908 North Temperance Ave. ∇ Clovis, CA 93611 ∇ Phone 559-275-2175 ∇ Fax 559-275-4422

Certification Number: CA1312
NELAP Certification number: CA00046
DoD-ELAP Certificate number: 4064.01

Data Validatable Report

December 6, 2016

AECOM
1001 Bishop Street, Suite 1600
Honolulu, Hawaii 96813

Attn: Margie Thach

Title: Report of Data: Case 81492

Project: 60481245 CIV0053 Red Hill Fuel Storage. HI

Contract #: Prime contract # for DoD: NAVY CLEAN N62742-12-D-1829, CTO 0053
Subcontract: 14S-16234-HI16

Dear Ms. Thach:

Four water samples were received November 15, 2016. Written results for the requested analyses are being provided on this December 6, 2016.

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

If you have any questions or require further information, please contact your APPL Project Manager, Libby Cheeseborough, libby@applinc.com, at your convenience. Thank you for choosing APPL, Inc.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. These test results meet all requirements of NELAC and DoD QSM. Release of the hard copy has been authorized by the Laboratory Manager or her designee, as verified by the following signature.

Paula McCartney

Paula McCartney, Laboratory Director
APPL, Inc.

PM/rp
Enclosure
cc: File

Number of pages in this report: 714

Data Validation Package
for
60481245 CIV 0053 Red Hill Fuel Storage
APPL SDG 81492
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SAMPLE RECEIPT INFORMATION

Sample Receipt Information

ARF: 81492

Project: 60481245 CIV0053 Red Hill Fuel Storage. HI

Sample Receipt Information:

Four water samples were received November 15, 2016, at 2.0°C, 0.5°C, 0.5°C, 1.0°C, and 1.0°C. The sample group was assigned Analytical Request Form (ARF) number 81492. The sample numbers and requested analyses were compared to the chains of custody and email communications. Plastic containers for sample ERH116 were not received: as a result, the alkalinity, anion, ferrous iron, silica and metals analyses were canceled. Additionally the methane analysis was canceled for sample ERH116, as requested. MS/MSD was added to sample ERH115. The anion and metals analyte lists were revised, as requested on November 18, 2016. No other exception was encountered.

Sample Table

CLIENT ID	APPL ID	Matrix	Date Sampled	Date Received
ERH114	AZ45865	WATER	11/14/16	11/15/16
ERH115	AZ45866	WATER	11/14/16	11/15/16
ERH116	AZ45867	WATER	11/14/16	11/15/16
ERH120	AZ45868	WATER	11/14/16	11/15/16

The samples and blanks were screened for J-value responses between the detection limit (DL) and limit of quantitation (LOQ).

APPL's Laboratory control limits generated in house statistically do not meet the control limits listed in DoD QSM 5.0 for all analytes. Laboratory control spike recoveries for this project meet all control limits listed in the DoD QSM 5.0 except where noted. A copy of our in house generated control limits is available upon request. In addition, a copy of our LOQ control limits, established using 7 data points, are also available upon request.

Only the portion of the injection log relative to these samples is included. A full sequence log is available upon request.

Measurement uncertainty can be reported upon request.

CASE NARRATIVE

EPA Method 8015B

Total Petroleum Hydrocarbons - Diesel & Oil

Sample Preparation:

The water samples were extracted according to EPA method 3510C. All holding times were met.

Sample Analysis Information:

The samples were analyzed according to the method using an Agilent Gas Chromatograph with a flame ionization detector.

Quality Control/Assurance

Calibrations:

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Blanks:

No target analyte was detected above one-half the LOQ in the method blank.

Spikes:

A Laboratory Control Spike (LCS) was used for quality assurance. All acceptance criteria were met.

Sample ERH115 was designated by the client for MS/MSD analysis. All spike recoveries were within the acceptance limits.

Surrogates:

Surrogate recoveries are summarized on the Form 2 & 8. All surrogate recoveries were acceptable.

Summary:

No analytical problem was encountered. The data generated are acceptable.

EPA Method 8270D-SIM
Polynuclear Aromatic Hydrocarbons

Sample Preparation:

The water samples were extracted according to EPA method 3510C. All holding times were met.

Analysis Information:

The samples were analyzed according to EPA Method 8270D using an Agilent Gas Chromatograph with a mass spectrometer detector, in selective ion monitoring mode (SIM).

Quality Control/Assurance

Spike Recovery

A Laboratory Control Spike (LCS) was used for quality assurance. All LCS recoveries met acceptance criteria.

Sample ERH115 was designated by the client for MS/MSD analysis. All spike recoveries were within the acceptance limits.

Method blanks

No target compound was detected at or above one-half the LOQ in the method blank.

Surrogates

Surrogate recoveries are summarized on the Form 2 & 8. All surrogate recoveries met acceptance criteria.

Calibration

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Tuning:

The instrument was tuned using DFTPP. All method criteria were met.

Internal Standards

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8270. All acceptance criteria were met.

Summary:

No analytical exception was encountered. The data generated are acceptable.

EPA Method 8270D
Semi-Volatile Organic Compounds

Sample Preparation:

The water samples were extracted according to EPA method 3510C. All holding times were met.

Analysis Information:

The samples were analyzed according to EPA Method 8270D using an Agilent Gas Chromatograph with a mass spectrometer detector.

Quality Control/Assurance

Spike Recovery

A Laboratory Control Spike (LCS) was used for quality assurance. All LCS recoveries met acceptance criteria.

Sample ERH115 was designated by the client for MS/MSD analysis. All spike recoveries were within the acceptance limits.

Method blanks

No target compound was detected at or above one-half the LOQ in the method blank.

Surrogates

Surrogate recoveries are summarized on the Form 2 & 8. All surrogate recoveries met acceptance criteria.

Calibration

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Tuning:

The instrument was tuned using DFTPP. All method criteria were met.

Internal Standards

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8270. All acceptance criteria were met.

Summary:

No analytical exception was encountered. The data generated are acceptable.

APPL SOP ANA2MEE

2-(2-Methoxyethoxy) ethanol by SPE, GC/MS

Sample Preparation:

The water samples were extracted according to EPA method 3535. All holding times were met.

Analysis Information:

The samples were analyzed according to an internal method APPL SOP ANA2MEE using an Agilent Gas Chromatograph with a mass spectrometer detector.

Quality Control/Assurance

Spike Recovery

A Laboratory Control Spike (LCS) was used for quality assurance. All LCS recoveries met acceptance criteria.

Sample ERH115 was designated by the client for MS/MSD analysis. All spike recoveries were within the acceptance limits.

Method blanks

No target compound was detected at or above one-half the LOQ in the method blank.

Surrogates

No surrogate was used for this method.

Calibration

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Tuning:

The instrument was tuned using DFTPP. All method criteria were met.

Internal Standards

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8270. All acceptance criteria were met.

Summary:

No other analytical exception was encountered. The data generated are acceptable.

EPA Method 8260B

Volatile Organic Analysis and Gasoline Range Organics

Sample Preparation:

The water samples were purged according to EPA method 5030B. All holding times were met.

Sample Analysis Information:

The samples were analyzed according to EPA method 8260B using an Agilent Gas Chromatograph with a mass spectrometer detector.

Quality Control/Assurance:

Calibrations:

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Blanks:

No analyte was detected above one-half the limit of quantitation (LOQ) in the method blanks.

Spikes:

Laboratory Control Spikes (LCS) were used for quality assurance. All LCS recovery acceptance criteria were met.

Sample ERH115 was designated by the client for MS/MSD analysis. All spike recoveries were within the acceptance limits.

Surrogates:

Surrogate recoveries are summarized on the Form 2 & 8. All surrogate recoveries were acceptable.

Tuning:

The instrument was tuned using BFB. All method criteria were met.

Internal Standards:

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8260. All method acceptance criteria were met.

Summary:

No problem was encountered. The data generated are acceptable.

Methane
RSK-175

Sample Preparation and Analysis

The water samples were analyzed with guidance from RSK-175. The samples were allowed to equilibrate for 10 minutes at 40°C and a portion of the headspace was analyzed using a Hewlett Packard Gas Chromatograph with a flame ionization detector. All holding times were met.

Quality Control/Assurance

Spike Recovery

Laboratory Control Spikes (LCS) were used for quality assurance. All acceptance criteria were met.

Sample ERH115 was designated by the client for MS/MSD analysis. Methane recovered above the 125% upper control limit in the MS and MSD.

Method blanks

The blanks contained no target analyte above one-half the limit of quantitation (LOQ).

Calibration

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Summary:

No other analytical exception is noted. The data generated are acceptable.

EPA Method 6010C
Metals

Digestion Information:

The water samples were digested according to EPA method 3010A. All holding times were met.

Analysis Information:

Samples:

The samples were analyzed for metals according to EPA method 6010B using a Perkin Elmer ICP 5300DV.

Calibrations:

Calibrations were performed according to the methods for the initial calibration and the initial calibration verification. The initial calibration verification is prepared from a second source standard. All acceptance criteria were met.

Blanks:

No target metal was detected above one half the LOQ in the method blank.

Spikes:

A Laboratory Control Spike (LCS), matrix spike (MS), sample duplicate (DUP), post digestion spike (PDS), and serial dilution (DT) were used for quality assurance. All LCS acceptance criteria were met.

Sample ERH115 was designated by the client for MS/MSD analysis. The MS/MSD, PDS, and DT met acceptance criteria.

Summary:

No analytical problem was encountered. The data generated are acceptable.

Inorganic Analyses

EPA Method 300.0 and SM 2320B, SM 3500 FeB and SM 4500SiD

Sample Preparation Information:

The water samples were prepared according to the methods.

Analysis Information:

Samples:

The samples were analyzed according to the methods. A Dionex DX500 ion chromatograph was used for the EPA 300.0 analysis. The samples were analyzed as soon as possible upon arrival for ferrous iron. All other holding times were met.

Calibrations:

Initial and continuing calibrations were performed according to the methods and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Blanks:

Alkalinity and Bicarbonate were detected above one-half the LOQ in the method blank. The samples contained over ten times the concentration of the hit in the blank. No target analyte was detected above one half the LOQ in the method blanks.

Spikes:

Laboratory Control Spikes (LCS) were used for quality assurance. All recoveries were within acceptance limits in the LCS.

Sample ERH115 was designated by the client for MS/MSD analysis. Chloride recovered above the 110% upper control limit in the MS and MSD. Silica recovered above the upper control limit in the MS. All other acceptance criteria were met in the MS/MSD.

Summary:

No other analytical exception is noted. All data are acceptable.

APPL Inc.
Abbreviations and Flags

FLAG	DESCRIPTION
#	Recovery or RPD outside control limits
*	Recovery or RPD outside control limits
B	Analyte detected in associated method blank
C1	Reason for correction: wrote incorrect response
C2	Reason for correction: calculated incorrectly
C3	Reason for correction: needs to be rechecked
C4	Reason for correction: data not usable
DO	Diluted out
E	Exceeds linear range
F	Estimated value
G1	Includes a wide range of hydrocarbons which does not match our gasoline standard
G10	Includes a match to hydrocarbon profiles within the range of mineral spirits
G11	Includes a match to hydrocarbon profiles within the range of JP-4
G12	Pattern does not match the gasoline standard; the carbon range for this sample is consistent with JP8
G13	Closely resembles the hydrocarbon profile of aviation gasoline
G14	Analyte concentration may be biased due to carry over
G2	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G3	Includes higher boiling hydrocarbons
G4	Includes dominant peak(s) not indicative of petroleum hydrocarbons
G5	Is mainly dominant peak(s) not indicative of petroleum hydrocarbons
G6	Contains recognizable contaminant peak(s) which has been removed from quantitation
G7	Is mainly a match to hydrocarbons within the range of gasoline
G8	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G9	Includes hydrocarbons within the range of kerosene
J	Estimated value
M	Matrix effect
MI1	Manual integration: integration does not follow baseline
MI2	Manual integration: non-target peak interference
MI3	Manual integration: to split a peak that was integrated as one peak by the computer.
MI4	Manual integration: to integrate a split peak
MI5	Manual integration: the whole peak or part of the peak was not integrated
MI6	Manual integration: computer integrated wrong peak
MI7	Manual integration: other – (See case narrative)
MDL	Method detection limit
ND	Not detected
NT	Non-target
Q	Acceptance criteria not met
T1 I	Includes wide range of hydrocarbons not indicative of diesel
T1 M	Is mainly wide range of hydrocarbons not necessarily indicative of diesel
T2 I	Includes lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T2 M	Is mainly lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T3 I	Includes higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T3 M	Is mainly higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T4 I	Includes dominant peak(s) not indicative of hydrocarbons
T4 M	Is mainly dominant peak(s) not indicative of hydrocarbons
T5	Contains recognizable contaminant peak(s) which has been removed from quantitation
T6	Is mainly a match to hydrocarbons within range of diesel fuel
T7	Closely resembles the boiling point hydrocarbon profile consistent with diesel fuel
T8	Includes a match to hydrocarbon profiles within range of diesel and kerosene fuel
T9 I	Includes non-diesel hydrocarbons within boiling point range of diesel fuel
T9 M	Is mainly non-diesel hydrocarbons within boiling point range of diesel fuel
U	Not detected
Y	Percent difference between primary and confirmation column > 40%

CHAIN OF CUSTODY,

ARF, CRF, AND

CLIENT COMMUNICATION

APPL - Analysis Request Form

81492

Client: AECOM
Address: 1001 Bishop Street, Suite 1600
Honolulu, HI 96813
Attn: Margie Thach
Phone: 808-356-5373 Fax: 808-523-8950
Job: 60481245 CIV0053 Red Hill Fuel Storage
PO #: 14S-16234-HI16, PO# 77265
Chain of Custody (Y/N): Y # 111416
RAD Screen (Y/N): Y pH (Y/N): Y
Turn Around Type: 1 WEEK

Received by: CM
Date Received: 11/15/16 Time: 10:15
Delivered by: FED EX
Shuttle Custody Seals (Y/N): Y Time Zone: -10
Chest Temp(s): 2° 2X 0.5° 2X 1.0°C
Color: VOA/M-PURPNK/R-ORGYL
Samples Chilled until Placed in Refrig/Freezer: Y
Project Manager: Libby Cheesebor
QC Report Type: DVP4DOD/EQUIS/HI
Due Date: 11/22/16

Comments:
7-day TAT for Form 1s; 21 day TAT for DVP; F1s, login to Margie.Thach@aecom.com
A: DOD QSM ver 5.0; DOD Forms (LOQ/LOD database/DL) Print ND as LOD w/U Qual.
8260: BTEX & TPH-G only;
8270 SIM: 1-methylnaphthalene, 2-methylnaphthalene & naphthalene only. RSK: Methane only;
$87DC53W5: report phenol only; $87DMEEW5: special SPE Extraction for 2-MEE (see Diane).
FR: HC to LDC, 2 labeled CDs to Margie Thach. PM needs to review after Admin Review is complete.
EDD: AECOM EQuIS EDD 2.5.3 to Margie.Thach@aecom.com & jecklund@lab-data.com
We did not receive plastic bottles for sample ERH116, per Margie cancel analyses. 11-15-16. rp
CHANGE IN ARF: cancel RSK methane anlaysis on sample ERH116 per Margie's email 11-17-06. rp

Sample Distribution:
GC: 3-$87DC53W5, 3-$87DMEEW5, 3-$DOC53W5, 3-$SIMDOD5W
Extractions: 3-_MWE2MEE, 3-_SEP004, 3-_SEP004S, 3-_SEP011LL
VOA: 4-$86BXDOD5W, 4-$GASBL, 4-$GRO86BW, 3-$RSKMETH
Metals: 2-$61CDOD5W(Ca,Mg,Mn,K,Na)
Wetlab: 2-$232W(HCO3,CO3,ALK), 2-$300W(NO3,BR,CL,F,SO4), 2-$35FE, 2-$SIO2, 2-$SIO2D
Other: 2-_M3010

Charges:

Invoice To:
ACCOUNTS PAYABLE
1001 Bishop Street, Ste 1600
USAPImaging@aecom.com
mary.basano@aecom.com

	Client ID		APPL ID	Sampled	Analyses Requested
1.	ERH114		AZ45865W	11/14/16 11:00	$86BXDOD5W, $GASBL, $GRO86BW, $RSKMETH
2.	ERH115	MS/MSD	AZ45866W	11/14/16 11:20	$232W(HCO3,CO3,ALK), $300W(NO3,BR,CL,F,SO4), $35FE, $61CDOD5W(Ca,Mg,Mn,K,Na), $86BXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $RSKMETH, $SIMDOD5W, $SIO2, $SIO2D
3.	ERH116		AZ45867W	11/14/16 11:20	$86BXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $SIMDOD5W

Note: All times, excluding sample collection times, are Pacific Time Zone unless noted otherwise. Collection times are in: -10 UTC

4.	ERH120	AZ45868W	11/14/16 10:55	$232W(HCO3,CO3,ALK), $300W(NO3,BR,CL,F,SO4), $35FE, $61CDOD5W(Ca,Mg,Mn,K,Na), $86BXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $RSKMETH, $SIMDOD5W, $SIO2, $SIO2D

APPL Sample Receipt Form

ARF# **81492**

Sample	Container Type	Count	p
AZ45865	13 VOAs - HCL	3	NA
	15 VOAs - NP	2	NA
AZ45866	3 PL 250mL	3	NA
	6 PL 500mL - HNO3	1	1.7
	13 VOAs - HCL	12	NA
	17 Amber Liter	18	NA
	38 250mL brn poly, HCl prsvd	1	1.7
AZ45867	13 VOAs - HCL	6	NA
	17 Amber Liter	6	NA
AZ45868	3 PL 250mL	3	NA
	6 PL 500mL - HNO3	1	1.7
	13 VOAs - HCL	6	NA
	17 Amber Liter	6	NA
	38 250mL brn poly, HCl prsvd	1	1.7

Sample	Container Type	Count	p

Hi Libby,

Yes, please cancel the RSK analysis.

Thank you,

Margie Pascua Thach

Environmental Scientist

Environment, West Region, Pacific District

Direct 808.356.5373

Margie.Thach@aecom.com

From: Libby Cheeseborough [mailto:libby@applinc.com]
Sent: Thursday, November 17, 2016 8:04 AM
To: Thach, Margie
Cc: Libby Cheeseborough

Subject: FW: ARF 81492 Receiving notes

Morning Margie,

For the revised COC that you sent on 11/15 (attached), I wanted to verify that you do want to cancel the RSK for ERH116. We DID receive RSK VOA vials intact for ERH116.

The plastic containers, which we did NOT receive only apply to SM3500-Fe and EPA 300. Those are the 2 analyses we will cancel, unless you really do want to cancel the RSK.

Please clarify for me. I'd appreciate it!

thank you,

Libby

Renee Patterson

From: Libby Cheeseborough [libby@applinc.com]
Sent: Tuesday, November 15, 2016 2:03 PM
To: cmoua@applinc.com; receiving@applinc.com
Cc: rpatterson@applinc.com
Subject: FW: ARF 81492 Receiving notes

Please see below for Margie's response to notes.

thank you,
Libby

Libby Cheeseborough

APPL INC

Agriculture & Priority Pollutants Laboratories, Inc.
WOSB. NELAP Accredited.
t. 559.275-2175 f. 559.275-4422
a. 908 N. Temperance Ave., Clovis, CA 93611

Website • Email

DoD accredited for ISM, Dioxins and PCB congeners.

This is a PRIVATE and CONFIDENTIAL message. If you are not the intended recipient, please delete without copying and kindly advise us by e-mail of the mistake in delivery. NOTE: Regardless of content, this e-mail shall not operate to bind APPL, Inc. to any order or other contract unless pursuant to explicit written agreement or government initiative expressly permitting the use of e-mail for such purpose.

From: Thach, Margie [mailto:Margie.Thach@aecom.com]
Sent: Tuesday, November 15, 2016 1:31 PM
To: Libby Cheeseborough
Subject: RE: ARF 81492 Receiving notes

Hi Libby,
Thank you. Yes, sorry about that. Knew there were errors on those COCs but we only had 30 minutes to custody seal, pack, and get to FedEx. I'll send revised COCs later today.

*For Sample ERH116 APPL only received 6 Voas and 6 Amber liters. We received no plastic conntainers for the analyses that require them. – cancel analyses that require plastic containers.

*The Coc is missing a collection time time for Sample ERH114, the container lists the collection time as 1100. – thank you for the time. We missed noting that.

*We received extra VOAs and Amber liters for Sample ERH115, Possible MS/MSD? - Yes, please do MS/MSD.

Thank you,

LABS

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C.

revised 11/15/16 MT

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number: CIV 53 / 60481245

Sampler (Print): Margie Thach

Purchase Order Number: 77265

Sampler (Signature):

Date Shipped: 11/15/16

Carrier: FX

Tracking No.:

Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil		8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3530C/8015C TPH-D/O W SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate Sulfate Chloride	RSK175M Methane	
[illegible]		[illegible]	1100	[illegible]		X				X	X										X	
			MT 11/15/16																			
	[illegible]																					

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
[illegible]	11/15/16	[illegible]					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

APPL LABS

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C.

revised 11/15/16 MT

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number: CIV 53 / 60481245

Sampler (Print): [illegible]

Purchase Order Number: 77265

Sampler (Signature): [illegible]

Date Shipped: 11/14/16

Carrier: [illegible]

Tracking No.:

Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq.	Matrix: Sed.	Matrix: Soil	Analysis Requested/Method Number: 8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3000/8015C TPH-D/O W/ SOT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate Sulfate Chloride	RSK175M Methane			
[illegible]	[illegible]	11/14/16	1120	[illegible]	[illegible]	X			X	X			X	X	X	X	X	X	[illegible]	X	X	X	[illegible] MS/MS
																							MT 11/1

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
[illegible]	11/14/16	[illegible]					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

LABS

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C.

revised 11/15/16 MT

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number: CIV 53 / 60481245
Sampler (Print): Margie Thach
Purchase Order Number: 77265
Sampler (Signature): MT

Date Shipped: 11/15/16
Carrier: FedEx
Tracking No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil	Matrix:	8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate, Sulfate, Chloride	RSK175M Methane		
11/11/16	[illegible] 5401	11/14/16	1120	[illegible]	10	X				X	X			X	X	X	X	X			X	X	X NO SGT
	MT 11/14/16																					

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
[illegible]	11/14/16	[illegible]					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

APPL LABS

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C. 111416

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number: CIV 53 / 60481245
Sampler (Print): Margie Thach
Purchase Order Number: 77265
Sampler (Signature): [signature]

Date Shipped: 11/14/16
Carrier: FedEX
Tracking No.:
Comments:

Analysis Requested/Method Number

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil	Matrix:	8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O W/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	SM4500 total silica, 300.0 Nitrate, Sulfate, Chloride, SM2320 Alkalinity	RSK175M Methane	SM4500 Dissolved silica	6010 total metals
ERH 114	Trip	11/14/16		HST	5	X				X	X										X		

MT 11/14/16

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	11/14/16	1500					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					11/15/16	1015	[signature]

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

81442

2.0
0.5
0.5
1.0
1.0

APPL LABS

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C. 11/14/16

Report to: PLEASE PRINT	Invoice to: PLEASE PRINT
Company Name: AECOM Phone: 808-356-5373	Company Name: AECOM Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600	Address: 1001 Bishop St. Suite 1600
Honolulu, Hawaii 96813 Fax:	Honolulu, Hawaii 96813 Fax:
Attn: Margie Thach Email: margie.thach@aecom.com	Attn: Mary Basano Email: mary.basano@aecom.com

Project Name/Number: CIV 53 / 60481245
Sampler (Print): Margie Thach
Purchase Order Number: 77265
Sampler (Signature): [signature]

Date Shipped: 11/14/16
Carrier: FedEx
Tracking No.:
Comments:

Analysis Requested/Method Number

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil	Matrix:	8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O W/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	SM 2320 Alkalinity, 300.0 Nitrate, Sulfate, Chloride, SM4500 total silica	RSK175M Methane	SM4500 Dissolved silica	6010 total metals	
ERH115	RHMW2254-01	11/14/16	1120	HST	37	X				X	X			X	X	~~X~~	X	X	X	X/X/X	X	X	X	NO SGT
																MT 11/14/16								

NOT 11/14/16

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	11/14/16	1500					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					11/15/16	10:15	[signature]

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

APPL LABS

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C. 11/14/16

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number: CIV 53 / 60481245
Sampler (Print): Margie Thach
Purchase Order Number: 77265
Sampler (Signature): [signature]

Date Shipped: 11/14/16
Carrier: FedEx
Tracking No.:
Comments:

Analysis Requested/Method Number

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil		8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O W/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	SM4500 Total Silica, 300.0 Nitrate, Sulfate, Chloride, SM2320 Alkalinity	RSK175M Methane	SM4500 Dissolved Silica	6010 Total Metals	
ERH116	RHMW2254-01	11/14/16	1120	HST	10	X				X	X			X	X	~~X~~ MT 11/14/16	X	X	X	X/X/X	X	X	X	NO SGT

MT 11/14 16

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	11/14/16	1500					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					11/15/16	1015	[signature]

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C. 11/4/16

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number	Sampler (Print)									Analysis Requested/Method Number														Date Shipped: 11/4/16
CIV 53 / 60481245	Margie Thach																							Carrier: FedEx
Purchase Order Number 77265	Sampler (Signature)																							Tracking No.:
																								Comments:
Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil		8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O w/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	SM4500 Nitrate, 300.0 Nitrate, Sulfate, Chloride	RSK175M Methane	SM4500 dissolved CH4	300.0 Sulfate	
ERH120	RHMW06	11/4/16	1055	HST	17	X				X	X			X	X		X	X	X	XXX	X	X	X	

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other _____

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	11/14/16	1500					
Relinquished by:	**Date**	**Time**	**Received by:**	**Relinquished by:**	**Date**	**Time**	**Received at lab by:**

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

COOLER RECEIPT FORM **ARF: 81492**

1) Project: 60481245 CIV0053 Red Hill Fuel Storage Date Received: 11/15/16

2) Coolers: Number of Coolers: 5 - - ---

3) YES Were custody seals present and intact?
How many? 10 Name/Date on seal? see Below

4) YES Was there a shipping slip? Carrier name: FED EX

5) Type of packing in cooler: X bubble wrap __ popcorn __ foam X plastic bags
X wet ice __ dry ice __ no ice __ other

6) YES Were cooler temperatures acceptable?

7) Serial number of certified NIST thermometer use J5297

8) Cooler temp(s): In °C
1: 2 2: 0.5 3: 1.0 4: 1.0 5: 0.5 6: _____
7: _____ 8: _____ 9: _____ 10: _____ 11: _____ 12: _____

Chain of custody:

9) YES Was a chain of custody received?

10) YES Were the custody papers complete/signed in the appropriate places?

Sample Labels:

11) YES Were all sample labels complete (sample ID, date/time of sampling, etc.)?

12) YES Did all container labels agree with custody papers?

Sample Containers:

13) YES Were all containers sealed in separate bags?

14) YES Did all containers arrive in good condition:(unbroken, no leakage, no cracked/broken lids)?

15) YES Were correct containers and preservatives used for the tests indicated?

16) YES Was a sufficient amount of sample sent for tests indicated?

17) Yes Were bubbles present in volatile samples?
If yes, the following were received with air bubbles:
Larger than a pea: AZ45865W01-5
Smaller than a pea: _____

Preservation Hold time:

18) Yes Was a sufficient amount of holding time remaining to analyze the samples?

19) Yes Was the pH taken of all non-VOA preserved samples and written on the sample container?

20) Yes Was the pH of acid preserved non-VOA samples < 2?

21) NA Was the pH of sodium hydroxide preserved samples for Cyanide > 12 and Sulfide >9?

22) NO Were unpreserved VOA Vials received?

23) NA Are unpreserved VOA vials noted in the ADD TEST FIELD on the ARF?
pH strip lot number: 90B2031
Lab notified if pH was not adequate: _____

Notes/Deficiencies:

For Sample ERH116 APPL only received 6 Voas and 6 Amber liters. We received no plastic conntainers for the analyses that require them. The Coc is missing a collection time time for Sample :ERH114, the container lists the collection time as 1100. We received extra VOAs and Amberliters for Sample ERH 115, Possible MS/MSD?

CUSTODY SEAL
75-2175
APPL, Inc.
Initials BS 11/14/16

Personnel receiving samples: SM Second reviewer: YL
Personnel labeling samples: SM
Project manager notified: Libby Date/Time of notification 11-15-16
Name of client notified: Margie Date/Time of notification 11-15-16

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank

EPA 8015B TPH WATER

Blank Name/QCG: **161118W-45866 - 214015**

Batch ID: #DOC53-161118A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	11/18/16	11/21/16
BLANK	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	11/18/16	11/21/16
BLANK	SURROGATE: OCTACOSANE (S)	94.7	60-142			%	11/18/16	11/21/16
BLANK	SURROGATE: ORTHO-TERPHEN	76.3	56-125			%	11/18/16	11/21/16

Quant Method: DOC1103.M
Run #: 1121005
Instrument: Apollo
Sequence: 161121
Initials: DPO

GC SC-Blank-REG MDLs-DOD
Printed: 11/23/16 4:49:25 PM

Laboratory Control Spike Recovery
EPA 8015B TPH WATER

APPL ID: **161118W-45866 LCS - 214015**
Batch ID: #DOC53-161118A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
DIESEL (C10-C24)	1330	988	74.1	36-132
OIL (C24-C40)	1330	1130	84.8	41-113
SURROGATE: OCTACOSANE (S)	40.0	36.2	90.5	60-142
SURROGATE: ORTHO-TERPHENYL (S)	40.0	36.4	91.0	56-125

Comments: _____

Primary	SPK
Quant Method :	DOC1103.M
Extraction Date :	11/18/16
Analysis Date :	11/21/16
Instrument :	Apollo
Run :	1121006
Initials :	DPO

Printed: 11/23/16 4:49:27 PM
APPL Standard LCS

Matrix Spike Recoveries

EPA 8015B TPH WATER

APPL ID: **161118W-45866 MS - 214015**
Batch ID: #DOC53-161118A
Sample ID: AZ45866
Client ID: ERH115

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
DIESEL (C10-C24)	1330	ND	1040	936	78.0	70.2	36-132	10.5	30
OIL (C24-C40)	1330	ND	1030	1070	77.3	80.3	41-113	3.8	30
SURROGATE: OCTACOSANE (S)	40.0	NA	35.9	33.3	89.8	83.3	60-142		
SURROGATE: ORTHO-TERPHENYL (S)	40.0	NA	36.1	34.4	90.3	86.0	56-125		

Comments: _____

Primary	SPK	DUP
Quant Method :	DOC1103.M	DOC1103.M
Extraction Date :	11/18/16	11/18/16
Analysis Date :	11/21/16	11/21/16
Instrument :	Apollo	Apollo
Run :	1121010	1121009
Initials :	DPO	

Printed: 11/23/16 4:49:40 PM
APPL MSD SCII

EPA 8015B-eLL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81492

Case No: 81492 Date Analyzed: 11/21/16

Matrix: WATER Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: OCTACOSANE (S)			SURROGATE: ORTHO-TERPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161118A-BLK	Blank	60-142	94.7		56-125	76.3	
161118A-LCS	Lab Control Spike	60-142	90.5		56-125	91.0	
AZ45866-MSD	Matrix SpikeD	60-142	83.3		56-125	86.0	
AZ45866-MS	Matrix Spike	60-142	89.8		56-125	90.3	
AZ45866	ERH115	60-142	85.2		56-125	69.7	
AZ45867	ERH116	60-142	83.2		56-125	67.1	
AZ45868	ERH120	60-142	91.4		56-125	74.2	

Comments: Batch: #DOC53-161118A

EPA 8015B-eL

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81492

Case No: 81492 Date Analyzed: 11/21/16

Matrix: WATER Instrument: Apollo

Blank ID: 161118A-BLK Time Analyzed: 1459

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161118A-BLK	Blank	1121005	11/21/16 1459
161118A-LCS	Lab Control Spike	1121006	11/21/16 1520
161118A-MSD	Matrix SpikeD	1121009	11/21/16 1622
161118A-MS	Matrix Spike	1121010	11/21/16 1643
AZ45866	ERH115	1121012	11/21/16 1725
AZ45867	ERH116	1121013	11/21/16 1746
AZ45868	ERH120	1121014	11/21/16 1806

Comments: Batch: #DOC53-161118A

Printed: 11/23/16 4:49:46 PM
Form 4, Blank Summary

ORGANICS

Sample Data

APPL, INC.

EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH115
Sample Collection Date: 11/14/16

ARF: 81492
APPL ID: AZ45866
QCG: #DOC53-161118A-214015

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	11/18/16	11/21/16
EPA 8015B-eL	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	11/18/16	11/21/16
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	85.2	60-142			%	11/18/16	11/21/16
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	69.7	56-125			%	11/18/16	11/21/16

Quant Method: DOC1103.M
Run #: 1121012
Instrument: Apollo
Sequence: 161121
Dilution Factor: 1
Initials: DPO

Printed: 11/23/16 4:49:47 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161121\1121012.D Vial: 12
Acq On : 11-21-16 17:25:16 Operator: DP
Sample : AZ45866W23 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Nov 23 16:37 2016 Quant Results File: DOC1103.RES

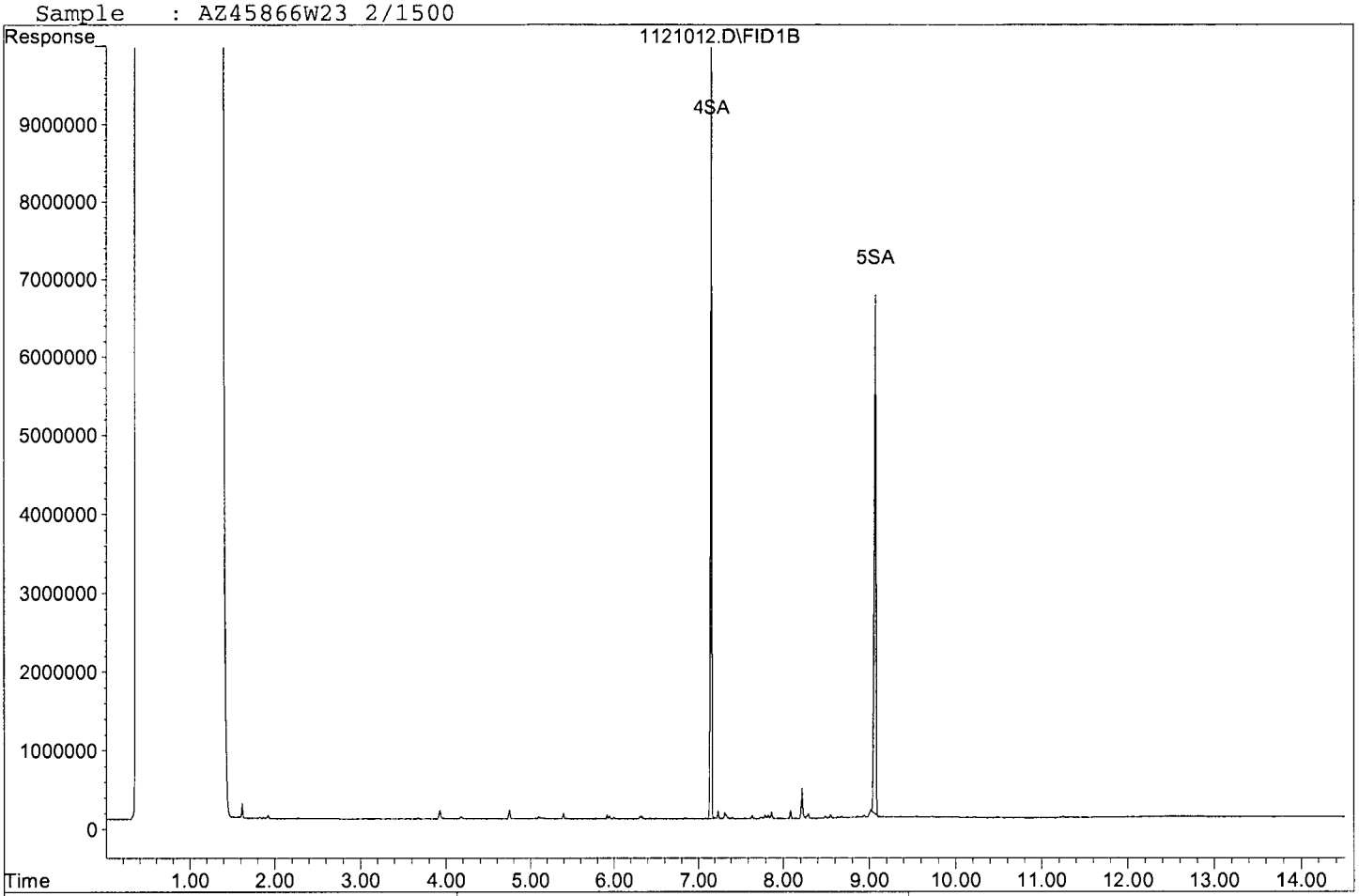
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

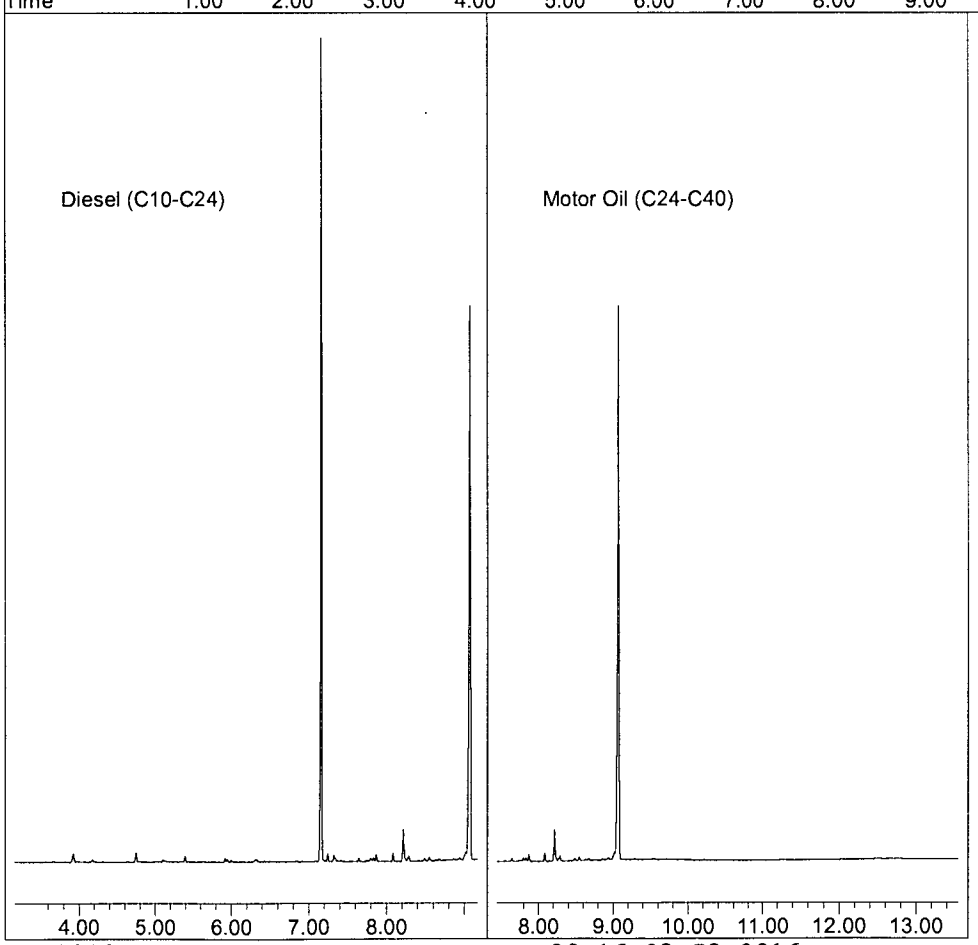
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.16	97514201	27.874	ppb
Surrogate Spike 40.000	Recovery =		69.69%	
5) SA Octacosane(S)	9.07	89486827	34.093	ppb
Surrogate Spike 40.000	Recovery =		85.23%	
Target Compounds				

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161121\1121012.D
Sample : AZ45866W23 2/1500





EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH116
Sample Collection Date: 11/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81492
APPL ID: AZ45867
QCG: #DOC53-161118A-214015

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	11/18/16	11/21/16
EPA 8015B-eL	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	11/18/16	11/21/16
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	83.2	60-142			%	11/18/16	11/21/16
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	67.1	56-125			%	11/18/16	11/21/16

Quant Method: DOC1103.M
Run #: 1121013
Instrument: Apollo
Sequence: 161121
Dilution Factor: 1
Initials: DPO

Printed: 11/23/16 4:49:47 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161121\1121013.D Vial: 13
Acq On : 11-21-16 17:46:00 Operator: DP
Sample : AZ45867W10 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Nov 23 16:37 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

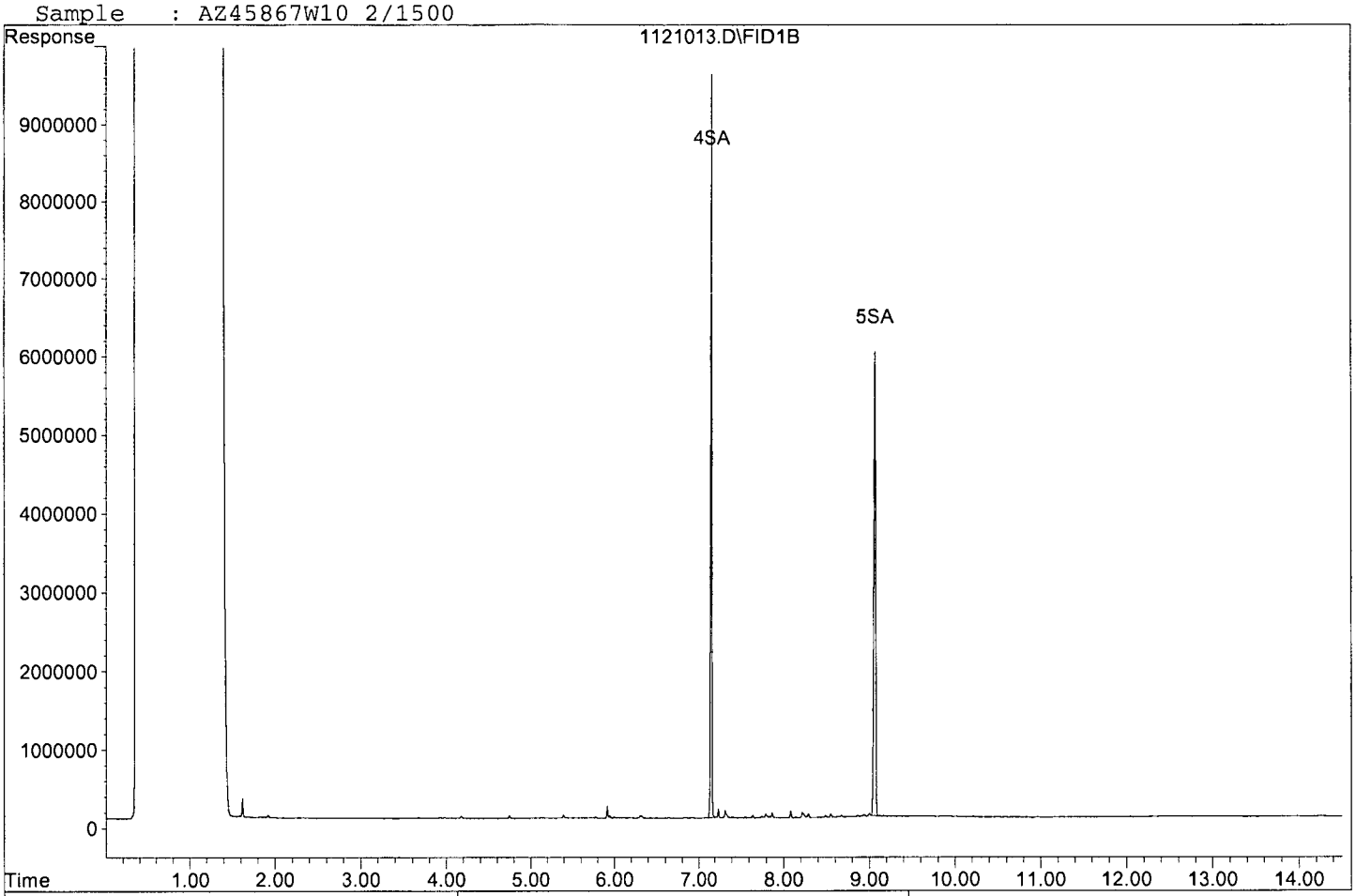
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

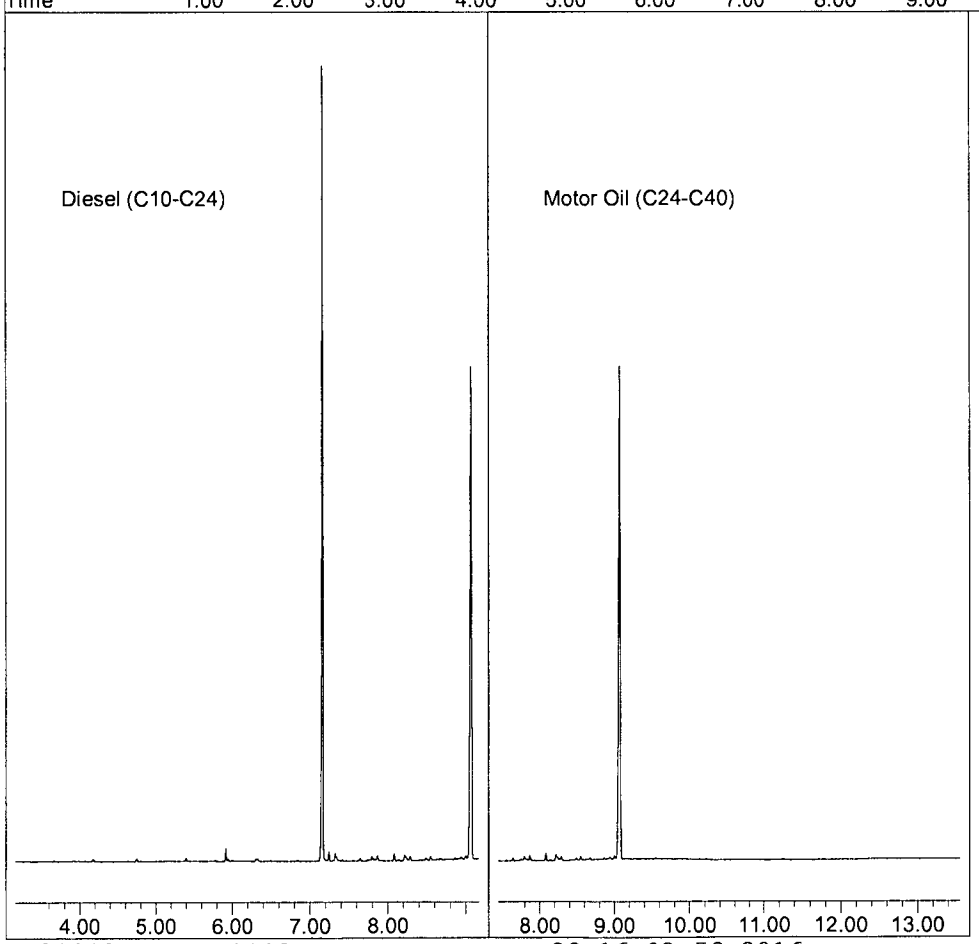
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.16	93901611	26.842 ppb
Surrogate Spike 40.000	Recovery =		67.10%
5) SA Octacosane(S)	9.07	87383440	33.292 ppb
Surrogate Spike 40.000	Recovery =		83.23%
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161121\1121013.D
Sample : AZ45867W10 2/1500





1121013.D DOC1103.M Mon Nov 28 16:03:58 2016

EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH120
Sample Collection Date: 11/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81492
APPL ID: AZ45868
QCG: #DOC53-161118A-214015

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	11/18/16	11/21/16
EPA 8015B-eL	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	11/18/16	11/21/16
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	91.4	60-142			%	11/18/16	11/21/16
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	74.2	56-125			%	11/18/16	11/21/16

Quant Method: DOC1103.M
Run #: 1121014
Instrument: Apollo
Sequence: 161121
Dilution Factor: 1
Initials: DPO

Printed: 11/23/16 4:49:47 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161121\1121014.D Vial: 14
Acq On : 11-21-16 18:06:49 Operator: DP
Sample : AZ45868W12 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Nov 23 16:38 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

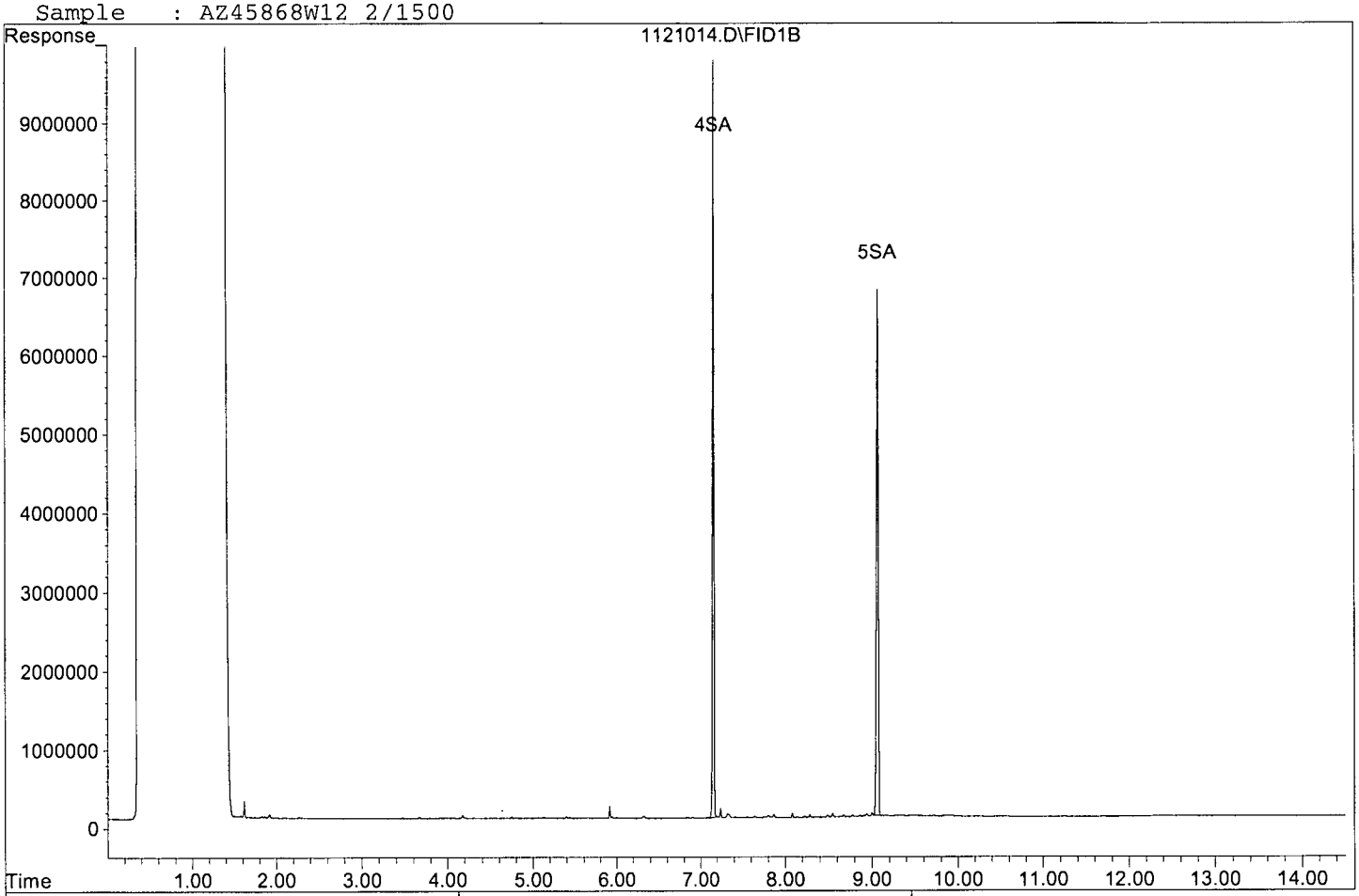
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

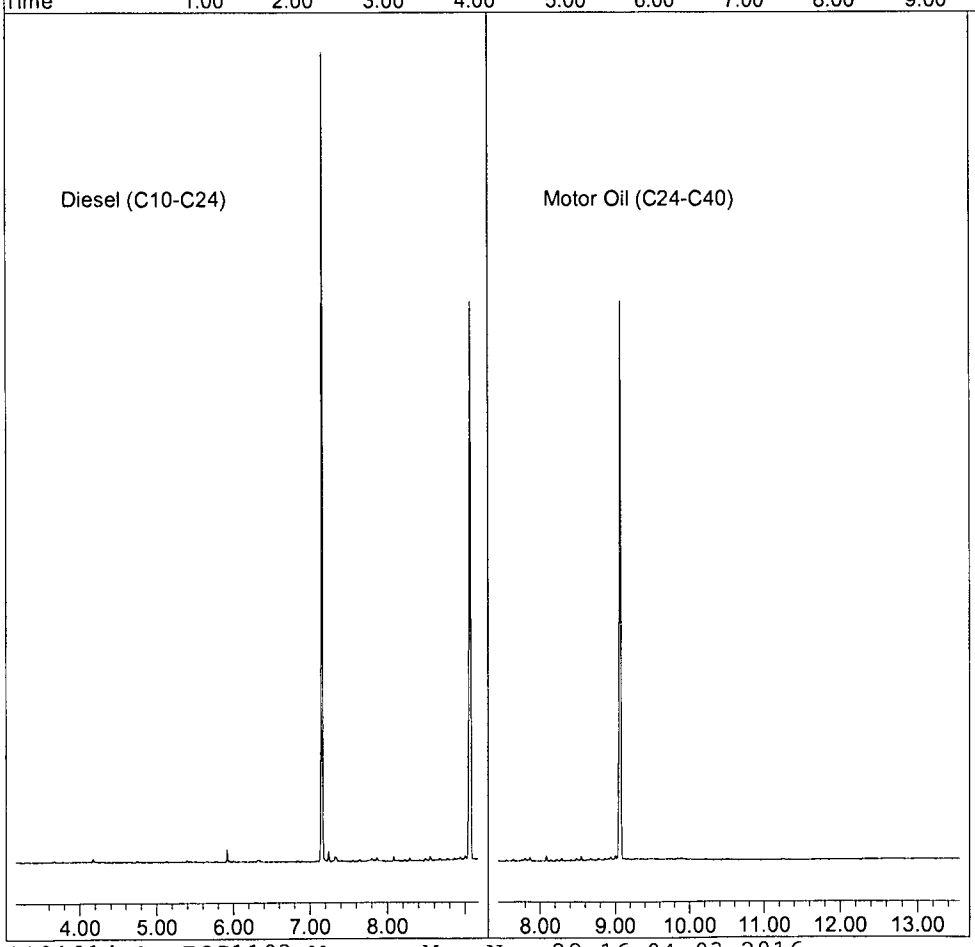
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.16	103782708	29.666 ppb
Surrogate Spike 40.000		Recovery =	74.17%
5) SA Octacosane(S)	9.07	95923216	36.545 ppb
Surrogate Spike 40.000		Recovery =	91.36%
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161121\1121014.D
Sample : AZ45868W12 2/1500





ORGANICS

Calibration Data

APPL, INC.

TPH Extractables
DOC1103

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 11/03/16
Matrix: Instrument: Apollo
Initials:

Diesel:	1103004.D	1103011.D	1103006.D	1103007.D	1103008.D	1103009.D										
Motor Oil:	1028002.D	1028003.D	1028004.D	1028005.D	1028006.D	1028007.D										

		Compound	1	2	3	4	5	6					Avg	%RSD		
1	HATM	Diesel (C10-C24)	1713970	2056602	1625582	1697733	1643335	1625559					1727130	9.6	HATM	
2	HBTM	Motor Oil (C24-C40)	1562690	1603769	1282978	1340015	1321969	1245819					1392873	11	HBTM	
3	SC	Decanoic Acid(S)	436509	643644	711658	659596	590571	627574					611592	15	SC	
4	SA	Ortho-Terphenyl(S)		2687660	2255130	2296757	2215766	2205848					2332232	8.7	SA	
5	SA	Octacosane(S)	1736016	2067699	1697441	1704564	1657038	1636278					1749839	9.1	SA	
6																
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1.5347542

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161103\1103004.D Vial: 4
Acq On : 11-3-16 9:45:14 Operator: DP
Sample : DIESEL 10ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

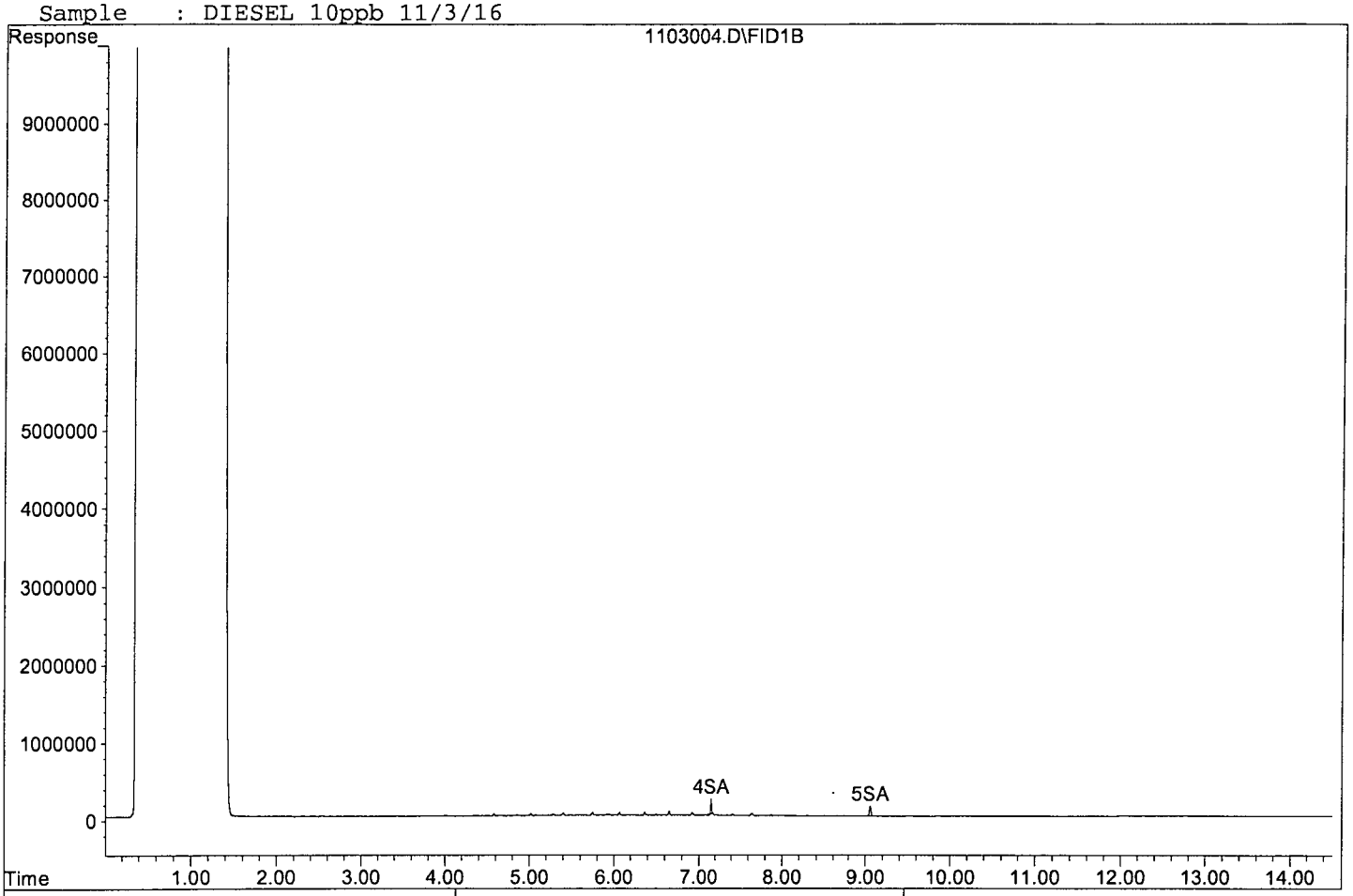
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

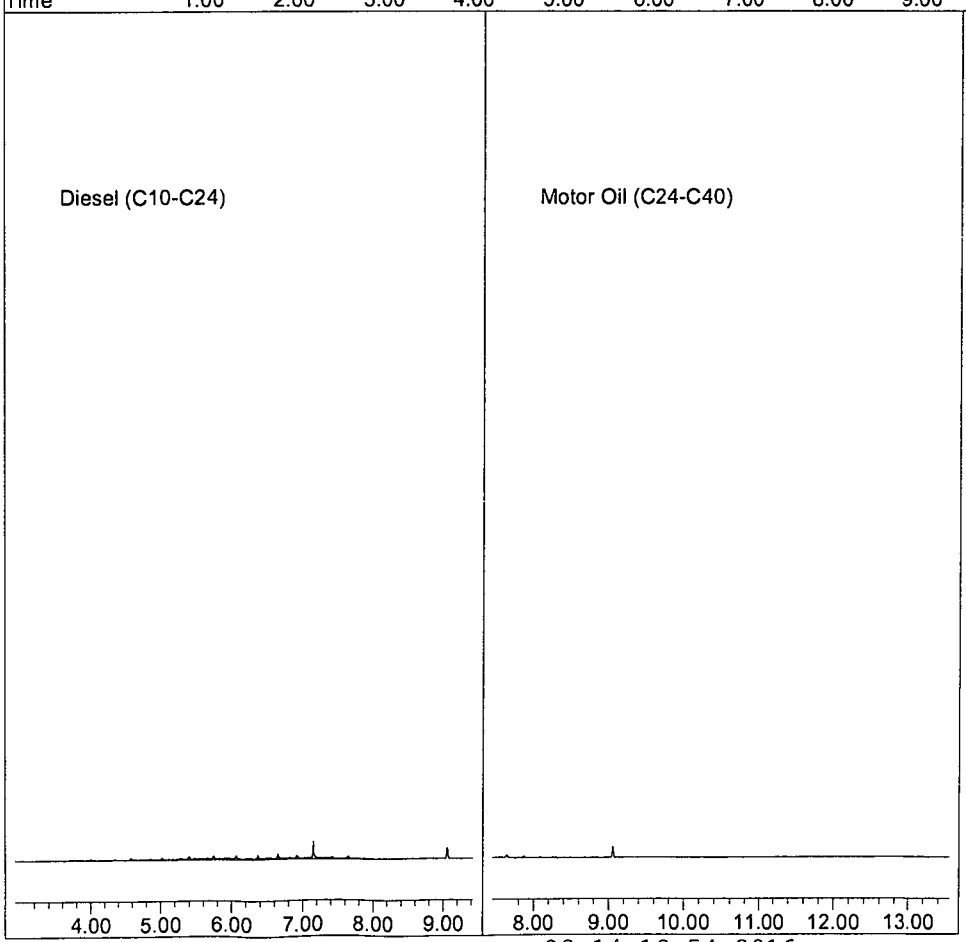
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.15	1320666	0.233 ppb
Surrogate Spike 30.000	Recovery =		0.78%
5) SA Octacosane(S)	9.06	1736016	0.492 ppb
Surrogate Spike 30.000	Recovery =		1.64%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	34279391	10.218 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103004.D
Sample : DIESEL 10ppb 11/3/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161103\1103011.D Vial: 11
Acq On : 11-3-16 12:56:47 Operator: DP
Sample : DIESEL 100ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

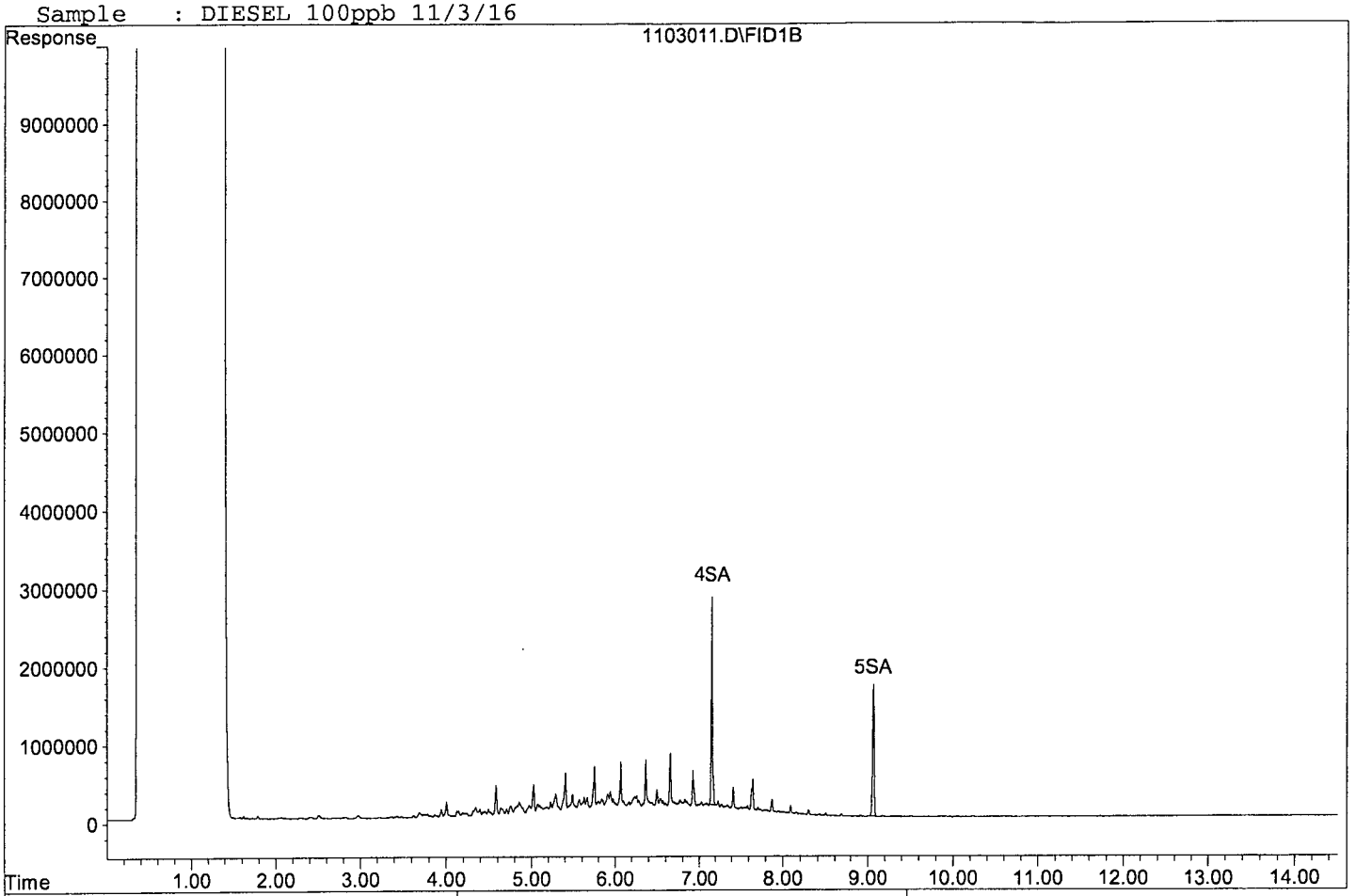
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

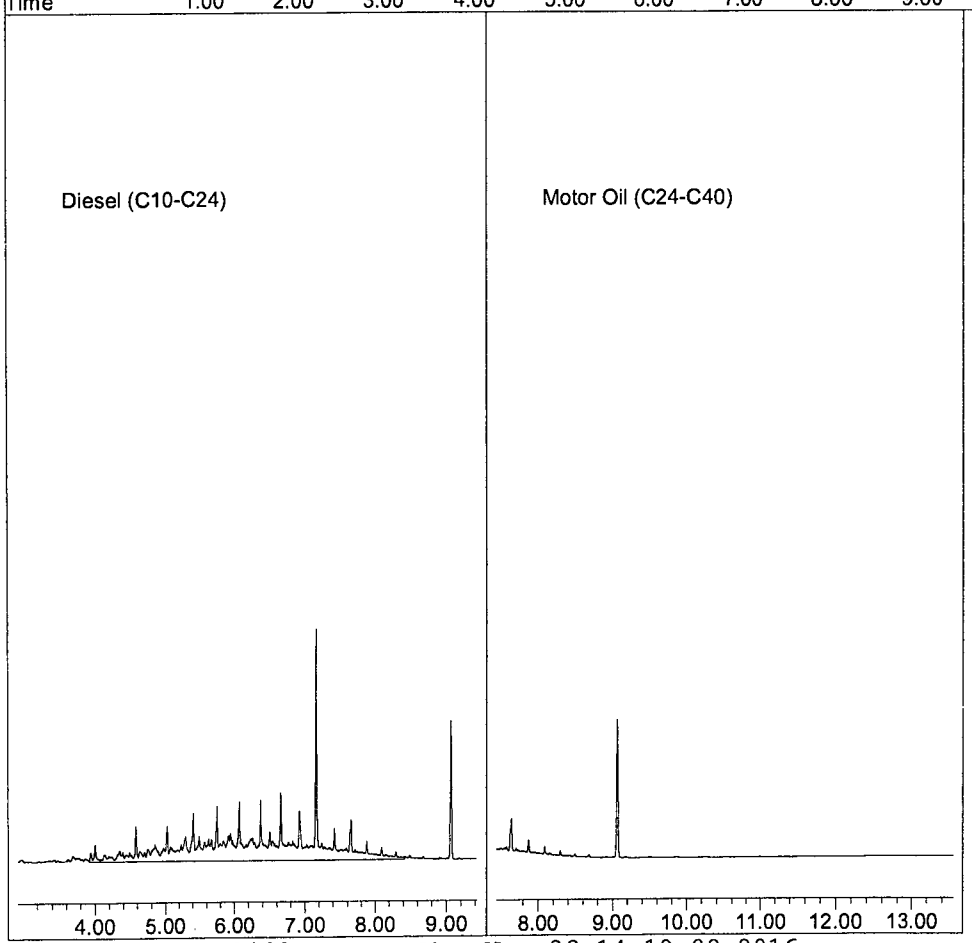
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.16	26876603	4.740 ppb
Surrogate Spike 30.000		Recovery =	15.80%
5) SA Octacosane(S)	9.06	20676993	5.864 ppb
Surrogate Spike 30.000		Recovery =	19.55%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	411320381	122.610 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103011.D
Sample : DIESEL 100ppb 11/3/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103006.D Vial: 6
Acq On : 11-3-16 10:26:16 Operator: DP
Sample : DIESEL 400ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

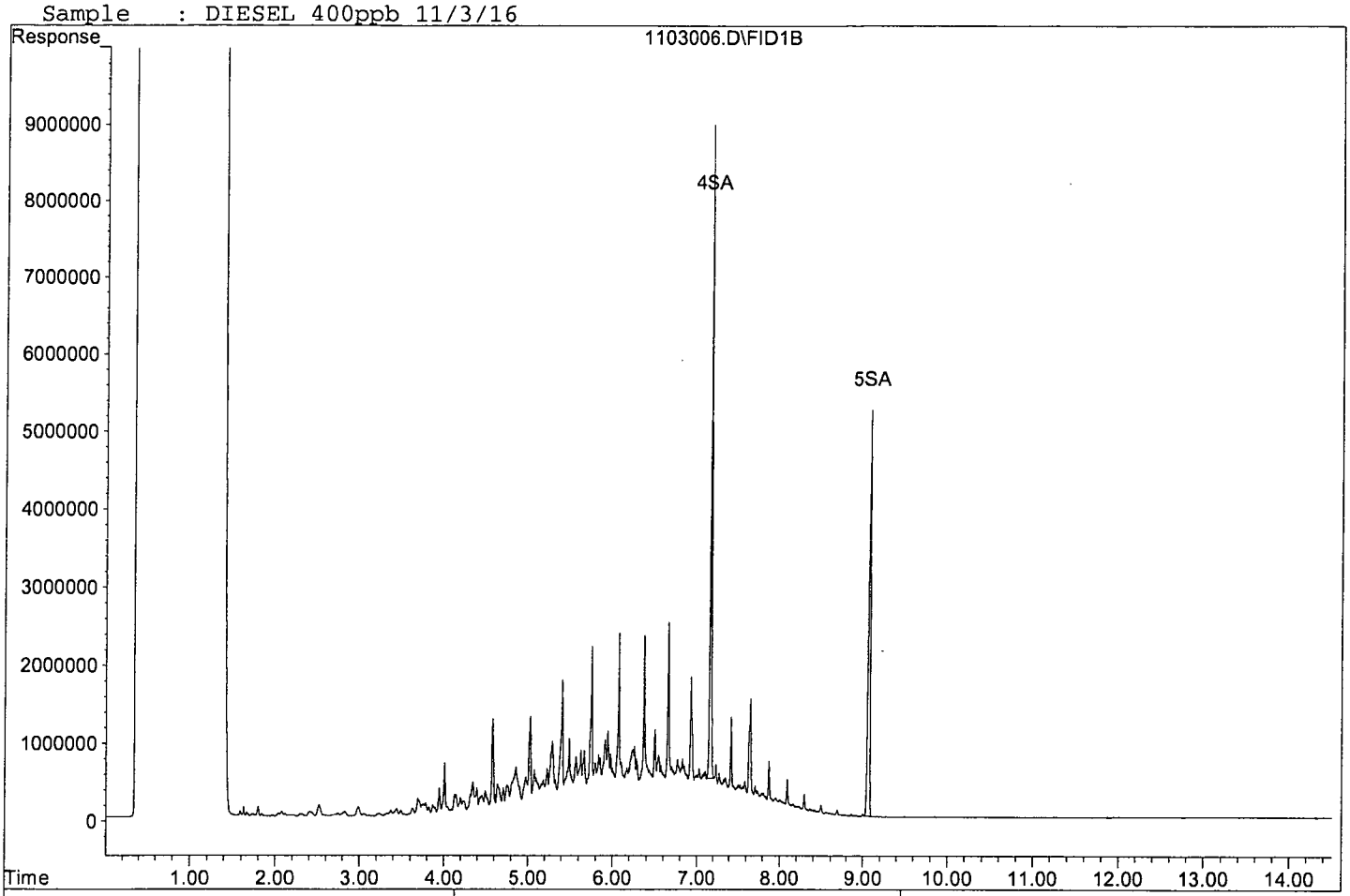
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

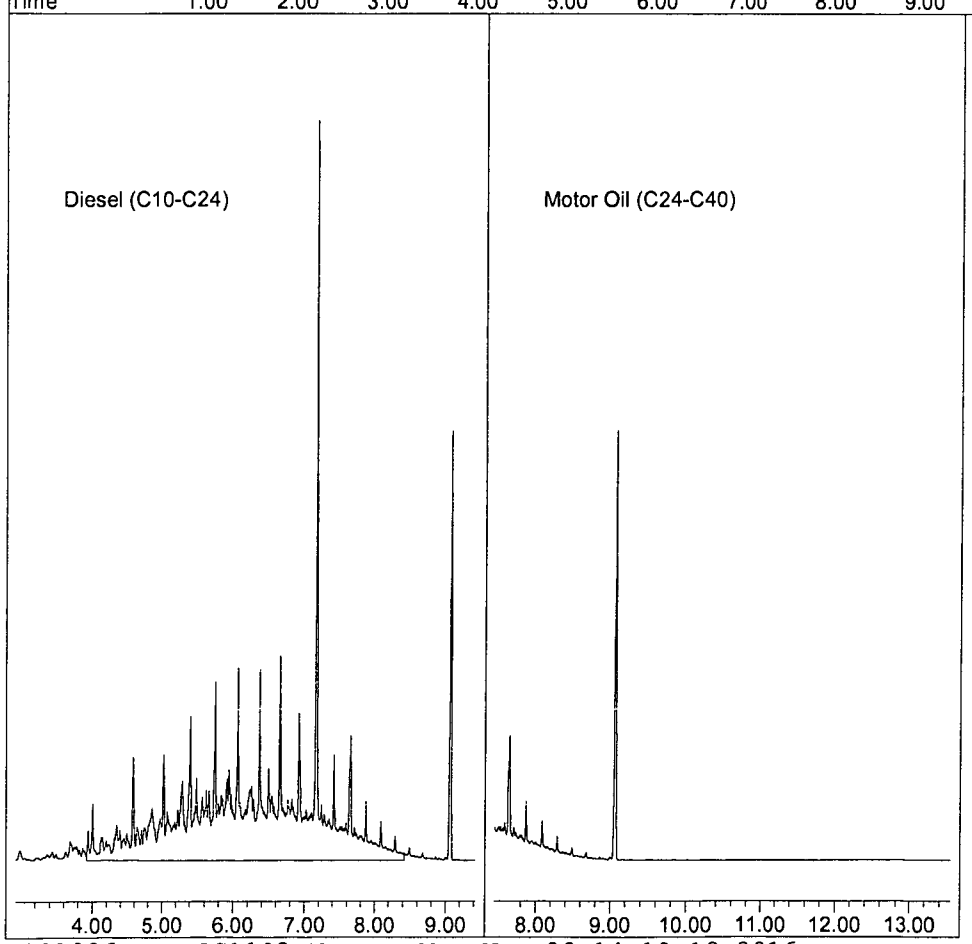
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.16	90205209	15.909 ppb
Surrogate Spike 30.000		Recovery =	53.03%
5) SA Octacosane(S)	9.07	67897660	19.256 ppb
Surrogate Spike 30.000		Recovery =	64.19%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	1300465223	387.653 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103006.D
Sample : DIESEL 400ppb 11/3/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103007.D Vial: 7
Acq On : 11-3-16 10:46:56 Operator: DP
Sample : DIESEL 600ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

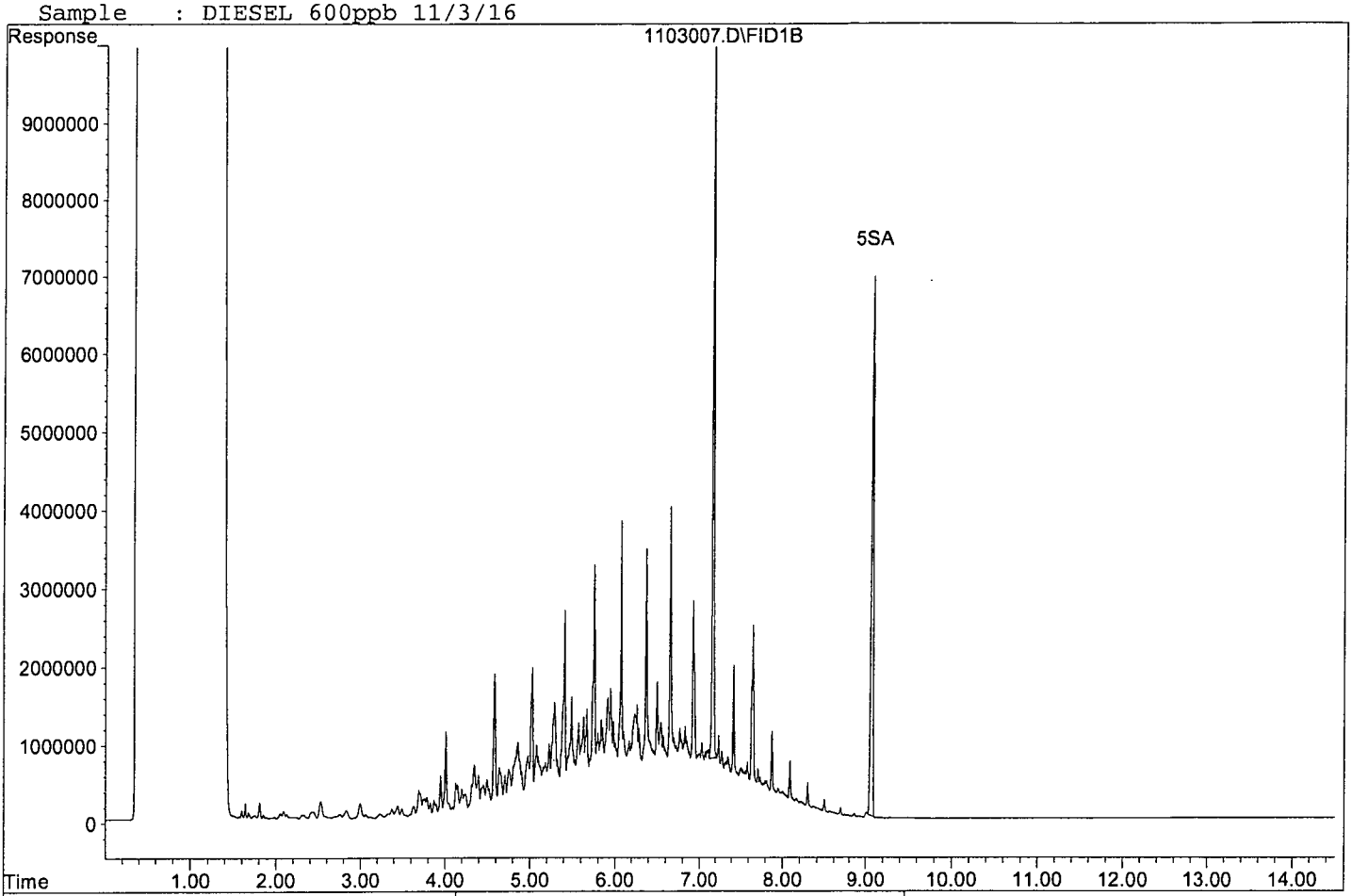
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

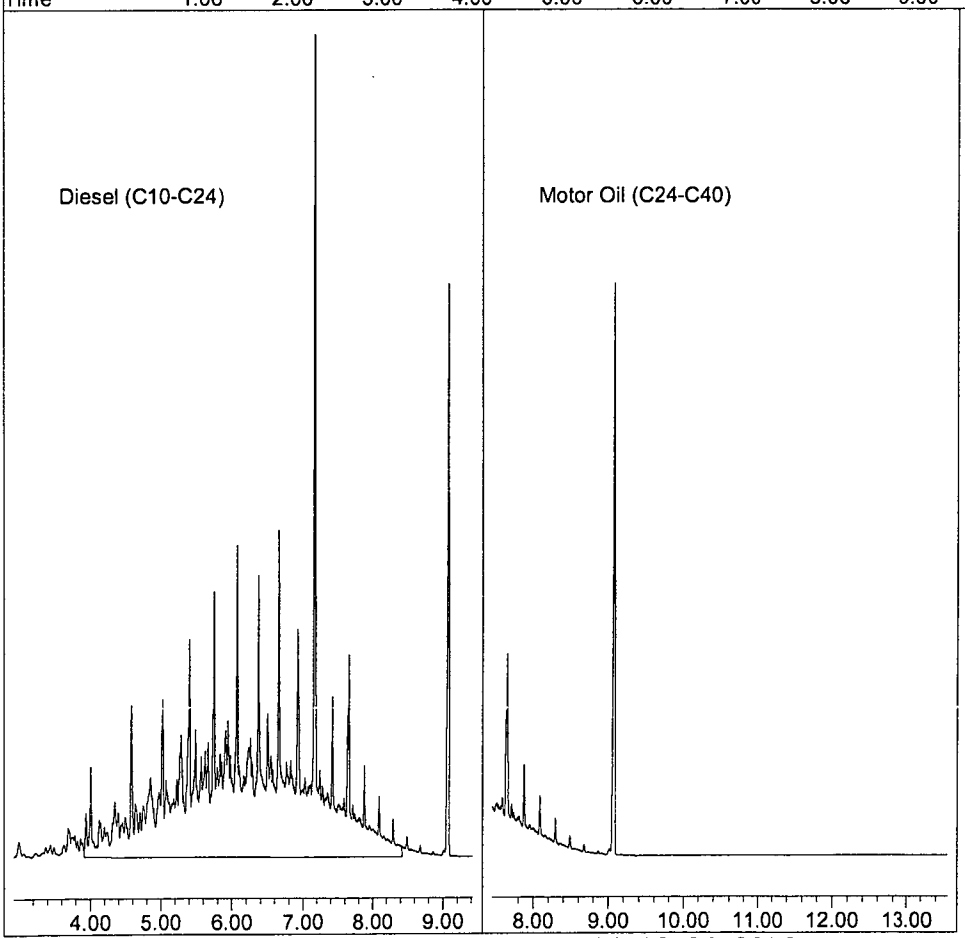
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.17	137805437	24.304 ppb
Surrogate Spike 30.000	Recovery =		81.01%
5) SA Octacosane(S)	9.07	102273844	29.005 ppb
Surrogate Spike 30.000	Recovery =		96.68%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	2037280173	607.288 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103007.D
Sample : DIESEL 600ppb 11/3/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103008.D Vial: 8
Acq On : 11-3-16 11:07:39 Operator: DP
Sample : DIESEL 800ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

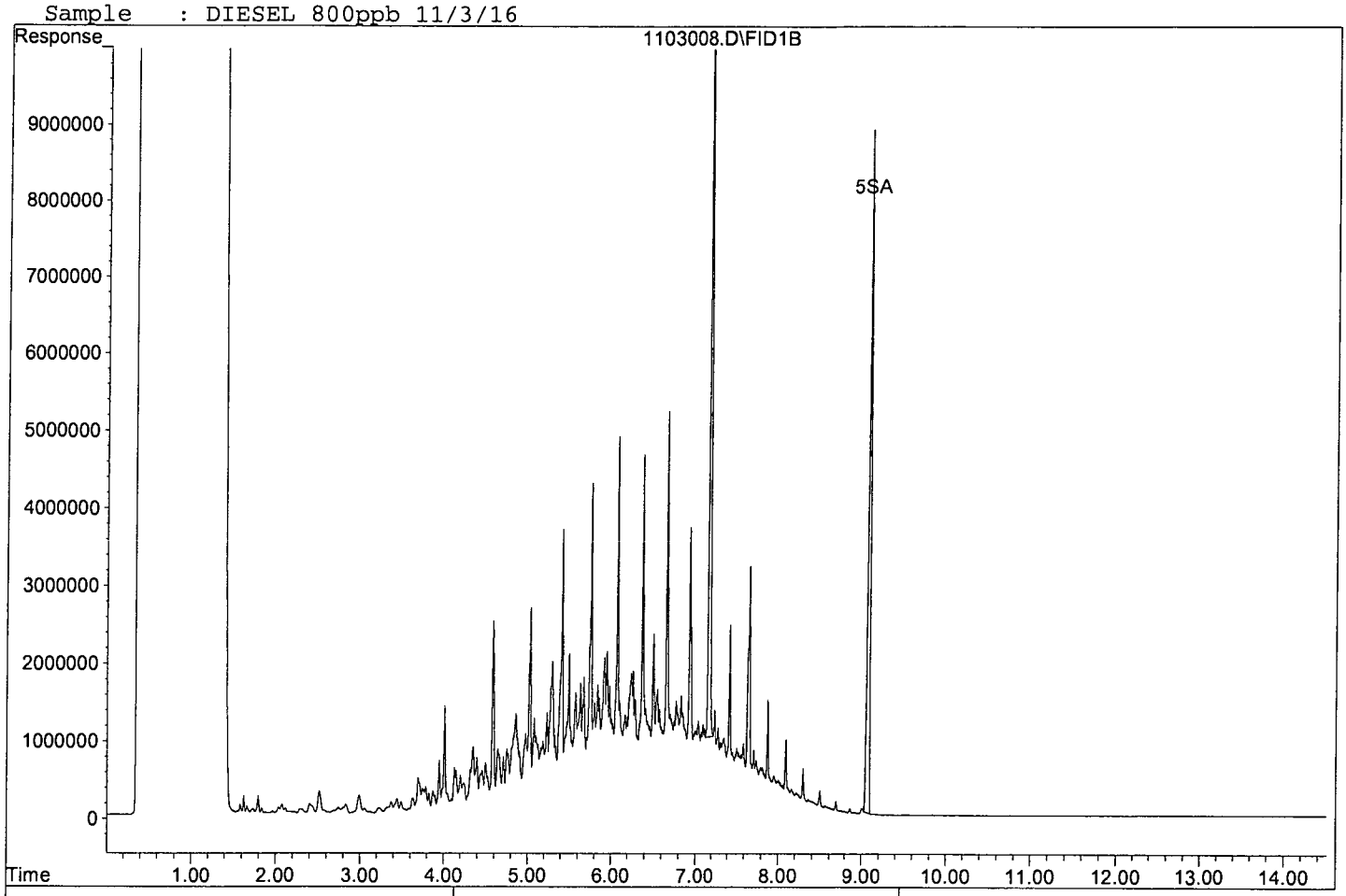
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

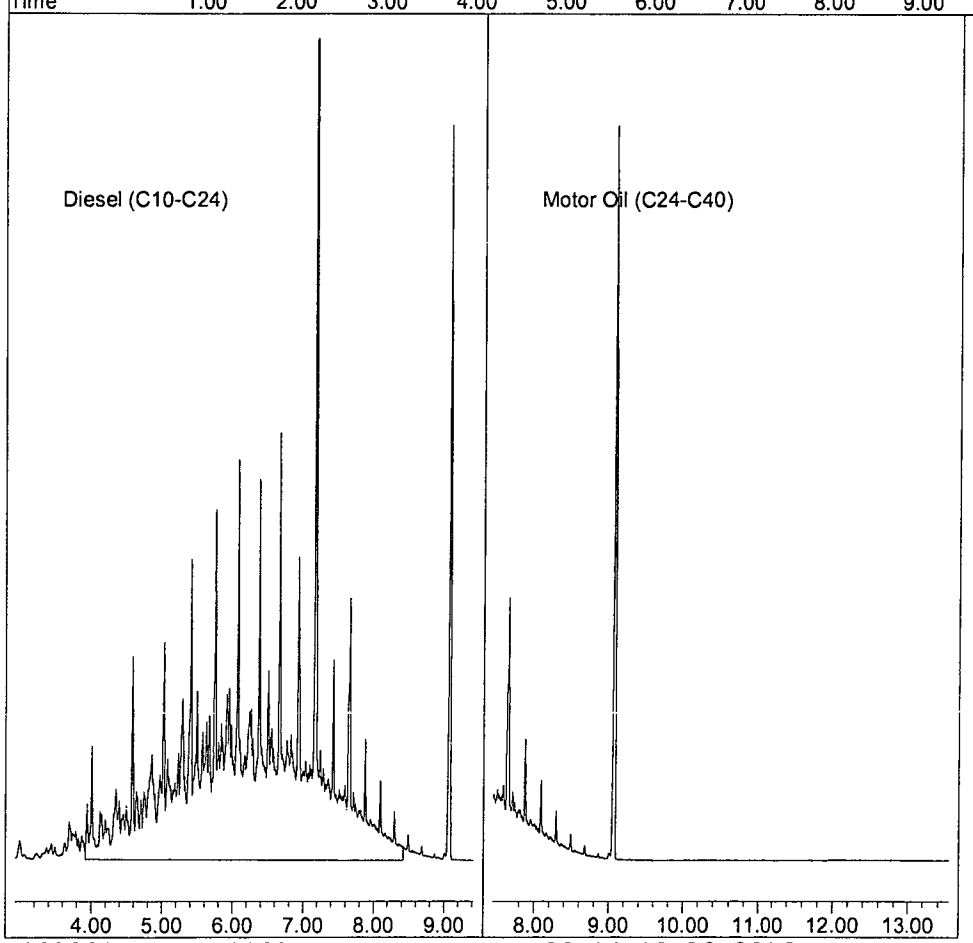
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.17	177261246	31.263 ppb
Surrogate Spike 30.000		Recovery =	104.21%
5) SA Octacosane(S)	9.08	132563050	37.596 ppb
Surrogate Spike 30.000		Recovery =	125.32%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	2629335633	783.773 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103008.D
Sample : DIESEL 800ppb 11/3/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103009.D Vial: 9
Acq On : 11-3-16 11:28:31 Operator: DP
Sample : DIESEL 1000ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

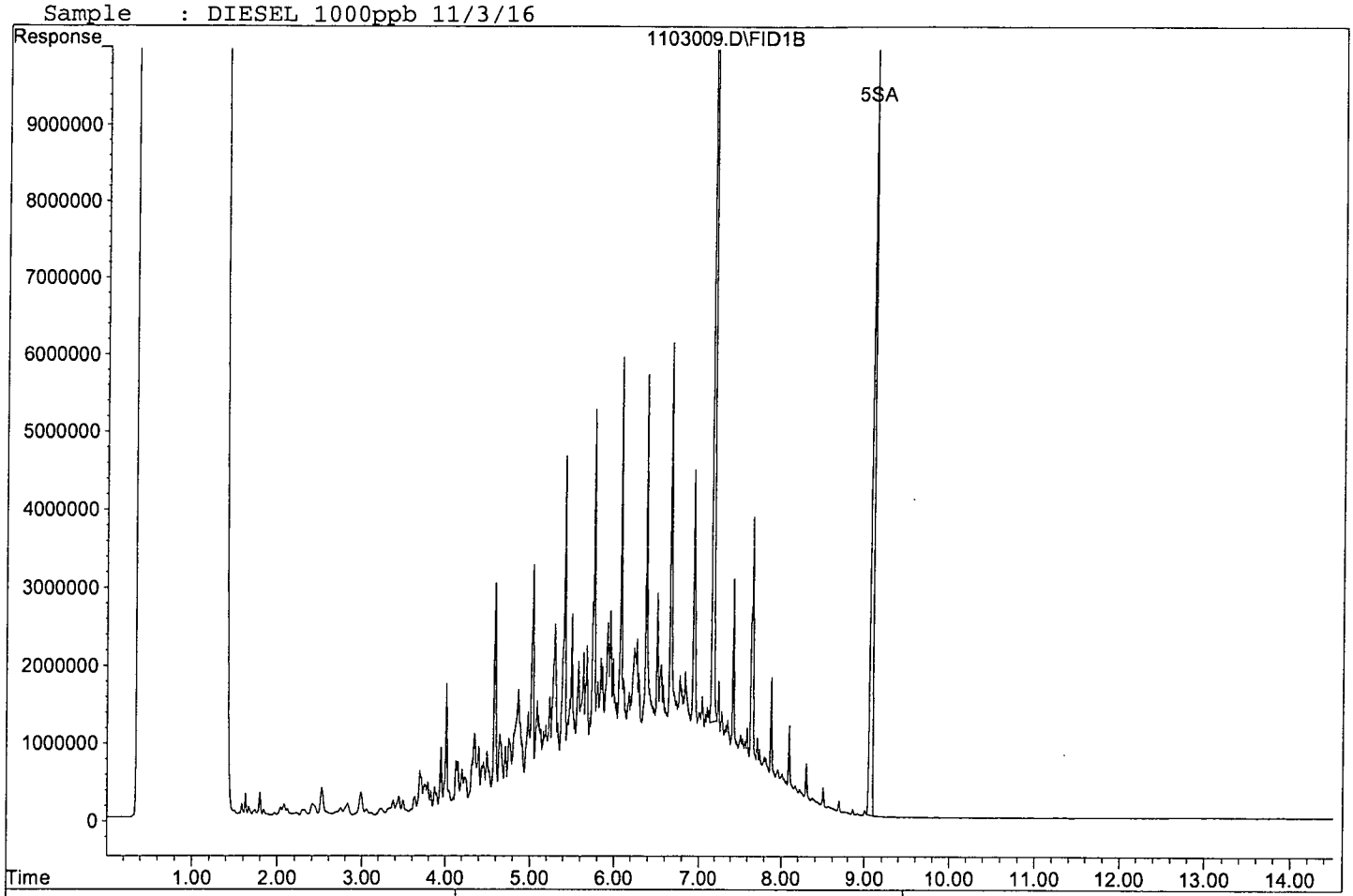
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

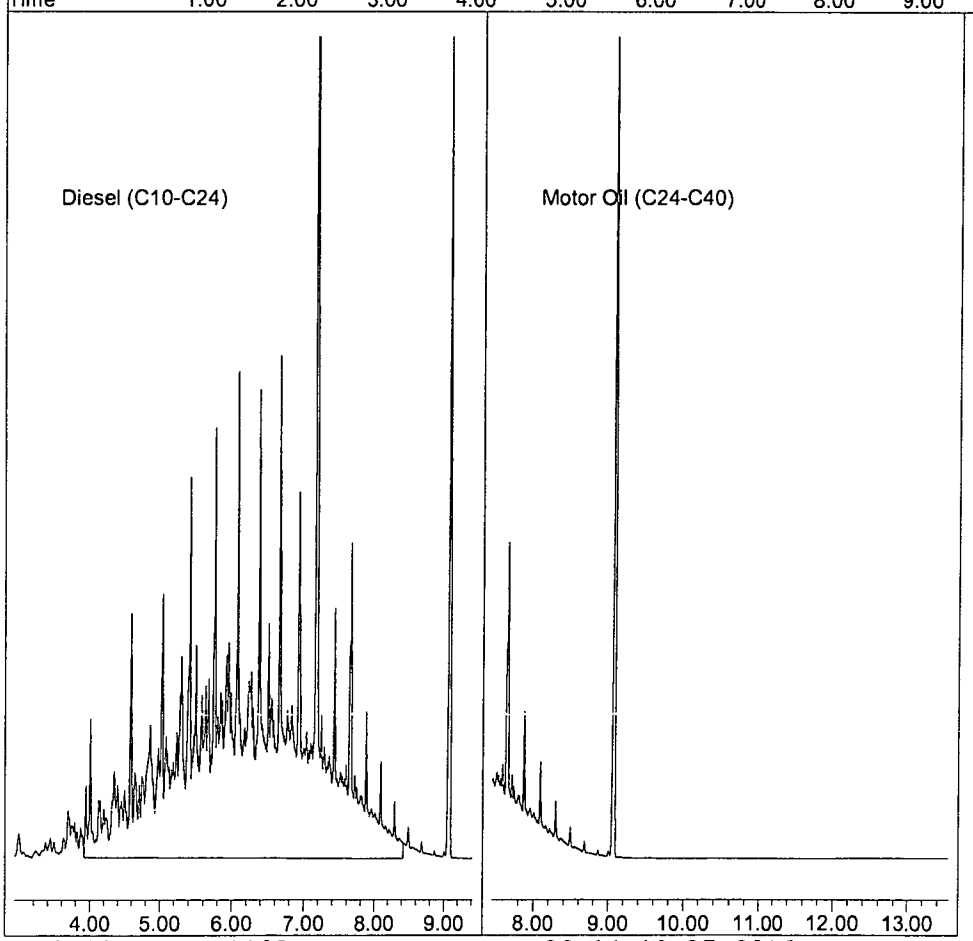
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.18	220584770	38.903	ppb
Surrogate Spike 30.000		Recovery =	129.68%	
5) SA Octacosane(S)	9.08	163627822	46.406	ppb
Surrogate Spike 30.000		Recovery =	154.69%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	3251118324	969.119	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103009.D
Sample : DIESEL 1000ppb 11/3/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028002.D Vial: 2
Acq On : 10-28-16 9:07:30 Operator: DP
Sample : MO 20ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:24 2016 Quant Results File: DOC1103.RES

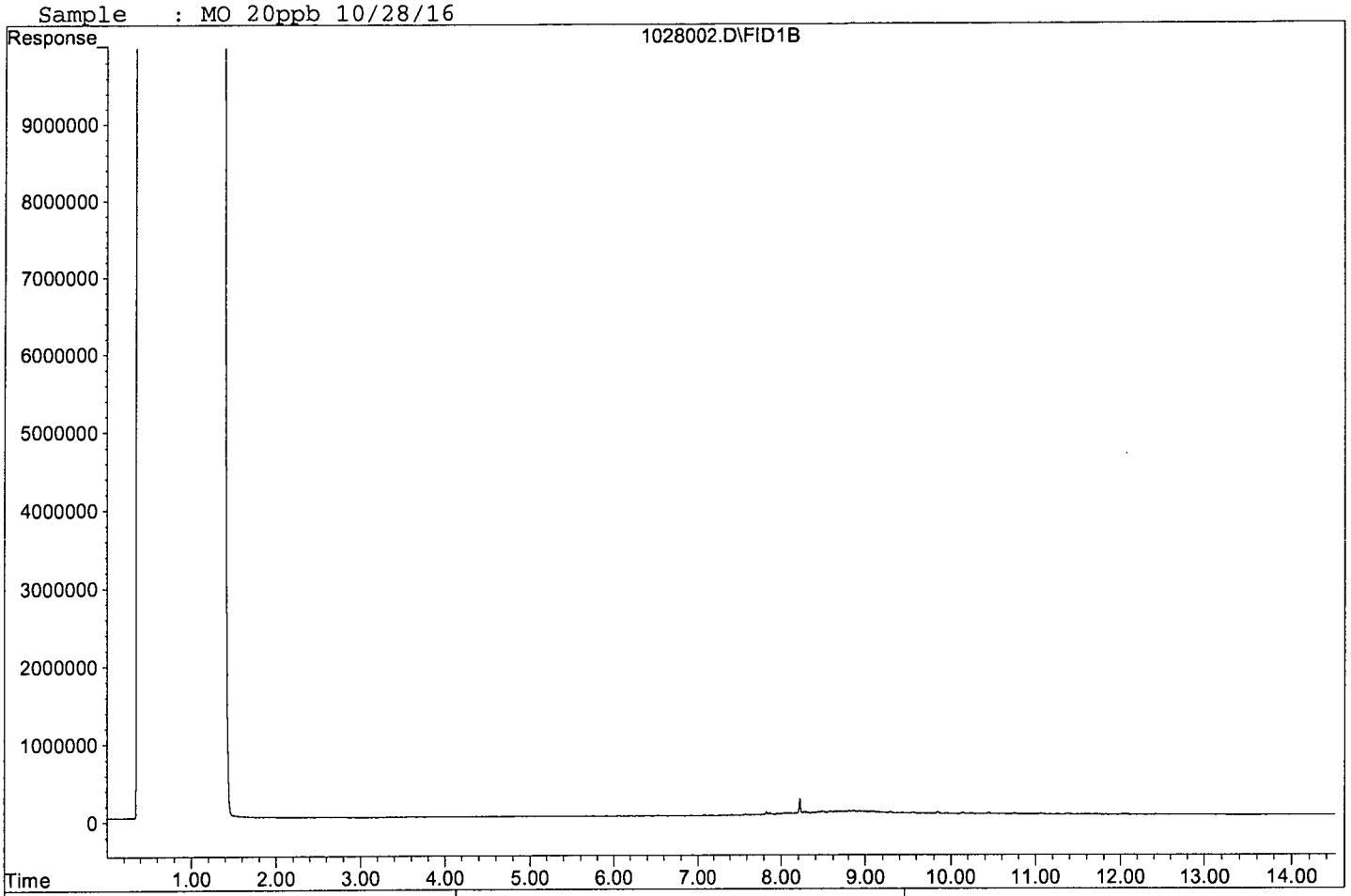
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

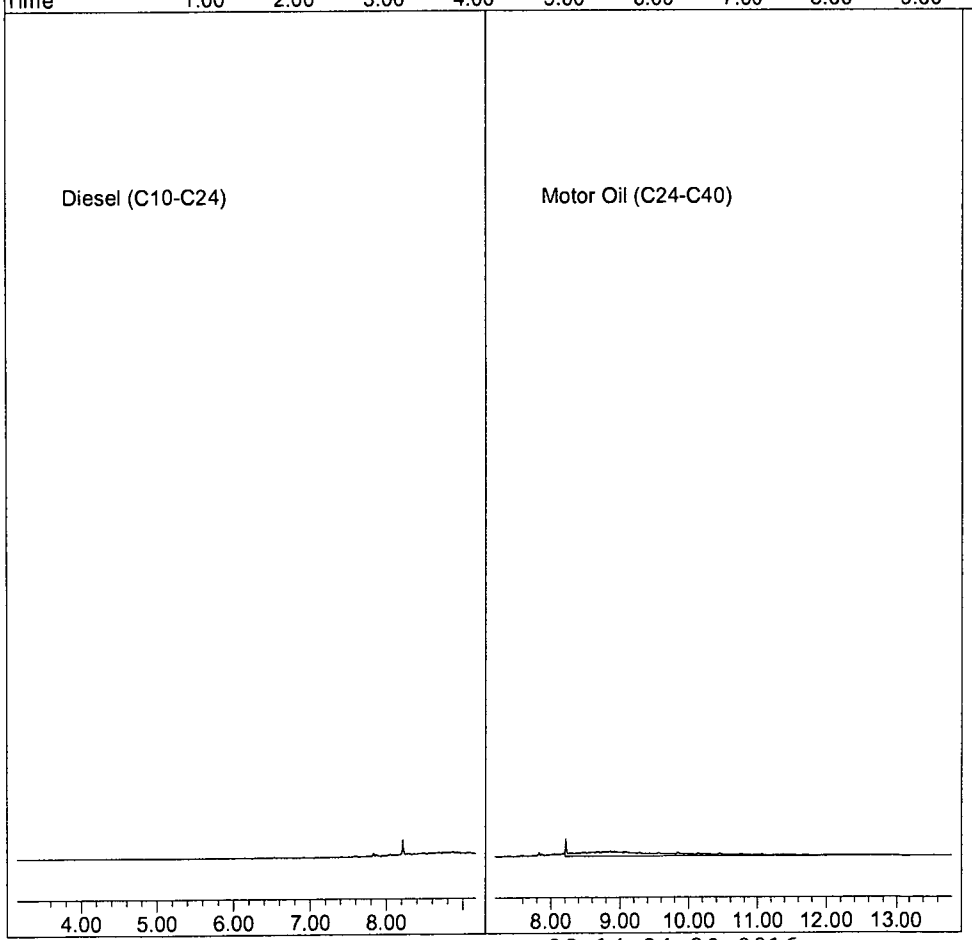
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	62507592	22.438 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028002.D
Sample : MO 20ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028003.D Vial: 3
Acq On : 10-28-16 9:28:13 Operator: DP
Sample : MO 50ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:24 2016 Quant Results File: DOC1103.RES

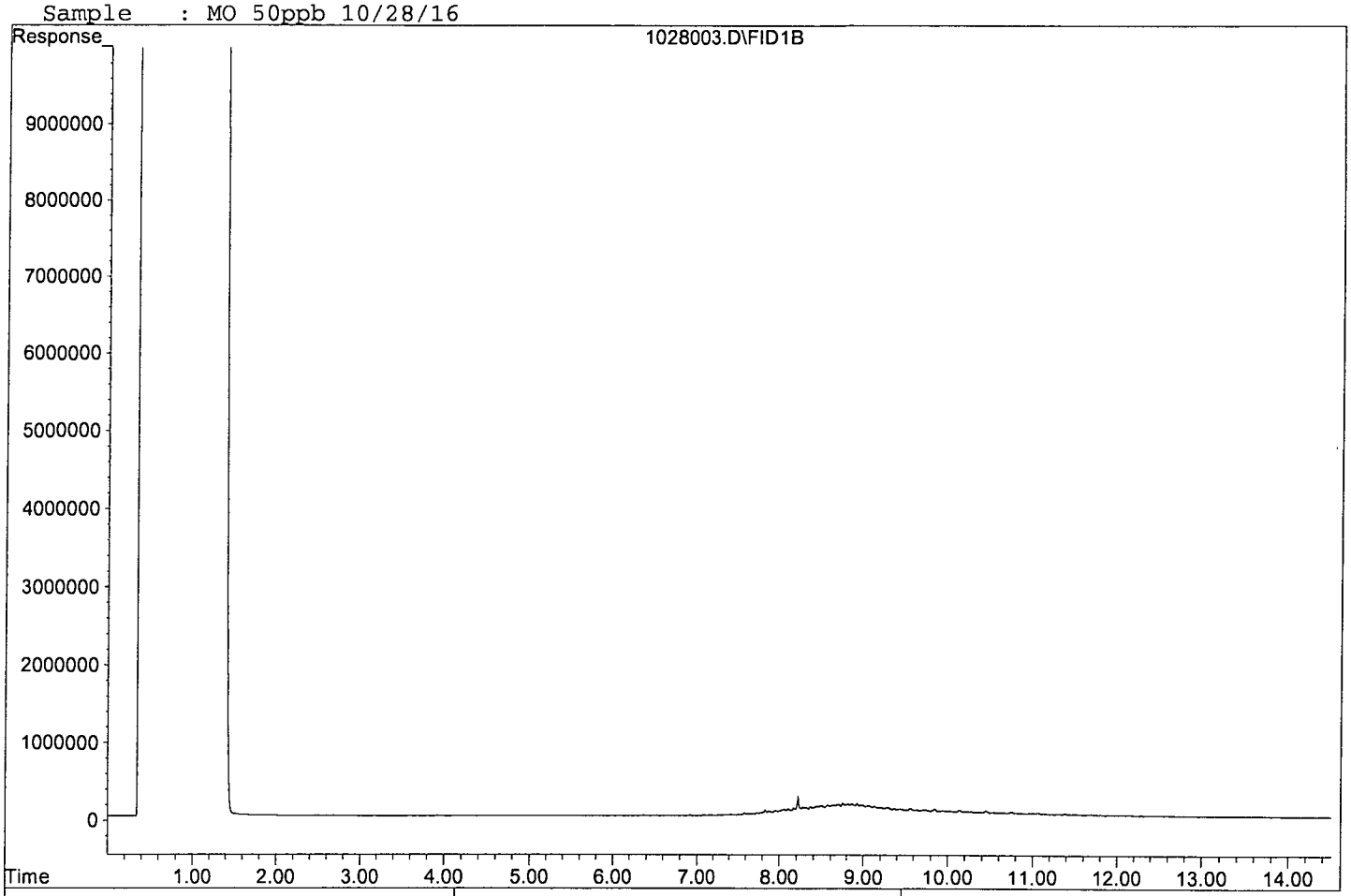
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

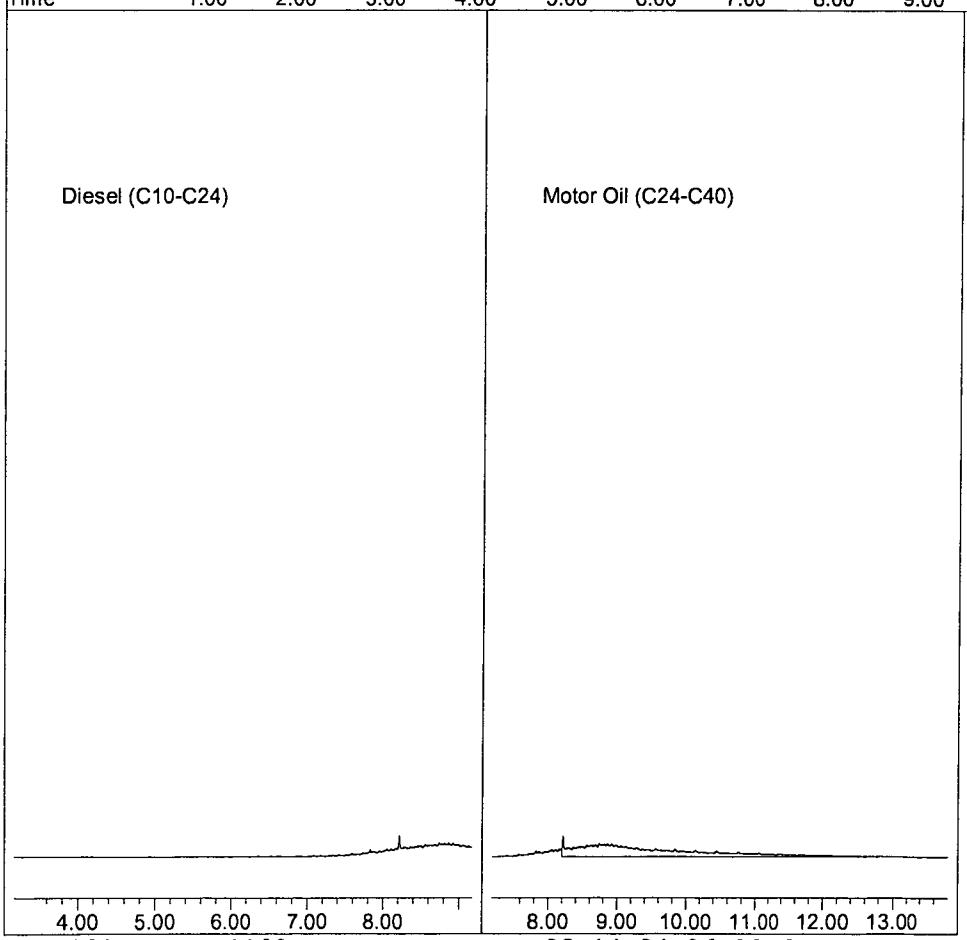
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	160376925	57.571 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028003.D
Sample : MO 50ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028004.D Vial: 4
Acq On : 10-28-16 9:49:06 Operator: DP
Sample : MO 250ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:24 2016 Quant Results File: DOC1103.RES

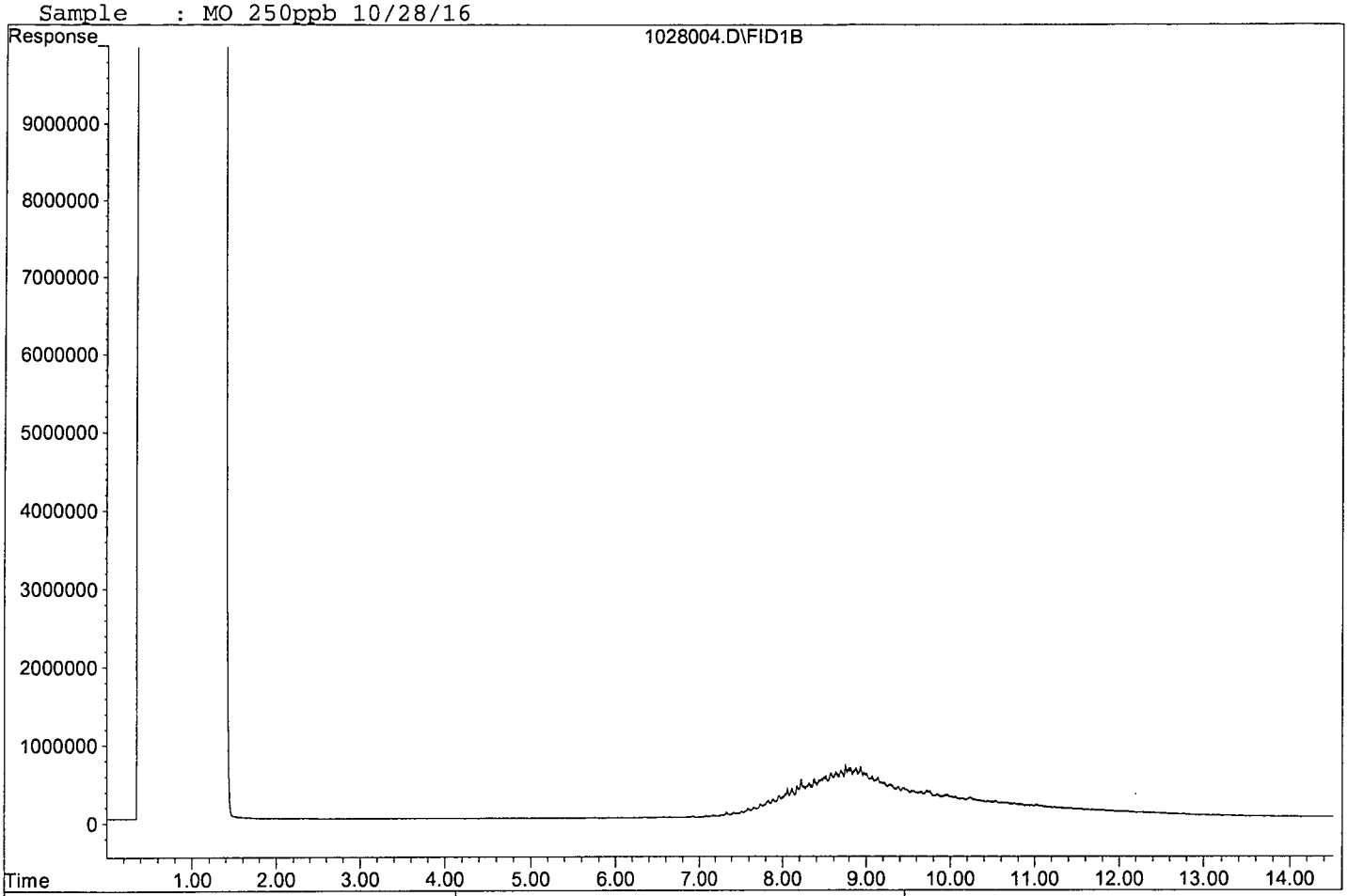
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

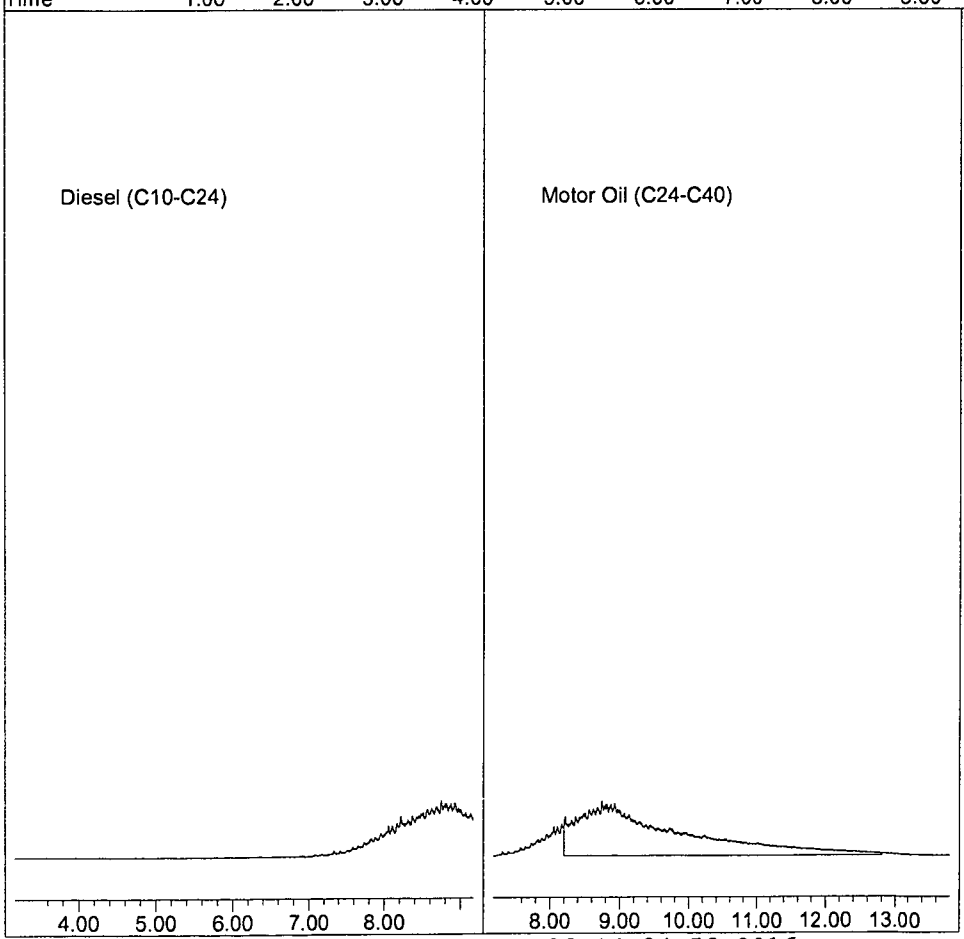
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	641488837	230.275 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028004.D
Sample : MO 250ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028005.D Vial: 5
Acq On : 10-28-16 10:09:58 Operator: DP
Sample : MO 1000ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:25 2016 Quant Results File: DOC1103.RES

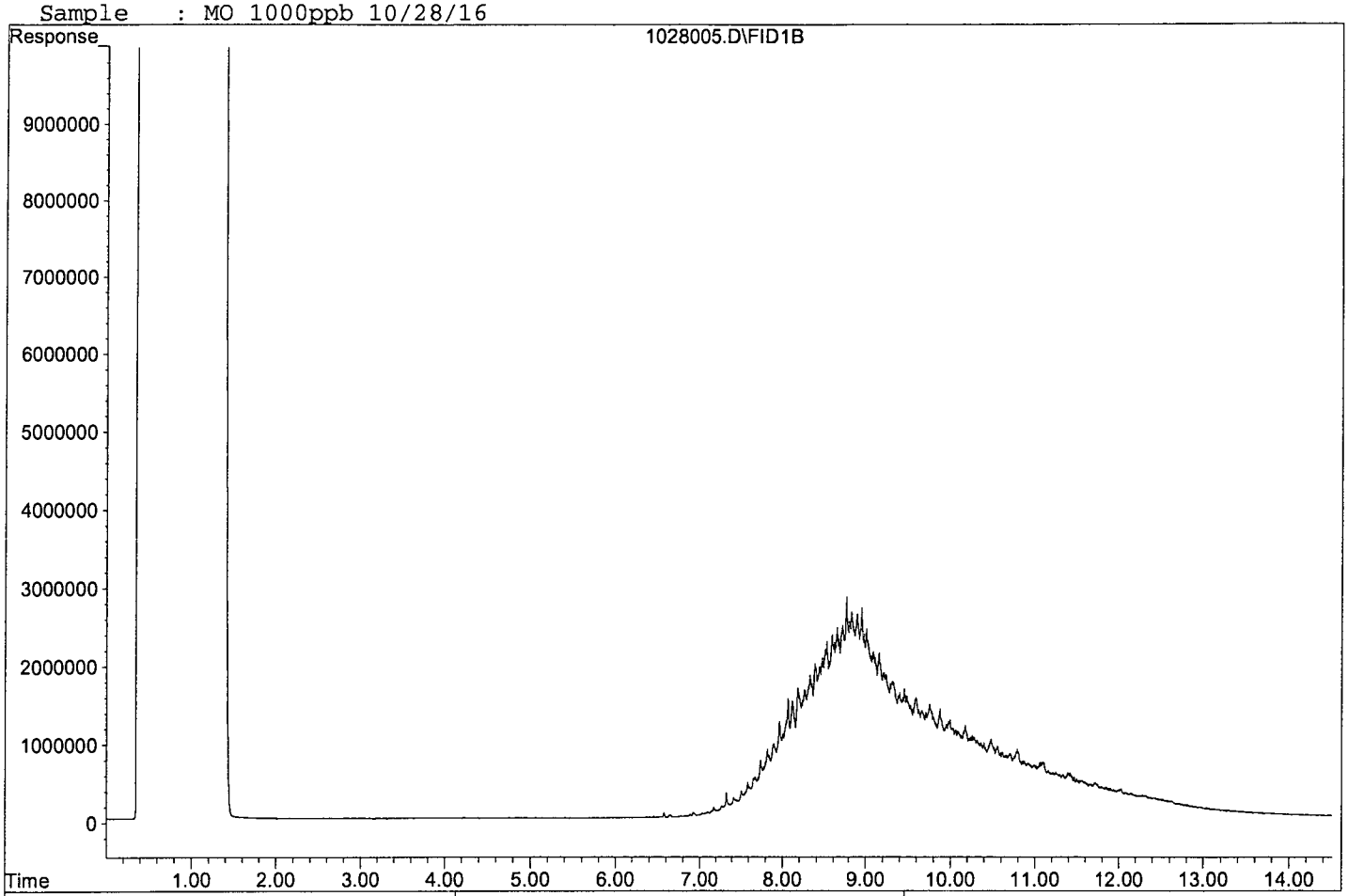
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

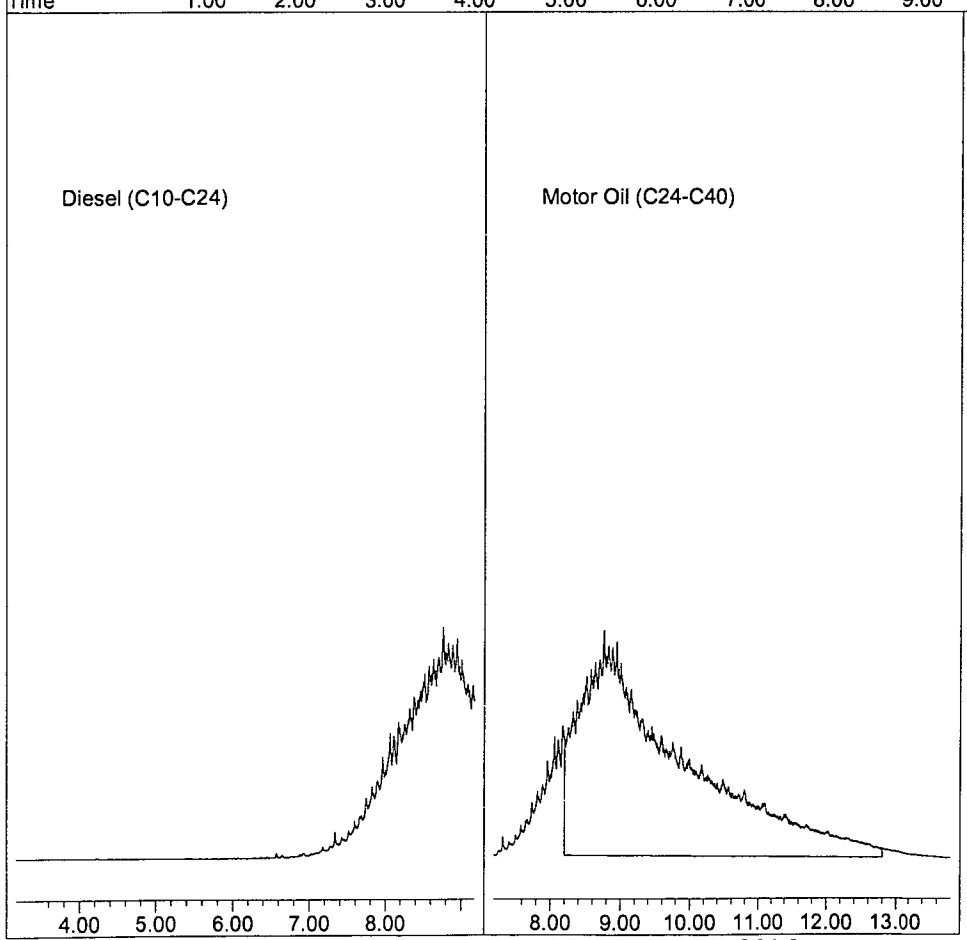
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	2680029704	962.051 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028005.D
Sample : MO 1000ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028006.D Vial: 6
Acq On : 10-28-16 10:30:51 Operator: DP
Sample : MO 1500ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:25 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

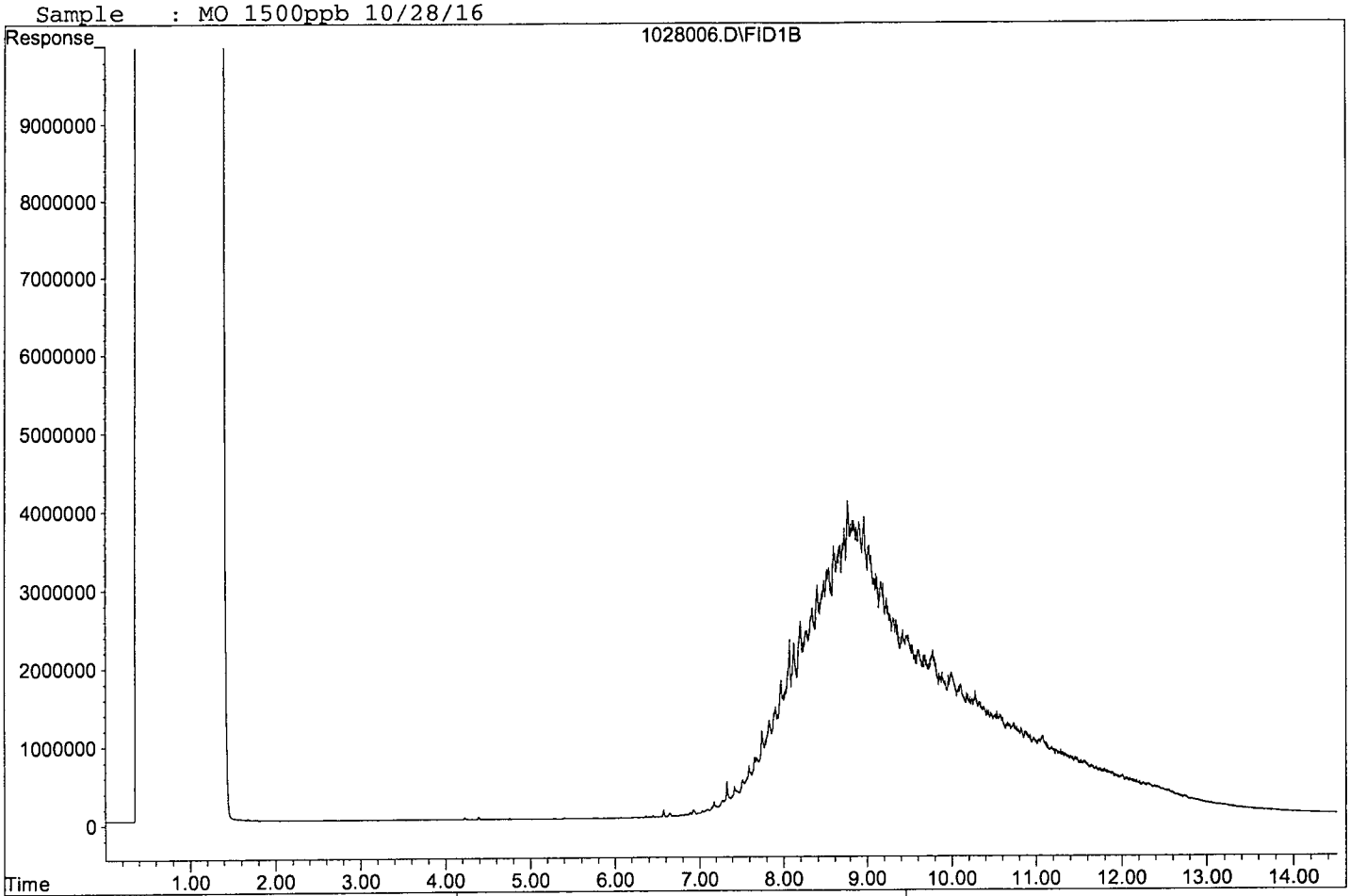
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

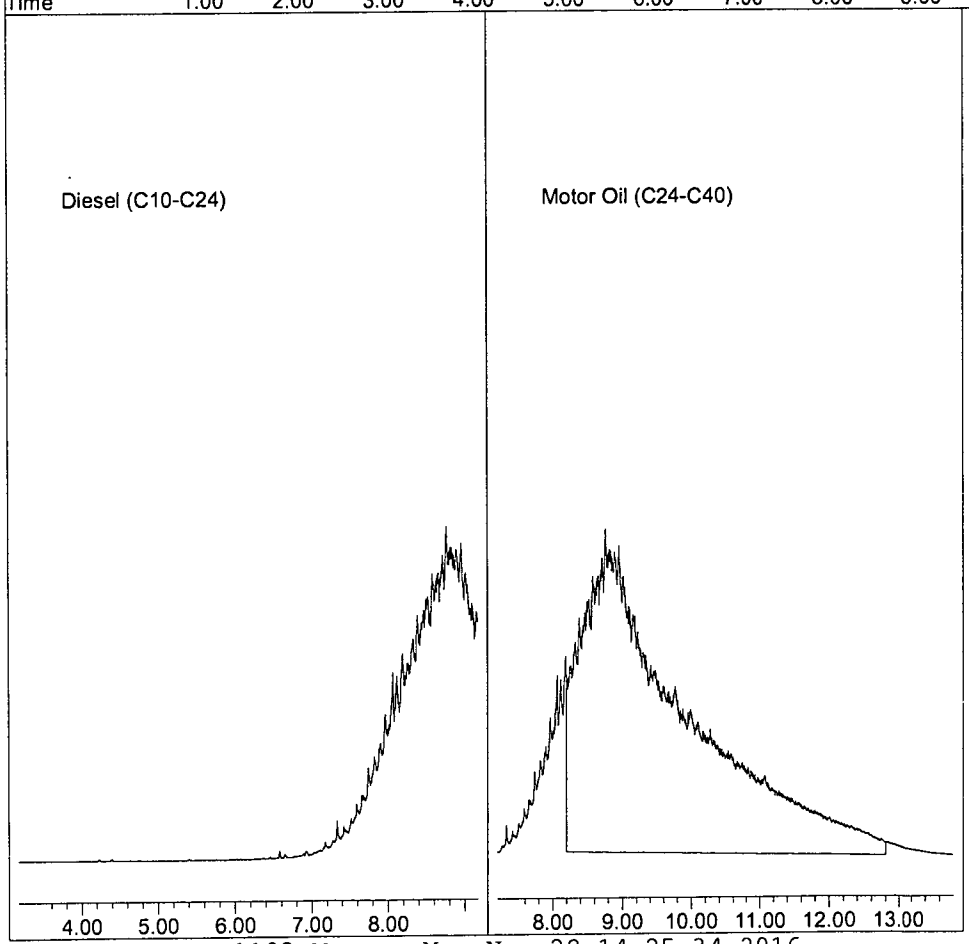
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
Target Compounds				
2) HBTM Motor Oil (C24-C40)	10.50	3965906010	1423.642	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161028\1028006.D
Sample : MO 1500ppb 10/28/16





1028006.D DOC1103.M Mon Nov 28 14:25:34 2016

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028007.D Vial: 7
Acq On : 10-28-16 10:51:50 Operator: DP
Sample : MO 2000ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:25 2016 Quant Results File: DOC1103.RES

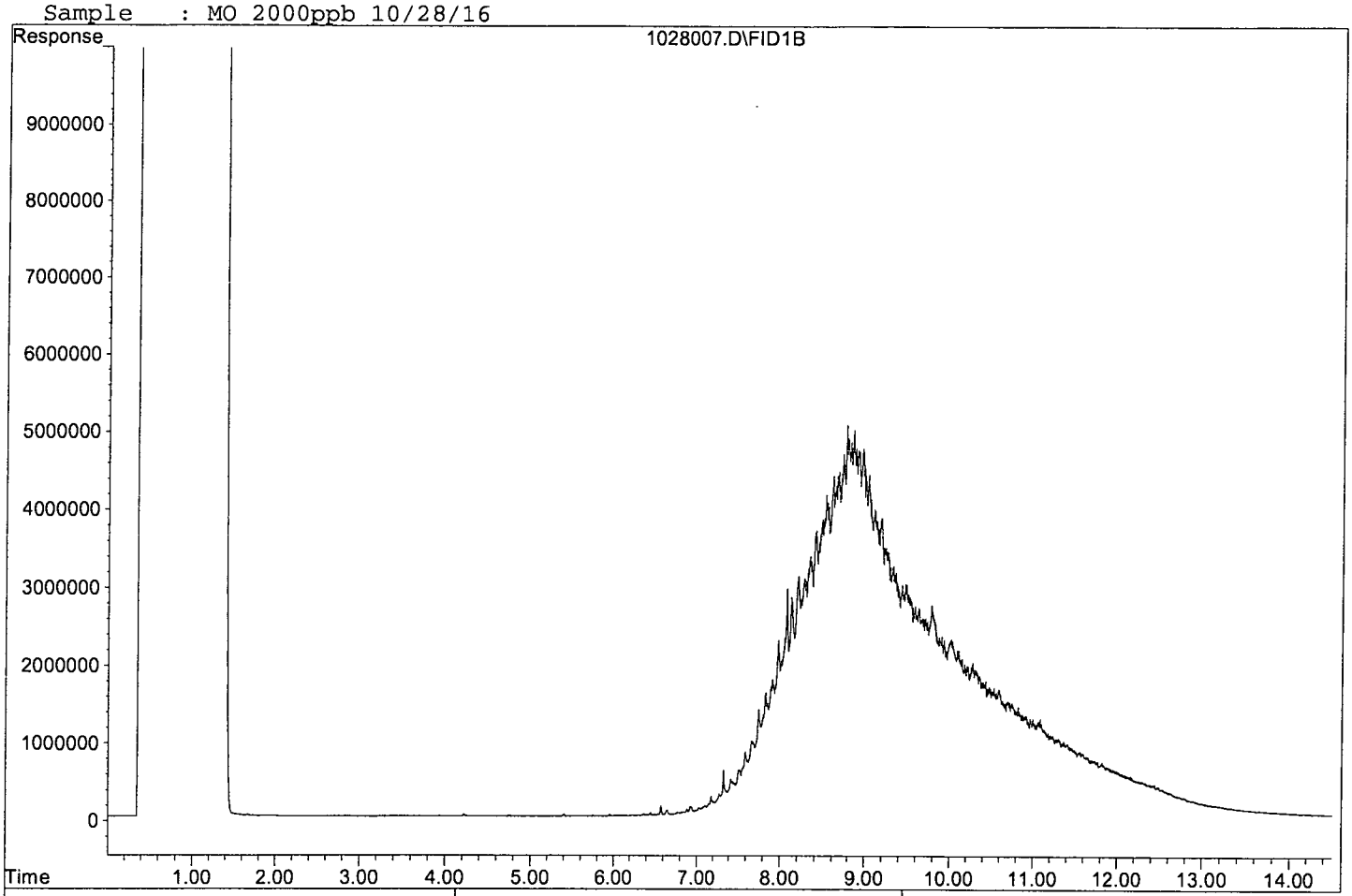
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

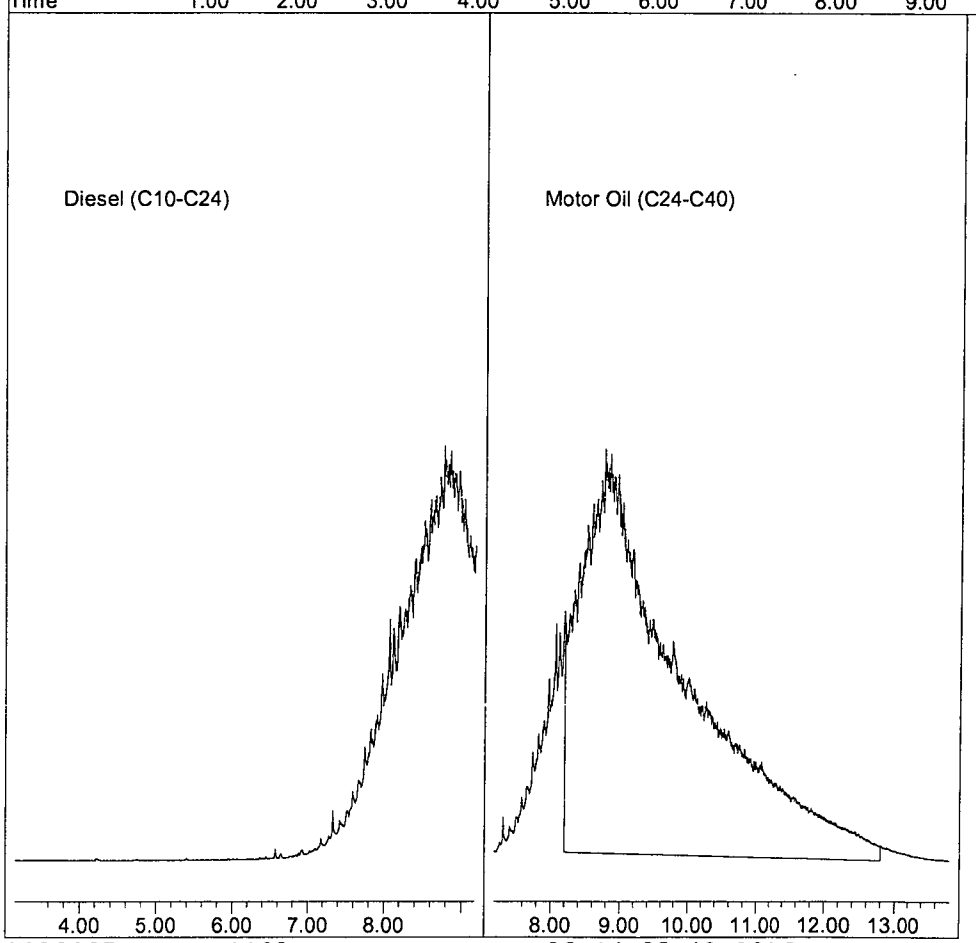
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
Target Compounds				
2) HBTM Motor Oil (C24-C40)	10.50	4983276169	1788.848	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028007.D
Sample : MO 2000ppb 10/28/16





TPH Extractables
DOC1103

Form 7

Second Source Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 11/03/16
Matrix: Instrument: Apollo
Initial Cal. Date: 11/03/16
Data File: 1103012.D 1028008.D
Diesel Motor Oil

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C24)	1727130	1667670	3.4	HATM	
2	HBTM	Motor Oil (C24-C40)	1392870	1239910	11	HBTM	
3							
4							
5							
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35							
36							
37							
38							
39							
40							
		Average			7.2		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103012.D Vial: 12
Acq On : 11-3-16 13:25:11 Operator: DP
Sample : DIESEL-SS 400ppb 8/1/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 15:21 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

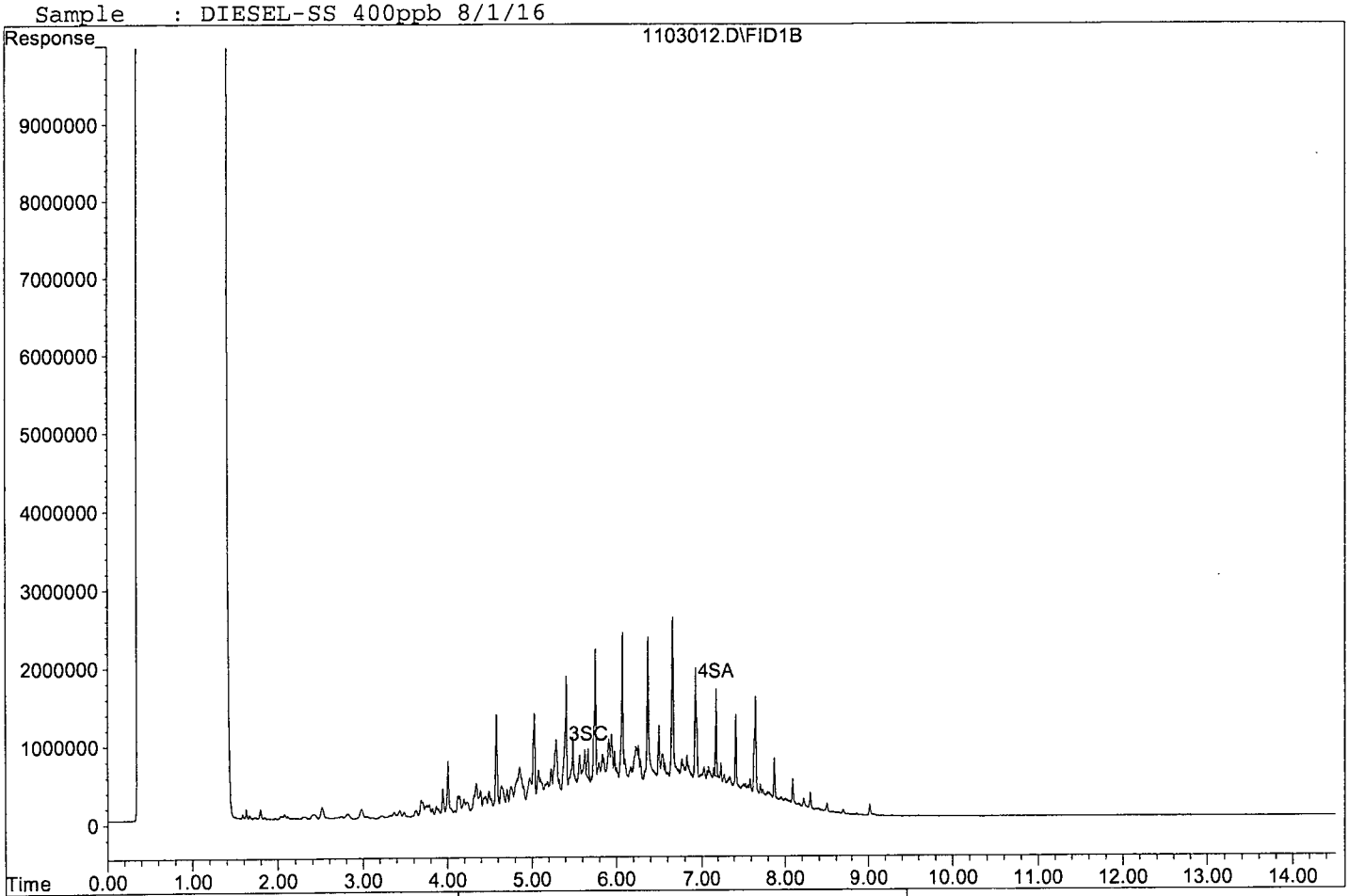
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SC Decanoic Acid(S)	5.67	4681185	3.827 ppb
Surrogate Spike 48.000	Recovery =		7.97%
4) SA Ortho-Terphenyl(S)	7.18	9886456	2.120 ppb
Surrogate Spike 30.000	Recovery =		7.07%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	1345831567	389.615 ppb
2) HBTM Motor Oil (C24-C40)	10.50	43170153	15.497 ppb

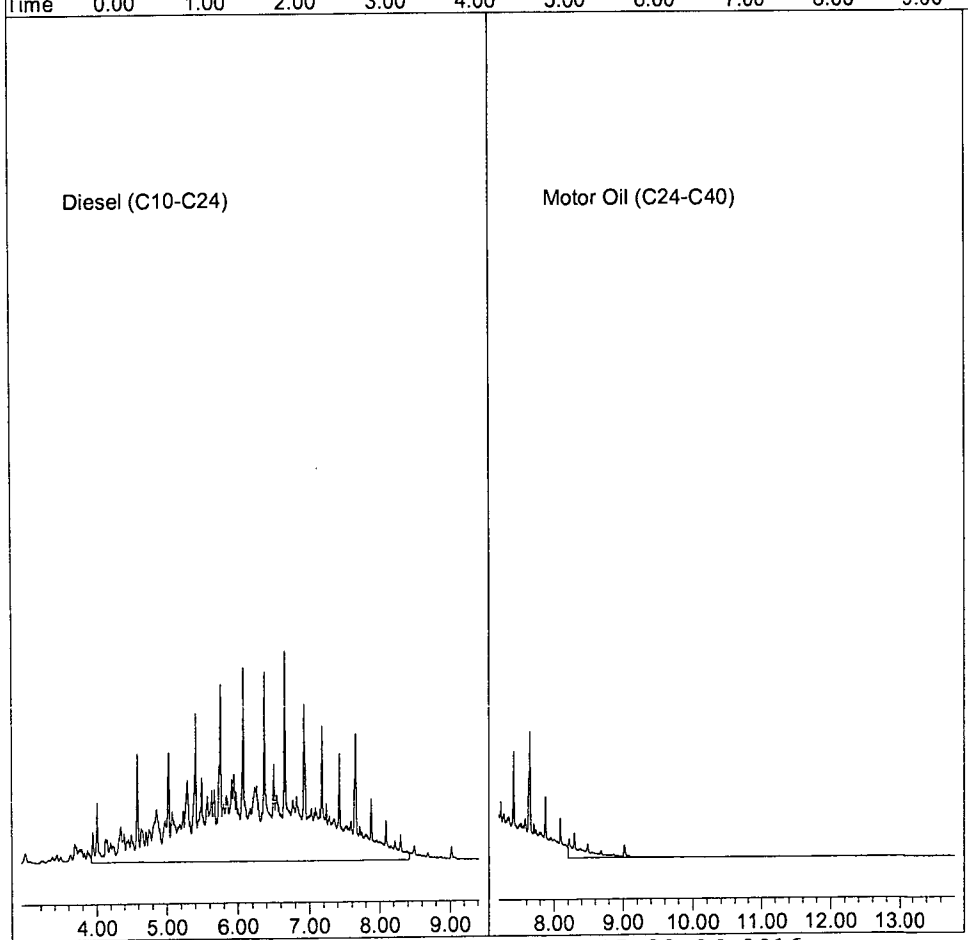
algorithm check: $\frac{1345831567 \times 1}{1727130 \times 2} = 389.6150165$

D.P. 11/28/16

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103012.D
Sample : DIESEL-SS 400ppb 8/1/16





1103012.D DOC1103.M Mon Nov 28 15:22:26 2016

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161028\1028008.D Vial: 8
Acq On : 10-28-16 11:12:44 Operator: DP
Sample : MO SS 1000ppb 7/6/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 15:22 2016 Quant Results File: DOC1103.RES

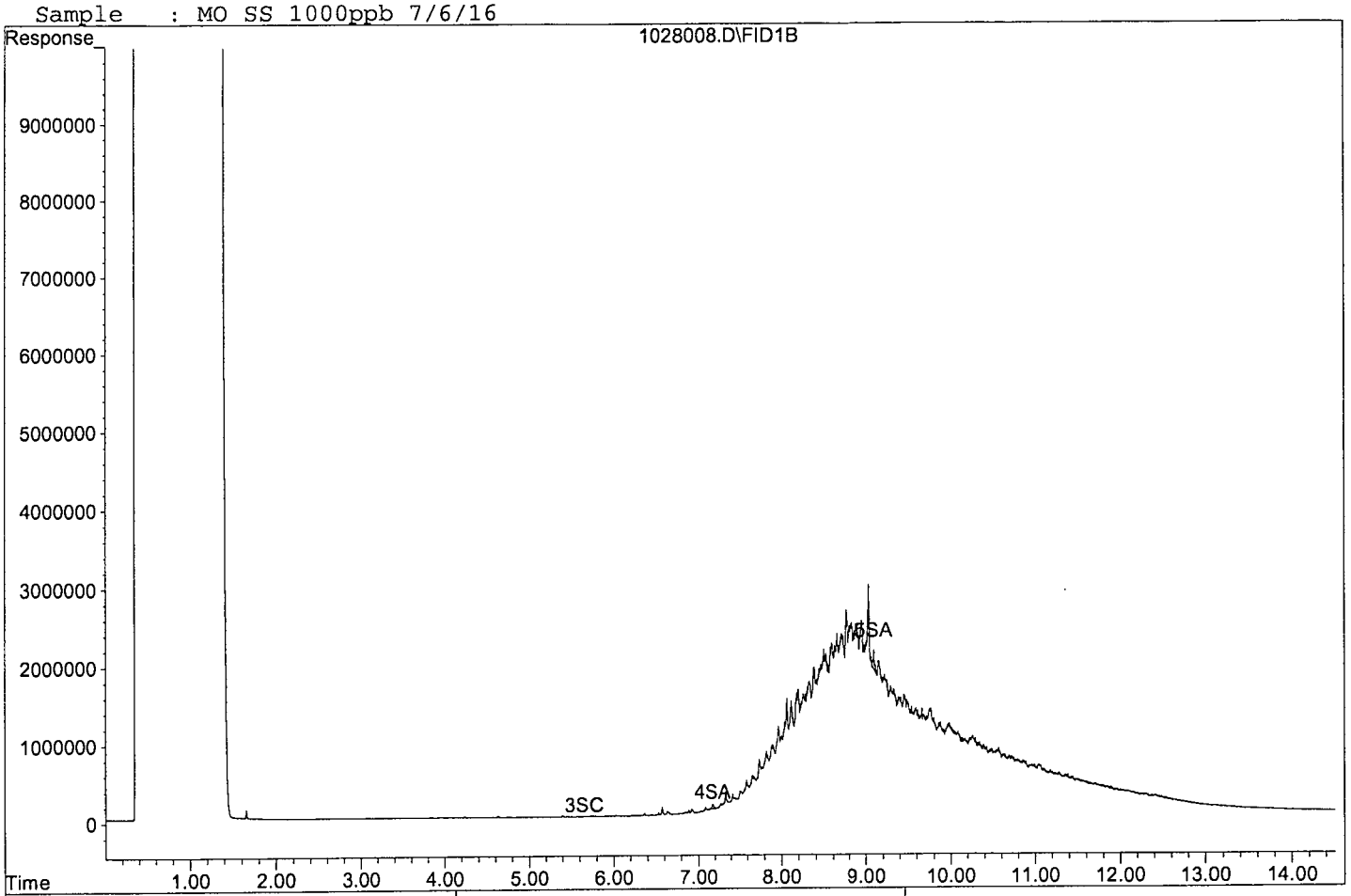
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

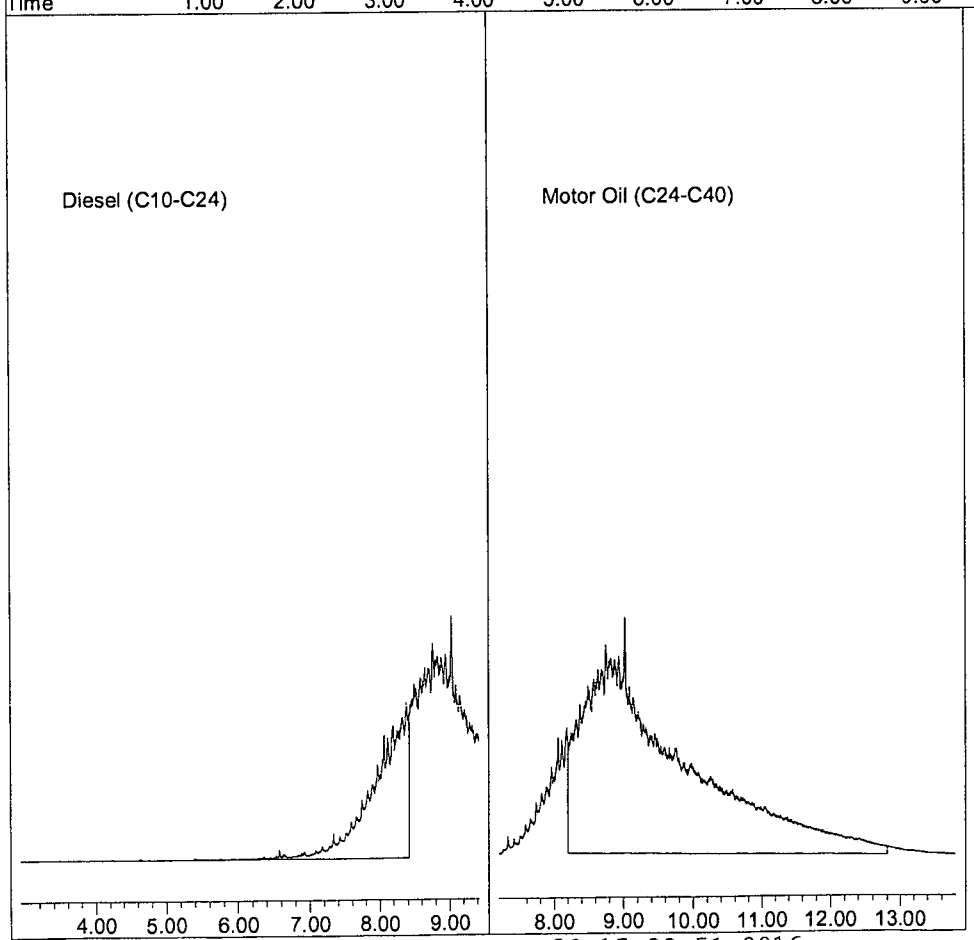
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SC Decanoic Acid(S)	5.65	6816	0.006	ppb
Surrogate Spike 48.000	Recovery	=	0.01%	
4) SA Ortho-Terphenyl(S)	7.17	747984	0.160	ppb
Surrogate Spike 30.000	Recovery	=	0.53%	
5) SA Octacosane(S)	9.09	2492290	0.712	ppb
Surrogate Spike 30.000	Recovery	=	2.37%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	603419098	174.688	ppb
2) HBTM Motor Oil (C24-C40)	10.50	2511616588	901.596	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028008.D
Sample : MO SS 1000ppb 7/6/16





1028008.D DOC1103.M Mon Nov 28 15:22:51 2016

TPH Extractables
DOC1103

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/21/16
Instrument: Apollo
Initial Cal. Date: 10/19/16
Data File: 1121002,4.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1727130	1694440	1.9	HATM	
2	HBTM	Motor Oil (C24-C40)	1392870	1290070	7.4	HBTM	
3							
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37							
38							
39							
40							
		Average			4.7		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161121\1121002.D Vial: 2
Acq On : 11-21-16 13:08:08 Operator: DP
Sample : CCV: DIESEL 400ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 21 14:37 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

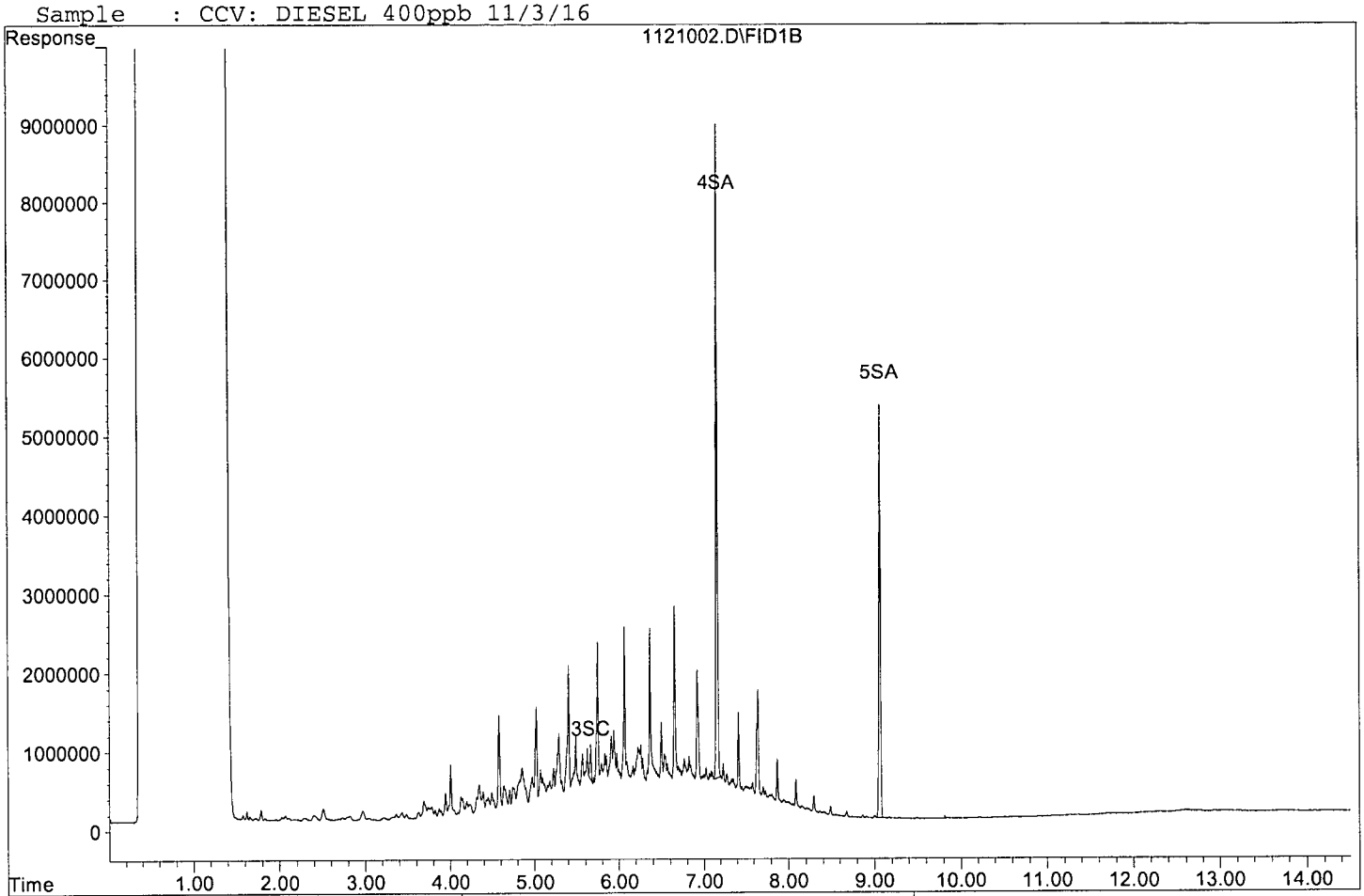
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

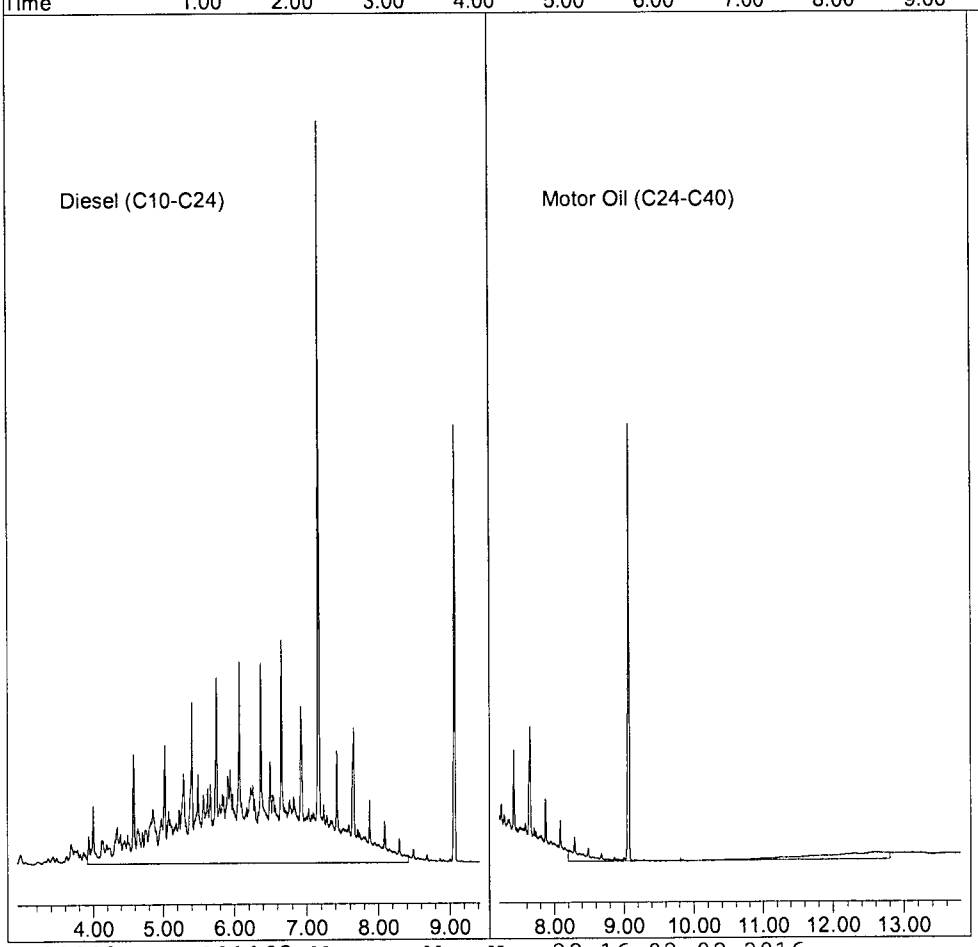
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SC Decanoic Acid(S)	5.66	4821680	3.942 ppb
Surrogate Spike 48.000		Recovery =	8.21%
4) SA Ortho-Terphenyl(S)	7.17	91731962	19.666 ppb
Surrogate Spike 30.000		Recovery =	65.55%
5) SA Octacosane(S)	9.07	66118060	18.893 ppb
Surrogate Spike 30.000		Recovery =	62.98%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	1355555911	392.430 ppb
2) HBTM Motor Oil (C24-C40)	10.50	87859199	31.539 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161121\1121002.D
Sample : CCV: DIESEL 400ppb 11/3/16





1121002.D DOC1103.M Mon Nov 28 16:02:08 2016

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161121\1121004.D Vial: 4
Acq On : 11-21-16 14:38:53 Operator: DP
Sample : CCV: MO 1000ppb 11/21/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 21 14:54 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

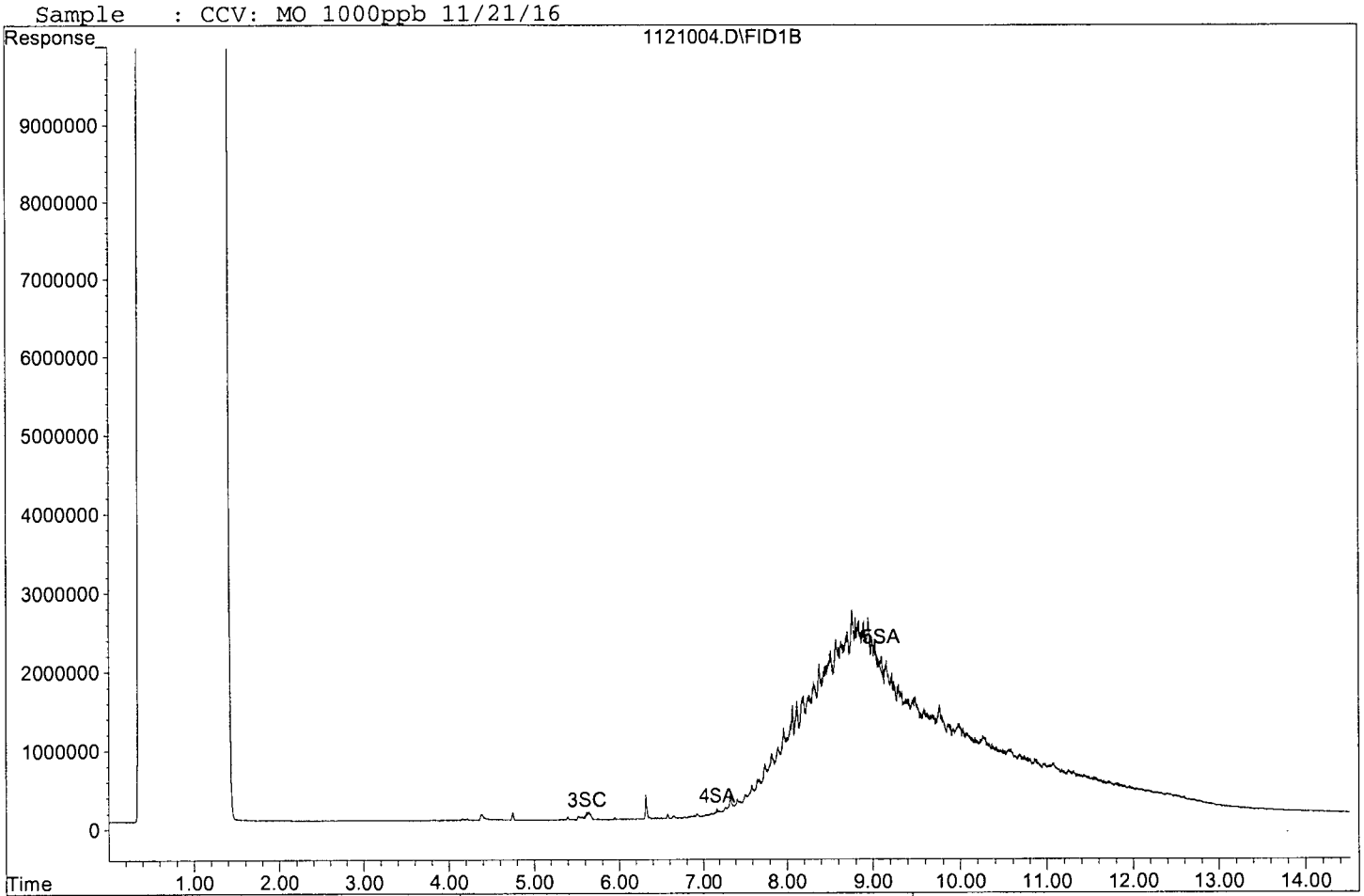
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

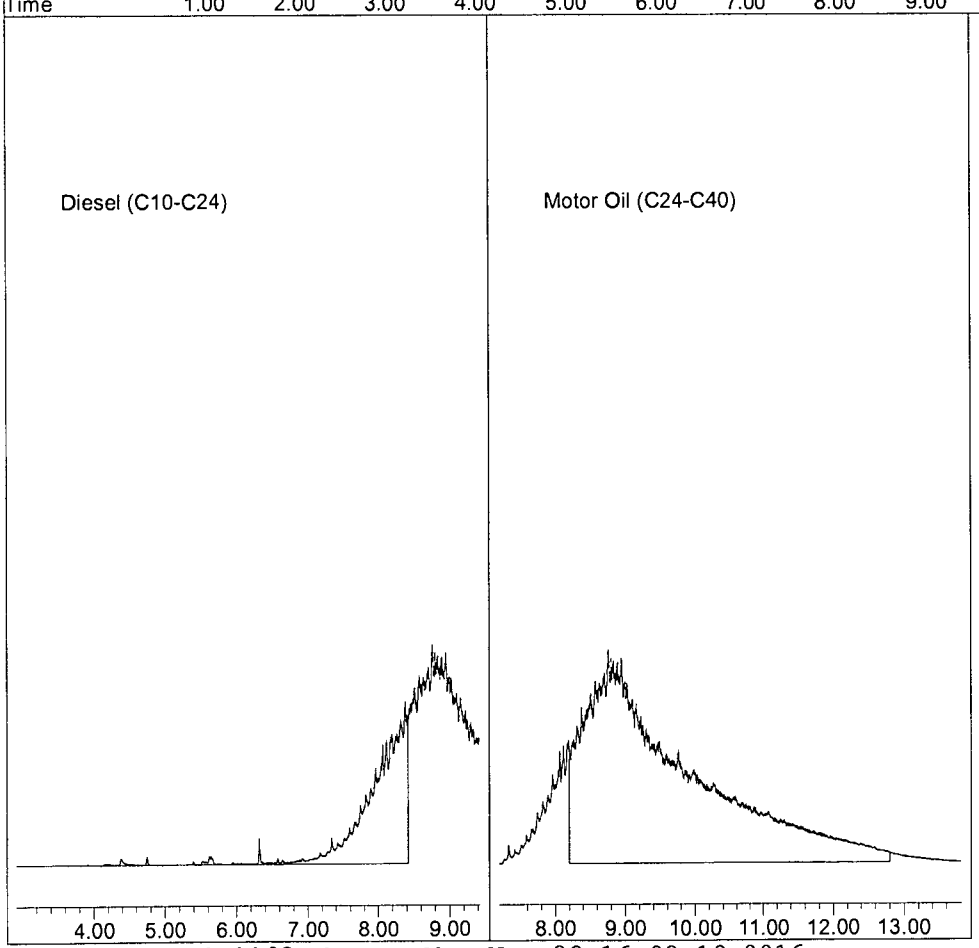
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SC Decanoic Acid(S)	5.62	96502	0.079	ppb
Surrogate Spike 48.000	Recovery =		0.16%	
4) SA Ortho-Terphenyl(S)	7.17	491300	0.105	ppb
Surrogate Spike 30.000	Recovery =		0.35%	
5) SA Octacosane(S)	9.10	2667118	0.762	ppb
Surrogate Spike 30.000	Recovery =		2.54%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	617529921	178.773	ppb
2) HBTM Motor Oil (C24-C40)	10.50	2580147491	926.196	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161121\1121004.D
Sample : CCV: MO 1000ppb 11/21/16





1121004.D DOC1103.M Mon Nov 28 16:02:19 2016

TPH Extractables
DOC1103

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/21/16
Instrument: Apollo
Initial Cal. Date: 10/19/16
Data File: 1121020-21.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1727130	1710860	0.94	HATM	
2	HBTM	Motor Oil (C24-C40)	1392870	1315280	5.6	HBTM	
3							
4							
5							
6							
7							
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12							
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31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			3.3		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161121\1121020.D Vial: 20
Acq On : 11-21-16 20:10:51 Operator: DP
Sample : CCV: DIESEL 400ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 23 16:32 2016 Quant Results File: DOC1103.RES

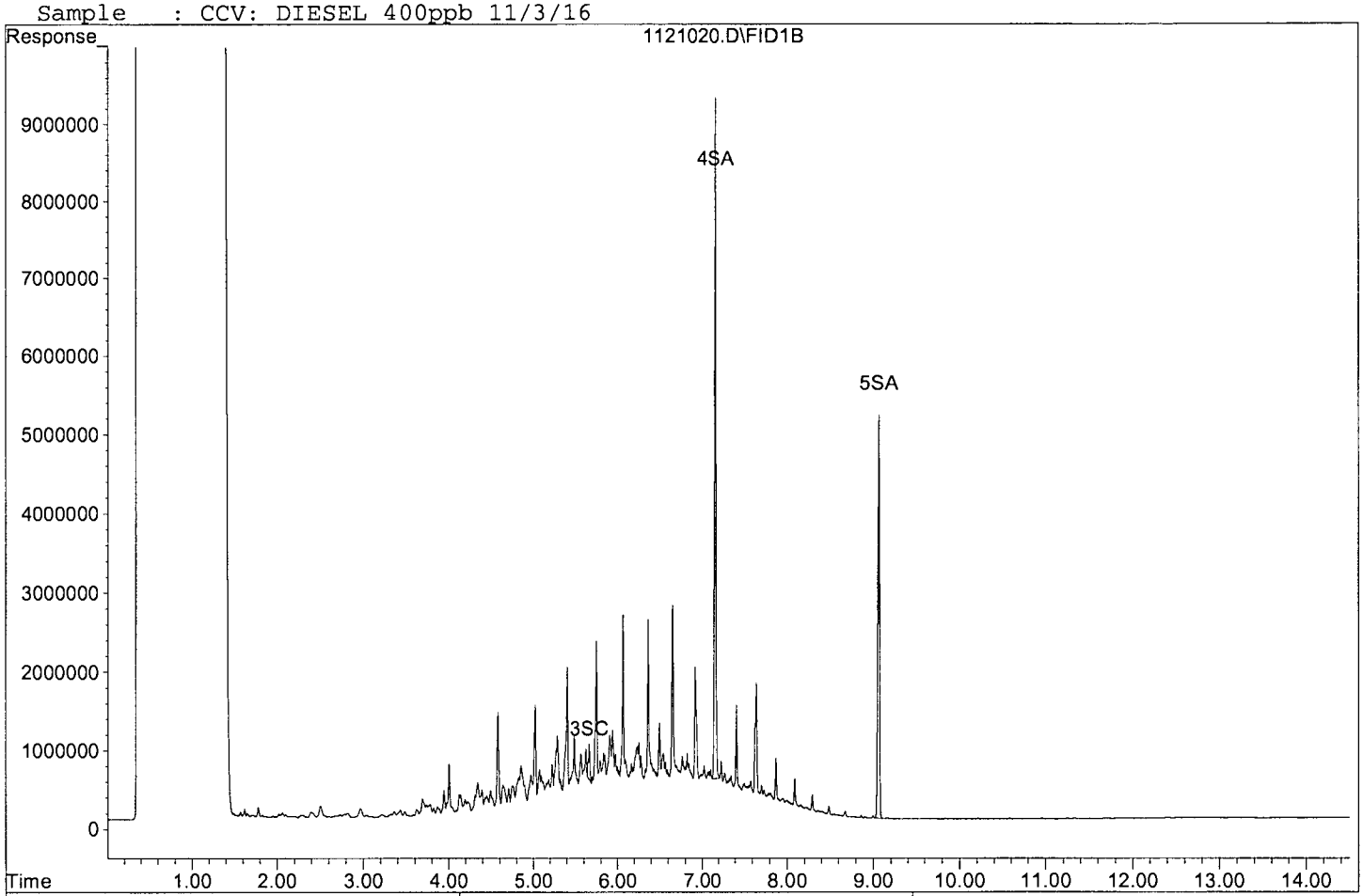
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

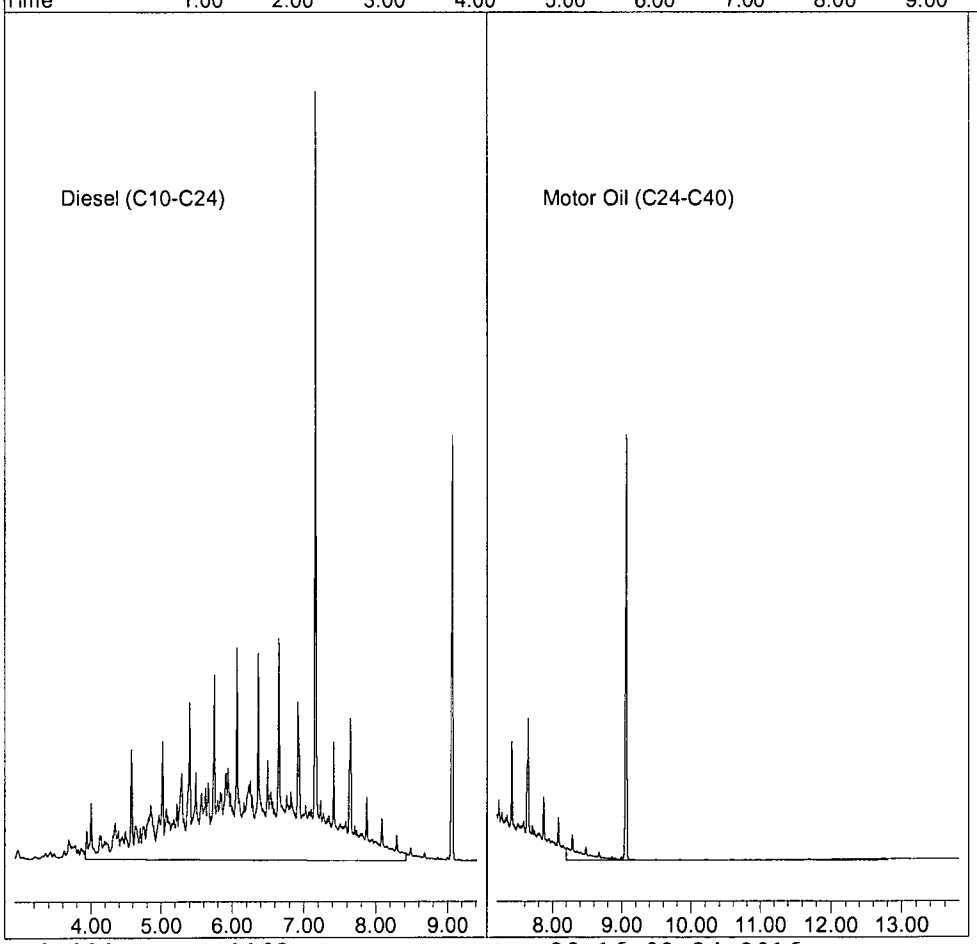
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SC Decanoic Acid(S)	5.66	5593254	4.573 ppb
Surrogate Spike 48.000		Recovery =	9.53%
4) SA Ortho-Terphenyl(S)	7.16	93799021	20.109 ppb
Surrogate Spike 30.000		Recovery =	67.03%
5) SA Octacosane(S)	9.06	69419427	19.836 ppb
Surrogate Spike 30.000		Recovery =	66.12%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	1368690688	396.233 ppb
2) HBTM Motor Oil (C24-C40)	10.50	46099571	16.548 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161121\1121020.D
Sample : CCV: DIESEL 400ppb 11/3/16





1121020.D DOC1103.M Mon Nov 28 16:02:34 2016

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161121\1121021.D Vial: 21
Acq On : 11-21-16 20:31:34 Operator: DP
Sample : CCV: MO 1000ppb 11/21/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 23 16:32 2016 Quant Results File: DOC1103.RES

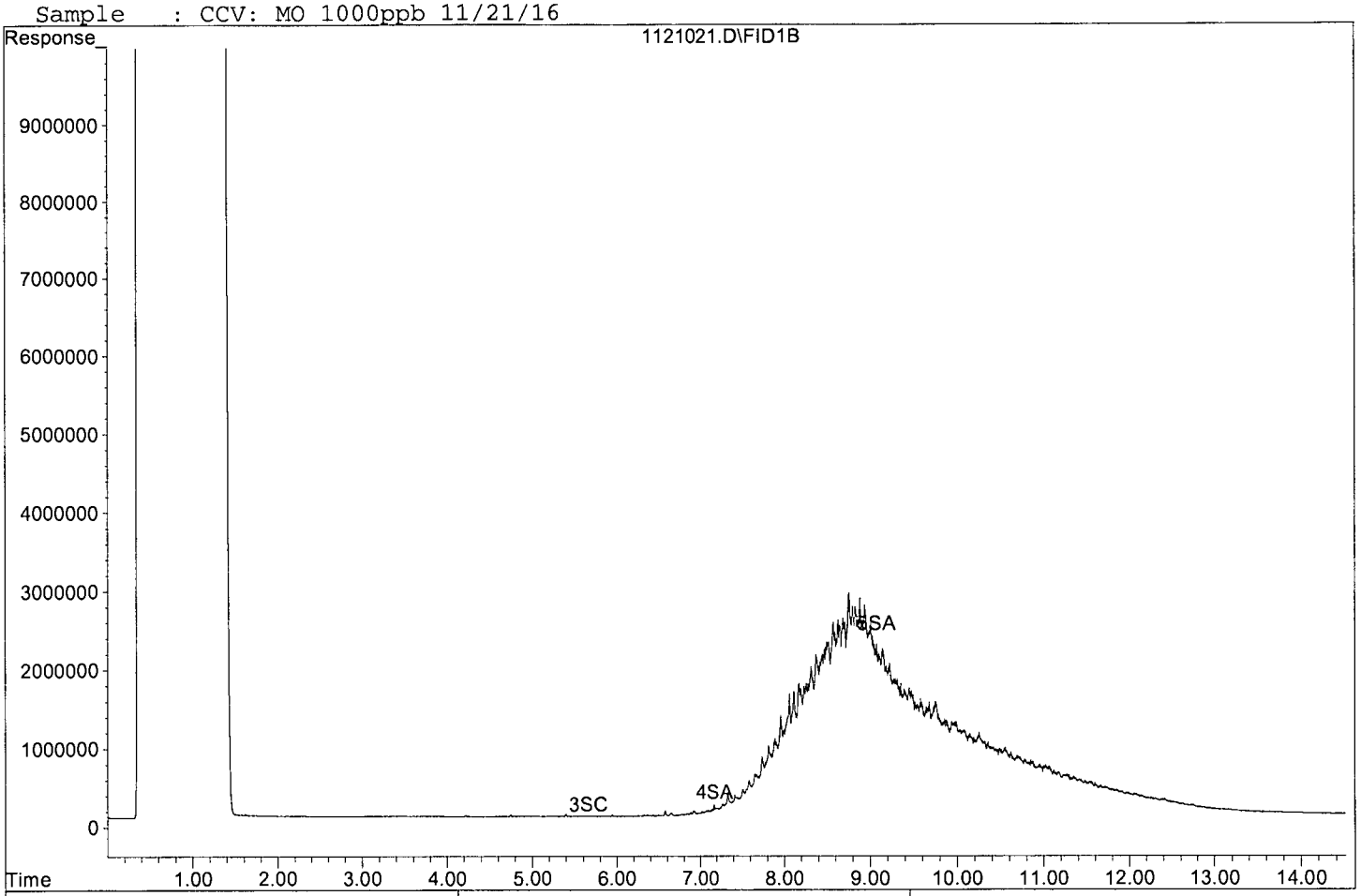
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

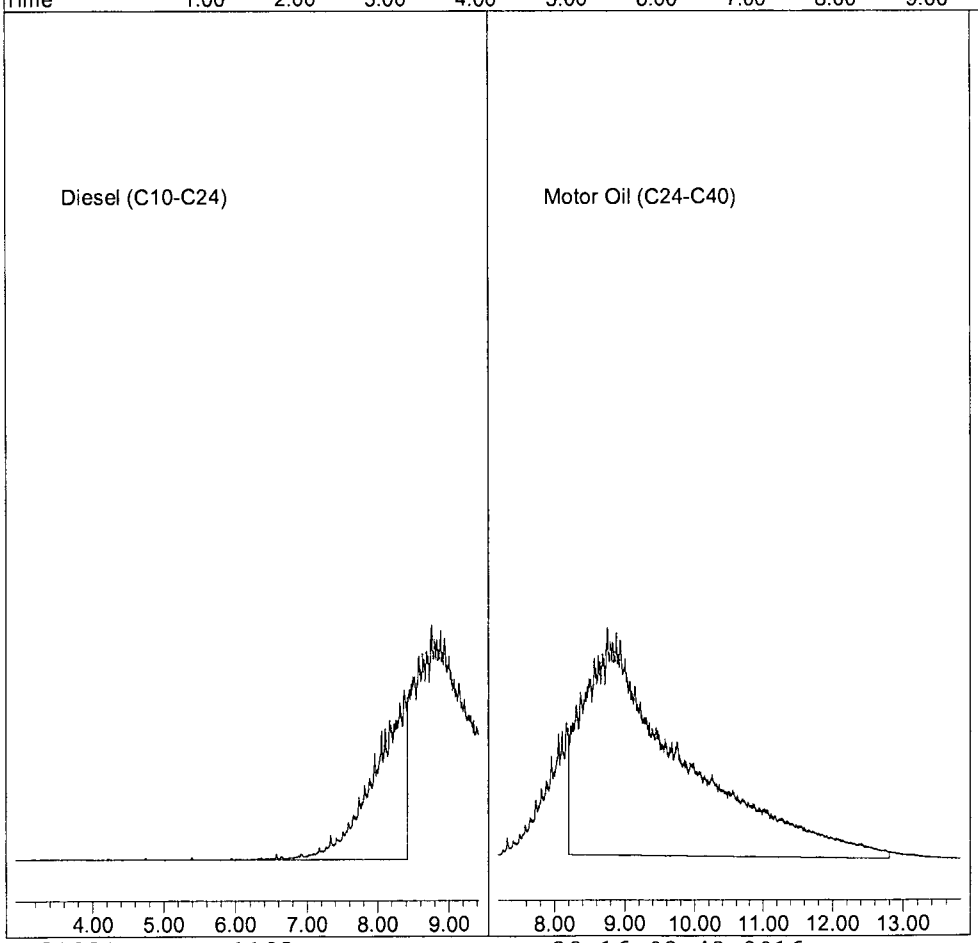
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SC Decanoic Acid(S)	5.66	18626	0.015	ppb
Surrogate Spike 48.000		Recovery =	0.03%	
4) SA Ortho-Terphenyl(S)	7.17	606747	0.130	ppb
Surrogate Spike 30.000		Recovery =	0.43%	
5) SA Octacosane(S)	9.07	1408404	0.402	ppb
Surrogate Spike 30.000		Recovery =	1.34%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	642328126	185.952	ppb
2) HBTM Motor Oil (C24-C40)	10.50	2630565910	944.295	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161121\1121021.D
Sample : CCV: MO 1000ppb 11/21/16





ORGANICS

Raw Data

APPL, INC.

Method Blank
EPA 8015B TPH WATER

Blank Name/QCG: **161118W-45866 - 214015**
Batch ID: #DOC53-161118A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	11/18/16	11/21/16
BLANK	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	11/18/16	11/21/16
BLANK	SURROGATE: OCTACOSANE (S)	94.7	60-142			%	11/18/16	11/21/16
BLANK	SURROGATE: ORTHO-TERPHEN	76.3	56-125			%	11/18/16	11/21/16

Quant Method:DOC1103.M
Run #:1121005
Instrument:Apollo
Sequence:161121
Initials:DPO

GC SC-Blank-REG MDLs-DOD
Printed: 11/23/16 4:49:51 PM

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161121\1121005.D Vial: 5
Acq On : 11-21-16 14:59:26 Operator: DP
Sample : 161118A BLK 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Nov 23 16:39 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

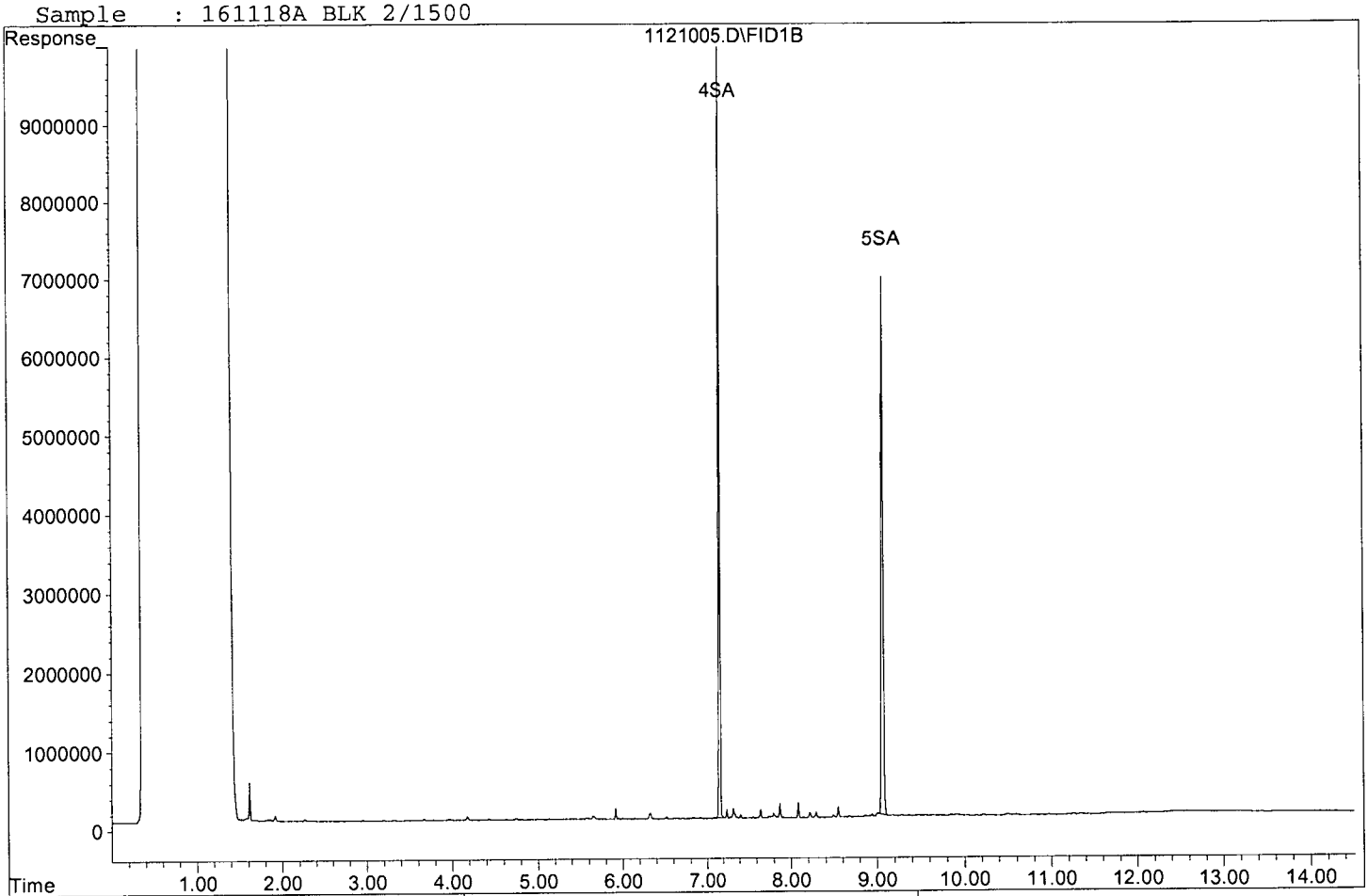
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

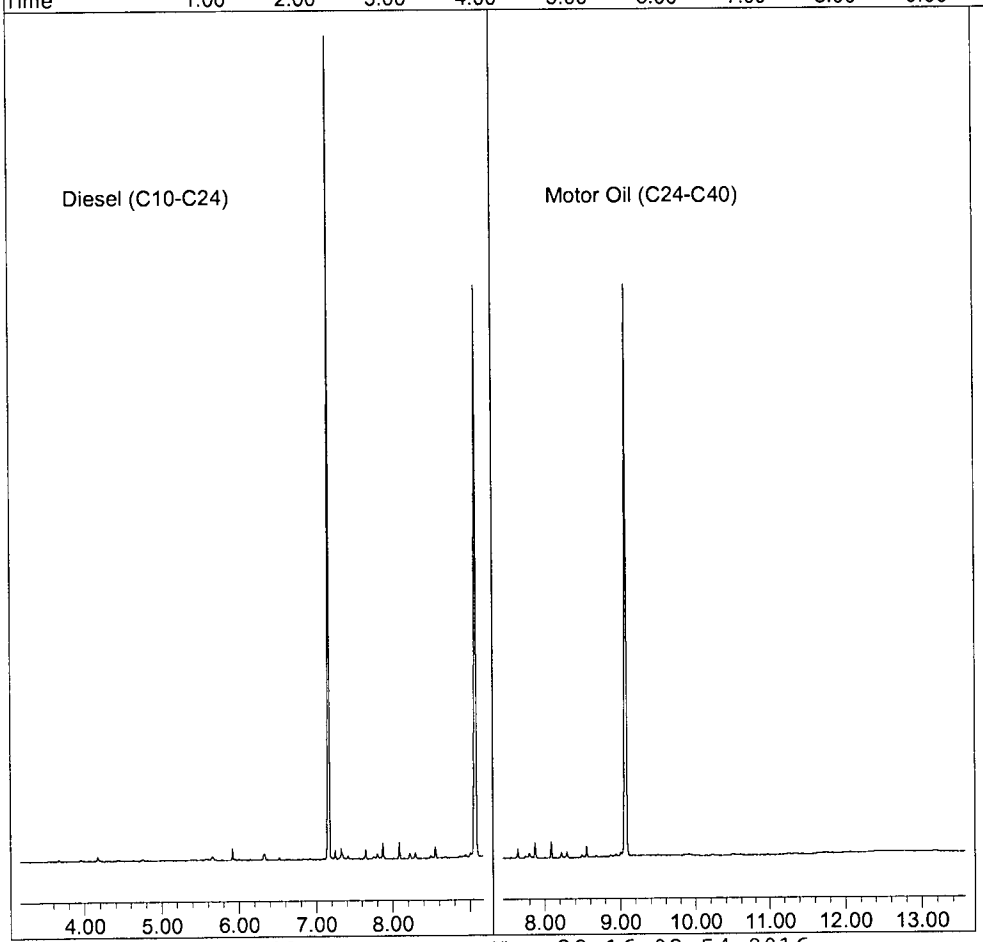
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.17	106797201	30.528	ppb
Surrogate Spike 40.000		Recovery =	76.32%	
5) SA Octacosane(S)	9.08	99409095	37.874	ppb
Surrogate Spike 40.000		Recovery =	94.69%	
Target Compounds				

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161121\1121005.D
Sample : 161118A BLK 2/1500





1121005.D DOC1103.M Mon Nov 28 16:02:54 2016

Laboratory Control Spike Recovery
EPA 8015B TPH WATER

APPL ID: **161118W-45866 LCS - 214015**
Batch ID: #DOC53-161118A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
DIESEL (C10-C24)	1330	988	74.1	36-132
OIL (C24-C40)	1330	1130	84.8	41-113
SURROGATE: OCTACOSANE (S)	40.0	36.2	90.5	60-142
SURROGATE: ORTHO-TERPHENYL (S)	40.0	36.4	91.0	56-125

Comments: _____

Primary	SPK
Quant Method :	DOC1103.M
Extraction Date :	11/18/16
Analysis Date :	11/21/16
Instrument :	Apollo
Run :	1121006
Initials :	DPO

Printed: 11/23/16 4:49:52 PM
APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161121\1121006.D Vial: 6
Acq On : 11-21-16 15:20:13 Operator: DP
Sample : 161118A LCS-1 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Nov 23 16:35 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

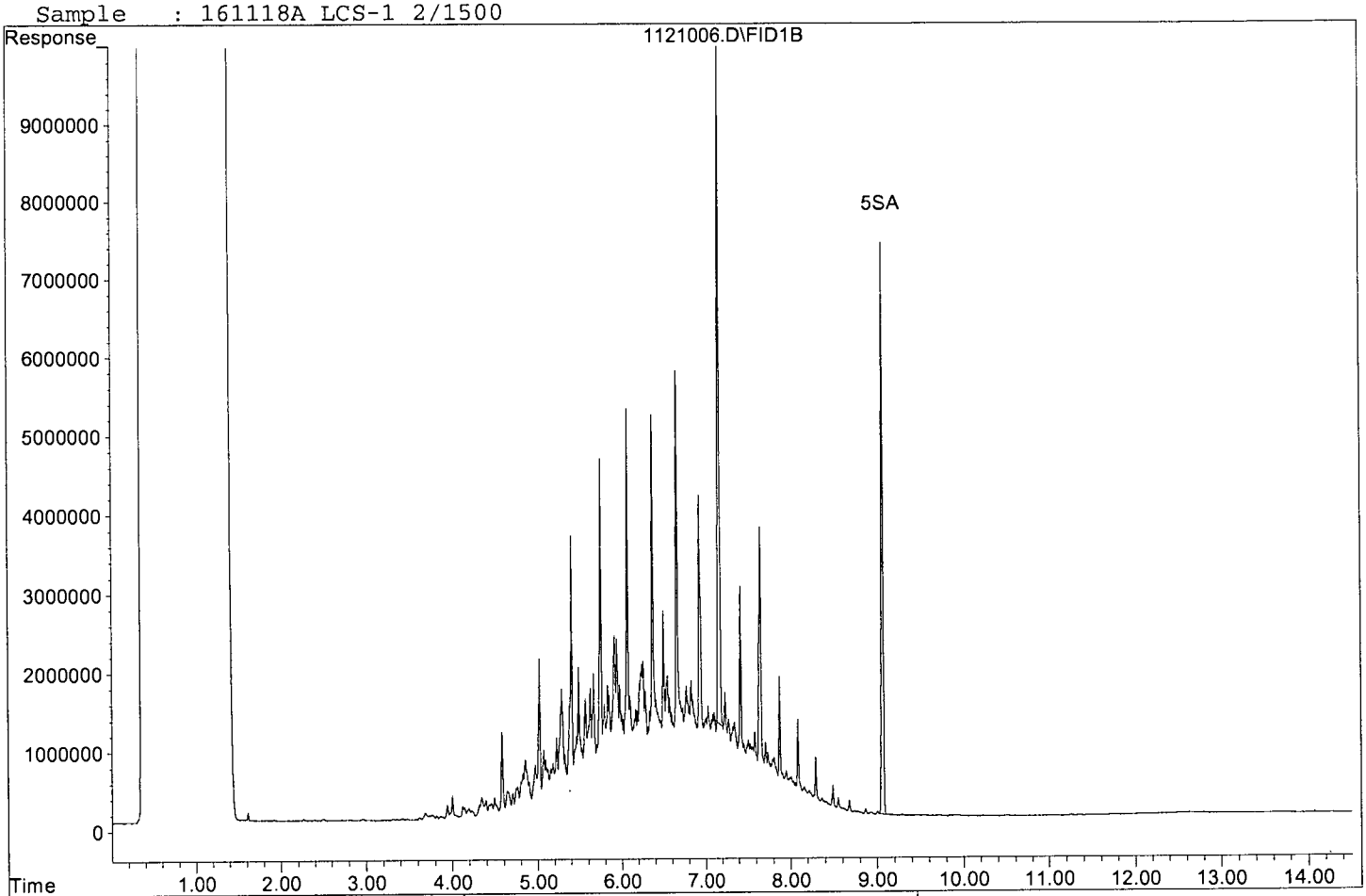
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

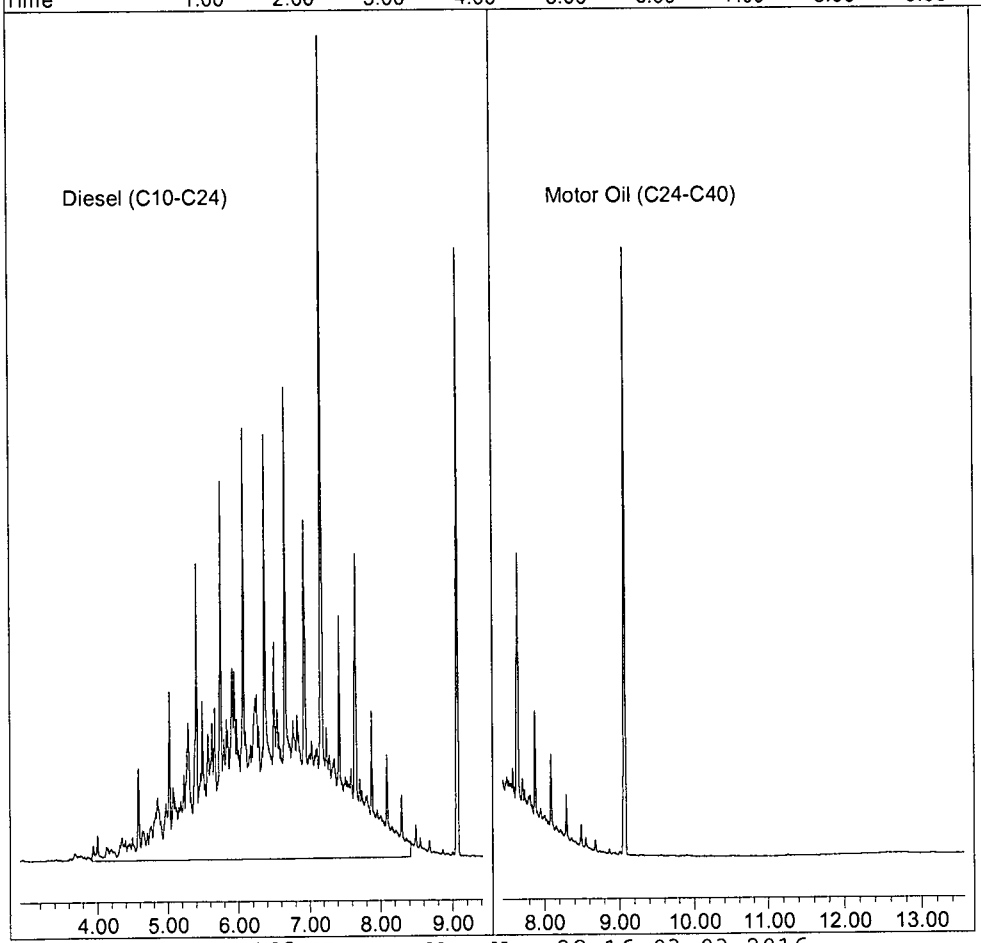
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.17	127341612	36.400 ppb
Surrogate Spike 40.000	Recovery =		91.00%
5) SA Octacosane(S)	9.07	94932309	36.168 ppb
Surrogate Spike 40.000	Recovery =		90.42%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	2558980914	987.756 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161121\1121006.D
Sample : 161118A LCS-1 2/1500





1121006.D DOC1103.M Mon Nov 28 16:03:03 2016

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161121\1121007.D Vial: 7
Acq On : 11-21-16 15:41:03 Operator: DP
Sample : 161118A LCS-2 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Nov 23 16:35 2016 Quant Results File: DOC1103.RES

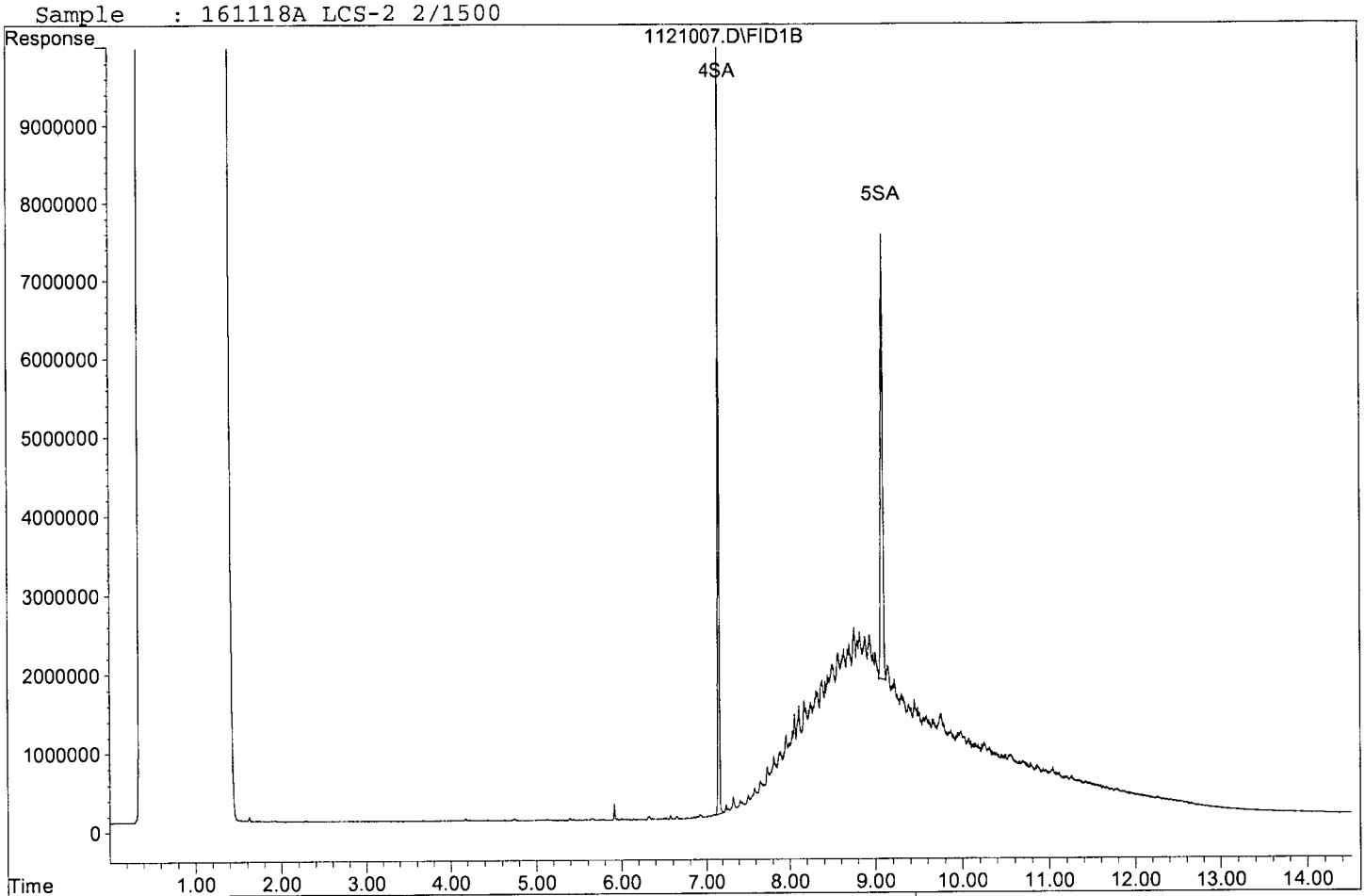
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

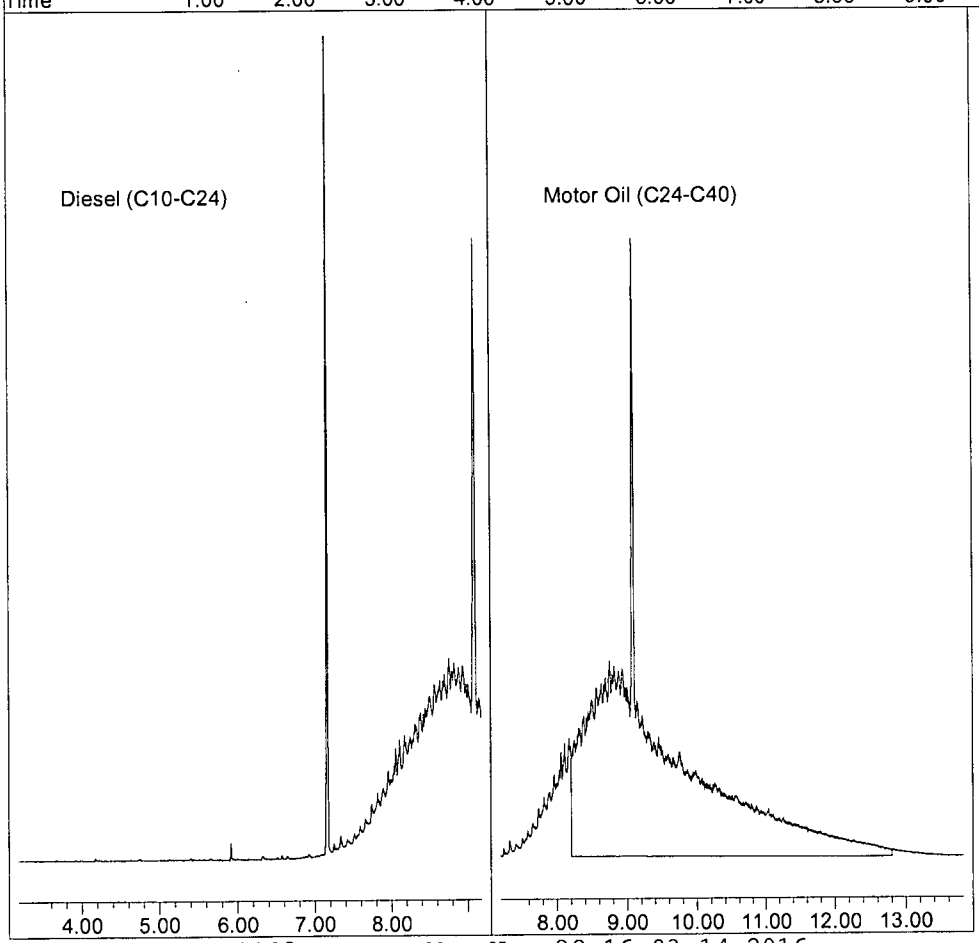
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.16	106776859	30.522 ppb
Surrogate Spike 40.000		Recovery =	76.31%
5) SA Octacosane(S)	9.09	95598103	36.422 ppb
Surrogate Spike 40.000		Recovery =	91.05%
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	2356477245	1127.871 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161121\1121007.D
Sample : 161118A LCS-2 2/1500





Matrix Spike Recoveries

EPA 8015B TPH WATER

APPL ID: **161118W-45866 MS - 214015**
Batch ID: #DOC53-161118A
Sample ID: AZ45866
Client ID: ERH115

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
DIESEL (C10-C24)	1330	ND	1040	936	78.0	70.2	36-132	10.5	30
OIL (C24-C40)	1330	ND	1030	1070	77.3	80.3	41-113	3.8	30
SURROGATE: OCTACOSANE (S)	40.0	NA	35.9	33.3	89.8	83.3	60-142		
SURROGATE: ORTHO-TERPHENYL (S)	40.0	NA	36.1	34.4	90.3	86.0	56-125		

Comments: _____

Primary	SPK	DUP
Quant Method :	DOC1103.M	DOC1103.M
Extraction Date :	11/18/16	11/18/16
Analysis Date :	11/21/16	11/21/16
Instrument :	Apollo	Apollo
Run :	1121010	1121009
Initials :	DPO	

Printed: 11/23/16 4:50:00 PM
APPL MSD SCII

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161121\1121008.D Vial: 8
Acq On : 11-21-16 16:01:52 Operator: DP
Sample : AZ45866W31 MS-1 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Nov 23 16:35 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

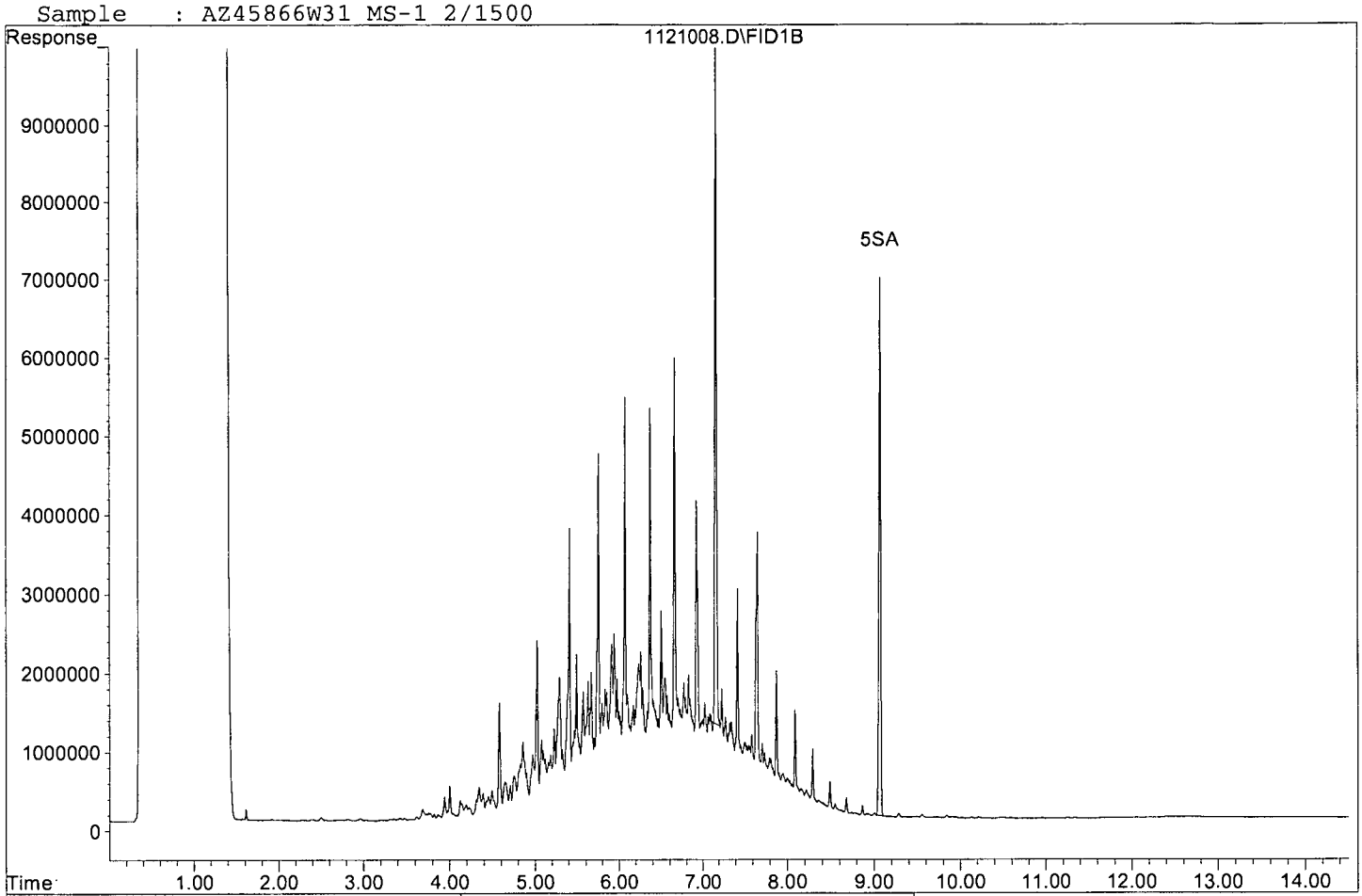
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

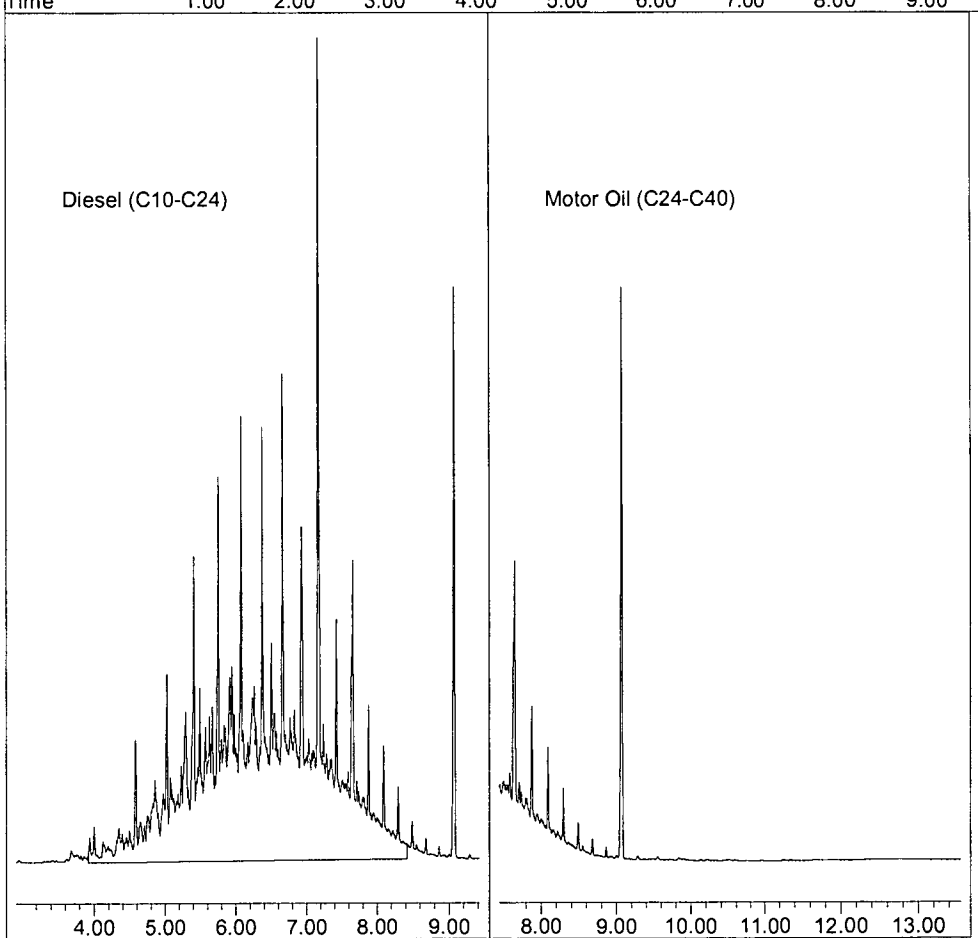
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.17	126287630	36.099	ppb
Surrogate Spike 40.000	Recovery =		90.25%	
5) SA Octacosane(S)	9.07	94298300	35.926	ppb
Surrogate Spike 40.000	Recovery =		89.82%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	2685909396	1036.750	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161121\1121008.D
Sample : AZ45866W31 MS-1 2/1500





1121008.D DOC1103.M Mon Nov 28 16:03:34 2016

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161121\1121009.D Vial: 9
Acq On : 11-21-16 16:22:44 Operator: DP
Sample : AZ45866W20 MSD-1 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Nov 23 16:36 2016 Quant Results File: DOC1103.RES

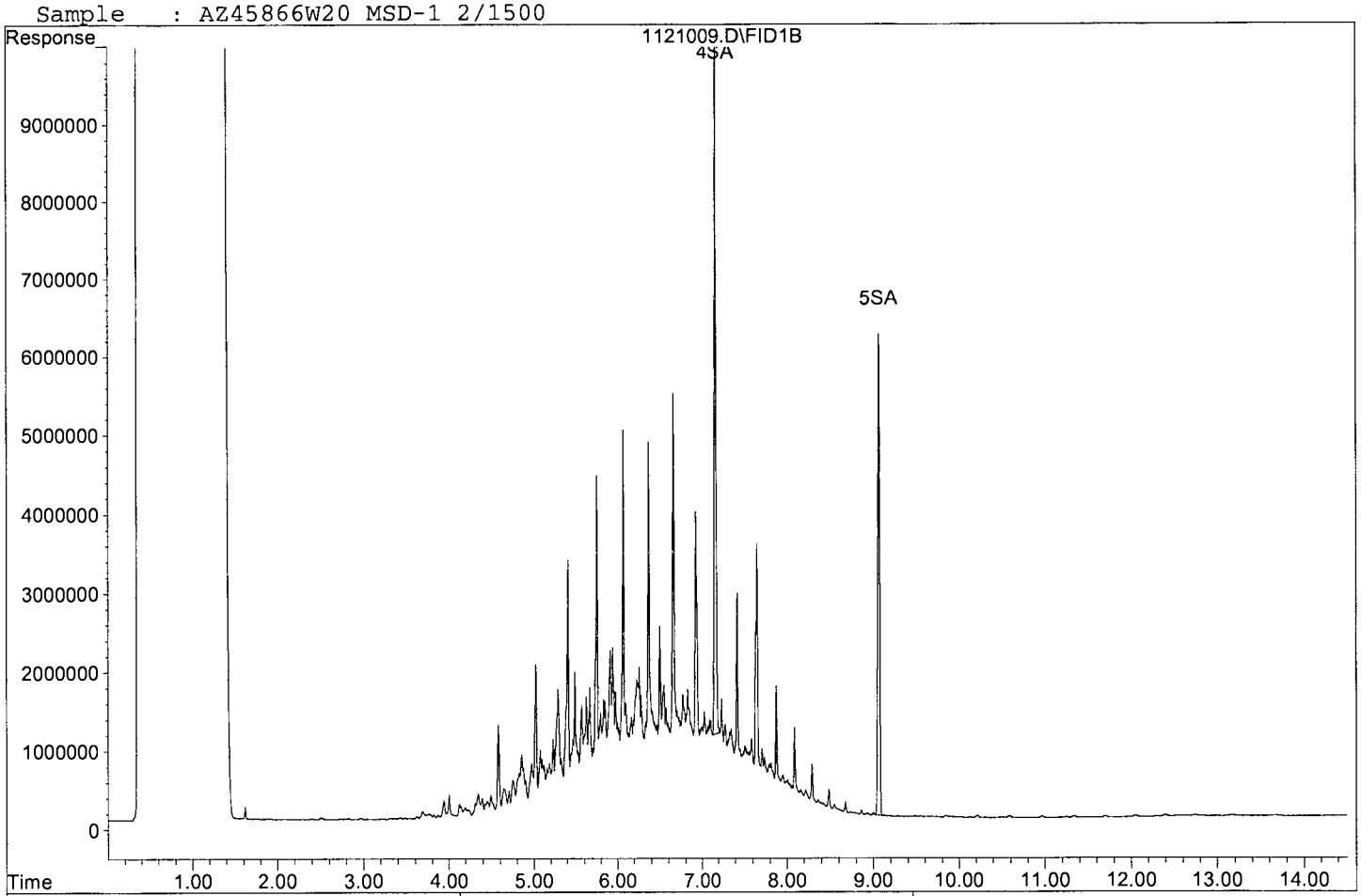
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

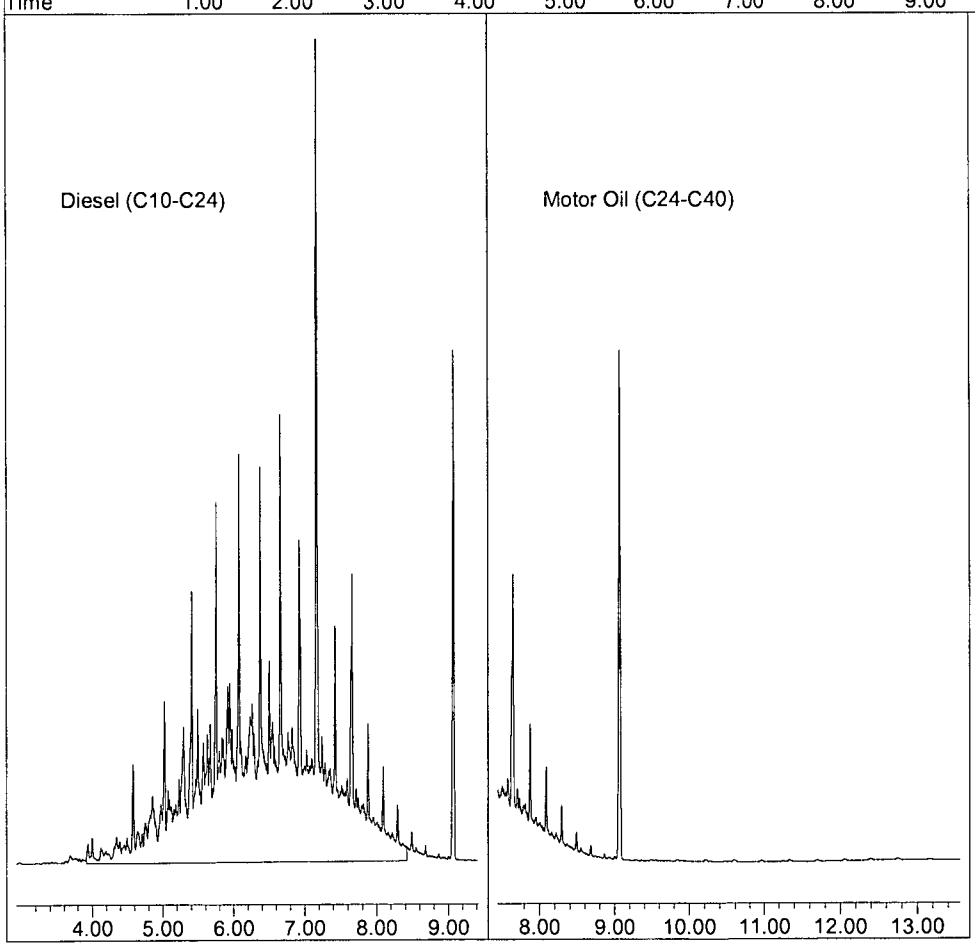
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.17	120485835	34.441 ppb
Surrogate Spike 40.000		Recovery =	86.10%
5) SA Octacosane(S)	9.07	87469840	33.325 ppb
Surrogate Spike 40.000		Recovery =	83.31%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	2425963205	936.412 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161121\1121009.D
Sample : AZ45866W20 MSD-1 2/1500





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161121\1121010.D Vial: 10
Acq On : 11-21-16 16:43:34 Operator: DP
Sample : AZ45866W26 MS-2 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Nov 23 16:37 2016 Quant Results File: DOC1103.RES

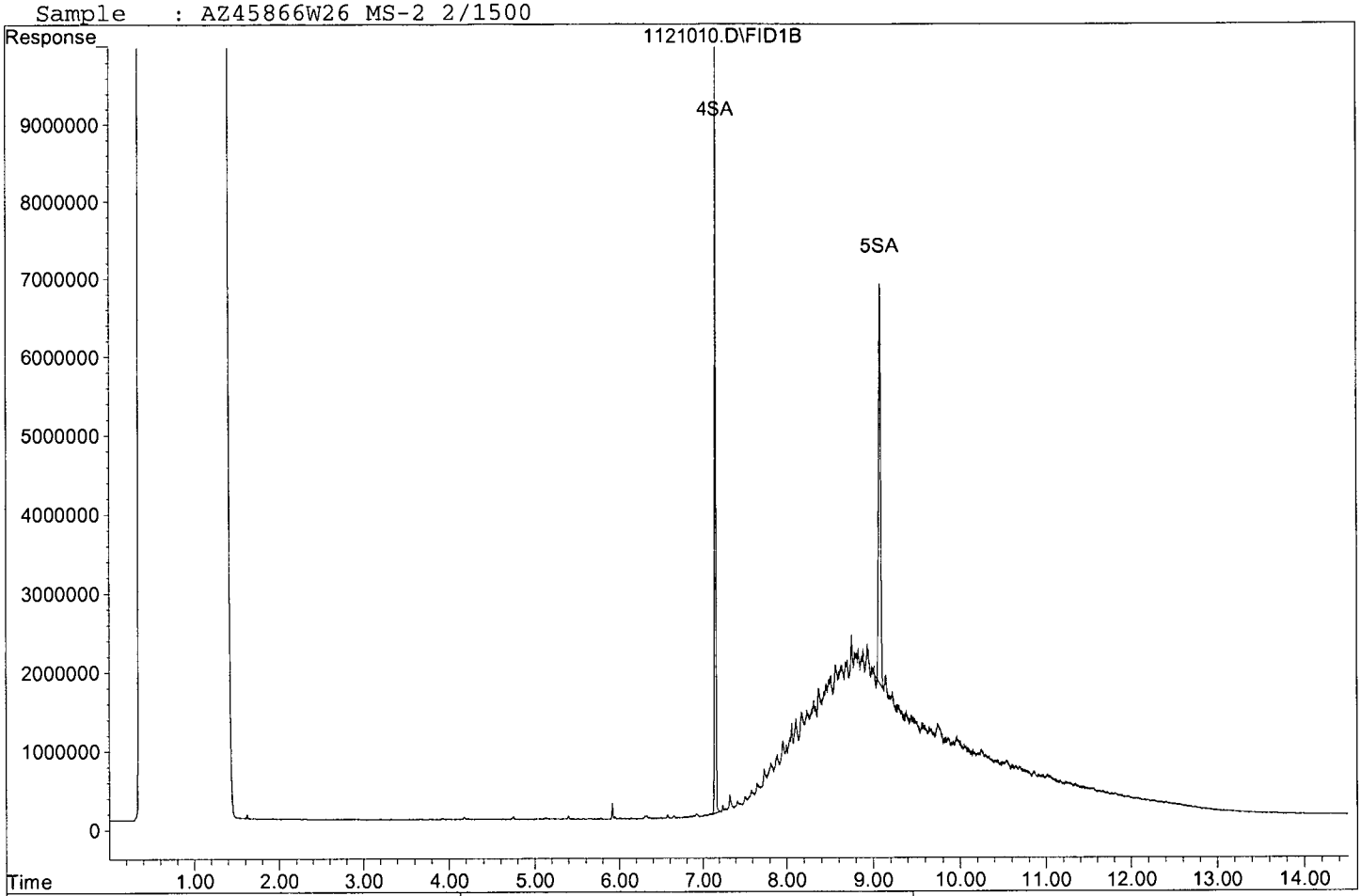
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

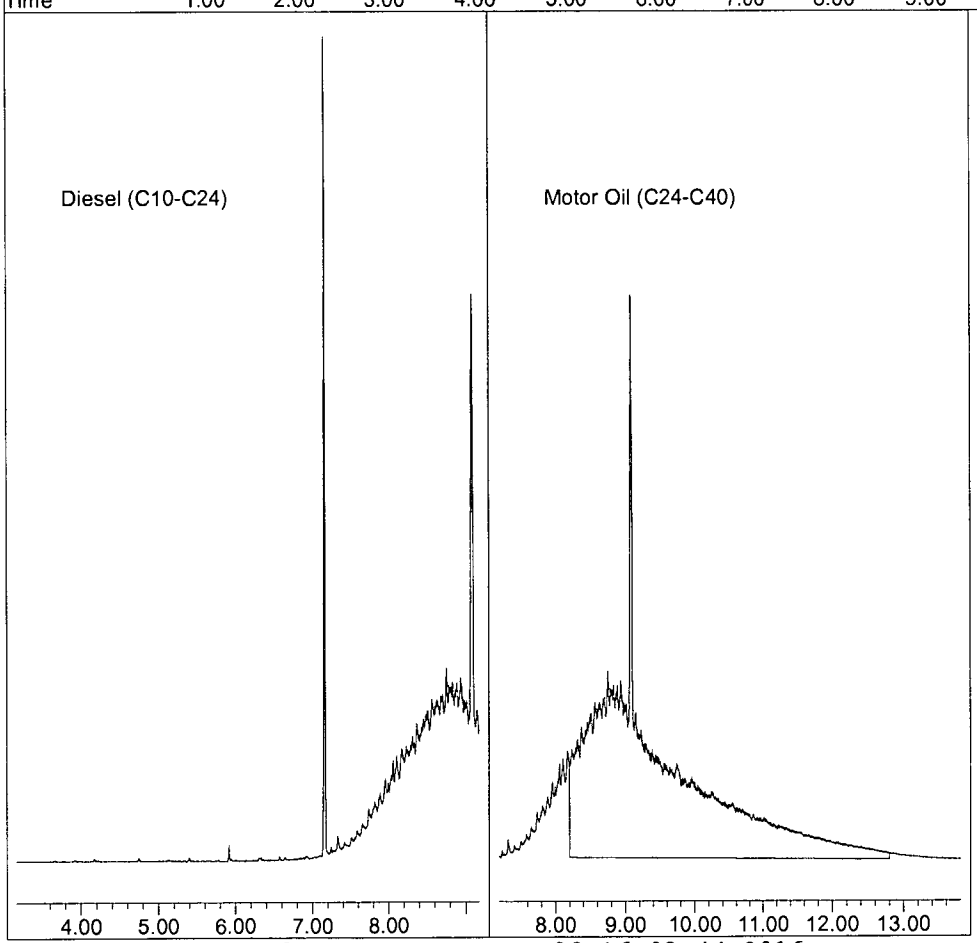
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.16	97489773	27.867 ppb
Surrogate Spike 40.000		Recovery =	69.67%
5) SA Octacosane(S)	9.09	84352525	32.137 ppb
Surrogate Spike 40.000		Recovery =	80.34%
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	2155118903	1031.495 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161121\1121010.D
Sample : AZ45866W26 MS-2 2/1500





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161121\1121011.D Vial: 11
Acq On : 11-21-16 17:04:26 Operator: DP
Sample : AZ45866W30 MSD-2 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Nov 23 16:37 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

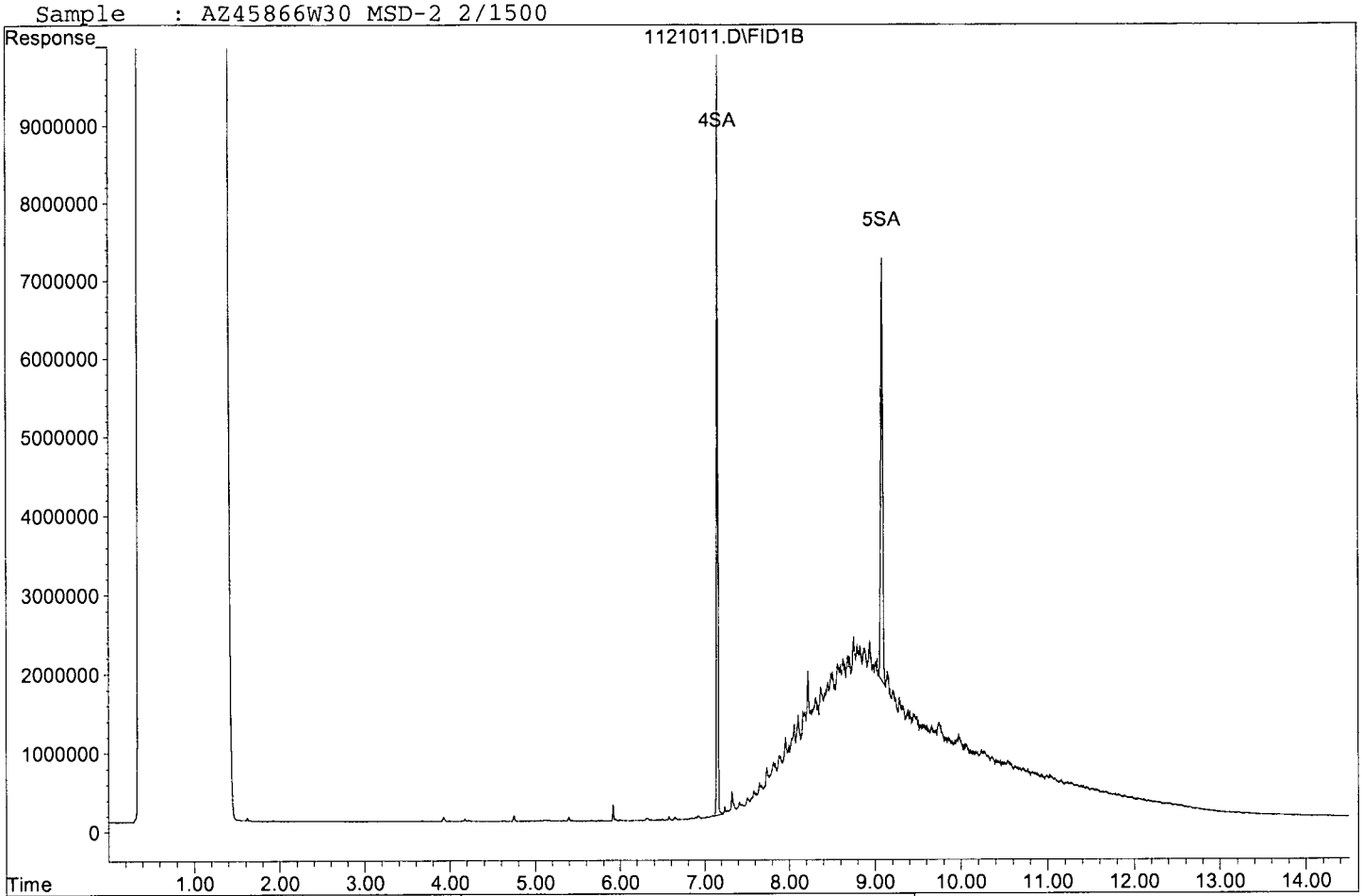
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

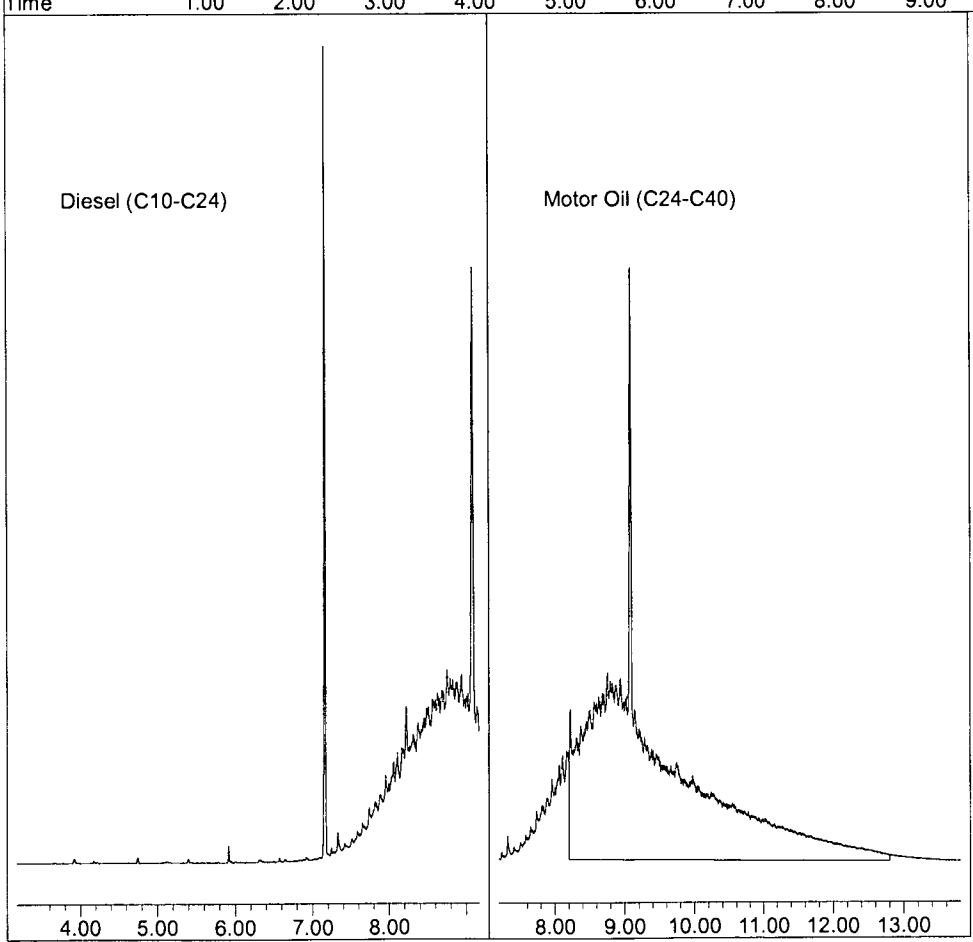
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.16	101221263	28.934 ppb
Surrogate Spike 40.000		Recovery =	72.34%
5) SA Octacosane(S)	9.09	87868659	33.477 ppb
Surrogate Spike 40.000		Recovery =	83.69%
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	2242067161	1073.111 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161121\1121011.D
Sample : AZ45866W30 MSD-2 2/1500





DIESEL CURVE		prep:11/03/16-D.P.		ex:6/03/17						
STD	**[µg/mL]**	**LOT #**	**DATE**	**EXP. DATE**	**µL**	**µL**	**µL**	**µL**	**µL**	**µL**
DIESEL	1000	237562-37104	11/03/16	06/03/17	10	10	40	60	80	100
MC	N/A	56098			990	90	60	40	20	NA
				Final VOL.	1000	100	100	100	100	100
				ppm	10	100	400	600	800	1000

MOTOR OIL CURVE		prep: 10/28/16-D.P.		ex:4/26/17						
STD	**[µg/mL]**	**LOT #**	**DATE**	**EXP. DATE**	**µL**	**µL**	**µL**	**µL**	**µL**	**µL**
MOTOR OIL	2000		10/26/16	04/26/17	10	25	125	500	750	200
MC	N/A	56098			990	975	875	500	250	NA
				Final VOL.	1000	1000	1000	1000	1000	200
				ppm	20	50	250	1000	1500	2000

Prep: 11/03/16-D.P. Exp: 6/03/17						
DIESEL CAL STD.						
STD.	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT / LOT#
DIESEL FUEL #2	50,000 ug/mL	O2SI CAT#011598-03 LOT#237562-37104 OP: 11/03/06 EXP: 11/03/17	500 µL	25 mL	1000ug/mL	MC LOT# 56098
O-TERPHENYL OCTACOSANE	600 ug/mL	O2SI CAT#110316-05 LOT#266278-37107 OP: 10/27/16 EXP: 10/27/17	2080 µL		50ug/mL	

Prep: 10/26/16 -D.P. Ex: 4/26/17						
MOTOR OIL CAL STD						
STD.	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT / LOT#
MOTOR OIL	50,000 ug/mL	O2SI CAT#116390-02 LOT#239390-36901 OP:10/26/16 EXP:10/26/17	1mL	25mL	2000ug/mL	MC LOT# 56098

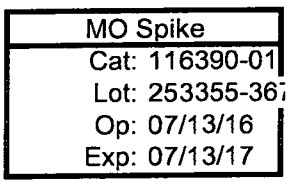
DIESEL SECOND SOURCE prep: 08/01/16-D.P. ex: 07/6/17						
standard	initial conc.	SOURCE DATE	ALIQUOT	FINAL VOL.	FINAL CONC.	SOLVENT LOT
DIESEL SECOND SOURCE	50,000 ug/mL	O2SI CAT#011598-03-SS LOT#244813-34634 OP: 08/28/15 Exp 03/14/19	200uL	10mL	1000ug/mL	MC #56061

MOTOR OIL SECOND SOURCE prep: 07/6/16-L.H. ex: 07/6/17						
standard	initial conc.	SOURCE DATE	ALIQUOT	FINAL VOL.	FINAL CONC.	SOLVENT LOT
MOTOR OIL SECOND SOURCE	50,000 ug/mL	O2SI CAT#116390-02-SS LOT#244814-34637 OP: 07/06/16 Exp 07/06/17	200uL	10mL	1000ug/mL	MC #56061

DIESEL CCV 400ug/ml						
Prep: 11/03/16-D.P. Ex: 02/03/16						
STANDARD	**INITIAL CONC.**	**SOURCE DATE**	**ALIQUOT**	**FINAL VOL**	**FINAL CONC.**	**SOLVENT /LOT#**
DIESEL STD.	1000 µg/mL	Diesel Std.	2000µL	5mL	400 µg/ml	MC
	PREP:	11/03/16				56098
	Exp:	06/03/17				

MOTOR OIL CCV 1000ppm						
Prep: 11/21/16-G.A. Ex: 2/21/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
MO STD.	2000 µg/mL	MO Std.	2500µL	5mL	1000 µg/ml	MC
	PREP:	10/26/16				56098
	Exp:	04/26/17				

Diesel Fuel #2
Conc. 50000 ug/ml
O2SI
CAT #011598-03
LOT# 237562-37102
OP: 10/25/16 RH
EXP: 10/25/17


MO Spike
Cat: 116390-01
Lot: 253355-36
Op: 07/13/16
Exp: 07/13/17

THC Surrogate
Cat: 110316-05
Lot: 266278-37
Op: 10/27/16
Exp: 10/27/17

_SEP011LL

Organic Extraction Worksheet

Method	THC Sep Fun Ext 3510C (LOW LEVEL)	Extraction Set	161118A	Extraction Method	SEP011LL	Units	mL

Spiked ID 1	Diesel Spike 10-26-16 EXP 10-26-17		Surrogate ID 1	THC Surrogate 11-7-16 EXP 11-7-17	
Spiked ID 2	Motor Oil Spike 11-7-16 EXP 11-7-17		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	11/18/16 9:40	
Spiked ID 8			Ext. End Time:	11/21/16 8:55	
			GC Requires Extract By:	**11/22/16 0:00**	

pH1			Water Bath Temp Criteria	35,35,35,3
pH2				
pH3				

Spiked By: KY **Date** 11/18/16 **Witnessed By:** JR **Date** 11/18/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	161118A Blk				0.1	1	1500	2	7	11/18/16 9:40	
						equip	E-WB1				
2	161118A LCS-1		0.040	1	0.1	1	1500	2	7	11/18/16 9:40	
						equip	E-WB2				
3	161118A LCS-2		0.040	2	0.1	1	1500	2	7	11/18/16 9:40	
						equip	E-WB3				
4	AZ45866 MS-1	AZ45866W31	0.040	1	0.1	1	1500	2	7	11/18/16 9:40	81492 1 WEEK
						equip	E-WB1				
5	AZ45866 MSD-1	AZ45866W20	0.040	1	0.1	1	1500	2	7	11/18/16 9:40	81492 1 WEEK
						equip	E-WB2				
6	AZ45866 MS-2	AZ45866W26	0.040	2	0.1	1	1500	2	7	11/18/16 9:40	81492 1 WEEK
						equip	E-WB3				
7	AZ45866 MSD-2	AZ45866W30	0.040	2	0.1	1	1500	2	7	11/18/16 9:40	81492 1 WEEK
						equip	E-WB4				
8	AZ45866	AZ45866W23			0.1	1	1500	2	7	11/18/16 9:40	81492 1 WEEK
						equip	E-WB1				
9	AZ45867	AZ45867W10			0.1	1	1500	2	7	11/18/16 9:40	81492 1 WEEK
						equip	E-WB2				
10	AZ45868	AZ45868W12			0.1	1	1500	2	7	11/18/16 9:40	81492 1 WEEK
						equip	E-WB3				
11	AZ45907	AZ45907W16			0.1	1	1500	2	7	11/18/16 9:40	81500 1 WEEK
						equip	E-WB4				
12	AZ45908	AZ45908W11			0.1	1	1500	2	7	11/18/16 9:40	81500 1 WEEK
						equip	E-WB1				
13	AZ45909	AZ45909W14			0.1	1	1500	2	7	11/18/16 9:40	81500 1 WEEK
						equip	E-WB2				
14	AZ45910	AZ45910W15			0.1	1	1500	2	7	11/18/16 9:40	81500 1 WEEK
						equip	E-WB3				
15	AZ45911	AZ45911W15			0.1	1	1500	2	7	11/18/16 9:40	81500 1 WEEK
						equip	E-WB4				

Ky 11/21/16

Solvent and Lot#	
MC	56153
Na2SO4	16C255214
ph-indicator strips	HC 574756
Filter Paper	400112

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	GA
Date	11/21/16
Time	1000
Refrigerator	Hobart

	Technician's Initials
Scanned By	KY
Sample Preparation	KY,JR
Extraction	KY,JR
Concentration	DL

Modified	11/21/16 9:34:48 AM

Reviewed By: Ky **Date** 11/21/16

Injection Log

Directory: G:\APOLLO\DATA\161028\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	1028002.D	1	MO 20ppb 10/28/16	Mix(B)	10-28-16 9:07:30
2	3	1028003.D	1	MO 50ppb 10/28/16	Mix(B)	10-28-16 9:28:13
3	4	1028004.D	1	MO 250ppb 10/28/16	Mix(B)	10-28-16 9:49:06
4	5	1028005.D	1	MO 1000ppb 10/28/16	Mix(B)	10-28-16 10:09:58
5	6	1028006.D	1	MO 1500ppb 10/28/16	Mix(B)	10-28-16 10:30:51
6	7	1028007.D	1	MO 2000ppb 10/28/16	Mix(B)	10-28-16 10:51:50
7	8	1028008.D	1	MO SS 1000ppb 7/6/16	Mix(B)	10-28-16 11:12:44
8	4	1103004.D	1	DIESEL 10ppb 11/3/16	Mix(A)	11-3-16 9:45:14
9	6	1103006.D	1	DIESEL 400ppb 11/3/16	Mix(A)	11-3-16 10:26:16
10	7	1103007.D	1	DIESEL 600ppb 11/3/16	Mix(A)	11-3-16 10:46:56
11	8	1103008.D	1	DIESEL 800ppb 11/3/16	Mix(A)	11-3-16 11:07:39
12	9	1103009.D	1	DIESEL 1000ppb 11/3/16	Mix(A)	11-3-16 11:28:31
13	11	1103011.D	1	DIESEL 100ppb 11/3/16	Mix(A)	11-3-16 12:56:47
14	12	1103012.D	1	DIESEL-SS 400ppb 8/1/16	Mix(A)	11-3-16 13:25:11
15	2	1121002.D	1	CCV: DIESEL 400ppb 11/3/16	Mix(A)	11-21-16 13:08:08
16	4	1121004.D	1	CCV: MO 1000ppb 11/21/16	Mix(B)	11-21-16 14:38:53
17	5	1121005.D	1.33333	161118A BLK 2/1500	Water	11-21-16 14:59:26
18	6	1121006.D	1.33333	161118A LCS-1 2/1500	Water	11-21-16 15:20:13
19	7	1121007.D	1.33333	161118A LCS-2 2/1500	Water	11-21-16 15:41:03
20	8	1121008.D	1.33333	AZ45866W31 MS-1 2/1500	Water	11-21-16 16:01:52
21	9	1121009.D	1.33333	AZ45866W20 MSD-1 2/1500	Water	11-21-16 16:22:44
22	10	1121010.D	1.33333	AZ45866W26 MS-2 2/1500	Water	11-21-16 16:43:34
23	11	1121011.D	1.33333	AZ45866W30 MSD-2 2/1500	Water	11-21-16 17:04:26
24	12	1121012.D	1.33333	AZ45866W23 2/1500	Water	11-21-16 17:25:16
25	13	1121013.D	1.33333	AZ45867W10 2/1500	Water	11-21-16 17:46:00
26	14	1121014.D	1.33333	AZ45868W12 2/1500	Water	11-21-16 18:06:49
27	20	1121020.D	1	CCV: DIESEL 400ppb 11/3/16	Mix(A)	11-21-16 20:10:51
28	21	1121021.D	1	CCV: MO 1000ppb 11/21/16	Mix(B)	11-21-16 20:31:34

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank
EPA 8270D SIM

Blank Name/QCG: **161118W-45866 - 214136**
Batch ID: #SIMDO-161118A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	11/18/16	11/29/16
BLANK	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	11/18/16	11/29/16
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	11/18/16	11/29/16
BLANK	SURROGATE: 2-FLUORBIPHENY	59.5	53-106			%	11/18/16	11/29/16
BLANK	SURROGATE: NITROBENZENE-	78.7	55-111			%	11/18/16	11/29/16
BLANK	SURROGATE: TERPHENYL-D14 (	93.2	58-132			%	11/18/16	11/29/16

Quant Method: L1026P.M
Run #: 1129L004
Instrument: Linus
Sequence: L161129
Initials: RHA

GC SC-Blank-REG MDLs-DOD
Printed: 11/30/16 12:03:50 PM

Laboratory Control Spike Recovery
EPA 8270D SIM

APPL ID: **161118W-45866 LCS - 214136**
Batch ID: #SIMDO-161118A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1-METHYLNAPHTHALENE	5.00	3.33	66.6	41-115
2-METHYLNAPHTHALENE	5.00	3.29	65.8	39-114
NAPHTHALENE	5.00	3.24	64.8	43-114
SURROGATE: 2-FLUORBIPHENYL (S)	5.00	2.92	58.4	53-106
SURROGATE: NITROBENZENE-D5 (S)	5.00	3.77	75.4	55-111
SURROGATE: TERPHENYL-D14 (S)	5.00	3.97	79.4	58-132

Comments:

Primary	SPK
Quant Method :	L1026P.M
Extraction Date :	11/18/16
Analysis Date :	11/23/16
Instrument :	Linus
Run :	1026L318
Initials :	RHA

Printed: 11/30/16 12:03:35 PM
APPL Standard LCS

Matrix Spike Recoveries

EPA 8270D SIM

APPL ID: **161118W-45866 MS - 214136**
Batch ID: #SIMDO-161118A
Sample ID: AZ45866
Client ID: ERH115

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
1-METHYLNAPHTHALENE	5.00	ND	2.95	3.05	59.0	61.0	41-115	3.3	20
2-METHYLNAPHTHALENE	5.00	ND	2.90	3.05	58.0	61.0	39-114	5.0	20
NAPHTHALENE	5.00	ND	2.92	2.94	58.4	58.8	43-114	0.68	20
SURROGATE: 2-FLUORBIPHENYL (S)	4.67	NA	2.74	2.53	58.6	54.1	53-106		
SURROGATE: NITROBENZENE-D5 (S)	4.67	NA	3.34	2.95	71.5	63.1	55-111		
SURROGATE: TERPHENYL-D14 (S)	4.67	NA	3.86	3.60	82.6	77.0	58-132		

Comments: _____

Primary	SPK	DUP
Quant Method :	L1026P.M	L1026P.M
Extraction Date :	11/18/16	11/18/16
Analysis Date :	11/29/16	11/29/16
Instrument :	Linus	Linus
Run :	1129L005	1129L006
Initials :	RHA	

Printed: 12/01/16 5:53:40 PM
APPL MSD SCII

8270D-SIM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81492

Case No: 81492 Date Analyzed: 11/23/16

Matrix: WATER Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: 2-FLUORBIPHENYL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161118A-LCS	Lab Control Spike	53-106	58.4		55-111	75.4	
AZ45866	ERH115	53-106	54.0		55-111	69.8	
AZ45867	ERH116	53-106	58.2		55-111	74.0	
161118A-BLK	Blank	53-106	59.5		55-111	78.7	
AZ45866-MS	Matrix Spike	53-106	58.6		55-111	71.5	
AZ45866-MSD	Matrix SpikeD	53-106	54.1		55-111	63.1	
AZ45868	ERH120	53-106	62.6		55-111	79.8	

Comments: Batch: #SIMDO-161118A

8270D-SIM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81492

Case No: 81492 Date Analyzed: 11/23/16

Matrix: WATER Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: TERPHENYL-D14 (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
161118A-LCS	Lab Control Spike	58-132	79.4				
AZ45866	ERH115	58-132	77.0				
AZ45867	ERH116	58-132	73.5				
161118A-BLK	Blank	58-132	93.2				
AZ45866-MS	Matrix Spike	58-132	82.6				
AZ45866-MSD	Matrix SpikeD	58-132	77.0				
AZ45868	ERH120	58-132	85.9				

Comments: Batch: #SIMDO-161118A

8270D-SIM

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81492

Case No: 81492 Date Analyzed: 11/29/16

Matrix: WATER Instrument: Linus

Blank ID: 161118A-BLK Time Analyzed: 1550

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161118A-LCS	Lab Control Spike	1026L318	11/23/16 1805
AZ45866	ERH115	1026L321	11/23/16 1942
AZ45867	ERH116	1026L322	11/23/16 2014
161118A-BLK	Blank	1129L004	11/29/16 1550
161118A-MS	Matrix Spike	1129L005	11/29/16 1623
161118A-MSD	Matrix SpikeD	1129L006	11/29/16 1655
AZ45868	ERH120	1129L007	11/29/16 1727

Comments: Batch: #SIMDO-161118A

Printed: 11/30/16 12:02:02 PM
Form 4, Blank Summary

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81492
Matrix: Water
ID: SV TUNE 9/22/16

SDG No: 81492
Date Analyzed: 10/26/16
Instrument: Linus
Time Analyzed: 10:58

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.1 ug/ml PAH 10/26/	1026L003.D	10/26/16 11:23
2		0.2 ug/ml PAH 10/26/	1026L004.D	10/26/16 11:56
3		0.5 ug/ml PAH 10/26/	1026L005.D	10/26/16 12:28
4		1.0 ug/ml PAH 10/26/	1026L006.D	10/26/16 13:01
5		5.0 ug/ml PAH 10/26/	1026L007.D	10/26/16 13:33
6		10.0 ug/ml PAH 10/26	1026L008.D	10/26/16 14:05
7		50.0 ug/ml PAH 10/26	1026L009.D	10/26/16 14:37
8		100.0 ug/ml PAH 10/2	1026L010.D	10/26/16 15:09
9		SS PAH 10/26/16	1026L011.D	10/26/16 15:42
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	30 - 60% of mass 198	31.3
68	0 - 2% of mass 69	0.0
69	100 - 100% of mass 69	100.0
70	0 - 2% of mass 69	0.4
127	40 - 60% of mass 198	50.4
197	0 - 1% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.9
275	10 - 30% of mass 198	25.7
365	1 - 100% of mass 198	2.6
441	0.01 - 100% of mass 443	76.7
442	40 - 150% of mass 198	57.8
443	17 - 23% of mass 442	21.6

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81492
Matrix: Water
ID: SV Tune 11/15/16

SDG No: 81492
Date Analyzed: 11/23/16
Instrument: Linus
Time Analyzed: 16:46

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		2.5 ug/ml PAH 10/26/	1026L316.D	11/23/16 17:01
2	Lab Control Spike	161118A LCS-1 1/1000	1026L318.D	11/23/16 18:05
3	ERH115	AZ45866W27 1/1070	1026L321.D	11/23/16 19:42
4	ERH116	AZ45867W09 1/1050	1026L322.D	11/23/16 20:14
5		2.5 ug/ml PAH 10/26/	1026L338.D	11/24/16 4:16
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	30 - 60% of mass 198	31.0
68	0 - 2% of mass 69	0.0
69	100 - 100% of mass 69	100.0
70	0 - 2% of mass 69	1.5
127	40 - 60% of mass 198	49.8
197	0 - 1% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.9
275	10 - 30% of mass 198	27.9
365	1 - 100% of mass 198	2.9
441	0.01 - 100% of mass 443	78.6
442	40 - 150% of mass 198	76.2
443	17 - 23% of mass 442	21.2

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81492
Matrix: Water
ID: SV TUNE 9/22/16

SDG No: 81492
Date Analyzed: 11/29/16
Instrument: Linus
Time Analyzed: 15:03

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		5.0 ug/ml PAH 11/28/	1129L003.D	11/29/16 15:19
2	Blank	161118A BLK 1/1000	1129L004.D	11/29/16 15:50
3		AZ45866W28 MS-1 1/10	1129L005.D	11/29/16 16:23
4		AZ45866W34 MSD-1 1/1	1129L006.D	11/29/16 16:55
5	ERH120	AZ45868W16 1/1070	1129L007.D	11/29/16 17:27
6		5.0 ug/ml PAH 11/28/	1129L021.D	11/30/16 0:25
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	30 - 60% of mass 198	30.3
68	0 - 2% of mass 69	0.0
69	100 - 100% of mass 69	100.0
70	0 - 2% of mass 69	0.5
127	40 - 60% of mass 198	48.9
197	0 - 1% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.8
275	10 - 30% of mass 198	26.9
365	1 - 100% of mass 198	2.8
441	0.01 - 100% of mass 443	75.2
442	40 - 150% of mass 198	70.2
443	17 - 23% of mass 442	21.6

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 81492

Lab File ID (Standard): 1026L007.D Date Analyzed: 10/26/16

Instrument ID: Linus Time Analyzed: 13:33

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Napthalene-D8(IS)		Acenaphthene-D10(IS)		Phenanthrene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	2942	5.89	1477	7.94	2585	9.87
	UPPER LIMIT	5884	6.39	2954	8.44	5170	10.37
	LOWER LIMIT	1471	5.39	739	7.44	1293	9.37
	SAMPLE NO.						
01	161118A LCS-1 1/1000	2312	5.90	1218	7.95	2242	9.90
02	AZ45866W27 1/1070	2493	5.90	1340	7.95	2303	9.91
03	AZ45867W09 1/1050	2594	5.90	1350	7.95	2382	9.90
04	161118A BLK 1/1000	2929	5.89	1546	7.95	2678	9.90
05	AZ45866W28 MS-1 1/1(	2718	5.89	1430	7.94	2544	9.89
06	AZ45866W34 MSD-1 1/	3143	5.89	1672	7.94	2981	9.89
07	AZ45868W16 1/1070	2656	5.89	1405	7.95	2408	9.90
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81492

Lab File ID (Standard): 1026L007.D Date Analyzed: 10/26/16

Instrument ID: Linus Time Analyzed: 13:33

GC Column: ID: Heated Purge: (Y/N)

		Chrysene-D12(IS)		Perylene-D12(IS)			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	3262	16.84	2933	20.60		
	UPPER LIMIT	6524	17.34	5866	21.10		
	LOWER LIMIT	1631	16.34	1467	20.10		
	SAMPLE NO.						
01	161118A LCS-1 1/1000	2937	16.89	2754	20.66		
02	AZ45866W27 1/1070	3013	16.91	2879	20.69		
03	AZ45867W09 1/1050	3088	16.91	2935	20.69		
04	161118A BLK 1/1000	3290	16.91	3019	20.69		
05	AZ45866W28 MS-1 1/1(	3215	16.88	2948	20.64		
06	AZ45866W34 MSD-1 1/	3775	16.87	3447	20.64		
07	AZ45868W16 1/1070	2990	16.90	2753	20.66		
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

ORGANICS

Sample Data

APPL, INC.

EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Project: 60481245 CIV0053 Red Hill Fuel Storage
ARF: 81492

Sample ID: ERH115
APPL ID: AZ45866

Sample Collection Date: 11/14/16
QCG: #SIMDO-161118A-214136

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	11/18/16	11/23/16
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	11/18/16	11/23/16
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	11/18/16	11/23/16
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	54.0	53-106			%	11/18/16	11/23/16
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	69.8	55-111			%	11/18/16	11/23/16
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	77.0	58-132			%	11/18/16	11/23/16

Quant Method: L1026P.M
Run #: 1026L321
Instrument: Linus
Sequence: L161026
Dilution Factor: 1
Initials: RHA

Printed: 11/30/16 12:01:59 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L321.D Vial: 21
Acq On : 23 Nov 16 19:42 Operator: MA
Sample : AZ45866W27 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Nov 30 9:59 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.90	136	2493	2.50000	ppb	0.01
6) Acenaphthene-D10(IS)	7.95	164	1340	2.50000	ppb	0.01
11) Phenanthrene-D10(IS)	9.91	188	2303	2.50000	ppb	0.04
15) Chrysene-D12(IS)	16.91	240	3013	2.50000	ppb	0.07
21) Perylene-D12(IS)	20.69	264	2879	2.50000	ppb	0.09
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.05	82	1053	3.25953	ppb	0.00
Spiked Amount 4.673			Recovery = 69.764%			
7) Surrogate Recovery (FBP)	7.17	172	2335	2.52475	ppb	0.01
Spiked Amount 4.673			Recovery = 54.035%			
17) Surrogate Recovery (TPH)	13.91	244	3988	3.59855	ppb	0.03
Spiked Amount 4.673			Recovery = 77.019%			
Target Compounds						Qvalue

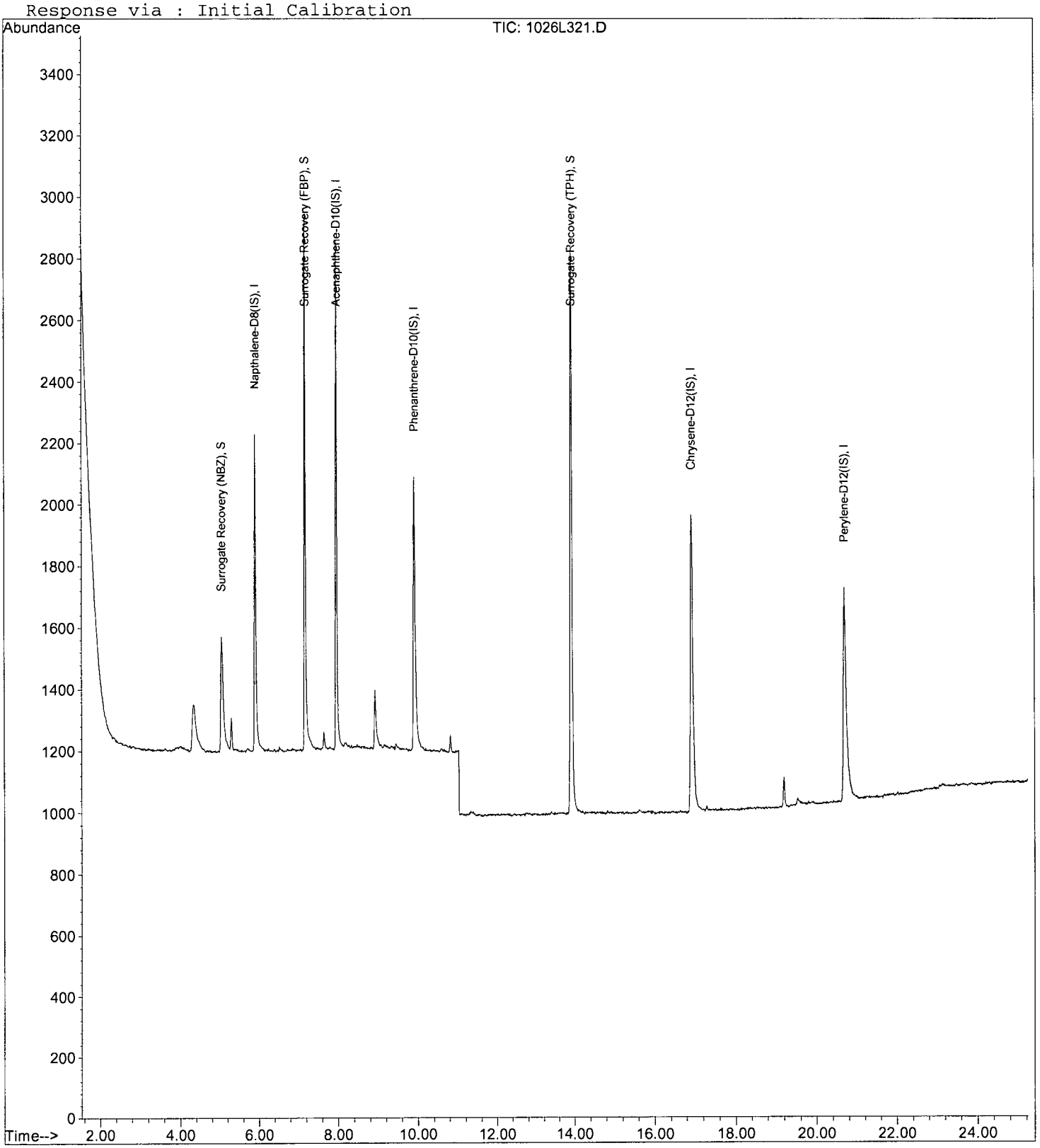
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161026\1026L321.D Vial: 21
Acq On : 23 Nov 16 19:42 Operator: MA
Sample : AZ45866W27 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Nov 30 9:59 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81492

Sample ID: ERH116

APPL ID: AZ45867

Sample Collection Date: 11/14/16

QCG: #SIMDO-161118A-214136

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	11/18/16	11/23/16
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	11/18/16	11/23/16
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	11/18/16	11/23/16
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	58.2	53-106			%	11/18/16	11/23/16
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	74.0	55-111			%	11/18/16	11/23/16
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	73.5	58-132			%	11/18/16	11/23/16

Quant Method: L1026P.M
Run #: 1026L322
Instrument: Linus
Sequence: L161026
Dilution Factor: 1
Initials: RHA

Printed: 11/30/16 12:01:59 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L322.D Vial: 22
Acq On : 23 Nov 16 20:14 Operator: MA
Sample : AZ45867W09 1/1050 Inst : Linus
Misc : water Multiplr: 0.95

Quant Time: Nov 30 10:00 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	5.90	136	2594	2.50000 ppb	0.01
6) Acenaphthene-D10(IS)	7.95	164	1350	2.50000 ppb	0.01
11) Phenanthrene-D10(IS)	9.90	188	2382	2.50000 ppb	0.02
15) Chrysene-D12(IS)	16.91	240	3088	2.50000 ppb	0.07
21) Perylene-D12(IS)	20.69	264	2935	2.50000 ppb	0.09
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.05	82	1162	3.52509 ppb	0.00
Spiked Amount 4.762			Recovery = 74.025%		
7) Surrogate Recovery (FBP)	7.17	172	2534	2.77142 ppb	0.01
Spiked Amount 4.762			Recovery = 58.191%		
17) Surrogate Recovery (TPH)	13.91	244	3903	3.50176 ppb	0.03
Spiked Amount 4.762			Recovery = 73.542%		

Target Compounds Qvalue

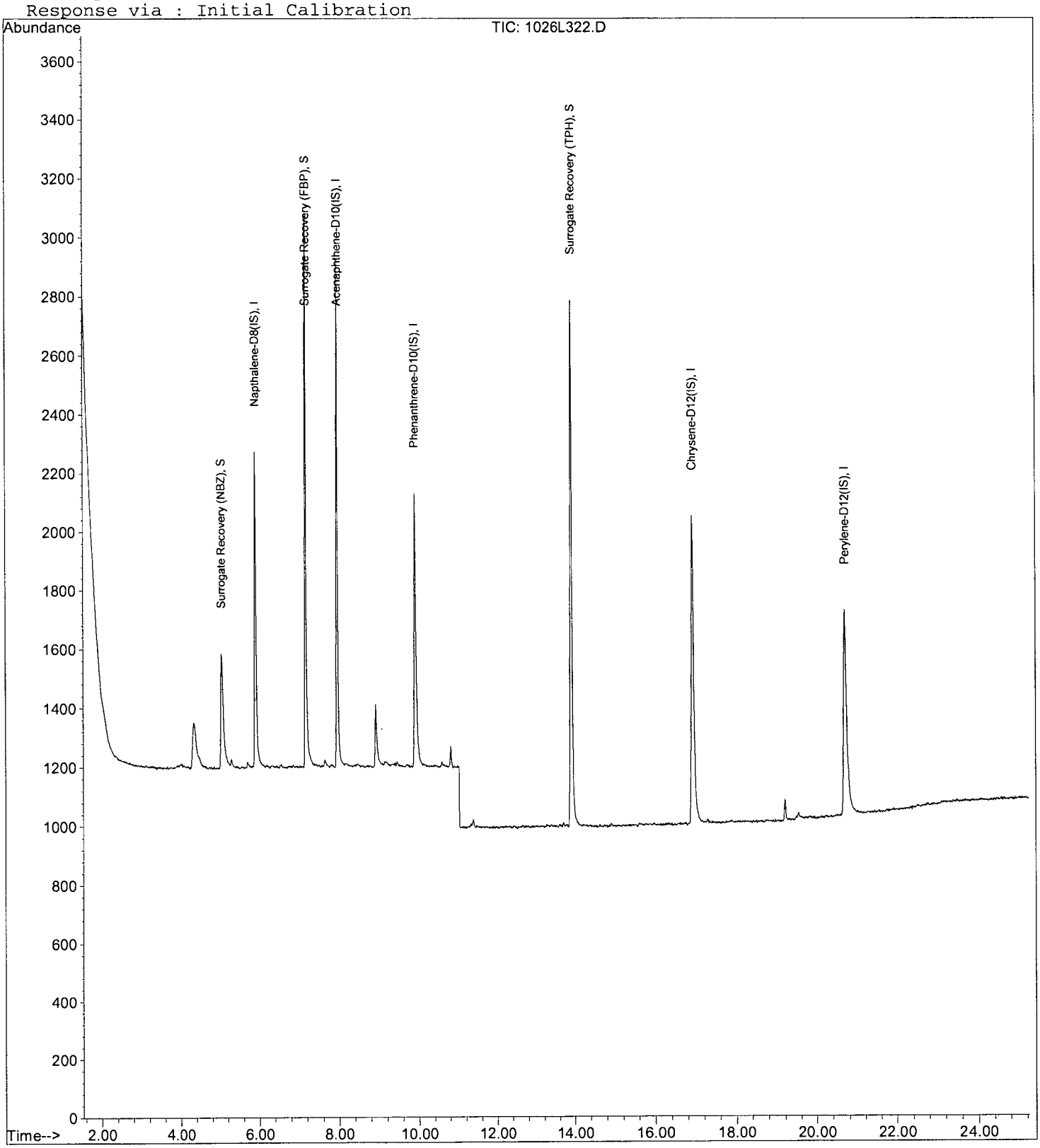
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161026\1026L322.D Vial: 22
Acq On : 23 Nov 16 20:14 Operator: MA
Sample : AZ45867W09 1/1050 Inst : Linus
Misc : water Multiplr: 0.95

Quant Time: Nov 30 10:00 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH120
Sample Collection Date: 11/14/16

ARF: 81492
APPL ID: AZ45868
QCG: #SIMDO-161118A-214136

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	11/18/16	11/29/16
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	11/18/16	11/29/16
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	11/18/16	11/29/16
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	62.6	53-106			%	11/18/16	11/29/16
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	79.8	55-111			%	11/18/16	11/29/16
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	85.9	58-132			%	11/18/16	11/29/16

Quant Method: L1026P.M
Run #: 1129L007
Instrument: Linus
Sequence: L161129
Dilution Factor: 1
Initials: RHA

Printed: 11/30/16 12:01:59 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161129\1129L007.D Vial: 7
Acq On : 29 Nov 16 17:27 Operator: MA
Sample : AZ45868W16 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Nov 30 11:25 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.89	136	2656	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	7.95	164	1405	2.50000	ppb	0.01
11) Phenanthrene-D10(IS)	9.90	188	2408	2.50000	ppb	0.02
15) Chrysene-D12(IS)	16.90	240	2990	2.50000	ppb	0.06
21) Perylene-D12(IS)	20.66	264	2753	2.50000	ppb	0.06
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.05	82	1281	3.72736	ppb	0.00
Spiked Amount 4.673			Recovery = 79.758%			
7) Surrogate Recovery (FBP)	7.16	172	2834	2.92253	ppb	0.00
Spiked Amount 4.673			Recovery = 62.552%			
17) Surrogate Recovery (TPH)	13.89	244	4416	4.01540	ppb	0.00
Spiked Amount 4.673			Recovery = 85.921%			

Target Compounds	Qvalue

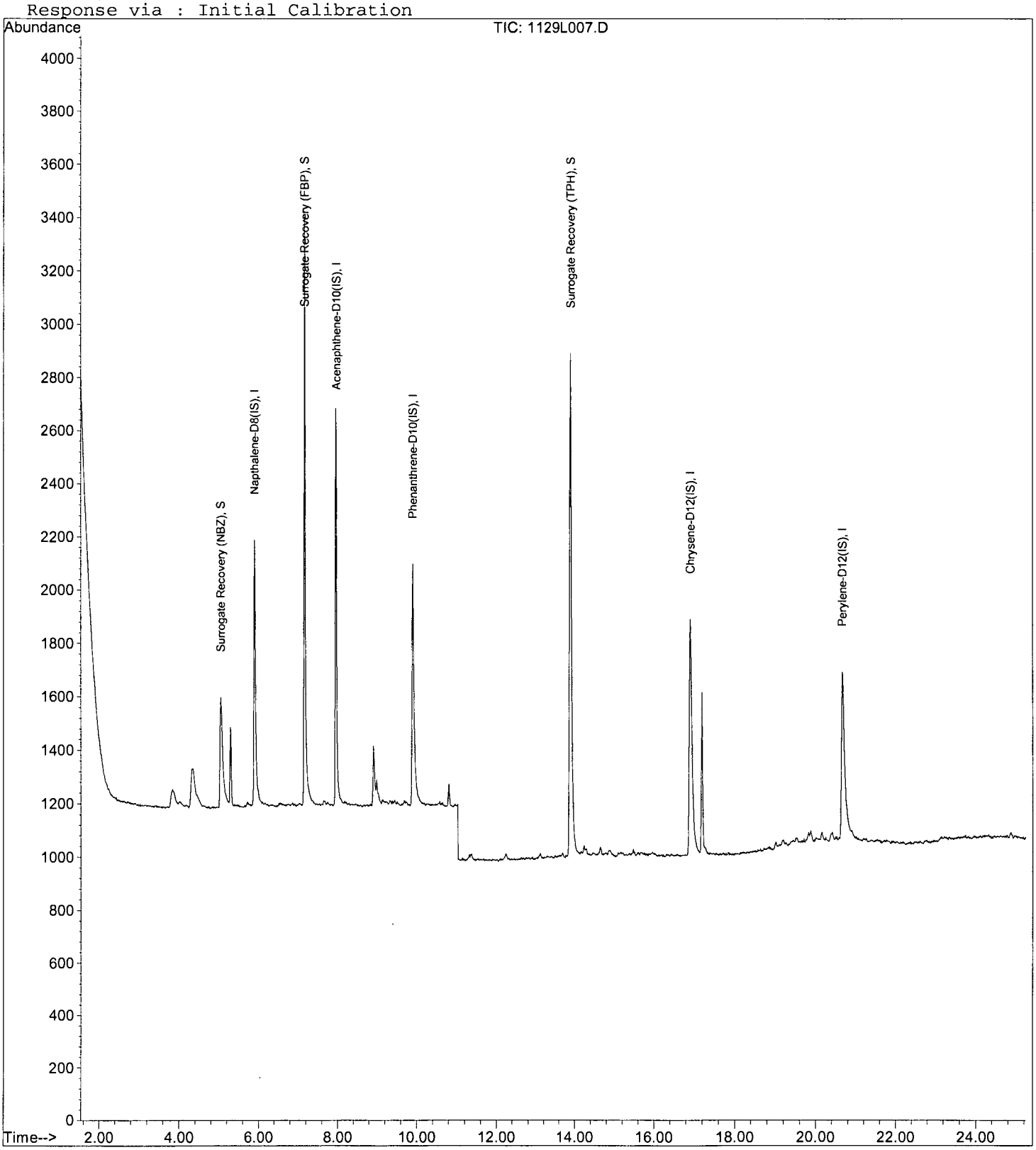
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161129\1129L007.D Vial: 7
Acq On : 29 Nov 16 17:27 Operator: MA
Sample : AZ45868W16 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Nov 30 11:25 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



ORGANICS

Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 10/26/16
Matrix: Instrument: Linus
Initials:

		Compound	0.1	0.2	0.5	1	5	10	50	100			Avg	%RSD		
			1026L003.D	1026L004.D	1026L005.D	1026L006.D	1026L007.D	1026L008.D	1026L009.D	1026L010.D						
1	I	Napthalene-D8(IS)														
2	SL	Surrogate Recovery (NBZ)	0.0804	0.3248	0.2336	0.2296	0.3042	0.3217	0.3012	0.2990			0.26	31	SL	1.000
3	TM	Naphthalene	1.093	1.058	0.9776	0.9622	1.079	1.065	0.9798	0.9449			1.0	5.8	TM	
4	TM	2-Methylnaphthalene	0.6190	0.6163	0.5906	0.5922	0.7073	0.7051	0.6480	0.6150			0.64	7.3	TM	
5	TM	1-Methylnaphthalene	0.7154	0.6995	0.6590	0.6161	0.6859	0.6794	0.5923	0.5625			0.65	8.4	TM	
6	I	Acenaphthene-D10(IS)														
7	S	Surrogate Recovery (FBP)	1.836	1.693	1.539	1.472	1.693	1.691	1.497	1.479			1.6	8.3	S	
8	TM	Acenaphthylene	2.007	2.013	1.915	1.895	2.275	2.242	2.059	1.996			2.1	6.8	TM	
9	*TM	Acenaphthene	1.353	1.216	1.158	1.178	1.322	1.313	1.191	1.156			1.2	6.5	*TM	
10	TM	Fluorene	1.493	1.372	1.332	1.314	1.566	1.550	1.413	1.365			1.4	6.9	TM	
11	I	Phenanthrene-D10(IS)														
12	TM	Phenanthrene	1.230	1.150	1.056	1.044	1.240	1.222	1.159	1.146			1.2	6.5	TM	
13	TM	Anthracene	0.9570	1.040	0.9985	0.9861	1.219	1.204	1.097	1.057			1.1	9.1	TM	
14	*TM	Fluoranthene	1.467	1.458	1.392	1.359	1.692	1.703	1.689	1.748			1.6	10	*TM	
15	I	Chrysene-D12(IS)														
16	TM	Pyrene	1.451	1.378	1.226	1.218	1.401	1.386	1.296	1.331			1.3	6.3	TM	
17	S	Surrogate Recovery (TPH)	1.024	0.9543	0.8040	0.7782	0.8541	0.8678	0.7977	0.7947			0.86	10	S	
18	TM	Benz (a) anthracene	1.156	1.102	1.027	1.021	1.221	1.256	1.226	1.133			1.1	7.8	TM	
19	TM	Chrysene	1.280	1.279	1.279	1.191	1.301	1.263	1.139	1.149			1.2	5.3	TM	
20	TM	Indeno (1,2,3-cd) pyrene	1.079	0.9954	1.025	1.057	1.233	1.254	1.210	1.222			1.1	9.3	TM	
21	I	Perylene-D12(IS)														
22	TM	Benzo (b) fluoranthene	1.137	0.9566	0.9689	0.9943	1.184	1.252	1.308	1.404			1.2	15	TM	
23	TML	Benzo (k) fluoranthene	0.8067	0.8751	0.8849	0.8451	1.200	1.135	1.110				0.98	17	TML	1.000
24	*TM	Benzo (a) pyrene	1.154	1.068	1.067	1.007	1.225	1.226	1.208	1.236			1.1	7.8	*TM	
25	TML	Dibenz (a,h) anthracene	0.6534	0.7507	0.9234	0.8434	1.105	1.128	1.115	1.121			0.96	20	TML	1.00
26	TM	Benzo (g,h,i) perylene	1.033	0.9952	0.9584	0.9260	1.106	1.118	1.083	1.084			1.0	6.9	TM	
27																
28																
29																
30																
31																
32																
33																
34																
35																

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L003.D Vial: 3
Acq On : 26 Oct 16 11:23 Operator: MA
Sample : 0.1 ug/ml PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 28 8:24 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.89	136	3110	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	7.94	164	1607	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.89	188	2743	2.50000 ppb		0.01
15) Chrysene-D12(IS)	16.86	240	3222	2.50000 ppb		0.02
21) Perylene-D12(IS)	20.61	264	3099	2.50000 ppb		0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.03	82	5	-0.02736 ppb		-0.01
Spiked Amount 5.000			Recovery = -0.540%			
7) Surrogate Recovery (FBP)	7.17	172	59	0.05692 ppb		0.01
Spiked Amount 5.000			Recovery = 1.140%			
17) Surrogate Recovery (TPH)	13.91	244	66	0.05959 ppb		0.03
Spiked Amount 5.000			Recovery = 1.200%			
Target Compounds						Qvalue
3) Naphthalene	5.92	128	136	0.10719 ppb		99
4) 2-Methylnaphthalene	6.74	142	77	0.09722 ppb		97
5) 1-Methylnaphthalene	6.84	142	89	0.10985 ppb		95
8) Acenaphthylene	7.79	152	129	0.09789 ppb		100
9) Acenaphthene	7.98	154	87	0.10949 ppb		98
10) Fluorene	8.61	166	96	0.10475 ppb		97
12) Phenanthrene	9.93	178	135	0.10645 ppb		99
13) Anthracene	10.03	178	105	0.08946 ppb		98
14) Fluoranthene	12.72	202	161	0.09385 ppb		97
16) Pyrene	13.35	202	187	0.10863 ppb		98
18) Benz (a) anthracene	16.84	228	149	0.10115 ppb		92
19) Chrysene	16.93	228	165	0.10363 ppb		98
20) Indeno (1,2,3-cd) pyrene	22.95	276	139	0.09508 ppb	#	95
22) Benzo (b) fluoranthene	19.72	252	141	0.09886 ppb		92
24) Benzo (a) pyrene	20.36	252	143	0.10041 ppb		93
25) Dibenz (a,h) anthracene	23.01	278	81	0.15217 ppb		96
26) Benzo (g,h,i) perylene	23.49	276	128	0.09949 ppb		91

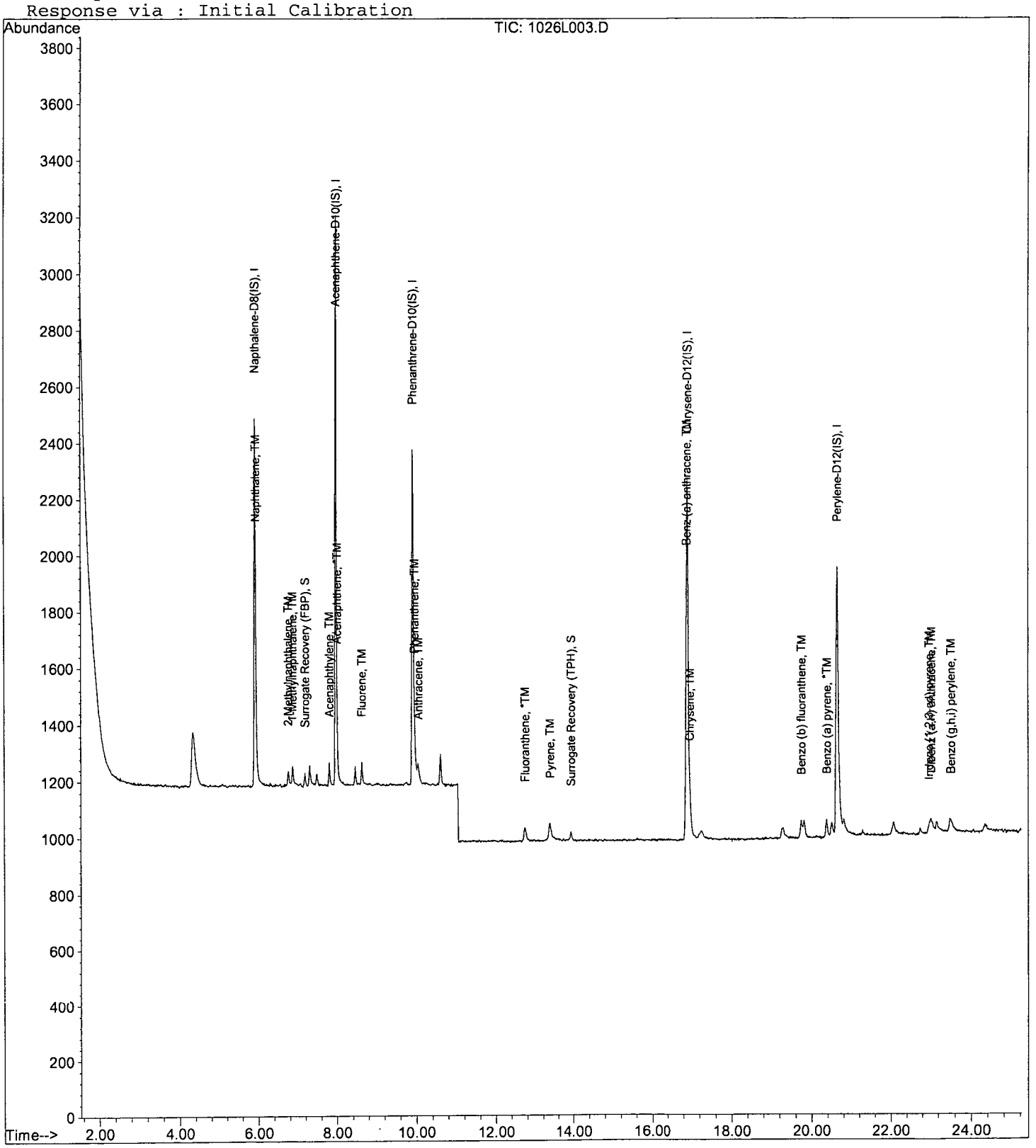
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161026\1026L003.D Vial: 3
Acq On : 26 Oct 16 11:23 Operator: MA
Sample : 0.1 ug/ml PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 28 8:24 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L004.D Vial: 4
Acq On : 26 Oct 16 11:56 Operator: MA
Sample : 0.2 ug/ml PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 15:51 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed Oct 26 15:50:22 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.89	136	3002	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.94	164	1521	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.89	188	2597	2.50000	ppb		0.01
15) Chrysene-D12(IS)	16.86	240	3039	2.50000	ppb		0.02
21) Perylene-D12(IS)	20.61	264	2914	2.50000	ppb		0.00
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.05	82	39	0.40403	ppb		0.03
Spiked Amount 5.000			Recovery =	8.080%			
7) Surrogate Recovery (FBP)	7.17	172	103	0.09222	ppb		0.01
Spiked Amount 5.000			Recovery =	1.840%			
17) Surrogate Recovery (TPH)	13.91	244	116	0.09317	ppb		0.03
Spiked Amount 5.000			Recovery =	1.860%			
Target Compounds							Qvalue
3) Naphthalene	5.92	128	254	0.19348	ppb		99
4) 2-Methylnaphthalene	6.74	142	148	0.19912	ppb		99
5) 1-Methylnaphthalene	6.86	142	168	0.19556	ppb		96
8) Acenaphthylene	7.79	152	245	0.20066	ppb		99
9) Acenaphthene	7.98	154	148	0.17973	ppb		96
10) Fluorene	8.61	166	167	0.18379	ppb		98
12) Phenanthrene	9.93	178	239	0.18699	ppb		98
13) Anthracene	10.03	178	216	0.21728	ppb		97
14) Fluoranthene	12.71	202	303	0.19878	ppb		99
16) Pyrene	13.34	202	335	0.18993	ppb		98
18) Benz (a) anthracene	16.84	228	268	0.19070	ppb		98
19) Chrysene	16.93	228	311	0.19983	ppb		96
20) Indeno (1,2,3-cd) pyrene	22.95	276	242	0.18458	ppb	#	98
22) Benzo (b) fluoranthene	19.71	252	223	0.16820	ppb		99
23) Benzo (k) fluoranthene	19.78	252	204	0.21695	ppb		100
24) Benzo (a) pyrene	20.36	252	249	0.18518	ppb		95
25) Dibenz (a,h) anthracene	23.00	278	175	0.22977	ppb		98
26) Benzo (g,h,i) perylene	23.48	276	232	0.19276	ppb		94

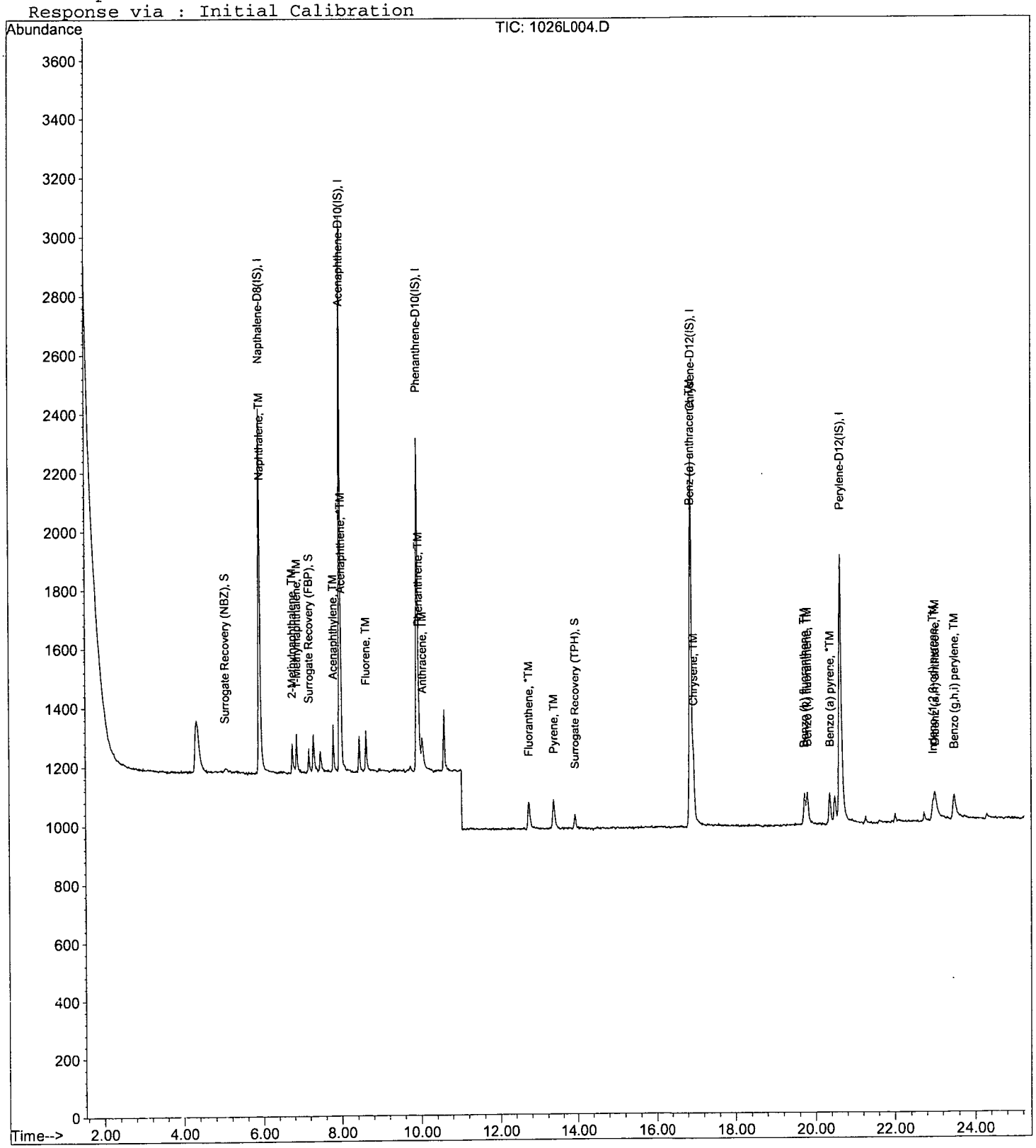
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161026\1026L004.D Vial: 4
Acq On : 26 Oct 16 11:56 Operator: MA
Sample : 0.2 ug/ml PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 15:51 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L005.D Vial: 5
Acq On : 26 Oct 16 12:28 Operator: MA
Sample : 0.5 ug/ml PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 15:51 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed Oct 26 15:50:22 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.89	136	2997	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.94	164	1546	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.89	188	2604	2.50000	ppb		0.01
15) Chrysene-D12(IS)	16.86	240	3072	2.50000	ppb		0.02
21) Perylene-D12(IS)	20.61	264	2859	2.50000	ppb		0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.06	82	70	0.28823	ppb		0.04
Spiked Amount 5.000			Recovery =	5.760%			
7) Surrogate Recovery (FBP)	7.17	172	238	0.21813	ppb		0.01
Spiked Amount 5.000			Recovery =	4.360%			
17) Surrogate Recovery (TPH)	13.90	244	247	0.20320	ppb		0.02
Spiked Amount 5.000			Recovery =	4.060%			
Target Compounds							Qvalue
3) Naphthalene	5.93	128	586	0.45453	ppb		99
4) 2-Methylnaphthalene	6.74	142	354	0.47812	ppb		100
5) 1-Methylnaphthalene	6.84	142	395	0.46573	ppb		97
8) Acenaphthylene	7.79	152	592	0.47623	ppb		100
9) Acenaphthene	7.98	154	358	0.45056	ppb		98
10) Fluorene	8.61	166	412	0.46494	ppb		99
12) Phenanthrene	9.93	178	550	0.44358	ppb		99
13) Anthracene	10.03	178	520	0.50007	ppb		100
14) Fluoranthene	12.71	202	725	0.47580	ppb		97
16) Pyrene	13.34	202	753	0.43324	ppb		98
18) Benz (a) anthracene	16.84	228	631	0.45474	ppb		99
19) Chrysene	16.93	228	786	0.49983	ppb		98
20) Indeno (1,2,3-cd) pyrene	22.94	276	630	0.49442	ppb	#	99
22) Benzo (b) fluoranthene	19.71	252	554	0.46268	ppb		99
23) Benzo (k) fluoranthene	19.78	252	506	0.52618	ppb		100
24) Benzo (a) pyrene	20.36	252	610	0.48017	ppb		96
25) Dibenz (a,h) anthracene	23.00	278	528	0.65763	ppb		99
26) Benzo (g,h,i) perylene	23.47	276	548	0.47262	ppb		96

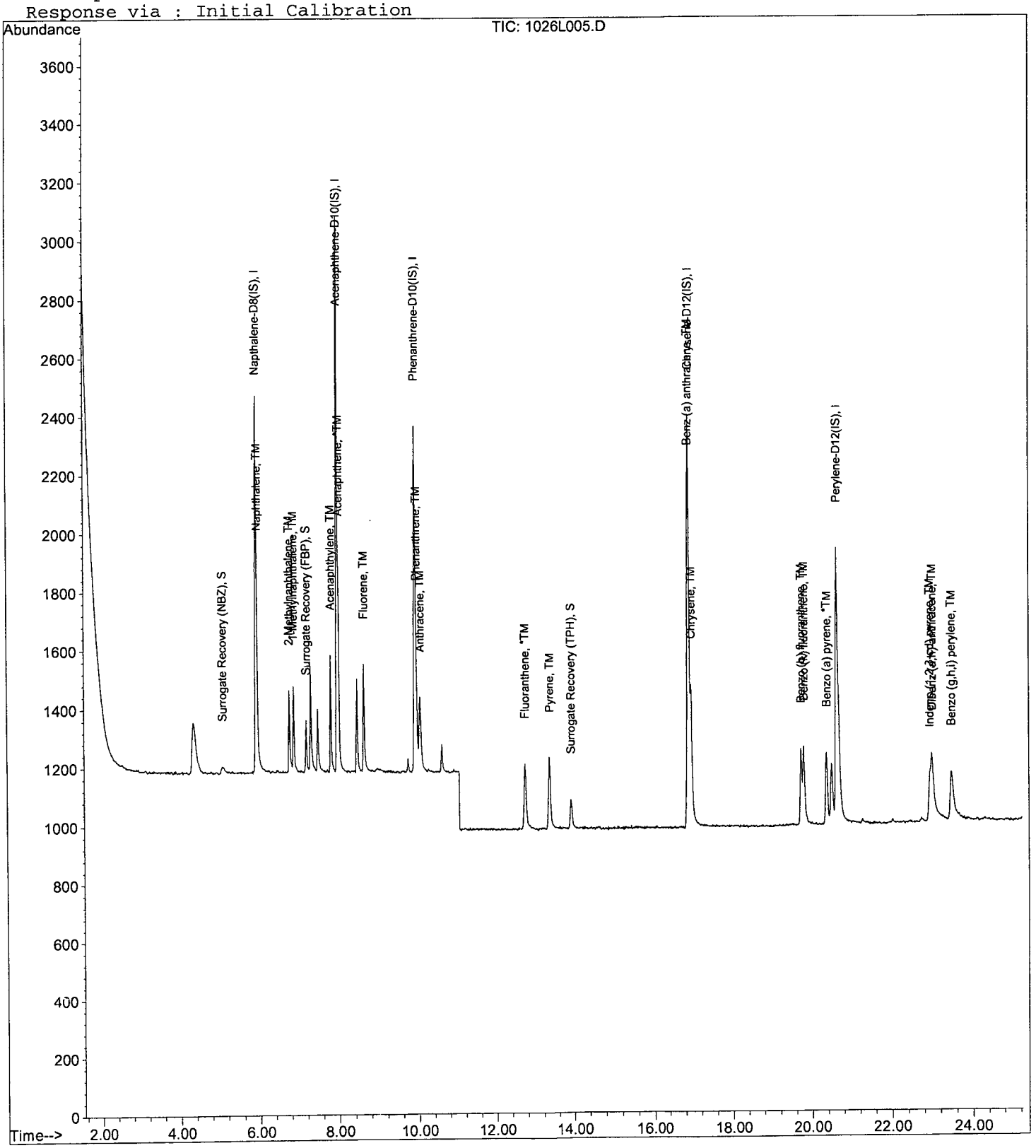
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161026\1026L005.D Vial: 5
Acq On : 26 Oct 16 12:28 Operator: MA
Sample : 0.5 ug/ml PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 15:51 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L006.D Vial: 6
Acq On : 26 Oct 16 13:01 Operator: MA
Sample : 1.0 ug/ml PAH 10/26/16 (1) Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 15:51 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed Oct 26 15:50:22 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.89	136	3027	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	7.94	164	1545	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.89	188	2662	2.50000 ppb		0.01
15) Chrysene-D12(IS)	16.85	240	3161	2.50000 ppb		0.01
21) Perylene-D12(IS)	20.61	264	2967	2.50000 ppb		0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.05	82	139	0.53919 ppb		0.03
Spiked Amount 5.000			Recovery	= 10.780%		
7) Surrogate Recovery (FBP)	7.17	172	455	0.43581 ppb		0.01
Spiked Amount 5.000			Recovery	= 8.720%		
17) Surrogate Recovery (TPH)	13.90	244	492	0.41953 ppb		0.02
Spiked Amount 5.000			Recovery	= 8.400%		
Target Compounds						Qvalue
3) Naphthalene	5.93	128	1165	0.92265 ppb		99
4) 2-Methylnaphthalene	6.74	142	717	0.97300 ppb		99
5) 1-Methylnaphthalene	6.84	142	746	0.89122 ppb		98
8) Acenaphthylene	7.79	152	1171	0.95780 ppb		100
9) Acenaphthene	7.98	154	728	0.94806 ppb		97
10) Fluorene	8.61	166	812	0.93887 ppb		99
12) Phenanthrene	9.92	178	1112	0.91159 ppb		99
13) Anthracene	10.02	178	1050	0.98771 ppb		99
14) Fluoranthene	12.70	202	1447	0.94417 ppb		97
16) Pyrene	13.33	202	1540	0.90120 ppb		99
18) Benz (a) anthracene	16.83	228	1291	0.93232 ppb		99
19) Chrysene	16.93	228	1506	0.93083 ppb		99
20) Indeno (1,2,3-cd) pyrene	22.94	276	1337	1.02354 ppb	#	100
22) Benzo (b) fluoranthene	19.71	252	1180	0.97384 ppb		99
23) Benzo (k) fluoranthene	19.77	252	1003	0.98779 ppb		98
24) Benzo (a) pyrene	20.35	252	1195	0.91857 ppb		98
25) Dibenz (a,h) anthracene	22.99	278	1001	1.08714 ppb		95
26) Benzo (g,h,i) perylene	23.46	276	1099	0.93031 ppb		96

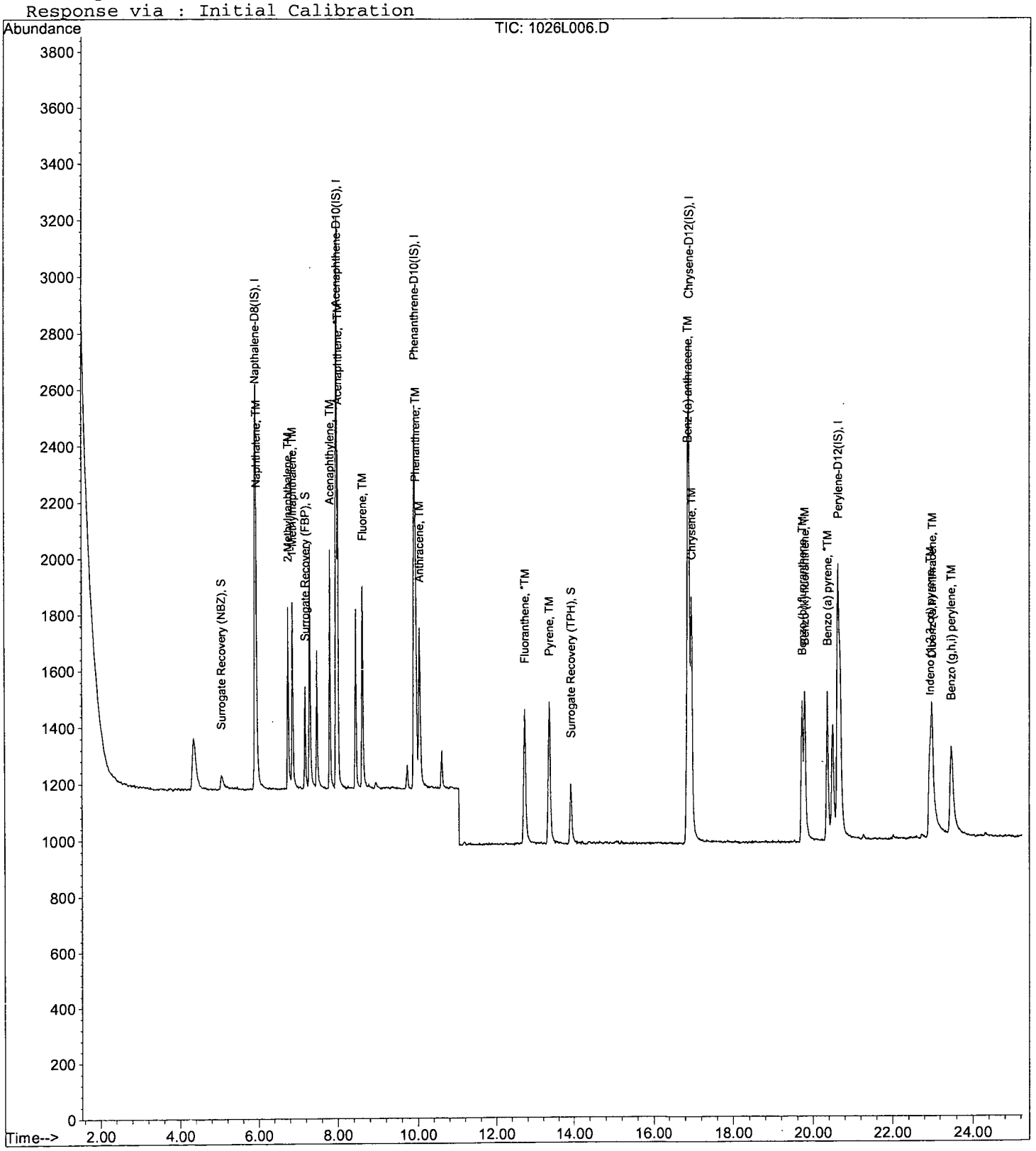
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161026\1026L006.D Vial: 6
Acq On : 26 Oct 16 13:01 Operator: MA
Sample : 1.0 ug/ml PAH 10/26/16 (1) Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 15:51 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L007.D Vial: 7
Acq On : 26 Oct 16 13:33 Operator: MA
Sample : 5.0 ug/ml PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 15:51 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed Oct 26 15:50:22 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.89	136	2942	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	7.94	164	1477	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.87	188	2585	2.50000 ppb		0.00
15) Chrysene-D12(IS)	16.84	240	3262	2.50000 ppb		0.00
21) Perylene-D12(IS)	20.60	264	2933	2.50000 ppb		0.00
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.05	82	895	3.50342 ppb		0.03
Spiked Amount 5.000			Recovery = 70.060%			
7) Surrogate Recovery (FBP)	7.16	172	2500	2.58785 ppb		0.00
Spiked Amount 5.000			Recovery = 51.760%			
17) Surrogate Recovery (TPH)	13.88	244	2786	2.39859 ppb		0.00
Spiked Amount 5.000			Recovery = 47.980%			
Target Compounds						Qvalue
3) Naphthalene	5.92	128	6347	5.27386 ppb		100
4) 2-Methylnaphthalene	6.74	142	4162	5.85067 ppb		99
5) 1-Methylnaphthalene	6.84	142	4036	5.09968 ppb		97
8) Acenaphthylene	7.79	152	6719	5.80999 ppb		99
9) Acenaphthene	7.98	154	3906	5.39090 ppb		98
10) Fluorene	8.59	166	4625	5.68065 ppb		98
12) Phenanthrene	9.91	178	6410	5.53358 ppb		99
13) Anthracene	10.01	178	6300	6.12160 ppb		100
14) Fluoranthene	12.68	202	8746	5.95997 ppb		96
16) Pyrene	13.31	202	9137	5.31261 ppb		99
18) Benz (a) anthracene	16.82	228	7969	5.67276 ppb		99
19) Chrysene	16.92	228	8489	5.17390 ppb		99
20) Indeno (1,2,3-cd) pyrene	22.90	276	8042	5.93101 ppb	#	98
22) Benzo (b) fluoranthene	19.69	252	6943	5.83458 ppb		100
23) Benzo (k) fluoranthene	19.76	252	7038	7.03310 ppb		98
24) Benzo (a) pyrene	20.34	252	7187	5.70464 ppb		96
25) Dibenz (a,h) anthracene	22.96	278	6484	6.97171 ppb		100
26) Benzo (g,h,i) perylene	23.43	276	6490	5.65605 ppb		98

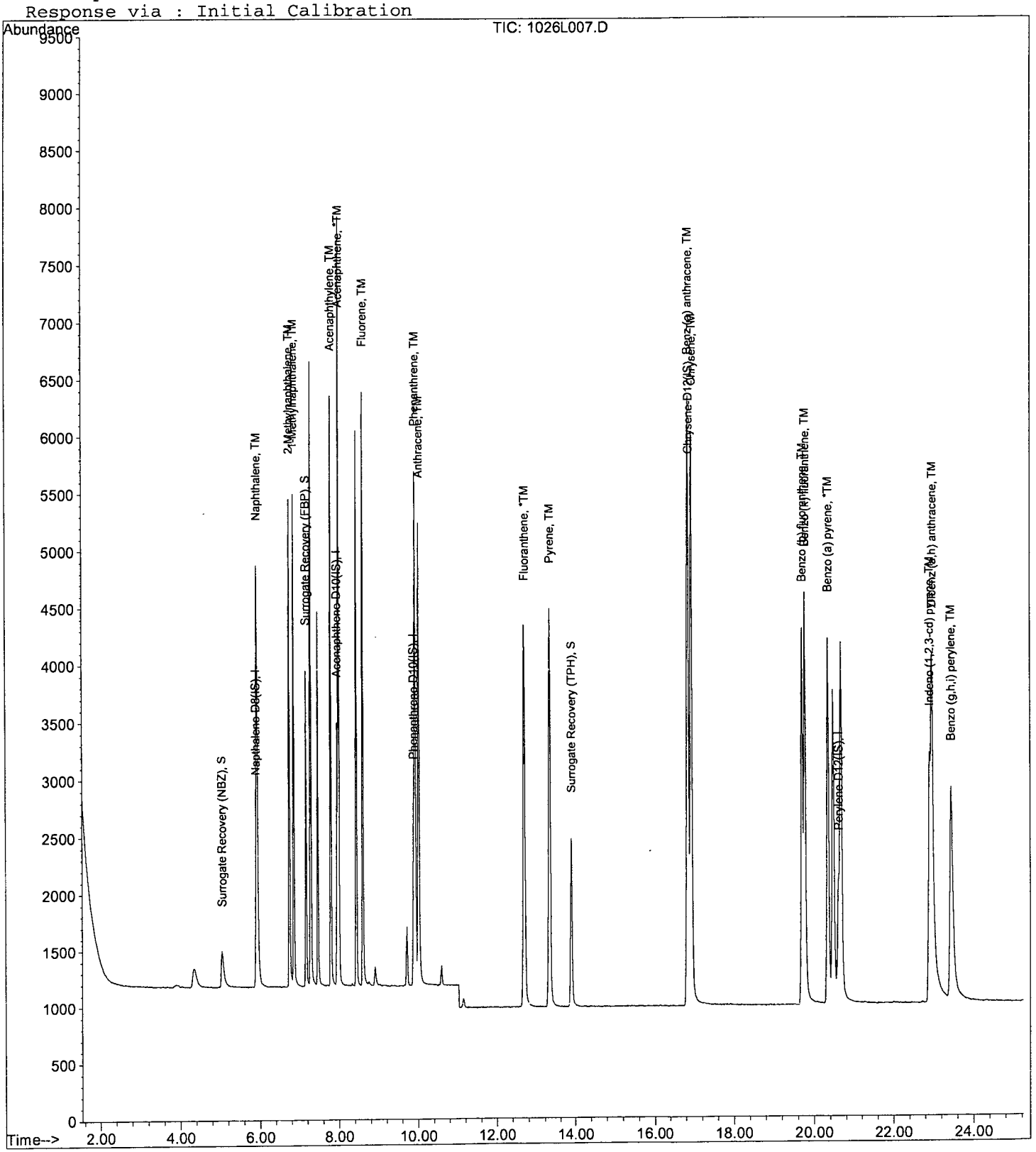
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161026\1026L007.D Vial: 7
Acq On : 26 Oct 16 13:33 Operator: MA
Sample : 5.0 ug/ml PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 15:51 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L008.D Vial: 8
Acq On : 26 Oct 16 14:05 Operator: MA
Sample : 10.0 ug/ml PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 15:51 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed Oct 26 15:50:22 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.89	136	2986	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.94	164	1505	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.87	188	2677	2.50000	ppb		0.00
15) Chrysene-D12(IS)	16.84	240	3400	2.50000	ppb		0.00
21) Perylene-D12(IS)	20.59	264	3039	2.50000	ppb		-0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.05	82	1921	6.85829	ppb		0.00
Spiked Amount 5.000			Recovery = 137.160%				
7) Surrogate Recovery (FBP)	7.16	172	5091	5.13577	ppb		0.00
Spiked Amount 5.000			Recovery = 102.720%				
17) Surrogate Recovery (TPH)	13.88	244	5901	4.91410	ppb		0.00
Spiked Amount 5.000			Recovery = 98.280%				
Target Compounds							Qvalue
3) Naphthalene	5.93	128	12724	10.30399	ppb		100
4) 2-Methylnaphthalene	6.74	142	8422	11.28079	ppb		99
5) 1-Methylnaphthalene	6.84	142	8115	10.06248	ppb		97
8) Acenaphthylene	7.79	152	13495	11.09277	ppb		99
9) Acenaphthene	7.98	154	7905	10.54234	ppb		99
10) Fluorene	8.58	166	9332	10.95063	ppb		97
12) Phenanthrene	9.91	178	13084	10.67897	ppb		100
13) Anthracene	9.99	178	12890	11.57524	ppb		99
14) Fluoranthene	12.67	202	18238	11.55739	ppb		97
16) Pyrene	13.30	202	18848	10.38432	ppb		100
18) Benz (a) anthracene	16.82	228	17088	11.36461	ppb		99
19) Chrysene	16.91	228	17182	9.97769	ppb		100
20) Indeno (1,2,3-cd) pyrene	22.89	276	17051	11.63162	ppb	#	98
22) Benzo (b) fluoranthene	19.69	252	15215	11.94137	ppb		99
23) Benzo (k) fluoranthene	19.75	252	13796	12.30485	ppb		98
24) Benzo (a) pyrene	20.33	252	14907	11.10660	ppb		99
25) Dibenz (a,h) anthracene	22.95	278	13714	13.19086	ppb		99
26) Benzo (g,h,i) perylene	23.42	276	13588	11.13668	ppb		98

(#) = qualifier out of range (m) = manual integration

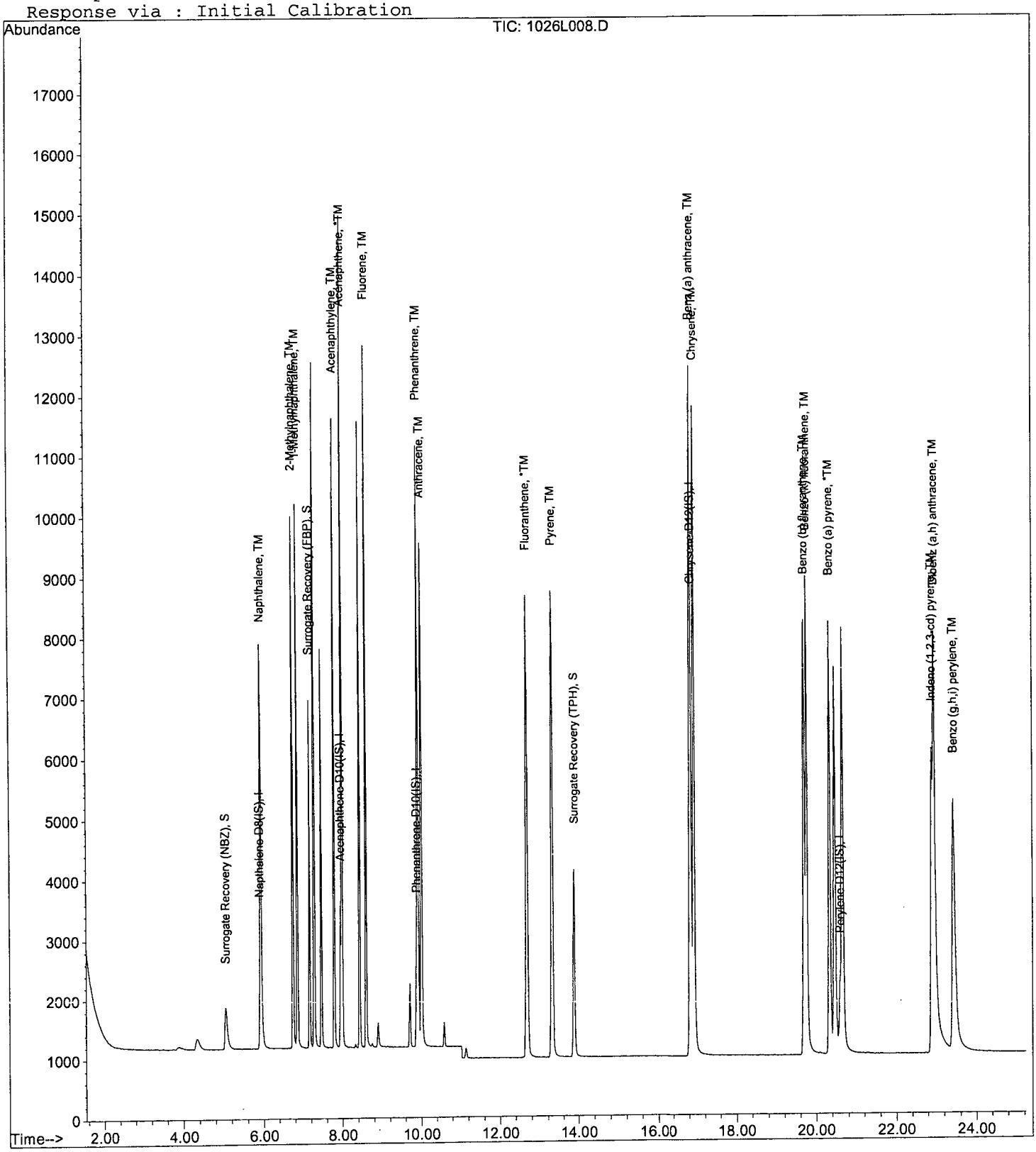
Quantitation Report

Data File : M:\LINUS\DATA\L161026\1026L008.D
Acq On : 26 Oct 16 14:05
Sample : 10.0 ug/ml PAH 10/26/16
Misc : water

Vial: 8
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Oct 26 15:51 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L009.D Vial: 9
Acq On : 26 Oct 16 14:37 Operator: MA
Sample : 50.0 ug/ml PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 15:51 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed Oct 26 15:50:22 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.89	136	2794	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.94	164	1386	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.87	188	2434	2.50000	ppb		0.00
15) Chrysene-D12(IS)	16.85	240	3234	2.50000	ppb		0.01
21) Perylene-D12(IS)	20.60	264	2790	2.50000	ppb		0.00
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.03	82	8415	30.23463	ppb		-0.01
Spiked Amount 5.000			Recovery = 604.700%				
7) Surrogate Recovery (FBP)	7.16	172	20751	22.62838	ppb		0.00
Spiked Amount 5.000			Recovery = 452.560%				
17) Surrogate Recovery (TPH)	13.87	244	25797	22.65018	ppb		-0.01
Spiked Amount 5.000			Recovery = 453.000%				
Target Compounds							Qvalue
3) Naphthalene	5.93	128	54753	47.14744	ppb		100
4) 2-Methylnaphthalene	6.74	142	36210	50.75083	ppb		99
5) 1-Methylnaphthalene	6.84	142	33098	43.81569	ppb		97
8) Acenaphthylene	7.79	152	57065	50.02321	ppb		100
9) Acenaphthene	7.99	154	33025	47.39617	ppb		96
10) Fluorene	8.59	166	39169	49.13071	ppb		99
12) Phenanthrene	9.92	178	56397	50.05941	ppb		99
13) Anthracene	10.01	178	53407	51.39823	ppb		99
14) Fluoranthene	12.68	202	82212	55.84917	ppb		97
16) Pyrene	13.31	202	83805	48.23348	ppb		99
18) Benz (a) anthracene	16.83	228	79293	54.20887	ppb		99
19) Chrysene	16.93	228	73686	45.00303	ppb		100
20) Indeno (1,2,3-cd) pyrene	22.90	276	78247	54.63168	ppb	#	99
22) Benzo (b) fluoranthene	19.71	252	72967	60.42347	ppb		99
23) Benzo (k) fluoranthene	19.78	252	61939	57.94864	ppb		99
24) Benzo (a) pyrene	20.36	252	67423	53.72649	ppb		96
25) Dibenz (a,h) anthracene	22.96	278	62206	61.88207	ppb		99
26) Benzo (g,h,i) perylene	23.43	276	60431	52.94634	ppb		97

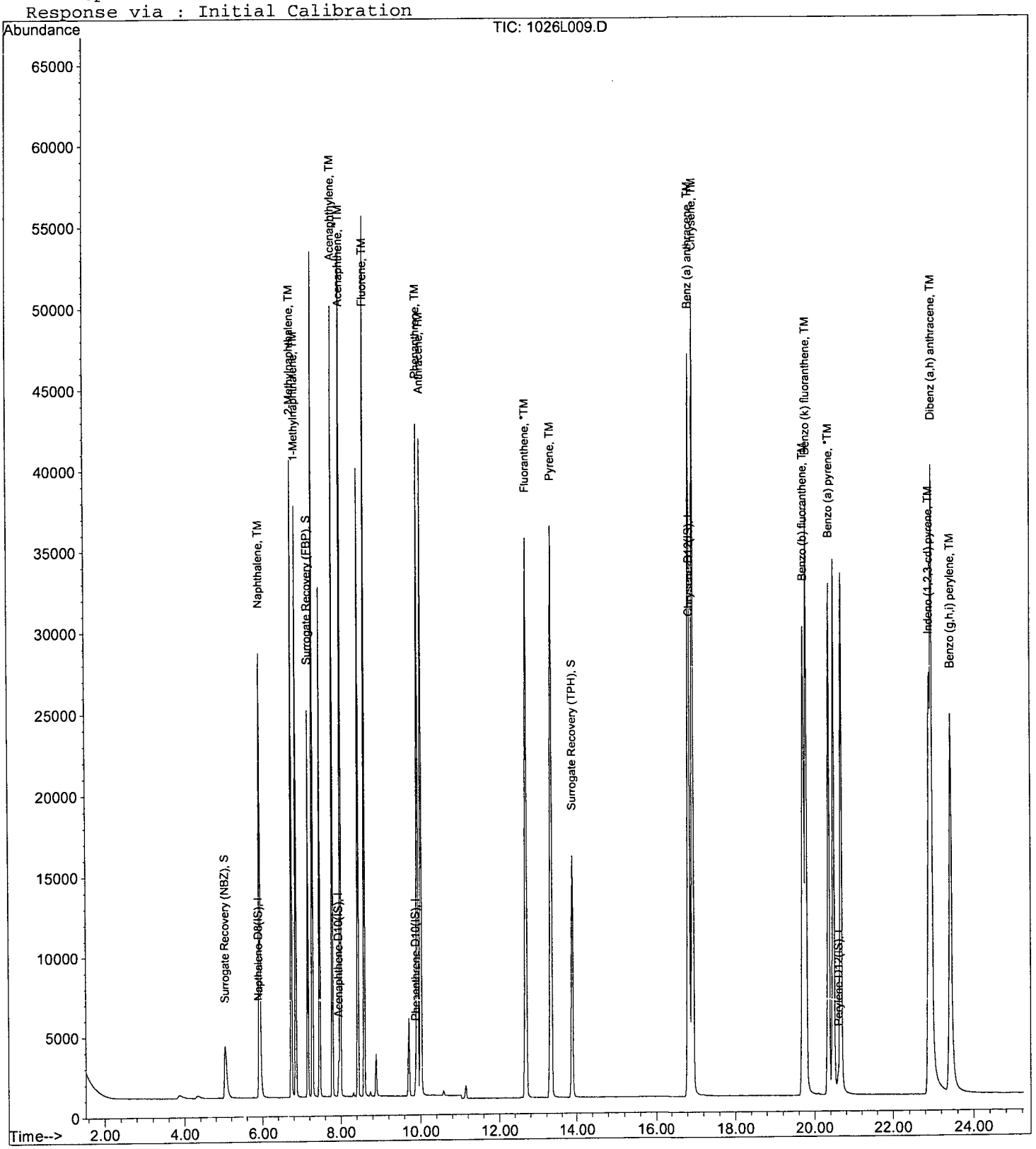
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161026\1026L009.D Vial: 9
Acq On : 26 Oct 16 14:37 Operator: MA
Sample : 50.0 ug/ml PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 15:51 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L010.D Vial: 10
Acq On : 26 Oct 16 15:09 Operator: MA
Sample : 100.0 ug/ml PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 15:51 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed Oct 26 15:50:22 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.90	136	2855	2.50000 ppb		0.01
6) Acenaphthene-D10(IS)	7.95	164	1362	2.50000 ppb		0.01
11) Phenanthrene-D10(IS)	9.89	188	2333	2.50000 ppb		0.01
15) Chrysene-D12(IS)	16.88	240	3111	2.50000 ppb		0.04
21) Perylene-D12(IS)	20.62	264	2663	2.50000 ppb		0.02
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.05	82	17071	58.28135 ppb		0.00
Spiked Amount 5.000			Recovery	= 1165.620%		
7) Surrogate Recovery (FBP)	7.16	172	40283	45.31564 ppb		0.00
Spiked Amount 5.000			Recovery	= 906.320%		
17) Surrogate Recovery (TPH)	13.88	244	49449	45.74789 ppb		0.00
Spiked Amount 5.000			Recovery	= 914.960%		
Target Compounds						Qvalue
3) Naphthalene	5.93	128	107908	91.68077 ppb		99
4) 2-Methylnaphthalene	6.74	142	70232	96.12565 ppb		100
5) 1-Methylnaphthalene	6.86	142	64241	84.72330 ppb		99
8) Acenaphthylene	7.79	152	108768	97.01976 ppb		99
9) Acenaphthene	7.99	154	63005	92.70530 ppb		99
10) Fluorene	8.59	166	74351	95.14008 ppb		99
12) Phenanthrene	9.93	178	106925	99.00134 ppb		99
13) Anthracene	10.02	178	98627	98.63251 ppb		98
14) Fluoranthene	12.70	202	163122	113.71087 ppb		97
16) Pyrene	13.34	202	165586	99.57259 ppb		99
18) Benz (a) anthracene	16.85	228	141018	99.02815 ppb		99
19) Chrysene	16.97	228	143007	92.10839 ppb		99
20) Indeno (1,2,3-cd) pyrene	22.94	276	152037	108.90723 ppb	#	98
22) Benzo (b) fluoranthene	19.73	252	149573	126.01447 ppb		99
23) Benzo (k) fluoranthene	19.82	252	80228	76.89275 ppb		98
24) Benzo (a) pyrene	20.39	252	131607	108.71585 ppb		97
25) Dibenz (a,h) anthracene	23.01	278	119414	120.37099 ppb		96
26) Benzo (g,h,i) perylene	23.48	276	115421	105.06387 ppb		98

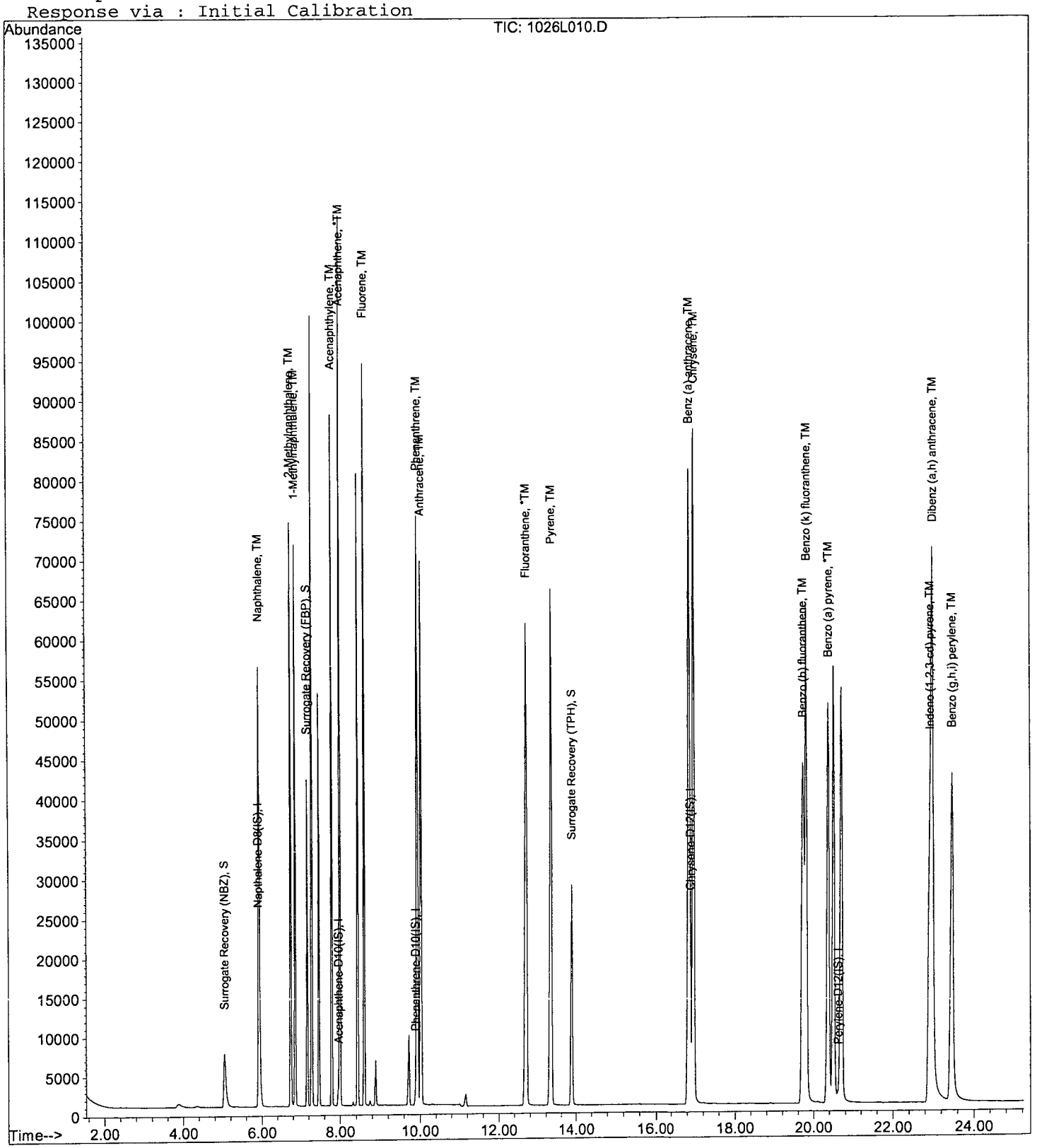
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161026\1026L010.D Vial: 10
Acq On : 26 Oct 16 15:09 Operator: MA
Sample : 100.0 ug/ml PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 15:51 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 10/26/16
Instrument: Linus
Initial Cal. Date: 10/26/16
Data File: 1026L011.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	Naphthalene	1.020	1.149	13	TM	
2	TM	2-Methylnaphthalene	0.6367	0.7311	15	TM	
3	TM	1-Methylnaphthalene	0.6513	0.7303	12	TM	
4	TM	Acenaphthylene	2.050	2.256	10	TM	
5	*TM	Acenaphthene	1.236	1.335	8.0	*TM	
6	TM	Fluorene	1.426	1.572	10	TM	
7	TM	Phenanthrene	1.156	1.229	6.3	TM	
8	TM	Anthracene	1.070	1.196	12	TM	
9	*TM	Fluoranthene	1.564	1.710	9.4	*TM	
10	TM	Pyrene	1.336	1.394	4.4	TM	
11	TM	Benz (a) anthracene	1.143	1.235	8.0	TM	
12	TM	Chrysene	1.235	1.312	6.2	TM	
13	TM	Indeno (1,2,3-cd) pyrene	1.134	1.292	14	TM	
14	TM	Benzo (b) fluoranthene	1.151	1.183	2.8	TM	
15	TML	Benzo (k) fluoranthene	0.9795	1.143	17	TML	2.5
16	*TM	Benzo (a) pyrene	1.149	1.228	6.9	*TM	
17	TML	Dibenz (a,h) anthracene	0.9550	1.177	23	TML	6.9
18	TM	Benzo (g,h,i) perylene	1.038	1.117	7.6	TM	
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
		Average			10.3		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L011.D Vial: 11
Acq On : 26 Oct 16 15:42 Operator: MA
Sample : SS PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 16:20 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed Oct 26 16:16:15 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.90	136	2785	2.50000 ppb		0.01
6) Acenaphthene-D10(IS)	7.94	164	1444	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.87	188	2515	2.50000 ppb		0.00
15) Chrysene-D12(IS)	16.85	240	3169	2.50000 ppb		0.01
21) Perylene-D12(IS)	20.60	264	2834	2.50000 ppb		0.00
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.06	82	1	-0.03779 ppb		0.01
Spiked Amount 5.000			Recovery = -0.760%			
7) Surrogate Recovery (FBP)	7.16	172	7	0.00752 ppb		0.00
Spiked Amount 5.000			Recovery = 0.160%			
17) Surrogate Recovery (TPH)	13.90	244	3	0.00275 ppb		0.02
Spiked Amount 5.000			Recovery = 0.060%			
Target Compounds						Qvalue
3) Naphthalene	5.93	128	6402	5.63457 ppb		100
4) 2-Methylnaphthalene	6.74	142	4072	5.74118 ppb		99
5) 1-Methylnaphthalene	6.84	142	4068	5.60694 ppb		97
8) Acenaphthylene	7.79	152	6514	5.50095 ppb		99
9) Acenaphthene	7.98	154	3856	5.40076 ppb		98
10) Fluorene	8.59	166	4539	5.51180 ppb		100
12) Phenanthrene	9.92	178	6183	5.31717 ppb		99
13) Anthracene	10.01	178	6017	5.59144 ppb		100
14) Fluoranthene	12.68	202	8601	5.46808 ppb		97
16) Pyrene	13.31	202	8838	5.22011 ppb		99
18) Benz (a) anthracene	16.82	228	7826	5.40169 ppb		99
19) Chrysene	16.92	228	8315	5.30991 ppb		99
20) Indeno (1,2,3-cd) pyrene	22.91	276	8191	5.69657 ppb	#	97
22) Benzo (b) fluoranthene	19.69	252	6704	5.14014 ppb		100
23) Benzo (k) fluoranthene	19.76	252	6480	5.12262 ppb		98
24) Benzo (a) pyrene	20.34	252	6962	5.34581 ppb		97
25) Dibenz (a,h) anthracene	22.96	278	6674	5.34490 ppb		99
26) Benzo (g,h,i) perylene	23.44	276	6331	5.38111 ppb		98

Algorithum = $\frac{6402 * 1 * 2.5}{1 * 2785 * 1.02} = \frac{16003}{2840.7} = 5.63417$

RH 10/27/16

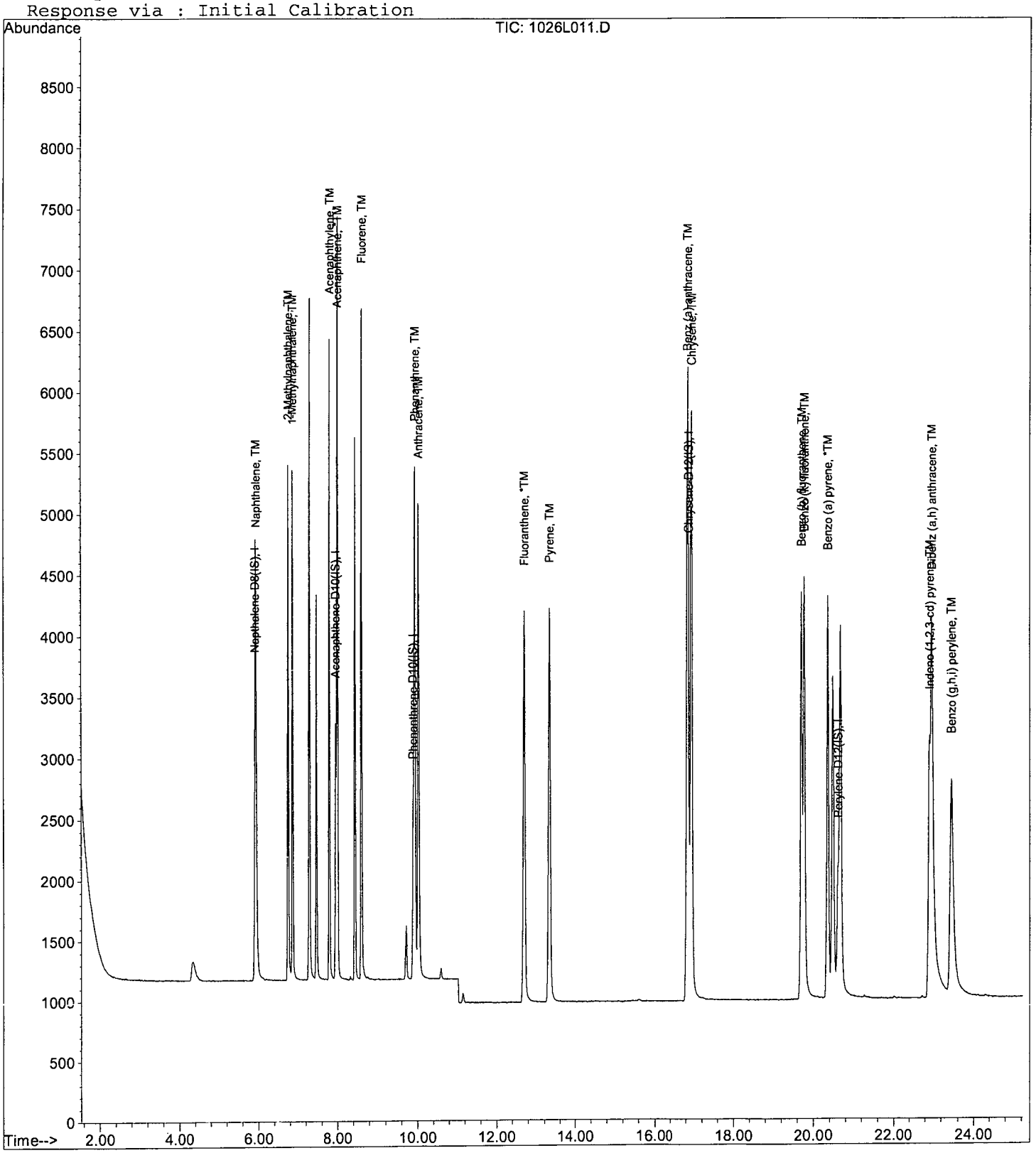
(#) = qualifier out of range (m) = manual integration
1026L011.D L1026P.M Wed Nov 02 15:58:03 2016

Quantitation Report

Data File : M:\LINUS\DATA\L161026\1026L011.D Vial: 11
Acq On : 26 Oct 16 15:42 Operator: MA
Sample : SS PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 16:20 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/23/16
Instrument: Linus
Initial Cal. Date: 10/26/16
Data File: 1026L316.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	SL	Surrogate Recovery (NBZ)	0.2618	0.3477	33	SL	15
3	TM	Naphthalene	1.020	1.054	3.3	TM	
4	TM	2-Methylnaphthalene	0.6367	0.6923	8.7	TM	
5	TM	1-Methylnaphthalene	0.6513	0.6754	3.7	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	S	Surrogate Recovery (FBP)	1.613	1.639	1.7	S	
8	TM	Acenaphthylene	2.050	2.159	5.3	TM	
9	*TM	Acenaphthene	1.236	1.249	1.0	*TM	
10	TM	Fluorene	1.426	1.485	4.2	TM	
11	I	Phenanthrene-D10(IS)	ISTD			I	
12	TM	Phenanthrene	1.156	1.146	0.89	TM	
13	TM	Anthracene	1.070	1.149	7.5	TM	
14	*TM	Fluoranthene	1.564	1.676	7.2	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.336	1.367	2.3	TM	
17	S	Surrogate Recovery (TPH)	0.8594	0.9078	5.6	S	
18	TM	Benz (a) anthracene	1.143	1.272	11	TM	
19	TM	Chrysene	1.235	1.232	0.30	TM	
20	TM	Indeno (1,2,3-cd) pyrene	1.134	1.276	13	TM	
21	I	Perylene-D12(IS)	ISTD			I	
22	TM	Benzo (b) fluoranthene	1.151	1.145	0.47	TM	
23	TML	Benzo (k) fluoranthene	0.9795	1.125	15	TML	0.83
24	*TM	Benzo (a) pyrene	1.149	1.136	1.1	*TM	
25	TML	Dibenz (a,h) anthracene	0.9550	1.122	17	TML	1.9
26	TM	Benzo (g,h,i) perylene	1.038	1.080	4.1	TM	
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			7.0		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L316.D Vial: 16
Acq On : 23 Nov 16 17:01 Operator: MA
Sample : 2.5 ug/ml PAH 10/26/16 (2) Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Nov 23 17:29 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.90	136	2301	2.50000 ppb		0.01
6) Acenaphthene-D10(IS)	7.95	164	1220	2.50000 ppb		0.01
11) Phenanthrene-D10(IS)	9.90	188	2212	2.50000 ppb		0.02
15) Chrysene-D12(IS)	16.89	240	2821	2.50000 ppb		0.05
21) Perylene-D12(IS)	20.66	264	2678	2.50000 ppb		0.06
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.05	82	800	2.86361 ppb		0.00
Spiked Amount 5.000			Recovery	= 57.280%		
7) Surrogate Recovery (FBP)	7.16	172	2000	2.54150 ppb		0.00
Spiked Amount 5.000			Recovery	= 50.820%		
17) Surrogate Recovery (TPH)	13.90	244	2561	2.64096 ppb		0.02
Spiked Amount 5.000			Recovery	= 52.820%		
Target Compounds						Qvalue
3) Naphthalene	5.93	128	4850	5.16649 ppb		100
4) 2-Methylnaphthalene	6.74	142	3186	5.43686 ppb		99
5) 1-Methylnaphthalene	6.86	142	3108	5.18483 ppb		99
8) Acenaphthylene	7.79	152	5268	5.26554 ppb		99
9) Acenaphthene	7.99	154	3047	5.05123 ppb		99
10) Fluorene	8.59	166	3624	5.20869 ppb		98
12) Phenanthrene	9.93	178	5068	4.95531 ppb		99
13) Anthracene	10.02	178	5085	5.37264 ppb		99
14) Fluoranthene	12.71	202	7414	5.35910 ppb		97
16) Pyrene	13.34	202	7710	5.11564 ppb		99
18) Benz (a) anthracene	16.87	228	7177	5.56483 ppb		99
19) Chrysene	16.96	228	6949	4.98502 ppb		99
20) Indeno (1,2,3-cd) pyrene	22.98	276	7201	5.62585 ppb	#	98
22) Benzo (b) fluoranthene	19.75	252	6133	4.97626 ppb		99
23) Benzo (k) fluoranthene	19.81	252	6027	5.04170 ppb		98
24) Benzo (a) pyrene	20.40	252	6084	4.94376 ppb		96
25) Dibenz (a,h) anthracene	23.03	278	6008	5.09626 ppb		98
26) Benzo (g,h,i) perylene	23.51	276	5786	5.20436 ppb		98

(#) = qualifier out of range (m) = manual integration

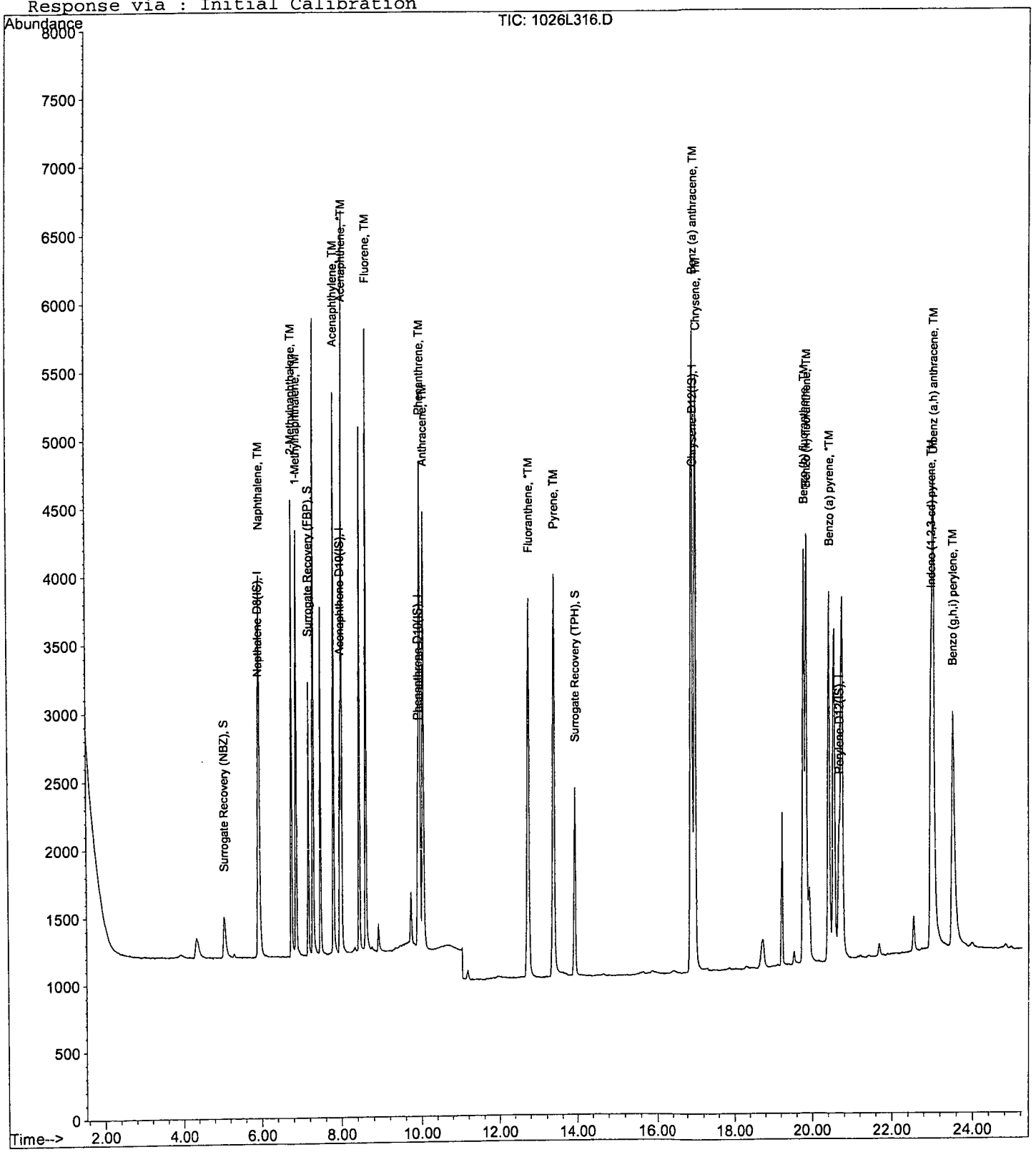
Quantitation Report

Data File : M:\LINUS\DATA\L161026\1026L316.D
Acq On : 23 Nov 16 17:01
Sample : 2.5 ug/ml PAH 10/26/16 (2)
Misc :

Vial: 16
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Nov 23 17:29 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Date Analyzed: 11/24/16

Matrix: Instrument: Linus

Initial Cal. Date: 10/26/16

Data File: 1026L338.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	SL	Surrogate Recovery (NBZ)	0.2618	0.3398	30	SL	12
3	TM	Naphthalene	1.020	1.058	3.7	TM	
4	TM	2-Methylnaphthalene	0.6367	0.6852	7.6	TM	
5	TM	1-Methylnaphthalene	0.6513	0.6740	3.5	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	S	Surrogate Recovery (FBP)	1.613	1.653	2.5	S	
8	TM	Acenaphthylene	2.050	2.141	4.4	TM	
9	*TM	Acenaphthene	1.236	1.252	1.3	*TM	
10	TM	Fluorene	1.426	1.471	3.2	TM	
11	I	Phenanthrene-D10(IS)	ISTD			I	
12	TM	Phenanthrene	1.156	1.135	1.8	TM	
13	TM	Anthracene	1.070	1.152	7.7	TM	
14	*TM	Fluoranthene	1.564	1.672	6.9	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.336	1.327	0.67	TM	
17	S	Surrogate Recovery (TPH)	0.8594	0.8817	2.6	S	
18	TM	Benz (a) anthracene	1.143	1.183	3.5	TM	
19	TM	Chrysene	1.235	1.259	1.9	TM	
20	TM	Indeno (1,2,3-cd) pyrene	1.134	1.236	8.9	TM	
21	I	Perylene-D12(IS)	ISTD			I	
22	TM	Benzo (b) fluoranthene	1.151	1.078	6.3	TM	
23	TML	Benzo (k) fluoranthene	0.9795	1.028	4.9	TML	8.0
24	*TM	Benzo (a) pyrene	1.149	1.117	2.8	*TM	
25	TML	Dibenz (a,h) anthracene	0.9550	1.062	11	TML	3.4
26	TM	Benzo (g,h,i) perylene	1.038	1.030	0.74	TM	
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			5.5		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L338.D Vial: 38
Acq On : 24 Nov 16 4:16 Operator: MA
Sample : 2.5 ug/ml PAH 10/26/16 (2) Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Nov 28 8:42 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.90	136	2325	2.50000	ppb		0.01
6) Acenaphthene-D10(IS)	7.94	164	1216	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.89	188	2150	2.50000	ppb		0.01
15) Chrysene-D12(IS)	16.88	240	2816	2.50000	ppb		0.04
21) Perylene-D12(IS)	20.65	264	2604	2.50000	ppb		0.05
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.05	82	790	2.79770	ppb		0.00
Spiked Amount 5.000			Recovery = 55.960%				
7) Surrogate Recovery (FBP)	7.16	172	2010	2.56261	ppb		0.00
Spiked Amount 5.000			Recovery = 51.260%				
17) Surrogate Recovery (TPH)	13.91	244	2483	2.56507	ppb		0.03
Spiked Amount 5.000			Recovery = 51.300%				
Target Compounds							Qvalue
3) Naphthalene	5.93	128	4918	5.18485	ppb		100
4) 2-Methylnaphthalene	6.74	142	3186	5.38073	ppb		99
5) 1-Methylnaphthalene	6.84	142	3134	5.17424	ppb		96
8) Acenaphthylene	7.79	152	5207	5.22169	ppb		100
9) Acenaphthene	7.99	154	3044	5.06286	ppb		98
10) Fluorene	8.59	166	3577	5.15805	ppb		99
12) Phenanthrene	9.93	178	4881	4.91009	ppb		99
13) Anthracene	10.02	178	4952	5.38300	ppb		99
14) Fluoranthene	12.71	202	7190	5.34705	ppb		98
16) Pyrene	13.34	202	7472	4.96652	ppb		98
18) Benz (a) anthracene	16.86	228	6661	5.17391	ppb		99
19) Chrysene	16.96	228	7092	5.09663	ppb		99
20) Indeno (1,2,3-cd) pyrene	22.98	276	6960	5.44722	ppb	#	98
22) Benzo (b) fluoranthene	19.74	252	5616	4.68626	ppb		99
23) Benzo (k) fluoranthene	19.80	252	5352	4.60235	ppb		98
24) Benzo (a) pyrene	20.39	252	5817	4.86113	ppb		97
25) Dibenz (a,h) anthracene	23.03	278	5531	4.82998	ppb		99
26) Benzo (g,h,i) perylene	23.51	276	5365	4.96282	ppb		97

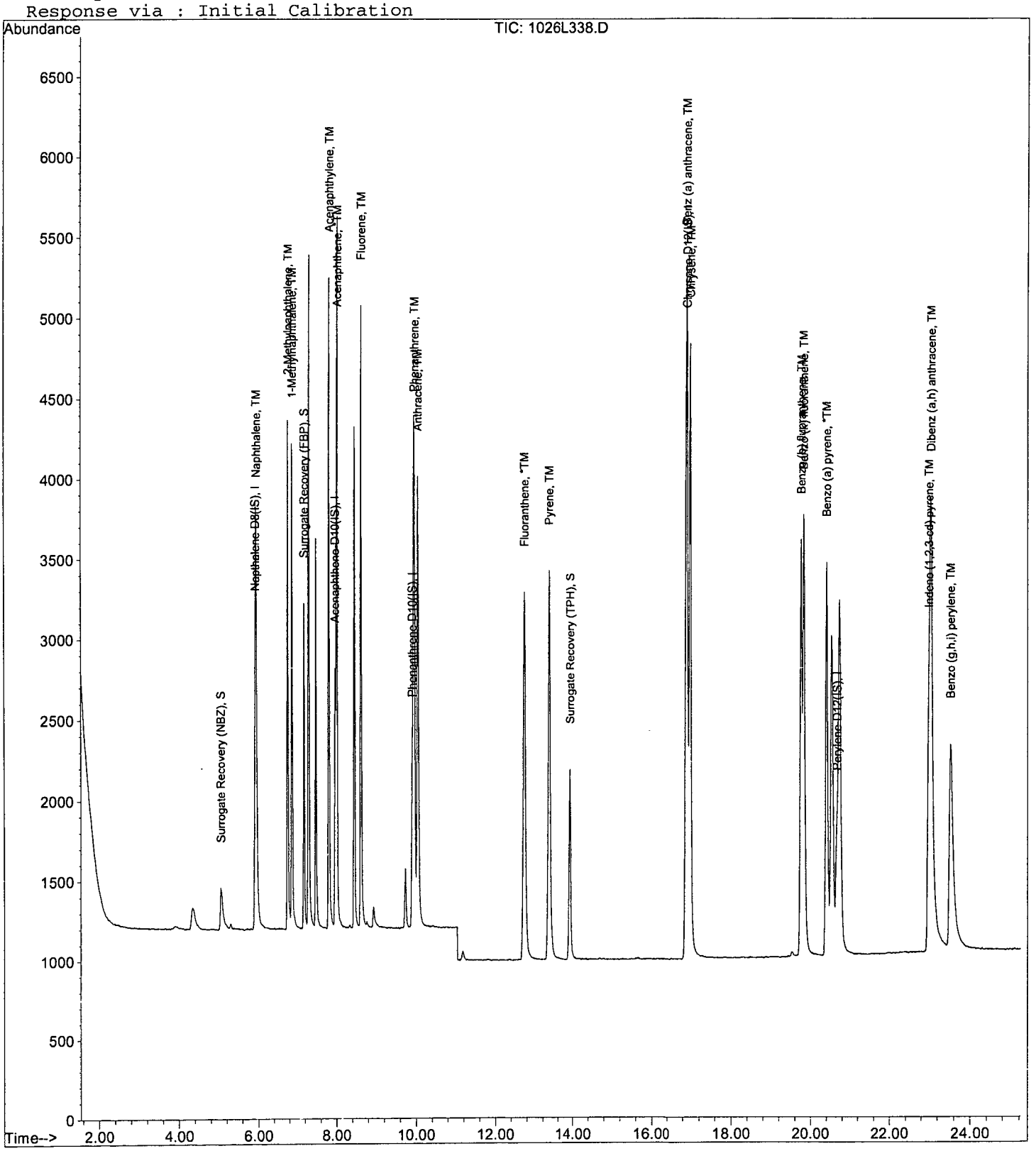
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161026\1026L338.D Vial: 38
Acq On : 24 Nov 16 4:16 Operator: MA
Sample : 2.5 ug/ml PAH 10/26/16 (2) Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Nov 28 8:42 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/29/16
Instrument: Linus
Initial Cal. Date: 10/26/16
Data File: 1129L003.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	SL	Surrogate Recovery (NBZ)	0.2618	0.3290	26	SL	8.3
3	TM	Naphthalene	1.020	1.064	4.4	TM	
4	TM	2-Methylnaphthalene	0.6367	0.7016	10	TM	
5	TM	1-Methylnaphthalene	0.6513	0.6868	5.5	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	S	Surrogate Recovery (FBP)	1.613	1.605	0.48	S	
8	TM	Acenaphthylene	2.050	2.184	6.5	TM	
9	*TM	Acenaphthene	1.236	1.267	2.5	*TM	
10	TM	Fluorene	1.426	1.501	5.3	TM	
11	I	Phenanthrene-D10(IS)	ISTD			I	
12	TM	Phenanthrene	1.156	1.137	1.6	TM	
13	TM	Anthracene	1.070	1.163	8.8	TM	
14	*TM	Fluoranthene	1.564	1.631	4.3	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.336	1.362	2.0	TM	
17	S	Surrogate Recovery (TPH)	0.8594	0.8864	3.1	S	
18	TM	Benz (a) anthracene	1.143	1.204	5.4	TM	
19	TM	Chrysene	1.235	1.279	3.5	TM	
20	TM	Indeno (1,2,3-cd) pyrene	1.134	1.233	8.7	TM	
21	I	Perylene-D12(IS)	ISTD			I	
22	TM	Benzo (b) fluoranthene	1.151	1.025	11	TM	
23	TML	Benzo (k) fluoranthene	0.9795	0.9704	0.93	TML	13
24	*TM	Benzo (a) pyrene	1.149	1.106	3.7	*TM	
25	TML	Dibenz (a,h) anthracene	0.9550	1.081	13	TML	1.7
26	TM	Benzo (g,h,i) perylene	1.038	0.9929	4.3	TM	
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			6.2		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161129\1129L003.D Vial: 3
Acq On : 29 Nov 16 15:19 Operator: MA
Sample : 5.0 ug/ml PAH 11/28/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Nov 29 15:47 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.89	136	2775	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	7.94	164	1450	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.89	188	2643	2.50000 ppb		0.01
15) Chrysene-D12(IS)	16.88	240	3292	2.50000 ppb		0.04
21) Perylene-D12(IS)	20.64	264	3040	2.50000 ppb		0.04
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.05	82	913	2.70768 ppb		0.00
Spiked Amount 5.000			Recovery	= 54.160%		
7) Surrogate Recovery (FBP)	7.16	172	2327	2.48799 ppb		0.00
Spiked Amount 5.000			Recovery	= 49.760%		
17) Surrogate Recovery (TPH)	13.90	244	2918	2.57858 ppb		0.02
Spiked Amount 5.000			Recovery	= 51.580%		
Target Compounds						Qvalue
3) Naphthalene	5.92	128	5907	5.21765 ppb		100
4) 2-Methylnaphthalene	6.74	142	3894	5.51000 ppb		99
5) 1-Methylnaphthalene	6.84	142	3812	5.27303 ppb		97
8) Acenaphthylene	7.79	152	6333	5.32597 ppb		99
9) Acenaphthene	7.98	154	3673	5.12316 ppb		100
10) Fluorene	8.59	166	4352	5.26285 ppb		99
12) Phenanthrene	9.92	178	6011	4.91891 ppb		99
13) Anthracene	10.01	178	6150	5.43826 ppb		100
14) Fluoranthene	12.70	202	8624	5.21718 ppb		97
16) Pyrene	13.33	202	8967	5.09842 ppb		100
18) Benz (a) anthracene	16.86	228	7930	5.26897 ppb		99
19) Chrysene	16.95	228	8419	5.17545 ppb		99
20) Indeno (1,2,3-cd) pyrene	22.97	276	8120	5.43619 ppb	#	99
22) Benzo (b) fluoranthene	19.73	252	6234	4.45588 ppb		100
23) Benzo (k) fluoranthene	19.80	252	5900	4.34469 ppb		98
24) Benzo (a) pyrene	20.38	252	6724	4.81319 ppb		98
25) Dibenz (a,h) anthracene	23.03	278	6572	4.91427 ppb		100
26) Benzo (g,h,i) perylene	23.51	276	6037	4.78351 ppb		99

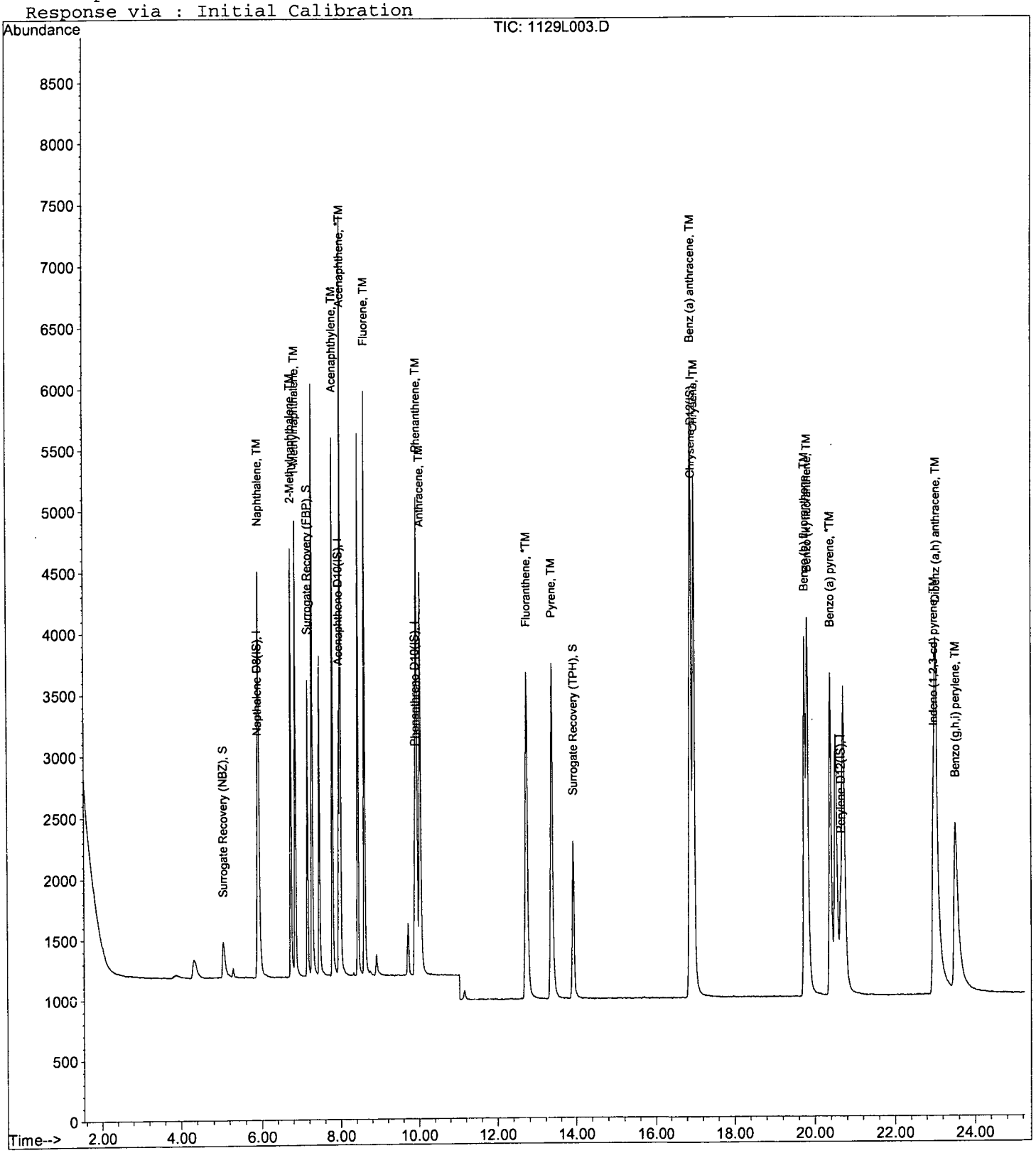
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161129\1129L003.D Vial: 3
Acq On : 29 Nov 16 15:19 Operator: MA
Sample : 5.0 ug/ml PAH 11/28/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Nov 29 15:47 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Date Analyzed: 11/30/16

Matrix: Instrument: Linus

Initial Cal. Date: 10/26/16

Data File: 1129L021.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Napthalene-D8(IS)	ISTD			I	
2	SL	Surrogate Recovery (NBZ)	0.2618	0.3155	21	SL	3.8
3	TM	Naphthalene	1.020	1.064	4.3	TM	
4	TM	2-Methylnaphthalene	0.6367	0.6965	9.4	TM	
5	TM	1-Methylnaphthalene	0.6513	0.6883	5.7	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	S	Surrogate Recovery (FBP)	1.613	1.613	0.01	S	
8	TM	Acenaphthylene	2.050	2.181	6.4	TM	
9	*TM	Acenaphthene	1.236	1.276	3.2	*TM	
10	TM	Fluorene	1.426	1.489	4.5	TM	
11	I	Phenanthrene-D10(IS)	ISTD			I	
12	TM	Phenanthrene	1.156	1.160	0.32	TM	
13	TM	Anthracene	1.070	1.186	11	TM	
14	*TM	Fluoranthene	1.564	1.675	7.1	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.336	1.367	2.4	TM	
17	S	Surrogate Recovery (TPH)	0.8594	0.8749	1.8	S	
18	TM	Benz (a) anthracene	1.143	1.233	7.8	TM	
19	TM	Chrysene	1.235	1.262	2.2	TM	
20	TM	Indeno (1,2,3-cd) pyrene	1.134	1.235	8.9	TM	
21	I	Perylene-D12(IS)	ISTD			I	
22	TM	Benzo (b) fluoranthene	1.151	1.057	8.1	TM	
23	TML	Benzo (k) fluoranthene	0.9795	0.9922	1.3	TML	11
24	*TM	Benzo (a) pyrene	1.149	1.114	3.0	*TM	
25	TML	Dibenz (a,h) anthracene	0.9550	1.095	15	TML	0.43
26	TM	Benzo (g,h,i) perylene	1.038	0.9969	4.0	TM	
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			6.1		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161129\1129L021.D Vial: 21
Acq On : 30 Nov 16 00:25 Operator: MA
Sample : 5.0 ug/ml PAH 11/28/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Nov 30 9:17 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.89	136	2751	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	7.94	164	1441	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.89	188	2547	2.50000 ppb		0.01
15) Chrysene-D12(IS)	16.88	240	3278	2.50000 ppb		0.04
21) Perylene-D12(IS)	20.64	264	3020	2.50000 ppb		0.04
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.05	82	868	2.59501 ppb		0.00
Spiked Amount 5.000			Recovery	= 51.900%		
7) Surrogate Recovery (FBP)	7.16	172	2324	2.50030 ppb		0.00
Spiked Amount 5.000			Recovery	= 50.000%		
17) Surrogate Recovery (TPH)	13.90	244	2868	2.54522 ppb		0.02
Spiked Amount 5.000			Recovery	= 50.900%		
Target Compounds						Qvalue
3) Naphthalene	5.92	128	5853	5.21505 ppb		100
4) 2-Methylnaphthalene	6.74	142	3832	5.46958 ppb		99
5) 1-Methylnaphthalene	6.84	142	3787	5.28415 ppb		97
8) Acenaphthylene	7.79	152	6286	5.31946 ppb		100
9) Acenaphthene	7.98	154	3677	5.16077 ppb		99
10) Fluorene	8.59	166	4292	5.22271 ppb		100
12) Phenanthrene	9.92	178	5907	5.01599 ppb		100
13) Anthracene	10.02	178	6040	5.54230 ppb		99
14) Fluoranthene	12.70	202	8532	5.35607 ppb		98
16) Pyrene	13.34	202	8965	5.11905 ppb		98
18) Benz (a) anthracene	16.85	228	8081	5.39223 ppb		99
19) Chrysene	16.95	228	8276	5.10927 ppb		100
20) Indeno (1,2,3-cd) pyrene	22.97	276	8098	5.44462 ppb	#	99
22) Benzo (b) fluoranthene	19.73	252	6387	4.59548 ppb		100
23) Benzo (k) fluoranthene	19.80	252	5993	4.44290 ppb		99
24) Benzo (a) pyrene	20.38	252	6729	4.84867 ppb		97
25) Dibenz (a,h) anthracene	23.02	278	6616	4.97867 ppb		99
26) Benzo (g,h,i) perylene	23.50	276	6021	4.80243 ppb		97

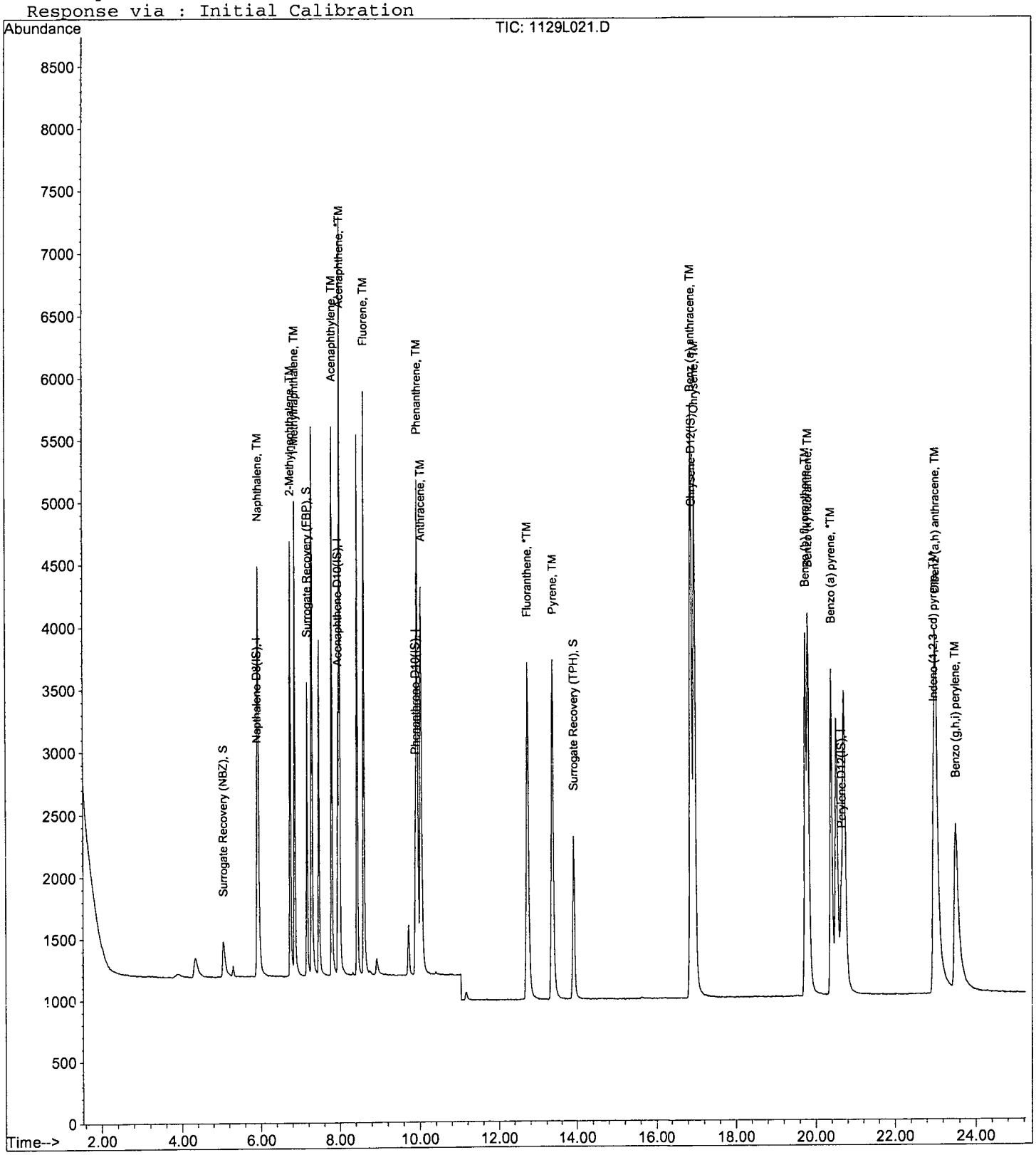
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161129\1129L021.D Vial: 21
Acq On : 30 Nov 16 00:25 Operator: MA
Sample : 5.0 ug/ml PAH 11/28/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Nov 30 9:17 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



ORGANICS

Raw Data

APPL, INC.

Method Blank
EPA 8270D SIM

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161118W-45866 - 214136**
Batch ID: #SIMDO-161118A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	11/18/16	11/29/16
BLANK	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	11/18/16	11/29/16
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	11/18/16	11/29/16
BLANK	SURROGATE: 2-FLUORBIPHENY	59.5	53-106			%	11/18/16	11/29/16
BLANK	SURROGATE: NITROBENZENE-	78.7	55-111			%	11/18/16	11/29/16
BLANK	SURROGATE: TERPHENYL-D14 (	93.2	58-132			%	11/18/16	11/29/16

Quant Method: L1026P.M
Run #: 1129L004
Instrument: Linus
Sequence: L161129
Initials: RHA

GC SC-Blank-REG MDLs-DOD
Printed: 11/30/16 12:03:50 PM

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161129\1129L004.D Vial: 4
Acq On : 29 Nov 16 15:50 Operator: MA
Sample : 161118A BLK 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Nov 30 9:43 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.89	136	2929	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	7.95	164	1546	2.50000	ppb	0.01
11) Phenanthrene-D10(IS)	9.90	188	2678	2.50000	ppb	0.02
15) Chrysene-D12(IS)	16.91	240	3290	2.50000	ppb	0.07
21) Perylene-D12(IS)	20.69	264	3019	2.50000	ppb	0.09
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.05	82	1394	3.93503	ppb	0.00
Spiked Amount 5.000			Recovery = 78.700%			
7) Surrogate Recovery (FBP)	7.16	172	2967	2.97528	ppb	0.00
Spiked Amount 5.000			Recovery = 59.500%			
17) Surrogate Recovery (TPH)	13.89	244	5270	4.65983	ppb	0.01
Spiked Amount 5.000			Recovery = 93.200%			

Target Compounds Qvalue

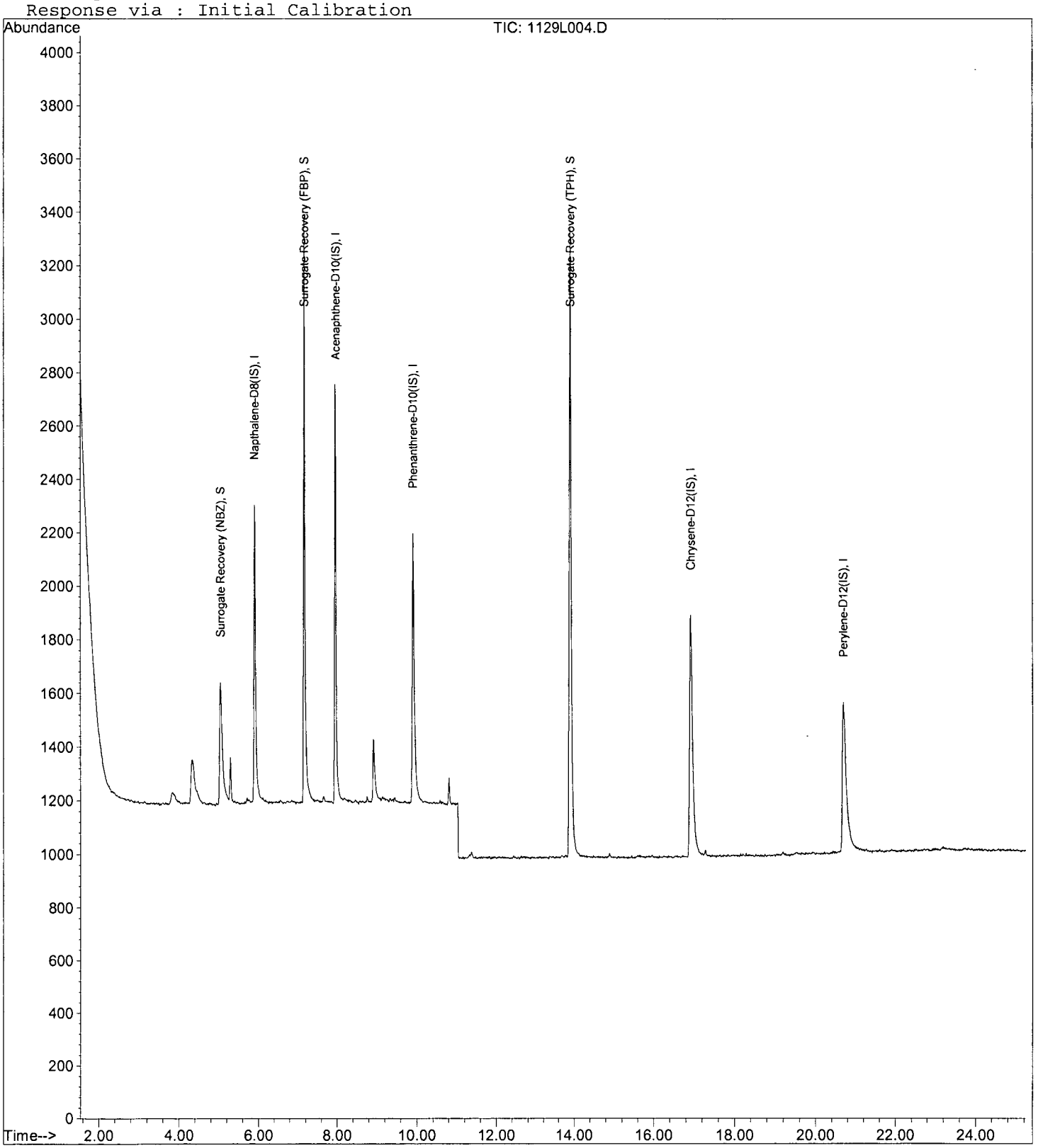
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161129\1129L004.D Vial: 4
Acq On : 29 Nov 16 15:50 Operator: MA
Sample : 161118A BLK 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Nov 30 9:43 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Laboratory Control Spike Recovery
EPA 8270D SIM

APPL ID: **161118W-45866 LCS - 214136**
Batch ID: #SIMDO-161118A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1-METHYLNAPHTHALENE	5.00	3.33	66.6	41-115
2-METHYLNAPHTHALENE	5.00	3.29	65.8	39-114
NAPHTHALENE	5.00	3.24	64.8	43-114
SURROGATE: 2-FLUORBIPHENYL (S)	5.00	2.92	58.4	53-106
SURROGATE: NITROBENZENE-D5 (S)	5.00	3.77	75.4	55-111
SURROGATE: TERPHENYL-D14 (S)	5.00	3.97	79.4	58-132

Comments: _____

Primary	SPK
Quant Method :	L1026P.M
Extraction Date :	11/18/16
Analysis Date :	11/23/16
Instrument :	Linus
Run :	1026L318
Initials :	RHA

Printed: 11/30/16 12:03:35 PM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L318.D Vial: 18
Acq On : 23 Nov 16 18:05 Operator: MA
Sample : 161118A LCS-1 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Nov 28 8:44 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.90	136	2312	2.50000	ppb		0.01
6) Acenaphthene-D10(IS)	7.95	164	1218	2.50000	ppb		0.01
11) Phenanthrene-D10(IS)	9.90	188	2242	2.50000	ppb		0.02
15) Chrysene-D12(IS)	16.89	240	2937	2.50000	ppb		0.05
21) Perylene-D12(IS)	20.66	264	2754	2.50000	ppb		0.06
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.05	82	1056	3.77478	ppb		0.00
Spiked Amount 5.000			Recovery = 75.500%				
7) Surrogate Recovery (FBP)	7.16	172	2292	2.91734	ppb		0.00
Spiked Amount 5.000			Recovery = 58.340%				
17) Surrogate Recovery (TPH)	13.90	244	4010	3.97187	ppb		0.02
Spiked Amount 5.000			Recovery = 79.440%				
Target Compounds							Qvalue
3) Naphthalene	5.93	128	3055	3.23887	ppb		100
4) 2-Methylnaphthalene	6.74	142	1940	3.29483	ppb		100
5) 1-Methylnaphthalene	6.86	142	2007	3.33219	ppb		100
8) Acenaphthylene	7.79	152	3832	3.83650	ppb		100
9) Acenaphthene	7.99	154	2179	3.61822	ppb		99
10) Fluorene	8.59	166	2791	4.01803	ppb		98
12) Phenanthrene	9.93	178	4178	4.03043	ppb		99
13) Anthracene	10.02	178	3931	4.09779	ppb		99
14) Fluoranthene	12.71	202	6474	4.61701	ppb		98
16) Pyrene	13.35	202	6738	4.29413	ppb		99
18) Benz (a) anthracene	16.87	228	6203	4.61966	ppb		99
19) Chrysene	16.96	228	6353	4.37746	ppb		100
20) Indeno (1,2,3-cd) pyrene	22.98	276	6432	4.82659	ppb	#	99
22) Benzo (b) fluoranthene	19.75	252	5362	4.23062	ppb		99
23) Benzo (k) fluoranthene	19.82	252	5202	4.22791	ppb		98
24) Benzo (a) pyrene	20.40	252	5420	4.28267	ppb		98
25) Dibenz (a,h) anthracene	23.04	278	5331	4.41009	ppb		99
26) Benzo (g,h,i) perylene	23.52	276	5087	4.44936	ppb		98

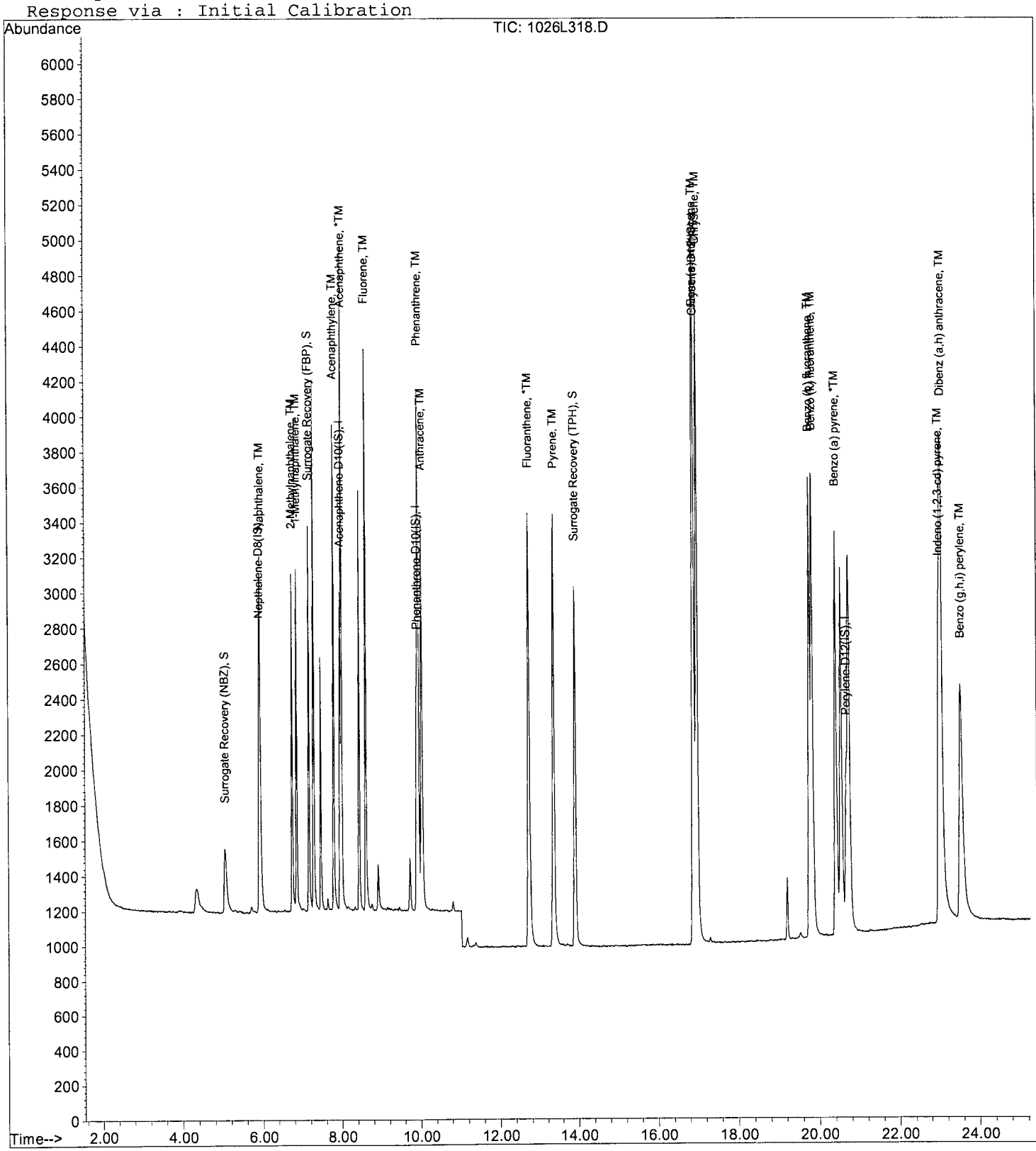
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161026\1026L318.D Vial: 18
Acq On : 23 Nov 16 18:05 Operator: MA
Sample : 161118A LCS-1 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Nov 28 8:44 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



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Matrix Spike Recoveries

EPA 8270D SIM

APPL ID: **161118W-45866 MS - 214136**
Batch ID: #SIMDO-161118A
Sample ID: AZ45866
Client ID: ERH115

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
1-METHYLNAPHTHALENE	5.00	ND	2.95	3.05	59.0	61.0	41-115	3.3	20
2-METHYLNAPHTHALENE	5.00	ND	2.90	3.05	58.0	61.0	39-114	5.0	20
NAPHTHALENE	5.00	ND	2.92	2.94	58.4	58.8	43-114	0.68	20
SURROGATE: 2-FLUORBIPHENYL (S)	4.67	NA	2.74	2.53	58.6	54.1	53-106		
SURROGATE: NITROBENZENE-D5 (S)	4.67	NA	3.34	2.95	71.5	63.1	55-111		
SURROGATE: TERPHENYL-D14 (S)	4.67	NA	3.86	3.60	82.6	77.0	58-132		

Comments: _____

Primary	SPK	DUP
Quant Method :	L1026P.M	L1026P.M
Extraction Date :	11/18/16	11/18/16
Analysis Date :	11/29/16	11/29/16
Instrument :	Linus	Linus
Run :	1129L005	1129L006
Initials :	RHA	

Printed: 12/01/16 5:53:40 PM
APPL MSD SCII

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161129\1129L005.D Vial: 5
Acq On : 29 Nov 16 16:23 Operator: MA
Sample : AZ45866W28 MS-1 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Nov 30 9:17 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.89	136	2718	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.94	164	1430	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.89	188	2544	2.50000	ppb		0.01
15) Chrysene-D12(IS)	16.88	240	3215	2.50000	ppb		0.04
21) Perylene-D12(IS)	20.64	264	2948	2.50000	ppb		0.04
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.05	82	1177	3.34273	ppb		0.00
Spiked Amount 4.673			Recovery = 71.540%				
7) Surrogate Recovery (FBP)	7.16	172	2709	2.74479	ppb		0.00
Spiked Amount 4.673			Recovery = 58.743%				
17) Surrogate Recovery (TPH)	13.89	244	4570	3.86462	ppb		0.00
Spiked Amount 4.673			Recovery = 82.711%				
Target Compounds							Qvalue
3) Naphthalene	5.92	128	3459	2.91533	ppb		99
4) 2-Methylnaphthalene	6.74	142	2145	2.89610	ppb		99
5) 1-Methylnaphthalene	6.84	142	2238	2.95391	ppb		99
8) Acenaphthylene	7.79	152	4171	3.32413	ppb		99
9) Acenaphthene	7.98	154	2399	3.17100	ppb		99
10) Fluorene	8.59	166	3090	3.54111	ppb		99
12) Phenanthrene	9.92	178	4668	3.70894	ppb		99
13) Anthracene	10.02	178	4492	3.85675	ppb		100
14) Fluoranthene	12.69	202	7211	4.23564	ppb		98
16) Pyrene	13.33	202	7488	4.07427	ppb		99
18) Benz (a) anthracene	16.85	228	6473	4.11579	ppb		99
19) Chrysene	16.95	228	7391	4.34796	ppb		99
20) Indeno (1,2,3-cd) pyrene	22.98	276	6906	4.42447	ppb	#	99
22) Benzo (b) fluoranthene	19.73	252	5334	3.67437	ppb		99
23) Benzo (k) fluoranthene	19.80	252	5060	3.58863	ppb		98
24) Benzo (a) pyrene	20.38	252	5907	4.07507	ppb		98
25) Dibenz (a,h) anthracene	23.03	278	5583	4.03426	ppb		100
26) Benzo (g,h,i) perylene	23.51	276	5143	3.92740	ppb		97

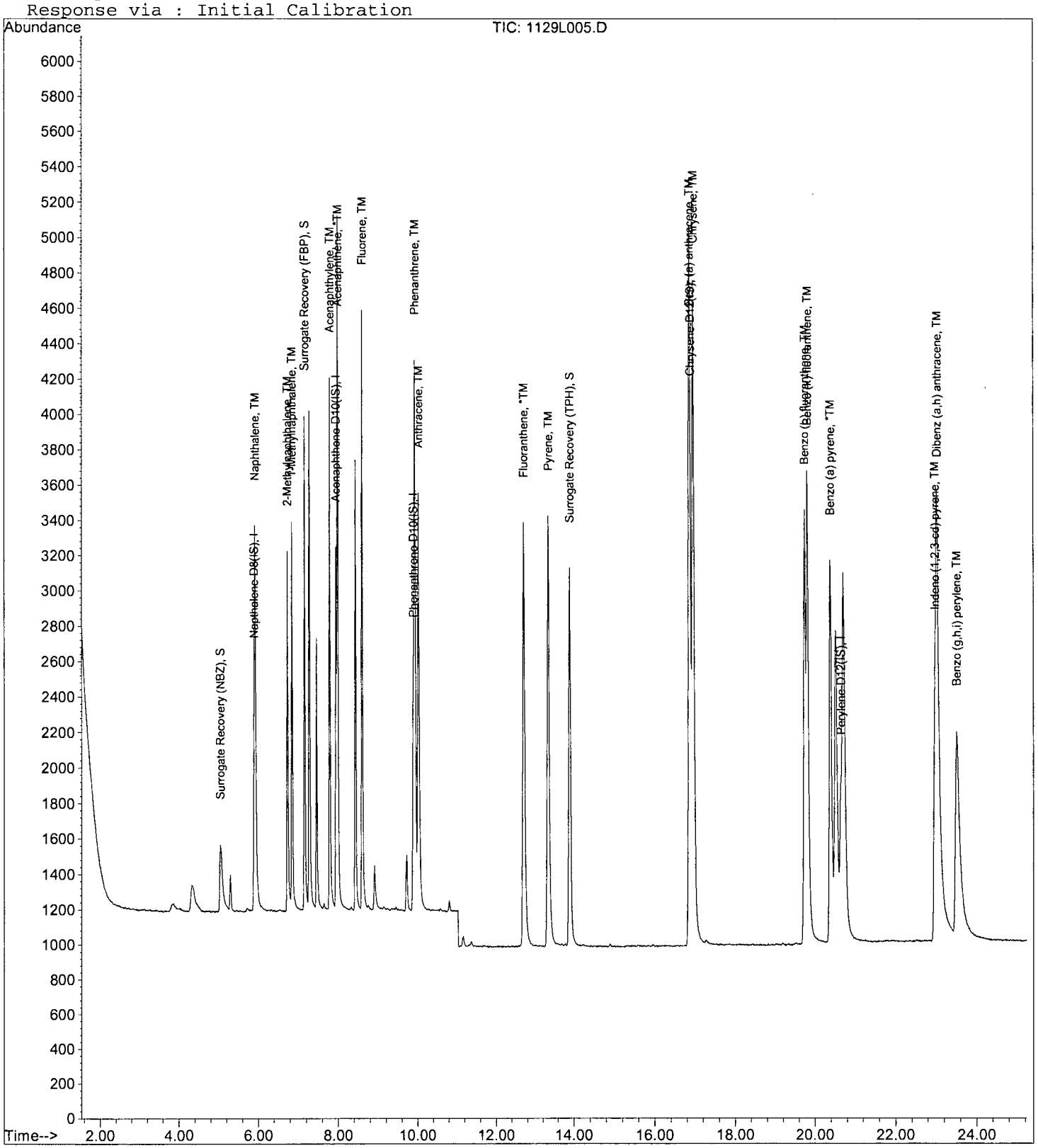
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161129\1129L005.D Vial: 5
Acq On : 29 Nov 16 16:23 Operator: MA
Sample : AZ45866W28 MS-1 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Nov 30 9:17 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161129\1129L006.D Vial: 6
Acq On : 29 Nov 16 16:55 Operator: MA
Sample : AZ45866W34 MSD-1 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Nov 30 9:17 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.89	136	3143	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.94	164	1672	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.89	188	2981	2.50000	ppb		0.01
15) Chrysene-D12(IS)	16.87	240	3775	2.50000	ppb		0.03
21) Perylene-D12(IS)	20.64	264	3447	2.50000	ppb		0.04
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.05	82	1204	2.95264	ppb		0.00
Spiked Amount 4.673			Recovery = 63.194%				
7) Surrogate Recovery (FBP)	7.16	172	2915	2.52603	ppb		0.00
Spiked Amount 4.673			Recovery = 54.056%				
17) Surrogate Recovery (TPH)	13.89	244	4994	3.59669	ppb		0.01
Spiked Amount 4.673			Recovery = 76.976%				
Target Compounds							Qvalue
3) Naphthalene	5.92	128	4032	2.93875	ppb		100
4) 2-Methylnaphthalene	6.74	142	2614	3.05208	ppb		99
5) 1-Methylnaphthalene	6.84	142	2672	3.04985	ppb		97
8) Acenaphthylene	7.79	152	4961	3.38148	ppb		100
9) Acenaphthene	7.98	154	2872	3.24676	ppb		99
10) Fluorene	8.59	166	3652	3.57941	ppb		100
12) Phenanthrene	9.92	178	5368	3.63987	ppb		99
13) Anthracene	10.01	178	5105	3.74052	ppb		99
14) Fluoranthene	12.69	202	8228	4.12451	ppb		98
16) Pyrene	13.33	202	8485	3.93187	ppb		99
18) Benz (a) anthracene	16.85	228	7759	4.20163	ppb		100
19) Chrysene	16.94	228	8232	4.12432	ppb		100
20) Indeno (1,2,3-cd) pyrene	22.98	276	8053	4.39396	ppb	#	98
22) Benzo (b) fluoranthene	19.73	252	6627	3.90421	ppb		100
23) Benzo (k) fluoranthene	19.79	252	5924	3.59321	ppb		98
24) Benzo (a) pyrene	20.38	252	6789	4.00553	ppb		97
25) Dibenz (a,h) anthracene	23.02	278	6544	4.04392	ppb		99
26) Benzo (g,h,i) perylene	23.50	276	6001	3.91921	ppb		98

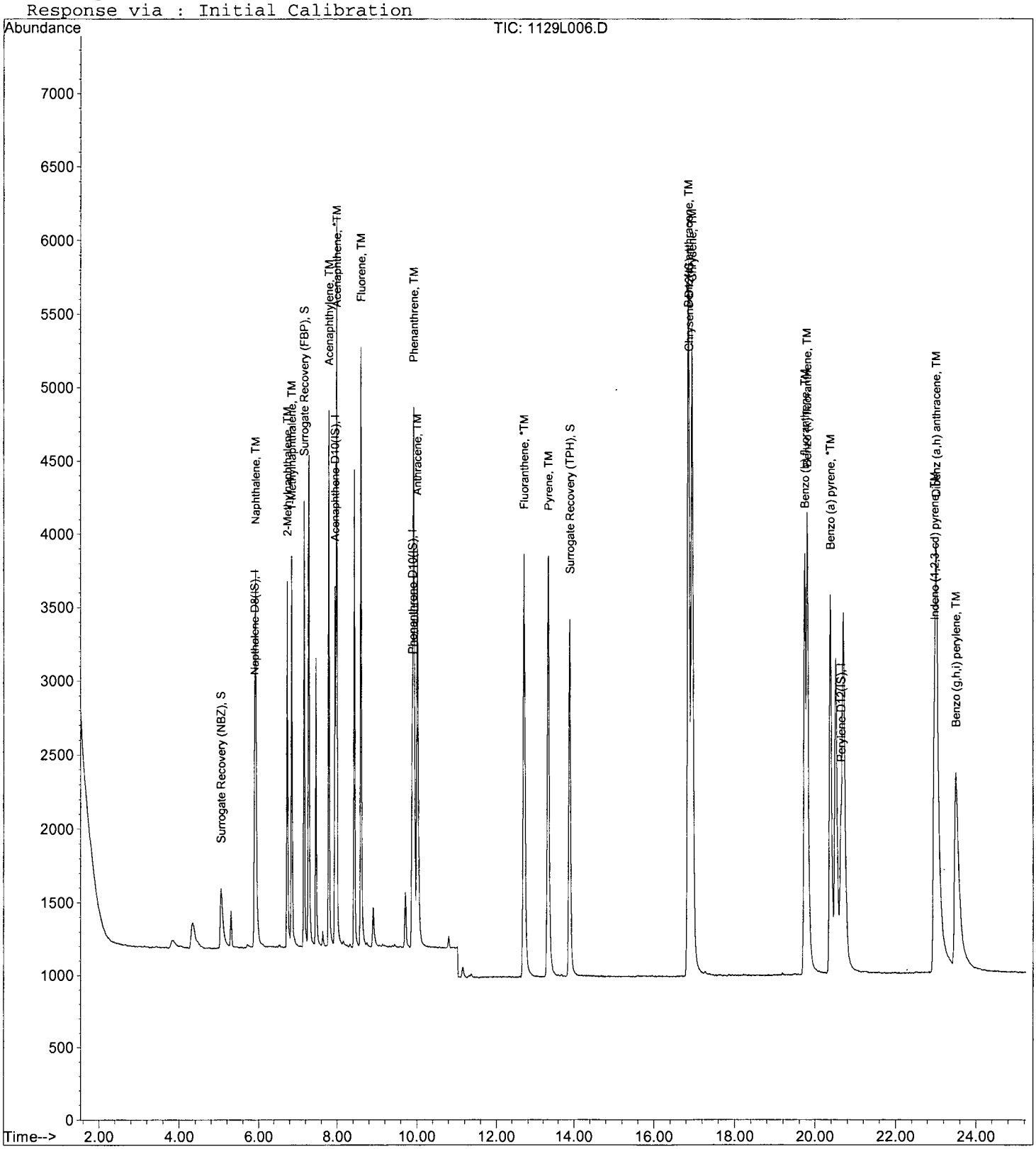
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161129\1129L006.D Vial: 6
Acq On : 29 Nov 16 16:55 Operator: MA
Sample : AZ45866W34 MSD-1 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Nov 30 9:17 2016 Quant Results File: L1026P.RES

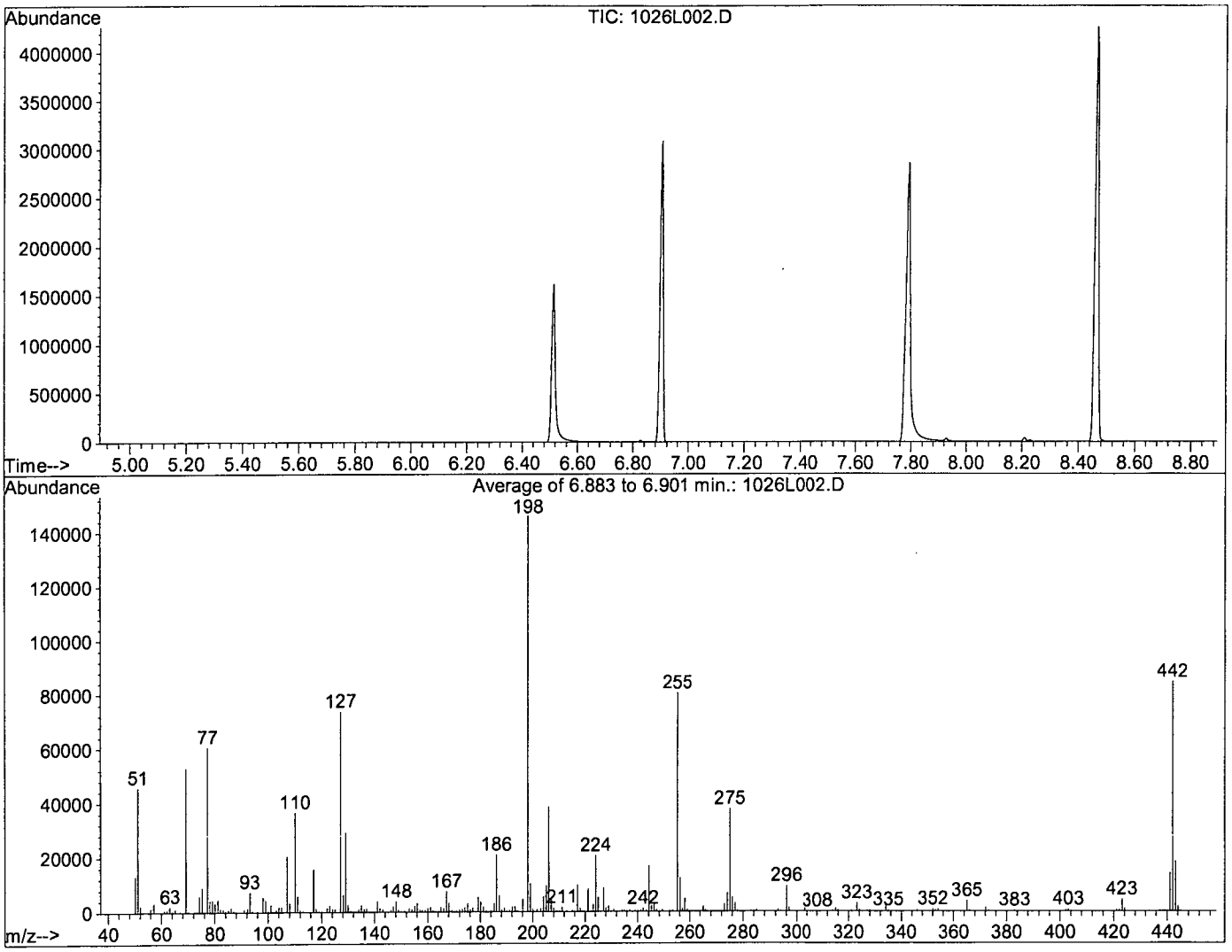
Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



DFTPP

Data File : M:\LINUS\DATA\L161026\1026L002.D Vial: 2
Acq On : 26 Oct 16 10:58 Operator: MA
Sample : SV TUNE 9/22/16 Inst : Linus
Misc : water Multiplr: 1.00

Method : M:\LINUS\DATA\L161026\DFTPP2.M (Chemstation Integrator)
Title :



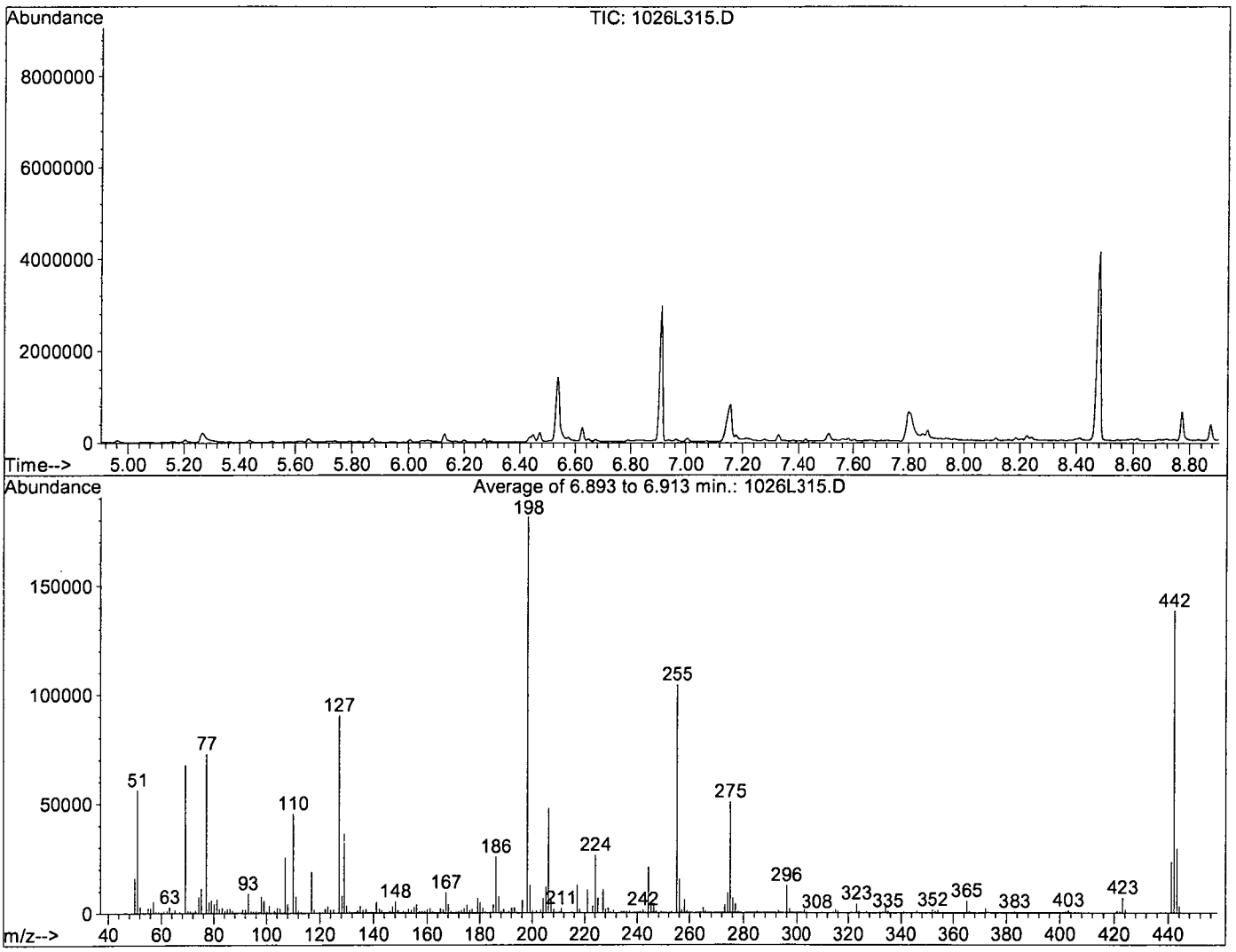
Spectrum Information: Average of 6.883 to 6.901 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	31.3	45754	PASS
68	69	0.00	2	0.0	0	PASS
69	69	100	100	100.0	52873	PASS
70	69	0.00	2	0.4	194	PASS
127	198	40	60	50.4	73640	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	146234	PASS
199	198	5	9	6.9	10141	PASS
275	198	10	30	25.7	37577	PASS
365	198	1	100	2.6	3776	PASS
441	443	0.01	100	76.7	13986	PASS
442	198	40	150	57.8	84489	PASS
443	442	17	23	21.6	18242	PASS

1026L002.D DFTPP2.M Wed Oct 26 16:35:21 2016

Data File : M:\LINUS\DATA\L161026\1026L315.D Vial: 15
Acq On : 23 Nov 16 16:46 Operator: MA
Sample : SV Tune 11/15/16 Inst : Linus
Misc : Multiplr: 1.00

Method : M:\LINUS\DATA\L161026\DFTPP2.M (Chemstation Integrator)
Title :



Spectrum Information: Average of 6.893 to 6.913 min.

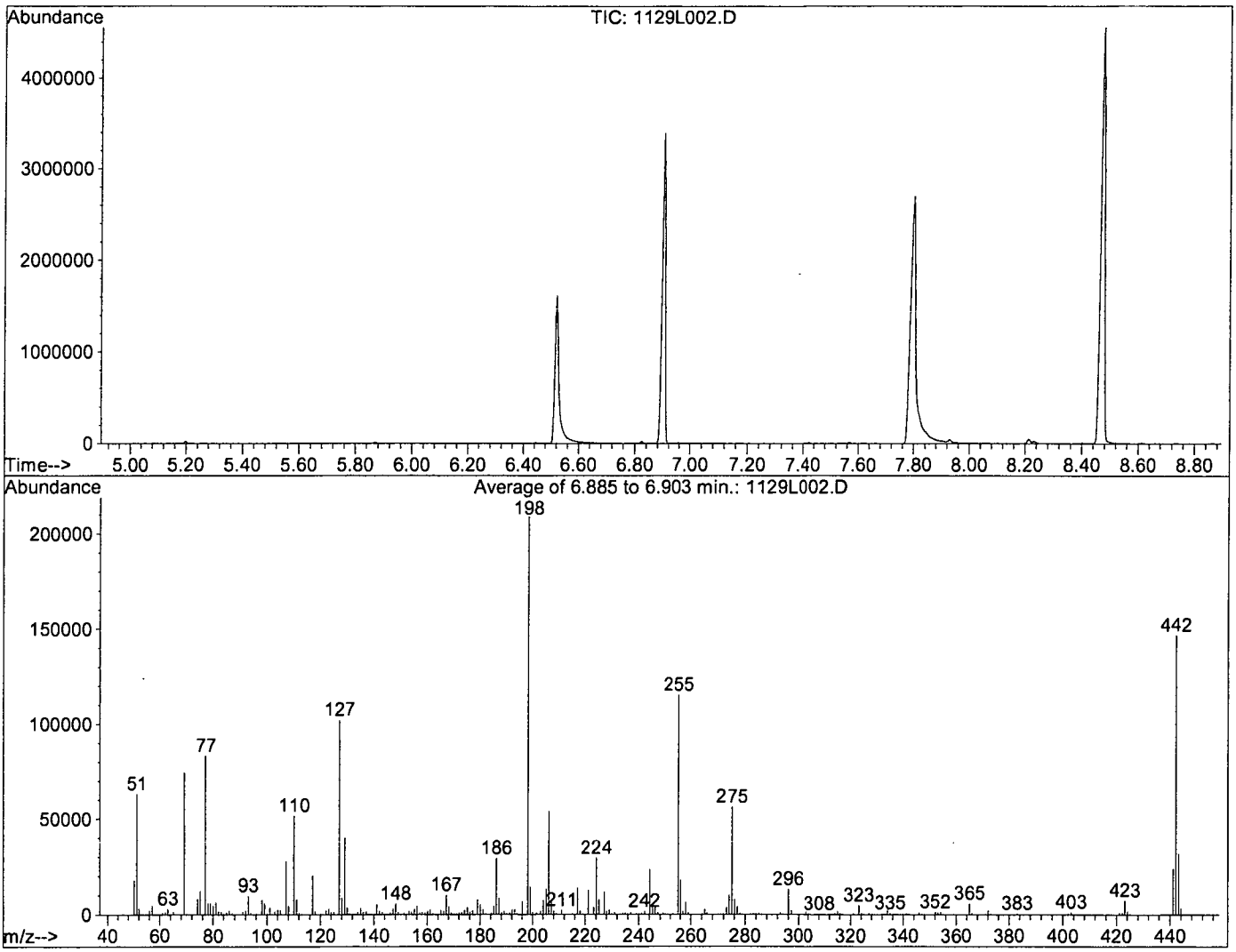
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	31.0	56286	PASS
68	69	0.00	2	0.0	0	PASS
69	69	100	100	100.0	67964	PASS
70	69	0.00	2	1.5	1008	PASS
127	198	40	60	49.8	90422	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	181637	PASS
199	198	5	9	6.9	12512	PASS
275	198	10	30	27.9	50648	PASS
365	198	1	100	2.9	5336	PASS
441	443	0.01	100	78.6	23035	PASS
442	198	40	150	76.2	138447	PASS
443	442	17	23	21.2	29298	PASS

1026L315.D DFTPP2.M Wed Nov 23 16:58:41 2016

DFTPP

Data File : M:\LINUS\DATA\L161129\1129L002.D Vial: 2
Acq On : 29 Nov 16 15:03 Operator: MA
Sample : SV TUNE 9/22/16 Inst : Linus
Misc : water Multiplr: 1.00

Method : M:\LINUS\DATA\L161026\DFTPP2.M (Chemstation Integrator)
Title :



Spectrum Information: Average of 6.885 to 6.903 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	30.3	63248	PASS
68	69	0.00	2	0.0	0	PASS
69	69	100	100	100.0	74577	PASS
70	69	0.00	2	0.5	410	PASS
127	198	40	60	48.9	102048	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	208746	PASS
199	198	5	9	6.8	14279	PASS
275	198	10	30	26.9	56225	PASS
365	198	1	100	2.8	5768	PASS
441	443	0.01	100	75.2	23822	PASS
442	198	40	150	70.2	146636	PASS
443	442	17	23	21.6	31677	PASS

1129L002.D DFTPP2.M Tue Nov 29 15:16:08 2016

8270 PAH SIM Standard Curve

PREP DATE:	10/26/16 RH											
8270 PAH SIM STANDARD CURVE												
Exp.DATE:	**12/20/16**					0.1	0.2	0.5	1	5	10	50	100
		Conc.		Date									
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL	µL	µL	µL	µL	µL
O2si	8270 PAH SIM S	200	278353-36992	9/12/16	9/12/17	0	0	0	0	5	5	25	50
	5.0ug/mL	5		9/12/16	7/29/17	0	0	10	20	0	0	0	0
	1.0ug/mL	1		9/12/16	7/29/17	10	20	0	0	0	0	0	0
O2SI	BNA SURR.	100/200		10/18/16	1/18/17	0	0	0	0	5	5	25	50
EM Science	Methylene Chloride		56061			90	80	90	80	190	90	50	0
Supelco	SV Internal St	2000	XA14020V-36768	10/10/16	10/10/17	2	2	2	2	4	2	2	2
				Final Vol.		102	102	102	102	204	102	102	102

8270 PAH SIM 2ND SRC

8270 PAH SIM 2ND SRC			Prep: 09/06/16 Exp 01/12/17 RH		
Supplier	**Standard**	**Conc.**	**Prep**	**Exp**	**µL**
O2SI	8270 2ND SRC	VARIOUS	06/03/16	01/21/17	25
	Methylene Chloride				75
o2si	8V Internal Standar	2000	10/10/16	10/10/17	2
LOT#	XA10079V-35507			Final Vol.	102

8270 SIM PAH Internal Standard						
PREP DATE:	10/10/16 RH.					
8270 SIM PAH Internal Standard Mix 125ug/ml						
Exp.DATE:	10/10/17					
		Conc.		Date	Exp.	125
Supplier	ID #	µg/mL	Lot #	Code	Date	µL
Supelco	SV Internal	2000	XA14020V-36768	10/10/16	10/10/17	350
EM Science	Methylene Chloride		56061			5250
				Final Vol.		5600

PAH SIM STD prep: 09/12/16-R.H.						
Exp:	19/12/17					
		Conc.				
Supplier	ID #	mg/L	Lot #	Open Date	Exp.Date	µL
o2si	110780-01	200	278353-36992	6/22/16	6/22/17	1000
				Fin Vol.		1000

8270 Surrog Mix 100/200ppm						
Prep: 10/18/16 -RH Ex: 01/18/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
8270 Acid Surrog Mix	10000 ug/ml	Restek Cat# 33029 Lot# A0118884-36874 Op: 10/03/16 EX: 10/03/17	2.0 mL	100 mL	200 µg/mL	MC
8270 B/N surrog Mix	5000 µg/mL	Restek Cat# 31086 Lot# A0119223-36869 Op: 10/03/16 EX: 10/03/17	2.0 mL	100 mL	100 ug/mL	MC

SIM SPIKE	
CAT:	110780-01
Lot:	278353-369
OP: 10/21/16-R.H.	
EX: 10/21/17	

Semivolatile (SV) Tuning Solution -G.A.						
PREP DATE:	10/19/16	RH				
Semivolatile (SV) Tune Solution 50ug/ml						
Exp:	01/19/17					
		Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
Ultra Scient	Semivolatile	1000	N081628-37012	08/23/16	8/23/17	200
EM Science	Methylene Chloride		55098			3800
				Final Vol.		4000

Semivolatile (SV) Tuning Solution -G.A.						
PREP DATE:	11/15/16	RH				
Semivolatile (SV) Tune Solution 50ug/ml						
Exp:	8/26/17					
		Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
Ultra Scient	Semivolatile GC	1000	N081628-37012	08/23/16	8/23/17	200
EM Science	Methylene Chloride		55098			3800
				Final Vol.		4000

8270 PAH SIM Standard Curve

PREP DATE:	11/28/16 RH					
8270 PAH SIM STANDARD CURVE						
Exp.DATE:	**12/20/16**					**5**
		Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
O2si	8270 PAH SIM S	200	278353-36992	9/12/16	9/12/17	5
	5.0ug/mL	5		9/12/16	7/29/17	0
	1.0ug/mL	1		9/12/16	7/29/17	0
O2SI	BNA SURR.	100/200		11/7/16	12/23/16	5
EM Science	Methylene Chloride		56061			190
Supelco	SV Internal St	2000	XA14020V-36768	10/10/16	10/10/17	4
				Final Vol.		204

_SEP004S

Organic Extraction Worksheet

Method	SIM Separatory Funnel Extra 3510C	Extraction Set	161118A	Extraction Method	SEP004S	Units	mL

Spiked ID 1	PAH SIM Spike 10-21-16 exp 10-21-17		Surrogate ID 1	8270 Surrogate 11-7-16 exp 12-23-16	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	11/18/16 12:35	
Spiked ID 8			Ext. End Time:	11/19/16 9:10	
			GC Requires Extract By:	11/22/16 0:00	

pH1	2	11/18/16 12:55:00 PM	Water Bath Temp Criteria	75 °C
pH2	14	11/18/16 2:00:00 PM		
pH3				

Spiked By: KY **Date** 11/18/16 **Witnessed By:** JR **Date** 11/18/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	161118A Blk				0.050	1	1000	1	2/1	11/18/16 12:35	
						equip	E-WB6				
2	161118A LCS-1		0.0250	1	0.050	1	1000	1	2/1	11/18/16 12:35	
						equip	E-WB6				
3	AZ45866 MS-1	AZ45866W28	0.0250	1	0.050	1	1070	1	2/1	11/18/16 12:35	81492 1 WEEK
						equip	E-WB6				
4	AZ45866 MSD-1	AZ45866W34	0.0250	1	0.050	1	1070	1	2/1	11/18/16 12:35	81492 1 WEEK
						equip	E-WB6				
5	AZ45866	AZ45866W27			0.050	1	1070	1	2/1	11/18/16 12:35	81492 1 WEEK
						equip	E-WB6				
6	AZ45867	AZ45867W09			0.050	1	1050	1	2/1	11/18/16 12:35	81492 1 WEEK
						equip	E-WB6				
7	AZ45868	AZ45868W16			0.050	1	1070	1	2/1	11/18/16 12:35	81492 1 WEEK
						equip	E-WB6				
8	AZ45907	AZ45907W15			0.050	1	1000	1	2/1	11/18/16 12:35	81500 1 WEEK
						equip	E-WB6				
9	AZ45908	AZ45908W15			0.050	1	1070	1	2/1	11/18/16 12:35	81500 1 WEEK
						equip	E-WB6				
10	AZ45909	AZ45909W18			0.050	1	1070	1	2/1	11/18/16 12:35	81500 1 WEEK
						equip	E-WB6				
11	AZ45910	AZ45910W16			0.050	1	1050	1	2/1	11/18/16 12:35	81500 1 WEEK
						equip	E-WB6				
12	AZ45911	AZ45911W13			0.050	1	1060	1	2/1	11/18/16 12:35	81500 1 WEEK
						equip	e-wb6				
13	AZ45968	AZ45968W02			0.050	1	1070	1	2/1	11/18/16 12:35	81512
						equip	E-WB6				
14	AZ45970	AZ45970W02			0.050	1	1070	1	2/1	11/18/16 12:35	81512
						equip	E-WB6				
15	AZ45971	AZ45971W03			0.050	1	1070	1	2/1	11/18/16 12:35	81512
						equip	E-WB6				
16	AZ45972	AZ45972W02			0.050	1	1070	1	2/1	11/18/16 12:35	81512
						equip	E-WB6				

Solvent and Lot#	
+1 Acid	9-28-16
PH STRIP	HC 574756
MC	56153
. Na2SO4	11-03-16
0N NaOH	10-27-16
. Na2SO4	16C255214
ILTER PAPER	400112

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	GA
Date	11/21/16
Time	1000
Refrigerator	GC-C

	Technician's Initials
Scanned By	KY
Sample Preparation	KY,JR
Extraction	KY,JR
Concentration	KY

Modified	11/19/16 9:58:54 AM

Reviewed By: KJR **Date** 11/19/16

1/19/16 9:59:01 AM

Ext_ID 53343

_SEP004S

Organic Extraction Worksheet

Method	SIM Separatory Funnel Extra 3510C	Extraction Set	161118A	Extraction Method	SEP004S	Units	mL

Spiked ID 1	PAH SIM Spike 10-21-16 exp 10-21-17		Surrogate ID 1	8270 Surrogate 11-7-16 exp 12-23-16	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	11/18/16 12:35	
Spiked ID 8			Ext. End Time:	11/19/16 9:10	
			GC Requires Extract By:	**11/22/16 0:00**	

pH1	2	1/18/16 12:55:00 PM	Water Bath Temp Criteria	75 °C
pH2	14	11/18/16 2:00:00 PM		
pH3				

Spiked By: KY **Date** 11/18/16 **Witnessed By:** JR **Date** 11/18/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
17	AZ45973	AZ45973W01			0.050	1	1070	1	2/1	11/18/16 12:35	81512
						equip	E-WB6				

KLS 11/19/16

Solvent and Lot#	
1+1 Acid	9-28-16
PH STRIP	HC 574756
MC	56153
A. Na2SO4	11-03-16
10N NaOH	10-27-16
B. Na2SO4	16C255214
FILTER PAPER	400112

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	
Date	
Time	
Refrigerator	

	Technician's Initials
Scanned By	KY
Sample Preparation	KY,JR
Extraction	KY,JR
Concentration	KY

Modified	11/19/16 9:58:54 AM

Reviewed By: KLS **Date** 11/19/16

Injection Log

Directory: M:\LINUS\DATA\L161026\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	1026L002.D	1	SV TUNE 9/22/16	water	26 Oct 16 10:58
2	3	1026L003.D	1	0.1 ug/ml PAH 10/26/16	water	26 Oct 16 11:23
3	4	1026L004.D	1	0.2 ug/ml PAH 10/26/16	water	26 Oct 16 11:56
4	5	1026L005.D	1	0.5 ug/ml PAH 10/26/16	water	26 Oct 16 12:28
5	6	1026L006.D	1	1.0 ug/ml PAH 10/26/16 (1)	water	26 Oct 16 13:01
6	7	1026L007.D	1	5.0 ug/ml PAH 10/26/16	water	26 Oct 16 13:33
7	8	1026L008.D	1	10.0 ug/ml PAH 10/26/16	water	26 Oct 16 14:05
8	9	1026L009.D	1	50.0 ug/ml PAH 10/26/16	water	26 Oct 16 14:37
9	10	1026L010.D	1	100.0 ug/ml PAH 10/26/16	water	26 Oct 16 15:09
10	11	1026L011.D	1	SS PAH 10/26/16	water	26 Oct 16 15:42
11	15	1026L315.D	1	SV Tune 11/15/16		23 Nov 16 16:46
12	16	1026L316.D	1	2.5 ug/ml PAH 10/26/16 (2)		23 Nov 16 17:01
13	18	1026L318.D	1	161118A LCS-1 1/1000	water	23 Nov 16 18:05
14	21	1026L321.D	0.934579	AZ45866W27 1/1070	water	23 Nov 16 19:42
15	22	1026L322.D	0.952381	AZ45867W09 1/1050	water	23 Nov 16 20:14
16	38	1026L338.D	1	2.5 ug/ml PAH 10/26/16 (2)		24 Nov 16 4:16
17	2	1129L002.D	1	SV TUNE 9/22/16	water	29 Nov 16 15:03
18	3	1129L003.D	1	5.0 ug/ml PAH 11/28/16	water	29 Nov 16 15:19
19	4	1129L004.D	1	161118A BLK 1/1000	water	29 Nov 16 15:50
20	5	1129L005.D	0.93458	AZ45866W28 MS-1 1/1070	water	29 Nov 16 16:23
21	6	1129L006.D	0.93458	AZ45866W34 MSD-1 1/1070	water	29 Nov 16 16:55
22	7	1129L007.D	0.93458	AZ45868W16 1/1070	water	29 Nov 16 17:27
23	21	1129L021.D	1	5.0 ug/ml PAH 11/28/16	water	30 Nov 16 00:25

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank
EPA 8270D WATER

Blank Name/QCG: **161117W-45866 - 214093**
Batch ID: #87DC5-161117A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	11/17/16	11/28/16
BLANK	SURROGATE: 2,4,6-TRIBROMOP	67.7	43-140			%	11/17/16	11/28/16
BLANK	SURROGATE: 2-FLUORBIPHENY	64.9	44-119			%	11/17/16	11/28/16
BLANK	SURROGATE: 2-FLUOROPHENO	48.9	19-119			%	11/17/16	11/28/16
BLANK	SURROGATE: NITROBENZENE-	65.4	44-120			%	11/17/16	11/28/16
BLANK	SURROGATE: PHENOL-D6 (S)	29.6	10-115			%	11/17/16	11/28/16
BLANK	SURROGATE: TERPHENYL-D14 (	68.4	50-134			%	11/17/16	11/28/16

Quant Method:Y1117.M
Run #:1117Y117
Instrument:Yoda
Sequence:Y161117
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 11/29/16 12:38:00 PM

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81492

Case No: 81492 Date Analyzed: 11/28/16

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2,4,6-TRIBROMOPHENOL (S)			SURROGATE: 2-FLUORBIPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161117A-BLK	Blank	43-140	67.7		44-119	64.9	
161117A-LCS	Lab Control Spike	43-140	73.0		44-119	69.1	
AZ45866-MS	Matrix Spike	43-140	69.0		44-119	67.1	
AZ45866-MSD	Matrix SpikeD	43-140	65.5		44-119	62.5	
AZ45866	ERH115	43-140	71.6		44-119	71.5	
AZ45867	ERH116	43-140	51.2		44-119	47.2	
AZ45868	ERH120	43-140	68.2		44-119	63.6	

Comments: Batch: #87DC5-161117A

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81492

Case No: 81492 Date Analyzed: 11/28/16

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2-FLUOROPHENOL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161117A-BLK	Blank	19-119	48.9		44-120	65.4	
161117A-LCS	Lab Control Spike	19-119	46.8		44-120	68.6	
AZ45866-MS	Matrix Spike	19-119	43.8		44-120	64.6	
AZ45866-MSD	Matrix SpikeD	19-119	40.1		44-120	61.3	
AZ45866	ERH115	19-119	47.7		44-120	70.3	
AZ45867	ERH116	19-119	33.0		44-120	45.5	
AZ45868	ERH120	19-119	43.1		44-120	64.4	

Comments: Batch: #87DC5-161117A

Printed: 11/29/16 12:38:01 PM

Form 2 & 8, Surrogate Recovery Summary

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81492

Case No: 81492 Date Analyzed: 11/28/16

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: PHENOL-D6 (S)			SURROGATE: TERPHENYL-D14 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161117A-BLK	Blank	10-115	29.6		50-134	68.4	
161117A-LCS	Lab Control Spike	10-115	28.1		50-134	71.8	
AZ45866-MS	Matrix Spike	10-115	26.3		50-134	67.4	
AZ45866-MSD	Matrix SpikeD	10-115	23.8		50-134	60.9	
AZ45866	ERH115	10-115	28.0		50-134	72.0	
AZ45867	ERH116	10-115	20.8		50-134	51.2	
AZ45868	ERH120	10-115	25.0		50-134	66.4	

Comments: Batch: #87DC5-161117A

Laboratory Control Spike Recovery
EPA 8270D WATER

APPL ID: **161117W-45866 LCS - 214093**
Batch ID: #87DC5-161117A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
PHENOL	50.0	17.7	35.4	10-115
SURROGATE: 2,4,6-TRIBROMOPHENOL	200	146	73.0	43-140
SURROGATE: 2-FLUORBIPHENYL (S)	100	69.1	69.1	44-119
SURROGATE: 2-FLUOROPHENOL (S)	200	93.6	46.8	19-119
SURROGATE: NITROBENZENE-D5 (S)	100	68.6	68.6	44-120
SURROGATE: PHENOL-D6 (S)	200	56.2	28.1	10-115
SURROGATE: TERPHENYL-D14 (S)	100	71.8	71.8	50-134

Comments: _____

Primary	SPK
Quant Method :	Y1117.M
Extraction Date :	11/17/16
Analysis Date :	11/28/16
Instrument :	Yoda
Run :	1117Y118
Initials :	MA

Printed: 11/29/16 12:38:03 PM
APPL Standard LCS

Matrix Spike Recoveries

EPA 8270D WATER

APPL ID: **161117W-45866 MS - 214093**
Batch ID: #87DC5-161117A
Sample ID: AZ45866
Client ID: ERH115

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
PHENOL	50.0	ND	16.6	15.5	33.2	31.0	10-115	6.9	20
SURROGATE: 2,4,6-TRIBROMOPHENOL	200	NA	138	131	69.0	65.5	43-140		
SURROGATE: 2-FLUORBIPHENYL (S)	100	NA	67.1	62.5	67.1	62.5	44-119		
SURROGATE: 2-FLUOROPHENOL (S)	200	NA	87.5	80.3	43.8	40.1	19-119		
SURROGATE: NITROBENZENE-D5 (S)	100	NA	64.6	61.3	64.6	61.3	44-120		
SURROGATE: PHENOL-D6 (S)	200	NA	52.6	47.6	26.3	23.8	10-115		
SURROGATE: TERPHENYL-D14 (S)	100	NA	67.4	60.9	67.4	60.9	50-134		

Comments: _____

Primary	SPK	DUP
Quant Method :	Y1117.M	Y1117.M
Extraction Date :	11/17/16	11/17/16
Analysis Date :	11/28/16	11/28/16
Instrument :	Yoda	Yoda
Run :	1117Y120	1117Y121
Initials :	MA	

Printed: 11/29/16 12:38:20 PM
APPL MSD SCII

EPA 8270D

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81492

Case No: 81492 Date Analyzed: 11/28/16

Matrix: WATER Instrument: Yoda

Blank ID: 161117A-BLK Time Analyzed: 1111

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161117A-BLK	Blank	1117Y117	11/28/16 1111
161117A-LCS	Lab Control Spike	1117Y118	11/28/16 1141
161117A-MS	Matrix Spike	1117Y120	11/28/16 1240
161117A-MSD	Matrix SpikeD	1117Y121	11/28/16 1310
AZ45866	ERH115	1117Y122	11/28/16 1339
AZ45867	ERH116	1117Y123	11/28/16 1409
AZ45868	ERH120	1117Y124	11/28/16 1439

Comments: Batch: #87DC5-161117A

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: Water
ID: SV Tune 10/19/16

SDG No: 81492
Date Analyzed: 11/17/16
Instrument: Yoda
Time Analyzed: 11:17

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		5ug/ml SVOC 11/15/16	1117Y003.D	11/17/16 11:32
2		10ug/ml SVOC 11/15/1	1117Y004.D	11/17/16 12:02
3		20ug/ml SVOC 11/15/1	1117Y005.D	11/17/16 12:31
4		40ug/ml SVOC 11/15/1	1117Y006.D	11/17/16 13:00
5		50ug/ml SVOC 11/15/1	1117Y007.D	11/17/16 13:29
6		60ug/ml SVOC 11/15/1	1117Y008.D	11/17/16 13:59
7		80ug/ml SVOC 11/15/1	1117Y009.D	11/17/16 14:28
8		100ug/ml SVOC 11/15/	1117Y010.D	11/17/16 14:58
9		2ND SRC SVOC 11/15/1	1117Y011.D	11/17/16 15:27
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	45.2
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.1
127	40 - 60% of mass 198	57.0
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 197.95	100.0
199	5 - 9% of mass 198	6.1
275	10 - 30% of mass 198	22.5
365	1 - 100% of mass 198	3.4
441	0.01 - 100% of mass 443	80.8
442	50 - 150% of mass 197.95	91.2
443	17 - 23% of mass 442	20.4

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81492
Matrix: Water
ID: SV Tune 11/15/16

SDG No: 81492
Date Analyzed: 11/28/16
Instrument: Yoda
Time Analyzed: 9:47

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		50ug/ml SVOC 11/15/1	1117Y116.D	11/28/16 10:42
2	Blank	161117A BLK 1/1000	1117Y117.D	11/28/16 11:11
3	Lab Control Spike	161117A LCS-1.1/1000	1117Y118.D	11/28/16 11:41
4		AZ45866W32 MS-1 1/10	1117Y120.D	11/28/16 12:40
5		AZ45866W21 MSD-1 1/1	1117Y121.D	11/28/16 13:10
6	ERH115	AZ45866W19 1/1050	1117Y122.D	11/28/16 13:39
7	ERH116	AZ45867W07 1/1070	1117Y123.D	11/28/16 14:09
8	ERH120	AZ45868W14 1/1070	1117Y124.D	11/28/16 14:39
9		50ug/ml SVOC 11/15/1	1117Y139.D	11/28/16 21:26
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	45.4
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.5
127	40 - 60% of mass 198	54.8
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 197.95	100.0
199	5 - 9% of mass 198	6.1
275	10 - 30% of mass 198	23.1
365	1 - 100% of mass 198	3.4
441	0.01 - 100% of mass 443	83.1
442	50 - 150% of mass 197.95	91.6
443	17 - 23% of mass 442	19.9

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 81492

Lab File ID (Standard): 1117Y007.D Date Analyzed: 11/17/16

Instrument ID: Yoda Time Analyzed: 13:29

GC Column: _____ ID: Heated Purge: (Y/N) _____

		1,4-dichlorobenzene-D4(IS)		Napthalene-D8(IS)		Acenaphthene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	181943	5.04	778154	6.46	463295	8.47
	UPPER LIMIT	363886	5.54	1556308	6.96	926590	8.97
	LOWER LIMIT	90972	4.54	389077	5.96	231648	7.97
	SAMPLE NO.						
01	161117A BLK 1/1000	157544	5.03	722959	6.46	436863	8.47
02	161117A LCS-1 1/1000	160801	5.03	707138	6.45	427668	8.47
03	AZ45866W32 MS-1 1/1(	159649	5.03	724521	6.45	435008	8.47
04	AZ45866W21 MSD-1 1/	161673	5.03	715817	6.46	424411	8.47
05	AZ45866W19 1/1050	162627	5.04	710170	6.46	425171	8.46
06	AZ45867W07 1/1070	152933	5.04	700307	6.46	424960	8.46
07	AZ45868W14 1/1070	166737	5.04	735930	6.46	442017	8.47
08	50ug/ml SVOC 11/15/16	137005	5.03	602961	6.46	369334	8.47
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 81492

Lab File ID (Standard): 1117Y007.D Date Analyzed: 11/17/16

Instrument ID: Yoda Time Analyzed: 13:29

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Phenanthrene-D10(IS)		Chrysene-D12(IS)		Perylene-D12(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	862854	10.20	815722	13.29	770325	14.98
	UPPER LIMIT	1725708	10.70	1631444	13.79	1540650	15.48
	LOWER LIMIT	431427	9.70	407861	12.79	385163	14.48
	SAMPLE NO.						
01	161117A BLK 1/1000	810106	10.19	800344	13.27	749060	14.97
02	161117A LCS-1 1/1000	803473	10.19	803295	13.28	735927	14.97
03	AZ45866W32 MS-1 1/1(	825885	10.19	808248	13.28	762823	14.97
04	AZ45866W21 MSD-1 1/	801452	10.20	788994	13.28	749030	14.97
05	AZ45866W19 1/1050	784526	10.19	784594	13.27	722903	14.97
06	AZ45867W07 1/1070	774876	10.19	768011	13.27	715059	14.97
07	AZ45868W14 1/1070	826076	10.19	817690	13.28	769181	14.98
08	50ug/ml SVOC 11/15/16	673860	10.19	677907	13.28	616110	14.97
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

ORGANICS

Sample Data

APPL, INC.

EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH115

Sample Collection Date: 11/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81492

APPL ID: AZ45866

QCG: #87DC5-161117A-214093

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	11/17/16	11/28/16
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	71.6	43-140			%	11/17/16	11/28/16
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	71.5	44-119			%	11/17/16	11/28/16
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	47.7	19-119			%	11/17/16	11/28/16
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	70.3	44-120			%	11/17/16	11/28/16
EPA 8270D	SURROGATE: PHENOL-D6 (S)	28.0	10-115			%	11/17/16	11/28/16
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	72.0	50-134			%	11/17/16	11/28/16

Quant Method: Y1117.M
Run #: 1117Y122
Instrument: Yoda
Sequence: Y161117
Dilution Factor: 1
Initials: MA

Printed: 11/29/16 12:38:28 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y122.D Vial: 22
Acq On : 28 Nov 16 13:39 Operator: MA
Sample : AZ45866W19 1/1050 Inst : Yoda
Misc : water Multiplr: 0.95

Quant Time: Nov 28 14:21 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	162627	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.46	136	710170	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.46	164	425171	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.19	188	784526	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.27	240	784594	40.00000 ppb	-0.02
88) Perylene-D12(IS)	14.97	264	722903	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.53	112	487416	90.95018 ppb	0.00
Spiked Amount 190.476			Recovery =	47.749%	
5) Phenol-D6 (S)	4.68	99	400824	53.30012 ppb	0.00
Spiked Amount 190.476			Recovery =	27.983%	
21) Nitrobenzene-D5(S)	5.66	82	522510	66.91319 ppb	0.00
Spiked Amount 95.238			Recovery =	70.259%	
45) 2-Fluorobiphenyl(S)	7.69	172	968223	68.09725 ppb	0.00
Spiked Amount 95.238			Recovery =	71.502%	
63) 2,4,6-Tribromophenol(S)	9.40	330	297625	136.35776 ppb	0.00
Spiked Amount 190.476			Recovery =	71.588%	
81) Terphenyl-D14(S)	12.06	244	1281658	68.52625 ppb	0.00
Spiked Amount 95.238			Recovery =	71.952%	
Target Compounds					Qvalue
49) Dimethyl phthalate	8.18	163	104543	6.44711 ppb	97

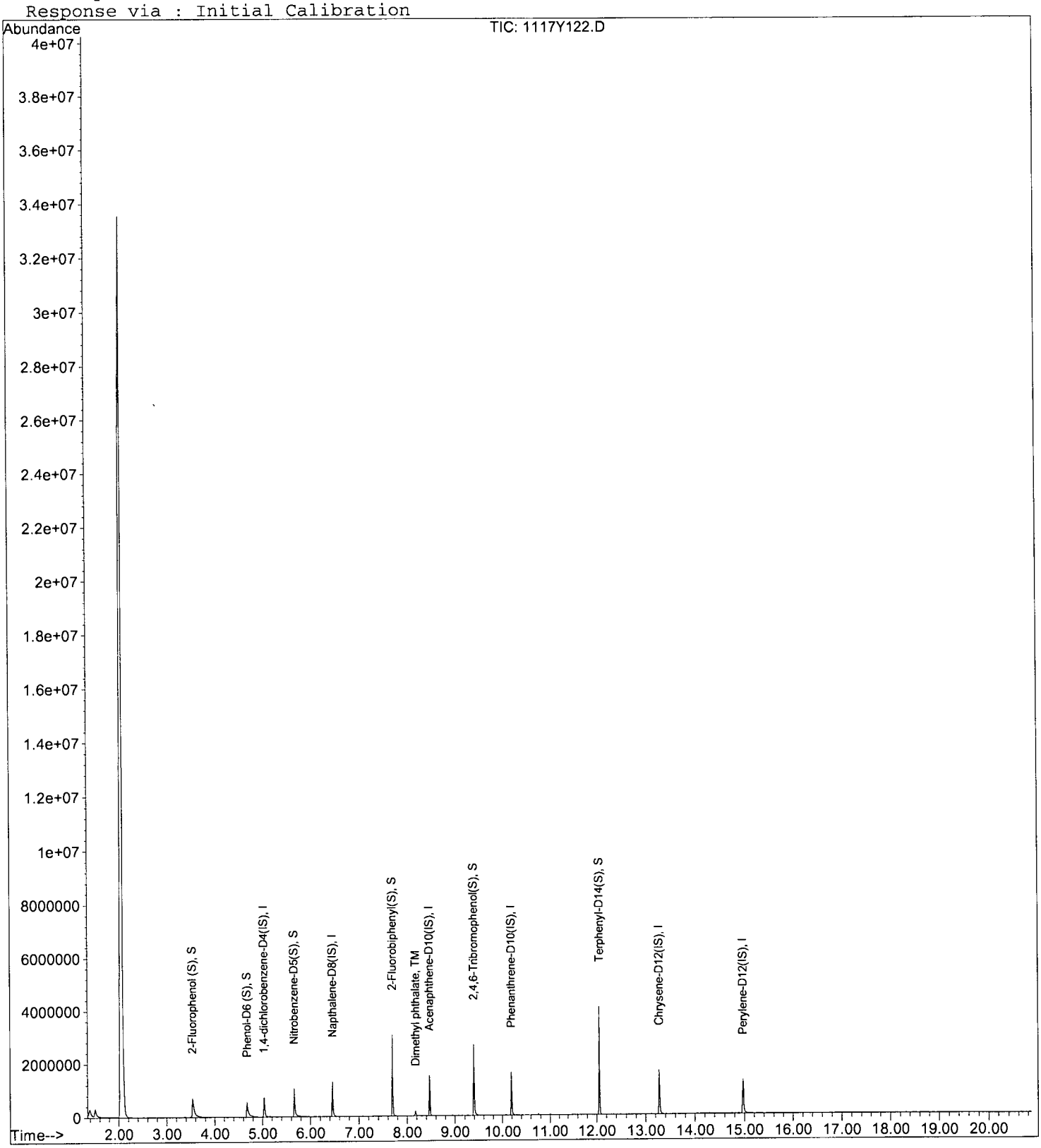
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y122.D Vial: 22
Acq On : 28 Nov 16 13:39 Operator: MA
Sample : AZ45866W19 1/1050 Inst : Yoda
Misc : water Multiplr: 0.95

Quant Time: Nov 28 14:21 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration



EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH116
Sample Collection Date: 11/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81492
APPL ID: AZ45867
QCG: #87DC5-161117A-214093

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	11/17/16	11/28/16
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	51.2	43-140			%	11/17/16	11/28/16
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	47.2	44-119			%	11/17/16	11/28/16
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	33.0	19-119			%	11/17/16	11/28/16
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	45.5	44-120			%	11/17/16	11/28/16
EPA 8270D	SURROGATE: PHENOL-D6 (S)	20.8	10-115			%	11/17/16	11/28/16
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	51.2	50-134			%	11/17/16	11/28/16

Quant Method: Y1117.M
Run #: 1117Y123
Instrument: Yoda
Sequence: Y161117
Dilution Factor: 1
Initials: MA

Printed: 11/29/16 12:38:28 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y123.D Vial: 23
Acq On : 28 Nov 16 14:09 Operator: MA
Sample : AZ45867W07 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Nov 28 14:50 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	152933	40.00000	ppb	0.00
20) Napthalene-D8(IS)	6.46	136	700307	40.00000	ppb	0.00
40) Acenaphthene-D10(IS)	8.46	164	424960	40.00000	ppb	0.00
64) Phenanthrene-D10(IS)	10.19	188	774876	40.00000	ppb	0.00
78) Chrysene-D12(IS)	13.27	240	768011	40.00000	ppb	-0.02
88) Perylene-D12(IS)	14.97	264	715059	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.54	112	317081	61.74059	ppb	0.00
Spiked Amount 186.916			Recovery = 33.031%			
5) Phenol-D6 (S)	4.68	99	280752	38.95777	ppb	0.00
Spiked Amount 186.916			Recovery = 20.843%			
21) Nitrobenzene-D5(S)	5.67	82	333358	42.48221	ppb	0.00
Spiked Amount 93.458			Recovery = 45.456%			
45) 2-Fluorobiphenyl(S)	7.69	172	638653	44.10014	ppb	0.00
Spiked Amount 93.458			Recovery = 47.187%			
63) 2,4,6-Tribromophenol(S)	9.39	330	212782	95.71196	ppb	0.00
Spiked Amount 186.916			Recovery = 51.206%			
81) Terphenyl-D14(S)	12.06	244	893485	47.89111	ppb	0.00
Spiked Amount 93.458			Recovery = 51.243%			

Target Compounds	Qvalue

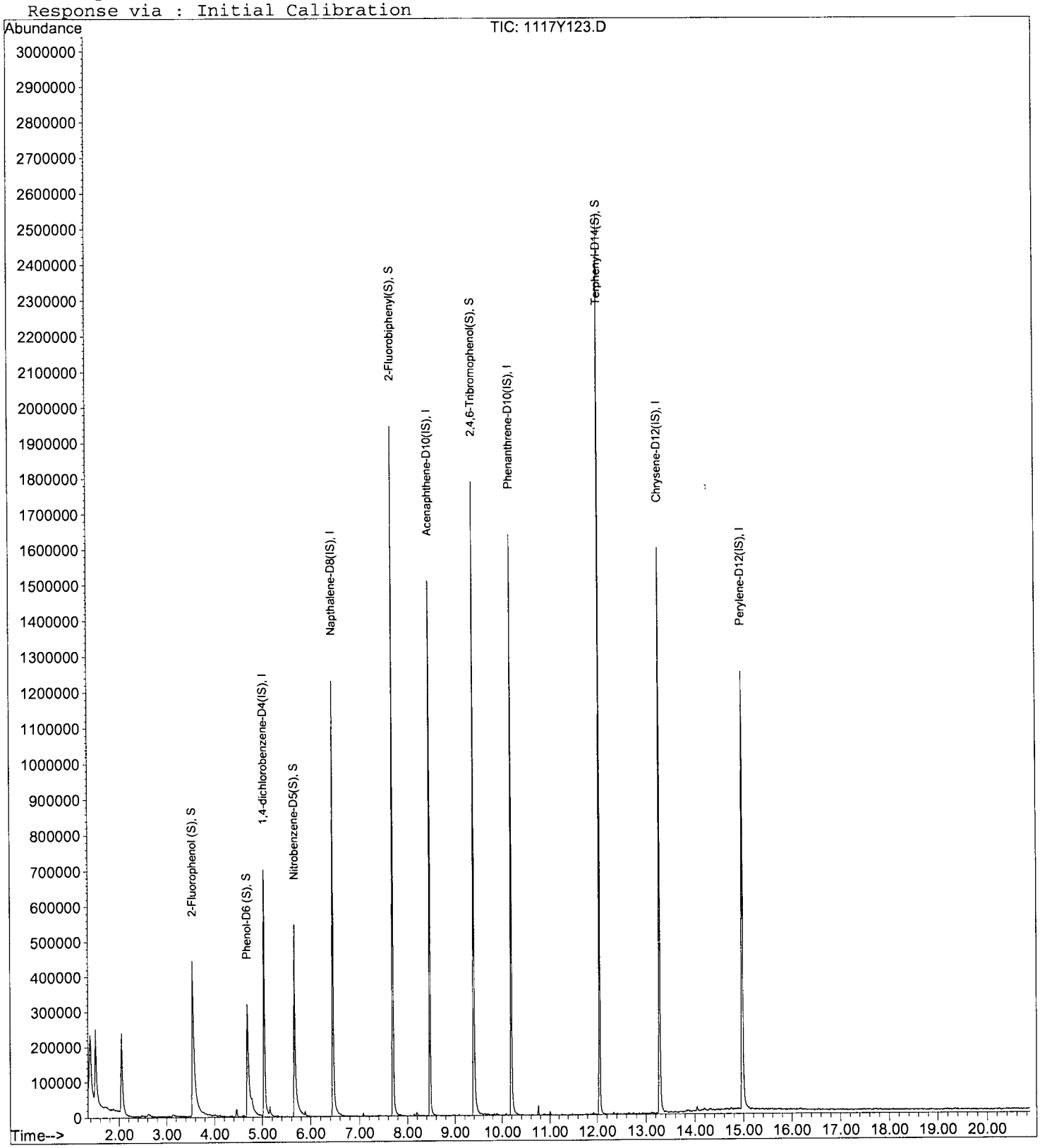
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y123.D Vial: 23
Acq On : 28 Nov 16 14:09 Operator: MA
Sample : AZ45867W07 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Nov 28 14:50 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration



EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH120

Sample Collection Date: 11/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81492

APPL ID: AZ45868

QCG: #87DC5-161117A-214093

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	11/17/16	11/28/16
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	68.2	43-140			%	11/17/16	11/28/16
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	63.6	44-119			%	11/17/16	11/28/16
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	43.1	19-119			%	11/17/16	11/28/16
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	64.4	44-120			%	11/17/16	11/28/16
EPA 8270D	SURROGATE: PHENOL-D6 (S)	25.0	10-115			%	11/17/16	11/28/16
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	66.4	50-134			%	11/17/16	11/28/16

Quant Method: Y1117.M
Run #: 1117Y124
Instrument: Yoda
Sequence: Y161117
Dilution Factor: 1
Initials: MA

Printed: 11/29/16 12:38:28 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y124.D Vial: 24
Acq On : 28 Nov 16 14:39 Operator: MA
Sample : AZ45868W14 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Nov 28 15:33 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	166737	40.00000	ppb	0.00
20) Napthalene-D8(IS)	6.46	136	735930	40.00000	ppb	0.00
40) Acenaphthene-D10(IS)	8.47	164	442017	40.00000	ppb	0.00
64) Phenanthrene-D10(IS)	10.19	188	826076	40.00000	ppb	0.00
78) Chrysene-D12(IS)	13.28	240	817690	40.00000	ppb	0.00
88) Perylene-D12(IS)	14.98	264	769181	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.53	112	451598	80.65332	ppb	0.00
Spiked Amount 186.916			Recovery = 43.149%			
5) Phenol-D6 (S)	4.68	99	367452	46.76721	ppb	0.00
Spiked Amount 186.916			Recovery = 25.020%			
21) Nitrobenzene-D5(S)	5.67	82	496245	60.17898	ppb	0.00
Spiked Amount 93.458			Recovery = 64.392%			
45) 2-Fluorobiphenyl(S)	7.69	172	894809	59.40389	ppb	0.00
Spiked Amount 93.458			Recovery = 63.562%			
63) 2,4,6-Tribromophenol(S)	9.40	330	294776	127.47734	ppb	0.00
Spiked Amount 186.916			Recovery = 68.200%			
81) Terphenyl-D14(S)	12.06	244	1233379	62.09311	ppb	0.00
Spiked Amount 93.458			Recovery = 66.440%			

Target Compounds Qvalue

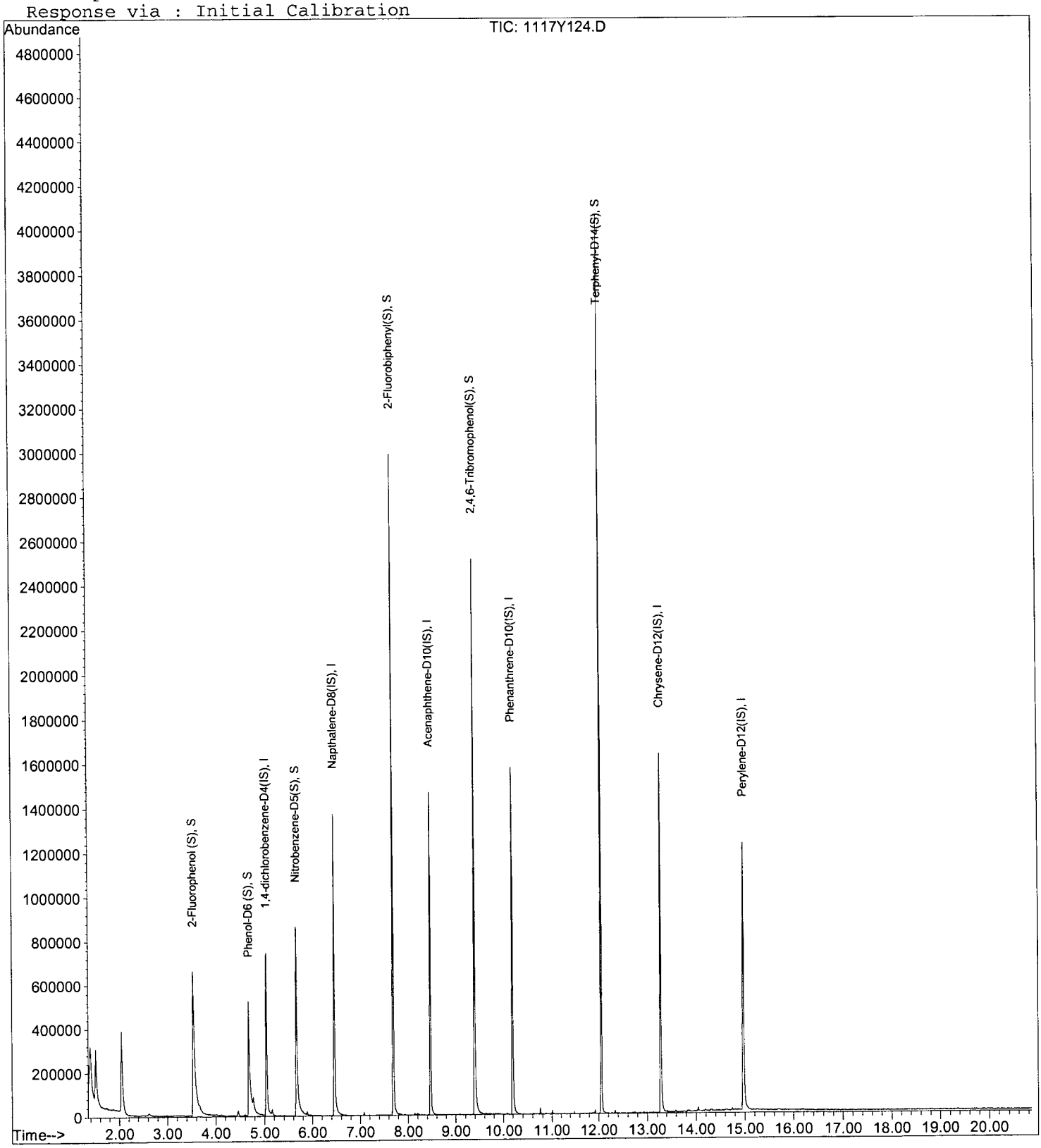
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y124.D Vial: 24
Acq On : 28 Nov 16 14:39 Operator: MA
Sample : AZ45868W14 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Nov 28 15:33 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration



ORGANICS

Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 11/17/16
Matrix: Instrument: Yoda
Initials:

		Compound	5	10	20	40	50	60	80	100			Avg	%RSD		
			1117Y003.D	1117Y004.D	1117Y005.D	1117Y006.D	1117Y007.D	1117Y008.D	1117Y009.D	1117Y010.D						
1	I	1,4-dichlorobenzene-D4(IS)														
2	TM	n-Nitrosodimethylamine	0.8767	0.9297	0.9993	0.9385	0.9504	0.9096	0.9453	1.051			0.95	5.7	TM	
3	TM	Pyridine	1.846	1.847	1.987	2.030	2.186	2.174	2.102	1.994			2.0	6.5	TM	
4	S	2-Fluorophenol (S)	0.8584	1.249	1.256	1.338	1.360	1.312	1.331	1.340			1.3	13	S	
5	S	Phenol-D6 (S)	1.779	1.865	1.723	1.758	1.788	1.709	1.716	1.755			1.8	2.9	S	
6	*TM	Phenol	1.968	2.028	1.977	2.010	2.042	1.971	1.974	1.997			2.0	1.4	*TM	
7	TM	Aniline	1.767	1.937	1.959	2.018	2.041	2.029	2.009	2.059			2.0	4.8	TM	
8	TM	Bis (2-chloroethyl) ether	0.8304	0.9093	0.9069	0.9191	0.9504	0.9073	0.8914	0.9307			0.91	3.9	TM	
9	TM	2-Chlorophenol	1.521	1.652	1.526	1.549	1.527	1.524	1.501	1.530			1.5	3.0	TM	
10	TM	1,3-DCB	1.688	1.749	1.697	1.671	1.710	1.638	1.618	1.667			1.7	2.4	TM	
11	*TM	1,4-DCB	1.781	1.762	1.709	1.737	1.724	1.680	1.654	1.691			1.7	2.5	*TM	
12	TM	Benzyl alcohol	0.8001	0.7934	0.8495	0.8899	0.8869	0.8719	0.8644	0.9061			0.86	4.8	TM	
13	TM	1,2-DCB	1.686	1.669	1.554	1.596	1.612	1.554	1.537	1.560			1.6	3.5	TM	
14	TM	2-Methylphenol	1.236	1.165	1.138	1.160	1.195	1.171	1.154	1.182			1.2	2.6	TM	
15	TM	Bis (2-chloroisopropyl) ether	1.904	1.923	1.786	1.771	1.790	1.736	1.727	1.719			1.8	4.4	TM	
16	TM	Acetophenone	2.239	2.266	2.125	2.199	2.247	2.164	2.129	2.201			2.2	2.4	TM	
17	TM	3&4-Methylphenol	1.539	1.633	1.511	1.538	1.569	1.538	1.521	1.555			1.6	2.4	TM	
18	**TM	n-Nitrosodi-n-propylamine	1.207	1.144	1.119	1.111	1.132	1.106	1.122	1.149			1.1	2.8	**TM	
19	TM	Hexachloroethane	0.7457	0.7268	0.7078	0.7126	0.7162	0.7028	0.6894	0.7071			0.71	2.4	TM	
20	I	Napthalene-D8(IS)														
21	S	Nitrobenzene-D5(S)	0.4332	0.4370	0.4213	0.4076	0.4248	0.3993	0.4068	0.4210			0.42	3.2	S	
22	TM	Nitrobenzene	0.4295	0.4309	0.4171	0.4270	0.4390	0.4237	0.4276	0.4424			0.43	1.9	TM	
23	TM	Isophorone	0.7247	0.7042	0.6896	0.6988	0.7327	0.6988	0.6991	0.7239			0.71	2.2	TM	
24	*TM	2-Nitrophenol	0.1932	0.2016	0.1966	0.2040	0.2115	0.2042	0.2042	0.2129			0.20	3.3	*TM	
25	TM	2,4-Dimethylphenol	0.3340	0.3144	0.3095	0.3090	0.3241	0.3090	0.3179	0.3242			0.32	2.9	TM	
26	TMQ	Benzoic acid	0.0719	0.1514	0.1913	0.2342	0.2570	0.2511	0.2607	0.2430			0.21	32	TMQ	0.997
27	TM	Bis (2-chloroethoxy) methane	0.3988	0.3691	0.3694	0.3697	0.3888	0.3654	0.3686	0.3821			0.38	3.2	TM	
28	*TM	2,4-Dichlorophenol	0.2902	0.3057	0.3020	0.3010	0.3107	0.3060	0.3071	0.3114			0.30	2.2	*TM	
29	TM	1,2,4-Trichlorobenzene	0.3536	0.3470	0.3243	0.3335	0.3488	0.3309	0.3242	0.3395			0.34	3.3	TM	
30	TM	3,4-Dimethylphenol	0.5541	0.5065	0.4845	0.4960	0.5109	0.4973	0.4916	0.5103			0.51	4.2	TM	
31	TM	Naphthalene	1.093	1.056	1.036	1.035	1.055	1.033	1.036	1.066			1.1	2.0	TM	
32	TM	4-Chloroaniline	0.3183	0.3776	0.3888	0.3921	0.4000	0.3809	0.3763	0.3680			0.38	6.7	TM	
33	TM	2,6-Dichlorophenol	0.3039	0.3083	0.2942	0.2904	0.3039	0.2873	0.2874	0.2959			0.30	2.7	TM	
34	TM	Hexachloropropene	0.2546	0.2601	0.2601	0.2662	0.2769	0.2730	0.2741	0.2845			0.27	3.8	TM	
35	*TM	Hexachlorobutadiene	0.2212	0.2159	0.2138	0.2125	0.2187	0.2103	0.2124	0.2192			0.22	1.8	*TM	

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 11/17/16
Matrix: Instrument: Yoda Initials:

		Compound	5	10	20	40	50	60	80	100			Avg	%RSD		
36	TM	Caprolactum	0.1651	0.1526	0.1600	0.1569	0.1637	0.1591	0.1588	0.1634			0.16	2.6	TM	
37	*TM	4-Chloro-3-methylphenol	0.3618	0.3334	0.3375	0.3472	0.3617	0.3561	0.3495	0.3671			0.35	3.4	*TM	
38	TM	2-Methylnaphthalene	0.7173	0.7093	0.7058	0.6996	0.7156	0.6981	0.6915	0.7283			0.71	1.7	TM	
39	TM	1-Methylnaphthalene	0.6863	0.6706	0.6709	0.6841	0.6964	0.6717	0.6690	0.6960			0.68	1.7	TM	
40	I	Acenaphthene-D10(IS)														
41	**TMQ	Hexachlorocyclopentadiene	0.0369	0.0603	0.1198	0.1905	0.2160	0.2348	0.2549	0.2883			0.18	53	**TMQ	0.999
42	TM	1,2,4,5-Tetrachlorobenzene	0.5685	0.5509	0.5514	0.5420	0.5405	0.5332	0.5167	0.5313			0.54	2.9	TM	
43	*TM	2,4,6-Trichlorophenol	0.3659	0.3576	0.3590	0.3614	0.3711	0.3594	0.3547	0.3624			0.36	1.4	*TM	
44	TM	2,4,5-Trichlorophenol	0.4206	0.3683	0.3806	0.3726	0.3846	0.3801	0.3707	0.3846			0.38	4.3	TM	
45	S	2-Fluorobiphenyl(S)	1.335	1.387	1.287	1.240	1.285	1.216	1.207	1.235			1.3	4.9	S	
46	TM	1,1'-Biphenyl	1.574	1.536	1.534	1.533	1.537	1.495	1.468	1.497			1.5	2.2	TM	
47	TM	2-Chloronaphthalene	1.254	1.206	1.172	1.193	1.205	1.180	1.145	1.179			1.2	2.7	TM	
48	TM	2-Nitroaniline	0.3775	0.4231	0.4274	0.4306	0.4382	0.4262	0.4241	0.4356			0.42	4.5	TM	
49	TM	Dimethyl phthalate	1.485	1.466	1.482	1.426	1.465	1.434	1.408	1.457			1.5	1.9	TM	
50	TM	2,6-DNT	0.3164	0.3095	0.3300	0.3225	0.3386	0.3287	0.3246	0.3321			0.33	2.8	TM	
51	TM	Acenaphthylene	1.925	1.884	1.887	1.849	1.895	1.793	1.797	1.851			1.9	2.5	TM	
52	TM	3-Nitroaniline	0.3201	0.3273	0.3321	0.3522	0.3587	0.3393	0.3335	0.3373			0.34	3.7	TM	
53	*TM	Acenaphthene	1.176	1.147	1.170	1.128	1.150	1.126	1.089	1.126			1.1	2.5	*TM	
54	**TML	2,4-Dinitrophenol		0.0456	0.1181	0.1571	0.1500	0.1783	0.1669	0.1813			0.14	33	**TML	0.995
55	**TML	4-Nitrophenol		0.0379	0.2280	0.2741	0.2816	0.2852	0.2899	0.3033			0.24	38	**TML	0.999
56	TM	Dibenzofuran	1.733	1.653	1.660	1.667	1.685	1.644	1.574	1.631			1.7	2.7	TM	
57	TM	2,4-DNT	0.4502	0.4413	0.4587	0.4575	0.4715	0.4569	0.4482	0.4677			0.46	2.2	TM	
58	TM	2,3,4,6-Tetrachlorophenol	0.2574	0.2950	0.2937	0.2843	0.3008	0.2922	0.2958	0.3124			0.29	5.5	TM	
59	TM	Diethyl phthalate	1.551	1.505	1.500	1.488	1.509	1.486	1.420	1.467			1.5	2.5	TM	
60	TM	4-Chlorophenyl phenyl ether	0.7199	0.6938	0.6647	0.6518	0.6641	0.6522	0.6617	0.7092			0.68	3.9	TM	
61	TM	Fluorene	1.420	1.401	1.340	1.320	1.355	1.329	1.334	1.425			1.4	3.2	TM	
62	TM	4-Nitroaniline	0.3032	0.3382	0.3427	0.3168	0.3196	0.3136	0.2981	0.3070			0.32	5.0	TM	
63	S	2,4,6-Tribromophenol(S)	0.1934	0.2058	0.1919	0.1906	0.1984	0.1911	0.1914	0.2019			0.20	3.0	S	
64	I	Phenanthrene-D10(IS)														
65	TM	4,6-Dinitro-2-methylphenol	0.1063	0.1246	0.1323	0.1512	0.1579	0.1497	0.1516	0.1592			0.14	13	TM	
66	TM	Diphenyl amine	0.5921	0.5629	0.5353	0.5467	0.5417	0.5203	0.5237	0.5445			0.55	4.2	TM	
67	*TM	n-Nitrosodiphenylamine	0.5921	0.5629	0.5353	0.5467	0.5417	0.5203	0.5237	0.5445			0.55	4.2	*TM	
68	TM	1,2-Diphenylhydrazine	0.8834	0.8524	0.8084	0.8230	0.9893	0.9572	0.9284	0.9300			0.90	7.3	TM	
69	TM	4-Bromophenyl phenyl ether	0.2190	0.2123	0.2068	0.2159	0.2154	0.2078	0.2046	0.2149			0.21	2.4	TM	
70	TM	Hexachlorobenzene	0.2403	0.2357	0.2177	0.2265	0.2269	0.2207	0.2217	0.2259			0.23	3.4	TM	

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 11/17/16
Matrix: Instrument: Yoda Initials:

		Compound	5	10	20	40	50	60	80	100			Avg	%RSD		
71	TM	Atrazine	0.2257	0.2133	0.2218	0.2263	0.2272	0.2159	0.2140	0.2232			0.22	2.6	TM	
72	*TMQ	Pentachlorophenol	0.0453	0.0466	0.0460	0.0678	0.0747	0.0721	0.0840	0.0918			0.07	28	*TMQ	0.998
73	TM	Phenanthrene	1.180	1.146	1.099	1.108	1.104	1.074	1.057	1.096			1.1	3.5	TM	
74	TM	Anthracene	1.224	1.216	1.124	1.157	1.167	1.136	1.113	1.126			1.2	3.7	TM	
75	TM	Carbazol	1.058	1.036	0.9944	1.020	1.014	0.9948	0.9918	1.015			1.0	2.3	TM	
76	TM	Di-n-butylphthalate	1.462	1.412	1.363	1.396	1.380	1.361	1.347	1.344			1.4	2.9	TM	
77	*TM	Fluoranthene	1.270	1.265	1.198	1.221	1.225	1.193	1.192	1.219			1.2	2.5	*TM	
78	I	Chrysene-D12(IS)														
79	TM	Benzidine	0.3946	0.4216	0.4411	0.4650	0.4775	0.4667	0.4453	0.4292			0.44	6.2	TM	
80	TM	Pyrene	1.403	1.326	1.289	1.330	1.365	1.325	1.285	1.277			1.3	3.3	TM	
81	S	Terphenyl-D14(S)	0.9882	0.9665	0.8976	0.8931	0.9110	0.8676	0.8830	0.8580			0.91	5.1	S	
82	TM	Butyl benzylphthalate	0.7130	0.6490	0.6557	0.6750	0.6887	0.6721	0.6496	0.6378			0.67	3.7	TM	
83	TM	3,3'-Dichlorobenzidine	0.3908	0.4253	0.4217	0.4193	0.4214	0.4152	0.3901	0.3756			0.41	4.6	TM	
84	TM	Benz (a) anthracene	1.298	1.306	1.228	1.264	1.289	1.278	1.258	1.225			1.3	2.4	TM	
85	TM	Bis (2-ethylhexyl) phthalate	0.9971	0.9443	0.9087	0.9552	0.9669	0.9473	0.9208	0.9292			0.95	2.9	TM	
86	TM	Chrysene	1.269	1.236	1.188	1.238	1.256	1.222	1.183	1.186			1.2	2.7	TM	
87	*TM	Di-n-octylphthalate	1.740	1.667	1.598	1.629	1.674	1.643	1.653	1.589			1.6	2.9	*TM	
88	I	Perylene-D12(IS)														
89	TM	Benzo (b) fluoranthene	1.487	1.345	1.328	1.284	1.470	1.402	1.312	1.372			1.4	5.3	TM	
90	TM	Benzo (k) fluoranthene	1.230	1.363	1.330	1.354	1.209	1.217	1.234	1.319			1.3	5.1	TM	
91	*TM	Benzo (a) pyrene	1.292	1.289	1.277	1.278	1.279	1.253	1.225	1.266			1.3	1.7	*TM	
92	TM	Indeno (1,2,3-cd) pyrene	1.486	1.520	1.448	1.455	1.481	1.433	1.385	1.426			1.5	2.9	TM	
93	TM	Dibenz (a,h) anthracene	1.286	1.284	1.214	1.241	1.243	1.218	1.171	1.221			1.2	3.1	TM	
94	TM	Benzo (g,h,i) perylene	1.248	1.244	1.234	1.216	1.235	1.191	1.148	1.191			1.2	2.8	TM	
95																
96																
97																
98																
99																
100																
101																
102																
103																
104																
105																

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y003.D Vial: 3
Acq On : 17 Nov 16 11:32 Operator: MA
Sample : 5ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:03:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	186655	40.00000	ppb		0.00
20) Napthalene-D8(IS)	6.46	136	811731	40.00000	ppb		0.00
40) Acenaphthene-D10(IS)	8.47	164	481288	40.00000	ppb		0.00
64) Phenanthrene-D10(IS)	10.20	188	871758	40.00000	ppb		0.00
78) Chrysene-D12(IS)	13.28	240	846746	40.00000	ppb		0.00
88) Perylene-D12(IS)	14.98	264	786880	40.00000	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol (S)	3.59	112	40058	4.74233	ppb		0.05
Spiked Amount 200.000			Recovery = 2.371%				
5) Phenol-D6 (S)	4.70	99	83025	7.57969	ppb		0.03
Spiked Amount 200.000			Recovery = 3.790%				
21) Nitrobenzene-D5(S)	5.68	82	43960	4.38254	ppb		0.00
Spiked Amount 100.000			Recovery = 4.383%				
45) 2-Fluorobiphenyl(S)	7.69	172	80290	5.33147	ppb		0.00
Spiked Amount 100.000			Recovery = 5.331%				
63) 2,4,6-Tribromophenol(S)	9.40	330	23274	10.21956	ppb		0.00
Spiked Amount 200.000			Recovery = 5.110%				
81) Terphenyl-D14(S)	12.06	244	104592	5.54620	ppb		0.00
Spiked Amount 100.000			Recovery = 5.546%				
Target Compounds							Qvalue
2) n-Nitrosodimethylamine	1.88	42	20454	3.70679	ppb		100
3) Pyridine	1.89	79	43077	3.83922	ppb		82
6) Phenol	4.72	94	45924	3.51779	ppb		94
7) Aniline	4.71	66	41234	3.37636	ppb		93
8) Bis (2-chloroethyl) ether	4.76	63	19374	3.25558	ppb		88
9) 2-Chlorophenol	4.84	128	35488	3.57195	ppb		89
10) 1,3-DCB	4.97	146	39374	3.61470	ppb		95
11) 1,4-DCB	5.06	146	41555	3.72196	ppb		95
12) Benzyl alcohol	5.25	108	18667	3.30711	ppb		91
13) 1,2-DCB	5.22	146	39344	3.81131	ppb		98
14) 2-Methylphenol	5.37	107	28841	3.73704	ppb		84
15) Bis (2-chloroisopropyl) et	5.34	45	44432	3.63432	ppb		94
16) Acetophenone	5.51	105	52237	3.68814	ppb		93
17) 3&4-Methylphenol	5.56	107	71793	7.15362	ppb		97
18) n-Nitrosodi-n-propylamine	5.49	70	28150	3.75423	ppb		91
19) Hexachloroethane	5.59	117	17398	3.83140	ppb		91
22) Nitrobenzene	5.70	77	43575	4.10858	ppb		98
23) Isophorone	5.95	82	73536	4.11900	ppb		98
24) 2-Nitrophenol	6.06	139	19605	3.80758	ppb		89
25) 2,4-Dimethylphenol	6.12	122	33888	4.31573	ppb		94
26) Benzoic acid	6.31	105	7294	7.11700	ppb	#	71
27) Bis (2-chloroethoxy) metha	6.20	93	40462	4.24091	ppb		96
28) 2,4-Dichlorophenol	6.37	162	29444	3.91857	ppb		96
29) 1,2,4-Trichlorobenzene	6.40	180	35876	4.30822	ppb		99
30) 3,4-Dimethylphenol	6.47	107	56222	4.52002	ppb		88
31) Naphthalene	6.49	128	110932	4.24975	ppb		100
32) 4-Chloroaniline	6.59	127	32298	3.56583	ppb		93
33) 2,6-Dichlorophenol	6.58	162	30836	4.25747	ppb		93
34) Hexachloropropene	6.58	213	25829	4.02245	ppb		95
35) Hexachlorobutadiene	6.62	225	22448	4.29550	ppb		90
36) Caprolactum	6.96	55	16755	4.08655	ppb	#	87
37) 4-Chloro-3-methylphenol	7.17	107	36714	4.18425	ppb		91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y003.D Vial: 3
Acq On : 17 Nov 16 11:32 Operator: MA
Sample : 5ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:03:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.27	142	72783	4.14303	ppb		98
39)	1-Methylnaphthalene	7.39	142	69633	4.06022	ppb		94
41)	Hexachlorocyclopentadiene	7.45	237	2217	7.00281	ppb		99
42)	1,2,4,5-Tetrachlorobenzene	7.48	216	34199	5.26632	ppb		97
43)	2,4,6-Trichlorophenol	7.63	196	22011	5.17286	ppb		97
44)	2,4,5-Trichlorophenol	7.71	196	25306	5.57341	ppb		94
46)	1,1'-Biphenyl	7.81	154	94682	5.13211	ppb		99
47)	2-Chloronaphthalene	7.83	162	75454	5.20180	ppb		96
48)	2-Nitroaniline	7.99	65	22709	4.38315	ppb		98
49)	Dimethyl phthalate	8.18	163	89346	5.06593	ppb		98
50)	2,6-DNT	8.26	165	19033	4.76838	ppb		96
51)	Acenaphthylene	8.31	152	115831	5.10681	ppb		97
52)	3-Nitroaniline	8.48	138	19258	4.65743	ppb	#	69
53)	Acenaphthene	8.51	154	70771	5.07941	ppb		98
54)	2,4-Dinitrophenol	8.69	184	2504	8.23519	ppb		95
55)	4-Nitrophenol	8.70	65	1447	12.54645	ppb	#	45
56)	Dibenzofuran	8.71	168	104236	5.13640	ppb		95
57)	2,4-DNT	8.74	165	27082	4.85019	ppb		85
58)	2,3,4,6-Tetrachlorophenol	8.89	232	15485	6.85515	ppb		97
59)	Diethyl phthalate	8.98	149	93304	5.20290	ppb		97
60)	4-Chlorophenyl phenyl ethe	9.11	204	43307	5.46797	ppb		90
61)	Fluorene	9.11	166	85433	5.20109	ppb		92
62)	4-Nitroaniline	9.19	138	18241	4.61005	ppb		90
65)	4,6-Dinitro-2-methylphenol	9.22	198	11583	3.93591	ppb		92
66)	Diphenyl amine	9.25	169	129052	11.23992	ppb		98
67)	n-Nitrosodiphenylamine	9.25	169	129052	11.23992	ppb		98
68)	1,2-Diphenylhydrazine	9.29	77	96269	5.15494	ppb		90
69)	4-Bromophenyl phenyl ether	9.68	248	23866	5.33693	ppb		97
70)	Hexachlorobenzene	9.75	284	26184	5.55790	ppb	#	70
71)	Atrazine	9.88	200	12297	2.58214	ppb		94
72)	Pentachlorophenol	10.01	266	4931	12.83279	ppb		88
73)	Phenanthrene	10.23	178	128534	5.50629	ppb		99
74)	Anthracene	10.29	178	133419	5.44194	ppb		99
75)	Carbazol	10.50	167	115285	5.31295	ppb		96
76)	Di-n-butylphthalate	10.89	149	159274	5.45549	ppb		98
77)	Fluoranthene	11.61	202	138379	5.36498	ppb		97
79)	Benzidine	11.81	184	41761	4.61245	ppb		97
80)	Pyrene	11.88	202	148527	5.29107	ppb		99
82)	Butyl benzylphthalate	12.63	149	75463	5.42104	ppb		89
83)	3,3'-Dichlorobenzidine	13.25	252	41366	4.70594	ppb	#	97
84)	Benz (a) anthracene	13.27	228	137348	5.19425	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.29	149	105533	5.37243	ppb	#	97
86)	Chrysene	13.31	228	134311	5.20963	ppb		99
87)	Di-n-octylphthalate	14.01	149	184159	5.37229	ppb		95
89)	Benzo (b) fluoranthene	14.50	252	146218	6.29055	ppb		99
90)	Benzo (k) fluoranthene	14.53	252	120958	5.79126	ppb	#	97
91)	Benzo (a) pyrene	14.91	252	127111	6.09950	ppb		98
92)	Indeno (1,2,3-cd) pyrene	16.64	276	146137	6.14875	ppb		98
93)	Dibenz (a,h) anthracene	16.65	278	126516	6.29407	ppb		96
94)	Benzo (g,h,i) perylene	17.13	276	122771	6.25659	ppb		97

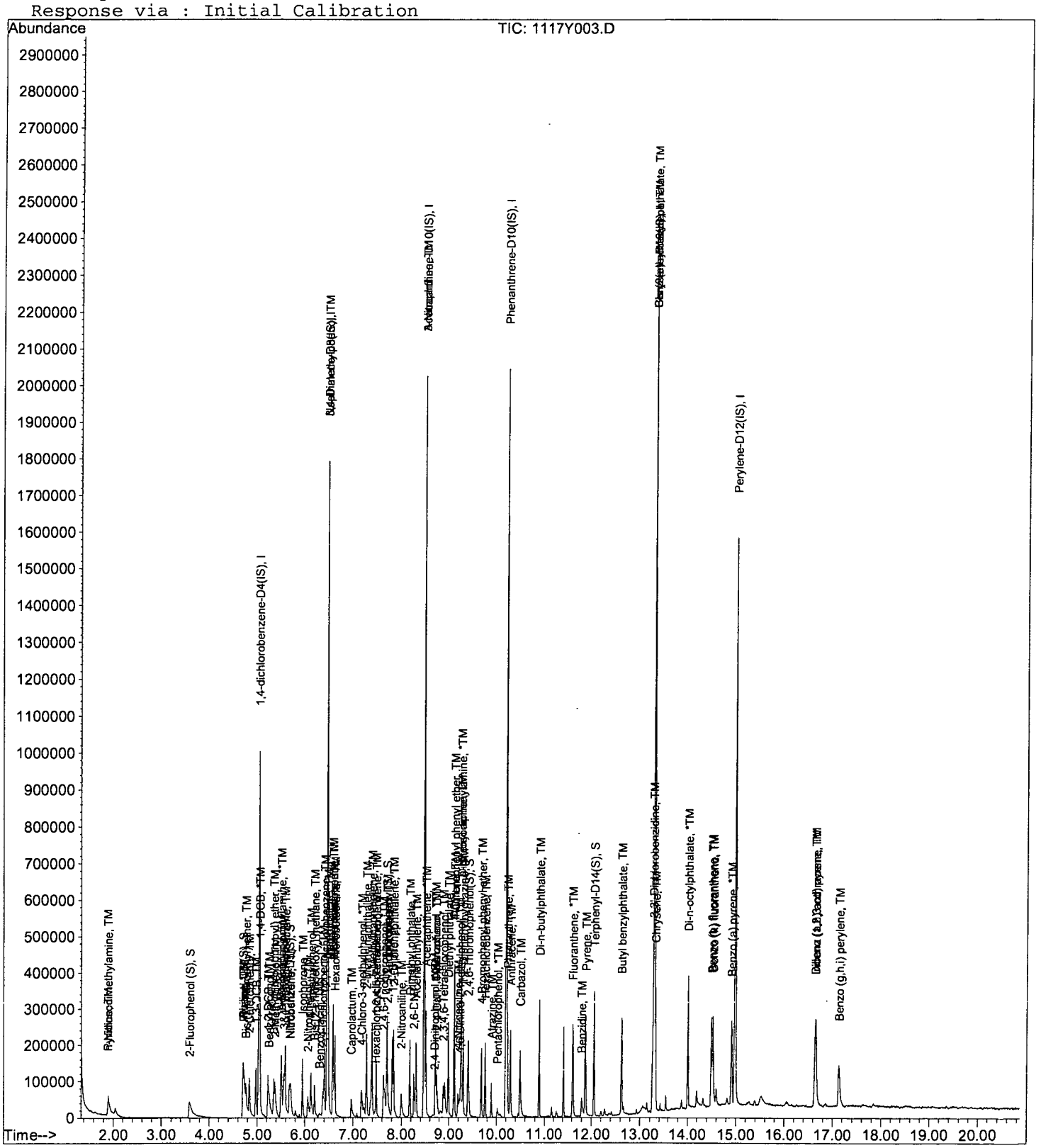
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y003.D Vial: 3
Acq On : 17 Nov 16 11:32 Operator: MA
Sample : 5ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:23:23 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y004.D Vial: 4
Acq On : 17 Nov 16 12:02 Operator: MA
Sample : 10ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:03:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	185154	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.46	136	822109	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.47	164	481361	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.20	188	875161	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.28	240	863627	40.00000 ppb		0.00
88) Perylene-D12(IS)	14.98	264	781590	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.57	112	115623	13.79919 ppb		0.03
Spiked Amount 200.000			Recovery =	6.900%		
5) Phenol-D6 (S)	4.69	99	172613	15.88629 ppb		0.01
Spiked Amount 200.000			Recovery =	7.943%		
21) Nitrobenzene-D5(S)	5.67	82	89823	8.84175 ppb		0.00
Spiked Amount 100.000			Recovery =	8.842%		
45) 2-Fluorobiphenyl(S)	7.69	172	166902	11.08106 ppb		0.00
Spiked Amount 100.000			Recovery =	11.081%		
63) 2,4,6-Tribromophenol(S)	9.40	330	49541	21.75003 ppb		0.00
Spiked Amount 200.000			Recovery =	10.875%		
81) Terphenyl-D14(S)	12.06	244	208667	10.84870 ppb		0.00
Spiked Amount 100.000			Recovery =	10.849%		
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.86	42	43035	7.86228 ppb		84
3) Pyridine	1.88	79	85516	7.68336 ppb		88
6) Phenol	4.70	94	93876	7.24922 ppb		88
7) Aniline	4.70	66	89655	7.40073 ppb		89
8) Bis (2-chloroethyl) ether	4.76	63	42089	7.12992 ppb		93
9) 2-Chlorophenol	4.83	128	76449	7.75715 ppb		95
10) 1,3-DCB	4.96	146	80941	7.49096 ppb		95
11) 1,4-DCB	5.05	146	81578	7.36593 ppb		97
12) Benzyl alcohol	5.23	108	36724	6.55888 ppb		98
13) 1,2-DCB	5.22	146	77247	7.54369 ppb		98
14) 2-Methylphenol	5.36	107	53916	7.04274 ppb		90
15) Bis (2-chloroisopropyl) et	5.35	45	89023	7.34069 ppb	#	89
16) Acetophenone	5.50	105	104901	7.46646 ppb		98
17) 3&4-Methylphenol	5.54	107	151141	15.18213 ppb		97
18) n-Nitrosodi-n-propylamine	5.49	70	52931	7.11639 ppb		98
19) Hexachloroethane	5.59	117	33644	7.46917 ppb		89
22) Nitrobenzene	5.69	77	88552	8.24395 ppb		97
23) Isophorone	5.95	82	144735	8.00476 ppb		97
24) 2-Nitrophenol	6.05	139	41430	7.94474 ppb		90
25) 2,4-Dimethylphenol	6.12	122	64613	8.12478 ppb		97
26) Benzoic acid	6.29	105	31117	11.63161 ppb		85
27) Bis (2-chloroethoxy) metha	6.20	93	75854	7.85007 ppb		97
28) 2,4-Dichlorophenol	6.36	162	62824	8.25541 ppb		97
29) 1,2,4-Trichlorobenzene	6.40	180	71311	8.45537 ppb		94
30) 3,4-Dimethylphenol	6.46	107	104096	8.26325 ppb		90
31) Naphthalene	6.48	128	217078	8.21117 ppb		98
32) 4-Chloroaniline	6.58	127	77605	8.45974 ppb		96
33) 2,6-Dichlorophenol	6.58	162	63356	8.63702 ppb		97
34) Hexachloropropene	6.58	213	53462	8.22074 ppb		97
35) Hexachlorobutadiene	6.62	225	44372	8.38355 ppb		96
36) Caprolactum	6.96	55	31361	7.55240 ppb		92
37) 4-Chloro-3-methylphenol	7.16	107	68532	7.71191 ppb		93

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y004.D Vial: 4
Acq On : 17 Nov 16 12:02 Operator: MA
Sample : 10ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:03:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38) 2-Methylnaphthalene	7.28	142	145777	8.19332	ppb		97
39) 1-Methylnaphthalene	7.39	142	137825	7.93496	ppb		95
41) Hexachlorocyclopentadiene	7.45	237	7259	9.14615	ppb	#	87
42) 1,2,4,5-Tetrachlorobenzene	7.47	216	66290	10.20647	ppb		98
43) 2,4,6-Trichlorophenol	7.63	196	43037	10.11270	ppb		95
44) 2,4,5-Trichlorophenol	7.70	196	44326	9.76091	ppb		94
46) 1,1'-Biphenyl	7.81	154	184829	10.01689	ppb	#	95
47) 2-Chloronaphthalene	7.83	162	145165	10.00616	ppb		96
48) 2-Nitroaniline	7.98	65	50918	9.82639	ppb		86
49) Dimethyl phthalate	8.18	163	176468	10.00424	ppb		98
50) 2,6-DNT	8.26	165	37246	9.32992	ppb		96
51) Acenaphthylene	8.31	152	226683	9.99259	ppb		98
52) 3-Nitroaniline	8.47	138	39392	9.52526	ppb	#	52
53) Acenaphthene	8.51	154	138001	9.90317	ppb		98
54) 2,4-Dinitrophenol	8.65	184	5483	10.16039	ppb	#	77
55) 4-Nitrophenol	8.74	65	4566	13.31663	ppb	#	4
56) Dibenzofuran	8.72	168	198937	9.80146	ppb		92
57) 2,4-DNT	8.73	165	53111	9.51036	ppb		91
58) 2,3,4,6-Tetrachlorophenol	8.88	232	35502	12.10025	ppb		93
59) Diethyl phthalate	8.98	149	181071	10.09551	ppb		99
60) 4-Chlorophenyl phenyl ethe	9.11	204	83495	10.54054	ppb		93
61) Fluorene	9.11	166	168575	10.26115	ppb		96
62) 4-Nitroaniline	9.18	138	40694	10.28304	ppb	#	79
65) 4,6-Dinitro-2-methylphenol	9.22	198	27272	9.23101	ppb		95
66) Diphenyl amine	9.25	169	246303	21.36861	ppb		98
67) n-Nitrosodiphenylamine	9.25	169	246303	21.36861	ppb		98
68) 1,2-Diphenylhydrazine	9.29	77	186489	9.94715	ppb		96
69) 4-Bromophenyl phenyl ether	9.68	248	46454	10.34767	ppb		91
70) Hexachlorobenzene	9.76	284	51564	10.90257	ppb	#	84
71) Atrazine	9.89	200	23339	4.88169	ppb	#	94
72) Pentachlorophenol	10.01	266	10205	15.84073	ppb		86
73) Phenanthrene	10.23	178	250811	10.70276	ppb		99
74) Anthracene	10.28	178	266091	10.81121	ppb		99
75) Carbazol	10.49	167	226586	10.40169	ppb		99
76) Di-n-butylphthalate	10.89	149	308919	10.54001	ppb		99
77) Fluoranthene	11.61	202	276700	10.68599	ppb		99
79) Benzidine	11.80	184	91034	9.85806	ppb		99
80) Pyrene	11.87	202	286211	9.99657	ppb		100
82) Butyl benzylphthalate	12.62	149	140130	9.86976	ppb		84
83) 3,3'-Dichlorobenzidine	13.25	252	91816	10.24115	ppb		95
84) Benz (a) anthracene	13.26	228	281961	10.45481	ppb		99
85) Bis (2-ethylhexyl) phthala	13.29	149	203887	10.17651	ppb	#	97
86) Chrysene	13.31	228	266760	10.14479	ppb		99
87) Di-n-octylphthalate	14.01	149	359854	10.29247	ppb		92
89) Benzo (b) fluoranthene	14.49	252	262768	11.38125	ppb		97
90) Benzo (k) fluoranthene	14.53	252	266245	12.83362	ppb	#	98
91) Benzo (a) pyrene	14.91	252	251923	12.17049	ppb		98
92) Indeno (1,2,3-cd) pyrene	16.63	276	297054	12.58320	ppb		98
93) Dibenz (a,h) anthracene	16.65	278	250820	12.56255	ppb		99
94) Benzo (g,h,i) perylene	17.13	276	243169	12.47613	ppb		97

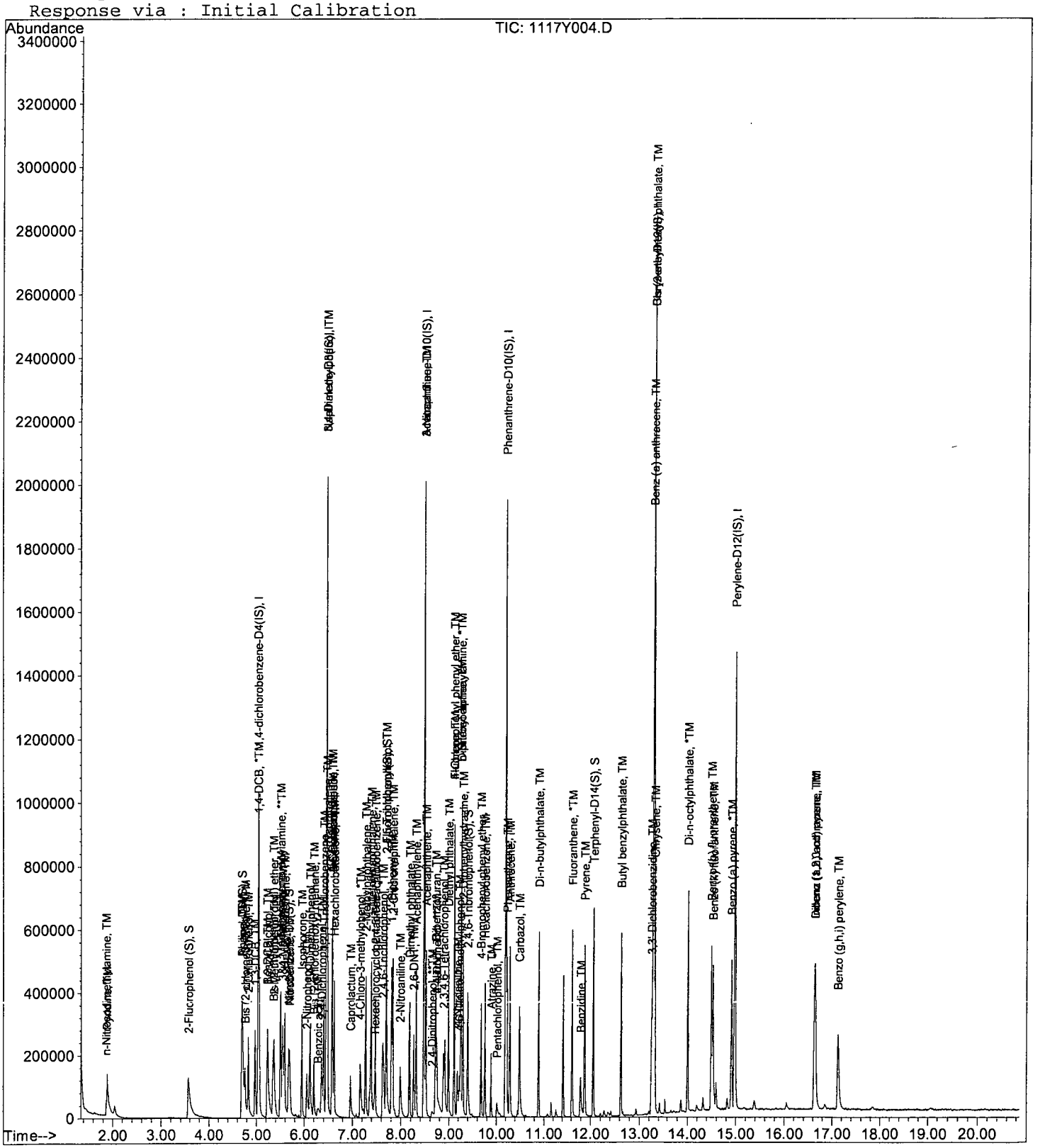
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y004.D Vial: 4
Acq On : 17 Nov 16 12:02 Operator: MA
Sample : 10ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:23:23 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y005.D Vial: 5
Acq On : 17 Nov 16 12:31 Operator: MA
Sample : 20ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:03:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	186808	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.46	136	805441	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.47	164	466214	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.20	188	881586	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.28	240	855940	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.98	264	778856	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.55	112	234571	27.74734 ppb	0.01
Spiked Amount 200.000			Recovery = 13.874%		
5) Phenol-D6 (S)	4.68	99	321881	29.36176 ppb	0.00
Spiked Amount 200.000			Recovery = 14.681%		
21) Nitrobenzene-D5(S)	5.67	82	169685	17.04864 ppb	0.00
Spiked Amount 100.000			Recovery = 17.049%		
45) 2-Fluorobiphenyl(S)	7.69	172	299927	20.55990 ppb	0.00
Spiked Amount 100.000			Recovery = 20.560%		
63) 2,4,6-Tribromophenol(S)	9.40	330	89455	40.54949 ppb	0.00
Spiked Amount 200.000			Recovery = 20.275%		
81) Terphenyl-D14(S)	12.06	244	384136	20.15078 ppb	0.00
Spiked Amount 100.000			Recovery = 20.151%		
Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.86	42	93342	16.90213 ppb	95
3) Pyridine	1.87	79	185625	16.53020 ppb	89
6) Phenol	4.70	94	184614	14.12989 ppb	79
7) Aniline	4.70	66	183002	14.97248 ppb	86
8) Bis (2-chloroethyl) ether	4.75	63	84706	14.22224 ppb	95
9) 2-Chlorophenol	4.83	128	142504	14.33162 ppb	91
10) 1,3-DCB	4.96	146	158480	14.53721 ppb	99
11) 1,4-DCB	5.05	146	159654	14.28802 ppb	95
12) Benzyl alcohol	5.22	108	79344	14.04532 ppb	93
13) 1,2-DCB	5.22	146	145187	14.05295 ppb	98
14) 2-Methylphenol	5.35	107	106252	13.75621 ppb	97
15) Bis (2-chloroisopropyl) et	5.35	45	166842	13.63570 ppb	95
16) Acetophenone	5.50	105	198516	14.00452 ppb	99
17) 3&4-Methylphenol	5.53	107	282311	28.10708 ppb	99
18) n-Nitrosodi-n-propylamine	5.49	70	104539	13.93046 ppb	99
19) Hexachloroethane	5.59	117	66112	14.54731 ppb	98
22) Nitrobenzene	5.69	77	167982	15.96231 ppb	97
23) Isophorone	5.95	82	277710	15.67697 ppb	98
24) 2-Nitrophenol	6.05	139	79188	15.49958 ppb	94
25) 2,4-Dimethylphenol	6.11	122	124623	15.99504 ppb	99
26) Benzoic acid	6.26	105	77046	19.99875 ppb	99
27) Bis (2-chloroethoxy) metha	6.20	93	148781	15.71585 ppb	99
28) 2,4-Dichlorophenol	6.35	162	121620	16.31225 ppb	95
29) 1,2,4-Trichlorobenzene	6.40	180	130621	15.80829 ppb	96
30) 3,4-Dimethylphenol	6.46	107	195130	15.81017 ppb	98
31) Naphthalene	6.49	128	417345	16.11314 ppb	99
32) 4-Chloroaniline	6.57	127	156564	17.42028 ppb	95
33) 2,6-Dichlorophenol	6.57	162	118484	16.48661 ppb	99
34) Hexachloropropene	6.58	213	104734	16.43801 ppb	97
35) Hexachlorobutadiene	6.62	225	86094	16.60305 ppb	94
36) Caprolactum	6.97	55	64421	15.83501 ppb	98
37) 4-Chloro-3-methylphenol	7.16	107	135905	15.60988 ppb	89

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y005.D Vial: 5
Acq On : 17 Nov 16 12:31 Operator: MA
Sample : 20ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:03:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.28	142	284227	16.30542	ppb		97
39)	1-Methylnaphthalene	7.39	142	270185	15.87720	ppb		95
41)	Hexachlorocyclopentadiene	7.45	237	27915	17.66565	ppb		98
42)	1,2,4,5-Tetrachlorobenzene	7.47	216	128526	20.43169	ppb		95
43)	2,4,6-Trichlorophenol	7.62	196	83695	20.30533	ppb		99
44)	2,4,5-Trichlorophenol	7.69	196	88724	20.17245	ppb		95
46)	1,1'-Biphenyl	7.81	154	357632	20.01174	ppb	#	97
47)	2-Chloronaphthalene	7.83	162	273307	19.45100	ppb		97
48)	2-Nitroaniline	7.98	65	99623	19.85034	ppb		97
49)	Dimethyl phthalate	8.18	163	345482	20.22224	ppb		99
50)	2,6-DNT	8.26	165	76926	19.89559	ppb		89
51)	Acenaphthylene	8.31	152	439881	20.02073	ppb		99
52)	3-Nitroaniline	8.46	138	77411	19.32668	ppb	#	79
53)	Acenaphthene	8.51	154	272781	20.21118	ppb		98
54)	2,4-Dinitrophenol	8.62	184	27527	23.31233	ppb		87
55)	4-Nitrophenol	8.74	65	53144	25.71548	ppb		84
56)	Dibenzofuran	8.72	168	386865	19.67978	ppb		92
57)	2,4-DNT	8.73	165	106929	19.76940	ppb		83
58)	2,3,4,6-Tetrachlorophenol	8.88	232	68474	21.32398	ppb		97
59)	Diethyl phthalate	8.98	149	349765	20.13452	ppb		98
60)	4-Chlorophenyl phenyl ethe	9.11	204	154935	20.19471	ppb		94
61)	Fluorene	9.11	166	312299	19.62722	ppb		100
62)	4-Nitroaniline	9.17	138	79884	20.84187	ppb		93
65)	4,6-Dinitro-2-methylphenol	9.22	198	58308	19.59222	ppb		81
66)	Diphenyl amine	9.25	169	471888	40.64141	ppb		98
67)	n-Nitrosodiphenylamine	9.25	169	471888	40.64141	ppb		98
68)	1,2-Diphenylhydrazine	9.29	77	356315	18.86700	ppb		92
69)	4-Bromophenyl phenyl ether	9.68	248	91166	20.15932	ppb		91
70)	Hexachlorobenzene	9.75	284	95977	20.14526	ppb	#	83
71)	Atrazine	9.88	200	48880	10.14946	ppb		93
72)	Pentachlorophenol	10.01	266	20289	21.37277	ppb		96
73)	Phenanthrene	10.23	178	484457	20.52237	ppb		99
74)	Anthracene	10.28	178	495624	19.99032	ppb		99
75)	Carbazol	10.49	167	438345	19.97608	ppb		98
76)	Di-n-butylphthalate	10.89	149	600610	20.34288	ppb		98
77)	Fluoranthene	11.61	202	528222	20.25095	ppb		98
79)	Benzidine	11.79	184	188771	20.62557	ppb		97
80)	Pyrene	11.87	202	551797	19.44585	ppb		99
82)	Butyl benzylphthalate	12.63	149	280605	19.94131	ppb		89
83)	3,3'-Dichlorobenzidine	13.25	252	180461	20.30937	ppb		95
84)	Benz (a) anthracene	13.27	228	525577	19.66285	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.29	149	388901	19.58535	ppb	#	98
86)	Chrysene	13.31	228	508358	19.50629	ppb		98
87)	Di-n-octylphthalate	14.01	149	684072	19.74139	ppb		94
89)	Benzo (b) fluoranthene	14.49	252	517242	22.48191	ppb		97
90)	Benzo (k) fluoranthene	14.53	252	517784	25.04599	ppb		99
91)	Benzo (a) pyrene	14.91	252	497474	24.11752	ppb		98
92)	Indeno (1,2,3-cd) pyrene	16.63	276	563885	23.97001	ppb		96
93)	Dibenz (a,h) anthracene	16.65	278	472599	23.75364	ppb		98
94)	Benzo (g,h,i) perylene	17.13	276	480397	24.73397	ppb		97

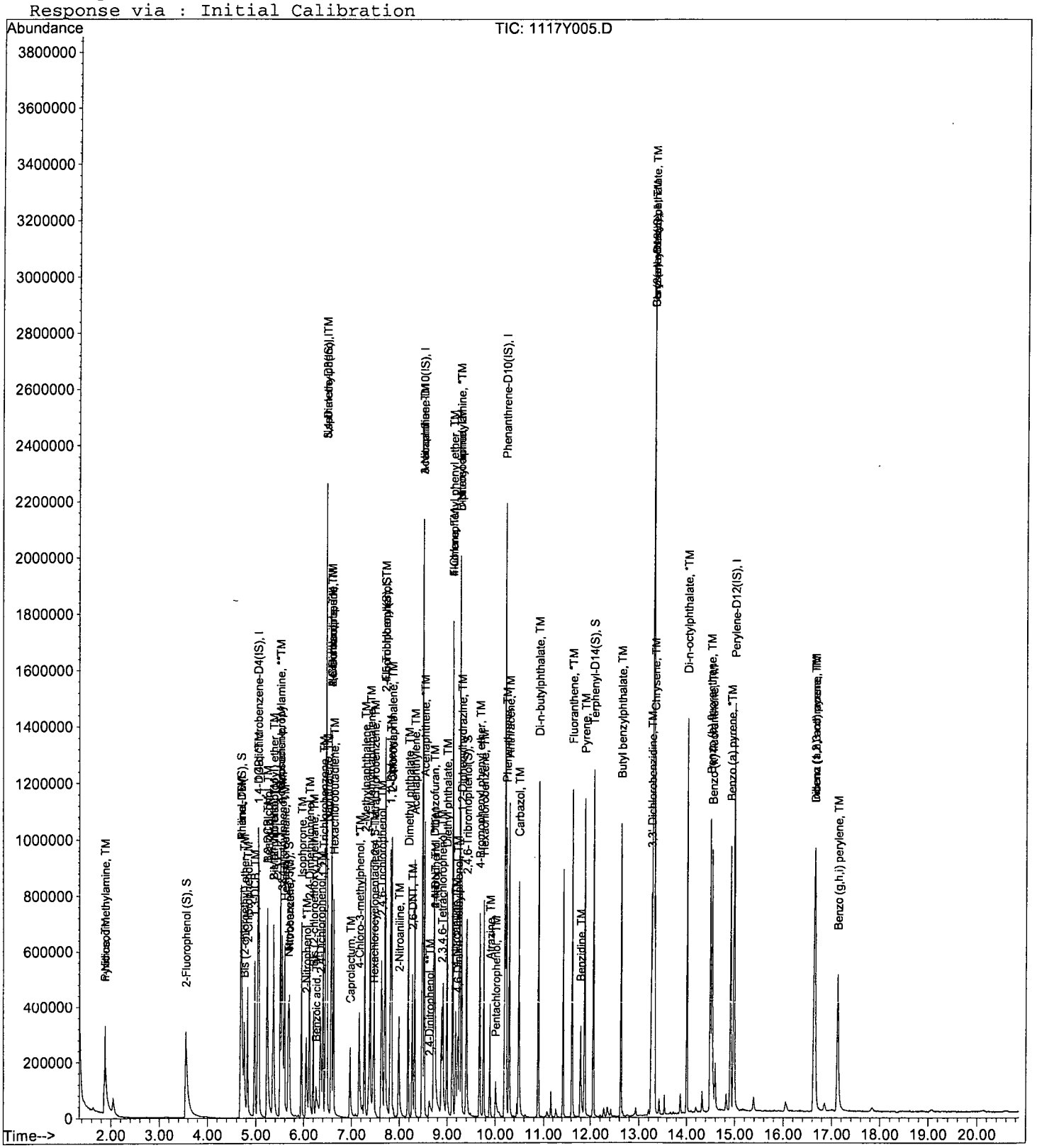
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y005.D Vial: 5
Acq On : 17 Nov 16 12:31 Operator: MA
Sample : 20ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:23:23 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y006.D Vial: 6
Acq On : 17 Nov 16 13:00 Operator: MA
Sample : 40ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:03:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	182920	40.00000	ppb		0.00
20) Napthalene-D8(IS)	6.46	136	799601	40.00000	ppb		0.00
40) Acenaphthene-D10(IS)	8.47	164	471497	40.00000	ppb		0.00
64) Phenanthrene-D10(IS)	10.20	188	857196	40.00000	ppb		0.00
78) Chrysene-D12(IS)	13.28	240	827115	40.00000	ppb		0.00
88) Perylene-D12(IS)	14.98	264	775756	40.00000	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol (S)	3.54	112	489327	59.11266	ppb		0.00
Spiked Amount 200.000			Recovery = 29.557%				
5) Phenol-D6 (S)	4.68	99	643202	59.91953	ppb		0.00
Spiked Amount 200.000			Recovery = 29.960%				
21) Nitrobenzene-D5(S)	5.67	82	325882	32.98125	ppb		0.00
Spiked Amount 100.000			Recovery = 32.981%				
45) 2-Fluorobiphenyl(S)	7.69	172	584742	39.63474	ppb		0.00
Spiked Amount 100.000			Recovery = 39.635%				
63) 2,4,6-Tribromophenol(S)	9.40	330	179721	80.55378	ppb		0.00
Spiked Amount 200.000			Recovery = 40.277%				
81) Terphenyl-D14(S)	12.06	244	738732	40.10248	ppb		0.00
Spiked Amount 100.000			Recovery = 40.102%				
Target Compounds							Qvalue
2) n-Nitrosodimethylamine	1.85	42	171667	31.74575	ppb		98
3) Pyridine	1.87	79	371406	33.77730	ppb		87
6) Phenol	4.69	94	367596	28.73289	ppb		96
7) Aniline	4.69	66	369124	30.84213	ppb		99
8) Bis (2-chloroethyl) ether	4.75	63	168115	28.82667	ppb		94
9) 2-Chlorophenol	4.82	128	283409	29.10825	ppb		96
10) 1,3-DCB	4.96	146	305742	28.64152	ppb		100
11) 1,4-DCB	5.05	146	317670	29.03373	ppb		95
12) Benzyl alcohol	5.21	108	162789	29.42910	ppb		94
13) 1,2-DCB	5.22	146	292026	28.86659	ppb		98
14) 2-Methylphenol	5.35	107	212274	28.06679	ppb		98
15) Bis (2-chloroisopropyl) et	5.34	45	323912	27.03543	ppb		97
16) Acetophenone	5.49	105	402204	28.97700	ppb		94
17) 3&4-Methylphenol	5.53	107	562583	57.20169	ppb		99
18) n-Nitrosodi-n-propylamine	5.50	70	203201	27.65332	ppb		98
19) Hexachloroethane	5.59	117	130351	29.29214	ppb		90
22) Nitrobenzene	5.69	77	341457	32.68355	ppb		99
23) Isophorone	5.95	82	558780	31.77399	ppb		95
24) 2-Nitrophenol	6.04	139	163133	32.16347	ppb	#	81
25) 2,4-Dimethylphenol	6.11	122	247045	31.93917	ppb		99
26) Benzoic acid	6.28	105	187229	37.43946	ppb		92
27) Bis (2-chloroethoxy) metha	6.20	93	295592	31.45166	ppb		99
28) 2,4-Dichlorophenol	6.34	162	240696	32.51908	ppb		99
29) 1,2,4-Trichlorobenzene	6.40	180	266693	32.51201	ppb		99
30) 3,4-Dimethylphenol	6.45	107	396588	32.36774	ppb		99
31) Naphthalene	6.49	128	827320	32.17503	ppb		98
32) 4-Chloroaniline	6.57	127	313519	35.13884	ppb		99
33) 2,6-Dichlorophenol	6.57	162	232199	32.54561	ppb		97
34) Hexachloropropene	6.58	213	212849	33.65066	ppb		97
35) Hexachlorobutadiene	6.62	225	169930	33.00999	ppb		95
36) Caprolactum	6.99	55	125478	31.06839	ppb		98
37) 4-Chloro-3-methylphenol	7.15	107	277582	32.11558	ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y006.D Vial: 6
Acq On : 17 Nov 16 13:00 Operator: MA
Sample : 40ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:03:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

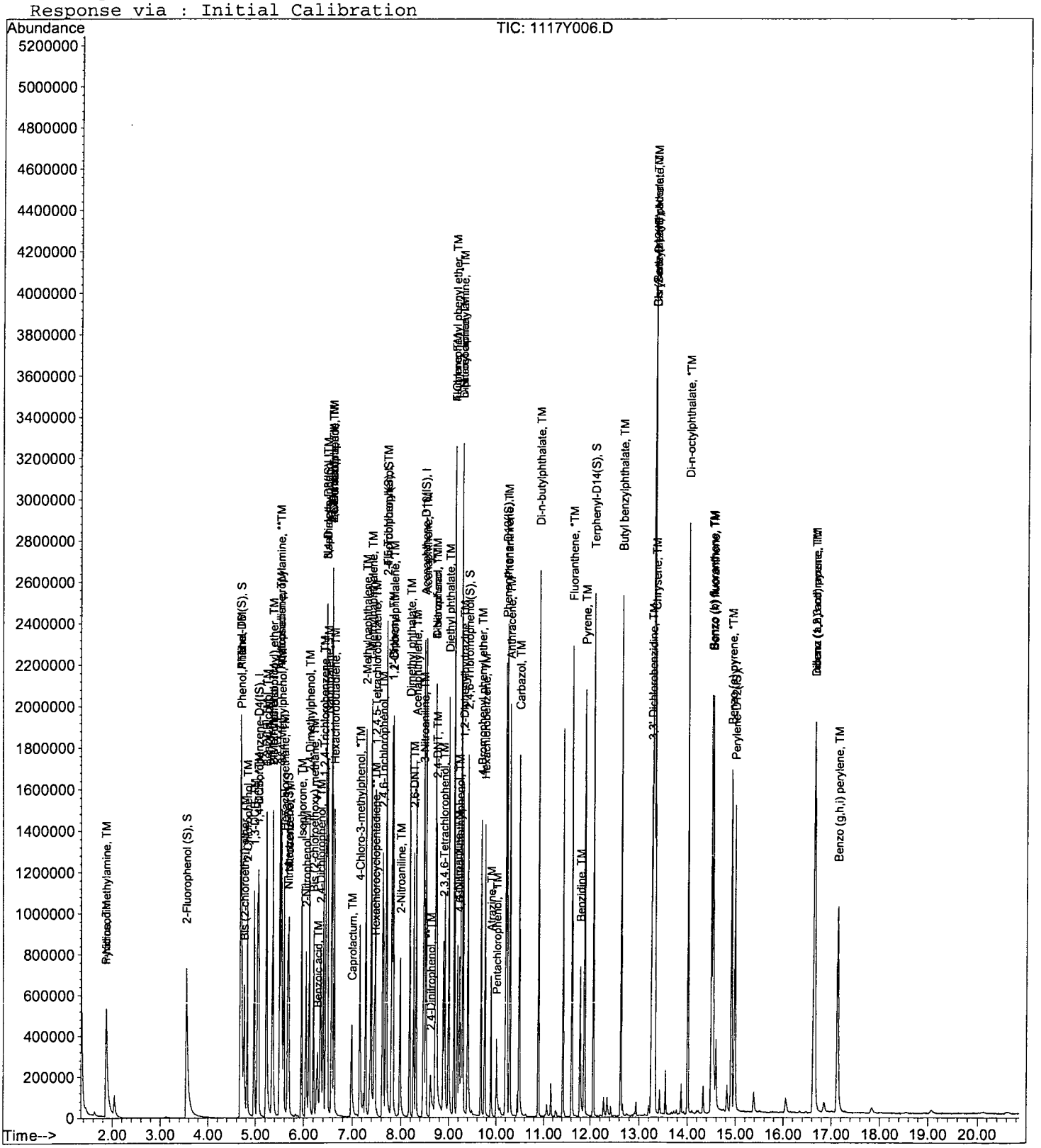
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	2-Methylnaphthalene	7.28	142	559401	32.32588 ppb		99
39)	1-Methylnaphthalene	7.39	142	547044	32.38138 ppb		99
41)	Hexachlorocyclopentadiene	7.45	237	89800	38.46180 ppb		95
42)	1,2,4,5-Tetrachlorobenzene	7.47	216	255571	40.17271 ppb		99
43)	2,4,6-Trichlorophenol	7.62	196	170380	40.87291 ppb		99
44)	2,4,5-Trichlorophenol	7.68	196	175659	39.49066 ppb		98
46)	1,1'-Biphenyl	7.81	154	723037	40.00510 ppb		99
47)	2-Chloronaphthalene	7.83	162	562260	39.56714 ppb		97
48)	2-Nitroaniline	7.97	65	203038	40.00296 ppb		82
49)	Dimethyl phthalate	8.18	163	672349	38.91391 ppb		99
50)	2,6-DNT	8.26	165	152051	38.88475 ppb		95
51)	Acenaphthylene	8.31	152	871568	39.22405 ppb		99
52)	3-Nitroaniline	8.45	138	166055	40.99330 ppb		83
53)	Acenaphthene	8.51	154	531893	38.96801 ppb		98
54)	2,4-Dinitrophenol	8.61	184	74069	44.79952 ppb		95
55)	4-Nitrophenol	8.72	65	129227	44.62260 ppb		94
56)	Dibenzofuran	8.71	168	785919	39.53164 ppb		94
57)	2,4-DNT	8.73	165	215731	39.43818 ppb		92
58)	2,3,4,6-Tetrachlorophenol	8.88	232	134037	38.65745 ppb		97
59)	Diethyl phthalate	8.99	149	701587	39.93492 ppb		99
60)	4-Chlorophenyl phenyl ethe	9.11	204	307329	39.60937 ppb		95
61)	Fluorene	9.11	166	622270	38.66994 ppb		99
62)	4-Nitroaniline	9.18	138	149377	38.53602 ppb		92
65)	4,6-Dinitro-2-methylphenol	9.22	198	129630	44.79665 ppb		91
66)	Diphenyl amine	9.26	169	937261	83.01851 ppb		99
67)	n-Nitrosodiphenylamine	9.26	169	937261	83.01851 ppb		99
68)	1,2-Diphenylhydrazine	9.30	77	705458	38.41708 ppb		95
69)	4-Bromophenyl phenyl ether	9.68	248	185079	42.09055 ppb		95
70)	Hexachlorobenzene	9.76	284	194123	41.90514 ppb		98
71)	Atrazine	9.89	200	97002	20.71462 ppb		99
72)	Pentachlorophenol	10.01	266	58149	41.55046 ppb		93
73)	Phenanthrene	10.23	178	949598	41.37106 ppb		100
74)	Anthracene	10.28	178	992145	41.15543 ppb		99
75)	Carbazol	10.49	167	874240	40.97411 ppb		100
76)	Di-n-butylphthalate	10.89	149	1196594	41.68226 ppb		99
77)	Fluoranthene	11.61	202	1046675	41.26913 ppb		99
79)	Benzidine	11.79	184	384636	43.49087 ppb		98
80)	Pyrene	11.88	202	1100278	40.12615 ppb		99
82)	Butyl benzylphthalate	12.63	149	558340	41.06147 ppb		99
83)	3,3'-Dichlorobenzidine	13.25	252	346782	40.38751 ppb		98
84)	Benz (a) anthracene	13.27	228	1045755	40.48718 ppb		100
85)	Bis (2-ethylhexyl) phthala	13.29	149	790052	41.17421 ppb		99
86)	Chrysene	13.32	228	1024348	40.67523 ppb		99
87)	Di-n-octylphthalate	14.01	149	1347084	40.22982 ppb		98
89)	Benzo (b) fluoranthene	14.50	252	995876	43.45869 ppb		99
90)	Benzo (k) fluoranthene	14.53	252	1050014	50.99371 ppb	#	98
91)	Benzo (a) pyrene	14.91	252	991743	48.27179 ppb	#	97
92)	Indeno (1,2,3-cd) pyrene	16.64	276	1128982	48.18332 ppb		99
93)	Dibenz (a,h) anthracene	16.65	278	962401	48.56523 ppb		95
94)	Benzo (g,h,i) perylene	17.13	276	943136	48.75283 ppb		99

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y161117\1117Y006.D Vial: 6
Acq On : 17 Nov 16 13:00 Operator: MA
Sample : 40ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:23:23 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y007.D Vial: 7
Acq On : 17 Nov 16 13:29 Operator: MA
Sample : 50ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:03:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	181943	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.46	136	778154	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.47	164	463295	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.20	188	862854	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.29	240	815722	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.98	264	770325	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.54	112	618430	75.10999 ppb	0.00
Spiked Amount 200.000			Recovery =	37.555%	
5) Phenol-D6 (S)	4.68	99	813183	76.16144 ppb	0.00
Spiked Amount 200.000			Recovery =	38.081%	
21) Nitrobenzene-D5(S)	5.67	82	413217	42.97271 ppb	0.00
Spiked Amount 100.000			Recovery =	42.973%	
45) 2-Fluorobiphenyl(S)	7.69	172	744145	51.33229 ppb	0.00
Spiked Amount 100.000			Recovery =	51.332%	
63) 2,4,6-Tribromophenol(S)	9.40	330	229822	104.83349 ppb	0.00
Spiked Amount 200.000			Recovery =	52.417%	
81) Terphenyl-D14(S)	12.06	244	928859	51.12789 ppb	0.00
Spiked Amount 100.000			Recovery =	51.128%	
Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.85	42	216155	40.18739 ppb	100
3) Pyridine	1.86	79	497169	45.45753 ppb	100
6) Phenol	4.69	94	464369	36.49199 ppb	100
7) Aniline	4.69	66	464226	38.99666 ppb	100
8) Bis (2-chloroethyl) ether	4.75	63	216148	37.26190 ppb	100
9) 2-Chlorophenol	4.82	128	347178	35.84929 ppb	100
10) 1,3-DCB	4.96	146	388921	36.62926 ppb	100
11) 1,4-DCB	5.06	146	392126	36.03115 ppb	100
12) Benzyl alcohol	5.21	108	201704	36.65999 ppb	100
13) 1,2-DCB	5.22	146	366617	36.43446 ppb	100
14) 2-Methylphenol	5.35	107	271756	36.12443 ppb	100
15) Bis (2-chloroisopropyl) et	5.34	45	407085	34.15995 ppb	100
16) Acetophenone	5.50	105	510953	37.00956 ppb	100
17) 3&4-Methylphenol	5.53	107	713751	72.96168 ppb	100
18) n-Nitrosodi-n-propylamine	5.50	70	257477	35.22782 ppb	100
19) Hexachloroethane	5.59	117	162886	36.79987 ppb	100
22) Nitrobenzene	5.69	77	426963	41.99439 ppb	100
23) Isophorone	5.96	82	712673	41.64175 ppb	100
24) 2-Nitrophenol	6.05	139	205718	41.67745 ppb	100
25) 2,4-Dimethylphenol	6.11	122	315229	41.87757 ppb	100
26) Benzoic acid	6.29	105	249982	47.09062 ppb	100
27) Bis (2-chloroethoxy) metha	6.20	93	378139	41.34378 ppb	100
28) 2,4-Dichlorophenol	6.34	162	302250	41.96077 ppb	100
29) 1,2,4-Trichlorobenzene	6.40	180	339275	42.50028 ppb	100
30) 3,4-Dimethylphenol	6.45	107	496951	41.67678 ppb	100
31) Naphthalene	6.49	128	1026450	41.01956 ppb	100
32) 4-Chloroaniline	6.57	127	389058	44.80698 ppb	100
33) 2,6-Dichlorophenol	6.57	162	295647	42.58075 ppb	100
34) Hexachloropropene	6.58	213	269357	43.75805 ppb	100
35) Hexachlorobutadiene	6.63	225	212704	42.45792 ppb	100
36) Caprolactum	7.00	55	159271	40.52245 ppb	100
37) 4-Chloro-3-methylphenol	7.15	107	351811	41.82555 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y007.D Vial: 7
Acq On : 17 Nov 16 13:29 Operator: MA
Sample : 50ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:03:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

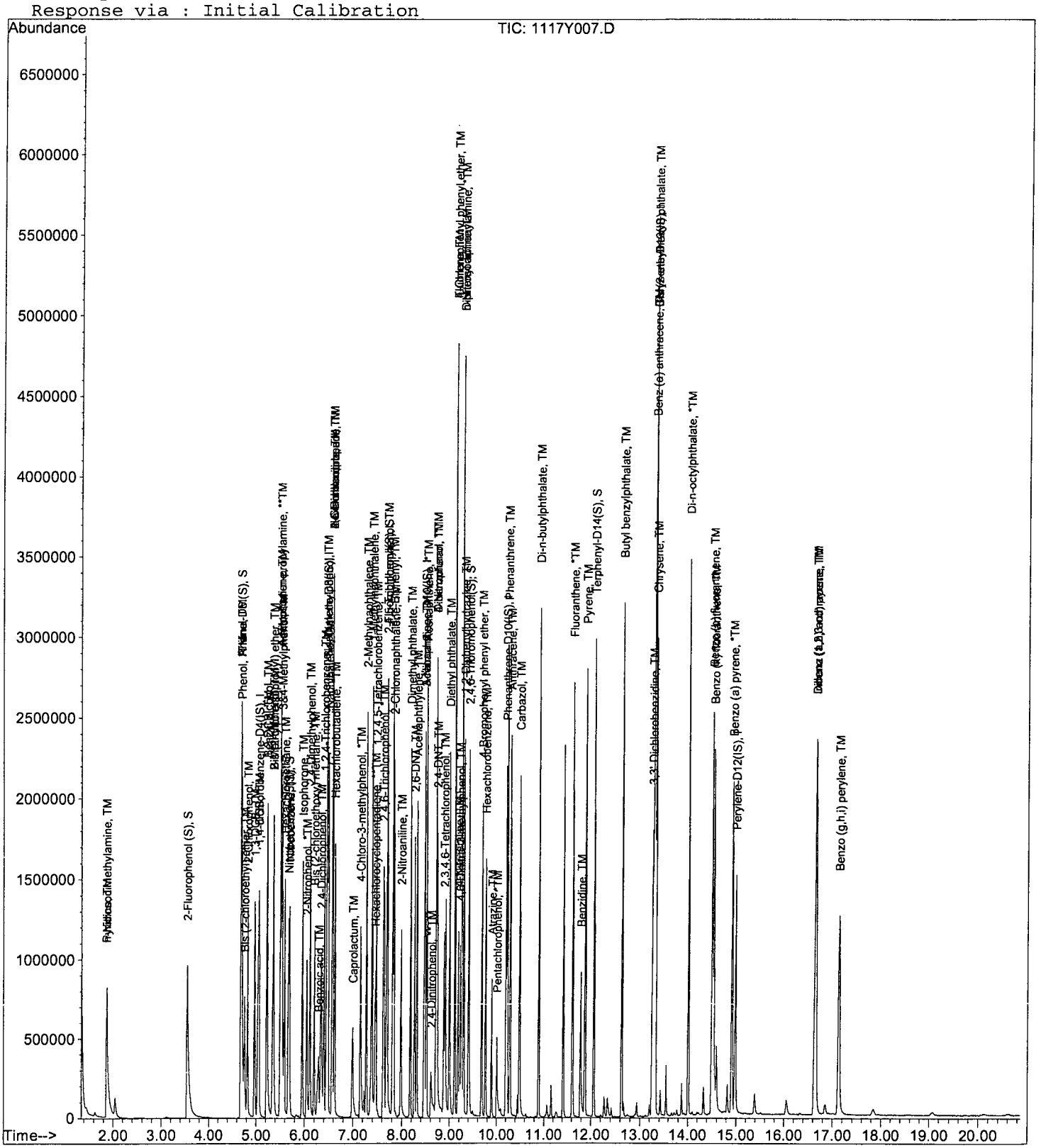
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38)	2-Methylnaphthalene	7.28	142	696045	41.33064	ppb	100
39)	1-Methylnaphthalene	7.39	142	677368	41.20079	ppb	100
41)	Hexachlorocyclopentadiene	7.45	237	125106	49.24610	ppb	100
42)	1,2,4,5-Tetrachlorobenzene	7.47	216	312985	50.06848	ppb	100
43)	2,4,6-Trichlorophenol	7.62	196	214891	52.46341	ppb	100
44)	2,4,5-Trichlorophenol	7.68	196	222710	50.95479	ppb	100
46)	1,1'-Biphenyl	7.81	154	890153	50.12343	ppb	100
47)	2-Chloronaphthalene	7.83	162	697990	49.98826	ppb	100
48)	2-Nitroaniline	7.98	65	253755	50.88042	ppb	100
49)	Dimethyl phthalate	8.18	163	848219	49.96196	ppb	100
50)	2,6-DNT	8.26	165	196067	51.02886	ppb	100
51)	Acenaphthylene	8.32	152	1097193	50.25224	ppb	100
52)	3-Nitroaniline	8.46	138	207701	52.18201	ppb	100
53)	Acenaphthene	8.51	154	666149	49.66800	ppb	100
54)	2,4-Dinitrophenol	8.61	184	86865	50.53357	ppb	100
55)	4-Nitrophenol	8.72	65	163056	53.78218	ppb	100
56)	Dibenzofuran	8.71	168	975560	49.93929	ppb	100
57)	2,4-DNT	8.73	165	273072	50.80458	ppb	100
58)	2,3,4,6-Tetrachlorophenol	8.88	232	174221	50.23368	ppb	100
59)	Diethyl phthalate	8.99	149	873862	50.62155	ppb	100
60)	4-Chlorophenyl phenyl ethe	9.11	204	384584	50.44370	ppb	100
61)	Fluorene	9.11	166	784486	49.61365	ppb	100
62)	4-Nitroaniline	9.18	138	185067	48.58850	ppb	100
65)	4,6-Dinitro-2-methylphenol	9.22	198	170321	58.47241	ppb	100
66)	Diphenyl amine	9.26	169	1168598	102.83060	ppb	100
67)	n-Nitrosodiphenylamine	9.26	169	1168598	102.83060	ppb	100
68)	1,2-Diphenylhydrazine	9.30	77	1067009	57.72503	ppb	100
69)	4-Bromophenyl phenyl ether	9.68	248	232342	52.49259	ppb	100
70)	Hexachlorobenzene	9.76	284	244690	52.47462	ppb	100
71)	Atrazine	9.89	200	122547	25.99810	ppb	100
72)	Pentachlorophenol	10.00	266	80566	52.08769	ppb	100
73)	Phenanthrene	10.23	178	1191263	51.55934	ppb	100
74)	Anthracene	10.29	178	1258645	51.86783	ppb	100
75)	Carbazol	10.49	167	1093880	50.93207	ppb	100
76)	Di-n-butylphthalate	10.89	149	1488154	51.49856	ppb	100
77)	Fluoranthene	11.61	202	1321409	51.75991	ppb	100
79)	Benzidine	11.79	184	486917	55.82475	ppb	100
80)	Pyrene	11.88	202	1392284	51.48451	ppb	100
82)	Butyl benzylphthalate	12.63	149	702283	52.36868	ppb	100
83)	3,3'-Dichlorobenzidine	13.24	252	429687	50.74187	ppb	100
84)	Benz (a) anthracene	13.27	228	1313858	51.57743	ppb	100
85)	Bis (2-ethylhexyl) phthala	13.29	149	985933	52.10036	ppb	100
86)	Chrysene	13.32	228	1281161	51.58340	ppb	100
87)	Di-n-octylphthalate	14.01	149	1707218	51.69710	ppb	100
89)	Benzo (b) fluoranthene	14.50	252	1415938	62.22526	ppb	100
90)	Benzo (k) fluoranthene	14.53	252	1164096	56.93266	ppb	100
91)	Benzo (a) pyrene	14.92	252	1232001	60.38881	ppb	100
92)	Indeno (1,2,3-cd) pyrene	16.64	276	1426210	61.29772	ppb	100
93)	Dibenz (a,h) anthracene	16.66	278	1197308	60.84521	ppb	100
94)	Benzo (g,h,i) perylene	17.13	276	1188963	61.89349	ppb	100

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y161117\1117Y007.D Vial: 7
Acq On : 17 Nov 16 13:29 Operator: MA
Sample : 50ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:23:23 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y008.D Vial: 8
Acq On : 17 Nov 16 13:59 Operator: MA
Sample : 60ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:03:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	186866	40.00000	ppb		0.00
20) Napthalene-D8(IS)	6.46	136	805709	40.00000	ppb		0.00
40) Acenaphthene-D10(IS)	8.47	164	477826	40.00000	ppb		0.00
64) Phenanthrene-D10(IS)	10.20	188	888712	40.00000	ppb		0.00
78) Chrysene-D12(IS)	13.29	240	837026	40.00000	ppb		0.00
88) Perylene-D12(IS)	14.98	264	783819	40.00000	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol (S)	3.54	112	735510	86.97628	ppb		0.00
Spiked Amount 200.000			Recovery = 43.488%				
5) Phenol-D6 (S)	4.68	99	958103	87.37035	ppb		0.00
Spiked Amount 200.000			Recovery = 43.685%				
21) Nitrobenzene-D5(S)	5.67	82	482547	48.46648	ppb		0.00
Spiked Amount 100.000			Recovery = 48.466%				
45) 2-Fluorobiphenyl(S)	7.69	172	871894	58.31558	ppb		0.00
Spiked Amount 100.000			Recovery = 58.316%				
63) 2,4,6-Tribromophenol(S)	9.40	330	273874	121.12871	ppb		0.00
Spiked Amount 200.000			Recovery = 60.565%				
81) Terphenyl-D14(S)	12.06	244	1089245	58.43013	ppb		0.00
Spiked Amount 100.000			Recovery = 58.430%				
Target Compounds							Qvalue
2) n-Nitrosodimethylamine	1.85	42	254946	46.15065	ppb		97
3) Pyridine	1.86	79	609331	54.24505	ppb		91
6) Phenol	4.70	94	552567	42.27897	ppb		97
7) Aniline	4.69	66	568762	46.51935	ppb		96
8) Bis (2-chloroethyl) ether	4.75	63	254311	42.68586	ppb		93
9) 2-Chlorophenol	4.82	128	427298	42.96000	ppb		99
10) 1,3-DCB	4.96	146	459257	42.11411	ppb		98
11) 1,4-DCB	5.06	146	470815	42.12189	ppb		98
12) Benzyl alcohol	5.22	108	244400	43.24979	ppb		91
13) 1,2-DCB	5.22	146	435654	42.15475	ppb		100
14) 2-Methylphenol	5.35	107	328296	42.49057	ppb		98
15) Bis (2-chloroisopropyl) et	5.35	45	486534	39.75122	ppb		96
16) Acetophenone	5.50	105	606524	42.77460	ppb		99
17) 3&4-Methylphenol	5.53	107	862404	85.83491	ppb		98
18) n-Nitrosodi-n-propylamine	5.50	70	309969	41.29245	ppb		93
19) Hexachloroethane	5.59	117	197001	43.33473	ppb		97
22) Nitrobenzene	5.69	77	512125	48.64793	ppb		97
23) Isophorone	5.96	82	844597	47.66236	ppb		98
24) 2-Nitrophenol	6.04	139	246827	48.29574	ppb	#	82
25) 2,4-Dimethylphenol	6.11	122	373486	47.92002	ppb		98
26) Benzoic acid	6.30	105	303410	52.82971	ppb		99
27) Bis (2-chloroethoxy) metha	6.20	93	441550	46.62576	ppb		100
28) 2,4-Dichlorophenol	6.34	162	369799	49.58271	ppb		98
29) 1,2,4-Trichlorobenzene	6.40	180	399963	48.38905	ppb		98
30) 3,4-Dimethylphenol	6.45	107	601030	48.68151	ppb		100
31) Naphthalene	6.49	128	1248556	48.18908	ppb		99
32) 4-Chloroaniline	6.57	127	460313	51.20023	ppb		98
33) 2,6-Dichlorophenol	6.57	162	347254	48.30303	ppb		99
34) Hexachloropropene	6.58	213	329921	51.76390	ppb		96
35) Hexachlorobutadiene	6.63	225	254211	49.00775	ppb		98
36) Caprolactum	7.00	55	192288	47.24964	ppb		96
37) 4-Chloro-3-methylphenol	7.15	107	430421	49.42117	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y008.D Vial: 8
Acq On : 17 Nov 16 13:59 Operator: MA
Sample : 60ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:03:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.28	142	843672	48.38334	ppb		98
39)	1-Methylnaphthalene	7.39	142	811794	47.68854	ppb		98
41)	Hexachlorocyclopentadiene	7.45	237	168291	59.38046	ppb		97
42)	1,2,4,5-Tetrachlorobenzene	7.47	216	382146	59.27316	ppb		99
43)	2,4,6-Trichlorophenol	7.62	196	257604	60.97878	ppb		98
44)	2,4,5-Trichlorophenol	7.68	196	272433	60.43560	ppb		98
46)	1,1'-Biphenyl	7.81	154	1071723	58.51221	ppb		99
47)	2-Chloronaphthalene	7.83	162	845644	58.72111	ppb		97
48)	2-Nitroaniline	7.98	65	305489	59.39084	ppb		98
49)	Dimethyl phthalate	8.18	163	1027561	58.68497	ppb		99
50)	2,6-DNT	8.26	165	235563	59.44376	ppb		94
51)	Acenaphthylene	8.31	152	1285124	57.06966	ppb		98
52)	3-Nitroaniline	8.46	138	243169	59.23498	ppb		97
53)	Acenaphthene	8.51	154	806703	58.31857	ppb		99
54)	2,4-Dinitrophenol	8.60	184	127764	64.23896	ppb		92
55)	4-Nitrophenol	8.72	65	204441	62.68770	ppb		99
56)	Dibenzofuran	8.72	168	1178060	58.47142	ppb		97
57)	2,4-DNT	8.73	165	327460	59.07065	ppb		98
58)	2,3,4,6-Tetrachlorophenol	8.88	232	209402	58.07892	ppb		95
59)	Diethyl phthalate	9.00	149	1065086	59.82257	ppb		95
60)	4-Chlorophenyl phenyl ethe	9.11	204	467459	59.44935	ppb		98
61)	Fluorene	9.11	166	952692	58.41929	ppb		98
62)	4-Nitroaniline	9.18	138	224758	57.21468	ppb		94
65)	4,6-Dinitro-2-methylphenol	9.23	198	199515	66.50199	ppb	#	73
66)	Diphenyl amine	9.26	169	1387160	118.51138	ppb		99
67)	n-Nitrosodiphenylamine	9.26	169	1387160	118.51138	ppb		99
68)	1,2-Diphenylhydrazine	9.30	77	1275971	67.02134	ppb		99
69)	4-Bromophenyl phenyl ether	9.68	248	276970	60.75462	ppb		97
70)	Hexachlorobenzene	9.76	284	294248	61.26647	ppb		98
71)	Atrazine	9.89	200	143923	29.64459	ppb		97
72)	Pentachlorophenol	10.01	266	96171	57.95150	ppb		100
73)	Phenanthrene	10.23	178	1431666	60.16136	ppb		99
74)	Anthracene	10.29	178	1513959	60.57385	ppb		99
75)	Carbazol	10.49	167	1326110	59.94838	ppb		100
76)	Di-n-butylphthalate	10.89	149	1814107	60.95178	ppb		100
77)	Fluoranthene	11.61	202	1590817	60.49964	ppb		100
79)	Benzidine	11.79	184	585939	65.46776	ppb		99
80)	Pyrene	11.88	202	1663029	59.93104	ppb		99
82)	Butyl benzylphthalate	12.63	149	843860	61.32437	ppb		96
83)	3,3'-Dichlorobenzidine	13.25	252	521291	59.99260	ppb	#	94
84)	Benz (a) anthracene	13.27	228	1604071	61.36746	ppb		100
85)	Bis (2-ethylhexyl) phthala	13.29	149	1189376	61.25136	ppb		100
86)	Chrysene	13.32	228	1534121	60.19620	ppb		100
87)	Di-n-octylphthalate	14.01	149	2062468	60.86500	ppb		100
89)	Benzo (b) fluoranthene	14.50	252	1648657	71.20509	ppb		99
90)	Benzo (k) fluoranthene	14.54	252	1431150	68.78853	ppb		99
91)	Benzo (a) pyrene	14.92	252	1472933	70.95558	ppb		100
92)	Indeno (1,2,3-cd) pyrene	16.64	276	1684608	71.15704	ppb		99
93)	Dibenz (a,h) anthracene	16.66	278	1432341	71.53608	ppb		99
94)	Benzo (g,h,i) perylene	17.14	276	1400790	71.66513	ppb		100

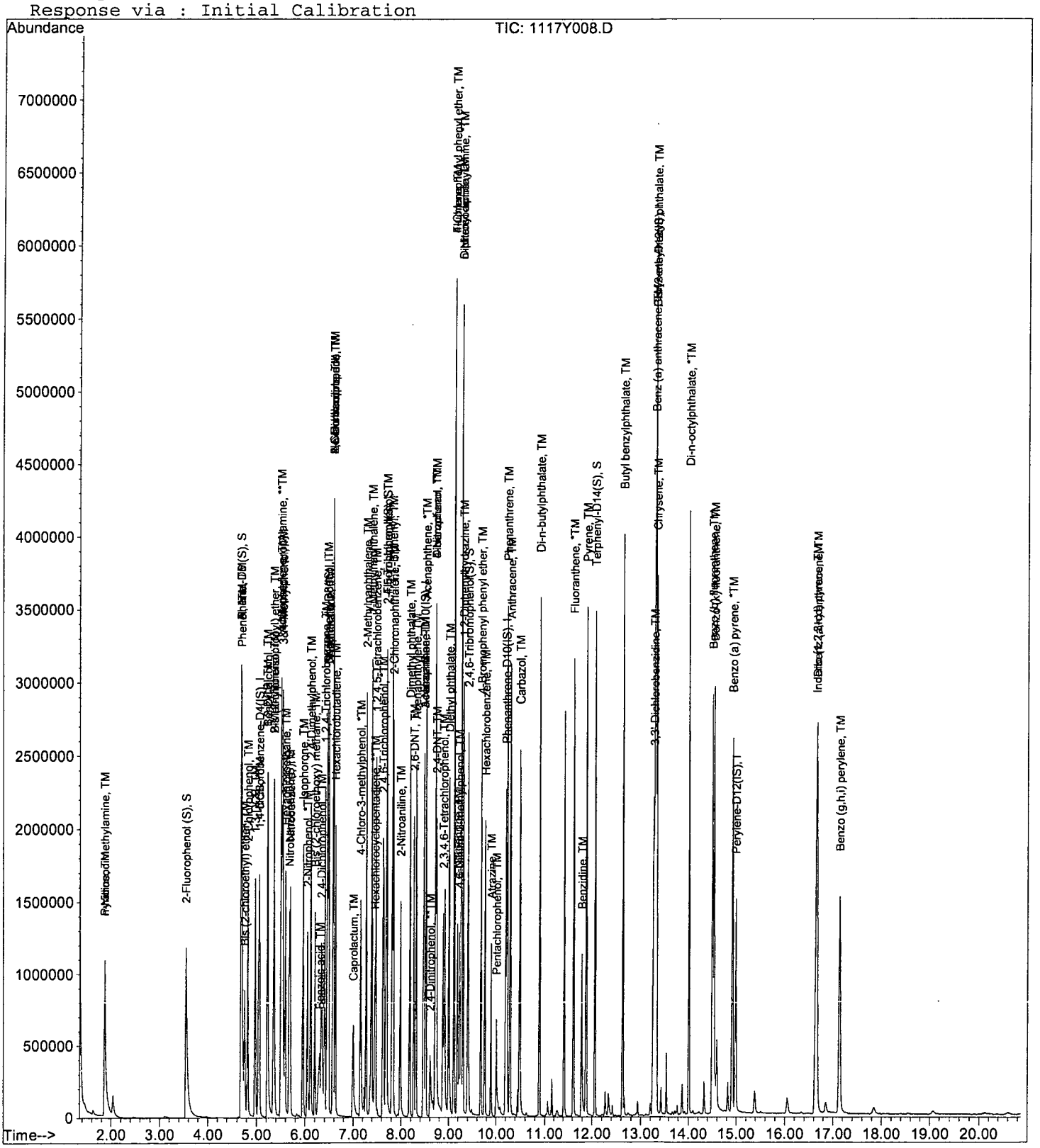
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y008.D Vial: 8
Acq On : 17 Nov 16 13:59 Operator: MA
Sample : 60ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:23:23 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y009.D Vial: 9
Acq On : 17 Nov 16 14:28 Operator: MA
Sample : 80ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:03:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	185570	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.46	136	796769	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.47	164	481968	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.20	188	892921	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.29	240	844482	40.00000 ppb		0.00
88) Perylene-D12(IS)	14.98	264	793228	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.54	112	987627	117.60552 ppb		0.00
Spiked Amount 200.000			Recovery = 58.803%			
5) Phenol-D6 (S)	4.69	99	1273775	116.96802 ppb		0.00
Spiked Amount 200.000			Recovery = 58.484%			
21) Nitrobenzene-D5(S)	5.67	82	648272	65.84229 ppb		0.00
Spiked Amount 100.000			Recovery = 65.842%			
45) 2-Fluorobiphenyl(S)	7.70	172	1163651	77.16054 ppb		0.00
Spiked Amount 100.000			Recovery = 77.161%			
63) 2,4,6-Tribromophenol(S)	9.41	330	368987	161.79270 ppb		0.00
Spiked Amount 200.000			Recovery = 80.897%			
81) Terphenyl-D14(S)	12.07	244	1491374	79.29511 ppb		0.00
Spiked Amount 100.000			Recovery = 79.295%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.85	42	350835	63.95214 ppb		97
3) Pyridine	1.86	79	780223	69.94362 ppb		90
6) Phenol	4.70	94	732452	56.43403 ppb		93
7) Aniline	4.70	66	745585	61.40768 ppb	#	68
8) Bis (2-chloroethyl) ether	4.75	63	330830	55.91731 ppb		96
9) 2-Chlorophenol	4.82	128	557148	56.40616 ppb		99
10) 1,3-DCB	4.96	146	600633	55.46302 ppb		98
11) 1,4-DCB	5.06	146	614009	55.31652 ppb		97
12) Benzyl alcohol	5.22	108	320815	57.16893 ppb		98
13) 1,2-DCB	5.22	146	570533	55.59146 ppb		97
14) 2-Methylphenol	5.35	107	428200	55.80795 ppb		98
15) Bis (2-chloroisopropyl) et	5.34	45	641127	52.74773 ppb		99
16) Acetophenone	5.50	105	790020	56.10462 ppb		97
17) 3&4-Methylphenol	5.53	107	1128891	113.14301 ppb		96
18) n-Nitrosodi-n-propylamine	5.51	70	416391	55.85682 ppb		96
19) Hexachloroethane	5.59	117	255879	56.67934 ppb		99
22) Nitrobenzene	5.69	77	681429	65.45680 ppb		95
23) Isophorone	5.96	82	1113984	63.56979 ppb		95
24) 2-Nitrophenol	6.05	139	325331	64.37058 ppb		99
25) 2,4-Dimethylphenol	6.12	122	506527	65.71902 ppb		97
26) Benzoic acid	6.32	105	415408	66.71840 ppb		99
27) Bis (2-chloroethoxy) metha	6.20	93	587341	62.71655 ppb		99
28) 2,4-Dichlorophenol	6.34	162	489407	66.35604 ppb		97
29) 1,2,4-Trichlorobenzene	6.40	180	516688	63.21228 ppb		96
30) 3,4-Dimethylphenol	6.45	107	783360	64.16159 ppb		99
31) Naphthalene	6.49	128	1650904	64.43297 ppb		99
32) 4-Chloroaniline	6.57	127	599717	67.45448 ppb		98
33) 2,6-Dichlorophenol	6.57	162	457931	64.41292 ppb		97
34) Hexachloropropene	6.58	213	436856	69.31083 ppb		99
35) Hexachlorobutadiene	6.63	225	338496	65.98872 ppb		98
36) Caprolactum	7.02	55	252992	62.86355 ppb		97
37) 4-Chloro-3-methylphenol	7.16	107	556887	64.65951 ppb		91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y009.D Vial: 9
Acq On : 17 Nov 16 14:28 Operator: MA
Sample : 80ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:03:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	2-Methylnaphthalene	7.28	142	1101884	63.90044 ppb		99
39)	1-Methylnaphthalene	7.39	142	1066046	63.32714 ppb		97
41)	Hexachlorocyclopentadiene	7.45	237	245692	76.76041 ppb		96
42)	1,2,4,5-Tetrachlorobenzene	7.47	216	498043	76.58561 ppb		99
43)	2,4,6-Trichlorophenol	7.62	196	341873	80.23106 ppb		99
44)	2,4,5-Trichlorophenol	7.68	196	357356	78.59334 ppb		98
46)	1,1'-Biphenyl	7.81	154	1415314	76.60698 ppb		99
47)	2-Chloronaphthalene	7.84	162	1104129	76.01128 ppb		93
48)	2-Nitroaniline	7.98	65	408811	78.79489 ppb		91
49)	Dimethyl phthalate	8.19	163	1357449	76.85894 ppb		99
50)	2,6-DNT	8.27	165	312851	78.26874 ppb		77
51)	Acenaphthylene	8.32	152	1731901	76.24913 ppb		99
52)	3-Nitroaniline	8.46	138	321468	77.63533 ppb		87
53)	Acenaphthene	8.51	154	1049600	75.22610 ppb		99
54)	2,4-Dinitrophenol	8.60	184	160896	74.49383 ppb		89
55)	4-Nitrophenol	8.71	65	279404	80.43551 ppb		92
56)	Dibenzofuran	8.71	168	1516972	74.64580 ppb		94
57)	2,4-DNT	8.74	165	432051	77.26807 ppb		78
58)	2,3,4,6-Tetrachlorophenol	8.88	232	285163	77.43295 ppb		93
59)	Diethyl phthalate	9.00	149	1369264	76.24637 ppb		98
60)	4-Chlorophenyl phenyl ethe	9.11	204	637877	80.42519 ppb		96
61)	Fluorene	9.11	166	1286145	78.18893 ppb		98
62)	4-Nitroaniline	9.19	138	287336	72.51602 ppb		99
65)	4,6-Dinitro-2-methylphenol	9.23	198	270784	89.83180 ppb		92
66)	Diphenyl amine	9.27	169	1870322	159.03690 ppb		99
67)	n-Nitrosodiphenylamine	9.27	169	1870322	159.03690 ppb		99
68)	1,2-Diphenylhydrazine	9.30	77	1657994	86.67688 ppb		93
69)	4-Bromophenyl phenyl ether	9.68	248	365428	79.78043 ppb		89
70)	Hexachlorobenzene	9.76	284	395833	82.02937 ppb		91
71)	Atrazine	9.89	200	191120	39.18045 ppb		93
72)	Pentachlorophenol	10.01	266	149986	79.96604 ppb		96
73)	Phenanthrene	10.23	178	1887722	78.95179 ppb		99
74)	Anthracene	10.29	178	1987881	79.16067 ppb		99
75)	Carbazol	10.50	167	1771198	79.69169 ppb		96
76)	Di-n-butylphthalate	10.90	149	2405928	80.45520 ppb		97
77)	Fluoranthene	11.62	202	2129288	80.59628 ppb		96
79)	Benzidine	11.79	184	752032	83.28369 ppb		100
80)	Pyrene	11.88	202	2169932	77.50802 ppb		100
82)	Butyl benzylphthalate	12.63	149	1097170	79.02876 ppb		91
83)	3,3'-Dichlorobenzidine	13.25	252	658841	75.15306 ppb	#	95
84)	Benz (a) anthracene	13.27	228	2125416	80.59480 ppb		100
85)	Bis (2-ethylhexyl) phthala	13.29	149	1555195	79.38345 ppb		100
86)	Chrysene	13.32	228	1998485	77.72468 ppb		99
87)	Di-n-octylphthalate	14.02	149	2791653	81.65643 ppb	#	88
89)	Benzo (b) fluoranthene	14.50	252	2081355	88.82693 ppb		98
90)	Benzo (k) fluoranthene	14.54	252	1958330	93.01104 ppb		99
91)	Benzo (a) pyrene	14.92	252	1943111	92.49515 ppb		98
92)	Indeno (1,2,3-cd) pyrene	16.65	276	2197065	91.70218 ppb		99
93)	Dibenz (a,h) anthracene	16.67	278	1858236	91.70592 ppb		98
94)	Benzo (g,h,i) perylene	17.15	276	1820935	92.05493 ppb		96

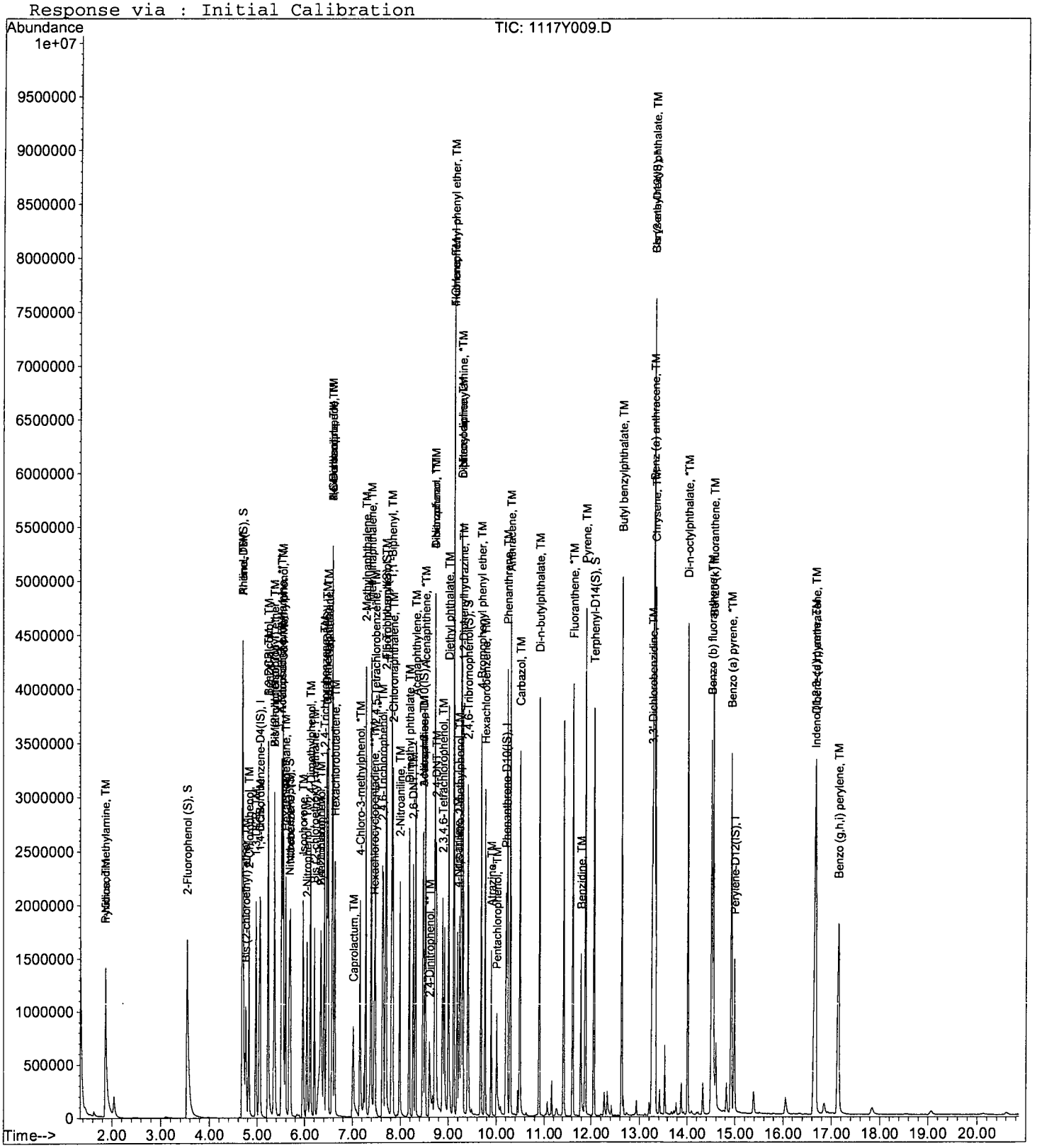
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y009.D Vial: 9
Acq On : 17 Nov 16 14:28 Operator: MA
Sample : 80ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:23:23 2016
Response via : Initial Calibration



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Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y010.D Vial: 10
Acq On : 17 Nov 16 14:58 Operator: MA
Sample : 100ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:15 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:05:44 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	180735	40.00000	ppb		0.00
20) Napthalene-D8(IS)	6.46	136	767853	40.00000	ppb		0.00
40) Acenaphthene-D10(IS)	8.48	164	466110	40.00000	ppb		0.00
64) Phenanthrene-D10(IS)	10.20	188	868261	40.00000	ppb		0.00
78) Chrysene-D12(IS)	13.29	240	852168	40.00000	ppb		0.00
88) Perylene-D12(IS)	14.98	264	748584	40.00000	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol (S)	3.55	112	1211162	195.78264	ppb		0.00
Spiked Amount 200.000			Recovery = 97.891%				
5) Phenol-D6 (S)	4.69	99	1585805	184.57518	ppb		0.01
Spiked Amount 200.000			Recovery = 92.287%				
21) Nitrobenzene-D5(S)	5.67	82	808093	96.09095	ppb		0.00
Spiked Amount 100.000			Recovery = 96.091%				
45) 2-Fluorobiphenyl(S)	7.71	172	1438715	97.11149	ppb		0.01
Spiked Amount 100.000			Recovery = 97.111%				
63) 2,4,6-Tribromophenol(S)	9.41	330	470620	206.63639	ppb		0.01
Spiked Amount 200.000			Recovery = 103.318%				
81) Terphenyl-D14(S)	12.06	244	1827975	94.68790	ppb		0.00
Spiked Amount 100.000			Recovery = 94.688%				
Target Compounds							Qvalue
2) n-Nitrosodimethylamine	1.85	42	475029	105.20258	ppb		93
3) Pyridine	1.87	79	901071	93.28727	ppb		87
6) Phenol	4.70	94	902387	92.12178	ppb		96
7) Aniline	4.70	66	930399	96.74525	ppb	#	65
8) Bis (2-chloroethyl) ether	4.75	63	420511	94.59028	ppb		95
9) 2-Chlorophenol	4.82	128	691135	91.68877	ppb		97
10) 1,3-DCB	4.97	146	753369	91.88467	ppb		98
11) 1,4-DCB	5.06	146	764013	90.92745	ppb		99
12) Benzyl alcohol	5.23	108	409415	97.34534	ppb		95
13) 1,2-DCB	5.23	146	704894	90.57849	ppb		99
14) 2-Methylphenol	5.36	107	534032	92.72371	ppb		99
15) Bis (2-chloroisopropyl) et	5.35	45	776745	88.00815	ppb		98
16) Acetophenone	5.51	105	994639	92.54047	ppb		98
17) 3&4-Methylphenol	5.54	107	1405444	185.15109	ppb		97
18) n-Nitrosodi-n-propylamine	5.51	70	519189	93.34169	ppb		97
19) Hexachloroethane	5.59	117	319515	92.03486	ppb		94
22) Nitrobenzene	5.69	77	849213	97.97511	ppb		95
23) Isophorone	5.97	82	1389571	96.85601	ppb		99
24) 2-Nitrophenol	6.04	139	408611	99.34253	ppb	#	79
25) 2,4-Dimethylphenol	6.12	122	622365	96.99760	ppb		97
26) Benzoic acid	6.33	105	466413	79.98489	ppb		98
27) Bis (2-chloroethoxy) metha	6.20	93	733563	96.39497	ppb		99
28) 2,4-Dichlorophenol	6.33	162	597686	97.17196	ppb		96
29) 1,2,4-Trichlorobenzene	6.41	180	651784	95.87147	ppb		98
30) 3,4-Dimethylphenol	6.45	107	979615	96.24118	ppb		98
31) Naphthalene	6.49	128	2045797	96.72628	ppb		98
32) 4-Chloroaniline	6.57	127	706390	94.24475	ppb		97
33) 2,6-Dichlorophenol	6.57	162	568037	95.46137	ppb		99
34) Hexachloropropene	6.58	213	546175	101.50369	ppb		99
35) Hexachlorobutadiene	6.63	225	420854	97.58743	ppb		96
36) Caprolactum	7.03	55	313706	96.54835	ppb		96
37) 4-Chloro-3-methylphenol	7.16	107	704662	99.29167	ppb		91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y010.D Vial: 10
Acq On : 17 Nov 16 14:58 Operator: MA
Sample : 100ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:15 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:05:44 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.28	142	1398021	98.17583	ppb		98
39)	1-Methylnaphthalene	7.39	142	1336099	97.24745	ppb		99
41)	Hexachlorocyclopentadiene	7.45	237	335967	97.84989	ppb		95
42)	1,2,4,5-Tetrachlorobenzene	7.47	216	619084	98.06507	ppb		98
43)	2,4,6-Trichlorophenol	7.62	196	422243	100.15060	ppb		98
44)	2,4,5-Trichlorophenol	7.69	196	448137	100.39630	ppb		98
46)	1,1'-Biphenyl	7.82	154	1744589	98.08208	ppb		99
47)	2-Chloronaphthalene	7.84	162	1374326	98.72516	ppb		93
48)	2-Nitroaniline	7.98	65	507600	102.48500	ppb		91
49)	Dimethyl phthalate	8.19	163	1697905	100.38208	ppb		99
50)	2,6-DNT	8.27	165	387010	102.00902	ppb		83
51)	Acenaphthylene	8.32	152	2156734	99.27710	ppb		99
52)	3-Nitroaniline	8.47	138	393000	99.40423	ppb		86
53)	Acenaphthene	8.51	154	1311741	98.49848	ppb		99
54)	2,4-Dinitrophenol	8.61	184	211258	92.21892	ppb		84
55)	4-Nitrophenol	8.72	65	353380	100.85569	ppb		92
56)	Dibenzofuran	8.72	168	1900232	98.26893	ppb		95
57)	2,4-DNT	8.74	165	545001	102.28463	ppb		81
58)	2,3,4,6-Tetrachlorophenol	8.88	232	364053	102.10437	ppb		96
59)	Diethyl phthalate	9.00	149	1709803	98.33523	ppb		100
60)	4-Chlorophenyl phenyl ethe	9.12	204	826395	105.61648	ppb		97
61)	Fluorene	9.12	166	1660776	104.76361	ppb		97
62)	4-Nitroaniline	9.19	138	357729	95.99717	ppb		98
65)	4,6-Dinitro-2-methylphenol	9.23	198	345580	112.95505	ppb		94
66)	Diphenyl amine	9.27	169	2364029	200.68405	ppb		98
67)	n-Nitrosodiphenylamine	9.27	169	2364029	200.68405	ppb		98
68)	1,2-Diphenylhydrazine	9.30	77	2018702	103.85749	ppb		94
69)	4-Bromophenyl phenyl ether	9.68	248	466498	102.11747	ppb		95
70)	Hexachlorobenzene	9.77	284	490430	100.11433	ppb		91
71)	Atrazine	9.90	200	242237	50.72612	ppb		94
72)	Pentachlorophenol	10.01	266	199273	99.70962	ppb		99
73)	Phenanthrene	10.23	178	2379343	99.31447	ppb		100
74)	Anthracene	10.30	178	2444850	97.49590	ppb		100
75)	Carbazol	10.50	167	2204161	100.41596	ppb		96
76)	Di-n-butylphthalate	10.89	149	2917363	97.32775	ppb		100
77)	Fluoranthene	11.62	202	2646038	100.17444	ppb	#	96
79)	Benzidine	11.79	184	914348	97.53793	ppb		98
80)	Pyrene	11.88	202	2719725	96.42132	ppb		100
82)	Butyl benzylphthalate	12.63	149	1358722	95.77817	ppb		92
83)	3,3'-Dichlorobenzidine	13.26	252	800270	92.37119	ppb	#	95
84)	Benz (a) anthracene	13.28	228	2610538	96.82885	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.29	149	1979509	98.60950	ppb		99
86)	Chrysene	13.32	228	2526305	97.50042	ppb		99
87)	Di-n-octylphthalate	14.02	149	3385958	96.74814	ppb	#	90
89)	Benzo (b) fluoranthene	14.50	252	2567812	101.51623	ppb		98
90)	Benzo (k) fluoranthene	14.54	252	2468554	106.62886	ppb	#	98
91)	Benzo (a) pyrene	14.92	252	2368866	102.12948	ppb		98
92)	Indeno (1,2,3-cd) pyrene	16.65	276	2668859	100.45367	ppb		98
93)	Dibenz (a,h) anthracene	16.68	278	2285789	101.57231	ppb		99
94)	Benzo (g,h,i) perylene	17.16	276	2229597	100.58760	ppb		98

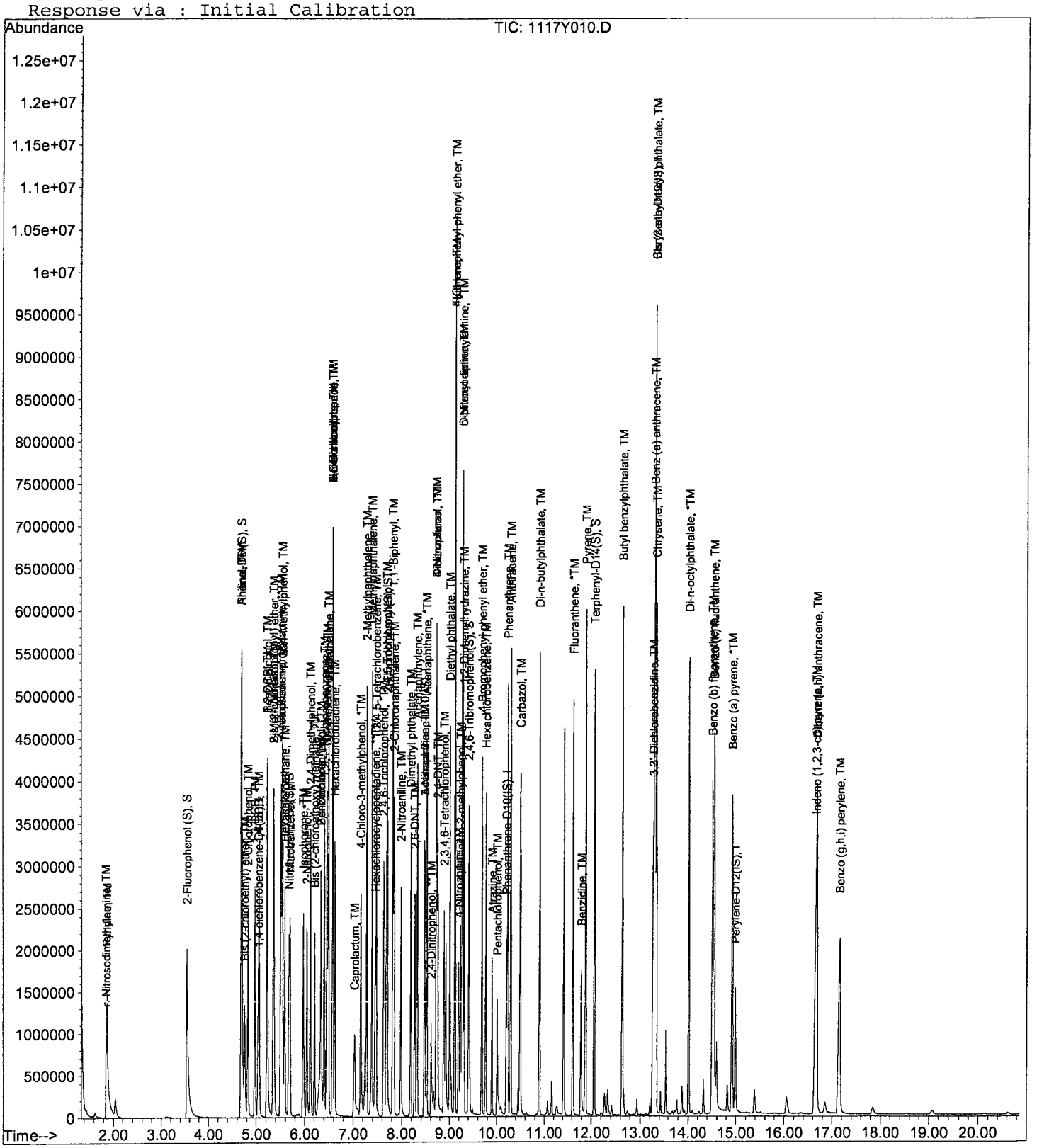
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y010.D Vial: 10
Acq On : 17 Nov 16 14:58 Operator: MA
Sample : 100ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:15 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:23:23 2016
Response via : Initial Calibration



Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/17/16
Instrument: Yoda
Initial Cal. Date: 11/17/16
Data File: 1117Y011.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	n-Nitrosodimethylamine	0.9501	0.8807	7.3	TM	
2	TM	Pyridine	2.021	1.991	1.5	TM	
3	*TM	Phenol	1.996	1.887	5.4	*TM	
4	TM	Aniline	1.977	1.727	13	TM	
5	TM	Bis (2-chloroethyl) ether	0.9057	0.9809	8.3	TM	
6	TM	2-Chlorophenol	1.541	1.467	4.8	TM	
7	TM	1,3-DCB	1.680	1.760	4.8	TM	
8	*TM	1,4-DCB	1.717	1.812	5.5	*TM	
9	TM	Benzyl alcohol	0.8578	0.9107	6.2	TM	
10	TM	1,2-DCB	1.596	1.649	3.3	TM	
11	TM	2-Methylphenol	1.175	1.085	7.7	TM	
12	TM	Bis (2-chloroisopropyl) ether	1.795	1.803	0.46	TM	
13	TM	Acetophenone	2.196	2.205	0.40	TM	
14	TM	3&4-Methylphenol	1.550	1.500	3.2	TM	
15	**TM	n-Nitrosodi-n-propylamine	1.136	1.113	2.0	**TM	
16	TM	Hexachloroethane	0.7136	0.7624	6.8	TM	
17	TM	Nitrobenzene	0.4296	0.4236	1.4	TM	
18	TM	Isophorone	0.7090	0.7729	9.0	TM	
19	*TM	2-Nitrophenol	0.2035	0.1949	4.2	*TM	
20	TM	2,4-Dimethylphenol	0.3177	0.3033	4.5	TM	
21	TMQ	Benzoic acid	0.2076	0.2589	25	TMQ	3.0
22	TM	Bis (2-chloroethoxy) methane	0.3765	0.3892	3.4	TM	
23	*TM	2,4-Dichlorophenol	0.3043	0.2910	4.3	*TM	
24	TM	1,2,4-Trichlorobenzene	0.3377	0.3675	8.8	TM	
25	TM	3,4-Dimethylphenol	0.5064	0.4550	10	TM	
26	TM	Naphthalene	1.051	1.015	3.4	TM	
27	TM	4-Chloroaniline	0.3752	0.3844	2.4	TM	
28	TM	2,6-Dichlorophenol	0.2964	0.2977	0.43	TM	
29	TM	Hexachloropropene	0.2687	0.2650	1.4	TM	
30	*TM	Hexachlorobutadiene	0.2155	0.2342	8.7	*TM	
31	TM	Caprolactum	0.1600	0.1467	8.3	TM	
32	*TM	4-Chloro-3-methylphenol	0.3518	0.3344	4.9	*TM	
33	TM	2-Methylnaphthalene	0.7082	0.6778	4.3	TM	
34	TM	1-Methylnaphthalene	0.6806	0.6425	5.6	TM	
35	**TMQ	Hexachlorocyclopentadiene	0.1752	0.2098	20	**TMQ	0.67
36	TM	1,2,4,5-Tetrachlorobenzene	0.5418	0.5478	1.1	TM	
37	*TM	2,4,6-Trichlorophenol	0.3614	0.3530	2.3	*TM	
38	TM	2,4,5-Trichlorophenol	0.3828	0.3809	0.49	TM	
39	TM	1,1'-Biphenyl	1.522	1.506	1.0	TM	
40	TM	2-Chloronaphthalene	1.192	1.274	6.9	TM	
		Average			5.6		

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 11/17/16
Instrument: Yoda
Cal. Date: 11/17/16
Data File: 1117Y011.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	2-Nitroaniline	0.4228	0.4316	2.1	TM	
42	TM	Dimethyl phthalate	1.453	1.411	2.9	TM	
43	TM	2,6-DNT	0.3253	0.3362	3.4	TM	
44	TM	Acenaphthylene	1.860	1.829	1.6	TM	
45	TM	3-Nitroaniline	0.3375	0.3403	0.81	TM	
46	*TM	Acenaphthene	1.139	1.121	1.6	*TM	
47	**TML	2,4-Dinitrophenol	0.1425	0.1552	8.9	**TML	3.7
48	**TML	4-Nitrophenol	0.2428	0.2544	4.8	**TML	7.3
49	TM	Dibenzofuran	1.656	1.637	1.1	TM	
50	TM	2,4-DNT	0.4565	0.4610	0.99	TM	
51	TM	2,3,4,6-Tetrachlorophenol	0.2915	0.2973	2.0	TM	
52	TM	Diethyl phthalate	1.491	1.486	0.35	TM	
53	TM	4-Chlorophenyl phenyl ether	0.6772	0.6629	2.1	TM	
54	TM	Fluorene	1.365	1.304	4.5	TM	
55	TM	4-Nitroaniline	0.3174	0.3282	3.4	TM	
56	TM	4,6-Dinitro-2-methylphenol	0.1416	0.1374	3.0	TM	
57	TM	Diphenyl amine	0.5459	0.5572	2.1	TM	
58	*TM	n-Nitrosodiphenylamine	0.5459	0.5572	2.1	*TM	
59	TM	1,2-Diphenylhydrazine	0.8965	1.020	14	TM	
60	TM	4-Bromophenyl phenyl ether	0.2121	0.2067	2.5	TM	
61	TM	Hexachlorobenzene	0.2269	0.2410	6.2	TM	
62	TM	Atrazine	0.2209	0.1870	15	TM	
63	*TMQ	Pentachlorophenol	0.0660	0.0621	6.0	*TMQ	9.5
64	TM	Phenanthrene	1.108	1.050	5.2	TM	
65	TM	Anthracene	1.158	1.030	11	TM	
66	TM	Carbazol	1.016	0.9587	5.6	TM	
67	TM	Di-n-butylphthalate	1.383	1.340	3.1	TM	
68	*TM	Fluoranthene	1.223	1.154	5.6	*TM	
69	TM	Benzidine	0.4426	0.4919	11	TM	
70	TM	Pyrene	1.325	1.252	5.5	TM	
71	TM	Butyl benzylphthalate	0.6676	0.6711	0.53	TM	
72	TM	3,3'-Dichlorobenzidine	0.4074	0.4566	12	TM	
73	TM	Benz (a) anthracene	1.268	1.211	4.5	TM	
74	TM	Bis (2-ethylhexyl) phthalate	0.9462	0.9206	2.7	TM	
75	TM	Chrysene	1.222	1.127	7.8	TM	
76	*TM	Di-n-octylphthalate	1.649	1.598	3.1	*TM	
77	TM	Benzo (b) fluoranthene	1.375	1.432	4.1	TM	
78	TM	Benzo (k) fluoranthene	1.282	1.094	15	TM	
79	*TM	Benzo (a) pyrene	1.270	1.249	1.6	*TM	
80	TM	Indeno (1,2,3-cd) pyrene	1.454	1.425	2.0	TM	
		Average			4.8		

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 11/17/16
Instrument: Yoda
Cal. Date: 11/17/16
Data File: 1117Y011.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	Dibenz (a,h) anthracene	1.235	1.198	3.0	TM	
82	TM	Benzo (g,h,i) perylene	1.213	1.171	3.5	TM	
83							
84							
85							
86							
87							
88							
89							
90							
91							
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		Average			3.3		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y011.D Vial: 11
Acq On : 17 Nov 16 15:27 Operator: MA
Sample : 2ND SRC SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:42 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:23:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	178099	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.46	136	769623	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.47	164	447548	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.20	188	850203	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.28	240	807208	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.98	264	747082	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	0.00	112	0	0.00000 ppb	
Spiked Amount 200.000			Recovery =	0.000%	
5) Phenol-D6 (S)	0.00	99	0	0.00000 ppb	
Spiked Amount 200.000			Recovery =	0.000%	
21) Nitrobenzene-D5(S)	5.59	82	49517	6.14391 ppb	-0.08
Spiked Amount 100.000			Recovery =	6.144%	
45) 2-Fluorobiphenyl(S)	7.68	172	789	0.05535 ppb	0.00
Spiked Amount 100.000			Recovery =	0.055%	
63) 2,4,6-Tribromophenol(S)	0.00	330	0	0.00000 ppb	
Spiked Amount 200.000			Recovery =	0.000%	
81) Terphenyl-D14(S)	12.07	244	513	0.02799 ppb	0.00
Spiked Amount 100.000			Recovery =	0.028%	

Algorithm = $\frac{196055 \times 1 \times 40}{178099 \times 0.9501} = 46.34$ HA 11/18/16

Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.85	42	196055	46.34556 ppb	100
3) Pyridine	1.86	79	443202	49.25354 ppb	99
6) Phenol	4.69	94	420166	47.28299 ppb	96
7) Aniline	4.69	66	384393	43.65810 ppb	85
8) Bis (2-chloroethyl) ether	4.75	63	218382	54.15612 ppb	94
9) 2-Chlorophenol	4.82	128	326695	47.60907 ppb	96
10) 1,3-DCB	4.96	146	391915	52.39951 ppb	99
11) 1,4-DCB	5.06	146	403370	52.75363 ppb	99
12) Benzyl alcohol	5.21	108	202739	53.08397 ppb	99
13) 1,2-DCB	5.22	146	367179	51.66444 ppb	100
14) 2-Methylphenol	5.35	107	241567	46.17052 ppb	96
15) Bis (2-chloroisopropyl) et	5.34	45	401353	50.22919 ppb	97
16) Acetophenone	5.50	105	490861	50.19755 ppb	98
17) 3&4-Methylphenol	5.53	107	667938	96.75444 ppb	99
18) n-Nitrosodi-n-propylamine	5.50	70	247886	49.00292 ppb	98
19) Hexachloroethane	5.59	117	169736	53.42408 ppb	98
22) Nitrobenzene	5.69	77	407484	49.29275 ppb	99
23) Isophorone	5.96	82	743559	54.50863 ppb	100
24) 2-Nitrophenol	6.04	139	187525	47.88802 ppb #	81
25) 2,4-Dimethylphenol	6.11	122	291787	47.72759 ppb	97
26) Benzoic acid	6.29	105	249036	51.50269 ppb	97
27) Bis (2-chloroethoxy) metha	6.20	93	374463	51.69613 ppb	100
28) 2,4-Dichlorophenol	6.34	162	279979	47.82613 ppb	96
29) 1,2,4-Trichlorobenzene	6.40	180	353567	54.40872 ppb	97
30) 3,4-Dimethylphenol	6.45	107	437742	44.92689 ppb	99
31) Naphthalene	6.49	128	976604	48.27987 ppb	100
32) 4-Chloroaniline	6.57	127	369838	51.22487 ppb	99
33) 2,6-Dichlorophenol	6.57	162	286400	50.21749 ppb	99
34) Hexachloropropene	6.58	213	254902	49.30675 ppb	98
35) Hexachlorobutadiene	6.63	225	225339	54.34327 ppb	99
36) Caprolactum	6.99	55	141152	45.86410 ppb	94
37) 4-Chloro-3-methylphenol	7.15	107	321726	47.53260 ppb	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y011.D Vial: 11
Acq On : 17 Nov 16 15:27 Operator: MA
Sample : 2ND SRC SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:42 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:23:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

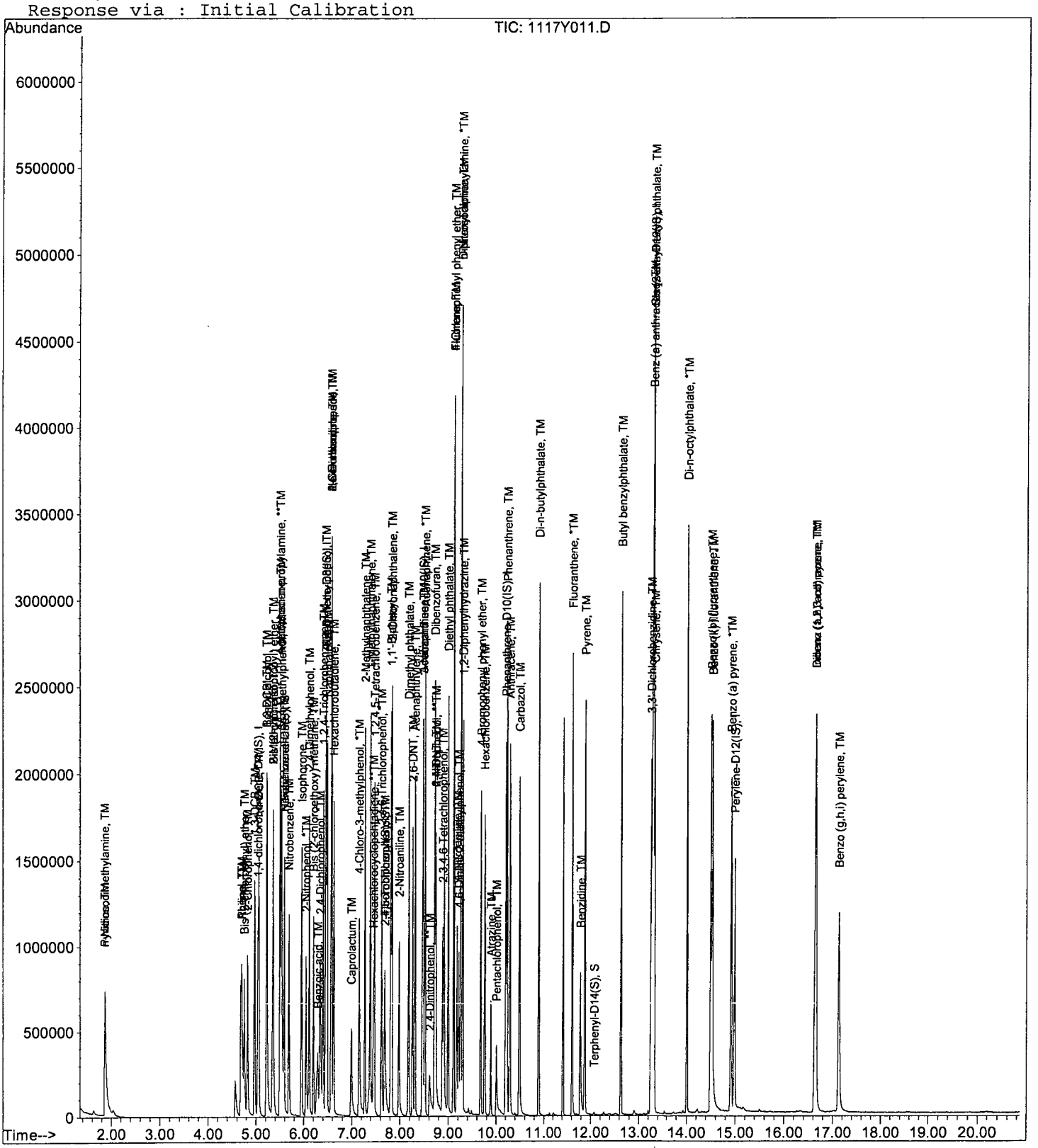
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.28	142	652072	47.85629	ppb		99
39)	1-Methylnaphthalene	7.39	142	618136	47.20184	ppb		98
41)	Hexachlorocyclopentadiene	7.45	237	117382	49.66528	ppb		99
42)	1,2,4,5-Tetrachlorobenzene	7.47	216	306459	50.55505	ppb		99
43)	2,4,6-Trichlorophenol	7.62	196	197508	48.84140	ppb		97
44)	2,4,5-Trichlorophenol	7.68	196	213089	49.75647	ppb		98
46)	1,1'-Biphenyl	7.81	154	842477	49.47591	ppb		99
47)	2-Chloronaphthalene	7.83	162	712717	53.44276	ppb		97
48)	2-Nitroaniline	7.98	65	241425	51.03059	ppb		97
49)	Dimethyl phthalate	8.18	163	789457	48.56368	ppb		100
50)	2,6-DNT	8.26	165	188106	51.68479	ppb		98
51)	Acenaphthylene	8.31	152	1023384	49.17611	ppb		99
52)	3-Nitroaniline	8.46	138	190375	50.40729	ppb		97
53)	Acenaphthene	8.51	154	626972	49.19895	ppb		98
54)	2,4-Dinitrophenol	8.61	184	86826	48.13890	ppb		98
55)	4-Nitrophenol	8.73	65	142334	46.34692	ppb	#	68
56)	Dibenzofuran	8.71	168	915643	49.42991	ppb		98
57)	2,4-DNT	8.73	165	257916	50.49503	ppb		96
58)	2,3,4,6-Tetrachlorophenol	8.88	232	166294	50.99391	ppb		98
59)	Diethyl phthalate	8.99	149	831141	49.82672	ppb		100
60)	4-Chlorophenyl phenyl ethe	9.11	204	370836	48.94460	ppb		97
61)	Fluorene	9.11	166	729365	47.74033	ppb		96
62)	4-Nitroaniline	9.18	138	183632	51.71061	ppb		93
65)	4,6-Dinitro-2-methylphenol	9.22	198	146016	48.51210	ppb		98
66)	Diphenyl amine	9.26	169	1184359	102.07189	ppb		99
67)	n-Nitrosodiphenylamine	9.26	169	1184359	102.07189	ppb		99
68)	1,2-Diphenylhydrazine	9.30	77	1083757	56.87464	ppb		98
69)	4-Bromophenyl phenyl ether	9.68	248	219716	48.73712	ppb		97
70)	Hexachlorobenzene	9.76	284	256115	53.10099	ppb		96
71)	Atrazine	9.89	200	99348	21.15512	ppb		100
72)	Pentachlorophenol	10.01	266	66010	45.23149	ppb		91
73)	Phenanthrene	10.23	178	1116078	47.38853	ppb		99
74)	Anthracene	10.28	178	1094278	44.45631	ppb		99
75)	Carbazol	10.49	167	1018908	47.20472	ppb		100
76)	Di-n-butylphthalate	10.89	149	1424538	48.46104	ppb		100
77)	Fluoranthene	11.61	202	1226693	47.19071	ppb		100
79)	Benzidine	11.79	184	496359	55.56966	ppb		99
80)	Pyrene	11.88	202	1263151	47.24097	ppb		100
82)	Butyl benzylphthalate	12.63	149	677173	50.26268	ppb		99
83)	3,3'-Dichlorobenzidine	13.24	252	460722	56.03688	ppb		96
84)	Benz (a) anthracene	13.27	228	1221918	47.74364	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.29	149	928848	48.64546	ppb		99
86)	Chrysene	13.32	228	1136927	46.09322	ppb		99
87)	Di-n-octylphthalate	14.01	149	1612549	48.45476	ppb		100
89)	Benzo (b) fluoranthene	14.50	252	1336971	52.06047	ppb		100
90)	Benzo (k) fluoranthene	14.53	252	1021943	42.68429	ppb	#	96
91)	Benzo (a) pyrene	14.91	252	1166546	49.17870	ppb	#	98
92)	Indeno (1,2,3-cd) pyrene	16.64	276	1331149	49.00834	ppb		98
93)	Dibenz (a,h) anthracene	16.65	278	1118366	48.49271	ppb		97
94)	Benzo (g,h,i) perylene	17.13	276	1093989	48.27170	ppb		97

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y161117\1117Y011.D Vial: 11
Acq On : 17 Nov 16 15:27 Operator: MA
Sample : 2ND SRC SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:42 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:23:23 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Date Analyzed: 11/28/16

Matrix: Instrument: Yoda

Initial Cal. Date: 11/17/16

Data File: 1117Y116.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	n-Nitrosodimethylamine	0.9501	1.046	10	TM	
3	TM	Pyridine	2.021	2.421	20	TM	
4	S	2-Fluorophenol (S)	1.255	1.327	5.7	S	
5	S	Phenol-D6 (S)	1.762	1.786	1.4	S	
6	*TM	Phenol	1.996	2.082	4.3	*TM	
7	TM	Aniline	1.977	2.163	9.4	TM	
8	TM	Bis (2-chloroethyl) ether	0.9057	0.9467	4.5	TM	
9	TM	2-Chlorophenol	1.541	1.596	3.6	TM	
10	TM	1,3-DCB	1.680	1.740	3.6	TM	
11	*TM	1,4-DCB	1.717	1.770	3.1	*TM	
12	TM	Benzyl alcohol	0.8578	0.9320	8.7	TM	
13	TM	1,2-DCB	1.596	1.655	3.7	TM	
14	TM	2-Methylphenol	1.175	1.247	6.1	TM	
15	TM	Bis (2-chloroisopropyl) ether	1.795	1.845	2.8	TM	
16	TM	Acetophenone	2.196	2.243	2.1	TM	
17	TM	3&4-Methylphenol	1.550	1.618	4.4	TM	
18	**TM	n-Nitrosodi-n-propylamine	1.136	1.202	5.8	**TM	
19	TM	Hexachloroethane	0.7136	0.7446	4.4	TM	
20	I	Napthalene-D8(IS)	ISTD			I	
21	S	Nitrobenzene-D5(S)	0.4189	0.4200	0.27	S	
22	TM	Nitrobenzene	0.4296	0.4448	3.5	TM	
23	TM	Isophorone	0.7090	0.7183	1.3	TM	
24	*TM	2-Nitrophenol	0.2035	0.2070	1.7	*TM	
25	TM	2,4-Dimethylphenol	0.3177	0.3294	3.7	TM	
26	TMQ	Benzoic acid	0.2076	0.2473	19	TMQ	1.4
27	TM	Bis (2-chloroethoxy) methane	0.3765	0.3830	1.7	TM	
28	*TM	2,4-Dichlorophenol	0.3043	0.3160	3.9	*TM	
29	TM	1,2,4-Trichlorobenzene	0.3377	0.3514	4.1	TM	
30	TM	3,4-Dimethylphenol	0.5064	0.5166	2.0	TM	
31	TM	Naphthalene	1.051	1.067	1.5	TM	
32	TM	4-Chloroaniline	0.3752	0.4062	8.3	TM	
33	TM	2,6-Dichlorophenol	0.2964	0.3049	2.9	TM	
34	TM	Hexachloropropene	0.2687	0.2875	7.0	TM	
35	*TM	Hexachlorobutadiene	0.2155	0.2233	3.6	*TM	
36	TM	Caprolactum	0.1600	0.1615	0.95	TM	
37	*TM	4-Chloro-3-methylphenol	0.3518	0.3641	3.5	*TM	
38	TM	2-Methylnaphthalene	0.7082	0.7125	0.62	TM	
39	TM	1-Methylnaphthalene	0.6806	0.7016	3.1	TM	
40	I	Acenaphthene-D10(IS)	ISTD			I	
		Average			4.8		

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 11/28/16
Instrument: Yoda
Cal. Date: 11/17/16
Data File: 1117Y116.D

		Compound	MEAN	CCRF	%D		%Drift
41	**TMQ	Hexachlorocyclopentadiene	0.1752	0.1833	4.6	**TMQ	9.8
42	TM	1,2,4,5-Tetrachlorobenzene	0.5418	0.5417	0.01	TM	
43	*TM	2,4,6-Trichlorophenol	0.3614	0.3615	0.03	*TM	
44	TM	2,4,5-Trichlorophenol	0.3828	0.3756	1.9	TM	
45	S	2-Fluorobiphenyl(S)	1.274	1.241	2.6	S	
46	TM	1,1'-Biphenyl	1.522	1.478	2.9	TM	
47	TM	2-Chloronaphthalene	1.192	1.197	0.46	TM	
48	TM	2-Nitroaniline	0.4228	0.4359	3.1	TM	
49	TM	Dimethyl phthalate	1.453	1.452	0.04	TM	
50	TM	2,6-DNT	0.3253	0.3254	0.04	TM	
51	TM	Acenaphthylene	1.860	1.845	0.83	TM	
52	TM	3-Nitroaniline	0.3375	0.3395	0.57	TM	
53	*TM	Acenaphthene	1.139	1.141	0.17	*TM	
54	**TML	2,4-Dinitrophenol	0.1425	0.1679	18	**TML	2.9
55	**TML	4-Nitrophenol	0.2428	0.2705	11	**TML	2.4
56	TM	Dibenzofuran	1.656	1.679	1.4	TM	
57	TM	2,4-DNT	0.4565	0.4675	2.4	TM	
58	TM	2,3,4,6-Tetrachlorophenol	0.2915	0.3073	5.4	TM	
59	TM	Diethyl phthalate	1.491	1.476	1.0	TM	
60	TM	4-Chlorophenyl phenyl ether	0.6772	0.6622	2.2	TM	
61	TM	Fluorene	1.365	1.335	2.2	TM	
62	TM	4-Nitroaniline	0.3174	0.3133	1.3	TM	
63	S	2,4,6-Tribromophenol(S)	0.1956	0.1969	0.68	S	
64	I	Phenanthrene-D10(IS)	ISTD			I	
65	TM	4,6-Dinitro-2-methylphenol	0.1416	0.1578	11	TM	
66	TM	Diphenyl amine	0.5459	0.5490	0.57	TM	
67	*TM	n-Nitrosodiphenylamine	0.5459	0.5490	0.57	*TM	
68	TM	1,2-Diphenylhydrazine	0.8965	0.8346	6.9	TM	
69	TM	4-Bromophenyl phenyl ether	0.2121	0.2173	2.5	TM	
70	TM	Hexachlorobenzene	0.2269	0.2287	0.78	TM	
71	TM	Atrazine	0.2209	0.2291	3.7	TM	
72	*TMQ	Pentachlorophenol	0.0660	0.0796	20	*TMQ	9.2
73	TM	Phenanthrene	1.108	1.125	1.5	TM	
74	TM	Anthracene	1.158	1.164	0.49	TM	
75	TM	Carbazol	1.016	1.021	0.56	TM	
76	TM	Di-n-butylphthalate	1.383	1.422	2.8	TM	
77	*TM	Fluoranthene	1.223	1.235	1.0	*TM	
78	I	Chrysene-D12(IS)	ISTD			I	
79	TM	Benzidine	0.4426	0.4556	2.9	TM	
80	TM	Pyrene	1.325	1.348	1.7	TM	
		Average			3.2		

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 11/28/16
Instrument: Yoda
Cal. Date: 11/17/16
Data File: 1117Y116.D

		Compound	MEAN	CCRF	%D	%Drift	
81	S	Terphenyl-D14(S)	0.9081	0.9017	0.71	S	
82	TM	Butyl benzylphthalate	0.6676	0.6658	0.28	TM	
83	TM	3,3'-Dichlorobenzidine	0.4074	0.4501	10	TM	
84	TM	Benz (a) anthracene	1.268	1.272	0.33	TM	
85	TM	Bis (2-ethylhexyl) phthalate	0.9462	0.9501	0.42	TM	
86	TM	Chrysene	1.222	1.237	1.2	TM	
87	*TM	Di-n-octylphthalate	1.649	1.680	1.8	*TM	
88	I	Perylene-D12(IS)	ISTD			I	
89	TM	Benzo (b) fluoranthene	1.375	1.341	2.5	TM	
90	TM	Benzo (k) fluoranthene	1.282	1.322	3.1	TM	
91	*TM	Benzo (a) pyrene	1.270	1.282	0.92	*TM	
92	TM	Indeno (1,2,3-cd) pyrene	1.454	1.477	1.6	TM	
93	TM	Dibenz (a,h) anthracene	1.235	1.253	1.5	TM	
94	TM	Benzo (g,h,i) perylene	1.213	1.242	2.4	TM	
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		Average			2.1		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y116.D Vial: 16
Acq On : 28 Nov 16 10:42 Operator: MA
Sample : 50ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 10:59 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	137102	40.00000	ppb		0.00
20) Napthalene-D8(IS)	6.46	136	602305	40.00000	ppb		0.00
40) Acenaphthene-D10(IS)	8.47	164	371946	40.00000	ppb		0.00
64) Phenanthrene-D10(IS)	10.20	188	674600	40.00000	ppb		0.00
78) Chrysene-D12(IS)	13.28	240	658175	40.00000	ppb		0.00
88) Perylene-D12(IS)	14.98	264	614866	40.00000	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol (S)	3.54	112	454825	105.70275	ppb		0.00
Spiked Amount 200.000			Recovery =	52.852%			
5) Phenol-D6 (S)	4.67	99	612139	101.38241	ppb		0.00
Spiked Amount 200.000			Recovery =	50.691%			
21) Nitrobenzene-D5(S)	5.66	82	316207	50.13300	ppb		0.00
Spiked Amount 100.000			Recovery =	50.133%			
45) 2-Fluorobiphenyl(S)	7.69	172	576883	48.69842	ppb		0.00
Spiked Amount 100.000			Recovery =	48.698%			
63) 2,4,6-Tribromophenol(S)	9.40	330	183090	100.68114	ppb		0.00
Spiked Amount 200.000			Recovery =	50.341%			
81) Terphenyl-D14(S)	12.06	244	741824	49.64535	ppb		0.00
Spiked Amount 100.000			Recovery =	49.645%			
Target Compounds							Qvalue
2) n-Nitrosodimethylamine	1.86	42	179205	55.02981	ppb		93
3) Pyridine	1.87	79	414913	59.89775	ppb		86
6) Phenol	4.68	94	356811	52.16028	ppb		82
7) Aniline	4.68	66	370702	54.69304	ppb		95
8) Bis (2-chloroethyl) ether	4.75	63	162243	52.26541	ppb		91
9) 2-Chlorophenol	4.81	128	273574	51.78926	ppb		97
10) 1,3-DCB	4.96	146	298192	51.79037	ppb		99
11) 1,4-DCB	5.05	146	303412	51.54650	ppb		96
12) Benzyl alcohol	5.21	108	159726	54.32747	ppb		98
13) 1,2-DCB	5.21	146	283668	51.84919	ppb		96
14) 2-Methylphenol	5.35	107	213730	53.06527	ppb		96
15) Bis (2-chloroisopropyl) et	5.34	45	316183	51.40269	ppb	#	77
16) Acetophenone	5.49	105	384453	51.07225	ppb		92
17) 3&4-Methylphenol	5.52	107	554685	104.37557	ppb		95
18) n-Nitrosodi-n-propylamine	5.50	70	206057	52.91454	ppb		95
19) Hexachloroethane	5.59	117	127615	52.17741	ppb		80
22) Nitrobenzene	5.69	77	334854	51.75944	ppb		95
23) Isophorone	5.95	82	540802	50.65819	ppb		96
24) 2-Nitrophenol	6.04	139	155855	50.85691	ppb		82
25) 2,4-Dimethylphenol	6.11	122	248033	51.84115	ppb		96
26) Benzoic acid	6.28	105	186152	49.28923	ppb		95
27) Bis (2-chloroethoxy) metha	6.20	93	288356	50.86742	ppb		98
28) 2,4-Dichlorophenol	6.34	162	237900	51.92730	ppb		96
29) 1,2,4-Trichlorobenzene	6.39	180	264587	52.02677	ppb		96
30) 3,4-Dimethylphenol	6.45	107	388919	51.00455	ppb		96
31) Naphthalene	6.48	128	803348	50.74729	ppb		100
32) 4-Chloroaniline	6.56	127	305839	54.12823	ppb		96
33) 2,6-Dichlorophenol	6.57	162	229539	51.42805	ppb		95
34) Hexachloropropene	6.58	213	216479	53.50699	ppb		97
35) Hexachlorobutadiene	6.62	225	168141	51.81370	ppb		97
36) Caprolactum	6.99	55	121575	50.47679	ppb		95
37) 4-Chloro-3-methylphenol	7.14	107	274133	51.75214	ppb		91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y116.D Vial: 16
Acq On : 28 Nov 16 10:42 Operator: MA
Sample : 50ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 10:59 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.27	142	536460	50.30862	ppb		99
39)	1-Methylnaphthalene	7.38	142	528210	51.53984	ppb		99
41)	Hexachlorocyclopentadiene	7.44	237	85208	45.11049	ppb		97
42)	1,2,4,5-Tetrachlorobenzene	7.47	216	251867	49.99461	ppb		98
43)	2,4,6-Trichlorophenol	7.62	196	168096	50.01733	ppb		96
44)	2,4,5-Trichlorophenol	7.68	196	174644	49.06840	ppb		98
46)	1,1'-Biphenyl	7.80	154	687388	48.57328	ppb		98
47)	2-Chloronaphthalene	7.83	162	556712	50.22988	ppb		94
48)	2-Nitroaniline	7.97	65	202643	51.53944	ppb		84
49)	Dimethyl phthalate	8.18	163	675264	49.98233	ppb		99
50)	2,6-DNT	8.26	165	151302	50.02240	ppb		86
51)	Acenaphthylene	8.31	152	857612	49.58681	ppb		98
52)	3-Nitroaniline	8.45	138	157834	50.28561	ppb	#	78
53)	Acenaphthene	8.51	154	530455	50.08596	ppb		100
54)	2,4-Dinitrophenol	8.61	184	78080	51.42814	ppb		97
55)	4-Nitrophenol	8.72	65	125767	48.82108	ppb		88
56)	Dibenzofuran	8.70	168	780608	50.70565	ppb		99
57)	2,4-DNT	8.73	165	217346	51.20138	ppb		84
58)	2,3,4,6-Tetrachlorophenol	8.87	232	142878	52.71896	ppb	#	83
59)	Diethyl phthalate	8.99	149	686197	49.49897	ppb		97
60)	4-Chlorophenyl phenyl ethe	9.10	204	307883	48.89543	ppb		89
61)	Fluorene	9.10	166	620882	48.90005	ppb		99
62)	4-Nitroaniline	9.18	138	145684	49.36315	ppb		91
65)	4,6-Dinitro-2-methylphenol	9.22	198	133035	55.70470	ppb		85
66)	Diphenyl amine	9.25	169	925896	100.56834	ppb		100
67)	n-Nitrosodiphenylamine	9.25	169	925896	100.56834	ppb		100
68)	1,2-Diphenylhydrazine	9.29	77	703758	46.54643	ppb		91
69)	4-Bromophenyl phenyl ether	9.68	248	183279	51.23741	ppb		88
70)	Hexachlorobenzene	9.75	284	192838	50.38909	ppb	#	78
71)	Atrazine	9.88	200	96575	25.91775	ppb		93
72)	Pentachlorophenol	10.00	266	67102	54.61983	ppb		97
73)	Phenanthrene	10.23	178	948584	50.76107	ppb		99
74)	Anthracene	10.28	178	981310	50.24447	ppb		99
75)	Carbazol	10.49	167	861148	50.28108	ppb		99
76)	Di-n-butylphthalate	10.89	149	1199425	51.42426	ppb		98
77)	Fluoranthene	11.61	202	1041830	50.51191	ppb		98
79)	Benzidine	11.79	184	374802	51.46214	ppb		99
80)	Pyrene	11.87	202	1109162	50.87479	ppb		98
82)	Butyl benzylphthalate	12.62	149	547738	49.86122	ppb		87
83)	3,3'-Dichlorobenzidine	13.24	252	370326	55.24122	ppb		96
84)	Benz (a) anthracene	13.27	228	1046861	50.16566	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.29	149	781680	50.20775	ppb	#	96
86)	Chrysene	13.31	228	1017845	50.60928	ppb		98
87)	Di-n-octylphthalate	14.01	149	1381753	50.92112	ppb		92
89)	Benzo (b) fluoranthene	14.49	252	1030863	48.77248	ppb		98
90)	Benzo (k) fluoranthene	14.53	252	1015893	51.55575	ppb		98
91)	Benzo (a) pyrene	14.91	252	985074	50.45821	ppb		99
92)	Indeno (i,2,3-cd) pyrene	16.64	276	1135119	50.77764	ppb		97
93)	Dibenz (a,h) anthracene	16.65	278	963386	50.75520	ppb		100
94)	Benzo (g,h,i) perylene	17.12	276	954748	51.18659	ppb		99

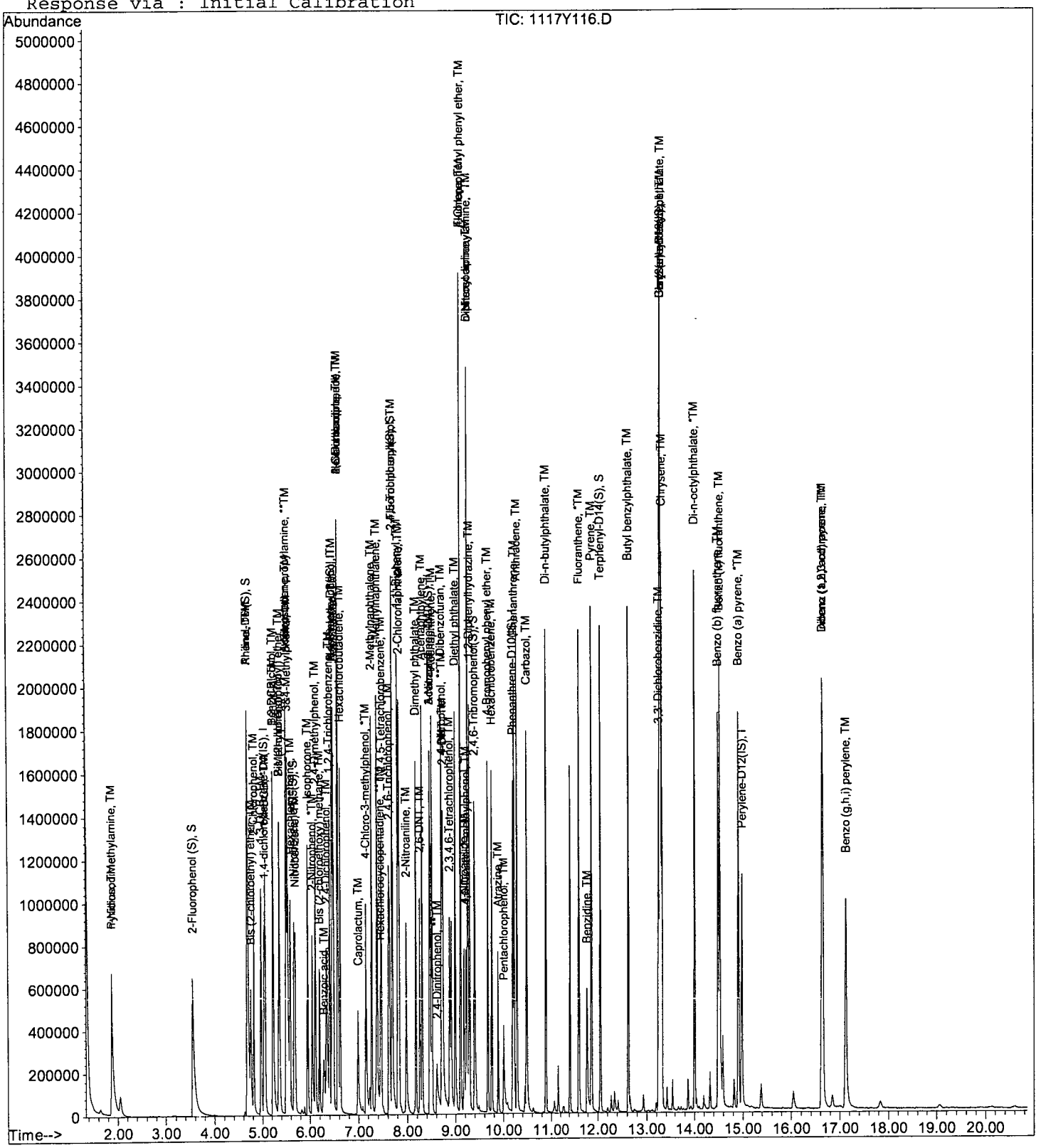
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y116.D Vial: 16
Acq On : 28 Nov 16 10:42 Operator: MA
Sample : 50ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 10:59 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Date Analyzed: 11/28/16

Matrix: Instrument: Yoda

Initial Cal. Date: 11/17/16

Data File: 1117Y139.D

		Compound	MEAN	CCRF	%D		%Drift	
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I		
2	TM	n-Nitrosodimethylamine	0.9501	1.154	21	TM		* NT
3	TM	Pyridine	2.021	2.340	16	TM		MA 11/29/16
4	S	2-Fluorophenol (S)	1.255	1.298	3.4	S		
5	S	Phenol-D6 (S)	1.762	1.776	0.81	S		
6	*TM	Phenol	1.996	2.052	2.8	*TM		
7	TM	Aniline	1.977	2.149	8.7	TM		
8	TM	Bis (2-chloroethyl) ether	0.9057	0.9573	5.7	TM		
9	TM	2-Chlorophenol	1.541	1.609	4.4	TM		
10	TM	1,3-DCB	1.680	1.728	2.9	TM		
11	*TM	1,4-DCB	1.717	1.759	2.4	*TM		
12	TM	Benzyl alcohol	0.8578	0.9431	10.0	TM		
13	TM	1,2-DCB	1.596	1.677	5.0	TM		
14	TM	2-Methylphenol	1.175	1.229	4.5	TM		
15	TM	Bis (2-chloroisopropyl) ether	1.795	1.899	5.8	TM		
16	TM	Acetophenone	2.196	2.244	2.2	TM		
17	TM	3&4-Methylphenol	1.550	1.614	4.1	TM		
18	**TM	n-Nitrosodi-n-propylamine	1.136	1.203	5.9	**TM		
19	TM	Hexachloroethane	0.7136	0.7421	4.0	TM		
20	I	Napthalene-D8(IS)	ISTD			I		
21	S	Nitrobenzene-D5(S)	0.4189	0.4212	0.56	S		
22	TM	Nitrobenzene	0.4296	0.4295	0.03	TM		
23	TM	Isophorone	0.7090	0.7169	1.1	TM		
24	*TM	2-Nitrophenol	0.2035	0.2079	2.1	*TM		
25	TM	2,4-Dimethylphenol	0.3177	0.3325	4.6	TM		
26	TMQ	Benzoic acid	0.2076	0.2589	25	TMQ	3.0	
27	TM	Bis (2-chloroethoxy) methane	0.3765	0.3797	0.85	TM		
28	*TM	2,4-Dichlorophenol	0.3043	0.3132	2.9	*TM		
29	TM	1,2,4-Trichlorobenzene	0.3377	0.3515	4.1	TM		
30	TM	3,4-Dimethylphenol	0.5064	0.5080	0.32	TM		
31	TM	Naphthalene	1.051	1.059	0.72	TM		
32	TM	4-Chloroaniline	0.3752	0.4070	8.5	TM		
33	TM	2,6-Dichlorophenol	0.2964	0.3084	4.0	TM		
34	TM	Hexachloropropene	0.2687	0.2815	4.8	TM		
35	*TM	Hexachlorobutadiene	0.2155	0.2255	4.6	*TM		
36	TM	Caprolactum	0.1600	0.1636	2.3	TM		
37	*TM	4-Chloro-3-methylphenol	0.3518	0.3620	2.9	*TM		
38	TM	2-Methylnaphthalene	0.7082	0.7203	1.7	TM		
39	TM	1-Methylnaphthalene	0.6806	0.7124	4.7	TM		
40	I	Acenaphthene-D10(IS)	ISTD			I		
		Average			5.0			

0
0

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 11/28/16
Matrix: 0 Instrument: Yoda
Cal. Date: 11/17/16
Data File: 1117Y139.D

		Compound	MEAN	CCRF	%D		%Drift
41	**TMQ	Hexachlorocyclopentadiene	0.1752	0.1874	7.0	**TMQ	8.3
42	TM	1,2,4,5-Tetrachlorobenzene	0.5418	0.5611	3.6	TM	
43	*TM	2,4,6-Trichlorophenol	0.3614	0.3551	1.7	*TM	
44	TM	2,4,5-Trichlorophenol	0.3828	0.3883	1.4	TM	
45	S	2-Fluorobiphenyl(S)	1.274	1.248	2.0	S	
46	TM	1,1'-Biphenyl	1.522	1.544	1.4	TM	
47	TM	2-Chloronaphthalene	1.192	1.220	2.3	TM	
48	TM	2-Nitroaniline	0.4228	0.4394	3.9	TM	
49	TM	Dimethyl phthalate	1.453	1.448	0.33	TM	
50	TM	2,6-DNT	0.3253	0.3263	0.32	TM	
51	TM	Acenaphthylene	1.860	1.857	0.19	TM	
52	TM	3-Nitroaniline	0.3375	0.3468	2.7	TM	
53	*TM	Acenaphthene	1.139	1.146	0.63	*TM	
54	**TML	2,4-Dinitrophenol	0.1425	0.1736	22	**TML	5.8
55	**TML	4-Nitrophenol	0.2428	0.2595	6.8	**TML	5.8
56	TM	Dibenzofuran	1.656	1.692	2.2	TM	
57	TM	2,4-DNT	0.4565	0.4692	2.8	TM	
58	TM	2,3,4,6-Tetrachlorophenol	0.2915	0.3059	5.0	TM	
59	TM	Diethyl phthalate	1.491	1.477	0.92	TM	
60	TM	4-Chlorophenyl phenyl ether	0.6772	0.6766	0.08	TM	
61	TM	Fluorene	1.365	1.354	0.83	TM	
62	TM	4-Nitroaniline	0.3174	0.3220	1.4	TM	
63	S	2,4,6-Tribromophenol(S)	0.1956	0.1934	1.1	S	
64	I	Phenanthrene-D10(IS)	ISTD			I	
65	TM	4,6-Dinitro-2-methylphenol	0.1416	0.1568	11	TM	
66	TM	Diphenyl amine	0.5459	0.5536	1.4	TM	
67	*TM	n-Nitrosodiphenylamine	0.5459	0.5536	1.4	*TM	
68	TM	1,2-Diphenylhydrazine	0.8965	0.8532	4.8	TM	
69	TM	4-Bromophenyl phenyl ether	0.2121	0.2189	3.2	TM	
70	TM	Hexachlorobenzene	0.2269	0.2359	4.0	TM	
71	TM	Atrazine	0.2209	0.2339	5.9	TM	
72	*TMQ	Pentachlorophenol	0.0660	0.0858	30	*TMQ	16
73	TM	Phenanthrene	1.108	1.138	2.7	TM	
74	TM	Anthracene	1.158	1.194	3.1	TM	
75	TM	Carbazol	1.016	1.049	3.3	TM	
76	TM	Di-n-butylphthalate	1.383	1.389	0.40	TM	
77	*TM	Fluoranthene	1.223	1.274	4.2	*TM	
78	I	Chrysene-D12(IS)	ISTD			I	
79	TM	Benzidine	0.4426	0.4633	4.7	TM	
80	TM	Pyrene	1.325	1.321	0.29	TM	
		Average			4.0		

0
0

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 11/28/16
Instrument: Yoda
Cal. Date: 11/17/16
Data File: 1117Y139.D

		Compound	MEAN	CCRF	%D		%Drift
81	S	Terphenyl-D14(S)	0.9081	0.8727	3.9	S	
82	TM	Butyl benzylphthalate	0.6676	0.6513	2.4	TM	
83	TM	3,3'-Dichlorobenzidine	0.4074	0.4399	8.0	TM	
84	TM	Benz (a) anthracene	1.268	1.262	0.51	TM	
85	TM	Bis (2-ethylhexyl) phthalate	0.9462	0.9276	2.0	TM	
86	TM	Chrysene	1.222	1.234	0.94	TM	
87	*TM	Di-n-octylphthalate	1.649	1.598	3.1	*TM	
88	I	Perylene-D12(IS)	ISTD			I	
89	TM	Benzo (b) fluoranthene	1.375	1.443	4.9	TM	
90	TM	Benzo (k) fluoranthene	1.282	1.256	2.0	TM	
91	*TM	Benzo (a) pyrene	1.270	1.285	1.2	*TM	
92	TM	Indeno (1,2,3-cd) pyrene	1.454	1.474	1.4	TM	
93	TM	Dibenz (a,h) anthracene	1.235	1.245	0.79	TM	
94	TM	Benzo (g,h,i) perylene	1.213	1.213	0.02	TM	
95							
96							
97							
98							
99							
100							
101							
102							
103							
104							
105							
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107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			2.4		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y139.D Vial: 39
Acq On : 28 Nov 16 21:26 Operator: MA
Sample : 50ug/ml SVOC 11/15/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Nov 29 8:55 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	137005	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.46	136	602961	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.47	164	369334	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.19	188	673860	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.28	240	677907	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.97	264	616110	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.55	112	444411	103.35562 ppb	0.00
Spiked Amount 200.000			Recovery =	51.678%	
5) Phenol-D6 (S)	4.67	99	608251	100.80981 ppb	0.00
Spiked Amount 200.000			Recovery =	50.405%	
21) Nitrobenzene-D5(S)	5.66	82	317469	50.27833 ppb	0.00
Spiked Amount 100.000			Recovery =	50.278%	
45) 2-Fluorobiphenyl(S)	7.70	172	576117	48.97771 ppb	0.00
Spiked Amount 100.000			Recovery =	48.978%	
63) 2,4,6-Tribromophenol(S)	9.39	330	178565	98.88728 ppb	0.00
Spiked Amount 200.000			Recovery =	49.444%	
81) Terphenyl-D14(S)	12.05	244	739521	48.05068 ppb	0.00
Spiked Amount 100.000			Recovery =	48.051%	
Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.87	42	197690	60.74912 ppb	99
3) Pyridine	1.88	79	400733	57.89165 ppb	85
6) Phenol	4.69	94	351376	51.40214 ppb	87
7) Aniline	4.68	66	368046	54.33962 ppb	96
8) Bis (2-chloroethyl) ether	4.75	63	163936	52.84819 ppb	93
9) 2-Chlorophenol	4.82	128	275627	52.21485 ppb	94
10) 1,3-DCB	4.97	146	295974	51.44154 ppb	97
11) 1,4-DCB	5.05	146	301274	51.21951 ppb	97
12) Benzyl alcohol	5.22	108	161517	54.97553 ppb	95
13) 1,2-DCB	5.22	146	287158	52.52425 ppb	98
14) 2-Methylphenol	5.36	107	210394	52.27398 ppb	93
15) Bis (2-chloroisopropyl) et	5.34	45	325290	52.92068 ppb	91
16) Acetophenone	5.50	105	384278	51.08514 ppb	94
17) 3&4-Methylphenol	5.52	107	552714	104.07832 ppb	99
18) n-Nitrosodi-n-propylamine	5.50	70	206025	52.94378 ppb	92
19) Hexachloroethane	5.58	117	127090	51.99954 ppb	91
22) Nitrobenzene	5.69	77	323736	49.98645 ppb	95
23) Isophorone	5.95	82	540296	50.55573 ppb	97
24) 2-Nitrophenol	6.04	139	156662	51.06463 ppb	92
25) 2,4-Dimethylphenol	6.11	122	250595	52.31965 ppb	92
26) Benzoic acid	6.29	105	195132	51.50898 ppb	94
27) Bis (2-chloroethoxy) metha	6.19	93	286151	50.42353 ppb	98
28) 2,4-Dichlorophenol	6.33	162	236051	51.46766 ppb	99
29) 1,2,4-Trichlorobenzene	6.40	180	264935	52.03852 ppb	98
30) 3,4-Dimethylphenol	6.44	107	382886	50.15872 ppb	99
31) Naphthalene	6.48	128	798089	50.36023 ppb	99
32) 4-Chloroaniline	6.56	127	306727	54.22633 ppb	95
33) 2,6-Dichlorophenol	6.57	162	232415	52.01576 ppb	93
34) Hexachloropropene	6.57	213	212139	52.37723 ppb	98
35) Hexachlorobutadiene	6.62	225	169926	52.30678 ppb	97
36) Caprolactum	6.99	55	123331	51.15015 ppb	97
37) 4-Chloro-3-methylphenol	7.15	107	272826	51.44936 ppb	91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y139.D Vial: 39
Acq On : 28 Nov 16 21:26 Operator: MA
Sample : 50ug/ml SVOC 11/15/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Nov 29 8:55 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	2-Methylnaphthalene	7.27	142	542925	50.85951 ppb		99
39)	1-Methylnaphthalene	7.38	142	536944	52.33506 ppb		100
41)	Hexachlorocyclopentadiene	7.45	237	86513	45.83009 ppb		95
42)	1,2,4,5-Tetrachlorobenzene	7.46	216	259050	51.78406 ppb		99
43)	2,4,6-Trichlorophenol	7.62	196	163958	49.13109 ppb		92
44)	2,4,5-Trichlorophenol	7.69	196	179264	50.72265 ppb		99
46)	1,1'-Biphenyl	7.81	154	712767	50.72285 ppb		99
47)	2-Chloronaphthalene	7.84	162	563187	51.17346 ppb		92
48)	2-Nitroaniline	7.97	65	202871	51.96234 ppb		93
49)	Dimethyl phthalate	8.17	163	668540	49.83459 ppb		98
50)	2,6-DNT	8.25	165	150652	50.15975 ppb		82
51)	Acenaphthylene	8.31	152	857095	49.90739 ppb		99
52)	3-Nitroaniline	8.46	138	160095	51.36669 ppb		87
53)	Acenaphthene	8.50	154	529136	50.31475 ppb		98
54)	2,4-Dinitrophenol	8.61	184	80153	52.89462 ppb		97
55)	4-Nitrophenol	8.73	65	119782	47.12088 ppb		82
56)	Dibenzofuran	8.71	168	781002	51.09002 ppb		97
57)	2,4-DNT	8.74	165	216601	51.38674 ppb		78
58)	2,3,4,6-Tetrachlorophenol	8.87	232	141240	52.48314 ppb		94
59)	Diethyl phthalate	8.99	149	681966	49.54167 ppb		99
60)	4-Chlorophenyl phenyl ethe	9.11	204	312387	49.96158 ppb		95
61)	Fluorene	9.11	166	625166	49.58567 ppb		99
62)	4-Nitroaniline	9.17	138	148640	50.72094 ppb		93
65)	4,6-Dinitro-2-methylphenol	9.22	198	132112	55.37896 ppb	#	75
66)	Diphenyl amine	9.26	169	932629	101.41091 ppb		99
67)	n-Nitrosodiphenylamine	9.26	169	932629	101.41091 ppb		99
68)	1,2-Diphenylhydrazine	9.29	77	718702	47.58703 ppb		98
69)	4-Bromophenyl phenyl ether	9.67	248	184423	51.61384 ppb		93
70)	Hexachlorobenzene	9.76	284	198726	51.98466 ppb		93
71)	Atrazine	9.89	200	98507	26.46527 ppb		97
72)	Pentachlorophenol	10.01	266	72264	57.79147 ppb		96
73)	Phenanthrene	10.22	178	958235	51.33383 ppb		99
74)	Anthracene	10.29	178	1005464	51.53773 ppb		99
75)	Carbazol	10.49	167	883312	51.63184 ppb		94
76)	Di-n-butylphthalate	10.88	149	1169586	50.20001 ppb		99
77)	Fluoranthene	11.61	202	1073193	52.08965 ppb		97
79)	Benzidine	11.78	184	392602	52.33711 ppb		100
80)	Pyrene	11.87	202	1119518	49.85514 ppb		99
82)	Butyl benzylphthalate	12.63	149	551895	48.77730 ppb		96
83)	3,3'-Dichlorobenzidine	13.25	252	372735	53.98219 ppb	#	97
84)	Benz (a) anthracene	13.27	228	1069203	49.74495 ppb		99
85)	Bis (2-ethylhexyl) phthala	13.28	149	786022	49.01711 ppb		99
86)	Chrysene	13.31	228	1045440	50.46833 ppb		100
87)	Di-n-octylphthalate	14.00	149	1354319	48.45737 ppb		99
89)	Benzo (b) fluoranthene	14.49	252	1111076	52.46140 ppb		99
90)	Benzo (k) fluoranthene	14.53	252	967322	48.99169 ppb		99
91)	Benzo (a) pyrene	14.91	252	989387	50.57681 ppb		99
92)	Indeno (1,2,3-cd) pyrene	16.65	276	1135167	50.67726 ppb		95
93)	Dibenz (a,h) anthracene	16.65	278	958475	50.39451 ppb		99
94)	Benzo (g,h,i) perylene	17.13	276	934345	49.99159 ppb		97

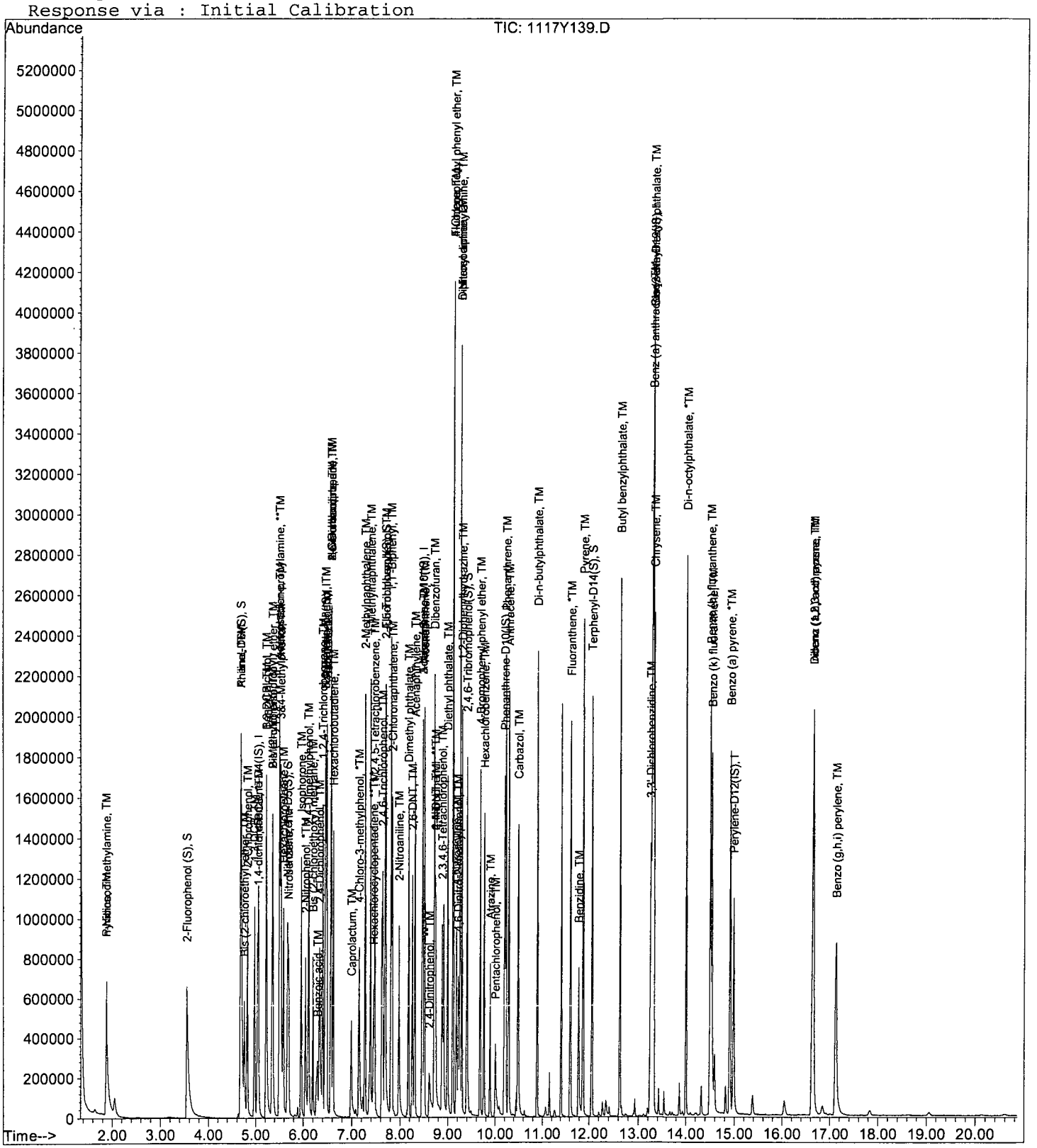
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y139.D Vial: 39
Acq On : 28 Nov 16 21:26 Operator: MA
Sample : 50ug/ml SVOC 11/15/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Nov 29 8:55 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration



ORGANICS

Raw Data

APPL, INC.

Method Blank
EPA 8270D WATER

Blank Name/QCG: **161117W-45866 - 214093**
Batch ID: #87DC5-161117A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	11/17/16	11/28/16
BLANK	SURROGATE: 2,4,6-TRIBROMOP	67.7	43-140			%	11/17/16	11/28/16
BLANK	SURROGATE: 2-FLUORBIPHENY	64.9	44-119			%	11/17/16	11/28/16
BLANK	SURROGATE: 2-FLUOROPHENO	48.9	19-119			%	11/17/16	11/28/16
BLANK	SURROGATE: NITROBENZENE-	65.4	44-120			%	11/17/16	11/28/16
BLANK	SURROGATE: PHENOL-D6 (S)	29.6	10-115			%	11/17/16	11/28/16
BLANK	SURROGATE: TERPHENYL-D14 (	68.4	50-134			%	11/17/16	11/28/16

Quant Method:Y1117.M
Run #:1117Y117
Instrument:Yoda
Sequence:Y161117
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 11/29/16 12:38:34 PM

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y117.D Vial: 17
Acq On : 28 Nov 16 11:11 Operator: MA
Sample : 161117A BLK 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Nov 28 12:08 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	157544	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.46	136	722959	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.47	164	436863	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.19	188	810106	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.27	240	800344	40.00000 ppb	-0.02
88) Perylene-D12(IS)	14.97	264	749060	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.54	112	483438	97.77428 ppb	0.00
Spiked Amount 200.000			Recovery =	48.887%	
5) Phenol-D6 (S)	4.68	99	411214	59.26829 ppb	0.00
Spiked Amount 200.000			Recovery =	29.634%	
21) Nitrobenzene-D5(S)	5.66	82	495059	65.39010 ppb	0.00
Spiked Amount 100.000			Recovery =	65.390%	
45) 2-Fluorobiphenyl(S)	7.69	172	902530	64.86694 ppb	0.00
Spiked Amount 100.000			Recovery =	64.867%	
63) 2,4,6-Tribromophenol(S)	9.39	330	289312	135.45173 ppb	0.00
Spiked Amount 200.000			Recovery =	67.726%	
81) Terphenyl-D14(S)	12.06	244	1242220	68.36612 ppb	0.00
Spiked Amount 100.000			Recovery =	68.366%	

Target Compounds Qvalue

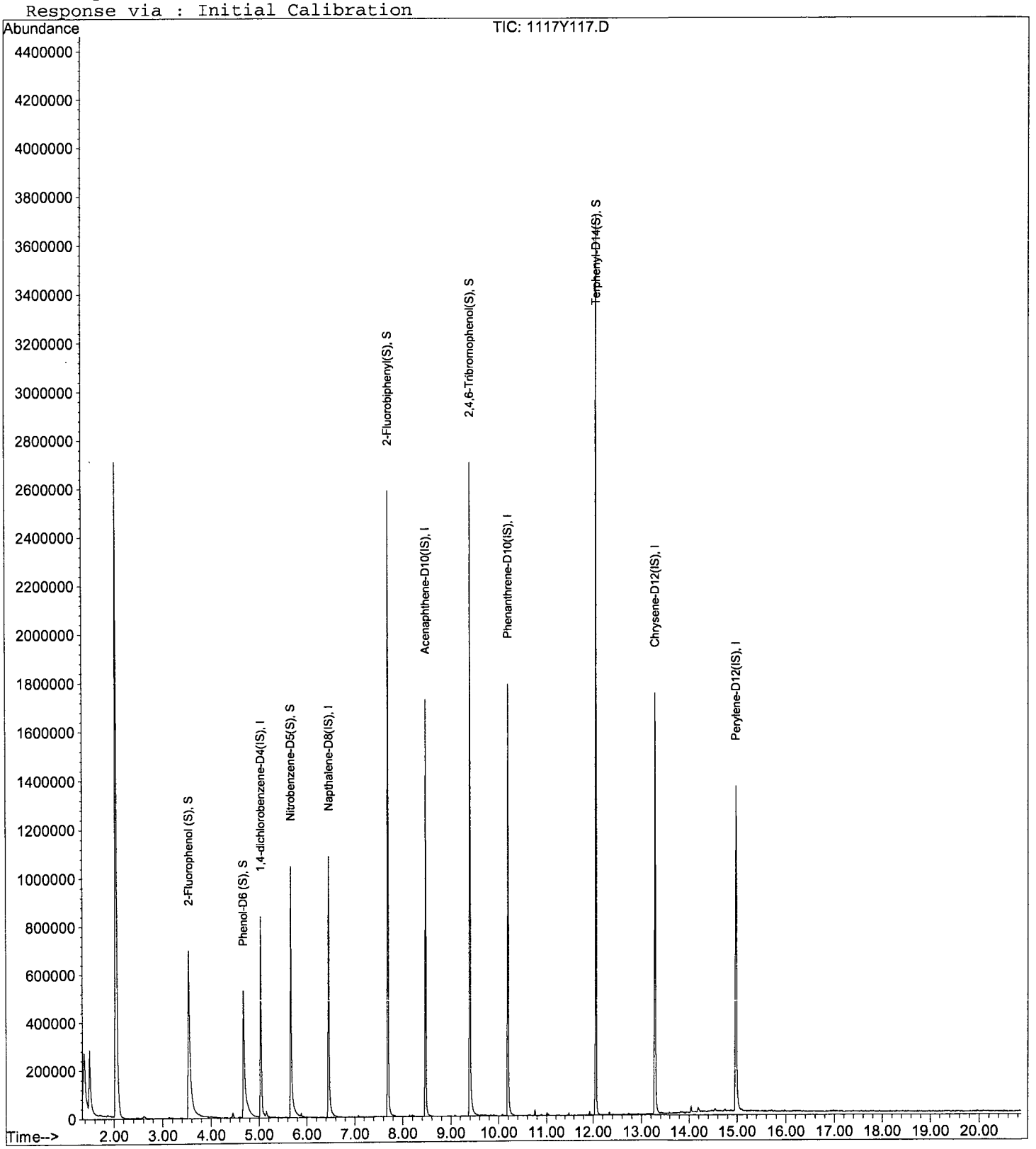
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y117.D Vial: 17
Acq On : 28 Nov 16 11:11 Operator: MA
Sample : 161117A BLK 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Nov 28 12:08 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration



Laboratory Control Spike Recovery
EPA 8270D WATER

APPL ID: **161117W-45866 LCS - 214093**
Batch ID: #87DC5-161117A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
PHENOL	50.0	17.7	35.4	10-115
SURROGATE: 2,4,6-TRIBROMOPHENOL	200	146	73.0	43-140
SURROGATE: 2-FLUORBIPHENYL (S)	100	69.1	69.1	44-119
SURROGATE: 2-FLUOROPHENOL (S)	200	93.6	46.8	19-119
SURROGATE: NITROBENZENE-D5 (S)	100	68.6	68.6	44-120
SURROGATE: PHENOL-D6 (S)	200	56.2	28.1	10-115
SURROGATE: TERPHENYL-D14 (S)	100	71.8	71.8	50-134

Comments: _____

Primary	SPK
Quant Method :	Y1117.M
Extraction Date :	11/17/16
Analysis Date :	11/28/16
Instrument :	Yoda
Run :	1117Y118
Initials :	MA

Printed: 11/29/16 12:38:35 PM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y118.D Vial: 18
Acq On : 28 Nov 16 11:41 Operator: MA
Sample : 161117A LCS-1 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Nov 28 12:09 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	160801	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.45	136	707138	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.47	164	427668	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.19	188	803473	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.28	240	803295	40.00000 ppb		-0.02
88) Perylene-D12(IS)	14.97	264	735927	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.54	112	472539	93.63423 ppb		0.00
Spiked Amount 200.000			Recovery =	46.817%		
5) Phenol-D6 (S)	4.67	99	397874	56.18407 ppb		0.00
Spiked Amount 200.000			Recovery =	28.092%		
21) Nitrobenzene-D5(S)	5.66	82	507938	68.59228 ppb		0.00
Spiked Amount 100.000			Recovery =	68.592%		
45) 2-Fluorobiphenyl(S)	7.70	172	940616	69.05779 ppb		0.00
Spiked Amount 100.000			Recovery =	69.058%		
63) 2,4,6-Tribromophenol(S)	9.40	330	305897	146.29579 ppb		0.00
Spiked Amount 200.000			Recovery =	73.148%		
81) Terphenyl-D14(S)	12.06	244	1309649	71.81232 ppb		0.00
Spiked Amount 100.000			Recovery =	71.812%		
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.87	42	102235	26.76718 ppb		93
3) Pyridine	1.88	79	175430	21.59297 ppb		89
6) Phenol	4.69	94	141622	17.65174 ppb	#	40
7) Aniline	4.68	66	200529	25.22547 ppb	#	61
8) Bis (2-chloroethyl) ether	4.75	63	123829	34.01150 ppb		88
9) 2-Chlorophenol	4.82	128	209530	33.81942 ppb		90
10) 1,3-DCB	4.97	146	165767	24.54744 ppb		96
11) 1,4-DCB	5.05	146	180539	26.15125 ppb		96
12) Benzyl alcohol	5.22	108	120089	34.82588 ppb		98
13) 1,2-DCB	5.22	146	171060	26.65846 ppb		98
14) 2-Methylphenol	5.36	107	145788	30.86183 ppb		92
15) Bis (2-chloroisopropyl) et	5.35	45	243201	33.71070 ppb	#	69
16) Acetophenone	5.50	105	313695	35.53075 ppb		98
17) 3&4-Methylphenol	5.52	107	365166	58.58653 ppb		97
18) n-Nitrosodi-n-propylamine	5.50	70	166631	36.48367 ppb		97
19) Hexachloroethane	5.58	117	63137	22.00999 ppb		94
22) Nitrobenzene	5.68	77	261353	34.40914 ppb		96
23) Isophorone	5.95	82	437259	34.88691 ppb		98
24) 2-Nitrophenol	6.04	139	125949	35.00550 ppb		93
25) 2,4-Dimethylphenol	6.10	122	175712	31.28087 ppb		97
26) Benzoic acid	6.27	105	47670	14.31599 ppb		95
27) Bis (2-chloroethoxy) metha	6.19	93	233057	35.01750 ppb		99
28) 2,4-Dichlorophenol	6.33	162	186939	34.75470 ppb		100
29) 1,2,4-Trichlorobenzene	6.40	180	171103	28.65684 ppb		98
30) 3,4-Dimethylphenol	6.44	107	299855	33.49449 ppb		98
31) Naphthalene	6.48	128	608443	32.73719 ppb		99
32) 4-Chloroaniline	6.56	127	275619	41.54822 ppb		98
33) 2,6-Dichlorophenol	6.56	162	180271	34.40185 ppb		97
34) Hexachloropropene	6.57	213	108064	22.75035 ppb		98
35) Hexachlorobutadiene	6.62	225	89445	23.47682 ppb		98
36) Caprolactum	6.97	55	38015	13.44357 ppb		96
37) 4-Chloro-3-methylphenol	7.14	107	230448	37.05546 ppb		93

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y118.D Vial: 18
Acq On : 28 Nov 16 11:41 Operator: MA
Sample : 161117A LCS-1 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Nov 28 12:09 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.27	142	414151	33.08081	ppb		98
39)	1-Methylnaphthalene	7.38	142	404870	33.64839	ppb		95
41)	Hexachlorocyclopentadiene	7.45	237	24839	17.71585	ppb		95
42)	1,2,4,5-Tetrachlorobenzene	7.46	216	191083	32.98732	ppb		98
43)	2,4,6-Trichlorophenol	7.61	196	134045	34.68861	ppb		96
44)	2,4,5-Trichlorophenol	7.68	196	141745	34.63611	ppb		97
46)	1,1'-Biphenyl	7.81	154	567195	34.85788	ppb		99
47)	2-Chloronaphthalene	7.84	162	418448	32.83569	ppb		93
48)	2-Nitroaniline	7.97	65	168432	37.25683	ppb		97
49)	Dimethyl phthalate	8.17	163	567777	36.55054	ppb		98
50)	2,6-DNT	8.25	165	125489	36.08267	ppb		87
51)	Acenaphthylene	8.31	152	706936	35.54909	ppb		97
52)	3-Nitroaniline	8.46	138	138265	38.31145	ppb		88
53)	Acenaphthene	8.50	154	431586	35.44116	ppb		98
54)	2,4-Dinitrophenol	8.62	184	52322	33.33219	ppb	#	60
55)	4-Nitrophenol	8.73	65	14475	11.36886	ppb	#	10
56)	Dibenzofuran	8.71	168	639329	36.11777	ppb		98
57)	2,4-DNT	8.74	165	177356	36.33700	ppb	#	74
58)	2,3,4,6-Tetrachlorophenol	8.88	232	106980	34.33027	ppb		95
59)	Diethyl phthalate	8.99	149	594964	37.32598	ppb		99
60)	4-Chlorophenyl phenyl ethe	9.11	204	260355	35.96016	ppb		94
61)	Fluorene	9.11	166	523418	35.85272	ppb		99
62)	4-Nitroaniline	9.17	138	133923	39.46566	ppb		98
65)	4,6-Dinitro-2-methylphenol	9.22	198	107127	37.66170	ppb	#	77
66)	Diphenyl amine	9.26	169	824482	75.18917	ppb		99
67)	n-Nitrosodiphenylamine	9.26	169	824482	75.18917	ppb		99
68)	1,2-Diphenylhydrazine	9.29	77	582277	32.33462	ppb		97
69)	4-Bromophenyl phenyl ether	9.67	248	152731	35.84897	ppb		95
70)	Hexachlorobenzene	9.76	284	160799	35.27786	ppb		97
71)	Atrazine	9.89	200	84315	18.99820	ppb		99
72)	Pentachlorophenol	10.01	266	50770	38.55866	ppb		95
73)	Phenanthrene	10.22	178	805464	36.18897	ppb		99
74)	Anthracene	10.29	178	838056	36.02717	ppb		99
75)	Carbazol	10.49	167	747294	36.63476	ppb		97
76)	Di-n-butylphthalate	10.88	149	998141	35.93039	ppb		99
77)	Fluoranthene	11.60	202	906283	36.89231	ppb		99
79)	Benzidine	11.79	184	88711	9.97998	ppb		94
80)	Pyrene	11.87	202	945238	35.52345	ppb		99
82)	Butyl benzylphthalate	12.63	149	464263	34.62745	ppb		96
83)	3,3'-Dichlorobenzidine	13.24	252	305223	37.30462	ppb		95
84)	Benz (a) anthracene	13.27	228	909429	35.70694	ppb		100
85)	Bis (2-ethylhexyl) phthala	13.28	149	688039	36.20938	ppb		100
86)	Chrysene	13.31	228	887040	36.13750	ppb		98
87)	Di-n-octylphthalate	14.00	149	1151813	34.77890	ppb		99
89)	Benzo (b) fluoranthene	14.49	252	1009317	39.89764	ppb		100
90)	Benzo (k) fluoranthene	14.52	252	773306	32.78886	ppb	#	96
91)	Benzo (a) pyrene	14.90	252	854506	36.56991	ppb	#	97
92)	Indeno (1,2,3-cd) pyrene	16.64	276	997664	37.28732	ppb		99
93)	Dibenz (a,h) anthracene	16.65	278	827719	36.43417	ppb		97
94)	Benzo (g,h,i) perylene	17.12	276	832023	37.26907	ppb		96

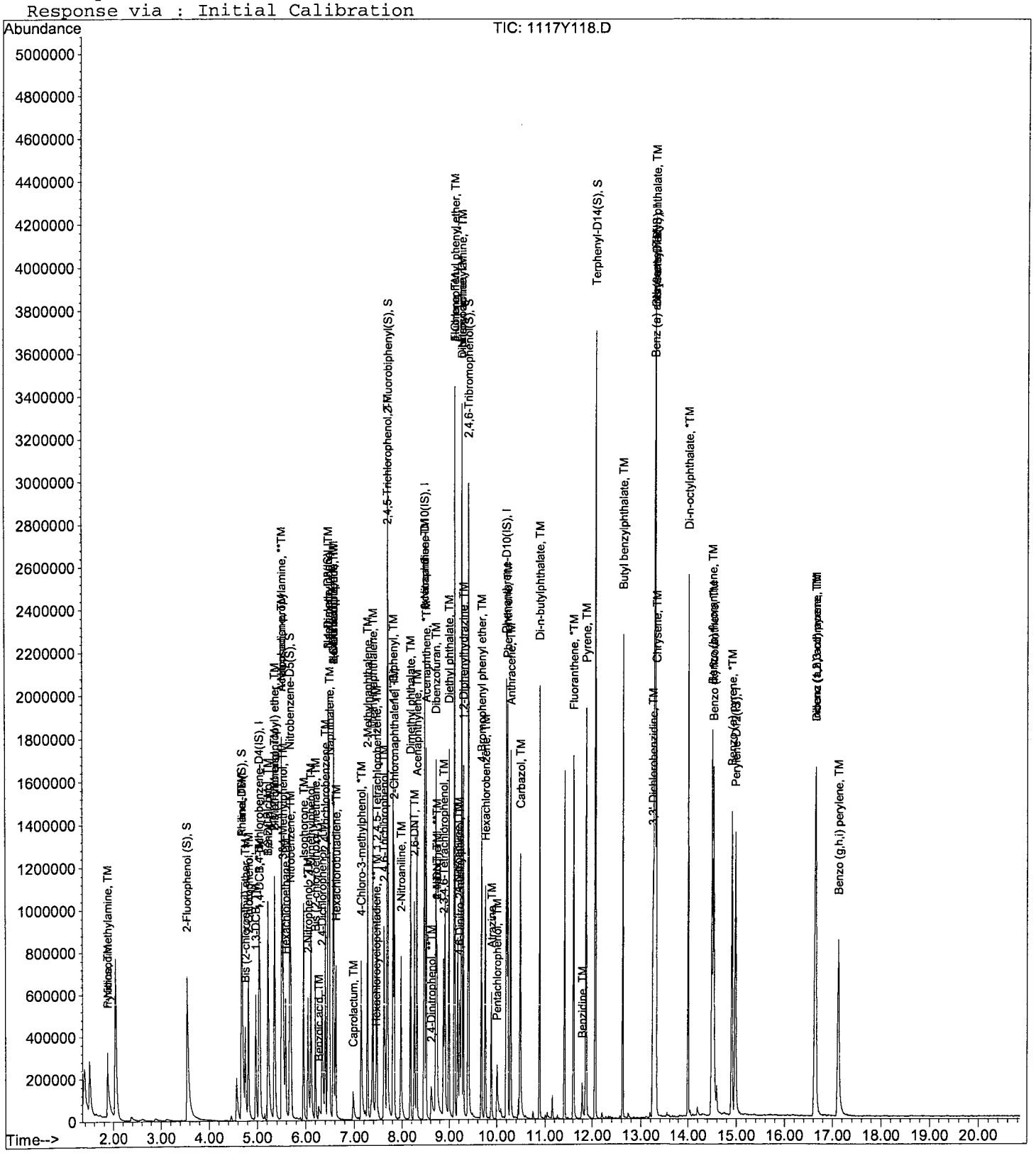
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y118.D Vial: 18
Acq On : 28 Nov 16 11:41 Operator: MA
Sample : 161117A LCS-1 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Nov 28 12:09 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration



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Matrix Spike Recoveries

EPA 8270D WATER

APPL ID: **161117W-45866 MS - 214093**
Batch ID: #87DC5-161117A
Sample ID: AZ45866
Client ID: ERH115

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
PHENOL	50.0	ND	16.6	15.5	33.2	31.0	10-115	6.9	20
SURROGATE: 2,4,6-TRIBROMOPHENOL	200	NA	138	131	69.0	65.5	43-140		
SURROGATE: 2-FLUORBIPHENYL (S)	100	NA	67.1	62.5	67.1	62.5	44-119		
SURROGATE: 2-FLUOROPHENOL (S)	200	NA	87.5	80.3	43.8	40.1	19-119		
SURROGATE: NITROBENZENE-D5 (S)	100	NA	64.6	61.3	64.6	61.3	44-120		
SURROGATE: PHENOL-D6 (S)	200	NA	52.6	47.6	26.3	23.8	10-115		
SURROGATE: TERPHENYL-D14 (S)	100	NA	67.4	60.9	67.4	60.9	50-134		

Comments: _____

Primary	SPK	DUP
Quant Method :	Y1117.M	Y1117.M
Extraction Date :	11/17/16	11/17/16
Analysis Date :	11/28/16	11/28/16
Instrument :	Yoda	Yoda
Run :	1117Y120	1117Y121
Initials :	MA	

Printed: 11/29/16 12:38:44 PM
APPL MSD SCII

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y120.D Vial: 20
Acq On : 28 Nov 16 12:40 Operator: MA
Sample : AZ45866W32 MS-1 1/1050 Inst : Yoda
Misc : water Multiplr: 0.95

Quant Time: Nov 28 13:18 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	159649	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.45	136	724521	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.47	164	435008	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.19	188	825885	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.28	240	808248	40.00000 ppb		-0.02
88) Perylene-D12(IS)	14.97	264	762823	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.54	112	460242	87.48156 ppb		0.00
Spiked Amount 190.476			Recovery = 45.928%			
5) Phenol-D6 (S)	4.67	99	388011	52.55874 ppb		0.00
Spiked Amount 190.476			Recovery = 27.593%			
21) Nitrobenzene-D5(S)	5.66	82	514949	64.63871 ppb		0.00
Spiked Amount 95.238			Recovery = 67.871%			
45) 2-Fluorobiphenyl(S)	7.70	172	976332	67.11476 ppb		0.00
Spiked Amount 95.238			Recovery = 70.471%			
63) 2,4,6-Tribromophenol(S)	9.40	330	307112	137.52246 ppb		0.00
Spiked Amount 190.476			Recovery = 72.199%			
81) Terphenyl-D14(S)	12.06	244	1298034	67.37073 ppb		0.00
Spiked Amount 95.238			Recovery = 70.740%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.86	42	121076	30.40845 ppb		75
3) Pyridine	1.88	79	165908	19.58886 ppb		87
6) Phenol	4.69	94	139029	16.62246 ppb	#	42
7) Aniline	4.68	66	198898	24.00081 ppb	#	66
8) Bis (2-chloroethyl) ether	4.75	63	127422	33.57230 ppb		88
9) 2-Chlorophenol	4.82	128	218581	33.84275 ppb		90
10) 1,3-DCB	4.97	146	192586	27.35685 ppb		97
11) 1,4-DCB	5.05	146	199710	27.74946 ppb		94
12) Benzyl alcohol	5.22	108	123711	34.41442 ppb		94
13) 1,2-DCB	5.22	146	193216	28.88438 ppb		97
14) 2-Methylphenol	5.36	107	146670	29.78341 ppb		92
15) Bis (2-chloroisopropyl) et	5.34	45	250991	33.37289 ppb		94
16) Acetophenone	5.50	105	312036	33.90273 ppb		96
17) 3&4-Methylphenol	5.52	107	359565	55.33732 ppb		98
18) n-Nitrosodi-n-propylamine	5.50	70	164610	34.57261 ppb		97
19) Hexachloroethane	5.58	117	74818	25.01930 ppb		97
22) Nitrobenzene	5.68	77	261854	32.04568 ppb		96
23) Isophorone	5.95	82	437587	32.45279 ppb		100
24) 2-Nitrophenol	6.04	139	126539	32.69112 ppb		88
25) 2,4-Dimethylphenol	6.10	122	175685	29.07208 ppb		95
26) Benzoic acid	6.27	105	45370	13.00452 ppb		96
27) Bis (2-chloroethoxy) metha	6.19	93	232427	32.46187 ppb		99
28) 2,4-Dichlorophenol	6.33	162	190172	32.86428 ppb		98
29) 1,2,4-Trichlorobenzene	6.40	180	190011	29.58103 ppb		98
30) 3,4-Dimethylphenol	6.44	107	303240	31.48563 ppb		98
31) Naphthalene	6.48	128	628016	31.40914 ppb		99
32) 4-Chloroaniline	6.56	127	277088	38.82620 ppb		96
33) 2,6-Dichlorophenol	6.57	162	189904	33.68635 ppb		94
34) Hexachloropropene	6.57	213	137943	26.99421 ppb		99
35) Hexachlorobutadiene	6.62	225	107357	26.19253 ppb		98
36) Caprolactum	6.97	55	36239	11.91242 ppb		94
37) 4-Chloro-3-methylphenol	7.14	107	223273	33.37178 ppb		90

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y120.D Vial: 20
Acq On : 28 Nov 16 12:40 Operator: MA
Sample : AZ45866W32 MS-1 1/1050 Inst : Yoda
Misc : water Multiplr: 0.95

Quant Time: Nov 28 13:18 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38) 2-Methylnaphthalene	7.27	142	425537	31.59502 ppb		99
39) 1-Methylnaphthalene	7.38	142	421758	32.58187 ppb		97
41) Hexachlorocyclopentadiene	7.45	237	28518	18.19297 ppb		92
42) 1,2,4,5-Tetrachlorobenzene	7.46	216	206617	33.39730 ppb		99
43) 2,4,6-Trichlorophenol	7.61	196	134339	32.55057 ppb		96
44) 2,4,5-Trichlorophenol	7.68	196	136803	31.29949 ppb		92
46) 1,1'-Biphenyl	7.81	154	577329	33.22096 ppb		99
47) 2-Chloronaphthalene	7.84	162	443305	32.57073 ppb		93
48) 2-Nitroaniline	7.97	65	166901	34.56690 ppb		95
49) Dimethyl phthalate	8.17	163	559221	33.70697 ppb		99
50) 2,6-DNT	8.25	165	128066	34.47840 ppb		93
51) Acenaphthylene	8.31	152	708543	33.36068 ppb		99
52) 3-Nitroaniline	8.46	138	140643	36.48839 ppb		93
53) Acenaphthene	8.50	154	436608	33.57009 ppb		99
54) 2,4-Dinitrophenol	8.62	184	55757	32.89259 ppb		92
55) 4-Nitrophenol	8.73	65	14059	10.64844 ppb	#	13
56) Dibenzofuran	8.71	168	640841	33.89745 ppb		97
57) 2,4-DNT	8.74	165	180950	34.71219 ppb	#	71
58) 2,3,4,6-Tetrachlorophenol	8.88	232	108781	32.68495 ppb		94
59) Diethyl phthalate	8.99	149	586352	34.44285 ppb		99
60) 4-Chlorophenyl phenyl ethe	9.11	204	260855	33.73457 ppb		97
61) Fluorene	9.11	166	517537	33.19212 ppb		99
62) 4-Nitroaniline	9.17	138	127648	35.22073 ppb		95
65) 4,6-Dinitro-2-methylphenol	9.22	198	103710	33.78190 ppb	#	73
66) Diphenyl amine	9.26	169	838643	70.86205 ppb		99
67) n-Nitrosodiphenylamine	9.26	169	838643	70.86205 ppb		99
68) 1,2-Diphenylhydrazine	9.29	77	586387	30.17067 ppb		98
69) 4-Bromophenyl phenyl ether	9.67	248	151694	32.98985 ppb		92
70) Hexachlorobenzene	9.76	284	162284	32.98808 ppb		97
71) Atrazine	9.89	200	82856	17.29793 ppb		98
72) Pentachlorophenol	10.01	266	51855	36.54048 ppb		95
73) Phenanthrene	10.22	178	796343	33.15070 ppb		100
74) Anthracene	10.29	178	834957	33.25705 ppb		100
75) Carbazol	10.49	167	742707	33.73508 ppb		97
76) Di-n-butylphthalate	10.88	149	995313	33.19649 ppb		99
77) Fluoranthene	11.60	202	896798	33.82432 ppb		99
79) Benzidine	11.79	184	77325	8.23405 ppb	#	98
80) Pyrene	11.87	202	943041	33.54638 ppb		100
82) Butyl benzylphthalate	12.63	149	466400	32.92730 ppb		99
83) 3,3'-Dichlorobenzidine	13.24	252	318555	36.85284 ppb		96
84) Benz (a) anthracene	13.27	228	897469	33.35373 ppb		99
85) Bis (2-ethylhexyl) phthala	13.28	149	681811	33.96356 ppb		99
86) Chrysene	13.31	228	885771	34.15682 ppb		97
87) Di-n-octylphthalate	14.00	149	1155894	33.03642 ppb		98
89) Benzo (b) fluoranthene	14.49	252	984025	35.73941 ppb		99
90) Benzo (k) fluoranthene	14.52	252	785180	30.58904 ppb	#	98
91) Benzo (a) pyrene	14.91	252	844791	33.21848 ppb		100
92) Indeno (1,2,3-cd) pyrene	16.63	276	975290	33.49132 ppb		98
93) Dibenz (a,h) anthracene	16.65	278	818986	33.12258 ppb		97
94) Benzo (g,h,i) perylene	17.12	276	813108	33.46441 ppb		97

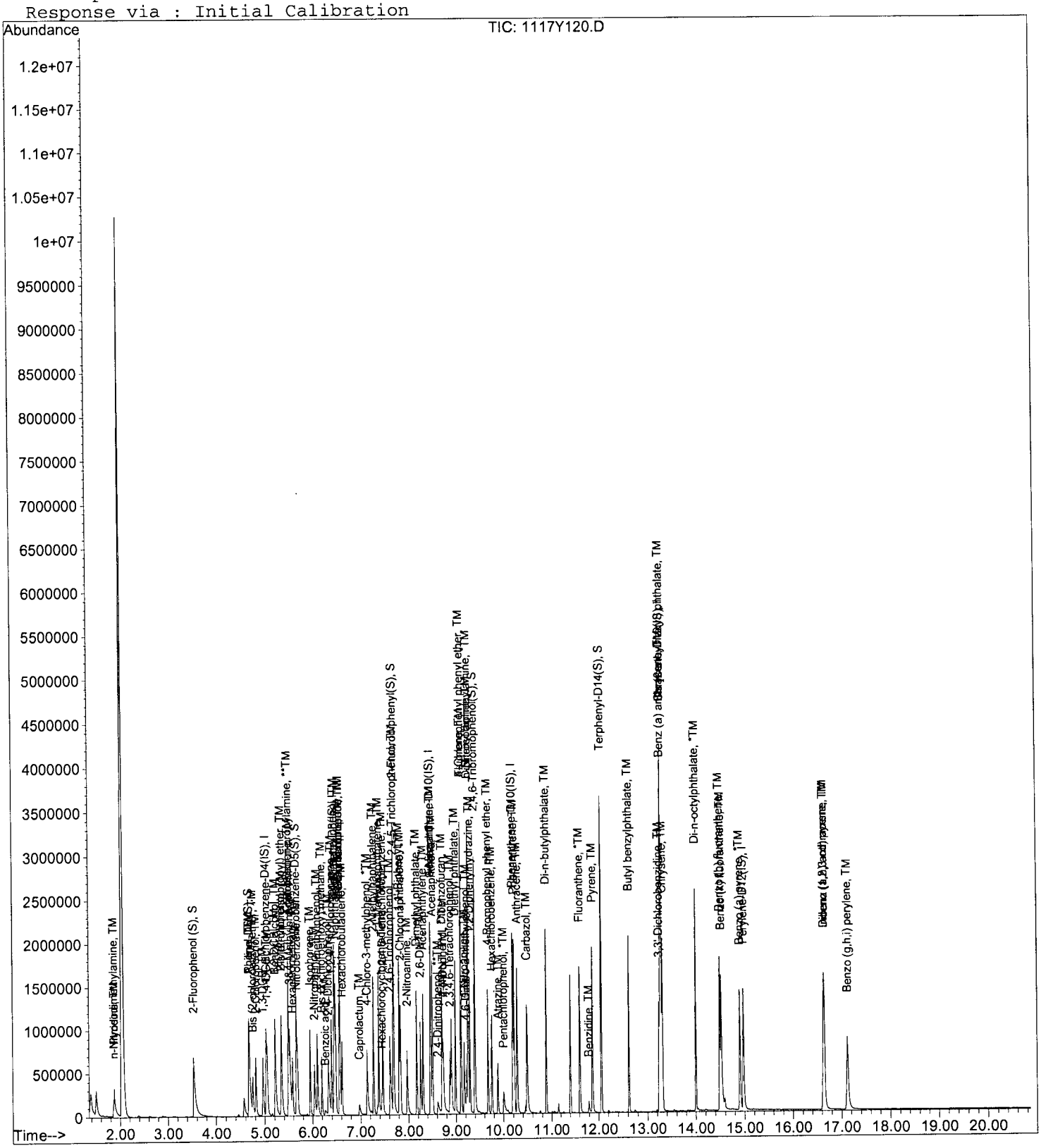
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y120.D Vial: 20
Acq On : 28 Nov 16 12:40 Operator: MA
Sample : AZ45866W32 MS-1 1/1050 Inst : Yoda
Misc : water Multiplr: 0.95

Quant Time: Nov 28 13:18 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y121.D Vial: 21
Acq On : 28 Nov 16 13:10 Operator: MA
Sample : AZ45866W21 MSD-1 1/1050 Inst : Yoda
Misc : water Multiplr: 0.95

Quant Time: Nov 28 13:34 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	161673	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.46	136	715817	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.47	164	424411	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.20	188	801452	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.28	240	788994	40.00000 ppb		0.00
88) Perylene-D12(IS)	14.97	264	749030	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.53	112	427777	80.29276 ppb		0.00
Spiked Amount 190.476			Recovery = 42.154%			
5) Phenol-D6 (S)	4.67	99	356002	47.61919 ppb		0.00
Spiked Amount 190.476			Recovery = 25.000%			
21) Nitrobenzene-D5(S)	5.66	82	482204	61.26441 ppb		0.00
Spiked Amount 95.238			Recovery = 64.327%			
45) 2-Fluorobiphenyl(S)	7.69	172	886670	62.47312 ppb		0.00
Spiked Amount 95.238			Recovery = 65.597%			
63) 2,4,6-Tribromophenol(S)	9.40	330	286289	131.39902 ppb		0.00
Spiked Amount 190.476			Recovery = 68.984%			
81) Terphenyl-D14(S)	12.06	244	1145153	60.88631 ppb		0.00
Spiked Amount 95.238			Recovery = 63.930%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.86	42	99667	24.71817 ppb		98
3) Pyridine	1.87	79	193323	22.54001 ppb		84
6) Phenol	4.69	94	130958	15.46147 ppb	#	22
7) Aniline	4.68	66	203559	24.25573 ppb	#	56
8) Bis (2-chloroethyl) ether	4.75	63	121891	31.71298 ppb		91
9) 2-Chlorophenol	4.82	128	201686	30.83597 ppb		94
10) 1,3-DCB	4.96	146	179224	25.14005 ppb		99
11) 1,4-DCB	5.05	146	190625	26.15552 ppb		96
12) Benzyl alcohol	5.21	108	117299	32.22220 ppb		98
13) 1,2-DCB	5.22	146	182707	26.97142 ppb		96
14) 2-Methylphenol	5.35	107	141914	28.45687 ppb		94
15) Bis (2-chloroisopropyl) et	5.34	45	237951	31.24294 ppb	#	83
16) Acetophenone	5.49	105	296111	31.76971 ppb		92
17) 3&4-Methylphenol	5.52	107	337015	51.21754 ppb		98
18) n-Nitrosodi-n-propylamine	5.49	70	155106	32.16868 ppb		94
19) Hexachloroethane	5.59	117	69844	23.06359 ppb		79
22) Nitrobenzene	5.69	77	247912	30.70837 ppb		97
23) Isophorone	5.95	82	411244	30.86997 ppb		99
24) 2-Nitrophenol	6.04	139	120650	31.54872 ppb		85
25) 2,4-Dimethylphenol	6.11	122	168069	28.14997 ppb		96
26) Benzoic acid	6.26	105	42326	12.54640 ppb		96
27) Bis (2-chloroethoxy) metha	6.20	93	224801	31.77855 ppb		99
28) 2,4-Dichlorophenol	6.34	162	178127	31.15704 ppb		96
29) 1,2,4-Trichlorobenzene	6.40	180	178541	28.13335 ppb		98
30) 3,4-Dimethylphenol	6.45	107	292891	30.78088 ppb		99
31) Naphthalene	6.48	128	592837	30.01025 ppb		100
32) 4-Chloroaniline	6.56	127	278595	39.51204 ppb		95
33) 2,6-Dichlorophenol	6.57	162	176375	31.66692 ppb		95
34) Hexachloropropene	6.58	213	125604	24.87845 ppb		98
35) Hexachlorobutadiene	6.62	225	98071	24.21791 ppb		97
36) Caprolactum	6.97	55	32647	10.86215 ppb		93
37) 4-Chloro-3-methylphenol	7.14	107	214878	32.50754 ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y121.D Vial: 21
Acq On : 28 Nov 16 13:10 Operator: MA
Sample : AZ45866W21 MSD-1 1/1050 Inst : Yoda
Misc : water Multiplr: 0.95

Quant Time: Nov 28 13:34 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38) 2-Methylnaphthalene	7.27	142	399782	30.04371 ppb		100
39) 1-Methylnaphthalene	7.38	142	398947	31.19441 ppb		96
41) Hexachlorocyclopentadiene	7.44	237	28972	18.66564 ppb		97
42) 1,2,4,5-Tetrachlorobenzene	7.47	216	187074	30.99341 ppb		98
43) 2,4,6-Trichlorophenol	7.62	196	127127	31.57221 ppb		96
44) 2,4,5-Trichlorophenol	7.68	196	129233	30.30579 ppb		91
46) 1,1'-Biphenyl	7.80	154	523420	30.87093 ppb		98
47) 2-Chloronaphthalene	7.83	162	410232	30.89335 ppb		95
48) 2-Nitroaniline	7.97	65	160297	34.02808 ppb		86
49) Dimethyl phthalate	8.18	163	552131	34.11057 ppb		99
50) 2,6-DNT	8.26	165	118019	32.56685 ppb		84
51) Acenaphthylene	8.31	152	651838	31.45712 ppb		98
52) 3-Nitroaniline	8.45	138	142663	37.93661 ppb		90
53) Acenaphthene	8.51	154	407132	32.08534 ppb		98
54) 2,4-Dinitrophenol	8.61	184	55493	33.39996 ppb		92
55) 4-Nitrophenol	8.73	65	13233	10.51489 ppb	#	7
56) Dibenzofuran	8.71	168	586378	31.79106 ppb		100
57) 2,4-DNT	8.73	165	170043	33.43434 ppb		82
58) 2,3,4,6-Tetrachlorophenol	8.87	232	103739	31.94828 ppb		91
59) Diethyl phthalate	8.98	149	541933	32.62849 ppb		100
60) 4-Chlorophenyl phenyl ethe	9.10	204	234739	31.11515 ppb		90
61) Fluorene	9.10	166	484241	31.83214 ppb		98
62) 4-Nitroaniline	9.17	138	124513	35.21354 ppb		91
65) 4,6-Dinitro-2-methylphenol	9.22	198	101362	34.02363 ppb	#	77
66) Diphenyl amine	9.25	169	757257	65.93590 ppb		99
67) n-Nitrosodiphenylamine	9.25	169	757257	65.93590 ppb		99
68) 1,2-Diphenylhydrazine	9.29	77	540809	28.67388 ppb		93
69) 4-Bromophenyl phenyl ether	9.67	248	141932	31.80785 ppb		85
70) Hexachlorobenzene	9.75	284	150066	31.43444 ppb	#	90
71) Atrazine	9.88	200	81179	17.46449 ppb		97
72) Pentachlorophenol	10.00	266	48348	35.41556 ppb		99
73) Phenanthrene	10.23	178	745298	31.97161 ppb		99
74) Anthracene	10.28	178	768728	31.55254 ppb		99
75) Carbazol	10.49	167	693917	32.47984 ppb		97
76) Di-n-butylphthalate	10.89	149	908606	31.22843 ppb		99
77) Fluoranthene	11.61	202	837721	32.55936 ppb	#	97
79) Benzidine	11.79	184	140317	15.30646 ppb		99
80) Pyrene	11.87	202	849751	30.96547 ppb		98
82) Butyl benzylphthalate	12.62	149	430430	31.12942 ppb		93
83) 3,3'-Dichlorobenzidine	13.24	252	310900	36.84497 ppb	#	97
84) Benz (a) anthracene	13.26	228	825691	31.43500 ppb		98
85) Bis (2-ethylhexyl) phthala	13.28	149	622676	31.77476 ppb		99
86) Chrysene	13.31	228	787316	31.10112 ppb		99
87) Di-n-octylphthalate	14.00	149	1060276	31.04309 ppb		96
89) Benzo (b) fluoranthene	14.49	252	865416	32.01038 ppb		99
90) Benzo (k) fluoranthene	14.53	252	776195	30.79584 ppb		99
91) Benzo (a) pyrene	14.91	252	773453	30.97340 ppb		98
92) Indeno (1,2,3-cd) pyrene	16.63	276	894795	31.29296 ppb		99
93) Dibenz (a,h) anthracene	16.64	278	757380	31.19508 ppb		98
94) Benzo (g,h,i) perylene	17.13	276	742468	31.11983 ppb		96

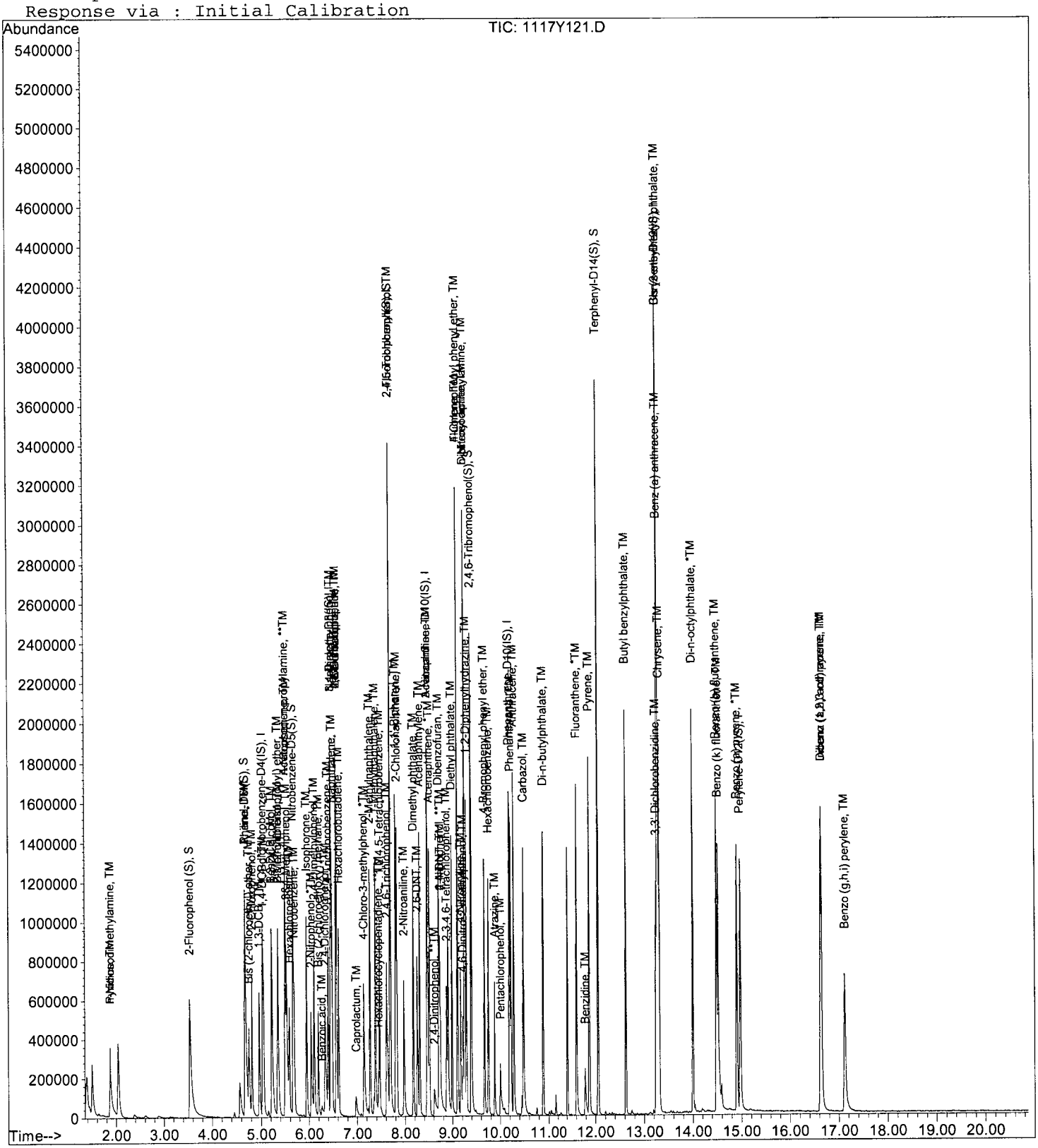
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y121.D Vial: 21
Acq On : 28 Nov 16 13:10 Operator: MA
Sample : AZ45866W21 MSD-1 1/1050 Inst : Yoda
Misc : water Multiplr: 0.95

Quant Time: Nov 28 13:34 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration



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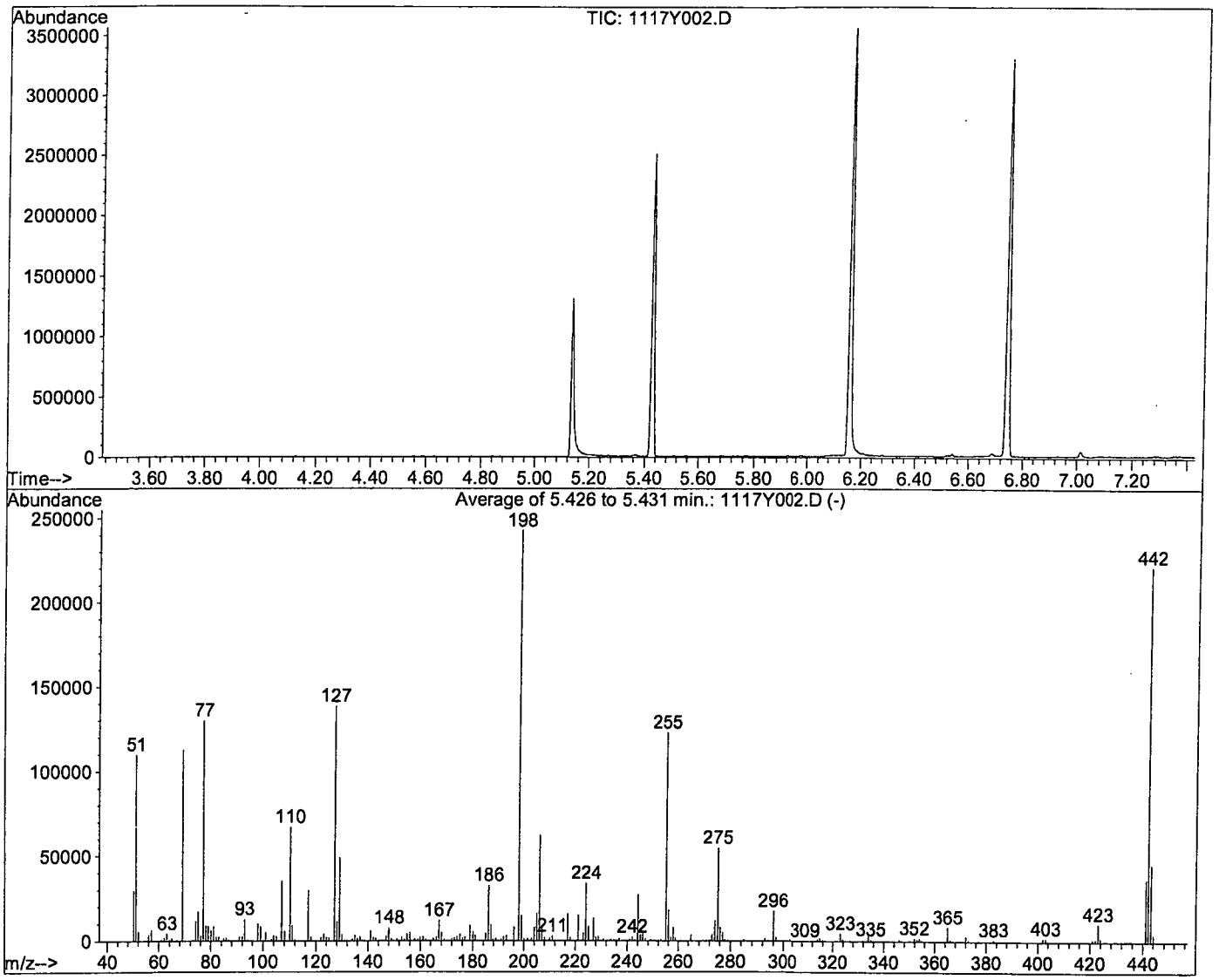
DFTPP

Data File : M:\YODA\DATA\Y161117\1117Y002.D Vial: 2
Acq On : 17 Nov 16 11:17 Operator: MA
Sample : SV Tune 10/19/16 Inst : Yoda
Misc : Multiplr: 1.00

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 737, 738, 739; Background Corrected with Scan 729

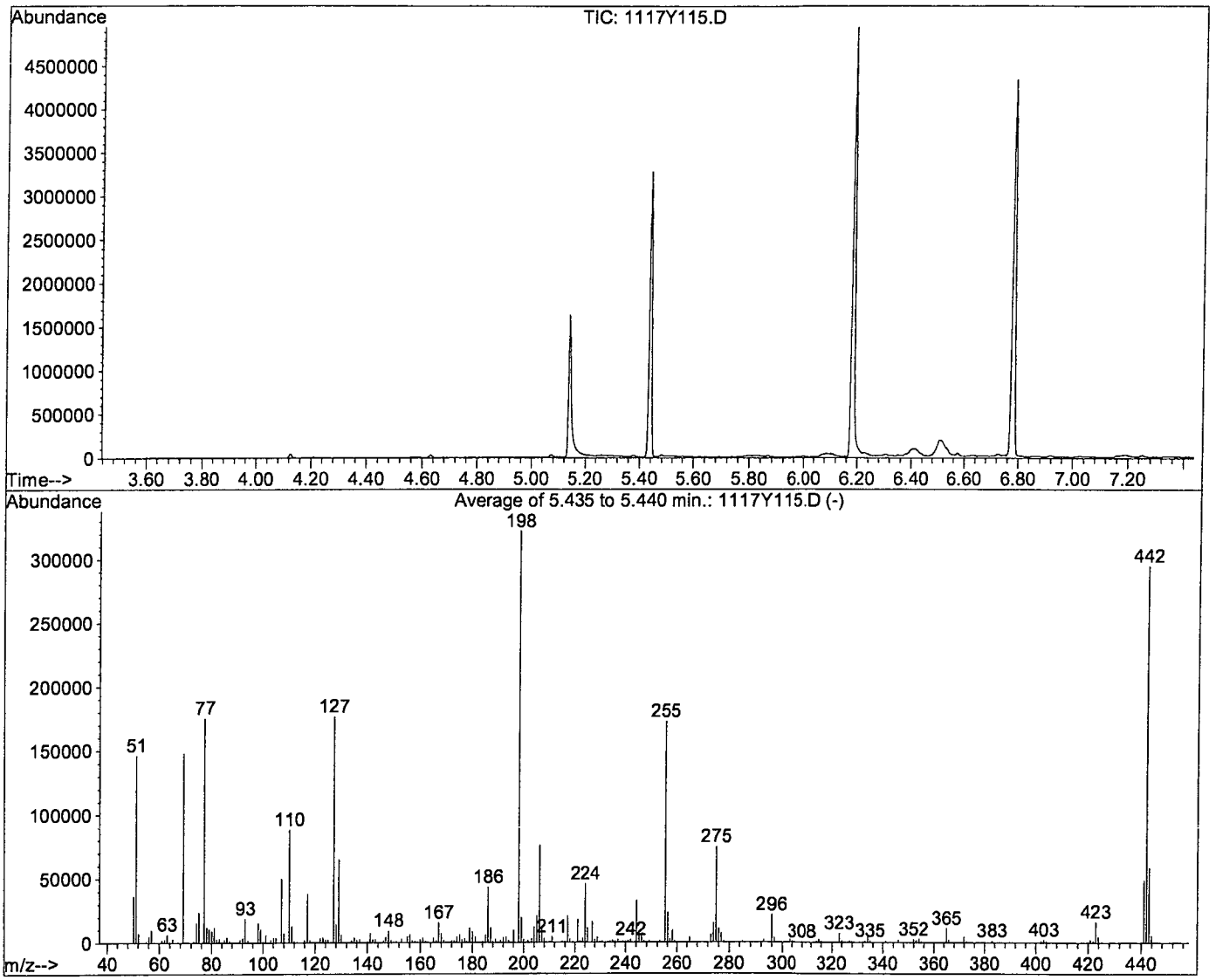
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	45.2	109960	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.1	156	PASS
127	198	40	60	57.0	138616	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	243008	PASS
199	198	5	9	6.1	14868	PASS
275	198	10	30	22.5	54709	PASS
365	198	1	100	3.4	8289	PASS
441	443	0.01	100	80.8	36571	PASS
442	198	50	150	91.2	221504	PASS
443	442	17	23	20.4	45280	PASS

1117Y002.D Y1117.M Thu Nov 17 11:40:44 2016

DFTPP

Data File : M:\YODA\DATA\Y161117\1117Y115.D Vial: 15
Acq On : 28 Nov 16 9:47 Operator: MA
Sample : SV Tune 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 740, 741, 742; Background Corrected with Scan 729

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	45.4	146296	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.5	708	PASS
127	198	40	60	54.8	176619	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	322240	PASS
199	198	5	9	6.1	19560	PASS
275	198	10	30	23.1	74552	PASS
365	198	1	100	3.4	11068	PASS
441	443	0.01	100	83.1	48733	PASS
442	198	50	150	91.6	295083	PASS
443	442	17	23	19.9	58664	PASS

1117Y115.D Y1117.M Mon Nov 28 09:52:38 2016

SV Internal Stanard Stock Prep: 10/19/16 RH EXP: 10/19/17						
		Conc.				
Supplier	ID #	µg/mL	Lot #	Open Date	Exp.Date	µL
Supleco	CRM48902	2000	XA14020V-36611	10/19/16	10/19/17	1000
					fin vol.	1000

8270 Full Scan Standard Curve

PREP DATE:	11/15/16 RH							
8270 Standard Curve								
Exp:	2/11/17					**5**	**10**	**20**
		Conc.		Date				
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL
Absolute	8270 Stock	200	VAR	10/28/16	10/28/17	5	5	10
o2si	8270 BN:A Su	200/400	277272-36400	6/20/16	12/20/16	5	5	10
EM Science	Methylene Chloride		56098			190	90	80
Supelco	SV Internal Sta	2000	XA14020V-36609	11/09/16	11/09/17	4	2	2
				Final Vol.		204	102	102

8270 Full Scan Second Source (SS)

PREP DATE:	11/15/16 RH					
Exp:	1/18/17	Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
o2si	8270 Stock SS	200	VAR	07/08/16	07/08/17	25
EM Science	Methylene Chloride		56098			75
Supelco	SV Internal Sta	2000	XA14020V-36609	11/09/16	11/09/17	2
				Final Vol.		102

40	**50**	**60**	**80**	**100**
µL	µL	µL	µL	µL
20	25	30	40	50
20	25	30	40	50
60	50	40	20	0
2	2	2	2	2
102	102	102	102	102

8270 Full Scan Second Source (SS)						
PREP DATE:	11/9/16 GA					
Exp:	1/18/17	Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
o2si	8270 Stock SS	200	VAR	07/08/16	07/08/17	25
EM Science	Methylene Chloride		56098			75
Supelco	SV Internal Standa	2000	XA14020V-36611	10/19/16	10/19/17	2
				Final Vol.		102

8270 SVOC Stock 10mL						
8270 Stock/Spike Standard						
prep:	10/28/16 RH					
Exp:	10/28/17					
		Conc.				
Supplier	ID #	µg/mL	Lot #	Open Date	Exp.Date	µL
Absolute	10001	2000	53014-3683	10/17/16	10/17/17	1000
Absolute	10002	2000	11114-3614	10/17/16	10/17/17	1000
Absolute	10004	2000	10815-3646	10/17/16	10/17/17	1000
Absolute	10005	2000	10314-3684	10/17/16	10/17/17	1000
Absolute	10006	2000	81216-3707	10/17/16	10/17/17	1000
Absolute	10007	2000	20515-3685	10/17/16	10/17/17	1000
Absolute	10018	2000	30216-3708	10/17/16	10/17/17	1000
Absolute	70023	1000	42716-3685	10/17/16	10/17/17	1000
Absolute	82705	2000	12516-3686	10/17/16	10/17/17	1000
Absolute	94552	2000	42016-3648	10/17/16	10/17/17	1000
				Final Vol.		10000

8270 Acid Surrog Stock 5000ppm						
Prep: 06/20/16 -LH Ex: 06/20/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
8270 Acid Surrog Mix	10,000 µg/mL	Restek Cat# 33029 Lot# A0115509-36718	10mL	20mL	5000 µg/ml	Acetone
	PREP:	06/20/16				
	Exp:	06/20/17				

8270 Surrog Mix 200/400ppm						
Prep: 06/20/16 -LH Ex: 12/20/16						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
8270 Acid Surrog Mix	5000 µg/mL	06/20/16	8.0mL	100 mL	400 µg/mL	MC
8270 B/N surrog Mix	5000 µg/mL	Restek Cat# 31086 Lot# A0119223-36720	4.0 mL	100 mL	200 ug/mL	MC
	PREP:	06/20/16				
	Exp:	12/20/16				

8270 Full Scan Second Source Stock

	7/8/16 GA					
8270 Second Source Stock						
Exp:	07/08/17					
		Conc.		Date	Exp.	
Supplier	ID #	µg/mL	Lot #	Code	Date	µL
o2si	116070-02	2000	234696-35233	07/08/16	07/08/17	1000
o2si	110391-01	2000	252133-35880	07/08/16	07/08/17	1000
o2si	010337-01	1000	259144-35881	07/08/16	07/08/17	1000
o2si	110396-01	2000	252136-35882	07/08/16	07/08/17	1000
o2si	110397-01	2000	263077-35835	07/08/16	01/08/17	1000
o2si	110393-01	2000	252141-35248	07/08/16	07/08/17	1000
o2si	110394-01	2000	252143-35884	07/08/16	07/08/17	1000
o2si	**110395-01**	2000	252146-35885	07/08/16	07/08/17	1000
o2si	110392-01	2000	243259-35886	07/08/16	07/08/17	1000
Absolute	10006	2000	091115-35856	07/08/16	07/08/17	1000
				Final Vol.		10000

8270 Surrog Mix 100/200ppm						
Prep: 10/26/16 -RH Ex: 01/26/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
8270 Acid Surrog Mix	10000 ug/ml	Restek Cat# 33029 Lot# A0118884-36874 Op: 10/03/16 EX: 10/03/17	2.0 mL	100 mL	200 µg/mL	MC
8270 B/N surrog Mix	5000 µg/mL	Restek Cat# 31086 Lot# A0119223-36873 Op: 10/26/16 EX: 10/26/17	2.0 mL	100 mL	100 ug/mL	MC

_SEP004

Organic Extraction Worksheet

Method	625/8270 Separatory Funnel Extra 3510C	Extraction Set	161117A	Extraction Method	SEP004	Units	mL

Spiked ID 1	8270T Spike 11-15-16 exp 11-15-17		Surrogate ID 1	8270 Surrogate 11-7-16 exp 12-23-16	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	11/17/16 11:15	
Spiked ID 8			Ext. End Time:	11/18/16 8:20	
			GC Requires Extract By:	11/22/16 0:00	

pH1	2	1/17/16 11:30:00 AM	Water Bath Temp Criteria	76 °C
pH2	14	11/17/16 1:10:00 PM		
pH3				

Spiked By: KY **Date** 11/17/16 **Witnessed By:** JR **Date** 11/17/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	161117A Blk				1	1	1000	1	2/1	11/17/16 11:15	
						equip	E-WB6				
2	161117A LCS-1		0.250	1	1	1	1000	1	2/1	11/17/16 11:15	
						equip	E-WB6				
3	AZ45738	AZ45738W09			1	1	980	1	2/1	11/17/16 11:15	81477
						equip	E-WB6				
4	AZ45866 MS-1	AZ45866W32	0.250	1	1	1	1050	1	2/1	11/17/16 11:15	81492
						equip	E-WB6				
5	AZ45866 MSD-1	AZ45866W21	0.250	1	1	1	1050	1	2/1	11/17/16 11:15	81492
						equip	E-WB6				
6	AZ45866	AZ45866W19			1	1	1050	1	2/1	11/17/16 11:15	81492
						equip	E-WB6				
7	AZ45867	AZ45867W07			1	1	1070	1	2/1	11/17/16 11:15	81492
						equip	E-WB6				
8	AZ45868	AZ45868W14			1	1	1070	1	2/1	11/17/16 11:15	81492
						equip	E-WB6				
9	AZ45907	AZ45907W11			1	1	1070	1	2/1	11/17/16 11:15	81500
						equip	E-WB6				
10	AZ45908	AZ45908W16			1	1	1070	1	2/1	11/17/16 11:15	81500
						equip	E-WB6				
11	AZ45909	AZ45909W16			1	1	1070	1	2/1	11/17/16 11:15	81500
						equip	E-WB6				
12	AZ45910	AZ45910W14			1	1	1070	1	2/1	11/17/16 11:15	81500
						equip	E-WB6				
13	AZ45911	AZ45911W16			1	1	1070	1	2/1	11/17/16 11:15	81500
						equip	E-WB6				

RH 11/18/16

Solvent and Lot#	
MC	56153
1+1 Sulfuric Acid	9-28-16
Acidified Na2SO4	11-3-16
B.Na2SO4	16c255214
10N NaOH	10-27-16
ph strips	hc 574756
Filter Paper	400112

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	RH
Date	11/18/16
Time	9:00
Refrigerator	GC-C

	Technician's Initials
Scanned By	KY
Sample Preparation	KY,JR
Extraction	KY,JR
Concentration	DL

Modified	11/18/16 8:33:07 AM

Reviewed By: Key **Date** 11/18/16

11/18/16 8:33:14 AM

Ext_ID 296 53341

Injection Log

Directory: M:\YODA\DATA\Y161117\

Vial	FileName	Multiplier	SampleName	Misc Info	Injected
2	1117Y002.D	1	SV Tune 10/19/16		17 Nov 16 11:17
3	1117Y003.D	1	5ug/ml SVOC 11/15/16		17 Nov 16 11:32
4	1117Y004.D	1	10ug/ml SVOC 11/15/16		17 Nov 16 12:02
5	1117Y005.D	1	20ug/ml SVOC 11/15/16		17 Nov 16 12:31
6	1117Y006.D	1	40ug/ml SVOC 11/15/16		17 Nov 16 13:00
7	1117Y007.D	1	50ug/ml SVOC 11/15/16		17 Nov 16 13:29
8	1117Y008.D	1	60ug/ml SVOC 11/15/16		17 Nov 16 13:59
9	1117Y009.D	1	80ug/ml SVOC 11/15/16		17 Nov 16 14:28
10	1117Y010.D	1	100ug/ml SVOC 11/15/16		17 Nov 16 14:58
11	1117Y011.D	1	2ND SRC SVOC 11/15/16		17 Nov 16 15:27
15	1117Y115.D	1	SV Tune 11/15/16		28 Nov 16 9:47
16	1117Y116.D	1	50ug/ml SVOC 11/15/16		28 Nov 16 10:42
17	1117Y117.D	1	161117A BLK 1/1000	water	28 Nov 16 11:11
18	1117Y118.D	1	161117A LCS-1 1/1000	water	28 Nov 16 11:41
20	1117Y120.D	0.952381	AZ45866W32 MS-1 1/1050	water	28 Nov 16 12:40
21	1117Y121.D	0.952381	AZ45866W21 MSD-1 1/1050	water	28 Nov 16 13:10
22	1117Y122.D	0.952381	AZ45866W19 1/1050	water	28 Nov 16 13:39
23	1117Y123.D	0.934579	AZ45867W07 1/1070	water	28 Nov 16 14:09
24	1117Y124.D	0.93458	AZ45868W14 1/1070	water	28 Nov 16 14:39
39	1117Y139.D	1	50ug/ml SVOC 11/15/16	water	28 Nov 16 21:26

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank

EPA 8270D MODIFIED WATER

Blank Name/QCG: **161118W-45866 - 214034**
Batch ID: #87DME-161118A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2-(2-METHOXYETHOXY)-ETHAN	80.0 U	100	80.0	40.0	ug/L	11/18/16	11/23/16

Quant Method:Y0GLYCOL.
Run #:1123Y014
Instrument:Yoda
Sequence:Y161123
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 11/28/16 10:13:05 AM

Laboratory Control Spike Recovery

EPA 8270D MODIFIED WATER

APPL ID: **161118W-45866 LCS - 214034**
Batch ID: #87DME-161118A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
2-(2-METHOXYETHOXY)-ETHANOL	500	407	81.4	30-130

Comments: _____

Primary	SPK
Quant Method :	Y0GLYCOL.M
Extraction Date :	11/18/16
Analysis Date :	11/23/16
Instrument :	Yoda
Run :	1123Y015
Initials :	MA

Printed: 11/28/16 10:13:19 AM
APPL Standard LCS

Matrix Spike Recoveries

EPA 8270D MODIFIED WATER

APPL ID: **161118W-45866 MS - 214034**
Batch ID: #87DME-161118A
Sample ID: AZ45866
Client ID: ERH115

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
2-(2-METHOXYETHOXY)-ETHANOL	500	ND	378	445	75.6	89.0	30-130	16.3	20

Comments: _____

Primary	SPK	DUP
Quant Method :	Y0GLYCOL.M	Y0GLYCOL.M
Extraction Date :	11/18/16	11/18/16
Analysis Date :	11/23/16	11/23/16
Instrument :	Yoda	Yoda
Run :	1123Y016	1123Y017
Initials :	MA	

Printed: 11/28/16 10:13:35 AM
APPL MSD SCII

EPA 8270D

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81492

Case No: 81492 Date Analyzed: 11/23/16

Matrix: WATER Instrument: Yoda

Blank ID: 161118A-BLK Time Analyzed: 1452

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161118A-BLK	Blank	1123Y014	11/23/16 1452
161118A-LCS	Lab Control Spike	1123Y015	11/23/16 1521
161118A-MS	Matrix Spike	1123Y016	11/23/16 1551
161118A-MSD	Matrix SpikeD	1123Y017	11/23/16 1621
AZ45866	ERH115	1123Y018	11/23/16 1650
AZ45867	ERH116	1123Y019	11/23/16 1719
AZ45868	ERH120	1123Y020	11/23/16 1748

Comments: Batch: #87DME-161118A

Printed: 11/28/16 10:13:43 AM

Form 4, Blank Summary

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: Water
ID: SV Tune 11/15/16

SDG No: 81492
Date Analyzed: 11/23/16
Instrument: Yoda
Time Analyzed: 9:15

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		100ug/ml DEG 11/22/1	1123Y004.D	11/23/16 10:00
2		200ug/ml DEG 11/22/1	1123Y005.D	11/23/16 10:29
3		400ug/ml DEG 11/22/1	1123Y006.D	11/23/16 10:59
4		500ug/ml DEG 11/22/1	1123Y007.D	11/23/16 11:28
5		600ug/ml DEG 11/22/1	1123Y008.D	11/23/16 11:58
6		800ug/ml DEG 11/22/1	1123Y009.D	11/23/16 12:28
7		1000ug/ml DEG 11/22/	1123Y010.D	11/23/16 13:11
8		SS2 DEG 11/22/16	1123Y012.D	11/23/16 14:09
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	48.3
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.3
127	40 - 60% of mass 198	56.2
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 197.95	100.0
199	5 - 9% of mass 198	6.3
275	10 - 30% of mass 198	21.5
365	1 - 100% of mass 198	3.4
441	0.01 - 100% of mass 443	82.0
442	50 - 150% of mass 197.95	83.2
443	17 - 23% of mass 442	18.9

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81492
Matrix: Water
ID: SV Tune 11/15/16

SDG No: 81492
Date Analyzed: 11/23/16
Instrument: Yoda
Time Analyzed: 14:35

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1	Blank	161118A BLK 2/500	1123Y014.D	11/23/16 14:52
2	Lab Control Spike	161118A LCS-1 2/500	1123Y015.D	11/23/16 15:21
3		AZ45866W18 MS-1 2/50	1123Y016.D	11/23/16 15:51
4		AZ45866W18 MSD-1 2/5	1123Y017.D	11/23/16 16:21
5	ERH115	AZ45866W25 2/500	1123Y018.D	11/23/16 16:50
6	ERH116	AZ45867W08 2/500	1123Y019.D	11/23/16 17:19
7	ERH120	AZ45868W15 2/500	1123Y020.D	11/23/16 17:48
8		50ug/ml DEG 11/22/16	1123Y038.D	11/24/16 2:20
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	42.3
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.9
127	40 - 60% of mass 198	56.2
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 197.95	100.0
199	5 - 9% of mass 198	6.7
275	10 - 30% of mass 198	24.1
365	1 - 100% of mass 198	3.5
441	0.01 - 100% of mass 443	91.3
442	50 - 150% of mass 197.95	97.0
443	17 - 23% of mass 442	18.7

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 81492

Lab File ID (Standard): 1123Y007.D Date Analyzed: 11/23/16

Instrument ID: Yoda Time Analyzed: 11:28

GC Column: _____ ID: Heated Purge: (Y/N) _____

		1,4-dichlorobenzene-D4(IS)		Napthalene-D8(IS)		Acenaphthene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	177940	5.04	800769	6.46	474142	8.47
	UPPER LIMIT	355880	5.54	1601538	6.96	948284	8.97
	LOWER LIMIT	88970	4.54	400385	5.96	237071	7.97
	SAMPLE NO.						
01	SS2 DEG 11/22/16	154792	5.03	678996	6.46	410275	8.47
02	161118A BLK 2/500	185498	5.06	864983	6.46	514113	8.47
03	161118A LCS-1 2/500	188487	5.05	846292	6.46	497749	8.47
04	AZ45866W18 MS-1 2/5(	189184	5.05	848376	6.46	497720	8.47
05	AZ45866W18 MSD-1 2/	185201	5.06	843334	6.46	499076	8.47
06	AZ45866W25 2/500	179518	5.06	801355	6.46	477114	8.47
07	AZ45867W08 2/500	178758	5.04	840004	6.46	500496	8.47
08	AZ45868W15 2/500	190573	5.04	844601	6.46	498317	8.47
09	50ug/ml DEG 11/22/16	171742	5.04	775247	6.46	456087	8.46
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81492

Lab File ID (Standard): 1123Y007.D Date Analyzed: 11/23/16

Instrument ID: Yoda Time Analyzed: 11:28

GC Column: ID: Heated Purge: (Y/N)

		Phenanthrene-D10(IS)		Chrysene-D12(IS)		Perylene-D12(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	857113	10.19	818162	13.27	686190	14.97
	UPPER LIMIT	1714226	10.69	1636324	13.77	1372380	15.47
	LOWER LIMIT	428557	9.69	409081	12.77	343095	14.47
	SAMPLE NO.						
01	SS2 DEG 11/22/16	752056	10.20	748077	13.28	520555	14.97
02	161118A BLK 2/500	956993	10.20	897711	13.28	639357	14.97
03	161118A LCS-1 2/500	920333	10.19	865185	13.27	652337	14.97
04	AZ45866W18 MS-1 2/5(	925234	10.19	859991	13.28	767563	14.97
05	AZ45866W18 MSD-1 2/	902894	10.20	847012	13.28	656354	14.98
06	AZ45866W25 2/500	867030	10.20	835501	13.28	772613	14.98
07	AZ45867W08 2/500	897319	10.20	836119	13.28	670371	14.97
08	AZ45868W15 2/500	911821	10.19	902389	13.28	797659	14.97
09	50ug/ml DEG 11/22/16	844398	10.19	796087	13.27	689360	14.97
10							
11							
12							
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22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

ORGANICS

Sample Data

APPL, INC.

EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH115
Sample Collection Date: 11/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81492
APPL ID: AZ45866
QCG: #87DME-161118A-214034

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	11/18/16	11/23/16

Quant Method: Y0GLYCOL.M
Run #: 1123Y018
Instrument: Yoda
Sequence: Y161123
Dilution Factor: 1
Initials: MA

Printed: 11/28/16 10:13:44 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y018.D Vial: 18
Acq On : 23 Nov 16 16:50 Operator: MA
Sample : AZ45866W25 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 9:12 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.06	152	179518	40.00000	ppb	0.02
3) Napthalene-D8(IS)	6.46	136	801355	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	477114	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.20	188	867030	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.28	240	835501	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.98	264	772613	40.00000	ppb	-0.19

System Monitoring Compounds

Target Compounds Qvalue

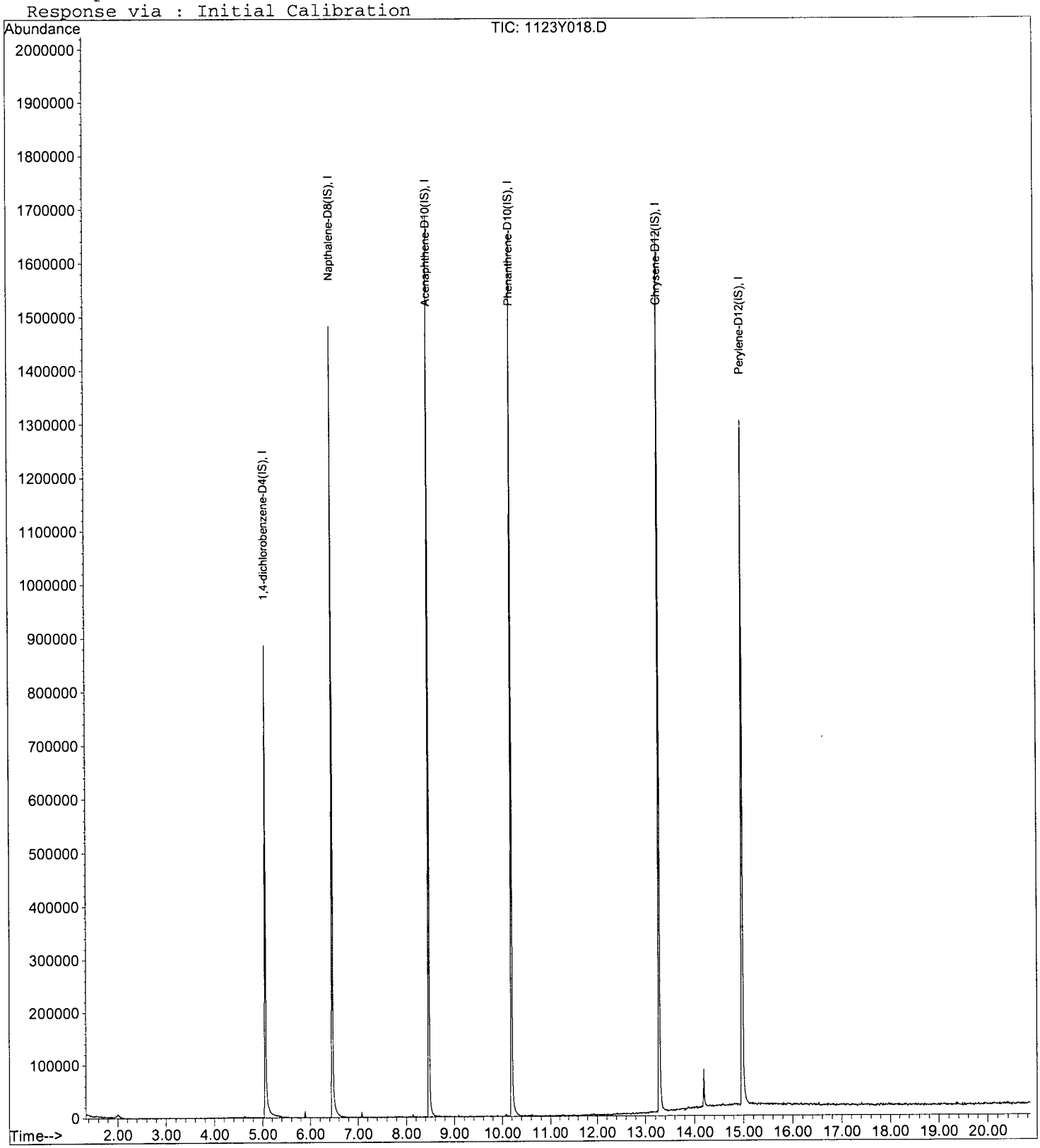
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y018.D Vial: 18
Acq On : 23 Nov 16 16:50 Operator: MA
Sample : AZ45866W25 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 9:12 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH116
Sample Collection Date: 11/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81492
APPL ID: AZ45867
QCG: #87DME-161118A-214034

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	11/18/16	11/23/16

Quant Method: Y0GLYCOL.M
Run #: 1123Y019
Instrument: Yoda
Sequence: Y161123
Dilution Factor: 1
Initials: MA

Printed: 11/28/16 10:13:44 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y019.D Vial: 19
Acq On : 23 Nov 16 17:19 Operator: MA
Sample : AZ45867W08 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 9:12 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	178758	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.46	136	840004	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	500496	40.00000	ppb	0.01
5) Phenanthrene-D10(IS)	10.20	188	897319	40.00000	ppb	0.01
6) Chrysene-D12(IS)	13.28	240	836119	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.97	264	670371	40.00000	ppb	-0.19

System Monitoring Compounds

Target Compounds Qvalue

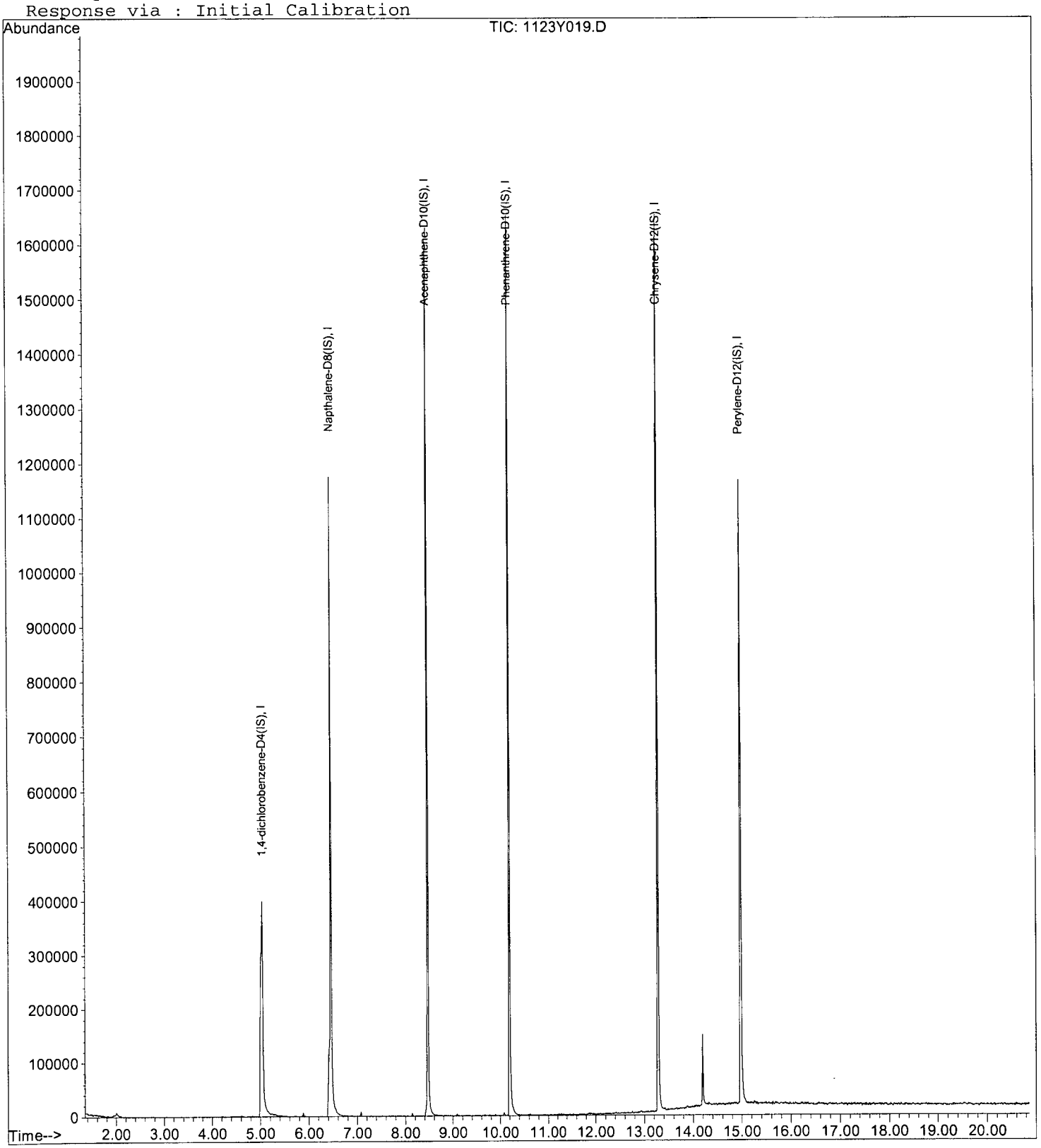
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y019.D Vial: 19
Acq On : 23 Nov 16 17:19 Operator: MA
Sample : AZ45867W08 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 9:12 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH120
Sample Collection Date: 11/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81492
APPL ID: AZ45868
QCG: #87DME-161118A-214034

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	11/18/16	11/23/16

Quant Method: Y0GLYCOL.M
Run #: 1123Y020
Instrument: Yoda
Sequence: Y161123
Dilution Factor: 1
Initials: MA

Printed: 11/28/16 10:13:44 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y020.D Vial: 20
Acq On : 23 Nov 16 17:48 Operator: MA
Sample : AZ45868W15 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 9:12 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	190573	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.46	136	844601	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	498317	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.19	188	911821	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.28	240	902389	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.97	264	797659	40.00000	ppb	-0.19

System Monitoring Compounds

Target Compounds Qvalue

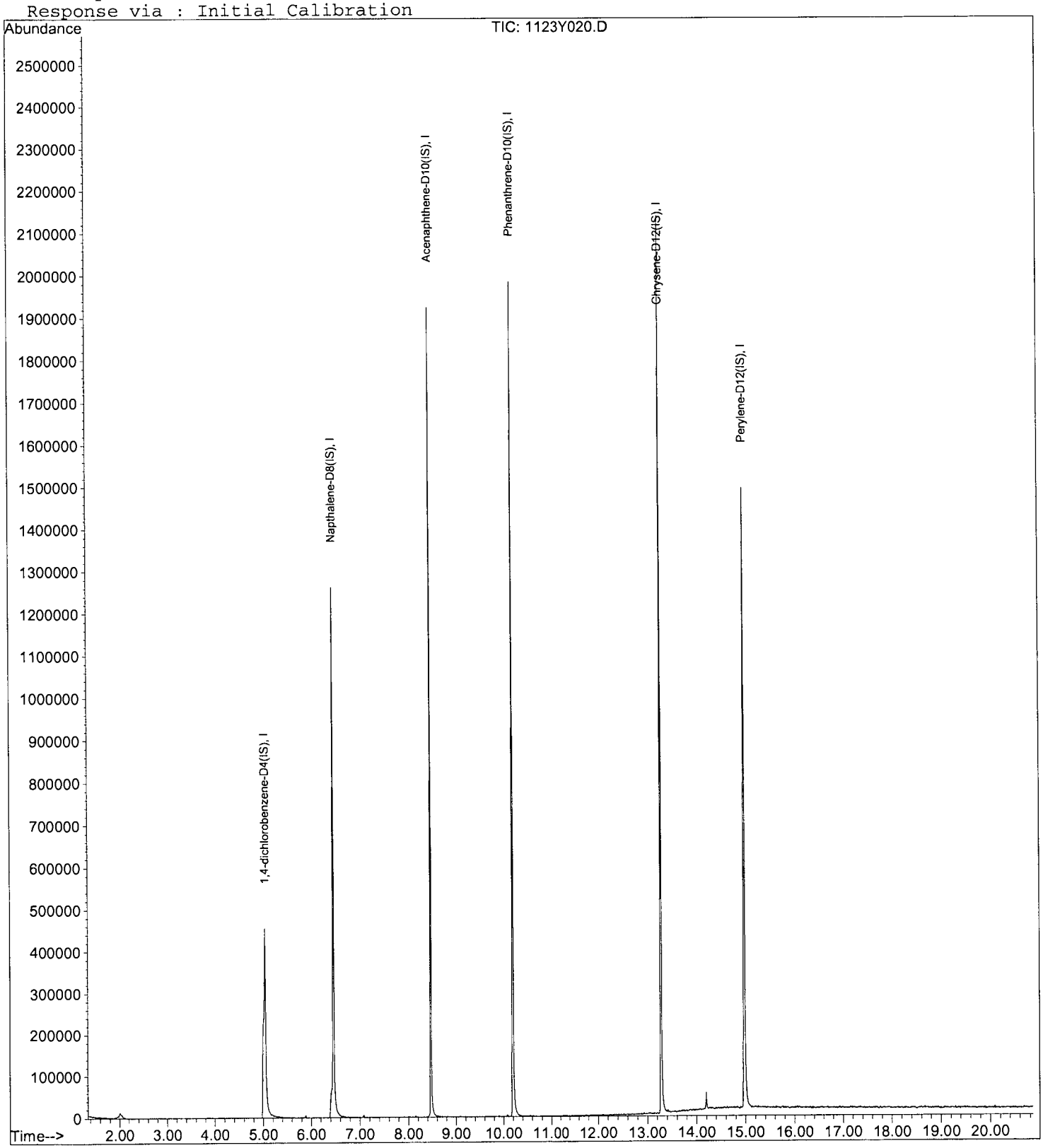
(#) = qualifier out of range (m) = manual integration
1123Y020.D Y0GLYCOL.M Mon Nov 28 09:29:48 2016

Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y020.D Vial: 20
Acq On : 23 Nov 16 17:48 Operator: MA
Sample : AZ45868W15 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 9:12 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



ORGANICS

Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Initial Cal. Date: 11/23/16

Matrix: Instrument: Yoda

Initials:

		Compound	1123Y003.D	1123Y004.D	1123Y005.D	1123Y006.D	1123Y007.D	1123Y008.D	1123Y009.D	1123Y010.D			Avg	%RSD		
1	I	1,4-dichlorobenzene-D4(IS)														
2	TML	2-(2-Methoxyethoxy)ethanol		0.0677	0.1017	0.1986	0.2068	0.2153	0.2208	0.2208			0.18	36	TML	0.997
3	I	Napthalene-D8(IS)														
4	I	Acenaphthene-D10(IS)														
5	I	Phenanthrene-D10(IS)														
6	I	Chrysene-D12(IS)														
7	I	Perylene-D12(IS)														
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Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y004.D Vial: 4
Acq On : 23 Nov 16 10:00 Operator: MA
Sample : 100ug/ml DEG 11/22/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 10:57 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 09:52:36 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	191756	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.46	136	848261	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	499918	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.20	188	910901	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.28	240	867420	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.98	264	881223	40.00000	ppb	-0.19
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.35	45	32433	35.04576	ppb	92

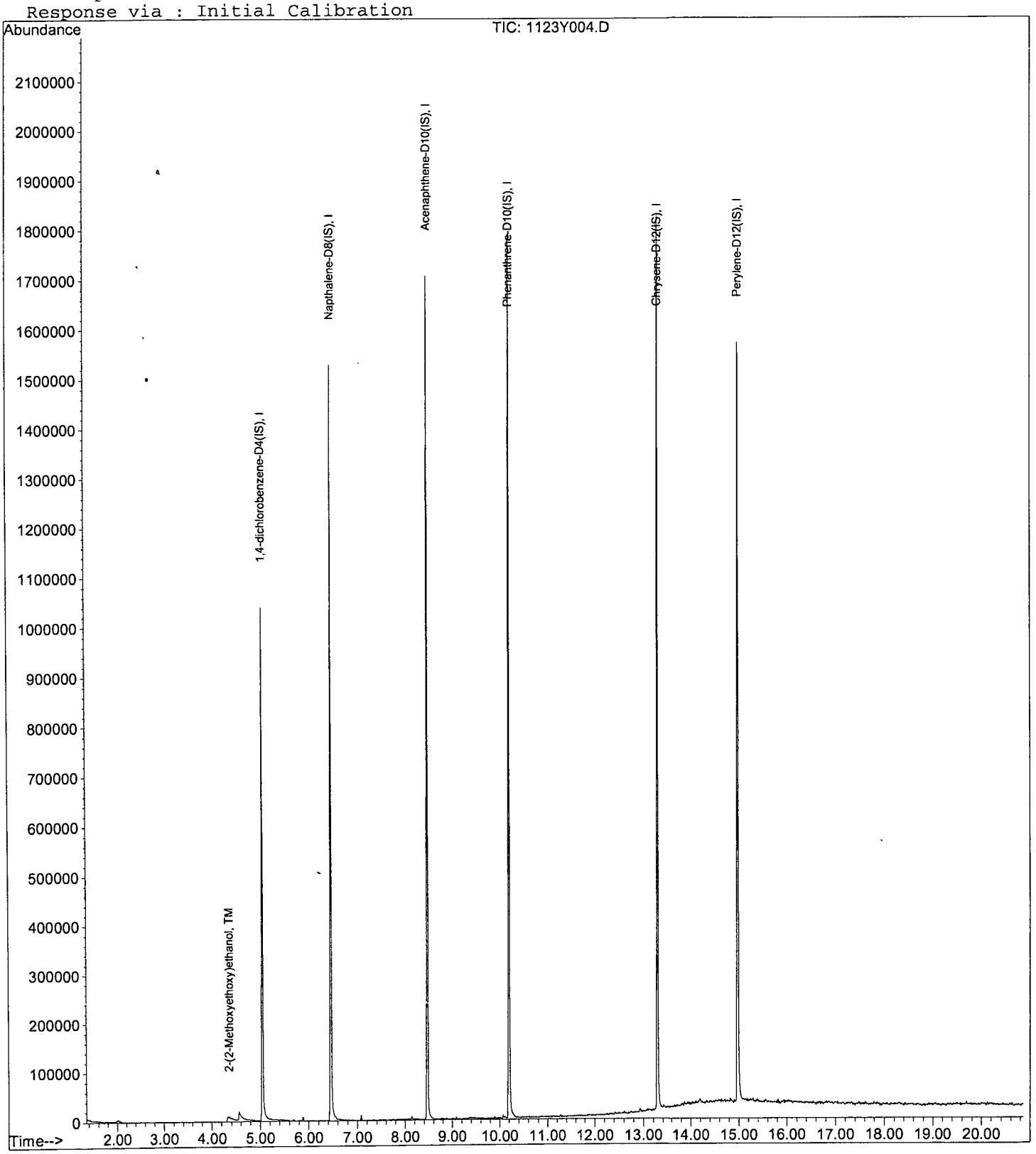
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y004.D Vial: 4
Acq On : 23 Nov 16 10:00 Operator: MA
Sample : 100ug/ml DEG 11/22/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 10:57 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y005.D Vial: 5
Acq On : 23 Nov 16 10:29 Operator: MA
Sample : 200ug/ml DEG 11/22/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 11:07 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 11:07:08 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	186195	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.46	136	831906	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	486938	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.20	188	888986	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.28	240	837900	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.98	264	835350	40.00000	ppb	-0.19
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.27	45	94721	105.40849	ppb	100

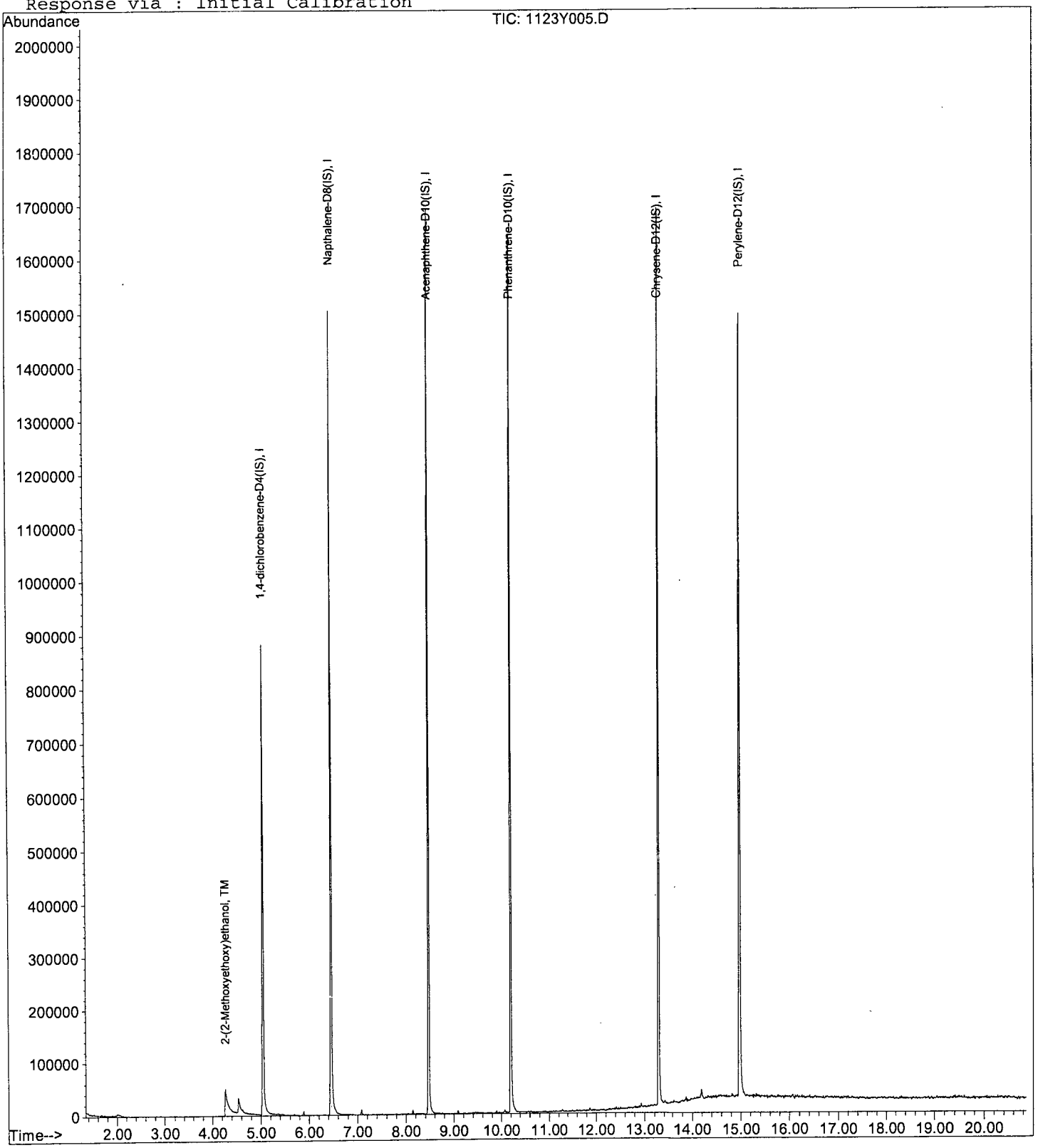
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y005.D Vial: 5
Acq On : 23 Nov 16 10:29 Operator: MA
Sample : 200ug/ml DEG 11/22/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 11:07 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y006.D Vial: 6
Acq On : 23 Nov 16 10:59 Operator: MA
Sample : 400ug/ml DEG 11/22/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 12:16 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 11:07:08 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	182640	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.46	136	809322	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	473893	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.20	188	873279	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.28	240	833981	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.98	264	933788	40.00000	ppb	-0.19

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.24	45	362663	411.43825	ppb	92

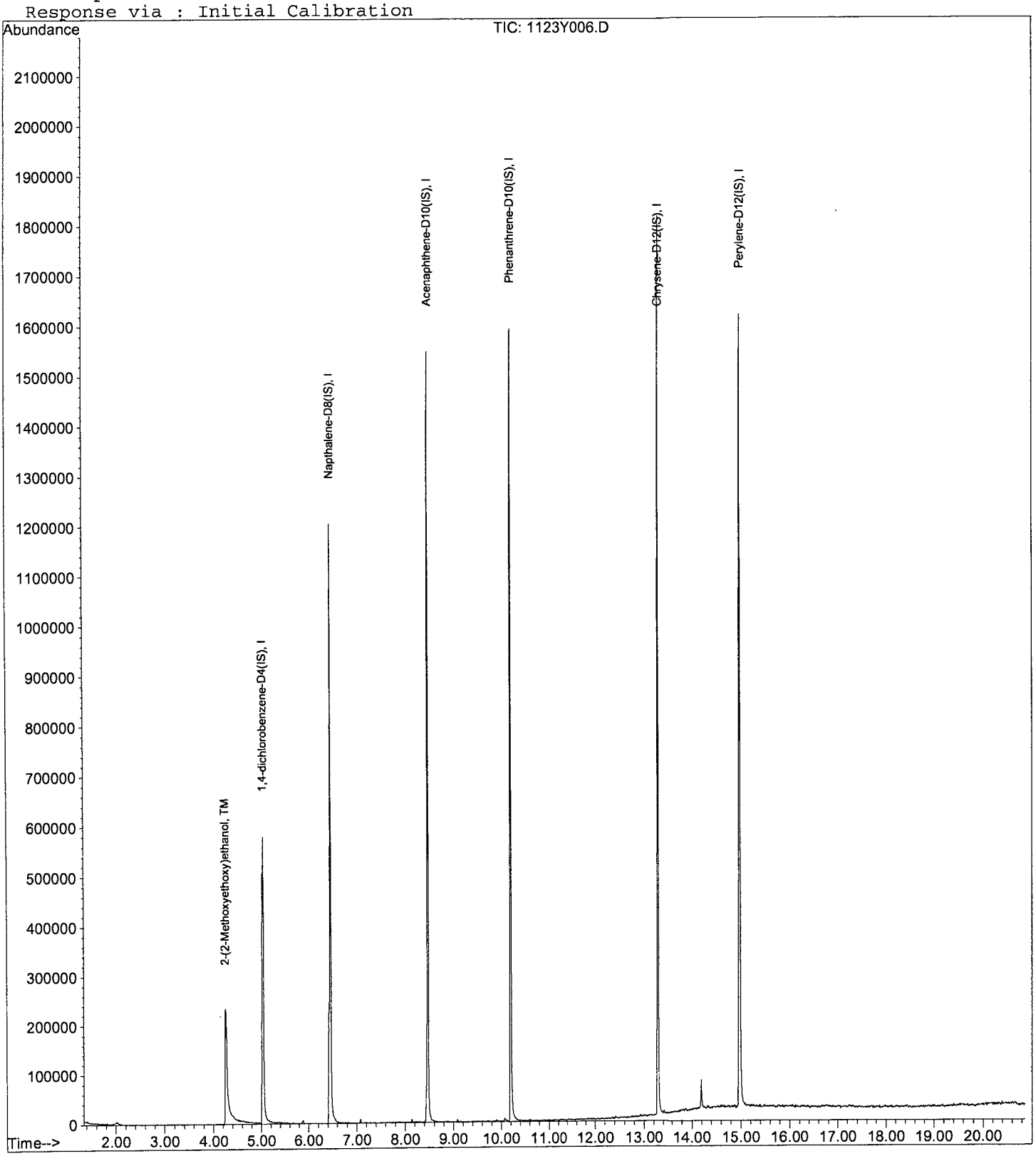
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y006.D Vial: 6
Acq On : 23 Nov 16 10:59 Operator: MA
Sample : 400ug/ml DEG 11/22/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 12:16 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y007.D Vial: 7
Acq On : 23 Nov 16 11:28 Operator: MA
Sample : 500ug/ml DEG 11/22/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 13:07 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:06:52 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	177940	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.46	136	800769	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	474142	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.19	188	857113	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.27	240	818162	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.97	264	686190	40.00000	ppb	-0.19
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.24	45	460031	535.68666	ppb	100

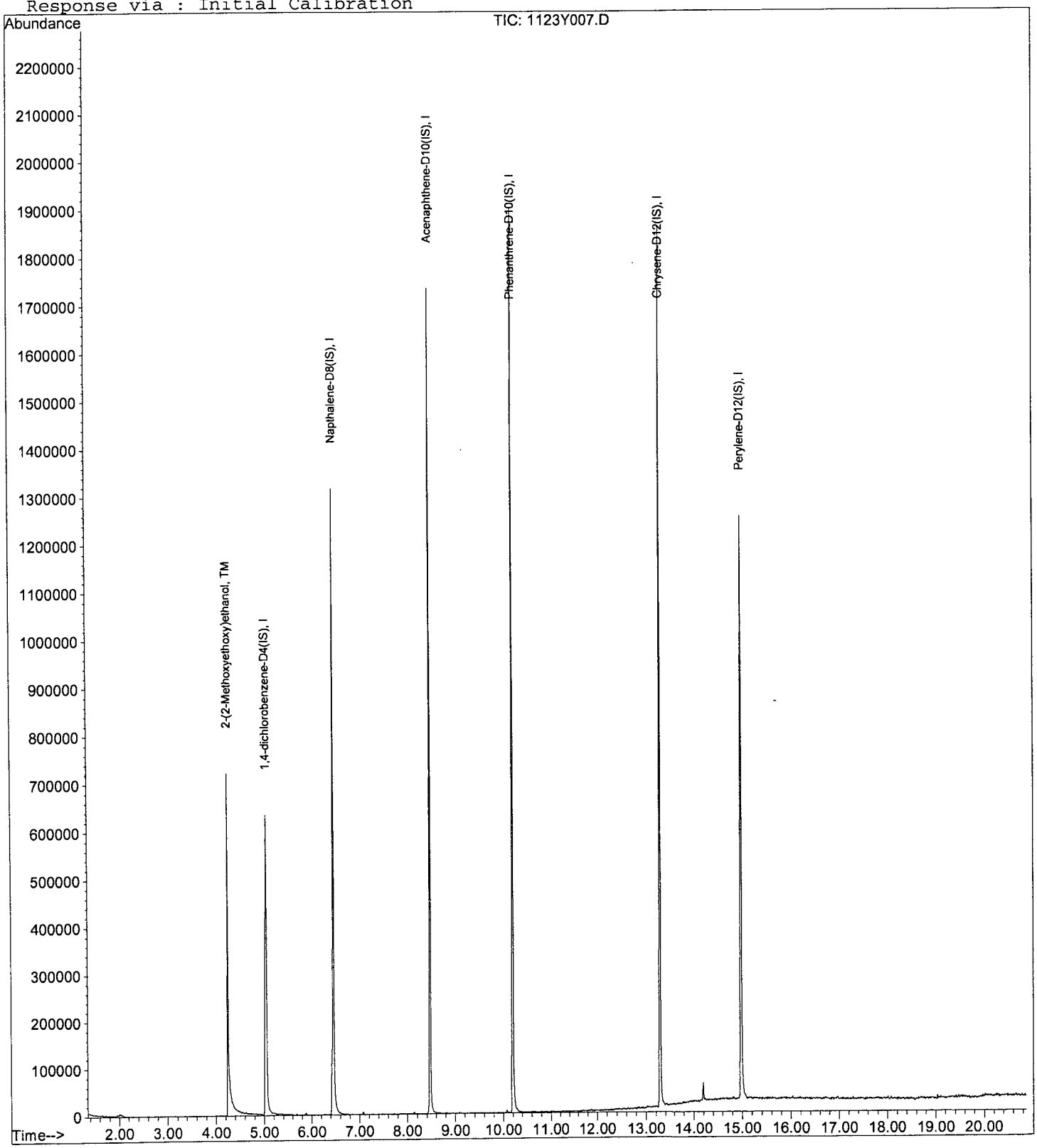
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y007.D Vial: 7
Acq On : 23 Nov 16 11:28 Operator: MA
Sample : 500ug/ml DEG 11/22/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 13:07 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y008.D Vial: 8
Acq On : 23 Nov 16 11:58 Operator: MA
Sample : 600ug/ml DEG 11/22/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 12:17 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 11:07:08 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	179974	40.00000	ppb	0.01
3) Napthalene-D8(IS)	6.46	136	822851	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	477957	40.00000	ppb	0.01
5) Phenanthrene-D10(IS)	10.20	188	864141	40.00000	ppb	0.01
6) Chrysene-D12(IS)	13.28	240	835483	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.98	264	983628	40.00000	ppb	-0.19
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.26	45	581168	669.09725	ppb	93

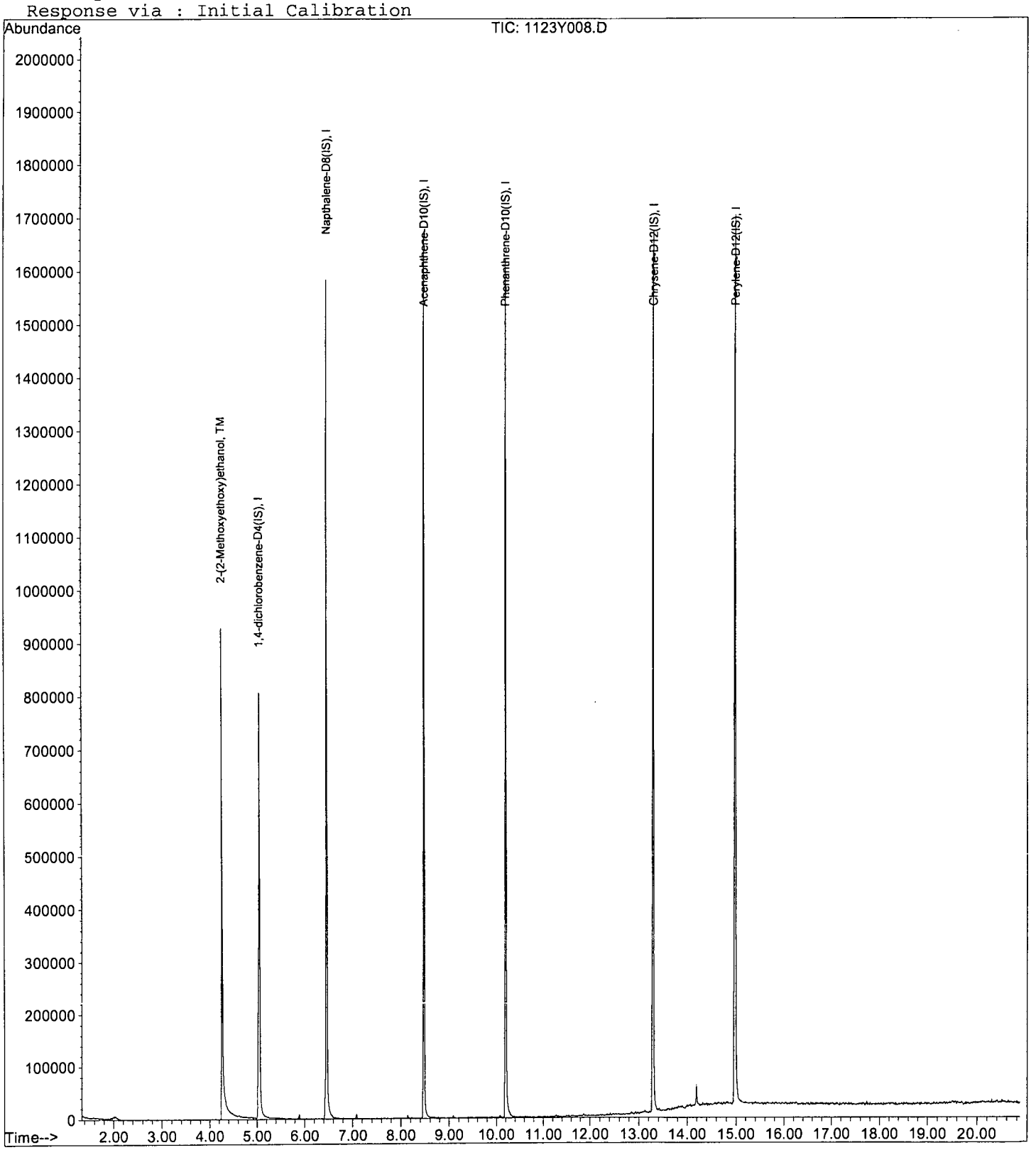
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y008.D Vial: 8
Acq On : 23 Nov 16 11:58 Operator: MA
Sample : 600ug/ml DEG 11/22/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 12:17 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y009.D Vial: 9
Acq On : 23 Nov 16 12:28 Operator: MA
Sample : 800ug/ml DEG 11/22/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 13:01 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 11:07:08 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	184046	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.46	136	806129	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	479713	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.19	188	887054	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.28	240	831663	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.97	264	732136	40.00000	ppb	-0.19
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.25	45	812749	915.01324	ppb	94

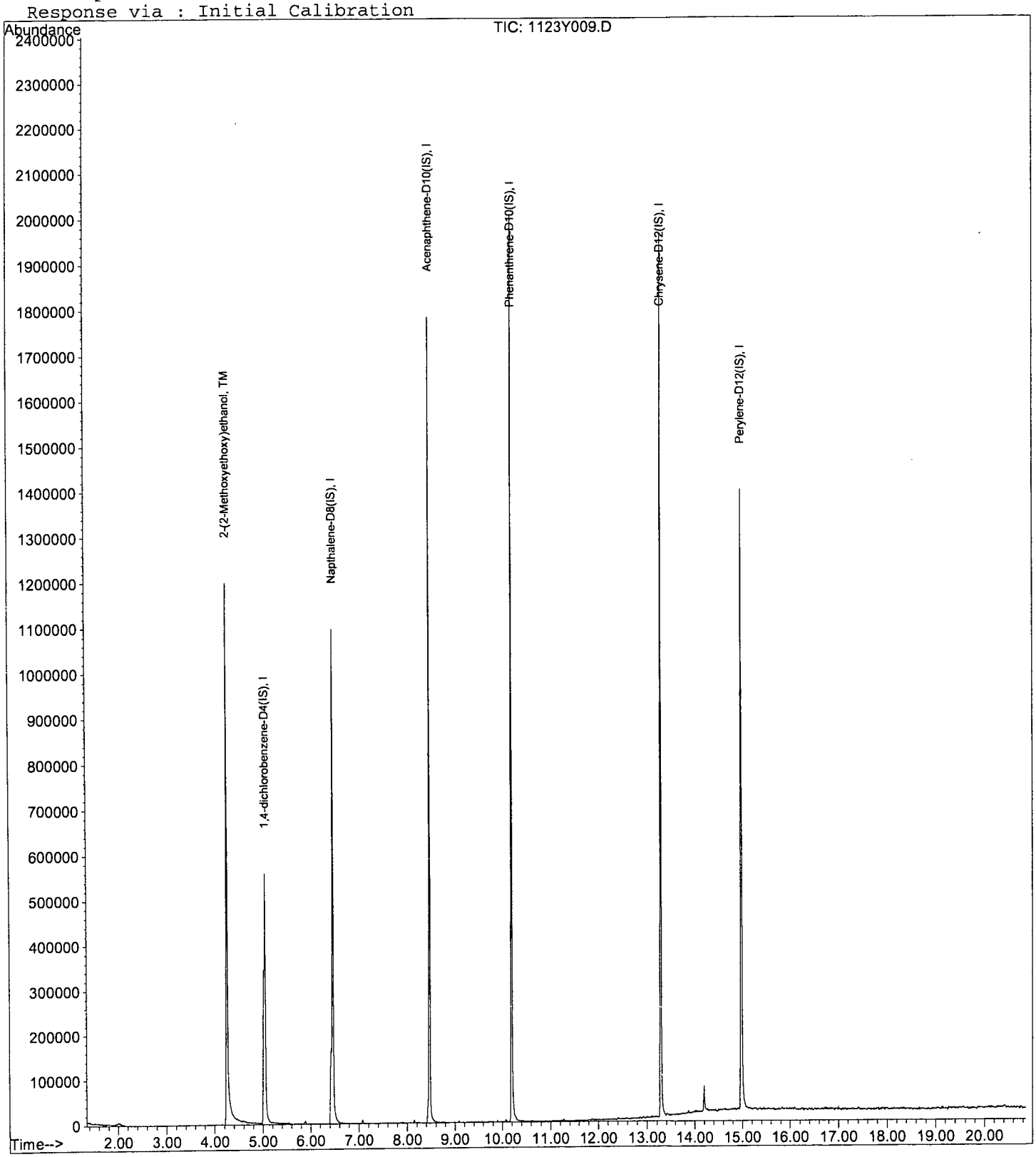
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y009.D Vial: 9
Acq On : 23 Nov 16 12:28 Operator: MA
Sample : 800ug/ml DEG 11/22/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 13:01 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y010.D Vial: 10
Acq On : 23 Nov 16 13:11 Operator: MA
Sample : 1000ug/ml DEG 11/22/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 13:40 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:12:53 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	183170	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.46	136	813439	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	480140	40.00000	ppb	0.01
5) Phenanthrene-D10(IS)	10.20	188	884921	40.00000	ppb	0.01
6) Chrysene-D12(IS)	13.28	240	830083	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.98	264	571112	40.00000	ppb	-0.19
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.26	45	1011237	971.48281	ppb	99

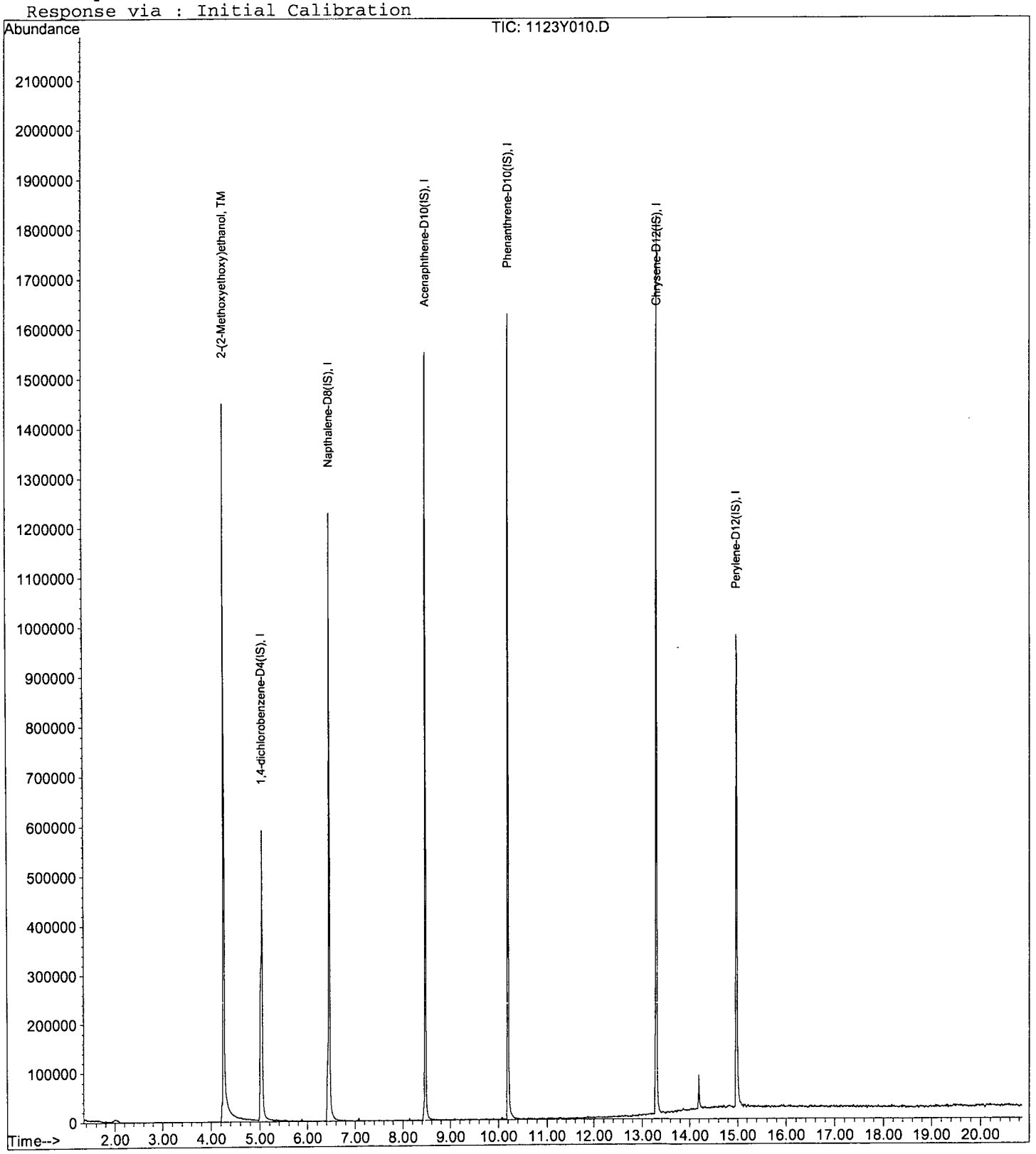
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y010.D Vial: 10
Acq On : 23 Nov 16 13:11 Operator: MA
Sample : 1000ug/ml DEG 11/22/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 13:40 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/23/16
Instrument: Yoda
Initial Cal. Date: 11/23/16
Data File: 1123Y012.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TML	2-(2-Methoxyethoxy)ethanol	0.1760	0.2259	28	TML	9.2
3	I	Napthalene-D8(IS)	ISTD			I	
4	I	Acenaphthene-D10(IS)	ISTD			I	
5	I	Phenanthrene-D10(IS)	ISTD			I	
6	I	Chrysene-D12(IS)	ISTD			I	
7	I	Perylene-D12(IS)	ISTD			I	
8							
9							
10							
11							
12							
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34							
35							
36							
37							
38							
39							
40							
		Average			28.0		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y012.D Vial: 12
Acq On : 23 Nov 16 14:09 Operator: MA
Sample : SS2 DEG 11/22/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 14:27 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	154792	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.46	136	678996	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	410275	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.20	188	752056	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.28	240	748077	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.97	264	520555	40.00000	ppb	-0.20

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.22	45	437112	545.83686	ppb	100

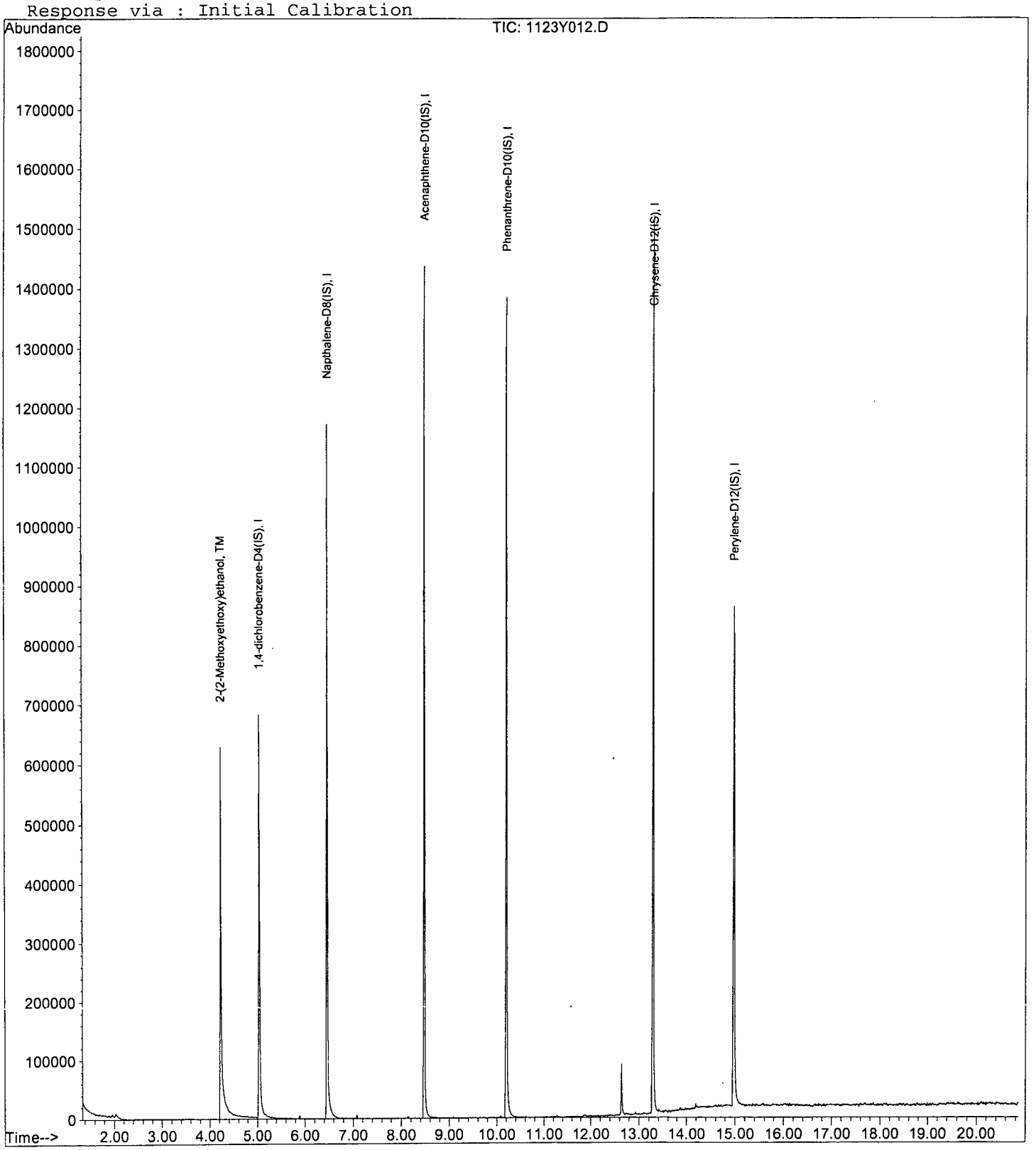
(#) = qualifier out of range (m) = manual integration
1123Y012.D Y0GLYCOL.M Mon Nov 28 09:28:57 2016 Page 1

Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y012.D Vial: 12
Acq On : 23 Nov 16 14:09 Operator: MA
Sample : SS2 DEG 11/22/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 14:27 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/24/16
Instrument: Yoda
Initial Cal. Date: 11/23/16
Data File: 1123Y038.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TML	2-(2-Methoxyethoxy)ethanol	0.1760	0.1732	1.6	TML	12
3	I	Napthalene-D8(IS)	ISTD			I	
4	I	Acenaphthene-D10(IS)	ISTD			I	
5	I	Phenanthrene-D10(IS)	ISTD			I	
6	I	Chrysene-D12(IS)	ISTD			I	
7	I	Perylene-D12(IS)	ISTD			I	
8							
9							
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37							
38							
39							
40							
		Average			1.6		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y038.D Vial: 38
Acq On : 24 Nov 16 2:20 Operator: MA
Sample : 50ug/ml DEG 11/22/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 9:01 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	171742	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.46	136	775247	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.46	164	456087	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.19	188	844398	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.27	240	796087	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.97	264	689360	40.00000	ppb	-0.20
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.25	45	371815	438.22291	ppb	99

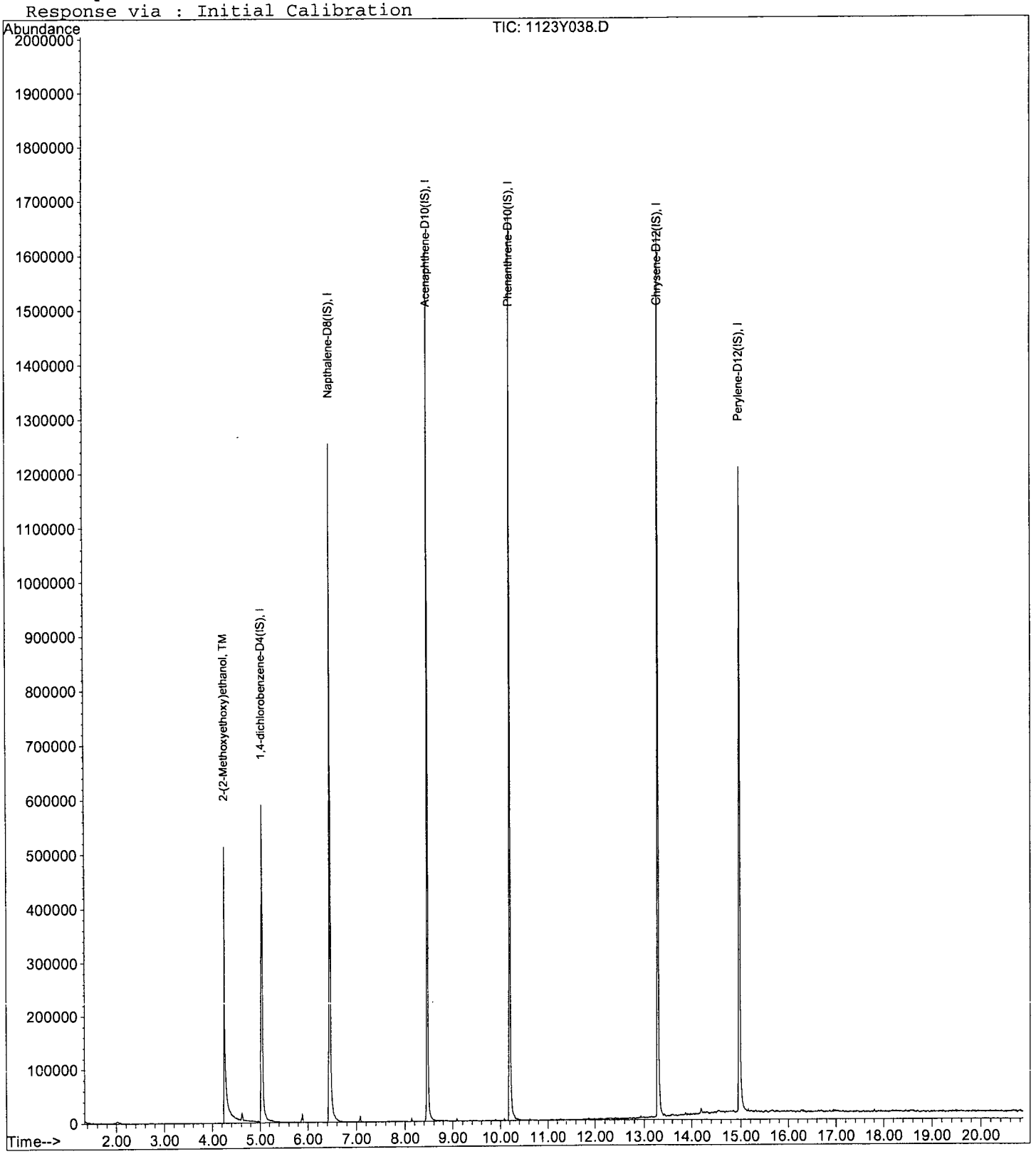
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y038.D Vial: 38
Acq On : 24 Nov 16 2:20 Operator: MA
Sample : 50ug/ml DEG 11/22/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 9:01 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



ORGANICS

Raw Data

APPL, INC.

Method Blank

EPA 8270D MODIFIED WATER

Blank Name/QCG: **161118W-45866 - 214034**
Batch ID: #87DME-161118A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2-(2-METHOXYETHOXY)-ETHAN	80.0 U	100	80.0	40.0	ug/L	11/18/16	11/23/16

Quant Method:Y0GLYCOL.
Run #:1123Y014
Instrument:Yoda
Sequence:Y161123
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 11/28/16 10:13:50 AM

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y014.D Vial: 14
Acq On : 23 Nov 16 14:52 Operator: MA
Sample : 161118A BLK 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 15:38 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.06	152	185498	40.00000	ppb	0.02
3) Napthalene-D8(IS)	6.46	136	864983	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	514113	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.20	188	956993	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.28	240	897711	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.97	264	639357	40.00000	ppb	-0.20

System Monitoring Compounds

Target Compounds Qvalue

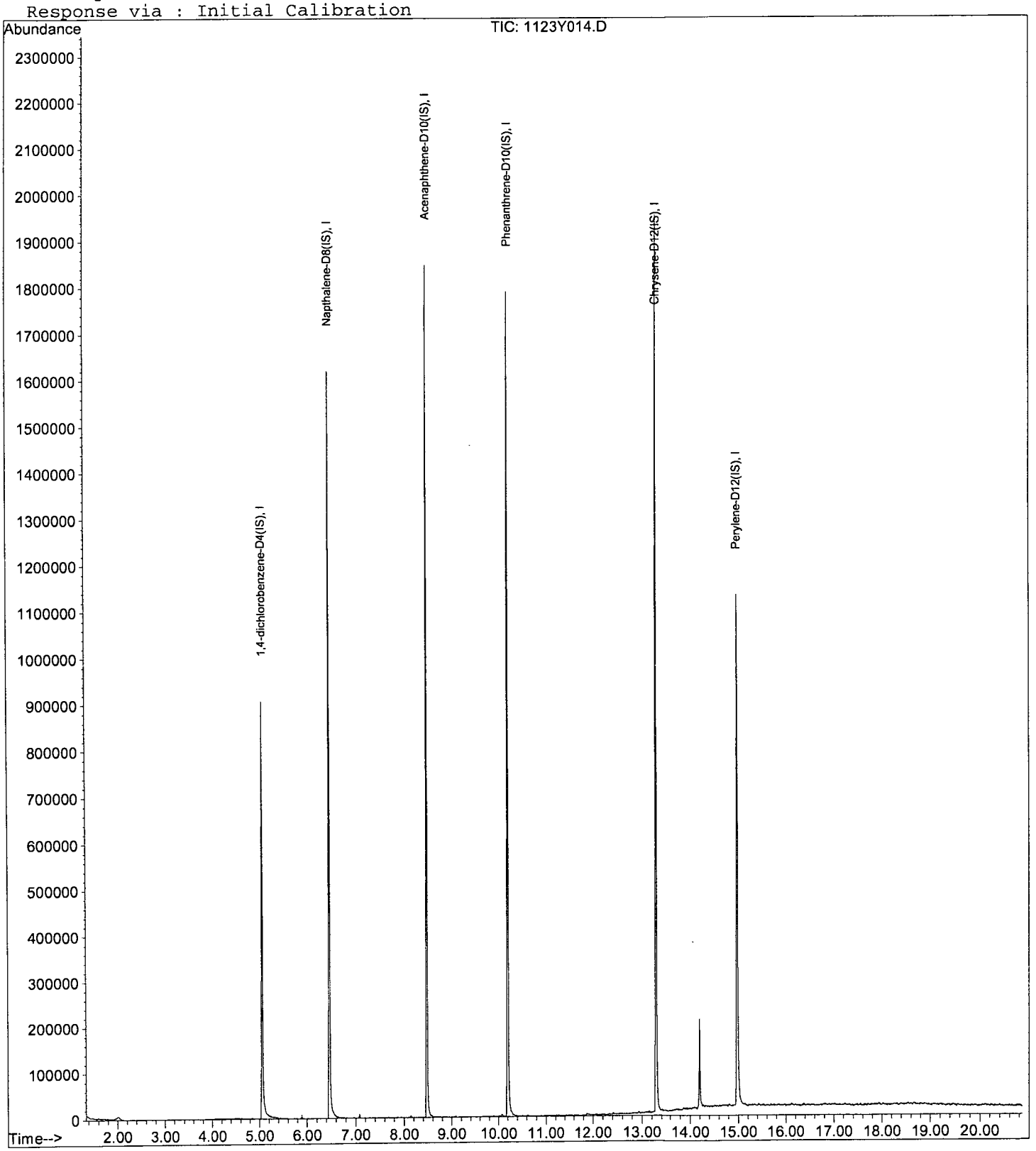
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y014.D Vial: 14
Acq On : 23 Nov 16 14:52 Operator: MA
Sample : 161118A BLK 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 15:38 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



Laboratory Control Spike Recovery

EPA 8270D MODIFIED WATER

APPL ID: **161118W-45866 LCS - 214034**
Batch ID: #87DME-161118A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
2-(2-METHOXYETHOXY)-ETHANOL	500	407	81.4	30-130

Comments: _____

Primary	SPK
Quant Method :	Y0GLYCOL.M
Extraction Date :	11/18/16
Analysis Date :	11/23/16
Instrument :	Yoda
Run :	1123Y015
Initials :	MA

Printed: 11/28/16 10:13:50 AM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y015.D Vial: 15
Acq On : 23 Nov 16 15:21 Operator: MA
Sample : 161118A LCS-1 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 15:38 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	188487	40.00000	ppb	0.01
3) Napthalene-D8(IS)	6.46	136	846292	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	497749	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.19	188	920333	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.27	240	865185	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.97	264	652337	40.00000	ppb	-0.19

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.31	45	372254	407.19096	ppb	97

$$\frac{\left(\frac{372254}{188487} + 0.518\right) * 40 * 1}{0.245} = 407 \quad HA \quad 11/28/16$$

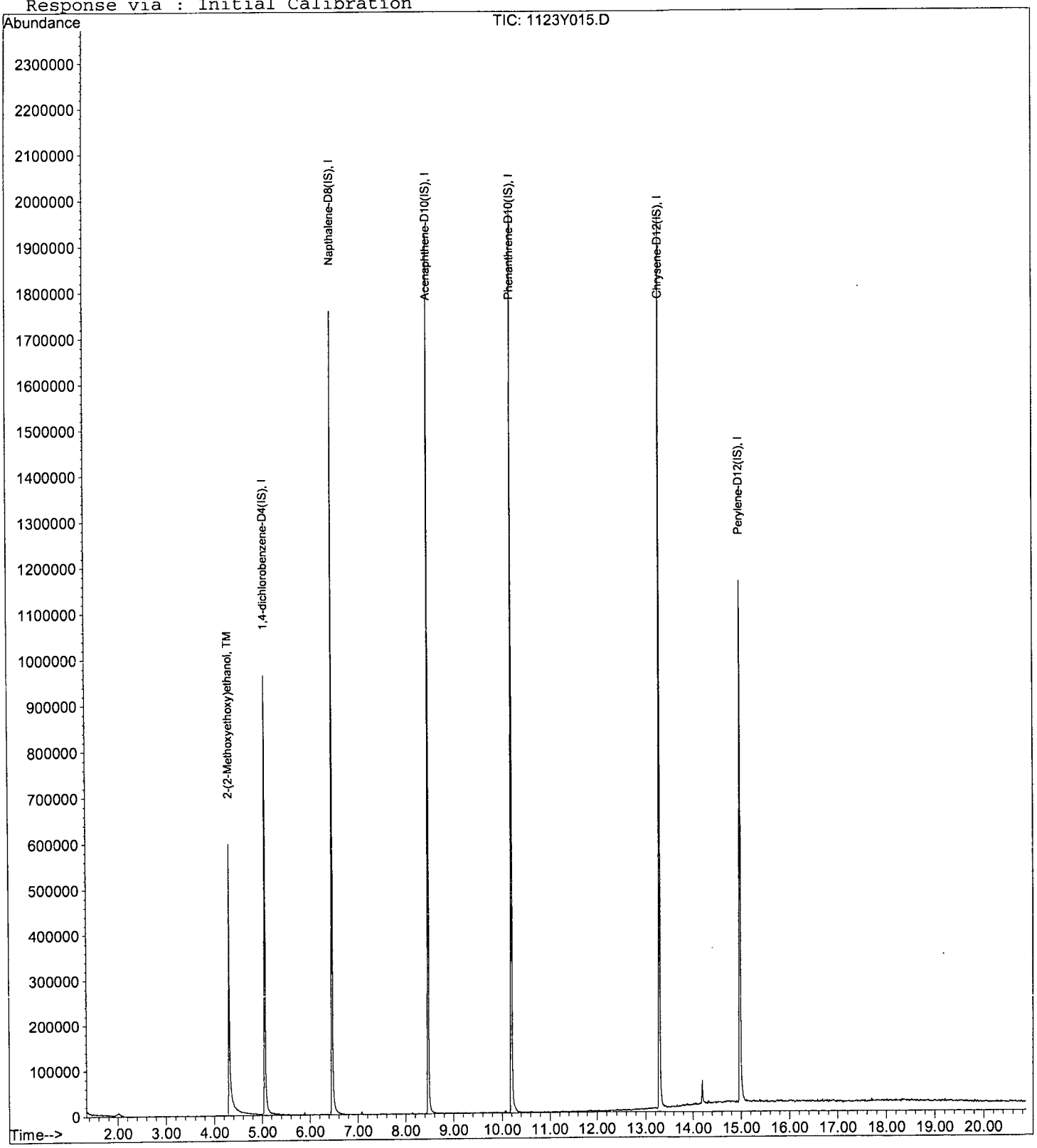
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y015.D Vial: 15
Acq On : 23 Nov 16 15:21 Operator: MA
Sample : 161118A LCS-1 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 15:38 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



Matrix Spike Recoveries

EPA 8270D MODIFIED WATER

APPL ID: **161118W-45866 MS - 214034**
Batch ID: #87DME-161118A
Sample ID: AZ45866
Client ID: ERH115

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
2-(2-METHOXYETHOXY)-ETHANOL	500	ND	378	445	75.6	89.0	30-130	16.3	20

Comments: _____

Primary	SPK	DUP
Quant Method :	Y0GLYCOL.M	Y0GLYCOL.M
Extraction Date :	11/18/16	11/18/16
Analysis Date :	11/23/16	11/23/16
Instrument :	Yoda	Yoda
Run :	1123Y016	1123Y017
Initials :	MA	

Printed: 11/28/16 10:14:00 AM
APPL MSD SCII

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y016.D Vial: 16
Acq On : 23 Nov 16 15:51 Operator: MA
Sample : AZ45866W18 MS-1 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 9:09 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	189184	40.00000	ppb	0.01
3) Napthalene-D8(IS)	6.46	136	848376	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	497720	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.19	188	925234	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.28	240	859991	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.97	264	767563	40.00000	ppb	-0.19
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.31	45	339532	377.75368	ppb	96

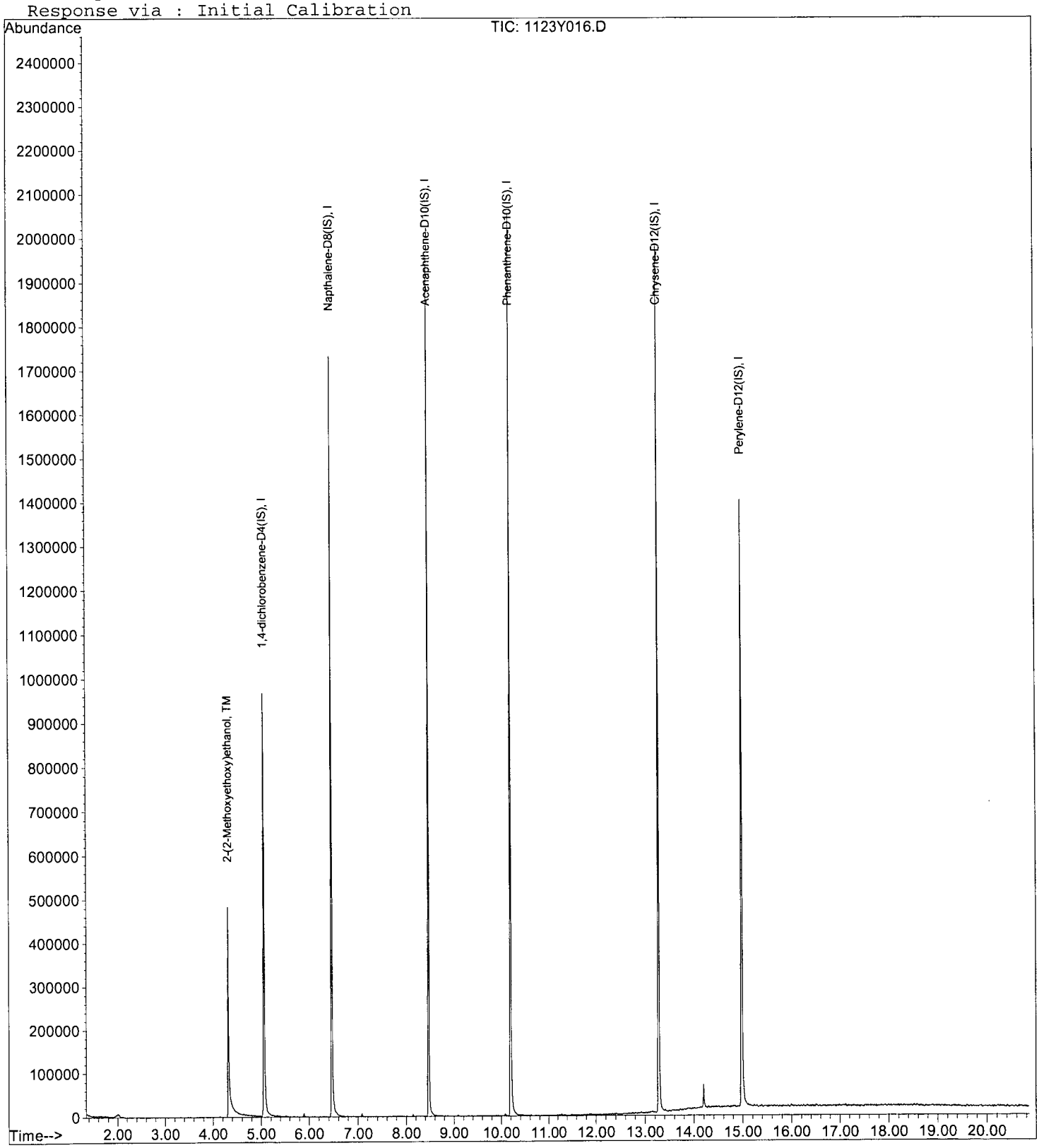
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y016.D Vial: 16
Acq-On : 23 Nov 16 15:51 Operator: MA
Sample : AZ45866W18 MS-1 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 9:09 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y017.D Vial: 17
Acq On : 23 Nov 16 16:21 Operator: MA
Sample : AZ45866W18 MSD-1 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 9:09 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.06	152	185201	40.00000	ppb	0.02
3) Napthalene-D8(IS)	6.46	136	843334	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	499076	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.20	188	902894	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.28	240	847012	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.98	264	656354	40.00000	ppb	-0.19

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.32	45	409145	445.44696	ppb	98

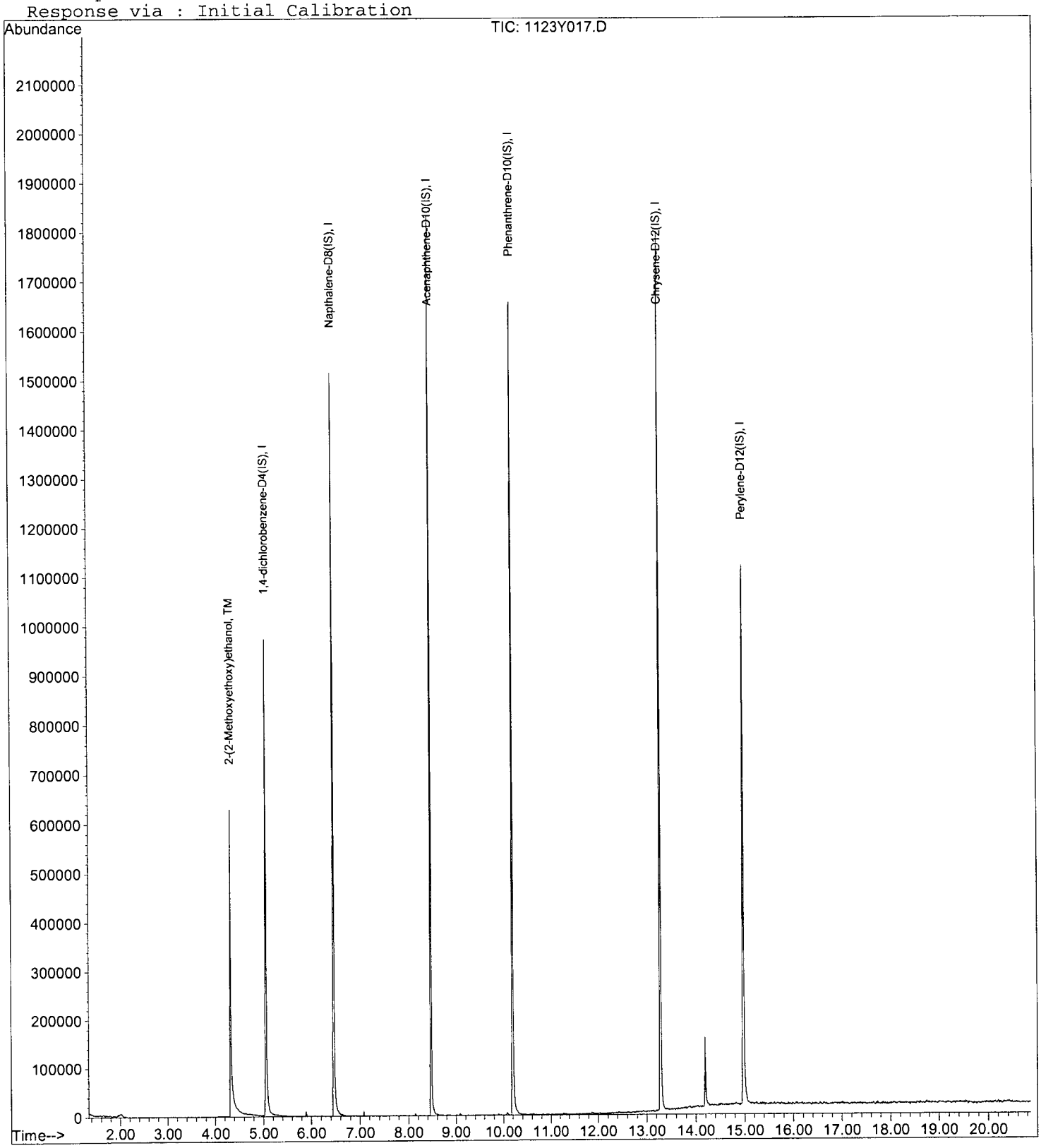
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y017.D Vial: 17
Acq On : 23 Nov 16 16:21 Operator: MA
Sample : AZ45866W18 MSD-1 2/500 Inst : Yoda
Misc : Multiplr: 1.00

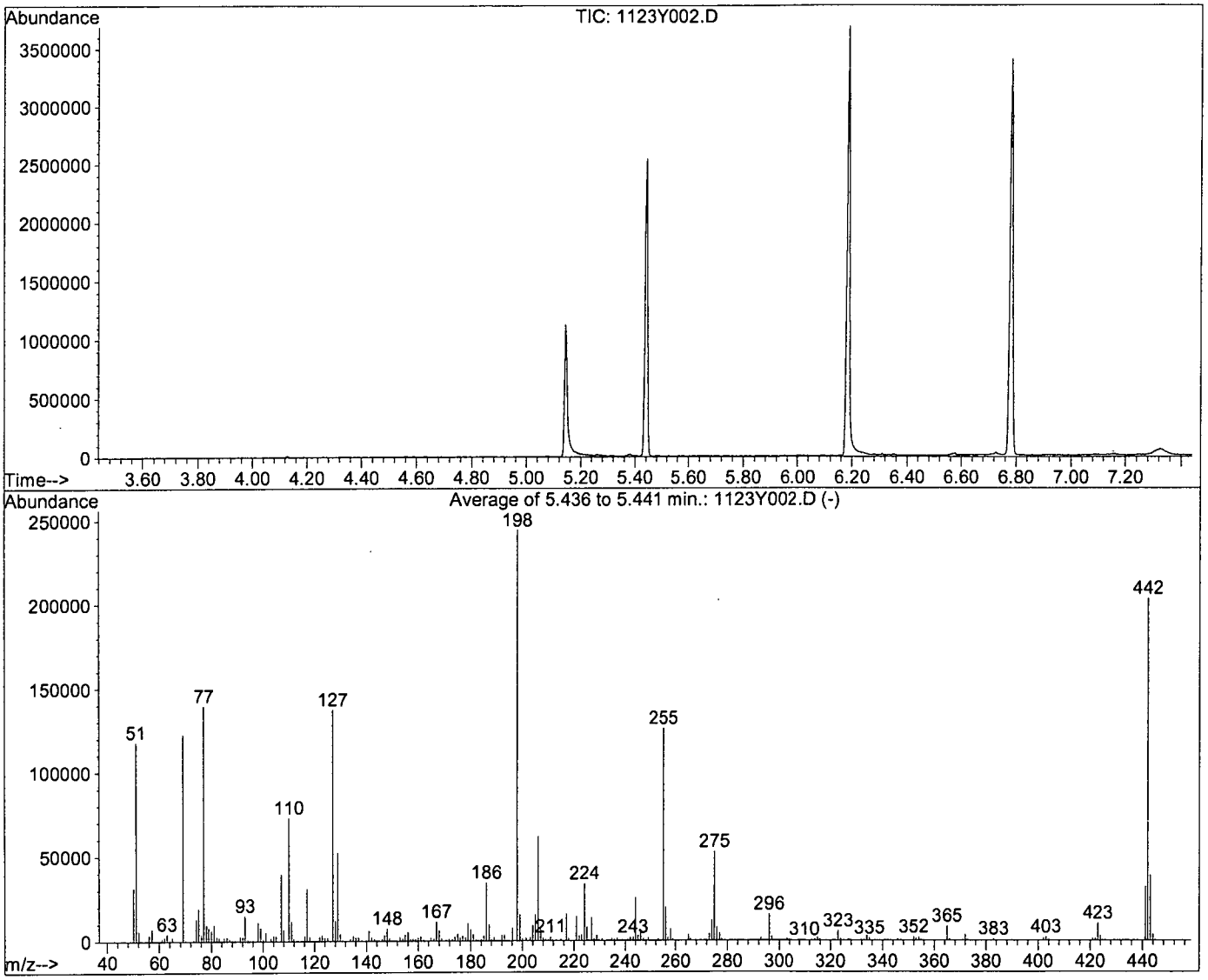
Quant Time: Nov 28 9:09 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



Data File : M:\YODA\DATA\Y161123\1123Y002.D Vial: 2
Acq On : 23 Nov 16 9:15 Operator: MA
Sample : SV Tune 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C

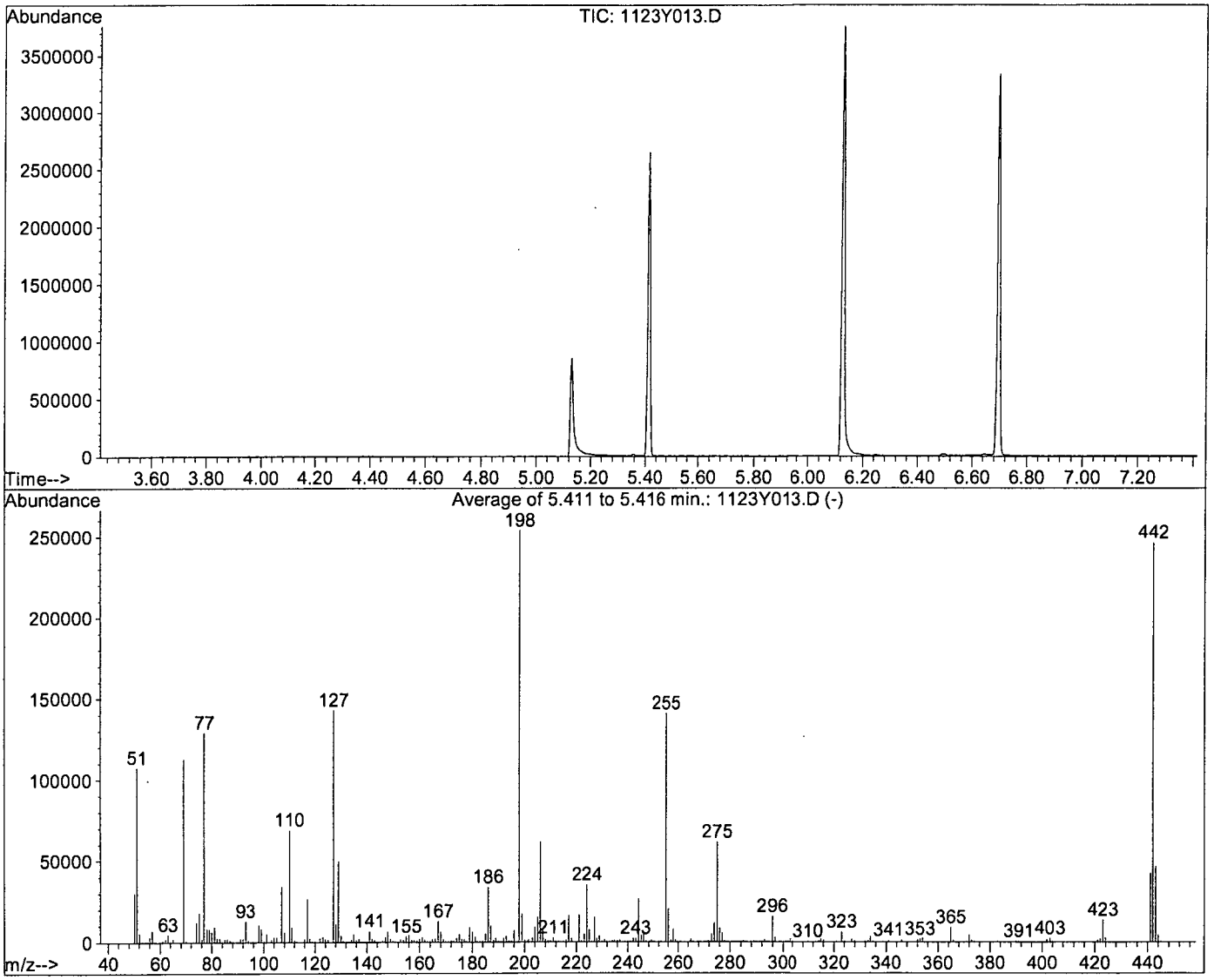


AutoFind: Scans 740, 741, 742; Background Corrected with Scan 733

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	48.3	118003	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.3	397	PASS
127	198	40	60	56.2	137144	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	244245	PASS
199	198	5	9	6.3	15388	PASS
275	198	10	30	21.5	52517	PASS
365	198	1	100	3.4	8422	PASS
441	443	0.01	100	82.0	31557	PASS
442	198	50	150	83.2	203229	PASS
443	442	17	23	18.9	38469	PASS

Data File : M:\YODA\DATA\Y161123\1123Y013.D Vial: 13
Acq On : 23 Nov 16 14:35 Operator: MA
Sample : SV Tune 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 731, 732, 733; Background Corrected with Scan 723

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	42.3	107464	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.9	976	PASS
127	198	40	60	56.2	142691	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	253973	PASS
199	198	5	9	6.7	17118	PASS
275	198	10	30	24.1	61248	PASS
365	198	1	100	3.5	8864	PASS
441	443	0.01	100	91.3	42037	PASS
442	198	50	150	97.0	246229	PASS
443	442	17	23	18.7	46037	PASS

Semivolatile (SV) Tuning Solution -G.A.						
PREP DATE:	11/15/16	RH				
Semivolatile (SV) Tune Solution 50ug/ml						
Exp:	8/26/17					
		Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
Ultra Scient	Semivolatile GC	1000	N081628-37012	08/23/16	8/23/17	200
EM Science	Methylene Chloride		55098			3800
				Final Vol.		4000

GED Curve

PREP DATE:	11/22/16 RH							
8270 Standard Curve								
Exp:	2/11/17					**50**	**100**	**200**
		Conc.		Date				
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL
	GED MSTD Std	2000	VAR	11/18/16	11/18/17	5	5	10
EM Science	Methylene Chloride		56098			195	95	90
Supelco	SV Internal	2000	A14020V-3660	11/09/16	11/09/17	4	2	2
				Final Vol.		204	102	102

400	**500**	**600**	**800**	**1000**
µL	µL	µL	µL	µL
20	25	30	40	50
80	75	70	60	50
2	2	2	2	2
102	102	102	102	102

Diethylene Glycol						
Prep: 11/18/16 -GA Ex: 11/18/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
Diethylene glycol monomethyl ether	2000 ug/ml	AcuuStandard Cat# S-72273 Lot# 216101007-37091 and 37092 Op: 11/18/16 EX: 11/1817	2.0 mL	4 ml	1000 ug/ml	Methanol Lot# 010616A

GED Second Source (SS2)						
PREP DATE:	11/22/16 RH					500
Exp:	1/18/17	Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
	GED MSS Stoc	2000	VAR	10/27/16	10/27/17	25
EM Science	Methylene Chloride		56098			75
Supelco	SV Internal	2000	A14020V-3660	11/09/16	11/09/17	2
				Final Vol.		102

Methoxyethoxyethanol-Neat (MEE) Stock: 9/27/16-R.H. ex: 09/27/17 Second Source						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
MEE	Neat 99.5%	HEM SERVIC	0.1154g	10 mL	11540 ug/ml	MC
		Cat: N-12404-1G				
		Lot: 5259000-37082				
		OP: 09/27/16				
		EXP: 09/27/17				

0.087ml were spiked in 500ml of water and extracted on 10/27/16. Final concentration is 2000ug/ml

_MWE2MEE

Organic Extraction Worksheet

Method	Solid-Phase Extraction-of-2MEE-in-Water	Extraction Set	161118A	Extraction Method	MWE2MEE	Units	mL

Spiked ID 1	Diethylene Glycol 11/18/16 exp 11/18/17		Surrogate ID 1		
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	11/18/16 10:35	
Spiked ID 8			Ext. End Time:	11/18/16 17:00	
			GC Requires Extract By:	11/22/16 0:00	

pH1			Water Bath Temp Criteria	
pH2				
pH3				

Spiked By: KY **Date** 11/18/16 **Witnessed By:** CFM **Date** 11/18/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	161118A Blk				NA	NA equip	500	2	7	11/18/16 10:35	
2	161118A LCS-1		0.250	1	NA	NA equip	500	2	7	11/18/16 10:35	
3	AZ45866 MS-1	AZ45866W18	0.250	1	NA	NA equip	500	2	7	11/18/16 10:35	81492 1 WEEK
4	AZ45866 MSD-1	AZ45866W18	0.250	1	NA	NA equip	500	2	7	11/18/16 10:35	81492 1 WEEK
5	AZ45866	AZ45866W25			NA	NA equip	500	2	7	11/18/16 10:35	81492 1 WEEK
6	AZ45867	AZ45867W08			NA	NA equip	500	2	7	11/18/16 10:35	81492 1 WEEK
7	AZ45868	AZ45868W15			NA	NA equip	500	2	7	11/18/16 10:35	81492 1 WEEK
8	AZ45907	AZ45907W14			NA	NA equip	500	2	7	11/18/16 10:35	81500 1 WEEK
9	AZ45908	AZ45908W13			NA	NA equip	500	2	7	11/18/16 10:35	81500 1 WEEK
10	AZ45909	AZ45909W19			NA	NA equip	500	2	7	11/18/16 10:35	81500 1 WEEK
11	AZ45910	AZ45910W13			NA	NA equip	500	2	7	11/18/16 10:35	81500 1 WEEK
12	AZ45911	AZ45911W12			NA	NA equip	500	2	7	11/18/16 10:35	81500 1 WEEK
13	M STD		1	1	NA	NA equip	500	2	7	11/18/16 10:35	

KY 11/19/16

Solvent and Lot#	
ENVI-Carb Plus 400MG/1ML	
Reverible Tube Lot:	8088703
PH Strip	HC 574756
Di Water	11-18-16
Dichloromethane	56153
Methanol	060316C

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	GA
Date	11/21/16
Time	1000
Refrigerator	Hobart

	Technician's Initials
Scanned By	KY
Sample Preparation	CFM
Extraction	CFM
Concentration	KY

Modified	11/18/16 9:07:20 AM

Reviewed By: KY **Date** 11/19/16

11/19/16 6:11:38 AM

Ext_ID 360 53342

Injection Log

Directory: M:\YODA\DATA\Y161123\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	1123Y002.D	1	SV Tune 11/15/16		23 Nov 16 9:15
3	4	1123Y004.D	1	100ug/ml DEG 11/22/16		23 Nov 16 10:00
4	5	1123Y005.D	1	200ug/ml DEG 11/22/16		23 Nov 16 10:29
5	6	1123Y006.D	1	400ug/ml DEG 11/22/16		23 Nov 16 10:59
6	7	1123Y007.D	1	500ug/ml DEG 11/22/16		23 Nov 16 11:28
7	8	1123Y008.D	1	600ug/ml DEG 11/22/16		23 Nov 16 11:58
8	9	1123Y009.D	1	800ug/ml DEG 11/22/16		23 Nov 16 12:28
9	10	1123Y010.D	1	1000ug/ml DEG 11/22/16		23 Nov 16 13:11
10	12	1123Y012.D	1	SS2 DEG 11/22/16		23 Nov 16 14:09
11	13	1123Y013.D	1	SV Tune 11/15/16		23 Nov 16 14:35
12	14	1123Y014.D	1	161118A BLK 2/500		23 Nov 16 14:52
13	15	1123Y015.D	1	161118A LCS-1 2/500		23 Nov 16 15:21
14	16	1123Y016.D	1	AZ45866W18 MS-1 2/500		23 Nov 16 15:51
15	17	1123Y017.D	1	AZ45866W18 MSD-1 2/500		23 Nov 16 16:21
16	18	1123Y018.D	1	AZ45866W25 2/500		23 Nov 16 16:50
17	19	1123Y019.D	1	AZ45867W08 2/500		23 Nov 16 17:19
18	20	1123Y020.D	1	AZ45868W15 2/500		23 Nov 16 17:48
19	38	1123Y038.D	1	50ug/ml DEG 11/22/16		24 Nov 16 2:20

EPA METHOD 8260B
Volatile Organic Compounds

APPL, INC.

EPA METHOD 8260B
Volatile Organic Compounds
QC Summary

APPL, INC.

Method Blank
EPA 8260B WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161116W-45866 - 213773**
Batch ID: #86BXD-161116BL

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	11/17/16	11/17/16
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	11/17/16	11/17/16
BLANK	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	11/17/16	11/17/16
BLANK	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	11/17/16	11/17/16
BLANK	SURROGATE: 1,2-DICHLOROET	101	81-118			%	11/17/16	11/17/16
BLANK	SURROGATE: 4-BROMOFLUORO	97.8	85-114			%	11/17/16	11/17/16
BLANK	SURROGATE: DIBROMOFLUOR	92.6	80-119			%	11/17/16	11/17/16
BLANK	SURROGATE: TOLUENE-D8 (S)	101	89-112			%	11/17/16	11/17/16

Quant Method: LALLW.M
Run #: 1116L46
Instrument: Loki
Sequence: 161113
Initials: CMO

GC SC-Blank-REG MDLs-DOD
Printed: 11/23/16 9:37:03 AM

Method Blank
EPA 8260B GRO WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161116W-45866 - 213796**
Batch ID: #GRO86-161116BL

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	11/17/16	11/17/16
BLANK	SURROGATE: 4-BROMOFLUORO	97.8	85-114			%	11/17/16	11/17/16

Quant Method: LSUR1113.M
Run #: 1116L46
Instrument: Loki
Sequence: 161113
Initials: CMO

GC SC-Blank-REG MDLs-DOD
Printed: 11/18/16 9:28:55 AM

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81492

Case No: 81492 Date Analyzed: 11/17/16

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: DIBROMOFLUOROMETHANE (S)			SURROGATE: TOLUENE-D8 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161116BL-LCS	Lab Control Spike	80-119	93.6		89-112	104	
161116BL-BLK	Blank	80-119	92.6		89-112	101	
AZ45865	ERH114	80-119	94.6		89-112	101	
AZ45866	ERH115	80-119	94.3		89-112	100	
AZ45867	ERH116	80-119	93.6		89-112	101	
AZ45868	ERH120	80-119	95.0		89-112	104	
AZ45866-MS	Matrix Spike	80-119	95.6		89-112	104	
AZ45866-MSD	Matrix SpikeD	80-119	93.6		89-112	103	

Comments: Batch: #86BXD-161116BL

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81492

Case No: 81492 Date Analyzed: 11/17/16

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: 1,2-DICHLOROETHANE-D4 (S)			SURROGATE: 4-BROMOFLUOROBENZENE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161116BL-LCS	Lab Control Spike	81-118	102		85-114	101	
161116BL-BLK	Blank	81-118	101		85-114	97.8	
AZ45865	ERH114	81-118	105		85-114	95.2	
AZ45866	ERH115	81-118	105		85-114	96.4	
AZ45867	ERH116	81-118	106		85-114	97.5	
AZ45868	ERH120	81-118	107		85-114	99.7	
AZ45866-MS	Matrix Spike	81-118	110		85-114	104	
AZ45866-MSD	Matrix SpikeD	81-118	108		85-114	100	

Comments: Batch: #86BXD-161116BL

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81492

Case No: 81492 Date Analyzed: 11/17/16

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: 4-BROMOFLUOROBENZENE (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
161116BL-BLK	Blank	85-114	97.8				
161116BL-LCS	Lab Control Spike	85-114	95.6				
AZ45865	ERH114	85-114	95.2				
AZ45866	ERH115	85-114	96.4				
AZ45867	ERH116	85-114	97.5				
AZ45868	ERH120	85-114	99.7				
AZ45866-MS	Matrix Spike	85-114	98.4				
AZ45866-MSD	Matrix SpikeD	85-114	101				

Comments: Batch: #GRO86-161116BL

Laboratory Control Spike Recovery
EPA 8260B WATER

APPL ID: **161117W-45866 LCS - 213773**
Batch ID: #86BXD-161116BL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
BENZENE	10.00	10.5	105	79-120
ETHYLBENZENE	10.00	10.9	109	79-121
TOLUENE	10.00	10.2	102	80-121
XYLENES (TOTAL)	30.0	31.5	105	79-121
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	25.6	102	81-118
SURROGATE: 4-BROMOFLUOROBENZE	25.0	25.2	101	85-114
SURROGATE: DIBROMOFLUOROMETH	25.0	23.4	93.6	80-119
SURROGATE: TOLUENE-D8 (S)	25.0	25.9	104	89-112

Comments: _____

Primary	SPK
Quant Method :	LALLW.M
Extraction Date :	11/17/16
Analysis Date :	11/17/16
Instrument :	Loki
Run :	1116L43
Initials :	CMO

Printed: 11/23/16 9:36:54 AM
APPL Standard LCS

Laboratory Control Spike Recovery
EPA 8260B GRO WATER

APPL ID: **161117W-45866 LCS - 213796**
Batch ID: #GRO86-161116BL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
GASOLINE RANGE ORGANICS	300	286	95.3	78-122
SURROGATE: 4-BROMOFLUOROBENZE	25.0	23.9	95.6	85-114

Comments: _____

Primary	SPK
Quant Method :	LSUR1113.M
Extraction Date :	11/17/16
Analysis Date :	11/17/16
Instrument :	Loki
Run :	1116L55
Initials :	CMO

Printed: 11/18/16 9:28:47 AM
APPL Standard LCS

Matrix Spike Recoveries

EPA 8260B WATER

APPL ID: **161117W-45866 MS - 213773**
Batch ID: #86BXD-161116BL
Sample ID: AZ45866
Client ID: ERH115

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
BENZENE	10.00	ND	9.99	9.71	99.9	97.1	79-120	2.8	20
ETHYLBENZENE	10.00	ND	10.1	9.76	101	97.6	79-121	3.4	20
TOLUENE	10.00	ND	9.66	9.35	96.6	93.5	80-121	3.3	20
XYLENES (TOTAL)	30.0	ND	29.2	28.4	97.3	94.7	79-121	2.8	20
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	NA	27.4	27.0	110	108	81-118		
SURROGATE: 4-BROMOFLUOROBENZE	25.0	NA	26.0	25.0	104	100	85-114		
SURROGATE: DIBROMOFLUOROMETH	25.0	NA	23.9	23.4	95.6	93.6	80-119		
SURROGATE: TOLUENE-D8 (S)	25.0	NA	26.0	25.7	104	103	89-112		

Comments:

Primary	SPK	DUP
Quant Method :	LALLW.M	LALLW.M
Extraction Date :	11/17/16	11/17/16
Analysis Date :	11/17/16	11/17/16
Instrument :	Loki	Loki
Run :	1116L62	1116L63
Initials :	CMO	

Printed: 11/23/16 9:36:48 AM
APPL MSD SCII

Matrix Spike Recoveries
EPA 8260B GRO WATER

APPL ID: **161117W-45866 MS - 213796**
Batch ID: #GRO86-161116BL
Sample ID: AZ45866
Client ID: ERH115

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
GASOLINE RANGE ORGANICS	300	ND	250	268	83.3	89.3	78-122	6.9	20
SURROGATE: 4-BROMOFLUOROBENZE	25.0	NA	24.6	25.2	98.4	101	85-114		

Comments: _____

Primary	SPK	DUP
Quant Method :	LSUR1113.M	LSUR1113.M
Extraction Date :	11/17/16	11/17/16
Analysis Date :	11/17/16	11/17/16
Instrument :	Loki	Loki
Run :	1116L64	1116L65
Initials :	CMO	

Printed: 11/18/16 9:31:39 AM
APPL MSD SCII

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81492

Case No: 81492 Date Analyzed: 11/17/16

Matrix: WATER Instrument: Loki

Blank ID: 161116BL-BLK Time Analyzed: 0528

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161116BL-LCS	Lab Control Spike	1116L43	11/17/16 0404
161116BL-BLK	Blank	1116L46	11/17/16 0528
AZ45865	ERH114	1116L56	11/17/16 1007
AZ45866	ERH115	1116L57	11/17/16 1035
AZ45867	ERH116	1116L58	11/17/16 1103
AZ45868	ERH120	1116L59	11/17/16 1132
161116BL-MS	Matrix Spike	1116L62	11/17/16 1256
161116BL-MSD	Matrix SpikeD	1116L63	11/17/16 1324

Comments: Batch: #86BXD-161116BL

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81492

Case No: 81492 Date Analyzed: 11/17/16

Matrix: WATER Instrument: Loki

Blank ID: 161116BL-BLK Time Analyzed: 0528

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161116BL-BLK	Blank	1116L46	11/17/16 0528
161116BL-LCS	Lab Control Spike	1116L55	11/17/16 0939
AZ45865	ERH114	1116L56	11/17/16 1007
AZ45866	ERH115	1116L57	11/17/16 1035
AZ45867	ERH116	1116L58	11/17/16 1103
AZ45868	ERH120	1116L59	11/17/16 1132
161116BL-MS	Matrix Spike	1116L64	11/17/16 1352
161116BL-MSD	Matrix SpikeD	1116L65	11/17/16 1420

Comments: Batch: #GRO86-161116BL

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: ~~1113L00.D~~ 81492
Matrix: Water np12-676
ID: 5ng- BFB STD 10-12-16

SDG No: np12-676 ~~Loki~~ 81492
Date Analyzed: 11/13/16
Instrument: Loki
Time Analyzed: 11:20

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		5ng- BFB STD 10-12-1	1113L00.D	11/13/16 11:20
2		0.3ug/L VOC STD 11/1	1113L05.D	11/13/16 13:35
3		0.5ug/L VOC STD 11/1	1113L06.D	11/13/16 14:04
4		1.0ug/L VOC STD 11/1	1113L07.D	11/13/16 14:32
5		2.0ug/L VOC STD 11/1	1113L08.D	11/13/16 15:00
6		5.0ug/L VOC STD 11/1	1113L09.D	11/13/16 15:28
7		10ug/L VOC STD 11/13	1113L10.D	11/13/16 15:56
8		20ug/L VOC STD 11/13	1113L11.D	11/13/16 16:24
9		40ug/L VOC STD 11/13	1113L12.D	11/13/16 16:53
10		100ug/L VOC STD 11/1	1113L13.D	11/13/16 17:21
11		(SS) 10ug/L VOC STD	1113L17.D	11/13/16 19:14
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	21.1
75	30 - 60% of mass 95	50.9
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	6.7
173	0 - 2% of mass 174	0.0
174	50 - 100% of mass 95	77.2
175	5 - 9% of mass 174	7.8
176	95 - 101% of mass 174	97.4
177	5 - 9% of mass 176	6.8

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81492
Matrix: Water
ID: 5ng- BFB STD 10-12-16

SDG No: 81492
Date Analyzed: 11/17/16
Instrument: Loki
Time Analyzed: 2:40

	Client Sample No.	APPL ID.	File ID.	Date Analyzed	
1		5ng- BFB STD 10-12-1	1116L40.D	11/17/16 2:40	
2	Lab Control Spike	161116B CCV/LCS 10ug	1116L42.D	11/17/16 3:36	
3	Lab Control Spike	161116B CCV/LCS 10ug	1116L43.D	11/17/16 4:04	
4	Blank	161116B BLK-1WL	1116L46.D	11/17/16 5:28	
5	Lab Control Spike	161116A CCV/LCS 300u	1116L54.D	11/17/16 9:11	
6	Lab Control Spike	161116A CCV/LCS 300u	1116L55.D	11/17/16 9:39	
7	ERH114	AZ45865W01	1116L56.D	11/17/16 10:07	
8	ERH115	AZ45866W01	1116L57.D	11/17/16 10:35	
9	ERH116	AZ45867W01	1116L58.D	11/17/16 11:03	
10	ERH120	AZ45868W01	1116L59.D	11/17/16 11:32	
11		AZ45866W234 MS-1WL 1	1116L62.D	11/17/16 12:56	
12		AZ45866W234 MSD-1WL	1116L63.D	11/17/16 13:24	
13		AZ45866W456 MS-1WL 3	1116L64.D	11/17/16 13:52	
14		AZ45866W456 MSD-1WL	1116L65.D	11/17/16 14:20	
15		Ending CCV 8260 10ug	1116L66.D	11/17/16 14:48	*
16		Ending CCV 8260 300u	1116L69.D	11/17/16 16:08	*
17					
18					
19					
20					
21					
22					

m/e		
50	15 - 40% of mass 95	22.2
75	30 - 60% of mass 95	52.8
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	6.2
173	0 - 2% of mass 174	0.4
174	50 - 100% of mass 95	80.6
175	5 - 9% of mass 174	7.4
176	95 - 101% of mass 174	95.6
177	5 - 9% of mass 176	6.3

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 81492

Lab File ID (Standard): 1113L10.D Date Analyzed: 11/13/16

Instrument ID: Loki Time Analyzed: 15:56

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	817344	5.38	790336	8.70	444864	11.03
	UPPER LIMIT	1634688	5.88	1580672	9.20	889728	11.53
	LOWER LIMIT	408672	4.88	395168	8.20	222432	10.53
	SAMPLE NO.						
01	161116B CCV/LCS 10ug	708480	5.38	658752	8.70	336192	11.03
02	161116B CCV/LCS 10ug	728576	5.38	650240	8.70	337984	11.03
03	161116B BLK-1WL	698624	5.38	642880	8.70	325056	11.03
04	AZ45865W01	716800	5.38	667072	8.70	323200	11.03
05	AZ45866W01	706560	5.38	659136	8.70	331456	11.03
06	AZ45867W01	702208	5.38	647552	8.70	330176	11.03
07	AZ45868W01	699136	5.38	644992	8.70	333888	11.03
08	AZ45866W234 MS-1WL	701376	5.38	643584	8.70	345152	11.03
09	AZ45866W234 MSD-1W	730816	5.38	668416	8.70	350784	11.03
10	Ending CCV 8260 10ug/	728512	5.38	666112	8.70	340992	11.03
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

EPA METHOD 8260B
Volatile Organic Compounds
Sample Data

APPL, INC.

EPA 8260B WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH114
Sample Collection Date: 11/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81492
APPL ID: AZ45865
QCG: #86BXD-161116BL-213773

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	11/17/16	11/17/16
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	11/17/16	11/17/16
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	11/17/16	11/17/16
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	11/17/16	11/17/16
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	105	81-118			%	11/17/16	11/17/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	95.2	85-114			%	11/17/16	11/17/16
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	94.6	80-119			%	11/17/16	11/17/16
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	101	89-112			%	11/17/16	11/17/16

Quant Method: LALLW.M
Run #: 1116L56
Instrument: Loki
Sequence: 161113
Dilution Factor: 1
Initials: CMO

Printed: 11/23/16 9:36:58 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH114

Sample Collection Date: 11/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81492

APPL ID: AZ45865

QCG: #GRO86-161116BL-213796

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	11/17/16	11/17/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	95.2	85-114			%	11/17/16	11/17/16

Quant Method:	LSUR1113.M
Run #:	1116L56
Instrument:	Loki
Sequence:	161113
Dilution Factor:	1
Initials:	CMO

Printed: 11/18/16 9:28:51 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1116L56.D Vial: 46
Acq On : 17 Nov 16 10:07 Operator: PM,DG,SV,CMM
Sample : AZ45865W01 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 14:52 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	716800	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	667072	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	323200	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	357655	23.64	ppb	0.00
Spiked Amount 25.000			Recovery =	94.580%		
37) 1,2-DCA-D4(S)	4.93	65	432739	26.24	ppb	0.00
Spiked Amount 25.000			Recovery =	104.968%		
57) Toluene-D8(S)	7.22	98	1283881	25.20	ppb	0.00
Spiked Amount 25.000			Recovery =	100.820%		
65) 4-Bromofluorobenzene(S)	9.89	95	437786	23.81	ppb	0.00
Spiked Amount 25.000			Recovery =	95.248%		

Target Compounds Qvalue

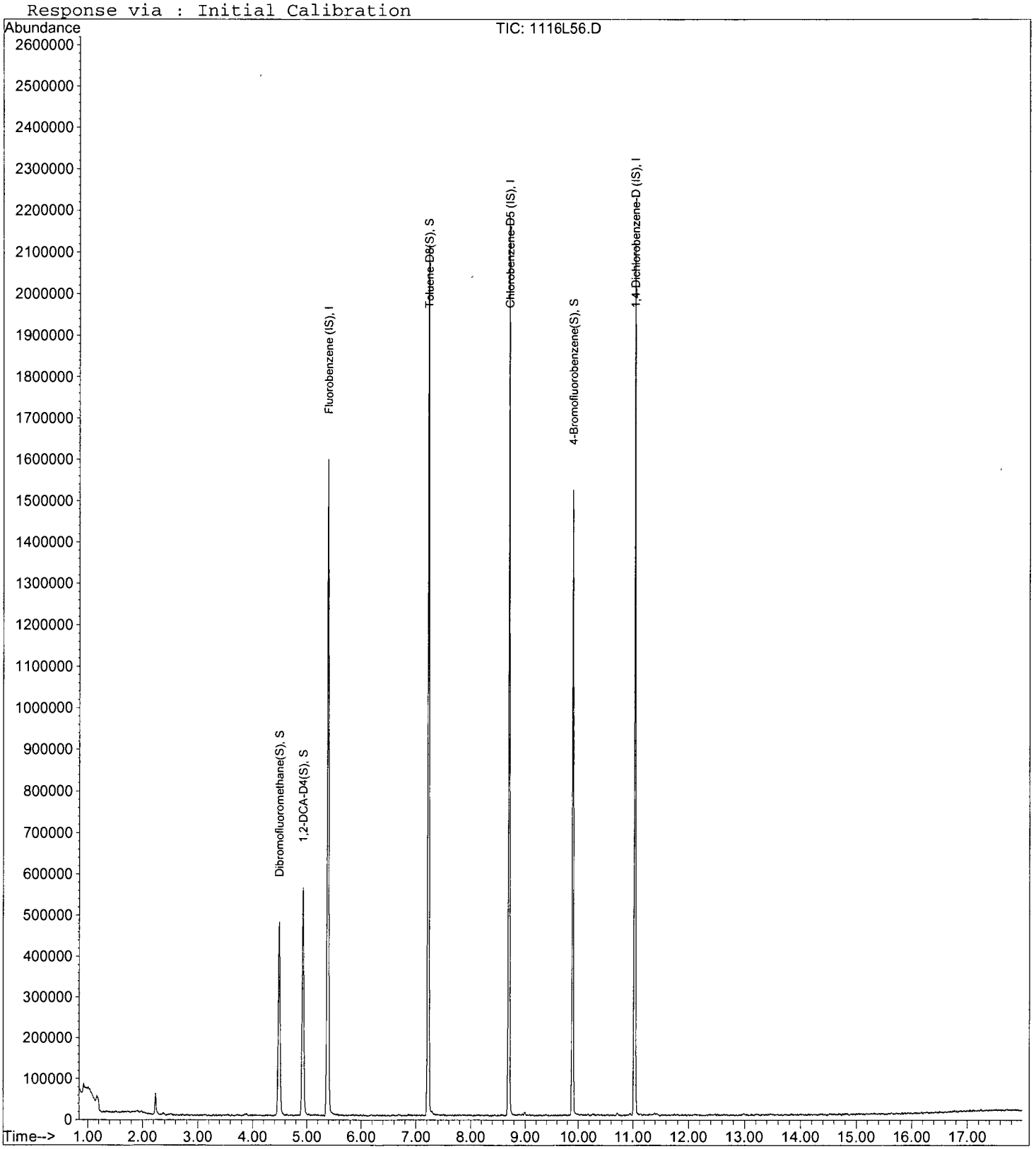
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1116L56.D Vial: 46
Acq-On : 17 Nov 16 10:07 Operator: PM,DG,SV,CMM
Sample : AZ45865W01 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 14:52 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1116L56.D Vial: 46
Acq On : 17 Nov 16 10:07 Operator: PM,DG,SV,CMM
Sample : AZ45865W01 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 14:45 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1590594	25.00 ppb	-0.10
3) Chlorobenzene-D5 (IS)	8.70	TIC	2172122	25.00 ppb	-0.09
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	2112597	25.00 ppb	-0.09

System Monitoring Compounds

Target Compounds Qvalue

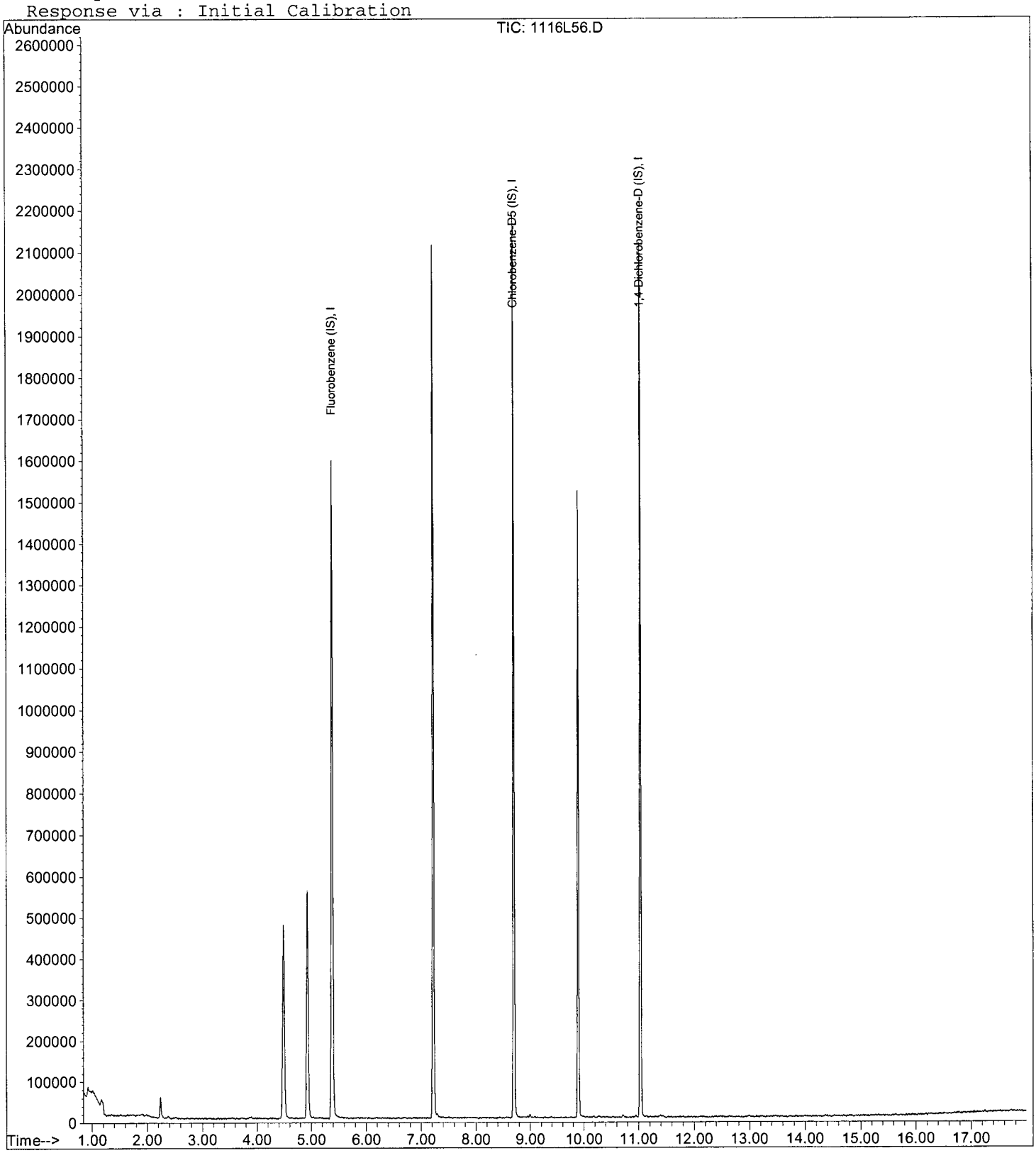
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1116L56.D Vial: 46
Acq On : 17 Nov 16 10:07 Operator: PM,DG,SV,CMM
Sample : AZ45865W01 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 14:45 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



EPA 8260B WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH115
Sample Collection Date: 11/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81492
APPL ID: AZ45866
QCG: #86BXD-161116BL-213773

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	11/17/16	11/17/16
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	11/17/16	11/17/16
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	11/17/16	11/17/16
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	11/17/16	11/17/16
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	105	81-118			%	11/17/16	11/17/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	96.4	85-114			%	11/17/16	11/17/16
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	94.3	80-119			%	11/17/16	11/17/16
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	100	89-112			%	11/17/16	11/17/16

Quant Method: LALLW.M
Run #: 1116L57
Instrument: Loki
Sequence: 161113
Dilution Factor: 1
Initials: CMO

Printed: 11/23/16 9:36:58 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH115
Sample Collection Date: 11/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81492
APPL ID: AZ45866
QCG: #GRO86-161116BL-213796

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	11/17/16	11/17/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	96.4	85-114			%	11/17/16	11/17/16

Quant Method: LSUR1113.M
Run #: 1116L57
Instrument: Loki
Sequence: 161113
Dilution Factor: 1
Initials: CMO

Printed: 11/18/16 9:28:52 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1116L57.D Vial: 47
Acq On : 17 Nov 16 10:35 Operator: PM, DG, SV, CMM
Sample : AZ45866W01 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 14:54 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	706560	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	659136	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	331456	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	351440	23.57	ppb	0.00
Spiked Amount 25.000			Recovery =	94.284%		
37) 1,2-DCA-D4(S)	4.93	65	425568	26.18	ppb	0.00
Spiked Amount 25.000			Recovery =	104.724%		
57) Toluene-D8(S)	7.22	98	1262721	25.09	ppb	0.00
Spiked Amount 25.000			Recovery =	100.352%		
65) 4-Bromofluorobenzene(S)	9.89	95	437821	24.10	ppb	0.00
Spiked Amount 25.000			Recovery =	96.404%		

Target Compounds Qvalue

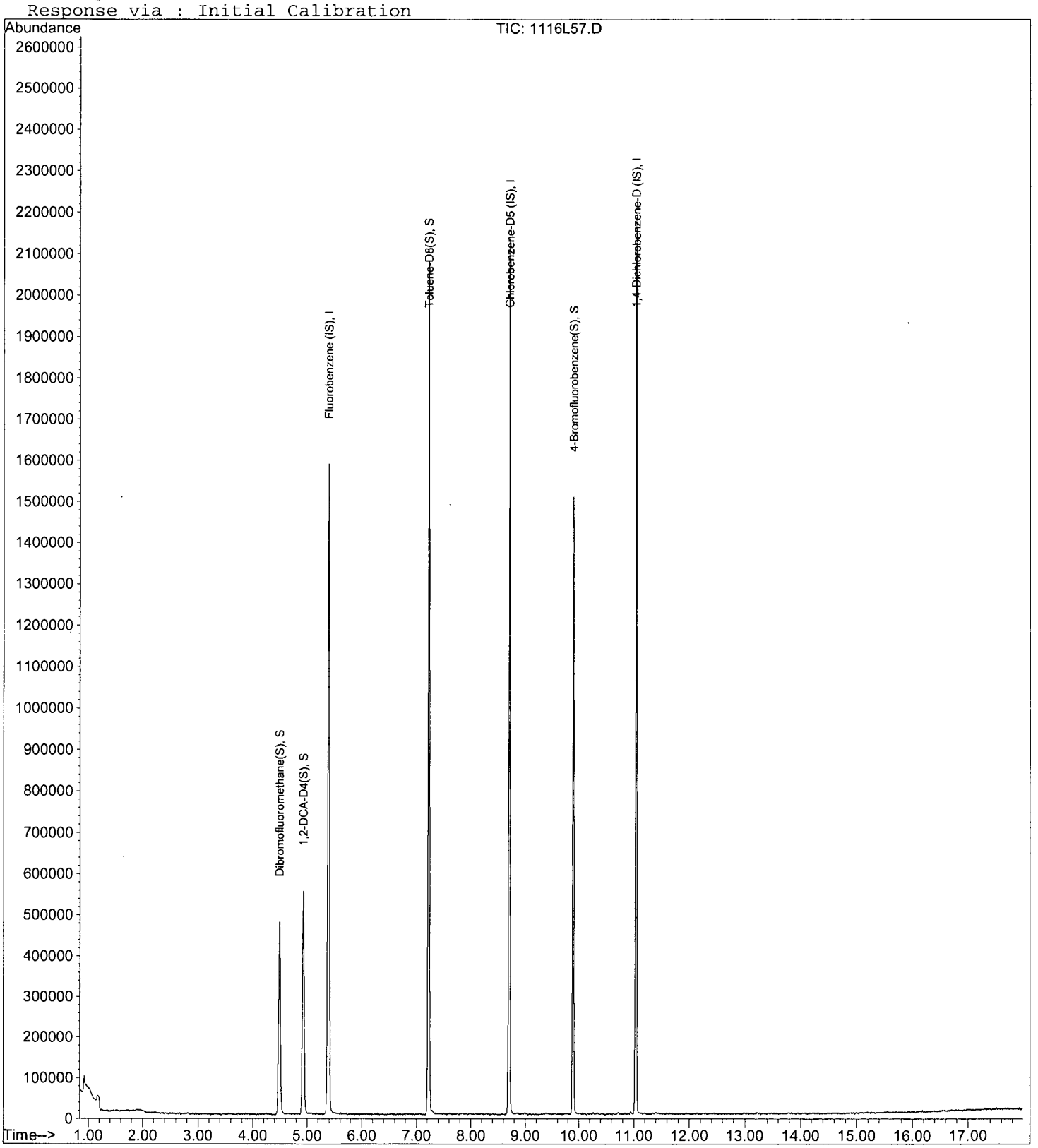
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1116L57.D Vial: 47
Acq On : 17 Nov 16 10:35 Operator: PM,DG,SV,CMM
Sample : AZ45866W01 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 14:54 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1116L57.D Vial: 47
Acq On : 17 Nov 16 10:35 Operator: PM,DG,SV,CMM
Sample : AZ45866W01 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 14:45 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1581093	25.00 ppb	-0.10
3) Chlorobenzene-D5 (IS)	8.70	TIC	2125196	25.00 ppb	-0.09
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	2177631	25.00 ppb	-0.09

System Monitoring Compounds

Target Compounds Qvalue

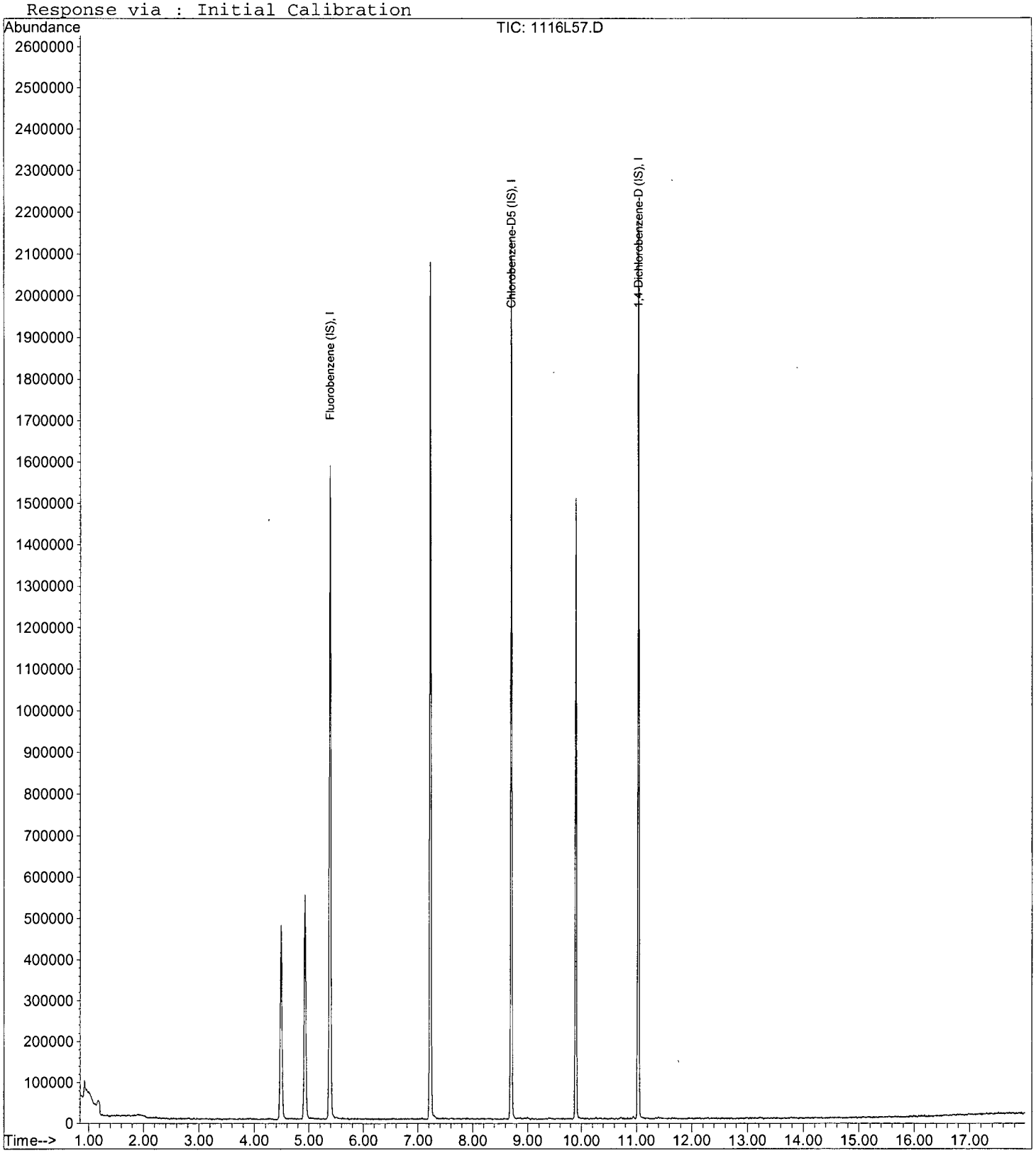
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1116L57.D Vial: 47
Acq On : 17 Nov 16 10:35 Operator: PM,DG,SV,CMM
Sample : AZ45866W01 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 14:45 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



EPA 8260B WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH116
Sample Collection Date: 11/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81492
APPL ID: AZ45867
QCG: #86BXD-161116BL-213773

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	11/17/16	11/17/16
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	11/17/16	11/17/16
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	11/17/16	11/17/16
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	11/17/16	11/17/16
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	106	81-118			%	11/17/16	11/17/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	97.5	85-114			%	11/17/16	11/17/16
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	93.6	80-119			%	11/17/16	11/17/16
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	101	89-112			%	11/17/16	11/17/16

Quant Method: LALLW.M
Run #: 1116L58
Instrument: Loki
Sequence: 161113
Dilution Factor: 1
Initials: CMO

Printed: 11/23/16 9:36:58 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81492

Sample ID: ERH116

APPL ID: AZ45867

Sample Collection Date: 11/14/16

QCG: #GRO86-161116BL-213796

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	11/17/16	11/17/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	97.5	85-114			%	11/17/16	11/17/16

Quant Method:	LSUR1113.M
Run #:	1116L58
Instrument:	Loki
Sequence:	161113
Dilution Factor:	1
Initials:	CMO

Printed: 11/18/16 9:28:52 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1116L58.D Vial: 48
Acq On : 17 Nov 16 11:03 Operator: PM,DG,SV,CMM
Sample : AZ45867W01 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 14:55 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	702208	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	647552	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	330176	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	346578	23.39	ppb	0.00
Spiked Amount 25.000			Recovery =	93.556%		
37) 1,2-DCA-D4(S)	4.93	65	426407	26.40	ppb	0.00
Spiked Amount 25.000			Recovery =	105.580%		
57) Toluene-D8(S)	7.22	98	1250966	25.30	ppb	0.00
Spiked Amount 25.000			Recovery =	101.196%		
65) 4-Bromofluorobenzene(S)	9.89	95	434869	24.37	ppb	0.00
Spiked Amount 25.000			Recovery =	97.464%		

Target Compounds Qvalue

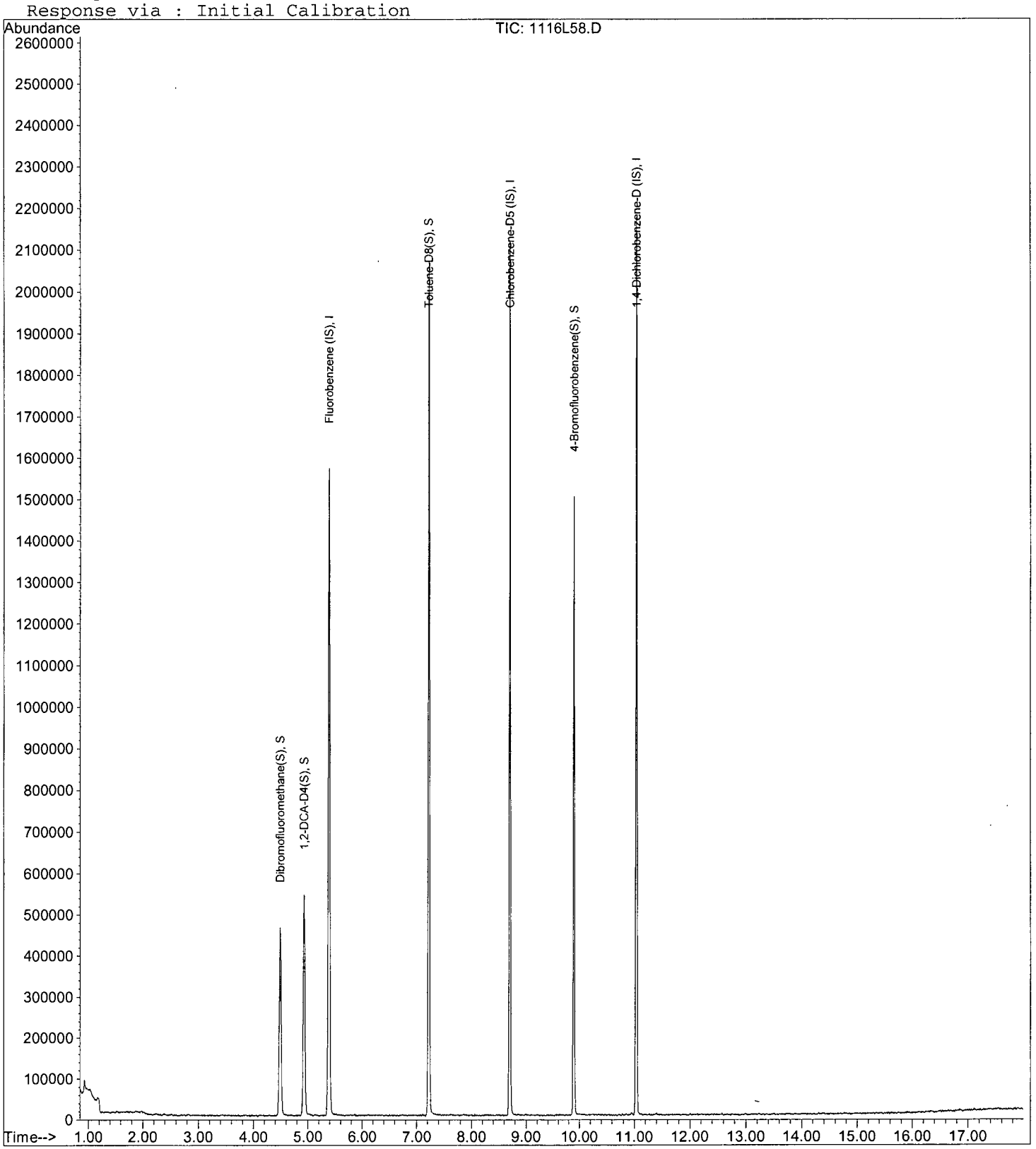
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1116L58.D Vial: 48
Acq On : 17 Nov 16 11:03 Operator: PM,DG,SV,CMM
Sample : AZ45867W01 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 14:55 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1116L58.D Vial: 48
Acq On : 17 Nov 16 11:03 Operator: PM,DG,SV,CMM
Sample : AZ45867W01 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 14:45 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1564333	25.00	ppb	-0.10
3) Chlorobenzene-D5 (IS)	8.70	TIC	2111475	25.00	ppb	-0.09
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	2167819	25.00	ppb	-0.09

System Monitoring Compounds

Target Compounds Qvalue

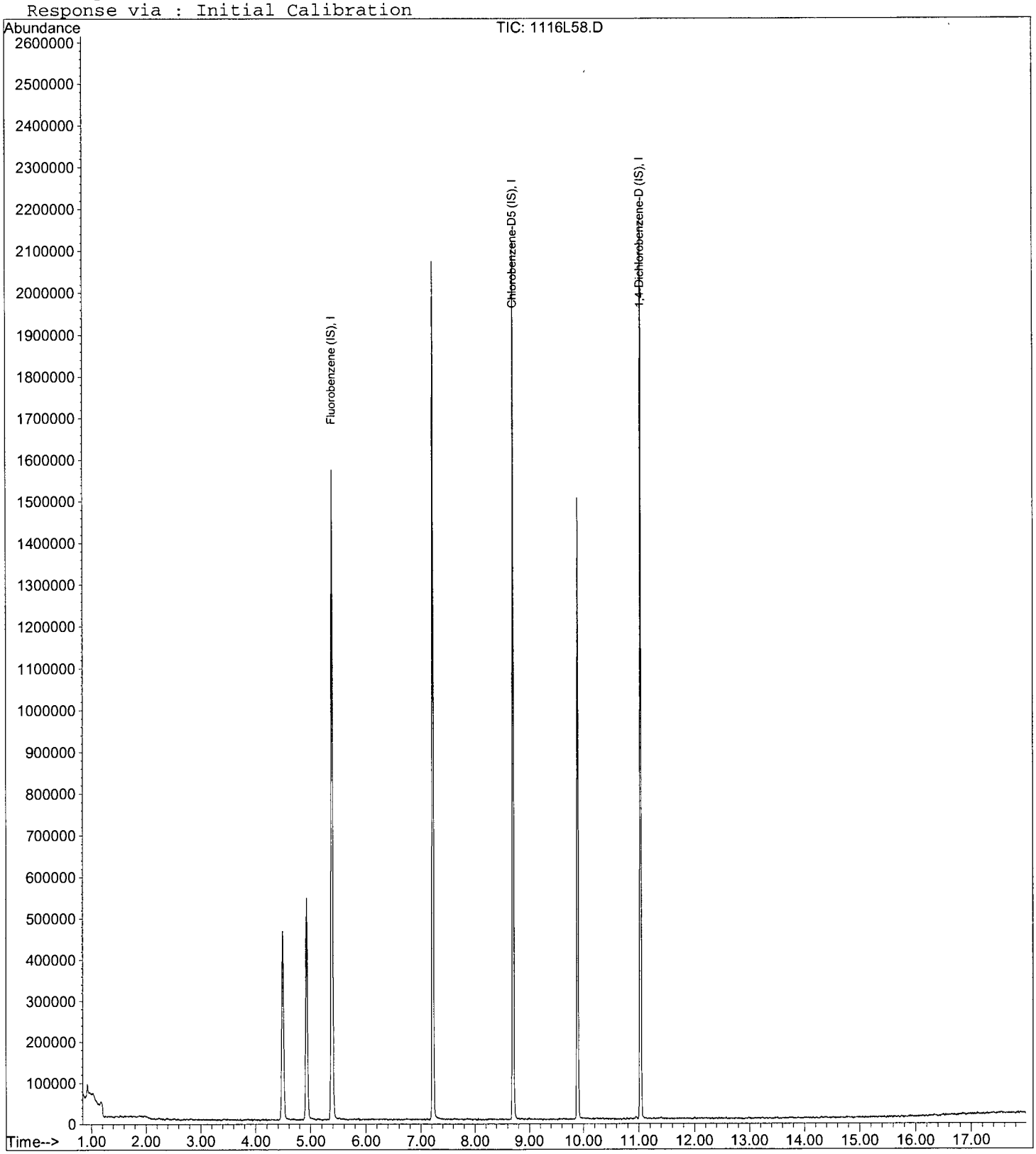
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1116L58.D Vial: 48
Acq On : 17 Nov 16 11:03 Operator: PM, DG, SV, CMM
Sample : AZ45867W01 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 14:45 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



EPA 8260B WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH120

Sample Collection Date: 11/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81492

APPL ID: AZ45868

QCG: #86BXD-161116BL-213773

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	11/17/16	11/17/16
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	11/17/16	11/17/16
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	11/17/16	11/17/16
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	11/17/16	11/17/16
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	107	81-118			%	11/17/16	11/17/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	99.7	85-114			%	11/17/16	11/17/16
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	95.0	80-119			%	11/17/16	11/17/16
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	104	89-112			%	11/17/16	11/17/16

Quant Method: LALLW.M
Run #: 1116L59
Instrument: Loki
Sequence: 161113
Dilution Factor: 1
Initials: CMO

Printed: 11/23/16 9:36:58 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH120

Sample Collection Date: 11/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81492

APPL ID: AZ45868

QCG: #GRO86-161116BL-213796

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	11/17/16	11/17/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	99.7	85-114			%	11/17/16	11/17/16

Quant Method: LSUR1113.M
Run #: 1116L59
Instrument: Loki
Sequence: 161113
Dilution Factor: 1
Initials: CMO

Printed: 11/18/16 9:28:52 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1116L59.D Vial: 49
Acq On : 17 Nov 16 11:32 Operator: PM,DG,SV,CMM
Sample : AZ45868W01 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 14:57 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	699136	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	644992	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	333888	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	350217	23.74	ppb	0.00
Spiked Amount 25.000			Recovery =	94.952%		
37) 1,2-DCA-D4(S)	4.93	65	431644	26.84	ppb	0.00
Spiked Amount 25.000			Recovery =	107.348%		
57) Toluene-D8(S)	7.22	98	1280072	25.99	ppb	0.00
Spiked Amount 25.000			Recovery =	103.960%		
65) 4-Bromofluorobenzene(S)	9.89	95	443201	24.93	ppb	0.00
Spiked Amount 25.000			Recovery =	99.728%		

Target Compounds Qvalue

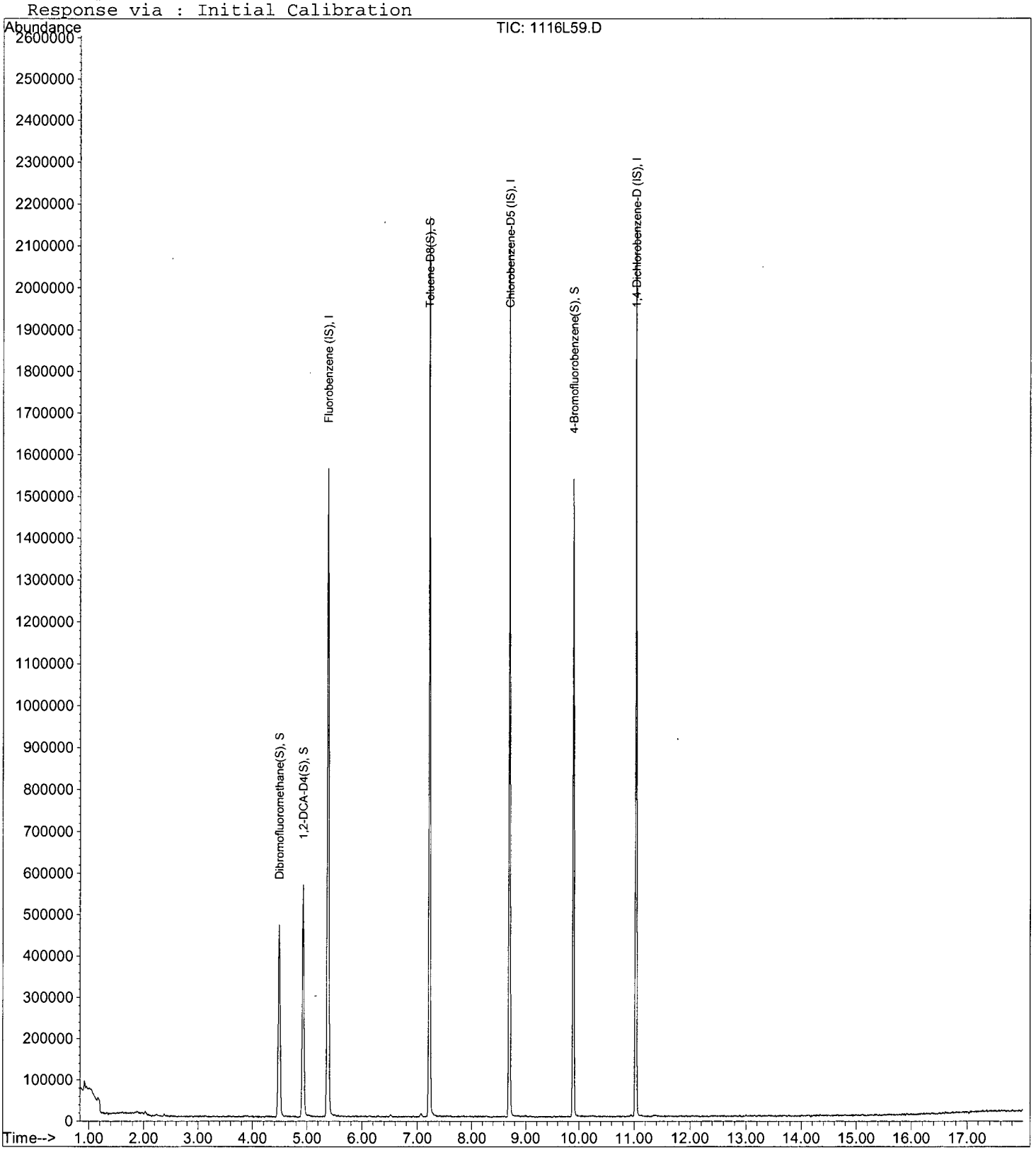
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1116L59.D Vial: 49
Acq On : 17 Nov 16 11:32 Operator: PM, DG, SV, CMM
Sample : AZ45868W01 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 14:57 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1116L59.D Vial: 49
Acq On : 17 Nov 16 11:32 Operator: PM,DG,SV,CMM
Sample : AZ45868W01 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 14:45 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1557888	25.00 ppb	-0.10
3) Chlorobenzene-D5 (IS)	8.70	TIC	2093643	25.00 ppb	-0.09
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	2144218	25.00 ppb	-0.09

System Monitoring Compounds

Target Compounds Qvalue

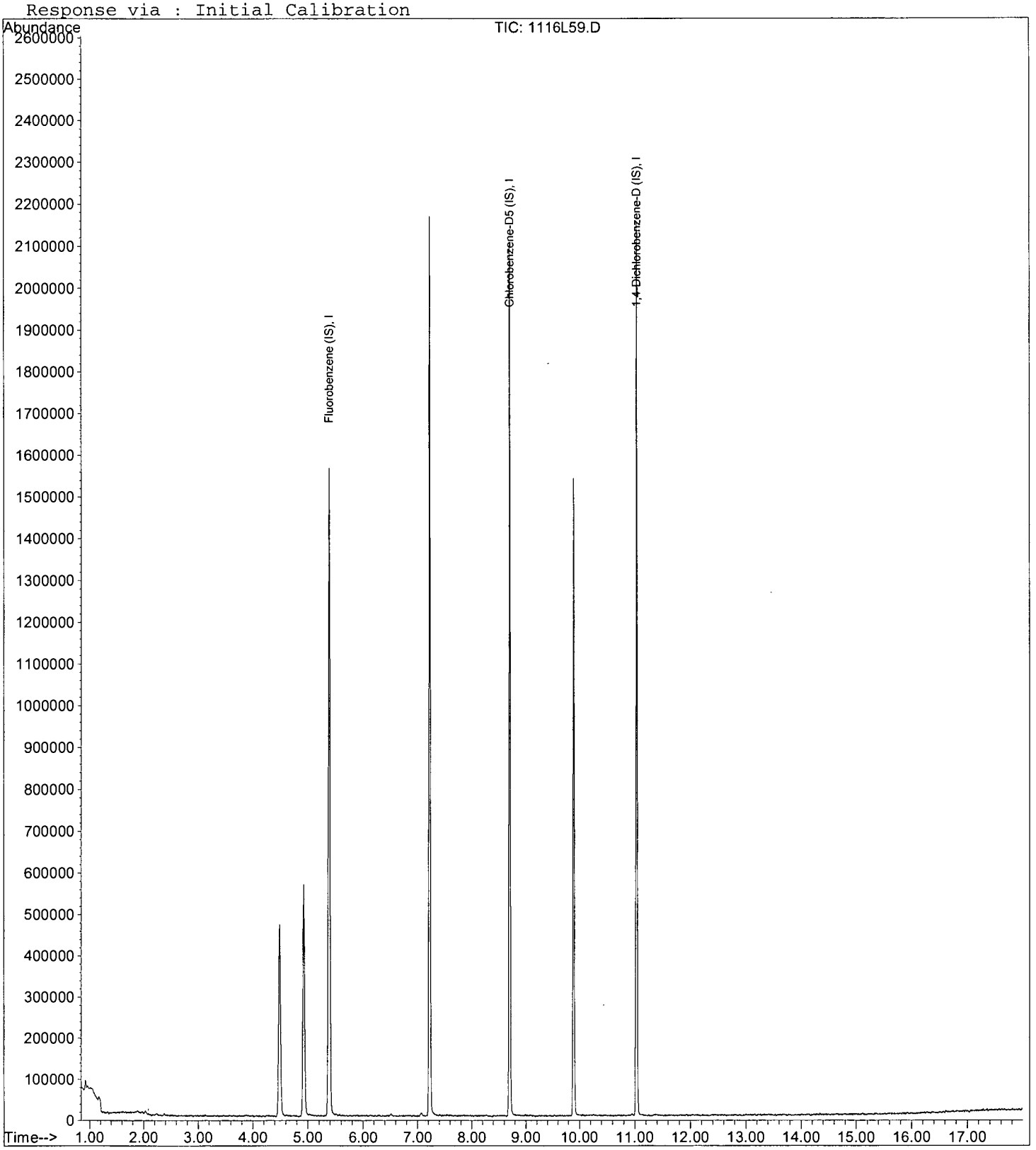
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1116L59.D Vial: 49
Acq On : 17 Nov 16 11:32 Operator: PM,DG,SV,CMM
Sample : AZ45868W01 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 14:45 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



EPA METHOD 8260B
Volatile Organic Compounds
Calibration Data

APPL, INC.

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 07/18/16
Matrix: Instrument: Loki

Initials:

			0718L21.D	0718L22.D	0718L23.D	0718L24.D	0718L25.D	0718L26.D	0718L27.D							
		Compound	1	2	3	4	5	6	7				Avg	%RSD		
1	I	Fluorobenzene (IS)														
2	TMHBL	Gasoline C6-C10	13.3	5.813	3.427	1.777	1.379	1.258	1.208				4.0	110	TMHBL	1.000
3	I	Chlorobenzene-D5 (IS)														
4	I	1,4-Dichlorobenzene-D (IS)														
5																
6																
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Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\160718\0718L21.D Vial: 18
Acq On : 18 Jul 16 20:20 Operator: PM,DG,SV,CMM
Sample : 20ug/L GAS STD 7/18/16L Inst : Loki
Misc : 10mL W IS:S 7/16/16,7/18/16 Multiplr: 1.00

Quant Time: Jul 19 8:34 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:13:42 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.49	TIC	2628348	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.79	TIC	3625758	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.12	TIC	4071971	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.31	TIC	28037025m	33.82307	ppb	100

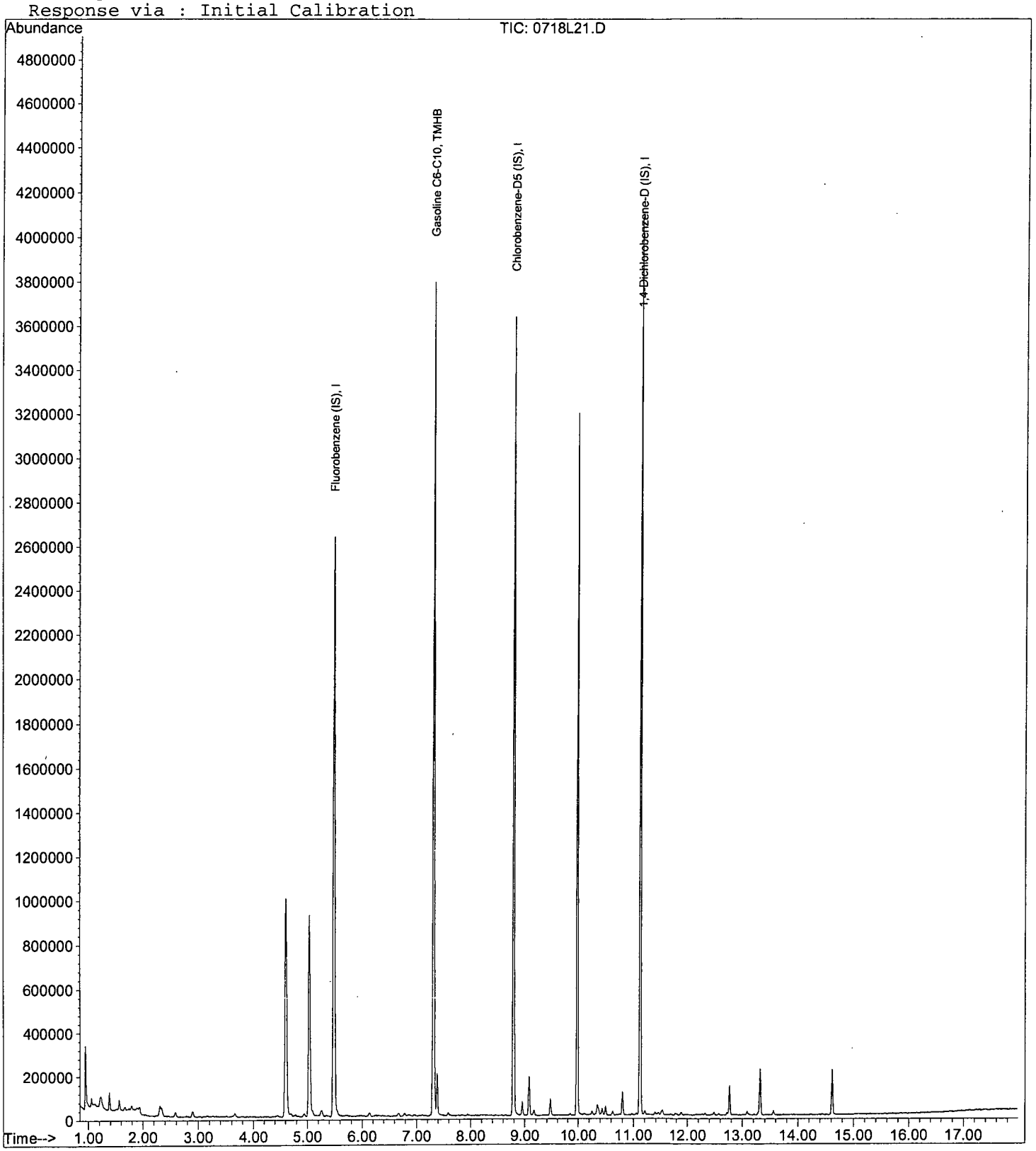
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\160718\0718L21.D Vial: 18
Acq On : 18 Jul 16 20:20 Operator: PM, DG, SV, CMM
Sample : 20ug/L GAS STD 7/18/16L Inst : Loki
Misc : 10mL W IS:S 7/16/16,7/18/16 Multiplr: 1.00

Quant Time: Jul 19 8:34 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\160718\0718L22.D Vial: 19
Acq On : 18 Jul 16 20:48 Operator: PM, DG, SV, CMM
Sample : 50ug/L GAS STD 7/18/16L Inst : Loki
Misc : 10mL W IS:S 7/16/16,7/18/16 Multiplr: 1.00

Quant Time: Jul 19 8:18 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:13:42 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.49	TIC	2665649	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.79	TIC	3702347	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.12	TIC	3931343	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.31	TIC	30989589m	55.45075	ppb	100

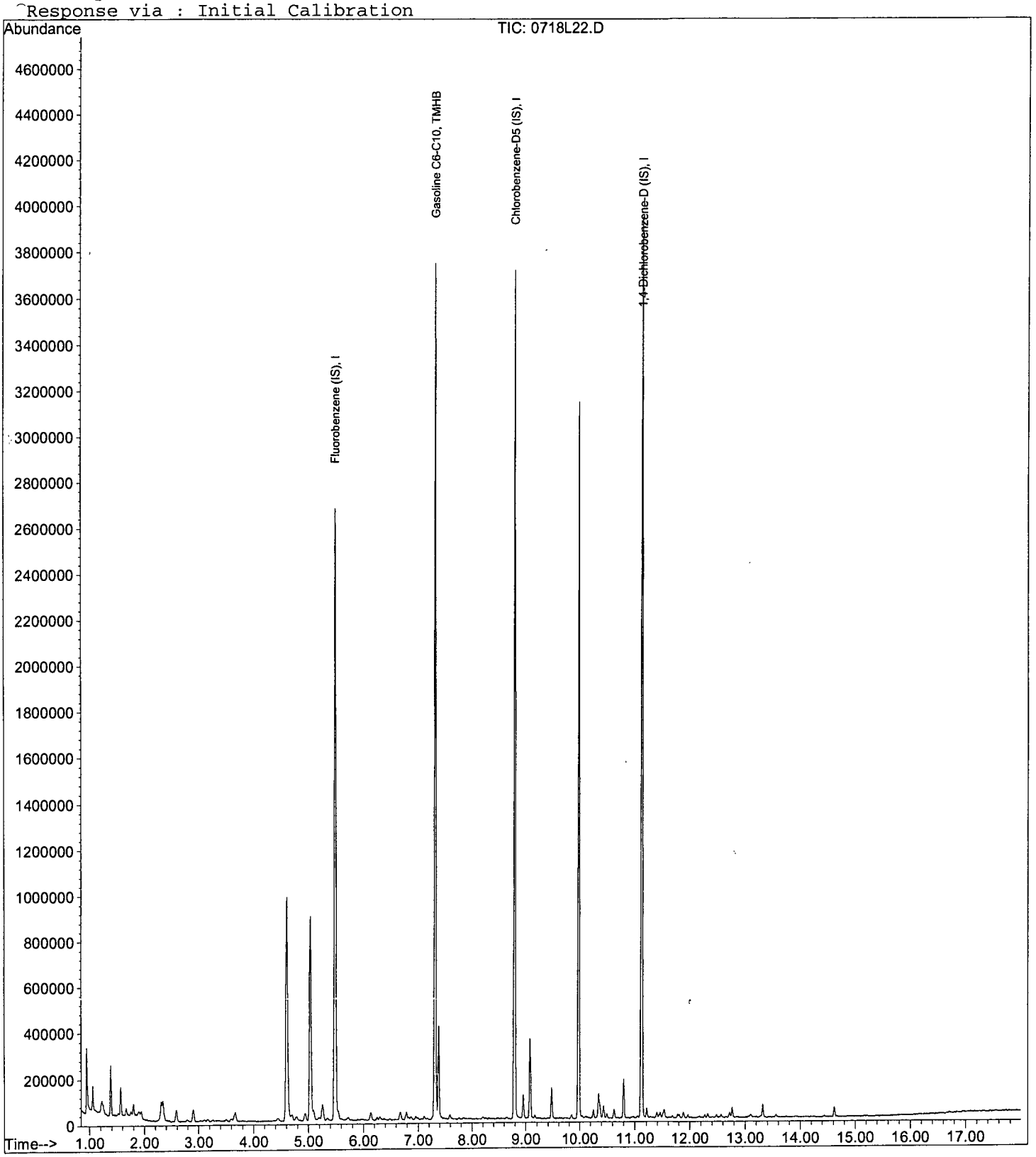
(#) = qualifier out of range (m) = manual integration
0718L22.D LGAS6718.M Tue Jul 19 09:15:23 2016 Page 1

Quantitation Report

Data File : M:\LOKI\DATA\160718\0718L22.D Vial: 19
Acq On : 18 Jul 16 20:48 Operator: PM,DG,SV,CMM
Sample : 50ug/L GAS STD 7/18/16L Inst : Loki
Misc : 10mL W IS:S 7/16/16,7/18/16 Multiplr: 1.00

Quant Time: Jul 19 8:18 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\160718\0718L23.D Vial: 20
Acq On : 18 Jul 16 21:17 Operator: PM,DG,SV,CMM
Sample : 100ug/L GAS STD 7/18/16L Inst : Loki
Misc : 10mL W IS:S 7/16/16,7/18/16 Multiplr: 1.00

Quant Time: Jul 19 8:31 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:13:42 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.49	TIC	2594632	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.79	TIC	3622041	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.12	TIC	4120406	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	8.79	TIC	35568341m	102.45607	ppb	100

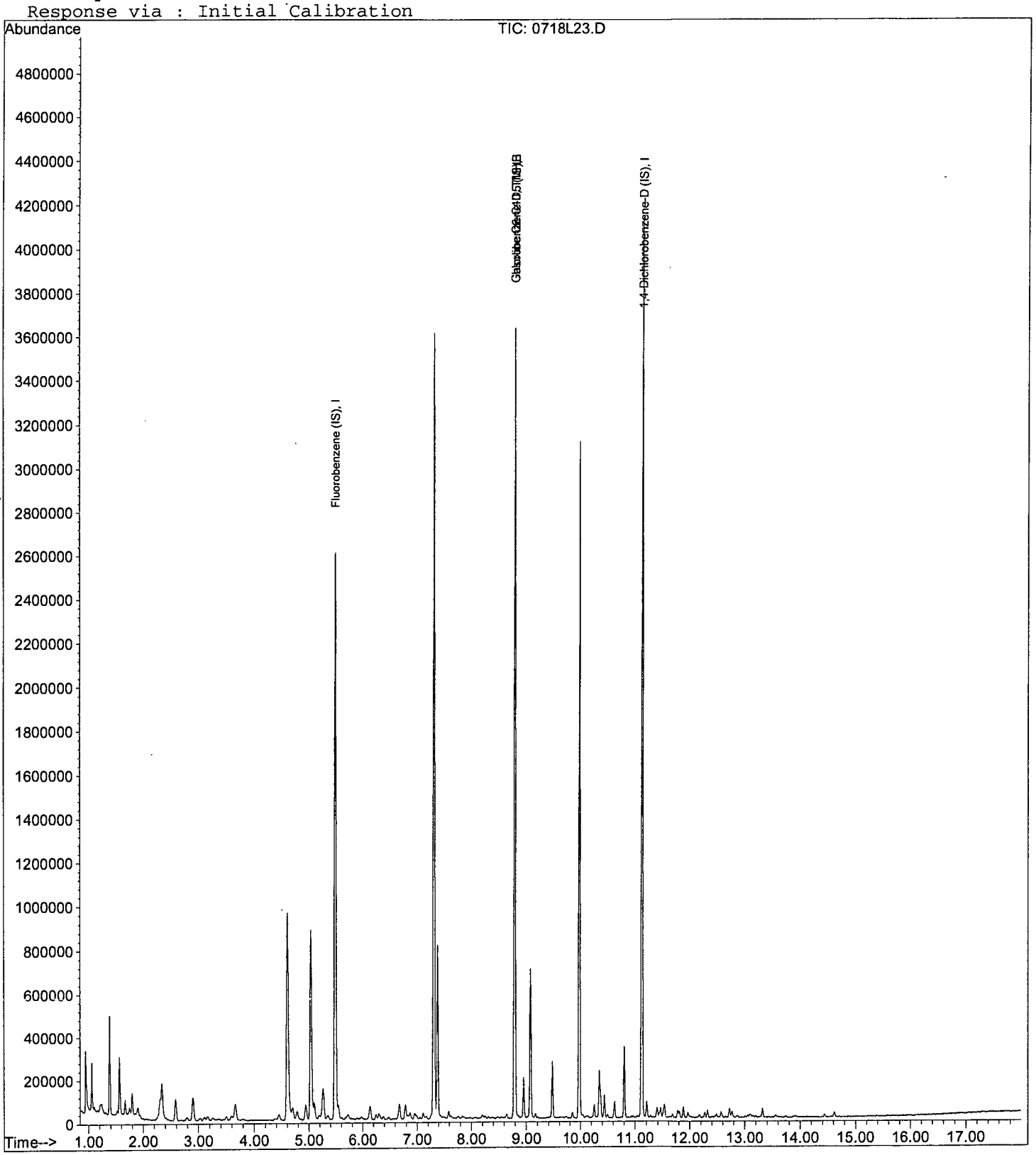
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\160718\0718L23.D Vial: 20
Acq On : 18-Jul-16 21:17 Operator: PM,DG,SV,CMM
Sample : 100ug/L GAS STD 7/18/16L Inst : Loki
Misc : 10mL W IS:S 7/16/16,7/18/16 Multiplr: 1.00

Quant Time: Jul 19 8:31 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\160718\0718L24.D Vial: 21
Acq On : 18 Jul 16 21:45 Operator: PM,DG,SV,CMM
Sample : 300ug/L GAS STD 7/18/16L Inst : Loki
Misc : 10mL W IS:S 7/16/16,7/18/16 Multiplr: 1.00

Quant Time: Jul 19 8:30 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:13:42 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.49	TIC	2596571	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.79	TIC	3594145	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.12	TIC	4036889	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.31	TIC	55354541m	274.19024	ppb	100

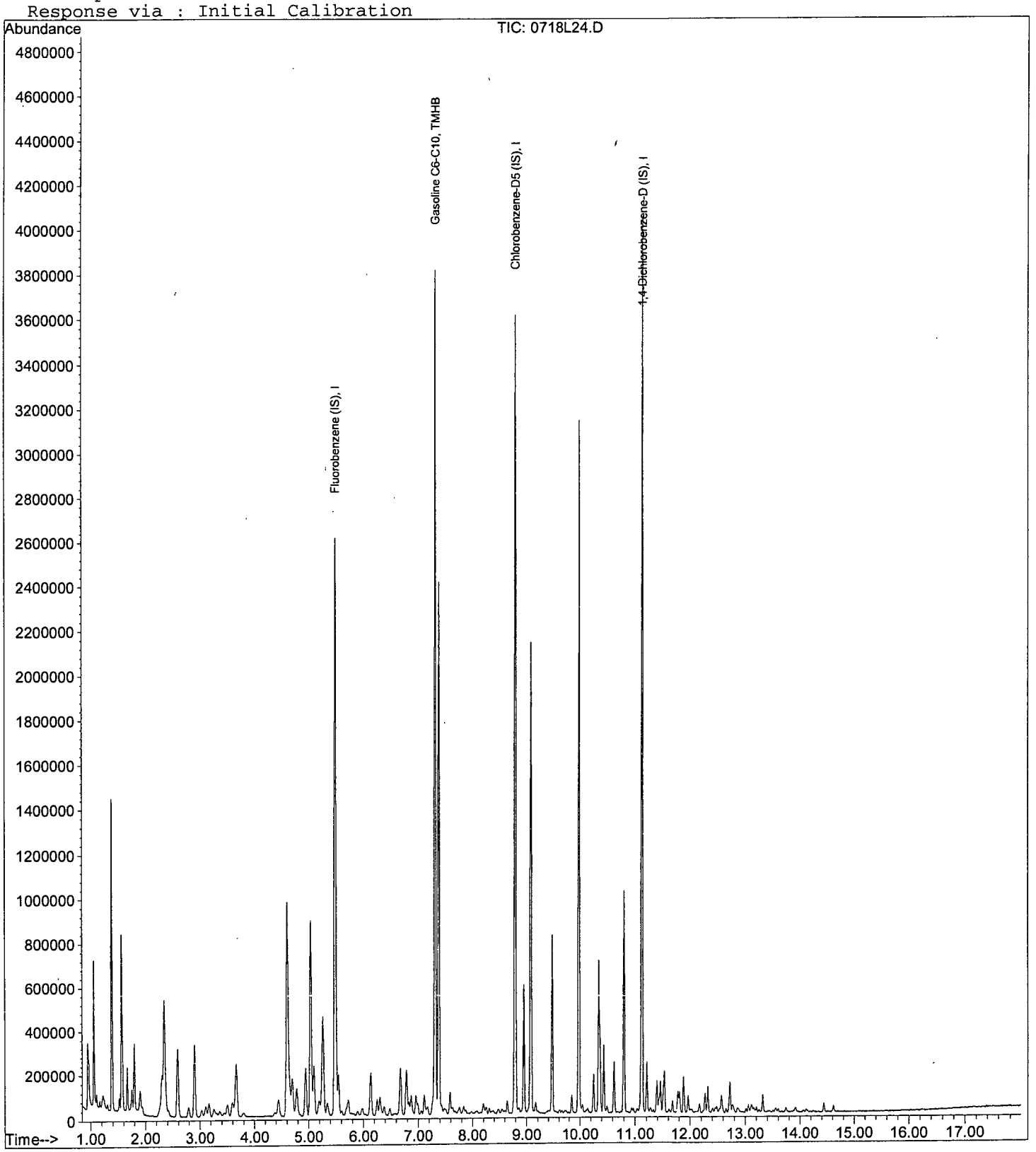
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\160718\0718L24.D Vial: 21
Acq On : 18 Jul 16 21:45 Operator: PM,DG,SV,CMM
Sample : 300ug/L GAS STD 7/18/16L Inst : Loki
Misc : 10mL W IS:S 7/16/16,7/18/16 Multiplr: 1.00

Quant Time: Jul 19 8:30 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\160718\0718L25.D Vial: 22
Acq On : 18 Jul 16 22:13 Operator: PM,DG,SV,CMM
Sample : 600ug/L GAS STD 7/18/16L Inst : Loki
Misc : 10mL W IS:S 7/16/16,7/18/16 Multiplr: 1.00

Quant Time: Jul 19 8:28 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:13:42 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.49	TIC	2583696	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.79	TIC	3664780	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.12	TIC	4100268	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.38	TIC	85540055m	540.24231	ppb	100

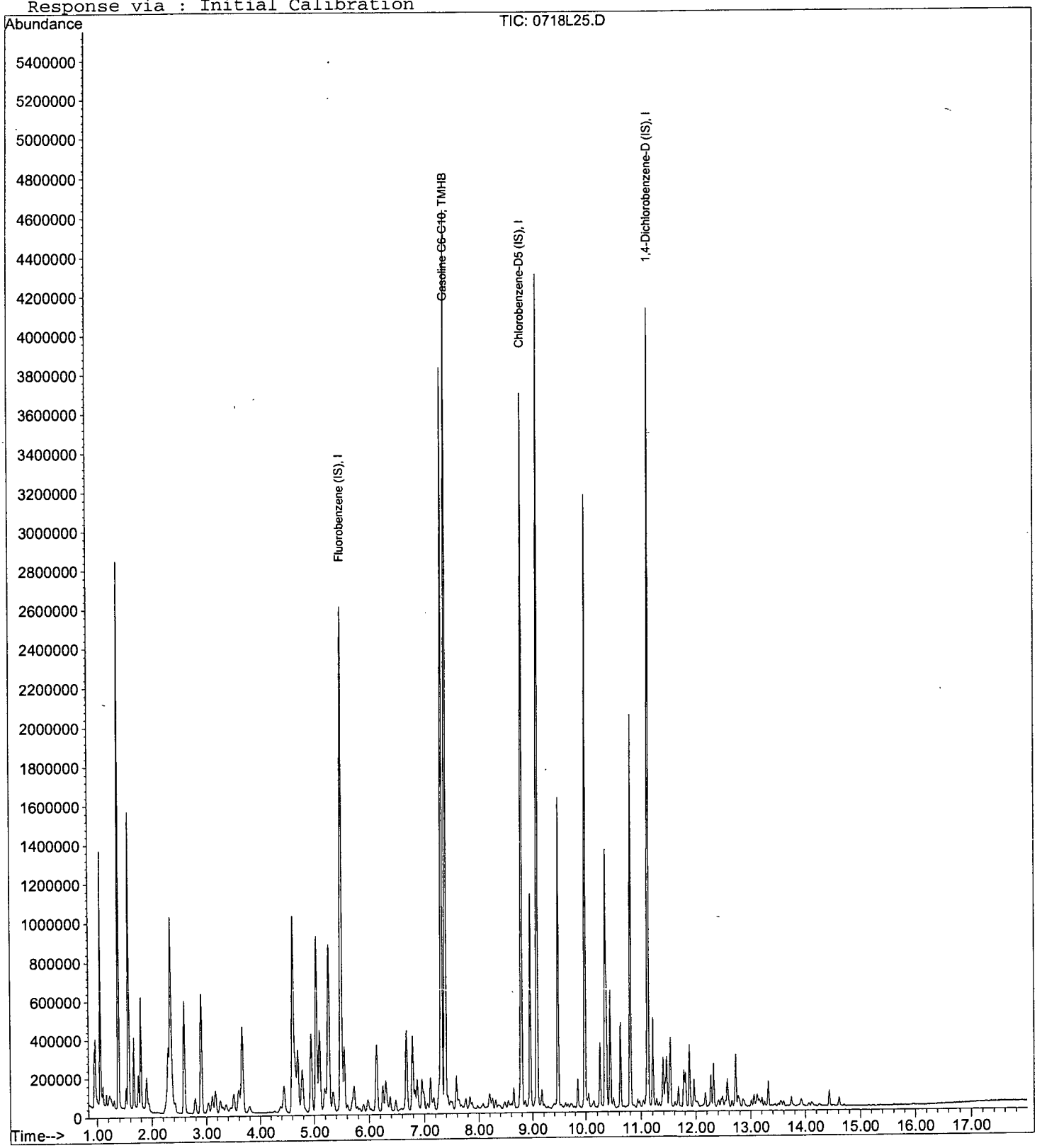
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\160718\0718L25.D Vial: 22
Acq On : 18 Jul 16 22:13 Operator: PM,DG,SV,CMM
Sample : 600ug/L GAS STD 7/18/16L Inst : Loki
Misc : 10mL W IS:S 7/16/16,7/18/16 Multiplr: 1.00

Quant Time: Jul 19 8:28 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\160718\0718L26.D Vial: 23
Acq On : 18 Jul 16 22:41 Operator: PM,DG,SV,CMM
Sample : 800ug/L GAS STD 7/18/16L Inst : Loki
Misc : 10mL W IS:S 7/16/16,7/18/16 Multiplr: 1.00

Quant Time: Jul 19 8:20 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:13:42 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.49	TIC	2591760	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.79	TIC	3654291	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.12	TIC	4069639	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.38	TIC	104311053m	701.36237	ppb	100

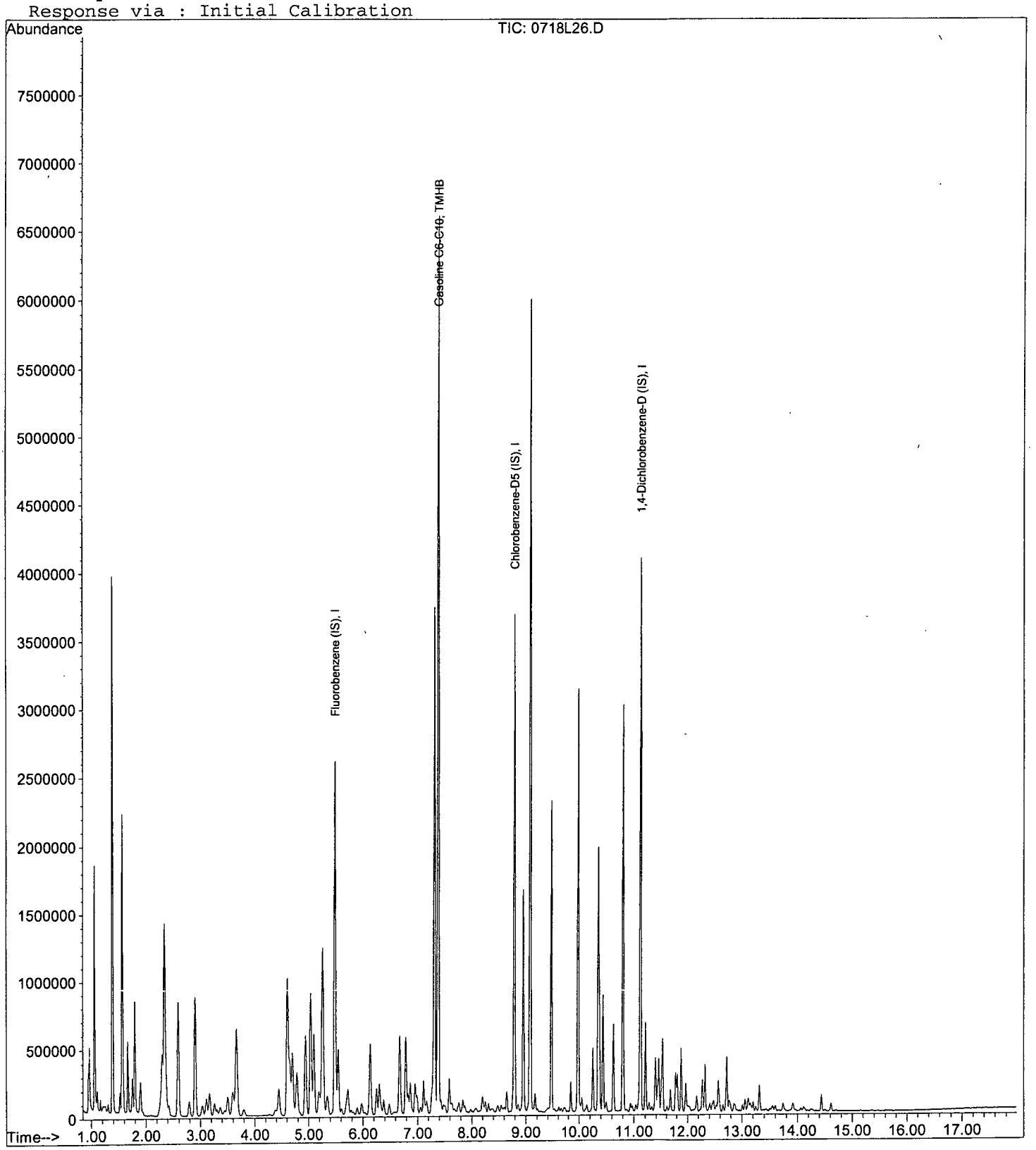
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\160718\0718L26.D Vial: 23
Acq On : 18 Jul 16 22:41 Operator: PM,DG,SV,CMM
Sample : 800ug/L GAS STD 7/18/16L Inst : Loki
Misc : 10mL W IS:S 7/16/16,7/18/16 Multiplr: 1.00

Quant Time: Jul 19 8:20 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\160718\0718L27.D Vial: 24
Acq On : 18 Jul 16 23:10 Operator: PM,DG,SV,CMM
Sample : 1000ug/L GAS STD 7/18/16L Inst : Loki
Misc : 10mL W IS:S 7/16/16,7/18/16 Multiplr: 1.00

Quant Time: Jul 19 8:33 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:13:42 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.49	TIC	2635141	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.79	TIC	3687466	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.12	TIC	4142548	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.38	TIC	127363032m	883.82618	ppb	100

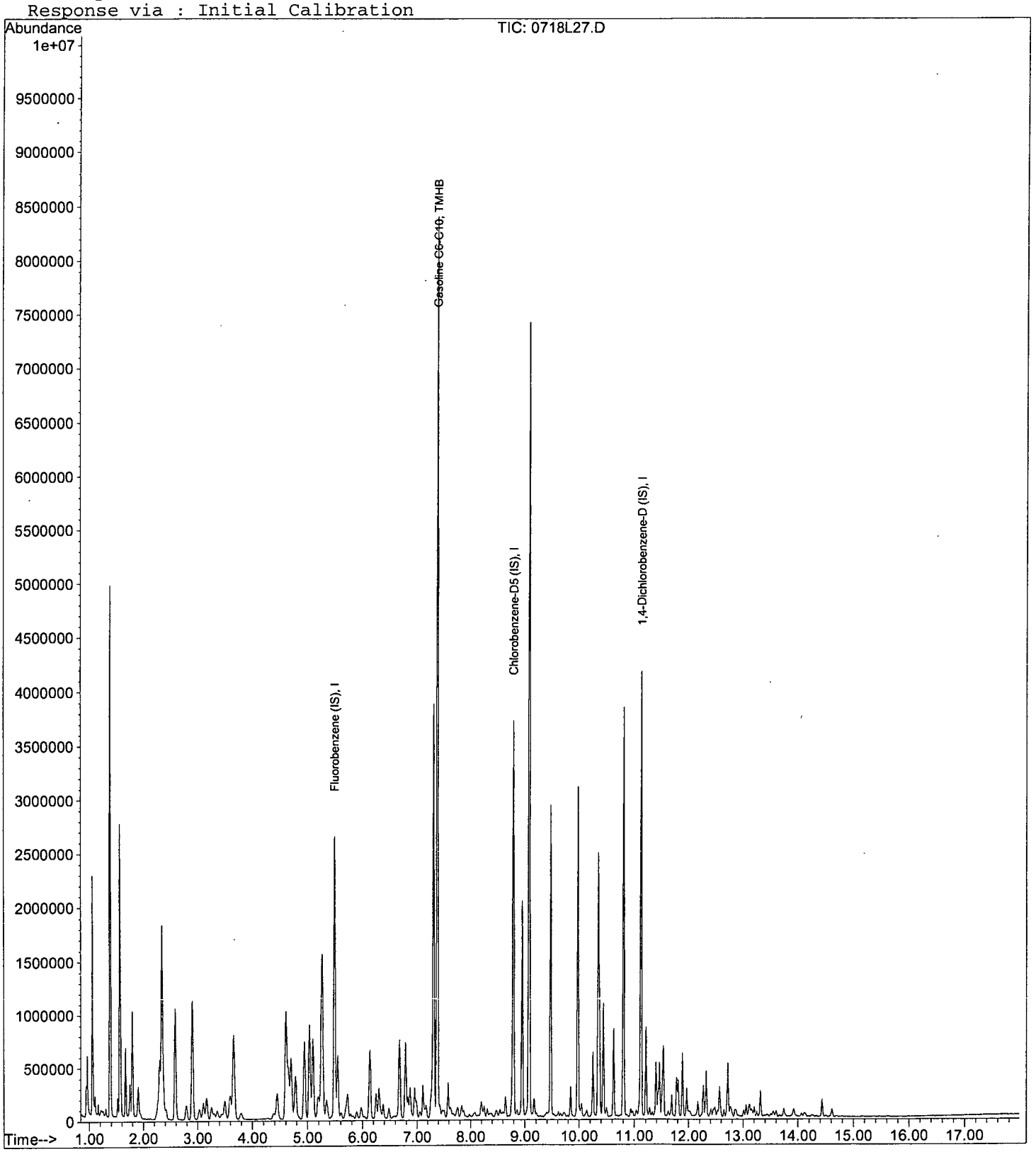
(#) = qualifier out of range (m) = manual integration

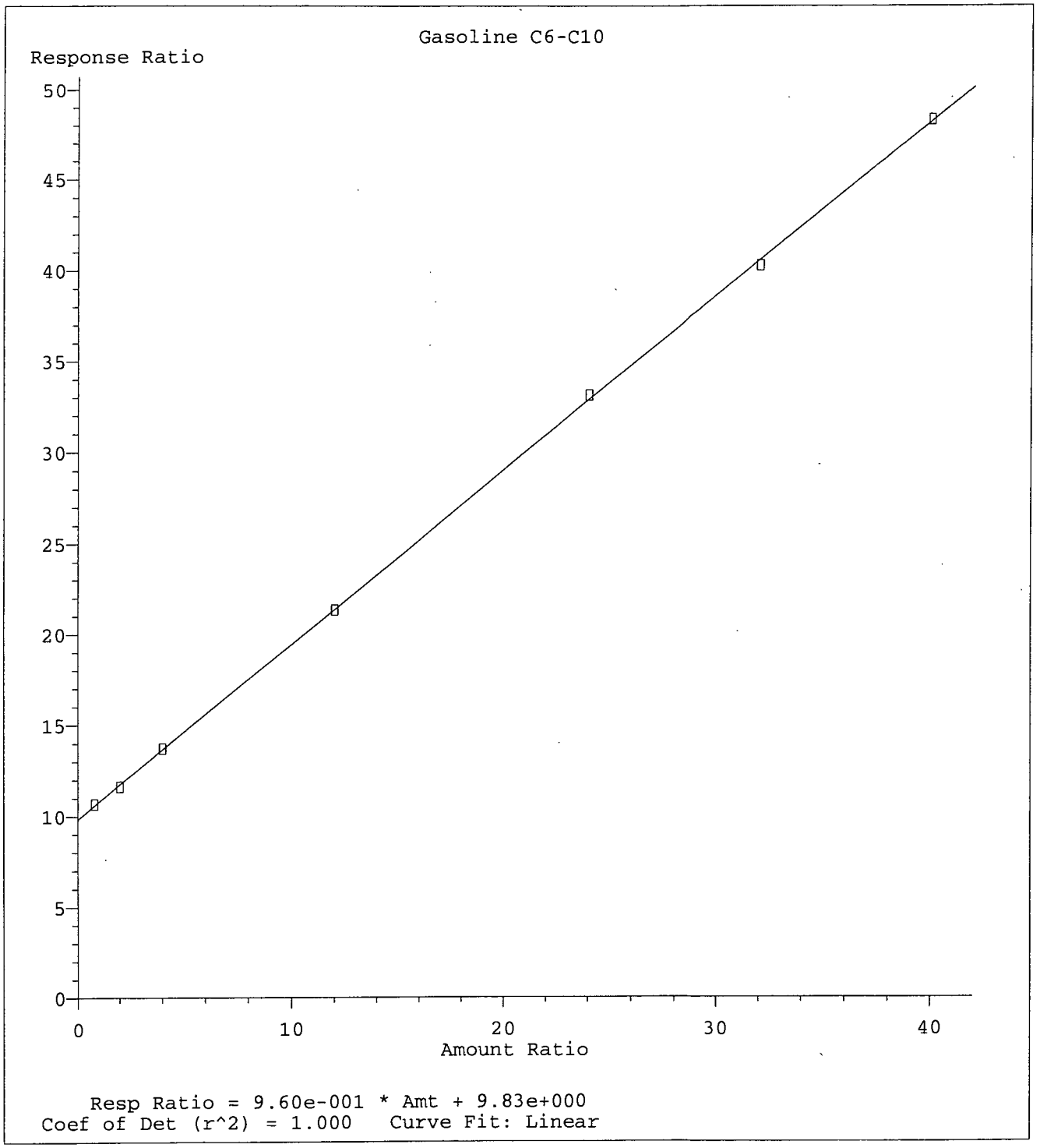
Quantitation Report

Data File : M:\LOKI\DATA\160718\0718L27.D Vial: 24
Acq On : 18 Jul 16 23:10 Operator: PM, DG, SV, CMM
Sample : 1000ug/L GAS STD 7/18/16L Inst : Loki
Misc : 10mL W IS:S 7/16/16,7/18/16 Multiplr: 1.00

Quant Time: Jul 19 8:33 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration





Method Name: M:\LOKI\DATA\160718\LGAS6718.M
Calibration Table Last Updated: Tue Jul 19 08:35:29 2016

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 07/19/16
Instrument: Loki
Initial Cal. Date: 07/18/16
Data File: 0718L30.D

		Compound	MEAN	CCRF	%D		%Drift
1	TMHB	Gasoline C6-C10	4.028	1.758	56	TMHBL	2.2
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			56.0		

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\160718\0718L30.D Vial: 27
Acq On : 19 Jul 16 00:34 Operator: PM,DG,SV,CMM
Sample : (SS)300ug/L GAS STD 7/18/16L Inst : Loki
Misc : 10mL W IS:S 7/16/16,7/18/16 Multiplr: 1.00

Quant Time: Jul 19 8:38 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.49	TIC	2619638	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.79	TIC	3645476	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.12	TIC	4041173	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.31	TIC	55271669m	293.49447	ppb	100

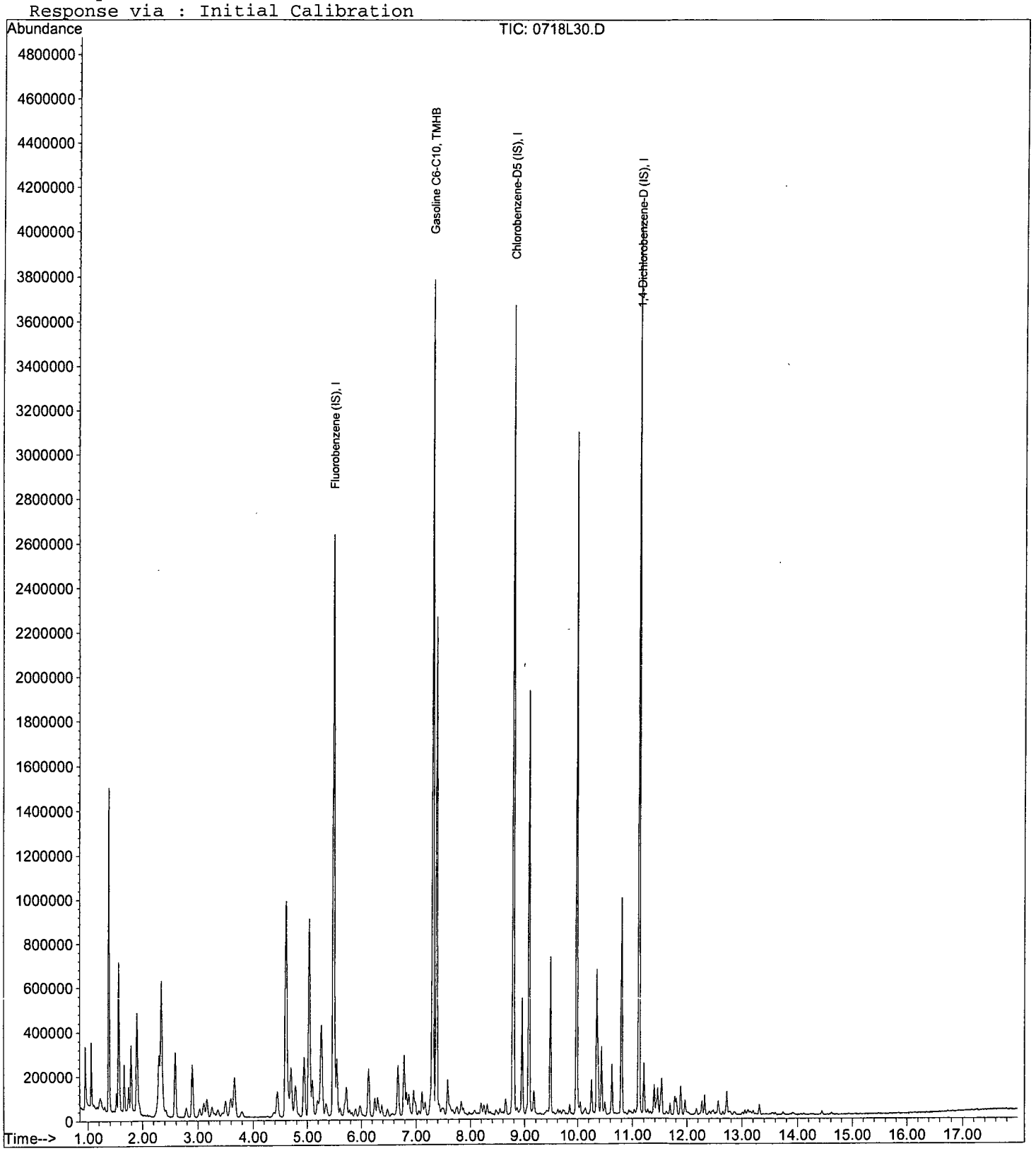
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\160718\0718L30.D Vial: 27
Acq On : 19 Jul 16 00:34 Operator: PM,DG,SV,CMM
Sample : (SS)300ug/L GAS STD 7/18/16L Inst : Loki
Misc : 10mL W IS:S 7/16/16,7/18/16 Multiplr: 1.00

Quant Time: Jul 19 8:38 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 11/13/16
Matrix: Instrument: Loki Initials:

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD		
			1113L05.D	1113L06.D	1113L07 D	1113L08.D	1113L09.D	1113L10.D	1113L11.D	1113L12.D	1113L13.D					
1	I	Fluorobenzene (IS)														
2	TM	Dichlorodifluoromethane		0.4807	0.5509	0.5378	0.5579	0.5256	0.5391	0.5150			0.53	4.9	TM	
3	TM	Freon 114		0.3958	0.4108	0.3934	0.3865	0.3873	0.3829	0.3879	0.3861		0.39	2.3	TM	
4	TM**	Chloromethane		0.7378	0.8117	0.6628	0.7834	0.7109	0.7197	0.7025	0.7485		0.73	6.4	TM**	
5	TM*	Vinyl chloride		0.6818	0.6768	0.6393	0.6941	0.6644	0.6612	0.6397	0.6388		0.66	3.2	TM*	
6	TM	Bromomethane		0.2946	0.2806	0.3174	0.3280	0.3373	0.3035	0.2863	0.2794		0.30	7.3	TM	
7	TM	Chloroethane		0.3901	0.3344	0.3412	0.4012	0.3623	0.3619	0.3569			0.36	6.7	TM	
8	TM	Dichlorofluoromethane		1.175	1.209	1.085	1.184	1.123	1.110	1.102	1.156		1.1	3.9	TM	
9	TM	Trichlorofluoromethane		0.6881	0.6679	0.6624	0.7070	0.6960	0.6853	0.6746	0.6949		0.68	2.2	TM	
10	TM	Acrolein		0.0393	0.0429	0.0409	0.0417	0.0431	0.0437	0.0431	0.0424		0.04	3.5	TM	
11	TML	Acetone		0.5116	0.4082	0.1838	0.1884	0.1740	0.1641	0.1623			0.26	56	TML	0.999
12	TM	Freon-113		0.4379	0.3965	0.3800	0.4051	0.3760	0.3823	0.3851	0.3805		0.39	5.2	TM	
13	TM*	1,1-DCE		0.3295	0.3072	0.3080	0.3314	0.3009	0.2961	0.2963	0.2836		0.31	5.4	TM*	
14	TM	t-Butanol	0.0212	0.0202	0.0189	0.0178	0.0187	0.0182	0.0191	0.0175	0.0173		0.02	6.7	TM	
15	TM	Acetonitrile		0.0501	0.0495	0.0454	0.0490	0.0493	0.0504	0.0623			0.05	10	TM	
16	TM	Methyl Acetate		0.3285	0.3952	0.3461	0.3698	0.3436	0.3409	0.3446	0.3525		0.35	5.9	TM	
17	TML	Iodomethane		0.1267	0.1361	0.1303	0.1680	0.1820	0.1893	0.2043			0.16	19	TML	0.999
18	TM	Acrylonitrile		0.1717	0.1343	0.1372	0.1262	0.1179	0.1212	0.1177	0.1211		0.13	14	TM	
19	TM	Methylene chloride		0.6584	0.6303	0.5286	0.5699	0.5297	0.5186	0.5082	0.5275		0.56	10	TM	
20	TM	Carbon disulfide		1.522	1.430	1.244	1.367	1.347	1.311	1.330	1.378		1.4	6.1	TM	
21	TM	Methyl t-butyl ether (MtBE)		1.331	1.407	1.310	1.396	1.334	1.330	1.302	1.332		1.3	2.8	TM	
22	TM	Trans-1,2-DCE		0.5340	0.5072	0.4801	0.5213	0.4783	0.4649	0.4610	0.4733		0.49	5.6	TM	
23	TM	Diisopropyl Ether		1.717	1.636	1.562	1.717	1.650	1.632	1.639	1.728		1.7	3.4	TM	
24	TM**	1,1-DCA		0.9983	0.9643	0.9241	0.9785	0.9234	0.9116	0.9015	0.9202		0.94	3.7	TM**	
25	TM	Vinyl Acetate		0.4425	0.4417	0.4162	0.4271	0.4139	0.4054	0.3516	0.3635		0.41	8.3	TM	
26	TM	Ethyl tert Butyl Ether		1.527	1.542	1.435	1.518	1.492	1.439	1.453	1.519		1.5	2.9	TM	
27	TM	MEK (2-Butanone)			0.2138	0.1735	0.1939	0.1891	0.1912	0.1850	0.1929		0.19	6.3	TM	
28	TM	Cis-1,2-DCE		0.6609	0.6316	0.5585	0.5963	0.5744	0.5420	0.5386	0.5474		0.58	7.7	TM	
29	TM	2,2-Dichloropropane		0.2352	0.2621	0.2436	0.2508	0.2303	0.2282	0.2281	0.2315		0.24	5.2	TM	
30	TM*	Chloroform		0.9548	0.9480	0.9049	0.9684	0.9338	0.9105	0.8890	0.9109		0.93	3.0	TM*	
31	TM	Bromochloromethane		0.3234	0.2864	0.2627	0.2784	0.2631	0.2578	0.2503	0.2513		0.27	9.0	TM	
32	S	Dibromofluoromethane(S)	0.6027	0.5768	0.4948	0.4832	0.5315	0.5349	0.5206	0.5097	0.4938		0.53	7.5	S	
33	TM	1,1,1-TCA		0.7596	0.7494	0.7369	0.7771	0.7457	0.7124	0.7123	0.7223		0.74	3.1	TM	
34	TM	Cyclohexane		0.4079	0.4070	0.3726	0.4122	0.3735	0.3733	0.3815	0.3857		0.39	4.4	TM	
35	TM	1,1-Dichloropropene		0.6681	0.6461	0.6166	0.6699	0.6449	0.6298	0.6216	0.6322		0.64	3.1	TM	

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Initial Cal. Date: 11/13/16
Instrument: Loki

Initials:

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD		
36	TM	2,2,4-Trimethylpentane		1.219	1.160	1.167	1.224	1.149	1.125	1.144	1.152		1.2	3.0	TM	
37	S	1,2-DCA-D4(S)	0.6553	0.6546	0.5528	0.5203	0.5804	0.5661	0.5641	0.5489	0.5338		0.58	8.4	S	
38	TM	Carbon Tetrachloride		0.6047	0.5974	0.5361	0.6255	0.5711	0.5729	0.5756	0.5719		0.58	4.6	TM	
39	TM	Tert Amyl Methyl Ether		1.404	1.385	1.274	1.400	1.340	1.332	1.320	1.368		1.4	3.3	TM	
40	TM	1,2-DCA		0.7136	0.7839	0.7083	0.7677	0.7036	0.7045	0.6870	0.7078		0.72	4.8	TM	
41	TM	Benzene		2.100	1.976	1.891	2.055	1.982	1.921	1.890	1.951		2.0	3.8	TM	
42	TM	TCE		0.3078	0.2772	0.2503	0.2755	0.2616	0.2611	0.2669	0.2708		0.27	6.3	TM	
43	TM	2-Pentanone		0.2890	0.2853	0.2775	0.2967	0.2968	0.3064	0.3049	0.3123		0.30	4.0	TM	
44	TM*	1,2-Dichloropropane		0.5703	0.5961	0.5407	0.5699	0.5422	0.5493	0.5439	0.5608		0.56	3.4	TM*	
45	TM	Bromodichloromethane		0.7355	0.6828	0.6567	0.7283	0.6942	0.6863	0.6865	0.7139		0.70	3.7	TM	
46	TM	Methyl Cyclohexane		0.6119	0.6757	0.6524	0.6820	0.6429	0.6324	0.6490	0.6558		0.65	3.5	TM	
47	TM	Dibromomethane		0.3213	0.2891	0.3155	0.3053	0.3046	0.3028	0.2998	0.3018		0.31	3.2	TM	
48	TM	2-Chloroethyl vinyl ether													TM	
49	TML	MIBK (methyl isobutyl ketone)		0.8618	0.5804	0.5714	0.5652	0.4921	0.4668	0.4267	0.4504		0.55	25	TML	0.999
50	TM	1-Bromo-2-chloroethane		0.3804	0.3767	0.3769	0.4180	0.4125	0.4006	0.3992	0.4130		0.40	4.3	TM	
51	TM	Cis-1,3-Dichloropropene		0.8748	0.8443	0.7773	0.8693	0.8248	0.8292	0.8212	0.8747		0.84	4.0	TM	
52	TM*	Toluene		2.160	2.089	2.024	2.232	2.115	2.050	2.042	2.108		2.1	3.3	TM*	
53	TM	Trans-1,3-Dichloropropene		0.7219	0.7134	0.6768	0.7301	0.7246	0.7029	0.7162	0.7547		0.72	3.1	TM	
54	TM	1,1,2-TCA		0.3971	0.4347	0.3495	0.3770	0.3684	0.3651	0.3606	0.3709		0.38	7.1	TM	
55	TML	2-Hexanone		0.1084	0.1257	0.1373	0.1663	0.1619	0.1736	0.1704	0.1910		0.15	18	TML	0.998
56	I	Chlorobenzene-D5 (IS)														
57	S	Toluene-D8(S)	2.205	2.217	1.741	1.767	1.894	1.894	1.884	1.819	1.760		1.9	9.5	S	
58	TM	1,2-EDB		0.4520	0.4024	0.3970	0.4507	0.4269	0.4362	0.4126	0.4227		0.43	4.8	TM	
59	TM	Tetrachloroethene		0.6060	0.5423	0.4946	0.5379	0.5162	0.5019	0.4839	0.4891		0.52	7.8	TM	
60	TM	1-Chlorohexane		0.6417	0.5737	0.5913	0.6237	0.6069	0.5900	0.5908	0.6067		0.60	3.6	TM	
61	TM	1,1,1,2-Tetrachloroethane		0.5843	0.5139	0.5057	0.5432	0.5293	0.5224	0.5028	0.5193		0.53	5.0	TM	
62	TM	m&p-Xylene		1.001	0.8789	0.8709	0.9420	0.9080	0.8927	0.8684	0.9129		0.91	4.9	TM	
63	TM	o-Xylene		0.9145	0.8550	0.8635	0.9265	0.9102	0.8963	0.8627	0.9191		0.89	3.2	TM	
64	TM	Styrene		0.9254	0.9418	0.9176	1.041	1.021	1.005	0.9764	1.067		0.99	5.6	TM	
65	S	4-Bromofluorobenzene(S)	0.8071	0.7219	0.6403	0.6414	0.6906	0.6903	0.6882	0.6642	0.6572		0.69	7.5	S	
66	TM	1,3-Dichloropropane		0.8887	0.7400	0.7391	0.7991	0.7802	0.7750	0.7408	0.7563		0.78	6.4	TM	
67	TM	Dibromochloromethane		0.5487	0.4902	0.4780	0.5318	0.5191	0.5178	0.5050	0.5250		0.51	4.4	TM	
68	TM**	Chlorobenzene		1.557	1.406	1.389	1.486	1.438	1.418	1.365	1.418		1.4	4.2	TM**	
69	TM*	Ethylbenzene		2.434	2.291	2.317	2.462	2.361	2.332	2.277	2.343		2.4	2.8	TM*	
70	TM**	Bromoform		0.3290	0.2881	0.3026	0.3196	0.3216	0.3109	0.3017	0.3195		0.31	4.3	TM**	

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Initial Cal. Date: 11/13/16
Instrument: Loki

Initials:

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD		
71	I	1,4-Dichlorobenzene-D (IS)														
72	TM	Isopropylbenzene		4.416	3.850	4.109	4.233	3.920	4.011	4.148	3.956		4.1	4.5	TM	
73	TM**	1,1,2,2-Tetrachloroethane		1.032	0.9633	1.007	1.049	0.9864	0.9992	0.9406	0.9699		0.99	3.6	TM**	
74	TM	1,2,3-Trichloropropane		0.1906	0.2108	0.1826	0.1959	0.1900	0.1894	0.1845	0.1789		0.19	5.2	TM	
75	TM	t-1,4-Dichloro-2-Butene				0.2825	0.2608	0.2537	0.2570	0.2653	0.2882		0.27	5.3	TM	
76	TM	Bromobenzene		1.211	1.089	1.168	1.171	1.081	1.102	1.086	1.026		1.1	5.4	TM	
77	TM	n-Propylbenzene		4.639	4.487	4.743	4.857	4.512	4.622	4.819	4.643		4.7	2.9	TM	
78	TM	4-Ethyltoluene		3.843	3.922	4.029	4.181	3.877	4.022	4.096	4.014		4.0	2.8	TM	
79	TM	2-Chlorotoluene		3.238	2.900	3.049	3.084	2.925	2.937	2.985	2.929		3.0	3.8	TM	
80	TM	1,3,5-Trimethylbenzene		3.532	3.085	3.330	3.561	3.340	3.405	3.452	3.397		3.4	4.4	TM	
81	TM	4-Chlorotoluene		3.628	3.383	3.454	3.616	3.310	3.400	3.513	3.468		3.5	3.2	TM	
82	TM	Tert-Butylbenzene		3.272	2.840	2.799	3.066	2.761	2.833	2.899	2.781		2.9	6.1	TM	
83	TM	1,2,4-Trimethylbenzene		3.512	3.226	3.353	3.507	3.328	3.430	3.574	3.551		3.4	3.6	TM	
84	TM	Sec-Butylbenzene		4.229	4.004	4.062	4.300	3.930	4.006	4.153	4.098		4.1	3.0	TM	
85	TM	p-Isopropyltoluene		3.402	3.298	3.346	3.515	3.273	3.398	3.529	3.498		3.4	2.9	TM	
86	TM	Benzyl Chloride		1.064	1.020	0.9909	1.045	1.057	1.154	1.214	1.403		1.1	12	TM	
87	TM	1,3-DCB		1.987	1.998	2.055	2.134	1.980	2.003	2.018	1.978		2.0	2.6	TM	
88	TM	1,4-DCB		2.279	2.055	2.119	2.176	2.008	2.018	2.028	2.036		2.1	4.6	TM	
89	TM	n-Butylbenzene		2.956	2.976	2.939	3.052	2.848	2.919	3.119	3.217		3.0	4.0	TM	
90	TM	1,2-DCB		2.016	1.948	1.986	2.068	1.913	1.939	1.926	1.971		2.0	2.6	TM	
91	TM	Hexachloroethane		0.6643	0.6253	0.6641	0.7370	0.6742	0.7204	0.7250	0.7451		0.69	6.2	TM	
92	TM	1,2-Dibromo-3-chloropropane		0.2391	0.1725	0.1751	0.1833	0.1683	0.1726	0.1825	0.1794		0.18	12	TM	
93	TM	1,2,4-Trichlorobenzene		1.393	1.280	1.309	1.360	1.298	1.315	1.365	1.357		1.3	3.0	TM	
94	TM	Hexachlorobutadiene		0.5424	0.4994	0.5093	0.5550	0.5224	0.5063	0.5110	0.5040		0.52	3.8	TM	
95	TM	Naphthalene		1.525	1.617	1.581	1.709	1.745	1.786	1.843	1.707		1.7	6.4	TM	
96	TM	1,2,3-Trichlorobenzene		0.7972	0.7626	0.7396	0.8855	0.8096	0.8268	0.8879	0.8169		0.82	6.4	TM	
97																
98																
99																
100																
101																
102																
103																
104																
105																

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L05.D Vial: 5
Acq On : 13 Nov 16 13:35 Operator: PM,DG,SV,CMM
Sample : 0.3ug/L VOC STD 11/13/16J Inst : Loki
Misc : 1uL-5ppb Multiplr: 1.00

Quant Time: Nov 14 8:43 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	821614	25.00000	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	780352	25.00000	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	427200	25.00000	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.49	111	99036	5.71210	ppb		0.00
Spiked Amount 25.000			Recovery	= 22.848%			
37) 1,2-DCA-D4(S)	4.93	65	107676	5.69665	ppb		0.00
Spiked Amount 25.000			Recovery	= 22.788%			
57) Toluene-D8(S)	7.22	98	344140	5.77527	ppb		0.00
Spiked Amount 25.000			Recovery	= 23.100%			
65) 4-Bromofluorobenzene(S)	9.89	95	125959	5.85659	ppb		0.00
Spiked Amount 25.000			Recovery	= 23.428%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.86	85	5653	0.32481	ppb		99
3) Freon 114	0.93	85	4312	0.33529	ppb		88
4) Chloromethane	0.96	50	8200	0.33962	ppb		96
5) Vinyl chloride	1.03	62	7440	0.34197	ppb	#	71
6) Bromomethane	1.23	96	2853	0.28613	ppb		99
7) Chloroethane	1.29	64	3337	0.27894	ppb		99
8) Dichlorofluoromethane	1.43	67	12630	0.33622	ppb		94
9) Trichlorofluoromethane	1.46	101	7342	0.32636	ppb		89
10) Acrolein	1.76	56	12182	8.79790	ppb	#	83
11) Acetone	1.89	43	6880	0.34173	ppb		96
12) Freon-113	1.85	101	3957	0.30643	ppb		93
13) 1,1-DCE	1.83	96	3531	0.35040	ppb	#	75
14) t-Butanol	2.40	59	6957	11.27590	ppb		99
15) Acetonitrile	2.10	41	17913	10.71863	ppb		90
16) Methyl Acetate	2.17	43	4224	0.36446	ppb	#	80
17) Iodomethane	1.93	142	1047	0.87639	ppb	#	78
18) Acrylonitrile	2.48	52	3822	0.88828	ppb	#	65
19) Methylene chloride	2.24	84	7244	0.39438	ppb		92
20) Carbon disulfide	1.98	76	17633	0.39276	ppb	#	90
21) Methyl t-butyl ether (MtBE	2.52	73	15401	0.34900	ppb		98
22) Trans-1,2-DCE	2.51	96	5434	0.33743	ppb		79
23) Diisopropyl Ether	3.11	45	16893	0.30962	ppb		99
24) 1,1-DCA	2.95	63	9857	0.31898	ppb	#	91
25) Vinyl Acetate	3.11	43	4740	0.35373	ppb	#	83
26) Ethyl tert Butyl Ether	3.60	59	15506	0.31653	ppb	#	78
27) MEK (2-Butanone)	3.82	43	2693	0.40807	ppb		88
28) Cis-1,2-DCE	3.72	96	7901	0.41363	ppb	#	82
29) 2,2-Dichloropropane	3.71	77	2796	0.35637	ppb		95
30) Chloroform	4.26	83	9472	0.31073	ppb		98
31) Bromochloromethane	4.09	128	2858	0.32010	ppb		93
33) 1,1,1-TCA	4.47	97	8133	0.33467	ppb		99
34) Cyclohexane	4.53	41	4618	0.36105	ppb		68
35) 1,1-Dichloropropene	4.73	75	6719	0.31889	ppb	#	80
36) 2,2,4-Trimethylpentane	5.16	57	12117	0.31575	ppb	#	28
38) Carbon Tetrachloride	4.71	119	6409	0.33513	ppb	#	72
39) Tert Amyl Methyl Ether	5.23	73	14063	0.31631	ppb	#	93
40) 1,2-DCA	5.03	62	8817	0.37156	ppb		96
41) Benzene	4.99	78	23478	0.36251	ppb		95
42) TCE	5.84	95	2528	0.28342	ppb		94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L05.D Vial: 5
Acq_On : 13 Nov 16 13:35 Operator: PM,DG,SV,CMM
Sample : 0.3ug/L VOC STD 11/13/16J Inst : Loki
Misc : 1uL-5ppb Multiplr: 1.00

Quant Time: Nov 14 8:43 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43)	2-Pentanone	6.13	43	99727	10.24785 ppb		100
44)	1,2-Dichloropropane	6.09	63	6984	0.38007 ppb	#	93
45)	Bromodichloromethane	6.44	83	7812	0.34053 ppb	#	92
46)	Methyl Cyclohexane	6.04	83	7018	0.32840 ppb		80
47)	Dibromomethane	6.22	93	3679	0.36699 ppb		92
49)	MIBK (methyl isobutyl ket	7.16	43	6601	-0.09153 ppb		99
50)	1-Bromo-2-chloroethane	6.75	63	3760	0.28806 ppb		97
51)	Cis-1,3-Dichloropropene	6.96	75	9869	0.35772 ppb		95
52)	Toluene	7.29	91	22670	0.32810 ppb		99
53)	Trans-1,3-Dichloropropene	7.57	75	8042	0.34100 ppb		99
54)	1,1,2-TCA	7.74	83	4464	0.35942 ppb		90
55)	2-Hexanone	8.06	43	1369	1.34758 ppb	#	86
58)	1,2-EDB	8.21	107	4222	0.31821 ppb		96
59)	Tetrachloroethene	7.86	166	5264	0.32338 ppb		95
60)	1-Chlorohexane	8.76	91	6301	0.33470 ppb		95
61)	1,1,1,2-Tetrachloroethane	8.83	131	5443	0.33050 ppb		87
62)	m&p-Xylene	8.99	106	18857	0.66430 ppb		100
63)	o-Xylene	9.38	106	9413	0.33752 ppb		81
64)	Styrene	9.40	104	8915	0.28940 ppb		97
66)	1,3-Dichloropropane	7.90	76	8546	0.35219 ppb		100
67)	Dibromochloromethane	8.12	129	5297	0.32987 ppb		95
68)	Chlorobenzene	8.73	112	15924	0.35561 ppb		86
69)	Ethylbenzene	8.87	91	23491	0.31997 ppb		100
70)	Bromoform	9.55	173	3036	0.31210 ppb		83
72)	Isopropylbenzene	9.76	105	22186	0.31818 ppb		98
73)	1,1,2,2-Tetrachloroethane	10.06	83	5237	0.30849 ppb	#	95
74)	1,2,3-Trichloropropane	10.09	110	1005	0.30899 ppb		93
75)	t-1,4-Dichloro-2-Butene	10.13	53	2224	0.48580 ppb		95
76)	Bromobenzene	10.02	156	6174	0.32354 ppb		86
77)	n-Propylbenzene	10.17	91	25185	0.31593 ppb		95
78)	4-Ethyltoluene	10.29	105	20709	0.30314 ppb		99
79)	2-Chlorotoluene	10.23	91	15745	0.30655 ppb		92
80)	1,3,5-Trimethylbenzene	10.35	105	16669	0.28793 ppb		99
81)	4-Chlorotoluene	10.34	91	19747	0.33288 ppb		93
82)	Tert-Butylbenzene	10.66	119	15845	0.31904 ppb		91
83)	1,2,4-Trimethylbenzene	10.71	105	16886	0.28766 ppb		96
84)	Sec-Butylbenzene	10.88	105	21309	0.30432 ppb		100
85)	p-Isopropyltoluene	11.04	119	18218	0.31289 ppb	#	92
86)	Benzyl Chloride	11.20	91	5595	0.29273 ppb	#	91
87)	1,3-DCB	10.96	146	11205	0.32476 ppb		98
88)	1,4-DCB	11.05	146	12229	0.34243 ppb		92
89)	n-Butylbenzene	11.44	91	15347	0.29906 ppb	#	92
90)	1,2-DCB	11.41	146	10790	0.32039 ppb		96
91)	Hexachloroethane	11.65	117	3723	0.31374 ppb	#	81
92)	1,2-Dibromo-3-chloropropan	12.18	157	904	0.28738 ppb		88
93)	1,2,4-Trichlorobenzene	12.99	180	7498	0.32878 ppb		97
94)	Hexachlorobutadiene	13.18	225	2695	0.30405 ppb		91
95)	Naphthalene	13.22	128	7388	0.25596 ppb		93
96)	1,2,3-Trichlorobenzene	13.46	180	4437	0.31830 ppb		98

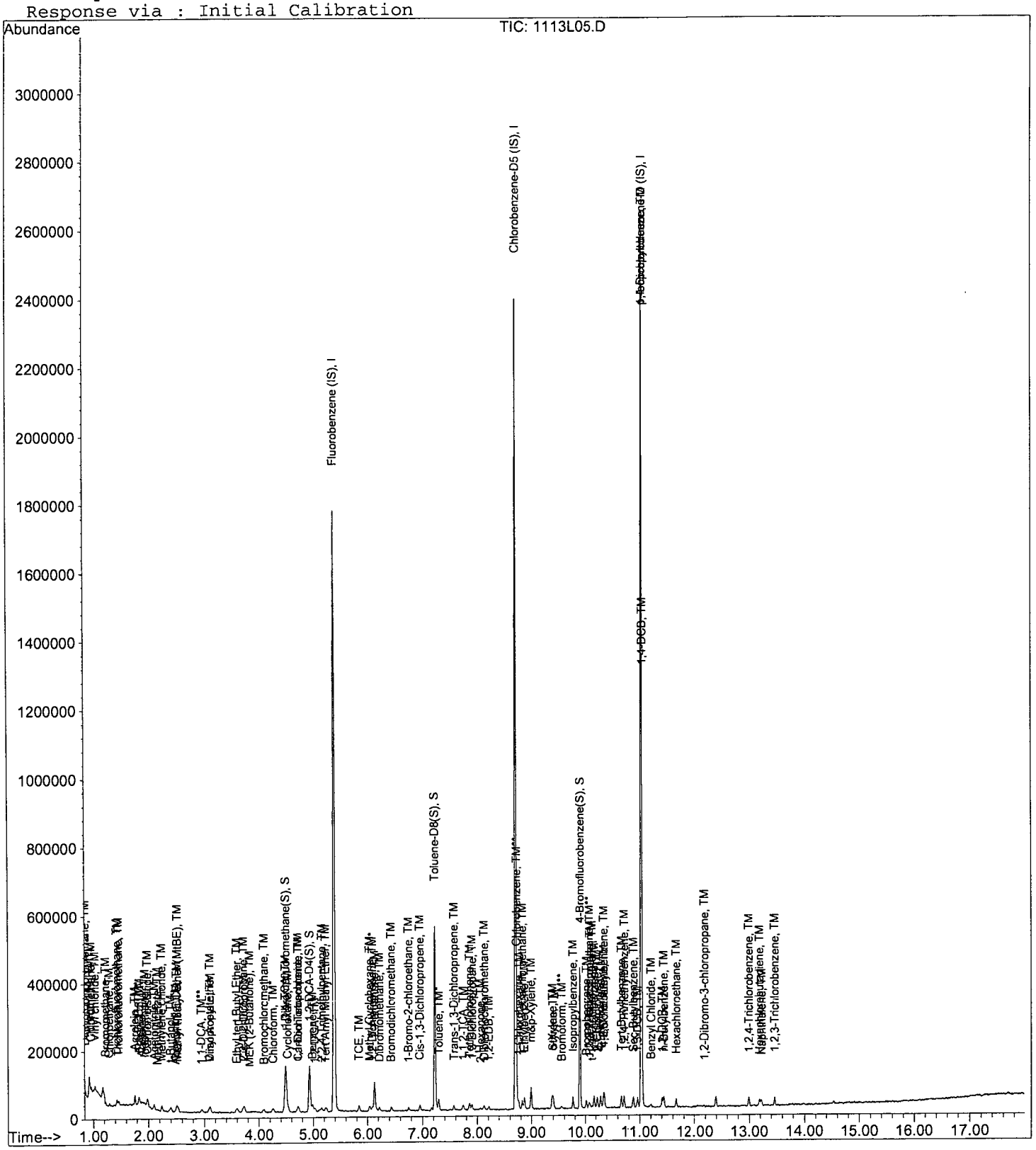
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1113L05.D Vial: 5
Acq On : 13 Nov 16 13:35 Operator: PM,DG,SV,CMM
Sample : 0.3ug/L VOC STD 11/13/16J Inst : Loki
Misc : 1uL-5ppb Multiplr: 1.00

Quant Time: Nov 14 8:43 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L06.D Vial: 6
Acq On : 13 Nov 16 14:04 Operator: PM,DG,SV,CMM
Sample : 0.5ug/L VOC STD 11/13/16K Inst : Loki
Misc : 1uL-5ppb Multiplr: 1.00

Quant Time: Nov 14 8:43 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	848000	25.00000	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	782336	25.00000	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	423936	25.00000	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.49	111	97825	5.46669	ppb		0.00
Spiked Amount 25.000			Recovery = 21.868%				
37) 1,2-DCA-D4(S)	4.93	65	111019	5.69075	ppb		0.00
Spiked Amount 25.000			Recovery = 22.764%				
57) Toluene-D8(S)	7.22	98	346936	5.80743	ppb		0.00
Spiked Amount 25.000			Recovery = 23.228%				
65) 4-Bromofluorobenzene(S)	9.89	95	124253	5.76261	ppb		0.00
Spiked Amount 25.000			Recovery = 23.052%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.86	85	8153	0.45388	ppb		93
3) Freon 114	0.93	85	6712	0.50566	ppb		98
4) Chloromethane	0.96	50	12513	0.50213	ppb		98
5) Vinyl chloride	1.03	62	11563	0.51494	ppb		90
6) Bromomethane	1.23	96	4997	0.48555	ppb		95
7) Chloroethane	1.29	64	6616	0.53583	ppb		91
8) Dichlorofluoromethane	1.43	67	19930	0.51404	ppb		97
9) Trichlorofluoromethane	1.46	101	11670	0.50261	ppb		99
10) Acrolein	1.76	56	33329	23.32141	ppb	#	98
11) Acetone	1.88	43	8677	0.63589	ppb		85
12) Freon-113	1.84	101	7426	0.55717	ppb		95
13) 1,1-DCE	1.83	96	5588	0.53728	ppb		95
14) t-Butanol	2.40	59	17120	26.88468	ppb		99
15) Acetonitrile	2.10	41	42460	24.61632	ppb		95
16) Methyl Acetate	2.17	43	5571	0.46573	ppb		97
17) Iodomethane	1.93	142	2149	1.02985	ppb	#	93
18) Acrylonitrile	2.48	52	2912	0.65573	ppb		84
19) Methylene chloride	2.24	84	11166	0.58899	ppb		100
20) Carbon disulfide	1.98	76	25808	0.55696	ppb	#	90
21) Methyl t-butyl ether (MtBE	2.53	73	22581	0.49579	ppb		94
22) Trans-1,2-DCE	2.50	96	9056	0.54484	ppb		95
23) Diisopropyl Ether	3.10	45	29116	0.51704	ppb		99
24) 1,1-DCA	2.95	63	16932	0.53089	ppb		97
25) Vinyl Acetate	3.07	43	7505	0.54264	ppb		100
26) Ethyl tert Butyl Ether	3.60	59	25895	0.51216	ppb		95
27) MEK (2-Butanone)	3.82	43	4529	0.66492	ppb	#	82
28) Cis-1,2-DCE	3.73	96	11209	0.56855	ppb		91
29) 2,2-Dichloropropane	3.70	77	3989	0.49260	ppb		98
30) Chloroform	4.26	83	16194	0.51471	ppb		98
31) Bromochloromethane	4.09	128	5485	0.59520	ppb		80
33) 1,1,1-TCA	4.47	97	12882	0.51359	ppb		88
34) Cyclohexane	4.54	41	6918	0.52404	ppb	#	66
35) 1,1-Dichloropropene	4.73	75	11331	0.52104	ppb	#	79
36) 2,2,4-Trimethylpentane	5.16	57	20673	0.52194	ppb	#	61
38) Carbon Tetrachloride	4.70	119	10256	0.51960	ppb		88
39) Tert Amyl Methyl Ether	5.23	73	23805	0.51877	ppb	#	95
40) 1,2-DCA	5.04	62	12102	0.49412	ppb	#	89
41) Benzene	4.99	78	35615	0.53280	ppb		96
42) TCE	5.84	95	5221	0.56712	ppb		85

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161113\1113L06.D Vial: 6
Acq On : 13 Nov 16 14:04 Operator: PM,DG,SV,CMM
Sample : 0.5ug/L VOC STD 11/13/16K Inst : Loki
Misc : 1uL-5ppb Multiplr: 1.00

Quant Time: Nov 14 8:43 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43) 2-Pentanone	6.13	43	245102	24.40275 ppb		99
44) 1,2-Dichloropropane	6.09	63	9672	0.50997 ppb		98
45) Bromodichloromethane	6.44	83	12474	0.52683 ppb		99
46) Methyl Cyclohexane	6.04	83	10377	0.47048 ppb		97
47) Dibromomethane	6.22	93	5449	0.52664 ppb		97
49) MIBK (methyl isobutyl ket	7.16	43	14616	0.42555 ppb		91
50) 1-Bromo-2-chloroethane	6.75	63	6451	0.47885 ppb		93
51) Cis-1,3-Dichloropropene	6.95	75	14837	0.52107 ppb		94
52) Toluene	7.29	91	36637	0.51374 ppb		92
53) Trans-1,3-Dichloropropene	7.57	75	12244	0.50303 ppb		99
54) 1,1,2-TCA	7.74	83	6735	0.52539 ppb		94
55) 2-Hexanone	8.06	43	1839	1.41350 ppb	#	78
58) 1,2-EDB	8.21	107	7072	0.53166 ppb		97
59) Tetrachloroethene	7.86	166	9482	0.58102 ppb		86
60) 1-Chlorohexane	8.76	91	10040	0.53197 ppb		96
61) 1,1,1,2-Tetrachloroethane	8.83	131	9142	0.55370 ppb		91
62) m&p-Xylene	8.99	106	31340	1.10126 ppb		96
63) o-Xylene	9.38	106	14309	0.51177 ppb		85
64) Styrene	9.40	104	14479	0.46883 ppb		90
66) 1,3-Dichloropropane	7.90	76	13906	0.57162 ppb		96
67) Dibromochloromethane	8.12	129	8586	0.53333 ppb		98
68) Chlorobenzene	8.73	112	24358	0.54257 ppb		96
69) Ethylbenzene	8.87	91	38082	0.51740 ppb		100
70) Bromoform	9.55	173	5148	0.52787 ppb		95
72) Isopropylbenzene	9.76	105	37440	0.54108 ppb		98
73) 1,1,2,2-Tetrachloroethane	10.07	83	8750	0.51939 ppb		93
74) 1,2,3-Trichloropropane	10.09	110	1616	0.50067 ppb	#	63
75) t-1,4-Dichloro-2-Butene	10.13	53	2746	0.60444 ppb		97
76) Bromobenzene	10.02	156	10266	0.54212 ppb		95
77) n-Propylbenzene	10.17	91	39329	0.49716 ppb		99
78) 4-Ethyltoluene	10.29	105	32580	0.48057 ppb		91
79) 2-Chlorotoluene	10.23	91	27454	0.53863 ppb		93
80) 1,3,5-Trimethylbenzene	10.35	105	29949	0.52130 ppb		96
81) 4-Chlorotoluene	10.34	91	30758	0.52249 ppb		93
82) Tert-Butylbenzene	10.67	119	27742	0.56289 ppb		88
83) 1,2,4-Trimethylbenzene	10.71	105	29781	0.51124 ppb		96
84) Sec-Butylbenzene	10.88	105	35854	0.51599 ppb		98
85) p-Isopropyltoluene	11.04	119	28842	0.49917 ppb		97
86) Benzyl Chloride	11.20	91	9018	0.47545 ppb		95
87) 1,3-DCB	10.96	146	16849	0.49211 ppb		90
88) 1,4-DCB	11.05	146	19323	0.54524 ppb		90
89) n-Butylbenzene	11.44	91	25062	0.49214 ppb		98
90) 1,2-DCB	11.41	146	17097	0.51157 ppb		96
91) Hexachloroethane	11.66	117	5632	0.47827 ppb		98
92) 1,2-Dibromo-3-chloropropan	12.17	157	2027	0.64933 ppb		93
93) 1,2,4-Trichlorobenzene	13.00	180	11813	0.52197 ppb		99
94) Hexachlorobutadiene	13.19	225	4599	0.52285 ppb		86
95) Naphthalene	13.22	128	12928	0.45134 ppb		91
96) 1,2,3-Trichlorobenzene	13.46	180	6759	0.48860 ppb	#	91

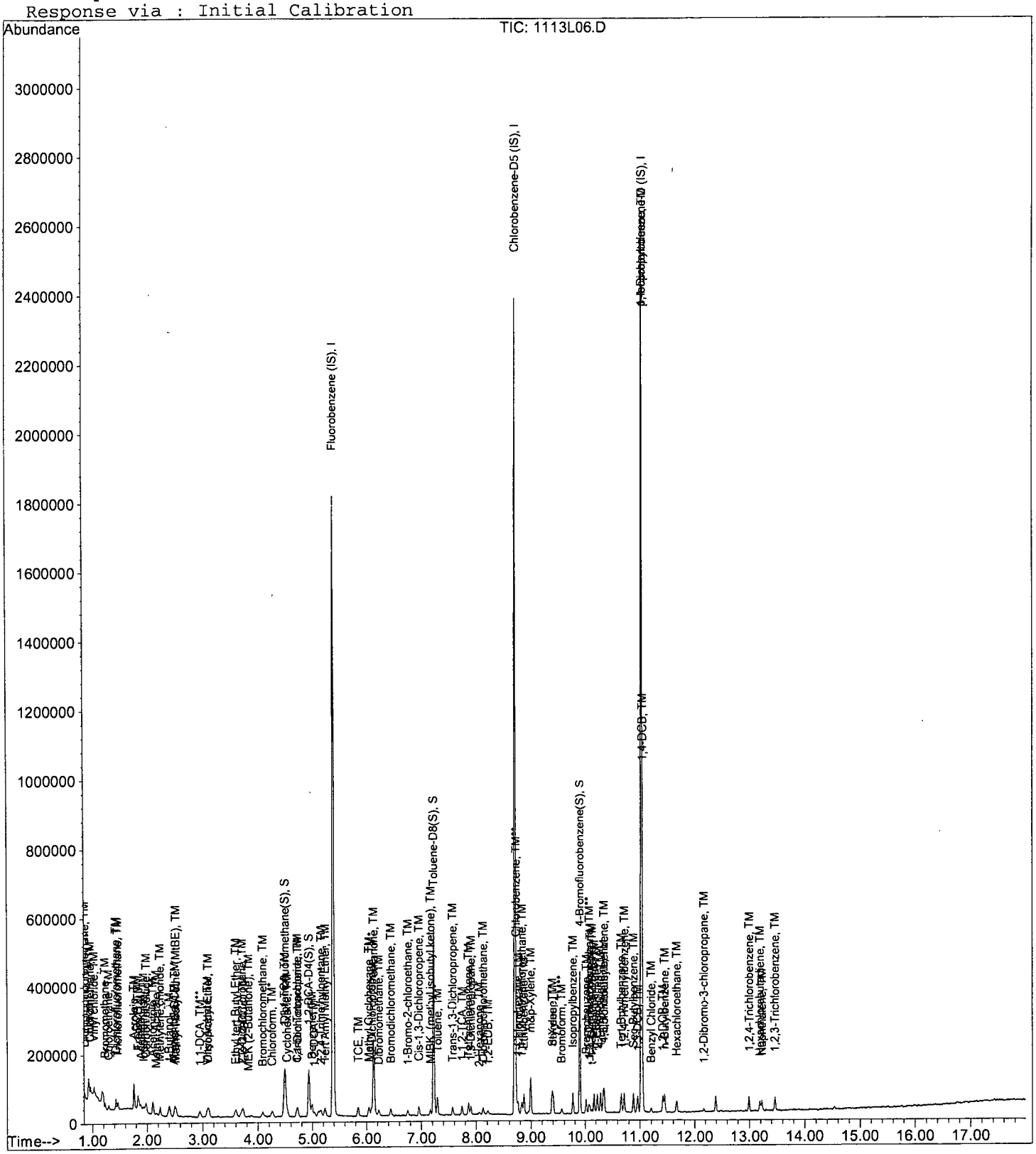
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1113L06.D Vial: 6
Acq On : 13 Nov 16 14:04 Operator: PM,DG,SV,CMM
Sample : 0.5ug/L VOC STD 11/13/16K Inst : Loki
Misc : 1uL-5ppb Multiplr: 1.00

Quant Time: Nov 14 8:43 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L07.D Vial: 7
Acq On : 13 Nov 16 14:32 Operator: PM,DG,SV,CMM
Sample : 1.0ug/L VOC STD 11/13/16L Inst : Loki
Misc : 2uL-10ppb Multiplr: 1.00

Quant Time: Nov 14 8:43 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.39	96	819008	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	820800	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	438720	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	162096	9.37896 ppb		0.00
Spiked Amount 25.000			Recovery	= 37.516%		
37) 1,2-DCA-D4(S)	4.93	65	181084	9.61082 ppb		0.00
Spiked Amount 25.000			Recovery	= 38.444%		
57) Toluene-D8(S)	7.22	98	571625	9.12015 ppb		0.00
Spiked Amount 25.000			Recovery	= 36.480%		
65) 4-Bromofluorobenzene(S)	9.89	95	210233	9.29329 ppb		0.00
Spiked Amount 25.000			Recovery	= 37.172%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.86	85	18047	1.04024 ppb		99
3) Freon 114	0.93	85	13457	1.04970 ppb		94
4) Chloromethane	0.96	50	26593	1.10491 ppb		100
5) Vinyl chloride	1.03	62	22171	1.02230 ppb		91
6) Bromomethane	1.22	96	9193	0.92490 ppb		98
7) Chloroethane	1.29	64	10956	0.91873 ppb		93
8) Dichlorofluoromethane	1.43	67	39601	1.05755 ppb		96
9) Trichlorofluoromethane	1.46	101	21880	0.97569 ppb		97
10) Acrolein	1.76	56	70296	50.92967 ppb		98
11) Acetone	1.88	43	13373	1.60072 ppb		98
12) Freon-113	1.85	101	12990	1.00913 ppb		96
13) 1,1-DCE	1.83	96	10065	1.00199 ppb		93
14) t-Butanol	2.40	59	30921	50.27619 ppb		98
15) Acetonitrile	2.11	41	81157	48.71658 ppb		98
16) Methyl Acetate	2.17	43	12948	1.12075 ppb		88
17) Iodomethane	1.93	142	4459	1.38433 ppb		90
18) Acrylonitrile	2.48	52	4263	0.99393 ppb	#	60
19) Methylene chloride	2.24	84	20648	1.12770 ppb		94
20) Carbon disulfide	1.98	76	46833	1.04648 ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	46110	1.04823 ppb		95
22) Trans-1,2-DCE	2.50	96	16617	1.03513 ppb		96
23) Diisopropyl Ether	3.11	45	53595	0.98544 ppb		99
24) 1,1-DCA	2.95	63	31590	1.02554 ppb		99
25) Vinyl Acetate	3.10	43	14470	1.08327 ppb	#	82
26) Ethyl tert Butyl Ether	3.60	59	50501	1.03418 ppb		96
27) MEK (2-Butanone)	3.82	43	7005	1.06484 ppb		97
28) Cis-1,2-DCE	3.73	96	20693	1.08676 ppb		95
29) 2,2-Dichloropropane	3.70	77	8585	1.09769 ppb		96
30) Chloroform	4.26	83	31058	1.02210 ppb		99
31) Bromochloromethane	4.09	128	9382	1.05413 ppb		90
33) 1,1,1-TCA	4.48	97	24551	1.01347 ppb		99
34) Cyclohexane	4.54	41	13332	1.04565 ppb		95
35) 1,1-Dichloropropene	4.72	75	21165	1.00769 ppb		97
36) 2,2,4-Trimethylpentane	5.15	57	37999	0.99333 ppb	#	42
38) Carbon Tetrachloride	4.70	119	19572	1.02668 ppb		96
39) Tert Amyl Methyl Ether	5.23	73	45376	1.02386 ppb		98
40) 1,2-DCA	5.04	62	25680	1.08562 ppb		95
41) Benzene	4.99	78	64726	1.00257 ppb		98
42) TCE	5.84	95	9081	1.02132 ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L07.D Vial: 7
Acq On : 13 Nov 16 14:32 Operator: PM,DG,SV,CMM
Sample : 1.0ug/L VOC STD 11/13/16L Inst : Loki
Misc : 2uL-10ppb Multiplr: 1.00

Quant Time: Nov 14 8:43 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	2-Pentanone	6.12	43	467333	48.17549	ppb		99
44)	1,2-Dichloropropane	6.09	63	19527	1.06604	ppb		96
45)	Bromodichloromethane	6.44	83	22368	0.97814	ppb		100
46)	Methyl Cyclohexane	6.04	83	22136	1.03914	ppb		89
47)	Dibromomethane	6.22	93	9472	0.94787	ppb		95
49)	MIBK (methyl isobutyl ket	7.16	43	19014	0.76160	ppb	#	95
50)	1-Bromo-2-chloroethane	6.75	63	12340	0.94840	ppb		95
51)	Cis-1,3-Dichloropropene	6.95	75	27661	1.00582	ppb		96
52)	Toluene	7.29	91	68420	0.99338	ppb		99
53)	Trans-1,3-Dichloropropene	7.57	75	23372	0.99419	ppb		94
54)	1,1,2-TCA	7.74	83	14242	1.15033	ppb		87
55)	2-Hexanone	8.05	43	4119	1.78883	ppb		94
58)	1,2-EDB	8.21	107	13213	0.94679	ppb		94
59)	Tetrachloroethene	7.86	166	17806	1.03996	ppb		95
60)	1-Chlorohexane	8.76	91	18835	0.95120	ppb		98
61)	1,1,1,2-Tetrachloroethane	8.83	131	16873	0.97405	ppb		89
62)	m&p-Xylene	8.99	106	57713	1.93294	ppb		97
63)	o-Xylene	9.38	106	28071	0.95693	ppb		95
64)	Styrene	9.40	104	30920	0.95427	ppb		99
66)	1,3-Dichloropropane	7.90	76	24295	0.95187	ppb		95
67)	Dibromochloromethane	8.12	129	16093	0.95279	ppb		99
68)	Chlorobenzene	8.73	112	46168	0.98020	ppb		97
69)	Ethylbenzene	8.87	91	75230	0.97422	ppb		99
70)	Bromoform	9.55	173	9459	0.92447	ppb		95
72)	Isopropylbenzene	9.76	105	67567	0.94357	ppb		99
73)	1,1,2,2-Tetrachloroethane	10.06	83	16905	0.96965	ppb	#	92
74)	1,2,3-Trichloropropane	10.09	110	3699	1.10740	ppb		81
75)	t-1,4-Dichloro-2-Butene	10.16	53	521	0.11082	ppb		100
76)	Bromobenzene	10.02	156	19111	0.97520	ppb		90
77)	n-Propylbenzene	10.17	91	78739	0.96180	ppb		97
78)	4-Ethyltoluene	10.29	105	68835	0.98114	ppb		96
79)	2-Chlorotoluene	10.23	91	50887	0.96472	ppb		100
80)	1,3,5-Trimethylbenzene	10.35	105	54142	0.91065	ppb		100
81)	4-Chlorotoluene	10.34	91	59371	0.97456	ppb		93
82)	Tert-Butylbenzene	10.67	119	49832	0.97702	ppb		97
83)	1,2,4-Trimethylbenzene	10.71	105	56609	0.93904	ppb		100
84)	Sec-Butylbenzene	10.88	105	70273	0.97725	ppb		97
85)	p-Isopropyltoluene	11.04	119	57874	0.96788	ppb		98
86)	Benzyl Chloride	11.20	91	17896	0.91173	ppb		99
87)	1,3-DCB	10.96	146	35054	0.98932	ppb		97
88)	1,4-DCB	11.05	146	36066	0.98338	ppb		94
89)	n-Butylbenzene	11.44	91	52225	0.99097	ppb		98
90)	1,2-DCB	11.41	146	34187	0.98846	ppb		95
91)	Hexachloroethane	11.66	117	10973	0.90043	ppb		90
92)	1,2-Dibromo-3-chloropropan	12.18	157	3027	0.93700	ppb	#	64
93)	1,2,4-Trichlorobenzene	12.99	180	22460	0.95898	ppb		98
94)	Hexachlorobutadiene	13.19	225	8764	0.96279	ppb	#	83
95)	Naphthalene	13.22	128	28384	0.95755	ppb		98
96)	1,2,3-Trichlorobenzene	13.46	180	13383	0.93484	ppb		98

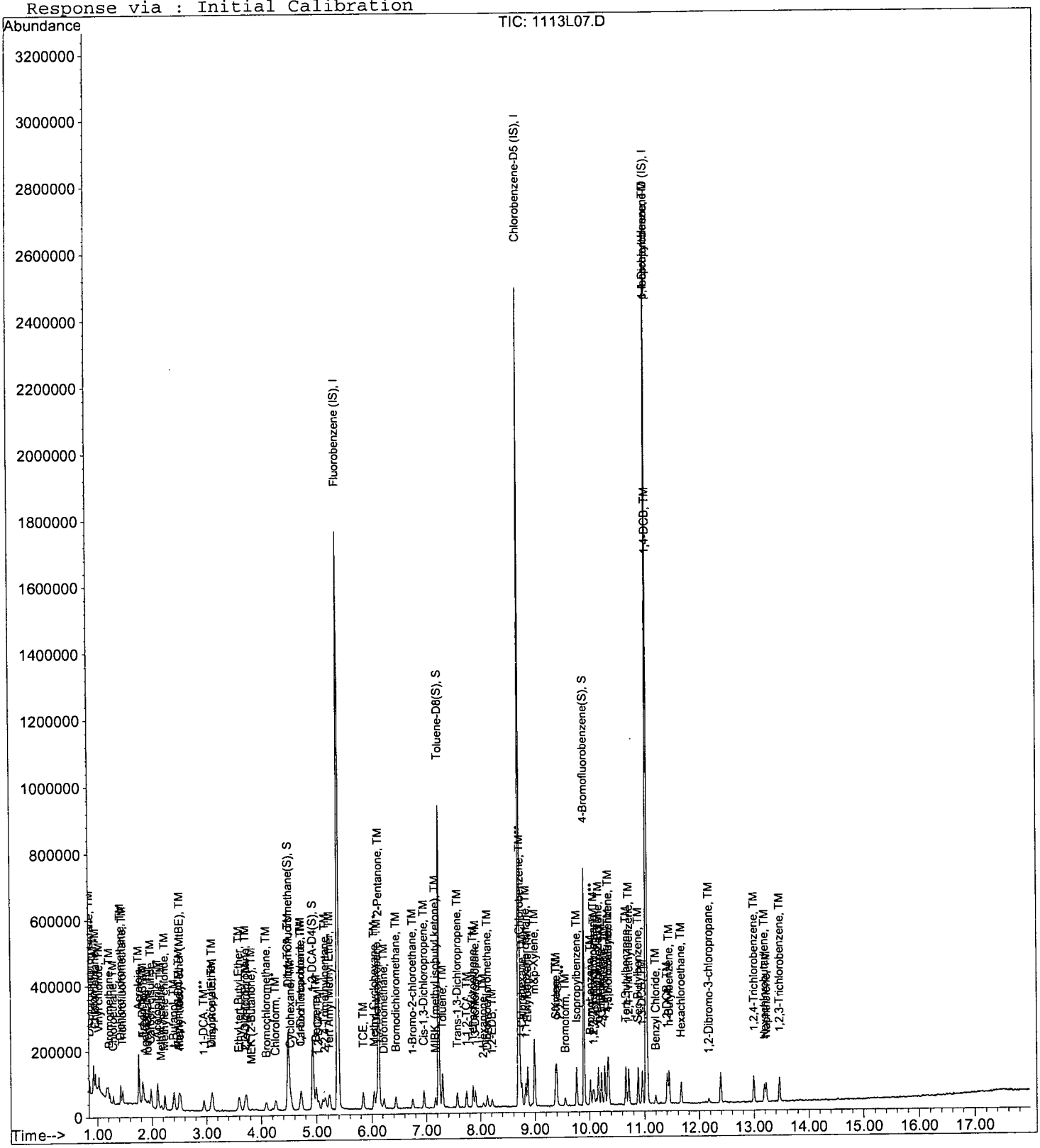
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1113L07.D Vial: 7
Acq On : 13 Nov 16 14:32 Operator: PM,DG,SV,CMM
Sample : 1.0ug/L VOC STD 11/13/16L Inst : Loki
Misc : 2uL-10ppb Multiplr: 1.00

Quant Time: Nov 14 8:43 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



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Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L08.D Vial: 8
Acq On : 13 Nov 16 15:00 Operator: PM,DG,SV,CMM
Sample : 2.0ug/L VOC STD 11/13/16M Inst : Loki
Misc : 2uL-10ppb Multiplr: 1.00

Quant Time: Nov 14 8:43 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	848479	25.00000	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	802368	25.00000	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	417920	25.00000	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.49	111	164004	9.15976	ppb		0.00
Spiked Amount 25.000			Recovery	= 36.640%			
37) 1,2-DCA-D4(S)	4.93	65	176601	9.04733	ppb		0.00
Spiked Amount 25.000			Recovery	= 36.188%			
57) Toluene-D8(S)	7.22	98	567184	9.25717	ppb		0.00
Spiked Amount 25.000			Recovery	= 37.028%			
65) 4-Bromofluorobenzene(S)	9.89	95	205871	9.30953	ppb		0.00
Spiked Amount 25.000			Recovery	= 37.240%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.86	85	36508	2.03125	ppb		98
3) Freon 114	0.93	85	26700	2.01037	ppb		99
4) Chloromethane	0.96	50	44990	1.80436	ppb		97
5) Vinyl chloride	1.03	62	43395	1.93144	ppb		92
6) Bromomethane	1.22	96	21543	2.09213	ppb		93
7) Chloroethane	1.29	64	23160	1.87466	ppb		99
8) Dichlorofluoromethane	1.43	67	73674	1.89914	ppb		97
9) Trichlorofluoromethane	1.46	101	44963	1.93539	ppb		95
10) Acrolein	1.76	56	104016	72.74237	ppb	#	98
11) Acetone	1.88	43	12476	1.34364	ppb		94
12) Freon-113	1.84	101	25791	1.93399	ppb		95
13) 1,1-DCE	1.83	96	20908	2.00913	ppb		94
14) t-Butanol	2.40	59	45368	71.20418	ppb		99
15) Acetonitrile	2.11	41	115441	66.88950	ppb		96
16) Methyl Acetate	2.17	43	23495	1.96304	ppb		92
17) Iodomethane	1.93	142	8846	1.99108	ppb		97
18) Acrylonitrile	2.48	52	9312	2.09571	ppb		99
19) Methylene chloride	2.24	84	35882	1.89165	ppb		89
20) Carbon disulfide	1.98	76	84411	1.82065	ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	88934	1.95154	ppb		95
22) Trans-1,2-DCE	2.50	96	32590	1.95962	ppb		95
23) Diisopropyl Ether	3.10	45	106000	1.88130	ppb		98
24) 1,1-DCA	2.95	63	62726	1.96561	ppb		99
25) Vinyl Acetate	3.08	43	28249	2.04136	ppb		93
26) Ethyl tert Butyl Ether	3.60	59	97414	1.92559	ppb		90
27) MEK (2-Butanone)	3.81	43	11775	1.72777	ppb	#	66
28) Cis-1,2-DCE	3.73	96	37912	1.92191	ppb		91
29) 2,2-Dichloropropane	3.70	77	16535	2.04076	ppb		98
30) Chloroform	4.26	83	61423	1.95118	ppb		98
31) Bromochloromethane	4.08	128	17831	1.93384	ppb		95
33) 1,1,1-TCA	4.47	97	50020	1.99312	ppb		99
34) Cyclohexane	4.53	41	25289	1.91456	ppb		90
35) 1,1-Dichloropropene	4.72	75	41852	1.92341	ppb		98
36) 2,2,4-Trimethylpentane	5.15	57	79219	1.99894	ppb	#	66
38) Carbon Tetrachloride	4.70	119	36389	1.84253	ppb		97
39) Tert Amyl Methyl Ether	5.23	73	86507	1.88414	ppb		98
40) 1,2-DCA	5.03	62	48078	1.96190	ppb		100
41) Benzene	4.99	78	128360	1.91917	ppb		99
42) TCE	5.84	95	16992	1.84467	ppb		99

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161113\1113L08.D Vial: 8
Acq On : 13 Nov 16 15:00 Operator: PM,DG,SV,CMM
Sample : 2.0ug/L VOC STD 11/13/16M Inst : Loki
Misc : 2uL-10ppb Multiplr: 1.00

Quant Time: Nov 14 8:43 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	2-Pentanone	6.12	43	706269	70.27759	ppb		100
44)	1,2-Dichloropropane	6.08	63	36700	1.93398	ppb		99
45)	Bromodichloromethane	6.44	83	44577	1.88162	ppb	#	95
46)	Methyl Cyclohexane	6.04	83	44281	2.00650	ppb		96
47)	Dibromomethane	6.22	93	21413	2.06838	ppb		97
49)	MIBK (methyl isobutyl ket	7.16	43	38784	2.02564	ppb		97
50)	1-Bromo-2-chloroethane	6.75	63	25584	1.89798	ppb		100
51)	Cis-1,3-Dichloropropene	6.95	75	52764	1.85199	ppb		98
52)	Toluene	7.29	91	137412	1.92576	ppb		98
53)	Trans-1,3-Dichloropropene	7.56	75	45943	1.88643	ppb		96
54)	1,1,2-TCA	7.74	83	23722	1.84949	ppb		97
55)	2-Hexanone	8.05	43	9319	2.57003	ppb		95
58)	1,2-EDB	8.21	107	25485	1.86810	ppb		99
59)	Tetrachloroethene	7.86	166	31748	1.89684	ppb		90
60)	1-Chlorohexane	8.76	91	37958	1.96098	ppb		96
61)	1,1,1,2-Tetrachloroethane	8.83	131	32461	1.91696	ppb		100
62)	m&p-Xylene	8.99	106	111804	3.83060	ppb		97
63)	o-Xylene	9.38	106	55428	1.93292	ppb		100
64)	Styrene	9.40	104	58903	1.85966	ppb		98
66)	1,3-Dichloropropane	7.90	76	47440	1.90139	ppb		98
67)	Dibromochloromethane	8.12	129	30684	1.85839	ppb		94
68)	Chlorobenzene	8.73	112	89137	1.93595	ppb		98
69)	Ethylbenzene	8.87	91	148723	1.97019	ppb		96
70)	Bromoform	9.55	173	19425	1.94210	ppb		98
72)	Isopropylbenzene	9.76	105	137377	2.01395	ppb		99
73)	1,1,2,2-Tetrachloroethane	10.07	83	33665	2.02709	ppb		98
74)	1,2,3-Trichloropropane	10.08	110	6106	1.91898	ppb		99
75)	t-1,4-Dichloro-2-Butene	10.13	53	9446	2.10916	ppb	#	76
76)	Bromobenzene	10.02	156	39045	2.09155	ppb		96
77)	n-Propylbenzene	10.17	91	158563	2.03324	ppb		99
78)	4-Ethyltoluene	10.29	105	134702	2.01554	ppb		100
79)	2-Chlorotoluene	10.23	91	101947	2.02892	ppb		96
80)	1,3,5-Trimethylbenzene	10.35	105	111350	1.96609	ppb		98
81)	4-Chlorotoluene	10.34	91	115489	1.99008	ppb		95
82)	Tert-Butylbenzene	10.66	119	93572	1.92592	ppb		99
83)	1,2,4-Trimethylbenzene	10.71	105	112110	1.95226	ppb		99
84)	Sec-Butylbenzene	10.88	105	135808	1.98261	ppb		98
85)	p-Isopropyltoluene	11.04	119	111879	1.96417	ppb		97
86)	Benzyl Chloride	11.20	91	33129	1.77180	ppb		99
87)	1,3-DCB	10.96	146	68708	2.03565	ppb		95
88)	1,4-DCB	11.05	146	70851	2.02798	ppb		98
89)	n-Butylbenzene	11.44	91	98248	1.95704	ppb		97
90)	1,2-DCB	11.41	146	66383	2.01487	ppb		98
91)	Hexachloroethane	11.66	117	22202	1.91255	ppb		94
92)	1,2-Dibromo-3-chloropropan	12.17	157	5855	1.90260	ppb		92
93)	1,2,4-Trichlorobenzene	12.99	180	43771	1.96191	ppb		97
94)	Hexachlorobutadiene	13.19	225	17028	1.96375	ppb		89
95)	Naphthalene	13.22	128	52848	1.87160	ppb		96
96)	1,2,3-Trichlorobenzene	13.46	180	24728	1.81330	ppb		93

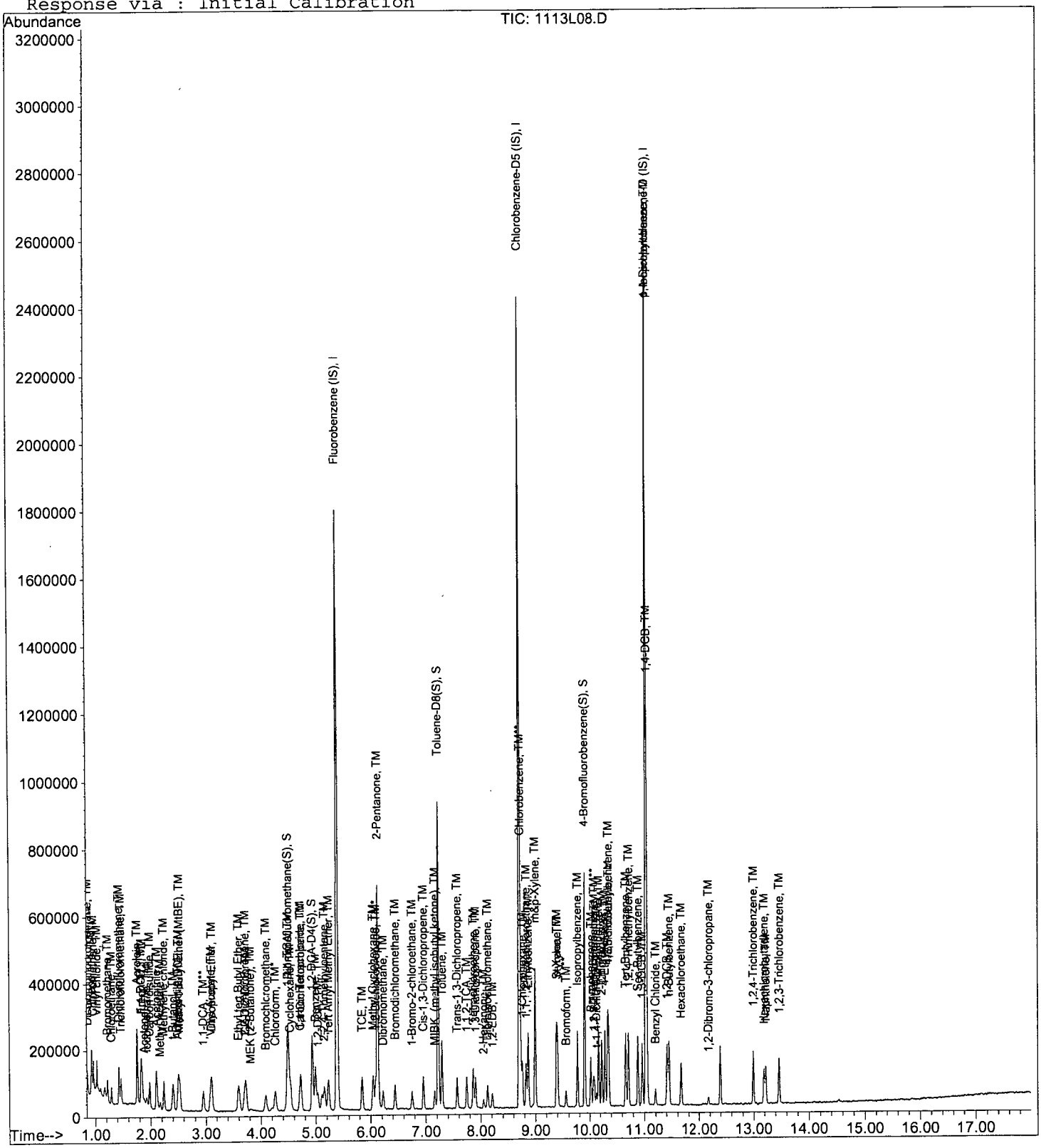
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1113L08.D Vial: 8
Acq On : 13 Nov 16 15:00 Operator: PM,DG,SV,CMM
Sample : 2.0ug/L VOC STD 11/13/16M Inst : Loki
Misc : 2uL-10ppb Multiplr: 1.00

Quant Time: Nov 14 8:43 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L09.D Vial: 9
Acq_On : 13_Nov_16 15:28 Operator: PM,DG,SV,CMM
Sample : 5.0ug/L VOC STD 11/13/16AN Inst : Loki
Misc : 5uL-25ppb Multiplr: 1.00

Quant Time: Nov 14 8:43 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	816896	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	796416	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	431296	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	434172	25.18638 ppb		0.00
Spiked Amount 25.000			Recovery	= 100.744%		
37) 1,2-DCA-D4(S)	4.93	65	474115	25.22814 ppb		0.00
Spiked Amount 25.000			Recovery	= 100.912%		
57) Toluene-D8(S)	7.22	98	1508650	24.80713 ppb		0.00
Spiked Amount 25.000			Recovery	= 99.228%		
65) 4-Bromofluorobenzene(S)	9.89	95	550032	25.05844 ppb		0.00
Spiked Amount 25.000			Recovery	= 100.232%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.86	85	91142	5.26705 ppb		99
3) Freon 114	0.93	85	63141	4.93800 ppb		93
4) Chloromethane	0.96	50	127987	5.33148 ppb		98
5) Vinyl chloride	1.03	62	113394	5.24211 ppb		95
6) Bromomethane	1.22	96	53582	5.40476 ppb		92
7) Chloroethane	1.29	64	65555	5.51142 ppb		96
8) Dichlorofluoromethane	1.43	67	193515	5.18121 ppb		99
9) Trichlorofluoromethane	1.46	101	115502	5.16389 ppb		100
10) Acrolein	1.76	56	136154	98.89903 ppb	#	96
11) Acetone	1.88	43	30777	4.97944 ppb		93
12) Freon-113	1.84	101	66190	5.15529 ppb		97
13) 1,1-DCE	1.83	96	54144	5.40407 ppb		96
14) t-Butanol	2.40	59	61120	99.63537 ppb		98
15) Acetonitrile	2.10	41	160004	96.29485 ppb	#	96
16) Methyl Acetate	2.17	43	60412	5.24265 ppb		99
17) Iodomethane	1.93	142	27448	4.81388 ppb		96
18) Acrylonitrile	2.48	52	20621	4.82027 ppb		93
19) Methylene chloride	2.24	84	93111	5.09846 ppb		99
20) Carbon disulfide	1.98	76	223399	5.00475 ppb		97
21) Methyl t-butyl ether (MtBE	2.52	73	227998	5.19654 ppb		97
22) Trans-1,2-DCE	2.50	96	85166	5.31899 ppb		99
23) Diisopropyl Ether	3.10	45	280578	5.17225 ppb		98
24) 1,1-DCA	2.95	63	159873	5.20356 ppb		99
25) Vinyl Acetate	3.08	43	69774	5.23702 ppb		94
26) Ethyl tert Butyl Ether	3.60	59	248081	5.09342 ppb		100
27) MEK (2-Butanone)	3.81	43	31680	4.82818 ppb		92
28) Cis-1,2-DCE	3.73	96	97430	5.13007 ppb		92
29) 2,2-Dichloropropane	3.70	77	40976	5.25281 ppb		95
30) Chloroform	4.25	83	158216	5.22024 ppb		100
31) Bromochloromethane	4.08	128	45479	5.12306 ppb		97
33) 1,1,1-TCA	4.47	97	126956	5.25432 ppb		97
34) Cyclohexane	4.53	41	67345	5.29562 ppb		96
35) 1,1-Dichloropropene	4.72	75	109442	5.22414 ppb		99
36) 2,2,4-Trimethylpentane	5.15	57	200047	5.24296 ppb	#	83
38) Carbon Tetrachloride	4.71	119	102196	5.37469 ppb		96
39) Tert Amyl Methyl Ether	5.23	73	228683	5.17333 ppb		98
40) 1,2-DCA	5.03	62	125428	5.31618 ppb		98
41) Benzene	4.99	78	335707	5.21336 ppb		99
42) TCE	5.84	95	45008	5.07503 ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L09.D Vial: 9
Acq On : 13-Nov-16 15:28 Operator: PM,DG,SV,CMM
Sample : 5.0ug/L VOC STD 11/13/16AN Inst : Loki
Misc : 5uL-25ppb Multiplr: 1.00

Quant Time: Nov 14 8:43 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

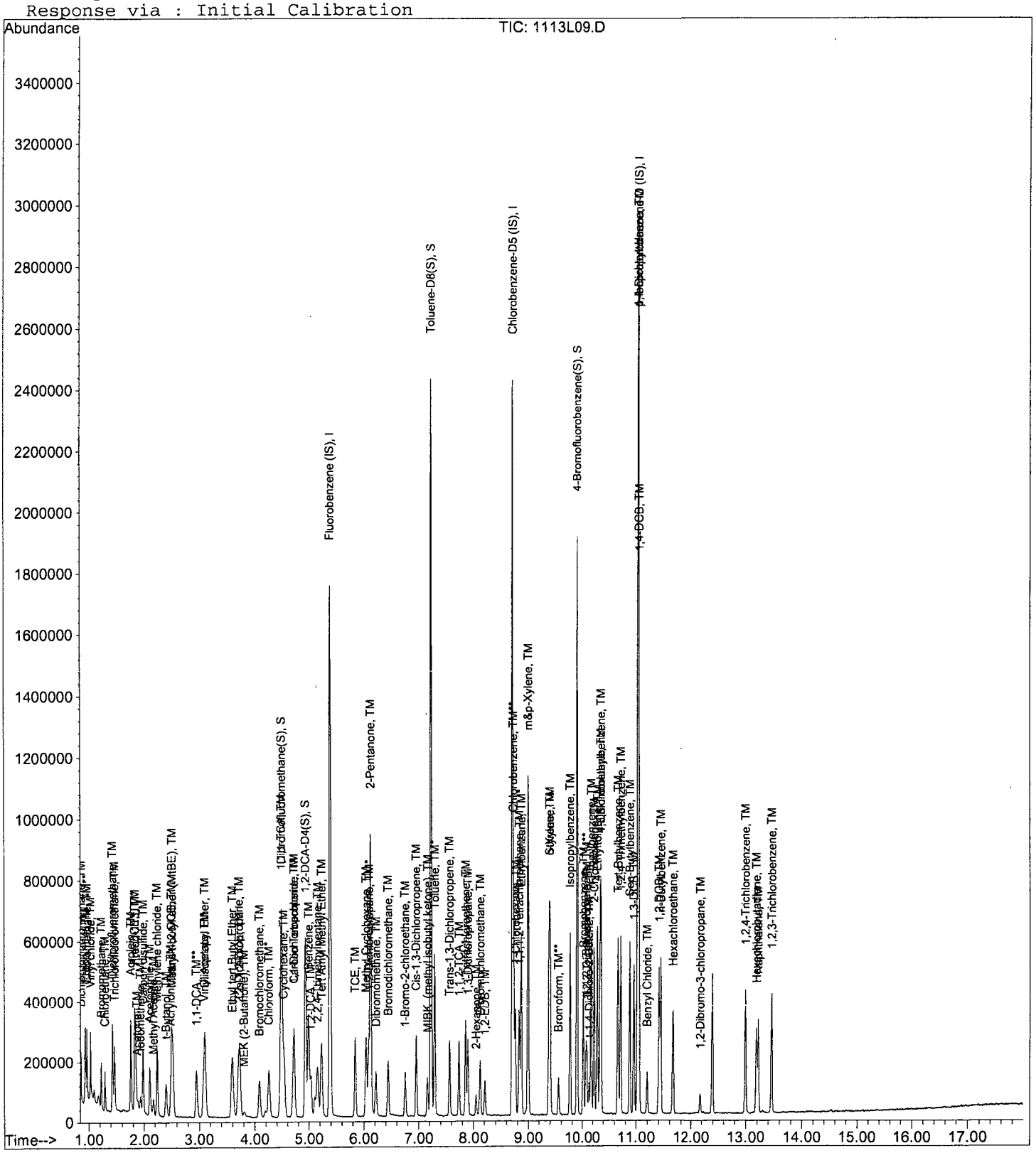
Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43) 2-Pentanone	6.12	43	969439	100.19396	ppb		99
44) 1,2-Dichloropropane	6.09	63	93112	5.09644	ppb		97
45) Bromodichloromethane	6.44	83	118989	5.21679	ppb		98
46) Methyl Cyclohexane	6.04	83	111422	5.24405	ppb		99
47) Dibromomethane	6.22	93	49877	5.00412	ppb		98
49) MIBK (methyl isobutyl ket	7.16	43	92344	5.80933	ppb		97
50) 1-Bromo-2-chloroethane	6.75	63	68296	5.26252	ppb		98
51) Cis-1,3-Dichloropropene	6.95	75	142020	5.17756	ppb		98
52) Toluene	7.29	91	364665	5.30820	ppb		99
53) Trans-1,3-Dichloropropene	7.56	75	119281	5.08706	ppb		97
54) 1,1,2-TCA	7.74	83	61586	4.98720	ppb		96
55) 2-Hexanone	8.05	43	27171	5.49307	ppb		97
58) 1,2-EDB	8.21	107	71782	5.30107	ppb		98
59) Tetrachloroethene	7.86	166	85673	5.15693	ppb		97
60) 1-Chlorohexane	8.76	91	99351	5.17101	ppb		98
61) 1,1,1,2-Tetrachloroethane	8.83	131	86528	5.14804	ppb		99
62) m&p-Xylene	8.99	106	300095	10.35861	ppb		100
63) o-Xylene	9.38	106	147570	5.18461	ppb		94
64) Styrene	9.40	104	165888	5.27648	ppb		97
66) 1,3-Dichloropropane	7.90	76	127289	5.13984	ppb		98
67) Dibromochloromethane	8.12	129	84705	5.16853	ppb		99
68) Chlorobenzene	8.73	112	236616	5.17742	ppb		99
69) Ethylbenzene	8.87	91	392088	5.23296	ppb		99
70) Bromoform	9.55	173	50907	5.12770	ppb		98
72) Isopropylbenzene	9.76	105	365150	5.18709	ppb		98
73) 1,1,2,2-Tetrachloroethane	10.06	83	90518	5.28138	ppb		95
74) 1,2,3-Trichloropropane	10.09	110	16896	5.14535	ppb		90
75) t-1,4-Dichloro-2-Butene	10.13	53	22494	4.86684	ppb		89
76) Bromobenzene	10.02	156	100978	5.24140	ppb		95
77) n-Propylbenzene	10.17	91	418948	5.20553	ppb		98
78) 4-Ethyltoluene	10.29	105	360615	5.22851	ppb		98
79) 2-Chlorotoluene	10.23	91	265984	5.12937	ppb		95
80) 1,3,5-Trimethylbenzene	10.35	105	307146	5.25504	ppb		99
81) 4-Chlorotoluene	10.34	91	311903	5.20796	ppb		99
82) Tert-Butylbenzene	10.67	119	264476	5.27467	ppb		98
83) 1,2,4-Trimethylbenzene	10.71	105	302504	5.10438	ppb		98
84) Sec-Butylbenzene	10.88	105	370881	5.24644	ppb		99
85) p-Isopropyltoluene	11.04	119	303190	5.15778	ppb		99
86) Benzyl Chloride	11.19	91	90134	4.67102	ppb		98
87) 1,3-DCB	10.96	146	184044	5.28365	ppb		97
88) 1,4-DCB	11.05	146	187709	5.20619	ppb		99
89) n-Butylbenzene	11.44	91	263234	5.08085	ppb		97
90) 1,2-DCB	11.41	146	178372	5.24609	ppb		99
91) Hexachloroethane	11.66	117	63576	5.30678	ppb		95
92) 1,2-Dibromo-3-chloropropan	12.17	157	15811	4.97850	ppb	#	82
93) 1,2,4-Trichlorobenzene	12.99	180	117324	5.09563	ppb		99
94) Hexachlorobutadiene	13.19	225	47870	5.34938	ppb		99
95) Naphthalene	13.22	128	147456	5.06016	ppb		98
96) 1,2,3-Trichlorobenzene	13.46	180	76384	5.42751	ppb		99

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161113\1113L09.D Vial: 9
Acq On : 13 Nov 16 15:28 Operator: PM,DG,SV,CMM
Sample : 5.0ug/L VOC STD 11/13/16AN Inst : Loki
Misc : 5uL-25ppb Multiplr: 1.00

Quant Time: Nov 14 8:43 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L10.D Vial: 10
Acq On : 13_Nov_16 15:56 Operator: PM,DG,SV,CMM
Sample : 10ug/L VOC STD 11/13/16O Inst : Loki
Misc : 5uL-25ppb Multiplr: 1.00

Quant Time: Nov 14 8:43 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	817344	25.00000	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	790336	25.00000	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	444864	25.00000	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	437231	25.34993	ppb	0.00
Spiked Amount 25.000			Recovery = 101.400%			
37) 1,2-DCA-D4(S)	4.93	65	462687	24.60655	ppb	0.00
Spiked Amount 25.000			Recovery = 98.428%			
57) Toluene-D8(S)	7.22	98	1497085	24.80634	ppb	0.00
Spiked Amount 25.000			Recovery = 99.224%			
65) 4-Bromofluorobenzene(S)	9.89	95	545532	25.04462	ppb	0.00
Spiked Amount 25.000			Recovery = 100.180%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.86	85	171848	9.92556	ppb	100
3) Freon 114	0.93	85	126610	9.89623	ppb	100
4) Chloromethane	0.96	50	232419	9.67644	ppb	100
5) Vinyl chloride	1.03	62	217212	10.03602	ppb	100
6) Bromomethane	1.22	96	110291	11.11884	ppb	100
7) Chloroethane	1.29	64	118452	9.95318	ppb	100
8) Dichlorofluoromethane	1.43	67	367247	9.82735	ppb	100
9) Trichlorofluoromethane	1.46	101	227555	10.16800	ppb	100
10) Acrolein	1.76	56	176200	127.91734	ppb	100
11) Acetone	1.88	43	56895	10.03376	ppb	100
12) Freon-113	1.84	101	122929	9.56923	ppb	100
13) 1,1-DCE	1.83	96	98384	9.81424	ppb	100
14) t-Butanol	2.40	59	74422	121.25326	ppb	100
15) Acetonitrile	2.10	41	201347	121.10979	ppb	100
16) Methyl Acetate	2.17	43	112323	9.74223	ppb	100
17) Iodomethane	1.93	142	59504	9.58880	ppb	100
18) Acrylonitrile	2.48	52	38558	9.00820	ppb	100
19) Methylene chloride	2.24	84	173185	9.47785	ppb	100
20) Carbon disulfide	1.98	76	440464	9.86220	ppb	100
21) Methyl t-butyl ether (MtBE	2.52	73	436026	9.93248	ppb	100
22) Trans-1,2-DCE	2.50	96	156390	9.76188	ppb	100
23) Diisopropyl Ether	3.10	45	539539	9.94055	ppb	100
24) 1,1-DCA	2.95	63	301906	9.82107	ppb	100
25) Vinyl Acetate	3.07	43	135329	10.15180	ppb	100
26) Ethyl tert Butyl Ether	3.59	59	487849	10.01067	ppb	100
27) MEK (2-Butanone)	3.80	43	61836	9.41893	ppb	100
28) Cis-1,2-DCE	3.73	96	187788	9.88236	ppb	100
29) 2,2-Dichloropropane	3.70	77	75303	9.64799	ppb	100
30) Chloroform	4.26	83	305289	10.06730	ppb	100
31) Bromochloromethane	4.08	128	86027	9.68535	ppb	100
33) 1,1,1-TCA	4.47	97	243807	10.08490	ppb	100
34) Cyclohexane	4.53	41	122116	9.59723	ppb	100
35) 1,1-Dichloropropene	4.72	75	210838	10.05870	ppb	100
36) 2,2,4-Trimethylpentane	5.16	57	375728	9.84191	ppb	100
38) Carbon Tetrachloride	4.70	119	186724	9.81480	ppb	100
39) Tert Amyl Methyl Ether	5.23	73	438132	9.90610	ppb	100
40) 1,2-DCA	5.03	62	230035	9.74454	ppb	100
41) Benzene	4.99	78	648060	10.05852	ppb	100
42) TCE	5.84	95	85520	9.63781	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L10.D Vial: 10
Acq On : 13 Nov 16 15:56 Operator: PM,DG,SV,CMM
Sample : 10ug/L VOC STD 11/13/160 Inst : Loki
Misc : 5uL-25ppb Multiplr: 1.00

Quant Time: Nov 14 8:43 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
43) 2-Pentanone	6.12	43	1213054	125.30347 ppb	100
44) 1,2-Dichloropropane	6.09	63	177261	9.69697 ppb	100
45) Bromodichloromethane	6.44	83	226975	9.94572 ppb	100
46) Methyl Cyclohexane	6.04	83	210179	9.88661 ppb	100
47) Dibromomethane	6.22	93	99591	9.98642 ppb	100
49) MIBK (methyl isobutyl ket	7.15	43	160890	10.51853 ppb	100
50) 1-Bromo-2-chloroethane	6.75	63	134876	10.38712 ppb	100
51) Cis-1,3-Dichloropropene	6.95	75	269648	9.82504 ppb	100
52) Toluene	7.29	91	691431	10.05920 ppb	100
53) Trans-1,3-Dichloropropene	7.56	75	236915	10.09834 ppb	100
54) 1,1,2-TCA	7.74	83	120458	9.74927 ppb	100
55) 2-Hexanone	8.04	43	52934	9.62637 ppb	100
58) 1,2-EDB	8.21	107	134963	10.04364 ppb	100
59) Tetrachloroethene	7.86	166	163202	9.89921 ppb	100
60) 1-Chlorohexane	8.76	91	191868	10.06315 ppb	100
61) 1,1,1,2-Tetrachloroethane	8.83	131	167319	10.03134 ppb	100
62) m&p-Xylene	8.99	106	574089	19.96872 ppb	100
63) o-Xylene	9.38	106	287758	10.18763 ppb	100
64) Styrene	9.40	104	322624	10.34081 ppb	100
66) 1,3-Dichloropropane	7.90	76	246634	10.03553 ppb	100
67) Dibromochloromethane	8.12	129	164109	10.09063 ppb	100
68) Chlorobenzene	8.73	112	454689	10.02563 ppb	100
69) Ethylbenzene	8.87	91	746522	10.04002 ppb	100
70) Bromoform	9.55	173	101672	10.31987 ppb	100
72) Isopropylbenzene	9.76	105	697569	9.60700 ppb	100
73) 1,1,2,2-Tetrachloroethane	10.06	83	175525	9.92886 ppb	100
74) 1,2,3-Trichloropropane	10.08	110	33816	9.98393 ppb	100
75) t-1,4-Dichloro-2-Butene	10.13	53	45143	9.46932 ppb	100
76) Bromobenzene	10.01	156	192287	9.67651 ppb	100
77) n-Propylbenzene	10.17	91	802912	9.67211 ppb	100
78) 4-Ethyltoluene	10.29	105	689952	9.69842 ppb	100
79) 2-Chlorotoluene	10.23	91	520453	9.73057 ppb	100
80) 1,3,5-Trimethylbenzene	10.35	105	594418	9.85988 ppb	100
81) 4-Chlorotoluene	10.33	91	588998	9.53477 ppb	100
82) Tert-Butylbenzene	10.66	119	491395	9.50141 ppb	100
83) 1,2,4-Trimethylbenzene	10.71	105	592254	9.68876 ppb	100
84) Sec-Butylbenzene	10.88	105	699257	9.58993 ppb	100
85) p-Isopropyltoluene	11.04	119	582402	9.60548 ppb	100
86) Benzyl Chloride	11.19	91	188150	9.45313 ppb	100
87) 1,3-DCB	10.96	146	352384	9.80792 ppb	100
88) 1,4-DCB	11.05	146	357340	9.60871 ppb	100
89) n-Butylbenzene	11.44	91	506714	9.48212 ppb	100
90) 1,2-DCB	11.41	146	340416	9.70659 ppb	100
91) Hexachloroethane	11.66	117	119972	9.70881 ppb	100
92) 1,2-Dibromo-3-chloropropan	12.17	157	29947	9.14199 ppb	100
93) 1,2,4-Trichlorobenzene	12.99	180	230943	9.72443 ppb	100
94) Hexachlorobutadiene	13.19	225	92951	10.07029 ppb	100
95) Naphthalene	13.22	128	310464	10.32906 ppb	100
96) 1,2,3-Trichlorobenzene	13.46	180	144064	9.92434 ppb	100

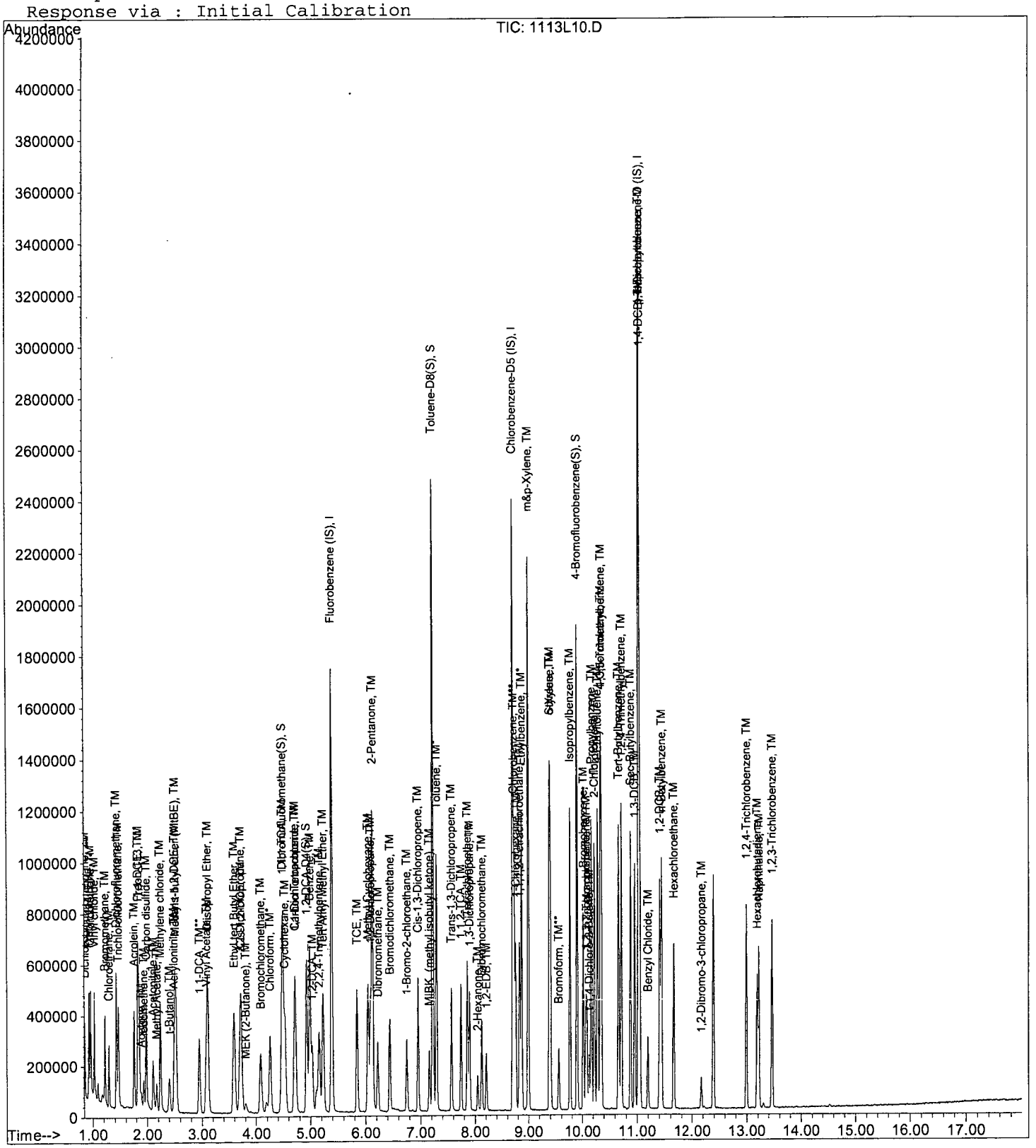
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1113L10.D Vial: 10
Acq On : 13 Nov-16 15:56 Operator: PM,DG,SV,CMM
Sample : 10ug/L VOC STD 11/13/160 Inst : Loki
Misc : 5uL-25ppb Multiplr: 1.00

Quant Time: Nov 14 8:43 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



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Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L11.D Vial: 11
Acq On : 13 Nov 16 16:24 Operator: PM,DG,SV,CMM
Sample : 20ug/L VOC STD 11/13/16P Inst : Loki
Misc : 10uL-50ppb Multiplr: 1.00

Quant Time: Nov 14 8:44 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	822357	25.00000 ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	788800	25.00000 ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	427392	25.00000 ppb	0.00
System Monitoring Compounds					
32) Dibromofluoromethane(S)	4.49	111	856205	49.33874 ppb	0.00
Spiked Amount 25.000			Recovery	= 197.356%	
37) 1,2-DCA-D4(S)	4.93	65	927747	49.03853 ppb	0.00
Spiked Amount 25.000			Recovery	= 196.156%	
57) Toluene-D8(S)	7.22	98	2971626	49.33501 ppb	0.00
Spiked Amount 25.000			Recovery	= 197.340%	
65) 4-Bromofluorobenzene(S)	9.89	95	1085660	49.93821 ppb	0.00
Spiked Amount 25.000			Recovery	= 199.752%	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.86	85	354663	20.35969 ppb	100
3) Freon 114	0.93	85	251900	19.56925 ppb	97
4) Chloromethane	0.96	50	473489	19.59289 ppb	99
5) Vinyl chloride	1.03	62	435008	19.97650 ppb	97
6) Bromomethane	1.22	96	199669	20.00666 ppb	97
7) Chloroethane	1.29	64	238096	19.88456 ppb	98
8) Dichlorofluoromethane	1.43	67	730132	19.41888 ppb	98
9) Trichlorofluoromethane	1.46	101	450873	20.02387 ppb	96
10) Acrolein	1.76	56	215818	155.72404 ppb	97
11) Acetone	1.89	43	107949	19.79264 ppb	96
12) Freon-113	1.84	101	251517	19.45963 ppb	94
13) 1,1-DCE	1.83	96	194783	19.31202 ppb	98
14) t-Butanol	2.41	59	94440	152.92995 ppb	99
15) Acetonitrile	2.11	41	248771	148.72307 ppb	99
16) Methyl Acetate	2.17	43	224285	19.33456 ppb	96
17) Iodomethane	1.93	142	124512	19.16356 ppb	96
18) Acrylonitrile	2.48	52	79723	18.51193 ppb	93
19) Methylene chloride	2.24	84	341187	18.55823 ppb	99
20) Carbon disulfide	1.98	76	862329	19.19026 ppb	100
21) Methyl t-butyl ether (MtBE	2.52	73	874800	19.80608 ppb	97
22) Trans-1,2-DCE	2.50	96	305873	18.97624 ppb	99
23) Diisopropyl Ether	3.10	45	1073733	19.66203 ppb	100
24) 1,1-DCA	2.95	63	599750	19.39107 ppb	99
25) Vinyl Acetate	3.07	43	266709	19.88540 ppb	100
26) Ethyl tert Butyl Ether	3.59	59	946482	19.30343 ppb	99
27) MEK (2-Butanone)	3.80	43	125770	19.04066 ppb	99
28) Cis-1,2-DCE	3.73	96	356573	18.65029 ppb	91
29) 2,2-Dichloropropane	3.70	77	150139	19.11888 ppb	99
30) Chloroform	4.26	83	599014	19.63286 ppb	98
31) Bromochloromethane	4.09	128	169633	18.98172 ppb	100
33) 1,1,1-TCA	4.47	97	468688	19.26876 ppb	98
34) Cyclohexane	4.53	41	245561	19.18126 ppb	93
35) 1,1-Dichloropropene	4.72	75	414306	19.64530 ppb	99
36) 2,2,4-Trimethylpentane	5.15	57	740311	19.27368 ppb	91
38) Carbon Tetrachloride	4.71	119	376894	19.68997 ppb	98
39) Tert Amyl Methyl Ether	5.23	73	876009	19.68571 ppb	99
40) 1,2-DCA	5.03	62	463500	19.51468 ppb	98
41) Benzene	4.99	78	1263716	19.49454 ppb	99
42) TCE	5.84	95	171776	19.24057 ppb	98

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161113\1113L11.D Vial: 11
Acq On : 13 Nov 16 16:24 Operator: PM,DG,SV,CMM
Sample : 20ug/L VOC STD 11/13/16P Inst : Loki
Misc : 10uL-50ppb Multiplr: 1.00

Quant Time: Nov 14 8:44 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
43) 2-Pentanone	6.12	43	1511709	155.20140	ppb	100
44) 1,2-Dichloropropane	6.09	63	361372	19.64817	ppb	98
45) Bromodichloromethane	6.44	83	451531	19.66483	ppb	99
46) Methyl Cyclohexane	6.04	83	416051	19.45131	ppb	100
47) Dibromomethane	6.22	93	199240	19.85686	ppb	97
49) MIBK (methyl isobutyl ket	7.15	43	307118	20.44330	ppb	97
50) 1-Bromo-2-chloroethane	6.75	63	263548	20.17272	ppb	99
51) Cis-1,3-Dichloropropene	6.95	75	545534	19.75621	ppb	99
52) Toluene	7.29	91	1348723	19.50213	ppb	99
53) Trans-1,3-Dichloropropene	7.56	75	462443	19.59116	ppb	97
54) 1,1,2-TCA	7.74	83	240209	19.32280	ppb	99
55) 2-Hexanone	8.04	43	114237	19.35544	ppb	94
58) 1,2-EDB	8.21	107	275232	20.52202	ppb	100
59) Tetrachloroethene	7.86	166	316732	19.24916	ppb	99
60) 1-Chlorohexane	8.76	91	372331	19.56614	ppb	98
61) 1,1,1,2-Tetrachloroethane	8.83	131	329640	19.80152	ppb	99
62) m&p-Xylene	8.99	106	1126596	39.26306	ppb	98
63) o-Xylene	9.38	106	565610	20.06355	ppb	95
64) Styrene	9.40	104	634368	20.37248	ppb	98
66) 1,3-Dichloropropane	7.90	76	489029	19.93732	ppb	98
67) Dibromochloromethane	8.12	129	326731	20.12896	ppb	99
68) Chlorobenzene	8.73	112	894855	19.76946	ppb	99
69) Ethylbenzene	8.87	91	1471302	19.82616	ppb	100
70) Bromoform	9.55	173	196197	19.95309	ppb	100
72) Isopropylbenzene	9.76	105	1371534	19.66112	ppb	98
73) 1,1,2,2-Tetrachloroethane	10.06	83	341654	20.11629	ppb	97
74) 1,2,3-Trichloropropane	10.08	110	64752	19.89910	ppb	96
75) t-1,4-Dichloro-2-Butene	10.12	53	87870	19.18536	ppb	97
76) Bromobenzene	10.02	156	376912	19.74284	ppb	98
77) n-Propylbenzene	10.17	91	1580224	19.81403	ppb	98
78) 4-Ethyltoluene	10.29	105	1375049	20.11876	ppb	99
79) 2-Chlorotoluene	10.23	91	1004293	19.54421	ppb	97
80) 1,3,5-Trimethylbenzene	10.35	105	1164345	20.10305	ppb	100
81) 4-Chlorotoluene	10.34	91	1162619	19.59001	ppb	98
82) Tert-Butylbenzene	10.66	119	968620	19.49449	ppb	99
83) 1,2,4-Trimethylbenzene	10.71	105	1172682	19.96830	ppb	98
84) Sec-Butylbenzene	10.88	105	1369823	19.55437	ppb	100
85) p-Isopropyltoluene	11.04	119	1161957	19.94743	ppb	99
86) Benzyl Chloride	11.19	91	394713	20.64209	ppb	99
87) 1,3-DCB	10.96	146	684721	19.83697	ppb	98
88) 1,4-DCB	11.05	146	690147	19.31638	ppb	97
89) n-Butylbenzene	11.44	91	998074	19.44045	ppb	97
90) 1,2-DCB	11.41	146	662820	19.67222	ppb	99
91) Hexachloroethane	11.66	117	246320	20.74850	ppb	99
92) 1,2-Dibromo-3-chloropropan	12.17	157	59001	18.74769	ppb	94
93) 1,2,4-Trichlorobenzene	12.99	180	449582	19.70467	ppb	97
94) Hexachlorobutadiene	13.19	225	173097	19.51994	ppb	97
95) Naphthalene	13.22	128	610624	21.14582	ppb	100
96) 1,2,3-Trichlorobenzene	13.46	180	282688	20.27003	ppb	98

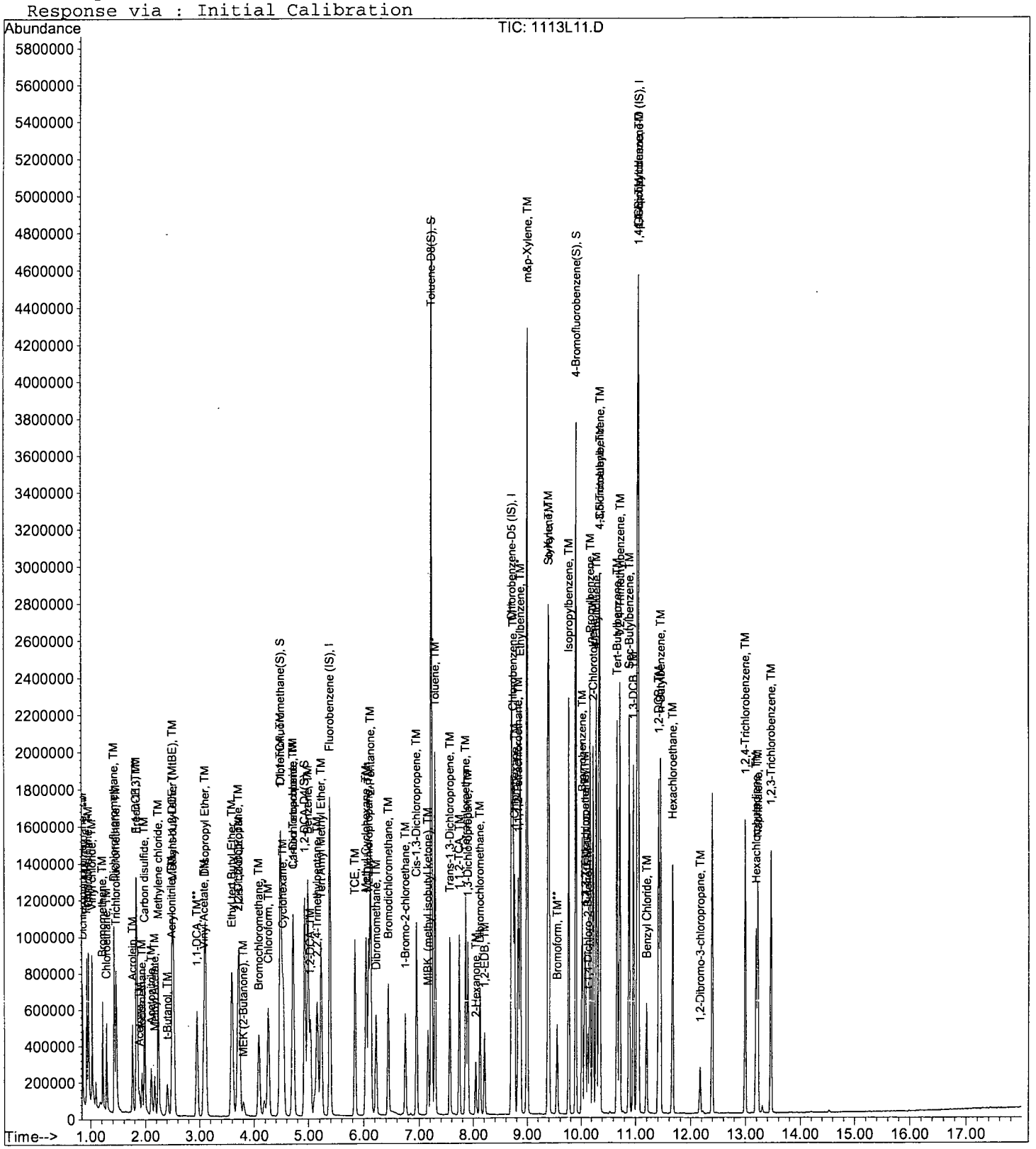
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1113L11.D Vial: 11
Acq On : 13 Nov 16 16:24 Operator: PM,DG,SV,CMM
Sample : 20ug/L VOC STD 11/13/16P Inst : Loki
Misc : 10uL-50ppb Multiplr: 1.00

Quant Time: Nov 14 8:44 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L12.D Vial: 12
Acq On : 13 Nov 16 16:53 Operator: PM,DG,SV,CMM
Sample : 40ug/L VOC STD 11/13/16Q Inst : Loki
Misc : 10uL-50ppb Multiplr: 1.00

Quant Time: Nov 14 8:44 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	833460	25.00000	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	819328	25.00000	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	420224	25.00000	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.49	111	849578	48.30468	ppb		0.00
Spiked Amount 25.000			Recovery = 193.220%				
37) 1,2-DCA-D4(S)	4.93	65	914958	47.71827	ppb		0.00
Spiked Amount 25.000			Recovery = 190.872%				
57) Toluene-D8(S)	7.22	98	2980523	47.63901	ppb		0.00
Spiked Amount 25.000			Recovery = 190.556%				
65) 4-Bromofluorobenzene(S)	9.89	95	1088386	48.19824	ppb		0.00
Spiked Amount 25.000			Recovery = 192.792%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.86	85	686737	38.89747	ppb		100
3) Freon 114	0.93	85	517315	39.65306	ppb		99
4) Chloromethane	0.96	50	936791	38.24784	ppb		100
5) Vinyl chloride	1.03	62	853037	38.65143	ppb		98
6) Bromomethane	1.22	96	381820	37.74838	ppb		98
7) Chloroethane	1.28	64	475938	39.21840	ppb		97
8) Dichlorofluoromethane	1.43	67	1469150	38.55357	ppb		98
9) Trichlorofluoromethane	1.46	101	899616	39.42091	ppb		98
10) Acrolein	1.76	56	251294	178.90635	ppb	#	98
11) Acetone	1.88	43	216417	40.11391	ppb		99
12) Freon-113	1.84	101	513576	39.20555	ppb		96
13) 1,1-DCE	1.83	96	395103	38.65117	ppb		96
14) t-Butanol	2.42	59	102192	163.27854	ppb		98
15) Acetonitrile	2.52	41	363630	214.49339	ppb	#	37
16) Methyl Acetate	2.17	43	459595	39.09174	ppb		100
17) Iodomethane	1.93	142	272384	40.52850	ppb		97
18) Acrylonitrile	2.48	52	156974	35.96428	ppb		93
19) Methylene chloride	2.24	84	677659	36.36896	ppb		100
20) Carbon disulfide	1.98	76	1773711	38.94630	ppb		100
21) Methyl t-butyl ether (MtBE	2.52	73	1736695	38.79618	ppb		99
22) Trans-1,2-DCE	2.50	96	614725	37.62925	ppb		99
23) Diisopropyl Ether	3.10	45	2185240	39.48270	ppb		98
24) 1,1-DCA	2.95	63	1202217	38.35217	ppb		99
25) Vinyl Acetate	3.10	43	468926	34.49663	ppb	#	77
26) Ethyl tert Butyl Ether	3.59	59	1937466	38.98808	ppb		97
27) MEK (2-Butanone)	3.80	43	246641	36.84222	ppb		98
28) Cis-1,2-DCE	3.72	96	718192	37.06409	ppb		92
29) 2,2-Dichloropropane	3.70	77	304243	38.22655	ppb		99
30) Chloroform	4.25	83	1185472	38.33659	ppb		99
31) Bromochloromethane	4.08	128	333724	36.84582	ppb		99
33) 1,1,1-TCA	4.47	97	949840	38.52973	ppb		96
34) Cyclohexane	4.53	41	508715	39.20738	ppb		96
35) 1,1-Dichloropropene	4.72	75	828903	38.78081	ppb		99
36) 2,2,4-Trimethylpentane	5.15	57	1526183	39.20421	ppb		94
38) Carbon Tetrachloride	4.70	119	767576	39.56606	ppb		99
39) Tert Amyl Methyl Ether	5.23	73	1760662	39.03858	ppb		99
40) 1,2-DCA	5.03	62	916121	38.05750	ppb		99
41) Benzene	4.99	78	2520124	38.35844	ppb		100
42) TCE	5.84	95	355968	39.34069	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L12.D Vial: 12
Acq On : 13 Nov 16 16:53 Operator: PM,DG,SV,CMM
Sample : 40ug/L VOC STD 11/13/16Q Inst : Loki
Misc : 10uL-50ppb Multiplr: 1.00

Quant Time: Nov 14 8:44 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
43)	2-Pentanone	6.12	43	1778872	180.19709	ppb	99
44)	1,2-Dichloropropane	6.09	63	725249	38.90723	ppb	98
45)	Bromodichloromethane	6.44	83	915504	39.34037	ppb	100
46)	Methyl Cyclohexane	6.04	83	865467	39.92349	ppb	99
47)	Dibromomethane	6.22	93	399784	39.31290	ppb	97
49)	MIBK (methyl isobutyl ket	7.15	43	569061	37.82464	ppb	99
50)	1-Bromo-2-chloroethane	6.75	63	532362	40.20569	ppb	100
51)	Cis-1,3-Dichloropropene	6.95	75	1095085	39.12959	ppb	97
52)	Toluene	7.29	91	2722600	38.84353	ppb	100
53)	Trans-1,3-Dichloropropene	7.56	75	955039	39.92076	ppb	97
54)	1,1,2-TCA	7.74	83	480895	38.16864	ppb	99
55)	2-Hexanone	8.04	43	227174	36.89166	ppb	96
58)	1,2-EDB	8.21	107	540882	38.82691	ppb	100
59)	Tetrachloroethene	7.86	166	634330	37.11456	ppb	97
60)	1-Chlorohexane	8.76	91	774501	39.18385	ppb	100
61)	1,1,1,2-Tetrachloroethane	8.83	131	659176	38.12143	ppb	99
62)	m&p-Xylene	8.99	106	2276888	76.39532	ppb	98
63)	o-Xylene	9.38	106	1130922	38.62180	ppb	97
64)	Styrene	9.40	104	1280000	39.57506	ppb	99
66)	1,3-Dichloropropane	7.90	76	971116	38.11644	ppb	99
67)	Dibromochloromethane	8.12	129	662038	39.26657	ppb	99
68)	Chlorobenzene	8.73	112	1789839	38.06845	ppb	98
69)	Ethylbenzene	8.87	91	2984545	38.71898	ppb	100
70)	Bromoform	9.55	173	395560	38.72927	ppb	97
72)	Isopropylbenzene	9.76	105	2789141	40.66470	ppb	99
73)	1,1,2,2-Tetrachloroethane	10.07	83	632400	37.87030	ppb	98
74)	1,2,3-Trichloropropane	10.08	110	124048	38.77176	ppb	91
75)	t-1,4-Dichloro-2-Butene	10.13	53	178359	39.60680	ppb	99
76)	Bromobenzene	10.02	156	730261	38.90391	ppb	97
77)	n-Propylbenzene	10.17	91	3239890	41.31711	ppb	99
78)	4-Ethyltoluene	10.29	105	2753926	40.98084	ppb	100
79)	2-Chlorotoluene	10.23	91	2006856	39.72093	ppb	97
80)	1,3,5-Trimethylbenzene	10.35	105	2320777	40.75297	ppb	100
81)	4-Chlorotoluene	10.33	91	2361824	40.47533	ppb	98
82)	Tert-Butylbenzene	10.67	119	1949427	39.90349	ppb	100
83)	1,2,4-Trimethylbenzene	10.71	105	2403303	41.62124	ppb	96
84)	Sec-Butylbenzene	10.88	105	2792193	40.53874	ppb	99
85)	p-Isopropyltoluene	11.04	119	2372617	41.42572	ppb	99
86)	Benzyl Chloride	11.19	91	816368	43.42139	ppb	100
87)	1,3-DCB	10.96	146	1356952	39.98267	ppb	99
88)	1,4-DCB	11.05	146	1363231	38.80602	ppb	98
89)	n-Butylbenzene	11.44	91	2097179	41.54555	ppb	97
90)	1,2-DCB	11.41	146	1295204	39.09683	ppb	100
91)	Hexachloroethane	11.66	117	487492	41.76380	ppb	99
92)	1,2-Dibromo-3-chloropropan	12.17	157	122683	39.64772	ppb	94
93)	1,2,4-Trichlorobenzene	12.99	180	917886	40.91612	ppb	98
94)	Hexachlorobutadiene	13.19	225	343572	39.40508	ppb	95
95)	Naphthalene	13.22	128	1239040	43.63967	ppb	99
96)	1,2,3-Trichlorobenzene	13.46	180	596992	43.53726	ppb	98

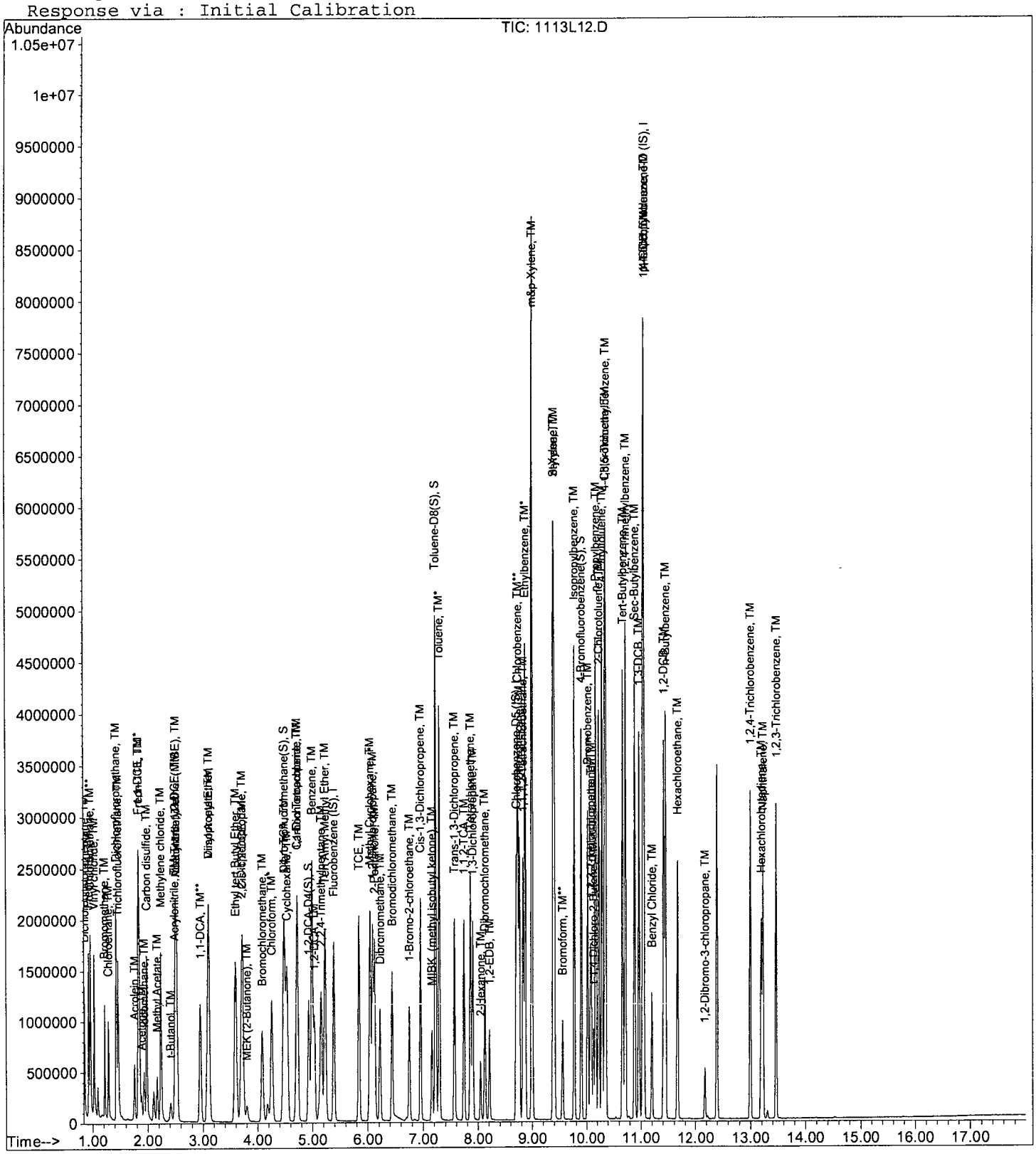
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1113L12.D Vial: 12
Acq On : 13 Nov 16 16:53 Operator: PM, DG, SV, CMM
Sample : 40ug/L VOC STD 11/13/16Q Inst : Loki
Misc : 10uL-50ppb Multiplr: 1.00

Quant Time: Nov 14 8:44 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



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Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L13.D Vial: 13
Acq On : 13 Nov 16 17:21 Operator: PM,DG,SV,CMM
Sample : 100ug/L VOC STD 11/13/16R Inst : Loki
Misc : 20uL-100ppb Multiplr: 1.00

Quant Time: Nov 14 8:44 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	813101	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	804096	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	453440	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	1606098	93.60482 ppb		0.00
Spiked Amount 25.000			Recovery	= 374.420%		
37) 1,2-DCA-D4(S)	4.93	65	1736238	92.81818 ppb		0.00
Spiked Amount 25.000			Recovery	= 371.272%		
57) Toluene-D8(S)	7.22	98	5659435	92.17076 ppb		0.00
Spiked Amount 25.000			Recovery	= 368.684%		
65) 4-Bromofluorobenzene(S)	9.89	95	2113780	95.38013 ppb		0.00
Spiked Amount 25.000			Recovery	= 381.520%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.93	85	1015570	58.96319 ppb		99
3) Freon 114	0.93	85	1255896	98.67693 ppb		97
4) Chloromethane	0.96	50	2434518	101.88670 ppb		100
5) Vinyl chloride	1.03	62	2077651	96.49628 ppb		99
6) Bromomethane	1.21	96	908871	92.10477 ppb		96
7) Chloroethane	1.27	64	460873	38.92790 ppb		100
8) Dichlorofluoromethane	1.42	67	3758654	101.10462 ppb		98
9) Trichlorofluoromethane	1.45	101	2259955	101.51016 ppb		98
10) Acrolein	1.76	56	275661	201.16815 ppb	#	100
11) Acetone	1.89	43	532432	102.65670 ppb		97
12) Freon-113	1.84	101	1237616	96.84317 ppb		95
13) 1,1-DCE	1.82	96	922240	92.47759 ppb		98
14) t-Butanol	2.44	59	112736	184.63545 ppb		99
15) Acetonitrile	2.52	41	915544	553.57147 ppb	#	37
16) Methyl Acetate	2.17	43	1146392	99.95008 ppb		100
17) Iodomethane	1.93	142	754304	113.71848 ppb		97
18) Acrylonitrile	2.48	52	393878	92.50083 ppb		96
19) Methylene chloride	2.24	84	1715775	94.38876 ppb		100
20) Carbon disulfide	1.97	76	4482658	100.89259 ppb		100
21) Methyl t-butyl ether (MtBE	2.52	73	4330674	99.16562 ppb		99
22) Trans-1,2-DCE	2.50	96	1539303	96.58487 ppb		98
23) Diisopropyl Ether	3.11	45	5621684	104.11525 ppb		99
24) 1,1-DCA	2.95	63	2992955	97.86955 ppb		99
25) Vinyl Acetate	3.10	43	1182248	89.14997 ppb	#	76
26) Ethyl tert Butyl Ether	3.60	59	4940568	101.90955 ppb		99
27) MEK (2-Butanone)	3.80	43	627504	96.08094 ppb		100
28) Cis-1,2-DCE	3.72	96	1780389	94.18201 ppb		89
29) 2,2-Dichloropropane	3.70	77	752965	96.97494 ppb		98
30) Chloroform	4.25	83	2962591	98.20512 ppb		99
31) Bromochloromethane	4.08	128	817483	92.51662 ppb		98
33) 1,1,1-TCA	4.47	97	2349082	97.67513 ppb		97
34) Cyclohexane	4.53	41	1254290	99.09039 ppb		96
35) 1,1-Dichloropropene	4.72	75	2056081	98.60379 ppb		99
36) 2,2,4-Trimethylpentane	5.15	57	3747499	98.67517 ppb		95
38) Carbon Tetrachloride	4.70	119	1860031	98.27926 ppb		99
39) Tert Amyl Methyl Ether	5.23	73	4448301	101.10031 ppb		100
40) 1,2-DCA	5.03	62	2302189	98.03217 ppb		98
41) Benzene	4.99	78	6345637	99.00442 ppb		100
42) TCE	5.84	95	880768	99.77754 ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L13.D Vial: 13
Acq On : 13 Nov 16 17:21 Operator: PM,DG,SV,CMM
Sample : 100ug/L VOC STD 11/13/16R Inst : Loki
Misc : 20uL-100ppb Multiplr: 1.00

Quant Time: Nov 14 8:44 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
43)	2-Pentanone	6.13	43	2031310	210.92087	ppb	98
44)	1,2-Dichloropropane	6.09	63	1823861	100.29405	ppb	98
45)	Bromodichloromethane	6.44	83	2321828	102.27006	ppb	99
46)	Methyl Cyclohexane	6.04	83	2132906	100.85327	ppb	99
47)	Dibromomethane	6.22	93	981695	98.95245	ppb	98
49)	MIBK (methyl isobutyl ket	7.16	43	1464811	100.69141	ppb	99
50)	1-Bromo-2-chloroethane	6.75	63	1343319	103.99198	ppb	99
51)	Cis-1,3-Dichloropropene	6.95	75	2844874	104.19833	ppb	97
52)	Toluene	7.29	91	6855059	100.25045	ppb	100
53)	Trans-1,3-Dichloropropene	7.56	75	2454606	105.17190	ppb	97
54)	1,1,2-TCA	7.74	83	1206304	98.14168	ppb	98
55)	2-Hexanone	8.04	43	621148	101.36110	ppb	96
58)	1,2-EDB	8.21	107	1359622	99.44854	ppb	100
59)	Tetrachloroethene	7.86	166	1573260	93.79495	ppb	98
60)	1-Chlorohexane	8.76	91	1951401	100.59620	ppb	95
61)	1,1,1,2-Tetrachloroethane	8.83	131	1670219	98.42175	ppb	100
62)	m&p-Xylene	8.99	106	5872256	200.76127	ppb	98
63)	o-Xylene	9.38	106	2956152	102.86711	ppb	94
64)	Styrene	9.40	104	3430912	108.08642	ppb	97
66)	1,3-Dichloropropane	7.90	76	2432626	97.28960	ppb	100
67)	Dibromochloromethane	8.12	129	1688546	102.04761	ppb	99
68)	Chlorobenzene	8.73	112	4560965	98.84571	ppb	98
69)	Ethylbenzene	8.87	91	7534661	99.60002	ppb	99
70)	Bromoform	9.55	173	1027737	102.53187	ppb	100
72)	Isopropylbenzene	9.76	105	7175261	96.94956	ppb	98
73)	1,1,2,2-Tetrachloroethane	10.07	83	1759176	97.62862	ppb	98
74)	1,2,3-Trichloropropane	10.09	110	324544	94.00703	ppb	95
75)	t-1,4-Dichloro-2-Butene	10.13	53	522694	107.56805	ppb	97
76)	Bromobenzene	10.02	156	1861631	91.91148	ppb	98
77)	n-Propylbenzene	10.17	91	8421775	99.53236	ppb	100
78)	4-Ethyltoluene	10.29	105	7279780	100.39403	ppb	98
79)	2-Chlorotoluene	10.23	91	5312135	97.43912	ppb	94
80)	1,3,5-Trimethylbenzene	10.35	105	6161616	100.27243	ppb	100
81)	4-Chlorotoluene	10.34	91	6289858	99.89522	ppb	97
82)	Tert-Butylbenzene	10.67	119	5044056	95.68522	ppb	98
83)	1,2,4-Trimethylbenzene	10.71	105	6440263	103.36442	ppb	97
84)	Sec-Butylbenzene	10.88	105	7432063	99.99891	ppb	99
85)	p-Isopropyltoluene	11.04	119	6344403	102.65833	ppb	98
86)	Benzyl Chloride	11.19	91	2544631	125.43062	ppb	99
87)	1,3-DCB	10.96	146	3587755	97.96955	ppb	98
88)	1,4-DCB	11.05	146	3692358	97.40798	ppb	98
89)	n-Butylbenzene	11.44	91	5834683	107.11919	ppb	97
90)	1,2-DCB	11.41	146	3574885	100.00608	ppb	99
91)	Hexachloroethane	11.66	117	1351457	107.29903	ppb	95
92)	1,2-Dibromo-3-chloropropan	12.17	157	325395	97.45536	ppb	93
93)	1,2,4-Trichlorobenzene	12.99	180	2460396	101.64166	ppb	99
94)	Hexachlorobutadiene	13.19	225	914103	97.16069	ppb	94
95)	Naphthalene	13.22	128	3096576	101.07387	ppb	99
96)	1,2,3-Trichlorobenzene	13.46	180	1481728	100.14334	ppb	100

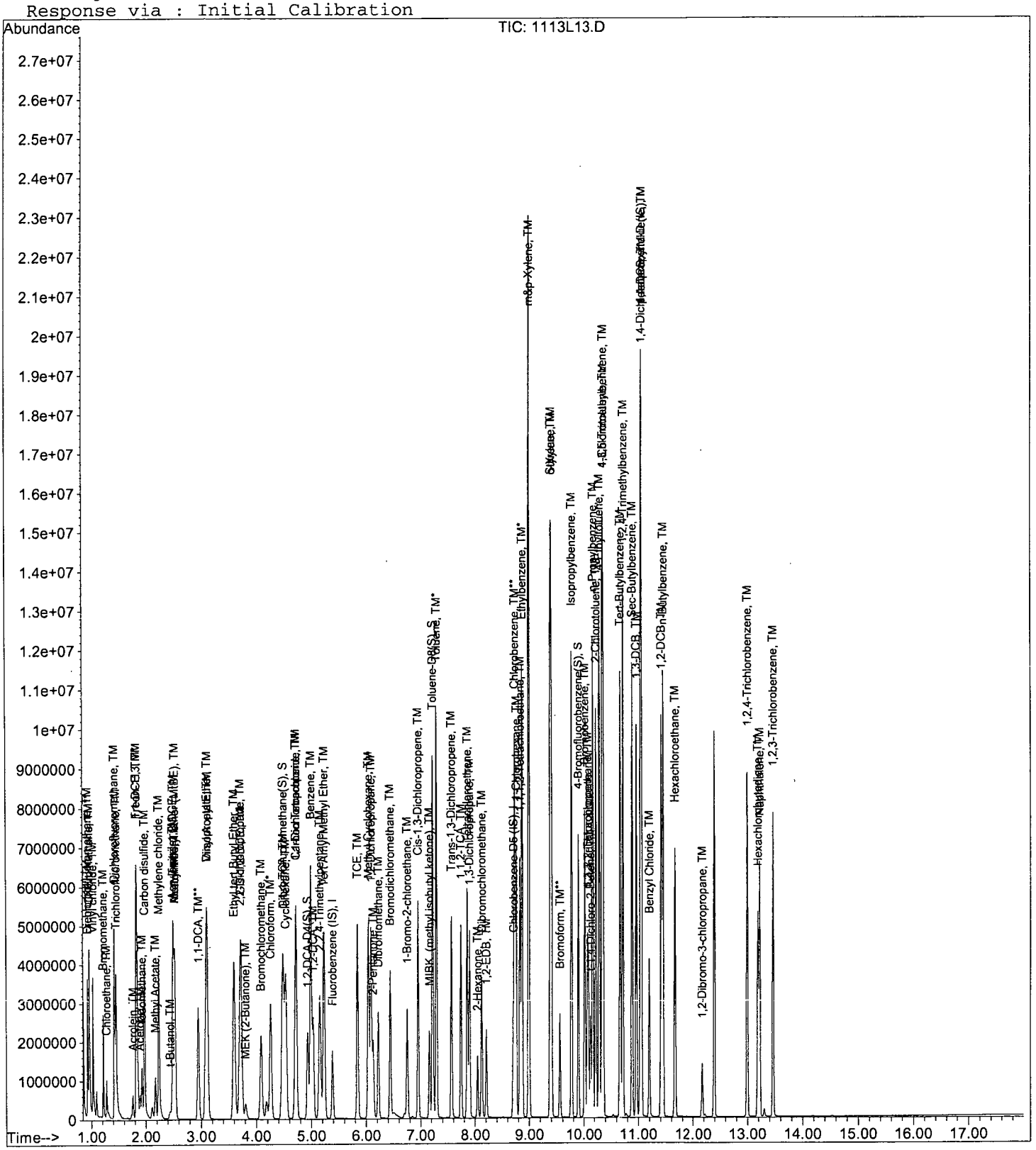
(#) = qualifier out of range (m) = manual integration

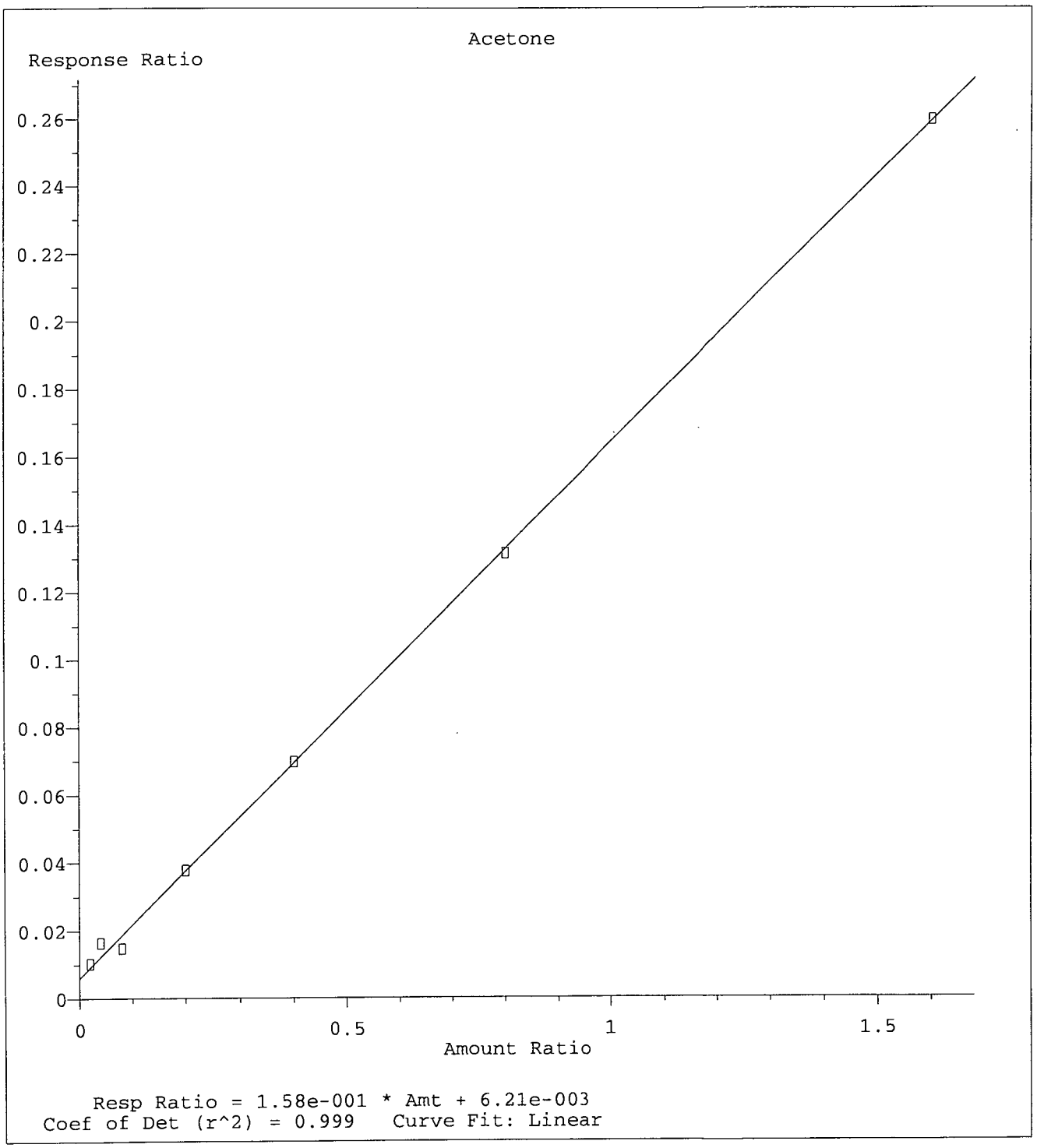
Quantitation Report

Data File : M:\LOKI\DATA\161113\1113L13.D Vial: 13
Acq On : 13-Nov-16 17:21 Operator: PM,DG,SV,CMM
Sample : 100ug/L VOC STD 11/13/16R Inst : Loki
Misc : 20uL-100ppb Multiplr: 1.00

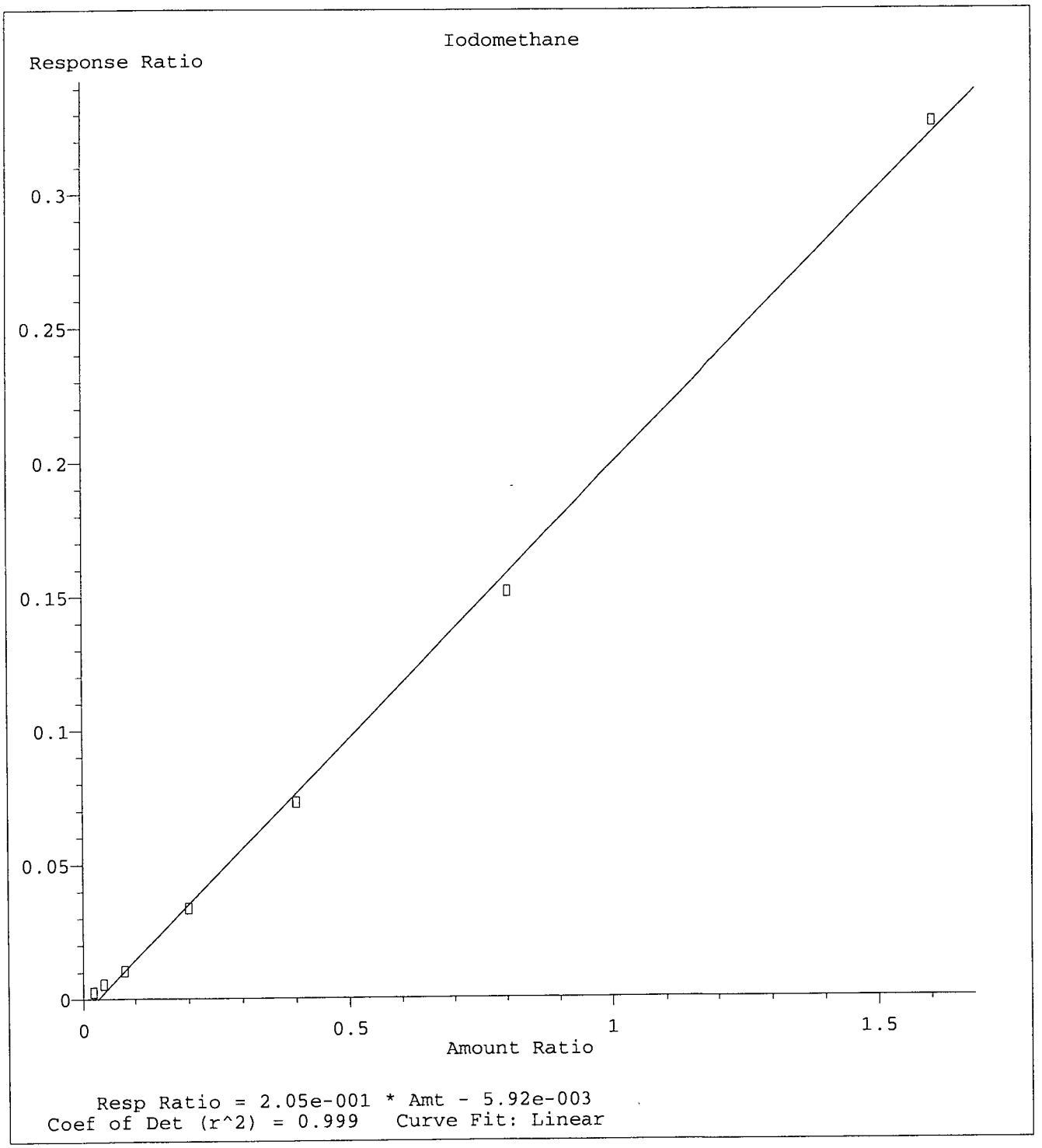
Quant Time: Nov 14 8:44 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration

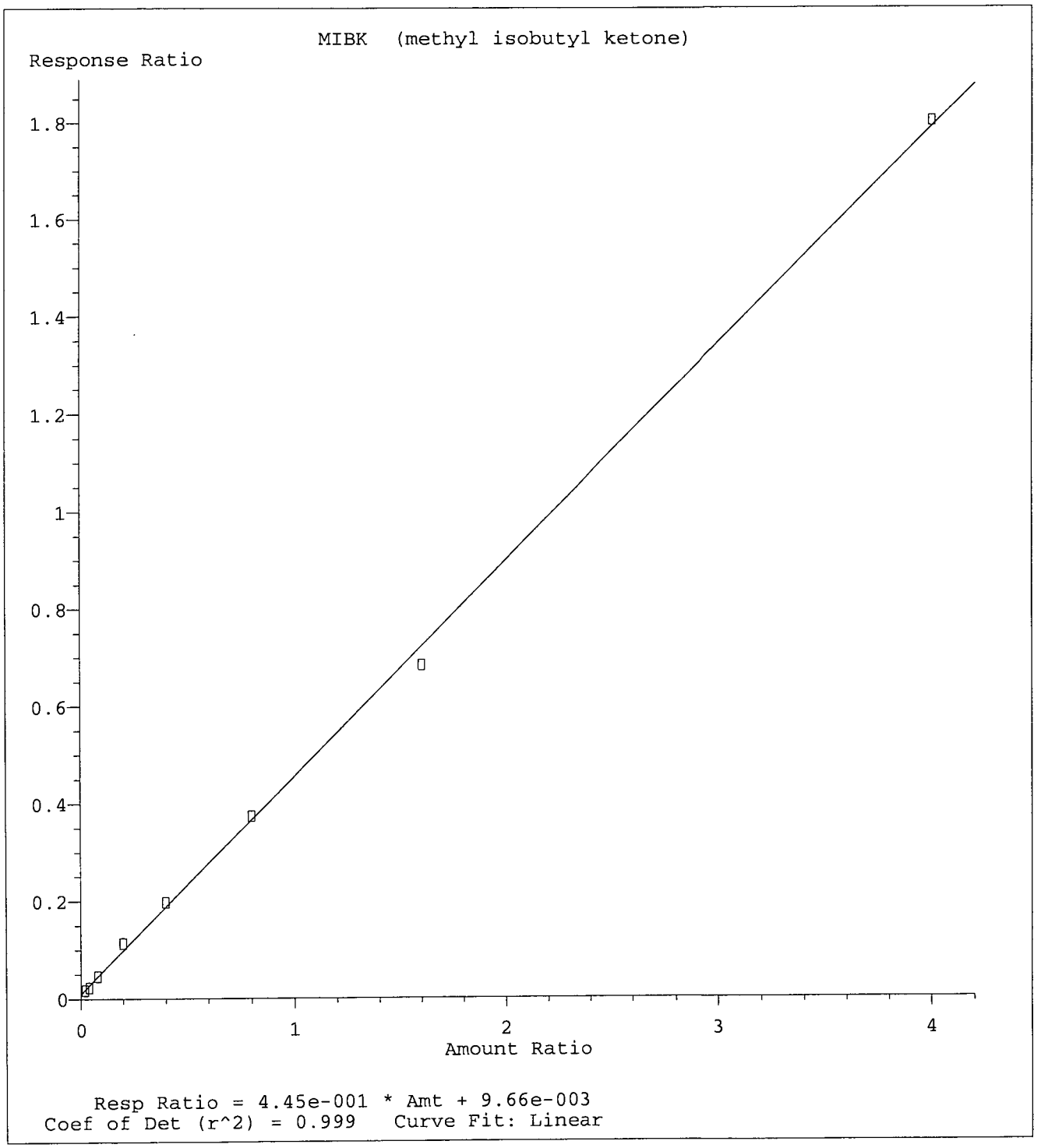




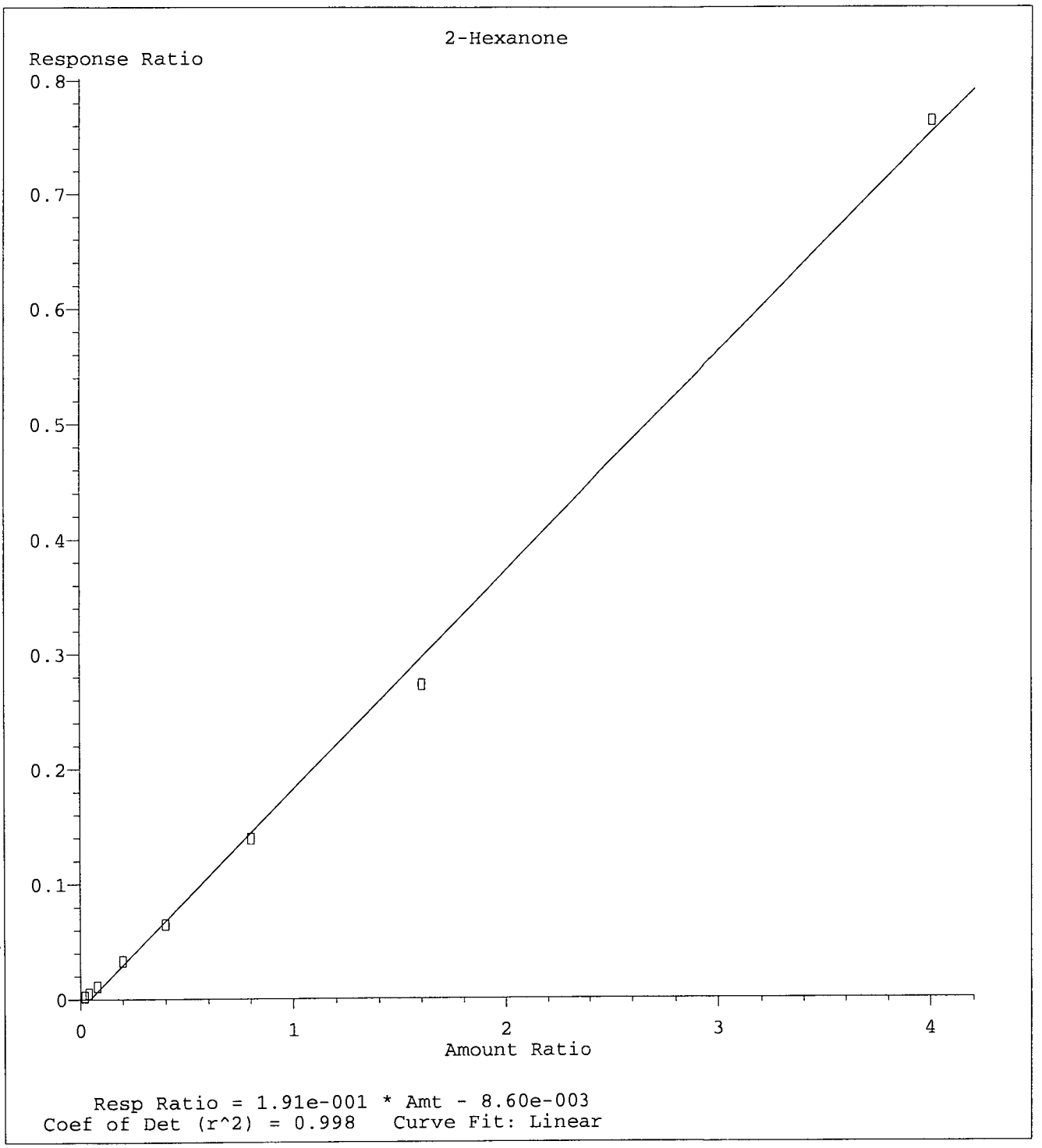
Method Name: M:\LOKI\DATA\161113\LALLW.M
Calibration Table Last Updated: Mon Nov 14 08:45:03 2016



Method Name: M:\LOKI\DATA\161113\LALLW.M
Calibration Table Last Updated: Mon Nov 14 08:45:03 2016



Method Name: M:\LOKI\DATA\161113\LALLW.M
Calibration Table Last Updated: Mon Nov 14 08:45:03 2016



Method Name: M:\LOKI\DATA\161113\LALLW.M
Calibration Table Last Updated: Mon Nov 14 08:45:03 2016

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 11/13/16
Matrix: Instrument: Loki
Initial Cal. Date: 11/13/16
Data File: 1113L17.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	Dichlorodifluoromethane	0.5296	0.4968	6.2	TM	
2	TM	Freon 114	0.3913	0.3998	2.2	TM	
3	TM**	Chloromethane	0.7347	0.6634	9.7	TM**	
4	TM*	Vinyl chloride	0.6620	0.6071	8.3	TM*	
5	TM	Bromomethane	0.3034	0.3100	2.2	TM	
6	TM	Chloroethane	0.3640	0.3518	3.4	TM	
7	TM	Dichlorofluoromethane	1.143	1.120	2.0	TM	
8	TM	Trichlorofluoromethane	0.6845	0.6645	2.9	TM	
9	TM	Acrolein	0.0421	0.0339	19	TM	
10	TML	Acetone	0.2561	0.1597	38	TML	8.7
11	TM	Freon-113	0.3929	0.4050	3.1	TM	
12	TM*	1,1-DCE	0.3066	0.3097	0.99	TM*	
13	TM	t-Butanol	0.0188	0.0157	16	TM	
14	TM	Acetonitrile	0.0509	0.0421	17	TM	
15	TM	Methyl Acetate	0.3527	0.3350	5.0	TM	
16	TML	Iodomethane	0.1624	0.1371	16	TML	26 nt
17	TM	Acrylonitrile	0.1309	0.1092	17	TM	
18	TM	Methylene chloride	0.5589	0.5355	4.2	TM	
19	TM	Carbon disulfide	1.366	1.175	14	TM	
20	TM	Methyl t-butyl ether (MtBE)	1.343	1.330	0.91	TM	
21	TM	Trans-1,2-DCE	0.4900	0.4900	0.00	TM	
22	TM	Diisopropyl Ether	1.660	1.626	2.0	TM	
23	TM**	1,1-DCA	0.9403	0.8925	5.1	TM**	
24	TM	Vinyl Acetate	0.4077	0.3853	5.5	TM	
25	TM	Ethyl tert Butyl Ether	1.491	1.529	2.6	TM	
26	TM	MEK (2-Butanone)	0.1913	0.1585	17	TM	
27	TM	Cis-1,2-DCE	0.5812	0.5593	3.8	TM	
28	TM	2,2-Dichloropropane	0.2387	0.2220	7.0	TM	
29	TM*	Chloroform	0.9275	0.8768	5.5	TM*	
30	TM	Bromochloromethane	0.2717	0.2661	2.1	TM	
31	TM	1,1,1-TCA	0.7395	0.7151	3.3	TM	
32	TM	Cyclohexane	0.3892	0.3883	0.22	TM	
33	TM	1,1-Dichloropropene	0.6411	0.6282	2.0	TM	
34	TM	2,2,4-Trimethylpentane	1.168	1.147	1.7	TM	
35	TM	Carbon Tetrachloride	0.5819	0.5644	3.0	TM	
36	TM	Tert Amyl Methyl Ether	1.353	1.314	2.8	TM	
37	TM	1,2-DCA	0.7221	0.6924	4.1	TM	
38	TM	Benzene	1.971	1.965	0.28	TM	
39	TM	TCE	0.2714	0.2575	5.1	TM	
40	TM	2-Pentanone	0.2961	0.2532	14	TM	
		Average			6.9		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 11/13/16
Instrument: Loki
Cal. Date: 11/13/16
Data File: 1113L17.D

		Compound	MEAN	CCRF	%D		%Drift	
41	TM*	1,2-Dichloropropane	0.5591	0.5455	2.4	TM*		
42	TM	Bromodichloromethane	0.6980	0.6751	3.3	TM		
43	TM	Methyl Cyclohexane	0.6502	0.6688	2.9	TM		
44	TM	Dibromomethane	0.3050	0.3055	0.15	TM		
45	TM	2-Chloroethyl vinyl ether	0.0000	0.0056	0.00	TM		
46	TML	MIBK (methyl isobutyl ketone)	0.5519	0.4199	24	TML	11	
47	TM	1-Bromo-2-chloroethane	0.3972	0.3733	6.0	TM		
48	TM	Cis-1,3-Dichloropropene	0.8395	0.8252	1.7	TM		
49	TM*	Toluene	2.102	2.059	2.0	TM*		
50	TM	Trans-1,3-Dichloropropene	0.7176	0.6717	6.4	TM		
51	TM	1,1,2-TCA	0.3779	0.3468	8.2	TM		
52	TML	2-Hexanone	0.1543	0.1310	15	TML	20	
53	TM	1,2-EDB	0.4251	0.4322	1.7	TM		
54	TM	Tetrachloroethene	0.5215	0.5207	0.16	TM		
55	TM	1-Chlorohexane	0.6031	0.5956	1.2	TM		
56	TM	1,1,1,2-Tetrachloroethane	0.5276	0.5047	4.3	TM		
57	TM	m&p-Xylene	0.9094	0.9025	0.76	TM		
58	TM	o-Xylene	0.8935	0.8958	0.26	TM		
59	TM	Styrene	0.9869	0.9926	0.58	TM		
60	TM	1,3-Dichloropropane	0.7774	0.7631	1.8	TM		
61	TM	Dibromochloromethane	0.5144	0.4852	5.7	TM		
62	TM**	Chlorobenzene	1.435	1.430	0.34	TM**		
63	TM*	Ethylbenzene	2.352	2.341	0.49	TM*		
64	TM**	Bromoform	0.3116	0.2872	7.8	TM**		
65	TM	Isopropylbenzene	4.080	4.011	1.7	TM		
66	TM**	1,1,2,2-Tetrachloroethane	0.9935	0.9599	3.4	TM**		
67	TM	1,2,3-Trichloropropane	0.1903	0.1774	6.8	TM		
68	TM	t-1,4-Dichloro-2-Butene	0.2679	0.2198	18	TM		
69	TM	Bromobenzene	1.117	1.098	1.7	TM		
70	TM	n-Propylbenzene	4.665	4.787	2.6	TM		
71	TM	4-Ethyltoluene	3.998	4.042	1.1	TM		
72	TM	2-Chlorotoluene	3.006	2.896	3.6	TM		
73	TM	1,3,5-Trimethylbenzene	3.388	3.379	0.27	TM		
74	TM	4-Chlorotoluene	3.471	3.399	2.1	TM		
75	TM	Tert-Butylbenzene	2.906	2.821	2.9	TM		
76	TM	1,2,4-Trimethylbenzene	3.435	3.465	0.87	TM		
77	TM	Sec-Butylbenzene	4.098	3.980	2.9	TM		
78	TM	p-Isopropyltoluene	3.407	3.354	1.6	TM		
79	TM	Benzyl Chloride	1.119	0.8334	25	TM		nt
80	TM	1,3-DCB	2.019	2.034	0.75	TM		
		Average			4.3			

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 11/13/16
Instrument: Loki
Cal. Date: 11/13/16
Data File: 1113L17.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	1,4-DCB	2.090	2.035	2.6	TM	
82	TM	n-Butylbenzene	3.003	2.873	4.3	TM	
83	TM	1,2-DCB	1.971	1.943	1.4	TM	
84	TM	Hexachloroethane	0.6944	0.6354	8.5	TM	
85	TM	1,2-Dibromo-3-chloropropane	0.1841	0.1791	2.7	TM	
86	TM	1,2,4-Trichlorobenzene	1.335	1.334	0.04	TM	
87	TM	Hexachlorobutadiene	0.5187	0.4979	4.0	TM	
88	TM	Naphthalene	1.689	1.732	2.5	TM	
89	TM	1,2,3-Trichlorobenzene	0.8158	0.7879	3.4	TM	
90							
91							
92							
93							
94							
95							
96							
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			3.3		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L17.D Vial: 17
Acq On : 13 Nov 16 19:14 Operator: PM,DG,SV,CMM
Sample : (SS) 10ug/L VOC STD 11/13/16 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 14 8:45 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	818661	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	787584	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	425024	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	426943	24.71363 ppb		0.00
Spiked Amount 25.000			Recovery =	98.856%		
37) 1,2-DCA-D4(S)	4.93	65	460938	24.47410 ppb		0.00
Spiked Amount 25.000			Recovery =	97.896%		
57) Toluene-D8(S)	7.22	98	1449269	24.09795 ppb		0.00
Spiked Amount 25.000			Recovery =	96.392%		
65) 4-Bromofluorobenzene(S)	9.89	95	535467	24.66845 ppb		0.00
Spiked Amount 25.000			Recovery =	98.672%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.86	85	162693	9.38168 ppb		99
3) Freon 114	0.93	85	130930	10.21743 ppb		98
4) Chloromethane	0.96	50	217234	9.02969 ppb		98
5) Vinyl chloride	1.03	62	198802	9.17063 ppb		96
6) Bromomethane	1.22	96	101527	10.21885 ppb		99
7) Chloroethane	1.29	64	115205	9.66477 ppb		95
8) Dichlorofluoromethane	1.43	67	366664	9.79597 ppb		97
9) Trichlorofluoromethane	1.46	101	217616	9.70825 ppb		96
10) Acrolein	1.76	56	138931	100.69860 ppb		92
11) Acetone	1.88	43	52304	9.12845 ppb		98
12) Freon-113	1.84	101	132637	10.30833 ppb		97
13) 1,1-DCE	1.83	96	101401	10.09893 ppb		96
14) t-Butanol	2.40	59	64346	104.66812 ppb		99
15) Acetonitrile	2.10	41	172172	103.39449 ppb		99
16) Methyl Acetate	2.17	43	109703	9.49968 ppb		99
17) Iodomethane	1.93	142	44904	7.40226 ppb		97
18) Acrylonitrile	2.48	52	35761	8.34130 ppb		94
19) Methylene chloride	2.24	84	175342	9.58046 ppb		99
20) Carbon disulfide	1.98	76	384701	8.59978 ppb		98
21) Methyl t-butyl ether (MtBE	2.52	73	435686	9.90877 ppb		99
22) Trans-1,2-DCE	2.50	96	160458	9.99969 ppb		98
23) Diisopropyl Ether	3.10	45	532605	9.79701 ppb		99
24) 1,1-DCA	2.95	63	292265	9.49215 ppb		99
25) Vinyl Acetate	3.07	43	126182	9.45040 ppb		96
26) Ethyl tert Butyl Ether	3.59	59	500582	10.25542 ppb		99
27) MEK (2-Butanone)	3.80	43	51891	8.28162 ppb		89
28) Cis-1,2-DCE	3.73	96	183143	9.62241 ppb		94
29) 2,2-Dichloropropane	3.70	77	72710	9.30078 ppb		100
30) Chloroform	4.25	83	287133	9.45335 ppb		99
31) Bromochloromethane	4.08	128	87126	9.79330 ppb		95
33) 1,1,1-TCA	4.47	97	234158	9.67019 ppb		98
34) Cyclohexane	4.53	41	127160	9.97756 ppb		96
35) 1,1-Dichloropropene	4.72	75	205701	9.79784 ppb		98
36) 2,2,4-Trimethylpentane	5.16	57	375725	9.82600 ppb	#	90
38) Carbon Tetrachloride	4.71	119	184834	9.69983 ppb		97
39) Tert Amyl Methyl Ether	5.23	73	430413	9.71592 ppb		99
40) 1,2-DCA	5.03	62	226730	9.58908 ppb		100
41) Benzene	4.99	78	643506	9.97177 ppb		99
42) TCE	5.84	95	84336	9.48909 ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L17.D Vial: 17
Acq On : 13 Nov 16 19:14 Operator: PM,DG,SV,CMM
Sample : (SS) 10ug/L VOC STD 11/13/16 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 14 8:45 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

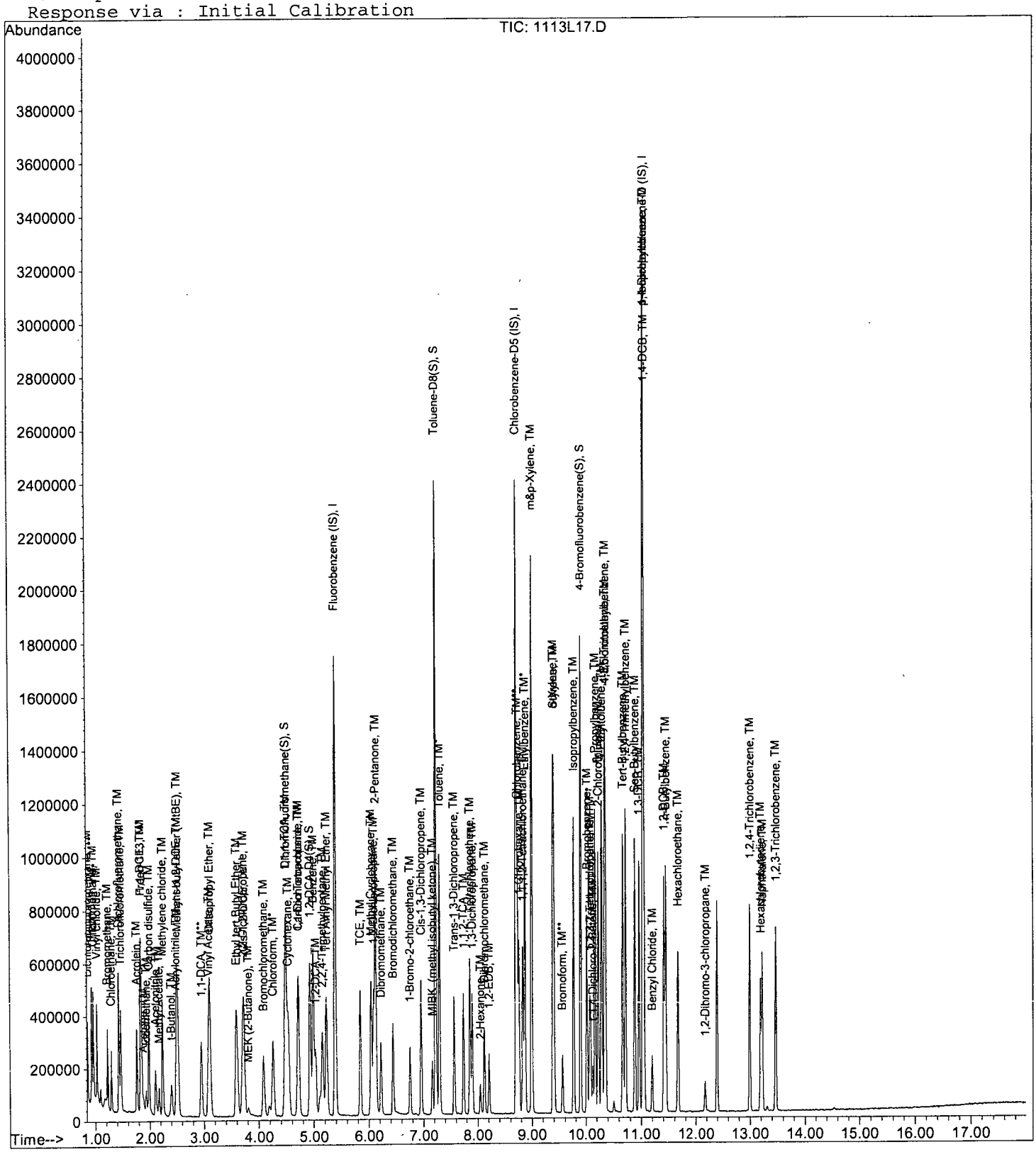
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
43) 2-Pentanone	6.12	43	1036379	106.88145 ppb	99
44) 1,2-Dichloropropane	6.09	63	178638	9.75658 ppb	99
45) Bromodichloromethane	6.44	83	221078	9.67174 ppb	98
46) Methyl Cyclohexane	6.04	83	219002	10.28506 ppb	96
47) Dibromomethane	6.22	93	100041	10.01540 ppb	98
49) MIBK (methyl isobutyl ket	7.15	43	137487	8.89432 ppb	97
50) 1-Bromo-2-chloroethane	6.75	63	122257	9.40015 ppb	98
51) Cis-1,3-Dichloropropene	6.95	75	270233	9.83052 ppb	99
52) Toluene	7.29	91	674411	9.79581 ppb	100
53) Trans-1,3-Dichloropropene	7.56	75	219968	9.36090 ppb	97
54) 1,1,2-TCA	7.74	83	113549	9.17530 ppb	95
55) 2-Hexanone	8.05	43	42887	8.00246 ppb	96
58) 1,2-EDB	8.21	107	136171	10.16894 ppb	100
59) Tetrachloroethene	7.86	166	164032	9.98432 ppb	99
60) 1-Chlorohexane	8.76	91	187629	9.87520 ppb	99
61) 1,1,1,2-Tetrachloroethane	8.83	131	159006	9.56626 ppb	100
62) m&p-Xylene	8.99	106	568650	19.84865 ppb	98
63) o-Xylene	9.38	106	282197	10.02566 ppb	99
64) Styrene	9.40	104	312704	10.05787 ppb	99
66) 1,3-Dichloropropane	7.90	76	240396	9.81588 ppb	99
67) Dibromochloromethane	8.12	129	152853	9.43137 ppb	98
68) Chlorobenzene	8.73	112	450407	9.96592 ppb	97
69) Ethylbenzene	8.87	91	737349	9.95130 ppb	100
70) Bromoform	9.55	173	90481	9.21606 ppb	98
72) Isopropylbenzene	9.76	105	681987	9.83084 ppb	99
73) 1,1,2,2-Tetrachloroethane	10.07	83	163200	9.66261 ppb	95
74) 1,2,3-Trichloropropane	10.09	110	30160	9.32018 ppb	89
75) t-1,4-Dichloro-2-Butene	10.13	53	37376	8.20607 ppb	100
76) Bromobenzene	10.02	156	186679	9.83282 ppb	92
77) n-Propylbenzene	10.17	91	813781	10.26064 ppb	99
78) 4-Ethyltoluene	10.29	105	687117	10.10943 ppb	99
79) 2-Chlorotoluene	10.23	91	492383	9.63549 ppb	96
80) 1,3,5-Trimethylbenzene	10.35	105	574427	9.97305 ppb	99
81) 4-Chlorotoluene	10.34	91	577788	9.78991 ppb	100
82) Tert-Butylbenzene	10.67	119	479671	9.70766 ppb	99
83) 1,2,4-Trimethylbenzene	10.71	105	589117	10.08731 ppb	97
84) Sec-Butylbenzene	10.88	105	676611	9.71251 ppb	100
85) p-Isopropyltoluene	11.04	119	570202	9.84325 ppb	99
86) Benzyl Chloride	11.20	91	141693	7.45133 ppb	99
87) 1,3-DCB	10.96	146	345849	10.07537 ppb	99
88) 1,4-DCB	11.05	146	346024	9.73875 ppb	96
89) n-Butylbenzene	11.44	91	488497	9.56794 ppb	97
90) 1,2-DCB	11.41	146	330258	9.85653 ppb	99
91) Hexachloroethane	11.66	117	108017	9.14939 ppb	99
92) 1,2-Dibromo-3-chloropropan	12.17	157	30443	9.72722 ppb	88
93) 1,2,4-Trichlorobenzene	12.99	180	226813	9.99634 ppb	99
94) Hexachlorobutadiene	13.19	225	84640	9.59793 ppb	91
95) Naphthalene	13.22	128	294400	10.25183 ppb	98
96) 1,2,3-Trichlorobenzene	13.46	180	133952	9.65849 ppb	97

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161113\1113L17.D Vial: 17
Acq On : 13-Nov-16 19:14 Operator: PM,DG,SV,CMM
Sample : (SS) 10ug/L VOC STD 11/13/16 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 14 8:45 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 11/17/16
Matrix: Instrument: Loki
Initial Cal. Date: 11/13/16
Data File: 1116L42.D

		Compound	MEAN	CCRF	%D		%Drift	
1	I	Fluorobenzene (IS)	ISTD			I		
2	TM	Dichlorodifluoromethane	0.5296	0.4289	19	TM		
3	TM	Freon 114	0.3913	0.3120	20	TM		
4	TM**	Chloromethane	0.7347	0.8362	14	TM**		
5	TM*	Vinyl chloride	0.6620	0.6637	0.25	TM*		
6	TM	Bromomethane	0.3034	0.3269	7.7	TM		
7	TM	Chloroethane	0.3640	0.3790	4.1	TM		
8	TM	Dichlorofluoromethane	1.143	1.153	0.85	TM		
9	TM	Trichlorofluoromethane	0.6845	0.5829	15	TM		
10	TM	Acrolein	0.0421	0.0376	11	TM		
11	TML	Acetone	0.2561	0.1632	36	TML	6.5	
12	TM	Freon-113	0.3929	0.3123	21	TM		*NT
13	TM*	1,1-DCE	0.3066	0.2833	7.6	TM*		
14	TM	t-Butanol	0.0188	0.0147	22	TM		*NT
15	TM	Acetonitrile	0.0509	0.0534	4.9	TM		
16	TM	Methyl Acetate	0.3527	0.3590	1.8	TM		
17	TML	Iodomethane	0.1624	0.2637	62	TML	36	*NT
18	TM	Acrylonitrile	0.1309	0.1277	2.5	TM		
19	TM	Methylene chloride	0.5589	0.5666	1.4	TM		
20	TM	Carbon disulfide	1.366	1.144	16	TM		
21	TM	Methyl t-butyl ether (MtBE)	1.343	1.260	6.1	TM		
22	TM	Trans-1,2-DCE	0.4900	0.4776	2.5	TM		
23	TM	Diisopropyl Ether	1.660	1.937	17	TM		
24	TM**	1,1-DCA	0.9403	1.017	8.1	TM**		
25	TM	Vinyl Acetate	0.4077	0.4257	4.4	TM		
26	TM	Ethyl tert Butyl Ether	1.491	1.472	1.2	TM		
27	TM	MEK (2-Butanone)	0.1913	0.1896	0.91	TM		
28	TM	Cis-1,2-DCE	0.5812	0.5734	1.3	TM		
29	TM	2,2-Dichloropropane	0.2387	0.1921	20	TM		
30	TM*	Chloroform	0.9275	0.9728	4.9	TM*		
31	TM	Bromochloromethane	0.2717	0.2479	8.8	TM		
32	S	Dibromofluoromethane(S)	0.5276	0.5086	3.6	S		
33	TM	1,1,1-TCA	0.7395	0.6809	7.9	TM		
34	TM	Cyclohexane	0.3892	0.3729	4.2	TM		
35	TM	1,1-Dichloropropene	0.6411	0.6194	3.4	TM		
36	TM	2,2,4-Trimethylpentane	1.168	0.9832	16	TM		
37	S	1,2-DCA-D4(S)	0.5751	0.5945	3.4	S		
38	TM	Carbon Tetrachloride	0.5819	0.4831	17	TM		
39	TM	Tert Amyl Methyl Ether	1.353	1.261	6.8	TM		
40	TM	1,2-DCA	0.7221	0.7368	2.0	TM		
		Average			10.4			

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 11/17/16
Instrument: Loki
Cal. Date: 11/13/16
Data File: 1116L42.D

		Compound	MEAN	CCRF	%D		%Drift	
41	TM	Benzene	1.971	2.088	6.0	TM		
42	TM	TCE	0.2714	0.2691	0.84	TM		
43	TM	2-Pentanone	0.2961	0.2966	0.18	TM		
44	TM*	1,2-Dichloropropane	0.5591	0.6135	9.7	TM*		
45	TM	Bromodichloromethane	0.6980	0.6892	1.3	TM		
46	TM	Methyl Cyclohexane	0.6502	0.5409	17	TM		
47	TM	Dibromomethane	0.3050	0.2930	4.0	TM		
48	TM	2-Chloroethyl vinyl ether	0.0000	0.0089	0.00	TM		
49	TML	MIBK (methyl isobutyl ketone)	0.5519	0.4781	13	TML	2.0	
50	TM	1-Bromo-2-chloroethane	0.3972	0.4109	3.5	TM		
51	TM	Cis-1,3-Dichloropropene	0.8395	0.7726	8.0	TM		
52	TM*	Toluene	2.102	2.136	1.6	TM*		
53	TM	Trans-1,3-Dichloropropene	0.7176	0.6292	12	TM		
54	TM	1,1,2-TCA	0.3779	0.3615	4.3	TM		
55	TML	2-Hexanone	0.1543	0.1408	8.7	TML	15	
56	I	Chlorobenzene-D5 (IS)	ISTD			I		
57	S	Toluene-D8(S)	1.909	1.965	2.9	S		
58	TM	1,2-EDB	0.4251	0.3904	8.2	TM		
59	TM	Tetrachloroethene	0.5215	0.4494	14	TM		
60	TM	1-Chlorohexane	0.6031	0.5372	11	TM		
61	TM	1,1,1,2-Tetrachloroethane	0.5276	0.4834	8.4	TM		
62	TM	m&p-Xylene	0.9094	0.9188	1.0	TM		
63	TM	o-Xylene	0.8935	0.9031	1.1	TM		
64	TM	Styrene	0.9869	1.004	1.7	TM		
65	S	4-Bromofluorobenzene(S)	0.6890	0.6799	1.3	S		
66	TM	1,3-Dichloropropane	0.7774	0.8036	3.4	TM		
67	TM	Dibromochloromethane	0.5144	0.4564	11	TM		
68	TM**	Chlorobenzene	1.435	1.446	0.80	TM**		
69	TM*	Ethylbenzene	2.352	2.456	4.4	TM*		
70	TM**	Bromoform	0.3116	0.2380	24	TM**		*NT
71	I	1,4-Dichlorobenzene-D (IS)	ISTD			I		
72	TM	Isopropylbenzene	4.080	4.207	3.1	TM		
73	TM**	1,1,2,2-Tetrachloroethane	0.9935	1.001	0.72	TM**		
74	TM	1,2,3-Trichloropropane	0.1903	0.1833	3.7	TM		
75	TM	t-1,4-Dichloro-2-Butene	0.2679	0.2565	4.3	TM		
76	TM	Bromobenzene	1.117	1.129	1.1	TM		
77	TM	n-Propylbenzene	4.665	5.177	11	TM		
78	TM	4-Ethyltoluene	3.998	4.311	7.8	TM		
79	TM	2-Chlorotoluene	3.006	3.248	8.1	TM		
80	TM	1,3,5-Trimethylbenzene	3.388	3.668	8.3	TM		
		Average			6.1			

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 11/17/16
Instrument: Loki
Cal. Date: 11/13/16
Data File: 1116L42.D

		Compound	MEAN	CCRF	%D		%Drift	
81	TM	4-Chlorotoluene	3.471	3.804	9.6	TM		
82	TM	Tert-Butylbenzene	2.906	2.936	1.0	TM		
83	TM	1,2,4-Trimethylbenzene	3.435	3.709	8.0	TM		
84	TM	Sec-Butylbenzene	4.098	4.149	1.2	TM		
85	TM	p-Isopropyltoluene	3.407	3.468	1.8	TM		
86	TM	Benzyl Chloride	1.119	0.6937	38	TM		*NT
87	TM	1,3-DCB	2.019	2.133	5.6	TM		
88	TM	1,4-DCB	2.090	2.083	0.33	TM		
89	TM	n-Butylbenzene	3.003	3.151	4.9	TM		
90	TM	1,2-DCB	1.971	1.989	0.91	TM		
91	TM	Hexachloroethane	0.6944	0.6509	6.3	TM		
92	TM	1,2-Dibromo-3-chloropropane	0.1841	0.1386	25	TM		*NT
93	TM	1,2,4-Trichlorobenzene	1.335	1.237	7.3	TM		
94	TM	Hexachlorobutadiene	0.5187	0.4238	18	TM		
95	TM	Naphthalene	1.689	1.571	7.0	TM		
96	TM	1,2,3-Trichlorobenzene	0.8158	0.7417	9.1	TM		
97								
98								
99								
100								
101								
102								
103								
104								
105								
106								
107								
108								
109								
110								
111								
112								
113								
114								
115								
116								
117								
118								
119								
120								
		Average			9.0			

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1116L42.D Vial: 32
Acq On : 17 Nov 16 3:36 Operator: PM,DG,SV,CMM
Sample : 161116B CCV/LCS 10ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 11:45 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	708480	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	658752	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	336192	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.49	111	360364	24.10	ppb		0.00
Spiked Amount 25.000			Recovery = 96.416%				
37) 1,2-DCA-D4(S)	4.93	65	421191	25.84	ppb		0.00
Spiked Amount 25.000			Recovery = 103.368%				
57) Toluene-D8(S)	7.22	98	1294588	25.74	ppb		0.00
Spiked Amount 25.000			Recovery = 102.944%				
65) 4-Bromofluorobenzene(S)	9.89	95	447862	24.67	ppb		0.00
Spiked Amount 25.000			Recovery = 98.672%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.86	85	121551	8.10	ppb		99
3) Freon 114	0.93	85	88431	7.97	ppb		100
4) Chloromethane	0.96	50	236980	11.38	ppb		99
5) Vinyl chloride	1.03	62	188080	10.03	ppb		97
6) Bromomethane	1.22	96	92627	10.77	ppb		98
7) Chloroethane	1.29	64	107404	10.41	ppb		99
8) Dichlorofluoromethane	1.43	67	326671	10.08	ppb		99
9) Trichlorofluoromethane	1.46	101	165180	8.51	ppb		99
10) Acrolein	1.76	56	133248	111.60	ppb		97
11) Acetone	1.88	43	46249	9.35	ppb		98
12) Freon-113	1.84	101	88490	7.95	ppb		94
13) 1,1-DCE	1.83	96	80280	9.24	ppb		100
14) t-Butanol	2.40	59	51944	97.63	ppb		98
15) Acetonitrile	2.10	41	189019	131.16	ppb		98
16) Methyl Acetate	2.17	43	101746	10.18	ppb		99
17) Iodomethane	1.93	142	74744	13.57	ppb		92
18) Acrylonitrile	2.47	52	36188	9.75	ppb		94
19) Methylene chloride	2.24	84	160578	10.14	ppb		98
20) Carbon disulfide	1.98	76	324159	8.37	ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	357155	9.39	ppb		95
22) Trans-1,2-DCE	2.50	96	135358	9.75	ppb		90
23) Diisopropyl Ether	3.10	45	548935	11.67	ppb	#	89
24) 1,1-DCA	2.95	63	288110	10.81	ppb		99
25) Vinyl Acetate	3.09	43	120650	10.44	ppb	#	79
26) Ethyl tert Butyl Ether	3.59	59	417213	9.88	ppb		100
27) MEK (2-Butanone)	3.80	43	53731	9.91	ppb	#	84
28) Cis-1,2-DCE	3.73	96	162497	9.87	ppb		87
29) 2,2-Dichloropropane	3.70	77	54440	8.05	ppb		95
30) Chloroform	4.25	83	275698	10.49	ppb		97
31) Bromochloromethane	4.08	128	70254	9.12	ppb		99
33) 1,1,1-TCA	4.47	97	192952	9.21	ppb		92
34) Cyclohexane	4.53	41	105683	9.58	ppb		91
35) 1,1-Dichloropropene	4.72	75	175521	9.66	ppb		99
36) 2,2,4-Trimethylpentane	5.15	57	278641	8.42	ppb	#	81
38) Carbon Tetrachloride	4.70	119	136909	8.30	ppb		97
39) Tert Amyl Methyl Ether	5.23	73	357378	9.32	ppb	#	93
40) 1,2-DCA	5.03	62	208793	10.20	ppb		95
41) Benzene	4.98	78	591749	10.60	ppb		99
42) TCE	5.84	95	76266	9.92	ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1116L42.D Vial: 32
Acq On : 17 Nov 16 3:36 Operator: PM, DG, SV, CMM
Sample : 161116B CCV/LCS 10ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 11:45 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

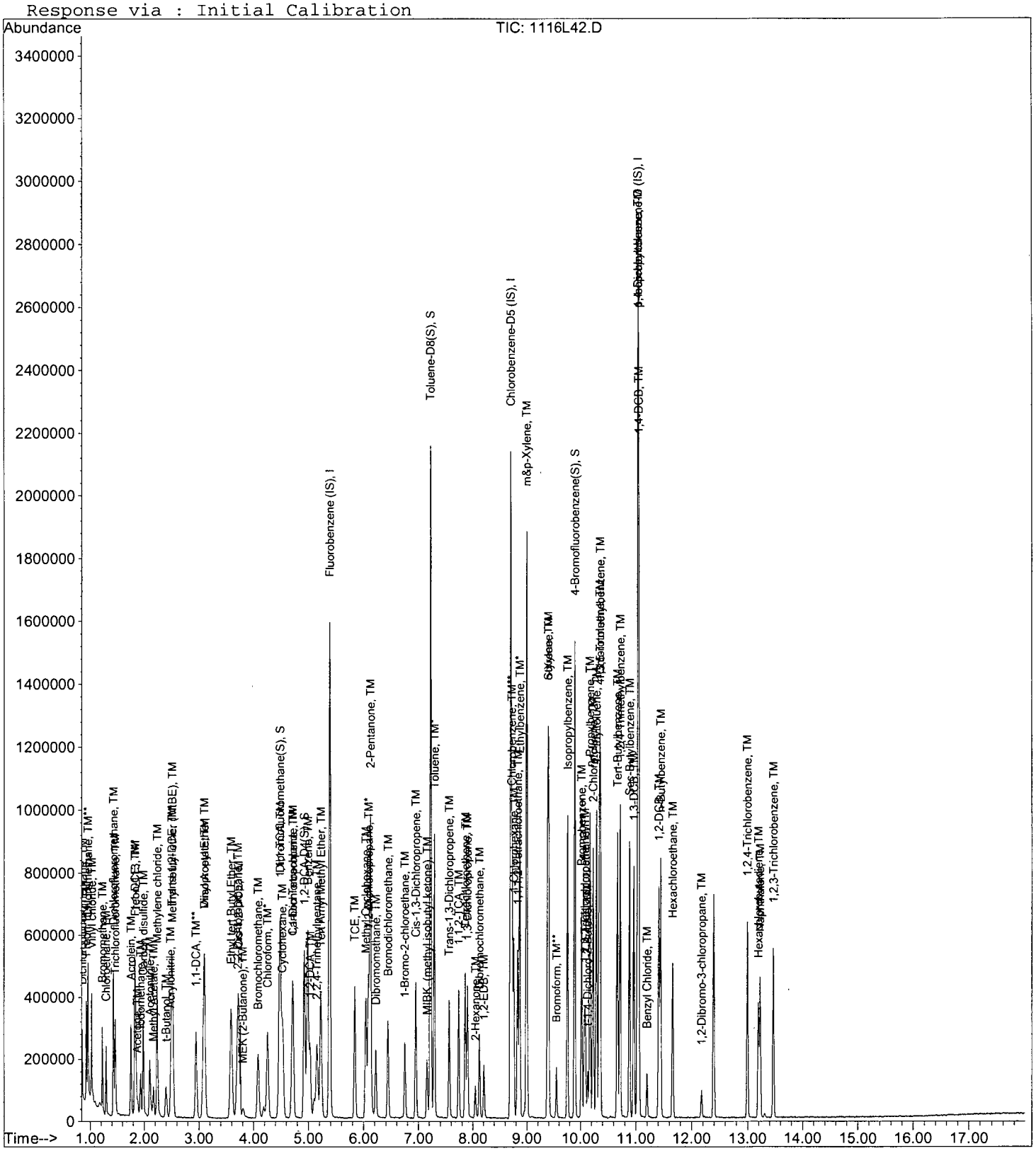
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	2-Pentanone	6.12	43	1050822	125.22	ppb		94
44)	1,2-Dichloropropane	6.09	63	173866	10.97	ppb	#	95
45)	Bromodichloromethane	6.44	83	195325	9.87	ppb		100
46)	Methyl Cyclohexane	6.04	83	153277	8.32	ppb		91
47)	Dibromomethane	6.22	93	83027	9.60	ppb		93
49)	MIBK (methyl isobutyl ket	7.16	43	135478	10.20	ppb		97
50)	1-Bromo-2-chloroethane	6.75	63	116440	10.35	ppb		97
51)	Cis-1,3-Dichloropropene	6.95	75	218955	9.20	ppb		93
52)	Toluene	7.29	91	605207	10.16	ppb		99
53)	Trans-1,3-Dichloropropene	7.56	75	178306	8.77	ppb		95
54)	1,1,2-TCA	7.74	83	102456	9.57	ppb		98
55)	2-Hexanone	8.05	43	39913	8.52	ppb		97
58)	1,2-EDB	8.21	107	102867	9.18	ppb		99
59)	Tetrachloroethene	7.86	166	118427	8.62	ppb		94
60)	1-Chlorohexane	8.76	91	141555	8.91	ppb		86
61)	1,1,1,2-Tetrachloroethane	8.83	131	127375	9.16	ppb		99
62)	m&p-Xylene	8.99	106	484190	20.21	ppb		98
63)	o-Xylene	9.38	106	237957	10.11	ppb		89
64)	Styrene	9.40	104	264465	10.17	ppb		95
66)	1,3-Dichloropropane	7.90	76	211745	10.34	ppb		99
67)	Dibromochloromethane	8.12	129	120263	8.87	ppb		99
68)	Chlorobenzene	8.73	112	381034	10.08	ppb		96
69)	Ethylbenzene	8.87	91	647258	10.44	ppb		99
70)	Bromoform	9.55	173	62703	7.64	ppb		97
72)	Isopropylbenzene	9.76	105	565735	10.31	ppb		97
73)	1,1,2,2-Tetrachloroethane	10.07	83	134559	10.07	ppb		99
74)	1,2,3-Trichloropropane	10.09	110	24656	9.63	ppb		98
75)	t-1,4-Dichloro-2-Butene	10.13	53	34495	9.57	ppb		87
76)	Bromobenzene	10.02	156	151782	10.11	ppb		100
77)	n-Propylbenzene	10.17	91	696156	11.10	ppb		96
78)	4-Ethyltoluene	10.29	105	579722	10.78	ppb		97
79)	2-Chlorotoluene	10.23	91	436826	10.81	ppb		94
80)	1,3,5-Trimethylbenzene	10.36	105	493200	10.83	ppb		99
81)	4-Chlorotoluene	10.34	91	511489	10.96	ppb		94
82)	Tert-Butylbenzene	10.67	119	394820	10.10	ppb		99
83)	1,2,4-Trimethylbenzene	10.72	105	498723	10.80	ppb		97
84)	Sec-Butylbenzene	10.88	105	557924	10.12	ppb		98
85)	p-Isopropyltoluene	11.04	119	466349	10.18	ppb		98
86)	Benzyl Chloride	11.20	91	93283	6.20	ppb		98
87)	1,3-DCB	10.96	146	286832	10.56	ppb		99
88)	1,4-DCB	11.06	146	280126	9.97	ppb		98
89)	n-Butylbenzene	11.44	91	423787	10.49	ppb		99
90)	1,2-DCB	11.41	146	267456	10.09	ppb		98
91)	Hexachloroethane	11.66	117	87526	9.37	ppb		94
92)	1,2-Dibromo-3-chloropropan	12.18	157	18632	7.53	ppb		88
93)	1,2,4-Trichlorobenzene	13.00	180	166414	9.27	ppb		97
94)	Hexachlorobutadiene	13.19	225	56990	8.17	ppb		91
95)	Naphthalene	13.23	128	211328	9.30	ppb		100
96)	1,2,3-Trichlorobenzene	13.47	180	99744	9.09	ppb		99

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161113\1116L42.D Vial: 32
Acq On : 17 Nov 16 3:36 Operator: PM, DG, SV, CMM
Sample : 161116B CCV/LCS 10ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 11:45 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/17/16
Instrument: Loki
Initial Cal. Date: 11/13/16
Data File: 1116L54.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	4.028	1.699	58	TMHBL	8.3
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
5							
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39							
40							
		Average			58.0		

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1116L54.D Vial: 44
Acq On : 17 Nov 16 9:11 Operator: PM,DG,SV,CMM
Sample : 161116A CCV/LCS 300ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 11:56 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1582722	25.00 ppb	-0.10
3) Chlorobenzene-D5 (IS)	8.56	TIC	40273	25.00 ppb	-0.22
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	2196314	25.00 ppb	-0.09

System Monitoring Compounds

Target Compounds					Qvalue
2) Gasoline C6-C10	8.70	TIC	32267785m	274.97 ppb	100

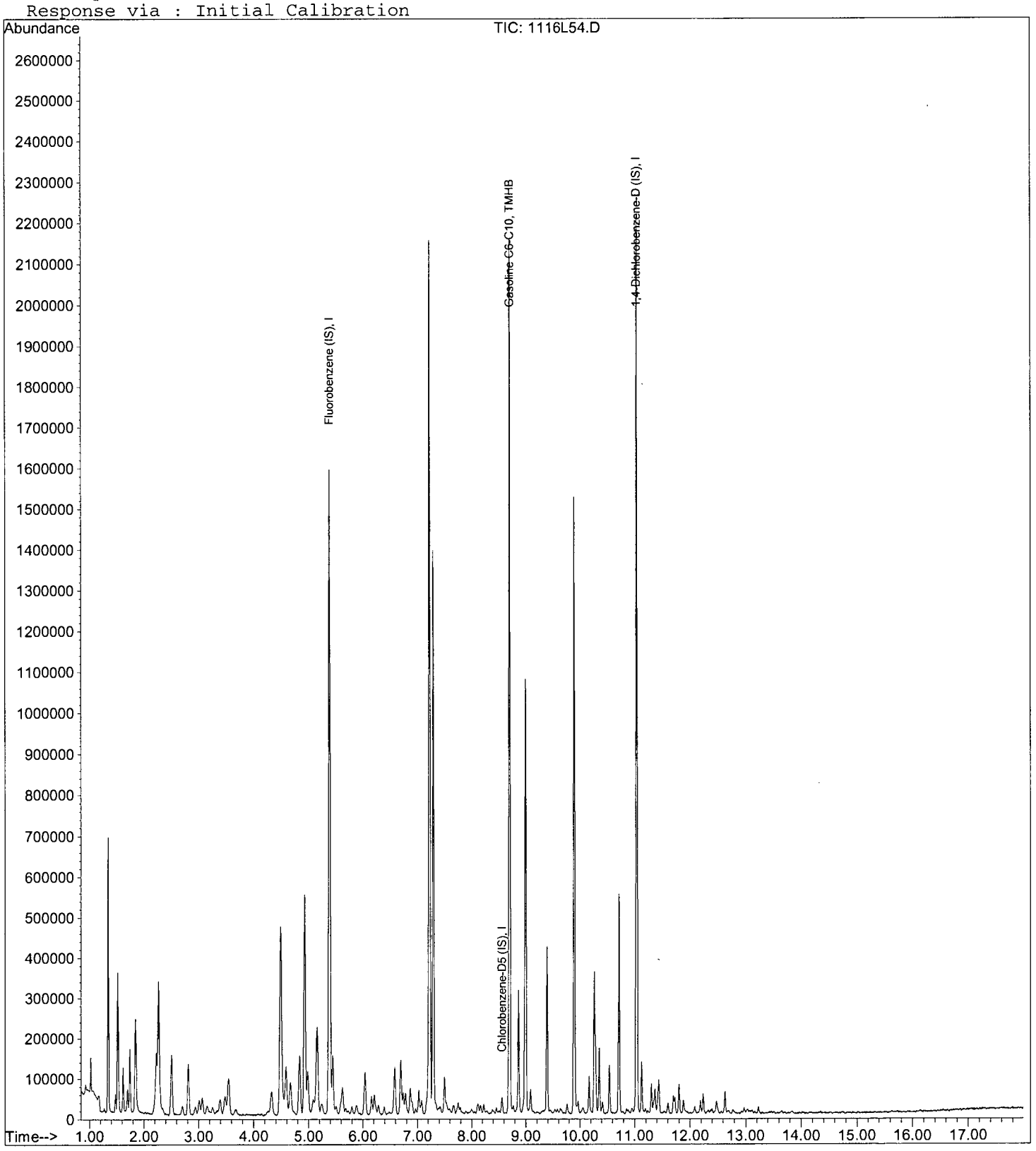
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1116L54.D Vial: 44
Acq On : 17 Nov 16 9:11 Operator: PM,DG,SV,CMM
Sample : 161116A CCV/LCS 300ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 11:56 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 11/17/16
Matrix: Instrument: Loki
Initial Cal. Date: 11/13/16
Data File: 1116L66.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	TM	Dichlorodifluoromethane	0.5296	0.3938	26	TM	
3	TM	Freon 114	0.3913	0.3000	23	TM	
4	TM**	Chloromethane	0.7347	0.8241	12	TM**	
5	TM*	Vinyl chloride	0.6620	0.6198	6.4	TM*	
6	TM	Bromomethane	0.3034	0.3259	7.4	TM	
7	TM	Chloroethane	0.3640	0.3391	6.9	TM	
8	TM	Dichlorofluoromethane	1.143	1.041	8.9	TM	
9	TM	Trichlorofluoromethane	0.6845	0.5284	23	TM	
10	TM	Acrolein	0.0421	0.0459	9.0	TM	
11	TML	Acetone	0.2561	0.1749	32	TML	0.90
12	TM	Freon-113	0.3929	0.2733	30	TM	
13	TM*	1,1-DCE	0.3066	0.2504	18	TM*	
14	TM	t-Butanol	0.0188	0.0182	2.9	TM	
15	TM	Acetonitrile	0.0509	0.0604	19	TM	
16	TM	Methyl Acetate	0.3527	0.3783	7.3	TM	
17	TML	Iodomethane	0.1624	0.1827	13	TML	3.8
18	TM	Acrylonitrile	0.1309	0.1336	2.0	TM	
19	TM	Methylene chloride	0.5589	0.5551	0.68	TM	
20	TM	Carbon disulfide	1.366	0.9721	29	TM	
21	TM	Methyl t-butyl ether (MtBE)	1.343	1.240	7.6	TM	
22	TM	Trans-1,2-DCE	0.4900	0.4167	15	TM	
23	TM	Diisopropyl Ether	1.660	1.808	8.9	TM	
24	TM**	1,1-DCA	0.9403	0.9262	1.5	TM**	
25	TM	Vinyl Acetate	0.4077	0.4349	6.7	TM	
26	TM	Ethyl tert Butyl Ether	1.491	1.419	4.8	TM	
27	TM	MEK (2-Butanone)	0.1913	0.2055	7.4	TM	
28	TM	Cis-1,2-DCE	0.5812	0.4962	15	TM	
29	TM	2,2-Dichloropropane	0.2387	0.1877	21	TM	
30	TM*	Chloroform	0.9275	0.8605	7.2	TM*	
31	TM	Bromochloromethane	0.2717	0.2249	17	TM	
32	S	Dibromofluoromethane(S)	0.5276	0.4864	7.8	S	
33	TM	1,1,1-TCA	0.7395	0.5858	21	TM	
34	TM	Cyclohexane	0.3892	0.3432	12	TM	
35	TM	1,1-Dichloropropene	0.6411	0.5478	15	TM	
36	TM	2,2,4-Trimethylpentane	1.168	0.9234	21	TM	
37	S	1,2-DCA-D4(S)	0.5751	0.6075	5.6	S	
38	TM	Carbon Tetrachloride	0.5819	0.4279	26	TM	
39	TM	Tert Amyl Methyl Ether	1.353	1.217	10	TM	
40	TM	1,2-DCA	0.7221	0.7040	2.5	TM	
		Average			13.1		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 11/17/16
Instrument: Loki
Cal. Date: 11/13/16
Data File: 1116L66.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	Benzene	1.971	1.840	6.6	TM	
42	TM	TCE	0.2714	0.2301	15	TM	
43	TM	2-Pentanone	0.2961	0.3394	15	TM	
44	TM*	1,2-Dichloropropane	0.5591	0.5531	1.1	TM*	
45	TM	Bromodichloromethane	0.6980	0.6184	11	TM	
46	TM	Methyl Cyclohexane	0.6502	0.4720	27	TM	
47	TM	Dibromomethane	0.3050	0.2811	7.8	TM	
48	TM	2-Chloroethyl vinyl ether	0.0000	0.0050	0.00	TM	
49	TML	MIBK (methyl isobutyl ketone)	0.5519	0.5432	1.6	TML	17
50	TM	1-Bromo-2-chloroethane	0.3972	0.4033	1.5	TM	
51	TM	Cis-1,3-Dichloropropene	0.8395	0.7465	11	TM	
52	TM*	Toluene	2.102	1.909	9.2	TM*	
53	TM	Trans-1,3-Dichloropropene	0.7176	0.6204	14	TM	
54	TM	1,1,2-TCA	0.3779	0.3497	7.5	TM	
55	TML	2-Hexanone	0.1543	0.1736	13	TML	2.4
56	I	Chlorobenzene-D5 (IS)	ISTD			I	
57	S	Toluene-D8(S)	1.909	1.909	0.01	S	
58	TM	1,2-EDB	0.4251	0.3919	7.8	TM	
59	TM	Tetrachloroethene	0.5215	0.4057	22	TM	
60	TM	1-Chlorohexane	0.6031	0.4874	19	TM	
61	TM	1,1,1,2-Tetrachloroethane	0.5276	0.4461	15	TM	
62	TM	m&p-Xylene	0.9094	0.8388	7.8	TM	
63	TM	o-Xylene	0.8935	0.8458	5.3	TM	
64	TM	Styrene	0.9869	0.9298	5.8	TM	
65	S	4-Bromofluorobenzene(S)	0.6890	0.6777	1.6	S	
66	TM	1,3-Dichloropropane	0.7774	0.7959	2.4	TM	
67	TM	Dibromochloromethane	0.5144	0.4255	17	TM	
68	TM**	Chlorobenzene	1.435	1.327	7.5	TM**	
69	TM*	Ethylbenzene	2.352	2.219	5.6	TM*	
70	TM**	Bromoform	0.3116	0.2425	22	TM**	
71	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
72	TM	Isopropylbenzene	4.080	3.809	6.6	TM	
73	TM**	1,1,2,2-Tetrachloroethane	0.9935	1.091	9.8	TM**	
74	TM	1,2,3-Trichloropropane	0.1903	0.1770	7.0	TM	
75	TM	t-1,4-Dichloro-2-Butene	0.2679	0.3030	13	TM	
76	TM	Bromobenzene	1.117	1.028	7.9	TM	
77	TM	n-Propylbenzene	4.665	4.628	0.80	TM	
78	TM	4-Ethyltoluene	3.998	3.914	2.1	TM	
79	TM	2-Chlorotoluene	3.006	3.016	0.33	TM	
80	TM	1,3,5-Trimethylbenzene	3.388	3.345	1.3	TM	
		Average			8.7		

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 11/17/16
Instrument: Loki
Cal. Date: 11/13/16
Data File: 1116L66.D

		Compound	MEAN	CCRF	%D	%Drift	
81	TM	4-Chlorotoluene	3.471	3.537	1.9	TM	
82	TM	Tert-Butylbenzene	2.906	2.589	11	TM	
83	TM	1,2,4-Trimethylbenzene	3.435	3.422	0.39	TM	
84	TM	Sec-Butylbenzene	4.098	3.757	8.3	TM	
85	TM	p-Isopropyltoluene	3.407	3.100	9.0	TM	
86	TM	Benzyl Chloride	1.119	1.041	6.9	TM	
87	TM	1,3-DCB	2.019	1.976	2.1	TM	
88	TM	1,4-DCB	2.090	1.943	7.0	TM	
89	TM	n-Butylbenzene	3.003	2.784	7.3	TM	
90	TM	1,2-DCB	1.971	1.867	5.3	TM	
91	TM	Hexachloroethane	0.6944	0.6374	8.2	TM	
92	TM	1,2-Dibromo-3-chloropropane	0.1841	0.1606	13	TM	
93	TM	1,2,4-Trichlorobenzene	1.335	1.182	11	TM	
94	TM	Hexachlorobutadiene	0.5187	0.3897	25	TM	
95	TM	Naphthalene	1.689	1.625	3.8	TM	
96	TM	1,2,3-Trichlorobenzene	0.8158	0.7359	9.8	TM	
97							
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115							
116							
117							
118							
119							
120							
		Average			8.1		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1116L66.D Vial: 56
Acq On : 17 Nov 16 14:48 Operator: PM,DG,SV,CMM
Sample : Ending CCV 8260 10ug/L 11/16/16 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 15:20 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	728512	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	666112	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	340992	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.49	111	354345	23.05	ppb		0.00
Spiked Amount 25.000			Recovery = 92.196%				
37) 1,2-DCA-D4(S)	4.93	65	442602	26.41	ppb		0.00
Spiked Amount 25.000			Recovery = 105.636%				
57) Toluene-D8(S)	7.22	98	1271740	25.00	ppb		0.00
Spiked Amount 25.000			Recovery = 100.008%				
65) 4-Bromofluorobenzene(S)	9.89	95	451401	24.59	ppb		0.00
Spiked Amount 25.000			Recovery = 98.352%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.86	85	114747	7.44	ppb		99
3) Freon 114	0.93	85	87423	7.67	ppb		92
4) Chloromethane	0.96	50	240138	11.22	ppb		98
5) Vinyl chloride	1.03	62	180601	9.36	ppb		98
6) Bromomethane	1.22	96	94968	10.74	ppb		97
7) Chloroethane	1.29	64	98803	9.31	ppb		100
8) Dichlorofluoromethane	1.43	67	303457	9.11	ppb		97
9) Trichlorofluoromethane	1.46	101	153982	7.72	ppb		99
10) Acrolein	1.76	56	167298	136.26	ppb	#	98
11) Acetone	1.88	43	50971	10.09	ppb		98
12) Freon-113	1.84	101	79653	6.96	ppb		94
13) 1,1-DCE	1.83	96	72976	8.17	ppb		96
14) t-Butanol	2.40	59	66368	121.32	ppb		98
15) Acetonitrile	2.10	41	220181	148.59	ppb		98
16) Methyl Acetate	2.17	43	110233	10.73	ppb		94
17) Iodomethane	1.93	142	53240	9.62	ppb		93
18) Acrylonitrile	2.48	52	38919	10.20	ppb		91
19) Methylene chloride	2.24	84	161754	9.93	ppb		97
20) Carbon disulfide	1.98	76	283261	7.12	ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	361483	9.24	ppb		97
22) Trans-1,2-DCE	2.50	96	121436	8.50	ppb		94
23) Diisopropyl Ether	3.10	45	526776	10.89	ppb		93
24) 1,1-DCA	2.95	63	269887	9.85	ppb		99
25) Vinyl Acetate	3.07	43	126729	10.67	ppb		92
26) Ethyl tert Butyl Ether	3.59	59	413501	9.52	ppb		99
27) MEK (2-Butanone)	3.81	43	59888	10.74	ppb		91
28) Cis-1,2-DCE	3.73	96	144584	8.54	ppb		89
29) 2,2-Dichloropropane	3.71	77	54698	7.86	ppb		98
30) Chloroform	4.25	83	250763	9.28	ppb		100
31) Bromochloromethane	4.08	128	65541	8.28	ppb		98
33) 1,1,1-TCA	4.47	97	170713	7.92	ppb		92
34) Cyclohexane	4.53	41	99996	8.82	ppb		92
35) 1,1-Dichloropropene	4.72	75	159627	8.54	ppb		97
36) 2,2,4-Trimethylpentane	5.16	57	269094	7.91	ppb	#	77
38) Carbon Tetrachloride	4.70	119	124700	7.35	ppb		99
39) Tert Amyl Methyl Ether	5.23	73	354712	9.00	ppb	#	89
40) 1,2-DCA	5.03	62	205150	9.75	ppb		96
41) Benzene	4.99	78	536316	9.34	ppb		98
42) TCE	5.84	95	67064	8.48	ppb		94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1116L66.D Vial: 56
Acq On : 17 Nov 16 14:48 Operator: PM,DG,SV,CMM
Sample : Ending CCV 8260 10ug/L 11/16/16 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 15:20 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

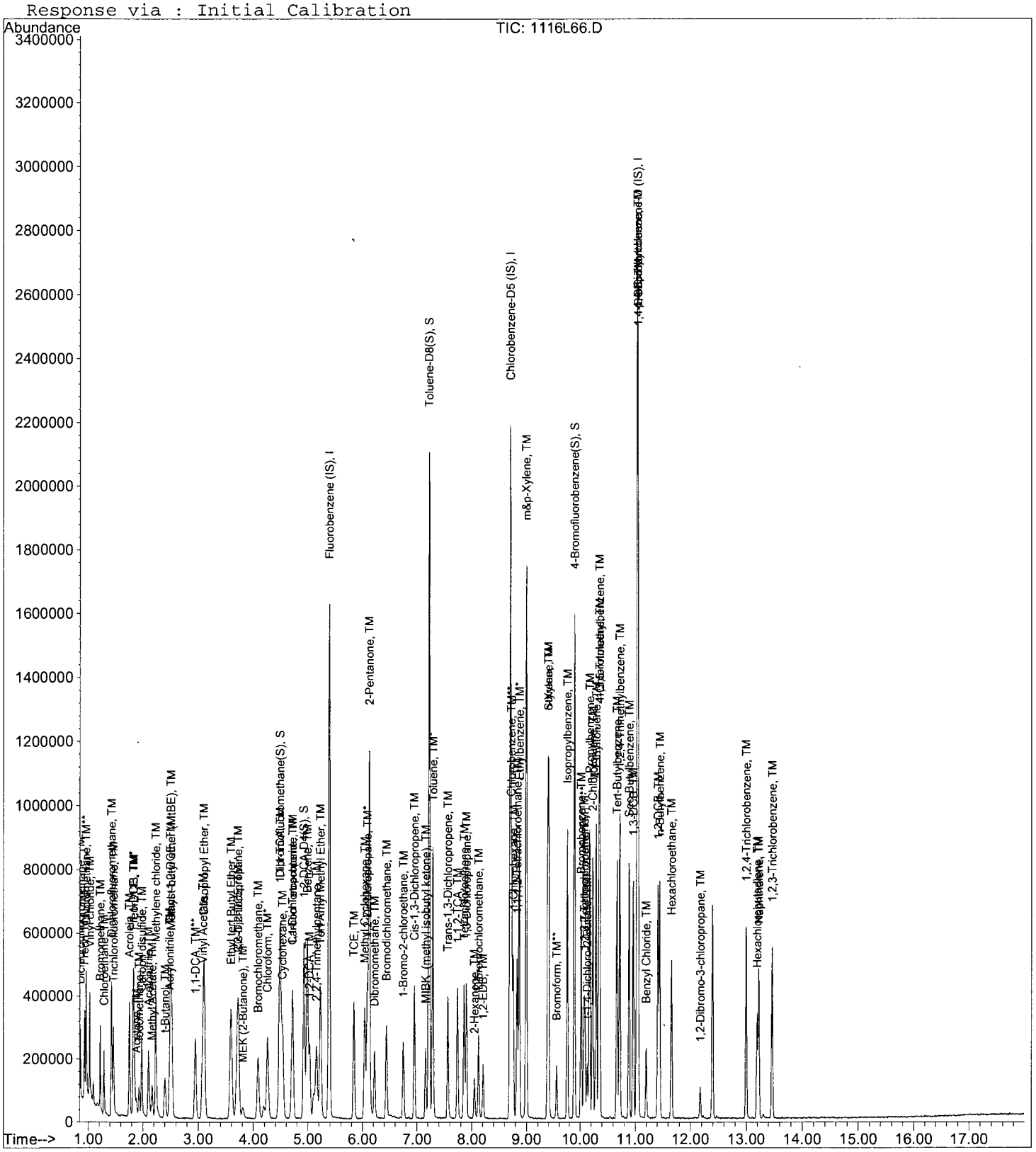
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
43)	2-Pentanone	6.12	43	1236280	143.27	ppb	93
44)	1,2-Dichloropropane	6.09	63	161182	9.89	ppb	96
45)	Bromodichloromethane	6.44	83	180203	8.86	ppb	100
46)	Methyl Cyclohexane	6.04	83	137554	7.26	ppb	88
47)	Dibromomethane	6.22	93	81918	9.22	ppb	95
49)	MIBK (methyl isobutyl ket	7.16	43	158302	11.67	ppb	94
50)	1-Bromo-2-chloroethane	6.75	63	117528	10.15	ppb	99
51)	Cis-1,3-Dichloropropene	6.95	75	217543	8.89	ppb	97
52)	Toluene	7.29	91	556338	9.08	ppb	99
53)	Trans-1,3-Dichloropropene	7.57	75	180776	8.65	ppb	97
54)	1,1,2-TCA	7.74	83	101901	9.25	ppb	96
55)	2-Hexanone	8.05	43	50599	10.24	ppb	94
58)	1,2-EDB	8.21	107	104416	9.22	ppb	98
59)	Tetrachloroethene	7.86	166	108094	7.78	ppb	97
60)	1-Chlorohexane	8.76	91	129878	8.08	ppb	84
61)	1,1,1,2-Tetrachloroethane	8.83	131	118863	8.46	ppb	99
62)	m&p-Xylene	8.99	106	446981	18.45	ppb	97
63)	o-Xylene	9.38	106	225349	9.47	ppb	96
64)	Styrene	9.40	104	247744	9.42	ppb	93
66)	1,3-Dichloropropane	7.90	76	212068	10.24	ppb	98
67)	Dibromochloromethane	8.12	129	113370	8.27	ppb	98
68)	Chlorobenzene	8.73	112	353576	9.25	ppb	95
69)	Ethylbenzene	8.87	91	591341	9.44	ppb	100
70)	Bromoform	9.55	173	64616	7.78	ppb	94
72)	Isopropylbenzene	9.76	105	519603	9.34	ppb	97
73)	1,1,2,2-Tetrachloroethane	10.07	83	148814	10.98	ppb	99
74)	1,2,3-Trichloropropane	10.09	110	24136	9.30	ppb	91
75)	t-1,4-Dichloro-2-Butene	10.13	53	41324	11.31	ppb	87
76)	Bromobenzene	10.02	156	140277	9.21	ppb	100
77)	n-Propylbenzene	10.17	91	631211	9.92	ppb	97
78)	4-Ethyltoluene	10.29	105	533794	9.79	ppb	98
79)	2-Chlorotoluene	10.23	91	411335	10.03	ppb	93
80)	1,3,5-Trimethylbenzene	10.36	105	456222	9.87	ppb	98
81)	4-Chlorotoluene	10.34	91	482451	10.19	ppb	95
82)	Tert-Butylbenzene	10.67	119	353115	8.91	ppb	97
83)	1,2,4-Trimethylbenzene	10.72	105	466706	9.96	ppb	96
84)	Sec-Butylbenzene	10.88	105	512471	9.17	ppb	98
85)	p-Isopropyltoluene	11.04	119	422854	9.10	ppb	98
86)	Benzyl Chloride	11.20	91	141967	9.31	ppb	99
87)	1,3-DCB	10.96	146	269507	9.79	ppb	97
88)	1,4-DCB	11.05	146	265049	9.30	ppb	96
89)	n-Butylbenzene	11.44	91	379692	9.27	ppb	98
90)	1,2-DCB	11.41	146	254587	9.47	ppb	97
91)	Hexachloroethane	11.66	117	86934	9.18	ppb	90
92)	1,2-Dibromo-3-chloropropan	12.18	157	21903	8.72	ppb	90
93)	1,2,4-Trichlorobenzene	13.00	180	161245	8.86	ppb	99
94)	Hexachlorobutadiene	13.19	225	53159	7.51	ppb	95
95)	Naphthalene	13.22	128	221696	9.62	ppb	97
96)	1,2,3-Trichlorobenzene	13.47	180	100368	9.02	ppb	100

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161113\1116L66.D Vial: 56
Acq On : 17 Nov 16 14:48 Operator: PM,DG,SV,CMM
Sample : Ending CCV 8260 10ug/L 11/16/16 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 15:20 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



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VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/17/16
Instrument: Loki
Initial Cal. Date: 07/18/16
Data File: 1116L69.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	4.028	1.553	61	TMHBL	24
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
5							
6							
7							
8							
9							
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32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			61.0		

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1116L69.D Vial: 59
Acq On : 17 Nov 16 16:08 Operator: PM,DG,SV,CMM
Sample : Ending CCV 8260 300ug/L 11/16/16 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 18 9:11 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1582678	25.00	ppb	-0.10
3) Chlorobenzene-D5 (IS)	8.56	TIC	21509	25.00	ppb	-0.22
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	2231421	25.00	ppb	-0.09

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	29501126m	229.45	ppb	100

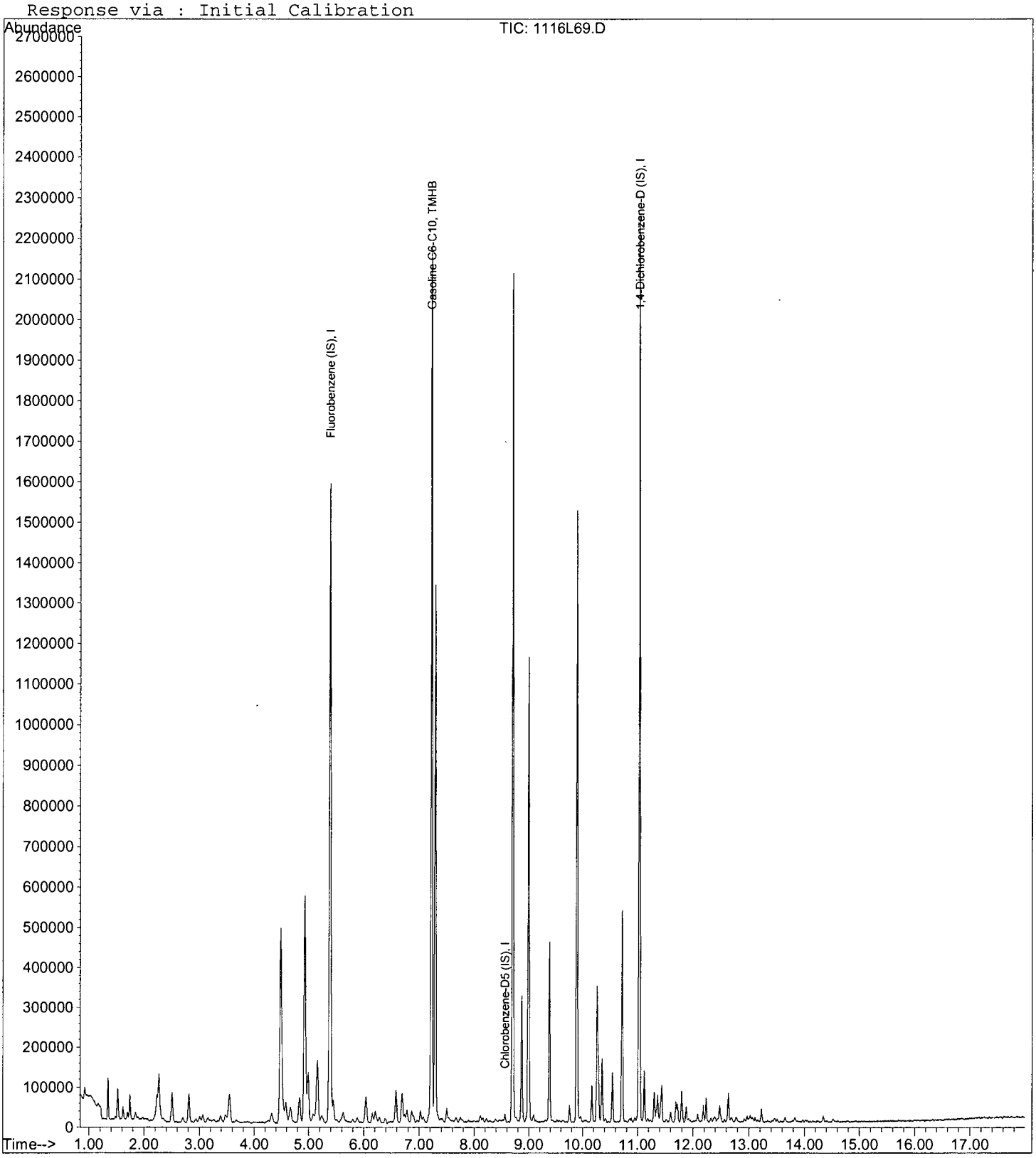
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1116L69.D Vial: 59
Acq On : 17 Nov 16 16:08 Operator: PM,DG,SV,CMM
Sample : Ending CCV 8260 300ug/L 11/16/16 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 18 9:11 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



EPA METHOD 8260B
Volatile Organic Compounds
Raw Data

APPL, INC.

Method Blank
EPA 8260B WATER

Blank Name/QCG: **161116W-45866 - 213773**
Batch ID: #86BXD-161116BL

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	11/17/16	11/17/16
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	11/17/16	11/17/16
BLANK	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	11/17/16	11/17/16
BLANK	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	11/17/16	11/17/16
BLANK	SURROGATE: 1,2-DICHLOROET	101	81-118			%	11/17/16	11/17/16
BLANK	SURROGATE: 4-BROMOFLUORO	97.8	85-114			%	11/17/16	11/17/16
BLANK	SURROGATE: DIBROMOFLUOR	92.6	80-119			%	11/17/16	11/17/16
BLANK	SURROGATE: TOLUENE-D8 (S)	101	89-112			%	11/17/16	11/17/16

Quant Method: LALLW.M
Run #: 1116L46
Instrument: Loki
Sequence: 161113
Initials: CMO

GC SC-Blank-REG MDLs-DOD
Printed: 11/23/16 9:37:03 AM

Method Blank

EPA 8260B GRO WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161116W-45866 - 213796**
Batch ID: #GRO86-161116BL

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	11/17/16	11/17/16
BLANK	SURROGATE: 4-BROMOFLUORO	97.8	85-114			%	11/17/16	11/17/16

Quant Method: LSUR1113.M
Run #: 1116L46
Instrument: Loki
Sequence: 161113
Initials: CMO

GC SC-Blank-REG MDLs-DOD
Printed: 11/18/16 9:28:55 AM

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1116L46.D Vial: 36
Acq On : 17 Nov 16 5:28 Operator: PM,DG,SV;CMM
Sample : 161116B BLK-1WL Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 13:15 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	698624	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	642880	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	325056	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	341380	23.16	ppb	0.00
Spiked Amount 25.000			Recovery =	92.624%		
37) 1,2-DCA-D4(S)	4.93	65	406058	25.26	ppb	0.00
Spiked Amount 25.000			Recovery =	101.060%		
57) Toluene-D8(S)	7.22	98	1245472	25.37	ppb	0.00
Spiked Amount 25.000			Recovery =	101.484%		
65) 4-Bromofluorobenzene(S)	9.89	95	433014	24.44	ppb	0.00
Spiked Amount 25.000			Recovery =	97.756%		

Target Compounds Qvalue

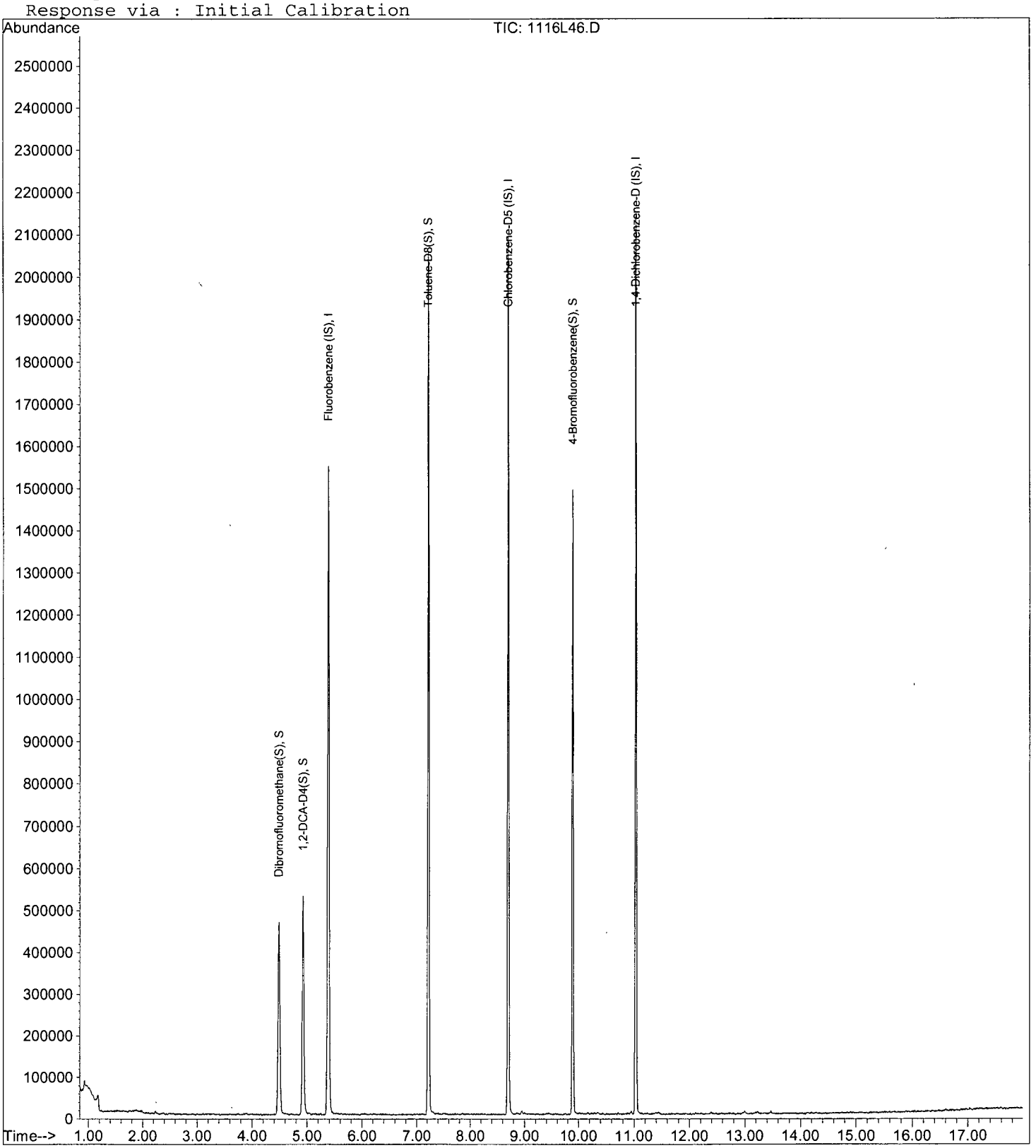
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1116L46.D Vial: 36
Acq On : 17 Nov 16 5:28 Operator: PM,DG,SV,CMM
Sample : 161116B BLK-1WL Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 13:15 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



Laboratory Control Spike Recovery

EPA 8260B GRO WATER

APPL ID: **161117W-45866 LCS - 213796**
Batch ID: #GRO86-161116BL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
GASOLINE RANGE ORGANICS	300	286	95.3	78-122
SURROGATE: 4-BROMOFLUOROBENZE	25.0	23.9	95.6	85-114

Comments: _____

Primary	SPK
Quant Method :	LSUR1113.M
Extraction Date :	11/17/16
Analysis Date :	11/17/16
Instrument :	Loki
Run :	1116L55
Initials :	CMO

Printed: 11/18/16 9:28:47 AM
APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1116L55.D Vial: 45
Acq On : 17 Nov 16 9:39 Operator: PM,DG,SV,CMM
Sample : 161116A CCV/LCS 300ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 11:56 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1603266	25.00 ppb	-0.10
3) Chlorobenzene-D5 (IS)	8.57	TIC	40985	25.00 ppb	-0.22
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	2147076	25.00 ppb	-0.09

System Monitoring Compounds

Target Compounds					Qvalue
2) Gasoline C6-C10	8.70	TIC	33362279m	285.94 ppb	100

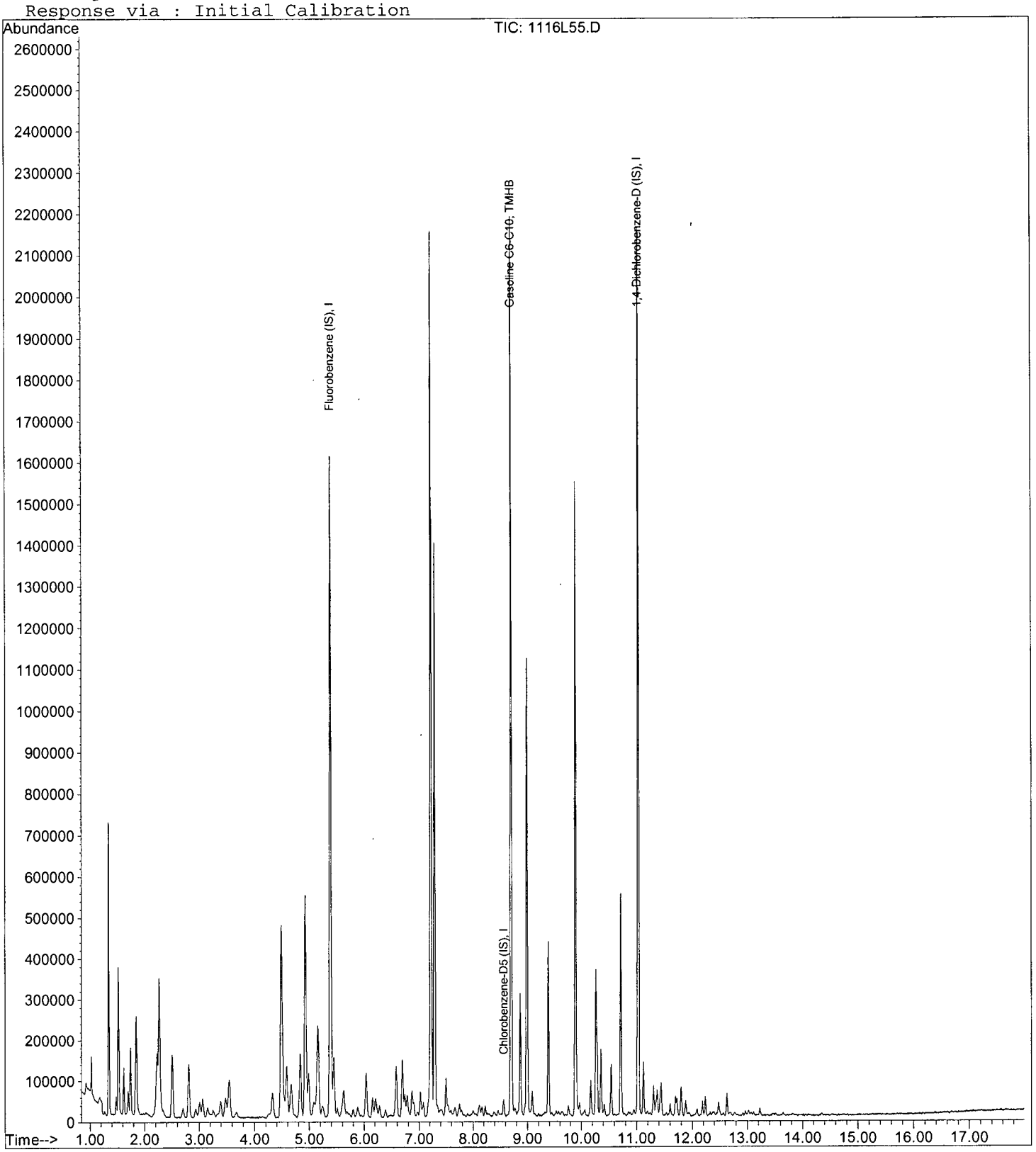
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1116L55.D Vial: 45
Acq On : 17 Nov 16 9:39 Operator: PM,DG,SV,CMM
Sample : 161116A CCV/LCS 300ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 11:56 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



Laboratory Control Spike Recovery
EPA 8260B WATER

APPL ID: **161117W-45866 LCS - 213773**
Batch ID: #86BXD-161116BL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
BENZENE	10.00	10.5	105	79-120
ETHYLBENZENE	10.00	10.9	109	79-121
TOLUENE	10.00	10.2	102	80-121
XYLENES (TOTAL)	30.0	31.5	105	79-121
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	25.6	102	81-118
SURROGATE: 4-BROMOFLUOROBENZE	25.0	25.2	101	85-114
SURROGATE: DIBROMOFLUOROMETH	25.0	23.4	93.6	80-119
SURROGATE: TOLUENE-D8 (S)	25.0	25.9	104	89-112

Comments: _____

Primary	SPK
Quant Method :	LALLW.M
Extraction Date :	11/17/16
Analysis Date :	11/17/16
Instrument :	Loki
Run :	1116L43
Initials :	CMO

Printed: 11/23/16 9:36:54 AM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1116L43.D Vial: 33
Acq On : 17 Nov 16 4:04 Operator: PM,DG,SV,CMM
Sample : 161116B CCV/LCS 10ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 11:45 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	728576	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	650240	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	337984	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.49	111	359665	23.39	ppb		0.00
Spiked Amount 25.000			Recovery = 93.572%				
37) 1,2-DCA-D4(S)	4.93	65	428481	25.56	ppb		0.00
Spiked Amount 25.000			Recovery = 102.256%				
57) Toluene-D8(S)	7.22	98	1287980	25.94	ppb		0.00
Spiked Amount 25.000			Recovery = 103.760%				
65) 4-Bromofluorobenzene(S)	9.89	95	452310	25.24	ppb		0.00
Spiked Amount 25.000			Recovery = 100.956%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.85	85	122245	7.92	ppb		96
3) Freon 114	0.93	85	89074	7.81	ppb		95
4) Chloromethane	0.96	50	257542	12.03	ppb		100
5) Vinyl chloride	1.03	62	195863	10.15	ppb		99
6) Bromomethane	1.22	96	95616	10.81	ppb		100
7) Chloroethane	1.29	64	115567	10.89	ppb		95
8) Dichlorofluoromethane	1.43	67	338062	10.15	ppb		100
9) Trichlorofluoromethane	1.46	101	162075	8.12	ppb		100
10) Acrolein	1.76	56	125656	102.34	ppb		98
11) Acetone	1.88	43	46707	9.16	ppb		91
12) Freon-113	1.84	101	86777	7.58	ppb		92
13) 1,1-DCE	1.83	96	81000	9.06	ppb		95
14) t-Butanol	2.40	59	50976	93.17	ppb		98
15) Acetonitrile	2.10	41	187952	126.83	ppb		99
16) Methyl Acetate	2.17	43	101058	9.83	ppb		93
17) Iodomethane	1.93	142	78088	13.78	ppb		95
18) Acrylonitrile	2.48	52	34538	9.05	ppb		93
19) Methylene chloride	2.24	84	162254	9.96	ppb		99
20) Carbon disulfide	1.98	76	343589	8.63	ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	362360	9.26	ppb		98
22) Trans-1,2-DCE	2.50	96	136548	9.56	ppb		93
23) Diisopropyl Ether	3.10	45	560597	11.59	ppb		90
24) 1,1-DCA	2.95	63	299482	10.93	ppb		98
25) Vinyl Acetate	3.09	43	123633	10.40	ppb	#	78
26) Ethyl tert Butyl Ether	3.59	59	423696	9.75	ppb		99
27) MEK (2-Butanone)	3.80	43	52402	9.40	ppb		90
28) Cis-1,2-DCE	3.72	96	164224	9.70	ppb		87
29) 2,2-Dichloropropane	3.71	77	55619	7.99	ppb		100
30) Chloroform	4.25	83	278167	10.29	ppb		100
31) Bromochloromethane	4.08	128	69083	8.73	ppb		96
33) 1,1,1-TCA	4.47	97	199672	9.27	ppb		93
34) Cyclohexane	4.53	41	107795	9.50	ppb		90
35) 1,1-Dichloropropene	4.72	75	183241	9.81	ppb		98
36) 2,2,4-Trimethylpentane	5.16	57	259511	7.63	ppb		96
38) Carbon Tetrachloride	4.71	119	142648	8.41	ppb		99
39) Tert Amyl Methyl Ether	5.23	73	362303	9.19	ppb		94
40) 1,2-DCA	5.03	62	213704	10.16	ppb		98
41) Benzene	4.99	78	605224	10.54	ppb		99
42) TCE	5.84	95	76088	9.62	ppb		96

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161113\1116L43.D Vial: 33
Acq On : 17 Nov 16 4:04 Operator: PM,DG,SV,CMM
Sample : 161116B CCV/LCS 10ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 11:45 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	2-Pentanone	6.12	43	1044139	121.00	ppb		93
44)	1,2-Dichloropropane	6.08	63	180919	11.10	ppb	#	95
45)	Bromodichloromethane	6.44	83	198566	9.76	ppb		97
46)	Methyl Cyclohexane	6.04	83	148610	7.84	ppb		90
47)	Dibromomethane	6.22	93	83455	9.39	ppb		92
49)	MIBK (methyl isobutyl ket	7.16	43	134358	9.82	ppb		97
50)	1-Bromo-2-chloroethane	6.75	63	117736	10.17	ppb		96
51)	Cis-1,3-Dichloropropene	6.95	75	222476	9.09	ppb		95
52)	Toluene	7.29	91	621974	10.15	ppb		97
53)	Trans-1,3-Dichloropropene	7.56	75	181552	8.68	ppb		95
54)	1,1,2-TCA	7.74	83	104434	9.48	ppb		96
55)	2-Hexanone	8.05	43	41708	8.64	ppb		90
58)	1,2-EDB	8.21	107	104046	9.41	ppb		95
59)	Tetrachloroethene	7.86	166	124798	9.20	ppb		95
60)	1-Chlorohexane	8.76	91	146402	9.33	ppb		85
61)	1,1,1,2-Tetrachloroethane	8.83	131	131407	9.58	ppb		100
62)	m&p-Xylene	8.99	106	495546	20.95	ppb		90
63)	o-Xylene	9.38	106	245402	10.56	ppb		89
64)	Styrene	9.40	104	272064	10.60	ppb		98
66)	1,3-Dichloropropane	7.90	76	215910	10.68	ppb		97
67)	Dibromochloromethane	8.12	129	118561	8.86	ppb		99
68)	Chlorobenzene	8.73	112	390256	10.46	ppb		98
69)	Ethylbenzene	8.87	91	666777	10.90	ppb		99
70)	Bromoform	9.55	173	65398	8.07	ppb		100
72)	Isopropylbenzene	9.76	105	589196	10.68	ppb		96
73)	1,1,2,2-Tetrachloroethane	10.07	83	130991	9.75	ppb		99
74)	1,2,3-Trichloropropane	10.09	110	23496	9.13	ppb		83
75)	t-1,4-Dichloro-2-Butene	10.13	53	35455	9.79	ppb		80
76)	Bromobenzene	10.02	156	146986	9.74	ppb		95
77)	n-Propylbenzene	10.17	91	707140	11.21	ppb		97
78)	4-Ethyltoluene	10.29	105	592767	10.97	ppb		99
79)	2-Chlorotoluene	10.23	91	448105	11.03	ppb		93
80)	1,3,5-Trimethylbenzene	10.36	105	510846	11.15	ppb		99
81)	4-Chlorotoluene	10.34	91	537003	11.44	ppb		93
82)	Tert-Butylbenzene	10.67	119	402828	10.25	ppb		97
83)	1,2,4-Trimethylbenzene	10.72	105	511024	11.00	ppb		97
84)	Sec-Butylbenzene	10.88	105	580715	10.48	ppb		98
85)	p-Isopropyltoluene	11.04	119	475396	10.32	ppb		99
86)	Benzyl Chloride	11.20	91	93807	6.20	ppb		97
87)	1,3-DCB	10.96	146	289148	10.59	ppb		99
88)	1,4-DCB	11.06	146	290883	10.30	ppb		99
89)	n-Butylbenzene	11.44	91	439084	10.81	ppb		97
90)	1,2-DCB	11.41	146	273140	10.25	ppb		99
91)	Hexachloroethane	11.66	117	94543	10.07	ppb		93
92)	1,2-Dibromo-3-chloropropan	12.18	157	18254	7.33	ppb		96
93)	1,2,4-Trichlorobenzene	13.00	180	170068	9.43	ppb		98
94)	Hexachlorobutadiene	13.19	225	60147	8.58	ppb		100
95)	Naphthalene	13.23	128	212032	9.29	ppb		99
96)	1,2,3-Trichlorobenzene	13.47	180	104976	9.52	ppb		97

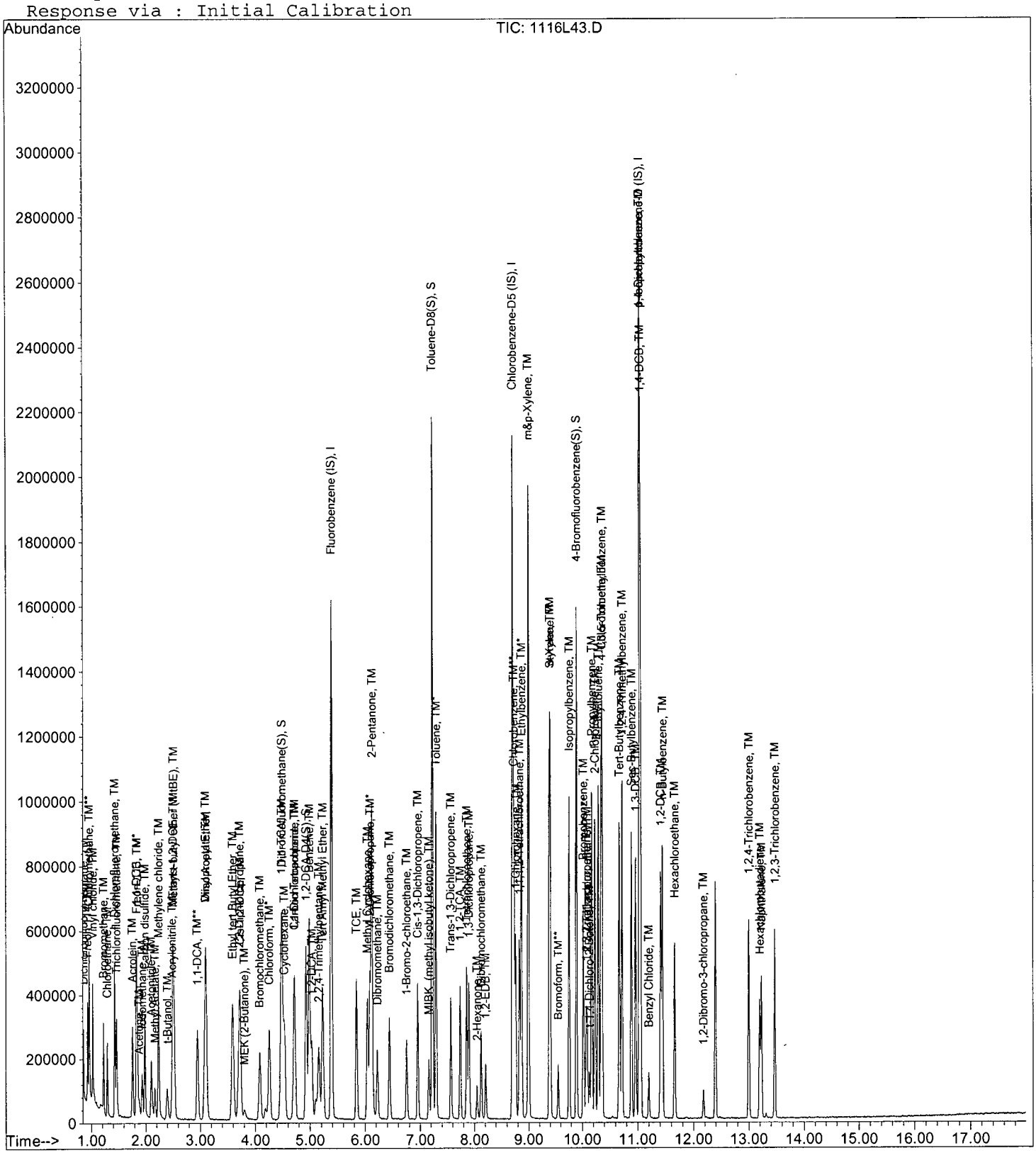
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1116L43.D Vial: 33
Acq On : 17 Nov 16 4:04 Operator: PM,DG,SV,CMM
Sample : 161116B CCV/LCS 10ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 11:45 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



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Matrix Spike Recoveries

EPA 8260B WATER

APPL ID: **161117W-45866 MS - 213773**
Batch ID: #86BXD-161116BL
Sample ID: AZ45866
Client ID: ERH115

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
BENZENE	10.00	ND	9.99	9.71	99.9	97.1	79-120	2.8	20
ETHYLBENZENE	10.00	ND	10.1	9.76	101	97.6	79-121	3.4	20
TOLUENE	10.00	ND	9.66	9.35	96.6	93.5	80-121	3.3	20
XYLENES (TOTAL)	30.0	ND	29.2	28.4	97.3	94.7	79-121	2.8	20
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	NA	27.4	27.0	110	108	81-118		
SURROGATE: 4-BROMOFLUOROBENZE	25.0	NA	26.0	25.0	104	100	85-114		
SURROGATE: DIBROMOFLUOROMETH	25.0	NA	23.9	23.4	95.6	93.6	80-119		
SURROGATE: TOLUENE-D8 (S)	25.0	NA	26.0	25.7	104	103	89-112		

Comments: _____

Primary	SPK	DUP
Quant Method :	LALLW.M	LALLW.M
Extraction Date :	11/17/16	11/17/16
Analysis Date :	11/17/16	11/17/16
Instrument :	Loki	Loki
Run :	1116L62	1116L63
Initials :	CMO	

Printed: 11/23/16 9:36:48 AM
APPL MSD SCII

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1116L62.D Vial: 52
Acq On : 17 Nov 16 12:56 Operator: PM,DG,SV,CMM
Sample : AZ45866W234 MS-1WL 10ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 14:48 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	701376	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	643584	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	345152	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.49	111	353519	23.89	ppb		0.00
Spiked Amount 25.000			Recovery = 95.540%				
37) 1,2-DCA-D4(S)	4.93	65	442157	27.40	ppb		0.00
Spiked Amount 25.000			Recovery = 109.612%				
57) Toluene-D8(S)	7.22	98	1277301	25.99	ppb		0.00
Spiked Amount 25.000			Recovery = 103.964%				
65) 4-Bromofluorobenzene(S)	9.89	95	462038	26.05	ppb		0.00
Spiked Amount 25.000			Recovery = 104.192%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.86	85	119705	8.06	ppb		100
3) Freon 114	0.93	85	89350	8.14	ppb		96
4) Chloromethane	0.96	50	237699	11.53	ppb		97
5) Vinyl chloride	1.03	62	184563	9.94	ppb		98
6) Bromomethane	1.22	96	96272	11.31	ppb		98
7) Chloroethane	1.29	64	99626	9.76	ppb		98
8) Dichlorofluoromethane	1.43	67	315174	9.83	ppb		98
9) Trichlorofluoromethane	1.46	101	155274	8.09	ppb		99
10) Acrolein	1.76	56	158272	133.90	ppb	#	97
11) Acetone	1.88	43	51577	10.66	ppb		98
12) Freon-113	1.85	101	85741	7.78	ppb		92
13) 1,1-DCE	1.83	96	74976	8.72	ppb		93
14) t-Butanol	2.40	59	64444	122.36	ppb		100
15) Acetonitrile	2.10	41	214623	150.44	ppb		100
16) Methyl Acetate	2.17	43	110721	11.19	ppb		94
17) Iodomethane	1.93	142	64272	11.88	ppb		97
18) Acrylonitrile	2.48	52	40143	10.93	ppb		96
19) Methylene chloride	2.24	84	149462	9.53	ppb		98
20) Carbon disulfide	1.98	76	295763	7.72	ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	363574	9.65	ppb		95
22) Trans-1,2-DCE	2.50	96	123240	8.96	ppb		90
23) Diisopropyl Ether	3.10	45	523343	11.24	ppb		91
24) 1,1-DCA	2.95	63	275391	10.44	ppb		98
25) Vinyl Acetate	3.07	43	126565	11.06	ppb	#	92
26) Ethyl tert Butyl Ether	3.59	59	417766	9.99	ppb		98
27) MEK (2-Butanone)	3.80	43	59645	11.11	ppb		98
28) Cis-1,2-DCE	3.73	96	149134	9.15	ppb		82
29) 2,2-Dichloropropane	3.70	77	62186	9.28	ppb		95
30) Chloroform	4.25	83	251677	9.67	ppb		100
31) Bromochloromethane	4.08	128	65326	8.57	ppb		95
33) 1,1,1-TCA	4.47	97	179960	8.67	ppb		93
34) Cyclohexane	4.52	41	103179	9.45	ppb		92
35) 1,1-Dichloropropene	4.72	75	171240	9.52	ppb		96
36) 2,2,4-Trimethylpentane	5.15	57	292015	8.91	ppb	#	79
38) Carbon Tetrachloride	4.70	119	130466	7.99	ppb		96
39) Tert Amyl Methyl Ether	5.23	73	354602	9.34	ppb	#	91
40) 1,2-DCA	5.03	62	205103	10.12	ppb		97
41) Benzene	4.99	78	552184	9.99	ppb		97
42) TCE	5.84	95	69192	9.09	ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1116L62.D Vial: 52
Acq On : 17 Nov 16 12:56 Operator: PM,DG,SV,CMM
Sample : AZ45866W234 MS-1WL 10ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 14:48 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
43)	2-Pentanone	6.12	43	1220951	146.97	ppb	92
44)	1,2-Dichloropropane	6.09	63	167525	10.68	ppb	97
45)	Bromodichloromethane	6.44	83	181716	9.28	ppb	98
46)	Methyl Cyclohexane	6.04	83	151320	8.29	ppb	97
47)	Dibromomethane	6.22	93	80326	9.39	ppb	93
49)	MIBK (methyl isobutyl ket	7.16	43	151552	11.60	ppb	93
50)	1-Bromo-2-chloroethane	6.75	63	116616	10.47	ppb	98
51)	Cis-1,3-Dichloropropene	6.95	75	217435	9.23	ppb	97
52)	Toluene	7.29	91	569876	9.66	ppb	99
53)	Trans-1,3-Dichloropropene	7.56	75	178055	8.84	ppb	97
54)	1,1,2-TCA	7.74	83	103396	9.75	ppb	98
55)	2-Hexanone	8.05	43	46856	9.89	ppb	96
58)	1,2-EDB	8.21	107	104358	9.54	ppb	98
59)	Tetrachloroethene	7.86	166	115233	8.58	ppb	95
60)	1-Chlorohexane	8.76	91	137546	8.86	ppb	83
61)	1,1,1,2-Tetrachloroethane	8.83	131	121556	8.95	ppb	100
62)	m&p-Xylene	8.99	106	455282	19.45	ppb	95
63)	o-Xylene	9.38	106	223189	9.70	ppb	89
64)	Styrene	9.40	104	252608	9.94	ppb	99
66)	1,3-Dichloropropane	7.90	76	208144	10.40	ppb	100
67)	Dibromochloromethane	8.12	129	114716	8.66	ppb	100
68)	Chlorobenzene	8.73	112	358304	9.70	ppb	96
69)	Ethylbenzene	8.87	91	611806	10.10	ppb	99
70)	Bromoform	9.55	173	64454	8.03	ppb	97
72)	Isopropylbenzene	9.76	105	534687	9.49	ppb	100
73)	1,1,2,2-Tetrachloroethane	10.07	83	147924	10.78	ppb	98
74)	1,2,3-Trichloropropane	10.09	110	26936	10.25	ppb	94
75)	t-1,4-Dichloro-2-Butene	10.13	53	36914	9.98	ppb	85
76)	Bromobenzene	10.02	156	141459	9.18	ppb	99
77)	n-Propylbenzene	10.17	91	679201	10.55	ppb	99
78)	4-Ethyltoluene	10.29	105	556445	10.08	ppb	96
79)	2-Chlorotoluene	10.23	91	420360	10.13	ppb	92
80)	1,3,5-Trimethylbenzene	10.36	105	473211	10.12	ppb	97
81)	4-Chlorotoluene	10.34	91	491642	10.26	ppb	95
82)	Tert-Butylbenzene	10.67	119	376735	9.39	ppb	98
83)	1,2,4-Trimethylbenzene	10.71	105	473295	9.98	ppb	96
84)	Sec-Butylbenzene	10.88	105	538429	9.52	ppb	97
85)	p-Isopropyltoluene	11.04	119	447019	9.50	ppb	98
86)	Benzyl Chloride	11.20	91	151638	9.82	ppb	97
87)	1,3-DCB	10.96	146	269771	9.68	ppb	99
88)	1,4-DCB	11.05	146	274718	9.52	ppb	99
89)	n-Butylbenzene	11.44	91	408541	9.85	ppb	98
90)	1,2-DCB	11.41	146	255478	9.39	ppb	98
91)	Hexachloroethane	11.66	117	85393	8.91	ppb	97
92)	1,2-Dibromo-3-chloropropan	12.18	157	20629	8.12	ppb	94
93)	1,2,4-Trichlorobenzene	13.00	180	160107	8.69	ppb	96
94)	Hexachlorobutadiene	13.19	225	55502	7.75	ppb	95
95)	Naphthalene	13.23	128	215680	9.25	ppb	98
96)	1,2,3-Trichlorobenzene	13.47	180	104488	9.28	ppb	97

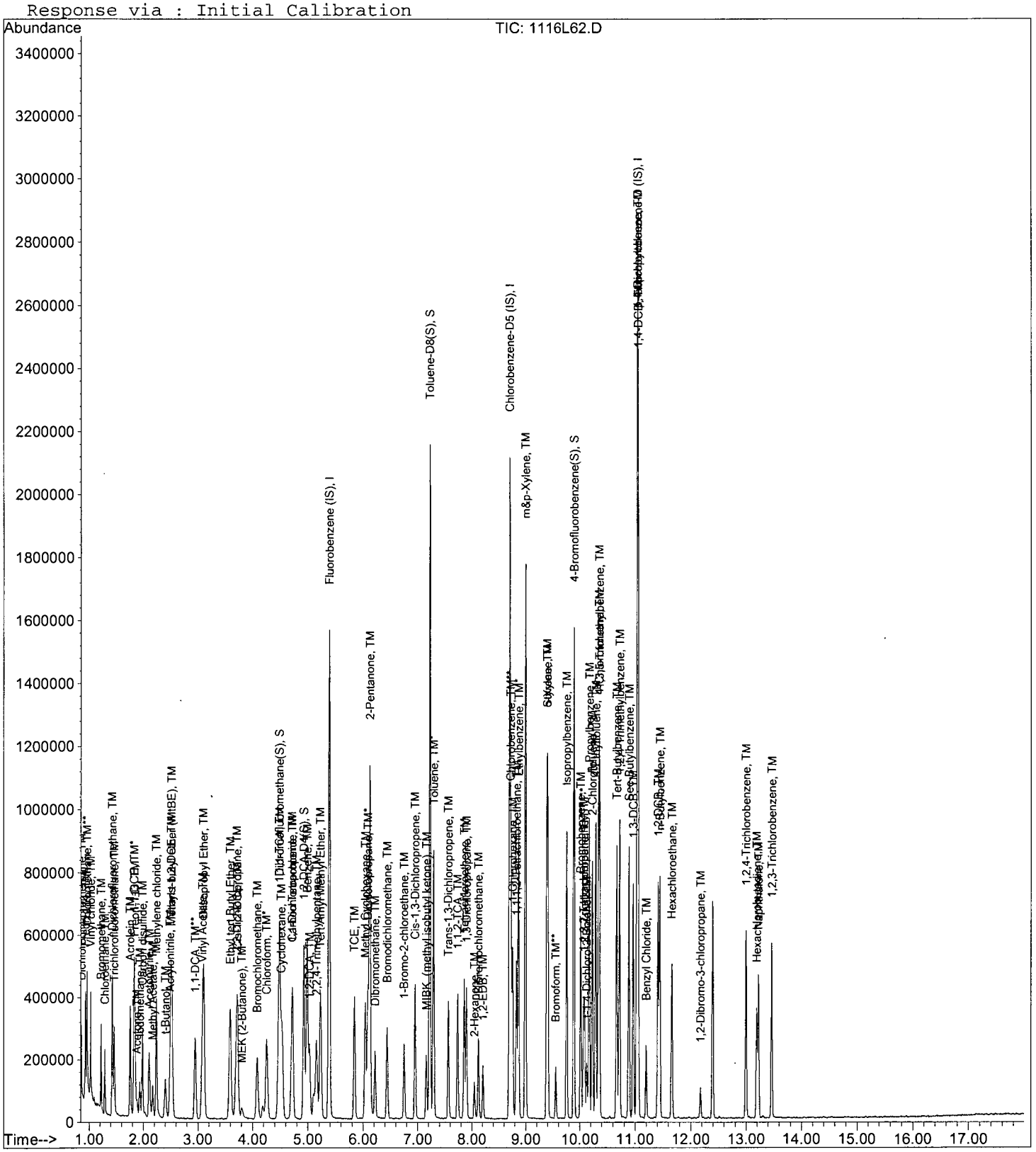
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1116L62.D Vial: 52
Acq On : 17 Nov 16 12:56 Operator: PM,DG,SV,CMM
Sample : AZ45866W234 MS-1WL 10ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 14:48 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1116L63.D Vial: 53
Acq On : 17 Nov 16 13:24 Operator: PM,DG,SV,CMM
Sample : AZ45866W234 MSD-1WL 10ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 14:48 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	730816	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	668416	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	350784	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.49	111	361277	23.43	ppb		0.00
Spiked Amount 25.000			Recovery = 93.704%				
37) 1,2-DCA-D4(S)	4.93	65	454473	27.03	ppb		0.00
Spiked Amount 25.000			Recovery = 108.124%				
57) Toluene-D8(S)	7.22	98	1314304	25.75	ppb		0.00
Spiked Amount 25.000			Recovery = 103.000%				
65) 4-Bromofluorobenzene(S)	9.89	95	460704	25.01	ppb		0.00
Spiked Amount 25.000			Recovery = 100.032%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.86	85	109216	7.05	ppb		99
3) Freon 114	0.93	85	87185	7.62	ppb		91
4) Chloromethane	0.96	50	232966	10.85	ppb		99
5) Vinyl chloride	1.03	62	178058	9.20	ppb		96
6) Bromomethane	1.22	96	95224	10.74	ppb		99
7) Chloroethane	1.29	64	99131	9.32	ppb		96
8) Dichlorofluoromethane	1.43	67	314939	9.43	ppb		99
9) Trichlorofluoromethane	1.46	101	148861	7.44	ppb		99
10) Acrolein	1.76	56	166976	135.57	ppb		97
11) Acetone	1.88	43	49402	9.72	ppb		98
12) Freon-113	1.84	101	79651	6.93	ppb		94
13) 1,1-DCE	1.83	96	76248	8.51	ppb		97
14) t-Butanol	2.40	59	67266	122.57	ppb		100
15) Acetonitrile	2.10	41	219476	147.64	ppb		99
16) Methyl Acetate	2.17	43	111012	10.77	ppb		91
17) Iodomethane	1.93	142	69456	12.30	ppb		96
18) Acrylonitrile	2.48	52	38655	10.10	ppb		93
19) Methylene chloride	2.24	84	149986	9.18	ppb		98
20) Carbon disulfide	1.98	76	293615	7.35	ppb		100
21) Methyl t-butyl ether (MtBE	2.52	73	370968	9.45	ppb		95
22) Trans-1,2-DCE	2.50	96	127075	8.87	ppb		96
23) Diisopropyl Ether	3.10	45	543917	11.21	ppb		90
24) 1,1-DCA	2.95	63	273653	9.96	ppb		100
25) Vinyl Acetate	3.07	43	129909	10.90	ppb		94
26) Ethyl tert Butyl Ether	3.59	59	429648	9.86	ppb		97
27) MEK (2-Butanone)	3.80	43	61401	10.98	ppb		96
28) Cis-1,2-DCE	3.72	96	149184	8.78	ppb		90
29) 2,2-Dichloropropane	3.70	77	62285	8.92	ppb		99
30) Chloroform	4.25	83	262271	9.67	ppb		98
31) Bromochloromethane	4.08	128	66813	8.41	ppb		89
33) 1,1,1-TCA	4.47	97	184121	8.52	ppb		90
34) Cyclohexane	4.53	41	101893	8.96	ppb		88
35) 1,1-Dichloropropene	4.72	75	168545	8.99	ppb		96
36) 2,2,4-Trimethylpentane	5.15	57	275583	8.07	ppb	#	78
38) Carbon Tetrachloride	4.70	119	131370	7.72	ppb		97
39) Tert Amyl Methyl Ether	5.23	73	368396	9.32	ppb		94
40) 1,2-DCA	5.03	62	208471	9.88	ppb		98
41) Benzene	4.99	78	559248	9.71	ppb		99
42) TCE	5.84	95	70280	8.86	ppb		94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1116L63.D Vial: 53
Acq On : 17 Nov 16 13:24 Operator: PM,DG,SV,CMM
Sample : AZ45866W234 MSD-1WL 10ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 14:48 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	2-Pentanone	6.12	43	1271317	146.87	ppb		92
44)	1,2-Dichloropropane	6.09	63	170363	10.42	ppb	#	95
45)	Bromodichloromethane	6.44	83	186101	9.12	ppb		100
46)	Methyl Cyclohexane	6.04	83	136204	7.17	ppb		88
47)	Dibromomethane	6.22	93	84026	9.42	ppb		92
49)	MIBK (methyl isobutyl ket	7.16	43	158033	11.61	ppb		97
50)	1-Bromo-2-chloroethane	6.75	63	120719	10.40	ppb		99
51)	Cis-1,3-Dichloropropene	6.95	75	223177	9.09	ppb		96
52)	Toluene	7.29	91	574777	9.35	ppb		98
53)	Trans-1,3-Dichloropropene	7.57	75	188449	8.98	ppb		97
54)	1,1,2-TCA	7.74	83	105327	9.53	ppb		94
55)	2-Hexanone	8.05	43	48998	9.93	ppb		97
58)	1,2-EDB	8.21	107	107256	9.44	ppb		100
59)	Tetrachloroethene	7.86	166	115228	8.26	ppb		96
60)	1-Chlorohexane	8.76	91	135587	8.41	ppb		79
61)	1,1,1,2-Tetrachloroethane	8.83	131	125758	8.91	ppb		99
62)	m&p-Xylene	8.99	106	460046	18.92	ppb		97
63)	o-Xylene	9.38	106	226681	9.49	ppb		94
64)	Styrene	9.40	104	256640	9.73	ppb		98
66)	1,3-Dichloropropane	7.90	76	215922	10.39	ppb		100
67)	Dibromochloromethane	8.12	129	119435	8.68	ppb		99
68)	Chlorobenzene	8.73	112	359467	9.37	ppb		93
69)	Ethylbenzene	8.87	91	613729	9.76	ppb		99
70)	Bromoform	9.55	173	66529	7.98	ppb		97
72)	Isopropylbenzene	9.76	105	536841	9.38	ppb		98
73)	1,1,2,2-Tetrachloroethane	10.07	83	150753	10.81	ppb		97
74)	1,2,3-Trichloropropane	10.09	110	26152	9.79	ppb		93
75)	t-1,4-Dichloro-2-Butene	10.13	53	39796	10.59	ppb		92
76)	Bromobenzene	10.02	156	144970	9.25	ppb		98
77)	n-Propylbenzene	10.17	91	653637	9.99	ppb		100
78)	4-Ethyltoluene	10.29	105	549625	9.80	ppb		100
79)	2-Chlorotoluene	10.23	91	429773	10.19	ppb		92
80)	1,3,5-Trimethylbenzene	10.36	105	477146	10.04	ppb		99
81)	4-Chlorotoluene	10.34	91	486119	9.98	ppb		95
82)	Tert-Butylbenzene	10.67	119	369460	9.06	ppb		95
83)	1,2,4-Trimethylbenzene	10.72	105	478242	9.92	ppb		97
84)	Sec-Butylbenzene	10.88	105	528501	9.19	ppb		97
85)	p-Isopropyltoluene	11.04	119	450080	9.41	ppb		99
86)	Benzyl Chloride	11.20	91	150866	9.61	ppb		97
87)	1,3-DCB	10.96	146	267954	9.46	ppb		97
88)	1,4-DCB	11.05	146	271752	9.27	ppb		98
89)	n-Butylbenzene	11.44	91	408849	9.70	ppb		99
90)	1,2-DCB	11.41	146	259722	9.39	ppb		99
91)	Hexachloroethane	11.66	117	88211	9.05	ppb		97
92)	1,2-Dibromo-3-chloropropan	12.18	157	21439	8.30	ppb		96
93)	1,2,4-Trichlorobenzene	13.00	180	166456	8.89	ppb		98
94)	Hexachlorobutadiene	13.19	225	58219	8.00	ppb		93
95)	Naphthalene	13.23	128	227520	9.60	ppb		99
96)	1,2,3-Trichlorobenzene	13.47	180	102456	8.95	ppb		97

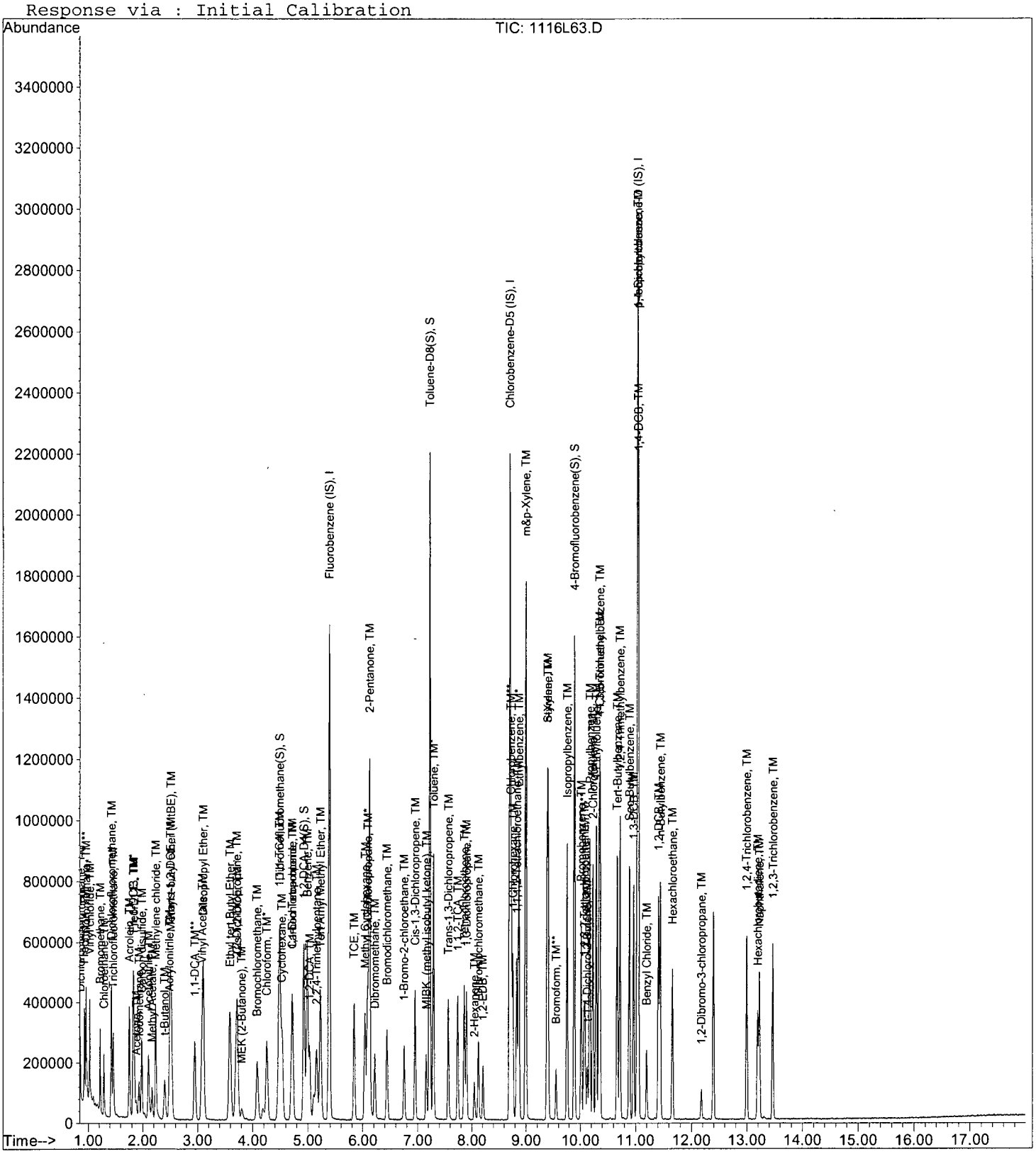
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1116L63.D Vial: 53
Acq On : 17 Nov 16 13:24 Operator: PM,DG,SV,CMM
Sample : AZ45866W234 MSD-1WL 10ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 14:48 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



499

Matrix Spike Recoveries

EPA 8260B GRO WATER

APPL ID: **161117W-45866 MS - 213796**
Batch ID: #GRO86-161116BL
Sample ID: AZ45866
Client ID: ERH115

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
GASOLINE RANGE ORGANICS	300	ND	250	268	83.3	89.3	78-122	6.9	20
SURROGATE: 4-BROMOFLUOROBENZE	25.0	NA	24.6	25.2	98.4	101	85-114		

Comments: _____

Primary	SPK	DUP
Quant Method :	LSUR1113.M	LSUR1113.M
Extraction Date :	11/17/16	11/17/16
Analysis Date :	11/17/16	11/17/16
Instrument :	Loki	Loki
Run :	1116L64	1116L65
Initials :	CMO	

Printed: 11/18/16 9:31:39 AM
APPL MSD SCII

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1116L64.D Vial: 54
Acq On : 17 Nov 16 13:52 Operator: PM,DG,SV,CMM
Sample : AZ45866W456 MS-1WL 300ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 14:42 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1592303	25.00	ppb	-0.10
3) Chlorobenzene-D5 (IS)	8.57	TIC	30663	25.00	ppb	-0.22
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	2206514	25.00	ppb	-0.09

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	8.70	TIC	30952946m	250.27	ppb	100

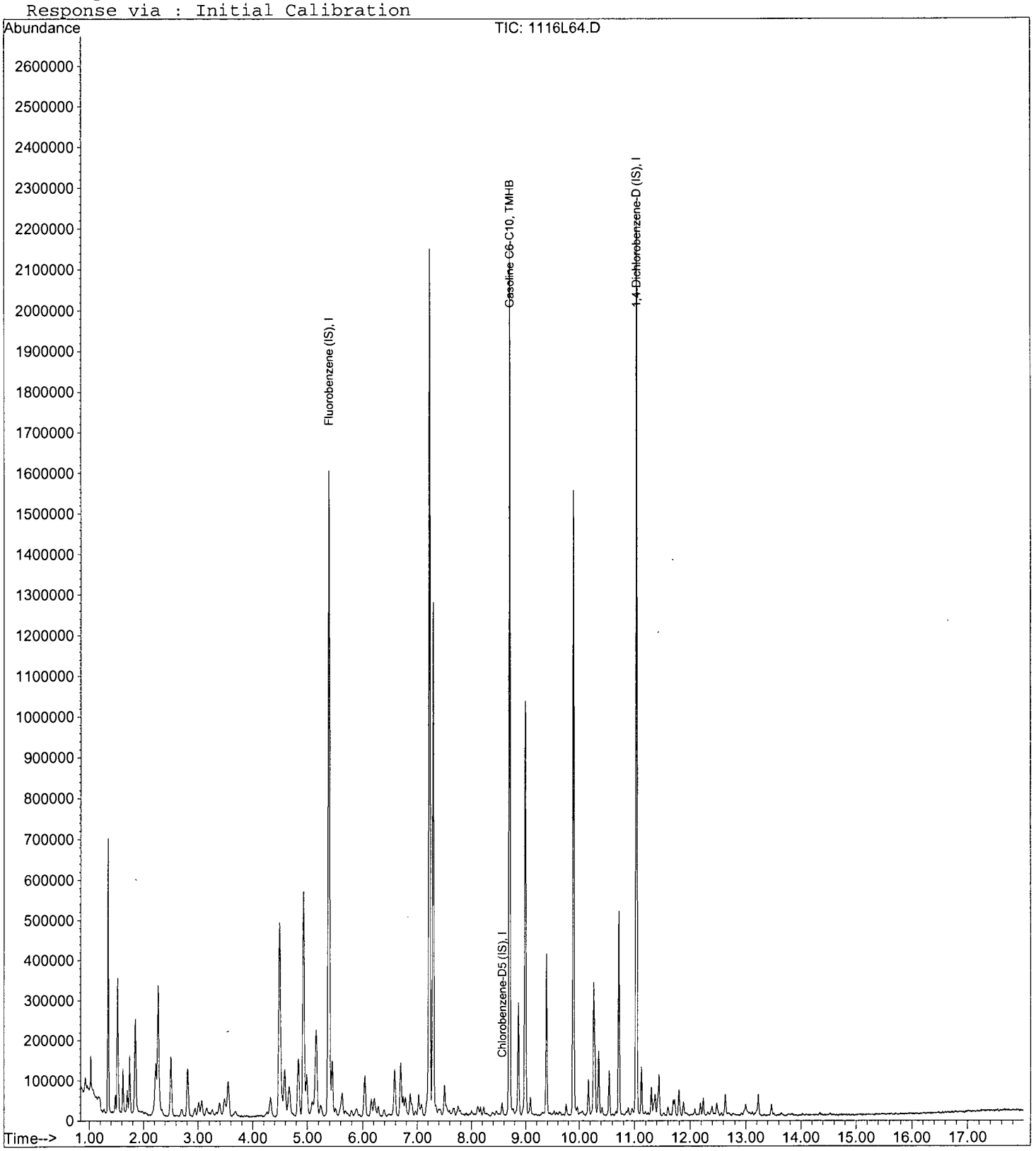
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1116L64.D Vial: 54
Acq On : 17 Nov 16 13:52 Operator: PM,DG,SV,CMM
Sample : AZ45866W456 MS-1WL 300ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 14:42 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1116L65.D Vial: 55
Acq On : 17 Nov 16 14:20 Operator: PM,DG,SV,CMM
Sample : AZ45866W456 MSD-1WL 300ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 14:43 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1539852	25.00 ppb	-0.10
3) Chlorobenzene-D5 (IS)	8.57	TIC	30749	25.00 ppb	-0.22
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	2222588	25.00 ppb	-0.09

System Monitoring Compounds

Target Compounds					Qvalue
2) Gasoline C6-C10	7.22	TIC	30978025m	267.93 ppb	100

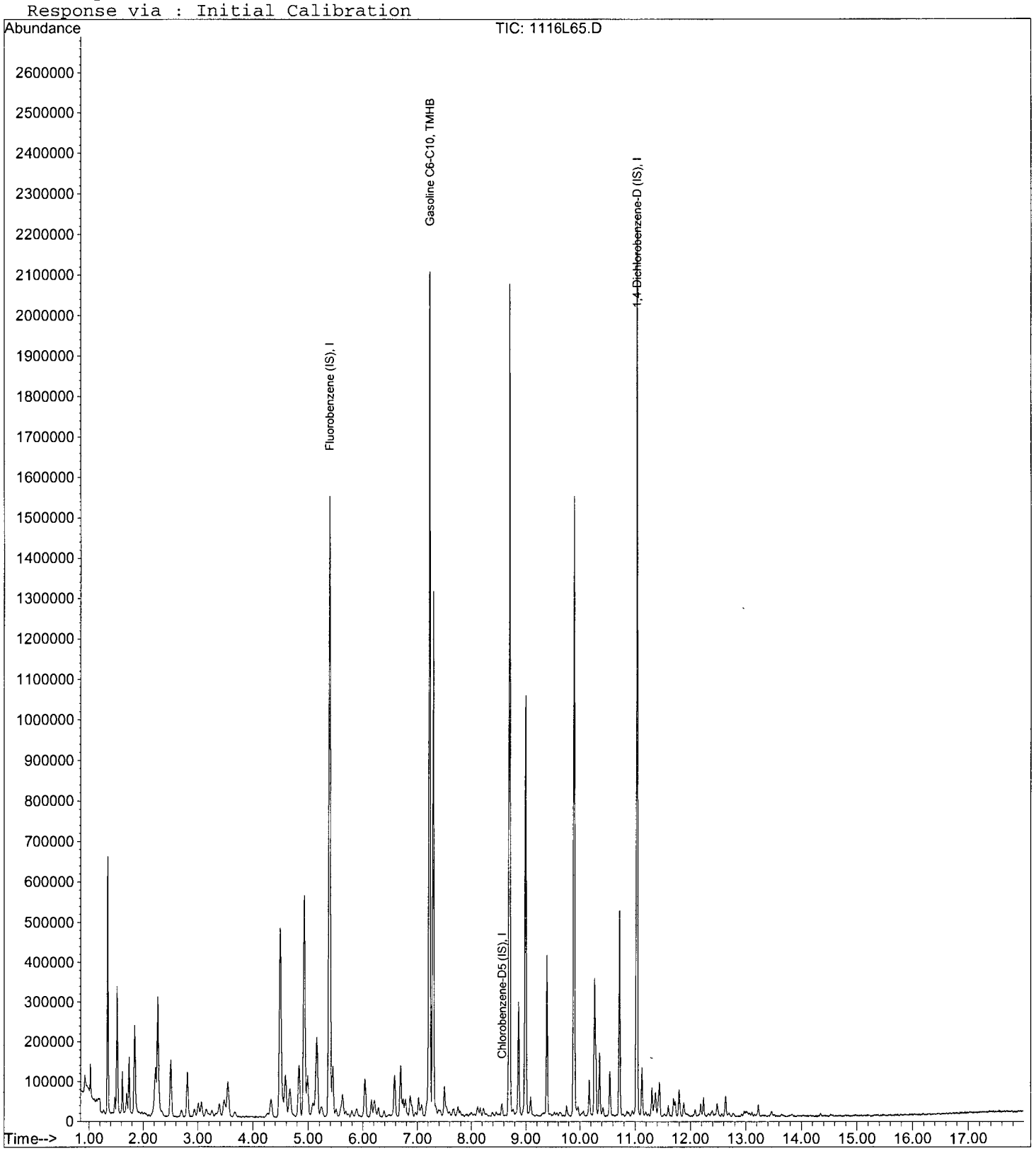
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1116L65.D Vial: 55
Acq On : 17 Nov 16 14:20 Operator: PM,DG,SV,CMM
Sample : AZ45866W456 MSD-1WL 300ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 14:43 2016 Quant Results File: LGAS6718.RES

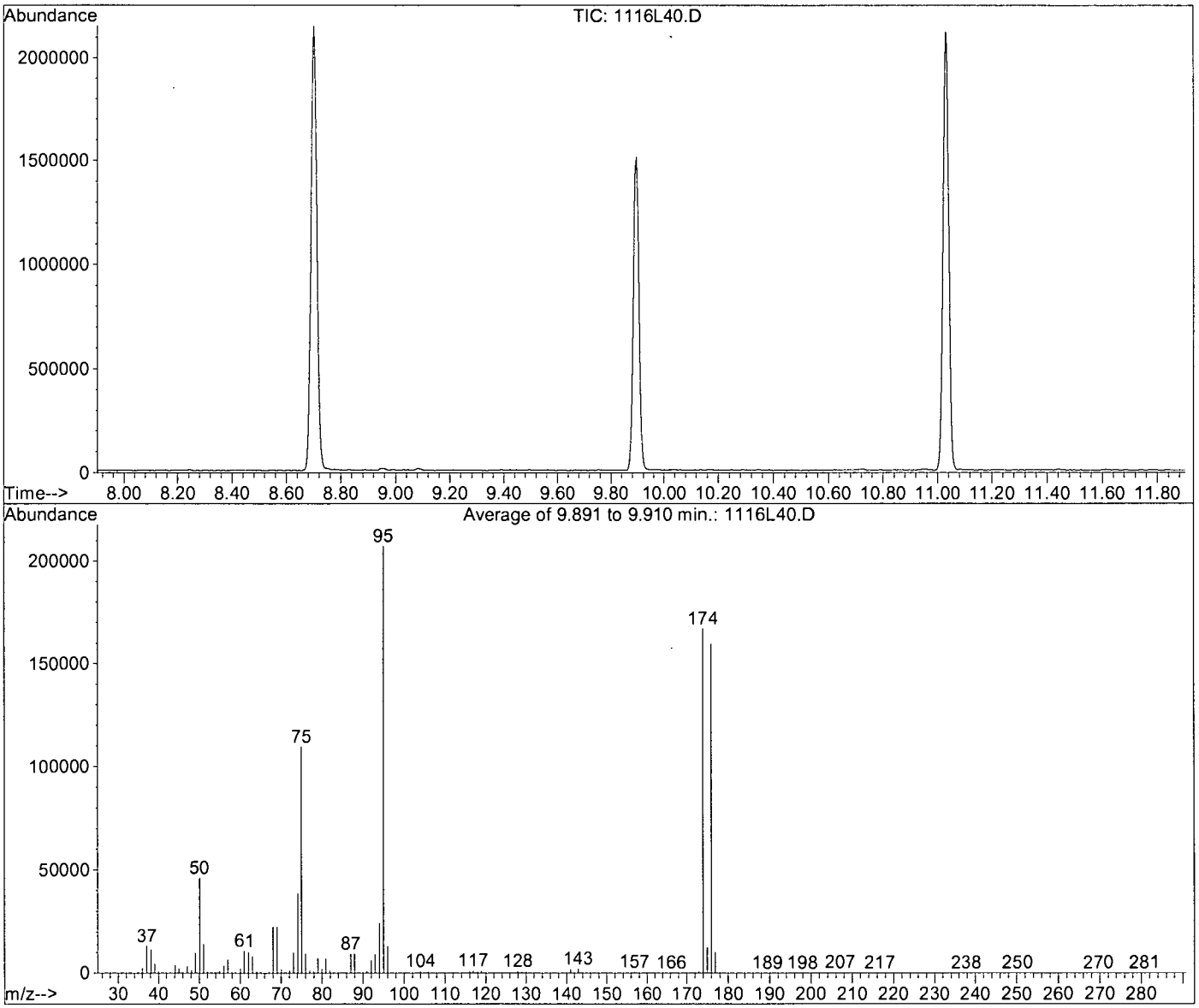
Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



Data File : M:\LOKI\DATA\161113\1116L40.D
Acq On : 17 Nov 16 2:40
Sample : 5ng- BFB STD 10-12-16
Misc : W IS&S 10/20/16, 11/04/16

Vial: 30
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B



Spectrum Information: Average of 9.891 to 9.910 min.

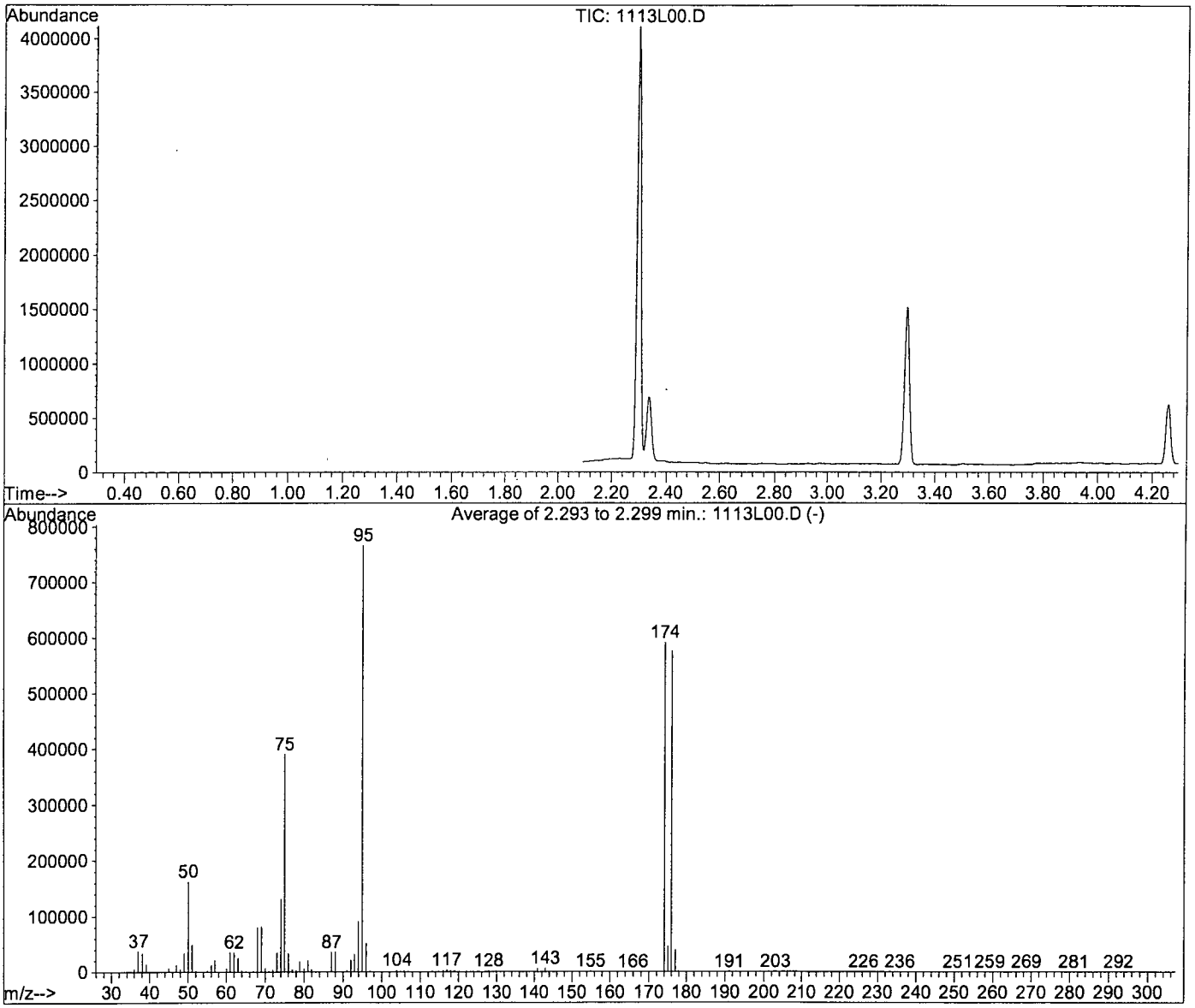
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	22.2	46054	PASS
75	95	30	60	52.8	109456	PASS
95	95	100	100	100.0	207329	PASS
96	95	5	9	6.2	12888	PASS
173	174	0.00	2	0.4	736	PASS
174	95	50	100	80.6	167099	PASS
175	174	5	9	7.4	12423	PASS
176	174	95	101	95.6	159750	PASS
177	176	5	9	6.3	10123	PASS

1116L40.D LALLW.M Thu Nov 17 11:53:20 2016

Data File : M:\LOKI\DATA\161113\1113L00.D
Acq On : 13 Nov 16 11:20
Sample : 5ng- BFB STD 10-12-16
Misc : 2ul

Vial: 1
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B



AutoFind: Scans 63, 64, 65; Background Corrected with Scan 54

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.1	161951	PASS
75	95	30	60	50.9	390227	PASS
95	95	100	100	100.0	766024	PASS
96	95	5	9	6.7	51629	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	77.2	591488	PASS
175	174	5	9	7.8	45844	PASS
176	174	95	101	97.4	576224	PASS
177	176	5	9	6.8	39248	PASS

1113L00.D LALLW.M Tue Nov 15 10:38:58 2016

Gasoline Curve Preparation for 100mL Purge (water)-LOKI			
Exp Date:	07/19/16	2000ug/ml	
		07/09/16B	Final Volume
	Conc.	Exp.03/31/21	w/ P&T H2O
Date/code	µg/L	uL	mL
07/18/16	20	1	100
07/18/16	50	2.5	100
07/18/16	100	5	100
07/18/16	300	15	100
07/18/16	600	30	100
07/18/16	800	40	100
07/18/16	1000	50	100

Gasoline SECOND SOURCE preparation @300ppb-Loki			
Exp Date.	07/10/16	2000ug/ml	
		07/08/16B	Final Volume
	Conc.	Exp.05-04-18	w/ P&T H2O
Date/code	µg/L	uL	mL
07/11/16	300	15	100

Volatile Standard Curve Preparation for 10mL Purge (8260 water)-LOKI										
Exp Date:	11/14/16	5µg/mL	5µg/mL	5µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	250µg/mL	
		Vol Std #9	Vol Std #10	Vol Std #12	Vol Std #7	Vol Std #8	Vol Std #1	Vol Std #2	TBA	
		11/12/16N	11/12/16O	11/12/16P	11/12/16J	11/12/16L	11/12/16K	11/12/16M	11/12/16Q	Final Vol
	Conc.	12/12/16	12/12/16	12/12/16	12/12/16	12/12/16	12/12/16	12/12/16	12/12/16	w/P&T H2O
Date/code	µg/L	ul	ul	ul	ul	ul	ul	ul	ul	mL
11/13/16J-CMM	0.3	3	3	3	n/a	n/a	n/a	n/a	2	50
11/13/16K-CMM	0.5	5	5	5	n/a	n/a	n/a	n/a	5	50
11/13/16L-CMM	1	10	10	10	n/a	n/a	n/a	n/a	10	50
11/13/16M-CMM	2	20	20	20	n/a	n/a	n/a	n/a	15	50
11/13/16N-CMM	5	n/a	n/a	n/a	5	5	5	5	20	50
11/13/16O-CMM	10	n/a	n/a	n/a	10	10	10	10	25	50
11/13/16P-CMM	20	n/a	n/a	n/a	20	20	20	20	30	50
11/13/16Q-CMM	40	n/a	n/a	n/a	40	40	40	40	35	50
11/13/16R-CMM	100	n/a	n/a	n/a	100	100	100	100	40	50

Injection Log

Directory: M:\LOKI\DATA\160718\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	18	0718L21.D	1	20ug/L GAS STD 7/18/16L	10mL W IS:S 7/16/16,7/18/1	18 Jul 16 20:20
2	19	0718L22.D	1	50ug/L GAS STD 7/18/16L	10mL W IS:S 7/16/16,7/18/1	18 Jul 16 20:48
3	20	0718L23.D	1	100ug/L GAS STD 7/18/16L	10mL W IS:S 7/16/16,7/18/1	18 Jul 16 21:17
4	21	0718L24.D	1	300ug/L GAS STD 7/18/16L	10mL W IS:S 7/16/16,7/18/1	18 Jul 16 21:45
5	22	0718L25.D	1	600ug/L GAS STD 7/18/16L	10mL W IS:S 7/16/16,7/18/1	18 Jul 16 22:13
6	23	0718L26.D	1	800ug/L GAS STD 7/18/16L	10mL W IS:S 7/16/16,7/18/1	18 Jul 16 22:41
7	24	0718L27.D	1	1000ug/L GAS STD 7/18/16L	10mL W IS:S 7/16/16,7/18/1	18 Jul 16 23:10
8	27	0718L30.D	1	(SS)300ug/L GAS STD 7/18/16L	10mL W IS:S 7/16/16,7/18/1	19 Jul 16 00:34
9	1	1113L00.D	1	5ng- BFB STD 10-12-16	2ul	13 Nov 16 11:20
10	5	1113L05.D	1	0.3ug/L VOC STD 11/13/16J	1uL-5ppb	13 Nov 16 13:35
11	6	1113L06.D	1	0.5ug/L VOC STD 11/13/16K	1uL-5ppb	13 Nov 16 14:04
12	7	1113L07.D	1	1.0ug/L VOC STD 11/13/16L	2uL-10ppb	13 Nov 16 14:32
13	8	1113L08.D	1	2.0ug/L VOC STD 11/13/16M	2uL-10ppb	13 Nov 16 15:00
14	9	1113L09.D	1	5.0ug/L VOC STD 11/13/16AN	5uL-25ppb	13 Nov 16 15:28
15	10	1113L10.D	1	10ug/L VOC STD 11/13/16O	5uL-25ppb	13 Nov 16 15:56
16	11	1113L11.D	1	20ug/L VOC STD 11/13/16P	10uL-50ppb	13 Nov 16 16:24
17	12	1113L12.D	1	40ug/L VOC STD 11/13/16Q	10uL-50ppb	13 Nov 16 16:53
18	13	1113L13.D	1	100ug/L VOC STD 11/13/16R	20uL-100ppb	13 Nov 16 17:21
19	17	1113L17.D	1	(SS) 10ug/L VOC STD 11/13/16	W IS&S 10/20/16, 11/04/16	13 Nov 16 19:14
20	30	1116L40.D	1	5ng- BFB STD 10-12-16	W IS&S 10/20/16, 11/04/16	17 Nov 16 2:40
21	32	1116L42.D	1	161116B CCV/LCS 10ug/L	W IS&S 10/20/16, 11/04/16	17 Nov 16 3:36
22	33	1116L43.D	1	161116B CCV/LCS 10ug/L	W IS&S 10/20/16, 11/04/16	17 Nov 16 4:04
23	36	1116L46.D	1	161116B BLK-1WL	W IS&S 10/20/16, 11/04/16	17 Nov 16 5:28
24	44	1116L54.D	1	161116A CCV/LCS 300ug/L	W IS&S 10/20/16, 11/04/16	17 Nov 16 9:11
25	45	1116L55.D	1	161116A CCV/LCS 300ug/L	W IS&S 10/20/16, 11/04/16	17 Nov 16 9:39
26	46	1116L56.D	1	AZ45865W01	W IS&S 10/20/16, 11/04/16	17 Nov 16 10:07
27	47	1116L57.D	1	AZ45866W01	W IS&S 10/20/16, 11/04/16	17 Nov 16 10:35
28	48	1116L58.D	1	AZ45867W01	W IS&S 10/20/16, 11/04/16	17 Nov 16 11:03
29	49	1116L59.D	1	AZ45868W01	W IS&S 10/20/16, 11/04/16	17 Nov 16 11:32
30	52	1116L62.D	1	AZ45866W234 MS-1WL 10ug/L	W IS&S 10/20/16, 11/04/16	17 Nov 16 12:56
31	53	1116L63.D	1	AZ45866W234 MSD-1WL 10ug/L	W IS&S 10/20/16, 11/04/16	17 Nov 16 13:24
32	54	1116L64.D	1	AZ45866W456 MS-1WL 300ug/L	W IS&S 10/20/16, 11/04/16	17 Nov 16 13:52
33	55	1116L65.D	1	AZ45866W456 MSD-1WL 300ug/L	W IS&S 10/20/16, 11/04/16	17 Nov 16 14:20
34	56	1116L66.D	1	Ending CCV 8260 10ug/L 11/16/16	W IS&S 10/20/16, 11/04/16	17 Nov 16 14:48
35	59	1116L69.D	1	Ending CCV 8260 300ug/L 11/16/16	W IS&S 10/20/16, 11/04/16	17 Nov 16 16:08

ORGANICS

APPL, INC.

ORGANICS
QC Summary

APPL, INC.

Method Blank
METHANE

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161119W-45866 - 213991**
Batch ID: #RSKME-161119A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	METHANE	1.00 U	5.0	1.00	0.25	ug/L	11/19/16	11/19/16

Quant Method: RSK0901.M
Run #: 1119001
Instrument: Rocky
Sequence: 160901
Initials: CMO

GC SC-Blank-REG MDLs-DOD
Printed: 11/25/16 12:52:14 PM

Laboratory Control Spike Recovery
METHANE

APPL ID: **161119W-45866 LCS - 213991**
Batch ID: #RSKME-161119A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
METHANE	320	306	95.5	72-125

Comments: _____

Primary	SPK
Quant Method :	RSK0901.M
Extraction Date :	11/19/16
Analysis Date :	11/19/16
Instrument :	Rocky
Run :	1119000
Initials :	CMO

Printed: 11/25/16 12:52:03 PM
APPL Standard LCS

Matrix Spike Recoveries

METHANE

APPL ID: **161119W-45866 MS - 213991**
Batch ID: #RSKME-161119A
Sample ID: AZ45866
Client ID: ERH115

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
METHANE	320	ND	459	481	143 #	150 #	72-125	4.7	30

= Recovery is outside QC limits.

Comments:

Primary	SPK	DUP
Quant Method :	RSK0901.M	RSK0901.M
Extraction Date :	11/19/16	11/19/16
Analysis Date :	11/19/16	11/19/16
Instrument :	Rocky	Rocky
Run :	1119004	1119005
Initials :	CMO	

Printed: 11/25/16 12:51:59 PM
APPL MSD SCII

RSK 175

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81492

Case No: 81492 Date Analyzed: 11/19/16

Matrix: WATER Instrument: Rocky

Blank ID: 161119A-BLK Time Analyzed: 1216

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161119A-LCS	Lab Control Spike	1119000	11/19/16 1151
161119A-BLK	Blank	1119001	11/19/16 1216
AZ45865	ERH114	1119002	11/19/16 1221
AZ45866	ERH115	1119003	11/19/16 1223
161119A-MS	Matrix Spike	1119004	11/19/16 1226
161119A-MSD	Matrix SpikeD	1119005	11/19/16 1228
AZ45868	ERH120	1119006	11/19/16 1230

Comments: Batch: #RSKME-161119A

Printed: 11/25/16 12:51:56 PM

Form 4, Blank Summary

ORGANICS
Sample Data

APPL, INC.

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH114
Sample Collection Date: 11/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81492
APPL ID: AZ45865
QCG: #RSKME-161119A-213991

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	11/19/16	11/19/16

Quant Method:	RSK0901.M
Run #:	1119002
Instrument:	Rocky
Sequence:	160901
Dilution Factor:	1
Initials:	CMO

Printed: 11/25/16 12:52:10 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1119002.D Vial: 1
Acq On : 19 Nov 16 12:21 Operator: lac
Sample : AZ45865W05 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Nov 25 13:10 2016 Quant Results File: RSK0901.RES

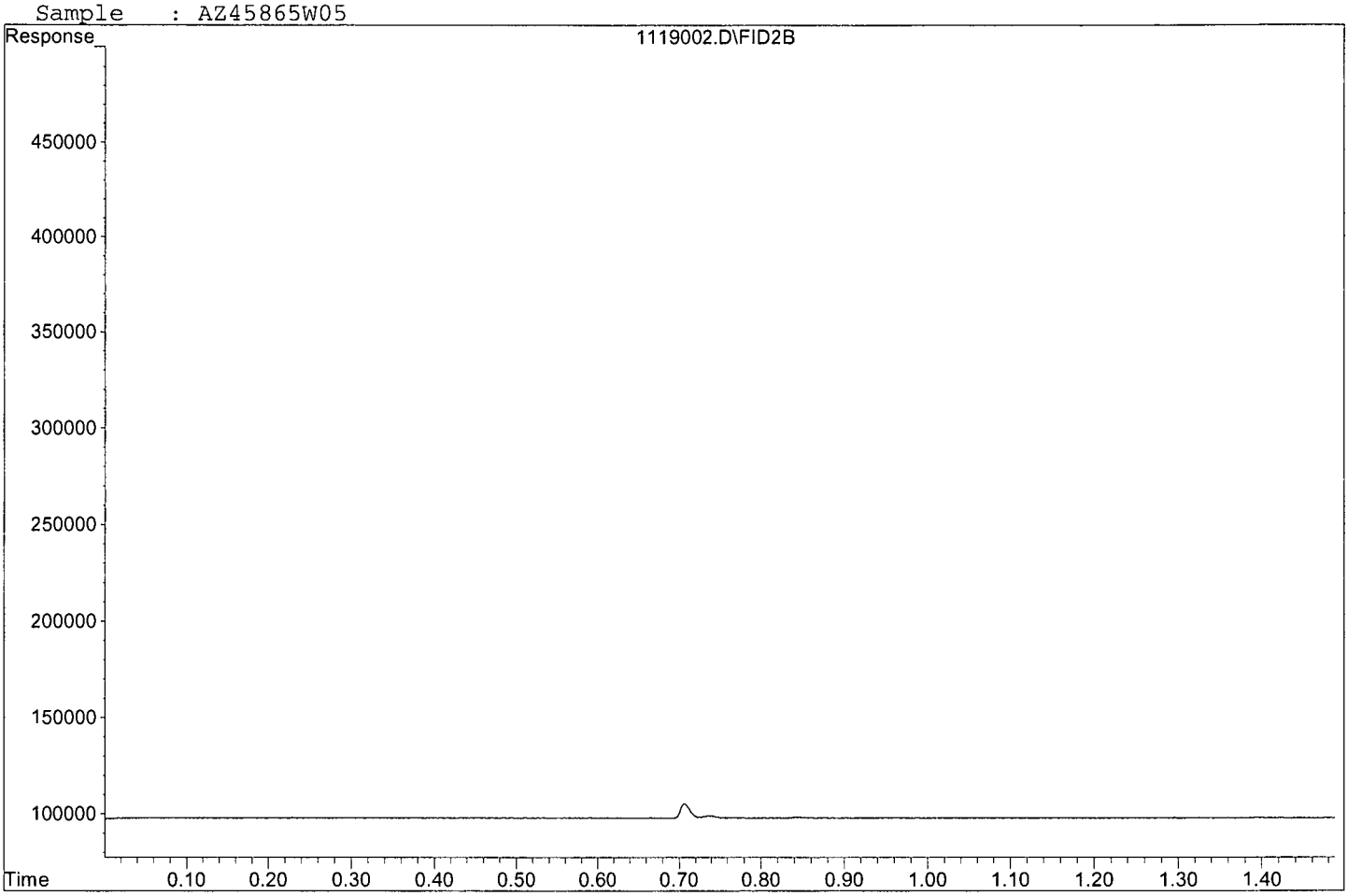
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Nov 23 12:26:39 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.74	1301	N.D.	ppb
2) ATM Ethane	0.87	287	N.D.	ppb
3) ATM Ethene	0.95	314	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1119002.D
Sample : AZ45865W05



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH115
Sample Collection Date: 11/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81492
APPL ID: AZ45866
QCG: #RSKME-161119A-213991

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	11/19/16	11/19/16

Quant Method:	RSK0901.M
Run #:	1119003
Instrument:	Rocky
Sequence:	160901
Dilution Factor:	1
Initials:	CMO

Printed: 11/25/16 12:52:10 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1119003.D Vial: 2
Acq On : 19 Nov 16 12:23 Operator: lac
Sample : AZ45866W07 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Nov 25 13:10 2016 Quant Results File: RSK0901.RES

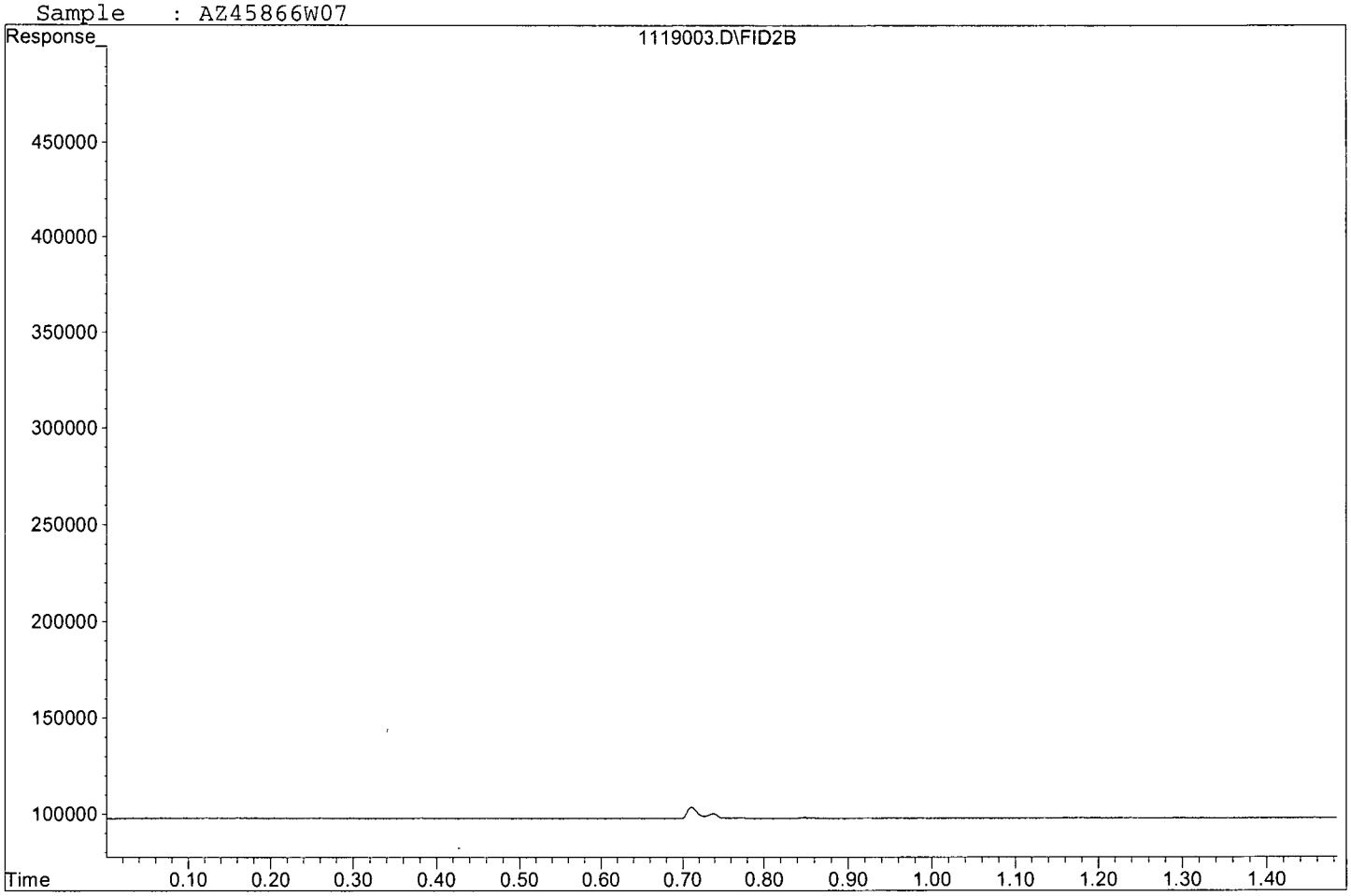
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Nov 23 12:26:39 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.74	2689	N.D.	ppb
2) ATM Ethane	0.88	240	N.D.	ppb
3) ATM Ethene	0.95	371	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1119003.D
Sample : AZ45866W07



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH120
Sample Collection Date: 11/14/16

ARF: 81492
APPL ID: AZ45868
QCG: #RSKME-161119A-213991

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	11/19/16	11/19/16

Quant Method:	RSK0901.M
Run #:	1119006
Instrument:	Rocky
Sequence:	160901
Dilution Factor:	1
Initials:	CMO

Printed: 11/25/16 12:52:10 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1119006.D Vial: 3
Acq On : 19 Nov 16 12:30 Operator: lac
Sample : AZ45868W05 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Nov 25 13:10 2016 Quant Results File: RSK0901.RES

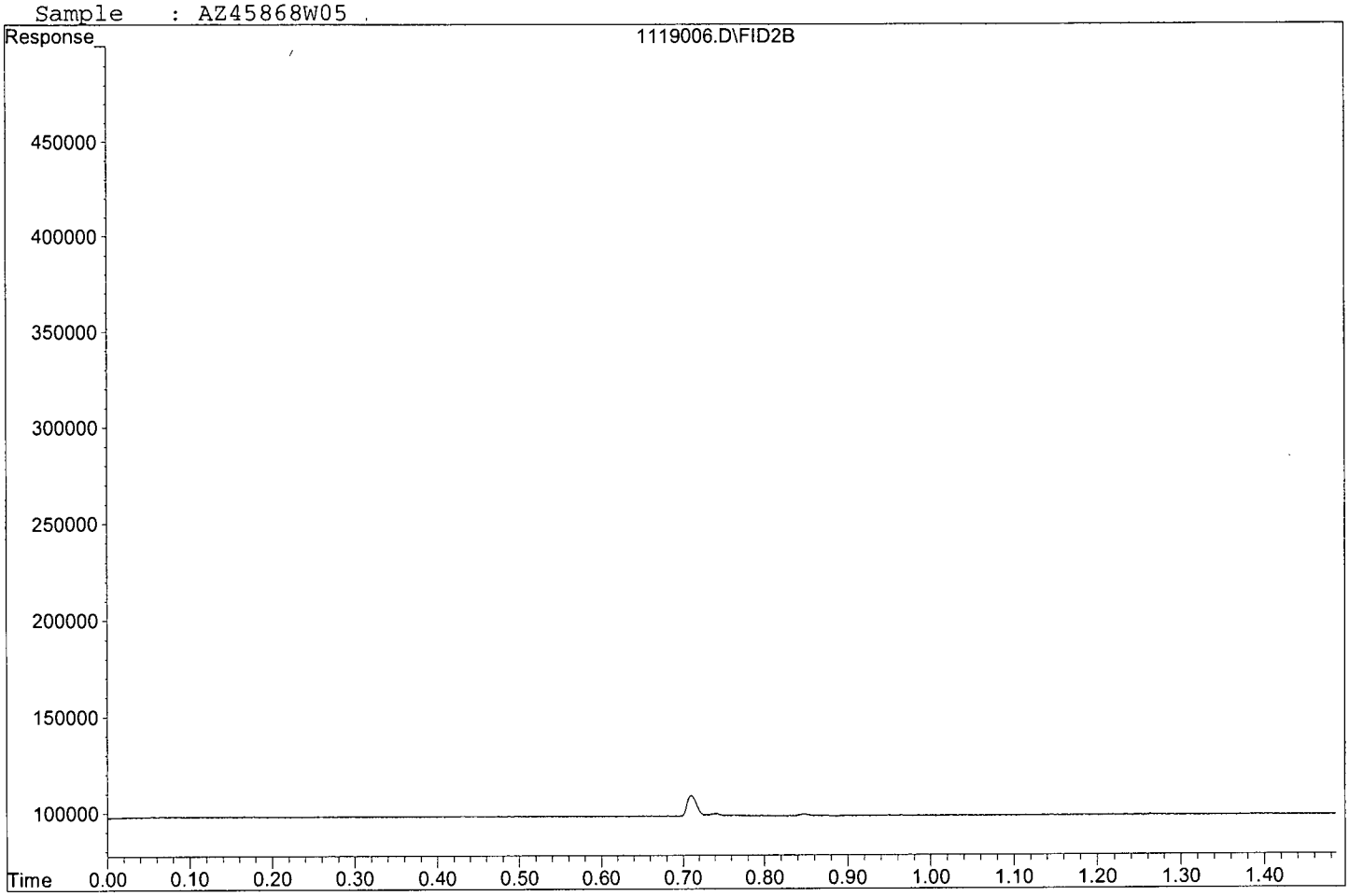
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Nov 23 12:26:39 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.74	1598	N.D.	ppb
2) ATM Ethane	0.87	521	N.D.	ppb
3) ATM Ethene	0.95	481	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1119006.D
Sample : AZ45868W05



ORGANICS
Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 09/01/16
Matrix: Instrument: 7890
Initials:

		Compound	0901000.D 1	0901001.D 2	0901002.D 3	0901003.D 4	0901004.D 5	0901005.D 6	0901006.D 7	0901007.D 8	0901008.D 9	0901009.D 10	Avg	%RSD		
1	ATM	Methane	7448	5672	3042	3435	1074	1006	1184	1314	1084	1089	2635	87	ATM	
2	ATM	Ethane	1509	1521	1416	2554	478	657	816	933	791	798	1147	54	ATM	
3	ATM	Ethene	1826	1525	1280	2301	444	570	693	733	628	626	1063	60	ATM	
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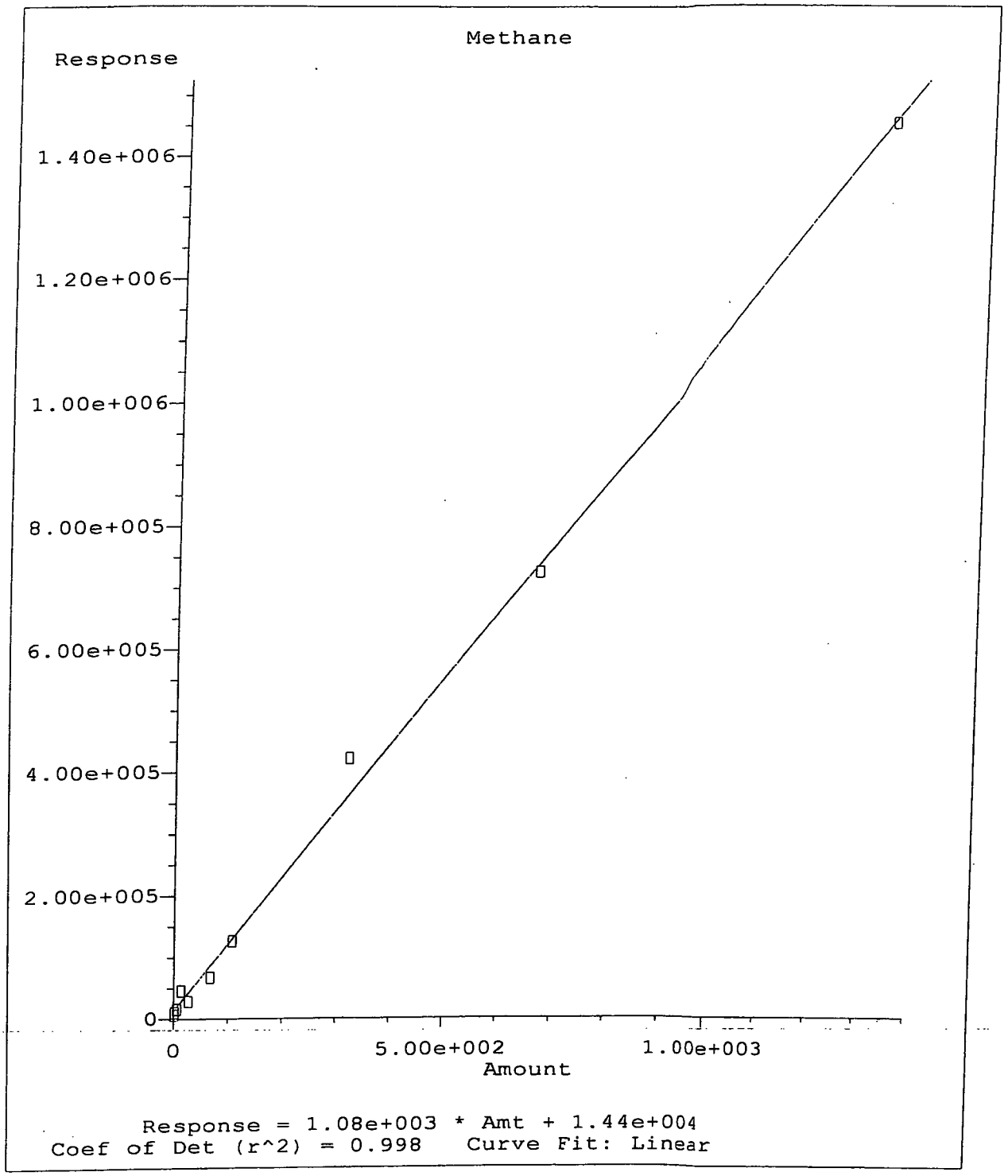
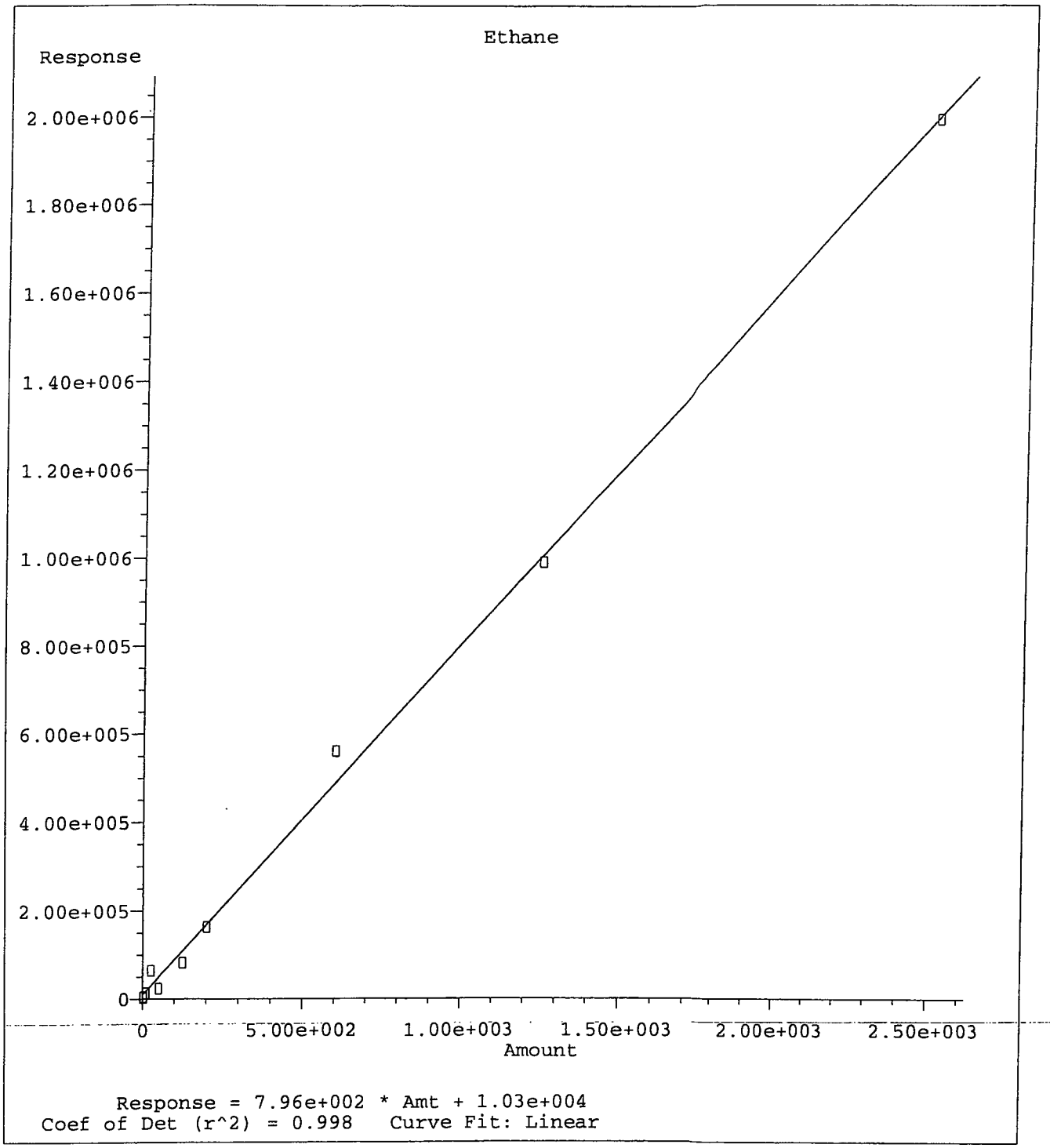
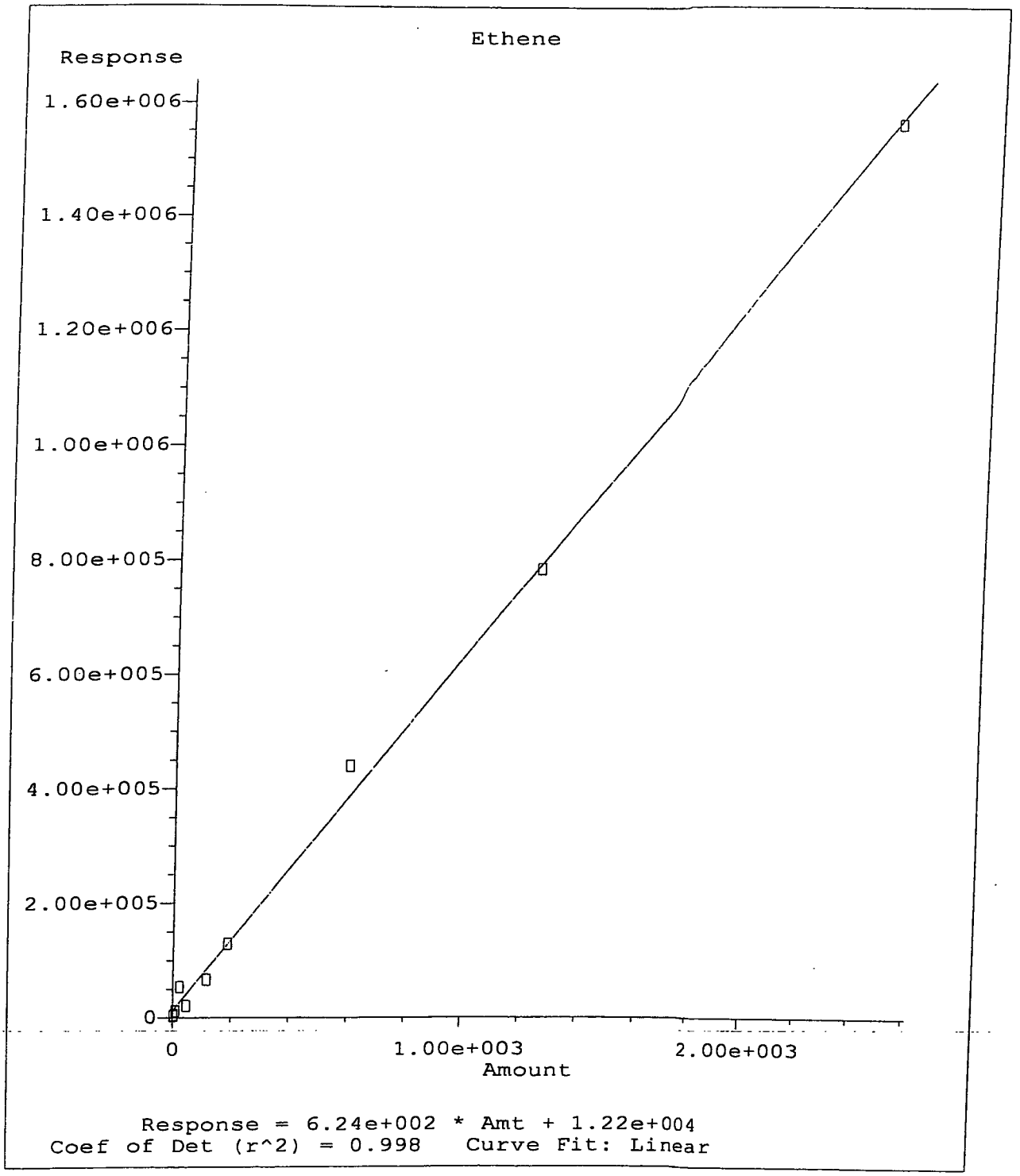
5.7170224



Method Name: G:\ROCKY\DATA\160901R\RSK0901.M
Calibration Table Last Updated: Fri Sep 02 15:25:38 2016



Method Name: G:\ROCKY\DATA\160901R\RSK0901.M
Calibration Table Last Updated: Thu Nov 10 08:49:51 2016



Method Name: G:\ROCKY\DATA\160901R\RSK0901.M
Calibration Table Last Updated: Fri Sep 02 15:25:38 2016

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901000.D Vial: 1
Acq On : 1 Sep 16 11:38 Operator: lac
Sample : RSK Level 1 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

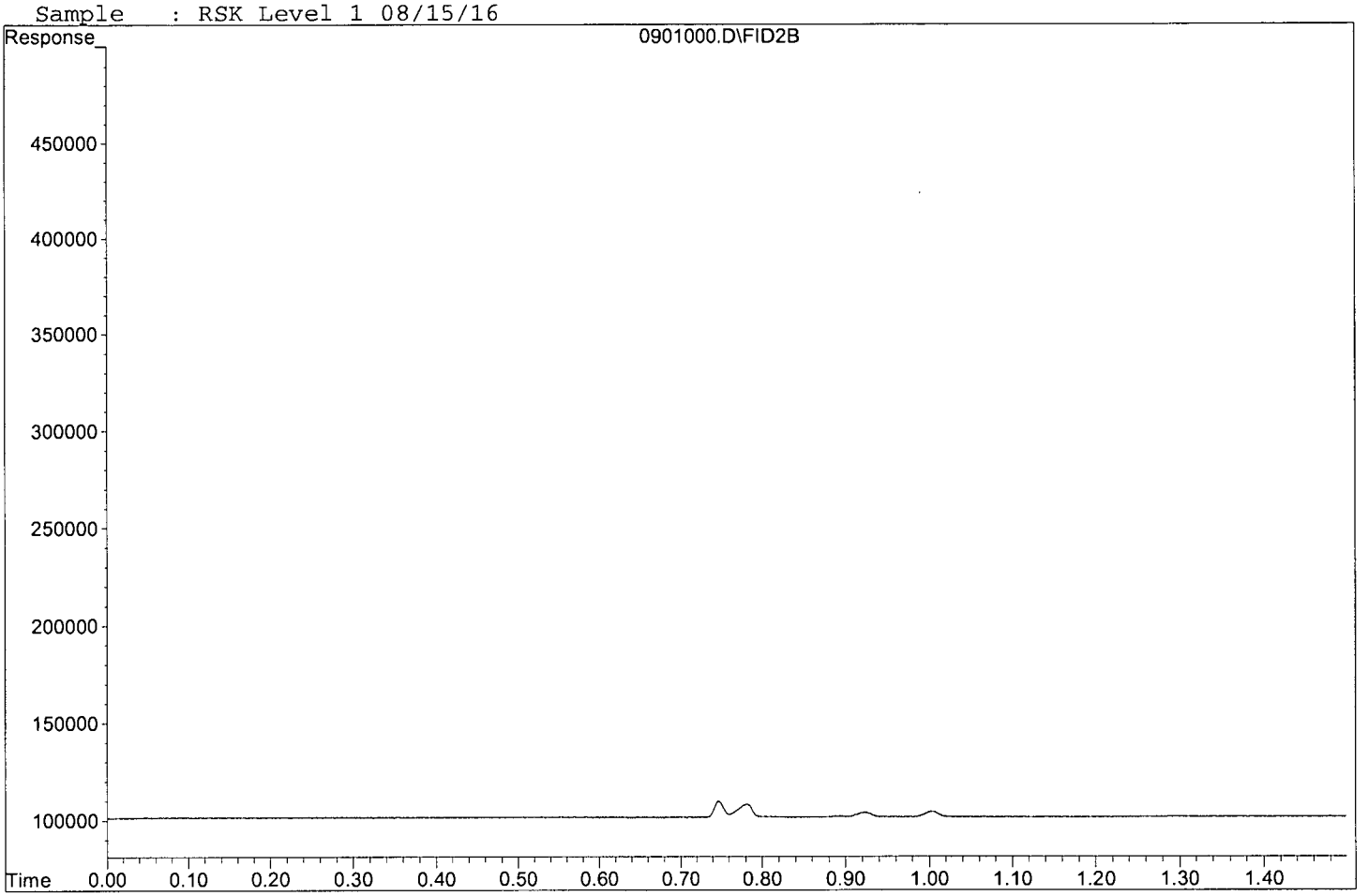
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.78	6703	N.D.	ppb
2) ATM Ethane	0.92	2566	N.D.	ppb
3) ATM Ethene	1.00	2922	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901000.D
Sample : RSK Level 1 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901001.D Vial: 2
Acq On : 1 Sep 16 11:41 Operator: lac
Sample : RSK Level 2 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

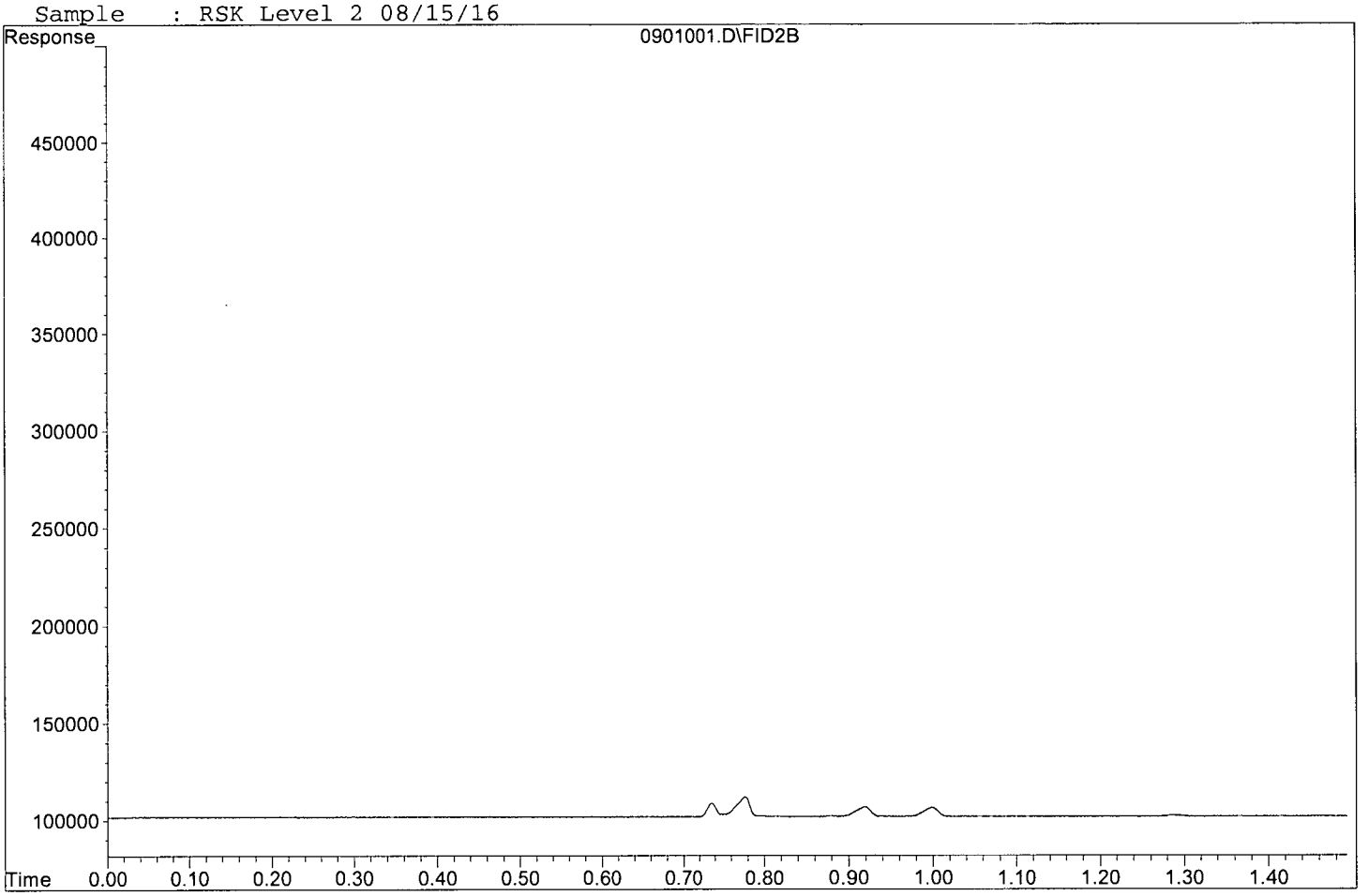
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.79	569	N.D.	ppb
2) ATM Ethane	0.94	352	N.D.	ppb
3) ATM Ethene	1.02	250	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901001.D
Sample : RSK Level 2 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901002.D Vial: 3
Acq On : 1 Sep 16 11:44 Operator: lac
Sample : RSK Level 3 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 14 13:31 2016 Quant Results File: RSK0901.RES

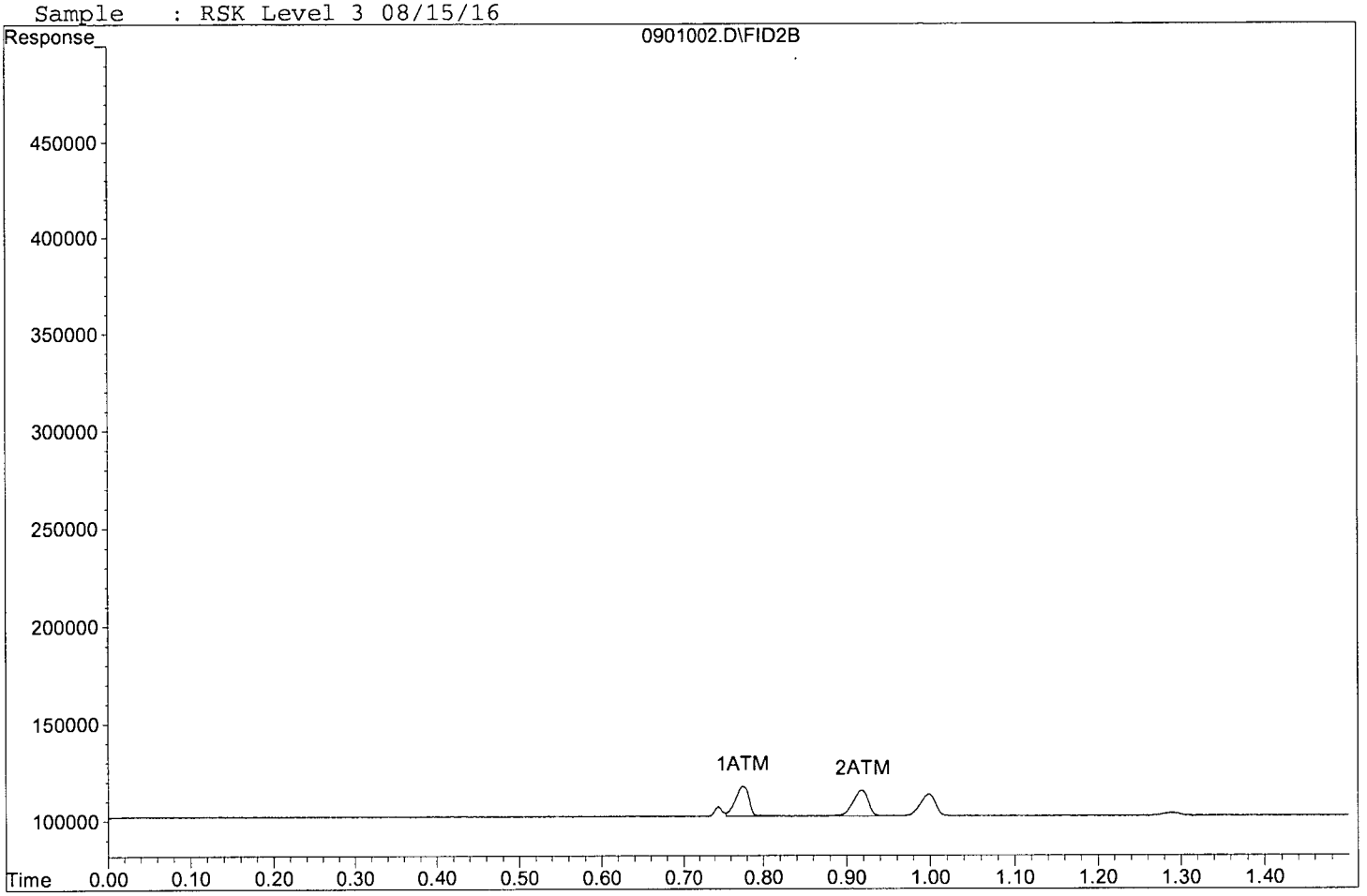
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.77	15515	1.054	ppb
2) ATM Ethane	0.92	13452	3.912	ppb
Target Compounds				
3) ATM Ethene	1.00	11390	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901002.D
Sample : RSK Level 3 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901003.D Vial: 4
Acq On : 1 Sep 16 11:46 Operator: lac
Sample : RSK Level 4 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

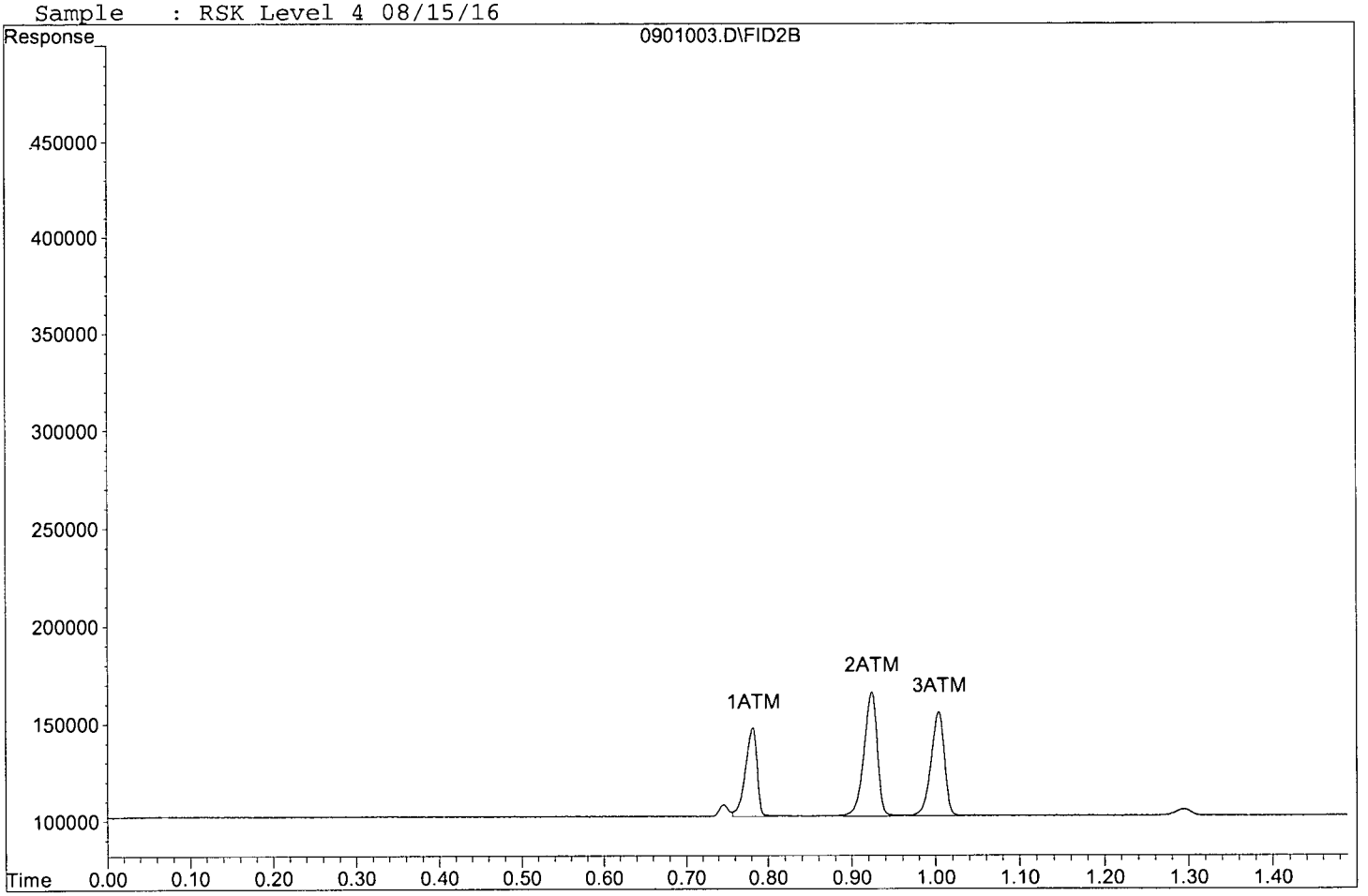
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.78	45792	29.006 ppb
2) ATM Ethane	0.92	63853	67.197 ppb
3) ATM Ethene	1.00	53608	66.354 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901003.D
Sample : RSK Level 4 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901004.D Vial: 5
Acq On : 1 Sep 16 11:48 Operator: lac
Sample : RSK Level 5 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

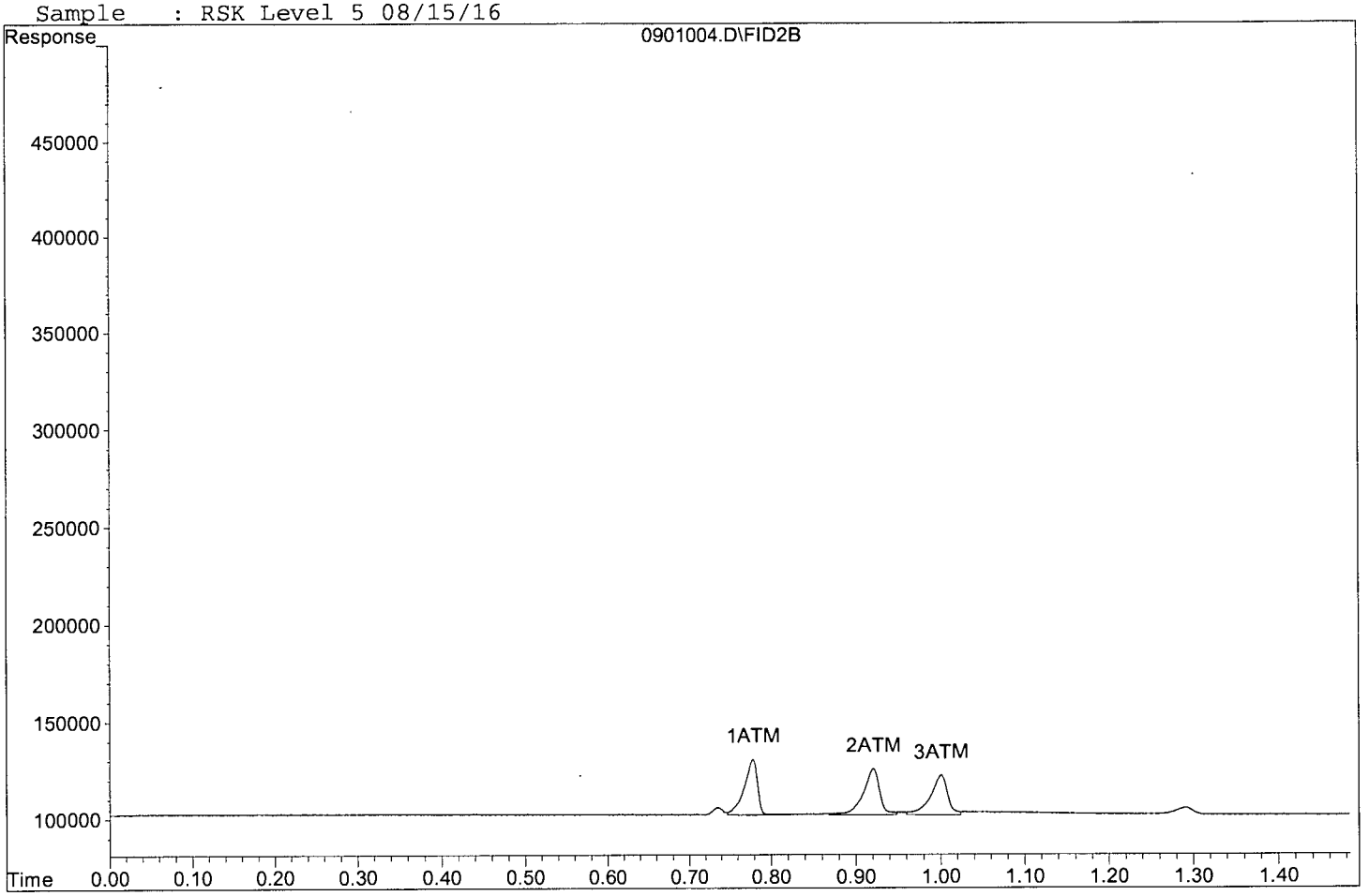
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.78	28664	13.193 ppb
2) ATM Ethane	0.92	23891	17.020 ppb
3) ATM Ethene	1.00	20700	13.631 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901004.D
Sample : RSK Level 5 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901005.D Vial: 6
Acq On : 1 Sep 16 11:50 Operator: lac
Sample : RSK Level 6 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

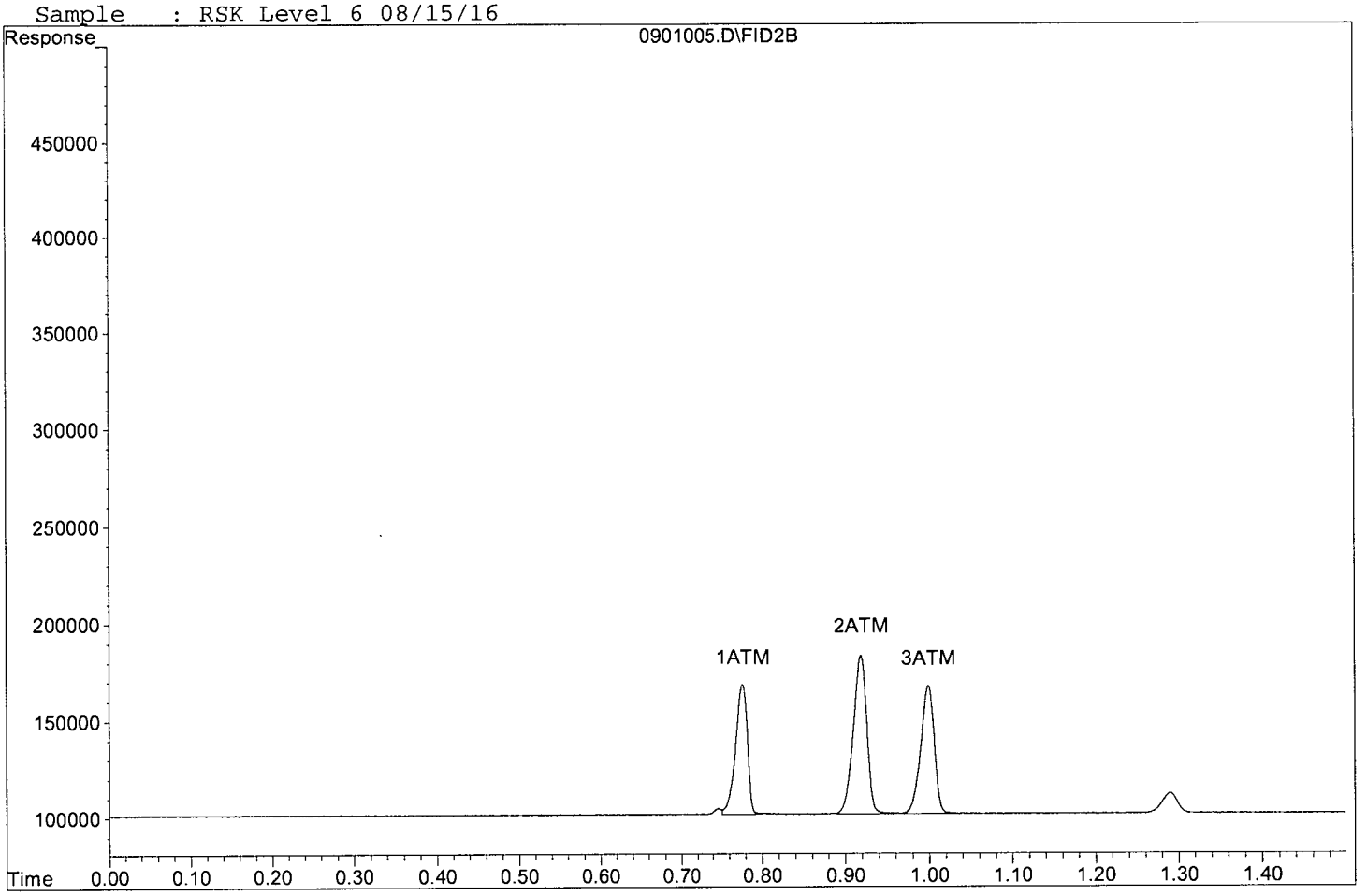
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.78	67137	48.712 ppb
2) ATM Ethane	0.92	82167	90.193 ppb
3) ATM Ethene	1.00	66348	86.764 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901005.D
Sample : RSK Level 6 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901006.D Vial: 7
Acq On : 1 Sep 16 11:52 Operator: lac
Sample : RSK Level 7 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

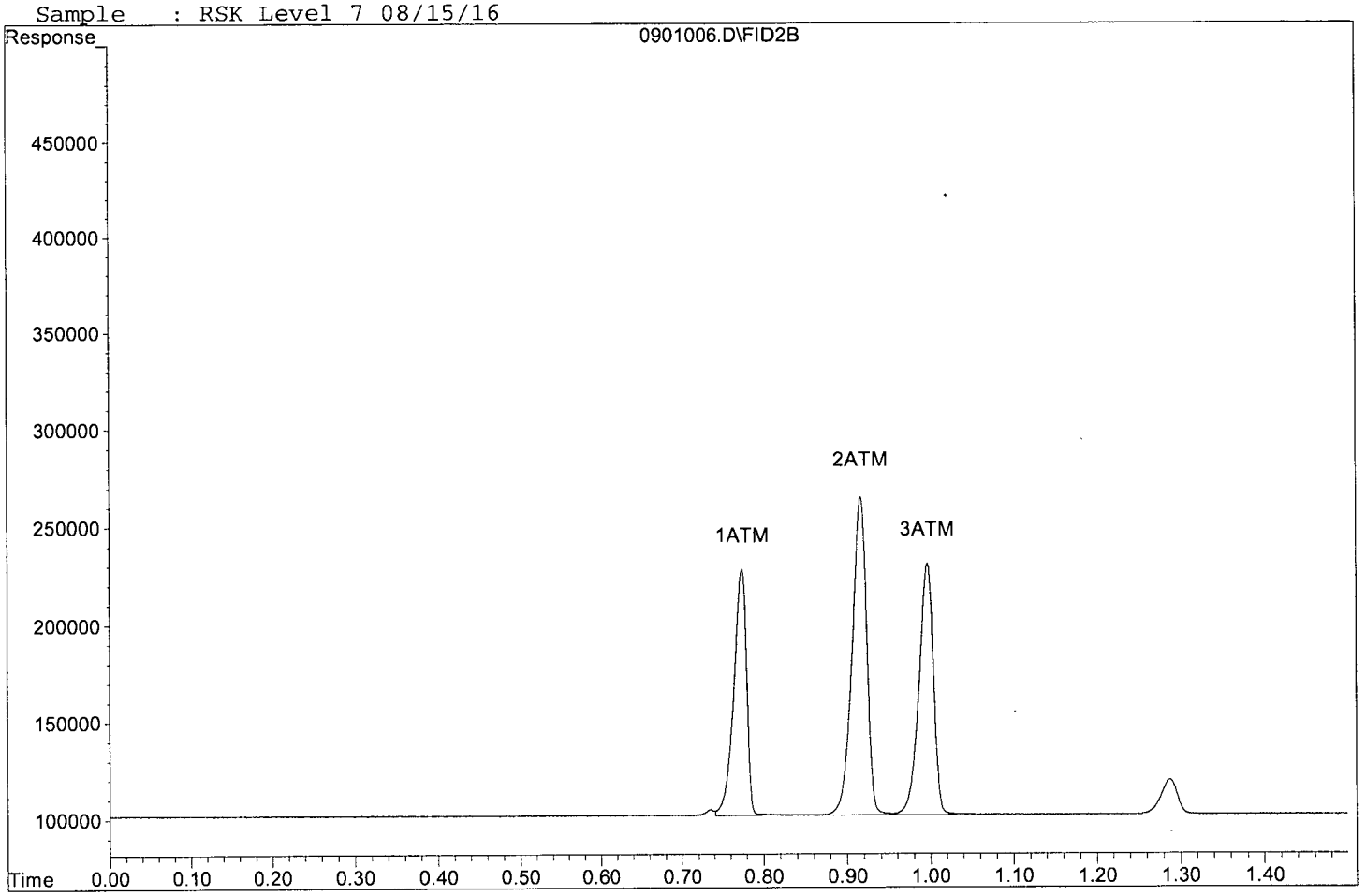
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.78	126422	103.446 ppb
2) ATM Ethane	0.92	163281	192.041 ppb
3) ATM Ethene	1.00	129200	187.460 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901006.D
Sample : RSK Level 7 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901007.D Vial: 8
Acq On : 1 Sep 16 11:55 Operator: lac
Sample : RSK Level 8 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

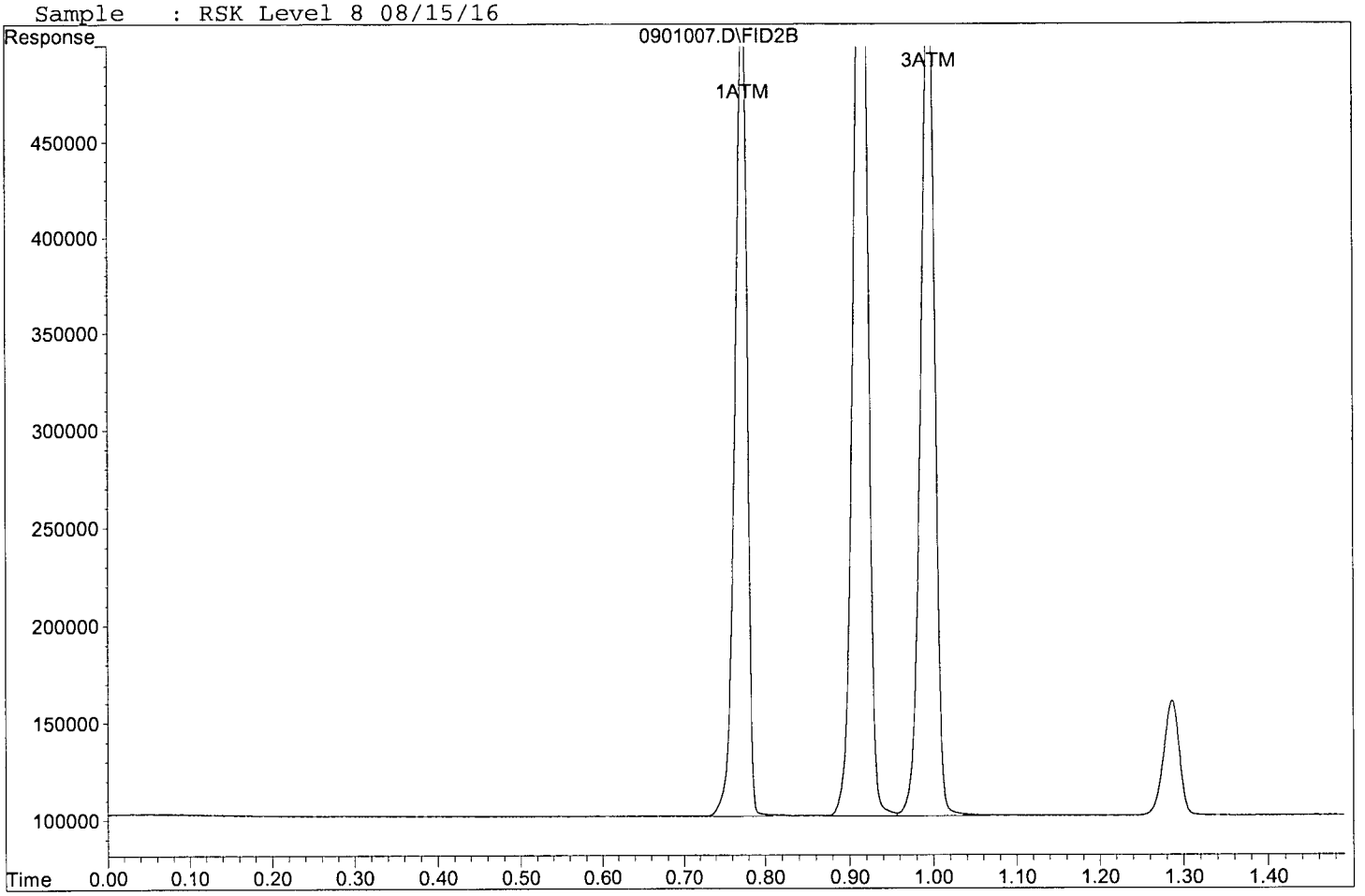
Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.77	421052	375.455 ppb
2) ATM Ethane	0.92	559640	689.720 ppb
3) ATM Ethene	1.00	439383	684.403 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\ROCKY\DATA\160901R\0901007.D
Sample : RSK Level 8 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901008.D Vial: 9
Acq On : 1 Sep 16 11:57 Operator: lac
Sample : RSK Level 9 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

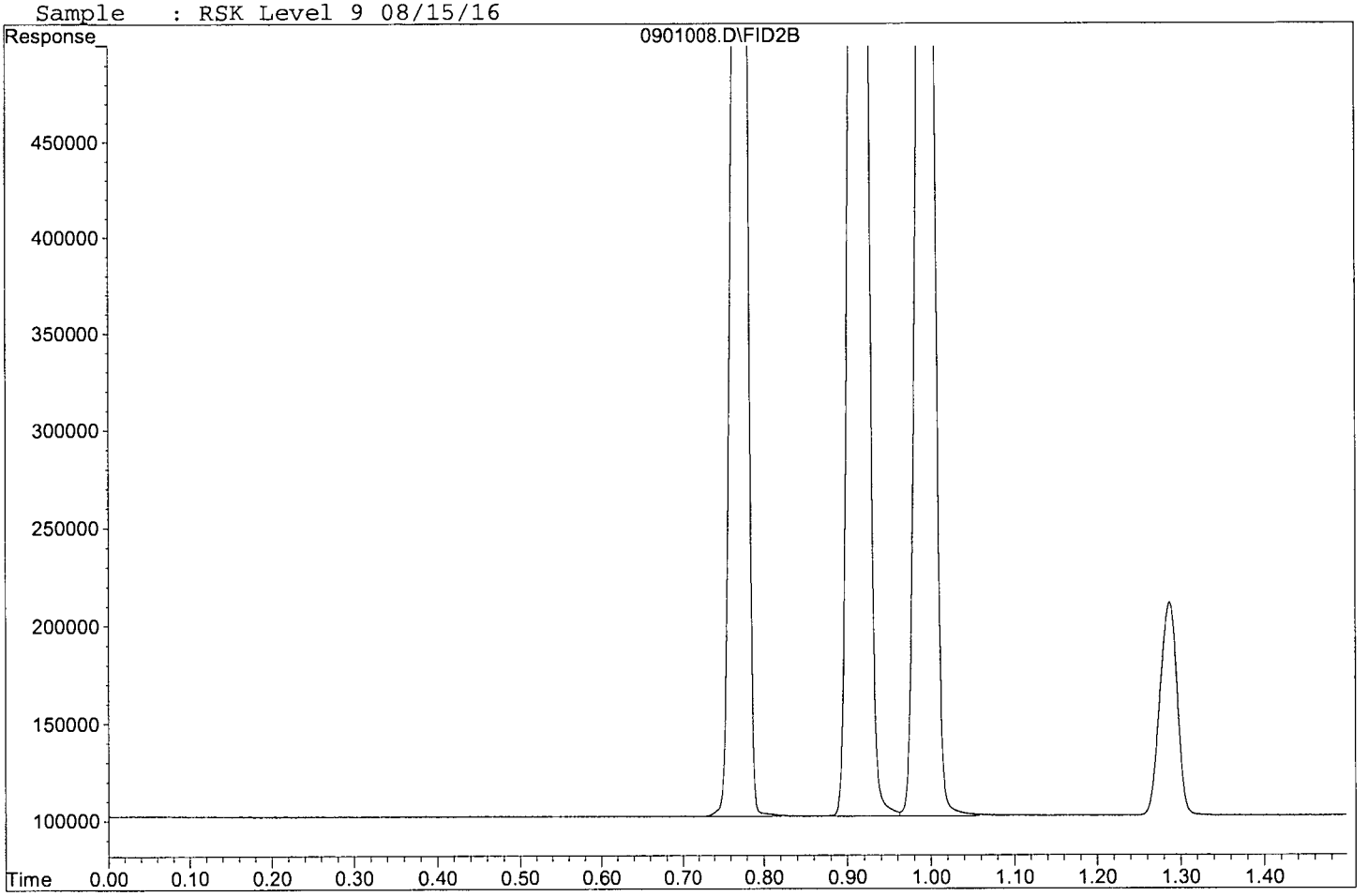
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.78	723824	654.982	ppb
2) ATM Ethane	0.92	989344	1229.268	ppb
3) ATM Ethene	1.00	783615	1235.897	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901008.D
Sample : RSK Level 9 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901009.D Vial: 10
Acq On : 1 Sep 16 11:59 Operator: lac
Sample : RSK Level 10 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

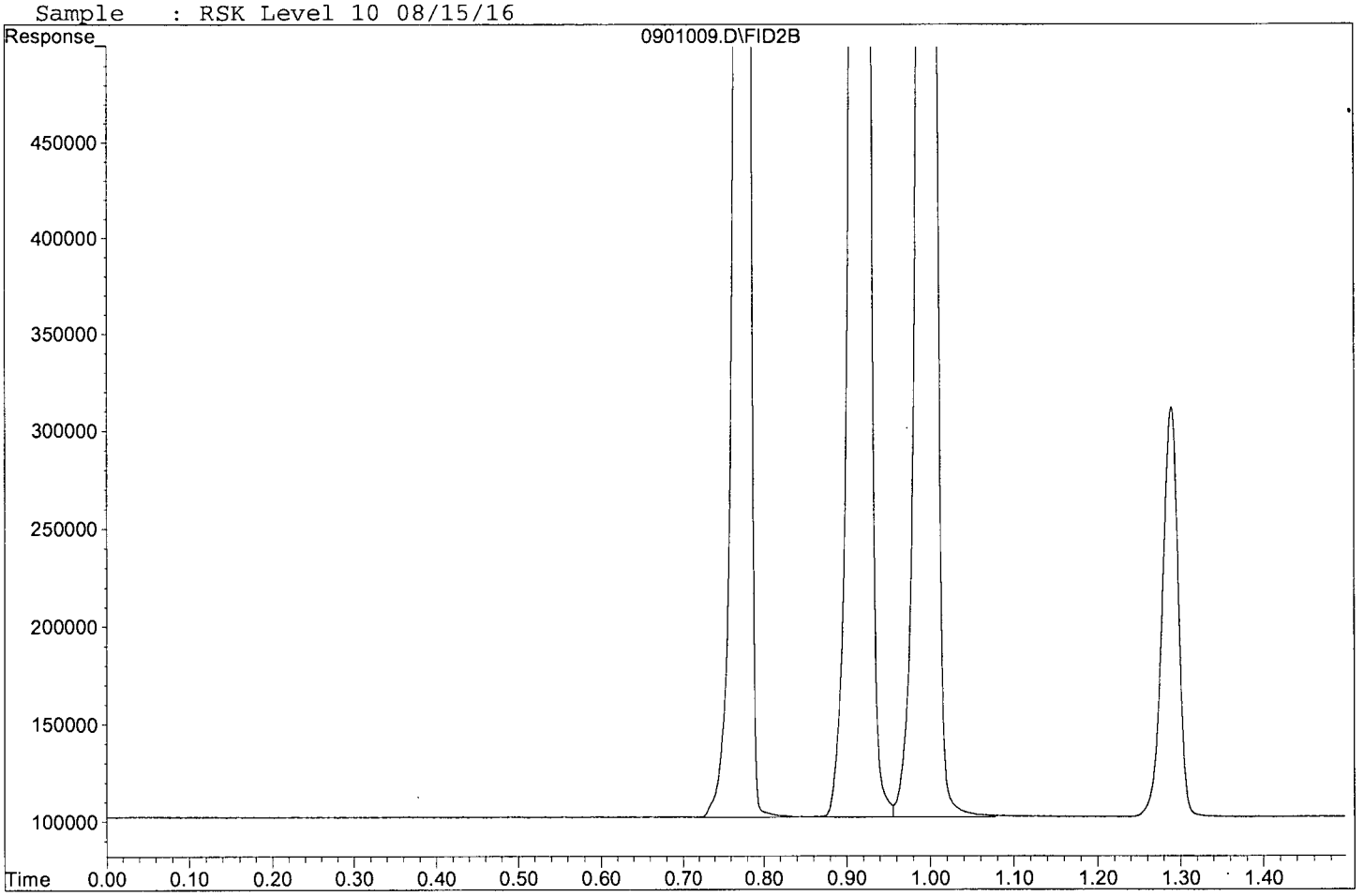
Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.78	1454283	1329.358	ppb
2) ATM Ethane	0.92	1994598	2491.490	ppb
3) ATM Ethene	1.00	1562244	2483.337	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\ROCKY\DATA\160901R\0901009.D
Sample : RSK Level 10 08/15/16



Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 1 Sep 16 13:11
Instrument: 7890
Initial Cal. Date: 09/01/16
Data File: 0901018.D

		Compound	MEAN	CCRF	%D	%Drift	
1	ATML	Methane	2635	1090	59	ATML	19
2	ATML	Ethane	1147	964	16	ATML	11
3	ATML	Ethene	1063	853	20	ATML	20
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38							
39							
40							
		Average			31.7		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901018.D Vial: 19
Acq On : 1 Sep 16 13:11 Operator: lac
Sample : (SS/LCS) RSK Level 6 09/01/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 1 13:16 2016 Quant Results File: RSK0901.RES

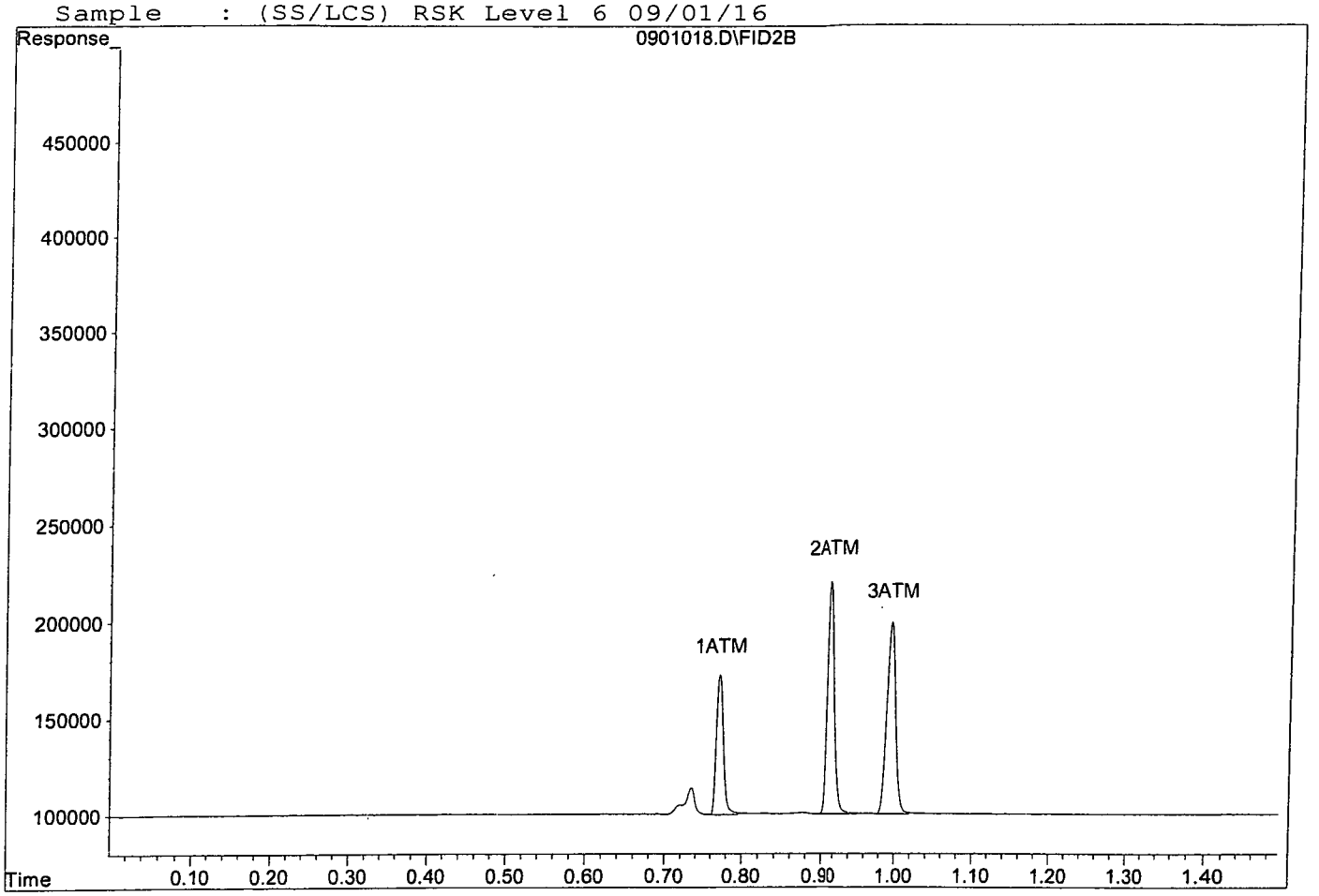
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Thu Sep 01 14:40:19 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.77	72750	53.894 ppb
2) ATM Ethane	0.91	120545	138.382 ppb
3) ATM Ethene	0.99	99349	139.636 ppb

Quantitation Report

Data File: G:\ROCKY\DATA\160901R\0901018.D
Sample : (SS/LCS) RSK Level 6 09/01/16



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/19/16
Instrument: 7890
Initial Cal. Date: 09/01/16
Data File: 1119000.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	2635	1078	59	ATML	4.6
2	ATML	Ethane	1147	748	35	ATML	8.3
3	ATML	Ethene	1063	559	47	ATML	14
4							
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38							
39							
40							
		Average			47.0		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1119000.D Vial: 1
Acq On : 19 Nov 16 11:51 Operator: lac
Sample : 161119A LCS/CCV RSK-Level 8 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Nov 25 12:47 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Nov 23 12:26:39 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

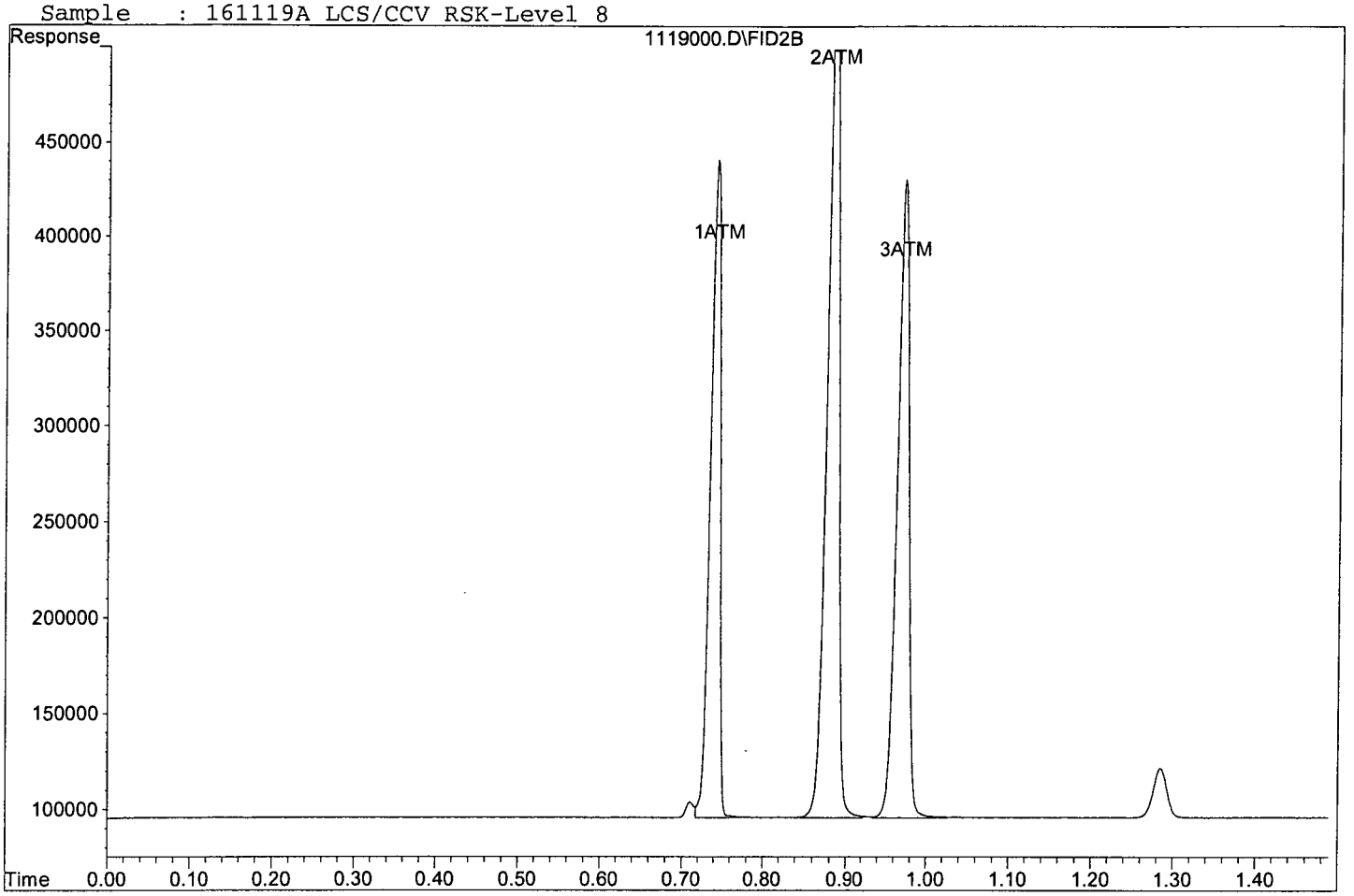
Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.74	345484	305.689 ppb
2) ATM Ethane	0.88	448684	550.401 ppb
3) ATM Ethene	0.97	334800	516.852 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\ROCKY\DATA\160901R\1119000.D
Sample : 161119A LCS/CCV RSK-Level 8



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/19/16
Instrument: 7890
Initial Cal. Date: 09/01/16
Data File: 1119025.D

		Compound	MEAN	CCRF	%D	%Drift	
1	ATML	Methane	2635	1137	57	ATML	0.83
2	ATML	Ethane	1147	812	29	ATML	0.24
3	ATML	Ethene	1063	628	41	ATML	2.6
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
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26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			42.3		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1119025.D Vial: 18
Acq On : 19 Nov 16 13:55 Operator: lac
Sample : 161119B LCS/CCV RSK Level 8 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Nov 25 12:47 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Nov 23 12:26:39 2016
Response via : Multiple Level Calibration

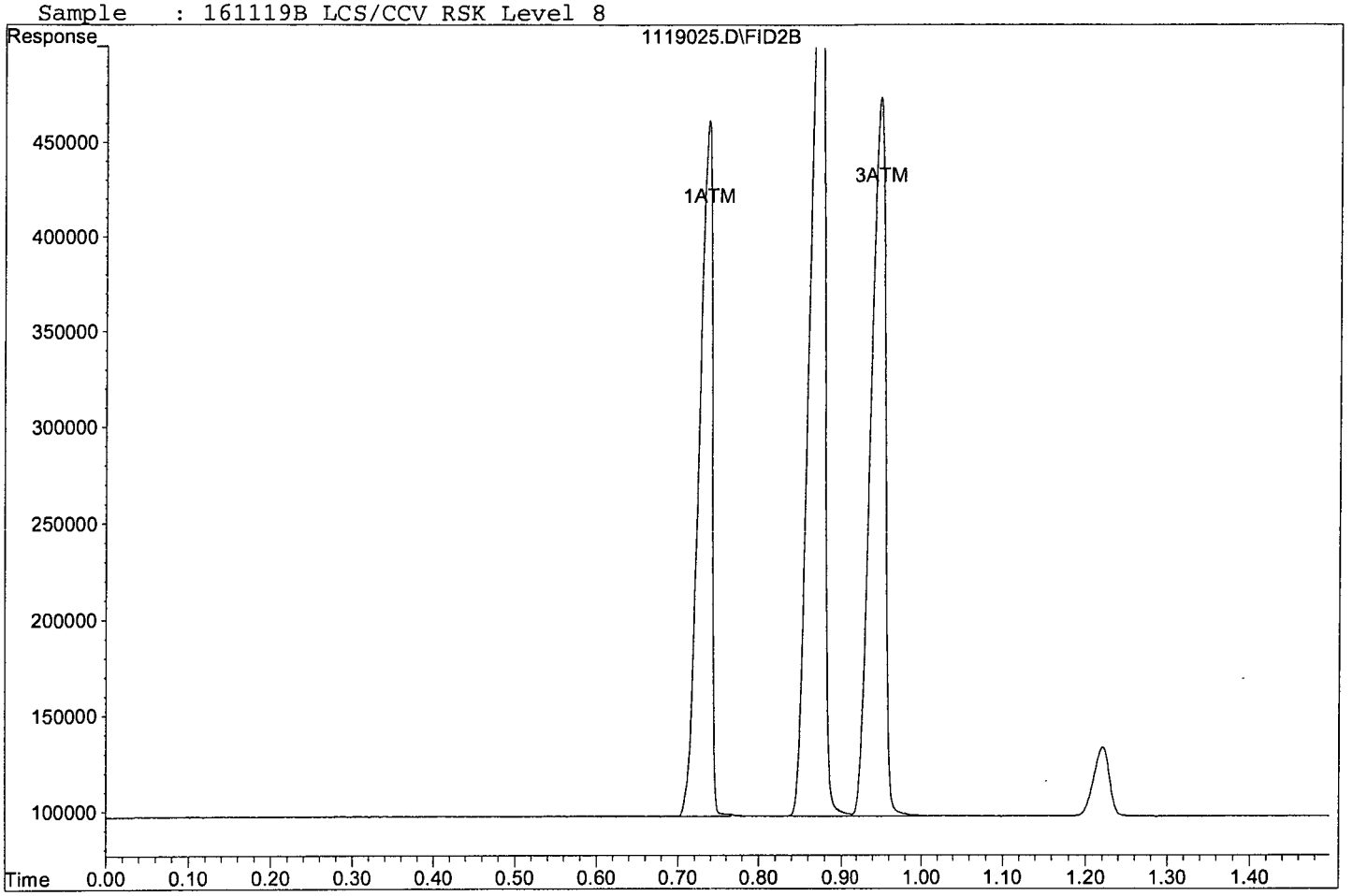
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.74	364304	323.064 ppb
2) ATM Ethane	0.87	487036	598.557 ppb
3) ATM Ethene	0.95	376482	583.630 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1119025.D
Sample : 161119B LCS/CCV RSK Level 8



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/19/16
Instrument: 7890
Initial Cal. Date: 09/01/16
Data File: 1119031.D

		Compound	MEAN	CCRF	%D	%Drift	
1	ATML	Methane	2635	987	63	ATML	13
2	ATML	Ethane	1147	653	43	ATML	20
3	ATML	Ethene	1063	488	54	ATML	25
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
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28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			53.3		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1119031.D Vial: 24
Acq On : 19 Nov 16 14:11 Operator: lac
Sample : Ending CCV RSK Level 8 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Nov 25 12:47 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Nov 23 12:26:39 2016
Response via : Multiple Level Calibration

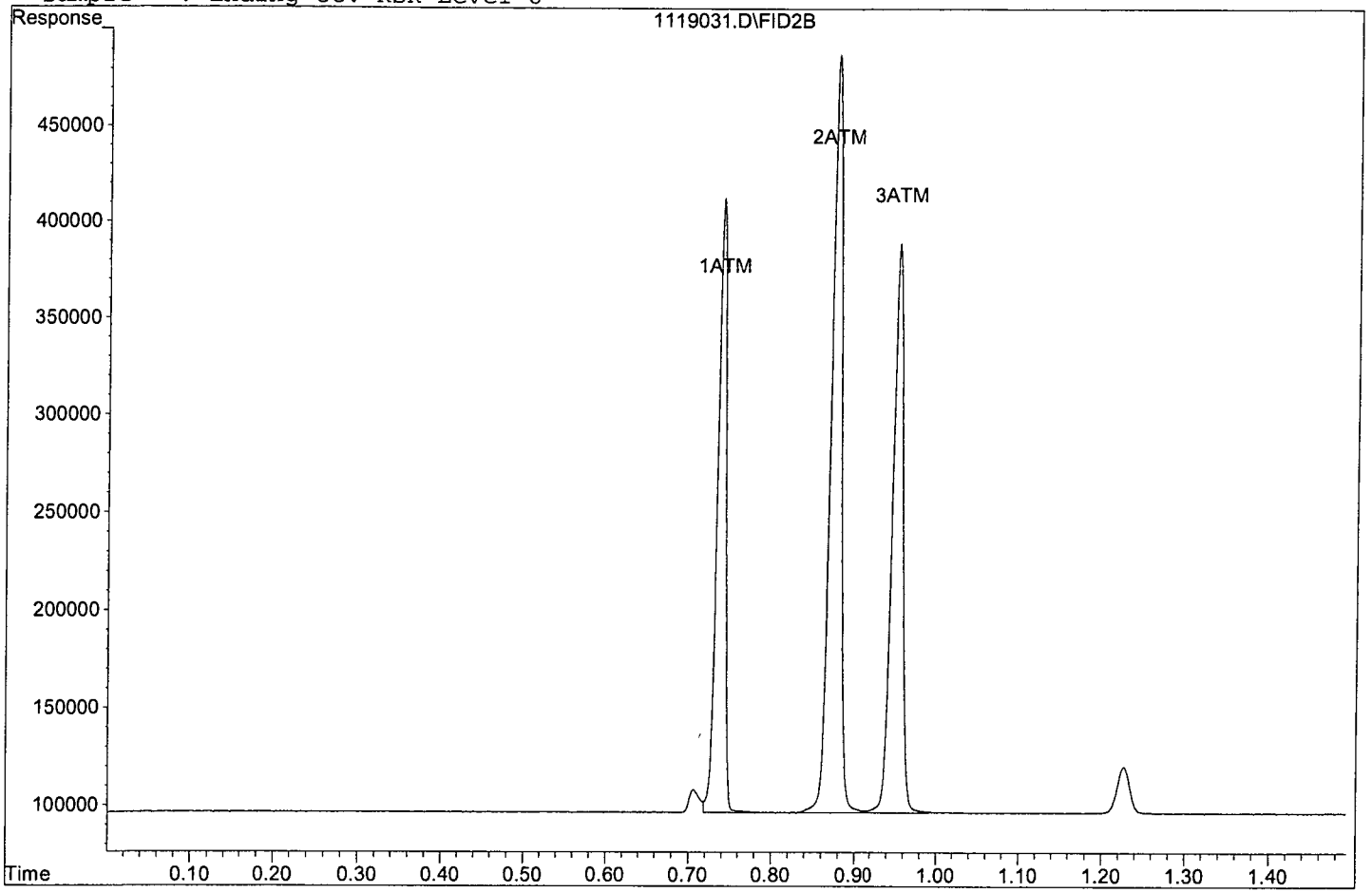
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.74	316096	278.557 ppb
2) ATM Ethane	0.88	391526	478.632 ppb
3) ATM Ethene	0.95	292531	449.132 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1119031.D
Sample : Ending CCV RSK Level 8



ORGANICS
Raw Data

APPL, INC.

Method Blank
METHANE

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161119W-45866 - 213991**
Batch ID: #RSKME-161119A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	METHANE	1.00 U	5.0	1.00	0.25	ug/L	11/19/16	11/19/16

Quant Method: RSK0901.M
Run #: 1119001
Instrument: Rocky
Sequence: 160901
Initials: CMO

GC SC-Blank-REG MDLs-DOD
Printed: 11/25/16 12:52:14 PM

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1119001.D Vial: 1
Acq On : 19 Nov 16 12:16 Operator: lac
Sample : 161119A BLK-RSK Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Nov 25 12:47 2016 Quant Results File: RSK0901.RES

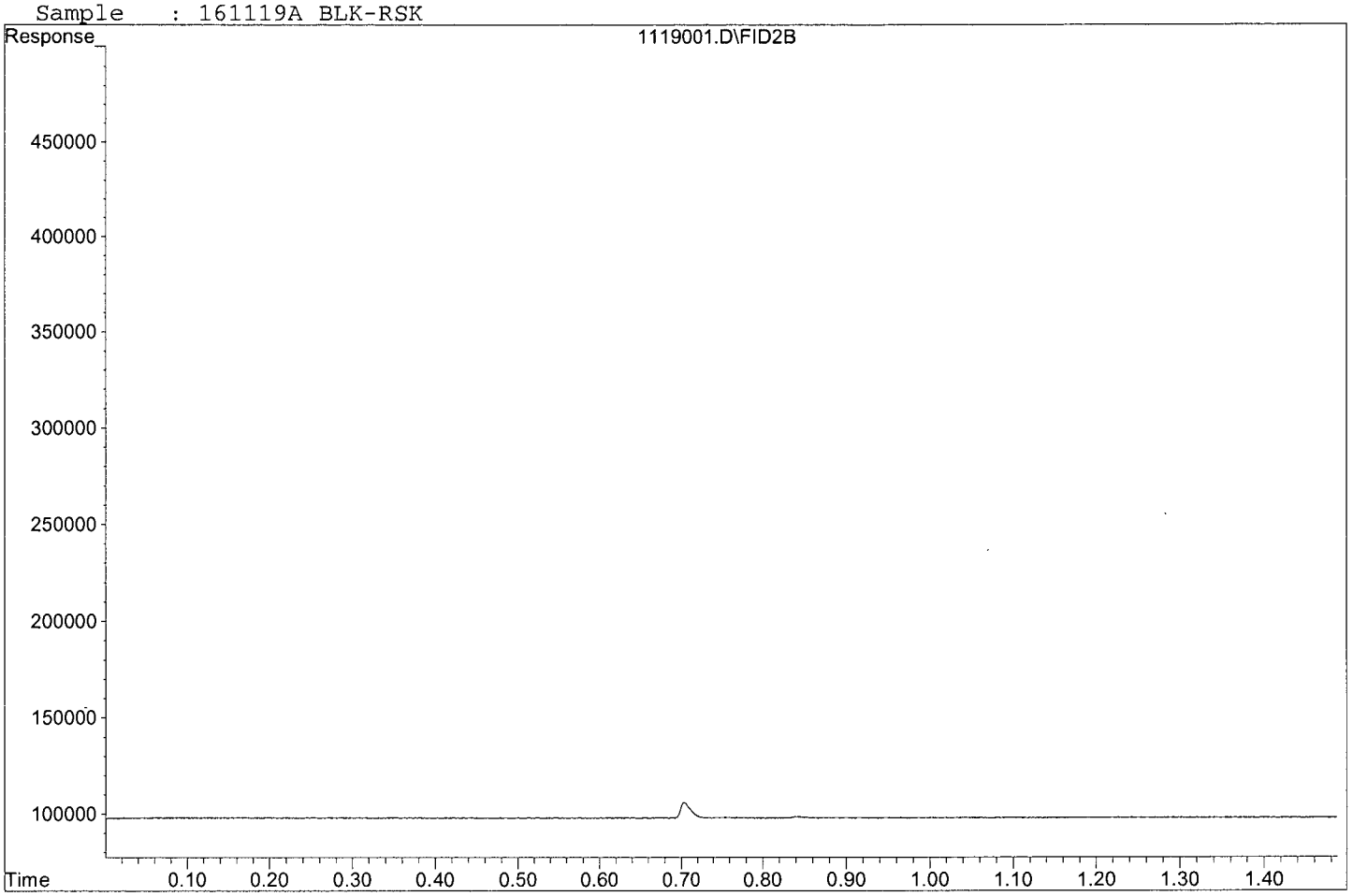
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Nov 23 12:26:39 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.75	449	N.D.	ppb
2) ATM Ethane	0.88	327	N.D.	ppb
3) ATM Ethene	0.95	300	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1119001.D
Sample : 161119A BLK-RSK



Laboratory Control Spike Recovery
METHANE

APPL ID: **161119W-45866 LCS - 213991**
Batch ID: #RSKME-161119A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
METHANE	320	306	95.5	72-125

Comments: _____

Primary	SPK
Quant Method :	RSK0901.M
Extraction Date :	11/19/16
Analysis Date :	11/19/16
Instrument :	Rocky
Run :	1119000
Initials :	CMO

Printed: 11/25/16 12:52:03 PM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1119000.D Vial: 1
Acq On : 19 Nov 16 11:51 Operator: lac
Sample : 161119A LCS/CCV RSK-Level 8 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Nov 25 12:47 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Nov 23 12:26:39 2016
Response via : Multiple Level Calibration

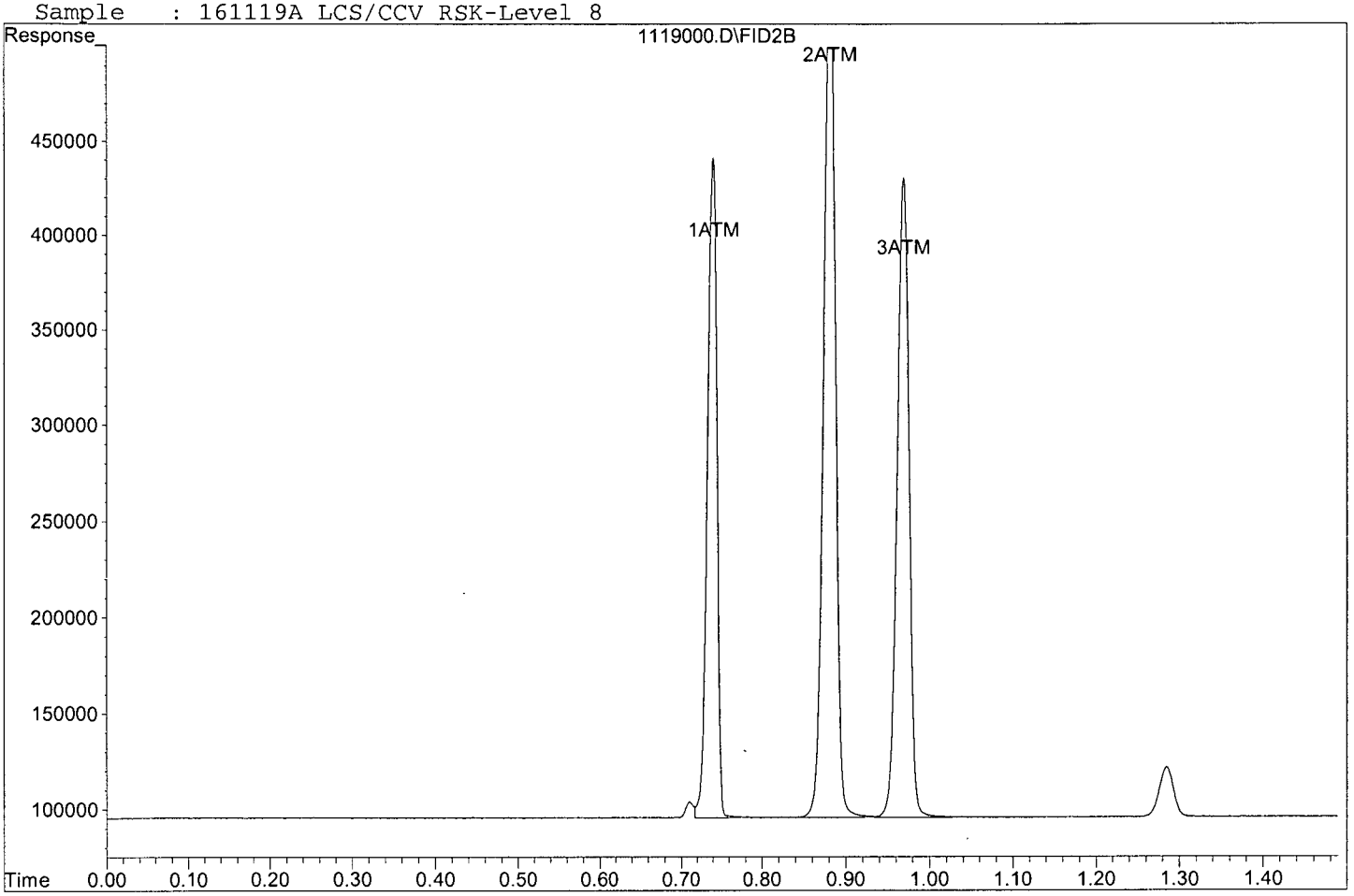
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.74	345484	305.689 ppb
2) ATM Ethane	0.88	448684	550.401 ppb
3) ATM Ethene	0.97	334800	516.852 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1119000.D
Sample : 161119A LCS/CCV RSK-Level 8



Matrix Spike Recoveries

METHANE

APPL ID: **161119W-45866 MS - 213991**
Batch ID: #RSKME-161119A
Sample ID: AZ45866
Client ID: ERH115

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
METHANE	320	ND	459	481	143 #	150 #	72-125	4.7	30

= Recovery is outside QC limits.

Comments: _____

Primary	SPK	DUP
Quant Method :	RSK0901.M	RSK0901.M
Extraction Date :	11/19/16	11/19/16
Analysis Date :	11/19/16	11/19/16
Instrument :	Rocky	Rocky
Run :	1119004	1119005
Initials :	CMO	

Printed: 11/25/16 12:51:59 PM
APPL MSD SCII

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1119004.D Vial: 2
Acq On : 19 Nov 16 12:26 Operator: lac
Sample : AZ45866W08 MS Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Nov 25 13:10 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Nov 23 12:26:39 2016
Response via : Multiple Level Calibration

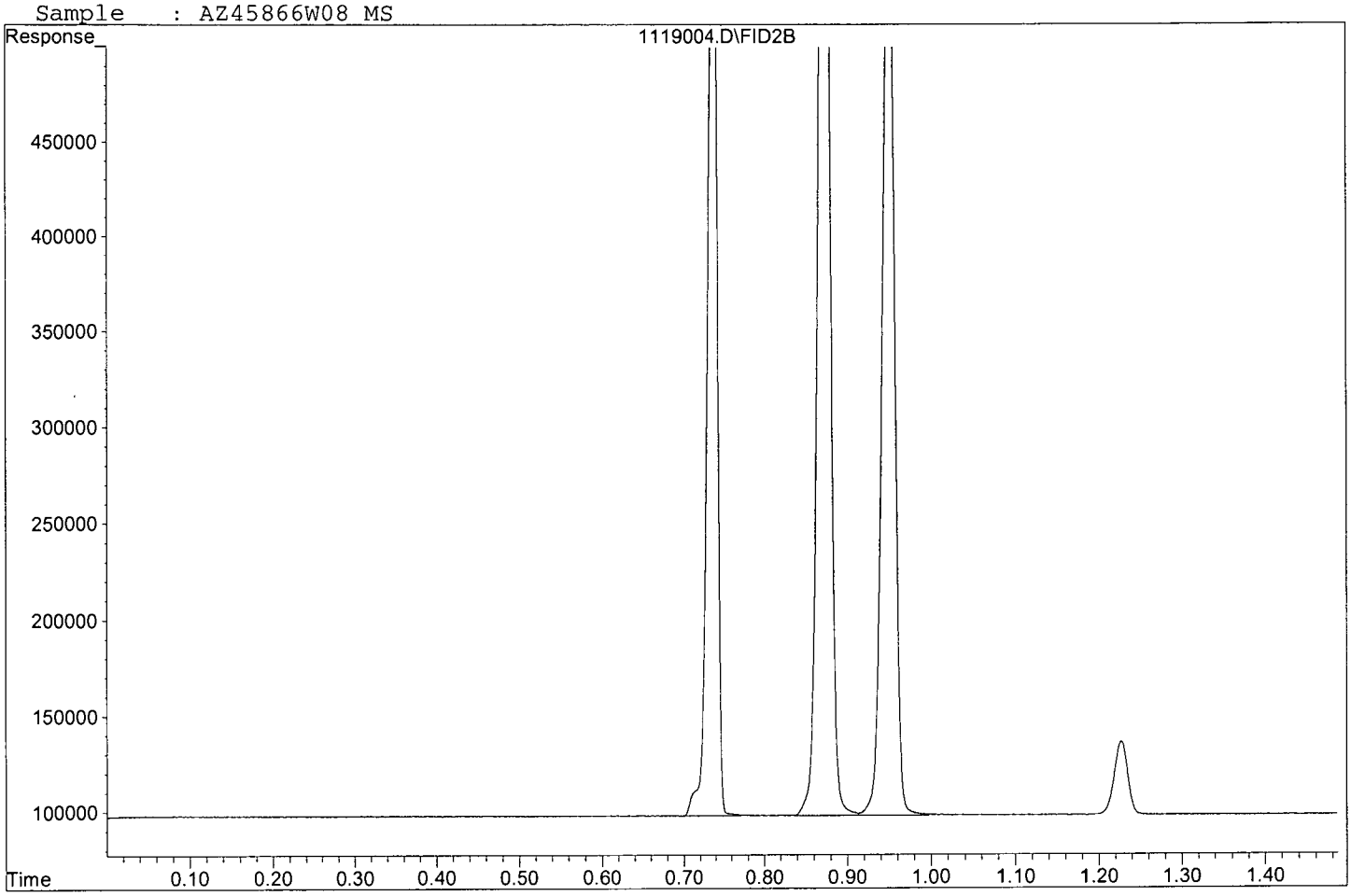
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.74	511360	458.830 ppb
2) ATM Ethane	0.87	705716	873.137 ppb
3) ATM Ethene	0.95	485987	759.067 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1119004.D
Sample : AZ45866W08 MS



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1119005.D Vial: 2
Acq On : 19 Nov 16 12:28 Operator: lac
Sample : AZ45866W09 MSD Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Nov 25 13:10 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Nov 23 12:26:39 2016
Response via : Multiple Level Calibration

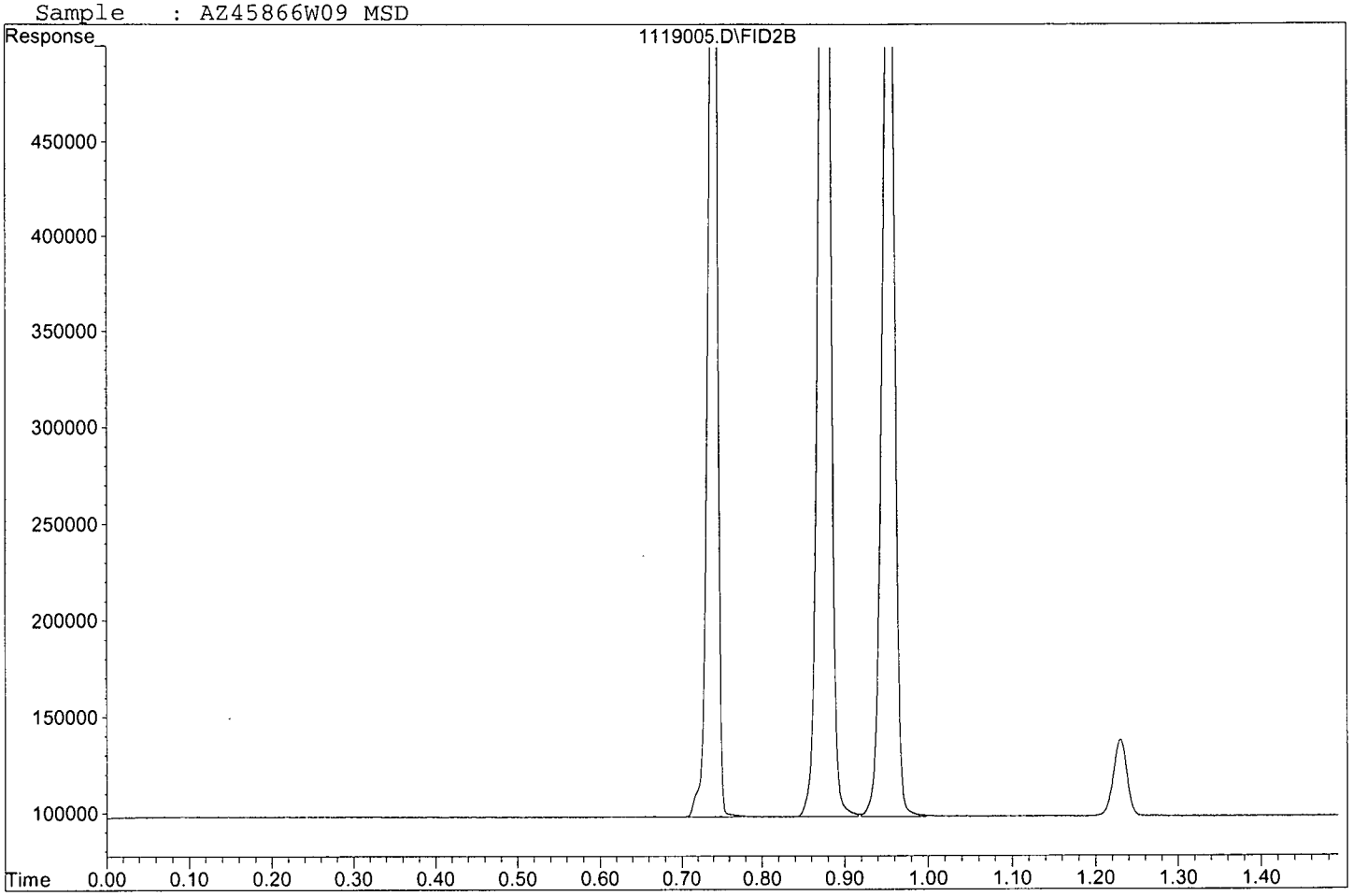
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.74	535390	481.015 ppb
2) ATM Ethane	0.88	738633	914.469 ppb
3) ATM Ethene	0.95	509994	797.529 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1119005.D
Sample : AZ45866W09 MSD



Primary Source Stock Standard 10,000ppmV **Manufacturer Exp date 7-8-2017** CM 8/15/16

RSK Gas Mix (Scott Specialty Gas) Cat.# 23452, Lot # 164PLU4SPC05L-34436

1% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

Intermediate Calibration Stock Standard 100ppmV **Expires 8/15/17** CM 8/15/16

Prepared in a 1 L Tedlar bag. Add 990mL Nitrogen and 10mL of 164PLU4SPC05L-34436 standard.

RSK Calibration Curve **Vial expiration date 9/28/16** CM 9/1/16

Analye	Conc Std 1 (ug/L)	Conc Std 2 (ug/L)	Conc Std 3 (ug/L)	Conc Std 4 (ug/L)	Conc Std 5 (ug/L)	Conc Std 6 (ug/L)	Conc Std 7 (ug/L)	Conc Std 8 (ug/L)	Conc Std 9 (ug/L)	Conc Std 10 (ug/L)
Methane (MW 16.	0.90	1.80	5.10	13.33	26.70	66.75	106.80	320.4	667.5	1335.0
Ethane (MW 30.0	1.70	3.40	9.50	25.00	50.00	125.00	200.00	600.0	1250.0	2500.0
Ethene (MW 28.0	1.60	3.20	8.90	23.30	46.60	116.50	186.40	599.2	1248.0	2496.0
Stock Source	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Primary Source Std #164PLU4SPC05L-34436	Primary Source Std #164PLU4SPC05L-34436	Primary Source Std #164PLU4SPC05L-34436	Primary Source Std #164PLU4SPC05L-34436
Stock Conc (ppr	100 ppmV	100 ppmV	100 ppmV	100 ppmV	100 ppmV	100 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV
Stock Aliquot (m	0.135 mL	0.270 mL	0.760 mL	2.0 mL	4.0 mL	10.0 mL	0.160 mL	0.480 mL	1.00 mL	2.00 mL
Final Volume P&T W	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL

Second Source Stock Standard 10,000ppmV **Manufacturer Exp Date 6-19-18** CM 8/15/16

RSK Gas Mix (Scott Specialty Gas) Cat.# 0104E40028`4, Lot # 170PLU5SPC06L-35410

1% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

Intermediate Second Source Standard 100ppmV **Expires 8/15/17** CM 8/15/16

Prepared in a 1 L Tedlar bag. Add 990mL Nitrogen and 10mL of lot# 170PLU5SPC06L-35410 standard.

Second Source / LCS - Level 6 **Expires 10/1/16** CM 9/1/16

10.0mL of Intermediate SS stock 8/15/16 into 10mL P&T water

final conc:66.7ppb Methane, 125.0ppb Ethane, and 116.5 ppb Ethene

CCV/LCS - Level 6 **Expires 10/1/16** CM 9/2/16

10.0mL of Intermediate calib stock 8/15/16 into 10mL P&T water

final conc:66.7ppb Methane, 125.0ppb Ethane, and 116.5 ppb Ethene

CCV/LCS - Level 7 **Expires 10/1/16** CM 9/2/16

0.160mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water

final conc:106.8ppb Methane, 200 ppb Ethane, and 186.4 ppb Ethene

CCV/LCS - Level 8 **Expires 10/1/16** CM 9/2/16

0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water

final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

AZ42293W06/W07 MS/MSD CM 9/2/16

4.0mL of Intermediate calib stock 8/15/16 into 10mL P&T water

final conc:26.7ppb Methane, 50.0ppb Ethane, and 46.6 ppb Ethene

CCV/LCS - Level 9 **Expires 10/3/16** CM 9/3/16
1.0mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:667.5ppb Methane,1250 ppb Ethane, and 1248 ppb Ethene

AZ41575w06 / W07 MS/MSD CM 9/3/16
4.0mL of Intermediate calib stock 8/15/16 into 10mL P&T water
final conc:26.7ppb Methane, 50.0ppb Ethane, and 46.6 ppb Ethene

CCV/LCS - Level 8 **Expires 10/6/16** CM 9/6/16
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

AZ42041w04 / W05 MS/MSD CM 9/6/16
4.0mL of Intermediate calib stock 8/15/16 into 10mL P&T water
final conc:26.7ppb Methane, 50.0ppb Ethane, and 46.6 ppb Ethene

CCV/LCS - Level 8 **Expires 10/8/16** CM 9/8/16
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

CCV/LCS - Level 9 **Expires 10/11/16** CM 9/11/16
1.0mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:667.5ppb Methane,1250 ppb Ethane, and 1248 ppb Ethene

CCV/LCS - Level 8 **Expires 10/13/16** CM 9/13/16
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

AZ42328W06 / W07 MS/MSD CM 9/13/16
4.0mL of Intermediate calib stock 8/15/16 into 10mL P&T water
final conc:26.7ppb Methane, 50.0ppb Ethane, and 46.6 ppb Ethene

CCV/LCS - Level 8 **Expires 10/15/16** CM 9/15/16
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

CCV/LCS - Level 7 **Expires 11/7/16** CM 10/7/16
0.160mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:106.8ppb Methane, 200 ppb Ethane, and 186.4 ppb Ethene

CCV/LCS - Level 8 **Expires 11/7/16** CM 10/7/16
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

CCV/LCS - Level 8 **Expires 11/20/16** CM 10/20/16
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

CCV/LCS - Level 8 **Expires 11/22/16** CM 10/22/16
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water

final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

CCV/LCS - Level 8 **Expires 11/25/16** **CM 10/25/16**
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

AZ44579 W10 and W11 MS/MSD **Expires 11/25/16** **CM 10/25/16**
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL sample AZ44579 water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

CCV/LCS - Level 8 **Expires 11/29/16** **CM 10/29/16**
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

AZ44621 W9 and W10 MS/MSD **Expires 11/29/16** **CM 10/29/16**
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL sample AZ44621 water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

CCV/LCS - Level 8 **Expires 11/30/16** **CM 10/30/16**
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

CCV/LCS - Level 8 **Expires 12/1/16** **CM 11/1/16**
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

CCV/LCS - Level 8 **Expires 12/4/16** **CM 11/4/16**
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

AZ45866W08/W09 MS/MSD **CM 11/19/16**
4.0mL of Intermediate calib stock 8/15/16 into 10mL P&T water
final conc:26.7ppb Methane, 50.0ppb Ethane, and 46.6 ppb Ethene

CCV/LCS - Level 8 **Expires 12/19/16** **CM 11/19/16**
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

Injection Log

Directory: G:\ROCKY\DATA\160901R\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0901000.D	1	RSK Level 1 / LOD Chk 08/15/16	Methane 0.9, Ethane, 1.7 Etl	1 Sep 16 11:38
2	2	0901001.D	1	RSK Level 2 08/15/16		1 Sep 16 11:41
3	3	0901002.D	1	RSK Level 3 / LOQ Chk 08/15/16	Methane 5.1, Ethane, 9.5 Etl	1 Sep 16 11:44
4	4	0901003.D	1	RSK Level 4 08/15/16		1 Sep 16 11:46
5	5	0901004.D	1	RSK Level 5 08/15/16		1 Sep 16 11:48
6	6	0901005.D	1	RSK Level 6 08/15/16		1 Sep 16 11:50
7	7	0901006.D	1	RSK Level 7 08/15/16		1 Sep 16 11:52
8	8	0901007.D	1	RSK Level 8 08/15/16		1 Sep 16 11:55
9	9	0901008.D	1	RSK Level 9 08/15/16		1 Sep 16 11:57
10	10	0901009.D	1	RSK Level 10 08/15/16		1 Sep 16 11:59
11	19	0901018.D	1	(SS/LCS) RSK Level 6 09/01/16		1 Sep 16 13:11
12	1	1119000.D	1	161119A LCS/CCV RSK-Level 8		19 Nov 16 11:51
13	1	1119001.D	1	161119A BLK-RSK		19 Nov 16 12:16
14	1	1119002.D	1	AZ45865W05		19 Nov 16 12:21
15	2	1119003.D	1	AZ45866W07		19 Nov 16 12:23
16	2	1119004.D	1	AZ45866W08 MS		19 Nov 16 12:26
17	2	1119005.D	1	AZ45866W09 MSD		19 Nov 16 12:28
18	3	1119006.D	1	AZ45868W05		19 Nov 16 12:30
19	24	1119031.D	1	Ending CCV RSK Level 8		19 Nov 16 14:11

METALS



METALS

QC Summary

APPL, INC.

METALS BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
6010C	CALCIUM (CA)	75.0 U	1000	75.0	27.5	ug/L	11/17/16	11/22/16	#61CDO-161117A-AZ45866
6010C	MAGNESIUM (MG)	30.0 U	500	30.0	12.9	ug/L	11/17/16	11/22/16	#61CDO-161117A-AZ45866
6010C	MANGANESE (MN)	4.00 U	10.0	4.00	1.23	ug/L	11/17/16	11/22/16	#61CDO-161117A-AZ45866
6010C	POTASSIUM (K)	500.0 U	3000	500.0	220.0	ug/L	11/17/16	11/22/16	#61CDO-161117A-AZ45866
6010C	SODIUM (NA)	500.0 U	5000	500.0	111.1	ug/L	11/17/16	11/22/16	#61CDO-161117A-AZ45866

Metals SC-Blank-REG MDLs
Printed: 11/23/16 1:55:44 PM

Laboratory Control Spike Recovery

METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 6010C	CALCIUM (CA)	25000	26900	108	87-113	11/17/16	11/22/16	#61CDO-161117A-AZ45866
EPA 6010C	MAGNESIUM (MG)	25000	26300	105	85-113	11/17/16	11/22/16	#61CDO-161117A-AZ45866
EPA 6010C	MANGANESE (MN)	250	269	108	90-114	11/17/16	11/22/16	#61CDO-161117A-AZ45866
EPA 6010C	POTASSIUM (K)	5000	5110	102	86-114	11/17/16	11/22/16	#61CDO-161117A-AZ45866
EPA 6010C	SODIUM (NA)	25000	26200	105	87-115	11/17/16	11/22/16	#61CDO-161117A-AZ45866

Comments: _____

Matrix Spike Recoveries

METALS

APPL ID: **161117W-45866 MS - 213989**

Sample ID: AZ45866

Client ID: ERH115

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl ug/L	Matrix Res ug/L	SPK Res ug/L	DUP Res ug/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
EPA 6010C	CALCIUM (CA)	25000	15800	42500	43900	107	112	3.2	20	87-113	11/17/16	11/22/16	11/17/16	11/22/16	213989	AZ45866
EPA 6010C	MAGNESIUM (MG)	25000	15400	41400	42900	104	110	3.6	20	85-113	11/17/16	11/22/16	11/17/16	11/22/16	213989	AZ45866
EPA 6010C	MANGANESE (MN)	250	ND	273	278	109	111	1.8	20	90-114	11/17/16	11/22/16	11/17/16	11/22/16	213989	AZ45866
EPA 6010C	POTASSIUM (K)	5000	2230	7430	7700	104	109	3.6	20	86-114	11/17/16	11/22/16	11/17/16	11/22/16	213989	AZ45866
EPA 6010C	SODIUM (NA)	25000	42200	67900	70500	103	113	3.8	20	87-115	11/17/16	11/22/16	11/17/16	11/22/16	213989	AZ45866

Comments: _____

METALS

Sample Data

APPL, INC.

Metals Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH115
Sample Collection Date: 11/14/16

ARF: 81492
APPL ID: AZ45866

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	CALCIUM (CA)	15800	1000	75.0	27.5	ug/L	1	11/17/16	11/22/16
6010C/3010A	MAGNESIUM (MG)	15400	500	30.0	12.9	ug/L	1	11/17/16	11/22/16
6010C/3010A	MANGANESE (MN)	4.00U	10.0	4.00	1.23	ug/L	1	11/17/16	11/22/16
6010C/3010A	POTASSIUM (K)	2230J	3000	500.0	220.0	ug/L	1	11/17/16	11/22/16
6010C/3010A	SODIUM (NA)	42200	5000	500.0	111.1	ug/L	1	11/17/16	11/22/16

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Sequence No.: 55
Sample ID: AZ45866W36
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 73
Date Collected: 11/22/16 5:05:47 PM
Data Type: Reprocessed on 11/23/16 12:16:02 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ45866W36

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1028415.3	99.43	%	1.065				1.07%
Y 371.029 Radial	965723.2	99.40	%	1.105				1.11%
Ag 338.289†	-0.3	-0.004	ug/L	0.8372	-0.004	ug/L	0.8372	>999.9%
Al 308.215†	3.2	4.553	ug/L	24.2657	4.553	ug/L	24.2657	533.01%
As 188.979†	-2.6	-2.547	ug/L	4.0258	-2.547	ug/L	4.0258	158.05%
B†	2507.5	86.00	ug/L	0.647	86.00	ug/L	0.647	0.75%
Ba 233.527†	423.6	6.496	ug/L	0.1924	6.496	ug/L	0.1924	2.96%
Be 313.107†	-2.5	-0.016	ug/L	0.0270	-0.016	ug/L	0.0270	168.28%
Ca 315.887†	43507.4	15820	ug/L	366.1	15820	ug/L	366.1	2.31%
Cd 214.440†	-78.0	-1.160	ug/L	0.1249	-1.160	ug/L	0.1249	10.77%
Co 228.616†	-13.3	-0.648	ug/L	0.7803	-0.648	ug/L	0.7803	120.46%
Cr 267.716†	162.5	3.052	ug/L	0.2732	3.052	ug/L	0.2732	8.95%
Cu 327.393†	59.4	0.057	ug/L	0.9044	0.057	ug/L	0.9044	>999.9%
Fe 273.955†	136.1	7.160	ug/L	0.7355	7.160	ug/L	0.7355	10.27%
K 766.490†	5026.0	2230	ug/L	124.3	2230	ug/L	124.3	5.57%
Mg 285.213†	71313.1	15410	ug/L	338.1	15410	ug/L	338.1	2.19%
Mn 257.610†	-0.5	-0.710	ug/L	0.4864	-0.710	ug/L	0.4864	68.49%
Mo 202.031†	9.5	0.526	ug/L	0.3264	0.526	ug/L	0.3264	62.08%
Na 589.592†	270397.3	42210	ug/L	1059.5	42210	ug/L	1059.5	2.51%
Ni 231.604†	-9.5	-0.557	ug/L	1.0767	-0.557	ug/L	1.0767	193.47%
P 213.617†	88.4	60.54	ug/L	1.590	60.54	ug/L	1.590	2.63%
Pb 220.353†	5.1	0.813	ug/L	1.8357	0.813	ug/L	1.8357	225.74%
Sb 206.836†	2.0	1.525	ug/L	1.1792	1.525	ug/L	1.1792	77.31%
Se 196.026†	-5.7	-5.691	ug/L	7.2124	-5.691	ug/L	7.2124	126.73%
Sn 189.927†	-19.4	-6.091	ug/L	1.0087	-6.091	ug/L	1.0087	16.56%
Sr 421.552†	43079.9	115.6	ug/L	2.42	115.6	ug/L	2.42	2.10%
Ti 337.279†	5.7	0.146	ug/L	0.3279	0.146	ug/L	0.3279	224.16%
Tl 190.801†	0.6	0.507	ug/L	2.3481	0.507	ug/L	2.3481	462.80%
V 292.402†	1642.5	16.16	ug/L	0.242	16.16	ug/L	0.242	1.50%
Zn 206.200†	17.9	1.500	ug/L	0.7069	1.500	ug/L	0.7069	47.12%

Metals Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH120
Sample Collection Date: 11/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81492
APPL ID: AZ45868

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	CALCIUM (CA)	35100	1000	75.0	27.5	ug/L	1	11/17/16	11/22/16
6010C/3010A	MAGNESIUM (MG)	54900	500	30.0	12.9	ug/L	1	11/17/16	11/22/16
6010C/3010A	MANGANESE (MN)	4.00U	10.0	4.00	1.23	ug/L	1	11/17/16	11/22/16
6010C/3010A	POTASSIUM (K)	2330J	3000	500.0	220.0	ug/L	1	11/17/16	11/22/16
6010C/3010A	SODIUM (NA)	165000	100000	10000.0	2220.0	ug/L	20	11/17/16	11/22/16

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Sequence No.: 60
Sample ID: AZ45868W18
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 78
Date Collected: 11/22/16 5:31:46 PM
Data Type: Reprocessed on 11/23/16 12:16:08 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ45868W18

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1000473.7	96.73	%	0.854				0.88%
Y 371.029 Radial	937376.8	96.48	%	0.962				1.00%
Ag 338.289†	-26.4	-0.399	ug/L	0.5938	-0.399	ug/L	0.5938	148.87%
Al 308.215†	-1.7	-17.94	ug/L	15.340	-17.94	ug/L	15.340	85.49%
As 188.979†	3.7	3.639	ug/L	3.9760	3.639	ug/L	3.9760	109.25%
B†	1631.3	55.95	ug/L	0.645	55.95	ug/L	0.645	1.15%
Ba 233.527†	929.8	14.18	ug/L	0.200	14.18	ug/L	0.200	1.41%
Be 313.107†	-12.1	-0.077	ug/L	0.0345	-0.077	ug/L	0.0345	44.64%
Ca 315.887†	96606.1	35120	ug/L	1019.8	35120	ug/L	1019.8	2.90%
Cd 214.440†	-120.1	-1.810	ug/L	0.1376	-1.810	ug/L	0.1376	7.60%
Co 228.616†	4.6	-0.180	ug/L	1.0173	-0.180	ug/L	1.0173	564.54%
Cr 267.716†	673.0	12.76	ug/L	0.565	12.76	ug/L	0.565	4.43%
Cu 327.393†	99.7	-1.238	ug/L	1.1731	-1.238	ug/L	1.1731	94.78%
Fe 273.955†	462.3	25.86	ug/L	1.218	25.86	ug/L	1.218	4.71%
K 766.490†	5243.0	2326	ug/L	50.0	2326	ug/L	50.0	2.15%
Mg 285.213†	254207.4	54940	ug/L	4302.1	54940	ug/L	4302.1	7.83%
Mn 257.610†	-3.1	-2.674	ug/L	0.4941	-2.674	ug/L	0.4941	18.48%
Mo 202.031†	12.9	-0.793	ug/L	0.6345	-0.793	ug/L	0.6345	80.03%
Na 589.592†	1020988.0	159400	ug/L	12438.4	159400	ug/L	12438.4	7.80%
Ni 231.604†	166.0	7.775	ug/L	0.6361	7.775	ug/L	0.6361	8.18%
P 213.617†	190.4	130.4	ug/L	4.02	130.4	ug/L	4.02	3.08%
Pb 220.353†	23.3	4.449	ug/L	4.3677	4.449	ug/L	4.3677	98.18%
Sb 206.836†	3.7	2.912	ug/L	2.3921	2.912	ug/L	2.3921	82.16%
Se 196.026†	-1.7	-1.685	ug/L	4.5687	-1.685	ug/L	4.5687	271.21%
Sn 189.927†	-32.5	-9.996	ug/L	0.8307	-9.996	ug/L	0.8307	8.31%
Sr 421.552†	116054.4	311.3	ug/L	24.38	311.3	ug/L	24.38	7.83%
Ti 337.279†	-12.1	-1.389	ug/L	0.9186	-1.389	ug/L	0.9186	66.14%
Tl 190.801†	-0.4	-0.352	ug/L	1.5913	-0.352	ug/L	1.5913	451.48%
V 292.402†	1811.0	18.04	ug/L	0.563	18.04	ug/L	0.563	3.12%
Zn 206.200†	46.7	4.087	ug/L	0.1056	4.087	ug/L	0.1056	2.58%

Sequence No.: 47
Sample ID: AZ45868W18-1/20
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution: 20X

Autosampler Location: 67
Date Collected: 11/22/16 4:32:08 PM
Data Type: Reprocessed on 11/23/16 12:15:52 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ45868W18-1/20

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1053044.8	101.8	%	1.02				1.00%
Y 371.029 Radial	990645.3	102.0	%	1.12				1.10%
Ag 338.289†	37.1	0.560	ug/L	0.6112	11.20	ug/L	12.224	109.15%
Al 308.215†	-9.5	-25.68	ug/L	1.941	-513.6	ug/L	38.83	7.56%
As 188.979†	-2.8	-2.639	ug/L	5.0411	-52.78	ug/L	100.823	191.02%
B†	79.5	2.727	ug/L	0.0454	54.54	ug/L	0.908	1.67%
Ba 233.527†	50.9	0.776	ug/L	0.1935	15.52	ug/L	3.870	24.94%
Be 313.107†	0.7	0.005	ug/L	0.0356	0.093	ug/L	0.7114	761.36%
Ca 315.887†	4929.2	1792	ug/L	43.7	35840	ug/L	873.7	2.44%
Cd 214.440†	-16.1	-0.236	ug/L	0.0858	-4.721	ug/L	1.7164	36.36%
Co 228.616†	-9.0	-0.373	ug/L	0.4735	-7.466	ug/L	9.4698	126.84%
Cr 267.716†	13.9	0.247	ug/L	0.1453	4.949	ug/L	2.9061	58.73%
Cu 327.393†	-23.0	-0.455	ug/L	0.1371	-9.093	ug/L	2.7428	30.16%
Fe 273.955†	-15.4	-2.085	ug/L	0.8966	-41.70	ug/L	17.932	43.00%
K 766.490†	145.4	64.47	ug/L	31.988	1289	ug/L	639.8	49.61%
Mg 285.213†	13279.2	2870	ug/L	122.4	57400	ug/L	2448.7	4.27%
Mn 257.610†	-5.9	-0.853	ug/L	0.2689	-17.05	ug/L	5.378	31.54%
Mo 202.031†	-4.2	-0.650	ug/L	0.3424	-13.01	ug/L	6.848	52.64%
Na 589.592†	52868.0	8253	ug/L	349.4	165100	ug/L	6988.0	4.23%
Ni 231.604†	11.6	0.544	ug/L	0.7471	10.89	ug/L	14.942	137.26%
P 213.617†	2.8	1.903	ug/L	4.1797	38.06	ug/L	83.594	219.65%
Pb 220.353†	9.8	2.188	ug/L	0.9883	43.75	ug/L	19.767	45.18%
Sb 206.836†	1.0	0.788	ug/L	1.8451	15.77	ug/L	36.902	234.02%
Se 196.026†	-3.3	-3.302	ug/L	3.0450	-66.03	ug/L	60.900	92.23%
Sn 189.927†	-0.9	-0.233	ug/L	1.3032	-4.653	ug/L	26.0641	560.21%
Sr 421.552†	5937.9	15.93	ug/L	0.654	318.6	ug/L	13.08	4.10%
Ti 337.279†	-0.7	-0.076	ug/L	0.5090	-1.514	ug/L	10.1792	672.47%
Tl 190.801†	2.1	1.645	ug/L	1.3104	32.89	ug/L	26.209	79.68%
V 292.402†	1.8	0.024	ug/L	0.7601	0.484	ug/L	15.2017	>999.9%
Zn 206.200†	8.4	0.777	ug/L	0.3857	15.54	ug/L	7.714	49.63%

METALS

Calibration Data

APPL, INC.

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM
ARF No: 81492 SDG: 81492
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 11/22/16 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 13:03	%R(1)	True CCV1	Found 13:23	%R(1)	True CCV2	Found 15:13	%R(1)	
Calcium (Ca)	12500	12810	102	25000	24410	97.6	18750	19430	104	P
Potassium (K)	12500	12180	97.4	10000	9399	94.0	7500	7655	102	P
Magnesium (Mg)	12500	13080	105	25000	24460	97.8	18750	19490	104	P
Manganese (Mn)	500	509.8	102	500	488.7	97.7	375.5	389.9	104	P
Sodium (Na)	12500	12430	99.4	12500	12000	96.0	9375	9705	104	P

(1) Control Limits: Metals 90-110

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No: 81492 SDG: 81492

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 11/22/16 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 13:03	%R(1)	True CCV1	Found 15:58	%R(1)	True CCV2	Found 16:58	%R(1)	
Calcium (Ca)	12500	12810	102	25000	24940	99.8	18750	19290	103	P
Potassium (K)	12500	12180	97.4	10000	9448	94.5	7500	7573	101	P
Magnesium (Mg)	12500	13080	105	25000	24590	98.4	18750	19470	104	P
Manganese (Mn)	500	509.8	102	500	501	100	375.5	390.6	104	P
Sodium (Na)	12500	12430	99.4	12500	12100	96.8	9375	9557	102	P

(1) Control Limits: Metals 90-110

ILM02.0

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No: 81492 SDG: 81492

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 11/22/16 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 13:03	%R(1)	True CCV1	Found 18:06	%R(1)	True	Found	%R(1)	
Calcium (Ca)	12500	12810	102	25000	26350	105				P
Potassium (K)	12500	12180	97.4	10000	10010	100				P
Magnesium (Mg)	12500	13080	105	25000	26510	106				P
Manganese (Mn)	500	509.8	102	500	528.4	106				P
Sodium (Na)	12500	12430	99.4	12500	12830	103				P

(1) Control Limits: Metals 90-110

ILM02.0

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 81492 SDG: 81492

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analysis Date: 11/22/16

Analyte	Initial Calibration Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
	13:09		13:27		15:19		16:05		15:24		
Calcium (Ca)	1000.00	U	1000.00	U	1000.00	U	1000.00	U	1000.00	U	P
Potassium (K)	3000.00	U	3000.00	U	3000.00	U	3000.00	U	3000.00	U	P
Magnesium (Mg)	500.00	U	500.00	U	500.00	U	500.00	U	500.00	U	P
Manganese (Mn)	10.00	U	10.00	U	10.00	U	10.00	U	10.00	U	P
Sodium (Na)	5000.00	U	5000.00	U	5000.00	U	5000.00	U	5000.00	U	P

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 81492 SDG: 81492

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analysis Date: 11/22/16

Analyte	Initial Calibration Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
	13:09		17:01		18:13				15:24		
Calcium (Ca)	1000.00	U	1000.00	U	1000.00	U			1000.00	U	P
Potassium (K)	3000.00	U	3000.00	U	3000.00	U			3000.00	U	P
Magnesium (Mg)	500.00	U	500.00	U	500.00	U			500.00	U	P
Manganese (Mn)	10.00	U	10.00	U	10.00	U			10.00	U	P
Sodium (Na)	5000.00	U	5000.00	U	5000.00	U			5000.00	U	P

A.P.P.L. INC.
4
ICP INTERFERENCE CHECK SAMPLE

Lab Name:	A.P.P.L. INC.	Contract:	AECOM
ARF No.:	81492	SDG:	81492
ICP ID Number:	Phoebe	ICS Source:	Environmental Express

Analysis Date: 11/22/16 Concentration Units: ug/L

Analyte	True		Initial Found		
	Sol A	Sol AB	Sol A 13:14	Sol AB 13:19	%R(1)
Aluminum (Al)	100000	100000	100300	98350	98.3
Calcium (Ca)	100000	100000	102400	97800	97.8
Iron (Fe)	100000	100000	96930	94190	94.2
Potassium (K)			-39.16	13.71	
Magnesium (Mg)	100000	100000	99730	95220	95.2
Manganese (Mn)		250	0.843	234.1	93.6
Sodium (Na)			-458.8	-452.6	

(1) Control Limits: Metals 80-120

A.P.P.L. INC.

LLICV Check

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No: 81492 SDG: 81492

Concentration Units: ug/L

Analysis Date: 11/22/16

Analyte	LLICV								
	True LLICV	Found 13:43	%R(1)	True	Found	%R(1)	True	Found	%R(1)
Calcium (Ca)	300	290.6	96.9						
Potassium (K)	3000	2619	87.3						
Magnesium (Mg)	150	145.4	96.9						
Sodium (Na)	3000	2766	92.2						

A.P.P.L. INC.

LLICV Check

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No: 81492 SDG: 81492

Concentration Units: ug/L

Analysis Date: 11/22/16

Analyte	LLICV								
	True LLICV	Found 13:36	%R(1)	True	Found	%R(1)	True	Found	%R(1)
Manganese (Mn)	10	8.806	88.1						

A.P.P.L. INC.

5B

POST DIGEST SPIKE SAMPLE RECOVERY

CLIENT SAMPLE NO.

ERH115

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 81492 SDG: 81492

Analysis Date: 11/22/16 Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Potassium (K)	75-125	6878		2230		5000.000	93.0		
Manganese (Mn)	75-125	241.5		-0.71		250.000	96.6		

Comments:

11/22/16 17:05 AZ45866W36

11/22/16 17:22 AZ45866W36-A

Sequence No.: 58
Sample ID: AZ45866W36-A
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 76
Date Collected: 11/22/16 5:22:08 PM
Data Type: Reprocessed on 11/23/16 12:16:05 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ45866W36-A

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1015395.2	98.17	%	0.593				0.60%
Y 371.029 Radial	952269.8	98.01	%	0.715				0.73%
Ag 338.289†	6124.5	92.50	ug/L	0.903	92.50	ug/L	0.903	0.98%
Al 308.215†	729.0	1916	ug/L	36.2	1916	ug/L	36.2	1.89%
As 188.979†	241.0	229.9	ug/L	4.13	229.9	ug/L	4.13	1.79%
B†	9653.8	331.1	ug/L	0.93	331.1	ug/L	0.93	0.28%
Ba 233.527†	15776.6	243.3	ug/L	1.17	243.3	ug/L	1.17	0.48%
Be 313.107†	7527.7	48.15	ug/L	0.460	48.15	ug/L	0.460	0.96%
Ca 315.887†	106417.0	38690	ug/L	1502.3	38690	ug/L	1502.3	3.88%
Cd 214.440†	3158.0	45.52	ug/L	0.298	45.52	ug/L	0.298	0.65%
Co 228.616†	6124.5	240.1	ug/L	2.73	240.1	ug/L	2.73	1.14%
Cr 267.716†	12428.4	243.4	ug/L	0.41	243.4	ug/L	0.41	0.17%
Cu 327.393†	17620.8	242.4	ug/L	1.55	242.4	ug/L	1.55	0.64%
Fe 273.955†	11248.9	970.4	ug/L	3.35	970.4	ug/L	3.35	0.35%
K 766.490†	15505.2	6878	ug/L	211.1	6878	ug/L	211.1	3.07%
Mg 285.213†	177714.6	38420	ug/L	1509.1	38420	ug/L	1509.1	3.93%
Mn 257.610†	1962.5	241.5	ug/L	1.28	241.5	ug/L	1.28	0.53%
Mo 202.031†	1852.3	232.5	ug/L	2.05	232.5	ug/L	2.05	0.88%
Na 589.592†	414963.1	64780	ug/L	2408.0	64780	ug/L	2408.0	3.72%
Ni 231.604†	4891.4	234.1	ug/L	2.41	234.1	ug/L	2.41	1.03%
P 213.617†	2766.8	1895	ug/L	17.8	1895	ug/L	17.8	0.94%
Pb 220.353†	1031.0	234.8	ug/L	5.32	234.8	ug/L	5.32	2.27%
Sb 206.836†	296.3	230.2	ug/L	0.89	230.2	ug/L	0.89	0.39%
Se 196.026†	212.4	211.4	ug/L	4.00	211.4	ug/L	4.00	1.89%
Sn 189.927†	662.2	230.9	ug/L	4.03	230.9	ug/L	4.03	1.74%
Sr 421.552†	128540.3	344.9	ug/L	13.12	344.9	ug/L	13.12	3.81%
Ti 337.279†	3966.5	241.5	ug/L	1.81	241.5	ug/L	1.81	0.75%
Tl 190.801†	296.1	232.5	ug/L	2.82	232.5	ug/L	2.82	1.21%
V 292.402†	26707.0	265.9	ug/L	0.58	265.9	ug/L	0.58	0.22%
Zn 206.200†	4922.5	467.4	ug/L	6.39	467.4	ug/L	6.39	1.37%

A.P.P.L. INC.

9

ICP SERIAL DILUTION

CLIENT SAMPLE NO.

ERH115

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 81492 SDG: 81492

Matrix: water

Analysis Date: 11/22/16 Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	%D	Q	M
Calcium (Ca)	15820		15340		3.03		
Magnesium (Mg)	15410		15190		1.43		
Sodium (Na)	42210		42360		0.355		

Comments:

11/22/16 17:05 AZ45866W36

11/22/16 17:27 AZ45866W36-1/5

Sequence No.: 59
Sample ID: AZ45866W36-1/5
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution: 5X

Autosampler Location: 77
Date Collected: 11/22/16 5:27:29 PM
Data Type: Reprocessed on 11/23/16 12:16:07 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ45866W36-1/5

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1061452.5	102.6	%	0.29				0.28%
Y 371.029 Radial	998350.3	102.8	%	0.28				0.27%
Ag 338.289†	30.4	0.459	ug/L	0.4087	2.297	ug/L	2.0435	88.97%
Al 308.215†	-2.0	-6.130	ug/L	9.0203	-30.65	ug/L	45.101	147.16%
As 188.979†	-0.9	-0.836	ug/L	3.8057	-4.182	ug/L	19.0287	455.01%
B†	569.1	19.52	ug/L	0.149	97.60	ug/L	0.744	0.76%
Ba 233.527†	85.6	1.313	ug/L	0.0987	6.563	ug/L	0.4936	7.52%
Be 313.107†	2.1	0.014	ug/L	0.0317	0.068	ug/L	0.1585	234.73%
Ca 315.887†	8437.0	3067	ug/L	124.4	15340	ug/L	621.9	4.06%
Cd 214.440†	-17.4	-0.258	ug/L	0.1935	-1.292	ug/L	0.9675	74.86%
Co 228.616†	2.8	0.085	ug/L	0.5096	0.423	ug/L	2.5480	602.73%
Cr 267.716†	11.0	0.187	ug/L	0.0059	0.935	ug/L	0.0295	3.16%
Cu 327.393†	5.4	-0.079	ug/L	2.2464	-0.393	ug/L	11.2322	>999.9%
Fe 273.955†	2.8	-0.736	ug/L	1.3385	-3.680	ug/L	6.6925	181.85%
K 766.490†	876.7	389.0	ug/L	44.28	1945	ug/L	221.4	11.38%
Mg 285.213†	14057.9	3038	ug/L	125.9	15190	ug/L	629.7	4.15%
Mn 257.610†	-3.4	-0.546	ug/L	0.1616	-2.731	ug/L	0.8078	29.58%
Mo 202.031†	-1.1	-0.274	ug/L	0.2596	-1.370	ug/L	1.2982	94.73%
Na 589.592†	54266.3	8472	ug/L	359.5	42360	ug/L	1797.7	4.24%
Ni 231.604†	-2.3	-0.135	ug/L	0.0884	-0.677	ug/L	0.4419	65.32%
P 213.617†	17.0	11.64	ug/L	1.334	58.21	ug/L	6.668	11.45%
Pb 220.353†	11.2	2.479	ug/L	3.5429	12.39	ug/L	17.715	142.94%
Sb 206.836†	-0.0	-0.033	ug/L	2.5051	-0.167	ug/L	12.5253	>999.9%
Se 196.026†	-0.6	-0.555	ug/L	4.5138	-2.776	ug/L	22.5692	813.11%
Sn 189.927†	-1.7	-0.472	ug/L	0.4074	-2.362	ug/L	2.0369	86.23%
Sr 421.552†	8449.8	22.67	ug/L	0.927	113.3	ug/L	4.63	4.09%
Ti 337.279†	-1.2	-0.115	ug/L	0.2365	-0.576	ug/L	1.1826	205.38%
Tl 190.801†	4.4	3.436	ug/L	0.8256	17.18	ug/L	4.128	24.03%
V 292.402†	334.3	3.280	ug/L	0.5979	16.40	ug/L	2.989	18.23%
Zn 206.200†	10.6	0.963	ug/L	0.1897	4.814	ug/L	0.9484	19.70%

Reprocessing Begun
Logged In Analyst: chemist_metals Technique: ICP Continuous

Results Data Set (original): 161122A2007X
Results Library (original): C:\PE\chemist\RESULTS\Results.mdb
Results Data Set (reprocessed):
Results Library (reprocessed):

Sequence No.: 1 Autosampler Location: 1
Sample ID: CalBlk 161122RJS I:PB O:R Date Collected: 11/22/16 12:48:32 PM
Analyst: Data Type: Reprocessed on 11/23/16 12:14:58 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Mean Data: CalBlk 161122RJS I:PB O:R

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1034294.5	4839.27	0.47%	100.0	%
Y 371.029 Radial	971577.8	4840.73	0.50%	100.0	%
Ag 338.289†	-498.2	23.75	4.77%	[0.00]	ug/L
Al 308.215†	35.3	6.63	18.78%	[0.00]	ug/L
As 188.979†	-18.1	2.77	15.34%	[0.00]	ug/L
B†	-127.9	4.80	3.76%	[0.00]	ug/L
Ba 233.527†	74.1	10.61	14.31%	[0.00]	ug/L
Be 313.107†	-107.0	3.25	3.04%	[0.00]	ug/L
Ca 315.887†	43.2	9.13	21.14%	[0.00]	ug/L
Cd 214.440†	127.6	14.72	11.53%	[0.00]	ug/L
Co 228.616†	50.2	8.44	16.80%	[0.00]	ug/L
Cr 267.716†	243.8	16.55	6.79%	[0.00]	ug/L
Cu 327.393†	-120.0	25.18	20.98%	[0.00]	ug/L
Fe 273.955†	-115.9	16.69	14.40%	[0.00]	ug/L
K 766.490†	693.8	185.96	26.80%	[0.00]	ug/L
Mg 285.213†	-38.1	6.80	17.86%	[0.00]	ug/L
Mn 257.610†	-56.3	1.63	2.90%	[0.00]	ug/L
Mo 202.031†	24.5	0.77	3.12%	[0.00]	ug/L
Na 589.592†	-159.8	22.57	14.13%	[0.00]	ug/L
Ni 231.604†	11.0	10.23	93.24%	[0.00]	ug/L
P 213.617†	1.6	4.48	276.39%	[0.00]	ug/L
Pb 220.353†	-4.1	6.92	170.01%	[0.00]	ug/L
Sb 206.836†	-9.2	1.56	16.91%	[0.00]	ug/L
Se 196.026†	-0.6	3.64	584.37%	[0.00]	ug/L
Sn 189.927†	12.8	2.28	17.78%	[0.00]	ug/L
Sr 421.552†	552.7	25.56	4.62%	[0.00]	ug/L
Ti 337.279†	-150.2	9.62	6.40%	[0.00]	ug/L
Tl 190.801†	-4.7	0.41	8.79%	[0.00]	ug/L
V 292.402†	-389.5	93.68	24.05%	[0.00]	ug/L
Zn 206.200†	-256.7	0.75	0.29%	[0.00]	ug/L

Sequence No.: 2
Sample ID: STD 1 161122RJS I:PB O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 2
Date Collected: 11/22/16 12:52:49 PM
Data Type: Reprocessed on 11/23/16 12:15:00 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: STD 1 161122RJS I:PB O:RJ

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1045155.5	2998.79	0.29%	101.1	%
Y 371.029 Radial	982425.5	3172.45	0.32%	101.1	%
Ag 338.289†	58.7	51.51	87.72%	[0.5]	ug/L
Al 308.215†	38.6	8.22	21.29%	[50]	ug/L
As 188.979†	2.9	3.76	128.92%	[2]	ug/L
B†	1636.2	3.45	0.21%	[25]	ug/L
Ba 233.527†	217.8	21.83	10.02%	[1.5]	ug/L
Be 313.107†	326.7	2.86	0.88%	[1]	ug/L
Ca 315.887†	723.9	16.49	2.28%	[50]	ug/L
Cd 214.440†	39.4	10.78	27.39%	[0.25]	ug/L
Co 228.616†	142.2	7.12	5.01%	[2.5]	ug/L
Cr 267.716†	58.8	11.61	19.75%	[0.5]	ug/L
Cu 327.393†	373.5	39.71	10.63%	[2.5]	ug/L
Fe 273.955†	620.9	4.81	0.77%	[25]	ug/L
K 766.490†	2333.0	137.70	5.90%	[25]	ug/L
Mg 285.213†	265.3	1.21	0.46%	[25]	ug/L
Mn 257.610†	11.1	2.96	26.62%	[1]	ug/L
Mo 202.031†	14.5	4.09	28.17%	[1]	ug/L
Na 589.592†	6748.2	313.83	4.65%	[500]	ug/L
Ni 231.604†	46.7	7.01	14.99%	[1]	ug/L
P 213.617†	39.5	5.56	14.07%	[12.5]	ug/L
Pb 220.353†	20.6	9.12	44.36%	[1.5]	ug/L
Sb 206.836†	5.3	0.88	16.67%	[2]	ug/L
Se 196.026†	2.5	1.11	44.74%	[2]	ug/L
Sn 189.927†	19.7	4.17	21.16%	[3]	ug/L
Sr 421.552†	757.1	53.65	7.09%	[1]	ug/L
Ti 337.279†	69.9	5.13	7.34%	[2.5]	ug/L
Tl 190.801†	5.1	1.77	34.93%	[2]	ug/L
V 292.402†	128.7	24.24	18.83%	[0.5]	ug/L
Zn 206.200†	664.1	6.76	1.02%	[25]	ug/L

Sequence No.: 3
Sample ID: STD 2 161122RJS I:PB O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 11/22/16 12:57:07 PM
Data Type: Reprocessed on 11/23/16 12:15:02 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: STD 2 161122RJS I:PB O:RJ

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1009240.6	14335.14	1.42%	97.58	%
Y 371.029 Radial	946325.1	14460.13	1.53%	97.40	%
Ag 338.289†	16702.8	299.22	1.79%	[250]	ug/L
Al 308.215†	3751.6	136.13	3.63%	[10000]	ug/L
As 188.979†	527.4	9.28	1.76%	[500]	ug/L
B†	14587.4	440.90	3.02%	[500]	ug/L
Ba 233.527†	33210.0	750.84	2.26%	[500]	ug/L
Be 313.107†	76100.4	3077.75	4.04%	[500]	ug/L
Ca 315.887†	67523.8	2774.70	4.11%	[25000]	ug/L
Cd 214.440†	35469.4	739.01	2.08%	[500]	ug/L
Co 228.616†	12961.5	189.60	1.46%	[500]	ug/L
Cr 267.716†	25965.0	508.54	1.96%	[500]	ug/L
Cu 327.393†	36521.0	770.13	2.11%	[500]	ug/L
Fe 273.955†	115153.5	2565.28	2.23%	[10000]	ug/L
K 766.490†	21478.0	650.08	3.03%	[10000]	ug/L
Mg 285.213†	113934.4	3777.70	3.32%	[25000]	ug/L
Mn 257.610†	3987.5	168.54	4.23%	[500]	ug/L
Mo 202.031†	3998.2	85.91	2.15%	[500]	ug/L
Na 589.592†	78208.7	2963.53	3.79%	[12500]	ug/L
Ni 231.604†	10523.8	231.88	2.20%	[500]	ug/L
P 213.617†	3662.6	52.72	1.44%	[2500]	ug/L
Pb 220.353†	2243.5	46.81	2.09%	[500]	ug/L
Sb 206.836†	649.8	14.66	2.26%	[500]	ug/L
Se 196.026†	506.2	17.30	3.42%	[500]	ug/L
Sn 189.927†	1470.4	34.05	2.32%	[500]	ug/L
Sr 421.552†	182034.8	6684.67	3.67%	[500]	ug/L
Ti 337.279†	8006.7	291.01	3.63%	[500]	ug/L
Tl 190.801†	647.1	12.17	1.88%	[500]	ug/L
V 292.402†	52020.9	916.66	1.76%	[500]	ug/L
Zn 206.200†	5344.0	83.72	1.57%	[500]	ug/L

Sequence No.: 4
Sample ID: STD 3 161122RJS I:PB O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 11/22/16 1:00:33 PM
Data Type: Reprocessed on 11/23/16 12:15:03 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: STD 3 161122RJS I:PB O:RJ

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	983519.3	7379.28	0.75%	95.09	%
Y 371.029 Radial	920377.3	7492.62	0.81%	94.73	%
Ag 338.289†	33029.1	313.78	0.95%	[500]	ug/L
Al 308.215†	7615.6	9.79	0.13%	[20000]	ug/L
As 188.979†	1048.7	8.79	0.84%	[1000]	ug/L
B†	29127.4	43.43	0.15%	[1000]	ug/L
Ba 233.527†	64457.6	563.38	0.87%	[1000]	ug/L
Be 313.107†	157373.6	1099.36	0.70%	[1000]	ug/L
Ca 315.887†	138145.5	401.16	0.29%	[50000]	ug/L
Cd 214.440†	69135.0	832.21	1.20%	[1000]	ug/L
Co 228.616†	25288.8	298.95	1.18%	[1000]	ug/L
Cr 267.716†	50625.9	476.32	0.94%	[1000]	ug/L
Cu 327.393†	72036.4	471.71	0.65%	[1000]	ug/L
Fe 273.955†	223510.3	1843.25	0.82%	[20000]	ug/L
K 766.490†	45548.1	165.82	0.36%	[20000]	ug/L
Mg 285.213†	232037.5	1690.04	0.73%	[50000]	ug/L
Mn 257.610†	8099.5	60.21	0.74%	[1000]	ug/L
Mo 202.031†	7910.5	42.70	0.54%	[1000]	ug/L
Na 589.592†	161028.3	1152.22	0.72%	[25000]	ug/L
Ni 231.604†	20639.2	161.56	0.78%	[1000]	ug/L
P 213.617†	7294.9	36.95	0.51%	[5000]	ug/L
Pb 220.353†	4363.0	34.04	0.78%	[1000]	ug/L
Sb 206.836†	1284.0	9.76	0.76%	[1000]	ug/L
Se 196.026†	1002.7	0.64	0.06%	[1000]	ug/L
Sn 189.927†	2895.9	25.15	0.87%	[1000]	ug/L
Sr 421.552†	374314.7	2882.35	0.77%	[1000]	ug/L
Ti 337.279†	16480.0	82.85	0.50%	[1000]	ug/L
Tl 190.801†	1268.6	12.46	0.98%	[1000]	ug/L
V 292.402†	101823.4	788.33	0.77%	[1000]	ug/L
Zn 206.200†	10492.6	67.51	0.64%	[1000]	ug/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 338.289	3	Lin Thru 0	0.0	66.21	0.00000	0.999989	
Al 308.215	3	Lin Thru 0	0.0	0.3797	0.00000	0.999980	
As 188.979	3	Lin Thru 0	0.0	1.050	0.00000	0.999997	
B	3	Lin Thru 0	0.0	29.15	0.00000	0.999613	
Ba 233.527	3	Lin Thru 0	0.0	64.85	0.00000	0.999925	
Be 313.107	3	Lin Thru 0	0.0	156.3	0.00000	0.999912	
Ca 315.887	3	Lin Thru 0	0.0	2.751	0.00000	0.999952	
Cd 214.440	3	Lin Thru 0	0.0	69.50	0.00000	0.999946	
Co 228.616	3	Lin Thru 0	0.0	25.42	0.00000	0.999946	
Cr 267.716	3	Lin Thru 0	0.0	50.89	0.00000	0.999947	
Cu 327.393	3	Lin Thru 0	0.0	72.24	0.00000	0.999982	
Fe 273.955	3	Lin Thru 0	0.0	11.24	0.00000	0.999926	
K 766.490	3	Lin Thru 0	0.0	2.252	0.00000	0.998715	
Mg 285.213	3	Lin Thru 0	0.0	4.624	0.00000	0.999974	
Mn 257.610	3	Lin Thru 0	0.0	8.075	0.00000	0.999981	
Mo 202.031	3	Lin Thru 0	0.0	7.928	0.00000	0.999990	
Na 589.592	3	Lin Thru 0	0.0	6.407	0.00000	0.999738	
Ni 231.604	3	Lin Thru 0	0.0	20.72	0.00000	0.999968	
P 213.617	3	Lin Thru 0	0.0	1.460	0.00000	0.999995	
Pb 220.353	3	Lin Thru 0	0.0	4.388	0.00000	0.999932	
Sb 206.836	3	Lin Thru 0	0.0	1.287	0.00000	0.999986	
Se 196.026	3	Lin Thru 0	0.0	1.005	0.00000	0.999993	
Sn 189.927	3	Lin Thru 0	0.0	2.905	0.00000	0.999975	
Sr 421.552	3	Lin Thru 0	0.0	372.3	0.00000	0.999939	

Ti 337.279	3	Lin Thru 0	0.0	16.39	0.00000	0.999934
Tl 190.801	3	Lin Thru 0	0.0	1.274	0.00000	0.999966
V 292.402	3	Lin Thru 0	0.0	102.3	0.00000	0.999962
Zn 206.200	3	Lin Thru 0	0.0	10.54	0.00000	0.999395

Sequence No.: 5
Sample ID: ICV 161122RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 11/22/16 1:03:52 PM
Data Type: Reprocessed on 11/23/16 12:15:05 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICV 161122RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1026741.9	99.27	%	0.465				0.47%
Y 371.029 Radial	964143.6	99.23	%	0.505				0.51%
Ag 338.289†	17120.8	258.6	ug/L	2.17	258.6	ug/L	2.17	0.84%
QC value within limits for Ag 338.289 Recovery = 103.44%								
Al 308.215†	4780.2	12600	ug/L	267.0	12600	ug/L	267.0	2.12%
QC value within limits for Al 308.215 Recovery = 100.78%								
As 188.979†	528.1	506.5	ug/L	6.59	506.5	ug/L	6.59	1.30%
QC value within limits for As 188.979 Recovery = 101.30%								
B†	14994.5	514.3	ug/L	14.06	514.3	ug/L	14.06	2.73%
QC value within limits for B Recovery = 102.86%								
Ba 233.527†	33582.7	516.6	ug/L	5.37	516.6	ug/L	5.37	1.04%
QC value within limits for Ba 233.527 Recovery = 103.33%								
Be 313.107†	79541.2	508.8	ug/L	4.67	508.8	ug/L	4.67	0.92%
QC value within limits for Be 313.107 Recovery = 101.75%								
Ca 315.887†	35235.0	12810	ug/L	269.9	12810	ug/L	269.9	2.11%
QC value within limits for Ca 315.887 Recovery = 102.45%								
Cd 214.440†	35867.8	515.9	ug/L	5.48	515.9	ug/L	5.48	1.06%
QC value within limits for Cd 214.440 Recovery = 103.17%								
Co 228.616†	13252.1	519.8	ug/L	6.08	519.8	ug/L	6.08	1.17%
QC value within limits for Co 228.616 Recovery = 103.96%								
Cr 267.716†	26125.1	512.3	ug/L	7.34	512.3	ug/L	7.34	1.43%
QC value within limits for Cr 267.716 Recovery = 102.47%								
Cu 327.393†	36834.8	510.6	ug/L	7.63	510.6	ug/L	7.63	1.49%
QC value within limits for Cu 327.393 Recovery = 102.13%								
Fe 273.955†	145005.1	12850	ug/L	69.1	12850	ug/L	69.1	0.54%
QC value within limits for Fe 273.955 Recovery = 102.81%								
K 766.490†	27454.5	12180	ug/L	179.9	12180	ug/L	179.9	1.48%
QC value within limits for K 766.490 Recovery = 97.46%								
Mg 285.213†	60412.7	13080	ug/L	266.9	13080	ug/L	266.9	2.04%
QC value within limits for Mg 285.213 Recovery = 104.62%								
Mn 257.610†	4113.2	509.8	ug/L	7.59	509.8	ug/L	7.59	1.49%
QC value within limits for Mn 257.610 Recovery = 101.97%								
Mo 202.031†	4012.0	506.3	ug/L	4.53	506.3	ug/L	4.53	0.89%
QC value within limits for Mo 202.031 Recovery = 101.26%								
Na 589.592†	80044.7	12430	ug/L	156.0	12430	ug/L	156.0	1.26%
QC value within limits for Na 589.592 Recovery = 99.43%								
Ni 231.604†	10821.4	519.2	ug/L	6.61	519.2	ug/L	6.61	1.27%
QC value within limits for Ni 231.604 Recovery = 103.84%								
P 213.617†	3730.3	2555	ug/L	19.6	2555	ug/L	19.6	0.77%
QC value within limits for P 213.617 Recovery = 102.19%								
Pb 220.353†	2265.2	518.7	ug/L	5.54	518.7	ug/L	5.54	1.07%
QC value within limits for Pb 220.353 Recovery = 103.75%								
Sb 206.836†	656.6	510.1	ug/L	5.92	510.1	ug/L	5.92	1.16%
QC value within limits for Sb 206.836 Recovery = 102.02%								
Se 196.026†	513.9	511.6	ug/L	16.41	511.6	ug/L	16.41	3.21%
QC value within limits for Se 196.026 Recovery = 102.31%								
Sn 189.927†	856.7	298.7	ug/L	3.82	298.7	ug/L	3.82	1.28%
QC value greater than the upper limit for Sn 189.927 Recovery = 119.47%								
Sr 421.552†	187084.3	502.4	ug/L	3.89	502.4	ug/L	3.89	0.77%
QC value within limits for Sr 421.552 Recovery = 100.48%								
Ti 337.279†	8561.3	522.2	ug/L	10.45	522.2	ug/L	10.45	2.00%
QC value within limits for Ti 337.279 Recovery = 104.43%								
Tl 190.801†	672.9	528.3	ug/L	5.46	528.3	ug/L	5.46	1.03%
QC value within limits for Tl 190.801 Recovery = 105.66%								
V 292.402†	52417.1	520.2	ug/L	8.00	520.2	ug/L	8.00	1.54%
QC value within limits for V 292.402 Recovery = 104.04%								
Zn 206.200†	5590.4	532.7	ug/L	5.25	532.7	ug/L	5.25	0.99%
QC value within limits for Zn 206.200 Recovery = 106.54%								

QC Failed. Continue with analysis.

Sequence No.: 6
Sample ID: ICB 161122RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 11/22/16 1:09:27 PM
Data Type: Reprocessed on 11/23/16 12:15:06 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICB 161122RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1048926.0	101.4	%	0.53				0.52%
Y 371.029 Radial	986739.9	101.6	%	0.58				0.57%
Ag 338.289†	5.4	0.081	ug/L	0.8061	0.081	ug/L	0.8061	994.57%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	-7.4	-19.65	ug/L	28.248	-19.65	ug/L	28.248	143.76%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	4.0	3.796	ug/L	3.7740	3.796	ug/L	3.7740	99.41%
QC value within limits for As 188.979 Recovery = Not calculated								
B†	69.0	2.367	ug/L	0.2586	2.367	ug/L	0.2586	10.92%
QC value within limits for B Recovery = Not calculated								
Ba 233.527†	1.7	0.026	ug/L	0.1006	0.026	ug/L	0.1006	393.51%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	2.5	0.016	ug/L	0.0099	0.016	ug/L	0.0099	62.68%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	-2.0	-0.717	ug/L	2.8377	-0.717	ug/L	2.8377	395.95%
QC value within limits for Ca 315.887 Recovery = Not calculated								
Cd 214.440†	20.1	0.290	ug/L	0.1510	0.290	ug/L	0.1510	52.10%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	-1.9	-0.070	ug/L	0.3264	-0.070	ug/L	0.3264	468.45%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	-1.0	-0.019	ug/L	0.1672	-0.019	ug/L	0.1672	875.72%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	-16.4	-0.228	ug/L	0.7334	-0.228	ug/L	0.7334	321.59%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	-8.5	-0.733	ug/L	1.4278	-0.733	ug/L	1.4278	194.73%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	109.0	48.42	ug/L	62.768	48.42	ug/L	62.768	129.63%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	1.1	0.228	ug/L	1.5053	0.228	ug/L	1.5053	659.43%
QC value within limits for Mg 285.213 Recovery = Not calculated								
Mn 257.610†	-6.7	-0.832	ug/L	0.1747	-0.832	ug/L	0.1747	20.98%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	8.9	1.127	ug/L	0.5031	1.127	ug/L	0.5031	44.63%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	-57.5	-9.003	ug/L	7.0615	-9.003	ug/L	7.0615	78.43%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	1.8	0.083	ug/L	0.2735	0.083	ug/L	0.2735	331.56%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	0.0	0.015	ug/L	3.6167	0.015	ug/L	3.6167	>999.9%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	15.4	3.516	ug/L	2.6502	3.516	ug/L	2.6502	75.37%
QC value greater than the upper limit for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	-1.6	-1.272	ug/L	1.8794	-1.272	ug/L	1.8794	147.70%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	0.1	0.109	ug/L	5.1508	0.109	ug/L	5.1508	>999.9%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	-0.3	-0.104	ug/L	0.1221	-0.104	ug/L	0.1221	117.89%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	23.8	0.064	ug/L	0.0820	0.064	ug/L	0.0820	128.39%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	-12.5	-0.766	ug/L	0.1582	-0.766	ug/L	0.1582	20.67%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	3.9	3.031	ug/L	1.1821	3.031	ug/L	1.1821	39.00%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	-28.2	-0.260	ug/L	0.6211	-0.260	ug/L	0.6211	238.71%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	8.0	0.763	ug/L	0.3635	0.763	ug/L	0.3635	47.67%
QC value within limits for Zn 206.200 Recovery = Not calculated								

QC Failed. Continue with analysis.

Sequence No.: 7 Autosampler Location: 6
Sample ID: ICSA 161122RJS I:PB O:RJS Date Collected: 11/22/16 1:14:14 PM
Analyst: Data Type: Reprocessed on 11/23/16 12:15:07 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Mean Data: ICSA 161122RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	983090.8	95.05	%	0.883				0.93%
Y 371.029 Radial	919369.3	94.63	%	0.975				1.03%
Ag 338.289†	-16.4	-0.248	ug/L	0.6408	-0.248	ug/L	0.6408	258.26%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	38076.0	100300	ug/L	3480.5	100300	ug/L	3480.5	3.47%
QC value within limits for Al 308.215 Recovery = 100.27%								
As 188.979†	-14.5	3.200	ug/L	5.7732	3.200	ug/L	5.7732	180.44%
QC value within limits for As 188.979 Recovery = Not calculated								
B†	-410.4	-14.08	ug/L	0.802	-14.08	ug/L	0.802	5.69%
QC value within limits for B Recovery = Not calculated								
Ba 233.527†	824.5	0.847	ug/L	0.6408	0.847	ug/L	0.6408	75.64%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-4.4	-0.028	ug/L	0.0162	-0.028	ug/L	0.0162	58.01%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	281713.9	102400	ug/L	3480.9	102400	ug/L	3480.9	3.40%
QC value within limits for Ca 315.887 Recovery = 102.41%								
Cd 214.440†	369.1	0.617	ug/L	0.3478	0.617	ug/L	0.3478	56.41%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	81.9	-0.990	ug/L	0.7212	-0.990	ug/L	0.7212	72.81%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	-61.7	-1.987	ug/L	0.1858	-1.987	ug/L	0.1858	9.35%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	-551.9	-1.920	ug/L	1.8356	-1.920	ug/L	1.8356	95.61%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	1090058.3	96930	ug/L	102.0	96930	ug/L	102.0	0.11%
QC value within limits for Fe 273.955 Recovery = 96.93%								
K 766.490†	78.6	-39.16	ug/L	25.448	-39.16	ug/L	25.448	64.99%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	460608.4	99730	ug/L	3478.4	99730	ug/L	3478.4	3.49%
QC value within limits for Mg 285.213 Recovery = 99.73%								
Mn 257.610†	-17.2	0.843	ug/L	0.3599	0.843	ug/L	0.3599	42.69%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	-52.4	-2.142	ug/L	0.3300	-2.142	ug/L	0.3300	15.41%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	-28.9	-458.8	ug/L	12.38	-458.8	ug/L	12.38	2.70%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	-65.0	-0.300	ug/L	0.9409	-0.300	ug/L	0.9409	313.24%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	1.6	1.115	ug/L	1.7429	1.115	ug/L	1.7429	156.27%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	-55.3	0.324	ug/L	3.2548	0.324	ug/L	3.2548	>999.9%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	0.5	0.385	ug/L	2.8540	0.385	ug/L	2.8540	741.17%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	-7.2	-7.146	ug/L	3.2854	-7.146	ug/L	3.2854	45.98%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	-49.8	-13.31	ug/L	1.781	-13.31	ug/L	1.781	13.38%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	277.9	-0.312	ug/L	0.0640	-0.312	ug/L	0.0640	20.52%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	1.1	-1.969	ug/L	0.9326	-1.969	ug/L	0.9326	47.38%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	3.5	2.769	ug/L	0.1482	2.769	ug/L	0.1482	5.35%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	2065.6	-1.216	ug/L	1.0386	-1.216	ug/L	1.0386	85.45%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	-15.3	-0.242	ug/L	0.1718	-0.242	ug/L	0.1718	71.08%
QC value within limits for Zn 206.200 Recovery = Not calculated								

All analyte(s) passed QC.

Sequence No.: 8
Sample ID: ICSAB 161122RJS I:PB O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 11/22/16 1:19:34 PM
Data Type: Reprocessed on 11/23/16 12:15:08 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICSAB 161122RJS I:PB O:RJ

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	979409.5	94.69	%	0.343				0.36%
Y 371.029 Radial	915478.5	94.23	%	0.389				0.41%
Ag 338.289†	32628.7	492.8	ug/L	6.02	492.8	ug/L	6.02	1.22%
QC value within limits for Ag 338.289 Recovery = 98.56%								
Al 308.215†	37345.5	98350	ug/L	1233.8	98350	ug/L	1233.8	1.25%
QC value within limits for Al 308.215 Recovery = 98.35%								
As 188.979†	222.7	227.6	ug/L	8.33	227.6	ug/L	8.33	3.66%
QC value within limits for As 188.979 Recovery = 91.03%								
B†	-393.3	-13.49	ug/L	1.093	-13.49	ug/L	1.093	8.10%
QC value within limits for B Recovery = Not calculated								
Ba 233.527†	16167.6	237.9	ug/L	2.02	237.9	ug/L	2.02	0.85%
QC value within limits for Ba 233.527 Recovery = 95.18%								
Be 313.107†	37160.3	237.7	ug/L	4.92	237.7	ug/L	4.92	2.07%
QC value within limits for Be 313.107 Recovery = 95.08%								
Ca 315.887†	269020.9	97800	ug/L	3112.0	97800	ug/L	3112.0	3.18%
QC value within limits for Ca 315.887 Recovery = 97.80%								
Cd 214.440†	32846.0	468.2	ug/L	4.25	468.2	ug/L	4.25	0.91%
QC value within limits for Cd 214.440 Recovery = 93.64%								
Co 228.616†	6279.1	242.9	ug/L	1.18	242.9	ug/L	1.18	0.48%
QC value within limits for Co 228.616 Recovery = 97.16%								
Cr 267.716†	11937.9	233.4	ug/L	2.28	233.4	ug/L	2.28	0.98%
QC value within limits for Cr 267.716 Recovery = 93.35%								
Cu 327.393†	17213.8	243.2	ug/L	2.63	243.2	ug/L	2.63	1.08%
QC value within limits for Cu 327.393 Recovery = 97.28%								
Fe 273.955†	1059484.7	94190	ug/L	823.8	94190	ug/L	823.8	0.87%
QC value within limits for Fe 273.955 Recovery = 94.19%								
K 766.490†	195.2	13.71	ug/L	72.985	13.71	ug/L	72.985	532.45%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	439777.0	95220	ug/L	2978.2	95220	ug/L	2978.2	3.13%
QC value within limits for Mg 285.213 Recovery = 95.22%								
Mn 257.610†	1866.1	234.1	ug/L	5.11	234.1	ug/L	5.11	2.18%
QC value within limits for Mn 257.610 Recovery = 93.64%								
Mo 202.031†	1811.6	232.8	ug/L	1.33	232.8	ug/L	1.33	0.57%
QC value within limits for Mo 202.031 Recovery = 93.12%								
Na 589.592†	-69.9	-452.6	ug/L	10.22	-452.6	ug/L	10.22	2.26%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	9953.8	481.7	ug/L	1.81	481.7	ug/L	1.81	0.38%
QC value within limits for Ni 231.604 Recovery = 96.34%								
P 213.617†	-27.9	-19.08	ug/L	2.119	-19.08	ug/L	2.119	11.11%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	2044.1	479.2	ug/L	4.15	479.2	ug/L	4.15	0.87%
QC value within limits for Pb 220.353 Recovery = 95.84%								
Sb 206.836†	299.8	232.9	ug/L	1.89	232.9	ug/L	1.89	0.81%
QC value within limits for Sb 206.836 Recovery = 93.17%								
Se 196.026†	224.2	223.1	ug/L	6.79	223.1	ug/L	6.79	3.04%
QC value within limits for Se 196.026 Recovery = 89.25%								
Sn 189.927†	-45.5	-11.97	ug/L	1.555	-11.97	ug/L	1.555	12.99%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	210.2	-0.449	ug/L	0.1171	-0.449	ug/L	0.1171	26.10%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	-9.1	-2.509	ug/L	4.8246	-2.509	ug/L	4.8246	192.30%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	310.6	243.8	ug/L	1.48	243.8	ug/L	1.48	0.61%
QC value within limits for Tl 190.801 Recovery = 97.54%								
V 292.402†	26117.9	239.6	ug/L	1.87	239.6	ug/L	1.87	0.78%
QC value within limits for V 292.402 Recovery = 95.83%								
Zn 206.200†	5026.1	479.0	ug/L	1.69	479.0	ug/L	1.69	0.35%
QC value within limits for Zn 206.200 Recovery = 95.80%								

All analyte(s) passed QC.

Sequence No.: 9
Sample ID: CCV1 161122RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 11/22/16 1:23:50 PM
Data Type: Reprocessed on 11/23/16 12:15:09 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCV1 161122RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1019149.1	98.54	%	1.741				1.77%
Y 371.029 Radial	955527.6	98.35	%	1.845				1.88%
Ag 338.289†	16521.1	249.5	ug/L	7.87	249.5	ug/L	7.87	3.15%
QC value within limits for Ag 338.289 Recovery = 99.81%								
Al 308.215†	3694.0	9735	ug/L	468.5	9735	ug/L	468.5	4.81%
QC value within limits for Al 308.215 Recovery = 97.35%								
As 188.979†	528.6	506.0	ug/L	9.04	506.0	ug/L	9.04	1.79%
QC value within limits for As 188.979 Recovery = 101.19%								
B†	14440.2	495.3	ug/L	22.57	495.3	ug/L	22.57	4.56%
QC value within limits for B Recovery = 99.06%								
Ba 233.527†	33198.4	511.0	ug/L	17.58	511.0	ug/L	17.58	3.44%
QC value within limits for Ba 233.527 Recovery = 102.20%								
Be 313.107†	75017.8	479.8	ug/L	15.38	479.8	ug/L	15.38	3.21%
QC value within limits for Be 313.107 Recovery = 95.97%								
Ca 315.887†	67159.7	24410	ug/L	1155.8	24410	ug/L	1155.8	4.73%
QC value within limits for Ca 315.887 Recovery = 97.65%								
Cd 214.440†	35548.4	511.4	ug/L	17.55	511.4	ug/L	17.55	3.43%
QC value within limits for Cd 214.440 Recovery = 102.28%								
Co 228.616†	12879.9	505.3	ug/L	14.17	505.3	ug/L	14.17	2.80%
QC value within limits for Co 228.616 Recovery = 101.06%								
Cr 267.716†	25996.0	509.8	ug/L	17.88	509.8	ug/L	17.88	3.51%
QC value within limits for Cr 267.716 Recovery = 101.95%								
Cu 327.393†	36181.0	501.0	ug/L	16.36	501.0	ug/L	16.36	3.26%
QC value within limits for Cu 327.393 Recovery = 100.21%								
Fe 273.955†	115230.3	10200	ug/L	335.7	10200	ug/L	335.7	3.29%
QC value within limits for Fe 273.955 Recovery = 102.01%								
K 766.490†	21192.7	9399	ug/L	399.5	9399	ug/L	399.5	4.25%
QC value within limits for K 766.490 Recovery = 93.99%								
Mg 285.213†	113069.3	24460	ug/L	780.0	24460	ug/L	780.0	3.19%
QC value within limits for Mg 285.213 Recovery = 97.85%								
Mn 257.610†	3947.7	488.7	ug/L	23.68	488.7	ug/L	23.68	4.85%
QC value within limits for Mn 257.610 Recovery = 97.73%								
Mo 202.031†	3994.1	503.9	ug/L	10.67	503.9	ug/L	10.67	2.12%
QC value within limits for Mo 202.031 Recovery = 100.78%								
Na 589.592†	77157.0	12000	ug/L	486.1	12000	ug/L	486.1	4.05%
QC value within limits for Na 589.592 Recovery = 95.99%								
Ni 231.604†	10475.2	502.4	ug/L	17.91	502.4	ug/L	17.91	3.57%
QC value within limits for Ni 231.604 Recovery = 100.49%								
P 213.617†	3649.8	2500	ug/L	50.4	2500	ug/L	50.4	2.02%
QC value within limits for P 213.617 Recovery = 99.98%								
Pb 220.353†	2237.5	511.8	ug/L	9.45	511.8	ug/L	9.45	1.85%
QC value within limits for Pb 220.353 Recovery = 102.35%								
Sb 206.836†	649.8	504.9	ug/L	7.90	504.9	ug/L	7.90	1.56%
QC value within limits for Sb 206.836 Recovery = 100.97%								
Se 196.026†	502.5	500.2	ug/L	13.35	500.2	ug/L	13.35	2.67%
QC value within limits for Se 196.026 Recovery = 100.04%								
Sn 189.927†	1470.7	510.2	ug/L	10.45	510.2	ug/L	10.45	2.05%
QC value within limits for Sn 189.927 Recovery = 102.05%								
Sr 421.552†	179732.7	482.6	ug/L	16.73	482.6	ug/L	16.73	3.47%
QC value within limits for Sr 421.552 Recovery = 96.51%								
Ti 337.279†	7927.2	483.3	ug/L	25.03	483.3	ug/L	25.03	5.18%
QC value within limits for Ti 337.279 Recovery = 96.67%								
Tl 190.801†	639.7	502.3	ug/L	10.48	502.3	ug/L	10.48	2.09%
QC value within limits for Tl 190.801 Recovery = 100.45%								
V 292.402†	52170.6	518.4	ug/L	16.05	518.4	ug/L	16.05	3.10%
QC value within limits for V 292.402 Recovery = 103.67%								
Zn 206.200†	5368.6	511.5	ug/L	8.26	511.5	ug/L	8.26	1.62%
QC value within limits for Zn 206.200 Recovery = 102.29%								

All analyte(s) passed QC.

Sequence No.: 10
Sample ID: CCB 161122RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 11/22/16 1:27:14 PM
Data Type: Reprocessed on 11/23/16 12:15:10 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCB 161122RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1066799.1	103.1	%	0.63				0.61%
Y 371.029 Radial	1003805.1	103.3	%	0.64				0.62%
Ag 338.289†	16.7	0.253	ug/L	1.0886	0.253	ug/L	1.0886	430.85%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	-3.5	-9.388	ug/L	27.1651	-9.388	ug/L	27.1651	289.35%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	4.5	4.260	ug/L	1.3946	4.260	ug/L	1.3946	32.73%
QC value greater than the upper limit for As 188.979 Recovery = Not calculated								
B†	97.9	3.357	ug/L	0.5740	3.357	ug/L	0.5740	17.10%
QC value within limits for B Recovery = Not calculated								
Ba 233.527†	-2.0	-0.031	ug/L	0.1383	-0.031	ug/L	0.1383	443.32%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	3.0	0.019	ug/L	0.0247	0.019	ug/L	0.0247	129.21%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	6.6	2.402	ug/L	4.5855	2.402	ug/L	4.5855	190.87%
QC value within limits for Ca 315.887 Recovery = Not calculated								
Cd 214.440†	22.6	0.325	ug/L	0.0524	0.325	ug/L	0.0524	16.14%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	-2.3	-0.087	ug/L	0.6560	-0.087	ug/L	0.6560	754.09%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	-13.9	-0.275	ug/L	0.2775	-0.275	ug/L	0.2775	100.75%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	12.2	0.169	ug/L	1.6315	0.169	ug/L	1.6315	965.61%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	0.5	0.088	ug/L	0.4658	0.088	ug/L	0.4658	527.67%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	169.4	75.21	ug/L	108.132	75.21	ug/L	108.132	143.77%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	11.8	2.550	ug/L	1.5602	2.550	ug/L	1.5602	61.17%
QC value within limits for Mg 285.213 Recovery = Not calculated								
Mn 257.610†	-3.8	-0.475	ug/L	0.9223	-0.475	ug/L	0.9223	194.36%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	8.5	1.076	ug/L	0.4186	1.076	ug/L	0.4186	38.90%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	-11.6	-1.839	ug/L	9.0761	-1.839	ug/L	9.0761	493.43%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	3.1	0.141	ug/L	0.3033	0.141	ug/L	0.3033	214.40%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	2.1	1.446	ug/L	0.5766	1.446	ug/L	0.5766	39.89%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	3.1	0.710	ug/L	4.1307	0.710	ug/L	4.1307	582.01%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	1.1	0.838	ug/L	1.0599	0.838	ug/L	1.0599	126.46%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	2.6	2.568	ug/L	7.1541	2.568	ug/L	7.1541	278.55%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	1.3	0.460	ug/L	0.0487	0.460	ug/L	0.0487	10.60%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	-62.9	-0.169	ug/L	0.1643	-0.169	ug/L	0.1643	97.31%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	4.8	0.292	ug/L	0.4140	0.292	ug/L	0.4140	141.91%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	4.5	3.529	ug/L	1.3491	3.529	ug/L	1.3491	38.22%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	-46.7	-0.444	ug/L	0.6808	-0.444	ug/L	0.6808	153.20%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	12.9	1.228	ug/L	0.5482	1.228	ug/L	0.5482	44.64%
QC value within limits for Zn 206.200 Recovery = Not calculated								

QC Failed. Continue with analysis.

Sequence No.: 12
Sample ID: LLICV 161122RJS I:PB O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 2
Date Collected: 11/22/16 1:36:45 PM
Data Type: Reprocessed on 11/23/16 12:15:13 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: LLICV 161122RJS I:PB O:RJ

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1055360.4	102.0	%	0.81				0.80%
Y 371.029 Radial	992551.0	102.2	%	0.85				0.83%
Ag 338.289†	136.3	2.059	ug/L	0.5678	2.059	ug/L	0.5678	27.58%
QC value less than the lower limit for Ag 338.289 Recovery = 68.62%								
Al 308.215†	76.6	201.6	ug/L	7.63	201.6	ug/L	7.63	3.78%
QC value less than the lower limit for Al 308.215 Recovery = 67.19%								
As 188.979†	8.4	8.089	ug/L	5.5264	8.089	ug/L	5.5264	68.32%
QC value less than the lower limit for As 188.979 Recovery = 77.04%								
B†	2969.3	101.8	ug/L	0.69	101.8	ug/L	0.69	0.68%
QC value less than the lower limit for B Recovery = 67.90%								
Ba 233.527†	683.3	10.53	ug/L	0.167	10.53	ug/L	0.167	1.59%
QC value less than the lower limit for Ba 233.527 Recovery = 70.18%								
Be 313.107†	616.8	3.945	ug/L	0.0237	3.945	ug/L	0.0237	0.60%
QC value less than the lower limit for Be 313.107 Recovery = 65.75%								
Ca 315.887†	582.5	211.6	ug/L	7.69	211.6	ug/L	7.69	3.63%
QC value less than the lower limit for Ca 315.887 Recovery = 70.53%								
Cd 214.440†	748.7	10.78	ug/L	0.106	10.78	ug/L	0.106	0.98%
QC value less than the lower limit for Cd 214.440 Recovery = 71.83%								
Co 228.616†	287.9	11.30	ug/L	0.169	11.30	ug/L	0.169	1.50%
QC value less than the lower limit for Co 228.616 Recovery = 75.30%								
Cr 267.716†	514.7	10.09	ug/L	0.172	10.09	ug/L	0.172	1.70%
QC value less than the lower limit for Cr 267.716 Recovery = 67.25%								
Cu 327.393†	704.1	9.716	ug/L	0.2691	9.716	ug/L	0.2691	2.77%
QC value less than the lower limit for Cu 327.393 Recovery = 64.77%								
Fe 273.955†	1192.6	105.3	ug/L	1.38	105.3	ug/L	1.38	1.31%
QC value less than the lower limit for Fe 273.955 Recovery = 70.18%								
K 766.490†	4513.4	2004	ug/L	128.8	2004	ug/L	128.8	6.43%
QC value less than the lower limit for K 766.490 Recovery = 66.82%								
Mg 285.213†	489.0	105.4	ug/L	1.88	105.4	ug/L	1.88	1.78%
QC value less than the lower limit for Mg 285.213 Recovery = 70.27%								
Mn 257.610†	71.1	8.806	ug/L	0.6795	8.806	ug/L	0.6795	7.72%
QC value less than the lower limit for Mn 257.610 Recovery = 58.70%								
Mo 202.031†	75.7	9.506	ug/L	0.8079	9.506	ug/L	0.8079	8.50%
QC value less than the lower limit for Mo 202.031 Recovery = 63.37%								
Na 589.592†	12826.0	2001	ug/L	67.0	2001	ug/L	67.0	3.35%
QC value less than the lower limit for Na 589.592 Recovery = 66.69%								
Ni 231.604†	237.4	11.37	ug/L	0.307	11.37	ug/L	0.307	2.70%
QC value less than the lower limit for Ni 231.604 Recovery = 75.78%								
P 213.617†	68.0	46.59	ug/L	1.769	46.59	ug/L	1.769	3.80%
QC value less than the lower limit for P 213.617 Recovery = 62.12%								
Pb 220.353†	40.0	9.152	ug/L	2.2020	9.152	ug/L	2.2020	24.06%
QC value within limits for Pb 220.353 Recovery = 101.69%								
Sb 206.836†	11.4	8.823	ug/L	0.2388	8.823	ug/L	0.2388	2.71%
QC value less than the lower limit for Sb 206.836 Recovery = 58.82%								
Se 196.026†	17.5	17.45	ug/L	3.045	17.45	ug/L	3.045	17.45%
QC value within limits for Se 196.026 Recovery = 116.35%								
Sn 189.927†	23.0	7.988	ug/L	0.4584	7.988	ug/L	0.4584	5.74%
QC value less than the lower limit for Sn 189.927 Recovery = 53.25%								
Sr 421.552†	3823.3	10.27	ug/L	0.191	10.27	ug/L	0.191	1.86%
QC value less than the lower limit for Sr 421.552 Recovery = 68.45%								
Ti 337.279†	156.2	9.522	ug/L	0.2261	9.522	ug/L	0.2261	2.37%
QC value less than the lower limit for Ti 337.279 Recovery = 63.48%								
Tl 190.801†	14.8	11.61	ug/L	0.377	11.61	ug/L	0.377	3.25%
QC value less than the lower limit for Tl 190.801 Recovery = 77.38%								
V 292.402†	958.9	9.556	ug/L	0.5583	9.556	ug/L	0.5583	5.84%
QC value less than the lower limit for V 292.402 Recovery = 63.71%								
Zn 206.200†	456.7	43.39	ug/L	0.203	43.39	ug/L	0.203	0.47%
QC value less than the lower limit for Zn 206.200 Recovery = 72.32%								

QC Failed. Continue with analysis.

Sequence No.: 13
Sample ID: LLICV 161122RJS I:PB O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 2
Date Collected: 11/22/16 1:43:31 PM
Data Type: Reprocessed on 11/23/16 12:15:14 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: LLICV 161122RJS I:PB O:RJ

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1065688.3	103.0	%	1.17				1.13%
Y 371.029 Radial	1002838.6	103.2	%	1.20				1.17%
Ag 338.289†	222.6	3.363	ug/L	0.6243	3.363	ug/L	0.6243	18.57%
QC value within limits for Ag 338.289 Recovery = 112.08%								
Al 308.215†	110.2	290.3	ug/L	24.35	290.3	ug/L	24.35	8.39%
QC value within limits for Al 308.215 Recovery = 96.78%								
As 188.979†	6.8	6.575	ug/L	2.5654	6.575	ug/L	2.5654	39.01%
QC value less than the lower limit for As 188.979 Recovery = 62.62%								
B†	3872.9	132.8	ug/L	4.95	132.8	ug/L	4.95	3.72%
QC value within limits for B Recovery = 88.56%								
Ba 233.527†	953.7	14.70	ug/L	0.133	14.70	ug/L	0.133	0.90%
QC value within limits for Ba 233.527 Recovery = 97.97%								
Be 313.107†	863.6	5.524	ug/L	0.0941	5.524	ug/L	0.0941	1.70%
QC value within limits for Be 313.107 Recovery = 92.07%								
Ca 315.887†	799.9	290.6	ug/L	3.81	290.6	ug/L	3.81	1.31%
QC value within limits for Ca 315.887 Recovery = 96.85%								
Cd 214.440†	1047.5	15.08	ug/L	0.218	15.08	ug/L	0.218	1.44%
QC value within limits for Cd 214.440 Recovery = 100.50%								
Co 228.616†	383.9	15.06	ug/L	0.464	15.06	ug/L	0.464	3.08%
QC value within limits for Co 228.616 Recovery = 100.39%								
Cr 267.716†	740.5	14.51	ug/L	0.266	14.51	ug/L	0.266	1.83%
QC value within limits for Cr 267.716 Recovery = 96.76%								
Cu 327.393†	1064.2	14.69	ug/L	0.958	14.69	ug/L	0.958	6.52%
QC value within limits for Cu 327.393 Recovery = 97.94%								
Fe 273.955†	1637.0	144.4	ug/L	0.27	144.4	ug/L	0.27	0.19%
QC value within limits for Fe 273.955 Recovery = 96.28%								
K 766.490†	5897.1	2619	ug/L	158.1	2619	ug/L	158.1	6.04%
QC value within limits for K 766.490 Recovery = 87.30%								
Mg 285.213†	674.5	145.4	ug/L	3.16	145.4	ug/L	3.16	2.18%
QC value within limits for Mg 285.213 Recovery = 96.93%								
Mn 257.610†	111.6	13.82	ug/L	0.424	13.82	ug/L	0.424	3.07%
QC value within limits for Mn 257.610 Recovery = 92.15%								
Mo 202.031†	104.1	13.08	ug/L	0.740	13.08	ug/L	0.740	5.65%
QC value within limits for Mo 202.031 Recovery = 87.21%								
Na 589.592†	17734.5	2766	ug/L	137.7	2766	ug/L	137.7	4.98%
QC value within limits for Na 589.592 Recovery = 92.22%								
Ni 231.604†	316.3	15.14	ug/L	0.470	15.14	ug/L	0.470	3.10%
QC value within limits for Ni 231.604 Recovery = 100.95%								
P 213.617†	94.6	64.79	ug/L	5.465	64.79	ug/L	5.465	8.44%
QC value within limits for P 213.617 Recovery = 86.38%								
Pb 220.353†	35.1	8.060	ug/L	2.1229	8.060	ug/L	2.1229	26.34%
QC value within limits for Pb 220.353 Recovery = 89.56%								
Sb 206.836†	16.6	12.93	ug/L	1.735	12.93	ug/L	1.735	13.42%
QC value within limits for Sb 206.836 Recovery = 86.17%								
Se 196.026†	15.2	15.15	ug/L	0.187	15.15	ug/L	0.187	1.24%
QC value within limits for Se 196.026 Recovery = 101.02%								
Sn 189.927†	43.7	15.13	ug/L	2.489	15.13	ug/L	2.489	16.45%
QC value within limits for Sn 189.927 Recovery = 100.88%								
Sr 421.552†	5176.6	13.90	ug/L	0.754	13.90	ug/L	0.754	5.43%
QC value within limits for Sr 421.552 Recovery = 92.68%								
Ti 337.279†	224.6	13.70	ug/L	0.554	13.70	ug/L	0.554	4.05%
QC value within limits for Ti 337.279 Recovery = 91.30%								
Tl 190.801†	18.6	14.56	ug/L	1.766	14.56	ug/L	1.766	12.13%
QC value within limits for Tl 190.801 Recovery = 97.10%								
V 292.402†	1422.9	14.17	ug/L	0.272	14.17	ug/L	0.272	1.92%
QC value within limits for V 292.402 Recovery = 94.44%								
Zn 206.200†	638.6	60.66	ug/L	0.671	60.66	ug/L	0.671	1.11%
QC value within limits for Zn 206.200 Recovery = 101.10%								

QC Failed. Continue with analysis.

Sequence No.: 31
Sample ID: CCV2 161122RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 11/22/16 3:13:20 PM
Data Type: Reprocessed on 11/23/16 12:15:34 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCV2 161122RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1024533.5	99.06	%	1.157				1.17%
Y 371.029 Radial	961288.0	98.94	%	1.238				1.25%
Ag 338.289†	12846.7	194.0	ug/L	3.00	194.0	ug/L	3.00	1.54%
QC value within limits for Ag 338.289 Recovery = 103.48%								
Al 308.215†	2939.1	7745	ug/L	197.2	7745	ug/L	197.2	2.55%
QC value within limits for Al 308.215 Recovery = 103.27%								
As 188.979†	398.0	381.2	ug/L	1.91	381.2	ug/L	1.91	0.50%
QC value within limits for As 188.979 Recovery = 101.66%								
B†	11271.1	386.6	ug/L	9.20	386.6	ug/L	9.20	2.38%
QC value within limits for B Recovery = 103.09%								
Ba 233.527†	25343.8	390.1	ug/L	7.36	390.1	ug/L	7.36	1.89%
QC value within limits for Ba 233.527 Recovery = 104.03%								
Be 313.107†	60106.2	384.5	ug/L	11.46	384.5	ug/L	11.46	2.98%
QC value within limits for Be 313.107 Recovery = 102.52%								
Ca 315.887†	53451.1	19430	ug/L	327.9	19430	ug/L	327.9	1.69%
QC value within limits for Ca 315.887 Recovery = 103.63%								
Cd 214.440†	26895.9	386.9	ug/L	7.54	386.9	ug/L	7.54	1.95%
QC value within limits for Cd 214.440 Recovery = 103.17%								
Co 228.616†	9906.9	388.6	ug/L	7.35	388.6	ug/L	7.35	1.89%
QC value within limits for Co 228.616 Recovery = 103.63%								
Cr 267.716†	19989.3	392.0	ug/L	7.35	392.0	ug/L	7.35	1.88%
QC value within limits for Cr 267.716 Recovery = 104.52%								
Cu 327.393†	28097.0	389.1	ug/L	7.38	389.1	ug/L	7.38	1.90%
QC value within limits for Cu 327.393 Recovery = 103.75%								
Fe 273.955†	89255.4	7902	ug/L	146.3	7902	ug/L	146.3	1.85%
QC value within limits for Fe 273.955 Recovery = 105.36%								
K 766.490†	17259.5	7655	ug/L	131.2	7655	ug/L	131.2	1.71%
QC value within limits for K 766.490 Recovery = 102.07%								
Mg 285.213†	90079.3	19490	ug/L	551.7	19490	ug/L	551.7	2.83%
QC value within limits for Mg 285.213 Recovery = 103.93%								
Mn 257.610†	3150.2	389.9	ug/L	6.97	389.9	ug/L	6.97	1.79%
QC value within limits for Mn 257.610 Recovery = 103.98%								
Mo 202.031†	2986.5	376.8	ug/L	6.99	376.8	ug/L	6.99	1.86%
QC value within limits for Mo 202.031 Recovery = 100.47%								
Na 589.592†	62400.4	9705	ug/L	301.0	9705	ug/L	301.0	3.10%
QC value within limits for Na 589.592 Recovery = 103.52%								
Ni 231.604†	8129.7	389.9	ug/L	7.07	389.9	ug/L	7.07	1.81%
QC value within limits for Ni 231.604 Recovery = 103.99%								
P 213.617†	2769.8	1897	ug/L	21.0	1897	ug/L	21.0	1.11%
QC value within limits for P 213.617 Recovery = 101.17%								
Pb 220.353†	1705.9	390.2	ug/L	5.40	390.2	ug/L	5.40	1.38%
QC value within limits for Pb 220.353 Recovery = 104.05%								
Sb 206.836†	486.3	377.9	ug/L	7.31	377.9	ug/L	7.31	1.93%
QC value within limits for Sb 206.836 Recovery = 100.76%								
Se 196.026†	374.2	372.4	ug/L	4.91	372.4	ug/L	4.91	1.32%
QC value within limits for Se 196.026 Recovery = 99.31%								
Sn 189.927†	1185.8	411.4	ug/L	3.41	411.4	ug/L	3.41	0.83%
QC value within limits for Sn 189.927 Recovery = 109.69%								
Sr 421.552†	143240.2	384.6	ug/L	11.59	384.6	ug/L	11.59	3.01%
QC value within limits for Sr 421.552 Recovery = 102.56%								
Ti 337.279†	6345.6	386.9	ug/L	6.04	386.9	ug/L	6.04	1.56%
QC value within limits for Ti 337.279 Recovery = 103.17%								
Tl 190.801†	476.6	374.2	ug/L	11.82	374.2	ug/L	11.82	3.16%
QC value within limits for Tl 190.801 Recovery = 99.78%								
V 292.402†	40147.3	398.7	ug/L	6.79	398.7	ug/L	6.79	1.70%
QC value within limits for V 292.402 Recovery = 106.33%								
Zn 206.200†	4094.0	389.9	ug/L	4.82	389.9	ug/L	4.82	1.24%
QC value within limits for Zn 206.200 Recovery = 103.98%								

All analyte(s) passed QC.

Sequence No.: 32 Autosampler Location: 1
Sample ID: CCB 161122RJS I:PB O:RJS Date Collected: 11/22/16 3:19:59 PM
Analyst: Data Type: Reprocessed on 11/23/16 12:15:36 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Mean Data: CCB 161122RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1074104.0	103.8	%	0.81				0.78%
Y 371.029 Radial	1011313.4	104.1	%	0.85				0.81%
Ag 338.289†	-6.8	-0.103	ug/L	1.1757	-0.103	ug/L	1.1757	>999.9%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	-1.7	-4.590	ug/L	9.8370	-4.590	ug/L	9.8370	214.33%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	2.0	1.954	ug/L	1.1563	1.954	ug/L	1.1563	59.19%
QC value within limits for As 188.979 Recovery = Not calculated								
B†	30.3	1.038	ug/L	0.3063	1.038	ug/L	0.3063	29.51%
QC value within limits for B Recovery = Not calculated								
Ba 233.527†	-3.3	-0.052	ug/L	0.1597	-0.052	ug/L	0.1597	308.99%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	3.8	0.024	ug/L	0.0065	0.024	ug/L	0.0065	26.86%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	-4.5	-1.634	ug/L	6.3437	-1.634	ug/L	6.3437	388.21%
QC value within limits for Ca 315.887 Recovery = Not calculated								
Cd 214.440†	-1.2	-0.018	ug/L	0.0509	-0.018	ug/L	0.0509	285.35%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	-9.3	-0.368	ug/L	0.1473	-0.368	ug/L	0.1473	40.01%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	-20.9	-0.412	ug/L	0.3358	-0.412	ug/L	0.3358	81.54%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	-70.2	-0.973	ug/L	0.4788	-0.973	ug/L	0.4788	49.23%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	14.8	1.385	ug/L	0.8951	1.385	ug/L	0.8951	64.63%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	19.3	8.581	ug/L	19.4221	8.581	ug/L	19.4221	226.34%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	12.5	2.693	ug/L	2.2733	2.693	ug/L	2.2733	84.40%
QC value within limits for Mg 285.213 Recovery = Not calculated								
Mn 257.610†	-6.3	-0.775	ug/L	0.1627	-0.775	ug/L	0.1627	20.99%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	1.4	0.177	ug/L	0.1298	0.177	ug/L	0.1298	73.49%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	659.1	102.9	ug/L	16.85	102.9	ug/L	16.85	16.39%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	16.5	0.794	ug/L	0.1825	0.794	ug/L	0.1825	22.99%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	5.0	3.393	ug/L	2.1118	3.393	ug/L	2.1118	62.25%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	10.0	2.278	ug/L	0.6715	2.278	ug/L	0.6715	29.48%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	1.4	1.104	ug/L	0.6476	1.104	ug/L	0.6476	58.64%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	-0.4	-0.442	ug/L	5.1217	-0.442	ug/L	5.1217	>999.9%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	6.0	2.078	ug/L	0.2901	2.078	ug/L	0.2901	13.96%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	-18.6	-0.050	ug/L	0.0992	-0.050	ug/L	0.0992	198.05%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	14.5	0.884	ug/L	1.0725	0.884	ug/L	1.0725	121.35%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	1.0	0.763	ug/L	1.0638	0.763	ug/L	1.0638	139.50%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	-80.9	-0.793	ug/L	0.0196	-0.793	ug/L	0.0196	2.48%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	32.0	3.036	ug/L	0.5876	3.036	ug/L	0.5876	19.36%
QC value within limits for Zn 206.200 Recovery = Not calculated								

All analyte(s) passed QC.

Sequence No.: 40
Sample ID: CCV1 161122RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 11/22/16 3:58:42 PM
Data Type: Reprocessed on 11/23/16 12:15:45 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCV1 161122RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1042257.3	100.8	%	1.12				1.11%
Y 371.029 Radial	979541.4	100.8	%	1.23				1.22%
Ag 338.289†	16743.5	252.9	ug/L	4.46	252.9	ug/L	4.46	1.76%
QC value within limits for Ag 338.289 Recovery = 101.16%								
Al 308.215†	3789.2	9986	ug/L	492.2	9986	ug/L	492.2	4.93%
QC value within limits for Al 308.215 Recovery = 99.86%								
As 188.979†	520.0	498.0	ug/L	7.38	498.0	ug/L	7.38	1.48%
QC value within limits for As 188.979 Recovery = 99.59%								
B†	14520.7	498.1	ug/L	13.44	498.1	ug/L	13.44	2.70%
QC value within limits for B Recovery = 99.61%								
Ba 233.527†	32968.7	507.5	ug/L	7.70	507.5	ug/L	7.70	1.52%
QC value within limits for Ba 233.527 Recovery = 101.49%								
Be 313.107†	75644.8	483.9	ug/L	12.00	483.9	ug/L	12.00	2.48%
QC value within limits for Be 313.107 Recovery = 96.77%								
Ca 315.887†	68617.0	24940	ug/L	1094.5	24940	ug/L	1094.5	4.39%
QC value within limits for Ca 315.887 Recovery = 99.77%								
Cd 214.440†	34793.4	500.5	ug/L	8.47	500.5	ug/L	8.47	1.69%
QC value within limits for Cd 214.440 Recovery = 100.10%								
Co 228.616†	12757.2	500.4	ug/L	8.62	500.4	ug/L	8.62	1.72%
QC value within limits for Co 228.616 Recovery = 100.08%								
Cr 267.716†	26013.1	510.1	ug/L	7.55	510.1	ug/L	7.55	1.48%
QC value within limits for Cr 267.716 Recovery = 102.02%								
Cu 327.393†	36500.2	505.4	ug/L	9.45	505.4	ug/L	9.45	1.87%
QC value within limits for Cu 327.393 Recovery = 101.09%								
Fe 273.955†	115475.9	10220	ug/L	162.7	10220	ug/L	162.7	1.59%
QC value within limits for Fe 273.955 Recovery = 102.23%								
K 766.490†	21304.1	9448	ug/L	373.0	9448	ug/L	373.0	3.95%
QC value within limits for K 766.490 Recovery = 94.48%								
Mg 285.213†	113667.7	24590	ug/L	722.6	24590	ug/L	722.6	2.94%
QC value within limits for Mg 285.213 Recovery = 98.36%								
Mn 257.610†	4047.2	501.0	ug/L	25.28	501.0	ug/L	25.28	5.05%
QC value within limits for Mn 257.610 Recovery = 100.20%								
Mo 202.031†	3896.2	491.5	ug/L	8.55	491.5	ug/L	8.55	1.74%
QC value within limits for Mo 202.031 Recovery = 98.31%								
Na 589.592†	77776.7	12100	ug/L	357.1	12100	ug/L	357.1	2.95%
QC value within limits for Na 589.592 Recovery = 96.76%								
Ni 231.604†	10507.5	504.0	ug/L	8.22	504.0	ug/L	8.22	1.63%
QC value within limits for Ni 231.604 Recovery = 100.80%								
P 213.617†	3579.9	2452	ug/L	26.5	2452	ug/L	26.5	1.08%
QC value within limits for P 213.617 Recovery = 98.07%								
Pb 220.353†	2198.9	502.9	ug/L	6.30	502.9	ug/L	6.30	1.25%
QC value within limits for Pb 220.353 Recovery = 100.59%								
Sb 206.836†	633.2	491.9	ug/L	7.68	491.9	ug/L	7.68	1.56%
QC value within limits for Sb 206.836 Recovery = 98.39%								
Se 196.026†	486.3	484.1	ug/L	13.37	484.1	ug/L	13.37	2.76%
QC value within limits for Se 196.026 Recovery = 96.81%								
Sn 189.927†	1434.9	498.0	ug/L	9.33	498.0	ug/L	9.33	1.87%
QC value within limits for Sn 189.927 Recovery = 99.60%								
Sr 421.552†	179928.8	483.1	ug/L	13.02	483.1	ug/L	13.02	2.70%
QC value within limits for Sr 421.552 Recovery = 96.62%								
Ti 337.279†	8136.0	496.1	ug/L	22.22	496.1	ug/L	22.22	4.48%
QC value within limits for Ti 337.279 Recovery = 99.21%								
Tl 190.801†	620.2	487.0	ug/L	10.56	487.0	ug/L	10.56	2.17%
QC value within limits for Tl 190.801 Recovery = 97.39%								
V 292.402†	52290.5	519.4	ug/L	8.21	519.4	ug/L	8.21	1.58%
QC value within limits for V 292.402 Recovery = 103.87%								
Zn 206.200†	5261.4	501.2	ug/L	6.37	501.2	ug/L	6.37	1.27%
QC value within limits for Zn 206.200 Recovery = 100.24%								

All analyte(s) passed QC.

Sequence No.: 41
Sample ID: CCB 161122RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 11/22/16 4:05:18 PM
Data Type: Reprocessed on 11/23/16 12:15:46 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCB 161122RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1075935.4	104.0	%	0.64				0.61%
Y 371.029 Radial	1013476.1	104.3	%	0.69				0.66%
Ag 338.289†	47.6	0.719	ug/L	0.5381	0.719	ug/L	0.5381	74.80%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	-6.5	-17.23	ug/L	20.272	-17.23	ug/L	20.272	117.67%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	0.2	0.160	ug/L	2.7359	0.160	ug/L	2.7359	>999.9%
QC value within limits for As 188.979 Recovery = Not calculated								
B†	35.2	1.207	ug/L	0.3949	1.207	ug/L	0.3949	32.72%
QC value within limits for B Recovery = Not calculated								
Ba 233.527†	6.8	0.104	ug/L	0.1088	0.104	ug/L	0.1088	104.77%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	6.0	0.039	ug/L	0.0067	0.039	ug/L	0.0067	17.25%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	-21.3	-7.737	ug/L	0.7351	-7.737	ug/L	0.7351	9.50%
QC value within limits for Ca 315.887 Recovery = Not calculated								
Cd 214.440†	0.2	0.002	ug/L	0.1939	0.002	ug/L	0.1939	>999.9%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	-10.3	-0.405	ug/L	0.7266	-0.405	ug/L	0.7266	179.49%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	-32.7	-0.644	ug/L	0.3663	-0.644	ug/L	0.3663	56.88%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	9.7	0.133	ug/L	1.1686	0.133	ug/L	1.1686	881.68%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	-3.8	-0.294	ug/L	0.5083	-0.294	ug/L	0.5083	172.84%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	-58.1	-25.81	ug/L	52.857	-25.81	ug/L	52.857	204.76%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	7.7	1.659	ug/L	0.1815	1.659	ug/L	0.1815	10.94%
QC value within limits for Mg 285.213 Recovery = Not calculated								
Mn 257.610†	-6.3	-0.776	ug/L	0.4454	-0.776	ug/L	0.4454	57.41%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	-0.3	-0.043	ug/L	0.7559	-0.043	ug/L	0.7559	>999.9%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	299.5	46.77	ug/L	16.375	46.77	ug/L	16.375	35.01%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	9.8	0.468	ug/L	0.7868	0.468	ug/L	0.7868	167.94%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	-1.1	-0.732	ug/L	1.6052	-0.732	ug/L	1.6052	219.29%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	-2.6	-0.593	ug/L	3.1159	-0.593	ug/L	3.1159	525.35%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	1.8	1.362	ug/L	2.1434	1.362	ug/L	2.1434	157.38%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	-1.4	-1.422	ug/L	5.9690	-1.422	ug/L	5.9690	419.83%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	0.5	0.161	ug/L	0.5595	0.161	ug/L	0.5595	347.67%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	3.8	0.010	ug/L	0.1988	0.010	ug/L	0.1988	>999.9%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	-6.6	-0.404	ug/L	0.6546	-0.404	ug/L	0.6546	161.89%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	3.2	2.511	ug/L	1.4051	2.511	ug/L	1.4051	55.97%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	-50.7	-0.501	ug/L	0.8188	-0.501	ug/L	0.8188	163.58%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	22.1	2.095	ug/L	0.2687	2.095	ug/L	0.2687	12.83%
QC value within limits for Zn 206.200 Recovery = Not calculated								

All analyte(s) passed QC.

Sequence No.: 53
Sample ID: CCV2 161122RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 11/22/16 4:58:06 PM
Data Type: Reprocessed on 11/23/16 12:15:59 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCV2 161122RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1023619.4	98.97	%	0.722				0.73%
Y 371.029 Radial	960747.8	98.89	%	0.774				0.78%
Ag 338.289†	12681.6	191.5	ug/L	0.83	191.5	ug/L	0.83	0.44%
QC value within limits for Ag 338.289 Recovery = 102.15%								
Al 308.215†	2927.6	7715	ug/L	90.2	7715	ug/L	90.2	1.17%
QC value within limits for Al 308.215 Recovery = 102.86%								
As 188.979†	399.5	382.5	ug/L	4.42	382.5	ug/L	4.42	1.16%
QC value within limits for As 188.979 Recovery = 102.00%								
B†	11101.4	380.8	ug/L	1.31	380.8	ug/L	1.31	0.34%
QC value within limits for B Recovery = 101.54%								
Ba 233.527†	24992.5	384.7	ug/L	4.89	384.7	ug/L	4.89	1.27%
QC value within limits for Ba 233.527 Recovery = 102.58%								
Be 313.107†	59258.7	379.0	ug/L	4.17	379.0	ug/L	4.17	1.10%
QC value within limits for Be 313.107 Recovery = 101.08%								
Ca 315.887†	53066.3	19290	ug/L	368.0	19290	ug/L	368.0	1.91%
QC value within limits for Ca 315.887 Recovery = 102.88%								
Cd 214.440†	26320.8	378.6	ug/L	10.47	378.6	ug/L	10.47	2.77%
QC value within limits for Cd 214.440 Recovery = 100.97%								
Co 228.616†	9718.7	381.2	ug/L	6.20	381.2	ug/L	6.20	1.63%
QC value within limits for Co 228.616 Recovery = 101.66%								
Cr 267.716†	19658.1	385.5	ug/L	5.88	385.5	ug/L	5.88	1.53%
QC value within limits for Cr 267.716 Recovery = 102.79%								
Cu 327.393†	27886.4	386.1	ug/L	6.31	386.1	ug/L	6.31	1.63%
QC value within limits for Cu 327.393 Recovery = 102.97%								
Fe 273.955†	87618.4	7757	ug/L	105.6	7757	ug/L	105.6	1.36%
QC value within limits for Fe 273.955 Recovery = 103.42%								
K 766.490†	17075.1	7573	ug/L	164.6	7573	ug/L	164.6	2.17%
QC value within limits for K 766.490 Recovery = 100.98%								
Mg 285.213†	89997.8	19470	ug/L	217.6	19470	ug/L	217.6	1.12%
QC value within limits for Mg 285.213 Recovery = 103.84%								
Mn 257.610†	3155.3	390.6	ug/L	10.18	390.6	ug/L	10.18	2.61%
QC value within limits for Mn 257.610 Recovery = 104.15%								
Mo 202.031†	2989.4	377.1	ug/L	1.82	377.1	ug/L	1.82	0.48%
QC value within limits for Mo 202.031 Recovery = 100.57%								
Na 589.592†	61443.4	9557	ug/L	106.7	9557	ug/L	106.7	1.12%
QC value within limits for Na 589.592 Recovery = 101.94%								
Ni 231.604†	7981.1	382.8	ug/L	4.65	382.8	ug/L	4.65	1.22%
QC value within limits for Ni 231.604 Recovery = 102.08%								
P 213.617†	2733.7	1872	ug/L	17.7	1872	ug/L	17.7	0.95%
QC value within limits for P 213.617 Recovery = 99.85%								
Pb 220.353†	1690.3	386.6	ug/L	4.93	386.6	ug/L	4.93	1.28%
QC value within limits for Pb 220.353 Recovery = 103.10%								
Sb 206.836†	487.2	378.5	ug/L	3.48	378.5	ug/L	3.48	0.92%
QC value within limits for Sb 206.836 Recovery = 100.95%								
Se 196.026†	377.2	375.4	ug/L	1.92	375.4	ug/L	1.92	0.51%
QC value within limits for Se 196.026 Recovery = 100.12%								
Sn 189.927†	1103.2	382.9	ug/L	2.22	382.9	ug/L	2.22	0.58%
QC value within limits for Sn 189.927 Recovery = 102.10%								
Sr 421.552†	142559.7	382.8	ug/L	4.54	382.8	ug/L	4.54	1.19%
QC value within limits for Sr 421.552 Recovery = 102.07%								
Ti 337.279†	6243.4	380.7	ug/L	8.33	380.7	ug/L	8.33	2.19%
QC value within limits for Ti 337.279 Recovery = 101.51%								
Tl 190.801†	476.3	374.0	ug/L	5.12	374.0	ug/L	5.12	1.37%
QC value within limits for Tl 190.801 Recovery = 99.72%								
V 292.402†	39657.3	393.9	ug/L	5.51	393.9	ug/L	5.51	1.40%
QC value within limits for V 292.402 Recovery = 105.05%								
Zn 206.200†	4057.3	386.4	ug/L	3.68	386.4	ug/L	3.68	0.95%
QC value within limits for Zn 206.200 Recovery = 103.03%								

All analyte(s) passed QC.

Sequence No.: 54
Sample ID: CCB 161122RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 11/22/16 5:01:32 PM
Data Type: Reprocessed on 11/23/16 12:16:00 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCB 161122RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1067527.1	103.2	%	1.46				1.41%
Y 371.029 Radial	1005014.1	103.4	%	1.62				1.57%
Ag 338.289†	-10.2	-0.154	ug/L	0.3697	-0.154	ug/L	0.3697	240.37%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	-2.2	-5.716	ug/L	8.3305	-5.716	ug/L	8.3305	145.73%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	2.8	2.632	ug/L	3.0260	2.632	ug/L	3.0260	114.95%
QC value within limits for As 188.979 Recovery = Not calculated								
B†	51.7	1.775	ug/L	0.4234	1.775	ug/L	0.4234	23.86%
QC value within limits for B Recovery = Not calculated								
Ba 233.527†	-3.7	-0.056	ug/L	0.1946	-0.056	ug/L	0.1946	345.38%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	2.4	0.015	ug/L	0.0335	0.015	ug/L	0.0335	222.25%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	-14.8	-5.371	ug/L	1.4934	-5.371	ug/L	1.4934	27.81%
QC value within limits for Ca 315.887 Recovery = Not calculated								
Cd 214.440†	-3.7	-0.054	ug/L	0.1916	-0.054	ug/L	0.1916	351.78%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	-7.6	-0.301	ug/L	0.2691	-0.301	ug/L	0.2691	89.54%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	-21.4	-0.421	ug/L	0.3418	-0.421	ug/L	0.3418	81.11%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	17.0	0.234	ug/L	0.3952	0.234	ug/L	0.3952	169.00%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	9.3	0.832	ug/L	0.8212	0.832	ug/L	0.8212	98.75%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	-20.6	-9.147	ug/L	38.8230	-9.147	ug/L	38.8230	424.45%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	5.1	1.097	ug/L	0.8569	1.097	ug/L	0.8569	78.10%
QC value within limits for Mg 285.213 Recovery = Not calculated								
Mn 257.610†	-5.2	-0.649	ug/L	0.1015	-0.649	ug/L	0.1015	15.63%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	-3.7	-0.470	ug/L	0.8649	-0.470	ug/L	0.8649	184.06%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	232.3	36.27	ug/L	11.243	36.27	ug/L	11.243	31.00%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	14.2	0.677	ug/L	0.7665	0.677	ug/L	0.7665	113.23%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	2.2	1.506	ug/L	1.0675	1.506	ug/L	1.0675	70.88%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	8.7	1.981	ug/L	1.0995	1.981	ug/L	1.0995	55.50%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	2.5	1.973	ug/L	1.4804	1.973	ug/L	1.4804	75.01%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	1.8	1.817	ug/L	4.8226	1.817	ug/L	4.8226	265.39%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	6.6	2.262	ug/L	0.8550	2.262	ug/L	0.8550	37.79%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	37.0	0.099	ug/L	0.1735	0.099	ug/L	0.1735	174.38%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	9.5	0.581	ug/L	0.5118	0.581	ug/L	0.5118	88.04%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	4.3	3.376	ug/L	1.6196	3.376	ug/L	1.6196	47.98%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	2.9	0.018	ug/L	1.2525	0.018	ug/L	1.2525	>999.9%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	18.5	1.758	ug/L	0.6369	1.758	ug/L	0.6369	36.23%
QC value within limits for Zn 206.200 Recovery = Not calculated								

All analyte(s) passed QC.

Sequence No.: 66
Sample ID: CCV1 161122RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 11/22/16 6:06:48 PM
Data Type: Reprocessed on 11/23/16 12:16:14 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCV1 161122RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1026945.2	99.29	%	0.950				0.96%
Y 371.029 Radial	963115.5	99.13	%	1.022				1.03%
Ag 338.289†	17914.3	270.6	ug/L	1.87	270.6	ug/L	1.87	0.69%
QC value within limits for Ag 338.289 Recovery = 108.23%								
Al 308.215†	3977.4	10480	ug/L	159.0	10480	ug/L	159.0	1.52%
QC value within limits for Al 308.215 Recovery = 104.81%								
As 188.979†	529.0	506.7	ug/L	5.44	506.7	ug/L	5.44	1.07%
QC value within limits for As 188.979 Recovery = 101.34%								
B†	14602.4	500.9	ug/L	2.33	500.9	ug/L	2.33	0.47%
QC value within limits for B Recovery = 100.17%								
Ba 233.527†	33968.4	522.9	ug/L	3.30	522.9	ug/L	3.30	0.63%
QC value within limits for Ba 233.527 Recovery = 104.57%								
Be 313.107†	85945.4	549.7	ug/L	5.53	549.7	ug/L	5.53	1.01%
QC value within limits for Be 313.107 Recovery = 109.95%								
Ca 315.887†	72492.3	26350	ug/L	404.7	26350	ug/L	404.7	1.54%
QC value within limits for Ca 315.887 Recovery = 105.41%								
Cd 214.440†	35599.1	512.1	ug/L	3.59	512.1	ug/L	3.59	0.70%
QC value within limits for Cd 214.440 Recovery = 102.42%								
Co 228.616†	13217.5	518.4	ug/L	4.72	518.4	ug/L	4.72	0.91%
QC value within limits for Co 228.616 Recovery = 103.69%								
Cr 267.716†	26861.6	526.7	ug/L	3.41	526.7	ug/L	3.41	0.65%
QC value within limits for Cr 267.716 Recovery = 105.34%								
Cu 327.393†	37613.8	520.8	ug/L	2.32	520.8	ug/L	2.32	0.45%
QC value within limits for Cu 327.393 Recovery = 104.16%								
Fe 273.955†	119194.4	10550	ug/L	70.9	10550	ug/L	70.9	0.67%
QC value within limits for Fe 273.955 Recovery = 105.52%								
K 766.490†	22560.6	10010	ug/L	121.7	10010	ug/L	121.7	1.22%
QC value within limits for K 766.490 Recovery = 100.06%								
Mg 285.213†	122536.8	26510	ug/L	321.5	26510	ug/L	321.5	1.21%
QC value within limits for Mg 285.213 Recovery = 106.04%								
Mn 257.610†	4269.1	528.4	ug/L	4.94	528.4	ug/L	4.94	0.94%
QC value within limits for Mn 257.610 Recovery = 105.68%								
Mo 202.031†	4014.7	506.5	ug/L	6.75	506.5	ug/L	6.75	1.33%
QC value within limits for Mo 202.031 Recovery = 101.30%								
Na 589.592†	82487.0	12830	ug/L	116.9	12830	ug/L	116.9	0.91%
QC value within limits for Na 589.592 Recovery = 102.63%								
Ni 231.604†	10823.2	519.1	ug/L	3.96	519.1	ug/L	3.96	0.76%
QC value within limits for Ni 231.604 Recovery = 103.81%								
P 213.617†	3780.7	2589	ug/L	30.9	2589	ug/L	30.9	1.19%
QC value within limits for P 213.617 Recovery = 103.57%								
Pb 220.353†	2253.0	515.4	ug/L	9.32	515.4	ug/L	9.32	1.81%
QC value within limits for Pb 220.353 Recovery = 103.07%								
Sb 206.836†	644.5	500.7	ug/L	7.10	500.7	ug/L	7.10	1.42%
QC value within limits for Sb 206.836 Recovery = 100.15%								
Se 196.026†	523.8	521.4	ug/L	5.76	521.4	ug/L	5.76	1.11%
QC value within limits for Se 196.026 Recovery = 104.29%								
Sn 189.927†	1474.8	511.9	ug/L	7.81	511.9	ug/L	7.81	1.53%
QC value within limits for Sn 189.927 Recovery = 102.38%								
Sr 421.552†	193911.8	520.6	ug/L	6.29	520.6	ug/L	6.29	1.21%
QC value within limits for Sr 421.552 Recovery = 104.13%								
Ti 337.279†	8535.9	520.4	ug/L	7.48	520.4	ug/L	7.48	1.44%
QC value within limits for Ti 337.279 Recovery = 104.09%								
Tl 190.801†	697.9	547.9	ug/L	6.54	547.9	ug/L	6.54	1.19%
QC value within limits for Tl 190.801 Recovery = 109.59%								
V 292.402†	53886.5	535.2	ug/L	3.71	535.2	ug/L	3.71	0.69%
QC value within limits for V 292.402 Recovery = 107.04%								
Zn 206.200†	5265.1	501.5	ug/L	6.73	501.5	ug/L	6.73	1.34%
QC value within limits for Zn 206.200 Recovery = 100.30%								

All analyte(s) passed QC.

Sequence No.: 67
Sample ID: CCB 161122RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 11/22/16 6:13:22 PM
Data Type: Reprocessed on 11/23/16 12:16:16 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCB 161122RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1074243.4	103.9	%	1.29				1.24%
Y 371.029 Radial	1010955.3	104.1	%	1.35				1.29%
Ag 338.289†	21.0	0.317	ug/L	0.7517	0.317	ug/L	0.7517	236.99%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	-3.2	-8.315	ug/L	23.5775	-8.315	ug/L	23.5775	283.54%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	0.3	0.285	ug/L	4.6506	0.285	ug/L	4.6506	>999.9%
QC value within limits for As 188.979 Recovery = Not calculated								
B†	36.0	1.234	ug/L	0.1689	1.234	ug/L	0.1689	13.69%
QC value within limits for B Recovery = Not calculated								
Ba 233.527†	-10.5	-0.162	ug/L	0.1320	-0.162	ug/L	0.1320	81.40%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	5.0	0.032	ug/L	0.0097	0.032	ug/L	0.0097	30.01%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	-32.3	-11.75	ug/L	3.478	-11.75	ug/L	3.478	29.61%
QC value within limits for Ca 315.887 Recovery = Not calculated								
Cd 214.440†	-6.0	-0.087	ug/L	0.1459	-0.087	ug/L	0.1459	167.16%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	2.3	0.090	ug/L	0.0737	0.090	ug/L	0.0737	81.73%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	-25.3	-0.497	ug/L	0.2234	-0.497	ug/L	0.2234	44.93%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	-57.5	-0.797	ug/L	0.6245	-0.797	ug/L	0.6245	78.36%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	-1.8	-0.169	ug/L	0.6608	-0.169	ug/L	0.6608	391.26%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	-17.7	-7.882	ug/L	33.4018	-7.882	ug/L	33.4018	423.78%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	10.3	2.223	ug/L	1.8669	2.223	ug/L	1.8669	83.96%
QC value within limits for Mg 285.213 Recovery = Not calculated								
Mn 257.610†	-2.8	-0.349	ug/L	0.4855	-0.349	ug/L	0.4855	139.20%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	-1.8	-0.229	ug/L	0.7093	-0.229	ug/L	0.7093	309.89%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	103.9	16.22	ug/L	15.124	16.22	ug/L	15.124	93.25%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	4.1	0.191	ug/L	0.5307	0.191	ug/L	0.5307	277.59%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	3.0	2.083	ug/L	0.7723	2.083	ug/L	0.7723	37.07%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	4.5	1.018	ug/L	1.3620	1.018	ug/L	1.3620	133.79%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	0.4	0.299	ug/L	0.9099	0.299	ug/L	0.9099	303.93%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	1.3	1.287	ug/L	2.2903	1.287	ug/L	2.2903	177.91%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	3.5	1.211	ug/L	1.1691	1.211	ug/L	1.1691	96.52%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	-3.2	-0.008	ug/L	0.0649	-0.008	ug/L	0.0649	764.87%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	2.9	0.176	ug/L	0.8960	0.176	ug/L	0.8960	509.57%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	4.0	3.157	ug/L	2.1980	3.157	ug/L	2.1980	69.62%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	9.1	0.082	ug/L	0.6414	0.082	ug/L	0.6414	784.69%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	24.0	2.270	ug/L	0.8333	2.270	ug/L	0.8333	36.71%
QC value within limits for Zn 206.200 Recovery = Not calculated								

All analyte(s) passed QC.

METALS

Raw Data

APPL, INC.

METALS BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
6010C	CALCIUM (CA)	75.0 U	1000	75.0	27.5	ug/L	11/17/16	11/22/16	#61CDO-161117A-AZ45866
6010C	MAGNESIUM (MG)	30.0 U	500	30.0	12.9	ug/L	11/17/16	11/22/16	#61CDO-161117A-AZ45866
6010C	MANGANESE (MN)	4.00 U	10.0	4.00	1.23	ug/L	11/17/16	11/22/16	#61CDO-161117A-AZ45866
6010C	POTASSIUM (K)	500.0 U	3000	500.0	220.0	ug/L	11/17/16	11/22/16	#61CDO-161117A-AZ45866
6010C	SODIUM (NA)	500.0 U	5000	500.0	111.1	ug/L	11/17/16	11/22/16	#61CDO-161117A-AZ45866

Metals SC-Blank-REG MDLs
Printed: 11/23/16 1:55:44 PM

Sequence No.: 33
Sample ID: 161117A-3010-BLK
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 55
Date Collected: 11/22/16 3:24:09 PM
Data Type: Reprocessed on 11/23/16 12:15:37 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: 161117A-3010-BLK

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1061990.2	102.7	%	1.53				1.49%
Y 371.029 Radial	999130.6	102.8	%	1.63				1.59%
Ag 338.289†	48.2	0.728	ug/L	0.7074	0.728	ug/L	0.7074	97.10%
Al 308.215†	3.3	8.819	ug/L	2.0425	8.819	ug/L	2.0425	23.16%
As 188.979†	2.0	1.883	ug/L	5.5425	1.883	ug/L	5.5425	294.39%
B†	8.0	0.275	ug/L	0.1508	0.275	ug/L	0.1508	54.95%
Ba 233.527†	-6.8	-0.105	ug/L	0.1357	-0.105	ug/L	0.1357	129.86%
Be 313.107†	3.3	0.021	ug/L	0.0173	0.021	ug/L	0.0173	82.02%
Ca 315.887†	-39.7	-14.43	ug/L	3.389	-14.43	ug/L	3.389	23.49%
Cd 214.440†	-10.3	-0.148	ug/L	0.2246	-0.148	ug/L	0.2246	151.54%
Co 228.616†	-8.2	-0.325	ug/L	0.2070	-0.325	ug/L	0.2070	63.79%
Cr 267.716†	-2.8	-0.054	ug/L	0.2545	-0.054	ug/L	0.2545	471.57%
Cu 327.393†	-50.6	-0.702	ug/L	2.6331	-0.702	ug/L	2.6331	375.00%
Fe 273.955†	-20.1	-1.802	ug/L	1.1171	-1.802	ug/L	1.1171	61.98%
K 766.490†	75.2	33.40	ug/L	31.962	33.40	ug/L	31.962	95.68%
Mg 285.213†	0.3	0.037	ug/L	0.3573	0.037	ug/L	0.3573	953.58%
Mn 257.610†	-6.7	-0.824	ug/L	0.3102	-0.824	ug/L	0.3102	37.66%
Mo 202.031†	-0.9	-0.117	ug/L	0.2006	-0.117	ug/L	0.2006	170.93%
Na 589.592†	510.3	79.64	ug/L	7.330	79.64	ug/L	7.330	9.20%
Ni 231.604†	3.9	0.186	ug/L	0.8904	0.186	ug/L	0.8904	477.90%
P 213.617†	8.1	5.544	ug/L	3.2327	5.544	ug/L	3.2327	58.31%
Pb 220.353†	1.4	0.331	ug/L	4.2663	0.331	ug/L	4.2663	>999.9%
Sb 206.836†	1.2	0.954	ug/L	2.2824	0.954	ug/L	2.2824	239.19%
Se 196.026†	2.9	2.931	ug/L	5.4816	2.931	ug/L	5.4816	187.00%
Sn 189.927†	6.0	2.062	ug/L	0.6818	2.062	ug/L	0.6818	33.06%
Sr 421.552†	1.8	0.005	ug/L	0.0711	0.005	ug/L	0.0711	>999.9%
Ti 337.279†	-1.0	-0.061	ug/L	0.5986	-0.061	ug/L	0.5986	985.04%
Tl 190.801†	2.5	1.991	ug/L	0.5146	1.991	ug/L	0.5146	25.84%
V 292.402†	13.0	0.125	ug/L	0.1483	0.125	ug/L	0.1483	118.72%
Zn 206.200†	21.7	2.065	ug/L	0.3251	2.065	ug/L	0.3251	15.74%

Laboratory Control Spike Recovery

METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 6010C	CALCIUM (CA)	25000	26900	108	87-113	11/17/16	11/22/16	#61CDO-161117A-AZ45866
EPA 6010C	MAGNESIUM (MG)	25000	26300	105	85-113	11/17/16	11/22/16	#61CDO-161117A-AZ45866
EPA 6010C	MANGANESE (MN)	250	269	108	90-114	11/17/16	11/22/16	#61CDO-161117A-AZ45866
EPA 6010C	POTASSIUM (K)	5000	5110	102	86-114	11/17/16	11/22/16	#61CDO-161117A-AZ45866
EPA 6010C	SODIUM (NA)	25000	26200	105	87-115	11/17/16	11/22/16	#61CDO-161117A-AZ45866

Comments: _____

Sequence No.: 34
Sample ID: 161117A-3010-LCS
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 56
Date Collected: 11/22/16 3:28:30 PM
Data Type: Reprocessed on 11/23/16 12:15:38 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: 161117A-3010-LCS

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1027214.3	99.32	%	1.358				1.37%
Y 371.029 Radial	963634.5	99.18	%	1.460				1.47%
Ag 338.289†	6632.3	100.2	ug/L	3.56	100.2	ug/L	3.56	3.55%
Al 308.215†	802.8	2114	ug/L	39.1	2114	ug/L	39.1	1.85%
As 188.979†	268.7	256.4	ug/L	4.82	256.4	ug/L	4.82	1.88%
B†	6823.8	234.1	ug/L	10.41	234.1	ug/L	10.41	4.45%
Ba 233.527†	16902.7	260.6	ug/L	9.14	260.6	ug/L	9.14	3.51%
Be 313.107†	8634.5	55.23	ug/L	0.344	55.23	ug/L	0.344	0.62%
Ca 315.887†	74082.7	26930	ug/L	1132.1	26930	ug/L	1132.1	4.20%
Cd 214.440†	3546.6	51.15	ug/L	0.743	51.15	ug/L	0.743	1.45%
Co 228.616†	6578.5	258.0	ug/L	9.80	258.0	ug/L	9.80	3.80%
Cr 267.716†	13641.1	267.3	ug/L	11.25	267.3	ug/L	11.25	4.21%
Cu 327.393†	18756.4	258.7	ug/L	10.38	258.7	ug/L	10.38	4.01%
Fe 273.955†	12133.8	1052	ug/L	38.3	1052	ug/L	38.3	3.64%
K 766.490†	11511.3	5105	ug/L	227.7	5105	ug/L	227.7	4.46%
Mg 285.213†	121735.8	26320	ug/L	1113.3	26320	ug/L	1113.3	4.23%
Mn 257.610†	2181.9	269.2	ug/L	3.51	269.2	ug/L	3.51	1.31%
Mo 202.031†	2034.5	256.1	ug/L	2.64	256.1	ug/L	2.64	1.03%
Na 589.592†	167762.2	26190	ug/L	1038.0	26190	ug/L	1038.0	3.96%
Ni 231.604†	5371.2	257.1	ug/L	10.16	257.1	ug/L	10.16	3.95%
P 213.617†	3053.8	2091	ug/L	15.3	2091	ug/L	15.3	0.73%
Pb 220.353†	1159.0	264.3	ug/L	2.16	264.3	ug/L	2.16	0.82%
Sb 206.836†	317.0	246.3	ug/L	4.27	246.3	ug/L	4.27	1.73%
Se 196.026†	245.7	244.6	ug/L	5.41	244.6	ug/L	5.41	2.21%
Sn 189.927†	730.1	254.0	ug/L	2.26	254.0	ug/L	2.26	0.89%
Sr 421.552†	97589.6	261.9	ug/L	10.70	261.9	ug/L	10.70	4.08%
Ti 337.279†	4334.4	264.1	ug/L	3.56	264.1	ug/L	3.56	1.35%
Tl 190.801†	339.0	266.2	ug/L	0.94	266.2	ug/L	0.94	0.35%
V 292.402†	27024.1	269.4	ug/L	10.15	269.4	ug/L	10.15	3.77%
Zn 206.200†	5461.6	518.8	ug/L	6.19	518.8	ug/L	6.19	1.19%

Matrix Spike Recoveries

METALS

APPL ID: **161117W-45866 MS - 213989**

Sample ID: AZ45866

Client ID: ERH115

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl ug/L	Matrix Res ug/L	SPK Res ug/L	DUP Res ug/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
EPA 6010C	CALCIUM (CA)	25000	15800	42500	43900	107	112	3.2	20	87-113	11/17/16	11/22/16	11/17/16	11/22/16	213989	AZ45866
EPA 6010C	MAGNESIUM (MG)	25000	15400	41400	42900	104	110	3.6	20	85-113	11/17/16	11/22/16	11/17/16	11/22/16	213989	AZ45866
EPA 6010C	MANGANESE (MN)	250	ND	273	278	109	111	1.8	20	90-114	11/17/16	11/22/16	11/17/16	11/22/16	213989	AZ45866
EPA 6010C	POTASSIUM (K)	5000	2230	7430	7700	104	109	3.6	20	86-114	11/17/16	11/22/16	11/17/16	11/22/16	213989	AZ45866
EPA 6010C	SODIUM (NA)	25000	42200	67900	70500	103	113	3.8	20	87-115	11/17/16	11/22/16	11/17/16	11/22/16	213989	AZ45866

Comments: _____

Sequence No.: 56
Sample ID: AZ45866W36 MS
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 74
Date Collected: 11/22/16 5:11:15 PM
Data Type: Reprocessed on 11/23/16 12:16:03 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ45866W36 MS

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1009426.7	97.60	%	0.481				0.49%
Y 371.029 Radial	945964.7	97.36	%	0.487				0.50%
Ag 338.289†	6744.8	101.9	ug/L	0.36	101.9	ug/L	0.36	0.36%
Al 308.215†	825.0	2169	ug/L	31.4	2169	ug/L	31.4	1.45%
As 188.979†	275.6	262.9	ug/L	7.04	262.9	ug/L	7.04	2.68%
B†	9727.3	333.6	ug/L	4.24	333.6	ug/L	4.24	1.27%
Ba 233.527†	17734.9	273.4	ug/L	1.75	273.4	ug/L	1.75	0.64%
Be 313.107†	8725.8	55.81	ug/L	0.221	55.81	ug/L	0.221	0.40%
Ca 315.887†	116841.7	42480	ug/L	1046.4	42480	ug/L	1046.4	2.46%
Cd 214.440†	3519.0	50.72	ug/L	0.219	50.72	ug/L	0.219	0.43%
Co 228.616†	6600.1	258.8	ug/L	1.18	258.8	ug/L	1.18	0.45%
Cr 267.716†	13914.0	272.6	ug/L	1.38	272.6	ug/L	1.38	0.51%
Cu 327.393†	19378.7	266.6	ug/L	2.12	266.6	ug/L	2.12	0.80%
Fe 273.955†	12401.3	1070	ug/L	13.4	1070	ug/L	13.4	1.25%
K 766.490†	16755.9	7432	ug/L	232.3	7432	ug/L	232.3	3.13%
Mg 285.213†	191696.8	41440	ug/L	1137.6	41440	ug/L	1137.6	2.75%
Mn 257.610†	2215.2	272.7	ug/L	1.09	272.7	ug/L	1.09	0.40%
Mo 202.031†	2042.4	256.4	ug/L	1.38	256.4	ug/L	1.38	0.54%
Na 589.592†	434660.8	67860	ug/L	1864.5	67860	ug/L	1864.5	2.75%
Ni 231.604†	5381.1	257.5	ug/L	2.01	257.5	ug/L	2.01	0.78%
P 213.617†	3153.2	2159	ug/L	10.5	2159	ug/L	10.5	0.49%
Pb 220.353†	1158.2	263.8	ug/L	2.13	263.8	ug/L	2.13	0.81%
Sb 206.836†	319.2	248.0	ug/L	1.15	248.0	ug/L	1.15	0.46%
Se 196.026†	248.6	247.4	ug/L	9.01	247.4	ug/L	9.01	3.64%
Sn 189.927†	726.6	253.4	ug/L	3.53	253.4	ug/L	3.53	1.39%
Sr 421.552†	140821.3	377.9	ug/L	9.97	377.9	ug/L	9.97	2.64%
Ti 337.279†	4381.4	266.8	ug/L	1.69	266.8	ug/L	1.69	0.63%
Tl 190.801†	333.9	262.1	ug/L	3.26	262.1	ug/L	3.26	1.24%
V 292.402†	29306.9	291.9	ug/L	2.06	291.9	ug/L	2.06	0.71%
Zn 206.200†	5439.9	516.5	ug/L	4.37	516.5	ug/L	4.37	0.85%

Sequence No.: 57
Sample ID: AZ45866W36 MSD
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 75
Date Collected: 11/22/16 5:16:34 PM
Data Type: Reprocessed on 11/23/16 12:16:04 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ45866W36 MSD

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1006314.7	97.29	%	0.798				0.82%
Y 371.029 Radial	943077.3	97.07	%	0.851				0.88%
Ag 338.289†	6816.2	103.0	ug/L	1.26	103.0	ug/L	1.26	1.23%
Al 308.215†	840.6	2210	ug/L	47.3	2210	ug/L	47.3	2.14%
As 188.979†	280.0	267.1	ug/L	7.63	267.1	ug/L	7.63	2.86%
B†	10193.7	349.6	ug/L	6.36	349.6	ug/L	6.36	1.82%
Ba 233.527†	18001.3	277.6	ug/L	5.14	277.6	ug/L	5.14	1.85%
Be 313.107†	8754.7	56.00	ug/L	0.888	56.00	ug/L	0.888	1.59%
Ca 315.887†	120804.9	43920	ug/L	853.8	43920	ug/L	853.8	1.94%
Cd 214.440†	3569.4	51.45	ug/L	0.527	51.45	ug/L	0.527	1.03%
Co 228.616†	6966.7	273.2	ug/L	2.39	273.2	ug/L	2.39	0.87%
Cr 267.716†	14209.9	278.3	ug/L	4.24	278.3	ug/L	4.24	1.52%
Cu 327.393†	19924.1	274.1	ug/L	4.95	274.1	ug/L	4.95	1.81%
Fe 273.955†	12644.4	1091	ug/L	11.0	1091	ug/L	11.0	1.01%
K 766.490†	17356.1	7698	ug/L	187.8	7698	ug/L	187.8	2.44%
Mg 285.213†	198383.2	42890	ug/L	861.8	42890	ug/L	861.8	2.01%
Mn 257.610†	2257.0	277.8	ug/L	4.74	277.8	ug/L	4.74	1.71%
Mo 202.031†	2074.6	260.5	ug/L	2.44	260.5	ug/L	2.44	0.94%
Na 589.592†	451495.9	70490	ug/L	1165.5	70490	ug/L	1165.5	1.65%
Ni 231.604†	5472.0	261.8	ug/L	4.08	261.8	ug/L	4.08	1.56%
P 213.617†	3160.1	2164	ug/L	17.2	2164	ug/L	17.2	0.79%
Pb 220.353†	1168.0	266.0	ug/L	2.55	266.0	ug/L	2.55	0.96%
Sb 206.836†	327.6	254.5	ug/L	3.97	254.5	ug/L	3.97	1.56%
Se 196.026†	248.3	247.2	ug/L	9.57	247.2	ug/L	9.57	3.87%
Sn 189.927†	753.4	262.7	ug/L	1.76	262.7	ug/L	1.76	0.67%
Sr 421.552†	145311.9	389.9	ug/L	7.08	389.9	ug/L	7.08	1.82%
Ti 337.279†	4487.3	273.2	ug/L	4.72	273.2	ug/L	4.72	1.73%
Tl 190.801†	329.0	258.3	ug/L	3.73	258.3	ug/L	3.73	1.45%
V 292.402†	30001.4	298.8	ug/L	5.40	298.8	ug/L	5.40	1.81%
Zn 206.200†	5565.6	528.5	ug/L	4.80	528.5	ug/L	4.80	0.91%

1%HNO3 / 5%HCl BLK		PREPPED BY: RJS			6010B/6010C ICSA				
AMOUNT	REAGENT	MANUFACTURER	LOT	OPEN DATE	AMOUNT	STD	MANUFACTURER	LOT	EXP DATE
100 mL	HCL	BDH	4115022	11/22/16	1mL	Al	CPI	14D237-33868	01/15/16
20 mL	HNO3	EMD	55043	11/22/16	1mL	Ca	CPI	14D176-33867	01/15/16
Prepared in 2000 ml DI Water					1mL	Mg	CPI	14F190-33865	01/15/16
STD 1 / LDL 6010B/6010C					1mL	Fe	O2SI	1062942-33880	01/12/16
AMOUNT	STD	MANUFACTURER	LOT	EXP DATE	Prepared in 50 ml 1%HNO3/5%HCl				
0.5 mL	6010 LDL	O2SI	1078402-35590	09/01/16	6010B/6010C ICSAB				
Prepared in 50 ml 1%HNO3/5%HCl					1mL	Al	CPI	14D237-33868	01/15/16
STD 3 / HDL 6010B/6010C					1mL	Ca	CPI	14D176-33867	01/15/16
1ML	CCV-A	Environmental Express	1602141-36120	01/27/17	1mL	Mg	CPI	14F190-33865	01/15/16
1ML	CCV-B	Environmental Express	1602140-36119	01/27/17	1mL	Fe	O2SI	1062942-33880	01/12/16
1ML	CCV-C	Environmental Express	1602139-36118	01/27/17	0.5mL	INT SPECIAL MIX	O2SI	1070553-34624	03/01/16
Prepared in 100 ml 1%HNO3 / 5%HCl					Prepared in 50 ml 1%HNO3/5%HCl				
STD 2 / CCV1 6010B/6010C/6010C					6010B/6010C ICV				
AMOUNT	STD	PREP DATE	EXP DATE		0.5ML	QCS ICV A	CPI	15C180-34943	09/19/16
25mL	STD 3	TODAY	1 week		0.5ML	QCS ICV B	CPI	15C181-34944	09/19/16
25mL	1%HNO3/5%HCl	TODAY	1 week		Prepared in 50ml 1%HNO3/5%HCl				
CCV2 6010B/6010C					6010B/6010C Internal Standard				
AMOUNT	STD	PREP DATE	EXP DATE		AMOUNT	STD	MANUFACTURER		
15mL	STD 3	TODAY	1 week		2mL	Yttrium	O2SI	1073310-35027	10/01/16
25mL	1%HNO3/5%HCl	TODAY	1 week		Prepared in 2L 1%HNO3 / 5%HCl				

Metals Digestion Worksheet

Method Name 3010A Digestion **Prep Method** M3010 **Set** 161117A **Units** mL

Spikes			
Spiked ID 1	LCSW LOT# 1095239-37014		
Spiked ID 2	LCSW LOT# 1095111-37013		
Spiked ID 3			
Spiked ID 4			
Spiked By	NM	Date:	11/17/16 8:04:00 AM
Witnessed By	EJ	Date:	11/17/16 8:04:00 AM

Starting Temp:	92c Slot 30
Ending Temp:	93c Slot 30
Temperature Type:	Mod Block
Sufficient Vol for Matrix QC:	Yes
End Date/Time	11/17/16 13:50

	Sample	Sample Container	Spike Amount	Spike ID	Digested Amount	Final Volume	Start Date/Time	Comments
1	161117A Blk				50mL	50mL	11/17/16 8:04	equip: Modblock2
2	161117A LCS		500uL	1+2	50mL	50mL	11/17/16 8:04	equip: Modblock2
3	AZ45738	AZ45738W14			50mL	50mL	11/17/16 8:04	equip: Modblock2
4	AZ45761	AZ45761W05			50mL	50mL	11/17/16 8:04	equip: Modblock2
5	AZ45762	AZ45762W05			50mL	50mL	11/17/16 8:04	equip: Modblock2
6	AZ45763	AZ45763W05			50mL	50mL	11/17/16 8:04	equip: Modblock2
7	AZ45866	AZ45866W36			50mL	50mL	11/17/16 8:04	equip: Modblock2
8	AZ45866 MS	AZ45866W36	500uL	1+2	50mL	50mL	11/17/16 8:04	equip: Modblock2
9	AZ45866 MSD	AZ45866W36	500uL	1+2	50mL	50mL	11/17/16 8:04	equip: Modblock2
10	AZ45868	AZ45868W18			50mL	50mL	11/17/16 8:04	equip: Modblock2
11	AZ45907	AZ45907W17			50mL	50mL	11/17/16 8:04	equip: Modblock2
12	AZ45908	AZ45908W17			50mL	50mL	11/17/16 8:04	equip: Modblock2
13	AZ45909	AZ45909W20			50mL	50mL	11/17/16 8:04	equip: Modblock2
14	AZ45910	AZ45910W17			50mL	50mL	11/17/16 8:04	equip: Modblock2
15	AZ45911	AZ45911W17			50mL	50mL	11/17/16 8:04	equip: Modblock2
16	AZ45925	AZ45925W01			50mL	50mL	11/17/16 8:04	equip: Modblock2

Solvent and Lot#
HNO3 J.T.B. 145075 7712
1:1 HCL 11-9-16

Sample COC Transfer	
Sample prep employee Initials	nm
Analyst's initials	RCS
Date	11/23/16
Time	1125
Moved to	METALS

Technician's Initials	
Scanned By	nm
Sample Preparation	nm
Digestion	nm
Bring up to volume	nm
Modified	11/17/16 7:46:22 AM

Reviewed By: RCS **Date:** 11/23/16

6010 Injection Log

Directory: K:\ICAP PHOEBE\Backup Excel\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	22 Nov 2016	12:48	CalBlk 161122RJS I:PB O:R		161122A6010	1.
2	22 Nov 2016	12:52	STD 1 161122RJS I:PB O:RJ		161122A6010	1.
3	22 Nov 2016	12:57	STD 2 161122RJS I:PB O:RJ		161122A6010	1.
4	22 Nov 2016	13:00	STD 3 161122RJS I:PB O:RJ		161122A6010	1.
5	22 Nov 2016	13:03	ICV 161122RJS I:PB O:RJS		161122A6010	1.
6	22 Nov 2016	13:09	ICB 161122RJS I:PB O:RJS		161122A6010	1.
7	22 Nov 2016	13:14	ICSA 161122RJS I:PB O:RJS		161122A6010	1.
8	22 Nov 2016	13:19	ICSAB 161122RJS I:PB O:RJ		161122A6010	1.
9	22 Nov 2016	13:23	CCV1 161122RJS I:PB O:RJS		161122A6010	1.
10	22 Nov 2016	13:27	CCB 161122RJS I:PB O:RJS		161122A6010	1.
12	22 Nov 2016	13:36	LLICV 161122RJS I:PB O:RJ		161122A6010	1.
13	22 Nov 2016	13:43	LLICV 161122RJS I:PB O:RJ		161122A6010	1.
31	22 Nov 2016	15:13	CCV2 161122RJS I:PB O:RJS		161122A6010	1.
32	22 Nov 2016	15:19	CCB 161122RJS I:PB O:RJS		161122A6010	1.
33	22 Nov 2016	15:24	161117A-3010-BLK		161122A6010	1.
34	22 Nov 2016	15:28	161117A-3010-LCS		161122A6010	1.
40	22 Nov 2016	15:58	CCV1 161122RJS I:PB O:RJS		161122A6010	1.
41	22 Nov 2016	16:05	CCB 161122RJS I:PB O:RJS		161122A6010	1.
47	22 Nov 2016	16:32	AZ45868W18-1/20		161122A6010	20.
53	22 Nov 2016	16:58	CCV2 161122RJS I:PB O:RJS		161122A6010	1.
54	22 Nov 2016	17:01	CCB 161122RJS I:PB O:RJS		161122A6010	1.
55	22 Nov 2016	17:05	AZ45866W36		161122A6010	1.
56	22 Nov 2016	17:11	AZ45866W36 MS		161122A6010	1.
57	22 Nov 2016	17:16	AZ45866W36 MSD		161122A6010	1.
58	22 Nov 2016	17:22	AZ45866W36-A		161122A6010	1.
59	22 Nov 2016	17:27	AZ45866W36-1/5		161122A6010	5.
60	22 Nov 2016	17:31	AZ45868W18		161122A6010	1.
66	22 Nov 2016	18:06	CCV1 161122RJS I:PB O:RJS		161122A6010	1.
67	22 Nov 2016	18:13	CCB 161122RJS I:PB O:RJS		161122A6010	1.

INORGANIC ANALYSIS

APPL, INC.

INORGANIC ANALYSIS
QC Summary

APPL, INC.

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
SM 2320B	BICARBONATE AS	1.6 J	2.0	1.70	0.85	mg/L	11/15/16	11/15/16	#232W-161115A-AZ45866
SM 2320B	CARBONATE AS CA	1.70 U	2.0	1.70	0.85	mg/L	11/15/16	11/15/16	#232W-161115A-AZ45866
SM 2320B	TOTAL ALKALINITY	1.6 J	2.0	1.70	0.85	mg/L	11/15/16	11/15/16	#232W-161115A-AZ45866
EPA 300.0	BROMIDE	0.16 U	0.5	0.16	0.05	mg/L	11/15/16	11/15/16	#300W-161115A-AZ45866
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	11/15/16	11/15/16	#300W-161115A-AZ45866
EPA 300.0	FLUORIDE	0.09 U	0.1	0.09	0.08	mg/L	11/15/16	11/15/16	#300W-161115A-AZ45866
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	11/15/16	11/15/16	#300W-161115A-AZ45866
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	11/15/16	11/15/16	#300W-161115A-AZ45866
SM3500Fe	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	11/15/16	11/15/16	#35FE-161115A-AZ45866
SM 4500-S	SILICA W	0.80 U	1.0	0.80	0.53	mg/L	11/21/16	11/21/16	#SIO2-161121A-AZ45866
SM 4500-S	DISSOLVED SILICA	0.80 U	1.0	0.80	0.53	mg/L	11/21/16	11/21/16	#SIO2D-161121B-AZ45866

Wetlab SC-Blank-REG MDLs
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Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 300.0	BROMIDE	12.5	12.1	96.8	90-110	11/15/16	11/15/16	#300W-161115A-AZ45866
EPA 300.0	CHLORIDE	20.0	18.7	93.5	90-110	11/15/16	11/15/16	#300W-161115A-AZ45866
EPA 300.0	FLUORIDE	2.50	2.59	104	90-110	11/15/16	11/15/16	#300W-161115A-AZ45866
EPA 300.0	NITRATE	22.1	20.4	92.3	90-110	11/15/16	11/15/16	#300W-161115A-AZ45866
EPA 300.0	SULFATE	20.0	18.4	92.0	90-110	11/15/16	11/15/16	#300W-161115A-AZ45866
SM 2320B	BICARBONATE AS CACO3	250	243	97.2	90-110	11/15/16	11/15/16	#232W-161115A-AZ45866
SM 2320B	TOTAL ALKALINITY AS CACO3	250	243	97.2	90-110	11/15/16	11/15/16	#232W-161115A-AZ45866
SM 4500-Si	SILICA W	4.00	4.29	107	80-120	11/21/16	11/21/16	#SIO2-161121A-AZ45866
SM 4500-Si	DISSOLVED SILICA	4.00	4.38	110	80-120	11/21/16	11/21/16	#SIO2D-161121B-AZ45866
SM3500Fe	FERROUS IRON	3.00	2.90	96.7	80-120	11/15/16	11/15/16	#35FE-161115A-AZ45866

Comments: _____

Matrix Spike Recoveries

WETLAB

APPL ID: **161122W-45866 MS - 213954**

Sample ID: AZ45866

Client ID: ERH115

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	Matrix Res mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
EPA 300.0	BROMIDE	12.5	0.36	12.3	12.2	95.5	94.7	0.82	20	90-110	11/22/16	11/22/16	11/22/16	11/22/16	213954	AZ45866
EPA 300.0	CHLORIDE	40.0	72.3	118	117	114 #	112 #	0.85	20	90-110	11/22/16	11/22/16	11/22/16	11/22/16	213954	AZ45866
EPA 300.0	FLUORIDE	2.50	0.24	2.54	2.54	92.0	92.0	0.0	20	90-110	11/22/16	11/22/16	11/22/16	11/22/16	213954	AZ45866
EPA 300.0	NITRATE	22.1	2.9	23.2	23.1	91.9	91.4	0.43	20	90-110	11/22/16	11/22/16	11/22/16	11/22/16	213954	AZ45866
EPA 300.0	SULFATE	20.0	18.5	38.3	38.3	99.0	99.0	0.0	20	90-110	11/22/16	11/22/16	11/22/16	11/22/16	213954	AZ45866
SM 2320B	BICARBONATE AS CA	250	67.4	299	303	92.6	94.2	1.3	20	90-110	11/15/16	11/15/16	11/15/16	11/15/16	213932	AZ45866
SM 2320B	TOTAL ALKALINITY AS	250	67.4	299	303	92.6	94.2	1.3	20	90-110	11/15/16	11/15/16	11/15/16	11/15/16	213932	AZ45866
SM 4500-Si	SILICA W	20.0	51.9	78.4	74.3	133 #	112	5.4	20	80-120	11/21/16	11/21/16	11/21/16	11/21/16	213944	AZ45866
SM 4500-Si	DISSOLVED SILICA	20.0	53.0	73.8	73.2	104	101	0.82	20	80-120	11/21/16	11/21/16	11/21/16	11/21/16	213947	AZ45866
SM3500Fe	FERROUS IRON	3.00	0.027	2.95	2.94	97.4	97.1	0.34	20	80-120	11/15/16	11/15/16	11/15/16	11/15/16	213949	AZ45866

= Recovery is outside QC limits.

Comments:

INORGANIC ANALYSIS
Sample Data

APPL, INC.

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH115

APPL ID: AZ45866

Sample Collection Date: 11/14/16

ARF: 81492

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	BROMIDE	0.36 J	0.5	0.16	0.05	mg/L	1	11/15/16	11/15/16
EPA 300.0	FLUORIDE	0.24	0.1	0.09	0.08	mg/L	1	11/15/16	11/15/16
EPA 300.0	NITRATE	2.9	0.5	0.18	0.04	mg/L	1	11/15/16	11/15/16
EPA 300.0	SULFATE	18.5	1.0	0.20	0.09	mg/L	1	11/15/16	11/15/16
EPA 300.0	CHLORIDE	72.3	2.0	0.40	0.16	mg/L	2	11/15/16	11/15/16
SM 2320B	BICARBONATE AS CACO3	67.4	2.0	1.70	0.85	mg/L	1	11/15/16	11/15/16
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	11/15/16	11/15/16
SM 2320B	TOTAL ALKALINITY AS CACO3	67.4	2.0	1.70	0.85	mg/L	1	11/15/16	11/15/16
SM 4500-Si D	SILICA W	51.9	5.0	4.00	2.65	mg/L	5	11/21/16	11/21/16
SM 4500-Si D	DISSOLVED SILICA	53.0	5.0	4.00	2.65	mg/L	5	11/21/16	11/21/16
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	11/15/16	11/15/16

J = Estimated value.

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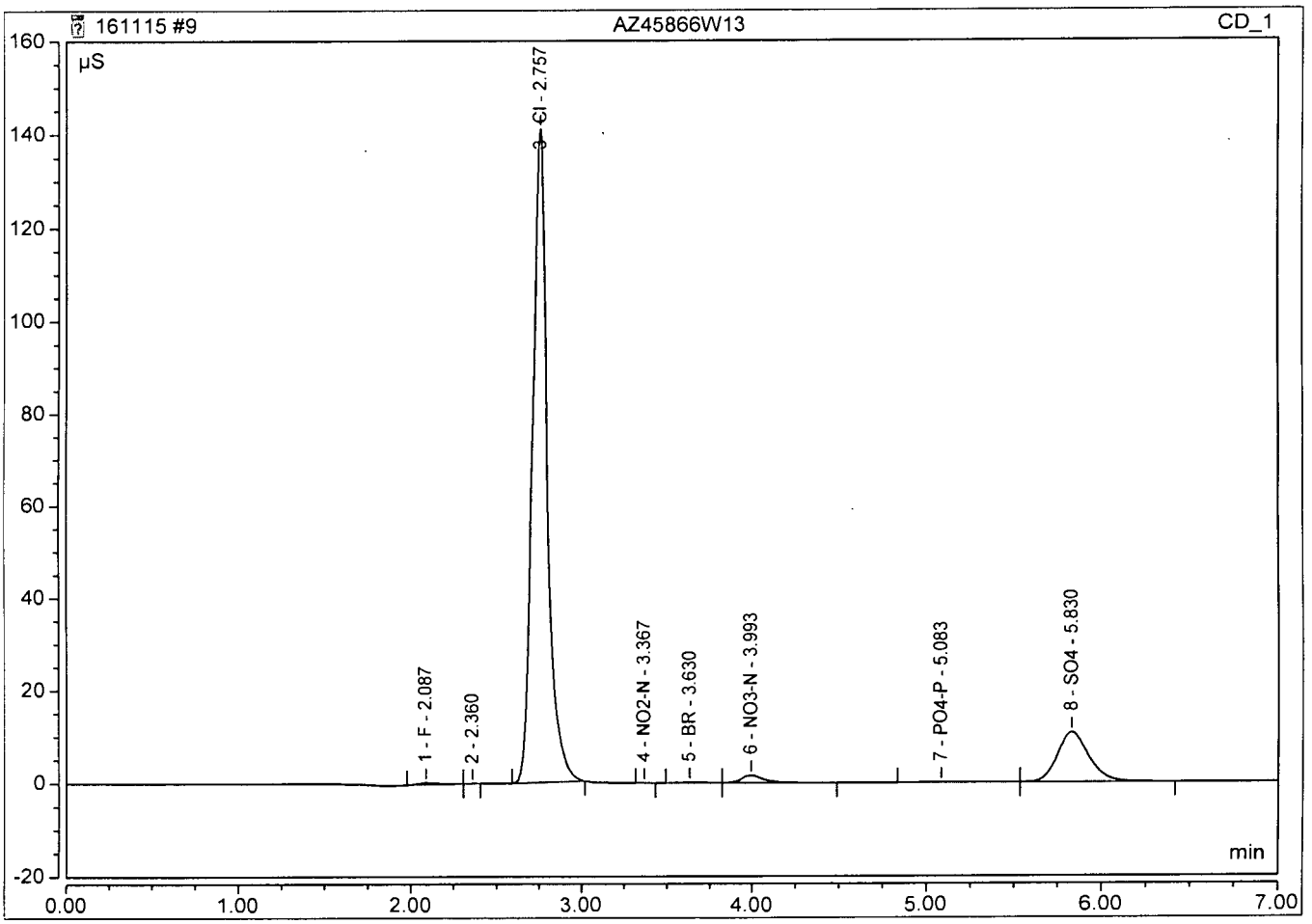
APPL-F1-SC-NoMC-REG MDLs

Peak Integration Report

Sample Name:	**AZ45866W13**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**15-Nov-2016 / 12:19**	*Run Time:*	**7.00**

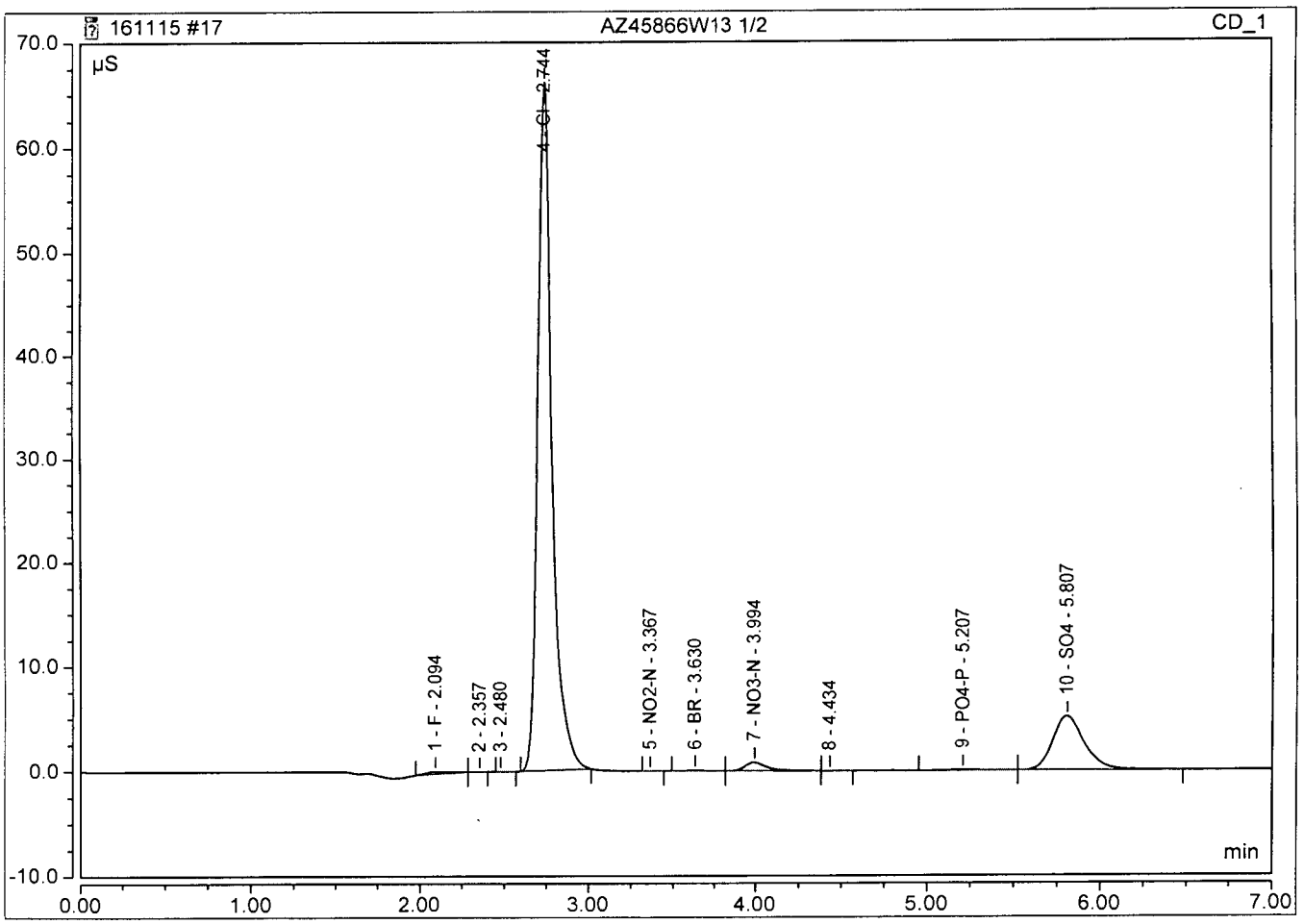
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.09	F	BMB	0.045	0.351	0.2387
3	2.76	Cl	BMB	14.152	140.814	78.4499
4	3.37	NO2-N	BMB	0.000	0.001	0.0218
5	3.63	BR	BMB	0.015	0.125	0.3613
6	3.99	NO3-N	BMB	0.231	1.628	0.6560
7	5.08	PO4-P	BMB	0.031	0.085	0.3141
8	5.83	SO4	BMB	2.202	10.703	18.5272
TOTAL:				16.68	153.71	98.57



Peak Integration Report

Sample Name:	**AZ45866W13 1/2**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**2.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**15-Nov-2016 / 14:04**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.09	F	BMB	0.033	0.228	0.3741
4	2.74	Cl	BMB	6.474	66.121	72.3391
5	3.37	NO2-N	BMB	0.000	0.001	0.0435
6	3.63	BR	BMB	0.007	0.062	0.4841
7	3.99	NO3-N	BMB	0.114	0.804	0.7437
9	5.21	PO4-P	BMB	0.014	0.043	0.3555
10	5.81	SO4	BMB	1.066	5.074	18.4388
TOTAL:				7.71	72.33	92.78



Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH120

APPL ID: AZ45868

Sample Collection Date: 11/14/16

ARF: 81492

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	BROMIDE	1.3	1.0	0.32	0.10	mg/L	2	11/15/16	11/15/16
EPA 300.0	FLUORIDE	0.23	0.2	0.18	0.16	mg/L	2	11/15/16	11/15/16
EPA 300.0	NITRATE	3.0	1.0	0.36	0.08	mg/L	2	11/15/16	11/15/16
EPA 300.0	SULFATE	81.8	2.0	0.40	0.18	mg/L	2	11/15/16	11/15/16
EPA 300.0	CHLORIDE	365	10.0	2.00	0.80	mg/L	10	11/15/16	11/15/16
SM 2320B	BICARBONATE AS CACO3	108	2.0	1.70	0.85	mg/L	1	11/15/16	11/15/16
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	11/15/16	11/15/16
SM 2320B	TOTAL ALKALINITY AS CACO3	108	2.0	1.70	0.85	mg/L	1	11/15/16	11/15/16
SM 4500-Si D	SILICA,W	72.1	5.0	4.00	2.65	mg/L	5	11/21/16	11/21/16
SM 4500-Si D	DISSOLVED SILICA	71.2	5.0	4.00	2.65	mg/L	5	11/21/16	11/21/16
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	11/15/16	11/15/16

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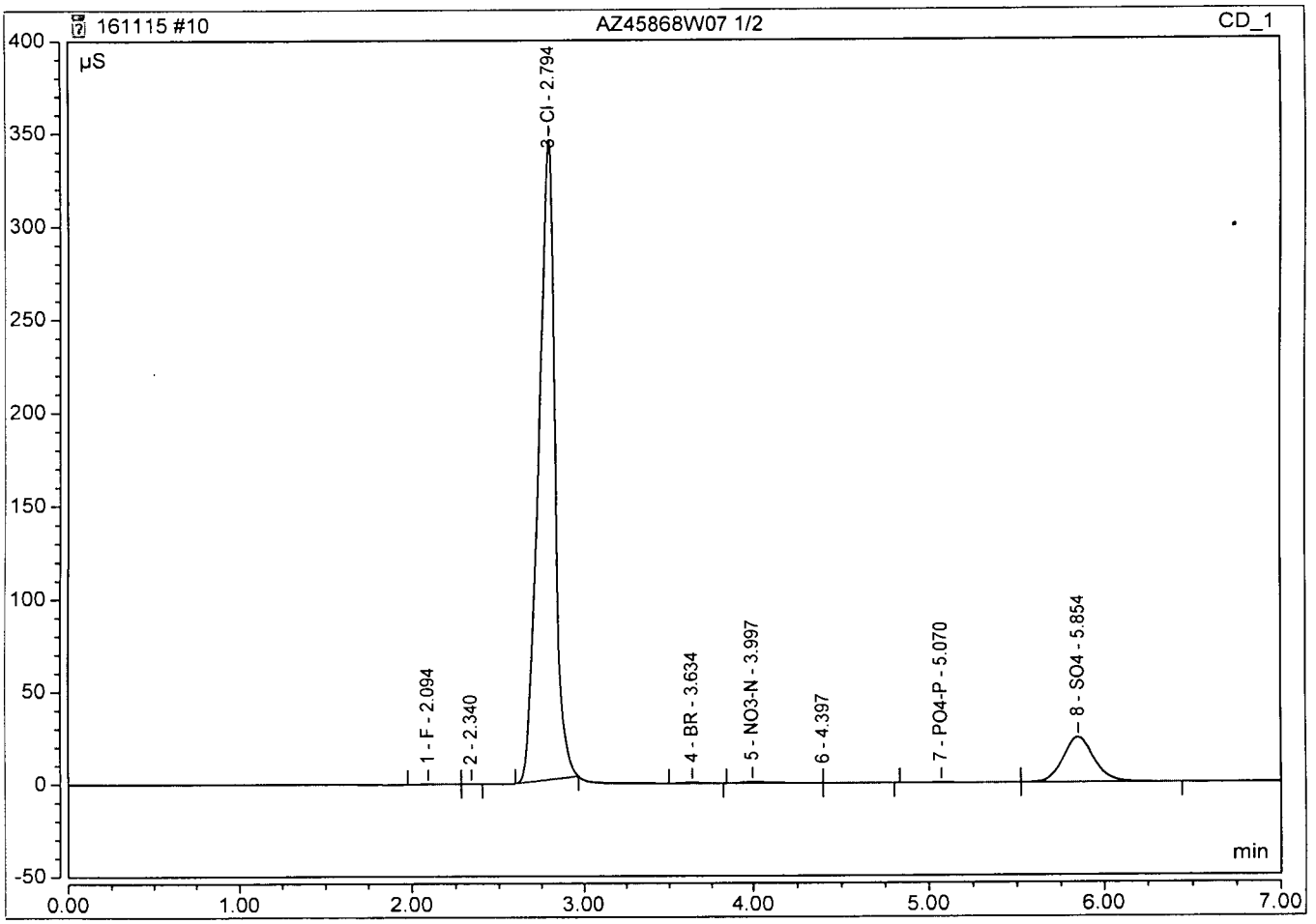
APPL-F1-SC-NoMC-REG MDLs

Peak Integration Report

Sample Name:	**AZ45868W07 1/2**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**2.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**15-Nov-2016 / 12:32**	*Run Time:*	**7.00**

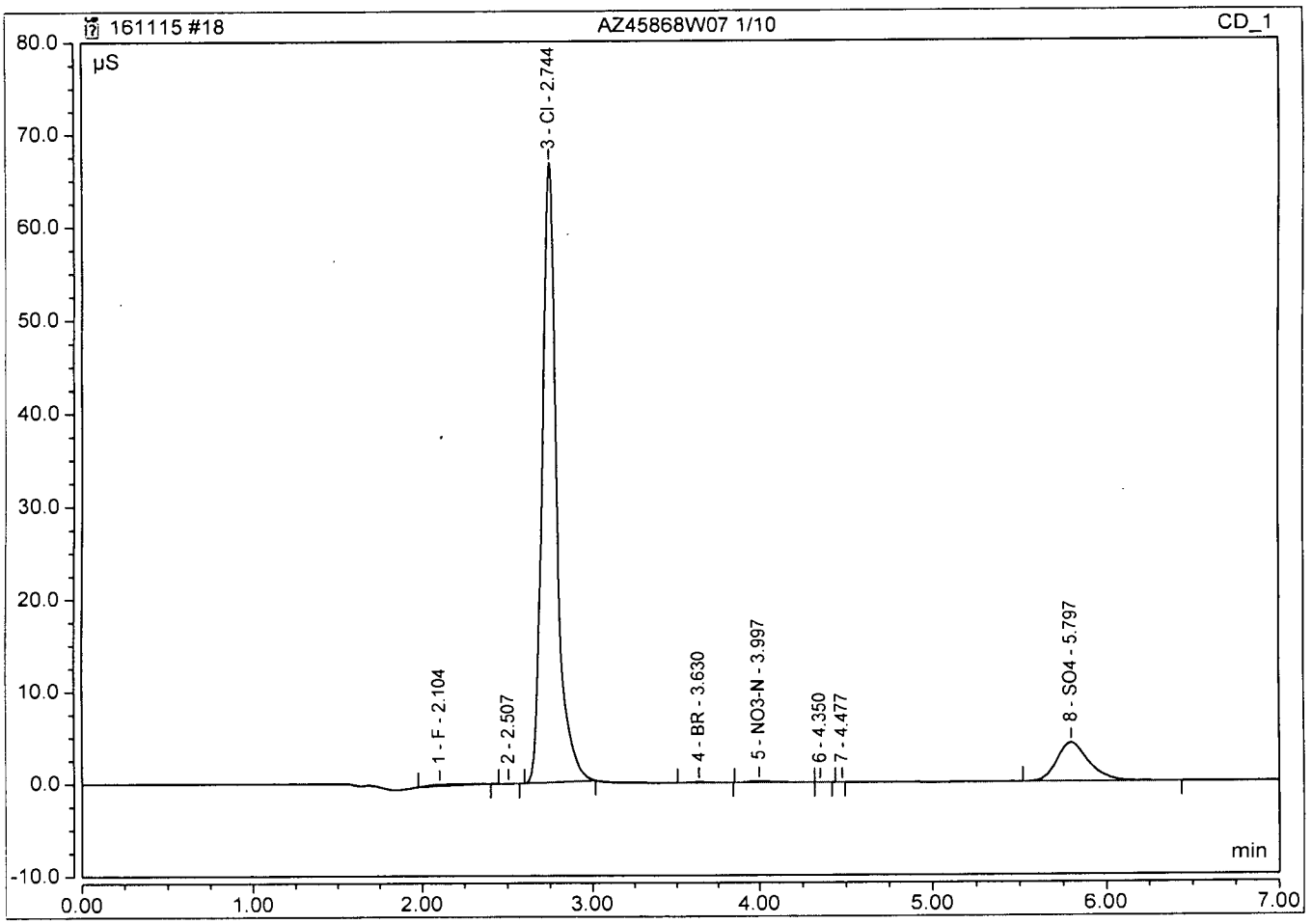
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.09	F	BMB	0.017	0.123	0.2279
3	2.79	Cl	BMB	37.835	344.026	417.7185
4	3.63	BR	BMB	0.032	0.269	1.2704
5	4.00	NO3-N	BMB	0.100	0.710	0.6767
7	5.07	PO4-P	BMB	0.031	0.087	0.6302
8	5.85	SO4	BMB	4.935	24.209	81.8141
TOTAL:				42.95	369.42	502.34



Peak Integration Report

Sample Name:	**AZ45868W07 1/10**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**10.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**15-Nov-2016 / 14:17**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB	0.039	0.151	2.1148
3	2.74	Cl	BMB	6.541	66.677	365.3710
4	3.63	BR	BMB	0.007	0.055	2.3170
5	4.00	NO3-N	BMB	0.021	0.143	1.4588
8	5.80	SO4	BMB	0.879	4.153	76.9485
TOTAL:				7.49	71.18	448.21



INORGANIC ANALYSIS
Calibration Data

APPL, INC.

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM
ARF No: 81492 SDG: 81492
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 05/20/16

Analyte	Calibration Verification									M
	True ICV	Found 12:41	%R(1)	True CCV1	Found 11:36	%R(1)	True CCV1	Found 11:43	%R(1)	
Ferrous Iron	3	3.01396	100	4	3.94306	98.6	4	3.93307	98.3	

(1) Control Limits: 90-110

ILM02.0

A.P.P.L. INC.

3

BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 81492 SDG: 81492

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	ICB 05/20/16 12:42	C	CCB 11/15/16 11:37	C	CCB 11/15/16 11:44	C		C		C	
Ferrous Iron	1.000	U	1.000	U	1.000	U					

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM
ARF No: 81492 SDG: 81492
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 10/20/16

Analyte	Calibration Verification									M
	True ICV	Found 12:37	%R(1)	True	Found	%R(1)	True	Found	%R(1)	
bromide	12.5	11.8422	94.7							
chloride	20	18.2183	91.1							
fluoride	2.5	2.55939	102							
Nitrate(NO3)	22.1	20.0573	90.8							
sulfate	20	18.4058	92.0							

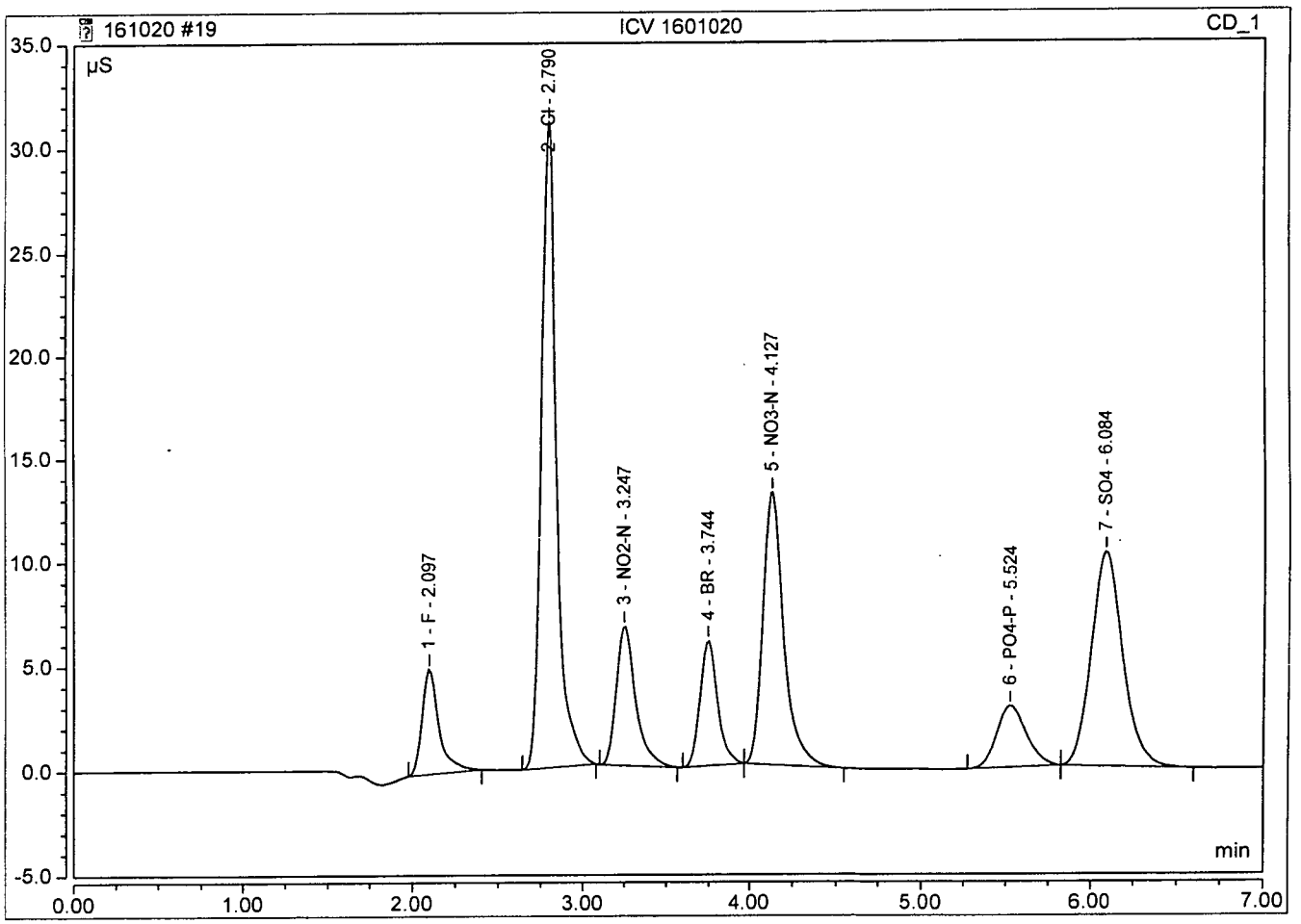
(1) Control Limits: 90-110

ILM02.0

Peak Integration Report

Sample Name:	ICV 1601020	*Inj. Vol.:*	25.00
Injection Type:	Unknown	*Dilution Factor:*	1.0000
Program:	Analytical Processing Method 161020 ND	*Operator:*	chemist_wetlab
Inj. Date / Time:	20-Oct-2016 / 12:37	*Run Time:*	7.00

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB	0.568	5.018	2.5594
2	2.79	Cl	BMB	3.214	31.139	18.2184
3	3.25	NO2-N	BMB	0.894	6.653	2.9873
4	3.74	BR	BMB	0.739	5.970	11.8423
5	4.13	NO3-N	BMB	1.827	13.075	4.5291
6	5.52	PO4-P	BMB	0.590	2.913	4.8011
7	6.08	SO4	BMB	2.187	10.255	18.4058
TOTAL:				10.02	75.02	63.34



Algorithm Check
$y = .2252x - .0087$ y = Peak Area, x = Amnt
$x = 2.56$ ✓ MM 12/2/16

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 81492 SDG: 81492

Preparation Blank Matrix (soil/water): water

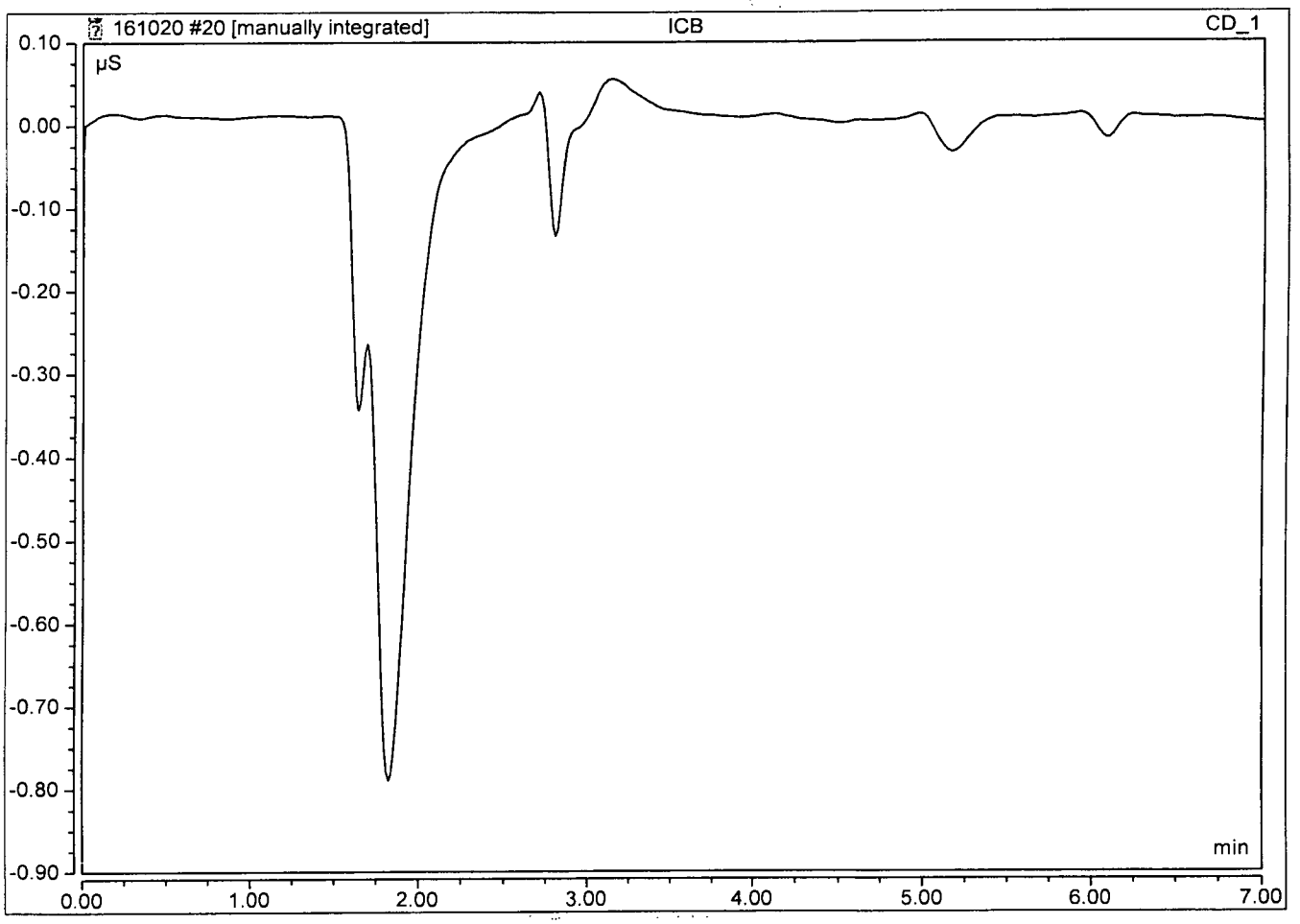
Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	ICB 10/20/16 12:50	C		C		C		C		C	
bromide	.500	U									
chloride	1.000	U									
fluoride	.100	U									
Nitrate(NO3)	.500	U									
sulfate	1.000	U									

Peak Integration Report

Sample Name:	ICB	*Inj. Vol.:*	25.00
Injection Type:	Unknown	*Dilution Factor:*	1.0000
Program:	Analytical Processing Method 161020 ND	*Operator:*	chemist_wetlab
Inj. Date / Time:	20-Oct-2016 / 12:50	*Run Time:*	7.00

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
TOTAL:				0.00	0.00	0.00



A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM
ARF No: 81492 SDG: 81492
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 11/15/16

Analyte	Calibration Verification									M
	True CCV1	Found 11:01	%R(1)	True CCV1	Found 13:25	%R(1)	True CCV1	Found 14:56	%R(1)	
bromide	12.5	11.998	96.0	12.5	11.9078	95.3	12.5	11.9845	95.9	
chloride	25	23.5903	94.4	25	23.5075	94.0	25	23.5925	94.4	
fluoride	2.5	2.6335	105	2.5	2.6261	105	2.5	2.6232	105	
Nitrate(NO3)	22.1	21.0606	95.3	22.1	20.9915	95.0	22.1	21.0531	95.3	
sulfate	25	22.9899	92.0	25	22.9423	91.8	25	22.9744	91.9	

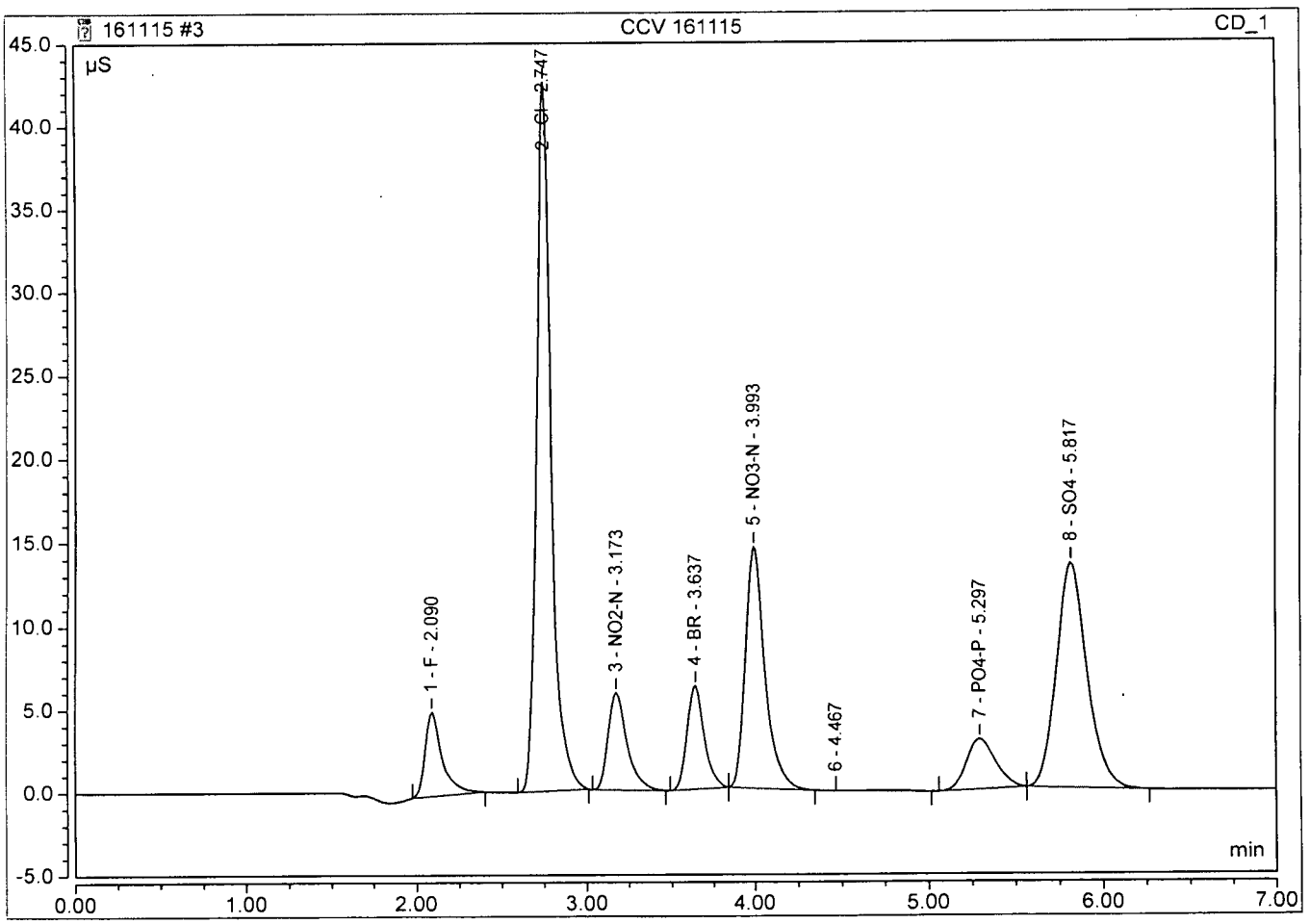
(1) Control Limits: 90-110

ILM02.0

Peak Integration Report

Sample Name:	**CCV 161115**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**15-Nov-2016 / 11:01**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.09	F	BMB	0.584	5.088	2.6335
2	2.75	Cl	BMB	4.190	42.554	23.5903
3	3.17	NO2-N	BMB	0.763	5.897	2.5520
4	3.64	BR	BMB	0.749	6.271	11.9980
5	3.99	NO3-N	BMB	1.920	14.474	4.7555
7	5.30	PO4-P	BMB	0.584	3.020	4.7501
8	5.82	SO4	BMB	2.747	13.513	22.9899
TOTAL:				11.54	90.82	73.27

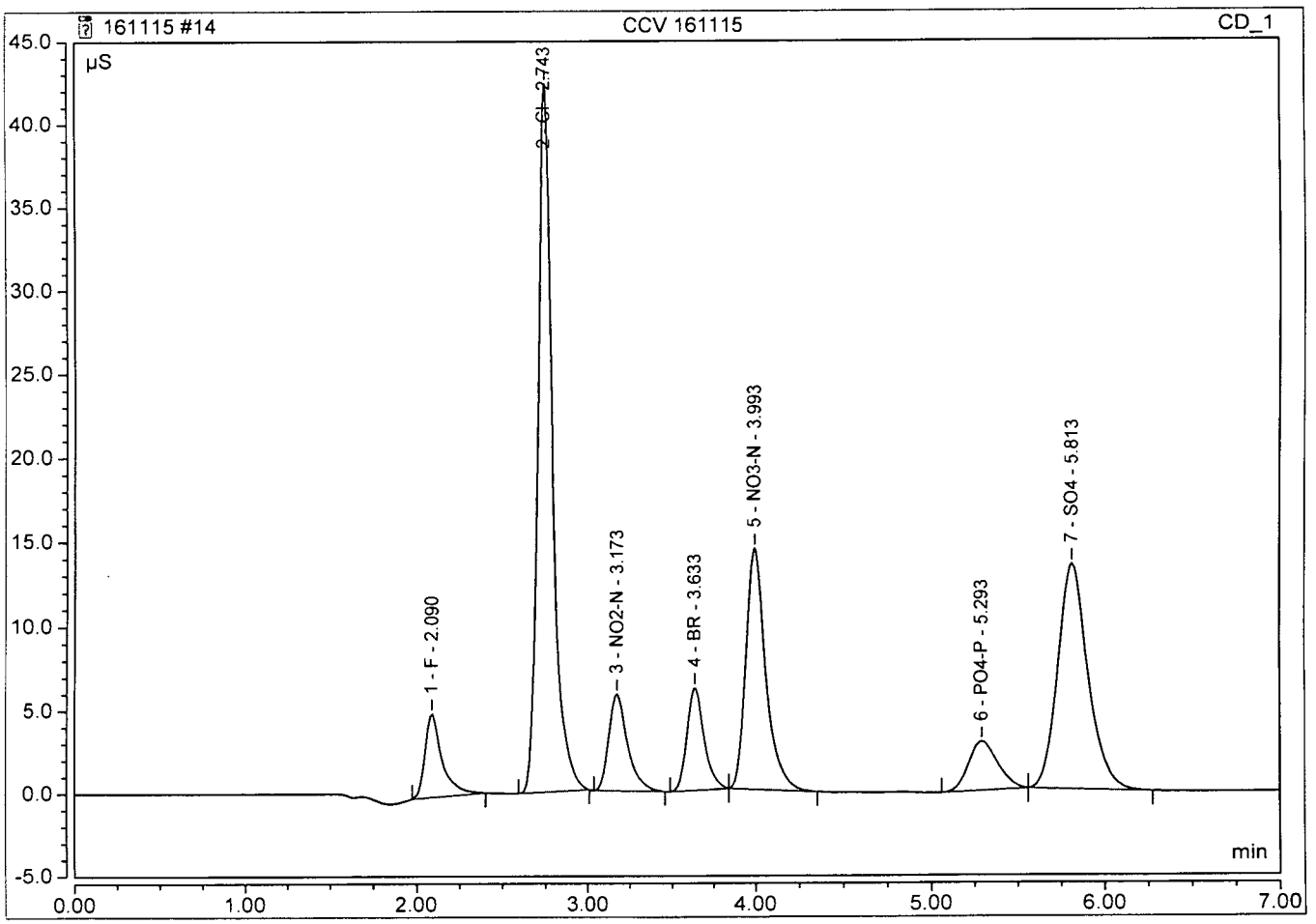


Algorithm Check +=Peak Area
y= .2252x-.0087 X=Amt
x= 2.63✓ MM 12/2/16

Peak Integration Report

Sample Name:	**CCV 161115**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**15-Nov-2016 / 13:25**	*Run Time:*	**7.00**

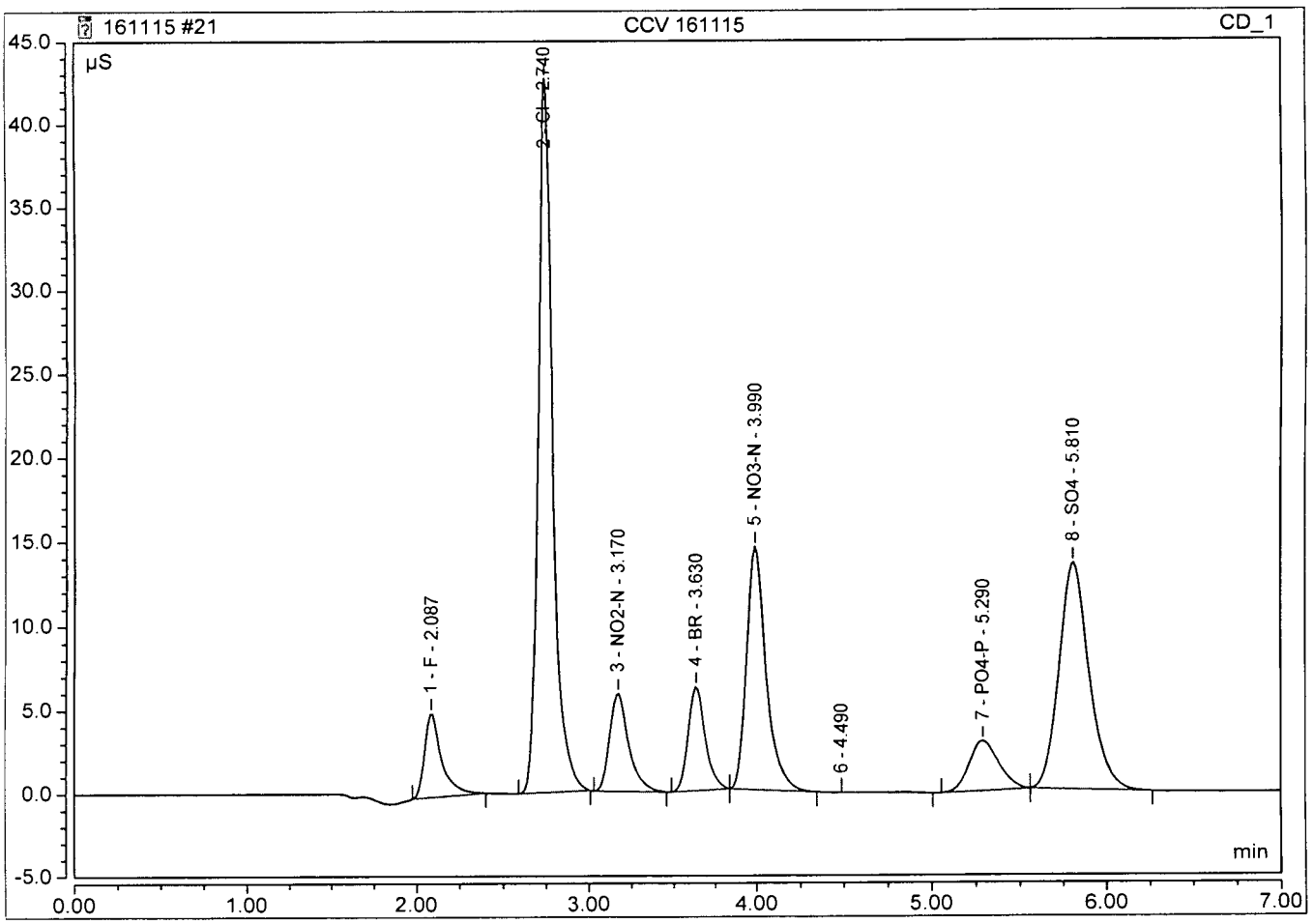
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.09	F	BMB	0.583	5.059	2.6261
2	2.74	Cl	BMB	4.175	42.339	23.5075
3	3.17	NO2-N	BMB	0.757	5.840	2.5342
4	3.63	BR	BMB	0.743	6.212	11.9078
5	3.99	NO3-N	BMB	1.914	14.329	4.7399
6	5.29	PO4-P	BMB	0.578	2.975	4.7042
7	5.81	SO4	BMB	2.741	13.408	22.9423
TOTAL:				11.49	90.16	72.96



Peak Integration Report

Sample Name:	**CCV 161115**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**15-Nov-2016 / 14:56**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.09	F	BMB	0.582	5.077	2.6232
2	2.74	Cl	BMB	4.190	42.674	23.5925
3	3.17	NO2-N	BMB	0.763	5.896	2.5537
4	3.63	BR	BMB	0.748	6.267	11.9845
5	3.99	NO3-N	BMB	1.919	14.445	4.7539
7	5.29	PO4-P	BMB	0.582	3.005	4.7332
8	5.81	SO4	BMB	2.745	13.474	22.9744
TOTAL:				11.53	90.84	73.22



A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 81492 SDG: 81492

Preparation Blank Matrix (soil/water): water

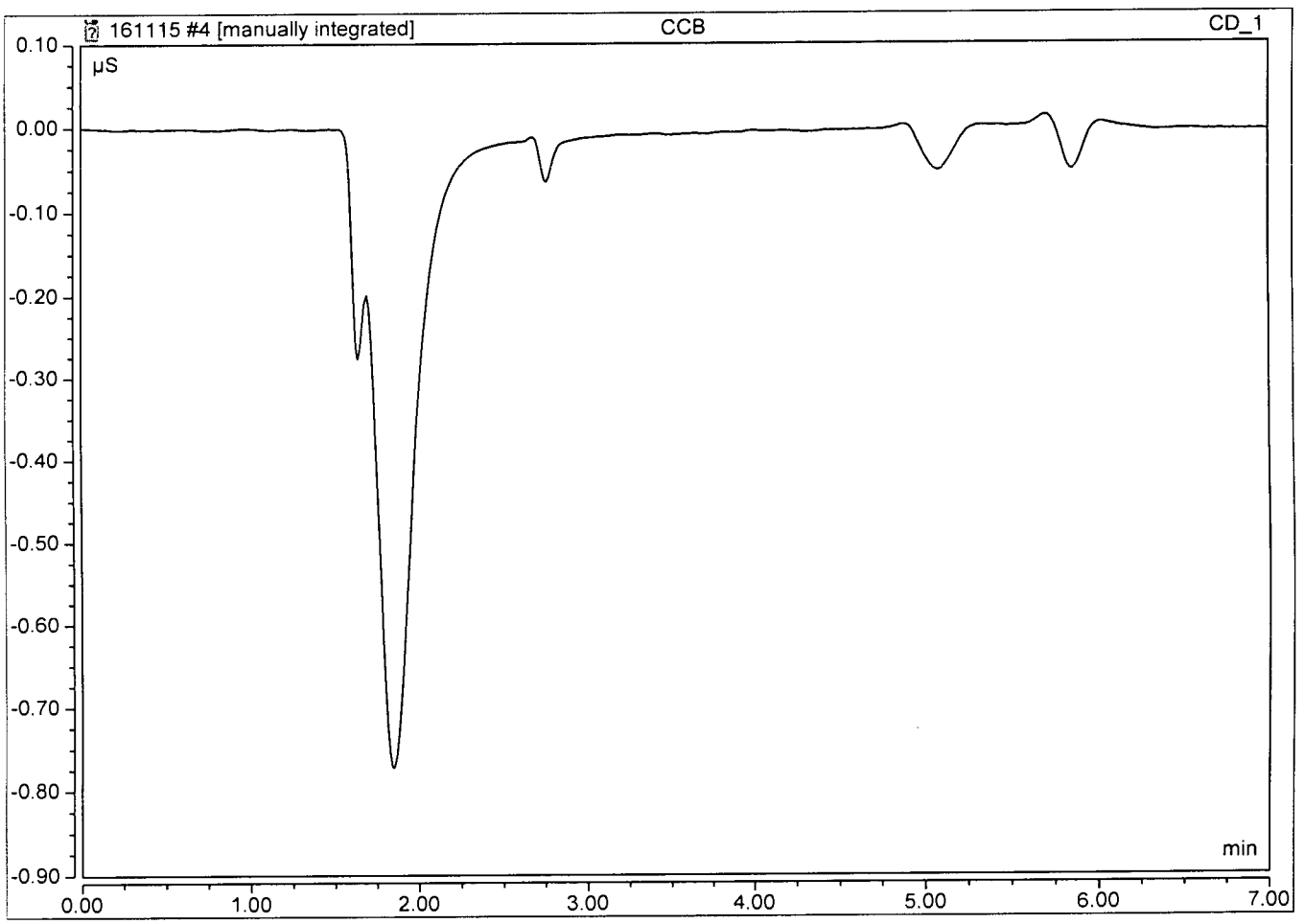
Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	CCB 11/15/16 11:14	C	CCB 11/15/16 13:38	C	CCB 11/15/16 15:09	C		C		C	
bromide	.500	U	.500	U	.500	U					
chloride	1.000	U	1.000	U	1.000	U					
fluoride	.100	U	.100	U	.100	U					
Nitrate(NO3)	.500	U	.500	U	.500	U					
sulfate	1.000	U	1.000	U	1.000	U					

Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**15-Nov-2016 / 11:14**	*Run Time:*	**7.00**

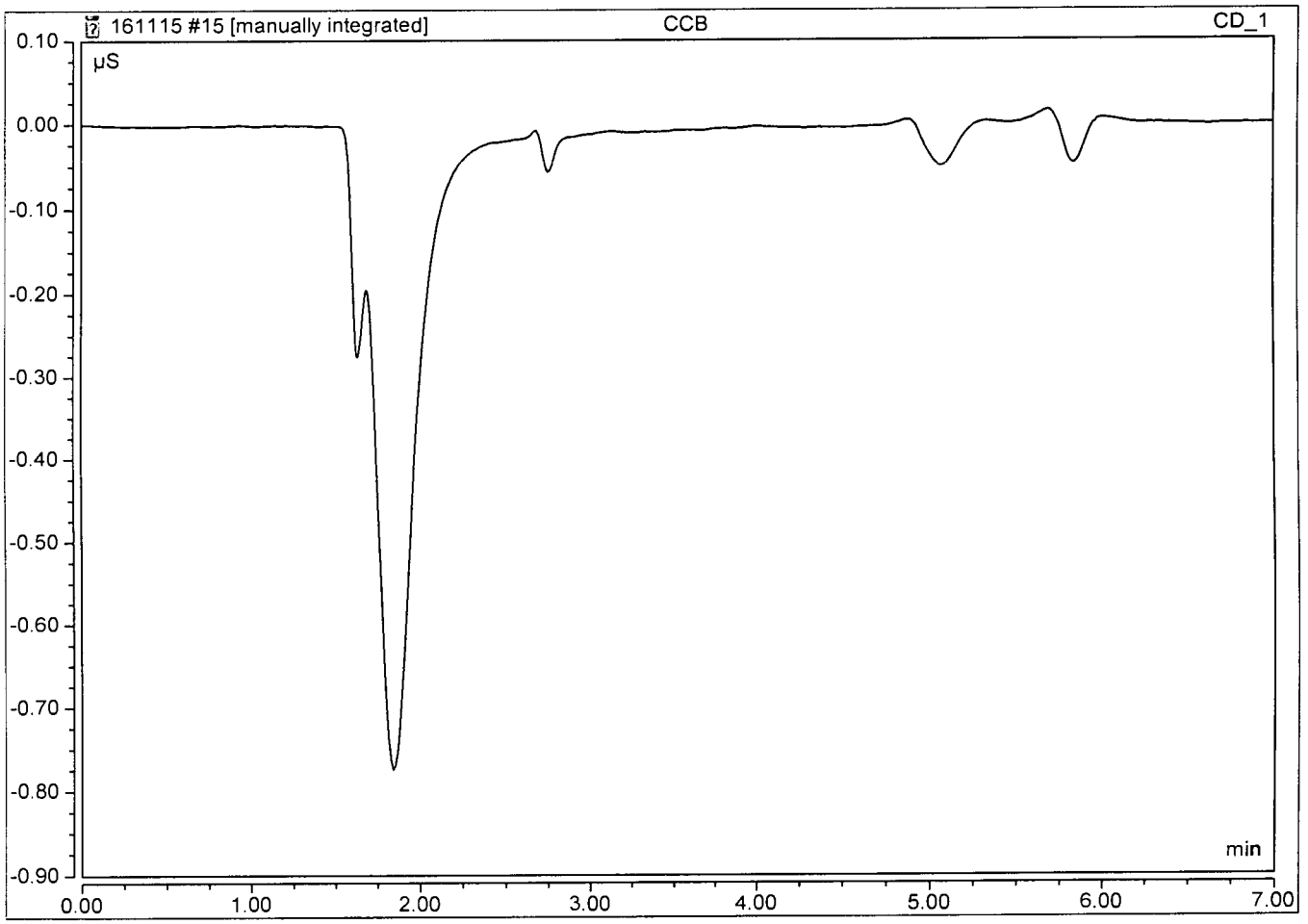
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
		TOTAL:		0.00	0.00	0.00



Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**15-Nov-2016 / 13:38**	*Run Time:*	**7.00**

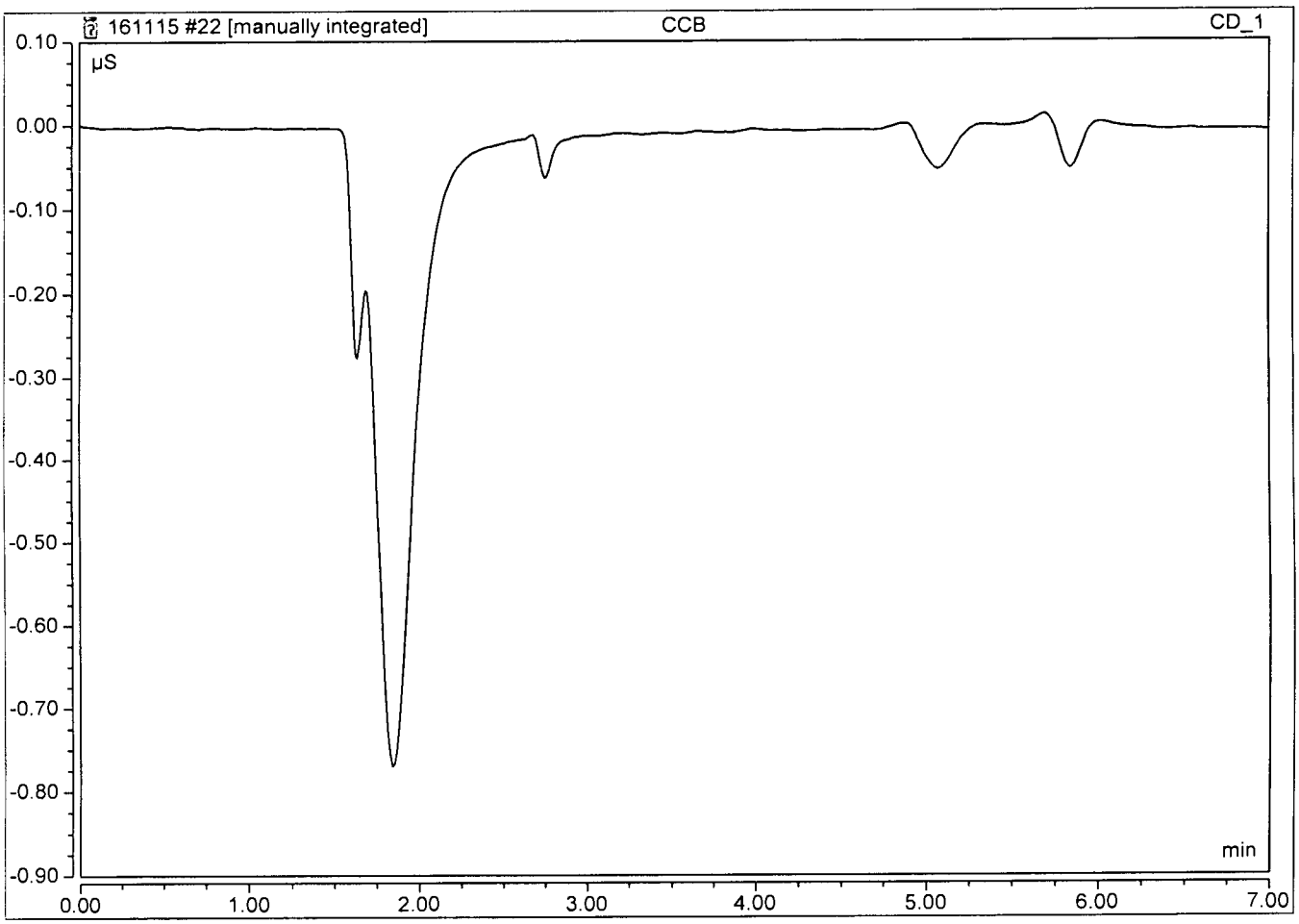
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
		TOTAL:		0.00	0.00	0.00



Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**15-Nov-2016 / 15:09**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
		TOTAL:		0.00	0.00	0.00



A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM
ARF No: 81492 SDG: 81492
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 11/22/16

Analyte	Calibration Verification									M
	True CCV1	Found 13:33	%R(1)	True CCV1	Found 17:14	%R(1)	True	Found	%R(1)	
bromide	12.5	12.3734	99.0	12.5	12.2983	98.4				
chloride	25	24.0709	96.3	25	24.0127	96.1				
fluoride	2.5	2.6302	105	2.5	2.6109	104				
Nitrate(NO3)	22.1	21.5920	97.7	22.1	21.5455	97.5				
sulfate	25	23.3497	93.4	25	23.3329	93.3				

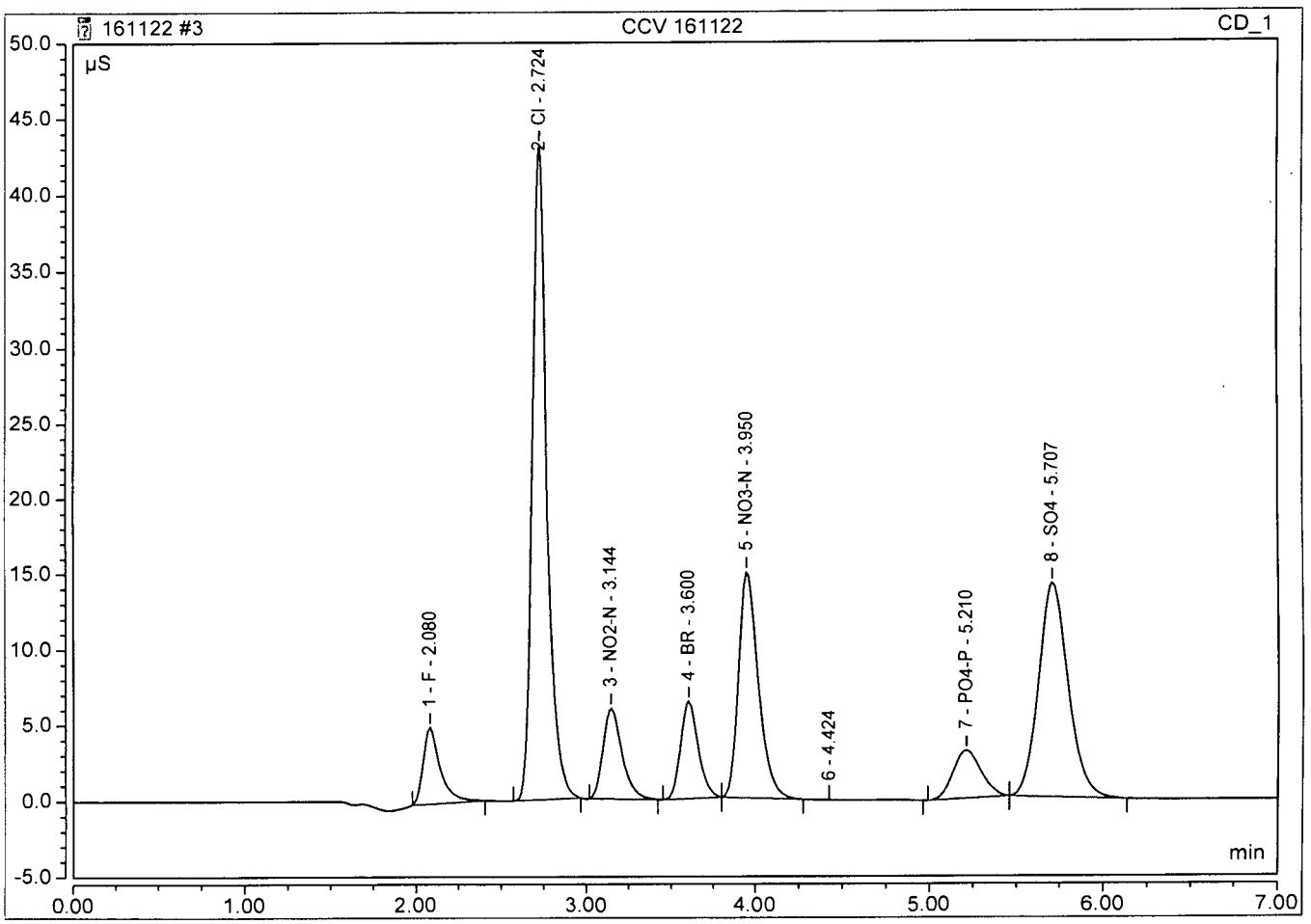
(1) Control Limits: 90-110

ILM02.0

Peak Integration Report

Sample Name:	**CCV 161122**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**22-Nov-2016 / 13:33**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.08	F	BMB	0.584	5.035	2.6301
2	2.72	Cl	BMB	4.277	43.173	24.0709
3	3.14	NO2-N	BMB	0.772	5.981	2.5823
4	3.60	BR	BMB	0.773	6.424	12.3734
5	3.95	NO3-N	BMB	1.969	14.904	4.8756
7	5.21	PO4-P	BMB	0.587	3.150	4.7792
8	5.71	SO4	BMB	2.791	14.090	23.3497
TOTAL:				11.75	92.76	74.66

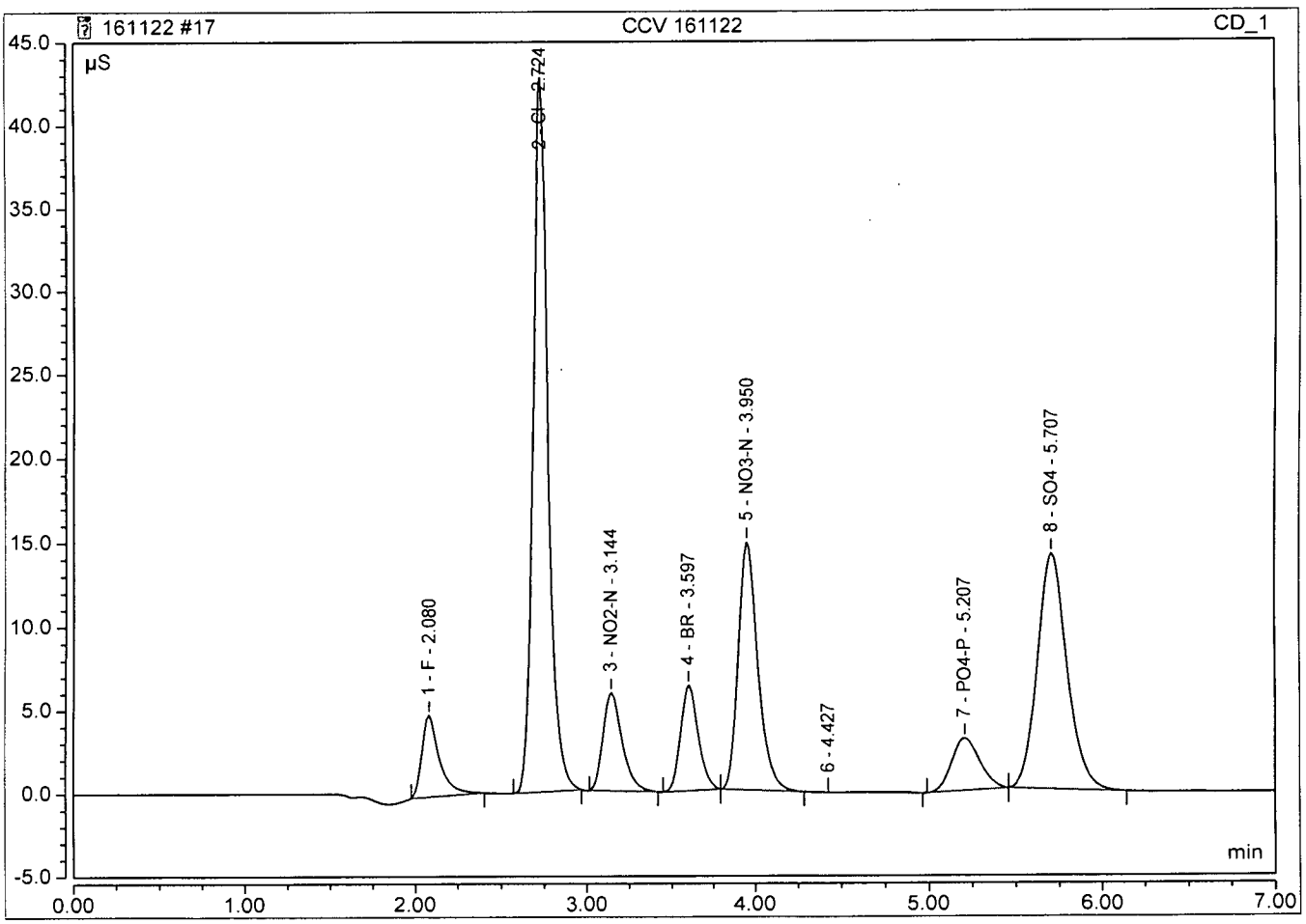


Algorithm Check
y = .2252x - .0087
x = 2.63
y = Peak Area
x = Amnt
MM 12/2/16

Peak Integration Report

Sample Name:	**CCV 161122**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**22-Nov-2016 / 17:14**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.08	F	BMB	0.579	4.904	2.6109
2	2.72	Cl	BMB	4.267	42.730	24.0127
3	3.14	NO2-N	BMB	0.767	5.909	2.5673
4	3.60	BR	BMB	0.768	6.356	12.2983
5	3.95	NO3-N	BMB	1.965	14.765	4.8651
7	5.21	PO4-P	BMB	0.585	3.129	4.7602
8	5.71	SO4	BMB	2.789	14.017	23.3329
TOTAL:				11.72	91.81	74.45



A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 81492 SDG: 81492

Preparation Blank Matrix (soil/water): water

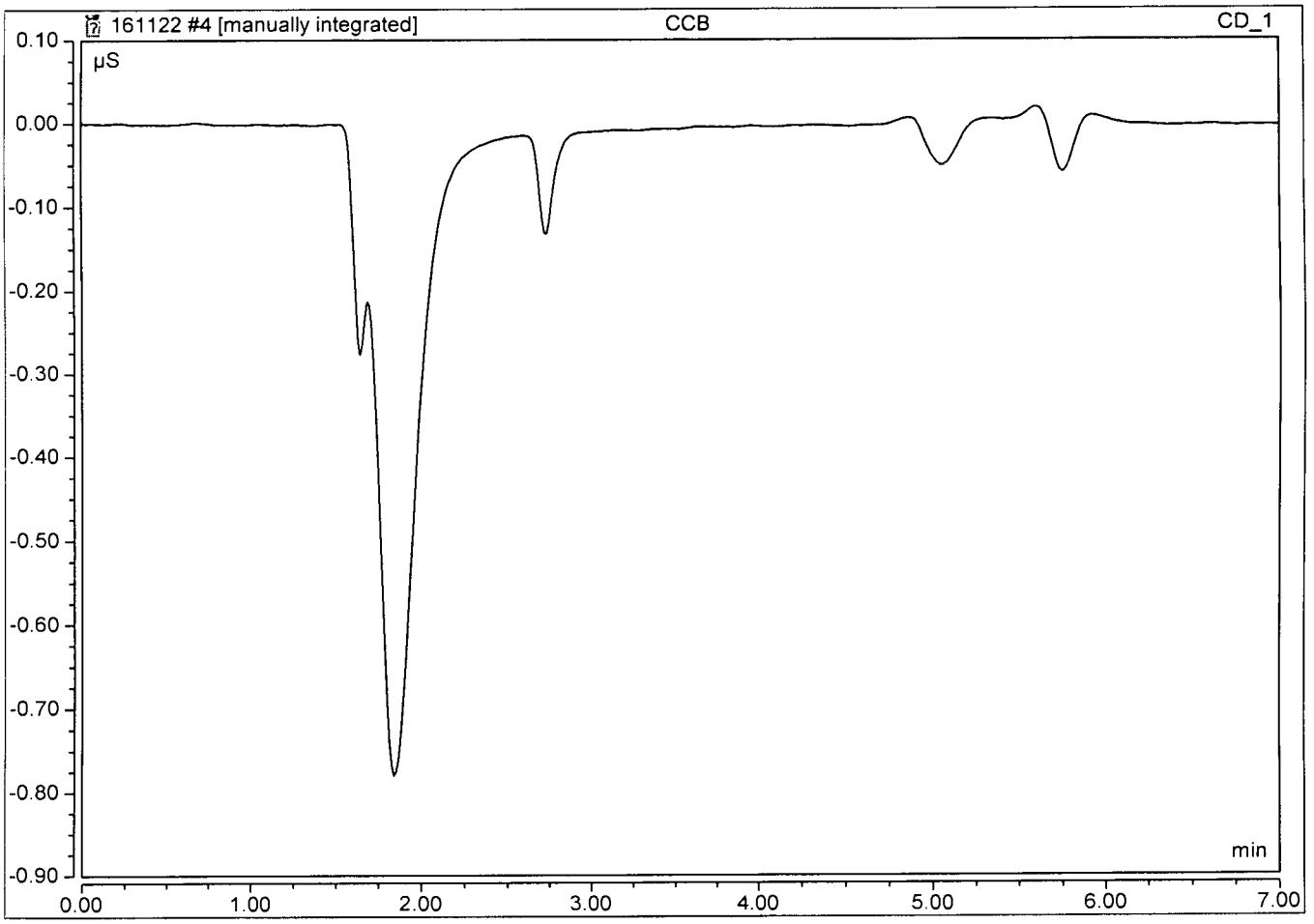
Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	CCB 11/22/16 13:46	C	CCB 11/22/16 17:27	C		C		C		C	
bromide	.500	U	.500	U							
chloride	1.000	U	1.000	U							
fluoride	.100	U	.100	U							
Nitrate(NO3)	.500	U	.500	U							
sulfate	1.000	U	1.000	U							

Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**22-Nov-2016 / 13:46**	*Run Time:*	**7.00**

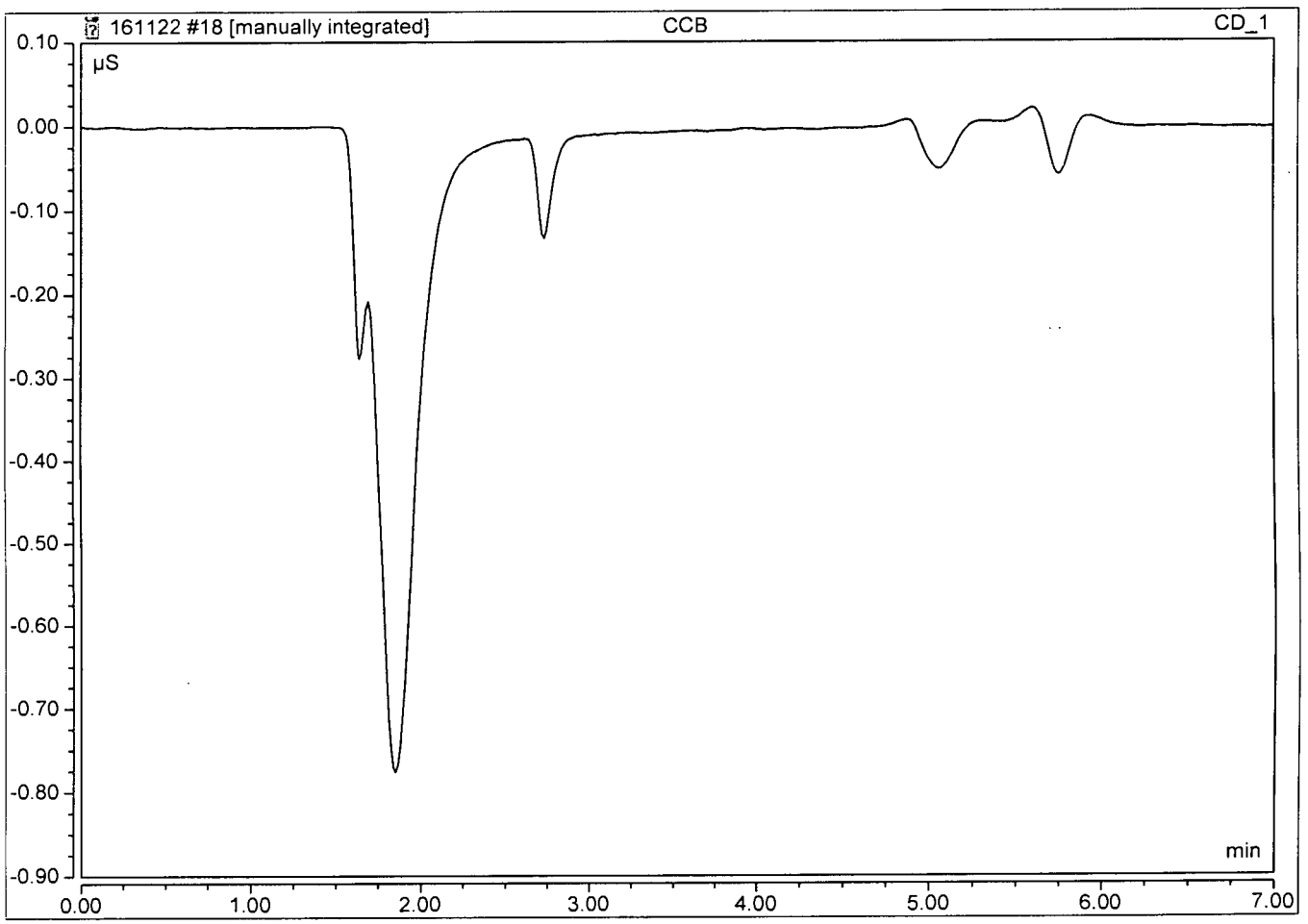
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
		TOTAL:		0.00	0.00	0.00



Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**22-Nov-2016 / 17:27**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
TOTAL:				0.00	0.00	0.00



A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No: 81492 SDG: 81492

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 11/21/16

Analyte	Calibration Verification									M
	True ICV	Found 11:09	%R(1)	True CCV2	Found 12:35	%R(1)	True CCV1	Found 12:52	%R(1)	
Silica	4	4.11366	103	10	9.24250	92.4	4	4.28901	107	

(1) Control Limits: 90-110

ILM02.0

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No: 81492 SDG: 81492

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 11/21/16

Analyte	Calibration Verification									M
	True CCV2	Found 15:15	%R(1)	True	Found	%R(1)	True	Found	%R(1)	
Silica	10	10.1192	101							

(1) Control Limits: 90-110

ILM02.0

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

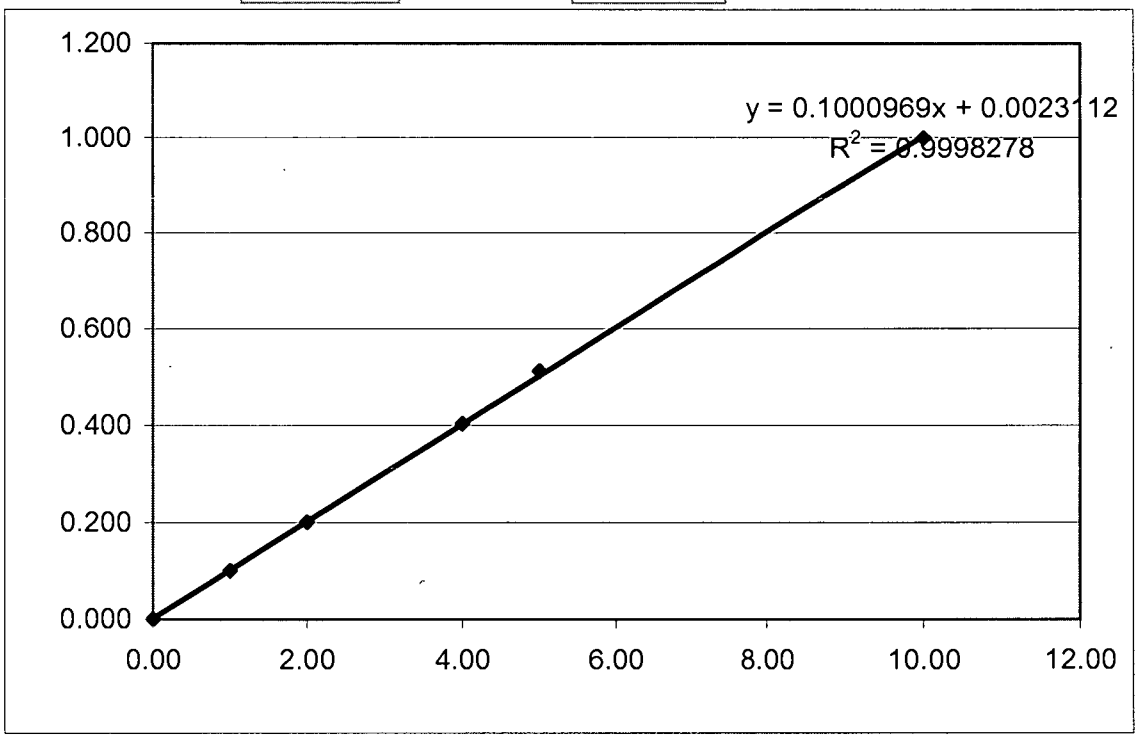
ARF No.: 81492 SDG: 81492

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	ICB 11/21/16 11:10	C	CCB 11/21/16 12:36	C	CCB 11/21/16 12:53	C	CCB 11/21/16 15:16	C		C	
Silica	1.000	U	1.000	U	1.000	U	1.000	U			

Ferrous Iron **161115A**



X	Y
0.00	0.000
1.00	0.101
2.00	0.201
4.00	0.403
5.00	0.512
10.00	0.999

Algorithm Check

reading (y)=	0.293	11/15/16	11:38
dilution=	1		
result (x)=	2.90 ✓	MM 12/2/16	

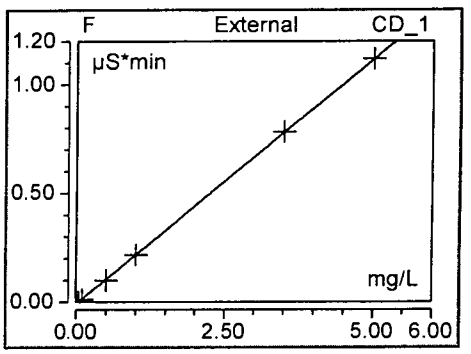
Calibration Batch Report

Sequence:	**161020**	*Injection Volume:*	**25.00**
Instrument Method:	**Program 1**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:24**	*Run Time:*	**7**

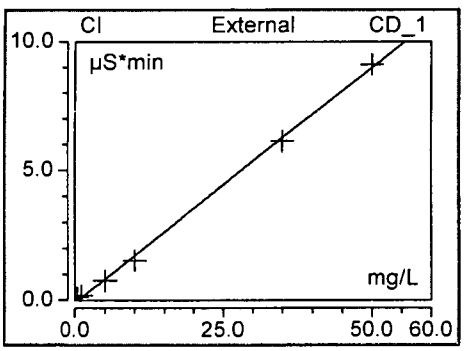
Calibration Summary

Peak Name	Eval.Type	Cal.Type	Points	Offset (C0)	Slope (C1)	Curve (C2)	Coeff.Det. %
F	Area	WithOffset,	6.000	-0.009	0.225	0.000	99.9840
Cl	Area	in, WithOffse	6.000	-0.094	0.182	0.000	99.8613
NO2-N	Area	in, WithOffse	6.000	-0.007	0.301	0.000	99.9917
BR	Area	in, WithOffse	6.000	-0.008	0.063	0.000	99.9802
NO3-N	Area	in, WithOffse	6.000	-0.039	0.412	0.000	99.9329
PO4-P	Area	in, WithOffse	6.000	-0.008	0.125	0.000	99.9563
SO4	Area	in, WithOffse	6.000	-0.060	0.122	0.000	99.9400
		AVERAGE:		-0.0322	0.2043	0.0000	99.9495

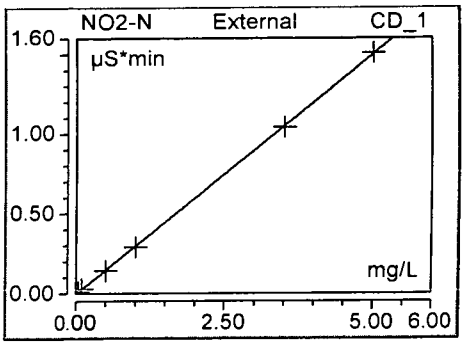
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	F	F	F	F
ICAL 1 10/20/16	2.123	0.0012	0.022	0.044
ICAL 2 10/20/16	2.107	0.0123	0.139	0.093
ICAL 3 10/20/16	2.100	0.1000	0.922	0.483
ICAL 4 10/20/16	2.104	0.2174	1.958	1.004
ICAL 5 10/20/16	2.097	0.7826	6.953	3.513
ICAL 6 10/20/16	2.103	1.1183	9.996	5.004
Average	2.106			
Rel. Std. Dev.	0.443 %			



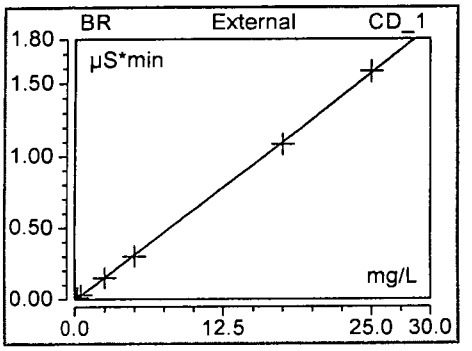
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	Cl	Cl	Cl	Cl
ICAL 1 10/20/16	2.793	0.1132	1.052	1.143
ICAL 2 10/20/16	2.790	0.1861	1.743	1.544
ICAL 3 10/20/16	2.790	0.7617	7.117	4.714
ICAL 4 10/20/16	2.797	1.5419	14.708	9.010
ICAL 5 10/20/16	2.793	6.1288	59.398	34.268
ICAL 6 10/20/16	2.803	9.1171	87.978	50.723
Average	2.795			
Rel. Std. Dev.	0.179 %			



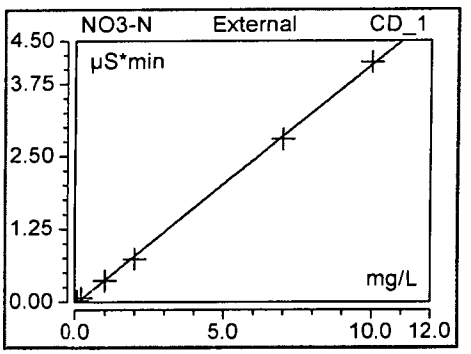
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	NO2-N	NO2-N	NO2-N	NO2-N
ICAL 1 10/20/16	3.250	0.0095	0.073	0.053
ICAL 2 10/20/16	3.247	0.0276	0.209	0.113
ICAL 3 10/20/16	3.250	0.1420	1.072	0.493
ICAL 4 10/20/16	3.254	0.2907	2.188	0.986
ICAL 5 10/20/16	3.250	1.0405	7.775	3.473
ICAL 6 10/20/16	3.257	1.5072	11.205	5.022
Average	3.251			
Rel. Std. Dev.	0.106 %			



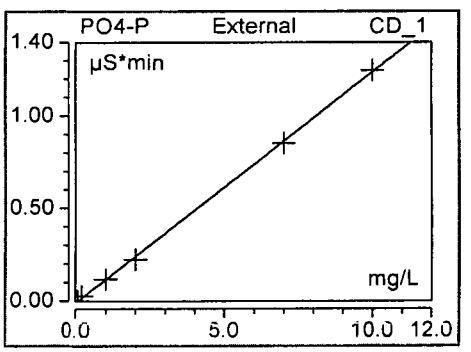
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	BR	BR	BR	BR
ICAL 1 10/20/16	3.757	0.0109	0.087	0.299
ICAL 2 10/20/16	3.753	0.0293	0.232	0.589
ICAL 3 10/20/16	3.750	0.1485	1.179	2.478
ICAL 4 10/20/16	3.754	0.2993	2.389	4.870
ICAL 5 10/20/16	3.743	1.0832	8.801	17.295
ICAL 6 10/20/16	3.747	1.5800	13.023	25.169
Average	3.751			
Rel. Std. Dev.	0.131 %			



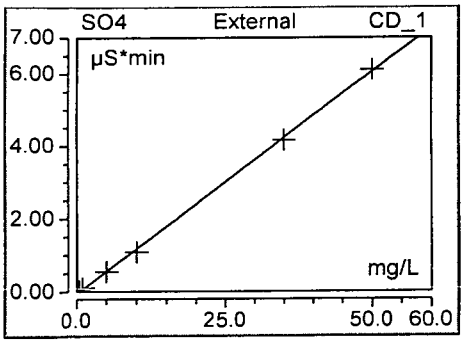
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	NO3-N	NO3-N	NO3-N	NO3-N
ICAL 1 10/20/16	4.143	0.0290	0.196	0.166
ICAL 2 10/20/16	4.140	0.0717	0.496	0.270
ICAL 3 10/20/16	4.137	0.3656	2.533	0.983
ICAL 4 10/20/16	4.140	0.7330	5.168	1.875
ICAL 5 10/20/16	4.123	2.7923	20.144	6.873
ICAL 6 10/20/16	4.123	4.1278	30.098	10.114
Average	4.135			
Rel. Std. Dev.	0.215 %			



Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	PO4-P	PO4-P	PO4-P	PO4-P
ICAL 1 10/20/16	5.540	0.0032	0.021	0.092
ICAL 2 10/20/16	5.540	0.0284	0.107	0.295
ICAL 3 10/20/16	5.537	0.1191	0.557	1.022
ICAL 4 10/20/16	5.537	0.2251	1.103	1.873
ICAL 5 10/20/16	5.520	0.8544	4.243	6.922
ICAL 6 10/20/16	5.523	1.2473	6.244	10.075
Average	5.533			
Rel. Std. Dev.	0.160 %			



Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	SO4	SO4	SO4	SO4
ICAL 1 10/20/16	6.090	0.0385	0.159	0.808
ICAL 2 10/20/16	6.093	0.1046	0.455	1.350
ICAL 3 10/20/16	6.097	0.5456	2.464	4.961
ICAL 4 10/20/16	6.100	1.0756	4.975	9.302
ICAL 5 10/20/16	6.097	4.1512	19.714	34.487
ICAL 6 10/20/16	6.110	6.1057	29.270	50.492
Average	6.098			
Rel. Std. Dev.	0.113 %			

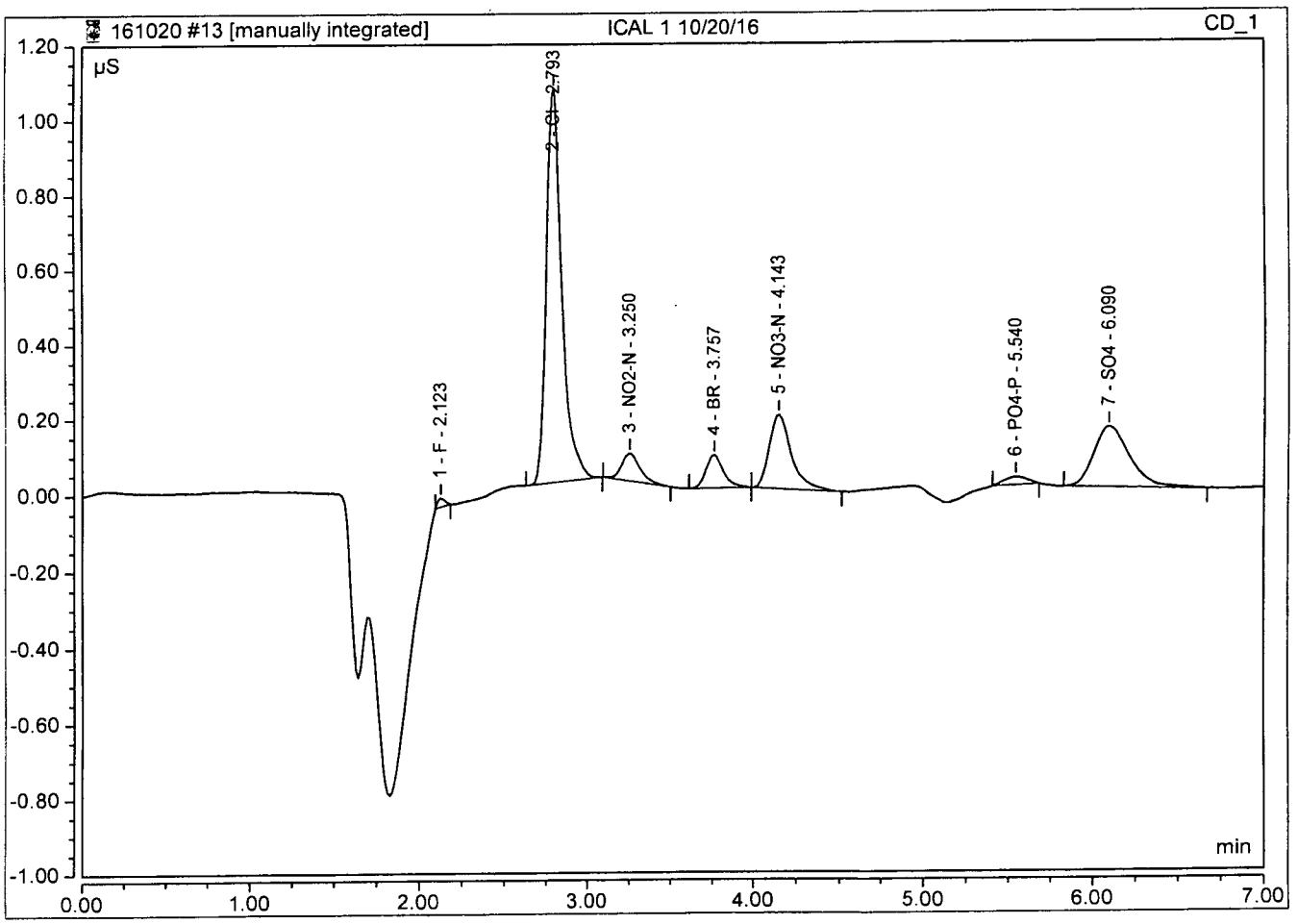


mj mm 11/30/16 JE 11-30-16

Peak Integration Report

Sample Name:	**ICAL 1 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:19**	*Run Time:*	**7.00**

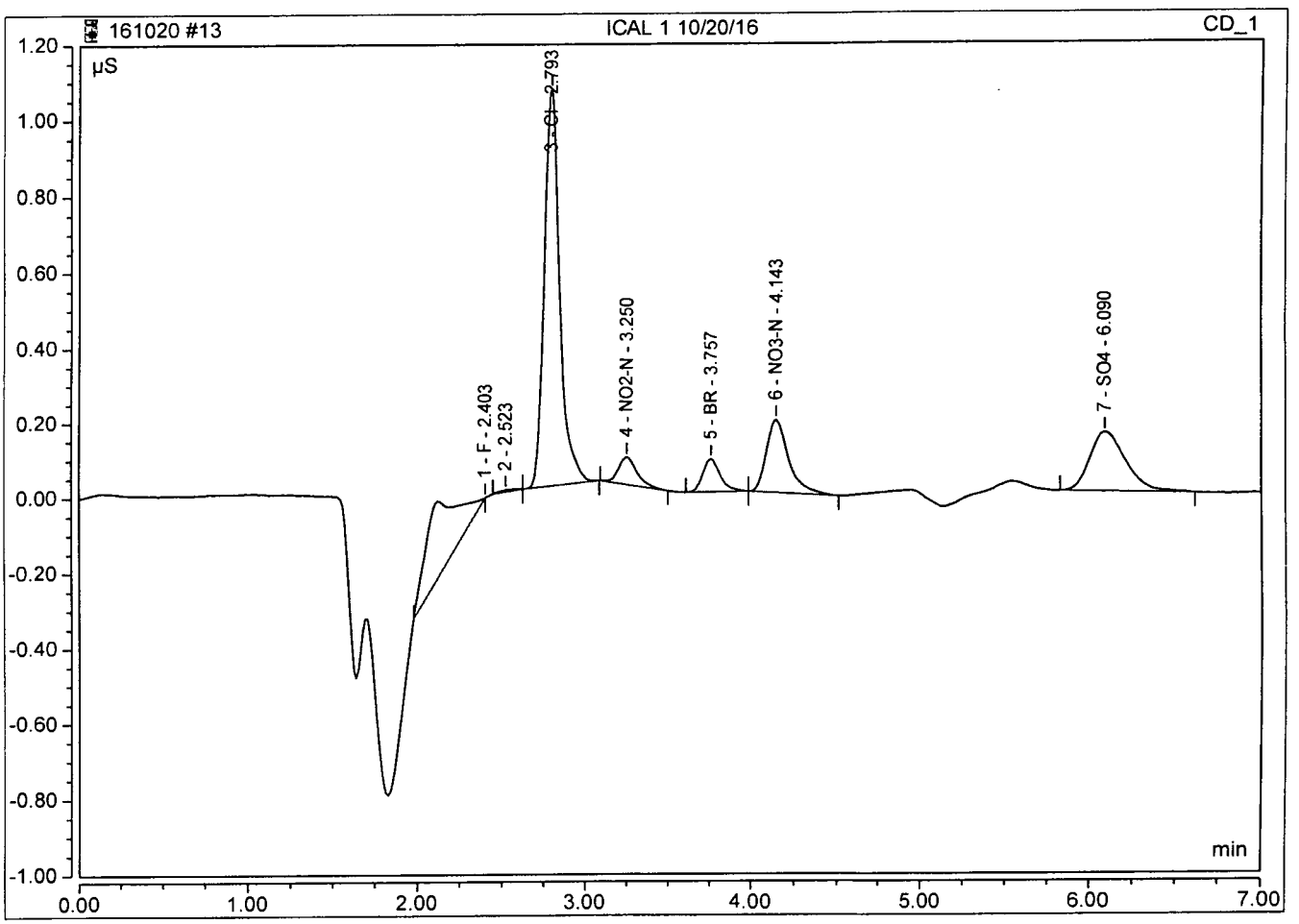
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.12	F	BMB*	0.001	0.022	0.0438
2	2.79	Cl	BMB	0.113	1.052	1.1427
3	3.25	NO2-N	BMB	0.009	0.073	0.0531
4	3.76	BR	BMB	0.011	0.087	0.2985
5	4.14	NO3-N	BMB	0.029	0.196	0.1660
6	5.54	PO4-P	BMB*	0.003	0.021	0.0923
7	6.09	SO4	BMB	0.038	0.159	0.8084
TOTAL:				0.21	1.61	2.60



Peak Integration Report

Sample Name:	**ICAL 1 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:19**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.40	F	BMB	0.044	0.000	0.2342
3	2.79	Cl	BMB	0.113	1.052	1.1427
4	3.25	NO2-N	BMB	0.009	0.073	0.0531
5	3.76	BR	BMB	0.011	0.087	0.2985
6	4.14	NO3-N	BMB	0.029	0.196	0.1660
7	6.09	SO4	BMB	0.038	0.159	0.8063
TOTAL:				0.24	1.57	2.70

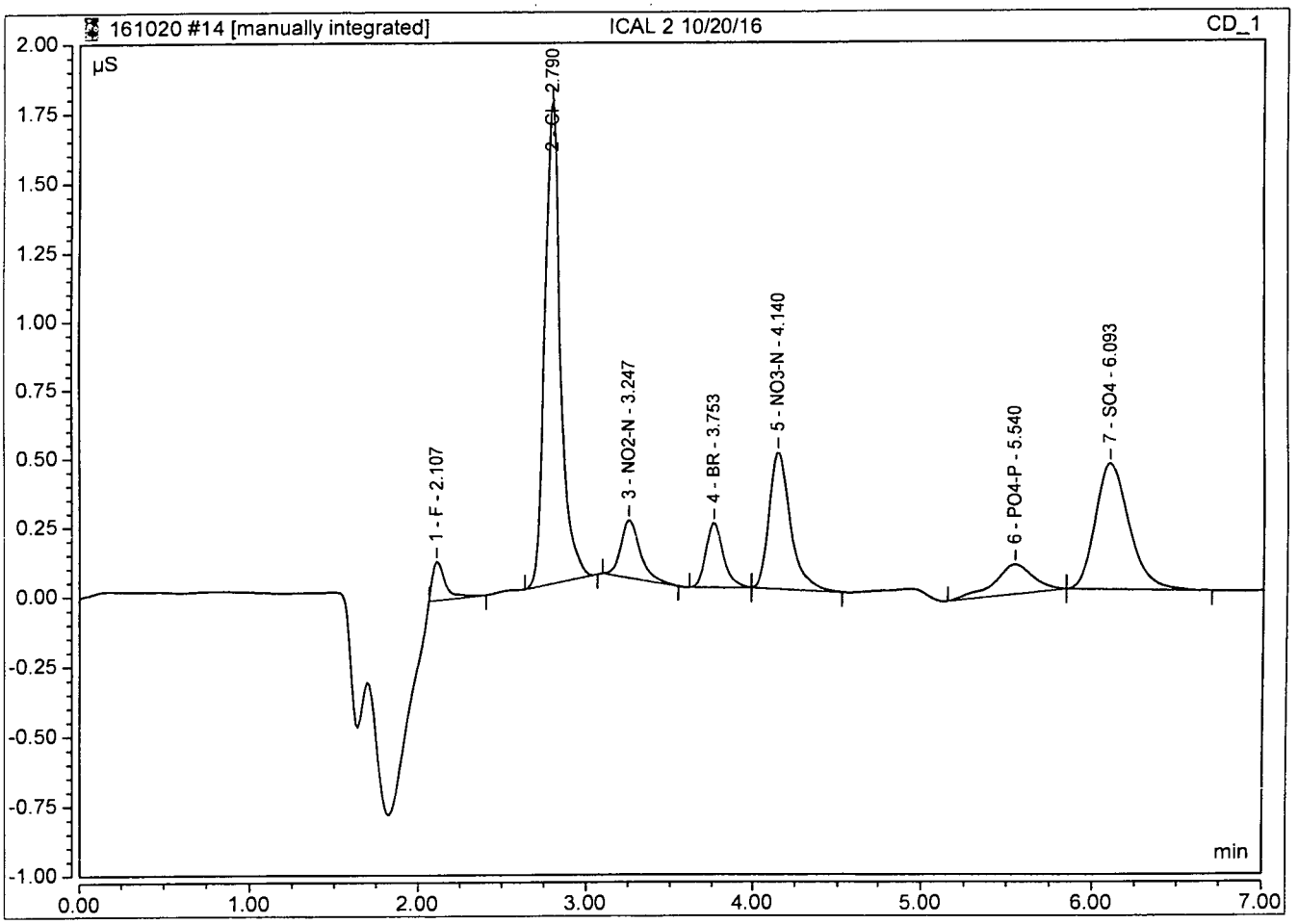


mi mm 11/30/16 ED 11-30-16

Peak Integration Report

Sample Name:	**ICAL 2 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:32**	*Run Time:*	**7.00**

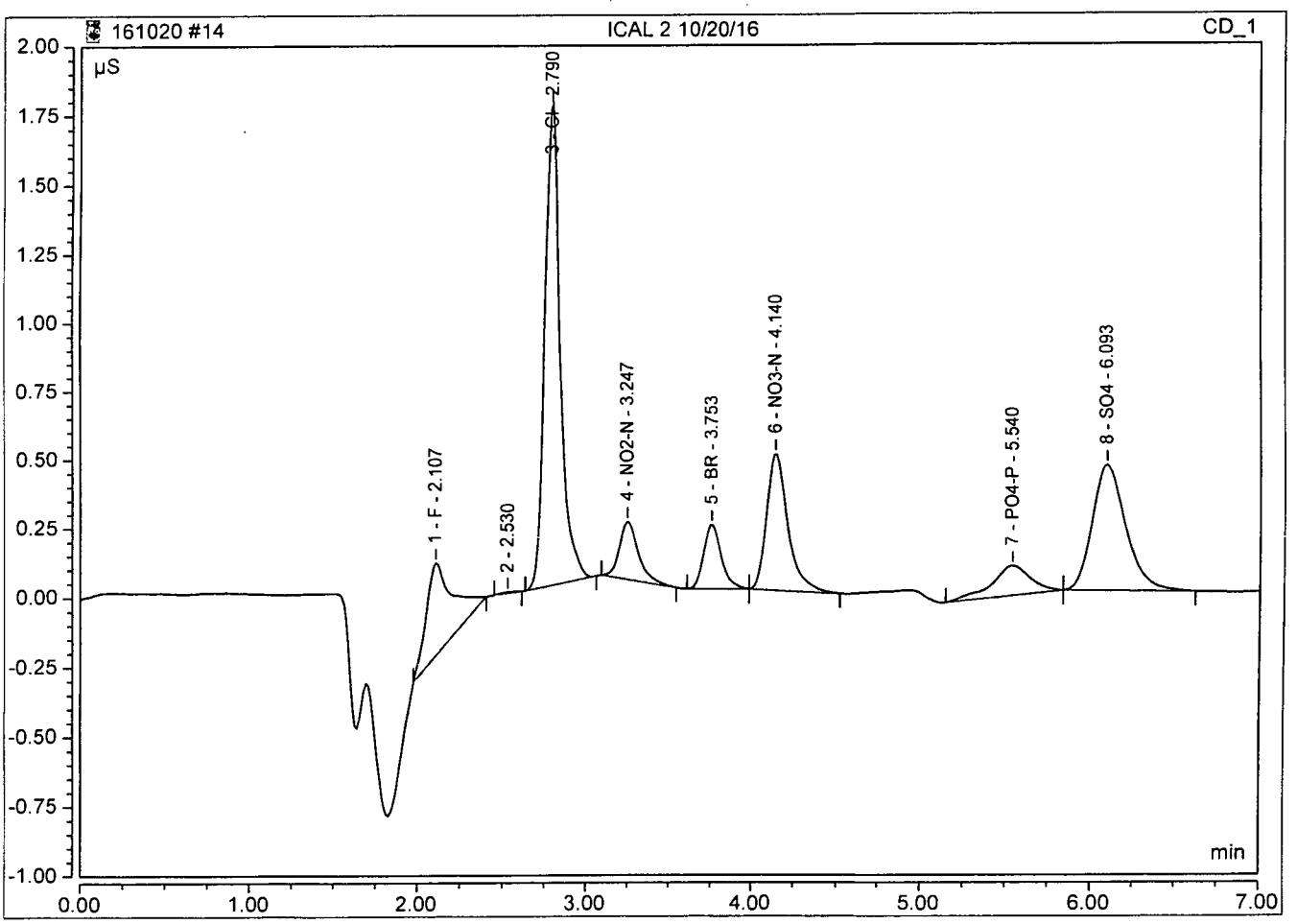
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.11	F	BMB*	0.012	0.139	0.0933
2	2.79	Cl	BMB	0.186	1.743	1.5439
3	3.25	NO2-N	BMB	0.028	0.209	0.1132
4	3.75	BR	BMB	0.029	0.232	0.5894
5	4.14	NO3-N	BMB	0.072	0.496	0.2699
6	5.54	PO4-P	BMB	0.028	0.107	0.2946
7	6.09	SO4	BMB	0.105	0.455	1.3496
TOTAL:				0.46	3.38	4.25



Peak Integration Report

Sample Name:	**ICAL 2 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:32**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.11	F	BMB	0.059	0.334	0.3000
3	2.79	Cl	BMB	0.186	1.743	1.5439
4	3.25	NO2-N	BMB	0.028	0.209	0.1132
5	3.75	BR	BMB	0.029	0.232	0.5894
6	4.14	NO3-N	BMB	0.072	0.496	0.2699
7	5.54	PO4-P	BMB	0.028	0.107	0.2946
8	6.09	SO4	BMB	0.104	0.455	1.3489
TOTAL:				0.51	3.58	4.46

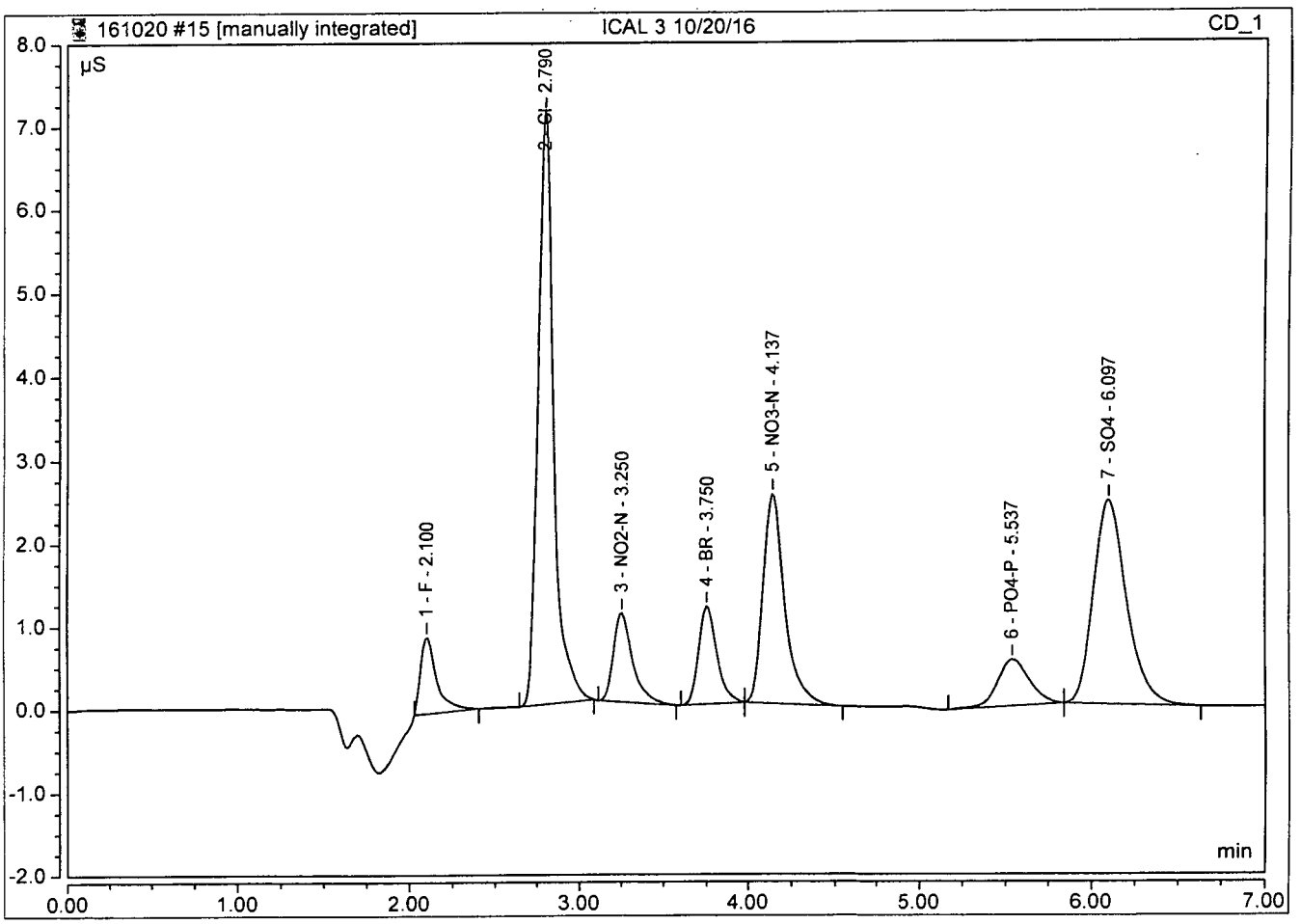


m1 mm 11/30/16 22 11-30-16

Peak Integration Report

Sample Name:	**ICAL 3 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:45**	*Run Time:*	**7.00**

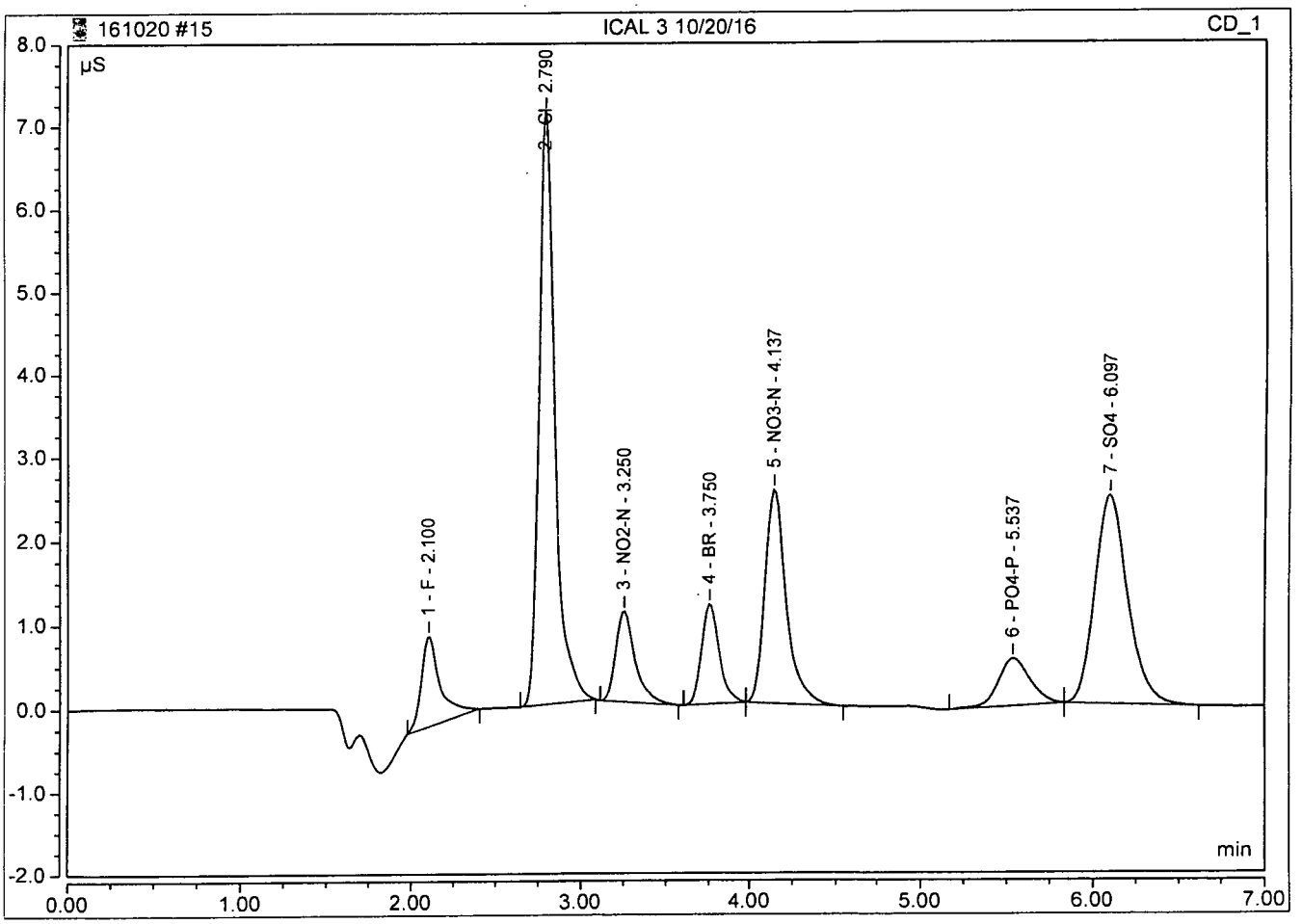
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB*	0.100	0.922	0.4827
2	2.79	Cl	BMB	0.762	7.117	4.7137
3	3.25	NO2-N	BMB	0.142	1.072	0.4926
4	3.75	BR	BMB	0.148	1.179	2.4784
5	4.14	NO3-N	BMB	0.366	2.533	0.9830
6	5.54	PO4-P	BMB	0.119	0.557	1.0221
7	6.10	SO4	BMB	0.546	2.464	4.9609
TOTAL:				2.18	15.84	15.13



Peak Integration Report

Sample Name:	**ICAL 3 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:45**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB	0.140	1.077	0.6592
2	2.79	Cl	BMB	0.762	7.117	4.7137
3	3.25	NO2-N	BMB	0.142	1.072	0.4926
4	3.75	BR	BMB	0.148	1.179	2.4784
5	4.14	NO3-N	BMB	0.366	2.533	0.9830
6	5.54	PO4-P	BMB	0.119	0.557	1.0221
7	6.10	SO4	BMB	0.545	2.464	4.9599
TOTAL:				2.22	16.00	15.31

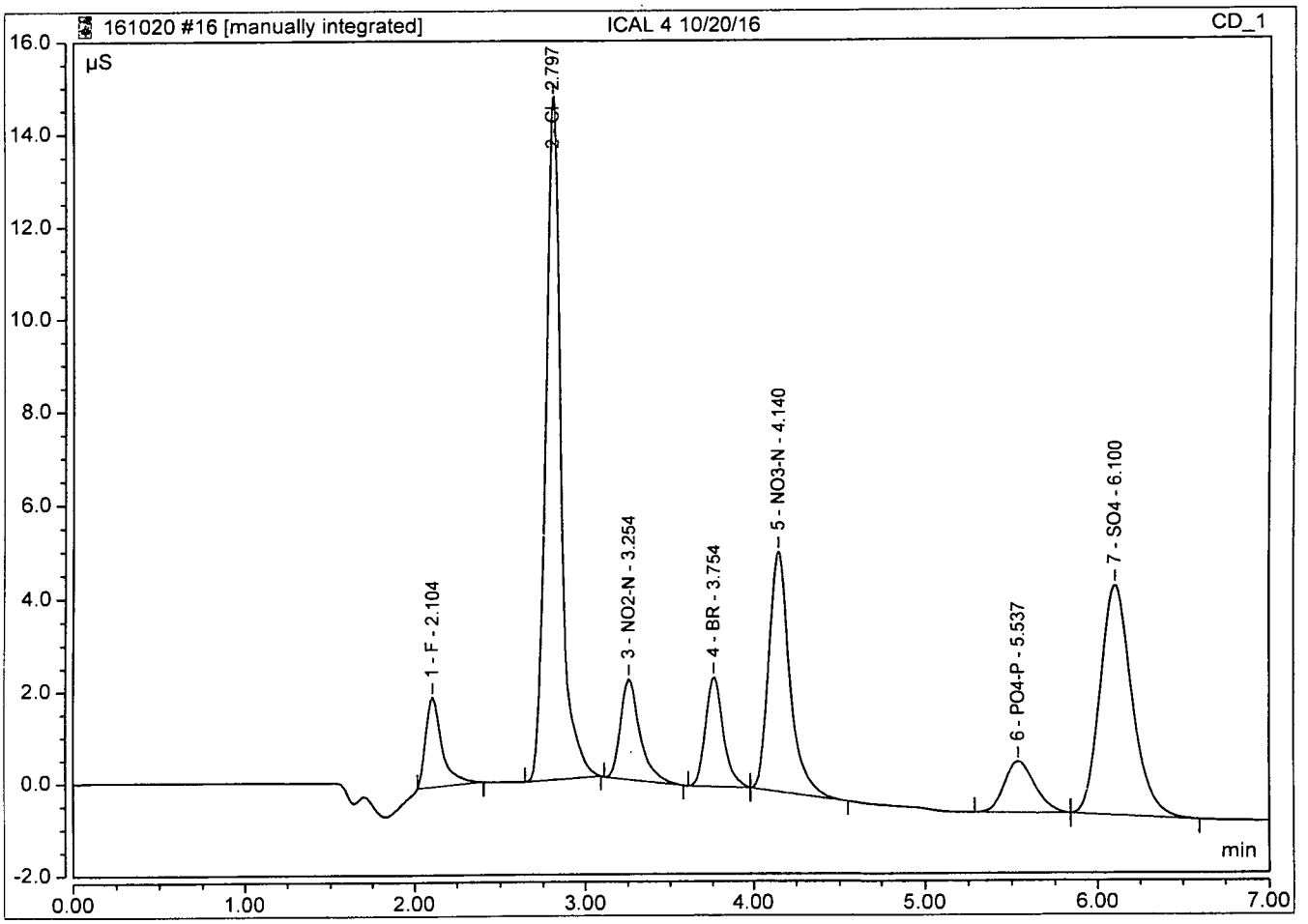


MI MM 11/30/16 JR 11-30-16

Peak Integration Report

Sample Name:	**ICAL 4 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:58**	*Run Time:*	**7.00**

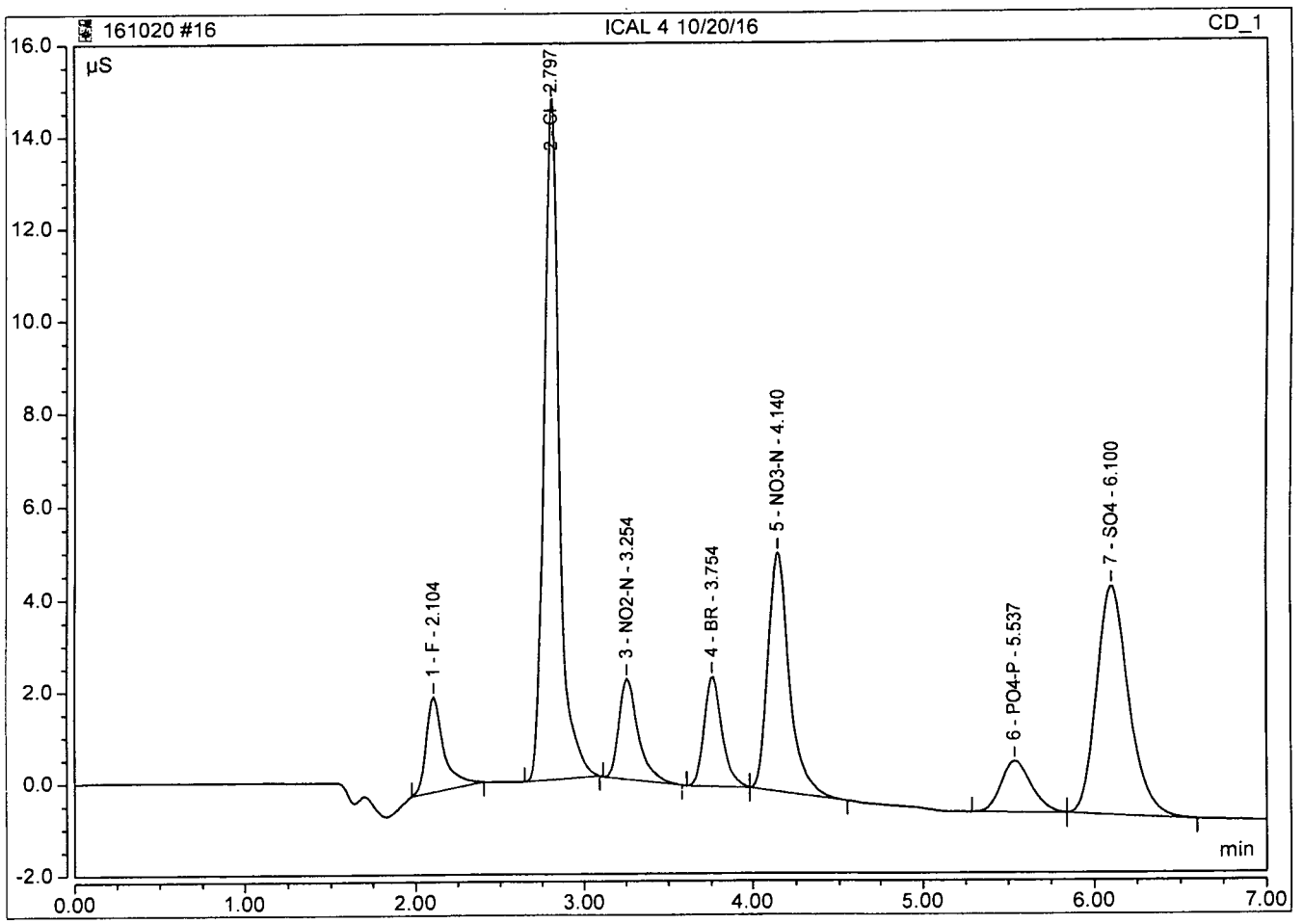
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB*	0.217	1.958	1.0036
2	2.80	Cl	BMB	1.542	14.708	9.0096
3	3.25	NO2-N	BMB	0.291	2.188	0.9859
4	3.75	BR	BMB	0.299	2.389	4.8695
5	4.14	NO3-N	BMB	0.733	5.168	1.8746
6	5.54	PO4-P	BMB	0.225	1.103	1.8731
7	6.10	SO4	BMB	1.076	4.975	9.3015
TOTAL:				4.38	32.49	28.92



Peak Integration Report

Sample Name:	**ICAL 4 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:58**	*Run Time:*	**7.00**

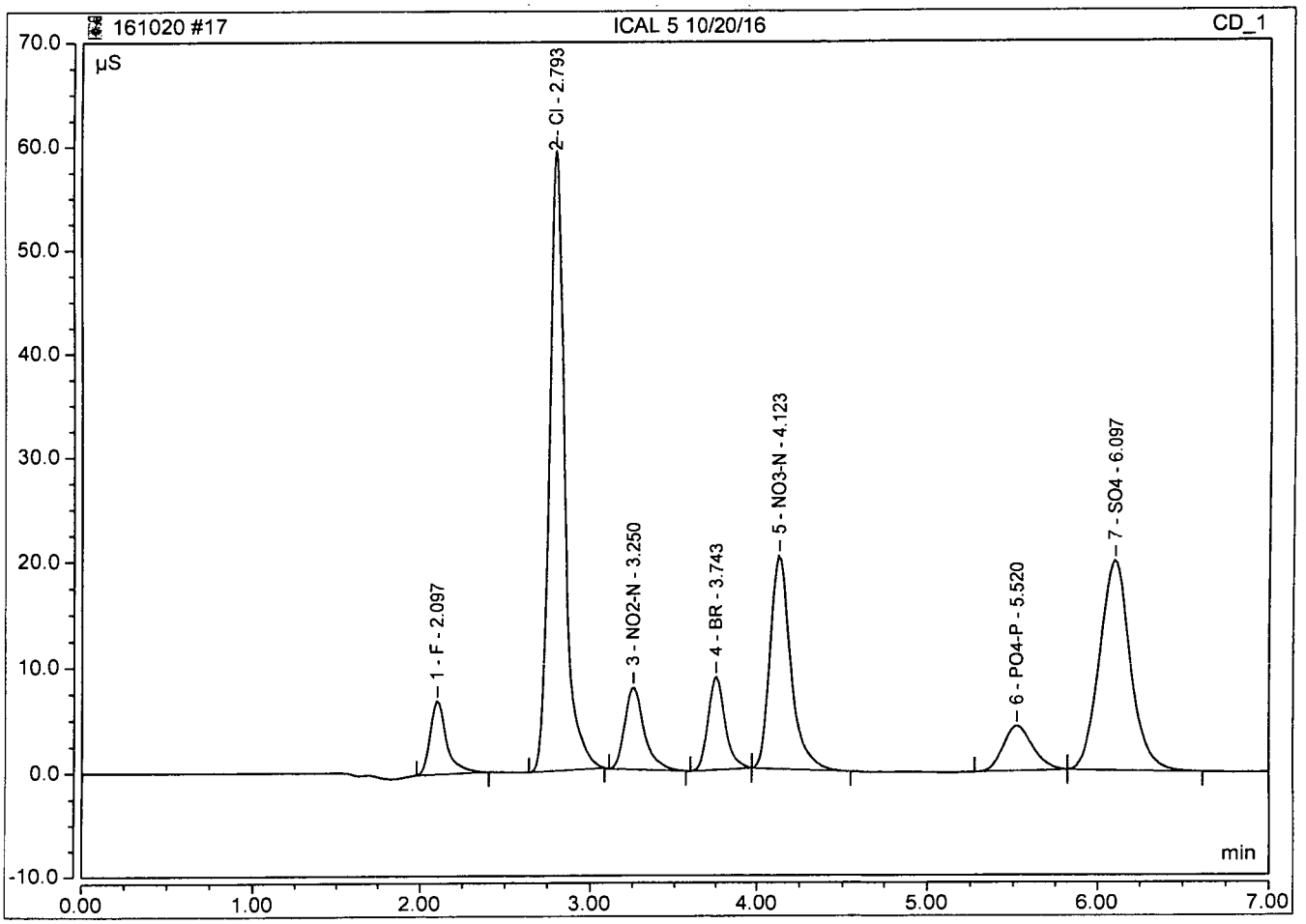
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB	0.248	2.072	1.1402
2	2.80	Cl	BMB	1.542	14.708	9.0096
3	3.25	NO2-N	BMB	0.291	2.188	0.9859
4	3.75	BR	BMB	0.299	2.389	4.8695
5	4.14	NO3-N	BMB	0.733	5.168	1.8746
6	5.54	PO4-P	BMB	0.225	1.103	1.8731
7	6.10	SO4	BMB	1.076	4.975	9.3015
TOTAL:				4.41	32.60	29.05



Peak Integration Report

Sample Name:	**ICAL 5 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:11**	*Run Time:*	**7.00**

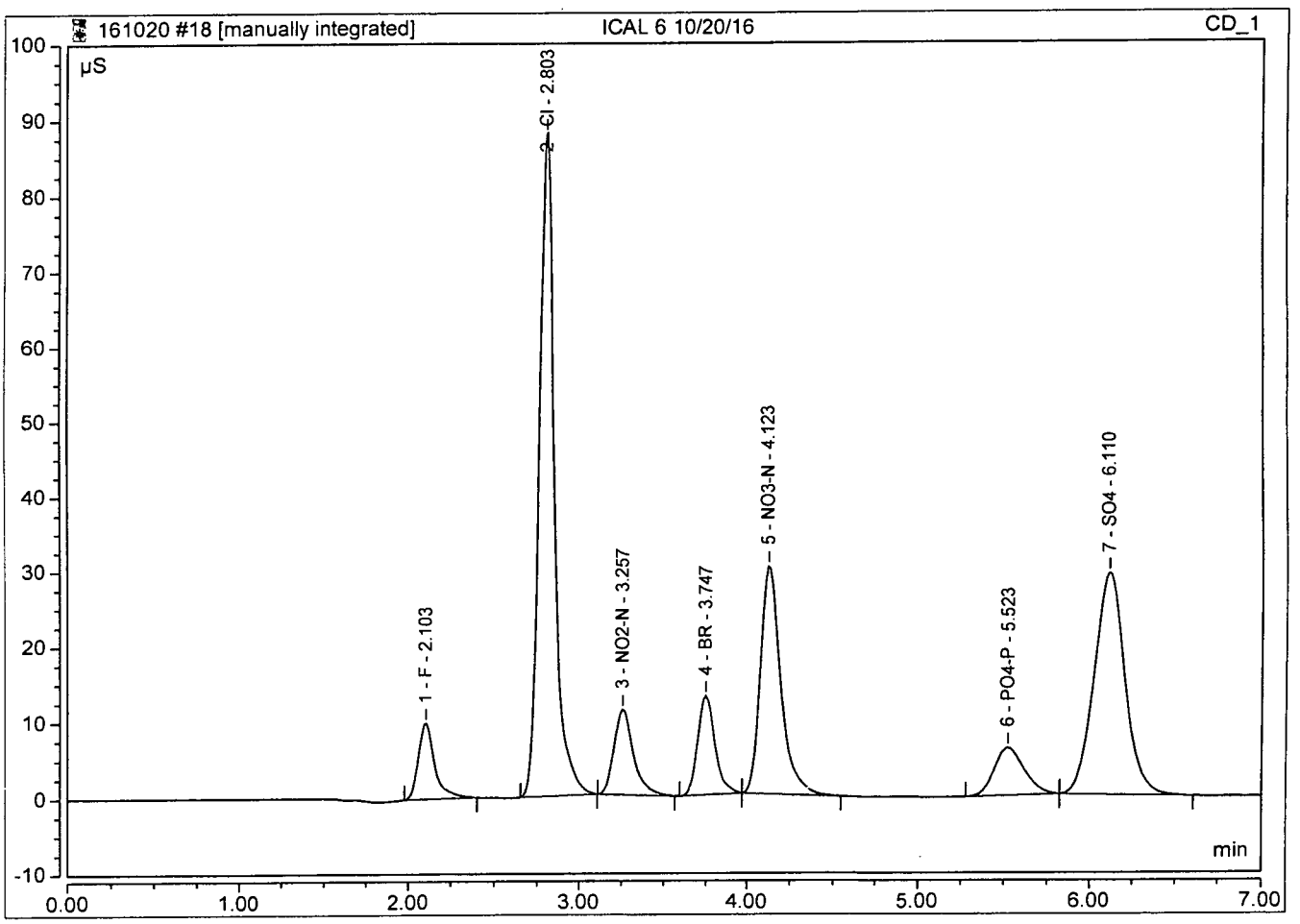
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB	0.783	6.953	3.5131
2	2.79	Cl	BMB	6.129	59.398	34.2675
3	3.25	NO2-N	BMB	1.040	7.775	3.4734
4	3.74	BR	BMB	1.083	8.801	17.2948
5	4.12	NO3-N	BMB	2.792	20.144	6.8727
6	5.52	PO4-P	BMB	0.854	4.243	6.9225
7	6.10	SO4	BMB	4.151	19.714	34.4871
TOTAL:				16.83	127.03	106.83



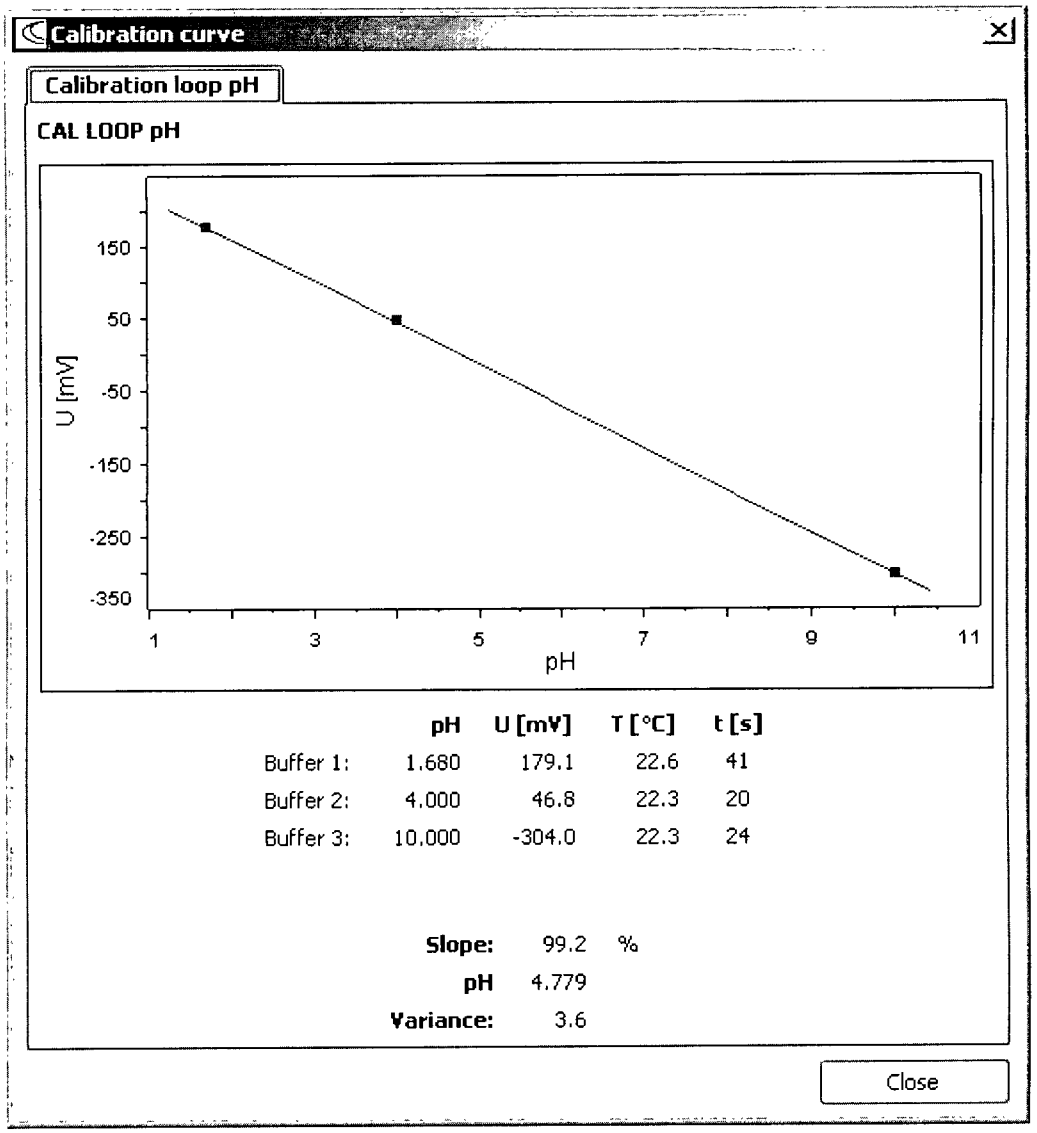
Peak Integration Report

Sample Name:	**ICAL 6 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:24**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB	1.118	9.996	5.0036
2	2.80	Cl	BMB*	9.117	87.978	50.7226
3	3.26	NO2-N	BMB	1.507	11.205	5.0218
4	3.75	BR	BMB	1.580	13.023	25.1693
5	4.12	NO3-N	BMB	4.128	30.098	10.1138
6	5.52	PO4-P	BMB	1.247	6.244	10.0755
7	6.11	SO4	BMB	6.106	29.270	50.4924
TOTAL:				24.80	187.81	156.60

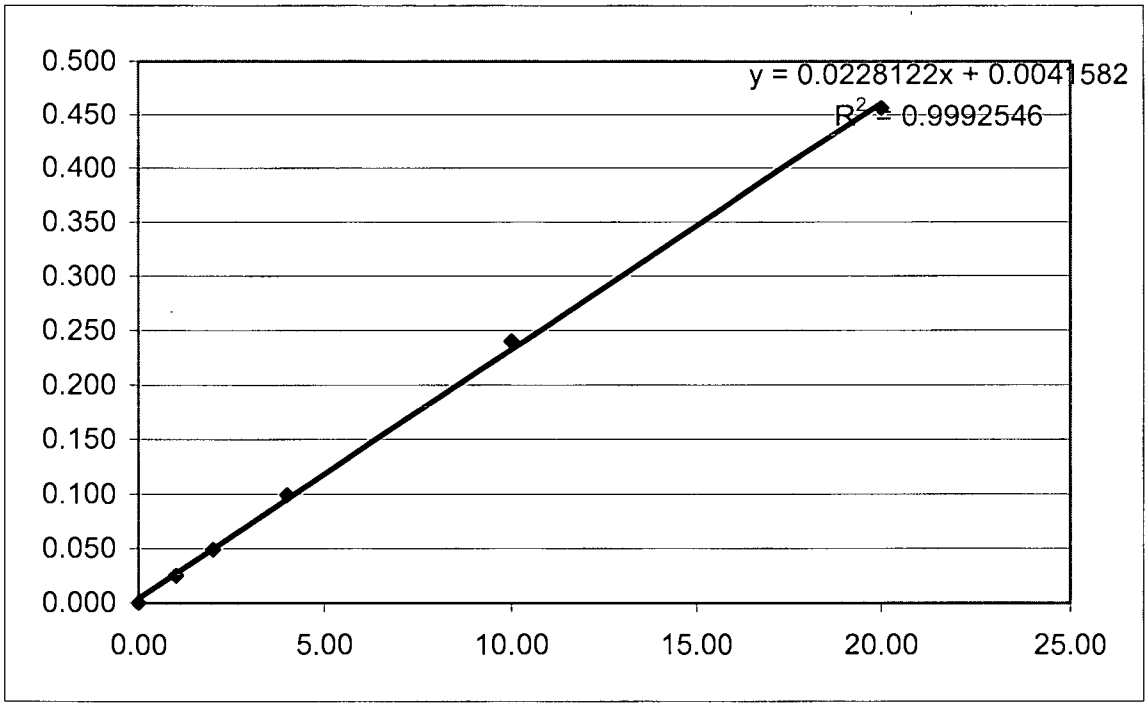


Tiamo Calibration Curve
11/15/16



Silica

11/21/16



X	Y
0.00	0.000
1.00	0.025
2.00	0.049
4.00	0.099
10.00	0.240
20.00	0.456

ALGORITHM CHECK

y= 0.098 11/21/16 11:09

dilution= 1

x*dil.= 4.114 ✓ MM 12/2/16

INORGANIC ANALYSIS
Raw Data

APPL, INC.

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
SM 2320B	BICARBONATE AS	1.6 J	2.0	1.70	0.85	mg/L	11/15/16	11/15/16	#232W-161115A-AZ45866
SM 2320B	CARBONATE AS CA	1.70 U	2.0	1.70	0.85	mg/L	11/15/16	11/15/16	#232W-161115A-AZ45866
SM 2320B	TOTAL ALKALINITY	1.6 J	2.0	1.70	0.85	mg/L	11/15/16	11/15/16	#232W-161115A-AZ45866
EPA 300.0	BROMIDE	0.16 U	0.5	0.16	0.05	mg/L	11/15/16	11/15/16	#300W-161115A-AZ45866
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	11/15/16	11/15/16	#300W-161115A-AZ45866
EPA 300.0	FLUORIDE	0.09 U	0.1	0.09	0.08	mg/L	11/15/16	11/15/16	#300W-161115A-AZ45866
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	11/15/16	11/15/16	#300W-161115A-AZ45866
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	11/15/16	11/15/16	#300W-161115A-AZ45866
SM3500Fe	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	11/15/16	11/15/16	#35FE-161115A-AZ45866
SM 4500-S	SILICA W	0.80 U	1.0	0.80	0.53	mg/L	11/21/16	11/21/16	#SIO2-161121A-AZ45866
SM 4500-S	DISSOLVED SILICA	0.80 U	1.0	0.80	0.53	mg/L	11/21/16	11/21/16	#SIO2D-161121B-AZ45866

Wetlab SC-Blank-REG MDLs
Printed: 11/22/16 5:46:34 PM

Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

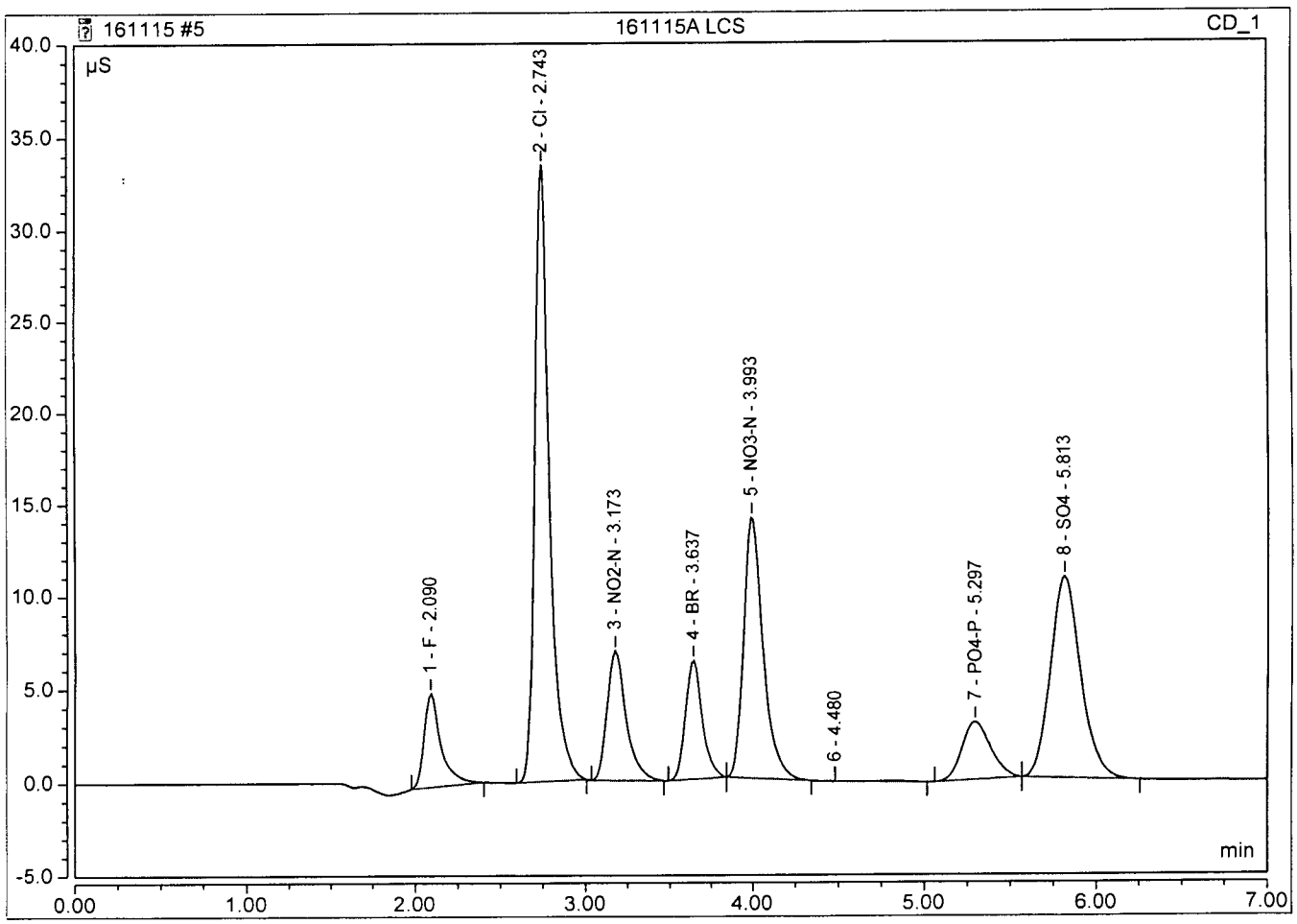
Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 300.0	BROMIDE	12.5	12.1	96.8	90-110	11/15/16	11/15/16	#300W-161115A-AZ45866
EPA 300.0	CHLORIDE	20.0	18.7	93.5	90-110	11/15/16	11/15/16	#300W-161115A-AZ45866
EPA 300.0	FLUORIDE	2.50	2.59	104	90-110	11/15/16	11/15/16	#300W-161115A-AZ45866
EPA 300.0	NITRATE	22.1	20.4	92.3	90-110	11/15/16	11/15/16	#300W-161115A-AZ45866
EPA 300.0	SULFATE	20.0	18.4	92.0	90-110	11/15/16	11/15/16	#300W-161115A-AZ45866
SM 2320B	BICARBONATE AS CACO3	250	243	97.2	90-110	11/15/16	11/15/16	#232W-161115A-AZ45866
SM 2320B	TOTAL ALKALINITY AS CACO3	250	243	97.2	90-110	11/15/16	11/15/16	#232W-161115A-AZ45866
SM 4500-Si	SILICA W	4.00	4.29	107	80-120	11/21/16	11/21/16	#SIO2-161121A-AZ45866
SM 4500-Si	DISSOLVED SILICA	4.00	4.38	110	80-120	11/21/16	11/21/16	#SIO2D-161121B-AZ45866
SM3500Fe	FERROUS IRON	3.00	2.90	96.7	80-120	11/15/16	11/15/16	#35FE-161115A-AZ45866

Comments: _____

Peak Integration Report

Sample Name:	**161115A LCS**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**15-Nov-2016 / 11:27**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.09	F	BMB	0.574	5.001	2.5876
2	2.74	Cl	BMB	3.298	33.437	18.6777
3	3.17	NO2-N	BMB	0.899	6.913	3.0056
4	3.64	BR	BMB	0.756	6.340	12.1069
5	3.99	NO3-N	BMB	1.859	14.018	4.6080
7	5.30	PO4-P	BMB	0.594	3.074	4.8337
8	5.81	SO4	BMB	2.189	10.758	18.4194
TOTAL:				10.17	79.54	64.24



Matrix Spike Recoveries

WETLAB

APPL ID: **161122W-45866 MS - 213954**

Sample ID: AZ45866

Client ID: ERH115

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	Matrix Res mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
EPA 300.0	BROMIDE	12.5	0.36	12.3	12.2	95.5	94.7	0.82	20	90-110	11/22/16	11/22/16	11/22/16	11/22/16	213954	AZ45866
EPA 300.0	CHLORIDE	40.0	72.3	118	117	114 #	112 #	0.85	20	90-110	11/22/16	11/22/16	11/22/16	11/22/16	213954	AZ45866
EPA 300.0	FLUORIDE	2.50	0.24	2.54	2.54	92.0	92.0	0.0	20	90-110	11/22/16	11/22/16	11/22/16	11/22/16	213954	AZ45866
EPA 300.0	NITRATE	22.1	2.9	23.2	23.1	91.9	91.4	0.43	20	90-110	11/22/16	11/22/16	11/22/16	11/22/16	213954	AZ45866
EPA 300.0	SULFATE	20.0	18.5	38.3	38.3	99.0	99.0	0.0	20	90-110	11/22/16	11/22/16	11/22/16	11/22/16	213954	AZ45866
SM 2320B	BICARBONATE AS CA	250	67.4	299	303	92.6	94.2	1.3	20	90-110	11/15/16	11/15/16	11/15/16	11/15/16	213932	AZ45866
SM 2320B	TOTAL ALKALINITY AS	250	67.4	299	303	92.6	94.2	1.3	20	90-110	11/15/16	11/15/16	11/15/16	11/15/16	213932	AZ45866
SM 4500-Si	SILICA W	20.0	51.9	78.4	74.3	133 #	112	5.4	20	80-120	11/21/16	11/21/16	11/21/16	11/21/16	213944	AZ45866
SM 4500-Si	DISSOLVED SILICA	20.0	53.0	73.8	73.2	104	101	0.82	20	80-120	11/21/16	11/21/16	11/21/16	11/21/16	213947	AZ45866
SM3500Fe	FERROUS IRON	3.00	0.027	2.95	2.94	97.4	97.1	0.34	20	80-120	11/15/16	11/15/16	11/15/16	11/15/16	213949	AZ45866

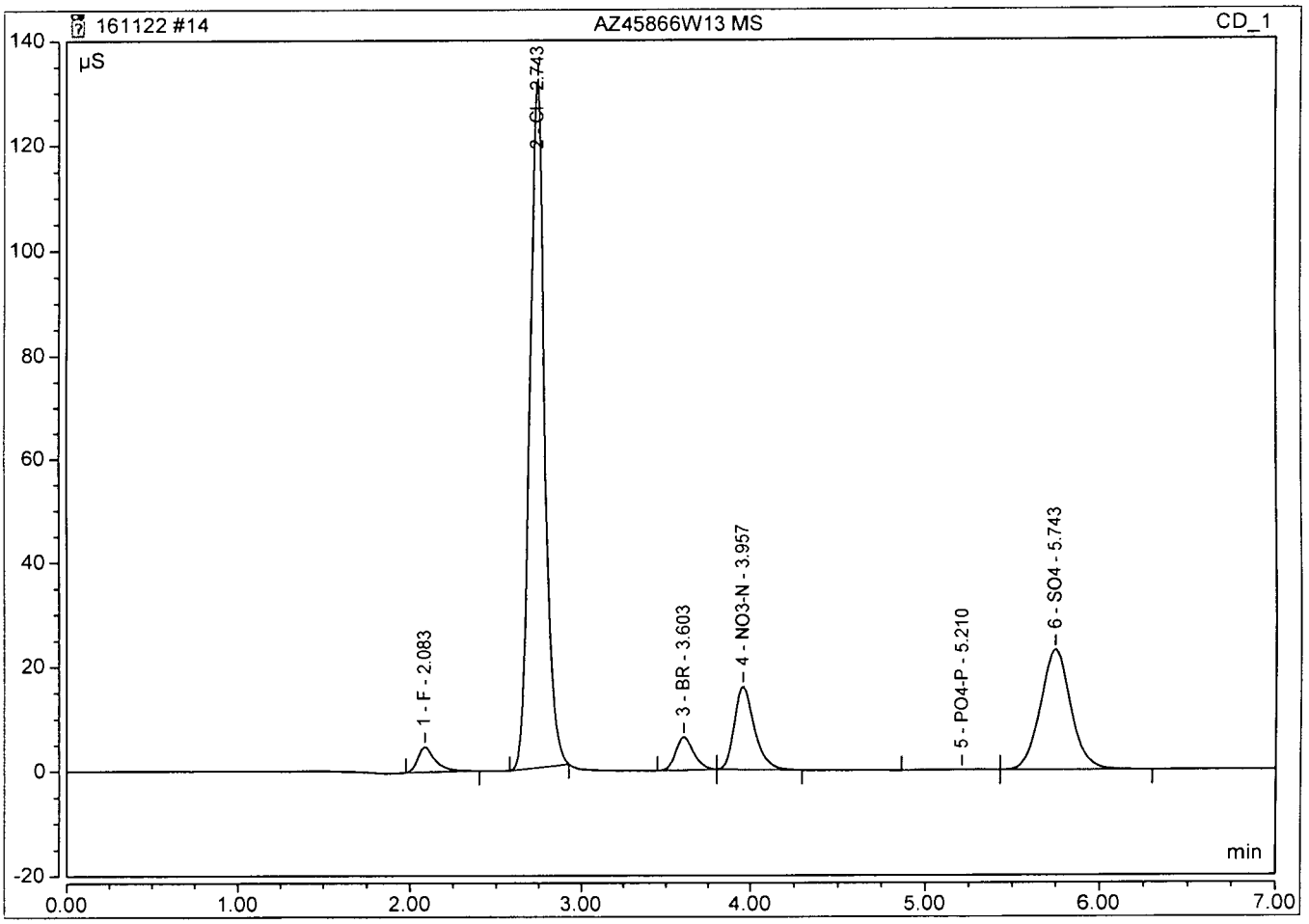
= Recovery is outside QC limits.

Comments: _____

Peak Integration Report

Sample Name:	**AZ45866W13 MS**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**22-Nov-2016 / 16:35**	*Run Time:*	**7.00**

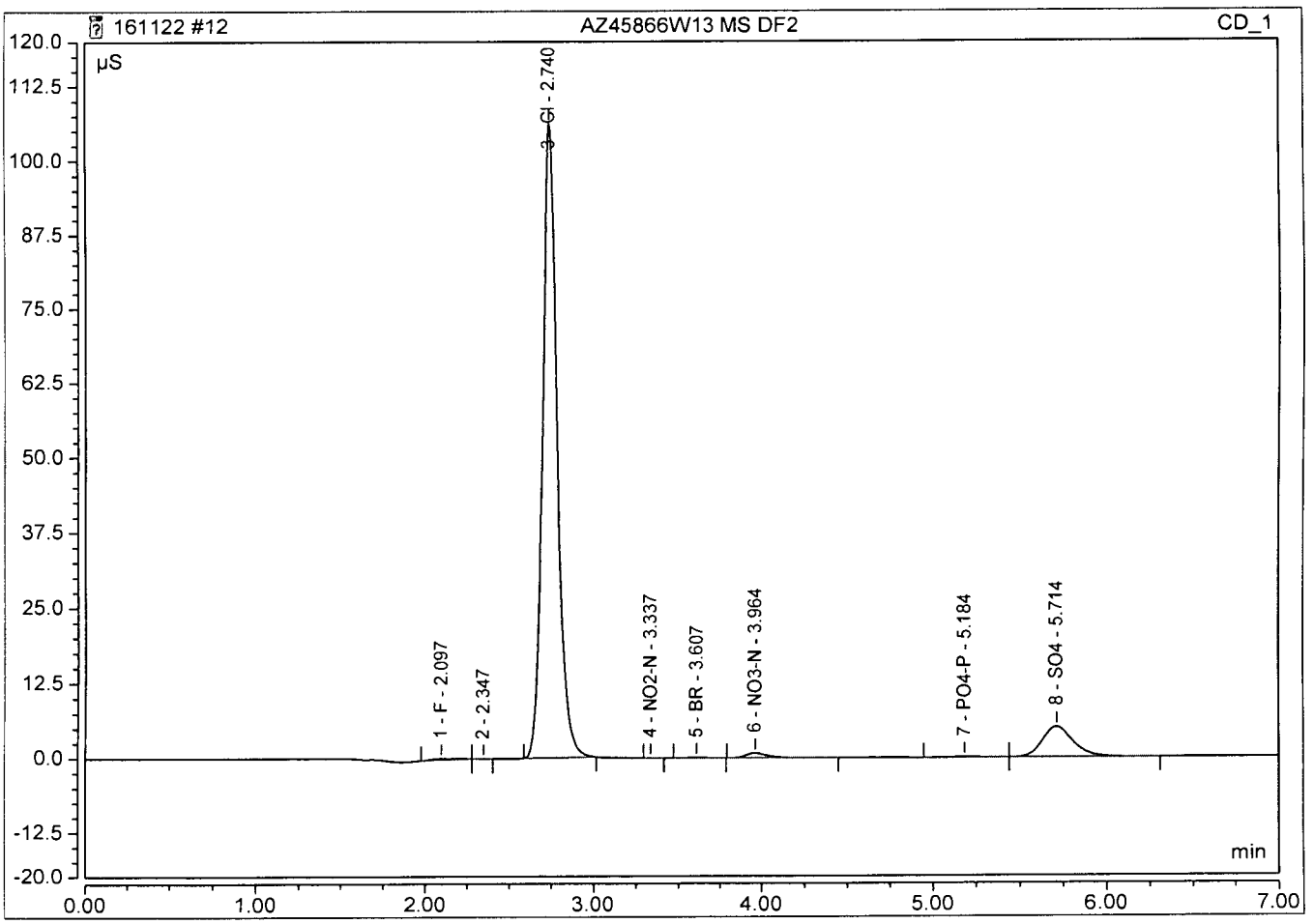
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.08	F	BMB	0.563	4.822	2.5388
2	2.74	Cl	BMB	13.257	131.899	73.5167
3	3.60	BR	BMB	0.769	6.325	12.3192
4	3.96	NO3-N	BMB	2.121	15.858	5.2439
5	5.21	PO4-P	BMB	0.029	0.092	0.2979
6	5.74	SO4	BMB	4.617	22.911	38.3034
TOTAL:				21.36	181.91	132.22



Peak Integration Report

Sample Name:	**AZ45866W13 MS DF2**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**2.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**22-Nov-2016 / 16:09**	*Run Time:*	**7.00**

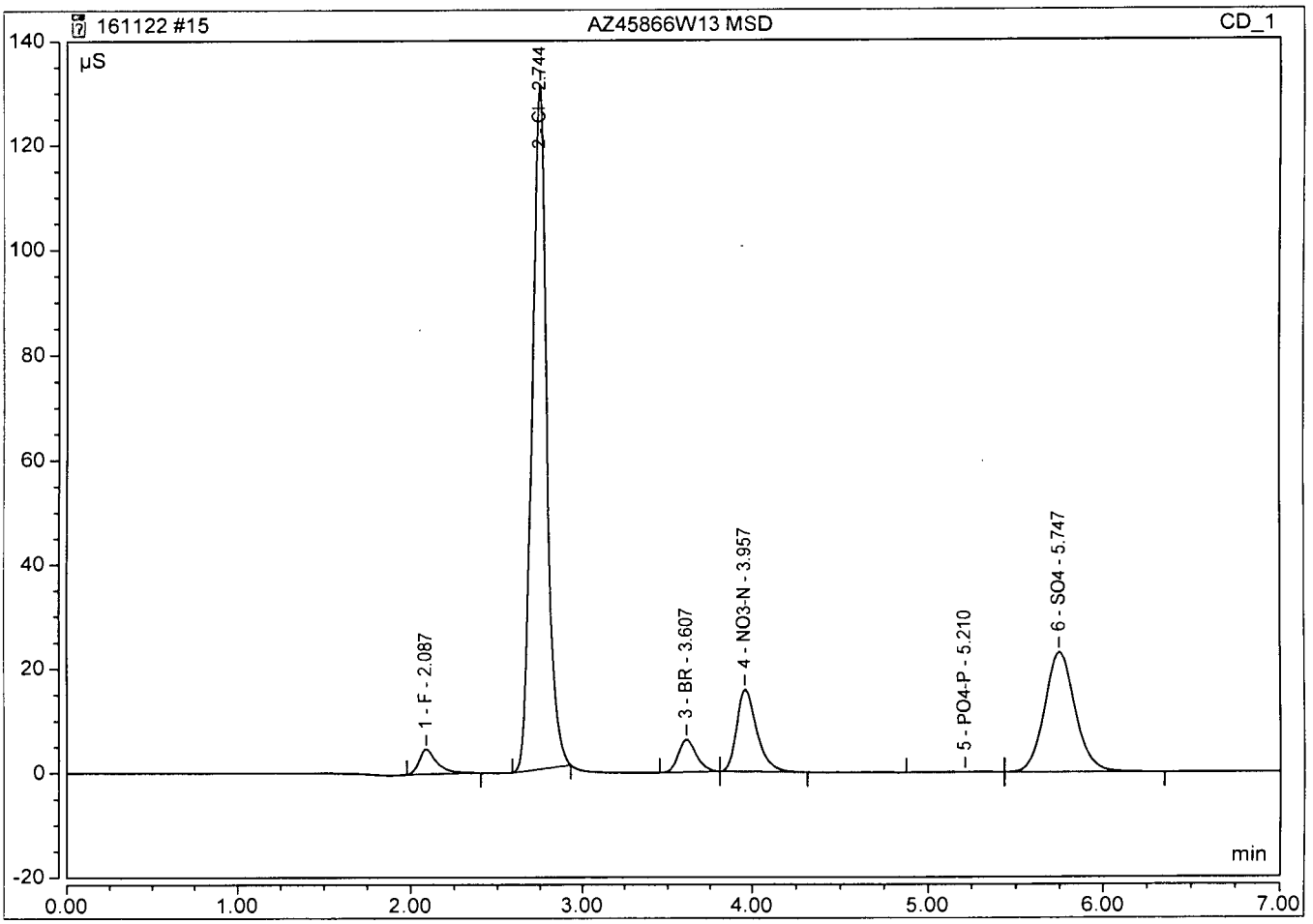
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB	0.032	0.219	0.3647
3	2.74	Cl	BMB	10.601	106.039	117.7914
4	3.34	NO2-N	BMB	0.000	0.001	0.0436
5	3.61	BR	BMB	0.008	0.066	0.5024
6	3.96	NO3-N	BMB	0.114	0.810	0.7455
7	5.18	PO4-P	BMB	0.014	0.053	0.3542
8	5.71	SO4	BMB	1.044	5.111	18.0887
TOTAL:				11.81	112.30	137.89



Peak Integration Report

Sample Name:	**AZ45866W13 MSD**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**22-Nov-2016 / 16:48**	*Run Time:*	**7.00**

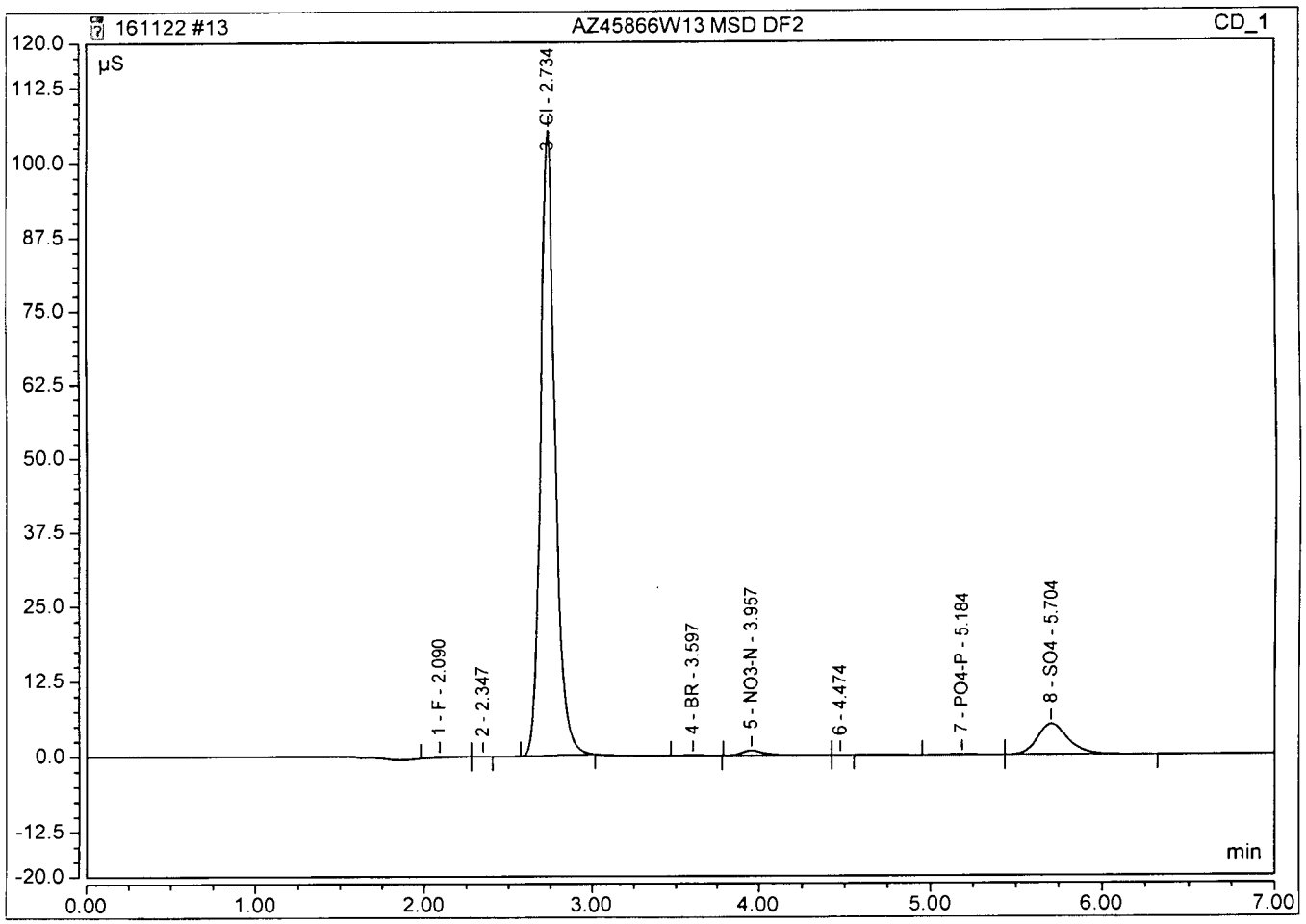
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.09	F	BMB	0.564	4.795	2.5424
2	2.74	Cl	BMB	13.174	130.852	73.0620
3	3.61	BR	BMB	0.764	6.266	12.2376
4	3.96	NO3-N	BMB	2.113	15.712	5.2250
5	5.21	PO4-P	BMB	0.028	0.092	0.2952
6	5.75	SO4	BMB	4.614	22.799	38.2763
TOTAL:				21.26	180.52	131.64



Peak Integration Report

Sample Name:	**AZ45866W13 MSD DF2**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**2.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**22-Nov-2016 / 16:22**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.09	F	BMB	0.031	0.213	0.3532
3	2.73	Cl	BMB	10.556	105.184	117.2880
4	3.60	BR	BMB	0.008	0.066	0.5033
5	3.96	NO3-N	BMB	0.114	0.806	0.7457
7	5.18	PO4-P	BMB	0.013	0.051	0.3474
8	5.70	SO4	BMB	1.044	5.082	18.0910
TOTAL:				11.77	111.40	137.33



SPECTROPHOTOMETRIC ANALYSIS (Ferrous Iron)

Method: SM3500Fe
Analyte: Ferrous Iron
Analyst: MM
Units: mg/L
QCG: 161115A
Notes:
Final Volume: 50mL

Instrument: GENESYS 10UV
Raw Spec: abs. @ 510nm
R-Squared: 0.99983
Reagent (lot#): COLORIZING REAGENT (11/15/16)
BUFFER (05/20/16)

Date	Time	APPL ID	DF	Raw Result	SubSample Amt	Raw BLK	Calc Conc	Result	QC True	QC%
05/20/16	12:37	0 BB 5/20/16	1	0.000						
05/20/16	12:38	1	1	0.101						
05/20/16	12:39	2	1	0.201						
05/20/16	12:39	4	1	0.403						
05/20/16	12:40	5	1	0.512						
05/20/16	12:40	10	1	0.999						
05/20/16	12:41	160520A ICV 3.0	1	0.304	25mL		3.01	3.01	3.000	100.5%
05/20/16	12:42	160520A ICB	1	0.000	25mL		-0.02	-0.02		
11/15/16	11:36	CCV 4.0 161115	1	0.397	25mL		3.94	3.943	4.000	*98.58*
11/15/16	11:37	CCB 161115	1	-0.004	25mL		-0.06	-0.063		
11/15/16	11:38	161115A LCS 3.0	1	0.293	25mL		2.90	2.904	3.000	*96.80*
11/15/16	11:39	AZ45866W35	1	0.005	25mL		0.03	0.027		
11/15/16	11:40	AZ45868W17	1	0.002	25mL		0.00	-0.003		
11/15/16	11:41	AZ45866W35 MS	1	0.298	25mL		2.95	2.954	3.000	*98.47*
11/15/16	11:42	AZ45866W35 MSD	1	0.297	25mL		2.94	2.944	3.00	*98.13*
11/15/16	11:43	CCV 4.0 161115	1	0.396	25mL		3.93	3.933	4.00	*98.33*
11/15/16	11:44	CCB 161115	1	-0.004	25mL		-0.06	-0.063		
								0.000		
								0.000		

Metrohm 814/809 Titrando Data

Sample ID	Analysis Date/Time	Method	Titration Volume (to 8.3)	Titration Volume (total)	OH	CO3	HCO3	Total Alk	Unit	Sample Vol	N	Batch	Initials
AZ45868W07	2016-11-15 21:05:22 UTC-8	Alkalinity	0.000	2.600	0.00	0.00	108.16	108.16	mg/L	25 mL	0.0208	161115A	AH
AZ45866W13 MSD	2016-11-15 20:49:56 UTC-8	Alkalinity	0.000	7.272	0.00	0.00	302.52	302.52	mg/L	25 mL	0.0208	161115A	AH
AZ45866W13 MS	2016-11-15 20:34:04 UTC-8	Alkalinity	0.000	7.194	0.00	0.00	299.27	299.27	mg/L	25 mL	0.0208	161115A	AH
AZ45866W13	2016-11-15 20:28:34 UTC-8	Alkalinity	0.000	1.620	0.00	0.00	67.39	67.39	mg/L	25 mL	0.0208	161115A	AH
161115A LCS	2016-11-15 19:02:56 UTC-8	Alkalinity	0.000	5.838	0.00	0.00	242.86	242.86	mg/L	25 mL	0.0208	161115A	AH
161115A Blk	2016-11-15 18:34:32 UTC-8	Alkalinity	0.000	0.038	0.00	0.00	1.58	1.58	mg/L	25 mL	0.0208	161115A	AH

SPECTROPHOTOMETRIC ANALYSIS (Silica)

Method: SM4500SiD
Analyte: Silica
Analyst: FJR
Units: mg/L
QCG: 161121A
Notes:
Final Volume: 25mL

Instrument: GENESYS 10UV
Raw Spec: abs. @ 410nm
R-Squared: 0.99925
Reagent (lot#): 1+1 HCL prep 11-15-16
Ammonium Molybdate prep 11-15-16
Oxalic Acid prep 11-15-16

Date	Time	APPL ID	DF	Raw Result	SubSample Amt	Raw BLK	Calc Conc	Result	QC True	QC%
11/21/16	11:03	0 11/21/16 FJR		0.000						
11/21/16	11:04	1		0.025						
11/21/16	11:05	2		0.049						
11/21/16	11:06	4		0.099						
11/21/16	11:07	10		0.240						
11/21/16	11:08	20		0.456						
11/21/16	11:09	161121 ICV 4	1	0.098	25mL		4.11	4.11	4.00	102.8%
11/21/16	11:10	ICB	1	0.000	25mL		-0.18	-0.18		
11/21/16	12:35	CCV2 10 161121	1	0.215	25mL		9.24	9.24	10.00	92.4%
11/21/16	12:36	CCB	1	0.002	25mL		-0.09	-0.09		
11/21/16	12:37	161121A BLK	1	0.002	25mL		-0.09	-0.09		
11/21/16	12:38	161121A 4 LCS	1	0.102	25mL		4.29	4.29	4.00	107.2%
11/21/16	12:39	161121A 4 LCSD	1	0.101	25mL		4.25	4.25	4.00	106.1%
11/21/16	12:40	AZ44821W01 Total DF5	5	0.450	5mL		19.54	97.72		
11/21/16	12:41	AZ45866W14 Total MS DF5	5	0.362	5mL		15.69	78.43		
11/21/16	12:42	AZ45866W14 Total MSDDF5	5	0.343	5mL		14.85	74.27		
11/21/16	12:43	AZ45866W14 Total DF5	5	0.241	5mL		10.38	51.91		
11/21/16	12:44	AZ45868W08 Total DF5	5	0.333	5mL		14.42	72.08		
11/21/16	12:45	AZ45907W07 Total DF5	5	0.305	5mL		13.19	65.94		
11/21/16	12:46	AZ45908W09 Total DF5	5	0.360	5mL		15.60	77.99		
11/21/16	12:47	AZ45909W10 Total DF5	5	0.170	5mL		7.27	36.35		
11/21/16	12:48	AZ45910W09 Total DF5	5	0.381	5mL		16.52	82.60		
11/21/16	12:49	AZ45911W08 Total DF5	5	0.265	5mL		11.43	57.17		
11/21/16	12:50	AZ45988W09 Total DF5	5	0.298	5mL		12.88	64.40		
11/21/16	12:51	AZ45991W08 Total DF5	5	0.386	5mL		16.74	83.69		
11/21/16	12:52	CCV1 4 161121	1	0.102	25mL		4.29	4.29	4.000	107.2%
11/21/16	12:53	CCB	1	0.003	25mL		-0.05	-0.05		
11/21/16	15:00	AZ45992W07 Total DF5	5	0.403	5mL		17.48	87.42		
11/21/16	15:01	AZ45993W07 Total DF5	5	0.310	5mL		13.41	67.03		
11/21/16	15:02	AZ45994W12 Total DF5	5	0.217	5mL		9.33	46.65		

11/21/16	15:03	161121B BLK	1	0.001	25mL	-0.14	-0.14	4.000	-3.5%
11/21/16	15:04	161121B 4 LCS	1	0.104	25mL	4.38	4.38	4.000	109.4%
11/21/16	15:05	161121B 4 LCSD	1	0.102	25mL	4.29	4.29	4.000	107.2%
11/21/16	15:06	AZ45866W15 Dissolved DF5	5	0.246	5mL	10.60	53.01		
11/21/16	15:07	AZ45866W15 Dissolved MS DF5	5	0.341	5mL	14.77	73.83		
11/21/16	15:08	AZ45866W15 Dissolved MSD DF5	5	0.338	5mL	14.63	73.17		
11/21/16	15:09	AZ45868W09 Dissolved DF5	5	0.329	5mL	14.24	71.20		
11/21/16	15:10	AZ45907W09 Dissolved DF5	5	0.315	5mL	13.63	68.13		
11/21/16	15:11	AZ45908W08 Dissolved DF5	5	0.354	5mL	15.34	76.68		
11/21/16	15:12	AZ45909W12 Dissolved DF5	5	0.182	5mL	7.80	38.98		
11/21/16	15:13	AZ45910W07 Dissolved DF5	5	0.394	5mL	17.09	85.45		
11/21/16	15:14	AZ45911W09 Dissolved DF5	5	0.289	5mL	12.49	62.43		
11/21/16	15:15	CCV2 10 161121	1	0.235	25mL	10.12	10.12	10.00	101.2%
11/21/16	15:16	CCB	1	0.007	25mL	0.12	0.12		
11/21/16	15:17	AZ45988W08 Dissolved DF5	5	0.273	5mL	11.79	58.93		
11/21/16	15:18	AZ45991W07 Dissolved DF5	5	0.389	5mL	16.87	84.35		
11/21/16	15:19	AZ45992W08 Dissolved DF5	5	0.385	5mL	16.69	83.47		
11/21/16	15:20	AZ45993W08 Dissolved DF5	5	0.290	5mL	12.53	62.65		
11/21/16	15:21	AZ45994W11 Dissolved DF5	5	0.249	5mL	10.73	53.66		
11/21/16	15:22	CCV1 4 161121	1	0.096	25mL	4.03	4.03	4.00	100.6%
11/21/16	15:23	CCB	1	0.009	25mL	0.21	0.21		

Ferrous Iron Standard Prep

Stock Standard Prep:

Prep Date: 5/20/16
Exp Date: 5/20/17
Prep'd By: BB

CCV Stock (200 mg/L): 0.3502 g $Fe(NH_4)2(SO_4)_2*6H_2O$ EMD Lot #2013050298 up to 250 mL with DI

ICV Stock (200 mg/L): 0.3500 g $Fe(NH_4)2(SO_4)_2*6H_2O$ JT Baker Lot #0000068681 up to 250 mL with DI

Curve Prep

Prep Date: 5/20/16
Exp Date: 5/20/17
Prep'd By: BB

METHOD 3500FeBc								
				ICAL #1	ICAL#2	ICAL #3 (CCV)	ICAL #4	ICAL #5
ID#	mg/L	Prep Date	EXP. DATE	mL	mL	mL	mL	mL
Fe CCV Stock	200	5/20/16	5/20/17	0.25	0.5	1	1.25	2.5
Brought up w/ DI Water to final volume of (mL):				50	50	50	50	50
	Final Conc Fe (mg/L):			1	2	4	5	10
Standards are then carried through the sample prep procedure according to the SOP								

ICV (3.0 mg/L): 0.75 mL of ICV Stock (prep: 05/20/16) brought up to 50 mL with DI then carried through the sample prep procedure

Ferrous Iron Standard Prep

Stock Standard Prep:

Prep Date: 5/20/16
Exp Date: 5/20/17
Prep'd By: BB

CCV Stock (200 mg/L): 0.3502 g $Fe(NH_4)2(SO_4)_2*6H_2O$ EMD Lot #2013050298 up to 250 mL with DI

ICV Stock (200 mg/L): 0.3500 g $Fe(NH_4)2(SO_4)_2*6H_2O$ JT Baker Lot #0000068681 up to 250 mL with DI

QC Prep

Prep Date: 11/15/16
Exp Date: 11/16/16
Prep'd By: MM

CCV (4.0 mg/L): 0.5 mL of CCV Stock (prep: 5/20/16) into 25 mL DI then carried through sample prep procedure

LCS (3.0 mg/L): 0.375 mL of ICV Stock (prep: 5/20/16) into 25 mL DI then carried through sample prep procedure

MS/MSD (3.0 mg/L): 0.375 mL of ICV Stock (prep: 5/20/16) into 25 mL sample then carried through sample prep procedure

METHOD 300 / 9056		ANION STOCK					PW 10/20/16
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)	
O2SI	F-	1,000	1085520-36282	07/24/17	0.25	5	
O2SI*	Cl-	5,000	1069557-34558	01/08/17	0.5	50	
O2SI	NO2-N	1,000	1088548-36281	09/26/17	0.25	5	
Ultra Scientific	Br-	1,000	CL-3274-36926	08/31/20	1.25	25	
O2SI	NO3-N	1,000	1078397-35587	01/30/17	0.5	10	
O2SI	PO4-P	1,000	1072004-34911	09/03/16	0.5	10	
Ultra Scientific	SO4	5,000	CP-1469-36296	04/30/18	0.5	50	
Brought up with milipore water to Final Volume of:						50	

METHOD 300 / 9056		ANION ICV / LCS/MS/MSD				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
CPI	F-	1,000	16B115-36204	09/03/17	0.125	2.50
CPI	Cl-	1,000	16E065-36694	12/06/17	1.00	20.00
CPI	NO2-N	304	15J001-36257	09/24/17	0.50	3.04
CPI	Br-	1,000	15L093-36101	07/21/17	0.625	12.50
CPI	NO3-N	1,000	16E022-36783	12/30/17	0.25	5.00
CPI	PO4-P	1,000	15B116-36258	09/24/17	0.25	5.00
CPI	SO4	1,000	16E104-36693	12/06/17	1.00	20.00
Brought up with milipore water to Final Volume of:					50	

METHOD 300 / 9056		ANION CAL CURVE							
				ICAL #1	ICAL#2	ICAL #3	ICAL #4	ICAL #5	ICAL #6
ID#	mg/L	Prep Date	EXP. DATE	mL	mL	mL	mL	mL	mL
ANION STOCK	100	08/19/16	08/21/16	0.4	2	10	2	7	10
Brought up w/ Milipore Water to final volume of (mL):				50	100	100	10	10	na
Final Conc F (mg/L):				0.04	0.1	0.5	1	3.5	5
Final Conc Cl (mg/L):				0.4	1	5	10	35	50
Final Conc NO2-N (mg/L):				0.04	0.1	0.5	1	3.5	5
Final Conc Br (mg/L):				0.2	0.5	2.5	5	17.5	25
Final Conc NO3-N (mg/L):				0.08	0.2	1	2	7	10
Final Conc PO4-P (mg/L):				0.08	0.2	1	2	7	10
Final Conc SO4 (mg/L):				0.4	1	5	10	35	50

161115 PW

		CCV				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
O2SI	F-	1,000	1085520-36282	07/24/17	0.125	2.50
O2SI	Cl-	5,000	1069557-34558	01/08/17	0.25	25.0
O2SI	NO2-N	1,000	1088548-36281	09/26/17	0.125	2.5
Ultra Scientific	Br-	1,000	CL-3274-36926	08/31/20	0.625	12.50
O2SI	NO3-N	1,000	1078397-35587	01/30/17	0.25	5.0
O2SI	PO4-P	1,000	1072004-34911	09/03/16	0.25	5.0
Ultra Scientific	SO4	5,000	CP-1469-36296	04/30/18	0.25	25.0
Brought up with milipore water to Final Volume of:					50	

METHOD 300 / 9056		ICV LCS MS				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
CPI	F-	1,000	16B115-36204	09/03/17	0.125	2.50
CPI	Cl-	1,000	16E065-36694	12/06/17	1.00	20.00
CPI	NO2-N	304	15C058-35411	09/24/17	0.50	3.04
CPI	Br-	1,000	15L093-36101	07/21/17	0.63	12.50
CPI	NO3-N	1,000	16E022-36783	12/30/17	0.250	5.00
CPI	PO4-P	1,000	15B116-36258	09/24/17	0.25	5.00
CPI	SO4	1,000	16E104-36693	12/06/17	1.00	20.00
Final Volume of Sample: (mL)					50	

161122 PW

		CCV				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
O2SI	F-	1,000	1085520-36282	07/24/17	0.125	2.50
O2SI	Cl-	5,000	1069557-34558	01/08/17	0.25	25.0
O2SI	NO2-N	1,000	1088548-36281	09/26/17	0.125	2.5
Ultra Scientific	Br-	1,000	CL-3274-36926	08/31/20	0.625	12.50
O2SI	NO3-N	1,000	1078397-35587	01/30/17	0.25	5.0
O2SI	PO4-P	1,000	1072004-34911	09/03/16	0.25	5.0
Ultra Scientific	SO4	5,000	CP-1469-36296	04/30/18	0.25	25.0
Brought up with milipore water to Final Volume of:					50	

METHOD 300 / 9056		ICV LCS MS				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
CPI	F-	1,000	16B115-36204	09/03/17	0.125	2.50
CPI	Cl-	1,000	16E065-36694	12/06/17	1.00	20.00
CPI	NO2-N	304	15C058-35411	09/24/17	0.50	3.04
CPI	Br-	1,000	15L093-36101	07/21/17	0.63	12.50
CPI	NO3-N	1,000	16E022-36783	12/30/17	0.250	5.00
CPI	PO4-P	1,000	15B116-36258	09/24/17	0.25	5.00
CPI	SO4	1,000	16E104-36693	12/06/17	1.00	20.00
Final Volume of Sample: (mL)					50	

0.02N H_2SO_4 Titrant for Alkalinity

200 mL 0.1N H_2SO_4 (prep 10/10/16)
Final vol 1L w/ DI water
Prep 11/01/16
Exp 10/10/17
AH 11/01/16

Inorganic Spiking Solution

3.4999g NaHCO3 BDH lot#1575C510
Final vol 500 mL w/DI water
Prep: 11/01/16
Exp: 10/10/17
AH

SiO_2 For Method 370.1 or SM4500 Si D

1000ppm SiO_2 o2si lot 1074114-35161 (exp: 10/21/16)

X 25 uL / 25mL DI → 1ppm SiO_2

↓ X 50uL ↓ → 2ppm SiO_2

↓ X 100uL ↓ → 4ppm SiO_2

↓ X 250uL ↓ → 10ppm SiO_2

↓ X 500uL ↓ → 20ppm SiO_2

ICV = 4ppm SiO_2
1000ppm SiO_2 Ultra Scientific Lot P01064-32895 (exp: 11/30/19) X 100uL / 25mL DI

LCS = 4ppm SiO_2
1000ppm SiO_2 Ultra Scientific Lot P01064-32895 (exp: 11/30/19) X 100uL / 25mL DI

MS = 4ppm SiO_2
1000ppm SiO_2 Ultra Scientific Lot P01064-32895 (exp: 11/30/19) X 100uL / 25mL Sample

Expires 11-22-2016

FJR 11/21/16

SM3500 Injection Log

Directory: I:\Spec Sheets\Ferrous Iron (Fe2)\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	20 May 2016	12:37	0 BB 5/20/16		161115a	1.
2	20 May 2016	12:38	1		161115a	1.
3	20 May 2016	12:39	4		161115a	1.
4	20 May 2016	12:39	2		161115a	1.
5	20 May 2016	12:40	10		161115a	1.
6	20 May 2016	12:40	5		161115a	1.
7	20 May 2016	12:41	160520A ICV 3.0		161115a	1.
8	20 May 2016	12:42	160520A ICB		161115a	1.
9	15 Nov 2016	11:36	CCV 4.0 161115		161115a	1.
10	15 Nov 2016	11:37	CCB 161115		161115a	1.
11	15 Nov 2016	11:38	161115A LCS 3.0		161115a	1.
12	15 Nov 2016	11:39	AZ45866W35		161115a	1.
13	15 Nov 2016	11:40	AZ45868W17		161115a	1.
14	15 Nov 2016	11:41	AZ45866W35 MS		161115a	1.
15	15 Nov 2016	11:42	AZ45866W35 MSD		161115a	1.
16	15 Nov 2016	11:43	CCV 4.0 161115		161115a	1.
17	15 Nov 2016	11:44	CCB 161115		161115a	1.

300/9056A Injection Log

Directory: I:\Dionex\Charlie\Anions\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
14	20 Oct 2016	11:19	ICAL 1 10/20/16		161020	1.
15	20 Oct 2016	11:32	ICAL 2 10/20/16		161020	1.
16	20 Oct 2016	11:45	ICAL 3 10/20/16		161020	1.
17	20 Oct 2016	11:58	ICAL 4 10/20/16		161020	1.
18	20 Oct 2016	12:11	ICAL 5 10/20/16		161020	1.
19	20 Oct 2016	12:24	ICAL 6 10/20/16		161020	1.
20	20 Oct 2016	12:37	ICV 1601020		161020	1.
21	20 Oct 2016	12:50	ICB		161020	1.

300/9056A Injection Log

Directory: I:\Dionex\Charlie\Anions\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
3	15 Nov 2016	11:01	CCV 161115		161115	1.
4	15 Nov 2016	11:14	CCB		161115	1.
5	15 Nov 2016	11:27	161115A LCS		161115	1.
9	15 Nov 2016	12:19	AZ45866W13		161115	1.
10	15 Nov 2016	12:32	AZ45868W07 1/2		161115	2.
14	15 Nov 2016	13:25	CCV 161115		161115	1.
15	15 Nov 2016	13:38	CCB		161115	1.
17	15 Nov 2016	14:04	AZ45866W13 1/2		161115	2.
18	15 Nov 2016	14:17	AZ45868W07 1/10		161115	10.
21	15 Nov 2016	14:56	CCV 161115		161115	1.
22	15 Nov 2016	15:09	CCB		161115	1.

300/9056A Injection Log

Directory: I:\Dionex\Charlie\Anions\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
3	22 Nov 2016	13:33	CCV 161122		161122	1.
4	22 Nov 2016	13:46	CCB		161122	1.
12	22 Nov 2016	16:09	AZ45866W13 MS DF2		161122	2.
13	22 Nov 2016	16:22	AZ45866W13 MSD DF2		161122	2.
14	22 Nov 2016	16:35	AZ45866W13 MS		161122	1.
15	22 Nov 2016	16:48	AZ45866W13 MSD		161122	1.
17	22 Nov 2016	17:14	CCV 161122		161122	1.
18	22 Nov 2016	17:27	CCB		161122	1.

310/SM2320B Injection Log

Directory: I:\Tiamo\EXPORT\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	15 Nov 2016	18:34	161115A Blk		161115A_AL	1.
2	15 Nov 2016	19:02	161115A LCS		161115A_AL	1.
3	15 Nov 2016	20:28	AZ45866W13		161115A_AL	1.
4	15 Nov 2016	20:34	AZ45866W13 MS		161115A_AL	1.
5	15 Nov 2016	20:49	AZ45866W13 MSD		161115A_AL	1.
6	15 Nov 2016	21:05	AZ45868W07		161115A_AL	1.

370.1/SM4500 Injection Log

Directory: I:\Spec Sheets\Silica (SiO2)\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	21 Nov 2016	11:03	0 11/21/16 FJR		161121A	21.
2	21 Nov 2016	11:04	1		161121A	1.
3	21 Nov 2016	11:05	2		161121A	1.
4	21 Nov 2016	11:06	4		161121A	1.
5	21 Nov 2016	11:07	10		161121A	1.
6	21 Nov 2016	11:08	20		161121A	1.
7	21 Nov 2016	11:09	161121 ICV 4		161121A	1.
8	21 Nov 2016	11:10	ICB		161121A	1.
9	21 Nov 2016	12:35	CCV2 10 161121		161121A	1.
10	21 Nov 2016	12:36	CCB		161121A	1.
11	21 Nov 2016	12:37	161121A BLK		161121A	1.
12	21 Nov 2016	12:38	161121A 4 LCS		161121A	1.
15	21 Nov 2016	12:41	AZ45866W14 Total MS DF5		161121A	5.
16	21 Nov 2016	12:42	AZ45866W14 Total MSDDF5		161121A	5.
17	21 Nov 2016	12:43	AZ45866W14 Total DF5		161121A	5.
18	21 Nov 2016	12:44	AZ45868W08 Total DF5		161121A	5.
26	21 Nov 2016	12:52	CCV1 4 161121		161121A	1.
27	21 Nov 2016	12:53	CCB		161121A	1.
31	21 Nov 2016	15:03	161121B BLK		161121A	1.
32	21 Nov 2016	15:04	161121B 4 LCS		161121A	1.
34	21 Nov 2016	15:06	AZ45866W15 Dissolved DF5		161121A	5.
35	21 Nov 2016	15:07	AZ45866W15 Dissolved MS DF5		161121A	5.
36	21 Nov 2016	15:08	AZ45866W15 Dissolved MSD DF5		161121A	5.
37	21 Nov 2016	15:09	AZ45868W09 Dissolved DF5		161121A	5.
43	21 Nov 2016	15:15	CCV2 10 161121		161121A	1.
44	21 Nov 2016	15:16	CCB		161121A	1.

908 North Temperance Ave. ∇ Clovis, CA 93611 ∇ Phone 559-275-2175 ∇ Fax 559-275-4422

Certification Number: CA1312
NELAP Certification number: CA00046
DoD-ELAP Certificate number: 4064.01

Data Validatable Report

December 7, 2016

AECOM
1001 Bishop Street, Suite 1600
Honolulu, Hawaii 96813

Attn: Margie Thach

Title: Report of Data: Case 81500

Project: 60481245 CIV0053 Red Hill Fuel Storage. HI

Contract #: Prime contract # for DoD: NAVY CLEAN N62742-12-D-1829, CTO 0053
Subcontract: 14S-16234-HI16

Dear Ms. Thach:

Five water samples were received November 16, 2016. Written results for the requested analyses are being provided on this December 7, 2016.

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

If you have any questions or require further information, please contact your APPL Project Manager, Libby Cheeseborough, libby@applinc.com, at your convenience. Thank you for choosing APPL, Inc.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. These test results meet all requirements of NELAC and DoD QSM. Release of the hard copy has been authorized by the Laboratory Manager or her designee, as verified by the following signature.

Paula McCartney

Paula McCartney, Laboratory Director
APPL, Inc.

PM/rp
Enclosure
cc: File

Number of pages in this report. 861

Data Validation Package
for
60481245 CIV 0053 Red Hill Fuel Storage
APPL SDG 81500
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Raw Data 719

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QC Summary 731

Sample Data 734

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Sample Data 791

Calibration Data 806

Raw Data 840

SAMPLE RECEIPT INFORMATION

Sample Receipt Information

ARF: 81500

Project: 60481245 CIV0053 Red Hill Fuel Storage. HI

Sample Receipt Information:

Five water samples were received November 16, 2016, at 0.0°C, 0.5°C, 1.0°C, 1.0°C, and 1.0°C. The sample group was assigned Analytical Request Form (ARF) number 81500. The sample numbers and requested analyses were compared to the chains of custody and email communications. The anion and metals analyte lists were revised, as requested on November 18, 2016. The client requested re-analysis of sample ERH122 for TPH-D&O and added TPH-D&O with silica gel preparation to the same sample on December 1, 2016. No other exception was encountered.

Sample Table

CLIENT ID	APPL ID	Matrix	Date Sampled	Date Received
ERH117	AZ45907	WATER	11/14/16	11/16/16
ERH121	AZ45908	WATER	11/14/16	11/16/16
ERH122	AZ45909	WATER	11/15/16	11/16/16
ERH126	AZ45910	WATER	11/15/16	11/16/16
ERH128	AZ45911	WATER	11/14/16	11/16/16

The samples and blanks were screened for J-value responses between the detection limit (DL) and limit of quantitation (LOQ).

APPL's Laboratory control limits generated in house statistically do not meet the control limits listed in DoD QSM 5.0 for all analytes. Laboratory control spike recoveries for this project meet all control limits listed in the DoD QSM 5.0 except where noted. A copy of our in house generated control limits is available upon request. In addition, a copy of our LOQ control limits, established using 7 data points, are also available upon request.

Only the portion of the injection log relative to these samples is included. A full sequence log is available upon request.

Measurement uncertainty can be reported upon request.

CASE NARRATIVE

EPA Method 8011

EDB

Sample Preparation:

The water sample was extracted according to EPA method 8011. All holding times were met.

Sample Analysis Information:

The sample was analyzed according to the method using an Agilent Gas Chromatograph with an ECD.

Quality Control/Assurance

Calibrations:

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Blanks:

No target analyte was detected above one-half the limit of quantitation (LOQ) in the method blank.

Spikes:

A Laboratory Control Spike (LCS) was used for quality assurance. All acceptance criteria were met.

No sample was designated by the client for MS/MSD analysis.

Surrogates

The surrogate recoveries are summarized in the Form 2 & 8. All surrogate recoveries were within the control limits.

Summary:

No problem was encountered.

EPA Method 8015B

Total Petroleum Hydrocarbons - Diesel & Oil

Sample Preparation:

The water samples were extracted according to EPA method 3510C. Sample ERH122 was silica gel cleaned according to APPL's SOP CLN004, as requested by the client. A reverse surrogate of Decanoic Acid Solution was used during the silica gel cleanup and was not detected in the sample. All holding times were met

Sample Analysis Information:

The samples were analyzed according to the method using an Agilent Gas Chromatograph with a flame ionization detector. As requested by the client, sample ERH122 was re-analyzed. After re-analysis, the client requested the sample be silica gel cleaned; all three results are reported.

Quality Control/Assurance

Calibrations:

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Blanks:

No target analyte was detected above one-half the LOQ in the method blanks.

Spikes:

Laboratory Control Spikes (LCS) were used for quality assurance. All acceptance criteria were met.

No sample was designated by the client for MS/MSD analysis.

Surrogates:

Surrogate recoveries are summarized on the Form 2 & 8. All surrogate recoveries were acceptable.

Summary:

No analytical problem was encountered. The data generated are acceptable.

EPA Method 8270D-SIM
Polynuclear Aromatic Hydrocarbons

Sample Preparation:

The water samples were extracted according to EPA method 3510C. All holding times were met.

Analysis Information:

The samples were analyzed according to EPA Method 8270D using an Agilent Gas Chromatograph with a mass spectrometer detector, in selective ion monitoring mode (SIM).

Quality Control/Assurance

Spike Recovery

A Laboratory Control Spike (LCS) was used for quality assurance. All LCS recoveries met acceptance criteria.

No sample was designated by the client for MS/MSD analysis.

Method blanks

No target compound was detected at or above one-half the LOQ in the method blank.

Surrogates

Surrogate recoveries are summarized on the Form 2 & 8. All surrogate recoveries met acceptance criteria.

Calibration

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Tuning:

The instrument was tuned using DFTPP. All method criteria were met.

Internal Standards

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8270. All acceptance criteria were met.

Summary:

No analytical exception was encountered. The data generated are acceptable.

EPA Method 8270D
Semi-Volatile Organic Compounds

Sample Preparation:

The water samples were extracted according to EPA method 3510C. All holding times were met.

Analysis Information:

The samples were analyzed according to EPA Method 8270D using an Agilent Gas Chromatograph with a mass spectrometer detector.

Quality Control/Assurance

Spike Recovery

A Laboratory Control Spike (LCS) was used for quality assurance. All LCS recoveries met acceptance criteria.

No sample was designated by the client for MS/MSD analysis.

Method blanks

No target compound was detected at or above one-half the LOQ in the method blank.

Surrogates

Surrogate recoveries are summarized on the Form 2 & 8. All surrogate recoveries met acceptance criteria.

Calibration

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Tuning:

The instrument was tuned using DFTPP. All method criteria were met.

Internal Standards

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8270. All acceptance criteria were met.

Summary:

No analytical exception was encountered. The data generated are acceptable.

APPL SOP ANA2MEE

2-(2-Methoxyethoxy) ethanol by SPE, GC/MS

Sample Preparation:

The water samples were extracted according to EPA method 3535. All holding times were met.

Analysis Information:

The samples were analyzed according to an internal method APPL SOP ANA2MEE using an Agilent Gas Chromatograph with a mass spectrometer detector.

Quality Control/Assurance

Spike Recovery

A Laboratory Control Spike (LCS) was used for quality assurance. All LCS recoveries met acceptance criteria.

No sample was designated by the client for MS/MSD analysis.

Method blanks

No target compound was detected at or above one-half the LOQ in the method blank.

Surrogates

No surrogate was used for this method.

Calibration

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Tuning:

The instrument was tuned using DFTPP. All method criteria were met.

Internal Standards

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8270. All acceptance criteria were met.

Summary:

No other analytical exception was encountered. The data generated are acceptable.

EPA Method 8260B
Volatile Organic Analysis

Sample Preparation:

The water samples were purged according to EPA method 5030B. All holding times were met.

Sample Analysis Information:

The samples were analyzed according to EPA method 8260B using an Agilent Gas Chromatograph with a mass spectrometer detector.

Quality Control/Assurance:

Calibrations:

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Blanks:

- No analyte was detected above one-half the limit of quantitation (LOQ) in the method blanks.

Spikes:

Laboratory Control Spikes (LCS) were used for quality assurance. All LCS recovery acceptance criteria were met.

No sample was designated by the client for MS/MSD analysis.

Surrogates:

Surrogate recoveries are summarized on the Form 2 & 8. All surrogate recoveries were acceptable.

Tuning:

The instrument was tuned using BFB. All method criteria were met.

Internal Standards:

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8260. All method acceptance criteria were met.

Summary:

No problem was encountered. The data generated are acceptable.

EPA Method 8260B
Gasoline

Sample Preparation:

The water samples were purged according to EPA method 5030B. All holding times were met.

Sample Analysis Information:

The samples were analyzed according to EPA method 8260B using an Agilent Gas Chromatograph with a mass spectrometer detector.

Quality Control/Assurance:

Calibrations:

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Blanks:

No analyte was detected above one-half the limit of quantitation (LOQ) in the method blank.

Spikes:

A Laboratory Control Spike (LCS) was used for quality assurance. All LCS recovery acceptance criteria were met.

No sample was designated by the client for MS/MSD analysis.

Surrogates:

Surrogate recoveries are summarized on the Form 2 & 8. All surrogate recoveries were acceptable.

Tuning:

The instrument was tuned using BFB. All method criteria were met.

Internal Standards:

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8260. All method acceptance criteria were met.

Summary:

No problem was encountered. The data generated are acceptable.

Methane
RSK-175

Sample Preparation and Analysis

The water samples were analyzed with guidance from RSK-175. The samples were allowed to equilibrate for 10 minutes at 40°C and a portion of the headspace was analyzed using a Hewlett Packard Gas Chromatograph with a flame ionization detector. All holding times were met.

Quality Control/Assurance

Spike Recovery

A Laboratory Control Spike (LCS) was used for quality assurance. All acceptance criteria were met.

No sample was designated by the client for MS/MSD analysis.

Method blanks

The blank contained no target analyte above one-half the limit of quantitation (LOQ).

Calibration

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Summary:

No analytical exception is noted.

EPA Method 6010C
Metals

Digestion Information:

The water samples were digested according to EPA method 3010A. All holding times were met.

Analysis Information:

Samples:

The samples were analyzed for metals according to EPA method 6010B using a Perkin Elmer ICP 5300DV.

Calibrations:

Calibrations were performed according to the methods for the initial calibration and the initial calibration verification. The initial calibration verification is prepared from a second source standard. All acceptance criteria were met.

Blanks:

No target metal was detected above one half the LOQ in the method blank.

Spikes:

A Laboratory Control Spike (LCS) was used for quality assurance. All LCS acceptance criteria were met.

No sample was designated by the client for MS/MSD analysis.

Summary:

No analytical problem was encountered. The data generated are acceptable.

Inorganic Analyses

EPA Method 300.0 and SM 2320B, SM 3500 FeB and SM 4500SiD

Sample Preparation Information:

The water samples were prepared according to the methods.

Analysis Information:

Samples:

The samples were analyzed according to the methods. A Dionex DX500 ion chromatograph was used for the EPA 300.0 analysis. The samples were received more than 24 hours after collection; they were analyzed as soon as possible upon arrival for ferrous iron and nitrate. All other holding times were met.

Calibrations:

Initial and continuing calibrations were performed according to the methods and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Blanks:

No target analyte was detected above one-half the LOQ in the method blanks.

Spikes:

Laboratory Control Spikes (LCS) were used for quality assurance. All recoveries were within acceptance limits in the LCS.

No sample was designated by the client for MS/MSD analysis.

Summary:

No other analytical exception is noted. All data are acceptable.

APPL Inc.
Abbreviations and Flags

FLAG	DESCRIPTION
#	Recovery or RPD outside control limits
*	Recovery or RPD outside control limits
B	Analyte detected in associated method blank
C1	Reason for correction: wrote incorrect response
C2	Reason for correction: calculated incorrectly
C3	Reason for correction: needs to be rechecked
C4	Reason for correction: data not usable
DO	Diluted out
E	Exceeds linear range
F	Estimated value
G1	Includes a wide range of hydrocarbons which does not match our gasoline standard
G10	Includes a match to hydrocarbon profiles within the range of mineral spirits
G11	Includes a match to hydrocarbon profiles within the range of JP-4
G12	Pattern does not match the gasoline standard; the carbon range for this sample is consistent with JP8
G13	Closely resembles the hydrocarbon profile of aviation gasoline
G14	Analyte concentration may be biased due to carry over
G2	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G3	Includes higher boiling hydrocarbons
G4	Includes dominant peak(s) not indicative of petroleum hydrocarbons
G5	Is mainly dominant peak(s) not indicative of petroleum hydrocarbons
G6	Contains recognizable contaminant peak(s) which has been removed from quantitation
G7	Is mainly a match to hydrocarbons within the range of gasoline
G8	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G9	Includes hydrocarbons within the range of kerosene
J	Estimated value
M	Matrix effect
MI1	Manual integration: integration does not follow baseline
MI2	Manual integration: non-target peak interference
MI3	Manual integration: to split a peak that was integrated as one peak by the computer.
MI4	Manual integration: to integrate a split peak
MI5	Manual integration: the whole peak or part of the peak was not integrated
MI6	Manual integration: computer integrated wrong peak
MI7	Manual integration: other – (See case narrative)
MDL	Method detection limit
ND	Not detected
NT	Non-target
Q	Acceptance criteria not met
T1 I	Includes wide range of hydrocarbons not indicative of diesel
T1 M	Is mainly wide range of hydrocarbons not necessarily indicative of diesel
T2 I	Includes lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T2 M	Is mainly lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T3 I	Includes higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T3 M	Is mainly higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T4 I	Includes dominant peak(s) not indicative of hydrocarbons
T4 M	Is mainly dominant peak(s) not indicative of hydrocarbons
T5	Contains recognizable contaminant peak(s) which has been removed from quantitation
T6	Is mainly a match to hydrocarbons within range of diesel fuel
T7	Closely resembles the boiling point hydrocarbon profile consistent with diesel fuel
T8	Includes a match to hydrocarbon profiles within range of diesel and kerosene fuel
T9 I	Includes non-diesel hydrocarbons within boiling point range of diesel fuel
T9 M	Is mainly non-diesel hydrocarbons within boiling point range of diesel fuel
U	Not detected
Y	Percent difference between primary and confirmation column > 40%

CHAIN OF CUSTODY,

ARF, CRF, AND

CLIENT COMMUNICATION

APPL - Analysis Request Form 81500

Client: **AECOM**
Address: **1001 Bishop Street, Suite 1600**
Honolulu, HI 96813
Attn: **Margie Thach**
Phone: **808-356-5373** Fax: **808-523-8950**
Job: **60481245 CIV0053 Red Hill Fuel Storage**
PO #: **14S-16234-HI16, PO# 77265**
Chain of Custody (Y/N): **Y** # **111516**
RAD Screen (Y/N): **Y** pH (Y/N): **Y**
Turn Around Type: **1 WEEK**

Received by: **CM**
Date Received: **11/16/16** Time: **10:00**
Delivered by: **FED EX**
Shuttle Custody Seals (Y/N): **Y** Time Zone: **-10**
Chest Temp(s): **0, 0.5, 3X1.0°C**
Color: **VOA/L-PURBRN/R-ORGYL**
Samples Chilled until Placed in Refrig/Freezer: **Y**
Project Manager: **Libby Cheesebor**
QC Report Type: **DVP4DOD/EQUIS/HI**
Due Date: **11/23/16**

Comments:
7-day TAT for Form 1s; 21 day TAT for DVP; F1s, login to Margie.Thach@aecom.com
A: DOD QSM ver 5.0; DOD Forms (LOQ/LOD database/DL) Print ND as LOD w/U Qual.
8260: BTEX & TPH-G only; 8270 SIM: 1-methylnaphthalene, 2-methylnaphthalene & naphthalene only.
TPH D & O; RSK: Methane only; 8011: EDB only;
$87DC53W5: report phenol only; $87DMEEW5: special SPE Extraction for 2-MEE (see Diane).
FR: HC to LDC, 2 labeled CDs to Margie Thach. PM needs to review after Admin Review is complete.
EDD: AECOM EQuIS EDD 2.5.3 to Margie.Thach@aecom.com & jecklund@lab-data.com
CHANGE IN ARF: re-analyze TPH-D&O and add SGC to AZ45909 per Margie 12-1-16. rp

Sample Distribution:
GC: 5-$87DC53W5, 5-$87DMEEW5, 5-$DOC53W5, 5-$SIMDOD5W, 1-$8011, 1-$DOC53SGCW5, 1-$DOC53W52
Extractions: 5-_MWE2MEE, 5-_SEP004, 5-_SEP004S, 5-_SEP011LL, 1-_MWE012
VOA: 5-$86BXDOD5W, 5-$GASBL, 5-$RSKMETH, 4-$GRO86BW
Metals: 5-$61CDOD5W(Ca,Mg,Mn,K,Na)
Wetlab: 5-$232W(HCO3,CO3,ALK), 5-$300W(NO3,BR,CL,F,SO4), 5-$35FE, 5-$SIO2, 5-$SIO2D
Other: 5-_M3010

Charges:

Invoice To:
ACCOUNTS PAYABLE
1001 Bishop Street, Ste 1600
USAPImaging@aecom.com
mary.basano@aecom.com

Client ID	APPL ID	Sampled	Analyses Requested
1. ERH117	AZ45907W	11/14/16 16:00	$232W(HCO3,CO3,ALK), $300W(NO3,BR,CL,F,SO4), $35FE, $61CDOD5W(Ca,Mg,Mn,K,Na), $86BXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $RSKMETH, $SIMDOD5W, $SIO2, $SIO2D
2. ERH121	AZ45908W	11/14/16 13:50	$232W(HCO3,CO3,ALK), $300W(NO3,BR,CL,F,SO4), $35FE, $61CDOD5W(Ca,Mg,Mn,K,Na), $86BXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $RSKMETH, $SIMDOD5W, $SIO2, $SIO2D

Note: All times, excluding sample collection times, are Pacific Time Zone unless noted otherwise. Collection times are in: -10 UTC
Page 1 Client Code: AECOM-CIV053 *Printed 12/07/16 8:50:01 AM* Computer: RENEECOMPUT **# 81500**

3. ERH122	AZ45909W 11/15/16 09:40		$232W(HCO3,CO3,ALK), $300W(NO3,BR,CL,F,SO4), $35FE, $61CDOD5W(Ca,Mg,Mn,K,Na), $8011, $86BXDOD5W, $87DC53W5, $87DMEEW5, $DOC53SGCW5, $DOC53W5, $DOC53W52, $GASBL, $GRO86BW, $RSKMETH, $SIMDOD5W, $SIO2, $SIO2D -- 8260: BTEX & 1,2-DCA; 8011: EDB only
4. ERH126	AZ45910W 11/15/16 09:40		$232W(HCO3,CO3,ALK), $300W(NO3,BR,CL,F,SO4), $35FE, $61CDOD5W(Ca,Mg,Mn,K,Na), $86BXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $RSKMETH, $SIMDOD5W, $SIO2, $SIO2D
5. ERH128	AZ45911W 11/14/16 17:30		$232W(HCO3,CO3,ALK), $300W(NO3,BR,CL,F,SO4), $35FE, $61CDOD5W(Ca,Mg,Mn,K,Na), $86BXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $RSKMETH, $SIMDOD5W, $SIO2, $SIO2D

APPL Sample Receipt Form

ARF# **81500**

Sample	Container Type	Count	pH
AZ45907	[3] PL 250mL	3	NA
	[7] PL 250mL - HNO3	1	1.7
	[13] VOAs - HCL	6	NA
	[17] Amber Liter	6	NA
	[38] 250mL brn poly, HCl prsvd	1	1.7
AZ45908	[3] PL 250mL	3	NA
	[7] PL 250mL - HNO3	1	1.7
	[13] VOAs - HCL	6	NA
	[17] Amber Liter	6	NA
	[38] 250mL brn poly, HCl prsvd	1	1.7
AZ45909	[3] PL 250mL	3	NA
	[7] PL 250mL - HNO3	1	1.7
	[13] VOAs - HCL	7	NA
	[15] VOAs - NP	3	NA
	[17] Amber Liter	6	NA
	[38] 250mL brn poly, HCl prsvd	1	1.7
AZ45910	[3] PL 250mL	3	NA
	[7] PL 250mL - HNO3	1	1.7
	[13] VOAs - HCL	6	NA
	[17] Amber Liter	6	NA
	[38] 250mL brn poly, HCl prsvd	1	1.7
AZ45911	[3] PL 250mL	3	NA
	[7] PL 250mL - HNO3	1	1.7
	[13] VOAs - HCL	6	NA
	[17] Amber Liter	6	NA
	[38] 250mL brn poly, HCl prsvd	1	1.7

Sample	Container Type	Count	pH

Libby Cheeseborough

From: Thach, Margie <Margie.Thach@aecom.com>
Sent: Thursday, December 01, 2016 1:25 PM
To: Libby Cheeseborough
Subject: RE: CIV0053 Red Hill 81492 81500 81515 TPH-D&O & MEE results

Importance: High

Add sgc to AZ45909 (ARF 81500) per Margie 12/1/2016 #

Thank you so much, Libby! Got out of a call with the client. Yes, please perform the silica gel cleanup as well. So to confirm for the case narrative:

1) Re-analyze ERH122 for TPH-d/o and report both original and reanalysis results.
2) Perform silica gel clean up on ERH122 extract for TPH-d/o and analyze extract. Report results as TPH-d/o with SGC.

Thank you,

Margie Pascua Thach
Environmental Scientist
Environment, West Region, Pacific District
Direct 808.356.5373
Margie.Thach@aecom.com

From: Libby Cheeseborough [mailto:libby@applinc.com]
Sent: Thursday, December 01, 2016 9:47 AM
To: Thach, Margie
Subject: RE: CIV0053 Red Hill 81492 81500 81515 TPH-D&O & MEE results

Hi Margie,
Yes, we can silica gel clean that sample.
Let me know if you'd like it added please.

thank you,
Libby

Libby Cheeseborough

Agriculture & Priority Pollutants Laboratories, Inc.
WOSB. NELAP Accredited.
t. 559.275-2175 f. 559.275-4422
a. 908 N. Temperance Ave., Clovis, CA 93611

Website • Email

DoD accredited for ISM, Dioxins and PCB congeners.

This is a PRIVATE and CONFIDENTIAL message. If you are not the intended recipient, please delete without copying and kindly advise us by e-mail of the mistake in delivery. NOTE: Regardless of content, this e-mail

shall not operate to bind APPL, Inc. to any order or other contract
unless pursuant to explicit written agreement or government initiative
expressly permitting the use of e-mail for such purpose.

From: Thach, Margie [mailto:Margie.Thach@aecom.com]
Sent: Thursday, December 01, 2016 11:36 AM
To: "Libby Cheeseborough"
Subject: RE: CIV0053 Red Hill 81492 81500 81515 TPH-D&O & MEE results
Importance: High

Hi Libby,
Sorry, another question on ERH122. The client wants to know if it's possible to still perform the TPH-d/o with silica gel cleanup with the remaining extract. If yes, then the client wants that performed. Please let me know.

Thank you,

Margie Pascua Thach
Environmental Scientist
Environment, West Region, Pacific District
Direct 808.356.5373
Margie.Thach@aecom.com

From: Thach, Margie
Sent: Wednesday, November 30, 2016 4:50 PM
To: "Libby Cheeseborough"
Subject: RE: CIV0053 Red Hill 81492 81500 81515 TPH-D&O & MEE results

Hi Libby,
The client reviewed the prelim results and requested that we reanalyze (for confirmation) sample ERH122 (AZ45909) for TPH-d/o. Please report both results in the final report if possible.
If you would like to discuss, please let me know.

Thank you,

Margie Pascua Thach
Environmental Scientist
Environment, West Region, Pacific District
Direct 808.356.5373
Margie.Thach@aecom.com

From: Renee Patterson [mailto:rpatterson@applinc.com]
Sent: Monday, November 28, 2016 5:00 PM
To: Thach, Margie
Cc: "Libby Cheeseborough"
Subject: CIV0053 Red Hill 81492 81500 81515 TPH-D&O & MEE results

The message is ready to be sent with the following file attachments:

CIV0053 Red Hill 81492 81500 81515 TPH-D&O results.pdf
CIV0053 Red Hill 81492 81500 81515 MEE results.pdf

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C.

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number	Sampler (Print)	Date Shipped: 11/15/16
CIV 53 / 60481245	Margie Thach	Carrier: FedEx
Purchase Order Number 77265	Sampler (Signature)	Tracking No.:
		Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil		8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O w/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3230 Alkalinity; SM3500 Ferrous Iron; SM4500 Total S/WEA	300.0 Nitrate,Sulfate,Chloride	RSK175M Methane	EDD Required	8015D Diesel	
ERH 117	RH MW01	11/14/16	1600	HST	17	X				X	X			X	X		X	X	XXX	X	X	X	X	

MY 11/15/16

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other _____

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	11/15/16	1500					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					11/16/16	1000	

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

APPL LABS

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C.

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number: CIV 53 / 60481245
Sampler (Print): Margie Thach
Purchase Order Number: 77265
Sampler (Signature):

Date Shipped: 11/15/16
Carrier: FedEx
Tracking No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil	Matrix:	8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O W/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	SM3500 Mercury, 300.0 Nitrate, Sulfate, Chloride, SM4500 total silica	RSK175M Methane	SM4500 Dissolved Silica	6010 total metals	
ERH121	RHMW07	11/14/15	1350	HST	17	X				X	X			X	X		X	X	X	X	X	X	X	

MT 11/15/16

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	11/15/16	1500					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					11/16/16	1000	

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C.

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number	Sampler (Print)	Date Shipped: 11/15/16
CIV 53 / 60481245	Margie Thach	Carrier: Fedex
Purchase Order Number 77265	Sampler (Signature)	Tracking No.:
		Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil		8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O w/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	SM2320 Alkalinity 300.0 Nitrate,Sulfate,Chloride SM4500 Total Silica	RSK175M Methane	Analysis Requested/Method Number: 8260C Benzene, Toluene, Ethylbenzene, Xylenes, Naphthalene, Methyl-t-butyl ether, Tert-butyl alcohol, Diisopropyl ether, Ethyl-t-butyl ether, Tert-amyl methyl ether, 1,2-Dichloroethane, 1,2-Dibromoethane	Analysis Requested/Method Number: 8260C Ethanol	Comments: Analysis Requested/Method Number: Dissolved Silica
ERH122	RHMW08	11/15/16	0940	HST	20	X				X	X	X	X	X	X		X	X	X	X	X	X	X	
	MT 11/15/16																							

Shuttle Temperature:	Turnaround Requested: Check one: ☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other	Sample Disposal: ☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	11/15/16	1600					
Relinquished by:	**Date**	**Time**	**Received by:**	**Relinquished by:**	**Date**	**Time**	**Received at lab by:**
					11/16/16	1000	

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

3x 1.0 8/500

APPL LABS

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175 0.0
Fax: (559) 275-4422 0.5
C.O.C.

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number	Sampler (Print)
CIV 53 / 60481245	Margie Thach
Purchase Order Number	Sampler (Signature)
77265	

Date Shipped: Fed Ex
Carrier: 11/15/16
Tracking No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil	8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O w SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	SM4500 Nitrate/Nitrite, 300.0 Nitrate, Sulfate, Chloride	RSK175M Methane	[illegible]	[illegible]	[illegible]	Analysis Requested/Method Number
ER-H126	RH-MW05	11/5/16	0940	HST	17	X			X	X	X MT 11/15/16		X	X		X	X	X	XX	X	X	X	X	no DCA

MT 11/15/16

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	11/15/16	1500					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					11/16/16	1000	

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

APPL LABS

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C.

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number: CIV 53 / 60481245
Sampler (Print): Margie Thach
Purchase Order Number: 77265
Sampler (Signature): [signature]

Date Shipped: 11/15/16
Carrier: FedEx
Tracking No.:
Comments:

Analysis Requested/Method Number

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil	Matrix:	8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O w/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM2320 Alkalinity	SM3500 Ferrous Iron	SM4500 Total Silica	300.0 Nitrate, Sulfate, Chloride	RSK175M Methane	SM4500 Dissolved Silica	6010 total metals
ERH128	RHMW04	11/14/16	1730	HST	17	X				X	X			X	X		X	X	X	X	X	X	X	X	X

Not 11/15/16

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	11/15/16	1500					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					11/16/16	1000	[signature]

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

COOLER RECEIPT FORM **ARF: 81500**

1) Project: 60481245 CIV0053 Red Hill Fuel Storage Date Received: 11/16/16

2) Coolers: Number of Coolers: 5

3) YES Were custody seals present and intact?
How many? 10 Name/Date on seal? See below

4) YES Was there a shipping slip? Carrier name: FED EX

5) Type of packing in cooler: X bubble wrap __ popcorn __ foam X plastic bags
X wet ice __ dry ice __ no ice __ other

6) YES Were cooler temperatures acceptable?

7) Serial number of certified NIST thermometer use J5297

8) Cooler temp(s): In °C
1: 0.0 2: 0.5 3: 1.0 4: 1.0 5: 1.0 6: _____
7: _____ 8: _____ 9: _____ 10: _____ 11: _____ 12: _____

Chain of custody:

9) YES Was a chain of custody received?

10) YES Were the custody papers complete/signed in the appropriate places?

Sample Labels:

11) YES Were all sample labels complete (sample ID, date/time of sampling, etc.)?

12) YES Did all container labels agree with custody papers?

Sample Containers:

13) YES Were all containers sealed in separate bags?

14) YES Did all containers arrive in good condition:(unbroken, no leakage, no cracked/broken lids)?

15) YES Were correct containers and preservatives used for the tests indicated?

16) YES Was a sufficient amount of sample sent for tests indicated?

17) NA Were bubbles present in volatile samples?
If yes, the following were received with air bubbles:
Larger than a pea: _____
Smaller than a pea: _____

Preservation Hold time:

18) Yes Was a sufficient amount of holding time remaining to analyze the samples?

19) Yes Was the pH taken of all non-VOA preserved samples and written on the sample container?

20) Yes Was the pH of acid preserved non-VOA samples < 2?

21) NA Was the pH of sodium hydroxide preserved samples for Cyanide > 12 and Sulfide >9?

22) Yes Were unpreserved VOA Vials received?

23) NA Are unpreserved VOA vials noted in the ADD TEST FIELD on the ARF?
pH strip lot number: 90B2031
Lab notified if pH was not adequate: _____

CUSTODY SEAL
APPL, Inc.
(559) 275-2175
Initials KS
Date 11/16/16

Notes/Deficiencies:

COC listed 20 containers for sample ERH122, but received total of 21 containers. Received ferrous iron greater than 24 hours for sample~~s ERH117, ERH121, and ERH128.~~ all KP 11-16-16

Personnel receiving samples: YL Second reviewer: SM

Personnel labeling samples: _____

Project manager notified: YL Date/Time of notification 11/16/16 13:13

Name of client notified: _____ Date/Time of notification _____

Revision: 22, November 5, 2013

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank
EPA 8011

Blank Name/QCG: **161122W-45909 - 213975**
Batch ID: #8011-161122A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	EDB	0.020 U	0.02	0.020	0.010	ug/L	11/22/16	11/22/16
BLANK	SURROGATE: 1,3-DIBROMOPRO	92.0	70-132			%	11/22/16	11/22/16

Quant Method: 80111123.M
Run #: 1101168
Instrument: Herbie
Sequence: 161101
Initials: RHA

GC SC-Blank-REG MDLs-DOD
Printed: 11/23/16 10:52:05 AM

Laboratory Control Spike Recovery

EPA 8011

APPL ID: **161122W-45909 LCS - 213975**
Batch ID: #8011-161122A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
EDB	0.250	0.241	96.4	60-140
SURROGATE: 1,3-DIBROMOPROPANE (	0.350	0.270	77.1	70-132

Comments: _____

Primary	SPK
Quant Method :	80111123.M
Extraction Date :	11/22/16
Analysis Date :	11/22/16
Instrument :	Herbie
Run :	1101170
Initials :	RHA

Printed: 11/23/16 10:52:00 AM
APPL Standard LCS

8011

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81500

Case No: 81500 Date Analyzed: 11/22/16

Matrix: WATER Instrument: Herbie

APPL ID.	Client Sample No.	SURROGATE: 1,3-DIBROMOPROPANE (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
161122A-BLK	Blank	70-132	92.0				
161122A-LCS	Lab Control Spike	70-132	77.1				
AZ45909	ERH122	70-132	103				

Comments: Batch: #8011-161122A

8011

Form 4

Blank Summary

Lab Name: APPL, Inc.
Case No: 81500
Matrix: WATER
Blank ID: 161122A-BLK

SDG No: 81500
Date Analyzed: 11/22/16
Instrument: Herbie
Time Analyzed: 2040

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161122A-BLK	Blank	1101168	11/22/16 2040
161122A-LCS	Lab Control Spike	1101170	11/22/16 2120
AZ45909	ERH122	1101171	11/22/16 2140

Comments: Batch: #8011-161122A

Printed: 11/23/16 10:51:57 AM
Form 4, Blank Summary

ORGANICS

Sample Data

APPL, INC.

EPA 8011

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH122
Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81500
APPL ID: AZ45909
QCG: #8011-161122A-213975

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8011	EDB	0.020 U	0.02	0.020	0.010	ug/L	11/22/16	11/22/16
8011	SURROGATE: 1,3-DIBROMOPROPANE	103	70-132			%	11/22/16	11/22/16

Quant Method: 80111123.M
Run #: 1101171
Instrument: Herbie
Sequence: 161101
Dilution Factor: 1
Initials: RHA

Printed: 11/23/16 10:51:55 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\161101\1101171.D\ECD1A.CH Vial: 71
Signal_#2 : G:\HERBIE\DATA\161101\1101171.D\ECD2B.CH
Acq On : 11-22-16 21:40:42 Operator: RH
Sample : AZ45909W08 2/35.73G Inst : Herbie
Misc : Multiplr: 0.98
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Nov 23 10:18 2016 Quant Results File: 80111123.RES

Quant Method : G:\HERBIE\DATA\161101\80111123.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Nov 23 09:28:27 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

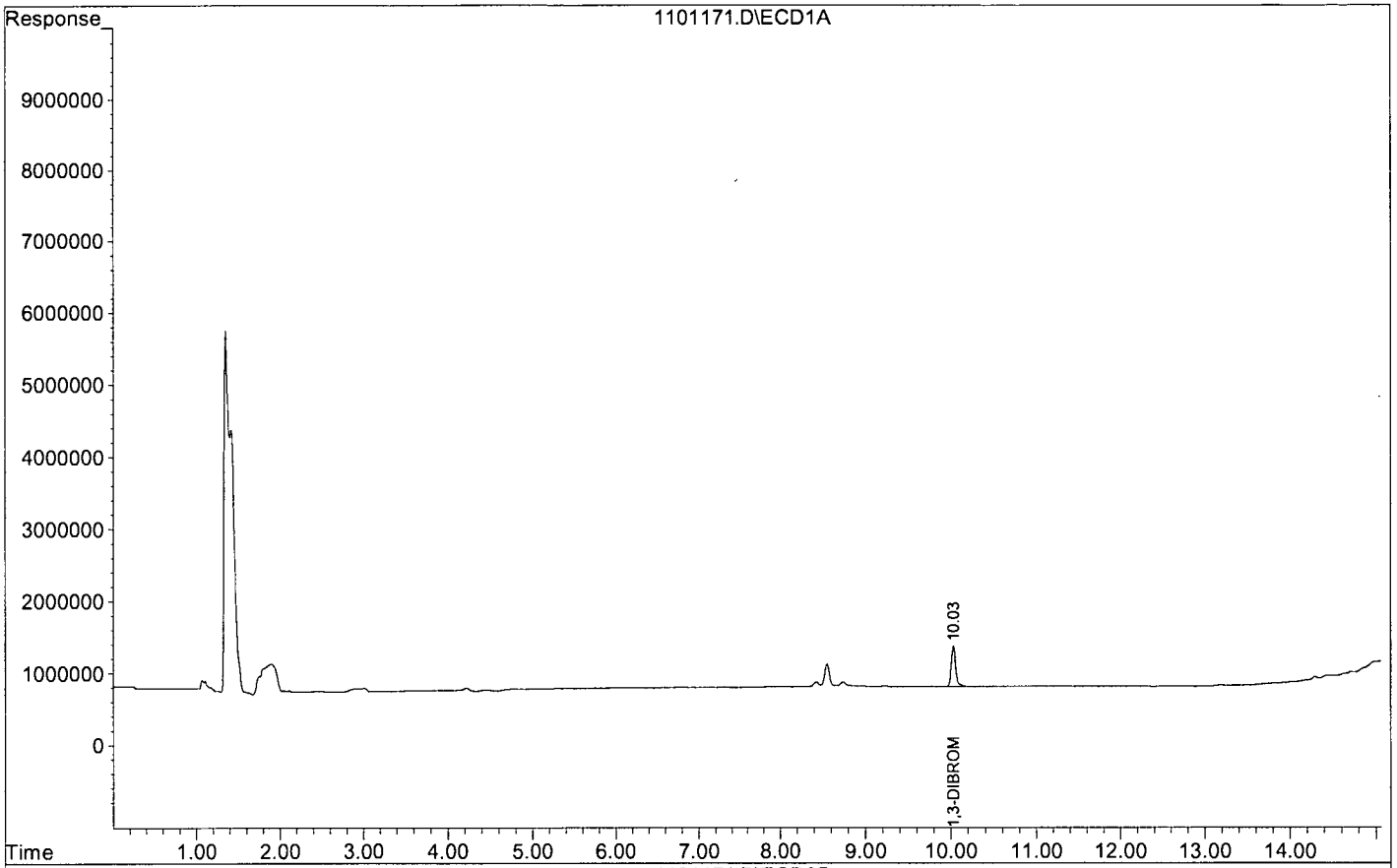
Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

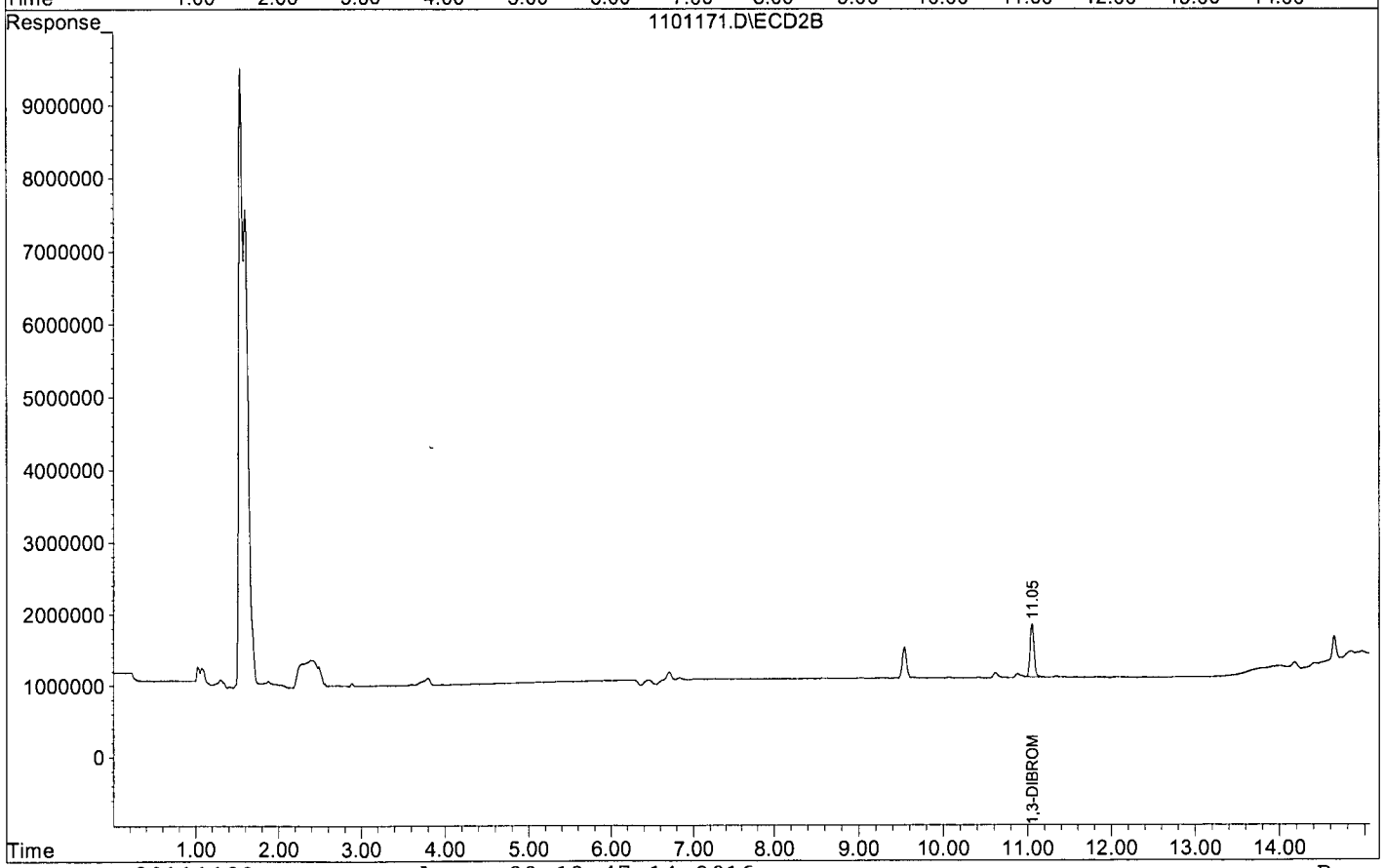
Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
3) S 1,3-DIBROMOPROPA	10.03	11.05	569764	744526	0.352	0.361
Spiked Amount 0.343			Recovery	=	102.67%	105.29%
Target Compounds						
Target Compounds						
1) TM EDB	0.00	0.00	0	0	N.D. d	N.D. d
2) TM 1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4) TM DBCP	0.00	0.00	0	0	N.D. d	N.D. d

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\161101\1101171.D Vial: 71
Acq On : 11-22-16 21:40:42 Operator: RH
Sample : AZ45909W08 2/35.73G Inst : Herbie
Misc : Multiplr: 0.98
Quant Method : G:\HERBIE\DATA\161101\80111123.M





ORGANICS

Calibration Data

APPL, INC.

DBCP/EDB/1,2,3-TCP Analysis by
504 8011 0301

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 11/22/16
Matrix: Instrument: Herbie
Initials:

		Compound	1101161.D	1101162.D	1101163.D	1101164.D	1101165.D	1101166.D					Avg	%RSD		
1	TML	EDB	905500	667785	660730	548370	550910	584803					653016	21	TML	0.996
2	TML	1,2,3-TCP	26900	255500	239182	204104	209537	211446					191112	43	TML	0.997
3	S	1,3-DIBROMOPROPANE(S)	605900	963000	873508	746696	769936	792435					791912	15	S	
4	TM	DBCP	2030625	2651995	2569122	2228201	2442355	2585221					2417920	10.0	TM	
5		Signal #2											0	0		
6																
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2.5480141

DBCP/EDB/1,2,3-TCP Analysis by
504 8011 0301

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 11/22/16
Matrix: Instrument: Herbie Initials:

		Compound	1101161.D	1101162.D	1101163.D	1101164.D	1101165.D	1101166.D					Avg	%RSD		
36	TM	EDB #2	1730600	1746165	1820586	1569188	1615566	1666058					1691361	5.5	TM	
37	TM	1,2,3-TCP #2	260900	282210	294928	260248	266834	277358					273746	5.0	TM	
38	S	1,3-DIBROMOPROPANE(S) #2	924200	1104780	1114742	976338	961335	975918					1009552	7.9	S	
39	TM	DBCP #2	3530325	4225010	4235268	3278315	4013675	4339088					3936947	11	TM	
40																
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Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161101\1101161.D\ECD1A.CH Vial: 61
Signal #2 : G:\HERBIE\DATA\161101\1101161.D\ECD2B.CH
Acq On : 11-22-16 18:21:41 Operator: RH
Sample : 8011 1 11/22/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Nov 23 9:18 2016 Quant Results File: 80111123.RES

Quant Method : G:\HERBIE\DATA\161101\80111123.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Nov 23 09:16:35 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

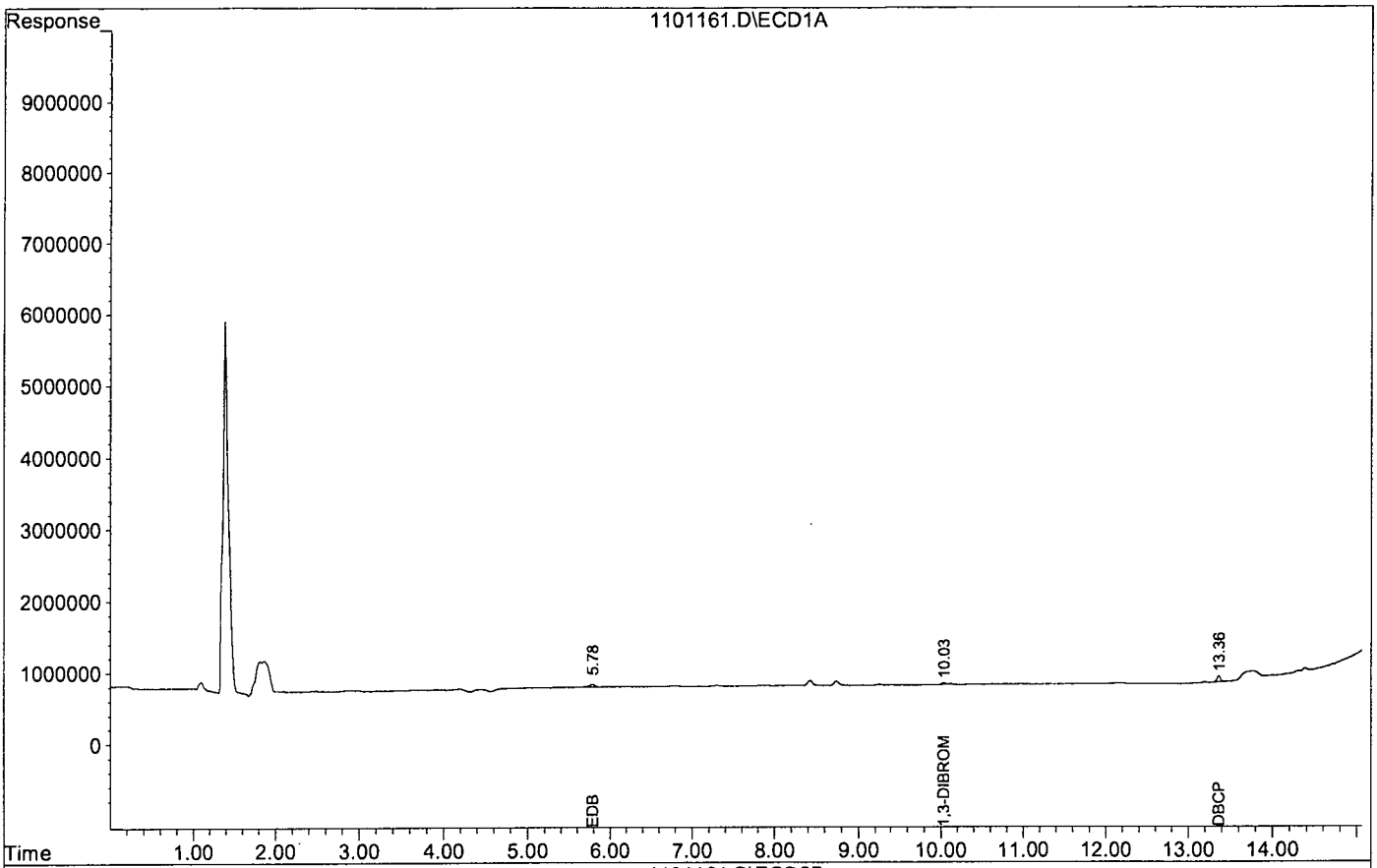
Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

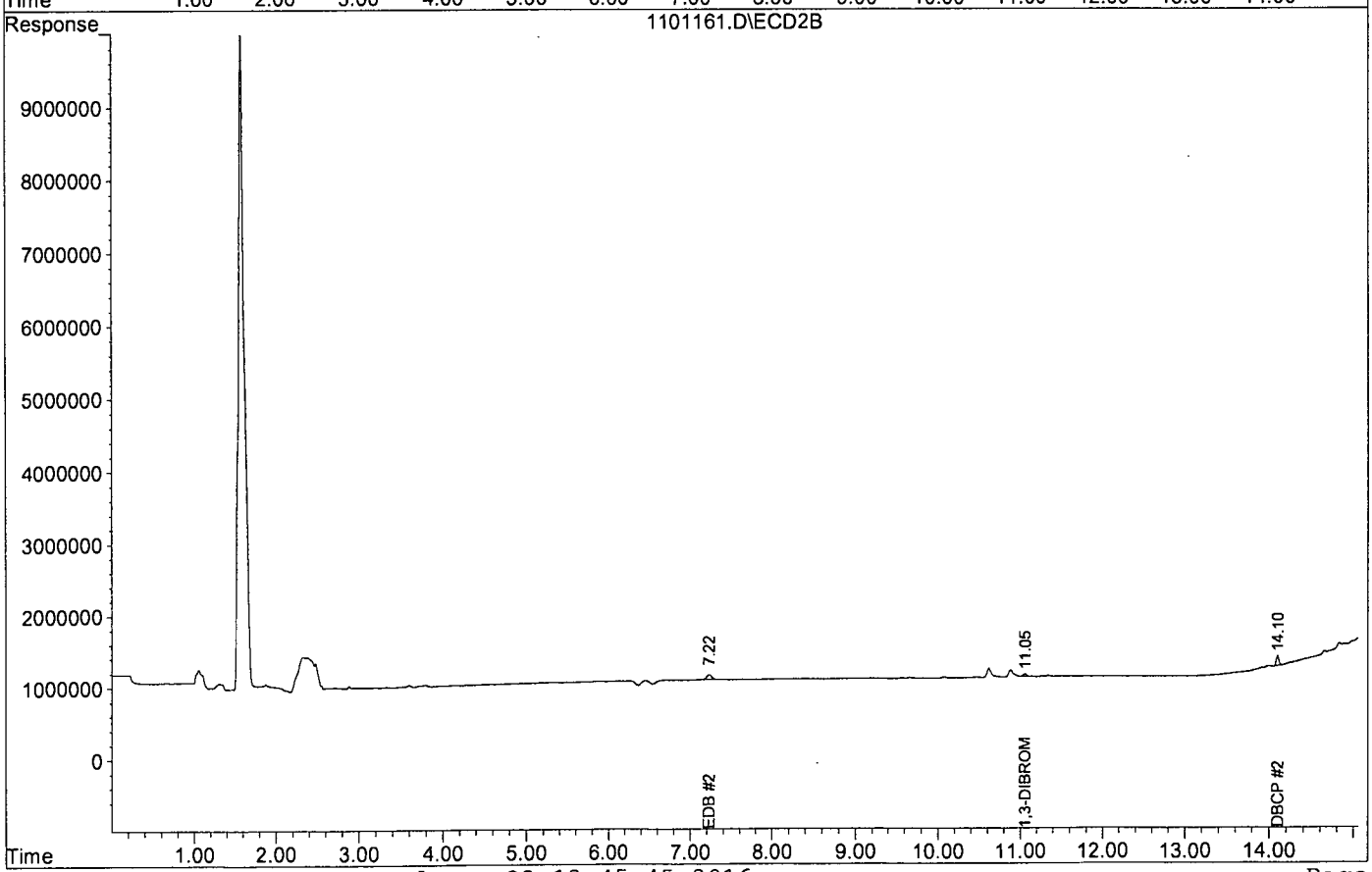
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	24236	36968	0.014	0.017
Spiked Amount	0.350			Recovery	=	4.00%	4.86%
	Target Compounds						
1) TM	EDB	5.78	7.22	36220	69224	0.031	0.020 #
4) TM	DBCP	13.36	14.10	81225	141213	0.015	0.017
	Target Compounds						
2) TM	1,2,3-TCP	9.24	10.46	1076	10436	N.D.	N.D.

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161101\1101161.D Vial: 61
Acq On : 11-22-16 18:21:41 Operator: RH
Sample : 8011 1 11/22/16 Inst : Herbie
Misc : Multiplr: 1.00
Quant Method : G:\HERBIE\DATA\161101\80111123.M





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161101\1101162.D\ECD1A.CH Vial: 62
Signal #2 : G:\HERBIE\DATA\161101\1101162.D\ECD2B.CH
Acq On : 11-22-16 18:41:37 Operator: RH
Sample : 8011 2 11/22/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Nov 23 9:18 2016 Quant Results File: 80111123.RES

Quant Method : G:\HERBIE\DATA\161101\80111123.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Nov 23 09:16:35 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	192600	220956	0.112	0.105
Spiked Amount	0.350			Recovery	=	32.00%	30.00%
	Target Compounds						
1) TM	EDB	5.80	7.22	133557	349233	0.113	0.099
2) TM	1,2,3-TCP	9.26	10.46	51100	56442	0.029	0.030
4) TM	DBCP	13.36	14.10	530399	845002	0.098	0.099

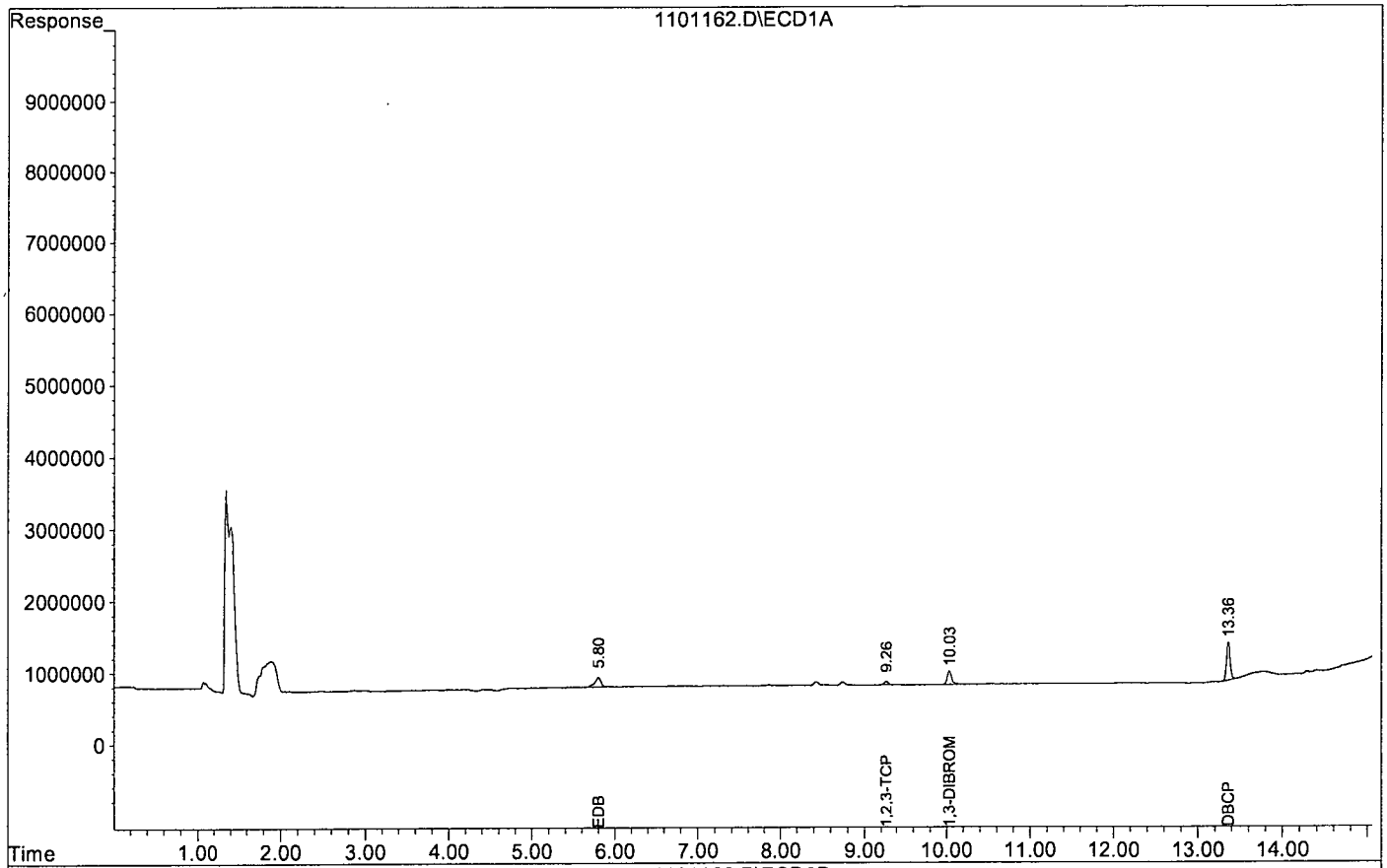
Target Compounds

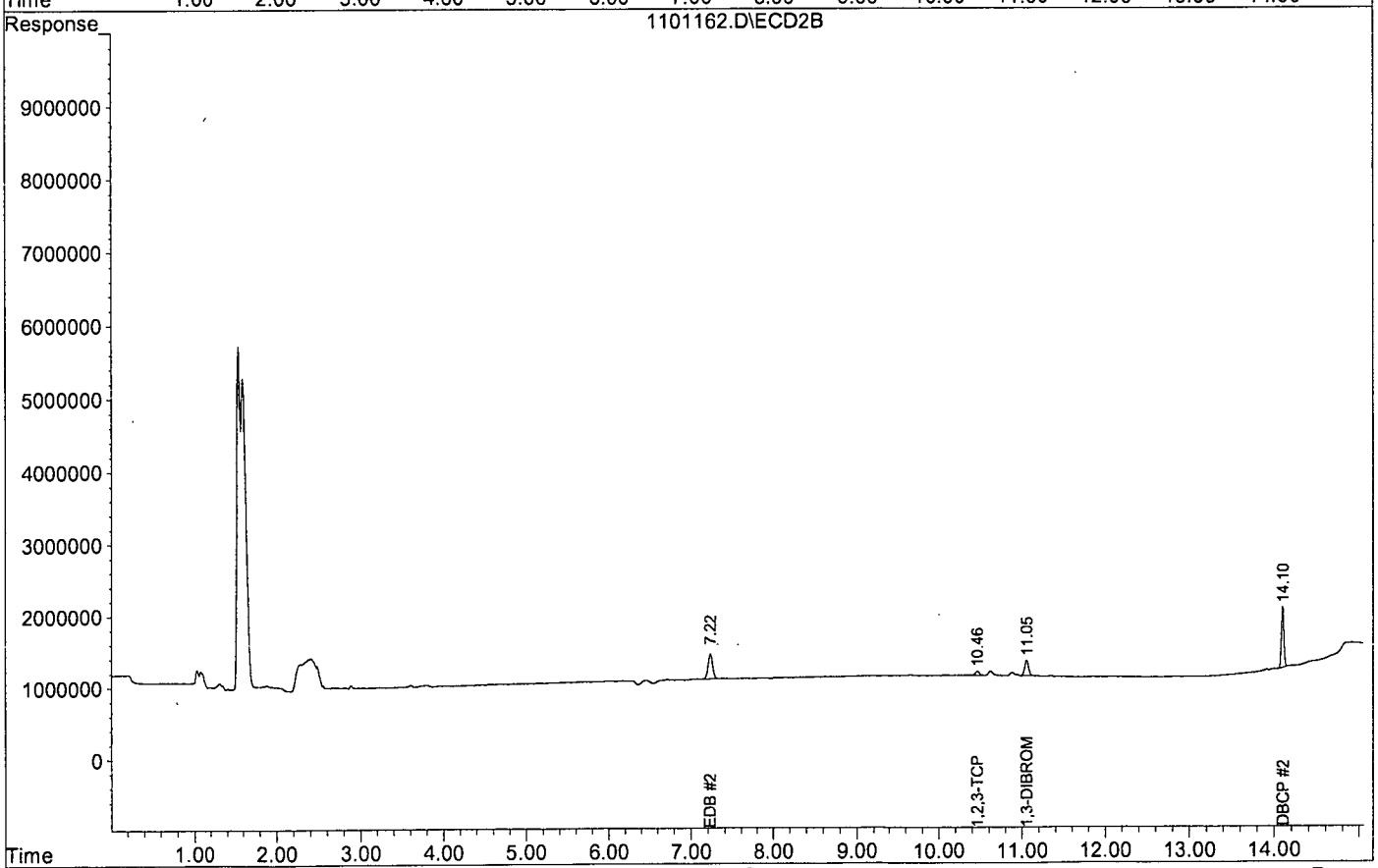
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161101\1101162.D
Acq On : 11-22-16 18:41:37
Sample : 8011 2 11/22/16
Misc :
Quant Method : G:\HERBIE\DATA\161101\80111123.M

Vial: 62
Operator: RH
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161101\1101163.D\ECD1A.CH Vial: 63
Signal #2 : G:\HERBIE\DATA\161101\1101163.D\ECD2B.CH
Acq On : 11-22-16 19:01:36 Operator: RH
Sample : 8011 3 11/22/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Nov 23 9:18 2016 Quant Results File: 80111123.RES

Quant Method : G:\HERBIE\DATA\161101\80111123.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Nov 23 09:16:35 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

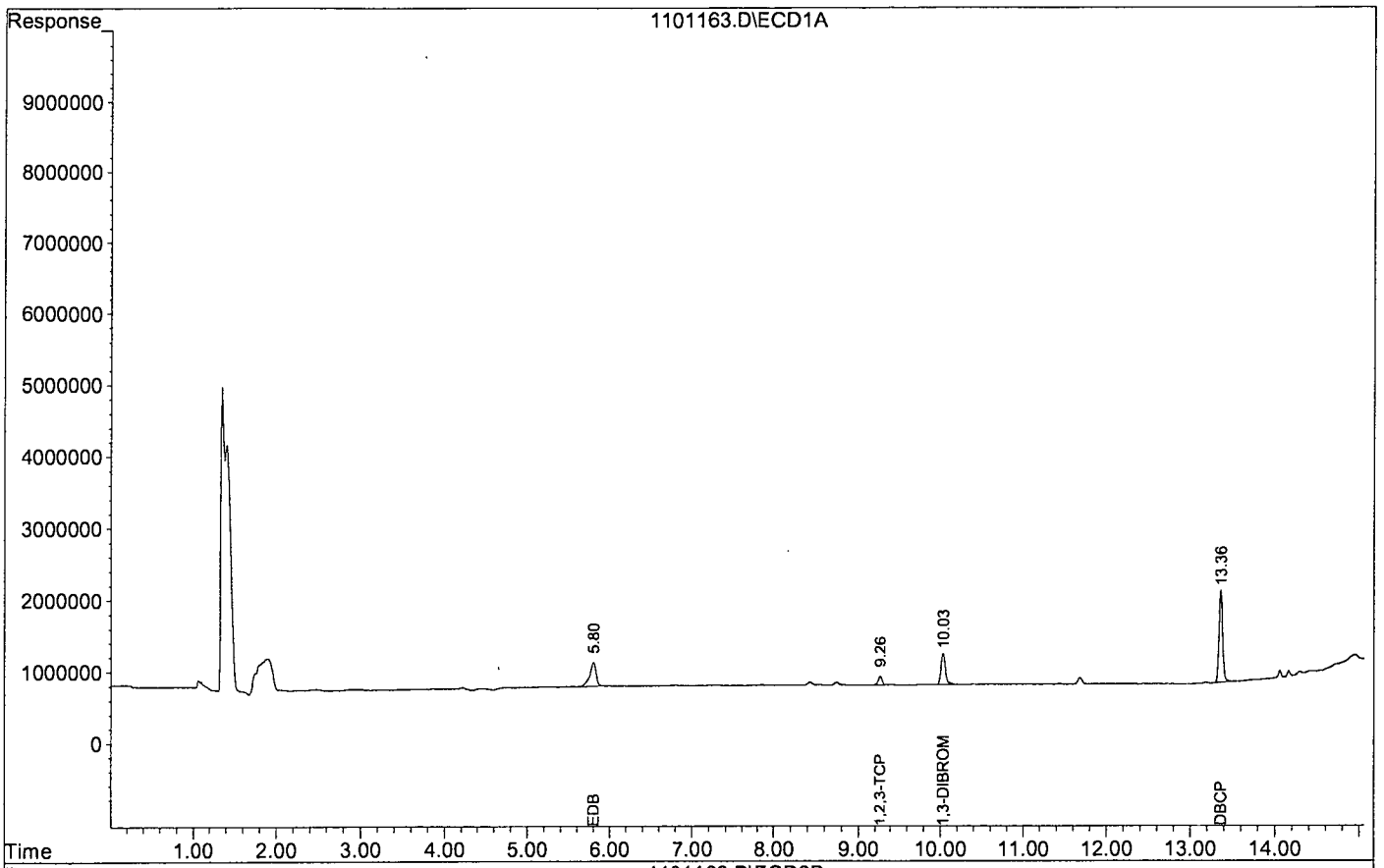
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	436754	557371	0.253	0.264
Spiked Amount	0.350			Recovery	=	72.29%	75.43%
	Target Compounds						
1) TM	EDB	5.80	7.22	330365	910293	0.281	0.259
2) TM	1,2,3-TCP	9.26	10.46	119591	147464	0.205	0.199
4) TM	DBCP	13.36	14.10	1284561	2117634	0.238	0.249

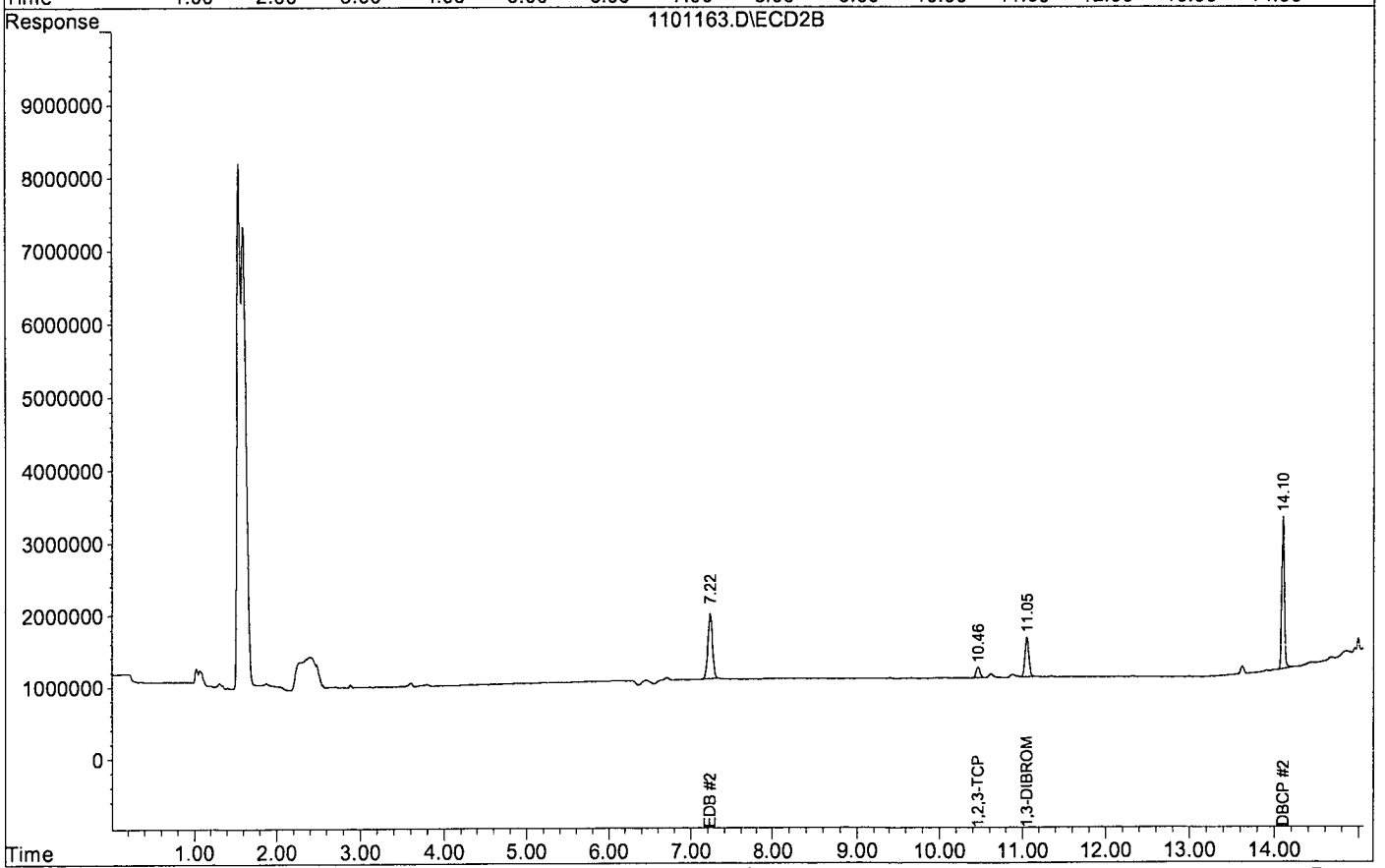
Target Compounds

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161101\1101163.D Vial: 63
Acq On : 11-22-16 19:01:36 Operator: RH
Sample : 8011 3 11/22/16 Inst : Herbie
Misc : Multiplr: 1.00
Quant Method : G:\HERBIE\DATA\161101\80111123.M





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161101\1101164.D\ECD1A.CH Vial: 64
Signal #2 : G:\HERBIE\DATA\161101\1101164.D\ECD2B.CH
Acq On : 11-22-16 19:21:27 Operator: RH
Sample : 8011 4 11/22/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Nov 23 9:18 2016 Quant Results File: 80111123.RES

Quant Method : G:\HERBIE\DATA\161101\80111123.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Nov 23 09:16:35 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

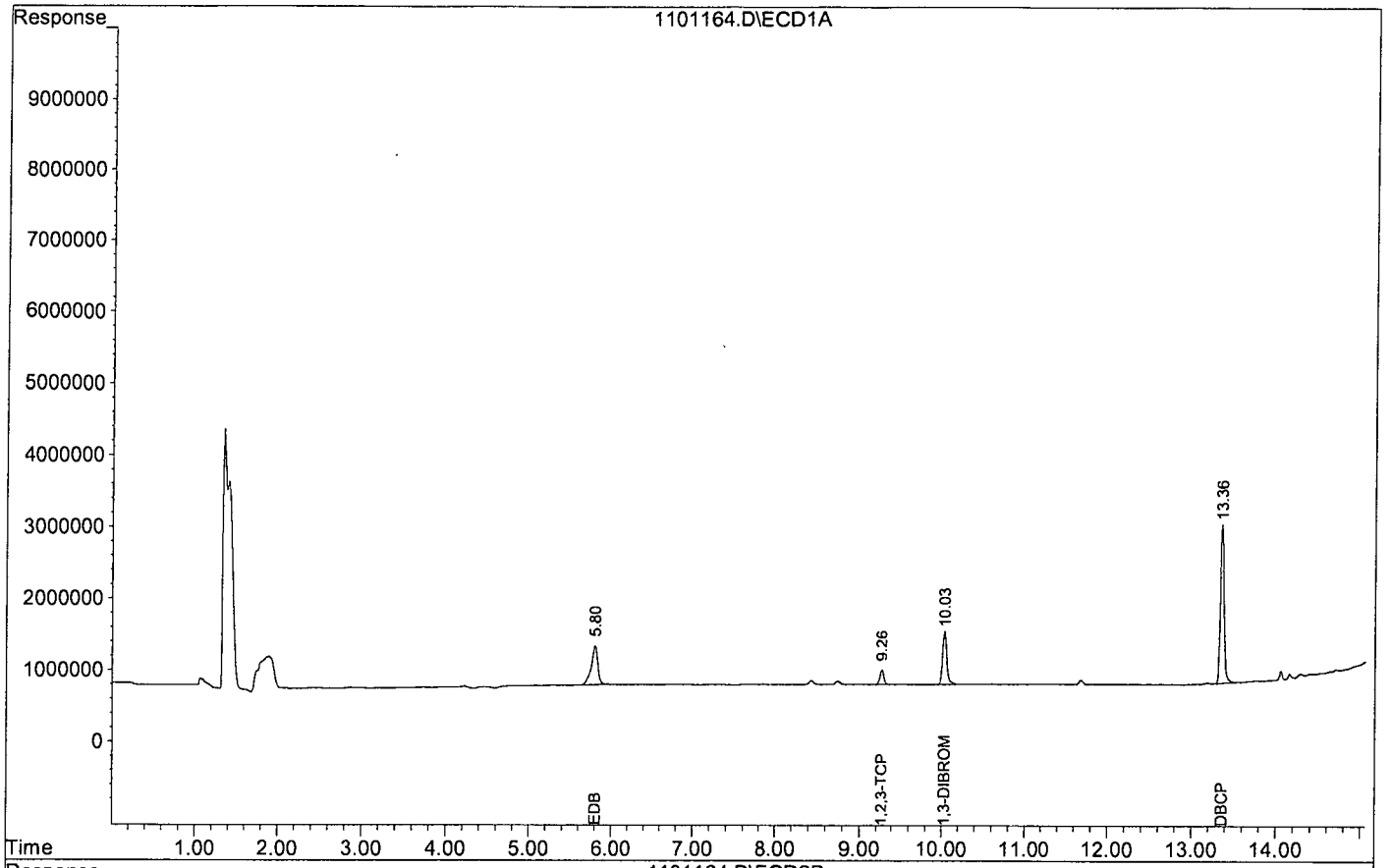
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	746696	976338	0.432	0.462
Spiked Amount	0.350			Recovery	=	123.43%	132.00%
	Target Compounds						
1) TM	EDB	5.80	7.23	548370	1569188	0.466	0.446
2) TM	1,2,3-TCP	9.26	10.46	204104	260248	0.423	0.409
4) TM	DBCP	13.36	14.10	2228201	3278315	0.413	0.385

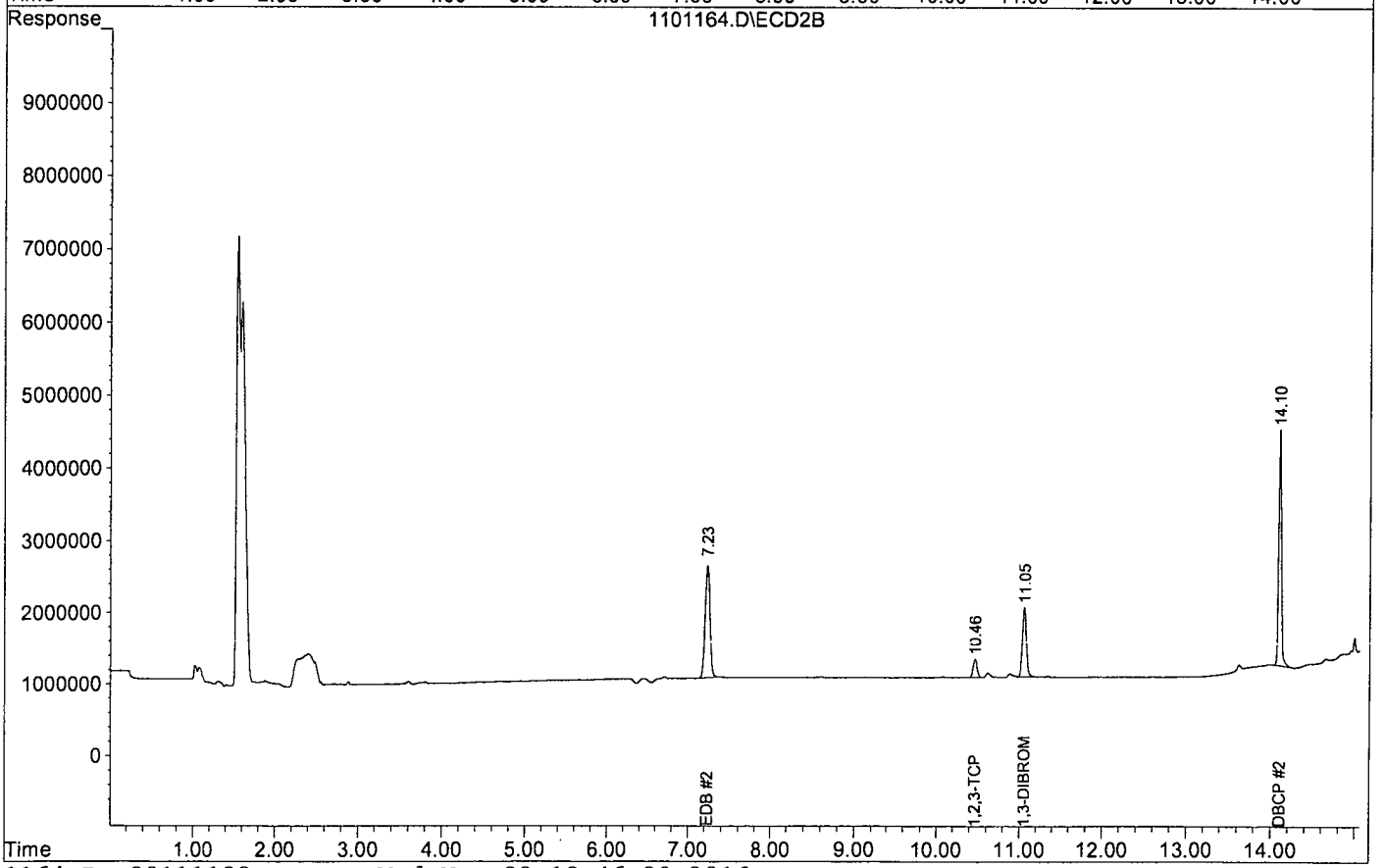
Target Compounds

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161101\1101164.D Vial: 64
Acq On : 11-22-16 19:21:27 Operator: RH
Sample : 8011 4 11/22/16 Inst : Herbie
Misc : Multiplr: 1.00
Quant Method : G:\HERBIE\DATA\161101\80111123.M





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161101\1101165.D\ECD1A.CH Vial: 65
Signal #2 : G:\HERBIE\DATA\161101\1101165.D\ECD2B.CH
Acq On : 11-22-16 19:41:21 Operator: RH
Sample : 8011 5 11/22/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Nov 23 9:18 2016 Quant Results File: 80111123.RES

Quant Method : G:\HERBIE\DATA\161101\80111123.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Nov 23 09:16:35 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

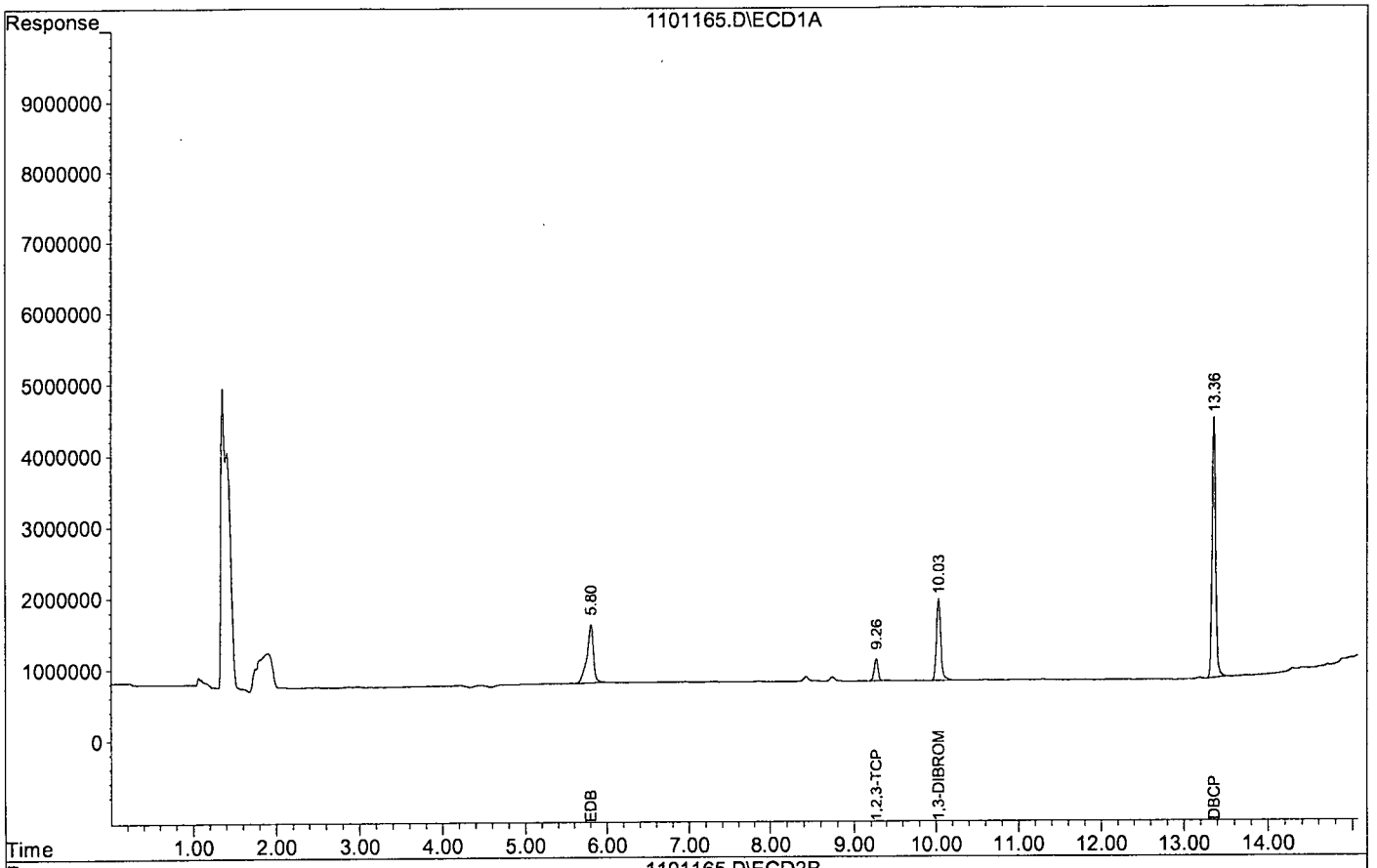
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	1154904	1442002	0.669	0.682
Spiked Amount	0.350			Recovery	=	191.14%	194.86%
	Target Compounds						
1) TM	EDB	5.80	7.23	826365	2423349	0.702	0.689
2) TM	1,2,3-TCP	9.26	10.46	314306	400251	0.707	0.670
4) TM	DBCP	13.36	14.10	3663532	6020512	0.679	0.707

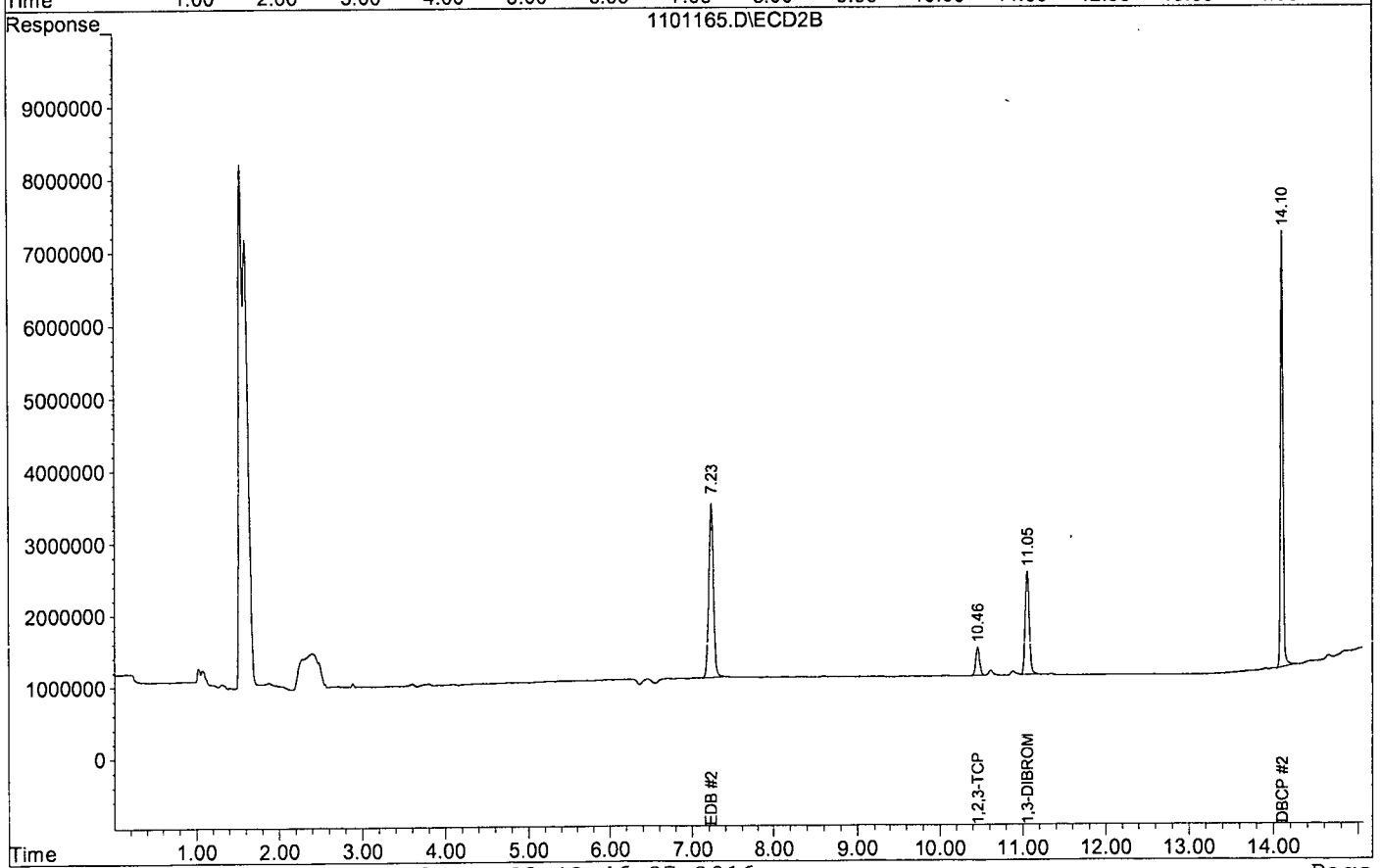
Target Compounds

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161101\1101165.D Vial: 65
Acq On : 11-22-16 19:41:21 Operator: RH
Sample : 8011 5 11/22/16 Inst : Herbie
Misc : Multiplr: 1.00
Quant Method : G:\HERBIE\DATA\161101\80111123.M





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161101\1101166.D\ECD1A.CH Vial: 66
Signal #2 : G:\HERBIE\DATA\161101\1101166.D\ECD2B.CH
Acq On : 11-22-16 20:01:16 Operator: RH
Sample : 8011 6 11/22/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Nov 23 9:18 2016 Quant Results File: 80111123.RES

Quant Method : G:\HERBIE\DATA\161101\80111123.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Nov 23 09:16:35 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

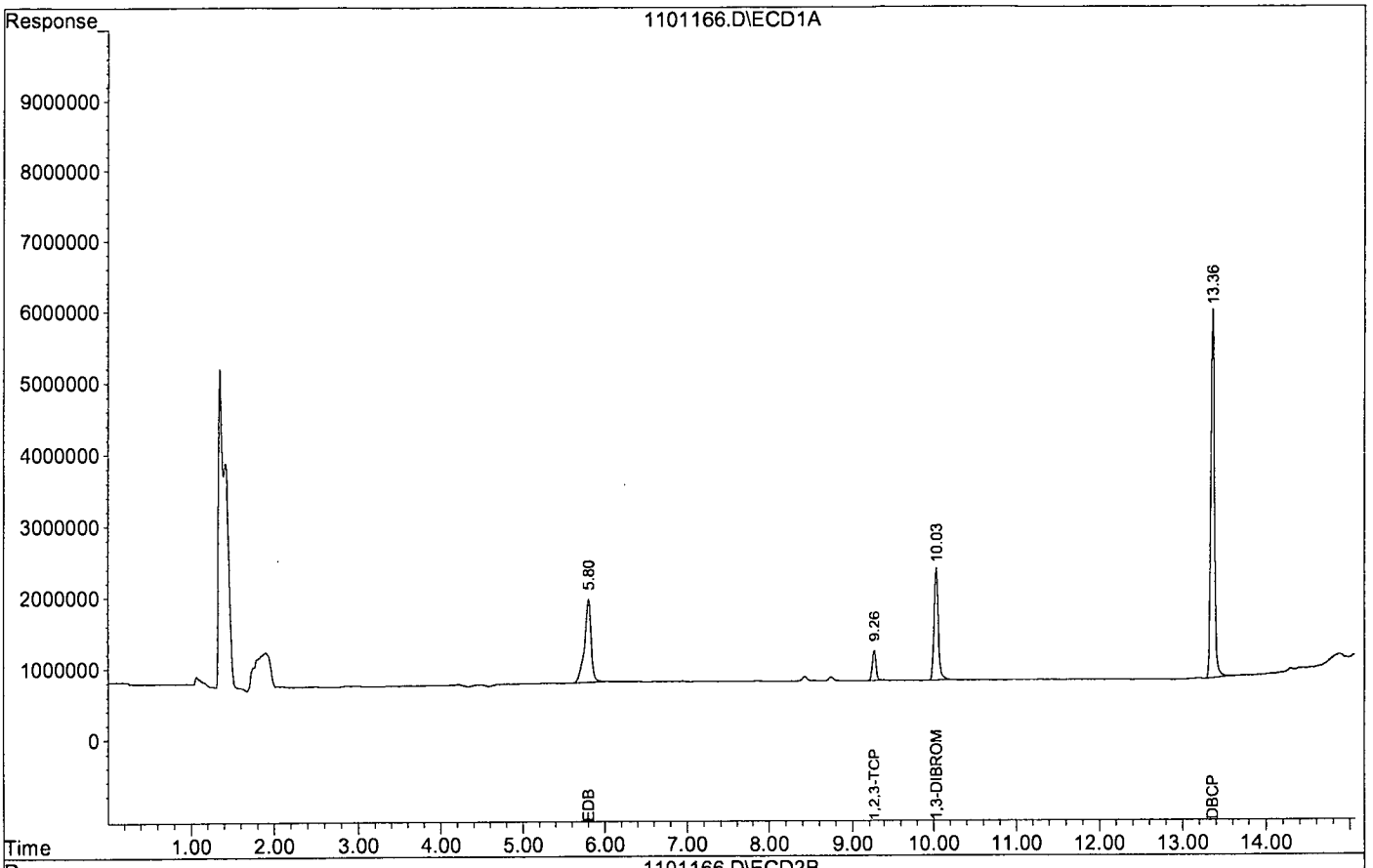
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	1584869	1951836	0.918	0.923
Spiked Amount	0.350			Recovery	=	262.29%	263.71%
	Target Compounds						
1) TM	EDB	5.80	7.23	1169605	3332116	0.993	0.947
2) TM	1,2,3-TCP	9.26	10.46	422892	554715	0.986	0.957
4) TM	DBCP	13.36	14.10	5170442	8678175	0.959	1.020

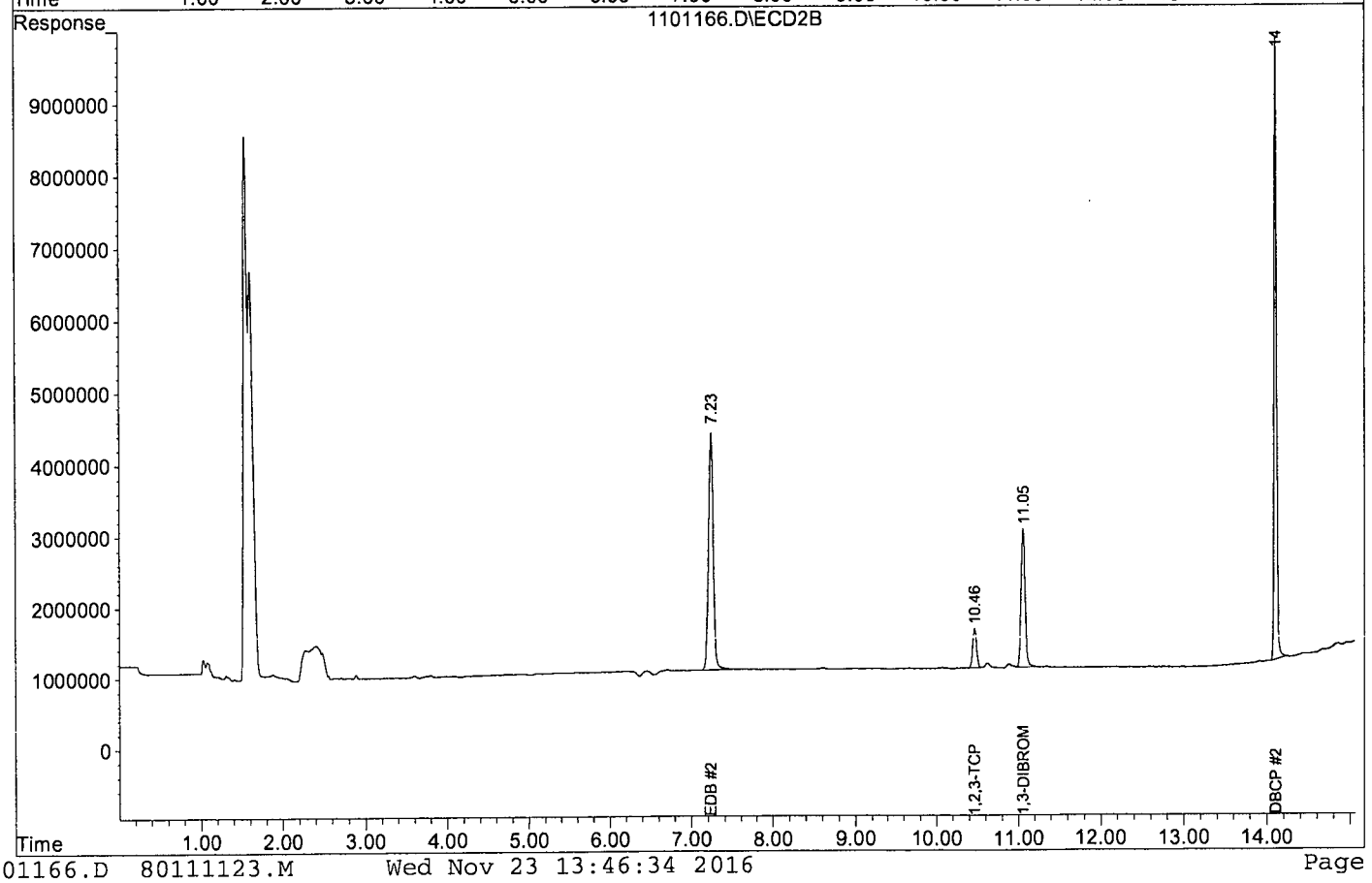
Target Compounds

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161101\1101166.D Vial: 66
Acq On : 11-22-16 20:01:16 Operator: RH
Sample : 8011 6 11/22/16 Inst : Herbie
Misc : Multiplr: 1.00
Quant Method : G:\HERBIE\DATA\161101\80111123.M





Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/22/16
Instrument: Herbie
Initial Cal. Date: 11/22/16
Data File: 1101169.D

		Compound	MEAN	CCRF	%D	%Drift		
1	TML	EDB	653016	773310	18	TML	22	*
2	TML	1,2,3-TCP	191112	285775	50	TML	29	*
3	TM	DBCP	2417920	2983980	23	TM		*
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
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21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								
		Average			30.3			

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 11/22/16
Instrument: Herbie
Cal. Date: 11/22/16
Data File: 1101169.D

		Compound	MEAN	CCRF	%D	%Drift	
41	TM	EDB	1691360	1913160	13	TM	
42	TM	1,2,3-TCP	273746	338760	24	TM	*
43	TM	DBCP	3936950	4969590	26	TM	*
44							
45							
46							
47							
48							
49							
50							
51							
52							
53							
54							
55							
56							
57							
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68							
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							
79							
80							
		Average			21.0		

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161101\1101169.D\ECD1A.CH Vial: 69
Signal #2 : G:\HERBIE\DATA\161101\1101169.D\ECD2B.CH
Acq On : 11-22-16 21:00:52 Operator: RH
Sample : 161122A LCS-1 2/35.98G Inst : Herbie
Misc : Multiplr: 0.97
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Nov 23 9:34 2016 Quant Results File: 80111123.RES

Quant Method : G:\HERBIE\DATA\161101\80111123.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Nov 23 09:28:27 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
3) S 1,3-DIBROMOPROPA	10.03	11.05	533687	692288	0.328	0.334
Spiked Amount 0.340			Recovery =		96.34%	98.10%
Target Compounds						
1) TM EDB	5.80	7.23	154662	382632	0.119	0.110
2) TM 1,2,3-TCP	9.26	10.46	57155	67752	0.126	0.120
4) TM DBCP	13.36	14.10	596796	993917	0.120	0.123

Target Compounds

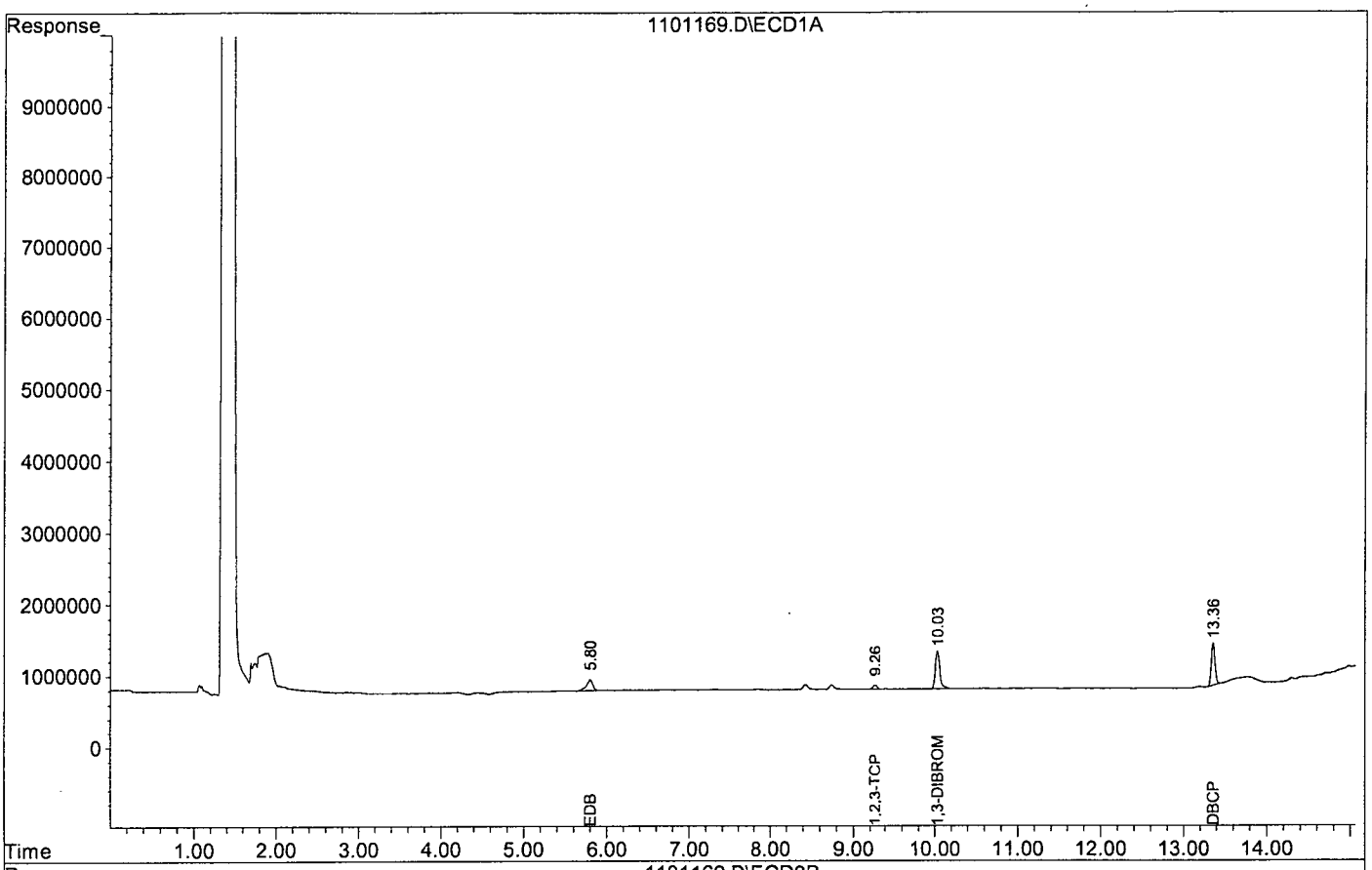
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
1101169.D 80111123.M Wed Nov 23 13:59:33 2016

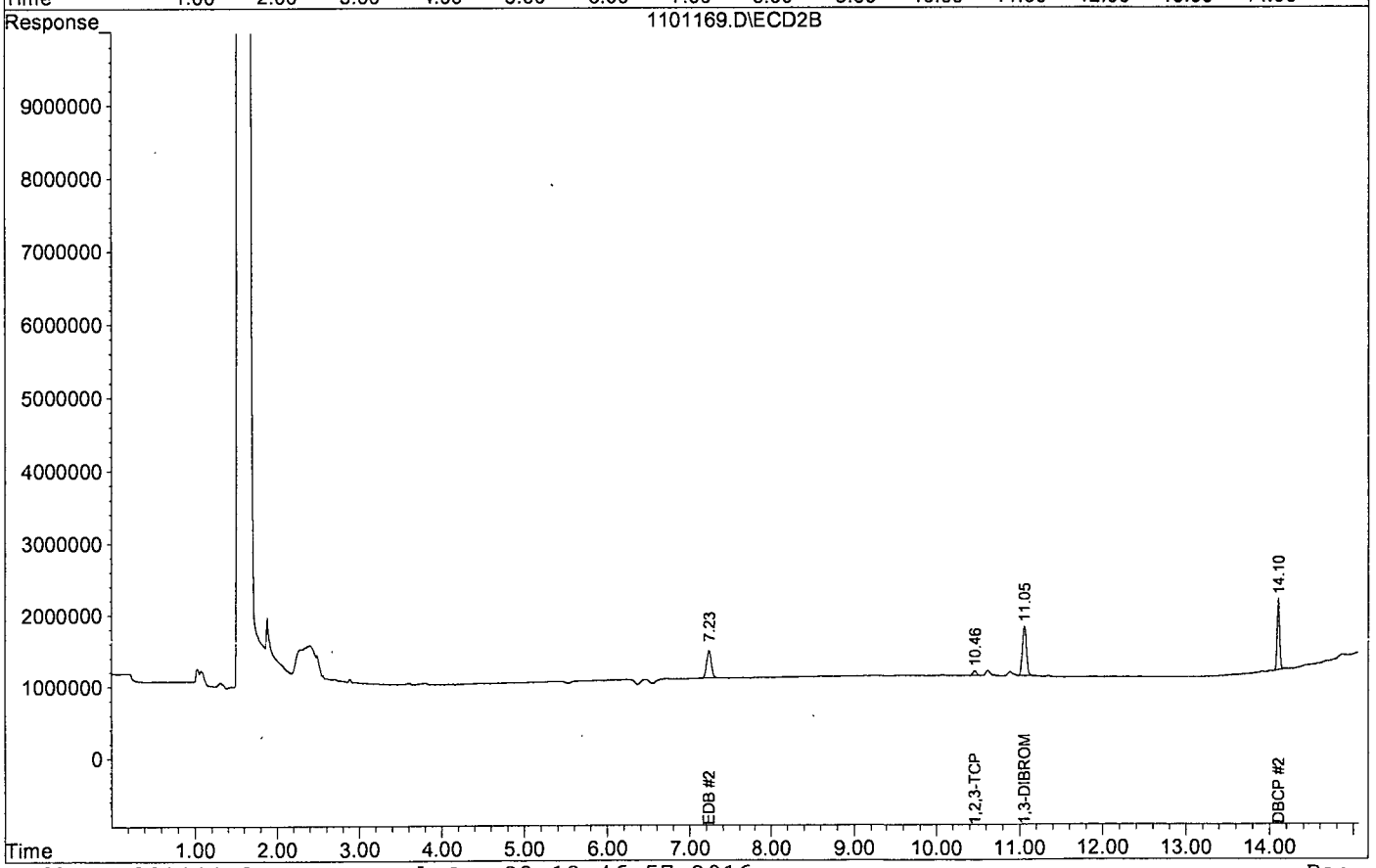
$$\text{Algorithum} = \frac{382632 * 0.97}{1691361 * 2} = 0.1097$$

RH 11/23/16

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161101\1101169.D Vial: 69
Acq On : 11-22-16 21:00:52 Operator: RH
Sample : 161122A LCS-1 2/35.98G Inst : Herbie
Misc : Multiplr: 0.97
Quant Method : G:\HERBIE\DATA\161101\80111123.M





Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/22/16
Instrument: Herbie
Initial Cal. Date: 11/22/16
Data File: 1101176.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TML	EDB	653016	608104	6.9	TML	2.1
2	TML	1,2,3-TCP	191112	250148	31	TML	17
3	S	1,3-DIBROMOPROPANE(S)	791912	904942	14	S	
4	TM	DBCP	2417920	2733050	13	TM	
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
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22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			16.2		

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 11/22/16
Instrument: Herbie
Cal. Date: 11/22/16
Data File: 1101176.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	EDB	1691360	1808100	6.9	TM	
42	TM	1,2,3-TCP	273746	298174	8.9	TM	
43	S	1,3-DIBROMOPROPANE(S)	1009550	1108280	9.8	S	
44	TM	DBCP	3936950	4052980	2.9	TM	
45							
46							
47							
48							
49							
50							
51							
52							
53							
54							
55							
56							
57							
58							
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62							
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66							
67							
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							
79							
80							
		Average			7.1		

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161101\1101176.D\ECD1A.CH Vial: 76
Signal #2 : G:\HERBIE\DATA\161101\1101176.D\ECD2B.CH
Acq On : 11-22-16 23:20:04 Operator: RH
Sample : 8011 3 11/22/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Nov 23 9:29 2016 Quant Results File: 80111123.RES

Quant Method : G:\HERBIE\DATA\161101\80111123.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Nov 23 09:28:27 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

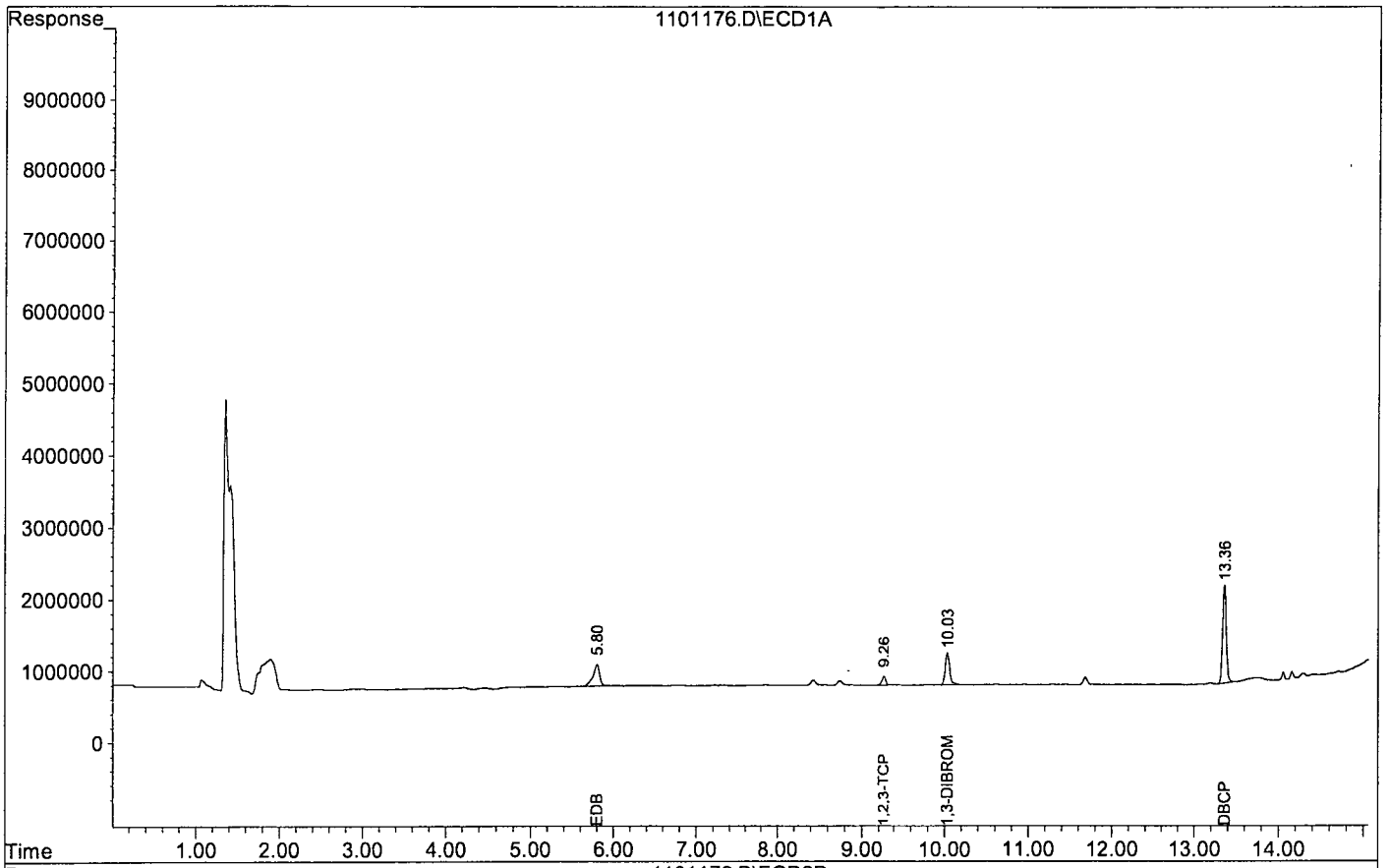
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	452471	554139	0.286	0.274
Spiked Amount	0.350			Recovery	=	81.71%	78.29%
	Target Compounds						
1) TM	EDB	5.80	7.23	304052	904052	0.255	0.267
2) TM	1,2,3-TCP	9.26	10.46	125074	149087	0.292	0.272
4) TM	DBCP	13.36	14.10	1366527	2026492	0.283	0.257

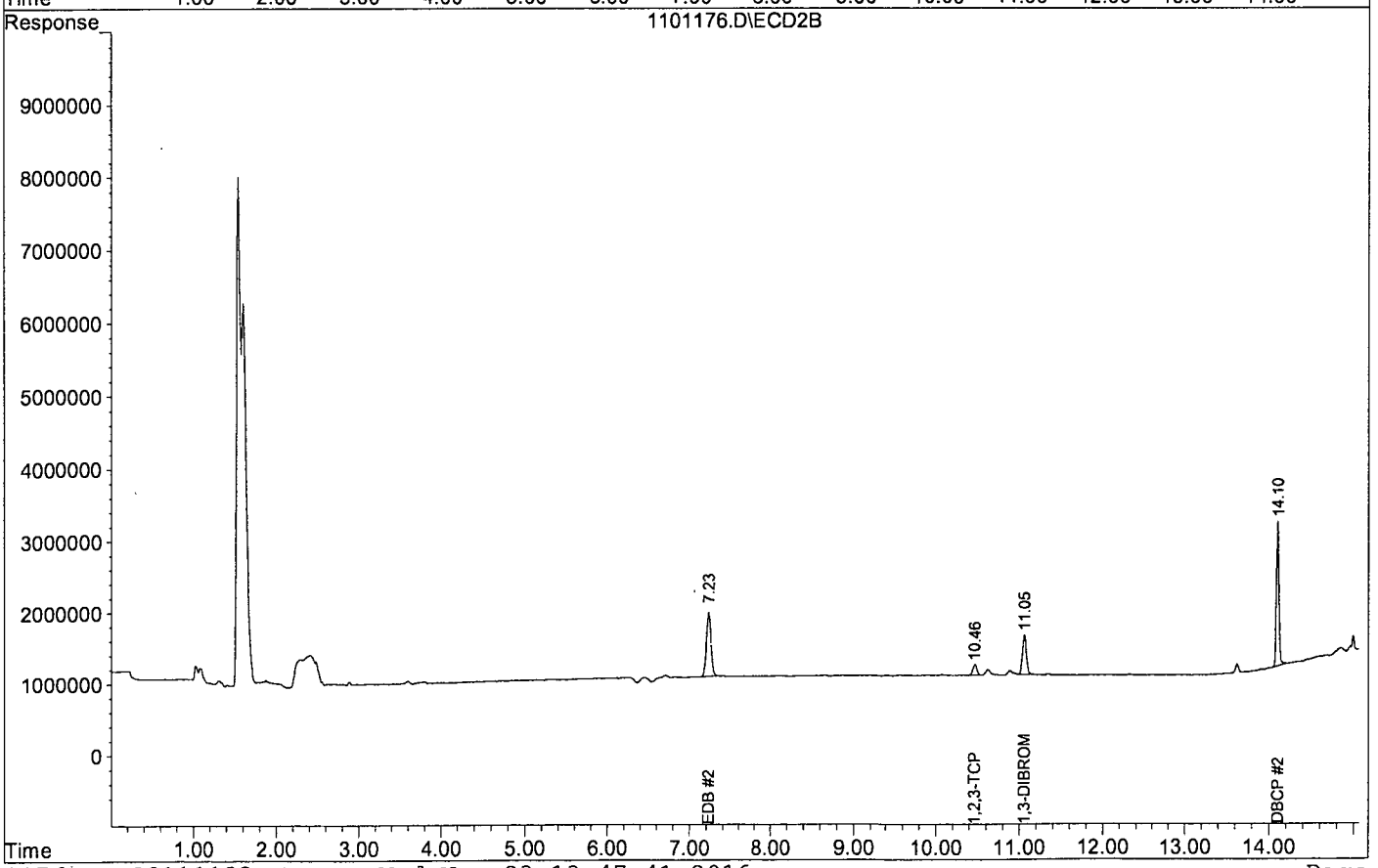
Target Compounds

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161101\1101176.D Vial: 76
Acq On : 11-22-16 23:20:04 Operator: RH
Sample : 8011 3 11/22/16 Inst : Herbie
Misc : Multiplr: 1.00
Quant Method : G:\HERBIE\DATA\161101\80111123.M





ORGANICS

Raw Data

APPL, INC.

Method Blank
EPA 8011

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161122W-45909 - 213975**
Batch ID: #8011-161122A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	EDB	0.020 U	0.02	0.020	0.010	ug/L	11/22/16	11/22/16
BLANK	SURROGATE: 1,3-DIBROMOPRO	92.0	70-132			%	11/22/16	11/22/16

Quant Method: 80111123.M
Run #: 1101168
Instrument: Herbie
Sequence: 161101
Initials: RHA

GC SC-Blank-REG MDLs-DOD
Printed: 11/23/16 10:52:05 AM

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\161101\1101168.D\ECD1A.CH Vial: 68
Acq On : 11-22-16 20:40:59 Operator: RH
Sample : 161122A BLK 2/34.67G Inst : Herbie
Misc : Multiplr: 1.01
IntFile : rteint.p

Data File : G:\HERBIE\DATA\161101\1101168.D\ECD2B.CH Vial: 68
Acq On : 11-22-16 20:41:00 Operator: RH
Sample : 161122A BLK 2/34.67G Inst : Herbie
Misc : Multiplr: 1.01
IntFile : rteint2.p
Quant Time: Nov 23 9:44 2016 Quant Results File: 80111123.RES

Quant Method : G:\HERBIE\DATA\161101\80111123.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Nov 23 09:28:27 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

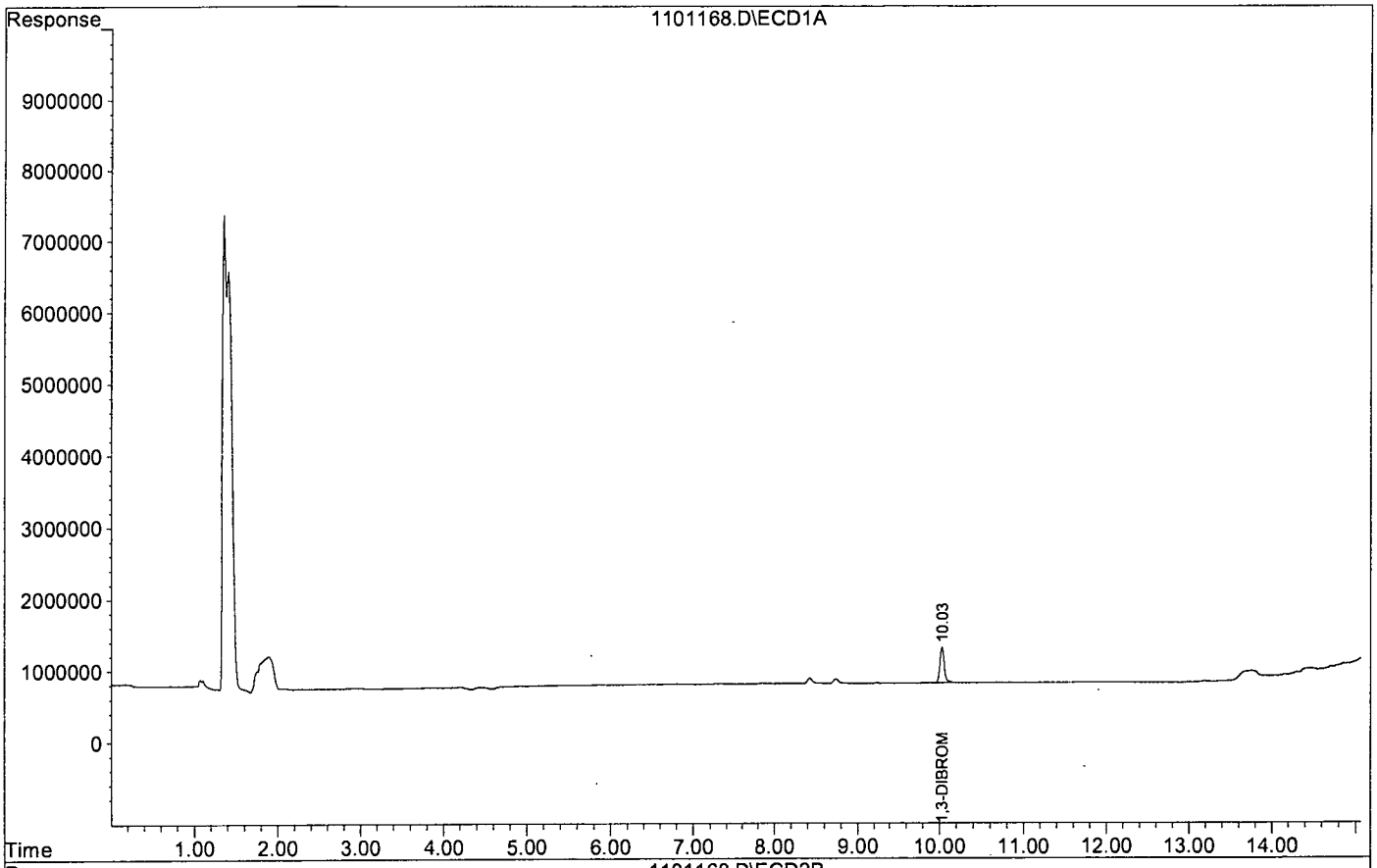
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	509361	661920	0.325	0.331
Spiked Amount	0.353			Recovery	=	91.98%	93.68%
	Target Compounds						
	Target Compounds						
1) TM	EDB	0.00	0.00	0	0	N.D. d	N.D. d
2) TM	1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4) TM	DBCP	0.00	0.00	0	0	N.D. d	N.D. d

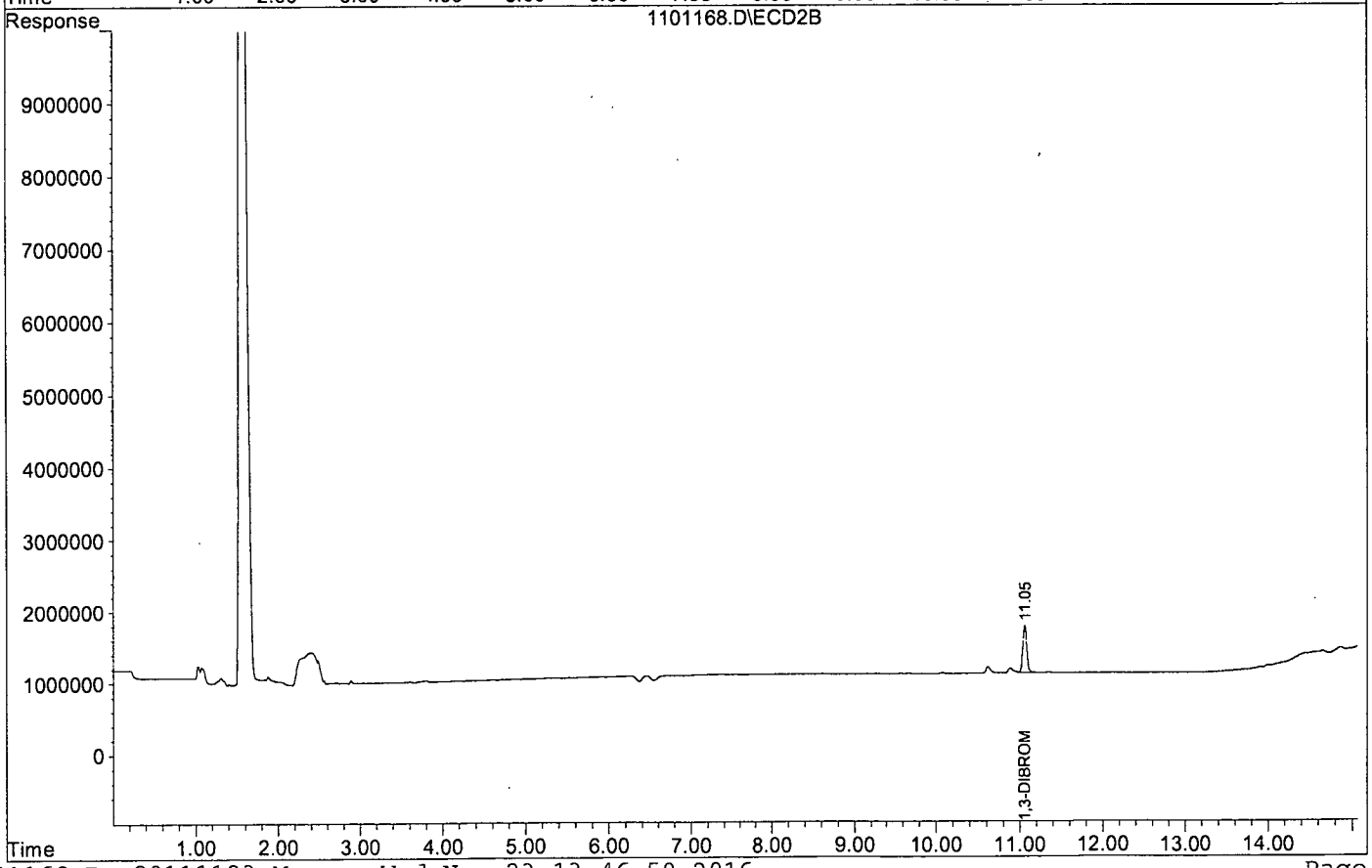
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\161101\1101168.D
Acq On : 11-22-16 20:40:59
Sample : 161122A BLK 2/34.67G
Misc :
Quant Method : G:\HERBIE\DATA\161101\80111123.M

Vial: 68
Operator: RH
Inst : Herbie
Multiplr: 1.01





Laboratory Control Spike Recovery

EPA 8011

APPL ID: **161122W-45909 LCS - 213975**
Batch ID: #8011-161122A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
EDB	0.250	0.241	96.4	60-140
SURROGATE: 1,3-DIBROMOPROPANE (	0.350	0.270	77.1	70-132

Comments: _____

Primary	SPK
Quant Method :	80111123.M
Extraction Date :	11/22/16
Analysis Date :	11/22/16
Instrument :	Herbie
Run :	1101170
Initials :	RHA

Printed: 11/23/16 10:52:00 AM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161101\1101170.D\ECD1A.CH Vial: 70
Signal #2 : G:\HERBIE\DATA\161101\1101170.D\ECD2B.CH
Acq On : 11-22-16 21:20:50 Operator: RH
Sample : 161122A LCS-2 2/35.78G Inst : Herbie
Misc : Multiplr: 0.98
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Nov 23 9:34 2016 Quant Results File: 80111123.RES

Quant Method : G:\HERBIE\DATA\161101\80111123.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Nov 23 09:28:27 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

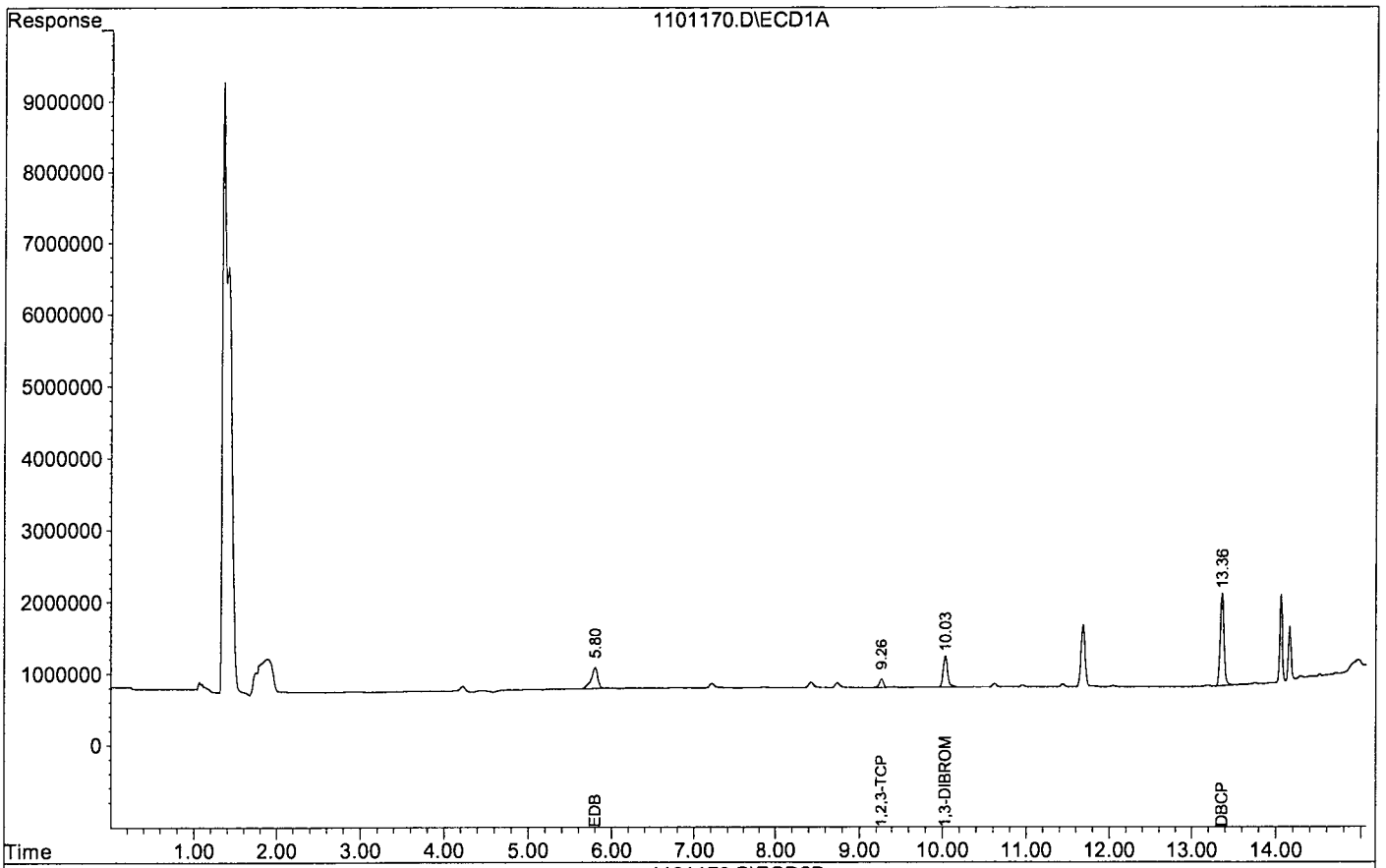
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	436902	534468	0.270	0.259
Spiked Amount	0.342			Recovery	=	78.86%	75.65%
	Target Compounds						
1) TM	EDB	5.80	7.22	294717	871121	0.241	0.252
2) TM	1,2,3-TCP	9.26	10.46	120507	144028	0.275	0.257
4) TM	DBCP	13.36	14.10	1293890	2101280	0.262	0.261

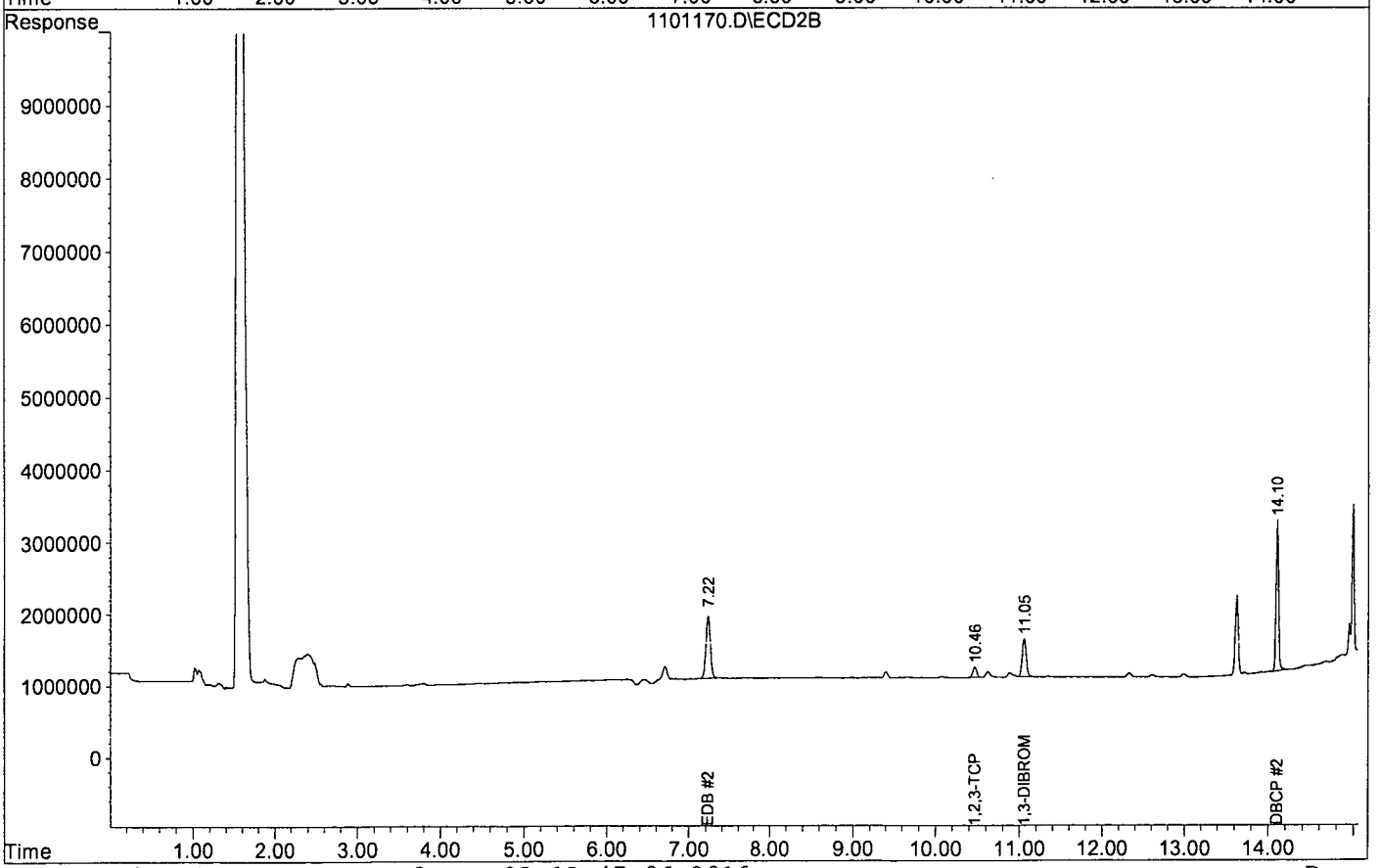
Target Compounds

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161101\1101170.D Vial: 70
Acq On : 11-22-16 21:20:50 Operator: RH
Sample : 161122A LCS-2 2/35.78G Inst : Herbie
Misc : Multiplr: 0.98
Quant Method : G:\HERBIE\DATA\161101\80111123.M





	504/8011 SURROGATE					
Prep: 11/22/16-R.H. Ex: 12/30/16						
Compound	**Initial Conc.**	**Source**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
1,3 DBP	100	1,3 DBP STOCK	35ul	10mL	0.35ug/mL	Methanol
		prep.12/30/15				070913A
		exp. 12/30/16				

		504/8011 M STD					
Prep: 11/22/16 Exp: 12/03/16 RH							
Compound	**Initial Conc.**	**Source**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**	
EDB	0.35ug/mL	504/8011 M STD STK	1000uL	10mL	0.035ug/mL	Methanol	
TCP		prep.08/03/16				010616A	
DBCP		exp: 12/03/16					
1,3 DBP							

		504/8011 SS				
Prep:03/11/16-L.H. Ex: 12/30/16						
Compound	**Initial Conc.**	**Source**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
EDB	0.35ug/mL	504/8011 SPIKE STOCK	1000uL	10mL	0.035ug/mL	Methanol
TCP		prep. 12/30/15				021915C
DBCP		Exp: 12/30/16				

504/8011 M STD STOCK						
Prep: 08/03/16-R.H.		Ex: 12/03/16				
Compound	**Initial Conc.**	**Source**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
EDB	20ug/mL	504/DOHS STOCK	438uL	25mL	0.35ug/mL	Methanol
TCP		prep. 06/07/16				021915C
DBCP		exp: 06/07/17				
1,3 DBP	100ug/mL	1,3 DBP STOCK	88uL			
		prep.06/07/16				
		exp. 06/07/17				

504/8011 M STD STOCK						
Prep: 12/30/15-L.H.		Ex: 08/24/16				
Compound	**Initial Conc.**	**Source**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
EDB	20ug/mL	504/DOHS STOCK	438uL	25mL	0.35ug/mL	Methanol
TCP		prep. 12/30/15				070913A
DBCP		exp: 08/24/15				
1,3 DBP	100ug/mL	1,3 DBP STOCK	88uL			
		prep.12/30/15				
		exp. 12/30/16				

1,3-DBP STOCK						
Compounds	**Init. Conc.**	**Stock SRC**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
1,3 DBP	1000ug/mL	Absolute	1000uL	10mL	100ug/mL	Methanol
	Cat:	71326				Lot # 021915C
	Lot:	031413-33902				
	Op:	12/30/15				
	Exp:	12/30/16		Prep: 12/30/15 Exp: 12/30/16 LH		

_MWE012

Organic Extraction Worksheet

Method	EPA Method 8011 DBCP/EDB	Extraction Set	161122A	Extraction Method	MWE012	Units	mL

Spiked ID 1	504.1 SS 3-11-16 exp 12-30-16		Surrogate ID 1	504.1 Surrogate 11-22-16 exp 12-30-16	
Spiked ID 2	504.1 M. STD 11-22-16 exp 12-03-16		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	11/22/16 16:30	
Spiked ID 8			Ext. End Time:	11/22/16 17:15	
			GC Requires Extract By:	11/23/16 0:00	

pH1			Water Bath Temp Criteria	
pH2				
pH3				

Spiked By: KY **Date** 11/22/16 **Witnessed By:** DL **Date** 11/22/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	161122A Blk				0.035	1 equip	34.67g	2	7	11/22/16 16:30	
2	161122A LCS-1		0.1	1	0.035	1 equip	35.98g	2	7	11/22/16 16:30	
3	161122A LCS-2		0.250	2	NA	NA equip	35.78g	2	7	11/22/16 16:30	
4	AZ45909	AZ45909W08			0.035	1 equip	35.73g	2	7	11/22/16 16:30	81500 1 WEEK
5	AZ45990	AZ45990W04			0.035	1 equip	35.18g	2	7	11/22/16 16:30	81515 1 WEEK
6	AZ45994	AZ45994W08			0.035	1 equip	35.93g	2	7	11/22/16 16:30	81515 1 WEEK
7	M STD 1		0.020	2	NA	NA equip	35.76g	2	7	11/22/16 16:30	
8	M STD 2		0.1	2	NA	NA equip	35.68g	2	7	11/22/16 16:30	
9	M STD 3		0.250	2	NA	NA equip	35.72g	2	7	11/22/16 16:30	
10	M STD 4		0.5	2	NA	NA equip	35.70g	2	7	11/22/16 16:30	
11	M STD 5		0.750	2	NA	NA equip	35.76g	2	7	11/22/16 16:30	
12	M STD 6		1	2	NA	NA equip	35.86g	2	7	11/22/16 16:30	

RH 11/22/16

Solvent and Lot#	
NaCL	16B100011
Sod. Thiosulfate	24050
GC2 Hexane	DN636

Extraction COC Transfer	
Extraction lab employee Initials	DL
GC analyst's initials	RH
Date	11/22/16
Time	5:30
Refrigerator	Hobert

	Technician's Initials
Scanned By	KY
Sample Preparation	KY
Extraction	KY
Concentration	----------

Modified	11/22/16 5:16:04 PM

Reviewed By: RH **Date** 11/22/16

11/22/16 5:25:59 PM Ext_ID 763370

Injection Log

Directory: G:\HERBIE\DATA\161101\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	61	1101161.D	1	8011 1 11/22/16		11-22-16 18:21:41
2	62	1101162.D	1	8011 2 11/22/16		11-22-16 18:41:37
3	63	1101163.D	1	8011 3 11/22/16		11-22-16 19:01:36
4	64	1101164.D	1	8011 4 11/22/16		11-22-16 19:21:27
5	65	1101165.D	1	8011 5 11/22/16		11-22-16 19:41:21
6	66	1101166.D	1	8011 6 11/22/16		11-22-16 20:01:16
7	68	1101168.D	1.00952	161122A BLK 2/34.67G		11-22-16 20:40:59
8	69	1101169.D	0.97276	161122A LCS-1 2/35.98G		11-22-16 21:00:52
9	70	1101170.D	0.9782	161122A LCS-2 2/35.78G		11-22-16 21:20:50
10	71	1101171.D	0.97957	AZ45909W08 2/35.73G		11-22-16 21:40:42
12	76	1101176.D	1	8011 3 11/22/16		11-22-16 23:20:04

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank

EPA 8015B TPH WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161118W-45866 - 214015**
Batch ID: #DOC53-161118A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	11/18/16	11/21/16
BLANK	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	11/18/16	11/21/16
BLANK	SURROGATE: OCTACOSANE (S)	94.7	60-142			%	11/18/16	11/21/16
BLANK	SURROGATE: ORTHO-TERPHEN	76.3	56-125			%	11/18/16	11/21/16

Quant Method: DOC1103.M
Run #: 1121005
Instrument: Apollo
Sequence: 161121
Initials: DPO

GC SC-Blank-REG MDLs-DOD
Printed: 11/23/16 4:51:37 PM

Method Blank

EPA 8015B TPH WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161118W-45909 - 214209**
Batch ID: #DOC53-161118A1

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	11/18/2016	12/1/2016
BLANK	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	11/18/2016	12/1/2016
BLANK	SURROGATE: OCTACOSANE (S)	91.7	60-142			%	11/18/2016	12/1/2016
BLANK	SURROGATE: ORTHO-TERPHEN	76.2	56-125			%	11/18/2016	12/1/2016

Quant Method: DOC1103.M
Run #: 1130074
Instrument: Apollo
Sequence: 161130
Initials: LA

GC SC-Blank-REG MDLs-DOD
Printed: 12/6/2016 3:23:28 PM

Method Blank

EPA 8015B TPH WATER W/ SGC

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161118W-45909 - 214324**
Batch ID: #DOC53-161118A2

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	11/18/2016	12/5/2016
BLANK	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	11/18/2016	12/5/2016
BLANK	SURROGATE: (R) DECANOIC AC	0.0	0-1			%	11/18/2016	12/5/2016
BLANK	SURROGATE: OCTACOSANE (S)	95.6	60-142			%	11/18/2016	12/5/2016
BLANK	SURROGATE: ORTHO-TERPHEN	79.5	56-125			%	11/18/2016	12/5/2016

Quant Method: DOC1103.M
Run #: 1205005
Instrument: Apollo
Sequence: 161205
Initials: DPO

GC SC-Blank-REG MDLs-DOD
Printed: 12/6/2016 3:23:28 PM

Laboratory Control Spike Recovery

EPA 8015B TPH WATER

APPL ID: **161118W-45866 LCS - 214015**
Batch ID: #DOC53-161118A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
DIESEL (C10-C24)	1330	988	74.1	36-132
OIL (C24-C40)	1330	1130	84.8	41-113
SURROGATE: OCTACOSANE (S)	40.0	36.2	90.5	60-142
SURROGATE: ORTHO-TERPHENYL (S)	40.0	36.4	91.0	56-125

Comments: _____

Primary	SPK
Quant Method :	DOC1103.M
Extraction Date :	11/18/16
Analysis Date :	11/21/16
Instrument :	Apollo
Run :	1121006
Initials :	DPO

Printed: 11/23/16 4:51:39 PM
APPL Standard LCS

Laboratory Control Spike Recovery

EPA 8015B TPH WATER

APPL ID: **161118W-45909 LCS - 214209**
Batch ID: #DOC53-161118A1

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
DIESEL (C10-C24)	1330	1020	76.7	36-132
OIL (C24-C40)	1300	1020	78.5	41-113
SURROGATE: OCTACOSANE (S)	40.0	35.7	89.3	60-142
SURROGATE: ORTHO-TERPHENYL (S)	40.0	37.5	93.8	56-125

Comments: _____

Primary	SPK
Quant Method :	DOC1103.M
Extraction Date :	11/18/2016
Analysis Date :	12/1/2016
Instrument :	Apollo
Run :	1130075
Initials :	LA

Printed: 12/6/2016 3:23:22 PM
APPL Standard LCS

Laboratory Control Spike Recovery

EPA 8015B TPH WATER W/ SGC

APPL ID: **161118W-45909 LCS - 214324**
Batch ID: #DOC53-161118A2

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
DIESEL (C10-C24)	1330	1030	77.3	36-132
OIL (C24-C40)	1330	1010	75.8	41-113
SURROGATE: (R) DECANOIC ACID (S)	10.00	0	0.0	0-1
SURROGATE: OCTACOSANE (S)	40.0	38.2	95.5	60-142
SURROGATE: ORTHO-TERPHENYL (S)	40.0	40.6	102	56-125

Comments: _____

Primary	SPK
Quant Method :	DOC1103.M
Extraction Date :	11/18/2016
Analysis Date :	12/5/2016
Instrument :	Apollo
Run :	1205006
Initials :	DPO

Printed: 12/6/2016 3:23:22 PM
APPL Standard LCS

EPA 8015B-eLL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81500

Case No: 81500 Date Analyzed: 11/21/16

Matrix: WATER Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: OCTACOSANE (S)			SURROGATE: ORTHO-TERPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161118A-BLK	Blank	60-142	94.7		56-125	76.3	
161118A-LCS	Lab Control Spike	60-142	90.5		56-125	91.0	
AZ45907	ERH117	60-142	90.7		56-125	73.4	
AZ45908	ERH121	60-142	85.4		56-125	69.3	
AZ45909	ERH122	60-142	90.6		56-125	73.0	
AZ45910	ERH126	60-142	86.8		56-125	70.7	
AZ45911	ERH128	60-142	90.1		56-125	73.2	

Comments: Batch: #DOC53-161118A

EPA 8015B-eLL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81500

Case No: 81500 Date Analyzed: 12/1/2016

Matrix: WATER Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: OCTACOSANE (S)			SURROGATE: ORTHO-TERPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
AZ45909	ERH122	60-142	88.6		56-125	74.0	
161118A1-BLK	Blank	60-142	91.7		56-125	76.2	
161118A1-LCS	Lab Control Spike	60-142	89.3		56-125	93.8	

Comments: Batch: #DOC53-161118A1

EPA 8015B-eLL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81500

Case No: 81500 Date Analyzed: 12/5/2016

Matrix: WATER Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: (R) DECANOIC ACID (S)			SURROGATE: OCTACOSANE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161118A2-BLK	Blank	0-1	0.0		60-142	95.6	
161118A2-LCS	Lab Control Spike	0-1	0.0		60-142	95.5	
AZ45909	ERH122	0-1	0.0		60-142	91.8	

Comments: Batch: #DOC53-161118A2

EPA 8015B-eLL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81500

Case No: 81500 Date Analyzed: 12/5/2016

Matrix: WATER Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: ORTHO-TERPHENYL (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
161118A2-BLK	Blank	56-125	79.5				
161118A2-LCS	Lab Control Spike	56-125	102				
AZ45909	ERH122	56-125	76.5				

Comments: Batch: #DOC53-161118A2

EPA 8015B-eL

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81500

Case No: 81500 Date Analyzed: 11/21/16

Matrix: WATER Instrument: Apollo

Blank ID: 161118A-BLK Time Analyzed: 1459

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161118A-BLK	Blank	1121005	11/21/16 1459
161118A-LCS	Lab Control Spike	1121006	11/21/16 1520
AZ45907	ERH117	1121015	11/21/16 1827
AZ45908	ERH121	1121016	11/21/16 1848
AZ45909	ERH122	1121017	11/21/16 1908
AZ45910	ERH126	1121018	11/21/16 1929
AZ45911	ERH128	1121019	11/21/16 1950

Comments: Batch: #DOC53-161118A

Printed: 11/23/16 4:51:59 PM
Form 4, Blank Summary

EPA 8015B-eL

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81500

Case No: 81500 Date Analyzed: 12/1/2016

Matrix: WATER Instrument: Apollo

Blank ID: 161118A1-BLK Time Analyzed: 1223

APPL ID.	Client Sample No.	File ID.	Date Analyzed
AZ45909	ERH122	1130072	12/1/2016 1142
161118A1-BLK	Blank	1130074	12/1/2016 1223
161118A1-LCS	Lab Control Spike	1130075	12/1/2016 1243

Comments: Batch: #DOC53-161118A1

EPA 8015B-eL

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81500

Case No: 81500 Date Analyzed: 12/5/2016

Matrix: WATER Instrument: Apollo

Blank ID: 161118A2-BLK Time Analyzed: 1700

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161118A2-BLK	Blank	1205005	12/5/2016 1700
161118A2-LCS	Lab Control Spike	1205006	12/5/2016 1721
AZ45909	ERH122	1205008	12/5/2016 1804

Comments: Batch: #DOC53-161118A2

Printed: 12/6/2016 3:23:13 PM
Form 4, Blank Summary

ORGANICS

Sample Data

APPL, INC.

EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH117
Sample Collection Date: 11/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81500
APPL ID: AZ45907
QCG: #DOC53-161118A-214015

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	94 ++	40.0	25.00	13.07	ug/L	11/18/16	11/21/16
EPA 8015B-eL	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	11/18/16	11/21/16
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	90.7	60-142			%	11/18/16	11/21/16
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	73.4	56-125			%	11/18/16	11/21/16

++(T6) The analyst has noted that the chromatogram of this sample is mainly a match to hydrocarbons within the range of diesel fuel.

Quant Method: DOC1103.M
Run #: 1121015
Instrument: Apollo
Sequence: 161121
Dilution Factor: 1
Initials: DPO

Printed: 11/23/16 4:52:00 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161121\1121015.D Vial: 15
Acq On : 11-21-16 18:27:30 Operator: DP
Sample : AZ45907W16 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Nov 23 16:38 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

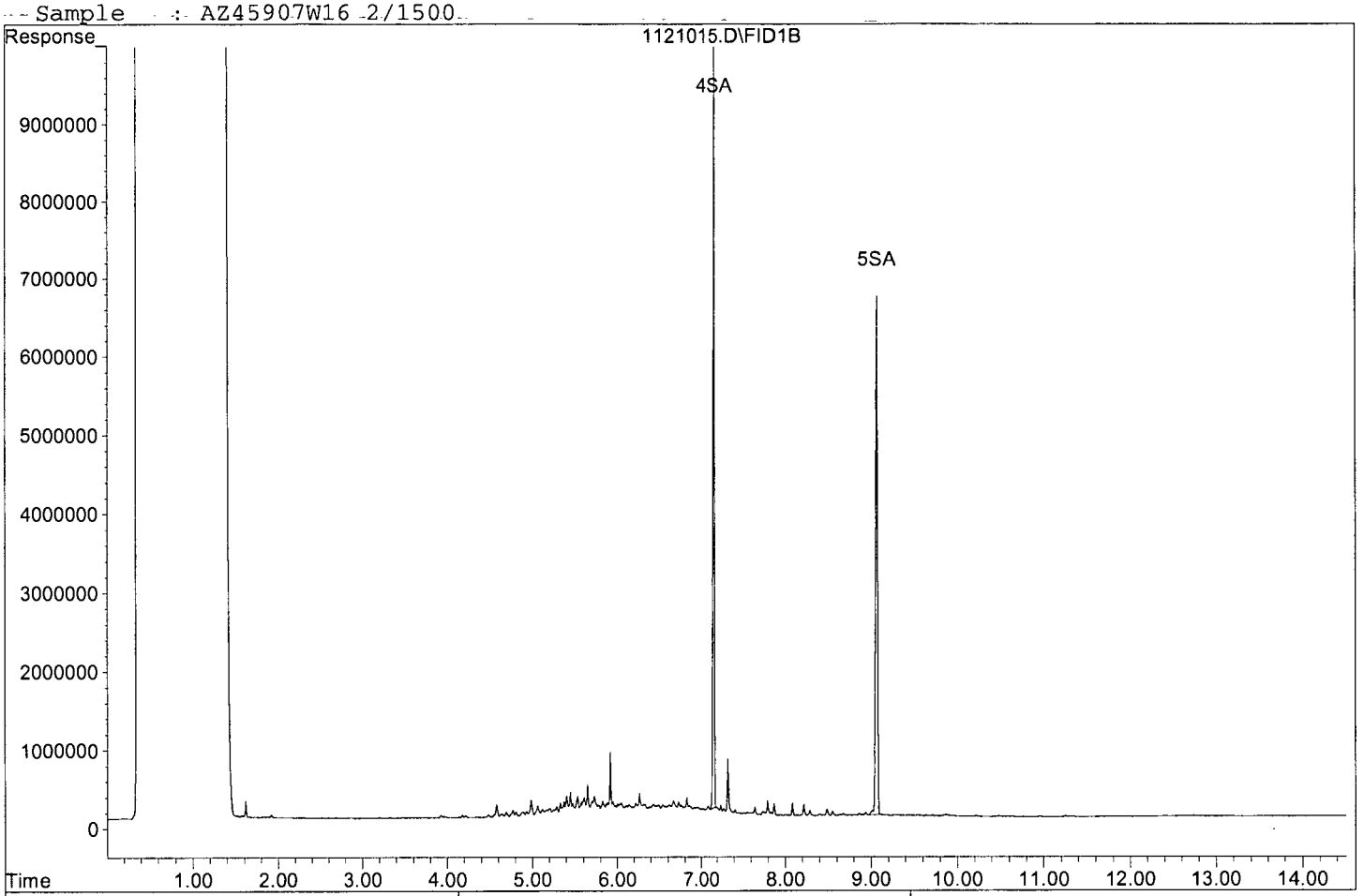
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

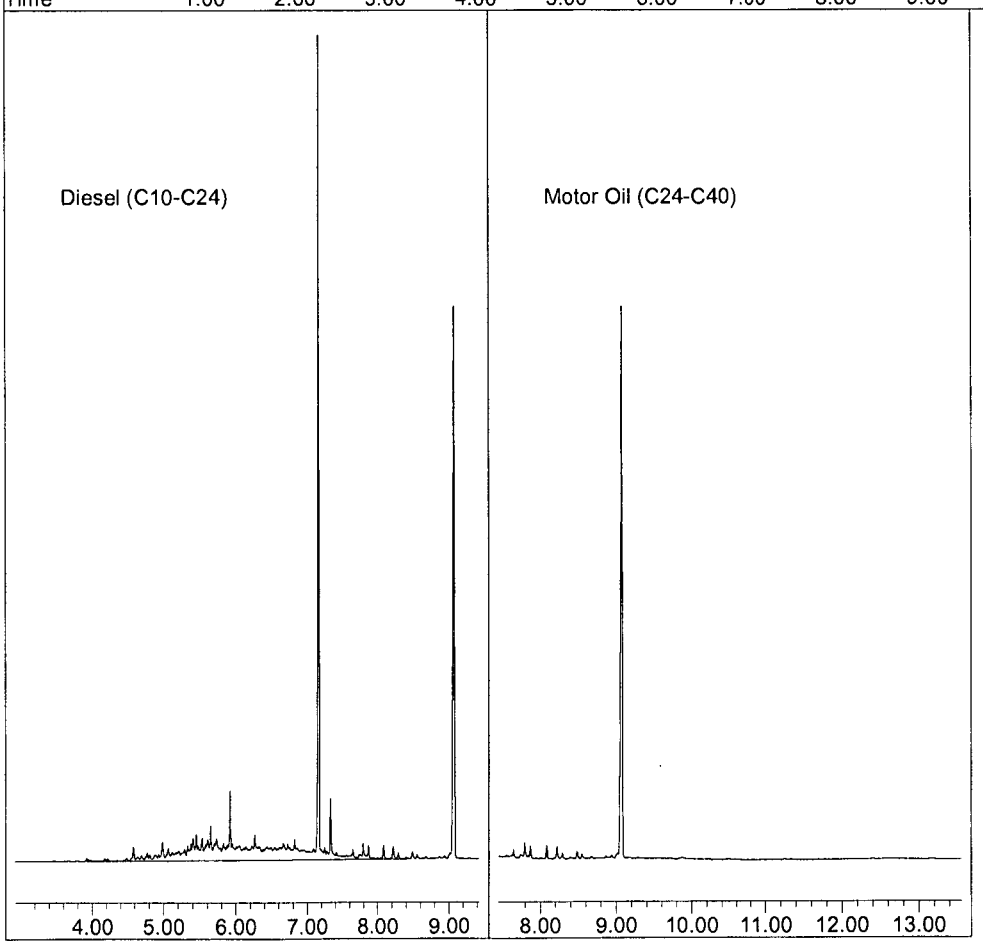
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.16	102658120	29.345 ppb
Surrogate Spike 40.000		Recovery =	73.36%
5) SA Octacosane(S)	9.07	95231563	36.282 ppb
Surrogate Spike 40.000		Recovery =	90.70%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	242552055	93.624 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161121\1121015.D
Sample : AZ45907W16 2/1500





1121015.D DOC1103.M Mon Nov 28 16:04:07 2016

EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH121
Sample Collection Date: 11/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81500
APPL ID: AZ45908
QCG: #DOC53-161118A-214015

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	11/18/16	11/21/16
EPA 8015B-eL	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	11/18/16	11/21/16
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	85.4	60-142			%	11/18/16	11/21/16
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	69.3	56-125			%	11/18/16	11/21/16

Quant Method: DOC1103.M
Run #: 1121016
Instrument: Apollo
Sequence: 161121
Dilution Factor: 1
Initials: DPO

Printed: 11/23/16 4:52:00 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161121\1121016.D Vial: 16
Acq On : 11-21-16 18:48:11 Operator: DP
Sample : AZ45908W11 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Nov 23 16:38 2016 Quant Results File: DOC1103.RES

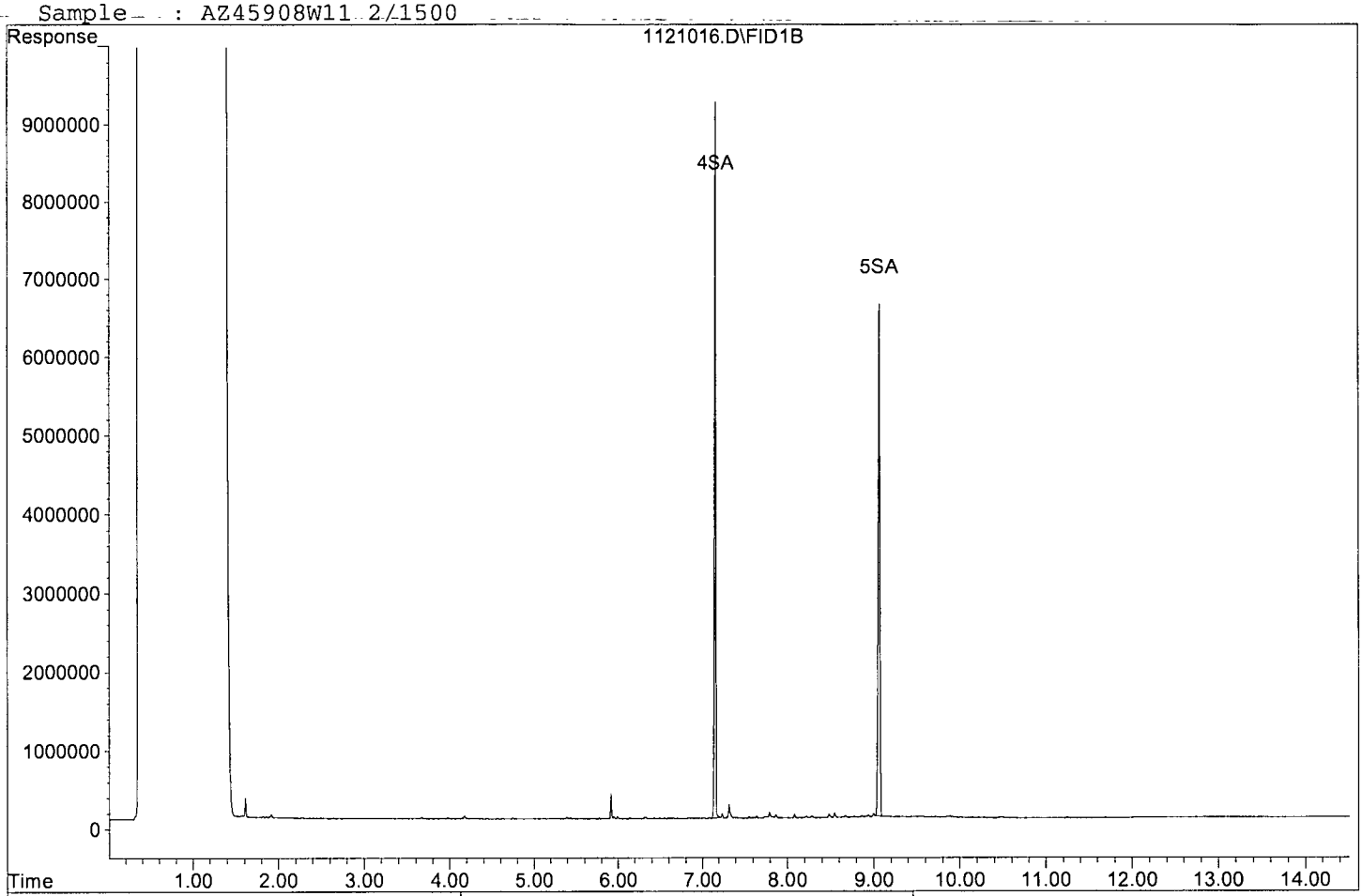
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

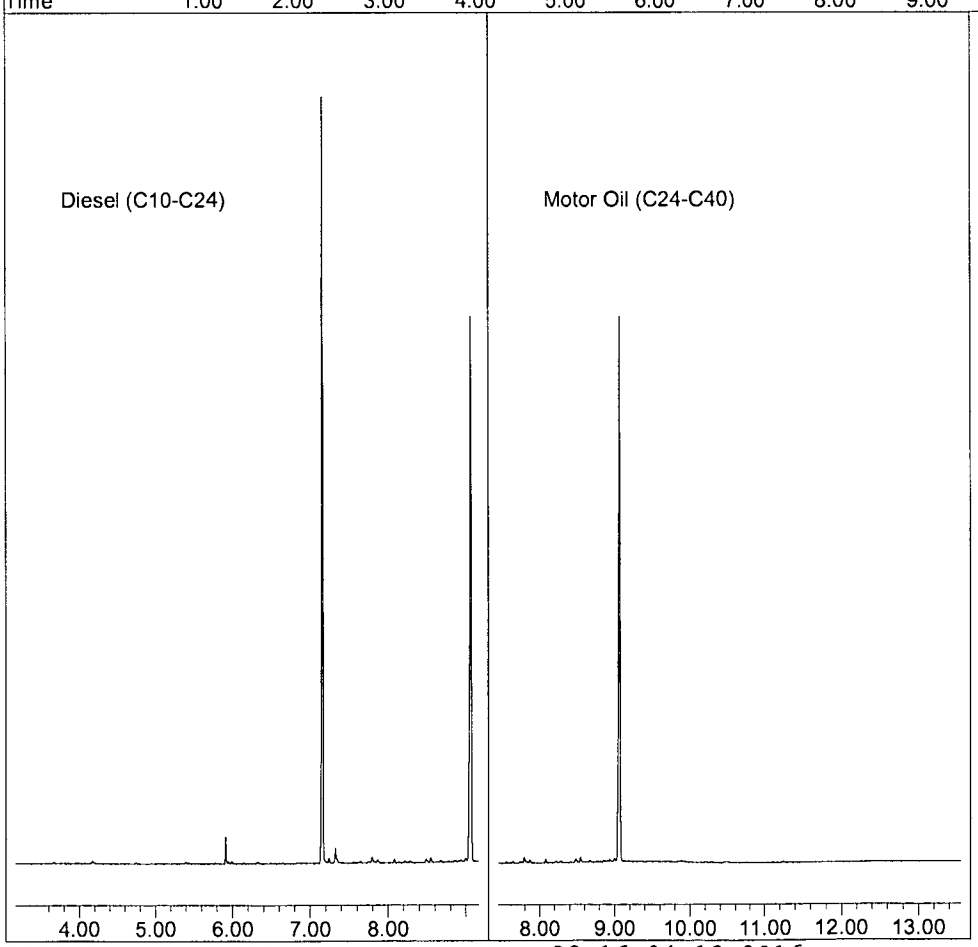
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.16	96951140	27.713 ppb
Surrogate Spike 40.000	Recovery =		69.28%
5) SA Octacosane(S)	9.07	89636723	34.150 ppb
Surrogate Spike 40.000	Recovery =		85.38%
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161121\1121016.D
Sample : AZ45908W11 2/1500





EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH122
Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81500
APPL ID: AZ45909
QCG: #DOC53-161118A-214015

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	33 ++J	40.0	25.00	13.07	ug/L	11/18/16	11/21/16
EPA 8015B-eL	OIL (C24-C40)	32 J	40.0	40.00	5.54	ug/L	11/18/16	11/21/16
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	90.6	60-142			%	11/18/16	11/21/16
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	73.0	56-125			%	11/18/16	11/21/16

J = Estimated value.
++(T3M) The analyst has noted that the chromatogram of this sample is mainly higher boiling hydrocarbons.

Quant Method: DOC1103.M
Run #: 1121017
Instrument: Apollo
Sequence: 161121
Dilution Factor: 1
Initials: DPO

Printed: 11/23/16 4:52:00 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161121\1121017.D Vial: 17
Acq On : 11-21-16 19:08:51 Operator: DP
Sample : AZ45909W14 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Dec 7 12:05 2016 Quant Results File: DOC1103.RES

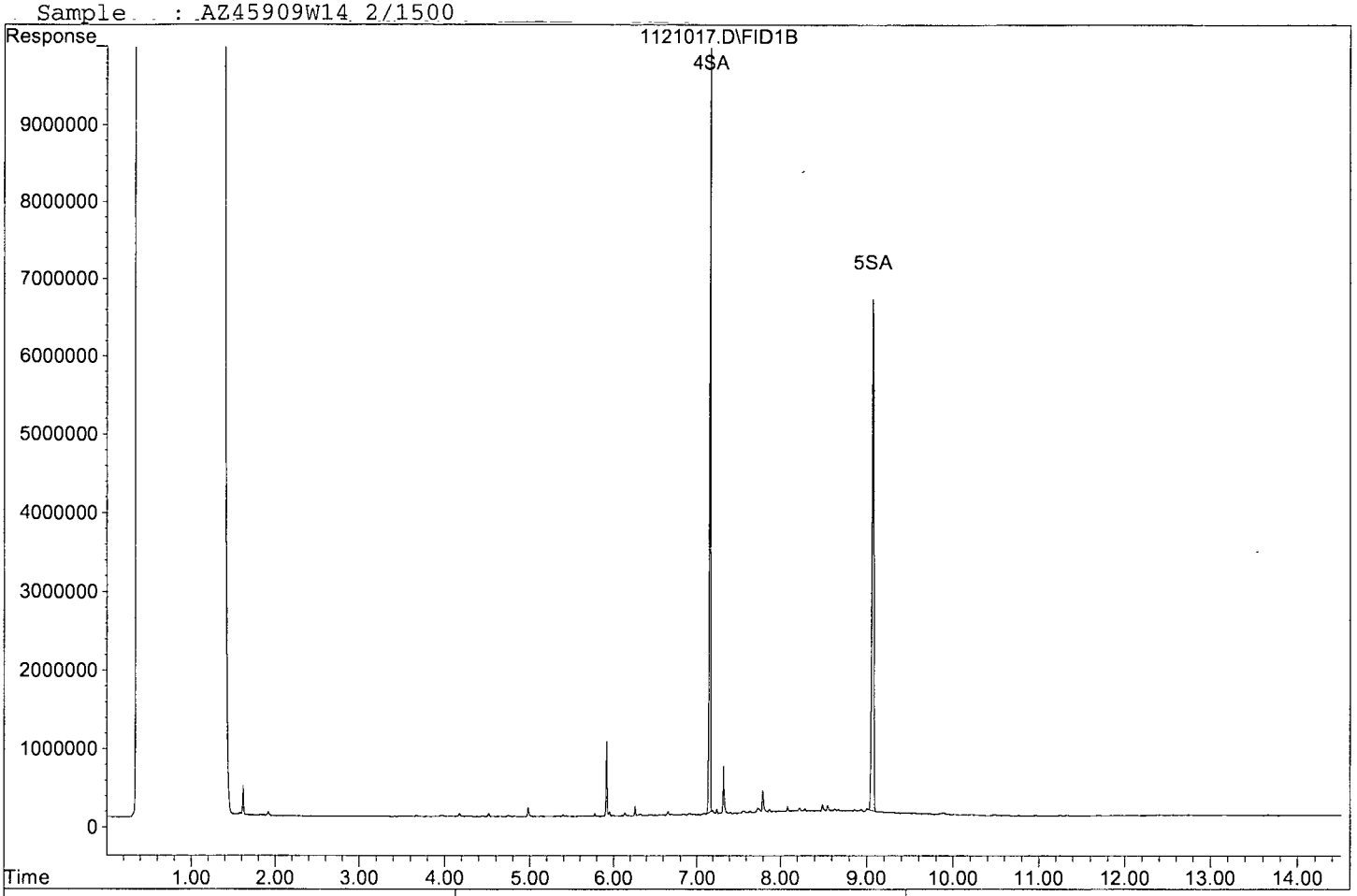
Method : G:\APOLLO\DATA\161123\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

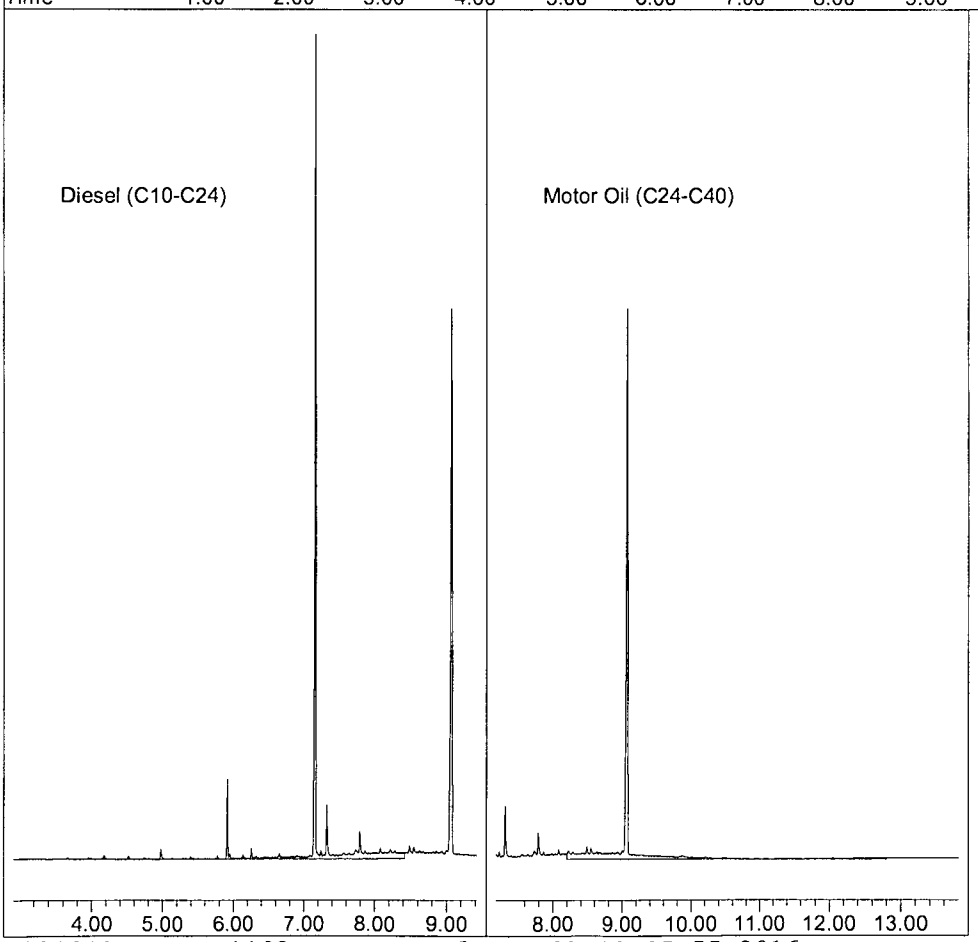
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.16	102087390	29.182 ppb
Surrogate Spike 40.000		Recovery =	72.96%
5) SA Octacosane(S)	9.07	95145306	36.249 ppb
Surrogate Spike 40.000		Recovery =	90.62%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	84673145	32.683 ppb
2) HBTM Motor Oil (C24-C40)	10.50	67291234	32.207 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161121\1121017.D
Sample : AZ45909W14 2/1500





EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH122

Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81500

APPL ID: AZ45909

QCG: #DOC53-161118A1-214209

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	27 ++J	40.0	25.00	13.07	ug/L	11/18/16	12/01/16
EPA 8015B-eL	OIL (C24-C40)	23 J	40.0	40.00	5.54	ug/L	11/18/16	12/01/16
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	88.6	60-142			%	11/18/16	12/01/16
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	74.0	56-125			%	11/18/16	12/01/16

J = Estimated value.
++(T3M) The analyst has noted that the chromatogram of this sample is mainly higher boiling hydrocarbons.

Quant Method: DOC1103.M
Run #: 1130072
Instrument: Apollo
Sequence: 161130
Dilution Factor: 1
Initials: LA

Printed: 12/6/2016 3:23:25 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161130\1130072.D Vial: 72
Acq On : 12-1-16 11:42:13 Operator: DP
Sample : AZ45909W14 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Dec 7 12:04 2016 Quant Results File: DOC1103.RES

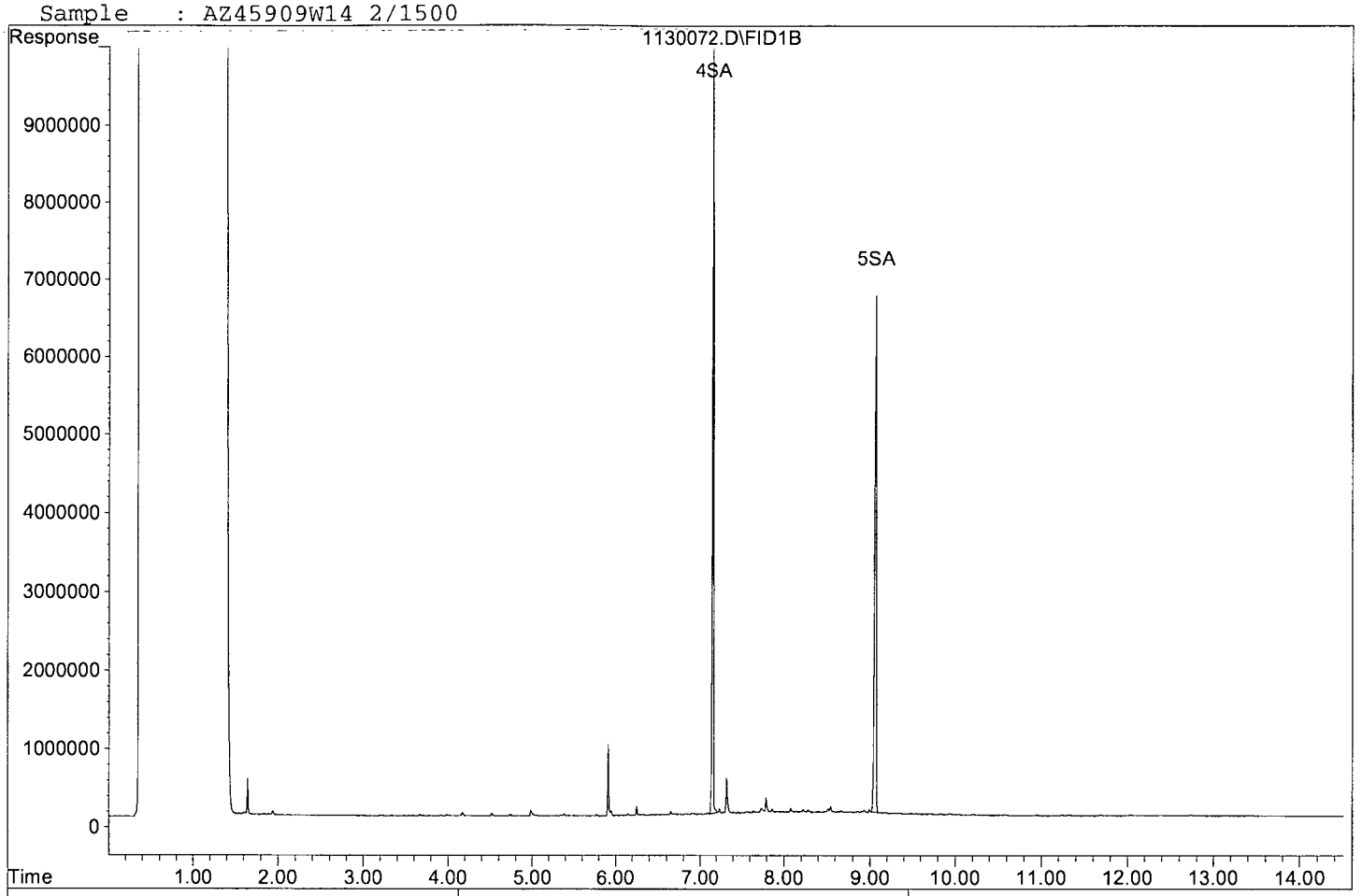
Method : G:\APOLLO\DATA\161123\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

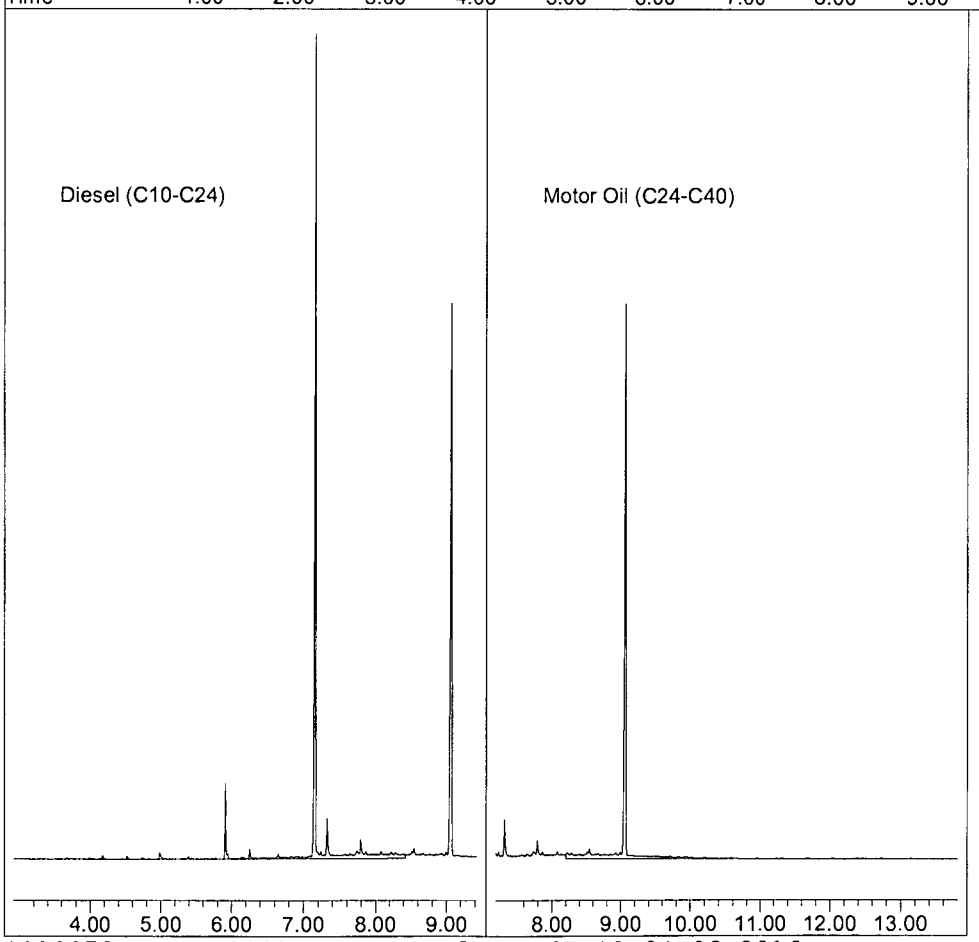
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.16	103510484	29.588 ppb
Surrogate Spike 40.000		Recovery =	73.97%
5) SA Octacosane(S)	9.06	93039945	35.447 ppb
Surrogate Spike 40.000		Recovery =	88.62%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	68789937	26.553 ppb
2) HBTM Motor Oil (C24-C40)	10.50	48552294	23.238 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161130\1130072.D
Sample : AZ45909W14 2/1500





EPA 8015B TPH WATER W/ SGC

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH122
Sample Collection Date: 11/15/16

ARF: 81500
APPL ID: AZ45909
QCG: #DOC53-161118A2-214324

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	11/18/16	12/05/16
EPA 8015B-eL	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	11/18/16	12/05/16
EPA 8015B-eL	SURROGATE: (R) DECANOIC ACID (S)	0.0	0-1			%	11/18/16	12/05/16
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	91.8	60-142			%	11/18/16	12/05/16
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	76.5	56-125			%	11/18/16	12/05/16

Quant Method: DOC1103.M
Run #: 1205008
Instrument: Apollo
Sequence: 161205
Dilution Factor: 1
Initials: DPO

Printed: 12/6/2016 3:23:25 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161205\1205008.D Vial: 8
Acq On : 12-5-16 18:04:02 Operator: DP
Sample : AZ45909W14 2/1500 SGC Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Dec 6 11:43 2016 Quant Results File: DOC1103.RES

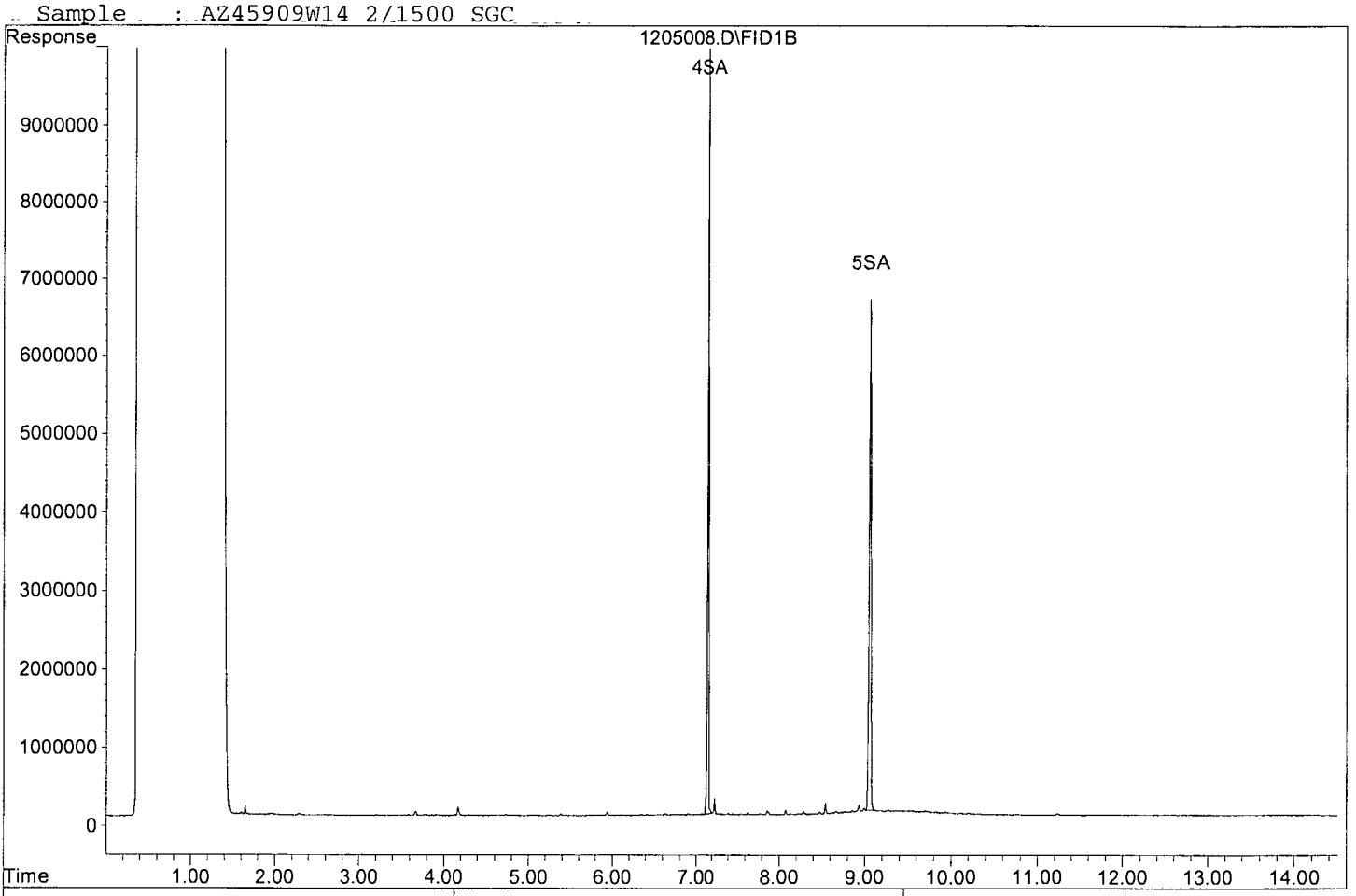
Method : G:\APOLLO\DATA\161123\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

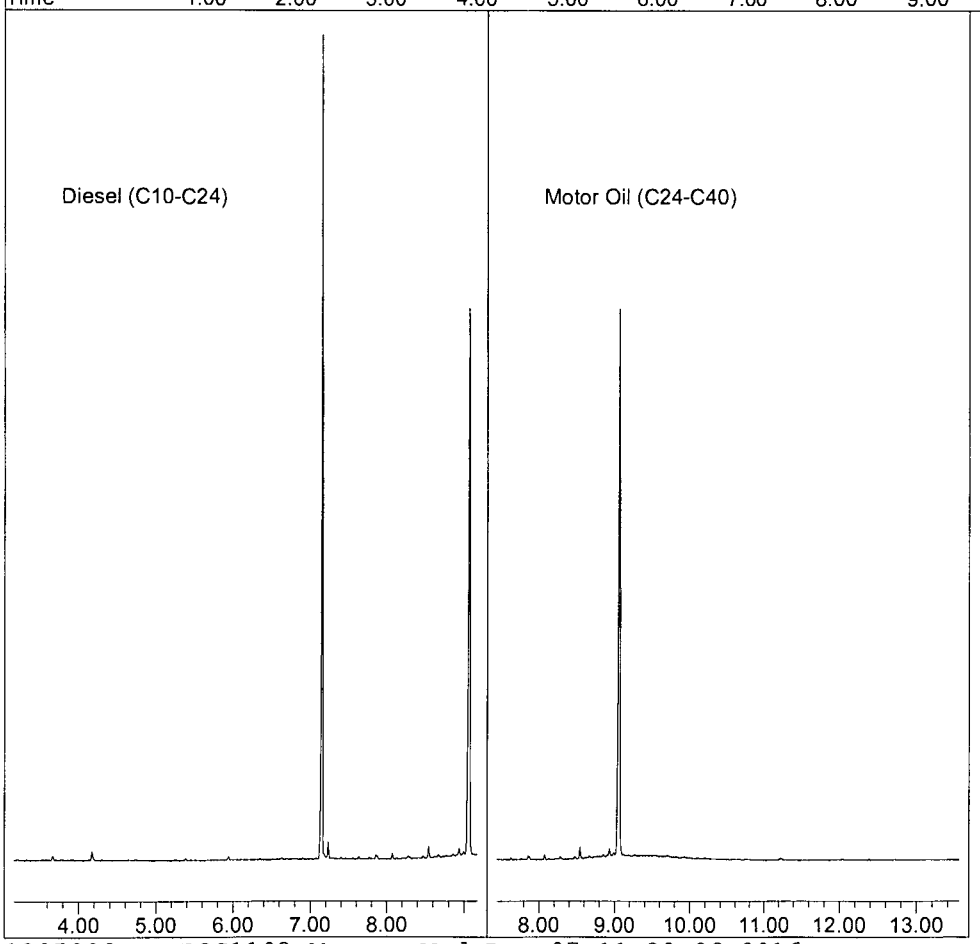
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.15	107020874	30.592	ppb
Surrogate Spike 40.000		Recovery =	76.48%	
5) SA Octacosane(S)	9.06	96340056	36.704	ppb
Surrogate Spike 40.000		Recovery =	91.76%	
Target Compounds				

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161205\1205008.D
Sample : AZ45909W14 2/1500 SGC





EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH126
Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81500
APPL ID: AZ45910
QCG: #DOC53-161118A-214015

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	11/18/16	11/21/16
EPA 8015B-eL	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	11/18/16	11/21/16
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	86.8	60-142			%	11/18/16	11/21/16
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	70.7	56-125			%	11/18/16	11/21/16

Quant Method: DOC1103.M
Run #: 1121018
Instrument: Apollo
Sequence: 161121
Dilution Factor: 1
Initials: DPO

Printed: 11/23/16 4:52:00 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161121\1121018.D Vial: 18
Acq On : 11-21-16 19:29:34 Operator: DP
Sample : AZ45910W15 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Nov 23 16:41 2016 Quant Results File: DOC1103.RES

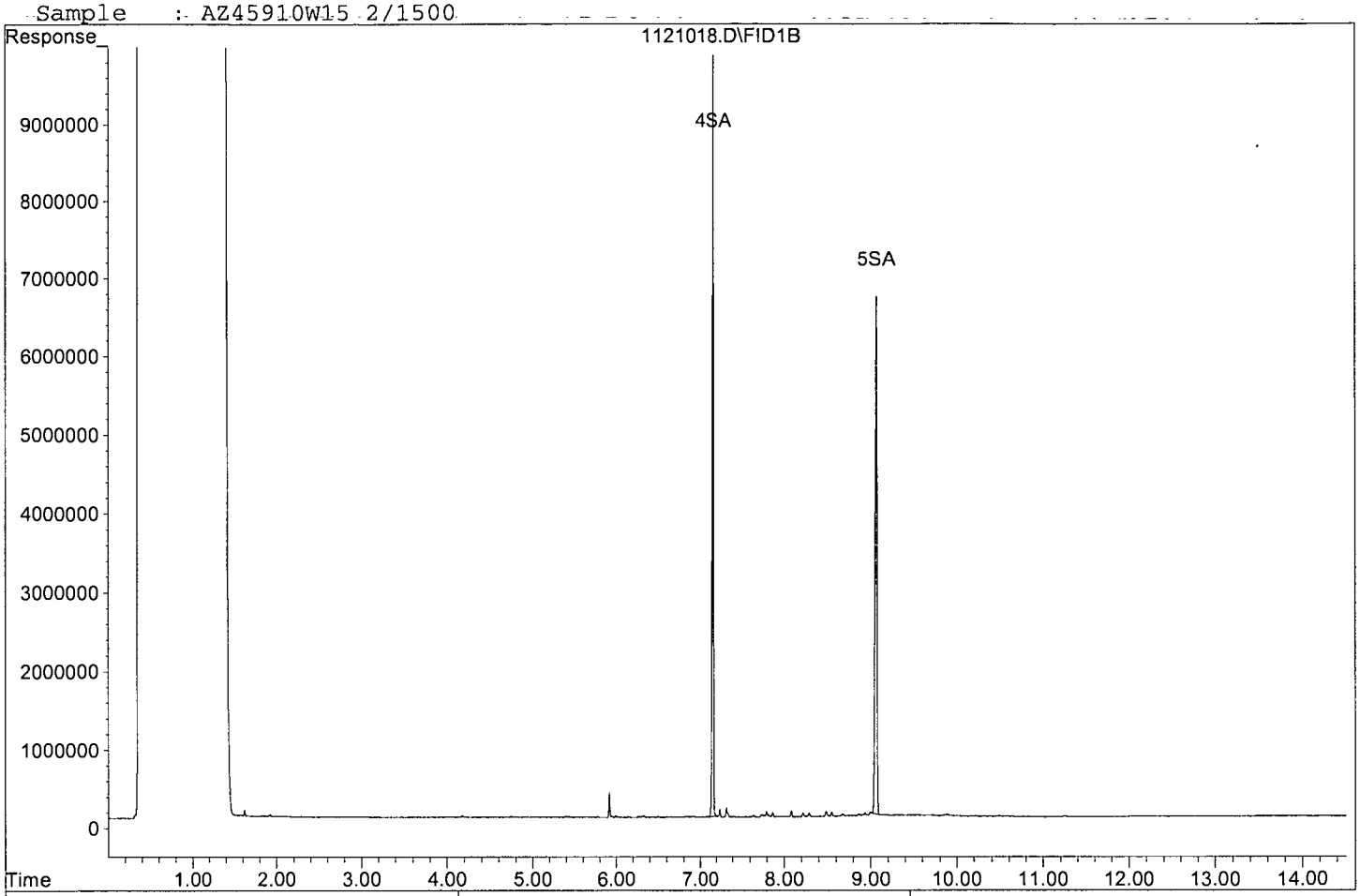
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

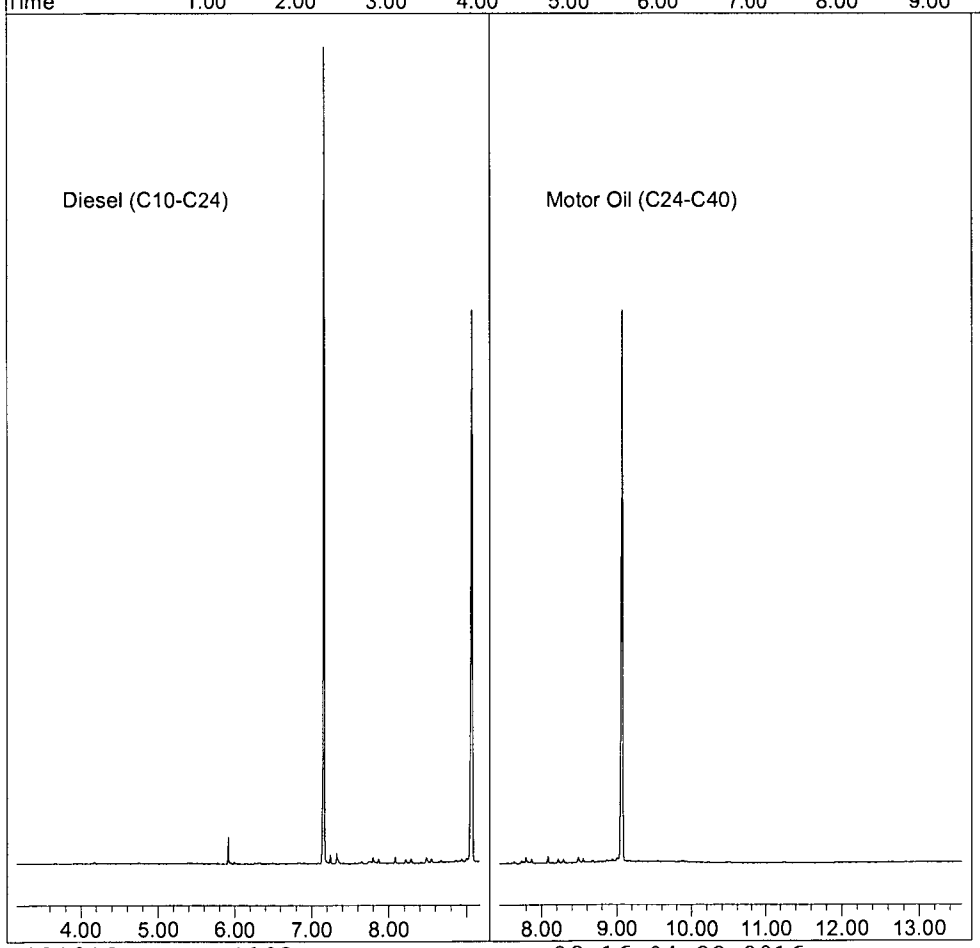
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.16	98955068	28.286 ppb
Surrogate Spike 40.000	Recovery =		70.72%
5) SA Octacosane(S)	9.07	91081631	34.701 ppb
Surrogate Spike 40.000	Recovery =		86.75%
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161121\1121018.D
Sample : AZ45910W15 2/1500





EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH128
Sample Collection Date: 11/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81500
APPL ID: AZ45911
QCG: #DOC53-161118A-214015

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	11/18/16	11/21/16
EPA 8015B-eL	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	11/18/16	11/21/16
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	90.1	60-142			%	11/18/16	11/21/16
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	73.2	56-125			%	11/18/16	11/21/16

Quant Method: DOC1103.M
Run #: 1121019
Instrument: Apollo
Sequence: 161121
Dilution Factor: 1
Initials: DPO

Printed: 11/23/16 4:52:00 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161121\1121019.D Vial: 19
Acq On : 11-21-16 19:50:09 Operator: DP
Sample : AZ45911W15 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Nov 23 16:42 2016 Quant Results File: DOC1103.RES

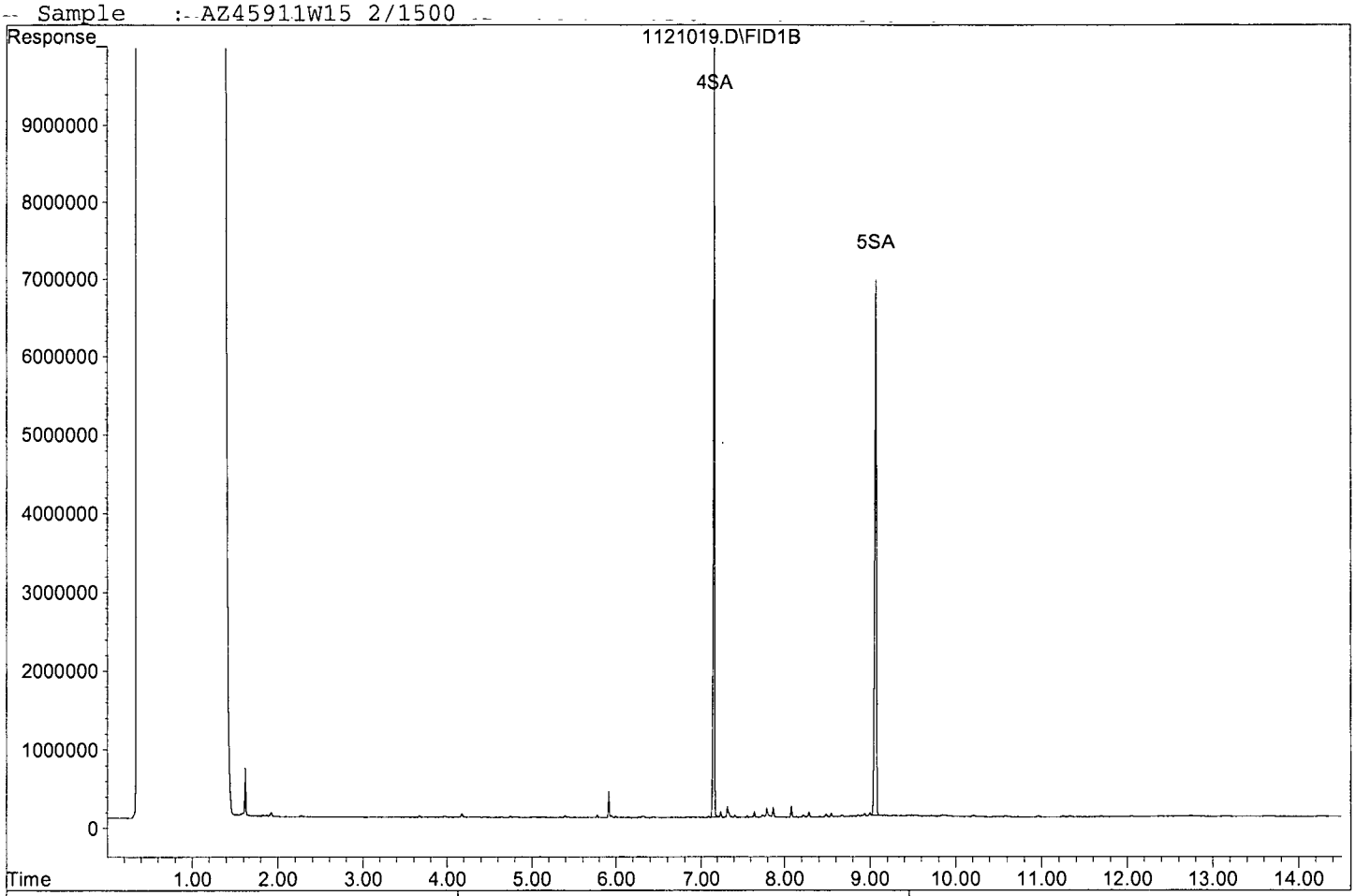
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

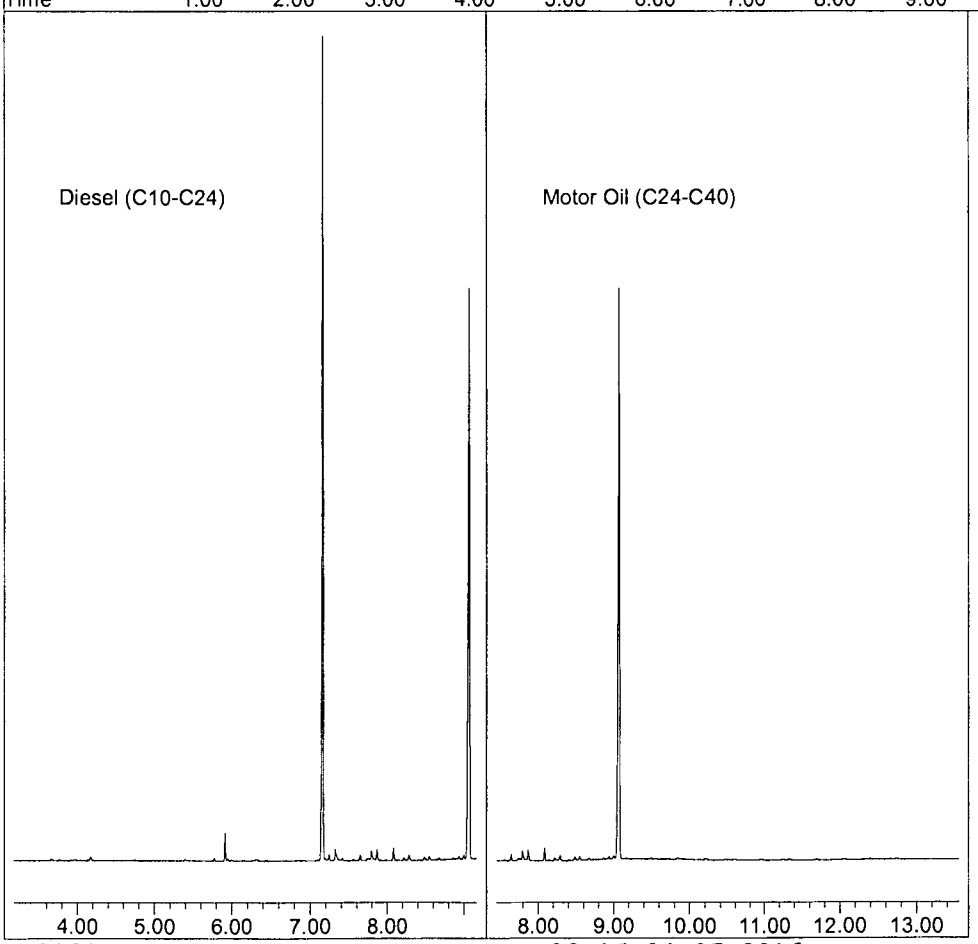
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.16	102477315	29.293 ppb
Surrogate Spike 40.000		Recovery =	73.23%
5) SA Octacosane(S)	9.07	94539270	36.018 ppb
Surrogate Spike 40.000		Recovery =	90.05%
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161121\1121019.D
Sample : AZ45911W15 2/1500





ORGANICS

Calibration Data

APPL, INC.

TPH Extractables
DOC1103

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 11/03/16
Matrix: Instrument: Apollo Initials:

Diesel:	1103004.D	1103011.D	1103006.D	1103007.D	1103008.D	1103009.D										
Motor Oil:	1028002.D	1028003.D	1028004.D	1028005.D	1028006.D	1028007.D										

		Compound	1	2	3	4	5	6					Avg	%RSD		
1	HATM	Diesel (C10-C24)	1713970	2056602	1625582	1697733	1643335	1625559					1727130	9.6	HATM	
2	HBTM	Motor Oil (C24-C40)	1562690	1603769	1282978	1340015	1321969	1245819					1392873	11	HBTM	
3	SC	Decanoic Acid(S)	436509	643644	711658	659596	590571	627574					611592	15	SC	
4	SA	Ortho-Terphenyl(S)		2687660	2255130	2296757	2215766	2205848					2332232	8.7	SA	
5	SA	Octacosane(S)	1736016	2067699	1697441	1704564	1657038	1636278					1749839	9.1	SA	
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Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161019\1019016.D Vial: 16
Acq On : 10-19-16 16:56:15 Operator: lac
Sample : DECANOIC ACID-1 10/19/16 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:15 2016 Quant Results File: DOC1103.RES

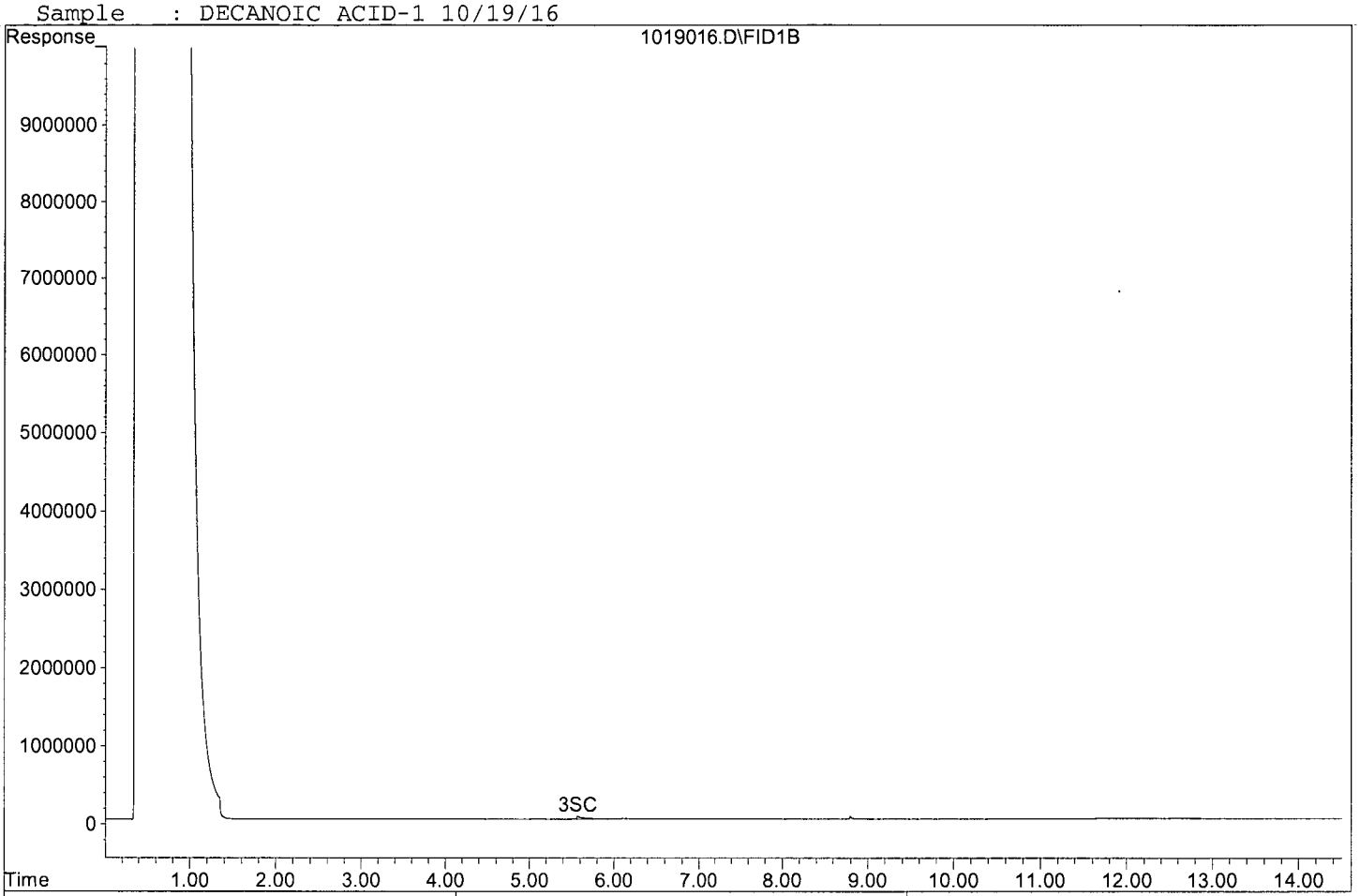
Method : G:\APOLLO\DATA\161123\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

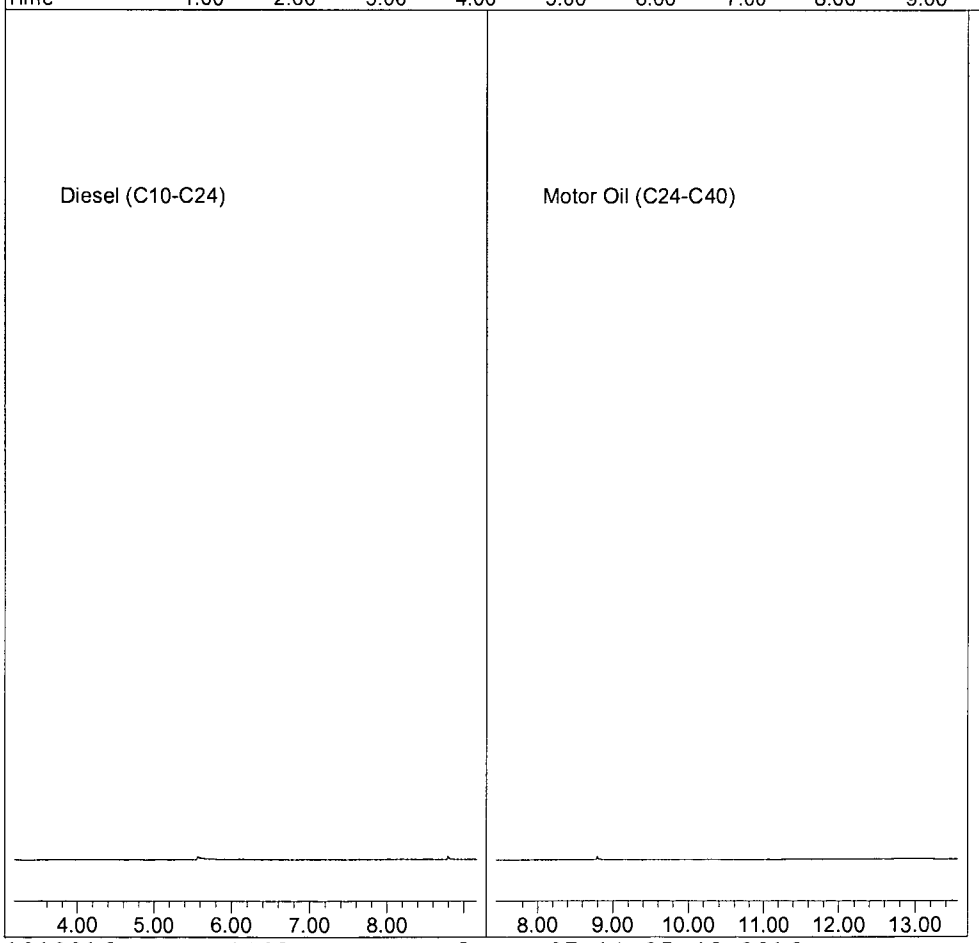
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SC Decanoic Acid(S)	5.57	2619053	3.848 ppb
Surrogate Spike 48.000	Recovery	=	8.02%
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161019\1019016.D
Sample : DECANOIC ACID-1 10/19/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161019\1019017.D Vial: 17
Acq On : 10-19-16 17:17:37 Operator: lac
Sample : DECANOIC ACID-2 10/19/16 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:16 2016 Quant Results File: DOC1103.RES

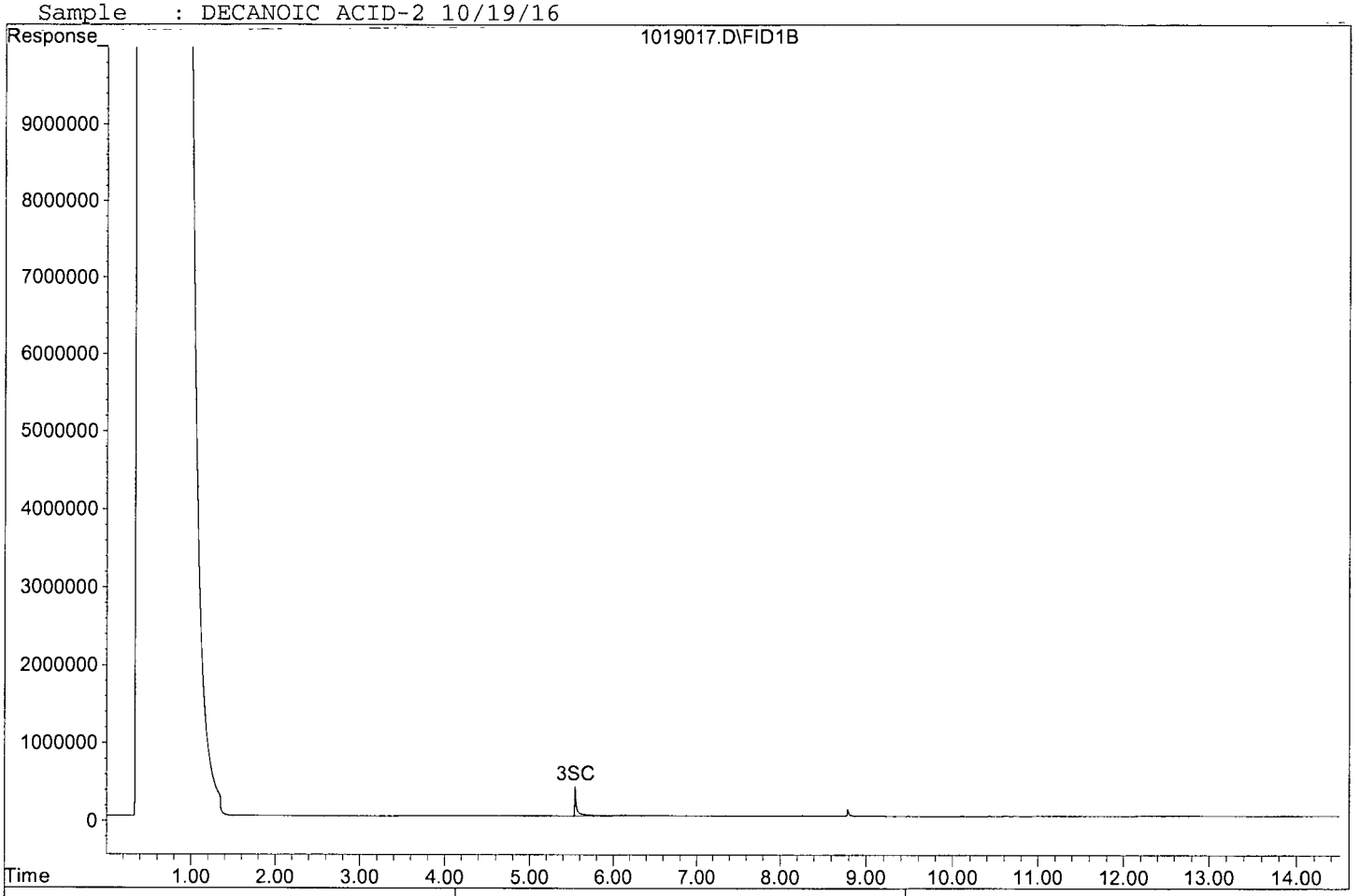
Method : G:\APOLLO\DATA\161123\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

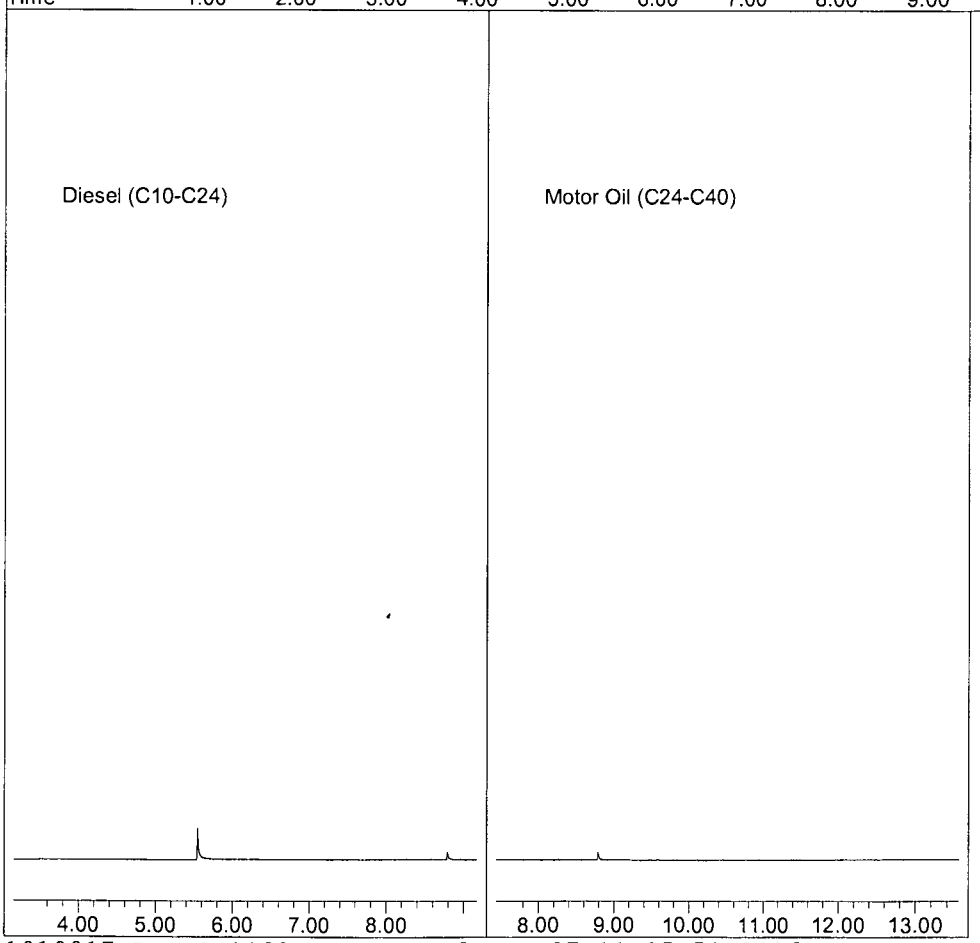
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SC Decanoic Acid(S)	5.55f	7723732	8.847 ppb
Surrogate Spike 48.000	Recovery =		18.43%
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161019\1019017.D
Sample : DECANOIC ACID-2 10/19/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161019\1019018.D Vial: 18
Acq On : 10-19-16 17:38:57 Operator: lac
Sample : DECANOIC ACID-3 10/19/16 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:16 2016 Quant Results File: DOC1103.RES

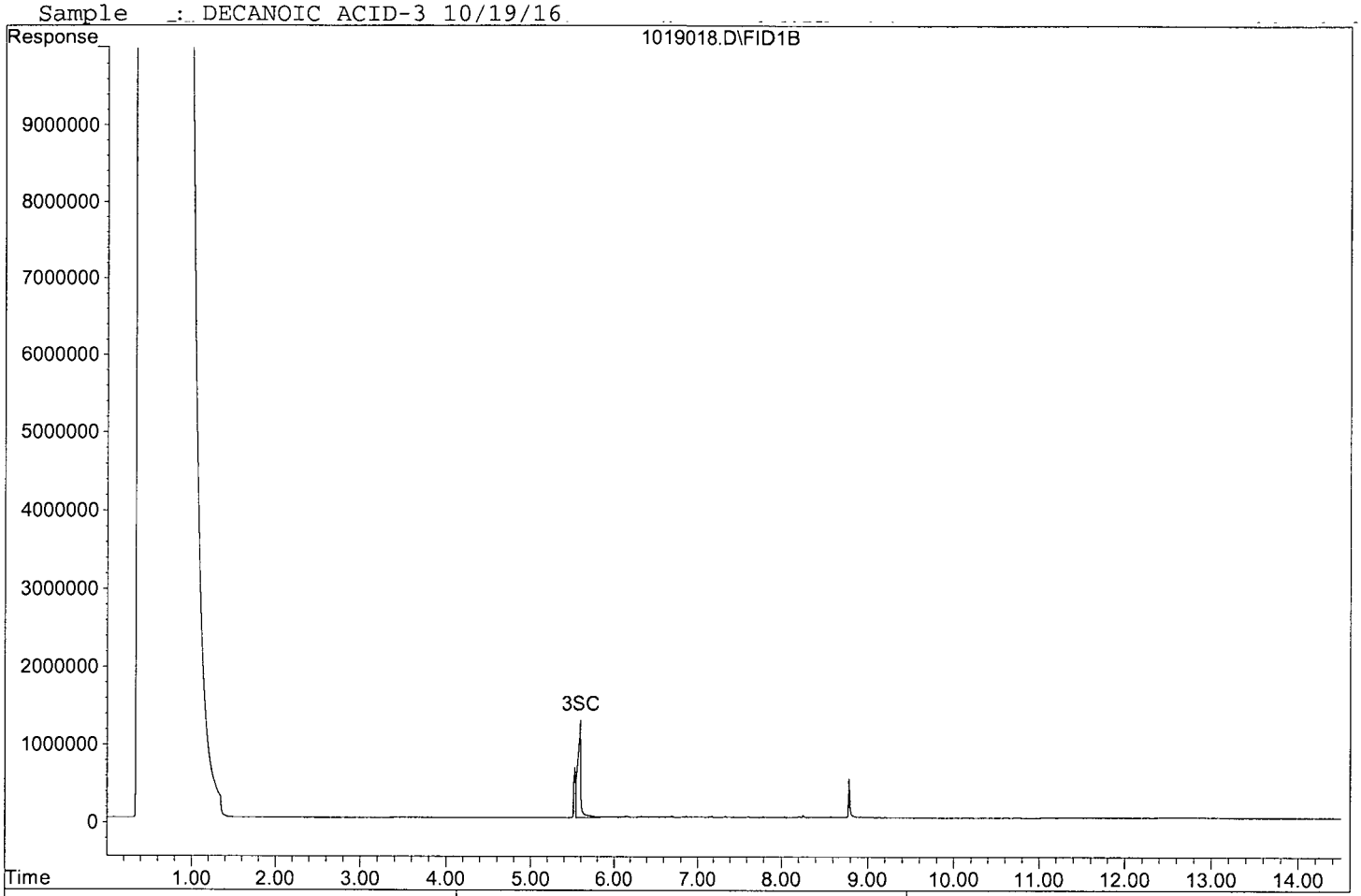
Method : G:\APOLLO\DATA\161123\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

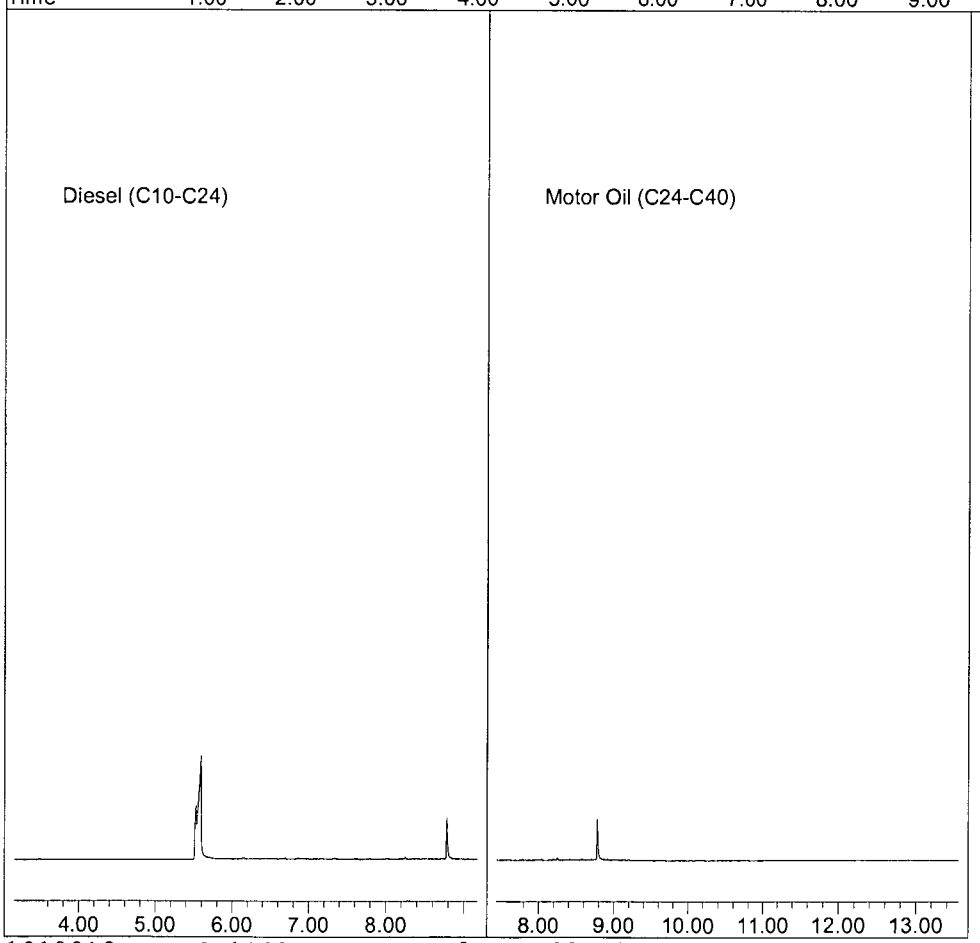
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SC Decanoic Acid(S)	5.59	34159574	31.625 ppb
Surrogate Spike 48.000	Recovery =		65.89%
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161019\1019018.D
Sample _: DECANOIC ACID-3 10/19/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161019\1019019.D Vial: 19
Acq On : 10-19-16 18:00:04 Operator: lac
Sample : DECANOIC ACID-4 10/19/16 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:16 2016 Quant Results File: DOC1103.RES

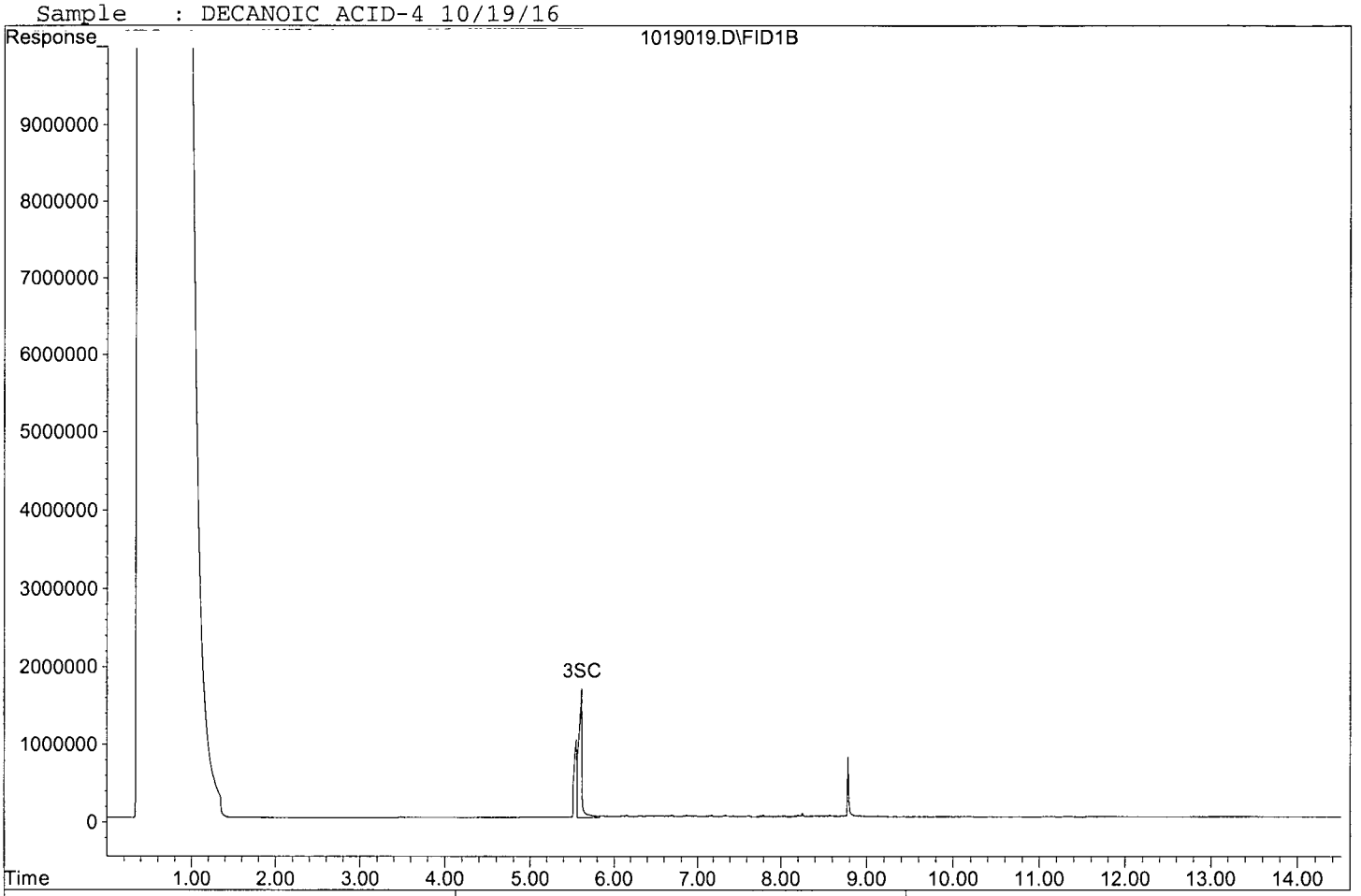
Method : G:\APOLLO\DATA\161123\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

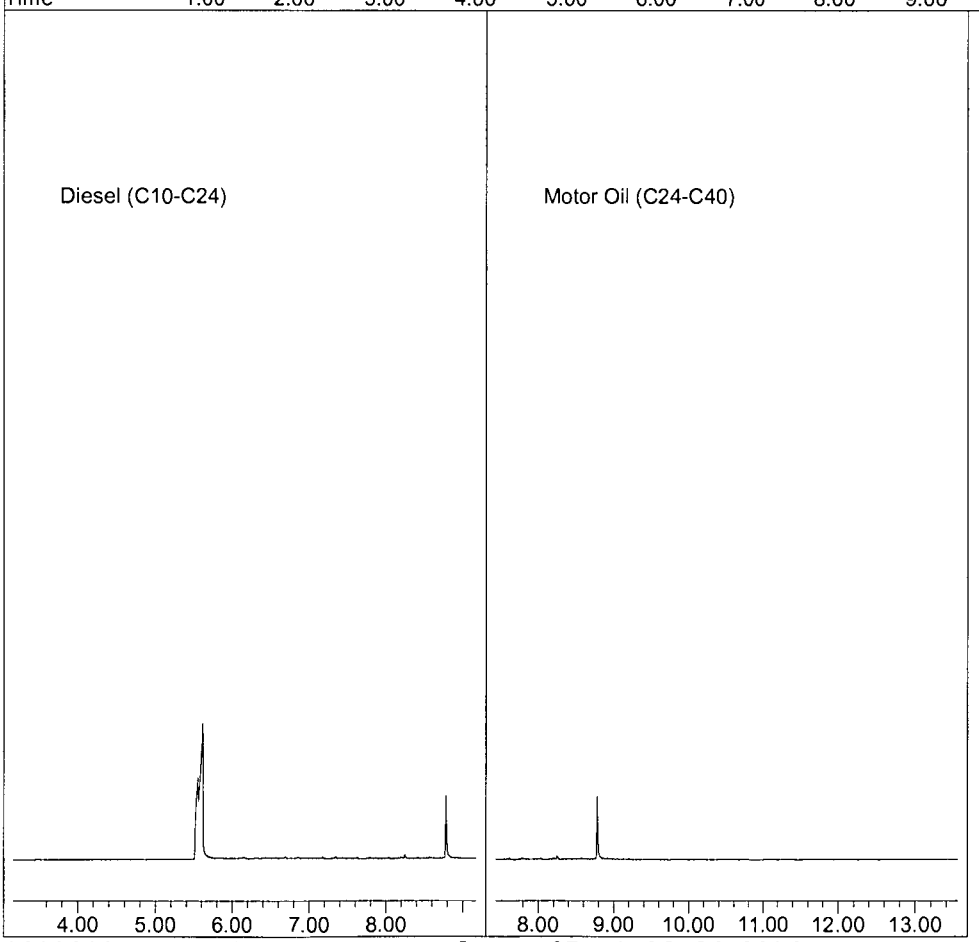
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SC Decanoic Acid(S)	5.61	47490932	39.757 ppb
Surrogate Spike 48.000		Recovery =	82.83%
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161019\1019019.D
Sample : DECANOIC ACID-4 10/19/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161019\1019020.D Vial: 20
Acq On : 10-19-16 18:21:47 Operator: lac
Sample : DECANOIC ACID-5 10/19/16 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:16 2016 Quant Results File: DOC1103.RES

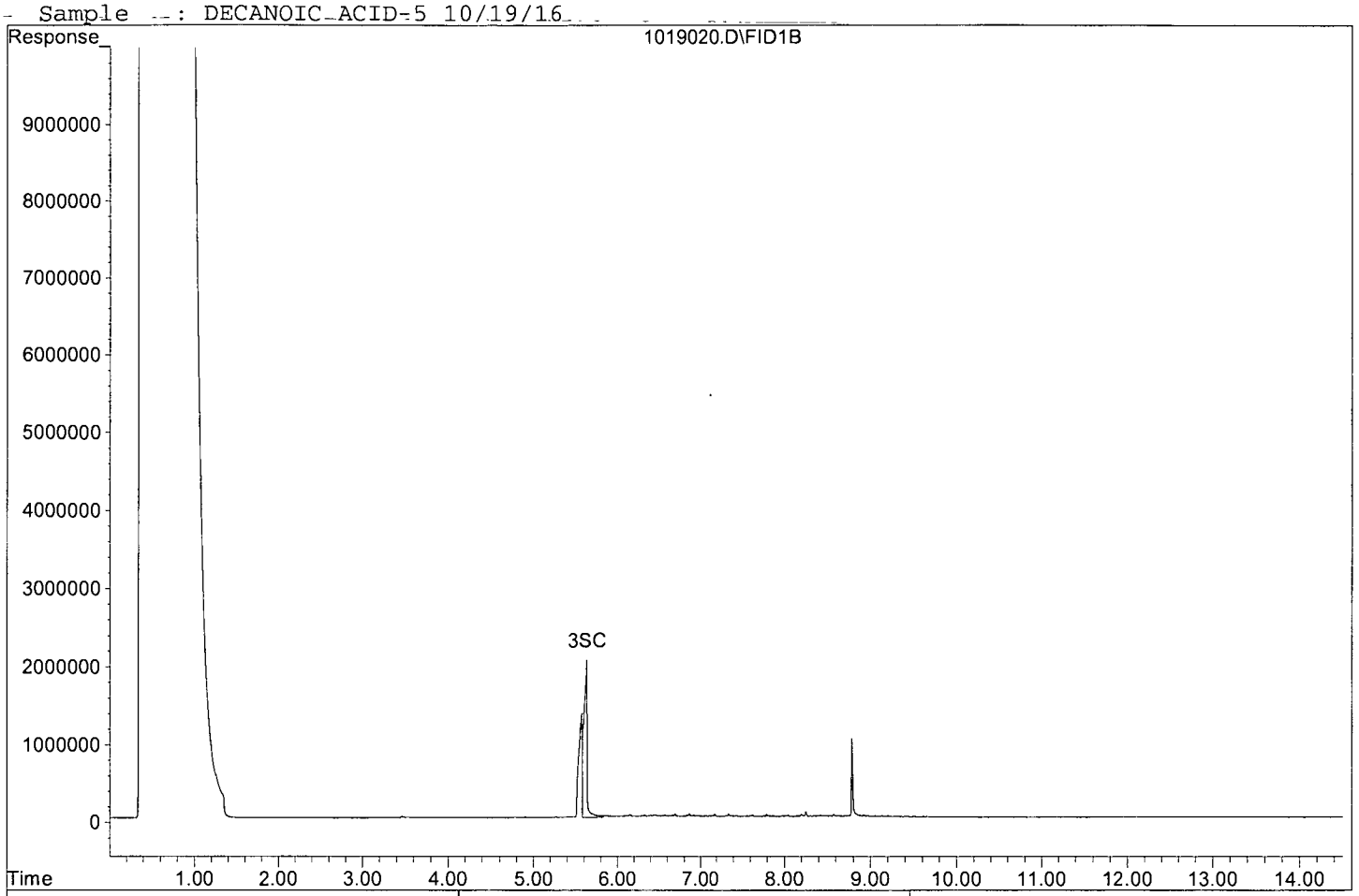
Method : G:\APOLLO\DATA\161123\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

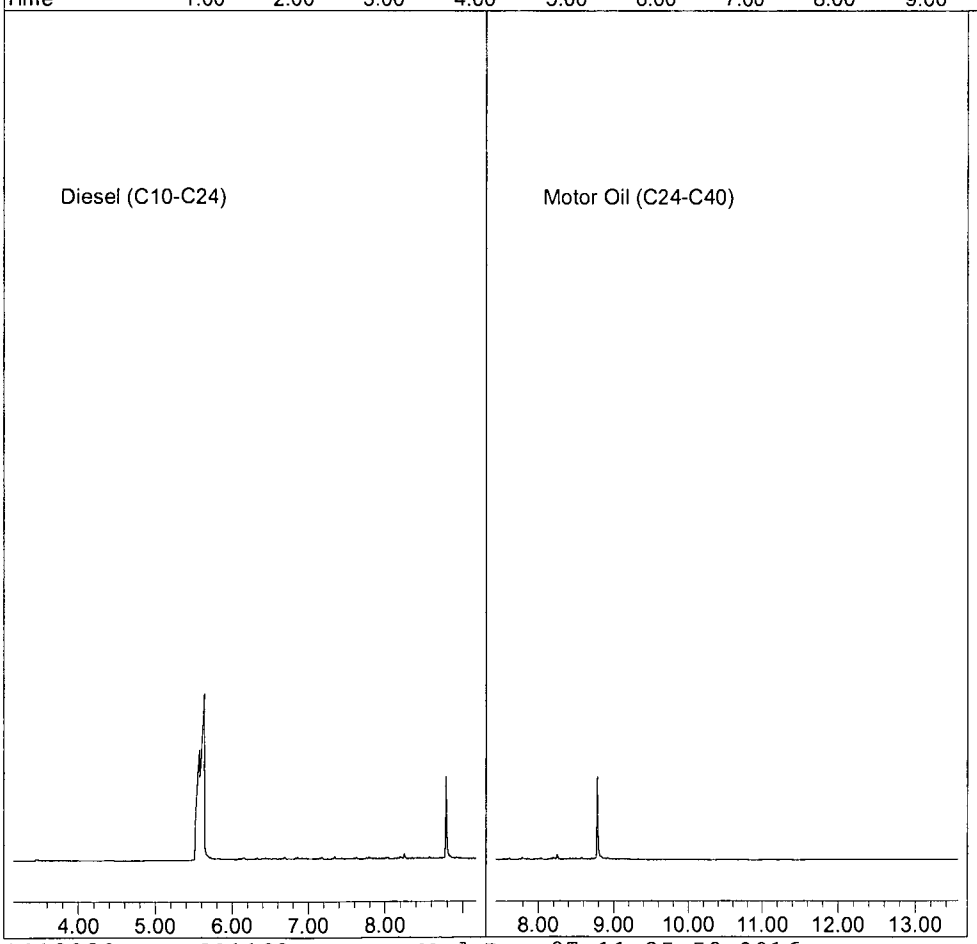
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SC Decanoic Acid(S)	5.63	56694836	46.255 ppb
Surrogate Spike 48.000	Recovery =		96.36%
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161019\1019020.D
Sample : DECANOIC_ACID-5 10/19/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161019\1019021.D Vial: 21
Acq On : 10-19-16 18:42:46 Operator: lac
Sample : DECANOIC ACID-6 10/19/16 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:17 2016 Quant Results File: DOC1103.RES

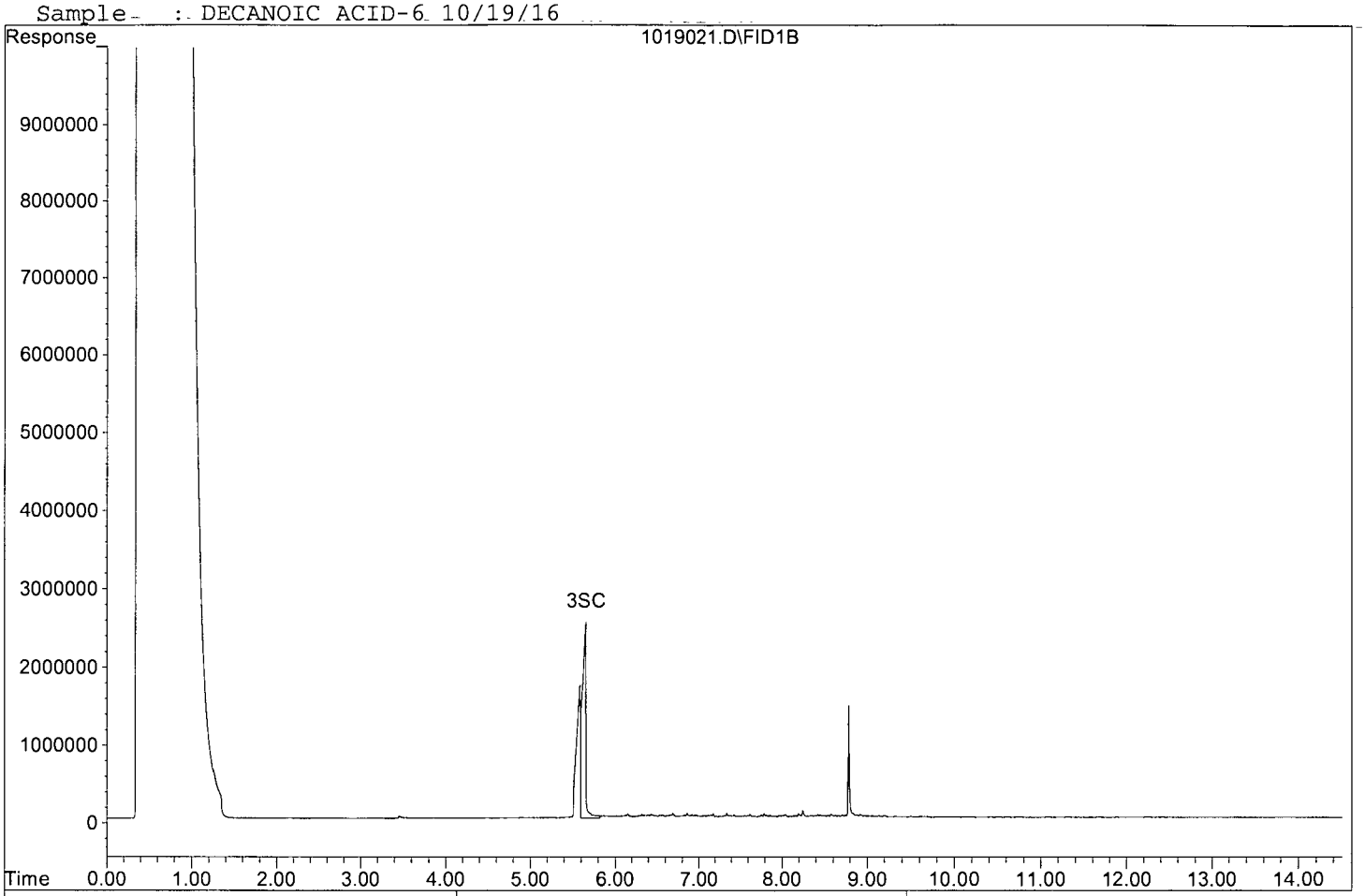
Method : G:\APOLLO\DATA\161123\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

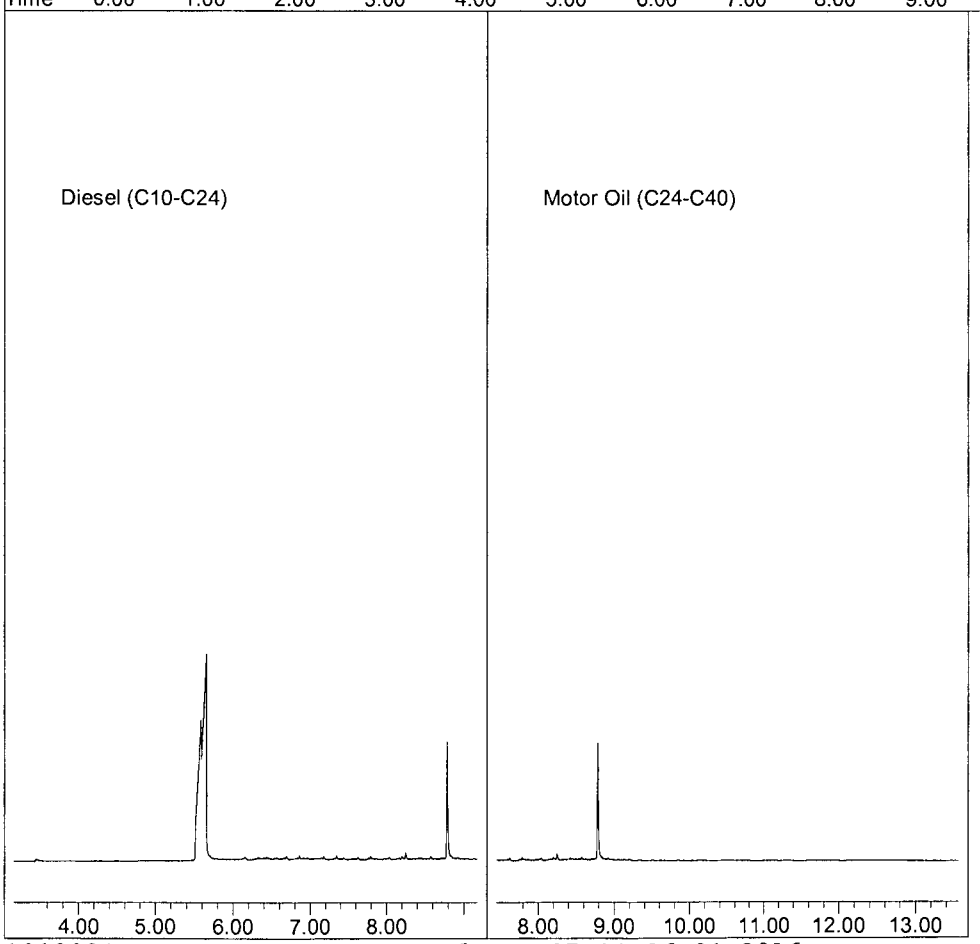
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SC Decanoic Acid(S)	5.65	75308900	61.891 ppb
Surrogate Spike 48.000	Recovery =	128.94%	
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161019\1019021.D
Sample : DECANOIC ACID-6 10/19/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161103\1103004.D Vial: 4
Acq On : 11-3-16 9:45:14 Operator: DP
Sample : DIESEL 10ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

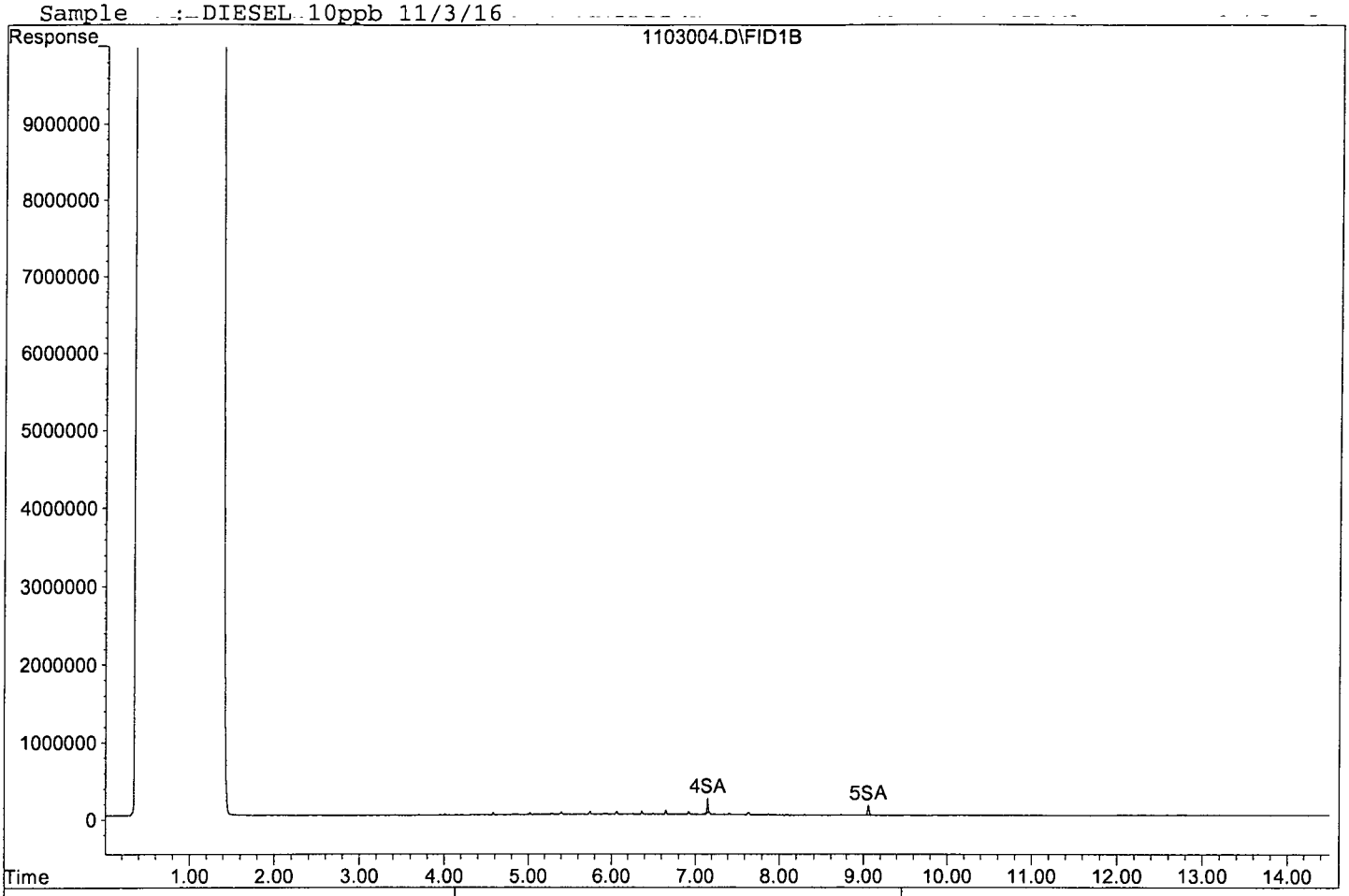
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

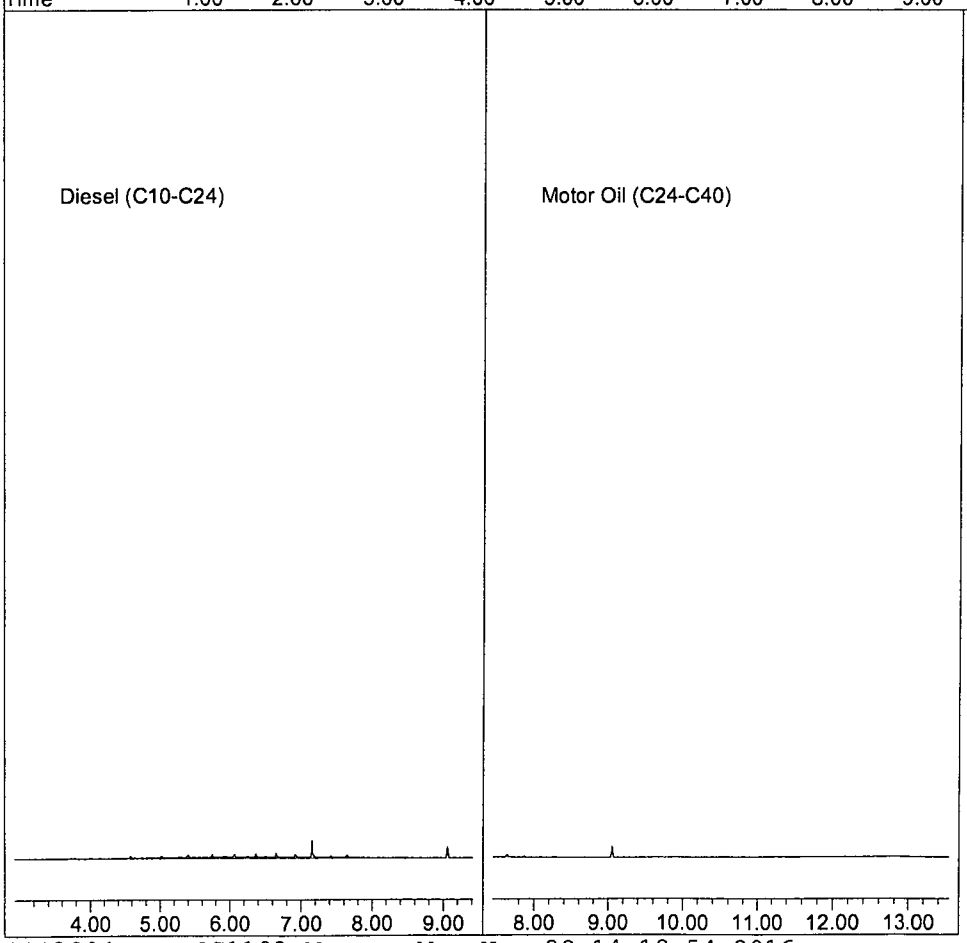
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.15	1320666	0.233 ppb
Surrogate Spike 30.000	Recovery =		0.78%
5) SA Octacosane(S)	9.06	1736016	0.492 ppb
Surrogate Spike 30.000	Recovery =		1.64%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	34279391	10.218 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103004.D
Sample : DIESEL 10ppb 11/3/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161103\1103011.D Vial: 11
Acq On : 11-3-16 12:56:47 Operator: DP
Sample : DIESEL 100ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

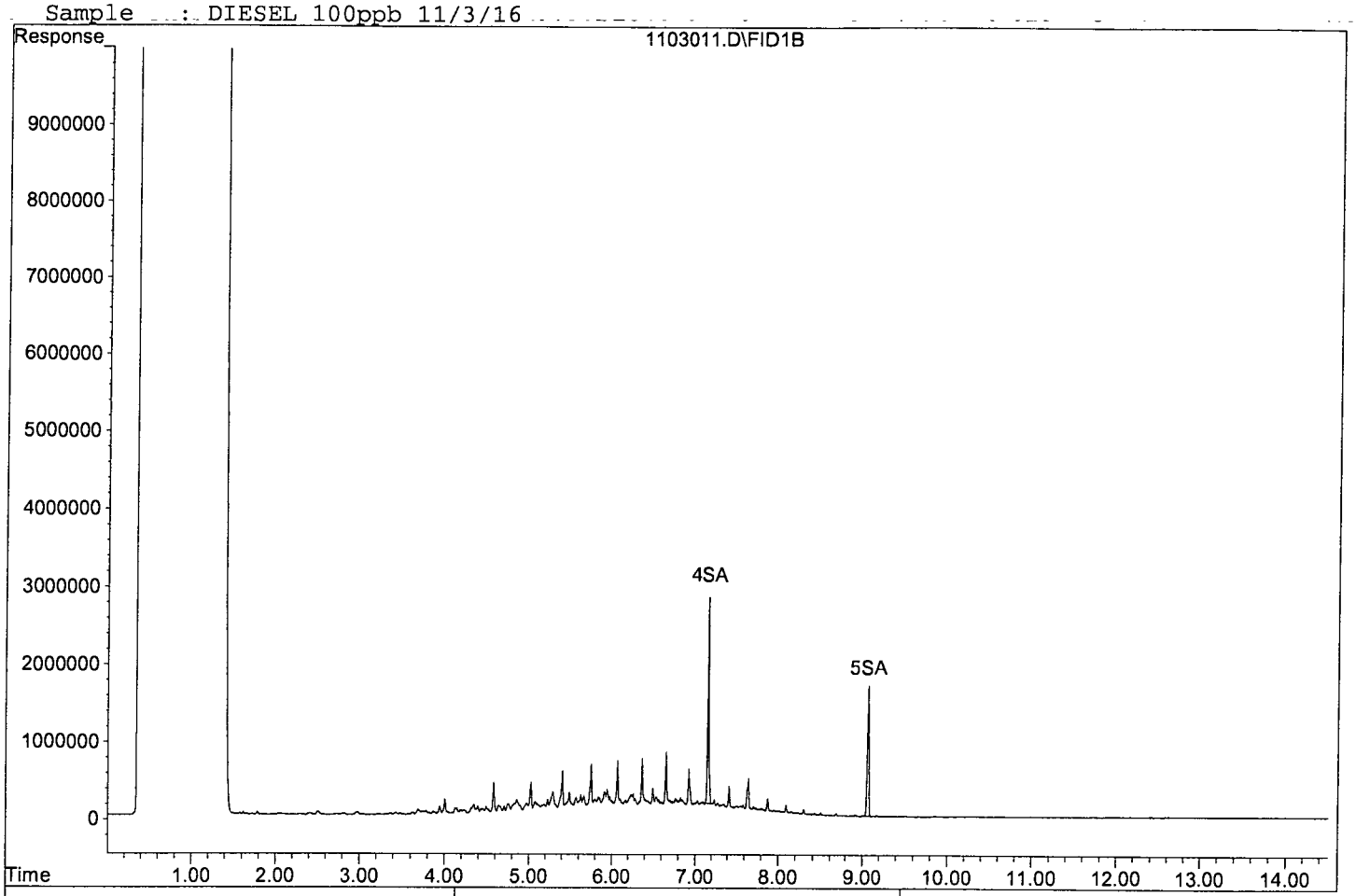
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

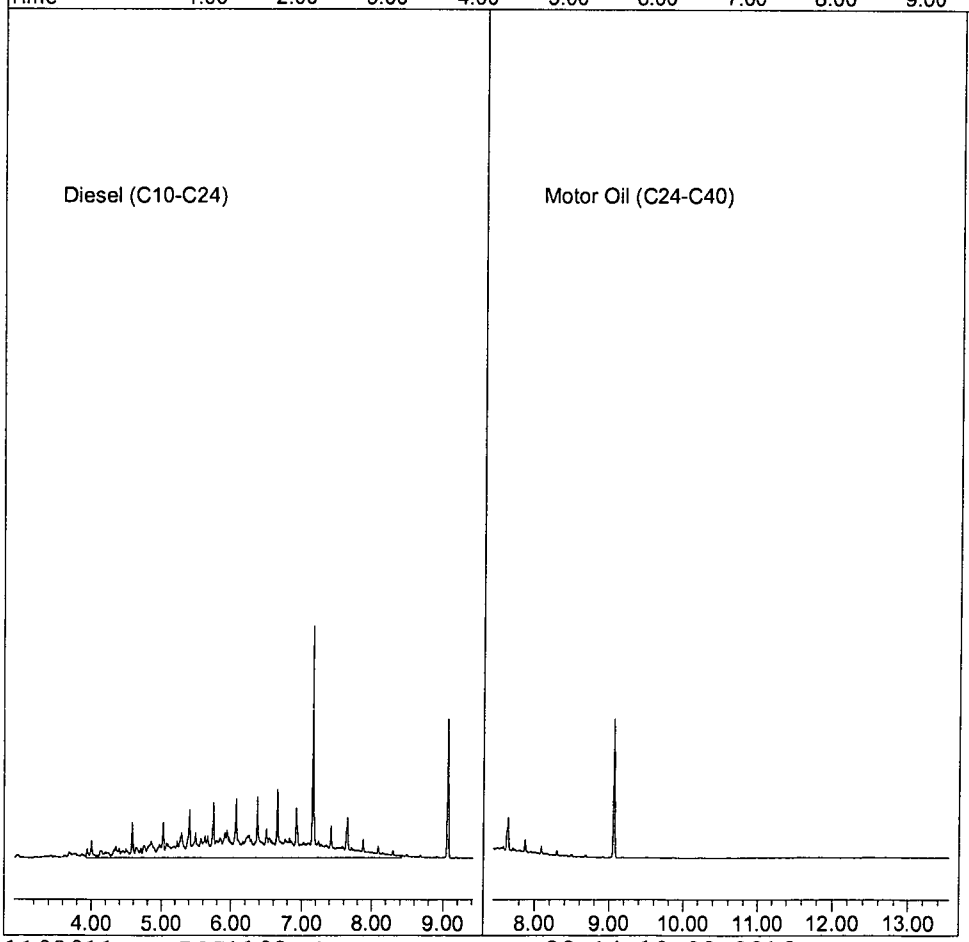
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.16	26876603	4.740 ppb
Surrogate Spike 30.000	Recovery =		15.80%
5) SA Octacosane(S)	9.06	20676993	5.864 ppb
Surrogate Spike 30.000	Recovery =		19.55%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	411320381	122.610 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103011.D
Sample : DIESEL 100ppb 11/3/16





1103011.D DOC1103.M Mon Nov 28 14:19:09 2016

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103006.D Vial: 6
Acq On : 11-3-16 10:26:16 Operator: DP
Sample : DIESEL 400ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

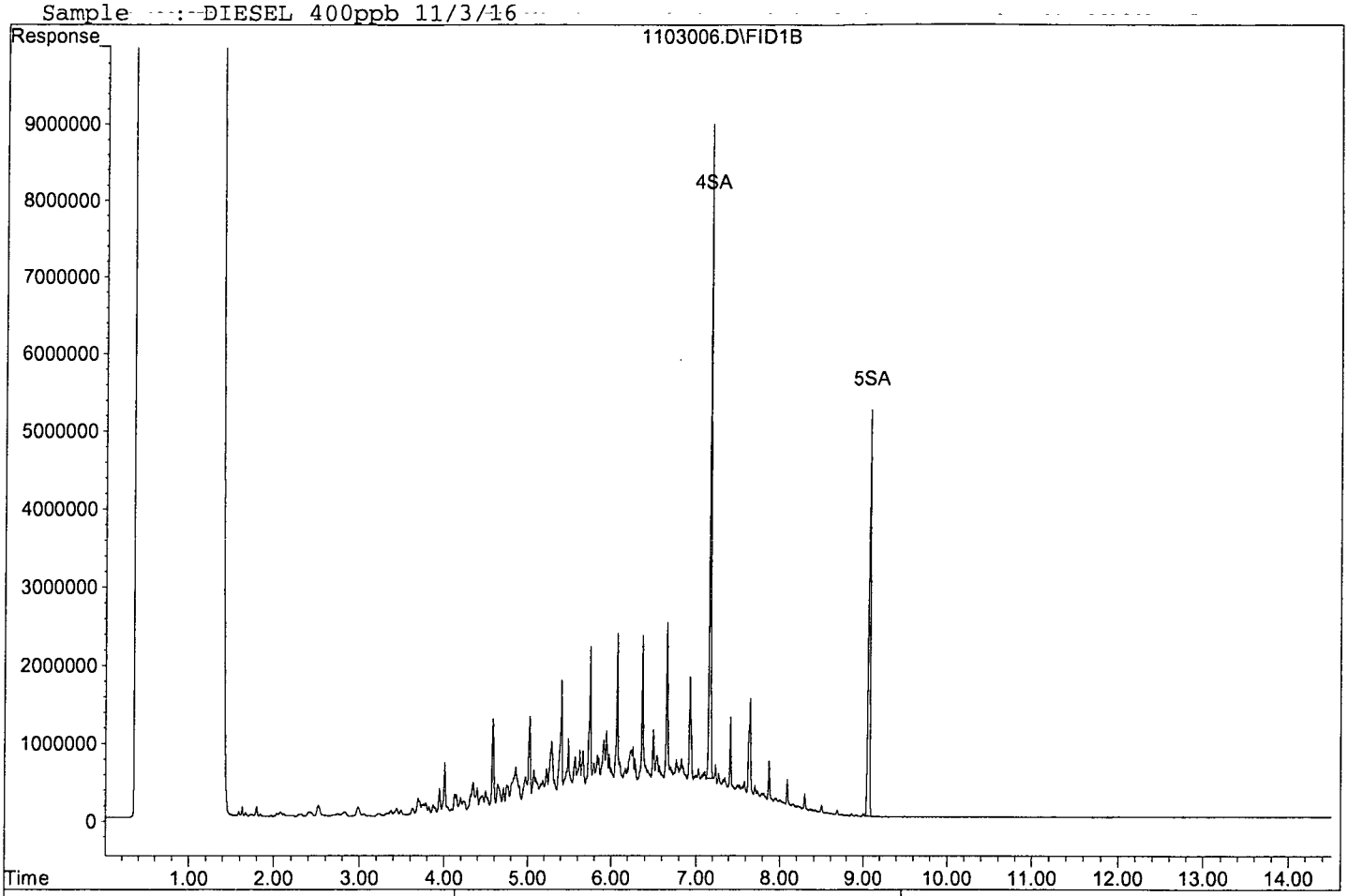
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

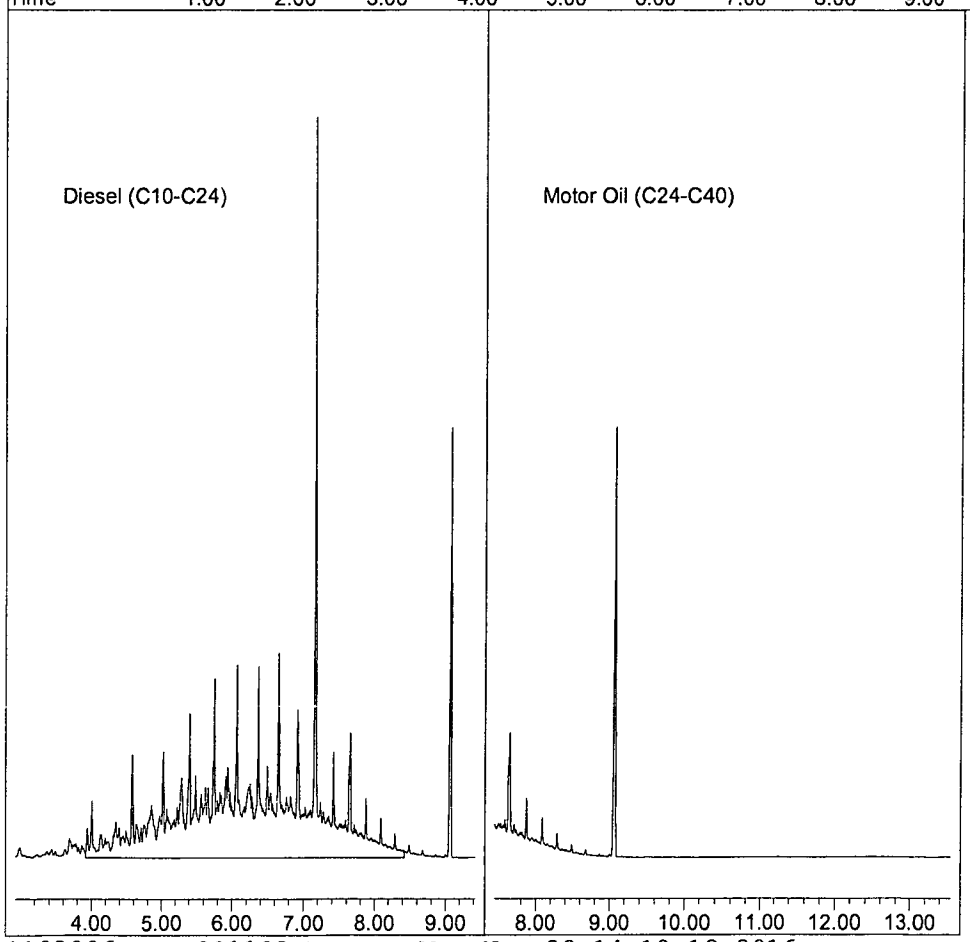
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.16	90205209	15.909 ppb
Surrogate Spike 30.000		Recovery =	53.03%
5) SA Octacosane(S)	9.07	67897660	19.256 ppb
Surrogate Spike 30.000		Recovery =	64.19%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	1300465223	387.653 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161103\1103006.D
Sample : DIESEL 400ppb 11/3/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103007.D Vial: 7
Acq On : 11-3-16 10:46:56 Operator: DP
Sample : DIESEL 600ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

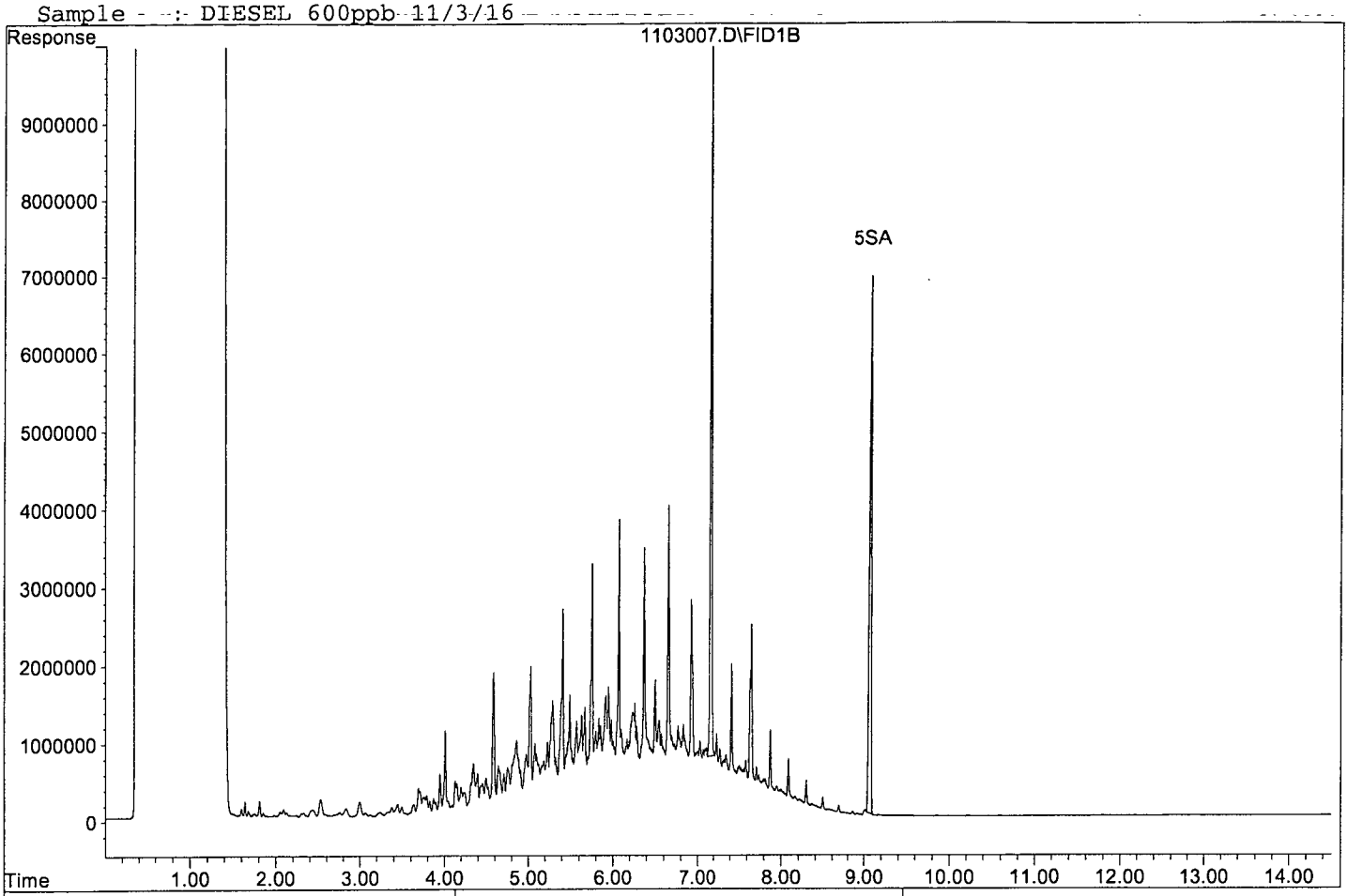
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

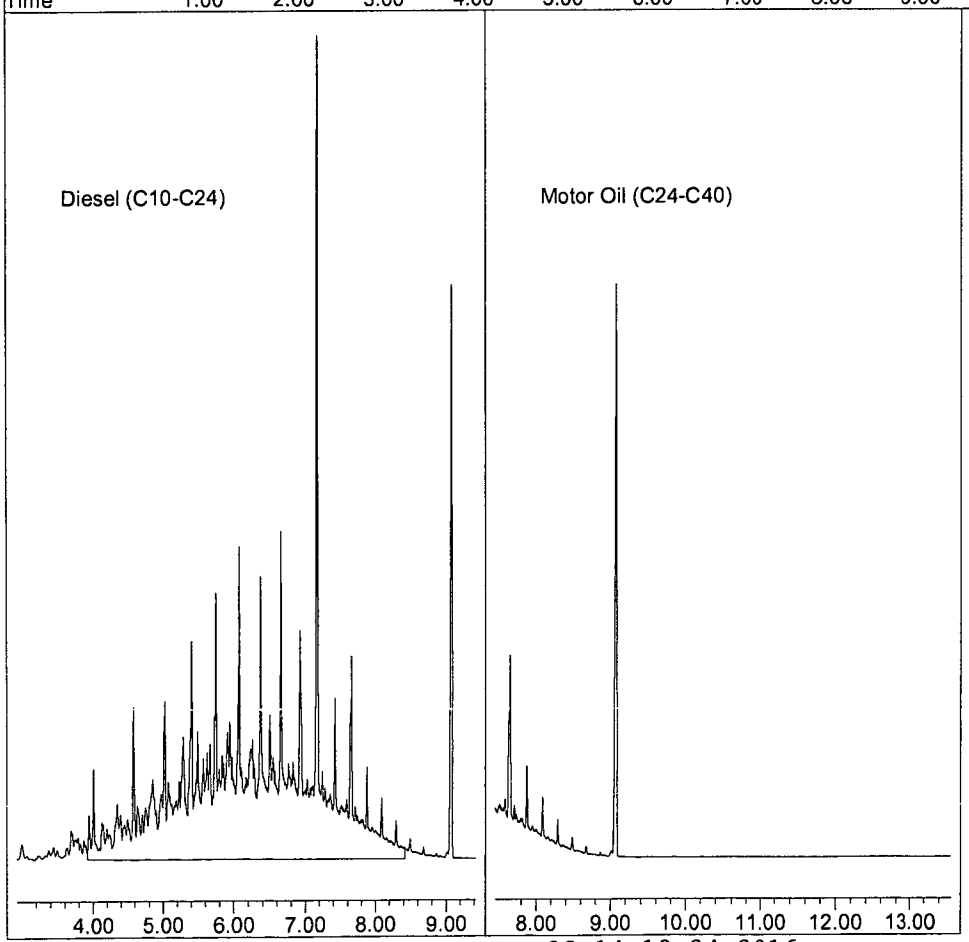
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.17	137805437	24.304 ppb
Surrogate Spike 30.000		Recovery =	81.01%
5) SA Octacosane(S)	9.07	102273844	29.005 ppb
Surrogate Spike 30.000		Recovery =	96.68%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	2037280173	607.288 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161103\1103007.D
Sample - : DIESEL 600ppb 11/3/16





1103007.D DOC1103.M Mon Nov 28 14:19:24 2016

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103008.D Vial: 8
Acq On : 11-3-16 11:07:39 Operator: DP
Sample : DIESEL 800ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

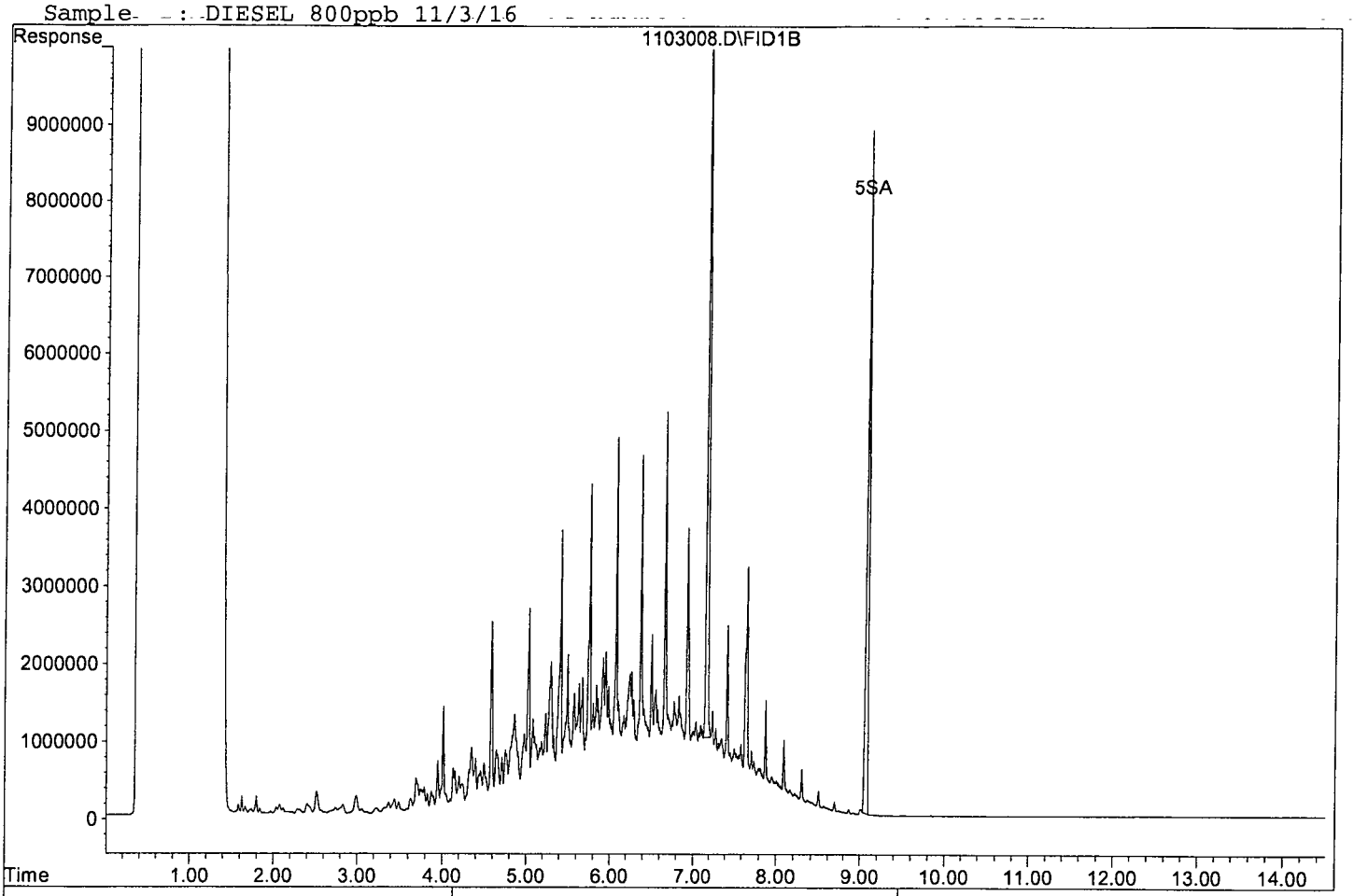
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

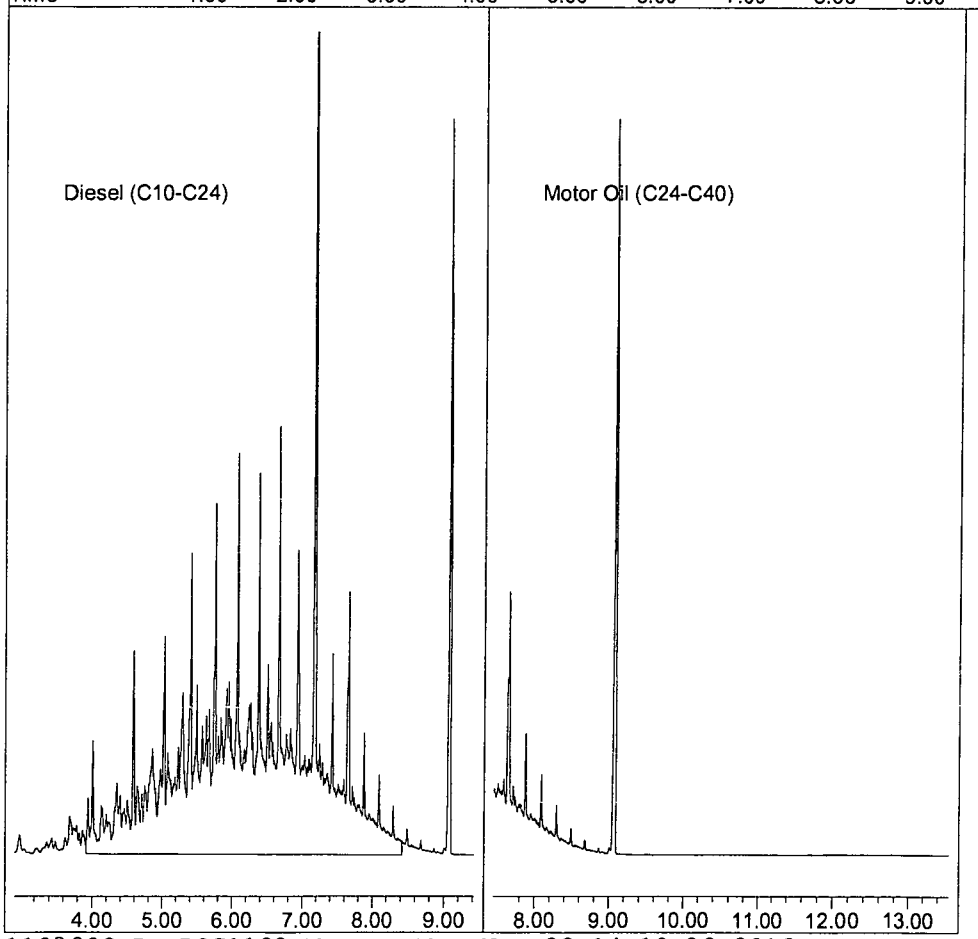
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.17	177261246	31.263 ppb
Surrogate Spike 30.000		Recovery =	104.21%
5) SA Octacosane(S)	9.08	132563050	37.596 ppb
Surrogate Spike 30.000		Recovery =	125.32%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	2629335633	783.773 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103008.D
Sample : DIESEL 800ppb 11/3/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103009.D Vial: 9
Acq On : 11-3-16 11:28:31 Operator: DP
Sample : DIESEL 1000ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

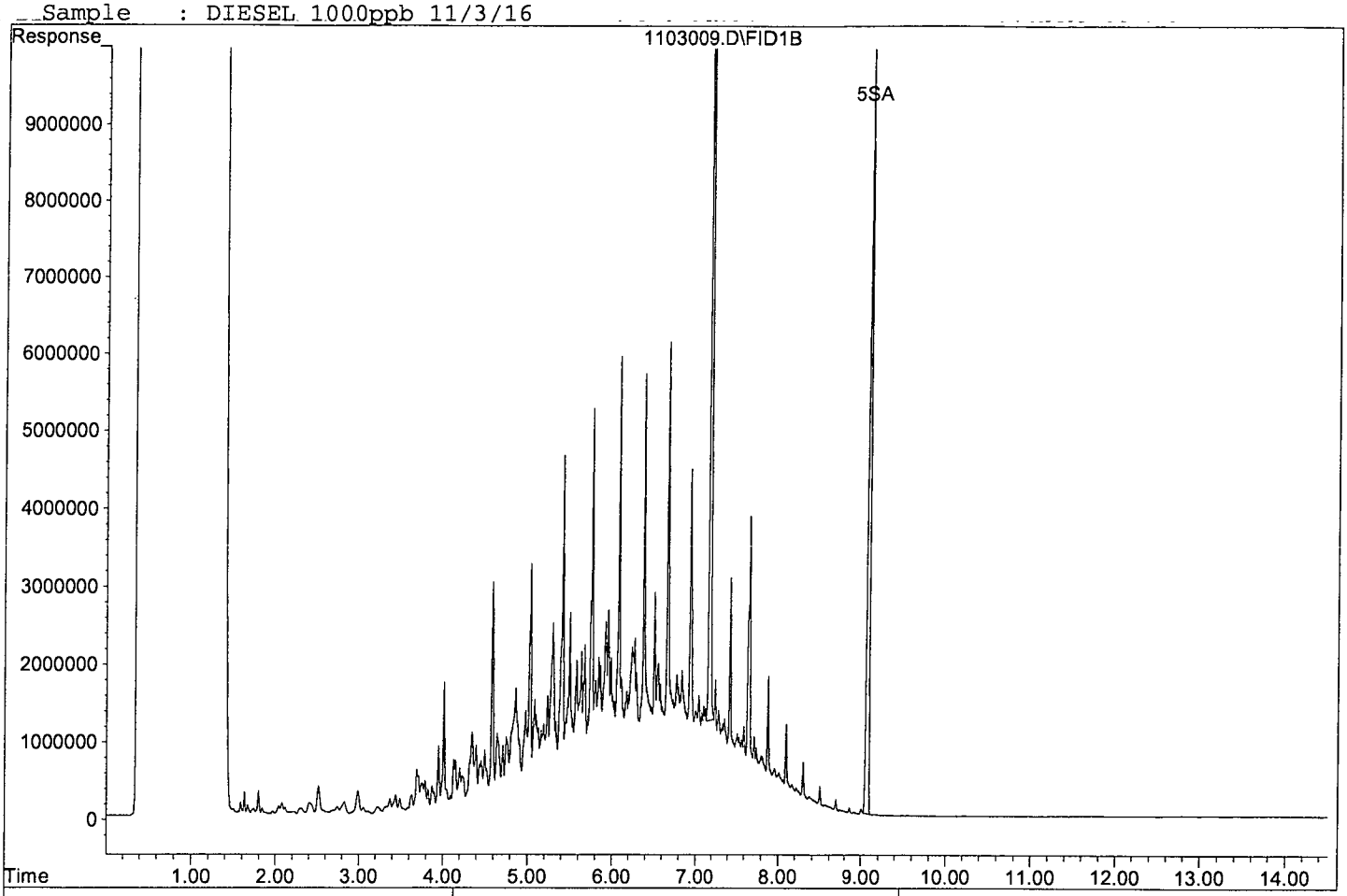
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

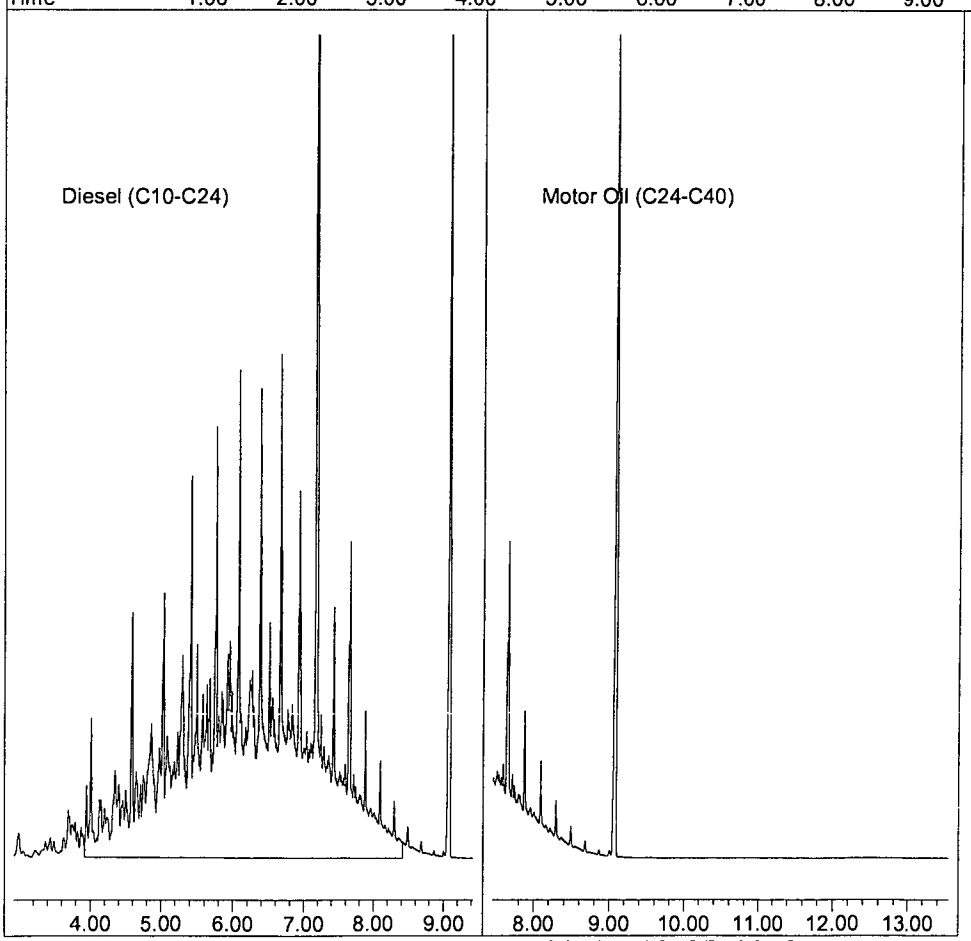
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.18	220584770	38.903	ppb
Surrogate Spike 30.000	Recovery =		129.68%	
5) SA Octacosane(S)	9.08	163627822	46.406	ppb
Surrogate Spike 30.000	Recovery =		154.69%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	3251118324	969.119	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103009.D
Sample : DIESEL 1000ppb 11/3/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028002.D Vial: 2
Acq On : 10-28-16 9:07:30 Operator: DP
Sample : MO 20ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multip1r: 1.00
IntFile : events.e
Quant Time: Nov 28 14:24 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

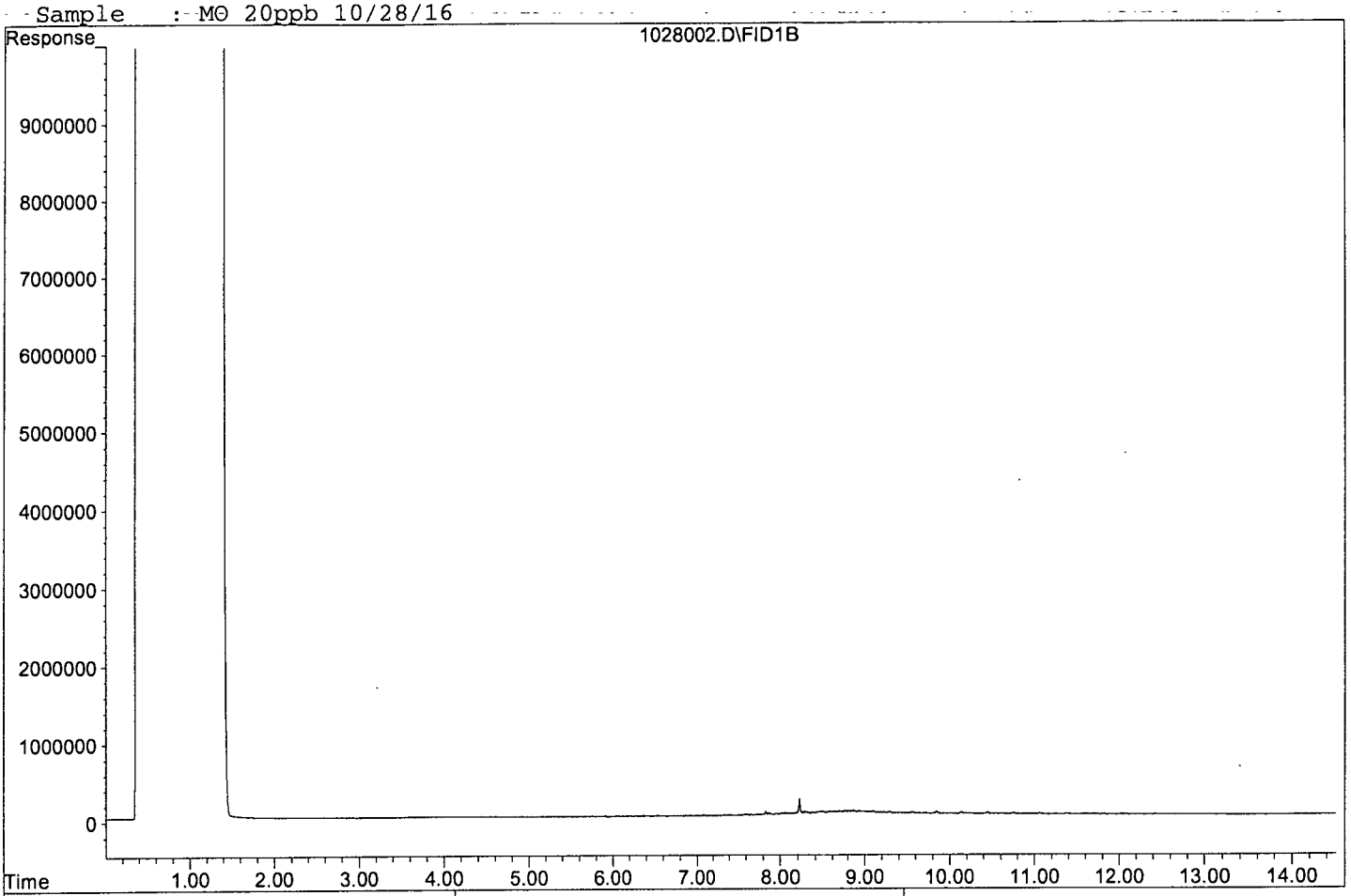
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

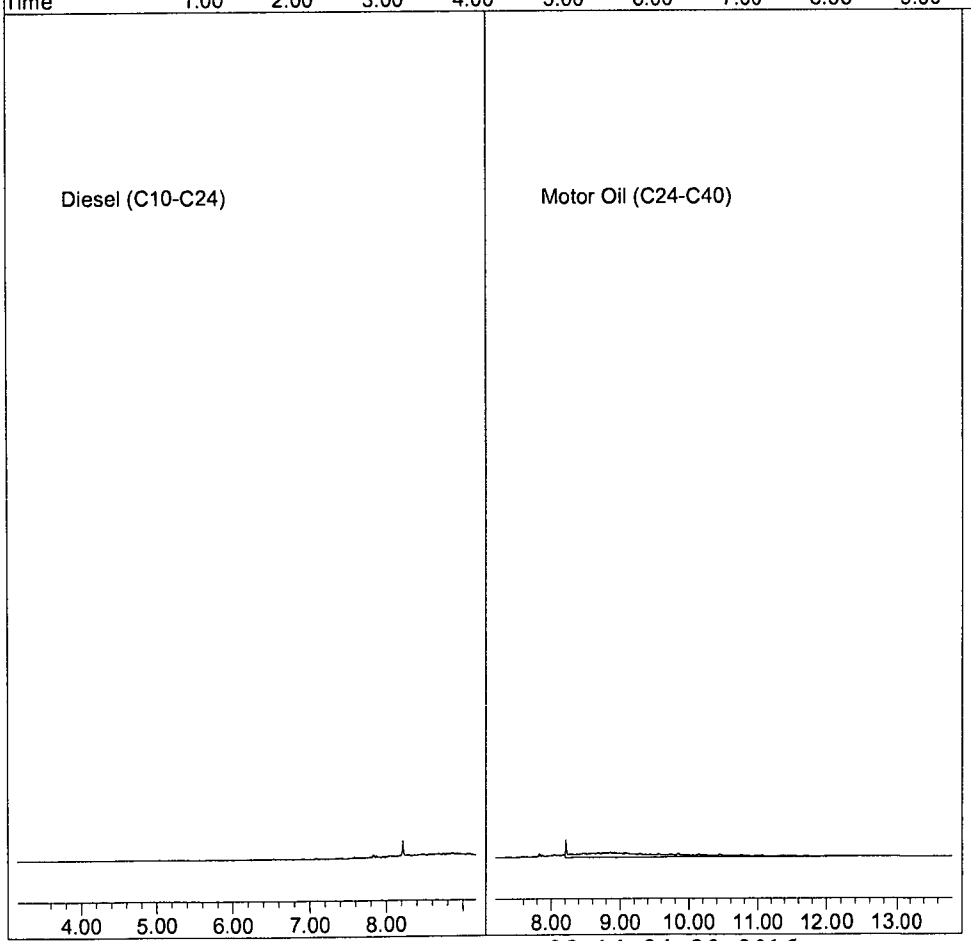
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	62507592	22.438 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161028\1028002.D
Sample : MO 20ppb 10/28/16





1028002.D DOC1103.M Mon Nov 28 14:24:20 2016

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028003.D Vial: 3
Acq On : 10-28-16 9:28:13 Operator: DP
Sample : MO 50ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:24 2016 Quant Results File: DOC1103.RES

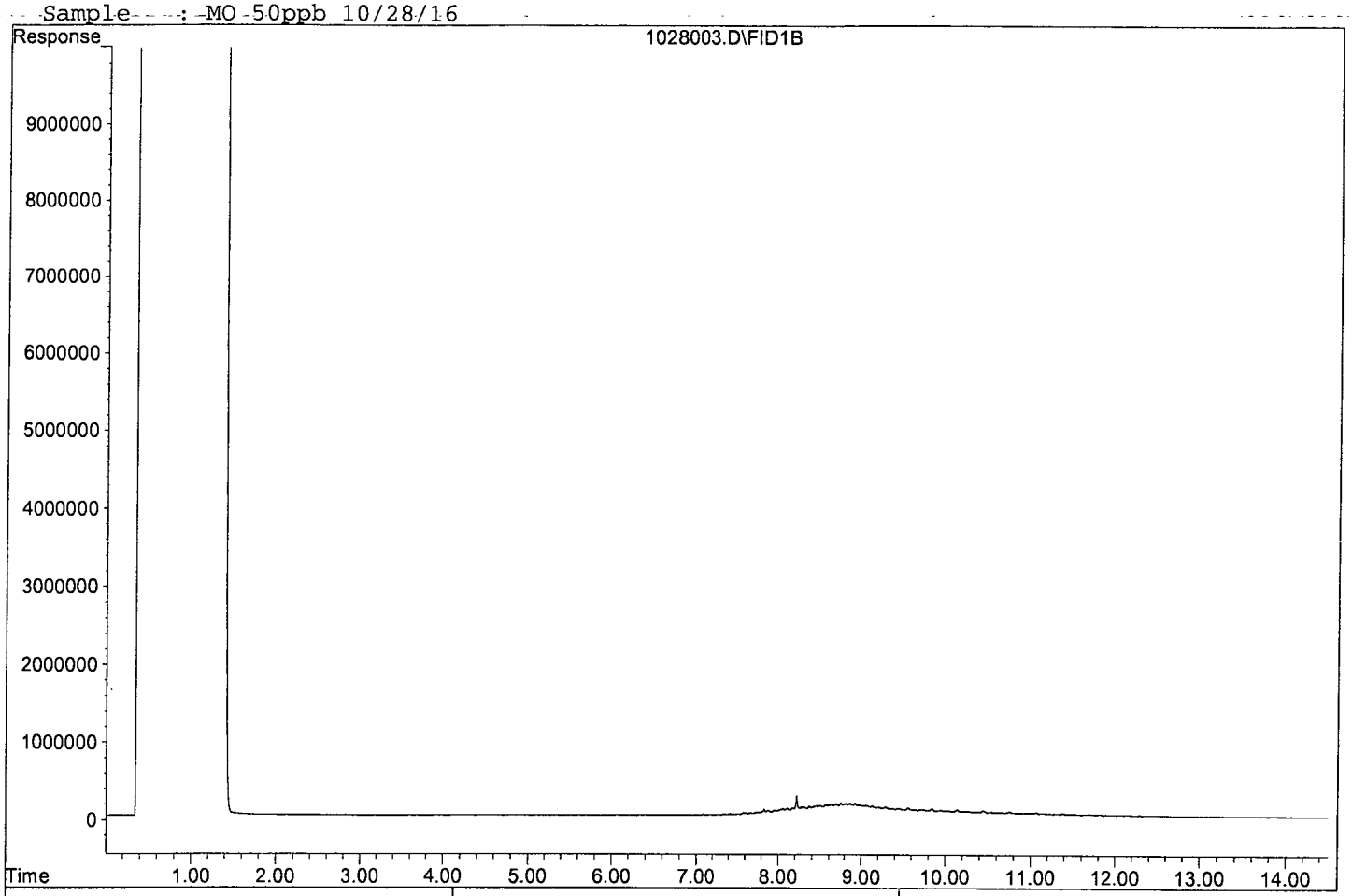
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

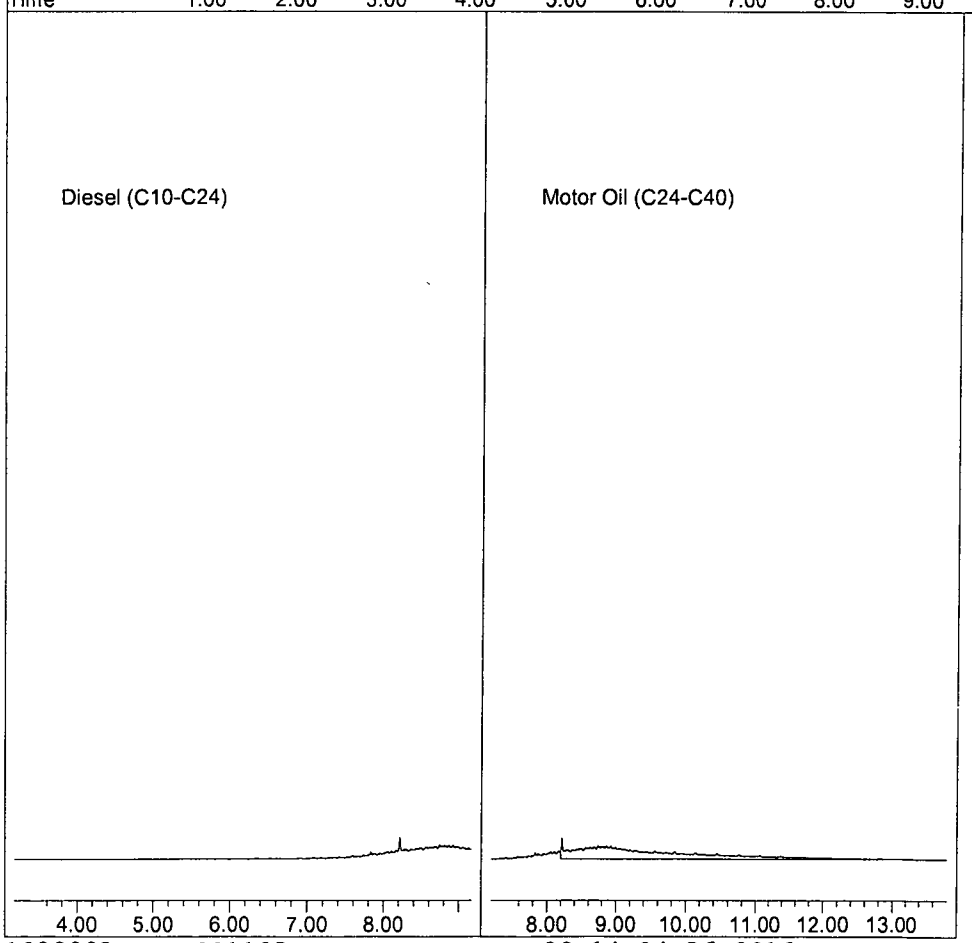
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	160376925	57.571 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028003.D
Sample : MO 50ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028004.D Vial: 4
Acq On : 10-28-16 9:49:06 Operator: DP
Sample : MO 250ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:24 2016 Quant Results File: DOC1103.RES

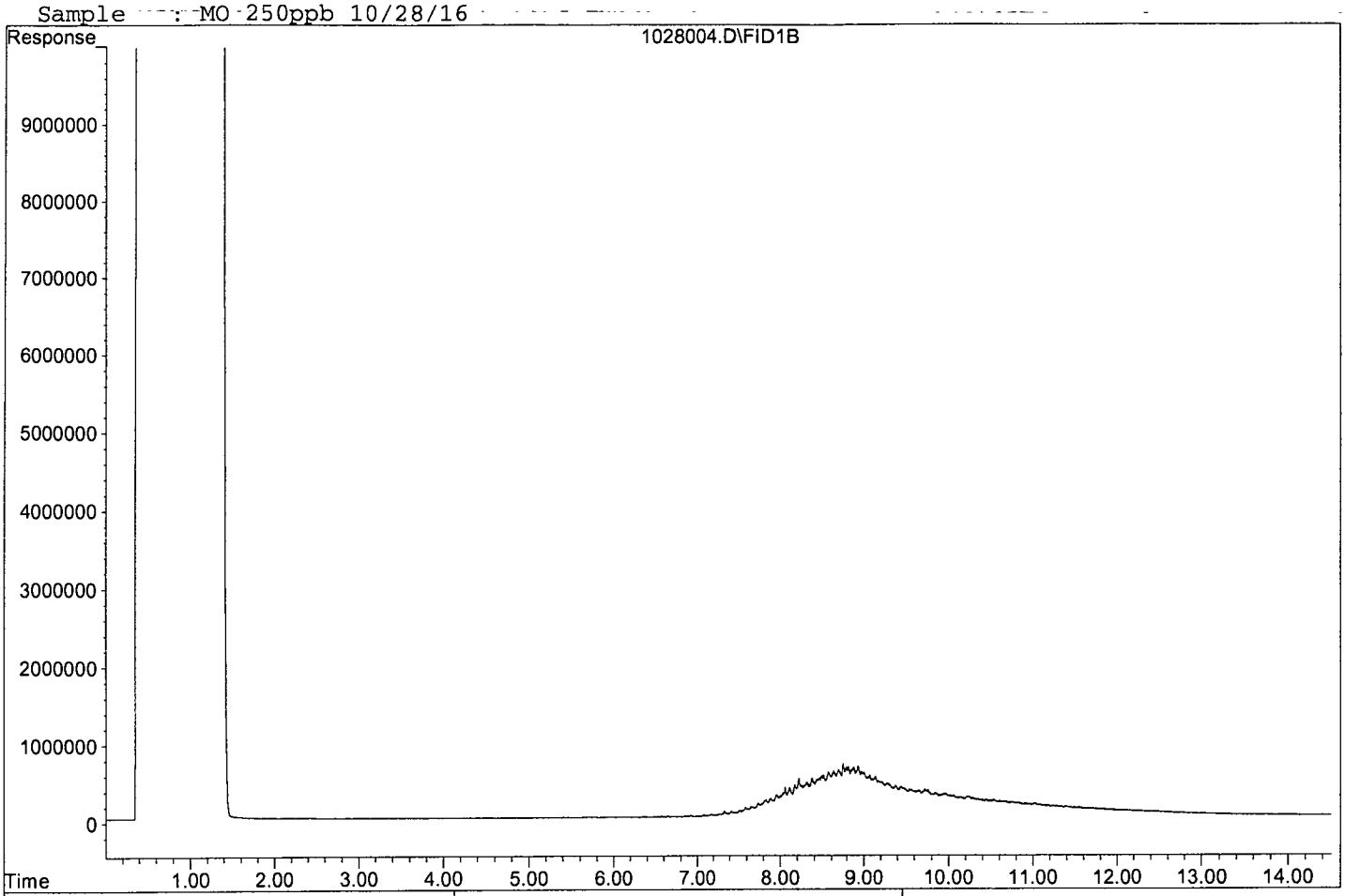
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

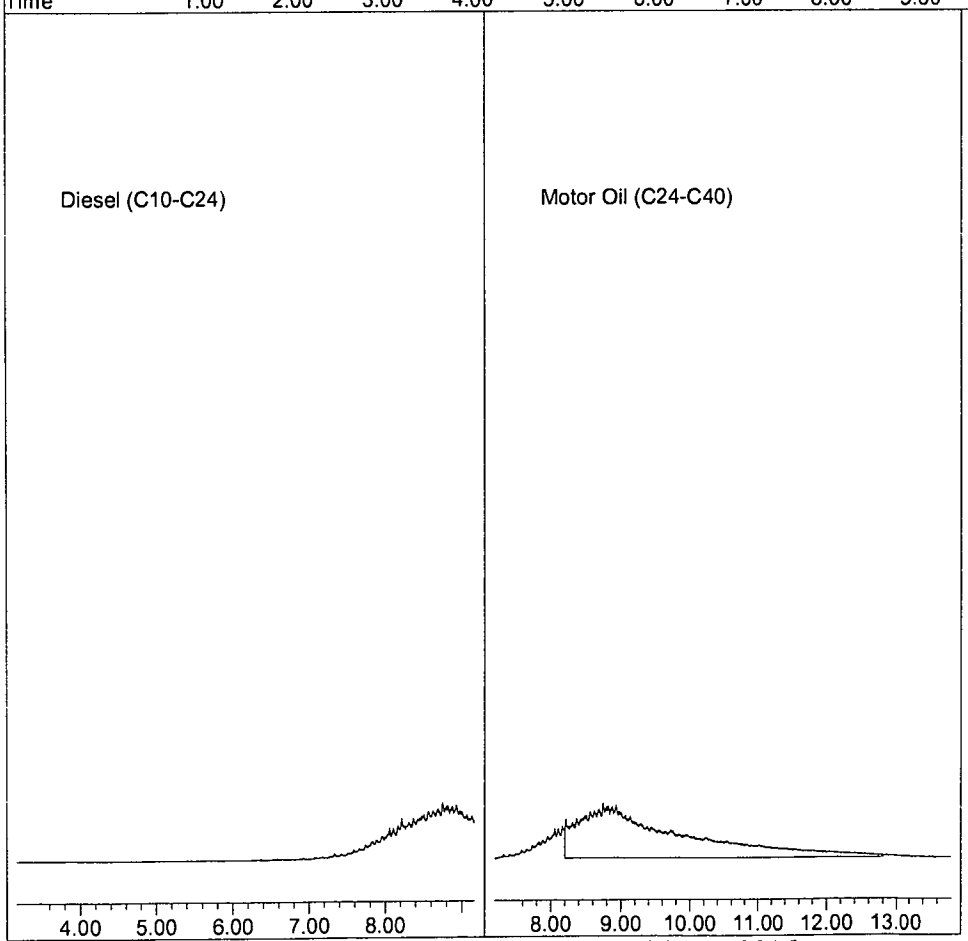
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	641488837	230.275 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028004.D
Sample : MO 250ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028005.D Vial: 5
Acq On : 10-28-16 10:09:58 Operator: DP
Sample : MO 1000ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:25 2016 Quant Results File: DOC1103.RES

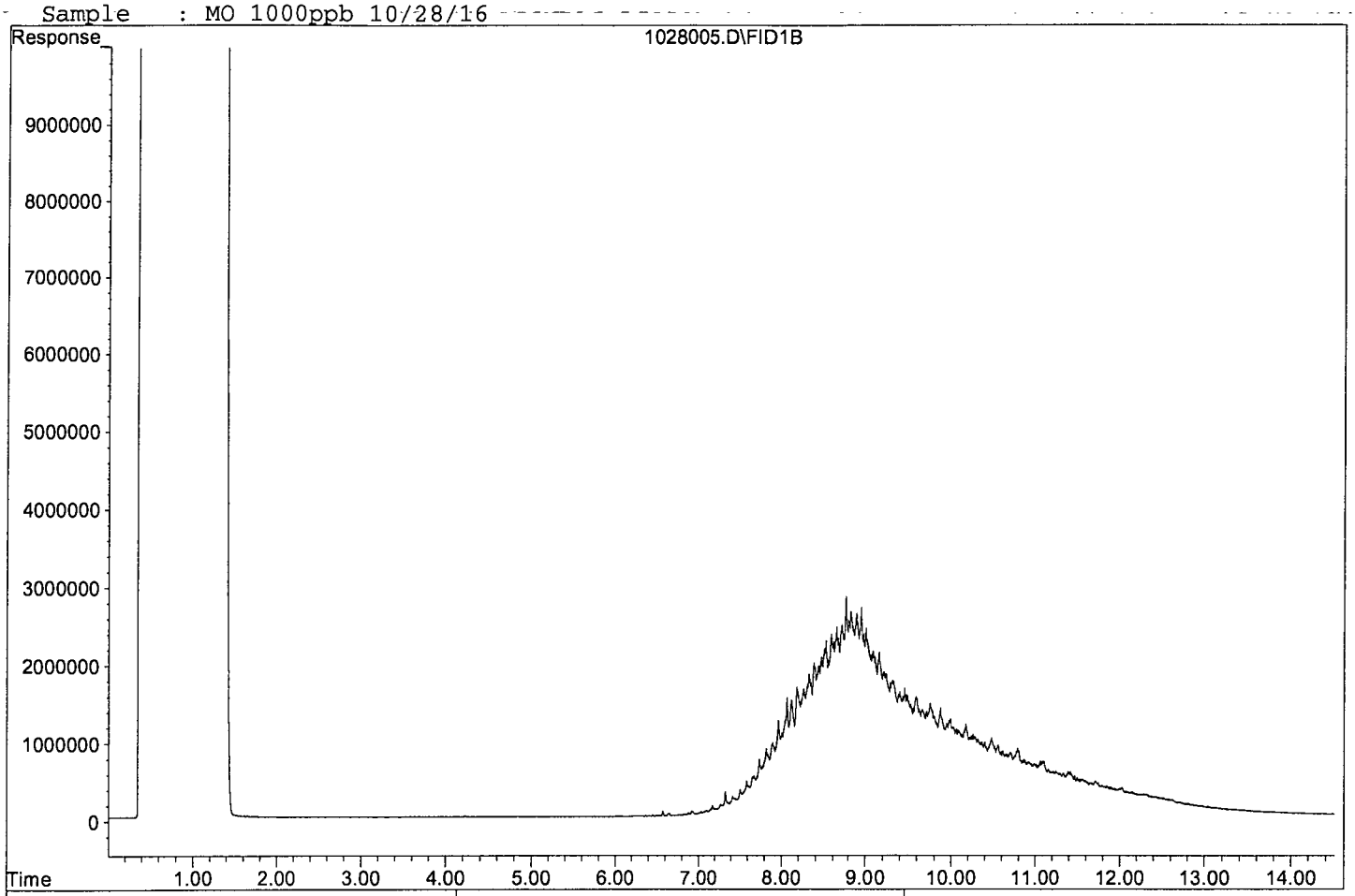
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

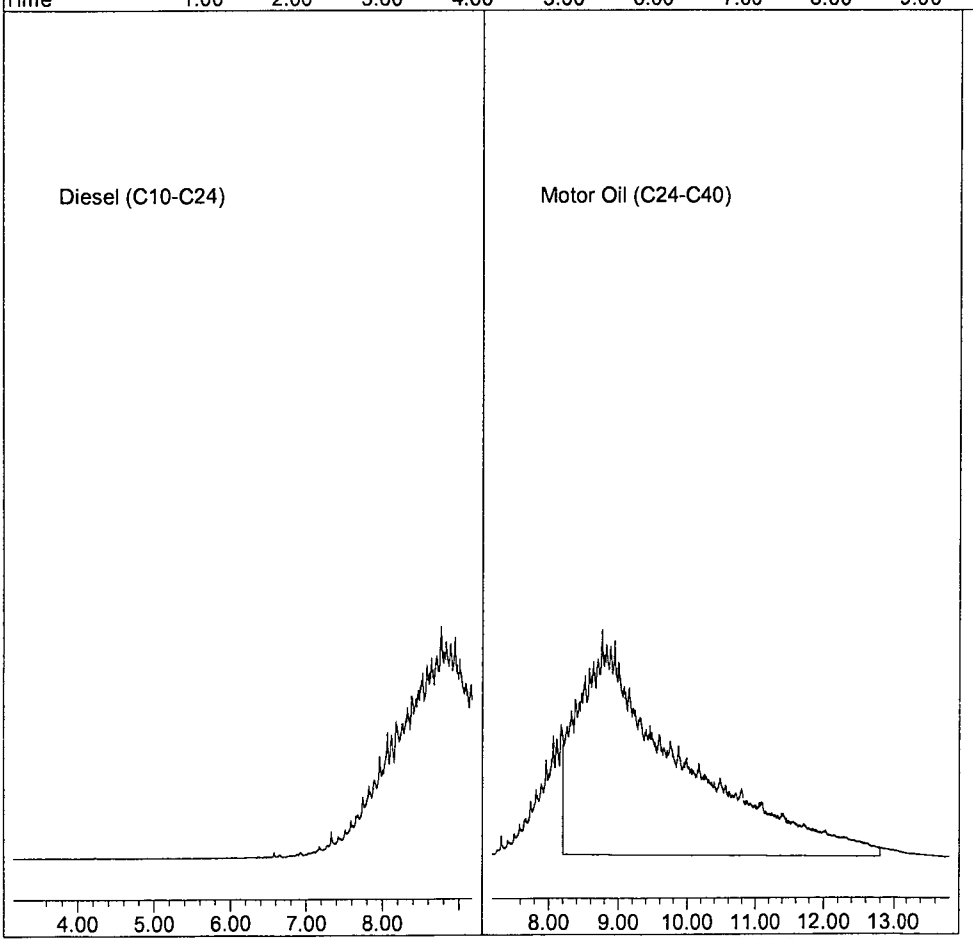
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	2680029704	962.051 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028005.D
Sample : MO 1000ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028006.D Vial: 6
Acq On : 10-28-16 10:30:51 Operator: DP
Sample : MO 1500ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:25 2016 Quant Results File: DOC1103.RES

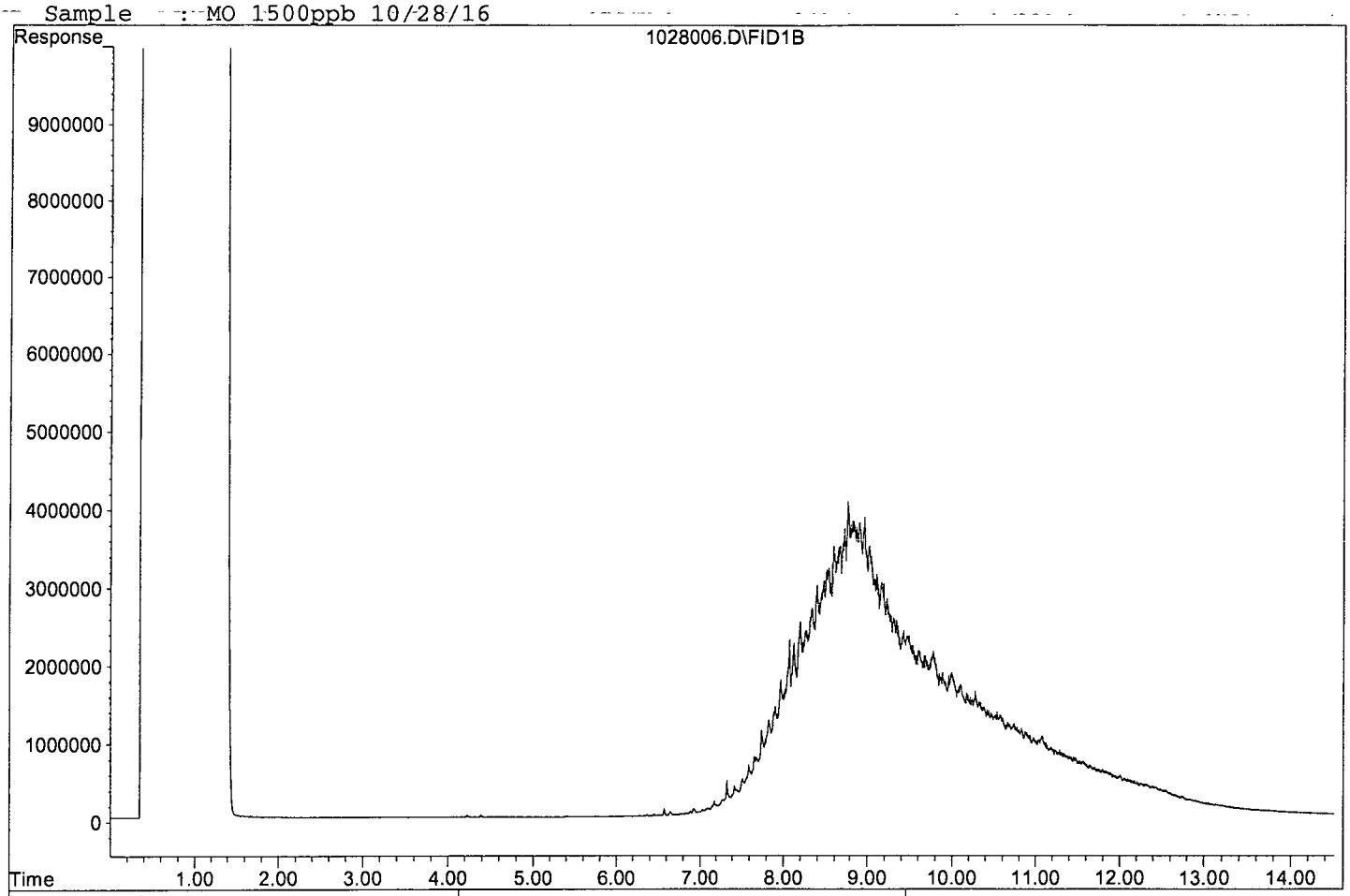
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

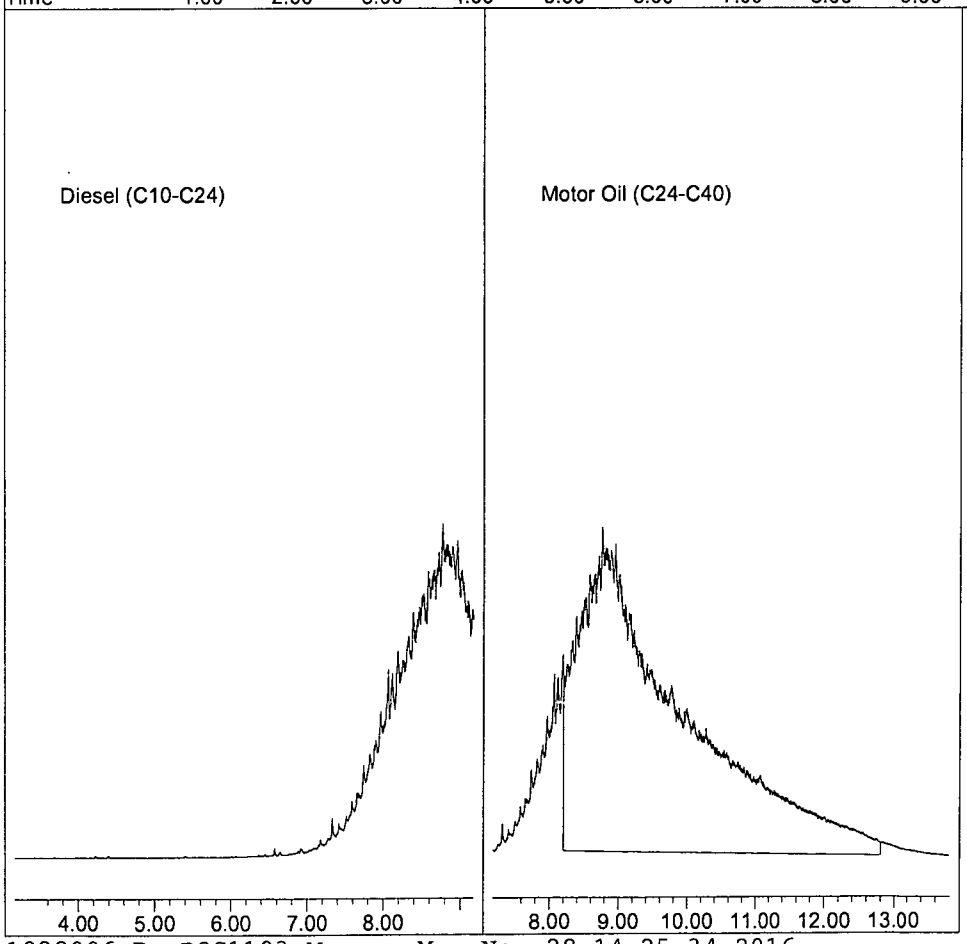
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
Target Compounds				
2) HBTM Motor Oil (C24-C40)	10.50	3965906010	1423.642	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028006.D
Sample : MO 1500ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028007.D Vial: 7
Acq On : 10-28-16 10:51:50 Operator: DP
Sample : MO 2000ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:25 2016 Quant Results File: DOC1103.RES

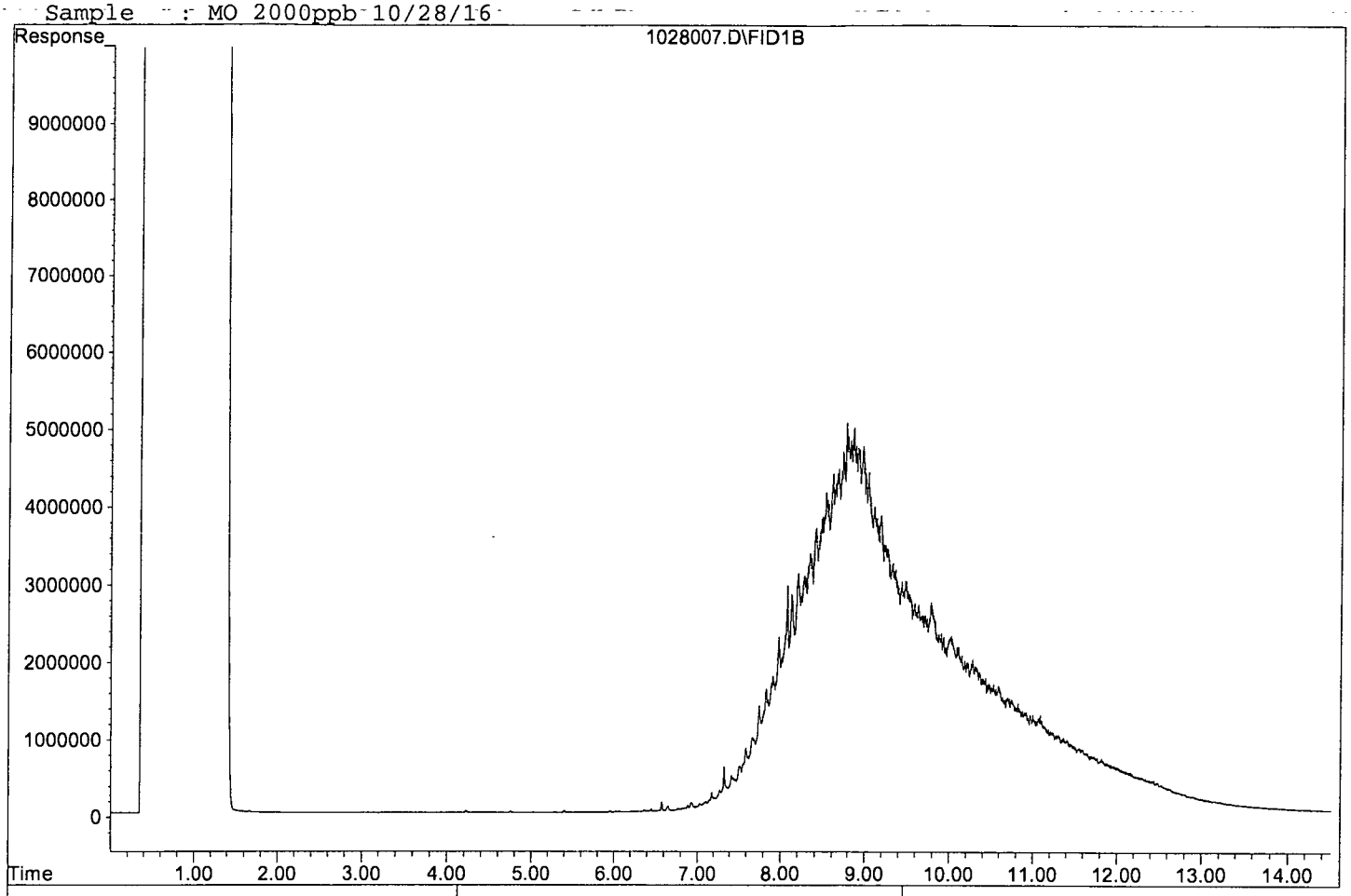
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

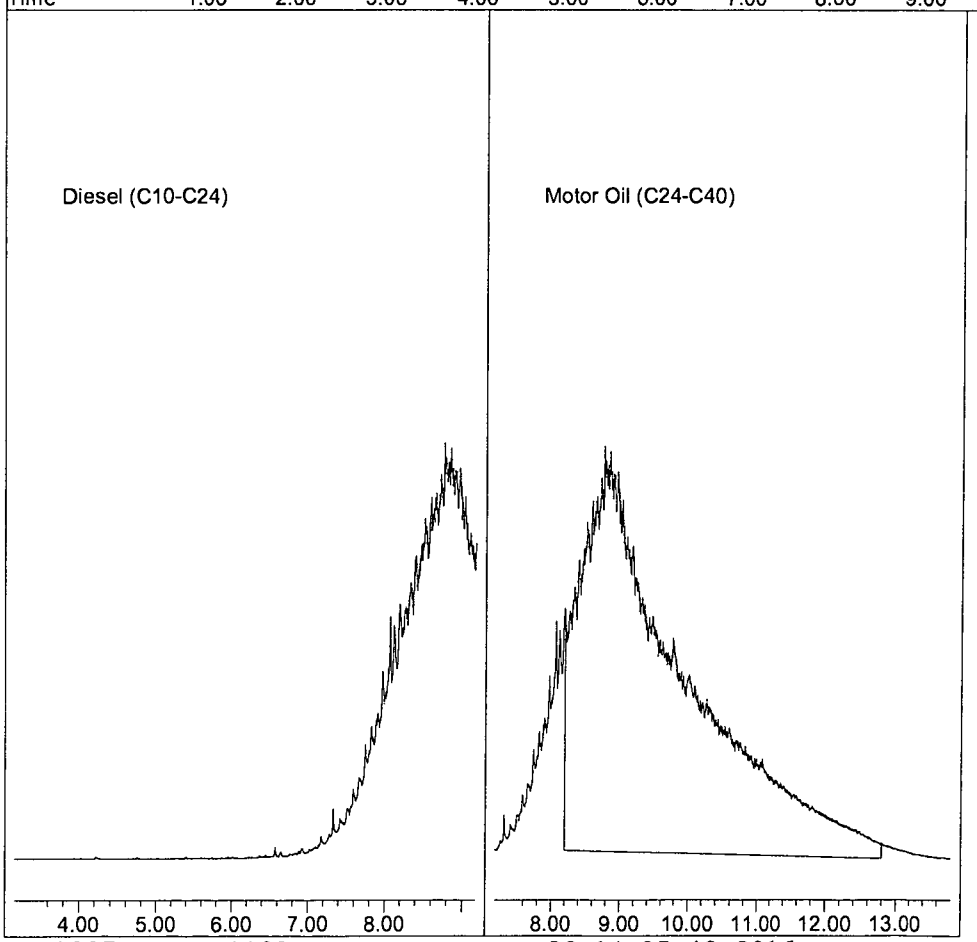
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
Target Compounds				
2) HBTM Motor Oil (C24-C40)	10.50	4983276169	1788.848	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028007.D
Sample : MO 2000ppb 10/28/16





Form 7

Second Source Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 11/03/16
Matrix: Instrument: Apollo
Initial Cal. Date: 11/03/16
Data File: 1103012.D 1028008.D
Diesel Motor Oil

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C24)	1727130	1667670	3.4	HATM	
2	HBTM	Motor Oil (C24-C40)	1392870	1239910	11	HBTM	
3							
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38							
39							
40							
		Average			7.2		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103012.D Vial: 12
Acq On : 11-3-16 13:25:11 Operator: DP
Sample : DIESEL-SS 400ppb 8/1/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 15:21 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

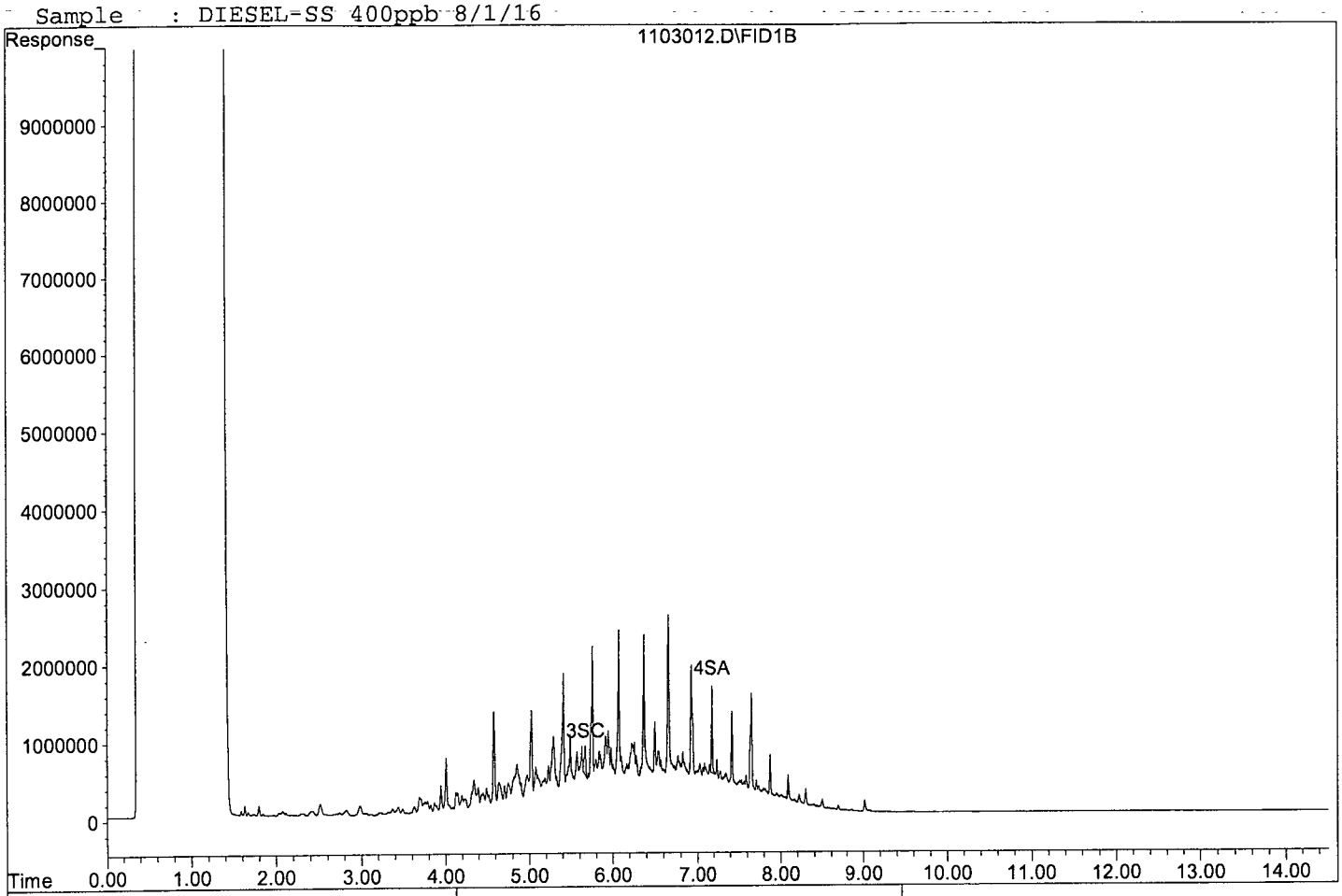
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SC Decanoic Acid(S)	5.67	4681185	3.827 ppb
Surrogate Spike 48.000		Recovery =	7.97%
4) SA Ortho-Terphenyl(S)	7.18	9886456	2.120 ppb
Surrogate Spike 30.000		Recovery =	7.07%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	1345831567	389.615 ppb
2) HBTM Motor Oil (C24-C40)	10.50	43170153	15.497 ppb

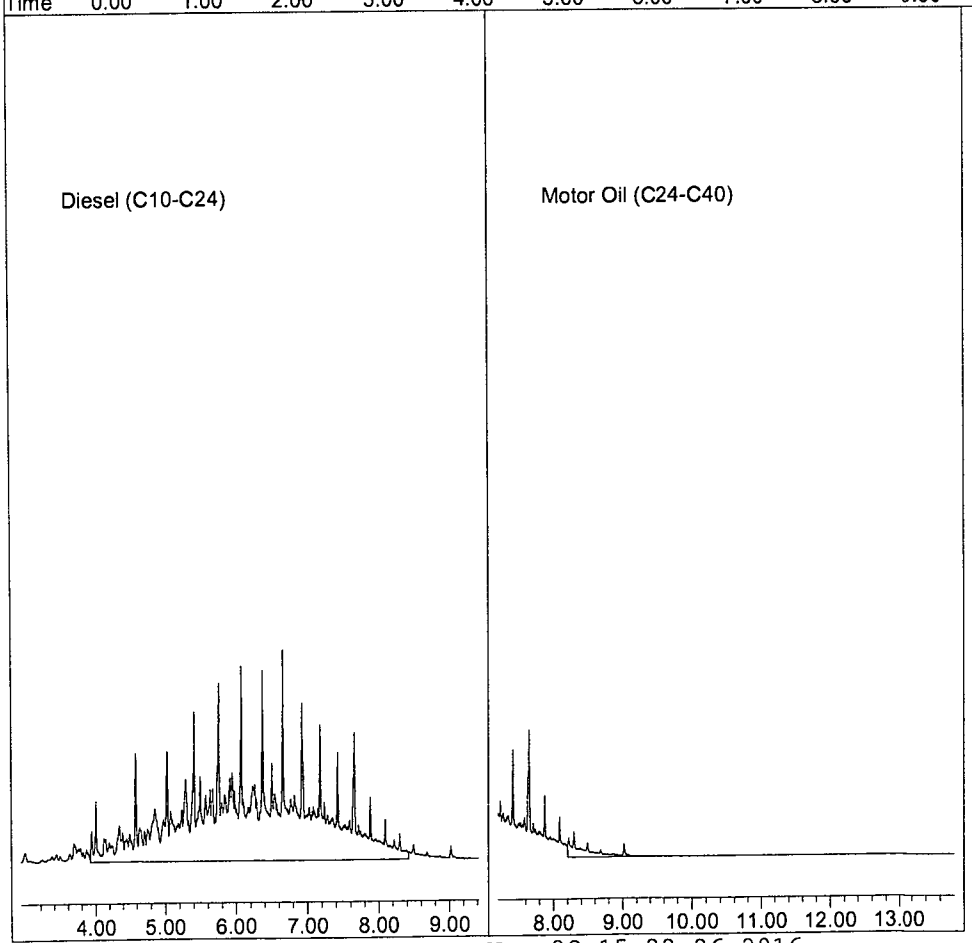
algorithm check: $\frac{1345831567 \times 1}{1727130 \times 2} = 389.6150165$

D.P. 11/28/16

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103012.D
Sample : DIESEL-SS 400ppb 8/1/16





1103012.D DOC1103.M Mon Nov 28 15:22:26 2016

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161028\1028008.D Vial: 8
Acq On : 10-28-16 11:12:44 Operator: DP
Sample : MO SS 1000ppb 7/6/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 15:22 2016 Quant Results File: DOC1103.RES

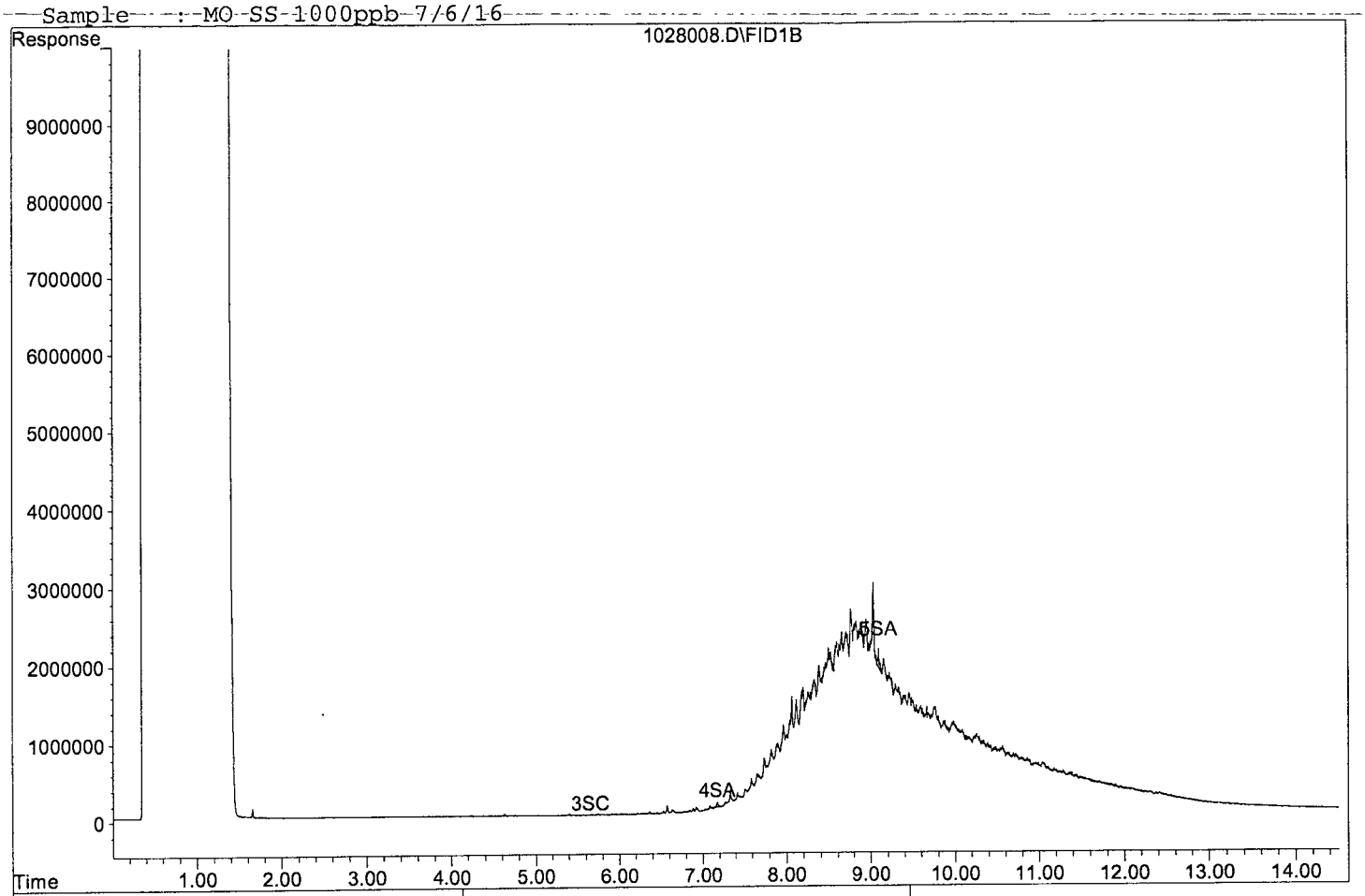
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

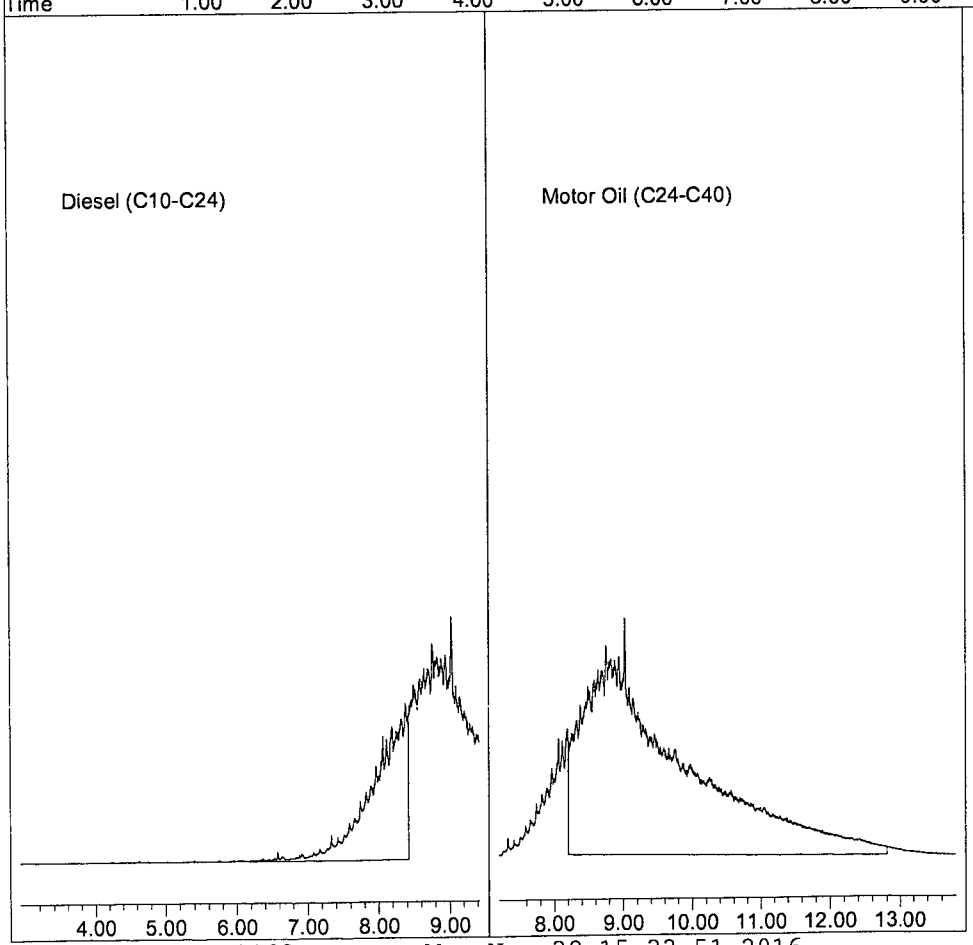
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SC Decanoic Acid(S)	5.65	6816	0.006	ppb
Surrogate Spike 48.000	Recovery	=	0.01%	
4) SA Ortho-Terphenyl(S)	7.17	747984	0.160	ppb
Surrogate Spike 30.000	Recovery	=	0.53%	
5) SA Octacosane(S)	9.09	2492290	0.712	ppb
Surrogate Spike 30.000	Recovery	=	2.37%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	603419098	174.688	ppb
2) HBTM Motor Oil (C24-C40)	10.50	2511616588	901.596	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028008.D
Sample : MO-SS-1000ppb-7/6/16





TPH Extractables
DOC1103

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/21/16
Instrument: Apollo
Initial Cal. Date: 10/19/16
Data File: 1121002,4.D

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C24)	1727130	1694440	1.9	HATM	
2	HBTM	Motor Oil (C24-C40)	1392870	1290070	7.4	HBTM	
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		Average			4.7		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161121\1121002.D Vial: 2
Acq On : 11-21-16 13:08:08 Operator: DP
Sample : CCV: DIESEL 400ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 21 14:37 2016 Quant Results File: DOC1103.RES

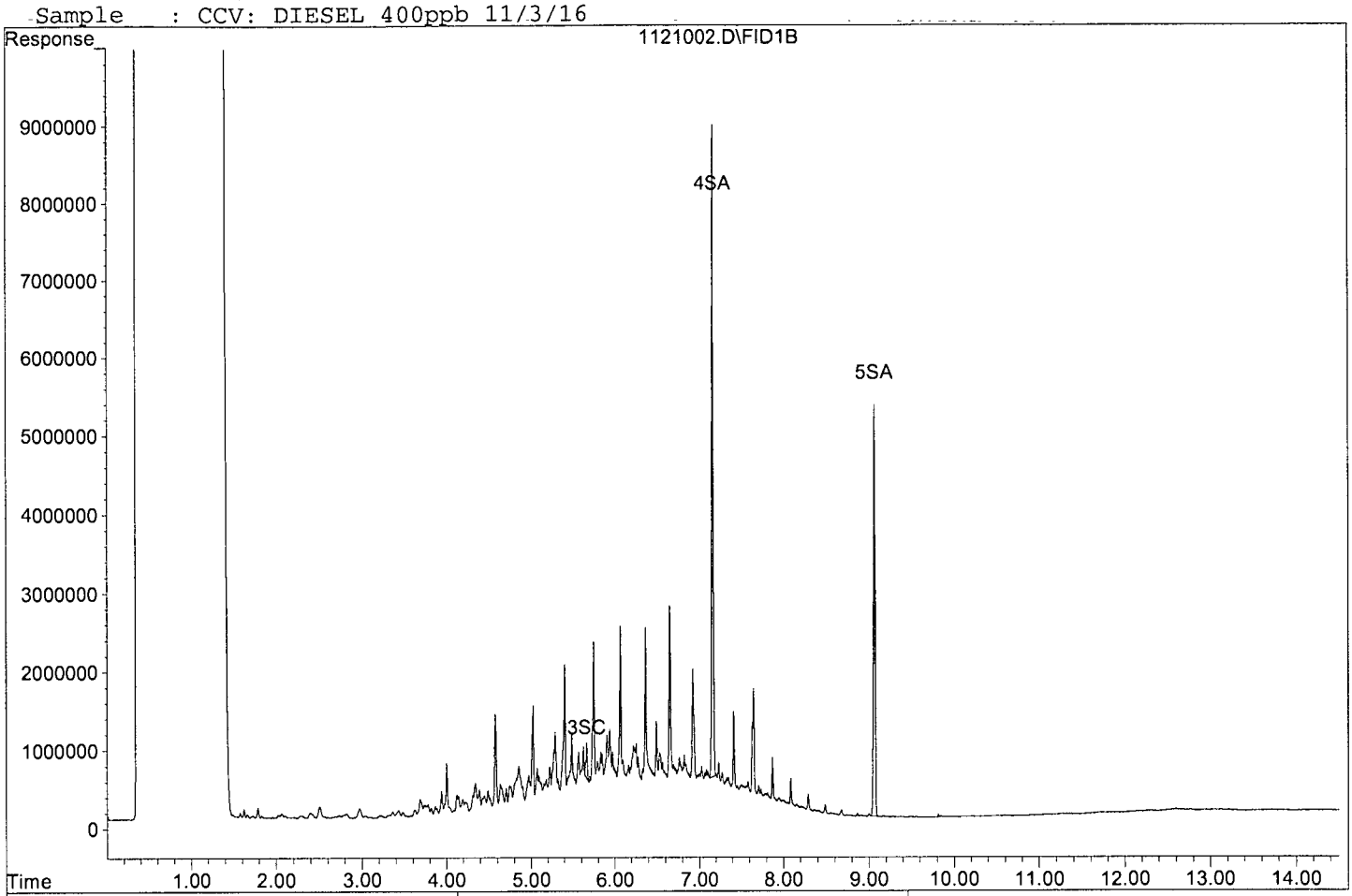
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

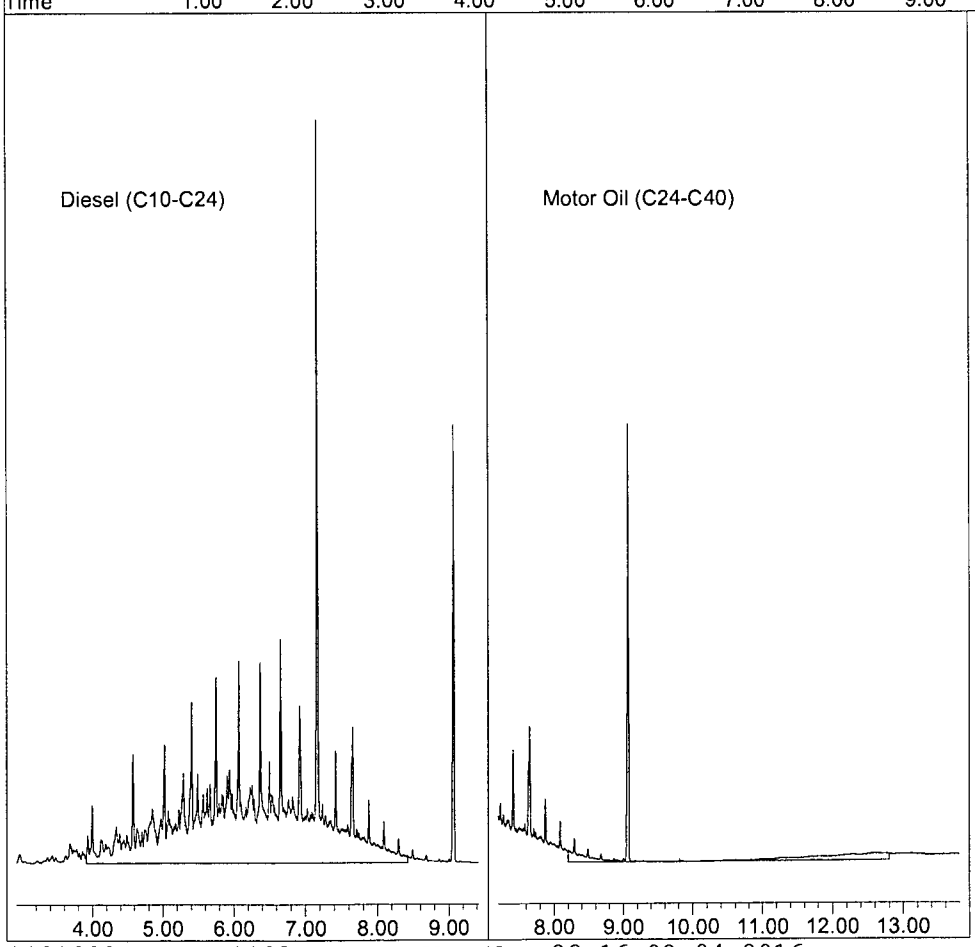
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SC Decanoic Acid(S)	5.66	4821680	3.942	ppb
Surrogate Spike 48.000		Recovery =	8.21%	
4) SA Ortho-Terphenyl(S)	7.17	91731962	19.666	ppb
Surrogate Spike 30.000		Recovery =	65.55%	
5) SA Octacosane(S)	9.07	66118060	18.893	ppb
Surrogate Spike 30.000		Recovery =	62.98%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	1355555911	392.430	ppb
2) HBTM Motor Oil (C24-C40)	10.50	87859199	31.539	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161121\1121002.D
Sample : CCV: DIESEL 400ppb 11/3/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161121\1121004.D Vial: 4
Acq On : 11-21-16 14:38:53 Operator: DP
Sample : CCV: MO 1000ppb 11/21/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 21 14:54 2016 Quant Results File: DOC1103.RES

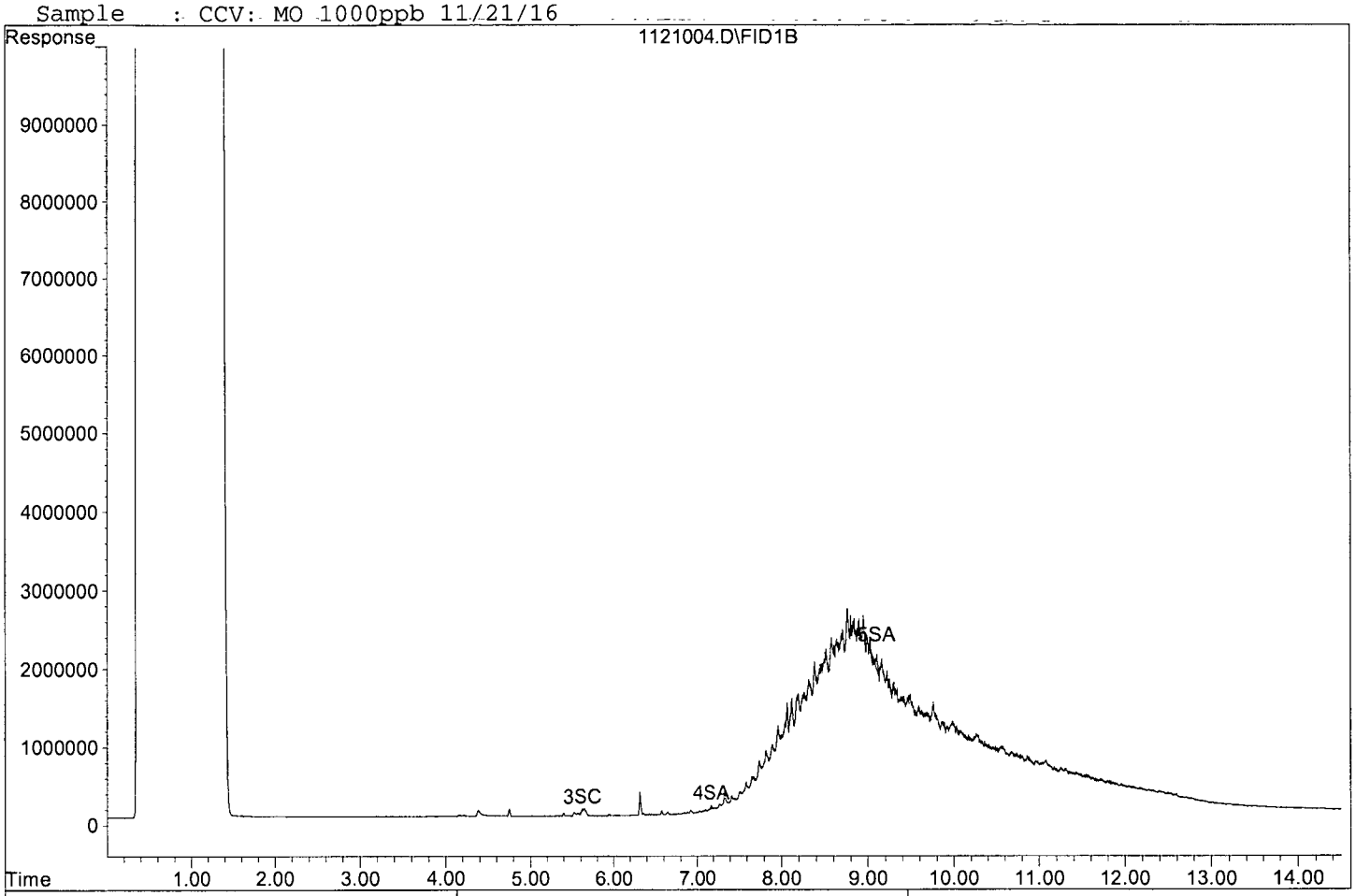
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

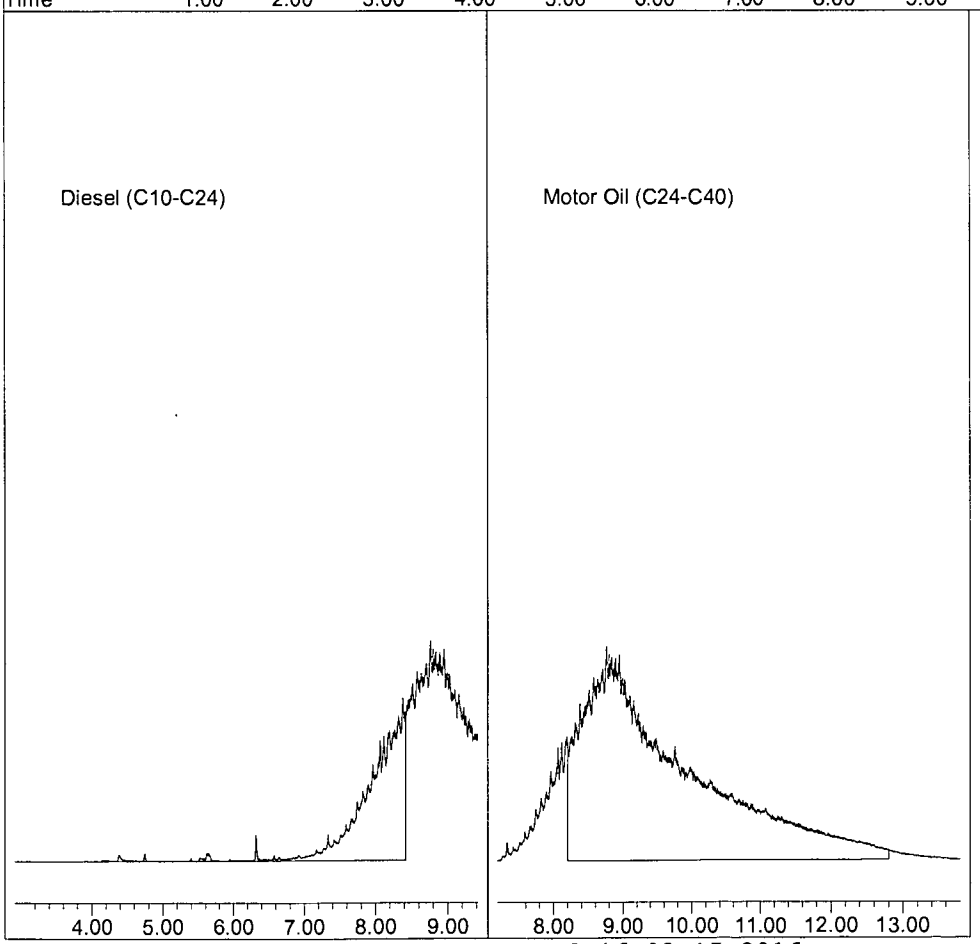
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SC Decanoic Acid(S)	5.62	96502	0.079	ppb
Surrogate Spike 48.000	Recovery =		0.16%	
4) SA Ortho-Terphenyl(S)	7.17	491300	0.105	ppb
Surrogate Spike 30.000	Recovery =		0.35%	
5) SA Octacosane(S)	9.10	2667118	0.762	ppb
Surrogate Spike 30.000	Recovery =		2.54%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	617529921	178.773	ppb
2) HBTM Motor Oil (C24-C40)	10.50	2580147491	926.196	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161121\1121004.D
Sample : CCV: MO 1000ppb 11/21/16





TPH Extractables
DOC1103

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/21/16
Instrument: Apollo
Initial Cal. Date: 10/19/16
Data File: 1121020-21.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1727130	1710860	0.94	HATM	
2	HBTM	Motor Oil (C24-C40)	1392870	1315280	5.6	HBTM	
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		Average			3.3		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161121\1121020.D Vial: 20
Acq On : 11-21-16 20:10:51 Operator: DP
Sample : CCV: DIESEL 400ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 23 16:32 2016 Quant Results File: DOC1103.RES

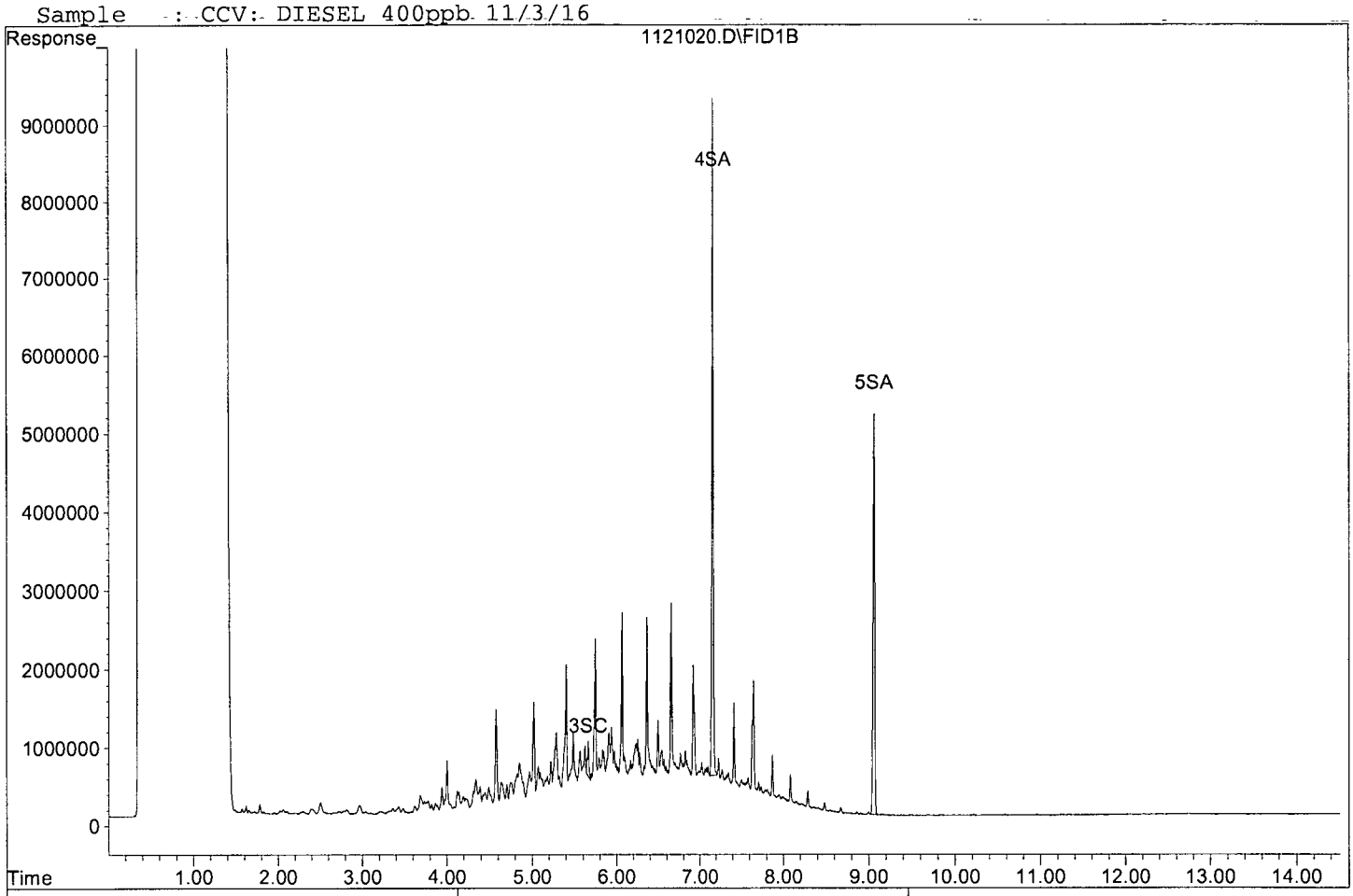
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

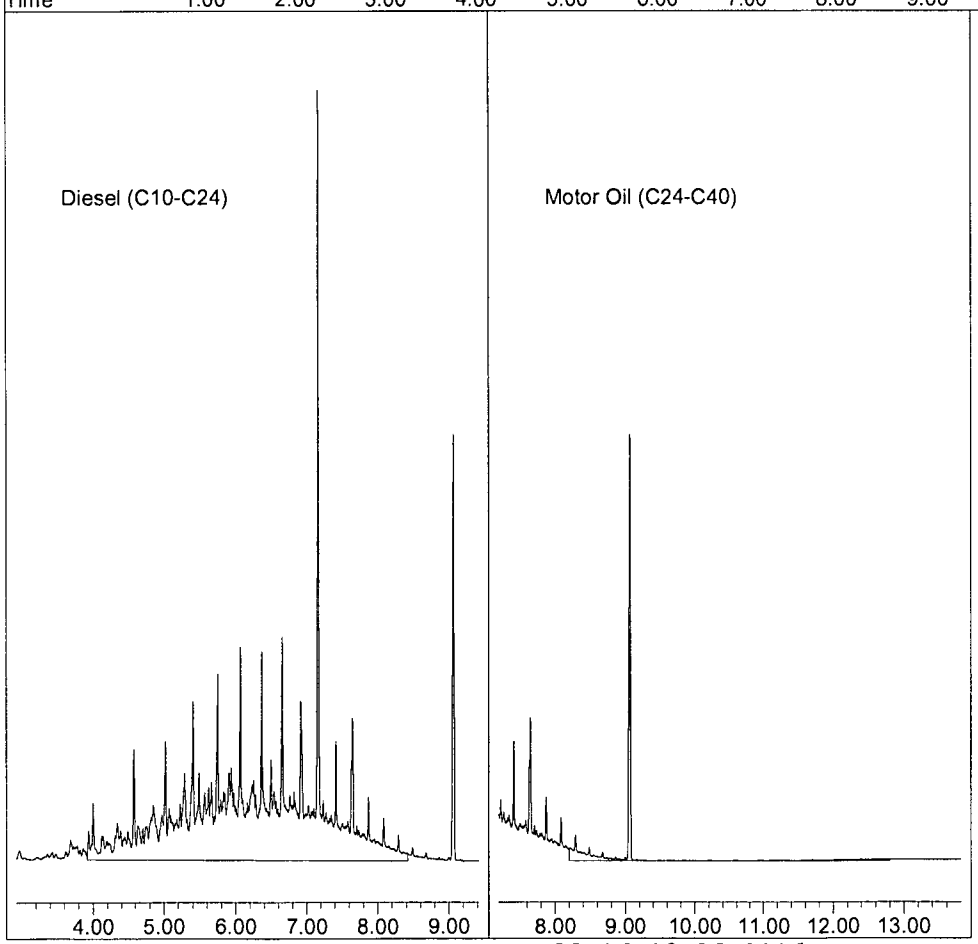
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SC Decanoic Acid(S)	5.66	5593254	4.573 ppb
Surrogate Spike 48.000		Recovery =	9.53%
4) SA Ortho-Terphenyl(S)	7.16	93799021	20.109 ppb
Surrogate Spike 30.000		Recovery =	67.03%
5) SA Octacosane(S)	9.06	69419427	19.836 ppb
Surrogate Spike 30.000		Recovery =	66.12%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	1368690688	396.233 ppb
2) HBTM Motor Oil (C24-C40)	10.50	46099571	16.548 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161121\1121020.D
Sample : CCV: DIESEL 400ppb 11/3/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161121\1121021.D Vial: 21
Acq On : 11-21-16 20:31:34 Operator: DP
Sample : CCV: MO 1000ppb 11/21/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 23 16:32 2016 Quant Results File: DOC1103.RES

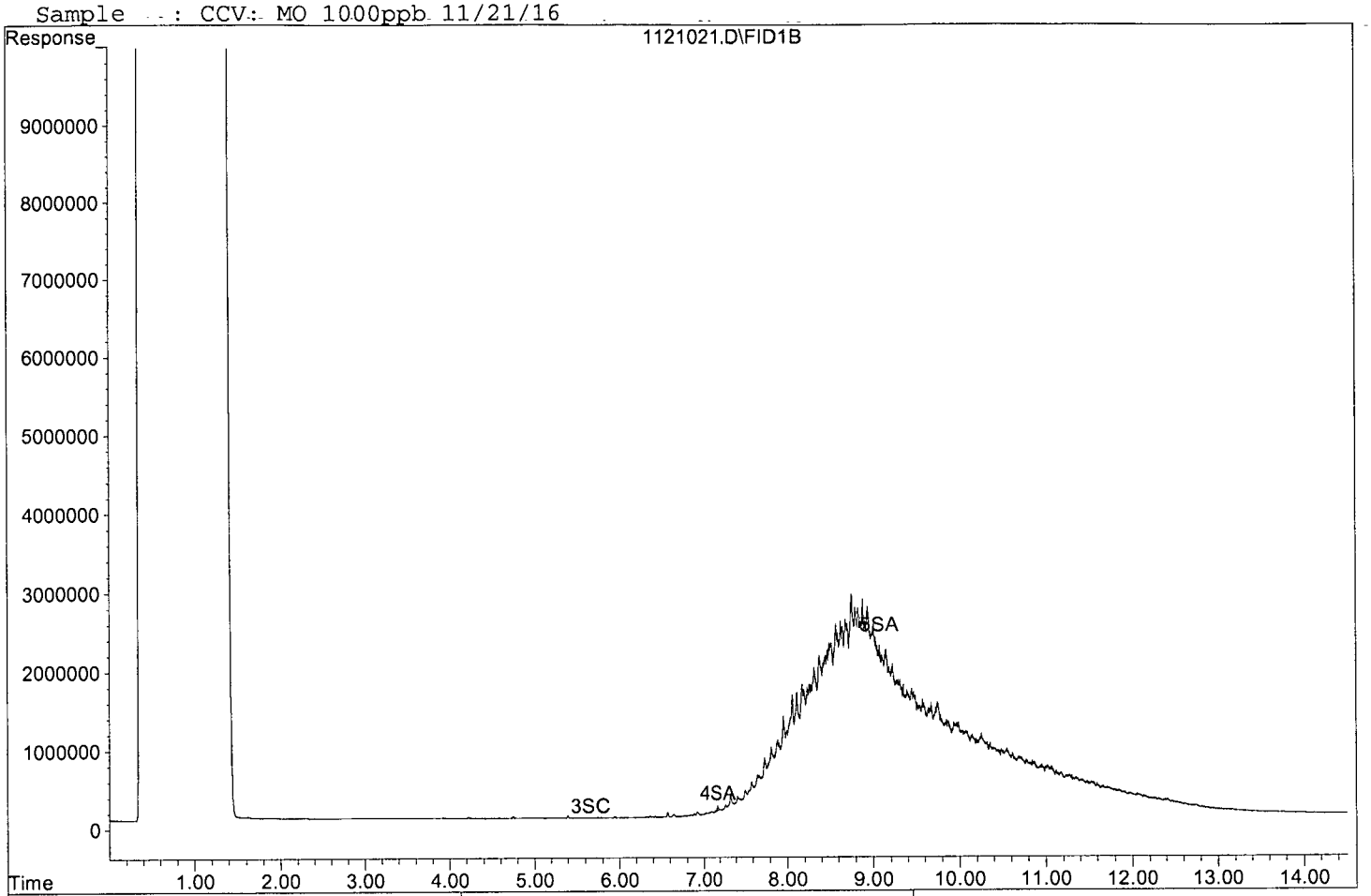
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

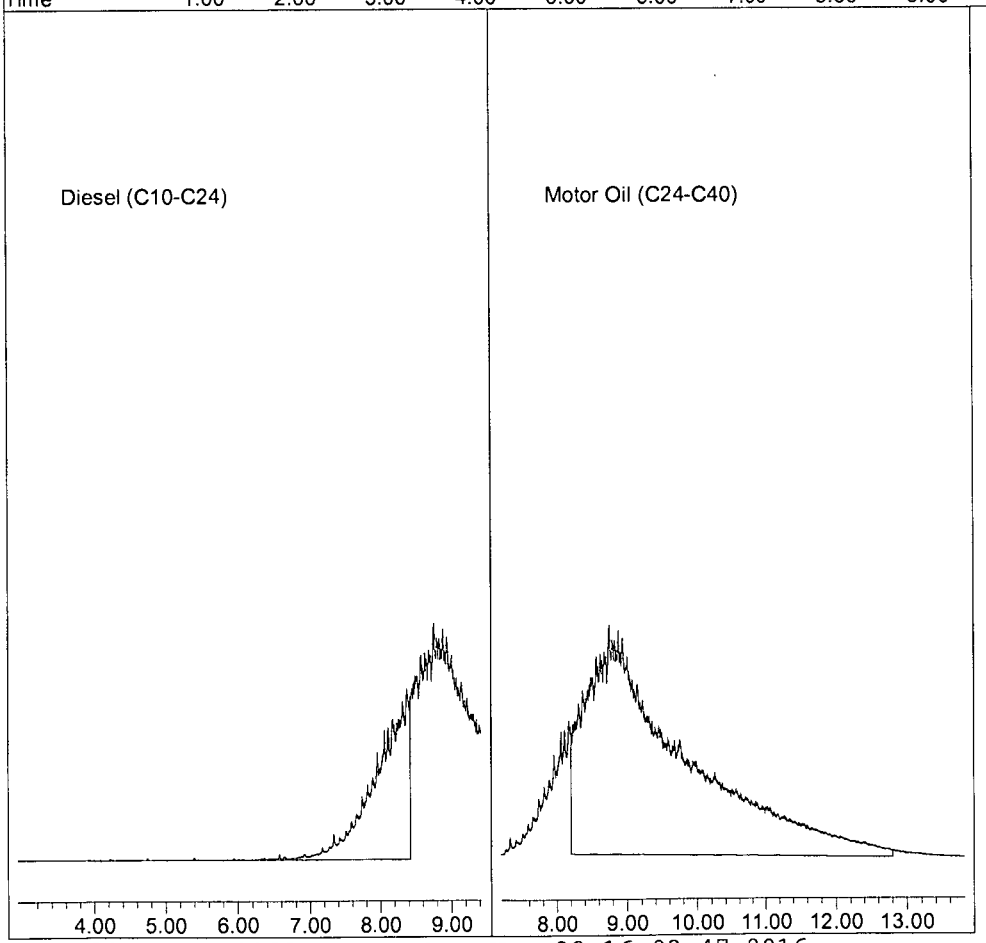
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SC Decanoic Acid(S)	5.66	18626	0.015 ppb
Surrogate Spike 48.000		Recovery =	0.03%
4) SA Ortho-Terphenyl(S)	7.17	606747	0.130 ppb
Surrogate Spike 30.000		Recovery =	0.43%
5) SA Octacosane(S)	9.07	1408404	0.402 ppb
Surrogate Spike 30.000		Recovery =	1.34%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	642328126	185.952 ppb
2) HBTM Motor Oil (C24-C40)	10.50	2630565910	944.295 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161121\1121021.D
Sample : CCV: MO 1000ppb 11/21/16





TPH Extractables
DOC1103

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 12/01/16
Matrix: Instrument: Apollo
Initial Cal. Date: 10/19/16
Data File: 1130070,71.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1727130	1767250	2.3	HATM	
2	HBTM	Motor Oil (C24-C40)	1392870	1211700	13	HBTM	
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		Average			7.7		

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Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161130\1130070.D Vial: 70
Acq On : 12-1-16 11:01:09 Operator: DP
Sample : CCV: DIESEL 400ppb 11/30/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 7 11:40 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161103\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.16	94665341	20.295 ppb
Surrogate Spike 30.000	Recovery =		67.65%
5) SA Octacosane(S)	9.06	69646203	19.901 ppb
Surrogate Spike 30.000	Recovery =		66.34%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	1413798557	409.291 ppb

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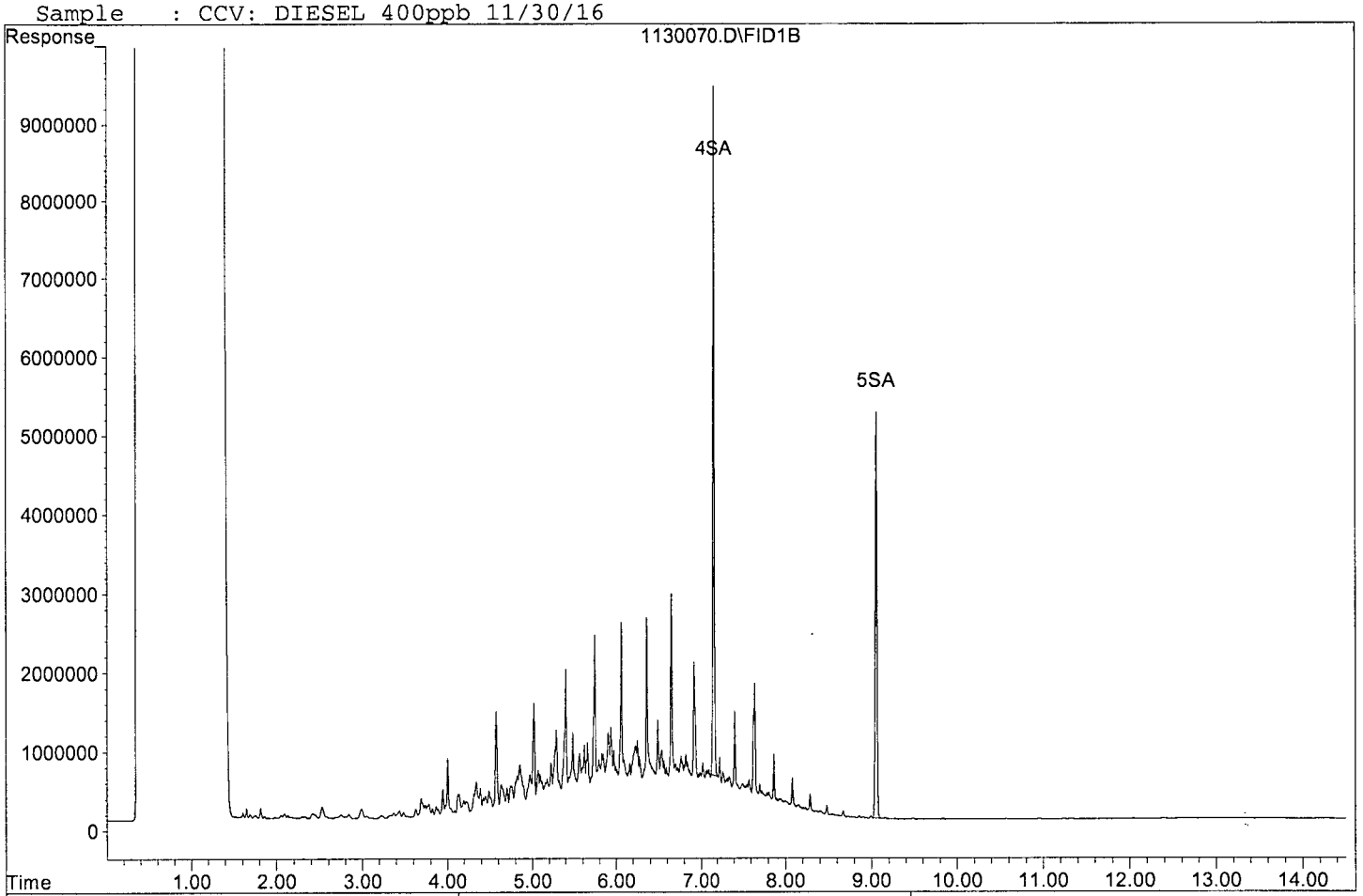
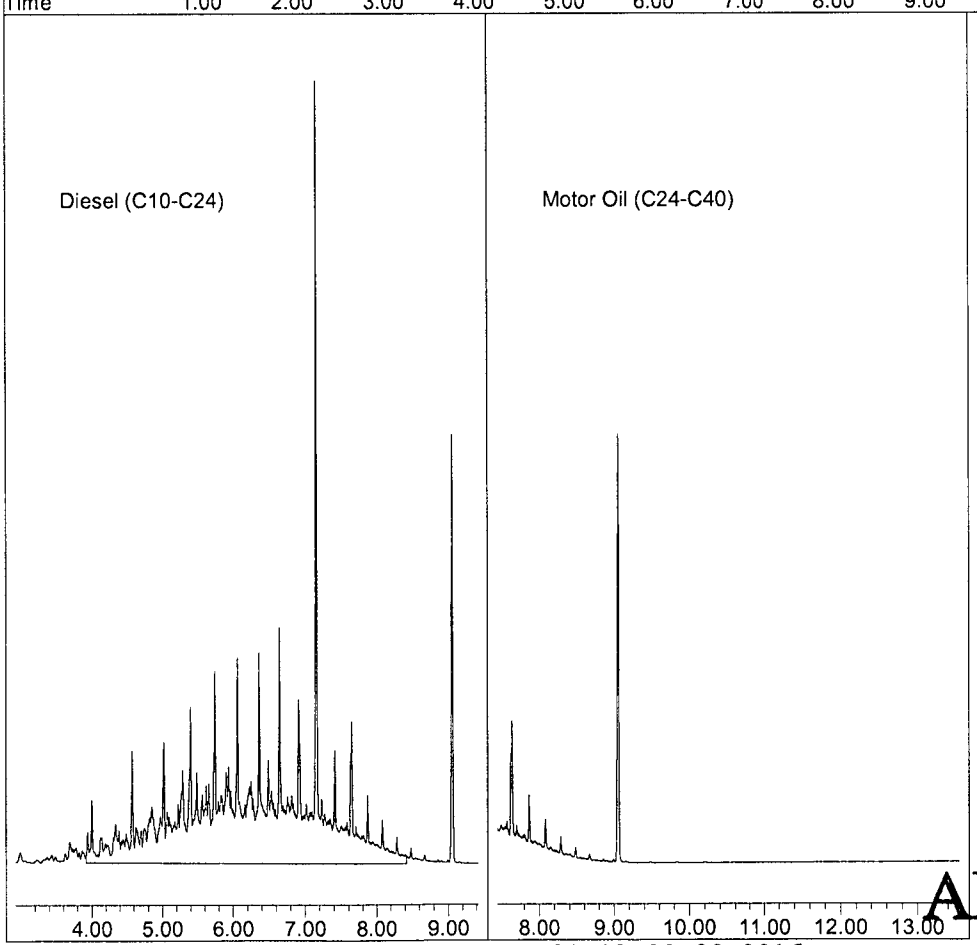
(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161130\1130070.D
Sample : CCV: DIESEL 400ppb 11/30/16





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Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161130\1130071.D Vial: 71
Acq On : 12-1-16 11:21:41 Operator: DP
Sample : CCV: MO 1000ppb 11/21/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 7 11:40 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161103\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	2423402165	869.929 ppb

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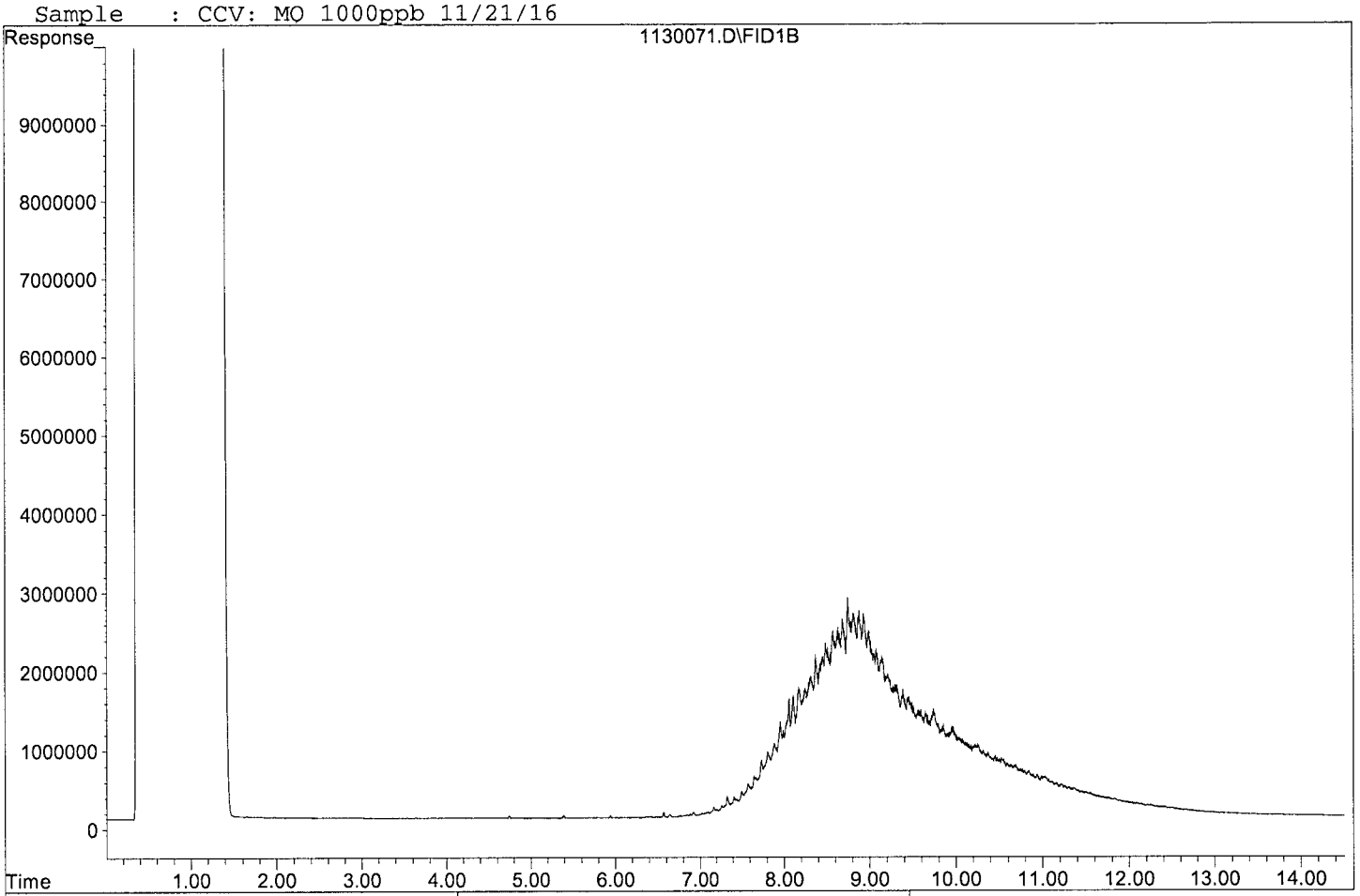
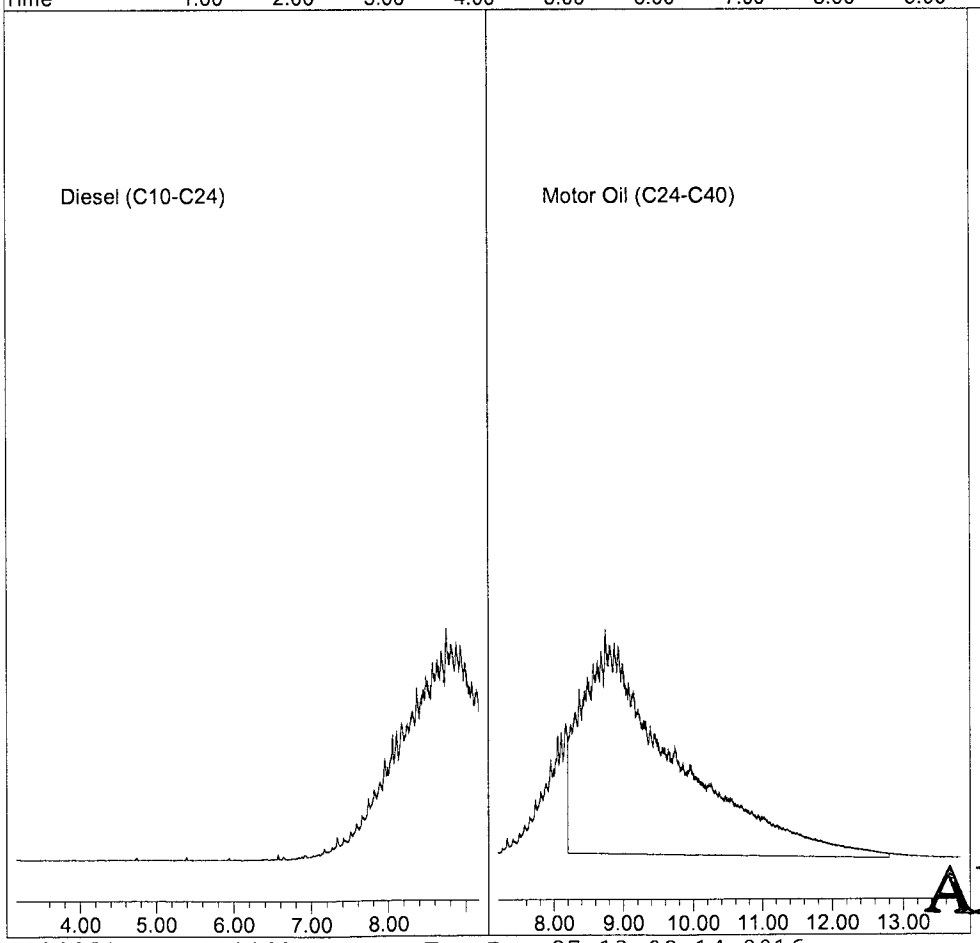
(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161130\1130071.D
Sample : CCV: MO 1000ppb 11/21/16





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Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/1/2016
Instrument: Apollo
Initial Cal. Date: 10/19/2016
Data File: 1130089,90.D

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C24)	1727130	1820640	5.4	HATM	
2	HBTM	Motor Oil (C24-C40)	1392870	1291320	7.3	HBTM	
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		Average			6.4		

TPH Extractables
DOC1103

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/5/2016
Instrument: Apollo
Initial Cal. Date: 10/19/2016
Data File: 1205002-3.D

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C24)	1727130	1631080	5.6	HATM	
2	HBTM	Motor Oil (C24-C40)	1392870	1113070	20	HBTM	
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		Average			12.8		

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/5/2016
Instrument: Apollo
Initial Cal. Date: 10/19/2016
Data File: 1205019-20.D

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C24)	1727130	1644880	4.8	HATM	
2	HBTM	Motor Oil (C24-C40)	1392870	1228680	12	HBTM	
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40							
		Average			8.4		

TPH Extractables
DOC1103

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/1/2016
Instrument: Apollo
Initial Cal. Date: 10/19/2016
Data File: 1130070,71.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1727130	1767250	2.3	HATM	
2	HBTM	Motor Oil (C24-C40)	1392870	1211700	13	HBTM	
3							
4							
5							
6							
7							
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10							
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12							
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28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			7.7		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161130\1130070.D Vial: 70
Acq On : 12-1-16 11:01:09 Operator: DP
Sample : CCV: DIESEL 400ppb 11/30/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 7 11:40 2016 Quant Results File: DOC1103.RES

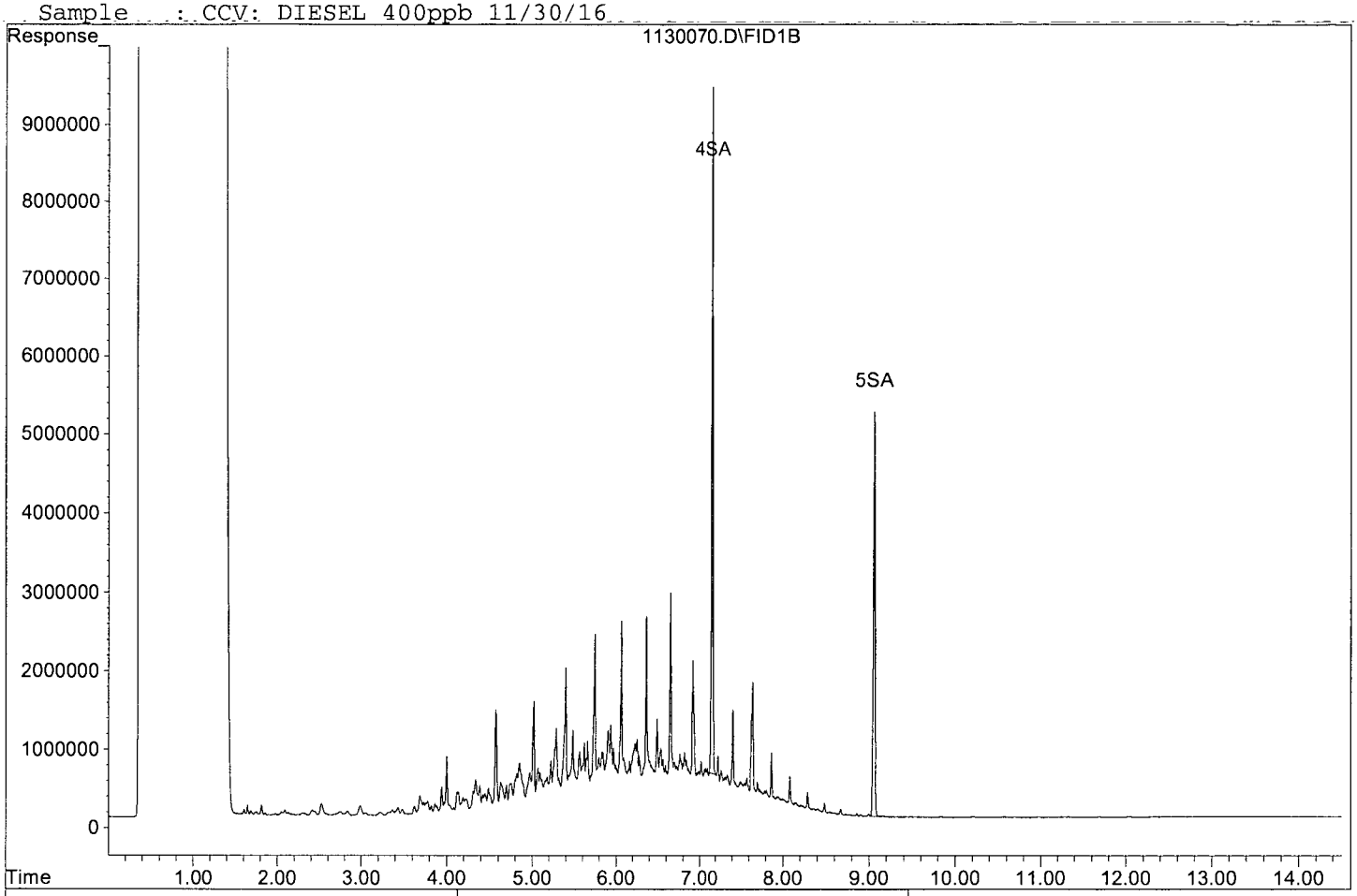
Method : G:\APOLLO\DATA\161123\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

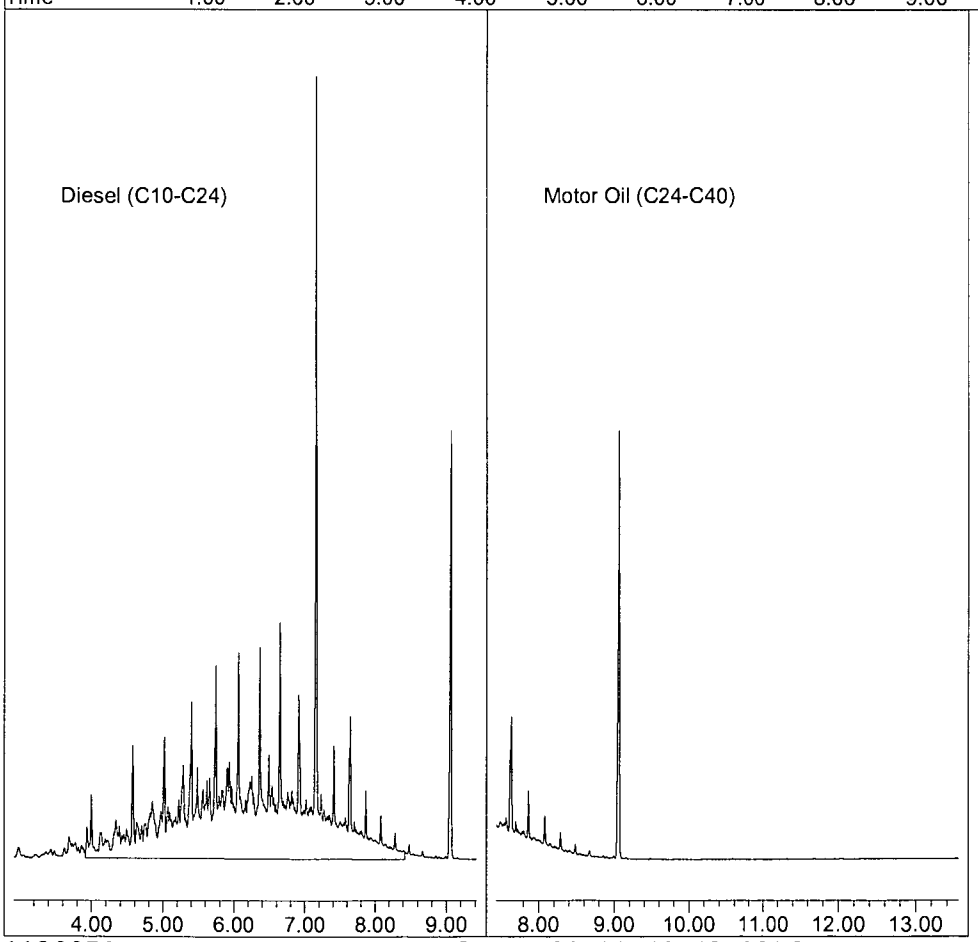
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.16	94665341	20.295 ppb
Surrogate Spike 30.000		Recovery =	67.65%
5) SA Octacosane(S)	9.06	69646203	19.901 ppb
Surrogate Spike 30.000		Recovery =	66.34%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	1413798557	409.291 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161130\1130070.D
Sample : CCV: DIESEL 400ppb 11/30/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161130\1130071.D Vial: 71
Acq On : 12-1-16 11:21:41 Operator: DP
Sample : CCV: MO 1000ppb 11/21/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 7 11:40 2016 Quant Results File: DOC1103.RES

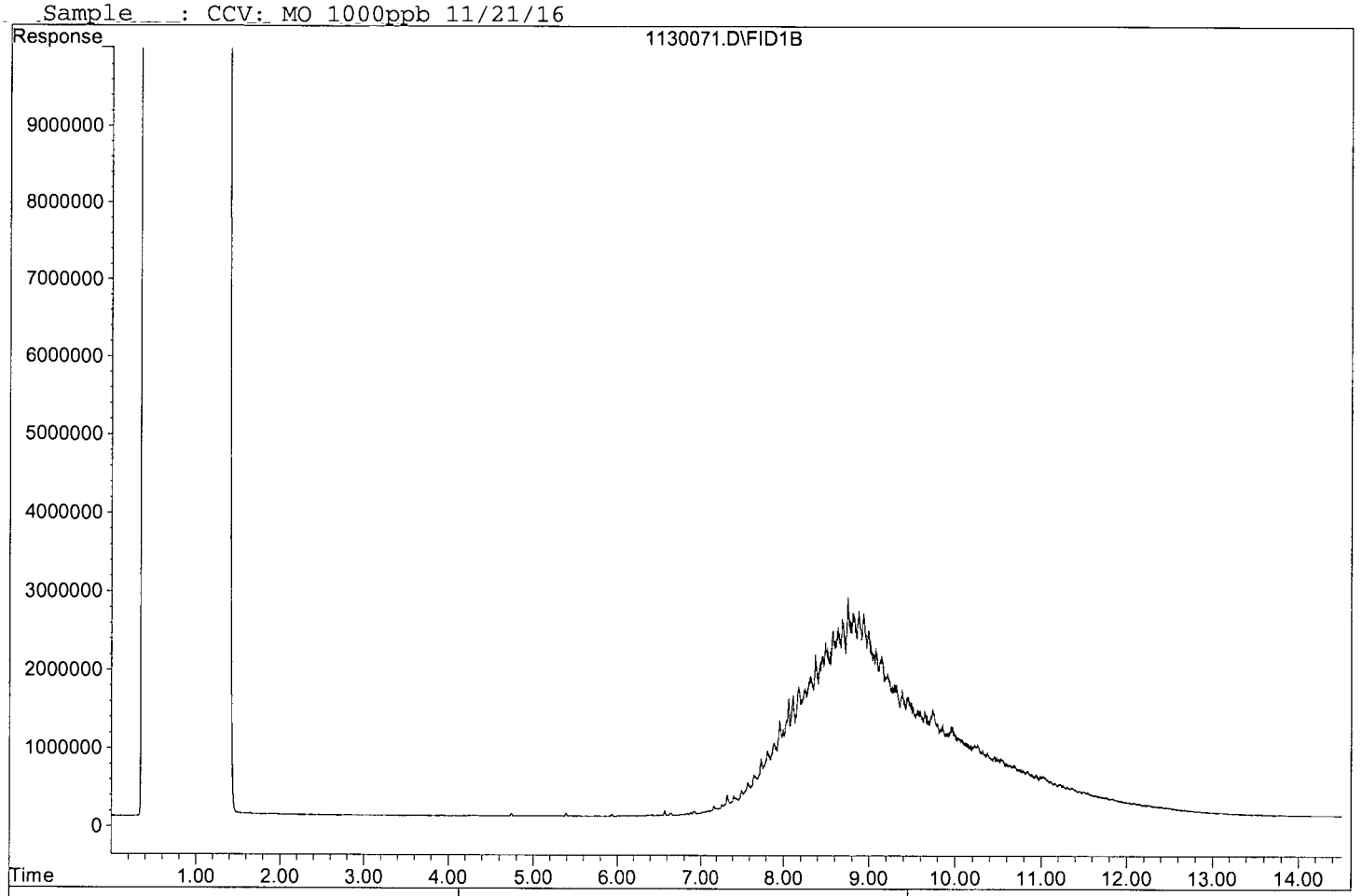
Method : G:\APOLLO\DATA\161123\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

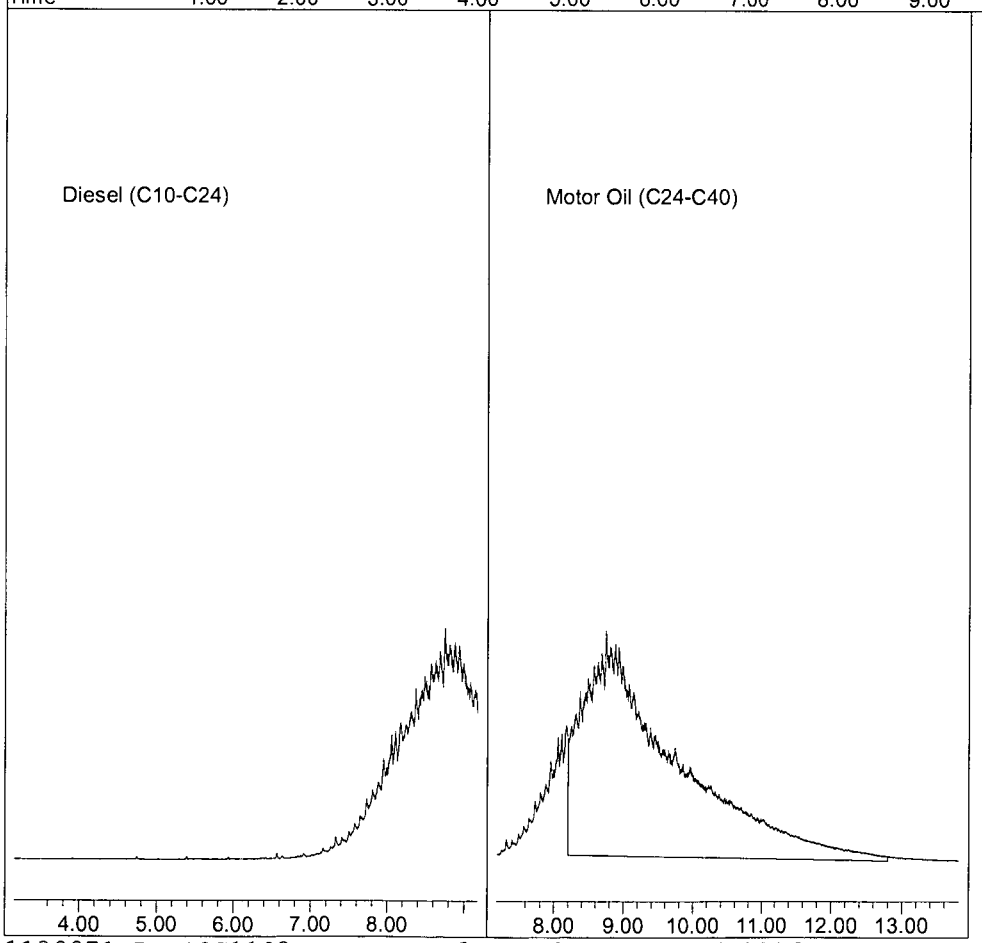
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	2423402165	869.929 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161130\1130071.D
Sample : CCV: MO 1000ppb 11/21/16





TPH Extractables
DOC1103

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/5/2016
Instrument: Apollo
Initial Cal. Date: 10/19/2016
Data File: 1205002-3.D

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C24)	1727130	1631080	5.6	HATM	
2	HBTM	Motor Oil (C24-C40)	1392870	1113070	20	HBTM	
3							
4							
5							
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34							
35							
36							
37							
38							
39							
40							
		Average			12.8		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161205\1205002.D Vial: 2
Acq On : 12-5-16 11:26:43 Operator: DP
Sample : CCV: DIESEL 400ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 6 10:45 2016 Quant Results File: DOC1103.RES

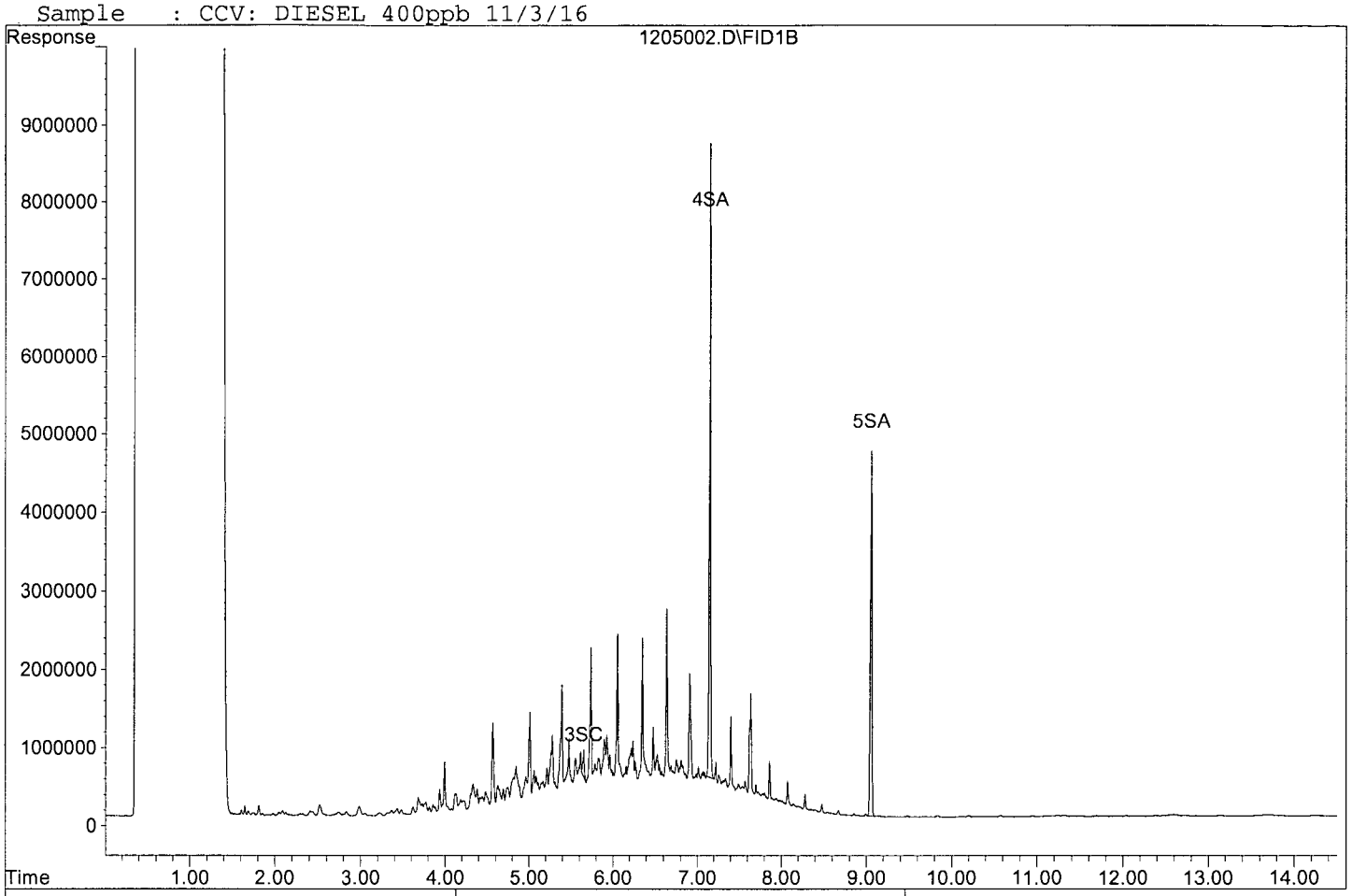
Method : G:\APOLLO\DATA\161123\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

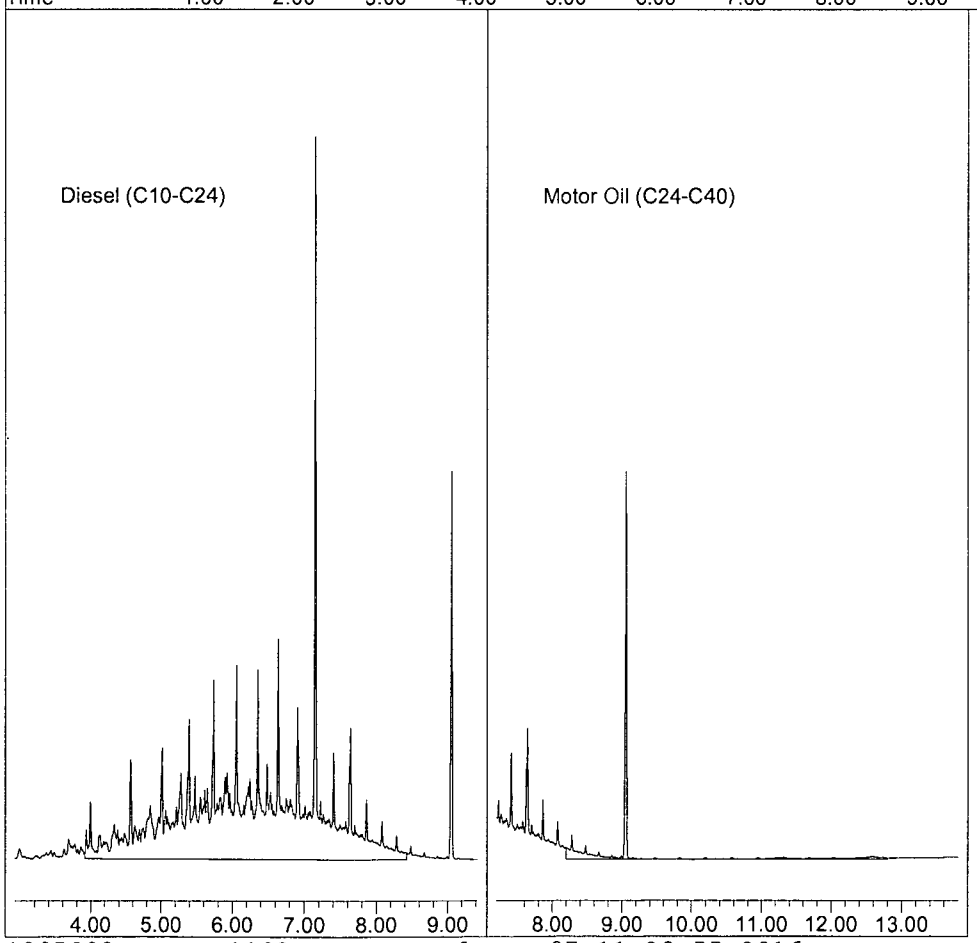
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SC Decanoic Acid(S)	5.65	4154401	3.396	ppb
Surrogate Spike 48.000	Recovery =		7.07%	
4) SA Ortho-Terphenyl(S)	7.15	86890943	18.628	ppb
Surrogate Spike 30.000	Recovery =		62.09%	
5) SA Octacosane(S)	9.06	61564536	17.591	ppb
Surrogate Spike 30.000	Recovery =		58.64%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	1304862361	377.755	ppb
2) HBTM Motor Oil (C24-C40)	10.50	51844527	18.611	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161205\1205002.D
Sample : CCV: DIESEL 400ppb 11/3/16





1205002.D DOC1103.M Wed Dec 07 11:28:55 2016

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161205\1205003.D Vial: 3
Acq On : 12-5-16 11:47:40 Operator: DP
Sample : CCV: MO 1000ppb 11/21/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 6 10:46 2016 Quant Results File: DOC1103.RES

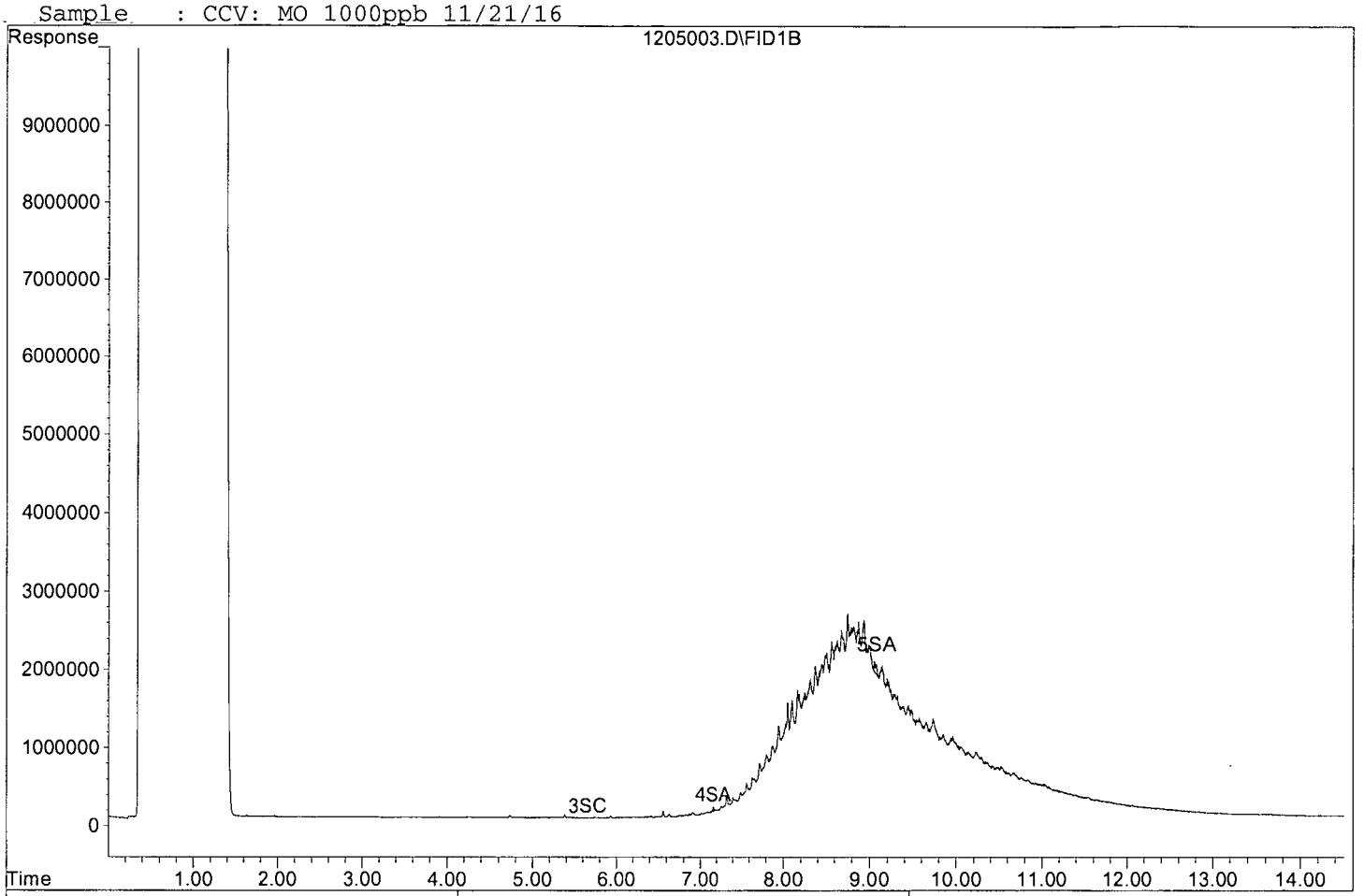
Method : G:\APOLLO\DATA\161123\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

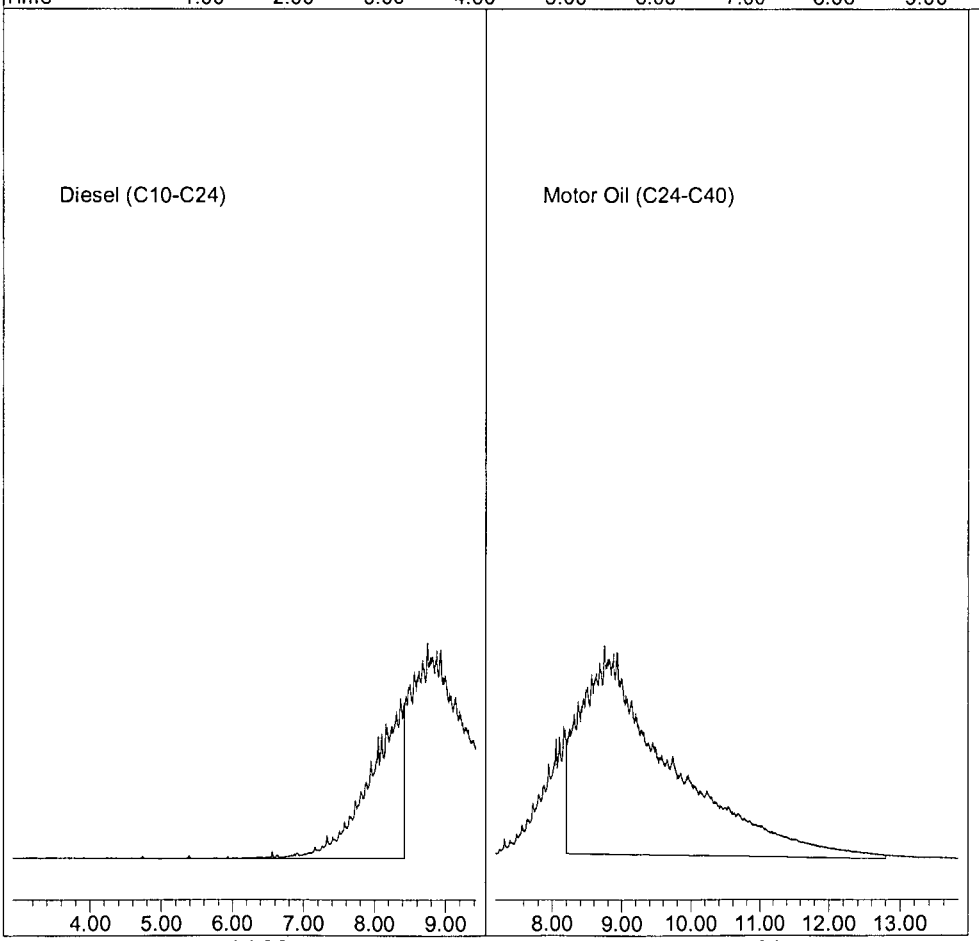
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SC Decanoic Acid(S)	5.65	7514	0.006	ppb
Surrogate Spike 48.000	Recovery =		0.01%	
4) SA Ortho-Terphenyl(S)	7.16	572016	0.123	ppb
Surrogate Spike 30.000	Recovery =		0.41%	
5) SA Octacosane(S)	9.08	2413574	0.690	ppb
Surrogate Spike 30.000	Recovery =		2.30%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	626247032	181.297	ppb
2) HBTM Motor Oil (C24-C40)	10.50	2226131452	799.115	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161205\1205003.D
Sample : CCV: MO 1000ppb 11/21/16





Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/5/2016
Instrument: Apollo
Initial Cal. Date: 10/19/2016
Data File: 1205019-20.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1727130	1644880	4.8	HATM	
2	HBTM	Motor Oil (C24-C40)	1392870	1228680	12	HBTM	
3							
4							
5							
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34							
35							
36							
37							
38							
39							
40							
		Average			8.4		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161205\1205019.D Vial: 19
Acq On : 12-5-16 21:54:15 Operator: DP
Sample : CCV: DIESEL 400ppb 11/30/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 6 10:46 2016 Quant Results File: DOC1103.RES

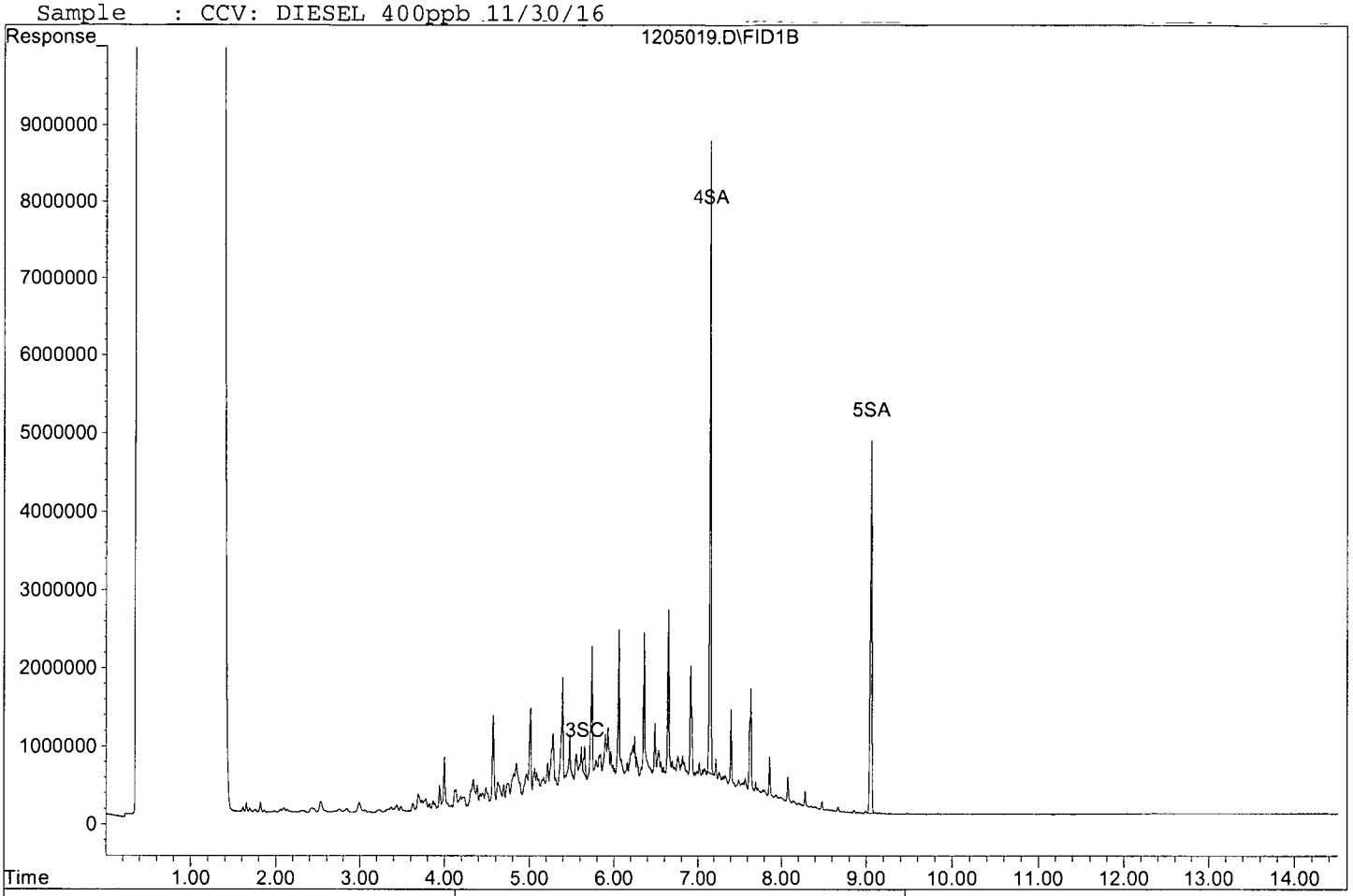
Method : G:\APOLLO\DATA\161123\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

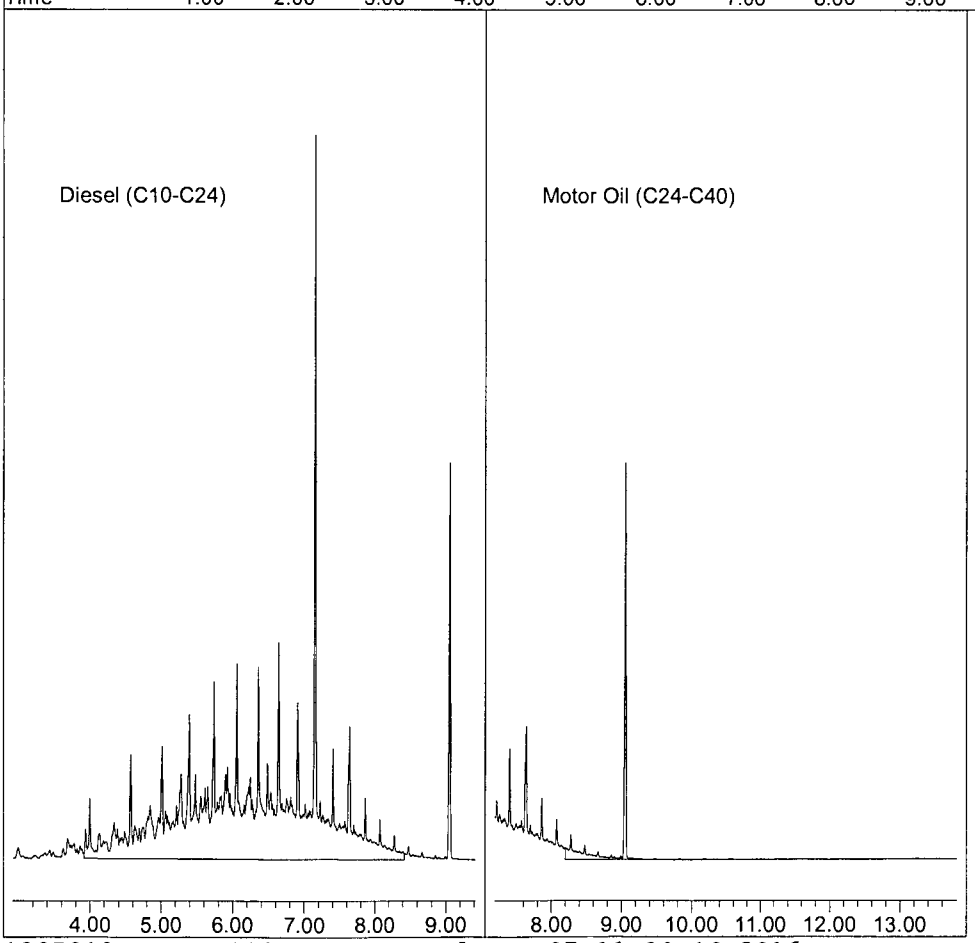
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SC Decanoic Acid(S)	5.65	4521584	3.697	ppb
Surrogate Spike 48.000	Recovery =		7.70%	
4) SA Ortho-Terphenyl(S)	7.15	87128917	18.679	ppb
Surrogate Spike 30.000	Recovery =		62.26%	
5) SA Octacosane(S)	9.06	61202533	17.488	ppb
Surrogate Spike 30.000	Recovery =		58.29%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	1315904426	380.951	ppb
2) HBTM Motor Oil (C24-C40)	10.50	39157191	14.056	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161205\1205019.D
Sample : CCV: DIESEL 400ppb 11/30/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161205\1205020.D Vial: 20
Acq On : 12-5-16 22:15:05 Operator: DP
Sample : CCV: MO 1000ppb 11/21/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 6 10:47 2016 Quant Results File: DOC1103.RES

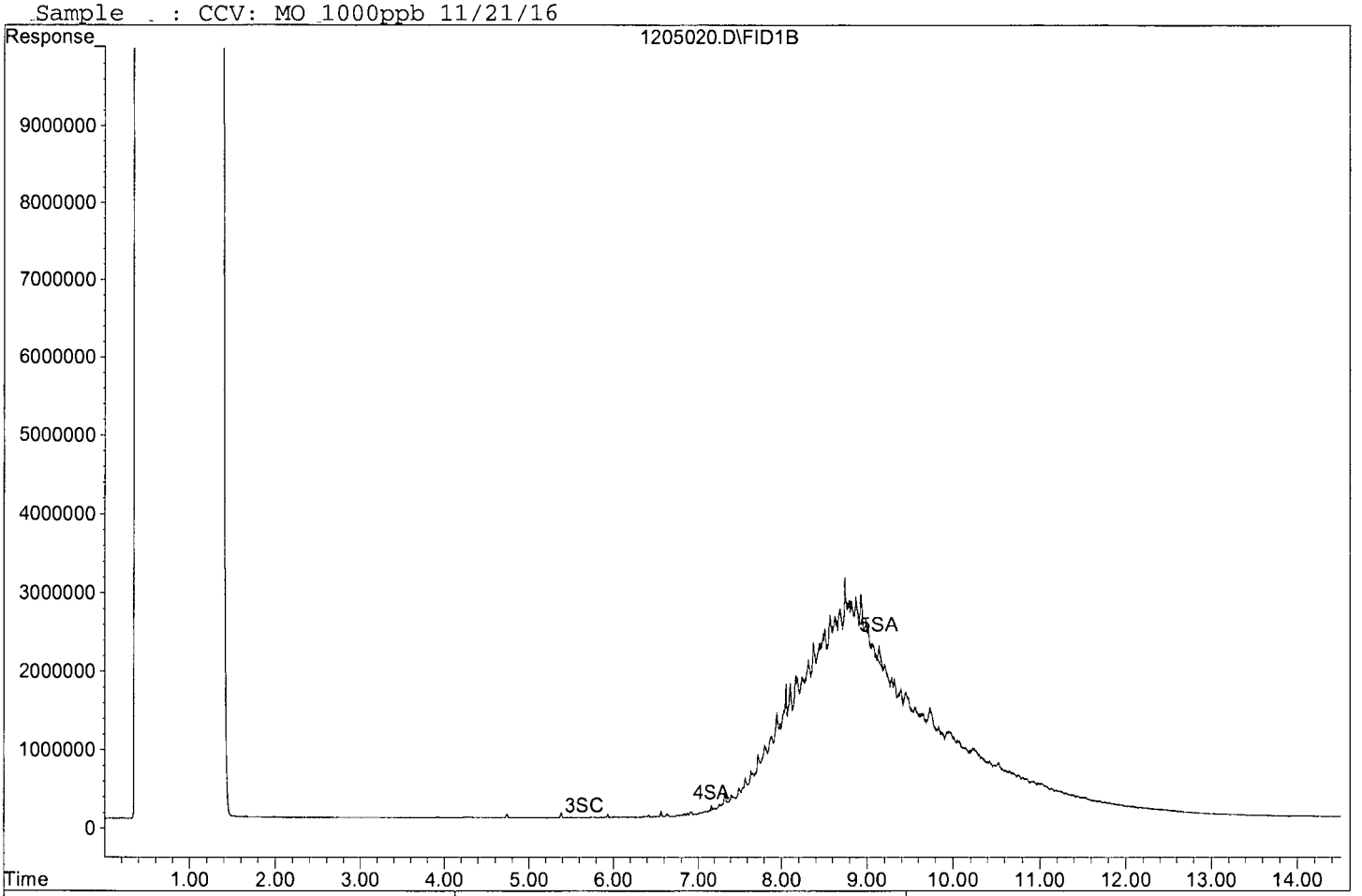
Method : G:\APOLLO\DATA\161123\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

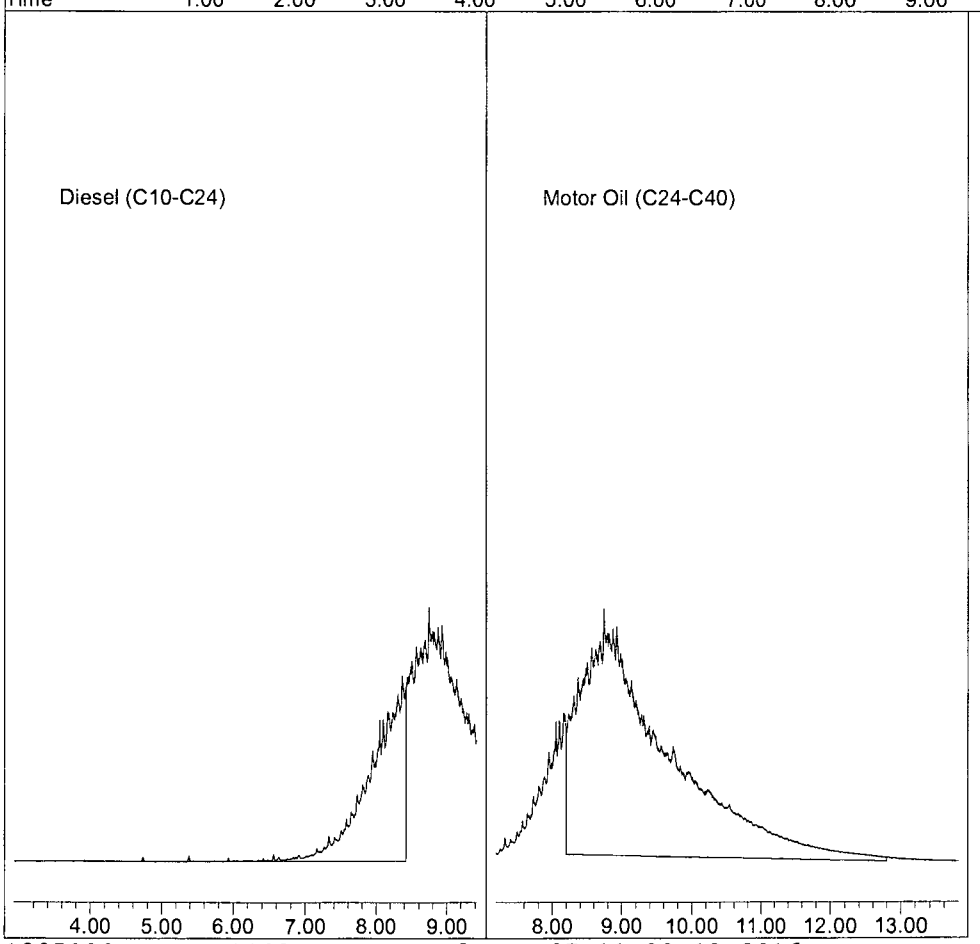
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SC Decanoic Acid(S)	5.65	8690	0.007 ppb
Surrogate Spike 48.000		Recovery =	0.01%
4) SA Ortho-Terphenyl(S)	7.16	675227	0.145 ppb
Surrogate Spike 30.000		Recovery =	0.48%
5) SA Octacosane(S)	9.14	3369509	0.963 ppb
Surrogate Spike 30.000		Recovery =	3.21%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	708705989	205.169 ppb
2) HBTM Motor Oil (C24-C40)	10.50	2457361732	882.120 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161205\1205020.D
Sample : CCV: MO 1000ppb 11/21/16





ORGANICS

Raw Data

APPL, INC.

Method Blank

EPA 8015B TPH WATER

Blank Name/QCG: **161118W-45866 - 214015**
Batch ID: #DOC53-161118A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	11/18/16	11/21/16
BLANK	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	11/18/16	11/21/16
BLANK	SURROGATE: OCTACOSANE (S)	94.7	60-142			%	11/18/16	11/21/16
BLANK	SURROGATE: ORTHO-TERPHEN	76.3	56-125			%	11/18/16	11/21/16

Quant Method:DOC1103.M
Run #:1121005
Instrument:Apollo
Sequence:161121
Initials:DPO

GC SC-Blank-REG MDLs-DOD
Printed: 11/23/16 4:52:05 PM

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161121\1121005.D Vial: 5
Acq On : 11-21-16 14:59:26 Operator: DP
Sample : 161118A BLK 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Nov 23 16:39 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

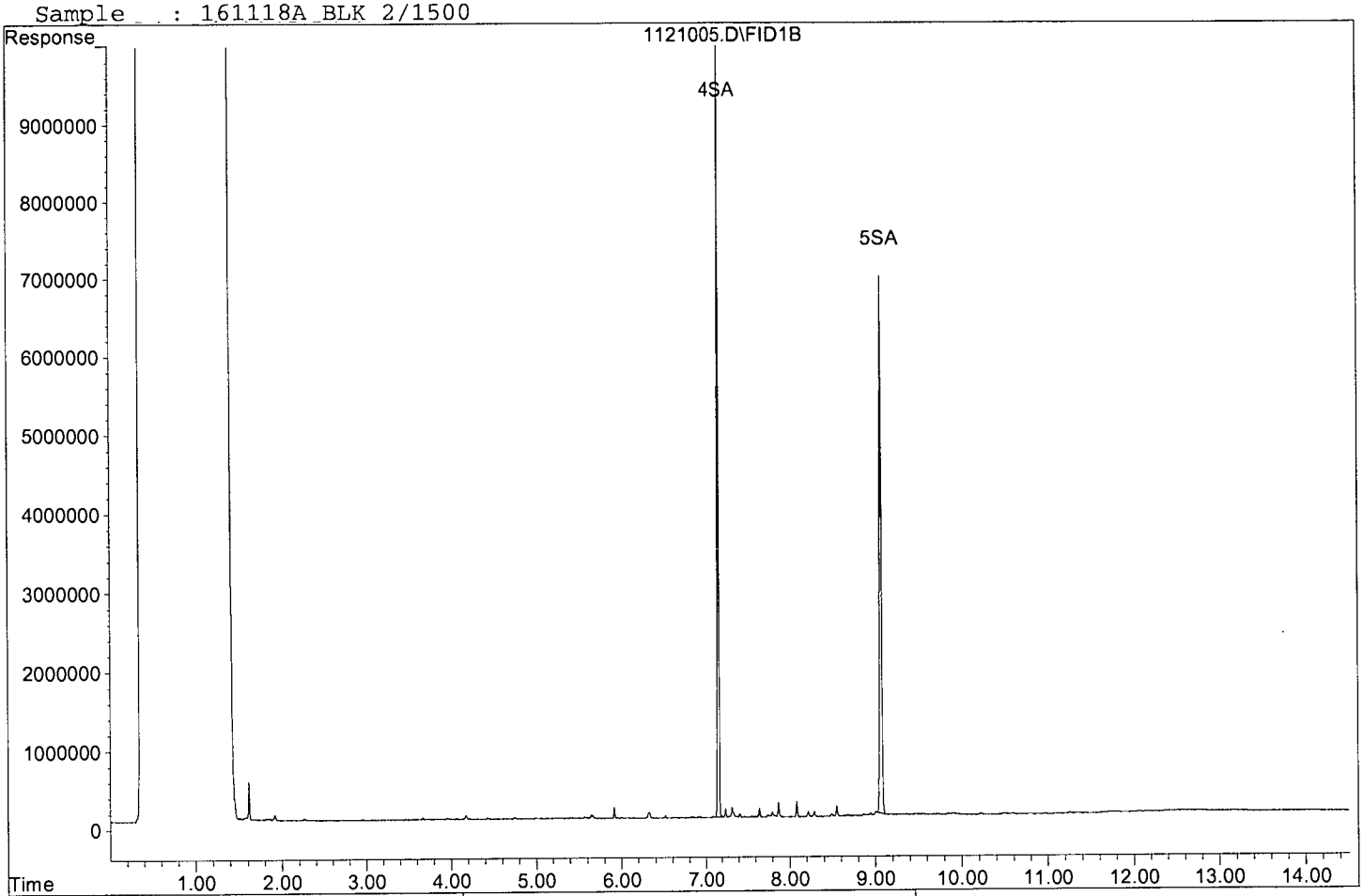
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

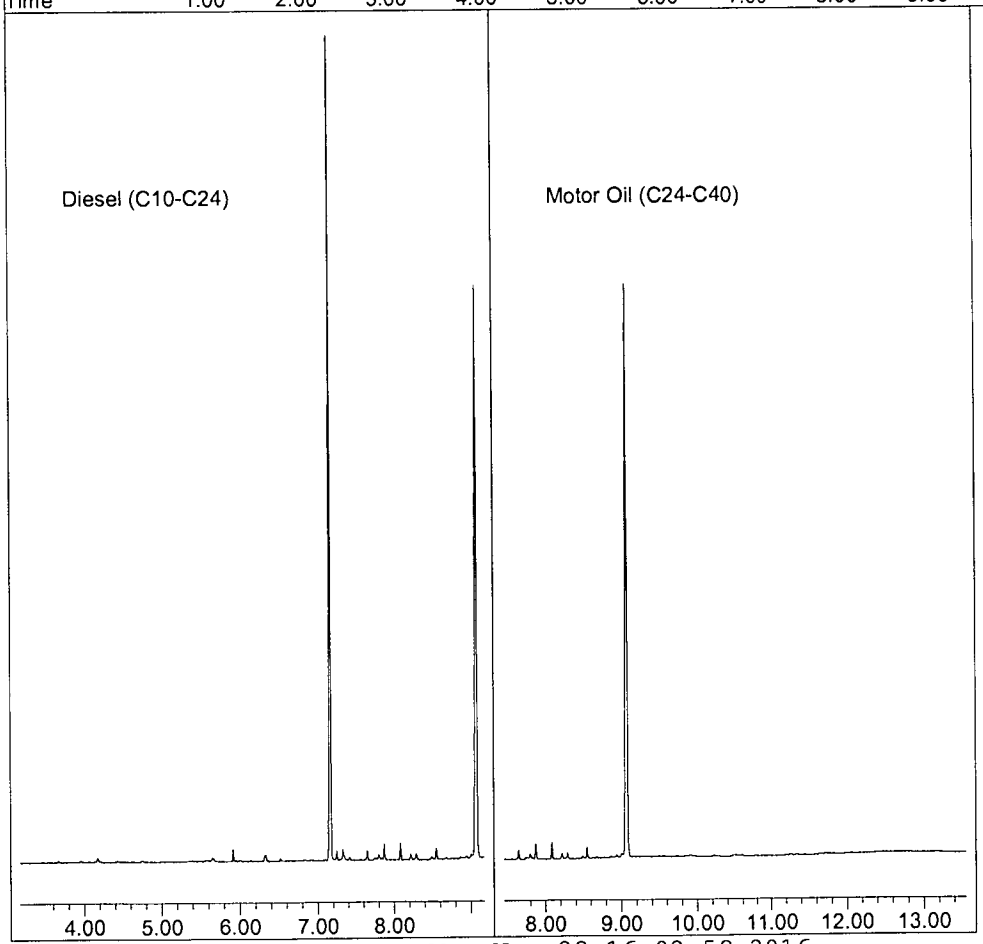
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.17	106797201	30.528 ppb
Surrogate Spike 40.000		Recovery =	76.32%
5) SA Octacosane(S)	9.08	99409095	37.874 ppb
Surrogate Spike 40.000		Recovery =	94.69%
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161121\1121005.D
Sample : 161118A_BLK 2/1500





Method Blank
EPA 8015B TPH WATER

Blank Name/QCG: **161118W-45909 - 214209**
Batch ID: #DOC53-161118A1

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	11/18/2016	12/1/2016
BLANK	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	11/18/2016	12/1/2016
BLANK	SURROGATE: OCTACOSANE (S)	91.7	60-142			%	11/18/2016	12/1/2016
BLANK	SURROGATE: ORTHO-TERPHEN	76.2	56-125			%	11/18/2016	12/1/2016

Quant Method: DOC1103.M
Run #: 1130074
Instrument: Apollo
Sequence: 161130
Initials: LA

GC SC-Blank-REG MDLs-DOD
Printed: 12/6/2016 3:23:28 PM

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161130\1130074.D Vial: 74
Acq On : 12-1-16 12:23:16 Operator: DP
Sample : 161118A BLK 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Dec 2 12:37 2016 Quant Results File: DOC1103.RES

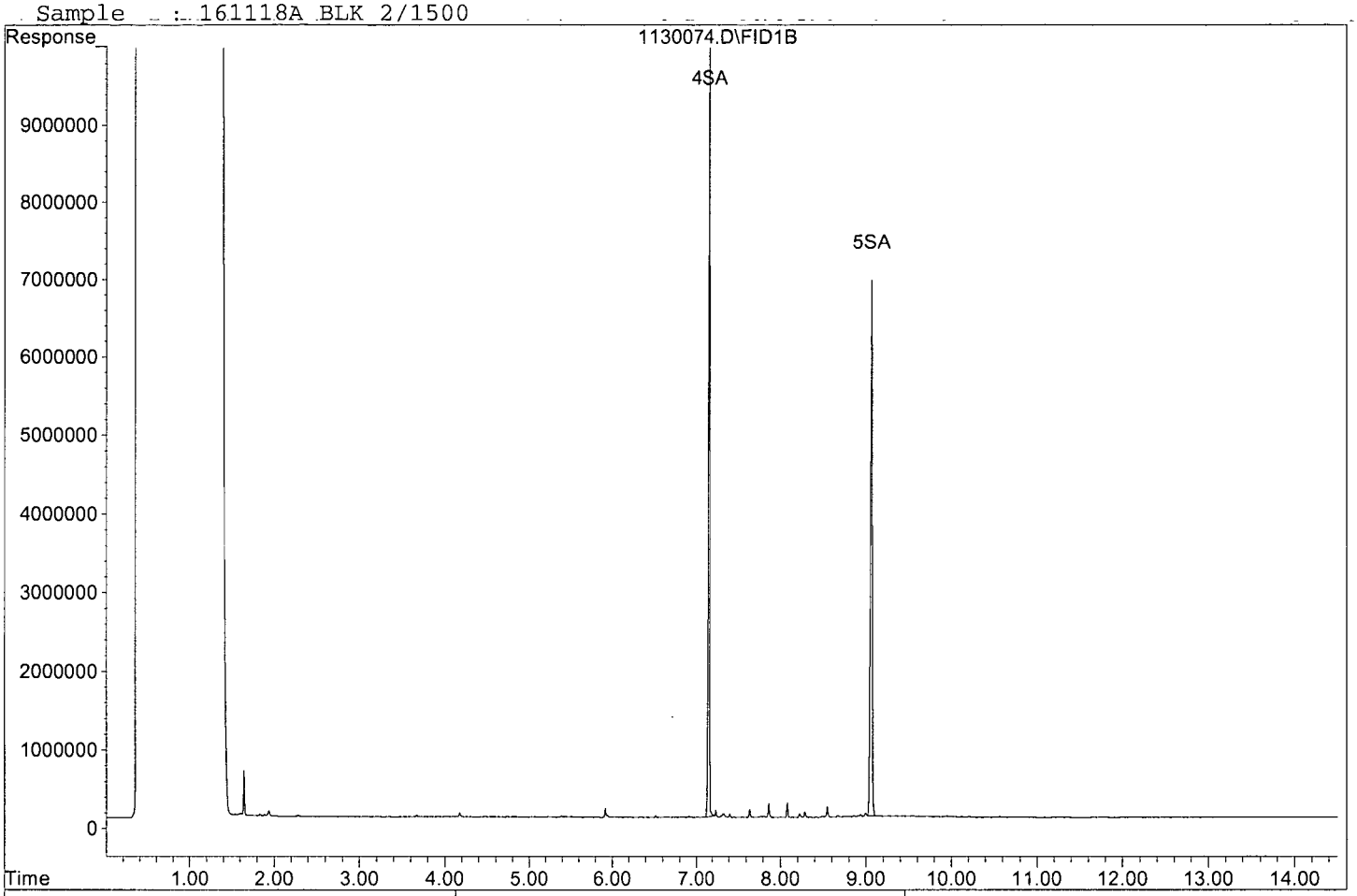
Method : G:\APOLLO\DATA\161123\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

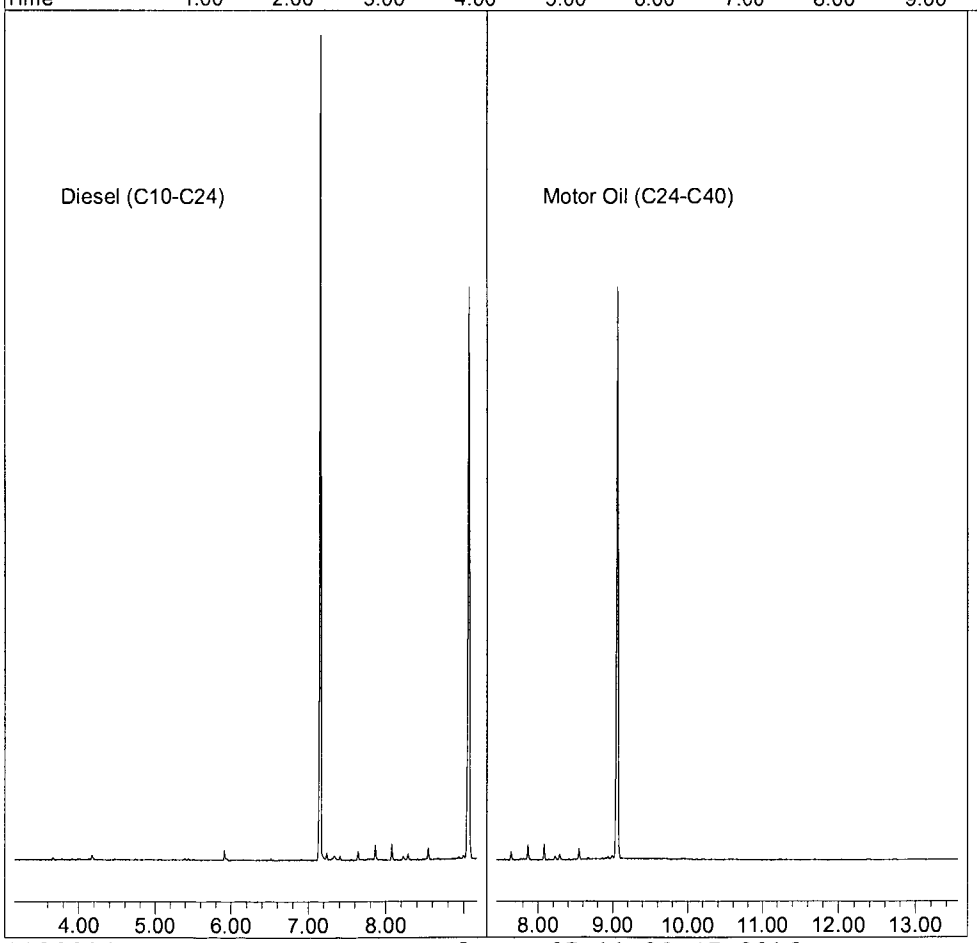
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.16	106605994	30.473 ppb
Surrogate Spike 40.000		Recovery =	76.18%
5) SA Octacosane(S)	9.06	96310442	36.693 ppb
Surrogate Spike 40.000		Recovery =	91.73%
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161130\1130074.D
Sample : 161118A BLK 2/1500





Method Blank

EPA 8015B TPH WATER W/ SGC

Blank Name/QCG: **161118W-45909 - 214324**
Batch ID: #DOC53-161118A2

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	11/18/2016	12/5/2016
BLANK	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	11/18/2016	12/5/2016
BLANK	SURROGATE: (R) DECANOIC AC	0.0	0-1			%	11/18/2016	12/5/2016
BLANK	SURROGATE: OCTACOSANE (S)	95.6	60-142			%	11/18/2016	12/5/2016
BLANK	SURROGATE: ORTHO-TERPHEN	79.5	56-125			%	11/18/2016	12/5/2016

Quant Method: DOC1103.M
Run #: 1205005
Instrument: Apollo
Sequence: 161205
Initials: DPO

GC SC-Blank-REG MDLs-DOD
Printed: 12/6/2016 3:23:28 PM

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161205\1205005.D Vial: 5
Acq On : 12-5-16 17:00:40 Operator: DP
Sample : 161118A BLK 2/1500 SGC Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Dec 6 11:43 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161123\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

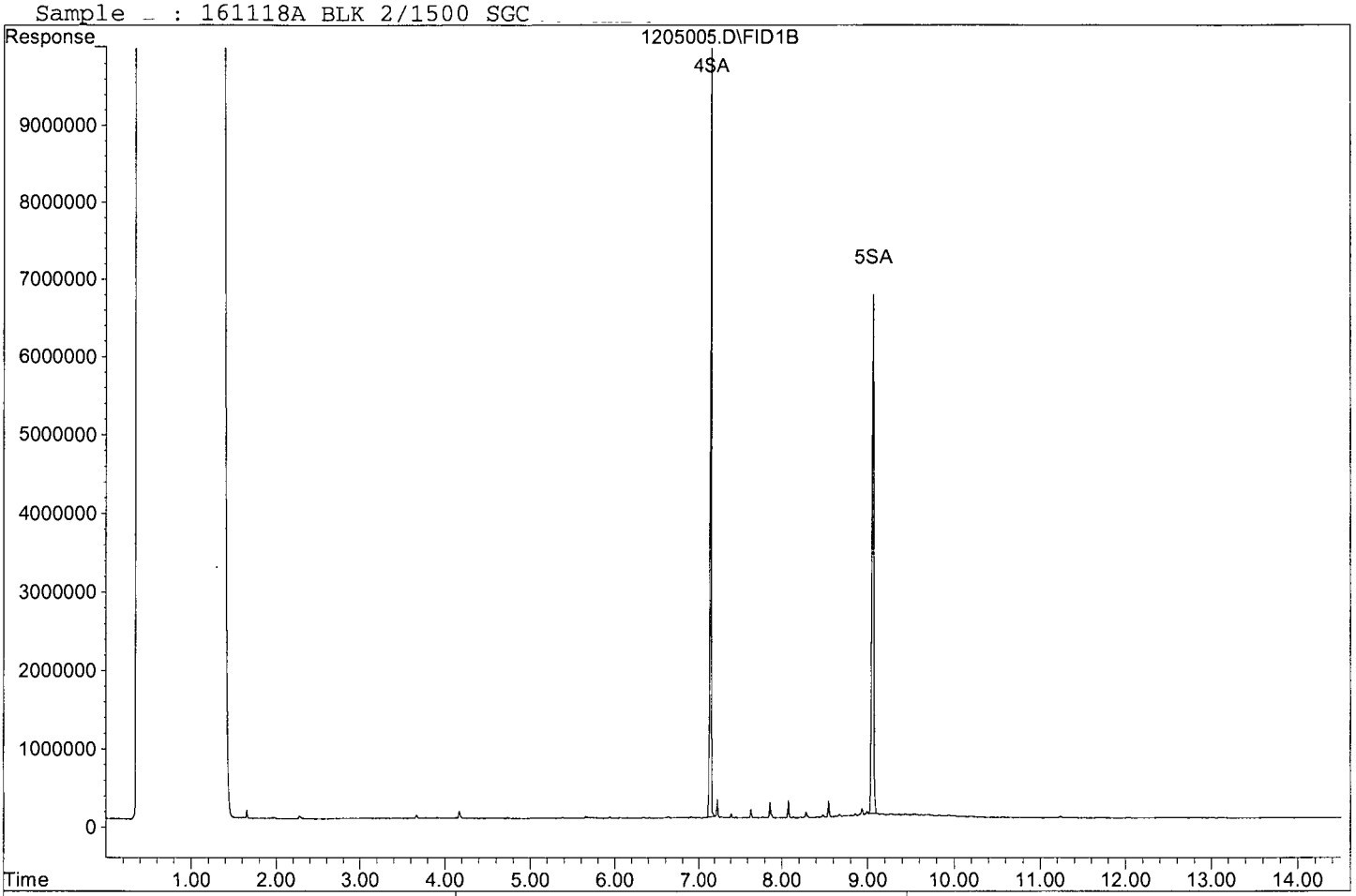
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

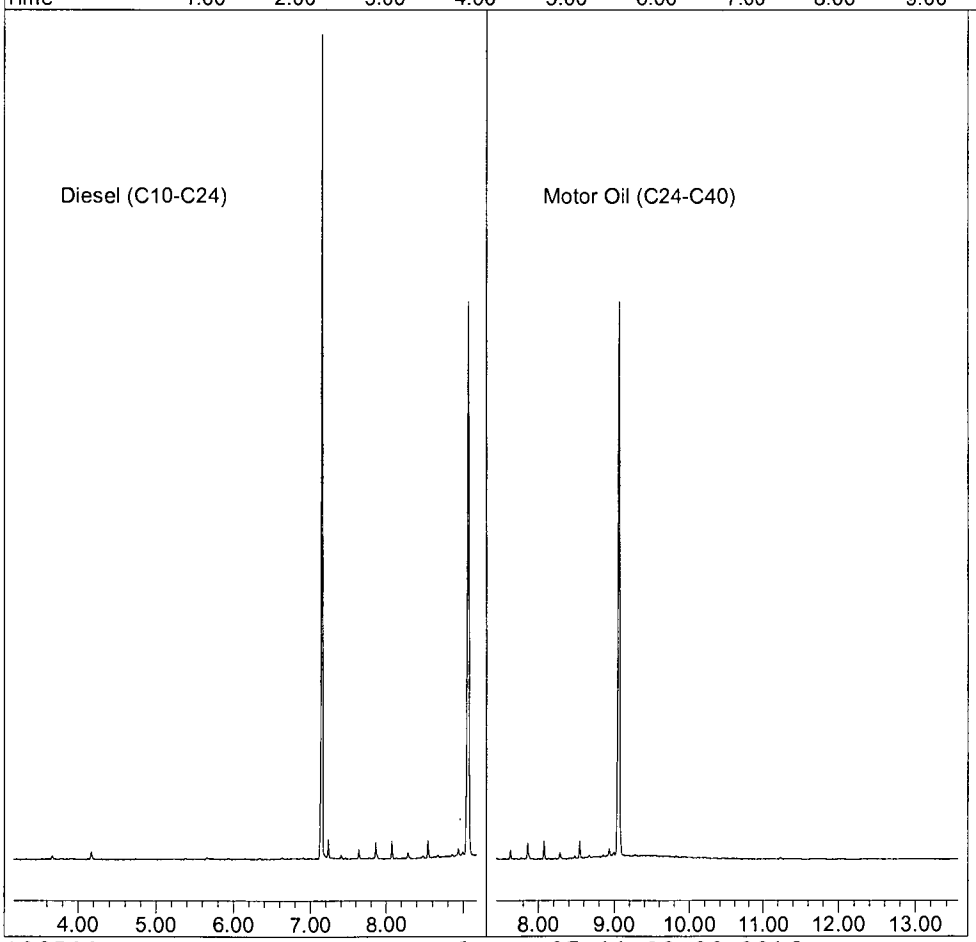
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.15	111256004	31.802	ppb
Surrogate Spike 40.000		Recovery =	79.51%	
5) SA Octacosane(S)	9.06	100347132	38.231	ppb
Surrogate Spike 40.000		Recovery =	95.58%	
Target Compounds				

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161205\1205005.D
Sample _ : 161118A BLK 2/1500 SGC





Laboratory Control Spike Recovery

EPA 8015B TPH WATER

APPL ID: **161118W-45866 LCS - 214015**
Batch ID: #DOC53-161118A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
DIESEL (C10-C24)	1330	988	74.1	36-132
OIL (C24-C40)	1330	1130	84.8	41-113
SURROGATE: OCTACOSANE (S)	40.0	36.2	90.5	60-142
SURROGATE: ORTHO-TERPHENYL (S)	40.0	36.4	91.0	56-125

Comments: _____

Primary	SPK
Quant Method :	DOC1103.M
Extraction Date :	11/18/16
Analysis Date :	11/21/16
Instrument :	Apollo
Run :	1121006
Initials :	DPO

Printed: 11/23/16 4:52:06 PM
APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161121\1121006.D Vial: 6
Acq On : 11-21-16 15:20:13 Operator: DP
Sample : 161118A LCS-1 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Nov 23 16:35 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

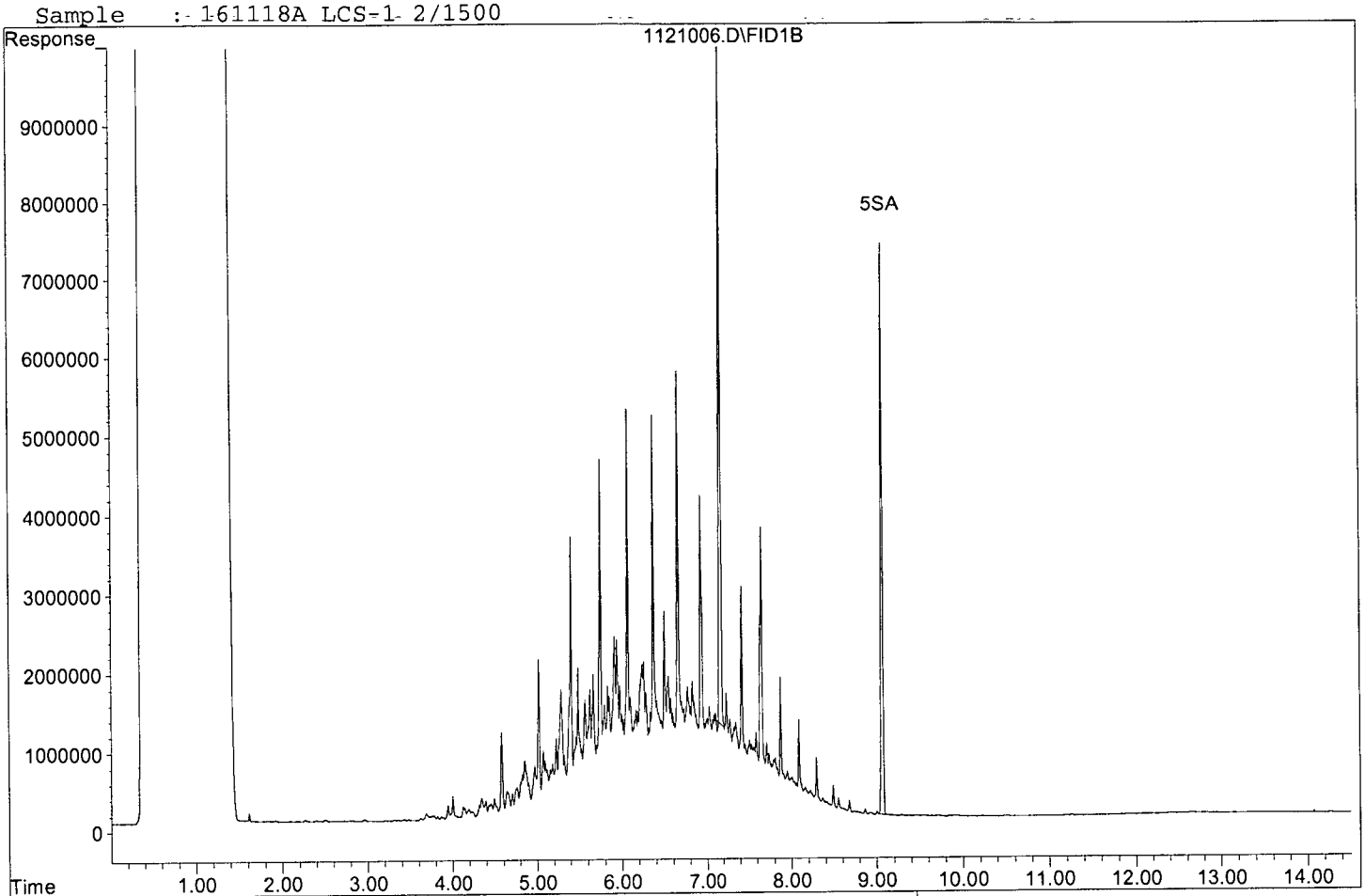
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

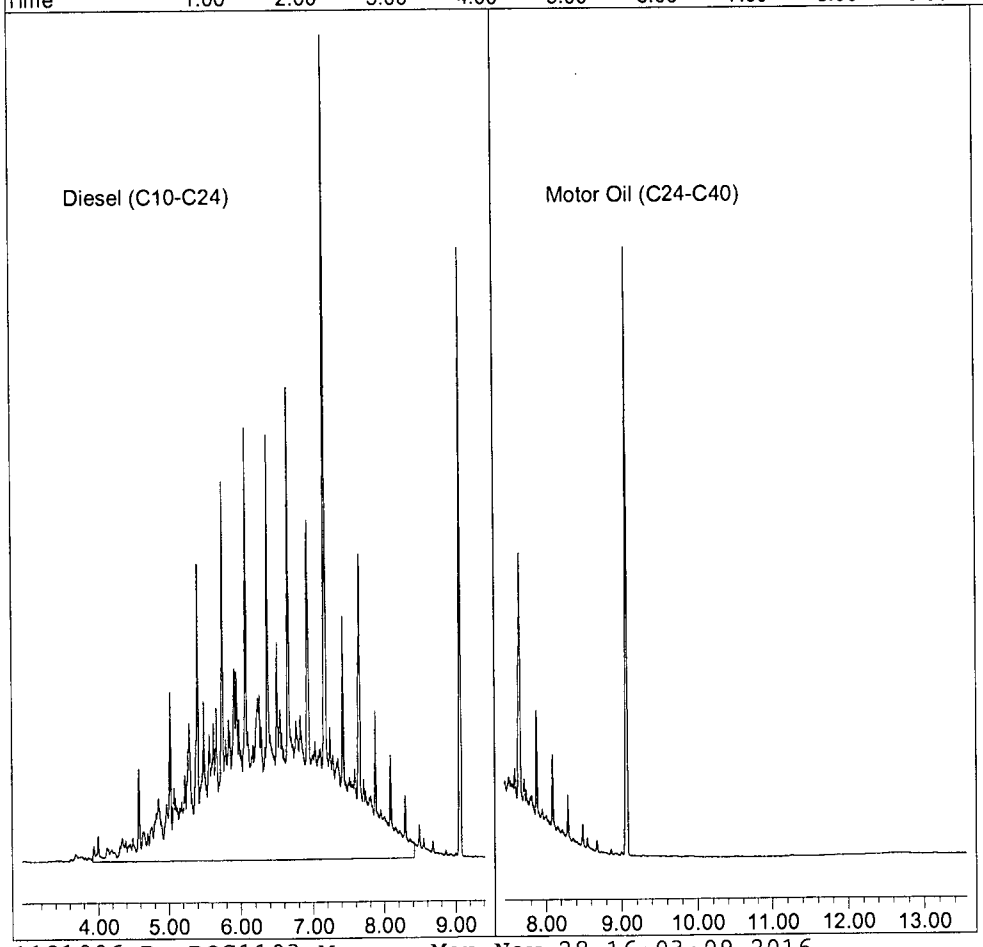
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.17	127341612	36.400 ppb
Surrogate Spike 40.000	Recovery =		91.00%
5) SA Octacosane(S)	9.07	94932309	36.168 ppb
Surrogate Spike 40.000	Recovery =		90.42%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	2558980914	987.756 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161121\1121006.D
Sample : 161118A LCS-1 2/1500





1121006.D DOC1103.M Mon Nov 28 16:03:09 2016

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161121\1121007.D Vial: 7
Acq On : 11-21-16 15:41:03 Operator: DP
Sample : 161118A LCS-2 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Nov 23 16:35 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

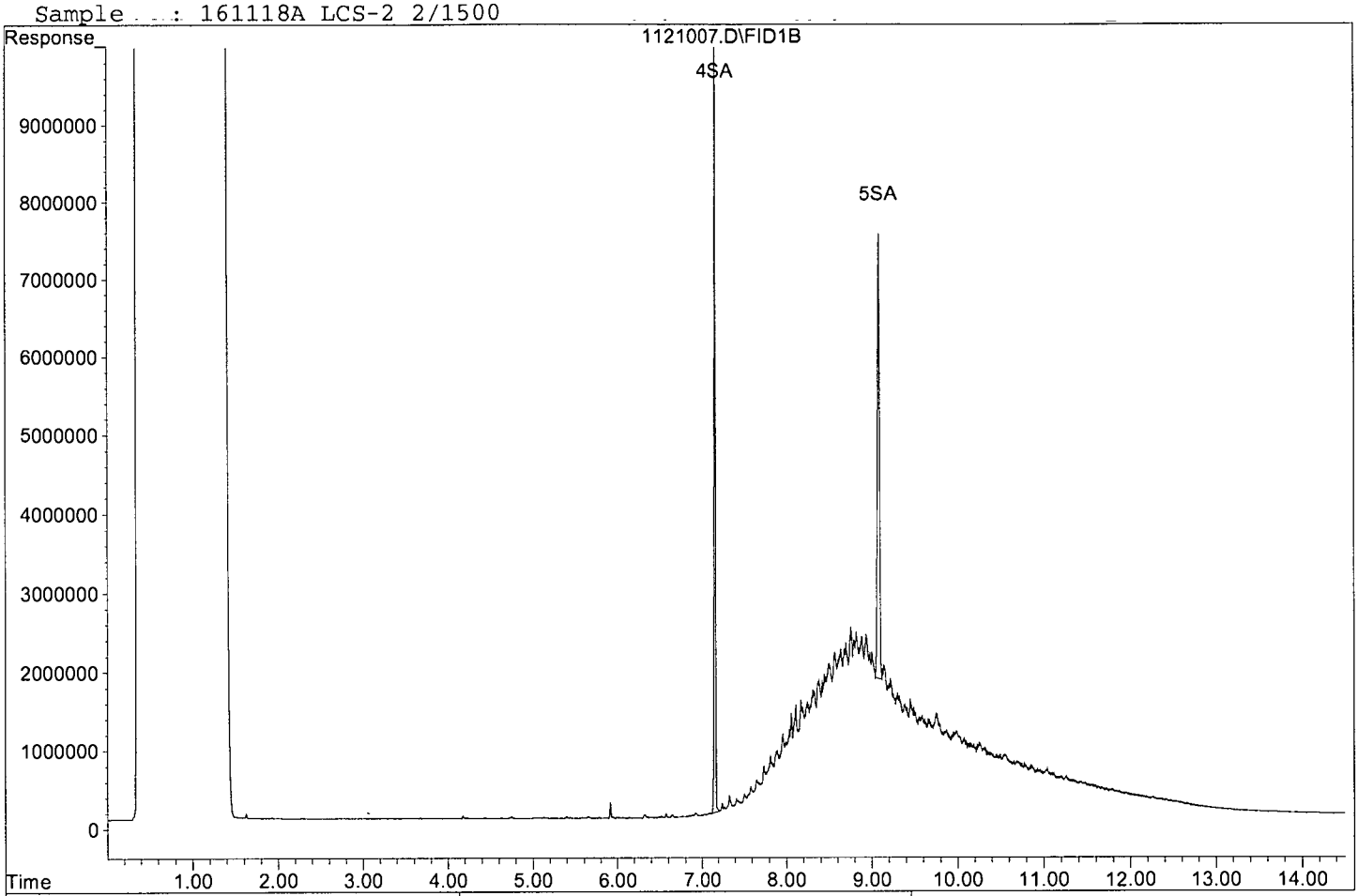
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

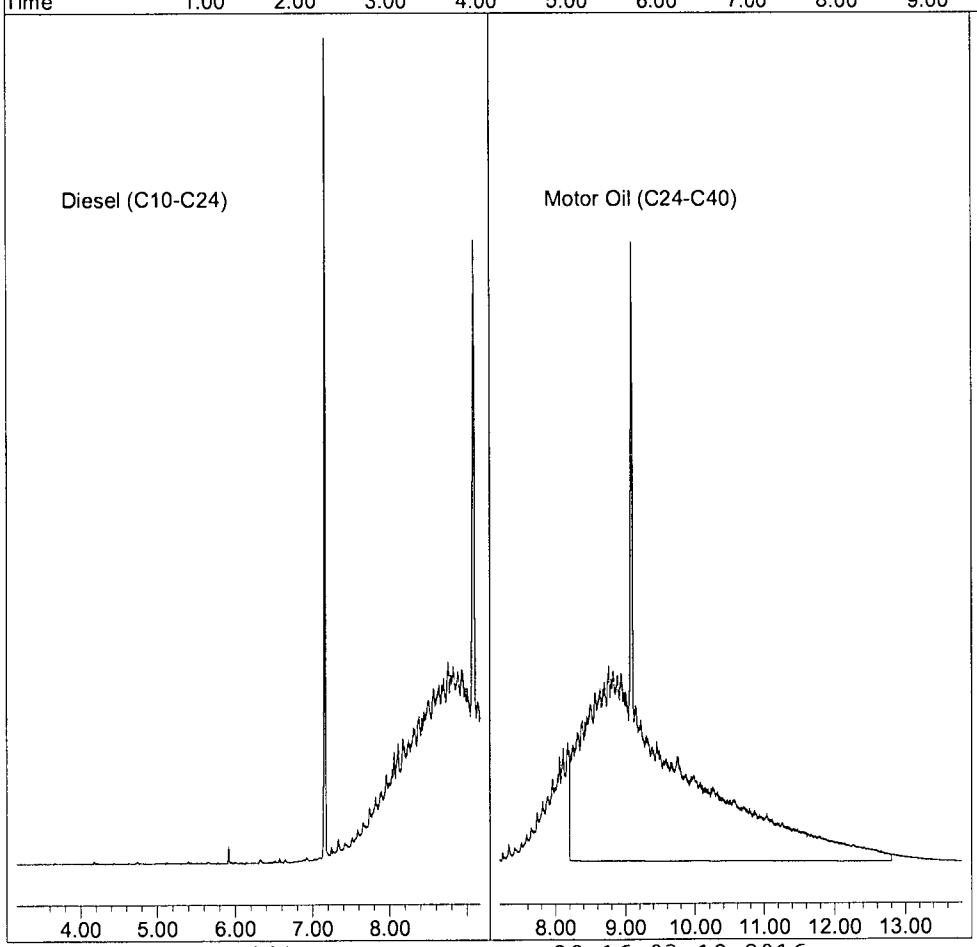
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.16	106776859	30.522 ppb
Surrogate Spike 40.000		Recovery =	76.31%
5) SA Octacosane(S)	9.09	95598103	36.422 ppb
Surrogate Spike 40.000		Recovery =	91.05%
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	2356477245	1127.871 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161121\1121007.D
Sample : 161118A LCS-2 2/1500





1121007.D DOC1103.M Mon Nov 28 16:03:19 2016

Laboratory Control Spike Recovery
EPA 8015B TPH WATER

APPL ID: **161118W-45909 LCS - 214209**
Batch ID: #DOC53-161118A1

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
DIESEL (C10-C24)	1330	1020	76.7	36-132
OIL (C24-C40)	1300	1020	78.5	41-113
SURROGATE: OCTACOSANE (S)	40.0	35.7	89.3	60-142
SURROGATE: ORTHO-TERPHENYL (S)	40.0	37.5	93.8	56-125

Comments: _____

Primary	SPK
Quant Method :	DOC1103.M
Extraction Date :	11/18/2016
Analysis Date :	12/1/2016
Instrument :	Apollo
Run :	1130075
Initials :	LA

Printed: 12/6/2016 3:23:22 PM
APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161130\1130075.D Vial: 75
Acq On : 12-1-16 12:43:48 Operator: DP
Sample : 161118A LCS-1 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Dec 2 12:37 2016 Quant Results File: DOC1103.RES

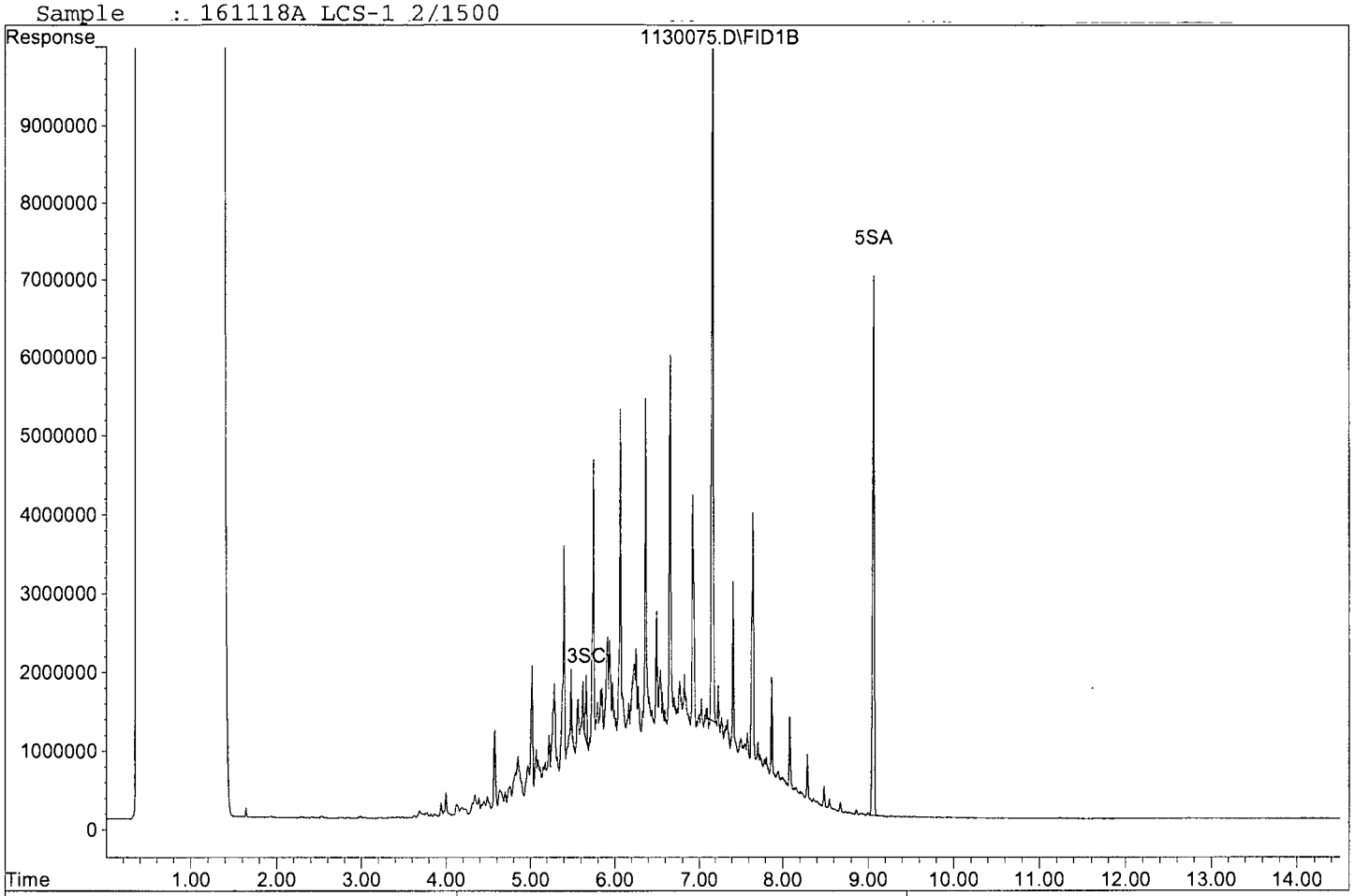
Method : G:\APOLLO\DATA\161123\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

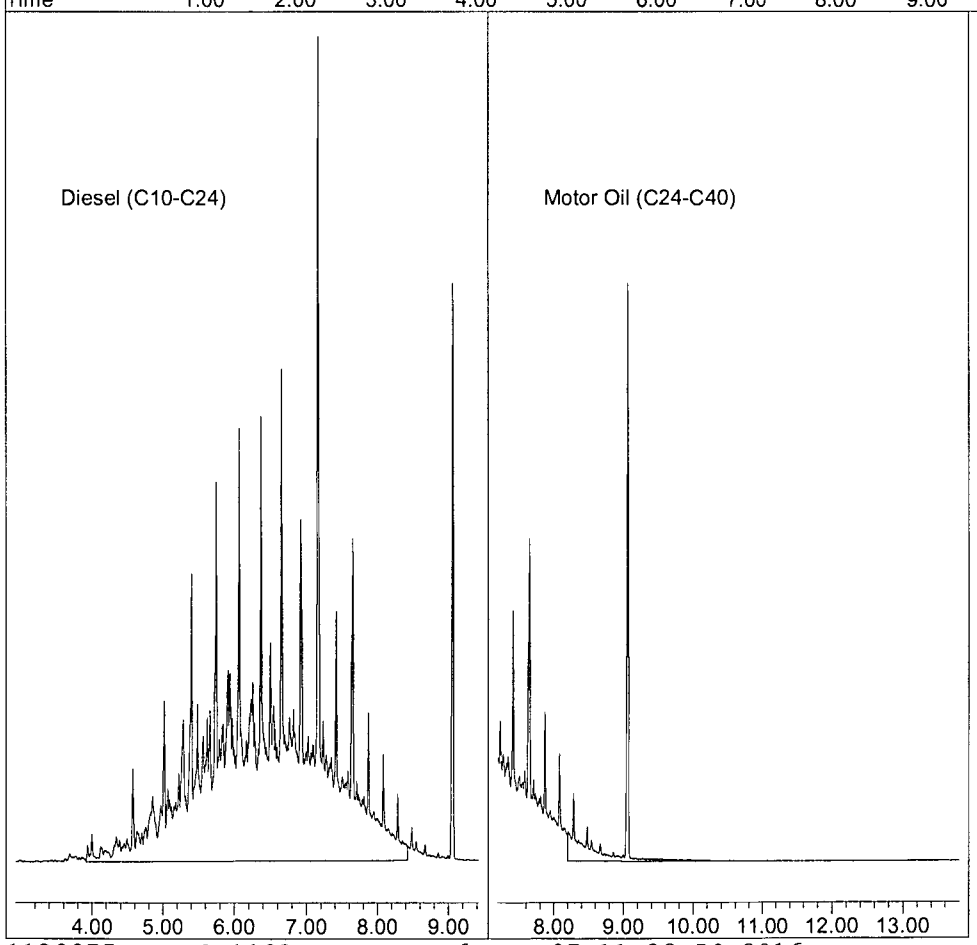
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SC Decanoic Acid(S)	5.66	9595260	10.459	ppb
Surrogate Spike 64.000	Recovery =		16.34%	
4) SA Ortho-Terphenyl(S)	7.17	131163898	37.493	ppb
Surrogate Spike 40.000	Recovery =		93.73%	
5) SA Octacosane(S)	9.06	93835003	35.750	ppb
Surrogate Spike 40.000	Recovery =		89.38%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	2638010513	1018.261	ppb
2) HBTM Motor Oil (C24-C40)	10.50	95079256	45.507	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161130\1130075.D
Sample : 161118A LCS-1 2/1500





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161130\1130076.D Vial: 76
Acq On : 12-1-16 13:04:15 Operator: DP
Sample : 161118A LCS-2 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Dec 2 12:39 2016 Quant Results File: DOC1103.RES

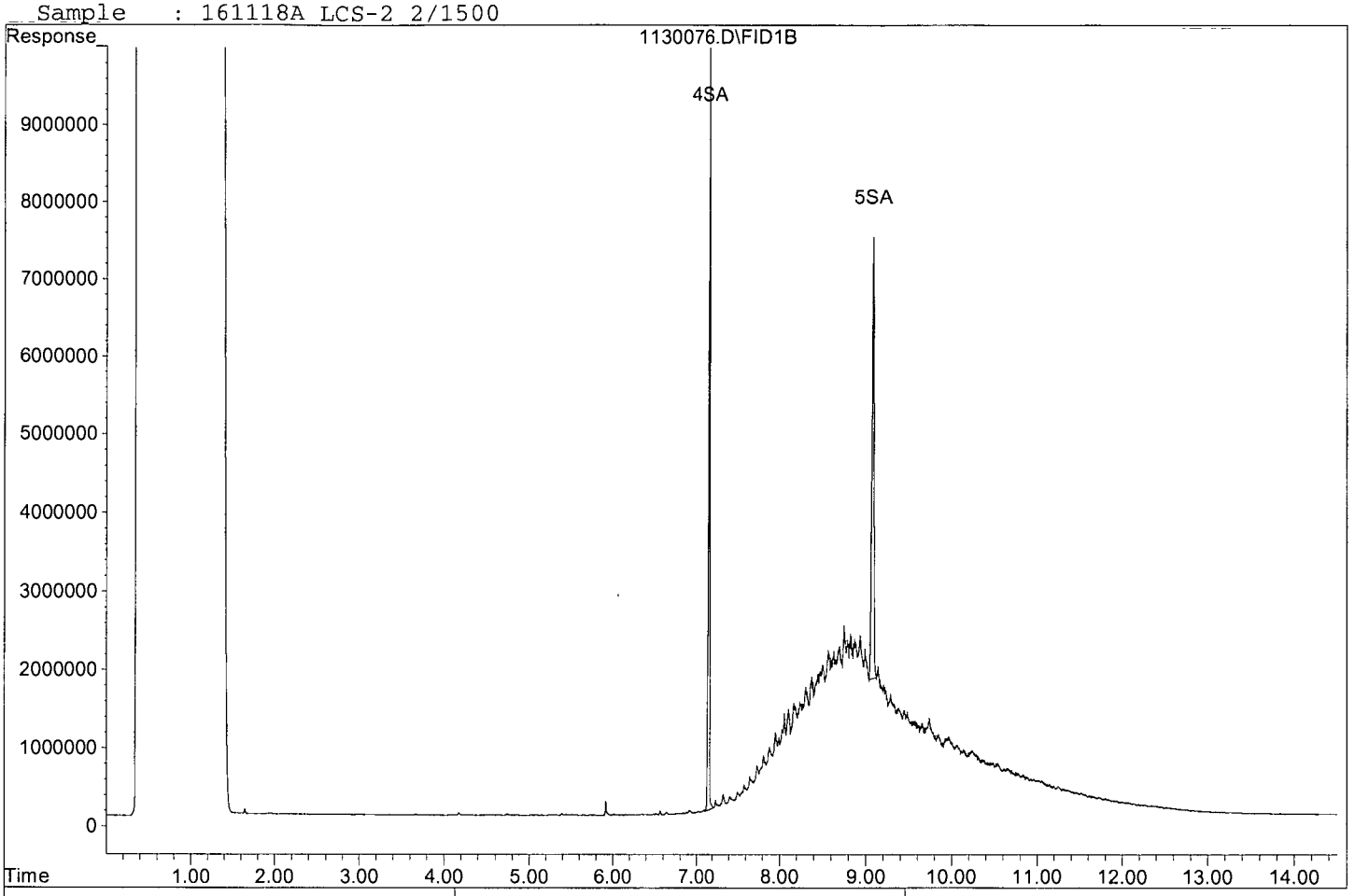
Method : G:\APOLLO\DATA\161123\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

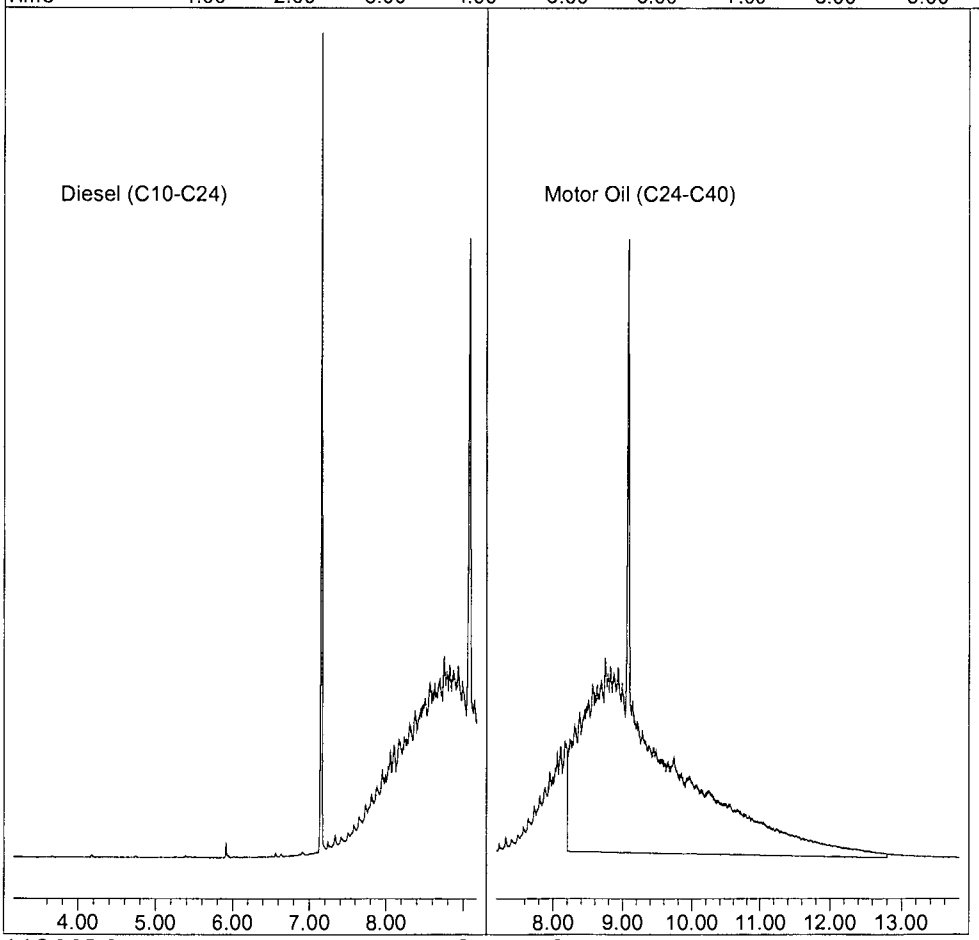
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.16	105727487	30.222 ppb
Surrogate Spike 40.000		Recovery =	75.56%
5) SA Octacosane(S)	9.08	91514835	34.866 ppb
Surrogate Spike 40.000		Recovery =	87.17%
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	2125326187	1017.236 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161130\1130076.D
Sample : 161118A LCS-2 2/1500





Laboratory Control Spike Recovery

EPA 8015B TPH WATER W/ SGC

APPL ID: **161118W-45909 LCS - 214324**
Batch ID: #DOC53-161118A2

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
DIESEL (C10-C24)	1330	1030	77.3	36-132
OIL (C24-C40)	1330	1010	75.8	41-113
SURROGATE: (R) DECANOIC ACID (S)	10.00	0	0.0	0-1
SURROGATE: OCTACOSANE (S)	40.0	38.2	95.5	60-142
SURROGATE: ORTHO-TERPHENYL (S)	40.0	40.6	102	56-125

Comments: _____

Primary	SPK
Quant Method :	DOC1103.M
Extraction Date :	11/18/2016
Analysis Date :	12/5/2016
Instrument :	Apollo
Run :	1205006
Initials :	DPO

Printed: 12/6/2016 3:23:22 PM
APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161205\1205006.D Vial: 6
Acq On : 12-5-16 17:21:52 Operator: DP
Sample : 161118A LCS-1 2/1500 SGC Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Dec 6 10:48 2016 Quant Results File: DOC1103.RES

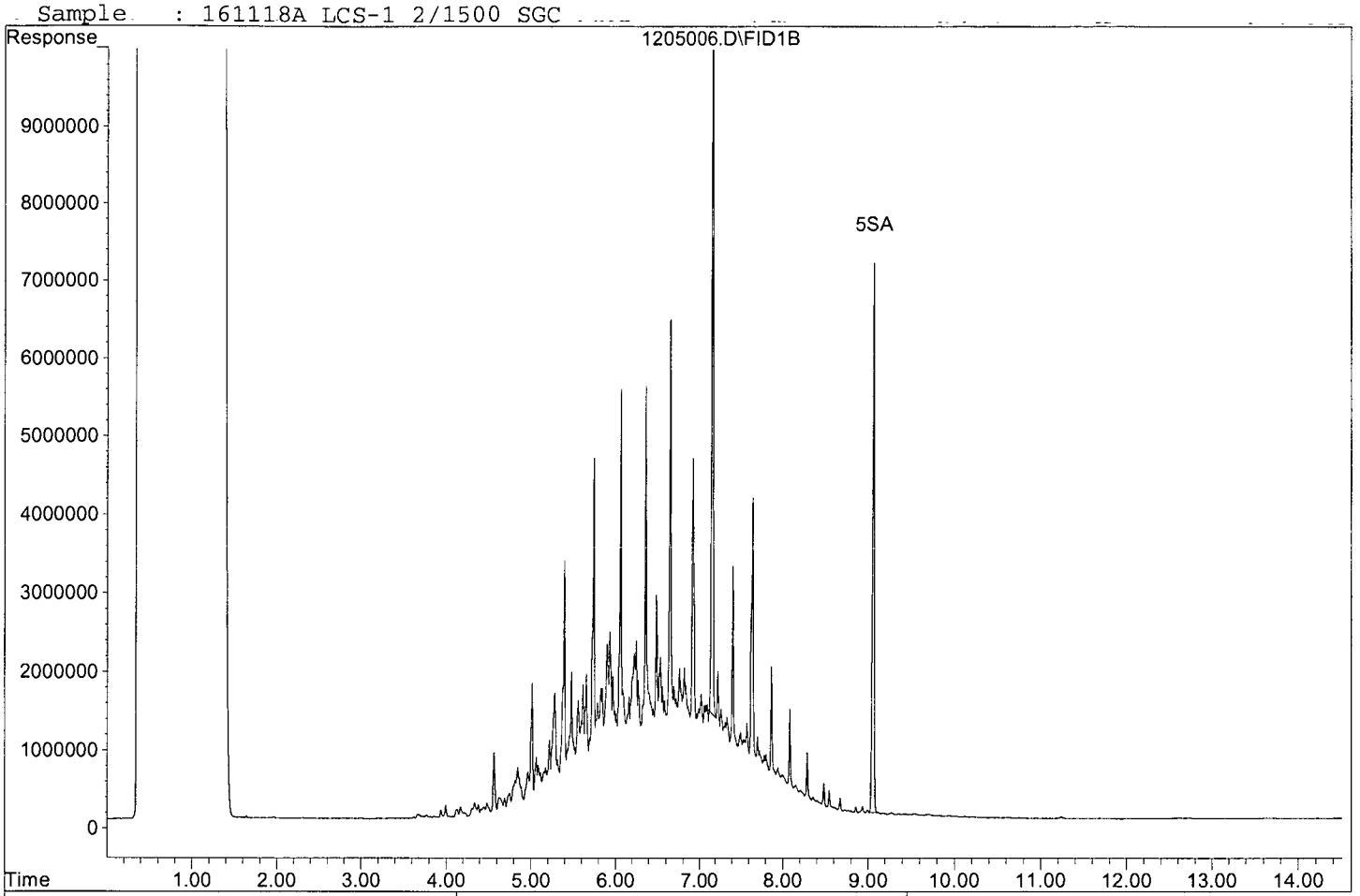
Method : G:\APOLLO\DATA\161123\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

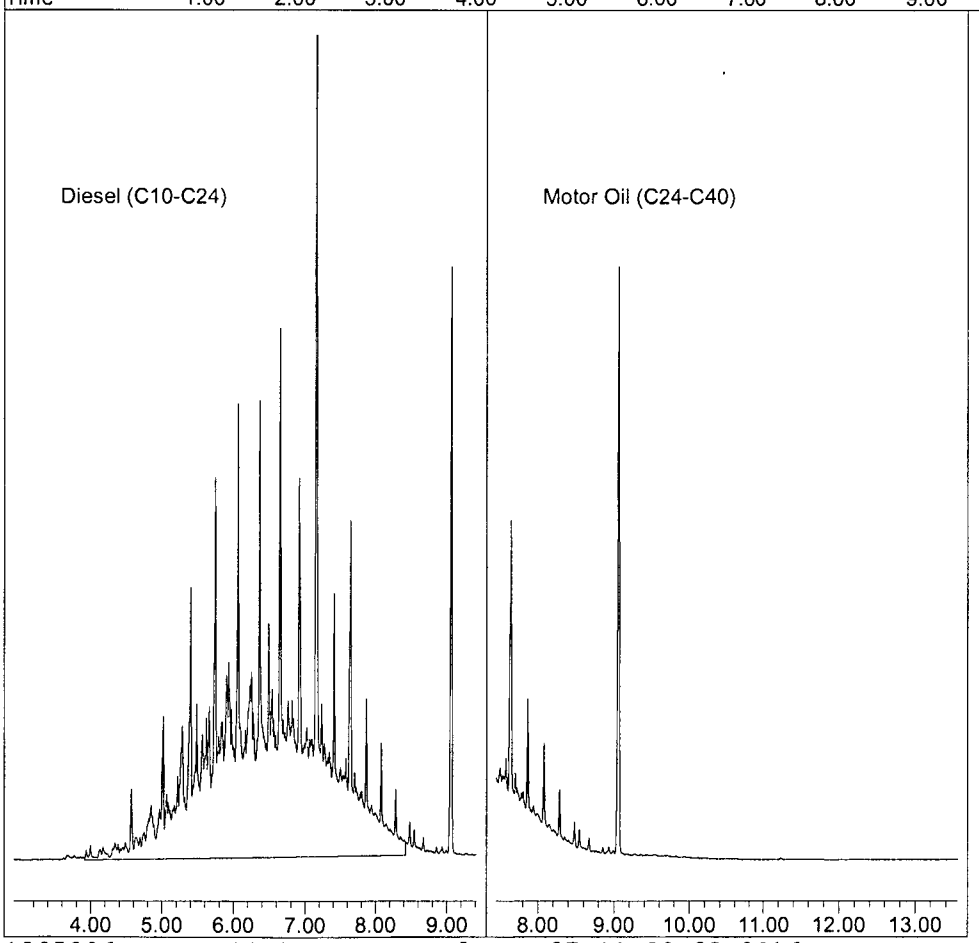
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.16	141936750	40.572 ppb
Surrogate Spike 40.000	Recovery =		101.43%
5) SA Octacosane(S)	9.06	100137850	38.151 ppb
Surrogate Spike 40.000	Recovery =		95.38%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	2678039948	1033.712 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161205\1205006.D
Sample : 161118A LCS-1 2/1500 SGC





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161205\1205007.D Vial: 7
Acq On : 12-5-16 17:42:58 Operator: DP
Sample : 161118A LCS-2 2/1500 SGC Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Dec 6 10:48 2016 Quant Results File: DOC1103.RES

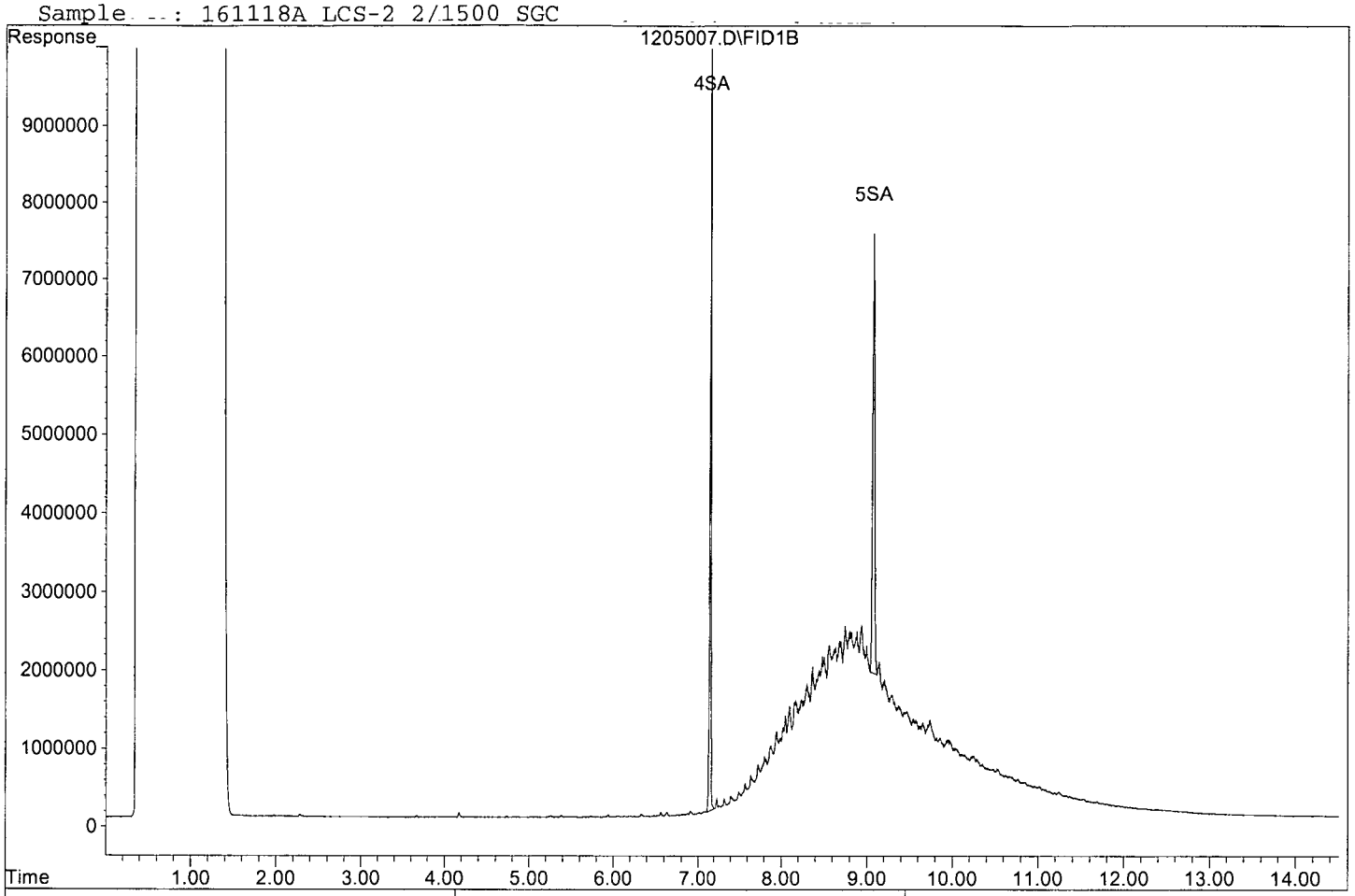
Method : G:\APOLLO\DATA\161123\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

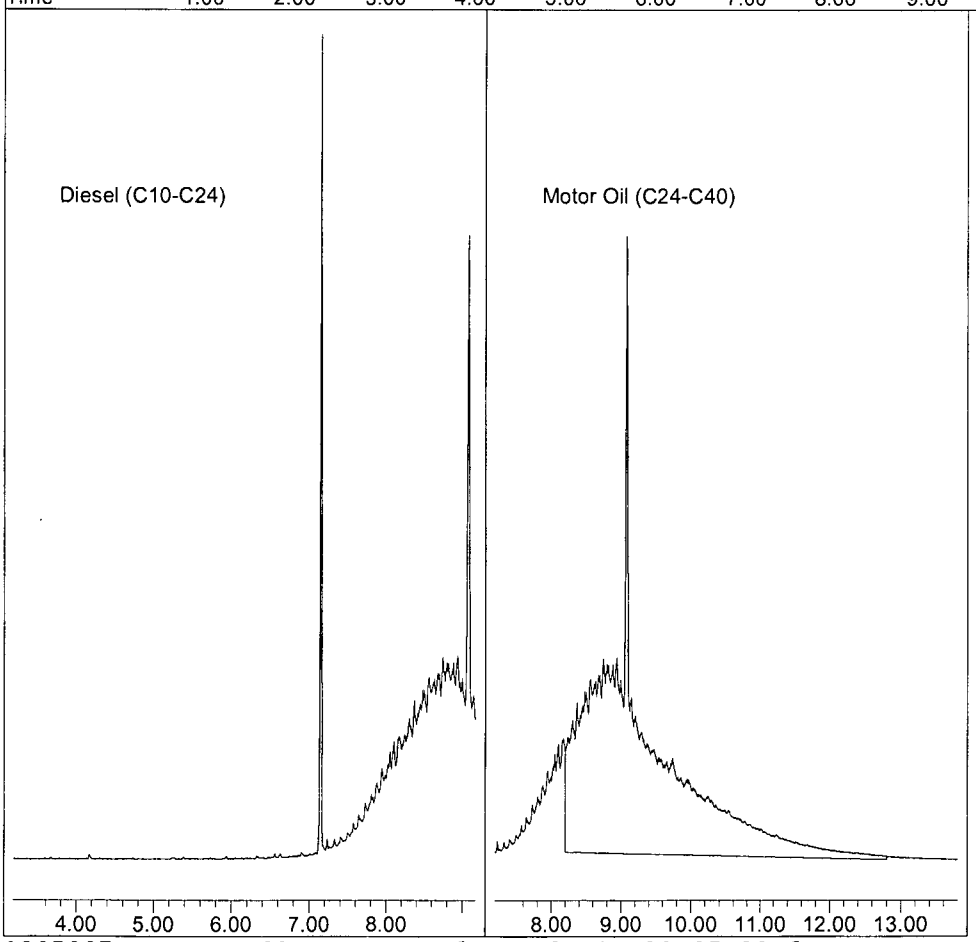
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.15	110490417	31.584 ppb
Surrogate Spike 40.000	Recovery =		78.96%
5) SA Octacosane(S)	9.08	94738932	36.094 ppb
Surrogate Spike 40.000	Recovery =		90.24%
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	2113236951	1011.450 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161205\1205007.D
Sample : 161118A LCS-2 2/1500 SGC





DIESEL CURVE		prep:11/03/16-D.P.		ex:6/03/17						
STD	**[µg/mL]**	**LOT #**	**DATE**	**EXP. DATE**	**µL**	**µL**	**µL**	**µL**	**µL**	**µL**
DIESEL	1000	237562-37104	11/03/16	06/03/17	10	10	40	60	80	100
MC	N/A	56098			990	90	60	40	20	NA
				Final VOL.	1000	100	100	100	100	100
				ppm	10	100	400	600	800	1000

MOTOR OIL CURVE		prep: 10/28/16-D.P.		ex:4/26/17						
STD	**[µg/mL]**	**LOT #**	**DATE**	**EXP. DATE**	**µL**	**µL**	**µL**	**µL**	**µL**	**µL**
MOTOR OIL	2000		10/26/16	04/26/17	10	25	125	500	750	200
MC	N/A	56098			990	975	875	500	250	NA
				Final VOL.	1000	1000	1000	1000	1000	200
				ppm	20	50	250	1000	1500	2000

Prep: 11/03/16-D.P. Exp: 6/03/17						
DIESEL CAL STD.						
STD.	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT / LOT#
DIESEL FUEL #2	50,000 ug/mL	O2SI CAT#011598-03 LOT#237562-37104 OP: 11/03/06 EXP: 11/03/17	500 µL	25 mL	1000ug/mL	MC LOT# 56098
O-TERPHENYL OCTACOSANE	600 ug/mL	O2SI CAT#110316-05 LOT#266278-37107 OP: 10/27/16 EXP: 10/27/17	2080 µL		50ug/mL	

Prep: 10/26/16 -D.P. Ex: 4/26/17						
MOTOR OIL CAL STD						
STD.	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT / LOT#
MOTOR OIL	50,000 ug/mL	O2SI CAT#116390-02 LOT#239390-36901 OP:10/26/16 EXP:10/26/17	1mL	25mL	2000ug/mL	MC LOT# 56098

DIESEL SECOND SOURCE prep: 08/01/16-D.P. ex: 07/6/17						
standard	**initial conc.**	**SOURCE DATE**	**ALIQUOT**	**FINAL VOL.**	**FINAL CONC.**	**SOLVENT LOT**
DIESEL SECOND SOURCE	50,000 ug/mL	O2SI CAT#011598-03-SS LOT#244813-34634 OP: 08/28/15 Exp 03/14/19	200uL	10mL	1000ug/mL	MC #56061

MOTOR OIL SECOND SOURCE prep: 07/6/16-L.H. ex: 07/6/17						
standard	initial conc.	SOURCE DATE	ALIQUOT	FINAL VOL.	FINAL CONC.	SOLVENT LOT
MOTOR OIL SECOND SOURCE	50,000 ug/mL	O2SI CAT#116390-02-SS LOT#244814-34637 OP: 07/06/16 Exp 07/06/17	200uL	10mL	1000ug/mL	MC #56061

DIESEL CCV 400ug/ml						
Prep: 11/03/16-D.P. Ex: 02/03/16						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
DIESEL STD.	1000 µg/mL	Diesel Std.	2000µL	5mL	400 µg/ml	MC
	PREP:	11/03/16				56098
	Exp:	06/03/17				

MOTOR OIL CCV 1000ppm						
Prep: 11/21/16-G.A. Ex: 2/21/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
MO STD.	2000 µg/mL	MO Std.	2500µL	5mL	1000 µg/ml	MC
	PREP:	10/26/16				56098
	Exp:	04/26/17				

Diesel Fuel #2
Conc. 50000 ug/ml
O2SI
CAT #011598-03
LOT# 237562-37102
OP: 10/25/16 RH
EXP: 10/25/17

MO Spike
Cat: 116390-01
Lot: 253355-367
Op: 07/13/16
Exp: 07/13/17

THC Surrogate
Cat: 110316-05
Lot: 266278-37
Op: 10/27/16
Exp: 10/27/17

_SEP011LL

Organic Extraction Worksheet

Method	THC Sep Fun Ext 3510C (LOW LEVEL)	Extraction Set	161118A	Extraction Method	SEP011LL	Units	mL

Spiked ID 1	Diesel Spike 10-26-16 EXP 10-26-17		Surrogate ID 1	THC Surrogate 11-7-16 EXP 11-7-17	
Spiked ID 2	Motor Oil Spike 11-7-16 EXP 11-7-17		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	11/18/16 9:40	
Spiked ID 8			Ext. End Time:	11/21/16 8:55	
			GC Requires Extract By:	11/22/16 0:00	

pH1			Water Bath Temp Criteria	35,35,35,3
pH2				
pH3				

Spiked By: KY **Date** 11/18/16 **Witnessed By:** JR **Date** 11/18/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	161118A Blk				0.1	1 equip	1500 E-WB1	2	7	11/18/16 9:40	
2	161118A LCS-1		0.040	1	0.1	1 equip	1500 E-WB2	2	7	11/18/16 9:40	
3	161118A LCS-2		0.040	2	0.1	1 equip	1500 E-WB3	2	7	11/18/16 9:40	
4	AZ45866 MS-1	AZ45866W31	0.040	1	0.1	1 equip	1500 E-WB1	2	7	11/18/16 9:40	81492 1 WEEK
5	AZ45866 MSD-1	AZ45866W20	0.040	1	0.1	1 equip	1500 E-WB2	2	7	11/18/16 9:40	81492 1 WEEK
6	AZ45866 MS-2	AZ45866W26	0.040	2	0.1	1 equip	1500 E-WB3	2	7	11/18/16 9:40	81492 1 WEEK
7	AZ45866 MSD-2	AZ45866W30	0.040	2	0.1	1 equip	1500 E-WB4	2	7	11/18/16 9:40	81492 1 WEEK
8	AZ45866	AZ45866W23			0.1	1 equip	1500 E-WB1	2	7	11/18/16 9:40	81492 1 WEEK
9	AZ45867	AZ45867W10			0.1	1 equip	1500 E-WB2	2	7	11/18/16 9:40	81492 1 WEEK
10	AZ45868	AZ45868W12			0.1	1 equip	1500 E-WB3	2	7	11/18/16 9:40	81492 1 WEEK
11	AZ45907	AZ45907W16			0.1	1 equip	1500 E-WB4	2	7	11/18/16 9:40	81500 1 WEEK
12	AZ45908	AZ45908W11			0.1	1 equip	1500 E-WB1	2	7	11/18/16 9:40	81500 1 WEEK
13	AZ45909	AZ45909W14			0.1	1 equip	1500 E-WB2	2	7	11/18/16 9:40	81500 1 WEEK
14	AZ45910	AZ45910W15			0.1	1 equip	1500 E-WB3	2	7	11/18/16 9:40	81500 1 WEEK
15	AZ45911	AZ45911W15			0.1	1 equip	1500 E-WB4	2	7	11/18/16 9:40	81500 1 WEEK

Kes 11/21/16

olvent and Lot#	
1C	56153
la2SO4	16C255214
h-indicator strips	HC 574756
ilter Paper	400112

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	GA
Date	11/21/16
Time	1000
Refrigerator	Hobart

	Technician's Initials
Scanned By	KY
Sample Preparation	KY,JR
Extraction	KY,JR
Concentration	DL

Modified	11/21/16 9:34:48 AM

Reviewed By: Kes **Date** 11/21/16

1/21/16 9:34:57 AM

Ext_ID 227 53345

_SEP011LL

Organic Extraction Worksheet

Method	THC Sep Fun Ext 3510C (LOW LEVEL)	Extraction Set	161118A	Extraction Method	SEP011LL	Units	mL

Spiked ID 1	Diesel Spike 10-26-16 EXP 10-26-17		Surrogate ID 1	THC Surrogate 11-7-16 EXP 11-7-17	
Spiked ID 2	Motor Oil Spike 11-7-16 EXP 11-7-17		Surrogate ID 2		
Spiked ID 3	(*)Decanoic Acid Solution 1000ug/mL Lot: 11-29-16		Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	11/18/16 9:40	
Spiked ID 8			Ext. End Time:	11/21/16 8:55	
			GC Requires Extract By:	**11/22/16 0:00**	

pH1			Water Bath Temp Criteria	35,35,35,3
pH2				
pH3				

Spiked By: KY **Date** 11/18/16 **Witnessed By:** JR **Date** 11/18/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	161118A Blk		0.050	3	0.1	1	1500	2	7	11/18/16 9:40	*
						equip	E-WB1				
2	161118A LCS-1		0.04,0.05	1,3	0.1	1	1500	2	7	11/18/16 9:40	*
						equip	E-WB2				
3	161118A LCS-2		0.04,0.05	2,3	0.1	1	1500	2	7	11/18/16 9:40	*
						equip	E-WB3				
4	AZ45866 MS-1	AZ45866W31	0.040	1	0.1	1	1500	2	7	11/18/16 9:40	81492 1 WEEK
						equip	E-WB1				
5	AZ45866 MSD-1	AZ45866W20	0.040	1	0.1	1	1500	2	7	11/18/16 9:40	81492 1 WEEK
						equip	E-WB2				
6	AZ45866 MS-2	AZ45866W26	0.040	2	0.1	1	1500	2	7	11/18/16 9:40	81492 1 WEEK
						equip	E-WB3				
7	AZ45866 MSD-2	AZ45866W30	0.040	2	0.1	1	1500	2	7	11/18/16 9:40	81492 1 WEEK
						equip	E-WB4				
8	AZ45866	AZ45866W23			0.1	1	1500	2	7	11/18/16 9:40	81492 1 WEEK
						equip	E-WB1				
9	AZ45867	AZ45867W10			0.1	1	1500	2	7	11/18/16 9:40	81492 1 WEEK
						equip	E-WB2				
10	AZ45868	AZ45868W12			0.1	1	1500	2	7	11/18/16 9:40	81492 1 WEEK
						equip	E-WB3				
11	AZ45907	AZ45907W16			0.1	1	1500	2	7	11/18/16 9:40	81500 1 WEEK
						equip	E-WB4				
12	AZ45908	AZ45908W11			0.1	1	1500	2	7	11/18/16 9:40	81500 1 WEEK
						equip	E-WB1				
13	AZ45909	AZ45909W14	0.050	3	0.1	1	1500	2	7	11/18/16 9:40	81500 1 WEEK *
						equip	E-WB2				
14	AZ45910	AZ45910W15			0.1	1	1500	2	7	11/18/16 9:40	81500 1 WEEK
						equip	E-WB3				
15	AZ45911	AZ45911W15			0.1	1	1500	2	7	11/18/16 9:40	81500 1 WEEK
						equip	E-WB4				

KY 12/05/16

Solvent and Lot#	
MC	56153
Na2SO4	16C255214
ph-indicator strips	HC 574756
Filter Paper	400112
SILICA GEL (*)	8-1-16

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	
Date	
Time	
Refrigerator	

	Technician's Initials
Scanned By	KY
Sample Preparation	KY,JR
Extraction	KY,JR
Concentration	DL

Modified	12/05/16 3:54:09 PM

Reviewed By: KY **Date** 12/05/16

Injection Log

Directory: G:\APOLLO\DATA\161019\161028\161103\161121\161130\161205

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	16	1019016.D	1	DECANOIC ACID-1 10/19/16	water	10-19-16 16:56:15
2	17	1019017.D	1	DECANOIC ACID-2 10/19/16	water	10-19-16 17:17:37
3	18	1019018.D	1	DECANOIC ACID-3 10/19/16	water	10-19-16 17:38:57
4	19	1019019.D	1	DECANOIC ACID-4 10/19/16	water	10-19-16 18:00:04
5	20	1019020.D	1	DECANOIC ACID-5 10/19/16	water	10-19-16 18:21:47
6	21	1019021.D	1	DECANOIC ACID-6 10/19/16	water	10-19-16 18:42:46
7	2	1028002.D	1	MO 20ppb 10/28/16	Mix(B)	10-28-16 9:07:30
8	3	1028003.D	1	MO 50ppb 10/28/16	Mix(B)	10-28-16 9:28:13
9	4	1028004.D	1	MO 250ppb 10/28/16	Mix(B)	10-28-16 9:49:06
10	5	1028005.D	1	MO 1000ppb 10/28/16	Mix(B)	10-28-16 10:09:58
11	6	1028006.D	1	MO 1500ppb 10/28/16	Mix(B)	10-28-16 10:30:51
12	7	1028007.D	1	MO 2000ppb 10/28/16	Mix(B)	10-28-16 10:51:50
13	8	1028008.D	1	MO SS 1000ppb 7/6/16	Mix(B)	10-28-16 11:12:44
14	4	1103004.D	1	DIESEL 10ppb 11/3/16	Mix(A)	11-3-16 9:45:14
15	6	1103006.D	1	DIESEL 400ppb 11/3/16	Mix(A)	11-3-16 10:26:16
16	7	1103007.D	1	DIESEL 600ppb 11/3/16	Mix(A)	11-3-16 10:46:56
17	8	1103008.D	1	DIESEL 800ppb 11/3/16	Mix(A)	11-3-16 11:07:39
18	9	1103009.D	1	DIESEL 1000ppb 11/3/16	Mix(A)	11-3-16 11:28:31
19	11	1103011.D	1	DIESEL 100ppb 11/3/16	Mix(A)	11-3-16 12:56:47
20	12	1103012.D	1	DIESEL-SS 400ppb 8/1/16	Mix(A)	11-3-16 13:25:11
21	2	1121002.D	1	CCV: DIESEL 400ppb 11/3/16	Mix(A)	11-21-16 13:08:08
22	4	1121004.D	1	CCV: MO 1000ppb 11/21/16	Mix(B)	11-21-16 14:38:53
23	5	1121005.D	1.33333	161118A BLK 2/1500	Water	11-21-16 14:59:26
24	6	1121006.D	1.33333	161118A LCS-1 2/1500	Water	11-21-16 15:20:13
25	7	1121007.D	1.33333	161118A LCS-2 2/1500	Water	11-21-16 15:41:03
26	15	1121015.D	1.33333	AZ45907W16 2/1500	Water	11-21-16 18:27:30
27	16	1121016.D	1.33333	AZ45908W11 2/1500	Water	11-21-16 18:48:11
28	17	1121017.D	1.33333	AZ45909W14 2/1500	Water	11-21-16 19:08:51
29	18	1121018.D	1.33333	AZ45910W15 2/1500	Water	11-21-16 19:29:34
30	19	1121019.D	1.33333	AZ45911W15 2/1500	Water	11-21-16 19:50:09
31	20	1121020.D	1	CCV: DIESEL 400ppb 11/3/16	Mix(A)	11-21-16 20:10:51
32	21	1121021.D	1	CCV: MO 1000ppb 11/21/16	Mix(B)	11-21-16 20:31:34
33	70	1130070.D	1	CCV: DIESEL 400ppb 11/30/16	Mix(A)	12-1-16 11:01:09
34	71	1130071.D	1	CCV: MO 1000ppb 11/21/16	Mix(B)	12-1-16 11:21:41
35	72	1130072.D	1.33333	AZ45909W14 2/1500	Water	12-1-16 11:42:13
36	74	1130074.D	1.33333	161118A BLK 2/1500	Water	12-1-16 12:23:16
37	75	1130075.D	1.33333	161118A LCS-1 2/1500	Water	12-1-16 12:43:48
38	76	1130076.D	1.33333	161118A LCS-2 2/1500	Water	12-1-16 13:04:15
39	89	1130089.D	1	CCV: DIESEL 400ppb 11/30/16	Mix(A)	12-1-16 17:33:05
40	90	1130090.D	1	CCV: MO 1000ppb 11/21/16	Mix(B)	12-1-16 17:53:56
41	2	1205002.D	1	CCV: DIESEL 400ppb 11/3/16	Mix(A)	12-5-16 11:26:43
42	3	1205003.D	1	CCV: MO 1000ppb 11/21/16	Mix(B)	12-5-16 11:47:40
43	5	1205005.D	1.33333	161118A BLK 2/1500 SGC	Water	12-5-16 17:00:40
44	6	1205006.D	1.33333	161118A LCS-1 2/1500 SGC	Water	12-5-16 17:21:52
45	7	1205007.D	1.33333	161118A LCS-2 2/1500 SGC	Water	12-5-16 17:42:58
46	8	1205008.D	1.33333	AZ45909W14 2/1500 SGC	Water	12-5-16 18:04:02
47	19	1205019.D	1	CCV: DIESEL 400ppb 11/30/16	Mix(A)	12-5-16 21:54:15
48	20	1205020.D	1	CCV: MO 1000ppb 11/21/16	Mix(B)	12-5-16 22:15:05

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank
EPA 8270D SIM

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161118W-45866 - 214136**
Batch ID: #SIMDO-161118A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	11/18/16	11/29/16
BLANK	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	11/18/16	11/29/16
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	11/18/16	11/29/16
BLANK	SURROGATE: 2-FLUORBIPHENY	59.5	53-106			%	11/18/16	11/29/16
BLANK	SURROGATE: NITROBENZENE-	78.7	55-111			%	11/18/16	11/29/16
BLANK	SURROGATE: TERPHENYL-D14 (	93.2	58-132			%	11/18/16	11/29/16

Quant Method: L1026P.M
Run #: 1129L004
Instrument: Linus
Sequence: L161129
Initials: RHA

GC SC-Blank-REG MDLs-DOD
Printed: 11/30/16 12:55:43 PM

Laboratory Control Spike Recovery

EPA 8270D SIM

APPL ID: **161118W-45866 LCS - 214136**
Batch ID: #SIMDO-161118A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1-METHYLNAPHTHALENE	5.00	3.33	66.6	41-115
2-METHYLNAPHTHALENE	5.00	3.29	65.8	39-114
NAPHTHALENE	5.00	3.24	64.8	43-114
SURROGATE: 2-FLUORBIPHENYL (S)	5.00	2.92	58.4	53-106
SURROGATE: NITROBENZENE-D5 (S)	5.00	3.77	75.4	55-111
SURROGATE: TERPHENYL-D14 (S)	5.00	3.97	79.4	58-132

Comments: _____

Primary	SPK
Quant Method :	L1026P.M
Extraction Date :	11/18/16
Analysis Date :	11/23/16
Instrument :	Linus
Run :	1026L318
Initials :	RHA

Printed: 11/30/16 12:55:37 PM
APPL Standard LCS

8270D-SIM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81500

Case No: 81500 Date Analyzed: 11/23/16

Matrix: WATER Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: 2-FLUORBIPHENYL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161118A-LCS	Lab Control Spike	53-106	58.4		55-111	75.4	
AZ45908	ERH121	53-106	59.2		55-111	75.9	
AZ45909	ERH122	53-106	53.3		55-111	69.8	
AZ45910	ERH126	53-106	56.5		55-111	73.9	
AZ45911	ERH128	53-106	55.3		55-111	68.9	
161118A-BLK	Blank	53-106	59.5		55-111	78.7	
AZ45907	ERH117	53-106	60.4		55-111	83.8	

Comments: Batch: #SIMDO-161118A

8270D-SIM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81500

Case No: 81500 Date Analyzed: 11/23/16

Matrix: WATER Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: TERPHENYL-D14 (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
161118A-LCS	Lab Control Spike	58-132	79.4				
AZ45908	ERH121	58-132	76.7				
AZ45909	ERH122	58-132	70.9				
AZ45910	ERH126	58-132	74.2				
AZ45911	ERH128	58-132	70.2				
161118A-BLK	Blank	58-132	93.2				
AZ45907	ERH117	58-132	90.2				

Comments: Batch: #SIMDO-161118A

8270D-SIM

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81500

Case No: 81500 Date Analyzed: 11/29/16

Matrix: WATER Instrument: Linus

Blank ID: 161118A-BLK Time Analyzed: 1550

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161118A-LCS	Lab Control Spike	1026L318	11/23/16 1805
AZ45908	ERH121	1026L325	11/23/16 2151
AZ45909	ERH122	1026L326	11/23/16 2223
AZ45910	ERH126	1026L327	11/23/16 2255
AZ45911	ERH128	1026L328	11/23/16 2327
161118A-BLK	Blank	1129L004	11/29/16 1550
AZ45907	ERH117	1129L008	11/29/16 1758

Comments: Batch: #SIMDO-161118A

Printed: 11/30/16 12:55:34 PM
Form 4, Blank Summary

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81500
Matrix: Water
ID: SV TUNE 9/22/16

SDG No: 81500
Date Analyzed: 10/26/16
Instrument: Linus
Time Analyzed: 10:58

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.1 ug/ml PAH 10/26/	1026L003.D	10/26/16 11:23
2		0.2 ug/ml PAH 10/26/	1026L004.D	10/26/16 11:56
3		0.5 ug/ml PAH 10/26/	1026L005.D	10/26/16 12:28
4		1.0 ug/ml PAH 10/26/	1026L006.D	10/26/16 13:01
5		5.0 ug/ml PAH 10/26/	1026L007.D	10/26/16 13:33
6		10.0 ug/ml PAH 10/26	1026L008.D	10/26/16 14:05
7		50.0 ug/ml PAH 10/26	1026L009.D	10/26/16 14:37
8		100.0 ug/ml PAH 10/2	1026L010.D	10/26/16 15:09
9		SS PAH 10/26/16	1026L011.D	10/26/16 15:42
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	30 - 60% of mass 198	31.3
68	0 - 2% of mass 69	0.0
69	100 - 100% of mass 69	100.0
70	0 - 2% of mass 69	0.4
127	40 - 60% of mass 198	50.4
197	0 - 1% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.9
275	10 - 30% of mass 198	25.7
365	1 - 100% of mass 198	2.6
441	0.01 - 100% of mass 443	76.7
442	40 - 150% of mass 198	57.8
443	17 - 23% of mass 442	21.6

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81500
Matrix: Water
ID: SV Tune 11/15/16

SDG No: 81500
Date Analyzed: 11/23/16
Instrument: Linus
Time Analyzed: 16:46

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		2.5 ug/ml PAH 10/26/	1026L316.D	11/23/16 17:01
2	Lab Control Spike	161118A LCS-1 1/1000	1026L318.D	11/23/16 18:05
3	ERH121	AZ45908W15 1/1070	1026L325.D	11/23/16 21:51
4	ERH122	AZ45909W18 1/1070	1026L326.D	11/23/16 22:23
5	ERH126	AZ45910W16 1/1050	1026L327.D	11/23/16 22:55
6	ERH128	AZ45911W13 1/1060	1026L328.D	11/23/16 23:27
7		2.5 ug/ml PAH 10/26/	1026L338.D	11/24/16 4:16
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	30 - 60% of mass 198	31.0
68	0 - 2% of mass 69	0.0
69	100 - 100% of mass 69	100.0
70	0 - 2% of mass 69	1.5
127	40 - 60% of mass 198	49.8
197	0 - 1% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.9
275	10 - 30% of mass 198	27.9
365	1 - 100% of mass 198	2.9
441	0.01 - 100% of mass 443	78.6
442	40 - 150% of mass 198	76.2
443	17 - 23% of mass 442	21.2

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81500
Matrix: Water
ID: SV TUNE 9/22/16

SDG No: 81500
Date Analyzed: 11/29/16
Instrument: Linus
Time Analyzed: 15:03

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		5.0 ug/ml PAH 11/28/	1129L003.D	11/29/16 15:19
2	Blank	161118A BLK 1/1000	1129L004.D	11/29/16 15:50
3	ERH117	AZ45907W15 1/1000	1129L008.D	11/29/16 17:58
4		5.0 ug/ml PAH 11/28/	1129L021.D	11/30/16 0:25
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	30 - 60% of mass 198	30.3
68	0 - 2% of mass 69	0.0
69	100 - 100% of mass 69	100.0
70	0 - 2% of mass 69	0.5
127	40 - 60% of mass 198	48.9
197	0 - 1% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.8
275	10 - 30% of mass 198	26.9
365	1 - 100% of mass 198	2.8
441	0.01 - 100% of mass 443	75.2
442	40 - 150% of mass 198	70.2
443	17 - 23% of mass 442	21.6

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81500

Lab File ID (Standard): 1026L007.D Date Analyzed: 10/26/16

Instrument ID: Linus Time Analyzed: 13:33

GC Column: ID: Heated Purge: (Y/N)

		Napthalene-D8(IS)		Acenaphthene-D10(IS)		Phenanthrene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	2942	5.89	1477	7.94	2585	9.87
	UPPER LIMIT	5884	6.39	2954	8.44	5170	10.37
	LOWER LIMIT	1471	5.39	739	7.44	1293	9.37
	SAMPLE NO.						
01	161118A LCS-1 1/1000	2312	5.90	1218	7.95	2242	9.90
02	AZ45908W15 1/1070	2508	5.90	1318	7.95	2312	9.90
03	AZ45909W18 1/1070	2720	5.90	1415	7.95	2514	9.90
04	AZ45910W16 1/1050	2638	5.90	1417	7.95	2470	9.91
05	AZ45911W13 1/1060	2630	5.90	1381	7.95	2383	9.91
06	161118A BLK 1/1000	2929	5.89	1546	7.95	2678	9.90
07	AZ45907W15 1/1000	2637	5.89	1389	7.94	2514	9.87
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 81500

Lab File ID (Standard): 1026L007.D Date Analyzed: 10/26/16

Instrument ID: Linus Time Analyzed: 13:33

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Chrysene-D12(IS)		Perylene-D12(IS)			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	3262	16.84	2933	20.60		
	UPPER LIMIT	6524	17.34	5866	21.10		
	LOWER LIMIT	1631	16.34	1467	20.10		
	SAMPLE NO.						
01	161118A LCS-1 1/1000	2937	16.89	2754	20.66		
02	AZ45908W15 1/1070	3010	16.90	2807	20.67		
03	AZ45909W18 1/1070	3284	16.90	3112	20.68		
04	AZ45910W16 1/1050	3220	16.91	3027	20.69		
05	AZ45911W13 1/1060	3113	16.91	3011	20.69		
06	161118A BLK 1/1000	3290	16.91	3019	20.69		
07	AZ45907W15 1/1000	3132	16.89	2898	20.68		
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

ORGANICS

Sample Data

APPL, INC.

EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH117
Sample Collection Date: 11/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81500
APPL ID: AZ45907
QCG: #SIMDO-161118A-214136

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	11/18/16	11/29/16
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	11/18/16	11/29/16
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	11/18/16	11/29/16
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	60.4	53-106			%	11/18/16	11/29/16
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	83.8	55-111			%	11/18/16	11/29/16
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	90.2	58-132			%	11/18/16	11/29/16

Quant Method: L1026P.M
Run #: 1129L008
Instrument: Linus
Sequence: L161129
Dilution Factor: 1
Initials: RHA

Printed: 11/30/16 12:55:31 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161129\1129L008.D Vial: 8
Acq On : 29 Nov 16 17:58 Operator: MA
Sample : AZ45907W15 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Nov 30 11:26 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	5.89	136	2637	2.50000 ppb	0.00
6) Acenaphthene-D10(IS)	7.94	164	1389	2.50000 ppb	0.00
11) Phenanthrene-D10(IS)	9.87	188	2514	2.50000 ppb	0.00
15) Chrysene-D12(IS)	16.89	240	3132	2.50000 ppb	0.05
21) Perylene-D12(IS)	20.68	264	2898	2.50000 ppb	0.08
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.05	82	1335	4.18837 ppb	0.00
Spiked Amount 5.000			Recovery = 83.760%		
7) Surrogate Recovery (FBP)	7.16	172	2707	3.02138 ppb	0.00
Spiked Amount 5.000			Recovery = 60.420%		
17) Surrogate Recovery (TPH)	13.88	244	4856	4.51037 ppb	0.00
Spiked Amount 5.000			Recovery = 90.200%		

Target Compounds	Qvalue

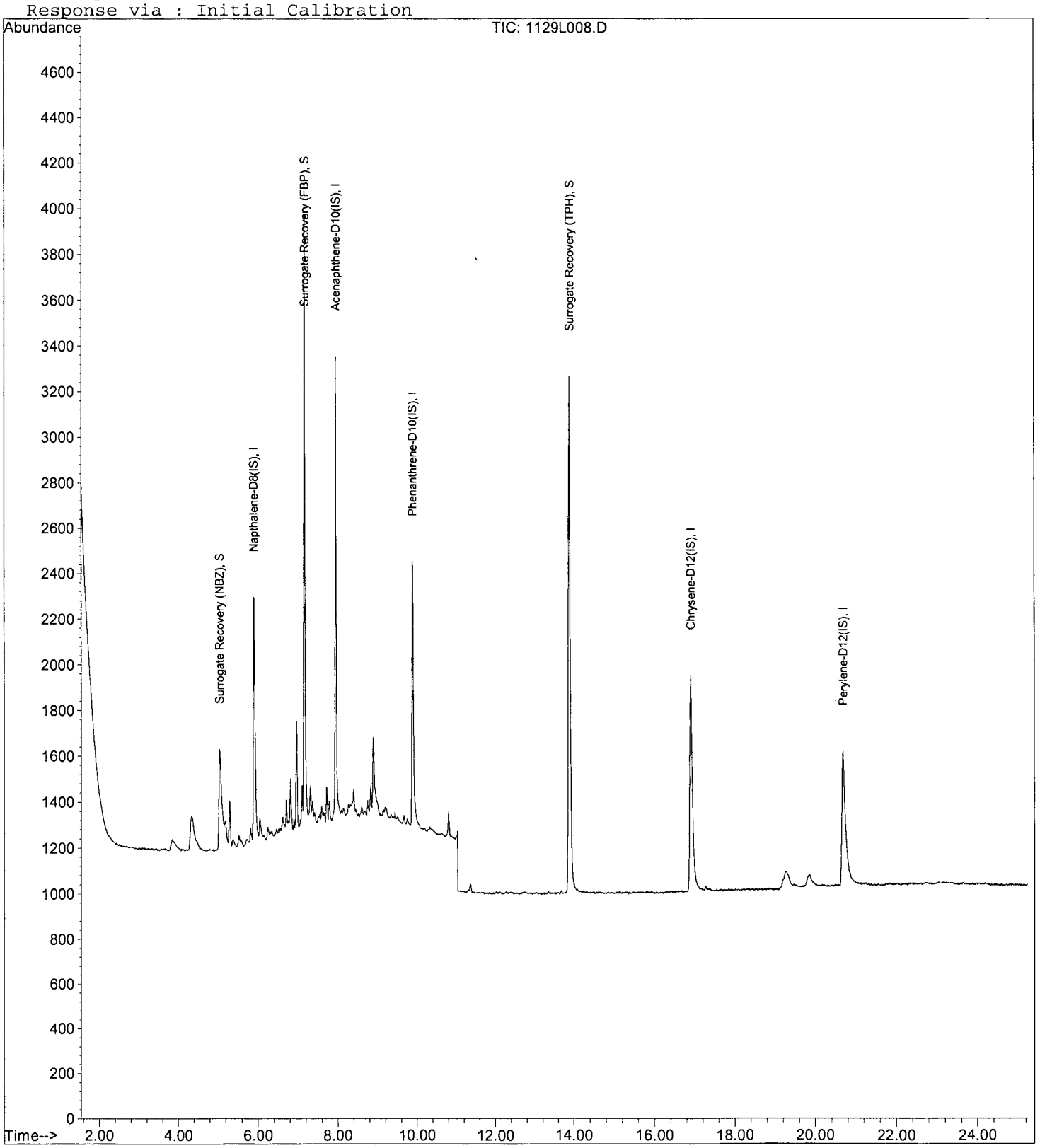
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161129\1129L008.D Vial: 8
Acq On : 29 Nov 16 17:58 Operator: MA
Sample : AZ45907W15 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Nov 30 11:26 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH121

Sample Collection Date: 11/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81500

APPL ID: AZ45908

QCG: #SIMDO-161118A-214136

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	11/18/16	11/23/16
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	11/18/16	11/23/16
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	11/18/16	11/23/16
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	59.2	53-106			%	11/18/16	11/23/16
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	75.9	55-111			%	11/18/16	11/23/16
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	76.7	58-132			%	11/18/16	11/23/16

Quant Method: L1026P.M
Run #: 1026L325
Instrument: Linus
Sequence: L161026
Dilution Factor: 1
Initials: RHA

Printed: 11/30/16 12:55:31 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L325.D Vial: 25
Acq On : 23 Nov 16 21:51 Operator: MA
Sample : AZ45908W15 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Nov 30 10:00 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.90	136	2508	2.50000	ppb	0.01
6) Acenaphthene-D10(IS)	7.95	164	1318	2.50000	ppb	0.01
11) Phenanthrene-D10(IS)	9.90	188	2312	2.50000	ppb	0.02
15) Chrysene-D12(IS)	16.90	240	3010	2.50000	ppb	0.06
21) Perylene-D12(IS)	20.67	264	2807	2.50000	ppb	0.07
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.06	82	1151	3.54488	ppb	0.01
Spiked Amount 4.673			Recovery = 75.863%			
7) Surrogate Recovery (FBP)	7.17	172	2518	2.76806	ppb	0.01
Spiked Amount 4.673			Recovery = 59.235%			
17) Surrogate Recovery (TPH)	13.90	244	3970	3.58587	ppb	0.02
Spiked Amount 4.673			Recovery = 76.740%			

Target Compounds Qvalue

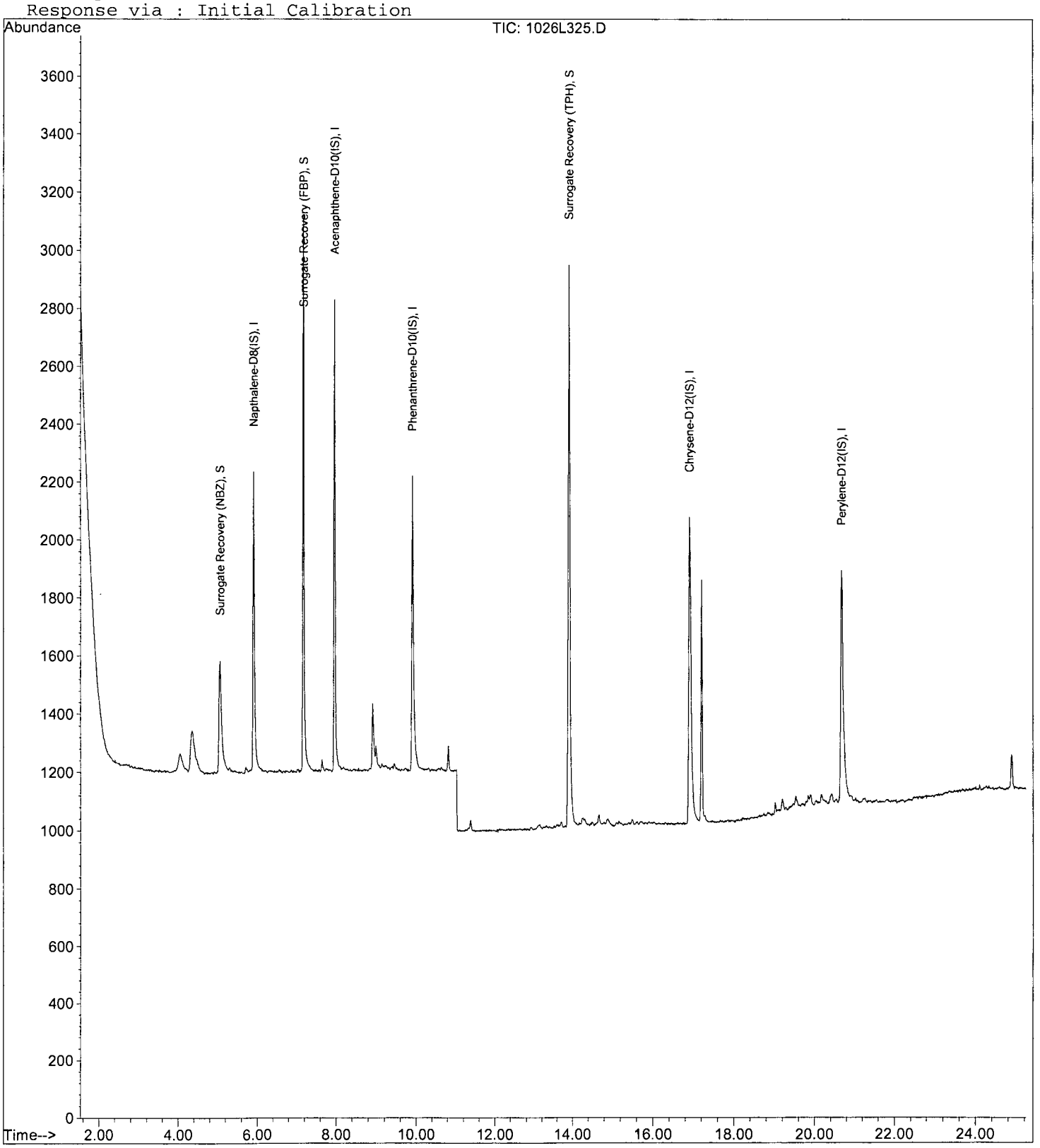
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161026\1026L325.D Vial: 25
Acq On : 23 Nov 16 21:51 Operator: MA
Sample : AZ45908W15 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Nov 30 10:00 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH122

Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81500

APPL ID: AZ45909

QCG: #SIMDO-161118A-214136

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	11/18/16	11/23/16
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	11/18/16	11/23/16
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	11/18/16	11/23/16
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	53.3	53-106			%	11/18/16	11/23/16
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	69.8	55-111			%	11/18/16	11/23/16
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	70.9	58-132			%	11/18/16	11/23/16

Quant Method: L1026P.M
Run #: 1026L326
Instrument: Linus
Sequence: L161026
Dilution Factor: 1
Initials: RHA

Printed: 11/30/16 12:55:31 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L326.D Vial: 26
Acq On : 23 Nov 16 22:23 Operator: MA
Sample : AZ45909W18 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Nov 30 11:01 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.90	136	2720	2.50000	ppb	0.01
6) Acenaphthene-D10(IS)	7.95	164	1415	2.50000	ppb	0.01
11) Phenanthrene-D10(IS)	9.90	188	2514	2.50000	ppb	0.02
15) Chrysene-D12(IS)	16.90	240	3284	2.50000	ppb	0.06
21) Perylene-D12(IS)	20.68	264	3112	2.50000	ppb	0.08
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.05	82	1149	3.25988	ppb	0.00
Spiked Amount 4.673			Recovery = 69.764%			
7) Surrogate Recovery (FBP)	7.17	172	2431	2.48922	ppb	0.01
Spiked Amount 4.673			Recovery = 53.265%			
17) Surrogate Recovery (TPH)	13.90	244	4003	3.31401	ppb	0.02
Spiked Amount 4.673			Recovery = 70.920%			

Target Compounds Qvalue

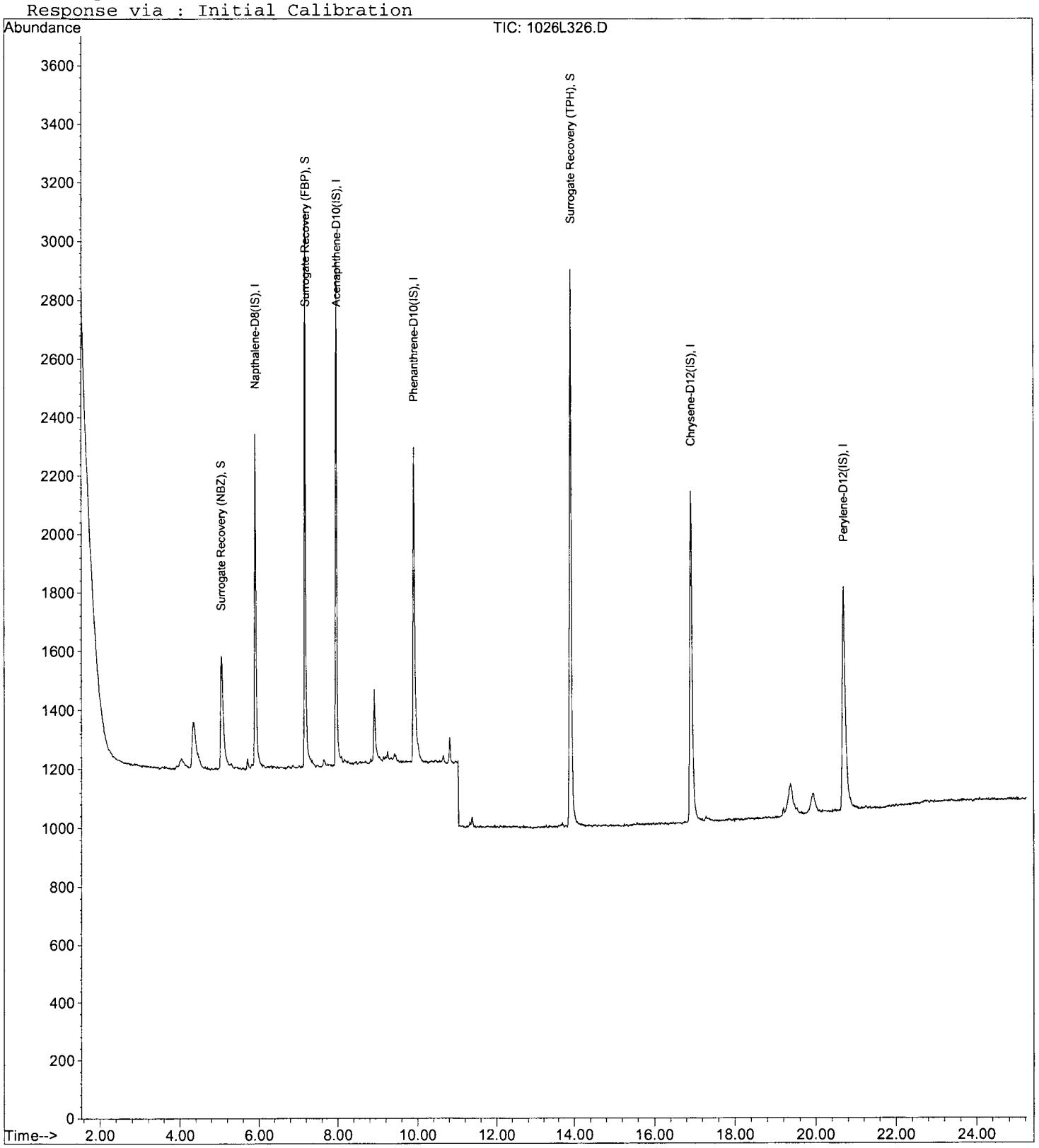
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161026\1026L326.D Vial: 26
Acq On : 23 Nov 16 22:23 Operator: MA
Sample : AZ45909W18 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Nov 30 11:01 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH126

Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81500

APPL ID: AZ45910

QCG: #SIMDO-161118A-214136

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	11/18/16	11/23/16
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	11/18/16	11/23/16
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	11/18/16	11/23/16
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	56.5	53-106			%	11/18/16	11/23/16
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	73.9	55-111			%	11/18/16	11/23/16
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	74.2	58-132			%	11/18/16	11/23/16

Quant Method: L1026P.M
Run #: 1026L327
Instrument: Linus
Sequence: L161026
Dilution Factor: 1
Initials: RHA

Printed: 11/30/16 12:55:31 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L327.D Vial: 27
Acq On : 23 Nov 16 22:55 Operator: MA
Sample : AZ45910W16 1/1050 Inst : Linus
Misc : water Multiplr: 0.95

Quant Time: Nov 30 11:01 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	5.90	136	2638	2.50000 ppb	0.01
6) Acenaphthene-D10(IS)	7.95	164	1417	2.50000 ppb	0.01
11) Phenanthrene-D10(IS)	9.91	188	2470	2.50000 ppb	0.04
15) Chrysene-D12(IS)	16.91	240	3220	2.50000 ppb	0.07
21) Perylene-D12(IS)	20.69	264	3027	2.50000 ppb	0.09
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.06	82	1180	3.51993 ppb	0.01
Spiked Amount 4.762			Recovery = 73.920%		
7) Surrogate Recovery (FBP)	7.17	172	2584	2.69248 ppb	0.01
Spiked Amount 4.762			Recovery = 56.532%		
17) Surrogate Recovery (TPH)	13.90	244	4108	3.53460 ppb	0.02
Spiked Amount 4.762			Recovery = 74.235%		

Target Compounds Qvalue

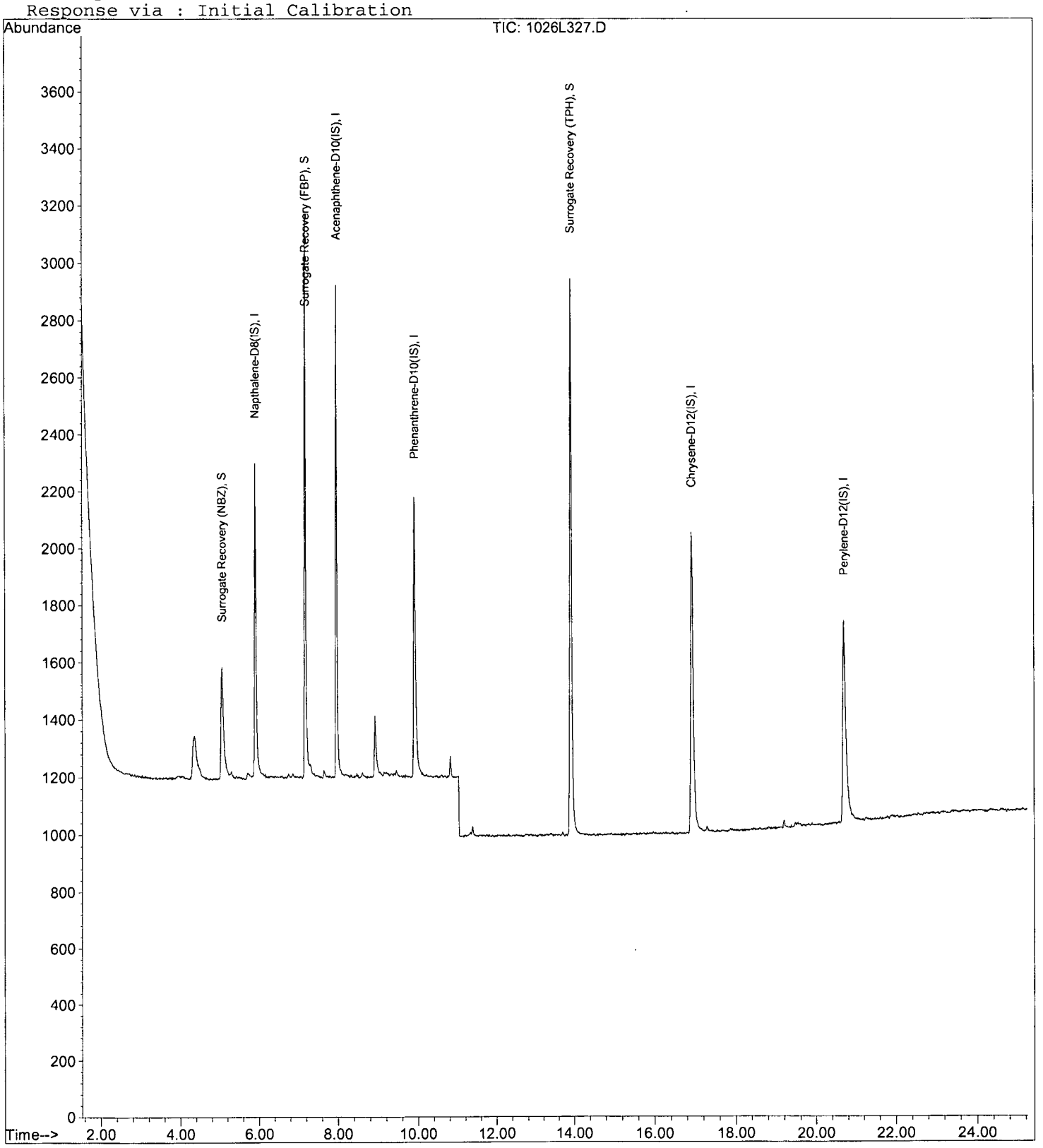
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161026\1026L327.D Vial: 27
Acq On : 23 Nov 16 22:55 Operator: MA
Sample : AZ45910W16 1/1050 Inst : Linus
Misc : water Multiplr: 0.95

Quant Time: Nov 30 11:01 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH128
Sample Collection Date: 11/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81500
APPL ID: AZ45911
QCG: #SIMDO-161118A-214136

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	11/18/16	11/23/16
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	11/18/16	11/23/16
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	11/18/16	11/23/16
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	55.3	53-106			%	11/18/16	11/23/16
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	68.9	55-111			%	11/18/16	11/23/16
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	70.2	58-132			%	11/18/16	11/23/16

Quant Method: L1026P.M
Run #: 1026L328
Instrument: Linus
Sequence: L161026
Dilution Factor: 1
Initials: RHA

Printed: 11/30/16 12:55:31 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L328.D Vial: 28
Acq On : 23 Nov 16 23:27 Operator: MA
Sample : AZ45911W13 1/1060 Inst : Linus
Misc : water Multiplr: 0.94

Quant Time: Nov 30 11:02 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	5.90	136	2630	2.50000 ppb	0.01
6) Acenaphthene-D10(IS)	7.95	164	1381	2.50000 ppb	0.01
11) Phenanthrene-D10(IS)	9.91	188	2383	2.50000 ppb	0.04
15) Chrysene-D12(IS)	16.91	240	3113	2.50000 ppb	0.07
21) Perylene-D12(IS)	20.69	264	3011	2.50000 ppb	0.09
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.06	82	1098	3.25173 ppb	0.01
Spiked Amount 4.717			Recovery = 68.942%		
7) Surrogate Recovery (FBP)	7.17	172	2463	2.60846 ppb	0.01
Spiked Amount 4.717			Recovery = 55.290%		
17) Surrogate Recovery (TPH)	13.90	244	3755	3.31039 ppb	0.02
Spiked Amount 4.717			Recovery = 70.172%		

Target Compounds Qvalue

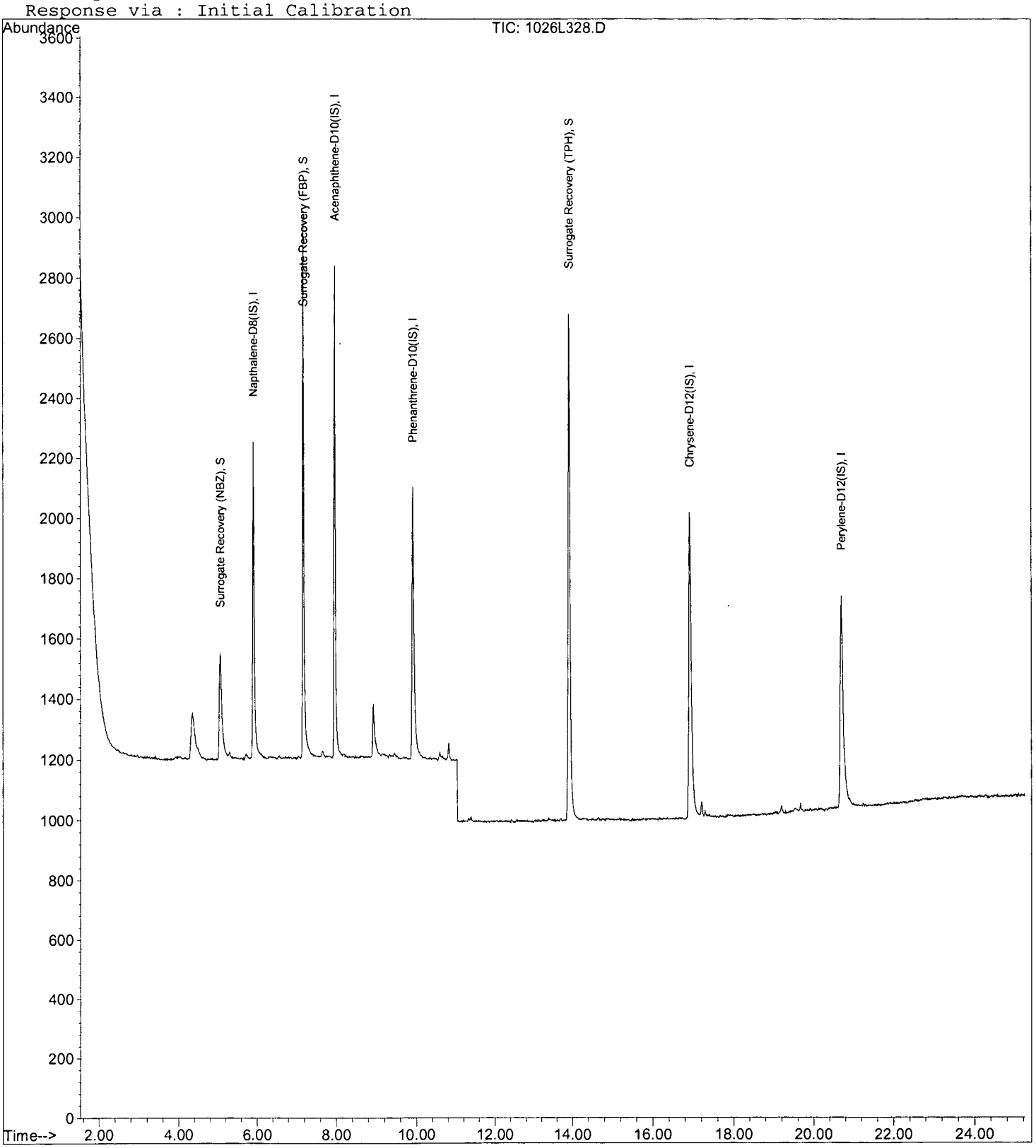
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161026\1026L328.D Vial: 28
Acq On : 23 Nov 16 23:27 Operator: MA
Sample : AZ45911W13 1/1060 Inst : Linus
Misc : water Multiplr: 0.94

Quant Time: Nov 30 11:02 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



ORGANICS

Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 10/26/16
Matrix: Instrument: Linus
Initials:

		Compound	1026L003.D 0.1	1026L004.D 0.2	1026L005.D 0.5	1026L006.D 1	1026L007.D 5	1026L008.D 10	1026L009.D 50	1026L010.D 100			Avg	%RSD		
1	I	Napthalene-D8(IS)														
2	SL	Surrogate Recovery (NBZ)	0.0804	0.3248	0.2336	0.2296	0.3042	0.3217	0.3012	0.2990			0.26	31	SL	1.000
3	TM	Naphthalene	1.093	1.058	0.9776	0.9622	1.079	1.065	0.9798	0.9449			1.0	5.8	TM	
4	TM	2-Methylnaphthalene	0.6190	0.6163	0.5906	0.5922	0.7073	0.7051	0.6480	0.6150			0.64	7.3	TM	
5	TM	1-Methylnaphthalene	0.7154	0.6995	0.6590	0.6161	0.6859	0.6794	0.5923	0.5625			0.65	8.4	TM	
6	I	Acenaphthene-D10(IS)														
7	S	Surrogate Recovery (FBP)	1.836	1.693	1.539	1.472	1.693	1.691	1.497	1.479			1.6	8.3	S	
8	TM	Acenaphthylene	2.007	2.013	1.915	1.895	2.275	2.242	2.059	1.996			2.1	6.8	TM	
9	*TM	Acenaphthene	1.353	1.216	1.158	1.178	1.322	1.313	1.191	1.156			1.2	6.5	*TM	
10	TM	Fluorene	1.493	1.372	1.332	1.314	1.566	1.550	1.413	1.365			1.4	6.9	TM	
11	I	Phenanthrene-D10(IS)														
12	TM	Phenanthrene	1.230	1.150	1.056	1.044	1.240	1.222	1.159	1.146			1.2	6.5	TM	
13	TM	Anthracene	0.9570	1.040	0.9985	0.9861	1.219	1.204	1.097	1.057			1.1	9.1	TM	
14	*TM	Fluoranthene	1.467	1.458	1.392	1.359	1.692	1.703	1.689	1.748			1.6	10	*TM	
15	I	Chrysene-D12(IS)														
16	TM	Pyrene	1.451	1.378	1.226	1.218	1.401	1.386	1.296	1.331			1.3	6.3	TM	
17	S	Surrogate Recovery (TPH)	1.024	0.9543	0.8040	0.7782	0.8541	0.8678	0.7977	0.7947			0.86	10	S	
18	TM	Benz (a) anthracene	1.156	1.102	1.027	1.021	1.221	1.256	1.226	1.133			1.1	7.8	TM	
19	TM	Chrysene	1.280	1.279	1.279	1.191	1.301	1.263	1.139	1.149			1.2	5.3	TM	
20	TM	Indeno (1,2,3-cd) pyrene	1.079	0.9954	1.025	1.057	1.233	1.254	1.210	1.222			1.1	9.3	TM	
21	I	Perylene-D12(IS)														
22	TM	Benzo (b) fluoranthene	1.137	0.9566	0.9689	0.9943	1.184	1.252	1.308	1.404			1.2	15	TM	
23	TML	Benzo (k) fluoranthene	0.8067	0.8751	0.8849	0.8451	1.200	1.135	1.110				0.98	17	TML	1.000
24	*TM	Benzo (a) pyrene	1.154	1.068	1.067	1.007	1.225	1.226	1.208	1.236			1.1	7.8	*TM	
25	TML	Dibenz (a,h) anthracene	0.6534	0.7507	0.9234	0.8434	1.105	1.128	1.115	1.121			0.96	20	TML	1.00
26	TM	Benzo (g,h,i) perylene	1.033	0.9952	0.9584	0.9260	1.106	1.118	1.083	1.084			1.0	6.9	TM	
27																
28																
29																
30																
31																
32																
33																
34																
35																

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L003.D Vial: 3
Acq On : 26 Oct 16 11:23 Operator: MA
Sample : 0.1 ug/ml PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 28 8:24 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.89	136	3110	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.94	164	1607	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.89	188	2743	2.50000	ppb		0.01
15) Chrysene-D12(IS)	16.86	240	3222	2.50000	ppb		0.02
21) Perylene-D12(IS)	20.61	264	3099	2.50000	ppb		0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.03	82	5	-0.02736	ppb		-0.01
Spiked Amount 5.000			Recovery = -0.540%				
7) Surrogate Recovery (FBP)	7.17	172	59	0.05692	ppb		0.01
Spiked Amount 5.000			Recovery = 1.140%				
17) Surrogate Recovery (TPH)	13.91	244	66	0.05959	ppb		0.03
Spiked Amount 5.000			Recovery = 1.200%				
Target Compounds							Qvalue
3) Naphthalene	5.92	128	136	0.10719	ppb		99
4) 2-Methylnaphthalene	6.74	142	77	0.09722	ppb		97
5) 1-Methylnaphthalene	6.84	142	89	0.10985	ppb		95
8) Acenaphthylene	7.79	152	129	0.09789	ppb		100
9) Acenaphthene	7.98	154	87	0.10949	ppb		98
10) Fluorene	8.61	166	96	0.10475	ppb		97
12) Phenanthrene	9.93	178	135	0.10645	ppb		99
13) Anthracene	10.03	178	105	0.08946	ppb		98
14) Fluoranthene	12.72	202	161	0.09385	ppb		97
16) Pyrene	13.35	202	187	0.10863	ppb		98
18) Benz (a) anthracene	16.84	228	149	0.10115	ppb		92
19) Chrysene	16.93	228	165	0.10363	ppb		98
20) Indeno (1,2,3-cd) pyrene	22.95	276	139	0.09508	ppb	#	95
22) Benzo (b) fluoranthene	19.72	252	141	0.09886	ppb		92
24) Benzo (a) pyrene	20.36	252	143	0.10041	ppb		93
25) Dibenz (a,h) anthracene	23.01	278	81	0.15217	ppb		96
26) Benzo (g,h,i) perylene	23.49	276	128	0.09949	ppb		91

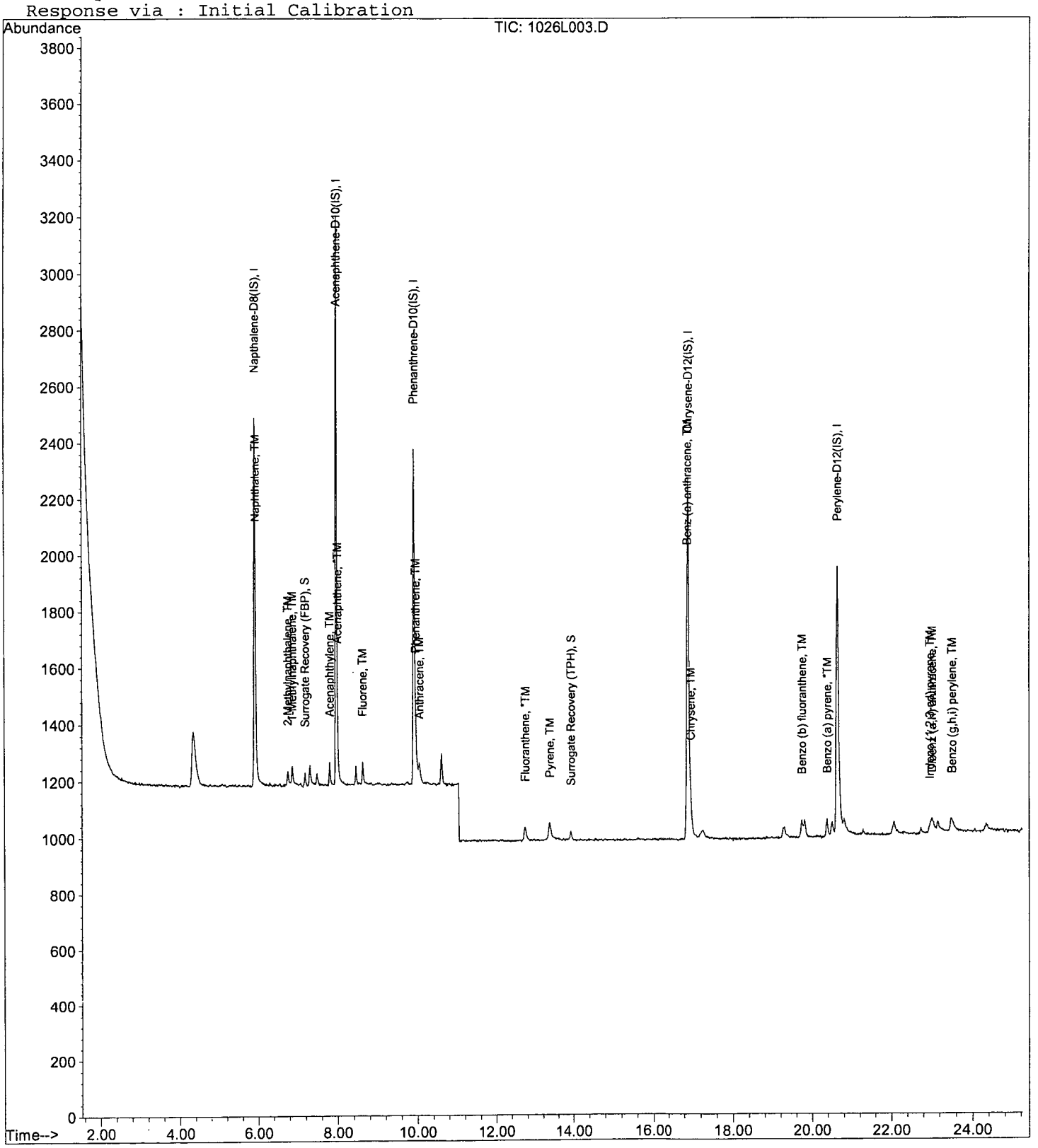
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161026\1026L003.D Vial: 3
Acq On : 26 Oct 16 11:23 Operator: MA
Sample : 0.1 ug/ml PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 28 8:24 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L004.D Vial: 4
Acq On : 26-Oct-16 11:56 Operator: MA
Sample : 0.2 ug/ml PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 15:51 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed Oct 26 15:50:22 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.89	136	3002	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	7.94	164	1521	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.89	188	2597	2.50000 ppb		0.01
15) Chrysene-D12(IS)	16.86	240	3039	2.50000 ppb		0.02
21) Perylene-D12(IS)	20.61	264	2914	2.50000 ppb		0.00
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.05	82	39	0.40403 ppb		0.03
Spiked Amount 5.000			Recovery =	8.080%		
7) Surrogate Recovery (FBP)	7.17	172	103	0.09222 ppb		0.01
Spiked Amount 5.000			Recovery =	1.840%		
17) Surrogate Recovery (TPH)	13.91	244	116	0.09317 ppb		0.03
Spiked Amount 5.000			Recovery =	1.860%		
Target Compounds						Qvalue
3) Naphthalene	5.92	128	254	0.19348 ppb		99
4) 2-Methylnaphthalene	6.74	142	148	0.19912 ppb		99
5) 1-Methylnaphthalene	6.86	142	168	0.19556 ppb		96
8) Acenaphthylene	7.79	152	245	0.20066 ppb		99
9) Acenaphthene	7.98	154	148	0.17973 ppb		96
10) Fluorene	8.61	166	167	0.18379 ppb		98
12) Phenanthrene	9.93	178	239	0.18699 ppb		98
13) Anthracene	10.03	178	216	0.21728 ppb		97
14) Fluoranthene	12.71	202	303	0.19878 ppb		99
16) Pyrene	13.34	202	335	0.18993 ppb		98
18) Benz (a) anthracene	16.84	228	268	0.19070 ppb		98
19) Chrysene	16.93	228	311	0.19983 ppb		96
20) Indeno (1,2,3-cd) pyrene	22.95	276	242	0.18458 ppb	#	98
22) Benzo (b) fluoranthene	19.71	252	223	0.16820 ppb		99
23) Benzo (k) fluoranthene	19.78	252	204	0.21695 ppb		100
24) Benzo (a) pyrene	20.36	252	249	0.18518 ppb		95
25) Dibenz (a,h) anthracene	23.00	278	175	0.22977 ppb		98
26) Benzo (g,h,i) perylene	23.48	276	232	0.19276 ppb		94

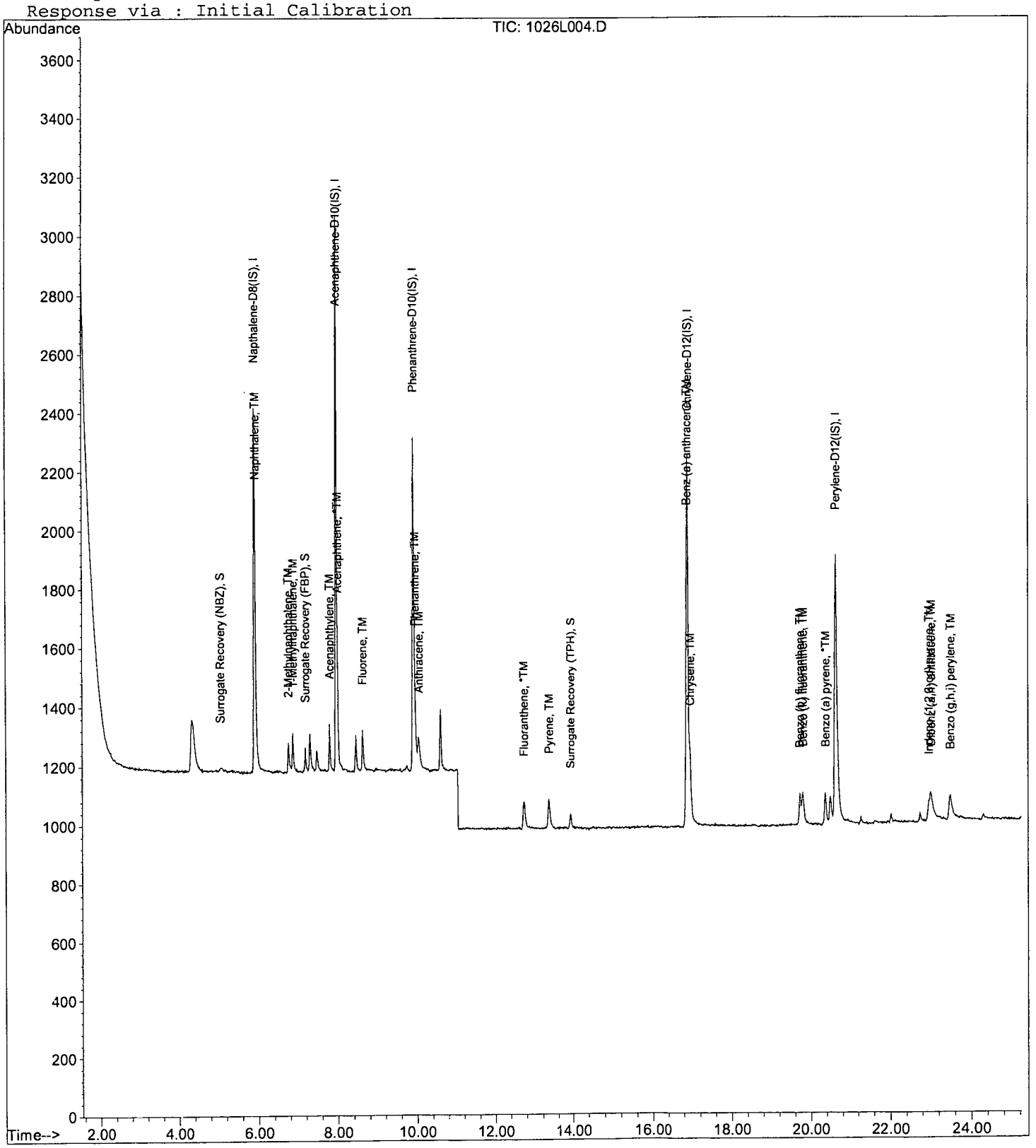
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161026\1026L004.D Vial: 4
Acq On : 26-Oct-16 11:56 Operator: MA
Sample : 0.2 ug/ml PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 15:51 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L005.D Vial: 5
Acq On : 26-Oct-16 12:28 Operator: MA
Sample : 0.5 ug/ml PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 15:51 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed Oct 26 15:50:22 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.89	136	2997	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.94	164	1546	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.89	188	2604	2.50000	ppb		0.01
15) Chrysene-D12(IS)	16.86	240	3072	2.50000	ppb		0.02
21) Perylene-D12(IS)	20.61	264	2859	2.50000	ppb		0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.06	82	70	0.28823	ppb		0.04
Spiked Amount 5.000			Recovery	=	5.760%		
7) Surrogate Recovery (FBP)	7.17	172	238	0.21813	ppb		0.01
Spiked Amount 5.000			Recovery	=	4.360%		
17) Surrogate Recovery (TPH)	13.90	244	247	0.20320	ppb		0.02
Spiked Amount 5.000			Recovery	=	4.060%		
Target Compounds							Qvalue
3) Naphthalene	5.93	128	586	0.45453	ppb		99
4) 2-Methylnaphthalene	6.74	142	354	0.47812	ppb		100
5) 1-Methylnaphthalene	6.84	142	395	0.46573	ppb		97
8) Acenaphthylene	7.79	152	592	0.47623	ppb		100
9) Acenaphthene	7.98	154	358	0.45056	ppb		98
10) Fluorene	8.61	166	412	0.46494	ppb		99
12) Phenanthrene	9.93	178	550	0.44358	ppb		99
13) Anthracene	10.03	178	520	0.50007	ppb		100
14) Fluoranthene	12.71	202	725	0.47580	ppb		97
16) Pyrene	13.34	202	753	0.43324	ppb		98
18) Benz (a) anthracene	16.84	228	631	0.45474	ppb		99
19) Chrysene	16.93	228	786	0.49983	ppb		98
20) Indeno (1,2,3-cd) pyrene	22.94	276	630	0.49442	ppb	#	99
22) Benzo (b) fluoranthene	19.71	252	554	0.46268	ppb		99
23) Benzo (k) fluoranthene	19.78	252	506	0.52618	ppb		100
24) Benzo (a) pyrene	20.36	252	610	0.48017	ppb		96
25) Dibenz (a,h) anthracene	23.00	278	528	0.65763	ppb		99
26) Benzo (g,h,i) perylene	23.47	276	548	0.47262	ppb		96

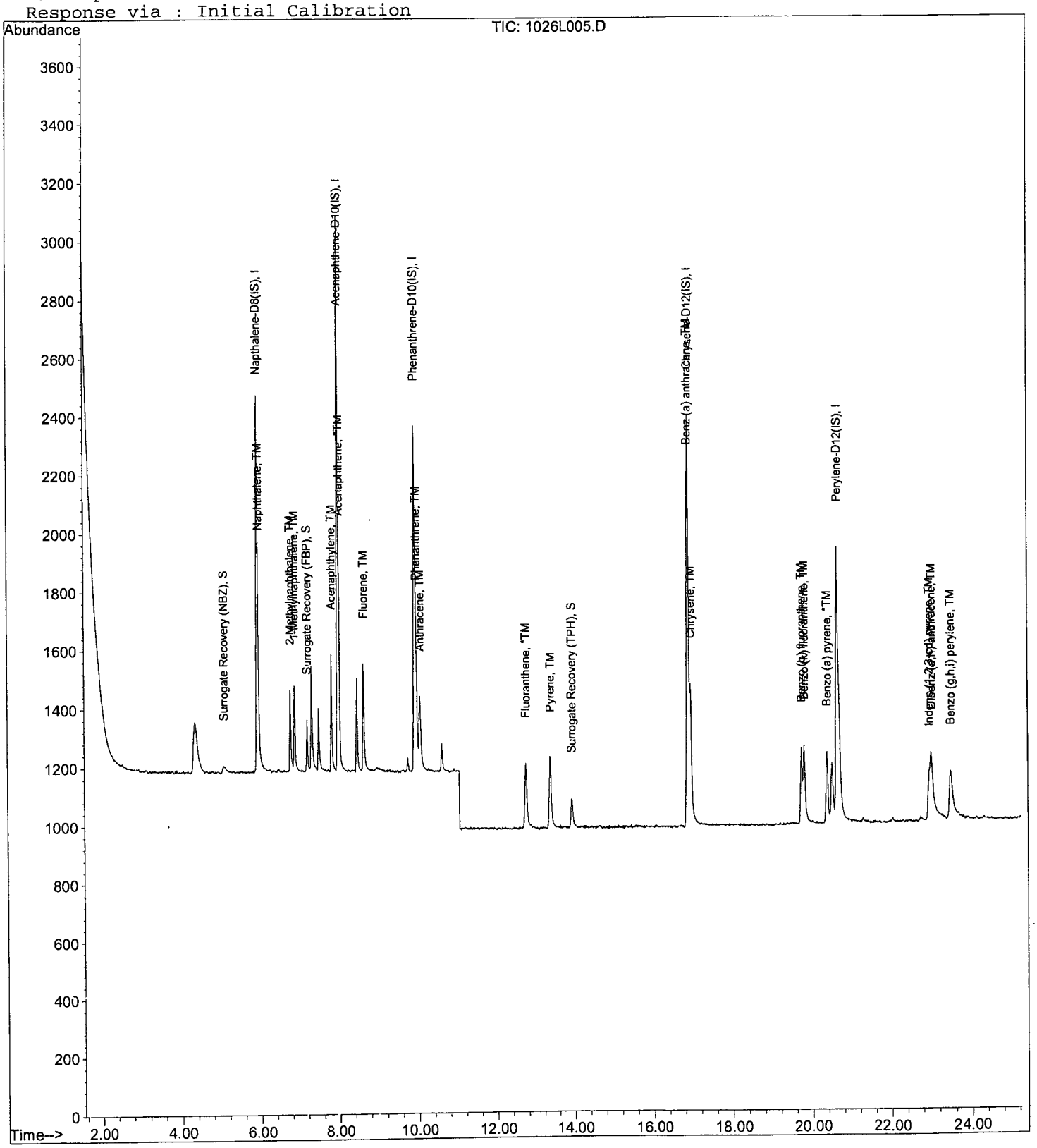
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161026\1026L005.D Vial: 5
Acq On : 26 Oct 16 12:28 Operator: MA
Sample : 0.5 ug/ml PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 15:51 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L006.D Vial: 6
Acq On : 26 Oct 16 13:01 Operator: MA
Sample : 1.0 ug/ml PAH 10/26/16 (1) Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 15:51 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed Oct 26 15:50:22 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.89	136	3027	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.94	164	1545	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.89	188	2662	2.50000	ppb		0.01
15) Chrysene-D12(IS)	16.85	240	3161	2.50000	ppb		0.01
21) Perylene-D12(IS)	20.61	264	2967	2.50000	ppb		0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.05	82	139	0.53919	ppb		0.03
Spiked Amount 5.000			Recovery = 10.780%				
7) Surrogate Recovery (FBP)	7.17	172	455	0.43581	ppb		0.01
Spiked Amount 5.000			Recovery = 8.720%				
17) Surrogate Recovery (TPH)	13.90	244	492	0.41953	ppb		0.02
Spiked Amount 5.000			Recovery = 8.400%				
Target Compounds							Qvalue
3) Naphthalene	5.93	128	1165	0.92265	ppb		99
4) 2-Methylnaphthalene	6.74	142	717	0.97300	ppb		99
5) 1-Methylnaphthalene	6.84	142	746	0.89122	ppb		98
8) Acenaphthylene	7.79	152	1171	0.95780	ppb		100
9) Acenaphthene	7.98	154	728	0.94806	ppb		97
10) Fluorene	8.61	166	812	0.93887	ppb		99
12) Phenanthrene	9.92	178	1112	0.91159	ppb		99
13) Anthracene	10.02	178	1050	0.98771	ppb		99
14) Fluoranthene	12.70	202	1447	0.94417	ppb		97
16) Pyrene	13.33	202	1540	0.90120	ppb		99
18) Benz (a) anthracene	16.83	228	1291	0.93232	ppb		99
19) Chrysene	16.93	228	1506	0.93083	ppb		99
20) Indeno (1,2,3-cd) pyrene	22.94	276	1337	1.02354	ppb	#	100
22) Benzo (b) fluoranthene	19.71	252	1180	0.97384	ppb		99
23) Benzo (k) fluoranthene	19.77	252	1003	0.98779	ppb		98
24) Benzo (a) pyrene	20.35	252	1195	0.91857	ppb		98
25) Dibenz (a,h) anthracene	22.99	278	1001	1.08714	ppb		95
26) Benzo (g,h,i) perylene	23.46	276	1099	0.93031	ppb		96

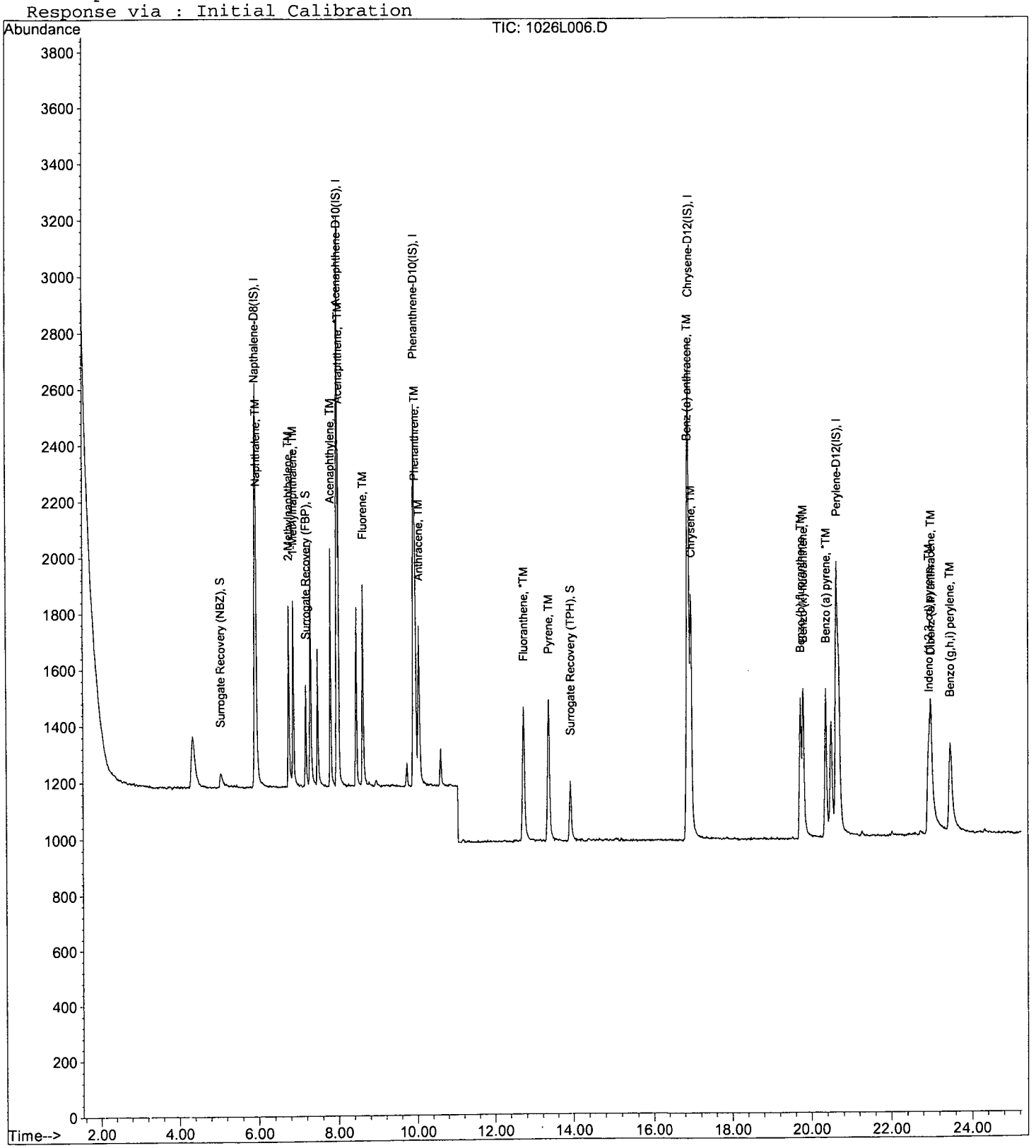
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161026\1026L006.D Vial: 6
Acq On : 26 Oct 16 13:01 Operator: MA
Sample : 1.0 ug/ml PAH 10/26/16 (1) Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 15:51 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L007.D Vial: 7
Acq On : 26-Oct-16 13:33 Operator: MA
Sample : 5.0 ug/ml PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 15:51 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed Oct 26 15:50:22 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.89	136	2942	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.94	164	1477	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.87	188	2585	2.50000	ppb		0.00
15) Chrysene-D12(IS)	16.84	240	3262	2.50000	ppb		0.00
21) Perylene-D12(IS)	20.60	264	2933	2.50000	ppb		0.00
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.05	82	895	3.50342	ppb		0.03
Spiked Amount 5.000			Recovery	= 70.060%			
7) Surrogate Recovery (FBP)	7.16	172	2500	2.58785	ppb		0.00
Spiked Amount 5.000			Recovery	= 51.760%			
17) Surrogate Recovery (TPH)	13.88	244	2786	2.39859	ppb		0.00
Spiked Amount 5.000			Recovery	= 47.980%			
Target Compounds							Qvalue
3) Naphthalene	5.92	128	6347	5.27386	ppb		100
4) 2-Methylnaphthalene	6.74	142	4162	5.85067	ppb		99
5) 1-Methylnaphthalene	6.84	142	4036	5.09968	ppb		97
8) Acenaphthylene	7.79	152	6719	5.80999	ppb		99
9) Acenaphthene	7.98	154	3906	5.39090	ppb		98
10) Fluorene	8.59	166	4625	5.68065	ppb		98
12) Phenanthrene	9.91	178	6410	5.53358	ppb		99
13) Anthracene	10.01	178	6300	6.12160	ppb		100
14) Fluoranthene	12.68	202	8746	5.95997	ppb		96
16) Pyrene	13.31	202	9137	5.31261	ppb		99
18) Benz (a) anthracene	16.82	228	7969	5.67276	ppb		99
19) Chrysene	16.92	228	8489	5.17390	ppb		99
20) Indeno (1,2,3-cd) pyrene	22.90	276	8042	5.93101	ppb	#	98
22) Benzo (b) fluoranthene	19.69	252	6943	5.83458	ppb		100
23) Benzo (k) fluoranthene	19.76	252	7038	7.03310	ppb		98
24) Benzo (a) pyrene	20.34	252	7187	5.70464	ppb		96
25) Dibenz (a,h) anthracene	22.96	278	6484	6.97171	ppb		100
26) Benzo (g,h,i) perylene	23.43	276	6490	5.65605	ppb		98

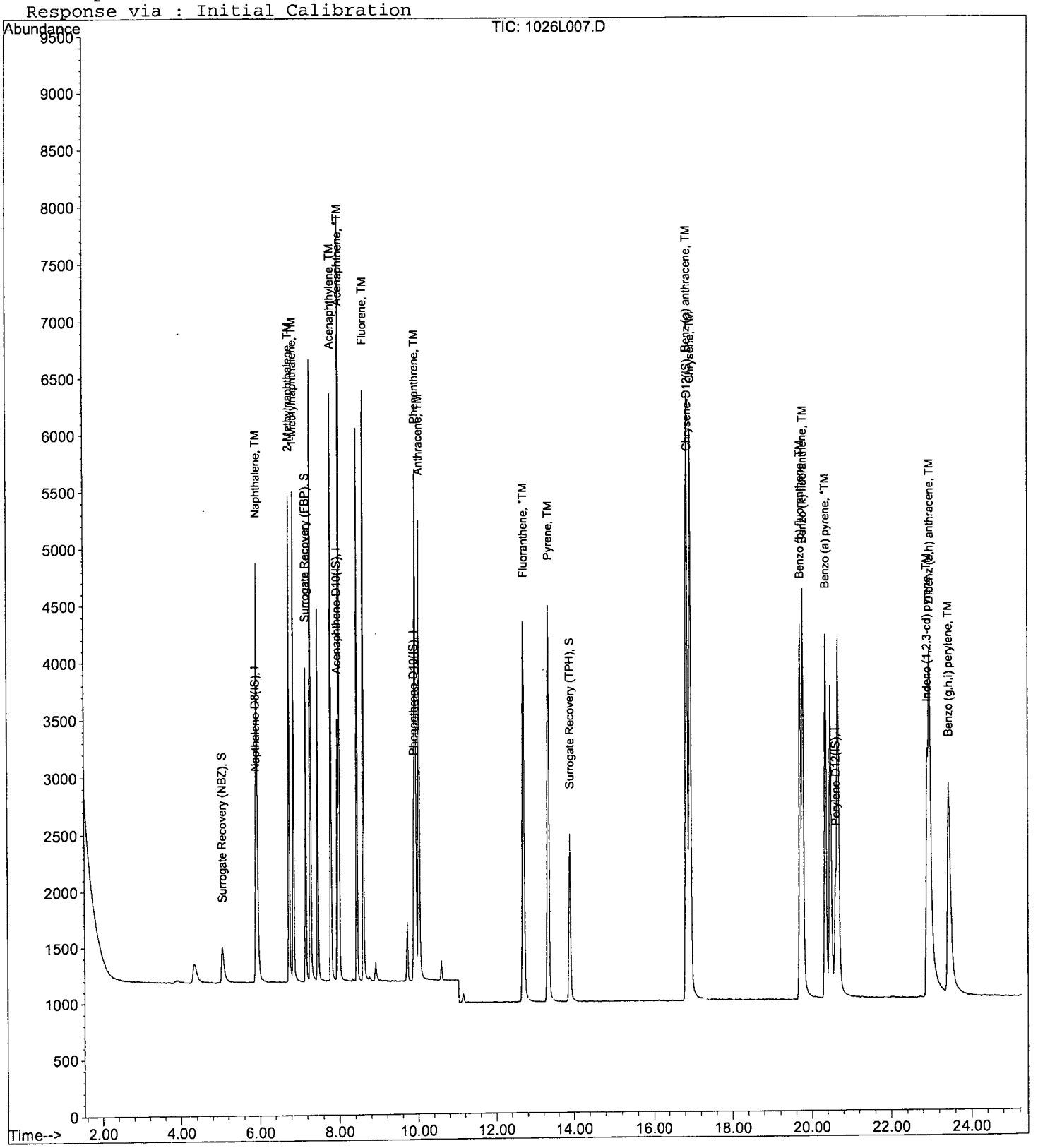
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161026\1026L007.D Vial: 7
Acq On : 26-Oct-16 13:33 Operator: MA
Sample : 5.0 ug/ml PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 15:51 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L008.D Vial: 8
Acq On : 26 Oct 16 14:05 Operator: MA
Sample : 10.0 ug/ml PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 15:51 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed Oct 26 15:50:22 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.89	136	2986	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	7.94	164	1505	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.87	188	2677	2.50000 ppb		0.00
15) Chrysene-D12(IS)	16.84	240	3400	2.50000 ppb		0.00
21) Perylene-D12(IS)	20.59	264	3039	2.50000 ppb		-0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.05	82	1921	6.85829 ppb		0.00
Spiked Amount 5.000			Recovery	= 137.160%		
7) Surrogate Recovery (FBP)	7.16	172	5091	5.13577 ppb		0.00
Spiked Amount 5.000			Recovery	= 102.720%		
17) Surrogate Recovery (TPH)	13.88	244	5901	4.91410 ppb		0.00
Spiked Amount 5.000			Recovery	= 98.280%		
Target Compounds						Qvalue
3) Naphthalene	5.93	128	12724	10.30399 ppb		100
4) 2-Methylnaphthalene	6.74	142	8422	11.28079 ppb		99
5) 1-Methylnaphthalene	6.84	142	8115	10.06248 ppb		97
8) Acenaphthylene	7.79	152	13495	11.09277 ppb		99
9) Acenaphthene	7.98	154	7905	10.54234 ppb		99
10) Fluorene	8.58	166	9332	10.95063 ppb		97
12) Phenanthrene	9.91	178	13084	10.67897 ppb		100
13) Anthracene	9.99	178	12890	11.57524 ppb		99
14) Fluoranthene	12.67	202	18238	11.55739 ppb		97
16) Pyrene	13.30	202	18848	10.38432 ppb		100
18) Benz (a) anthracene	16.82	228	17088	11.36461 ppb		99
19) Chrysene	16.91	228	17182	9.97769 ppb		100
20) Indeno (1,2,3-cd) pyrene	22.89	276	17051	11.63162 ppb	#	98
22) Benzo (b) fluoranthene	19.69	252	15215	11.94137 ppb		99
23) Benzo (k) fluoranthene	19.75	252	13796	12.30485 ppb		98
24) Benzo (a) pyrene	20.33	252	14907	11.10660 ppb		99
25) Dibenz (a,h) anthracene	22.95	278	13714	13.19086 ppb		99
26) Benzo (g,h,i) perylene	23.42	276	13588	11.13668 ppb		98

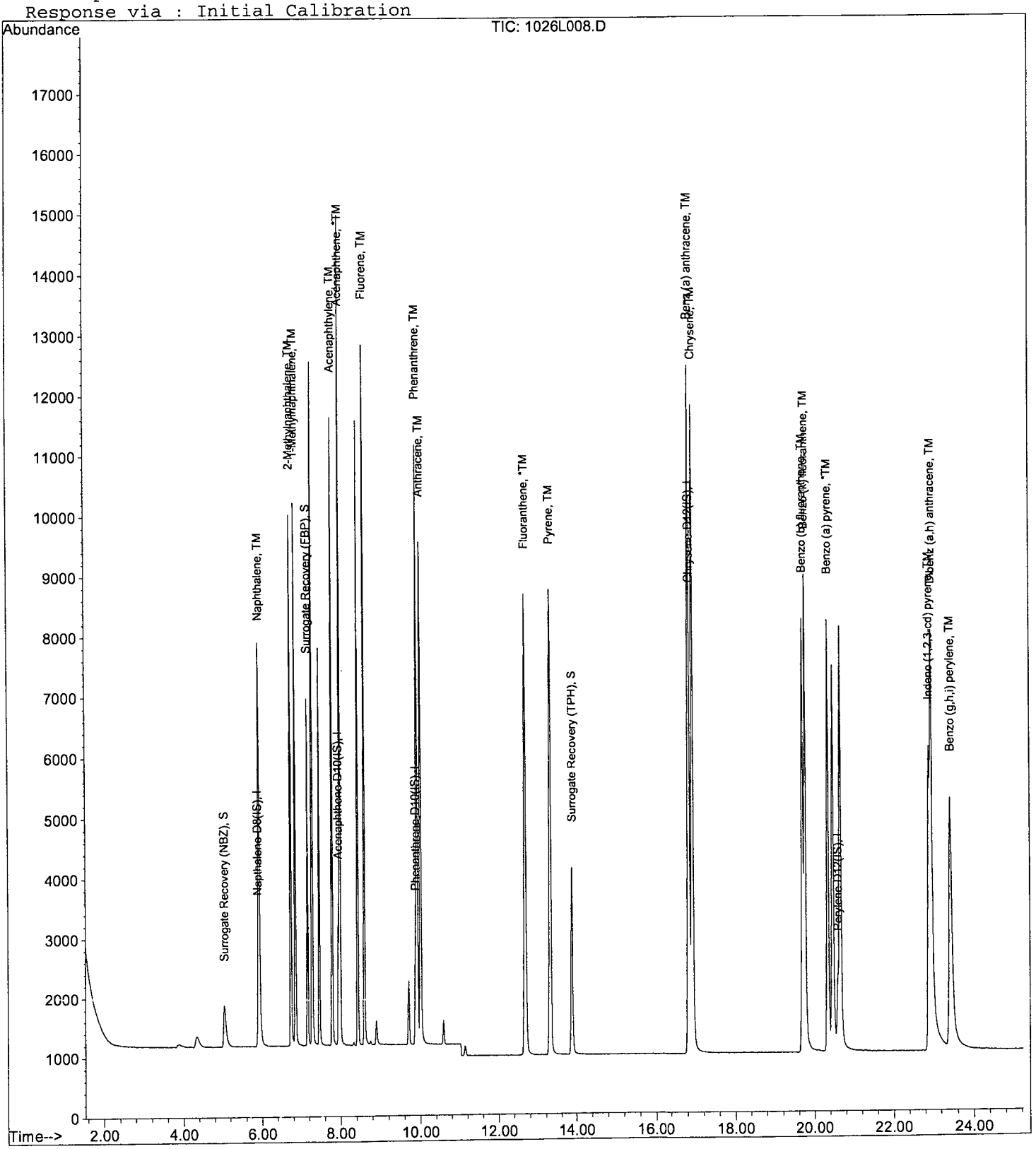
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161026\1026L008.D Vial: 8
Acq On : 26 Oct 16 14:05 Operator: MA
Sample : 10.0 ug/ml PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 15:51 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L009.D Vial: 9
Acq On : 26 Oct 16 14:37 Operator: MA
Sample : 50.0 ug/ml PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 15:51 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed Oct 26 15:50:22 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.89	136	2794	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.94	164	1386	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.87	188	2434	2.50000	ppb		0.00
15) Chrysene-D12(IS)	16.85	240	3234	2.50000	ppb		0.01
21) Perylene-D12(IS)	20.60	264	2790	2.50000	ppb		0.00
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.03	82	8415	30.23463	ppb		-0.01
Spiked Amount 5.000			Recovery = 604.700%				
7) Surrogate Recovery (FBP)	7.16	172	20751	22.62838	ppb		0.00
Spiked Amount 5.000			Recovery = 452.560%				
17) Surrogate Recovery (TPH)	13.87	244	25797	22.65018	ppb		-0.01
Spiked Amount 5.000			Recovery = 453.000%				
Target Compounds							Qvalue
3) Naphthalene	5.93	128	54753	47.14744	ppb		100
4) 2-Methylnaphthalene	6.74	142	36210	50.75083	ppb		99
5) 1-Methylnaphthalene	6.84	142	33098	43.81569	ppb		97
8) Acenaphthylene	7.79	152	57065	50.02321	ppb		100
9) Acenaphthene	7.99	154	33025	47.39617	ppb		96
10) Fluorene	8.59	166	39169	49.13071	ppb		99
12) Phenanthrene	9.92	178	56397	50.05941	ppb		99
13) Anthracene	10.01	178	53407	51.39823	ppb		99
14) Fluoranthene	12.68	202	82212	55.84917	ppb		97
16) Pyrene	13.31	202	83805	48.23348	ppb		99
18) Benz (a) anthracene	16.83	228	79293	54.20887	ppb		99
19) Chrysene	16.93	228	73686	45.00303	ppb		100
20) Indeno (1,2,3-cd) pyrene	22.90	276	78247	54.63168	ppb	#	99
22) Benzo (b) fluoranthene	19.71	252	72967	60.42347	ppb		99
23) Benzo (k) fluoranthene	19.78	252	61939	57.94864	ppb		99
24) Benzo (a) pyrene	20.36	252	67423	53.72649	ppb		96
25) Dibenz (a,h) anthracene	22.96	278	62206	61.88207	ppb		99
26) Benzo (g,h,i) perylene	23.43	276	60431	52.94634	ppb		97

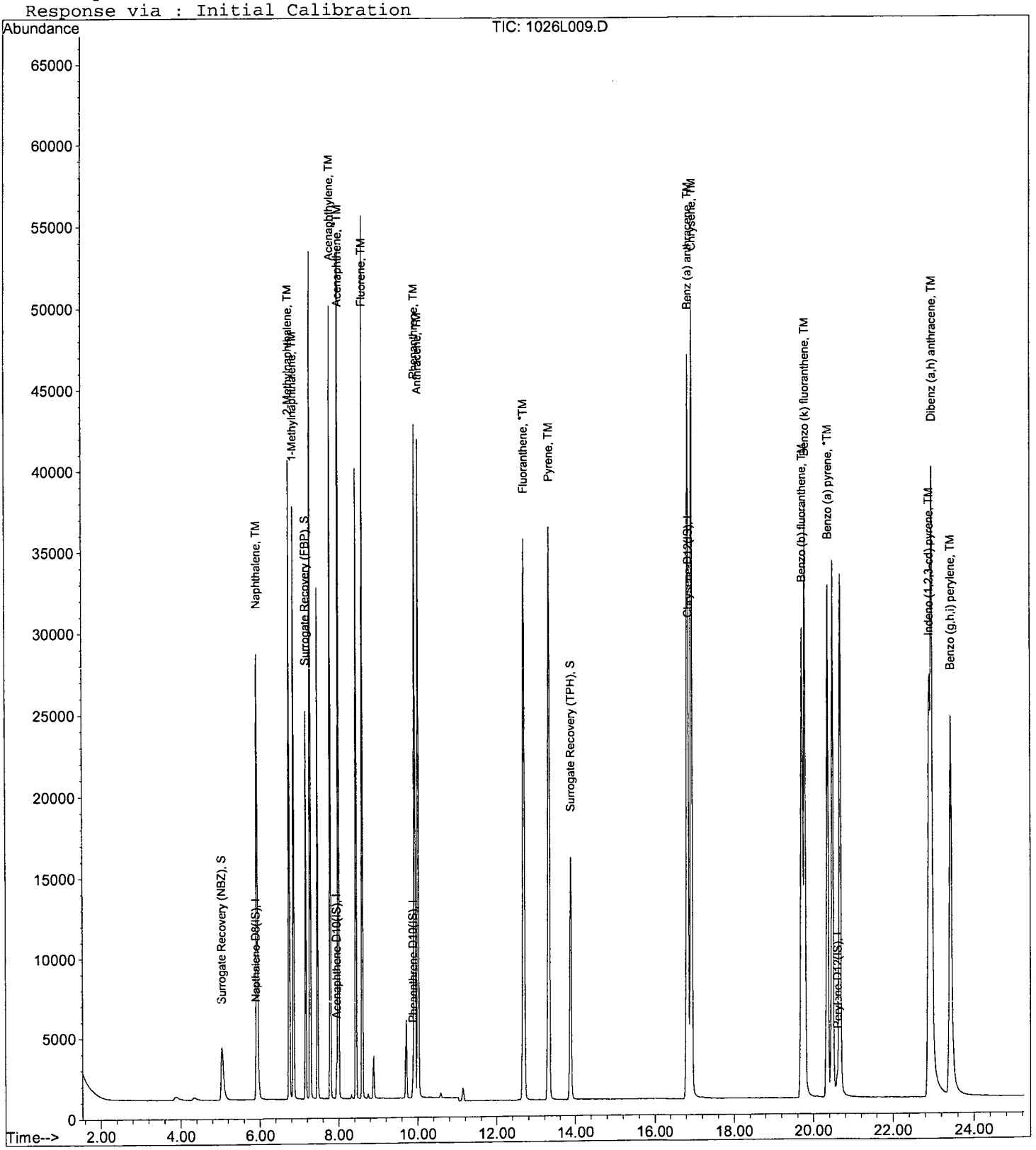
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161026\1026L009.D Vial: 9
Acq On : 26 Oct 16 14:37 Operator: MA
Sample : 50.0 ug/ml PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 15:51 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L010.D Vial: 10
Acq On : 26-Oct-16 15:09 Operator: MA
Sample : 100.0 ug/ml PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 15:51 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed Oct 26 15:50:22 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.90	136	2855	2.50000 ppb		0.01
6) Acenaphthene-D10(IS)	7.95	164	1362	2.50000 ppb		0.01
11) Phenanthrene-D10(IS)	9.89	188	2333	2.50000 ppb		0.01
15) Chrysene-D12(IS)	16.88	240	3111	2.50000 ppb		0.04
21) Perylene-D12(IS)	20.62	264	2663	2.50000 ppb		0.02
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.05	82	17071	58.28135 ppb		0.00
Spiked Amount 5.000			Recovery	= 1165.620%		
7) Surrogate Recovery (FBP)	7.16	172	40283	45.31564 ppb		0.00
Spiked Amount 5.000			Recovery	= 906.320%		
17) Surrogate Recovery (TPH)	13.88	244	49449	45.74789 ppb		0.00
Spiked Amount 5.000			Recovery	= 914.960%		
Target Compounds						Qvalue
3) Naphthalene	5.93	128	107908	91.68077 ppb		99
4) 2-Methylnaphthalene	6.74	142	70232	96.12565 ppb		100
5) 1-Methylnaphthalene	6.86	142	64241	84.72330 ppb		99
8) Acenaphthylene	7.79	152	108768	97.01976 ppb		99
9) Acenaphthene	7.99	154	63005	92.70530 ppb		99
10) Fluorene	8.59	166	74351	95.14008 ppb		99
12) Phenanthrene	9.93	178	106925	99.00134 ppb		99
13) Anthracene	10.02	178	98627	98.63251 ppb		98
14) Fluoranthene	12.70	202	163122	113.71087 ppb		97
16) Pyrene	13.34	202	165586	99.57259 ppb		99
18) Benz (a) anthracene	16.85	228	141018	99.02815 ppb		99
19) Chrysene	16.97	228	143007	92.10839 ppb		99
20) Indeno (1,2,3-cd) pyrene	22.94	276	152037	108.90723 ppb	#	98
22) Benzo (b) fluoranthene	19.73	252	149573	126.01447 ppb		99
23) Benzo (k) fluoranthene	19.82	252	80228	76.89275 ppb		98
24) Benzo (a) pyrene	20.39	252	131607	108.71585 ppb		97
25) Dibenz (a,h) anthracene	23.01	278	119414	120.37099 ppb		96
26) Benzo (g,h,i) perylene	23.48	276	115421	105.06387 ppb		98

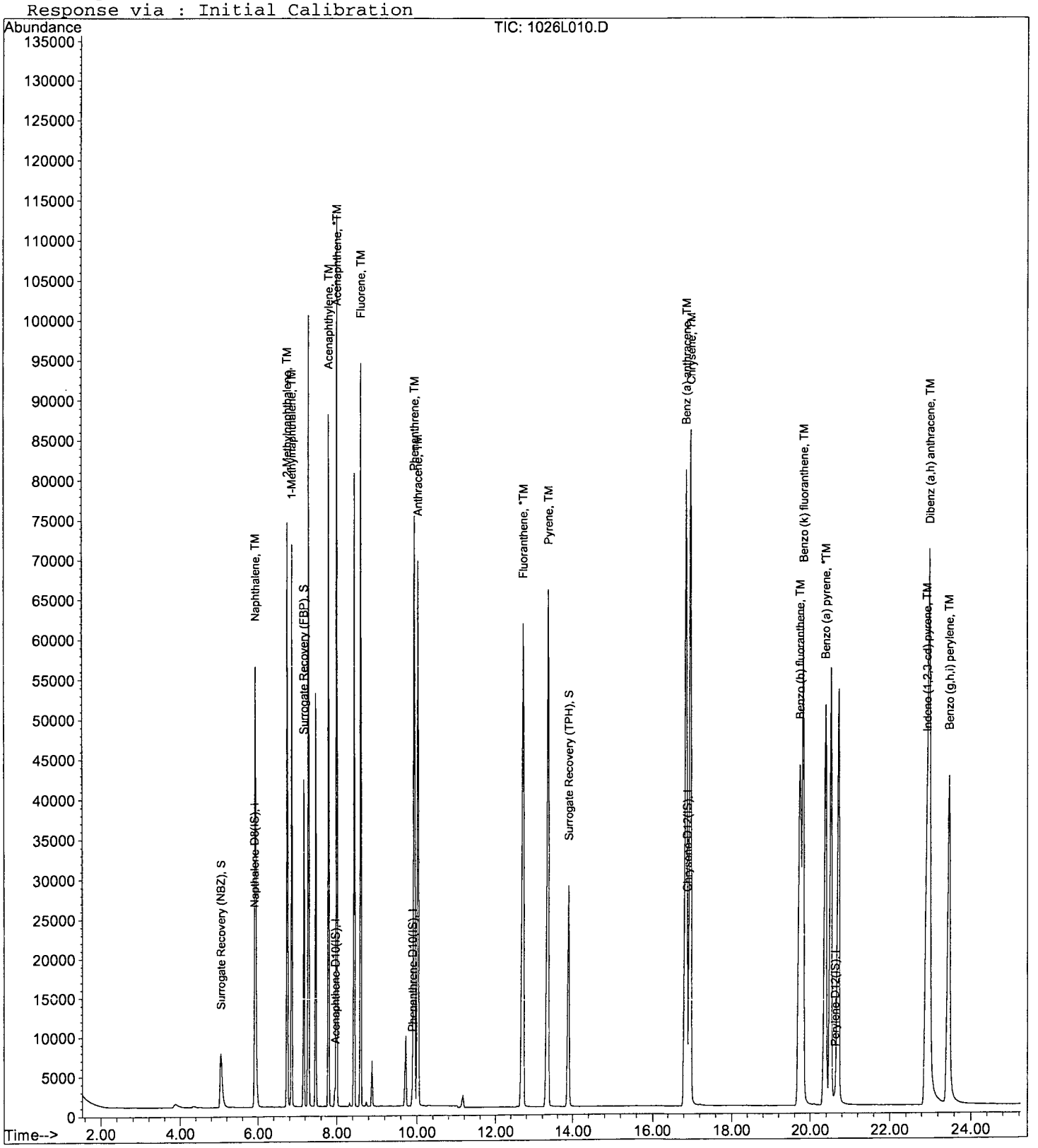
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161026\1026L010.D Vial: 10
Acq On : 26 Oct 16 15:09 Operator: MA
Sample : 100.0 ug/ml PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 15:51 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Form 7

Second Source Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 10/26/16
Matrix: Instrument: Linus
Initial Cal. Date: 10/26/16
Data File: 1026L011.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	Naphthalene	1.020	1.149	13	TM	
2	TM	2-Methylnaphthalene	0.6367	0.7311	15	TM	
3	TM	1-Methylnaphthalene	0.6513	0.7303	12	TM	
4	TM	Acenaphthylene	2.050	2.256	10	TM	
5	*TM	Acenaphthene	1.236	1.335	8.0	*TM	
6	TM	Fluorene	1.426	1.572	10	TM	
7	TM	Phenanthrene	1.156	1.229	6.3	TM	
8	TM	Anthracene	1.070	1.196	12	TM	
9	*TM	Fluoranthene	1.564	1.710	9.4	*TM	
10	TM	Pyrene	1.336	1.394	4.4	TM	
11	TM	Benz (a) anthracene	1.143	1.235	8.0	TM	
12	TM	Chrysene	1.235	1.312	6.2	TM	
13	TM	Indeno (1,2,3-cd) pyrene	1.134	1.292	14	TM	
14	TM	Benzo (b) fluoranthene	1.151	1.183	2.8	TM	
15	TML	Benzo (k) fluoranthene	0.9795	1.143	17	TML	2.5
16	*TM	Benzo (a) pyrene	1.149	1.228	6.9	*TM	
17	TML	Dibenz (a,h) anthracene	0.9550	1.177	23	TML	6.9
18	TM	Benzo (g,h,i) perylene	1.038	1.117	7.6	TM	
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
		Average			10.3		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L011.D Vial: 11
Acq On : 26 Oct 16 15:42 Operator: MA
Sample : SS PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 16:20 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed Oct 26 16:16:15 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.90	136	2785	2.50000 ppb		0.01
6) Acenaphthene-D10(IS)	7.94	164	1444	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.87	188	2515	2.50000 ppb		0.00
15) Chrysene-D12(IS)	16.85	240	3169	2.50000 ppb		0.01
21) Perylene-D12(IS)	20.60	264	2834	2.50000 ppb		0.00
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.06	82	1	-0.03779 ppb		0.01
Spiked Amount 5.000			Recovery = -0.760%			
7) Surrogate Recovery (FBP)	7.16	172	7	0.00752 ppb		0.00
Spiked Amount 5.000			Recovery = 0.160%			
17) Surrogate Recovery (TPH)	13.90	244	3	0.00275 ppb		0.02
Spiked Amount 5.000			Recovery = 0.060%			
Target Compounds						Qvalue
3) Naphthalene	5.93	128	6402	5.63457 ppb		100
4) 2-Methylnaphthalene	6.74	142	4072	5.74118 ppb		99
5) 1-Methylnaphthalene	6.84	142	4068	5.60694 ppb		97
8) Acenaphthylene	7.79	152	6514	5.50095 ppb		99
9) Acenaphthene	7.98	154	3856	5.40076 ppb		98
10) Fluorene	8.59	166	4539	5.51180 ppb		100
12) Phenanthrene	9.92	178	6183	5.31717 ppb		99
13) Anthracene	10.01	178	6017	5.59144 ppb		100
14) Fluoranthene	12.68	202	8601	5.46808 ppb		97
16) Pyrene	13.31	202	8838	5.22011 ppb		99
18) Benz (a) anthracene	16.82	228	7826	5.40169 ppb		99
19) Chrysene	16.92	228	8315	5.30991 ppb		99
20) Indeno (1,2,3-cd) pyrene	22.91	276	8191	5.69657 ppb	#	97
22) Benzo (b) fluoranthene	19.69	252	6704	5.14014 ppb		100
23) Benzo (k) fluoranthene	19.76	252	6480	5.12262 ppb		98
24) Benzo (a) pyrene	20.34	252	6962	5.34581 ppb		97
25) Dibenz (a,h) anthracene	22.96	278	6674	5.34490 ppb		99
26) Benzo (g,h,i) perylene	23.44	276	6331	5.38111 ppb		98

Algorithum = $\frac{6402 * 1 * 2.5}{1 * 2785 * 1.02} = \frac{16005}{2840.7} = 5.63417$

RH 10/27/16

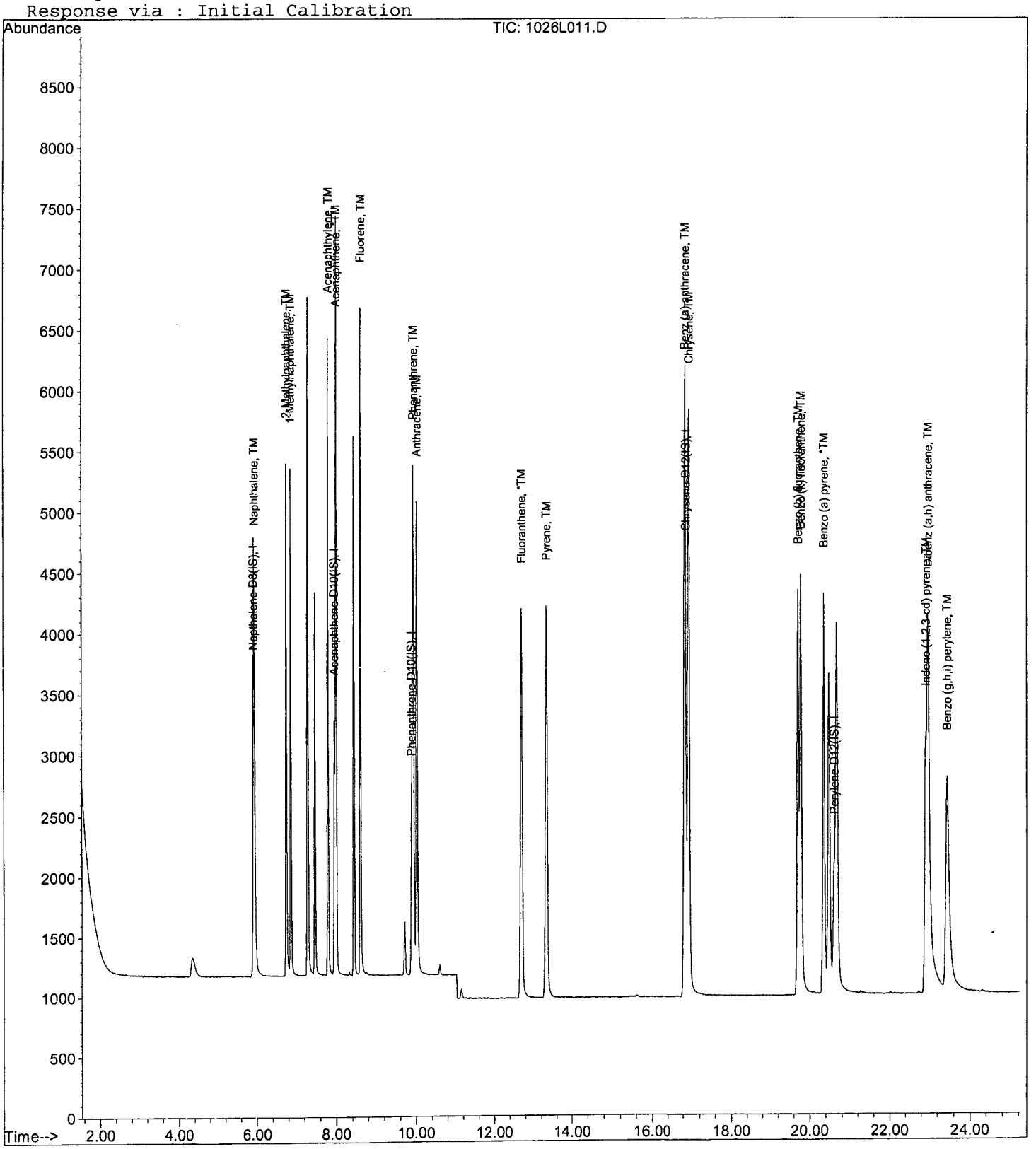
(#) = qualifier out of range (m) = manual integration
1026L011.D L1026P.M Wed Nov 02 15:58:03 2016

Quantitation Report

Data File : M:\LINUS\DATA\L161026\1026L011.D Vial: 11
Acq On : 26 Oct 16 15:42 Operator: MA
Sample : SS PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 16:20 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/23/16
Instrument: Linus
Initial Cal. Date: 10/26/16
Data File: 1026L316.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	SL	Surrogate Recovery (NBZ)	0.2618	0.3477	33	SL	15
3	TM	Naphthalene	1.020	1.054	3.3	TM	
4	TM	2-Methylnaphthalene	0.6367	0.6923	8.7	TM	
5	TM	1-Methylnaphthalene	0.6513	0.6754	3.7	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	S	Surrogate Recovery (FBP)	1.613	1.639	1.7	S	
8	TM	Acenaphthylene	2.050	2.159	5.3	TM	
9	*TM	Acenaphthene	1.236	1.249	1.0	*TM	
10	TM	Fluorene	1.426	1.485	4.2	TM	
11	I	Phenanthrene-D10(IS)	ISTD			I	
12	TM	Phenanthrene	1.156	1.146	0.89	TM	
13	TM	Anthracene	1.070	1.149	7.5	TM	
14	*TM	Fluoranthene	1.564	1.676	7.2	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.336	1.367	2.3	TM	
17	S	Surrogate Recovery (TPH)	0.8594	0.9078	5.6	S	
18	TM	Benz (a) anthracene	1.143	1.272	11	TM	
19	TM	Chrysene	1.235	1.232	0.30	TM	
20	TM	Indeno (1,2,3-cd) pyrene	1.134	1.276	13	TM	
21	I	Perylene-D12(IS)	ISTD			I	
22	TM	Benzo (b) fluoranthene	1.151	1.145	0.47	TM	
23	TML	Benzo (k) fluoranthene	0.9795	1.125	15	TML	0.83
24	*TM	Benzo (a) pyrene	1.149	1.136	1.1	*TM	
25	TML	Dibenz (a,h) anthracene	0.9550	1.122	17	TML	1.9
26	TM	Benzo (g,h,i) perylene	1.038	1.080	4.1	TM	
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			7.0		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L316.D Vial: 16
Acq On : 23 Nov 16 17:01 Operator: MA
Sample : 2.5 ug/ml PAH 10/26/16 (2) Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Nov 23 17:29 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.90	136	2301	2.50000 ppb		0.01
6) Acenaphthene-D10(IS)	7.95	164	1220	2.50000 ppb		0.01
11) Phenanthrene-D10(IS)	9.90	188	2212	2.50000 ppb		0.02
15) Chrysene-D12(IS)	16.89	240	2821	2.50000 ppb		0.05
21) Perylene-D12(IS)	20.66	264	2678	2.50000 ppb		0.06
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.05	82	800	2.86361 ppb		0.00
Spiked Amount 5.000			Recovery	= 57.280%		
7) Surrogate Recovery (FBP)	7.16	172	2000	2.54150 ppb		0.00
Spiked Amount 5.000			Recovery	= 50.820%		
17) Surrogate Recovery (TPH)	13.90	244	2561	2.64096 ppb		0.02
Spiked Amount 5.000			Recovery	= 52.820%		
Target Compounds						Qvalue
3) Naphthalene	5.93	128	4850	5.16649 ppb		100
4) 2-Methylnaphthalene	6.74	142	3186	5.43686 ppb		99
5) 1-Methylnaphthalene	6.86	142	3108	5.18483 ppb		99
8) Acenaphthylene	7.79	152	5268	5.26554 ppb		99
9) Acenaphthene	7.99	154	3047	5.05123 ppb		99
10) Fluorene	8.59	166	3624	5.20869 ppb		98
12) Phenanthrene	9.93	178	5068	4.95531 ppb		99
13) Anthracene	10.02	178	5085	5.37264 ppb		99
14) Fluoranthene	12.71	202	7414	5.35910 ppb		97
16) Pyrene	13.34	202	7710	5.11564 ppb		99
18) Benz (a) anthracene	16.87	228	7177	5.56483 ppb		99
19) Chrysene	16.96	228	6949	4.98502 ppb		99
20) Indeno (1,2,3-cd) pyrene	22.98	276	7201	5.62585 ppb	#	98
22) Benzo (b) fluoranthene	19.75	252	6133	4.97626 ppb		99
23) Benzo (k) fluoranthene	19.81	252	6027	5.04170 ppb		98
24) Benzo (a) pyrene	20.40	252	6084	4.94376 ppb		96
25) Dibenz (a,h) anthracene	23.03	278	6008	5.09626 ppb		98
26) Benzo (g,h,i) perylene	23.51	276	5786	5.20436 ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

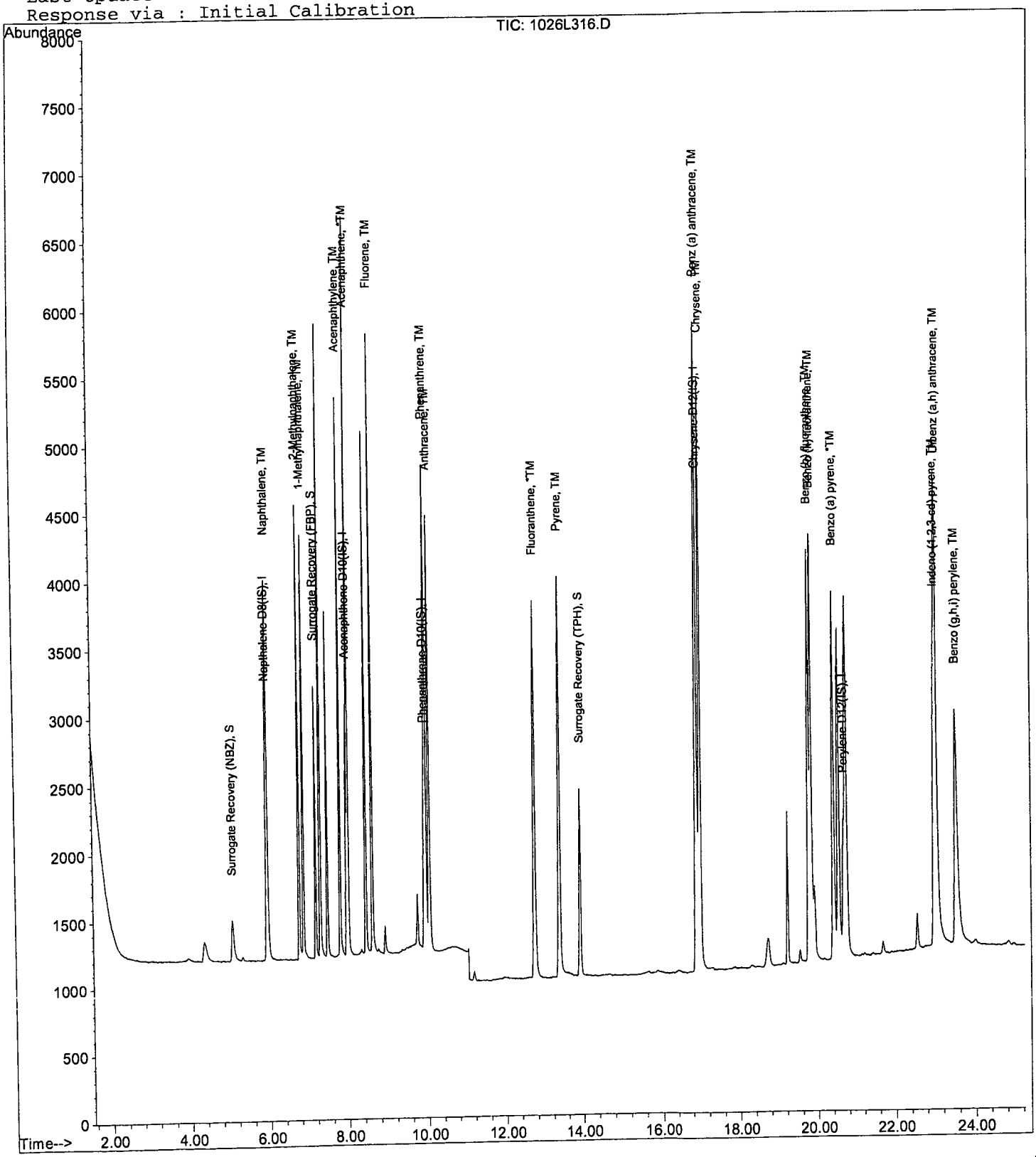
Data File : M:\LINUS\DATA\L161026\1026L316.D
Acq On : 23 Nov 16 17:01
Sample : 2.5 ug/ml PAH 10/26/16 (2)
Misc :

Vial: 16
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Nov 23 17:29 2016

Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/24/16
Instrument: Linus
Initial Cal. Date: 10/26/16
Data File: 1026L338.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	SL	Surrogate Recovery (NBZ)	0.2618	0.3398	30	SL	12
3	TM	Naphthalene	1.020	1.058	3.7	TM	
4	TM	2-Methylnaphthalene	0.6367	0.6852	7.6	TM	
5	TM	1-Methylnaphthalene	0.6513	0.6740	3.5	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	S	Surrogate Recovery (FBP)	1.613	1.653	2.5	S	
8	TM	Acenaphthylene	2.050	2.141	4.4	TM	
9	*TM	Acenaphthene	1.236	1.252	1.3	*TM	
10	TM	Fluorene	1.426	1.471	3.2	TM	
11	I	Phenanthrene-D10(IS)	ISTD			I	
12	TM	Phenanthrene	1.156	1.135	1.8	TM	
13	TM	Anthracene	1.070	1.152	7.7	TM	
14	*TM	Fluoranthene	1.564	1.672	6.9	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.336	1.327	0.67	TM	
17	S	Surrogate Recovery (TPH)	0.8594	0.8817	2.6	S	
18	TM	Benz (a) anthracene	1.143	1.183	3.5	TM	
19	TM	Chrysene	1.235	1.259	1.9	TM	
20	TM	Indeno (1,2,3-cd) pyrene	1.134	1.236	8.9	TM	
21	I	Perylene-D12(IS)	ISTD			I	
22	TM	Benzo (b) fluoranthene	1.151	1.078	6.3	TM	
23	TML	Benzo (k) fluoranthene	0.9795	1.028	4.9	TML	8.0
24	*TM	Benzo (a) pyrene	1.149	1.117	2.8	*TM	
25	TML	Dibenz (a,h) anthracene	0.9550	1.062	11	TML	3.4
26	TM	Benzo (g,h,i) perylene	1.038	1.030	0.74	TM	
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			5.5		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L338.D Vial: 38
Acq On : 24 Nov 16 4:16 Operator: MA
Sample : 2.5 ug/ml PAH 10/26/16 (2) Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Nov 28 8:42 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.90	136	2325	2.50000	ppb		0.01
6) Acenaphthene-D10(IS)	7.94	164	1216	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.89	188	2150	2.50000	ppb		0.01
15) Chrysene-D12(IS)	16.88	240	2816	2.50000	ppb		0.04
21) Perylene-D12(IS)	20.65	264	2604	2.50000	ppb		0.05
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.05	82	790	2.79770	ppb		0.00
Spiked Amount 5.000			Recovery = 55.960%				
7) Surrogate Recovery (FBP)	7.16	172	2010	2.56261	ppb		0.00
Spiked Amount 5.000			Recovery = 51.260%				
17) Surrogate Recovery (TPH)	13.91	244	2483	2.56507	ppb		0.03
Spiked Amount 5.000			Recovery = 51.300%				
Target Compounds							Qvalue
3) Naphthalene	5.93	128	4918	5.18485	ppb		100
4) 2-Methylnaphthalene	6.74	142	3186	5.38073	ppb		99
5) 1-Methylnaphthalene	6.84	142	3134	5.17424	ppb		96
8) Acenaphthylene	7.79	152	5207	5.22169	ppb		100
9) Acenaphthene	7.99	154	3044	5.06286	ppb		98
10) Fluorene	8.59	166	3577	5.15805	ppb		99
12) Phenanthrene	9.93	178	4881	4.91009	ppb		99
13) Anthracene	10.02	178	4952	5.38300	ppb		99
14) Fluoranthene	12.71	202	7190	5.34705	ppb		98
16) Pyrene	13.34	202	7472	4.96652	ppb		98
18) Benz (a) anthracene	16.86	228	6661	5.17391	ppb		99
19) Chrysene	16.96	228	7092	5.09663	ppb		99
20) Indeno (1,2,3-cd) pyrene	22.98	276	6960	5.44722	ppb	#	98
22) Benzo (b) fluoranthene	19.74	252	5616	4.68626	ppb		99
23) Benzo (k) fluoranthene	19.80	252	5352	4.60235	ppb		98
24) Benzo (a) pyrene	20.39	252	5817	4.86113	ppb		97
25) Dibenz (a,h) anthracene	23.03	278	5531	4.82998	ppb		99
26) Benzo (g,h,i) perylene	23.51	276	5365	4.96282	ppb		97

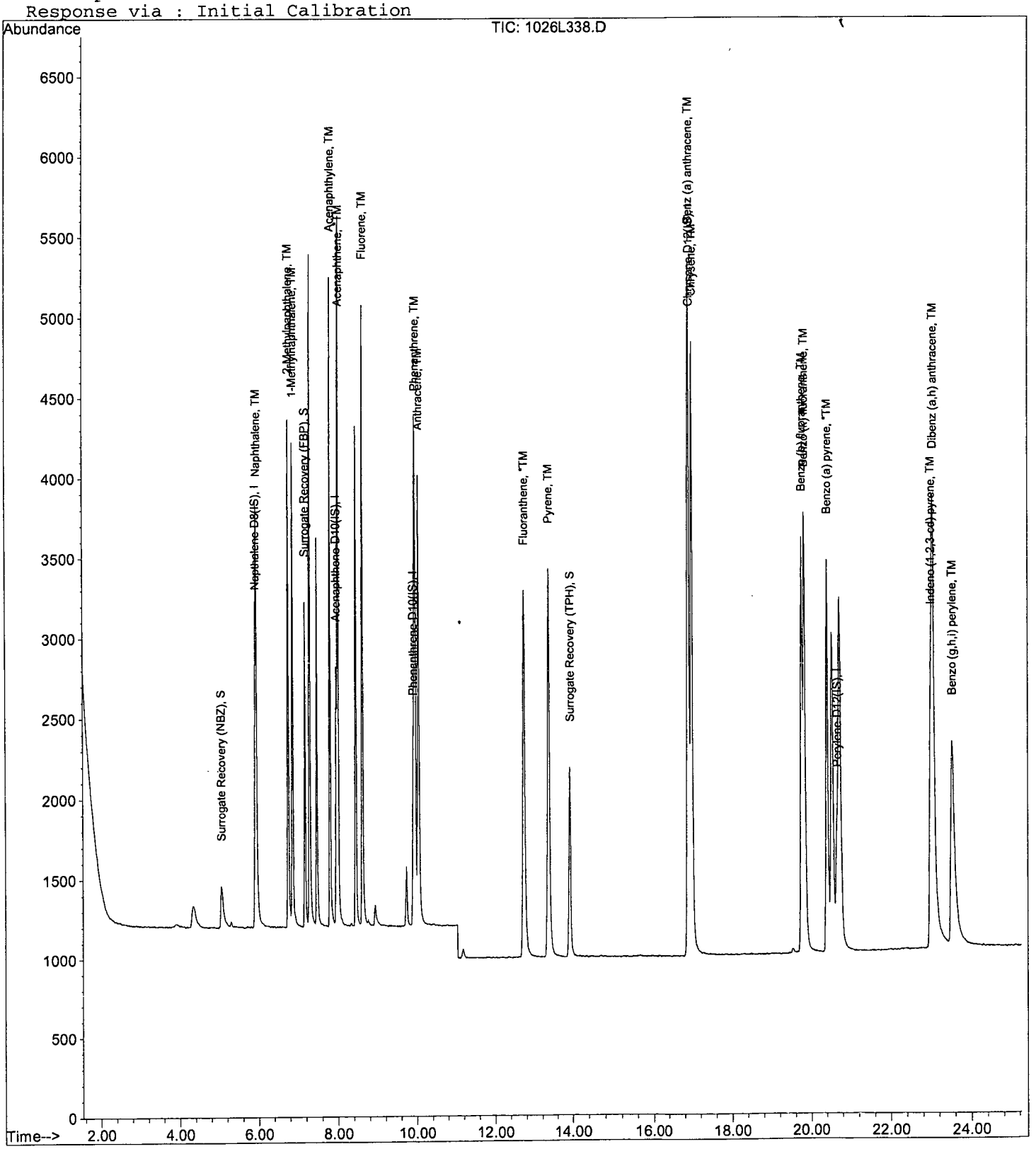
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161026\1026L338.D Vial: 38
Acq On : 24 Nov 16 4:16 Operator: MA
Sample : 2.5 ug/ml PAH 10/26/16 (2) Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Nov 28 8:42 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Date Analyzed: 11/29/16

Matrix: Instrument: Linus

Initial Cal. Date: 10/26/16

Data File: 1129L003.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	SL	Surrogate Recovery (NBZ)	0.2618	0.3290	26	SL	8.3
3	TM	Naphthalene	1.020	1.064	4.4	TM	
4	TM	2-Methylnaphthalene	0.6367	0.7016	10	TM	
5	TM	1-Methylnaphthalene	0.6513	0.6868	5.5	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	S	Surrogate Recovery (FBP)	1.613	1.605	0.48	S	
8	TM	Acenaphthylene	2.050	2.184	6.5	TM	
9	*TM	Acenaphthene	1.236	1.267	2.5	*TM	
10	TM	Fluorene	1.426	1.501	5.3	TM	
11	I	Phenanthrene-D10(IS)	ISTD			I	
12	TM	Phenanthrene	1.156	1.137	1.6	TM	
13	TM	Anthracene	1.070	1.163	8.8	TM	
14	*TM	Fluoranthene	1.564	1.631	4.3	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.336	1.362	2.0	TM	
17	S	Surrogate Recovery (TPH)	0.8594	0.8864	3.1	S	
18	TM	Benz (a) anthracene	1.143	1.204	5.4	TM	
19	TM	Chrysene	1.235	1.279	3.5	TM	
20	TM	Indeno (1,2,3-cd) pyrene	1.134	1.233	8.7	TM	
21	I	Perylene-D12(IS)	ISTD			I	
22	TM	Benzo (b) fluoranthene	1.151	1.025	11	TM	
23	TML	Benzo (k) fluoranthene	0.9795	0.9704	0.93	TML	13
24	*TM	Benzo (a) pyrene	1.149	1.106	3.7	*TM	
25	TML	Dibenz (a,h) anthracene	0.9550	1.081	13	TML	1.7
26	TM	Benzo (g,h,i) perylene	1.038	0.9929	4.3	TM	
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			6.2		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161129\1129L003.D Vial: 3
Acq On : 29 Nov 16 15:19 Operator: MA
Sample : 5.0 ug/ml PAH 11/28/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Nov 29 15:47 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.89	136	2775	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	7.94	164	1450	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.89	188	2643	2.50000 ppb		0.01
15) Chrysene-D12(IS)	16.88	240	3292	2.50000 ppb		0.04
21) Perylene-D12(IS)	20.64	264	3040	2.50000 ppb		0.04
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.05	82	913	2.70768 ppb		0.00
Spiked Amount 5.000			Recovery = 54.160%			
7) Surrogate Recovery (FBP)	7.16	172	2327	2.48799 ppb		0.00
Spiked Amount 5.000			Recovery = 49.760%			
17) Surrogate Recovery (TPH)	13.90	244	2918	2.57858 ppb		0.02
Spiked Amount 5.000			Recovery = 51.580%			
Target Compounds						Qvalue
3) Naphthalene	5.92	128	5907	5.21765 ppb		100
4) 2-Methylnaphthalene	6.74	142	3894	5.51000 ppb		99
5) 1-Methylnaphthalene	6.84	142	3812	5.27303 ppb		97
8) Acenaphthylene	7.79	152	6333	5.32597 ppb		99
9) Acenaphthene	7.98	154	3673	5.12316 ppb		100
10) Fluorene	8.59	166	4352	5.26285 ppb		99
12) Phenanthrene	9.92	178	6011	4.91891 ppb		99
13) Anthracene	10.01	178	6150	5.43826 ppb		100
14) Fluoranthene	12.70	202	8624	5.21718 ppb		97
16) Pyrene	13.33	202	8967	5.09842 ppb		100
18) Benz (a) anthracene	16.86	228	7930	5.26897 ppb		99
19) Chrysene	16.95	228	8419	5.17545 ppb		99
20) Indeno (1,2,3-cd) pyrene	22.97	276	8120	5.43619 ppb	#	99
22) Benzo (b) fluoranthene	19.73	252	6234	4.45588 ppb		100
23) Benzo (k) fluoranthene	19.80	252	5900	4.34469 ppb		98
24) Benzo (a) pyrene	20.38	252	6724	4.81319 ppb		98
25) Dibenz (a,h) anthracene	23.03	278	6572	4.91427 ppb		100
26) Benzo (g,h,i) perylene	23.51	276	6037	4.78351 ppb		99

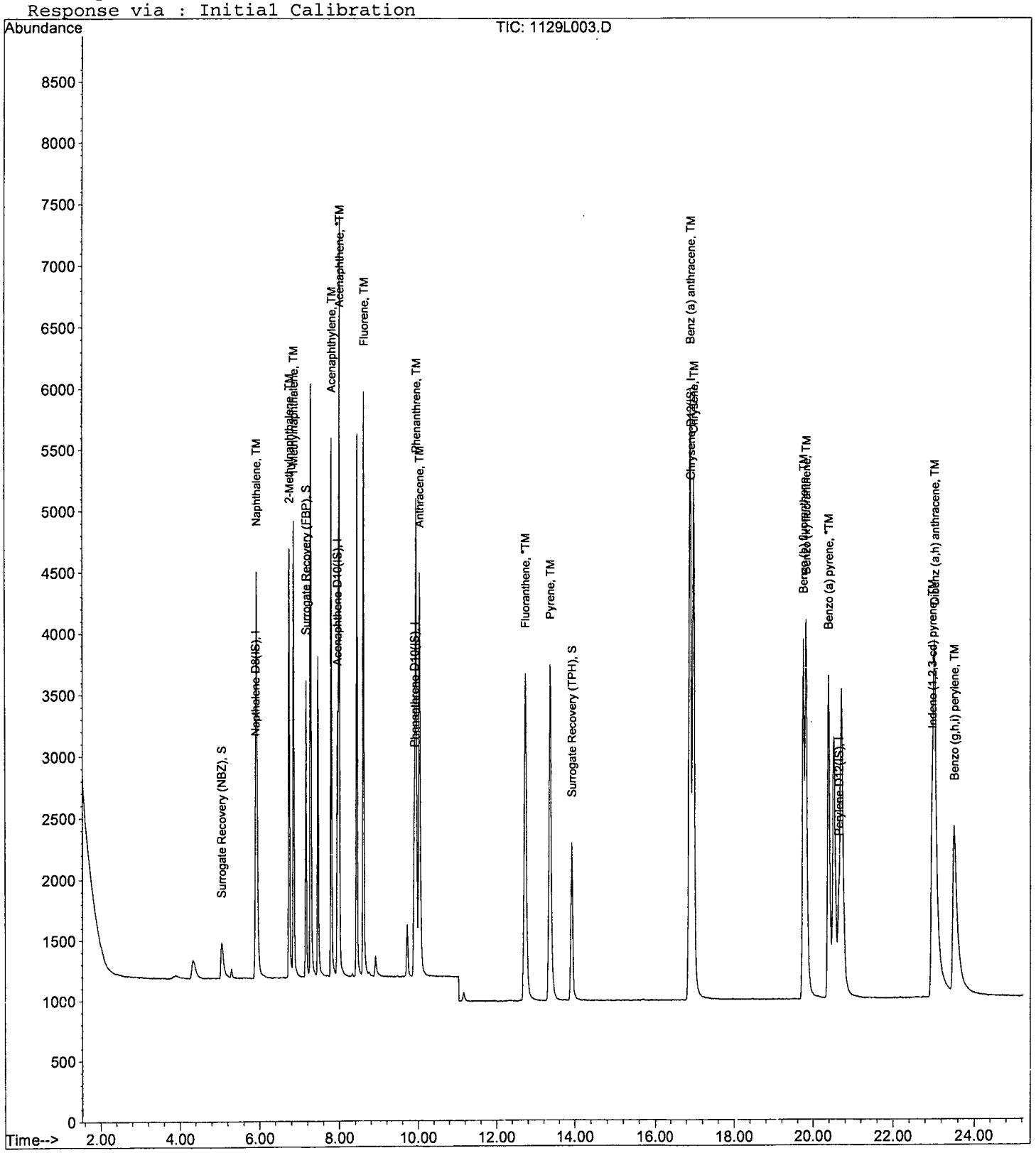
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161129\1129L003.D Vial: 3
Acq On : 29 Nov 16 15:19 Operator: MA
Sample : 5.0 ug/ml PAH 11/28/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Nov 29 15:47 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/30/16
Instrument: Linus
Initial Cal. Date: 10/26/16
Data File: 1129L021.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	SL	Surrogate Recovery (NBZ)	0.2618	0.3155	21	SL	3.8
3	TM	Naphthalene	1.020	1.064	4.3	TM	
4	TM	2-Methylnaphthalene	0.6367	0.6965	9.4	TM	
5	TM	1-Methylnaphthalene	0.6513	0.6883	5.7	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	S	Surrogate Recovery (FBP)	1.613	1.613	0.01	S	
8	TM	Acenaphthylene	2.050	2.181	6.4	TM	
9	*TM	Acenaphthene	1.236	1.276	3.2	*TM	
10	TM	Fluorene	1.426	1.489	4.5	TM	
11	I	Phenanthrene-D10(IS)	ISTD			I	
12	TM	Phenanthrene	1.156	1.160	0.32	TM	
13	TM	Anthracene	1.070	1.186	11	TM	
14	*TM	Fluoranthene	1.564	1.675	7.1	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.336	1.367	2.4	TM	
17	S	Surrogate Recovery (TPH)	0.8594	0.8749	1.8	S	
18	TM	Benz (a) anthracene	1.143	1.233	7.8	TM	
19	TM	Chrysene	1.235	1.262	2.2	TM	
20	TM	Indeno (1,2,3-cd) pyrene	1.134	1.235	8.9	TM	
21	I	Perylene-D12(IS)	ISTD			I	
22	TM	Benzo (b) fluoranthene	1.151	1.057	8.1	TM	
23	TML	Benzo (k) fluoranthene	0.9795	0.9922	1.3	TML	11
24	*TM	Benzo (a) pyrene	1.149	1.114	3.0	*TM	
25	TML	Dibenz (a,h) anthracene	0.9550	1.095	15	TML	0.43
26	TM	Benzo (g,h,i) perylene	1.038	0.9969	4.0	TM	
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			6.1		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161129\1129L021.D Vial: 21
Acq On : 30 Nov 16 00:25 Operator: MA
Sample : 5.0 ug/ml PAH 11/28/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Nov 30 9:17 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.89	136	2751	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	7.94	164	1441	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.89	188	2547	2.50000 ppb		0.01
15) Chrysene-D12(IS)	16.88	240	3278	2.50000 ppb		0.04
21) Perylene-D12(IS)	20.64	264	3020	2.50000 ppb		0.04
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.05	82	868	2.59501 ppb		0.00
Spiked Amount 5.000			Recovery = 51.900%			
7) Surrogate Recovery (FBP)	7.16	172	2324	2.50030 ppb		0.00
Spiked Amount 5.000			Recovery = 50.000%			
17) Surrogate Recovery (TPH)	13.90	244	2868	2.54522 ppb		0.02
Spiked Amount 5.000			Recovery = 50.900%			
Target Compounds						Qvalue
3) Naphthalene	5.92	128	5853	5.21505 ppb		100
4) 2-Methylnaphthalene	6.74	142	3832	5.46958 ppb		99
5) 1-Methylnaphthalene	6.84	142	3787	5.28415 ppb		97
8) Acenaphthylene	7.79	152	6286	5.31946 ppb		100
9) Acenaphthene	7.98	154	3677	5.16077 ppb		99
10) Fluorene	8.59	166	4292	5.22271 ppb		100
12) Phenanthrene	9.92	178	5907	5.01599 ppb		100
13) Anthracene	10.02	178	6040	5.54230 ppb		99
14) Fluoranthene	12.70	202	8532	5.35607 ppb		98
16) Pyrene	13.34	202	8965	5.11905 ppb		98
18) Benz (a) anthracene	16.85	228	8081	5.39223 ppb		99
19) Chrysene	16.95	228	8276	5.10927 ppb		100
20) Indeno (1,2,3-cd) pyrene	22.97	276	8098	5.44462 ppb	#	99
22) Benzo (b) fluoranthene	19.73	252	6387	4.59548 ppb		100
23) Benzo (k) fluoranthene	19.80	252	5993	4.44290 ppb		99
24) Benzo (a) pyrene	20.38	252	6729	4.84867 ppb		97
25) Dibenz (a,h) anthracene	23.02	278	6616	4.97867 ppb		99
26) Benzo (g,h,i) perylene	23.50	276	6021	4.80243 ppb		97

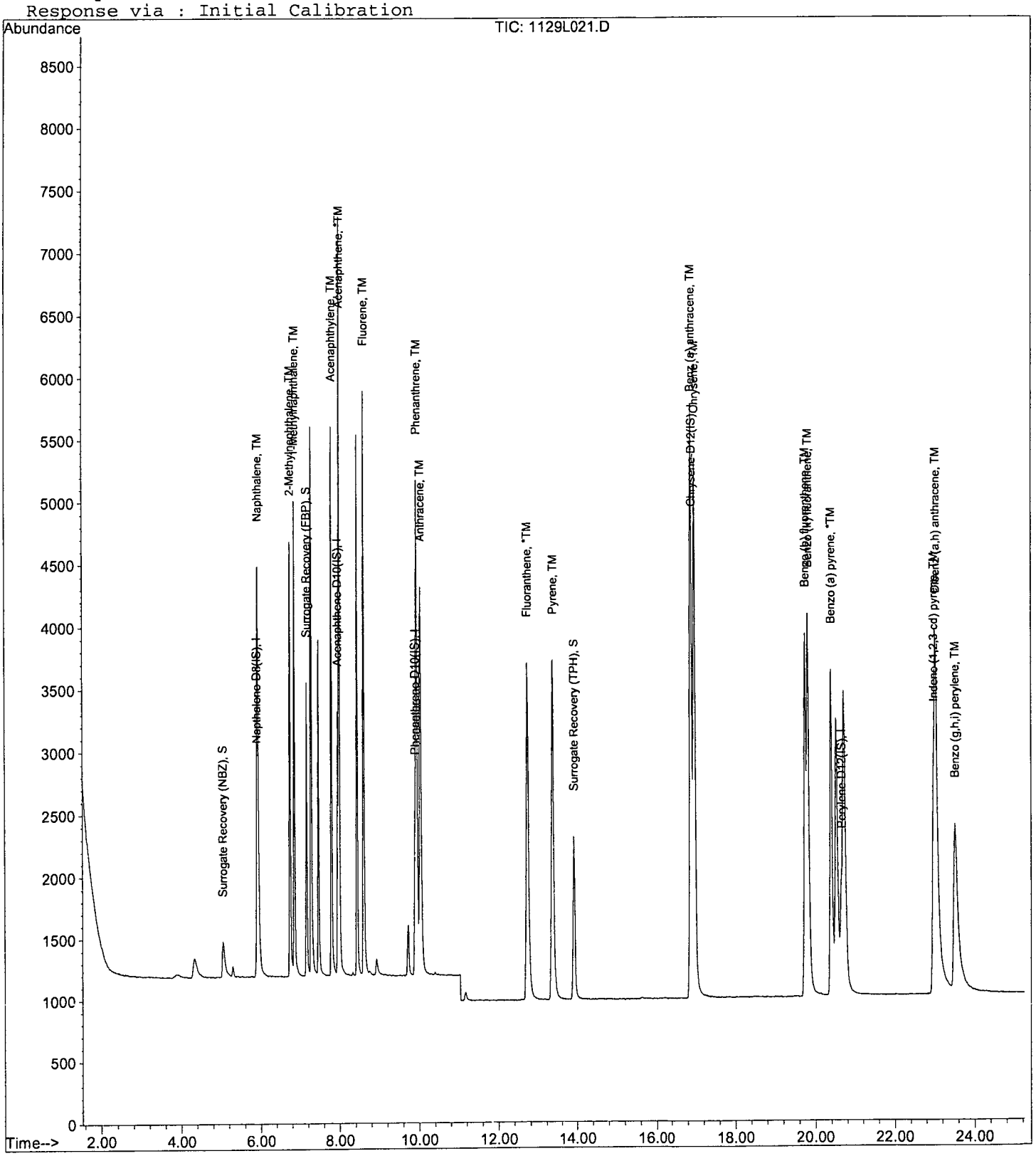
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161129\1129L021.D Vial: 21
Acq On : 30 Nov 16 00:25 Operator: MA
Sample : 5.0 ug/ml PAH 11/28/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Nov 30 9:17 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



ORGANICS

Raw Data

APPL, INC.

Method Blank

EPA 8270D SIM

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161118W-45866 - 214136**
Batch ID: #SIMDO-161118A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	11/18/16	11/29/16
BLANK	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	11/18/16	11/29/16
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	11/18/16	11/29/16
BLANK	SURROGATE: 2-FLUORBIPHENY	59.5	53-106			%	11/18/16	11/29/16
BLANK	SURROGATE: NITROBENZENE-	78.7	55-111			%	11/18/16	11/29/16
BLANK	SURROGATE: TERPHENYL-D14 (	93.2	58-132			%	11/18/16	11/29/16

Quant Method: L1026P.M
Run #: 1129L004
Instrument: Linus
Sequence: L161129
Initials: RHA

GC SC-Blank-REG MDLs-DOD
Printed: 11/30/16 12:55:43 PM

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161129\1129L004.D Vial: 4
Acq On : 29 Nov 16 15:50 Operator: MA
Sample : 161118A BLK 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Nov 30 9:43 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.89	136	2929	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	7.95	164	1546	2.50000	ppb	0.01
11) Phenanthrene-D10(IS)	9.90	188	2678	2.50000	ppb	0.02
15) Chrysene-D12(IS)	16.91	240	3290	2.50000	ppb	0.07
21) Perylene-D12(IS)	20.69	264	3019	2.50000	ppb	0.09
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.05	82	1394	3.93503	ppb	0.00
Spiked Amount 5.000			Recovery = 78.700%			
7) Surrogate Recovery (FBP)	7.16	172	2967	2.97528	ppb	0.00
Spiked Amount 5.000			Recovery = 59.500%			
17) Surrogate Recovery (TPH)	13.89	244	5270	4.65983	ppb	0.01
Spiked Amount 5.000			Recovery = 93.200%			

Target Compounds Qvalue

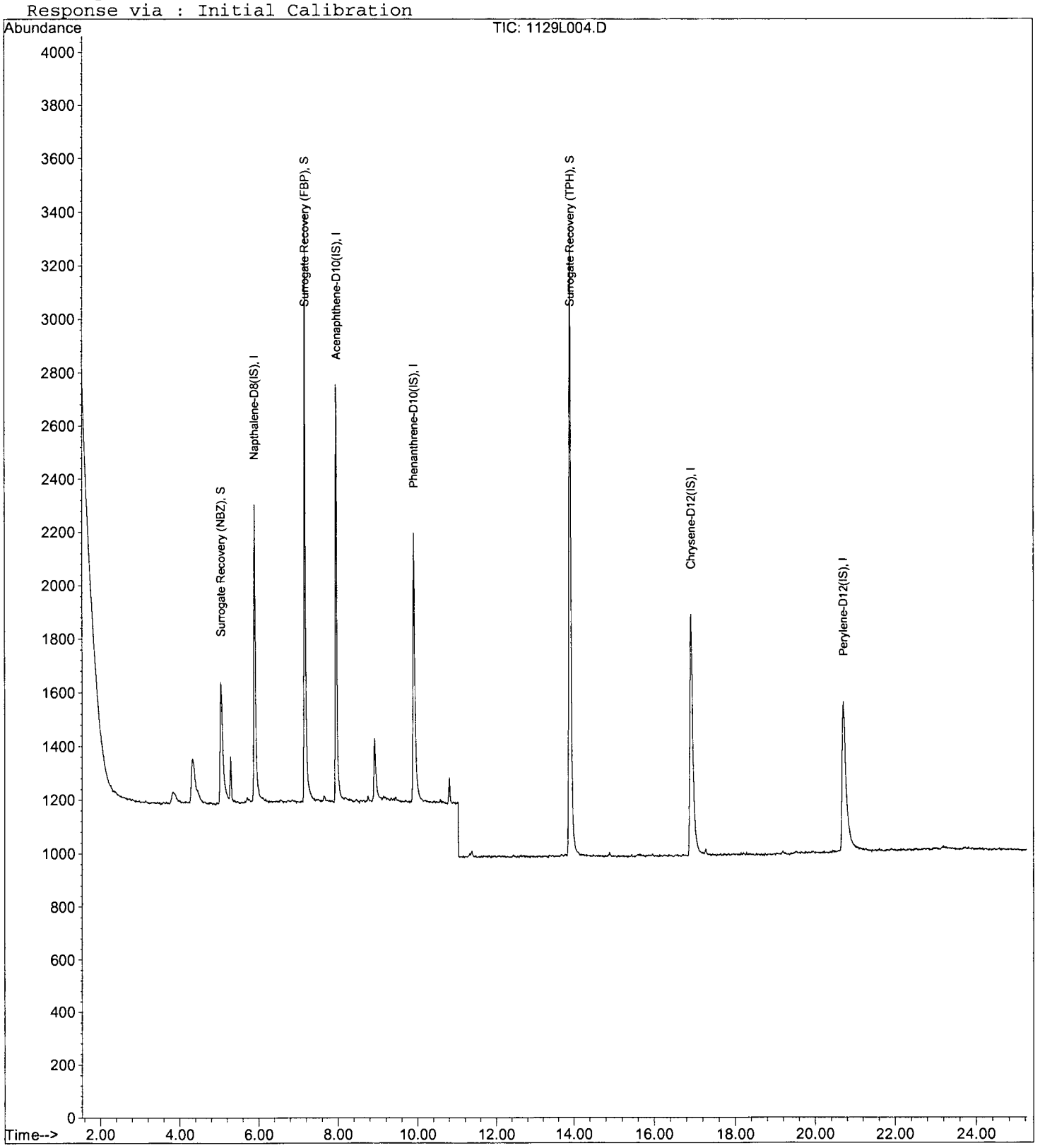
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161129\1129L004.D Vial: 4
Acq On : 29 Nov 16 15:50 Operator: MA
Sample : 161118A BLK 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Nov 30 9:43 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Laboratory Control Spike Recovery

EPA 8270D SIM

APPL ID: **161118W-45866 LCS - 214136**
Batch ID: #SIMDO-161118A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1-METHYLNAPHTHALENE	5.00	3.33	66.6	41-115
2-METHYLNAPHTHALENE	5.00	3.29	65.8	39-114
NAPHTHALENE	5.00	3.24	64.8	43-114
SURROGATE: 2-FLUORBIPHENYL (S)	5.00	2.92	58.4	53-106
SURROGATE: NITROBENZENE-D5 (S)	5.00	3.77	75.4	55-111
SURROGATE: TERPHENYL-D14 (S)	5.00	3.97	79.4	58-132

Comments: _____

Primary	SPK
Quant Method :	L1026P.M
Extraction Date :	11/18/16
Analysis Date :	11/23/16
Instrument :	Linus
Run :	1026L318
Initials :	RHA

Printed: 11/30/16 12:55:37 PM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L318.D Vial: 18
Acq On : 23 Nov 16 18:05 Operator: MA
Sample : 161118A LCS-1 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Nov 28 8:44 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

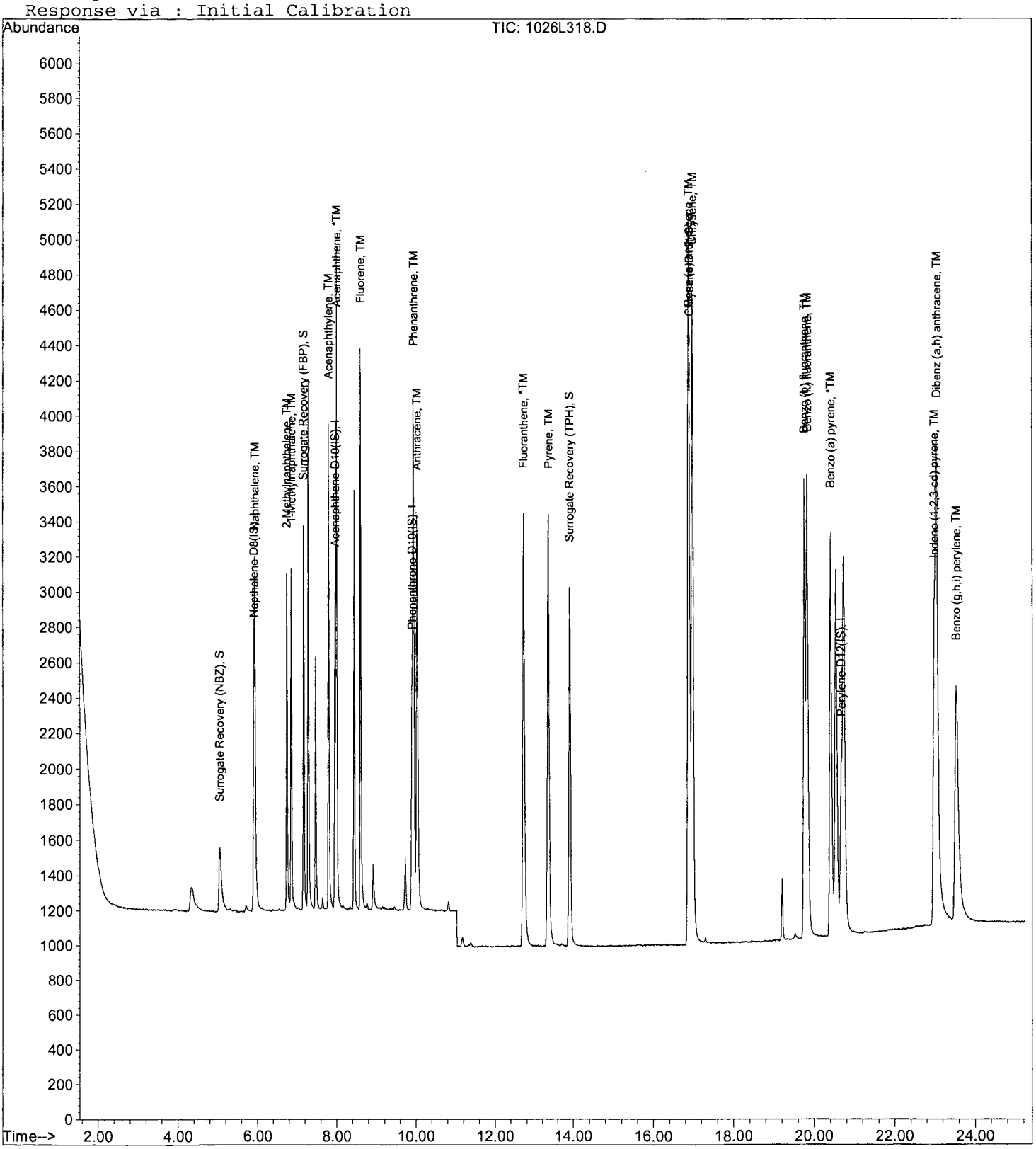
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.90	136	2312	2.50000	ppb		0.01
6) Acenaphthene-D10(IS)	7.95	164	1218	2.50000	ppb		0.01
11) Phenanthrene-D10(IS)	9.90	188	2242	2.50000	ppb		0.02
15) Chrysene-D12(IS)	16.89	240	2937	2.50000	ppb		0.05
21) Perylene-D12(IS)	20.66	264	2754	2.50000	ppb		0.06
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.05	82	1056	3.77478	ppb		0.00
Spiked Amount 5.000			Recovery = 75.500%				
7) Surrogate Recovery (FBP)	7.16	172	2292	2.91734	ppb		0.00
Spiked Amount 5.000			Recovery = 58.340%				
17) Surrogate Recovery (TPH)	13.90	244	4010	3.97187	ppb		0.02
Spiked Amount 5.000			Recovery = 79.440%				
Target Compounds							Qvalue
3) Naphthalene	5.93	128	3055	3.23887	ppb		100
4) 2-Methylnaphthalene	6.74	142	1940	3.29483	ppb		100
5) 1-Methylnaphthalene	6.86	142	2007	3.33219	ppb		100
8) Acenaphthylene	7.79	152	3832	3.83650	ppb		100
9) Acenaphthene	7.99	154	2179	3.61822	ppb		99
10) Fluorene	8.59	166	2791	4.01803	ppb		98
12) Phenanthrene	9.93	178	4178	4.03043	ppb		99
13) Anthracene	10.02	178	3931	4.09779	ppb		99
14) Fluoranthene	12.71	202	6474	4.61701	ppb		98
16) Pyrene	13.35	202	6738	4.29413	ppb		99
18) Benz (a) anthracene	16.87	228	6203	4.61966	ppb		99
19) Chrysene	16.96	228	6353	4.37746	ppb		100
20) Indeno (1,2,3-cd) pyrene	22.98	276	6432	4.82659	ppb	#	99
22) Benzo (b) fluoranthene	19.75	252	5362	4.23062	ppb		99
23) Benzo (k) fluoranthene	19.82	252	5202	4.22791	ppb		98
24) Benzo (a) pyrene	20.40	252	5420	4.28267	ppb		98
25) Dibenz (a,h) anthracene	23.04	278	5331	4.41009	ppb		99
26) Benzo (g,h,i) perylene	23.52	276	5087	4.44936	ppb		98

(#) = qualifier out of range (m) = manual integration

Data File : M:\LINUS\DATA\L161026\1026L318.D Vial: 18
Acq On : 23 Nov 16 18:05 Operator: MA
Sample : 161118A LCS-1 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

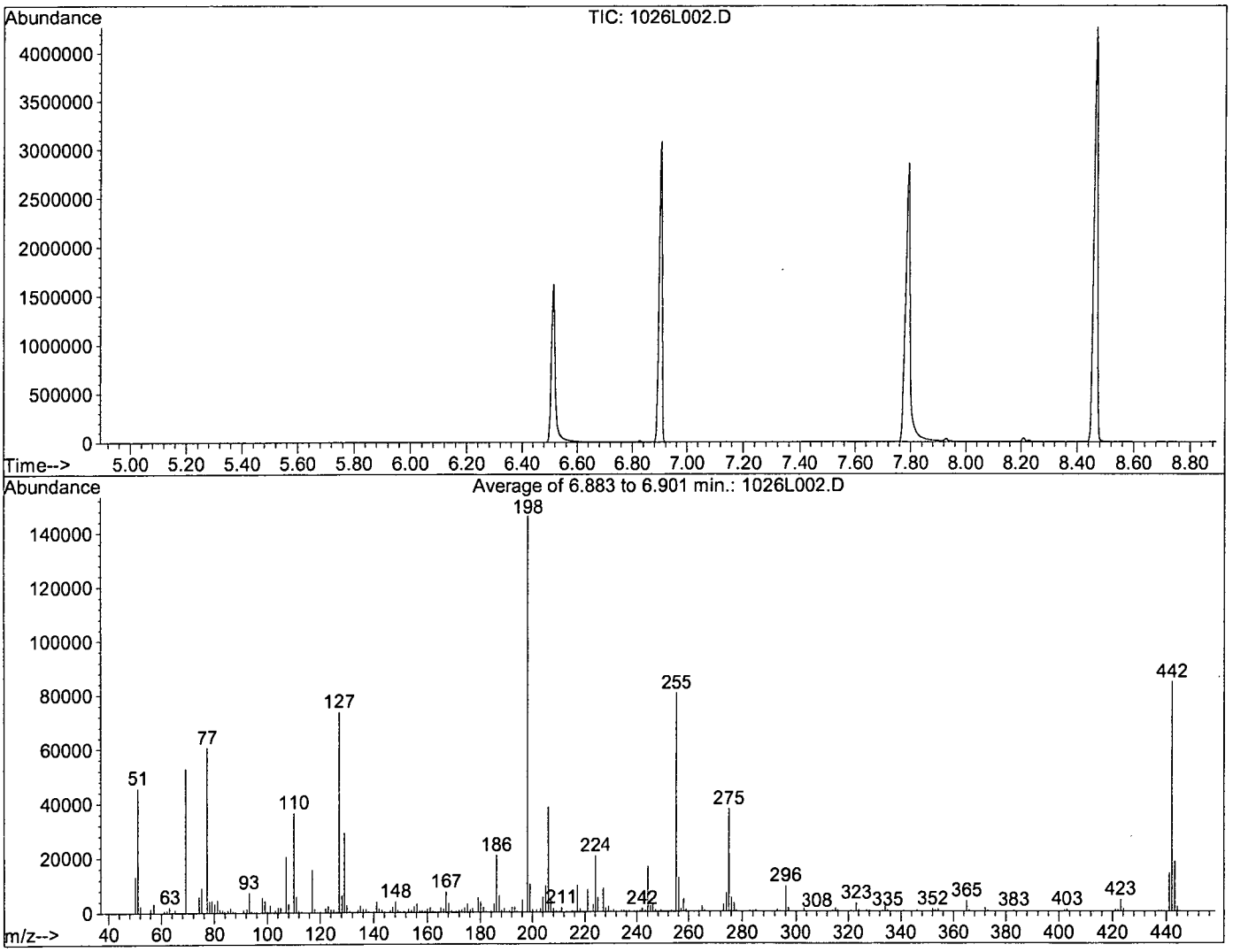
Quant Time: Nov 28 8:44 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Data File : M:\LINUS\DATA\L161026\1026L002.D Vial: 2
Acq On : 26 Oct 16 10:58 Operator: MA
Sample : SV TUNE 9/22/16 Inst : Linus
Misc : water Multiplr: 1.00

Method : M:\LINUS\DATA\L161026\DFTPP2.M (Chemstation Integrator)
Title :



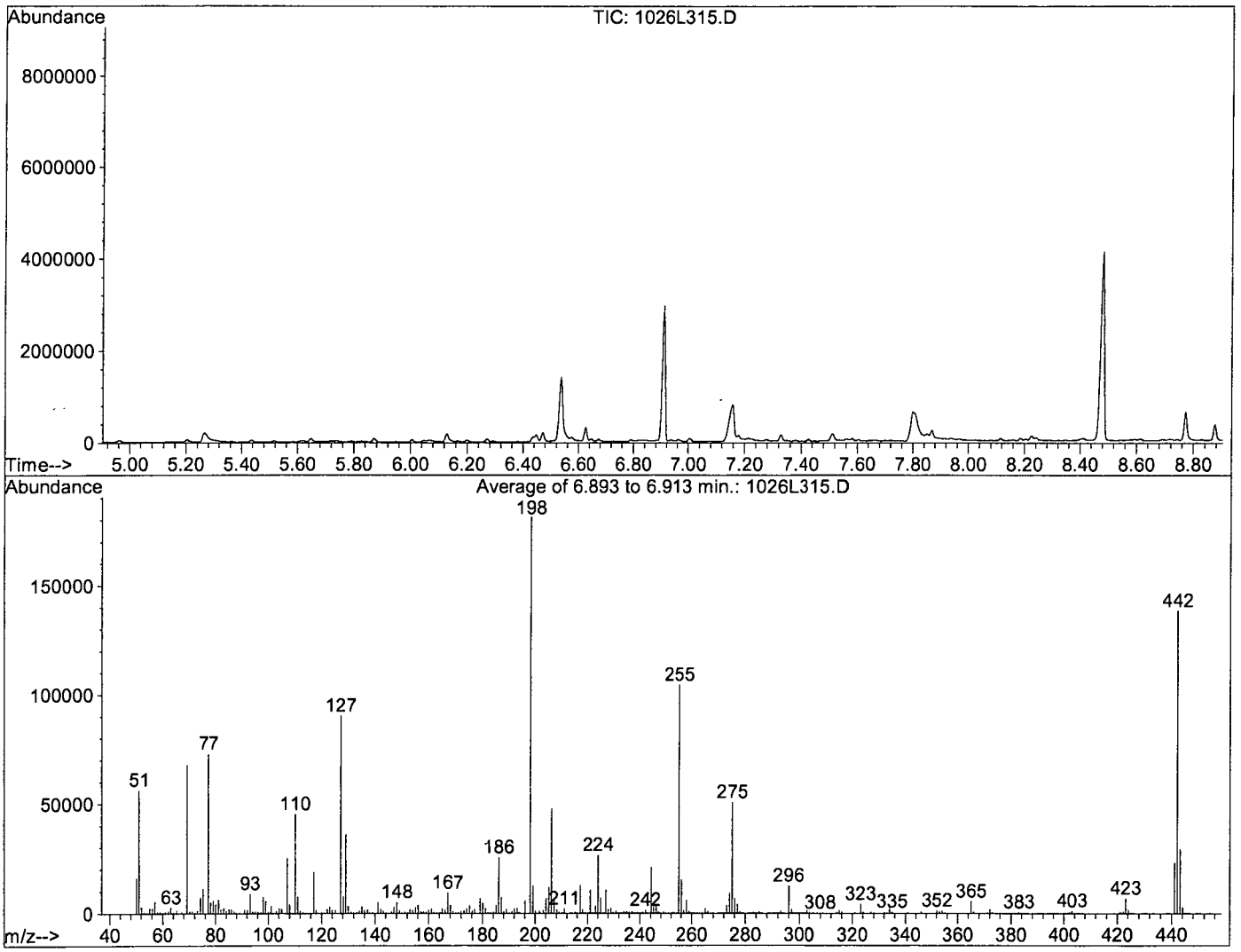
Spectrum Information: Average of 6.883 to 6.901 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	31.3	45754	PASS
68	69	0.00	2	0.0	0	PASS
69	69	100	100	100.0	52873	PASS
70	69	0.00	2	0.4	194	PASS
127	198	40	60	50.4	73640	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	146234	PASS
199	198	5	9	6.9	10141	PASS
275	198	10	30	25.7	37577	PASS
365	198	1	100	2.6	3776	PASS
441	443	0.01	100	76.7	13986	PASS
442	198	40	150	57.8	84489	PASS
443	442	17	23	21.6	18242	PASS

1026L002.D DFTPP2.M Wed Oct 26 16:35:21 2016

Data File : M:\LINUS\DATA\L161026\1026L315.D Vial: 15
Acq On : 23 Nov 16 16:46 Operator: MA
Sample : SV Tune 11/15/16 Inst : Linus
Misc : Multiplr: 1.00

Method : M:\LINUS\DATA\L161026\DFTPP2.M (Chemstation Integrator)
Title :



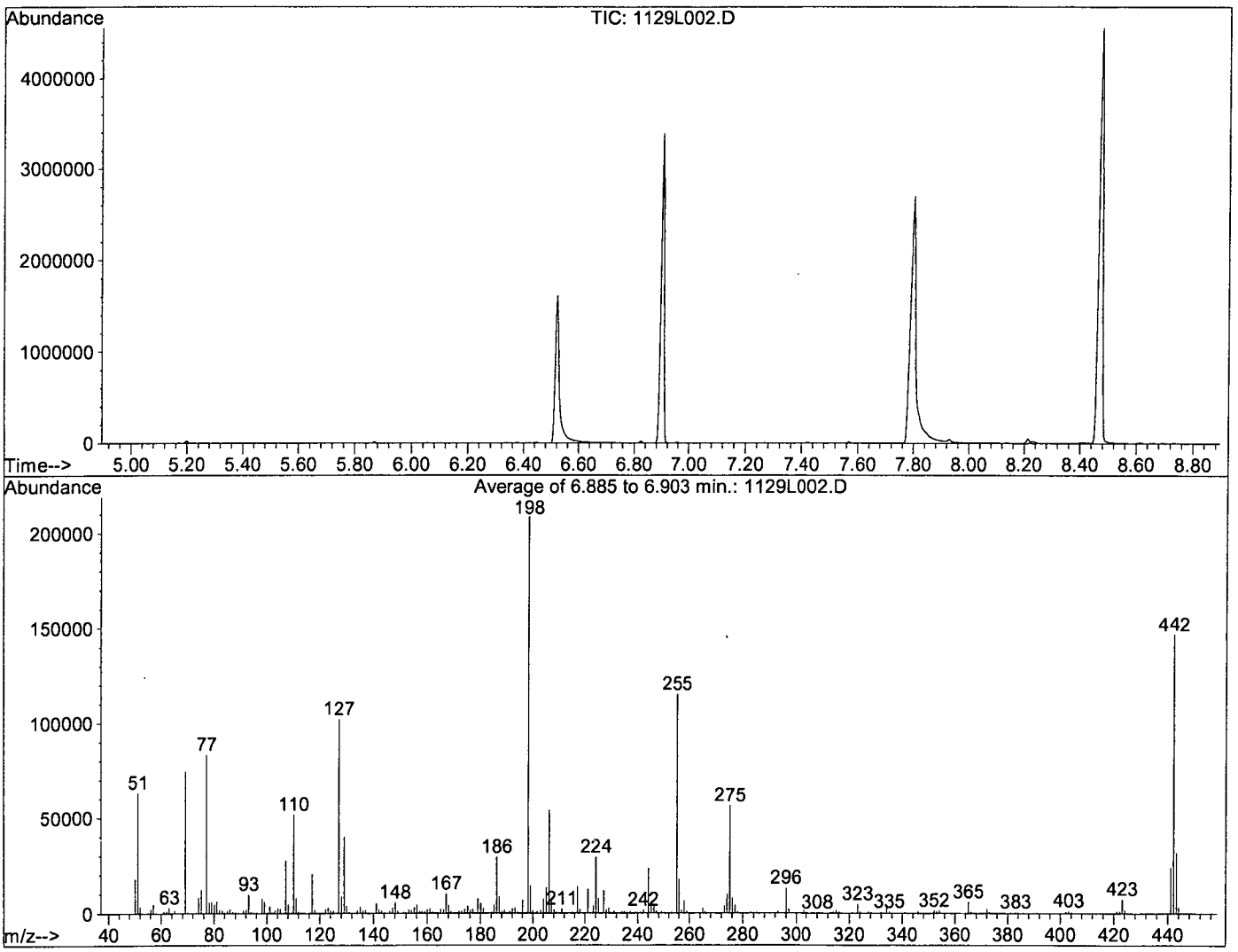
Spectrum Information: Average of 6.893 to 6.913 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	31.0	56286	PASS
68	69	0.00	2	0.0	0	PASS
69	69	100	100	100.0	67964	PASS
70	69	0.00	2	1.5	1008	PASS
127	198	40	60	49.8	90422	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	181637	PASS
199	198	5	9	6.9	12512	PASS
275	198	10	30	27.9	50648	PASS
365	198	1	100	2.9	5336	PASS
441	443	0.01	100	78.6	23035	PASS
442	198	40	150	76.2	138447	PASS
443	442	17	23	21.2	29298	PASS

1026L315.D DFTPP2.M Wed Nov 23 16:58:41 2016

Data File : M:\LINUS\DATA\L161129\1129L002.D Vial: 2
Acq On : 29 Nov 16 15:03 Operator: MA
Sample : SV TUNE 9/22/16 Inst : Linus
Misc : water Multiplr: 1.00

Method : M:\LINUS\DATA\L161026\DFTPP2.M (Chemstation Integrator)
Title :



Spectrum Information: Average of 6.885 to 6.903 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	30.3	63248	PASS
68	69	0.00	2	0.0	0	PASS
69	69	100	100	100.0	74577	PASS
70	69	0.00	2	0.5	410	PASS
127	198	40	60	48.9	102048	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	208746	PASS
199	198	5	9	6.8	14279	PASS
275	198	10	30	26.9	56225	PASS
365	198	1	100	2.8	5768	PASS
441	443	0.01	100	75.2	23822	PASS
442	198	40	150	70.2	146636	PASS
443	442	17	23	21.6	31677	PASS

1129L002.D DFTPP2.M Tue Nov 29 15:16:08 2016

8270 PAH SIM Standard Curve

PREP DATE:	10/26/16 RH												
8270 PAH SIM STANDARD CURVE													
Exp.DATE:	**12/20/16**					**0.1**	**0.2**	**0.5**	**1**	**5**	**10**	**50**	**100**
		Conc.		Date									
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL	µL	µL	µL	µL	µL
O2si	8270 PAH SIM S	200	278353-36992	9/12/16	9/12/17	0	0	0	0	5	5	25	50
	5.0ug/mL	5		9/12/16	7/29/17	0	0	10	20	0	0	0	0
	1.0ug/mL	1		9/12/16	7/29/17	10	20	0	0	0	0	0	0
O2SI	BNA SURR.	100/200		10/18/16	1/18/17	0	0	0	0	5	5	25	50
EM Science	Methylene Chloride		56061			90	80	90	80	190	90	50	0
Supelco	SV Internal St	2000	XA14020V-36768	10/10/16	10/10/17	2	2	2	2	4	2	2	2
				Final Vol.		102	102	102	102	204	102	102	102

8270 PAH SIM 2ND SRC

8270 PAH SIM 2ND SRC			Prep: 09/06/16 Exp 01/12/17 RH		
Supplier	**Standard**	**Conc.**	**Prep**	**Exp**	**µL**
O2SI	8270 2ND SRC	VARIOUS	06/03/16	01/21/17	25
	Methylene Chloride				75
o2si	8V Internal Standar	2000	10/10/16	10/10/17	2
LOT#	XA10079V-35507			Final Vol.	102

8270 SIM PAH Internal Standard						
PREP DATE:	10/10/16 RH.					
8270 SIM PAH Internal Standard Mix 125ug/ml						
Exp.DATE:	10/10/17					
		Conc.		Date	Exp.	125
Supplier	ID #	µg/mL	Lot #	Code	Date	µL
Supelco	SV Internal	2000	XA14020V-36768	10/10/16	10/10/17	350
EM Science	Methylene Chloride		56061			5250
				Final Vol.		5600

PAH SIM STD prep: 09/12/16-R.H.						
Exp:	19/12/17					
		Conc.				
Supplier	ID #	mg/L	Lot #	Open Date	Exp.Date	µL
o2si	110780-01	200	278353-36992	6/22/16	6/22/17	1000
				Fin Vol.		1000

8270 Surrog Mix 100/200ppm						
Prep: 10/18/16 -RH Ex: 01/18/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
8270 Acid Surrog Mix	10000 ug/ml	Restek Cat# 33029 Lot# A0118884-36874 Op: 10/03/16 EX: 10/03/17	2.0 mL	100 mL	200 µg/mL	MC
8270 B/N surrog Mix	5000 µg/mL	Restek Cat# 31086 Lot# A0119223-36869 Op: 10/03/16 EX: 10/03/17	2.0 mL	100 mL	100 ug/mL	MC

SIM SPIKE	
CAT:	110780-01
Lot:	278353-36
OP: 10/21/16-R.H.	
EX: 10/21/17	

Semivolatile (SV) Tuning Solution -G.A.						
PREP DATE:	10/19/16	RH				
Semivolatile (SV) Tune Solution 50ug/ml						
Exp:	01/19/17					
		Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
Ultra Scient	Semivolatile	1000	N081628-37012	08/23/16	8/23/17	200
EM Science	Methylene Chloride		55098			3800
				Final Vol.		4000

Semivolatile (SV) Tuning Solution -G.A.						
PREP DATE:	11/15/16	RH				
Semivolatile (SV) Tune Solution 50ug/ml						
Exp:	8/26/17					
		Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
Ultra Scient	Semivolatile GC	1000	N081628-37012	08/23/16	8/23/17	200
EM Science	Methylene Chloride		55098			3800
				Final Vol.		4000

8270 PAH SIM Standard Curve

PREP DATE:	11/28/16 RH					
8270 PAH SIM STANDARD CURVE						
Exp.DATE:	**12/20/16**					**5**
		Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
O2si	8270 PAH SIM S	200	278353-36992	9/12/16	9/12/17	5
	5.0ug/mL	5		9/12/16	7/29/17	0
	1.0ug/mL	1		9/12/16	7/29/17	0
O2SI	BNA SURR.	100/200		11/7/16	12/23/16	5
EM Science	Methylene Chloride		56061			190
Supelco	SV Internal St	2000	XA14020V-36768	10/10/16	10/10/17	4
				Final Vol.		204

_SEP004S

Organic Extraction Worksheet

Method	SIM.Separatory.Funnel Extra 3510C	Extraction Set	161118A	Extraction Method	SEP004S	Units	mL

Spiked ID 1	PAH SIM Spike 10-21-16 exp 10-21-17		Surrogate ID 1	8270 Surrogate 11-7-16 exp 12-23-16	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	11/18/16 12:35	
Spiked ID 8			Ext. End Time:	11/19/16 9:10	
			GC Requires Extract By:	11/22/16 0:00	

pH1	2	11/18/16 12:55:00 PM	Water Bath Temp Criteria	75 °C
pH2	14	11/18/16 2:00:00 PM		
pH3				

Spiked By: KY **Date** 11/18/16 **Witnessed By:** JR **Date** 11/18/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	161118A Blk				0.050	1	1000	1	2/1	11/18/16 12:35	
						equip	E-WB6				
2	161118A LCS-1		0.0250	1	0.050	1	1000	1	2/1	11/18/16 12:35	
						equip	E-WB6				
3	AZ45866 MS-1	AZ45866W28	0.0250	1	0.050	1	1070	1	2/1	11/18/16 12:35	81492 1 WEEK
						equip	E-WB6				
4	AZ45866 MSD-1	AZ45866W34	0.0250	1	0.050	1	1070	1	2/1	11/18/16 12:35	81492 1 WEEK
						equip	E-WB6				
5	AZ45866	AZ45866W27			0.050	1	1070	1	2/1	11/18/16 12:35	81492 1 WEEK
						equip	E-WB6				
6	AZ45867	AZ45867W09			0.050	1	1050	1	2/1	11/18/16 12:35	81492 1 WEEK
						equip	E-WB6				
7	AZ45868	AZ45868W16			0.050	1	1070	1	2/1	11/18/16 12:35	81492 1 WEEK
						equip	E-WB6				
8	AZ45907	AZ45907W15			0.050	1	1000	1	2/1	11/18/16 12:35	81500 1 WEEK
						equip	E-WB6				
9	AZ45908	AZ45908W15			0.050	1	1070	1	2/1	11/18/16 12:35	81500 1 WEEK
						equip	E-WB6				
10	AZ45909	AZ45909W18			0.050	1	1070	1	2/1	11/18/16 12:35	81500 1 WEEK
						equip	E-WB6				
11	AZ45910	AZ45910W16			0.050	1	1050	1	2/1	11/18/16 12:35	81500 1 WEEK
						equip	E-WB6				
12	AZ45911	AZ45911W13			0.050	1	1060	1	2/1	11/18/16 12:35	81500 1 WEEK
						equip	e-wb6				
13	AZ45968	AZ45968W02			0.050	1	1070	1	2/1	11/18/16 12:35	81512
						equip	E-WB6				
14	AZ45970	AZ45970W02			0.050	1	1070	1	2/1	11/18/16 12:35	81512
						equip	E-WB6				
15	AZ45971	AZ45971W03			0.050	1	1070	1	2/1	11/18/16 12:35	81512
						equip	E-WB6				
16	AZ45972	AZ45972W02			0.050	1	1070	1	2/1	11/18/16 12:35	81512
						equip	E-WB6				

Solvent and Lot#	
+1 Acid	9-28-16
PH STRIP	HC 574756
MC	56153
A. Na2SO4	11-03-16
0N NaOH	10-27-16
3. Na2SO4	16C255214
FILTER PAPER	400112

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	GA
Date	11/21/16
Time	1000
Refrigerator	GC-C

	Technician's Initials
Scanned By	KY
Sample Preparation	KY,JR
Extraction	KY,JR
Concentration	KY

Modified	11/19/16 9:58:54 AM

Reviewed By: Kvr **Date** 11/19/16

11/19/16 9:59:01 AM

Ext_ID 53343

_SEP004S

Organic Extraction Worksheet

Method	SIM Separatory Funnel Extra 3510C	Extraction Set	161118A	Extraction Method	SEP004S	Units	mL

Spiked ID 1	PAH SIM Spike 10-21-16 exp 10-21-17		Surrogate ID 1	8270 Surrogate 11-7-16 exp 12-23-16	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	11/18/16 12:35	
Spiked ID 8			Ext. End Time:	11/19/16 9:10	
			GC Requires Extract By:	**11/22/16 0:00**	

pH1	2	1/18/16 12:55:00 PM	Water Bath Temp Criteria	75 °C
pH2	14	11/18/16 2:00:00 PM		
pH3				

Spiked By: KY **Date** 11/18/16 **Witnessed By:** JR **Date** 11/18/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
17	AZ45973	AZ45973W01			0.050	1	1070	1	2/1	11/18/16 12:35	81512
						equip	E-WB6				

KS 11/19/16

Solvent and Lot#	
1+1 Acid	9-28-16
PH STRIP	HC 574756
MC	56153
A. Na2SO4	11-03-16
10N NaOH	10-27-16
B. Na2SO4	16C255214
FILTER PAPER	400112

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	
Date	
Time	
Refrigerator	

	Technician's Initials
Scanned By	KY
Sample Preparation	KY,JR
Extraction	KY,JR
Concentration	KY

Modified	11/19/16 9:58:54 AM

Reviewed By: KS **Date** 11/19/16

Injection Log

Directory: M:\LINUS\DATA\L161026\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	1026L002.D	1	SV TUNE 9/22/16	water	26 Oct 16 10:58
2	3	1026L003.D	1	0.1 ug/ml PAH 10/26/16	water	26 Oct 16 11:23
3	4	1026L004.D	1	0.2 ug/ml PAH 10/26/16	water	26 Oct 16 11:56
4	5	1026L005.D	1	0.5 ug/ml PAH 10/26/16	water	26 Oct 16 12:28
5	6	1026L006.D	1	1.0 ug/ml PAH 10/26/16 (1)	water	26 Oct 16 13:01
6	7	1026L007.D	1	5.0 ug/ml PAH 10/26/16	water	26 Oct 16 13:33
7	8	1026L008.D	1	10.0 ug/ml PAH 10/26/16	water	26 Oct 16 14:05
8	9	1026L009.D	1	50.0 ug/ml PAH 10/26/16	water	26 Oct 16 14:37
9	10	1026L010.D	1	100.0 ug/ml PAH 10/26/16	water	26 Oct 16 15:09
10	11	1026L011.D	1	SS PAH 10/26/16	water	26 Oct 16 15:42
11	15	1026L315.D	1	SV Tune 11/15/16		23 Nov 16 16:46
12	16	1026L316.D	1	2.5 ug/ml PAH 10/26/16 (2)		23 Nov 16 17:01
13	18	1026L318.D	1	161118A LCS-1 1/1000	water	23 Nov 16 18:05
14	25	1026L325.D	0.934579	AZ45908W15 1/1070	water	23 Nov 16 21:51
15	26	1026L326.D	0.934579	AZ45909W18 1/1070	water	23 Nov 16 22:23
16	27	1026L327.D	0.952381	AZ45910W16 1/1050	water	23 Nov 16 22:55
17	28	1026L328.D	0.943396	AZ45911W13 1/1060	water	23 Nov 16 23:27
18	38	1026L338.D	1	2.5 ug/ml PAH 10/26/16 (2)		24 Nov 16 4:16
19	2	1129L002.D	1	SV TUNE 9/22/16	water	29 Nov 16 15:03
20	3	1129L003.D	1	5.0 ug/ml PAH 11/28/16	water	29 Nov 16 15:19
21	4	1129L004.D	1	161118A BLK 1/1000	water	29 Nov 16 15:50
22	8	1129L008.D	1	AZ45907W15 1/1000	water	29 Nov 16 17:58
23	21	1129L021.D	1	5.0 ug/ml PAH 11/28/16	water	30 Nov 16 00:25

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank

EPA 8270D WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161117W-45866 - 214093**
Batch ID: #87DC5-161117A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	11/17/16	11/28/16
BLANK	SURROGATE: 2,4,6-TRIBROMOP	67.7	43-140			%	11/17/16	11/28/16
BLANK	SURROGATE: 2-FLUORBIPHENY	64.9	44-119			%	11/17/16	11/28/16
BLANK	SURROGATE: 2-FLUOROPHENO	48.9	19-119			%	11/17/16	11/28/16
BLANK	SURROGATE: NITROBENZENE-	65.4	44-120			%	11/17/16	11/28/16
BLANK	SURROGATE: PHENOL-D6 (S)	29.6	10-115			%	11/17/16	11/28/16
BLANK	SURROGATE: TERPHENYL-D14 (	68.4	50-134			%	11/17/16	11/28/16

Quant Method:Y1117.M
Run #:1117Y117
Instrument:Yoda
Sequence:Y161117
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 11/29/16 12:43:36 PM

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81500

Case No: 81500 Date Analyzed: 11/28/16

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2,4,6-TRIBROMOPHENOL (S)			SURROGATE: 2-FLUORBIPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161117A-BLK	Blank	43-140	67.7		44-119	64.9	
161117A-LCS	Lab Control Spike	43-140	73.0		44-119	69.1	
AZ45907	ERH117	43-140	64.8		44-119	60.2	
AZ45908	ERH121	43-140	62.9		44-119	58.7	
AZ45909	ERH122	43-140	65.2		44-119	60.7	
AZ45910	ERH126	43-140	64.5		44-119	61.6	
AZ45911	ERH128	43-140	68.2		44-119	64.7	

Comments: Batch: #87DC5-161117A

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81500

Case No: 81500 Date Analyzed: 11/28/16

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2-FLUOROPHENOL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161117A-BLK	Blank	19-119	48.9		44-120	65.4	
161117A-LCS	Lab Control Spike	19-119	46.8		44-120	68.6	
AZ45907	ERH117	19-119	40.5		44-120	58.8	
AZ45908	ERH121	19-119	36.1		44-120	58.3	
AZ45909	ERH122	19-119	36.7		44-120	59.6	
AZ45910	ERH126	19-119	39.2		44-120	61.1	
AZ45911	ERH128	19-119	40.3		44-120	62.2	

Comments: Batch: #87DC5-161117A

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81500

Case No: 81500 Date Analyzed: 11/28/16

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: PHENOL-D6 (S)			SURROGATE: TERPHENYL-D14 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161117A-BLK	Blank	10-115	29.6		50-134	68.4	
161117A-LCS	Lab Control Spike	10-115	28.1		50-134	71.8	
AZ45907	ERH117	10-115	23.4		50-134	61.8	
AZ45908	ERH121	10-115	20.5		50-134	62.1	
AZ45909	ERH122	10-115	21.3		50-134	63.5	
AZ45910	ERH126	10-115	22.4		50-134	63.3	
AZ45911	ERH128	10-115	23.1		50-134	66.4	

Comments: Batch: #87DC5-161117A

Laboratory Control Spike Recovery
EPA 8270D WATER

APPL ID: **161117W-45866 LCS - 214093**
Batch ID: #87DC5-161117A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
PHENOL	50.0	17.7	35.4	10-115
SURROGATE: 2,4,6-TRIBROMOPHENOL	200	146	73.0	43-140
SURROGATE: 2-FLUORBIPHENYL (S)	100	69.1	69.1	44-119
SURROGATE: 2-FLUOROPHENOL (S)	200	93.6	46.8	19-119
SURROGATE: NITROBENZENE-D5 (S)	100	68.6	68.6	44-120
SURROGATE: PHENOL-D6 (S)	200	56.2	28.1	10-115
SURROGATE: TERPHENYL-D14 (S)	100	71.8	71.8	50-134

Comments: _____

Primary	SPK
Quant Method :	Y1117.M
Extraction Date :	11/17/16
Analysis Date :	11/28/16
Instrument :	Yoda
Run :	1117Y118
Initials :	MA

Printed: 11/29/16 12:43:40 PM
APPL Standard LCS

EPA 8270D

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81500

Case No: 81500 Date Analyzed: 11/28/16

Matrix: WATER Instrument: Yoda

Blank ID: 161117A-BLK Time Analyzed: 1111

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161117A-BLK	Blank	1117Y117	11/28/16 1111
161117A-LCS	Lab Control Spike	1117Y118	11/28/16 1141
AZ45907	ERH117	1117Y125	11/28/16 1508
AZ45908	ERH121	1117Y126	11/28/16 1537
AZ45909	ERH122	1117Y127	11/28/16 1607
AZ45910	ERH126	1117Y128	11/28/16 1636
AZ45911	ERH128	1117Y129	11/28/16 1706

Comments: Batch: #87DC5-161117A

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: Water
ID: SV Tune 10/19/16

SDG No: 81500
Date Analyzed: 11/17/16
Instrument: Yoda
Time Analyzed: 11:17

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		5ug/ml SVOC 11/15/16	1117Y003.D	11/17/16 11:32
2		10ug/ml SVOC 11/15/1	1117Y004.D	11/17/16 12:02
3		20ug/ml SVOC 11/15/1	1117Y005.D	11/17/16 12:31
4		40ug/ml SVOC 11/15/1	1117Y006.D	11/17/16 13:00
5		50ug/ml SVOC 11/15/1	1117Y007.D	11/17/16 13:29
6		60ug/ml SVOC 11/15/1	1117Y008.D	11/17/16 13:59
7		80ug/ml SVOC 11/15/1	1117Y009.D	11/17/16 14:28
8		100ug/ml SVOC 11/15/	1117Y010.D	11/17/16 14:58
9		2ND SRC SVOC 11/15/1	1117Y011.D	11/17/16 15:27
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	45.2
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.1
127	40 - 60% of mass 198	57.0
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 197.95	100.0
199	5 - 9% of mass 198	6.1
275	10 - 30% of mass 198	22.5
365	1 - 100% of mass 198	3.4
441	0.01 - 100% of mass 443	80.8
442	50 - 150% of mass 197.95	91.2
443	17 - 23% of mass 442	20.4

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81500
Matrix: Water
ID: SV Tune 11/15/16

SDG No: 81500
Date Analyzed: 11/28/16
Instrument: Yoda
Time Analyzed: 9:47

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		50ug/ml SVOC 11/15/1	1117Y116.D	11/28/16 10:42
2	Blank	161117A BLK 1/1000	1117Y117.D	11/28/16 11:11
3	Lab Control Spike	161117A LCS-1 1/1000	1117Y118.D	11/28/16 11:41
4	ERH117	AZ45907W11 1/1070	1117Y125.D	11/28/16 15:08
5	ERH121	AZ45908W16 1/1070	1117Y126.D	11/28/16 15:37
6	ERH122	AZ45909W16 1/1070	1117Y127.D	11/28/16 16:07
7	ERH126	AZ45910W14 1/1070	1117Y128.D	11/28/16 16:36
8	ERH128	AZ45911W16 1/1070	1117Y129.D	11/28/16 17:06
9		50ug/ml SVOC 11/15/1	1117Y139.D	11/28/16 21:26
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	45.4
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.5
127	40 - 60% of mass 198	54.8
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 197.95	100.0
199	5 - 9% of mass 198	6.1
275	10 - 30% of mass 198	23.1
365	1 - 100% of mass 198	3.4
441	0.01 - 100% of mass 443	83.1
442	50 - 150% of mass 197.95	91.6
443	17 - 23% of mass 442	19.9

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81500

Lab File ID (Standard): 1117Y007.D Date Analyzed: 11/17/16

Instrument ID: Yoda Time Analyzed: 13:29

GC Column: ID: Heated Purge: (Y/N)

		1,4-dichlorobenzene-D4(IS)		Napthalene-D8(IS)		Acenaphthene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	181943	5.04	778154	6.46	463295	8.47
	UPPER LIMIT	363886	5.54	1556308	6.96	926590	8.97
	LOWER LIMIT	90972	4.54	389077	5.96	231648	7.97
	SAMPLE NO.						
01	50ug/ml SVOC 11/15/16	137102	5.03	602305	6.46	371946	8.47
02	161117A BLK 1/1000	157544	5.03	722959	6.46	436863	8.47
03	161117A LCS-1 1/1000	160801	5.03	707138	6.45	427668	8.47
04	AZ45907W11 1/1070	165831	5.04	755781	6.46	447945	8.46
05	AZ45908W16 1/1070	171221	5.04	742659	6.46	445647	8.46
06	AZ45909W16 1/1070	167066	5.04	727105	6.46	437896	8.46
07	AZ45910W14 1/1070	167257	5.03	719598	6.46	432711	8.47
08	AZ45911W16 1/1070	162029	5.03	711825	6.46	421485	8.46
09	50ug/ml SVOC 11/15/16	137005	5.03	602961	6.46	369334	8.47
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81500

Lab File ID (Standard): 1117Y007.D Date Analyzed: 11/17/16

Instrument ID: Yoda Time Analyzed: 13:29

GC Column: ID: Heated Purge: (Y/N)

		Phenanthrene-D10(IS)		Chrysene-D12(IS)		Perylene-D12(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	862854	10.20	815722	13.29	770325	14.98
	UPPER LIMIT	1725708	10.70	1631444	13.79	1540650	15.48
	LOWER LIMIT	431427	9.70	407861	12.79	385163	14.48
	SAMPLE NO.						
01	50ug/ml SVOC 11/15/16	674600	10.20	658175	13.28	614866	14.98
02	161117A BLK 1/1000	810106	10.19	800344	13.27	749060	14.97
03	161117A LCS-1 1/1000	803473	10.19	803295	13.28	735927	14.97
04	AZ45907W11 1/1070	837583	10.19	845074	13.28	774884	14.97
05	AZ45908W16 1/1070	830959	10.19	820614	13.27	774508	14.97
06	AZ45909W16 1/1070	824923	10.19	811018	13.27	749100	14.97
07	AZ45910W14 1/1070	818902	10.19	815510	13.27	750133	14.97
08	AZ45911W16 1/1070	800841	10.19	790743	13.28	721047	14.97
09	50ug/ml SVOC 11/15/16	673860	10.19	677907	13.28	616110	14.97
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

ORGANICS

Sample Data

APPL, INC.

EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH117
Sample Collection Date: 11/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81500
APPL ID: AZ45907
QCG: #87DC5-161117A-214093

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	11/17/16	11/28/16
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	64.8	43-140			%	11/17/16	11/28/16
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	60.2	44-119			%	11/17/16	11/28/16
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	40.5	19-119			%	11/17/16	11/28/16
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	58.8	44-120			%	11/17/16	11/28/16
EPA 8270D	SURROGATE: PHENOL-D6 (S)	23.4	10-115			%	11/17/16	11/28/16
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	61.8	50-134			%	11/17/16	11/28/16

Quant Method: Y1117.M
Run #: 1117Y125
Instrument: Yoda
Sequence: Y161117
Dilution Factor: 1
Initials: MA

Printed: 11/29/16 12:44:03 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y125.D Vial: 25
Acq On : 28 Nov 16 15:08 Operator: MA
Sample : AZ45907W11 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Nov 28 15:34 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	165831	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.46	136	755781	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.46	164	447945	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.19	188	837583	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.28	240	845074	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.97	264	774884	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.54	112	422056	75.78899 ppb	0.00
Spiked Amount 186.916			Recovery =	40.547%	
5) Phenol-D6 (S)	4.68	99	341747	43.73321 ppb	0.00
Spiked Amount 186.916			Recovery =	23.397%	
21) Nitrobenzene-D5(S)	5.66	82	465599	54.97950 ppb	0.00
Spiked Amount 93.458			Recovery =	58.829%	
45) 2-Fluorobiphenyl(S)	7.69	172	859153	56.28192 ppb	0.00
Spiked Amount 93.458			Recovery =	60.222%	
63) 2,4,6-Tribromophenol(S)	9.40	330	283714	121.06970 ppb	0.00
Spiked Amount 186.916			Recovery =	64.772%	
81) Terphenyl-D14(S)	12.06	244	1185023	57.72543 ppb	0.00
Spiked Amount 93.458			Recovery =	61.766%	

Target Compounds Qvalue

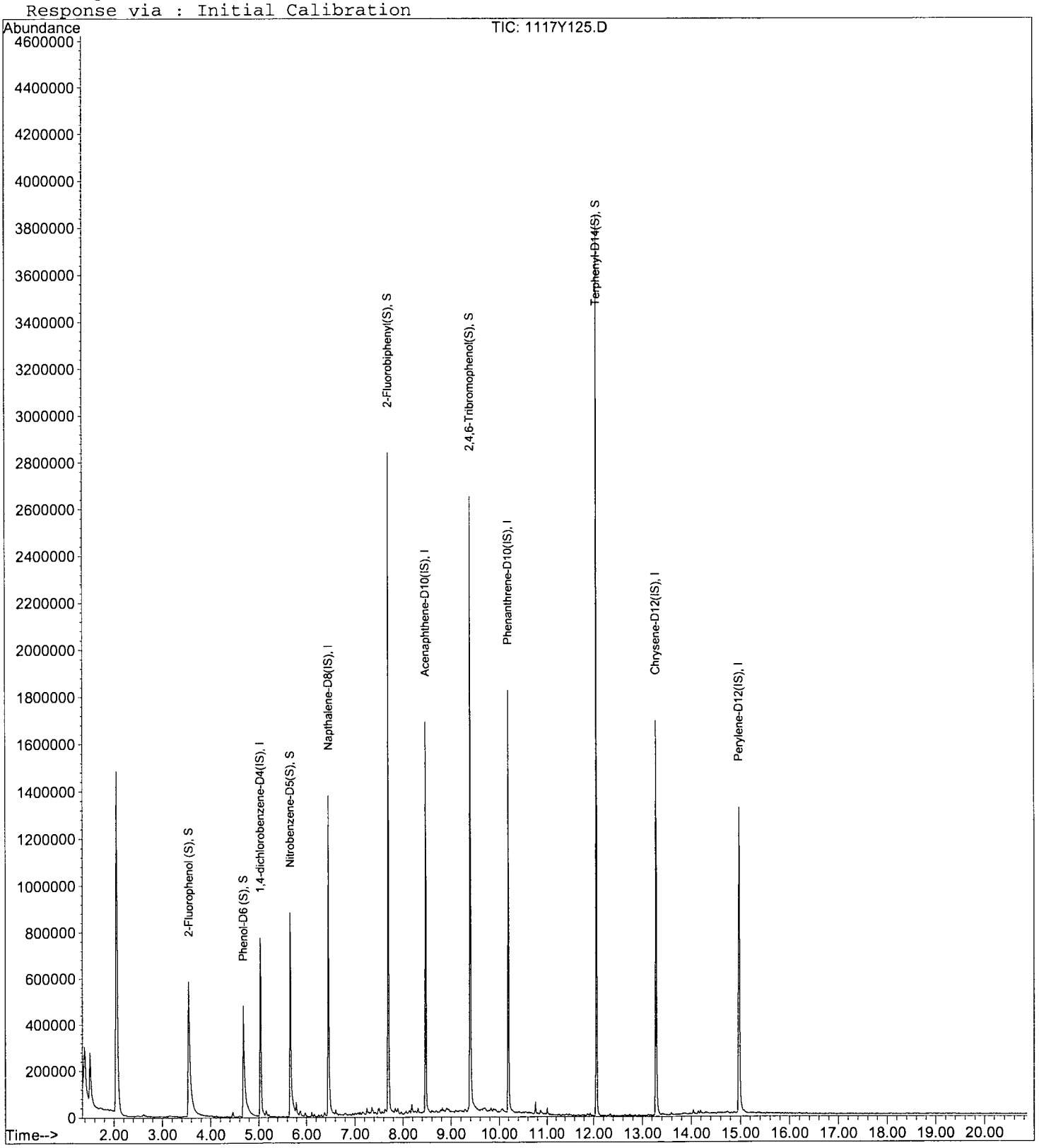
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y125.D Vial: 25
Acq On : 28 Nov 16 15:08 Operator: MA
Sample : AZ45907W11 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Nov 28 15:34 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration



EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH121
Sample Collection Date: 11/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81500
APPL ID: AZ45908
QCG: #87DC5-161117A-214093

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	11/17/16	11/28/16
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	62.9	43-140			%	11/17/16	11/28/16
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	58.7	44-119			%	11/17/16	11/28/16
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	36.1	19-119			%	11/17/16	11/28/16
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	58.3	44-120			%	11/17/16	11/28/16
EPA 8270D	SURROGATE: PHENOL-D6 (S)	20.5	10-115			%	11/17/16	11/28/16
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	62.1	50-134			%	11/17/16	11/28/16

Quant Method: Y1117.M
Run #: 1117Y126
Instrument: Yoda
Sequence: Y161117
Dilution Factor: 1
Initials: MA

Printed: 11/29/16 12:44:03 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y126.D Vial: 26
Acq On : 28 Nov 16 15:37 Operator: MA
Sample : AZ45908W16 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Nov 28 16:56 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	171221	40.00000	ppb	0.00
20) Napthalene-D8(IS)	6.46	136	742659	40.00000	ppb	0.00
40) Acenaphthene-D10(IS)	8.46	164	445647	40.00000	ppb	0.00
64) Phenanthrene-D10(IS)	10.19	188	830959	40.00000	ppb	0.00
78) Chrysene-D12(IS)	13.27	240	820614	40.00000	ppb	-0.02
88) Perylene-D12(IS)	14.97	264	774508	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.54	112	387662	67.42143	ppb	0.00
Spiked Amount 186.916			Recovery = 36.070%			
5) Phenol-D6 (S)	4.68	99	308782	38.27078	ppb	0.00
Spiked Amount 186.916			Recovery = 20.475%			
21) Nitrobenzene-D5(S)	5.66	82	453628	54.51238	ppb	0.00
Spiked Amount 93.458			Recovery = 58.328%			
45) 2-Fluorobiphenyl(S)	7.69	172	833768	54.90063	ppb	0.00
Spiked Amount 93.458			Recovery = 58.744%			
63) 2,4,6-Tribromophenol(S)	9.39	330	274286	117.65003	ppb	0.00
Spiked Amount 186.916			Recovery = 62.943%			
81) Terphenyl-D14(S)	12.06	244	1157371	58.05890	ppb	0.00
Spiked Amount 93.458			Recovery = 62.123%			

Target Compounds Qvalue

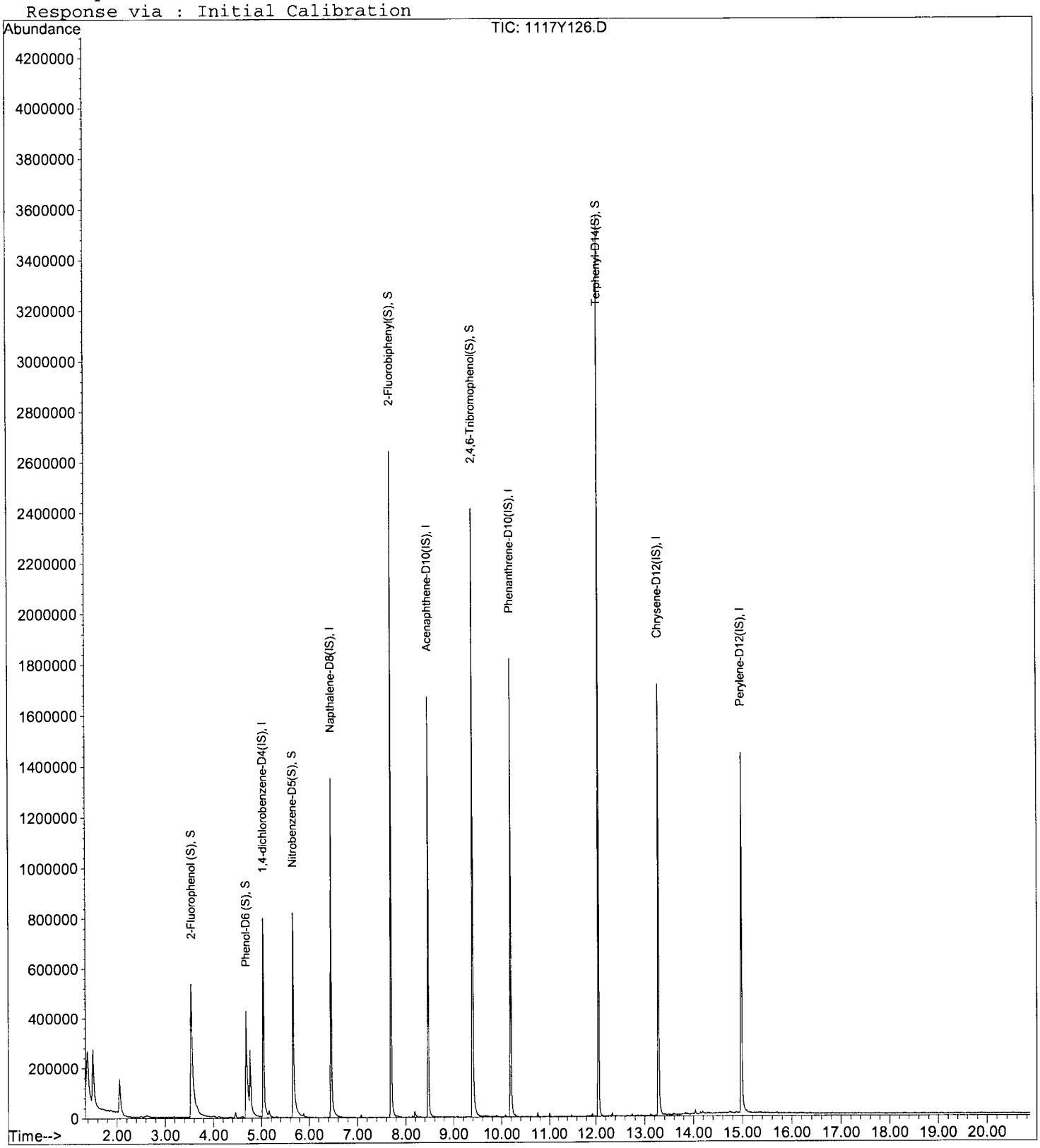
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y126.D Vial: 26
Acq On : 28 Nov 16 15:37 Operator: MA
Sample : AZ45908W16 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Nov 28 16:56 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration



EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH122
Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81500
APPL ID: AZ45909
QCG: #87DC5-161117A-214093

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	11/17/16	11/28/16
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	65.2	43-140			%	11/17/16	11/28/16
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	60.7	44-119			%	11/17/16	11/28/16
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	36.7	19-119			%	11/17/16	11/28/16
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	59.6	44-120			%	11/17/16	11/28/16
EPA 8270D	SURROGATE: PHENOL-D6 (S)	21.3	10-115			%	11/17/16	11/28/16
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	63.5	50-134			%	11/17/16	11/28/16

Quant Method: Y1117.M
Run #: 1117Y127
Instrument: Yoda
Sequence: Y161117
Dilution Factor: 1
Initials: MA

Printed: 11/29/16 12:44:03 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y127.D Vial: 27
Acq On : 28 Nov 16 16:07 Operator: MA
Sample : AZ45909W16 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Nov 28 16:57 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	167066	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.46	136	727105	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.46	164	437896	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.19	188	824923	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.27	240	811018	40.00000 ppb	-0.02
88) Perylene-D12(IS)	14.97	264	749100	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.54	112	385163	68.65280 ppb	0.00
Spiked Amount 186.916			Recovery =	36.729%	
5) Phenol-D6 (S)	4.68	99	313830	39.86381 ppb	0.00
Spiked Amount 186.916			Recovery =	21.327%	
21) Nitrobenzene-D5(S)	5.66	82	453972	55.72071 ppb	0.00
Spiked Amount 93.458			Recovery =	59.621%	
45) 2-Fluorobiphenyl(S)	7.69	172	846183	56.70435 ppb	0.00
Spiked Amount 93.458			Recovery =	60.673%	
63) 2,4,6-Tribromophenol(S)	9.40	330	279214	121.88369 ppb	0.00
Spiked Amount 186.916			Recovery =	65.208%	
81) Terphenyl-D14(S)	12.06	244	1168743	59.32307 ppb	0.00
Spiked Amount 93.458			Recovery =	63.476%	

Target Compounds Qvalue

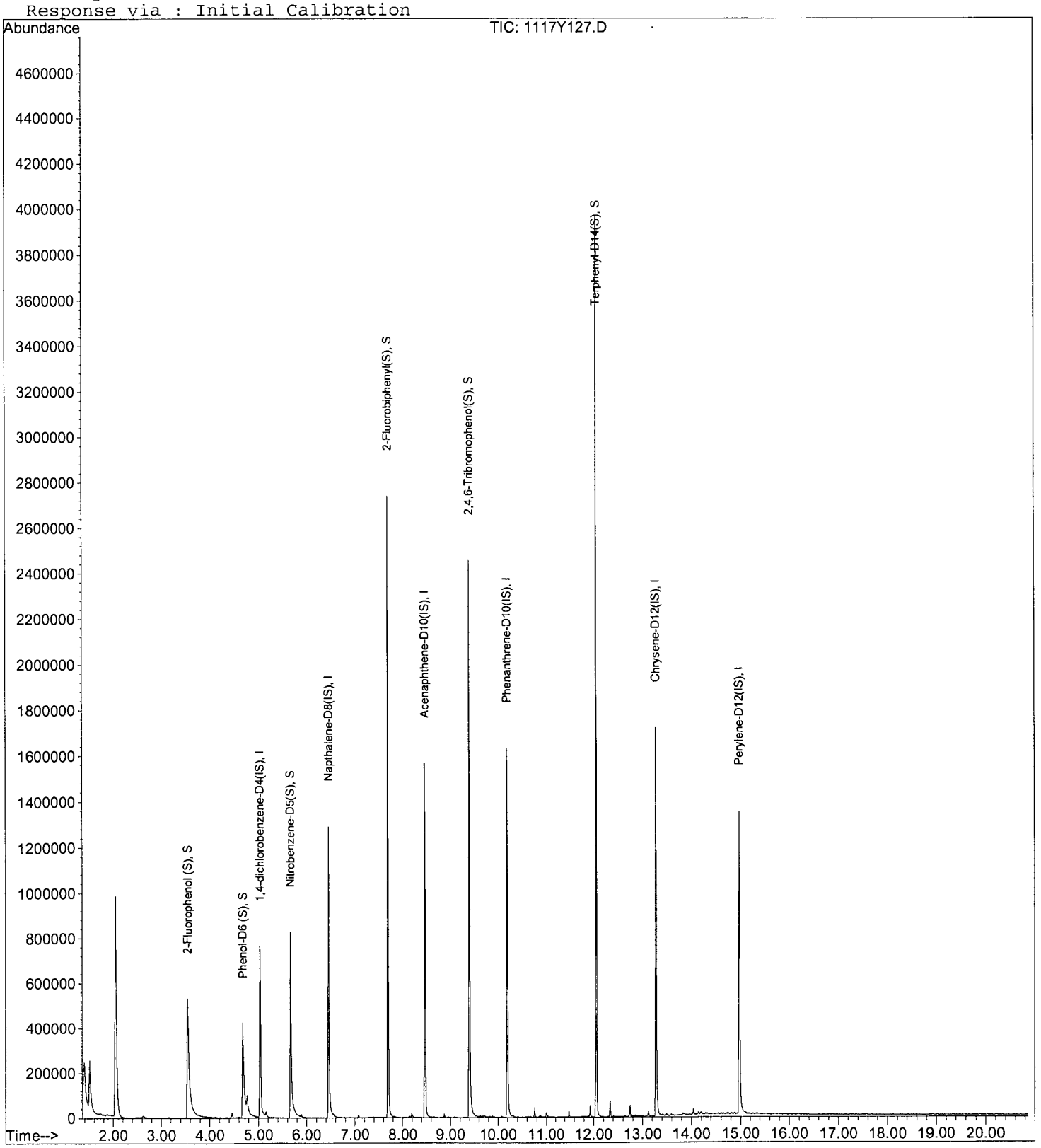
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y127.D Vial: 27
Acq On : 28 Nov 16 16:07 Operator: MA
Sample : AZ45909W16 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Nov 28 16:57 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration



EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH126

Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81500

APPL ID: AZ45910

QCG: #87DC5-161117A-214093

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	11/17/16	11/28/16
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	64.5	43-140			%	11/17/16	11/28/16
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	61.6	44-119			%	11/17/16	11/28/16
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	39.2	19-119			%	11/17/16	11/28/16
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	61.1	44-120			%	11/17/16	11/28/16
EPA 8270D	SURROGATE: PHENOL-D6 (S)	22.4	10-115			%	11/17/16	11/28/16
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	63.3	50-134			%	11/17/16	11/28/16

Quant Method: Y1117.M
Run #: 1117Y128
Instrument: Yoda
Sequence: Y161117
Dilution Factor: 1
Initials: MA

Printed: 11/29/16 12:44:03 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y128.D Vial: 28
Acq On : 28 Nov 16 16:36 Operator: MA
Sample : AZ45910W14 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Nov 28 16:58 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	167257	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.46	136	719598	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.47	164	432711	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.19	188	818902	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.27	240	815510	40.00000 ppb	-0.02
88) Perylene-D12(IS)	14.97	264	750133	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.54	112	411430	73.25097 ppb	0.00
Spiked Amount 186.916			Recovery =	39.189%	
5) Phenol-D6 (S)	4.68	99	329600	41.81916 ppb	0.00
Spiked Amount 186.916			Recovery =	22.373%	
21) Nitrobenzene-D5(S)	5.66	82	460136	57.06647 ppb	0.00
Spiked Amount 93.458			Recovery =	61.061%	
45) 2-Fluorobiphenyl(S)	7.70	172	848426	57.53593 ppb	0.00
Spiked Amount 93.458			Recovery =	61.564%	
63) 2,4,6-Tribromophenol(S)	9.39	330	273015	120.60574 ppb	0.00
Spiked Amount 186.916			Recovery =	64.524%	
81) Terphenyl-D14(S)	12.06	244	1172666	59.19434 ppb	0.00
Spiked Amount 93.458			Recovery =	63.338%	
Target Compounds					Qvalue

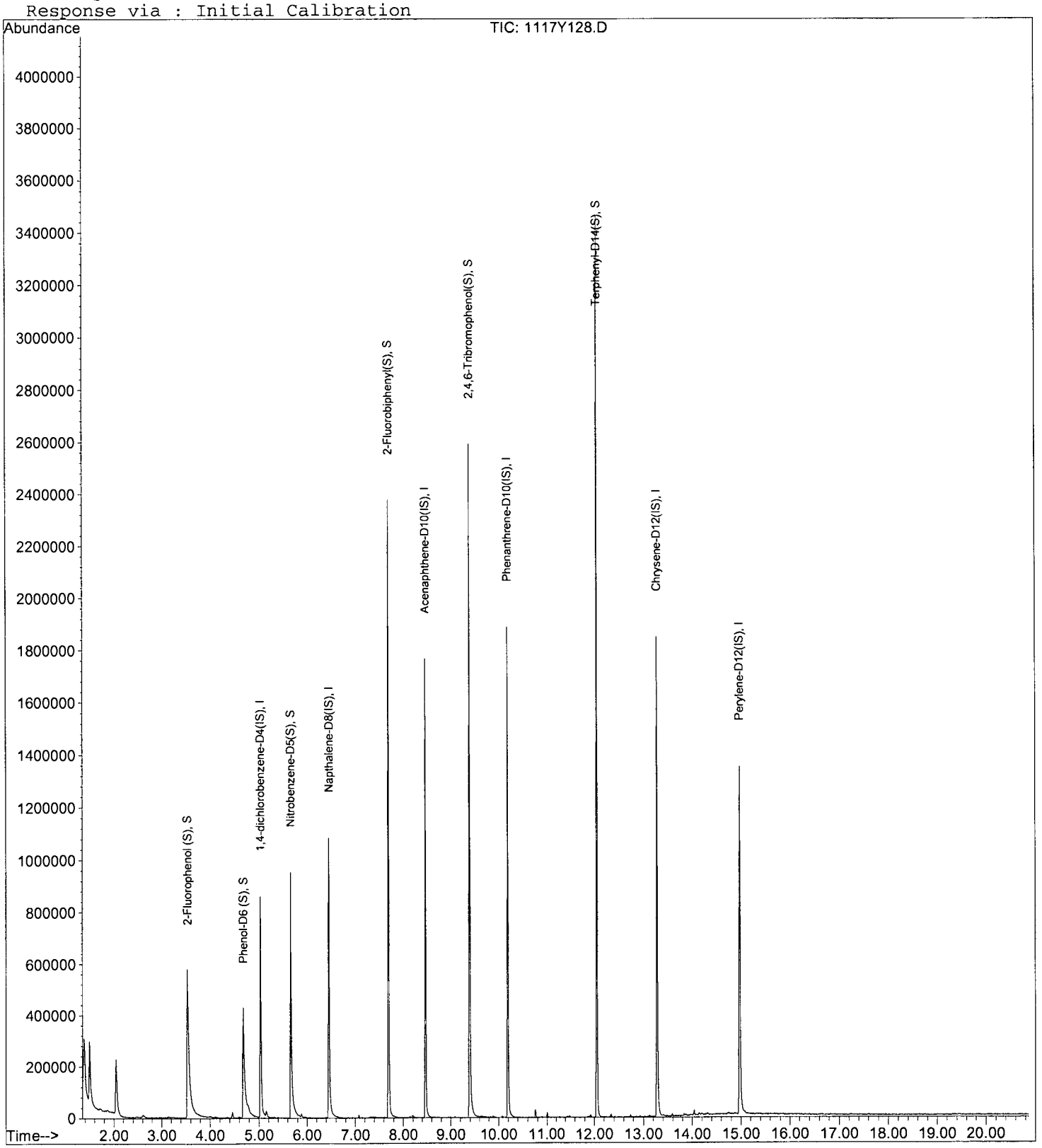
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y128.D Vial: 28
Acq On : 28 Nov 16 16:36 Operator: MA
Sample : AZ45910W14 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Nov 28 16:58 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration



EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH128
Sample Collection Date: 11/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81500
APPL ID: AZ45911
QCG: #87DC5-161117A-214093

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	11/17/16	11/28/16
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	68.2	43-140			%	11/17/16	11/28/16
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	64.7	44-119			%	11/17/16	11/28/16
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	40.3	19-119			%	11/17/16	11/28/16
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	62.2	44-120			%	11/17/16	11/28/16
EPA 8270D	SURROGATE: PHENOL-D6 (S)	23.1	10-115			%	11/17/16	11/28/16
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	66.4	50-134			%	11/17/16	11/28/16

Quant Method: Y1117.M
Run #: 1117Y129
Instrument: Yoda
Sequence: Y161117
Dilution Factor: 1
Initials: MA

Printed: 11/29/16 12:44:03 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y129.D Vial: 29
Acq On : 28 Nov 16 17:06 Operator: MA
Sample : AZ45911W16 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Nov 29 9:09 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	162029	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.46	136	711825	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.46	164	421485	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.19	188	800841	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.28	240	790743	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.97	264	721047	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.53	112	409437	75.24827 ppb	0.00
Spiked Amount 186.916			Recovery =	40.258%	
5) Phenol-D6 (S)	4.68	99	330236	43.25183 ppb	0.00
Spiked Amount 186.916			Recovery =	23.140%	
21) Nitrobenzene-D5(S)	5.66	82	463978	58.17138 ppb	0.00
Spiked Amount 93.458			Recovery =	62.243%	
45) 2-Fluorobiphenyl(S)	7.69	172	868964	60.49830 ppb	0.00
Spiked Amount 93.458			Recovery =	64.733%	
63) 2,4,6-Tribromophenol(S)	9.40	330	281193	127.52703 ppb	0.00
Spiked Amount 186.916			Recovery =	68.227%	
81) Terphenyl-D14(S)	12.06	244	1191392	62.02331 ppb	0.00
Spiked Amount 93.458			Recovery =	66.365%	

Target Compounds Qvalue

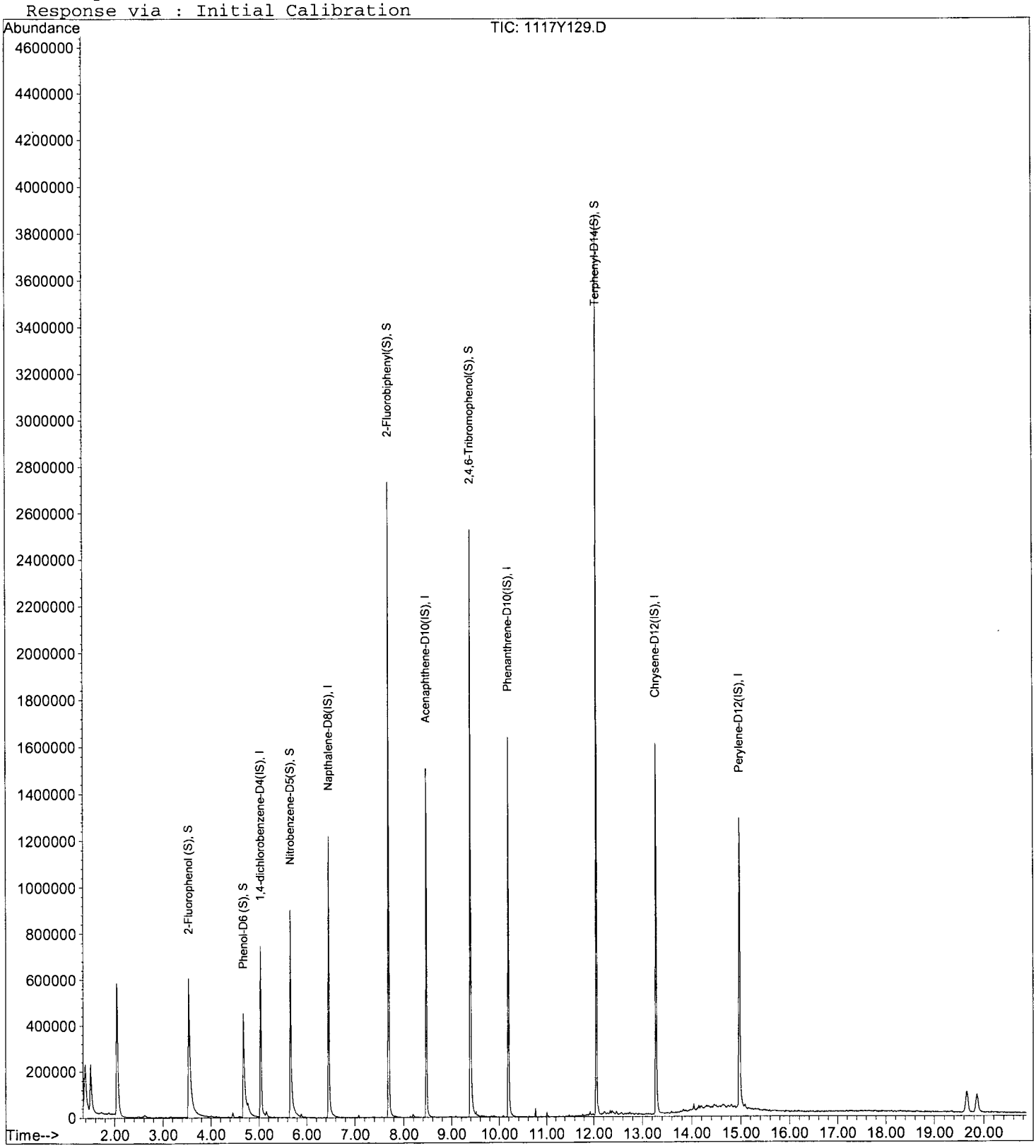
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y129.D Vial: 29
Acq On : 28 Nov 16 17:06 Operator: MA
Sample : AZ45911W16 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Nov 29 9:09 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration



ORGANICS

Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 11/17/16
Matrix: Instrument: Yoda
Initials:

			1117Y003.D	1117Y004.D	1117Y005 D	1117Y006.D	1117Y007.D	1117Y008.D	1117Y009.D	1117Y010.D						
		Compound	5	10	20	40	50	60	80	100			Avg	%RSD		
1	I	1,4-dichlorobenzene-D4(IS)														
2	TM	n-Nitrosodimethylamine	0.8767	0.9297	0.9993	0.9385	0.9504	0.9096	0.9453	1.051			0.95	5.7	TM	
3	TM	Pyridine	1.846	1.847	1.987	2.030	2.186	2.174	2.102	1.994			2.0	6.5	TM	
4	S	2-Fluorophenol (S)	0.8584	1.249	1.256	1.338	1.360	1.312	1.331	1.340			1.3	13	S	
5	S	Phenol-D6 (S)	1.779	1.865	1.723	1.758	1.788	1.709	1.716	1.755			1.8	2.9	S	
6	*TM	Phenol	1.968	2.028	1.977	2.010	2.042	1.971	1.974	1.997			2.0	1.4	*TM	
7	TM	Aniline	1.767	1.937	1.959	2.018	2.041	2.029	2.009	2.059			2.0	4.8	TM	
8	TM	Bis (2-chloroethyl) ether	0.8304	0.9093	0.9069	0.9191	0.9504	0.9073	0.8914	0.9307			0.91	3.9	TM	
9	TM	2-Chlorophenol	1.521	1.652	1.526	1.549	1.527	1.524	1.501	1.530			1.5	3.0	TM	
10	TM	1,3-DCB	1.688	1.749	1.697	1.671	1.710	1.638	1.618	1.667			1.7	2.4	TM	
11	*TM	1,4-DCB	1.781	1.762	1.709	1.737	1.724	1.680	1.654	1.691			1.7	2.5	*TM	
12	TM	Benzyl alcohol	0.8001	0.7934	0.8495	0.8899	0.8869	0.8719	0.8644	0.9061			0.86	4.8	TM	
13	TM	1,2-DCB	1.686	1.669	1.554	1.596	1.612	1.554	1.537	1.560			1.6	3.5	TM	
14	TM	2-Methylphenol	1.236	1.165	1.138	1.160	1.195	1.171	1.154	1.182			1.2	2.6	TM	
15	TM	Bis (2-chloroisopropyl) ether	1.904	1.923	1.786	1.771	1.790	1.736	1.727	1.719			1.8	4.4	TM	
16	TM	Acetophenone	2.239	2.266	2.125	2.199	2.247	2.164	2.129	2.201			2.2	2.4	TM	
17	TM	3&4-Methylphenol	1.539	1.633	1.511	1.538	1.569	1.538	1.521	1.555			1.6	2.4	TM	
18	**TM	n-Nitrosodi-n-propylamine	1.207	1.144	1.119	1.111	1.132	1.106	1.122	1.149			1.1	2.8	**TM	
19	TM	Hexachloroethane	0.7457	0.7268	0.7078	0.7126	0.7162	0.7028	0.6894	0.7071			0.71	2.4	TM	
20	I	Napthalene-D8(IS)														
21	S	Nitrobenzene-D5(S)	0.4332	0.4370	0.4213	0.4076	0.4248	0.3993	0.4068	0.4210			0.42	3.2	S	
22	TM	Nitrobenzene	0.4295	0.4309	0.4171	0.4270	0.4390	0.4237	0.4276	0.4424			0.43	1.9	TM	
23	TM	Isophorone	0.7247	0.7042	0.6896	0.6988	0.7327	0.6988	0.6991	0.7239			0.71	2.2	TM	
24	*TM	2-Nitrophenol	0.1932	0.2016	0.1966	0.2040	0.2115	0.2042	0.2042	0.2129			0.20	3.3	*TM	
25	TM	2,4-Dimethylphenol	0.3340	0.3144	0.3095	0.3090	0.3241	0.3090	0.3179	0.3242			0.32	2.9	TM	
26	TMQ	Benzoic acid	0.0719	0.1514	0.1913	0.2342	0.2570	0.2511	0.2607	0.2430			0.21	32	TMQ	0.997
27	TM	Bis (2-chloroethoxy) methane	0.3988	0.3691	0.3694	0.3697	0.3888	0.3654	0.3686	0.3821			0.38	3.2	TM	
28	*TM	2,4-Dichlorophenol	0.2902	0.3057	0.3020	0.3010	0.3107	0.3060	0.3071	0.3114			0.30	2.2	*TM	
29	TM	1,2,4-Trichlorobenzene	0.3536	0.3470	0.3243	0.3335	0.3488	0.3309	0.3242	0.3395			0.34	3.3	TM	
30	TM	3,4-Dimethylphenol	0.5541	0.5065	0.4845	0.4960	0.5109	0.4973	0.4916	0.5103			0.51	4.2	TM	
31	TM	Naphthalene	1.093	1.056	1.036	1.035	1.055	1.033	1.036	1.066			1.1	2.0	TM	
32	TM	4-Chloroaniline	0.3183	0.3776	0.3888	0.3921	0.4000	0.3809	0.3763	0.3680			0.38	6.7	TM	
33	TM	2,6-Dichlorophenol	0.3039	0.3083	0.2942	0.2904	0.3039	0.2873	0.2874	0.2959			0.30	2.7	TM	
34	TM	Hexachloropropene	0.2546	0.2601	0.2601	0.2662	0.2769	0.2730	0.2741	0.2845			0.27	3.8	TM	
35	*TM	Hexachlorobutadiene	0.2212	0.2159	0.2138	0.2125	0.2187	0.2103	0.2124	0.2192			0.22	1.8	*TM	

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 11/17/16
Matrix: Instrument: Yoda Initials:

		Compound	5	10	20	40	50	60	80	100			Avg	%RSD		
36	TM	Caprolactum	0.1651	0.1526	0.1600	0.1569	0.1637	0.1591	0.1588	0.1634			0.16	2.6	TM	
37	*TM	4-Chloro-3-methylphenol	0.3618	0.3334	0.3375	0.3472	0.3617	0.3561	0.3495	0.3671			0.35	3.4	*TM	
38	TM	2-Methylnaphthalene	0.7173	0.7093	0.7058	0.6996	0.7156	0.6981	0.6915	0.7283			0.71	1.7	TM	
39	TM	1-Methylnaphthalene	0.6863	0.6706	0.6709	0.6841	0.6964	0.6717	0.6690	0.6960			0.68	1.7	TM	
40	I	Acenaphthene-D10(IS)														
41	**TMQ	Hexachlorocyclopentadiene	0.0369	0.0603	0.1198	0.1905	0.2160	0.2348	0.2549	0.2883			0.18	53	**TMQ	0.999
42	TM	1,2,4,5-Tetrachlorobenzene	0.5685	0.5509	0.5514	0.5420	0.5405	0.5332	0.5167	0.5313			0.54	2.9	TM	
43	*TM	2,4,6-Trichlorophenol	0.3659	0.3576	0.3590	0.3614	0.3711	0.3594	0.3547	0.3624			0.36	1.4	*TM	
44	TM	2,4,5-Trichlorophenol	0.4206	0.3683	0.3806	0.3726	0.3846	0.3801	0.3707	0.3846			0.38	4.3	TM	
45	S	2-Fluorobiphenyl(S)	1.335	1.387	1.287	1.240	1.285	1.216	1.207	1.235			1.3	4.9	S	
46	TM	1,1'-Biphenyl	1.574	1.536	1.534	1.533	1.537	1.495	1.468	1.497			1.5	2.2	TM	
47	TM	2-Chloronaphthalene	1.254	1.206	1.172	1.193	1.205	1.180	1.145	1.179			1.2	2.7	TM	
48	TM	2-Nitroaniline	0.3775	0.4231	0.4274	0.4306	0.4382	0.4262	0.4241	0.4356			0.42	4.5	TM	
49	TM	Dimethyl phthalate	1.485	1.466	1.482	1.426	1.465	1.434	1.408	1.457			1.5	1.9	TM	
50	TM	2,6-DNT	0.3164	0.3095	0.3300	0.3225	0.3386	0.3287	0.3246	0.3321			0.33	2.8	TM	
51	TM	Acenaphthylene	1.925	1.884	1.887	1.849	1.895	1.793	1.797	1.851			1.9	2.5	TM	
52	TM	3-Nitroaniline	0.3201	0.3273	0.3321	0.3522	0.3587	0.3393	0.3335	0.3373			0.34	3.7	TM	
53	*TM	Acenaphthene	1.176	1.147	1.170	1.128	1.150	1.126	1.089	1.126			1.1	2.5	*TM	
54	**TML	2,4-Dinitrophenol		0.0456	0.1181	0.1571	0.1500	0.1783	0.1669	0.1813			0.14	33	**TML	0.995
55	**TML	4-Nitrophenol		0.0379	0.2280	0.2741	0.2816	0.2852	0.2899	0.3033			0.24	38	**TML	0.999
56	TM	Dibenzofuran	1.733	1.653	1.660	1.667	1.685	1.644	1.574	1.631			1.7	2.7	TM	
57	TM	2,4-DNT	0.4502	0.4413	0.4587	0.4575	0.4715	0.4569	0.4482	0.4677			0.46	2.2	TM	
58	TM	2,3,4,6-Tetrachlorophenol	0.2574	0.2950	0.2937	0.2843	0.3008	0.2922	0.2958	0.3124			0.29	5.5	TM	
59	TM	Diethyl phthalate	1.551	1.505	1.500	1.488	1.509	1.486	1.420	1.467			1.5	2.5	TM	
60	TM	4-Chlorophenyl phenyl ether	0.7199	0.6938	0.6647	0.6518	0.6641	0.6522	0.6617	0.7092			0.68	3.9	TM	
61	TM	Fluorene	1.420	1.401	1.340	1.320	1.355	1.329	1.334	1.425			1.4	3.2	TM	
62	TM	4-Nitroaniline	0.3032	0.3382	0.3427	0.3168	0.3196	0.3136	0.2981	0.3070			0.32	5.0	TM	
63	S	2,4,6-Tribromophenol(S)	0.1934	0.2058	0.1919	0.1906	0.1984	0.1911	0.1914	0.2019			0.20	3.0	S	
64	I	Phenanthrene-D10(IS)														
65	TM	4,6-Dinitro-2-methylphenol	0.1063	0.1246	0.1323	0.1512	0.1579	0.1497	0.1516	0.1592			0.14	13	TM	
66	TM	Diphenyl amine	0.5921	0.5629	0.5353	0.5467	0.5417	0.5203	0.5237	0.5445			0.55	4.2	TM	
67	*TM	n-Nitrosodiphenylamine	0.5921	0.5629	0.5353	0.5467	0.5417	0.5203	0.5237	0.5445			0.55	4.2	*TM	
68	TM	1,2-Diphenylhydrazine	0.8834	0.8524	0.8084	0.8230	0.9893	0.9572	0.9284	0.9300			0.90	7.3	TM	
69	TM	4-Bromophenyl phenyl ether	0.2190	0.2123	0.2068	0.2159	0.2154	0.2078	0.2046	0.2149			0.21	2.4	TM	
70	TM	Hexachlorobenzene	0.2403	0.2357	0.2177	0.2265	0.2269	0.2207	0.2217	0.2259			0.23	3.4	TM	

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 11/17/16
Matrix: Instrument: Yoda Initials:

		Compound	5	10	20	40	50	60	80	100			Avg	%RSD		
71	TM	Atrazine	0.2257	0.2133	0.2218	0.2263	0.2272	0.2159	0.2140	0.2232			0.22	2.6	TM	
72	*TMQ	Pentachlorophenol	0.0453	0.0466	0.0460	0.0678	0.0747	0.0721	0.0840	0.0918			0.07	28	*TMQ	0.998
73	TM	Phenanthrene	1.180	1.146	1.099	1.108	1.104	1.074	1.057	1.096			1.1	3.5	TM	
74	TM	Anthracene	1.224	1.216	1.124	1.157	1.167	1.136	1.113	1.126			1.2	3.7	TM	
75	TM	Carbazol	1.058	1.036	0.9944	1.020	1.014	0.9948	0.9918	1.015			1.0	2.3	TM	
76	TM	Di-n-butylphthalate	1.462	1.412	1.363	1.396	1.380	1.361	1.347	1.344			1.4	2.9	TM	
77	*TM	Fluoranthene	1.270	1.265	1.198	1.221	1.225	1.193	1.192	1.219			1.2	2.5	*TM	
78	I	Chrysene-D12(IS)														
79	TM	Benzidine	0.3946	0.4216	0.4411	0.4650	0.4775	0.4667	0.4453	0.4292			0.44	6.2	TM	
80	TM	Pyrene	1.403	1.326	1.289	1.330	1.365	1.325	1.285	1.277			1.3	3.3	TM	
81	S	Terphenyl-D14(S)	0.9882	0.9665	0.8976	0.8931	0.9110	0.8676	0.8830	0.8580			0.91	5.1	S	
82	TM	Butyl benzylphthalate	0.7130	0.6490	0.6557	0.6750	0.6887	0.6721	0.6496	0.6378			0.67	3.7	TM	
83	TM	3,3'-Dichlorobenzidine	0.3908	0.4253	0.4217	0.4193	0.4214	0.4152	0.3901	0.3756			0.41	4.6	TM	
84	TM	Benz (a) anthracene	1.298	1.306	1.228	1.264	1.289	1.278	1.258	1.225			1.3	2.4	TM	
85	TM	Bis (2-ethylhexyl) phthalate	0.9971	0.9443	0.9087	0.9552	0.9669	0.9473	0.9208	0.9292			0.95	2.9	TM	
86	TM	Chrysene	1.269	1.236	1.188	1.238	1.256	1.222	1.183	1.186			1.2	2.7	TM	
87	*TM	Di-n-octylphthalate	1.740	1.667	1.598	1.629	1.674	1.643	1.653	1.589			1.6	2.9	*TM	
88	I	Perylene-D12(IS)														
89	TM	Benzo (b) fluoranthene	1.487	1.345	1.328	1.284	1.470	1.402	1.312	1.372			1.4	5.3	TM	
90	TM	Benzo (k) fluoranthene	1.230	1.363	1.330	1.354	1.209	1.217	1.234	1.319			1.3	5.1	TM	
91	*TM	Benzo (a) pyrene	1.292	1.289	1.277	1.278	1.279	1.253	1.225	1.266			1.3	1.7	*TM	
92	TM	Indeno (1,2,3-cd) pyrene	1.486	1.520	1.448	1.455	1.481	1.433	1.385	1.426			1.5	2.9	TM	
93	TM	Dibenz (a,h) anthracene	1.286	1.284	1.214	1.241	1.243	1.218	1.171	1.221			1.2	3.1	TM	
94	TM	Benzo (g,h,i) perylene	1.248	1.244	1.234	1.216	1.235	1.191	1.148	1.191			1.2	2.8	TM	
95																
96																
97																
98																
99																
100																
101																
102																
103																
104																
105																

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y003.D Vial: 3
Acq On : 17 Nov 16 11:32 Operator: MA
Sample : 5ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:03:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	186655	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.46	136	811731	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.47	164	481288	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.20	188	871758	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.28	240	846746	40.00000 ppb		0.00
88) Perylene-D12(IS)	14.98	264	786880	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.59	112	40058	4.74233 ppb		0.05
Spiked Amount 200.000			Recovery =	2.371%		
5) Phenol-D6 (S)	4.70	99	83025	7.57969 ppb		0.03
Spiked Amount 200.000			Recovery =	3.790%		
21) Nitrobenzene-D5(S)	5.68	82	43960	4.38254 ppb		0.00
Spiked Amount 100.000			Recovery =	4.383%		
45) 2-Fluorobiphenyl(S)	7.69	172	80290	5.33147 ppb		0.00
Spiked Amount 100.000			Recovery =	5.331%		
63) 2,4,6-Tribromophenol(S)	9.40	330	23274	10.21956 ppb		0.00
Spiked Amount 200.000			Recovery =	5.110%		
81) Terphenyl-D14(S)	12.06	244	104592	5.54620 ppb		0.00
Spiked Amount 100.000			Recovery =	5.546%		
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.88	42	20454	3.70679 ppb		100
3) Pyridine	1.89	79	43077	3.83922 ppb		82
6) Phenol	4.72	94	45924	3.51779 ppb		94
7) Aniline	4.71	66	41234	3.37636 ppb		93
8) Bis (2-chloroethyl) ether	4.76	63	19374	3.25558 ppb		88
9) 2-Chlorophenol	4.84	128	35488	3.57195 ppb		89
10) 1,3-DCB	4.97	146	39374	3.61470 ppb		95
11) 1,4-DCB	5.06	146	41555	3.72196 ppb		95
12) Benzyl alcohol	5.25	108	18667	3.30711 ppb		91
13) 1,2-DCB	5.22	146	39344	3.81131 ppb		98
14) 2-Methylphenol	5.37	107	28841	3.73704 ppb		84
15) Bis (2-chloroisopropyl) et	5.34	45	44432	3.63432 ppb		94
16) Acetophenone	5.51	105	52237	3.68814 ppb		93
17) 3&4-Methylphenol	5.56	107	71793	7.15362 ppb		97
18) n-Nitrosodi-n-propylamine	5.49	70	28150	3.75423 ppb		91
19) Hexachloroethane	5.59	117	17398	3.83140 ppb		91
22) Nitrobenzene	5.70	77	43575	4.10858 ppb		98
23) Isophorone	5.95	82	73536	4.11900 ppb		98
24) 2-Nitrophenol	6.06	139	19605	3.80758 ppb		89
25) 2,4-Dimethylphenol	6.12	122	33888	4.31573 ppb		94
26) Benzoic acid	6.31	105	7294	7.11700 ppb	#	71
27) Bis (2-chloroethoxy) metha	6.20	93	40462	4.24091 ppb		96
28) 2,4-Dichlorophenol	6.37	162	29444	3.91857 ppb		96
29) 1,2,4-Trichlorobenzene	6.40	180	35876	4.30822 ppb		99
30) 3,4-Dimethylphenol	6.47	107	56222	4.52002 ppb		88
31) Naphthalene	6.49	128	110932	4.24975 ppb		100
32) 4-Chloroaniline	6.59	127	32298	3.56583 ppb		93
33) 2,6-Dichlorophenol	6.58	162	30836	4.25747 ppb		93
34) Hexachloropropene	6.58	213	25829	4.02245 ppb		95
35) Hexachlorobutadiene	6.62	225	22448	4.29550 ppb		90
36) Caprolactum	6.96	55	16755	4.08655 ppb	#	87
37) 4-Chloro-3-methylphenol	7.17	107	36714	4.18425 ppb		91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y003.D Vial: 3
Acq On : 17 Nov 16 11:32 Operator: MA
Sample : 5ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:03:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.27	142	72783	4.14303	ppb		98
39)	1-Methylnaphthalene	7.39	142	69633	4.06022	ppb		94
41)	Hexachlorocyclopentadiene	7.45	237	2217	7.00281	ppb		99
42)	1,2,4,5-Tetrachlorobenzene	7.48	216	34199	5.26632	ppb		97
43)	2,4,6-Trichlorophenol	7.63	196	22011	5.17286	ppb		97
44)	2,4,5-Trichlorophenol	7.71	196	25306	5.57341	ppb		94
46)	1,1'-Biphenyl	7.81	154	94682	5.13211	ppb		99
47)	2-Chloronaphthalene	7.83	162	75454	5.20180	ppb		96
48)	2-Nitroaniline	7.99	65	22709	4.38315	ppb		98
49)	Dimethyl phthalate	8.18	163	89346	5.06593	ppb		98
50)	2,6-DNT	8.26	165	19033	4.76838	ppb		96
51)	Acenaphthylene	8.31	152	115831	5.10681	ppb		97
52)	3-Nitroaniline	8.48	138	19258	4.65743	ppb	#	69
53)	Acenaphthene	8.51	154	70771	5.07941	ppb		98
54)	2,4-Dinitrophenol	8.69	184	2504	8.23519	ppb		95
55)	4-Nitrophenol	8.70	65	1447	12.54645	ppb	#	45
56)	Dibenzofuran	8.71	168	104236	5.13640	ppb		95
57)	2,4-DNT	8.74	165	27082	4.85019	ppb		85
58)	2,3,4,6-Tetrachlorophenol	8.89	232	15485	6.85515	ppb		97
59)	Diethyl phthalate	8.98	149	93304	5.20290	ppb		97
60)	4-Chlorophenyl phenyl ethe	9.11	204	43307	5.46797	ppb		90
61)	Fluorene	9.11	166	85433	5.20109	ppb		92
62)	4-Nitroaniline	9.19	138	18241	4.61005	ppb		90
65)	4,6-Dinitro-2-methylphenol	9.22	198	11583	3.93591	ppb		92
66)	Diphenyl amine	9.25	169	129052	11.23992	ppb		98
67)	n-Nitrosodiphenylamine	9.25	169	129052	11.23992	ppb		98
68)	1,2-Diphenylhydrazine	9.29	77	96269	5.15494	ppb		90
69)	4-Bromophenyl phenyl ether	9.68	248	23866	5.33693	ppb		97
70)	Hexachlorobenzene	9.75	284	26184	5.55790	ppb	#	70
71)	Atrazine	9.88	200	12297	2.58214	ppb		94
72)	Pentachlorophenol	10.01	266	4931	12.83279	ppb		88
73)	Phenanthrene	10.23	178	128534	5.50629	ppb		99
74)	Anthracene	10.29	178	133419	5.44194	ppb		99
75)	Carbazol	10.50	167	115285	5.31295	ppb		96
76)	Di-n-butylphthalate	10.89	149	159274	5.45549	ppb		98
77)	Fluoranthene	11.61	202	138379	5.36498	ppb		97
79)	Benzidine	11.81	184	41761	4.61245	ppb		97
80)	Pyrene	11.88	202	148527	5.29107	ppb		99
82)	Butyl benzylphthalate	12.63	149	75463	5.42104	ppb		89
83)	3,3'-Dichlorobenzidine	13.25	252	41366	4.70594	ppb	#	97
84)	Benz (a) anthracene	13.27	228	137348	5.19425	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.29	149	105533	5.37243	ppb	#	97
86)	Chrysene	13.31	228	134311	5.20963	ppb		99
87)	Di-n-octylphthalate	14.01	149	184159	5.37229	ppb		95
89)	Benzo (b) fluoranthene	14.50	252	146218	6.29055	ppb		99
90)	Benzo (k) fluoranthene	14.53	252	120958	5.79126	ppb	#	97
91)	Benzo (a) pyrene	14.91	252	127111	6.09950	ppb		98
92)	Indeno (1,2,3-cd) pyrene	16.64	276	146137	6.14875	ppb		98
93)	Dibenz (a,h) anthracene	16.65	278	126516	6.29407	ppb		96
94)	Benzo (g,h,i) perylene	17.13	276	122771	6.25659	ppb		97

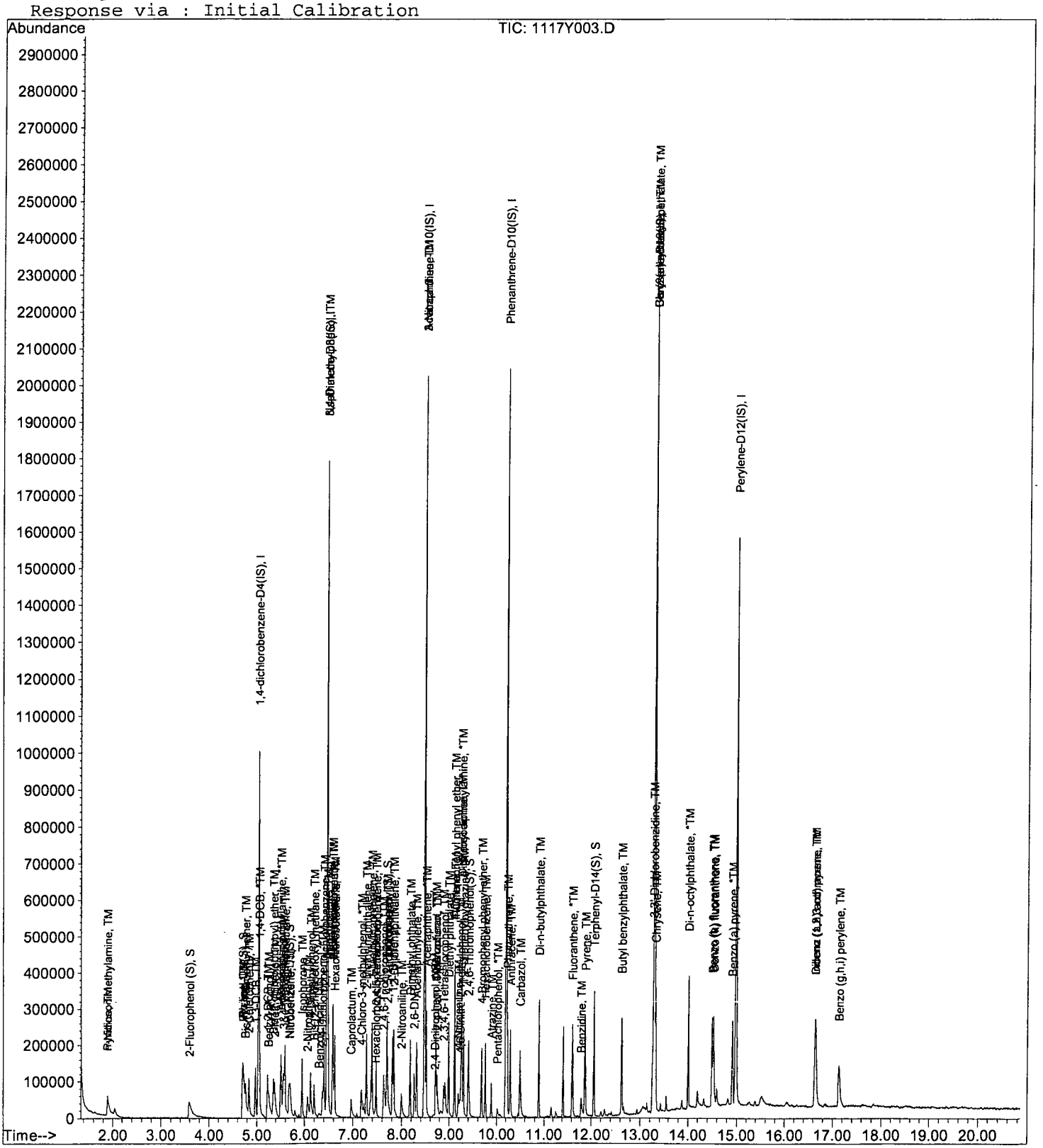
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y003.D Vial: 3
Acq On : 17 Nov 16 11:32 Operator: MA
Sample : 5ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:23:23 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y004.D Vial: 4
Acq On : 17 Nov 16 12:02 Operator: MA
Sample : 10ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:03:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	185154	40.00000	ppb		0.00
20) Napthalene-D8(IS)	6.46	136	822109	40.00000	ppb		0.00
40) Acenaphthene-D10(IS)	8.47	164	481361	40.00000	ppb		0.00
64) Phenanthrene-D10(IS)	10.20	188	875161	40.00000	ppb		0.00
78) Chrysene-D12(IS)	13.28	240	863627	40.00000	ppb		0.00
88) Perylene-D12(IS)	14.98	264	781590	40.00000	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol (S)	3.57	112	115623	13.79919	ppb		0.03
Spiked Amount 200.000			Recovery =	6.900%			
5) Phenol-D6 (S)	4.69	99	172613	15.88629	ppb		0.01
Spiked Amount 200.000			Recovery =	7.943%			
21) Nitrobenzene-D5(S)	5.67	82	89823	8.84175	ppb		0.00
Spiked Amount 100.000			Recovery =	8.842%			
45) 2-Fluorobiphenyl(S)	7.69	172	166902	11.08106	ppb		0.00
Spiked Amount 100.000			Recovery =	11.081%			
63) 2,4,6-Tribromophenol(S)	9.40	330	49541	21.75003	ppb		0.00
Spiked Amount 200.000			Recovery =	10.875%			
81) Terphenyl-D14(S)	12.06	244	208667	10.84870	ppb		0.00
Spiked Amount 100.000			Recovery =	10.849%			
Target Compounds							Qvalue
2) n-Nitrosodimethylamine	1.86	42	43035	7.86228	ppb		84
3) Pyridine	1.88	79	85516	7.68336	ppb		88
6) Phenol	4.70	94	93876	7.24922	ppb		88
7) Aniline	4.70	66	89655	7.40073	ppb		89
8) Bis (2-chloroethyl) ether	4.76	63	42089	7.12992	ppb		93
9) 2-Chlorophenol	4.83	128	76449	7.75715	ppb		95
10) 1,3-DCB	4.96	146	80941	7.49096	ppb		95
11) 1,4-DCB	5.05	146	81578	7.36593	ppb		97
12) Benzyl alcohol	5.23	108	36724	6.55888	ppb		98
13) 1,2-DCB	5.22	146	77247	7.54369	ppb		98
14) 2-Methylphenol	5.36	107	53916	7.04274	ppb		90
15) Bis (2-chloroisopropyl) et	5.35	45	89023	7.34069	ppb	#	89
16) Acetophenone	5.50	105	104901	7.46646	ppb		98
17) 3&4-Methylphenol	5.54	107	151141	15.18213	ppb		97
18) n-Nitrosodi-n-propylamine	5.49	70	52931	7.11639	ppb		98
19) Hexachloroethane	5.59	117	33644	7.46917	ppb		89
22) Nitrobenzene	5.69	77	88552	8.24395	ppb		97
23) Isophorone	5.95	82	144735	8.00476	ppb		97
24) 2-Nitrophenol	6.05	139	41430	7.94474	ppb		90
25) 2,4-Dimethylphenol	6.12	122	64613	8.12478	ppb		97
26) Benzoic acid	6.29	105	31117	11.63161	ppb		85
27) Bis (2-chloroethoxy) metha	6.20	93	75854	7.85007	ppb		97
28) 2,4-Dichlorophenol	6.36	162	62824	8.25541	ppb		97
29) 1,2,4-Trichlorobenzene	6.40	180	71311	8.45537	ppb		94
30) 3,4-Dimethylphenol	6.46	107	104096	8.26325	ppb		90
31) Naphthalene	6.48	128	217078	8.21117	ppb		98
32) 4-Chloroaniline	6.58	127	77605	8.45974	ppb		96
33) 2,6-Dichlorophenol	6.58	162	63356	8.63702	ppb		97
34) Hexachloropropene	6.58	213	53462	8.22074	ppb		97
35) Hexachlorobutadiene	6.62	225	44372	8.38355	ppb		96
36) Caprolactum	6.96	55	31361	7.55240	ppb		92
37) 4-Chloro-3-methylphenol	7.16	107	68532	7.71191	ppb		93

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y004.D Vial: 4
Acq On : 17 Nov 16 12:02 Operator: MA
Sample : 10ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:03:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.28	142	145777	8.19332	ppb		97
39)	1-Methylnaphthalene	7.39	142	137825	7.93496	ppb		95
41)	Hexachlorocyclopentadiene	7.45	237	7259	9.14615	ppb	#	87
42)	1,2,4,5-Tetrachlorobenzene	7.47	216	66290	10.20647	ppb		98
43)	2,4,6-Trichlorophenol	7.63	196	43037	10.11270	ppb		95
44)	2,4,5-Trichlorophenol	7.70	196	44326	9.76091	ppb		94
46)	1,1'-Biphenyl	7.81	154	184829	10.01689	ppb	#	95
47)	2-Chloronaphthalene	7.83	162	145165	10.00616	ppb		96
48)	2-Nitroaniline	7.98	65	50918	9.82639	ppb		86
49)	Dimethyl phthalate	8.18	163	176468	10.00424	ppb		98
50)	2,6-DNT	8.26	165	37246	9.32992	ppb		96
51)	Acenaphthylene	8.31	152	226683	9.99259	ppb		98
52)	3-Nitroaniline	8.47	138	39392	9.52526	ppb	#	52
53)	Acenaphthene	8.51	154	138001	9.90317	ppb		98
54)	2,4-Dinitrophenol	8.65	184	5483	10.16039	ppb	#	77
55)	4-Nitrophenol	8.74	65	4566	13.31663	ppb	#	4
56)	Dibenzofuran	8.72	168	198937	9.80146	ppb		92
57)	2,4-DNT	8.73	165	53111	9.51036	ppb		91
58)	2,3,4,6-Tetrachlorophenol	8.88	232	35502	12.10025	ppb		93
59)	Diethyl phthalate	8.98	149	181071	10.09551	ppb		99
60)	4-Chlorophenyl phenyl ethe	9.11	204	83495	10.54054	ppb		93
61)	Fluorene	9.11	166	168575	10.26115	ppb		96
62)	4-Nitroaniline	9.18	138	40694	10.28304	ppb	#	79
65)	4,6-Dinitro-2-methylphenol	9.22	198	27272	9.23101	ppb		95
66)	Diphenyl amine	9.25	169	246303	21.36861	ppb		98
67)	n-Nitrosodiphenylamine	9.25	169	246303	21.36861	ppb		98
68)	1,2-Diphenylhydrazine	9.29	77	186489	9.94715	ppb		96
69)	4-Bromophenyl phenyl ether	9.68	248	46454	10.34767	ppb		91
70)	Hexachlorobenzene	9.76	284	51564	10.90257	ppb	#	84
71)	Atrazine	9.89	200	23339	4.88169	ppb	#	94
72)	Pentachlorophenol	10.01	266	10205	15.84073	ppb		86
73)	Phenanthrene	10.23	178	250811	10.70276	ppb		99
74)	Anthracene	10.28	178	266091	10.81121	ppb		99
75)	Carbazol	10.49	167	226586	10.40169	ppb		99
76)	Di-n-butylphthalate	10.89	149	308919	10.54001	ppb		99
77)	Fluoranthene	11.61	202	276700	10.68599	ppb		99
79)	Benzidine	11.80	184	91034	9.85806	ppb		99
80)	Pyrene	11.87	202	286211	9.99657	ppb		100
82)	Butyl benzylphthalate	12.62	149	140130	9.86976	ppb		84
83)	3,3'-Dichlorobenzidine	13.25	252	91816	10.24115	ppb		95
84)	Benz (a) anthracene	13.26	228	281961	10.45481	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.29	149	203887	10.17651	ppb	#	97
86)	Chrysene	13.31	228	266760	10.14479	ppb		99
87)	Di-n-octylphthalate	14.01	149	359854	10.29247	ppb		92
89)	Benzo (b) fluoranthene	14.49	252	262768	11.38125	ppb		97
90)	Benzo (k) fluoranthene	14.53	252	266245	12.83362	ppb	#	98
91)	Benzo (a) pyrene	14.91	252	251923	12.17049	ppb		98
92)	Indeno (1,2,3-cd) pyrene	16.63	276	297054	12.58320	ppb		98
93)	Dibenz (a,h) anthracene	16.65	278	250820	12.56255	ppb		99
94)	Benzo (g,h,i) perylene	17.13	276	243169	12.47613	ppb		97

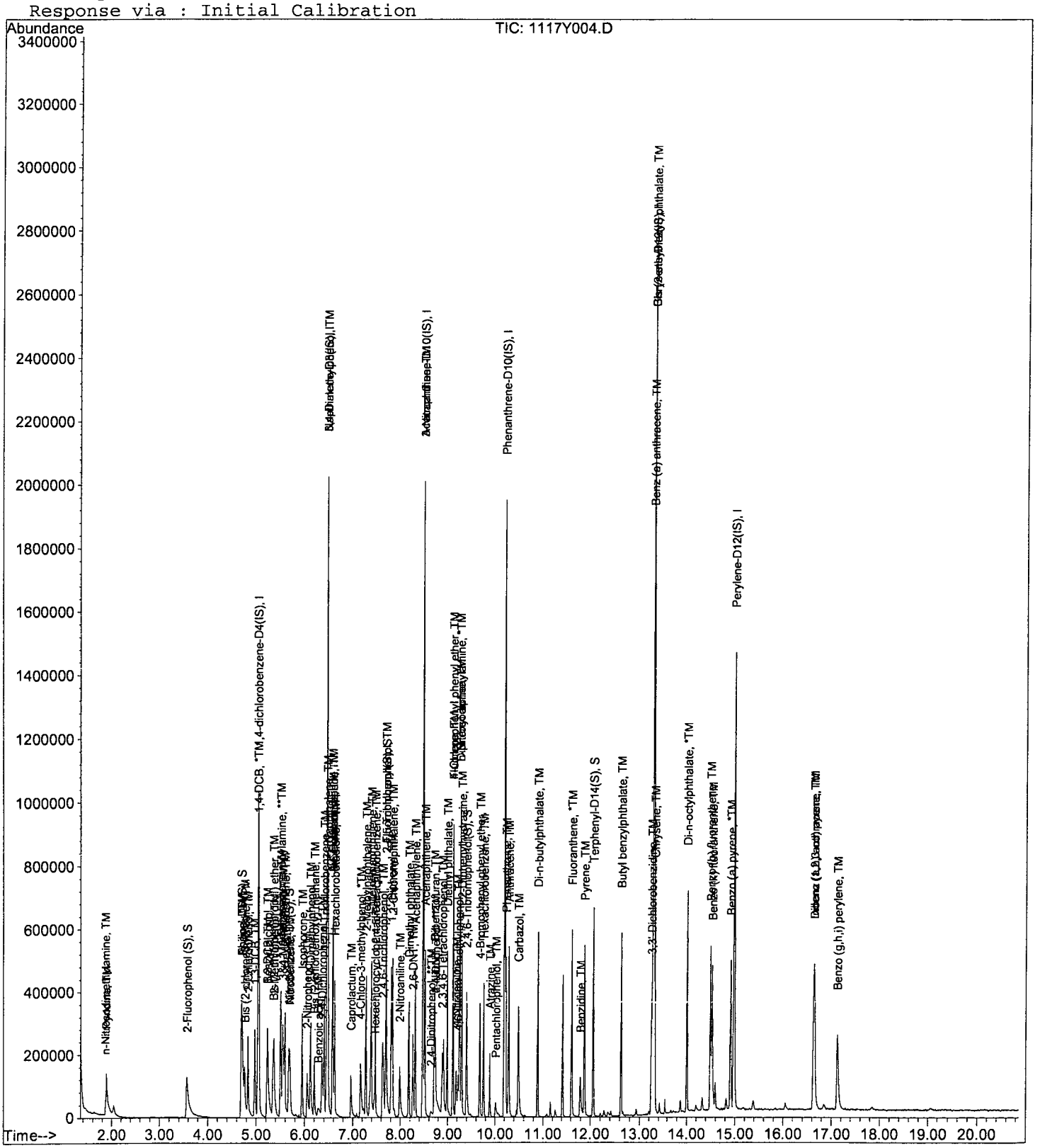
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y004.D Vial: 4
Acq On : 17 Nov 16 12:02 Operator: MA
Sample : 10ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:23:23 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y005.D Vial: 5
Acq On : 17 Nov 16 12:31 Operator: MA
Sample : 20ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:03:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	186808	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.46	136	805441	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.47	164	466214	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.20	188	881586	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.28	240	855940	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.98	264	778856	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.55	112	234571	27.74734 ppb	0.01
Spiked Amount 200.000			Recovery =	13.874%	
5) Phenol-D6 (S)	4.68	99	321881	29.36176 ppb	0.00
Spiked Amount 200.000			Recovery =	14.681%	
21) Nitrobenzene-D5(S)	5.67	82	169685	17.04864 ppb	0.00
Spiked Amount 100.000			Recovery =	17.049%	
45) 2-Fluorobiphenyl(S)	7.69	172	299927	20.55990 ppb	0.00
Spiked Amount 100.000			Recovery =	20.560%	
63) 2,4,6-Tribromophenol(S)	9.40	330	89455	40.54949 ppb	0.00
Spiked Amount 200.000			Recovery =	20.275%	
81) Terphenyl-D14(S)	12.06	244	384136	20.15078 ppb	0.00
Spiked Amount 100.000			Recovery =	20.151%	
Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.86	42	93342	16.90213 ppb	95
3) Pyridine	1.87	79	185625	16.53020 ppb	89
6) Phenol	4.70	94	184614	14.12989 ppb	79
7) Aniline	4.70	66	183002	14.97248 ppb	86
8) Bis (2-chloroethyl) ether	4.75	63	84706	14.22224 ppb	95
9) 2-Chlorophenol	4.83	128	142504	14.33162 ppb	91
10) 1,3-DCB	4.96	146	158480	14.53721 ppb	99
11) 1,4-DCB	5.05	146	159654	14.28802 ppb	95
12) Benzyl alcohol	5.22	108	79344	14.04532 ppb	93
13) 1,2-DCB	5.22	146	145187	14.05295 ppb	98
14) 2-Methylphenol	5.35	107	106252	13.75621 ppb	97
15) Bis (2-chloroisopropyl) et	5.35	45	166842	13.63570 ppb	95
16) Acetophenone	5.50	105	198516	14.00452 ppb	99
17) 3&4-Methylphenol	5.53	107	282311	28.10708 ppb	99
18) n-Nitrosodi-n-propylamine	5.49	70	104539	13.93046 ppb	99
19) Hexachloroethane	5.59	117	66112	14.54731 ppb	98
22) Nitrobenzene	5.69	77	167982	15.96231 ppb	97
23) Isophorone	5.95	82	277710	15.67697 ppb	98
24) 2-Nitrophenol	6.05	139	79188	15.49958 ppb	94
25) 2,4-Dimethylphenol	6.11	122	124623	15.99504 ppb	99
26) Benzoic acid	6.26	105	77046	19.99875 ppb	99
27) Bis (2-chloroethoxy) metha	6.20	93	148781	15.71585 ppb	99
28) 2,4-Dichlorophenol	6.35	162	121620	16.31225 ppb	95
29) 1,2,4-Trichlorobenzene	6.40	180	130621	15.80829 ppb	96
30) 3,4-Dimethylphenol	6.46	107	195130	15.81017 ppb	98
31) Naphthalene	6.49	128	417345	16.11314 ppb	99
32) 4-Chloroaniline	6.57	127	156564	17.42028 ppb	95
33) 2,6-Dichlorophenol	6.57	162	118484	16.48661 ppb	99
34) Hexachloropropene	6.58	213	104734	16.43801 ppb	97
35) Hexachlorobutadiene	6.62	225	86094	16.60305 ppb	94
36) Caprolactum	6.97	55	64421	15.83501 ppb	98
37) 4-Chloro-3-methylphenol	7.16	107	135905	15.60988 ppb	89

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y005.D Vial: 5
Acq On : 17 Nov 16 12:31 Operator: MA
Sample : 20ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:03:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

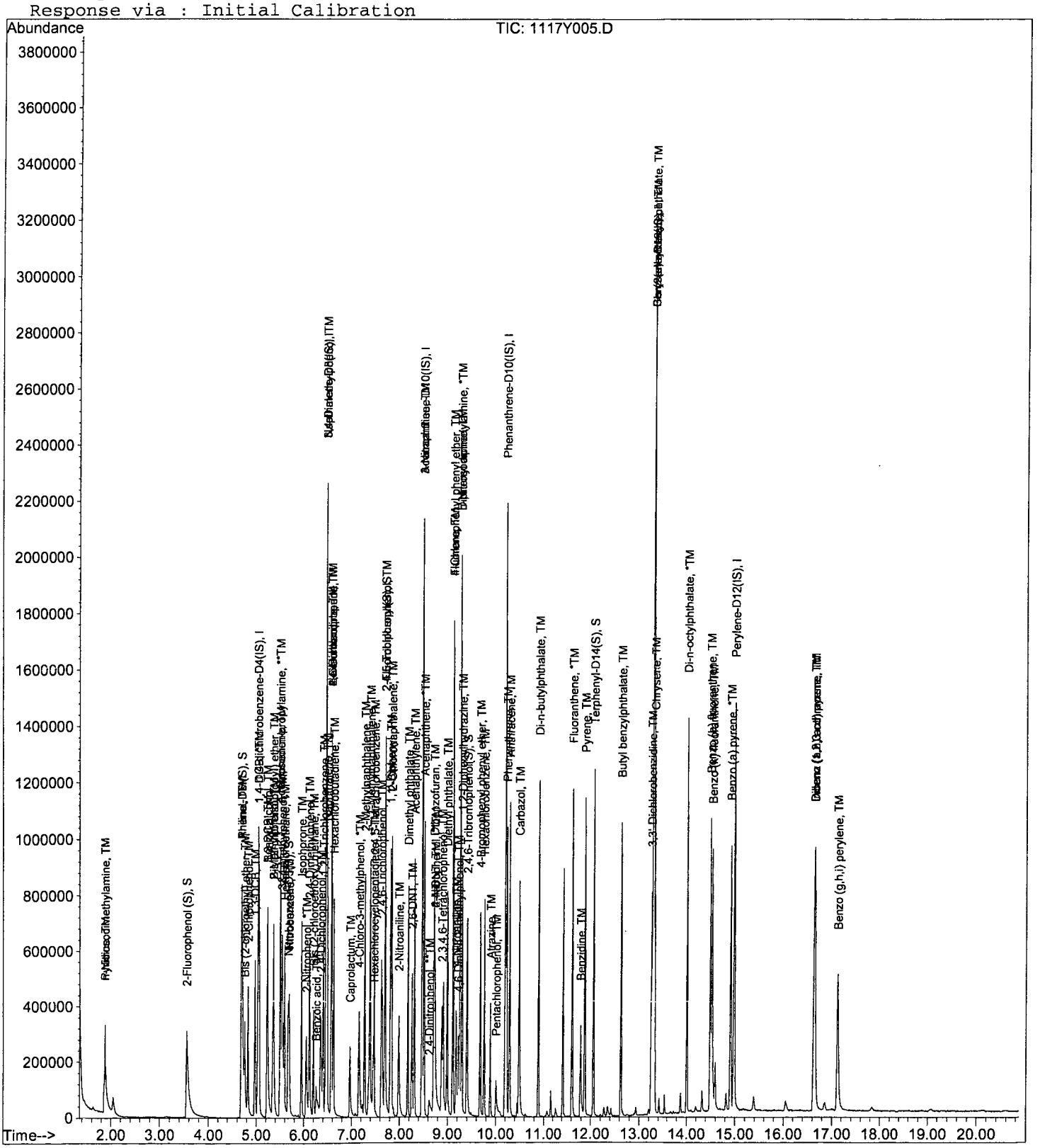
Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38) 2-Methylnaphthalene	7.28	142	284227	16.30542 ppb		97
39) 1-Methylnaphthalene	7.39	142	270185	15.87720 ppb		95
41) Hexachlorocyclopentadiene	7.45	237	27915	17.66565 ppb		98
42) 1,2,4,5-Tetrachlorobenzene	7.47	216	128526	20.43169 ppb		95
43) 2,4,6-Trichlorophenol	7.62	196	83695	20.30533 ppb		99
44) 2,4,5-Trichlorophenol	7.69	196	88724	20.17245 ppb		95
46) 1,1'-Biphenyl	7.81	154	357632	20.01174 ppb	#	97
47) 2-Chloronaphthalene	7.83	162	273307	19.45100 ppb		97
48) 2-Nitroaniline	7.98	65	99623	19.85034 ppb		97
49) Dimethyl phthalate	8.18	163	345482	20.22224 ppb		99
50) 2,6-DNT	8.26	165	76926	19.89559 ppb		89
51) Acenaphthylene	8.31	152	439881	20.02073 ppb		99
52) 3-Nitroaniline	8.46	138	77411	19.32668 ppb	#	79
53) Acenaphthene	8.51	154	272781	20.21118 ppb		98
54) 2,4-Dinitrophenol	8.62	184	27527	23.31233 ppb		87
55) 4-Nitrophenol	8.74	65	53144	25.71548 ppb		84
56) Dibenzofuran	8.72	168	386865	19.67978 ppb		92
57) 2,4-DNT	8.73	165	106929	19.76940 ppb		83
58) 2,3,4,6-Tetrachlorophenol	8.88	232	68474	21.32398 ppb		97
59) Diethyl phthalate	8.98	149	349765	20.13452 ppb		98
60) 4-Chlorophenyl phenyl ethe	9.11	204	154935	20.19471 ppb		94
61) Fluorene	9.11	166	312299	19.62722 ppb		100
62) 4-Nitroaniline	9.17	138	79884	20.84187 ppb		93
65) 4,6-Dinitro-2-methylphenol	9.22	198	58308	19.59222 ppb		81
66) Diphenyl amine	9.25	169	471888	40.64141 ppb		98
67) n-Nitrosodiphenylamine	9.25	169	471888	40.64141 ppb		98
68) 1,2-Diphenylhydrazine	9.29	77	356315	18.86700 ppb		92
69) 4-Bromophenyl phenyl ether	9.68	248	91166	20.15932 ppb		91
70) Hexachlorobenzene	9.75	284	95977	20.14526 ppb	#	83
71) Atrazine	9.88	200	48880	10.14946 ppb		93
72) Pentachlorophenol	10.01	266	20289	21.37277 ppb		96
73) Phenanthrene	10.23	178	484457	20.52237 ppb		99
74) Anthracene	10.28	178	495624	19.99032 ppb		99
75) Carbazol	10.49	167	438345	19.97608 ppb		98
76) Di-n-butylphthalate	10.89	149	600610	20.34288 ppb		98
77) Fluoranthene	11.61	202	528222	20.25095 ppb		98
79) Benzidine	11.79	184	188771	20.62557 ppb		97
80) Pyrene	11.87	202	551797	19.44585 ppb		99
82) Butyl benzylphthalate	12.63	149	280605	19.94131 ppb		89
83) 3,3'-Dichlorobenzidine	13.25	252	180461	20.30937 ppb		95
84) Benz (a) anthracene	13.27	228	525577	19.66285 ppb		99
85) Bis (2-ethylhexyl) phthala	13.29	149	388901	19.58535 ppb	#	98
86) Chrysene	13.31	228	508358	19.50629 ppb		98
87) Di-n-octylphthalate	14.01	149	684072	19.74139 ppb		94
89) Benzo (b) fluoranthene	14.49	252	517242	22.48191 ppb		97
90) Benzo (k) fluoranthene	14.53	252	517784	25.04599 ppb		99
91) Benzo (a) pyrene	14.91	252	497474	24.11752 ppb		98
92) Indeno (1,2,3-cd) pyrene	16.63	276	563885	23.97001 ppb		96
93) Dibenz (a,h) anthracene	16.65	278	472599	23.75364 ppb		98
94) Benzo (g,h,i) perylene	17.13	276	480397	24.73397 ppb		97

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y161117\1117Y005.D Vial: 5
Acq On : 17 Nov 16 12:31 Operator: MA
Sample : 20ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:23:23 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y006.D Vial: 6
Acq On : 17 Nov 16 13:00 Operator: MA
Sample : 40ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:03:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	182920	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.46	136	799601	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.47	164	471497	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.20	188	857196	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.28	240	827115	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.98	264	775756	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.54	112	489327	59.11266 ppb	0.00
Spiked Amount 200.000			Recovery =	29.557%	
5) Phenol-D6 (S)	4.68	99	643202	59.91953 ppb	0.00
Spiked Amount 200.000			Recovery =	29.960%	
21) Nitrobenzene-D5(S)	5.67	82	325882	32.98125 ppb	0.00
Spiked Amount 100.000			Recovery =	32.981%	
45) 2-Fluorobiphenyl(S)	7.69	172	584742	39.63474 ppb	0.00
Spiked Amount 100.000			Recovery =	39.635%	
63) 2,4,6-Tribromophenol(S)	9.40	330	179721	80.55378 ppb	0.00
Spiked Amount 200.000			Recovery =	40.277%	
81) Terphenyl-D14(S)	12.06	244	738732	40.10248 ppb	0.00
Spiked Amount 100.000			Recovery =	40.102%	
Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.85	42	171667	31.74575 ppb	98
3) Pyridine	1.87	79	371406	33.77730 ppb	87
6) Phenol	4.69	94	367596	28.73289 ppb	96
7) Aniline	4.69	66	369124	30.84213 ppb	99
8) Bis (2-chloroethyl) ether	4.75	63	168115	28.82667 ppb	94
9) 2-Chlorophenol	4.82	128	283409	29.10825 ppb	96
10) 1,3-DCB	4.96	146	305742	28.64152 ppb	100
11) 1,4-DCB	5.05	146	317670	29.03373 ppb	95
12) Benzyl alcohol	5.21	108	162789	29.42910 ppb	94
13) 1,2-DCB	5.22	146	292026	28.86659 ppb	98
14) 2-Methylphenol	5.35	107	212274	28.06679 ppb	98
15) Bis (2-chloroisopropyl) et	5.34	45	323912	27.03543 ppb	97
16) Acetophenone	5.49	105	402204	28.97700 ppb	94
17) 3&4-Methylphenol	5.53	107	562583	57.20169 ppb	99
18) n-Nitrosodi-n-propylamine	5.50	70	203201	27.65332 ppb	98
19) Hexachloroethane	5.59	117	130351	29.29214 ppb	90
22) Nitrobenzene	5.69	77	341457	32.68355 ppb	99
23) Isophorone	5.95	82	558780	31.77399 ppb	95
24) 2-Nitrophenol	6.04	139	163133	32.16347 ppb #	81
25) 2,4-Dimethylphenol	6.11	122	247045	31.93917 ppb	99
26) Benzoic acid	6.28	105	187229	37.43946 ppb	92
27) Bis (2-chloroethoxy) metha	6.20	93	295592	31.45166 ppb	99
28) 2,4-Dichlorophenol	6.34	162	240696	32.51908 ppb	99
29) 1,2,4-Trichlorobenzene	6.40	180	266693	32.51201 ppb	99
30) 3,4-Dimethylphenol	6.45	107	396588	32.36774 ppb	99
31) Naphthalene	6.49	128	827320	32.17503 ppb	98
32) 4-Chloroaniline	6.57	127	313519	35.13884 ppb	99
33) 2,6-Dichlorophenol	6.57	162	232199	32.54561 ppb	97
34) Hexachloropropene	6.58	213	212849	33.65066 ppb	97
35) Hexachlorobutadiene	6.62	225	169930	33.00999 ppb	95
36) Caprolactum	6.99	55	125478	31.06839 ppb	98
37) 4-Chloro-3-methylphenol	7.15	107	277582	32.11558 ppb	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y006.D Vial: 6
Acq On : 17 Nov 16 13:00 Operator: MA
Sample : 40ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:03:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.28	142	559401	32.32588	ppb		99
39)	1-Methylnaphthalene	7.39	142	547044	32.38138	ppb		99
41)	Hexachlorocyclopentadiene	7.45	237	89800	38.46180	ppb		95
42)	1,2,4,5-Tetrachlorobenzene	7.47	216	255571	40.17271	ppb		99
43)	2,4,6-Trichlorophenol	7.62	196	170380	40.87291	ppb		99
44)	2,4,5-Trichlorophenol	7.68	196	175659	39.49066	ppb		98
46)	1,1'-Biphenyl	7.81	154	723037	40.00510	ppb		99
47)	2-Chloronaphthalene	7.83	162	562260	39.56714	ppb		97
48)	2-Nitroaniline	7.97	65	203038	40.00296	ppb		82
49)	Dimethyl phthalate	8.18	163	672349	38.91391	ppb		99
50)	2,6-DNT	8.26	165	152051	38.88475	ppb		95
51)	Acenaphthylene	8.31	152	871568	39.22405	ppb		99
52)	3-Nitroaniline	8.45	138	166055	40.99330	ppb		83
53)	Acenaphthene	8.51	154	531893	38.96801	ppb		98
54)	2,4-Dinitrophenol	8.61	184	74069	44.79952	ppb		95
55)	4-Nitrophenol	8.72	65	129227	44.62260	ppb		94
56)	Dibenzofuran	8.71	168	785919	39.53164	ppb		94
57)	2,4-DNT	8.73	165	215731	39.43818	ppb		92
58)	2,3,4,6-Tetrachlorophenol	8.88	232	134037	38.65745	ppb		97
59)	Diethyl phthalate	8.99	149	701587	39.93492	ppb		99
60)	4-Chlorophenyl phenyl ethe	9.11	204	307329	39.60937	ppb		95
61)	Fluorene	9.11	166	622270	38.66994	ppb		99
62)	4-Nitroaniline	9.18	138	149377	38.53602	ppb		92
65)	4,6-Dinitro-2-methylphenol	9.22	198	129630	44.79665	ppb		91
66)	Diphenyl amine	9.26	169	937261	83.01851	ppb		99
67)	n-Nitrosodiphenylamine	9.26	169	937261	83.01851	ppb		99
68)	1,2-Diphenylhydrazine	9.30	77	705458	38.41708	ppb		95
69)	4-Bromophenyl phenyl ether	9.68	248	185079	42.09055	ppb		95
70)	Hexachlorobenzene	9.76	284	194123	41.90514	ppb		98
71)	Atrazine	9.89	200	97002	20.71462	ppb		99
72)	Pentachlorophenol	10.01	266	58149	41.55046	ppb		93
73)	Phenanthrene	10.23	178	949598	41.37106	ppb		100
74)	Anthracene	10.28	178	992145	41.15543	ppb		99
75)	Carbazol	10.49	167	874240	40.97411	ppb		100
76)	Di-n-butylphthalate	10.89	149	1196594	41.68226	ppb		99
77)	Fluoranthene	11.61	202	1046675	41.26913	ppb		99
79)	Benzidine	11.79	184	384636	43.49087	ppb		98
80)	Pyrene	11.88	202	1100278	40.12615	ppb		99
82)	Butyl benzylphthalate	12.63	149	558340	41.06147	ppb		99
83)	3,3'-Dichlorobenzidine	13.25	252	346782	40.38751	ppb		98
84)	Benz (a) anthracene	13.27	228	1045755	40.48718	ppb		100
85)	Bis (2-ethylhexyl) phthala	13.29	149	790052	41.17421	ppb		99
86)	Chrysene	13.32	228	1024348	40.67523	ppb		99
87)	Di-n-octylphthalate	14.01	149	1347084	40.22982	ppb		98
89)	Benzo (b) fluoranthene	14.50	252	995876	43.45869	ppb		99
90)	Benzo (k) fluoranthene	14.53	252	1050014	50.99371	ppb	#	98
91)	Benzo (a) pyrene	14.91	252	991743	48.27179	ppb	#	97
92)	Indeno (1,2,3-cd) pyrene	16.64	276	1128982	48.18332	ppb		99
93)	Dibenz (a,h) anthracene	16.65	278	962401	48.56523	ppb		95
94)	Benzo (g,h,i) perylene	17.13	276	943136	48.75283	ppb		99

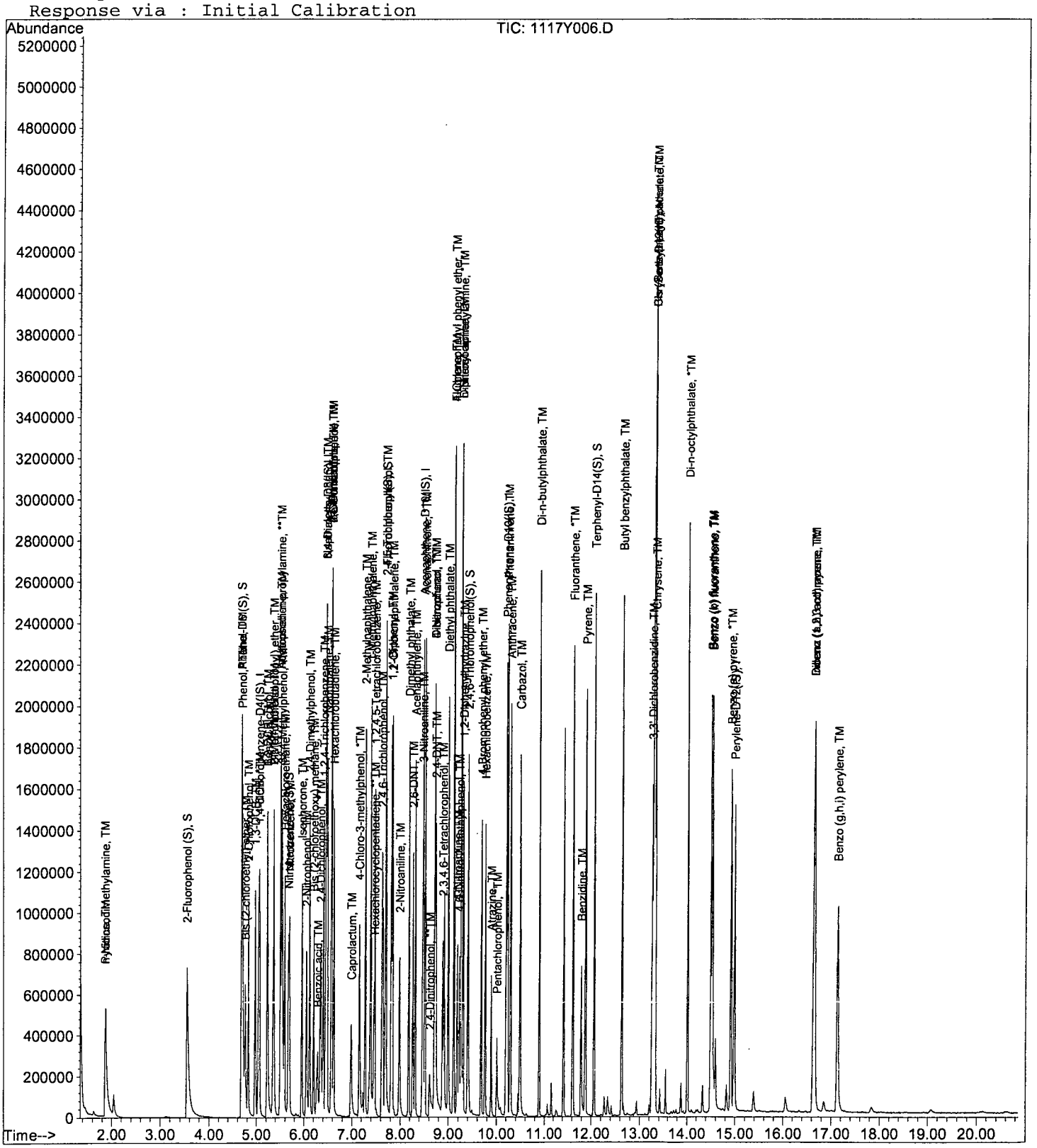
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y006.D Vial: 6
Acq On : 17 Nov 16 13:00 Operator: MA
Sample : 40ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:23:23 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y007.D Vial: 7
Acq On : 17 Nov 16 13:29 Operator: MA
Sample : 50ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:03:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	181943	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.46	136	778154	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.47	164	463295	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.20	188	862854	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.29	240	815722	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.98	264	770325	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.54	112	618430	75.10999 ppb	0.00
Spiked Amount 200.000			Recovery =	37.555%	
5) Phenol-D6 (S)	4.68	99	813183	76.16144 ppb	0.00
Spiked Amount 200.000			Recovery =	38.081%	
21) Nitrobenzene-D5(S)	5.67	82	413217	42.97271 ppb	0.00
Spiked Amount 100.000			Recovery =	42.973%	
45) 2-Fluorobiphenyl(S)	7.69	172	744145	51.33229 ppb	0.00
Spiked Amount 100.000			Recovery =	51.332%	
63) 2,4,6-Tribromophenol(S)	9.40	330	229822	104.83349 ppb	0.00
Spiked Amount 200.000			Recovery =	52.417%	
81) Terphenyl-D14(S)	12.06	244	928859	51.12789 ppb	0.00
Spiked Amount 100.000			Recovery =	51.128%	
Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.85	42	216155	40.18739 ppb	100
3) Pyridine	1.86	79	497169	45.45753 ppb	100
6) Phenol	4.69	94	464369	36.49199 ppb	100
7) Aniline	4.69	66	464226	38.99666 ppb	100
8) Bis (2-chloroethyl) ether	4.75	63	216148	37.26190 ppb	100
9) 2-Chlorophenol	4.82	128	347178	35.84929 ppb	100
10) 1,3-DCB	4.96	146	388921	36.62926 ppb	100
11) 1,4-DCB	5.06	146	392126	36.03115 ppb	100
12) Benzyl alcohol	5.21	108	201704	36.65999 ppb	100
13) 1,2-DCB	5.22	146	366617	36.43446 ppb	100
14) 2-Methylphenol	5.35	107	271756	36.12443 ppb	100
15) Bis (2-chloroisopropyl) et	5.34	45	407085	34.15995 ppb	100
16) Acetophenone	5.50	105	510953	37.00956 ppb	100
17) 3&4-Methylphenol	5.53	107	713751	72.96168 ppb	100
18) n-Nitrosodi-n-propylamine	5.50	70	257477	35.22782 ppb	100
19) Hexachloroethane	5.59	117	162886	36.79987 ppb	100
22) Nitrobenzene	5.69	77	426963	41.99439 ppb	100
23) Isophorone	5.96	82	712673	41.64175 ppb	100
24) 2-Nitrophenol	6.05	139	205718	41.67745 ppb	100
25) 2,4-Dimethylphenol	6.11	122	315229	41.87757 ppb	100
26) Benzoic acid	6.29	105	249982	47.09062 ppb	100
27) Bis (2-chloroethoxy) metha	6.20	93	378139	41.34378 ppb	100
28) 2,4-Dichlorophenol	6.34	162	302250	41.96077 ppb	100
29) 1,2,4-Trichlorobenzene	6.40	180	339275	42.50028 ppb	100
30) 3,4-Dimethylphenol	6.45	107	496951	41.67678 ppb	100
31) Naphthalene	6.49	128	1026450	41.01956 ppb	100
32) 4-Chloroaniline	6.57	127	389058	44.80698 ppb	100
33) 2,6-Dichlorophenol	6.57	162	295647	42.58075 ppb	100
34) Hexachloropropene	6.58	213	269357	43.75805 ppb	100
35) Hexachlorobutadiene	6.63	225	212704	42.45792 ppb	100
36) Caprolactum	7.00	55	159271	40.52245 ppb	100
37) 4-Chloro-3-methylphenol	7.15	107	351811	41.82555 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y007.D Vial: 7
Acq On : 17 Nov 16 13:29 Operator: MA
Sample : 50ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:03:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

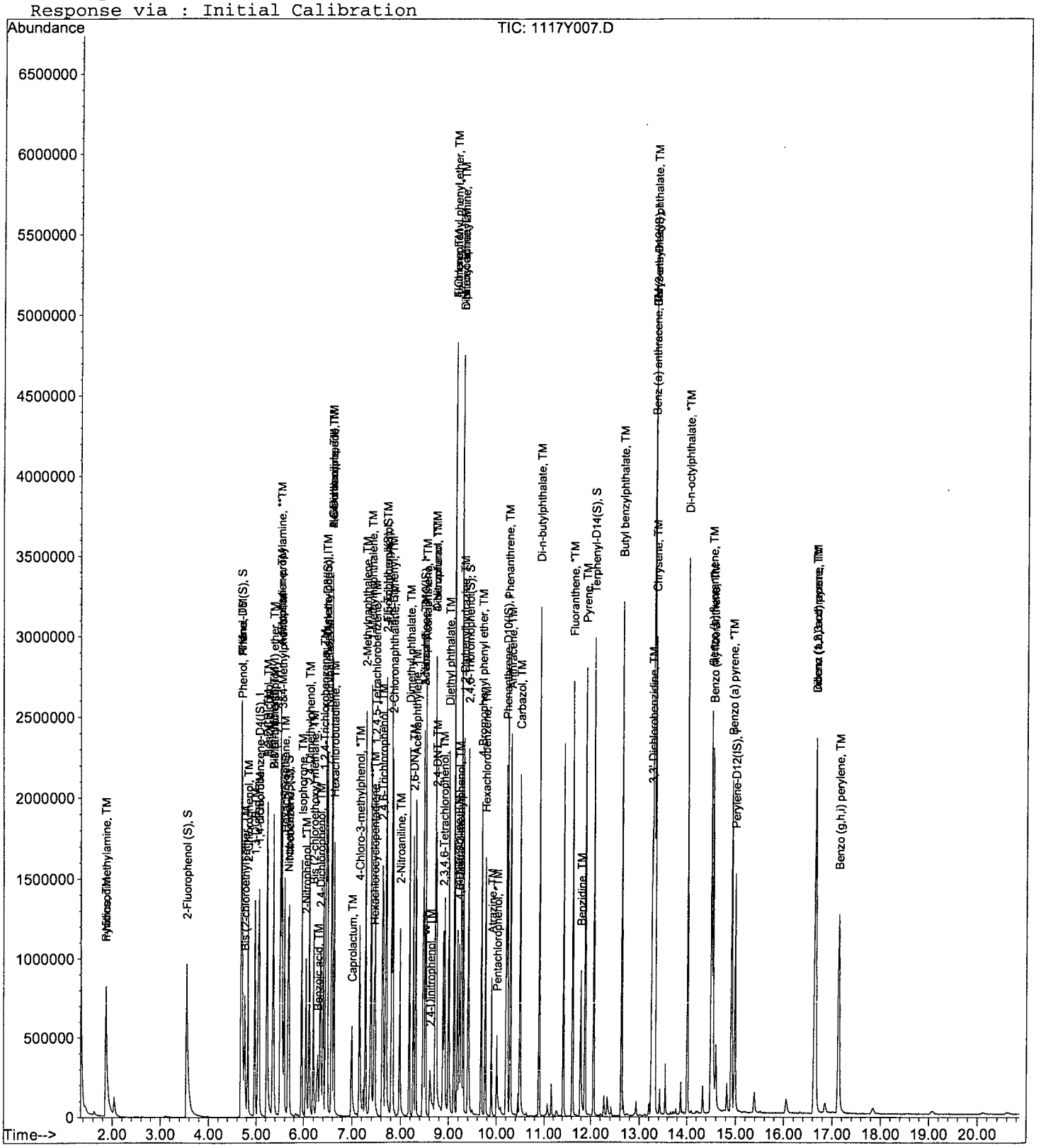
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
38)	2-Methylnaphthalene	7.28	142	696045	41.33064 ppb	100
39)	1-Methylnaphthalene	7.39	142	677368	41.20079 ppb	100
41)	Hexachlorocyclopentadiene	7.45	237	125106	49.24610 ppb	100
42)	1,2,4,5-Tetrachlorobenzene	7.47	216	312985	50.06848 ppb	100
43)	2,4,6-Trichlorophenol	7.62	196	214891	52.46341 ppb	100
44)	2,4,5-Trichlorophenol	7.68	196	222710	50.95479 ppb	100
46)	1,1'-Biphenyl	7.81	154	890153	50.12343 ppb	100
47)	2-Chloronaphthalene	7.83	162	697990	49.98826 ppb	100
48)	2-Nitroaniline	7.98	65	253755	50.88042 ppb	100
49)	Dimethyl phthalate	8.18	163	848219	49.96196 ppb	100
50)	2,6-DNT	8.26	165	196067	51.02886 ppb	100
51)	Acenaphthylene	8.32	152	1097193	50.25224 ppb	100
52)	3-Nitroaniline	8.46	138	207701	52.18201 ppb	100
53)	Acenaphthene	8.51	154	666149	49.66800 ppb	100
54)	2,4-Dinitrophenol	8.61	184	86865	50.53357 ppb	100
55)	4-Nitrophenol	8.72	65	163056	53.78218 ppb	100
56)	Dibenzofuran	8.71	168	975560	49.93929 ppb	100
57)	2,4-DNT	8.73	165	273072	50.80458 ppb	100
58)	2,3,4,6-Tetrachlorophenol	8.88	232	174221	50.23368 ppb	100
59)	Diethyl phthalate	8.99	149	873862	50.62155 ppb	100
60)	4-Chlorophenyl phenyl ethe	9.11	204	384584	50.44370 ppb	100
61)	Fluorene	9.11	166	784486	49.61365 ppb	100
62)	4-Nitroaniline	9.18	138	185067	48.58850 ppb	100
65)	4,6-Dinitro-2-methylphenol	9.22	198	170321	58.47241 ppb	100
66)	Diphenyl amine	9.26	169	1168598	102.83060 ppb	100
67)	n-Nitrosodiphenylamine	9.26	169	1168598	102.83060 ppb	100
68)	1,2-Diphenylhydrazine	9.30	77	1067009	57.72503 ppb	100
69)	4-Bromophenyl phenyl ether	9.68	248	232342	52.49259 ppb	100
70)	Hexachlorobenzene	9.76	284	244690	52.47462 ppb	100
71)	Atrazine	9.89	200	122547	25.99810 ppb	100
72)	Pentachlorophenol	10.00	266	80566	52.08769 ppb	100
73)	Phenanthrene	10.23	178	1191263	51.55934 ppb	100
74)	Anthracene	10.29	178	1258645	51.86783 ppb	100
75)	Carbazol	10.49	167	1093880	50.93207 ppb	100
76)	Di-n-butylphthalate	10.89	149	1488154	51.49856 ppb	100
77)	Fluoranthene	11.61	202	1321409	51.75991 ppb	100
79)	Benzidine	11.79	184	486917	55.82475 ppb	100
80)	Pyrene	11.88	202	1392284	51.48451 ppb	100
82)	Butyl benzylphthalate	12.63	149	702283	52.36868 ppb	100
83)	3,3'-Dichlorobenzidine	13.24	252	429687	50.74187 ppb	100
84)	Benz (a) anthracene	13.27	228	1313858	51.57743 ppb	100
85)	Bis (2-ethylhexyl) phthala	13.29	149	985933	52.10036 ppb	100
86)	Chrysene	13.32	228	1281161	51.58340 ppb	100
87)	Di-n-octylphthalate	14.01	149	1707218	51.69710 ppb	100
89)	Benzo (b) fluoranthene	14.50	252	1415938	62.22526 ppb	100
90)	Benzo (k) fluoranthene	14.53	252	1164096	56.93266 ppb	100
91)	Benzo (a) pyrene	14.92	252	1232001	60.38881 ppb	100
92)	Indeno (1,2,3-cd) pyrene	16.64	276	1426210	61.29772 ppb	100
93)	Dibenz (a,h) anthracene	16.66	278	1197308	60.84521 ppb	100
94)	Benzo (g,h,i) perylene	17.13	276	1188963	61.89349 ppb	100

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y161117\1117Y007.D Vial: 7
Acq On : 17 Nov 16 13:29 Operator: MA
Sample : 50ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:23:23 2016
Response via : Initial Calibration



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Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y008.D Vial: 8
Acq On : 17 Nov 16 13:59 Operator: MA
Sample : 60ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:03:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	186866	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.46	136	805709	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.47	164	477826	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.20	188	888712	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.29	240	837026	40.00000 ppb		0.00
88) Perylene-D12(IS)	14.98	264	783819	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.54	112	735510	86.97628 ppb		0.00
Spiked Amount 200.000			Recovery = 43.488%			
5) Phenol-D6 (S)	4.68	99	958103	87.37035 ppb		0.00
Spiked Amount 200.000			Recovery = 43.685%			
21) Nitrobenzene-D5(S)	5.67	82	482547	48.46648 ppb		0.00
Spiked Amount 100.000			Recovery = 48.466%			
45) 2-Fluorobiphenyl(S)	7.69	172	871894	58.31558 ppb		0.00
Spiked Amount 100.000			Recovery = 58.316%			
63) 2,4,6-Tribromophenol(S)	9.40	330	273874	121.12871 ppb		0.00
Spiked Amount 200.000			Recovery = 60.565%			
81) Terphenyl-D14(S)	12.06	244	1089245	58.43013 ppb		0.00
Spiked Amount 100.000			Recovery = 58.430%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.85	42	254946	46.15065 ppb		97
3) Pyridine	1.86	79	609331	54.24505 ppb		91
6) Phenol	4.70	94	552567	42.27897 ppb		97
7) Aniline	4.69	66	568762	46.51935 ppb		96
8) Bis (2-chloroethyl) ether	4.75	63	254311	42.68586 ppb		93
9) 2-Chlorophenol	4.82	128	427298	42.96000 ppb		99
10) 1,3-DCB	4.96	146	459257	42.11411 ppb		98
11) 1,4-DCB	5.06	146	470815	42.12189 ppb		98
12) Benzyl alcohol	5.22	108	244400	43.24979 ppb		91
13) 1,2-DCB	5.22	146	435654	42.15475 ppb		100
14) 2-Methylphenol	5.35	107	328296	42.49057 ppb		98
15) Bis (2-chloroisopropyl) et	5.35	45	486534	39.75122 ppb		96
16) Acetophenone	5.50	105	606524	42.77460 ppb		99
17) 3&4-Methylphenol	5.53	107	862404	85.83491 ppb		98
18) n-Nitrosodi-n-propylamine	5.50	70	309969	41.29245 ppb		93
19) Hexachloroethane	5.59	117	197001	43.33473 ppb		97
22) Nitrobenzene	5.69	77	512125	48.64793 ppb		97
23) Isophorone	5.96	82	844597	47.66236 ppb		98
24) 2-Nitrophenol	6.04	139	246827	48.29574 ppb	#	82
25) 2,4-Dimethylphenol	6.11	122	373486	47.92002 ppb		98
26) Benzoic acid	6.30	105	303410	52.82971 ppb		99
27) Bis (2-chloroethoxy) metha	6.20	93	441550	46.62576 ppb		100
28) 2,4-Dichlorophenol	6.34	162	369799	49.58271 ppb		98
29) 1,2,4-Trichlorobenzene	6.40	180	399963	48.38905 ppb		98
30) 3,4-Dimethylphenol	6.45	107	601030	48.68151 ppb		100
31) Naphthalene	6.49	128	1248556	48.18908 ppb		99
32) 4-Chloroaniline	6.57	127	460313	51.20023 ppb		98
33) 2,6-Dichlorophenol	6.57	162	347254	48.30303 ppb		99
34) Hexachloropropene	6.58	213	329921	51.76390 ppb		96
35) Hexachlorobutadiene	6.63	225	254211	49.00775 ppb		98
36) Caprolactum	7.00	55	192288	47.24964 ppb		96
37) 4-Chloro-3-methylphenol	7.15	107	430421	49.42117 ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y008.D Vial: 8
Acq On : 17 Nov 16 13:59 Operator: MA
Sample : 60ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:03:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	2-Methylnaphthalene	7.28	142	843672	48.38334 ppb		98
39)	1-Methylnaphthalene	7.39	142	811794	47.68854 ppb		98
41)	Hexachlorocyclopentadiene	7.45	237	168291	59.38046 ppb		97
42)	1,2,4,5-Tetrachlorobenzene	7.47	216	382146	59.27316 ppb		99
43)	2,4,6-Trichlorophenol	7.62	196	257604	60.97878 ppb		98
44)	2,4,5-Trichlorophenol	7.68	196	272433	60.43560 ppb		98
46)	1,1'-Biphenyl	7.81	154	1071723	58.51221 ppb		99
47)	2-Chloronaphthalene	7.83	162	845644	58.72111 ppb		97
48)	2-Nitroaniline	7.98	65	305489	59.39084 ppb		98
49)	Dimethyl phthalate	8.18	163	1027561	58.68497 ppb		99
50)	2,6-DNT	8.26	165	235563	59.44376 ppb		94
51)	Acenaphthylene	8.31	152	1285124	57.06966 ppb		98
52)	3-Nitroaniline	8.46	138	243169	59.23498 ppb		97
53)	Acenaphthene	8.51	154	806703	58.31857 ppb		99
54)	2,4-Dinitrophenol	8.60	184	127764	64.23896 ppb		92
55)	4-Nitrophenol	8.72	65	204441	62.68770 ppb		99
56)	Dibenzofuran	8.72	168	1178060	58.47142 ppb		97
57)	2,4-DNT	8.73	165	327460	59.07065 ppb		98
58)	2,3,4,6-Tetrachlorophenol	8.88	232	209402	58.07892 ppb		95
59)	Diethyl phthalate	9.00	149	1065086	59.82257 ppb		95
60)	4-Chlorophenyl phenyl ethe	9.11	204	467459	59.44935 ppb		98
61)	Fluorene	9.11	166	952692	58.41929 ppb		98
62)	4-Nitroaniline	9.18	138	224758	57.21468 ppb		94
65)	4,6-Dinitro-2-methylphenol	9.23	198	199515	66.50199 ppb	#	73
66)	Diphenyl amine	9.26	169	1387160	118.51138 ppb		99
67)	n-Nitrosodiphenylamine	9.26	169	1387160	118.51138 ppb		99
68)	1,2-Diphenylhydrazine	9.30	77	1275971	67.02134 ppb		99
69)	4-Bromophenyl phenyl ether	9.68	248	276970	60.75462 ppb		97
70)	Hexachlorobenzene	9.76	284	294248	61.26647 ppb		98
71)	Atrazine	9.89	200	143923	29.64459 ppb		97
72)	Pentachlorophenol	10.01	266	96171	57.95150 ppb		100
73)	Phenanthrene	10.23	178	1431666	60.16136 ppb		99
74)	Anthracene	10.29	178	1513959	60.57385 ppb		99
75)	Carbazol	10.49	167	1326110	59.94838 ppb		100
76)	Di-n-butylphthalate	10.89	149	1814107	60.95178 ppb		100
77)	Fluoranthene	11.61	202	1590817	60.49964 ppb		100
79)	Benzidine	11.79	184	585939	65.46776 ppb		99
80)	Pyrene	11.88	202	1663029	59.93104 ppb		99
82)	Butyl benzylphthalate	12.63	149	843860	61.32437 ppb		96
83)	3,3'-Dichlorobenzidine	13.25	252	521291	59.99260 ppb	#	94
84)	Benz (a) anthracene	13.27	228	1604071	61.36746 ppb		100
85)	Bis (2-ethylhexyl) phthala	13.29	149	1189376	61.25136 ppb		100
86)	Chrysene	13.32	228	1534121	60.19620 ppb		100
87)	Di-n-octylphthalate	14.01	149	2062468	60.86500 ppb		100
89)	Benzo (b) fluoranthene	14.50	252	1648657	71.20509 ppb		99
90)	Benzo (k) fluoranthene	14.54	252	1431150	68.78853 ppb		99
91)	Benzo (a) pyrene	14.92	252	1472933	70.95558 ppb		100
92)	Indeno (1,2,3-cd) pyrene	16.64	276	1684608	71.15704 ppb		99
93)	Dibenz (a,h) anthracene	16.66	278	1432341	71.53608 ppb		99
94)	Benzo (g,h,i) perylene	17.14	276	1400790	71.66513 ppb		100

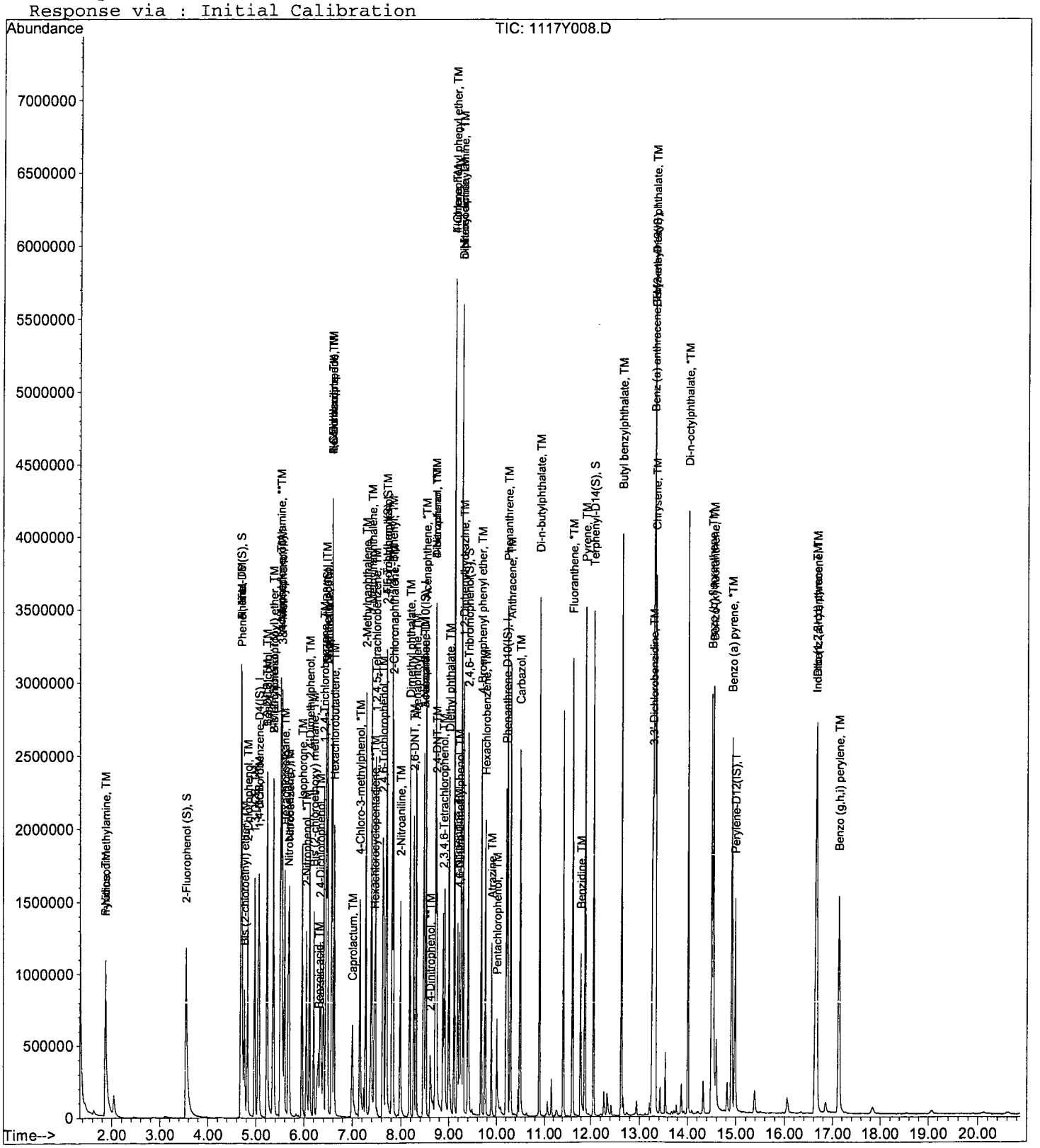
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y008.D Vial: 8
Acq On : 17 Nov 16 13:59 Operator: MA
Sample : 60ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:23:23 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y009.D Vial: 9
Acq On : 17 Nov 16 14:28 Operator: MA
Sample : 80ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:03:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	185570	40.00000	ppb		0.00
20) Napthalene-D8(IS)	6.46	136	796769	40.00000	ppb		0.00
40) Acenaphthene-D10(IS)	8.47	164	481968	40.00000	ppb		0.00
64) Phenanthrene-D10(IS)	10.20	188	892921	40.00000	ppb		0.00
78) Chrysene-D12(IS)	13.29	240	844482	40.00000	ppb		0.00
88) Perylene-D12(IS)	14.98	264	793228	40.00000	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol (S)	3.54	112	987627	117.60552	ppb		0.00
Spiked Amount 200.000			Recovery = 58.803%				
5) Phenol-D6 (S)	4.69	99	1273775	116.96802	ppb		0.00
Spiked Amount 200.000			Recovery = 58.484%				
21) Nitrobenzene-D5(S)	5.67	82	648272	65.84229	ppb		0.00
Spiked Amount 100.000			Recovery = 65.842%				
45) 2-Fluorobiphenyl(S)	7.70	172	1163651	77.16054	ppb		0.00
Spiked Amount 100.000			Recovery = 77.161%				
63) 2,4,6-Tribromophenol(S)	9.41	330	368987	161.79270	ppb		0.00
Spiked Amount 200.000			Recovery = 80.897%				
81) Terphenyl-D14(S)	12.07	244	1491374	79.29511	ppb		0.00
Spiked Amount 100.000			Recovery = 79.295%				
Target Compounds							Qvalue
2) n-Nitrosodimethylamine	1.85	42	350835	63.95214	ppb		97
3) Pyridine	1.86	79	780223	69.94362	ppb		90
6) Phenol	4.70	94	732452	56.43403	ppb		93
7) Aniline	4.70	66	745585	61.40768	ppb	#	68
8) Bis (2-chloroethyl) ether	4.75	63	330830	55.91731	ppb		96
9) 2-Chlorophenol	4.82	128	557148	56.40616	ppb		99
10) 1,3-DCB	4.96	146	600633	55.46302	ppb		98
11) 1,4-DCB	5.06	146	614009	55.31652	ppb		97
12) Benzyl alcohol	5.22	108	320815	57.16893	ppb		98
13) 1,2-DCB	5.22	146	570533	55.59146	ppb		97
14) 2-Methylphenol	5.35	107	428200	55.80795	ppb		98
15) Bis (2-chloroisopropyl) et	5.34	45	641127	52.74773	ppb		99
16) Acetophenone	5.50	105	790020	56.10462	ppb		97
17) 3&4-Methylphenol	5.53	107	1128891	113.14301	ppb		96
18) n-Nitrosodi-n-propylamine	5.51	70	416391	55.85682	ppb		96
19) Hexachloroethane	5.59	117	255879	56.67934	ppb		99
22) Nitrobenzene	5.69	77	681429	65.45680	ppb		95
23) Isophorone	5.96	82	1113984	63.56979	ppb		95
24) 2-Nitrophenol	6.05	139	325331	64.37058	ppb		99
25) 2,4-Dimethylphenol	6.12	122	506527	65.71902	ppb		97
26) Benzoic acid	6.32	105	415408	66.71840	ppb		99
27) Bis (2-chloroethoxy) metha	6.20	93	587341	62.71655	ppb		99
28) 2,4-Dichlorophenol	6.34	162	489407	66.35604	ppb		97
29) 1,2,4-Trichlorobenzene	6.40	180	516688	63.21228	ppb		96
30) 3,4-Dimethylphenol	6.45	107	783360	64.16159	ppb		99
31) Naphthalene	6.49	128	1650904	64.43297	ppb		99
32) 4-Chloroaniline	6.57	127	599717	67.45448	ppb		98
33) 2,6-Dichlorophenol	6.57	162	457931	64.41292	ppb		97
34) Hexachloropropene	6.58	213	436856	69.31083	ppb		99
35) Hexachlorobutadiene	6.63	225	338496	65.98872	ppb		98
36) Caprolactum	7.02	55	252992	62.86355	ppb		97
37) 4-Chloro-3-methylphenol	7.16	107	556887	64.65951	ppb		91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y009.D Vial: 9
Acq On : 17 Nov 16 14:28 Operator: MA
Sample : 80ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:03:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

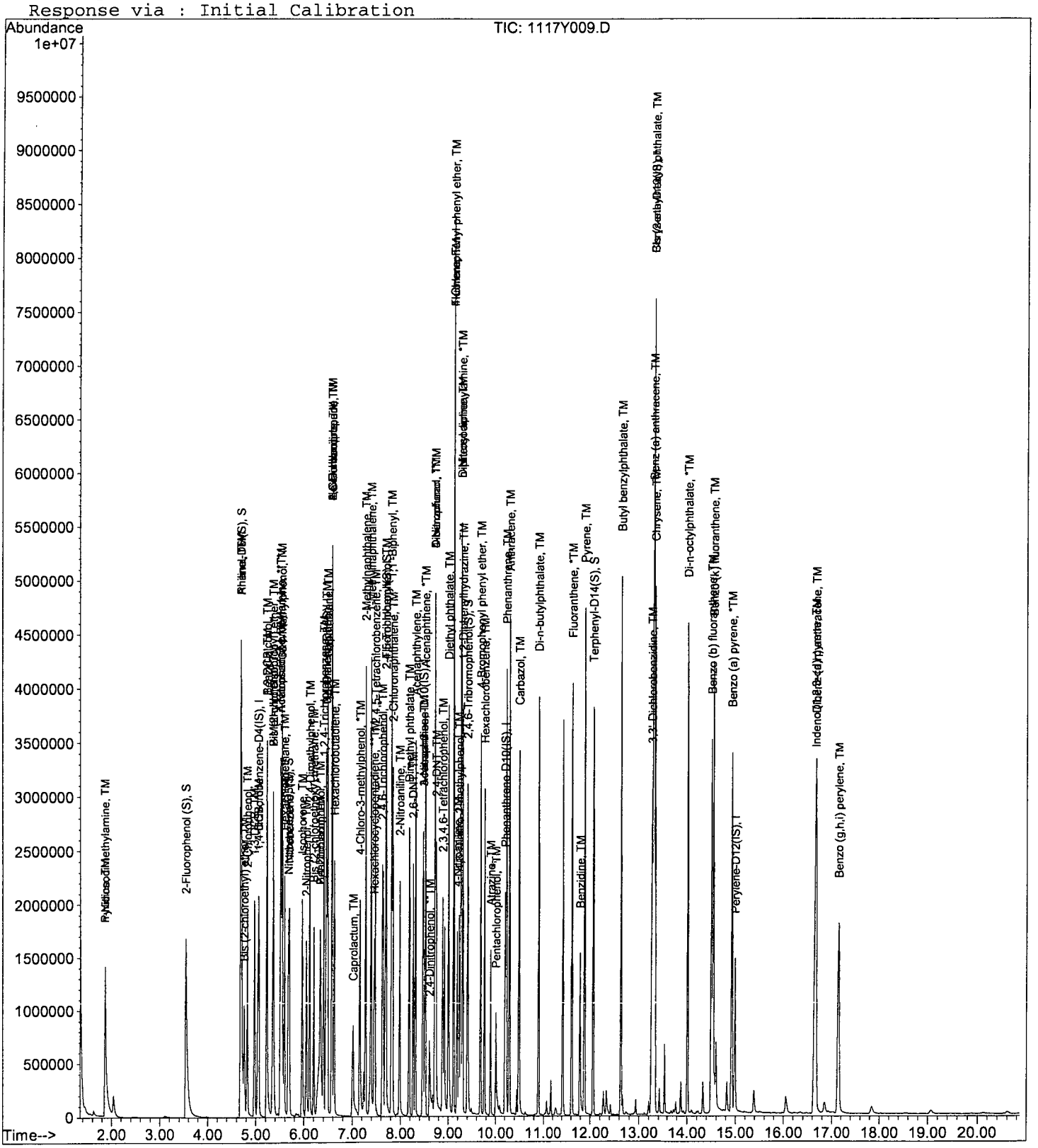
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.28	142	1101884	63.90044	ppb		99
39)	1-Methylnaphthalene	7.39	142	1066046	63.32714	ppb		97
41)	Hexachlorocyclopentadiene	7.45	237	245692	76.76041	ppb		96
42)	1,2,4,5-Tetrachlorobenzene	7.47	216	498043	76.58561	ppb		99
43)	2,4,6-Trichlorophenol	7.62	196	341873	80.23106	ppb		99
44)	2,4,5-Trichlorophenol	7.68	196	357356	78.59334	ppb		98
46)	1,1'-Biphenyl	7.81	154	1415314	76.60698	ppb		99
47)	2-Chloronaphthalene	7.84	162	1104129	76.01128	ppb		93
48)	2-Nitroaniline	7.98	65	408811	78.79489	ppb		91
49)	Dimethyl phthalate	8.19	163	1357449	76.85894	ppb		99
50)	2,6-DNT	8.27	165	312851	78.26874	ppb		77
51)	Acenaphthylene	8.32	152	1731901	76.24913	ppb		99
52)	3-Nitroaniline	8.46	138	321468	77.63533	ppb		87
53)	Acenaphthene	8.51	154	1049600	75.22610	ppb		99
54)	2,4-Dinitrophenol	8.60	184	160896	74.49383	ppb		89
55)	4-Nitrophenol	8.71	65	279404	80.43551	ppb		92
56)	Dibenzofuran	8.71	168	1516972	74.64580	ppb		94
57)	2,4-DNT	8.74	165	432051	77.26807	ppb		78
58)	2,3,4,6-Tetrachlorophenol	8.88	232	285163	77.43295	ppb		93
59)	Diethyl phthalate	9.00	149	1369264	76.24637	ppb		98
60)	4-Chlorophenyl phenyl ethe	9.11	204	637877	80.42519	ppb		96
61)	Fluorene	9.11	166	1286145	78.18893	ppb		98
62)	4-Nitroaniline	9.19	138	287336	72.51602	ppb		99
65)	4,6-Dinitro-2-methylphenol	9.23	198	270784	89.83180	ppb		92
66)	Diphenyl amine	9.27	169	1870322	159.03690	ppb		99
67)	n-Nitrosodiphenylamine	9.27	169	1870322	159.03690	ppb		99
68)	1,2-Diphenylhydrazine	9.30	77	1657994	86.67688	ppb		93
69)	4-Bromophenyl phenyl ether	9.68	248	365428	79.78043	ppb		89
70)	Hexachlorobenzene	9.76	284	395833	82.02937	ppb		91
71)	Atrazine	9.89	200	191120	39.18045	ppb		93
72)	Pentachlorophenol	10.01	266	149986	79.96604	ppb		96
73)	Phenanthrene	10.23	178	1887722	78.95179	ppb		99
74)	Anthracene	10.29	178	1987881	79.16067	ppb		99
75)	Carbazol	10.50	167	1771198	79.69169	ppb		96
76)	Di-n-butylphthalate	10.90	149	2405928	80.45520	ppb		97
77)	Fluoranthene	11.62	202	2129288	80.59628	ppb		96
79)	Benzidine	11.79	184	752032	83.28369	ppb		100
80)	Pyrene	11.88	202	2169932	77.50802	ppb		100
82)	Butyl benzylphthalate	12.63	149	1097170	79.02876	ppb		91
83)	3,3'-Dichlorobenzidine	13.25	252	658841	75.15306	ppb	#	95
84)	Benz (a) anthracene	13.27	228	2125416	80.59480	ppb		100
85)	Bis (2-ethylhexyl) phthala	13.29	149	1555195	79.38345	ppb		100
86)	Chrysene	13.32	228	1998485	77.72468	ppb		99
87)	Di-n-octylphthalate	14.02	149	2791653	81.65643	ppb	#	88
89)	Benzo (b) fluoranthene	14.50	252	2081355	88.82693	ppb		98
90)	Benzo (k) fluoranthene	14.54	252	1958330	93.01104	ppb		99
91)	Benzo (a) pyrene	14.92	252	1943111	92.49515	ppb		98
92)	Indeno (1,2,3-cd) pyrene	16.65	276	2197065	91.70218	ppb		99
93)	Dibenz (a,h) anthracene	16.67	278	1858236	91.70592	ppb		98
94)	Benzo (g,h,i) perylene	17.15	276	1820935	92.05493	ppb		96

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y161117\1117Y009.D Vial: 9
Acq On : 17 Nov 16 14:28 Operator: MA
Sample : 80ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:23:23 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y010.D Vial: 10
Acq On : 17 Nov 16 14:58 Operator: MA
Sample : 100ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:15 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:05:44 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	180735	40.00000	ppb		0.00
20) Napthalene-D8(IS)	6.46	136	767853	40.00000	ppb		0.00
40) Acenaphthene-D10(IS)	8.48	164	466110	40.00000	ppb		0.00
64) Phenanthrene-D10(IS)	10.20	188	868261	40.00000	ppb		0.00
78) Chrysene-D12(IS)	13.29	240	852168	40.00000	ppb		0.00
88) Perylene-D12(IS)	14.98	264	748584	40.00000	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol (S)	3.55	112	1211162	195.78264	ppb		0.00
Spiked Amount 200.000			Recovery = 97.891%				
5) Phenol-D6 (S)	4.69	99	1585805	184.57518	ppb		0.01
Spiked Amount 200.000			Recovery = 92.287%				
21) Nitrobenzene-D5(S)	5.67	82	808093	96.09095	ppb		0.00
Spiked Amount 100.000			Recovery = 96.091%				
45) 2-Fluorobiphenyl(S)	7.71	172	1438715	97.11149	ppb		0.01
Spiked Amount 100.000			Recovery = 97.111%				
63) 2,4,6-Tribromophenol(S)	9.41	330	470620	206.63639	ppb		0.01
Spiked Amount 200.000			Recovery = 103.318%				
81) Terphenyl-D14(S)	12.06	244	1827975	94.68790	ppb		0.00
Spiked Amount 100.000			Recovery = 94.688%				
Target Compounds							Qvalue
2) n-Nitrosodimethylamine	1.85	42	475029	105.20258	ppb		93
3) Pyridine	1.87	79	901071	93.28727	ppb		87
6) Phenol	4.70	94	902387	92.12178	ppb		96
7) Aniline	4.70	66	930399	96.74525	ppb	#	65
8) Bis (2-chloroethyl) ether	4.75	63	420511	94.59028	ppb		95
9) 2-Chlorophenol	4.82	128	691135	91.68877	ppb		97
10) 1,3-DCB	4.97	146	753369	91.88467	ppb		98
11) 1,4-DCB	5.06	146	764013	90.92745	ppb		99
12) Benzyl alcohol	5.23	108	409415	97.34534	ppb		95
13) 1,2-DCB	5.23	146	704894	90.57849	ppb		99
14) 2-Methylphenol	5.36	107	534032	92.72371	ppb		99
15) Bis (2-chloroisopropyl) et	5.35	45	776745	88.00815	ppb		98
16) Acetophenone	5.51	105	994639	92.54047	ppb		98
17) 3&4-Methylphenol	5.54	107	1405444	185.15109	ppb		97
18) n-Nitrosodi-n-propylamine	5.51	70	519189	93.34169	ppb		97
19) Hexachloroethane	5.59	117	319515	92.03486	ppb		94
22) Nitrobenzene	5.69	77	849213	97.97511	ppb		95
23) Isophorone	5.97	82	1389571	96.85601	ppb		99
24) 2-Nitrophenol	6.04	139	408611	99.34253	ppb	#	79
25) 2,4-Dimethylphenol	6.12	122	622365	96.99760	ppb		97
26) Benzoic acid	6.33	105	466413	79.98489	ppb		98
27) Bis (2-chloroethoxy) metha	6.20	93	733563	96.39497	ppb		99
28) 2,4-Dichlorophenol	6.33	162	597686	97.17196	ppb		96
29) 1,2,4-Trichlorobenzene	6.41	180	651784	95.87147	ppb		98
30) 3,4-Dimethylphenol	6.45	107	979615	96.24118	ppb		98
31) Naphthalene	6.49	128	2045797	96.72628	ppb		98
32) 4-Chloroaniline	6.57	127	706390	94.24475	ppb		97
33) 2,6-Dichlorophenol	6.57	162	568037	95.46137	ppb		99
34) Hexachloropropene	6.58	213	546175	101.50369	ppb		99
35) Hexachlorobutadiene	6.63	225	420854	97.58743	ppb		96
36) Caprolactum	7.03	55	313706	96.54835	ppb		96
37) 4-Chloro-3-methylphenol	7.16	107	704662	99.29167	ppb		91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y010.D Vial: 10
Acq On : 17 Nov 16 14:58 Operator: MA
Sample : 100ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:15 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:05:44 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.28	142	1398021	98.17583	ppb		98
39)	1-Methylnaphthalene	7.39	142	1336099	97.24745	ppb		99
41)	Hexachlorocyclopentadiene	7.45	237	335967	97.84989	ppb		95
42)	1,2,4,5-Tetrachlorobenzene	7.47	216	619084	98.06507	ppb		98
43)	2,4,6-Trichlorophenol	7.62	196	422243	100.15060	ppb		98
44)	2,4,5-Trichlorophenol	7.69	196	448137	100.39630	ppb		98
46)	1,1'-Biphenyl	7.82	154	1744589	98.08208	ppb		99
47)	2-Chloronaphthalene	7.84	162	1374326	98.72516	ppb		93
48)	2-Nitroaniline	7.98	65	507600	102.48500	ppb		91
49)	Dimethyl phthalate	8.19	163	1697905	100.38208	ppb		99
50)	2,6-DNT	8.27	165	387010	102.00902	ppb		83
51)	Acenaphthylene	8.32	152	2156734	99.27710	ppb		99
52)	3-Nitroaniline	8.47	138	393000	99.40423	ppb		86
53)	Acenaphthene	8.51	154	1311741	98.49848	ppb		99
54)	2,4-Dinitrophenol	8.61	184	211258	92.21892	ppb		84
55)	4-Nitrophenol	8.72	65	353380	100.85569	ppb		92
56)	Dibenzofuran	8.72	168	1900232	98.26893	ppb		95
57)	2,4-DNT	8.74	165	545001	102.28463	ppb		81
58)	2,3,4,6-Tetrachlorophenol	8.88	232	364053	102.10437	ppb		96
59)	Diethyl phthalate	9.00	149	1709803	98.33523	ppb		100
60)	4-Chlorophenyl phenyl ethe	9.12	204	826395	105.61648	ppb		97
61)	Fluorene	9.12	166	1660776	104.76361	ppb		97
62)	4-Nitroaniline	9.19	138	357729	95.99717	ppb		98
65)	4,6-Dinitro-2-methylphenol	9.23	198	345580	112.95505	ppb		94
66)	Diphenyl amine	9.27	169	2364029	200.68405	ppb		98
67)	n-Nitrosodiphenylamine	9.27	169	2364029	200.68405	ppb		98
68)	1,2-Diphenylhydrazine	9.30	77	2018702	103.85749	ppb		94
69)	4-Bromophenyl phenyl ether	9.68	248	466498	102.11747	ppb		95
70)	Hexachlorobenzene	9.77	284	490430	100.11433	ppb		91
71)	Atrazine	9.90	200	242237	50.72612	ppb		94
72)	Pentachlorophenol	10.01	266	199273	99.70962	ppb		99
73)	Phenanthrene	10.23	178	2379343	99.31447	ppb		100
74)	Anthracene	10.30	178	2444850	97.49590	ppb		100
75)	Carbazol	10.50	167	2204161	100.41596	ppb		96
76)	Di-n-butylphthalate	10.89	149	2917363	97.32775	ppb		100
77)	Fluoranthene	11.62	202	2646038	100.17444	ppb	#	96
79)	Benzidine	11.79	184	914348	97.53793	ppb		98
80)	Pyrene	11.88	202	2719725	96.42132	ppb		100
82)	Butyl benzylphthalate	12.63	149	1358722	95.77817	ppb		92
83)	3,3'-Dichlorobenzidine	13.26	252	800270	92.37119	ppb	#	95
84)	Benz (a) anthracene	13.28	228	2610538	96.82885	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.29	149	1979509	98.60950	ppb		99
86)	Chrysene	13.32	228	2526305	97.50042	ppb		99
87)	Di-n-octylphthalate	14.02	149	3385958	96.74814	ppb	#	90
89)	Benzo (b) fluoranthene	14.50	252	2567812	101.51623	ppb		98
90)	Benzo (k) fluoranthene	14.54	252	2468554	106.62886	ppb	#	98
91)	Benzo (a) pyrene	14.92	252	2368866	102.12948	ppb		98
92)	Indeno (1,2,3-cd) pyrene	16.65	276	2668859	100.45367	ppb		98
93)	Dibenz (a,h) anthracene	16.68	278	2285789	101.57231	ppb		99
94)	Benzo (g,h,i) perylene	17.16	276	2229597	100.58760	ppb		98

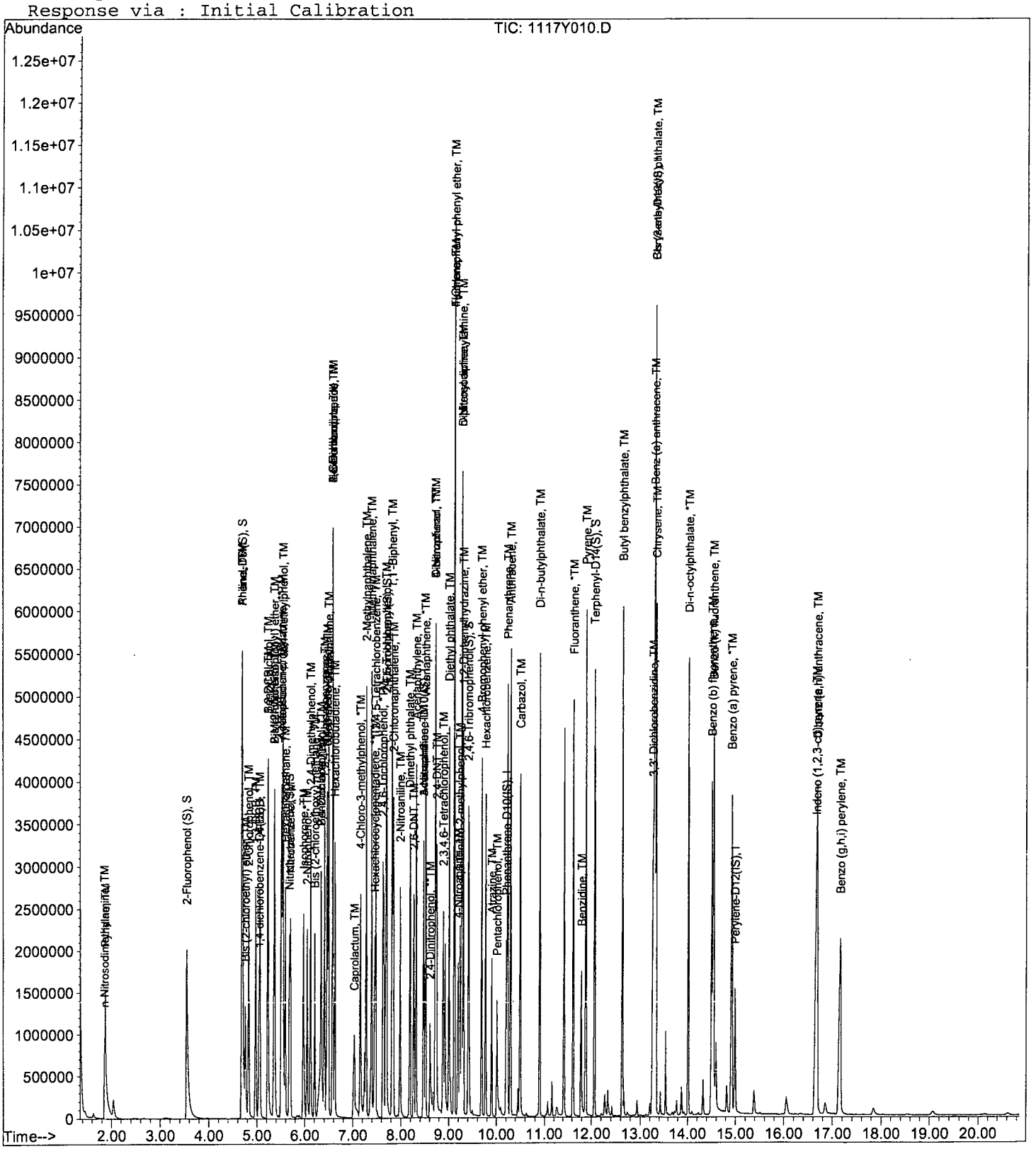
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y010.D Vial: 10
Acq On : 17 Nov 16 14:58 Operator: MA
Sample : 100ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:15 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:23:23 2016
Response via : Initial Calibration



Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/17/16
Instrument: Yoda
Initial Cal. Date: 11/17/16
Data File: 1117Y011.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	n-Nitrosodimethylamine	0.9501	0.8807	7.3	TM	
2	TM	Pyridine	2.021	1.991	1.5	TM	
3	*TM	Phenol	1.996	1.887	5.4	*TM	
4	TM	Aniline	1.977	1.727	13	TM	
5	TM	Bis (2-chloroethyl) ether	0.9057	0.9809	8.3	TM	
6	TM	2-Chlorophenol	1.541	1.467	4.8	TM	
7	TM	1,3-DCB	1.680	1.760	4.8	TM	
8	*TM	1,4-DCB	1.717	1.812	5.5	*TM	
9	TM	Benzyl alcohol	0.8578	0.9107	6.2	TM	
10	TM	1,2-DCB	1.596	1.649	3.3	TM	
11	TM	2-Methylphenol	1.175	1.085	7.7	TM	
12	TM	Bis (2-chloroisopropyl) ether	1.795	1.803	0.46	TM	
13	TM	Acetophenone	2.196	2.205	0.40	TM	
14	TM	3&4-Methylphenol	1.550	1.500	3.2	TM	
15	**TM	n-Nitrosodi-n-propylamine	1.136	1.113	2.0	**TM	
16	TM	Hexachloroethane	0.7136	0.7624	6.8	TM	
17	TM	Nitrobenzene	0.4296	0.4236	1.4	TM	
18	TM	Isophorone	0.7090	0.7729	9.0	TM	
19	*TM	2-Nitrophenol	0.2035	0.1949	4.2	*TM	
20	TM	2,4-Dimethylphenol	0.3177	0.3033	4.5	TM	
21	TMQ	Benzoic acid	0.2076	0.2589	25	TMQ	3.0
22	TM	Bis (2-chloroethoxy) methane	0.3765	0.3892	3.4	TM	
23	*TM	2,4-Dichlorophenol	0.3043	0.2910	4.3	*TM	
24	TM	1,2,4-Trichlorobenzene	0.3377	0.3675	8.8	TM	
25	TM	3,4-Dimethylphenol	0.5064	0.4550	10	TM	
26	TM	Naphthalene	1.051	1.015	3.4	TM	
27	TM	4-Chloroaniline	0.3752	0.3844	2.4	TM	
28	TM	2,6-Dichlorophenol	0.2964	0.2977	0.43	TM	
29	TM	Hexachloropropene	0.2687	0.2650	1.4	TM	
30	*TM	Hexachlorobutadiene	0.2155	0.2342	8.7	*TM	
31	TM	Caprolactum	0.1600	0.1467	8.3	TM	
32	*TM	4-Chloro-3-methylphenol	0.3518	0.3344	4.9	*TM	
33	TM	2-Methylnaphthalene	0.7082	0.6778	4.3	TM	
34	TM	1-Methylnaphthalene	0.6806	0.6425	5.6	TM	
35	**TMQ	Hexachlorocyclopentadiene	0.1752	0.2098	20	**TMQ	0.67
36	TM	1,2,4,5-Tetrachlorobenzene	0.5418	0.5478	1.1	TM	
37	*TM	2,4,6-Trichlorophenol	0.3614	0.3530	2.3	*TM	
38	TM	2,4,5-Trichlorophenol	0.3828	0.3809	0.49	TM	
39	TM	1,1'-Biphenyl	1.522	1.506	1.0	TM	
40	TM	2-Chloronaphthalene	1.192	1.274	6.9	TM	
		Average			5.6		

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0

Form 7

Second Source Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 11/17/16
Matrix: 0 Instrument: Yoda
Cal. Date: 11/17/16
Data File: 1117Y011.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	2-Nitroaniline	0.4228	0.4316	2.1	TM	
42	TM	Dimethyl phthalate	1.453	1.411	2.9	TM	
43	TM	2,6-DNT	0.3253	0.3362	3.4	TM	
44	TM	Acenaphthylene	1.860	1.829	1.6	TM	
45	TM	3-Nitroaniline	0.3375	0.3403	0.81	TM	
46	*TM	Acenaphthene	1.139	1.121	1.6	*TM	
47	**TML	2,4-Dinitrophenol	0.1425	0.1552	8.9	**TML	3.7
48	**TML	4-Nitrophenol	0.2428	0.2544	4.8	**TML	7.3
49	TM	Dibenzofuran	1.656	1.637	1.1	TM	
50	TM	2,4-DNT	0.4565	0.4610	0.99	TM	
51	TM	2,3,4,6-Tetrachlorophenol	0.2915	0.2973	2.0	TM	
52	TM	Diethyl phthalate	1.491	1.486	0.35	TM	
53	TM	4-Chlorophenyl phenyl ether	0.6772	0.6629	2.1	TM	
54	TM	Fluorene	1.365	1.304	4.5	TM	
55	TM	4-Nitroaniline	0.3174	0.3282	3.4	TM	
56	TM	4,6-Dinitro-2-methylphenol	0.1416	0.1374	3.0	TM	
57	TM	Diphenyl amine	0.5459	0.5572	2.1	TM	
58	*TM	n-Nitrosodiphenylamine	0.5459	0.5572	2.1	*TM	
59	TM	1,2-Diphenylhydrazine	0.8965	1.020	14	TM	
60	TM	4-Bromophenyl phenyl ether	0.2121	0.2067	2.5	TM	
61	TM	Hexachlorobenzene	0.2269	0.2410	6.2	TM	
62	TM	Atrazine	0.2209	0.1870	15	TM	
63	*TMQ	Pentachlorophenol	0.0660	0.0621	6.0	*TMQ	9.5
64	TM	Phenanthrene	1.108	1.050	5.2	TM	
65	TM	Anthracene	1.158	1.030	11	TM	
66	TM	Carbazol	1.016	0.9587	5.6	TM	
67	TM	Di-n-butylphthalate	1.383	1.340	3.1	TM	
68	*TM	Fluoranthene	1.223	1.154	5.6	*TM	
69	TM	Benzidine	0.4426	0.4919	11	TM	
70	TM	Pyrene	1.325	1.252	5.5	TM	
71	TM	Butyl benzylphthalate	0.6676	0.6711	0.53	TM	
72	TM	3,3'-Dichlorobenzidine	0.4074	0.4566	12	TM	
73	TM	Benz (a) anthracene	1.268	1.211	4.5	TM	
74	TM	Bis (2-ethylhexyl) phthalate	0.9462	0.9206	2.7	TM	
75	TM	Chrysene	1.222	1.127	7.8	TM	
76	*TM	Di-n-octylphthalate	1.649	1.598	3.1	*TM	
77	TM	Benzo (b) fluoranthene	1.375	1.432	4.1	TM	
78	TM	Benzo (k) fluoranthene	1.282	1.094	15	TM	
79	*TM	Benzo (a) pyrene	1.270	1.249	1.6	*TM	
80	TM	Indeno (1,2,3-cd) pyrene	1.454	1.425	2.0	TM	
		Average			4.8		

0
0

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 11/17/16
Instrument: Yoda
Cal. Date: 11/17/16
Data File: 1117Y011.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	Dibenz (a,h) anthracene	1.235	1.198	3.0	TM	
82	TM	Benzo (g,h,i) perylene	1.213	1.171	3.5	TM	
83							
84							
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118							
119							
120							
		Average			3.3		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y011.D Vial: 11
Acq On : 17 Nov 16 15:27 Operator: MA
Sample : 2ND SRC SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:42 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:23:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	178099	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.46	136	769623	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.47	164	447548	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.20	188	850203	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.28	240	807208	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.98	264	747082	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	0.00	112	0	0.00000 ppb	
Spiked Amount 200.000			Recovery =	0.000%	
5) Phenol-D6 (S)	0.00	99	0	0.00000 ppb	
Spiked Amount 200.000			Recovery =	0.000%	
21) Nitrobenzene-D5(S)	5.59	82	49517	6.14391 ppb	-0.08
Spiked Amount 100.000			Recovery =	6.144%	
45) 2-Fluorobiphenyl(S)	7.68	172	789	0.05535 ppb	0.00
Spiked Amount 100.000			Recovery =	0.055%	
63) 2,4,6-Tribromophenol(S)	0.00	330	0	0.00000 ppb	
Spiked Amount 200.000			Recovery =	0.000%	
81) Terphenyl-D14(S)	12.07	244	513	0.02799 ppb	0.00
Spiked Amount 100.000			Recovery =	0.028%	

Algorithm = $\frac{196055 \times 1 \times 40}{178099 \times 0.9501} = 46.34$ HA 11/18/16

Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.85	42	196055	46.34556 ppb	100
3) Pyridine	1.86	79	443202	49.25354 ppb	99
6) Phenol	4.69	94	420166	47.28299 ppb	96
7) Aniline	4.69	66	384393	43.65810 ppb	85
8) Bis (2-chloroethyl) ether	4.75	63	218382	54.15612 ppb	94
9) 2-Chlorophenol	4.82	128	326695	47.60907 ppb	96
10) 1,3-DCB	4.96	146	391915	52.39951 ppb	99
11) 1,4-DCB	5.06	146	403370	52.75363 ppb	99
12) Benzyl alcohol	5.21	108	202739	53.08397 ppb	99
13) 1,2-DCB	5.22	146	367179	51.66444 ppb	100
14) 2-Methylphenol	5.35	107	241567	46.17052 ppb	96
15) Bis (2-chloroisopropyl) et	5.34	45	401353	50.22919 ppb	97
16) Acetophenone	5.50	105	490861	50.19755 ppb	98
17) 3&4-Methylphenol	5.53	107	667938	96.75444 ppb	99
18) n-Nitrosodi-n-propylamine	5.50	70	247886	49.00292 ppb	98
19) Hexachloroethane	5.59	117	169736	53.42408 ppb	98
22) Nitrobenzene	5.69	77	407484	49.29275 ppb	99
23) Isophorone	5.96	82	743559	54.50863 ppb	100
24) 2-Nitrophenol	6.04	139	187525	47.88802 ppb #	81
25) 2,4-Dimethylphenol	6.11	122	291787	47.72759 ppb	97
26) Benzoic acid	6.29	105	249036	51.50269 ppb	97
27) Bis (2-chloroethoxy) metha	6.20	93	374463	51.69613 ppb	100
28) 2,4-Dichlorophenol	6.34	162	279979	47.82613 ppb	96
29) 1,2,4-Trichlorobenzene	6.40	180	353567	54.40872 ppb	97
30) 3,4-Dimethylphenol	6.45	107	437742	44.92689 ppb	99
31) Naphthalene	6.49	128	976604	48.27987 ppb	100
32) 4-Chloroaniline	6.57	127	369838	51.22487 ppb	99
33) 2,6-Dichlorophenol	6.57	162	286400	50.21749 ppb	99
34) Hexachloropropene	6.58	213	254902	49.30675 ppb	98
35) Hexachlorobutadiene	6.63	225	225339	54.34327 ppb	99
36) Caprolactum	6.99	55	141152	45.86410 ppb	94
37) 4-Chloro-3-methylphenol	7.15	107	321726	47.53260 ppb	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y011.D Vial: 11
Acq On : 17 Nov 16 15:27 Operator: MA
Sample : 2ND SRC SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:42 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:23:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.28	142	652072	47.85629	ppb		99
39)	1-Methylnaphthalene	7.39	142	618136	47.20184	ppb		98
41)	Hexachlorocyclopentadiene	7.45	237	117382	49.66528	ppb		99
42)	1,2,4,5-Tetrachlorobenzene	7.47	216	306459	50.55505	ppb		99
43)	2,4,6-Trichlorophenol	7.62	196	197508	48.84140	ppb		97
44)	2,4,5-Trichlorophenol	7.68	196	213089	49.75647	ppb		98
46)	1,1'-Biphenyl	7.81	154	842477	49.47591	ppb		99
47)	2-Chloronaphthalene	7.83	162	712717	53.44276	ppb		97
48)	2-Nitroaniline	7.98	65	241425	51.03059	ppb		97
49)	Dimethyl phthalate	8.18	163	789457	48.56368	ppb		100
50)	2,6-DNT	8.26	165	188106	51.68479	ppb		98
51)	Acenaphthylene	8.31	152	1023384	49.17611	ppb		99
52)	3-Nitroaniline	8.46	138	190375	50.40729	ppb		97
53)	Acenaphthene	8.51	154	626972	49.19895	ppb		98
54)	2,4-Dinitrophenol	8.61	184	86826	48.13890	ppb		98
55)	4-Nitrophenol	8.73	65	142334	46.34692	ppb	#	68
56)	Dibenzofuran	8.71	168	915643	49.42991	ppb		98
57)	2,4-DNT	8.73	165	257916	50.49503	ppb		96
58)	2,3,4,6-Tetrachlorophenol	8.88	232	166294	50.99391	ppb		98
59)	Diethyl phthalate	8.99	149	831141	49.82672	ppb		100
60)	4-Chlorophenyl phenyl ethe	9.11	204	370836	48.94460	ppb		97
61)	Fluorene	9.11	166	729365	47.74033	ppb		96
62)	4-Nitroaniline	9.18	138	183632	51.71061	ppb		93
65)	4,6-Dinitro-2-methylphenol	9.22	198	146016	48.51210	ppb		98
66)	Diphenyl amine	9.26	169	1184359	102.07189	ppb		99
67)	n-Nitrosodiphenylamine	9.26	169	1184359	102.07189	ppb		99
68)	1,2-Diphenylhydrazine	9.30	77	1083757	56.87464	ppb		98
69)	4-Bromophenyl phenyl ether	9.68	248	219716	48.73712	ppb		97
70)	Hexachlorobenzene	9.76	284	256115	53.10099	ppb		96
71)	Atrazine	9.89	200	99348	21.15512	ppb		100
72)	Pentachlorophenol	10.01	266	66010	45.23149	ppb		91
73)	Phenanthrene	10.23	178	1116078	47.38853	ppb		99
74)	Anthracene	10.28	178	1094278	44.45631	ppb		99
75)	Carbazol	10.49	167	1018908	47.20472	ppb		100
76)	Di-n-butylphthalate	10.89	149	1424538	48.46104	ppb		100
77)	Fluoranthene	11.61	202	1226693	47.19071	ppb		100
79)	Benzidine	11.79	184	496359	55.56966	ppb		99
80)	Pyrene	11.88	202	1263151	47.24097	ppb		100
82)	Butyl benzylphthalate	12.63	149	677173	50.26268	ppb		99
83)	3,3'-Dichlorobenzidine	13.24	252	460722	56.03688	ppb		96
84)	Benz (a) anthracene	13.27	228	1221918	47.74364	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.29	149	928848	48.64546	ppb		99
86)	Chrysene	13.32	228	1136927	46.09322	ppb		99
87)	Di-n-octylphthalate	14.01	149	1612549	48.45476	ppb		100
89)	Benzo (b) fluoranthene	14.50	252	1336971	52.06047	ppb		100
90)	Benzo (k) fluoranthene	14.53	252	1021943	42.68429	ppb	#	96
91)	Benzo (a) pyrene	14.91	252	1166546	49.17870	ppb	#	98
92)	Indeno (1,2,3-cd) pyrene	16.64	276	1331149	49.00834	ppb		98
93)	Dibenz (a,h) anthracene	16.65	278	1118366	48.49271	ppb		97
94)	Benzo (g,h,i) perylene	17.13	276	1093989	48.27170	ppb		97

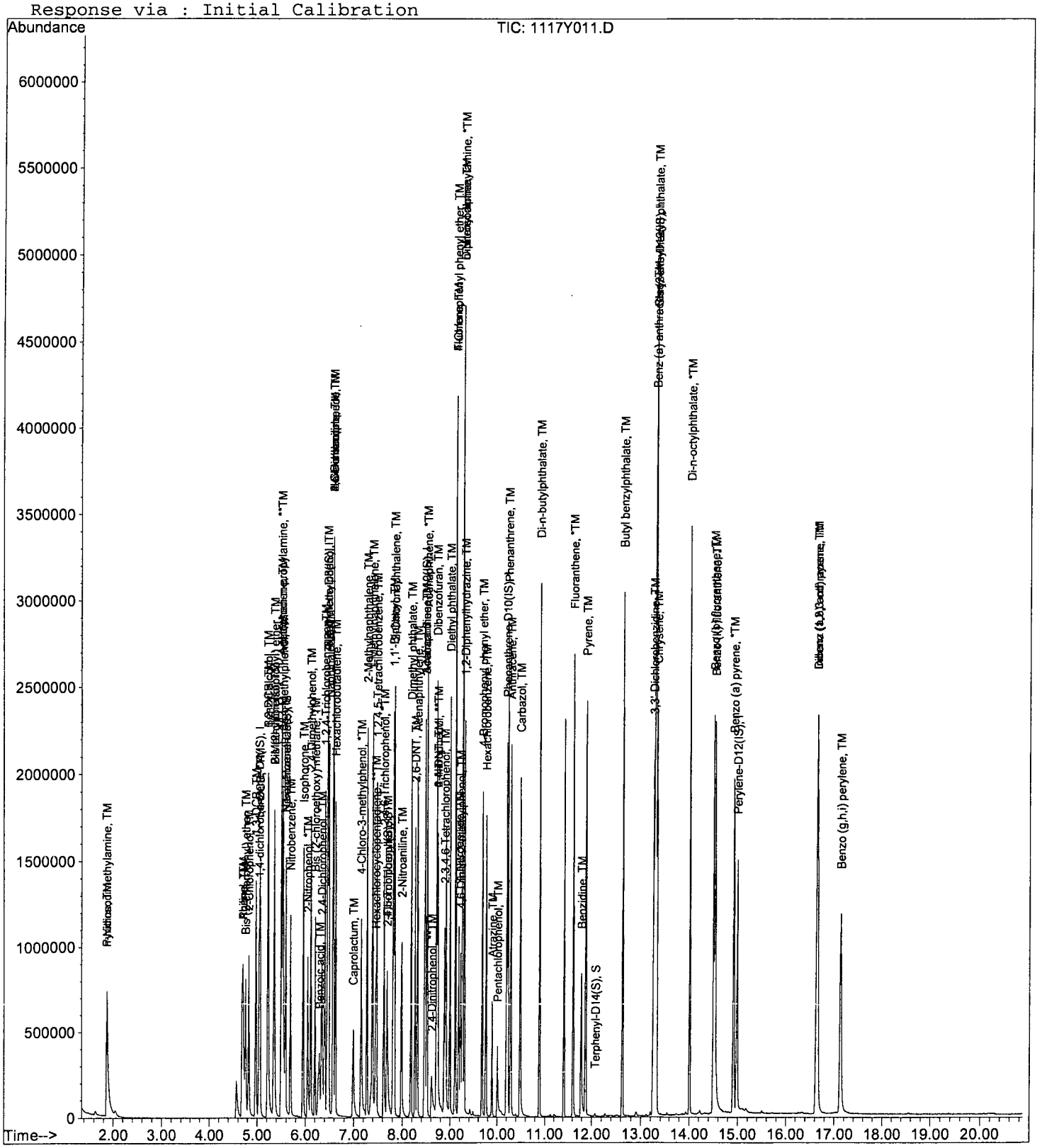
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y011.D Vial: 11
Acq On : 17 Nov 16 15:27 Operator: MA
Sample : 2ND SRC SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:42 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:23:23 2016
Response via : Initial Calibration



374

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Date Analyzed: 11/28/16

Matrix: Instrument: Yoda

Initial Cal. Date: 11/17/16

Data File: 1117Y116.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	n-Nitrosodimethylamine	0.9501	1.046	10	TM	
3	TM	Pyridine	2.021	2.421	20	TM	
4	S	2-Fluorophenol (S)	1.255	1.327	5.7	S	
5	S	Phenol-D6 (S)	1.762	1.786	1.4	S	
6	*TM	Phenol	1.996	2.082	4.3	*TM	
7	TM	Aniline	1.977	2.163	9.4	TM	
8	TM	Bis (2-chloroethyl) ether	0.9057	0.9467	4.5	TM	
9	TM	2-Chlorophenol	1.541	1.596	3.6	TM	
10	TM	1,3-DCB	1.680	1.740	3.6	TM	
11	*TM	1,4-DCB	1.717	1.770	3.1	*TM	
12	TM	Benzyl alcohol	0.8578	0.9320	8.7	TM	
13	TM	1,2-DCB	1.596	1.655	3.7	TM	
14	TM	2-Methylphenol	1.175	1.247	6.1	TM	
15	TM	Bis (2-chloroisopropyl) ether	1.795	1.845	2.8	TM	
16	TM	Acetophenone	2.196	2.243	2.1	TM	
17	TM	3&4-Methylphenol	1.550	1.618	4.4	TM	
18	**TM	n-Nitrosodi-n-propylamine	1.136	1.202	5.8	**TM	
19	TM	Hexachloroethane	0.7136	0.7446	4.4	TM	
20	I	Napthalene-D8(IS)	ISTD			I	
21	S	Nitrobenzene-D5(S)	0.4189	0.4200	0.27	S	
22	TM	Nitrobenzene	0.4296	0.4448	3.5	TM	
23	TM	Isophorone	0.7090	0.7183	1.3	TM	
24	*TM	2-Nitrophenol	0.2035	0.2070	1.7	*TM	
25	TM	2,4-Dimethylphenol	0.3177	0.3294	3.7	TM	
26	TMQ	Benzoic acid	0.2076	0.2473	19	TMQ	1.4
27	TM	Bis (2-chloroethoxy) methane	0.3765	0.3830	1.7	TM	
28	*TM	2,4-Dichlorophenol	0.3043	0.3160	3.9	*TM	
29	TM	1,2,4-Trichlorobenzene	0.3377	0.3514	4.1	TM	
30	TM	3,4-Dimethylphenol	0.5064	0.5166	2.0	TM	
31	TM	Naphthalene	1.051	1.067	1.5	TM	
32	TM	4-Chloroaniline	0.3752	0.4062	8.3	TM	
33	TM	2,6-Dichlorophenol	0.2964	0.3049	2.9	TM	
34	TM	Hexachloropropene	0.2687	0.2875	7.0	TM	
35	*TM	Hexachlorobutadiene	0.2155	0.2233	3.6	*TM	
36	TM	Caprolactum	0.1600	0.1615	0.95	TM	
37	*TM	4-Chloro-3-methylphenol	0.3518	0.3641	3.5	*TM	
38	TM	2-Methylnaphthalene	0.7082	0.7125	0.62	TM	
39	TM	1-Methylnaphthalene	0.6806	0.7016	3.1	TM	
40	I	Acenaphthene-D10(IS)	ISTD			I	
		Average			4.8		

0
0

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 11/28/16
Instrument: Yoda
Cal. Date: 11/17/16
Data File: 1117Y116.D

		Compound	MEAN	CCRF	%D		%Drift
41	**TMQ	Hexachlorocyclopentadiene	0.1752	0.1833	4.6	**TMQ	9.8
42	TM	1,2,4,5-Tetrachlorobenzene	0.5418	0.5417	0.01	TM	
43	*TM	2,4,6-Trichlorophenol	0.3614	0.3615	0.03	*TM	
44	TM	2,4,5-Trichlorophenol	0.3828	0.3756	1.9	TM	
45	S	2-Fluorobiphenyl(S)	1.274	1.241	2.6	S	
46	TM	1,1'-Biphenyl	1.522	1.478	2.9	TM	
47	TM	2-Chloronaphthalene	1.192	1.197	0.46	TM	
48	TM	2-Nitroaniline	0.4228	0.4359	3.1	TM	
49	TM	Dimethyl phthalate	1.453	1.452	0.04	TM	
50	TM	2,6-DNT	0.3253	0.3254	0.04	TM	
51	TM	Acenaphthylene	1.860	1.845	0.83	TM	
52	TM	3-Nitroaniline	0.3375	0.3395	0.57	TM	
53	*TM	Acenaphthene	1.139	1.141	0.17	*TM	
54	**TML	2,4-Dinitrophenol	0.1425	0.1679	18	**TML	2.9
55	**TML	4-Nitrophenol	0.2428	0.2705	11	**TML	2.4
56	TM	Dibenzofuran	1.656	1.679	1.4	TM	
57	TM	2,4-DNT	0.4565	0.4675	2.4	TM	
58	TM	2,3,4,6-Tetrachlorophenol	0.2915	0.3073	5.4	TM	
59	TM	Diethyl phthalate	1.491	1.476	1.0	TM	
60	TM	4-Chlorophenyl phenyl ether	0.6772	0.6622	2.2	TM	
61	TM	Fluorene	1.365	1.335	2.2	TM	
62	TM	4-Nitroaniline	0.3174	0.3133	1.3	TM	
63	S	2,4,6-Tribromophenol(S)	0.1956	0.1969	0.68	S	
64	I	Phenanthrene-D10(IS)	ISTD			I	
65	TM	4,6-Dinitro-2-methylphenol	0.1416	0.1578	11	TM	
66	TM	Diphenyl amine	0.5459	0.5490	0.57	TM	
67	*TM	n-Nitrosodiphenylamine	0.5459	0.5490	0.57	*TM	
68	TM	1,2-Diphenylhydrazine	0.8965	0.8346	6.9	TM	
69	TM	4-Bromophenyl phenyl ether	0.2121	0.2173	2.5	TM	
70	TM	Hexachlorobenzene	0.2269	0.2287	0.78	TM	
71	TM	Atrazine	0.2209	0.2291	3.7	TM	
72	*TMQ	Pentachlorophenol	0.0660	0.0796	20	*TMQ	9.2
73	TM	Phenanthrene	1.108	1.125	1.5	TM	
74	TM	Anthracene	1.158	1.164	0.49	TM	
75	TM	Carbazol	1.016	1.021	0.56	TM	
76	TM	Di-n-butylphthalate	1.383	1.422	2.8	TM	
77	*TM	Fluoranthene	1.223	1.235	1.0	*TM	
78	I	Chrysene-D12(IS)	ISTD			I	
79	TM	Benzidine	0.4426	0.4556	2.9	TM	
80	TM	Pyrene	1.325	1.348	1.7	TM	
		Average			3.2		

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 11/28/16
Instrument: Yoda
Cal. Date: 11/17/16
Data File: 1117Y116.D

		Compound	MEAN	CCRF	%D		%Drift
81	S	Terphenyl-D14(S)	0.9081	0.9017	0.71	S	
82	TM	Butyl benzylphthalate	0.6676	0.6658	0.28	TM	
83	TM	3,3'-Dichlorobenzidine	0.4074	0.4501	10	TM	
84	TM	Benz (a) anthracene	1.268	1.272	0.33	TM	
85	TM	Bis (2-ethylhexyl) phthalate	0.9462	0.9501	0.42	TM	
86	TM	Chrysene	1.222	1.237	1.2	TM	
87	*TM	Di-n-octylphthalate	1.649	1.680	1.8	*TM	
88	I	Perylene-D12(IS)	ISTD			I	
89	TM	Benzo (b) fluoranthene	1.375	1.341	2.5	TM	
90	TM	Benzo (k) fluoranthene	1.282	1.322	3.1	TM	
91	*TM	Benzo (a) pyrene	1.270	1.282	0.92	*TM	
92	TM	Indeno (1,2,3-cd) pyrene	1.454	1.477	1.6	TM	
93	TM	Dibenz (a,h) anthracene	1.235	1.253	1.5	TM	
94	TM	Benzo (g,h,i) perylene	1.213	1.242	2.4	TM	
95							
96							
97							
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110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			2.1		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y116.D Vial: 16
Acq On : 28 Nov 16 10:42 Operator: MA
Sample : 50ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 10:59 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	137102	40.00000	ppb		0.00
20) Napthalene-D8(IS)	6.46	136	602305	40.00000	ppb		0.00
40) Acenaphthene-D10(IS)	8.47	164	371946	40.00000	ppb		0.00
64) Phenanthrene-D10(IS)	10.20	188	674600	40.00000	ppb		0.00
78) Chrysene-D12(IS)	13.28	240	658175	40.00000	ppb		0.00
88) Perylene-D12(IS)	14.98	264	614866	40.00000	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol (S)	3.54	112	454825	105.70275	ppb		0.00
Spiked Amount 200.000			Recovery = 52.852%				
5) Phenol-D6 (S)	4.67	99	612139	101.38241	ppb		0.00
Spiked Amount 200.000			Recovery = 50.691%				
21) Nitrobenzene-D5(S)	5.66	82	316207	50.13300	ppb		0.00
Spiked Amount 100.000			Recovery = 50.133%				
45) 2-Fluorobiphenyl(S)	7.69	172	576883	48.69842	ppb		0.00
Spiked Amount 100.000			Recovery = 48.698%				
63) 2,4,6-Tribromophenol(S)	9.40	330	183090	100.68114	ppb		0.00
Spiked Amount 200.000			Recovery = 50.341%				
81) Terphenyl-D14(S)	12.06	244	741824	49.64535	ppb		0.00
Spiked Amount 100.000			Recovery = 49.645%				
Target Compounds							Qvalue
2) n-Nitrosodimethylamine	1.86	42	179205	55.02981	ppb		93
3) Pyridine	1.87	79	414913	59.89775	ppb		86
6) Phenol	4.68	94	356811	52.16028	ppb		82
7) Aniline	4.68	66	370702	54.69304	ppb		95
8) Bis (2-chloroethyl) ether	4.75	63	162243	52.26541	ppb		91
9) 2-Chlorophenol	4.81	128	273574	51.78926	ppb		97
10) 1,3-DCB	4.96	146	298192	51.79037	ppb		99
11) 1,4-DCB	5.05	146	303412	51.54650	ppb		96
12) Benzyl alcohol	5.21	108	159726	54.32747	ppb		98
13) 1,2-DCB	5.21	146	283668	51.84919	ppb		96
14) 2-Methylphenol	5.35	107	213730	53.06527	ppb		96
15) Bis (2-chloroisopropyl) et	5.34	45	316183	51.40269	ppb	#	77
16) Acetophenone	5.49	105	384453	51.07225	ppb		92
17) 3&4-Methylphenol	5.52	107	554685	104.37557	ppb		95
18) n-Nitrosodi-n-propylamine	5.50	70	206057	52.91454	ppb		95
19) Hexachloroethane	5.59	117	127615	52.17741	ppb		80
22) Nitrobenzene	5.69	77	334854	51.75944	ppb		95
23) Isophorone	5.95	82	540802	50.65819	ppb		96
24) 2-Nitrophenol	6.04	139	155855	50.85691	ppb		82
25) 2,4-Dimethylphenol	6.11	122	248033	51.84115	ppb		96
26) Benzoic acid	6.28	105	186152	49.28923	ppb		95
27) Bis (2-chloroethoxy) metha	6.20	93	288356	50.86742	ppb		98
28) 2,4-Dichlorophenol	6.34	162	237900	51.92730	ppb		96
29) 1,2,4-Trichlorobenzene	6.39	180	264587	52.02677	ppb		96
30) 3,4-Dimethylphenol	6.45	107	388919	51.00455	ppb		96
31) Naphthalene	6.48	128	803348	50.74729	ppb		100
32) 4-Chloroaniline	6.56	127	305839	54.12823	ppb		96
33) 2,6-Dichlorophenol	6.57	162	229539	51.42805	ppb		95
34) Hexachloropropene	6.58	213	216479	53.50699	ppb		97
35) Hexachlorobutadiene	6.62	225	168141	51.81370	ppb		97
36) Caprolactum	6.99	55	121575	50.47679	ppb		95
37) 4-Chloro-3-methylphenol	7.14	107	274133	51.75214	ppb		91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y116.D Vial: 16
Acq On : 28 Nov 16 10:42 Operator: MA
Sample : 50ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 10:59 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	2-Methylnaphthalene	7.27	142	536460	50.30862 ppb		99
39)	1-Methylnaphthalene	7.38	142	528210	51.53984 ppb		99
41)	Hexachlorocyclopentadiene	7.44	237	85208	45.11049 ppb		97
42)	1,2,4,5-Tetrachlorobenzene	7.47	216	251867	49.99461 ppb		98
43)	2,4,6-Trichlorophenol	7.62	196	168096	50.01733 ppb		96
44)	2,4,5-Trichlorophenol	7.68	196	174644	49.06840 ppb		98
46)	1,1'-Biphenyl	7.80	154	687388	48.57328 ppb		98
47)	2-Chloronaphthalene	7.83	162	556712	50.22988 ppb		94
48)	2-Nitroaniline	7.97	65	202643	51.53944 ppb		84
49)	Dimethyl phthalate	8.18	163	675264	49.98233 ppb		99
50)	2,6-DNT	8.26	165	151302	50.02240 ppb		86
51)	Acenaphthylene	8.31	152	857612	49.58681 ppb		98
52)	3-Nitroaniline	8.45	138	157834	50.28561 ppb	#	78
53)	Acenaphthene	8.51	154	530455	50.08596 ppb		100
54)	2,4-Dinitrophenol	8.61	184	78080	51.42814 ppb		97
55)	4-Nitrophenol	8.72	65	125767	48.82108 ppb		88
56)	Dibenzofuran	8.70	168	780608	50.70565 ppb		99
57)	2,4-DNT	8.73	165	217346	51.20138 ppb		84
58)	2,3,4,6-Tetrachlorophenol	8.87	232	142878	52.71896 ppb	#	83
59)	Diethyl phthalate	8.99	149	686197	49.49897 ppb		97
60)	4-Chlorophenyl phenyl ethe	9.10	204	307883	48.89543 ppb		89
61)	Fluorene	9.10	166	620882	48.90005 ppb		99
62)	4-Nitroaniline	9.18	138	145684	49.36315 ppb		91
65)	4,6-Dinitro-2-methylphenol	9.22	198	133035	55.70470 ppb		85
66)	Diphenyl amine	9.25	169	925896	100.56834 ppb		100
67)	n-Nitrosodiphenylamine	9.25	169	925896	100.56834 ppb		100
68)	1,2-Diphenylhydrazine	9.29	77	703758	46.54643 ppb		91
69)	4-Bromophenyl phenyl ether	9.68	248	183279	51.23741 ppb		88
70)	Hexachlorobenzene	9.75	284	192838	50.38909 ppb	#	78
71)	Atrazine	9.88	200	96575	25.91775 ppb		93
72)	Pentachlorophenol	10.00	266	67102	54.61983 ppb		97
73)	Phenanthrene	10.23	178	948584	50.76107 ppb		99
74)	Anthracene	10.28	178	981310	50.24447 ppb		99
75)	Carbazol	10.49	167	861148	50.28108 ppb		99
76)	Di-n-butylphthalate	10.89	149	1199425	51.42426 ppb		98
77)	Fluoranthene	11.61	202	1041830	50.51191 ppb		98
79)	Benzidine	11.79	184	374802	51.46214 ppb		99
80)	Pyrene	11.87	202	1109162	50.87479 ppb		98
82)	Butyl benzylphthalate	12.62	149	547738	49.86122 ppb		87
83)	3,3'-Dichlorobenzidine	13.24	252	370326	55.24122 ppb		96
84)	Benz (a) anthracene	13.27	228	1046861	50.16566 ppb		99
85)	Bis (2-ethylhexyl) phthala	13.29	149	781680	50.20775 ppb	#	96
86)	Chrysene	13.31	228	1017845	50.60928 ppb		98
87)	Di-n-octylphthalate	14.01	149	1381753	50.92112 ppb		92
89)	Benzo (b) fluoranthene	14.49	252	1030863	48.77248 ppb		98
90)	Benzo (k) fluoranthene	14.53	252	1015893	51.55575 ppb		98
91)	Benzo (a) pyrene	14.91	252	985074	50.45821 ppb		99
92)	Indeno (1,2,3-cd) pyrene	16.64	276	1135119	50.77764 ppb		97
93)	Dibenz (a,h) anthracene	16.65	278	963386	50.75520 ppb		100
94)	Benzo (g,h,i) perylene	17.12	276	954748	51.18659 ppb		99

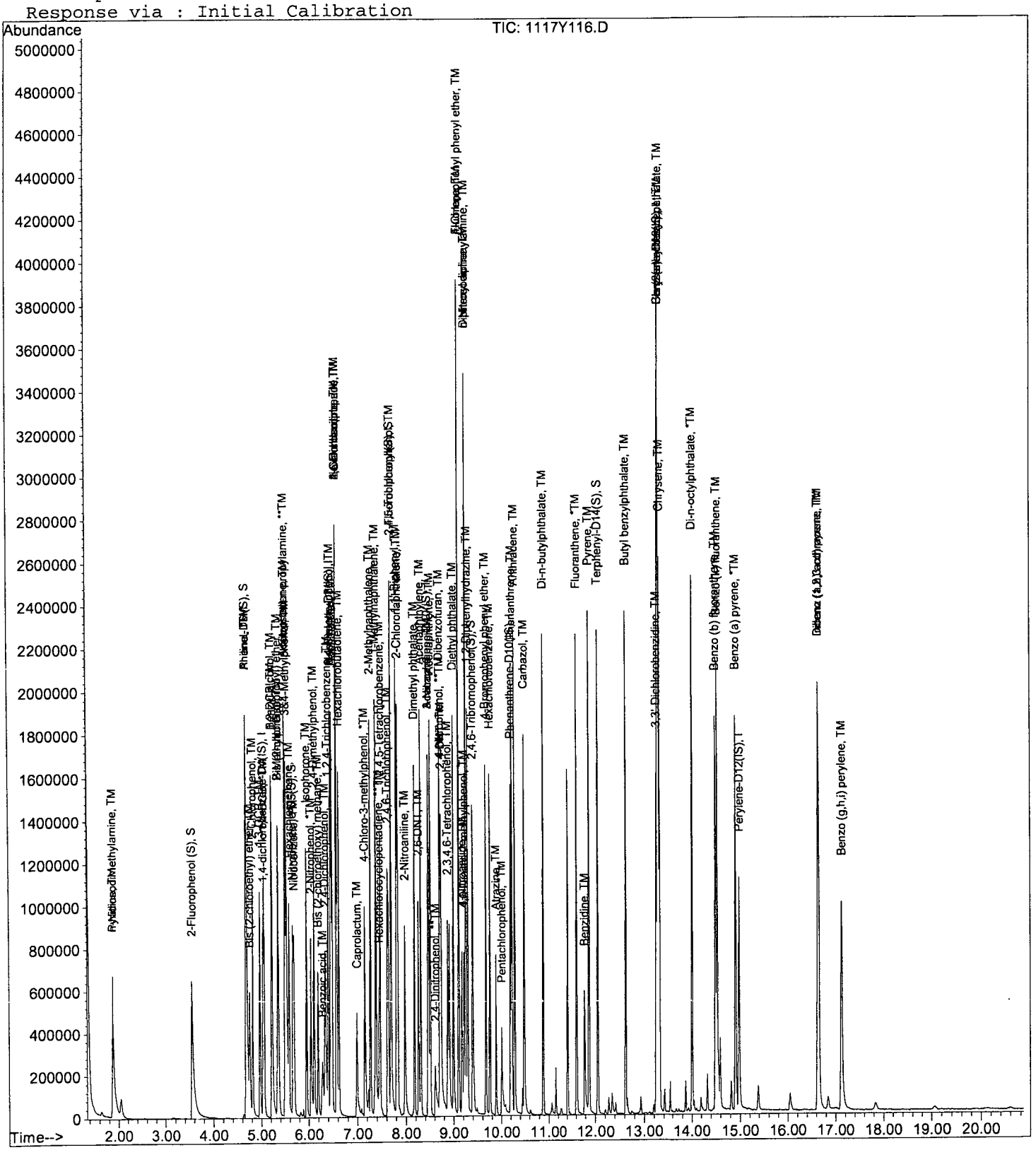
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y116.D Vial: 16
Acq On : 28 Nov 16 10:42 Operator: MA
Sample : 50ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 10:59 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Date Analyzed: 11/28/16

Matrix: Instrument: Yoda

Initial Cal. Date: 11/17/16

Data File: 1117Y139.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	n-Nitrosodimethylamine	0.9501	1.154	21	TM	
3	TM	Pyridine	2.021	2.340	16	TM	
4	S	2-Fluorophenol (S)	1.255	1.298	3.4	S	
5	S	Phenol-D6 (S)	1.762	1.776	0.81	S	
6	*TM	Phenol	1.996	2.052	2.8	*TM	
7	TM	Aniline	1.977	2.149	8.7	TM	
8	TM	Bis (2-chloroethyl) ether	0.9057	0.9573	5.7	TM	
9	TM	2-Chlorophenol	1.541	1.609	4.4	TM	
10	TM	1,3-DCB	1.680	1.728	2.9	TM	
11	*TM	1,4-DCB	1.717	1.759	2.4	*TM	
12	TM	Benzyl alcohol	0.8578	0.9431	10.0	TM	
13	TM	1,2-DCB	1.596	1.677	5.0	TM	
14	TM	2-Methylphenol	1.175	1.229	4.5	TM	
15	TM	Bis (2-chloroisopropyl) ether	1.795	1.899	5.8	TM	
16	TM	Acetophenone	2.196	2.244	2.2	TM	
17	TM	3&4-Methylphenol	1.550	1.614	4.1	TM	
18	**TM	n-Nitrosodi-n-propylamine	1.136	1.203	5.9	**TM	
19	TM	Hexachloroethane	0.7136	0.7421	4.0	TM	
20	I	Napthalene-D8(IS)	ISTD			I	
21	S	Nitrobenzene-D5(S)	0.4189	0.4212	0.56	S	
22	TM	Nitrobenzene	0.4296	0.4295	0.03	TM	
23	TM	Isophorone	0.7090	0.7169	1.1	TM	
24	*TM	2-Nitrophenol	0.2035	0.2079	2.1	*TM	
25	TM	2,4-Dimethylphenol	0.3177	0.3325	4.6	TM	
26	TMQ	Benzoic acid	0.2076	0.2589	25	TMQ	3.0
27	TM	Bis (2-chloroethoxy) methane	0.3765	0.3797	0.85	TM	
28	*TM	2,4-Dichlorophenol	0.3043	0.3132	2.9	*TM	
29	TM	1,2,4-Trichlorobenzene	0.3377	0.3515	4.1	TM	
30	TM	3,4-Dimethylphenol	0.5064	0.5080	0.32	TM	
31	TM	Naphthalene	1.051	1.059	0.72	TM	
32	TM	4-Chloroaniline	0.3752	0.4070	8.5	TM	
33	TM	2,6-Dichlorophenol	0.2964	0.3084	4.0	TM	
34	TM	Hexachloropropene	0.2687	0.2815	4.8	TM	
35	*TM	Hexachlorobutadiene	0.2155	0.2255	4.6	*TM	
36	TM	Caprolactum	0.1600	0.1636	2.3	TM	
37	*TM	4-Chloro-3-methylphenol	0.3518	0.3620	2.9	*TM	
38	TM	2-Methylnaphthalene	0.7082	0.7203	1.7	TM	
39	TM	1-Methylnaphthalene	0.6806	0.7124	4.7	TM	
40	I	Acenaphthene-D10(IS)	ISTD			I	
		Average			5.0		

*NT
HA 11/29/16

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 11/28/16
Instrument: Yoda
Cal. Date: 11/17/16
Data File: 1117Y139.D

		Compound	MEAN	CCRF	%D	%Drift	
41	**TMQ	Hexachlorocyclopentadiene	0.1752	0.1874	7.0	**TMQ	8.3
42	TM	1,2,4,5-Tetrachlorobenzene	0.5418	0.5611	3.6	TM	
43	*TM	2,4,6-Trichlorophenol	0.3614	0.3551	1.7	*TM	
44	TM	2,4,5-Trichlorophenol	0.3828	0.3883	1.4	TM	
45	S	2-Fluorobiphenyl(S)	1.274	1.248	2.0	S	
46	TM	1,1'-Biphenyl	1.522	1.544	1.4	TM	
47	TM	2-Chloronaphthalene	1.192	1.220	2.3	TM	
48	TM	2-Nitroaniline	0.4228	0.4394	3.9	TM	
49	TM	Dimethyl phthalate	1.453	1.448	0.33	TM	
50	TM	2,6-DNT	0.3253	0.3263	0.32	TM	
51	TM	Acenaphthylene	1.860	1.857	0.19	TM	
52	TM	3-Nitroaniline	0.3375	0.3468	2.7	TM	
53	*TM	Acenaphthene	1.139	1.146	0.63	*TM	
54	**TML	2,4-Dinitrophenol	0.1425	0.1736	22	**TML	5.8
55	**TML	4-Nitrophenol	0.2428	0.2595	6.8	**TML	5.8
56	TM	Dibenzofuran	1.656	1.692	2.2	TM	
57	TM	2,4-DNT	0.4565	0.4692	2.8	TM	
58	TM	2,3,4,6-Tetrachlorophenol	0.2915	0.3059	5.0	TM	
59	TM	Diethyl phthalate	1.491	1.477	0.92	TM	
60	TM	4-Chlorophenyl phenyl ether	0.6772	0.6766	0.08	TM	
61	TM	Fluorene	1.365	1.354	0.83	TM	
62	TM	4-Nitroaniline	0.3174	0.3220	1.4	TM	
63	S	2,4,6-Tribromophenol(S)	0.1956	0.1934	1.1	S	
64	I	Phenanthrene-D10(IS)	ISTD			I	
65	TM	4,6-Dinitro-2-methylphenol	0.1416	0.1568	11	TM	
66	TM	Diphenyl amine	0.5459	0.5536	1.4	TM	
67	*TM	n-Nitrosodiphenylamine	0.5459	0.5536	1.4	*TM	
68	TM	1,2-Diphenylhydrazine	0.8965	0.8532	4.8	TM	
69	TM	4-Bromophenyl phenyl ether	0.2121	0.2189	3.2	TM	
70	TM	Hexachlorobenzene	0.2269	0.2359	4.0	TM	
71	TM	Atrazine	0.2209	0.2339	5.9	TM	
72	*TMQ	Pentachlorophenol	0.0660	0.0858	30	*TMQ	16
73	TM	Phenanthrene	1.108	1.138	2.7	TM	
74	TM	Anthracene	1.158	1.194	3.1	TM	
75	TM	Carbazol	1.016	1.049	3.3	TM	
76	TM	Di-n-butylphthalate	1.383	1.389	0.40	TM	
77	*TM	Fluoranthene	1.223	1.274	4.2	*TM	
78	I	Chrysene-D12(IS)	ISTD			I	
79	TM	Benzidine	0.4426	0.4633	4.7	TM	
80	TM	Pyrene	1.325	1.321	0.29	TM	
		Average			4.0		

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 11/28/16
Matrix: 0 Instrument: Yoda
Cal. Date: 11/17/16
Data File: 1117Y139.D

		Compound	MEAN	CCRF	%D	%Drift	
81	S	Terphenyl-D14(S)	0.9081	0.8727	3.9	S	
82	TM	Butyl benzylphthalate	0.6676	0.6513	2.4	TM	
83	TM	3,3'-Dichlorobenzidine	0.4074	0.4399	8.0	TM	
84	TM	Benz (a) anthracene	1.268	1.262	0.51	TM	
85	TM	Bis (2-ethylhexyl) phthalate	0.9462	0.9276	2.0	TM	
86	TM	Chrysene	1.222	1.234	0.94	TM	
87	*TM	Di-n-octylphthalate	1.649	1.598	3.1	*TM	
88	I	Perylene-D12(IS)	ISTD			I	
89	TM	Benzo (b) fluoranthene	1.375	1.443	4.9	TM	
90	TM	Benzo (k) fluoranthene	1.282	1.256	2.0	TM	
91	*TM	Benzo (a) pyrene	1.270	1.285	1.2	*TM	
92	TM	Indeno (1,2,3-cd) pyrene	1.454	1.474	1.4	TM	
93	TM	Dibenz (a,h) anthracene	1.235	1.245	0.79	TM	
94	TM	Benzo (g,h,i) perylene	1.213	1.213	0.02	TM	
95							
96							
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			2.4		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y139.D Vial: 39
Acq On : 28 Nov 16 21:26 Operator: MA
Sample : 50ug/ml SVOC 11/15/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Nov 29 8:55 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	137005	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.46	136	602961	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.47	164	369334	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.19	188	673860	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.28	240	677907	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.97	264	616110	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.55	112	444411	103.35562 ppb	0.00
Spiked Amount 200.000			Recovery = 51.678%		
5) Phenol-D6 (S)	4.67	99	608251	100.80981 ppb	0.00
Spiked Amount 200.000			Recovery = 50.405%		
21) Nitrobenzene-D5(S)	5.66	82	317469	50.27833 ppb	0.00
Spiked Amount 100.000			Recovery = 50.278%		
45) 2-Fluorobiphenyl(S)	7.70	172	576117	48.97771 ppb	0.00
Spiked Amount 100.000			Recovery = 48.978%		
63) 2,4,6-Tribromophenol(S)	9.39	330	178565	98.88728 ppb	0.00
Spiked Amount 200.000			Recovery = 49.444%		
81) Terphenyl-D14(S)	12.05	244	739521	48.05068 ppb	0.00
Spiked Amount 100.000			Recovery = 48.051%		
Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.87	42	197690	60.74912 ppb	99
3) Pyridine	1.88	79	400733	57.89165 ppb	85
6) Phenol	4.69	94	351376	51.40214 ppb	87
7) Aniline	4.68	66	368046	54.33962 ppb	96
8) Bis (2-chloroethyl) ether	4.75	63	163936	52.84819 ppb	93
9) 2-Chlorophenol	4.82	128	275627	52.21485 ppb	94
10) 1,3-DCB	4.97	146	295974	51.44154 ppb	97
11) 1,4-DCB	5.05	146	301274	51.21951 ppb	97
12) Benzyl alcohol	5.22	108	161517	54.97553 ppb	95
13) 1,2-DCB	5.22	146	287158	52.52425 ppb	98
14) 2-Methylphenol	5.36	107	210394	52.27398 ppb	93
15) Bis (2-chloroisopropyl) et	5.34	45	325290	52.92068 ppb	91
16) Acetophenone	5.50	105	384278	51.08514 ppb	94
17) 3&4-Methylphenol	5.52	107	552714	104.07832 ppb	99
18) n-Nitrosodi-n-propylamine	5.50	70	206025	52.94378 ppb	92
19) Hexachloroethane	5.58	117	127090	51.99954 ppb	91
22) Nitrobenzene	5.69	77	323736	49.98645 ppb	95
23) Isophorone	5.95	82	540296	50.55573 ppb	97
24) 2-Nitrophenol	6.04	139	156662	51.06463 ppb	92
25) 2,4-Dimethylphenol	6.11	122	250595	52.31965 ppb	92
26) Benzoic acid	6.29	105	195132	51.50898 ppb	94
27) Bis (2-chloroethoxy) metha	6.19	93	286151	50.42353 ppb	98
28) 2,4-Dichlorophenol	6.33	162	236051	51.46766 ppb	99
29) 1,2,4-Trichlorobenzene	6.40	180	264935	52.03852 ppb	98
30) 3,4-Dimethylphenol	6.44	107	382886	50.15872 ppb	99
31) Naphthalene	6.48	128	798089	50.36023 ppb	99
32) 4-Chloroaniline	6.56	127	306727	54.22633 ppb	95
33) 2,6-Dichlorophenol	6.57	162	232415	52.01576 ppb	93
34) Hexachloropropene	6.57	213	212139	52.37723 ppb	98
35) Hexachlorobutadiene	6.62	225	169926	52.30678 ppb	97
36) Caprolactum	6.99	55	123331	51.15015 ppb	97
37) 4-Chloro-3-methylphenol	7.15	107	272826	51.44936 ppb	91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y139.D Vial: 39
Acq On : 28 Nov 16 21:26 Operator: MA
Sample : 50ug/ml SVOC 11/15/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Nov 29 8:55 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	2-Methylnaphthalene	7.27	142	542925	50.85951 ppb		99
39)	1-Methylnaphthalene	7.38	142	536944	52.33506 ppb		100
41)	Hexachlorocyclopentadiene	7.45	237	86513	45.83009 ppb		95
42)	1,2,4,5-Tetrachlorobenzene	7.46	216	259050	51.78406 ppb		99
43)	2,4,6-Trichlorophenol	7.62	196	163958	49.13109 ppb		92
44)	2,4,5-Trichlorophenol	7.69	196	179264	50.72265 ppb		99
46)	1,1'-Biphenyl	7.81	154	712767	50.72285 ppb		99
47)	2-Chloronaphthalene	7.84	162	563187	51.17346 ppb		92
48)	2-Nitroaniline	7.97	65	202871	51.96234 ppb		93
49)	Dimethyl phthalate	8.17	163	668540	49.83459 ppb		98
50)	2,6-DNT	8.25	165	150652	50.15975 ppb		82
51)	Acenaphthylene	8.31	152	857095	49.90739 ppb		99
52)	3-Nitroaniline	8.46	138	160095	51.36669 ppb		87
53)	Acenaphthene	8.50	154	529136	50.31475 ppb		98
54)	2,4-Dinitrophenol	8.61	184	80153	52.89462 ppb		97
55)	4-Nitrophenol	8.73	65	119782	47.12088 ppb		82
56)	Dibenzofuran	8.71	168	781002	51.09002 ppb		97
57)	2,4-DNT	8.74	165	216601	51.38674 ppb		78
58)	2,3,4,6-Tetrachlorophenol	8.87	232	141240	52.48314 ppb		94
59)	Diethyl phthalate	8.99	149	681966	49.54167 ppb		99
60)	4-Chlorophenyl phenyl ethe	9.11	204	312387	49.96158 ppb		95
61)	Fluorene	9.11	166	625166	49.58567 ppb		99
62)	4-Nitroaniline	9.17	138	148640	50.72094 ppb		93
65)	4,6-Dinitro-2-methylphenol	9.22	198	132112	55.37896 ppb	#	75
66)	Diphenyl amine	9.26	169	932629	101.41091 ppb		99
67)	n-Nitrosodiphenylamine	9.26	169	932629	101.41091 ppb		99
68)	1,2-Diphenylhydrazine	9.29	77	718702	47.58703 ppb		98
69)	4-Bromophenyl phenyl ether	9.67	248	184423	51.61384 ppb		93
70)	Hexachlorobenzene	9.76	284	198726	51.98466 ppb		93
71)	Atrazine	9.89	200	98507	26.46527 ppb		97
72)	Pentachlorophenol	10.01	266	72264	57.79147 ppb		96
73)	Phenanthrene	10.22	178	958235	51.33383 ppb		99
74)	Anthracene	10.29	178	1005464	51.53773 ppb		99
75)	Carbazol	10.49	167	883312	51.63184 ppb		94
76)	Di-n-butylphthalate	10.88	149	1169586	50.20001 ppb		99
77)	Fluoranthene	11.61	202	1073193	52.08965 ppb		97
79)	Benzidine	11.78	184	392602	52.33711 ppb		100
80)	Pyrene	11.87	202	1119518	49.85514 ppb		99
82)	Butyl benzylphthalate	12.63	149	551895	48.77730 ppb		96
83)	3,3'-Dichlorobenzidine	13.25	252	372735	53.98219 ppb	#	97
84)	Benz (a) anthracene	13.27	228	1069203	49.74495 ppb		99
85)	Bis (2-ethylhexyl) phthala	13.28	149	786022	49.01711 ppb		99
86)	Chrysene	13.31	228	1045440	50.46833 ppb		100
87)	Di-n-octylphthalate	14.00	149	1354319	48.45737 ppb		99
89)	Benzo (b) fluoranthene	14.49	252	1111076	52.46140 ppb		99
90)	Benzo (k) fluoranthene	14.53	252	967322	48.99169 ppb		99
91)	Benzo (a) pyrene	14.91	252	989387	50.57681 ppb		99
92)	Indeno (1,2,3-cd) pyrene	16.65	276	1135167	50.67726 ppb		95
93)	Dibenz (a,h) anthracene	16.65	278	958475	50.39451 ppb		99
94)	Benzo (g,h,i) perylene	17.13	276	934345	49.99159 ppb		97

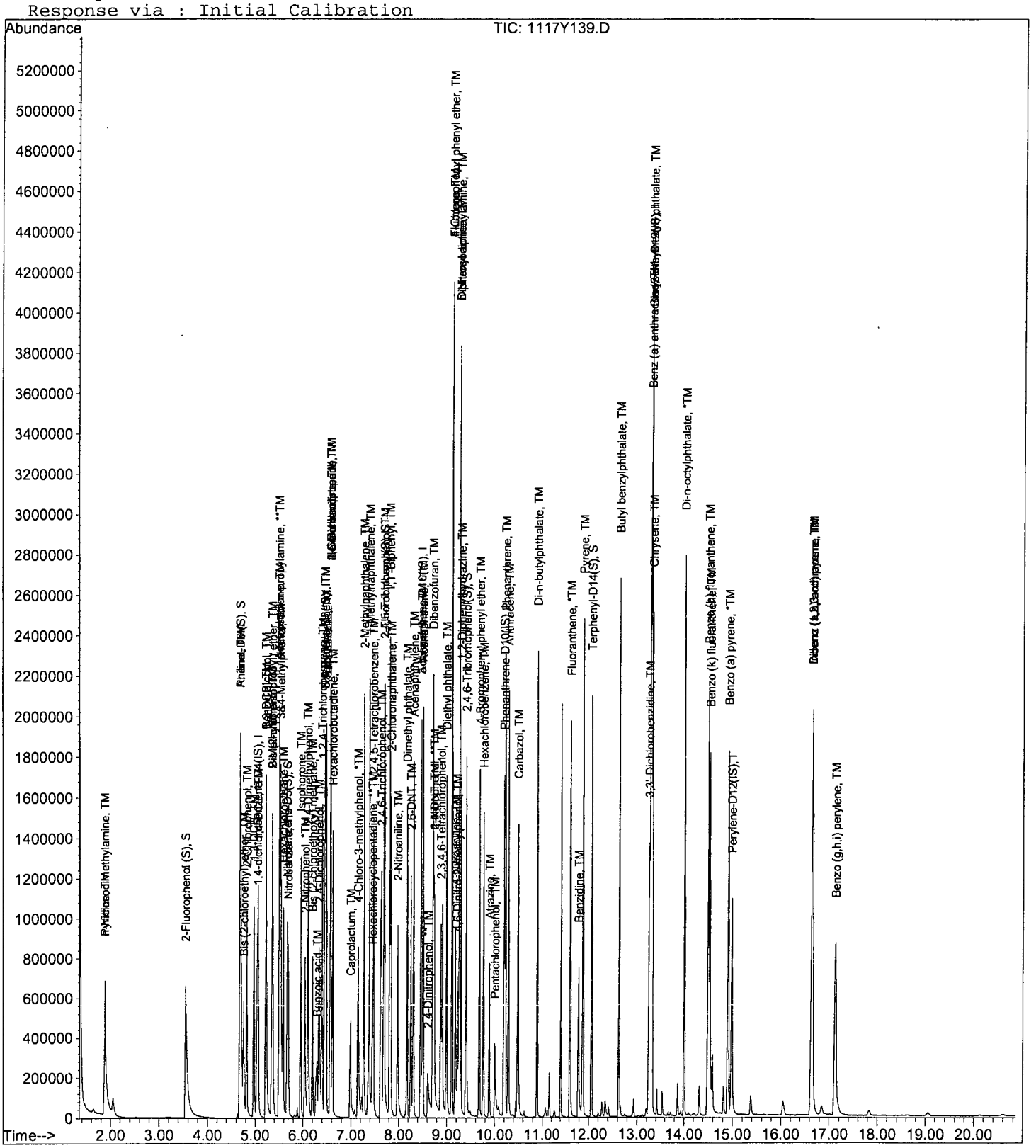
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y139.D Vial: 39
Acq On : 28 Nov 16 21:26 Operator: MA
Sample : 50ug/ml SVOC 11/15/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Nov 29 8:55 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration



386

ORGANICS

Raw Data

APPL, INC.

Method Blank
EPA 8270D WATER

Blank Name/QCG: **161117W-45866 - 214093**
Batch ID: #87DC5-161117A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	11/17/16	11/28/16
BLANK	SURROGATE: 2,4,6-TRIBROMOP	67.7	43-140			%	11/17/16	11/28/16
BLANK	SURROGATE: 2-FLUORBIPHENY	64.9	44-119			%	11/17/16	11/28/16
BLANK	SURROGATE: 2-FLUOROPHENO	48.9	19-119			%	11/17/16	11/28/16
BLANK	SURROGATE: NITROBENZENE-	65.4	44-120			%	11/17/16	11/28/16
BLANK	SURROGATE: PHENOL-D6 (S)	29.6	10-115			%	11/17/16	11/28/16
BLANK	SURROGATE: TERPHENYL-D14 (	68.4	50-134			%	11/17/16	11/28/16

Quant Method:Y1117.M
Run #:1117Y117
Instrument:Yoda
Sequence:Y161117
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 11/29/16 12:44:09 PM

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y117.D Vial: 17
Acq On : 28 Nov 16 11:11 Operator: MA
Sample : 161117A BLK 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Nov 28 12:08 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	157544	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.46	136	722959	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.47	164	436863	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.19	188	810106	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.27	240	800344	40.00000 ppb	-0.02
88) Perylene-D12(IS)	14.97	264	749060	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.54	112	483438	97.77428 ppb	0.00
Spiked Amount 200.000			Recovery =	48.887%	
5) Phenol-D6 (S)	4.68	99	411214	59.26829 ppb	0.00
Spiked Amount 200.000			Recovery =	29.634%	
21) Nitrobenzene-D5(S)	5.66	82	495059	65.39010 ppb	0.00
Spiked Amount 100.000			Recovery =	65.390%	
45) 2-Fluorobiphenyl(S)	7.69	172	902530	64.86694 ppb	0.00
Spiked Amount 100.000			Recovery =	64.867%	
63) 2,4,6-Tribromophenol(S)	9.39	330	289312	135.45173 ppb	0.00
Spiked Amount 200.000			Recovery =	67.726%	
81) Terphenyl-D14(S)	12.06	244	1242220	68.36612 ppb	0.00
Spiked Amount 100.000			Recovery =	68.366%	

Target Compounds Qvalue

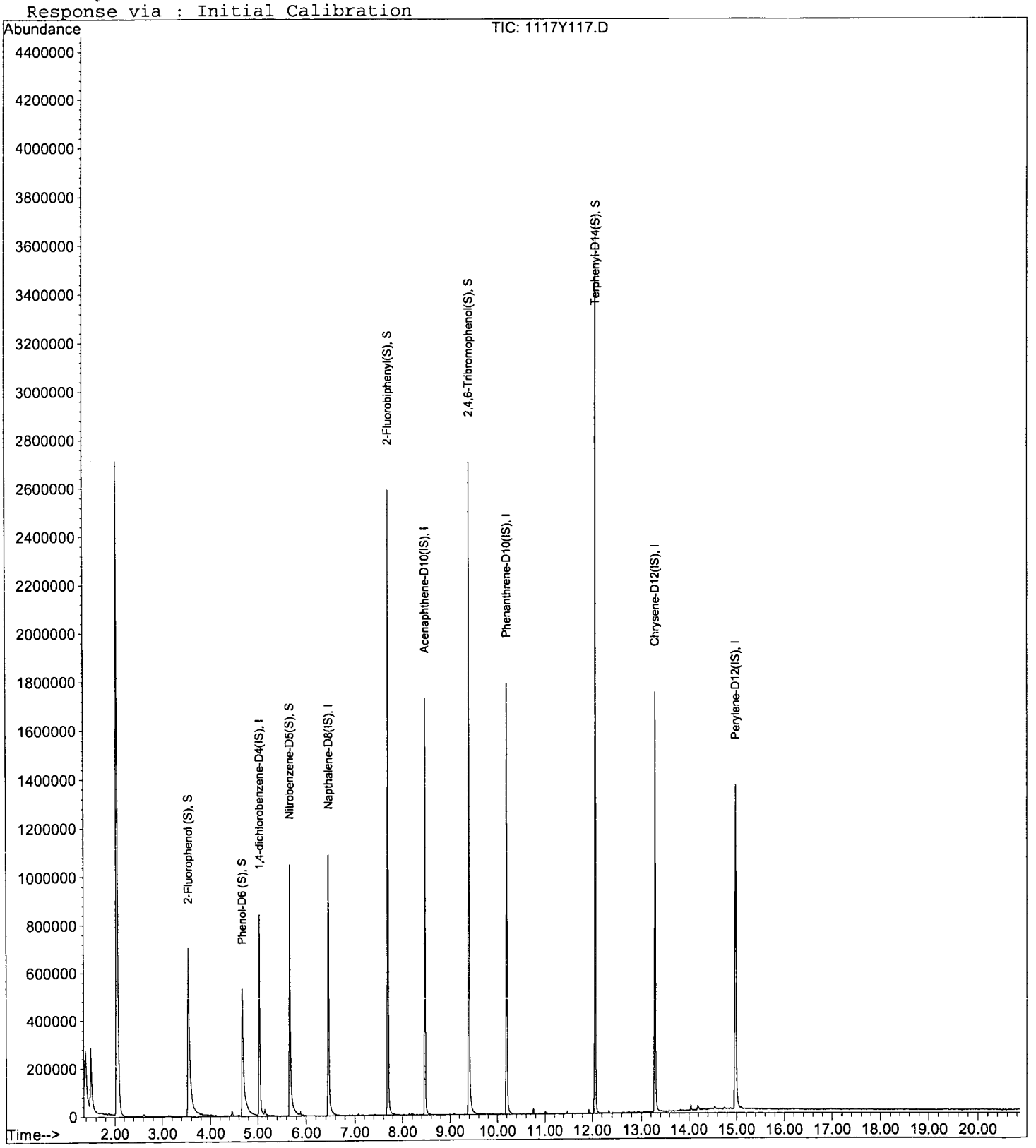
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y117.D Vial: 17
Acq On : 28 Nov 16 11:11 Operator: MA
Sample : 161117A BLK 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Nov 28 12:08 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration



Laboratory Control Spike Recovery
EPA 8270D WATER

APPL ID: **161117W-45866 LCS - 214093**
Batch ID: #87DC5-161117A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
PHENOL	50.0	17.7	35.4	10-115
SURROGATE: 2,4,6-TRIBROMOPHENOL	200	146	73.0	43-140
SURROGATE: 2-FLUORBIPHENYL (S)	100	69.1	69.1	44-119
SURROGATE: 2-FLUOROPHENOL (S)	200	93.6	46.8	19-119
SURROGATE: NITROBENZENE-D5 (S)	100	68.6	68.6	44-120
SURROGATE: PHENOL-D6 (S)	200	56.2	28.1	10-115
SURROGATE: TERPHENYL-D14 (S)	100	71.8	71.8	50-134

Comments: _____

Primary	SPK
Quant Method :	Y1117.M
Extraction Date :	11/17/16
Analysis Date :	11/28/16
Instrument :	Yoda
Run :	1117Y118
Initials :	MA

Printed: 11/29/16 12:44:10 PM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y118.D Vial: 18
Acq On : 28 Nov 16 11:41 Operator: MA
Sample : 161117A LCS-1 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Nov 28 12:09 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	160801	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.45	136	707138	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.47	164	427668	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.19	188	803473	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.28	240	803295	40.00000 ppb		-0.02
88) Perylene-D12(IS)	14.97	264	735927	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.54	112	472539	93.63423 ppb		0.00
Spiked Amount 200.000			Recovery =	46.817%		
5) Phenol-D6 (S)	4.67	99	397874	56.18407 ppb		0.00
Spiked Amount 200.000			Recovery =	28.092%		
21) Nitrobenzene-D5(S)	5.66	82	507938	68.59228 ppb		0.00
Spiked Amount 100.000			Recovery =	68.592%		
45) 2-Fluorobiphenyl(S)	7.70	172	940616	69.05779 ppb		0.00
Spiked Amount 100.000			Recovery =	69.058%		
63) 2,4,6-Tribromophenol(S)	9.40	330	305897	146.29579 ppb		0.00
Spiked Amount 200.000			Recovery =	73.148%		
81) Terphenyl-D14(S)	12.06	244	1309649	71.81232 ppb		0.00
Spiked Amount 100.000			Recovery =	71.812%		
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.87	42	102235	26.76718 ppb		93
3) Pyridine	1.88	79	175430	21.59297 ppb		89
6) Phenol	4.69	94	141622	17.65174 ppb	#	40
7) Aniline	4.68	66	200529	25.22547 ppb	#	61
8) Bis (2-chloroethyl) ether	4.75	63	123829	34.01150 ppb		88
9) 2-Chlorophenol	4.82	128	209530	33.81942 ppb		90
10) 1,3-DCB	4.97	146	165767	24.54744 ppb		96
11) 1,4-DCB	5.05	146	180539	26.15125 ppb		96
12) Benzyl alcohol	5.22	108	120089	34.82588 ppb		98
13) 1,2-DCB	5.22	146	171060	26.65846 ppb		98
14) 2-Methylphenol	5.36	107	145788	30.86183 ppb		92
15) Bis (2-chloroisopropyl) et	5.35	45	243201	33.71070 ppb	#	69
16) Acetophenone	5.50	105	313695	35.53075 ppb		98
17) 3&4-Methylphenol	5.52	107	365166	58.58653 ppb		97
18) n-Nitrosodi-n-propylamine	5.50	70	166631	36.48367 ppb		97
19) Hexachloroethane	5.58	117	63137	22.00999 ppb		94
22) Nitrobenzene	5.68	77	261353	34.40914 ppb		96
23) Isophorone	5.95	82	437259	34.88691 ppb		98
24) 2-Nitrophenol	6.04	139	125949	35.00550 ppb		93
25) 2,4-Dimethylphenol	6.10	122	175712	31.28087 ppb		97
26) Benzoic acid	6.27	105	47670	14.31599 ppb		95
27) Bis (2-chloroethoxy) metha	6.19	93	233057	35.01750 ppb		99
28) 2,4-Dichlorophenol	6.33	162	186939	34.75470 ppb		100
29) 1,2,4-Trichlorobenzene	6.40	180	171103	28.65684 ppb		98
30) 3,4-Dimethylphenol	6.44	107	299855	33.49449 ppb		98
31) Naphthalene	6.48	128	608443	32.73719 ppb		99
32) 4-Chloroaniline	6.56	127	275619	41.54822 ppb		98
33) 2,6-Dichlorophenol	6.56	162	180271	34.40185 ppb		97
34) Hexachloropropene	6.57	213	108064	22.75035 ppb		98
35) Hexachlorobutadiene	6.62	225	89445	23.47682 ppb		98
36) Caprolactum	6.97	55	38015	13.44357 ppb		96
37) 4-Chloro-3-methylphenol	7.14	107	230448	37.05546 ppb		93

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y118.D Vial: 18
Acq On : 28 Nov 16 11:41 Operator: MA
Sample : 161117A LCS-1 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Nov 28 12:09 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.27	142	414151	33.08081	ppb		98
39)	1-Methylnaphthalene	7.38	142	404870	33.64839	ppb		95
41)	Hexachlorocyclopentadiene	7.45	237	24839	17.71585	ppb		95
42)	1,2,4,5-Tetrachlorobenzene	7.46	216	191083	32.98732	ppb		98
43)	2,4,6-Trichlorophenol	7.61	196	134045	34.68861	ppb		96
44)	2,4,5-Trichlorophenol	7.68	196	141745	34.63611	ppb		97
46)	1,1'-Biphenyl	7.81	154	567195	34.85788	ppb		99
47)	2-Chloronaphthalene	7.84	162	418448	32.83569	ppb		93
48)	2-Nitroaniline	7.97	65	168432	37.25683	ppb		97
49)	Dimethyl phthalate	8.17	163	567777	36.55054	ppb		98
50)	2,6-DNT	8.25	165	125489	36.08267	ppb		87
51)	Acenaphthylene	8.31	152	706936	35.54909	ppb		97
52)	3-Nitroaniline	8.46	138	138265	38.31145	ppb		88
53)	Acenaphthene	8.50	154	431586	35.44116	ppb		98
54)	2,4-Dinitrophenol	8.62	184	52322	33.33219	ppb	#	60
55)	4-Nitrophenol	8.73	65	14475	11.36886	ppb	#	10
56)	Dibenzofuran	8.71	168	639329	36.11777	ppb		98
57)	2,4-DNT	8.74	165	177356	36.33700	ppb	#	74
58)	2,3,4,6-Tetrachlorophenol	8.88	232	106980	34.33027	ppb		95
59)	Diethyl phthalate	8.99	149	594964	37.32598	ppb		99
60)	4-Chlorophenyl phenyl ethe	9.11	204	260355	35.96016	ppb		94
61)	Fluorene	9.11	166	523418	35.85272	ppb		99
62)	4-Nitroaniline	9.17	138	133923	39.46566	ppb		98
65)	4,6-Dinitro-2-methylphenol	9.22	198	107127	37.66170	ppb	#	77
66)	Diphenyl amine	9.26	169	824482	75.18917	ppb		99
67)	n-Nitrosodiphenylamine	9.26	169	824482	75.18917	ppb		99
68)	1,2-Diphenylhydrazine	9.29	77	582277	32.33462	ppb		97
69)	4-Bromophenyl phenyl ether	9.67	248	152731	35.84897	ppb		95
70)	Hexachlorobenzene	9.76	284	160799	35.27786	ppb		97
71)	Atrazine	9.89	200	84315	18.99820	ppb		99
72)	Pentachlorophenol	10.01	266	50770	38.55866	ppb		95
73)	Phenanthrene	10.22	178	805464	36.18897	ppb		99
74)	Anthracene	10.29	178	838056	36.02717	ppb		99
75)	Carbazol	10.49	167	747294	36.63476	ppb		97
76)	Di-n-butylphthalate	10.88	149	998141	35.93039	ppb		99
77)	Fluoranthene	11.60	202	906283	36.89231	ppb		99
79)	Benzidine	11.79	184	88711	9.97998	ppb		94
80)	Pyrene	11.87	202	945238	35.52345	ppb		99
82)	Butyl benzylphthalate	12.63	149	464263	34.62745	ppb		96
83)	3,3'-Dichlorobenzidine	13.24	252	305223	37.30462	ppb		95
84)	Benz (a) anthracene	13.27	228	909429	35.70694	ppb		100
85)	Bis (2-ethylhexyl) phthala	13.28	149	688039	36.20938	ppb		100
86)	Chrysene	13.31	228	887040	36.13750	ppb		98
87)	Di-n-octylphthalate	14.00	149	1151813	34.77890	ppb		99
89)	Benzo (b) fluoranthene	14.49	252	1009317	39.89764	ppb		100
90)	Benzo (k) fluoranthene	14.52	252	773306	32.78886	ppb	#	96
91)	Benzo (a) pyrene	14.90	252	854506	36.56991	ppb	#	97
92)	Indeno (1,2,3-cd) pyrene	16.64	276	997664	37.28732	ppb		99
93)	Dibenz (a,h) anthracene	16.65	278	827719	36.43417	ppb		97
94)	Benzo (g,h,i) perylene	17.12	276	832023	37.26907	ppb		96

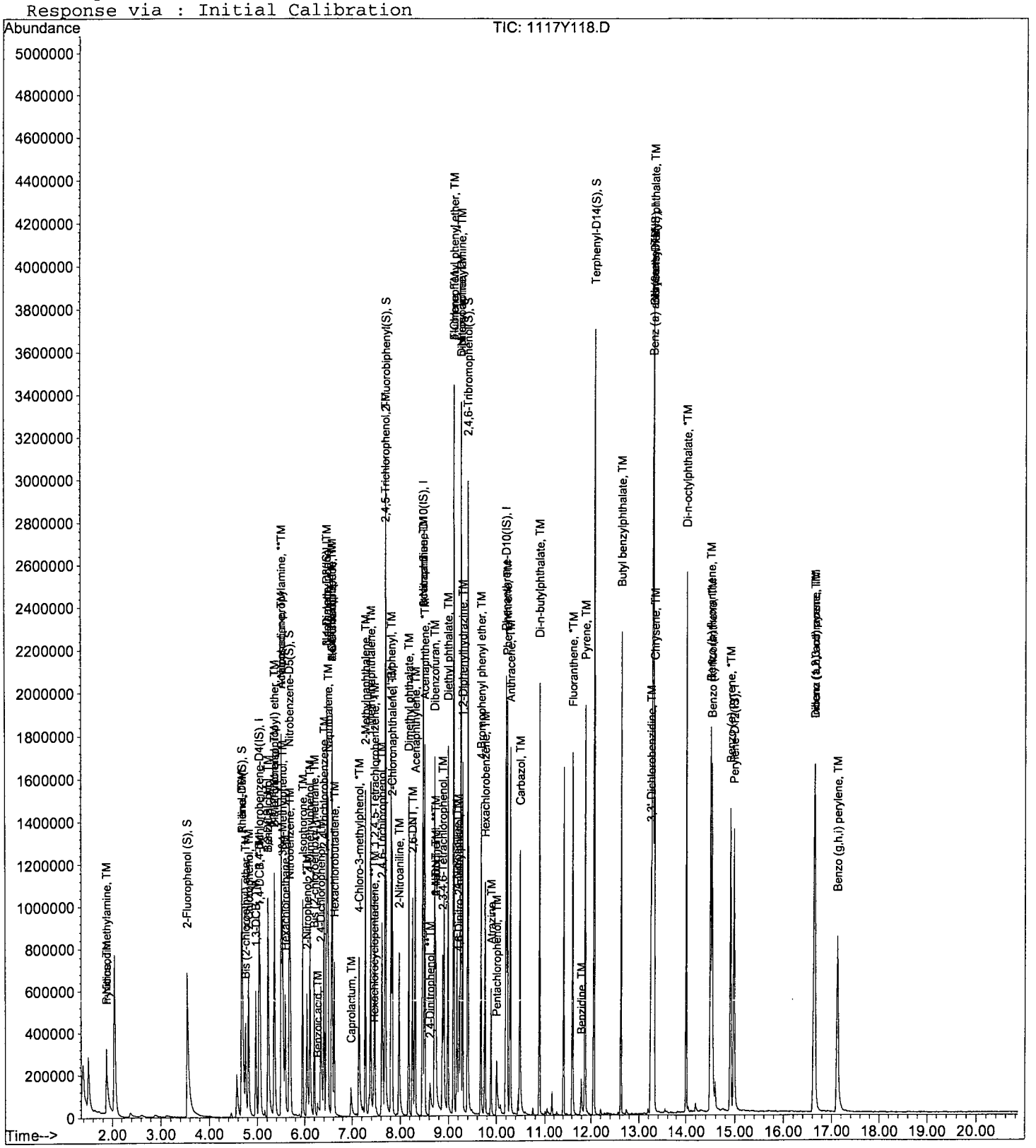
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y118.D Vial: 18
Acq On : 28 Nov 16 11:41 Operator: MA
Sample : 161117A LCS-1 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Nov 28 12:09 2016 Quant Results File: Y1117.RES

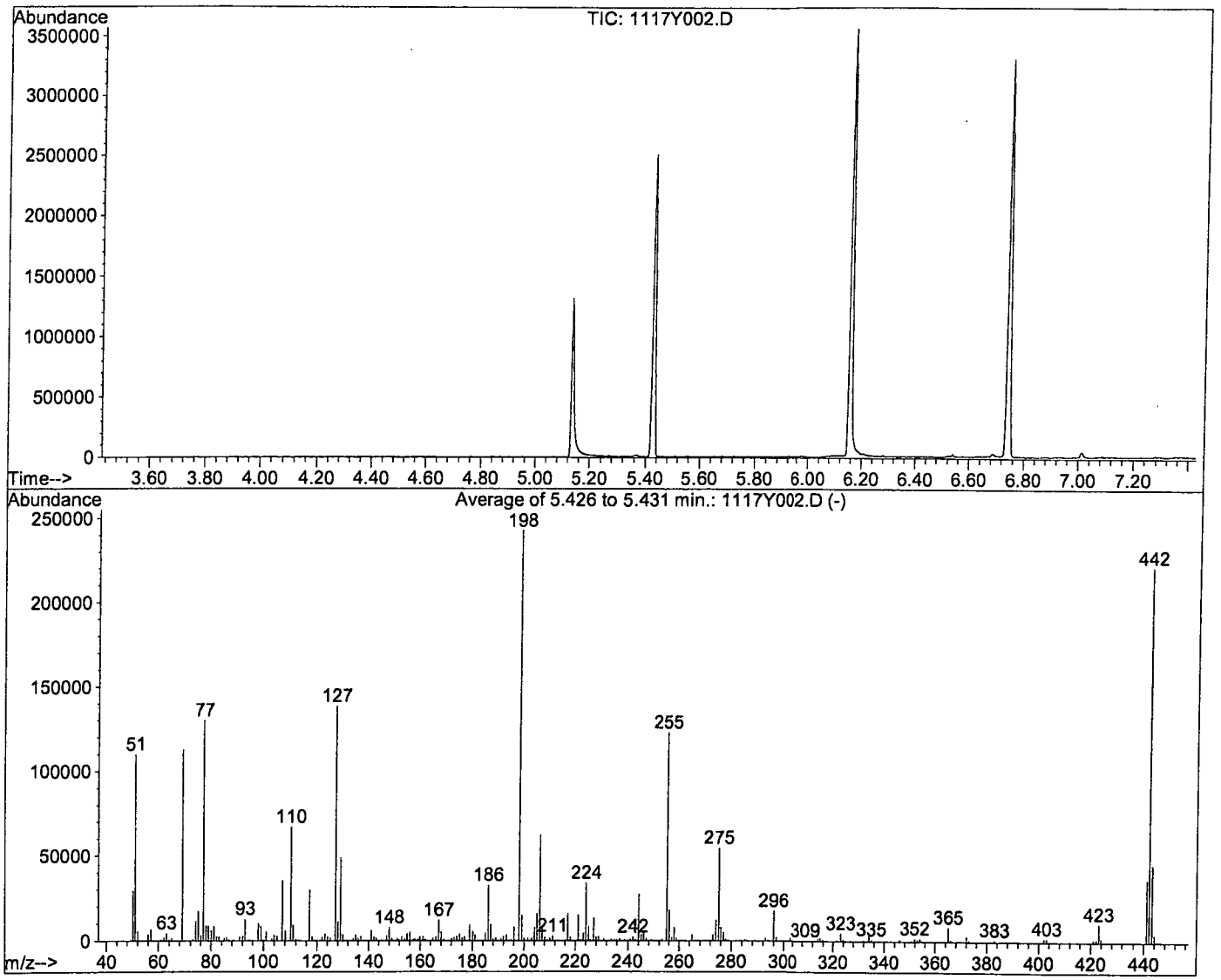
Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration



DFTPP

Data File : M:\YODA\DATA\Y161117\1117Y002.D Vial: 2
Acq On : 17 Nov 16 11:17 Operator: MA
Sample : SV Tune 10/19/16 Inst : Yoda
Misc : Multiplr: 1.00

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 737, 738, 739; Background Corrected with Scan 729

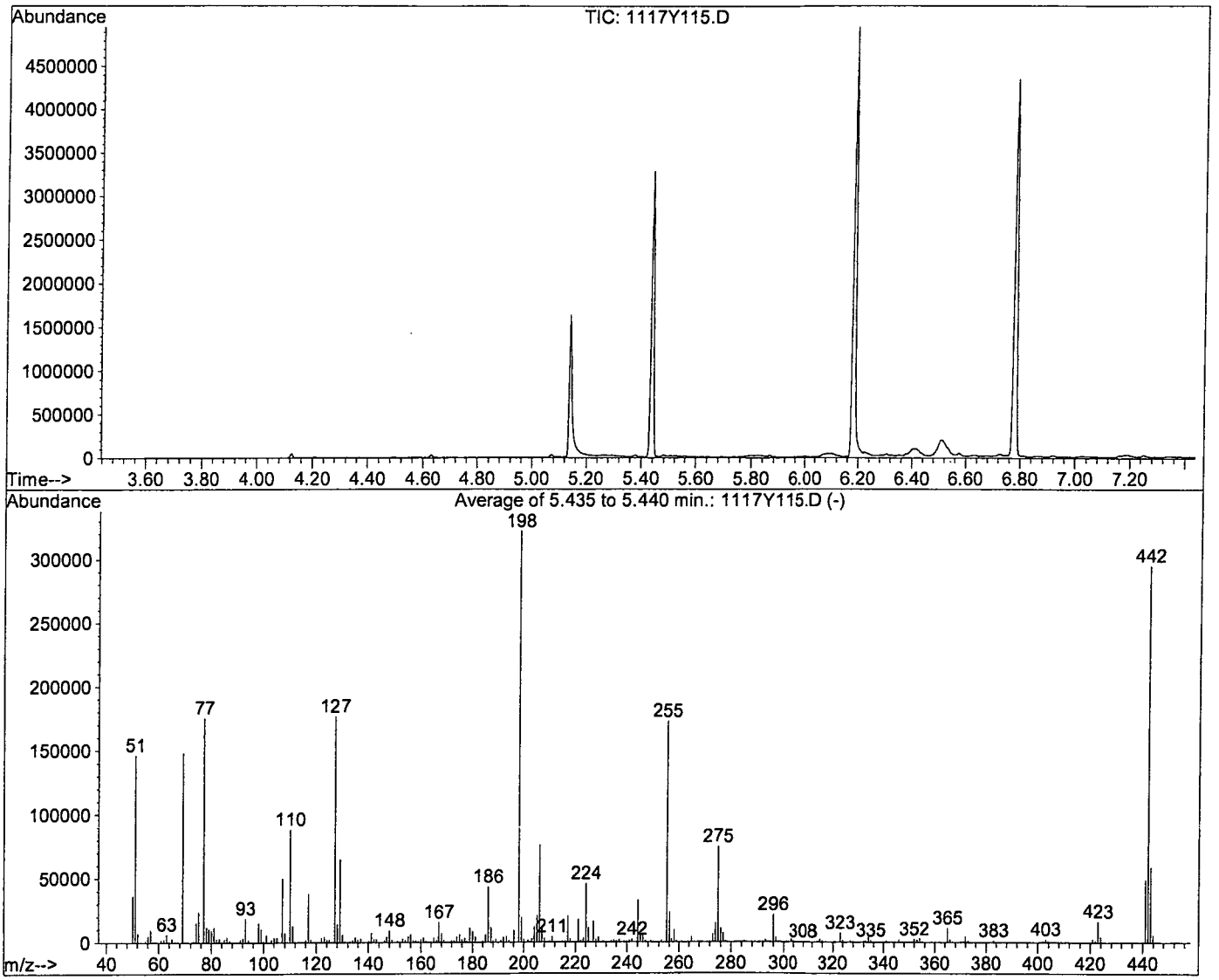
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	45.2	109960	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.1	156	PASS
127	198	40	60	57.0	138616	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	243008	PASS
199	198	5	9	6.1	14868	PASS
275	198	10	30	22.5	54709	PASS
365	198	1	100	3.4	8289	PASS
441	443	0.01	100	80.8	36571	PASS
442	198	50	150	91.2	221504	PASS
443	442	17	23	20.4	45280	PASS

1117Y002.D Y1117.M Thu Nov 17 11:40:44 2016

DFTPP

Data File : M:\YODA\DATA\Y161117\1117Y115.D Vial: 15
Acq On : 28 Nov 16 9:47 Operator: MA
Sample : SV Tune 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 740, 741, 742; Background Corrected with Scan 729

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	45.4	146296	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.5	708	PASS
127	198	40	60	54.8	176619	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	322240	PASS
199	198	5	9	6.1	19560	PASS
275	198	10	30	23.1	74552	PASS
365	198	1	100	3.4	11068	PASS
441	443	0.01	100	83.1	48733	PASS
442	198	50	150	91.6	295083	PASS
443	442	17	23	19.9	58664	PASS

1117Y115.D Y1117.M Mon Nov 28 09:52:38 2016

SV Internal Stanard Stock Prep: 10/19/16 RH EXP: 10/19/17						
		Conc.				
Supplier	ID #	µg/mL	Lot #	Open Date	Exp.Date	µL
Supleco	CRM48902	2000	XA14020V-36611	10/19/16	10/19/17	1000
					fin vol.	1000

8270 Full Scan Standard Curve

PREP DATE:	11/15/16 RH							
8270 Standard Curve								
Exp:	2/11/17					**5**	**10**	**20**
		Conc.		Date				
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL
Absolute	8270 Stock	200	VAR	10/28/16	10/28/17	5	5	10
o2si	8270 BN:A Su	200/400	277272-36400	6/20/16	12/20/16	5	5	10
EM Science	Methylene Chloride		56098			190	90	80
Supelco	SV Internal Sta	2000	XA14020V-36609	11/09/16	11/09/17	4	2	2
				Final Vol.		204	102	102

8270 Full Scan Second Source (SS)

PREP DATE:	11/15/16 RH					
Exp:	1/18/17	Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
o2si	8270 Stock SS	200	VAR	07/08/16	07/08/17	25
EM Science	Methylene Chloride		56098			75
Supelco	SV Internal Sta	2000	XA14020V-36609	11/09/16	11/09/17	2
				Final Vol.		102

40	**50**	**60**	**80**	**100**
µL	µL	µL	µL	µL
20	25	30	40	50
20	25	30	40	50
60	50	40	20	0
2	2	2	2	2
102	102	102	102	102

8270 Full Scan Second Source (SS)						
PREP DATE:	11/9/16 GA					
Exp:	1/18/17	Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
o2si	8270 Stock SS	200	VAR	07/08/16	07/08/17	25
EM Science	Methylene Chloride		56098			75
Supelco	SV Internal Standa	2000	XA14020V-36611	10/19/16	10/19/17	2
				Final Vol.		102

8270 SVOC Stock 10mL						
8270 Stock/Spike Standard						
prep:	10/28/16 RH					
Exp:	10/28/17					
		Conc.				
Supplier	ID #	µg/mL	Lot #	Open Date	Exp.Date	µL
Absolute	10001	2000	53014-3683	10/17/16	10/17/17	1000
Absolute	10002	2000	11114-3614	10/17/16	10/17/17	1000
Absolute	10004	2000	10815-3646	10/17/16	10/17/17	1000
Absolute	10005	2000	10314-3684	10/17/16	10/17/17	1000
Absolute	10006	2000	81216-3707	10/17/16	10/17/17	1000
Absolute	10007	2000	20515-3685	10/17/16	10/17/17	1000
Absolute	10018	2000	30216-3708	10/17/16	10/17/17	1000
Absolute	70023	1000	42716-3685	10/17/16	10/17/17	1000
Absolute	82705	2000	12516-3686	10/17/16	10/17/17	1000
Absolute	94552	2000	42016-3648	10/17/16	10/17/17	1000
				Final Vol.		10000

8270 Acid Surrog Stock 5000ppm						
Prep: 06/20/16 -LH Ex: 06/20/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
8270 Acid Surrog Mix	10,000 µg/mL	Restek Cat# 33029 Lot# A0115509-36718	10mL	20mL	5000 µg/ml	Acetone
	PREP:	06/20/16				
	Exp:	06/20/17				

8270 Surrog Mix 200/400ppm						
Prep: 06/20/16 -LH Ex: 12/20/16						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
8270 Acid Surrog Mix	5000 µg/mL	06/20/16	8.0mL	100 mL	400 µg/mL	MC
8270 B/N surrog Mix	5000 µg/mL	Restek Cat# 31086 Lot# A0119223-36720	4.0 mL	100 mL	200 ug/mL	MC
	PREP:	06/20/16				
	Exp:	12/20/16				

8270 Full Scan Second Source Stock

	7/8/16 GA					
8270 Second Source Stock						
Exp:	07/08/17					
		Conc.		Date	Exp.	
Supplier	ID #	µg/mL	Lot #	Code	Date	µL
o2si	116070-02	2000	234696-35233	07/08/16	07/08/17	1000
o2si	110391-01	2000	252133-35880	07/08/16	07/08/17	1000
o2si	010337-01	1000	259144-35881	07/08/16	07/08/17	1000
o2si	110396-01	2000	252136-35882	07/08/16	07/08/17	1000
o2si	110397-01	2000	263077-35835	07/08/16	01/08/17	1000
o2si	110393-01	2000	252141-35248	07/08/16	07/08/17	1000
o2si	110394-01	2000	252143-35884	07/08/16	07/08/17	1000
o2si	**110395-01**	2000	252146-35885	07/08/16	07/08/17	1000
o2si	110392-01	2000	243259-35886	07/08/16	07/08/17	1000
Absolute	10006	2000	091115-35856	07/08/16	07/08/17	1000
				Final Vol.		10000

8270 Surrog Mix 100/200ppm						
Prep: 10/26/16 -RH Ex: 01/26/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
8270 Acid Surrog Mix	10000 ug/ml	Restek Cat# 33029 Lot# A0118884-36874 Op: 10/03/16 EX: 10/03/17	2.0 mL	100 mL	200 µg/mL	MC
8270 B/N surrog Mix	5000 µg/mL	Restek Cat# 31086 Lot# A0119223-36873 Op: 10/26/16 EX: 10/26/17	2.0 mL	100 mL	100 ug/mL	MC

_SEP004

Organic Extraction Worksheet

Method	625/8270 Separatory Funnel Extra 3510C	Extraction Set	161117A	Extraction Method	SEP004	Units	mL

Spiked ID 1	8270T Spike 11-15-16 exp 11-15-17		Surrogate ID 1	8270 Surrogate 11-7-16 exp 12-23-16	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	11/17/16 11:15	
Spiked ID 8			Ext. End Time:	11/18/16 8:20	
			GC Requires Extract By:	11/22/16 0:00	

pH1	2	1/17/16 11:30:00 AM	Water Bath Temp Criteria	76 °C
pH2	14	11/17/16 1:10:00 PM		
pH3				

Spiked By: KY **Date** 11/17/16 **Witnessed By:** JR **Date** 11/17/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	161117A Blk				1	1	1000	1	2/1	11/17/16 11:15	
						equip	E-WB6				
2	161117A LCS-1		0.250	1	1	1	1000	1	2/1	11/17/16 11:15	
						equip	E-WB6				
3	AZ45738	AZ45738W09			1	1	980	1	2/1	11/17/16 11:15	81477
						equip	E-WB6				
4	AZ45866 MS-1	AZ45866W32	0.250	1	1	1	1050	1	2/1	11/17/16 11:15	81492
						equip	E-WB6				
5	AZ45866 MSD-1	AZ45866W21	0.250	1	1	1	1050	1	2/1	11/17/16 11:15	81492
						equip	E-WB6				
6	AZ45866	AZ45866W19			1	1	1050	1	2/1	11/17/16 11:15	81492
						equip	E-WB6				
7	AZ45867	AZ45867W07			1	1	1070	1	2/1	11/17/16 11:15	81492
						equip	E-WB6				
8	AZ45868	AZ45868W14			1	1	1070	1	2/1	11/17/16 11:15	81492
						equip	E-WB6				
9	AZ45907	AZ45907W11			1	1	1070	1	2/1	11/17/16 11:15	81500
						equip	E-WB6				
10	AZ45908	AZ45908W16			1	1	1070	1	2/1	11/17/16 11:15	81500
						equip	E-WB6				
11	AZ45909	AZ45909W16			1	1	1070	1	2/1	11/17/16 11:15	81500
						equip	E-WB6				
12	AZ45910	AZ45910W14			1	1	1070	1	2/1	11/17/16 11:15	81500
						equip	E-WB6				
13	AZ45911	AZ45911W16			1	1	1070	1	2/1	11/17/16 11:15	81500
						equip	E-WB6				

Ker 11/18/16

Solvent and Lot#	
MC	56153
1+1 Sulfuric Acid	9-28-16
Acidified Na2SO4	11-3-16
B.Na2SO4	16c255214
10N NaOH	10-27-16
ph strips	hc 574756
Filter Paper	400112

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	RH
Date	11/18/16
Time	9:00
Refrigerator	GC-C

	Technician's Initials
Scanned By	KY
Sample Preparation	KY,JR
Extraction	KY,JR
Concentration	DL

Modified	11/18/16 8:33:07 AM

Reviewed By: Ker **Date** 11/18/16

405

11/18/16 8:33:14 AM

Ext_ID 53341

Injection Log

Directory: M:\YODA\DATA\Y161117\

Vial	FileName	Multiplier	SampleName	Misc Info	Injected
2	1117Y002.D	1	SV Tune 10/19/16		17 Nov 16 11:17
3	1117Y003.D	1	5ug/ml SVOC 11/15/16		17 Nov 16 11:32
4	1117Y004.D	1	10ug/ml SVOC 11/15/16		17 Nov 16 12:02
5	1117Y005.D	1	20ug/ml SVOC 11/15/16		17 Nov 16 12:31
6	1117Y006.D	1	40ug/ml SVOC 11/15/16		17 Nov 16 13:00
7	1117Y007.D	1	50ug/ml SVOC 11/15/16		17 Nov 16 13:29
8	1117Y008.D	1	60ug/ml SVOC 11/15/16		17 Nov 16 13:59
9	1117Y009.D	1	80ug/ml SVOC 11/15/16		17 Nov 16 14:28
10	1117Y010.D	1	100ug/ml SVOC 11/15/16		17 Nov 16 14:58
11	1117Y011.D	1	2ND SRC SVOC 11/15/16		17 Nov 16 15:27
15	1117Y115.D	1	SV Tune 11/15/16		28 Nov 16 9:47
16	1117Y116.D	1	50ug/ml SVOC 11/15/16		28 Nov 16 10:42
17	1117Y117.D	1	161117A BLK 1/1000	water	28 Nov 16 11:11
18	1117Y118.D	1	161117A LCS-1 1/1000	water	28 Nov 16 11:41
25	1117Y125.D	0.934579	AZ45907W11 1/1070	water	28 Nov 16 15:08
26	1117Y126.D	0.934579	AZ45908W16 1/1070	water	28 Nov 16 15:37
27	1117Y127.D	0.934579	AZ45909W16 1/1070	water	28 Nov 16 16:07
28	1117Y128.D	0.934579	AZ45910W14 1/1070	water	28 Nov 16 16:36
29	1117Y129.D	0.93458	AZ45911W16 1/1070	water	28 Nov 16 17:06
39	1117Y139.D	1	50ug/ml SVOC 11/15/16	water	28 Nov 16 21:26

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank

EPA 8270D MODIFIED WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161118W-45866 - 214034**
Batch ID: #87DME-161118A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2-(2-METHOXYETHOXY)-ETHAN	80.0 U	100	80.0	40.0	ug/L	11/18/16	11/23/16

Quant Method: Y0GLYCOL.
Run #: 1123Y014
Instrument: Yoda
Sequence: Y161123
Initials: MA

GC SC-Blank-REG MDLs-DOD
Printed: 11/28/16 10:17:48 AM

Laboratory Control Spike Recovery
EPA 8270D MODIFIED WATER

APPL ID: **161118W-45866 LCS - 214034**
Batch ID: #87DME-161118A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
2-(2-METHOXYETHOXY)-ETHANOL	500	407	81.4	30-130

Comments: _____

Primary	SPK
Quant Method :	Y0GLYCOL.M
Extraction Date :	11/18/16
Analysis Date :	11/23/16
Instrument :	Yoda
Run :	1123Y015
Initials :	MA

Printed: 11/28/16 10:17:50 AM
APPL Standard LCS

EPA 8270D

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81500

Case No: 81500 Date Analyzed: 11/23/16

Matrix: WATER Instrument: Yoda

Blank ID: 161118A-BLK Time Analyzed: 1452

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161118A-BLK	Blank	1123Y014	11/23/16 1452
161118A-LCS	Lab Control Spike	1123Y015	11/23/16 1521
AZ45907	ERH117	1123Y021	11/23/16 1818
AZ45908	ERH121	1123Y022	11/23/16 1847
AZ45909	ERH122	1123Y023	11/23/16 1917
AZ45910	ERH126	1123Y024	11/23/16 1946
AZ45911	ERH128	1123Y025	11/23/16 2015

Comments: Batch: #87DME-161118A

Printed: 11/28/16 10:18:10 AM
Form 4, Blank Summary

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: Water
ID: SV Tune 11/15/16

SDG No: 81500
Date Analyzed: 11/23/16
Instrument: Yoda
Time Analyzed: 9:15

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		100ug/ml DEG 11/22/1	1123Y004.D	11/23/16 10:00
2		200ug/ml DEG 11/22/1	1123Y005.D	11/23/16 10:29
3		400ug/ml DEG 11/22/1	1123Y006.D	11/23/16 10:59
4		500ug/ml DEG 11/22/1	1123Y007.D	11/23/16 11:28
5		600ug/ml DEG 11/22/1	1123Y008.D	11/23/16 11:58
6		800ug/ml DEG 11/22/1	1123Y009.D	11/23/16 12:28
7		1000ug/ml DEG 11/22/	1123Y010.D	11/23/16 13:11
8		SS2 DEG 11/22/16	1123Y012.D	11/23/16 14:09
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	48.3
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.3
127	40 - 60% of mass 198	56.2
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 197.95	100.0
199	5 - 9% of mass 198	6.3
275	10 - 30% of mass 198	21.5
365	1 - 100% of mass 198	3.4
441	0.01 - 100% of mass 443	82.0
442	50 - 150% of mass 197.95	83.2
443	17 - 23% of mass 442	18.9

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81500
Matrix: Water
ID: SV Tune 11/15/16

SDG No: 81500
Date Analyzed: 11/23/16
Instrument: Yoda
Time Analyzed: 14:35

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1	Blank	161118A BLK 2/500	1123Y014.D	11/23/16 14:52
2	Lab Control Spike	161118A LCS-1 2/500	1123Y015.D	11/23/16 15:21
3	ERH117	AZ45907W14 2/500	1123Y021.D	11/23/16 18:18
4	ERH121	AZ45908W13 2/500	1123Y022.D	11/23/16 18:47
5	ERH122	AZ45909W19 2/500	1123Y023.D	11/23/16 19:17
6	ERH126	AZ45910W13 2/500	1123Y024.D	11/23/16 19:46
7	ERH128	AZ45911W12 2/500	1123Y025.D	11/23/16 20:15
8		50ug/ml DEG 11/22/16	1123Y038.D	11/24/16 2:20
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	42.3
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.9
127	40 - 60% of mass 198	56.2
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 197.95	100.0
199	5 - 9% of mass 198	6.7
275	10 - 30% of mass 198	24.1
365	1 - 100% of mass 198	3.5
441	0.01 - 100% of mass 443	91.3
442	50 - 150% of mass 197.95	97.0
443	17 - 23% of mass 442	18.7

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81500

Lab File ID (Standard): 1123Y007.D Date Analyzed: 11/23/16

Instrument ID: Yoda Time Analyzed: 11:28

GC Column: ID: Heated Purge: (Y/N)

		1,4-dichlorobenzene-D4(IS)		Napthalene-D8(IS)		Acenaphthene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	177940	5.04	800769	6.46	474142	8.47
	UPPER LIMIT	355880	5.54	1601538	6.96	948284	8.97
	LOWER LIMIT	88970	4.54	400385	5.96	237071	7.97
	SAMPLE NO.						
01	SS2 DEG 11/22/16	154792	5.03	678996	6.46	410275	8.47
02	161118A BLK 2/500	185498	5.06	864983	6.46	514113	8.47
03	161118A LCS-1 2/500	188487	5.05	846292	6.46	497749	8.47
04	AZ45907W14 2/500	181360	5.04	826013	6.46	500448	8.47
05	AZ45908W13 2/500	184306	5.04	841840	6.46	505450	8.47
06	AZ45909W19 2/500	189190	5.04	863535	6.46	508402	8.47
07	AZ45910W13 2/500	177203	5.04	805048	6.46	470999	8.47
08	AZ45911W12 2/500	156336	5.06	767436	6.46	447176	8.47
09	50ug/ml DEG 11/22/16	171742	5.04	775247	6.46	456087	8.46
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 81500

Lab File ID (Standard): 1123Y007.D Date Analyzed: 11/23/16

Instrument ID: Yoda Time Analyzed: 11:28

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Phenanthrene-D10(IS)		Chrysene-D12(IS)		Perylene-D12(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	857113	10.19	818162	13.27	686190	14.97
	UPPER LIMIT	1714226	10.69	1636324	13.77	1372380	15.47
	LOWER LIMIT	428557	9.69	409081	12.77	343095	14.47
	SAMPLE NO.						
01	SS2 DEG 11/22/16	752056	10.20	748077	13.28	520555	14.97
02	161118A BLK 2/500	956993	10.20	897711	13.28	639357	14.97
03	161118A LCS-1 2/500	920333	10.19	865185	13.27	652337	14.97
04	AZ45907W14 2/500	909908	10.20	875255	13.28	913336	14.98
05	AZ45908W13 2/500	911195	10.19	846158	13.28	698378	14.97
06	AZ45909W19 2/500	934133	10.19	842253	13.27	846054	14.97
07	AZ45910W13 2/500	863519	10.19	821763	13.28	726913	14.97
08	AZ45911W12 2/500	806354	10.20	767032	13.28	653967	14.97
09	50ug/ml DEG 11/22/16	844398	10.19	796087	13.27	689360	14.97
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

ORGANICS

Sample Data

APPL, INC.

EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH117
Sample Collection Date: 11/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81500
APPL ID: AZ45907
QCG: #87DME-161118A-214034

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	11/18/16	11/23/16

Quant Method:	Y0GLYCOL.M
Run #:	1123Y021
Instrument:	Yoda
Sequence:	Y161123
Dilution Factor:	1
Initials:	MA

Printed: 11/28/16 10:18:11 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y021.D Vial: 21
Acq On : 23 Nov 16 18:18 Operator: MA
Sample : AZ45907W14 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 9:13 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	181360	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.46	136	826013	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	500448	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.20	188	909908	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.28	240	875255	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.98	264	913336	40.00000	ppb	-0.19

System Monitoring Compounds

Target Compounds Qvalue

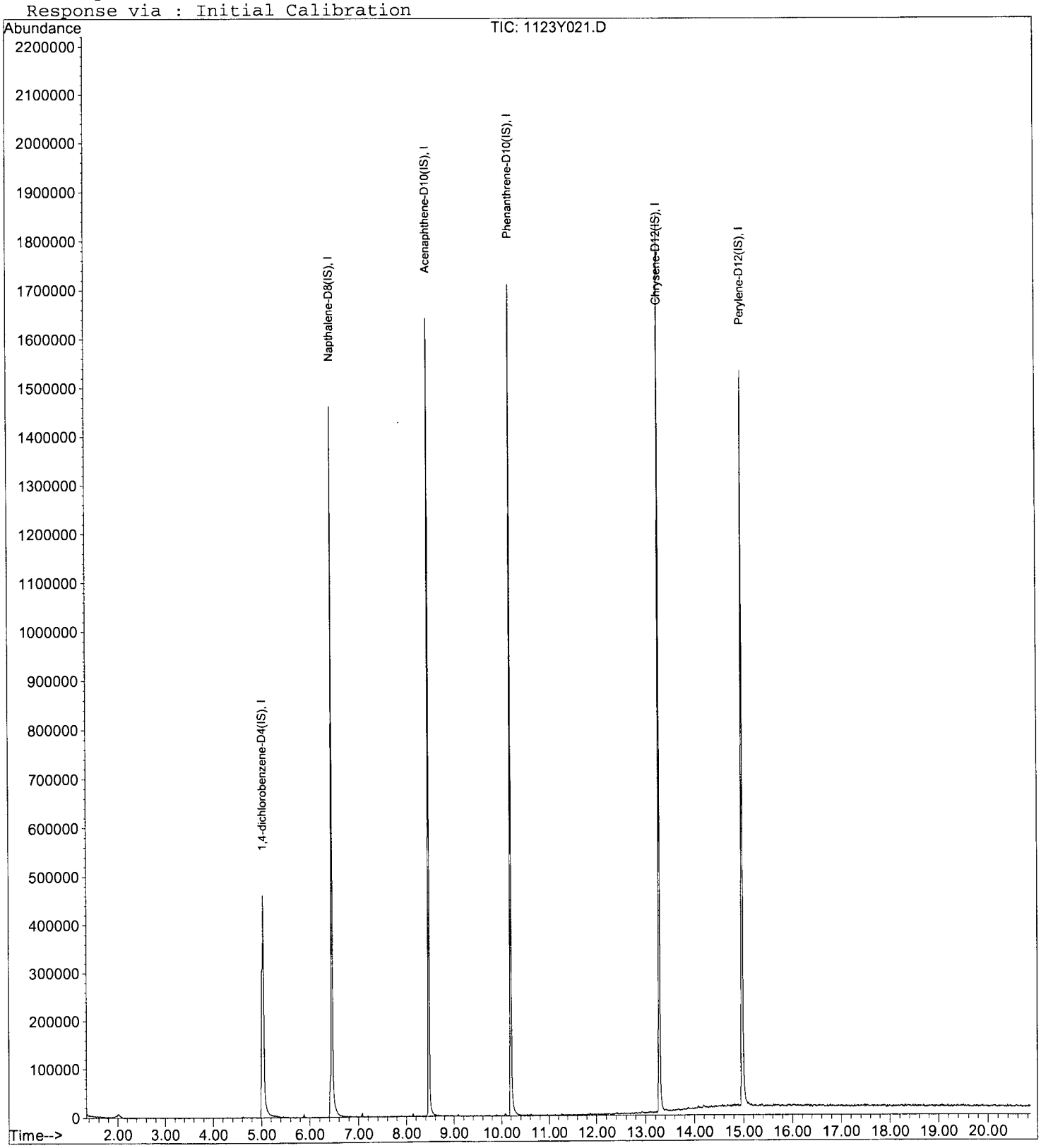
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y021.D Vial: 21
Acq On : 23 Nov 16 18:18 Operator: MA
Sample : AZ45907W14 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 9:13 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH121
Sample Collection Date: 11/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81500
APPL ID: AZ45908
QCG: #87DME-161118A-214034

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	11/18/16	11/23/16

Quant Method:	Y0GLYCOL.M
Run #:	1123Y022
Instrument:	Yoda
Sequence:	Y161123
Dilution Factor:	1
Initials:	MA

Printed: 11/28/16 10:18:11 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y022.D Vial: 22
Acq On : 23 Nov 16 18:47 Operator: MA
Sample : AZ45908W13 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 9:13 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	184306	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.46	136	841840	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	505450	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.19	188	911195	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.28	240	846158	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.97	264	698378	40.00000	ppb	-0.19

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

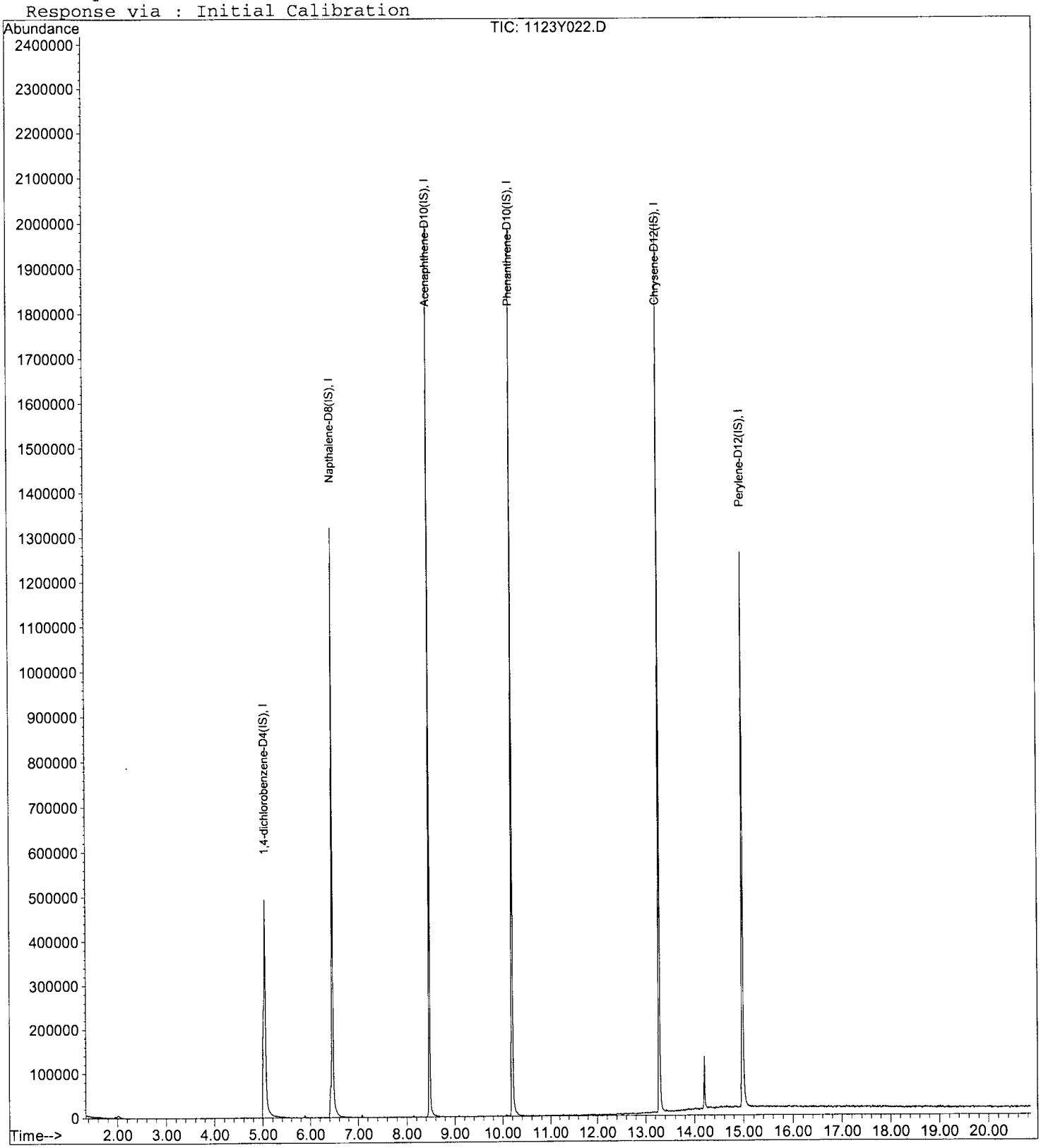
Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y022.D
Acq On : 23 Nov 16 18:47
Sample : AZ45908W13 2/500
Misc :

Vial: 22
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Nov 28 9:13 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH122
Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81500
APPL ID: AZ45909
QCG: #87DME-161118A-214034

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	11/18/16	11/23/16

Quant Method: Y0GLYCOL.M
Run #: 1123Y023
Instrument: Yoda
Sequence: Y161123
Dilution Factor: 1
Initials: MA

Printed: 11/28/16 10:18:11 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y023.D Vial: 23
Acq On : 23 Nov 16 19:17 Operator: MA
Sample : AZ45909W19 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 9:13 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	189190	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.46	136	863535	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	508402	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.19	188	934133	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.27	240	842253	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.97	264	846054	40.00000	ppb	-0.19

System Monitoring Compounds

Target Compounds Qvalue

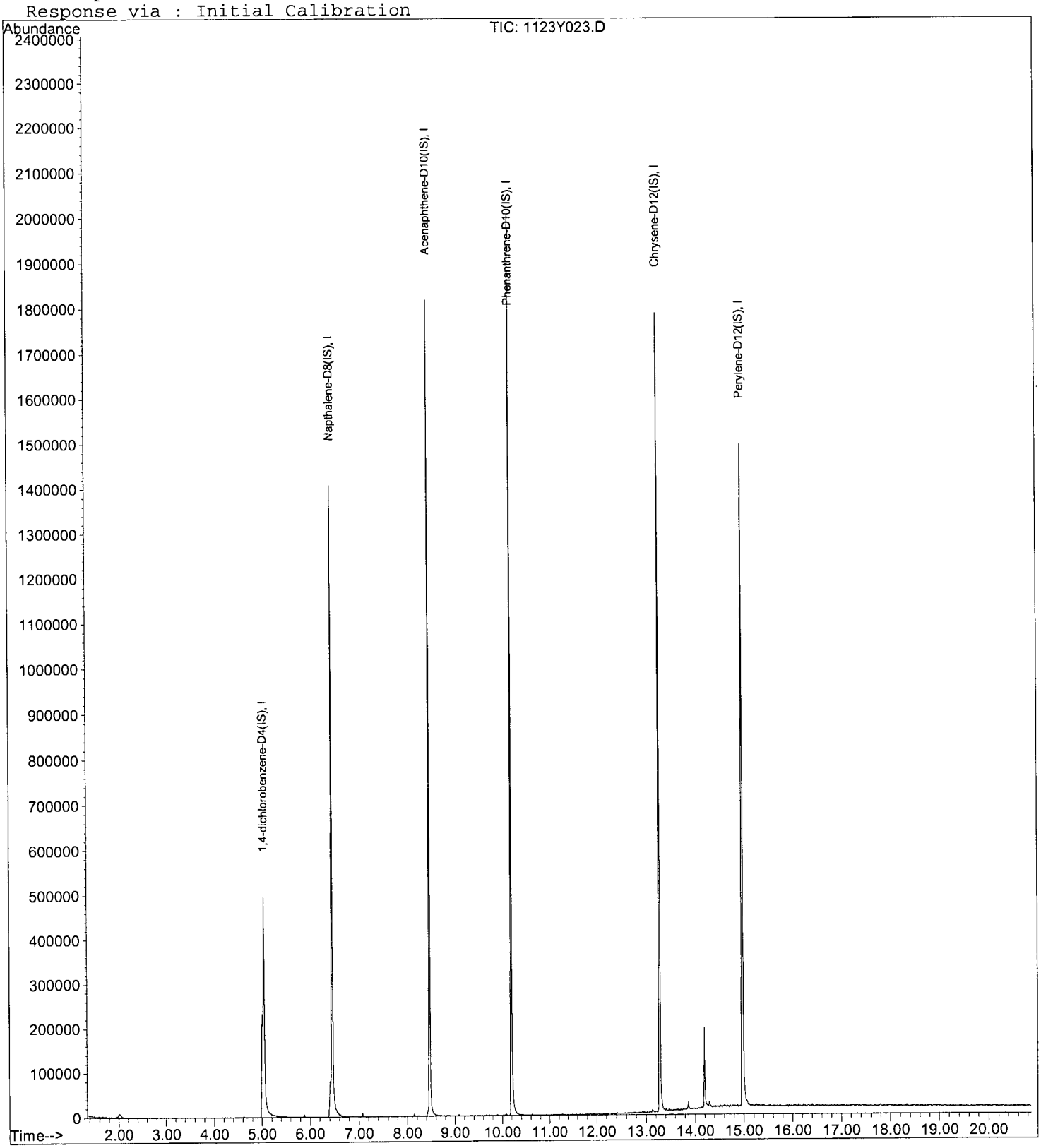
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y023.D Vial: 23
Acq On : 23 Nov 16 19:17 Operator: MA
Sample : AZ45909W19 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 9:13 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH126
Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81500
APPL ID: AZ45910
QCG: #87DME-161118A-214034

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	11/18/16	11/23/16

Quant Method:	Y0GLYCOL.M
Run #:	1123Y024
Instrument:	Yoda
Sequence:	Y161123
Dilution Factor:	1
Initials:	MA

Printed: 11/28/16 10:18:11 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y024.D Vial: 24
Acq On : 23 Nov 16 19:46 Operator: MA
Sample : AZ45910W13 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 9:09 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	177203	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.46	136	805048	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	470999	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.19	188	863519	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.28	240	821763	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.97	264	726913	40.00000	ppb	-0.19

System Monitoring Compounds

Target Compounds Qvalue

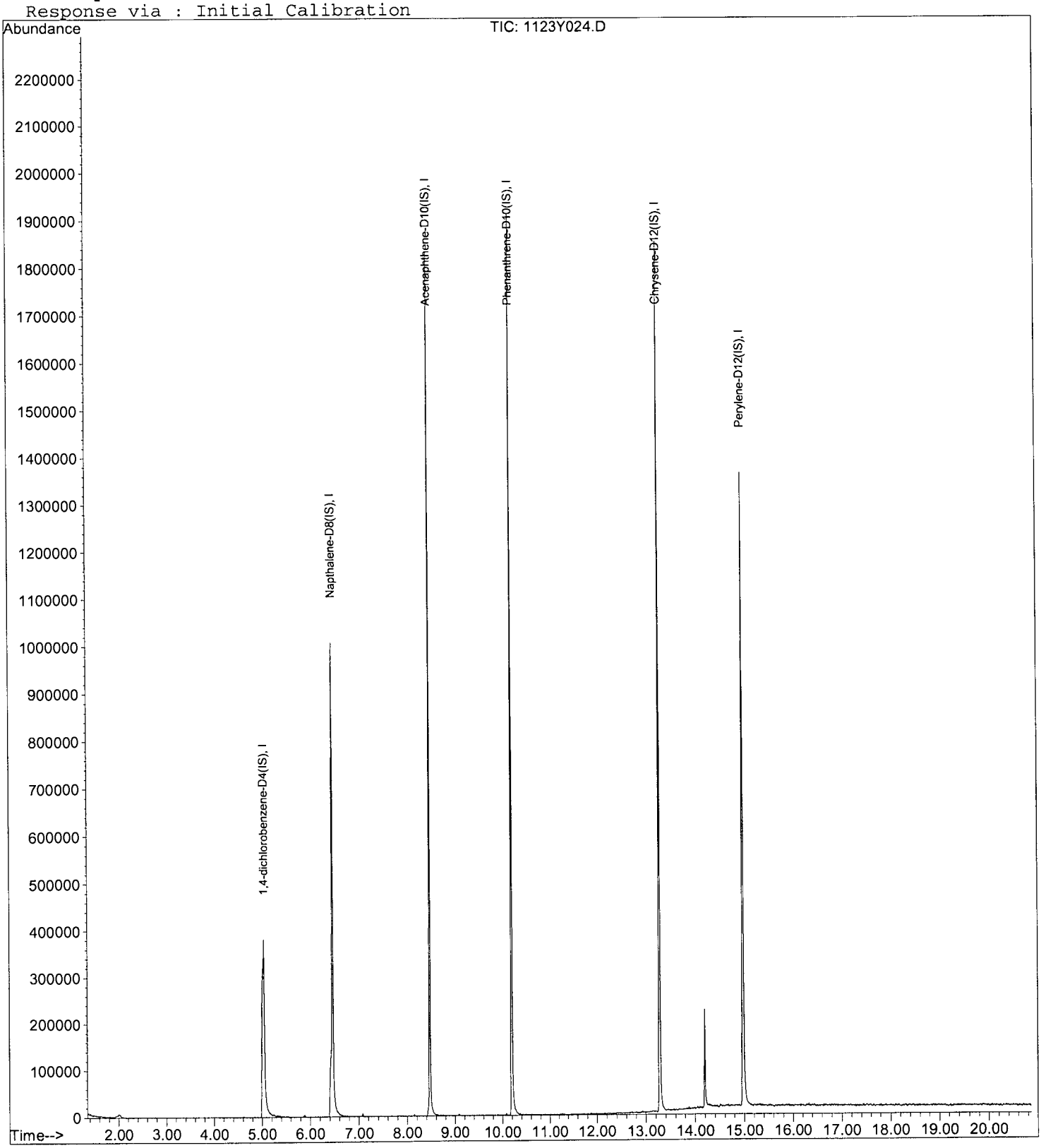
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y024.D Vial: 24
Acq On : 23 Nov 16 19:46 Operator: MA
Sample : AZ45910W13 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 9:09 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH128
Sample Collection Date: 11/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81500
APPL ID: AZ45911
QCG: #87DME-161118A-214034

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	11/18/16	11/23/16

Quant Method: Y0GLYCOL.M
Run #: 1123Y025
Instrument: Yoda
Sequence: Y161123
Dilution Factor: 1
Initials: MA

Printed: 11/28/16 10:18:11 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y025.D Vial: 25
Acq On : 23 Nov 16 20:15 Operator: MA
Sample : AZ45911W12 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 9:09 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.06	152	156336	40.00000	ppb	0.02
3) Napthalene-D8(IS)	6.46	136	767436	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	447176	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.20	188	806354	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.28	240	767032	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.97	264	653967	40.00000	ppb	-0.20

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

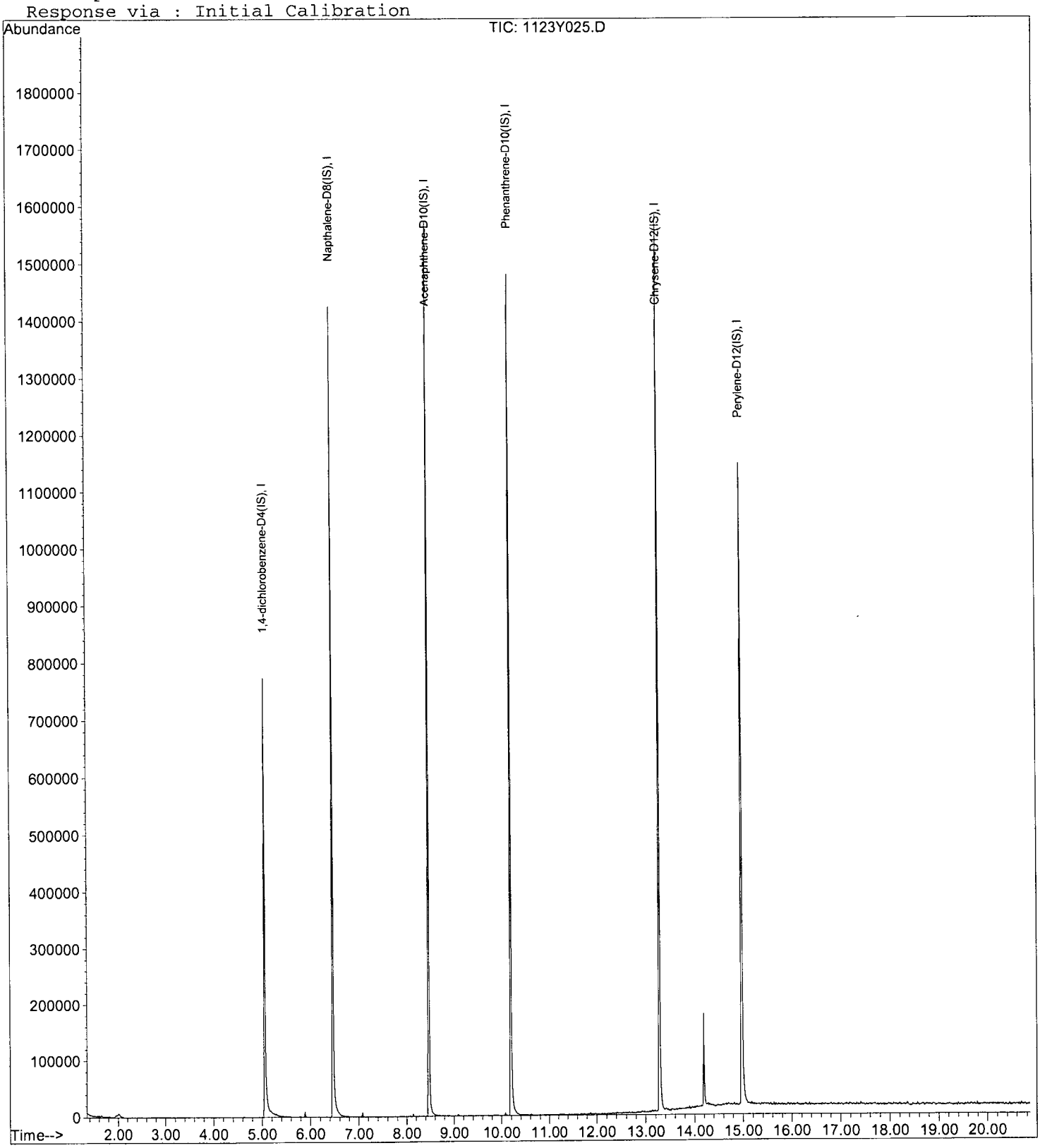
Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y025.D
Acq On : 23 Nov 16 20:15
Sample : AZ45911W12 2/500
Misc :

Vial: 25
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Nov 28 9:09 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



ORGANICS

Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 11/23/16
Matrix: Instrument: Yoda
Initials:

		Compound	1123Y003.D	1123Y004.D	1123Y005.D	1123Y006.D	1123Y007.D	1123Y008.D	1123Y009.D	1123Y010.D			Avg	%RSD		
1	I	1,4-dichlorobenzene-D4(IS)														
2	TML	2-(2-Methoxyethoxy)ethanol		0.0677	0.1017	0.1986	0.2068	0.2153	0.2208	0.2208			0.18	36	TML	0.997
3	I	Napthalene-D8(IS)														
4	I	Acenaphthene-D10(IS)														
5	I	Phenanthrene-D10(IS)														
6	I	Chrysene-D12(IS)														
7	I	Perylene-D12(IS)														
8																
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Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y004.D Vial: 4
Acq On : 23 Nov 16 10:00 Operator: MA
Sample : 100ug/ml DEG 11/22/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 10:57 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 09:52:36 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	191756	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.46	136	848261	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	499918	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.20	188	910901	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.28	240	867420	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.98	264	881223	40.00000	ppb	-0.19

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.35	45	32433	35.04576	ppb	92

(#) = qualifier out of range (m) = manual integration

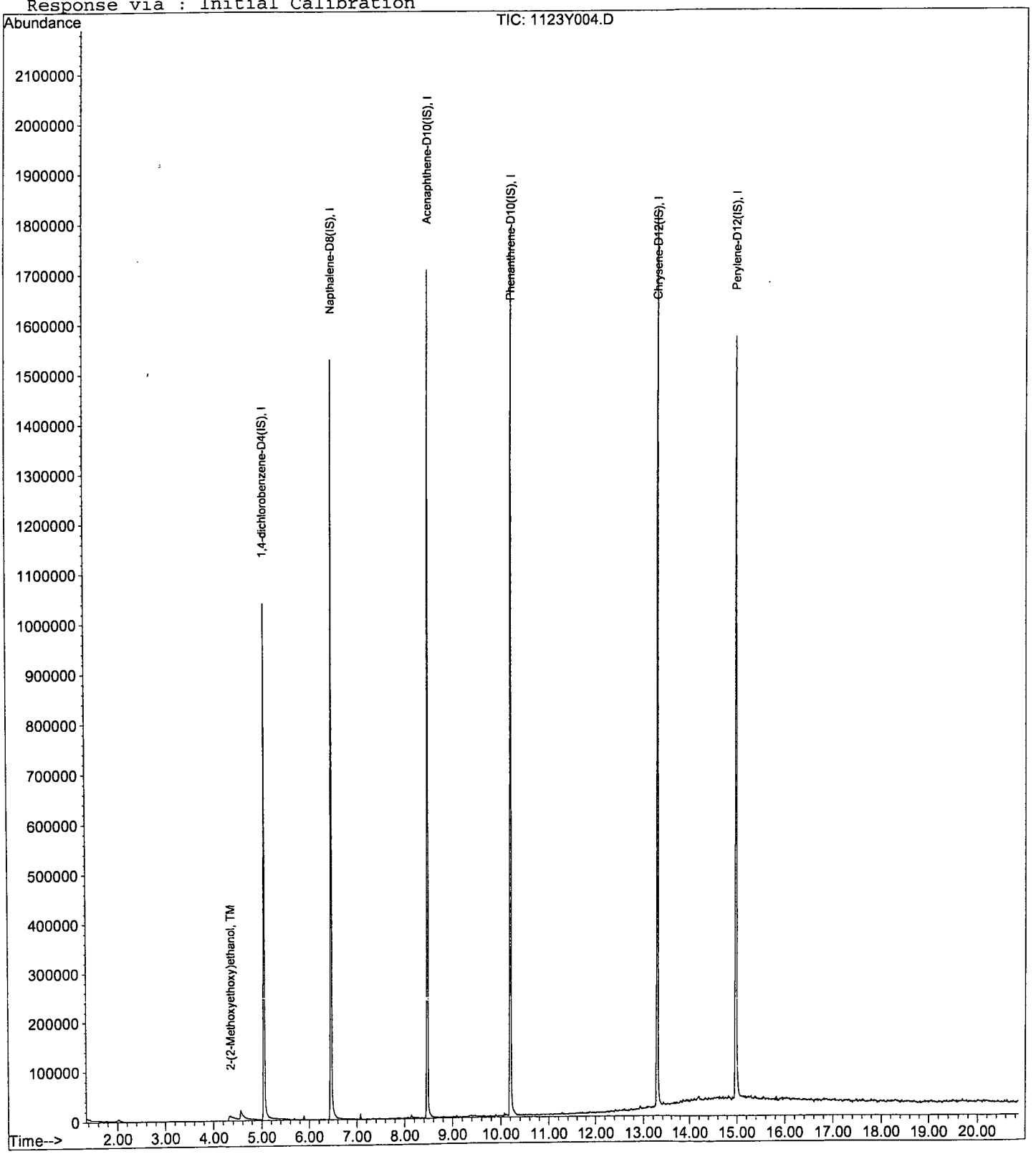
Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y004.D
Acq On : 23 Nov 16 10:00
Sample : 100ug/ml DEG 11/22/16
Misc :

Vial: 4
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Nov 23 10:57 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y005.D Vial: 5
Acq On : 23 Nov 16 10:29 Operator: MA
Sample : 200ug/ml DEG 11/22/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 11:07 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 11:07:08 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	186195	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.46	136	831906	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	486938	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.20	188	888986	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.28	240	837900	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.98	264	835350	40.00000	ppb	-0.19
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.27	45	94721	105.40849	ppb	100

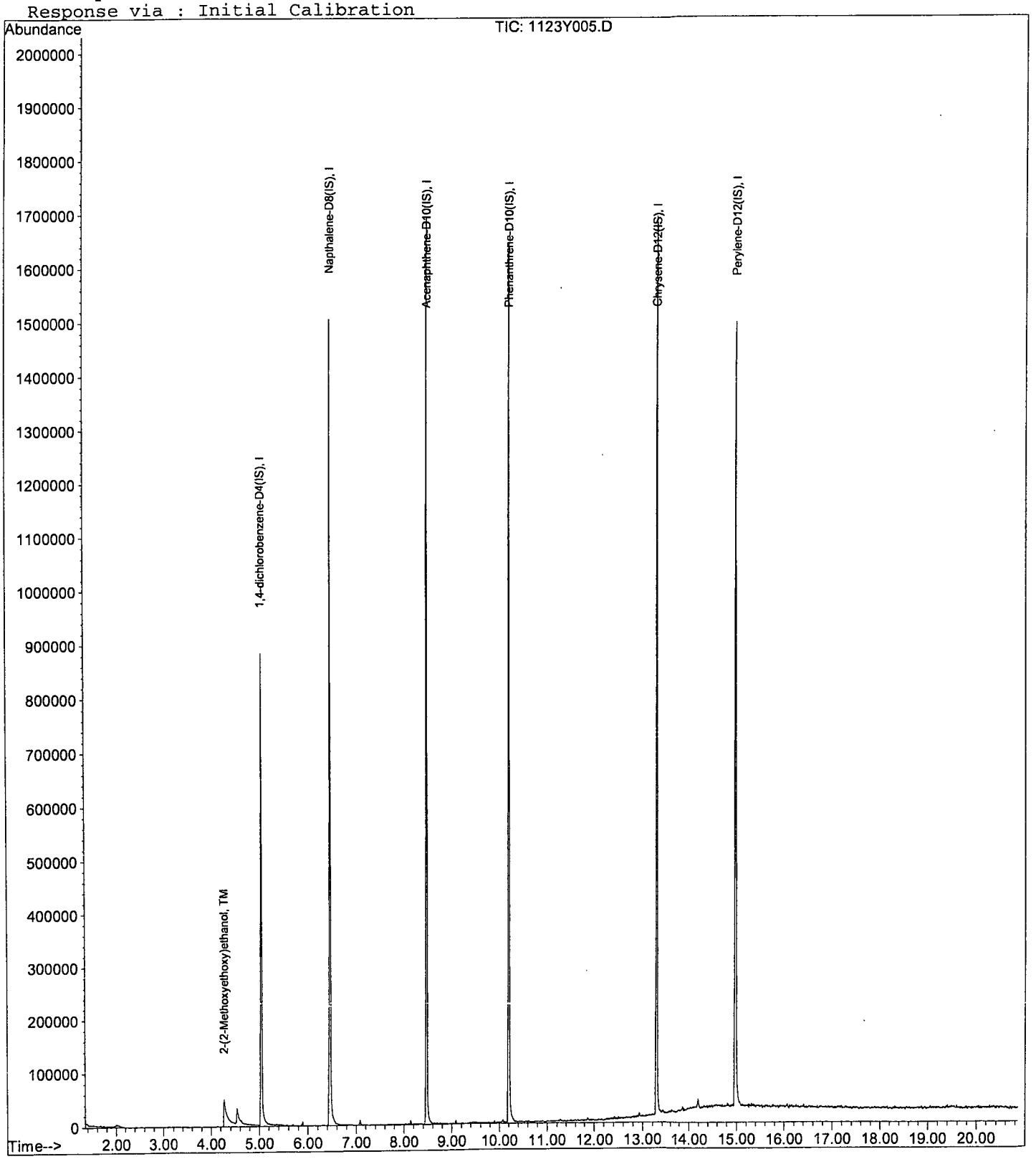
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y005.D Vial: 5
Acq On : 23 Nov 16 10:29 Operator: MA
Sample : 200ug/ml DEG 11/22/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 11:07 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y006.D Vial: 6
Acq On : 23 Nov 16 10:59 Operator: MA
Sample : 400ug/ml DEG 11/22/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 12:16 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 11:07:08 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	182640	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.46	136	809322	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	473893	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.20	188	873279	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.28	240	833981	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.98	264	933788	40.00000	ppb	-0.19

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.24	45	362663	411.43825	ppb	92

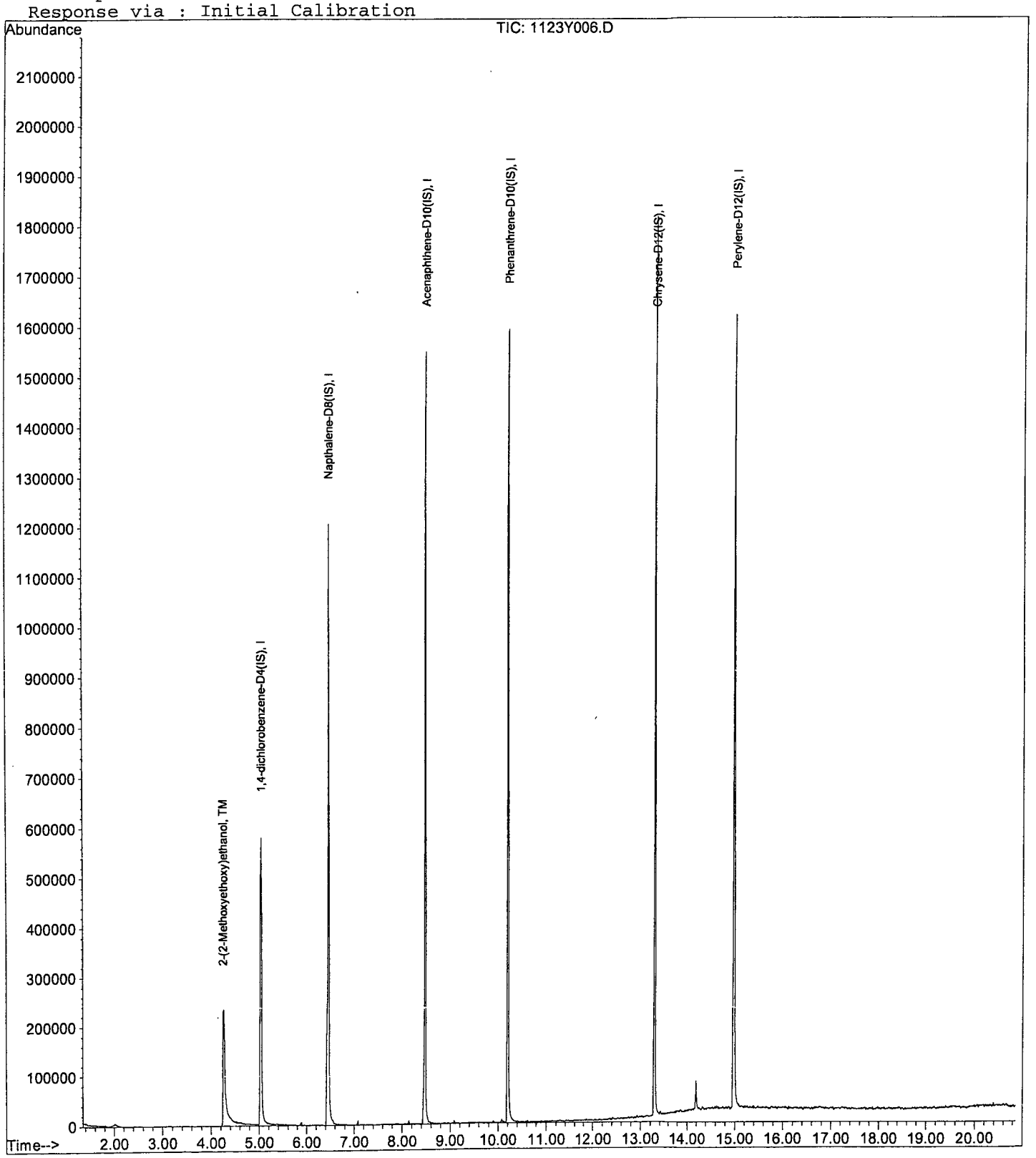
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y006.D Vial: 6
Acq On : 23 Nov 16 10:59 Operator: MA
Sample : 400ug/ml DEG 11/22/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 12:16 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y007.D Vial: 7
Acq On : 23 Nov 16 11:28 Operator: MA
Sample : 500ug/ml DEG 11/22/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 13:07 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:06:52 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	177940	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.46	136	800769	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	474142	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.19	188	857113	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.27	240	818162	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.97	264	686190	40.00000	ppb	-0.19
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.24	45	460031	535.68666	ppb	100

(#) = qualifier out of range (m) = manual integration

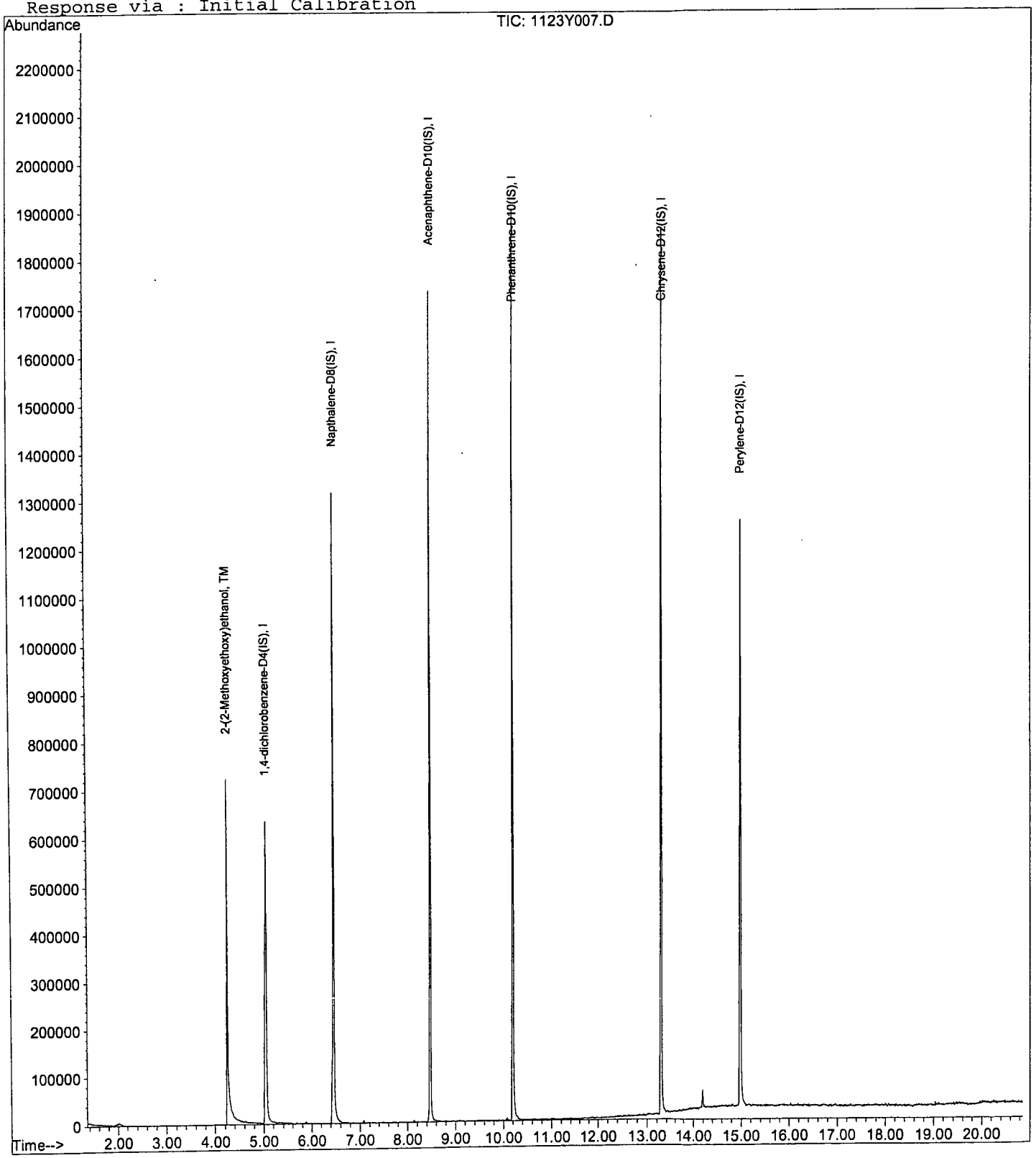
Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y007.D
Acq On : 23 Nov 16 11:28
Sample : 500ug/ml DEG 11/22/16
Misc :

Vial: 7
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Nov 23 13:07 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y008.D
Acq On : 23 Nov 16 11:58
Sample : 600ug/ml DEG 11/22/16
Misc :

Vial: 8
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Nov 23 12:17 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 11:07:08 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	179974	40.00000	ppb	0.01
3) Napthalene-D8(IS)	6.46	136	822851	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	477957	40.00000	ppb	0.01
5) Phenanthrene-D10(IS)	10.20	188	864141	40.00000	ppb	0.01
6) Chrysene-D12(IS)	13.28	240	835483	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.98	264	983628	40.00000	ppb	-0.19

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.26	45	581168	669.09725	ppb	93

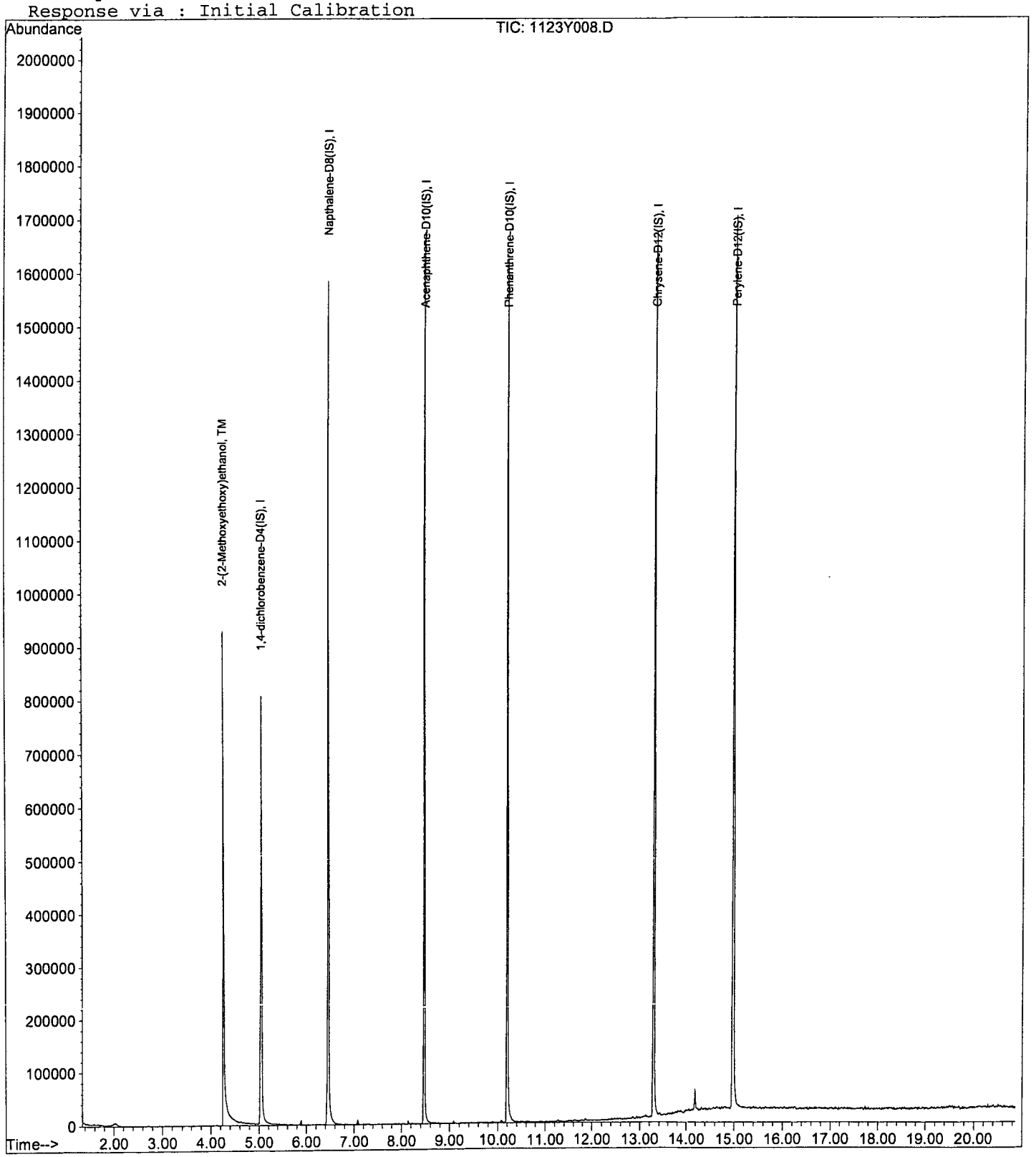
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y008.D Vial: 8
Acq On : 23 Nov 16 11:58 Operator: MA
Sample : 600ug/ml DEG 11/22/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 12:17 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y009.D Vial: 9
Acq On : 23 Nov 16 12:28 Operator: MA
Sample : 800ug/ml DEG 11/22/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 13:01 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 11:07:08 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	184046	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.46	136	806129	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	479713	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.19	188	887054	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.28	240	831663	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.97	264	732136	40.00000	ppb	-0.19

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.25	45	812749	915.01324	ppb	94

(#) = qualifier out of range (m) = manual integration
1123Y009.D Y0GLYCOL.M Mon Nov 28 09:28:50 2016 Page 1

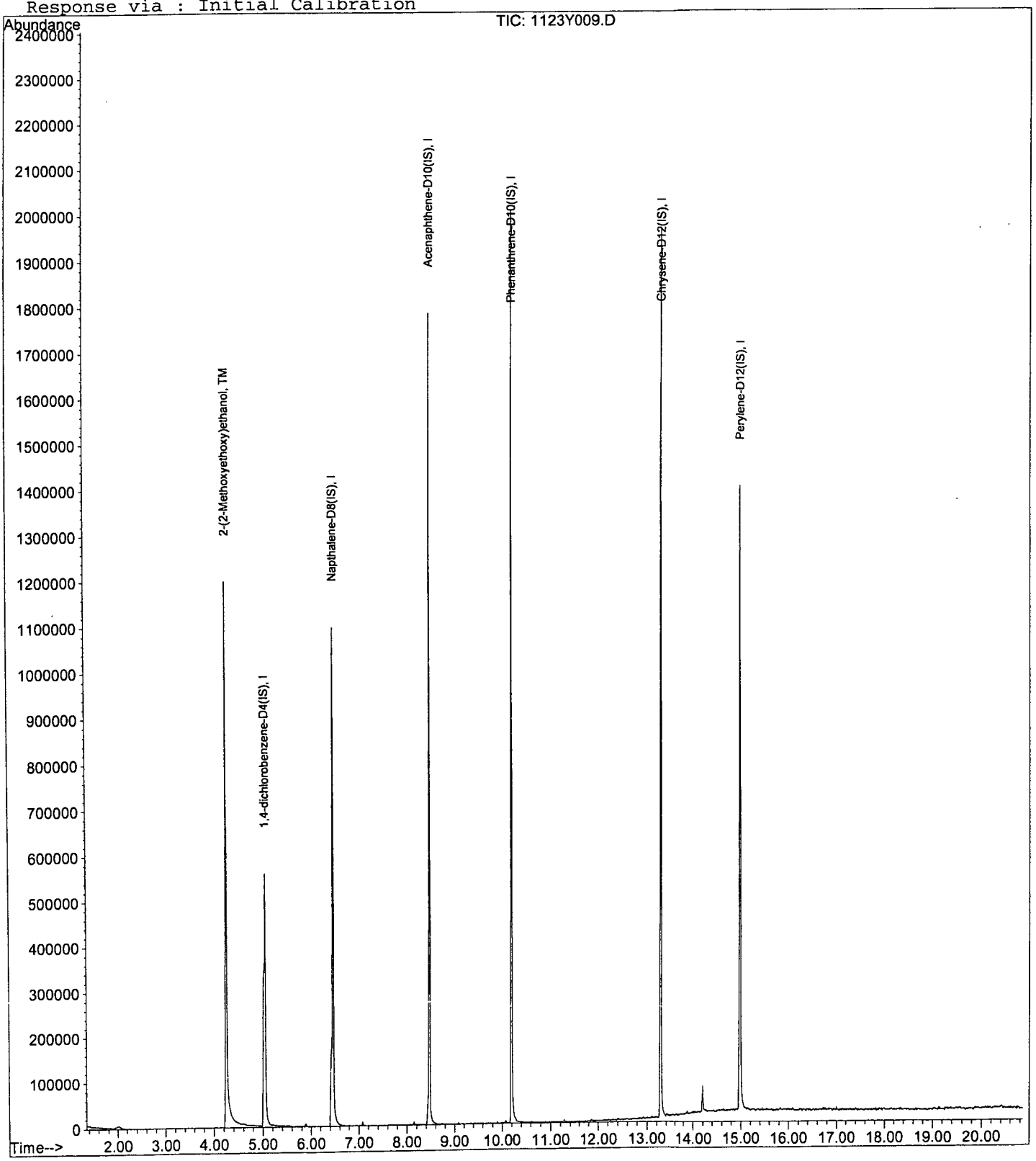
Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y009.D
Acq On : 23 Nov 16 12:28
Sample : 800ug/ml DEG 11/22/16
Misc :

Vial: 9
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Nov 23 13:01 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y010.D
Acq On : 23 Nov 16 13:11
Sample : 1000ug/ml DEG 11/22/16
Misc :

Vial: 10
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Nov 23 13:40 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:12:53 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	183170	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.46	136	813439	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	480140	40.00000	ppb	0.01
5) Phenanthrene-D10(IS)	10.20	188	884921	40.00000	ppb	0.01
6) Chrysene-D12(IS)	13.28	240	830083	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.98	264	571112	40.00000	ppb	-0.19
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.26	45	1011237	971.48281	ppb	99

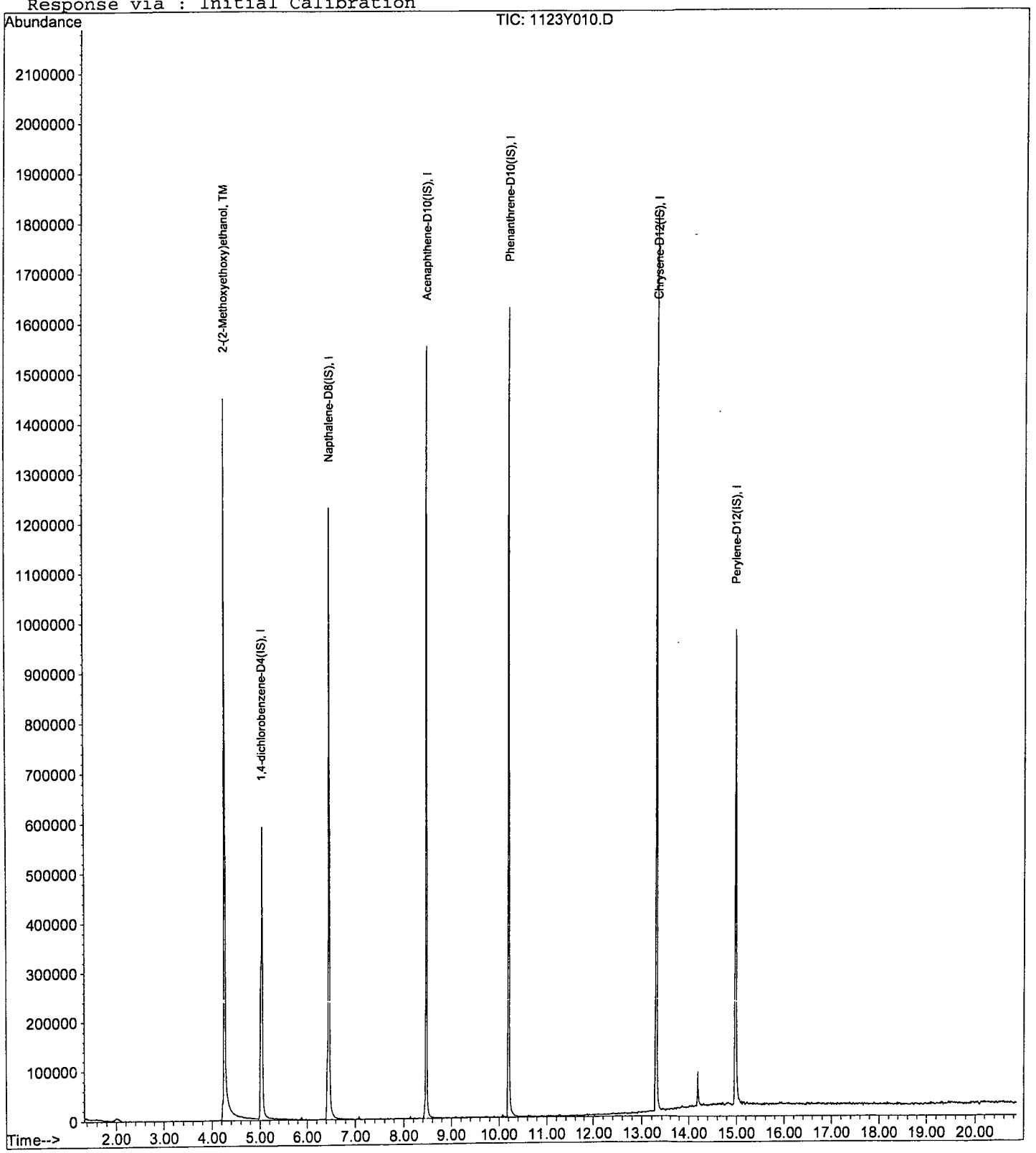
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y010.D Vial: 10
Acq On : 23 Nov 16 13:11 Operator: MA
Sample : 1000ug/ml DEG 11/22/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 13:40 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/23/16
Instrument: Yoda
Initial Cal. Date: 11/23/16
Data File: 1123Y012.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TML	2-(2-Methoxyethoxy)ethanol	0.1760	0.2259	28	TML	9.2
3	I	Napthalene-D8(IS)	ISTD			I	
4	I	Acenaphthene-D10(IS)	ISTD			I	
5	I	Phenanthrene-D10(IS)	ISTD			I	
6	I	Chrysene-D12(IS)	ISTD			I	
7	I	Perylene-D12(IS)	ISTD			I	
8							
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39							
40							
		Average			28.0		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y012.D Vial: 12
Acq On : 23 Nov 16 14:09 Operator: MA
Sample : SS2 DEG 11/22/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 14:27 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	154792	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.46	136	678996	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	410275	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.20	188	752056	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.28	240	748077	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.97	264	520555	40.00000	ppb	-0.20
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.22	45	437112	545.83686	ppb	100

(#) = qualifier out of range (m) = manual integration
1123Y012.D Y0GLYCOL.M Mon Nov 28 09:28:57 2016 Page 1

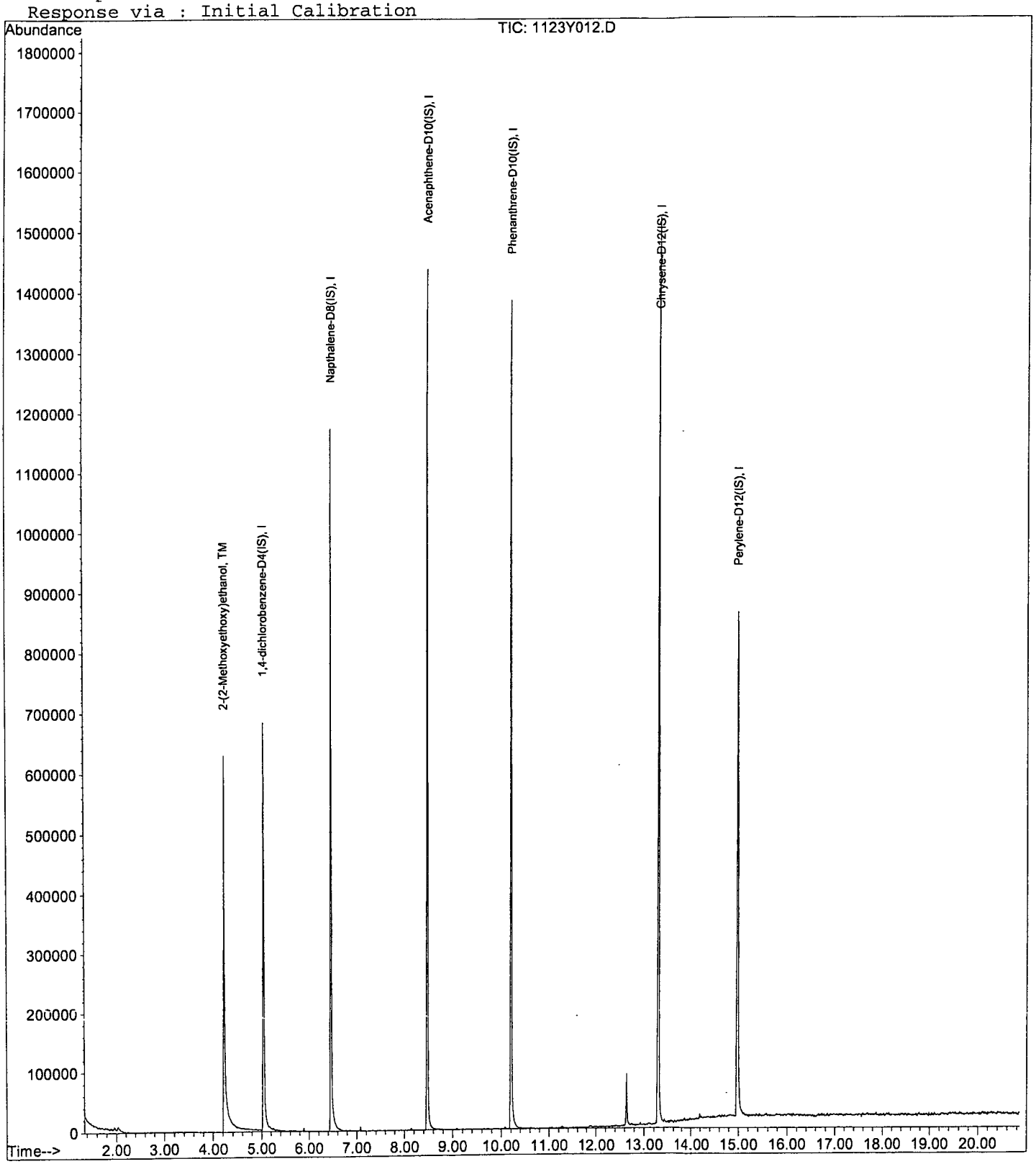
Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y012.D
Acq On : 23 Nov 16 14:09
Sample : SS2 DEG 11/22/16
Misc :

Vial: 12
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Nov 23 14:27 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/24/16
Instrument: Yoda
Initial Cal. Date: 11/23/16
Data File: 1123Y038.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TML	2-(2-Methoxyethoxy)ethanol	0.1760	0.1732	1.6	TML	12
3	I	Napthalene-D8(IS)	ISTD			I	
4	I	Acenaphthene-D10(IS)	ISTD			I	
5	I	Phenanthrene-D10(IS)	ISTD			I	
6	I	Chrysene-D12(IS)	ISTD			I	
7	I	Perylene-D12(IS)	ISTD			I	
8							
9							
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32							
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34							
35							
36							
37							
38							
39							
40							
		Average			1.6		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y038.D Vial: 38
Acq On : 24 Nov 16 2:20 Operator: MA
Sample : 50ug/ml DEG 11/22/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 9:01 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	171742	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.46	136	775247	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.46	164	456087	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.19	188	844398	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.27	240	796087	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.97	264	689360	40.00000	ppb	-0.20
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.25	45	371815	438.22291	ppb	99

(#) = qualifier out of range (m) = manual integration

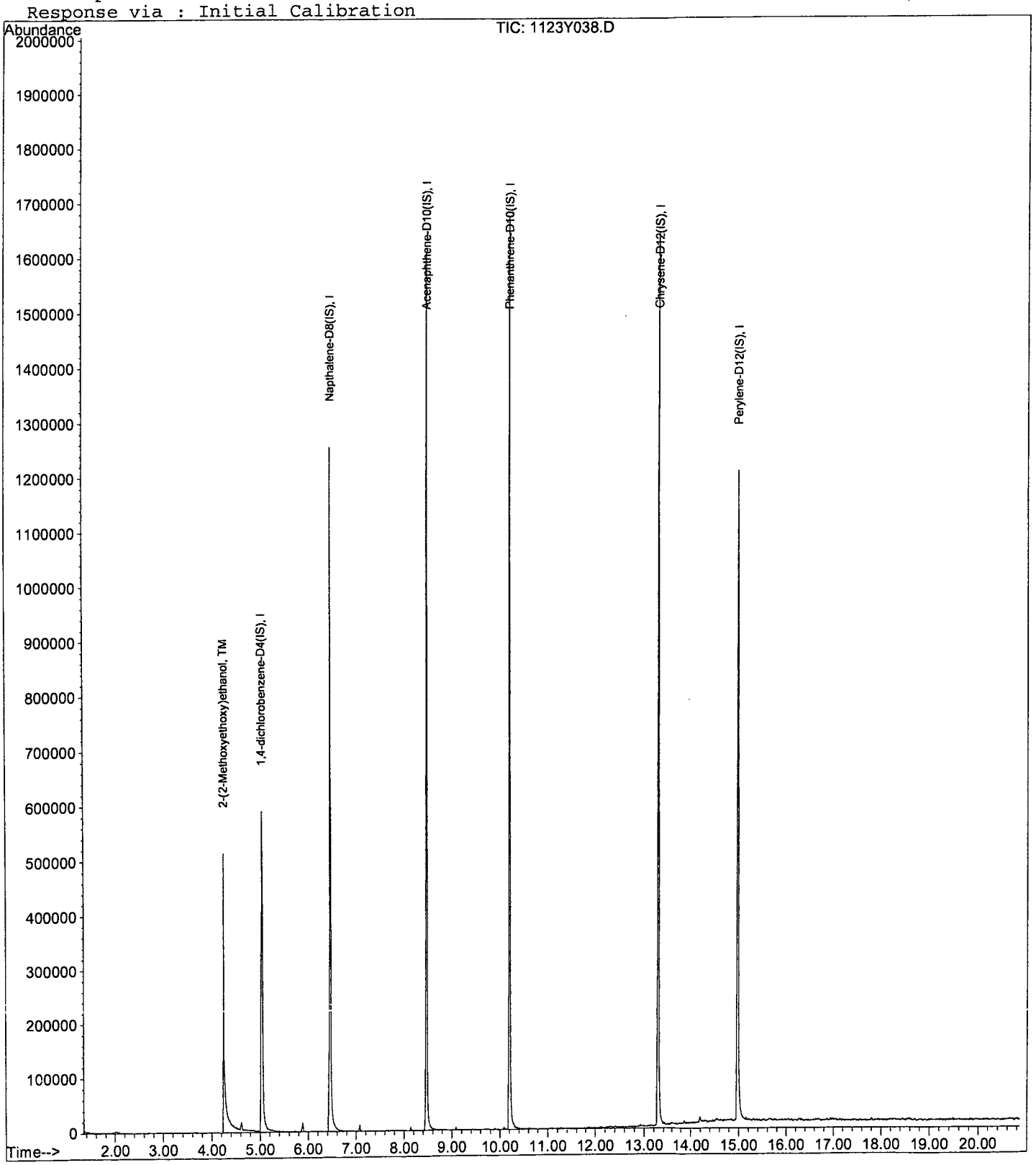
Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y038.D
Acq On : 24 Nov 16 2:20
Sample : 50ug/ml DEG 11/22/16
Misc :

Vial: 38
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Nov 28 9:01 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



ORGANICS

Raw Data

APPL, INC.

Method Blank

EPA 8270D MODIFIED WATER

Blank Name/QCG: **161118W-45866 - 214034**
Batch ID: #87DME-161118A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2-(2-METHOXYETHOXY)-ETHAN	80.0 U	100	80.0	40.0	ug/L	11/18/16	11/23/16

Quant Method: Y0GLYCOL.
Run #: 1123Y014
Instrument: Yoda
Sequence: Y161123
Initials: MA

GC SC-Blank-REG MDLs-DOD
Printed: 11/28/16 10:18:16 AM

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y014.D Vial: 14
Acq On : 23 Nov 16 14:52 Operator: MA
Sample : 161118A BLK 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 15:38 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.06	152	185498	40.00000	ppb	0.02
3) Napthalene-D8(IS)	6.46	136	864983	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	514113	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.20	188	956993	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.28	240	897711	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.97	264	639357	40.00000	ppb	-0.20

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

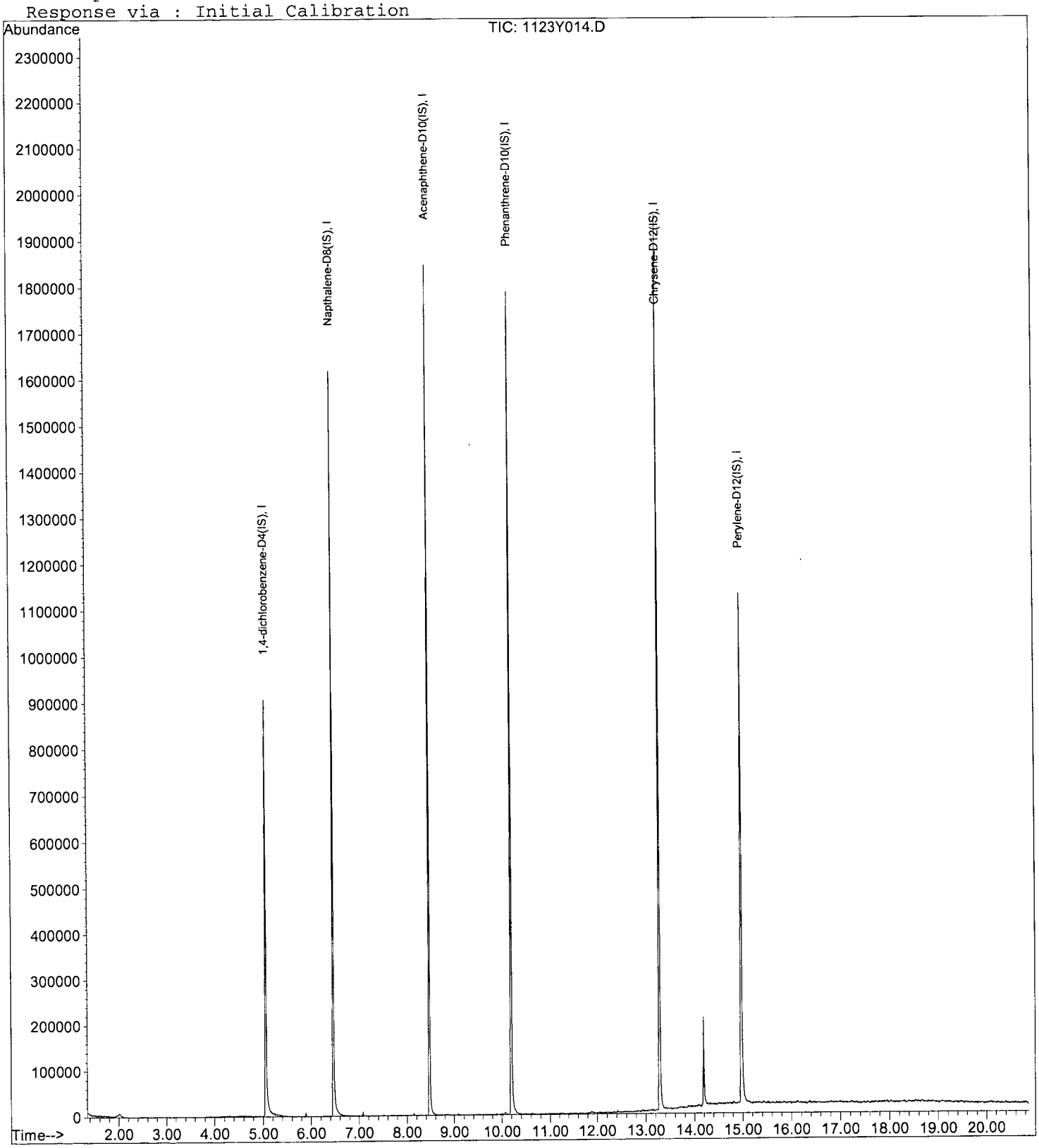
Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y014.D
Acq On : 23 Nov 16 14:52
Sample : 161118A BLK 2/500
Misc :

Vial: 14
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Nov 23 15:38 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



Laboratory Control Spike Recovery
EPA 8270D MODIFIED WATER

APPL ID: **161118W-45866 LCS - 214034**
Batch ID: #87DME-161118A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
2-(2-METHOXYETHOXY)-ETHANOL	500	407	81.4	30-130

Comments: _____

Primary	SPK
Quant Method :	Y0GLYCOL.M
Extraction Date :	11/18/16
Analysis Date :	11/23/16
Instrument :	Yoda
Run :	1123Y015
Initials :	MA

Printed: 11/28/16 10:18:17 AM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y015.D Vial: 15
Acq On : 23 Nov 16 15:21 Operator: MA
Sample : 161118A LCS-1 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 15:38 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	188487	40.00000	ppb	0.01
3) Napthalene-D8(IS)	6.46	136	846292	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	497749	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.19	188	920333	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.27	240	865185	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.97	264	652337	40.00000	ppb	-0.19

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.31	45	372254	407.19096	ppb	97

$$\frac{\left(\frac{372254}{188487} + 0.518\right) * 40 * 1}{0.245} = 407 \quad HA \quad 11/28/16$$

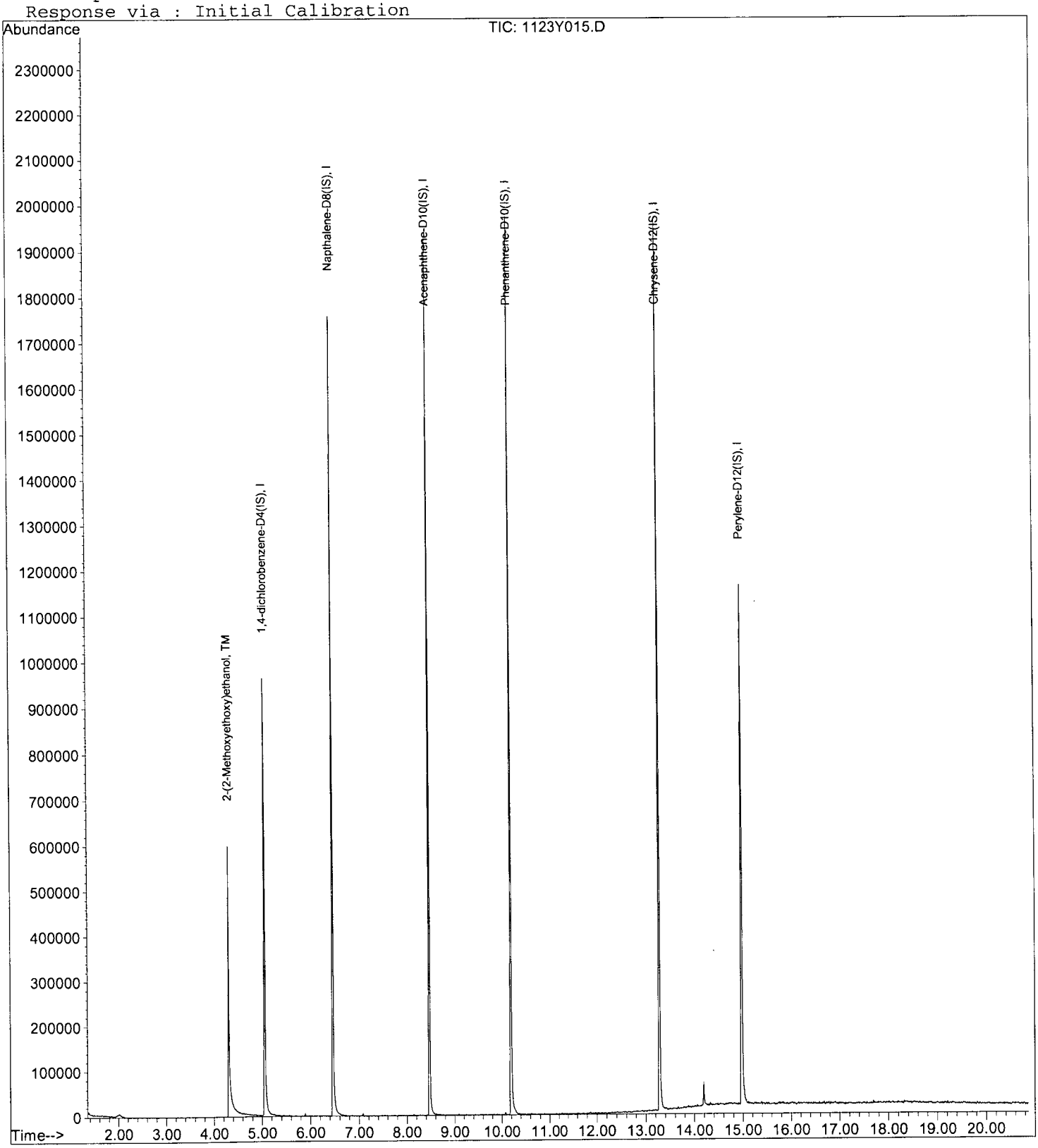
(#) = qualifier out of range (m) = manual integration
1123Y015.D Y0GLYCOL.M Mon Nov 28 09:29:31 2016 Page 1

Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y015.D Vial: 15
Acq On : 23 Nov 16 15:21 Operator: MA
Sample : 161118A LCS-1 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 15:38 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration

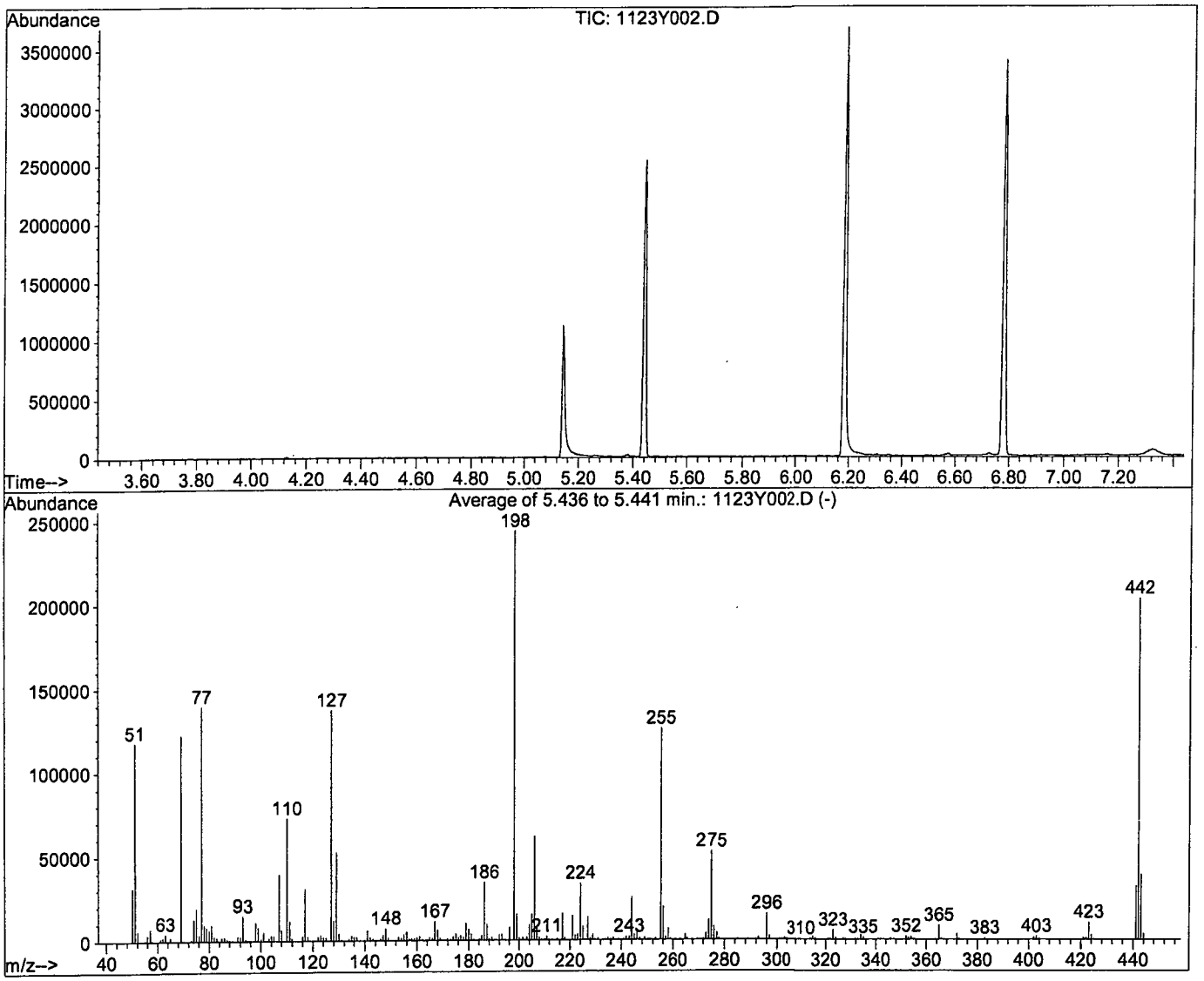


DFTPP

Data File : M:\YODA\DATA\Y161123\1123Y002.D
Acq On : 23 Nov 16 9:15
Sample : SV Tune 11/15/16
Misc :

Vial: 2
Operator: MA
Inst : Yoda
Multiplr: 1.00

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 740, 741, 742; Background Corrected with Scan 733

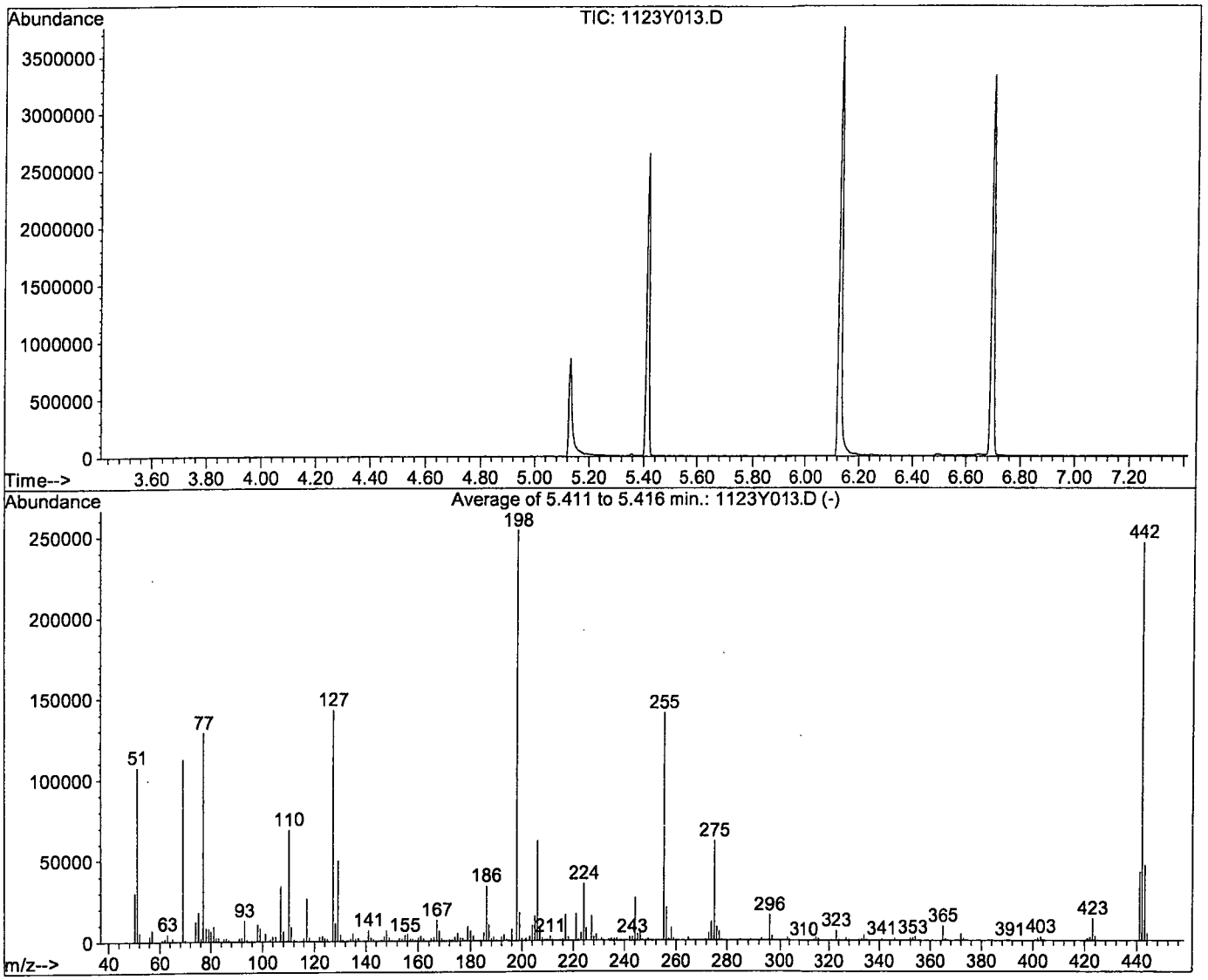
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	48.3	118003	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.3	397	PASS
127	198	40	60	56.2	137144	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	244245	PASS
199	198	5	9	6.3	15388	PASS
275	198	10	30	21.5	52517	PASS
365	198	1	100	3.4	8422	PASS
441	443	0.01	100	82.0	31557	PASS
442	198	50	150	83.2	203229	PASS
443	442	17	23	18.9	38469	PASS

DFTPP

Data File : M:\YODA\DATA\Y161123\1123Y013.D
Acq On : 23 Nov 16 14:35
Sample : SV Tune 11/15/16
Misc :

Vial: 13
Operator: MA
Inst : Yoda
Multiplr: 1.00

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 731, 732, 733; Background Corrected with Scan 723

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	42.3	107464	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.9	976	PASS
127	198	40	60	56.2	142691	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	253973	PASS
199	198	5	9	6.7	17118	PASS
275	198	10	30	24.1	61248	PASS
365	198	1	100	3.5	8864	PASS
441	443	0.01	100	91.3	42037	PASS
442	198	50	150	97.0	246229	PASS
443	442	17	23	18.7	46037	PASS

Semivolatile (SV) Tuning Solution -G.A.						
PREP DATE:	11/15/16	RH				
Semivolatile (SV) Tune Solution 50ug/ml						
Exp:	8/26/17					
		Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
Ultra Scient	Semivolatile GC	1000	N081628-37012	08/23/16	8/23/17	200
EM Science	Methylene Chloride		55098			3800
				Final Vol.		4000

GED Curve

PREP DATE:	11/22/16 RH							
8270 Standard Curve								
Exp:	2/11/17					**50**	**100**	**200**
		Conc.		Date				
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL
	GED MSTD Std	2000	VAR	11/18/16	11/18/17	5	5	10
EM Science	Methylene Chloride		56098			195	95	90
Supelco	SV Internal	2000	A14020V-3660	11/09/16	11/09/17	4	2	2
				Final Vol.		204	102	102

400	**500**	**600**	**800**	**1000**
µL	µL	µL	µL	µL
20	25	30	40	50
80	75	70	60	50
2	2	2	2	2
102	102	102	102	102

Diethylene Glycol						
Prep: 11/18/16 -GA Ex: 11/18/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
Diethylene glycol monomethyl ether	2000 ug/ml	AcuuStandard Cat# S-72273 Lot# 216101007-37091 and 37092 Op: 11/18/16 EX: 11/1817	2.0 mL	4 ml	1000 ug/ml	Methanol Lot# 010616A

GED Second Source (SS2)						
PREP DATE:	11/22/16 RH					500
Exp:	1/18/17	Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
	GED MSS Stoc	2000	VAR	10/27/16	10/27/17	25
EM Science	Methylene Chloride		56098			75
Supelco	SV Internal	2000	A14020V-3660	11/09/16	11/09/17	2
				Final Vol.		102

Methoxyethoxyethanol-Neat (MEE) Stock: 9/27/16-R.H. ex: 09/27/17 Second Source						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
MEE	Neat 99.5%	HEM SERVIC	0.1154g	10 mL	11540 ug/ml	MC
		Cat: N-12404-1G				
		Lot: 5259000-37082				
		OP: 09/27/16				
		EXP: 09/27/17				

0.087ml were spiked in 500ml of water and extracted on 10/27/16. Final concentration is 2000ug/ml

_MWE2MEE

Organic Extraction Worksheet

Method	Solid Phase Extraction of 2MEE in Water	Extraction Set	161118A	Extraction Method	MWE2MEE	Units	mL

Spiked ID 1	Diethylene Glycol 11/18/16 exp 11/18/17		Surrogate ID 1		
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	11/18/16 10:35	
Spiked ID 8			Ext. End Time:	11/18/16 17:00	
			GC Requires Extract By:	11/22/16 0:00	

pH1			Water Bath Temp Criteria	
pH2				
pH3				

Spiked By: KY **Date** 11/18/16 **Witnessed By:** CFM **Date** 11/18/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	161118A Blk				NA	NA equip	500	2	7	11/18/16 10:35	
2	161118A LCS-1		0.250	1	NA	NA equip	500	2	7	11/18/16 10:35	
3	AZ45866 MS-1	AZ45866W18	0.250	1	NA	NA equip	500	2	7	11/18/16 10:35	81492 1 WEEK
4	AZ45866 MSD-1	AZ45866W18	0.250	1	NA	NA equip	500	2	7	11/18/16 10:35	81492 1 WEEK
5	AZ45866	AZ45866W25			NA	NA equip	500	2	7	11/18/16 10:35	81492 1 WEEK
6	AZ45867	AZ45867W08			NA	NA equip	500	2	7	11/18/16 10:35	81492 1 WEEK
7	AZ45868	AZ45868W15			NA	NA equip	500	2	7	11/18/16 10:35	81492 1 WEEK
8	AZ45907	AZ45907W14			NA	NA equip	500	2	7	11/18/16 10:35	81500 1 WEEK
9	AZ45908	AZ45908W13			NA	NA equip	500	2	7	11/18/16 10:35	81500 1 WEEK
10	AZ45909	AZ45909W19			NA	NA equip	500	2	7	11/18/16 10:35	81500 1 WEEK
11	AZ45910	AZ45910W13			NA	NA equip	500	2	7	11/18/16 10:35	81500 1 WEEK
12	AZ45911	AZ45911W12			NA	NA equip	500	2	7	11/18/16 10:35	81500 1 WEEK
13	M STD		1	1	NA	NA equip	500	2	7	11/18/16 10:35	

KY 11/19/16

olvent and Lot#	
NVI-Carb Plus 400MG/1ML	
everible Tube Lot:	8088703
H Strip	HC 574756
i Water	11-18-16
ichloromethane	56153
lethanol	060316C

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	GA
Date	11/21/16
Time	1000
Refrigerator	Robart

	Technician's Initials
Scanned By	KY
Sample Preparation	CFM
Extraction	CFM
Concentration	KY

Modified	11/18/16 9:07:20 AM

Reviewed By: KY 469 **Date** 11/19/16

1/19/16 6:11:38 AM Ext_ID 53342

Injection Log

Directory: M:\YODA\DATA\Y161123\

Vial	FileName	Multiplier	SampleName	Misc Info	Injected
2	1123Y002.D	1	SV Tune 11/15/16		23 Nov 16 9:15
4	1123Y004.D	1	100ug/ml DEG 11/22/16		23 Nov 16 10:00
5	1123Y005.D	1	200ug/ml DEG 11/22/16		23 Nov 16 10:29
6	1123Y006.D	1	400ug/ml DEG 11/22/16		23 Nov 16 10:59
7	1123Y007.D	1	500ug/ml DEG 11/22/16		23 Nov 16 11:28
8	1123Y008.D	1	600ug/ml DEG 11/22/16		23 Nov 16 11:58
9	1123Y009.D	1	800ug/ml DEG 11/22/16		23 Nov 16 12:28
10	1123Y010.D	1	1000ug/ml DEG 11/22/16		23 Nov 16 13:11
12	1123Y012.D	1	SS2 DEG 11/22/16		23 Nov 16 14:09
13	1123Y013.D	1	SV Tune 11/15/16		23 Nov 16 14:35
14	1123Y014.D	1	161118A BLK 2/500		23 Nov 16 14:52
15	1123Y015.D	1	161118A LCS-1 2/500		23 Nov 16 15:21
21	1123Y021.D	1	AZ45907W14 2/500		23 Nov 16 18:18
22	1123Y022.D	1	AZ45908W13 2/500		23 Nov 16 18:47
23	1123Y023.D	1	AZ45909W19 2/500		23 Nov 16 19:17
24	1123Y024.D	1	AZ45910W13 2/500		23 Nov 16 19:46
25	1123Y025.D	1	AZ45911W12 2/500		23 Nov 16 20:15
38	1123Y038.D	1	50ug/ml DEG 11/22/16		24 Nov 16 2:20

EPA METHOD 8260B
Volatile Organic Compounds

APPL, INC.

EPA METHOD 8260B
Volatile Organic Compounds
QC Summary

APPL, INC.

Method Blank
EPA 8260B WATER

Blank Name/QCG: **161116W-45907 - 213749**
Batch ID: #86BXD-161116AL

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	11/16/16	11/16/16
BLANK	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	11/16/16	11/16/16
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	11/16/16	11/16/16
BLANK	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	11/16/16	11/16/16
BLANK	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	11/16/16	11/16/16
BLANK	SURROGATE: 1,2-DICHLOROET	105	81-118			%	11/16/16	11/16/16
BLANK	SURROGATE: 4-BROMOFLUOR	98.4	85-114			%	11/16/16	11/16/16
BLANK	SURROGATE: DIBROMOFLUOR	95.3	80-119			%	11/16/16	11/16/16
BLANK	SURROGATE: TOLUENE-D8 (S)	100.0	89-112			%	11/16/16	11/16/16

Quant Method: LALLW.M
Run #: 1116L20
Instrument: Loki
Sequence: 161113
Initials: SV

GC SC-Blank-REG MDLs-DOD
Printed: 12/06/16 10:43:49 AM

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81500

Case No: 81500 Date Analyzed: 11/16/16

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: 1,2-DICHLOROETHANE-D4 (S)			SURROGATE: 4-BROMOFLUOROBENZENE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161116AL-LCS	Lab Control Spike	81-118	104		85-114	99.2	
161116AL-BLK	Blank	81-118	105		85-114	98.4	
AZ45907	ERH117	81-118	104		85-114	100	
AZ45908	ERH121	81-118	103		85-114	100	
AZ45909	ERH122	81-118	103		85-114	99.6	
AZ45910	ERH126	81-118	103		85-114	97.9	
AZ45911	ERH128	81-118	103		85-114	94.6	

Comments: Batch: #86BXD-161116AL

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81500

Case No: 81500 Date Analyzed: 11/16/16

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: DIBROMOFLUOROMETHANE (S)			SURROGATE: TOLUENE-D8 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161116AL-LCS	Lab Control Spike	80-119	96.0		89-112	99.2	
161116AL-BLK	Blank	80-119	95.3		89-112	100.0	
AZ45907	ERH117	80-119	94.5		89-112	103	
AZ45908	ERH121	80-119	94.8		89-112	103	
AZ45909	ERH122	80-119	94.8		89-112	102	
AZ45910	ERH126	80-119	95.0		89-112	102	
AZ45911	ERH128	80-119	93.2		89-112	99.5	

Comments: Batch: #86BXD-161116AL

Laboratory Control Spike Recovery
EPA 8260B WATER

APPL ID: **161116W-45907 LCS - 213749**
Batch ID: #86BXD-161116AL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1,2-DICHLOROETHANE	10.00	10.3	103	73-128
BENZENE	10.00	10.3	103	79-120
ETHYLBENZENE	10.00	10.0	100	79-121
TOLUENE	10.00	10.0	100	80-121
XYLENES (TOTAL)	30.0	29.5	98.3	79-121
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	26.0	104	81-118
SURROGATE: 4-BROMOFLUOROBENZE	25.0	24.8	99.2	85-114
SURROGATE: DIBROMOFLUOROMETH	25.0	24.0	96.0	80-119
SURROGATE: TOLUENE-D8 (S)	25.0	24.8	99.2	89-112

Comments: _____

Primary	SPK
Quant Method :	LALLW.M
Extraction Date :	11/16/16
Analysis Date :	11/16/16
Instrument :	Loki
Run :	1116L16
Initials :	SV

Printed: 12/06/16 1:20:10 PM
APPL Standard LCS

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81500

Case No: 81500 Date Analyzed: 11/16/16

Matrix: WATER Instrument: Loki

Blank ID: 161116AL-BLK Time Analyzed: 1719

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161116AL-LCS	Lab Control Spike	1116L16	11/16/16 1527
161116AL-BLK	Blank	1116L20	11/16/16 1719
AZ45907	ERH117	1116L29	11/16/16 2132
AZ45908	ERH121	1116L30	11/16/16 2200
AZ45909	ERH122	1116L31	11/16/16 2228
AZ45910	ERH126	1116L32	11/16/16 2256
AZ45911	ERH128	1116L33	11/16/16 2324

Comments: Batch: #86BXD-161116AL

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 1113L00.D 81500
Matrix: Water np12-7-16
ID: 5ng- BFB STD 10-12-16

SDG No: np12-7-16 ~~Loki~~ 81500
Date Analyzed: 11/13/16
Instrument: Loki
Time Analyzed: 11:20

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.3ug/L VOC STD 11/1	1113L05.D	11/13/16 13:35
2		0.5ug/L VOC STD 11/1	1113L06.D	11/13/16 14:04
3		1.0ug/L VOC STD 11/1	1113L07.D	11/13/16 14:32
4		2.0ug/L VOC STD 11/1	1113L08.D	11/13/16 15:00
5		5.0ug/L VOC STD 11/1	1113L09.D	11/13/16 15:28
6		10ug/L VOC STD 11/13	1113L10.D	11/13/16 15:56
7		20ug/L VOC STD 11/13	1113L11.D	11/13/16 16:24
8		40ug/L VOC STD 11/13	1113L12.D	11/13/16 16:53
9		100ug/L VOC STD 11/1	1113L13.D	11/13/16 17:21
10		(SS) 10ug/L VOC STD	1113L17.D	11/13/16 19:14
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	21.1
75	30 - 60% of mass 95	50.9
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	6.7
173	0 - 2% of mass 174	0.0
174	50 - 100% of mass 95	77.2
175	5 - 9% of mass 174	7.8
176	95 - 100% of mass 174	97.4
177	5 - 9% of mass 176	6.8

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81500
Matrix: Water
ID: 5ng- BFB STD 10-12-16

SDG No: 81500
Date Analyzed: 11/16/16
Instrument: Loki
Time Analyzed: 12:44

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1	Lab Control Spike	161116A CCV/LCS 10ug	1116L16.D	11/16/16 15:27
2	Blank	161116A BLK-1WL	1116L20.D	11/16/16 17:19
3	ERH117	AZ45907W01	1116L29.D	11/16/16 21:32
4	ERH121	AZ45908W01	1116L30.D	11/16/16 22:00
5	ERH122	AZ45909W01	1116L31.D	11/16/16 22:28
6	ERH126	AZ45910W01	1116L32.D	11/16/16 22:56
7	ERH128	AZ45911W01	1116L33.D	11/16/16 23:24
8		Ending CCV 8260 10ug	1116L36.D	11/17/16 0:48 *
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	23.3
75	30 - 60% of mass 95	53.9
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	6.4
173	0 - 2% of mass 174	0.0
174	50 - 100% of mass 95	78.1
175	5 - 9% of mass 174	7.7
176	95 - 100% of mass 174	99.2
177	5 - 9% of mass 176	6.7

8A

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 81500

Lab File ID (Standard): 1113L10.D Date Analyzed: 11/13/16

Instrument ID: Loki Time Analyzed: 15:56

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	817344	5.38	790336	8.70	444864	11.03
	UPPER LIMIT	1634688	5.88	1580672	9.20	889728	11.53
	LOWER LIMIT	408672	4.88	395168	8.20	222432	10.53
	SAMPLE NO.						
01	0.3ug/L VOC STD 11/13/16J	821614	5.38	780352	8.70	427200	11.03
02	0.5ug/L VOC STD 11/13/16K	848000	5.38	782336	8.70	423936	11.03
03	1.0ug/L VOC STD 11/13/16L	819008	5.39	820800	8.70	438720	11.03
04	2.0ug/L VOC STD 11/13/16M	848479	5.38	802368	8.70	417920	11.03
05	5.0ug/L VOC STD 11/13/16AN	816896	5.38	796416	8.70	431296	11.03
06	10ug/L VOC STD 11/13/16O	817344	5.38	790336	8.70	444864	11.03
07	20ug/L VOC STD 11/13/16P	822357	5.38	788800	8.70	427392	11.03
08	40ug/L VOC STD 11/13/16Q	833460	5.38	819328	8.70	420224	11.03
09	100ug/L VOC STD 11/13/16R	813101	5.38	804096	8.70	453440	11.03
10	(SS) 10ug/L VOC STD 11/13/16	818661	5.38	787584	8.70	425024	11.03
11	161116A CCV/LCS 10ug/L	731776	5.38	695040	8.70	359936	11.03
12	161116A BLK-1WL	701915	5.39	658240	8.70	343296	11.03
13	AZ45907W01	717824	5.38	658048	8.70	331712	11.03
14	AZ45908W01	711488	5.38	651456	8.70	332480	11.03
15	AZ45909W01	696960	5.38	639744	8.70	326528	11.03
16	AZ45910W01	700288	5.38	649664	8.70	326656	11.03
17	AZ45911W01	723264	5.38	679488	8.70	339456	11.03
18	Ending CCV 8260 10ug/L 11/16/16	711931	5.38	656128	8.70	325120	11.03
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

EPA METHOD 8260B
Volatile Organic Compounds
Sample Data

APPL, INC.

EPA 8260B WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH117
Sample Collection Date: 11/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81500
APPL ID AZ45907
QCG: #86BXD-161116AL-213749

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	11/16/16	11/16/16
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	11/16/16	11/16/16
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	11/16/16	11/16/16
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	11/16/16	11/16/16
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	104	81-118			%	11/16/16	11/16/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	100	85-114			%	11/16/16	11/16/16
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	94.5	80-119			%	11/16/16	11/16/16
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	103	89-112			%	11/16/16	11/16/16

Quant Method: LALLW.M
Run #: 1116L29
Instrument: Loki
Sequence: 161113
Dilution Factor: 1
Initials: SV

Printed: 12/06/16 10:43:45 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1116L29.D Vial: 19
Acq On : 16 Nov 16 21:32 Operator: PM,DG,SV,CMM
Sample : AZ45907W01 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 8:40 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	717824	25.00000 ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	658048	25.00000 ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	331712	25.00000 ppb	0.00
System Monitoring Compounds					
32) Dibromofluoromethane(S)	4.49	111	357881	23.62606 ppb	0.00
Spiked Amount 25.000			Recovery = 94.504%		
37) 1,2-DCA-D4(S)	4.93	65	431313	26.11818 ppb	0.00
Spiked Amount 25.000			Recovery = 104.472%		
57) Toluene-D8(S)	7.22	98	1295263	25.77676 ppb	0.00
Spiked Amount 25.000			Recovery = 103.108%		
65) 4-Bromofluorobenzene(S)	9.89	95	453733	25.01778 ppb	0.00
Spiked Amount 25.000			Recovery = 100.072%		

Target Compounds Qvalue

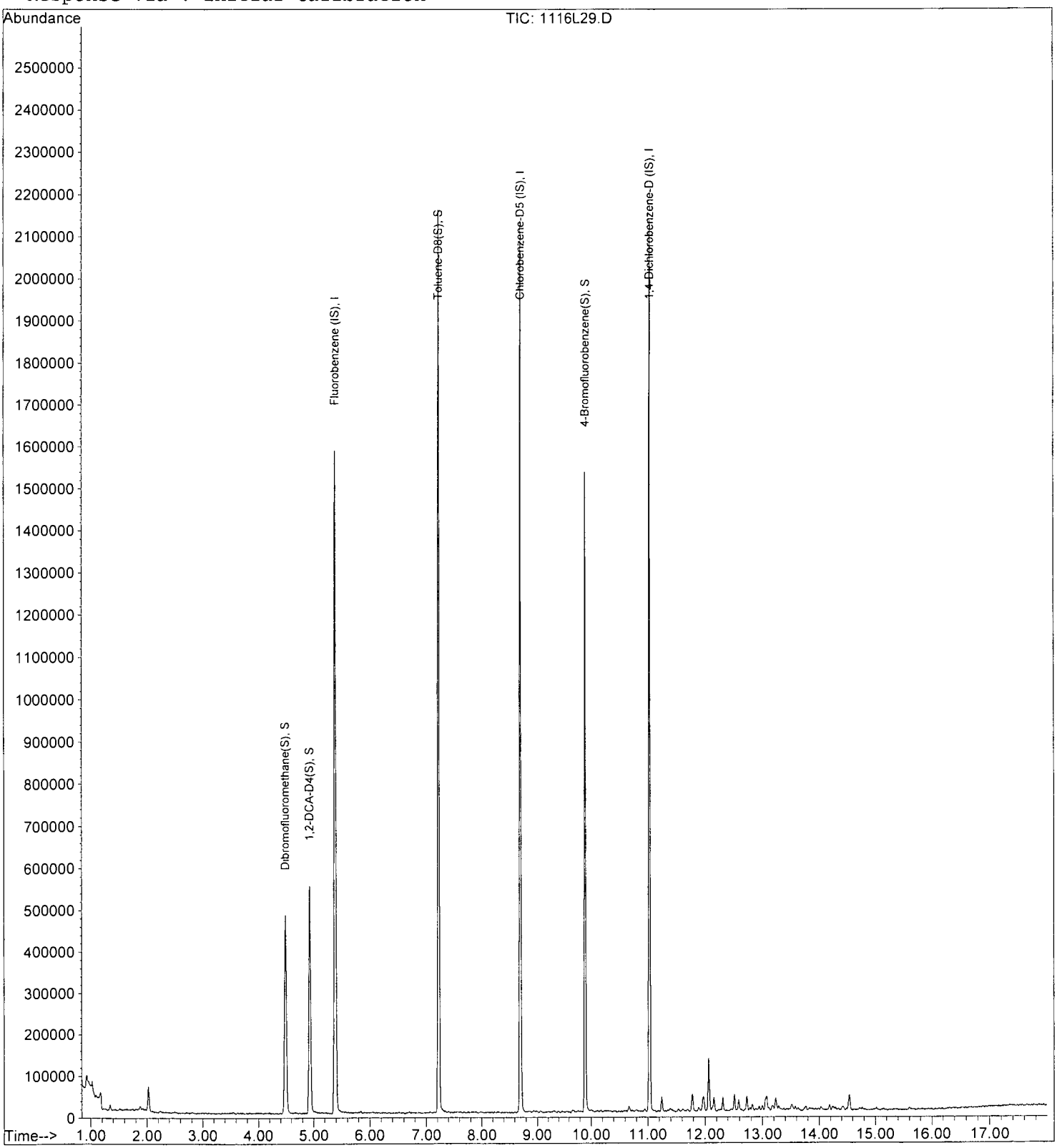
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1116L29.D Vial: 19
Acq On : 16 Nov 16 21:32 Operator: PM,DG,SV,CMM
Sample : AZ45907W01 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 8:40 2016 Quant Results File: LALLW.RES

Method : M:\THOR\DATA\T161110\TALLS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Nov 11 08:21:01 2016
Response via : Initial Calibration



EPA 8260B WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81500

Sample ID: ERH121

APPL ID AZ45908

Sample Collection Date: 11/14/16

QCG: #86BXD-161116AL-213749

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	11/16/16	11/16/16
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	11/16/16	11/16/16
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	11/16/16	11/16/16
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	11/16/16	11/16/16
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	103	81-118			%	11/16/16	11/16/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	100	85-114			%	11/16/16	11/16/16
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	94.8	80-119			%	11/16/16	11/16/16
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	103	89-112			%	11/16/16	11/16/16

Quant Method: LALLW.M
Run #: 1116L30
Instrument: Loki
Sequence: 161113
Dilution Factor: 1
Initials: SV

Printed: 12/06/16 10:43:45 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1116L30.D
Acq On : 16 Nov 16 22:00
Sample : AZ45908W01
Misc : W IS&S 10/20/16, 11/04/16

Vial: 20
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 17 8:40 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	711488	25.00000 ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	651456	25.00000 ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	332480	25.00000 ppb	0.00
System Monitoring Compounds					
32) Dibromofluoromethane(S)	4.49	111	355674	23.68946 ppb	0.00
Spiked Amount 25.000			Recovery = 94.756%		
37) 1,2-DCA-D4(S)	4.93	65	421804	25.76982 ppb	0.00
Spiked Amount 25.000			Recovery = 103.080%		
57) Toluene-D8(S)	7.22	98	1276631	25.66305 ppb	0.00
Spiked Amount 25.000			Recovery = 102.652%		
65) 4-Bromofluorobenzene(S)	9.89	95	450523	25.09215 ppb	0.00
Spiked Amount 25.000			Recovery = 100.368%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

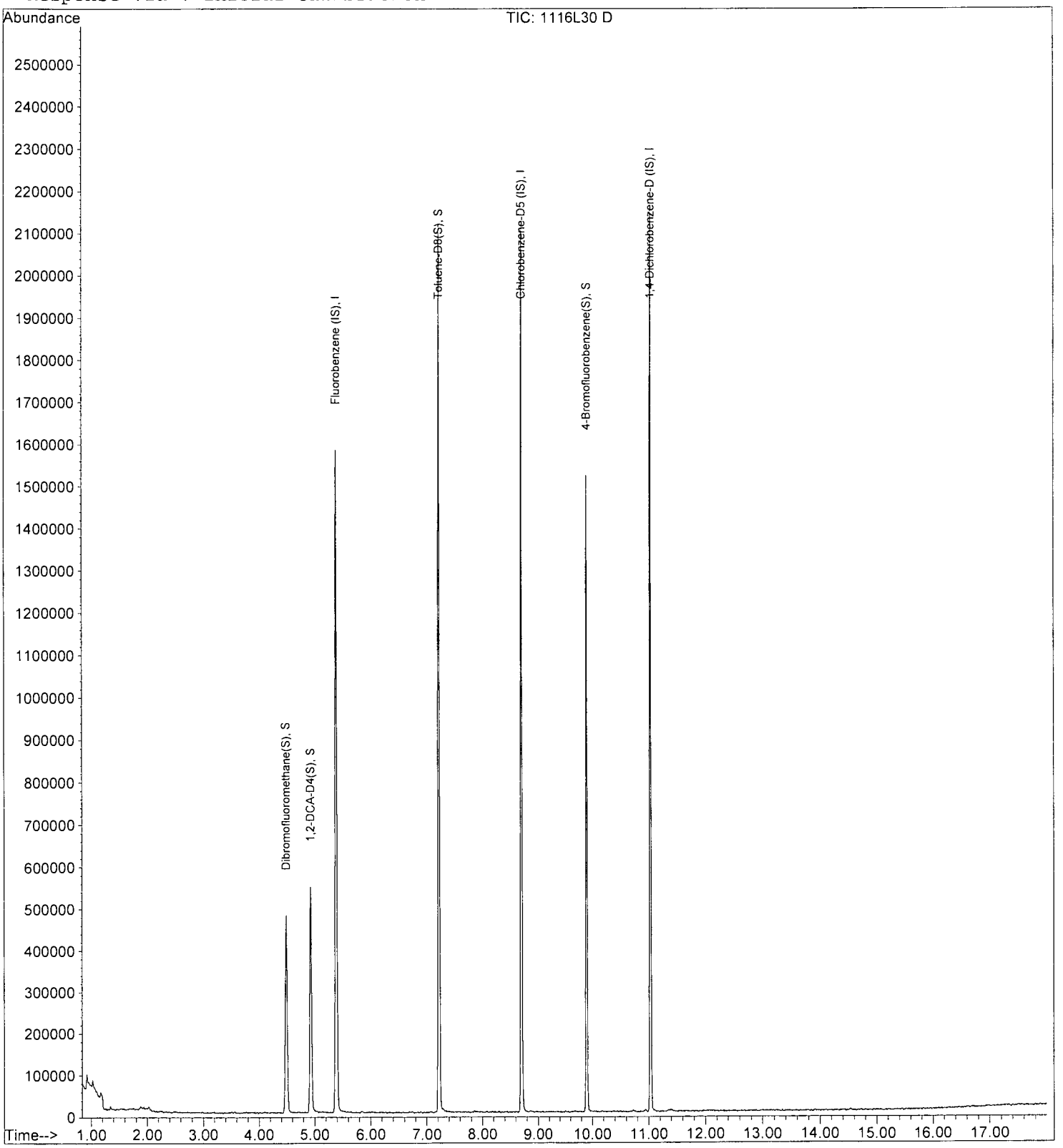
Quantitation Report

Data File : M:\LOKI\DATA\161113\1116L30.D
Acq On : 16 Nov 16 22:00
Sample : AZ45908W01
Misc : W IS&S 10/20/16, 11/04/16

Vial: 20
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 17 8:40 2016 Quant Results File: LALLW.RES

Method : M:\THOR\DATA\T161110\TALLS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Nov 11 08:21:01 2016
Response via : Initial Calibration



EPA 8260B WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH122

Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81500

APPL ID AZ45909

QCG: #86BXD-161116AL-213749

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	11/16/16	11/16/16
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	11/16/16	11/16/16
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	11/16/16	11/16/16
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	11/16/16	11/16/16
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	11/16/16	11/16/16
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	103	81-118			%	11/16/16	11/16/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	99.6	85-114			%	11/16/16	11/16/16
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	94.8	80-119			%	11/16/16	11/16/16
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	102	89-112			%	11/16/16	11/16/16

Quant Method: LALLW.M
Run #: 1116L31
Instrument: Loki
Sequence: 161113
Dilution Factor: 1
Initials: SV

Printed: 12/06/16 10:43:45 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1116L31.D Vial: 21
Acq On : 16 Nov 16 22:28 Operator: PM,DG,SV,CMM
Sample : AZ45909W01 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 8:41 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	696960	25.00000 ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	639744	25.00000 ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	326528	25.00000 ppb	0.00
System Monitoring Compounds					
32) Dibromofluoromethane(S)	4.49	111	348557	23.69936 ppb	0.00
Spiked Amount 25.000			Recovery =	94.796%	
37) 1,2-DCA-D4(S)	4.93	65	414602	25.85782 ppb	0.00
Spiked Amount 25.000			Recovery =	103.432%	
57) Toluene-D8(S)	7.22	98	1249195	25.57125 ppb	0.00
Spiked Amount 25.000			Recovery =	102.284%	
65) 4-Bromofluorobenzene(S)	9.89	95	439088	24.90298 ppb	0.00
Spiked Amount 25.000			Recovery =	99.612%	

Target Compounds Qvalue

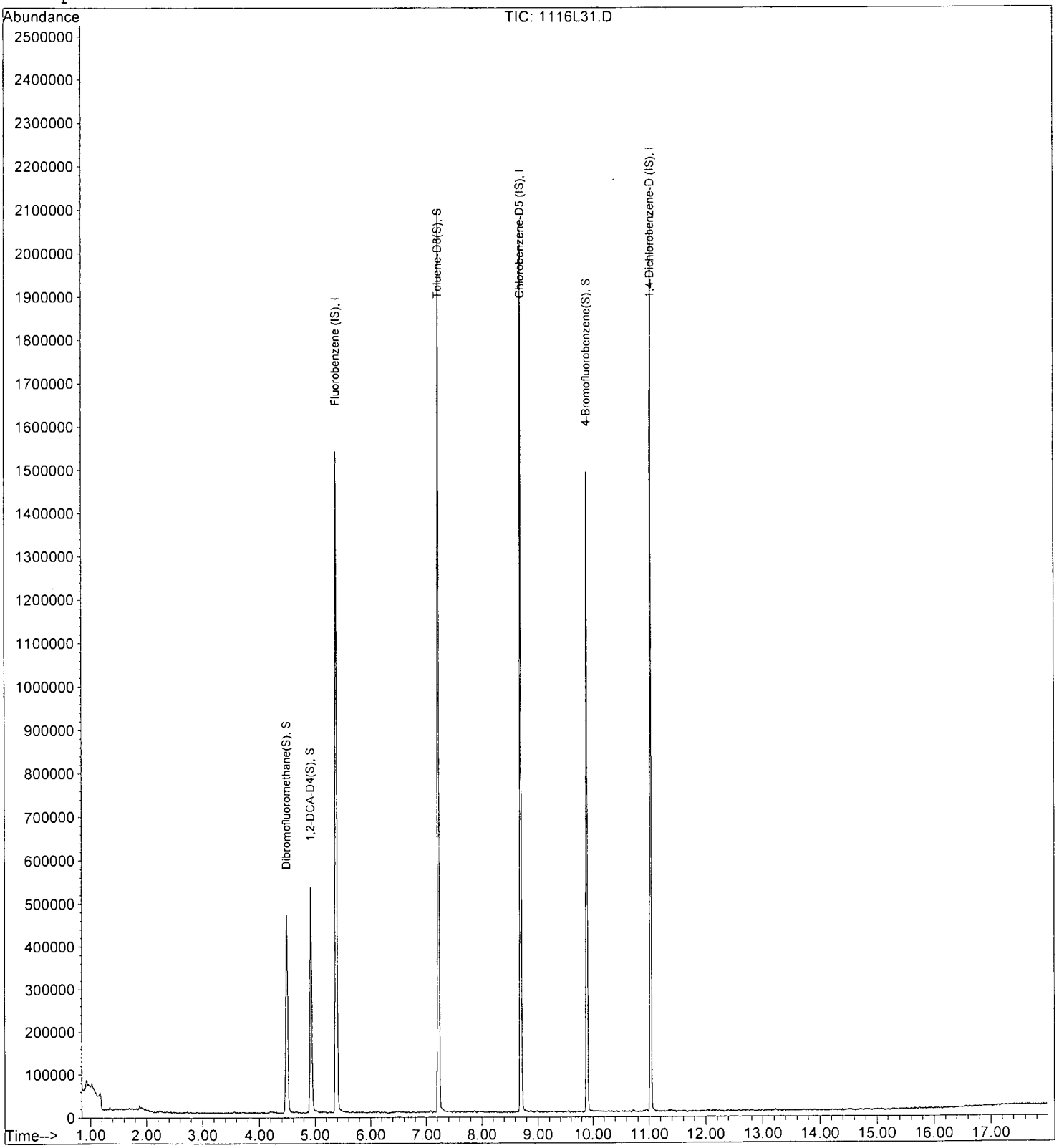
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1116L31.D Vial: 21
Acq On : 16 Nov 16 22:28 Operator: PM,DG,SV,CMM
Sample : AZ45909W01 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 8:41 2016 Quant Results File: LALLW.RES

Method : M:\THOR\DATA\T161110\TALLS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Nov 11 08:21:01 2016
Response via : Initial Calibration



EPA 8260B WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH126

Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81500

APPL ID AZ45910

QCG: #86BXD-161116AL-213749

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	11/16/16	11/16/16
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	11/16/16	11/16/16
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	11/16/16	11/16/16
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	11/16/16	11/16/16
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	103	81-118			%	11/16/16	11/16/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	97.9	85-114			%	11/16/16	11/16/16
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	95.0	80-119			%	11/16/16	11/16/16
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	102	89-112			%	11/16/16	11/16/16

Quant Method: LALLW.M
Run #: 1116L32
Instrument: Loki
Sequence: 161113
Dilution Factor: 1
Initials: SV

Printed: 12/06/16 10:43:45 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1116L32.D Vial: 22
Acq On : 16 Nov 16 22:56 Operator: PM,DG,SV,CMM
Sample : AZ45910W01 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 8:41 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	700288	25.00000 ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	649664	25.00000 ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	326656	25.00000 ppb	0.00
System Monitoring Compounds					
32) Dibromofluoromethane(S)	4.49	111	350814	23.73946 ppb	0.00
Spiked Amount 25.000			Recovery =	94.956%	
37) 1,2-DCA-D4(S)	4.93	65	415859	25.81295 ppb	0.00
Spiked Amount 25.000			Recovery =	103.252%	
57) Toluene-D8(S)	7.22	98	1262587	25.45075 ppb	0.00
Spiked Amount 25.000			Recovery =	101.804%	
65) 4-Bromofluorobenzene(S)	9.89	95	438083	24.46660 ppb	0.00
Spiked Amount 25.000			Recovery =	97.868%	

Target Compounds Qvalue

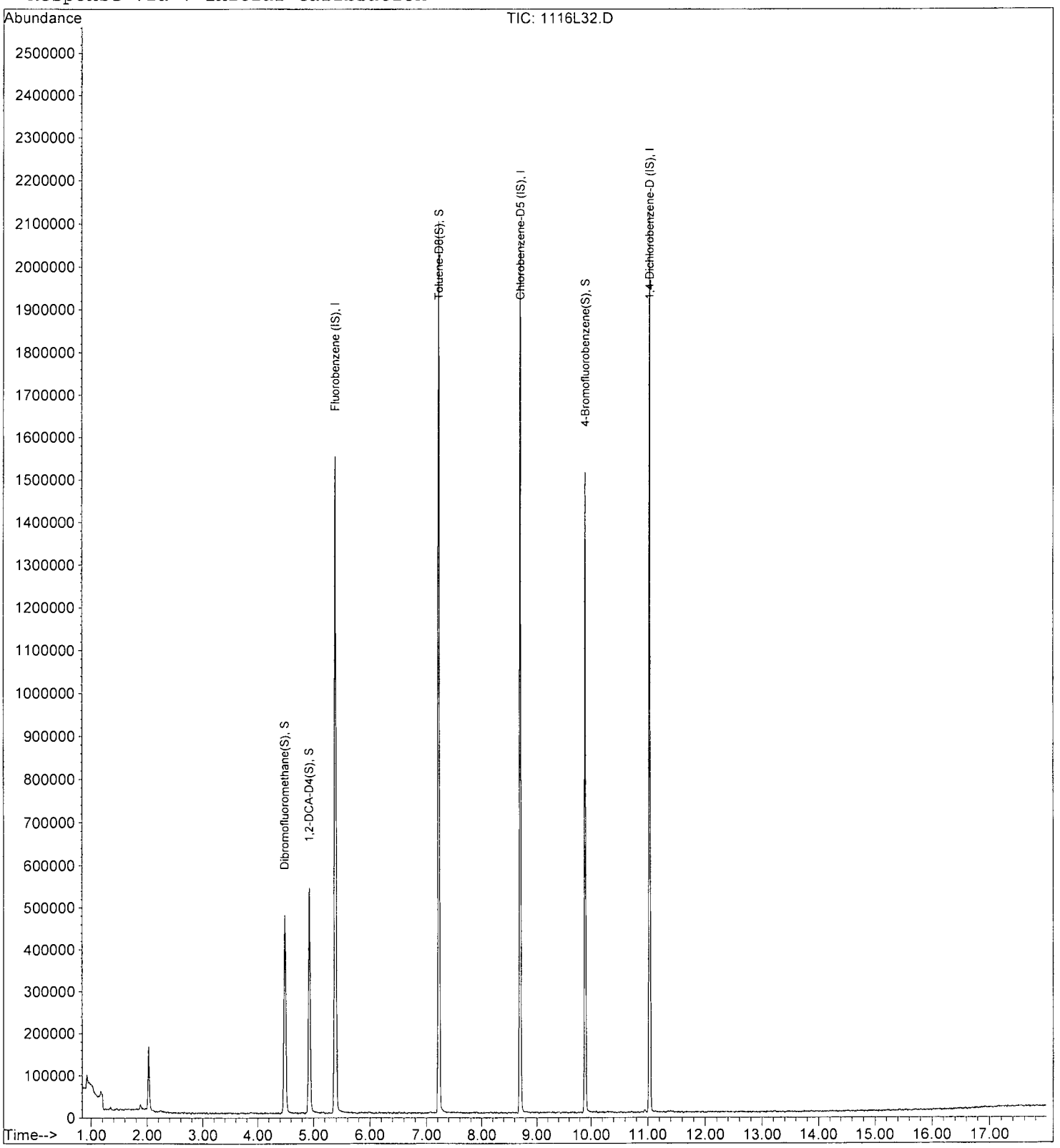
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1116L32.D Vial: 22
Acq On : 16 Nov 16 22:56 Operator: PM,DG,SV,CMM
Sample : AZ45910W01 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 8:41 2016 Quant Results File: LALLW.RES

Method : M:\THOR\DATA\T161110\TALLS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Nov 11 08:21:01 2016
Response via : Initial Calibration



EPA 8260B WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH128
Sample Collection Date: 11/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81500
APPL ID AZ45911
QCG: #86BXD-161116AL-213749

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	11/16/16	11/16/16
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	11/16/16	11/16/16
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	11/16/16	11/16/16
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	11/16/16	11/16/16
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	103	81-118			%	11/16/16	11/16/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	94.6	85-114			%	11/16/16	11/16/16
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	93.2	80-119			%	11/16/16	11/16/16
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	99.5	89-112			%	11/16/16	11/16/16

Quant Method: LALLW.M
Run #: 1116L33
Instrument: Loki
Sequence: 161113
Dilution Factor: 1
Initials: SV

Printed: 12/06/16 10:43:45 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1116L33.D Vial: 23
Acq On : 16 Nov 16 23:24 Operator: PM,DG,SV,CMM
Sample : AZ45911W01 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 8:42 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	723264	25.00000	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	679488	25.00000	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	339456	25.00000	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	355585	23.29793	ppb	0.00
Spiked Amount 25.000			Recovery = 93.192%			
37) 1,2-DCA-D4(S)	4.93	65	429713	25.82557	ppb	0.00
Spiked Amount 25.000			Recovery = 103.304%			
57) Toluene-D8(S)	7.22	98	1290036	24.86269	ppb	0.00
Spiked Amount 25.000			Recovery = 99.452%			
65) 4-Bromofluorobenzene(S)	9.89	95	443106	23.66093	ppb	0.00
Spiked Amount 25.000			Recovery = 94.644%			

Target Compounds Qvalue

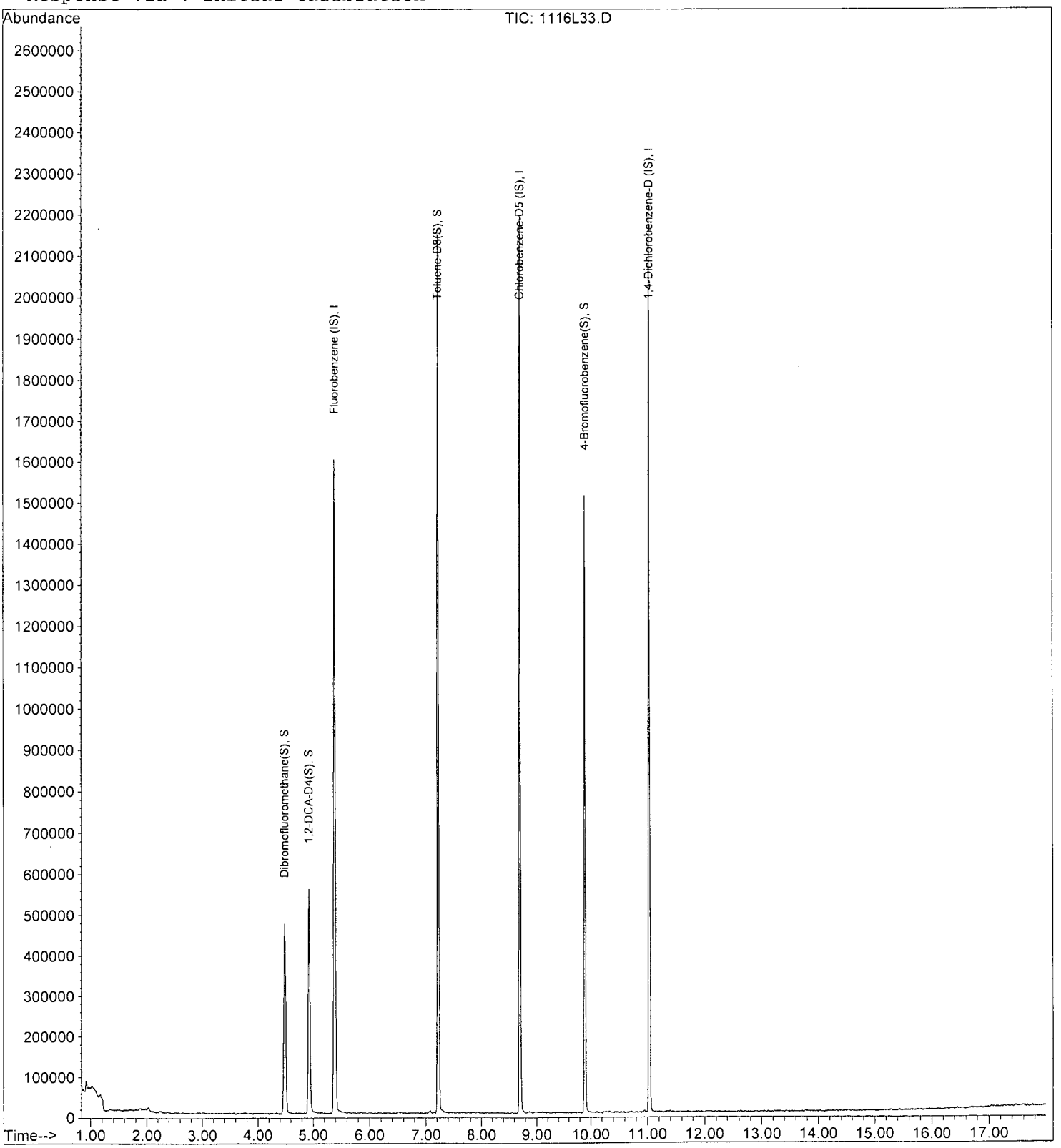
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1116L33.D Vial: 23
Acq On : 16 Nov 16 23:24 Operator: PM,DG,SV,CMM
Sample : AZ45911W01 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 8:42 2016 Quant Results File: LALLW.RES

Method : M:\THOR\DATA\T161110\TALLS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Nov 11 08:21:01 2016
Response via : Initial Calibration



EPA METHOD 8260B
Volatile Organic Compounds
Calibration Data

APPL, INC.

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Initial Cal. Date: 11/13/16
Instrument: Loki

Initials:

		Compound	1113L05.D 1	1113L06.D 2	1113L07.D 3	1113L08.D 4	1113L09.D 5	1113L10.D 6	1113L11.D 7	1113L12.D 8	1113L13.D 9		Avg	%RSD		
1	I	Fluorobenzene (IS)														
2	TM	Dichlorodifluoromethane		0.4807	0.5509	0.5378	0.5579	0.5256	0.5391	0.5150			0.53	4.9	TM	
3	TM	Freon 114		0.3958	0.4108	0.3934	0.3865	0.3873	0.3829	0.3879	0.3861		0.39	2.3	TM	
4	TM**	Chloromethane		0.7378	0.8117	0.6628	0.7834	0.7109	0.7197	0.7025	0.7485		0.73	6.4	TM**	
5	TM*	Vinyl chloride		0.6818	0.6768	0.6393	0.6941	0.6644	0.6612	0.6397	0.6388		0.66	3.2	TM*	
6	TM	Bromomethane		0.2946	0.2806	0.3174	0.3280	0.3373	0.3035	0.2863	0.2794		0.30	7.3	TM	
7	TM	Chloroethane		0.3901	0.3344	0.3412	0.4012	0.3623	0.3619	0.3569			0.36	6.7	TM	
8	TM	Dichlorofluoromethane		1.175	1.209	1.085	1.184	1.123	1.110	1.102	1.156		1.1	3.9	TM	
9	TM	Trichlorofluoromethane		0.6881	0.6679	0.6624	0.7070	0.6960	0.6853	0.6746	0.6949		0.68	2.2	TM	
10	TM	Acrolein		0.0393	0.0429	0.0409	0.0417	0.0431	0.0437	0.0431	0.0424		0.04	3.5	TM	
11	TML	Acetone		0.5116	0.4082	0.1838	0.1884	0.1740	0.1641	0.1623			0.26	56	TML	0.999
12	TM	Freon-113		0.4379	0.3965	0.3800	0.4051	0.3760	0.3823	0.3851	0.3805		0.39	5.2	TM	
13	TM*	1,1-DCE		0.3295	0.3072	0.3080	0.3314	0.3009	0.2961	0.2963	0.2836		0.31	5.4	TM*	
14	TM	t-Butanol	0.0212	0.0202	0.0189	0.0178	0.0187	0.0182	0.0191	0.0175	0.0173		0.02	6.7	TM	
15	TM	Acetonitrile		0.0501	0.0495	0.0454	0.0490	0.0493	0.0504	0.0623			0.05	10	TM	
16	TM	Methyl Acetate		0.3285	0.3952	0.3461	0.3698	0.3436	0.3409	0.3446	0.3525		0.35	5.9	TM	
17	TML	Iodomethane		0.1267	0.1361	0.1303	0.1680	0.1820	0.1893	0.2043			0.16	19	TML	0.999
18	TM	Acrylonitrile		0.1717	0.1343	0.1372	0.1262	0.1179	0.1212	0.1177	0.1211		0.13	14	TM	
19	TM	Methylene chloride		0.6584	0.6303	0.5286	0.5699	0.5297	0.5186	0.5082	0.5275		0.56	10	TM	
20	TM	Carbon disulfide		1.522	1.430	1.244	1.367	1.347	1.311	1.330	1.378		1.4	6.1	TM	
21	TM	Methyl t-butyl ether (MtBE)		1.331	1.407	1.310	1.396	1.334	1.330	1.302	1.332		1.3	2.8	TM	
22	TM	Trans-1,2-DCE		0.5340	0.5072	0.4801	0.5213	0.4783	0.4649	0.4610	0.4733		0.49	5.6	TM	
23	TM	Diisopropyl Ether		1.717	1.636	1.562	1.717	1.650	1.632	1.639	1.728		1.7	3.4	TM	
24	TM**	1,1-DCA		0.9983	0.9643	0.9241	0.9785	0.9234	0.9116	0.9015	0.9202		0.94	3.7	TM**	
25	TM	Vinyl Acetate		0.4425	0.4417	0.4162	0.4271	0.4139	0.4054	0.3516	0.3635		0.41	8.3	TM	
26	TM	Ethyl tert Butyl Ether		1.527	1.542	1.435	1.518	1.492	1.439	1.453	1.519		1.5	2.9	TM	
27	TM	MEK (2-Butanone)			0.2138	0.1735	0.1939	0.1891	0.1912	0.1850	0.1929		0.19	6.3	TM	
28	TM	Cis-1,2-DCE		0.6609	0.6316	0.5585	0.5963	0.5744	0.5420	0.5386	0.5474		0.58	7.7	TM	
29	TM	2,2-Dichloropropane		0.2352	0.2621	0.2436	0.2508	0.2303	0.2282	0.2281	0.2315		0.24	5.2	TM	
30	TM*	Chloroform		0.9548	0.9480	0.9049	0.9684	0.9338	0.9105	0.8890	0.9109		0.93	3.0	TM*	
31	TM	Bromochloromethane		0.3234	0.2864	0.2627	0.2784	0.2631	0.2578	0.2503	0.2513		0.27	9.0	TM	
32	S	Dibromofluoromethane(S)	0.6027	0.5768	0.4948	0.4832	0.5315	0.5349	0.5206	0.5097	0.4938		0.53	7.5	S	
33	TM	1,1,1-TCA		0.7596	0.7494	0.7369	0.7771	0.7457	0.7124	0.7123	0.7223		0.74	3.1	TM	
34	TM	Cyclohexane		0.4079	0.4070	0.3726	0.4122	0.3735	0.3733	0.3815	0.3857		0.39	4.4	TM	
35	TM	1,1-Dichloropropene		0.6681	0.6461	0.6166	0.6699	0.6449	0.6298	0.6216	0.6322		0.64	3.1	TM	

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Initial Cal. Date: 11/13/16
Instrument: Loki

Initials:

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD		
36	TM	2,2,4-Trimethylpentane		1.219	1.160	1.167	1.224	1.149	1.125	1.144	1.152		1.2	3.0	TM	
37	S	1,2-DCA-D4(S)	0.6553	0.6546	0.5528	0.5203	0.5804	0.5661	0.5641	0.5489	0.5338		0.58	8.4	S	
38	TM	Carbon Tetrachloride		0.6047	0.5974	0.5361	0.6255	0.5711	0.5729	0.5756	0.5719		0.58	4.6	TM	
39	TM	Tert Amyl Methyl Ether		1.404	1.385	1.274	1.400	1.340	1.332	1.320	1.368		1.4	3.3	TM	
40	TM	1,2-DCA		0.7136	0.7839	0.7083	0.7677	0.7036	0.7045	0.6870	0.7078		0.72	4.8	TM	
41	TM	Benzene		2.100	1.976	1.891	2.055	1.982	1.921	1.890	1.951		2.0	3.8	TM	
42	TM	TCE		0.3078	0.2772	0.2503	0.2755	0.2616	0.2611	0.2669	0.2708		0.27	6.3	TM	
43	TM	2-Pentanone		0.2890	0.2853	0.2775	0.2967	0.2968	0.3064	0.3049	0.3123		0.30	4.0	TM	
44	TM*	1,2-Dichloropropane		0.5703	0.5961	0.5407	0.5699	0.5422	0.5493	0.5439	0.5608		0.56	3.4	TM*	
45	TM	Bromodichloromethane		0.7355	0.6828	0.6567	0.7283	0.6942	0.6863	0.6865	0.7139		0.70	3.7	TM	
46	TM	Methyl Cyclohexane		0.6119	0.6757	0.6524	0.6820	0.6429	0.6324	0.6490	0.6558		0.65	3.5	TM	
47	TM	Dibromomethane		0.3213	0.2891	0.3155	0.3053	0.3046	0.3028	0.2998	0.3018		0.31	3.2	TM	
48	TM	2-Chloroethyl vinyl ether													TM	
49	TML	MIBK (methyl isobutyl ketone)		0.8618	0.5804	0.5714	0.5652	0.4921	0.4668	0.4267	0.4504		0.55	25	TML	0.999
50	TM	1-Bromo-2-chloroethane		0.3804	0.3767	0.3769	0.4180	0.4125	0.4006	0.3992	0.4130		0.40	4.3	TM	
51	TM	Cis-1,3-Dichloropropene		0.8748	0.8443	0.7773	0.8693	0.8248	0.8292	0.8212	0.8747		0.84	4.0	TM	
52	TM*	Toluene		2.160	2.089	2.024	2.232	2.115	2.050	2.042	2.108		2.1	3.3	TM*	
53	TM	Trans-1,3-Dichloropropene		0.7219	0.7134	0.6768	0.7301	0.7246	0.7029	0.7162	0.7547		0.72	3.1	TM	
54	TM	1,1,2-TCA		0.3971	0.4347	0.3495	0.3770	0.3684	0.3651	0.3606	0.3709		0.38	7.1	TM	
55	TML	2-Hexanone		0.1084	0.1257	0.1373	0.1663	0.1619	0.1736	0.1704	0.1910		0.15	18	TML	0.998
56	I	Chlorobenzene-D5 (IS)														
57	S	Toluene-D8(S)	2.205	2.217	1.741	1.767	1.894	1.894	1.884	1.819	1.760		1.9	9.5	S	
58	TM	1,2-EDB		0.4520	0.4024	0.3970	0.4507	0.4269	0.4362	0.4126	0.4227		0.43	4.8	TM	
59	TM	Tetrachloroethene		0.6060	0.5423	0.4946	0.5379	0.5162	0.5019	0.4839	0.4891		0.52	7.8	TM	
60	TM	1-Chlorohexane		0.6417	0.5737	0.5913	0.6237	0.6069	0.5900	0.5908	0.6067		0.60	3.6	TM	
61	TM	1,1,1,2-Tetrachloroethane		0.5843	0.5139	0.5057	0.5432	0.5293	0.5224	0.5028	0.5193		0.53	5.0	TM	
62	TM	m&p-Xylene		1.001	0.8789	0.8709	0.9420	0.9080	0.8927	0.8684	0.9129		0.91	4.9	TM	
63	TM	o-Xylene		0.9145	0.8550	0.8635	0.9265	0.9102	0.8963	0.8627	0.9191		0.89	3.2	TM	
64	TM	Styrene		0.9254	0.9418	0.9176	1.041	1.021	1.005	0.9764	1.067		0.99	5.6	TM	
65	S	4-Bromofluorobenzene(S)	0.8071	0.7219	0.6403	0.6414	0.6906	0.6903	0.6882	0.6642	0.6572		0.69	7.5	S	
66	TM	1,3-Dichloropropane		0.8887	0.7400	0.7391	0.7991	0.7802	0.7750	0.7408	0.7563		0.78	6.4	TM	
67	TM	Dibromochloromethane		0.5487	0.4902	0.4780	0.5318	0.5191	0.5178	0.5050	0.5250		0.51	4.4	TM	
68	TM**	Chlorobenzene		1.557	1.406	1.389	1.486	1.438	1.418	1.365	1.418		1.4	4.2	TM**	
69	TM*	Ethylbenzene		2.434	2.291	2.317	2.462	2.361	2.332	2.277	2.343		2.4	2.8	TM*	
70	TM**	Bromoform		0.3290	0.2881	0.3026	0.3196	0.3216	0.3109	0.3017	0.3195		0.31	4.3	TM**	

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 11/13/16
Matrix: Instrument: Loki

Initials:

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD		
71	I	1,4-Dichlorobenzene-D (IS)														
72	TM	Isopropylbenzene		4.416	3.850	4.109	4.233	3.920	4.011	4.148	3.956		4.1	4.5	TM	
73	TM**	1,1,2,2-Tetrachloroethane		1.032	0.9633	1.007	1.049	0.9864	0.9992	0.9406	0.9699		0.99	3.6	TM**	
74	TM	1,2,3-Trichloropropane		0.1906	0.2108	0.1826	0.1959	0.1900	0.1894	0.1845	0.1789		0.19	5.2	TM	
75	TM	t-1,4-Dichloro-2-Butene				0.2825	0.2608	0.2537	0.2570	0.2653	0.2882		0.27	5.3	TM	
76	TM	Bromobenzene		1.211	1.089	1.168	1.171	1.081	1.102	1.086	1.026		1.1	5.4	TM	
77	TM	n-Propylbenzene		4.639	4.487	4.743	4.857	4.512	4.622	4.819	4.643		4.7	2.9	TM	
78	TM	4-Ethyltoluene		3.843	3.922	4.029	4.181	3.877	4.022	4.096	4.014		4.0	2.8	TM	
79	TM	2-Chlorotoluene		3.238	2.900	3.049	3.084	2.925	2.937	2.985	2.929		3.0	3.8	TM	
80	TM	1,3,5-Trimethylbenzene		3.532	3.085	3.330	3.561	3.340	3.405	3.452	3.397		3.4	4.4	TM	
81	TM	4-Chlorotoluene		3.628	3.383	3.454	3.616	3.310	3.400	3.513	3.468		3.5	3.2	TM	
82	TM	Tert-Butylbenzene		3.272	2.840	2.799	3.066	2.761	2.833	2.899	2.781		2.9	6.1	TM	
83	TM	1,2,4-Trimethylbenzene		3.512	3.226	3.353	3.507	3.328	3.430	3.574	3.551		3.4	3.6	TM	
84	TM	Sec-Butylbenzene		4.229	4.004	4.062	4.300	3.930	4.006	4.153	4.098		4.1	3.0	TM	
85	TM	p-Isopropyltoluene		3.402	3.298	3.346	3.515	3.273	3.398	3.529	3.498		3.4	2.9	TM	
86	TM	Benzyl Chloride		1.064	1.020	0.9909	1.045	1.057	1.154	1.214	1.403		1.1	12	TM	
87	TM	1,3-DCB		1.987	1.998	2.055	2.134	1.980	2.003	2.018	1.978		2.0	2.6	TM	
88	TM	1,4-DCB		2.279	2.055	2.119	2.176	2.008	2.018	2.028	2.036		2.1	4.6	TM	
89	TM	n-Butylbenzene		2.956	2.976	2.939	3.052	2.848	2.919	3.119	3.217		3.0	4.0	TM	
90	TM	1,2-DCB		2.016	1.948	1.986	2.068	1.913	1.939	1.926	1.971		2.0	2.6	TM	
91	TM	Hexachloroethane		0.6643	0.6253	0.6641	0.7370	0.6742	0.7204	0.7250	0.7451		0.69	6.2	TM	
92	TM	1,2-Dibromo-3-chloropropane		0.2391	0.1725	0.1751	0.1833	0.1683	0.1726	0.1825	0.1794		0.18	12	TM	
93	TM	1,2,4-Trichlorobenzene		1.393	1.280	1.309	1.360	1.298	1.315	1.365	1.357		1.3	3.0	TM	
94	TM	Hexachlorobutadiene		0.5424	0.4994	0.5093	0.5550	0.5224	0.5063	0.5110	0.5040		0.52	3.8	TM	
95	TM	Naphthalene		1.525	1.617	1.581	1.709	1.745	1.786	1.843	1.707		1.7	6.4	TM	
96	TM	1,2,3-Trichlorobenzene		0.7972	0.7626	0.7396	0.8855	0.8096	0.8268	0.8879	0.8169		0.82	6.4	TM	
97																
98																
99																
100																
101																
102																
103																
104																
105																

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L05.D
Acq On : 13 Nov 16 13:35
Sample : 0.3ug/L VOC STD 11/13/16J
Misc : 1uL-5ppb

Vial: 5
Operator: PM,DG,SV,CMM
Inst : Loki
Multip1r: 1.00

Quant Time: Nov 14 8:43 2016

Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	821614	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	780352	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	427200	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	99036	5.71210 ppb		0.00
Spiked Amount 25.000			Recovery = 22.848%			
37) 1,2-DCA-D4(S)	4.93	65	107676	5.69665 ppb		0.00
Spiked Amount 25.000			Recovery = 22.788%			
57) Toluene-D8(S)	7.22	98	344140	5.77527 ppb		0.00
Spiked Amount 25.000			Recovery = 23.100%			
65) 4-Bromofluorobenzene(S)	9.89	95	125959	5.85659 ppb		0.00
Spiked Amount 25.000			Recovery = 23.428%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.86	85	5653	0.32481 ppb		99
3) Freon 114	0.93	85	4312	0.33529 ppb		88
4) Chloromethane	0.96	50	8200	0.33962 ppb		96
5) Vinyl chloride	1.03	62	7440	0.34197 ppb	#	71
6) Bromomethane	1.23	96	2853	0.28613 ppb		99
7) Chloroethane	1.29	64	3337	0.27894 ppb		99
8) Dichlorofluoromethane	1.43	67	12630	0.33622 ppb		94
9) Trichlorofluoromethane	1.46	101	7342	0.32636 ppb		89
10) Acrolein	1.76	56	12182	8.79790 ppb	#	83
11) Acetone	1.89	43	6880	0.34173 ppb		96
12) Freon-113	1.85	101	3957	0.30643 ppb		93
13) 1,1-DCE	1.83	96	3531	0.35040 ppb	#	75
14) t-Butanol	2.40	59	6957	11.27590 ppb		99
15) Acetonitrile	2.10	41	17913	10.71863 ppb		90
16) Methyl Acetate	2.17	43	4224	0.36446 ppb	#	80
17) Iodomethane	1.93	142	1047	0.87639 ppb	#	78
18) Acrylonitrile	2.48	52	3822	0.88828 ppb	#	65
19) Methylene chloride	2.24	84	7244	0.39438 ppb		92
20) Carbon disulfide	1.98	76	17633	0.39276 ppb	#	90
21) Methyl t-butyl ether (MtBE	2.52	73	15401	0.34900 ppb		98
22) Trans-1,2-DCE	2.51	96	5434	0.33743 ppb		79
23) Diisopropyl Ether	3.11	45	16893	0.30962 ppb		99
24) 1,1-DCA	2.95	63	9857	0.31898 ppb	#	91
25) Vinyl Acetate	3.11	43	4740	0.35373 ppb	#	83
26) Ethyl tert Butyl Ether	3.60	59	15506	0.31653 ppb	#	78
27) MEK (2-Butanone)	3.82	43	2693	0.40807 ppb		88
28) Cis-1,2-DCE	3.72	96	7901	0.41363 ppb	#	82
29) 2,2-Dichloropropane	3.71	77	2796	0.35637 ppb		95
30) Chloroform	4.26	83	9472	0.31073 ppb		98
31) Bromochloromethane	4.09	128	2858	0.32010 ppb		93
33) 1,1,1-TCA	4.47	97	8133	0.33467 ppb		99
34) Cyclohexane	4.53	41	4618	0.36105 ppb		68
35) 1,1-Dichloropropene	4.73	75	6719	0.31889 ppb	#	80
36) 2,2,4-Trimethylpentane	5.16	57	12117	0.31575 ppb	#	28
38) Carbon Tetrachloride	4.71	119	6409	0.33513 ppb	#	72
39) Tert Amyl Methyl Ether	5.23	73	14063	0.31631 ppb	#	93
40) 1,2-DCA	5.03	62	8817	0.37156 ppb		96
41) Benzene	4.99	78	23478	0.36251 ppb		95
42) TCE	5.84	95	2528	0.28342 ppb		94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L05.D
Acq On : 13 Nov 16 13:35
Sample : 0.3ug/L VOC STD 11/13/16J
Misc : 1uL-5ppb

Vial: 5
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:43 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	2-Pentanone	6.13	43	99727	10.24785	ppb		100
44)	1,2-Dichloropropane	6.09	63	6984	0.38007	ppb	#	93
45)	Bromodichloromethane	6.44	83	7812	0.34053	ppb	#	92
46)	Methyl Cyclohexane	6.04	83	7018	0.32840	ppb		80
47)	Dibromomethane	6.22	93	3679	0.36699	ppb		92
49)	MIBK (methyl isobutyl ket	7.16	43	6601	-0.09153	ppb		99
50)	1-Bromo-2-chloroethane	6.75	63	3760	0.28806	ppb		97
51)	Cis-1,3-Dichloropropene	6.96	75	9869	0.35772	ppb		95
52)	Toluene	7.29	91	22670	0.32810	ppb		99
53)	Trans-1,3-Dichloropropene	7.57	75	8042	0.34100	ppb		99
54)	1,1,2-TCA	7.74	83	4464	0.35942	ppb		90
55)	2-Hexanone	8.06	43	1369	1.34758	ppb	#	86
58)	1,2-EDB	8.21	107	4222	0.31821	ppb		96
59)	Tetrachloroethene	7.86	166	5264	0.32338	ppb		95
60)	1-Chlorohexane	8.76	91	6301	0.33470	ppb		95
61)	1,1,1,2-Tetrachloroethane	8.83	131	5443	0.33050	ppb		87
62)	m&p-Xylene	8.99	106	18857	0.66430	ppb		100
63)	o-Xylene	9.38	106	9413	0.33752	ppb		81
64)	Styrene	9.40	104	8915	0.28940	ppb		97
66)	1,3-Dichloropropane	7.90	76	8546	0.35219	ppb		100
67)	Dibromochloromethane	8.12	129	5297	0.32987	ppb		95
68)	Chlorobenzene	8.73	112	15924	0.35561	ppb		86
69)	Ethylbenzene	8.87	91	23491	0.31997	ppb		100
70)	Bromoform	9.55	173	3036	0.31210	ppb		83
72)	Isopropylbenzene	9.76	105	22186	0.31818	ppb		98
73)	1,1,2,2-Tetrachloroethane	10.06	83	5237	0.30849	ppb	#	95
74)	1,2,3-Trichloropropane	10.09	110	1005	0.30899	ppb		93
75)	t-1,4-Dichloro-2-Butene	10.13	53	2224	0.48580	ppb		95
76)	Bromobenzene	10.02	156	6174	0.32354	ppb		86
77)	n-Propylbenzene	10.17	91	25185	0.31593	ppb		95
78)	4-Ethyltoluene	10.29	105	20709	0.30314	ppb		99
79)	2-Chlorotoluene	10.23	91	15745	0.30655	ppb		92
80)	1,3,5-Trimethylbenzene	10.35	105	16669	0.28793	ppb		99
81)	4-Chlorotoluene	10.34	91	19747	0.33288	ppb		93
82)	Tert-Butylbenzene	10.66	119	15845	0.31904	ppb		91
83)	1,2,4-Trimethylbenzene	10.71	105	16886	0.28766	ppb		96
84)	Sec-Butylbenzene	10.88	105	21309	0.30432	ppb		100
85)	p-Isopropyltoluene	11.04	119	18218	0.31289	ppb	#	92
86)	Benzyl Chloride	11.20	91	5595	0.29273	ppb	#	91
87)	1,3-DCB	10.96	146	11205	0.32476	ppb		98
88)	1,4-DCB	11.05	146	12229	0.34243	ppb		92
89)	n-Butylbenzene	11.44	91	15347	0.29906	ppb	#	92
90)	1,2-DCB	11.41	146	10790	0.32039	ppb		96
91)	Hexachloroethane	11.65	117	3723	0.31374	ppb	#	81
92)	1,2-Dibromo-3-chloropropan	12.18	157	904	0.28738	ppb		88
93)	1,2,4-Trichlorobenzene	12.99	180	7498	0.32878	ppb		97
94)	Hexachlorobutadiene	13.18	225	2695	0.30405	ppb		91
95)	Naphthalene	13.22	128	7388	0.25596	ppb		93
96)	1,2,3-Trichlorobenzene	13.46	180	4437	0.31830	ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

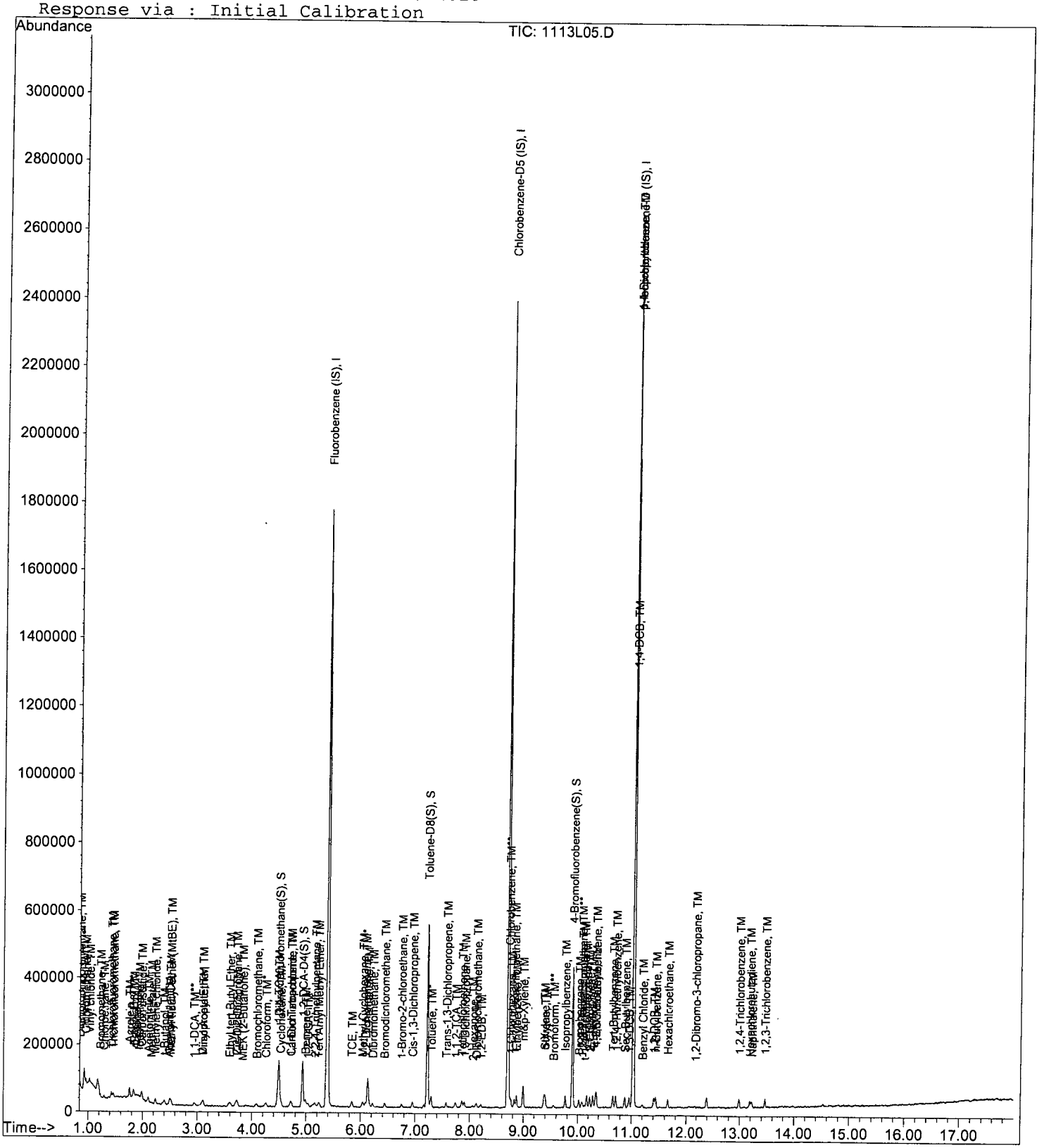
Data File : M:\LOKI\DATA\161113\1113L05.D
Acq On : 13 Nov 16 13:35
Sample : 0.3ug/L VOC STD 11/13/16J
Misc : 1uL-5ppb

Vial: 5
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:43 2016

Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



503

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L06.D
Acq On : 13 Nov 16 14:04
Sample : 0.5ug/L VOC STD 11/13/16K
Misc : 1uL-5ppb

Vial: 6
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:43 2016

Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	848000	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	782336	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	423936	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	97825	5.46669 ppb		0.00
Spiked Amount 25.000			Recovery = 21.868%			
37) 1,2-DCA-D4(S)	4.93	65	111019	5.69075 ppb		0.00
Spiked Amount 25.000			Recovery = 22.764%			
57) Toluene-D8(S)	7.22	98	346936	5.80743 ppb		0.00
Spiked Amount 25.000			Recovery = 23.228%			
65) 4-Bromofluorobenzene(S)	9.89	95	124253	5.76261 ppb		0.00
Spiked Amount 25.000			Recovery = 23.052%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.86	85	8153	0.45388 ppb		93
3) Freon 114	0.93	85	6712	0.50566 ppb		98
4) Chloromethane	0.96	50	12513	0.50213 ppb		98
5) Vinyl chloride	1.03	62	11563	0.51494 ppb		90
6) Bromomethane	1.23	96	4997	0.48555 ppb		95
7) Chloroethane	1.29	64	6616	0.53583 ppb		91
8) Dichlorofluoromethane	1.43	67	19930	0.51404 ppb		97
9) Trichlorofluoromethane	1.46	101	11670	0.50261 ppb		99
10) Acrolein	1.76	56	33329	23.32141 ppb	#	98
11) Acetone	1.88	43	8677	0.63589 ppb		85
12) Freon-113	1.84	101	7426	0.55717 ppb		95
13) 1,1-DCE	1.83	96	5588	0.53728 ppb		95
14) t-Butanol	2.40	59	17120	26.88468 ppb		99
15) Acetonitrile	2.10	41	42460	24.61632 ppb		95
16) Methyl Acetate	2.17	43	5571	0.46573 ppb		97
17) Iodomethane	1.93	142	2149	1.02985 ppb	#	93
18) Acrylonitrile	2.48	52	2912	0.65573 ppb		84
19) Methylene chloride	2.24	84	11166	0.58899 ppb		100
20) Carbon disulfide	1.98	76	25808	0.55696 ppb	#	90
21) Methyl t-butyl ether (MtBE	2.53	73	22581	0.49579 ppb		94
22) Trans-1,2-DCE	2.50	96	9056	0.54484 ppb		95
23) Diisopropyl Ether	3.10	45	29116	0.51704 ppb		99
24) 1,1-DCA	2.95	63	16932	0.53089 ppb		97
25) Vinyl Acetate	3.07	43	7505	0.54264 ppb		100
26) Ethyl tert Butyl Ether	3.60	59	25895	0.51216 ppb		95
27) MEK (2-Butanone)	3.82	43	4529	0.66492 ppb	#	82
28) Cis-1,2-DCE	3.73	96	11209	0.56855 ppb		91
29) 2,2-Dichloropropane	3.70	77	3989	0.49260 ppb		98
30) Chloroform	4.26	83	16194	0.51471 ppb		98
31) Bromochloromethane	4.09	128	5485	0.59520 ppb		80
33) 1,1,1-TCA	4.47	97	12882	0.51359 ppb		88
34) Cyclohexane	4.54	41	6918	0.52404 ppb	#	66
35) 1,1-Dichloropropene	4.73	75	11331	0.52104 ppb	#	79
36) 2,2,4-Trimethylpentane	5.16	57	20673	0.52194 ppb	#	61
38) Carbon Tetrachloride	4.70	119	10256	0.51960 ppb		88
39) Tert Amyl Methyl Ether	5.23	73	23805	0.51877 ppb	#	95
40) 1,2-DCA	5.04	62	12102	0.49412 ppb	#	89
41) Benzene	4.99	78	35615	0.53280 ppb		96
42) TCE	5.84	95	5221	0.56712 ppb		85

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L06.D
Acq On : 13 Nov 16 14:04
Sample : 0.5ug/L VOC STD 11/13/16K
Misc : 1uL-5ppb

Vial: 6
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:43 2016

Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43) 2-Pentanone	6.13	43	245102	24.40275 ppb		99
44) 1,2-Dichloropropane	6.09	63	9672	0.50997 ppb		98
45) Bromodichloromethane	6.44	83	12474	0.52683 ppb		99
46) Methyl Cyclohexane	6.04	83	10377	0.47048 ppb		97
47) Dibromomethane	6.22	93	5449	0.52664 ppb		97
49) MIBK (methyl isobutyl ket	7.16	43	14616	0.42555 ppb		91
50) 1-Bromo-2-chloroethane	6.75	63	6451	0.47885 ppb		93
51) Cis-1,3-Dichloropropene	6.95	75	14837	0.52107 ppb		94
52) Toluene	7.29	91	36637	0.51374 ppb		92
53) Trans-1,3-Dichloropropene	7.57	75	12244	0.50303 ppb		99
54) 1,1,2-TCA	7.74	83	6735	0.52539 ppb		94
55) 2-Hexanone	8.06	43	1839	1.41350 ppb	#	78
58) 1,2-EDB	8.21	107	7072	0.53166 ppb		97
59) Tetrachloroethene	7.86	166	9482	0.58102 ppb		86
60) 1-Chlorohexane	8.76	91	10040	0.53197 ppb		96
61) 1,1,1,2-Tetrachloroethane	8.83	131	9142	0.55370 ppb		91
62) m&p-Xylene	8.99	106	31340	1.10126 ppb		96
63) o-Xylene	9.38	106	14309	0.51177 ppb		85
64) Styrene	9.40	104	14479	0.46883 ppb		90
66) 1,3-Dichloropropane	7.90	76	13906	0.57162 ppb		96
67) Dibromochloromethane	8.12	129	8586	0.53333 ppb		98
68) Chlorobenzene	8.73	112	24358	0.54257 ppb		96
69) Ethylbenzene	8.87	91	38082	0.51740 ppb		100
70) Bromoform	9.55	173	5148	0.52787 ppb		95
72) Isopropylbenzene	9.76	105	37440	0.54108 ppb		98
73) 1,1,2,2-Tetrachloroethane	10.07	83	8750	0.51939 ppb		93
74) 1,2,3-Trichloropropane	10.09	110	1616	0.50067 ppb	#	63
75) t-1,4-Dichloro-2-Butene	10.13	53	2746	0.60444 ppb		97
76) Bromobenzene	10.02	156	10266	0.54212 ppb		95
77) n-Propylbenzene	10.17	91	39329	0.49716 ppb		99
78) 4-Ethyltoluene	10.29	105	32580	0.48057 ppb		91
79) 2-Chlorotoluene	10.23	91	27454	0.53863 ppb		93
80) 1,3,5-Trimethylbenzene	10.35	105	29949	0.52130 ppb		96
81) 4-Chlorotoluene	10.34	91	30758	0.52249 ppb		93
82) Tert-Butylbenzene	10.67	119	27742	0.56289 ppb		88
83) 1,2,4-Trimethylbenzene	10.71	105	29781	0.51124 ppb		96
84) Sec-Butylbenzene	10.88	105	35854	0.51599 ppb		98
85) p-Isopropyltoluene	11.04	119	28842	0.49917 ppb		97
86) Benzyl Chloride	11.20	91	9018	0.47545 ppb		95
87) 1,3-DCB	10.96	146	16849	0.49211 ppb		90
88) 1,4-DCB	11.05	146	19323	0.54524 ppb		90
89) n-Butylbenzene	11.44	91	25062	0.49214 ppb		98
90) 1,2-DCB	11.41	146	17097	0.51157 ppb		96
91) Hexachloroethane	11.66	117	5632	0.47827 ppb		98
92) 1,2-Dibromo-3-chloropropan	12.17	157	2027	0.64933 ppb		93
93) 1,2,4-Trichlorobenzene	13.00	180	11813	0.52197 ppb		99
94) Hexachlorobutadiene	13.19	225	4599	0.52285 ppb		86
95) Naphthalene	13.22	128	12928	0.45134 ppb		91
96) 1,2,3-Trichlorobenzene	13.46	180	6759	0.48860 ppb	#	91

(#) = qualifier out of range (m) = manual integration

Quantitation Report

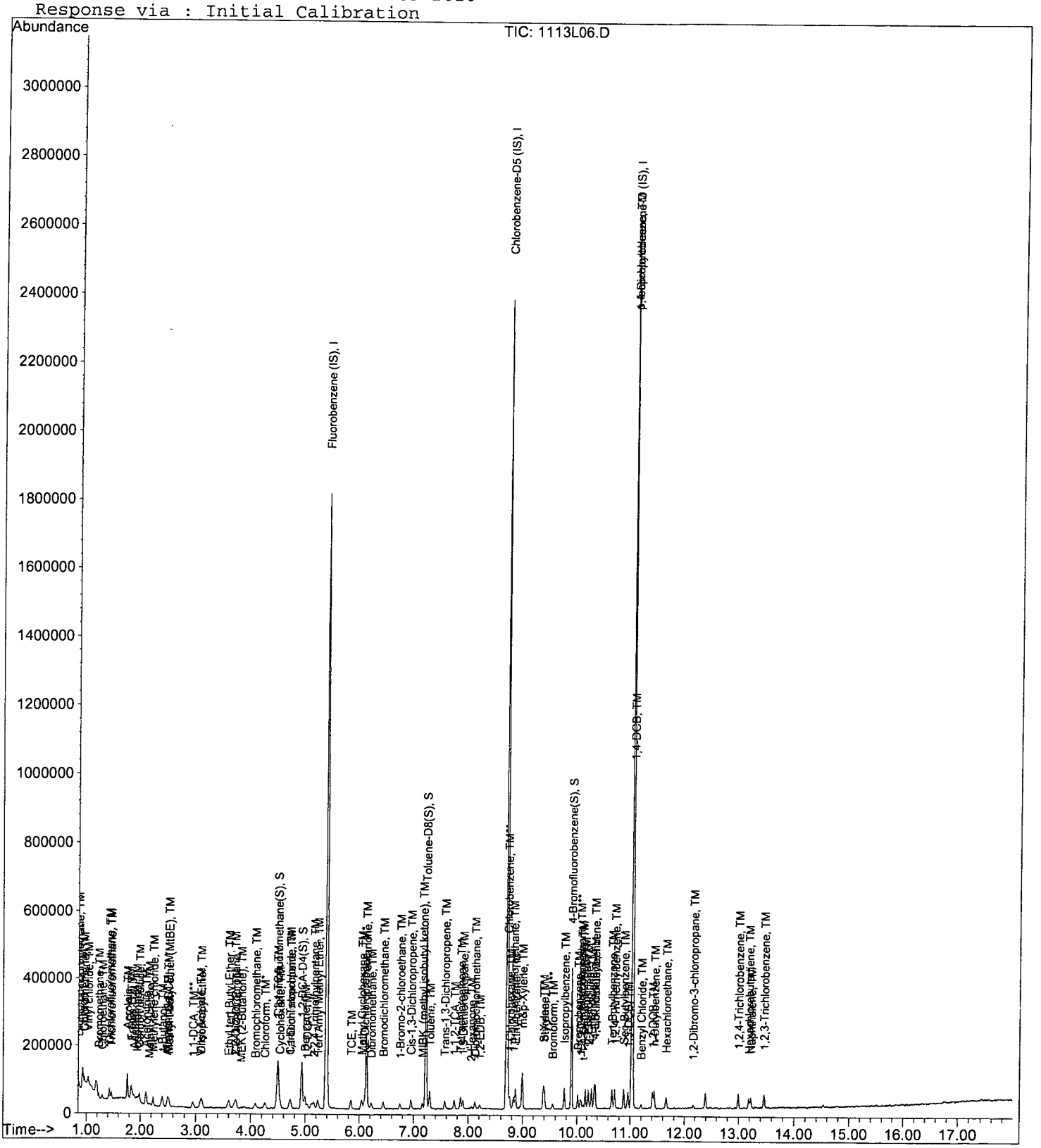
Data File : M:\LOKI\DATA\161113\1113L06.D
Acq On : 13 Nov 16 14:04
Sample : 0.5ug/L VOC STD 11/13/16K
Misc : 1uL-5ppb

Vial: 6
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:43 2016

Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L07.D
Acq On : 13 Nov 16 14:32
Sample : 1.0ug/L VOC STD 11/13/16L
Misc : 2uL-10ppb

Vial: 7
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:43 2016

Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.39	96	819008	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	820800	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	438720	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	162096	9.37896 ppb		0.00
Spiked Amount 25.000			Recovery	= 37.516%		
37) 1,2-DCA-D4(S)	4.93	65	181084	9.61082 ppb		0.00
Spiked Amount 25.000			Recovery	= 38.444%		
57) Toluene-D8(S)	7.22	98	571625	9.12015 ppb		0.00
Spiked Amount 25.000			Recovery	= 36.480%		
65) 4-Bromofluorobenzene(S)	9.89	95	210233	9.29329 ppb		0.00
Spiked Amount 25.000			Recovery	= 37.172%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.86	85	18047	1.04024 ppb		99
3) Freon 114	0.93	85	13457	1.04970 ppb		94
4) Chloromethane	0.96	50	26593	1.10491 ppb		100
5) Vinyl chloride	1.03	62	22171	1.02230 ppb		91
6) Bromomethane	1.22	96	9193	0.92490 ppb		98
7) Chloroethane	1.29	64	10956	0.91873 ppb		93
8) Dichlorofluoromethane	1.43	67	39601	1.05755 ppb		96
9) Trichlorofluoromethane	1.46	101	21880	0.97569 ppb		97
10) Acrolein	1.76	56	70296	50.92967 ppb		98
11) Acetone	1.88	43	13373	1.60072 ppb		98
12) Freon-113	1.85	101	12990	1.00913 ppb		96
13) 1,1-DCE	1.83	96	10065	1.00199 ppb		93
14) t-Butanol	2.40	59	30921	50.27619 ppb		98
15) Acetonitrile	2.11	41	81157	48.71658 ppb		98
16) Methyl Acetate	2.17	43	12948	1.12075 ppb		88
17) Iodomethane	1.93	142	4459	1.38433 ppb		90
18) Acrylonitrile	2.48	52	4263	0.99393 ppb	#	60
19) Methylene chloride	2.24	84	20648	1.12770 ppb		94
20) Carbon disulfide	1.98	76	46833	1.04648 ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	46110	1.04823 ppb		95
22) Trans-1,2-DCE	2.50	96	16617	1.03513 ppb		96
23) Diisopropyl Ether	3.11	45	53595	0.98544 ppb		99
24) 1,1-DCA	2.95	63	31590	1.02554 ppb		99
25) Vinyl Acetate	3.10	43	14470	1.08327 ppb	#	82
26) Ethyl tert Butyl Ether	3.60	59	50501	1.03418 ppb		96
27) MEK (2-Butanone)	3.82	43	7005	1.06484 ppb		97
28) Cis-1,2-DCE	3.73	96	20693	1.08676 ppb		95
29) 2,2-Dichloropropane	3.70	77	8585	1.09769 ppb		96
30) Chloroform	4.26	83	31058	1.02210 ppb		99
31) Bromochloromethane	4.09	128	9382	1.05413 ppb		90
33) 1,1,1-TCA	4.48	97	24551	1.01347 ppb		99
34) Cyclohexane	4.54	41	13332	1.04565 ppb		95
35) 1,1-Dichloropropene	4.72	75	21165	1.00769 ppb		97
36) 2,2,4-Trimethylpentane	5.15	57	37999	0.99333 ppb	#	42
38) Carbon Tetrachloride	4.70	119	19572	1.02668 ppb		96
39) Tert Amyl Methyl Ether	5.23	73	45376	1.02386 ppb		98
40) 1,2-DCA	5.04	62	25680	1.08562 ppb		95
41) Benzene	4.99	78	64726	1.00257 ppb		98
42) TCE	5.84	95	9081	1.02132 ppb		98

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161113\1113L07.D
Acq On : 13 Nov 16 14:32
Sample : 1.0ug/L VOC STD 11/13/16L
Misc : 2uL-10ppb

Vial: 7
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:43 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	2-Pentanone	6.12	43	467333	48.17549	ppb		99
44)	1,2-Dichloropropane	6.09	63	19527	1.06604	ppb		96
45)	Bromodichloromethane	6.44	83	22368	0.97814	ppb		100
46)	Methyl Cyclohexane	6.04	83	22136	1.03914	ppb		89
47)	Dibromomethane	6.22	93	9472	0.94787	ppb		95
49)	MIBK (methyl isobutyl ket	7.16	43	19014	0.76160	ppb	#	95
50)	1-Bromo-2-chloroethane	6.75	63	12340	0.94840	ppb		95
51)	Cis-1,3-Dichloropropene	6.95	75	27661	1.00582	ppb		96
52)	Toluene	7.29	91	68420	0.99338	ppb		99
53)	Trans-1,3-Dichloropropene	7.57	75	23372	0.99419	ppb		94
54)	1,1,2-TCA	7.74	83	14242	1.15033	ppb		87
55)	2-Hexanone	8.05	43	4119	1.78883	ppb		94
58)	1,2-EDB	8.21	107	13213	0.94679	ppb		94
59)	Tetrachloroethene	7.86	166	17806	1.03996	ppb		95
60)	1-Chlorohexane	8.76	91	18835	0.95120	ppb		98
61)	1,1,1,2-Tetrachloroethane	8.83	131	16873	0.97405	ppb		89
62)	m&p-Xylene	8.99	106	57713	1.93294	ppb		97
63)	o-Xylene	9.38	106	28071	0.95693	ppb		95
64)	Styrene	9.40	104	30920	0.95427	ppb		99
66)	1,3-Dichloropropane	7.90	76	24295	0.95187	ppb		95
67)	Dibromochloromethane	8.12	129	16093	0.95279	ppb		99
68)	Chlorobenzene	8.73	112	46168	0.98020	ppb		97
69)	Ethylbenzene	8.87	91	75230	0.97422	ppb		99
70)	Bromoform	9.55	173	9459	0.92447	ppb		95
72)	Isopropylbenzene	9.76	105	67567	0.94357	ppb		99
73)	1,1,2,2-Tetrachloroethane	10.06	83	16905	0.96965	ppb	#	92
74)	1,2,3-Trichloropropane	10.09	110	3699	1.10740	ppb		81
75)	t-1,4-Dichloro-2-Butene	10.16	53	521	0.11082	ppb		100
76)	Bromobenzene	10.02	156	19111	0.97520	ppb		90
77)	n-Propylbenzene	10.17	91	78739	0.96180	ppb		97
78)	4-Ethyltoluene	10.29	105	68835	0.98114	ppb		96
79)	2-Chlorotoluene	10.23	91	50887	0.96472	ppb		100
80)	1,3,5-Trimethylbenzene	10.35	105	54142	0.91065	ppb		100
81)	4-Chlorotoluene	10.34	91	59371	0.97456	ppb		93
82)	Tert-Butylbenzene	10.67	119	49832	0.97702	ppb		97
83)	1,2,4-Trimethylbenzene	10.71	105	56609	0.93904	ppb		100
84)	Sec-Butylbenzene	10.88	105	70273	0.97725	ppb		97
85)	p-Isopropyltoluene	11.04	119	57874	0.96788	ppb		98
86)	Benzyl Chloride	11.20	91	17896	0.91173	ppb		99
87)	1,3-DCB	10.96	146	35054	0.98932	ppb		97
88)	1,4-DCB	11.05	146	36066	0.98338	ppb		94
89)	n-Butylbenzene	11.44	91	52225	0.99097	ppb		98
90)	1,2-DCB	11.41	146	34187	0.98846	ppb		95
91)	Hexachloroethane	11.66	117	10973	0.90043	ppb		90
92)	1,2-Dibromo-3-chloropropan	12.18	157	3027	0.93700	ppb	#	64
93)	1,2,4-Trichlorobenzene	12.99	180	22460	0.95898	ppb		98
94)	Hexachlorobutadiene	13.19	225	8764	0.96279	ppb	#	83
95)	Naphthalene	13.22	128	28384	0.95755	ppb		98
96)	1,2,3-Trichlorobenzene	13.46	180	13383	0.93484	ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

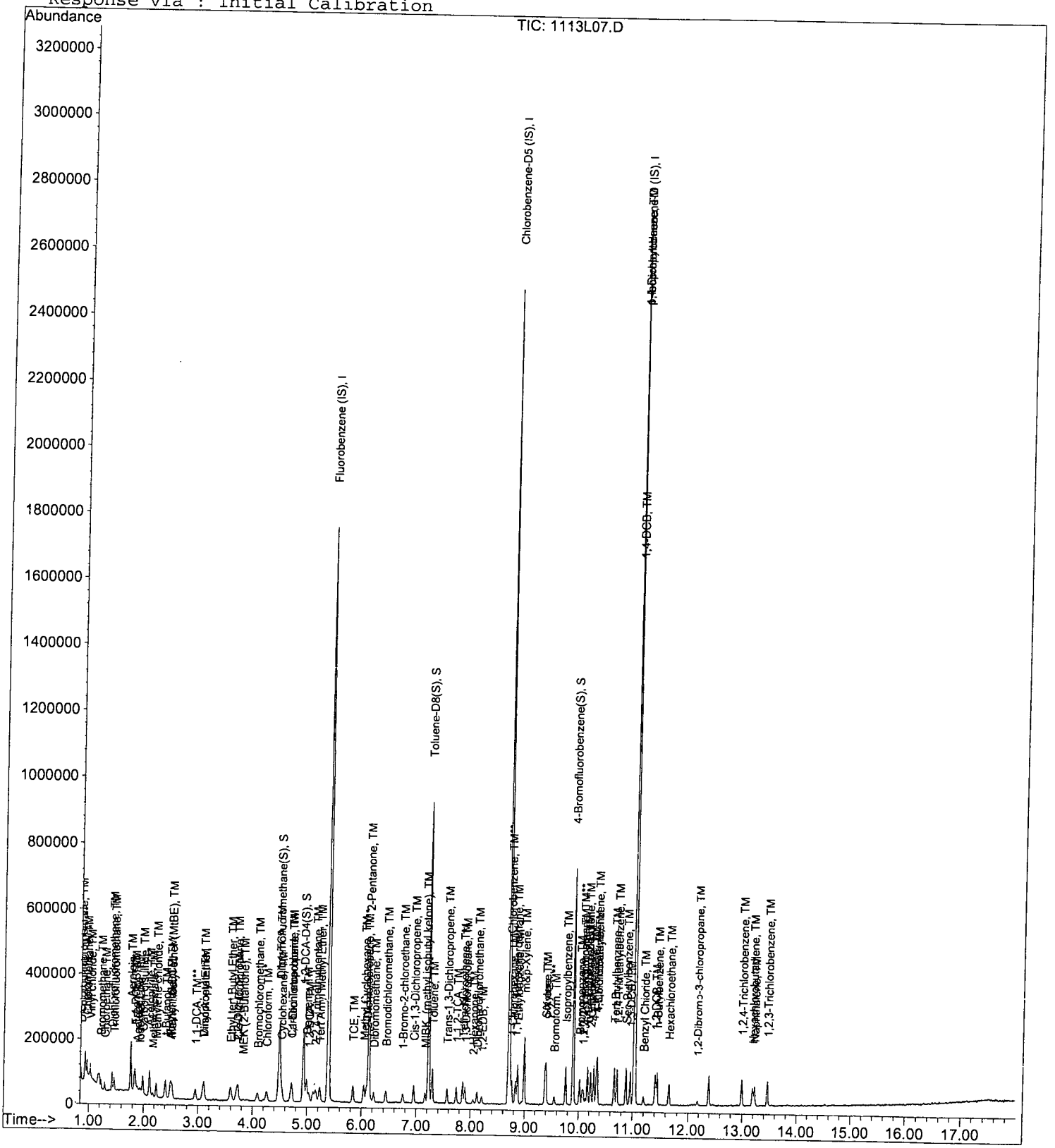
Data File : M:\LOKI\DATA\161113\1113L07.D
Acq On : 13 Nov 16 14:32
Sample : 1.0ug/L VOC STD 11/13/16L
Misc : 2uL-10ppb

Vial: 7
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:43 2016

Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L08.D
Acq On : 13 Nov 16 15:00
Sample : 2.0ug/L VOC STD 11/13/16M
Misc : 2uL-10ppb

Vial: 8
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:43 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	848479	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	802368	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	417920	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	164004	9.15976 ppb		0.00
Spiked Amount 25.000			Recovery = 36.640%			
37) 1,2-DCA-D4(S)	4.93	65	176601	9.04733 ppb		0.00
Spiked Amount 25.000			Recovery = 36.188%			
57) Toluene-D8(S)	7.22	98	567184	9.25717 ppb		0.00
Spiked Amount 25.000			Recovery = 37.028%			
65) 4-Bromofluorobenzene(S)	9.89	95	205871	9.30953 ppb		0.00
Spiked Amount 25.000			Recovery = 37.240%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.86	85	36508	2.03125 ppb		98
3) Freon 114	0.93	85	26700	2.01037 ppb		99
4) Chloromethane	0.96	50	44990	1.80436 ppb		97
5) Vinyl chloride	1.03	62	43395	1.93144 ppb		92
6) Bromomethane	1.22	96	21543	2.09213 ppb		93
7) Chloroethane	1.29	64	23160	1.87466 ppb		99
8) Dichlorofluoromethane	1.43	67	73674	1.89914 ppb		97
9) Trichlorofluoromethane	1.46	101	44963	1.93539 ppb		95
10) Acrolein	1.76	56	104016	72.74237 ppb	#	98
11) Acetone	1.88	43	12476	1.34364 ppb		94
12) Freon-113	1.84	101	25791	1.93399 ppb		95
13) 1,1-DCE	1.83	96	20908	2.00913 ppb		94
14) t-Butanol	2.40	59	45368	71.20418 ppb		99
15) Acetonitrile	2.11	41	115441	66.88950 ppb		96
16) Methyl Acetate	2.17	43	23495	1.96304 ppb		92
17) Iodomethane	1.93	142	8846	1.99108 ppb		97
18) Acrylonitrile	2.48	52	9312	2.09571 ppb		99
19) Methylene chloride	2.24	84	35882	1.89165 ppb		89
20) Carbon disulfide	1.98	76	84411	1.82065 ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	88934	1.95154 ppb		95
22) Trans-1,2-DCE	2.50	96	32590	1.95962 ppb		95
23) Diisopropyl Ether	3.10	45	106000	1.88130 ppb		98
24) 1,1-DCA	2.95	63	62726	1.96561 ppb		99
25) Vinyl Acetate	3.08	43	28249	2.04136 ppb		93
26) Ethyl tert Butyl Ether	3.60	59	97414	1.92559 ppb		90
27) MEK (2-Butanone)	3.81	43	11775	1.72777 ppb	#	66
28) Cis-1,2-DCE	3.73	96	37912	1.92191 ppb		91
29) 2,2-Dichloropropane	3.70	77	16535	2.04076 ppb		98
30) Chloroform	4.26	83	61423	1.95118 ppb		98
31) Bromochloromethane	4.08	128	17831	1.93384 ppb		95
33) 1,1,1-TCA	4.47	97	50020	1.99312 ppb		99
34) Cyclohexane	4.53	41	25289	1.91456 ppb		90
35) 1,1-Dichloropropene	4.72	75	41852	1.92341 ppb		98
36) 2,2,4-Trimethylpentane	5.15	57	79219	1.99894 ppb	#	66
38) Carbon Tetrachloride	4.70	119	36389	1.84253 ppb		97
39) Tert Amyl Methyl Ether	5.23	73	86507	1.88414 ppb		98
40) 1,2-DCA	5.03	62	48078	1.96190 ppb		100
41) Benzene	4.99	78	128360	1.91917 ppb		99
42) TCE	5.84	95	16992	1.84467 ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L08.D
Acq On : 13 Nov 16 15:00
Sample : 2.0ug/L VOC STD 11/13/16M
Misc : 2uL-10ppb

Vial: 8
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:43 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43)	2-Pentanone	6.12	43	706269	70.27759 ppb		100
44)	1,2-Dichloropropane	6.08	63	36700	1.93398 ppb		99
45)	Bromodichloromethane	6.44	83	44577	1.88162 ppb	#	95
46)	Methyl Cyclohexane	6.04	83	44281	2.00650 ppb		96
47)	Dibromomethane	6.22	93	21413	2.06838 ppb		97
49)	MIBK (methyl isobutyl ket	7.16	43	38784	2.02564 ppb		97
50)	1-Bromo-2-chloroethane	6.75	63	25584	1.89798 ppb		100
51)	Cis-1,3-Dichloropropene	6.95	75	52764	1.85199 ppb		98
52)	Toluene	7.29	91	137412	1.92576 ppb		98
53)	Trans-1,3-Dichloropropene	7.56	75	45943	1.88643 ppb		96
54)	1,1,2-TCA	7.74	83	23722	1.84949 ppb		97
55)	2-Hexanone	8.05	43	9319	2.57003 ppb		95
58)	1,2-EDB	8.21	107	25485	1.86810 ppb		99
59)	Tetrachloroethene	7.86	166	31748	1.89684 ppb		90
60)	1-Chlorohexane	8.76	91	37958	1.96098 ppb		96
61)	1,1,1,2-Tetrachloroethane	8.83	131	32461	1.91696 ppb		100
62)	m&p-Xylene	8.99	106	111804	3.83060 ppb		97
63)	o-Xylene	9.38	106	55428	1.93292 ppb		100
64)	Styrene	9.40	104	58903	1.85966 ppb		98
66)	1,3-Dichloropropane	7.90	76	47440	1.90139 ppb		98
67)	Dibromochloromethane	8.12	129	30684	1.85839 ppb		94
68)	Chlorobenzene	8.73	112	89137	1.93595 ppb		98
69)	Ethylbenzene	8.87	91	148723	1.97019 ppb		96
70)	Bromoform	9.55	173	19425	1.94210 ppb		98
72)	Isopropylbenzene	9.76	105	137377	2.01395 ppb		99
73)	1,1,2,2-Tetrachloroethane	10.07	83	33665	2.02709 ppb		98
74)	1,2,3-Trichloropropane	10.08	110	6106	1.91898 ppb		99
75)	t-1,4-Dichloro-2-Butene	10.13	53	9446	2.10916 ppb	#	76
76)	Bromobenzene	10.02	156	39045	2.09155 ppb		96
77)	n-Propylbenzene	10.17	91	158563	2.03324 ppb		99
78)	4-Ethyltoluene	10.29	105	134702	2.01554 ppb		100
79)	2-Chlorotoluene	10.23	91	101947	2.02892 ppb		96
80)	1,3,5-Trimethylbenzene	10.35	105	111350	1.96609 ppb		98
81)	4-Chlorotoluene	10.34	91	115489	1.99008 ppb		95
82)	Tert-Butylbenzene	10.66	119	93572	1.92592 ppb		99
83)	1,2,4-Trimethylbenzene	10.71	105	112110	1.95226 ppb		99
84)	Sec-Butylbenzene	10.88	105	135808	1.98261 ppb		98
85)	p-Isopropyltoluene	11.04	119	111879	1.96417 ppb		97
86)	Benzyl Chloride	11.20	91	33129	1.77180 ppb		99
87)	1,3-DCB	10.96	146	68708	2.03565 ppb		95
88)	1,4-DCB	11.05	146	70851	2.02798 ppb		98
89)	n-Butylbenzene	11.44	91	98248	1.95704 ppb		97
90)	1,2-DCB	11.41	146	66383	2.01487 ppb		98
91)	Hexachloroethane	11.66	117	22202	1.91255 ppb		94
92)	1,2-Dibromo-3-chloropropan	12.17	157	5855	1.90260 ppb		92
93)	1,2,4-Trichlorobenzene	12.99	180	43771	1.96191 ppb		97
94)	Hexachlorobutadiene	13.19	225	17028	1.96375 ppb		89
95)	Naphthalene	13.22	128	52848	1.87160 ppb		96
96)	1,2,3-Trichlorobenzene	13.46	180	24728	1.81330 ppb		93

(#) = qualifier out of range (m) = manual integration

Quantitation Report

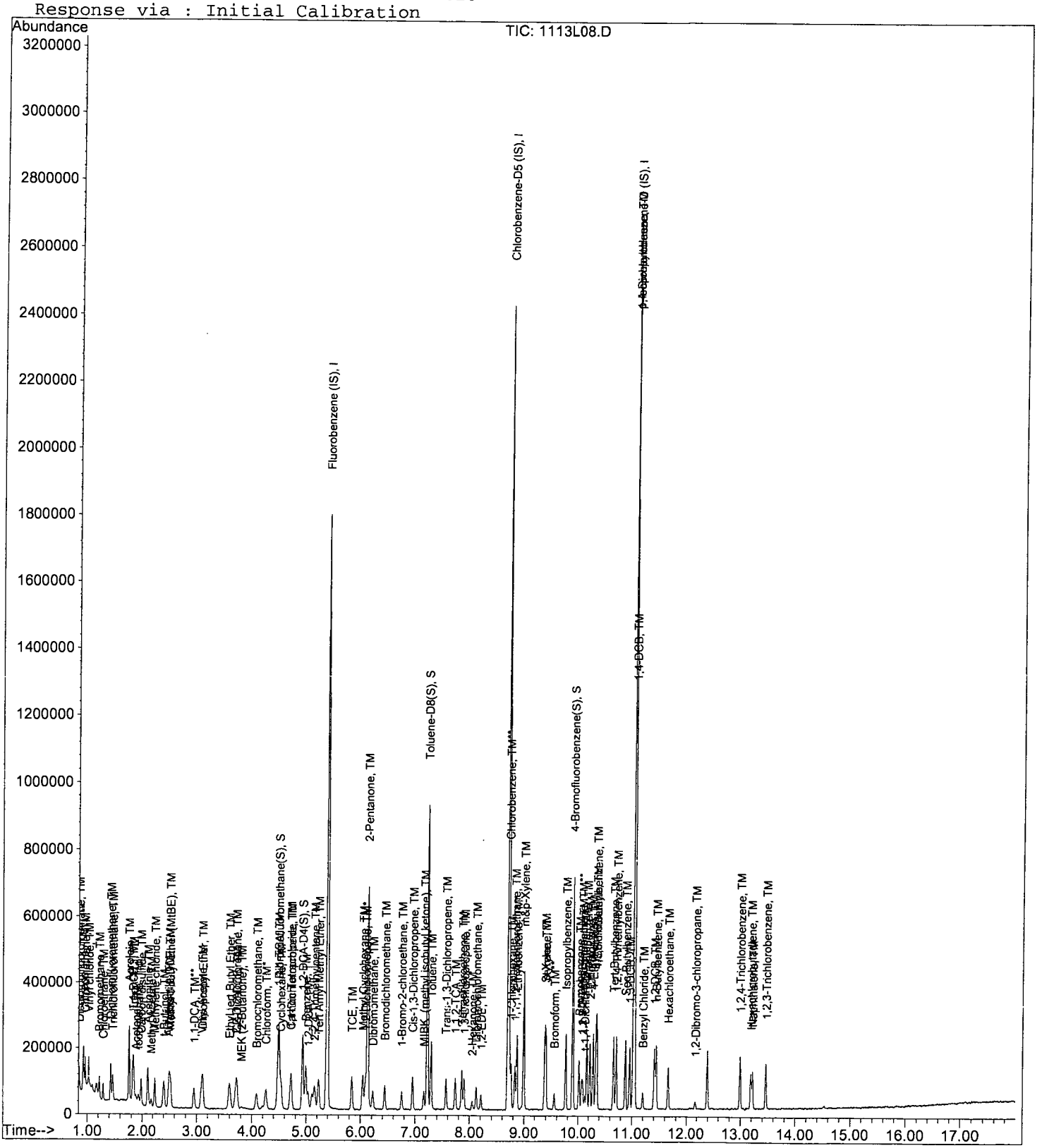
Data File : M:\LOKI\DATA\161113\1113L08.D
Acq On : 13 Nov 16 15:00
Sample : 2.0ug/L VOC STD 11/13/16M
Misc : 2uL-10ppb

Vial: 8
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:43 2016

Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L09.D
Acq On : 13 Nov 16 15:28
Sample : 5.0ug/L VOC STD 11/13/16AN
Misc : 5uL-25ppb

Vial: 9
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:43 2016

Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	816896	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	796416	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	431296	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	434172	25.18638 ppb		0.00
Spiked Amount 25.000			Recovery = 100.744%			
37) 1,2-DCA-D4(S)	4.93	65	474115	25.22814 ppb		0.00
Spiked Amount 25.000			Recovery = 100.912%			
57) Toluene-D8(S)	7.22	98	1508650	24.80713 ppb		0.00
Spiked Amount 25.000			Recovery = 99.228%			
65) 4-Bromofluorobenzene(S)	9.89	95	550032	25.05844 ppb		0.00
Spiked Amount 25.000			Recovery = 100.232%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.86	85	91142	5.26705 ppb		99
3) Freon 114	0.93	85	63141	4.93800 ppb		93
4) Chloromethane	0.96	50	127987	5.33148 ppb		98
5) Vinyl chloride	1.03	62	113394	5.24211 ppb		95
6) Bromomethane	1.22	96	53582	5.40476 ppb		92
7) Chloroethane	1.29	64	65555	5.51142 ppb		96
8) Dichlorofluoromethane	1.43	67	193515	5.18121 ppb		99
9) Trichlorofluoromethane	1.46	101	115502	5.16389 ppb		100
10) Acrolein	1.76	56	136154	98.89903 ppb	#	96
11) Acetone	1.88	43	30777	4.97944 ppb		93
12) Freon-113	1.84	101	66190	5.15529 ppb		97
13) 1,1-DCE	1.83	96	54144	5.40407 ppb		96
14) t-Butanol	2.40	59	61120	99.63537 ppb		98
15) Acetonitrile	2.10	41	160004	96.29485 ppb	#	96
16) Methyl Acetate	2.17	43	60412	5.24265 ppb		99
17) Iodomethane	1.93	142	27448	4.81388 ppb		96
18) Acrylonitrile	2.48	52	20621	4.82027 ppb		93
19) Methylene chloride	2.24	84	93111	5.09846 ppb		99
20) Carbon disulfide	1.98	76	223399	5.00475 ppb		97
21) Methyl t-butyl ether (MtBE	2.52	73	227998	5.19654 ppb		97
22) Trans-1,2-DCE	2.50	96	85166	5.31899 ppb		99
23) Diisopropyl Ether	3.10	45	280578	5.17225 ppb		98
24) 1,1-DCA	2.95	63	159873	5.20356 ppb		99
25) Vinyl Acetate	3.08	43	69774	5.23702 ppb		94
26) Ethyl tert Butyl Ether	3.60	59	248081	5.09342 ppb		100
27) MEK (2-Butanone)	3.81	43	31680	4.82818 ppb		92
28) Cis-1,2-DCE	3.73	96	97430	5.13007 ppb		92
29) 2,2-Dichloropropane	3.70	77	40976	5.25281 ppb		95
30) Chloroform	4.25	83	158216	5.22024 ppb		100
31) Bromochloromethane	4.08	128	45479	5.12306 ppb		97
33) 1,1,1-TCA	4.47	97	126956	5.25432 ppb		97
34) Cyclohexane	4.53	41	67345	5.29562 ppb		96
35) 1,1-Dichloropropene	4.72	75	109442	5.22414 ppb		99
36) 2,2,4-Trimethylpentane	5.15	57	200047	5.24296 ppb	#	83
38) Carbon Tetrachloride	4.71	119	102196	5.37469 ppb		96
39) Tert Amyl Methyl Ether	5.23	73	228683	5.17333 ppb		98
40) 1,2-DCA	5.03	62	125428	5.31618 ppb		98
41) Benzene	4.99	78	335707	5.21336 ppb		99
42) TCE	5.84	95	45008	5.07503 ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L09.D
Acq On : 13 Nov 16 15:28
Sample : 5.0ug/L VOC STD 11/13/16AN
Misc : 5uL-25ppb

Vial: 9
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:43 2016

Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43) 2-Pentanone	6.12	43	969439	100.19396 ppb		99
44) 1,2-Dichloropropane	6.09	63	93112	5.09644 ppb		97
45) Bromodichloromethane	6.44	83	118989	5.21679 ppb		98
46) Methyl Cyclohexane	6.04	83	111422	5.24405 ppb		99
47) Dibromomethane	6.22	93	49877	5.00412 ppb		98
49) MIBK (methyl isobutyl ket	7.16	43	92344	5.80933 ppb		97
50) 1-Bromo-2-chloroethane	6.75	63	68296	5.26252 ppb		98
51) Cis-1,3-Dichloropropene	6.95	75	142020	5.17756 ppb		98
52) Toluene	7.29	91	364665	5.30820 ppb		99
53) Trans-1,3-Dichloropropene	7.56	75	119281	5.08706 ppb		97
54) 1,1,2-TCA	7.74	83	61586	4.98720 ppb		96
55) 2-Hexanone	8.05	43	27171	5.49307 ppb		97
58) 1,2-EDB	8.21	107	71782	5.30107 ppb		98
59) Tetrachloroethene	7.86	166	85673	5.15693 ppb		97
60) 1-Chlorohexane	8.76	91	99351	5.17101 ppb		98
61) 1,1,1,2-Tetrachloroethane	8.83	131	86528	5.14804 ppb		99
62) m&p-Xylene	8.99	106	300095	10.35861 ppb		100
63) o-Xylene	9.38	106	147570	5.18461 ppb		94
64) Styrene	9.40	104	165888	5.27648 ppb		97
66) 1,3-Dichloropropane	7.90	76	127289	5.13984 ppb		98
67) Dibromochloromethane	8.12	129	84705	5.16853 ppb		99
68) Chlorobenzene	8.73	112	236616	5.17742 ppb		99
69) Ethylbenzene	8.87	91	392088	5.23296 ppb		99
70) Bromoform	9.55	173	50907	5.12770 ppb		98
72) Isopropylbenzene	9.76	105	365150	5.18709 ppb		98
73) 1,1,2,2-Tetrachloroethane	10.06	83	90518	5.28138 ppb		95
74) 1,2,3-Trichloropropane	10.09	110	16896	5.14535 ppb		90
75) t-1,4-Dichloro-2-Butene	10.13	53	22494	4.86684 ppb		89
76) Bromobenzene	10.02	156	100978	5.24140 ppb		95
77) n-Propylbenzene	10.17	91	418948	5.20553 ppb		98
78) 4-Ethyltoluene	10.29	105	360615	5.22851 ppb		98
79) 2-Chlorotoluene	10.23	91	265984	5.12937 ppb		95
80) 1,3,5-Trimethylbenzene	10.35	105	307146	5.25504 ppb		99
81) 4-Chlorotoluene	10.34	91	311903	5.20796 ppb		99
82) Tert-Butylbenzene	10.67	119	264476	5.27467 ppb		98
83) 1,2,4-Trimethylbenzene	10.71	105	302504	5.10438 ppb		98
84) Sec-Butylbenzene	10.88	105	370881	5.24644 ppb		99
85) p-Isopropyltoluene	11.04	119	303190	5.15778 ppb		99
86) Benzyl Chloride	11.19	91	90134	4.67102 ppb		98
87) 1,3-DCB	10.96	146	184044	5.28365 ppb		97
88) 1,4-DCB	11.05	146	187709	5.20619 ppb		99
89) n-Butylbenzene	11.44	91	263234	5.08085 ppb		97
90) 1,2-DCB	11.41	146	178372	5.24609 ppb		99
91) Hexachloroethane	11.66	117	63576	5.30678 ppb		95
92) 1,2-Dibromo-3-chloropropan	12.17	157	15811	4.97850 ppb	#	82
93) 1,2,4-Trichlorobenzene	12.99	180	117324	5.09563 ppb		99
94) Hexachlorobutadiene	13.19	225	47870	5.34938 ppb		99
95) Naphthalene	13.22	128	147456	5.06016 ppb		98
96) 1,2,3-Trichlorobenzene	13.46	180	76384	5.42751 ppb		99

(#) = qualifier out of range (m) = manual integration

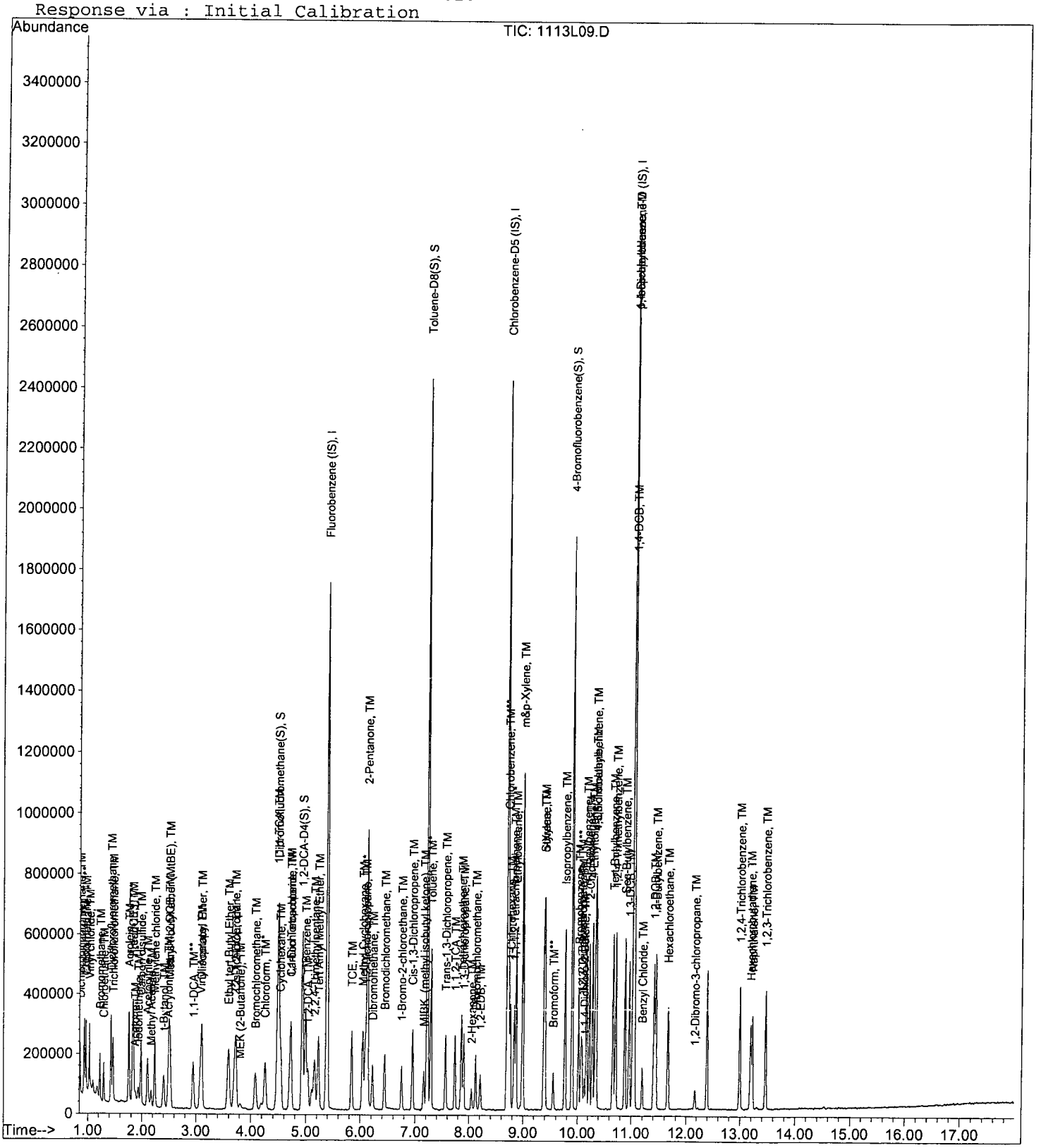
Quantitation Report

Data File : M:\LOKI\DATA\161113\1113L09.D
Acq On : 13 Nov 16 15:28
Sample : 5.0ug/L VOC STD 11/13/16AN
Misc : 5uL-25ppb

Vial: 9
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:43 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L10.D
Acq On : 13 Nov 16 15:56
Sample : 10ug/L VOC STD 11/13/16O
Misc : 5uL-25ppb

Vial: 10
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:43 2016

Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	817344	25.00000 ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	790336	25.00000 ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	444864	25.00000 ppb	0.00
System Monitoring Compounds					
32) Dibromofluoromethane(S)	4.49	111	437231	25.34993 ppb	0.00
Spiked Amount 25.000			Recovery = 101.400%		
37) 1,2-DCA-D4(S)	4.93	65	462687	24.60655 ppb	0.00
Spiked Amount 25.000			Recovery = 98.428%		
57) Toluene-D8(S)	7.22	98	1497085	24.80634 ppb	0.00
Spiked Amount 25.000			Recovery = 99.224%		
65) 4-Bromofluorobenzene(S)	9.89	95	545532	25.04462 ppb	0.00
Spiked Amount 25.000			Recovery = 100.180%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.86	85	171848	9.92556 ppb	100
3) Freon 114	0.93	85	126610	9.89623 ppb	100
4) Chloromethane	0.96	50	232419	9.67644 ppb	100
5) Vinyl chloride	1.03	62	217212	10.03602 ppb	100
6) Bromomethane	1.22	96	110291	11.11884 ppb	100
7) Chloroethane	1.29	64	118452	9.95318 ppb	100
8) Dichlorofluoromethane	1.43	67	367247	9.82735 ppb	100
9) Trichlorofluoromethane	1.46	101	227555	10.16800 ppb	100
10) Acrolein	1.76	56	176200	127.91734 ppb	100
11) Acetone	1.88	43	56895	10.03376 ppb	100
12) Freon-113	1.84	101	122929	9.56923 ppb	100
13) 1,1-DCE	1.83	96	98384	9.81424 ppb	100
14) t-Butanol	2.40	59	74422	121.25326 ppb	100
15) Acetonitrile	2.10	41	201347	121.10979 ppb	100
16) Methyl Acetate	2.17	43	112323	9.74223 ppb	100
17) Iodomethane	1.93	142	59504	9.58880 ppb	100
18) Acrylonitrile	2.48	52	38558	9.00820 ppb	100
19) Methylene chloride	2.24	84	173185	9.47785 ppb	100
20) Carbon disulfide	1.98	76	440464	9.86220 ppb	100
21) Methyl t-butyl ether (MtBE	2.52	73	436026	9.93248 ppb	100
22) Trans-1,2-DCE	2.50	96	156390	9.76188 ppb	100
23) Diisopropyl Ether	3.10	45	539539	9.94055 ppb	100
24) 1,1-DCA	2.95	63	301906	9.82107 ppb	100
25) Vinyl Acetate	3.07	43	135329	10.15180 ppb	100
26) Ethyl tert Butyl Ether	3.59	59	487849	10.01067 ppb	100
27) MEK (2-Butanone)	3.80	43	61836	9.41893 ppb	100
28) Cis-1,2-DCE	3.73	96	187788	9.88236 ppb	100
29) 2,2-Dichloropropane	3.70	77	75303	9.64799 ppb	100
30) Chloroform	4.26	83	305289	10.06730 ppb	100
31) Bromochloromethane	4.08	128	86027	9.68535 ppb	100
33) 1,1,1-TCA	4.47	97	243807	10.08490 ppb	100
34) Cyclohexane	4.53	41	122116	9.59723 ppb	100
35) 1,1-Dichloropropene	4.72	75	210838	10.05870 ppb	100
36) 2,2,4-Trimethylpentane	5.16	57	375728	9.84191 ppb	100
38) Carbon Tetrachloride	4.70	119	186724	9.81480 ppb	100
39) Tert Amyl Methyl Ether	5.23	73	438132	9.90610 ppb	100
40) 1,2-DCA	5.03	62	230035	9.74454 ppb	100
41) Benzene	4.99	78	648060	10.05852 ppb	100
42) TCE	5.84	95	85520	9.63781 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L10.D
Acq On : 13 Nov 16 15:56
Sample : 10ug/L VOC STD 11/13/160
Misc : 5uL-25ppb

Vial: 10
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:43 2016

Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
43) 2-Pentanone	6.12	43	1213054	125.30347 ppb	100
44) 1,2-Dichloropropane	6.09	63	177261	9.69697 ppb	100
45) Bromodichloromethane	6.44	83	226975	9.94572 ppb	100
46) Methyl Cyclohexane	6.04	83	210179	9.88661 ppb	100
47) Dibromomethane	6.22	93	99591	9.98642 ppb	100
49) MIBK (methyl isobutyl ket	7.15	43	160890	10.51853 ppb	100
50) 1-Bromo-2-chloroethane	6.75	63	134876	10.38712 ppb	100
51) Cis-1,3-Dichloropropene	6.95	75	269648	9.82504 ppb	100
52) Toluene	7.29	91	691431	10.05920 ppb	100
53) Trans-1,3-Dichloropropene	7.56	75	236915	10.09834 ppb	100
54) 1,1,2-TCA	7.74	83	120458	9.74927 ppb	100
55) 2-Hexanone	8.04	43	52934	9.62637 ppb	100
58) 1,2-EDB	8.21	107	134963	10.04364 ppb	100
59) Tetrachloroethene	7.86	166	163202	9.89921 ppb	100
60) 1-Chlorohexane	8.76	91	191868	10.06315 ppb	100
61) 1,1,1,2-Tetrachloroethane	8.83	131	167319	10.03134 ppb	100
62) m&p-Xylene	8.99	106	574089	19.96872 ppb	100
63) o-Xylene	9.38	106	287758	10.18763 ppb	100
64) Styrene	9.40	104	322624	10.34081 ppb	100
66) 1,3-Dichloropropane	7.90	76	246634	10.03553 ppb	100
67) Dibromochloromethane	8.12	129	164109	10.09063 ppb	100
68) Chlorobenzene	8.73	112	454689	10.02563 ppb	100
69) Ethylbenzene	8.87	91	746522	10.04002 ppb	100
70) Bromoform	9.55	173	101672	10.31987 ppb	100
72) Isopropylbenzene	9.76	105	697569	9.60700 ppb	100
73) 1,1,2,2-Tetrachloroethane	10.06	83	175525	9.92886 ppb	100
74) 1,2,3-Trichloropropane	10.08	110	33816	9.98393 ppb	100
75) t-1,4-Dichloro-2-Butene	10.13	53	45143	9.46932 ppb	100
76) Bromobenzene	10.01	156	192287	9.67651 ppb	100
77) n-Propylbenzene	10.17	91	802912	9.67211 ppb	100
78) 4-Ethyltoluene	10.29	105	689952	9.69842 ppb	100
79) 2-Chlorotoluene	10.23	91	520453	9.73057 ppb	100
80) 1,3,5-Trimethylbenzene	10.35	105	594418	9.85988 ppb	100
81) 4-Chlorotoluene	10.33	91	588998	9.53477 ppb	100
82) Tert-Butylbenzene	10.66	119	491395	9.50141 ppb	100
83) 1,2,4-Trimethylbenzene	10.71	105	592254	9.68876 ppb	100
84) Sec-Butylbenzene	10.88	105	699257	9.58993 ppb	100
85) p-Isopropyltoluene	11.04	119	582402	9.60548 ppb	100
86) Benzyl Chloride	11.19	91	188150	9.45313 ppb	100
87) 1,3-DCB	10.96	146	352384	9.80792 ppb	100
88) 1,4-DCB	11.05	146	357340	9.60871 ppb	100
89) n-Butylbenzene	11.44	91	506714	9.48212 ppb	100
90) 1,2-DCB	11.41	146	340416	9.70659 ppb	100
91) Hexachloroethane	11.66	117	119972	9.70881 ppb	100
92) 1,2-Dibromo-3-chloropropan	12.17	157	29947	9.14199 ppb	100
93) 1,2,4-Trichlorobenzene	12.99	180	230943	9.72443 ppb	100
94) Hexachlorobutadiene	13.19	225	92951	10.07029 ppb	100
95) Naphthalene	13.22	128	310464	10.32906 ppb	100
96) 1,2,3-Trichlorobenzene	13.46	180	144064	9.92434 ppb	100

(#) = qualifier out of range (m) = manual integration
1113L10.D LALLW.M Tue Nov 15 10:40:24 2016

Quantitation Report

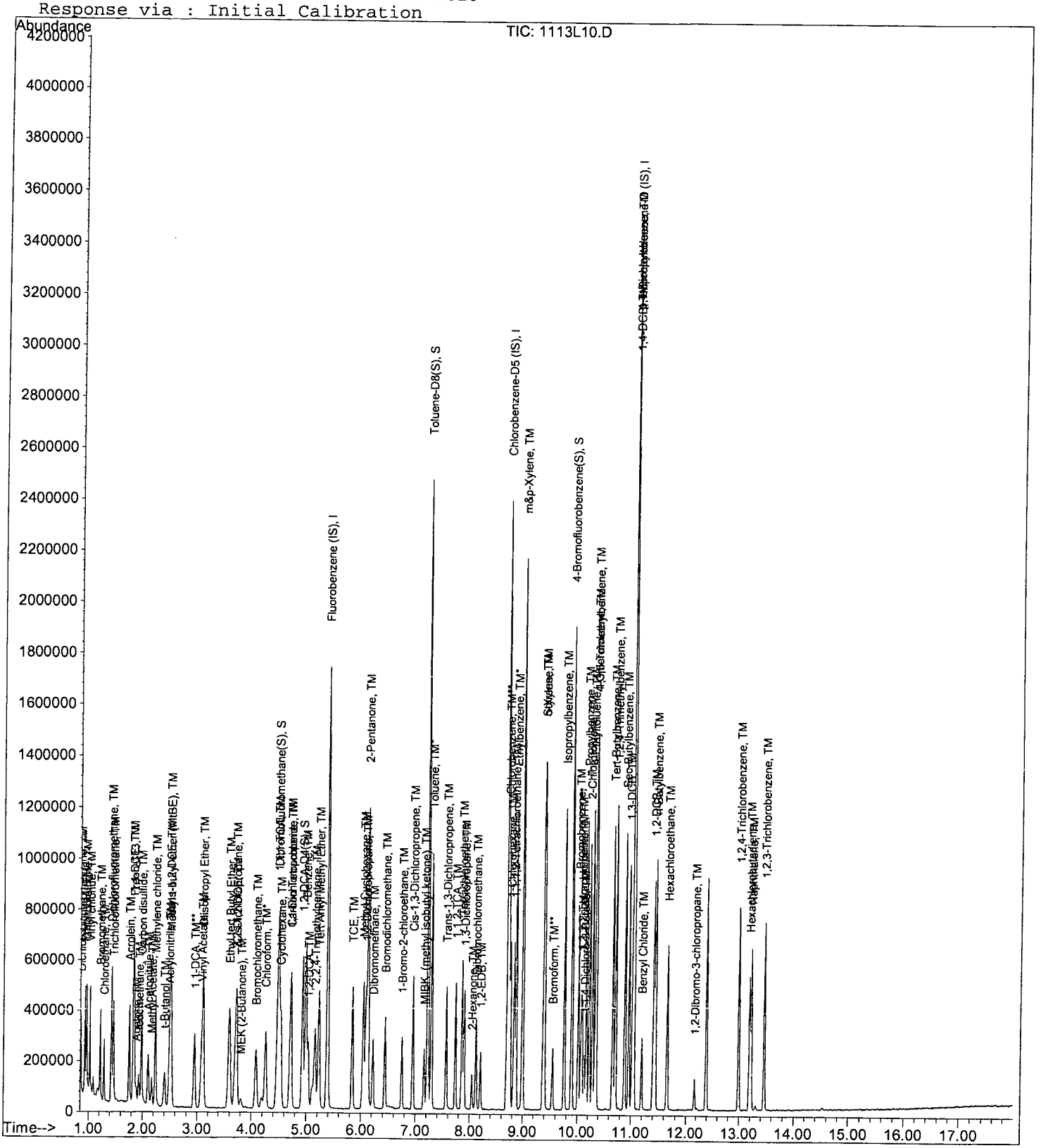
Data File : M:\LOKI\DATA\161113\1113L10.D
Acq On : 13 Nov 16 15:56
Sample : 10ug/L VOC STD 11/13/160
Misc : 5uL-25ppb

Vial: 10
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:43 2016

Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



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Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L11.D
Acq On : 13 Nov 16 16:24
Sample : 20ug/L VOC STD 11/13/16P
Misc : 10uL-50ppb

Vial: 11
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:44 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	822357	25.00000 ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	788800	25.00000 ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	427392	25.00000 ppb	0.00
System Monitoring Compounds					
32) Dibromofluoromethane(S)	4.49	111	856205	49.33874 ppb	0.00
Spiked Amount 25.000			Recovery = 197.356%		
37) 1,2-DCA-D4(S)	4.93	65	927747	49.03853 ppb	0.00
Spiked Amount 25.000			Recovery = 196.156%		
57) Toluene-D8(S)	7.22	98	2971626	49.33501 ppb	0.00
Spiked Amount 25.000			Recovery = 197.340%		
65) 4-Bromofluorobenzene(S)	9.89	95	1085660	49.93821 ppb	0.00
Spiked Amount 25.000			Recovery = 199.752%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.86	85	354663	20.35969 ppb	100
3) Freon 114	0.93	85	251900	19.56925 ppb	97
4) Chloromethane	0.96	50	473489	19.59289 ppb	99
5) Vinyl chloride	1.03	62	435008	19.97650 ppb	97
6) Bromomethane	1.22	96	199669	20.00666 ppb	97
7) Chloroethane	1.29	64	238096	19.88456 ppb	98
8) Dichlorofluoromethane	1.43	67	730132	19.41888 ppb	98
9) Trichlorofluoromethane	1.46	101	450873	20.02387 ppb	96
10) Acrolein	1.76	56	215818	155.72404 ppb	97
11) Acetone	1.89	43	107949	19.79264 ppb	96
12) Freon-113	1.84	101	251517	19.45963 ppb	94
13) 1,1-DCE	1.83	96	194783	19.31202 ppb	98
14) t-Butanol	2.41	59	94440	152.92995 ppb	99
15) Acetonitrile	2.11	41	248771	148.72307 ppb	99
16) Methyl Acetate	2.17	43	224285	19.33456 ppb	96
17) Iodomethane	1.93	142	124512	19.16356 ppb	96
18) Acrylonitrile	2.48	52	79723	18.51193 ppb	93
19) Methylene chloride	2.24	84	341187	18.55823 ppb	99
20) Carbon disulfide	1.98	76	862329	19.19026 ppb	100
21) Methyl t-butyl ether (MtBE	2.52	73	874800	19.80608 ppb	97
22) Trans-1,2-DCE	2.50	96	305873	18.97624 ppb	99
23) Diisopropyl Ether	3.10	45	1073733	19.66203 ppb	100
24) 1,1-DCA	2.95	63	599750	19.39107 ppb	99
25) Vinyl Acetate	3.07	43	266709	19.88540 ppb	100
26) Ethyl tert Butyl Ether	3.59	59	946482	19.30343 ppb	99
27) MEK (2-Butanone)	3.80	43	125770	19.04066 ppb	99
28) Cis-1,2-DCE	3.73	96	356573	18.65029 ppb	91
29) 2,2-Dichloropropane	3.70	77	150139	19.11888 ppb	99
30) Chloroform	4.26	83	599014	19.63286 ppb	98
31) Bromochloromethane	4.09	128	169633	18.98172 ppb	100
33) 1,1,1-TCA	4.47	97	468688	19.26876 ppb	98
34) Cyclohexane	4.53	41	245561	19.18126 ppb	93
35) 1,1-Dichloropropene	4.72	75	414306	19.64530 ppb	99
36) 2,2,4-Trimethylpentane	5.15	57	740311	19.27368 ppb	91
38) Carbon Tetrachloride	4.71	119	376894	19.68997 ppb	98
39) Tert Amyl Methyl Ether	5.23	73	876009	19.68571 ppb	99
40) 1,2-DCA	5.03	62	463500	19.51468 ppb	98
41) Benzene	4.99	78	1263716	19.49454 ppb	99
42) TCE	5.84	95	171776	19.24057 ppb	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L11.D
Acq On : 13 Nov 16 16:24
Sample : 20ug/L VOC STD 11/13/16P
Misc : 10uL-50ppb

Vial: 11
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:44 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
43) 2-Pentanone	6.12	43	1511709	155.20140 ppb	100
44) 1,2-Dichloropropane	6.09	63	361372	19.64817 ppb	98
45) Bromodichloromethane	6.44	83	451531	19.66483 ppb	99
46) Methyl Cyclohexane	6.04	83	416051	19.45131 ppb	100
47) Dibromomethane	6.22	93	199240	19.85686 ppb	97
49) MIBK (methyl isobutyl ket	7.15	43	307118	20.44330 ppb	97
50) 1-Bromo-2-chloroethane	6.75	63	263548	20.17272 ppb	99
51) Cis-1,3-Dichloropropene	6.95	75	545534	19.75621 ppb	99
52) Toluene	7.29	91	1348723	19.50213 ppb	99
53) Trans-1,3-Dichloropropene	7.56	75	462443	19.59116 ppb	97
54) 1,1,2-TCA	7.74	83	240209	19.32280 ppb	99
55) 2-Hexanone	8.04	43	114237	19.35544 ppb	94
58) 1,2-EDB	8.21	107	275232	20.52202 ppb	100
59) Tetrachloroethene	7.86	166	316732	19.24916 ppb	99
60) 1-Chlorohexane	8.76	91	372331	19.56614 ppb	98
61) 1,1,1,2-Tetrachloroethane	8.83	131	329640	19.80152 ppb	99
62) m&p-Xylene	8.99	106	1126596	39.26306 ppb	98
63) o-Xylene	9.38	106	565610	20.06355 ppb	95
64) Styrene	9.40	104	634368	20.37248 ppb	98
66) 1,3-Dichloropropane	7.90	76	489029	19.93732 ppb	98
67) Dibromochloromethane	8.12	129	326731	20.12896 ppb	99
68) Chlorobenzene	8.73	112	894855	19.76946 ppb	99
69) Ethylbenzene	8.87	91	1471302	19.82616 ppb	100
70) Bromoform	9.55	173	196197	19.95309 ppb	100
72) Isopropylbenzene	9.76	105	1371534	19.66112 ppb	98
73) 1,1,2,2-Tetrachloroethane	10.06	83	341654	20.11629 ppb	97
74) 1,2,3-Trichloropropane	10.08	110	64752	19.89910 ppb	96
75) t-1,4-Dichloro-2-Butene	10.12	53	87870	19.18536 ppb	97
76) Bromobenzene	10.02	156	376912	19.74284 ppb	98
77) n-Propylbenzene	10.17	91	1580224	19.81403 ppb	98
78) 4-Ethyltoluene	10.29	105	1375049	20.11876 ppb	99
79) 2-Chlorotoluene	10.23	91	1004293	19.54421 ppb	97
80) 1,3,5-Trimethylbenzene	10.35	105	1164345	20.10305 ppb	100
81) 4-Chlorotoluene	10.34	91	1162619	19.59001 ppb	98
82) Tert-Butylbenzene	10.66	119	968620	19.49449 ppb	99
83) 1,2,4-Trimethylbenzene	10.71	105	1172682	19.96830 ppb	98
84) Sec-Butylbenzene	10.88	105	1369823	19.55437 ppb	100
85) p-Isopropyltoluene	11.04	119	1161957	19.94743 ppb	99
86) Benzyl Chloride	11.19	91	394713	20.64209 ppb	99
87) 1,3-DCB	10.96	146	684721	19.83697 ppb	98
88) 1,4-DCB	11.05	146	690147	19.31638 ppb	97
89) n-Butylbenzene	11.44	91	998074	19.44045 ppb	97
90) 1,2-DCB	11.41	146	662820	19.67222 ppb	99
91) Hexachloroethane	11.66	117	246320	20.74850 ppb	99
92) 1,2-Dibromo-3-chloropropan	12.17	157	59001	18.74769 ppb	94
93) 1,2,4-Trichlorobenzene	12.99	180	449582	19.70467 ppb	97
94) Hexachlorobutadiene	13.19	225	173097	19.51994 ppb	97
95) Naphthalene	13.22	128	610624	21.14582 ppb	100
96) 1,2,3-Trichlorobenzene	13.46	180	282688	20.27003 ppb	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

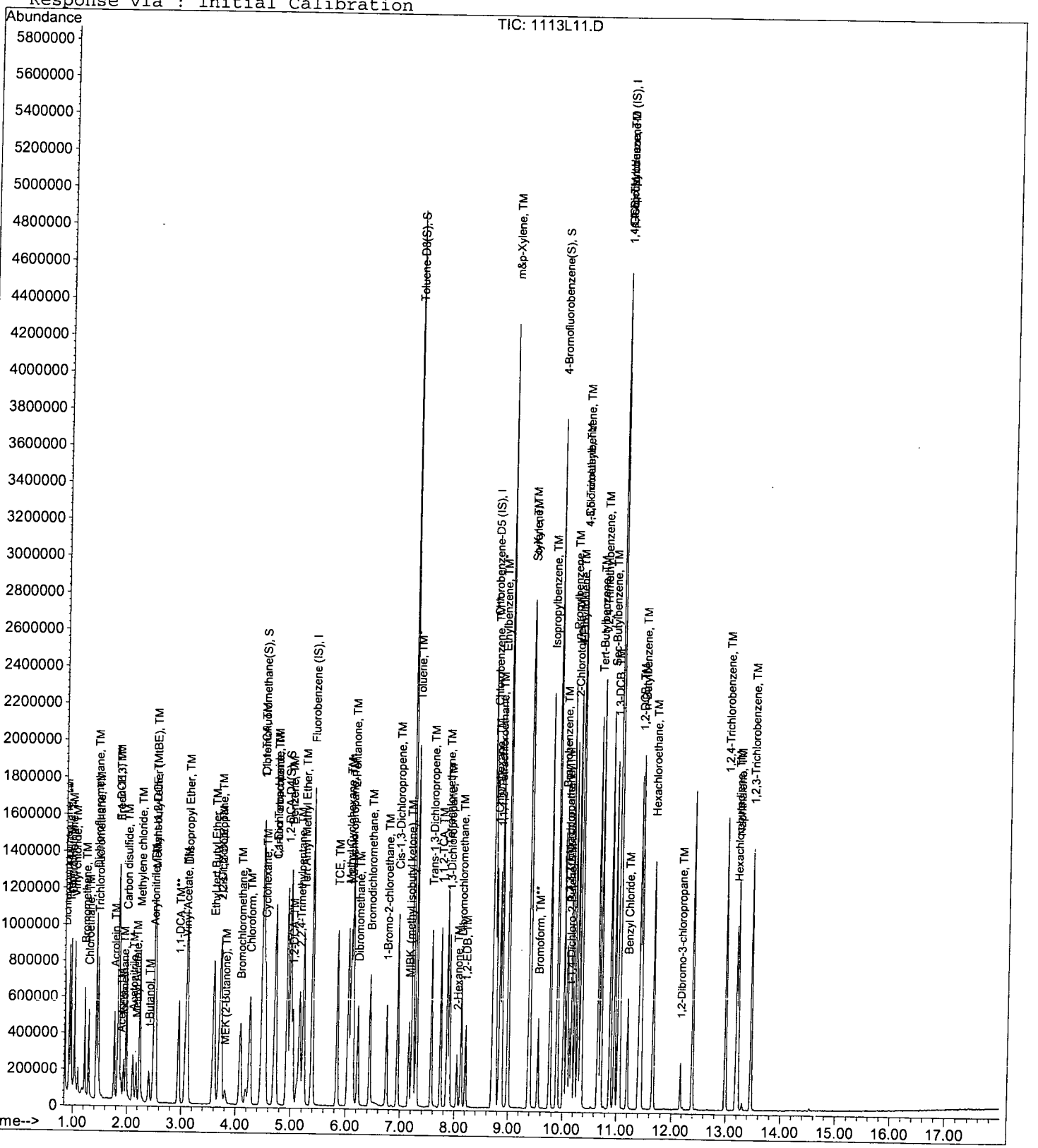
Data File : M:\LOKI\DATA\161113\1113L11.D
Acq On : 13 Nov 16 16:24
Sample : 20ug/L VOC STD 11/13/16P
Misc : 10uL-50ppb

Vial: 11
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:44 2016

Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L12.D
Acq On : 13 Nov 16 16:53
Sample : 40ug/L VOC STD 11/13/16Q
Misc : 10uL-50ppb

Vial: 12
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:44 2016

Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	833460	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	819328	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	420224	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	849578	48.30468 ppb		0.00
Spiked Amount 25.000				Recovery = 193.220%		
37) 1,2-DCA-D4(S)	4.93	65	914958	47.71827 ppb		0.00
Spiked Amount 25.000				Recovery = 190.872%		
57) Toluene-D8(S)	7.22	98	2980523	47.63901 ppb		0.00
Spiked Amount 25.000				Recovery = 190.556%		
65) 4-Bromofluorobenzene(S)	9.89	95	1088386	48.19824 ppb		0.00
Spiked Amount 25.000				Recovery = 192.792%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.86	85	686737	38.89747 ppb		100
3) Freon 114	0.93	85	517315	39.65306 ppb		99
4) Chloromethane	0.96	50	936791	38.24784 ppb		100
5) Vinyl chloride	1.03	62	853037	38.65143 ppb		98
6) Bromomethane	1.22	96	381820	37.74838 ppb		98
7) Chloroethane	1.28	64	475938	39.21840 ppb		97
8) Dichlorofluoromethane	1.43	67	1469150	38.55357 ppb		98
9) Trichlorofluoromethane	1.46	101	899616	39.42091 ppb		98
10) Acrolein	1.76	56	251294	178.90635 ppb	#	98
11) Acetone	1.88	43	216417	40.11391 ppb		99
12) Freon-113	1.84	101	513576	39.20555 ppb		96
13) 1,1-DCE	1.83	96	395103	38.65117 ppb		96
14) t-Butanol	2.42	59	102192	163.27854 ppb		98
15) Acetonitrile	2.52	41	363630	214.49339 ppb	#	37
16) Methyl Acetate	2.17	43	459595	39.09174 ppb		100
17) Iodomethane	1.93	142	272384	40.52850 ppb		97
18) Acrylonitrile	2.48	52	156974	35.96428 ppb		93
19) Methylene chloride	2.24	84	677659	36.36896 ppb		100
20) Carbon disulfide	1.98	76	1773711	38.94630 ppb		100
21) Methyl t-butyl ether (MtBE	2.52	73	1736695	38.79618 ppb		99
22) Trans-1,2-DCE	2.50	96	614725	37.62925 ppb		99
23) Diisopropyl Ether	3.10	45	2185240	39.48270 ppb		98
24) 1,1-DCA	2.95	63	1202217	38.35217 ppb		99
25) Vinyl Acetate	3.10	43	468926	34.49663 ppb	#	77
26) Ethyl tert Butyl Ether	3.59	59	1937466	38.98808 ppb		97
27) MEK (2-Butanone)	3.80	43	246641	36.84222 ppb		98
28) Cis-1,2-DCE	3.72	96	718192	37.06409 ppb		92
29) 2,2-Dichloropropane	3.70	77	304243	38.22655 ppb		99
30) Chloroform	4.25	83	1185472	38.33659 ppb		99
31) Bromochloromethane	4.08	128	333724	36.84582 ppb		99
33) 1,1,1-TCA	4.47	97	949840	38.52973 ppb		96
34) Cyclohexane	4.53	41	508715	39.20738 ppb		96
35) 1,1-Dichloropropene	4.72	75	828903	38.78081 ppb		99
36) 2,2,4-Trimethylpentane	5.15	57	1526183	39.20421 ppb		94
38) Carbon Tetrachloride	4.70	119	767576	39.56606 ppb		99
39) Tert Amyl Methyl Ether	5.23	73	1760662	39.03858 ppb		99
40) 1,2-DCA	5.03	62	916121	38.05750 ppb		99
41) Benzene	4.99	78	2520124	38.35844 ppb		100
42) TCE	5.84	95	355968	39.34069 ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L12.D
Acq On : 13 Nov 16 16:53
Sample : 40ug/L VOC STD 11/13/16Q
Misc : 10uL-50ppb

Vial: 12
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:44 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
43) 2-Pentanone	6.12	43	1778872	180.19709 ppb	99
44) 1,2-Dichloropropane	6.09	63	725249	38.90723 ppb	98
45) Bromodichloromethane	6.44	83	915504	39.34037 ppb	100
46) Methyl Cyclohexane	6.04	83	865467	39.92349 ppb	99
47) Dibromomethane	6.22	93	399784	39.31290 ppb	97
49) MIBK (methyl isobutyl ket	7.15	43	569061	37.82464 ppb	99
50) 1-Bromo-2-chloroethane	6.75	63	532362	40.20569 ppb	100
51) Cis-1,3-Dichloropropene	6.95	75	1095085	39.12959 ppb	97
52) Toluene	7.29	91	2722600	38.84353 ppb	100
53) Trans-1,3-Dichloropropene	7.56	75	955039	39.92076 ppb	97
54) 1,1,2-TCA	7.74	83	480895	38.16864 ppb	99
55) 2-Hexanone	8.04	43	227174	36.89166 ppb	96
58) 1,2-EDB	8.21	107	540882	38.82691 ppb	100
59) Tetrachloroethene	7.86	166	634330	37.11456 ppb	97
60) 1-Chlorohexane	8.76	91	774501	39.18385 ppb	100
61) 1,1,1,2-Tetrachloroethane	8.83	131	659176	38.12143 ppb	99
62) m&p-Xylene	8.99	106	2276888	76.39532 ppb	98
63) o-Xylene	9.38	106	1130922	38.62180 ppb	97
64) Styrene	9.40	104	1280000	39.57506 ppb	99
66) 1,3-Dichloropropane	7.90	76	971116	38.11644 ppb	99
67) Dibromochloromethane	8.12	129	662038	39.26657 ppb	99
68) Chlorobenzene	8.73	112	1789839	38.06845 ppb	98
69) Ethylbenzene	8.87	91	2984545	38.71898 ppb	100
70) Bromoform	9.55	173	395560	38.72927 ppb	97
72) Isopropylbenzene	9.76	105	2789141	40.66470 ppb	99
73) 1,1,2,2-Tetrachloroethane	10.07	83	632400	37.87030 ppb	98
74) 1,2,3-Trichloropropane	10.08	110	124048	38.77176 ppb	91
75) t-1,4-Dichloro-2-Butene	10.13	53	178359	39.60680 ppb	99
76) Bromobenzene	10.02	156	730261	38.90391 ppb	97
77) n-Propylbenzene	10.17	91	3239890	41.31711 ppb	99
78) 4-Ethyltoluene	10.29	105	2753926	40.98084 ppb	100
79) 2-Chlorotoluene	10.23	91	2006856	39.72093 ppb	97
80) 1,3,5-Trimethylbenzene	10.35	105	2320777	40.75297 ppb	100
81) 4-Chlorotoluene	10.33	91	2361824	40.47533 ppb	98
82) Tert-Butylbenzene	10.67	119	1949427	39.90349 ppb	100
83) 1,2,4-Trimethylbenzene	10.71	105	2403303	41.62124 ppb	96
84) Sec-Butylbenzene	10.88	105	2792193	40.53874 ppb	99
85) p-Isopropyltoluene	11.04	119	2372617	41.42572 ppb	99
86) Benzyl Chloride	11.19	91	816368	43.42139 ppb	100
87) 1,3-DCB	10.96	146	1356952	39.98267 ppb	99
88) 1,4-DCB	11.05	146	1363231	38.80602 ppb	98
89) n-Butylbenzene	11.44	91	2097179	41.54555 ppb	97
90) 1,2-DCB	11.41	146	1295204	39.09683 ppb	100
91) Hexachloroethane	11.66	117	487492	41.76380 ppb	99
92) 1,2-Dibromo-3-chloropropan	12.17	157	122683	39.64772 ppb	94
93) 1,2,4-Trichlorobenzene	12.99	180	917886	40.91612 ppb	98
94) Hexachlorobutadiene	13.19	225	343572	39.40508 ppb	95
95) Naphthalene	13.22	128	1239040	43.63967 ppb	99
96) 1,2,3-Trichlorobenzene	13.46	180	596992	43.53726 ppb	98

(#) = qualifier out of range (m) = manual integration
1113L12.D LALLW.M Tue Nov 15 10:40:38 2016

Quantitation Report

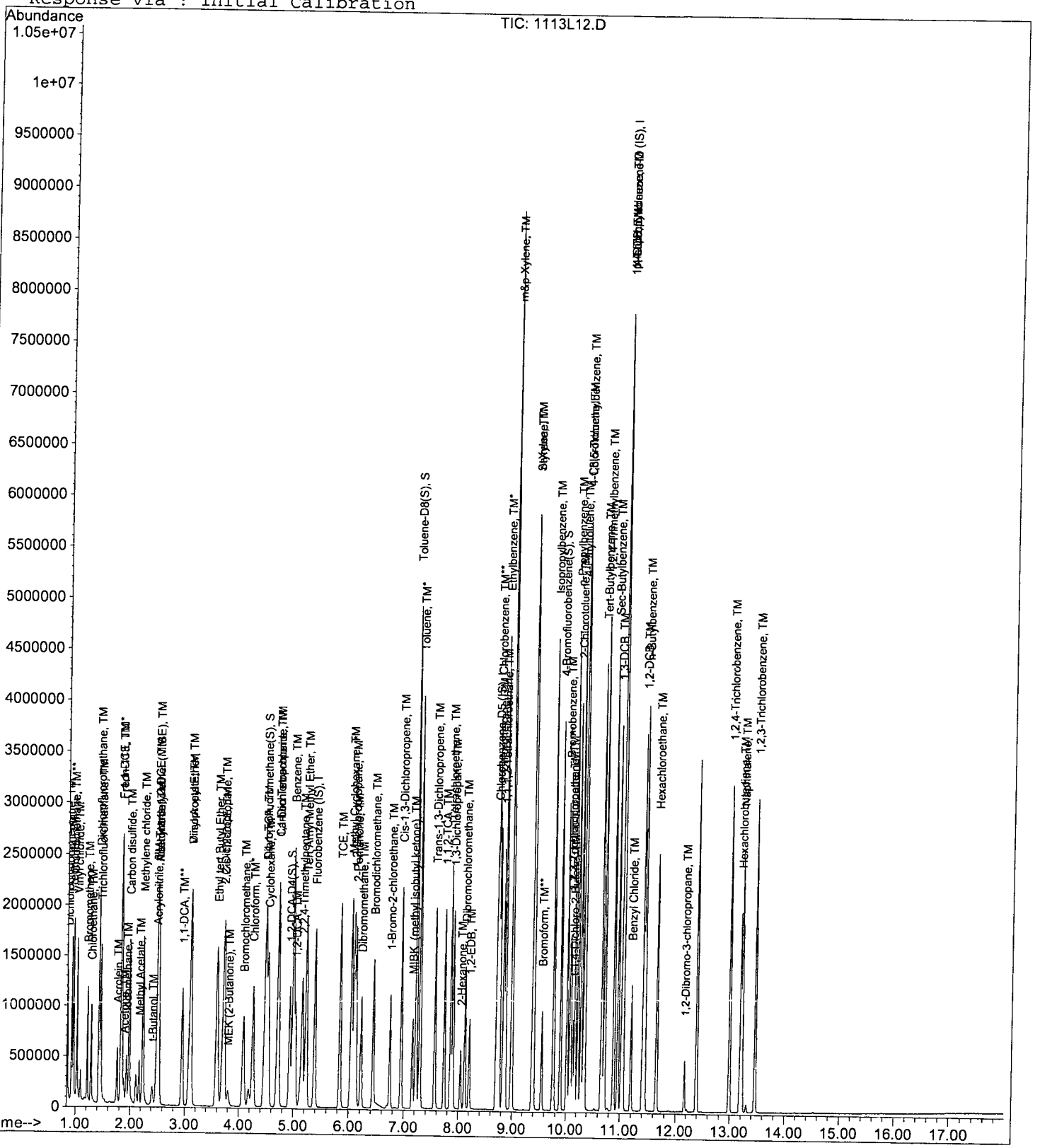
Data File : M:\LOKI\DATA\161113\1113L12.D
Acq On : 13 Nov 16 16:53
Sample : 40ug/L VOC STD 11/13/16Q
Misc : 10uL-50ppb

Vial: 12
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:44 2016

Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



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Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L13.D
Acq On : 13 Nov 16 17:21
Sample : 100ug/L VOC STD 11/13/16R
Misc : 20uL-100ppb

Vial: 13
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:44 2016

Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	813101	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	804096	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	453440	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	1606098	93.60482 ppb		0.00
Spiked Amount 25.000				Recovery = 374.420%		
37) 1,2-DCA-D4(S)	4.93	65	1736238	92.81818 ppb		0.00
Spiked Amount 25.000				Recovery = 371.272%		
57) Toluene-D8(S)	7.22	98	5659435	92.17076 ppb		0.00
Spiked Amount 25.000				Recovery = 368.684%		
65) 4-Bromofluorobenzene(S)	9.89	95	2113780	95.38013 ppb		0.00
Spiked Amount 25.000				Recovery = 381.520%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.93	85	1015570	58.96319 ppb		99
3) Freon 114	0.93	85	1255896	98.67693 ppb		97
4) Chloromethane	0.96	50	2434518	101.88670 ppb		100
5) Vinyl chloride	1.03	62	2077651	96.49628 ppb		99
6) Bromomethane	1.21	96	908871	92.10477 ppb		96
7) Chloroethane	1.27	64	460873	38.92790 ppb		100
8) Dichlorofluoromethane	1.42	67	3758654	101.10462 ppb		98
9) Trichlorofluoromethane	1.45	101	2259955	101.51016 ppb		98
10) Acrolein	1.76	56	275661	201.16815 ppb	#	100
11) Acetone	1.89	43	532432	102.65670 ppb		97
12) Freon-113	1.84	101	1237616	96.84317 ppb		95
13) 1,1-DCE	1.82	96	922240	92.47759 ppb		98
14) t-Butanol	2.44	59	112736	184.63545 ppb		99
15) Acetonitrile	2.52	41	915544	553.57147 ppb	#	37
16) Methyl Acetate	2.17	43	1146392	99.95008 ppb		100
17) Iodomethane	1.93	142	754304	113.71848 ppb		97
18) Acrylonitrile	2.48	52	393878	92.50083 ppb		96
19) Methylene chloride	2.24	84	1715775	94.38876 ppb		100
20) Carbon disulfide	1.97	76	4482658	100.89259 ppb		100
21) Methyl t-butyl ether (MtBE	2.52	73	4330674	99.16562 ppb		99
22) Trans-1,2-DCE	2.50	96	1539303	96.58487 ppb		98
23) Diisopropyl Ether	3.11	45	5621684	104.11525 ppb		99
24) 1,1-DCA	2.95	63	2992955	97.86955 ppb		99
25) Vinyl Acetate	3.10	43	1182248	89.14997 ppb	#	76
26) Ethyl tert Butyl Ether	3.60	59	4940568	101.90955 ppb		99
27) MEK (2-Butanone)	3.80	43	627504	96.08094 ppb		100
28) Cis-1,2-DCE	3.72	96	1780389	94.18201 ppb		89
29) 2,2-Dichloropropane	3.70	77	752965	96.97494 ppb		98
30) Chloroform	4.25	83	2962591	98.20512 ppb		99
31) Bromochloromethane	4.08	128	817483	92.51662 ppb		98
33) 1,1,1-TCA	4.47	97	2349082	97.67513 ppb		97
34) Cyclohexane	4.53	41	1254290	99.09039 ppb		96
35) 1,1-Dichloropropene	4.72	75	2056081	98.60379 ppb		99
36) 2,2,4-Trimethylpentane	5.15	57	3747499	98.67517 ppb		95
38) Carbon Tetrachloride	4.70	119	1860031	98.27926 ppb		99
39) Tert Amyl Methyl Ether	5.23	73	4448301	101.10031 ppb		100
40) 1,2-DCA	5.03	62	2302189	98.03217 ppb		98
41) Benzene	4.99	78	6345637	99.00442 ppb		100
42) TCE	5.84	95	880768	99.77754 ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L13.D
Acq On : 13 Nov 16 17:21
Sample : 100ug/L VOC STD 11/13/16R
Misc : 20uL-100ppb

Vial: 13
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:44 2016

Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
43) 2-Pentanone	6.13	43	2031310	210.92087 ppb	98
44) 1,2-Dichloropropane	6.09	63	1823861	100.29405 ppb	98
45) Bromodichloromethane	6.44	83	2321828	102.27006 ppb	99
46) Methyl Cyclohexane	6.04	83	2132906	100.85327 ppb	99
47) Dibromomethane	6.22	93	981695	98.95245 ppb	98
49) MIBK (methyl isobutyl ket	7.16	43	1464811	100.69141 ppb	99
50) 1-Bromo-2-chloroethane	6.75	63	1343319	103.99198 ppb	99
51) Cis-1,3-Dichloropropene	6.95	75	2844874	104.19833 ppb	97
52) Toluene	7.29	91	6855059	100.25045 ppb	100
53) Trans-1,3-Dichloropropene	7.56	75	2454606	105.17190 ppb	97
54) 1,1,2-TCA	7.74	83	1206304	98.14168 ppb	98
55) 2-Hexanone	8.04	43	621148	101.36110 ppb	96
58) 1,2-EDB	8.21	107	1359622	99.44854 ppb	100
59) Tetrachloroethene	7.86	166	1573260	93.79495 ppb	98
60) 1-Chlorohexane	8.76	91	1951401	100.59620 ppb	95
61) 1,1,1,2-Tetrachloroethane	8.83	131	1670219	98.42175 ppb	100
62) m&p-Xylene	8.99	106	5872256	200.76127 ppb	98
63) o-Xylene	9.38	106	2956152	102.86711 ppb	94
64) Styrene	9.40	104	3430912	108.08642 ppb	97
66) 1,3-Dichloropropane	7.90	76	2432626	97.28960 ppb	100
67) Dibromochloromethane	8.12	129	1688546	102.04761 ppb	99
68) Chlorobenzene	8.73	112	4560965	98.84571 ppb	98
69) Ethylbenzene	8.87	91	7534661	99.60002 ppb	99
70) Bromoform	9.55	173	1027737	102.53187 ppb	100
72) Isopropylbenzene	9.76	105	7175261	96.94956 ppb	98
73) 1,1,2,2-Tetrachloroethane	10.07	83	1759176	97.62862 ppb	98
74) 1,2,3-Trichloropropane	10.09	110	324544	94.00703 ppb	95
75) t-1,4-Dichloro-2-Butene	10.13	53	522694	107.56805 ppb	97
76) Bromobenzene	10.02	156	1861631	91.91148 ppb	98
77) n-Propylbenzene	10.17	91	8421775	99.53236 ppb	100
78) 4-Ethyltoluene	10.29	105	7279780	100.39403 ppb	98
79) 2-Chlorotoluene	10.23	91	5312135	97.43912 ppb	94
80) 1,3,5-Trimethylbenzene	10.35	105	6161616	100.27243 ppb	100
81) 4-Chlorotoluene	10.34	91	6289858	99.89522 ppb	97
82) Tert-Butylbenzene	10.67	119	5044056	95.68522 ppb	98
83) 1,2,4-Trimethylbenzene	10.71	105	6440263	103.36442 ppb	97
84) Sec-Butylbenzene	10.88	105	7432063	99.99891 ppb	99
85) p-Isopropyltoluene	11.04	119	6344403	102.65833 ppb	98
86) Benzyl Chloride	11.19	91	2544631	125.43062 ppb	99
87) 1,3-DCB	10.96	146	3587755	97.96955 ppb	98
88) 1,4-DCB	11.05	146	3692358	97.40798 ppb	98
89) n-Butylbenzene	11.44	91	5834683	107.11919 ppb	97
90) 1,2-DCB	11.41	146	3574885	100.00608 ppb	99
91) Hexachloroethane	11.66	117	1351457	107.29903 ppb	95
92) 1,2-Dibromo-3-chloropropan	12.17	157	325395	97.45536 ppb	93
93) 1,2,4-Trichlorobenzene	12.99	180	2460396	101.64166 ppb	99
94) Hexachlorobutadiene	13.19	225	914103	97.16069 ppb	94
95) Naphthalene	13.22	128	3096576	101.07387 ppb	99
96) 1,2,3-Trichlorobenzene	13.46	180	1481728	100.14334 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

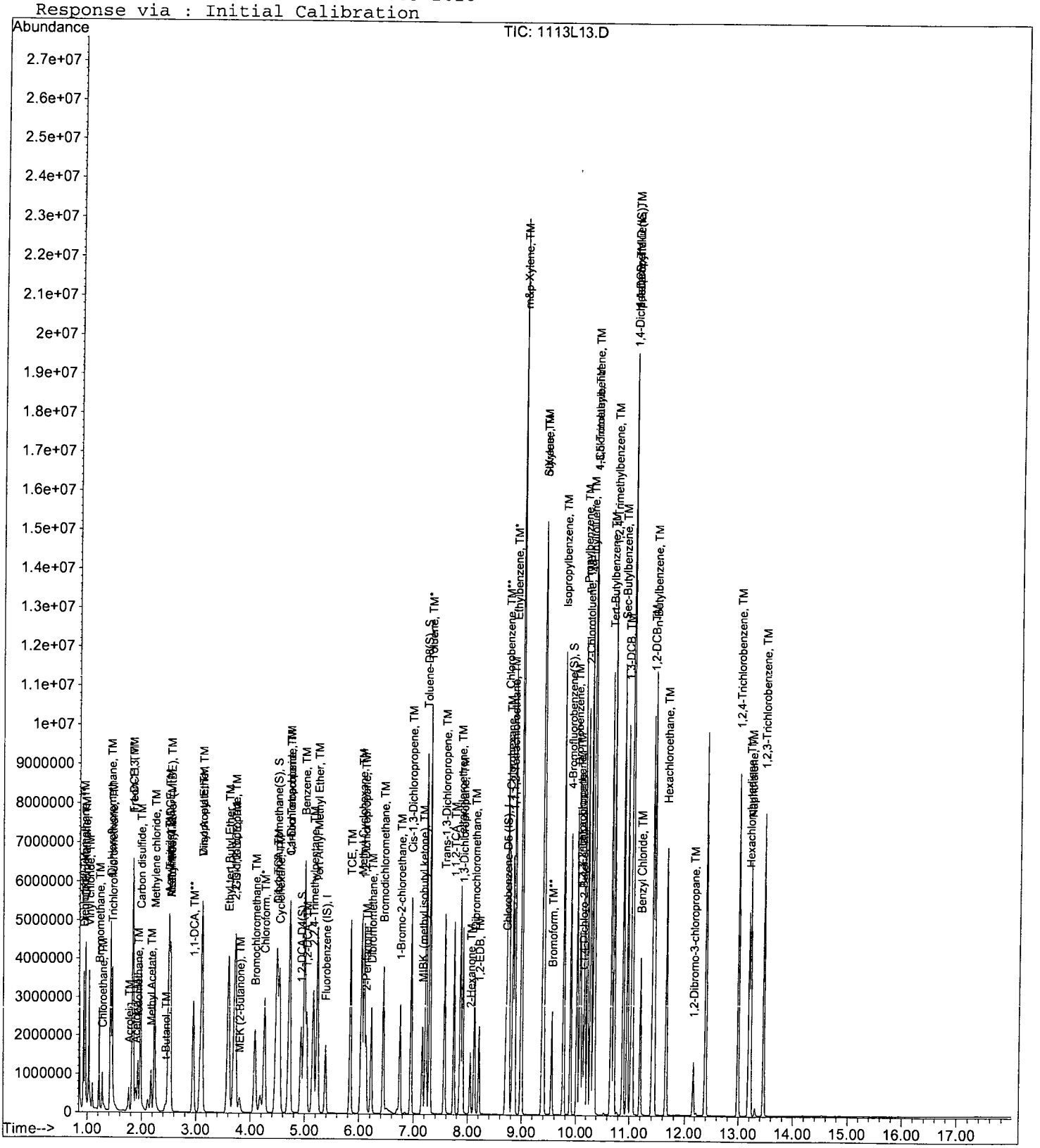
Data File : M:\LOKI\DATA\161113\1113L13.D
Acq On : 13 Nov 16 17:21
Sample : 100ug/L VOC STD 11/13/16R
Misc : 20uL-100ppb

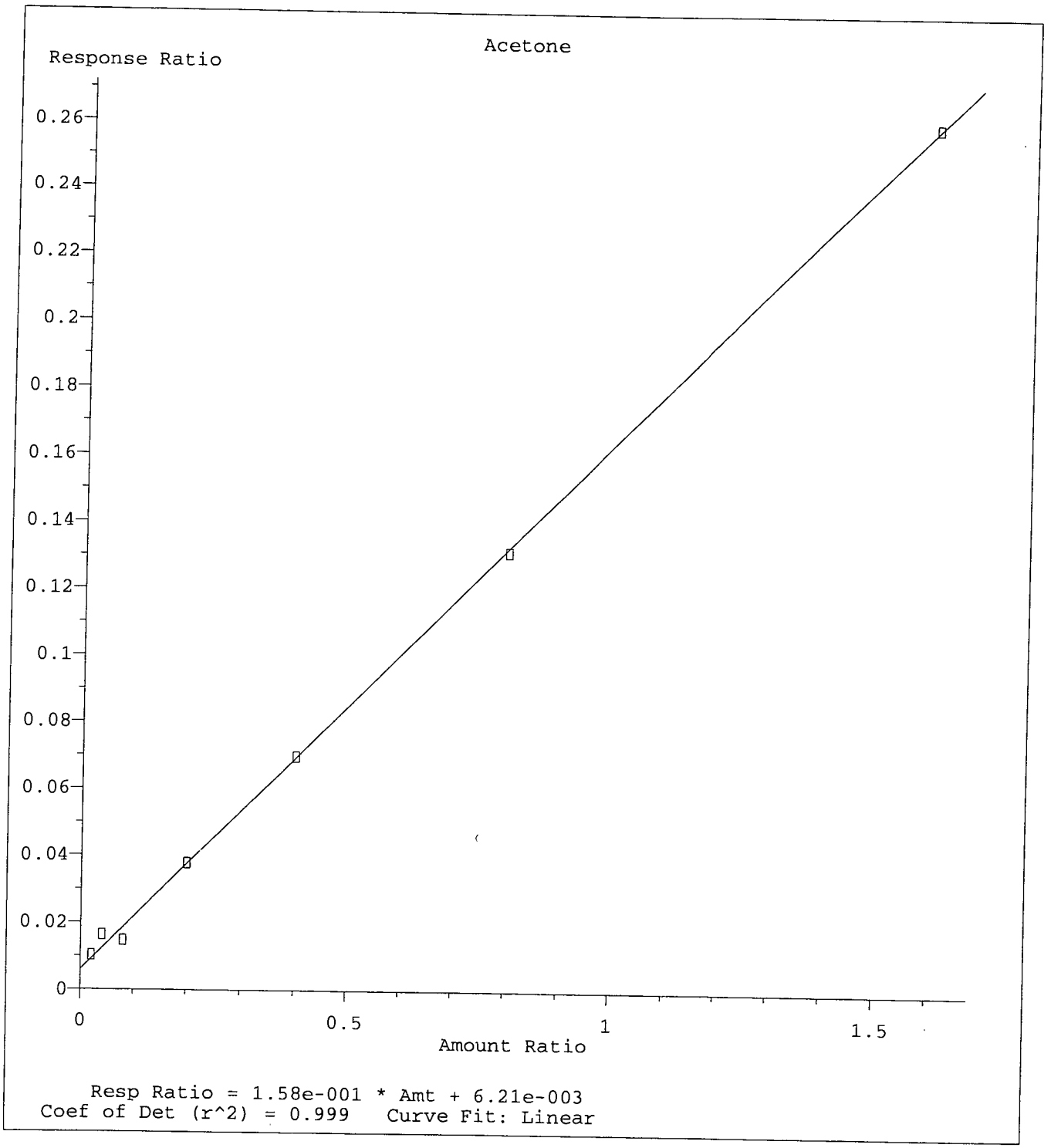
Vial: 13
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:44 2016

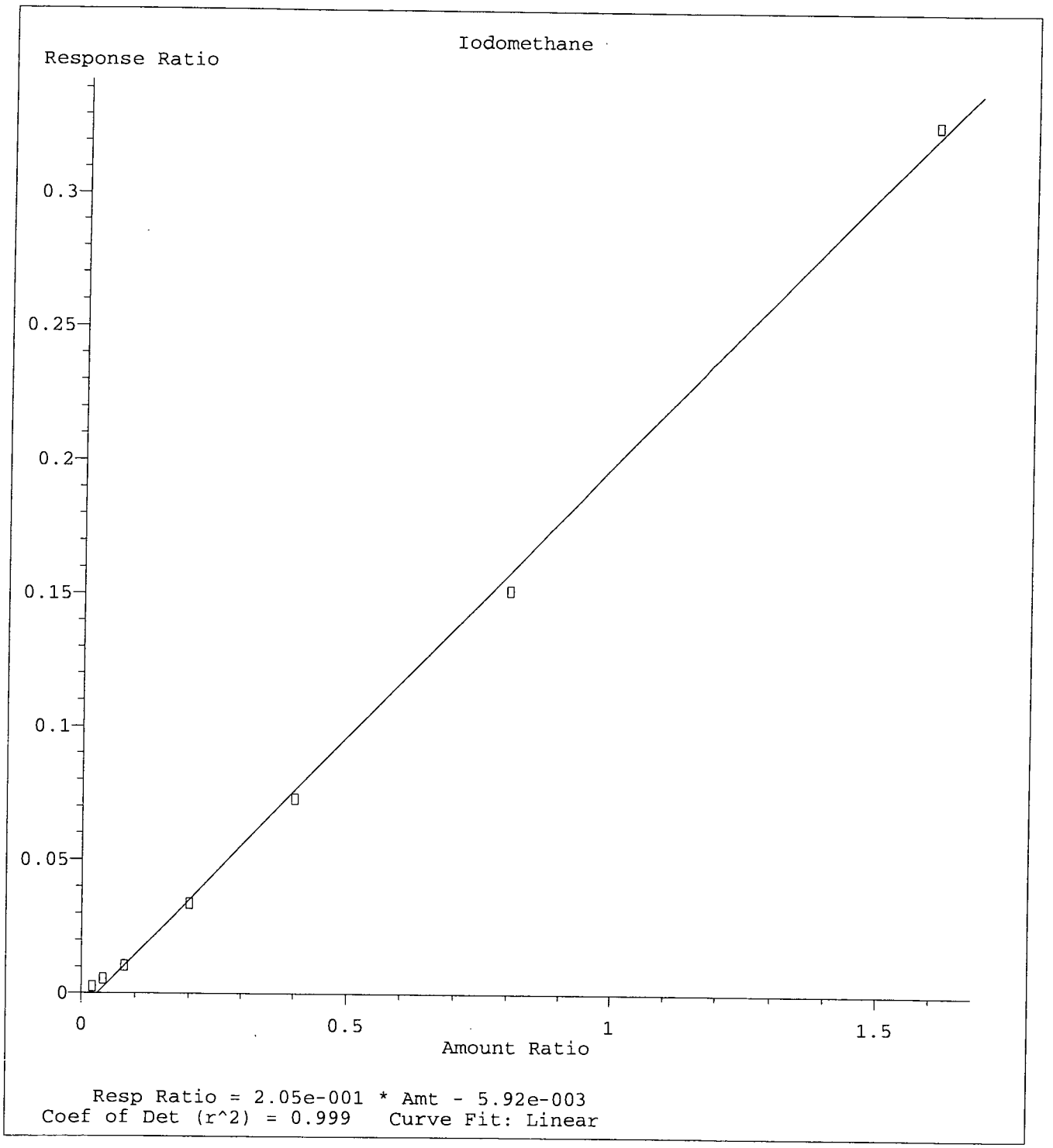
Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration

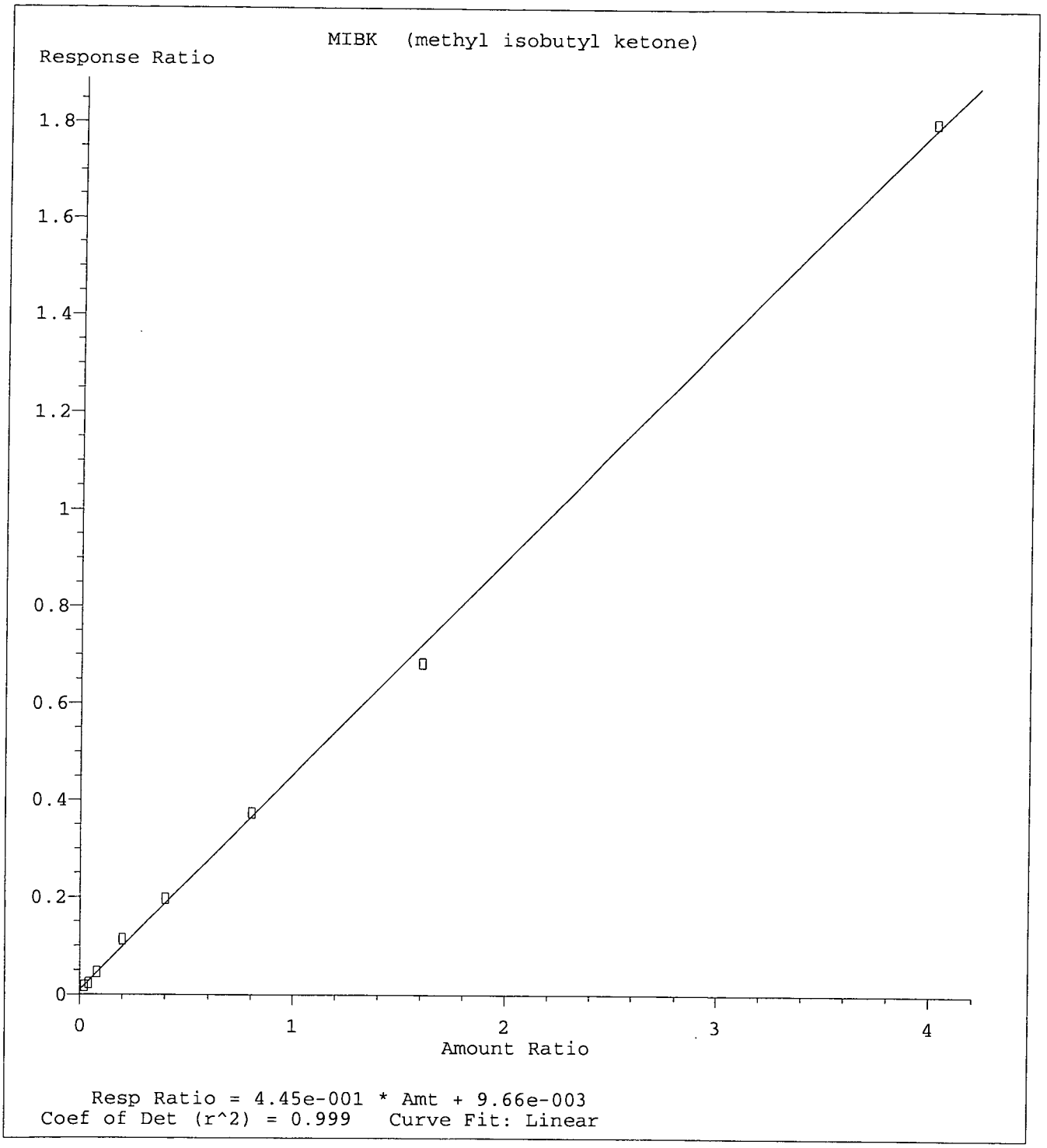




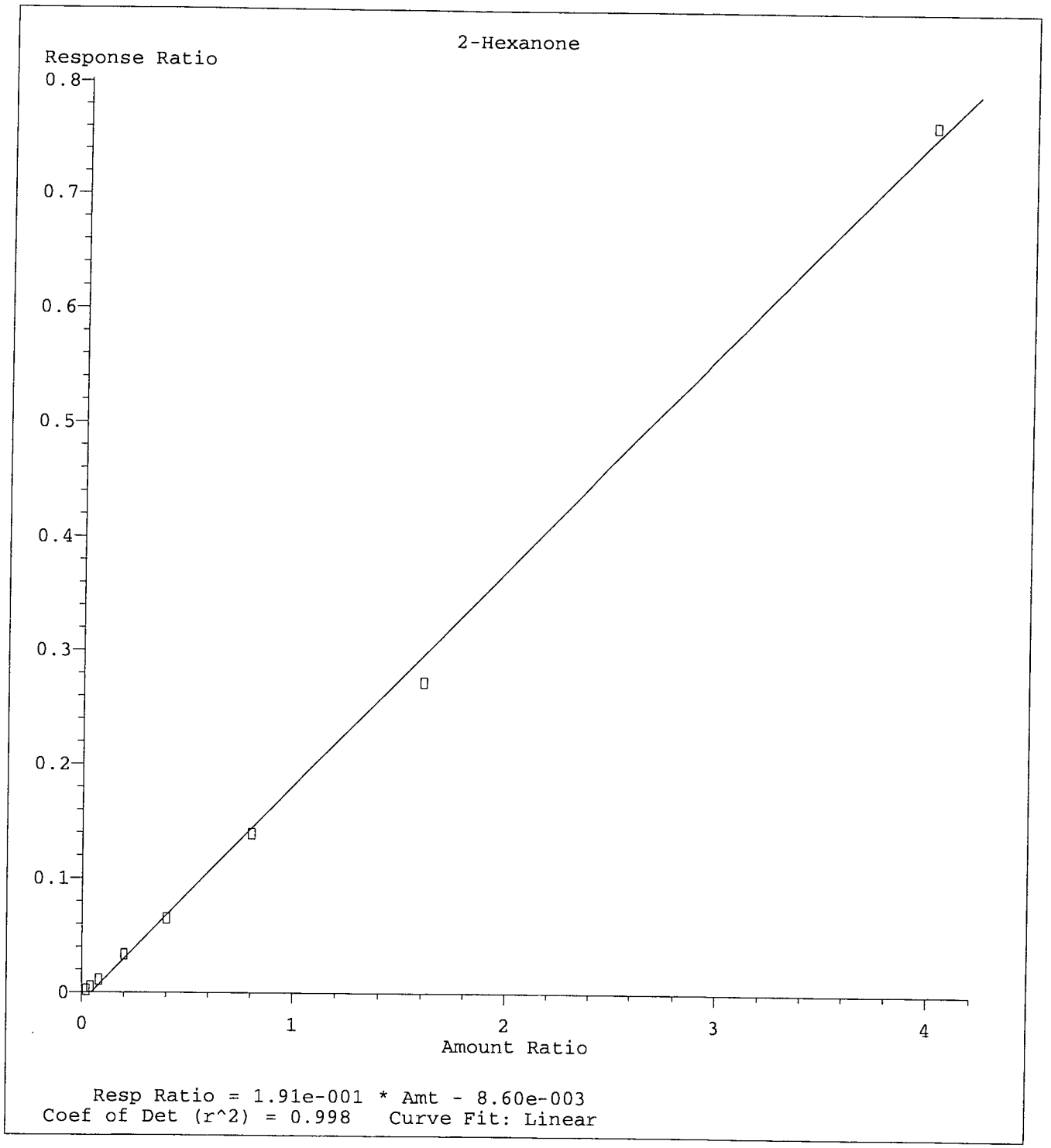
Method Name: M:\LOKI\DATA\161113\LALLW.M
Calibration Table Last Updated: Mon Nov 14 08:45:03 2016



Method Name: M:\LOKI\DATA\161113\LALLW.M
Calibration Table Last Updated: Mon Nov 14 08:45:03 2016



Method Name: M:\LOKI\DATA\161113\LALLW.M
Calibration Table Last Updated: Mon Nov 14 08:45:03 2016



Method Name: M:\LOKI\DATA\161113\LALLW.M
Calibration Table Last Updated: Mon Nov 14 08:45:03 2016

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/13/16
Instrument: Loki
Initial Cal. Date: 11/13/16
Data File: 1113L17.D

		Compound	MEAN	CCRF	%D		%Drift	
1	TM	Dichlorodifluoromethane	0.5296	0.4968	6.2	TM		
2	TM	Freon 114	0.3913	0.3998	2.2	TM		
3	TM**	Chloromethane	0.7347	0.6634	9.7	TM**		
4	TM*	Vinyl chloride	0.6620	0.6071	8.3	TM*		
5	TM	Bromomethane	0.3034	0.3100	2.2	TM		
6	TM	Chloroethane	0.3640	0.3518	3.4	TM		
7	TM	Dichlorofluoromethane	1.143	1.120	2.0	TM		
8	TM	Trichlorofluoromethane	0.6845	0.6645	2.9	TM		
9	TM	Acrolein	0.0421	0.0339	19	TM		
10	TML	Acetone	0.2561	0.1597	38	TML	8.7	
11	TM	Freon-113	0.3929	0.4050	3.1	TM		
12	TM*	1,1-DCE	0.3066	0.3097	0.99	TM*		
13	TM	t-Butanol	0.0188	0.0157	16	TM		
14	TM	Acetonitrile	0.0509	0.0421	17	TM		
15	TM	Methyl Acetate	0.3527	0.3350	5.0	TM		
16	TML	Iodomethane	0.1624	0.1371	16	TML	26	nt
17	TM	Acrylonitrile	0.1309	0.1092	17	TM		
18	TM	Methylene chloride	0.5589	0.5355	4.2	TM		
19	TM	Carbon disulfide	1.366	1.175	14	TM		
20	TM	Methyl t-butyl ether (MtBE)	1.343	1.330	0.91	TM		
21	TM	Trans-1,2-DCE	0.4900	0.4900	0.00	TM		
22	TM	Diisopropyl Ether	1.660	1.626	2.0	TM		
23	TM**	1,1-DCA	0.9403	0.8925	5.1	TM**		
24	TM	Vinyl Acetate	0.4077	0.3853	5.5	TM		
25	TM	Ethyl tert Butyl Ether	1.491	1.529	2.6	TM		
26	TM	MEK (2-Butanone)	0.1913	0.1585	17	TM		
27	TM	Cis-1,2-DCE	0.5812	0.5593	3.8	TM		
28	TM	2,2-Dichloropropane	0.2387	0.2220	7.0	TM		
29	TM*	Chloroform	0.9275	0.8768	5.5	TM*		
30	TM	Bromochloromethane	0.2717	0.2661	2.1	TM		
31	TM	1,1,1-TCA	0.7395	0.7151	3.3	TM		
32	TM	Cyclohexane	0.3892	0.3883	0.22	TM		
33	TM	1,1-Dichloropropene	0.6411	0.6282	2.0	TM		
34	TM	2,2,4-Trimethylpentane	1.168	1.147	1.7	TM		
35	TM	Carbon Tetrachloride	0.5819	0.5644	3.0	TM		
36	TM	Tert Amyl Methyl Ether	1.353	1.314	2.8	TM		
37	TM	1,2-DCA	0.7221	0.6924	4.1	TM		
38	TM	Benzene	1.971	1.965	0.28	TM		
39	TM	TCE	0.2714	0.2575	5.1	TM		
40	TM	2-Pentanone	0.2961	0.2532	14	TM		
		Average			6.9			

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 11/13/16
Instrument: Loki
Cal. Date: 11/13/16
Data File: 1113L17.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM*	1,2-Dichloropropane	0.5591	0.5455	2.4	TM*	
42	TM	Bromodichloromethane	0.6980	0.6751	3.3	TM	
43	TM	Methyl Cyclohexane	0.6502	0.6688	2.9	TM	
44	TM	Dibromomethane	0.3050	0.3055	0.15	TM	
45	TM	2-Chloroethyl vinyl ether	0.0000	0.0056	0.00	TM	
46	TML	MIBK (methyl isobutyl ketone)	0.5519	0.4199	24	TML	11
47	TM	1-Bromo-2-chloroethane	0.3972	0.3733	6.0	TM	
48	TM	Cis-1,3-Dichloropropene	0.8395	0.8252	1.7	TM	
49	TM*	Toluene	2.102	2.059	2.0	TM*	
50	TM	Trans-1,3-Dichloropropene	0.7176	0.6717	6.4	TM	
51	TM	1,1,2-TCA	0.3779	0.3468	8.2	TM	
52	TML	2-Hexanone	0.1543	0.1310	15	TML	20
53	TM	1,2-EDB	0.4251	0.4322	1.7	TM	
54	TM	Tetrachloroethene	0.5215	0.5207	0.16	TM	
55	TM	1-Chlorohexane	0.6031	0.5956	1.2	TM	
56	TM	1,1,1,2-Tetrachloroethane	0.5276	0.5047	4.3	TM	
57	TM	m&p-Xylene	0.9094	0.9025	0.76	TM	
58	TM	o-Xylene	0.8935	0.8958	0.26	TM	
59	TM	Styrene	0.9869	0.9926	0.58	TM	
60	TM	1,3-Dichloropropane	0.7774	0.7631	1.8	TM	
61	TM	Dibromochloromethane	0.5144	0.4852	5.7	TM	
62	TM**	Chlorobenzene	1.435	1.430	0.34	TM**	
63	TM*	Ethylbenzene	2.352	2.341	0.49	TM*	
64	TM**	Bromoform	0.3116	0.2872	7.8	TM**	
65	TM	Isopropylbenzene	4.080	4.011	1.7	TM	
66	TM**	1,1,2,2-Tetrachloroethane	0.9935	0.9599	3.4	TM**	
67	TM	1,2,3-Trichloropropane	0.1903	0.1774	6.8	TM	
68	TM	t-1,4-Dichloro-2-Butene	0.2679	0.2198	18	TM	
69	TM	Bromobenzene	1.117	1.098	1.7	TM	
70	TM	n-Propylbenzene	4.665	4.787	2.6	TM	
71	TM	4-Ethyltoluene	3.998	4.042	1.1	TM	
72	TM	2-Chlorotoluene	3.006	2.896	3.6	TM	
73	TM	1,3,5-Trimethylbenzene	3.388	3.379	0.27	TM	
74	TM	4-Chlorotoluene	3.471	3.399	2.1	TM	
75	TM	Tert-Butylbenzene	2.906	2.821	2.9	TM	
76	TM	1,2,4-Trimethylbenzene	3.435	3.465	0.87	TM	
77	TM	Sec-Butylbenzene	4.098	3.980	2.9	TM	
78	TM	p-Isopropyltoluene	3.407	3.354	1.6	TM	
79	TM	Benzyl Chloride	1.119	0.8334	25	TM	nt
80	TM	1,3-DCB	2.019	2.034	0.75	TM	
		Average			4.3		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 11/13/16
Instrument: Loki
Cal. Date: 11/13/16
Data File: 1113L17.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	1,4-DCB	2.090	2.035	2.6	TM	
82	TM	n-Butylbenzene	3.003	2.873	4.3	TM	
83	TM	1,2-DCB	1.971	1.943	1.4	TM	
84	TM	Hexachloroethane	0.6944	0.6354	8.5	TM	
85	TM	1,2-Dibromo-3-chloropropane	0.1841	0.1791	2.7	TM	
86	TM	1,2,4-Trichlorobenzene	1.335	1.334	0.04	TM	
87	TM	Hexachlorobutadiene	0.5187	0.4979	4.0	TM	
88	TM	Naphthalene	1.689	1.732	2.5	TM	
89	TM	1,2,3-Trichlorobenzene	0.8158	0.7879	3.4	TM	
90							
91							
92							
93							
94							
95							
96							
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			3.3		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L17.D
Acq On : 13 Nov 16 19:14
Sample : (SS) 10ug/L VOC STD 11/13/16
Misc : W IS&S 10/20/16, 11/04/16

Vial: 17
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:45 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	818661	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	787584	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	425024	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	426943	24.71363 ppb		0.00
Spiked Amount 25.000			Recovery = 98.856%			
37) 1,2-DCA-D4(S)	4.93	65	460938	24.47410 ppb		0.00
Spiked Amount 25.000			Recovery = 97.896%			
57) Toluene-D8(S)	7.22	98	1449269	24.09795 ppb		0.00
Spiked Amount 25.000			Recovery = 96.392%			
65) 4-Bromofluorobenzene(S)	9.89	95	535467	24.66845 ppb		0.00
Spiked Amount 25.000			Recovery = 98.672%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.86	85	162693	9.38168 ppb		99
3) Freon 114	0.93	85	130930	10.21743 ppb		98
4) Chloromethane	0.96	50	217234	9.02969 ppb		98
5) Vinyl chloride	1.03	62	198802	9.17063 ppb		96
6) Bromomethane	1.22	96	101527	10.21885 ppb		99
7) Chloroethane	1.29	64	115205	9.66477 ppb		95
8) Dichlorofluoromethane	1.43	67	366664	9.79597 ppb		97
9) Trichlorofluoromethane	1.46	101	217616	9.70825 ppb		96
10) Acrolein	1.76	56	138931	100.69860 ppb		92
11) Acetone	1.88	43	52304	9.12845 ppb		98
12) Freon-113	1.84	101	132637	10.30833 ppb		97
13) 1,1-DCE	1.83	96	101401	10.09893 ppb		96
14) t-Butanol	2.40	59	64346	104.66812 ppb		99
15) Acetonitrile	2.10	41	172172	103.39449 ppb		99
16) Methyl Acetate	2.17	43	109703	9.49968 ppb		99
17) Iodomethane	1.93	142	44904	7.40226 ppb		97
18) Acrylonitrile	2.48	52	35761	8.34130 ppb		94
19) Methylene chloride	2.24	84	175342	9.58046 ppb		99
20) Carbon disulfide	1.98	76	384701	8.59978 ppb		98
21) Methyl t-butyl ether (MtBE	2.52	73	435686	9.90877 ppb		99
22) Trans-1,2-DCE	2.50	96	160458	9.99969 ppb		98
23) Diisopropyl Ether	3.10	45	532605	9.79701 ppb		99
24) 1,1-DCA	2.95	63	292265	9.49215 ppb		99
25) Vinyl Acetate	3.07	43	126182	9.45040 ppb		96
26) Ethyl tert Butyl Ether	3.59	59	500582	10.25542 ppb		99
27) MEK (2-Butanone)	3.80	43	51891	8.28162 ppb		89
28) Cis-1,2-DCE	3.73	96	183143	9.62241 ppb		94
29) 2,2-Dichloropropane	3.70	77	72710	9.30078 ppb		100
30) Chloroform	4.25	83	287133	9.45335 ppb		99
31) Bromochloromethane	4.08	128	87126	9.79330 ppb		95
33) 1,1,1-TCA	4.47	97	234158	9.67019 ppb		98
34) Cyclohexane	4.53	41	127160	9.97756 ppb		96
35) 1,1-Dichloropropene	4.72	75	205701	9.79784 ppb		98
36) 2,2,4-Trimethylpentane	5.16	57	375725	9.82600 ppb	#	90
38) Carbon Tetrachloride	4.71	119	184834	9.69983 ppb		97
39) Tert Amyl Methyl Ether	5.23	73	430413	9.71592 ppb		99
40) 1,2-DCA	5.03	62	226730	9.58908 ppb		100
41) Benzene	4.99	78	643506	9.97177 ppb		99
42) TCE	5.84	95	84336	9.48909 ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L17.D
Acq On : 13 Nov 16 19:14
Sample : (SS) 10ug/L VOC STD 11/13/16
Misc : W IS&S 10/20/16, 11/04/16

Vial: 17
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:45 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
43) 2-Pentanone	6.12	43	1036379	106.88145 ppb	99
44) 1,2-Dichloropropane	6.09	63	178638	9.75658 ppb	99
45) Bromodichloromethane	6.44	83	221078	9.67174 ppb	98
46) Methyl Cyclohexane	6.04	83	219002	10.28506 ppb	96
47) Dibromomethane	6.22	93	100041	10.01540 ppb	98
49) MIBK (methyl isobutyl ket	7.15	43	137487	8.89432 ppb	97
50) 1-Bromo-2-chloroethane	6.75	63	122257	9.40015 ppb	98
51) Cis-1,3-Dichloropropene	6.95	75	270233	9.83052 ppb	99
52) Toluene	7.29	91	674411	9.79581 ppb	100
53) Trans-1,3-Dichloropropene	7.56	75	219968	9.36090 ppb	97
54) 1,1,2-TCA	7.74	83	113549	9.17530 ppb	95
55) 2-Hexanone	8.05	43	42887	8.00246 ppb	96
58) 1,2-EDB	8.21	107	136171	10.16894 ppb	100
59) Tetrachloroethene	7.86	166	164032	9.98432 ppb	99
60) 1-Chlorohexane	8.76	91	187629	9.87520 ppb	99
61) 1,1,1,2-Tetrachloroethane	8.83	131	159006	9.56626 ppb	100
62) m&p-Xylene	8.99	106	568650	19.84865 ppb	98
63) o-Xylene	9.38	106	282197	10.02566 ppb	99
64) Styrene	9.40	104	312704	10.05787 ppb	99
66) 1,3-Dichloropropane	7.90	76	240396	9.81588 ppb	99
67) Dibromochloromethane	8.12	129	152853	9.43137 ppb	98
68) Chlorobenzene	8.73	112	450407	9.96592 ppb	97
69) Ethylbenzene	8.87	91	737349	9.95130 ppb	100
70) Bromoform	9.55	173	90481	9.21606 ppb	98
72) Isopropylbenzene	9.76	105	681987	9.83084 ppb	99
73) 1,1,2,2-Tetrachloroethane	10.07	83	163200	9.66261 ppb	95
74) 1,2,3-Trichloropropane	10.09	110	30160	9.32018 ppb	89
75) t-1,4-Dichloro-2-Butene	10.13	53	37376	8.20607 ppb	100
76) Bromobenzene	10.02	156	186679	9.83282 ppb	92
77) n-Propylbenzene	10.17	91	813781	10.26064 ppb	99
78) 4-Ethyltoluene	10.29	105	687117	10.10943 ppb	99
79) 2-Chlorotoluene	10.23	91	492383	9.63549 ppb	96
80) 1,3,5-Trimethylbenzene	10.35	105	574427	9.97305 ppb	99
81) 4-Chlorotoluene	10.34	91	577788	9.78991 ppb	100
82) Tert-Butylbenzene	10.67	119	479671	9.70766 ppb	99
83) 1,2,4-Trimethylbenzene	10.71	105	589117	10.08731 ppb	97
84) Sec-Butylbenzene	10.88	105	676611	9.71251 ppb	100
85) p-Isopropyltoluene	11.04	119	570202	9.84325 ppb	99
86) Benzyl Chloride	11.20	91	141693	7.45133 ppb	99
87) 1,3-DCB	10.96	146	345849	10.07537 ppb	99
88) 1,4-DCB	11.05	146	346024	9.73875 ppb	96
89) n-Butylbenzene	11.44	91	488497	9.56794 ppb	97
90) 1,2-DCB	11.41	146	330258	9.85653 ppb	99
91) Hexachloroethane	11.66	117	108017	9.14939 ppb	99
92) 1,2-Dibromo-3-chloropropan	12.17	157	30443	9.72722 ppb	88
93) 1,2,4-Trichlorobenzene	12.99	180	226813	9.99634 ppb	99
94) Hexachlorobutadiene	13.19	225	84640	9.59793 ppb	91
95) Naphthalene	13.22	128	294400	10.25183 ppb	98
96) 1,2,3-Trichlorobenzene	13.46	180	133952	9.65849 ppb	97

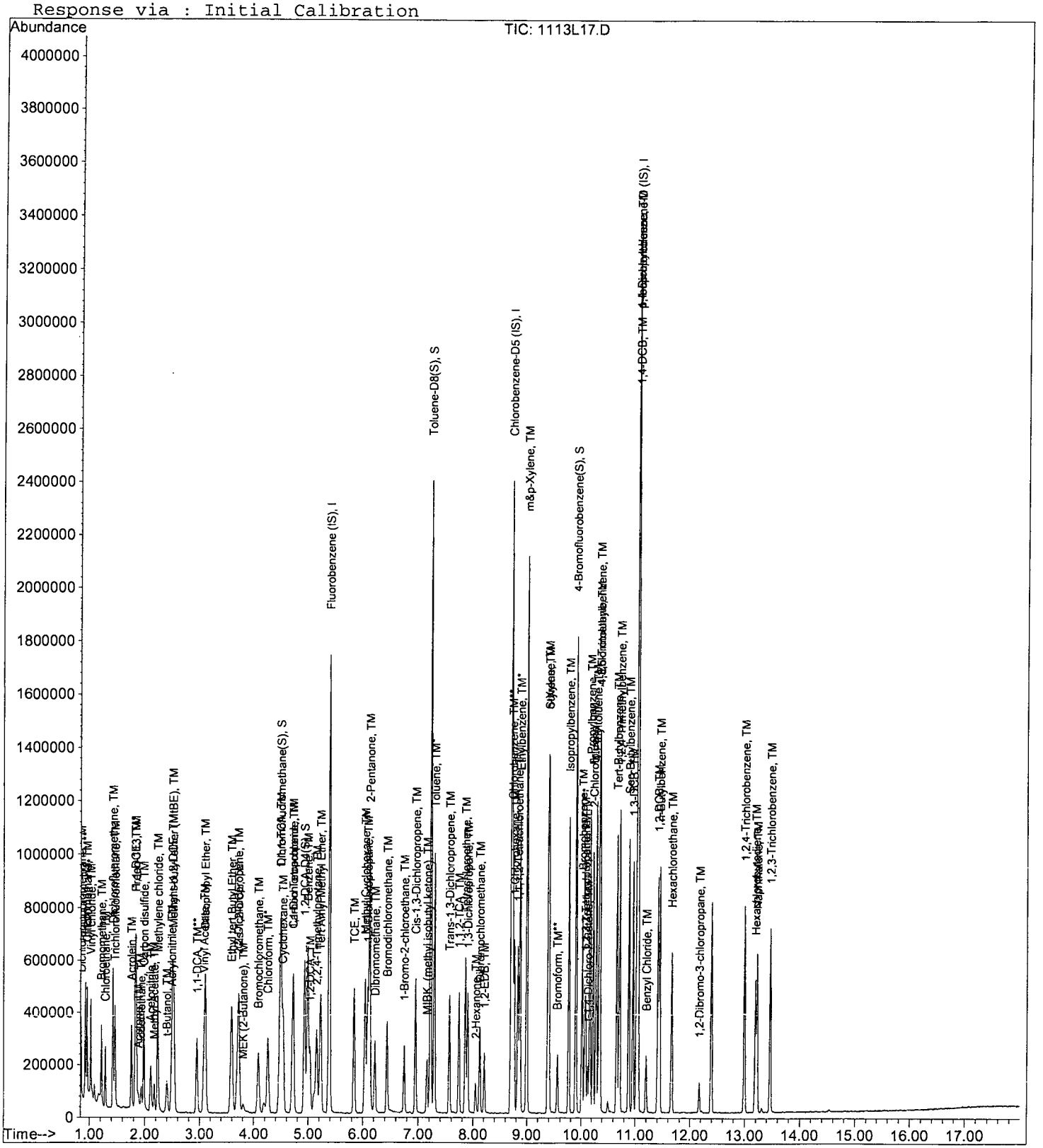
(#) = qualifier out of range (m) = manual integration
1113L17.D LALLW.M Tue Nov 15 10:42:39 2016

Quantitation Report

Data File : M:\LOKI\DATA\161113\1113L17.D Vial: 17
Acq On : 13 Nov 16 19:14 Operator: PM,DG,SV,CMM
Sample : (SS) 10ug/L VOC STD 11/13/16 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 14 8:45 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 11/16/16
Matrix: Instrument: Loki
Initial Cal. Date: 11/13/16
Data File: 1116L16.D

		Compound	MEAN	CCRF	%D		%Drift	
1	I	Fluorobenzene (IS)	ISTD			I		
2	TM	Dichlorodifluoromethane	0.5296	0.4660	12	TM		
3	TM	Freon 114	0.3913	0.3586	8.4	TM		
4	TM**	Chloromethane	0.7347	0.8717	19	TM**		
5	TM*	Vinyl chloride	0.6620	0.6818	3.0	TM*		
6	TM	Bromomethane	0.3034	0.3559	17	TM		
7	TM	Chloroethane	0.3640	0.3815	4.8	TM		
8	TM	Dichlorofluoromethane	1.143	1.156	1.1	TM		
9	TM	Trichlorofluoromethane	0.6845	0.5999	12	TM		
10	TM	Acrolein	0.0421	0.0475	13	TM		
11	TML	Acetone	0.2561	0.2017	21	TML	18	
12	TM	Freon-113	0.3929	0.3336	15	TM		
13	TM*	1,1-DCE	0.3066	0.2773	9.6	TM*		
14	TM	t-Butanol	0.0188	0.0196	4.7	TM		
15	TM	Acetonitrile	0.0509	0.0619	22	TM		nt
16	TM	Methyl Acetate	0.3527	0.4042	15	TM		
17	TML	Iodomethane	0.1624	0.2291	41	TML	19	
18	TM	Acrylonitrile	0.1309	0.1423	8.7	TM		
19	TM	Methylene chloride	0.5589	0.5527	1.1	TM		
20	TM	Carbon disulfide	1.366	1.141	16	TM		
21	TM	Methyl t-butyl ether (MtBE)	1.343	1.341	0.16	TM		
22	TM	Trans-1,2-DCE	0.4900	0.4737	3.3	TM		
23	TM	Diisopropyl Ether	1.660	1.874	13	TM		
24	TM**	1,1-DCA	0.9403	0.9868	5.0	TM**		
25	TM	Vinyl Acetate	0.4077	0.4519	11	TM		
26	TM	Ethyl tert Butyl Ether	1.491	1.496	0.33	TM		
27	TM	MEK (2-Butanone)	0.1913	0.2314	21	TM		*
28	TM	Cis-1,2-DCE	0.5812	0.5564	4.3	TM		
29	TM	2,2-Dichloropropane	0.2387	0.2282	4.4	TM		
30	TM*	Chloroform	0.9275	0.9226	0.53	TM*		
31	TM	Bromochloromethane	0.2717	0.2438	10	TM		
32	S	Dibromofluoromethane(S)	0.5276	0.5073	3.8	S		
33	TM	1,1,1-TCA	0.7395	0.6740	8.8	TM		
34	TM	Cyclohexane	0.3892	0.3852	1.0	TM		
35	TM	1,1-Dichloropropene	0.6411	0.6184	3.5	TM		
36	TM	2,2,4-Trimethylpentane	1.168	1.175	0.59	TM		
37	S	1,2-DCA-D4(S)	0.5751	0.5974	3.9	S		
38	TM	Carbon Tetrachioride	0.5819	0.4973	15	TM		
39	TM	Tert Amyl Methyl Ether	1.353	1.338	1.1	TM		
40	TM	1,2-DCA	0.7221	0.7441	3.1	TM		
		Average			9.2			

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 11/16/16
Instrument: Loki
Cal. Date: 11/13/16
Data File: 1116L16.D

		Compound	MEAN	CCRF	%D	%Drift		
41	TM	Benzene	1.971	2.024	2.7	TM		
42	TM	TCE	0.2714	0.2549	6.1	TM		
43	TM	2-Pentanone	0.2961	0.3580	21	TM		nt
44	TM*	1,2-Dichloropropane	0.5591	0.6136	9.7	TM*		
45	TM	Bromodichloromethane	0.6980	0.6700	4.0	TM		
46	TM	Methyl Cyclohexane	0.6502	0.5831	10	TM		
47	TM	Dibromomethane	0.3050	0.3055	0.15	TM		
48	TM	2-Chloroethyl vinyl ether	0.0000	0.0093	0.00	TM		
49	TML	MIBK (methyl isobutyl ketone)	0.5519	0.5676	2.9	TML	22	*
50	TM	1-Bromo-2-chloroethane	0.3972	0.4258	7.2	TM		
51	TM	Cis-1,3-Dichloropropene	0.8395	0.8087	3.7	TM		
52	TM*	Toluene	2.102	2.103	0.03	TM*		
53	TM	Trans-1,3-Dichloropropene	0.7176	0.6750	5.9	TM		
54	TM	1,1,2-TCA	0.3779	0.3815	0.96	TM		
55	TML	2-Hexanone	0.1543	0.1909	24	TML	11	
56	I	Chlorobenzene-D5 (IS)	ISTD			I		
57	S	Toluene-D8(S)	1.909	1.895	0.74	S		
58	TM	1,2-EDB	0.4251	0.4134	2.7	TM		
59	TM	Tetrachloroethene	0.5215	0.4388	16	TM		
60	TM	1-Chlorohexane	0.6031	0.5528	8.3	TM		
61	TM	1,1,1,2-Tetrachloroethane	0.5276	0.4902	7.1	TM		
62	TM	m&p-Xylene	0.9094	0.8918	1.9	TM		
63	TM	o-Xylene	0.8935	0.8797	1.5	TM		
64	TM	Styrene	0.9869	0.9929	0.60	TM		
65	S	4-Bromofluorobenzene(S)	0.6890	0.6837	0.77	S		
66	TM	1,3-Dichloropropane	0.7774	0.8196	5.4	TM		
67	TM	Dibromochloromethane	0.5144	0.4561	11	TM		
68	TM**	Chlorobenzene	1.435	1.395	2.8	TM**		
69	TM*	Ethylbenzene	2.352	2.358	0.27	TM*		
70	TM**	Bromoform	0.3116	0.2750	12	TM**		
71	I	1,4-Dichlorobenzene-D (IS)	ISTD			I		
72	TM	Isopropylbenzene	4.080	4.100	0.47	TM		
73	TM**	1,1,2,2-Tetrachloroethane	0.9935	1.105	11	TM**		
74	TM	1,2,3-Trichloropropane	0.1903	0.2088	9.7	TM		
75	TM	t-1,4-Dichloro-2-Butene	0.2679	0.2995	12	TM		
76	TM	Bromobenzene	1.117	1.099	1.6	TM		
77	TM	n-Propylbenzene	4.665	4.870	4.4	TM		
78	TM	4-Ethyltoluene	3.998	4.114	2.9	TM		
79	TM	2-Chlorotoluene	3.006	3.134	4.3	TM		
80	TM	1,3,5-Trimethylbenzene	3.388	3.489	3.0	TM		
		Average			5.8			

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 11/16/16
Matrix: 0 Instrument: Loki
Cal. Date: 11/13/16
Data File: 1116L16.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	4-Chlorotoluene	3.471	3.663	5.5	TM	
82	TM	Tert-Butylbenzene	2.906	2.792	3.9	TM	
83	TM	1,2,4-Trimethylbenzene	3.435	3.555	3.5	TM	
84	TM	Sec-Butylbenzene	4.098	4.059	0.94	TM	
85	TM	p-Isopropyltoluene	3.407	3.450	1.3	TM	
86	TM	Benzyl Chloride	1.119	1.183	5.8	TM	
87	TM	1,3-DCB	2.019	2.076	2.8	TM	
88	TM	1,4-DCB	2.090	2.100	0.49	TM	
89	TM	n-Butylbenzene	3.003	3.082	2.6	TM	
90	TM	1,2-DCB	1.971	1.970	0.07	TM	
91	TM	Hexachloroethane	0.6944	0.6538	5.9	TM	
92	TM	1,2-Dibromo-3-chloropropane	0.1841	0.1647	11	TM	
93	TM	1,2,4-Trichlorobenzene	1.335	1.299	2.6	TM	
94	TM	Hexachlorobutadiene	0.5187	0.4589	12	TM	
95	TM	Naphthalene	1.689	1.812	7.3	TM	
96	TM	1,2,3-Trichlorobenzene	0.8158	0.8559	4.9	TM	
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			4.4		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1116L16.D Vial: 6
Acq On : 16 Nov 16 15:27 Operator: PM,DG,SV,CMM
Sample : 161116A CCV/LCS 10ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 7:47 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	731776	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	695040	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	359936	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	371242	24.04084 ppb		0.00
Spiked Amount 25.000			Recovery = 96.164%			
37) 1,2-DCA-D4(S)	4.93	65	437164	25.96776 ppb		0.00
Spiked Amount 25.000			Recovery = 103.872%			
57) Toluene-D8(S)	7.22	98	1316976	24.81396 ppb		0.00
Spiked Amount 25.000			Recovery = 99.256%			
65) 4-Bromofluorobenzene(S)	9.89	95	475191	24.80644 ppb		0.00
Spiked Amount 25.000			Recovery = 99.224%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.86	85	136397	8.79918 ppb		98
3) Freon 114	0.93	85	104954	9.16278 ppb		94
4) Chloromethane	0.96	50	255146	11.86478 ppb		99
5) Vinyl chloride	1.03	62	199570	10.29911 ppb		97
6) Bromomethane	1.22	96	104176	11.73043 ppb		98
7) Chloroethane	1.29	64	111662	10.47976 ppb		97
8) Dichlorofluoromethane	1.43	67	338272	10.11046 ppb		97
9) Trichlorofluoromethane	1.46	101	175598	8.76386 ppb		98
10) Acrolein	1.76	56	173722	140.86563 ppb		99
11) Acetone	1.88	43	59054	11.78901 ppb		98
12) Freon-113	1.84	101	97648	8.49010 ppb		93
13) 1,1-DCE	1.83	96	81176	9.04454 ppb		97
14) t-Butanol	2.41	59	71896	130.83488 ppb		100
15) Acetonitrile	2.10	41	226430	152.12296 ppb		99
16) Methyl Acetate	2.17	43	118315	11.46189 ppb		99
17) Iodomethane	1.93	142	67064	11.88409 ppb		97
18) Acrylonitrile	2.48	52	41646	10.86735 ppb		89
19) Methylene chloride	2.24	84	161772	9.88848 ppb		99
20) Carbon disulfide	1.98	76	334107	8.35556 ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	392419	9.98440 ppb		96
22) Trans-1,2-DCE	2.50	96	138663	9.66745 ppb		92
23) Diisopropyl Ether	3.10	45	548626	11.28991 ppb		93
24) 1,1-DCA	2.95	63	288858	10.49538 ppb		99
25) Vinyl Acetate	3.08	43	132278	11.08324 ppb		92
26) Ethyl tert Butyl Ether	3.59	59	437772	10.03350 ppb		99
27) MEK (2-Butanone)	3.81	43	67746	12.09576 ppb		98
28) Cis-1,2-DCE	3.73	96	162875	9.57357 ppb		89
29) 2,2-Dichloropropane	3.71	77	66806	9.56019 ppb		100
30) Chloroform	4.26	83	270068	9.94722 ppb		97
31) Bromochloromethane	4.08	128	71350	8.97225 ppb		93
33) 1,1,1-TCA	4.47	97	197299	9.11543 ppb		90
34) Cyclohexane	4.53	41	112748	9.89712 ppb		90
35) 1,1-Dichloropropene	4.72	75	181009	9.64539 ppb		97
36) 2,2,4-Trimethylpentane	5.16	57	343813	10.05900 ppb	#	84
38) Carbon Tetrachloride	4.71	119	145553	8.54534 ppb		99
39) Tert Amyl Methyl Ether	5.23	73	391597	9.88927 ppb		95
40) 1,2-DCA	5.03	62	217809	10.30552 ppb		96
41) Benzene	4.99	78	592552	10.27241 ppb		99
42) TCE	5.84	95	74600	9.39023 ppb		95

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161113\1116L16.D Vial: 6
Acq On : 16 Nov 16 15:27 Operator: PM,DG,SV,CMM
Sample : 161116A CCV/LCS 10ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 7:47 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
43)	2-Pentanone	6.12	43	1310016	151.14239 ppb	94
44)	1,2-Dichloropropane	6.09	63	179595	10.97347 ppb	97
45)	Bromodichloromethane	6.44	83	196130	9.59906 ppb	99
46)	Methyl Cyclohexane	6.04	83	170694	8.96815 ppb	92
47)	Dibromomethane	6.22	93	89419	10.01489 ppb	93
49)	MIBK (methyl isobutyl ket	7.16	43	166156	12.21636 ppb	97
50)	1-Bromo-2-chloroethane	6.75	63	124640	10.72123 ppb	99
51)	Cis-1,3-Dichloropropene	6.95	75	236716	9.63367 ppb	95
52)	Toluene	7.29	91	615574	10.00280 ppb	97
53)	Trans-1,3-Dichloropropene	7.57	75	197578	9.40639 ppb	95
54)	1,1,2-TCA	7.74	83	111681	10.09584 ppb	99
55)	2-Hexanone	8.05	43	55878	11.14784 ppb	93
58)	1,2-EDB	8.21	107	114927	9.72524 ppb	99
59)	Tetrachloroethene	7.86	166	121982	8.41342 ppb	94
60)	1-Chlorohexane	8.76	91	153696	9.16633 ppb	88
61)	1,1,1,2-Tetrachloroethane	8.83	131	136294	9.29164 ppb	99
62)	m&p-Xylene	8.99	106	495861	19.61250 ppb	98
63)	o-Xylene	9.38	106	244567	9.84568 ppb	93
64)	Styrene	9.40	104	276032	10.06049 ppb	99
66)	1,3-Dichloropropane	7.90	76	227875	10.54353 ppb	99
67)	Dibromochloromethane	8.12	129	126799	8.86551 ppb	100
68)	Chlorobenzene	8.73	112	387735	9.72152 ppb	95
69)	Ethylbenzene	8.87	91	655631	10.02659 ppb	100
70)	Bromoform	9.55	173	76457	8.82454 ppb	100
72)	Isopropylbenzene	9.76	105	590246	10.04698 ppb	98
73)	1,1,2,2-Tetrachloroethane	10.07	83	159149	11.12670 ppb	99
74)	1,2,3-Trichloropropane	10.09	110	30056	10.96762 ppb	95
75)	t-1,4-Dichloro-2-Butene	10.13	53	43122	11.17968 ppb	85
76)	Bromobenzene	10.02	156	158207	9.84003 ppb	99
77)	n-Propylbenzene	10.17	91	701173	10.43952 ppb	100
78)	4-Ethyltoluene	10.29	105	592348	10.29108 ppb	100
79)	2-Chlorotoluene	10.23	91	451210	10.42648 ppb	94
80)	1,3,5-Trimethylbenzene	10.35	105	502390	10.29965 ppb	99
81)	4-Chlorotoluene	10.34	91	527355	10.55119 ppb	96
82)	Tert-Butylbenzene	10.67	119	401933	9.60535 ppb	98
83)	1,2,4-Trimethylbenzene	10.72	105	511832	10.34879 ppb	97
84)	Sec-Butylbenzene	10.88	105	584437	9.90645 ppb	97
85)	p-Isopropyltoluene	11.04	119	496729	10.12552 ppb	98
86)	Benzyl Chloride	11.20	91	170389	10.58071 ppb	98
87)	1,3-DCB	10.96	146	298878	10.28151 ppb	98
88)	1,4-DCB	11.05	146	302357	10.04859 ppb	98
89)	n-Butylbenzene	11.44	91	443685	10.26170 ppb	95
90)	1,2-DCB	11.41	146	283567	9.99343 ppb	99
91)	Hexachloroethane	11.66	117	94125	9.41441 ppb	97
92)	1,2-Dibromo-3-chloropropan	12.18	157	23719	8.94923 ppb	96
93)	1,2,4-Trichlorobenzene	13.00	180	187062	9.73524 ppb	96
94)	Hexachlorobutadiene	13.19	225	66071	8.84710 ppb	94
95)	Naphthalene	13.23	128	260864	10.72669 ppb	98
96)	1,2,3-Trichlorobenzene	13.47	180	123224	10.49164 ppb	99

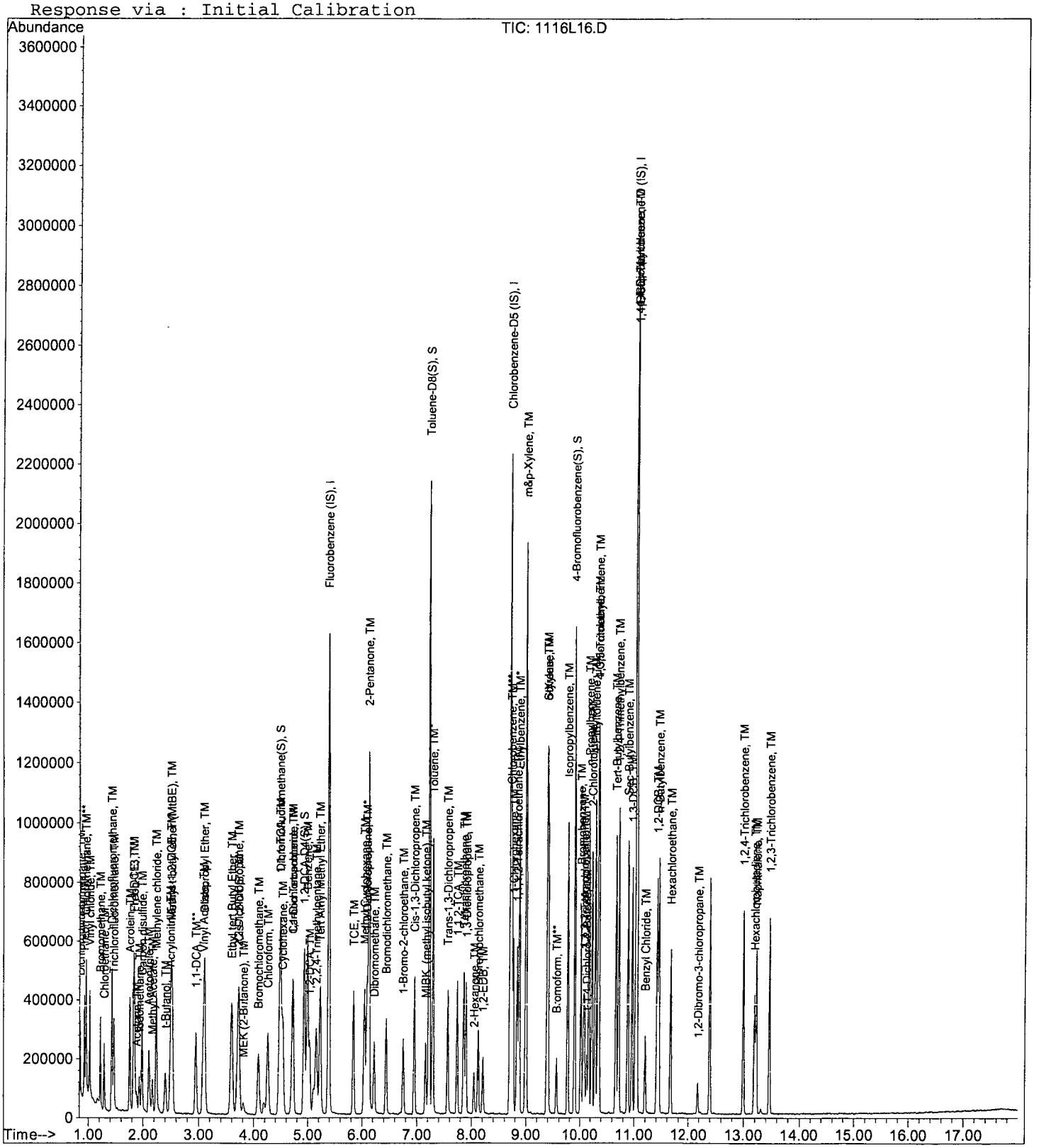
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1116L16.D Vial: 6
Acq On : 16 Nov 16 15:27 Operator: PM,DG,SV,CMM
Sample : 161116A CCV/LCS 10ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 7:47 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 11/17/16
Matrix: Instrument: Loki
Initial Cal. Date: 11/13/16
Data File: 1116L36.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TM	Dichlorodifluoromethane	0.5296	0.4399	17	TM	
3	TM	Freon 114	0.3913	0.3265	17	TM	
4	TM**	Chloromethane	0.7347	0.8879	21	TM**	
5	TM*	Vinyl chloride	0.6620	0.6820	3.0	TM*	
6	TM	Bromomethane	0.3034	0.3347	10	TM	
7	TM	Chloroethane	0.3640	0.3923	7.8	TM	
8	TM	Dichlorofluoromethane	1.143	1.142	0.10	TM	
9	TM	Trichlorofluoromethane	0.6845	0.5864	14	TM	
10	TM	Acrolein	0.0421	0.0419	0.66	TM	
11	TML	Acetone	0.2561	0.1790	30	TML	3.5
12	TM	Freon-113	0.3929	0.2985	24	TM	
13	TM*	1,1-DCE	0.3066	0.2758	10	TM*	
14	TM	t-Butanol	0.0188	0.0162	14	TM	
15	TM	Acetonitrile	0.0509	0.0572	13	TM	
16	TM	Methyl Acetate	0.3527	0.3746	6.2	TM	
17	TML	Iodomethane	0.1624	0.2668	64	TML	37
18	TM	Acrylonitrile	0.1309	0.1244	5.0	TM	
19	TM	Methylene chloride	0.5589	0.5490	1.8	TM	
20	TM	Carbon disulfide	1.366	1.146	16	TM	
21	TM	Methyl t-butyl ether (MtBE)	1.343	1.280	4.6	TM	
22	TM	Trans-1,2-DCE	0.4900	0.4590	6.3	TM	
23	TM	Diisopropyl Ether	1.660	1.960	18	TM	
24	TM**	1,1-DCA	0.9403	1.012	7.7	TM**	
25	TM	Vinyl Acetate	0.4077	0.4393	7.8	TM	
26	TM	Ethyl tert Butyl Ether	1.491	1.505	0.95	TM	
27	TM	MEK (2-Butanone)	0.1913	0.2032	6.2	TM	
28	TM	Cis-1,2-DCE	0.5812	0.5566	4.2	TM	
29	TM	2,2-Dichloropropane	0.2387	0.2021	15	TM	
30	TM*	Chloroform	0.9275	0.9515	2.6	TM*	
31	TM	Bromochloromethane	0.2717	0.2471	9.1	TM	
32	S	Dibromofluoromethane(S)	0.5276	0.5023	4.8	S	
33	TM	1,1,1-TCA	0.7395	0.6788	8.2	TM	
34	TM	Cyclohexane	0.3892	0.3640	6.5	TM	
35	TM	1,1-Dichloropropene	0.6411	0.6050	5.6	TM	
36	TM	2,2,4-Trimethylpentane	1.168	0.9631	18	TM	
37	S	1,2-DCA-D4(S)	0.5751	0.6119	6.4	S	
38	TM	Carbon Tetrachloride	0.5819	0.4848	17	TM	
39	TM	Tert Amyl Methyl Ether	1.353	1.284	5.1	TM	
40	TM	1,2-DCA	0.7221	0.7309	1.2	TM	
		Average			11.0		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 11/17/16
Instrument: Loki
Cal. Date: 11/13/16
Data File: 1116L36.D

		Compound	MEAN	CCRF	%D	%Drift	
41	TM	Benzene	1.971	2.092	6.1	TM	
42	TM	TCE	0.2714	0.2611	3.8	TM	
43	TM	2-Pentanone	0.2961	0.3157	6.6	TM	
44	TM*	1,2-Dichloropropane	0.5591	0.6178	11	TM*	
45	TM	Bromodichloromethane	0.6980	0.6708	3.9	TM	
46	TM	Methyl Cyclohexane	0.6502	0.5349	18	TM	
47	TM	Dibromomethane	0.3050	0.2877	5.7	TM	
48	TM	2-Chloroethyl vinyl ether	0.0000	0.0010	0.00	TM	
49	TML	MIBK (methyl isobutyl ketone)	0.5519	0.5647	2.3	TML	21
50	TM	1-Bromo-2-chloroethane	0.3972	0.4148	4.4	TM	
51	TM	Cis-1,3-Dichloropropene	0.8395	0.8060	4.0	TM	
52	TM*	Toluene	2.102	2.103	0.02	TM*	
53	TM	Trans-1,3-Dichloropropene	0.7176	0.6463	9.9	TM	
54	TM	1,1,2-TCA	0.3779	0.3650	3.4	TM	
55	TML	2-Hexanone	0.1543	0.1579	2.3	TML	5.8
56	I	Chlorobenzene-D5 (IS)	ISTD			I	
57	S	Toluene-D8(S)	1.909	1.969	3.1	S	
58	TM	1,2-EDB	0.4251	0.3976	6.5	TM	
59	TM	Tetrachloroethene	0.5215	0.4530	13	TM	
60	TM	1-Chlorohexane	0.6031	0.5532	8.3	TM	
61	TM	1,1,1,2-Tetrachloroethane	0.5276	0.4884	7.4	TM	
62	TM	m&p-Xylene	0.9094	0.9201	1.2	TM	
63	TM	o-Xylene	0.8935	0.9113	2.0	TM	
64	TM	Styrene	0.9869	1.009	2.2	TM	
65	S	4-Bromofluorobenzene(S)	0.6890	0.6937	0.67	S	
66	TM	1,3-Dichloropropane	0.7774	0.8134	4.6	TM	
67	TM	Dibromochloromethane	0.5144	0.4591	11	TM	
68	TM**	Chlorobenzene	1.435	1.462	1.9	TM**	
69	TM*	Ethylbenzene	2.352	2.472	5.1	TM*	
70	TM**	Bromoform	0.3116	0.2461	21	TM**	
71	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
72	TM	Isopropylbenzene	4.080	4.418	8.3	TM	
73	TM**	1,1,2,2-Tetrachloroethane	0.9935	1.069	7.6	TM**	
74	TM	1,2,3-Trichloropropane	0.1903	0.1974	3.7	TM	
75	TM	t-1,4-Dichloro-2-Butene	0.2679	0.2494	6.9	TM	
76	TM	Bromobenzene	1.117	1.144	2.5	TM	
77	TM	n-Propylbenzene	4.665	5.234	12	TM	
78	TM	4-Ethyltoluene	3.998	4.380	9.6	TM	
79	TM	2-Chlorotoluene	3.006	3.432	14	TM	
80	TM	1,3,5-Trimethylbenzene	3.388	3.823	13	TM	
		Average			6.5		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 11/17/16
Instrument: Loki
Cal. Date: 11/13/16
Data File: 1116L36.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	4-Chlorotoluene	3.471	3.939	13	TM	
82	TM	Tert-Butylbenzene	2.906	2.994	3.0	TM	
83	TM	1,2,4-Trimethylbenzene	3.435	3.862	12	TM	
84	TM	Sec-Butylbenzene	4.098	4.273	4.3	TM	
85	TM	p-Isopropyltoluene	3.407	3.572	4.8	TM	
86	TM	Benzyl Chloride	1.119	0.8444	25	TM	
87	TM	1,3-DCB	2.019	2.193	8.6	TM	
88	TM	1,4-DCB	2.090	2.228	6.6	TM	
89	TM	n-Butylbenzene	3.003	3.216	7.1	TM	
90	TM	1,2-DCB	1.971	2.046	3.8	TM	
91	TM	Hexachloroethane	0.6944	0.7113	2.4	TM	
92	TM	1,2-Dibromo-3-chloropropane	0.1841	0.1523	17	TM	
93	TM	1,2,4-Trichlorobenzene	1.335	1.298	2.8	TM	
94	TM	Hexachlorobutadiene	0.5187	0.4389	15	TM	
95	TM	Naphthalene	1.689	1.745	3.3	TM	
96	TM	1,2,3-Trichlorobenzene	0.8158	0.8204	0.57	TM	
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			8.1		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1116L36.D Vial: 26
Acq On : 17 Nov 16 00:48 Operator: PM,DG,SV,CMM
Sample : Ending CCV 8260 10ug/L 11/16/16 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 7:48 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	711931	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	656128	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	325120	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	357605	23.80326 ppb		0.00
Spiked Amount 25.000			Recovery = 95.212%			
37) 1,2-DCA-D4(S)	4.93	65	435617	26.59716 ppb		0.00
Spiked Amount 25.000			Recovery = 106.388%			
57) Toluene-D8(S)	7.22	98	1292014	25.78735 ppb		0.00
Spiked Amount 25.000			Recovery = 103.148%			
65) 4-Bromofluorobenzene(S)	9.89	95	455136	25.16858 ppb		0.00
Spiked Amount 25.000			Recovery = 100.676%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	125284	8.30756 ppb		98
3) Freon 114	0.93	85	92977	8.34342 ppb		90
4) Chloromethane	0.96	50	252849	12.08572 ppb		99
5) Vinyl chloride	1.03	62	194209	10.30182 ppb		95
6) Bromomethane	1.22	96	95320	11.03241 ppb		96
7) Chloroethane	1.29	64	111719	10.77738 ppb		97
8) Dichlorofluoromethane	1.43	67	325166	9.98965 ppb		96
9) Trichlorofluoromethane	1.46	101	166998	8.56698 ppb		98
10) Acrolein	1.76	56	148992	124.18051 ppb	#	99
11) Acetone	1.88	43	50970	10.34784 ppb		96
12) Freon-113	1.84	101	85007	7.59704 ppb		94
13) 1,1-DCE	1.83	96	78544	8.99523 ppb		96
14) t-Butanol	2.40	59	57592	107.72617 ppb		99
15) Acetonitrile	2.10	41	203714	140.67663 ppb		99
16) Methyl Acetate	2.17	43	106689	10.62371 ppb		93
17) Iodomethane	1.93	142	75968	13.71865 ppb		94
18) Acrylonitrile	2.47	52	35423	9.50114 ppb		92
19) Methylene chloride	2.24	84	156347	9.82327 ppb		99
20) Carbon disulfide	1.98	76	326305	8.38791 ppb		100
21) Methyl t-butyl ether (MtBE	2.52	73	364621	9.53573 ppb		96
22) Trans-1,2-DCE	2.50	96	130705	9.36664 ppb		91
23) Diisopropyl Ether	3.10	45	558027	11.80347 ppb		93
24) 1,1-DCA	2.95	63	288277	10.76624 ppb		98
25) Vinyl Acetate	3.09	43	125113	10.77511 ppb	#	81
26) Ethyl tert Butyl Ether	3.59	59	428530	10.09545 ppb		99
27) MEK (2-Butanone)	3.80	43	57880	10.62229 ppb		97
28) Cis-1,2-DCE	3.72	96	158492	9.57562 ppb		85
29) 2,2-Dichloropropane	3.70	77	57560	8.46666 ppb		99
30) Chloroform	4.25	83	270956	10.25812 ppb		98
31) Bromochloromethane	4.08	128	70356	9.09387 ppb		97
33) 1,1,1-TCA	4.47	97	193310	9.18009 ppb		89
34) Cyclohexane	4.53	41	103659	9.35292 ppb		93
35) 1,1-Dichloropropene	4.72	75	172292	9.43681 ppb		100
36) 2,2,4-Trimethylpentane	5.16	57	274269	8.24802 ppb	#	80
38) Carbon Tetrachloride	4.70	119	138057	8.33118 ppb		100
39) Tert Amyl Methyl Ether	5.23	73	365536	9.48845 ppb	#	92
40) 1,2-DCA	5.03	62	208150	10.12303 ppb		96
41) Benzene	4.99	78	595668	10.61427 ppb		99
42) TCE	5.84	95	74344	9.61886 ppb		94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1116L36.D Vial: 26
Acq On : 17 Nov 16 00:48 Operator: PM,DG,SV,CMM
Sample : Ending CCV 8260 10ug/L 11/16/16 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 7:48 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43) 2-Pentanone	6.12	43	1123824	133.27486 ppb		93
44) 1,2-Dichloropropane	6.08	63	175945	11.05012 ppb		96
45) Bromodichloromethane	6.44	83	191019	9.60952 ppb		98
46) Methyl Cyclohexane	6.04	83	152334	8.22662 ppb		88
47) Dibromomethane	6.22	93	81943	9.43340 ppb		94
49) MIBK (methyl isobutyl ket	7.15	43	160797	12.14903 ppb		95
50) 1-Bromo-2-chloroethane	6.75	63	118128	10.44432 ppb		98
51) Cis-1,3-Dichloropropene	6.95	75	229520	9.60118 ppb		98
52) Toluene	7.29	91	598848	10.00226 ppb		98
53) Trans-1,3-Dichloropropene	7.56	75	184045	9.00634 ppb		97
54) 1,1,2-TCA	7.74	83	103944	9.65835 ppb		95
55) 2-Hexanone	8.05	43	44973	9.41736 ppb		97
58) 1,2-EDB	8.21	107	104352	9.35406 ppb		98
59) Tetrachloroethene	7.86	166	118878	8.68560 ppb		98
60) 1-Chlorohexane	8.76	91	145196	9.17295 ppb		87
61) 1,1,1,2-Tetrachloroethane	8.83	131	128173	9.25622 ppb		100
62) m&p-Xylene	8.99	106	482944	20.23443 ppb		93
63) o-Xylene	9.38	106	239168	10.19934 ppb		93
64) Styrene	9.40	104	264832	10.22472 ppb		96
66) 1,3-Dichloropropane	7.90	76	213490	10.46376 ppb		97
67) Dibromochloromethane	8.12	129	120501	8.92483 ppb		99
68) Chlorobenzene	8.73	112	383678	10.19031 ppb		99
69) Ethylbenzene	8.87	91	648829	10.51103 ppb		99
70) Bromoform	9.55	173	64579	7.89564 ppb		99
72) Isopropylbenzene	9.76	105	574580	10.82766 ppb		96
73) 1,1,2,2-Tetrachloroethane	10.07	83	138970	10.75635 ppb		99
74) 1,2,3-Trichloropropane	10.09	110	25672	10.37105 ppb		93
75) t-1,4-Dichloro-2-Butene	10.13	53	32438	9.31035 ppb	#	74
76) Bromobenzene	10.02	156	148836	10.24850 ppb		99
77) n-Propylbenzene	10.17	91	680727	11.22044 ppb		99
78) 4-Ethyltoluene	10.29	105	569584	10.95528 ppb		98
79) 2-Chlorotoluene	10.23	91	446274	11.41674 ppb		93
80) 1,3,5-Trimethylbenzene	10.36	105	497207	11.28497 ppb		98
81) 4-Chlorotoluene	10.34	91	512242	11.34632 ppb		96
82) Tert-Butylbenzene	10.67	119	389382	10.30189 ppb		98
83) 1,2,4-Trimethylbenzene	10.72	105	502200	11.24140 ppb		96
84) Sec-Butylbenzene	10.88	105	555687	10.42779 ppb		98
85) p-Isopropyltoluene	11.04	119	464552	10.48368 ppb		99
86) Benzyl Chloride	11.20	91	109812	7.54927 ppb		98
87) 1,3-DCB	10.96	146	285154	10.85985 ppb		98
88) 1,4-DCB	11.06	146	289775	10.66173 ppb		99
89) n-Butylbenzene	11.44	91	418272	10.70989 ppb		99
90) 1,2-DCB	11.41	146	266022	10.37906 ppb		100
91) Hexachloroethane	11.66	117	92504	10.24307 ppb		90
92) 1,2-Dibromo-3-chloropropan	12.18	157	19800	8.27058 ppb		96
93) 1,2,4-Trichlorobenzene	12.99	180	168769	9.72379 ppb		100
94) Hexachlorobutadiene	13.19	225	57072	8.46047 ppb		95
95) Naphthalene	13.23	128	226880	10.32832 ppb		99
96) 1,2,3-Trichlorobenzene	13.47	180	106696	10.05722 ppb		100

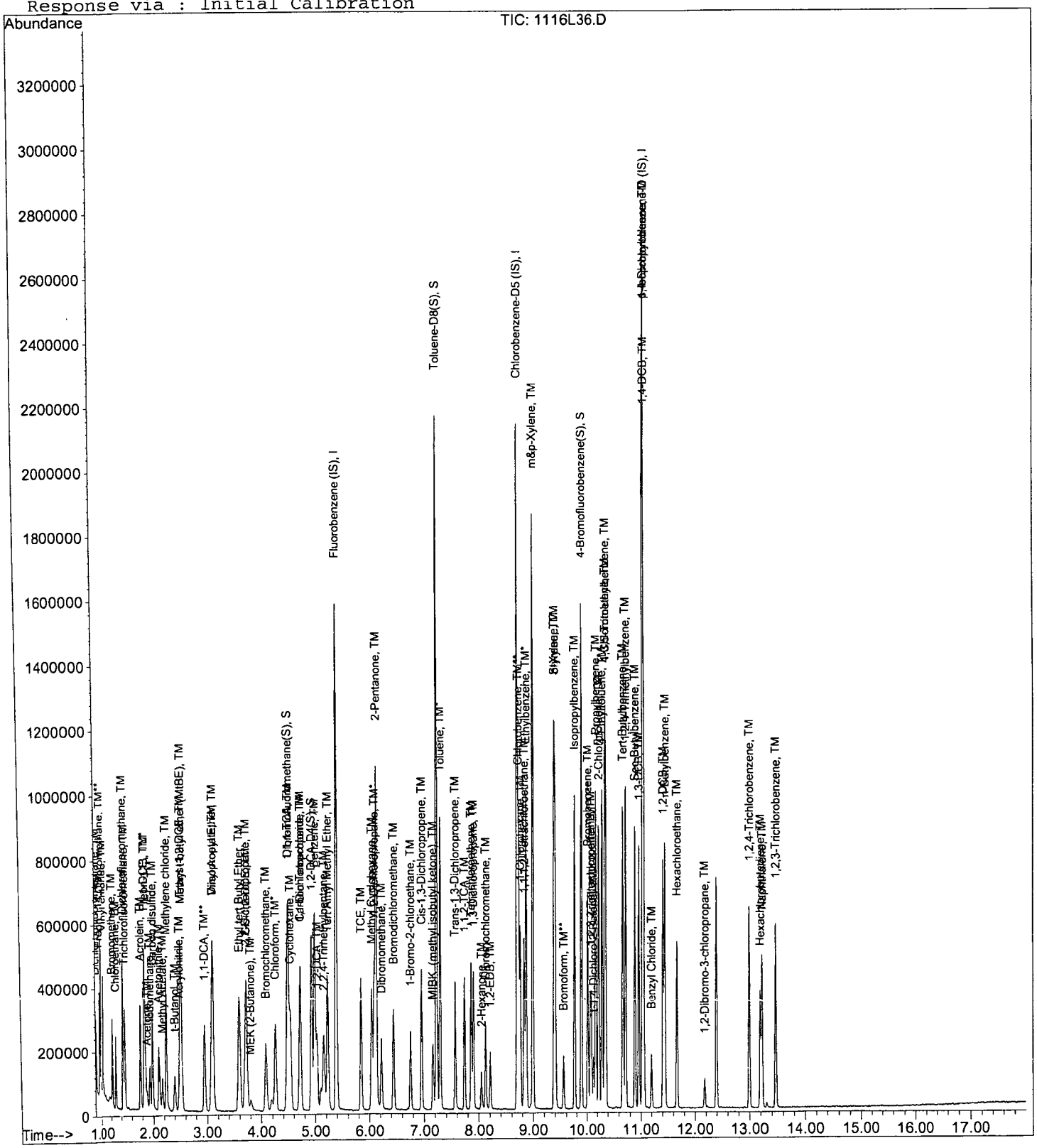
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1116L36.D Vial: 26
Acq On : 17 Nov 16 00:48 Operator: PM,DG,SV,CMM
Sample : Ending CCV 8260 10ug/L 11/16/16 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 7:48 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



EPA METHOD 8260B
Volatile Organic Compounds
Raw Data

APPL, INC.

Method Blank
EPA 8260B WATER

Blank Name/QCG: **161116W-45907 - 213749**
Batch ID: #86BXD-161116AL

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	11/16/16	11/16/16
BLANK	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	11/16/16	11/16/16
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	11/16/16	11/16/16
BLANK	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	11/16/16	11/16/16
BLANK	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	11/16/16	11/16/16
BLANK	SURROGATE: 1,2-DICHLOROET	105	81-118			%	11/16/16	11/16/16
BLANK	SURROGATE: 4-BROMOFLUOR	98.4	85-114			%	11/16/16	11/16/16
BLANK	SURROGATE: DIBROMOFLUOR	95.3	80-119			%	11/16/16	11/16/16
BLANK	SURROGATE: TOLUENE-D8 (S)	100.0	89-112			%	11/16/16	11/16/16

Quant Method: LALLW.M
Run #: 1116L20
Instrument: Loki
Sequence: 161113
Initials: SV

GC SC-Blank-REG MDLs-DOD
Printed: 12/06/16 10:43:49 AM

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1116L20.D Vial: 10
Acq On : 16 Nov 16 17:19 Operator: PM,DG,SV,CMM
Sample : 161116A BLK-1WL Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 7:57 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.39	96	701915	25.00000 ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	658240	25.00000 ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	343296	25.00000 ppb	0.00
System Monitoring Compounds					
32) Dibromofluoromethane(S)	4.49	111	353055	23.83573 ppb	0.00
Spiked Amount 25.000			Recovery =	95.344%	
37) 1,2-DCA-D4(S)	4.93	65	425682	26.36144 ppb	0.00
Spiked Amount 25.000			Recovery =	105.444%	
57) Toluene-D8(S)	7.22	98	1256029	24.98869 ppb	0.00
Spiked Amount 25.000			Recovery =	99.956%	
65) 4-Bromofluorobenzene(S)	9.89	95	446270	24.59911 ppb	0.00
Spiked Amount 25.000			Recovery =	98.396%	
Target Compounds					Qvalue
19) Methylene chloride	2.24	84	17846	1.13726 ppb	97

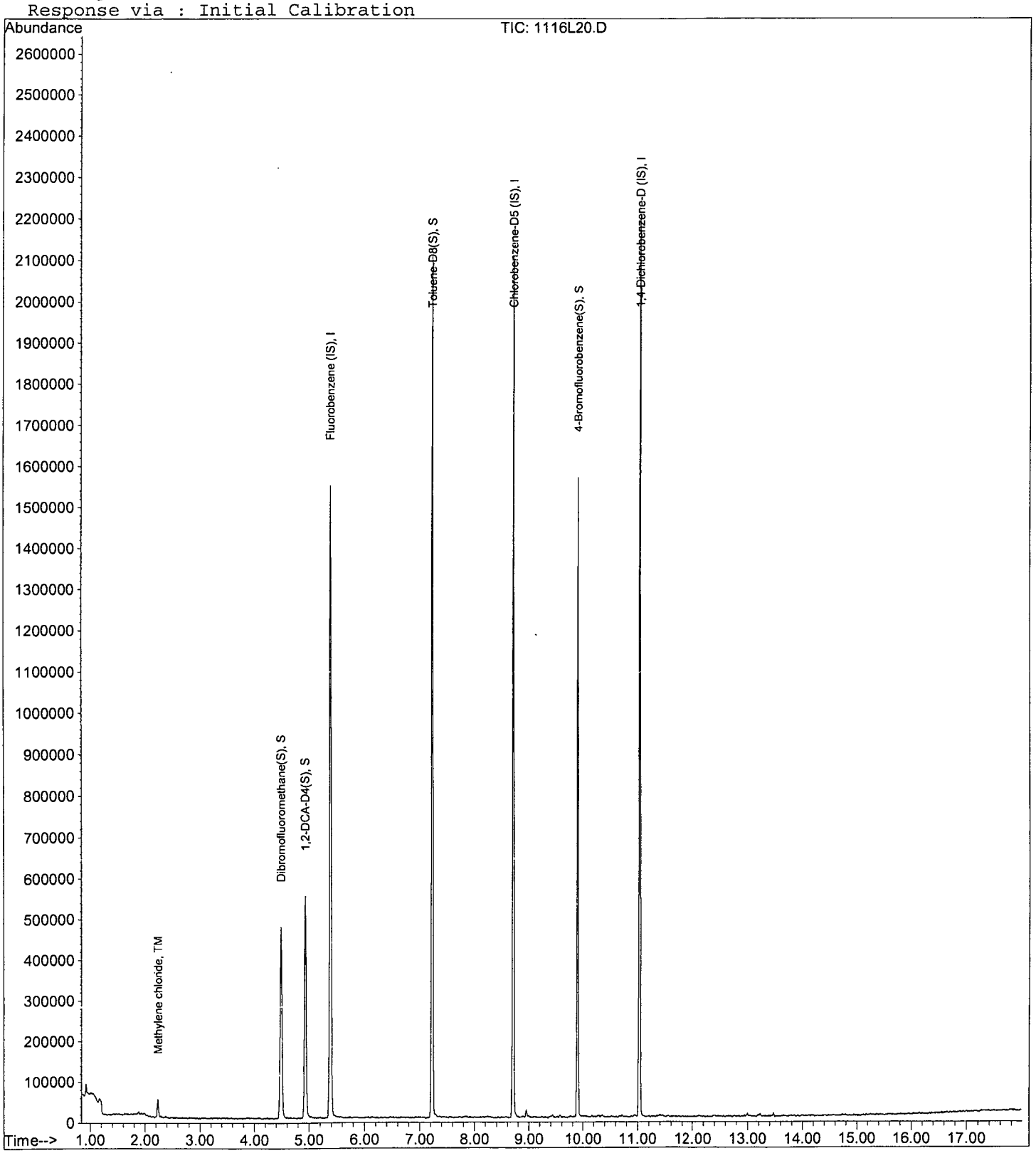
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1116L20.D Vial: 10
Acq On : 16 Nov 16 17:19 Operator: PM,DG,SV,CMM
Sample : 161116A BLK-1WL Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 7:57 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



Laboratory Control Spike Recovery
EPA 8260B WATER

APPL ID: **161116W-45907 LCS - 213749**
Batch ID: #86BXD-161116AL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1,2-DICHLOROETHANE	10.00	10.3	103	73-128
BENZENE	10.00	10.3	103	79-120
ETHYLBENZENE	10.00	10.0	100	79-121
TOLUENE	10.00	10.0	100	80-121
XYLENES (TOTAL)	30.0	29.5	98.3	79-121
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	26.0	104	81-118
SURROGATE: 4-BROMOFLUOROBENZE	25.0	24.8	99.2	85-114
SURROGATE: DIBROMOFLUOROMETH	25.0	24.0	96.0	80-119
SURROGATE: TOLUENE-D8 (S)	25.0	24.8	99.2	89-112

Comments: _____

Primary	SPK
Quant Method :	LALLW.M
Extraction Date :	11/16/16
Analysis Date :	11/16/16
Instrument :	Loki
Run :	1116L16
Initials :	SV

Printed: 12/06/16 1:20:10 PM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1116L16.D Vial: 6
Acq On : 16 Nov 16 15:27 Operator: PM,DG,SV,CMM
Sample : 161116A CCV/LCS 10ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 7:47 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	731776	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	695040	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	359936	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	371242	24.04084 ppb		0.00
Spiked Amount 25.000			Recovery = 96.164%			
37) 1,2-DCA-D4(S)	4.93	65	437164	25.96776 ppb		0.00
Spiked Amount 25.000			Recovery = 103.872%			
57) Toluene-D8(S)	7.22	98	1316976	24.81396 ppb		0.00
Spiked Amount 25.000			Recovery = 99.256%			
65) 4-Bromofluorobenzene(S)	9.89	95	475191	24.80644 ppb		0.00
Spiked Amount 25.000			Recovery = 99.224%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.86	85	136397	8.79918 ppb		98
3) Freon 114	0.93	85	104954	9.16278 ppb		94
4) Chloromethane	0.96	50	255146	11.86478 ppb		99
5) Vinyl chloride	1.03	62	199570	10.29911 ppb		97
6) Bromomethane	1.22	96	104176	11.73043 ppb		98
7) Chloroethane	1.29	64	111662	10.47976 ppb		97
8) Dichlorofluoromethane	1.43	67	338272	10.11046 ppb		97
9) Trichlorofluoromethane	1.46	101	175598	8.76386 ppb		98
10) Acrolein	1.76	56	173722	140.86563 ppb		99
11) Acetone	1.88	43	59054	11.78901 ppb		98
12) Freon-113	1.84	101	97648	8.49010 ppb		93
13) 1,1-DCE	1.83	96	81176	9.04454 ppb		97
14) t-Butanol	2.41	59	71896	130.83488 ppb		100
15) Acetonitrile	2.10	41	226430	152.12296 ppb		99
16) Methyl Acetate	2.17	43	118315	11.46189 ppb		99
17) Iodomethane	1.93	142	67064	11.88409 ppb		97
18) Acrylonitrile	2.48	52	41646	10.86735 ppb		89
19) Methylene chloride	2.24	84	161772	9.88848 ppb		99
20) Carbon disulfide	1.98	76	334107	8.35556 ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	392419	9.98440 ppb		96
22) Trans-1,2-DCE	2.50	96	138663	9.66745 ppb		92
23) Diisopropyl Ether	3.10	45	548626	11.28991 ppb		93
24) 1,1-DCA	2.95	63	288858	10.49538 ppb		99
25) Vinyl Acetate	3.08	43	132278	11.08324 ppb		92
26) Ethyl tert Butyl Ether	3.59	59	437772	10.03350 ppb		99
27) MEK (2-Butanone)	3.81	43	67746	12.09576 ppb		98
28) Cis-1,2-DCE	3.73	96	162875	9.57357 ppb		89
29) 2,2-Dichloropropane	3.71	77	66806	9.56019 ppb		100
30) Chloroform	4.26	83	270068	9.94722 ppb		97
31) Bromochloromethane	4.08	128	71350	8.97225 ppb		93
33) 1,1,1-TCA	4.47	97	197299	9.11543 ppb		90
34) Cyclohexane	4.53	41	112748	9.89712 ppb		90
35) 1,1-Dichloropropene	4.72	75	181009	9.64539 ppb		97
36) 2,2,4-Trimethylpentane	5.16	57	343813	10.05900 ppb	#	84
38) Carbon Tetrachloride	4.71	119	145553	8.54534 ppb		99
39) Tert Amyl Methyl Ether	5.23	73	391597	9.88927 ppb		95
40) 1,2-DCA	5.03	62	217809	10.30552 ppb		96
41) Benzene	4.99	78	592552	10.27241 ppb		99
42) TCE	5.84	95	74600	9.39023 ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1116L16.D Vial: 6
Acq On : 16 Nov 16 15:27 Operator: PM,DG,SV,CMM
Sample : 161116A CCV/LCS 10ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 7:47 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
43) 2-Pentanone	6.12	43	1310016	151.14239 ppb	94
44) 1,2-Dichloropropane	6.09	63	179595	10.97347 ppb	97
45) Bromodichloromethane	6.44	83	196130	9.59906 ppb	99
46) Methyl Cyclohexane	6.04	83	170694	8.96815 ppb	92
47) Dibromomethane	6.22	93	89419	10.01489 ppb	93
49) MIBK (methyl isobutyl ket	7.16	43	166156	12.21636 ppb	97
50) 1-Bromo-2-chloroethane	6.75	63	124640	10.72123 ppb	99
51) Cis-1,3-Dichloropropene	6.95	75	236716	9.63367 ppb	95
52) Toluene	7.29	91	615574	10.00280 ppb	97
53) Trans-1,3-Dichloropropene	7.57	75	197578	9.40639 ppb	95
54) 1,1,2-TCA	7.74	83	111681	10.09584 ppb	99
55) 2-Hexanone	8.05	43	55878	11.14784 ppb	93
58) 1,2-EDB	8.21	107	114927	9.72524 ppb	99
59) Tetrachloroethene	7.86	166	121982	8.41342 ppb	94
60) 1-Chlorohexane	8.76	91	153696	9.16633 ppb	88
61) 1,1,1,2-Tetrachloroethane	8.83	131	136294	9.29164 ppb	99
62) m&p-Xylene	8.99	106	495861	19.61250 ppb	98
63) o-Xylene	9.38	106	244567	9.84568 ppb	93
64) Styrene	9.40	104	276032	10.06049 ppb	99
66) 1,3-Dichloropropane	7.90	76	227875	10.54353 ppb	99
67) Dibromochloromethane	8.12	129	126799	8.86551 ppb	100
68) Chlorobenzene	8.73	112	387735	9.72152 ppb	95
69) Ethylbenzene	8.87	91	655631	10.02659 ppb	100
70) Bromoform	9.55	173	76457	8.82454 ppb	100
72) Isopropylbenzene	9.76	105	590246	10.04698 ppb	98
73) 1,1,2,2-Tetrachloroethane	10.07	83	159149	11.12670 ppb	99
74) 1,2,3-Trichloropropane	10.09	110	30056	10.96762 ppb	95
75) t-1,4-Dichloro-2-Butene	10.13	53	43122	11.17968 ppb	85
76) Bromobenzene	10.02	156	158207	9.84003 ppb	99
77) n-Propylbenzene	10.17	91	701173	10.43952 ppb	100
78) 4-Ethyltoluene	10.29	105	592348	10.29108 ppb	100
79) 2-Chlorotoluene	10.23	91	451210	10.42648 ppb	94
80) 1,3,5-Trimethylbenzene	10.35	105	502390	10.29965 ppb	99
81) 4-Chlorotoluene	10.34	91	527355	10.55119 ppb	96
82) Tert-Butylbenzene	10.67	119	401933	9.60535 ppb	98
83) 1,2,4-Trimethylbenzene	10.72	105	511832	10.34879 ppb	97
84) Sec-Butylbenzene	10.88	105	584437	9.90645 ppb	97
85) p-Isopropyltoluene	11.04	119	496729	10.12552 ppb	98
86) Benzyl Chloride	11.20	91	170389	10.58071 ppb	98
87) 1,3-DCB	10.96	146	298878	10.28151 ppb	98
88) 1,4-DCB	11.05	146	302357	10.04859 ppb	98
89) n-Butylbenzene	11.44	91	443685	10.26170 ppb	95
90) 1,2-DCB	11.41	146	283567	9.99343 ppb	99
91) Hexachloroethane	11.66	117	94125	9.41441 ppb	97
92) 1,2-Dibromo-3-chloropropan	12.18	157	23719	8.94923 ppb	96
93) 1,2,4-Trichlorobenzene	13.00	180	187062	9.73524 ppb	96
94) Hexachlorobutadiene	13.19	225	66071	8.84710 ppb	94
95) Naphthalene	13.23	128	260864	10.72669 ppb	98
96) 1,2,3-Trichlorobenzene	13.47	180	123224	10.49164 ppb	99

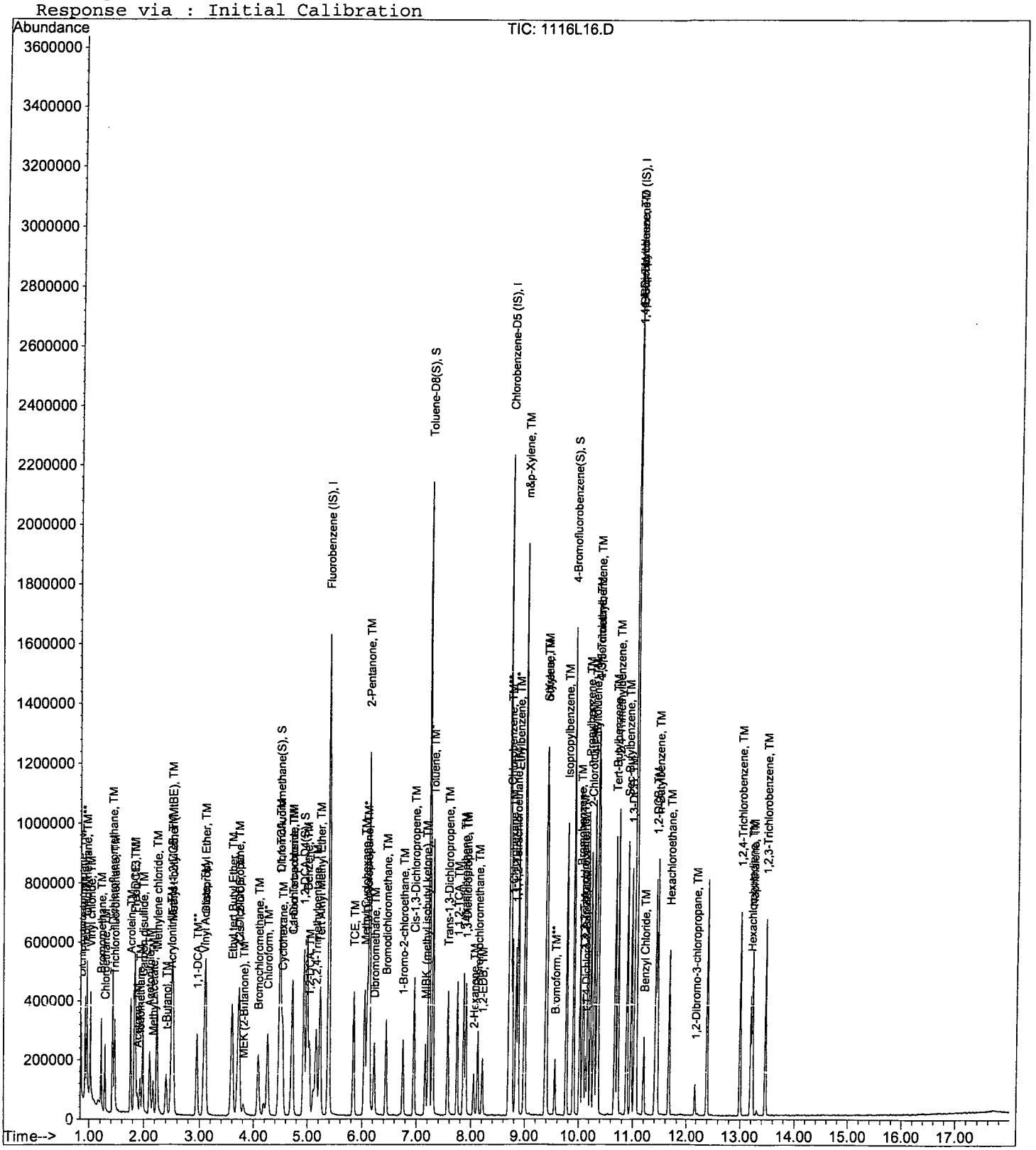
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1116L16.D Vial: 6
Acq On : 16 Nov 16 15:27 Operator: PM,DG,SV,CMM
Sample : 161116A CCV/LCS 10ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 7:47 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration

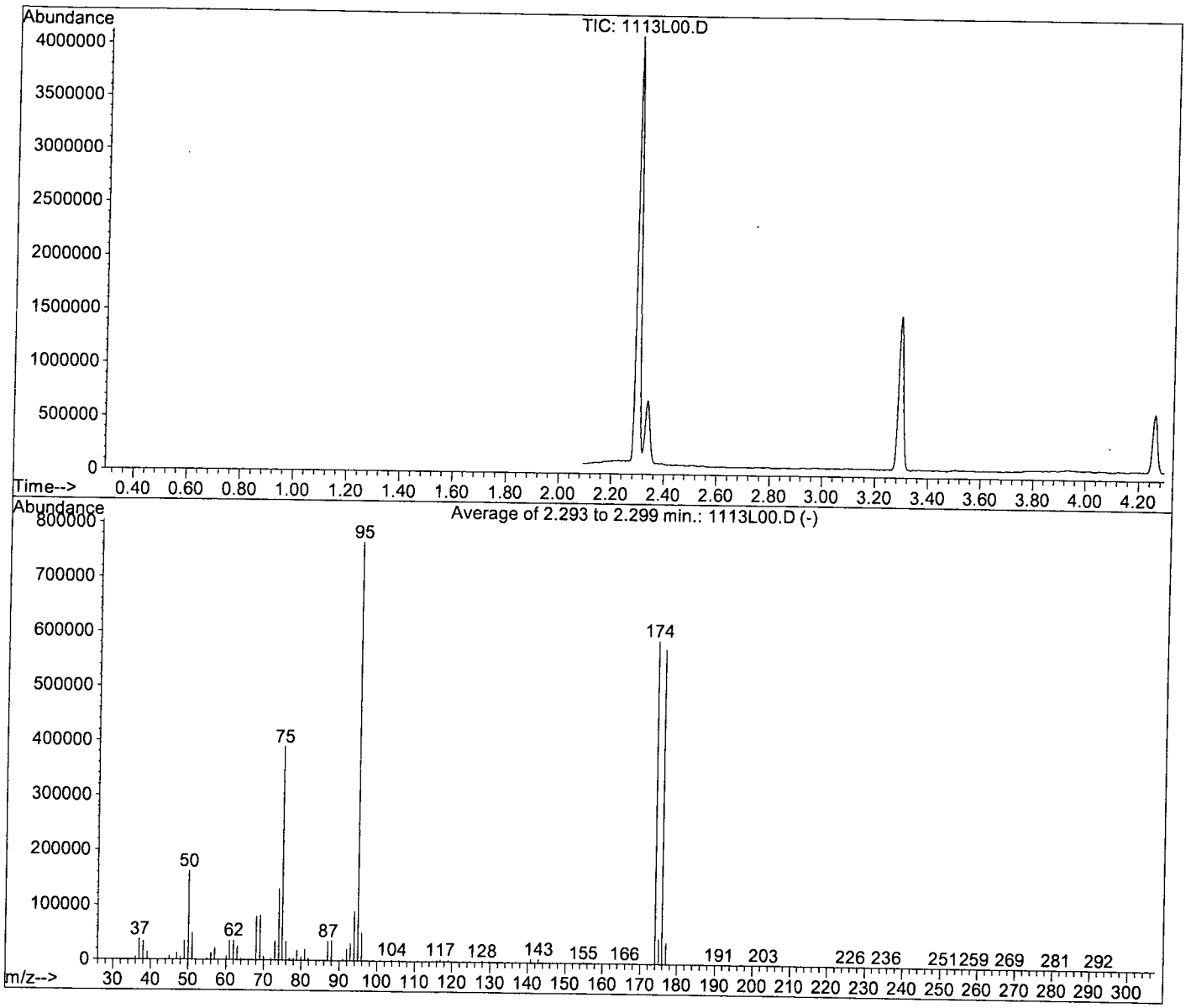


BFB

Data File : M:\LOKI\DATA\161113\1113L00.D
Acq On : 13 Nov 16 11:20
Sample : 5ng- BFB STD 10-12-16
Misc : 2ul

Vial: 1
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B



AutoFind: Scans 63, 64, 65; Background Corrected with Scan 54

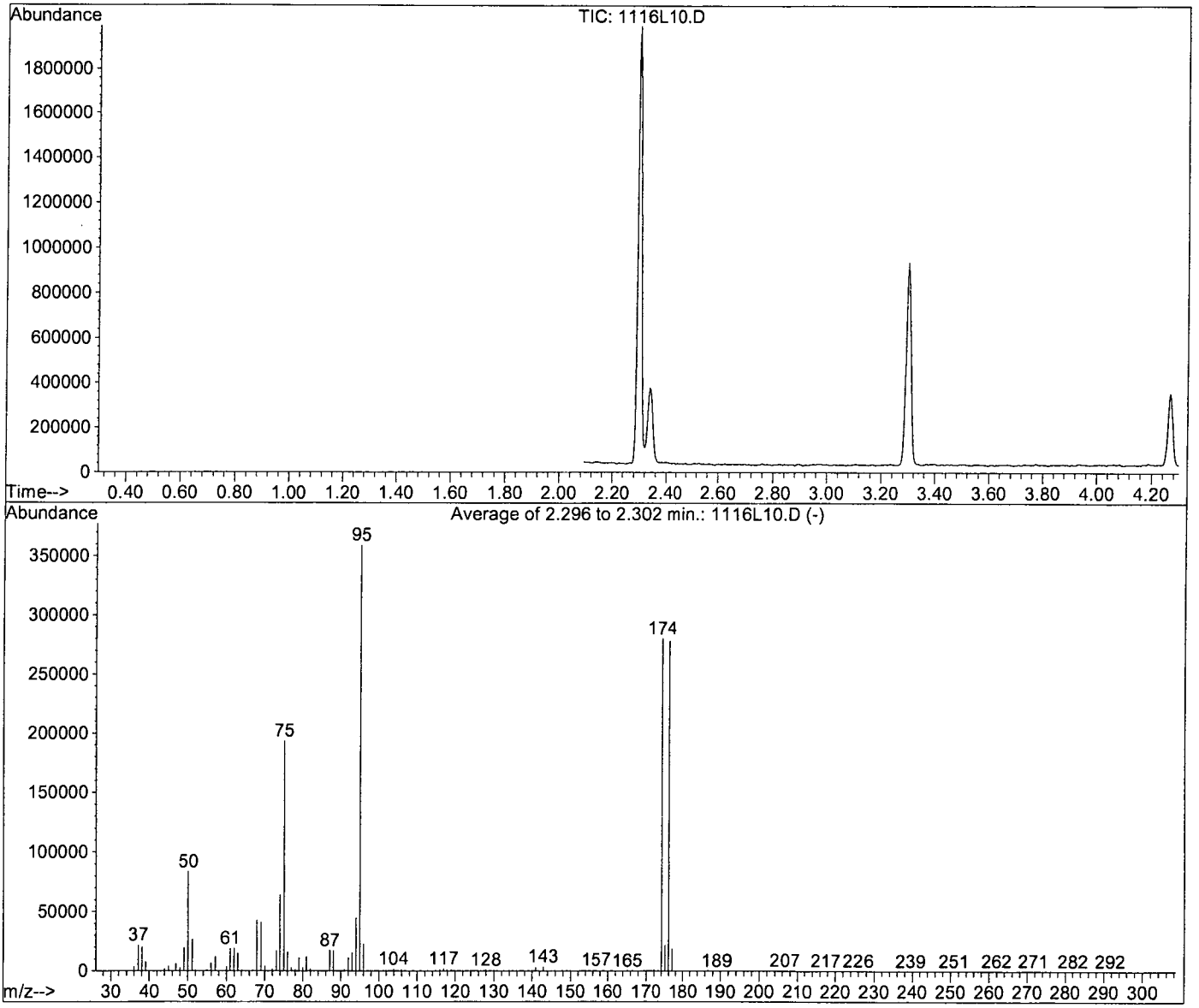
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.1	161951	PASS
75	95	30	60	50.9	390227	PASS
95	95	100	100	100.0	766024	PASS
96	95	5	9	6.7	51629	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	77.2	591488	PASS
175	174	5	9	7.8	45844	PASS
176	174	95	101	97.4	576224	PASS
177	176	5	9	6.8	39248	PASS

1113L00.D LALLW.M Tue Nov 15 10:38:58 2016

Data File : M:\LOKI\DATA\161113\1116L10.D
Acq On : 16 Nov 16 12:44
Sample : 5ng- BFB STD 10-12-16
Misc : 2ul

Vial: 1
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B



AutoFind: Scans 64, 65, 66; Background Corrected with Scan 53

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	23.3	83661	PASS
75	95	30	60	53.9	193501	PASS
95	95	100	100	100.0	359235	PASS
96	95	5	9	6.4	22896	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	78.1	280491	PASS
175	174	5	9	7.7	21611	PASS
176	174	95	101	99.2	278362	PASS
177	176	5	9	6.7	18739	PASS

1116L10.D LALLW.M Thu Nov 17 07:51:37 2016

PRIMARY STANDARD

11/12/16J							
50ug/ml Vol Work Std #7							
Exp:12/12/16							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120016-03	Gas Mix	2000	279822-36647	11/12/16A-CMM	02/19/19	100
02SI	020049-02	HEXACHLOROETHANE	1000	254167-36568	10/27/16B-CMM	11/30/18	200
02SI	020228-02	Benzyl Chloride	1000	279824-36570	10/27/16C-CMM	05/24/18	200
J&T Brand		Purge & Trap MeOH		55344-00862	10/23/16	10/23/17	3500
11/12/16K							
50ug/ml Vol Work Std #1							
Exp:12/12/16					Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	020145-02-02	2-CEVE	2000	229586-35351	11/03/16B-CMM	06/03/17	50
J&T Brand		Purge & Trap MeOH		55344-00862	10/23/16	10/23/17	1950
11/12/16L							
50ug/ml Vol Work Std #8							
Exp:12/12/16							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	122039-02	Volatile Mix, 20-29	2000	258033-37168	11/12/16B-CMM	08/17/17	100
02SI	120023-03	VOC'S-54 COMP	2000	271929-36580	11/12/16C-CMM	02/15/18	100
02SI	020232-02	Vinyl Acetate	2000	287418-37045	10/27/16E-CMM	11/27/16	100
J&T Brand		Purge & Trap MeOH		55344-00862	10/23/16	10/23/17	3700
11/12/16M							
50ug/ml Vol Work Std #2							
Exp:12/12/16							
Supplier	ID #	ID	ug/ml				
02SI	121020-05	HSL'S-Ketone Solution	2000	258036-36072	11/03/16C-CMM	08/17/17	100
J&T Brand		Purge & Trap MeOH		55344-00862	10/23/16	10/23/17	3900
		11/12/16N					
		5ug/ml Vol Work Std #9					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #7		**11/12/16J**	Exp:12/12/16	200	
		50ug/ml Vol Work Std #8		**11/12/16L**	Exp:12/12/16	200	
		J&T Brand		10/23/16	10/23/17	1600	
		11/12/16O					
		5ug/ml Vol Work Std #10					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #1		**11/12/16K**	Exp:12/12/16	200	
		J&T Brand		10/23/16	10/23/17	1800	
		11/12/16P					
		5ug/ml Vol Work Std #12					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #2		**11/12/16M**	Exp:12/12/16	200	
		J&T Brand		10/23/16	10/23/17	1800	
11/12/16Q							
250ug/ml TBA/IBA/Acetonitrile/Cyclohexanone/Acrolein/2-P							
Exp:12/12/16			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
02SI	120166-01	Volatile Mix 4-3	2000	275544-36406	11/12/16D-CMM	10/20/17	500
02SI	020229-09-02	Acrolein	10000	291928-37173	11/12/16E-CMM	12/12/16	100
J&T Brand		Purge & Trap MeOH		55344-00862	10/23/16	10/23/17	3400

SECONDARY SOURCE

11/12/16R							
50ug/ml VOC Std#4							
Exp:12/12/16							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120296-01-SS	Custom 8260 Solution	2000	258037-36087	11/03/16D-CMM	08/18/17	50
J&T Brand		Purge & Trap MeOH		55344-00862	10/23/16	10/23/17	1950
11/12/16S							
50ug/ml VOC Std#5							
Exp:12/12/16							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120016-03-SS	8260 Gases(SS)	2000	279826-36676	11/12/16F-CMM	06/01/19	50
02SI	020145-02-02-SS	2-CEVE (SS)	2000	254171-35394	11/12/16G-CMM	06/21/17	50
J&T Brand		Purge & Trap MeOH		55344-00862	10/23/16	10/23/17	1900
11/12/16T							

50ug/ml VOC Std#6							
Exp:12/12/16							
	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120023-03-SS	VOC'S 54 COMP.	2000	265897-35926	11/12/16H-CMM	11/29/17	50
02SI	020232-02-SS	Vinyl Acetate(SS)	2000	287420-37047	10/27/16J-CMM	11/27/16	50
02SI	020049-02-SS	HEXACHLOROETHANE (SS)	1000	265899-35937	10/27/16K-CMM	11/30/17	100
J&T Brand		Purge & Trap MeOH		55344-00862	10/23/16	10/23/17	1800
11/12/16U							
250ug/ml TBA/IBA/Acetonitrile/Acrolein/2-P							
Exp:12/12/16			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
02SI	120166-01-SS	VOC Mix 4-3 (SS)	2000	229588-34410	10/27/16L-CMM	06/03/17	250
02SI	020229-09-SS	Acrolein SOLUTION (SS)	10000	291929-37175	11/12/16I-CMM	12/12/16	50
J&T Brand		Purge & Trap MeOH		55344-00862	10/23/16	10/23/17	1700
8260 water		spiked with		Total Vol			
CCV/LCS	10ug/L Vol Std	10uL of 50ug/ml Std #7		50mL P&T H2O			
Ending CCV		10uL of 50ug/ml Std #8					
		10uL of 50ug/ml Std #1					
		10uL of 50ug/ml Std #2					
		25uL of 250ug/ml Std TBA					
X4 ketones							
LCS	10ug/L Vol Std	10uL of 50ug/ml Std #7		50mL P&T H2O			
		10uL of 50ug/ml Std #8					
		10uL of 50ug/ml Std #1					
		40uL of 50ug/ml Std #2					
		25uL of 250ug/ml Std TBA					
8260 soil		spiked with		Total Vol			
CCV/LCS	50ug/Kg Vol Std	5uL of 50ug/ml Std #7		5mL P&T H2O			
Ending CCV		5uL of 50ug/ml Std #8					
		5uL of 50ug/ml Std #1					
		5uL of 50ug/ml Std #2					
		5uL of 250ug/ml Std TBA					
Matrix spikes are prepared with same standards as ccv (see above) into the sample.							
8260water		spiked with		Total Vol			
SS	10ug/L STD	10uL of 50ug/ml Std #4		50mL P&T H2O			
		10uL of 50ug/ml Std #5					
		10uL of 50ug/ml Std #6					
		25uL of 250ug/ml Std TBA					
8260 SOIL	50ug/Kg STD	5uL of 50ug/ml Std #4		Total Vol			
SS		5uL of 50ug/ml Std #5		5mL P&T H2O			
		5uL of 50ug/ml Std #6					
		5uL of 250ug/ml Std TBA					

Volatile Standard Curve Preparation for 10mL Purge (8260 water)-LOKI										
Exp Date:	11/14/16	5µg/mL	5µg/mL	5µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	250µg/mL	
		Vol Std #9	Vol Std #10	Vol Std #12	Vol Std #7	Vol Std #8	Vol Std #1	Vol Std #2	TBA	
		11/12/16N	11/12/16O	11/12/16P	11/12/16J	11/12/16L	11/12/16K	11/12/16M	11/12/16Q	Final Vol
	Conc.	12/12/16	12/12/16	12/12/16	12/12/16	12/12/16	12/12/16	12/12/16	12/12/16	w/P&T H2O
Date/code	µg/L	ul	ul	ul	ul	ul	ul	ul	ul	mL
11/13/16J-CMM	0.3	3	3	3	n/a	n/a	n/a	n/a	2	50
11/13/16K-CMM	0.5	5	5	5	n/a	n/a	n/a	n/a	5	50
11/13/16L-CMM	1	10	10	10	n/a	n/a	n/a	n/a	10	50
11/13/16M-CMM	2	20	20	20	n/a	n/a	n/a	n/a	15	50
11/13/16N-CMM	5	n/a	n/a	n/a	5	5	5	5	20	50
11/13/16O-CMM	10	n/a	n/a	n/a	10	10	10	10	25	50
11/13/16P-CMM	20	n/a	n/a	n/a	20	20	20	20	30	50
11/13/16Q-CMM	40	n/a	n/a	n/a	40	40	40	40	35	50
11/13/16R-CMM	100	n/a	n/a	n/a	100	100	100	100	40	50

Injection Log

Directory: M:\LOKI\DATA\161113\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1113L00.D	1	5ng- BFB STD 10-12-16	2ul	13 Nov 16 11:20
2	5	1113L05.D	1	0.3ug/L VOC STD 11/13/16J	1uL-5ppb	13 Nov 16 13:35
3	6	1113L06.D	1	0.5ug/L VOC STD 11/13/16K	1uL-5ppb	13 Nov 16 14:04
4	7	1113L07.D	1	1.0ug/L VOC STD 11/13/16L	2uL-10ppb	13 Nov 16 14:32
5	8	1113L08.D	1	2.0ug/L VOC STD 11/13/16M	2uL-10ppb	13 Nov 16 15:00
6	9	1113L09.D	1	5.0ug/L VOC STD 11/13/16AN	5uL-25ppb	13 Nov 16 15:28
7	10	1113L10.D	1	10ug/L VOC STD 11/13/16O	5uL-25ppb	13 Nov 16 15:56
8	11	1113L11.D	1	20ug/L VOC STD 11/13/16P	10uL-50ppb	13 Nov 16 16:24
9	12	1113L12.D	1	40ug/L VOC STD 11/13/16Q	10uL-50ppb	13 Nov 16 16:53
10	13	1113L13.D	1	100ug/L VOC STD 11/13/16R	20uL-100ppb	13 Nov 16 17:21
11	17	1113L17.D	1	(SS) 10ug/L VOC STD 11/13/16	W IS&S 10/20/16, 11/04/16	13 Nov 16 19:14
12	1	1116L10.D	1	5ng- BFB STD 10-12-16	2ul	16 Nov 16 12:44
13	6	1116L16.D	1	161116A CCV/LCS 10ug/L	W IS&S 10/20/16, 11/04/16	16 Nov 16 15:27
14	10	1116L20.D	1	161116A BLK-1WL	W IS&S 10/20/16, 11/04/16	16 Nov 16 17:19
15	19	1116L29.D	1	AZ45907W01	W IS&S 10/20/16, 11/04/16	16 Nov 16 21:32
16	20	1116L30.D	1	AZ45908W01	W IS&S 10/20/16, 11/04/16	16 Nov 16 22:00
17	21	1116L31.D	1	AZ45909W01	W IS&S 10/20/16, 11/04/16	16 Nov 16 22:28
18	22	1116L32.D	1	AZ45910W01	W IS&S 10/20/16, 11/04/16	16 Nov 16 22:56
19	23	1116L33.D	1	AZ45911W01	W IS&S 10/20/16, 11/04/16	16 Nov 16 23:24
20	26	1116L36.D	1	Ending CCV 8260 10ug/L 11/16/16	W IS&S 10/20/16, 11/04/16	17 Nov 16 00:48

ORGANICS

APPL, INC.

ORGANICS
QC Summary

APPL, INC.

Method Blank
EPA 8260B GRO WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161116W-45907 - 213753**
Batch ID: #GRO86-161116AL

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	11/16/16	11/16/16
BLANK	SURROGATE: 4-BROMOFLUORO	98.4	85-114			%	11/16/16	11/16/16

Quant Method: LGAS6718.M
Run #: 1116L20
Instrument: Loki
Sequence: 161113
Initials: SV

GC SC-Blank-REG MDLs-DOD
Printed: 11/28/16 12:30:17 PM

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81500

Case No: 81500 Date Analyzed: 11/16/16

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: 4-BROMOFLUOROBENZENE (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
161116AL-LCS	Lab Control Spike	85-114	99.2				
161116AL-BLK	Blank	85-114	98.4				
AZ45907	ERH117	85-114	100				
AZ45908	ERH121	85-114	100				
AZ45909	ERH122	85-114	99.6				
AZ45910	ERH126	85-114	97.9				
AZ45911	ERH128	85-114	94.6				

Comments: Batch: #GRO86-161116AL

Laboratory Control Spike Recovery

EPA 8260B GRO WATER

APPL ID: **161116W-45907 LCS - 213753**
Batch ID: #GRO86-161116AL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
GASOLINE RANGE ORGANICS	300	269	89.7	78-122
SURROGATE: 4-BROMOFLUOROBENZE	25.0	24.8	99.2	85-114

Comments: _____

Primary	SPK
Quant Method :	LGAS6718.M
Extraction Date :	11/16/16
Analysis Date :	11/16/16
Instrument :	Loki
Run :	1116L12
Initials :	SV

Printed: 11/28/16 12:29:57 PM
APPL Standard LCS

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81500

Case No: 81500 Date Analyzed: 11/16/16

Matrix: WATER Instrument: Loki

Blank ID: 161116AL-BLK Time Analyzed: 1719

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161116AL-LCS	Lab Control Spike	1116L12	11/16/16 1334
161116AL-BLK	Blank	1116L20	11/16/16 1719
AZ45907	ERH117	1116L29	11/16/16 2132
AZ45908	ERH121	1116L30	11/16/16 2200
AZ45909	ERH122	1116L31	11/16/16 2228
AZ45910	ERH126	1116L32	11/16/16 2256
AZ45911	ERH128	1116L33	11/16/16 2324

Comments: Batch: #GRO86-161116AL

Printed: 11/28/16 12:29:54 PM

Form 4, Blank Summary

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81500

Lab File ID (Standard): 1113L10.D Date Analyzed: 11/13/16

Instrument ID: Loki Time Analyzed: 15:56

GC Column: ID: Heated Purge: (Y/N)

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	817344	5.38	790336	8.70	444864	11.03
	UPPER LIMIT	1634688	5.88	1580672	9.20	889728	11.53
	LOWER LIMIT	408672	4.88	395168	8.20	222432	10.53
	SAMPLE NO.						
01	161116A CCV/LCS 300	737757	5.38	680896	8.70	360768	11.03
02	161116A BLK-1WL	701915	5.39	658240	8.70	343296	11.03
03	AZ45907W01	717824	5.38	658048	8.70	331712	11.03
04	AZ45908W01	711488	5.38	651456	8.70	332480	11.03
05	AZ45909W01	696960	5.38	639744	8.70	326528	11.03
06	AZ45910W01	700288	5.38	649664	8.70	326656	11.03
07	AZ45911W01	723264	5.38	679488	8.70	339456	11.03
08	Ending CCV GAS 300ug	735552	5.38	676800	8.70	342336	11.03
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

ORGANICS
Sample Data

APPL, INC.

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH117
Sample Collection Date: 11/14/16

ARF: 81500
APPL ID: AZ45907
QCG: #GRO86-161116AL-213753

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	11/16/16	11/16/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	100	85-114			%	11/16/16	11/16/16

Quant Method: LGAS6718.M
Run #: 1116L29
Instrument: Loki
Sequence: 161113
Dilution Factor: 1
Initials: SV

Printed: 11/28/16 12:29:51 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1116L29.D Vial: 19
Acq On : 16 Nov 16 21:32 Operator: PM,DG,SV,CMM
Sample : AZ45907W01 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 9:34 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1579761	25.00	ppb	-0.10
3) Chlorobenzene-D5 (IS)	8.70	TIC	2126389	25.00	ppb	-0.09
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	2124422	25.00	ppb	-0.08

System Monitoring Compounds

Target Compounds Qvalue

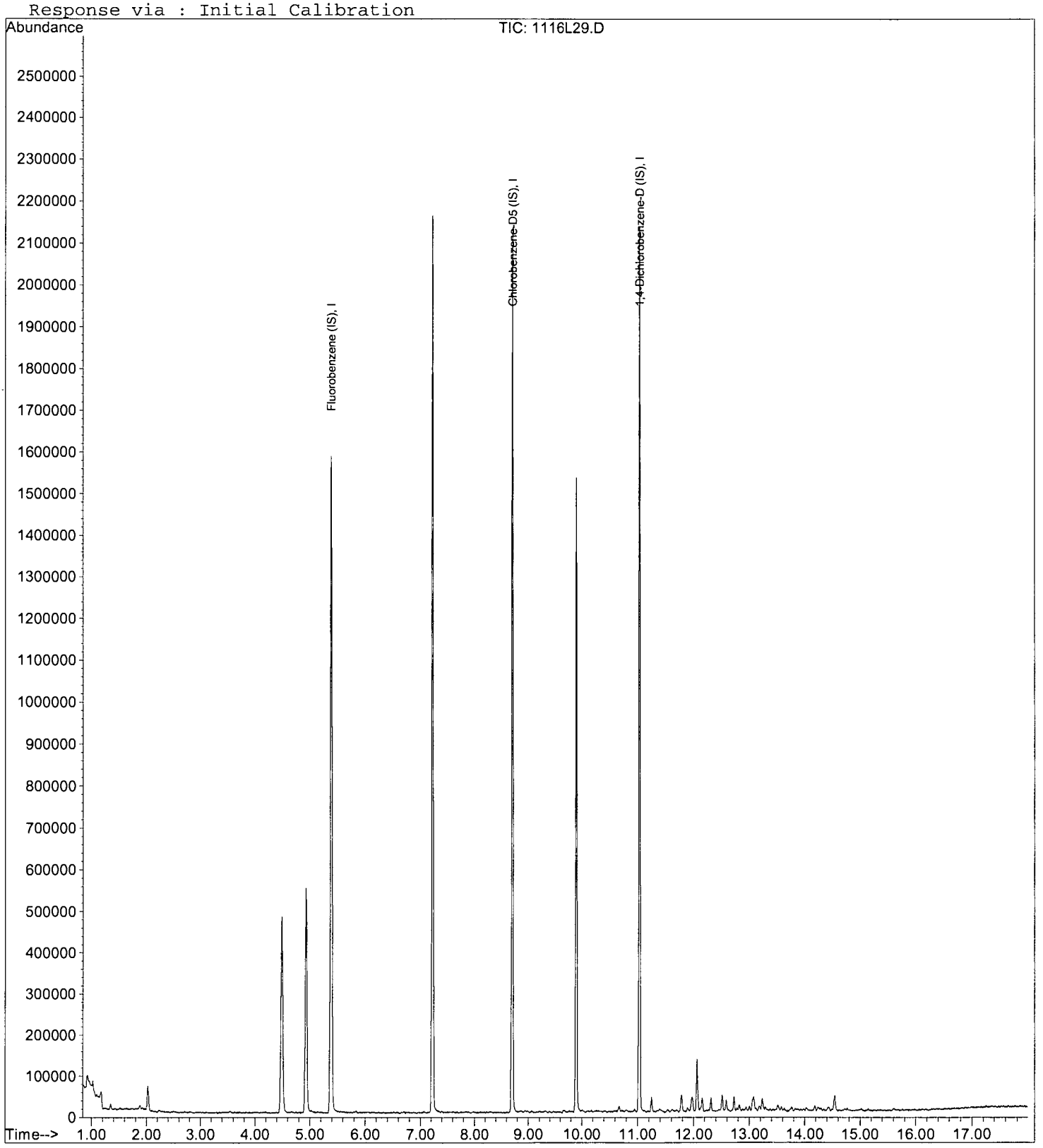
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1116L29.D Vial: 19
Acq On : 16 Nov 16 21:32 Operator: PM,DG,SV,CMM
Sample : AZ45907W01 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 9:34 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1116L29.D Vial: 19
Acq On : 16 Nov 16 21:32 Operator: PM,DG,SV,CMM
Sample : AZ45907W01 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 10:15 2016 Quant Results File: LSUR1113.RES

Quant Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	717824	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	658048	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	331712	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.49	111	357881	23.63	ppb	0.00
Spiked Amount 25.000			Recovery = 94.504%			
3) 1,2-DCA-D4(S)	4.93	65	431313	26.12	ppb	0.00
Spiked Amount 25.000			Recovery = 104.472%			
5) Toluene-D8(S)	7.22	98	1295263	25.78	ppb	0.00
Spiked Amount 25.000			Recovery = 103.108%			
6) 4-Bromofluorobenzene(S)	9.89	95	453733	25.02	ppb	0.00
Spiked Amount 25.000			Recovery = 100.072%			

Target Compounds Qvalue

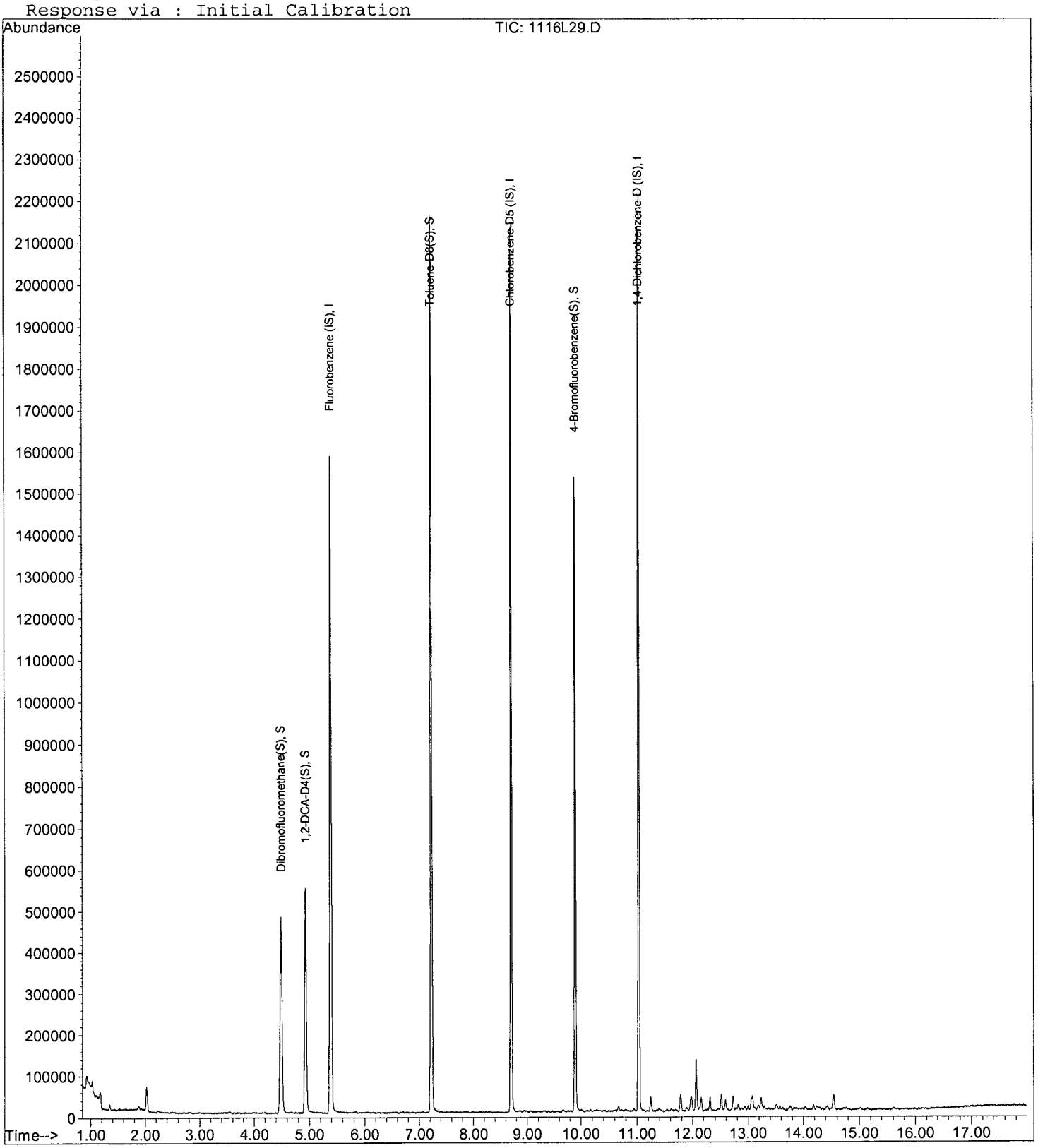
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1116L29.D Vial: 19
Acq On : 16 Nov 16 21:32 Operator: PM,DG,SV,CMM
Sample : AZ45907W01 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 10:15 2016 Quant Results File: LSUR1113.RES

Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH121
Sample Collection Date: 11/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81500
APPL ID: AZ45908
QCG: #GRO86-161116AL-213753

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	11/16/16	11/16/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	100	85-114			%	11/16/16	11/16/16

Quant Method: LGAS6718.M
Run #: 1116L30
Instrument: Loki
Sequence: 161113
Dilution Factor: 1
Initials: SV

Printed: 11/28/16 12:29:51 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1116L30.D Vial: 20
Acq On : 16 Nov 16 22:00 Operator: PM,DG,SV,CMM
Sample : AZ45908W01 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 9:35 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1575766	25.00	ppb	-0.10
3) Chlorobenzene-D5 (IS)	8.70	TIC	2100192	25.00	ppb	-0.09
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	2149041	25.00	ppb	-0.09

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

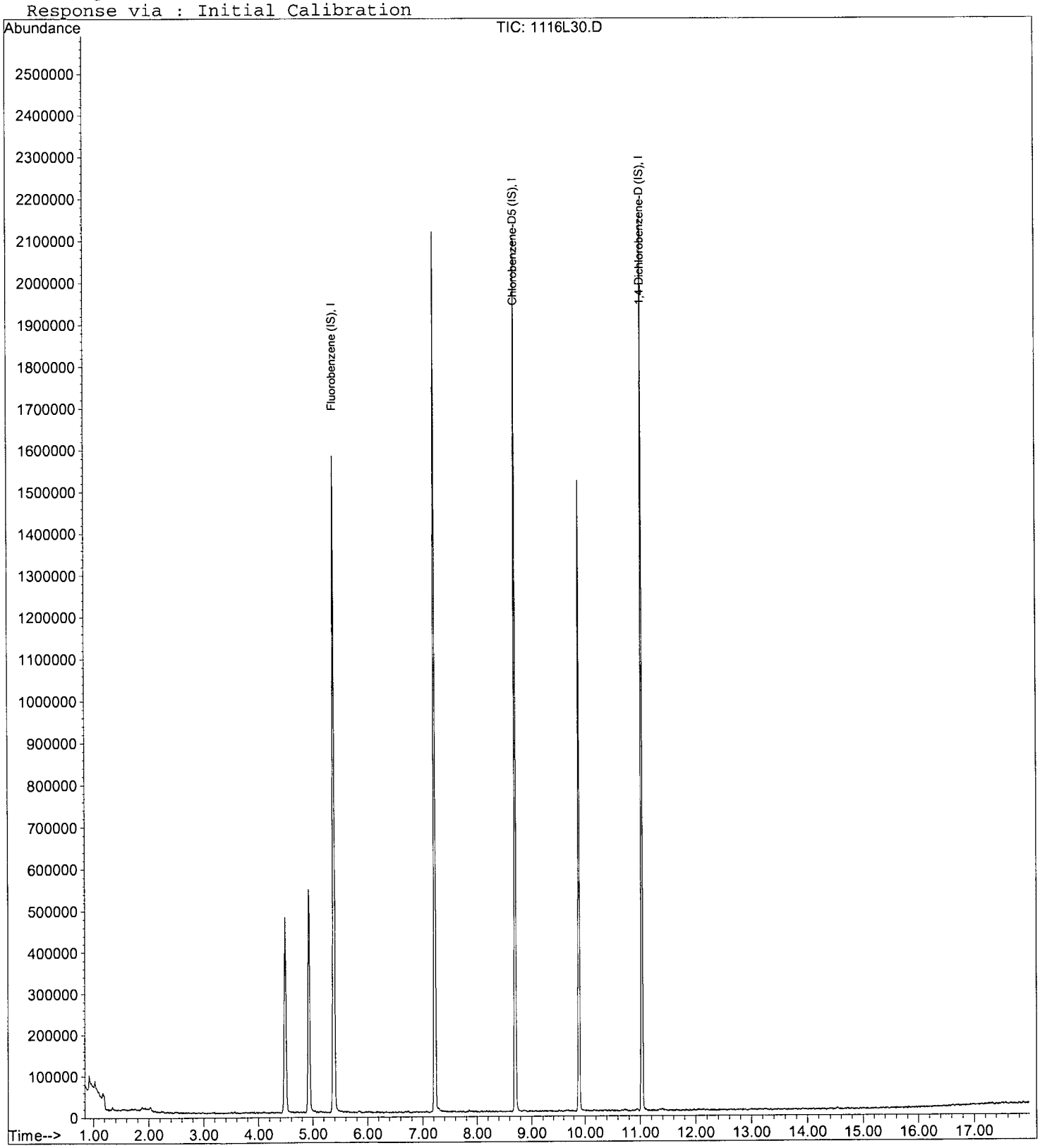
Quantitation Report

Data File : M:\LOKI\DATA\161113\1116L30.D
Acq On : 16 Nov 16 22:00
Sample : AZ45908W01
Misc : W IS&S 10/20/16, 11/04/16

Vial: 20
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 17 9:35 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1116L30.D Vial: 20
Acq On : 16 Nov 16 22:00 Operator: PM,DG,SV,CMM
Sample : AZ45908W01 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 10:15 2016 Quant Results File: LSUR1113.RES

Quant Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	711488	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	651456	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	332480	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.49	111	355674	23.69	ppb	0.00
Spiked Amount 25.000			Recovery =	94.756%		
3) 1,2-DCA-D4(S)	4.93	65	421804	25.77	ppb	0.00
Spiked Amount 25.000			Recovery =	103.080%		
5) Toluene-D8(S)	7.22	98	1276631	25.66	ppb	0.00
Spiked Amount 25.000			Recovery =	102.652%		
6) 4-Bromofluorobenzene(S)	9.89	95	450523	25.09	ppb	0.00
Spiked Amount 25.000			Recovery =	100.368%		

Target Compounds Qvalue

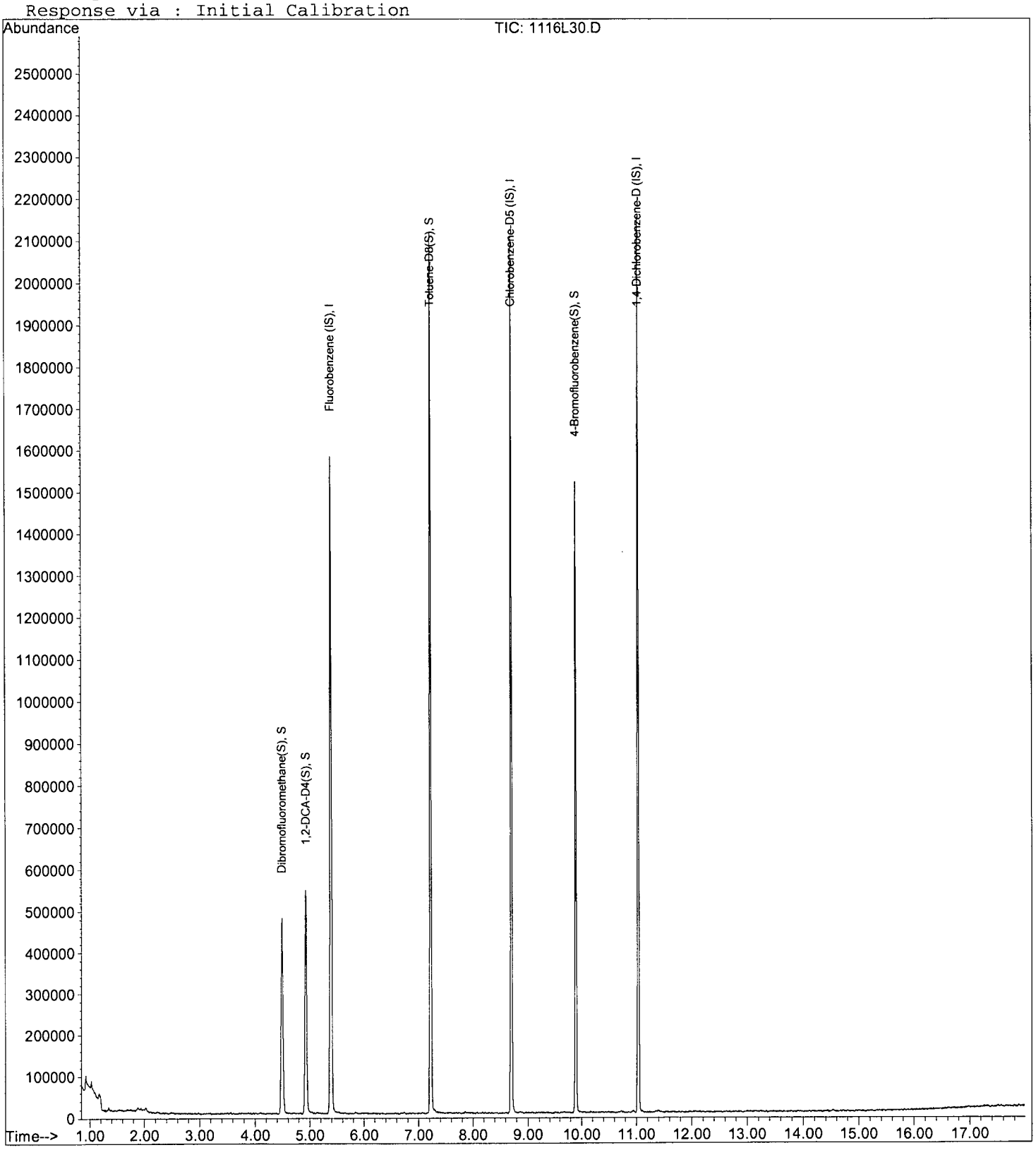
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1116L30.D Vial: 20
Acq On : 16 Nov 16 22:00 Operator: PM,DG,SV,CMM
Sample : AZ45908W01 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 10:15 2016 Quant Results File: LSUR1113.RES

Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81500

Sample ID: ERH122

APPL ID: AZ45909

Sample Collection Date: 11/15/16

QCG: #GRO86-161116AL-213753

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	11/16/16	11/16/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	99.6	85-114			%	11/16/16	11/16/16

Quant Method: LGAS6718.M
Run #: 1116L31
Instrument: Loki
Sequence: 161113
Dilution Factor: 1
Initials: SV

Printed: 11/28/16 12:29:51 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1116L31.D Vial: 21
Acq On : 16 Nov 16 22:28 Operator: PM,DG,SV,CMM
Sample : AZ45909W01 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 9:35 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1531363	25.00 ppb	-0.10
3) Chlorobenzene-D5 (IS)	8.70	TIC	2066151	25.00 ppb	-0.09
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	2076912	25.00 ppb	-0.09

System Monitoring Compounds

Target Compounds Qvalue

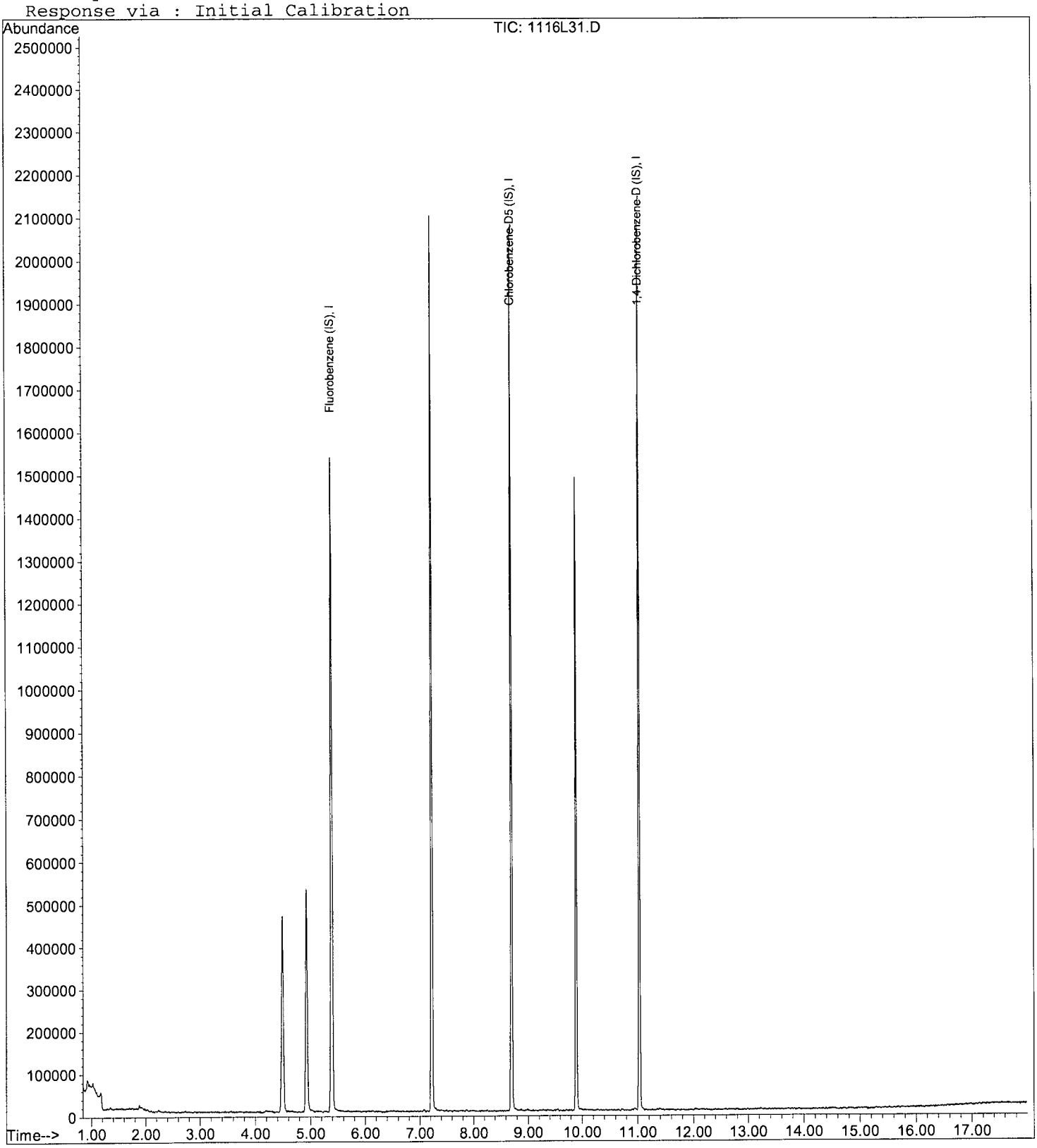
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1116L31.D Vial: 21
Acq On : 16 Nov 16 22:28 Operator: PM,DG,SV,CMM
Sample : AZ45909W01 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 9:35 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1116L31.D Vial: 21
Acq On : 16 Nov 16 22:28 Operator: PM,DG,SV,CMM
Sample : AZ45909W01 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 10:15 2016 Quant Results File: LSUR1113.RES

Quant Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	696960	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	639744	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	326528	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.49	111	348557	23.70	ppb	0.00
Spiked Amount 25.000			Recovery = 94.796%			
3) 1,2-DCA-D4(S)	4.93	65	414602	25.86	ppb	0.00
Spiked Amount 25.000			Recovery = 103.432%			
5) Toluene-D8(S)	7.22	98	1249195	25.57	ppb	0.00
Spiked Amount 25.000			Recovery = 102.284%			
6) 4-Bromofluorobenzene(S)	9.89	95	439088	24.90	ppb	0.00
Spiked Amount 25.000			Recovery = 99.612%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

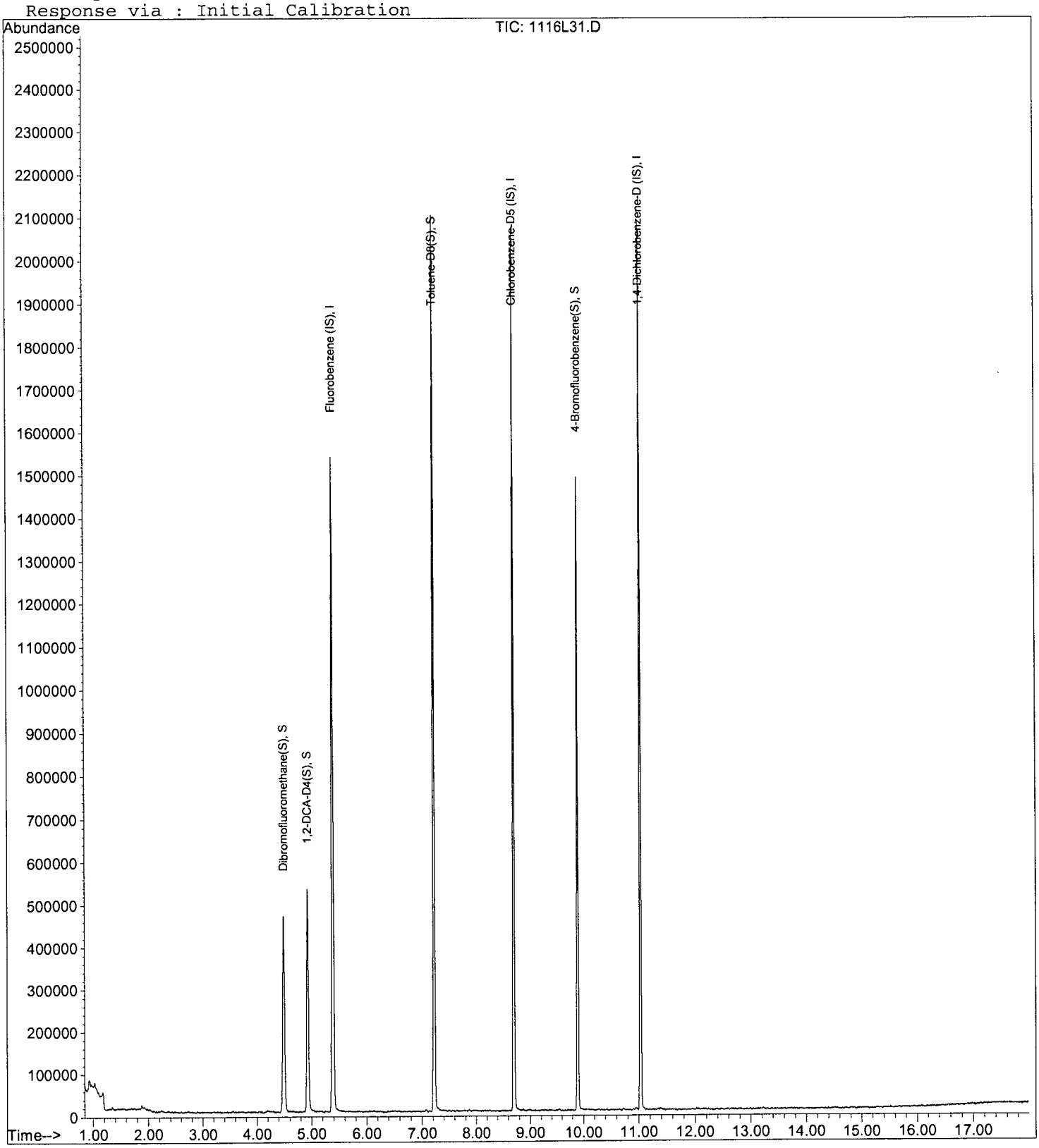
Quantitation Report

Data File : M:\LOKI\DATA\161113\1116L31.D
Acq On : 16 Nov 16 22:28
Sample : AZ45909W01
Misc : W IS&S 10/20/16, 11/04/16

Vial: 21
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 17 10:15 2016 Quant Results File: LSUR1113.RES

Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH126
Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81500
APPL ID: AZ45910
QCG: #GRO86-161116AL-213753

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	11/16/16	11/16/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	97.9	85-114			%	11/16/16	11/16/16

Quant Method: LGAS6718.M
Run #: 1116L32
Instrument: Loki
Sequence: 161113
Dilution Factor: 1
Initials: SV

Printed: 11/28/16 12:29:51 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1116L32.D Vial: 22
Acq On : 16 Nov 16 22:56 Operator: PM,DG,SV,CMM
Sample : AZ45910W01 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 9:35 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1544509	25.00	ppb	-0.10
3) Chlorobenzene-D5 (IS)	8.70	TIC	2086235	25.00	ppb	-0.09
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	2124304	25.00	ppb	-0.09

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

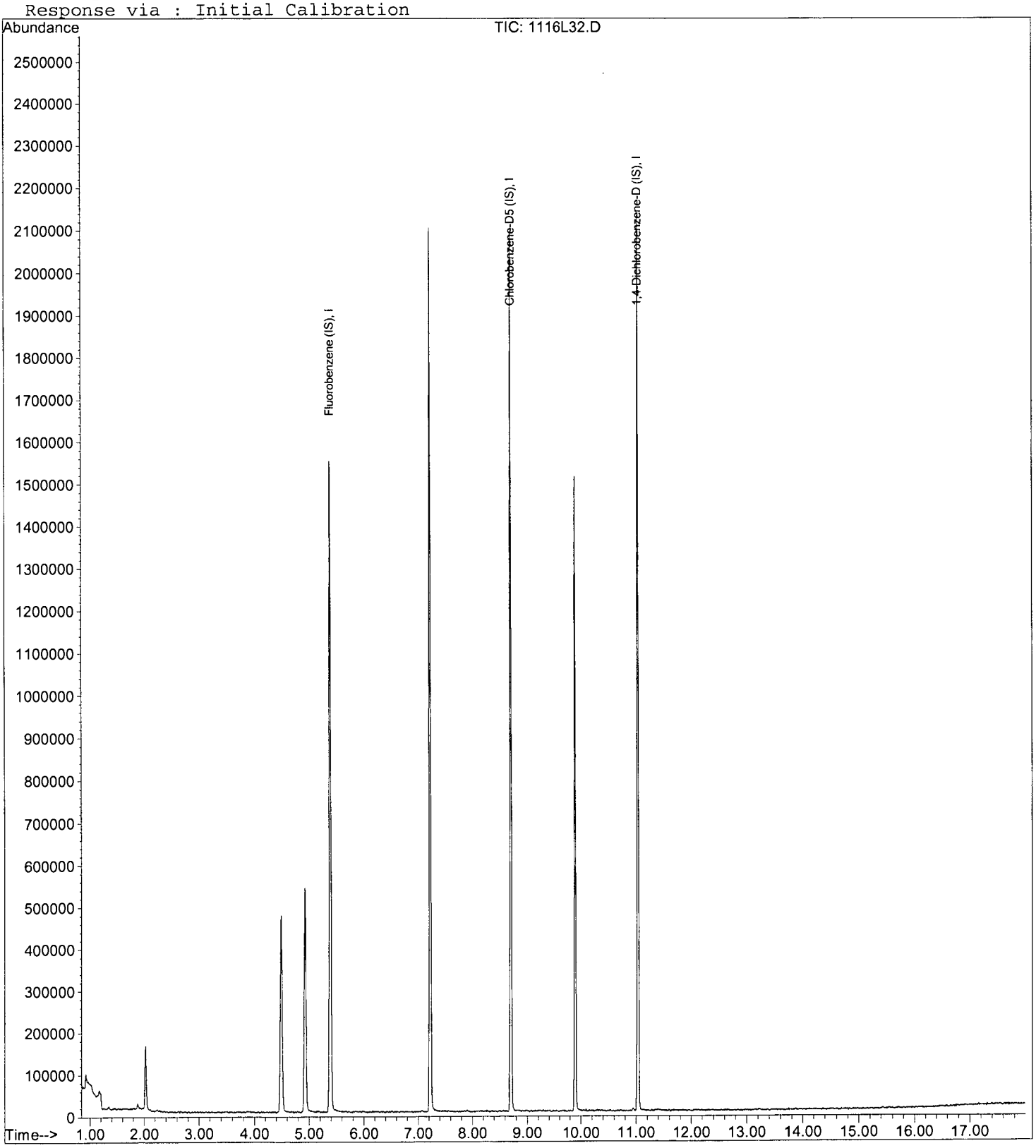
Quantitation Report

Data File : M:\LOKI\DATA\161113\1116L32.D
Acq On : 16 Nov 16 22:56
Sample : AZ45910W01
Misc : W IS&S 10/20/16, 11/04/16

Vial: 22
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 17 9:35 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1116L32.D Vial: 22
Acq On : 16 Nov 16 22:56 Operator: PM,DG,SV,CMM
Sample : AZ45910W01 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 10:15 2016 Quant Results File: LSUR1113.RES

Quant Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	700288	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	649664	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	326656	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.49	111	350814	23.74	ppb	0.00
Spiked Amount 25.000			Recovery =	94.956%		
3) 1,2-DCA-D4(S)	4.93	65	415859	25.81	ppb	0.00
Spiked Amount 25.000			Recovery =	103.252%		
5) Toluene-D8(S)	7.22	98	1262587	25.45	ppb	0.00
Spiked Amount 25.000			Recovery =	101.804%		
6) 4-Bromofluorobenzene(S)	9.89	95	438083	24.47	ppb	0.00
Spiked Amount 25.000			Recovery =	97.868%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

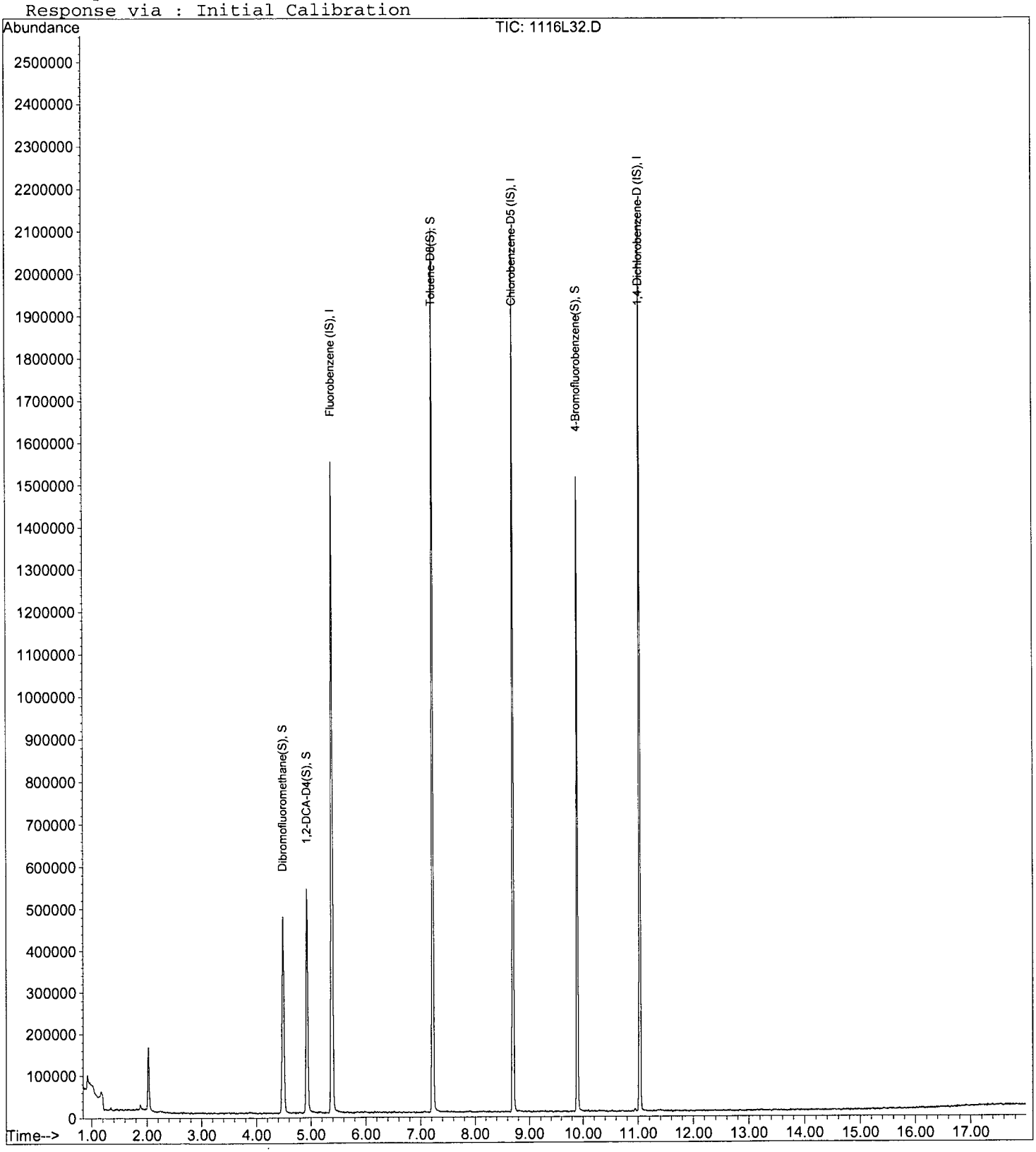
Quantitation Report

Data File : M:\LOKI\DATA\161113\1116L32.D
Acq On : 16 Nov 16 22:56
Sample : AZ45910W01
Misc : W IS&S 10/20/16, 11/04/16

Vial: 22
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 17 10:15 2016 Quant Results File: LSUR1113.RES

Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH128

Sample Collection Date: 11/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81500

APPL ID: AZ45911

QCG: #GRO86-161116AL-213753

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	11/16/16	11/16/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	94.6	85-114			%	11/16/16	11/16/16

Quant Method:	LGAS6718.M
Run #:	1116L33
Instrument:	Loki
Sequence:	161113
Dilution Factor:	1
Initials:	SV

Printed: 11/28/16 12:29:51 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1116L33.D Vial: 23
Acq On : 16 Nov 16 23:24 Operator: PM,DG,SV,CMM
Sample : AZ45911W01 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 9:36 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1595185	25.00 ppb	-0.10
3) Chlorobenzene-D5 (IS)	8.70	TIC	2189774	25.00 ppb	-0.09
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	2203854	25.00 ppb	-0.09

System Monitoring Compounds

Target Compounds Qvalue

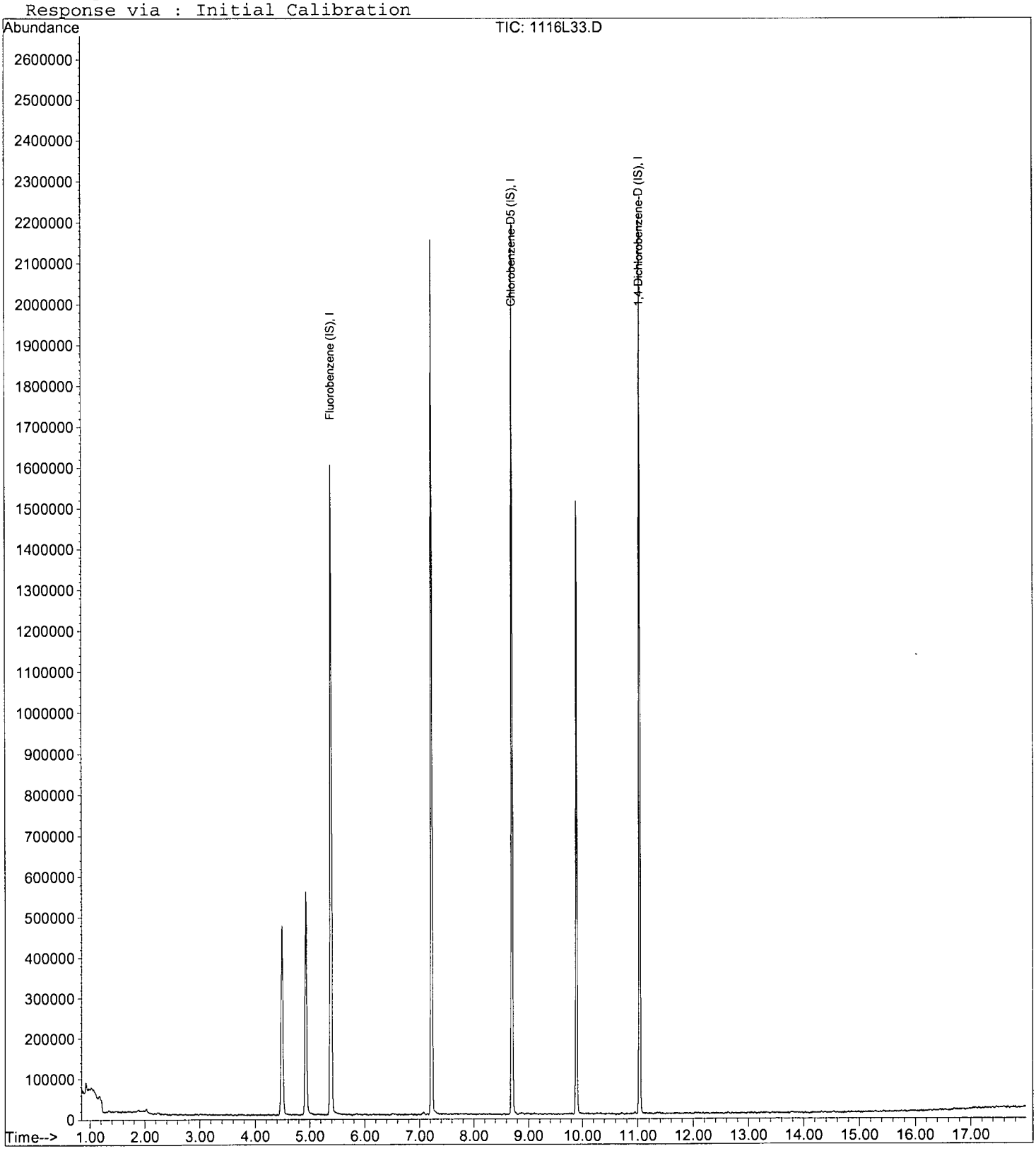
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1116L33.D Vial: 23
Acq On : 16 Nov 16 23:24 Operator: PM,DG,SV,CMM
Sample : AZ45911W01 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 9:36 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1116L33.D Vial: 23
Acq On : 16 Nov 16 23:24 Operator: PM,DG,SV,CMM
Sample : AZ45911W01 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 10:15 2016 Quant Results File: LSUR1113.RES

Quant Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	723264	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	679488	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	339456	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.49	111	355585	23.30	ppb	0.00
Spiked Amount 25.000			Recovery = 93.192%			
3) 1,2-DCA-D4(S)	4.93	65	429713	25.83	ppb	0.00
Spiked Amount 25.000			Recovery = 103.304%			
5) Toluene-D8(S)	7.22	98	1290036	24.86	ppb	0.00
Spiked Amount 25.000			Recovery = 99.452%			
6) 4-Bromofluorobenzene(S)	9.89	95	443106	23.66	ppb	0.00
Spiked Amount 25.000			Recovery = 94.644%			

Target Compounds Qvalue

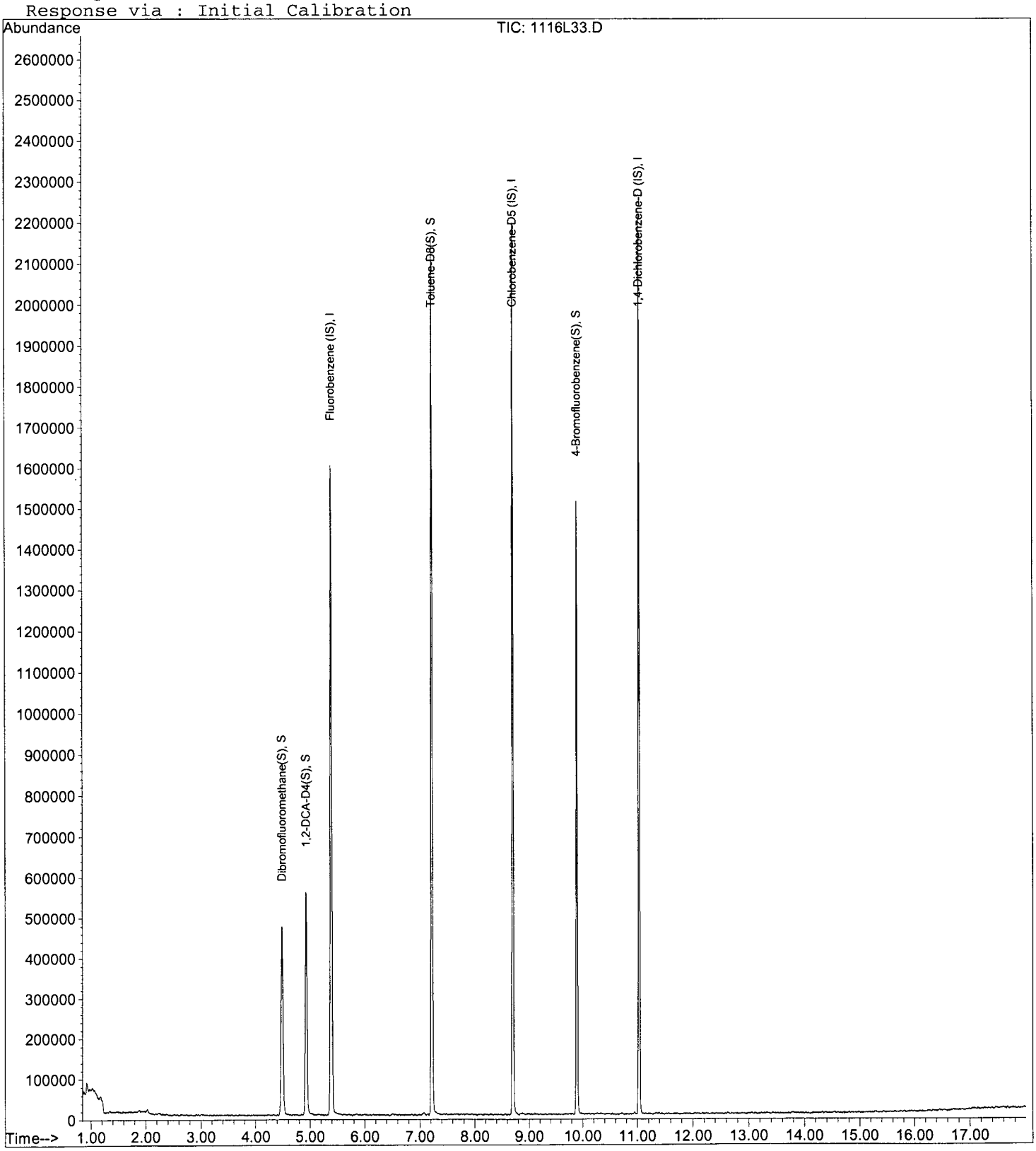
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1116L33.D Vial: 23
Acq On : 16 Nov 16 23:24 Operator: PM,DG,SV,CMM
Sample : AZ45911W01 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 10:15 2016 Quant Results File: LSUR1113.RES

Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



ORGANICS
Calibration Data

APPL, INC.

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 07/18/16
Matrix: Instrument: Loki

Initials:

		Compound	1	2	3	4	5	6	7				Avg	%RSD		
			0718L21.D	0718L22.D	0718L23.D	0718L24.D	0718L25.D	0718L26.D	0718L27.D							
1	I	Fluorobenzene (IS)														
2	TMHBL	Gasoline C6-C10	13.3	5.813	3.427	1.777	1.379	1.258	1.208				4.0	110	TMHBL	1.000
3	I	Chlorobenzene-D5 (IS)														
4	I	1,4-Dichlorobenzene-D (IS)														
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Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\160718\0718L21.D Vial: 18
Acq On : 18 Jul 16 20:20 Operator: PM,DG,SV,CMM
Sample : 20ug/L GAS STD 7/18/16L Inst : Loki
Misc : 10mL W IS:S 7/16/16,7/18/16 Multiplr: 1.00

Quant Time: Jul 19 8:34 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:13:42 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.49	TIC	2628348	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.79	TIC	3625758	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.12	TIC	4071971	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.31	TIC	28037025m	33.82307	ppb	100

(#) = qualifier out of range (m) = manual integration

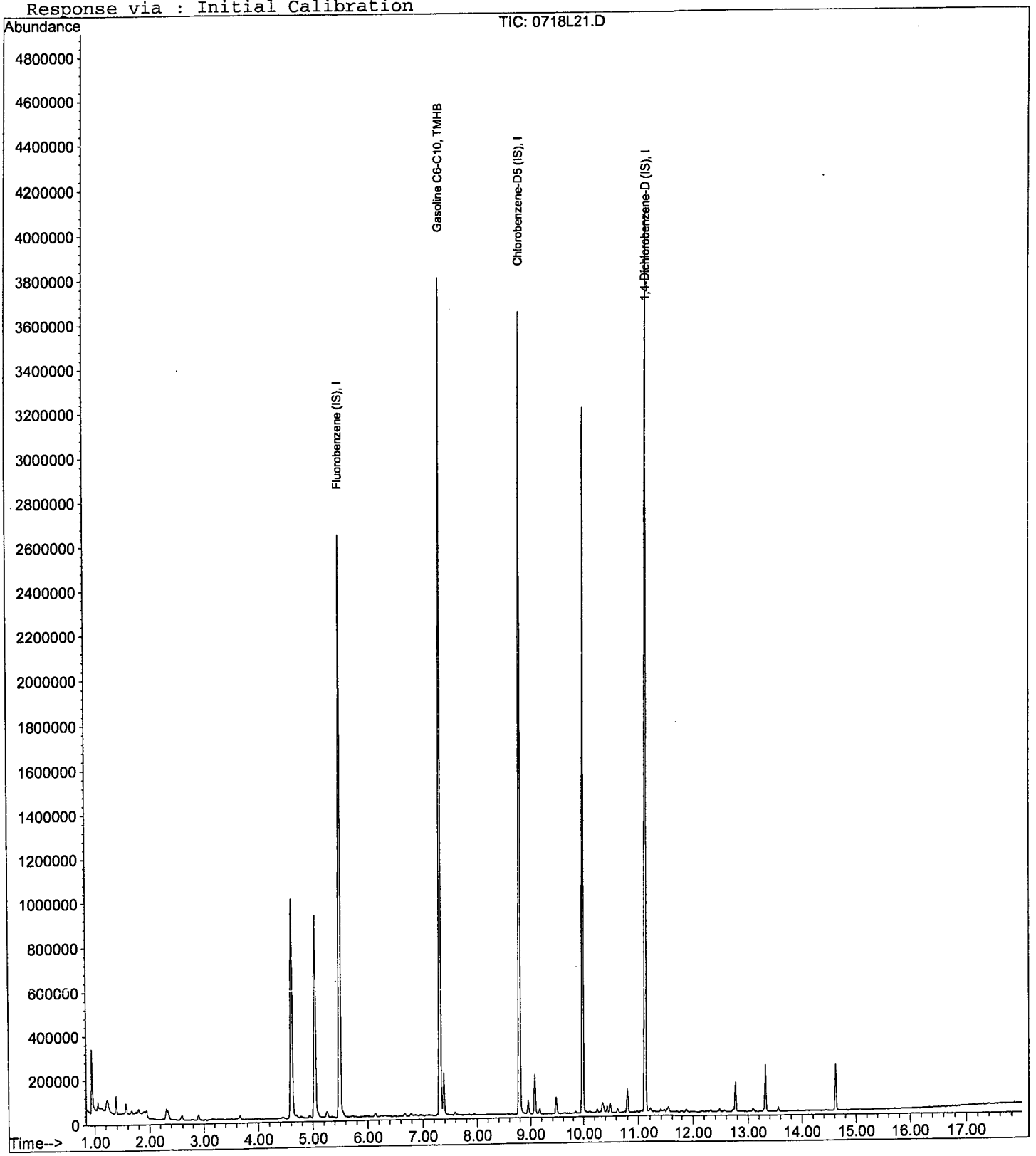
Quantitation Report

Data File : M:\LOKI\DATA\160718\0718L21.D
Acq On : 18 Jul 16 20:20
Sample : 20ug/L GAS STD 7/18/16L
Misc : 10mL W IS:S 7/16/16,7/18/16

Vial: 18
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jul 19 8:34 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\160718\0718L22.D
Acq On : 18 Jul 16 20:48
Sample : 50ug/L GAS STD 7/18/16L
Misc : 10mL W IS:S 7/16/16,7/18/16

Vial: 19
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jul 19 8:18 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:13:42 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.49	TIC	2665649	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.79	TIC	3702347	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.12	TIC	3931343	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.31	TIC	30989589m	55.45075	ppb	100

(#) = qualifier out of range (m) = manual integration

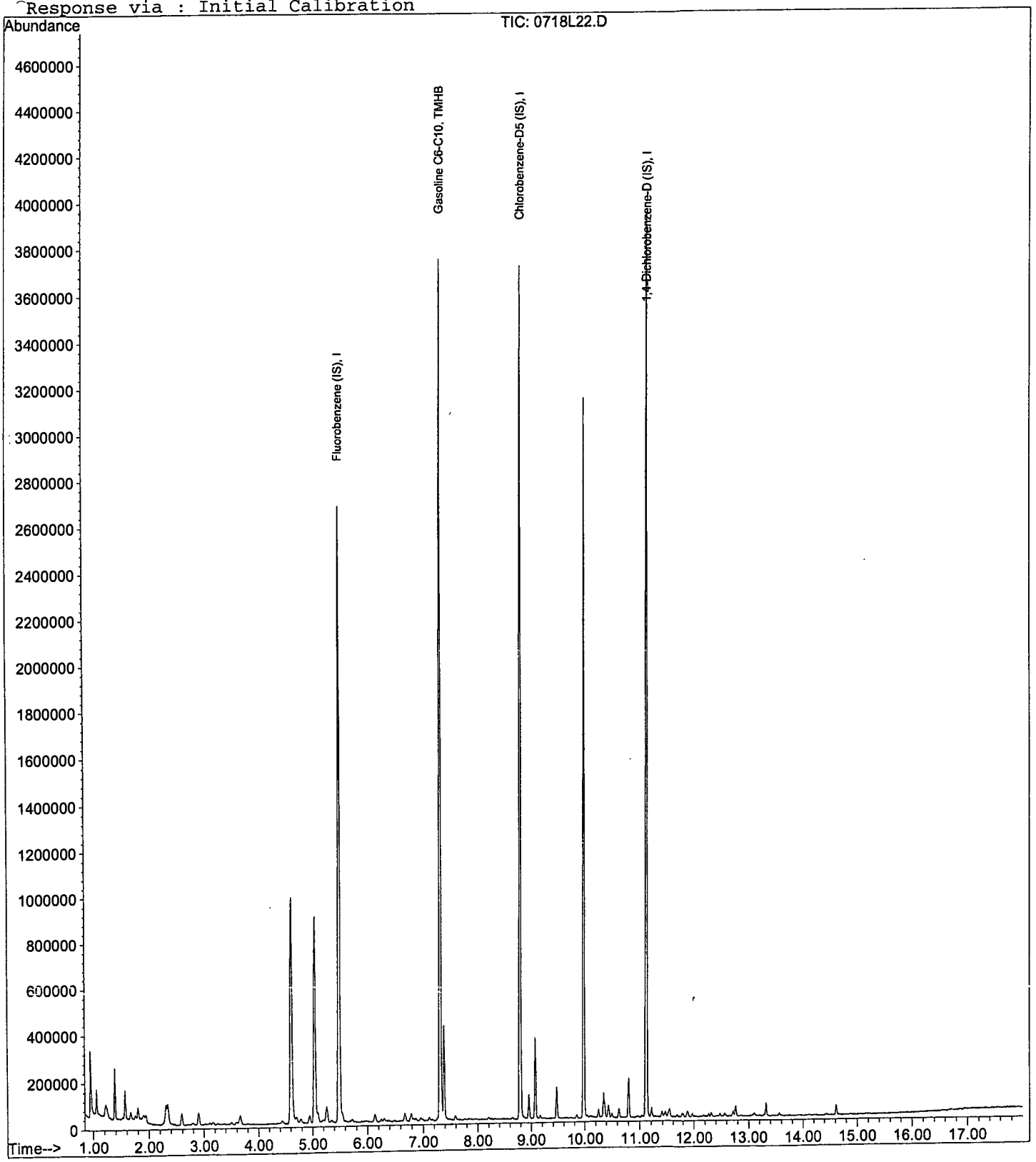
Quantitation Report

Data File : M:\LOKI\DATA\160718\0718L22.D
Acq On : 18 Jul 16 20:48
Sample : 50ug/L GAS STD 7/18/16L
Misc : 10mL W IS:S 7/16/16,7/18/16

Vial: 19
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jul 19 8:18 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\160718\0718L23.D
Acq On : 18 Jul 16 21:17
Sample : 100ug/L GAS STD 7/18/16L
Misc : 10mL W IS:S 7/16/16,7/18/16

Vial: 20
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jul 19 8:31 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:13:42 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.49	TIC	2594632	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.79	TIC	3622041	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.12	TIC	4120406	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.79	TIC	35568341m	102.45607	ppb	100

(#) = qualifier out of range (m) = manual integration

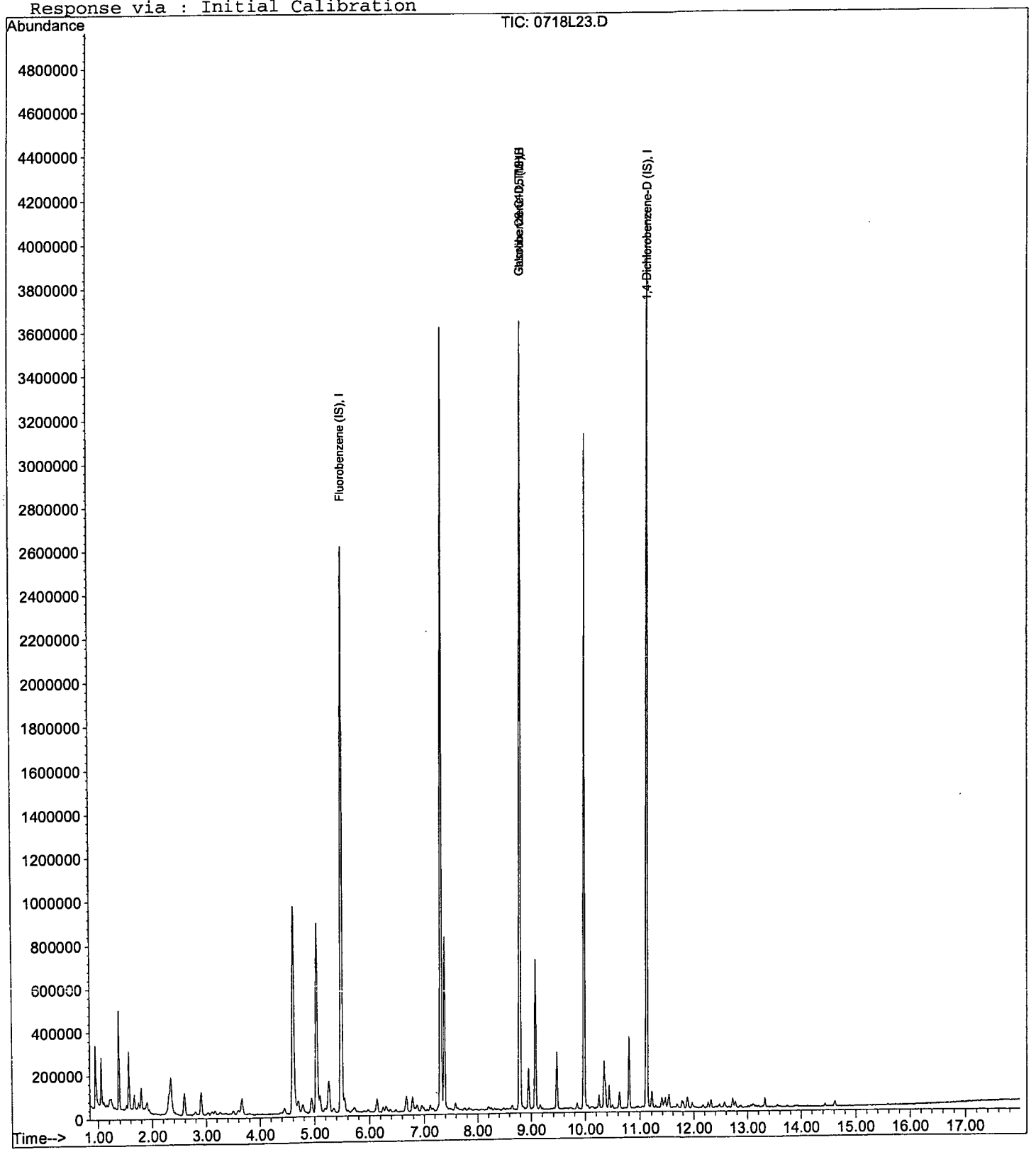
Quantitation Report

Data File : M:\LOKI\DATA\160718\0718L23.D
Acq On : 18 Jul 16 21:17
Sample : 100ug/L GAS STD 7/18/16L
Misc : 10mL W IS:S 7/16/16,7/18/16

Vial: 20
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jul 19 8:31 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\160718\0718L24.D
Acq On : 18 Jul 16 21:45
Sample : 300ug/L GAS STD 7/18/16L
Misc : 10mL W IS:S 7/16/16,7/18/16

Vial: 21
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jul 19 8:30 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:13:42 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.49	TIC	2596571	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.79	TIC	3594145	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.12	TIC	4036889	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.31	TIC	55354541m	274.19024	ppb	100

(#) = qualifier out of range (m) = manual integration

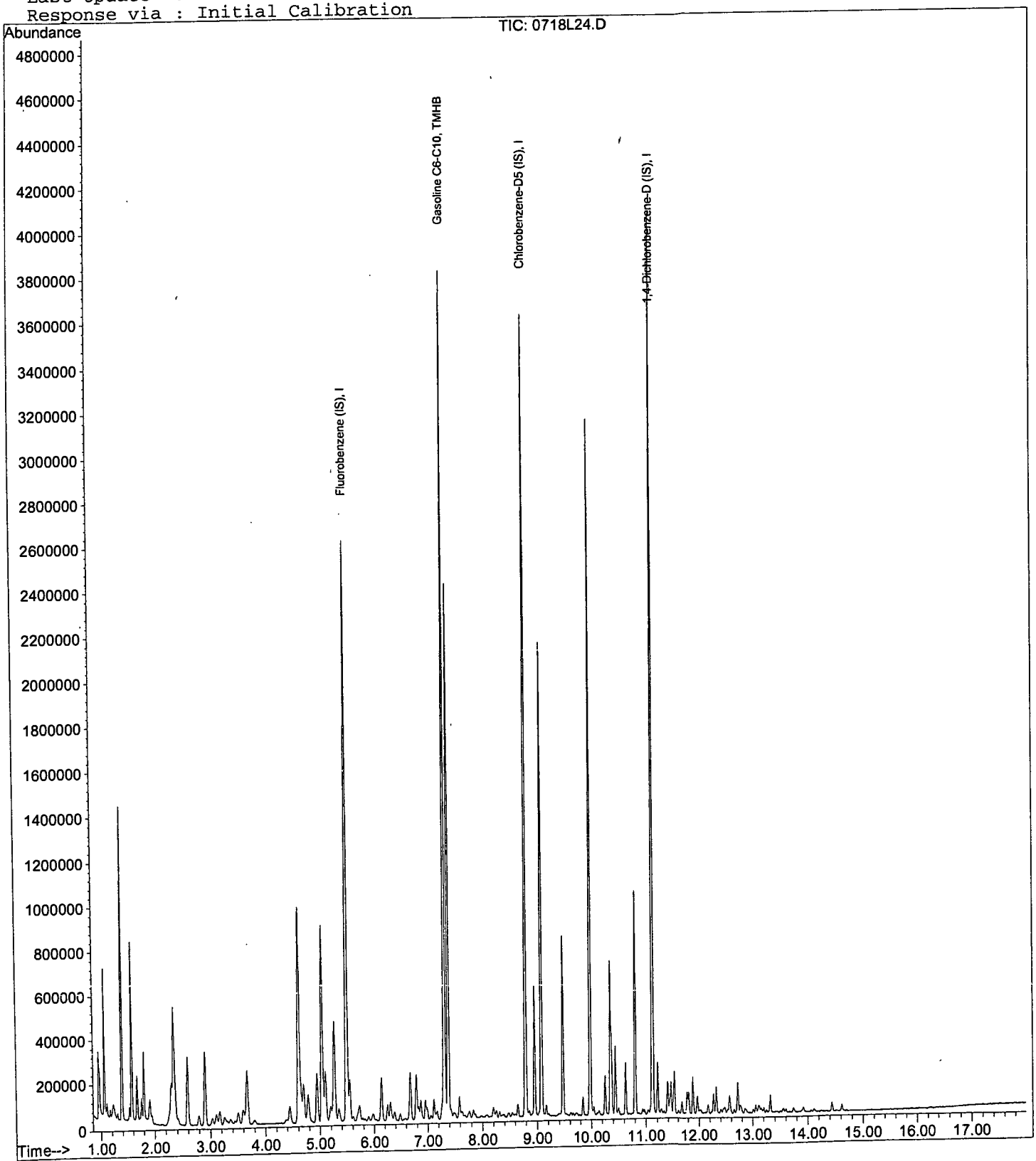
Quantitation Report

Data File : M:\LOKI\DATA\160718\0718L24.D
Acq On : 18 Jul 16 21:45
Sample : 300ug/L GAS STD 7/18/16L
Misc : 10mL W IS:S 7/16/16,7/18/16

Vial: 21
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jul 19 8:30 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\160718\0718L25.D
Acq On : 18 Jul 16 22:13
Sample : 600ug/L GAS STD 7/18/16L
Misc : 10mL W IS:S 7/16/16,7/18/16

Vial: 22
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jul 19 8:28 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:13:42 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.49	TIC	2583696	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.79	TIC	3664780	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.12	TIC	4100268	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.38	TIC	85540055m	540.24231	ppb	100

(#) = qualifier out of range (m) = manual integration

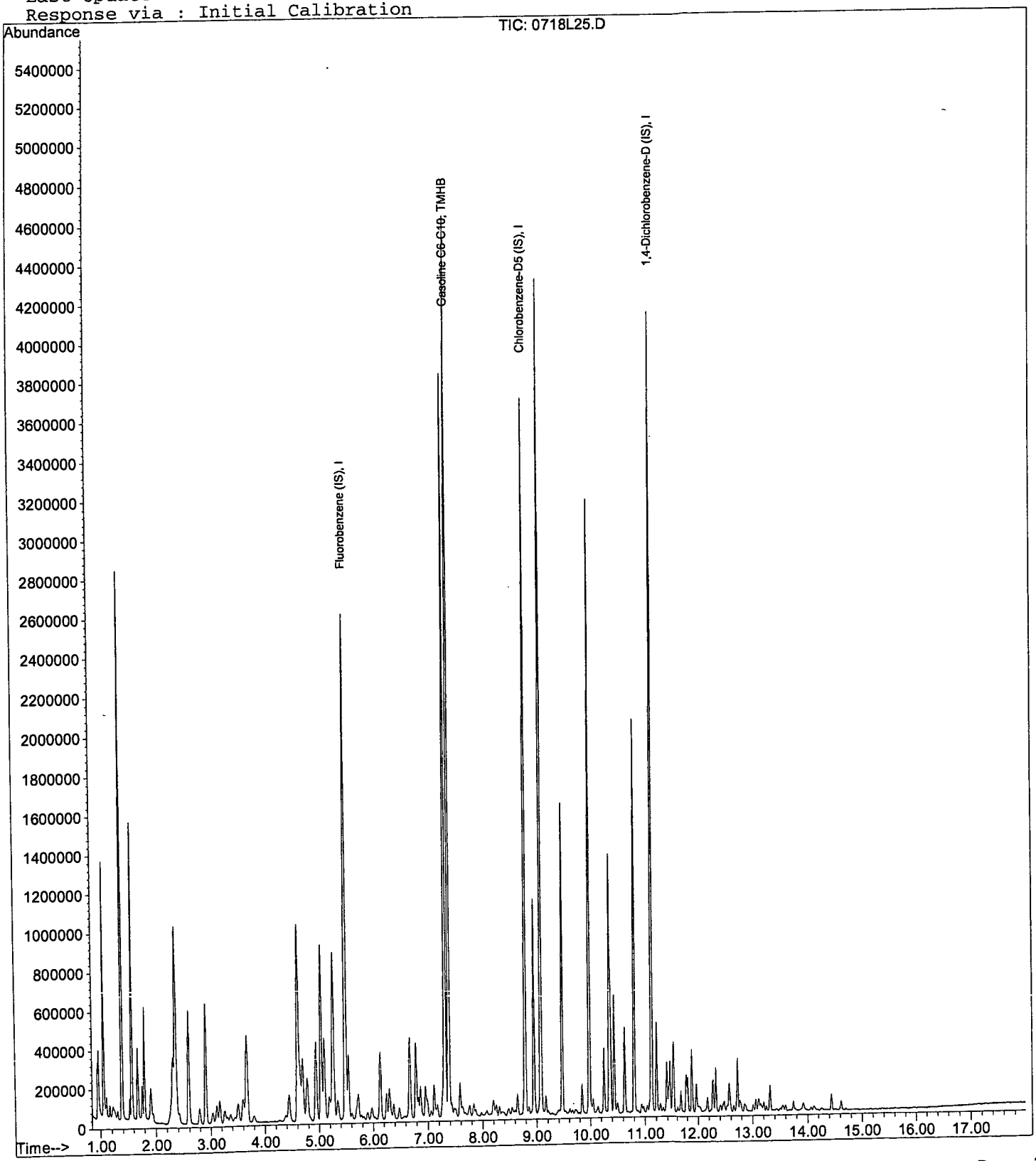
Quantitation Report

Data File : M:\LOKI\DATA\160718\0718L25.D
Acq On : 18 Jul 16 22:13
Sample : 600ug/L GAS STD 7/18/16L
Misc : 10mL W IS:S 7/16/16,7/18/16

Vial: 22
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jul 19 8:28 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\160718\0718L26.D
Acq On : 18 Jul 16 22:41
Sample : 800ug/L GAS STD 7/18/16L
Misc : 10mL W IS:S 7/16/16,7/18/16

Vial: 23
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jul 19 8:20 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:13:42 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.49	TIC	2591760	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.79	TIC	3654291	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.12	TIC	4069639	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.38	TIC	104311053m	701.36237	ppb	100

(#) = qualifier out of range (m) = manual integration

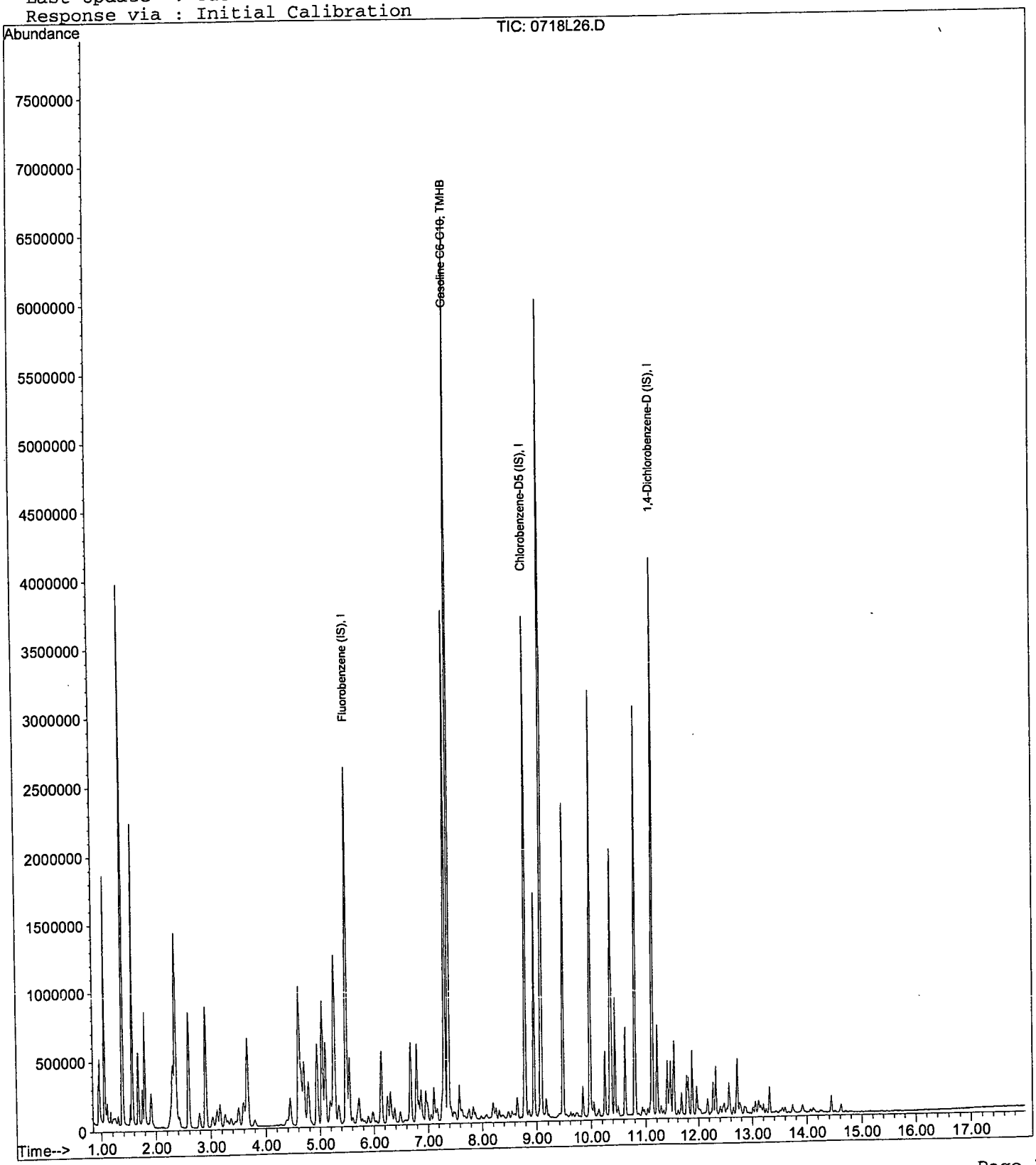
Quantitation Report

Data File : M:\LOKI\DATA\160718\0718L26.D
Acq On : 18 Jul 16 22:41
Sample : 800ug/L GAS STD 7/18/16L
Misc : 10mL W IS:S 7/16/16,7/18/16

Vial: 23
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jul 19 8:20 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\160718\0718L27.D
Acq On : 18 Jul 16 23:10
Sample : 1000ug/L GAS STD 7/18/16L
Misc : 10mL W IS:S 7/16/16,7/18/16

Vial: 24
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jul 19 8:33 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:13:42 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.49	TIC	2635141	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.79	TIC	3687466	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.12	TIC	4142548	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.38	TIC	127363032m	883.82618	ppb	100

(#) = qualifier out of range (m) = manual integration

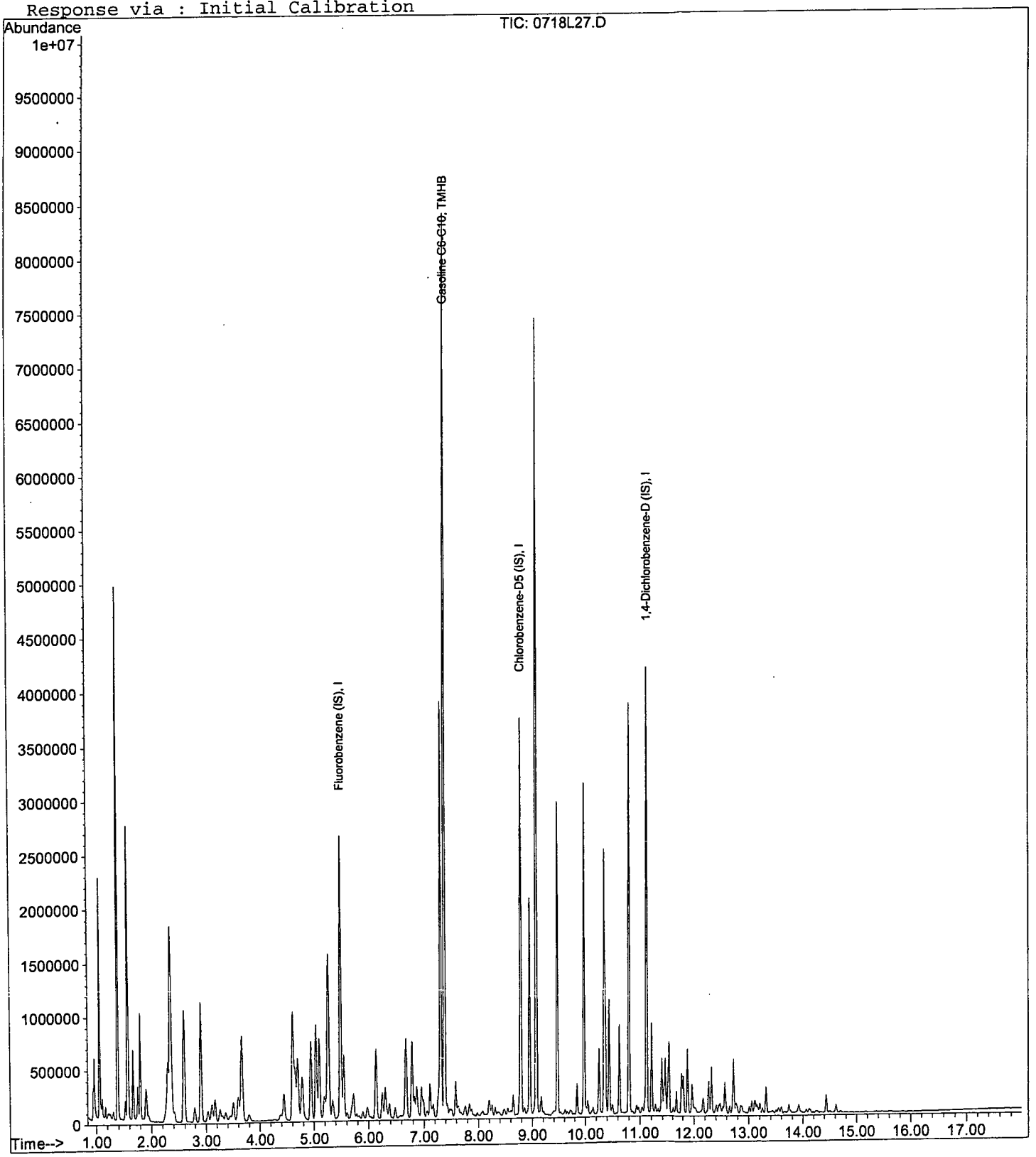
Quantitation Report

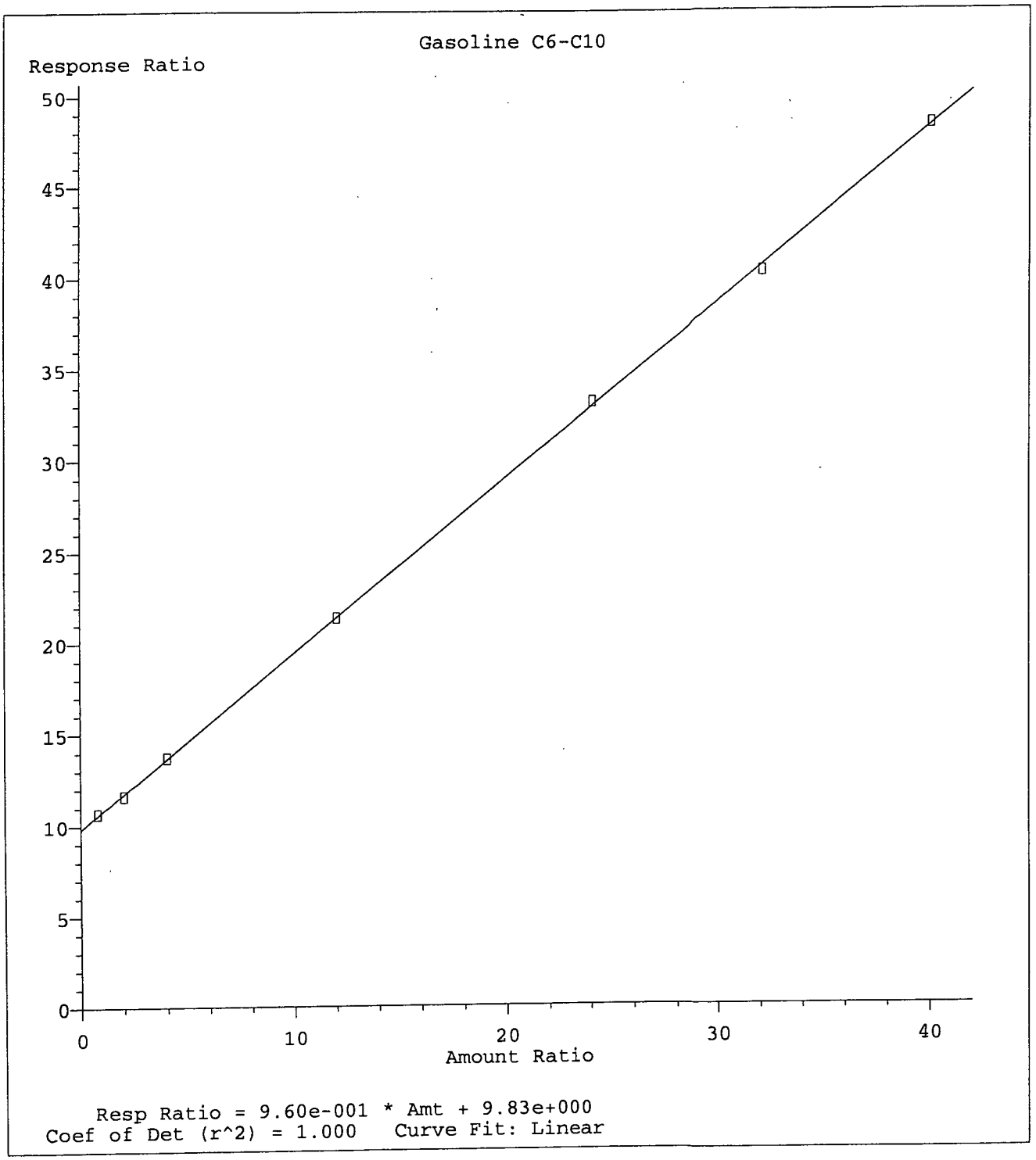
Data File : M:\LOKI\DATA\160718\0718L27.D
Acq On : 18 Jul 16 23:10
Sample : 1000ug/L GAS STD 7/18/16L
Misc : 10mL W IS:S 7/16/16,7/18/16

Vial: 24
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jul 19 8:33 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration





Method Name: M:\LOKI\DATA\160718\LGAS6718.M
Calibration Table Last Updated: Tue Jul 19 08:35:29 2016

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 07/19/16
Instrument: Loki
Initial Cal. Date: 07/18/16
Data File: 0718L30.D

		Compound	MEAN	CCRF	%D		%Drift
1	TMHB	Gasoline C6-C10	4.028	1.758	56	TMHBL	2.2
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
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30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			56.0		

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\160718\0718L30.D Vial: 27
Acq On : 19 Jul 16 00:34 Operator: PM,DG,SV,CMM
Sample : (SS)300ug/L GAS STD 7/18/16L Inst : Loki
Misc : 10mL W IS:S 7/16/16,7/18/16 Multiplr: 1.00

Quant Time: Jul 19 8:38 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.49	TIC	2619638	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.79	TIC	3645476	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.12	TIC	4041173	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.31	TIC	55271669m	293.49447	ppb	100

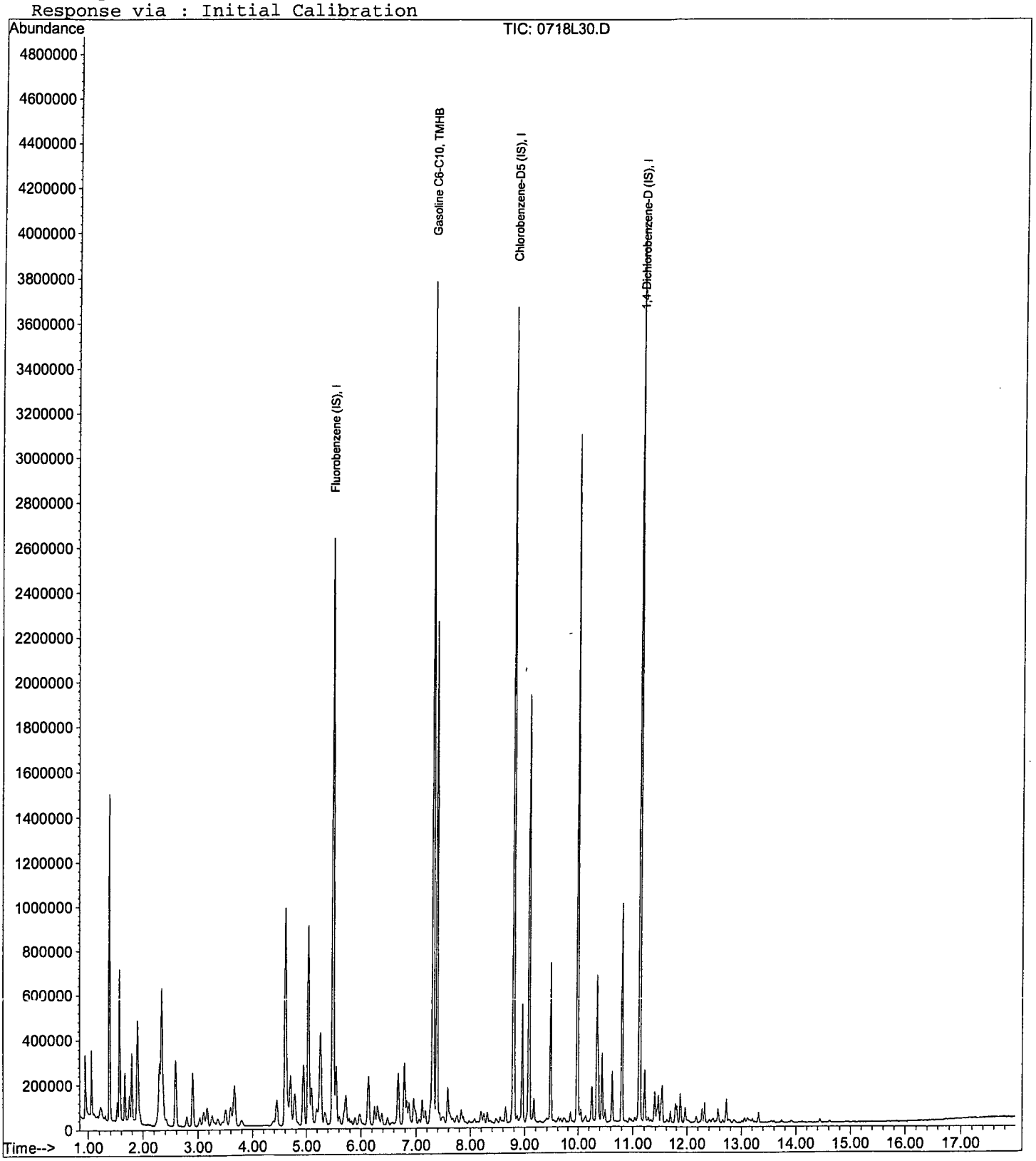
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\160718\0718L30.D Vial: 27
Acq On : 19 Jul 16 00:34 Operator: PM,DG,SV,CMM
Sample : (SS)300ug/L GAS STD 7/18/16L Inst : Loki
Misc : 10mL W IS:S 7/16/16,7/18/16 Multiplr: 1.00

Quant Time: Jul 19 8:38 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 11/13/16
Matrix: Instrument: Loki
Initials:

		Compound	1113L05.D	1113L06.D	1113L07.D	1113L08.D	1113L09.D	1113L10.D	1113L11.D	1113L12.D	1113L13.D		Avg	%RSD		
1	I	Fluorobenzene (IS)														
2	S	Dibromofluoromethane(S)	0.6027	0.5768	0.4948	0.4832	0.5315	0.5349	0.5206	0.5097	0.4938		0.53	7.5	S	
3	S	1,2-DCA-D4(S)	0.6553	0.6546	0.5528	0.5203	0.5804	0.5661	0.5641	0.5489	0.5338		0.58	8.4	S	
4	I	Chlorobenzene-D5 (IS)														
5	S	Toluene-D8(S)	2.205	2.217	1.741	1.767	1.894	1.894	1.884	1.819	1.760		1.9	9.5	S	
6	S	4-Bromofluorobenzene(S)	0.8071	0.7219	0.6403	0.6414	0.6906	0.6903	0.6882	0.6642	0.6572		0.69	7.5	S	
7	I	1,4-Dichlorobenzene-D (IS)														
8																
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Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L05.D Vial: 5
Acq On : 13 Nov 16 13:35 Operator: PM,DG,SV,CMM
Sample : 0.3ug/L VOC STD 11/13/16J Inst : Loki
Misc : 1uL-5ppb Multiplr: 1.00

Quant Time: Nov 17 11:17 2016 Quant Results File: LSUR1113.RES

Quant Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	821614	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	780352	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	427200	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.49	111	99036	5.71210 ppb	0.00
Spiked Amount 25.000			Recovery	= 22.848%	
3) 1,2-DCA-D4(S)	4.93	65	107676	5.69665 ppb	0.00
Spiked Amount 25.000			Recovery	= 22.788%	
5) Toluene-D8(S)	7.22	98	344140	5.77527 ppb	0.00
Spiked Amount 25.000			Recovery	= 23.100%	
6) 4-Bromofluorobenzene(S)	9.89	95	125959	5.85659 ppb	0.00
Spiked Amount 25.000			Recovery	= 23.428%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

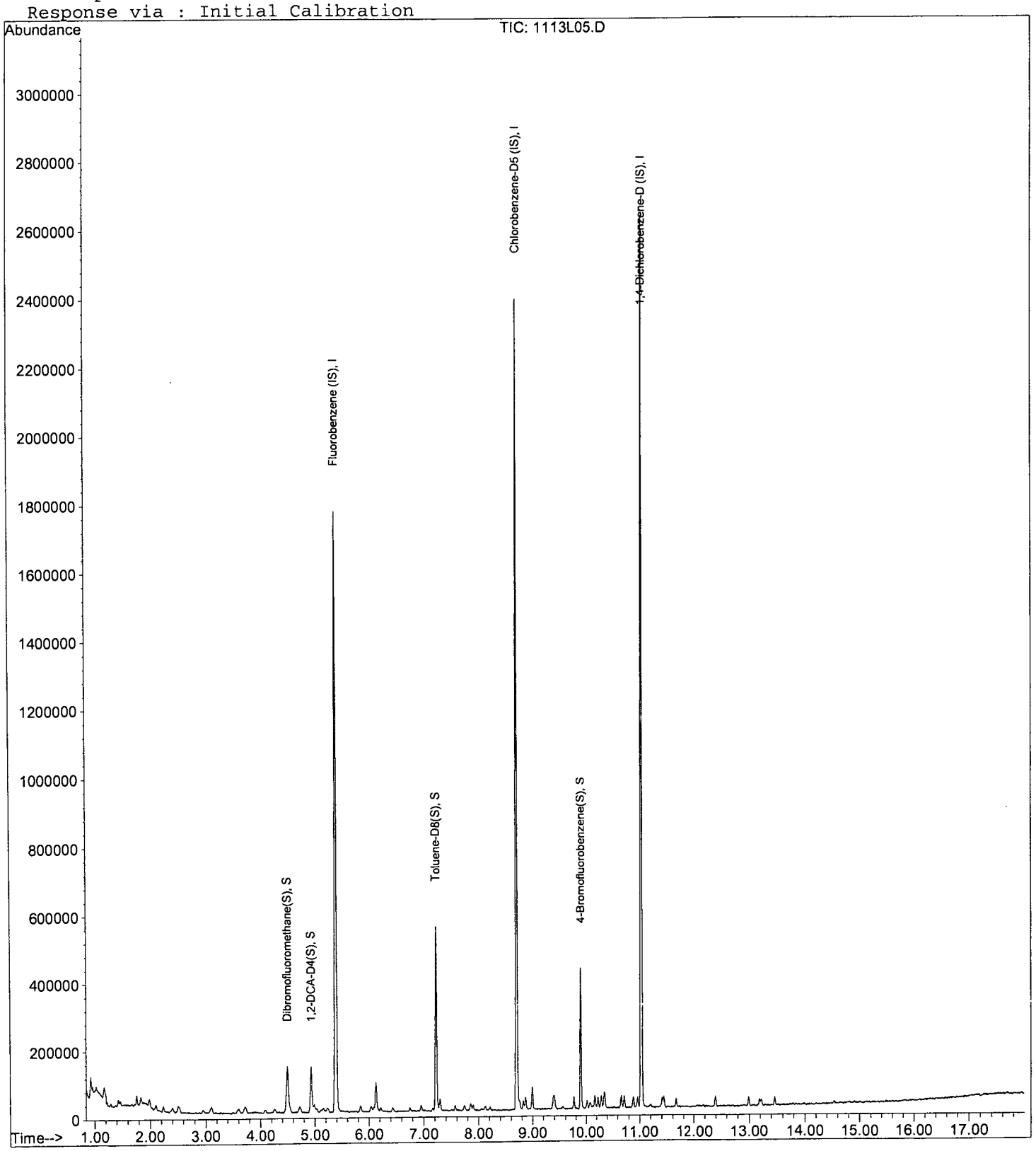
Quantitation Report

Data File : M:\LOKI\DATA\161113\1113L05.D
Acq On : 13 Nov 16 13:35
Sample : 0.3ug/L VOC STD 11/13/16J
Misc : 1uL-5ppb

Vial: 5
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 17 11:17 2016 Quant Results File: LSUR1113.RES

Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L06.D Vial: 6
Acq On : 13 Nov 16 14:04 Operator: PM,DG,SV,CMM
Sample : 0.5ug/L VOC STD 11/13/16K Inst : Loki
Misc : 1uL-5ppb Multiplr: 1.00

Quant Time: Nov 17 11:17 2016 Quant Results File: LSUR1113.RES

Quant Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	848000	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	782336	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	423936	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.49	111	97825	5.46669 ppb	0.00
Spiked Amount 25.000			Recovery =	21.868%	
3) 1,2-DCA-D4(S)	4.93	65	111019	5.69075 ppb	0.00
Spiked Amount 25.000			Recovery =	22.764%	
5) Toluene-D8(S)	7.22	98	346936	5.80743 ppb	0.00
Spiked Amount 25.000			Recovery =	23.228%	
6) 4-Bromofluorobenzene(S)	9.89	95	124253	5.76261 ppb	0.00
Spiked Amount 25.000			Recovery =	23.052%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

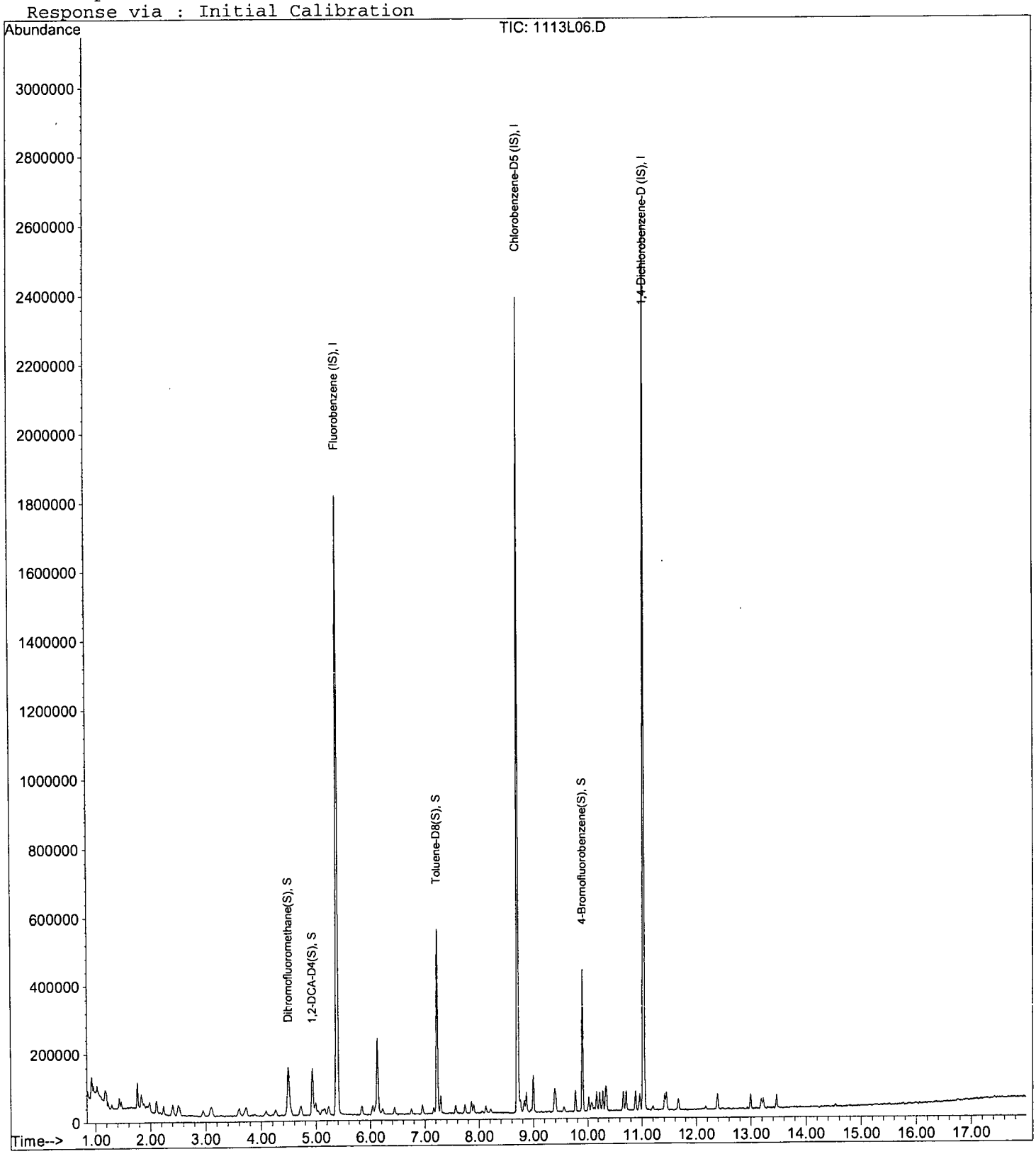
Quantitation Report

Data File : M:\LOKI\DATA\161113\1113L06.D
Acq On : 13 Nov 16 14:04
Sample : 0.5ug/L VOC STD 11/13/16K
Misc : 1uL-5ppb

Vial: 6
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 17 11:17 2016 Quant Results File: LSUR1113.RES

Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L07.D Vial: 7
Acq On : 13 Nov 16 14:32 Operator: PM,DG,SV,CMM
Sample : 1.0ug/L VOC STD 11/13/16L Inst : Loki
Misc : 2uL-10ppb Multiplr: 1.00

Quant Time: Nov 17 11:17 2016 Quant Results File: LSUR1113.RES

Quant Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.39	96	819008	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	820800	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	438720	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.49	111	162096	9.37896 ppb	0.00
Spiked Amount 25.000			Recovery	= 37.516%	
3) 1,2-DCA-D4(S)	4.93	65	181084	9.61082 ppb	0.00
Spiked Amount 25.000			Recovery	= 38.444%	
5) Toluene-D8(S)	7.22	98	571625	9.12015 ppb	0.00
Spiked Amount 25.000			Recovery	= 36.480%	
6) 4-Bromofluorobenzene(S)	9.89	95	210233	9.29329 ppb	0.00
Spiked Amount 25.000			Recovery	= 37.172%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

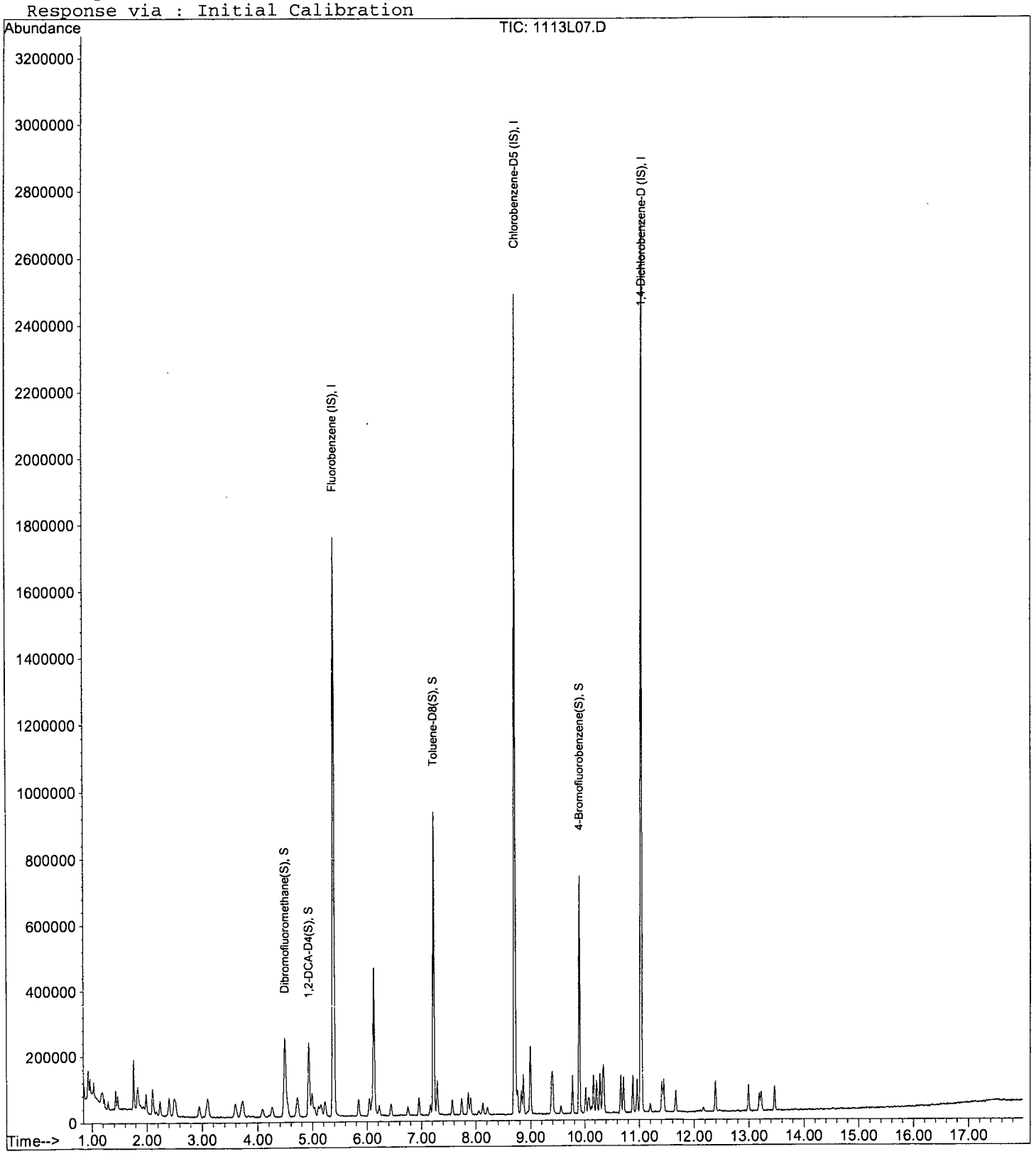
Quantitation Report

Data File : M:\LOKI\DATA\161113\1113L07.D
Acq On : 13 Nov 16 14:32
Sample : 1.0ug/L VOC STD 11/13/16L
Misc : 2uL-10ppb

Vial: 7
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 17 11:17 2016 Quant Results File: LSUR1113.RES

Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L08.D Vial: 8
Acq On : 13 Nov 16 15:00 Operator: PM,DG,SV,CMM
Sample : 2.0ug/L VOC STD 11/13/16M Inst : Loki
Misc : 2uL-10ppb Multiplr: 1.00

Quant Time: Nov 17 11:17 2016 Quant Results File: LSUR1113.RES

Quant Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	848479	25.00000	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	802368	25.00000	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	417920	25.00000	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.49	111	164004	9.15976	ppb	0.00
Spiked Amount 25.000			Recovery = 36.640%			
3) 1,2-DCA-D4(S)	4.93	65	176601	9.04733	ppb	0.00
Spiked Amount 25.000			Recovery = 36.188%			
5) Toluene-D8(S)	7.22	98	567184	9.25717	ppb	0.00
Spiked Amount 25.000			Recovery = 37.028%			
6) 4-Bromofluorobenzene(S)	9.89	95	205871	9.30953	ppb	0.00
Spiked Amount 25.000			Recovery = 37.240%			

Target Compounds Qvalue

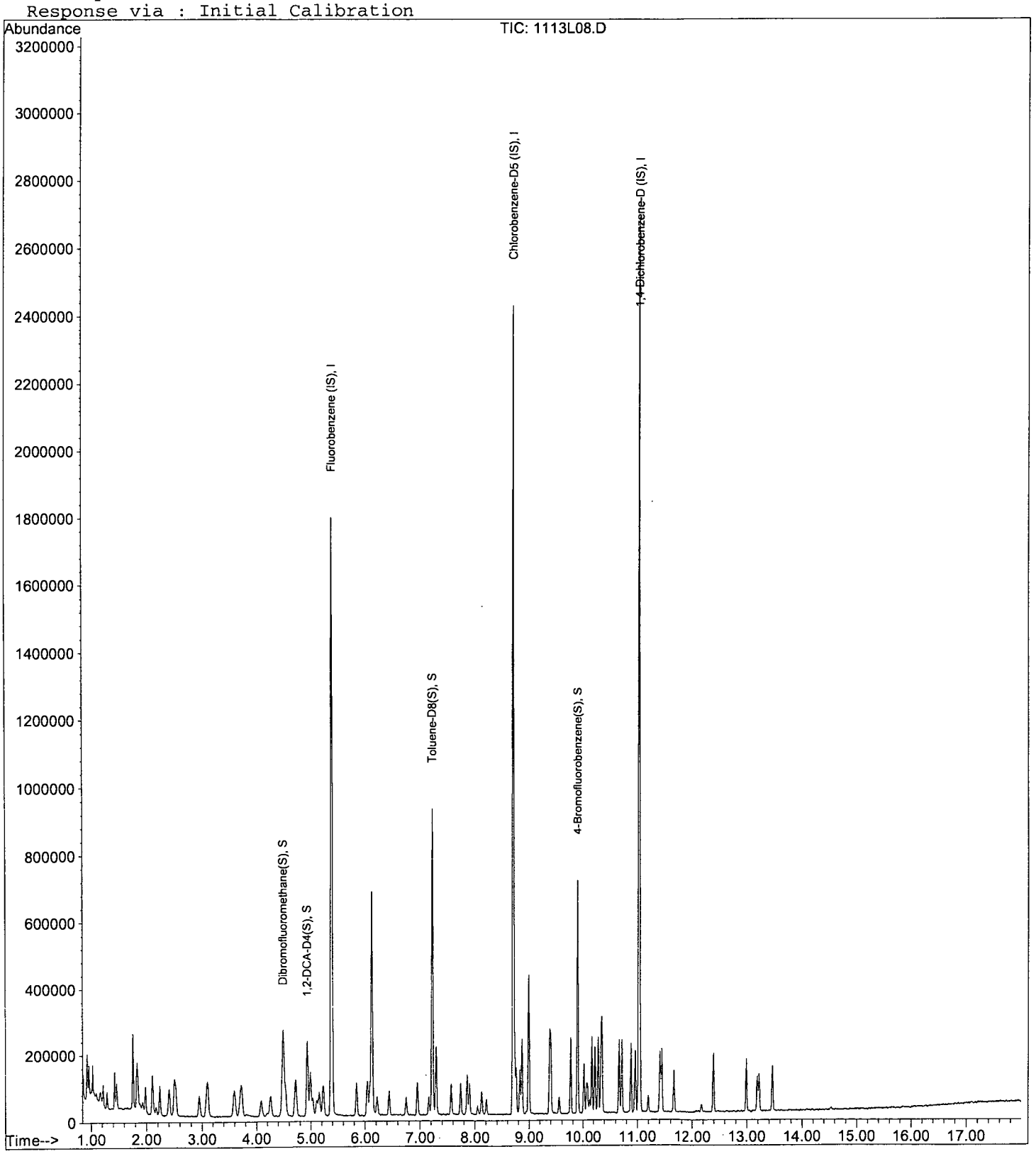
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1113L08.D Vial: 8
Acq On : 13 Nov 16 15:00 Operator: PM,DG,SV,CMM
Sample : 2.0ug/L VOC STD 11/13/16M Inst : Loki
Misc : 2uL-10ppb Multiplr: 1.00

Quant Time: Nov 17 11:17 2016 Quant Results File: LSUR1113.RES

Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L09.D Vial: 9
Acq On : 13 Nov 16 15:28 Operator: PM,DG,SV,CMM
Sample : 5.0ug/L VOC STD 11/13/16AN Inst : Loki
Misc : 5uL-25ppb Multiplr: 1.00

Quant Time: Nov 17 11:17 2016 Quant Results File: LSUR1113.RES

Quant Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	816896	25.00000	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	796416	25.00000	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	431296	25.00000	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.49	111	434172	25.18638	ppb	0.00
Spiked Amount 25.000			Recovery = 100.744%			
3) 1,2-DCA-D4(S)	4.93	65	474115	25.22814	ppb	0.00
Spiked Amount 25.000			Recovery = 100.912%			
5) Toluene-D8(S)	7.22	98	1508650	24.80713	ppb	0.00
Spiked Amount 25.000			Recovery = 99.228%			
6) 4-Bromofluorobenzene(S)	9.89	95	550032	25.05844	ppb	0.00
Spiked Amount 25.000			Recovery = 100.232%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
1113L09.D LSUR1113.M Mon Nov 21 12:03:15 2016 Page 1

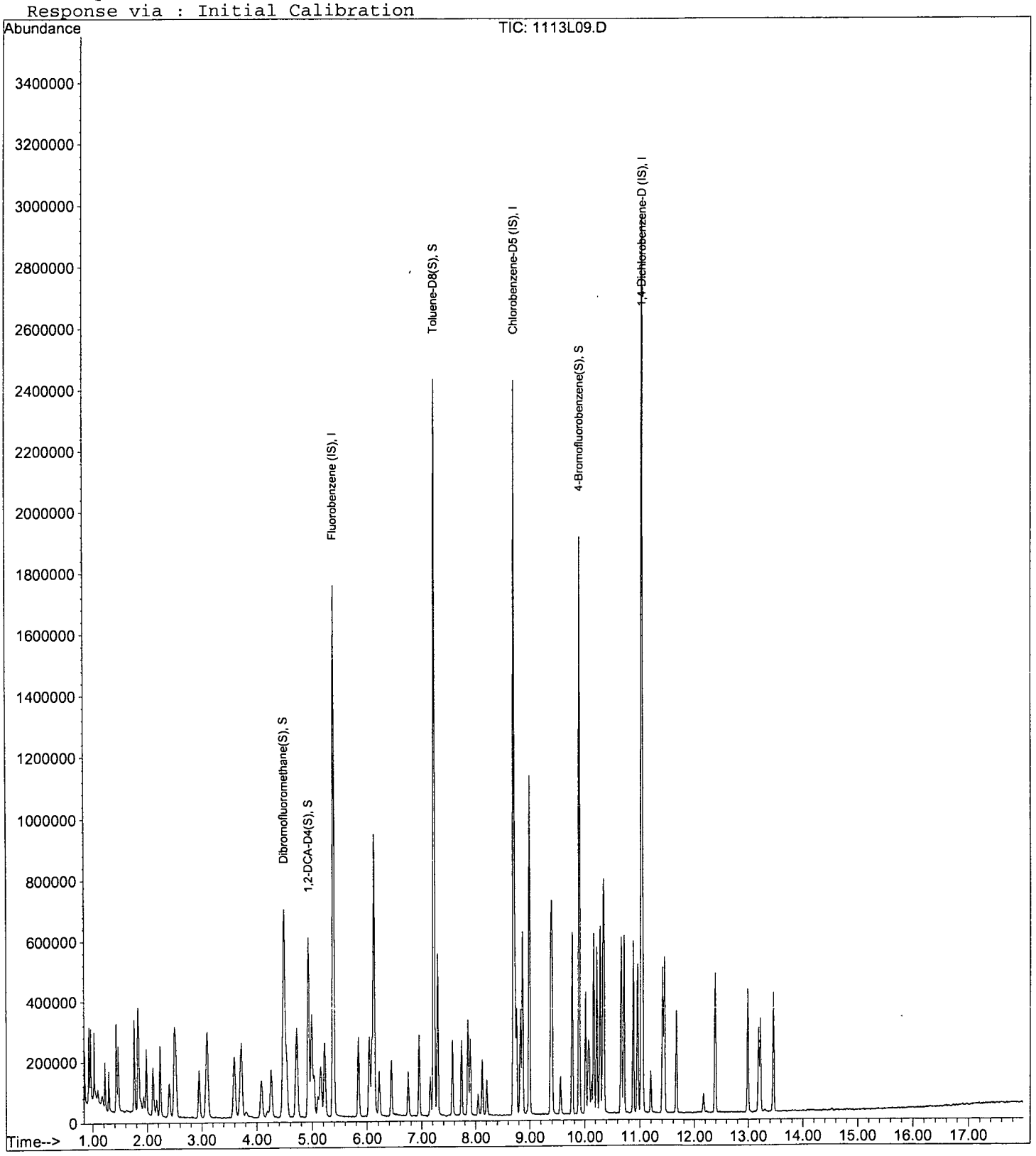
Quantitation Report

Data File : M:\LOKI\DATA\161113\1113L09.D
Acq On : 13 Nov 16 15:28
Sample : 5.0ug/L VOC STD 11/13/16AN
Misc : 5uL-25ppb

Vial: 9
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 17 11:17 2016 Quant Results File: LSUR1113.RES

Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L10.D Vial: 10
Acq On : 13 Nov 16 15:56 Operator: PM,DG,SV,CMM
Sample : 10ug/L VOC STD 11/13/160 Inst : Loki
Misc : 5uL-25ppb Multiplr: 1.00

Quant Time: Nov 17 11:17 2016 Quant Results File: LSUR1113.RES

Quant Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	817344	25.00000	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	790336	25.00000	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	444864	25.00000	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.49	111	437231	25.34993	ppb	0.00
Spiked Amount 25.000			Recovery = 101.400%			
3) 1,2-DCA-D4(S)	4.93	65	462687	24.60655	ppb	0.00
Spiked Amount 25.000			Recovery = 98.428%			
5) Toluene-D8(S)	7.22	98	1497085	24.80634	ppb	0.00
Spiked Amount 25.000			Recovery = 99.224%			
6) 4-Bromofluorobenzene(S)	9.89	95	545532	25.04462	ppb	0.00
Spiked Amount 25.000			Recovery = 100.180%			

Target Compounds Qvalue

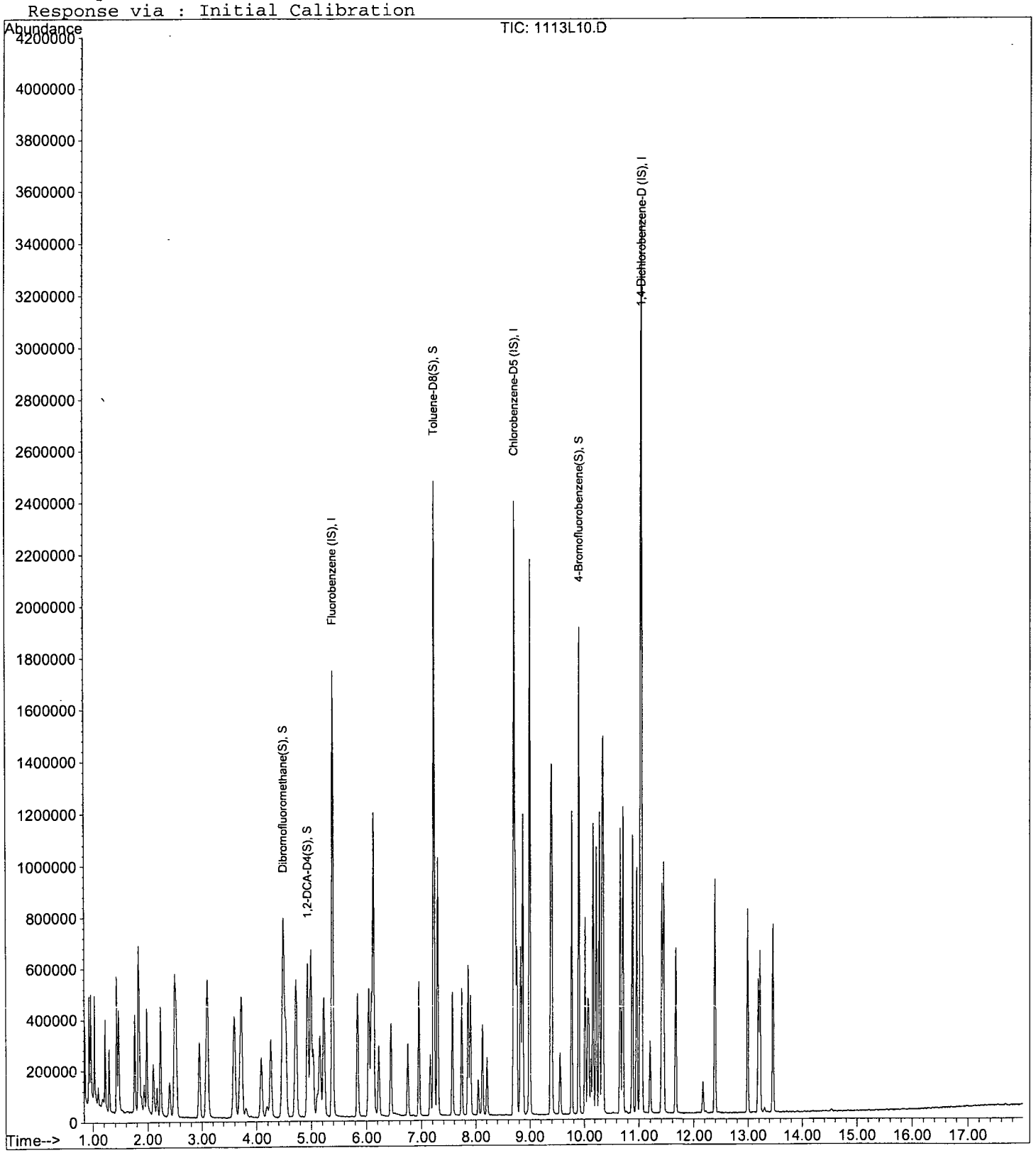
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1113L10.D Vial: 10
Acq On : 13 Nov 16 15:56 Operator: PM,DG,SV,CMM
Sample : 10ug/L VOC STD 11/13/160 Inst : Loki
Misc : 5uL-25ppb Multiplr: 1.00

Quant Time: Nov 17 11:17 2016 Quant Results File: LSUR1113.RES

Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L11.D Vial: 11
Acq On : 13 Nov 16 16:24 Operator: PM,DG,SV,CMM
Sample : 20ug/L VOC STD 11/13/16P Inst : Loki
Misc : 10uL-50ppb Multiplr: 1.00

Quant Time: Nov 17 11:17 2016 Quant Results File: LSUR1113.RES

Quant Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	822357	25.00000	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	788800	25.00000	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	427392	25.00000	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.49	111	856205	49.33874	ppb	0.00
Spiked Amount 25.000			Recovery = 197.356%			
3) 1,2-DCA-D4(S)	4.93	65	927747	49.03853	ppb	0.00
Spiked Amount 25.000			Recovery = 196.156%			
5) Toluene-D8(S)	7.22	98	2971626	49.33501	ppb	0.00
Spiked Amount 25.000			Recovery = 197.340%			
6) 4-Bromofluorobenzene(S)	9.89	95	1085660	49.93821	ppb	0.00
Spiked Amount 25.000			Recovery = 199.752%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

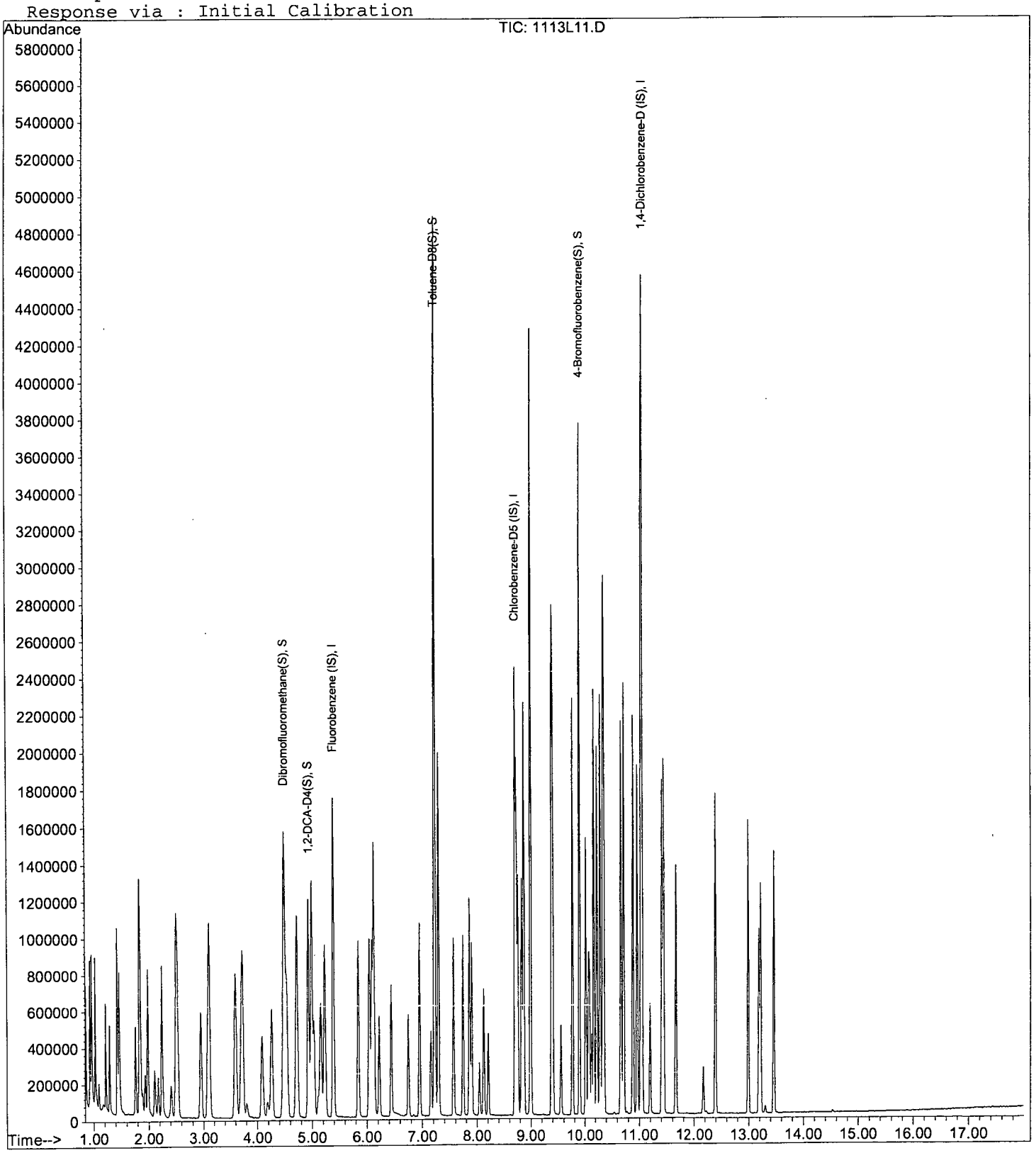
Quantitation Report

Data File : M:\LOKI\DATA\161113\1113L11.D
Acq On : 13 Nov 16 16:24
Sample : 20ug/L VOC STD 11/13/16P
Misc : 10uL-50ppb

Vial: 11
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 17 11:17 2016 Quant Results File: LSUR1113.RES

Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L12.D Vial: 12
Acq On : 13 Nov 16 16:53 Operator: PM,DG,SV,CMM
Sample : 40ug/L VOC STD 11/13/16Q Inst : Loki
Misc : 10uL-50ppb Multiplr: 1.00

Quant Time: Nov 17 11:17 2016 Quant Results File: LSUR1113.RES

Quant Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	833460	25.00000	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	819328	25.00000	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	420224	25.00000	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.49	111	849578	48.30468	ppb	0.00
Spiked Amount 25.000			Recovery = 193.220%			
3) 1,2-DCA-D4(S)	4.93	65	914958	47.71827	ppb	0.00
Spiked Amount 25.000			Recovery = 190.872%			
5) Toluene-D8(S)	7.22	98	2980523	47.63901	ppb	0.00
Spiked Amount 25.000			Recovery = 190.556%			
6) 4-Bromofluorobenzene(S)	9.89	95	1088386	48.19824	ppb	0.00
Spiked Amount 25.000			Recovery = 192.792%			

Target Compounds Qvalue

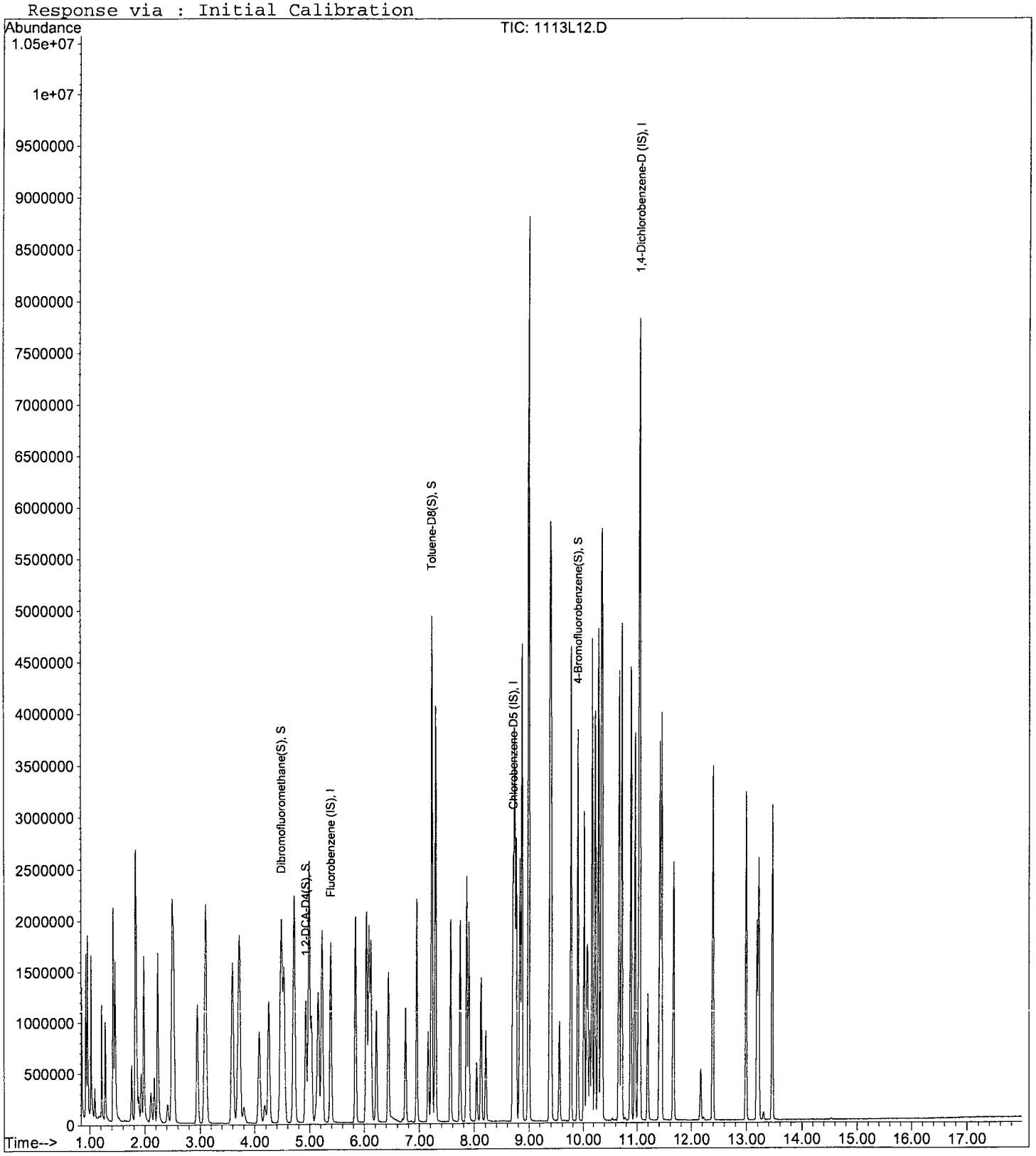
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1113L12.D Vial: 12
Acq On : 13 Nov 16 16:53 Operator: PM,DG,SV,CMM
Sample : 40ug/L VOC STD 11/13/16Q Inst : Loki
Misc : 10uL-50ppb Multiplr: 1.00

Quant Time: Nov 17 11:17 2016 Quant Results File: LSUR1113.RES

Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L13.D Vial: 13
Acq On : 13 Nov 16 17:21 Operator: PM,DG,SV,CMM
Sample : 100ug/L VOC STD 11/13/16R Inst : Loki
Misc : 20uL-100ppb Multiplr: 1.00

Quant Time: Nov 17 11:17 2016 Quant Results File: LSUR1113.RES

Quant Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	813101	25.00000	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	804096	25.00000	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	453440	25.00000	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.49	111	1606098	93.60482	ppb	0.00
Spiked Amount 25.000			Recovery = 374.420%			
3) 1,2-DCA-D4(S)	4.93	65	1736238	92.81818	ppb	0.00
Spiked Amount 25.000			Recovery = 371.272%			
5) Toluene-D8(S)	7.22	98	5659435	92.17076	ppb	0.00
Spiked Amount 25.000			Recovery = 368.684%			
6) 4-Bromofluorobenzene(S)	9.89	95	2113780	95.38013	ppb	0.00
Spiked Amount 25.000			Recovery = 381.520%			

Target Compounds Qvalue

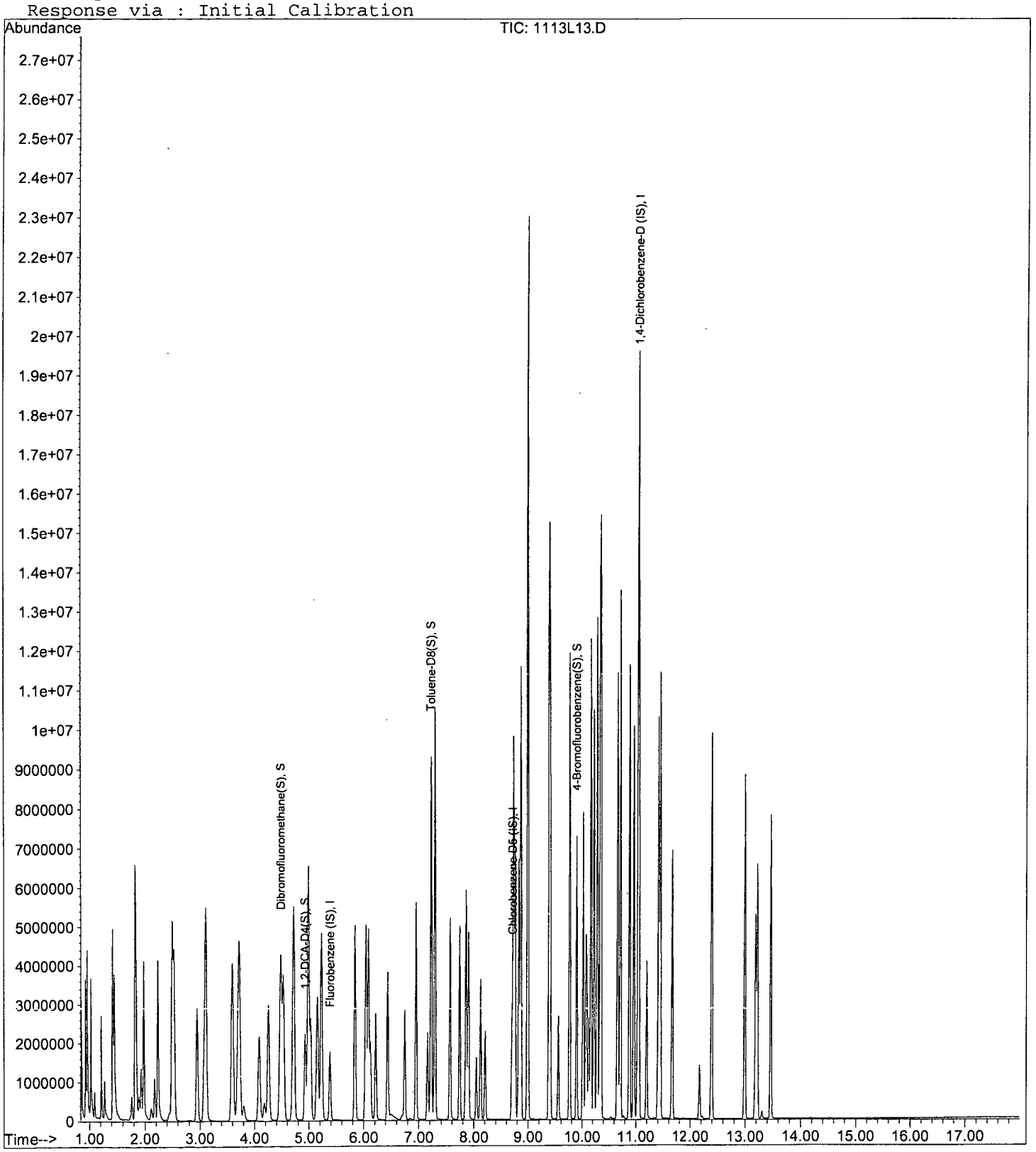
(#) = qualifier out of range (m) = manual integration
1113L13.D LSUR1113.M Mon Nov 21 12:03:31 2016 Page 1

Quantitation Report

Data File : M:\LOKI\DATA\161113\1113L13.D Vial: 13
Acq On : 13 Nov 16 17:21 Operator: PM,DG,SV,CMM
Sample : 100ug/L VOC STD 11/13/16R Inst : Loki
Misc : 20uL-100ppb Multiplr: 1.00

Quant Time: Nov 17 11:17 2016 Quant Results File: LSUR1113.RES

Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/16/16
Instrument: Loki
Initial Cal. Date: 11/13/16
Data File: 1116L12.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	4.028	1.678	58	TMHBL	10
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
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40							
		Average			58.0		

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1116L12.D Vial: 2
Acq On : 16 Nov 16 13:34 Operator: PM,DG,SV,CMM
Sample : 161116A CCV/LCS 300ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 9:29 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1601710	25.00000	ppb	-0.10
3) Chlorobenzene-D5 (IS)	8.70	TIC	2177917	25.00000	ppb	-0.09
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	2313546	25.00000	ppb	-0.09

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	32257790m	268.50853	ppb	100

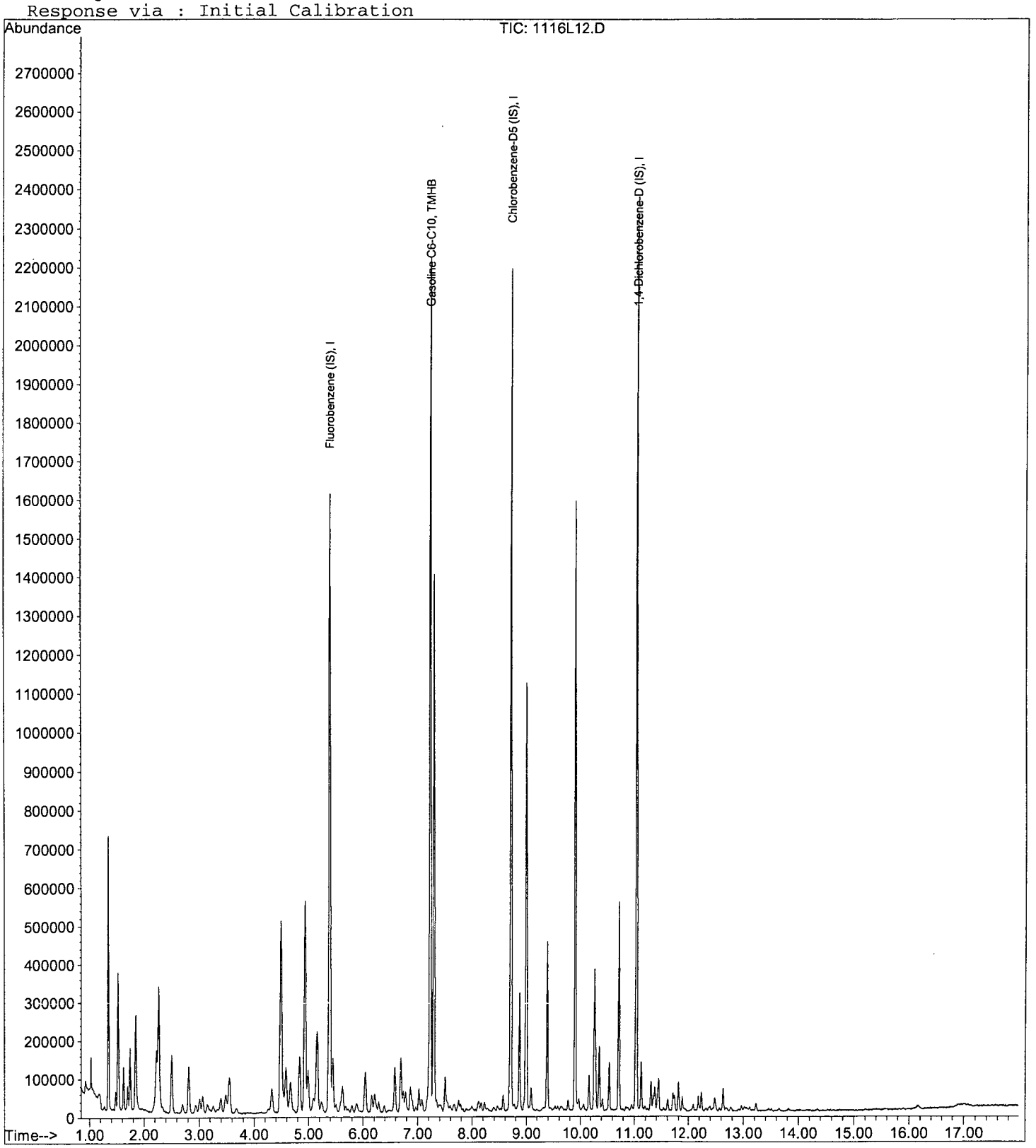
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1116L12.D Vial: 2
Acq On : 16 Nov 16 13:34 Operator: PM,DG,SV,CMM
Sample : 161116A CCV/LCS 300ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 9:29 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/16/16
Instrument: Loki
Initial Cal. Date: 11/13/16
Data File: 1116L12.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	S	Dibromofluoromethane(S)	0.5276	0.4991	5.4	S	
3	S	1,2-DCA-D4(S)	0.5751	0.5922	3.0	S	
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	S	Toluene-D8(S)	1.909	1.948	2.0	S	
6	S	4-Bromofluorobenzene(S)	0.6890	0.6843	0.69	S	
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
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		Average			2.8		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1116L12.D Vial: 2
Acq On : 16 Nov 16 13:34 Operator: PM,DG,SV,CMM
Sample : 161116A CCV/LCS 300ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 10:14 2016 Quant Results File: LSUR1113.RES

Quant Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	737757	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	680896	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	360768	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.49	111	368212	23.65131 ppb	0.00
Spiked Amount 25.000			Recovery	= 94.604%	
3) 1,2-DCA-D4(S)	4.93	65	436914	25.74251 ppb	0.00
Spiked Amount 25.000			Recovery	= 102.972%	
5) Toluene-D8(S)	7.22	98	1326443	25.51149 ppb	0.00
Spiked Amount 25.000			Recovery	= 102.044%	
6) 4-Bromofluorobenzene(S)	9.89	95	465913	24.82733 ppb	0.00
Spiked Amount 25.000			Recovery	= 99.308%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/17/16
Instrument: Loki
Initial Cal. Date: 11/13/16
Data File: 1116L37.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	4.028	1.315	67	TMHBL	48
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
5							
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7							
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		Average			67.0		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1116L37.D Vial: 27
Acq On : 17 Nov 16 1:16 Operator: PM,DG,SV,CMM
Sample : Ending CCV GAS 300ug/L 11/16/16 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 9:28 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1623756	25.00000	ppb	-0.10
3) Chlorobenzene-D5 (IS)	8.57	TIC	32966	25.00000	ppb	-0.22
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	2243799	25.00000	ppb	-0.09

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.31	TIC	25632133m	155.11626	ppb	100

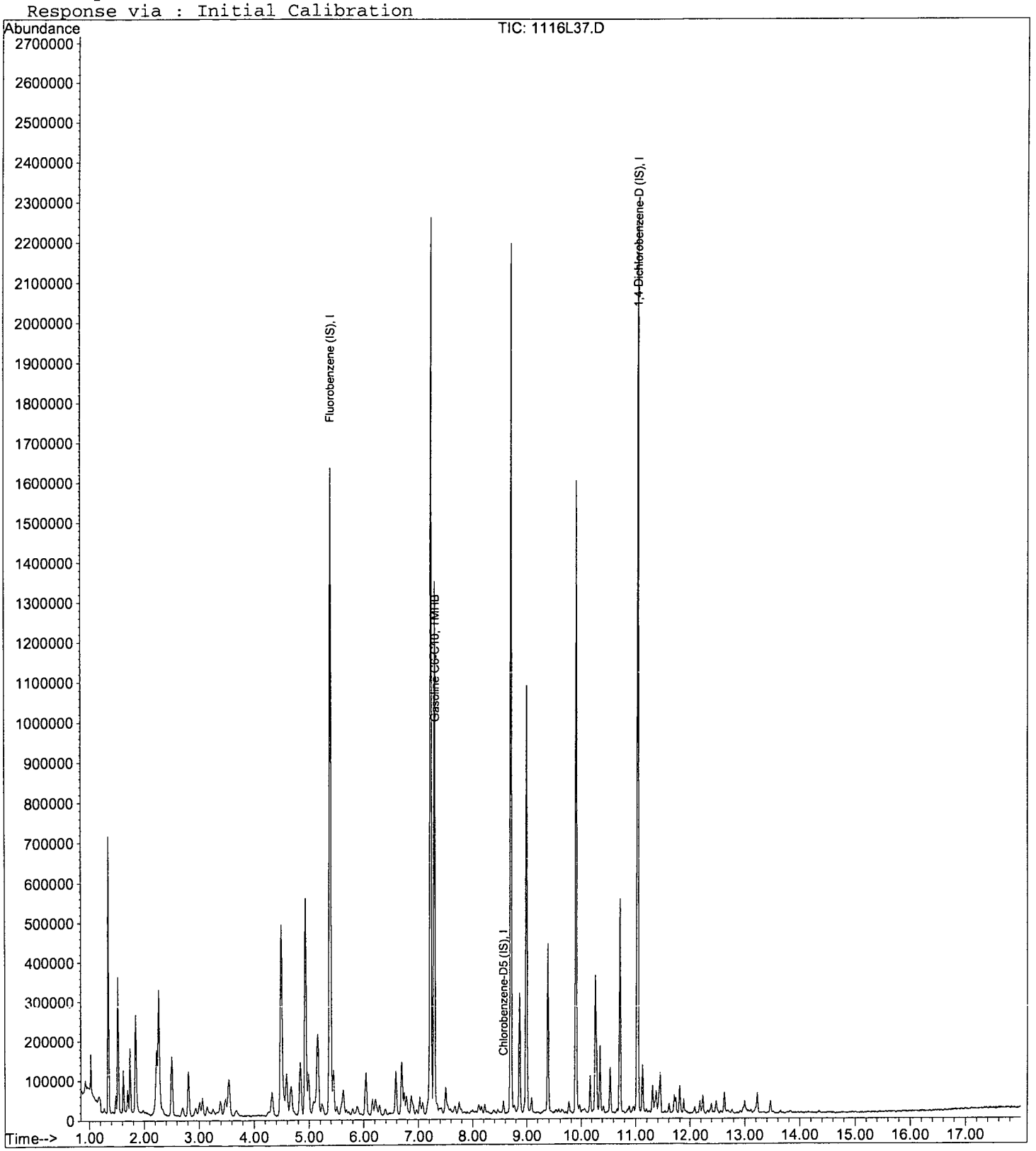
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1116L37.D Vial: 27
Acq On : 17 Nov 16 1:16 Operator: PM,DG,SV,CMM
Sample : Ending CCV GAS 300ug/L 11/16/16 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 9:28 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 11/17/16
Matrix: Instrument: Loki
Initial Cal. Date: 11/13/16
Data File: 1116L37.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	S	Dibromofluoromethane(S)	0.5276	0.4851	8.1	S	
3	S	1,2-DCA-D4(S)	0.5751	0.5922	3.0	S	
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	S	Toluene-D8(S)	1.909	1.944	1.8	S	
6	S	4-Bromofluorobenzene(S)	0.6890	0.6855	0.52	S	
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
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40							
		Average			3.4		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1116L37.D Vial: 27
Acq On : 17 Nov 16 1:16 Operator: PM,DG,SV,CMM
Sample : Ending CCV GAS 300ug/L 11/16/16 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 10:15 2016 Quant Results File: LSUR1113.RES

Quant Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	735552	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	676800	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	342336	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.49	111	356786	22.98609 ppb	0.00
Spiked Amount 25.000			Recovery = 91.944%		
3) 1,2-DCA-D4(S)	4.93	65	435596	25.74179 ppb	0.00
Spiked Amount 25.000			Recovery = 102.968%		
5) Toluene-D8(S)	7.22	98	1315819	25.46032 ppb	0.00
Spiked Amount 25.000			Recovery = 101.840%		
6) 4-Bromofluorobenzene(S)	9.89	95	463925	24.87101 ppb	0.00
Spiked Amount 25.000			Recovery = 99.484%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

ORGANICS
Raw Data

APPL, INC.

Method Blank
EPA 8260B GRO WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161116W-45907 - 213753**
Batch ID: #GRO86-161116AL

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	11/16/16	11/16/16
BLANK	SURROGATE: 4-BROMOFLUORO	98.4	85-114			%	11/16/16	11/16/16

Quant Method: LGAS6718.M
Run #: 1116L20
Instrument: Loki
Sequence: 161113
Initials: SV

GC SC-Blank-REG MDLs-DOD
Printed: 11/28/16 12:30:17 PM

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1116L20.D
Acq On : 16 Nov 16 17:19
Sample : 161116A BLK-1WL
Misc : W IS&S 10/20/16, 11/04/16

Vial: 10
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 17 9:30 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1540206	25.00000	ppb	-0.10
3) Chlorobenzene-D5 (IS)	8.70	TIC	2096050	25.00000	ppb	-0.09
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	2191818	25.00000	ppb	-0.09

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

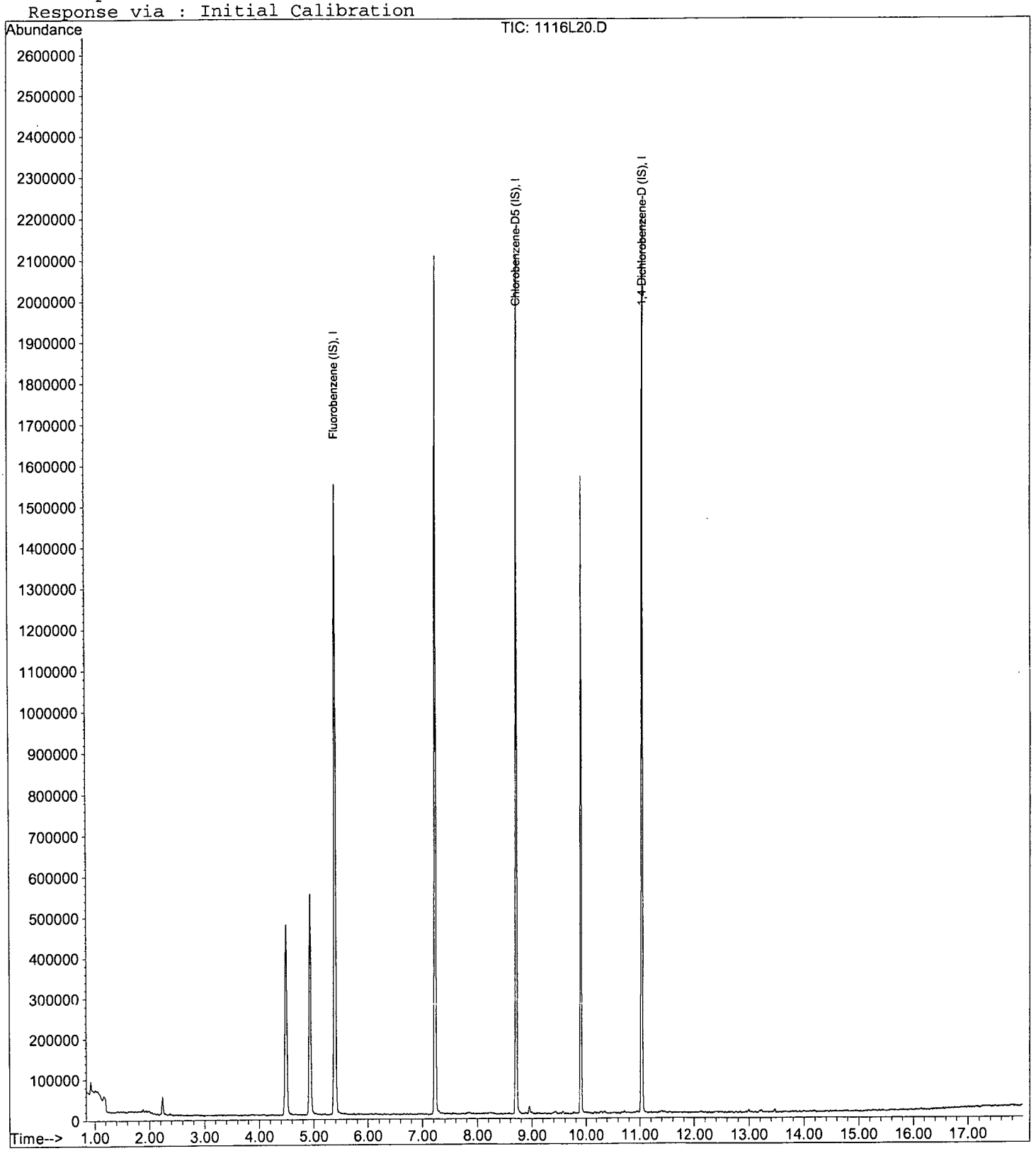
Quantitation Report

Data File : M:\LOKI\DATA\161113\1116L20.D
Acq On : 16 Nov 16 17:19
Sample : 161116A BLK-1WL
Misc : W IS&S 10/20/16, 11/04/16

Vial: 10
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 17 9:30 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1116L20.D Vial: 10
Acq On : 16 Nov 16 17:19 Operator: PM,DG,SV,CMM
Sample : 161116A BLK-1WL Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 10:14 2016 Quant Results File: LSUR1113.RES

Quant Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.39	96	701915	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	658240	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	343296	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.49	111	353055	23.83573 ppb	0.00
Spiked Amount 25.000			Recovery =	95.344%	
3) 1,2-DCA-D4(S)	4.93	65	425682	26.36144 ppb	0.00
Spiked Amount 25.000			Recovery =	105.444%	
5) Toluene-D8(S)	7.22	98	1256029	24.98869 ppb	0.00
Spiked Amount 25.000			Recovery =	99.956%	
6) 4-Bromofluorobenzene(S)	9.89	95	446270	24.59911 ppb	0.00
Spiked Amount 25.000			Recovery =	98.396%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Laboratory Control Spike Recovery
EPA 8260B GRO WATER

APPL ID: **161116W-45907 LCS - 213753**
Batch ID: #GRO86-161116AL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
GASOLINE RANGE ORGANICS	300	269	89.7	78-122
SURROGATE: 4-BROMOFLUOROBENZE	25.0	24.8	99.2	85-114

Comments: _____

Primary	SPK
Quant Method :	LGAS6718.M
Extraction Date :	11/16/16
Analysis Date :	11/16/16
Instrument :	Loki
Run :	1116L12
Initials :	SV

Printed: 11/28/16 12:29:57 PM
APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1116L12.D
Acq On : 16 Nov 16 13:34
Sample : 161116A CCV/LCS 300ug/L
Misc : W IS&S 10/20/16, 11/04/16

Vial: 2
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 17 9:29 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1601710	25.00000	ppb	-0.10
3) Chlorobenzene-D5 (IS)	8.70	TIC	2177917	25.00000	ppb	-0.09
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	2313546	25.00000	ppb	-0.09

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	32257790m	268.50853	ppb	100

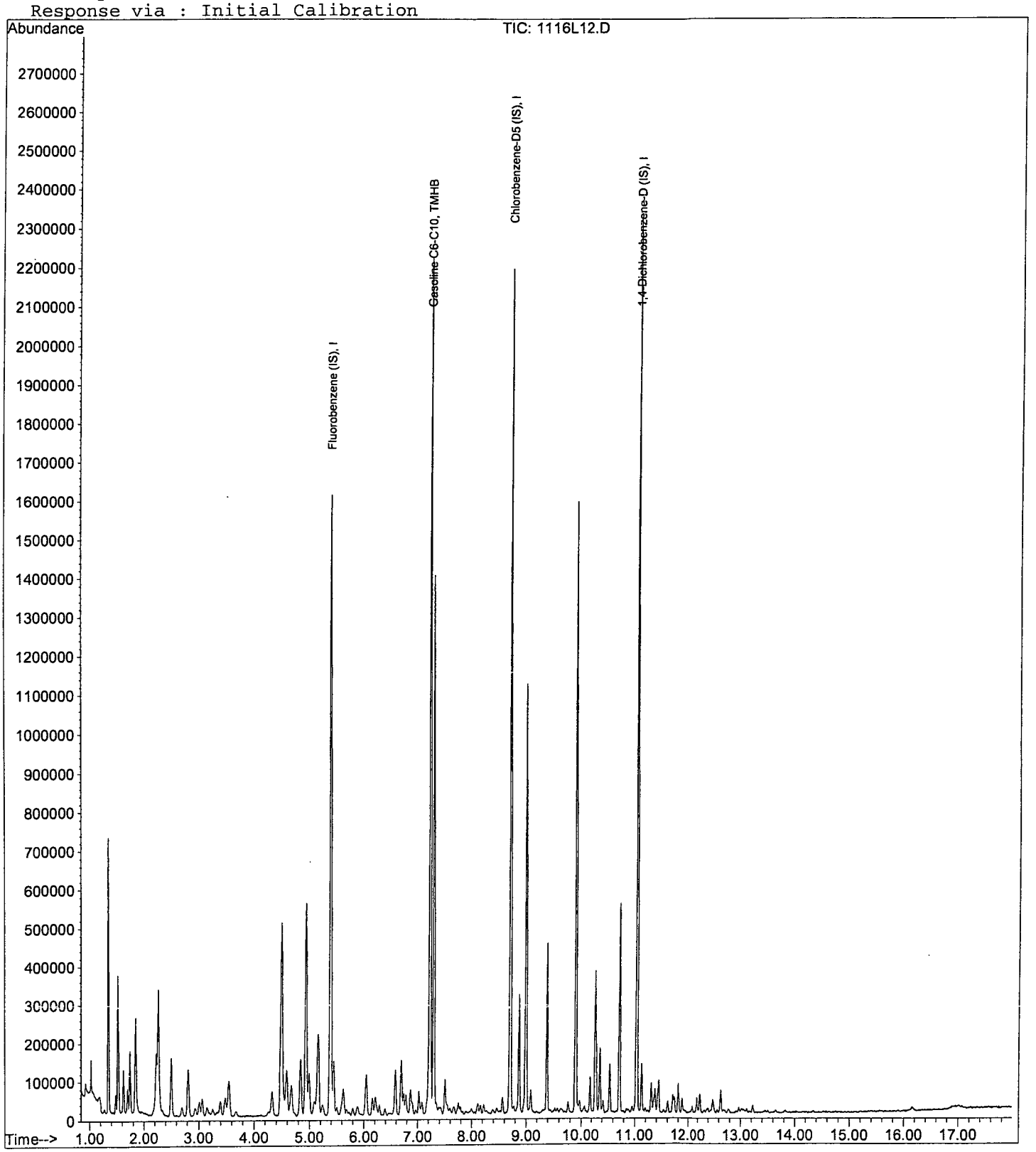
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1116L12.D Vial: 2
Acq On : 16 Nov 16 13:34 Operator: PM,DG,SV,CMM
Sample : 161116A CCV/LCS 300ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 9:29 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1116L12.D Vial: 2
Acq On : 16 Nov 16 13:34 Operator: PM,DG,SV,CMM
Sample : 161116A CCV/LCS 300ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 17 10:14 2016 Quant Results File: LSUR1113.RES

Quant Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	737757	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	680896	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	360768	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.49	111	368212	23.65131 ppb	0.00
Spiked Amount 25.000			Recovery	= 94.604%	
3) 1,2-DCA-D4(S)	4.93	65	436914	25.74251 ppb	0.00
Spiked Amount 25.000			Recovery	= 102.972%	
5) Toluene-D8(S)	7.22	98	1326443	25.51149 ppb	0.00
Spiked Amount 25.000			Recovery	= 102.044%	
6) 4-Bromofluorobenzene(S)	9.89	95	465913	24.82733 ppb	0.00
Spiked Amount 25.000			Recovery	= 99.308%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

PRIMARY STANDARD

11/12/16J							
50ug/ml Vol Work Std #7							
Exp:12/12/16							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120016-03	Gas Mix	2000	279822-36647	11/12/16A-CMM	02/19/19	100
02SI	020049-02	HEXACHLOROETHANE	1000	254167-36568	10/27/16B-CMM	11/30/18	200
02SI	020228-02	Benzyl Chloride	1000	279824-36570	10/27/16C-CMM	05/24/18	200
J&T Brand		Purge & Trap MeOH		55344-00862	10/23/16	10/23/17	3500
11/12/16K							
50ug/ml Vol Work Std #1							
Exp:12/12/16					Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	020145-02-02	2-CEVE	2000	229586-35351	11/03/16B-CMM	06/03/17	50
J&T Brand		Purge & Trap MeOH		55344-00862	10/23/16	10/23/17	1950
11/12/16L							
50ug/ml Vol Work Std #8							
Exp:12/12/16							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	122039-02	Volatile Mix, 20-29	2000	258033-37168	11/12/16B-CMM	08/17/17	100
02SI	120023-03	VOC'S-54 COMP	2000	271929-36580	11/12/16C-CMM	02/15/18	100
02SI	020232-02	Vinyl Acetate	2000	287418-37045	10/27/16E-CMM	11/27/16	100
J&T Brand		Purge & Trap MeOH		55344-00862	10/23/16	10/23/17	3700
11/12/16M							
50ug/ml Vol Work Std #2							
Exp:12/12/16							
Supplier	ID #	ID	ug/ml				
02SI	121020-05	HSL'S-Ketone Solution	2000	258036-36072	11/03/16C-CMM	08/17/17	100
J&T Brand		Purge & Trap MeOH		55344-00862	10/23/16	10/23/17	3900
		11/12/16N					
		5ug/ml Vol Work Std #9					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #7		**11/12/16J**	Exp:12/12/16	200	
		50ug/ml Vol Work Std #8		**11/12/16L**	Exp:12/12/16	200	
		J&T Brand		10/23/16	10/23/17	1600	
		11/12/16O					
		5ug/ml Vol Work Std #10					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #1		**11/12/16K**	Exp:12/12/16	200	
		J&T Brand		10/23/16	10/23/17	1800	
		11/12/16P					
		5ug/ml Vol Work Std #12					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #2		**11/12/16M**	Exp:12/12/16	200	
		J&T Brand		10/23/16	10/23/17	1800	
11/12/16Q							
250ug/ml TBA/IBA/Acetonitrile/Cyclohexanone/Acrolein/2-P							
Exp:12/12/16			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
02SI	120166-01	Volatile Mix 4-3	2000	275544-36406	11/12/16D-CMM	10/20/17	500
02SI	020229-09-02	Acrolein	10000	291928-37173	11/12/16E-CMM	12/12/16	100
J&T Brand		Purge & Trap MeOH		55344-00862	10/23/16	10/23/17	3400

SECONDARY SOURCE

11/12/16R							
50ug/ml VOC Std#4							
Exp:12/12/16							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120296-01-SS	Custom 8260 Solution	2000	258037-36087	11/03/16D-CMM	08/18/17	50
J&T Brand		Purge & Trap MeOH		55344-00862	10/23/16	10/23/17	1950
11/12/16S							
50ug/ml VOC Std#5							
Exp:12/12/16							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120016-03-SS	8260 Gases(SS)	2000	279826-36676	11/12/16F-CMM	06/01/19	50
02SI	020145-02-02-SS	2-CEVE (SS)	2000	254171-35394	11/12/16G-CMM	06/21/17	50
J&T Brand		Purge & Trap MeOH		55344-00862	10/23/16	10/23/17	1900
11/12/16T							

50ug/ml VOC Std#6							
Exp:12/12/16							
	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120023-03-SS	VOC'S 54 COMP.	2000	265897-35926	11/12/16H-CMM	11/29/17	50
02SI	020232-02-SS	Vinyl Acetate(SS)	2000	287420-37047	10/27/16J-CMM	11/27/16	50
02SI	020049-02-SS	HEXACHLOROETHANE (SS)	1000	265899-35937	10/27/16K-CMM	11/30/17	100
J&T Brand		Purge & Trap MeOH		55344-00862	10/23/16	10/23/17	1800
11/12/16U							
250ug/ml TBA/IBA/Acetonitrile/Acrolein/2-P							
Exp:12/12/16			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
02SI	120166-01-SS	VOC Mix 4-3 (SS)	2000	229588-34410	10/27/16L-CMM	06/03/17	250
02SI	020229-09-SS	Acrolein SOLUTION (SS)	10000	291929-37175	11/12/16I-CMM	12/12/16	50
J&T Brand		Purge & Trap MeOH		55344-00862	10/23/16	10/23/17	1700
8260 water		spiked with		Total Vol			
CCV/LCS	10ug/L Vol Std	10uL of 50ug/ml Std #7		50mL P&T H2O			
Ending CCV		10uL of 50ug/ml Std #8					
		10uL of 50ug/ml Std #1					
		10uL of 50ug/ml Std #2					
		25uL of 250ug/ml Std TBA					
X4 ketones							
LCS	10ug/L Vol Std	10uL of 50ug/ml Std #7		50mL P&T H2O			
		10uL of 50ug/ml Std #8					
		10uL of 50ug/ml Std #1					
		40uL of 50ug/ml Std #2					
		25uL of 250ug/ml Std TBA					
8260 soil		spiked with		Total Vol			
CCV/LCS	50ug/Kg Vol Std	5uL of 50ug/ml Std #7		5mL P&T H2O			
Ending CCV		5uL of 50ug/ml Std #8					
		5uL of 50ug/ml Std #1					
		5uL of 50ug/ml Std #2					
		5uL of 250ug/ml Std TBA					
Matrix spikes are prepared with same standards as ccv (see above) into the sample.							
8260water		spiked with		Total Vol			
SS	10ug/L STD	10uL of 50ug/ml Std #4		50mL P&T H2O			
		10uL of 50ug/ml Std #5					
		10uL of 50ug/ml Std #6					
		25uL of 250ug/ml Std TBA					
8260 SOIL	50ug/Kg STD	5uL of 50ug/ml Std #4		Total Vol			
SS		5uL of 50ug/ml Std #5		5mL P&T H2O			
		5uL of 50ug/ml Std #6					
		5uL of 250ug/ml Std TBA					

Volatile Standard Curve Preparation for 10mL Purge (8260 water)-LOKI										
Exp Date:	11/14/16	5µg/mL	5µg/mL	5µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	250µg/mL	
		Vol Std #9	Vol Std #10	Vol Std #12	Vol Std #7	Vol Std #8	Vol Std #1	Vol Std #2	TBA	
		11/12/16N	11/12/16O	11/12/16P	11/12/16J	11/12/16L	11/12/16K	11/12/16M	11/12/16Q	Final Vol
	Conc.	12/12/16	12/12/16	12/12/16	12/12/16	12/12/16	12/12/16	12/12/16	12/12/16	w/P&T H2O
Date/code	µg/L	ul	ul	ul	ul	ul	ul	ul	ul	mL
11/13/16J-CMM	0.3	3	3	3	n/a	n/a	n/a	n/a	2	50
11/13/16K-CMM	0.5	5	5	5	n/a	n/a	n/a	n/a	5	50
11/13/16L-CMM	1	10	10	10	n/a	n/a	n/a	n/a	10	50
11/13/16M-CMM	2	20	20	20	n/a	n/a	n/a	n/a	15	50
11/13/16N-CMM	5	n/a	n/a	n/a	5	5	5	5	20	50
11/13/16O-CMM	10	n/a	n/a	n/a	10	10	10	10	25	50
11/13/16P-CMM	20	n/a	n/a	n/a	20	20	20	20	30	50
11/13/16Q-CMM	40	n/a	n/a	n/a	40	40	40	40	35	50
11/13/16R-CMM	100	n/a	n/a	n/a	100	100	100	100	40	50

Gasoline Curve Preparation for 100mL Purge (water)-LOKI			
Exp Date:	07/19/16	2000ug/ml	
		07/09/16B	Final Volume
	Conc.	Exp.03/31/21	w/ P&T H2O
Date/code	µg/L	uL	mL
07/18/16	20	1	100
07/18/16	50	2.5	100
07/18/16	100	5	100
07/18/16	300	15	100
07/18/16	600	30	100
07/18/16	800	40	100
07/18/16	1000	50	100

Gasoline SECOND SOURCE preparation @300ppb-Loki			
Exp Date:	07/10/16	2000ug/ml	
		07/08/16B	Final Volume
	Conc.	Exp.05-04-18	w/ P&T H2O
Date/code	µg/L	uL	mL
07/11/16	300	15	100

Injection Log

Directory: M:\LOKI\DATA\160718\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	18	0718L21.D	1	20ug/L GAS STD 7/18/16L	10mL W IS:S 7/16/16,7/18/1	18 Jul 16 20:20
2	19	0718L22.D	1	50ug/L GAS STD 7/18/16L	10mL W IS:S 7/16/16,7/18/1	18 Jul 16 20:48
3	20	0718L23.D	1	100ug/L GAS STD 7/18/16L	10mL W IS:S 7/16/16,7/18/1	18 Jul 16 21:17
4	21	0718L24.D	1	300ug/L GAS STD 7/18/16L	10mL W IS:S 7/16/16,7/18/1	18 Jul 16 21:45
5	22	0718L25.D	1	600ug/L GAS STD 7/18/16L	10mL W IS:S 7/16/16,7/18/1	18 Jul 16 22:13
6	23	0718L26.D	1	800ug/L GAS STD 7/18/16L	10mL W IS:S 7/16/16,7/18/1	18 Jul 16 22:41
7	24	0718L27.D	1	1000ug/L GAS STD 7/18/16L	10mL W IS:S 7/16/16,7/18/1	18 Jul 16 23:10
8	27	0718L30.D	1	(SS)300ug/L GAS STD 7/18/16L	10mL W IS:S 7/16/16,7/18/1	19 Jul 16 00:34
9	5	1113L05.D	1	0.3ug/L VOC STD 11/13/16J	1uL-5ppb	13 Nov 16 13:35
10	6	1113L06.D	1	0.5ug/L VOC STD 11/13/16K	1uL-5ppb	13 Nov 16 14:04
11	7	1113L07.D	1	1.0ug/L VOC STD 11/13/16L	2uL-10ppb	13 Nov 16 14:32
12	8	1113L08.D	1	2.0ug/L VOC STD 11/13/16M	2uL-10ppb	13 Nov 16 15:00
13	9	1113L09.D	1	5.0ug/L VOC STD 11/13/16AN	5uL-25ppb	13 Nov 16 15:28
14	10	1113L10.D	1	10ug/L VOC STD 11/13/16O	5uL-25ppb	13 Nov 16 15:56
15	11	1113L11.D	1	20ug/L VOC STD 11/13/16P	10uL-50ppb	13 Nov 16 16:24
16	12	1113L12.D	1	40ug/L VOC STD 11/13/16Q	10uL-50ppb	13 Nov 16 16:53
17	13	1113L13.D	1	100ug/L VOC STD 11/13/16R	20uL-100ppb	13 Nov 16 17:21
18	2	1116L12.D	1	161116A CCV/LCS 300ug/L	W IS&S 10/20/16, 11/04/16	16 Nov 16 13:34
19	10	1116L20.D	1	161116A BLK-1WL	W IS&S 10/20/16, 11/04/16	16 Nov 16 17:19
20	19	1116L29.D	1	AZ45907W01	W IS&S 10/20/16, 11/04/16	16 Nov 16 21:32
21	20	1116L30.D	1	AZ45908W01	W IS&S 10/20/16, 11/04/16	16 Nov 16 22:00
22	21	1116L31.D	1	AZ45909W01	W IS&S 10/20/16, 11/04/16	16 Nov 16 22:28
23	22	1116L32.D	1	AZ45910W01	W IS&S 10/20/16, 11/04/16	16 Nov 16 22:56
24	23	1116L33.D	1	AZ45911W01	W IS&S 10/20/16, 11/04/16	16 Nov 16 23:24
25	27	1116L37.D	1	Ending CCV GAS 300ug/L 11/16/16	W IS&S 10/20/16, 11/04/16	17 Nov 16 1:16

ORGANICS

APPL, INC.

ORGANICS
QC Summary

APPL, INC.

Method Blank
METHANE

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161119W-45866 - 213991**
Batch ID: #RSKME-161119A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	METHANE	1.00 U	5.0	1.00	0.25	ug/L	11/19/16	11/19/16

Quant Method: RSK0901.M
Run #: 1119001
Instrument: Rocky
Sequence: 160901
Initials: CMO

GC SC-Blank-REG MDLs-DOD
Printed: 11/25/16 1:18:20 PM

Laboratory Control Spike Recovery
METHANE

APPL ID: **161119W-45866 LCS - 213991**
Batch ID: #RSKME-161119A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
METHANE	320	306	95.5	72-125

Comments: _____

Primary	SPK
Quant Method :	RSK0901.M
Extraction Date :	11/19/16
Analysis Date :	11/19/16
Instrument :	Rocky
Run :	1119000
Initials :	CMO

Printed: 11/25/16 1:18:11 PM
APPL Standard LCS

RSK 175

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81500

Case No: 81500 Date Analyzed: 11/19/16

Matrix: WATER Instrument: Rocky

Blank ID: 161119A-BLK Time Analyzed: 1216

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161119A-LCS	Lab Control Spike	1119000	11/19/16 1151
161119A-BLK	Blank	1119001	11/19/16 1216
AZ45908	ERH121	1119008	11/19/16 1234
AZ45909	ERH122	1119009	11/19/16 1236
AZ45910	ERH126	1119010	11/19/16 1239
AZ45911	ERH128	1119011	11/19/16 1241
AZ45907	ERH117	1119029	11/19/16 1405

Comments: Batch: #RSKME-161119A

ORGANICS
Sample Data

APPL, INC.

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH117
Sample Collection Date: 11/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81500
APPL ID: AZ45907
QCG: #RSKME-161119A-213991

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	7500	50.0	10.00	2.50	ug/L	11/19/16	11/19/16

Quant Method: RSK0901.M
Run #: 1119029
Instrument: Rocky
Sequence: 160901
Dilution Factor: 10
Initials: CMO

Printed: 11/25/16 1:18:16 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1119029.D Vial: 22
Acq On : 19 Nov 16 14:05 Operator: lac
Sample : AZ45907W05 DF10 Inst : 7890
Misc : Multiplr: 10.00
IntFile : autoint1.e
Quant Time: Nov 25 13:22 2016 Quant Results File: RSK0901.RES

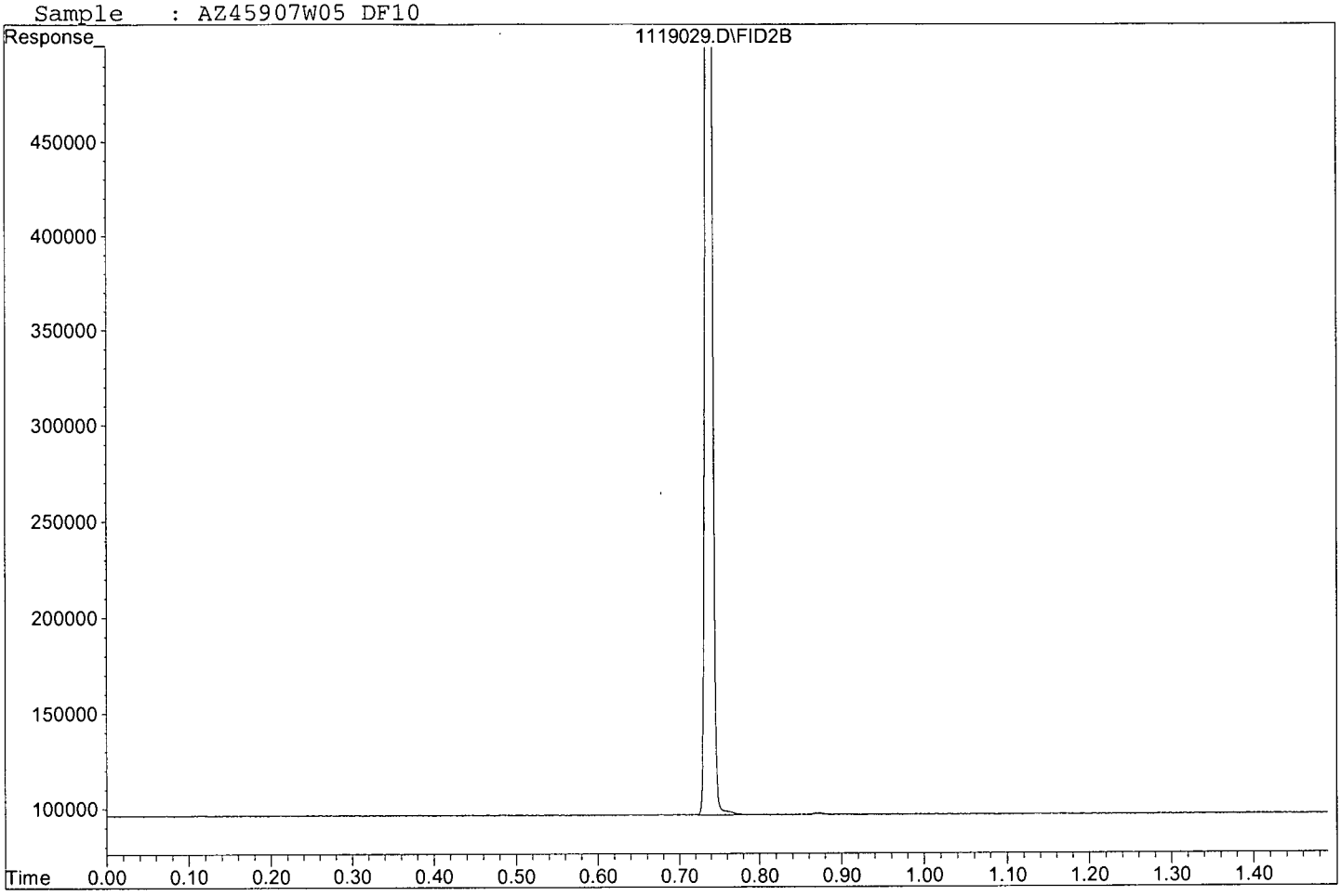
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Nov 23 12:26:39 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.74	827605	7507.945	ppb
Target Compounds				
2) ATM Ethane	0.87	921	N.D.	ppb
3) ATM Ethene	0.95	271	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1119029.D
Sample : AZ45907W05 DF10



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH121
Sample Collection Date: 11/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81500
APPL ID: AZ45908
QCG: #RSKME-161119A-213991

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	11/19/16	11/19/16

Quant Method: RSK0901.M
Run #: 1119008
Instrument: Rocky
Sequence: 160901
Dilution Factor: 1
Initials: CMO

Printed: 11/25/16 1:18:16 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1119008.D Vial: 3
Acq On : 19 Nov 16 12:34 Operator: lac
Sample : AZ45908W05 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Nov 25 13:21 2016 Quant Results File: RSK0901.RES

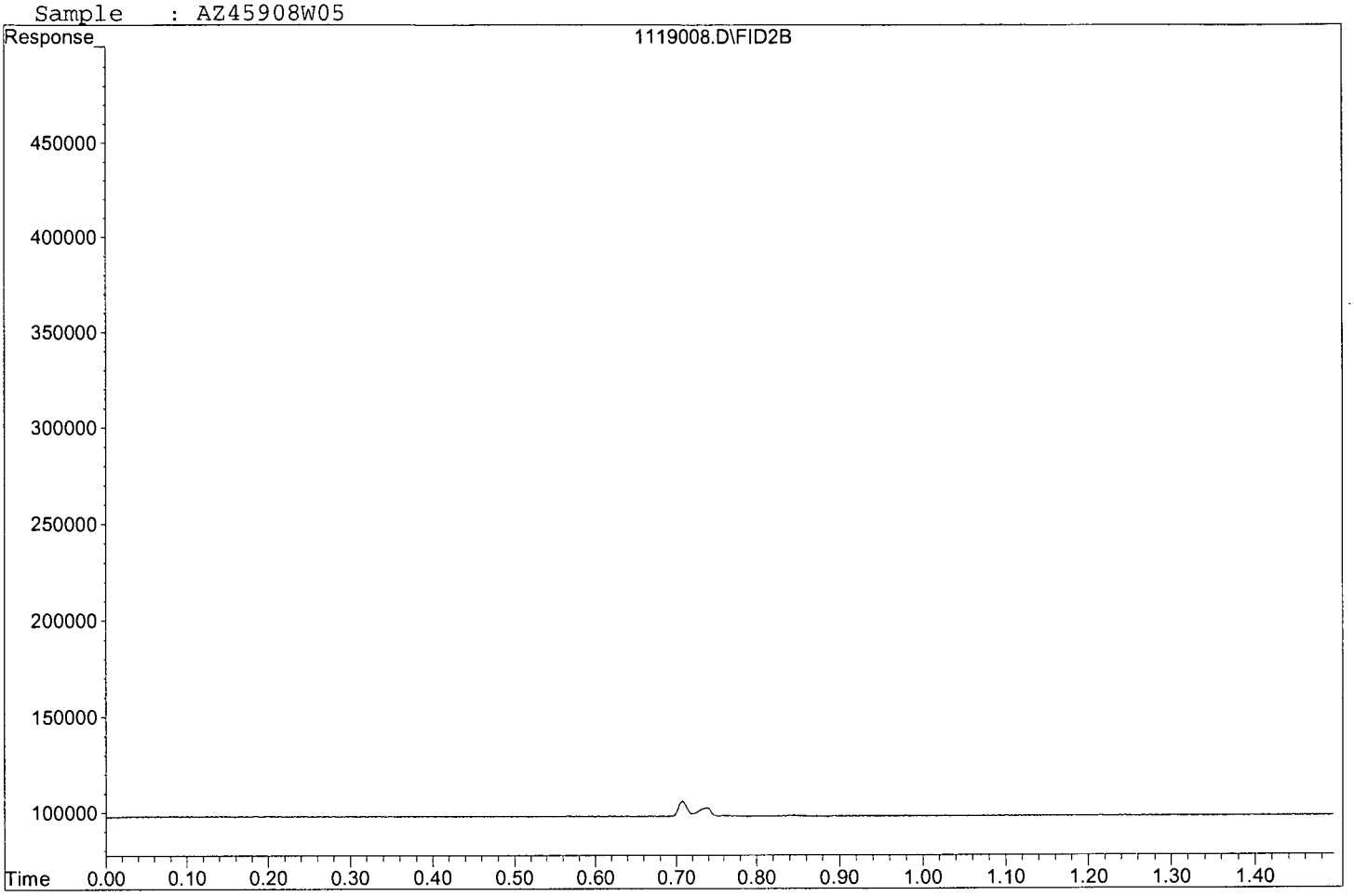
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Nov 23 12:26:39 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.74	4591	N.D.	ppb
2) ATM Ethane	0.87	380	N.D.	ppb
3) ATM Ethene	0.95	320	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1119008.D
Sample : AZ45908W05



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH122
Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81500
APPL ID: AZ45909
QCG: #RSKME-161119A-213991

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	11/19/16	11/19/16

Quant Method:	RSK0901.M
Run #:	1119009
Instrument:	Rocky
Sequence:	160901
Dilution Factor:	1
Initials:	CMO

Printed: 11/25/16 1:18:16 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1119009.D Vial: 4
Acq On : 19 Nov 16 12:36 Operator: lac
Sample : AZ45909W05 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Nov 25 13:21 2016 Quant Results File: RSK0901.RES

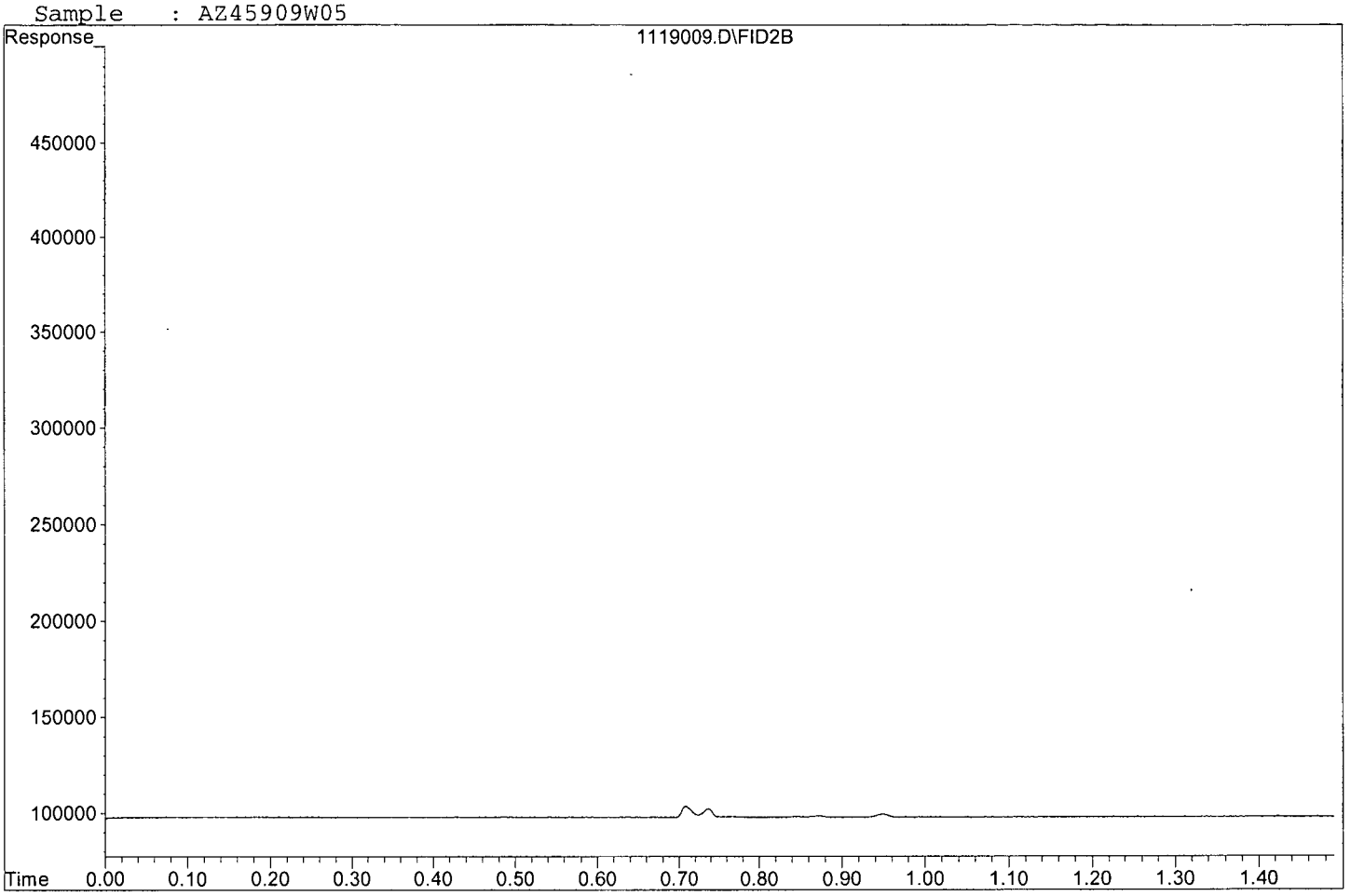
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Nov 23 12:26:39 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.74	4447	N.D.	ppb
2) ATM Ethane	0.87	900	N.D.	ppb
3) ATM Ethene	0.95	1827	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1119009.D
Sample : AZ45909W05



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH126
Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81500
APPL ID: AZ45910
QCG: #RSKME-161119A-213991

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	11/19/16	11/19/16

Quant Method:	RSK0901.M
Run #:	1119010
Instrument:	Rocky
Sequence:	160901
Dilution Factor:	1
Initials:	CMO

Printed: 11/25/16 1:18:16 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1119010.D Vial: 4
Acq On : 19 Nov 16 12:39 Operator: lac
Sample : AZ45910W05 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Nov 25 13:21 2016 Quant Results File: RSK0901.RES

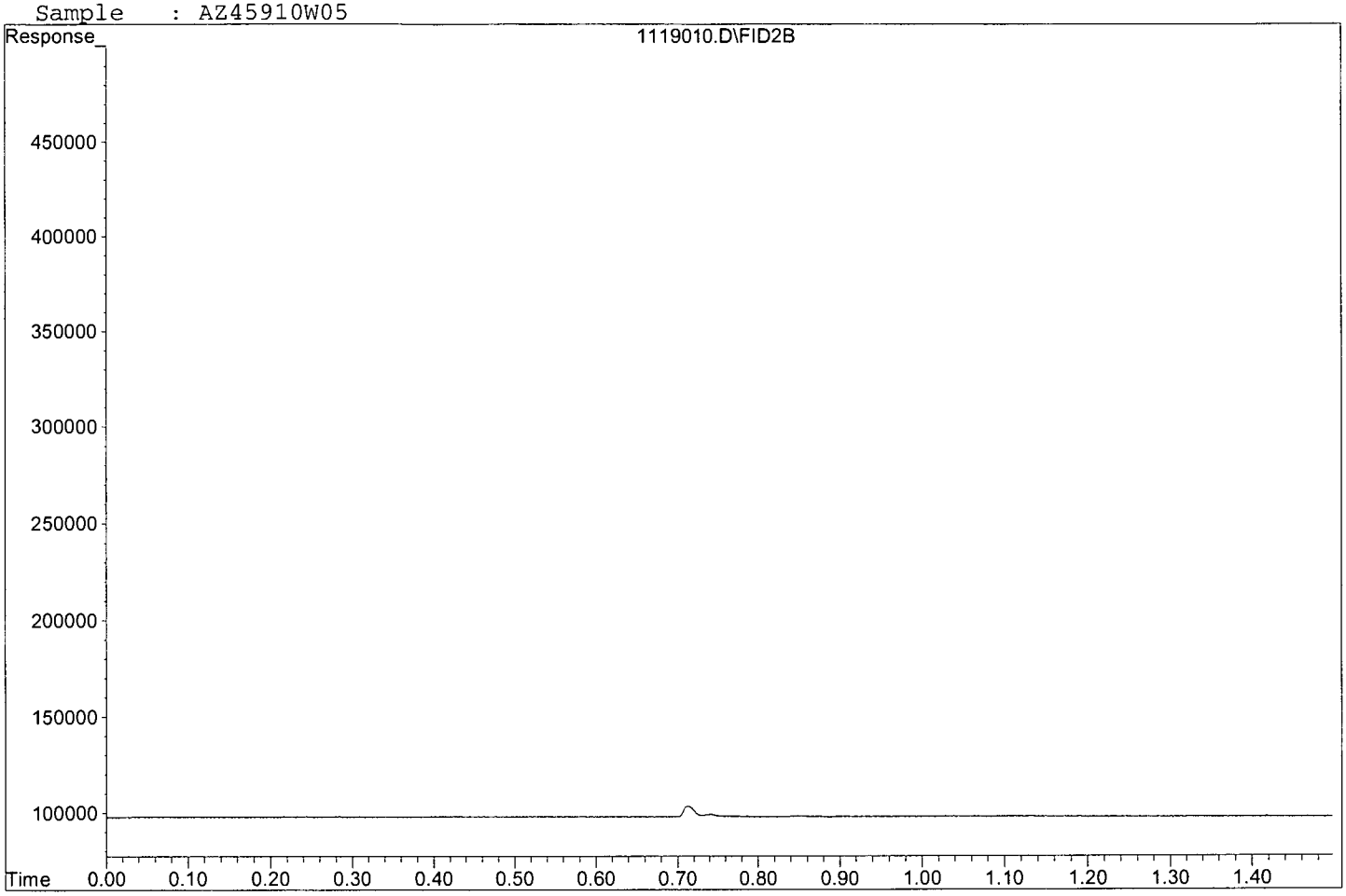
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Nov 23 12:26:39 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.74	1697	N.D.	ppb
2) ATM Ethane	0.88	552	N.D.	ppb
3) ATM Ethene	0.95	604	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1119010.D
Sample : AZ45910W05



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH128
Sample Collection Date: 11/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81500
APPL ID: AZ45911
QCG: #RSKME-161119A-213991

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	11/19/16	11/19/16

Quant Method:	RSK0901.M
Run #:	1119011
Instrument:	Rocky
Sequence:	160901
Dilution Factor:	1
Initials:	CMO

Printed: 11/25/16 1:18:16 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1119011.D Vial: 5
Acq On : 19 Nov 16 12:41 Operator: lac
Sample : AZ45911W05 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Nov 25 13:22 2016 Quant Results File: RSK0901.RES

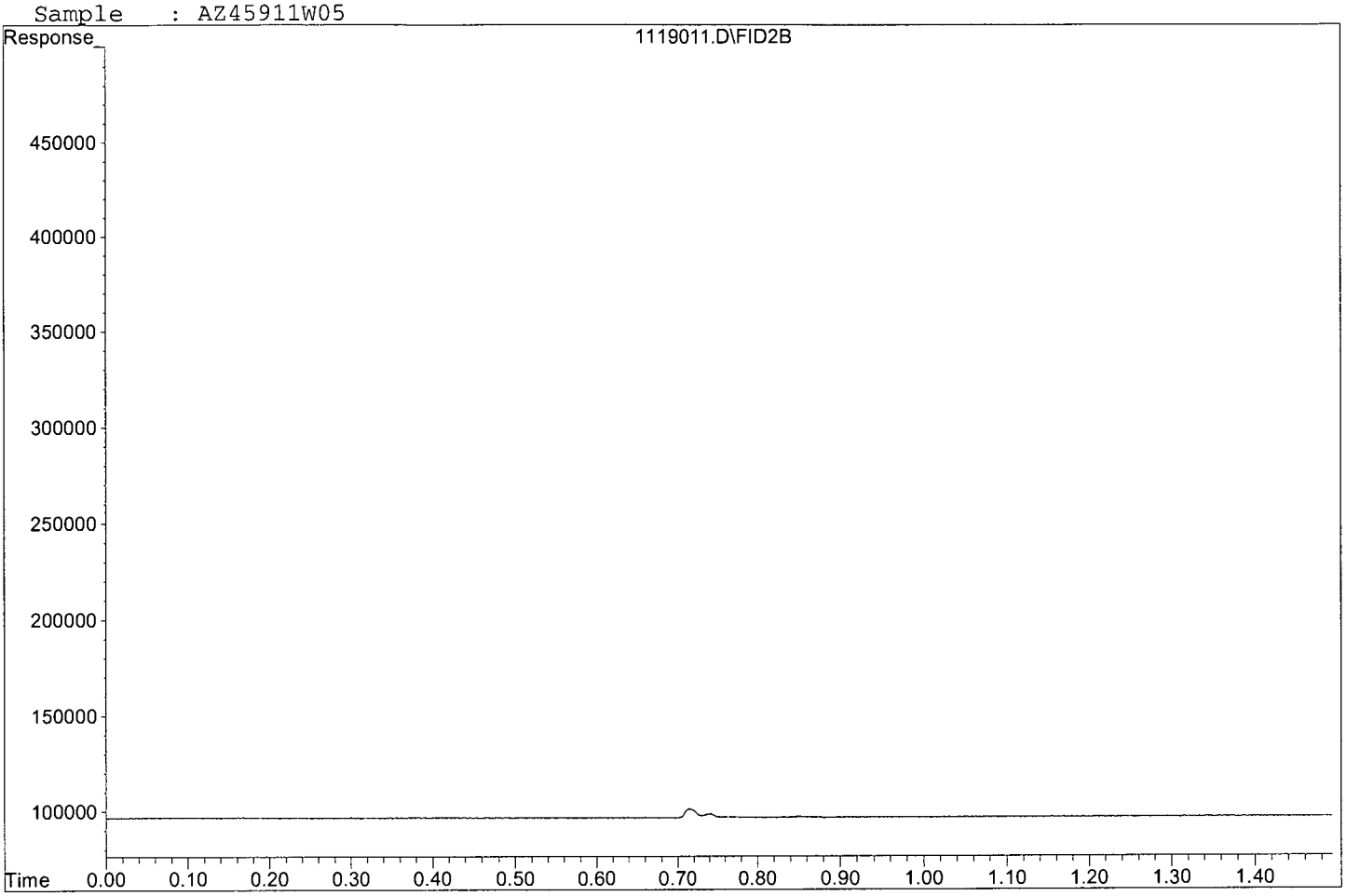
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Nov 23 12:26:39 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.74	2130	N.D.	ppb
2) ATM Ethane	0.88	301	N.D.	ppb
3) ATM Ethene	0.95	378	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1119011.D
Sample : AZ45911W05



ORGANICS
Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Initial Cal. Date: 09/01/16

Matrix: Instrument: 7890

Initials:

		Compound	1	2	3	4	5	6	7	8	9	10	Avg	%RSD		
			0901000.D	0901001.D	0901002.D	0901003.D	0901004.D	0901005.D	0901006.D	0901007.D	0901008.D	0901009.D				
1	ATM	Methane	7448	5672	3042	3435	1074	1006	1184	1314	1084	1089	2635	87	ATM	
2	ATM	Ethane	1509	1521	1416	2554	478	657	816	933	791	798	1147	54	ATM	
3	ATM	Ethene	1826	1525	1280	2301	444	570	693	733	628	626	1063	60	ATM	
4																
5																
6																
7																
8																
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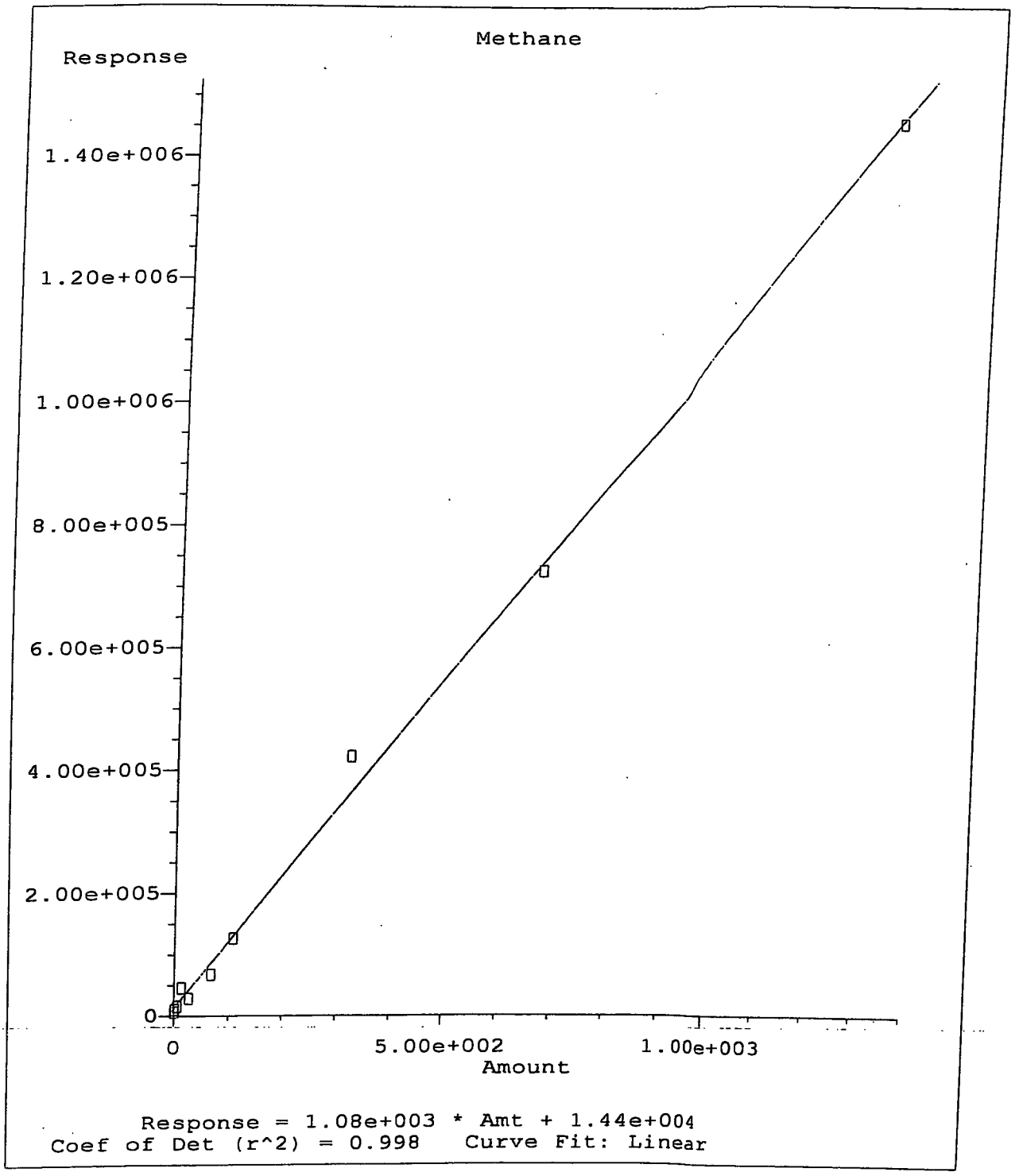
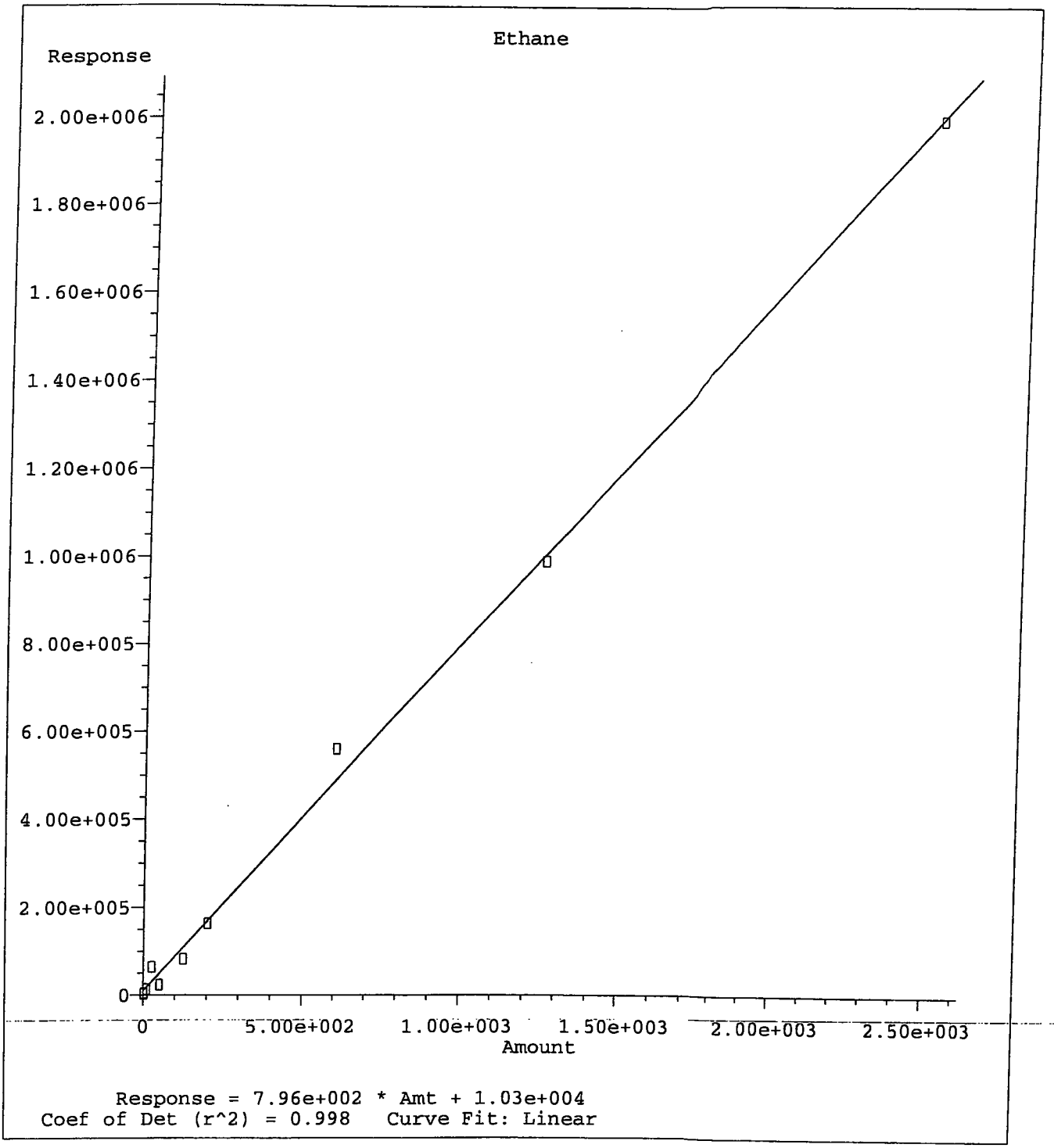
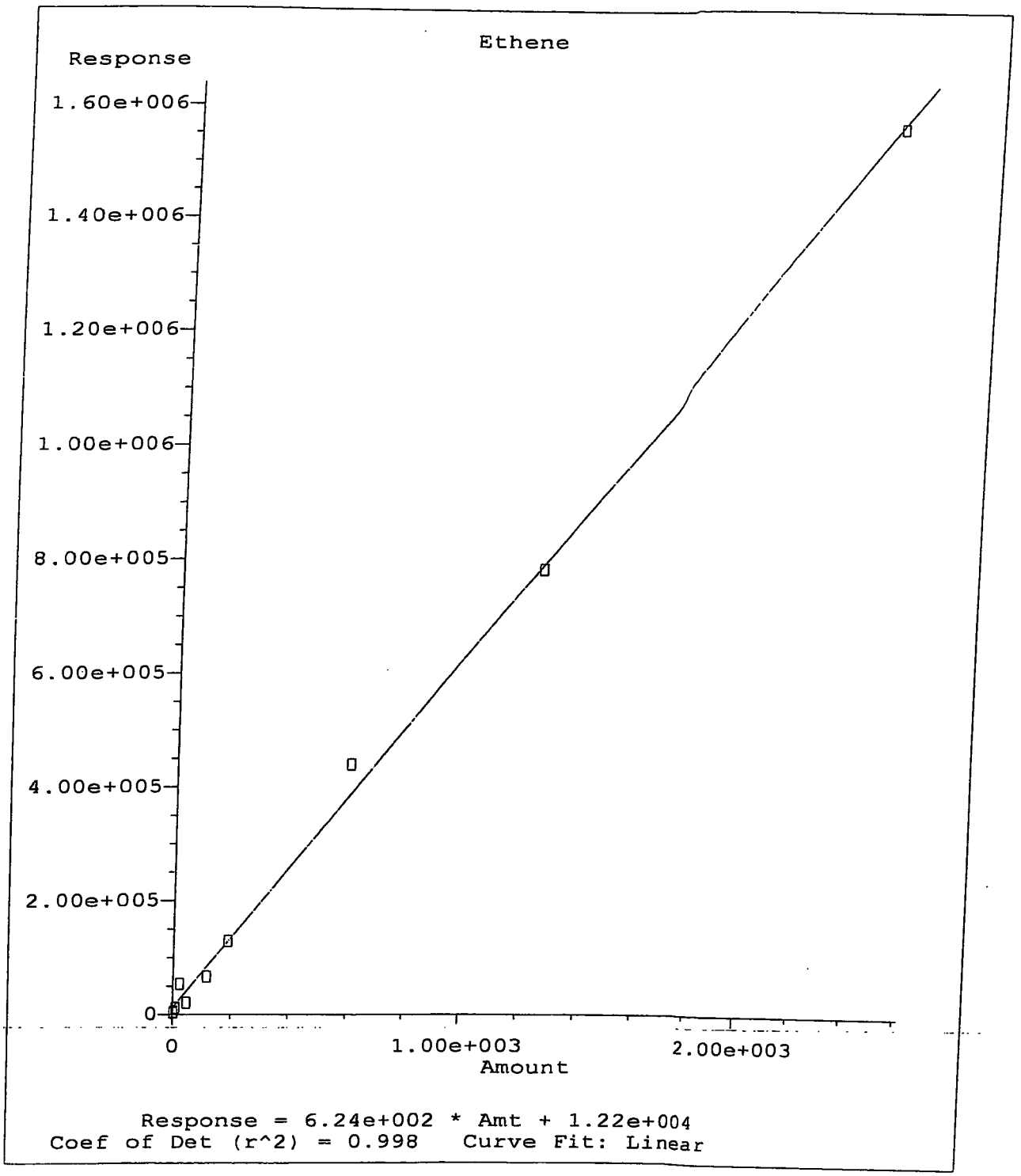
5.7170224



Method Name: G:\ROCKY\DATA\160901R\RSK0901.M
Calibration Table Last Updated: Fri Sep 02 15:25:38 2016



Method Name: G:\ROCKY\DATA\160901R\RSK0901.M
Calibration Table Last Updated: Thu Nov 10 08:49:51 2016



Method Name: G:\ROCKY\DATA\160901R\RSK0901.M
Calibration Table Last Updated: Fri Sep 02 15:25:38 2016

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901000.D Vial: 1
Acq On : 1 Sep 16 11:38 Operator: lac
Sample : RSK Level 1 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

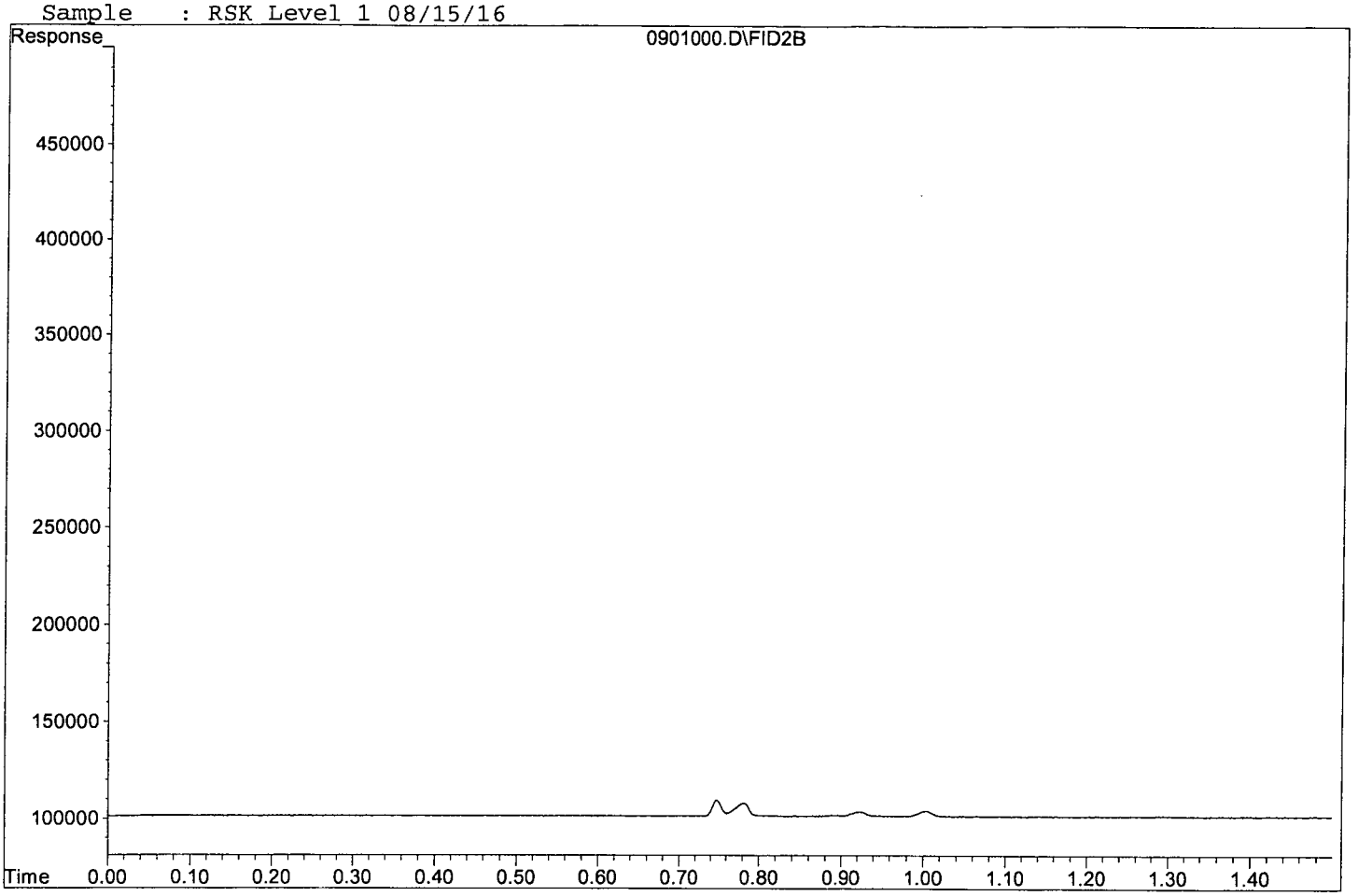
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.78	6703	N.D.	ppb
2) ATM Ethane	0.92	2566	N.D.	ppb
3) ATM Ethene	1.00	2922	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901000.D
Sample : RSK Level 1 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901001.D Vial: 2
Acq On : 1 Sep 16 11:41 Operator: lac
Sample : RSK Level 2 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

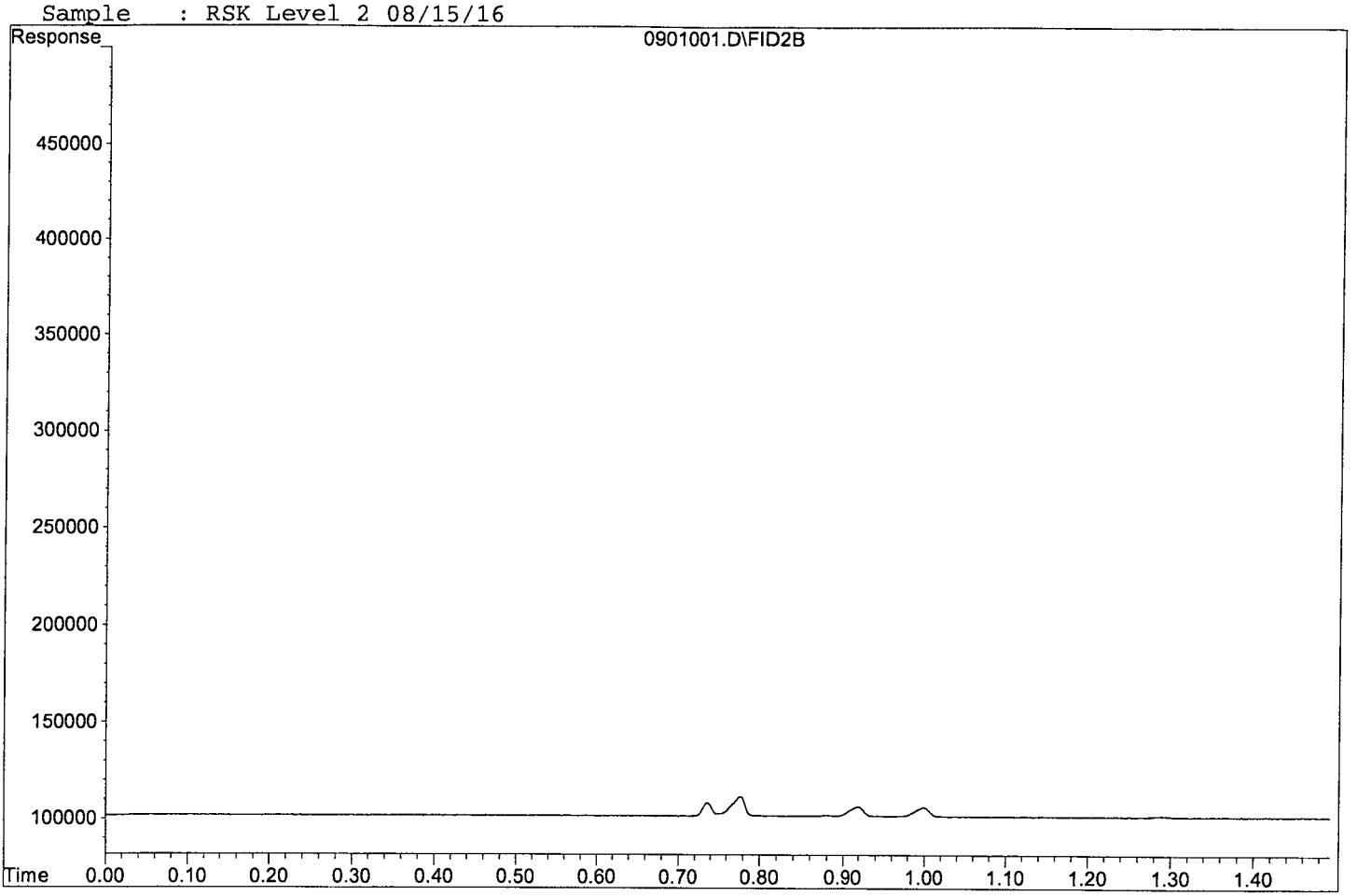
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.79	569	N.D.	ppb
2) ATM Ethane	0.94	352	N.D.	ppb
3) ATM Ethene	1.02	250	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901001.D
Sample : RSK Level 2 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901002.D Vial: 3
Acq On : 1 Sep 16 11:44 Operator: lac
Sample : RSK Level 3 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 14 13:31 2016 Quant Results File: RSK0901.RES

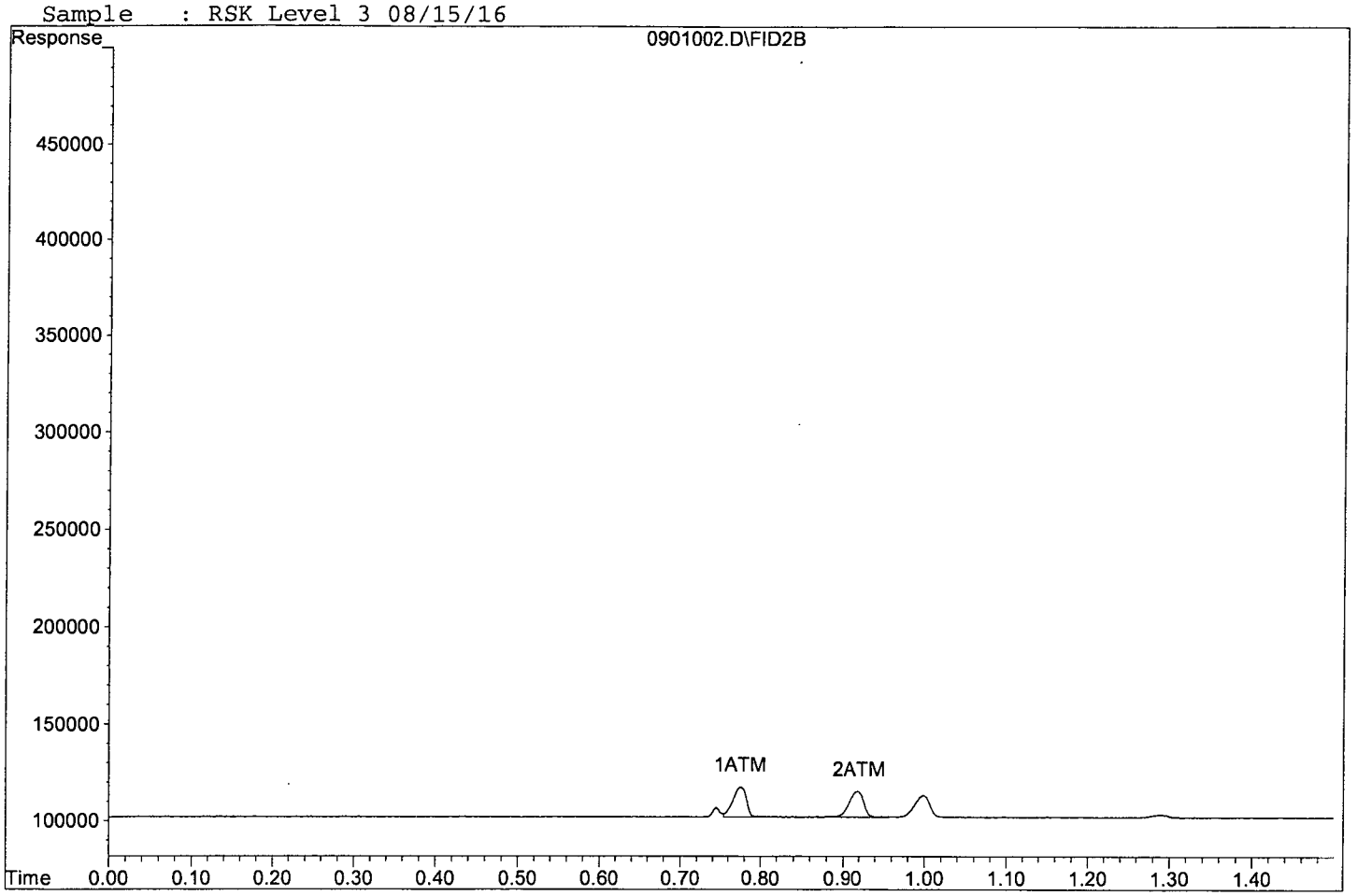
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.77	15515	1.054	ppb
2) ATM Ethane	0.92	13452	3.912	ppb
Target Compounds				
3) ATM Ethene	1.00	11390	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901002.D
Sample : RSK Level 3 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901003.D Vial: 4
Acq On : 1 Sep 16 11:46 Operator: lac
Sample : RSK Level 4 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

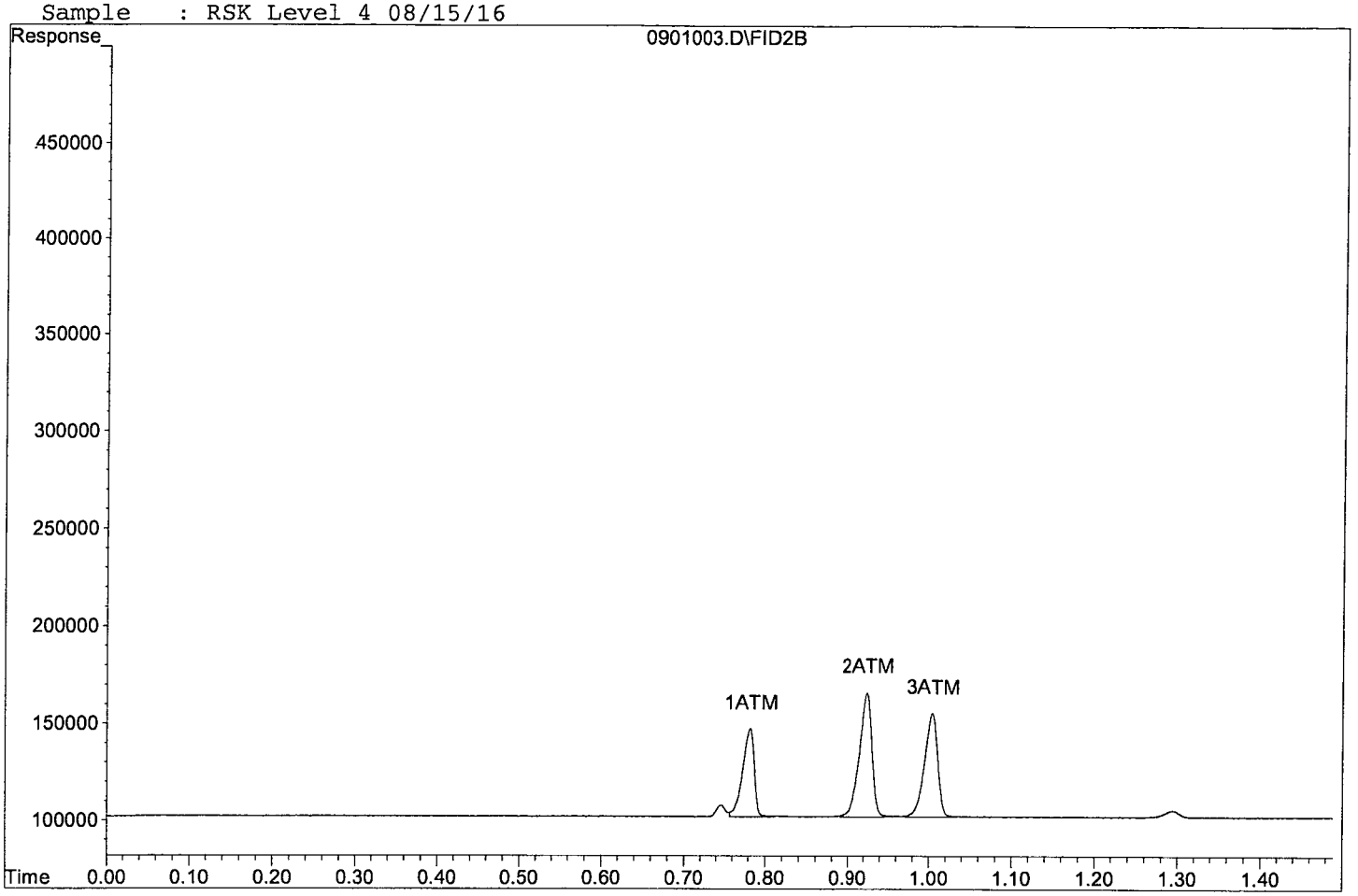
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.78	45792	29.006 ppb
2) ATM Ethane	0.92	63853	67.197 ppb
3) ATM Ethene	1.00	53608	66.354 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901003.D
Sample : RSK Level 4 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901004.D Vial: 5
Acq On : 1 Sep 16 11:48 Operator: lac
Sample : RSK Level 5 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

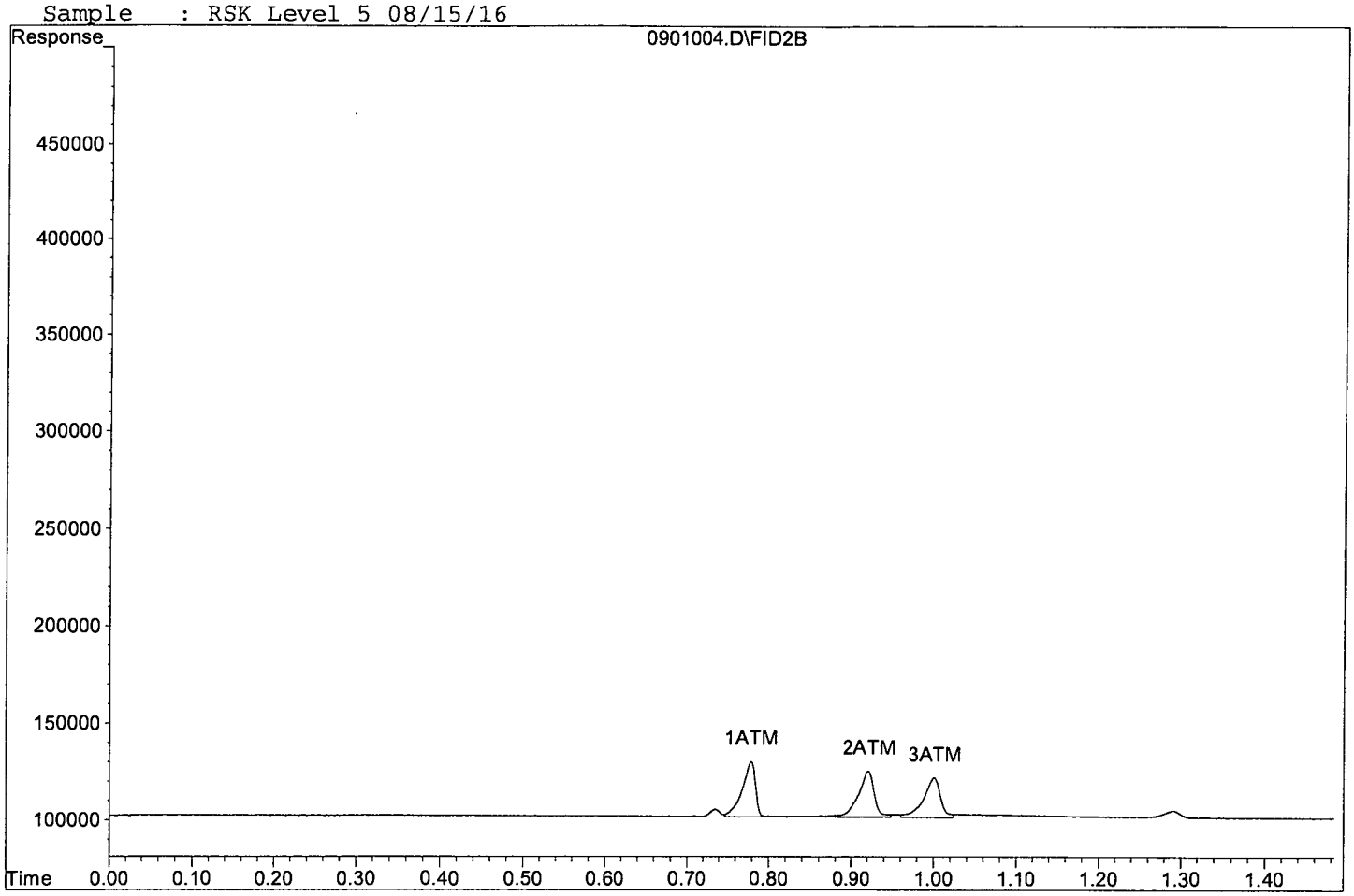
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.78	28664	13.193 ppb
2) ATM Ethane	0.92	23891	17.020 ppb
3) ATM Ethene	1.00	20700	13.631 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901004.D
Sample : RSK Level 5 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901005.D Vial: 6
Acq On : 1 Sep 16 11:50 Operator: lac
Sample : RSK Level 6 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

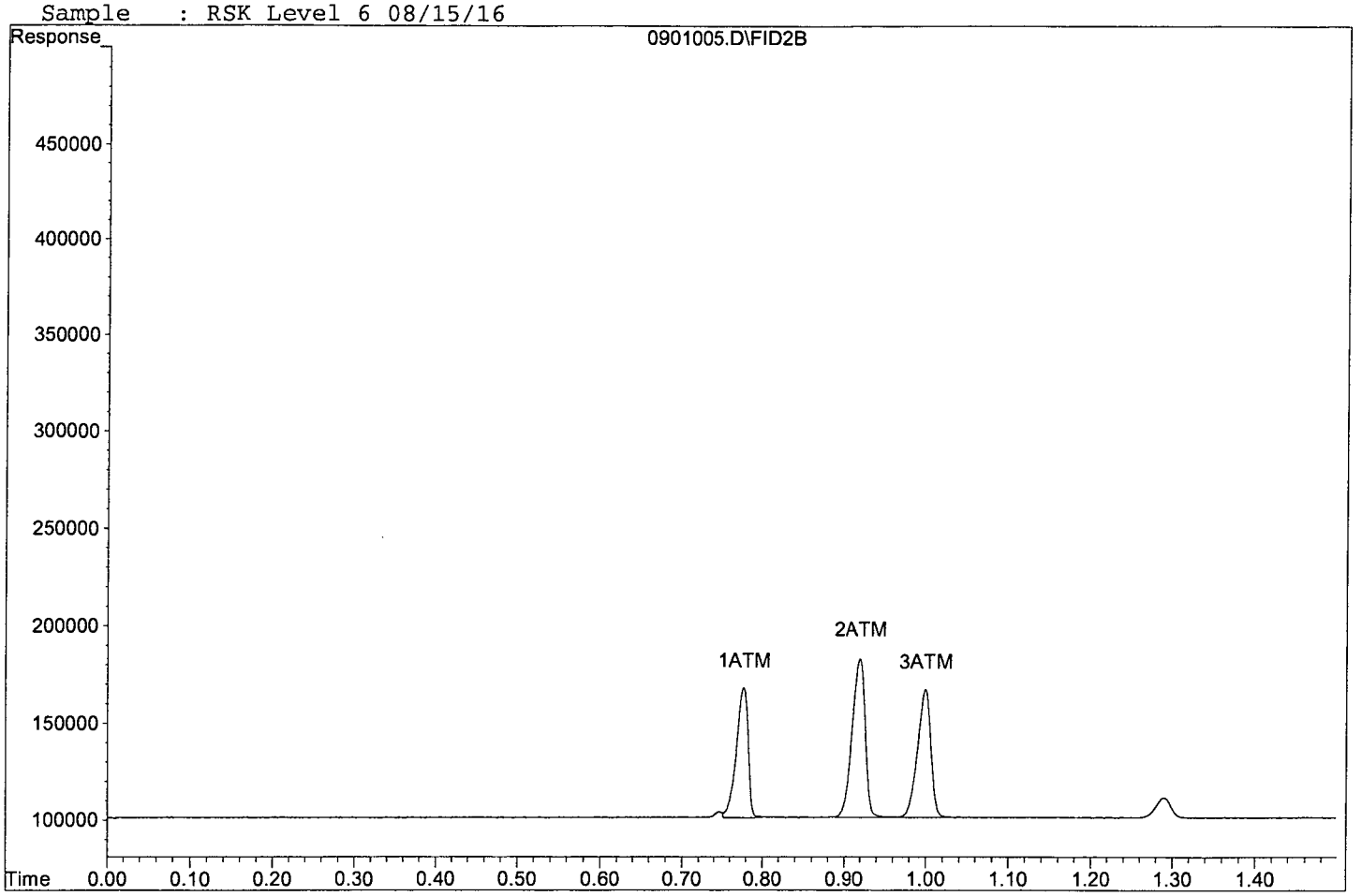
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.78	67137	48.712 ppb
2) ATM Ethane	0.92	82167	90.193 ppb
3) ATM Ethene	1.00	66348	86.764 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901005.D
Sample : RSK Level 6 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901006.D Vial: 7
Acq On : 1 Sep 16 11:52 Operator: lac
Sample : RSK Level 7 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

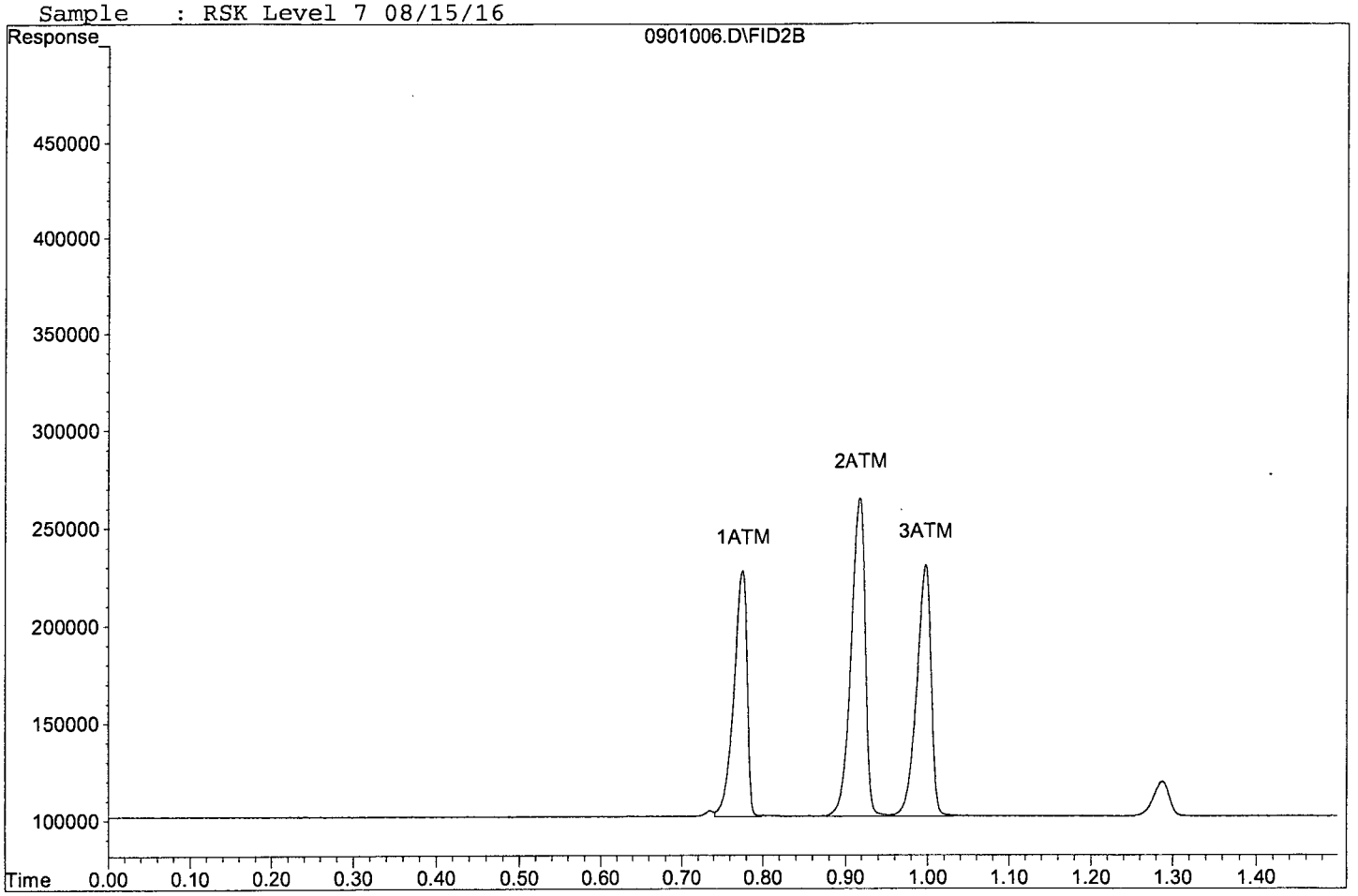
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.78	126422	103.446 ppb
2) ATM Ethane	0.92	163281	192.041 ppb
3) ATM Ethene	1.00	129200	187.460 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901006.D
Sample : RSK Level 7 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901007.D Vial: 8
Acq On : 1 Sep 16 11:55 Operator: lac
Sample : RSK Level 8 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

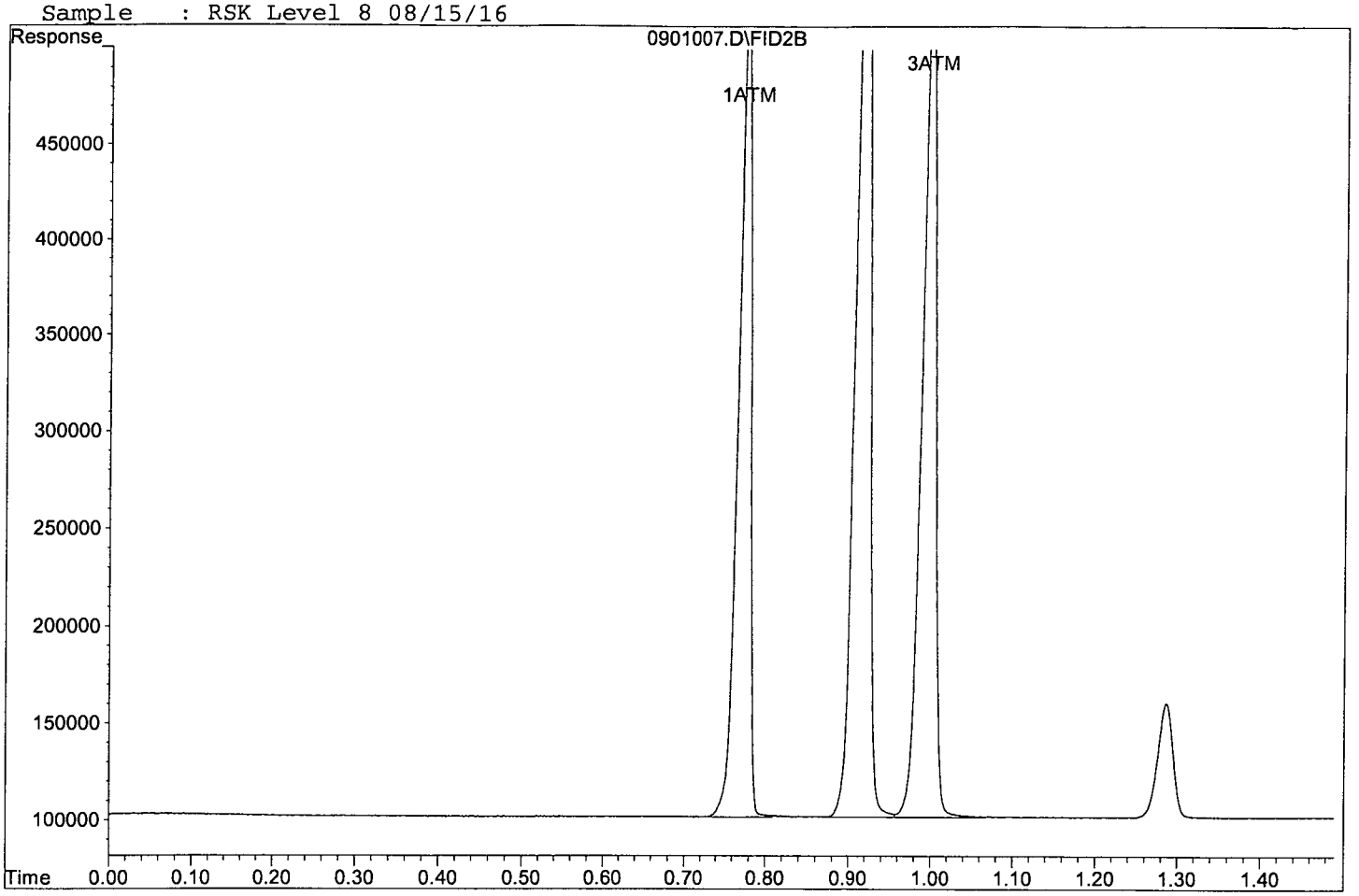
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.77	421052	375.455 ppb
2) ATM Ethane	0.92	559640	689.720 ppb
3) ATM Ethene	1.00	439383	684.403 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901007.D
Sample : RSK Level 8 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901008.D Vial: 9
Acq On : 1 Sep 16 11:57 Operator: lac
Sample : RSK Level 9 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

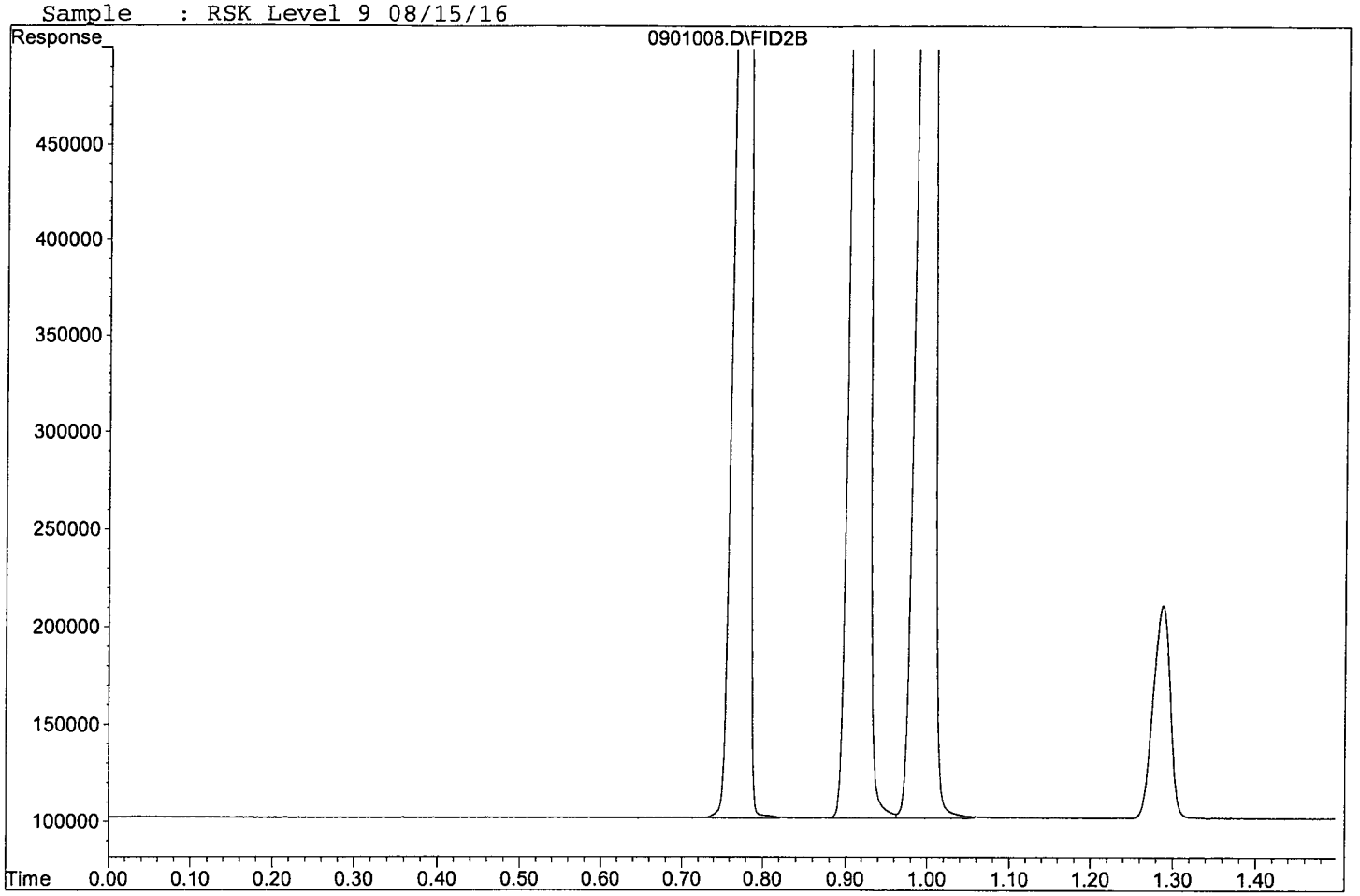
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.78	723824	654.982 ppb
2) ATM Ethane	0.92	989344	1229.268 ppb
3) ATM Ethene	1.00	783615	1235.897 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901008.D
Sample : RSK Level 9 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901009.D Vial: 10
Acq On : 1 Sep 16 11:59 Operator: lac
Sample : RSK Level 10 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

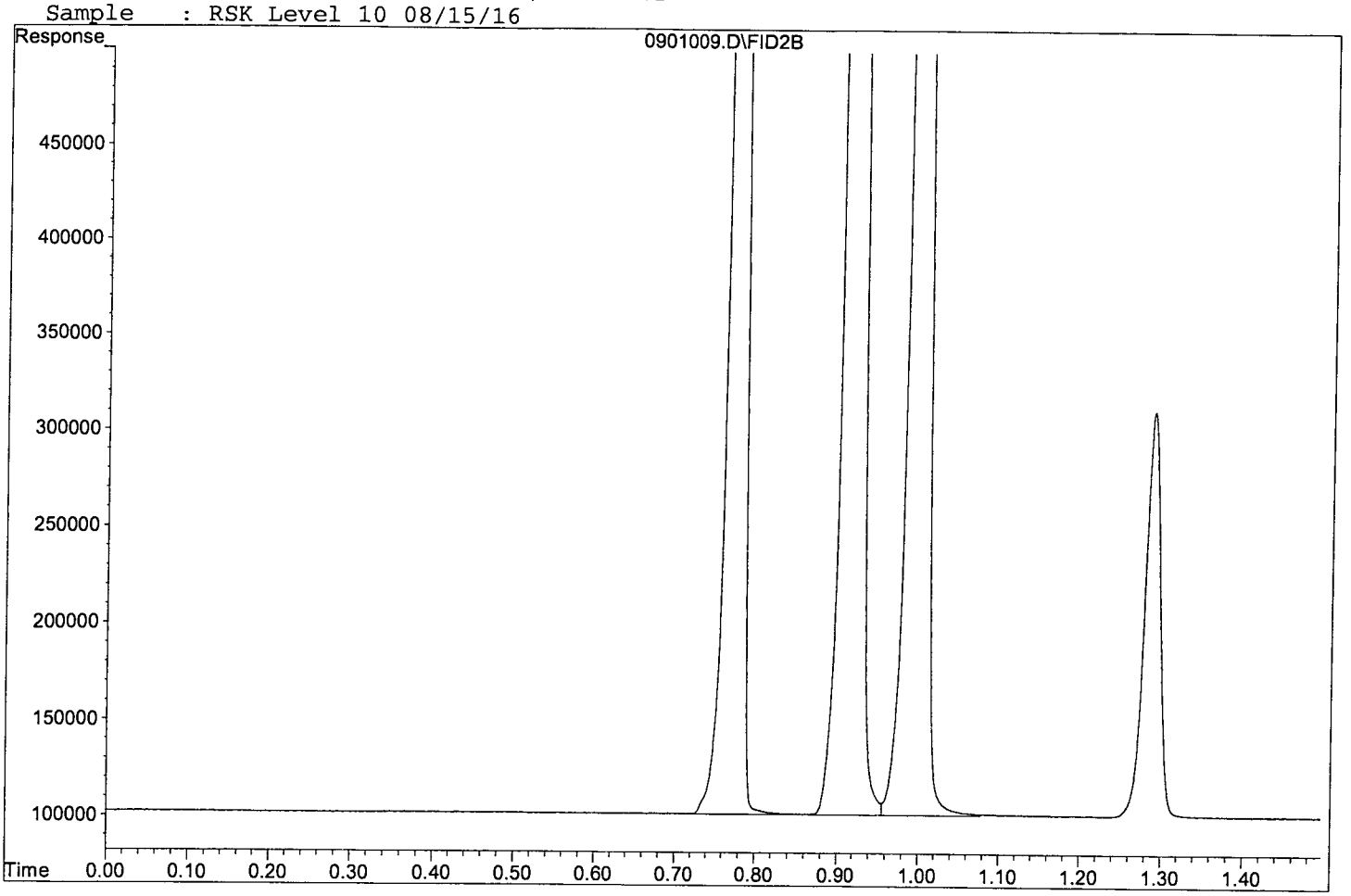
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.78	1454283	1329.358	ppb
2) ATM Ethane	0.92	1994598	2491.490	ppb
3) ATM Ethene	1.00	1562244	2483.337	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901009.D
Sample : RSK Level 10 08/15/16



Form 7

Second Source Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Date Analyzed: 1 Sep 16 13:11

Matrix: Instrument: 7890

Initial Cal. Date: 09/01/16

Data File: 0901018.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	2635	1090	59	ATML	19
2	ATML	Ethane	1147	964	16	ATML	11
3	ATML	Ethene	1063	853	20	ATML	20
4							
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36							
37							
38							
39							
40							
		Average			31.7		

Quantitation Report (Not Reviewed)

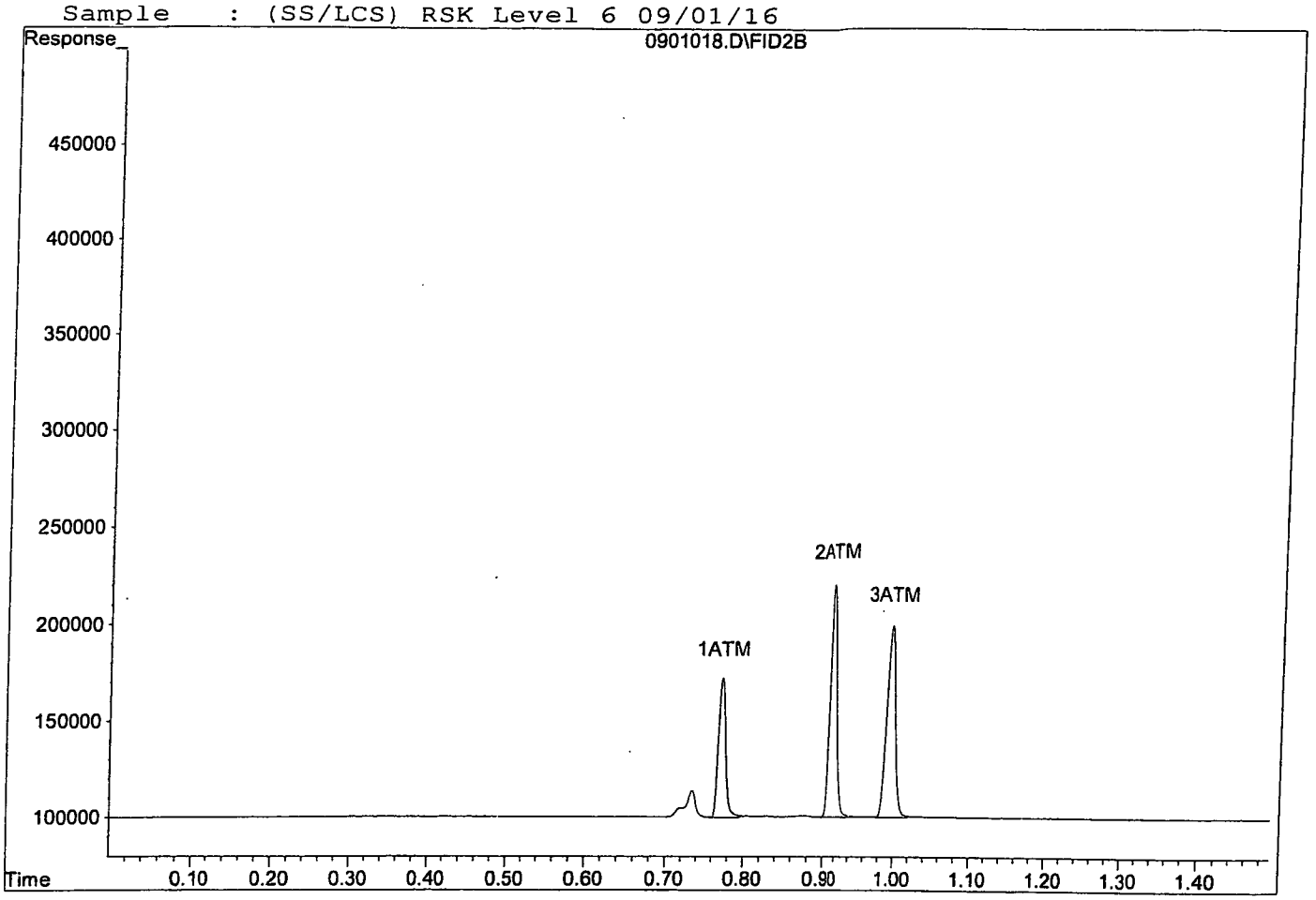
Data File : G:\ROCKY\DATA\160901R\0901018.D Vial: 19
Acq On : 1 Sep 16 13:11 Operator: lac
Sample : (SS/LCS) RSK Level 6 09/01/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 1 13:16 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Thu Sep 01 14:40:19 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.77	72750	53.894 ppb
2) ATM Ethane	0.91	120545	138.382 ppb
3) ATM Ethene	0.99	99349	139.636 ppb

Data File: G:\ROCKY\DATA\160901R\0901018.D
Sample : (SS/LCS) RSK Level 6 09/01/16



Algorithm Check for Linear Regression

Data file:	0901018.d
Analyte:	Methane
Area of target analyte:	72750
Area of internal standard:	1
concentration of internal standard:	1
multiplyer:	1
amt:	14400
response ratio:	1080

$$\frac{((\text{Area pk/area IS}) - \text{constant term}) * (\text{conc IS} * \text{multiplyer})}{\text{slope}} =$$

54.03

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/19/16
Instrument: 7890
Initial Cal. Date: 09/01/16
Data File: 1119000.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	2635	1078	59	ATML	4.6
2	ATML	Ethane	1147	748	35	ATML	8.3
3	ATML	Ethene	1063	559	47	ATML	14
4							
5							
6							
7							
8							
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38							
39							
40							
		Average			47.0		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1119000.D Vial: 1
Acq On : 19 Nov 16 11:51 Operator: lac
Sample : 161119A LCS/CCV RSK-Level 8 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Nov 25 12:47 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Nov 23 12:26:39 2016
Response via : Multiple Level Calibration

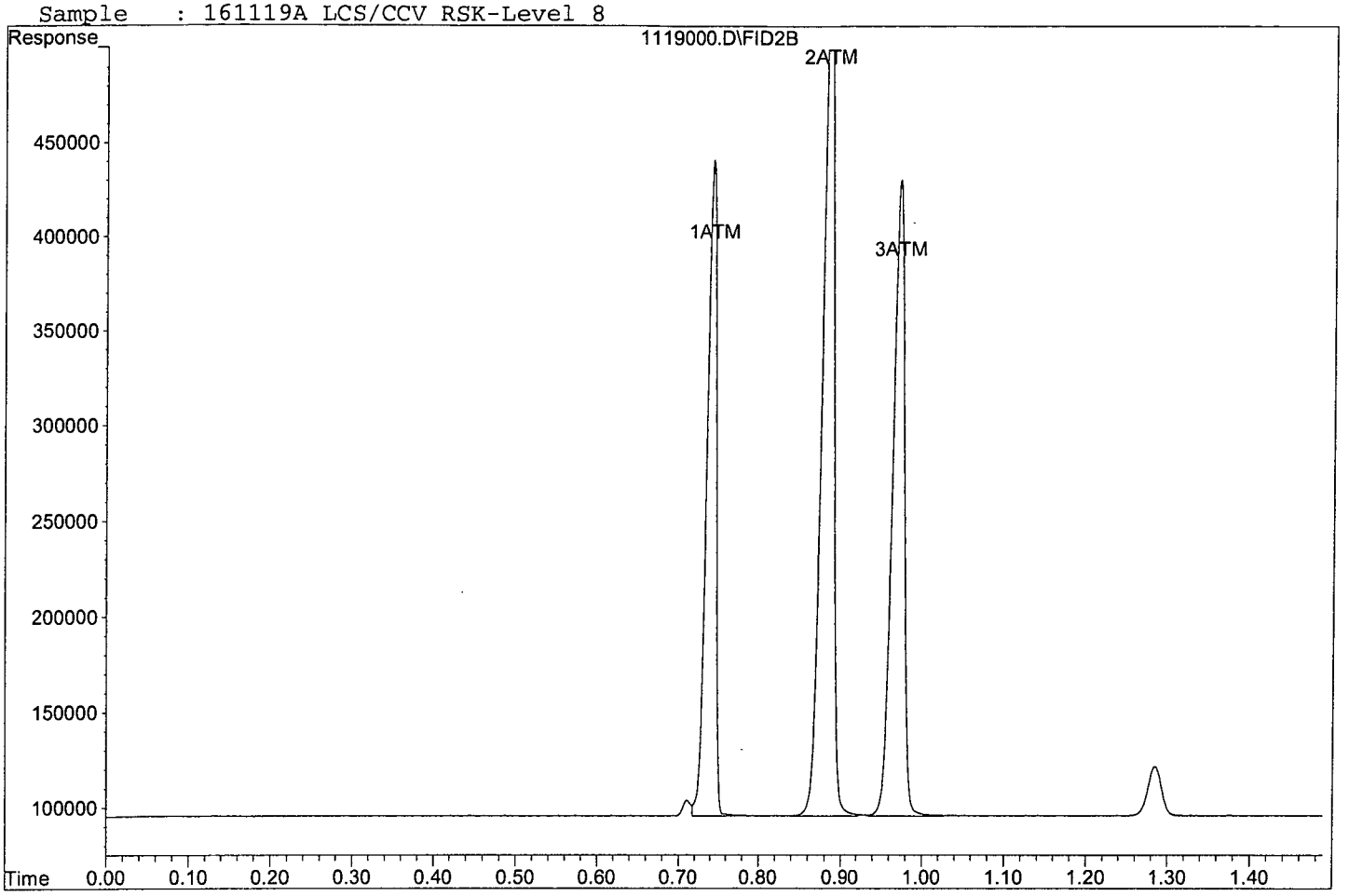
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.74	345484	305.689 ppb
2) ATM Ethane	0.88	448684	550.401 ppb
3) ATM Ethene	0.97	334800	516.852 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1119000.D
Sample : 161119A LCS/CCV RSK-Level 8



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/19/16
Instrument: 7890
Initial Cal. Date: 09/01/16
Data File: 1119025.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	2635	1137	57	ATML	0.83
2	ATML	Ethane	1147	812	29	ATML	0.24
3	ATML	Ethene	1063	628	41	ATML	2.6
4							
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7							
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39							
40							
		Average			42.3		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1119025.D Vial: 18
Acq On : 19 Nov 16 13:55 Operator: lac
Sample : 161119B LCS/CCV RSK Level 8 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Nov 25 12:47 2016 Quant Results File: RSK0901.RES

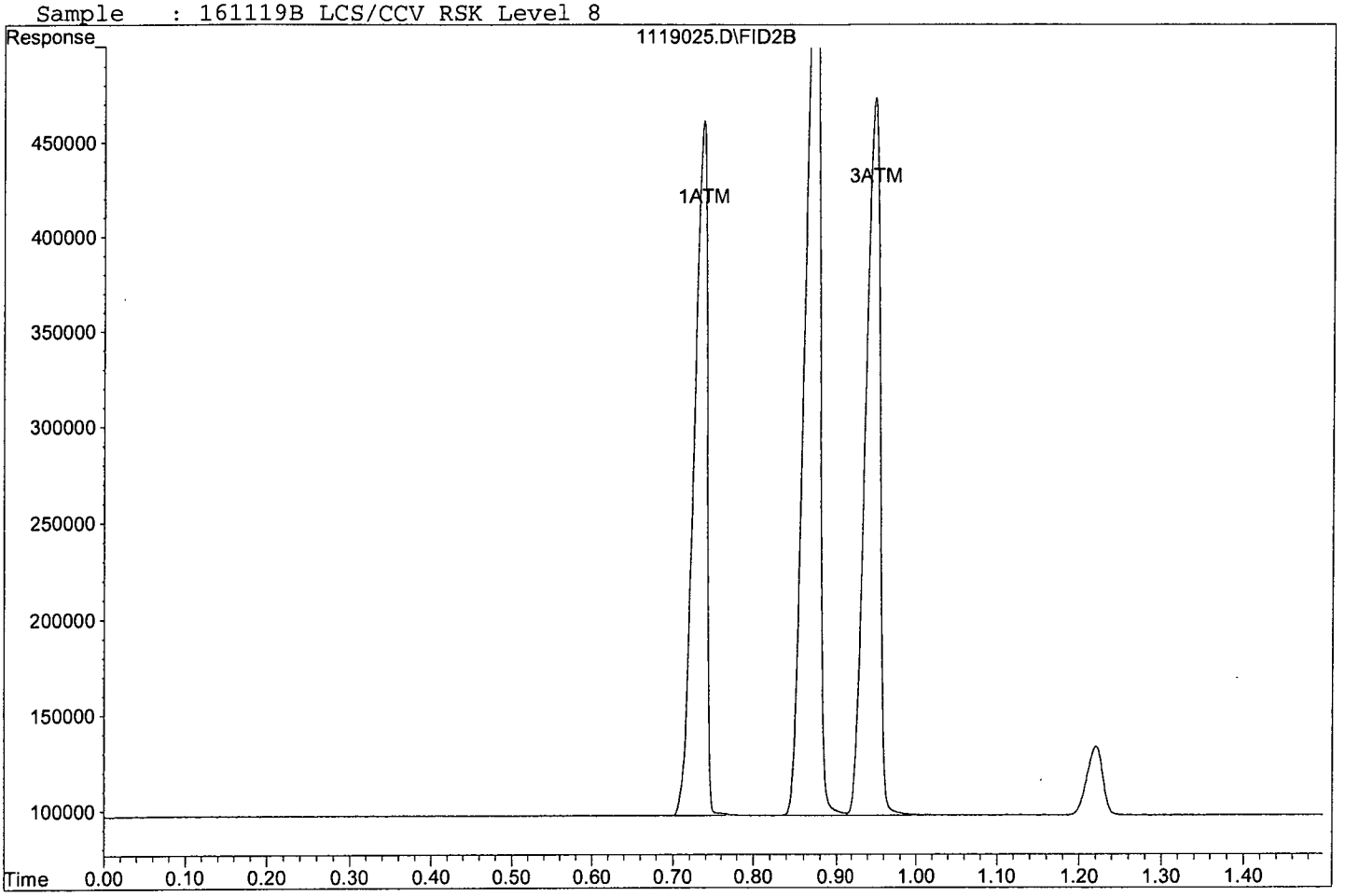
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Nov 23 12:26:39 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.74	364304	323.064 ppb
2) ATM Ethane	0.87	487036	598.557 ppb
3) ATM Ethene	0.95	376482	583.630 ppb

Target Compounds

Data File: G:\ROCKY\DATA\160901R\1119025.D
Sample : 161119B LCS/CCV RSK Level 8



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/19/16
Instrument: 7890
Initial Cal. Date: 09/01/16
Data File: 1119031.D

		Compound	MEAN	CCRF	%D	%Drift	
1	ATML	Methane	2635	987	63	ATML	13
2	ATML	Ethane	1147	653	43	ATML	20
3	ATML	Ethene	1063	488	54	ATML	25
4							
5							
6							
7							
8							
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39							
40							
		Average			53.3		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1119031.D Vial: 24
Acq On : 19 Nov 16 14:11 Operator: lac
Sample : Ending CCV RSK Level 8 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Nov 25 12:47 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Nov 23 12:26:39 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

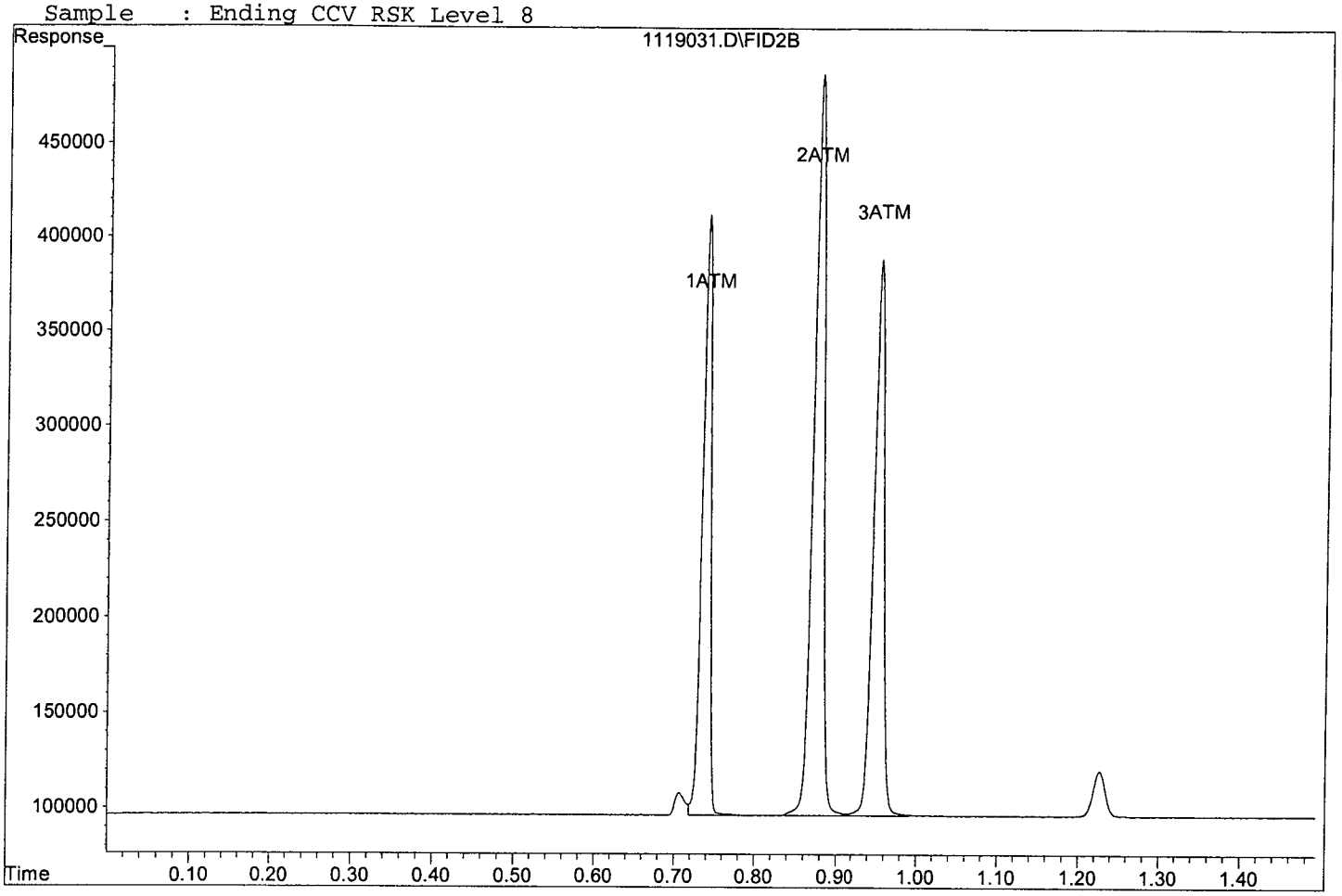
Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.74	316096	278.557 ppb
2) ATM Ethane	0.88	391526	478.632 ppb
3) ATM Ethene	0.95	292531	449.132 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\ROCKY\DATA\160901R\1119031.D
Sample : Ending CCV RSK Level 8



ORGANICS
Raw Data

APPL, INC.

Method Blank
METHANE

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161119W-45866 - 213991**
Batch ID: #RSKME-161119A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	METHANE	1.00 U	5.0	1.00	0.25	ug/L	11/19/16	11/19/16

Quant Method: RSK0901.M
Run #: 1119001
Instrument: Rocky
Sequence: 160901
Initials: CMO

GC SC-Blank-REG MDLs-DOD
Printed: 11/25/16 1:18:20 PM

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1119001.D Vial: 1
Acq On : 19 Nov 16 12:16 Operator: lac
Sample : 161119A BLK-RSK Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Nov 25 12:47 2016 Quant Results File: RSK0901.RES

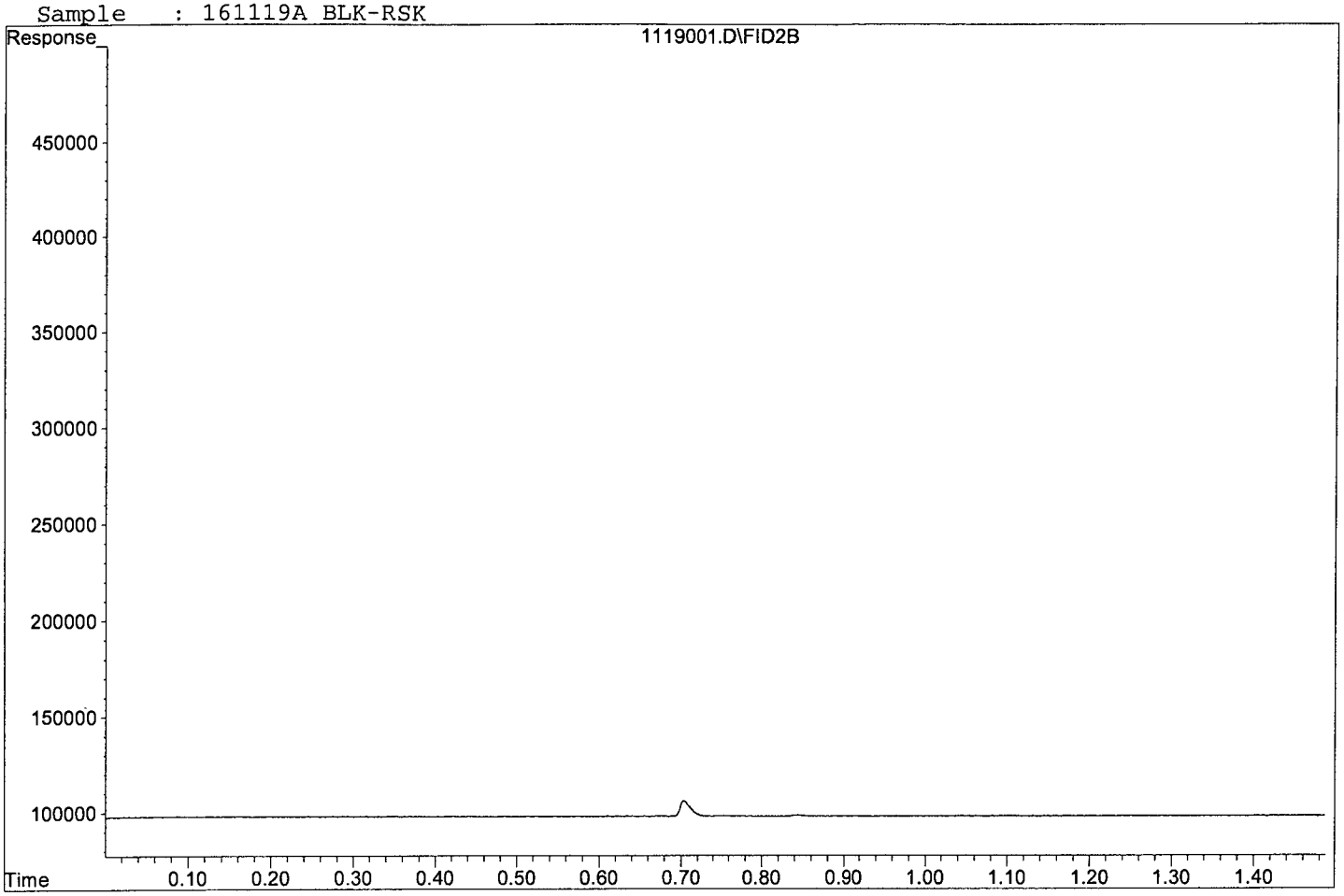
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Nov 23 12:26:39 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.75	449	N.D.	ppb
2) ATM Ethane	0.88	327	N.D.	ppb
3) ATM Ethene	0.95	300	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1119001.D
Sample : 161119A BLK-RSK



Laboratory Control Spike Recovery
METHANE

APPL ID: **161119W-45866 LCS - 213991**
Batch ID: #RSKME-161119A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
METHANE	320	306	95.5	72-125

Comments: _____

Primary	SPK
Quant Method :	RSK0901.M
Extraction Date :	11/19/16
Analysis Date :	11/19/16
Instrument :	Rocky
Run :	1119000
Initials :	CMO

Printed: 11/25/16 1:18:11 PM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1119000.D Vial: 1
Acq On : 19 Nov 16 11:51 Operator: lac
Sample : 161119A LCS/CCV RSK-Level 8 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Nov 25 12:47 2016 Quant Results File: RSK0901.RES

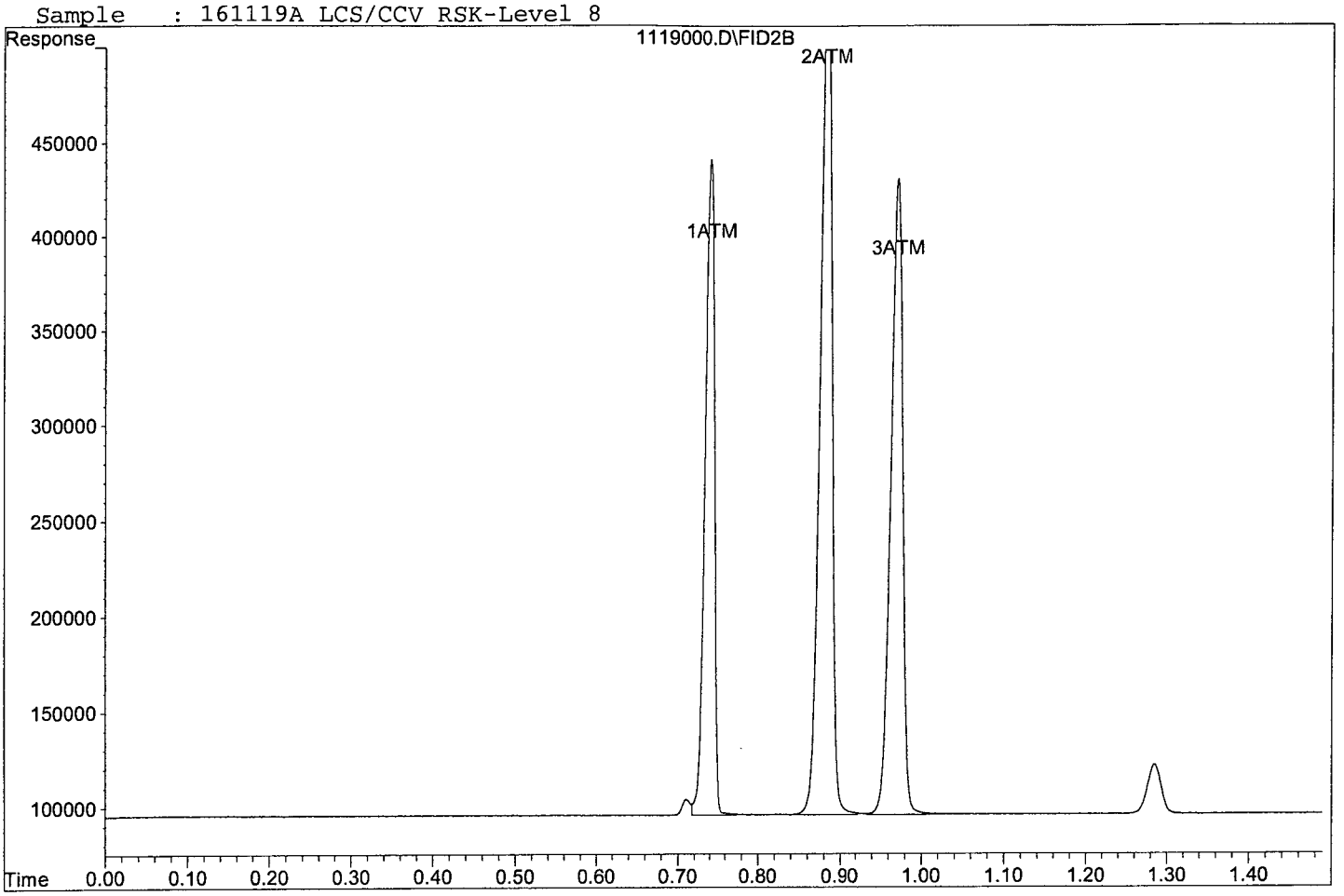
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Nov 23 12:26:39 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.74	345484	305.689 ppb
2) ATM Ethane	0.88	448684	550.401 ppb
3) ATM Ethene	0.97	334800	516.852 ppb

Target Compounds

Data File: G:\ROCKY\DATA\160901R\1119000.D
Sample : 161119A LCS/CCV RSK-Level 8



Primary Source Stock Standard 10,000ppmV **Manufacturer Exp date 7-8-2017** CM 8/15/16

RSK Gas Mix (Scott Specialty Gas) Cat.# 23452, Lot # 164PLU4SPC05L-34436

1% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

Intermediate Calibration Stock Standard 100ppmV **Expires 8/15/17** CM 8/15/16

Prepared in a 1 L Tedlar bag. Add 990mL Nitrogen and 10mL of 164PLU4SPC05L-34436 standard.

RSK Calibration Curve **Vial expiration date 9/28/16** CM 9/1/16

Analye	Conc Std 1 (ug/L)	Conc Std 2 (ug/L)	Conc Std 3 (ug/L)	Conc Std 4 (ug/L)	Conc Std 5 (ug/L)	Conc Std 6 (ug/L)	Conc Std 7 (ug/L)	Conc Std 8 (ug/L)	Conc Std 9 (ug/L)	Conc Std 10 (ug/L)
Methane (MW 16.	0.90	1.80	5.10	13.33	26.70	66.75	106.80	320.4	667.5	1335.0
Ethane (MW 30.0	1.70	3.40	9.50	25.00	50.00	125.00	200.00	600.0	1250.0	2500.0
Ethene (MW 28.0	1.60	3.20	8.90	23.30	46.60	116.50	186.40	599.2	1248.0	2496.0
Stock Source	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Primary Source Std #164PLU4S PC05L-34436	Primary Source Std #164PLU4S PC05L-34436	Primary Source Std #164PLU4SP C05L-34436	Primary Source Std #164PLU4S PC05L-34436
Stock Conc (ppr	100 ppmV	100 ppmV	100 ppmV	100 ppmV	100 ppmV	100 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV
Stock Aliquot (m	0.135 mL	0.270 mL	0.760 mL	2.0 mL	4.0 mL	10.0 mL	0.160 mL	0.480 mL	1.00 mL	2.00 mL
Final Volume P&T W	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL

Second Source Stock Standard 10,000ppmV **Manufacturer Exp Date 6-19-18** CM 8/15/16

RSK Gas Mix (Scott Specialty Gas) Cat.# 0104E40028`4, Lot # 170PLU5SPC06L-35410

1% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

Intermediate Second Source Standard 100ppmV **Expires 8/15/17** CM 8/15/16

Prepared in a 1 L Tedlar bag. Add 990mL Nitrogen and 10mL of lot# 170PLU5SPC06L-35410 standard.

Second Source / LCS - Level 6 **Expires 10/1/16** CM 9/1/16

10.0mL of Intermediate SS stock 8/15/16 into 10mL P&T water

final conc:66.7ppb Methane, 125.0ppb Ethane, and 116.5 ppb Ethene

CCV/LCS - Level 6 **Expires 10/1/16** CM 9/2/16

10.0mL of Intermediate calib stock 8/15/16 into 10mL P&T water

final conc:66.7ppb Methane, 125.0ppb Ethane, and 116.5 ppb Ethene

CCV/LCS - Level 7 **Expires 10/1/16** CM 9/2/16

0.160mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water

final conc:106.8ppb Methane, 200 ppb Ethane, and 186.4 ppb Ethene

CCV/LCS - Level 8 **Expires 10/1/16** CM 9/2/16

0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water

final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

AZ42293W06/W07 MS/MSD CM 9/2/16

4.0mL of Intermediate calib stock 8/15/16 into 10mL P&T water

final conc:26.7ppb Methane, 50.0ppb Ethane, and 46.6 ppb Ethene

CCV/LCS - Level 9 **Expires 10/3/16** CM 9/3/16
1.0mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:667.5ppb Methane,1250 ppb Ethane, and 1248 ppb Ethene

AZ41575w06 / W07 MS/MSD CM 9/3/16
4.0mL of Intermediate calib stock 8/15/16 into 10mL P&T water
final conc:26.7ppb Methane, 50.0ppb Ethane, and 46.6 ppb Ethene

CCV/LCS - Level 8 **Expires 10/6/16** CM 9/6/16
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

AZ42041w04 / W05 MS/MSD CM 9/6/16
4.0mL of Intermediate calib stock 8/15/16 into 10mL P&T water
final conc:26.7ppb Methane, 50.0ppb Ethane, and 46.6 ppb Ethene

CCV/LCS - Level 8 **Expires 10/8/16** CM 9/8/16
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

CCV/LCS - Level 9 **Expires 10/11/16** CM 9/11/16
1.0mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:667.5ppb Methane,1250 ppb Ethane, and 1248 ppb Ethene

CCV/LCS - Level 8 **Expires 10/13/16** CM 9/13/16
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

AZ42328W06 / W07 MS/MSD CM 9/13/16
4.0mL of Intermediate calib stock 8/15/16 into 10mL P&T water
final conc:26.7ppb Methane, 50.0ppb Ethane, and 46.6 ppb Ethene

CCV/LCS - Level 8 **Expires 10/15/16** CM 9/15/16
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

CCV/LCS - Level 7 **Expires 11/7/16** CM 10/7/16
0.160mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:106.8ppb Methane, 200 ppb Ethane, and 186.4 ppb Ethene

CCV/LCS - Level 8 **Expires 11/7/16** CM 10/7/16
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

CCV/LCS - Level 8 **Expires 11/20/16** CM 10/20/16
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

CCV/LCS - Level 8 **Expires 11/22/16** CM 10/22/16
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water

final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

CCV/LCS - Level 8 **Expires 11/25/16** **CM 10/25/16**
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

AZ44579 W10 and W11 MS/MSD **Expires 11/25/16** **CM 10/25/16**
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL sample AZ44579 water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

CCV/LCS - Level 8 **Expires 11/29/16** **CM 10/29/16**
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

AZ44621 W9 and W10 MS/MSD **Expires 11/29/16** **CM 10/29/16**
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL sample AZ44621 water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

CCV/LCS - Level 8 **Expires 11/30/16** **CM 10/30/16**
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

CCV/LCS - Level 8 **Expires 12/1/16** **CM 11/1/16**
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

CCV/LCS - Level 8 **Expires 12/4/16** **CM 11/4/16**
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

AZ45866W08/W09 MS/MSD **CM 11/19/16**
4.0mL of Intermediate calib stock 8/15/16 into 10mL P&T water
final conc:26.7ppb Methane, 50.0ppb Ethane, and 46.6 ppb Ethene

CCV/LCS - Level 8 **Expires 12/19/16** **CM 11/19/16**
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

Injection Log

Directory: G:\ROCKY\DATA\160901R\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0901000.D	1	RSK Level 1 / LOD Chk 08/15/16	Methane 0.9, Ethane, 1.7 Etl	1 Sep 16 11:38
2	2	0901001.D	1	RSK Level 2 08/15/16		1 Sep 16 11:41
3	3	0901002.D	1	RSK Level 3 / LOQ Chk 08/15/16	Methane 5.1, Ethane, 9.5 Etl	1 Sep 16 11:44
4	4	0901003.D	1	RSK Level 4 08/15/16		1 Sep 16 11:46
5	5	0901004.D	1	RSK Level 5 08/15/16		1 Sep 16 11:48
6	6	0901005.D	1	RSK Level 6 08/15/16		1 Sep 16 11:50
7	7	0901006.D	1	RSK Level 7 08/15/16		1 Sep 16 11:52
8	8	0901007.D	1	RSK Level 8 08/15/16		1 Sep 16 11:55
9	9	0901008.D	1	RSK Level 9 08/15/16		1 Sep 16 11:57
10	10	0901009.D	1	RSK Level 10 08/15/16		1 Sep 16 11:59
11	19	0901018.D	1	(SS/LCS) RSK Level 6 09/01/16		1 Sep 16 13:11
12	1	1119000.D	1	161119A LCS/CCV RSK-Level 8		19 Nov 16 11:51
13	1	1119001.D	1	161119A BLK-RSK		19 Nov 16 12:16
14	3	1119008.D	1	AZ45908W05		19 Nov 16 12:34
15	4	1119009.D	1	AZ45909W05		19 Nov 16 12:36
16	4	1119010.D	1	AZ45910W05		19 Nov 16 12:39
17	5	1119011.D	1	AZ45911W05		19 Nov 16 12:41
18	18	1119025.D	1	161119B LCS/CCV RSK Level 8		19 Nov 16 13:55
19	19	1119026.D	1	161119B BLK-RSK		19 Nov 16 13:58
20	22	1119029.D	10	AZ45907W05 DF10		19 Nov 16 14:05
21	23	1119030.D	1	Ending CCV RSK Level 8 dont use		19 Nov 16 14:07

METALS



METALS

QC Summary

APPL, INC.

METALS BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
6010C	CALCIUM (CA)	75.0 U	1000	75.0	27.5	ug/L	11/17/16	11/22/16	#61CDO-161117A-AZ45866
6010C	MAGNESIUM (MG)	30.0 U	500	30.0	12.9	ug/L	11/17/16	11/22/16	#61CDO-161117A-AZ45866
6010C	MANGANESE (MN)	4.00 U	10.0	4.00	1.23	ug/L	11/17/16	11/22/16	#61CDO-161117A-AZ45866
6010C	POTASSIUM (K)	500.0 U	3000	500.0	220.0	ug/L	11/17/16	11/22/16	#61CDO-161117A-AZ45866
6010C	SODIUM (NA)	500.0 U	5000	500.0	111.1	ug/L	11/17/16	11/22/16	#61CDO-161117A-AZ45866

Metals SC-Blank-REG MDLs
Printed: 11/23/16 2:54:48 PM

Laboratory Control Spike Recovery

METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 6010C	CALCIUM (CA)	25000	26900	108	87-113	11/17/16	11/22/16	#61CDO-161117A-AZ45866
EPA 6010C	MAGNESIUM (MG)	25000	26300	105	85-113	11/17/16	11/22/16	#61CDO-161117A-AZ45866
EPA 6010C	MANGANESE (MN)	250	269	108	90-114	11/17/16	11/22/16	#61CDO-161117A-AZ45866
EPA 6010C	POTASSIUM (K)	5000	5110	102	86-114	11/17/16	11/22/16	#61CDO-161117A-AZ45866
EPA 6010C	SODIUM (NA)	25000	26200	105	87-115	11/17/16	11/22/16	#61CDO-161117A-AZ45866

Comments: _____

METALS

Sample Data

APPL, INC.

Metals Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH117
Sample Collection Date: 11/14/16

ARF: 81500
APPL ID: AZ45907

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	CALCIUM (CA)	11500	1000	75.0	27.5	ug/L	1	11/17/16	11/22/16
6010C/3010A	MAGNESIUM (MG)	9880	500	30.0	12.9	ug/L	1	11/17/16	11/22/16
6010C/3010A	MANGANESE (MN)	743	10.0	4.00	1.23	ug/L	1	11/17/16	11/22/16
6010C/3010A	POTASSIUM (K)	1900 J	3000	500.0	220.0	ug/L	1	11/17/16	11/22/16
6010C/3010A	SODIUM (NA)	35200	5000	500.0	111.1	ug/L	1	11/17/16	11/22/16

J = Estimated value.

Printed: 11/23/16 2:54:44 PM
APPL-F1-SC-NoMC-REG MDLs

Sequence No.: 61
Sample ID: AZ45907W17
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 79
Date Collected: 11/22/16 5:37:15 PM
Data Type: Reprocessed on 11/23/16 12:16:09 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ45907W17

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1041945.3	100.7	%	0.81				0.80%
Y 371.029 Radial	978824.6	100.7	%	0.89				0.88%
Ag 338.289†	14.0	0.212	ug/L	0.9917	0.212	ug/L	0.9917	467.70%
Al 308.215†	1.7	-0.664	ug/L	24.3710	-0.664	ug/L	24.3710	>999.9%
As 188.979†	-4.4	-4.153	ug/L	2.7171	-4.153	ug/L	2.7171	65.43%
B†	1789.5	61.38	ug/L	0.855	61.38	ug/L	0.855	1.39%
Ba 233.527†	731.3	11.18	ug/L	0.078	11.18	ug/L	0.078	0.69%
Be 313.107†	-0.4	-0.002	ug/L	0.0149	-0.002	ug/L	0.0149	635.09%
Ca 315.887†	31556.5	11470	ug/L	653.2	11470	ug/L	653.2	5.69%
Cd 214.440†	-84.7	-1.275	ug/L	0.1965	-1.275	ug/L	0.1965	15.41%
Co 228.616†	17.8	0.549	ug/L	0.1891	0.549	ug/L	0.1891	34.46%
Cr 267.716†	61.9	0.694	ug/L	0.2015	0.694	ug/L	0.2015	29.05%
Cu 327.393†	118.5	1.061	ug/L	1.2562	1.061	ug/L	1.2562	118.42%
Fe 273.955†	5083.0	449.8	ug/L	1.39	449.8	ug/L	1.39	0.31%
K 766.490†	4286.3	1903	ug/L	131.4	1903	ug/L	131.4	6.91%
Mg 285.213†	45701.8	9876	ug/L	544.5	9876	ug/L	544.5	5.51%
Mn 257.610†	6004.6	743.3	ug/L	9.26	743.3	ug/L	9.26	1.25%
Mo 202.031†	3.7	0.033	ug/L	0.2955	0.033	ug/L	0.2955	882.73%
Na 589.592†	225606.5	35220	ug/L	1825.2	35220	ug/L	1825.2	5.18%
Ni 231.604†	2.5	-0.295	ug/L	0.7740	-0.295	ug/L	0.7740	262.08%
P 213.617†	202.3	138.5	ug/L	3.23	138.5	ug/L	3.23	2.33%
Pb 220.353†	8.0	1.463	ug/L	1.0268	1.463	ug/L	1.0268	70.19%
Sb 206.836†	2.0	1.564	ug/L	2.9047	1.564	ug/L	2.9047	185.77%
Se 196.026†	2.6	2.628	ug/L	5.3988	2.628	ug/L	5.3988	205.40%
Sn 189.927†	-16.4	-5.190	ug/L	1.2175	-5.190	ug/L	1.2175	23.46%
Sr 421.552†	27916.5	74.87	ug/L	3.843	74.87	ug/L	3.843	5.13%
Ti 337.279†	14.1	0.723	ug/L	0.4823	0.723	ug/L	0.4823	66.68%
Tl 190.801†	0.0	0.010	ug/L	0.5193	0.010	ug/L	0.5193	>999.9%
V 292.402†	-72.6	-0.596	ug/L	0.8535	-0.596	ug/L	0.8535	143.30%
Zn 206.200†	15.4	-4.097	ug/L	0.3133	-4.097	ug/L	0.3133	7.65%

Metals Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH121
Sample Collection Date: 11/14/16

ARF: 81500
APPL ID: AZ45908

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	CALCIUM (CA)	55500	1000	75.0	27.5	ug/L	1	11/17/16	11/22/16
6010C/3010A	MAGNESIUM (MG)	71900	500	30.0	12.9	ug/L	1	11/17/16	11/22/16
6010C/3010A	MANGANESE (MN)	4.00U	10.0	4.00	1.23	ug/L	1	11/17/16	11/22/16
6010C/3010A	POTASSIUM (K)	3040	3000	500.0	220.0	ug/L	1	11/17/16	11/22/16
6010C/3010A	SODIUM (NA)	150000	100000	10000.0	2220.0	ug/L	20	11/17/16	11/22/16

Printed: 11/23/16 2:54:44 PM
APPL-F1-SC-NoMC-REG MDLs

Sequence No.: 62
Sample ID: AZ45908W17
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 80
Date Collected: 11/22/16 5:42:37 PM
Data Type: Reprocessed on 11/23/16 12:16:10 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ45908W17

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1000509.5	96.73	%	1.490				1.54%
Y 371.029 Radial	936898.4	96.43	%	1.590				1.65%
Ag 338.289†	40.1	0.605	ug/L	1.5582	0.605	ug/L	1.5582	257.49%
Al 308.215†	0.6	-15.84	ug/L	6.094	-15.84	ug/L	6.094	38.46%
As 188.979†	5.9	5.318	ug/L	5.3912	5.318	ug/L	5.3912	101.38%
B†	2081.1	71.38	ug/L	1.312	71.38	ug/L	1.312	1.84%
Ba 233.527†	1077.1	16.43	ug/L	0.445	16.43	ug/L	0.445	2.71%
Be 313.107†	-6.6	-0.042	ug/L	0.0229	-0.042	ug/L	0.0229	54.03%
Ca 315.887†	152604.3	55480	ug/L	1363.5	55480	ug/L	1363.5	2.46%
Cd 214.440†	-132.2	-2.015	ug/L	0.1279	-2.015	ug/L	0.1279	6.35%
Co 228.616†	-10.5	-0.880	ug/L	0.5349	-0.880	ug/L	0.5349	60.76%
Cr 267.716†	170.8	2.757	ug/L	0.1425	2.757	ug/L	0.1425	5.17%
Cu 327.393†	-48.3	-3.691	ug/L	0.9503	-3.691	ug/L	0.9503	25.75%
Fe 273.955†	-9.0	-18.44	ug/L	0.886	-18.44	ug/L	0.886	4.80%
K 766.490†	6854.3	3035	ug/L	111.8	3035	ug/L	111.8	3.68%
Mg 285.213†	332654.8	71910	ug/L	1970.0	71910	ug/L	1970.0	2.74%
Mn 257.610†	14.4	-1.231	ug/L	0.8147	-1.231	ug/L	0.8147	66.19%
Mo 202.031†	13.2	-0.634	ug/L	0.2592	-0.634	ug/L	0.2592	40.90%
Na 589.592†	928359.9	144900	ug/L	3564.5	144900	ug/L	3564.5	2.46%
Ni 231.604†	63.4	2.679	ug/L	0.3091	2.679	ug/L	0.3091	11.54%
P 213.617†	183.9	126.0	ug/L	2.87	126.0	ug/L	2.87	2.28%
Pb 220.353†	29.8	5.480	ug/L	2.0592	5.480	ug/L	2.0592	37.58%
Sb 206.836†	3.0	2.361	ug/L	0.9567	2.361	ug/L	0.9567	40.51%
Se 196.026†	-5.9	-5.890	ug/L	3.4377	-5.890	ug/L	3.4377	58.36%
Sn 189.927†	-40.8	-12.11	ug/L	1.613	-12.11	ug/L	1.613	13.32%
Sr 421.552†	175821.1	471.7	ug/L	13.18	471.7	ug/L	13.18	2.79%
Ti 337.279†	-1.4	-1.010	ug/L	0.0860	-1.010	ug/L	0.0860	8.51%
Tl 190.801†	-0.5	-0.360	ug/L	0.3903	-0.360	ug/L	0.3903	108.53%
V 292.402†	1101.7	11.05	ug/L	1.168	11.05	ug/L	1.168	10.58%
Zn 206.200†	28.1	1.785	ug/L	0.5082	1.785	ug/L	0.5082	28.46%

Sequence No.: 49
Sample ID: AZ45908W17-1/20
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution: 20X

Autosampler Location: 69
Date Collected: 11/22/16 4:40:43 PM
Data Type: Reprocessed on 11/23/16 12:15:55 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ45908W17-1/20

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1043668.9	100.9	%	0.71				0.71%
Y 371.029 Radial	980855.7	101.0	%	0.77				0.77%
Ag 338.289†	-19.4	-0.293	ug/L	0.5637	-5.859	ug/L	11.2745	192.44%
Al 308.215†	2.2	5.059	ug/L	19.4788	101.2	ug/L	389.58	385.07%
As 188.979†	1.0	0.905	ug/L	2.5316	18.10	ug/L	50.632	279.78%
B†	96.4	3.305	ug/L	0.0423	66.10	ug/L	0.845	1.28%
Ba 233.527†	64.7	0.989	ug/L	0.1410	19.78	ug/L	2.819	14.25%
Be 313.107†	-2.8	-0.018	ug/L	0.0247	-0.363	ug/L	0.4936	135.88%
Ca 315.887†	7601.8	2763	ug/L	79.6	55270	ug/L	1592.6	2.88%
Cd 214.440†	-10.9	-0.162	ug/L	0.1128	-3.241	ug/L	2.2560	69.61%
Co 228.616†	-1.2	-0.073	ug/L	0.0236	-1.463	ug/L	0.4719	32.26%
Cr 267.716†	2.4	0.017	ug/L	0.1302	0.333	ug/L	2.6044	782.54%
Cu 327.393†	42.2	0.426	ug/L	1.3524	8.519	ug/L	27.0488	317.51%
Fe 273.955†	-24.3	-3.151	ug/L	0.7810	-63.02	ug/L	15.620	24.78%
K 766.490†	257.8	114.0	ug/L	35.10	2280	ug/L	701.9	30.78%
Mg 285.213†	17579.3	3800	ug/L	127.6	76000	ug/L	2552.9	3.36%
Mn 257.610†	-6.0	-0.906	ug/L	0.5072	-18.11	ug/L	10.145	56.01%
Mo 202.031†	-6.2	-0.906	ug/L	0.1464	-18.13	ug/L	2.928	16.15%
Na 589.592†	48004.6	7495	ug/L	294.1	149900	ug/L	5882.4	3.92%
Ni 231.604†	4.7	0.204	ug/L	0.1691	4.080	ug/L	3.3818	82.89%
P 213.617†	5.2	3.576	ug/L	1.0007	71.51	ug/L	20.014	27.99%
Pb 220.353†	9.0	1.973	ug/L	1.8633	39.47	ug/L	37.267	94.42%
Sb 206.836†	-0.4	-0.329	ug/L	1.7245	-6.585	ug/L	34.4900	523.75%
Se 196.026†	0.2	0.198	ug/L	5.8397	3.965	ug/L	116.7945	>999.9%
Sn 189.927†	-1.5	-0.408	ug/L	0.3436	-8.170	ug/L	6.8720	84.12%
Sr 421.552†	8983.7	24.10	ug/L	1.135	482.1	ug/L	22.69	4.71%
Ti 337.279†	-9.2	-0.611	ug/L	0.1433	-12.22	ug/L	2.865	23.45%
Tl 190.801†	3.0	2.365	ug/L	2.3546	47.30	ug/L	47.093	99.57%
V 292.402†	118.6	1.161	ug/L	1.0847	23.23	ug/L	21.694	93.39%
Zn 206.200†	5.5	0.483	ug/L	0.9651	9.651	ug/L	19.3024	200.00%

Metals Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH122
Sample Collection Date: 11/15/16

ARF: 81500
APPL ID: AZ45909

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	CALCIUM (CA)	32700	1000	75.0	27.5	ug/L	1	11/17/16	11/22/16
6010C/3010A	MAGNESIUM (MG)	12000	500	30.0	12.9	ug/L	1	11/17/16	11/22/16
6010C/3010A	MANGANESE (MN)	4.00U	10.0	4.00	1.23	ug/L	1	11/17/16	11/22/16
6010C/3010A	POTASSIUM (K)	5680	3000	500.0	220.0	ug/L	1	11/17/16	11/22/16
6010C/3010A	SODIUM (NA)	109000	100000	10000.0	2220.0	ug/L	20	11/17/16	11/22/16

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APPL-F1-SC-NoMC-REG MDLs

Sequence No.: 63
Sample ID: AZ45909W20
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 81
Date Collected: 11/22/16 5:48:06 PM
Data Type: Reprocessed on 11/23/16 12:16:11 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ45909W20

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1020233.7	98.64	%	0.276				0.28%
Y 371.029 Radial	956610.6	98.46	%	0.309				0.31%
Ag 338.289†	-43.0	-0.650	ug/L	0.9913	-0.650	ug/L	0.9913	152.59%
Al 308.215†	7.9	11.73	ug/L	6.261	11.73	ug/L	6.261	53.37%
As 188.979†	12.2	11.04	ug/L	4.244	11.04	ug/L	4.244	38.43%
B†	3378.5	115.9	ug/L	1.24	115.9	ug/L	1.24	1.07%
Ba 233.527†	232.2	3.480	ug/L	0.1826	3.480	ug/L	0.1826	5.25%
Be 313.107†	-2.7	-0.017	ug/L	0.0244	-0.017	ug/L	0.0244	141.58%
Ca 315.887†	90011.9	32720	ug/L	799.2	32720	ug/L	799.2	2.44%
Cd 214.440†	-1514.5	-21.86	ug/L	0.169	-21.86	ug/L	0.169	0.78%
Co 228.616†	82.4	3.175	ug/L	0.2884	3.175	ug/L	0.2884	9.08%
Cr 267.716†	414.4	7.887	ug/L	0.0955	7.887	ug/L	0.0955	1.21%
Cu 327.393†	19.1	-1.000	ug/L	1.9346	-1.000	ug/L	1.9346	193.44%
Fe 273.955†	205.0	13.40	ug/L	1.778	13.40	ug/L	1.778	13.27%
K 766.490†	12779.7	5676	ug/L	121.5	5676	ug/L	121.5	2.14%
Mg 285.213†	55420.2	11960	ug/L	296.6	11960	ug/L	296.6	2.48%
Mn 257.610†	-9.5	-1.697	ug/L	0.6033	-1.697	ug/L	0.6033	35.56%
Mo 202.031†	469.2	57.68	ug/L	0.255	57.68	ug/L	0.255	0.44%
Na 589.592†	619946.5	96780	ug/L	1724.6	96780	ug/L	1724.6	1.78%
Ni 231.604†	-20.1	-1.120	ug/L	0.4558	-1.120	ug/L	0.4558	40.72%
P 213.617†	242.8	166.3	ug/L	0.71	166.3	ug/L	0.71	0.43%
Pb 220.353†	-171.4	-39.48	ug/L	3.322	-39.48	ug/L	3.322	8.41%
Sb 206.836†	-25.9	-20.09	ug/L	1.476	-20.09	ug/L	1.476	7.35%
Se 196.026†	29.5	29.34	ug/L	5.617	29.34	ug/L	5.617	19.15%
Sn 189.927†	-39.5	-12.28	ug/L	2.725	-12.28	ug/L	2.725	22.20%
Sr 421.552†	50299.1	134.8	ug/L	3.42	134.8	ug/L	3.42	2.54%
Ti 337.279†	18.9	0.989	ug/L	0.3750	0.989	ug/L	0.3750	37.94%
Tl 190.801†	13.7	10.76	ug/L	1.857	10.76	ug/L	1.857	17.25%
V 292.402†	2416.7	24.60	ug/L	0.745	24.60	ug/L	0.745	3.03%
Zn 206.200†	67.5	6.086	ug/L	0.4788	6.086	ug/L	0.4788	7.87%

Sequence No.: 50
Sample ID: AZ45909W20-1/20
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution: 20X

Autosampler Location: 70
Date Collected: 11/22/16 4:45:01 PM
Data Type: Reprocessed on 11/23/16 12:15:56 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ45909W20-1/20

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1051630.9	101.7	%	0.56				0.55%
Y 371.029 Radial	989248.2	101.8	%	0.59				0.58%
Ag 338.289†	40.4	0.611	ug/L	0.8851	12.21	ug/L	17.703	144.96%
Al 308.215†	-10.2	-27.30	ug/L	15.101	-545.9	ug/L	302.02	55.32%
As 188.979†	4.6	4.307	ug/L	2.4523	86.14	ug/L	49.046	56.94%
B†	174.3	5.978	ug/L	0.0548	119.6	ug/L	1.10	0.92%
Ba 233.527†	-2.0	-0.036	ug/L	0.0880	-0.719	ug/L	1.7594	244.58%
Be 313.107†	-3.4	-0.022	ug/L	0.0032	-0.440	ug/L	0.0649	14.74%
Ca 315.887†	4894.0	1779	ug/L	39.9	35580	ug/L	797.9	2.24%
Cd 214.440†	-77.1	-1.115	ug/L	0.0206	-22.29	ug/L	0.412	1.85%
Co 228.616†	2.0	0.074	ug/L	0.3544	1.475	ug/L	7.0871	480.52%
Cr 267.716†	-2.6	-0.065	ug/L	0.1785	-1.306	ug/L	3.5708	273.47%
Cu 327.393†	16.2	0.153	ug/L	0.4838	3.053	ug/L	9.6753	316.88%
Fe 273.955†	-20.4	-2.071	ug/L	0.6752	-41.42	ug/L	13.503	32.60%
K 766.490†	620.6	275.6	ug/L	57.65	5513	ug/L	1152.9	20.91%
Mg 285.213†	3082.3	665.4	ug/L	13.89	13310	ug/L	277.8	2.09%
Mn 257.610†	-7.4	-0.947	ug/L	0.4286	-18.94	ug/L	8.572	45.25%
Mo 202.031†	16.1	1.950	ug/L	0.5978	39.00	ug/L	11.956	30.66%
Na 589.592†	34828.4	5437	ug/L	282.8	108700	ug/L	5656.7	5.20%
Ni 231.604†	11.3	0.535	ug/L	0.5019	10.71	ug/L	10.039	93.74%
P 213.617†	10.3	7.068	ug/L	1.5604	141.4	ug/L	31.21	22.08%
Pb 220.353†	-0.8	-0.217	ug/L	0.8955	-4.340	ug/L	17.9091	412.65%
Sb 206.836†	0.7	0.513	ug/L	2.4841	10.26	ug/L	49.681	484.25%
Se 196.026†	-3.8	-3.811	ug/L	2.2065	-76.23	ug/L	44.129	57.89%
Sn 189.927†	3.0	1.110	ug/L	0.1799	22.20	ug/L	3.598	16.21%
Sr 421.552†	2653.5	7.109	ug/L	0.2490	142.2	ug/L	4.98	3.50%
Ti 337.279†	-6.3	-0.394	ug/L	0.4589	-7.871	ug/L	9.1778	116.60%
Tl 190.801†	3.3	2.574	ug/L	1.1641	51.49	ug/L	23.282	45.22%
V 292.402†	112.8	1.136	ug/L	1.1091	22.73	ug/L	22.182	97.60%
Zn 206.200†	8.3	0.770	ug/L	0.5124	15.40	ug/L	10.249	66.55%

Metals Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
ARF: 81500
Sample ID: ERH126
APPL ID: AZ45910
Sample Collection Date: 11/15/16

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	CALCIUM (CA)	7850	1000	75.0	27.5	ug/L	1	11/17/16	11/22/16
6010C/3010A	MAGNESIUM (MG)	13200	500	30.0	12.9	ug/L	1	11/17/16	11/22/16
6010C/3010A	MANGANESE (MN)	4.00 U	10.0	4.00	1.23	ug/L	1	11/17/16	11/22/16
6010C/3010A	POTASSIUM (K)	4930	3000	500.0	220.0	ug/L	1	11/17/16	11/22/16
6010C/3010A	SODIUM (NA)	136000	100000	10000.0	2220.0	ug/L	20	11/17/16	11/22/16

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APPL-F1-SC-NoMC-REG MDLs

Sequence No.: 64
Sample ID: AZ45910W17
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 82
Date Collected: 11/22/16 5:53:40 PM
Data Type: Reprocessed on 11/23/16 12:16:12 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ45910W17

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1001035.5	96.78	%	1.209				1.25%
Y 371.029 Radial	937882.6	96.53	%	1.306				1.35%
Ag 338.289†	-42.0	-0.635	ug/L	0.4396	-0.635	ug/L	0.4396	69.27%
Al 308.215†	2.7	3.546	ug/L	10.9503	3.546	ug/L	10.9503	308.83%
As 188.979†	-2.9	-2.364	ug/L	7.3607	-2.364	ug/L	7.3607	311.32%
B†	8995.4	308.5	ug/L	4.23	308.5	ug/L	4.23	1.37%
Ba 233.527†	515.4	7.907	ug/L	0.2187	7.907	ug/L	0.2187	2.77%
Be 313.107†	-8.3	-0.053	ug/L	0.0152	-0.053	ug/L	0.0152	28.68%
Ca 315.887†	21595.4	7848	ug/L	142.4	7848	ug/L	142.4	1.81%
Cd 214.440†	-118.3	-1.749	ug/L	0.2522	-1.749	ug/L	0.2522	14.42%
Co 228.616†	10.0	0.258	ug/L	0.3075	0.258	ug/L	0.3075	119.12%
Cr 267.716†	291.9	5.591	ug/L	0.2288	5.591	ug/L	0.2288	4.09%
Cu 327.393†	-69.6	-2.299	ug/L	0.6765	-2.299	ug/L	0.6765	29.43%
Fe 273.955†	212.8	9.385	ug/L	0.8440	9.385	ug/L	0.8440	8.99%
K 766.490†	11080.8	4927	ug/L	92.3	4927	ug/L	92.3	1.87%
Mg 285.213†	60919.1	13150	ug/L	268.8	13150	ug/L	268.8	2.04%
Mn 257.610†	-12.1	-2.039	ug/L	0.2267	-2.039	ug/L	0.2267	11.12%
Mo 202.031†	5.9	-1.168	ug/L	1.1010	-1.168	ug/L	1.1010	94.30%
Na 589.592†	847476.7	132300	ug/L	5556.6	132300	ug/L	5556.6	4.20%
Ni 231.604†	-15.1	-0.750	ug/L	0.2672	-0.750	ug/L	0.2672	35.62%
P 213.617†	824.7	564.8	ug/L	7.36	564.8	ug/L	7.36	1.30%
Pb 220.353†	12.7	2.702	ug/L	1.1357	2.702	ug/L	1.1357	42.03%
Sb 206.836†	2.1	1.648	ug/L	0.7461	1.648	ug/L	0.7461	45.27%
Se 196.026†	2.7	2.668	ug/L	3.0978	2.668	ug/L	3.0978	116.11%
Sn 189.927†	-12.9	-4.134	ug/L	1.7766	-4.134	ug/L	1.7766	42.98%
Sr 421.552†	29220.2	78.35	ug/L	1.518	78.35	ug/L	1.518	1.94%
Ti 337.279†	3.6	0.118	ug/L	0.7797	0.118	ug/L	0.7797	659.05%
Tl 190.801†	-0.5	-0.371	ug/L	1.6918	-0.371	ug/L	1.6918	455.73%
V 292.402†	5989.3	58.75	ug/L	0.056	58.75	ug/L	0.056	0.10%
Zn 206.200†	-17.0	-1.484	ug/L	0.3372	-1.484	ug/L	0.3372	22.72%

Sequence No.: 51
Sample ID: AZ45910W17-1/20
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution: 20X

Autosampler Location: 71
Date Collected: 11/22/16 4:49:19 PM
Data Type: Reprocessed on 11/23/16 12:15:57 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ45910W17-1/20

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1056466.8	102.1	%	0.56				0.55%
Y 371.029 Radial	994212.2	102.3	%	0.62				0.60%
Ag 338.289†	5.7	0.087	ug/L	0.7050	1.734	ug/L	14.0993	813.01%
Al 308.215†	1.8	4.608	ug/L	12.0744	92.16	ug/L	241.488	262.02%
As 188.979†	0.4	0.399	ug/L	1.9095	7.977	ug/L	38.1902	478.75%
B†	463.2	15.89	ug/L	0.334	317.8	ug/L	6.68	2.10%
Ba 233.527†	32.2	0.495	ug/L	0.0668	9.907	ug/L	1.3351	13.48%
Be 313.107†	-0.7	-0.004	ug/L	0.0213	-0.090	ug/L	0.4261	473.41%
Ca 315.887†	1049.0	381.2	ug/L	7.01	7624	ug/L	140.3	1.84%
Cd 214.440†	-15.4	-0.224	ug/L	0.1475	-4.488	ug/L	2.9510	65.75%
Co 228.616†	-2.7	-0.113	ug/L	0.3026	-2.262	ug/L	6.0518	267.59%
Cr 267.716†	-7.8	-0.162	ug/L	0.1982	-3.236	ug/L	3.9635	122.48%
Cu 327.393†	18.5	0.186	ug/L	1.3624	3.724	ug/L	27.2488	731.79%
Fe 273.955†	-17.8	-2.047	ug/L	0.4363	-40.94	ug/L	8.726	21.32%
K 766.490†	506.7	225.3	ug/L	17.91	4507	ug/L	358.2	7.95%
Mg 285.213†	3085.0	665.7	ug/L	6.90	13310	ug/L	138.0	1.04%
Mn 257.610†	-4.5	-0.589	ug/L	0.2135	-11.77	ug/L	4.271	36.28%
Mo 202.031†	-6.2	-0.881	ug/L	0.8486	-17.61	ug/L	16.972	96.37%
Na 589.592†	43569.9	6801	ug/L	293.9	136000	ug/L	5877.4	4.32%
Ni 231.604†	-2.5	-0.124	ug/L	0.5070	-2.471	ug/L	10.1399	410.29%
P 213.617†	36.3	24.84	ug/L	2.334	496.8	ug/L	46.67	9.40%
Pb 220.353†	0.8	0.169	ug/L	1.9591	3.372	ug/L	39.1828	>999.9%
Sb 206.836†	0.7	0.534	ug/L	1.2233	10.69	ug/L	24.467	228.90%
Se 196.026†	4.2	4.148	ug/L	4.0774	82.97	ug/L	81.547	98.29%
Sn 189.927†	4.0	1.384	ug/L	0.4601	27.69	ug/L	9.201	33.23%
Sr 421.552†	1394.4	3.738	ug/L	0.5036	74.77	ug/L	10.073	13.47%
Ti 337.279†	-8.1	-0.497	ug/L	0.6946	-9.932	ug/L	13.8929	139.89%
Tl 190.801†	1.1	0.892	ug/L	1.2999	17.84	ug/L	25.999	145.74%
V 292.402†	280.0	2.734	ug/L	0.4773	54.68	ug/L	9.546	17.46%
Zn 206.200†	14.7	1.396	ug/L	0.2271	27.93	ug/L	4.541	16.26%

Metals Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH128
Sample Collection Date: 11/14/16

ARF: 81500
APPL ID: AZ45911

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	CALCIUM (CA)	16900	1000	75.0	27.5	ug/L	1	11/17/16	11/22/16
6010C/3010A	MAGNESIUM (MG)	18600	500	30.0	12.9	ug/L	1	11/17/16	11/22/16
6010C/3010A	MANGANESE (MN)	4.00U	10.0	4.00	1.23	ug/L	1	11/17/16	11/22/16
6010C/3010A	POTASSIUM (K)	1960J	3000	500.0	220.0	ug/L	1	11/17/16	11/22/16
6010C/3010A	SODIUM (NA)	34700	5000	500.0	111.1	ug/L	1	11/17/16	11/22/16

J = Estimated value.

Printed: 11/23/16 2:54:44 PM
APPL-F1-SC-NoMC-REG MDLs

Sequence No.: 65
Sample ID: AZ45911W17
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 83
Date Collected: 11/22/16 5:59:09 PM
Data Type: Reprocessed on 11/23/16 12:16:13 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ45911W17

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1027888.2	99.38	%	0.126				0.13%
Y 371.029 Radial	964362.9	99.26	%	0.101				0.10%
Ag 338.289†	25.4	0.384	ug/L	0.4772	0.384	ug/L	0.4772	124.41%
Al 308.215†	-0.4	-4.842	ug/L	10.9541	-4.842	ug/L	10.9541	226.22%
As 188.979†	3.7	3.358	ug/L	4.6777	3.358	ug/L	4.6777	139.31%
B†	1093.7	37.51	ug/L	0.148	37.51	ug/L	0.148	0.39%
Ba 233.527†	317.9	4.871	ug/L	0.1566	4.871	ug/L	0.1566	3.22%
Be 313.107†	-2.7	-0.018	ug/L	0.0148	-0.018	ug/L	0.0148	84.15%
Ca 315.887†	46587.8	16940	ug/L	1081.7	16940	ug/L	1081.7	6.39%
Cd 214.440†	-89.6	-1.323	ug/L	0.1288	-1.323	ug/L	0.1288	9.74%
Co 228.616†	-3.3	-0.263	ug/L	0.4189	-0.263	ug/L	0.4189	159.13%
Cr 267.716†	206.8	3.918	ug/L	0.0855	3.918	ug/L	0.0855	2.18%
Cu 327.393†	-10.1	-0.917	ug/L	1.4300	-0.917	ug/L	1.4300	156.01%
Fe 273.955†	28.0	-3.234	ug/L	0.9909	-3.234	ug/L	0.9909	30.64%
K 766.490†	4426.0	1963	ug/L	219.9	1963	ug/L	219.9	11.21%
Mg 285.213†	85817.8	18550	ug/L	1232.3	18550	ug/L	1232.3	6.64%
Mn 257.610†	-3.0	-1.147	ug/L	0.4857	-1.147	ug/L	0.4857	42.33%
Mo 202.031†	4.9	0.046	ug/L	0.3230	0.046	ug/L	0.3230	708.68%
Na 589.592†	222423.6	34730	ug/L	2332.5	34730	ug/L	2332.5	6.72%
Ni 231.604†	-7.1	-0.460	ug/L	0.1053	-0.460	ug/L	0.1053	22.91%
P 213.617†	129.8	88.90	ug/L	2.935	88.90	ug/L	2.935	3.30%
Pb 220.353†	20.5	4.286	ug/L	2.6267	4.286	ug/L	2.6267	61.29%
Sb 206.836†	3.6	2.816	ug/L	2.3029	2.816	ug/L	2.3029	81.79%
Se 196.026†	-2.2	-2.206	ug/L	4.6045	-2.206	ug/L	4.6045	208.74%
Sn 189.927†	-23.7	-7.551	ug/L	0.0505	-7.551	ug/L	0.0505	0.67%
Sr 421.552†	39419.1	105.7	ug/L	7.00	105.7	ug/L	7.00	6.62%
Ti 337.279†	-3.8	-0.485	ug/L	0.0969	-0.485	ug/L	0.0969	20.00%
Tl 190.801†	0.3	0.198	ug/L	1.0808	0.198	ug/L	1.0808	544.75%
V 292.402†	1854.8	18.23	ug/L	0.230	18.23	ug/L	0.230	1.26%
Zn 206.200†	7.5	0.485	ug/L	0.8876	0.485	ug/L	0.8876	183.19%

METALS

Calibration Data

APPL, INC.

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM
ARF No: 81500 SDG: 81500
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 11/22/16 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 13:03	%R(1)	True CCV1	Found 13:23	%R(1)	True CCV2	Found 15:13	%R(1)	
Calcium (Ca)	12500	12810	102	25000	24410	97.6	18750	19430	104	P
Potassium (K)	12500	12180	97.4	10000	9399	94.0	7500	7655	102	P
Magnesium (Mg)	12500	13080	105	25000	24460	97.8	18750	19490	104	P
Manganese (Mn)	500	509.8	102	500	488.7	97.7	375.5	389.9	104	P
Sodium (Na)	12500	12430	99.4	12500	12000	96.0	9375	9705	104	P

(1) Control Limits: Metals 90-110

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM
ARF No: 81500 SDG: 81500
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 11/22/16 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 13:03	%R(1)	True CCV1	Found 15:58	%R(1)	True CCV2	Found 16:58	%R(1)	
Calcium (Ca)	12500	12810	102	25000	24940	99.8	18750	19290	103	P
Potassium (K)	12500	12180	97.4	10000	9448	94.5	7500	7573	101	P
Magnesium (Mg)	12500	13080	105	25000	24590	98.4	18750	19470	104	P
Manganese (Mn)	500	509.8	102	500	501	100	375.5	390.6	104	P
Sodium (Na)	12500	12430	99.4	12500	12100	96.8	9375	9557	102	P

(1) Control Limits: Metals 90-110

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No: 81500 SDG: 81500

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 11/22/16 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 13:03	%R(1)	True CCV1	Found 18:06	%R(1)	True	Found	%R(1)	
Calcium (Ca)	12500	12810	102	25000	26350	105				P
Potassium (K)	12500	12180	97.4	10000	10010	100				P
Magnesium (Mg)	12500	13080	105	25000	26510	106				P
Manganese (Mn)	500	509.8	102	500	528.4	106				P
Sodium (Na)	12500	12430	99.4	12500	12830	103				P

(1) Control Limits: Metals 90-110

ILM02.0

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 81500 SDG: 81500

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analysis Date: 11/22/16

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)								Preparation Blank		M
		C	1	C	2	C	3	C		C			
	13:09		13:27		15:19		16:05				15:24		
Calcium (Ca)	1000.00	U	1000.00	U	1000.00	U	1000.00	U			1000.00	U	P
Potassium (K)	3000.00	U	3000.00	U	3000.00	U	3000.00	U			3000.00	U	P
Magnesium (Mg)	500.00	U	500.00	U	500.00	U	500.00	U			500.00	U	P
Manganese (Mn)	10.00	U	10.00	U	10.00	U	10.00	U			10.00	U	P
Sodium (Na)	5000.00	U	5000.00	U	5000.00	U	5000.00	U			5000.00	U	P

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 81500 SDG: 81500

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analysis Date: 11/22/16

Analyte	Initial Calibration Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
	13:09		17:01		18:13				15:24		
Calcium (Ca)	1000.00	U	1000.00	U	1000.00	U			1000.00	U	P
Potassium (K)	3000.00	U	3000.00	U	3000.00	U			3000.00	U	P
Magnesium (Mg)	500.00	U	500.00	U	500.00	U			500.00	U	P
Manganese (Mn)	10.00	U	10.00	U	10.00	U			10.00	U	P
Sodium (Na)	5000.00	U	5000.00	U	5000.00	U			5000.00	U	P

A.P.P.L. INC.
4
ICP INTERFERENCE CHECK SAMPLE

Lab Name: A.P.P.L. INC. Contract: AECOM
ARF No.: 81500 SDG: 81500
ICP ID Number: Phoebe ICS Source: Environmental Express

Analysis Date: 11/22/16 Concentration Units: ug/L

Analyte	True		Initial Found		
	Sol A	Sol AB	Sol A 13:14	Sol AB 13:19	%R(1)
Aluminum (Al)	100000	100000	100300	98350	98.3
Calcium (Ca)	100000	100000	102400	97800	97.8
Iron (Fe)	100000	100000	96930	94190	94.2
Potassium (K)			-39.16	13.71	
Magnesium (Mg)	100000	100000	99730	95220	95.2
Manganese (Mn)		250	0.843	234.1	93.6
Sodium (Na)			-458.8	-452.6	

(1) Control Limits: Metals 80-120

A.P.P.L. INC.

LLICV Check

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No: 81500 SDG: 81500

Concentration Units: ug/L

Analysis Date: 11/22/16

Analyte	LLICV								
	True LLICV	Found 13:43	%R(1)	True	Found	%R(1)	True	Found	%R(1)
Calcium (Ca)	300	290.6	96.9						
Potassium (K)	3000	2619	87.3						
Magnesium (Mg)	150	145.4	96.9						
Sodium (Na)	3000	2766	92.2						

A.P.P.L. INC.

LLICV Check

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No: 81500 SDG: 81500

Concentration Units: ug/L

Analysis Date: 11/22/16

Analyte	LLICV								
	True LLICV	Found 13:36	%R(1)	True	Found	%R(1)	True	Found	%R(1)
Manganese (Mn)	10	8.806	88.1						

Reprocessing Begun
Logged In Analyst: chemist_metals Technique: ICP Continuous

Results Data Set (original): 161122A2007X
Results Library (original): C:\PE\chemist\RESULTS\Results.mdb
Results Data Set (reprocessed):
Results Library (reprocessed):

Sequence No.: 1 Autosampler Location: 1
Sample ID: CalBlk 161122RJS I:PB O:R Date Collected: 11/22/16 12:48:32 PM
Analyst: Data Type: Reprocessed on 11/23/16 12:14:58 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Mean Data: CalBlk 161122RJS I:PB O:R

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1034294.5	4839.27	0.47%	100.0	%
Y 371.029 Radial	971577.8	4840.73	0.50%	100.0	%
Ag 338.289†	-498.2	23.75	4.77%	[0.00]	ug/L
Al 308.215†	35.3	6.63	18.78%	[0.00]	ug/L
As 188.979†	-18.1	2.77	15.34%	[0.00]	ug/L
B†	-127.9	4.80	3.76%	[0.00]	ug/L
Ba 233.527†	74.1	10.61	14.31%	[0.00]	ug/L
Be 313.107†	-107.0	3.25	3.04%	[0.00]	ug/L
Ca 315.887†	43.2	9.13	21.14%	[0.00]	ug/L
Cd 214.440†	127.6	14.72	11.53%	[0.00]	ug/L
Co 228.616†	50.2	8.44	16.80%	[0.00]	ug/L
Cr 267.716†	243.8	16.55	6.79%	[0.00]	ug/L
Cu 327.393†	-120.0	25.18	20.98%	[0.00]	ug/L
Fe 273.955†	-115.9	16.69	14.40%	[0.00]	ug/L
K 766.490†	693.8	185.96	26.80%	[0.00]	ug/L
Mg 285.213†	-38.1	6.80	17.86%	[0.00]	ug/L
Mn 257.610†	-56.3	1.63	2.90%	[0.00]	ug/L
Mo 202.031†	24.5	0.77	3.12%	[0.00]	ug/L
Na 589.592†	-159.8	22.57	14.13%	[0.00]	ug/L
Ni 231.604†	11.0	10.23	93.24%	[0.00]	ug/L
P 213.617†	1.6	4.48	276.39%	[0.00]	ug/L
Pb 220.353†	-4.1	6.92	170.01%	[0.00]	ug/L
Sb 206.836†	-9.2	1.56	16.91%	[0.00]	ug/L
Se 196.026†	-0.6	3.64	584.37%	[0.00]	ug/L
Sn 189.927†	12.8	2.28	17.78%	[0.00]	ug/L
Sr 421.552†	552.7	25.56	4.62%	[0.00]	ug/L
Ti 337.279†	-150.2	9.62	6.40%	[0.00]	ug/L
Tl 190.801†	-4.7	0.41	8.79%	[0.00]	ug/L
V 292.402†	-389.5	93.68	24.05%	[0.00]	ug/L
Zn 206.200†	-256.7	0.75	0.29%	[0.00]	ug/L

Sequence No.: 2
Sample ID: STD 1 161122RJS I:PB O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 2
Date Collected: 11/22/16 12:52:49 PM
Data Type: Reprocessed on 11/23/16 12:15:00 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: STD 1 161122RJS I:PB O:RJ

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1045155.5	2998.79	0.29%	101.1	%
Y 371.029 Radial	982425.5	3172.45	0.32%	101.1	%
Ag 338.289†	58.7	51.51	87.72%	[0.5]	ug/L
Al 308.215†	38.6	8.22	21.29%	[50]	ug/L
As 188.979†	2.9	3.76	128.92%	[2]	ug/L
B†	1636.2	3.45	0.21%	[25]	ug/L
Ba 233.527†	217.8	21.83	10.02%	[1.5]	ug/L
Be 313.107†	326.7	2.86	0.88%	[1]	ug/L
Ca 315.887†	723.9	16.49	2.28%	[50]	ug/L
Cd 214.440†	39.4	10.78	27.39%	[0.25]	ug/L
Co 228.616†	142.2	7.12	5.01%	[2.5]	ug/L
Cr 267.716†	58.8	11.61	19.75%	[0.5]	ug/L
Cu 327.393†	373.5	39.71	10.63%	[2.5]	ug/L
Fe 273.955†	620.9	4.81	0.77%	[25]	ug/L
K 766.490†	2333.0	137.70	5.90%	[25]	ug/L
Mg 285.213†	265.3	1.21	0.46%	[25]	ug/L
Mn 257.610†	11.1	2.96	26.62%	[1]	ug/L
Mo 202.031†	14.5	4.09	28.17%	[1]	ug/L
Na 589.592†	6748.2	313.83	4.65%	[500]	ug/L
Ni 231.604†	46.7	7.01	14.99%	[1]	ug/L
P 213.617†	39.5	5.56	14.07%	[12.5]	ug/L
Pb 220.353†	20.6	9.12	44.36%	[1.5]	ug/L
Sb 206.836†	5.3	0.88	16.67%	[2]	ug/L
Se 196.026†	2.5	1.11	44.74%	[2]	ug/L
Sn 189.927†	19.7	4.17	21.16%	[3]	ug/L
Sr 421.552†	757.1	53.65	7.09%	[1]	ug/L
Ti 337.279†	69.9	5.13	7.34%	[2.5]	ug/L
Tl 190.801†	5.1	1.77	34.93%	[2]	ug/L
V 292.402†	128.7	24.24	18.83%	[0.5]	ug/L
Zn 206.200†	664.1	6.76	1.02%	[25]	ug/L

Sequence No.: 3
Sample ID: STD 2 161122RJS I:PB O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 11/22/16 12:57:07 PM
Data Type: Reprocessed on 11/23/16 12:15:02 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: STD 2 161122RJS I:PB O:RJ

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1009240.6	14335.14	1.42%	97.58	%
Y 371.029 Radial	946325.1	14460.13	1.53%	97.40	%
Ag 338.289†	16702.8	299.22	1.79%	[250]	ug/L
Al 308.215†	3751.6	136.13	3.63%	[10000]	ug/L
As 188.979†	527.4	9.28	1.76%	[500]	ug/L
B†	14587.4	440.90	3.02%	[500]	ug/L
Ba 233.527†	33210.0	750.84	2.26%	[500]	ug/L
Be 313.107†	76100.4	3077.75	4.04%	[500]	ug/L
Ca 315.887†	67523.8	2774.70	4.11%	[25000]	ug/L
Cd 214.440†	35469.4	739.01	2.08%	[500]	ug/L
Co 228.616†	12961.5	189.60	1.46%	[500]	ug/L
Cr 267.716†	25965.0	508.54	1.96%	[500]	ug/L
Cu 327.393†	36521.0	770.13	2.11%	[500]	ug/L
Fe 273.955†	115153.5	2565.28	2.23%	[10000]	ug/L
K 766.490†	21478.0	650.08	3.03%	[10000]	ug/L
Mg 285.213†	113934.4	3777.70	3.32%	[25000]	ug/L
Mn 257.610†	3987.5	168.54	4.23%	[500]	ug/L
Mo 202.031†	3998.2	85.91	2.15%	[500]	ug/L
Na 589.592†	78208.7	2963.53	3.79%	[12500]	ug/L
Ni 231.604†	10523.8	231.88	2.20%	[500]	ug/L
P 213.617†	3662.6	52.72	1.44%	[2500]	ug/L
Pb 220.353†	2243.5	46.81	2.09%	[500]	ug/L
Sb 206.836†	649.8	14.66	2.26%	[500]	ug/L
Se 196.026†	506.2	17.30	3.42%	[500]	ug/L
Sn 189.927†	1470.4	34.05	2.32%	[500]	ug/L
Sr 421.552†	182034.8	6684.67	3.67%	[500]	ug/L
Ti 337.279†	8006.7	291.01	3.63%	[500]	ug/L
Tl 190.801†	647.1	12.17	1.88%	[500]	ug/L
V 292.402†	52020.9	916.66	1.76%	[500]	ug/L
Zn 206.200†	5344.0	83.72	1.57%	[500]	ug/L

Sequence No.: 4
Sample ID: STD 3 161122RJS I:PB O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 11/22/16 1:00:33 PM
Data Type: Reprocessed on 11/23/16 12:15:03 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: STD 3 161122RJS I:PB O:RJ

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	983519.3	7379.28	0.75%	95.09	%
Y 371.029 Radial	920377.3	7492.62	0.81%	94.73	%
Ag 338.289†	33029.1	313.78	0.95%	[500]	ug/L
Al 308.215†	7615.6	9.79	0.13%	[20000]	ug/L
As 188.979†	1048.7	8.79	0.84%	[1000]	ug/L
B†	29127.4	43.43	0.15%	[1000]	ug/L
Ba 233.527†	64457.6	563.38	0.87%	[1000]	ug/L
Be 313.107†	157373.6	1099.36	0.70%	[1000]	ug/L
Ca 315.887†	138145.5	401.16	0.29%	[50000]	ug/L
Cd 214.440†	69135.0	832.21	1.20%	[1000]	ug/L
Co 228.616†	25288.8	298.95	1.18%	[1000]	ug/L
Cr 267.716†	50625.9	476.32	0.94%	[1000]	ug/L
Cu 327.393†	72036.4	471.71	0.65%	[1000]	ug/L
Fe 273.955†	223510.3	1843.25	0.82%	[20000]	ug/L
K 766.490†	45548.1	165.82	0.36%	[20000]	ug/L
Mg 285.213†	232037.5	1690.04	0.73%	[50000]	ug/L
Mn 257.610†	8099.5	60.21	0.74%	[1000]	ug/L
Mo 202.031†	7910.5	42.70	0.54%	[1000]	ug/L
Na 589.592†	161028.3	1152.22	0.72%	[25000]	ug/L
Ni 231.604†	20639.2	161.56	0.78%	[1000]	ug/L
P 213.617†	7294.9	36.95	0.51%	[5000]	ug/L
Pb 220.353†	4363.0	34.04	0.78%	[1000]	ug/L
Sb 206.836†	1284.0	9.76	0.76%	[1000]	ug/L
Se 196.026†	1002.7	0.64	0.06%	[1000]	ug/L
Sn 189.927†	2895.9	25.15	0.87%	[1000]	ug/L
Sr 421.552†	374314.7	2882.35	0.77%	[1000]	ug/L
Ti 337.279†	16480.0	82.85	0.50%	[1000]	ug/L
Tl 190.801†	1268.6	12.46	0.98%	[1000]	ug/L
V 292.402†	101823.4	788.33	0.77%	[1000]	ug/L
Zn 206.200†	10492.6	67.51	0.64%	[1000]	ug/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 338.289	3	Lin Thru 0	0.0	66.21	0.00000	0.999989	
Al 308.215	3	Lin Thru 0	0.0	0.3797	0.00000	0.999980	
As 188.979	3	Lin Thru 0	0.0	1.050	0.00000	0.999997	
B	3	Lin Thru 0	0.0	29.15	0.00000	0.999613	
Ba 233.527	3	Lin Thru 0	0.0	64.85	0.00000	0.999925	
Be 313.107	3	Lin Thru 0	0.0	156.3	0.00000	0.999912	
Ca 315.887	3	Lin Thru 0	0.0	2.751	0.00000	0.999952	
Cd 214.440	3	Lin Thru 0	0.0	69.50	0.00000	0.999946	
Co 228.616	3	Lin Thru 0	0.0	25.42	0.00000	0.999946	
Cr 267.716	3	Lin Thru 0	0.0	50.89	0.00000	0.999947	
Cu 327.393	3	Lin Thru 0	0.0	72.24	0.00000	0.999982	
Fe 273.955	3	Lin Thru 0	0.0	11.24	0.00000	0.999926	
K 766.490	3	Lin Thru 0	0.0	2.252	0.00000	0.998715	
Mg 285.213	3	Lin Thru 0	0.0	4.624	0.00000	0.999974	
Mn 257.610	3	Lin Thru 0	0.0	8.075	0.00000	0.999981	
Mo 202.031	3	Lin Thru 0	0.0	7.928	0.00000	0.999990	
Na 589.592	3	Lin Thru 0	0.0	6.407	0.00000	0.999738	
Ni 231.604	3	Lin Thru 0	0.0	20.72	0.00000	0.999968	
P 213.617	3	Lin Thru 0	0.0	1.460	0.00000	0.999995	
Pb 220.353	3	Lin Thru 0	0.0	4.388	0.00000	0.999932	
Sb 206.836	3	Lin Thru 0	0.0	1.287	0.00000	0.999986	
Se 196.026	3	Lin Thru 0	0.0	1.005	0.00000	0.999993	
Sn 189.927	3	Lin Thru 0	0.0	2.905	0.00000	0.999975	
Sr 421.552	3	Lin Thru 0	0.0	372.3	0.00000	0.999939	

Ti 337.279	3	Lin Thru 0	0.0	16.39	0.00000	0.999934
Tl 190.801	3	Lin Thru 0	0.0	1.274	0.00000	0.999966
V 292.402	3	Lin Thru 0	0.0	102.3	0.00000	0.999962
Zn 206.200	3	Lin Thru 0	0.0	10.54	0.00000	0.999395

Sequence No.: 5
Sample ID: ICV 161122RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 11/22/16 1:03:52 PM
Data Type: Reprocessed on 11/23/16 12:15:05 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICV 161122RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1026741.9	99.27	%	0.465				0.47%
Y 371.029 Radial	964143.6	99.23	%	0.505				0.51%
Ag 338.289†	17120.8	258.6	ug/L	2.17	258.6	ug/L	2.17	0.84%
QC value within limits for Ag 338.289 Recovery = 103.44%								
Al 308.215†	4780.2	12600	ug/L	267.0	12600	ug/L	267.0	2.12%
QC value within limits for Al 308.215 Recovery = 100.78%								
As 188.979†	528.1	506.5	ug/L	6.59	506.5	ug/L	6.59	1.30%
QC value within limits for As 188.979 Recovery = 101.30%								
B†	14994.5	514.3	ug/L	14.06	514.3	ug/L	14.06	2.73%
QC value within limits for B Recovery = 102.86%								
Ba 233.527†	33582.7	516.6	ug/L	5.37	516.6	ug/L	5.37	1.04%
QC value within limits for Ba 233.527 Recovery = 103.33%								
Be 313.107†	79541.2	508.8	ug/L	4.67	508.8	ug/L	4.67	0.92%
QC value within limits for Be 313.107 Recovery = 101.75%								
Ca 315.887†	35235.0	12810	ug/L	269.9	12810	ug/L	269.9	2.11%
QC value within limits for Ca 315.887 Recovery = 102.45%								
Cd 214.440†	35867.8	515.9	ug/L	5.48	515.9	ug/L	5.48	1.06%
QC value within limits for Cd 214.440 Recovery = 103.17%								
Co 228.616†	13252.1	519.8	ug/L	6.08	519.8	ug/L	6.08	1.17%
QC value within limits for Co 228.616 Recovery = 103.96%								
Cr 267.716†	26125.1	512.3	ug/L	7.34	512.3	ug/L	7.34	1.43%
QC value within limits for Cr 267.716 Recovery = 102.47%								
Cu 327.393†	36834.8	510.6	ug/L	7.63	510.6	ug/L	7.63	1.49%
QC value within limits for Cu 327.393 Recovery = 102.13%								
Fe 273.955†	145005.1	12850	ug/L	69.1	12850	ug/L	69.1	0.54%
QC value within limits for Fe 273.955 Recovery = 102.81%								
K 766.490†	27454.5	12180	ug/L	179.9	12180	ug/L	179.9	1.48%
QC value within limits for K 766.490 Recovery = 97.46%								
Mg 285.213†	60412.7	13080	ug/L	266.9	13080	ug/L	266.9	2.04%
QC value within limits for Mg 285.213 Recovery = 104.62%								
Mn 257.610†	4113.2	509.8	ug/L	7.59	509.8	ug/L	7.59	1.49%
QC value within limits for Mn 257.610 Recovery = 101.97%								
Mo 202.031†	4012.0	506.3	ug/L	4.53	506.3	ug/L	4.53	0.89%
QC value within limits for Mo 202.031 Recovery = 101.26%								
Na 589.592†	80044.7	12430	ug/L	156.0	12430	ug/L	156.0	1.26%
QC value within limits for Na 589.592 Recovery = 99.43%								
Ni 231.604†	10821.4	519.2	ug/L	6.61	519.2	ug/L	6.61	1.27%
QC value within limits for Ni 231.604 Recovery = 103.84%								
P 213.617†	3730.3	2555	ug/L	19.6	2555	ug/L	19.6	0.77%
QC value within limits for P 213.617 Recovery = 102.19%								
Pb 220.353†	2265.2	518.7	ug/L	5.54	518.7	ug/L	5.54	1.07%
QC value within limits for Pb 220.353 Recovery = 103.75%								
Sb 206.836†	656.6	510.1	ug/L	5.92	510.1	ug/L	5.92	1.16%
QC value within limits for Sb 206.836 Recovery = 102.02%								
Se 196.026†	513.9	511.6	ug/L	16.41	511.6	ug/L	16.41	3.21%
QC value within limits for Se 196.026 Recovery = 102.31%								
Sn 189.927†	856.7	298.7	ug/L	3.82	298.7	ug/L	3.82	1.28%
QC value greater than the upper limit for Sn 189.927 Recovery = 119.47%								
Sr 421.552†	187084.3	502.4	ug/L	3.89	502.4	ug/L	3.89	0.77%
QC value within limits for Sr 421.552 Recovery = 100.48%								
Ti 337.279†	8561.3	522.2	ug/L	10.45	522.2	ug/L	10.45	2.00%
QC value within limits for Ti 337.279 Recovery = 104.43%								
Tl 190.801†	672.9	528.3	ug/L	5.46	528.3	ug/L	5.46	1.03%
QC value within limits for Tl 190.801 Recovery = 105.66%								
V 292.402†	52417.1	520.2	ug/L	8.00	520.2	ug/L	8.00	1.54%
QC value within limits for V 292.402 Recovery = 104.04%								
Zn 206.200†	5590.4	532.7	ug/L	5.25	532.7	ug/L	5.25	0.99%
QC value within limits for Zn 206.200 Recovery = 106.54%								

QC Failed. Continue with analysis.

Sequence No.: 6
Sample ID: ICB 161122RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 11/22/16 1:09:27 PM
Data Type: Reprocessed on 11/23/16 12:15:06 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICB 161122RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1048926.0	101.4	%	0.53				0.52%
Y 371.029 Radial	986739.9	101.6	%	0.58				0.57%
Ag 338.289†	5.4	0.081	ug/L	0.8061	0.081	ug/L	0.8061	994.57%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	-7.4	-19.65	ug/L	28.248	-19.65	ug/L	28.248	143.76%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	4.0	3.796	ug/L	3.7740	3.796	ug/L	3.7740	99.41%
QC value within limits for As 188.979 Recovery = Not calculated								
B†	69.0	2.367	ug/L	0.2586	2.367	ug/L	0.2586	10.92%
QC value within limits for B Recovery = Not calculated								
Ba 233.527†	1.7	0.026	ug/L	0.1006	0.026	ug/L	0.1006	393.51%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	2.5	0.016	ug/L	0.0099	0.016	ug/L	0.0099	62.68%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	-2.0	-0.717	ug/L	2.8377	-0.717	ug/L	2.8377	395.95%
QC value within limits for Ca 315.887 Recovery = Not calculated								
Cd 214.440†	20.1	0.290	ug/L	0.1510	0.290	ug/L	0.1510	52.10%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	-1.9	-0.070	ug/L	0.3264	-0.070	ug/L	0.3264	468.45%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	-1.0	-0.019	ug/L	0.1672	-0.019	ug/L	0.1672	875.72%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	-16.4	-0.228	ug/L	0.7334	-0.228	ug/L	0.7334	321.59%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	-8.5	-0.733	ug/L	1.4278	-0.733	ug/L	1.4278	194.73%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	109.0	48.42	ug/L	62.768	48.42	ug/L	62.768	129.63%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	1.1	0.228	ug/L	1.5053	0.228	ug/L	1.5053	659.43%
QC value within limits for Mg 285.213 Recovery = Not calculated								
Mn 257.610†	-6.7	-0.832	ug/L	0.1747	-0.832	ug/L	0.1747	20.98%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	8.9	1.127	ug/L	0.5031	1.127	ug/L	0.5031	44.63%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	-57.5	-9.003	ug/L	7.0615	-9.003	ug/L	7.0615	78.43%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	1.8	0.083	ug/L	0.2735	0.083	ug/L	0.2735	331.56%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	0.0	0.015	ug/L	3.6167	0.015	ug/L	3.6167	>999.9%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	15.4	3.516	ug/L	2.6502	3.516	ug/L	2.6502	75.37%
QC value greater than the upper limit for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	-1.6	-1.272	ug/L	1.8794	-1.272	ug/L	1.8794	147.70%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	0.1	0.109	ug/L	5.1508	0.109	ug/L	5.1508	>999.9%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	-0.3	-0.104	ug/L	0.1221	-0.104	ug/L	0.1221	117.89%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	23.8	0.064	ug/L	0.0820	0.064	ug/L	0.0820	128.39%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	-12.5	-0.766	ug/L	0.1582	-0.766	ug/L	0.1582	20.67%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	3.9	3.031	ug/L	1.1821	3.031	ug/L	1.1821	39.00%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	-28.2	-0.260	ug/L	0.6211	-0.260	ug/L	0.6211	238.71%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	8.0	0.763	ug/L	0.3635	0.763	ug/L	0.3635	47.67%
QC value within limits for Zn 206.200 Recovery = Not calculated								

QC Failed. Continue with analysis.

Sequence No.: 7
Sample ID: ICSA 161122RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 11/22/16 1:14:14 PM
Data Type: Reprocessed on 11/23/16 12:15:07 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICSA 161122RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	983090.8	95.05	%	0.883				0.93%
Y 371.029 Radial	919369.3	94.63	%	0.975				1.03%
Ag 338.289†	-16.4	-0.248	ug/L	0.6408	-0.248	ug/L	0.6408	258.26%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	38076.0	100300	ug/L	3480.5	100300	ug/L	3480.5	3.47%
QC value within limits for Al 308.215 Recovery = 100.27%								
As 188.979†	-14.5	3.200	ug/L	5.7732	3.200	ug/L	5.7732	180.44%
QC value within limits for As 188.979 Recovery = Not calculated								
B†	-410.4	-14.08	ug/L	0.802	-14.08	ug/L	0.802	5.69%
QC value within limits for B Recovery = Not calculated								
Ba 233.527†	824.5	0.847	ug/L	0.6408	0.847	ug/L	0.6408	75.64%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-4.4	-0.028	ug/L	0.0162	-0.028	ug/L	0.0162	58.01%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	281713.9	102400	ug/L	3480.9	102400	ug/L	3480.9	3.40%
QC value within limits for Ca 315.887 Recovery = 102.41%								
Cd 214.440†	369.1	0.617	ug/L	0.3478	0.617	ug/L	0.3478	56.41%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	81.9	-0.990	ug/L	0.7212	-0.990	ug/L	0.7212	72.81%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	-61.7	-1.987	ug/L	0.1858	-1.987	ug/L	0.1858	9.35%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	-551.9	-1.920	ug/L	1.8356	-1.920	ug/L	1.8356	95.61%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	1090058.3	96930	ug/L	102.0	96930	ug/L	102.0	0.11%
QC value within limits for Fe 273.955 Recovery = 96.93%								
K 766.490†	78.6	-39.16	ug/L	25.448	-39.16	ug/L	25.448	64.99%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	460608.4	99730	ug/L	3478.4	99730	ug/L	3478.4	3.49%
QC value within limits for Mg 285.213 Recovery = 99.73%								
Mn 257.610†	-17.2	0.843	ug/L	0.3599	0.843	ug/L	0.3599	42.69%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	-52.4	-2.142	ug/L	0.3300	-2.142	ug/L	0.3300	15.41%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	-28.9	-458.8	ug/L	12.38	-458.8	ug/L	12.38	2.70%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	-65.0	-0.300	ug/L	0.9409	-0.300	ug/L	0.9409	313.24%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	1.6	1.115	ug/L	1.7429	1.115	ug/L	1.7429	156.27%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	-55.3	0.324	ug/L	3.2548	0.324	ug/L	3.2548	>999.9%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	0.5	0.385	ug/L	2.8540	0.385	ug/L	2.8540	741.17%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	-7.2	-7.146	ug/L	3.2854	-7.146	ug/L	3.2854	45.98%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	-49.8	-13.31	ug/L	1.781	-13.31	ug/L	1.781	13.38%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	277.9	-0.312	ug/L	0.0640	-0.312	ug/L	0.0640	20.52%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	1.1	-1.969	ug/L	0.9326	-1.969	ug/L	0.9326	47.38%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	3.5	2.769	ug/L	0.1482	2.769	ug/L	0.1482	5.35%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	2065.6	-1.216	ug/L	1.0386	-1.216	ug/L	1.0386	85.45%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	-15.3	-0.242	ug/L	0.1718	-0.242	ug/L	0.1718	71.08%
QC value within limits for Zn 206.200 Recovery = Not calculated								

All analyte(s) passed QC.

Sequence No.: 8
Sample ID: ICSAB 161122RJS I:PB O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 11/22/16 1:19:34 PM
Data Type: Reprocessed on 11/23/16 12:15:08 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICSAB 161122RJS I:PB O:RJ

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	979409.5	94.69	%	0.343				0.36%
Y 371.029 Radial	915478.5	94.23	%	0.389				0.41%
Ag 338.289†	32628.7	492.8	ug/L	6.02	492.8	ug/L	6.02	1.22%
QC value within limits for Ag 338.289 Recovery = 98.56%								
Al 308.215†	37345.5	98350	ug/L	1233.8	98350	ug/L	1233.8	1.25%
QC value within limits for Al 308.215 Recovery = 98.35%								
As 188.979†	222.7	227.6	ug/L	8.33	227.6	ug/L	8.33	3.66%
QC value within limits for As 188.979 Recovery = 91.03%								
B†	-393.3	-13.49	ug/L	1.093	-13.49	ug/L	1.093	8.10%
QC value within limits for B Recovery = Not calculated								
Ba 233.527†	16167.6	237.9	ug/L	2.02	237.9	ug/L	2.02	0.85%
QC value within limits for Ba 233.527 Recovery = 95.18%								
Be 313.107†	37160.3	237.7	ug/L	4.92	237.7	ug/L	4.92	2.07%
QC value within limits for Be 313.107 Recovery = 95.08%								
Ca 315.887†	269020.9	97800	ug/L	3112.0	97800	ug/L	3112.0	3.18%
QC value within limits for Ca 315.887 Recovery = 97.80%								
Cd 214.440†	32846.0	468.2	ug/L	4.25	468.2	ug/L	4.25	0.91%
QC value within limits for Cd 214.440 Recovery = 93.64%								
Co 228.616†	6279.1	242.9	ug/L	1.18	242.9	ug/L	1.18	0.48%
QC value within limits for Co 228.616 Recovery = 97.16%								
Cr 267.716†	11937.9	233.4	ug/L	2.28	233.4	ug/L	2.28	0.98%
QC value within limits for Cr 267.716 Recovery = 93.35%								
Cu 327.393†	17213.8	243.2	ug/L	2.63	243.2	ug/L	2.63	1.08%
QC value within limits for Cu 327.393 Recovery = 97.28%								
Fe 273.955†	1059484.7	94190	ug/L	823.8	94190	ug/L	823.8	0.87%
QC value within limits for Fe 273.955 Recovery = 94.19%								
K 766.490†	195.2	13.71	ug/L	72.985	13.71	ug/L	72.985	532.45%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	439777.0	95220	ug/L	2978.2	95220	ug/L	2978.2	3.13%
QC value within limits for Mg 285.213 Recovery = 95.22%								
Mn 257.610†	1866.1	234.1	ug/L	5.11	234.1	ug/L	5.11	2.18%
QC value within limits for Mn 257.610 Recovery = 93.64%								
Mo 202.031†	1811.6	232.8	ug/L	1.33	232.8	ug/L	1.33	0.57%
QC value within limits for Mo 202.031 Recovery = 93.12%								
Na 589.592†	-69.9	-452.6	ug/L	10.22	-452.6	ug/L	10.22	2.26%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	9953.8	481.7	ug/L	1.81	481.7	ug/L	1.81	0.38%
QC value within limits for Ni 231.604 Recovery = 96.34%								
P 213.617†	-27.9	-19.08	ug/L	2.119	-19.08	ug/L	2.119	11.11%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	2044.1	479.2	ug/L	4.15	479.2	ug/L	4.15	0.87%
QC value within limits for Pb 220.353 Recovery = 95.84%								
Sb 206.836†	299.8	232.9	ug/L	1.89	232.9	ug/L	1.89	0.81%
QC value within limits for Sb 206.836 Recovery = 93.17%								
Se 196.026†	224.2	223.1	ug/L	6.79	223.1	ug/L	6.79	3.04%
QC value within limits for Se 196.026 Recovery = 89.25%								
Sn 189.927†	-45.5	-11.97	ug/L	1.555	-11.97	ug/L	1.555	12.99%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	210.2	-0.449	ug/L	0.1171	-0.449	ug/L	0.1171	26.10%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	-9.1	-2.509	ug/L	4.8246	-2.509	ug/L	4.8246	192.30%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	310.6	243.8	ug/L	1.48	243.8	ug/L	1.48	0.61%
QC value within limits for Tl 190.801 Recovery = 97.54%								
V 292.402†	26117.9	239.6	ug/L	1.87	239.6	ug/L	1.87	0.78%
QC value within limits for V 292.402 Recovery = 95.83%								
Zn 206.200†	5026.1	479.0	ug/L	1.69	479.0	ug/L	1.69	0.35%
QC value within limits for Zn 206.200 Recovery = 95.80%								

All analyte(s) passed QC.

Sequence No.: 9
Sample ID: CCV1 161122RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 11/22/16 1:23:50 PM
Data Type: Reprocessed on 11/23/16 12:15:09 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCV1 161122RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1019149.1	98.54	%	1.741				1.77%
Y 371.029 Radial	955527.6	98.35	%	1.845				1.88%
Ag 338.289†	16521.1	249.5	ug/L	7.87	249.5	ug/L	7.87	3.15%
QC value within limits for Ag 338.289 Recovery = 99.81%								
Al 308.215†	3694.0	9735	ug/L	468.5	9735	ug/L	468.5	4.81%
QC value within limits for Al 308.215 Recovery = 97.35%								
As 188.979†	528.6	506.0	ug/L	9.04	506.0	ug/L	9.04	1.79%
QC value within limits for As 188.979 Recovery = 101.19%								
B†	14440.2	495.3	ug/L	22.57	495.3	ug/L	22.57	4.56%
QC value within limits for B Recovery = 99.06%								
Ba 233.527†	33198.4	511.0	ug/L	17.58	511.0	ug/L	17.58	3.44%
QC value within limits for Ba 233.527 Recovery = 102.20%								
Be 313.107†	75017.8	479.8	ug/L	15.38	479.8	ug/L	15.38	3.21%
QC value within limits for Be 313.107 Recovery = 95.97%								
Ca 315.887†	67159.7	24410	ug/L	1155.8	24410	ug/L	1155.8	4.73%
QC value within limits for Ca 315.887 Recovery = 97.65%								
Cd 214.440†	35548.4	511.4	ug/L	17.55	511.4	ug/L	17.55	3.43%
QC value within limits for Cd 214.440 Recovery = 102.28%								
Co 228.616†	12879.9	505.3	ug/L	14.17	505.3	ug/L	14.17	2.80%
QC value within limits for Co 228.616 Recovery = 101.06%								
Cr 267.716†	25996.0	509.8	ug/L	17.88	509.8	ug/L	17.88	3.51%
QC value within limits for Cr 267.716 Recovery = 101.95%								
Cu 327.393†	36181.0	501.0	ug/L	16.36	501.0	ug/L	16.36	3.26%
QC value within limits for Cu 327.393 Recovery = 100.21%								
Fe 273.955†	115230.3	10200	ug/L	335.7	10200	ug/L	335.7	3.29%
QC value within limits for Fe 273.955 Recovery = 102.01%								
K 766.490†	21192.7	9399	ug/L	399.5	9399	ug/L	399.5	4.25%
QC value within limits for K 766.490 Recovery = 93.99%								
Mg 285.213†	113069.3	24460	ug/L	780.0	24460	ug/L	780.0	3.19%
QC value within limits for Mg 285.213 Recovery = 97.85%								
Mn 257.610†	3947.7	488.7	ug/L	23.68	488.7	ug/L	23.68	4.85%
QC value within limits for Mn 257.610 Recovery = 97.73%								
Mo 202.031†	3994.1	503.9	ug/L	10.67	503.9	ug/L	10.67	2.12%
QC value within limits for Mo 202.031 Recovery = 100.78%								
Na 589.592†	77157.0	12000	ug/L	486.1	12000	ug/L	486.1	4.05%
QC value within limits for Na 589.592 Recovery = 95.99%								
Ni 231.604†	10475.2	502.4	ug/L	17.91	502.4	ug/L	17.91	3.57%
QC value within limits for Ni 231.604 Recovery = 100.49%								
P 213.617†	3649.8	2500	ug/L	50.4	2500	ug/L	50.4	2.02%
QC value within limits for P 213.617 Recovery = 99.98%								
Pb 220.353†	2237.5	511.8	ug/L	9.45	511.8	ug/L	9.45	1.85%
QC value within limits for Pb 220.353 Recovery = 102.35%								
Sb 206.836†	649.8	504.9	ug/L	7.90	504.9	ug/L	7.90	1.56%
QC value within limits for Sb 206.836 Recovery = 100.97%								
Se 196.026†	502.5	500.2	ug/L	13.35	500.2	ug/L	13.35	2.67%
QC value within limits for Se 196.026 Recovery = 100.04%								
Sn 189.927†	1470.7	510.2	ug/L	10.45	510.2	ug/L	10.45	2.05%
QC value within limits for Sn 189.927 Recovery = 102.05%								
Sr 421.552†	179732.7	482.6	ug/L	16.73	482.6	ug/L	16.73	3.47%
QC value within limits for Sr 421.552 Recovery = 96.51%								
Ti 337.279†	7927.2	483.3	ug/L	25.03	483.3	ug/L	25.03	5.18%
QC value within limits for Ti 337.279 Recovery = 96.67%								
Tl 190.801†	639.7	502.3	ug/L	10.48	502.3	ug/L	10.48	2.09%
QC value within limits for Tl 190.801 Recovery = 100.45%								
V 292.402†	52170.6	518.4	ug/L	16.05	518.4	ug/L	16.05	3.10%
QC value within limits for V 292.402 Recovery = 103.67%								
Zn 206.200†	5368.6	511.5	ug/L	8.26	511.5	ug/L	8.26	1.62%
QC value within limits for Zn 206.200 Recovery = 102.29%								

All analyte(s) passed QC.

Sequence No.: 10
Sample ID: CCB 161122RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 11/22/16 1:27:14 PM
Data Type: Reprocessed on 11/23/16 12:15:10 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCB 161122RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1066799.1	103.1	%	0.63				0.61%
Y 371.029 Radial	1003805.1	103.3	%	0.64				0.62%
Ag 338.289†	16.7	0.253	ug/L	1.0886	0.253	ug/L	1.0886	430.85%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	-3.5	-9.388	ug/L	27.1651	-9.388	ug/L	27.1651	289.35%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	4.5	4.260	ug/L	1.3946	4.260	ug/L	1.3946	32.73%
QC value greater than the upper limit for As 188.979 Recovery = Not calculated								
B†	97.9	3.357	ug/L	0.5740	3.357	ug/L	0.5740	17.10%
QC value within limits for B Recovery = Not calculated								
Ba 233.527†	-2.0	-0.031	ug/L	0.1383	-0.031	ug/L	0.1383	443.32%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	3.0	0.019	ug/L	0.0247	0.019	ug/L	0.0247	129.21%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	6.6	2.402	ug/L	4.5855	2.402	ug/L	4.5855	190.87%
QC value within limits for Ca 315.887 Recovery = Not calculated								
Cd 214.440†	22.6	0.325	ug/L	0.0524	0.325	ug/L	0.0524	16.14%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	-2.3	-0.087	ug/L	0.6560	-0.087	ug/L	0.6560	754.09%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	-13.9	-0.275	ug/L	0.2775	-0.275	ug/L	0.2775	100.75%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	12.2	0.169	ug/L	1.6315	0.169	ug/L	1.6315	965.61%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	0.5	0.088	ug/L	0.4658	0.088	ug/L	0.4658	527.67%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	169.4	75.21	ug/L	108.132	75.21	ug/L	108.132	143.77%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	11.8	2.550	ug/L	1.5602	2.550	ug/L	1.5602	61.17%
QC value within limits for Mg 285.213 Recovery = Not calculated								
Mn 257.610†	-3.8	-0.475	ug/L	0.9223	-0.475	ug/L	0.9223	194.36%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	8.5	1.076	ug/L	0.4186	1.076	ug/L	0.4186	38.90%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	-11.6	-1.839	ug/L	9.0761	-1.839	ug/L	9.0761	493.43%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	3.1	0.141	ug/L	0.3033	0.141	ug/L	0.3033	214.40%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	2.1	1.446	ug/L	0.5766	1.446	ug/L	0.5766	39.89%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	3.1	0.710	ug/L	4.1307	0.710	ug/L	4.1307	582.01%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	1.1	0.838	ug/L	1.0599	0.838	ug/L	1.0599	126.46%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	2.6	2.568	ug/L	7.1541	2.568	ug/L	7.1541	278.55%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	1.3	0.460	ug/L	0.0487	0.460	ug/L	0.0487	10.60%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	-62.9	-0.169	ug/L	0.1643	-0.169	ug/L	0.1643	97.31%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	4.8	0.292	ug/L	0.4140	0.292	ug/L	0.4140	141.91%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	4.5	3.529	ug/L	1.3491	3.529	ug/L	1.3491	38.22%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	-46.7	-0.444	ug/L	0.6808	-0.444	ug/L	0.6808	153.20%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	12.9	1.228	ug/L	0.5482	1.228	ug/L	0.5482	44.64%
QC value within limits for Zn 206.200 Recovery = Not calculated								

QC Failed. Continue with analysis.

Sequence No.: 12
Sample ID: LLICV 161122RJS I:PB O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 2
Date Collected: 11/22/16 1:36:45 PM
Data Type: Reprocessed on 11/23/16 12:15:13 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: LLICV 161122RJS I:PB O:RJ

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1055360.4	102.0	%	0.81				0.80%
Y 371.029 Radial	992551.0	102.2	%	0.85				0.83%
Ag 338.289†	136.3	2.059	ug/L	0.5678	2.059	ug/L	0.5678	27.58%
QC value less than the lower limit for Ag 338.289 Recovery = 68.62%								
Al 308.215†	76.6	201.6	ug/L	7.63	201.6	ug/L	7.63	3.78%
QC value less than the lower limit for Al 308.215 Recovery = 67.19%								
As 188.979†	8.4	8.089	ug/L	5.5264	8.089	ug/L	5.5264	68.32%
QC value less than the lower limit for As 188.979 Recovery = 77.04%								
B†	2969.3	101.8	ug/L	0.69	101.8	ug/L	0.69	0.68%
QC value less than the lower limit for B Recovery = 67.90%								
Ba 233.527†	683.3	10.53	ug/L	0.167	10.53	ug/L	0.167	1.59%
QC value less than the lower limit for Ba 233.527 Recovery = 70.18%								
Be 313.107†	616.8	3.945	ug/L	0.0237	3.945	ug/L	0.0237	0.60%
QC value less than the lower limit for Be 313.107 Recovery = 65.75%								
Ca 315.887†	582.5	211.6	ug/L	7.69	211.6	ug/L	7.69	3.63%
QC value less than the lower limit for Ca 315.887 Recovery = 70.53%								
Cd 214.440†	748.7	10.78	ug/L	0.106	10.78	ug/L	0.106	0.98%
QC value less than the lower limit for Cd 214.440 Recovery = 71.83%								
Co 228.616†	287.9	11.30	ug/L	0.169	11.30	ug/L	0.169	1.50%
QC value less than the lower limit for Co 228.616 Recovery = 75.30%								
Cr 267.716†	514.7	10.09	ug/L	0.172	10.09	ug/L	0.172	1.70%
QC value less than the lower limit for Cr 267.716 Recovery = 67.25%								
Cu 327.393†	704.1	9.716	ug/L	0.2691	9.716	ug/L	0.2691	2.77%
QC value less than the lower limit for Cu 327.393 Recovery = 64.77%								
Fe 273.955†	1192.6	105.3	ug/L	1.38	105.3	ug/L	1.38	1.31%
QC value less than the lower limit for Fe 273.955 Recovery = 70.18%								
K 766.490†	4513.4	2004	ug/L	128.8	2004	ug/L	128.8	6.43%
QC value less than the lower limit for K 766.490 Recovery = 66.82%								
Mg 285.213†	489.0	105.4	ug/L	1.88	105.4	ug/L	1.88	1.78%
QC value less than the lower limit for Mg 285.213 Recovery = 70.27%								
Mn 257.610†	71.1	8.806	ug/L	0.6795	8.806	ug/L	0.6795	7.72%
QC value less than the lower limit for Mn 257.610 Recovery = 58.70%								
Mo 202.031†	75.7	9.506	ug/L	0.8079	9.506	ug/L	0.8079	8.50%
QC value less than the lower limit for Mo 202.031 Recovery = 63.37%								
Na 589.592†	12826.0	2001	ug/L	67.0	2001	ug/L	67.0	3.35%
QC value less than the lower limit for Na 589.592 Recovery = 66.69%								
Ni 231.604†	237.4	11.37	ug/L	0.307	11.37	ug/L	0.307	2.70%
QC value less than the lower limit for Ni 231.604 Recovery = 75.78%								
P 213.617†	68.0	46.59	ug/L	1.769	46.59	ug/L	1.769	3.80%
QC value less than the lower limit for P 213.617 Recovery = 62.12%								
Pb 220.353†	40.0	9.152	ug/L	2.2020	9.152	ug/L	2.2020	24.06%
QC value within limits for Pb 220.353 Recovery = 101.69%								
Sb 206.836†	11.4	8.823	ug/L	0.2388	8.823	ug/L	0.2388	2.71%
QC value less than the lower limit for Sb 206.836 Recovery = 58.82%								
Se 196.026†	17.5	17.45	ug/L	3.045	17.45	ug/L	3.045	17.45%
QC value within limits for Se 196.026 Recovery = 116.35%								
Sn 189.927†	23.0	7.988	ug/L	0.4584	7.988	ug/L	0.4584	5.74%
QC value less than the lower limit for Sn 189.927 Recovery = 53.25%								
Sr 421.552†	3823.3	10.27	ug/L	0.191	10.27	ug/L	0.191	1.86%
QC value less than the lower limit for Sr 421.552 Recovery = 68.45%								
Ti 337.279†	156.2	9.522	ug/L	0.2261	9.522	ug/L	0.2261	2.37%
QC value less than the lower limit for Ti 337.279 Recovery = 63.48%								
Tl 190.801†	14.8	11.61	ug/L	0.377	11.61	ug/L	0.377	3.25%
QC value less than the lower limit for Tl 190.801 Recovery = 77.38%								
V 292.402†	958.9	9.556	ug/L	0.5583	9.556	ug/L	0.5583	5.84%
QC value less than the lower limit for V 292.402 Recovery = 63.71%								
Zn 206.200†	456.7	43.39	ug/L	0.203	43.39	ug/L	0.203	0.47%
QC value less than the lower limit for Zn 206.200 Recovery = 72.32%								

QC Failed. Continue with analysis.

Sequence No.: 13
Sample ID: LLICV 161122RJS I:PB O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 2
Date Collected: 11/22/16 1:43:31 PM
Data Type: Reprocessed on 11/23/16 12:15:14 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: LLICV 161122RJS I:PB O:RJ

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1065688.3	103.0	%	1.17				1.13%
Y 371.029 Radial	1002838.6	103.2	%	1.20				1.17%
Ag 338.289†	222.6	3.363	ug/L	0.6243	3.363	ug/L	0.6243	18.57%
QC value within limits for Ag 338.289 Recovery = 112.08%								
Al 308.215†	110.2	290.3	ug/L	24.35	290.3	ug/L	24.35	8.39%
QC value within limits for Al 308.215 Recovery = 96.78%								
As 188.979†	6.8	6.575	ug/L	2.5654	6.575	ug/L	2.5654	39.01%
QC value less than the lower limit for As 188.979 Recovery = 62.62%								
B†	3872.9	132.8	ug/L	4.95	132.8	ug/L	4.95	3.72%
QC value within limits for B Recovery = 88.56%								
Ba 233.527†	953.7	14.70	ug/L	0.133	14.70	ug/L	0.133	0.90%
QC value within limits for Ba 233.527 Recovery = 97.97%								
Be 313.107†	863.6	5.524	ug/L	0.0941	5.524	ug/L	0.0941	1.70%
QC value within limits for Be 313.107 Recovery = 92.07%								
Ca 315.887†	799.9	290.6	ug/L	3.81	290.6	ug/L	3.81	1.31%
QC value within limits for Ca 315.887 Recovery = 96.85%								
Cd 214.440†	1047.5	15.08	ug/L	0.218	15.08	ug/L	0.218	1.44%
QC value within limits for Cd 214.440 Recovery = 100.50%								
Co 228.616†	383.9	15.06	ug/L	0.464	15.06	ug/L	0.464	3.08%
QC value within limits for Co 228.616 Recovery = 100.39%								
Cr 267.716†	740.5	14.51	ug/L	0.266	14.51	ug/L	0.266	1.83%
QC value within limits for Cr 267.716 Recovery = 96.76%								
Cu 327.393†	1064.2	14.69	ug/L	0.958	14.69	ug/L	0.958	6.52%
QC value within limits for Cu 327.393 Recovery = 97.94%								
Fe 273.955†	1637.0	144.4	ug/L	0.27	144.4	ug/L	0.27	0.19%
QC value within limits for Fe 273.955 Recovery = 96.28%								
K 766.490†	5897.1	2619	ug/L	158.1	2619	ug/L	158.1	6.04%
QC value within limits for K 766.490 Recovery = 87.30%								
Mg 285.213†	674.5	145.4	ug/L	3.16	145.4	ug/L	3.16	2.18%
QC value within limits for Mg 285.213 Recovery = 96.93%								
Mn 257.610†	111.6	13.82	ug/L	0.424	13.82	ug/L	0.424	3.07%
QC value within limits for Mn 257.610 Recovery = 92.15%								
Mo 202.031†	104.1	13.08	ug/L	0.740	13.08	ug/L	0.740	5.65%
QC value within limits for Mo 202.031 Recovery = 87.21%								
Na 589.592†	17734.5	2766	ug/L	137.7	2766	ug/L	137.7	4.98%
QC value within limits for Na 589.592 Recovery = 92.22%								
Ni 231.604†	316.3	15.14	ug/L	0.470	15.14	ug/L	0.470	3.10%
QC value within limits for Ni 231.604 Recovery = 100.95%								
P 213.617†	94.6	64.79	ug/L	5.465	64.79	ug/L	5.465	8.44%
QC value within limits for P 213.617 Recovery = 86.38%								
Pb 220.353†	35.1	8.060	ug/L	2.1229	8.060	ug/L	2.1229	26.34%
QC value within limits for Pb 220.353 Recovery = 89.56%								
Sb 206.836†	16.6	12.93	ug/L	1.735	12.93	ug/L	1.735	13.42%
QC value within limits for Sb 206.836 Recovery = 86.17%								
Se 196.026†	15.2	15.15	ug/L	0.187	15.15	ug/L	0.187	1.24%
QC value within limits for Se 196.026 Recovery = 101.02%								
Sn 189.927†	43.7	15.13	ug/L	2.489	15.13	ug/L	2.489	16.45%
QC value within limits for Sn 189.927 Recovery = 100.88%								
Sr 421.552†	5176.6	13.90	ug/L	0.754	13.90	ug/L	0.754	5.43%
QC value within limits for Sr 421.552 Recovery = 92.68%								
Ti 337.279†	224.6	13.70	ug/L	0.554	13.70	ug/L	0.554	4.05%
QC value within limits for Ti 337.279 Recovery = 91.30%								
Tl 190.801†	18.6	14.56	ug/L	1.766	14.56	ug/L	1.766	12.13%
QC value within limits for Tl 190.801 Recovery = 97.10%								
V 292.402†	1422.9	14.17	ug/L	0.272	14.17	ug/L	0.272	1.92%
QC value within limits for V 292.402 Recovery = 94.44%								
Zn 206.200†	638.6	60.66	ug/L	0.671	60.66	ug/L	0.671	1.11%
QC value within limits for Zn 206.200 Recovery = 101.10%								

QC Failed. Continue with analysis.

Sequence No.: 31
Sample ID: CCV2 161122RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 11/22/16 3:13:20 PM
Data Type: Reprocessed on 11/23/16 12:15:34 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCV2 161122RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1024533.5	99.06	%	1.157				1.17%
Y 371.029 Radial	961288.0	98.94	%	1.238				1.25%
Ag 338.289†	12846.7	194.0	ug/L	3.00	194.0	ug/L	3.00	1.54%
QC value within limits for Ag 338.289 Recovery = 103.48%								
Al 308.215†	2939.1	7745	ug/L	197.2	7745	ug/L	197.2	2.55%
QC value within limits for Al 308.215 Recovery = 103.27%								
As 188.979†	398.0	381.2	ug/L	1.91	381.2	ug/L	1.91	0.50%
QC value within limits for As 188.979 Recovery = 101.66%								
B†	11271.1	386.6	ug/L	9.20	386.6	ug/L	9.20	2.38%
QC value within limits for B Recovery = 103.09%								
Ba 233.527†	25343.8	390.1	ug/L	7.36	390.1	ug/L	7.36	1.89%
QC value within limits for Ba 233.527 Recovery = 104.03%								
Be 313.107†	60106.2	384.5	ug/L	11.46	384.5	ug/L	11.46	2.98%
QC value within limits for Be 313.107 Recovery = 102.52%								
Ca 315.887†	53451.1	19430	ug/L	327.9	19430	ug/L	327.9	1.69%
QC value within limits for Ca 315.887 Recovery = 103.63%								
Cd 214.440†	26895.9	386.9	ug/L	7.54	386.9	ug/L	7.54	1.95%
QC value within limits for Cd 214.440 Recovery = 103.17%								
Co 228.616†	9906.9	388.6	ug/L	7.35	388.6	ug/L	7.35	1.89%
QC value within limits for Co 228.616 Recovery = 103.63%								
Cr 267.716†	19989.3	392.0	ug/L	7.35	392.0	ug/L	7.35	1.88%
QC value within limits for Cr 267.716 Recovery = 104.52%								
Cu 327.393†	28097.0	389.1	ug/L	7.38	389.1	ug/L	7.38	1.90%
QC value within limits for Cu 327.393 Recovery = 103.75%								
Fe 273.955†	89255.4	7902	ug/L	146.3	7902	ug/L	146.3	1.85%
QC value within limits for Fe 273.955 Recovery = 105.36%								
K 766.490†	17259.5	7655	ug/L	131.2	7655	ug/L	131.2	1.71%
QC value within limits for K 766.490 Recovery = 102.07%								
Mg 285.213†	90079.3	19490	ug/L	551.7	19490	ug/L	551.7	2.83%
QC value within limits for Mg 285.213 Recovery = 103.93%								
Mn 257.610†	3150.2	389.9	ug/L	6.97	389.9	ug/L	6.97	1.79%
QC value within limits for Mn 257.610 Recovery = 103.98%								
Mo 202.031†	2986.5	376.8	ug/L	6.99	376.8	ug/L	6.99	1.86%
QC value within limits for Mo 202.031 Recovery = 100.47%								
Na 589.592†	62400.4	9705	ug/L	301.0	9705	ug/L	301.0	3.10%
QC value within limits for Na 589.592 Recovery = 103.52%								
Ni 231.604†	8129.7	389.9	ug/L	7.07	389.9	ug/L	7.07	1.81%
QC value within limits for Ni 231.604 Recovery = 103.99%								
P 213.617†	2769.8	1897	ug/L	21.0	1897	ug/L	21.0	1.11%
QC value within limits for P 213.617 Recovery = 101.17%								
Pb 220.353†	1705.9	390.2	ug/L	5.40	390.2	ug/L	5.40	1.38%
QC value within limits for Pb 220.353 Recovery = 104.05%								
Sb 206.836†	486.3	377.9	ug/L	7.31	377.9	ug/L	7.31	1.93%
QC value within limits for Sb 206.836 Recovery = 100.76%								
Se 196.026†	374.2	372.4	ug/L	4.91	372.4	ug/L	4.91	1.32%
QC value within limits for Se 196.026 Recovery = 99.31%								
Sn 189.927†	1185.8	411.4	ug/L	3.41	411.4	ug/L	3.41	0.83%
QC value within limits for Sn 189.927 Recovery = 109.69%								
Sr 421.552†	143240.2	384.6	ug/L	11.59	384.6	ug/L	11.59	3.01%
QC value within limits for Sr 421.552 Recovery = 102.56%								
Ti 337.279†	6345.6	386.9	ug/L	6.04	386.9	ug/L	6.04	1.56%
QC value within limits for Ti 337.279 Recovery = 103.17%								
Tl 190.801†	476.6	374.2	ug/L	11.82	374.2	ug/L	11.82	3.16%
QC value within limits for Tl 190.801 Recovery = 99.78%								
V 292.402†	40147.3	398.7	ug/L	6.79	398.7	ug/L	6.79	1.70%
QC value within limits for V 292.402 Recovery = 106.33%								
Zn 206.200†	4094.0	389.9	ug/L	4.82	389.9	ug/L	4.82	1.24%
QC value within limits for Zn 206.200 Recovery = 103.98%								

All analyte(s) passed QC.

Sequence No.: 32
Sample ID: CCB 161122RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 11/22/16 3:19:59 PM
Data Type: Reprocessed on 11/23/16 12:15:36 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCB 161122RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1074104.0	103.8	%	0.81				0.78%
Y 371.029 Radial	1011313.4	104.1	%	0.85				0.81%
Ag 338.289†	-6.8	-0.103	ug/L	1.1757	-0.103	ug/L	1.1757	>999.9%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	-1.7	-4.590	ug/L	9.8370	-4.590	ug/L	9.8370	214.33%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	2.0	1.954	ug/L	1.1563	1.954	ug/L	1.1563	59.19%
QC value within limits for As 188.979 Recovery = Not calculated								
B†	30.3	1.038	ug/L	0.3063	1.038	ug/L	0.3063	29.51%
QC value within limits for B Recovery = Not calculated								
Ba 233.527†	-3.3	-0.052	ug/L	0.1597	-0.052	ug/L	0.1597	308.99%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	3.8	0.024	ug/L	0.0065	0.024	ug/L	0.0065	26.86%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	-4.5	-1.634	ug/L	6.3437	-1.634	ug/L	6.3437	388.21%
QC value within limits for Ca 315.887 Recovery = Not calculated								
Cd 214.440†	-1.2	-0.018	ug/L	0.0509	-0.018	ug/L	0.0509	285.35%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	-9.3	-0.368	ug/L	0.1473	-0.368	ug/L	0.1473	40.01%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	-20.9	-0.412	ug/L	0.3358	-0.412	ug/L	0.3358	81.54%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	-70.2	-0.973	ug/L	0.4788	-0.973	ug/L	0.4788	49.23%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	14.8	1.385	ug/L	0.8951	1.385	ug/L	0.8951	64.63%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	19.3	8.581	ug/L	19.4221	8.581	ug/L	19.4221	226.34%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	12.5	2.693	ug/L	2.2733	2.693	ug/L	2.2733	84.40%
QC value within limits for Mg 285.213 Recovery = Not calculated								
Mn 257.610†	-6.3	-0.775	ug/L	0.1627	-0.775	ug/L	0.1627	20.99%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	1.4	0.177	ug/L	0.1298	0.177	ug/L	0.1298	73.49%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	659.1	102.9	ug/L	16.85	102.9	ug/L	16.85	16.39%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	16.5	0.794	ug/L	0.1825	0.794	ug/L	0.1825	22.99%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	5.0	3.393	ug/L	2.1118	3.393	ug/L	2.1118	62.25%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	10.0	2.278	ug/L	0.6715	2.278	ug/L	0.6715	29.48%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	1.4	1.104	ug/L	0.6476	1.104	ug/L	0.6476	58.64%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	-0.4	-0.442	ug/L	5.1217	-0.442	ug/L	5.1217	>999.9%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	6.0	2.078	ug/L	0.2901	2.078	ug/L	0.2901	13.96%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	-18.6	-0.050	ug/L	0.0992	-0.050	ug/L	0.0992	198.05%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	14.5	0.884	ug/L	1.0725	0.884	ug/L	1.0725	121.35%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	1.0	0.763	ug/L	1.0638	0.763	ug/L	1.0638	139.50%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	-80.9	-0.793	ug/L	0.0196	-0.793	ug/L	0.0196	2.48%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	32.0	3.036	ug/L	0.5876	3.036	ug/L	0.5876	19.36%
QC value within limits for Zn 206.200 Recovery = Not calculated								

All analyte(s) passed QC.

Sequence No.: 40
Sample ID: CCV1 161122RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 11/22/16 3:58:42 PM
Data Type: Reprocessed on 11/23/16 12:15:45 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCV1 161122RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1042257.3	100.8	%	1.12				1.11%
Y 371.029 Radial	979541.4	100.8	%	1.23				1.22%
Ag 338.289†	16743.5	252.9	ug/L	4.46	252.9	ug/L	4.46	1.76%
QC value within limits for Ag 338.289 Recovery = 101.16%								
Al 308.215†	3789.2	9986	ug/L	492.2	9986	ug/L	492.2	4.93%
QC value within limits for Al 308.215 Recovery = 99.86%								
As 188.979†	520.0	498.0	ug/L	7.38	498.0	ug/L	7.38	1.48%
QC value within limits for As 188.979 Recovery = 99.59%								
B†	14520.7	498.1	ug/L	13.44	498.1	ug/L	13.44	2.70%
QC value within limits for B Recovery = 99.61%								
Ba 233.527†	32968.7	507.5	ug/L	7.70	507.5	ug/L	7.70	1.52%
QC value within limits for Ba 233.527 Recovery = 101.49%								
Be 313.107†	75644.8	483.9	ug/L	12.00	483.9	ug/L	12.00	2.48%
QC value within limits for Be 313.107 Recovery = 96.77%								
Ca 315.887†	68617.0	24940	ug/L	1094.5	24940	ug/L	1094.5	4.39%
QC value within limits for Ca 315.887 Recovery = 99.77%								
Cd 214.440†	34793.4	500.5	ug/L	8.47	500.5	ug/L	8.47	1.69%
QC value within limits for Cd 214.440 Recovery = 100.10%								
Co 228.616†	12757.2	500.4	ug/L	8.62	500.4	ug/L	8.62	1.72%
QC value within limits for Co 228.616 Recovery = 100.08%								
Cr 267.716†	26013.1	510.1	ug/L	7.55	510.1	ug/L	7.55	1.48%
QC value within limits for Cr 267.716 Recovery = 102.02%								
Cu 327.393†	36500.2	505.4	ug/L	9.45	505.4	ug/L	9.45	1.87%
QC value within limits for Cu 327.393 Recovery = 101.09%								
Fe 273.955†	115475.9	10220	ug/L	162.7	10220	ug/L	162.7	1.59%
QC value within limits for Fe 273.955 Recovery = 102.23%								
K 766.490†	21304.1	9448	ug/L	373.0	9448	ug/L	373.0	3.95%
QC value within limits for K 766.490 Recovery = 94.48%								
Mg 285.213†	113667.7	24590	ug/L	722.6	24590	ug/L	722.6	2.94%
QC value within limits for Mg 285.213 Recovery = 98.36%								
Mn 257.610†	4047.2	501.0	ug/L	25.28	501.0	ug/L	25.28	5.05%
QC value within limits for Mn 257.610 Recovery = 100.20%								
Mo 202.031†	3896.2	491.5	ug/L	8.55	491.5	ug/L	8.55	1.74%
QC value within limits for Mo 202.031 Recovery = 98.31%								
Na 589.592†	77776.7	12100	ug/L	357.1	12100	ug/L	357.1	2.95%
QC value within limits for Na 589.592 Recovery = 96.76%								
Ni 231.604†	10507.5	504.0	ug/L	8.22	504.0	ug/L	8.22	1.63%
QC value within limits for Ni 231.604 Recovery = 100.80%								
P 213.617†	3579.9	2452	ug/L	26.5	2452	ug/L	26.5	1.08%
QC value within limits for P 213.617 Recovery = 98.07%								
Pb 220.353†	2198.9	502.9	ug/L	6.30	502.9	ug/L	6.30	1.25%
QC value within limits for Pb 220.353 Recovery = 100.59%								
Sb 206.836†	633.2	491.9	ug/L	7.68	491.9	ug/L	7.68	1.56%
QC value within limits for Sb 206.836 Recovery = 98.39%								
Se 196.026†	486.3	484.1	ug/L	13.37	484.1	ug/L	13.37	2.76%
QC value within limits for Se 196.026 Recovery = 96.81%								
Sn 189.927†	1434.9	498.0	ug/L	9.33	498.0	ug/L	9.33	1.87%
QC value within limits for Sn 189.927 Recovery = 99.60%								
Sr 421.552†	179928.8	483.1	ug/L	13.02	483.1	ug/L	13.02	2.70%
QC value within limits for Sr 421.552 Recovery = 96.62%								
Ti 337.279†	8136.0	496.1	ug/L	22.22	496.1	ug/L	22.22	4.48%
QC value within limits for Ti 337.279 Recovery = 99.21%								
Tl 190.801†	620.2	487.0	ug/L	10.56	487.0	ug/L	10.56	2.17%
QC value within limits for Tl 190.801 Recovery = 97.39%								
V 292.402†	52290.5	519.4	ug/L	8.21	519.4	ug/L	8.21	1.58%
QC value within limits for V 292.402 Recovery = 103.87%								
Zn 206.200†	5261.4	501.2	ug/L	6.37	501.2	ug/L	6.37	1.27%
QC value within limits for Zn 206.200 Recovery = 100.24%								

All analyte(s) passed QC.

Sequence No.: 41
Sample ID: CCB 161122RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 11/22/16 4:05:18 PM
Data Type: Reprocessed on 11/23/16 12:15:46 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCB 161122RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1075935.4	104.0	%	0.64				0.61%
Y 371.029 Radial	1013476.1	104.3	%	0.69				0.66%
Ag 338.289†	47.6	0.719	ug/L	0.5381	0.719	ug/L	0.5381	74.80%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	-6.5	-17.23	ug/L	20.272	-17.23	ug/L	20.272	117.67%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	0.2	0.160	ug/L	2.7359	0.160	ug/L	2.7359	>999.9%
QC value within limits for As 188.979 Recovery = Not calculated								
B†	35.2	1.207	ug/L	0.3949	1.207	ug/L	0.3949	32.72%
QC value within limits for B Recovery = Not calculated								
Ba 233.527†	6.8	0.104	ug/L	0.1088	0.104	ug/L	0.1088	104.77%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	6.0	0.039	ug/L	0.0067	0.039	ug/L	0.0067	17.25%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	-21.3	-7.737	ug/L	0.7351	-7.737	ug/L	0.7351	9.50%
QC value within limits for Ca 315.887 Recovery = Not calculated								
Cd 214.440†	0.2	0.002	ug/L	0.1939	0.002	ug/L	0.1939	>999.9%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	-10.3	-0.405	ug/L	0.7266	-0.405	ug/L	0.7266	179.49%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	-32.7	-0.644	ug/L	0.3663	-0.644	ug/L	0.3663	56.88%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	9.7	0.133	ug/L	1.1686	0.133	ug/L	1.1686	881.68%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	-3.8	-0.294	ug/L	0.5083	-0.294	ug/L	0.5083	172.84%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	-58.1	-25.81	ug/L	52.857	-25.81	ug/L	52.857	204.76%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	7.7	1.659	ug/L	0.1815	1.659	ug/L	0.1815	10.94%
QC value within limits for Mg 285.213 Recovery = Not calculated								
Mn 257.610†	-6.3	-0.776	ug/L	0.4454	-0.776	ug/L	0.4454	57.41%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	-0.3	-0.043	ug/L	0.7559	-0.043	ug/L	0.7559	>999.9%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	299.5	46.77	ug/L	16.375	46.77	ug/L	16.375	35.01%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	9.8	0.468	ug/L	0.7868	0.468	ug/L	0.7868	167.94%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	-1.1	-0.732	ug/L	1.6052	-0.732	ug/L	1.6052	219.29%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	-2.6	-0.593	ug/L	3.1159	-0.593	ug/L	3.1159	525.35%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	1.8	1.362	ug/L	2.1434	1.362	ug/L	2.1434	157.38%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	-1.4	-1.422	ug/L	5.9690	-1.422	ug/L	5.9690	419.83%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	0.5	0.161	ug/L	0.5595	0.161	ug/L	0.5595	347.67%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	3.8	0.010	ug/L	0.1988	0.010	ug/L	0.1988	>999.9%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	-6.6	-0.404	ug/L	0.6546	-0.404	ug/L	0.6546	161.89%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	3.2	2.511	ug/L	1.4051	2.511	ug/L	1.4051	55.97%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	-50.7	-0.501	ug/L	0.8188	-0.501	ug/L	0.8188	163.58%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	22.1	2.095	ug/L	0.2687	2.095	ug/L	0.2687	12.83%
QC value within limits for Zn 206.200 Recovery = Not calculated								

All analyte(s) passed QC.

Sequence No.: 53
Sample ID: CCV2 161122RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 11/22/16 4:58:06 PM
Data Type: Reprocessed on 11/23/16 12:15:59 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCV2 161122RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1023619.4	98.97	%	0.722				0.73%
Y 371.029 Radial	960747.8	98.89	%	0.774				0.78%
Ag 338.289†	12681.6	191.5	ug/L	0.83	191.5	ug/L	0.83	0.44%
QC value within limits for Ag 338.289 Recovery = 102.15%								
Al 308.215†	2927.6	7715	ug/L	90.2	7715	ug/L	90.2	1.17%
QC value within limits for Al 308.215 Recovery = 102.86%								
As 188.979†	399.5	382.5	ug/L	4.42	382.5	ug/L	4.42	1.16%
QC value within limits for As 188.979 Recovery = 102.00%								
B†	11101.4	380.8	ug/L	1.31	380.8	ug/L	1.31	0.34%
QC value within limits for B Recovery = 101.54%								
Ba 233.527†	24992.5	384.7	ug/L	4.89	384.7	ug/L	4.89	1.27%
QC value within limits for Ba 233.527 Recovery = 102.58%								
Be 313.107†	59258.7	379.0	ug/L	4.17	379.0	ug/L	4.17	1.10%
QC value within limits for Be 313.107 Recovery = 101.08%								
Ca 315.887†	53066.3	19290	ug/L	368.0	19290	ug/L	368.0	1.91%
QC value within limits for Ca 315.887 Recovery = 102.88%								
Cd 214.440†	26320.8	378.6	ug/L	10.47	378.6	ug/L	10.47	2.77%
QC value within limits for Cd 214.440 Recovery = 100.97%								
Co 228.616†	9718.7	381.2	ug/L	6.20	381.2	ug/L	6.20	1.63%
QC value within limits for Co 228.616 Recovery = 101.66%								
Cr 267.716†	19658.1	385.5	ug/L	5.88	385.5	ug/L	5.88	1.53%
QC value within limits for Cr 267.716 Recovery = 102.79%								
Cu 327.393†	27886.4	386.1	ug/L	6.31	386.1	ug/L	6.31	1.63%
QC value within limits for Cu 327.393 Recovery = 102.97%								
Fe 273.955†	87618.4	7757	ug/L	105.6	7757	ug/L	105.6	1.36%
QC value within limits for Fe 273.955 Recovery = 103.42%								
K 766.490†	17075.1	7573	ug/L	164.6	7573	ug/L	164.6	2.17%
QC value within limits for K 766.490 Recovery = 100.98%								
Mg 285.213†	89997.8	19470	ug/L	217.6	19470	ug/L	217.6	1.12%
QC value within limits for Mg 285.213 Recovery = 103.84%								
Mn 257.610†	3155.3	390.6	ug/L	10.18	390.6	ug/L	10.18	2.61%
QC value within limits for Mn 257.610 Recovery = 104.15%								
Mo 202.031†	2989.4	377.1	ug/L	1.82	377.1	ug/L	1.82	0.48%
QC value within limits for Mo 202.031 Recovery = 100.57%								
Na 589.592†	61443.4	9557	ug/L	106.7	9557	ug/L	106.7	1.12%
QC value within limits for Na 589.592 Recovery = 101.94%								
Ni 231.604†	7981.1	382.8	ug/L	4.65	382.8	ug/L	4.65	1.22%
QC value within limits for Ni 231.604 Recovery = 102.08%								
P 213.617†	2733.7	1872	ug/L	17.7	1872	ug/L	17.7	0.95%
QC value within limits for P 213.617 Recovery = 99.85%								
Pb 220.353†	1690.3	386.6	ug/L	4.93	386.6	ug/L	4.93	1.28%
QC value within limits for Pb 220.353 Recovery = 103.10%								
Sb 206.836†	487.2	378.5	ug/L	3.48	378.5	ug/L	3.48	0.92%
QC value within limits for Sb 206.836 Recovery = 100.95%								
Se 196.026†	377.2	375.4	ug/L	1.92	375.4	ug/L	1.92	0.51%
QC value within limits for Se 196.026 Recovery = 100.12%								
Sn 189.927†	1103.2	382.9	ug/L	2.22	382.9	ug/L	2.22	0.58%
QC value within limits for Sn 189.927 Recovery = 102.10%								
Sr 421.552†	142559.7	382.8	ug/L	4.54	382.8	ug/L	4.54	1.19%
QC value within limits for Sr 421.552 Recovery = 102.07%								
Ti 337.279†	6243.4	380.7	ug/L	8.33	380.7	ug/L	8.33	2.19%
QC value within limits for Ti 337.279 Recovery = 101.51%								
Tl 190.801†	476.3	374.0	ug/L	5.12	374.0	ug/L	5.12	1.37%
QC value within limits for Tl 190.801 Recovery = 99.72%								
V 292.402†	39657.3	393.9	ug/L	5.51	393.9	ug/L	5.51	1.40%
QC value within limits for V 292.402 Recovery = 105.05%								
Zn 206.200†	4057.3	386.4	ug/L	3.68	386.4	ug/L	3.68	0.95%
QC value within limits for Zn 206.200 Recovery = 103.03%								

All analyte(s) passed QC.

Sequence No.: 54
Sample ID: CCB 161122RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 11/22/16 5:01:32 PM
Data Type: Reprocessed on 11/23/16 12:16:00 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCB 161122RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1067527.1	103.2	%	1.46				1.41%
Y 371.029 Radial	1005014.1	103.4	%	1.62				1.57%
Ag 338.289†	-10.2	-0.154	ug/L	0.3697	-0.154	ug/L	0.3697	240.37%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	-2.2	-5.716	ug/L	8.3305	-5.716	ug/L	8.3305	145.73%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	2.8	2.632	ug/L	3.0260	2.632	ug/L	3.0260	114.95%
QC value within limits for As 188.979 Recovery = Not calculated								
B†	51.7	1.775	ug/L	0.4234	1.775	ug/L	0.4234	23.86%
QC value within limits for B Recovery = Not calculated								
Ba 233.527†	-3.7	-0.056	ug/L	0.1946	-0.056	ug/L	0.1946	345.38%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	2.4	0.015	ug/L	0.0335	0.015	ug/L	0.0335	222.25%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	-14.8	-5.371	ug/L	1.4934	-5.371	ug/L	1.4934	27.81%
QC value within limits for Ca 315.887 Recovery = Not calculated								
Cd 214.440†	-3.7	-0.054	ug/L	0.1916	-0.054	ug/L	0.1916	351.78%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	-7.6	-0.301	ug/L	0.2691	-0.301	ug/L	0.2691	89.54%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	-21.4	-0.421	ug/L	0.3418	-0.421	ug/L	0.3418	81.11%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	17.0	0.234	ug/L	0.3952	0.234	ug/L	0.3952	169.00%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	9.3	0.832	ug/L	0.8212	0.832	ug/L	0.8212	98.75%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	-20.6	-9.147	ug/L	38.8230	-9.147	ug/L	38.8230	424.45%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	5.1	1.097	ug/L	0.8569	1.097	ug/L	0.8569	78.10%
QC value within limits for Mg 285.213 Recovery = Not calculated								
Mn 257.610†	-5.2	-0.649	ug/L	0.1015	-0.649	ug/L	0.1015	15.63%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	-3.7	-0.470	ug/L	0.8649	-0.470	ug/L	0.8649	184.06%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	232.3	36.27	ug/L	11.243	36.27	ug/L	11.243	31.00%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	14.2	0.677	ug/L	0.7665	0.677	ug/L	0.7665	113.23%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	2.2	1.506	ug/L	1.0675	1.506	ug/L	1.0675	70.88%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	8.7	1.981	ug/L	1.0995	1.981	ug/L	1.0995	55.50%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	2.5	1.973	ug/L	1.4804	1.973	ug/L	1.4804	75.01%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	1.8	1.817	ug/L	4.8226	1.817	ug/L	4.8226	265.39%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	6.6	2.262	ug/L	0.8550	2.262	ug/L	0.8550	37.79%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	37.0	0.099	ug/L	0.1735	0.099	ug/L	0.1735	174.38%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	9.5	0.581	ug/L	0.5118	0.581	ug/L	0.5118	88.04%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	4.3	3.376	ug/L	1.6196	3.376	ug/L	1.6196	47.98%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	2.9	0.018	ug/L	1.2525	0.018	ug/L	1.2525	>999.9%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	18.5	1.758	ug/L	0.6369	1.758	ug/L	0.6369	36.23%
QC value within limits for Zn 206.200 Recovery = Not calculated								

All analyte(s) passed QC.

Sequence No.: 66
Sample ID: CCV1 161122RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 11/22/16 6:06:48 PM
Data Type: Reprocessed on 11/23/16 12:16:14 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCV1 161122RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1026945.2	99.29	%	0.950				0.96%
Y 371.029 Radial	963115.5	99.13	%	1.022				1.03%
Ag 338.289†	17914.3	270.6	ug/L	1.87	270.6	ug/L	1.87	0.69%
QC value within limits for Ag 338.289 Recovery = 108.23%								
Al 308.215†	3977.4	10480	ug/L	159.0	10480	ug/L	159.0	1.52%
QC value within limits for Al 308.215 Recovery = 104.81%								
As 188.979†	529.0	506.7	ug/L	5.44	506.7	ug/L	5.44	1.07%
QC value within limits for As 188.979 Recovery = 101.34%								
B†	14602.4	500.9	ug/L	2.33	500.9	ug/L	2.33	0.47%
QC value within limits for B Recovery = 100.17%								
Ba 233.527†	33968.4	522.9	ug/L	3.30	522.9	ug/L	3.30	0.63%
QC value within limits for Ba 233.527 Recovery = 104.57%								
Be 313.107†	85945.4	549.7	ug/L	5.53	549.7	ug/L	5.53	1.01%
QC value within limits for Be 313.107 Recovery = 109.95%								
Ca 315.887†	72492.3	26350	ug/L	404.7	26350	ug/L	404.7	1.54%
QC value within limits for Ca 315.887 Recovery = 105.41%								
Cd 214.440†	35599.1	512.1	ug/L	3.59	512.1	ug/L	3.59	0.70%
QC value within limits for Cd 214.440 Recovery = 102.42%								
Co 228.616†	13217.5	518.4	ug/L	4.72	518.4	ug/L	4.72	0.91%
QC value within limits for Co 228.616 Recovery = 103.69%								
Cr 267.716†	26861.6	526.7	ug/L	3.41	526.7	ug/L	3.41	0.65%
QC value within limits for Cr 267.716 Recovery = 105.34%								
Cu 327.393†	37613.8	520.8	ug/L	2.32	520.8	ug/L	2.32	0.45%
QC value within limits for Cu 327.393 Recovery = 104.16%								
Fe 273.955†	119194.4	10550	ug/L	70.9	10550	ug/L	70.9	0.67%
QC value within limits for Fe 273.955 Recovery = 105.52%								
K 766.490†	22560.6	10010	ug/L	121.7	10010	ug/L	121.7	1.22%
QC value within limits for K 766.490 Recovery = 100.06%								
Mg 285.213†	122536.8	26510	ug/L	321.5	26510	ug/L	321.5	1.21%
QC value within limits for Mg 285.213 Recovery = 106.04%								
Mn 257.610†	4269.1	528.4	ug/L	4.94	528.4	ug/L	4.94	0.94%
QC value within limits for Mn 257.610 Recovery = 105.68%								
Mo 202.031†	4014.7	506.5	ug/L	6.75	506.5	ug/L	6.75	1.33%
QC value within limits for Mo 202.031 Recovery = 101.30%								
Na 589.592†	82487.0	12830	ug/L	116.9	12830	ug/L	116.9	0.91%
QC value within limits for Na 589.592 Recovery = 102.63%								
Ni 231.604†	10823.2	519.1	ug/L	3.96	519.1	ug/L	3.96	0.76%
QC value within limits for Ni 231.604 Recovery = 103.81%								
P 213.617†	3780.7	2589	ug/L	30.9	2589	ug/L	30.9	1.19%
QC value within limits for P 213.617 Recovery = 103.57%								
Pb 220.353†	2253.0	515.4	ug/L	9.32	515.4	ug/L	9.32	1.81%
QC value within limits for Pb 220.353 Recovery = 103.07%								
Sb 206.836†	644.5	500.7	ug/L	7.10	500.7	ug/L	7.10	1.42%
QC value within limits for Sb 206.836 Recovery = 100.15%								
Se 196.026†	523.8	521.4	ug/L	5.76	521.4	ug/L	5.76	1.11%
QC value within limits for Se 196.026 Recovery = 104.29%								
Sn 189.927†	1474.8	511.9	ug/L	7.81	511.9	ug/L	7.81	1.53%
QC value within limits for Sn 189.927 Recovery = 102.38%								
Sr 421.552†	193911.8	520.6	ug/L	6.29	520.6	ug/L	6.29	1.21%
QC value within limits for Sr 421.552 Recovery = 104.13%								
Ti 337.279†	8535.9	520.4	ug/L	7.48	520.4	ug/L	7.48	1.44%
QC value within limits for Ti 337.279 Recovery = 104.09%								
Tl 190.801†	697.9	547.9	ug/L	6.54	547.9	ug/L	6.54	1.19%
QC value within limits for Tl 190.801 Recovery = 109.59%								
V 292.402†	53886.5	535.2	ug/L	3.71	535.2	ug/L	3.71	0.69%
QC value within limits for V 292.402 Recovery = 107.04%								
Zn 206.200†	5265.1	501.5	ug/L	6.73	501.5	ug/L	6.73	1.34%
QC value within limits for Zn 206.200 Recovery = 100.30%								

All analyte(s) passed QC.

Sequence No.: 67
Sample ID: CCB 161122RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 11/22/16 6:13:22 PM
Data Type: Reprocessed on 11/23/16 12:16:16 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCB 161122RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1074243.4	103.9	%	1.29				1.24%
Y 371.029 Radial	1010955.3	104.1	%	1.35				1.29%
Ag 338.289†	21.0	0.317	ug/L	0.7517	0.317	ug/L	0.7517	236.99%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	-3.2	-8.315	ug/L	23.5775	-8.315	ug/L	23.5775	283.54%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	0.3	0.285	ug/L	4.6506	0.285	ug/L	4.6506	>999.9%
QC value within limits for As 188.979 Recovery = Not calculated								
B†	36.0	1.234	ug/L	0.1689	1.234	ug/L	0.1689	13.69%
QC value within limits for B Recovery = Not calculated								
Ba 233.527†	-10.5	-0.162	ug/L	0.1320	-0.162	ug/L	0.1320	81.40%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	5.0	0.032	ug/L	0.0097	0.032	ug/L	0.0097	30.01%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	-32.3	-11.75	ug/L	3.478	-11.75	ug/L	3.478	29.61%
QC value within limits for Ca 315.887 Recovery = Not calculated								
Cd 214.440†	-6.0	-0.087	ug/L	0.1459	-0.087	ug/L	0.1459	167.16%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	2.3	0.090	ug/L	0.0737	0.090	ug/L	0.0737	81.73%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	-25.3	-0.497	ug/L	0.2234	-0.497	ug/L	0.2234	44.93%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	-57.5	-0.797	ug/L	0.6245	-0.797	ug/L	0.6245	78.36%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	-1.8	-0.169	ug/L	0.6608	-0.169	ug/L	0.6608	391.26%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	-17.7	-7.882	ug/L	33.4018	-7.882	ug/L	33.4018	423.78%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	10.3	2.223	ug/L	1.8669	2.223	ug/L	1.8669	83.96%
QC value within limits for Mg 285.213 Recovery = Not calculated								
Mn 257.610†	-2.8	-0.349	ug/L	0.4855	-0.349	ug/L	0.4855	139.20%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	-1.8	-0.229	ug/L	0.7093	-0.229	ug/L	0.7093	309.89%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	103.9	16.22	ug/L	15.124	16.22	ug/L	15.124	93.25%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	4.1	0.191	ug/L	0.5307	0.191	ug/L	0.5307	277.59%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	3.0	2.083	ug/L	0.7723	2.083	ug/L	0.7723	37.07%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	4.5	1.018	ug/L	1.3620	1.018	ug/L	1.3620	133.79%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	0.4	0.299	ug/L	0.9099	0.299	ug/L	0.9099	303.93%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	1.3	1.287	ug/L	2.2903	1.287	ug/L	2.2903	177.91%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	3.5	1.211	ug/L	1.1691	1.211	ug/L	1.1691	96.52%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	-3.2	-0.008	ug/L	0.0649	-0.008	ug/L	0.0649	764.87%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	2.9	0.176	ug/L	0.8960	0.176	ug/L	0.8960	509.57%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	4.0	3.157	ug/L	2.1980	3.157	ug/L	2.1980	69.62%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	9.1	0.082	ug/L	0.6414	0.082	ug/L	0.6414	784.69%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	24.0	2.270	ug/L	0.8333	2.270	ug/L	0.8333	36.71%
QC value within limits for Zn 206.200 Recovery = Not calculated								

All analyte(s) passed QC.

METALS

Raw Data

APPL, INC.

METALS BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
6010C	CALCIUM (CA)	75.0 U	1000	75.0	27.5	ug/L	11/17/16	11/22/16	#61CDO-161117A-AZ45866
6010C	MAGNESIUM (MG)	30.0 U	500	30.0	12.9	ug/L	11/17/16	11/22/16	#61CDO-161117A-AZ45866
6010C	MANGANESE (MN)	4.00 U	10.0	4.00	1.23	ug/L	11/17/16	11/22/16	#61CDO-161117A-AZ45866
6010C	POTASSIUM (K)	500.0 U	3000	500.0	220.0	ug/L	11/17/16	11/22/16	#61CDO-161117A-AZ45866
6010C	SODIUM (NA)	500.0 U	5000	500.0	111.1	ug/L	11/17/16	11/22/16	#61CDO-161117A-AZ45866

Metals SC-Blank-REG MDLs
Printed: 11/23/16 2:54:48 PM

Sequence No.: 33
Sample ID: 161117A-3010-BLK
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 55
Date Collected: 11/22/16 3:24:09 PM
Data Type: Reprocessed on 11/23/16 12:15:37 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: 161117A-3010-BLK

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1061990.2	102.7	%	1.53				1.49%
Y 371.029 Radial	999130.6	102.8	%	1.63				1.59%
Ag 338.289†	48.2	0.728	ug/L	0.7074	0.728	ug/L	0.7074	97.10%
Al 308.215†	3.3	8.819	ug/L	2.0425	8.819	ug/L	2.0425	23.16%
As 188.979†	2.0	1.883	ug/L	5.5425	1.883	ug/L	5.5425	294.39%
B†	8.0	0.275	ug/L	0.1508	0.275	ug/L	0.1508	54.95%
Ba 233.527†	-6.8	-0.105	ug/L	0.1357	-0.105	ug/L	0.1357	129.86%
Be 313.107†	3.3	0.021	ug/L	0.0173	0.021	ug/L	0.0173	82.02%
Ca 315.887†	-39.7	-14.43	ug/L	3.389	-14.43	ug/L	3.389	23.49%
Cd 214.440†	-10.3	-0.148	ug/L	0.2246	-0.148	ug/L	0.2246	151.54%
Co 228.616†	-8.2	-0.325	ug/L	0.2070	-0.325	ug/L	0.2070	63.79%
Cr 267.716†	-2.8	-0.054	ug/L	0.2545	-0.054	ug/L	0.2545	471.57%
Cu 327.393†	-50.6	-0.702	ug/L	2.6331	-0.702	ug/L	2.6331	375.00%
Fe 273.955†	-20.1	-1.802	ug/L	1.1171	-1.802	ug/L	1.1171	61.98%
K 766.490†	75.2	33.40	ug/L	31.962	33.40	ug/L	31.962	95.68%
Mg 285.213†	0.3	0.037	ug/L	0.3573	0.037	ug/L	0.3573	953.58%
Mn 257.610†	-6.7	-0.824	ug/L	0.3102	-0.824	ug/L	0.3102	37.66%
Mo 202.031†	-0.9	-0.117	ug/L	0.2006	-0.117	ug/L	0.2006	170.93%
Na 589.592†	510.3	79.64	ug/L	7.330	79.64	ug/L	7.330	9.20%
Ni 231.604†	3.9	0.186	ug/L	0.8904	0.186	ug/L	0.8904	477.90%
P 213.617†	8.1	5.544	ug/L	3.2327	5.544	ug/L	3.2327	58.31%
Pb 220.353†	1.4	0.331	ug/L	4.2663	0.331	ug/L	4.2663	>999.9%
Sb 206.836†	1.2	0.954	ug/L	2.2824	0.954	ug/L	2.2824	239.19%
Se 196.026†	2.9	2.931	ug/L	5.4816	2.931	ug/L	5.4816	187.00%
Sn 189.927†	6.0	2.062	ug/L	0.6818	2.062	ug/L	0.6818	33.06%
Sr 421.552†	1.8	0.005	ug/L	0.0711	0.005	ug/L	0.0711	>999.9%
Ti 337.279†	-1.0	-0.061	ug/L	0.5986	-0.061	ug/L	0.5986	985.04%
Tl 190.801†	2.5	1.991	ug/L	0.5146	1.991	ug/L	0.5146	25.84%
V 292.402†	13.0	0.125	ug/L	0.1483	0.125	ug/L	0.1483	118.72%
Zn 206.200†	21.7	2.065	ug/L	0.3251	2.065	ug/L	0.3251	15.74%

Laboratory Control Spike Recovery

METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 6010C	CALCIUM (CA)	25000	26900	108	87-113	11/17/16	11/22/16	#61CDO-161117A-AZ45866
EPA 6010C	MAGNESIUM (MG)	25000	26300	105	85-113	11/17/16	11/22/16	#61CDO-161117A-AZ45866
EPA 6010C	MANGANESE (MN)	250	269	108	90-114	11/17/16	11/22/16	#61CDO-161117A-AZ45866
EPA 6010C	POTASSIUM (K)	5000	5110	102	86-114	11/17/16	11/22/16	#61CDO-161117A-AZ45866
EPA 6010C	SODIUM (NA)	25000	26200	105	87-115	11/17/16	11/22/16	#61CDO-161117A-AZ45866

Comments: _____

Sequence No.: 34
Sample ID: 161117A-3010-LCS
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 56
Date Collected: 11/22/16 3:28:30 PM
Data Type: Reprocessed on 11/23/16 12:15:38 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: 161117A-3010-LCS

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1027214.3	99.32	%	1.358				1.37%
Y 371.029 Radial	963634.5	99.18	%	1.460				1.47%
Ag 338.289†	6632.3	100.2	ug/L	3.56	100.2	ug/L	3.56	3.55%
Al 308.215†	802.8	2114	ug/L	39.1	2114	ug/L	39.1	1.85%
As 188.979†	268.7	256.4	ug/L	4.82	256.4	ug/L	4.82	1.88%
B†	6823.8	234.1	ug/L	10.41	234.1	ug/L	10.41	4.45%
Ba 233.527†	16902.7	260.6	ug/L	9.14	260.6	ug/L	9.14	3.51%
Be 313.107†	8634.5	55.23	ug/L	0.344	55.23	ug/L	0.344	0.62%
Ca 315.887†	74082.7	26930	ug/L	1132.1	26930	ug/L	1132.1	4.20%
Cd 214.440†	3546.6	51.15	ug/L	0.743	51.15	ug/L	0.743	1.45%
Co 228.616†	6578.5	258.0	ug/L	9.80	258.0	ug/L	9.80	3.80%
Cr 267.716†	13641.1	267.3	ug/L	11.25	267.3	ug/L	11.25	4.21%
Cu 327.393†	18756.4	258.7	ug/L	10.38	258.7	ug/L	10.38	4.01%
Fe 273.955†	12133.8	1052	ug/L	38.3	1052	ug/L	38.3	3.64%
K 766.490†	11511.3	5105	ug/L	227.7	5105	ug/L	227.7	4.46%
Mg 285.213†	121735.8	26320	ug/L	1113.3	26320	ug/L	1113.3	4.23%
Mn 257.610†	2181.9	269.2	ug/L	3.51	269.2	ug/L	3.51	1.31%
Mo 202.031†	2034.5	256.1	ug/L	2.64	256.1	ug/L	2.64	1.03%
Na 589.592†	167762.2	26190	ug/L	1038.0	26190	ug/L	1038.0	3.96%
Ni 231.604†	5371.2	257.1	ug/L	10.16	257.1	ug/L	10.16	3.95%
P 213.617†	3053.8	2091	ug/L	15.3	2091	ug/L	15.3	0.73%
Pb 220.353†	1159.0	264.3	ug/L	2.16	264.3	ug/L	2.16	0.82%
Sb 206.836†	317.0	246.3	ug/L	4.27	246.3	ug/L	4.27	1.73%
Se 196.026†	245.7	244.6	ug/L	5.41	244.6	ug/L	5.41	2.21%
Sn 189.927†	730.1	254.0	ug/L	2.26	254.0	ug/L	2.26	0.89%
Sr 421.552†	97589.6	261.9	ug/L	10.70	261.9	ug/L	10.70	4.08%
Ti 337.279†	4334.4	264.1	ug/L	3.56	264.1	ug/L	3.56	1.35%
Tl 190.801†	339.0	266.2	ug/L	0.94	266.2	ug/L	0.94	0.35%
V 292.402†	27024.1	269.4	ug/L	10.15	269.4	ug/L	10.15	3.77%
Zn 206.200†	5461.6	518.8	ug/L	6.19	518.8	ug/L	6.19	1.19%

1%HNO3 / 5%HCl BLK		PREPPED BY: RJS			6010B/6010C ICSA				
AMOUNT	REAGENT	MANUFACTURER	LOT	OPEN DATE	AMOUNT	STD	MANUFACTURER	LOT	EXP DATE
100 mL	HCL	BDH	4115022	11/22/16	1mL	Al	CPI	14D237-33868	01/15/16
20 mL	HNO3	EMD	55043	11/22/16	1mL	Ca	CPI	14D176-33867	01/15/16
Prepared in 2000 ml DI Water					1mL	Mg	CPI	14F190-33865	01/15/16
STD 1 / LDL 6010B/6010C					1mL	Fe	O2SI	1062942-33880	01/12/16
AMOUNT	STD	MANUFACTURER	LOT	EXP DATE	Prepared in 50 ml 1%HNO3/5%HCl				
0.5 mL	6010 LDL	O2SI	1078402-35590	09/01/16	6010B/6010C ICSAB				
Prepared in 50 ml 1%HNO3/5%HCl					1mL	Al	CPI	14D237-33868	01/15/16
STD 3 / HDL 6010B/6010C					1mL	Ca	CPI	14D176-33867	01/15/16
1ML	CCV-A	Environmental Express	1602141-36120	01/27/17	1mL	Mg	CPI	14F190-33865	01/15/16
1ML	CCV-B	Environmental Express	1602140-36119	01/27/17	1mL	Fe	O2SI	1062942-33880	01/12/16
1ML	CCV-C	Environmental Express	1602139-36118	01/27/17	0.5mL	INT SPECIAL MIX	O2SI	1070553-34624	03/01/16
Prepared in 100 ml 1%HNO3 / 5%HCl					Prepared in 50 ml 1%HNO3/5%HCl				
STD 2 / CCV1 6010B/6010C/6010C					6010B/6010C ICV				
AMOUNT	STD	PREP DATE	EXP DATE		0.5ML	QCS ICV A	CPI	15C180-34943	09/19/16
25mL	STD 3	TODAY	1 week		0.5ML	QCS ICV B	CPI	15C181-34944	09/19/16
25mL	1%HNO3/5%HCl	TODAY	1 week		Prepared in 50ml 1%HNO3/5%HCl				
CCV2 6010B/6010C					6010B/6010C Internal Standard				
AMOUNT	STD	PREP DATE	EXP DATE		AMOUNT	STD	MANUFACTURER		
15mL	STD 3	TODAY	1 week		2mL	Yttrium	O2SI	1073310-35027	10/01/16
25mL	1%HNO3/5%HCl	TODAY	1 week		Prepared in 2L 1%HNO3 / 5%HCl				

_M3010

Metals Digestion Worksheet

Method Name 3010A Digestion **Prep Method** M3010 **Set** 161117A **Units** mL

Spikes			
Spiked ID 1	LCSW LOT# 1095239-37014		
Spiked ID 2	LCSW LOT# 1095111-37013		
Spiked ID 3			
Spiked ID 4			
Spiked By	NM	Date:	11/17/16 8:04:00 AM
Witnessed By	EJ	Date:	11/17/16 8:04:00 AM

Starting Temp:	92c Slot 30
Ending Temp:	93c Slot 30
Temperature Type:	Mod Block
Sufficient Vol for Matrix QC:	Yes
End Date/Time	11/17/16 13:50

	Sample	Sample Container	Spike Amount	Spike ID	Digested Amount	Final Volume	Start Date/Time	Comments
1	161117A Blk				50mL	50mL	11/17/16 8:04	equip: Modblock2
2	161117A LCS		500uL	1+2	50mL	50mL	11/17/16 8:04	equip: Modblock2
3	AZ45738	AZ45738W14			50mL	50mL	11/17/16 8:04	equip: Modblock2
4	AZ45761	AZ45761W05			50mL	50mL	11/17/16 8:04	equip: Modblock2
5	AZ45762	AZ45762W05			50mL	50mL	11/17/16 8:04	equip: Modblock2
6	AZ45763	AZ45763W05			50mL	50mL	11/17/16 8:04	equip: Modblock2
7	AZ45866	AZ45866W36			50mL	50mL	11/17/16 8:04	equip: Modblock2
8	AZ45866 MS	AZ45866W36	500uL	1+2	50mL	50mL	11/17/16 8:04	equip: Modblock2
9	AZ45866 MSD	AZ45866W36	500uL	1+2	50mL	50mL	11/17/16 8:04	equip: Modblock2
10	AZ45868	AZ45868W18			50mL	50mL	11/17/16 8:04	equip: Modblock2
11	AZ45907	AZ45907W17			50mL	50mL	11/17/16 8:04	equip: Modblock2
12	AZ45908	AZ45908W17			50mL	50mL	11/17/16 8:04	equip: Modblock2
13	AZ45909	AZ45909W20			50mL	50mL	11/17/16 8:04	equip: Modblock2
14	AZ45910	AZ45910W17			50mL	50mL	11/17/16 8:04	equip: Modblock2
15	AZ45911	AZ45911W17			50mL	50mL	11/17/16 8:04	equip: Modblock2
16	AZ45925	AZ45925W01			50mL	50mL	11/17/16 8:04	equip: Modblock2

Solvent and Lot#
HNO3 J.T.B. 145075 7712
1:1 HCL 11-9-16

Sample COC Transfer	
Sample prep employee Initials	nm
Analyst's initials	RDS
Date	11/23/16
Time	1125
Moved to	METALS

Technician's Initials	
Scanned By	nm
Sample Preparation	nm
Digestion	nm
Bring up to volume	nm
Modified	11/17/16 7:46:22 AM

Reviewed By: RDS **Date:** 11/23/16

6010 Injection Log

Directory: K:\ICAP PHOEBE\Backup Excel\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	22 Nov 2016	12:48	CalBlk 161122RJS I:PB O:R		161122A6010	1.
2	22 Nov 2016	12:52	STD 1 161122RJS I:PB O:RJ		161122A6010	1.
3	22 Nov 2016	12:57	STD 2 161122RJS I:PB O:RJ		161122A6010	1.
4	22 Nov 2016	13:00	STD 3 161122RJS I:PB O:RJ		161122A6010	1.
5	22 Nov 2016	13:03	ICV 161122RJS I:PB O:RJS		161122A6010	1.
6	22 Nov 2016	13:09	ICB 161122RJS I:PB O:RJS		161122A6010	1.
7	22 Nov 2016	13:14	ICSA 161122RJS I:PB O:RJS		161122A6010	1.
8	22 Nov 2016	13:19	ICSAB 161122RJS I:PB O:RJ		161122A6010	1.
9	22 Nov 2016	13:23	CCV1 161122RJS I:PB O:RJS		161122A6010	1.
10	22 Nov 2016	13:27	CCB 161122RJS I:PB O:RJS		161122A6010	1.
12	22 Nov 2016	13:36	LLICV 161122RJS I:PB O:RJ		161122A6010	1.
13	22 Nov 2016	13:43	LLICV 161122RJS I:PB O:RJ		161122A6010	1.
31	22 Nov 2016	15:13	CCV2 161122RJS I:PB O:RJS		161122A6010	1.
32	22 Nov 2016	15:19	CCB 161122RJS I:PB O:RJS		161122A6010	1.
33	22 Nov 2016	15:24	161117A-3010-BLK		161122A6010	1.
34	22 Nov 2016	15:28	161117A-3010-LCS		161122A6010	1.
40	22 Nov 2016	15:58	CCV1 161122RJS I:PB O:RJS		161122A6010	1.
41	22 Nov 2016	16:05	CCB 161122RJS I:PB O:RJS		161122A6010	1.
49	22 Nov 2016	16:40	AZ45908W17-1/20		161122A6010	20.
50	22 Nov 2016	16:45	AZ45909W20-1/20		161122A6010	20.
51	22 Nov 2016	16:49	AZ45910W17-1/20		161122A6010	20.
53	22 Nov 2016	16:58	CCV2 161122RJS I:PB O:RJS		161122A6010	1.
54	22 Nov 2016	17:01	CCB 161122RJS I:PB O:RJS		161122A6010	1.
61	22 Nov 2016	17:37	AZ45907W17		161122A6010	1.
62	22 Nov 2016	17:42	AZ45908W17		161122A6010	1.
63	22 Nov 2016	17:48	AZ45909W20		161122A6010	1.
64	22 Nov 2016	17:53	AZ45910W17		161122A6010	1.
65	22 Nov 2016	17:59	AZ45911W17		161122A6010	1.
66	22 Nov 2016	18:06	CCV1 161122RJS I:PB O:RJS		161122A6010	1.
67	22 Nov 2016	18:13	CCB 161122RJS I:PB O:RJS		161122A6010	1.

INORGANIC ANALYSIS

APPL, INC.

INORGANIC ANALYSIS
QC Summary

APPL, INC.

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
SM 2320B	BICARBONATE AS	1.70 U	2.0	1.70	0.85	mg/L	11/21/16	11/21/16	#232W-161121A1-AZ45991
SM 2320B	CARBONATE AS CA	1.70 U	2.0	1.70	0.85	mg/L	11/21/16	11/21/16	#232W-161121A1-AZ45991
SM 2320B	TOTAL ALKALINITY	1.70 U	2.0	1.70	0.85	mg/L	11/21/16	11/21/16	#232W-161121A1-AZ45991
EPA 300.0	BROMIDE	0.16 U	0.5	0.16	0.05	mg/L	11/16/16	11/16/16	#300W-161116A-AZ45907
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	11/16/16	11/16/16	#300W-161116A-AZ45907
EPA 300.0	FLUORIDE	0.09 U	0.1	0.09	0.08	mg/L	11/16/16	11/16/16	#300W-161116A-AZ45907
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	11/16/16	11/16/16	#300W-161116A-AZ45907
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	11/16/16	11/16/16	#300W-161116A-AZ45907
SM 4500-S	SILICA W	0.80 U	1.0	0.80	0.53	mg/L	11/21/16	11/21/16	#SIO2-161121A-AZ45866
SM 4500-S	DISSOLVED SILICA	0.80 U	1.0	0.80	0.53	mg/L	11/21/16	11/21/16	#SIO2D-161121B-AZ45866
SM3500Fe	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	11/16/16	11/16/16	#35FE-161116A-AZ45911

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Wetlab SC-Blank-REG MDLs
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Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 300.0	BROMIDE	12.5	12.0	96.0	90-110	11/16/16	11/16/16	#300W-161116A-AZ45907
EPA 300.0	CHLORIDE	20.0	18.5	92.5	90-110	11/16/16	11/16/16	#300W-161116A-AZ45907
EPA 300.0	FLUORIDE	2.50	2.57	103	90-110	11/16/16	11/16/16	#300W-161116A-AZ45907
EPA 300.0	NITRATE	22.1	20.3	91.9	90-110	11/16/16	11/16/16	#300W-161116A-AZ45907
EPA 300.0	SULFATE	20.0	18.3	91.5	90-110	11/16/16	11/16/16	#300W-161116A-AZ45907
SM 2320B	BICARBONATE AS CACO3	250	242	96.8	90-110	11/21/16	11/21/16	#232W-161121A1-AZ45991
SM 2320B	TOTAL ALKALINITY AS CACO3	250	242	96.8	90-110	11/21/16	11/21/16	#232W-161121A1-AZ45991
SM 4500-Si	SILICA W	4.00	4.29	107	80-120	11/21/16	11/21/16	#SIO2-161121A-AZ45866
SM 4500-Si	DISSOLVED SILICA	4.00	4.38	110	80-120	11/21/16	11/21/16	#SIO2D-161121B-AZ45866

Comments: _____

Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
SM3500Fe	FERROUS IRON	3.00	2.96	98.7	80-120	11/16/16	11/16/16	#35FE-161116A-AZ45911

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Comments: _____

INORGANIC ANALYSIS
Sample Data

APPL, INC.

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH117

Sample Collection Date: 11/14/16

APPL ID: AZ45907

ARF: 81500

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date Analysis Date
EPA 300.0	BROMIDE	0.26 J	0.5	0.16	0.05	mg/L	1	11/16/16 11/16/16
EPA 300.0	CHLORIDE	39.4	1.0	0.20	0.08	mg/L	1	11/16/16 11/16/16
EPA 300.0	FLUORIDE	0.28	0.1	0.09	0.08	mg/L	1	11/16/16 11/16/16
EPA 300.0	NITRATE	0.94	0.5	0.18	0.04	mg/L	1	11/16/16 11/16/16
EPA 300.0	SULFATE	4.5	1.0	0.20	0.09	mg/L	1	11/16/16 11/16/16
SM 2320B	BICARBONATE AS CACO3	94.4	2.0	1.70	0.85	mg/L	1	11/21/16 11/21/16
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	11/21/16 11/21/16
SM 2320B	TOTAL ALKALINITY AS CACO3	94.4	2.0	1.70	0.85	mg/L	1	11/21/16 11/21/16
SM 4500-Si D	SILICA W	65.9	5.0	4.00	2.65	mg/L	5	11/21/16 11/21/16
SM 4500-Si D	DISSOLVED SILICA	68.1	5.0	4.00	2.65	mg/L	5	11/21/16 11/21/16
SM3500FeB	FERROUS IRON	0.53 J	1.0	0.32	0.16	mg/L	1	11/16/16 11/16/16

J = Estimated value.

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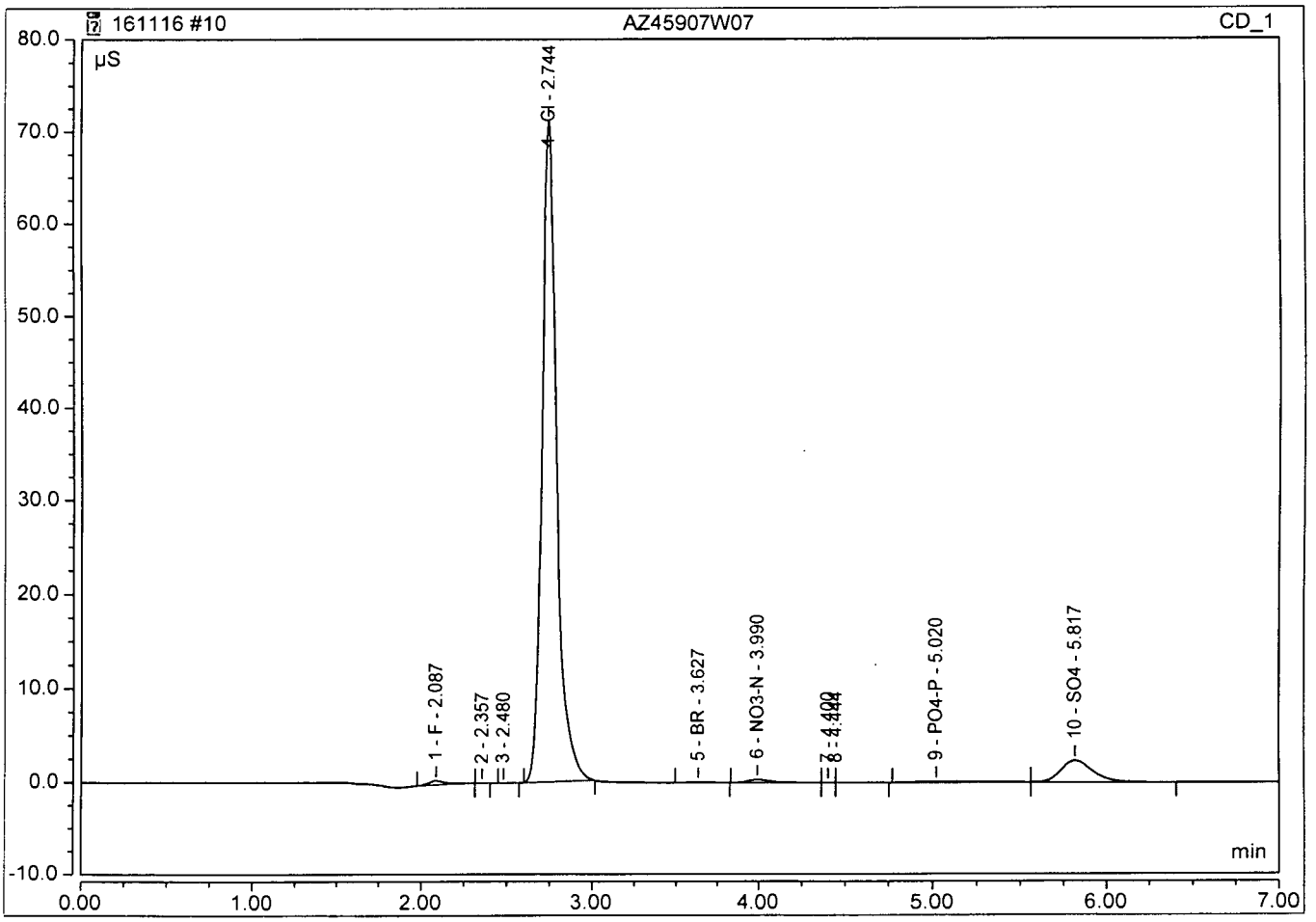
APPL-F1-SC-NoMC-REG MDLs

Peak Integration Report

Sample Name:	**AZ45907W07**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**16-Nov-2016 / 13:48**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.09	F	BMB	0.055	0.440	0.2806
4	2.74	Cl	BMB	7.060	71.122	39.3978
5	3.63	BR	BMB	0.008	0.069	0.2594
6	3.99	NO3-N	BMB	0.048	0.331	0.2113
9	5.02	PO4-P	BMB	0.049	0.125	0.4626
10	5.82	SO4	BMB	0.490	2.309	4.5026
TOTAL:				7.71	74.40	45.11



Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH121

Sample Collection Date: 11/14/16

APPL ID: AZ45908

ARF: 81500

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date Analysis Date
EPA 300.0	BROMIDE	1.3	1.0	0.32	0.10	mg/L	2	11/16/16 11/16/16
EPA 300.0	FLUORIDE	0.19 J	0.2	0.18	0.16	mg/L	2	11/16/16 11/16/16
EPA 300.0	NITRATE	4.1	1.0	0.36	0.08	mg/L	2	11/16/16 11/16/16
EPA 300.0	SULFATE	67.9	2.0	0.40	0.18	mg/L	2	11/16/16 11/16/16
EPA 300.0	CHLORIDE	411	10.0	2.00	0.80	mg/L	10	11/16/16 11/16/16
SM 2320B	BICARBONATE AS CACO3	119	2.0	1.70	0.85	mg/L	1	11/21/16 11/21/16
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	11/21/16 11/21/16
SM 2320B	TOTAL ALKALINITY AS CACO3	119	2.0	1.70	0.85	mg/L	1	11/21/16 11/21/16
SM 4500-Si D	SILICA W	78.0	5.0	4.00	2.65	mg/L	5	11/21/16 11/21/16
SM 4500-Si D	DISSOLVED SILICA	76.7	5.0	4.00	2.65	mg/L	5	11/21/16 11/21/16
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	11/16/16 11/16/16

J = Estimated value.

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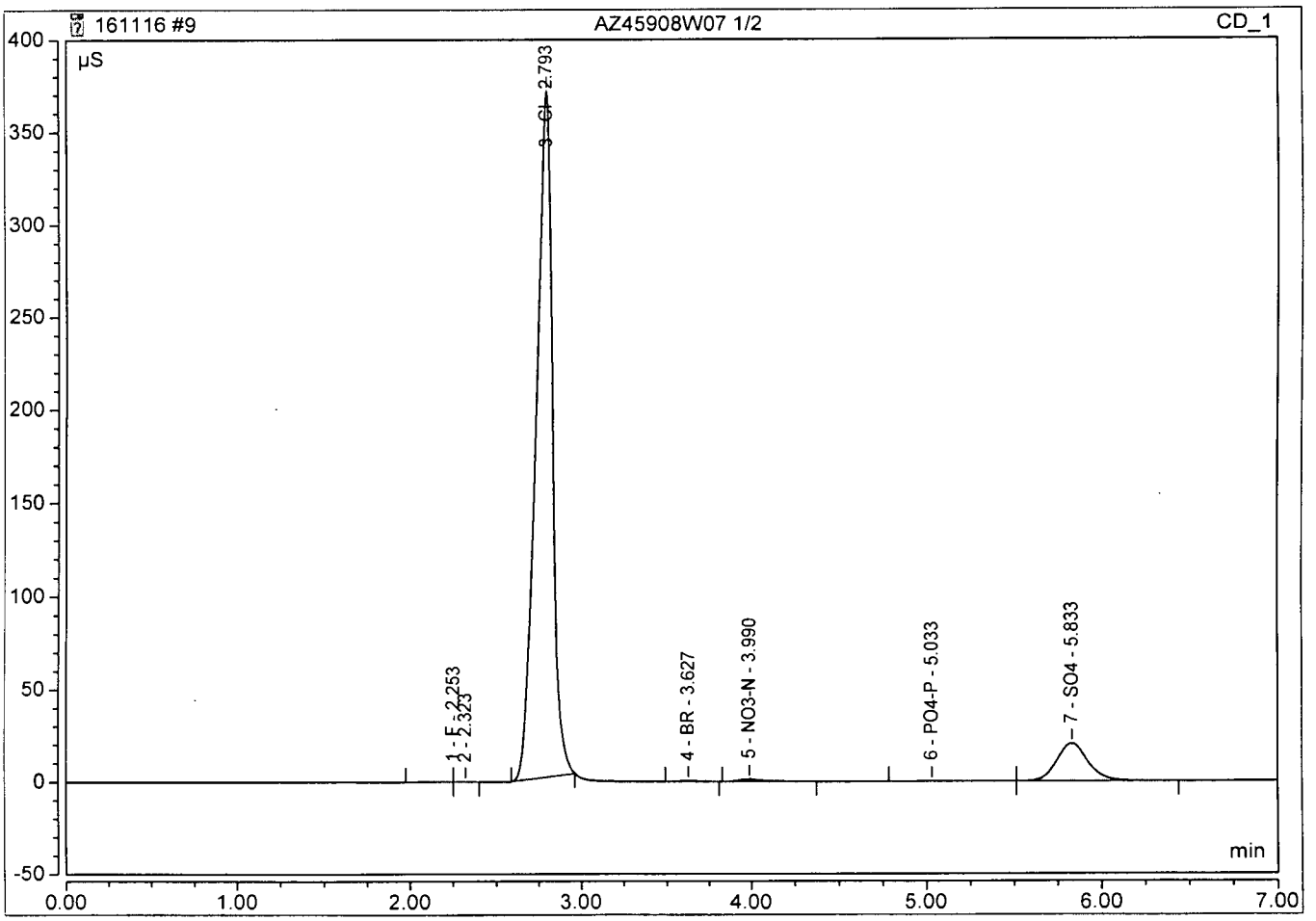
APPL-F1-SC-NoMC-REG MDLs

Peak Integration Report

Sample Name:	**AZ45908W07 1/2**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**2.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**16-Nov-2016 / 13:35**	*Run Time:*	**7.00**

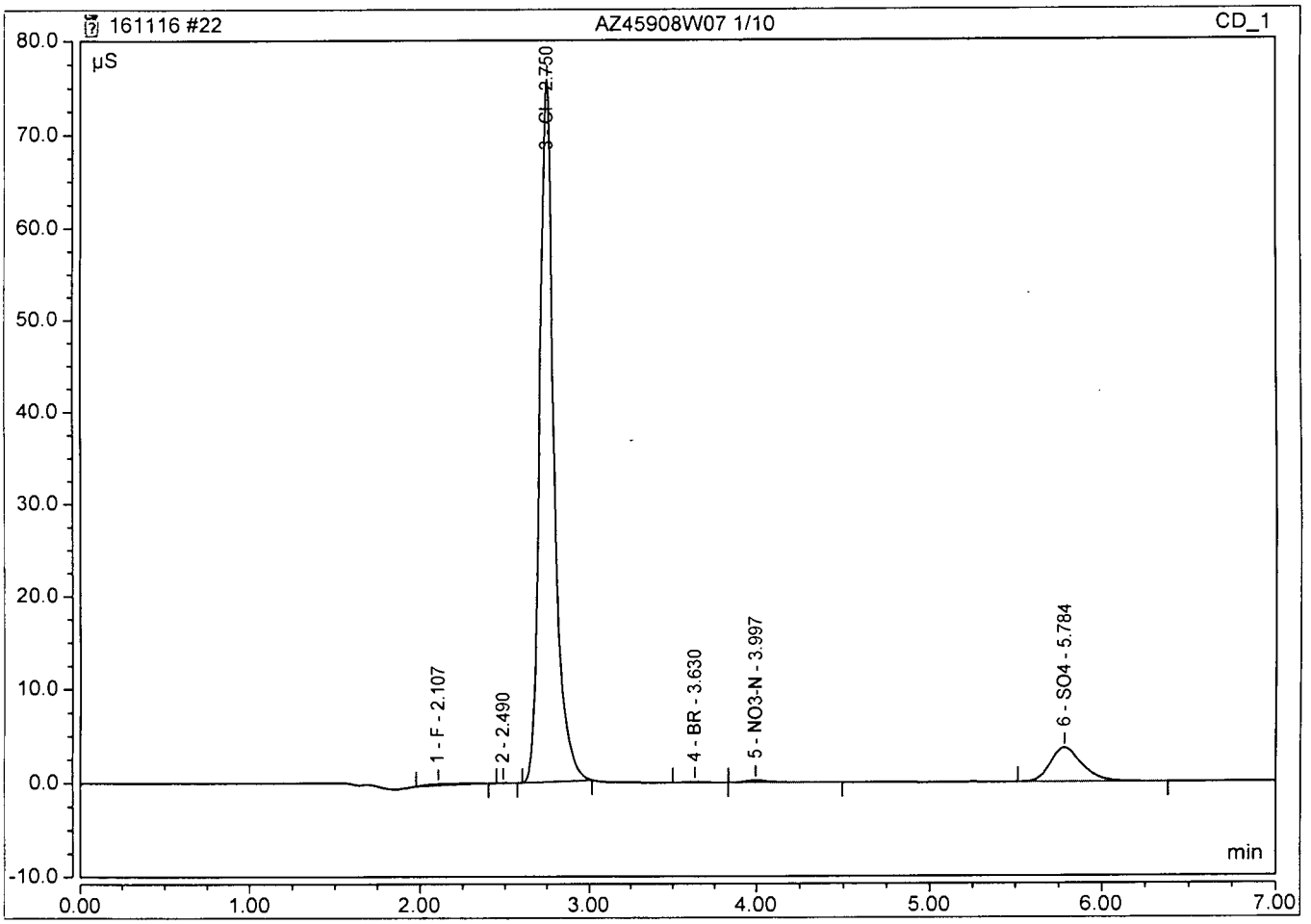
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.25	F	BMB	0.013	0.000	0.1894
3	2.79	Cl	BMB	41.386	369.485	456.8206
4	3.63	BR	BMB	0.035	0.290	1.3450
5	3.99	NO3-N	BMB	0.152	1.076	0.9274
6	5.03	PO4-P	BMB	0.036	0.104	0.7146
7	5.83	SO4	BMB	4.088	20.145	67.9316
TOTAL:				45.71	391.10	527.93



Peak Integration Report

Sample Name:	**AZ45908W07 1/10**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**10.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**16-Nov-2016 / 16:24**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.11	F	BMB	0.039	0.149	2.0993
3	2.75	Cl	BMB	7.378	75.710	411.4874
4	3.63	BR	BMB	0.007	0.060	2.4182
5	4.00	NO3-N	BMB	0.032	0.220	1.7262
6	5.78	SO4	BMB	0.752	3.582	66.5458
TOTAL:				8.21	79.72	484.28



Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH122

Sample Collection Date: 11/15/16

APPL ID: AZ45909

ARF: 81500

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	BROMIDE	0.63	0.5	0.16	0.05	mg/L	1	11/16/16	11/16/16
EPA 300.0	FLUORIDE	0.35	0.1	0.09	0.08	mg/L	1	11/16/16	11/16/16
EPA 300.0	NITRATE	2.1	0.5	0.18	0.04	mg/L	1	11/16/16	11/16/16
EPA 300.0	CHLORIDE	169	5.0	1.00	0.40	mg/L	5	11/16/16	11/16/16
EPA 300.0	SULFATE	58.2	5.0	1.00	0.45	mg/L	5	11/16/16	11/16/16
SM 2320B	BICARBONATE AS CACO3	50.8	2.0	1.70	0.85	mg/L	1	11/21/16	11/21/16
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	11/21/16	11/21/16
SM 2320B	TOTAL ALKALINITY AS CACO3	50.8	2.0	1.70	0.85	mg/L	1	11/21/16	11/21/16
SM 4500-Si D	SILICA W	36.3	5.0	4.00	2.65	mg/L	5	11/21/16	11/21/16
SM 4500-Si D	DISSOLVED SILICA	39.0	5.0	4.00	2.65	mg/L	5	11/21/16	11/21/16
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	11/16/16	11/16/16

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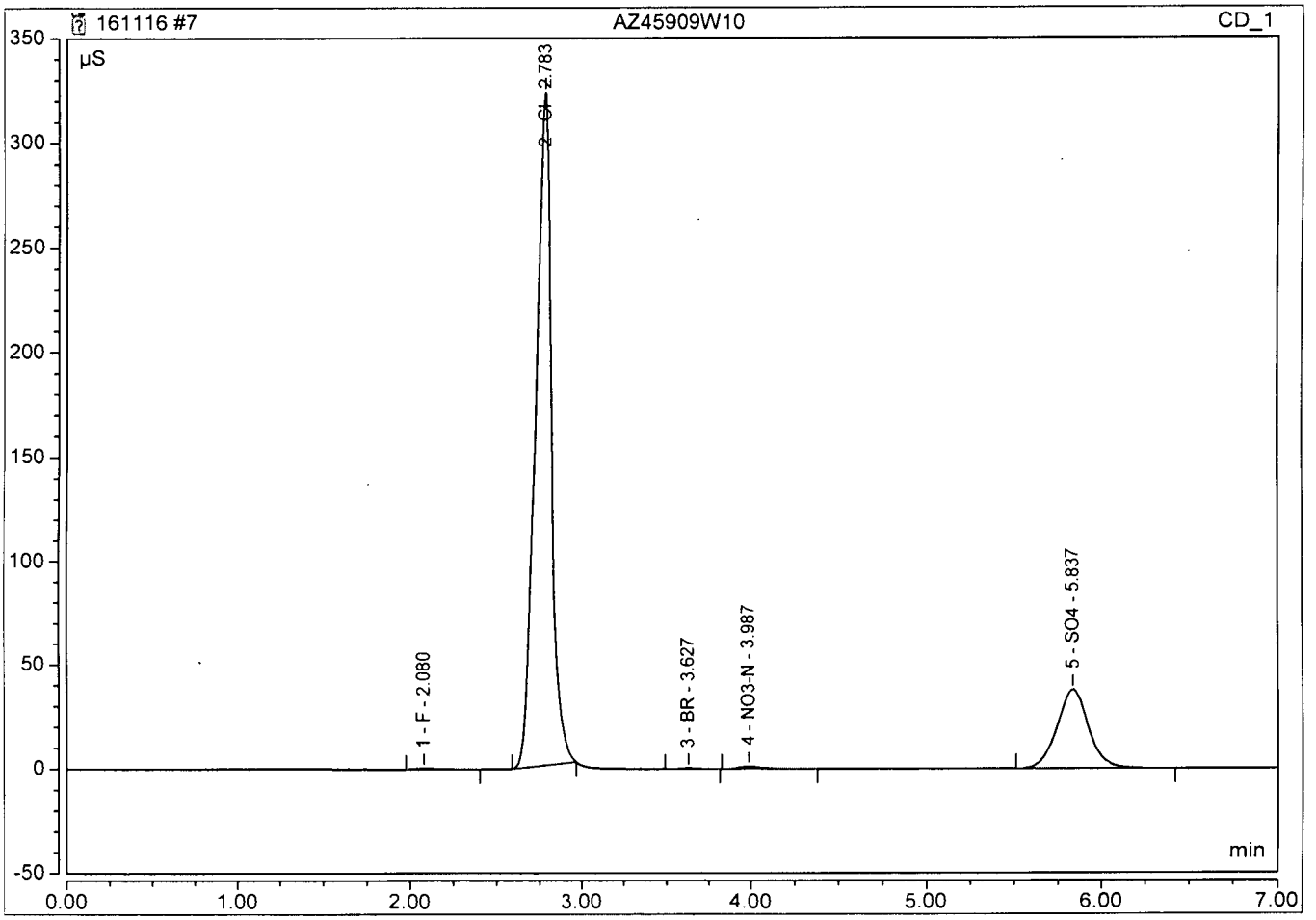
APPL-F1-SC-NoMC-REG MDLs

Peak Integration Report

Sample Name:	**AZ45909W10**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**16-Nov-2016 / 13:08**	*Run Time:*	**7.00**

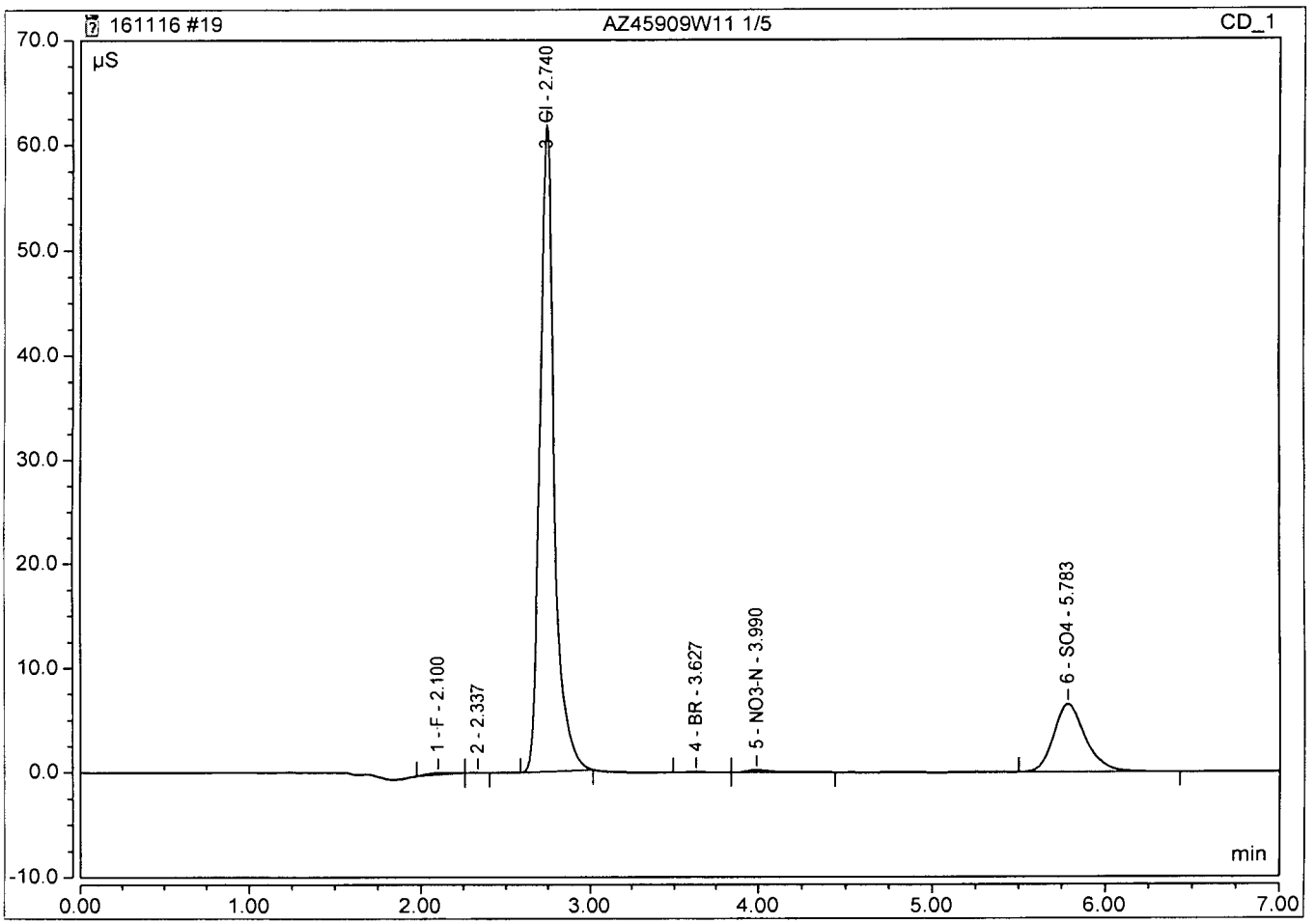
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.08	F	BMB	0.071	0.542	0.3523
2	2.78	Cl	BMB	35.090	322.369	193.7434
3	3.63	BR	BMB	0.032	0.268	0.6321
4	3.99	NO3-N	BMB	0.152	1.084	0.4640
5	5.84	SO4	BMB	7.812	37.606	64.4681
TOTAL:				43.16	361.87	259.66



Peak Integration Report

Sample Name:	**AZ45909W11 1/5**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**5.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**16-Nov-2016 / 15:45**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB	0.027	0.182	0.8000
3	2.74	Cl	BMB	6.058	61.808	169.3906
4	3.63	BR	BMB	0.007	0.054	1.1431
5	3.99	NO3-N	BMB	0.031	0.213	0.8502
6	5.78	SO4	BMB	1.362	6.500	58.2302
TOTAL:				7.48	68.76	230.41



Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH126

Sample Collection Date: 11/15/16

APPL ID: AZ45910

ARF: 81500

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	BROMIDE	0.62	0.5	0.16	0.05	mg/L	1	11/16/16	11/16/16
EPA 300.0	FLUORIDE	0.39	0.1	0.09	0.08	mg/L	1	11/16/16	11/16/16
EPA 300.0	NITRATE	4.4	0.5	0.18	0.04	mg/L	1	11/16/16	11/16/16
EPA 300.0	CHLORIDE	157	5.0	1.00	0.40	mg/L	5	11/16/16	11/16/16
EPA 300.0	SULFATE	46.5	5.0	1.00	0.45	mg/L	5	11/16/16	11/16/16
SM 2320B	BICARBONATE AS CACO3	98.1	2.0	1.70	0.85	mg/L	1	11/21/16	11/21/16
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	11/21/16	11/21/16
SM 2320B	TOTAL ALKALINITY AS CACO3	98.1	2.0	1.70	0.85	mg/L	1	11/21/16	11/21/16
SM 4500-Si D	SILICA W	82.6	5.0	4.00	2.65	mg/L	5	11/21/16	11/21/16
SM 4500-Si D	DISSOLVED SILICA	85.4	5.0	4.00	2.65	mg/L	5	11/21/16	11/21/16
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	11/16/16	11/16/16

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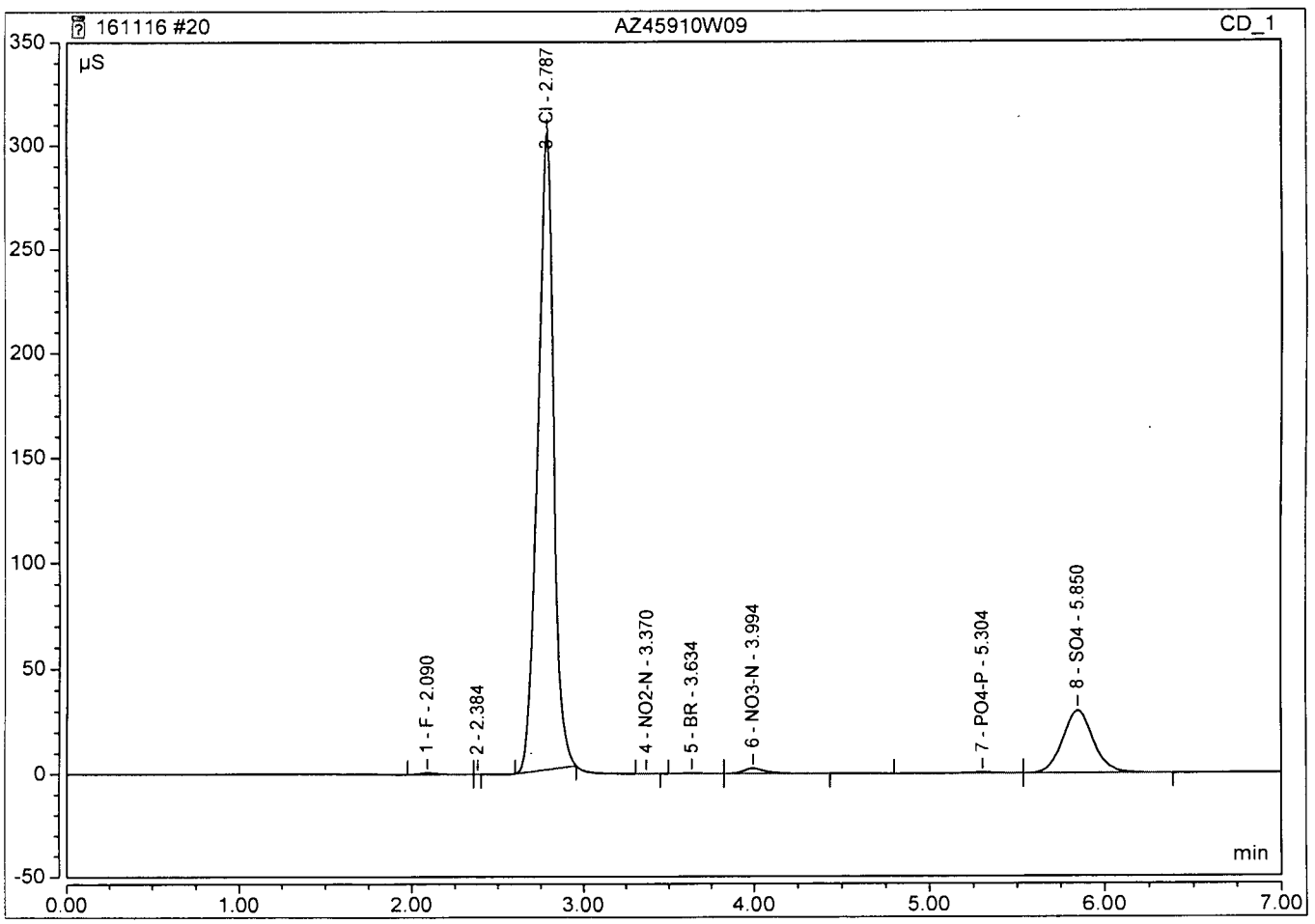
APPL-F1-SC-NoMC-REG MDLs

Peak Integration Report

Sample Name:	**AZ45910W09**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**16-Nov-2016 / 15:58**	*Run Time:*	**7.00**

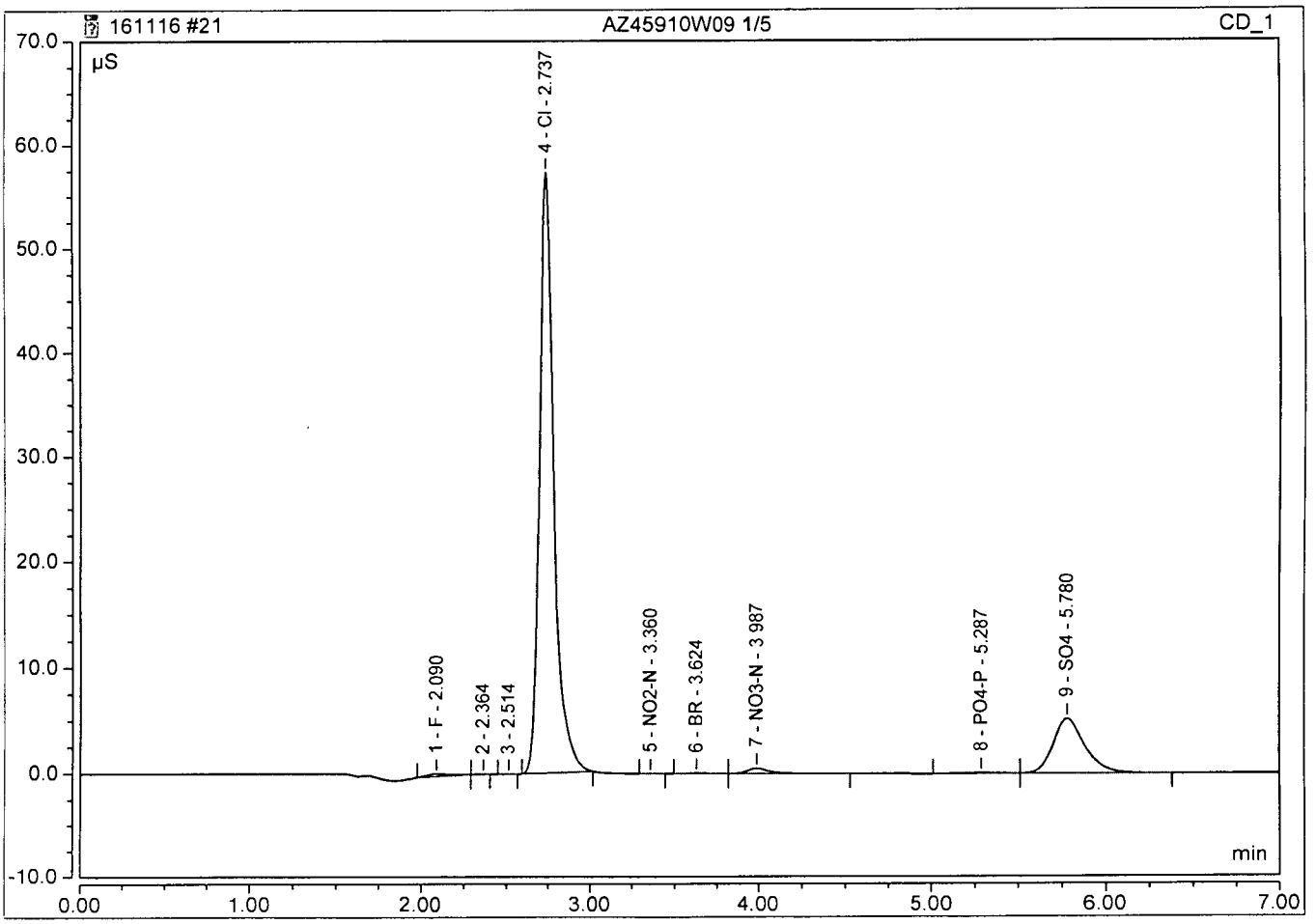
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.09	F	BMB	0.080	0.701	0.3936
3	2.79	Cl	BMB	32.584	303.655	179.9416
4	3.37	NO2-N	BMB	0.001	0.007	0.0233
5	3.63	BR	BMB	0.031	0.260	0.6174
6	3.99	NO3-N	BMB	0.366	2.595	0.9845
7	5.30	PO4-P	BMB	0.083	0.296	0.7299
8	5.85	SO4	BMB	6.105	30.223	50.4882
TOTAL:				39.25	337.74	233.18



Peak Integration Report

Sample Name:	**AZ45910W09 1/5**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**5.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**16-Nov-2016 / 16:11**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.09	F	BMB	0.034	0.230	0.9516
4	2.74	Cl	BMB	5.615	57.255	157.1785
5	3.36	NO2-N	BMB	0.000	0.001	0.1099
6	3.62	BR	BMB	0.006	0.053	1.1329
7	3.99	NO3-N	BMB	0.073	0.507	1.3614
8	5.29	PO4-P	BMB	0.016	0.066	0.9763
9	5.78	SO4	BMB	1.075	5.128	46.4716
TOTAL:				6.82	63.24	208.18



Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH128

Sample Collection Date: 11/14/16

APPL ID: AZ45911

ARF: 81500

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date Analysis Date
EPA 300.0	BROMIDE	0.35 J	0.5	0.16	0.05	mg/L	1	11/16/16 11/16/16
EPA 300.0	FLUORIDE	0.16	0.1	0.09	0.08	mg/L	1	11/16/16 11/16/16
EPA 300.0	NITRATE	2.4	0.5	0.18	0.04	mg/L	1	11/16/16 11/16/16
EPA 300.0	SULFATE	9.8	1.0	0.20	0.09	mg/L	1	11/16/16 11/16/16
EPA 300.0	CHLORIDE	72.8	2.0	0.40	0.16	mg/L	2	11/16/16 11/16/16
SM 2320B	BICARBONATE AS CACO3	75.2	2.0	1.70	0.85	mg/L	1	11/21/16 11/21/16
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	11/21/16 11/21/16
SM 2320B	TOTAL ALKALINITY AS CACO3	75.2	2.0	1.70	0.85	mg/L	1	11/21/16 11/21/16
SM 4500-Si D	SILICA W	57.2	5.0	4.00	2.65	mg/L	5	11/21/16 11/21/16
SM 4500-Si D	DISSOLVED SILICA	62.4	5.0	4.00	2.65	mg/L	5	11/21/16 11/21/16
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	11/16/16 11/16/16

J = Estimated value.

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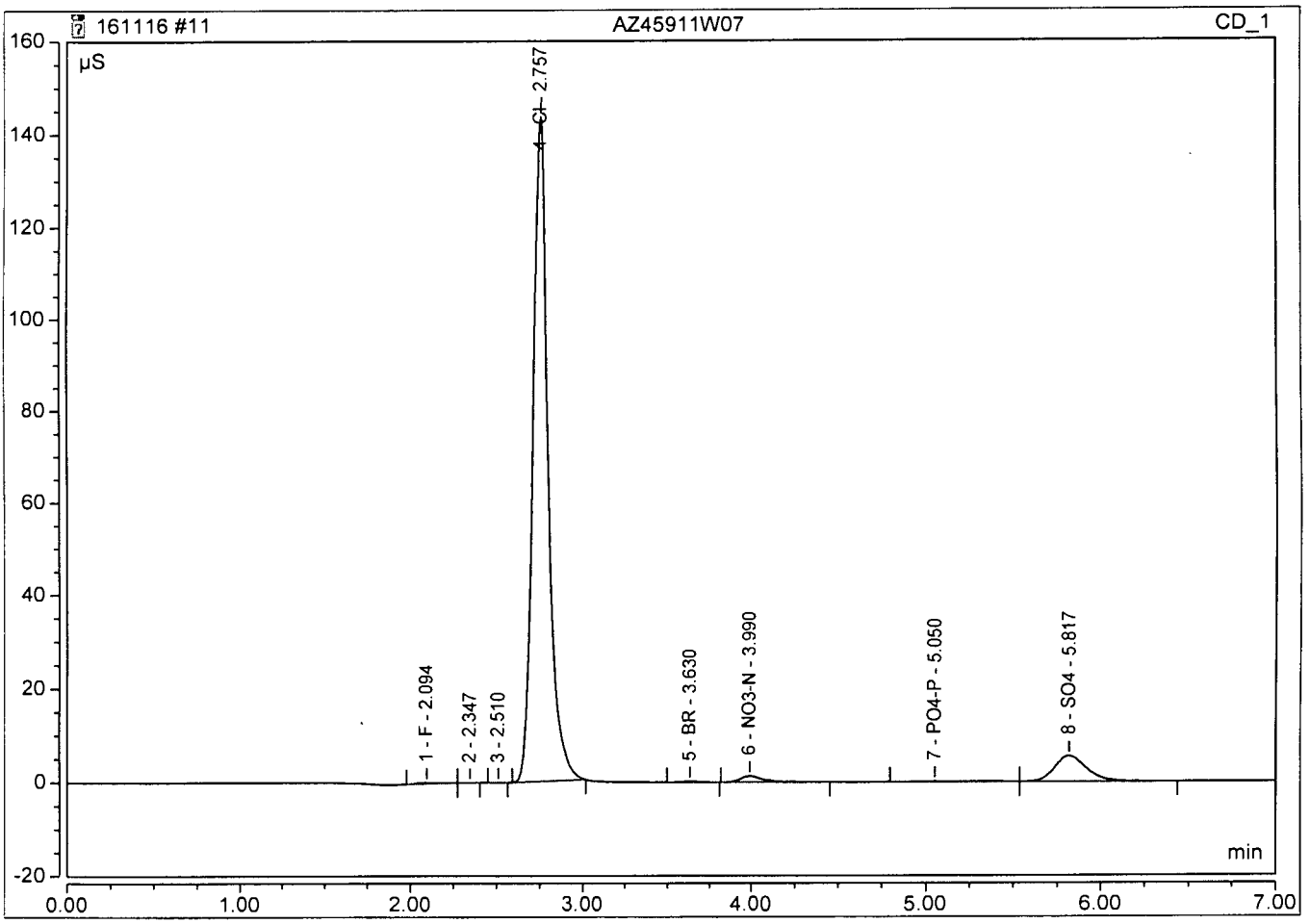
APPL-F1-SC-NoMC-REG MDLs

Peak Integration Report

Sample Name:	**AZ45911W07**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**16-Nov-2016 / 14:01**	*Run Time:*	**7.00**

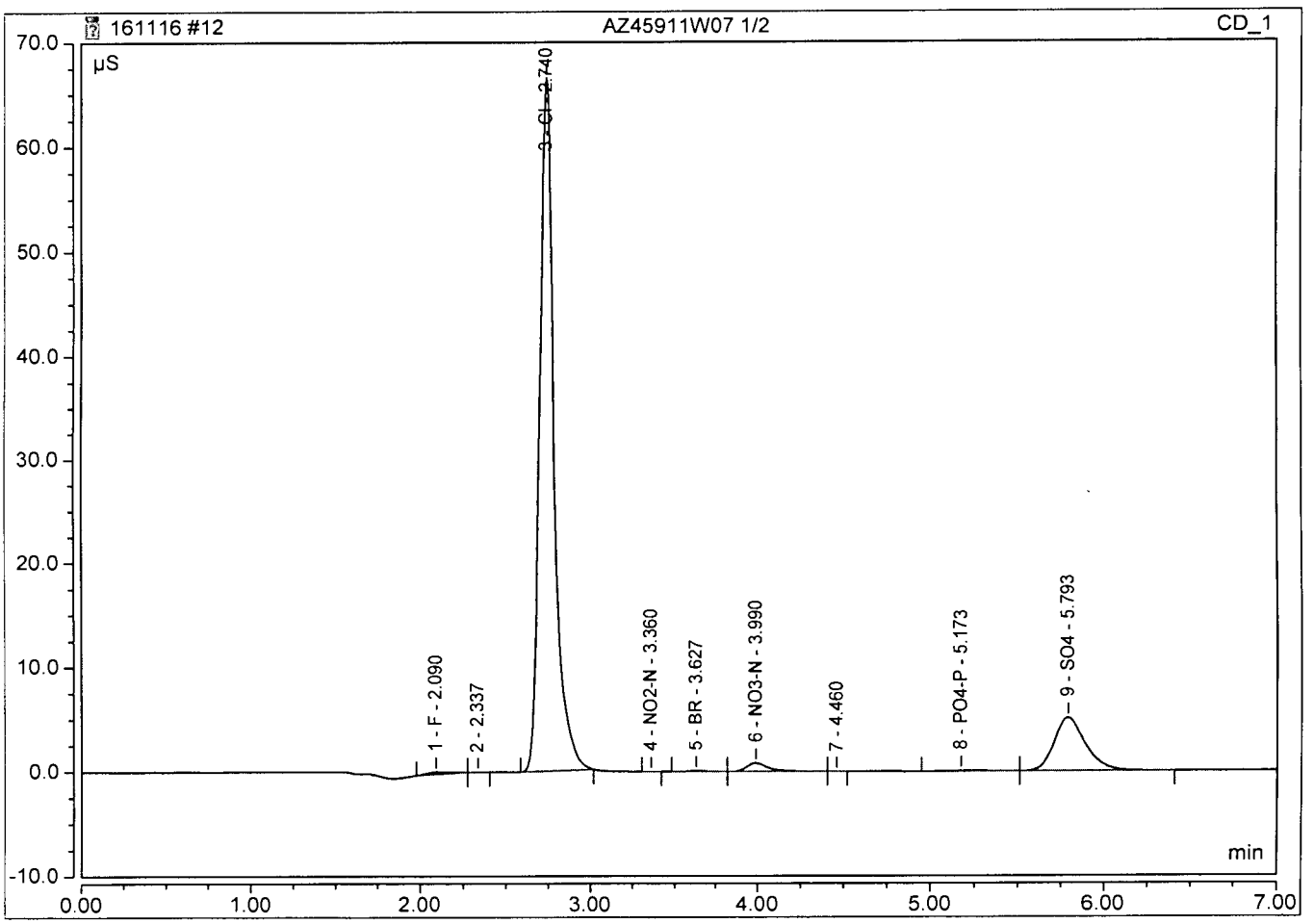
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.09	F	BMB	0.027	0.204	0.1576
4	2.76	Cl	BMB	14.518	143.467	80.4615
5	3.63	BR	BMB	0.014	0.118	0.3482
6	3.99	NO3-N	BMB	0.184	1.287	0.5421
7	5.05	PO4-P	BMB	0.040	0.104	0.3862
8	5.82	SO4	BMB	1.133	5.427	9.7755
		TOTAL:		15.92	150.61	91.67



Peak Integration Report

Sample Name:	**AZ45911W07 1/2**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**2.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**16-Nov-2016 / 14:14**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.09	F	BMB	0.032	0.224	0.3576
3	2.74	Cl	BMB	6.519	66.495	72.8275
4	3.36	NO2-N	BMB	0.000	0.001	0.0434
5	3.63	BR	BMB	0.008	0.065	0.4968
6	3.99	NO3-N	BMB	0.115	0.811	0.7495
8	5.17	PO4-P	BMB	0.013	0.043	0.3455
9	5.79	SO4	BMB	1.059	5.070	18.3351
TOTAL:				7.75	72.71	93.16



INORGANIC ANALYSIS
Calibration Data

APPL, INC.

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM
ARF No: 81500 SDG: 81500
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 05/20/16

Analyte	Calibration Verification									M
	True ICV	Found 12:41	%R(1)	True CCV1	Found 14:35	%R(1)	True CCV1	Found 14:44	%R(1)	
Ferrous Iron	3	3.01396	100	3	2.95402	98.5	3	2.95402	98.5	

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(1) Control Limits: 90-110

ILM02.0

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 81500 SDG: 81500

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	ICB 05/20/16 12:42	C	CCB 11/16/16 14:36	C	CCB 11/16/16 14:45	C		C		C	
Ferrous Iron	1.000	U	1.000	U	1.000	U					

AMENDED PAGE

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM
ARF No: 81500 SDG: 81500
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 10/20/16

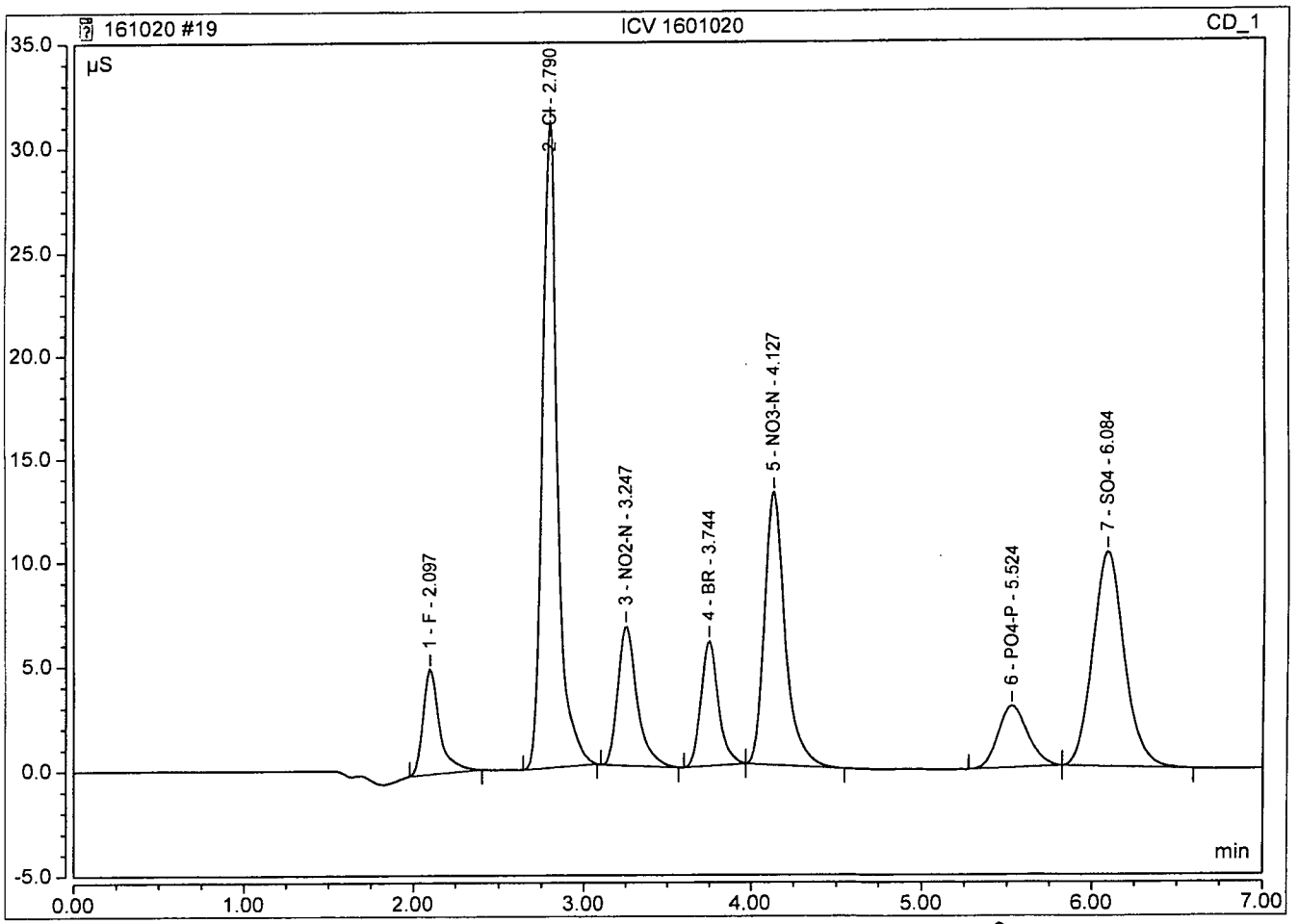
Analyte	Calibration Verification									M
	True ICV	Found 12:37	%R(1)	True	Found	%R(1)	True	Found	%R(1)	
bromide	12.5	11.8422	94.7							
chloride	20	18.2183	91.1							
fluoride	2.5	2.55939	102							
Nitrate(NO3)	22.1	20.0573	90.8							
sulfate	20	18.4058	92.0							

(1) Control Limits: 90-110

Peak Integration Report

Sample Name:	**ICV 1601020**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:37**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB	0.568	5.018	2.5594
2	2.79	Cl	BMB	3.214	31.139	18.2184
3	3.25	NO2-N	BMB	0.894	6.653	2.9873
4	3.74	BR	BMB	0.739	5.970	11.8423
5	4.13	NO3-N	BMB	1.827	13.075	4.5291
6	5.52	PO4-P	BMB	0.590	2.913	4.8011
7	6.08	SO4	BMB	2.187	10.255	18.4058
TOTAL:				10.02	75.02	63.34



Algorithm Check
$y = .2252x - .0087$ y=Peak Area x=Amnt
$x = 2.56$ ✓ MM 12/5/16

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 81500 SDG: 81500

Preparation Blank Matrix (soil/water): water

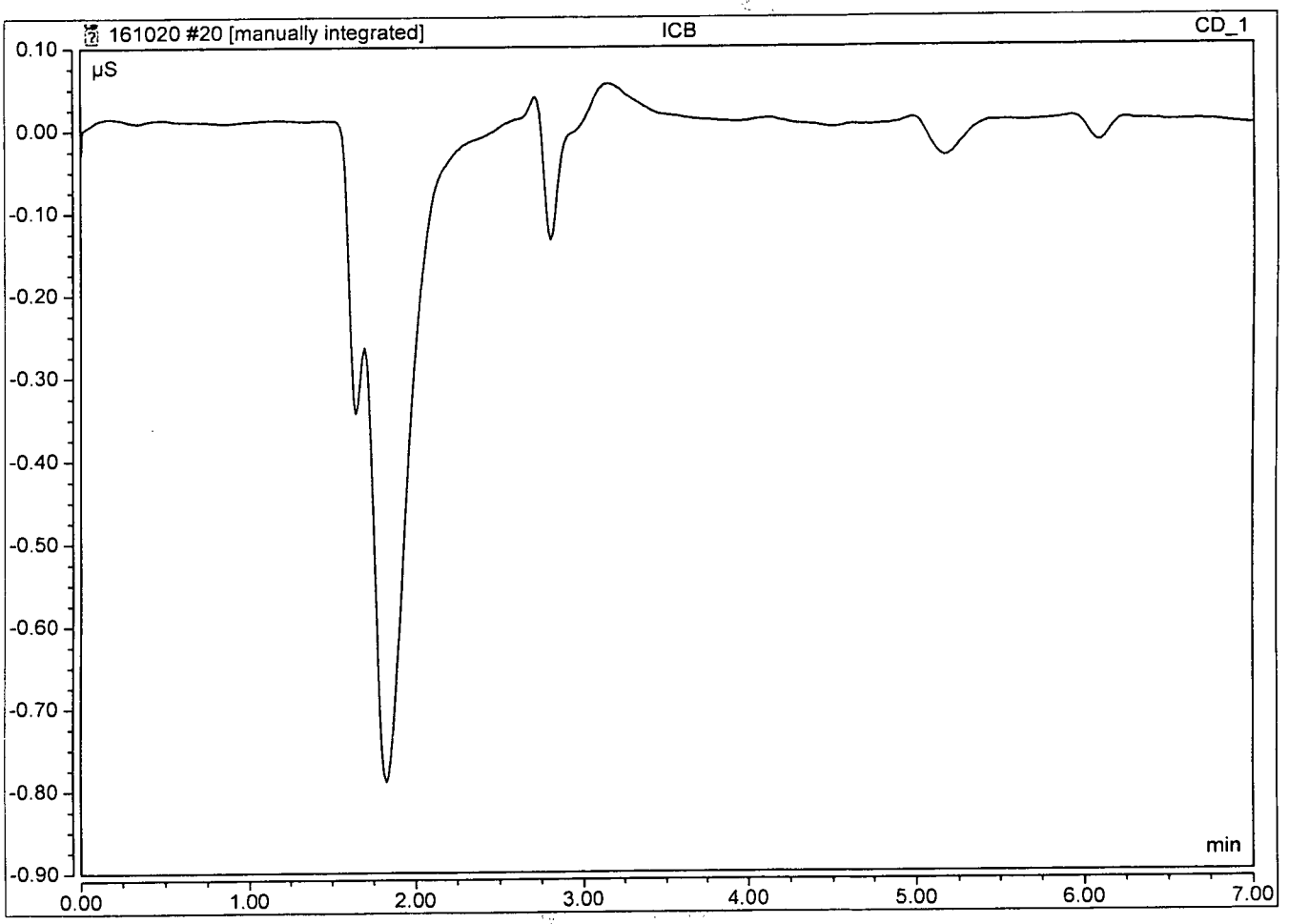
Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	ICB 10/20/16 12:50	C		C		C		C		C	
bromide	.500	U									
chloride	1.000	U									
fluoride	.100	U									
Nitrate(NO3)	.500	U									
sulfate	1.000	U									

Peak Integration Report

Sample Name:	ICB	*Inj. Vol.:*	25.00
Injection Type:	Unknown	*Dilution Factor:*	1.0000
Program:	Analytical Processing Method 161020 ND	*Operator:*	chemist_wetlab
Inj. Date / Time:	20-Oct-2016 / 12:50	*Run Time:*	7.00

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
		TOTAL:		0.00	0.00	0.00



A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No: 81500 SDG: 81500

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 11/16/16

Analyte	Calibration Verification									M
	True CCV1	Found 12:16	%R(1)	True CCV1	Found 15:06	%R(1)	True CCV1	Found 16:53	%R(1)	
bromide	12.5	11.9013	95.2	12.5	11.9601	95.7	12.5	11.9575	95.7	
chloride	25	23.4139	93.7	25	23.556	94.2	25	23.5895	94.4	
fluoride	2.5	2.6303	105	2.5	2.6009	104	2.5	2.6112	104	
Nitrate(NO3)	22.1	20.9525	94.8	22.1	21.0398	95.2	22.1	21.0486	95.2	
sulfate	25	22.9119	91.6	25	22.9575	91.8	25	22.977	91.9	

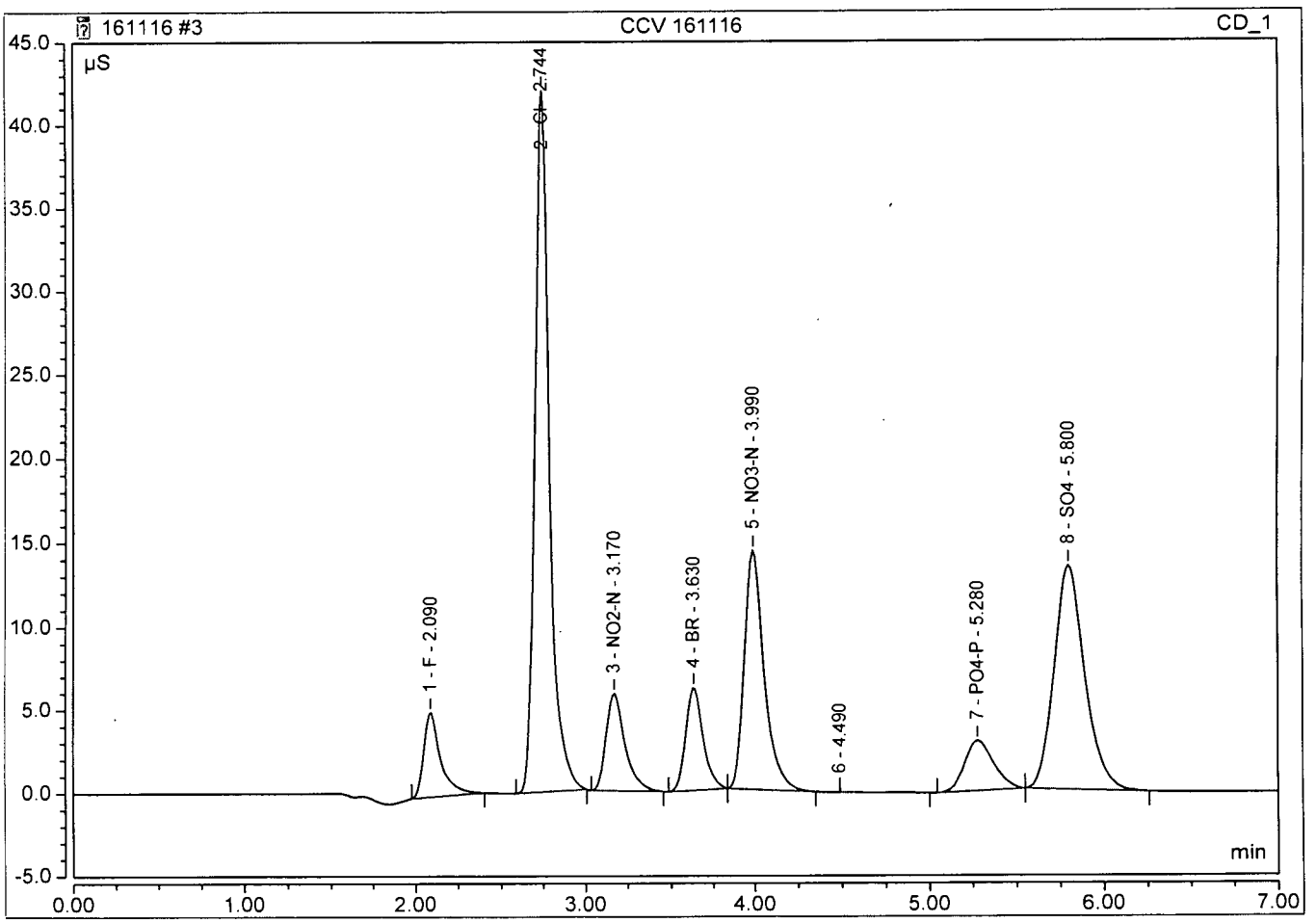
(1) Control Limits: 90-110

ILM02.0

Peak Integration Report

Sample Name:	**CCV 161116**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**16-Nov-2016 / 12:16**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.09	F	BMB	0.584	5.092	2.6303
2	2.74	Cl	BMB	4.158	41.967	23.4139
3	3.17	NO2-N	BMB	0.756	5.852	2.5311
4	3.63	BR	BMB	0.743	6.198	11.9013
5	3.99	NO3-N	BMB	1.910	14.318	4.7312
7	5.28	PO4-P	BMB	0.579	3.001	4.7103
8	5.80	SO4	BMB	2.738	13.440	22.9119
TOTAL:				11.47	89.87	72.83

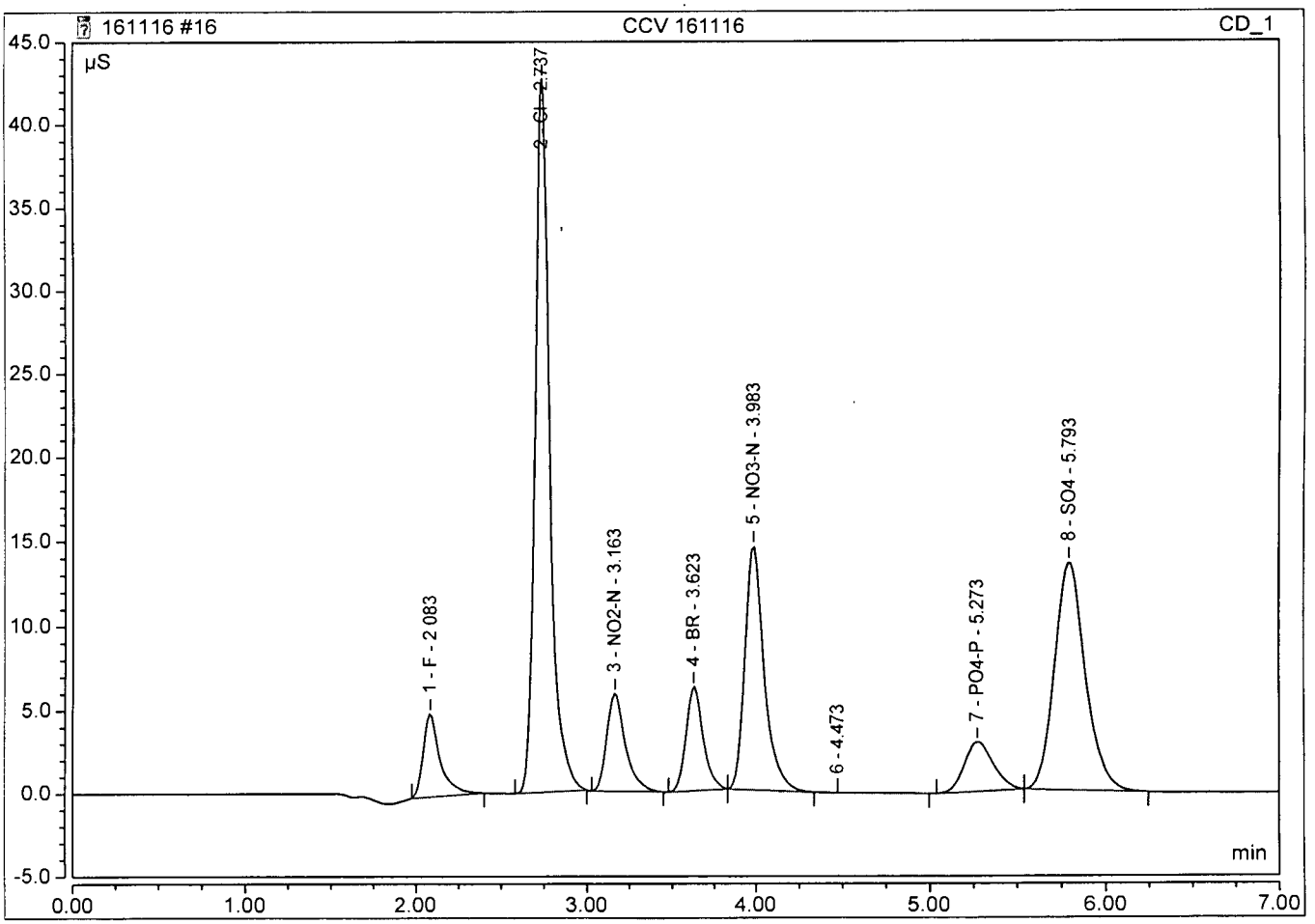


Algorithm Check
y = .2252x - .0087
x = 2.63 ✓
y = Peak Area
x = Amnt
MM 12/5/16

Peak Integration Report

Sample Name:	**CCV 161116**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**16-Nov-2016 / 15:06**	*Run Time:*	**7.00**

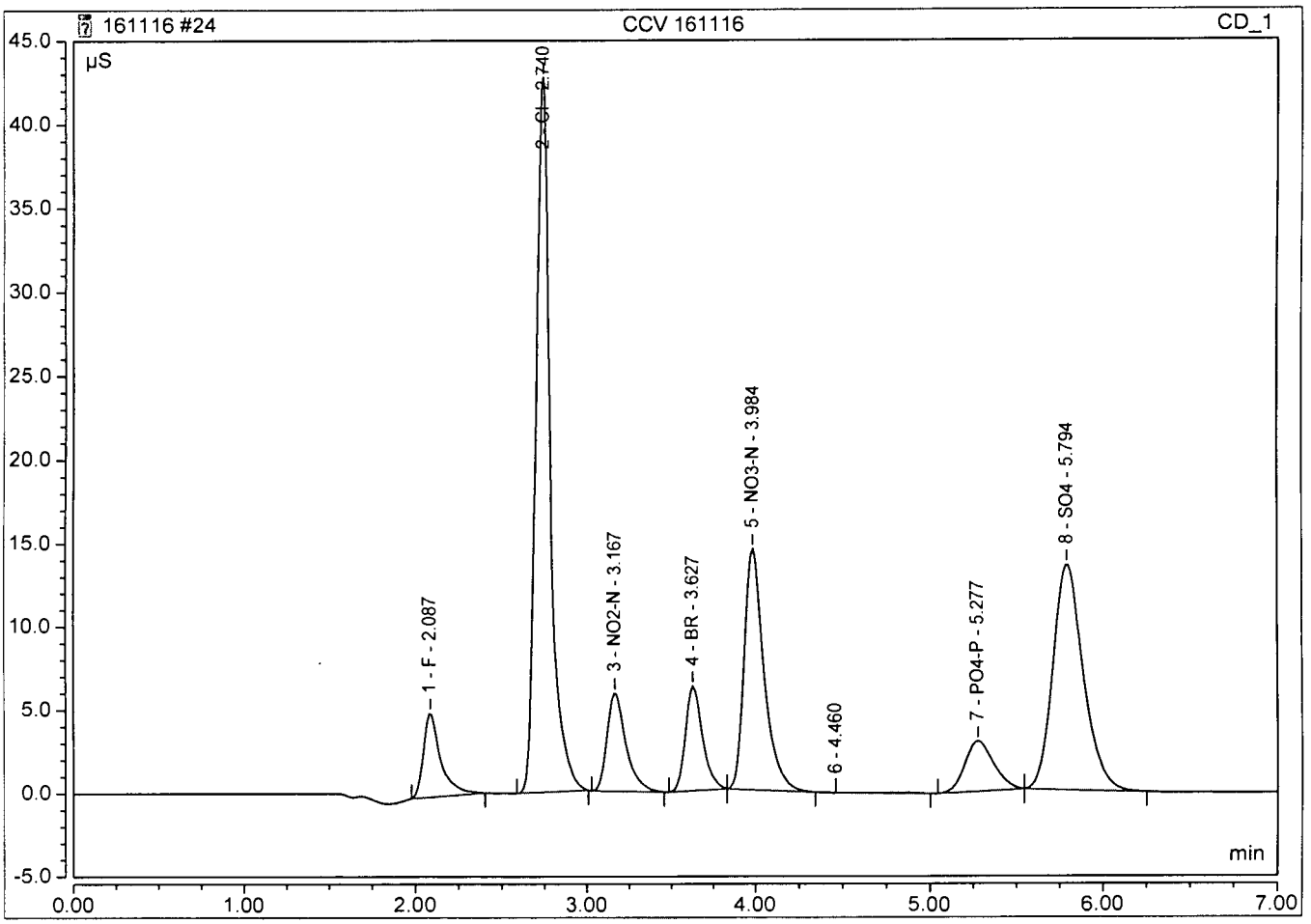
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.08	F	BMB	0.577	5.042	2.6009
2	2.74	Cl	BMB	4.184	42.658	23.5560
3	3.16	NO2-N	BMB	0.760	5.906	2.5428
4	3.62	BR	BMB	0.747	6.272	11.9601
5	3.98	NO3-N	BMB	1.918	14.476	4.7509
7	5.27	PO4-P	BMB	0.578	3.002	4.7042
8	5.79	SO4	BMB	2.743	13.523	22.9575
TOTAL:				11.51	90.88	73.07



Peak Integration Report

Sample Name:	**CCV 161116**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**16-Nov-2016 / 16:53**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.09	F	BMB	0.579	5.032	2.6112
2	2.74	Cl	BMB	4.190	42.688	23.5895
3	3.17	NO2-N	BMB	0.761	5.901	2.5453
4	3.63	BR	BMB	0.746	6.277	11.9575
5	3.98	NO3-N	BMB	1.919	14.481	4.7529
7	5.28	PO4-P	BMB	0.578	2.999	4.7033
8	5.79	SO4	BMB	2.746	13.526	22.9770
TOTAL:				11.52	90.90	73.14



A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 81500 SDG: 81500

Preparation Blank Matrix (soil/water): water

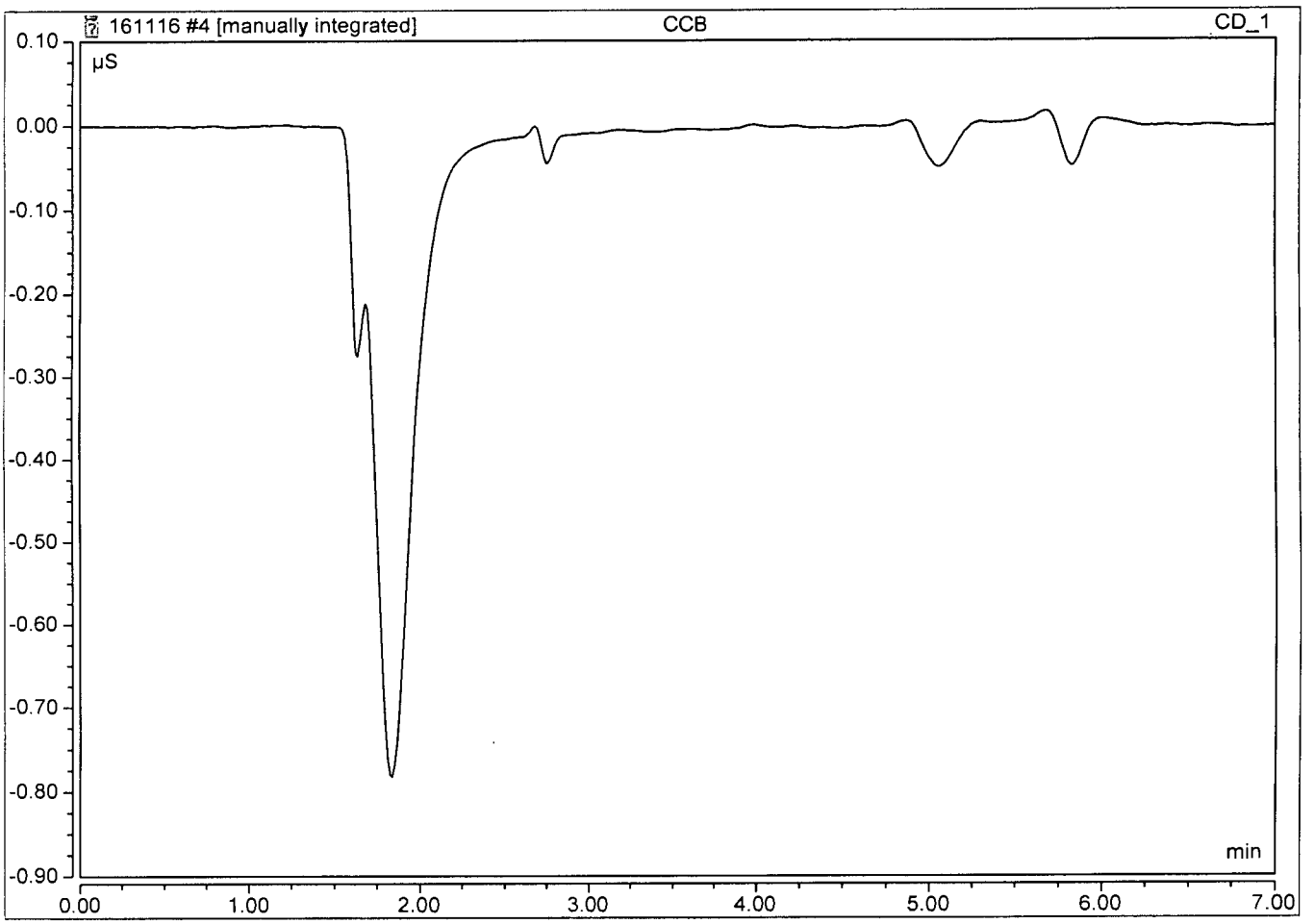
Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	CCB 11/16/16 12:29	C	CCB 11/16/16 15:19	C	CCB 11/16/16 17:06	C		C		C	
bromide	.500	U	.500	U	.500	U					
chloride	1.000	U	1.000	U	1.000	U					
fluoride	.100	U	.100	U	.100	U					
Nitrate(NO3)	.500	U	.500	U	.500	U					
sulfate	1.000	U	1.000	U	1.000	U					

Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**16-Nov-2016 / 12:29**	*Run Time:*	**7.00**

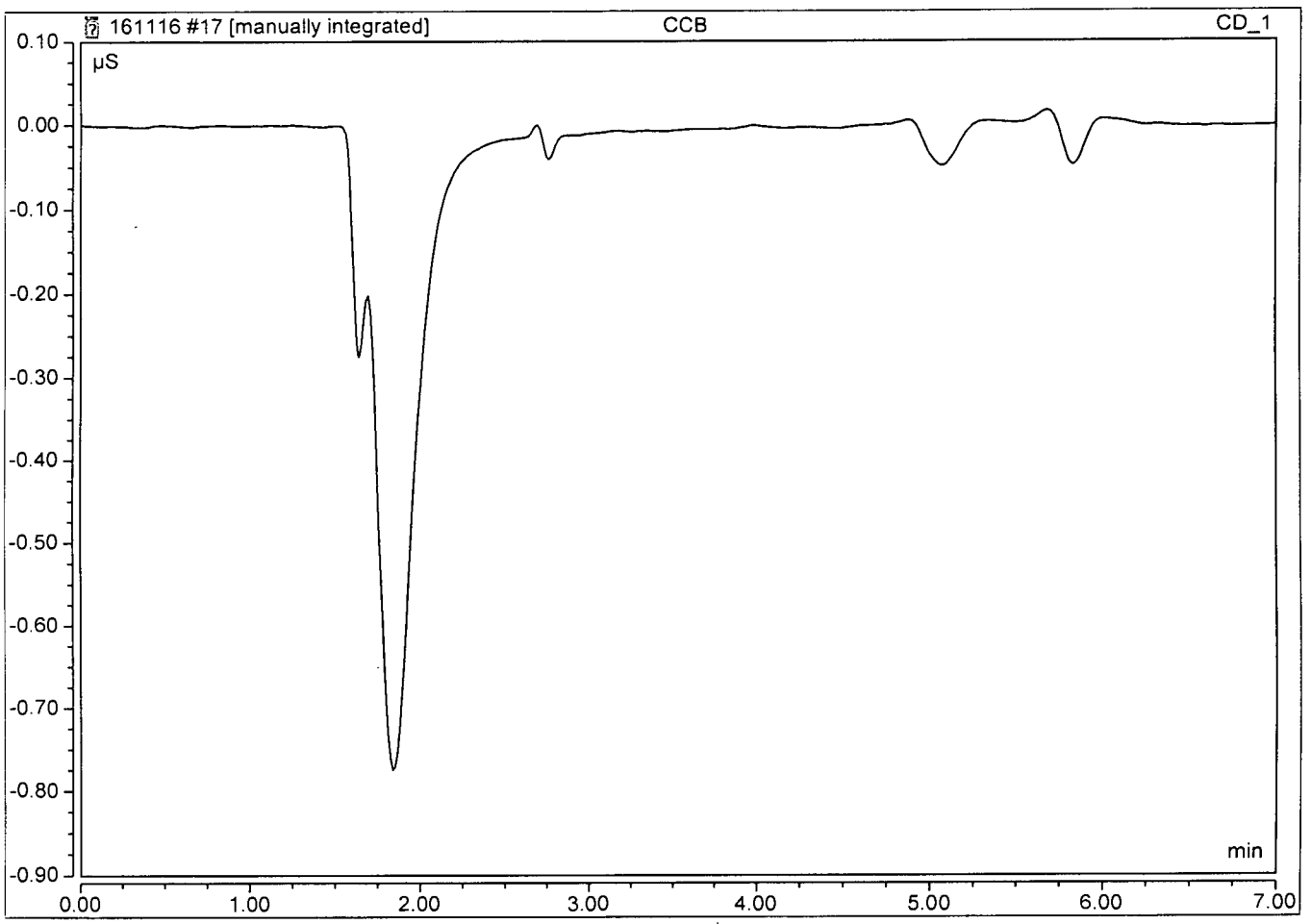
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
		TOTAL:		0.00	0.00	0.00



Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**16-Nov-2016 / 15:19**	*Run Time:*	**7.00**

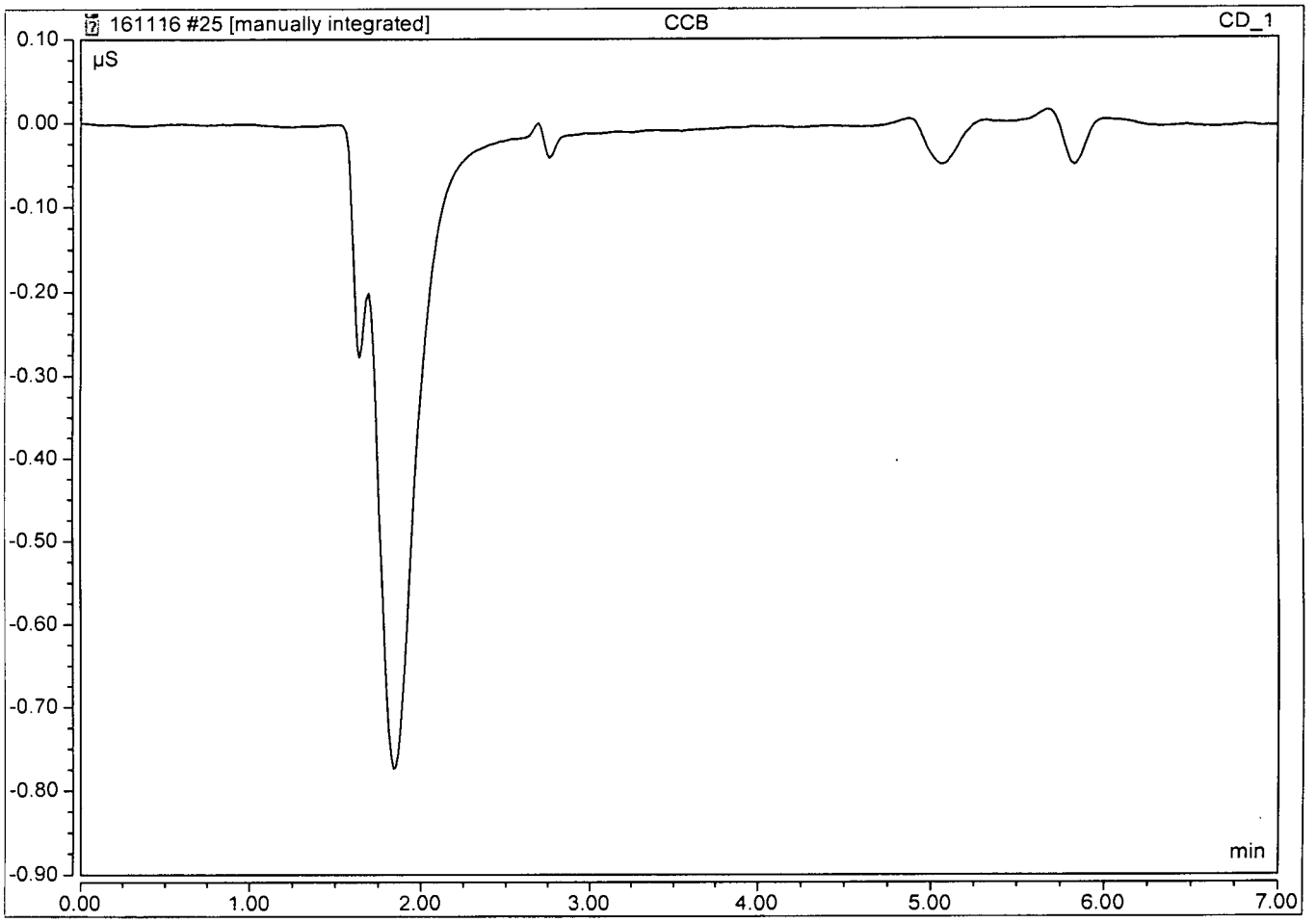
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
		TOTAL:		0.00	0.00	0.00



Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**16-Nov-2016 / 17:06**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
		TOTAL:		0.00	0.00	0.00



A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No: 81500 SDG: 81500

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 11/21/16

Analyte	Calibration Verification									M
	True ICV	Found 11:09	%R(1)	True CCV2	Found 12:35	%R(1)	True CCV1	Found 12:52	%R(1)	
Silica	4	4.11366	103	10	9.24250	92.4	4	4.28901	107	

(1) Control Limits: 90-110

ILM02.0

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No: 81500 SDG: 81500

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 11/21/16

Analyte	Calibration Verification									M
	True CCV2	Found 15:15	%R(1)	True	Found	%R(1)	True	Found	%R(1)	
Silica	10	10.1192	101							

(1) Control Limits: 90-110

ILM02.0

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

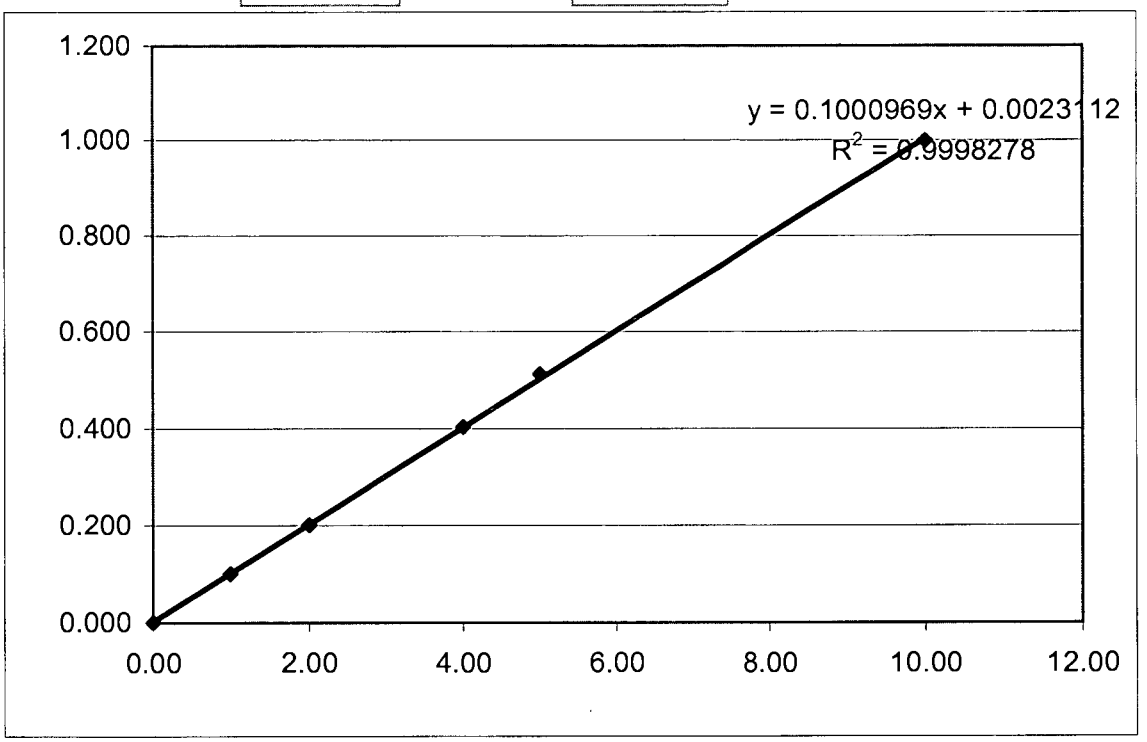
ARF No.: 81500 SDG: 81500

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	ICB 11/21/16 11:10	C	CCB 11/21/16 12:36	C	CCB 11/21/16 12:53	C	CCB 11/21/16 15:16	C		C	
Silica	1.000	U	1.000	U	1.000	U	1.000	U			

Ferrous Iron **161116A**



X	Y
0.00	0.000
1.00	0.101
2.00	0.201
4.00	0.403
5.00	0.512
10.00	0.999

Algorithm Check

reading (y)=	0.299	11/16/15	14:37
dilution=	1		
result (x)=	2.96 ✓		

MM 12/5/16

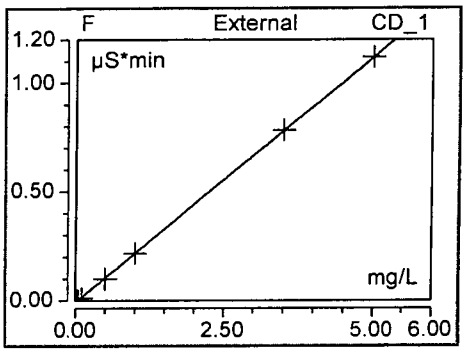
Calibration Batch Report

Sequence:	**161020**	*Injection Volume:*	**25.00**
Instrument Method:	**Program 1**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:24**	*Run Time:*	**7**

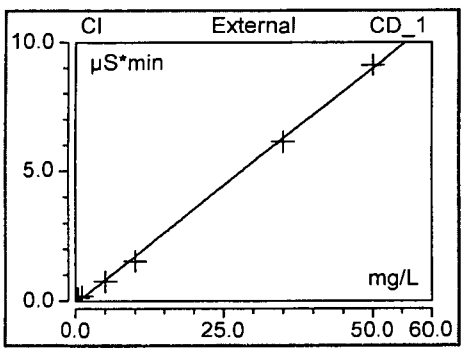
Calibration Summary

Peak Name	Eval.Type	Cal.Type	Points	Offset (C0)	Slope (C1)	Curve (C2)	Coeff.Det. %
F	Area	WithOffset,	6.000	-0.009	0.225	0.000	99.9840
Cl	Area	in, WithOffse	6.000	-0.094	0.182	0.000	99.8613
NO2-N	Area	in, WithOffse	6.000	-0.007	0.301	0.000	99.9917
BR	Area	in, WithOffse	6.000	-0.008	0.063	0.000	99.9802
NO3-N	Area	in, WithOffse	6.000	-0.039	0.412	0.000	99.9329
PO4-P	Area	in, WithOffse	6.000	-0.008	0.125	0.000	99.9563
SO4	Area	in, WithOffse	6.000	-0.060	0.122	0.000	99.9400
		AVERAGE:		-0.0322	0.2043	0.0000	99.9495

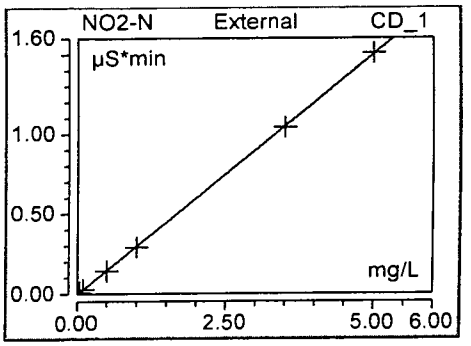
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	F	F	F	F
ICAL 1 10/20/16	2.123	0.0012	0.022	0.044
ICAL 2 10/20/16	2.107	0.0123	0.139	0.093
ICAL 3 10/20/16	2.100	0.1000	0.922	0.483
ICAL 4 10/20/16	2.104	0.2174	1.958	1.004
ICAL 5 10/20/16	2.097	0.7826	6.953	3.513
ICAL 6 10/20/16	2.103	1.1183	9.996	5.004
Average	2.106			
Rel. Std. Dev.	0.443 %			



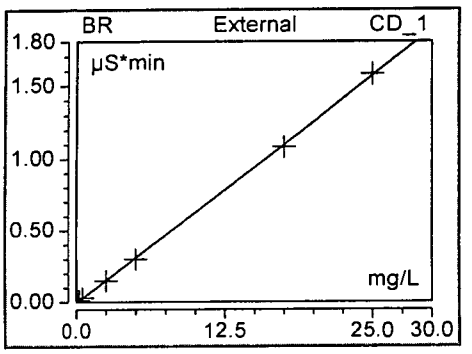
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	Cl	Cl	Cl	Cl
ICAL 1 10/20/16	2.793	0.1132	1.052	1.143
ICAL 2 10/20/16	2.790	0.1861	1.743	1.544
ICAL 3 10/20/16	2.790	0.7617	7.117	4.714
ICAL 4 10/20/16	2.797	1.5419	14.708	9.010
ICAL 5 10/20/16	2.793	6.1288	59.398	34.268
ICAL 6 10/20/16	2.803	9.1171	87.978	50.723
Average	2.795			
Rel. Std. Dev.	0.179 %			



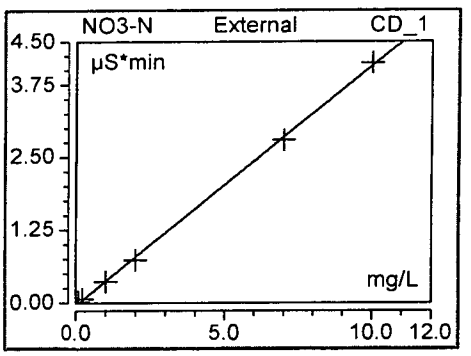
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	NO2-N	NO2-N	NO2-N	NO2-N
ICAL 1 10/20/16	3.250	0.0095	0.073	0.053
ICAL 2 10/20/16	3.247	0.0276	0.209	0.113
ICAL 3 10/20/16	3.250	0.1420	1.072	0.493
ICAL 4 10/20/16	3.254	0.2907	2.188	0.986
ICAL 5 10/20/16	3.250	1.0405	7.775	3.473
ICAL 6 10/20/16	3.257	1.5072	11.205	5.022
Average	3.251			
Rel. Std. Dev.	0.106 %			



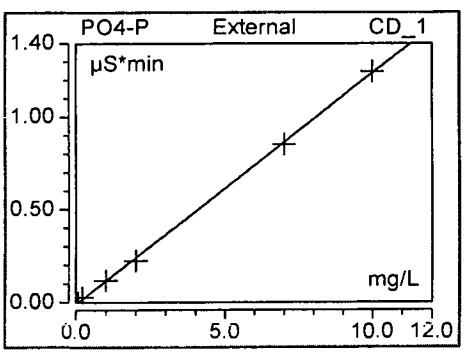
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	BR	BR	BR	BR
ICAL 1 10/20/16	3.757	0.0109	0.087	0.299
ICAL 2 10/20/16	3.753	0.0293	0.232	0.589
ICAL 3 10/20/16	3.750	0.1485	1.179	2.478
ICAL 4 10/20/16	3.754	0.2993	2.389	4.870
ICAL 5 10/20/16	3.743	1.0832	8.801	17.295
ICAL 6 10/20/16	3.747	1.5800	13.023	25.169
Average	3.751			
Rel. Std. Dev.	0.131 %			



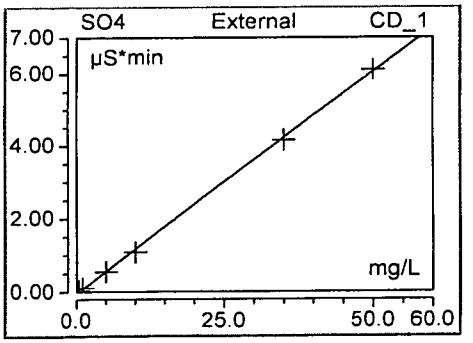
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	NO3-N	NO3-N	NO3-N	NO3-N
ICAL 1 10/20/16	4.143	0.0290	0.196	0.166
ICAL 2 10/20/16	4.140	0.0717	0.496	0.270
ICAL 3 10/20/16	4.137	0.3656	2.533	0.983
ICAL 4 10/20/16	4.140	0.7330	5.168	1.875
ICAL 5 10/20/16	4.123	2.7923	20.144	6.873
ICAL 6 10/20/16	4.123	4.1278	30.098	10.114
Average	4.135			
Rel. Std. Dev.	0.215 %			



Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	PO4-P	PO4-P	PO4-P	PO4-P
ICAL 1 10/20/16	5.540	0.0032	0.021	0.092
ICAL 2 10/20/16	5.540	0.0284	0.107	0.295
ICAL 3 10/20/16	5.537	0.1191	0.557	1.022
ICAL 4 10/20/16	5.537	0.2251	1.103	1.873
ICAL 5 10/20/16	5.520	0.8544	4.243	6.922
ICAL 6 10/20/16	5.523	1.2473	6.244	10.075
Average	5.533			
Rel. Std. Dev.	0.160 %			



Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	SO4	SO4	SO4	SO4
ICAL 1 10/20/16	6.090	0.0385	0.159	0.808
ICAL 2 10/20/16	6.093	0.1046	0.455	1.350
ICAL 3 10/20/16	6.097	0.5456	2.464	4.961
ICAL 4 10/20/16	6.100	1.0756	4.975	9.302
ICAL 5 10/20/16	6.097	4.1512	19.714	34.487
ICAL 6 10/20/16	6.110	6.1057	29.270	50.492
Average	6.098			
Rel. Std. Dev.	0.113 %			

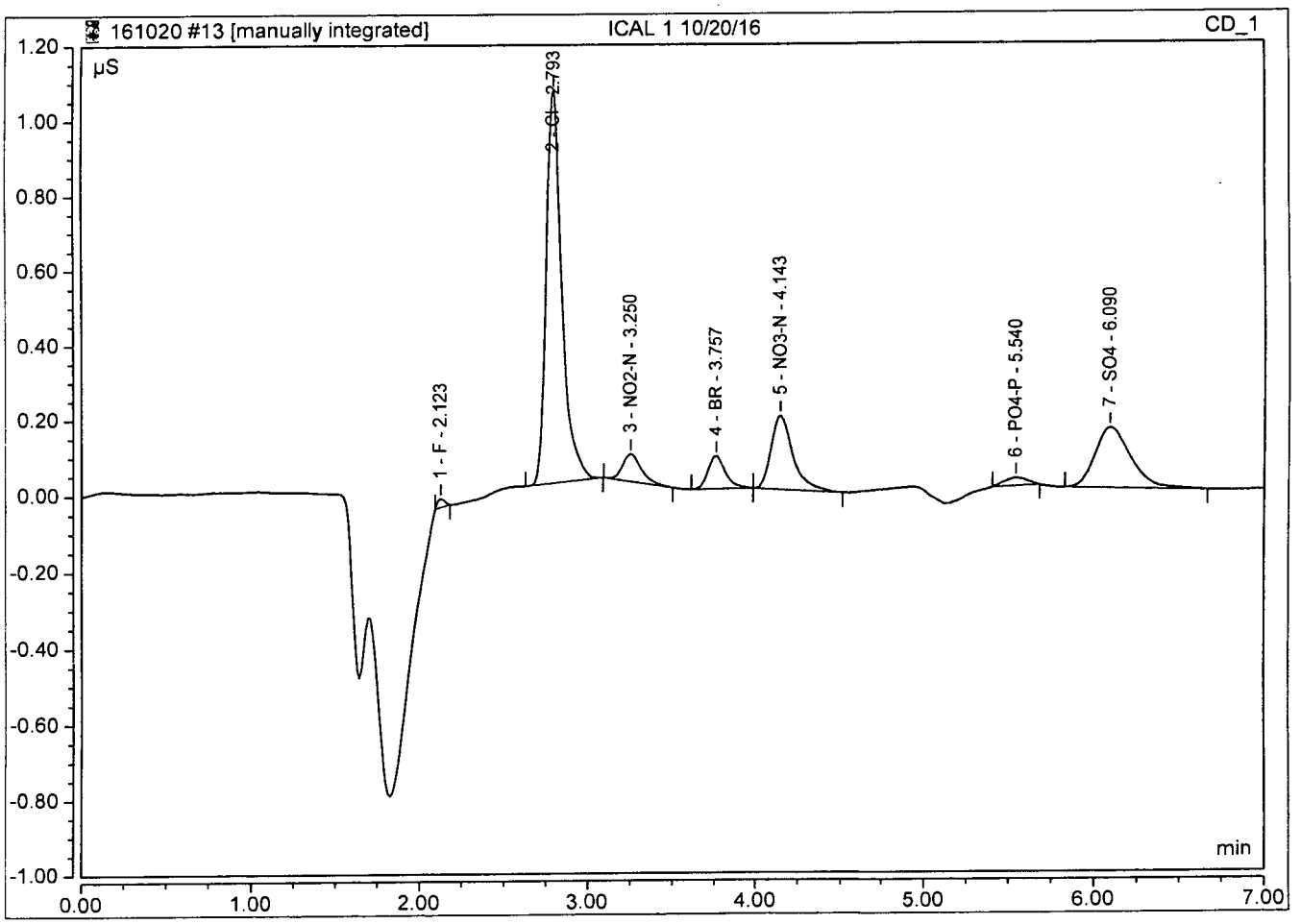


m1 mm 11/30/16 ge 11-30-16

Peak Integration Report

Sample Name:	**ICAL 1 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:19**	*Run Time:*	**7.00**

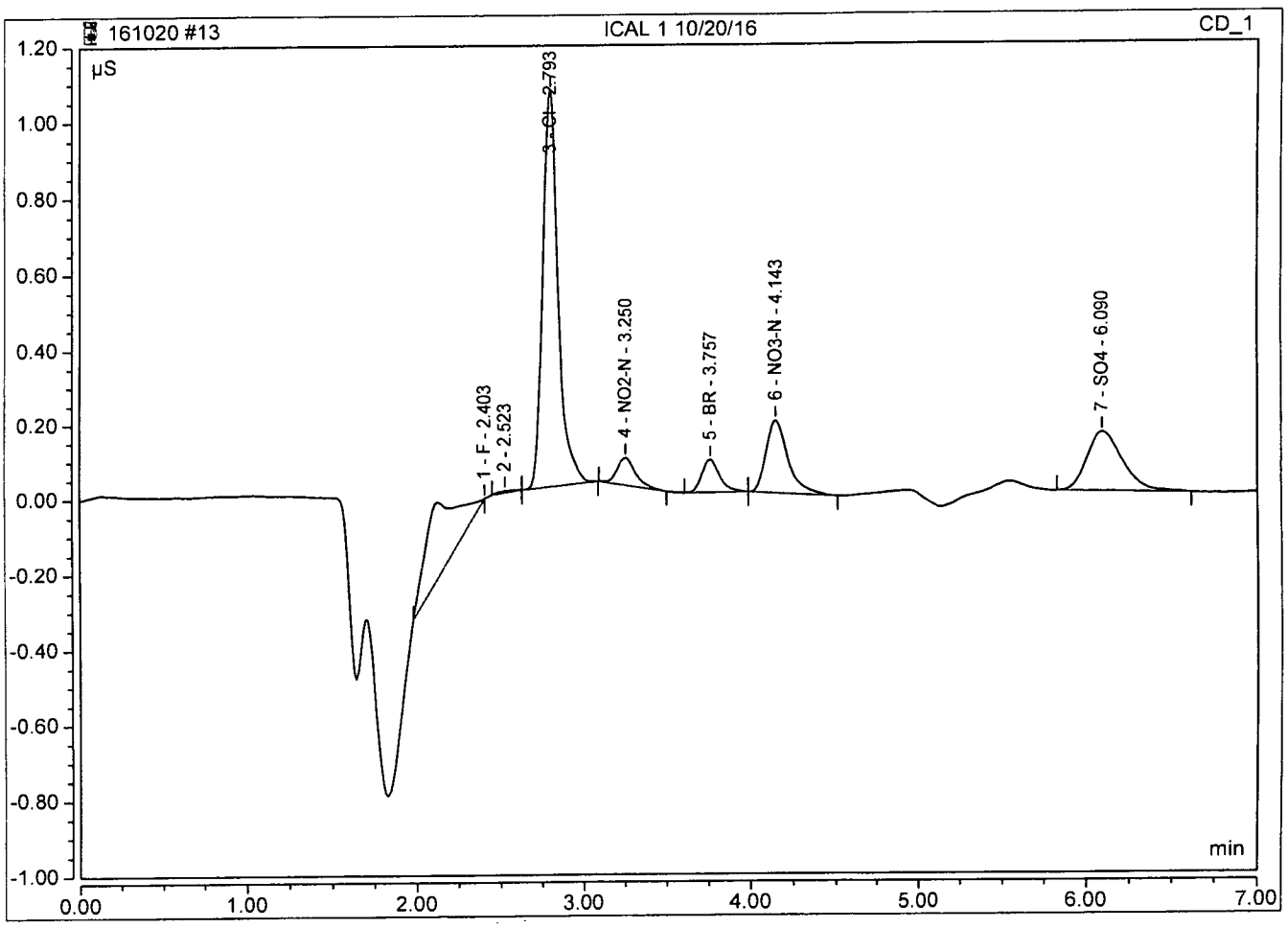
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.12	F	BMB*	0.001	0.022	0.0438
2	2.79	Cl	BMB	0.113	1.052	1.1427
3	3.25	NO2-N	BMB	0.009	0.073	0.0531
4	3.76	BR	BMB	0.011	0.087	0.2985
5	4.14	NO3-N	BMB	0.029	0.196	0.1660
6	5.54	PO4-P	BMB*	0.003	0.021	0.0923
7	6.09	SO4	BMB	0.038	0.159	0.8084
TOTAL:				0.21	1.61	2.60



Peak Integration Report

Sample Name:	**ICAL 1 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:19**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.40	F	BMB	0.044	0.000	0.2342
3	2.79	Cl	BMB	0.113	1.052	1.1427
4	3.25	NO2-N	BMB	0.009	0.073	0.0531
5	3.76	BR	BMB	0.011	0.087	0.2985
6	4.14	NO3-N	BMB	0.029	0.196	0.1660
7	6.09	SO4	BMB	0.038	0.159	0.8063
TOTAL:				0.24	1.57	2.70

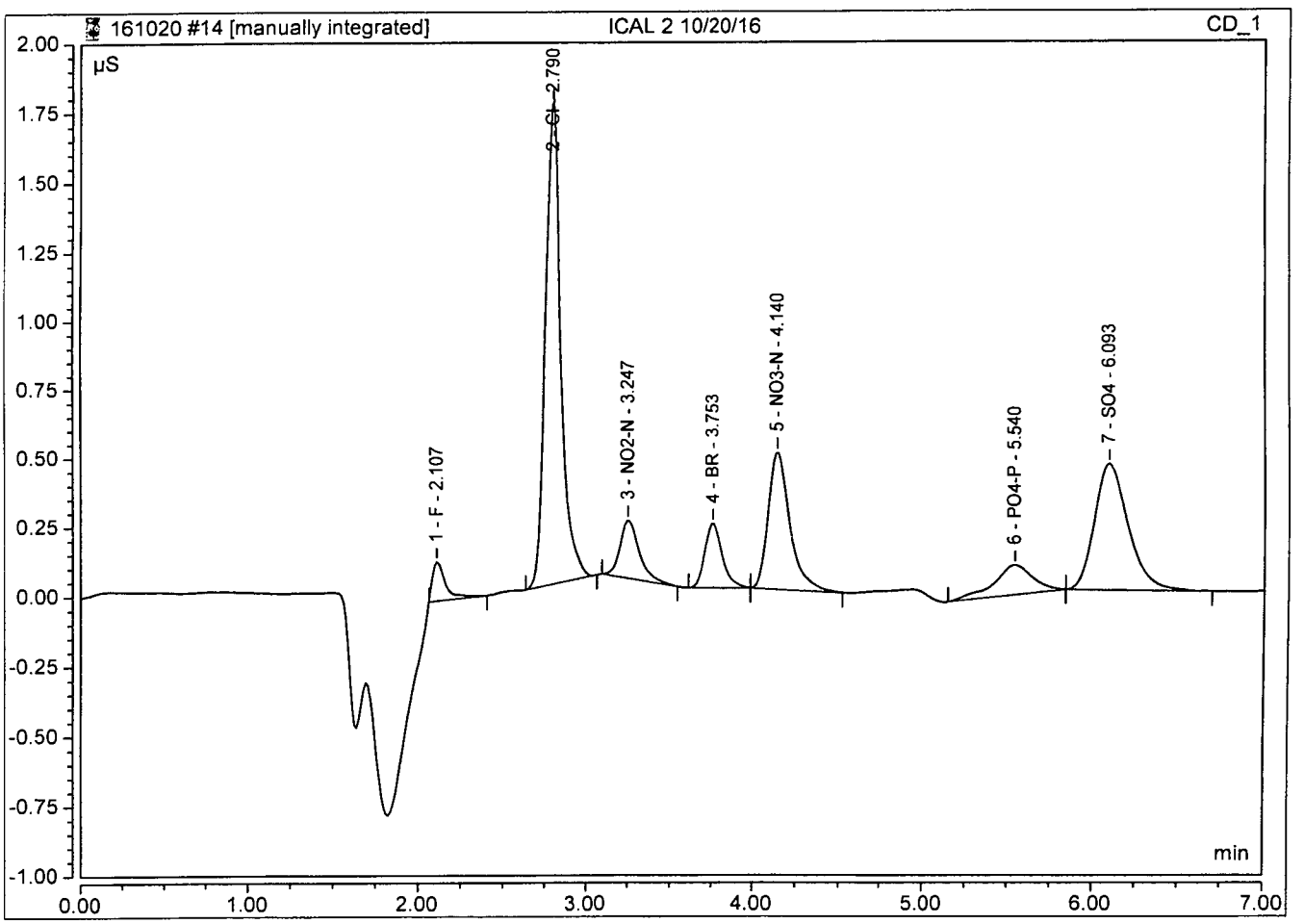


mi mm 11/30/16 KD 11-30-16

Peak Integration Report

Sample Name:	**ICAL 2 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:32**	*Run Time:*	**7.00**

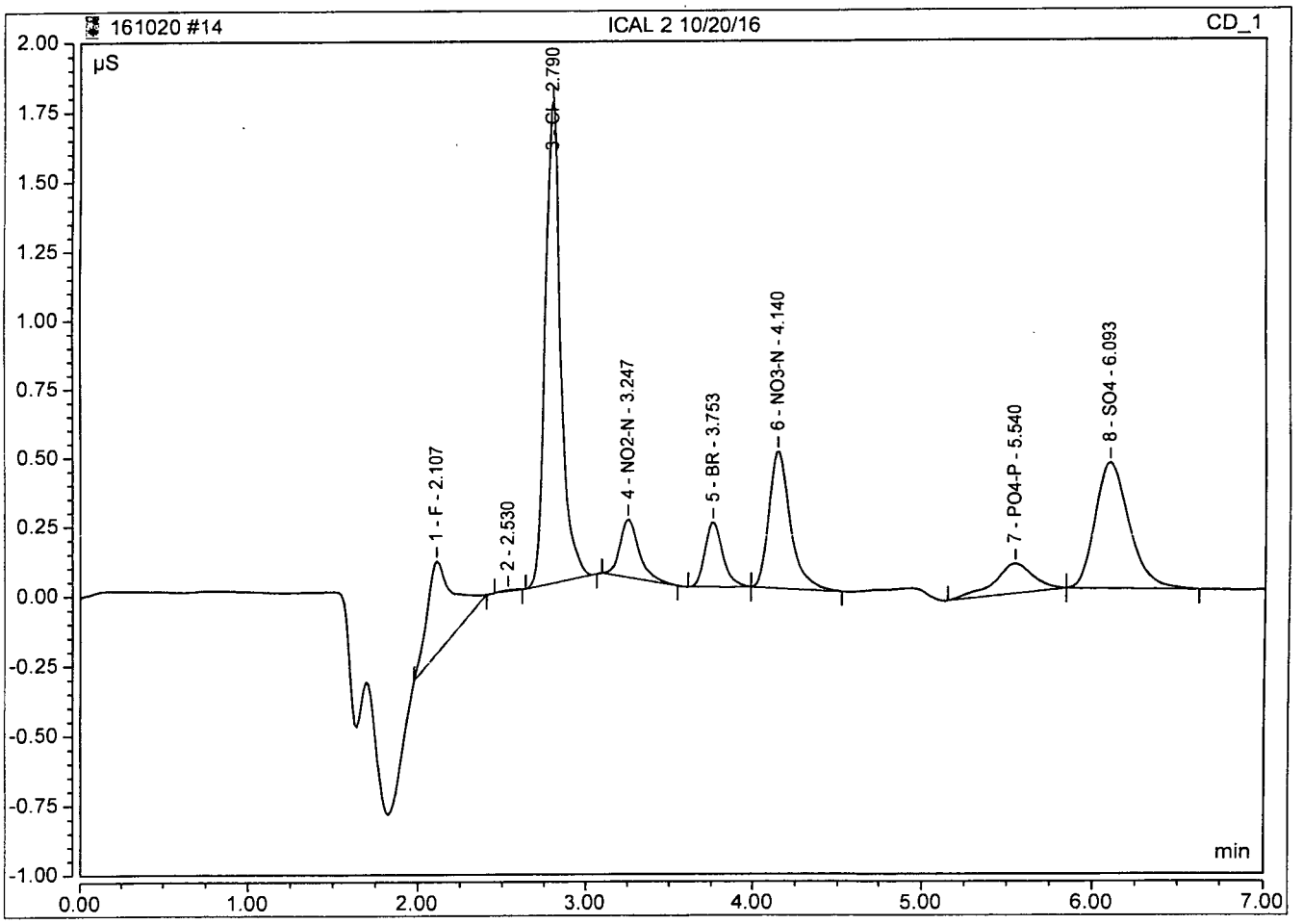
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.11	F	BMB*	0.012	0.139	0.0933
2	2.79	Cl	BMB	0.186	1.743	1.5439
3	3.25	NO2-N	BMB	0.028	0.209	0.1132
4	3.75	BR	BMB	0.029	0.232	0.5894
5	4.14	NO3-N	BMB	0.072	0.496	0.2699
6	5.54	PO4-P	BMB	0.028	0.107	0.2946
7	6.09	SO4	BMB	0.105	0.455	1.3496
TOTAL:				0.46	3.38	4.25



Peak Integration Report

Sample Name:	**ICAL 2 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:32**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.11	F	BMB	0.059	0.334	0.3000
3	2.79	Cl	BMB	0.186	1.743	1.5439
4	3.25	NO2-N	BMB	0.028	0.209	0.1132
5	3.75	BR	BMB	0.029	0.232	0.5894
6	4.14	NO3-N	BMB	0.072	0.496	0.2699
7	5.54	PO4-P	BMB	0.028	0.107	0.2946
8	6.09	SO4	BMB	0.104	0.455	1.3489
TOTAL:				0.51	3.58	4.46

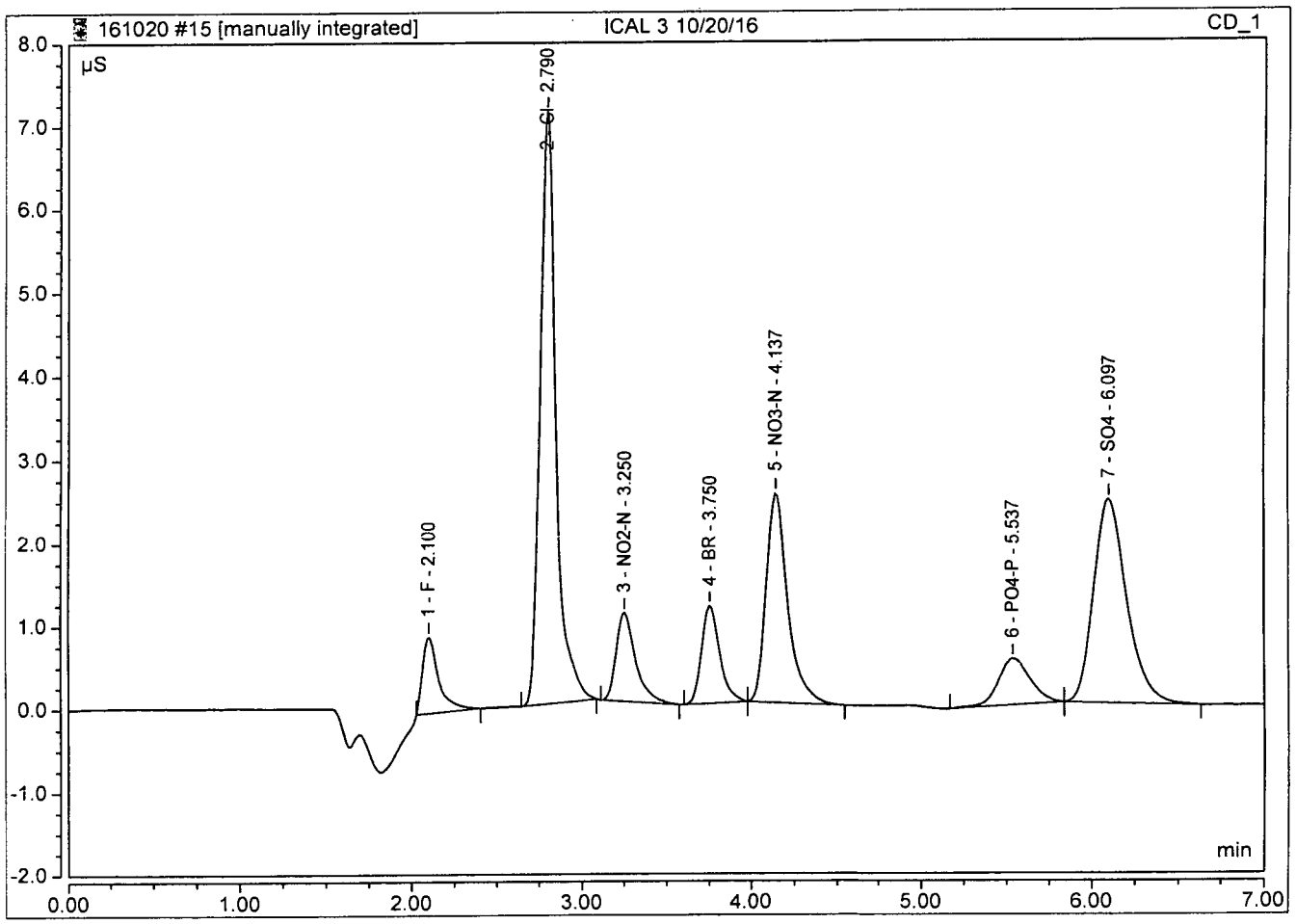


MI MM 11/30/16 ℒ 11·30·16

Peak Integration Report

Sample Name:	**ICAL 3 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:45**	*Run Time:*	**7.00**

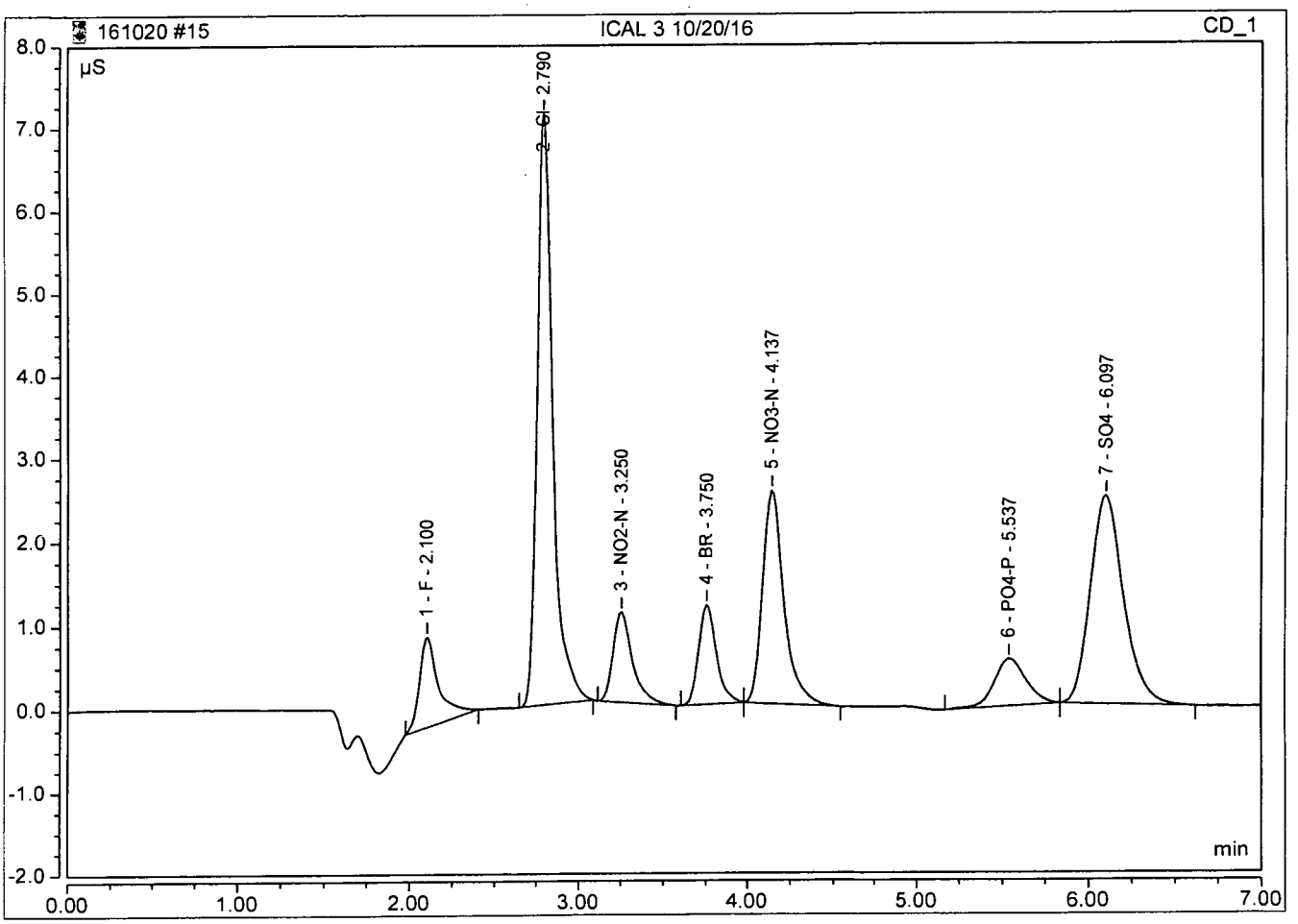
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB*	0.100	0.922	0.4827
2	2.79	Cl	BMB	0.762	7.117	4.7137
3	3.25	NO2-N	BMB	0.142	1.072	0.4926
4	3.75	BR	BMB	0.148	1.179	2.4784
5	4.14	NO3-N	BMB	0.366	2.533	0.9830
6	5.54	PO4-P	BMB	0.119	0.557	1.0221
7	6.10	SO4	BMB	0.546	2.464	4.9609
		TOTAL:		2.18	15.84	15.13



Peak Integration Report

Sample Name:	**ICAL 3 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:45**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB	0.140	1.077	0.6592
2	2.79	Cl	BMB	0.762	7.117	4.7137
3	3.25	NO2-N	BMB	0.142	1.072	0.4926
4	3.75	BR	BMB	0.148	1.179	2.4784
5	4.14	NO3-N	BMB	0.366	2.533	0.9830
6	5.54	PO4-P	BMB	0.119	0.557	1.0221
7	6.10	SO4	BMB	0.545	2.464	4.9599
TOTAL:				2.22	16.00	15.31

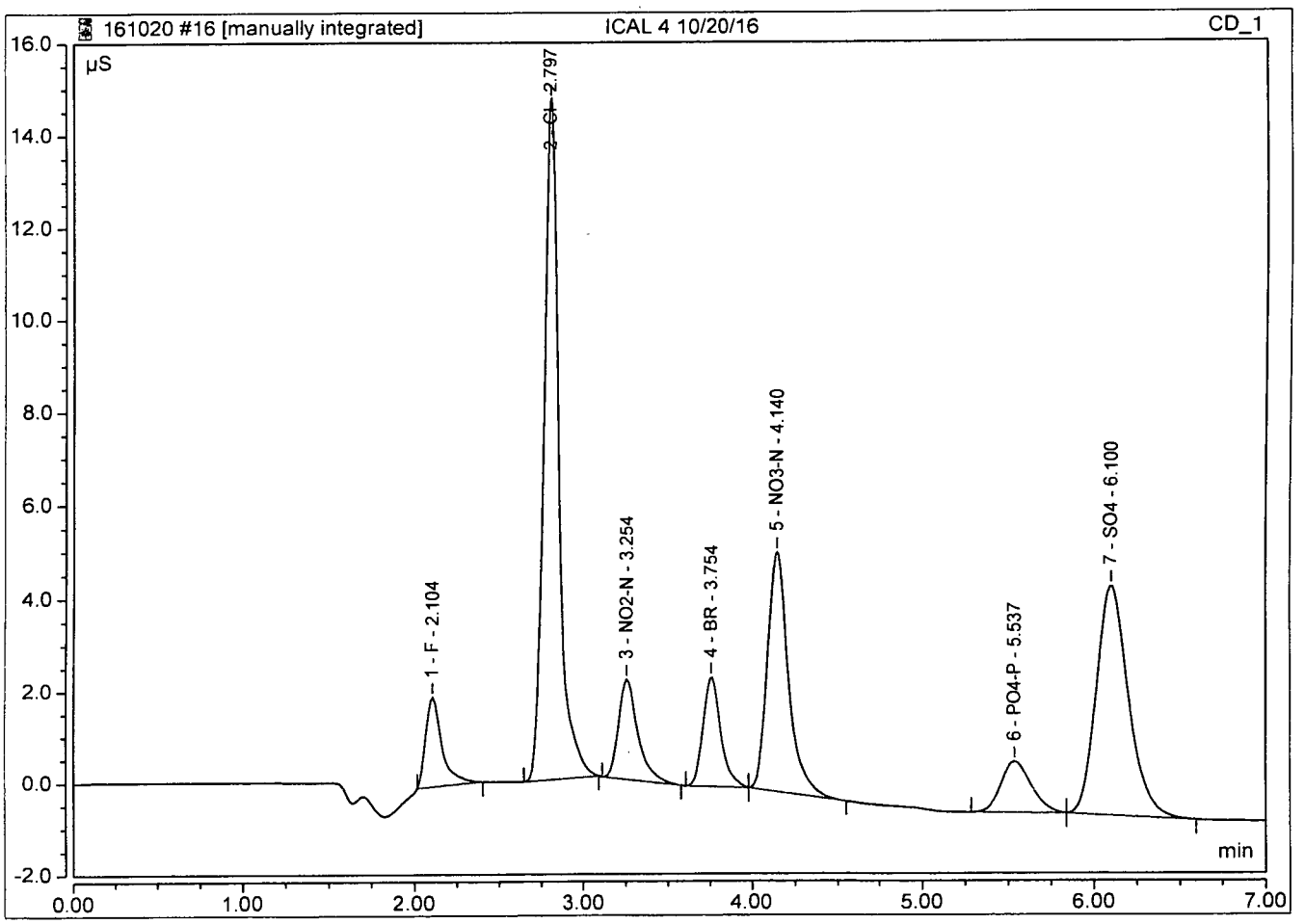


MI MM 11/30/16 JR 11-30-16

Peak Integration Report

Sample Name:	**ICAL 4 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:58**	*Run Time:*	**7.00**

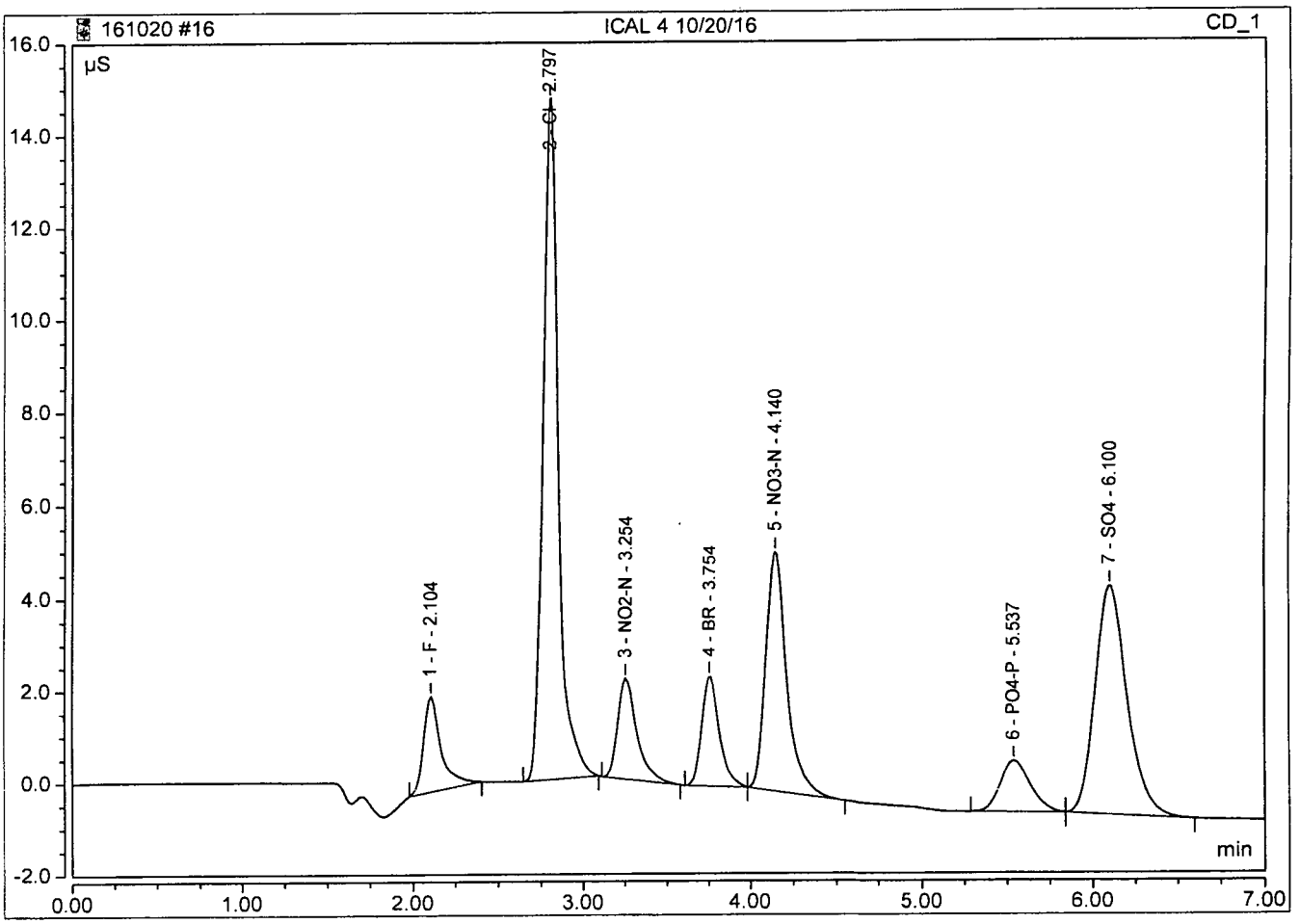
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB*	0.217	1.958	1.0036
2	2.80	Cl	BMB	1.542	14.708	9.0096
3	3.25	NO2-N	BMB	0.291	2.188	0.9859
4	3.75	BR	BMB	0.299	2.389	4.8695
5	4.14	NO3-N	BMB	0.733	5.168	1.8746
6	5.54	PO4-P	BMB	0.225	1.103	1.8731
7	6.10	SO4	BMB	1.076	4.975	9.3015
TOTAL:				4.38	32.49	28.92



Peak Integration Report

Sample Name:	**ICAL 4 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:58**	*Run Time:*	**7.00**

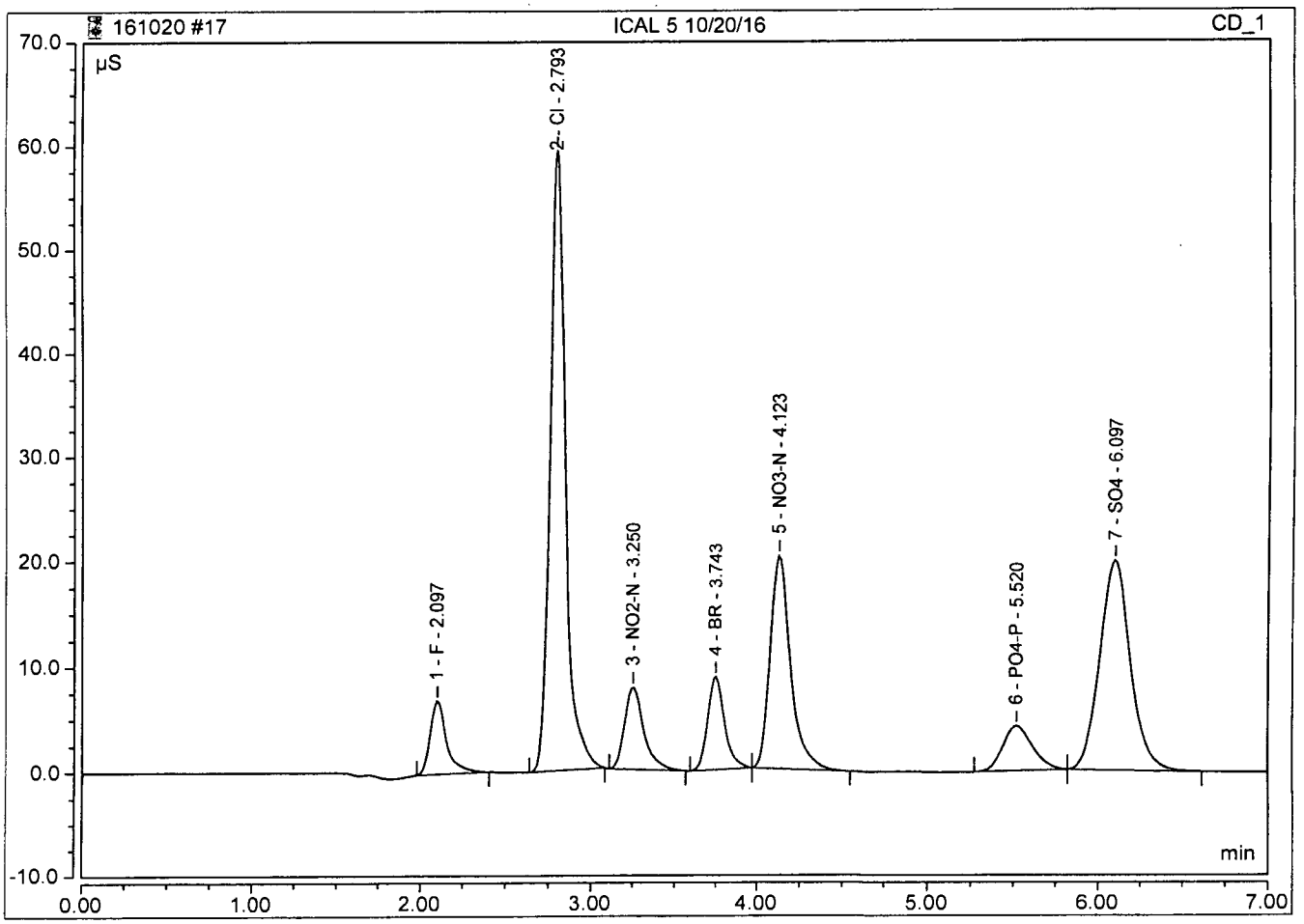
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB	0.248	2.072	1.1402
2	2.80	Cl	BMB	1.542	14.708	9.0096
3	3.25	NO2-N	BMB	0.291	2.188	0.9859
4	3.75	BR	BMB	0.299	2.389	4.8695
5	4.14	NO3-N	BMB	0.733	5.168	1.8746
6	5.54	PO4-P	BMB	0.225	1.103	1.8731
7	6.10	SO4	BMB	1.076	4.975	9.3015
TOTAL:				4.41	32.60	29.05



Peak Integration Report

Sample Name:	**ICAL 5 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:11**	*Run Time:*	**7.00**

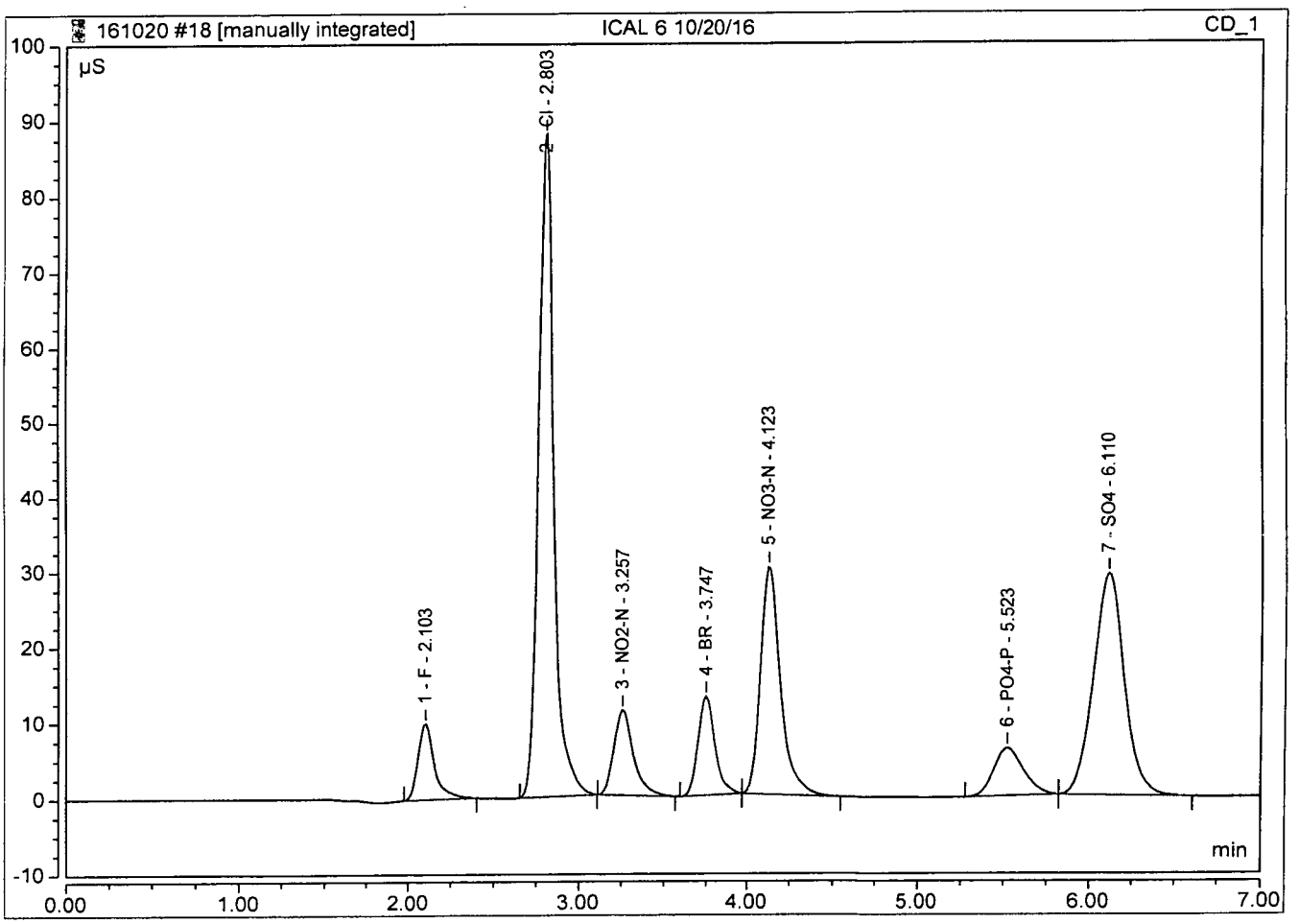
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB	0.783	6.953	3.5131
2	2.79	Cl	BMB	6.129	59.398	34.2675
3	3.25	NO2-N	BMB	1.040	7.775	3.4734
4	3.74	BR	BMB	1.083	8.801	17.2948
5	4.12	NO3-N	BMB	2.792	20.144	6.8727
6	5.52	PO4-P	BMB	0.854	4.243	6.9225
7	6.10	SO4	BMB	4.151	19.714	34.4871
TOTAL:				16.83	127.03	106.83



Peak Integration Report

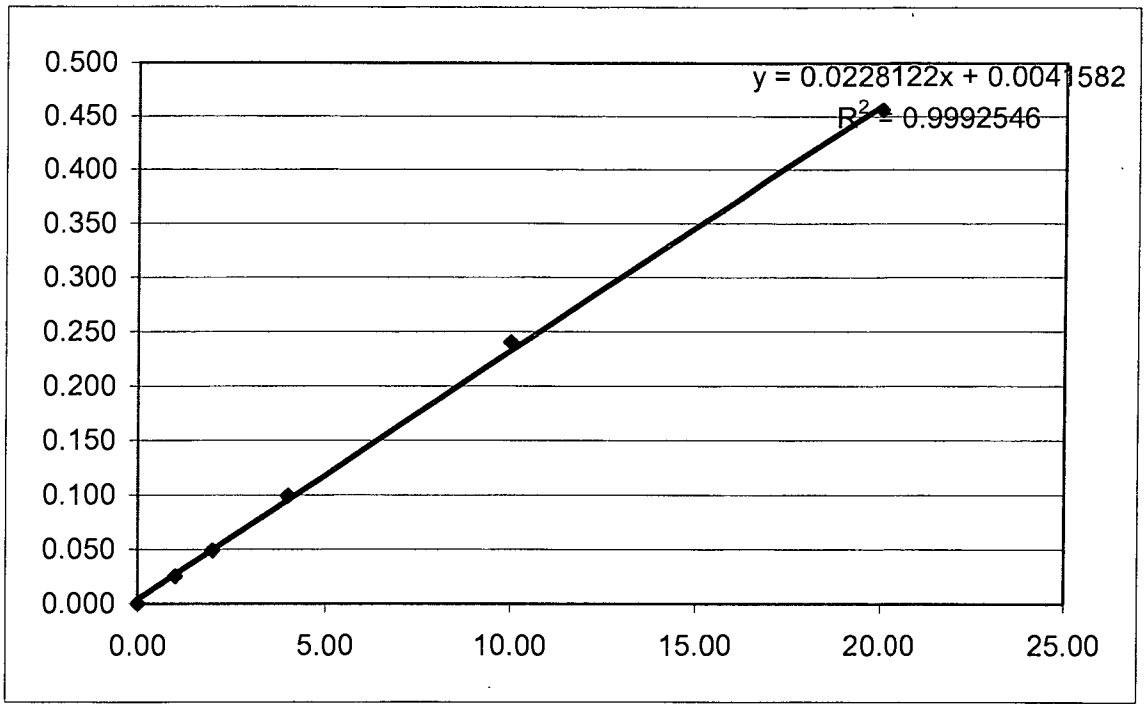
Sample Name:	**ICAL 6 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:24**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB	1.118	9.996	5.0036
2	2.80	Cl	BMB*	9.117	87.978	50.7226
3	3.26	NO2-N	BMB	1.507	11.205	5.0218
4	3.75	BR	BMB	1.580	13.023	25.1693
5	4.12	NO3-N	BMB	4.128	30.098	10.1138
6	5.52	PO4-P	BMB	1.247	6.244	10.0755
7	6.11	SO4	BMB	6.106	29.270	50.4924
TOTAL:				24.80	187.81	156.60



Silica

11/21/16



X	Y
0.00	0.000
1.00	0.025
2.00	0.049
4.00	0.099
10.00	0.240
20.00	0.456

ALGORITHM CHECK

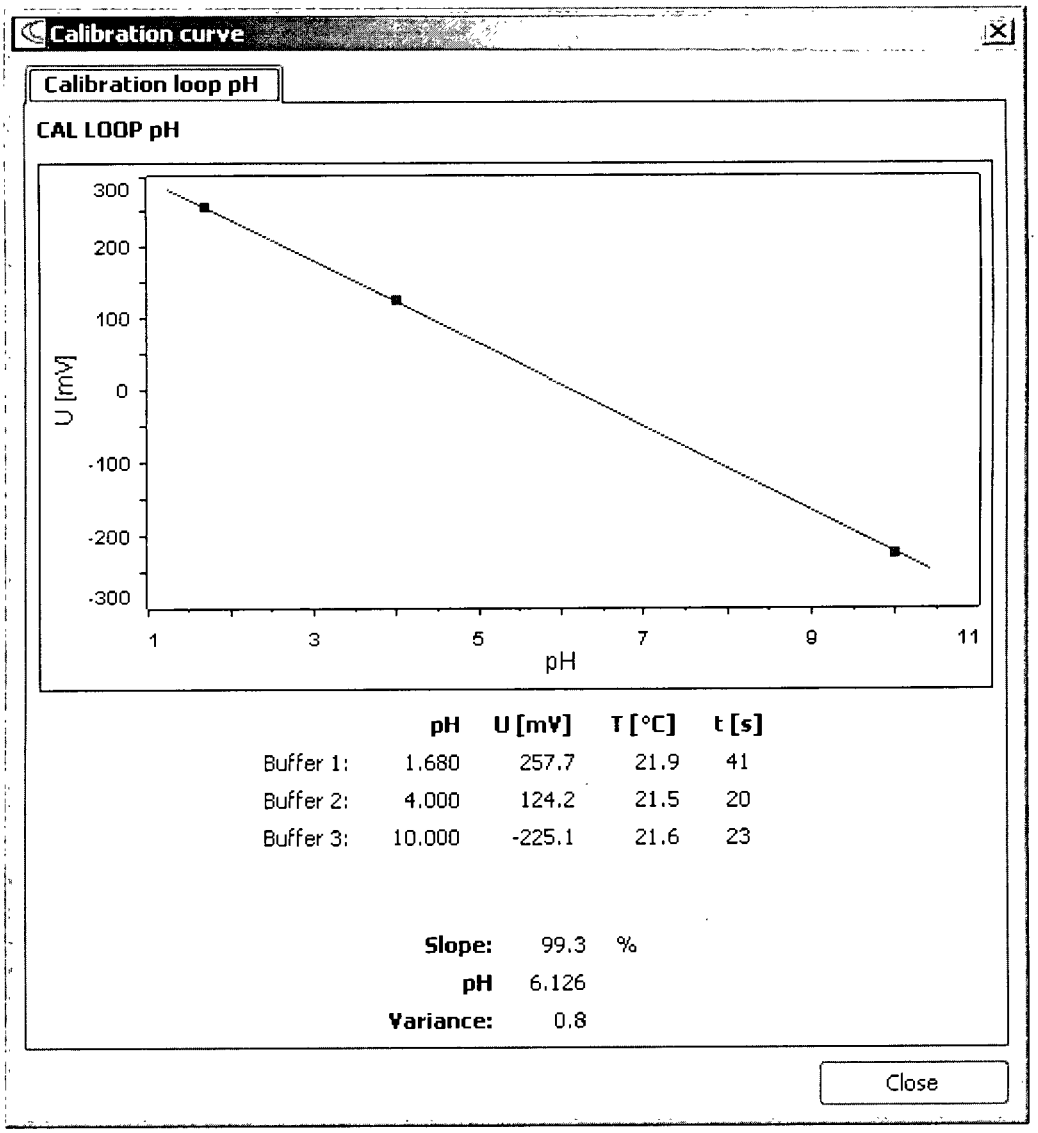
y= 0.098 11/21/16 11:09

dilution= 1

x*dil.= 4.114 ✓

MM 12/5/16

Tiamo Calibration Curve
11/21/16



INORGANIC ANALYSIS
Raw Data

APPL, INC.

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
SM 2320B	BICARBONATE AS	1.70 U	2.0	1.70	0.85	mg/L	11/21/16	11/21/16	#232W-161121A1-AZ45991
SM 2320B	CARBONATE AS CA	1.70 U	2.0	1.70	0.85	mg/L	11/21/16	11/21/16	#232W-161121A1-AZ45991
SM 2320B	TOTAL ALKALINITY	1.70 U	2.0	1.70	0.85	mg/L	11/21/16	11/21/16	#232W-161121A1-AZ45991
EPA 300.0	BROMIDE	0.16 U	0.5	0.16	0.05	mg/L	11/16/16	11/16/16	#300W-161116A-AZ45907
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	11/16/16	11/16/16	#300W-161116A-AZ45907
EPA 300.0	FLUORIDE	0.09 U	0.1	0.09	0.08	mg/L	11/16/16	11/16/16	#300W-161116A-AZ45907
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	11/16/16	11/16/16	#300W-161116A-AZ45907
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	11/16/16	11/16/16	#300W-161116A-AZ45907
SM 4500-S	SILICA W	0.80 U	1.0	0.80	0.53	mg/L	11/21/16	11/21/16	#SIO2-161121A-AZ45866
SM 4500-S	DISSOLVED SILICA	0.80 U	1.0	0.80	0.53	mg/L	11/21/16	11/21/16	#SIO2D-161121B-AZ45866
SM3500Fe	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	11/16/16	11/16/16	#35FE-161116A-AZ45911

Wetlab SC-Blank-REG MDLs
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Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
SM3500Fe	FERROUS IRON	3.00	2.96	98.7	80-120	11/16/16	11/16/16	#35FE-161116A-AZ45911

AMENDED PAGE

Comments: _____

Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

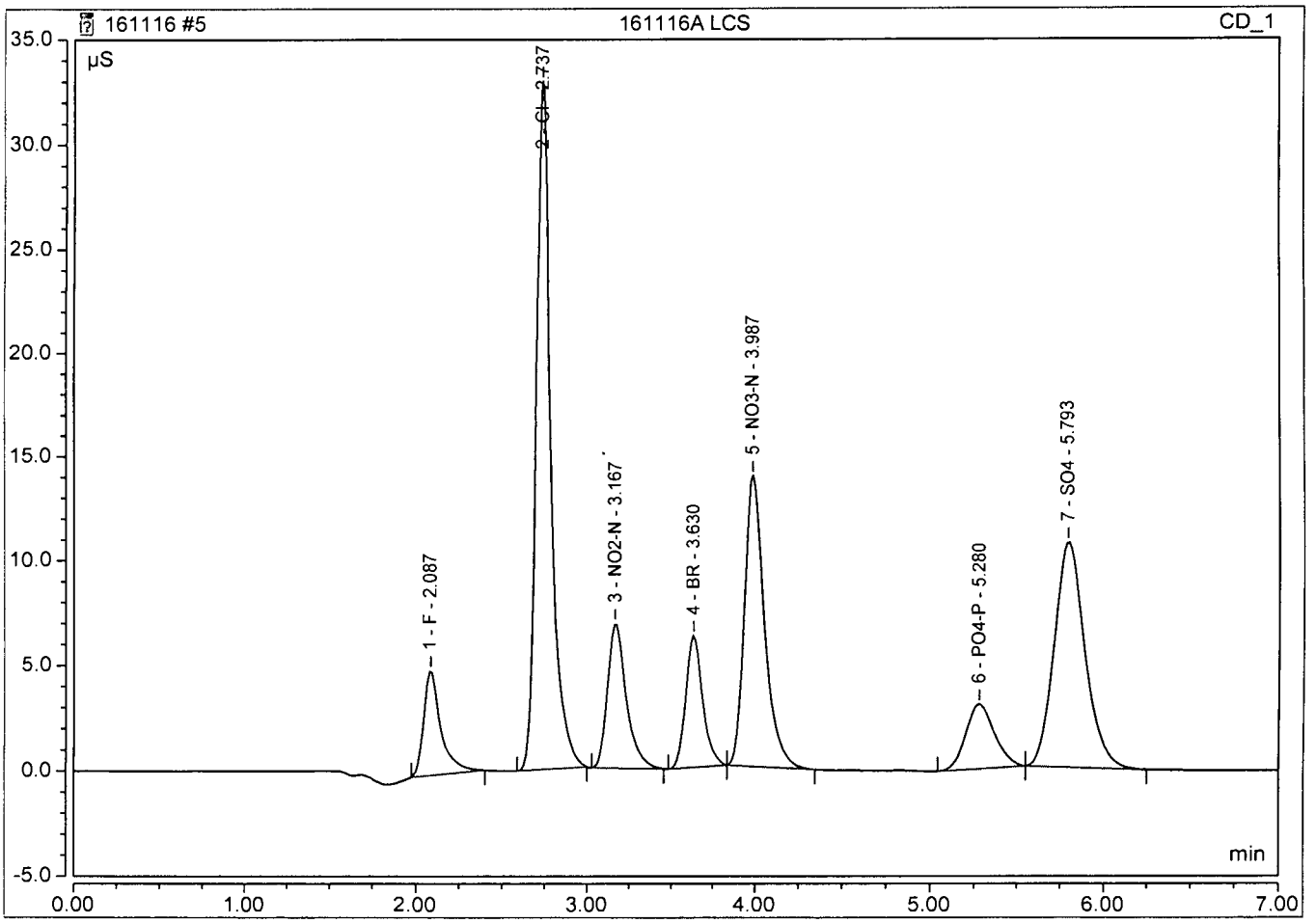
Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 300.0	BROMIDE	12.5	12.0	96.0	90-110	11/16/16	11/16/16	#300W-161116A-AZ45907
EPA 300.0	CHLORIDE	20.0	18.5	92.5	90-110	11/16/16	11/16/16	#300W-161116A-AZ45907
EPA 300.0	FLUORIDE	2.50	2.57	103	90-110	11/16/16	11/16/16	#300W-161116A-AZ45907
EPA 300.0	NITRATE	22.1	20.3	91.9	90-110	11/16/16	11/16/16	#300W-161116A-AZ45907
EPA 300.0	SULFATE	20.0	18.3	91.5	90-110	11/16/16	11/16/16	#300W-161116A-AZ45907
SM 2320B	BICARBONATE AS CACO3	250	242	96.8	90-110	11/21/16	11/21/16	#232W-161121A1-AZ45991
SM 2320B	TOTAL ALKALINITY AS CACO3	250	242	96.8	90-110	11/21/16	11/21/16	#232W-161121A1-AZ45991
SM 4500-Si	SILICA W	4.00	4.29	107	80-120	11/21/16	11/21/16	#SIO2-161121A-AZ45866
SM 4500-Si	DISSOLVED SILICA	4.00	4.38	110	80-120	11/21/16	11/21/16	#SIO2D-161121B-AZ45866

Comments: _____

Peak Integration Report

Sample Name:	**161116A LCS**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**16-Nov-2016 / 12:42**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.09	F	BMB	0.569	4.965	2.5669
2	2.74	Cl	BMB	3.271	32.945	18.5320
3	3.17	NO2-N	BMB	0.893	6.861	2.9837
4	3.63	BR	BMB	0.748	6.256	11.9832
5	3.99	NO3-N	BMB	1.848	13.866	4.5803
6	5.28	PO4-P	BMB	0.589	3.051	4.7927
7	5.79	SO4	BMB	2.180	10.696	18.3430
TOTAL:				10.10	78.64	63.78



SPECTROPHOTOMETRIC ANALYSIS (Ferrous Iron)

Method: SM3500Fe
Analyte: Ferrous Iron
Analyst: MM
Units: mg/L
QCG: 161116A
Notes:
Final Volume: 50mL

Instrument: GENESYS 10UV
Raw Spec: abs. @ 510nm
R-Squared: 0.99983
Reagent (lot#): COLORIZING REAGENT (11/15/16)
BUFFER (05/20/16)

Date	Time	APPL ID	DF	Raw Result	SubSample Amt	Raw BLK	Calc Conc	Result	QC True	QC%
05/20/16	12:37	0 BB 5/20/16	1	0.000						
05/20/16	12:38	1	1	0.101						
05/20/16	12:39	2	1	0.201						
05/20/16	12:39	4	1	0.403						
05/20/16	12:40	5	1	0.512						
05/20/16	12:40	10	1	0.999						
05/20/16	12:41	160520A ICV 3.0	1	0.304	25mL		3.01	3.01	3.000	100.5%
05/20/16	12:42	160520A ICB	1	0.000	25mL		-0.02	-0.02		
11/16/16	14:35	CCV 3.0 161116	1	0.298	25mL		2.95	2.954	3.000	*98.47*
11/16/16	14:36	CCB 161116	1	0.003	25mL		0.01	0.007		
11/16/16	14:37	161116A LCS 3.0	1	0.299	25mL		2.96	2.964	3.000	*98.80*
11/16/16	14:38	AZ45907W10	1	0.055	25mL		0.53	0.526		
11/16/16	14:39	AZ45908W10	1	0.007	25mL		0.05	0.047		
11/16/16	14:40	AZ45909W13	1	0.012	25mL		0.10	0.097		
11/16/16	14:41	AZ45910W10	1	0.009	25mL		0.07	0.067		
11/16/16	14:42	AZ45911W10	1	0.005	25mL		0.03	0.027		
11/16/16	14:43	AZ45911W10 MS	1	0.306	25mL		3.03	3.034	3.00	*101.13*
11/16/16	14:44	CCV 3.0 161116	1	0.298	25mL		2.95	2.954	3.00	*98.47*
11/16/16	14:45	CCB 161116	1	-0.001	25mL		-0.03	-0.033		

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SPECTROPHOTOMETRIC ANALYSIS (Silica)

Method: SM4500SiD
Analyte: Silica
Analyst: FJR
Units: mg/L
QCG: 161121A
Notes:
Final Volume: 25mL

Instrument: GENESYS 10UV
Raw Spec: abs. @ 410nm
R-Squared: 0.99925
Reagent (lot#): 1+1 HCL prep 11-15-16
Ammonium Molybdate prep 11-15-16
Oxalic Acid prep 11-15-16

Date	Time	APPL ID	DF	Raw Result	SubSample Amt	Raw BLK	Calc Conc	Result	QC True	QC%
11/21/16	11:03	0 11/21/16 FJR		0.000						
11/21/16	11:04	1		0.025						
11/21/16	11:05	2		0.049						
11/21/16	11:06	4		0.099						
11/21/16	11:07	10		0.240						
11/21/16	11:08	20		0.456						
11/21/16	11:09	161121 ICV 4	1	0.098	25mL		4.11	4.11	4.00	102.8%
11/21/16	11:10	ICB	1	0.000	25mL		-0.18	-0.18		
11/21/16	12:35	CCV2 10 161121	1	0.215	25mL		9.24	9.24	10.00	92.4%
11/21/16	12:36	CCB	1	0.002	25mL		-0.09	-0.09		
11/21/16	12:37	161121A BLK	1	0.002	25mL		-0.09	-0.09		
11/21/16	12:38	161121A 4 LCS	1	0.102	25mL		4.29	4.29	4.00	107.2%
11/21/16	12:39	161121A 4 LCSD	1	0.101	25mL		4.25	4.25	4.00	106.1%
11/21/16	12:40	AZ44821W01 Total DF5	5	0.450	5mL		19.54	97.72		
11/21/16	12:41	AZ45866W14 Total MS DF5	5	0.362	5mL		15.69	78.43		
11/21/16	12:42	AZ45866W14 Total MSDDF5	5	0.343	5mL		14.85	74.27		
11/21/16	12:43	AZ45866W14 Total DF5	5	0.241	5mL		10.38	51.91		
11/21/16	12:44	AZ45868W08 Total DF5	5	0.333	5mL		14.42	72.08		
11/21/16	12:45	AZ45907W07 Total DF5	5	0.305	5mL		13.19	65.94		
11/21/16	12:46	AZ45908W09 Total DF5	5	0.360	5mL		15.60	77.99		
11/21/16	12:47	AZ45909W10 Total DF5	5	0.170	5mL		7.27	36.35		
11/21/16	12:48	AZ45910W09 Total DF5	5	0.381	5mL		16.52	82.60		
11/21/16	12:49	AZ45911W08 Total DF5	5	0.265	5mL		11.43	57.17		
11/21/16	12:50	AZ45988W09 Total DF5	5	0.298	5mL		12.88	64.40		
11/21/16	12:51	AZ45991W08 Total DF5	5	0.386	5mL		16.74	83.69		
11/21/16	12:52	CCV1 4 161121	1	0.102	25mL		4.29	4.29	4.000	107.2%
11/21/16	12:53	CCB	1	0.003	25mL		-0.05	-0.05		
11/21/16	15:00	AZ45992W07 Total DF5	5	0.403	5mL		17.48	87.42		
11/21/16	15:01	AZ45993W07 Total DF5	5	0.310	5mL		13.41	67.03		
11/21/16	15:02	AZ45994W12 Total DF5	5	0.217	5mL		9.33	46.65		

11/21/16	15:03	161121B BLK	1	0.001	25mL	-0.14	-0.14	4.000	-3.5%
11/21/16	15:04	161121B 4 LCS	1	0.104	25mL	4.38	4.38	4.000	109.4%
11/21/16	15:05	161121B 4 LCSD	1	0.102	25mL	4.29	4.29	4.000	107.2%
11/21/16	15:06	AZ45866W15 Dissolved DF5	5	0.246	5mL	10.60	53.01		
11/21/16	15:07	AZ45866W15 Dissolved MS DF5	5	0.341	5mL	14.77	73.83		
11/21/16	15:08	AZ45866W15 Dissolved MSD DF5	5	0.338	5mL	14.63	73.17		
11/21/16	15:09	AZ45868W09 Dissolved DF5	5	0.329	5mL	14.24	71.20		
11/21/16	15:10	AZ45907W09 Dissolved DF5	5	0.315	5mL	13.63	68.13		
11/21/16	15:11	AZ45908W08 Dissolved DF5	5	0.354	5mL	15.34	76.68		
11/21/16	15:12	AZ45909W12 Dissolved DF5	5	0.182	5mL	7.80	38.98		
11/21/16	15:13	AZ45910W07 Dissolved DF5	5	0.394	5mL	17.09	85.45		
11/21/16	15:14	AZ45911W09 Dissolved DF5	5	0.289	5mL	12.49	62.43		
11/21/16	15:15	CCV2 10 161121	1	0.235	25mL	10.12	10.12	10.00	101.2%
11/21/16	15:16	CCB	1	0.007	25mL	0.12	0.12		
11/21/16	15:17	AZ45988W08 Dissolved DF5	5	0.273	5mL	11.79	58.93		
11/21/16	15:18	AZ45991W07 Dissolved DF5	5	0.389	5mL	16.87	84.35		
11/21/16	15:19	AZ45992W08 Dissolved DF5	5	0.385	5mL	16.69	83.47		
11/21/16	15:20	AZ45993W08 Dissolved DF5	5	0.290	5mL	12.53	62.65		
11/21/16	15:21	AZ45994W11 Dissolved DF5	5	0.249	5mL	10.73	53.66		
11/21/16	15:22	CCV1 4 161121	1	0.096	25mL	4.03	4.03	4.00	100.6%
11/21/16	15:23	CCB	1	0.009	25mL	0.21	0.21		

Metrohm 814/809 Titrando Data

Sample ID	Analysis Date/Time	Method	Titration Volume (to 8.3)	Titration Volume (total)	OH	CO3	HCO3	Total Alk	Unit	Sample Vol	N	Batch	Initials
AZ45911W07	2016-11-21 20:10:35 UTC-8	Alkalinity	0.000	1.824	0.00	0.00	75.15	75.15	mg/L	25 mL	0.0206	161121A	AH
AZ45910W08	2016-11-21 20:04:33 UTC-8	Alkalinity	0.000	2.380	0.00	0.00	98.06	98.06	mg/L	25 mL	0.0206	161121A	AH
AZ45909W11	2016-11-21 20:00:21 UTC-8	Alkalinity	0.000	1.234	0.00	0.00	50.84	50.84	mg/L	25 mL	0.0206	161121A	AH
AZ45908W07	2016-11-21 19:53:18 UTC-8	Alkalinity	0.000	2.900	0.00	0.00	119.48	119.48	mg/L	25 mL	0.0206	161121A	AH
AZ45907W08	2016-11-21 19:47:06 UTC-8	Alkalinity	0.000	2.292	0.00	0.00	94.43	94.43	mg/L	25 mL	0.0206	161121A	AH
161121A LCS	2016-11-21 15:26:37 UTC-8	Alkalinity	0.000	5.880	0.00	0.00	242.26	242.26	mg/L	25 mL	0.0206	161121A	AH
161121A Blk	2016-11-21 15:10:30 UTC-8	Alkalinity	0.000	0.000	0.00	0.00	0.00	0.00	mg/L	25 mL	0.0206	161121A	AH

Ferrous Iron Standard Prep

Stock Standard Prep:

Prep Date: 5/20/16
Exp Date: 5/20/17
Prep'd By: BB

CCV Stock (200 mg/L): 0.3502 g $Fe(NH_4)2(SO_4)_2*6H_2O$ EMD Lot #2013050298 up to 250 mL with DI

ICV Stock (200 mg/L): 0.3500 g $Fe(NH_4)2(SO_4)_2*6H_2O$ JT Baker Lot #0000068681 up to 250 mL with DI

Curve Prep

Prep Date: 5/20/16
Exp Date: 5/20/17
Prep'd By: BB

METHOD 3500FeBc								
				ICAL #1	ICAL#2	ICAL #3 (CCV)	ICAL #4	ICAL #5
ID#	mg/L	Prep Date	EXP. DATE	mL	mL	mL	mL	mL
Fe CCV Stock	200	5/20/16	5/20/17	0.25	0.5	1	1.25	2.5
Brought up w/ DI Water to final volume of (mL):				50	50	50	50	50
	Final Conc Fe (mg/L):			1	2	4	5	10
Standards are then carried through the sample prep procedure according to the SOP								

ICV (3.0 mg/L): 0.75 mL of ICV Stock (prep: 05/20/16) brought up to 50 mL with DI then carried through the sample prep procedure

Ferrous Iron Standard Prep

Stock Standard Prep:

Prep Date: 5/20/16
Exp Date: 5/20/17
Prep'd By: BB

CCV Stock (200 mg/L): 0.3502 g $Fe(NH_4)2(SO_4)_2*6H_2O$ EMD Lot #2013050298 up to 250 mL with DI

ICV Stock (200 mg/L): 0.3500 g $Fe(NH_4)2(SO_4)_2*6H_2O$ JT Baker Lot #0000068681 up to 250 mL with DI

QC Prep

Prep Date: 11/16/16
Exp Date: 11/17/16
Prep'd By: MM

CCV (3.0 mg/L): 0.375 mL of CCV Stock (prep: 5/20/16) into 25 mL DI then carried through sample prep procedure

LCS (3.0 mg/L): 0.375 mL of ICV Stock (prep: 5/20/16) into 25 mL DI then carried through sample prep procedure

MS/MSD (3.0 mg/L): 0.375 mL of ICV Stock (prep: 5/20/16) into 25 mL sample then carried through sample prep procedure

METHOD 300 / 9056		ANION STOCK				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
O2SI	F-	1,000	1085520-36282	07/24/17	0.25	5
O2SI*	Cl-	5,000	1069557-34558	01/08/17	0.5	50
O2SI	NO2-N	1,000	1088548-36281	09/26/17	0.25	5
Ultra Scientific	Br-	1,000	CL-3274-36926	08/31/20	1.25	25
O2SI	NO3-N	1,000	1078397-35587	01/30/17	0.5	10
O2SI	PO4-P	1,000	1072004-34911	09/03/16	0.5	10
Ultra Scientific	SO4	5,000	CP-1469-36296	04/30/18	0.5	50
Brought up with milipore water to Final Volume of:					50	

PW 10/20/16

METHOD 300 / 9056		ANION ICV / LCS/MS/MSD				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
CPI	F-	1,000	16B115-36204	09/03/17	0.125	2.50
CPI	Cl-	1,000	16E065-36694	12/06/17	1.00	20.00
CPI	NO2-N	304	15J001-36257	09/24/17	0.50	3.04
CPI	Br-	1,000	15L093-36101	07/21/17	0.625	12.50
CPI	NO3-N	1,000	16E022-36783	12/30/17	0.25	5.00
CPI	PO4-P	1,000	15B116-36258	09/24/17	0.25	5.00
CPI	SO4	1,000	16E104-36693	12/06/17	1.00	20.00
Brought up with milipore water to Final Volume of:					50	

METHOD 300 / 9056		ANION CAL CURVE							
				ICAL #1	ICAL#2	ICAL #3	ICAL #4	ICAL #5	ICAL #6
ID#	mg/L	Prep Date	EXP. DATE	mL	mL	mL	mL	mL	mL
ANION STOCK	100	08/19/16	08/21/16	0.4	2	10	2	7	10
Brought up w/ Milipore Water to final volume of (mL):				50	100	100	10	10	na
Final Conc F (mg/L):				0.04	0.1	0.5	1	3.5	5
Final Conc Cl (mg/L):				0.4	1	5	10	35	50
Final Conc NO2-N (mg/L):				0.04	0.1	0.5	1	3.5	5
Final Conc Br (mg/L):				0.2	0.5	2.5	5	17.5	25
Final Conc NO3-N (mg/L):				0.08	0.2	1	2	7	10
Final Conc PO4-P (mg/L):				0.08	0.2	1	2	7	10
Final Conc SO4 (mg/L):				0.4	1	5	10	35	50

161116 PW

		CCV				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
O2SI	F-	1,000	1085520-36282	07/24/17	0.125	2.50
O2SI	Cl-	5,000	1069557-34558	01/08/17	0.25	25.0
O2SI	NO2-N	1,000	1088548-36281	09/26/17	0.125	2.5
Ultra Scientific	Br-	1,000	CL-3274-36926	08/31/20	0.625	12.50
O2SI	NO3-N	1,000	1078397-35587	01/30/17	0.25	5.0
O2SI	PO4-P	1,000	1072004-34911	09/03/16	0.25	5.0
Ultra Scientific	SO4	5,000	CP-1469-36296	04/30/18	0.25	25.0
Brought up with milipore water to Final Volume of:					50	

METHOD 300 / 9056		ICV LCS MS				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
CPI	F-	1,000	16B115-36204	09/03/17	0.125	2.50
CPI	Cl-	1,000	16E065-36694	12/06/17	1.00	20.00
CPI	NO2-N	304	15C058-35411	09/24/17	0.50	3.04
CPI	Br-	1,000	15L093-36101	07/21/17	0.63	12.50
CPI	NO3-N	1,000	16E022-36783	12/30/17	0.250	5.00
CPI	PO4-P	1,000	15B116-36258	09/24/17	0.25	5.00
CPI	SO4	1,000	16E104-36693	12/06/17	1.00	20.00
Final Volume of Sample: (mL)					50	

SiO_2 For Method 370.1 or SM4500 Si D

1000ppm SiO_2 o2si lot 1074114-35161 (exp: 10/21/16)

	X 25 uL / 25mL DI		→ 1ppm SiO_2
↓	X 50uL	↓	→ 2ppm SiO_2
↓	X 100uL	↓	→ 4ppm SiO_2
↓	X 250uL	↓	→ 10ppm SiO_2
↓	X 500uL	↓	→ 20ppm SiO_2

ICV = 4ppm SiO_2
1000ppm SiO_2 Ultra Scientific Lot P01064-32895 (exp: 11/30/19) X 100uL / 25mL DI

LCS = 4ppm SiO_2
1000ppm SiO_2 Ultra Scientific Lot P01064-32895 (exp: 11/30/19) X 100uL / 25mL DI

MS = 4ppm SiO_2
1000ppm SiO_2 Ultra Scientific Lot P01064-32895 (exp: 11/30/19) X 100uL / 25mL Sample

Expires 11-22-2016

FJR 11/21/16

Inorganic Spiking Solution

3.4999g $NaHCO_3$ BDH lot#1575C510
Final vol 500 mL w/DI water
Prep: 11/01/16
Exp: 10/10/17
AH

0.02N H_2SO_4 Titrant for Alkalinity

400 mL 0.1N H_2SO_4 (prep 11/16/16)
Final vol 2L w/ DI water
Prep 11/21/16
Exp 11/21/17
AH 11/21/16

SM3500 Injection Log

Directory: I:\Spec Sheets\Ferrous Iron (Fe2)\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	20 May 2016	12:37	0 BB 5/20/16		161116a	1.
2	20 May 2016	12:38	1		161116a	1.
3	20 May 2016	12:39	2		161116a	1.
4	20 May 2016	12:39	4		161116a	1.
5	20 May 2016	12:40	5		161116a	1.
6	20 May 2016	12:40	10		161116a	1.
7	20 May 2016	12:41	160520A ICV 3.0		161116a	1.
8	20 May 2016	12:42	160520A ICB		161116a	1.
9	16 Nov 2016	14:35	CCV 3.0 161116		161116a	1.
10	16 Nov 2016	14:36	CCB 161116		161116a	1.
11	16 Nov 2016	14:37	161116A LCS 3.0		161116a	1.
12	16 Nov 2016	14:38	AZ45907W10		161116a	1.
13	16 Nov 2016	14:39	AZ45908W10		161116a	1.
14	16 Nov 2016	14:40	AZ45909W13		161116a	1.
15	16 Nov 2016	14:41	AZ45910W10		161116a	1.
16	16 Nov 2016	14:42	AZ45911W10		161116a	1.
18	16 Nov 2016	14:44	CCV 3.0 161116		161116a	1.
19	16 Nov 2016	14:45	CCB 161116		161116a	1.

300/9056A Injection Log

Directory: I:\Dionex\Charlie\Anions\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
14	20 Oct 2016	11:19	ICAL 1 10/20/16		161020	1.
15	20 Oct 2016	11:32	ICAL 2 10/20/16		161020	1.
16	20 Oct 2016	11:45	ICAL 3 10/20/16		161020	1.
17	20 Oct 2016	11:58	ICAL 4 10/20/16		161020	1.
18	20 Oct 2016	12:11	ICAL 5 10/20/16		161020	1.
19	20 Oct 2016	12:24	ICAL 6 10/20/16		161020	1.
20	20 Oct 2016	12:37	ICV 1601020		161020	1.
21	20 Oct 2016	12:50	ICB		161020	1.

300/9056A Injection Log

Directory: I:\Dionex\Charlie\Anions\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
3	16 Nov 2016	12:16	CCV 161116		161116	1.
4	16 Nov 2016	12:29	CCB		161116	1.
7	16 Nov 2016	13:08	AZ45909W10		161116	1.
9	16 Nov 2016	13:35	AZ45908W07 1/2		161116	2.
10	16 Nov 2016	13:48	AZ45907W07		161116	1.
11	16 Nov 2016	14:01	AZ45911W07		161116	1.
12	16 Nov 2016	14:14	AZ45911W07 1/2		161116	2.
16	16 Nov 2016	15:06	CCV 161116		161116	1.
17	16 Nov 2016	15:19	CCB		161116	1.
19	16 Nov 2016	15:45	AZ45909W11 1/5		161116	5.
20	16 Nov 2016	15:58	AZ45910W09		161116	1.
21	16 Nov 2016	16:11	AZ45910W09 1/5		161116	5.
22	16 Nov 2016	16:24	AZ45908W07 1/10		161116	10.
24	16 Nov 2016	16:53	CCV 161116		161116	1.
25	16 Nov 2016	17:06	CCB		161116	1.

370.1/SM4500 Injection Log

Directory: I:\Spec Sheets\Silica (SiO2)\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	21 Nov 2016	11:03	0 11/21/16 FJR		161121A	21.
2	21 Nov 2016	11:04	1		161121A	1.
3	21 Nov 2016	11:05	2		161121A	1.
4	21 Nov 2016	11:06	4		161121A	1.
5	21 Nov 2016	11:07	10		161121A	1.
6	21 Nov 2016	11:08	20		161121A	1.
7	21 Nov 2016	11:09	161121 ICV 4		161121A	1.
8	21 Nov 2016	11:10	ICB		161121A	1.
9	21 Nov 2016	12:35	CCV2 10 161121		161121A	1.
10	21 Nov 2016	12:36	CCB		161121A	1.
11	21 Nov 2016	12:37	161121A BLK		161121A	1.
12	21 Nov 2016	12:38	161121A 4 LCS		161121A	1.
19	21 Nov 2016	12:45	AZ45907W07 Total DF5		161121A	5.
20	21 Nov 2016	12:46	AZ45908W09 Total DF5		161121A	5.
21	21 Nov 2016	12:47	AZ45909W10 Total DF5		161121A	5.
22	21 Nov 2016	12:48	AZ45910W09 Total DF5		161121A	5.
23	21 Nov 2016	12:49	AZ45911W08 Total DF5		161121A	5.
26	21 Nov 2016	12:52	CCV1 4 161121		161121A	1.
27	21 Nov 2016	12:53	CCB		161121A	1.
31	21 Nov 2016	15:03	161121B BLK		161121A	1.
32	21 Nov 2016	15:04	161121B 4 LCS		161121A	1.
38	21 Nov 2016	15:10	AZ45907W09 Dissolved DF5		161121A	5.
39	21 Nov 2016	15:11	AZ45908W08 Dissolved DF5		161121A	5.
40	21 Nov 2016	15:12	AZ45909W12 Dissolved DF5		161121A	5.
41	21 Nov 2016	15:13	AZ45910W07 Dissolved DF5		161121A	5.
42	21 Nov 2016	15:14	AZ45911W09 Dissolved DF5		161121A	5.
43	21 Nov 2016	15:15	CCV2 10 161121		161121A	1.
44	21 Nov 2016	15:16	CCB		161121A	1.

310/SM2320B Injection Log

Directory: I:\Tiamo\EXPORT\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	21 Nov 2016	15:10	161121A Blk		161121A_AL	1.
2	21 Nov 2016	15:26	161121A LCS		161121A_AL	1.
12	21 Nov 2016	19:47	AZ45907W08		161121A_AL	1.
13	21 Nov 2016	19:53	AZ45908W07		161121A_AL	1.
14	21 Nov 2016	20:00	AZ45909W11		161121A_AL	1.
15	21 Nov 2016	20:04	AZ45910W08		161121A_AL	1.
16	21 Nov 2016	20:10	AZ45911W07		161121A_AL	1.

908 North Temperance Ave. ∇ Clovis, CA 93611 ∇ Phone 559-275-2175 ∇ Fax 559-275-4422

Certification Number: CA1312
NELAP Certification number: CA00046
DoD-ELAP Certificate number: 4064.01

Data Validatable Report

December 12, 2016

AECOM
1001 Bishop Street, Suite 1600
Honolulu, Hawaii 96813

Attn: Margie Thach

Title: Report of Data: Case 81515

Project: 60481245 CIV0053 Red Hill Fuel Storage. HI

Contract #: Prime contract # for DoD: NAVY CLEAN N62742-12-D-1829, CTO 0053
Subcontract: 14S-16234-HI16

Dear Ms. Thach:

Ten water samples were received November 17, 2016. Written results for the requested analyses are being provided on this December 12, 2016.

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

If you have any questions or require further information, please contact your APPL Project Manager, Libby Cheeseborough, libby@applinc.com, at your convenience. Thank you for choosing APPL, Inc.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. These test results meet all requirements of NELAC and DoD QSM. Release of the hard copy has been authorized by the Laboratory Manager or her designee, as verified by the following signature.

Paula McCartney

Paula McCartney, Laboratory Director
APPL, Inc.

PM/rp
Enclosure
cc: File

Number of pages in this report: 1016

Data Validation Package
for
60481245 CIV 0053 Red Hill Fuel Storage
APPL SDG 81515
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QC Summary 642
Sample Data 652
Calibration Data 703
Raw Data 771
Method RSK-175 Methane 796
QC Summary 797
Sample Data 801
Calibration Data 823
Raw Data 860

Method 6010C 875

QC Summary 876

Sample Data 879

Calibration Data 894

Raw Data 916

Inorganic Analyses 924

QC Summary 925

Sample Data 931

Calibration Data 945

Raw Data 990

SAMPLE RECEIPT INFORMATION

Sample Receipt Information

ARF: 81515

Project: 60481245 CIV0053 Red Hill Fuel Storage. HI

Sample Receipt Information:

Ten water samples were received November 17, 2016, at 0.0°C, 0.0°C, 0.0°C, 0.0°C, 0.0°C, -0.5°C, 1.5°C, and 1.5°C. The sample group was assigned Analytical Request Form (ARF) number 81515. The sample numbers and requested analyses were compared to the chains of custody and email communications. Labeling discrepancies were noted and reported to the client; collection times were revised, as requested. The anion and metals analyte lists were revised, as requested on November 18, 2016. No other exception was encountered.

Sample Table

CLIENT ID	APPL ID	Matrix	Date Sampled	Date Received
ERH118	AZ45988	WATER	11/15/16	11/17/16
ERH119	AZ45989	WATER	11/15/16	11/17/16
ERH123	AZ45990	WATER	11/15/16	11/17/16
ERH124	AZ45991	WATER	11/15/16	11/17/16
ERH125	AZ45992	WATER	11/15/16	11/17/16
ERH127	AZ45993	WATER	11/16/16	11/17/16
ERH129	AZ45994	WATER	11/15/16	11/17/16
ERH130	AZ45995	WATER	11/16/16	11/17/16
ERH131	AZ45996	WATER	11/16/16	11/17/16
ERH132	AZ45997	WATER	11/16/16	11/17/16

The samples and blanks were screened for J-value responses between the detection limit (DL) and limit of quantitation (LOQ).

APPL's Laboratory control limits generated in house statistically do not meet the control limits listed in DoD QSM 5.0 for all analytes. Laboratory control spike recoveries for this project meet all control limits listed in the DoD QSM 5.0 except where noted. A copy of our in house generated control limits is available upon request. In addition, a copy of our LOQ control limits, established using 7 data points, are also available upon request.

Only the portion of the injection log relative to these samples is included. A full sequence log is available upon request.

Measurement uncertainty can be reported upon request.

CASE NARRATIVE

EPA Method 8011

EDB

Sample Preparation:

The water samples were extracted according to EPA method 8011. All holding times were met.

Sample Analysis Information:

The samples were analyzed according to the method using an Agilent Gas Chromatograph with an ECD.

Quality Control/Assurance

Calibrations:

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Blanks:

No target analyte was detected above one-half the limit of quantitation (LOQ) in the method blank.

Spikes:

A Laboratory Control Spike (LCS) was used for quality assurance. All acceptance criteria were met.

No sample was designated by the client for MS/MSD analysis.

Surrogates

The surrogate recoveries are summarized in the Form 2 & 8. All surrogate recoveries were within the control limits.

Summary:

No problem was encountered.

EPA Method 8015B

Total Petroleum Hydrocarbons - Diesel & Oil

Sample Preparation:

The water samples were extracted according to EPA method 3510C. All holding times were met.

Sample Analysis Information:

The samples were analyzed according to the method using an Agilent Gas Chromatograph with a flame ionization detector.

The surrogate in sample ERH124 was manually integrated according to the SOP. Before and after chromatograms are included in the package.

Quality Control/Assurance

Calibrations:

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Blanks:

No target analyte was detected above one-half the LOQ in the method blank.

Spikes:

A Laboratory Control Spike (LCS) was used for quality assurance. All acceptance criteria were met.

No sample was designated by the client for MS/MSD analysis.

Surrogates:

Surrogate recoveries are summarized on the Form 2 & 8. All surrogate recoveries were acceptable.

Summary:

No analytical problem was encountered. The data generated are acceptable.

EPA Method 8270D-SIM
Polynuclear Aromatic Hydrocarbons

Sample Preparation:

The water samples were extracted according to EPA method 3510C. All holding times were met.

Analysis Information:

The samples were analyzed according to EPA Method 8270D using an Agilent Gas Chromatograph with a mass spectrometer detector, in selective ion monitoring mode (SIM).

Quality Control/Assurance

Spike Recovery

A Laboratory Control Spike (LCS) was used for quality assurance. All LCS recoveries met acceptance criteria.

No sample was designated by the client for MS/MSD analysis.

Method blanks

No target compound was detected at or above one-half the LOQ in the method blank.

Surrogates

Surrogate recoveries are summarized on the Form 2 & 8. One surrogate recovered below the QC limits in four samples. The samples were re-extracted outside of holding time. The surrogates recovered within the control limits. All other surrogate recoveries met acceptance criteria.

Calibration

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Tuning:

The instrument was tuned using DFTPP. All method criteria were met.

Internal Standards

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8270. All acceptance criteria were met.

Summary:

No analytical exception was encountered. The data generated are acceptable.

EPA Method 8270D
Semi-Volatile Organic Compounds

Sample Preparation:

The water samples were extracted according to EPA method 3510C. All holding times were met.

Analysis Information:

The samples were analyzed according to EPA Method 8270D using an Agilent Gas Chromatograph with a mass spectrometer detector.

Quality Control/Assurance

Spike Recovery

A Laboratory Control Spike (LCS) was used for quality assurance. All LCS recoveries met acceptance criteria.

No sample was designated by the client for MS/MSD analysis.

Method blanks

No target compound was detected at or above one-half the LOQ in the method blank.

Surrogates

Surrogate recoveries are summarized on the Form 2 & 8. Two surrogates recovered below the control limits in LCSD. All other surrogate recoveries met acceptance criteria.

Calibration

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Tuning:

The instrument was tuned using DFTPP. All method criteria were met.

Internal Standards

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8270. All acceptance criteria were met.

Summary:

No analytical exception was encountered. The data generated are acceptable.

APPL SOP ANA2MEE

2-(2-Methoxyethoxy) ethanol by SPE, GC/MS

Sample Preparation:

The water samples were extracted according to EPA method 3535. All holding times were met.

Analysis Information:

The samples were analyzed according to an internal method APPL SOP ANA2MEE using an Agilent Gas Chromatograph with a mass spectrometer detector.

Quality Control/Assurance

Spike Recovery

A Laboratory Control Spike (LCS) was used for quality assurance. All LCS recoveries met acceptance criteria.

No sample was designated by the client for MS/MSD analysis.

Method blanks

No target compound was detected at or above one-half the LOQ in the method blank.

Surrogates

No surrogate was used for this method.

Calibration

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Tuning:

The instrument was tuned using DFTPP. All method criteria were met.

Internal Standards

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8270. All acceptance criteria were met.

Summary:

No other analytical exception was encountered. The data generated are acceptable.

EPA Method 8260B
Volatile Organic Analysis

Sample Preparation:

The water samples were purged according to EPA method 5030B. All holding times were met.

Sample Analysis Information:

The samples were analyzed according to EPA method 8260B using an Agilent Gas Chromatograph with a mass spectrometer detector.

Quality Control/Assurance:

Calibrations:

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Blanks:

No analyte was detected above one-half the limit of quantitation (LOQ) in the method blanks.

Spikes:

Laboratory Control Spikes (LCS) were used for quality assurance. All LCS recovery acceptance criteria were met.

No sample was designated by the client for MS/MSD analysis.

Surrogates:

Surrogate recoveries are summarized on the Form 2 & 8. All surrogate recoveries were acceptable.

Tuning:

The instrument was tuned using BFB. All method criteria were met.

Internal Standards:

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8260. All method acceptance criteria were met.

Summary:

No problem was encountered. The data generated are acceptable.

EPA Method 8260B
Gasoline

Sample Preparation:

The water samples were purged according to EPA method 5030B. All holding times were met.

Sample Analysis Information:

The samples were analyzed according to EPA method 8260B using an Agilent Gas Chromatograph with a mass spectrometer detector.

Quality Control/Assurance:

Calibrations:

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Blanks:

No analyte was detected above one-half the limit of quantitation (LOQ) in the method blanks.

Spikes:

Laboratory Control Spikes (LCS) were used for quality assurance. All LCS recovery acceptance criteria were met.

No sample was designated by the client for MS/MSD analysis.

Surrogates:

Surrogate recoveries are summarized on the Form 2 & 8. All surrogate recoveries were acceptable.

Tuning:

The instrument was tuned using BFB. All method criteria were met.

Internal Standards:

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8260. All method acceptance criteria were met.

Summary:

No problem was encountered. The data generated are acceptable.

Methane
RSK-175

Sample Preparation and Analysis

The water samples were analyzed with guidance from RSK-175. The samples were allowed to equilibrate for 10 minutes at 40°C and a portion of the headspace was analyzed using a Hewlett Packard Gas Chromatograph with a flame ionization detector. All holding times were met.

Quality Control/Assurance

Spike Recovery

Laboratory Control Spikes (LCS) were used for quality assurance. All acceptance criteria were met.

No sample was designated by the client for MS/MSD analysis.

Method blanks

The blanks contained no target analyte above one-half the limit of quantitation (LOQ).

Calibration

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Summary:

No analytical exception is noted.

EPA Method 6010C
Metals

Digestion Information:

The water samples were digested according to EPA method 3010A. All holding times were met.

Analysis Information:

Samples:

The samples were analyzed for metals according to EPA method 6010B using a Perkin Elmer ICP 5300DV.

Calibrations:

Calibrations were performed according to the methods for the initial calibration and the initial calibration verification. The initial calibration verification is prepared from a second source standard. All acceptance criteria were met.

Blanks:

No target metal was detected above one half the LOQ in the method blank.

Spikes:

A Laboratory Control Spike (LCS) was used for quality assurance. All LCS acceptance criteria were met.

No sample was designated by the client for MS/MSD analysis.

Summary:

No analytical problem was encountered. The data generated are acceptable.

EPA Method 300.0 and SM 2320B, 3500 FeB and 4500SiD

Anions, and Ferrous Iron

Sample Preparation Information:

The water samples were prepared according to the methods.

Analysis Information:

Samples:

The samples were analyzed according to the methods. A Dionex DX500 ion chromatograph was used for the EPA 300.0 analysis. The samples were received more than 24 hours after collection. The samples were analyzed as soon as possible upon arrival for ferrous iron and nitrate. All other holding times were met.

Calibrations:

Initial and continuing calibrations were performed according to the methods and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Blanks:

No target analyte was detected above one-half the LOQ in the method blanks.

Spikes:

Laboratory Control Spikes (LCS) were used for quality assurance. All recoveries were within acceptance limits in the LCS.

No sample was designated by the client for MS/MSD analysis.

Summary:

No other analytical exception is noted. All data are acceptable.

APPL Inc.
Abbreviations and Flags

FLAG	DESCRIPTION
#	Recovery or RPD outside control limits
*	Recovery or RPD outside control limits
B	Analyte detected in associated method blank
C1	Reason for correction: wrote incorrect response
C2	Reason for correction: calculated incorrectly
C3	Reason for correction: needs to be rechecked
C4	Reason for correction: data not usable
DO	Diluted out
E	Exceeds linear range
F	Estimated value
G1	Includes a wide range of hydrocarbons which does not match our gasoline standard
G10	Includes a match to hydrocarbon profiles within the range of mineral spirits
G11	Includes a match to hydrocarbon profiles within the range of JP-4
G12	Pattern does not match the gasoline standard; the carbon range for this sample is consistent with JP8
G13	Closely resembles the hydrocarbon profile of aviation gasoline
G14	Analyte concentration may be biased due to carry over
G2	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G3	Includes higher boiling hydrocarbons
G4	Includes dominant peak(s) not indicative of petroleum hydrocarbons
G5	Is mainly dominant peak(s) not indicative of petroleum hydrocarbons
G6	Contains recognizable contaminant peak(s) which has been removed from quantitation
G7	Is mainly a match to hydrocarbons within the range of gasoline
G8	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G9	Includes hydrocarbons within the range of kerosene
J	Estimated value
M	Matrix effect
MI1	Manual integration: integration does not follow baseline
MI2	Manual integration: non-target peak interference
MI3	Manual integration: to split a peak that was integrated as one peak by the computer.
MI4	Manual integration: to integrate a split peak
MI5	Manual integration: the whole peak or part of the peak was not integrated
MI6	Manual integration: computer integrated wrong peak
MI7	Manual integration: other – (See case narrative)
MDL	Method detection limit
ND	Not detected
NT	Non-target
Q	Acceptance criteria not met
T1 I	Includes wide range of hydrocarbons not indicative of diesel
T1 M	Is mainly wide range of hydrocarbons not necessarily indicative of diesel
T2 I	Includes lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T2 M	Is mainly lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T3 I	Includes higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T3 M	Is mainly higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T4 I	Includes dominant peak(s) not indicative of hydrocarbons
T4 M	Is mainly dominant peak(s) not indicative of hydrocarbons
T5	Contains recognizable contaminant peak(s) which has been removed from quantitation
T6	Is mainly a match to hydrocarbons within range of diesel fuel
T7	Closely resembles the boiling point hydrocarbon profile consistent with diesel fuel
T8	Includes a match to hydrocarbon profiles within range of diesel and kerosene fuel
T9 I	Includes non-diesel hydrocarbons within boiling point range of diesel fuel
T9 M	Is mainly non-diesel hydrocarbons within boiling point range of diesel fuel
U	Not detected
Y	Percent difference between primary and confirmation column > 40%

CHAIN OF CUSTODY,

ARF, CRF, AND

CLIENT COMMUNICATION

APPL - Analysis Request Form 81515

Client: AECOM
Address: 1001 Bishop Street, Suite 1600
Honolulu, HI 96813
Attn: Margie Thach
Phone: 808-356-5373 Fax: 808-523-8950
Job: 60481245 CIV0053 Red Hill Fuel Storage
PO #: 14S-16234-HI16, PO# 77265
Chain of Custody (Y/N): Y # 111616
RAD Screen (Y/N): Y pH (Y/N): Y
Turn Around Type: 1 WEEK

Received by: CM
Date Received: 11/17/16 Time: 10:00
Delivered by: FED EX
Shuttle Custody Seals (Y/N): Y Time Zone: -10
Chest Temp(s): -0.5,5X0.0,2X1.5°C
Color: VOA/L-PURBN/O-ORGGN
Samples Chilled until Placed in Refrig/Freezer: Y
Project Manager: Libby Cheesebor
QC Report Type: DVP4DOD/EQUIS/HI
Due Date: 11/24/16

Comments:
7-day TAT for Form 1s; 21 day TAT for DVP; F1s, login to Margie.Thach@aecom.com
A: DOD QSM ver 5.0; DOD Forms (LOQ/LOD database/DL) Print ND as LOD w/U Qual.
8260: BTEX & TPH-G only; 8270 SIM: 1-methylnaphthalene, 2-methylnaphthalene & naphthalene only.
TPH D & O; RSK: Methane only; 8011: EDB only;
$87DC53W5: report phenol only; $87DMEEW5: special SPE Extraction for 2-MEE (see Diane).
FR: HC to LDC, 2 labeled CDs to Margie Thach. PM needs to review after Admin Review is complete.
EDD: AECOM EQuIS EDD 2.5.3 to Margie.Thach@aecom.com & jecklund@lab-data.com
Revised collection time for ERH129. 11-18-16 rp

Sample Distribution:
GC: 8-$87DC53W5, 8-$87DMEEW5, 8-$DOC53W5, 8-$SIMDOD5W, 2-$8011
Extractions: 8-_MWE2MEE, 8-_SEP004, 8-_SEP004S, 8-_SEP011LL, 2-_MWE012
VOA: 10-$86BXDOD5W, 10-$GASBL, 10-$GRO86BW, 7-$RSKMETH
Metals: 5-$61CDOD5W(Ca,Mg,Mn,K,Na)
Wetlab: 5-$232W(HCO3,CO3,ALK), 5-$300W(NO3,BR,CL,F,SO4), 5-$35FE, 5-$SIO2, 5-$SIO2D
Other: 5-_M3010

Charges:

Invoice To:
ACCOUNTS PAYABLE
1001 Bishop Street, Ste 1600
USAPImaging@aecom.com
mary.basano@aecom.com

	Client ID	APPL ID	Sampled	Analyses Requested
1.	ERH118	AZ45988W	11/15/16 17:15	$232W(HCO3,CO3,ALK), $300W(NO3,BR,CL,F,SO4), $35FE, $61CDOD5W(Ca,Mg,Mn,K,Na), $86BXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $RSKMETH, $SIMDOD5W, $SIO2, $SIO2D
2.	ERH119	AZ45989W	11/15/16 17:20	$86BXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $SIMDOD5W

Note: All times, excluding sample collection times, are Pacific Time Zone unless noted otherwise. Collection times are in: -10 UTC
Page 1 Client Code: AECOM-CIV053 *Printed 11/18/16 10:37:35 AM* Computer: APPL-135 **# 81515**

3.	ERH123	AZ45990W 11/15/16 08:00	$8011, $86BXDOD5W, $GASBL, $GRO86BW, $RSKMETH -- 8260: BTEX & 1,2-DCA; 8011: EDB only
4.	ERH124	AZ45991W 11/15/16 11:30	$232W(HCO3,CO3,ALK), $300W(NO3,BR,CL,F,SO4), $35FE, $61CDOD5W(Ca,Mg,Mn,K,Na), $86BXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $RSKMETH, $SIMDOD5W, $SIO2, $SIO2D
5.	ERH125	AZ45992W 11/15/16 14:15	$232W(HCO3,CO3,ALK), $300W(NO3,BR,CL,F,SO4), $35FE, $61CDOD5W(Ca,Mg,Mn,K,Na), $86BXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $RSKMETH, $SIMDOD5W, $SIO2, $SIO2D
6.	ERH127	AZ45993W 11/16/16 11:50	$232W(HCO3,CO3,ALK), $300W(NO3,BR,CL,F,SO4), $35FE, $61CDOD5W(Ca,Mg,Mn,K,Na), $86BXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $RSKMETH, $SIMDOD5W, $SIO2, $SIO2D
7.	ERH129	AZ45994W 11/15/16 13:40	$232W(HCO3,CO3,ALK), $300W(NO3,BR,CL,F,SO4), $35FE, $61CDOD5W(Ca,Mg,Mn,K,Na), $8011, $86BXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $RSKMETH, $SIMDOD5W, $SIO2, $SIO2D -- 8260: BTEX & 1,2-DCA; 8011: EDB only
8.	ERH130	AZ45995W 11/16/16 12:50	$86BXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $SIMDOD5W
9.	ERH131	AZ45996W 11/16/16 13:10	$86BXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $SIMDOD5W
10.	ERH132	AZ45997W 11/16/16 12:45	$86BXDOD5W, $GASBL, $GRO86BW, $RSKMETH -- Unpreserved VOA

LABS revised COC 11/17/16 MT

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

2x1.5, 0.0, 0.0, 0.0, 8/5/15

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422 0.0, -0.5, 0.0 8M 11/17/16
C.O.C.

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number	Sampler (Print)	Purchase Order Number	Sampler (Signature)
CIV 53 / 60481245	Margie Thach	77265	MT

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil	8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	[illegible]	8270D Phenol, TICs	[illegible]	SM3500 Ferrous Iron	[illegible]	RSK175M Methane	[illegible]	[illegible]
EX-H129	RHMW09	11/15/16	~~1540~~ 1240 MT 11/16/16	HST	21	X			X	X	X	X	X	X		X	X	X	X	X	X	X

Analysis Requested/Method Number

Date Shipped: 11/16/16
Carrier: FedEx
Tracking No.:
Comments:

MT 11/16/16

Shuttle Temperature:	Turnaround Requested: Check one ☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other	Sample Disposal: ☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	11/16/16	1500					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					11/17/16	1000	

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

LABS revised COC 11/17/16 MT

2x1.5, 0.0, 0.0, 0.0 8/5/15

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD
Phone: (559) 275-2175
Fax: (559) 275-4422 0.0, -0.5 0.0 8M 11/14/16
C.O.C.

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number	Sampler (Print)
CIV 53 / 60481245	Margie Thach
Purchase Order Number	Sampler (Signature)
77265	MT

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil	8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	ammonia	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	6010B/7470A Dissolved Metals	RSK175M Methane	SM5310B DOC (water)	6010B Dissolved Metals (water)
ERH129	RHMW09	11/15/16	~~1540~~ 1340 MT 11/17/16	HST	21	X			X	X	X	X	X	X		X	X	X	X	X	X	X

MT 11/16/16

Shuttle Temperature:	Turnaround Requested: Check one ☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other	Sample Disposal: ☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	11/16/16	1500					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					11/17/16	1000	

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

APPL Sample Receipt Form

ARF# **81515**

Sample	Container Type	Count	pH
AZ45988	[3] PL 250mL	3	NA
	[6] PL 500mL - HNO3	1	1.7
	[13] VOAs - HCL	6	NA
	[17] Amber Liter	6	NA
	[38] 250mL brn poly, HCl prsvd	1	1.7
AZ45989	[13] VOAs - HCL	4	NA
	[17] Amber Liter	6	NA
AZ45990	[13] VOAs - HCL	3	NA
	[15] VOAs - NP	3	NA
AZ45991	[3] PL 250mL	3	NA
	[6] PL 500mL - HNO3	1	1.7
	[13] VOAs - HCL	6	NA
	[17] Amber Liter	6	NA
	[38] 250mL brn poly, HCl prsvd	1	1.7
AZ45992	[3] PL 250mL	3	NA
	[6] PL 500mL - HNO3	1	1.7
	[13] VOAs - HCL	6	NA
	[17] Amber Liter	6	NA
	[38] 250mL brn poly, HCl prsvd	1	1.7
AZ45993	[3] PL 250mL	3	NA
	[6] PL 500mL - HNO3	1	1.7
	[13] VOAs - HCL	6	NA
	[17] Amber Liter	6	NA
	[38] 250mL brn poly, HCl prsvd	1	1.7
AZ45994	[3] PL 250mL	3	NA
	[6] PL 500mL - HNO3	1	1.7
	[13] VOAs - HCL	7	NA
	[15] VOAs - NP	3	NA
	[17] Amber Liter	6	NA
	[38] 250mL brn poly, HCl prsvd	1	1.7
AZ45995	[13] VOAs - HCL	6	NA
	[17] Amber Liter	6	NA
AZ45996	[13] VOAs - HCL	6	NA
	[17] Amber Liter	6	NA
AZ45997	[13] VOAs - HCL	3	NA
	[15] VOAs - NP	3	NA

Sample	Container Type	Count	pH

Renee Patterson

From: Chue Moua [cmoua@applinc.com]
Sent: Friday, November 18, 2016 5:16 AM
To: rpatterson@applinc.com
Subject: FW: ARF 81515 Receiving Notes

Chue Moua
Project Manager
Sample Custody Supervisor

Agriculture & Priority Pollutants Laboratories, Inc.
WOSB. NELAP Accredited.

t. 559.275-2175 f. 559.275-4422
a. 908 N. Temperance Ave., Clovis, CA 93611

Website • Email

DoD accredited for ISM, Dioxins and PCB congeners.

From: Libby Cheesebourough [mailto:libby@applinc.com]
Sent: Thursday, November 17, 2016 3:30 PM
To: Chue Moua; Receiving APPL
Subject: Fwd: ARF 81515 Receiving Notes

---------- Forwarded message ---------
From: Thach, Margie <Margie.Thach@aecom.com>
Date: Thu, Nov 17, 2016 at 3:14 PM
Subject: RE: ARF 81515 Receiving Notes
To: Libby Cheesebourough <libby@applinc.com>
Cc: Sharon Dehmlow <sdehmlow@applinc.com>, Kronen, John <john.kronen@aecom.com>

Hi Libby,

Thank you for the notes.

ERH125 – time should be 1415. Please note discrepancy on the login paperwork.

ERH129 – please use label time of 1340. I will send a revised COC.

ERH130 & 131 – ok.

Thank you,

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD
Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C.

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number	Sampler (Print)	Purchase Order Number	Sampler (Signature)
CIV 53 / 60481245	Margie Thach	77265	

Date Shipped: 11/16/16
Carrier: FedEx
Tracking No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil	8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	[illegible]	8270D Phenol, TICs	2,4,6-methoxybenzyl-ethanol	SM3500 Ferrous Iron	SM2320 Alkalinity, 300.0 Nitrate, Sulfate, Chloride, 9012B Total Cyanide	RSK175M Methane	SM5310C Dissolved Organic Carbon	Lab to perform
ERH118	OWOFMW01	11/15/16	1715	HST	17	X			X	X			X	X		X	X	X	X	X	X	X

MT 11/16/16

Shuttle Temperature:	Turnaround Requested: Check one: ☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other	Sample Disposal: ☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	11/16/16	1500					
Relinquished by:	**Date**	**Time**	**Received by:**	**Relinquished by:**	**Date**	**Time**	**Received at lab by:**
					11/17/16	1000	

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

LABS

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD
Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C.

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number	Sampler (Print)	Date Shipped: 11/16/16
CIV 53 / 60481245	Margie Thach	Carrier: FedEx
Purchase Order Number 77265	Sampler (Signature)	Tracking No.:
		Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil	8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	300.0/ISC TPH-D/O w/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	SM4500 D6420/B 2540C 6010 metals	RSK175M Methane
ERH119	OWDFMW01	11/15/16	~~1715~~ 1720	HST	10	X			X	X			X	X		X	X			
ERH123	Trip Blank	11/15/16	0800	HST	6	X			X	X	X	X								X

MS 11/16/16

Shuttle Temperature:	Turnaround Requested: Check one: ☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other	Sample Disposal: ☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	11/16/16	1900					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					11/17/16	1000	

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

APPL LABS

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD
Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C. ____

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number	Sampler (Print)	Date Shipped: 11/16/16
CIV 53 / 60481245	Margie Thach	Carrier: FedEx
Purchase Order Number	Sampler (Signature)	Tracking No.:
77265		Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil	8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O W SGT	8270D Phenol, TICs	2-(2-methenethoxy)-ethanol	SM3500 Ferrous Iron	SM5310C TOC, Dissolved	SM5310C TOC, Total	RSK175M Methane	Dissolved Methane	Total Methane
ERH124	RHMW02	11/15/16	1130	HST	17	X			X	X			X	X		X	X	X	X	X	X	X	X

MT 11/16/16

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other ____

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	11/16/16	1500					
Relinquished by:	**Date**	**Time**	**Received by:**	**Relinquished by:**	**Date**	**Time**	**Received at lab by:**
					11/17/16	0800	

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD
Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C.

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number	Sampler (Print)	Date Shipped: 11/16/16
CIV 53 / 60481245	Margie Thach	Carrier: FedEx
Purchase Order Number	Sampler (Signature)	Tracking No.:
77265		Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil		8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3050B/6010C TPH-DO ww sct	8270D Phenol, TICs	2,6-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	SM4500 Nitrate, Sulfate Chloride	RSK175M Methane	SM 2320B Alkalinity Preserved Field Lab Only	SM 2320B Alkalinity Preserved Lab Only
ERH125	RHMW03	11/16/16	1415	HST	17	X				X	X			X	X		X	X	X	X	X	X	X

MWT 11/16/16

Shuttle Temperature:	Turnaround Requested: Check one: ☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other	Sample Disposal: ☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	11/16/16	1500					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					11/17/16	1000	

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

APPL LABS

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C.

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number	Sampler (Print)	Date Shipped: 11/16/16
CIV 53 / 60481245	Margie Thach	Carrier: FedEx
Purchase Order Number	Sampler (Signature)	Tracking No.:
77265	[signature]	Comments:

Analysis Requested/Method Number

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil		8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O W SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	SM2320 Alkalinity 300.0 Nitrate, Sulfate, Chloride	SM4500 Total Silica	RSK175M Methane	[illegible]	[illegible]	
ERH127	HDMW2253-03	11/16/16	1150	HST	17	X				X	X			X	X		X	X	X	X	X	X	X	X	

MT 11/16/16

Shuttle Temperature:	Turnaround Requested: Check one ☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other	Sample Disposal: ☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	11/16/16	1500					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					11/17/16	1000	[signature]

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

2x1.5, 0.9 0.0, 0.0 8/5/15

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD
Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C.

0.0, -0.5 0.0 SM 11/17/16 OK

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number	Sampler (Print)
CIV 53 / 60481245	Margie Thach
Purchase Order Number	Sampler (Signature)
77265	

Date Shipped: 11/16/16
Carrier: FedEx
Tracking No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil		8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	[illegible]	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	CW22 Alkalinity	RSK175M Methane	[illegible]	[illegible]	[illegible]
ERH129	RHMW09	11/15/16	1540	HST	21	X				X	X	X	X	X	X		X	X	X	XX	X	X	X	

MM 11/16/16

Shuttle Temperature:	Turnaround Requested: Check one: ☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other	Sample Disposal: ☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	11/16/16	1500					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					11/17/16	1000	

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

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Clovis, CA 93611

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Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number	Sampler (Print)	Date Shipped: 11/16/16
CIV 53 / 60481245	Margie Thach	Carrier: FedEx
Purchase Order Number	Sampler (Signature)	Tracking No.:
77265		Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil	8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O w/ SGT	8270D Phenol, TICs	2,(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	SM2320 Alkalinity, 300.0 Nitrate, Sulfate, Chloride, SM4500-NH3 C, D, E, 353.2 NO3/NO2, 365.1 TPO4	RSK175M Methane	GWLEDD, Dissolved Metals, SW6010B, LUFT Metals
ERH130	Equip Blank	11/16/16	1250	HST	11	X			X	X			X	X		X	X				

MT 11/16/16

Shuttle Temperature:	Turnaround Requested: Check one: ☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other	Sample Disposal: ☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	11/16/16	1500					
Relinquished by:	**Date**	**Time**	**Received by:**	**Relinquished by:**	**Date**	**Time**	**Received at lab by:**
					11/17/16	1000	

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C.

Report to: PLEASE PRINT	Invoice to: PLEASE PRINT
Company Name: AECOM Phone: 808-356-5373	Company Name: AECOM Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813 Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813 Fax:
Attn: Margie Thach Email: margie.thach@aecom.com	Attn: Mary Basano Email: mary.basano@aecom.com

Project Name/Number: CIV 53 / 60481245
Sampler (Print): Margie Thach
Purchase Order Number: 77265
Sampler (Signature): [signature]

Date Shipped: 11/16/16
Carrier: FedEX
Tracking No.:
Comments:

Analysis Requested/Method Number

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil	8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O w/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	SM3320 Alkalinity 300.0 Nitrate, Sulfate, Chloride SM4500 Total Silica	RSK175M Methane	SM4500 Dissolved Sulfate	6010 metals
ERH131	Field Blank	11/16/16	1310	HST	11	X			X	X			X	X		X	X					
ERH132	Trip Blank	11/16/16	1245	HST	6	X			X	X										X		

MT 11/16/16

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	11/16/16	1500					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					11/17/16	1100	[signature]

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

COOLER RECEIPT FORM **ARF: 81515**

1) Project: 60481245 CIV0053 Red Hill Fuel Storage Date Received: 11/17/16

2) Coolers: Number of Coolers: 8

3) YES Were custody seals present and intact?
How many? 16 Name/Date on seal? See below

4) YES Was there a shipping slip? Carrier name: FED EX

5) Type of packing in cooler: X bubble wrap __ popcorn __ foam X plastic bags
X wet ice __ dry ice __ no ice __ other

6) YES Were cooler temperatures acceptable?

7) Serial number of certified NIST thermometer use J5297

8) Cooler temp(s): In °C
1: -0.5 2: 0.0 3: 0.0 4: 0.0 5: 0.0 6: 0.0
7: 1.5 8: 1.5 9: 10: 11: 12:

CUSTODY SEAL
APPL, Inc.
(559) 275-2175
Initials MT
Date 11/17/16

Chain of custody:

9) YES Was a chain of custody received?

10) YES Were the custody papers complete/signed in the appropriate places?

Sample Labels:

11) YES Were all sample labels complete (sample ID, date/time of sampling, etc.)?

12) YES/NO Did all container labels agree with custody papers?

Sample Containers:

13) YES Were all containers sealed in separate bags?

14) YES Did all containers arrive in good condition:(unbroken, no leakage, no cracked/broken lids)?

15) YES Were correct containers and preservatives used for the tests indicated?

16) YES Was a sufficient amount of sample sent for tests indicated?

17) Yes Were bubbles present in volatile samples?
If yes, the following were received with air bubbles:
Larger than a pea: AZ45994W07
Smaller than a pea: AZ45990W02-W03,AZ4599W06,AZ45992W06,AZ45993W04-W06,AZ45994W05-W06,AZ45995W05-W06,AZ45996W05-W06,AZ45997W04-W06,

Preservation Hold time:

18) YL 11/17/16 NO/Yes Was a sufficient amount of holding time remaining to analyze the samples?

19) Yes Was the pH taken of all non-VOA preserved samples and written on the sample container?

20) Yes Was the pH of acid preserved non-VOA samples < 2?

21) NA Was the pH of sodium hydroxide preserved samples for Cyanide > 12 and Sulfide >9?

22) Yes Were unpreserved VOA Vials received?

23) Yes Are unpreserved VOA vials noted in the ADD TEST FIELD on the ARF?
pH strip lot number: 90B2031
Lab notified if pH was not adequate:

Notes/Deficiencies:

Received ferrous iron greater than 24 hours for samples ERH118, ERH124, ERH125, and ERH129. Sample ERH125 - All voa vials has collection time of 16:15 or 16:20 other than what is listed on COC at 14:15. Sample ERH129 - COC collection time is 15:40, label time is 13:40. Samples ERH130 and ERH131 - COC listed 11 containers but received total of 12 containers.

Personnel receiving samples: YL Second reviewer:
Personnel labeling samples:
Project manager notified: YL Date/Time of notification 11/17/16 15:09
Name of client notified: Date/Time of notification

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank
EPA 8011

Blank Name/QCG: **161122W-45909 - 213975**
Batch ID: #8011-161122A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	EDB	0.020 U	0.02	0.020	0.010	ug/L	11/22/16	11/22/16
BLANK	SURROGATE: 1,3-DIBROMOPRO	92.0	70-132			%	11/22/16	11/22/16

Quant Method: 80111123.M
Run #: 1101168
Instrument: Herbie
Sequence: 161101
Initials: RHA

GC SC-Blank-REG MDLs-DOD
Printed: 11/23/16 10:55:26 AM

Laboratory Control Spike Recovery

EPA 8011

APPL ID: **161122W-45909 LCS - 213975**
Batch ID: #8011-161122A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
EDB	0.250	0.241	96.4	60-140
SURROGATE: 1,3-DIBROMOPROPANE (	0.350	0.270	77.1	70-132

Comments: _____

Primary	SPK
Quant Method :	80111123.M
Extraction Date :	11/22/16
Analysis Date :	11/22/16
Instrument :	Herbie
Run :	1101170
Initials :	RHA

Printed: 11/23/16 10:55:21 AM
APPL Standard LCS

8011

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81515

Case No: 81515 Date Analyzed: 11/22/16

Matrix: WATER Instrument: Herbie

APPL ID.	Client Sample No.	SURROGATE: 1,3-DIBROMOPROPANE (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
161122A-BLK	Blank	70-132	92.0				
161122A-LCS	Lab Control Spike	70-132	77.1				
AZ45990	ERH123	70-132	99.1				
AZ45994	ERH129	70-132	109				

Comments: Batch: #8011-161122A

Printed: 11/23/16 10:55:23 AM

Form 2 & 8, Surrogate Recovery Summary

8011

Form 4

Blank Summary

Lab Name: APPL, Inc.
Case No: 81515
Matrix: WATER
Blank ID: 161122A-BLK

SDG No: 81515
Date Analyzed: 11/22/16
Instrument: Herbie
Time Analyzed: 2040

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161122A-BLK	Blank	1101168	11/22/16 2040
161122A-LCS	Lab Control Spike	1101170	11/22/16 2120
AZ45990	ERH123	1101172	11/22/16 2200
AZ45994	ERH129	1101173	11/22/16 2220

Comments: Batch: #8011-161122A

Printed: 11/23/16 10:55:20 AM
Form 4, Blank Summary

ORGANICS

Sample Data

APPL, INC.

EPA 8011

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH123
Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515
APPL ID: AZ45990
QCG: #8011-161122A-213975

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8011	EDB	0.020 U	0.02	0.020	0.010	ug/L	11/22/16	11/22/16
8011	SURROGATE: 1,3-DIBROMOPROPANE	99.1	70-132			%	11/22/16	11/22/16

Quant Method: 80111123.M
Run #: 1101172
Instrument: Herbie
Sequence: 161101
Dilution Factor: 1
Initials: RHA

Printed: 11/23/16 10:55:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\161101\1101172.D\ECD1A.CH Vial: 72
Signal #2 : G:\HERBIE\DATA\161101\1101172.D\ECD2B.CH
Acq On : 11-22-16 22:00:35 Operator: RH
Sample : AZ45990W04 2/35.18G Inst : Herbie
Misc : Multiplr: 0.99
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Nov 23 10:41 2016 Quant Results File: 80111123.RES

Quant Method : G:\HERBIE\DATA\161101\80111123.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Nov 23 09:28:27 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

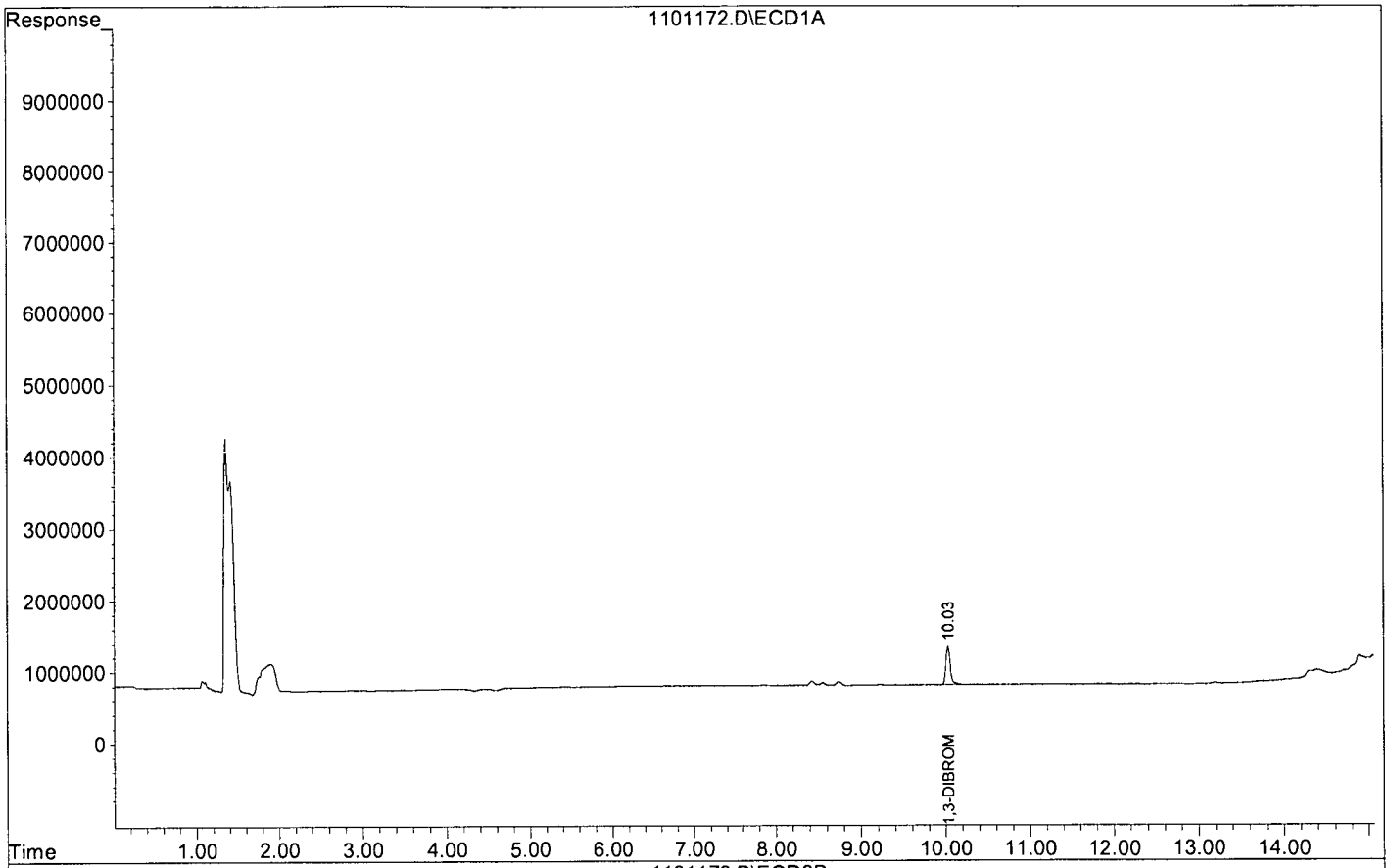
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	549089	716691	0.345	0.353
Spiked Amount	0.348			Recovery	=	99.08%	101.38%
	Target Compounds						
	Target Compounds						
1) TM	EDB	0.00	0.00	0	0	N.D. d	N.D. d
2) TM	1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4) TM	DBCP	0.00	0.00	0	0	N.D. d	N.D. d

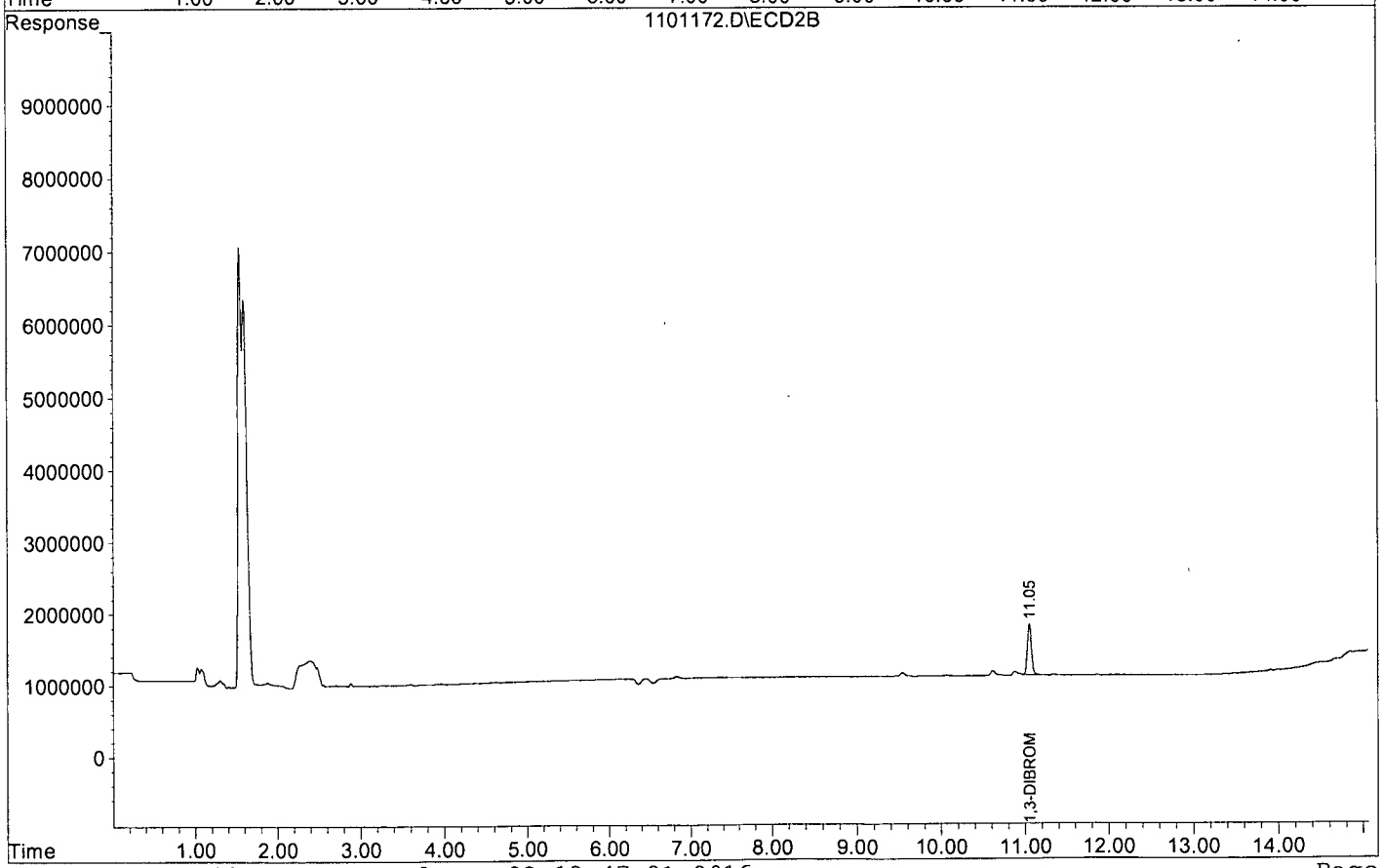
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\161101\1101172.D
Acq On : 11-22-16 22:00:35
Sample : AZ45990W04 2/35.18G
Misc :
Quant Method : G:\HERBIE\DATA\161101\80111123.M

Vial: 72
Operator: RH
Inst : Herbie
Multiplr: 0.99





EPA 8011

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH129
Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515
APPL ID: AZ45994
QCG: #8011-161122A-213975

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8011	EDB	0.020 U	0.02	0.020	0.010	ug/L	11/22/16	11/22/16
8011	SURROGATE: 1,3-DIBROMOPROPANE	109	70-132			%	11/22/16	11/22/16

Quant Method: 80111123.M
Run #: 1101173
Instrument: Herbie
Sequence: 161101
Dilution Factor: 1
Initials: RHA

Printed: 11/23/16 10:55:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\161101\1101173.D\ECD1A.CH Vial: 73
Acq On : 11-22-16 22:20:30 Operator: RH
Sample : AZ45994W08 2/35.93G Inst : Herbie
Misc : Multiplr: 0.97
IntFile : rteint.p

Data File : G:\HERBIE\DATA\161101\1101173.D\ECD2B.CH Vial: 73
Acq On : 11-22-16 22:20:29 Operator: RH
Sample : AZ45994W08 2/35.93G Inst : Herbie
Misc : Multiplr: 0.97
IntFile : rteint2.p
Quant Time: Nov 23 10:43 2016 Quant Results File: 80111123.RES

Quant Method : G:\HERBIE\DATA\161101\80111123.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Nov 23 09:28:27 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

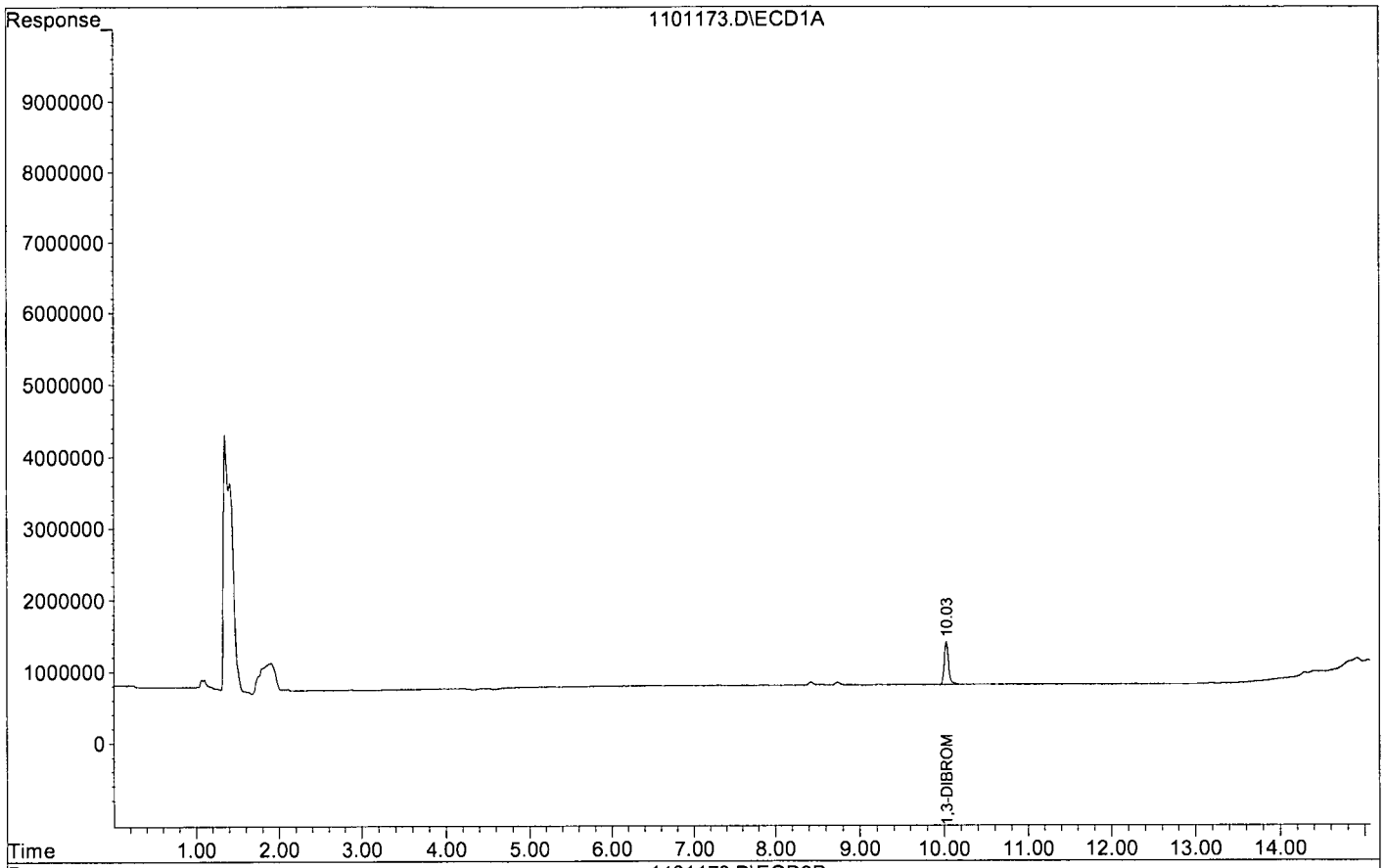
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	601213	778316	0.370	0.375
Spiked Amount	0.341			Recovery	=	108.52%	109.99%
	Target Compounds						
	Target Compounds						
1) TM	EDB	0.00	0.00	0	0	N.D. d	N.D. d
2) TM	1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4) TM	DBCP	0.00	0.00	0	0	N.D. d	N.D. d

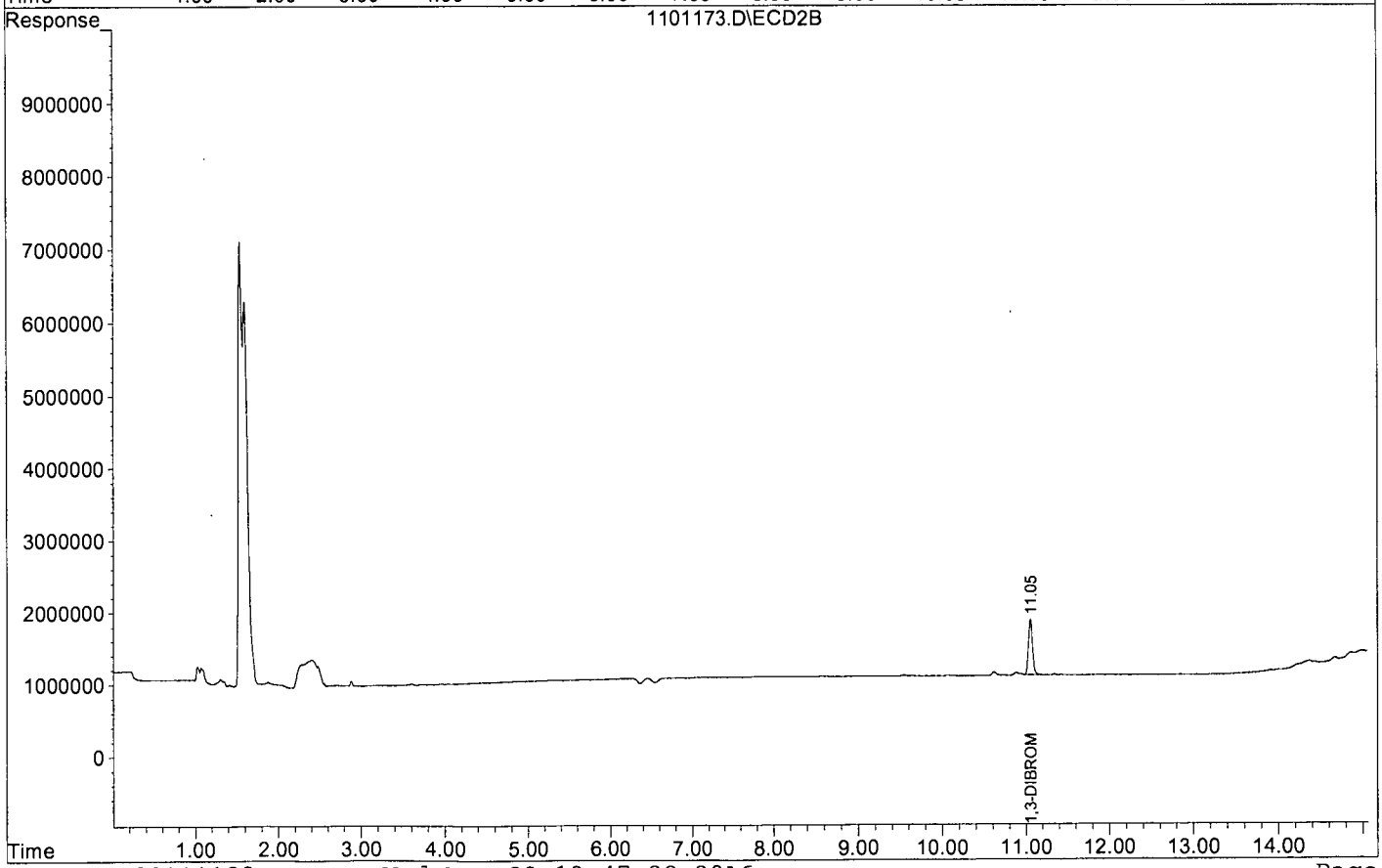
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\161101\1101173.D
Acq On : 11-22-16 22:20:30
Sample : AZ45994W08 2/35.93G
Misc :
Quant Method : G:\HERBIE\DATA\161101\80111123.M

Vial: 73
Operator: RH
Inst : Herbie
Multiplr: 0.97





ORGANICS

Calibration Data

APPL, INC.

DBCP/EDB/1,2,3-TCP Analysis by
504 8011 0301

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 11/22/16
Matrix: Instrument: Herbie Initials:

1101161.D 1101162.D 1101163.D 1101164.D 1101165 D 1101166 D

		Compound	1	2	3	4	5	6					Avg	%RSD		
1	TML	EDB	905500	667785	660730	548370	550910	584803					653016	21	TML	0.996
2	TML	1,2,3-TCP	26900	255500	239182	204104	209537	211446					191112	43	TML	0.997
3	S	1,3-DIBROMOPROPANE(S)	605900	963000	873508	746696	769936	792435					791912	15	S	
4	TM	DBCP	2030625	2651995	2569122	2228201	2442355	2585221					2417920	10.0	TM	
5		Signal #2											0	0		
6																
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2.5480141

DBCP/EDB/1,2,3-TCP Analysis by
504 8011 0301

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 11/22/16
Matrix: Instrument: Herbie
Initials:

1101161.D 1101162.D 1101163.D 1101164 D 1101165.D 1101166.D

		Compound	1	2	3	4	5	6					Avg	%RSD		
36	TM	EDB #2	1730600	1746165	1820586	1569188	1615566	1666058					1691361	5.5	TM	
37	TM	1,2,3-TCP #2	260900	282210	294928	260248	266834	277358					273746	5.0	TM	
38	S	1,3-DIBROMOPROPANE(S) #2	924200	1104780	1114742	976338	961335	975918					1009552	7.9	S	
39	TM	DBCP #2	3530325	4225010	4235268	3278315	4013675	4339088					3936947	11	TM	
40																
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0.83884

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161101\1101161.D\ECD1A.CH Vial: 61
Signal #2 : G:\HERBIE\DATA\161101\1101161.D\ECD2B.CH
Acq On : 11-22-16 18:21:41 Operator: RH
Sample : 8011 1 11/22/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Nov 23 9:18 2016 Quant Results File: 80111123.RES

Quant Method : G:\HERBIE\DATA\161101\80111123.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Nov 23 09:16:35 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

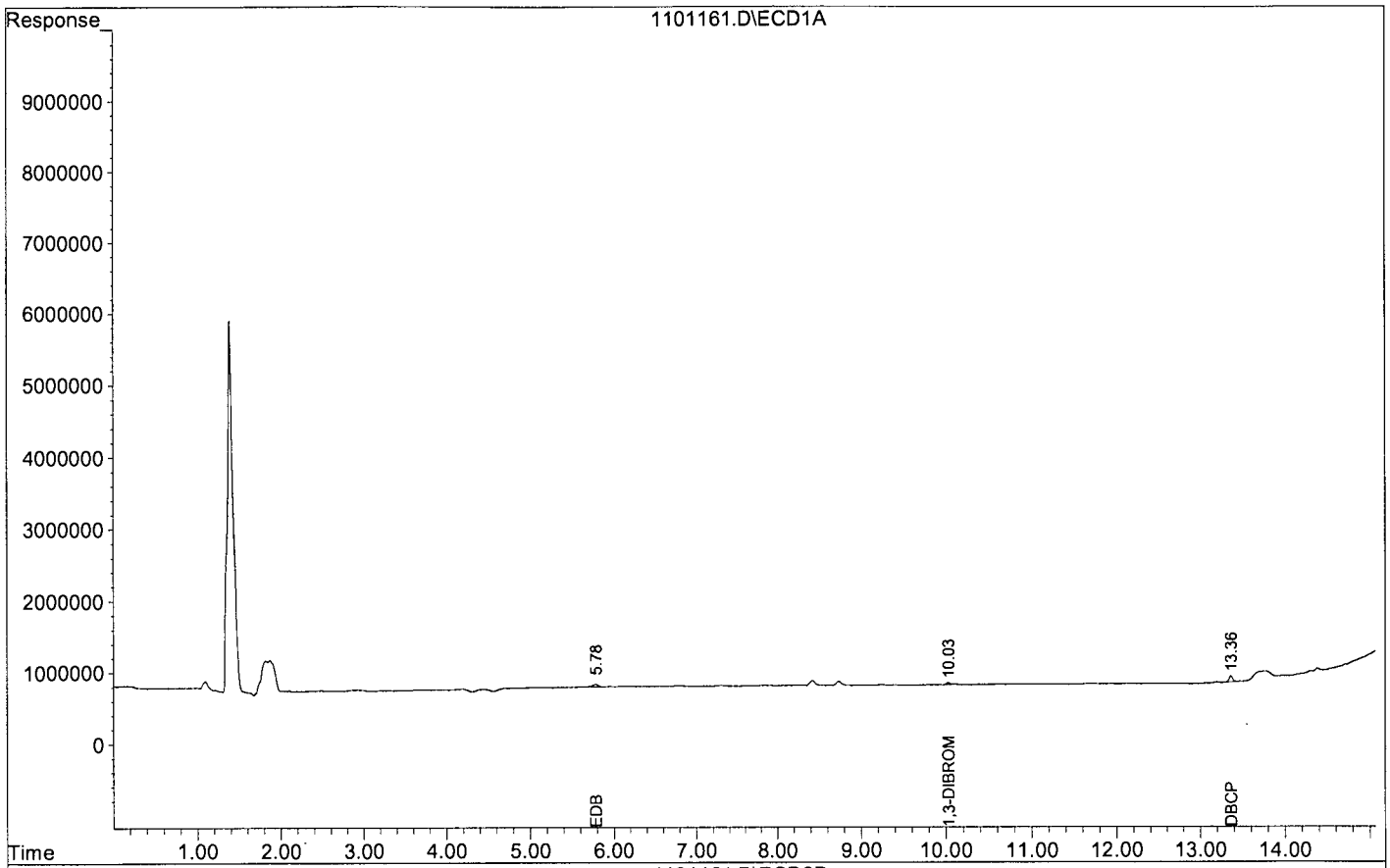
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	System Monitoring Compounds							
3) S	1,3-DIBROMOPROPA	10.03	11.05	24236	36968	0.014	0.017	
Spiked Amount	0.350			Recovery	=	4.00%	4.86%	
	Target Compounds							
1) TM	EDB	5.78	7.22	36220	69224	0.031	0.020	#
4) TM	DBCP	13.36	14.10	81225	141213	0.015	0.017	
	Target Compounds							
2) TM	1,2,3-TCP	9.24	10.46	1076	10436	N.D.	N.D.	

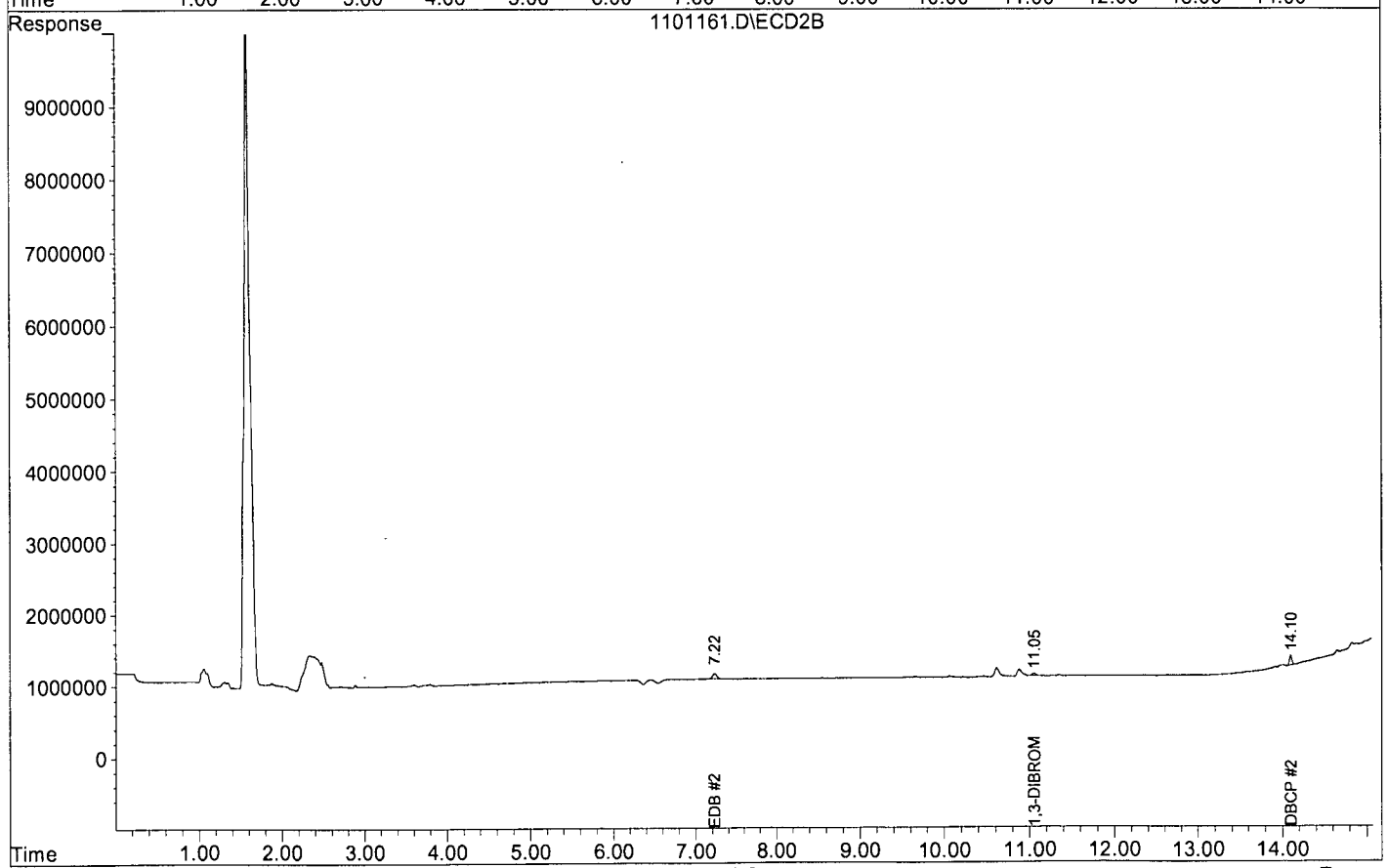
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161101\1101161.D
Acq On : 11-22-16 18:21:41
Sample : 8011 1 11/22/16
Misc :
Quant Method : G:\HERBIE\DATA\161101\80111123.M

Vial: 61
Operator: RH
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161101\1101162.D\ECD1A.CH Vial: 62
Signal #2 : G:\HERBIE\DATA\161101\1101162.D\ECD2B.CH
Acq On : 11-22-16 18:41:37 Operator: RH
Sample : 8011 2 11/22/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Nov 23 9:18 2016 Quant Results File: 80111123.RES

Quant Method : G:\HERBIE\DATA\161101\80111123.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Nov 23 09:16:35 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	192600	220956	0.112	0.105
Spiked Amount	0.350			Recovery	=	32.00%	30.00%
	Target Compounds						
1) TM	EDB	5.80	7.22	133557	349233	0.113	0.099
2) TM	1,2,3-TCP	9.26	10.46	51100	56442	0.029	0.030
4) TM	DBCP	13.36	14.10	530399	845002	0.098	0.099

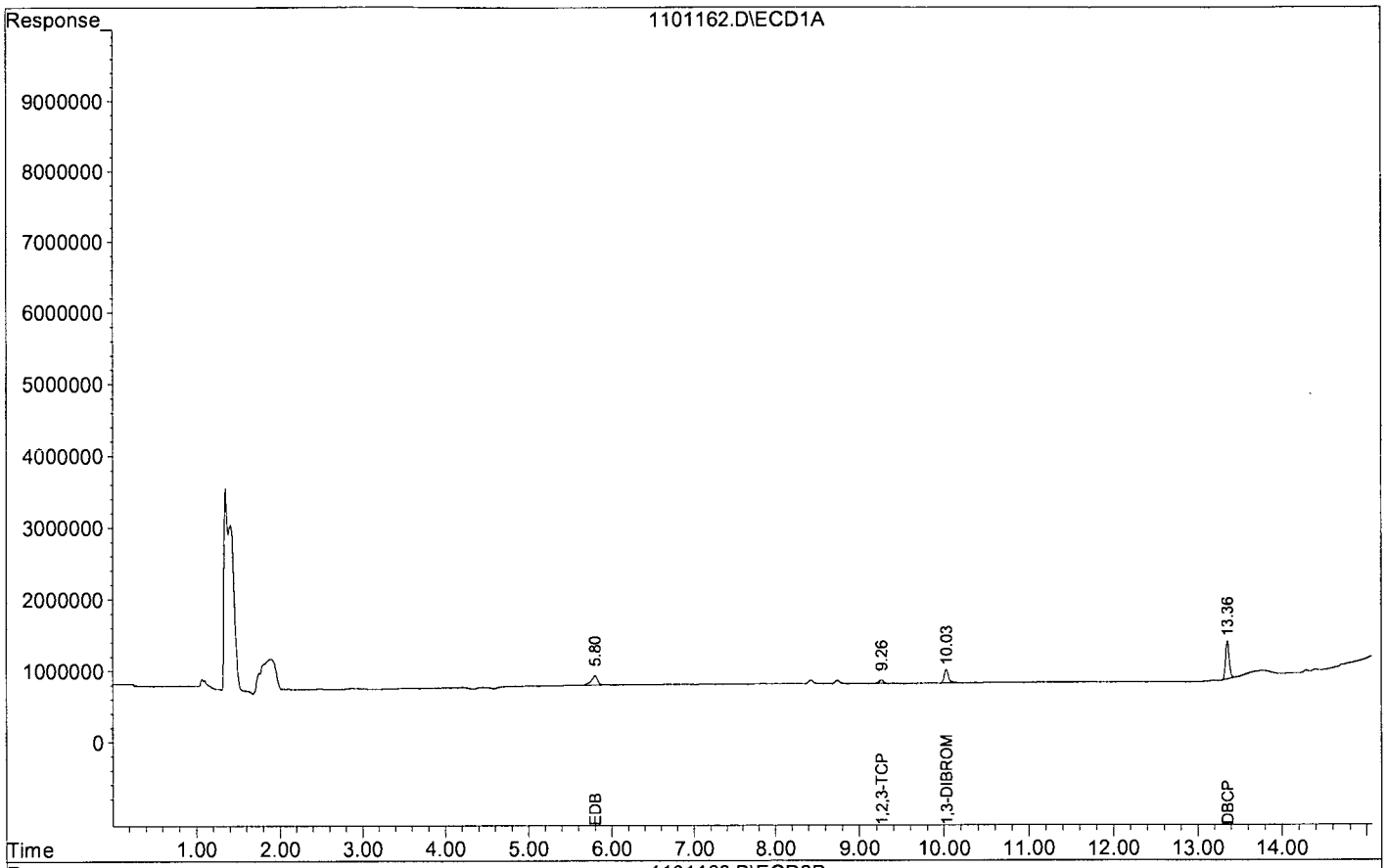
Target Compounds

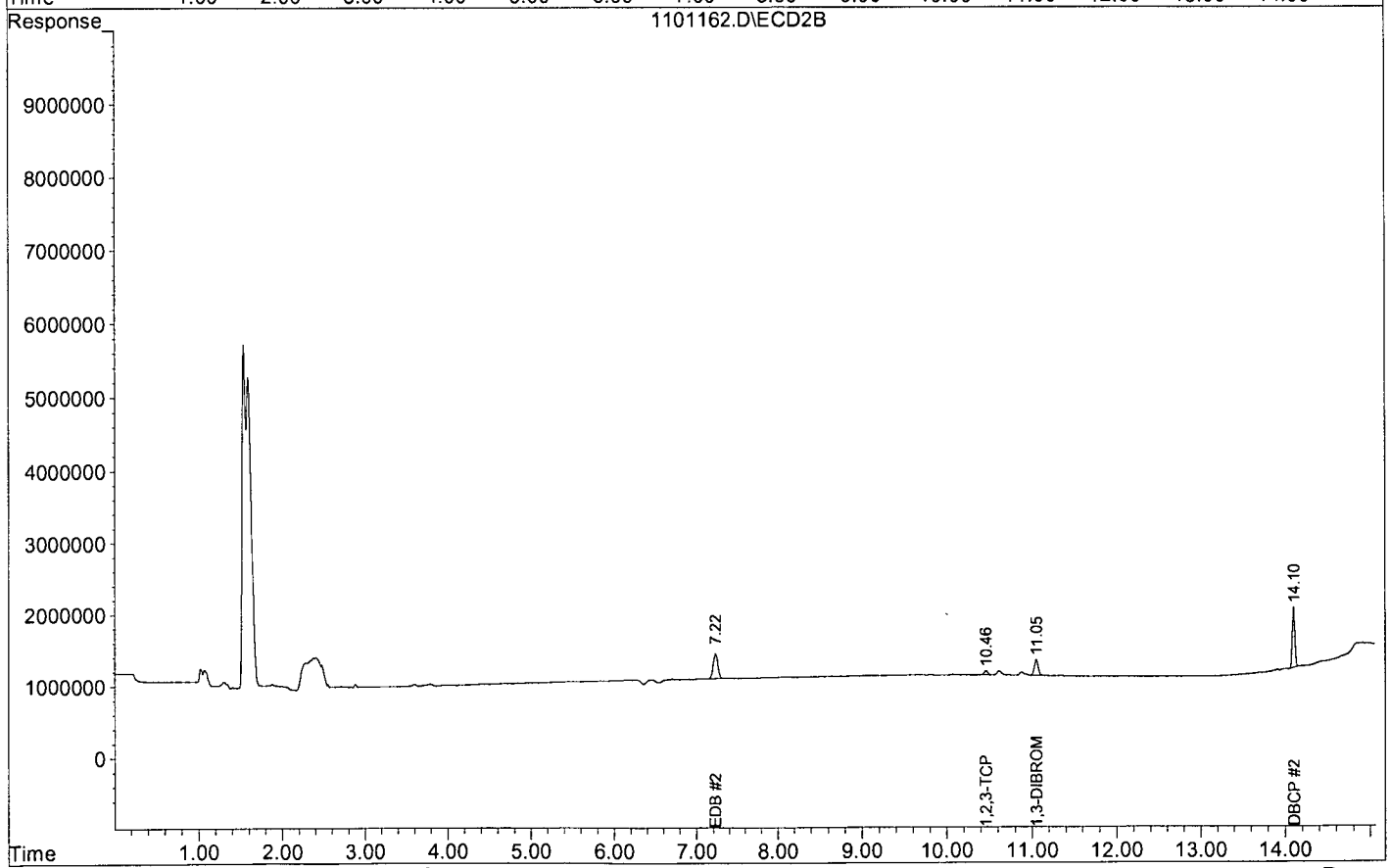
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161101\1101162.D
Acq On : 11-22-16 18:41:37
Sample : 8011 2 11/22/16
Misc :
Quant Method : G:\HERBIE\DATA\161101\80111123.M

Vial: 62
Operator: RH
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161101\1101163.D\ECD1A.CH Vial: 63
Signal #2 : G:\HERBIE\DATA\161101\1101163.D\ECD2B.CH
Acq On : 11-22-16 19:01:36 Operator: RH
Sample : 8011 3 11/22/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Nov 23 9:18 2016 Quant Results File: 80111123.RES

Quant Method : G:\HERBIE\DATA\161101\80111123.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Nov 23 09:16:35 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	436754	557371	0.253	0.264
Spiked Amount	0.350			Recovery	=	72.29%	75.43%
	Target Compounds						
1) TM	EDB	5.80	7.22	330365	910293	0.281	0.259
2) TM	1,2,3-TCP	9.26	10.46	119591	147464	0.205	0.199
4) TM	DBCP	13.36	14.10	1284561	2117634	0.238	0.249

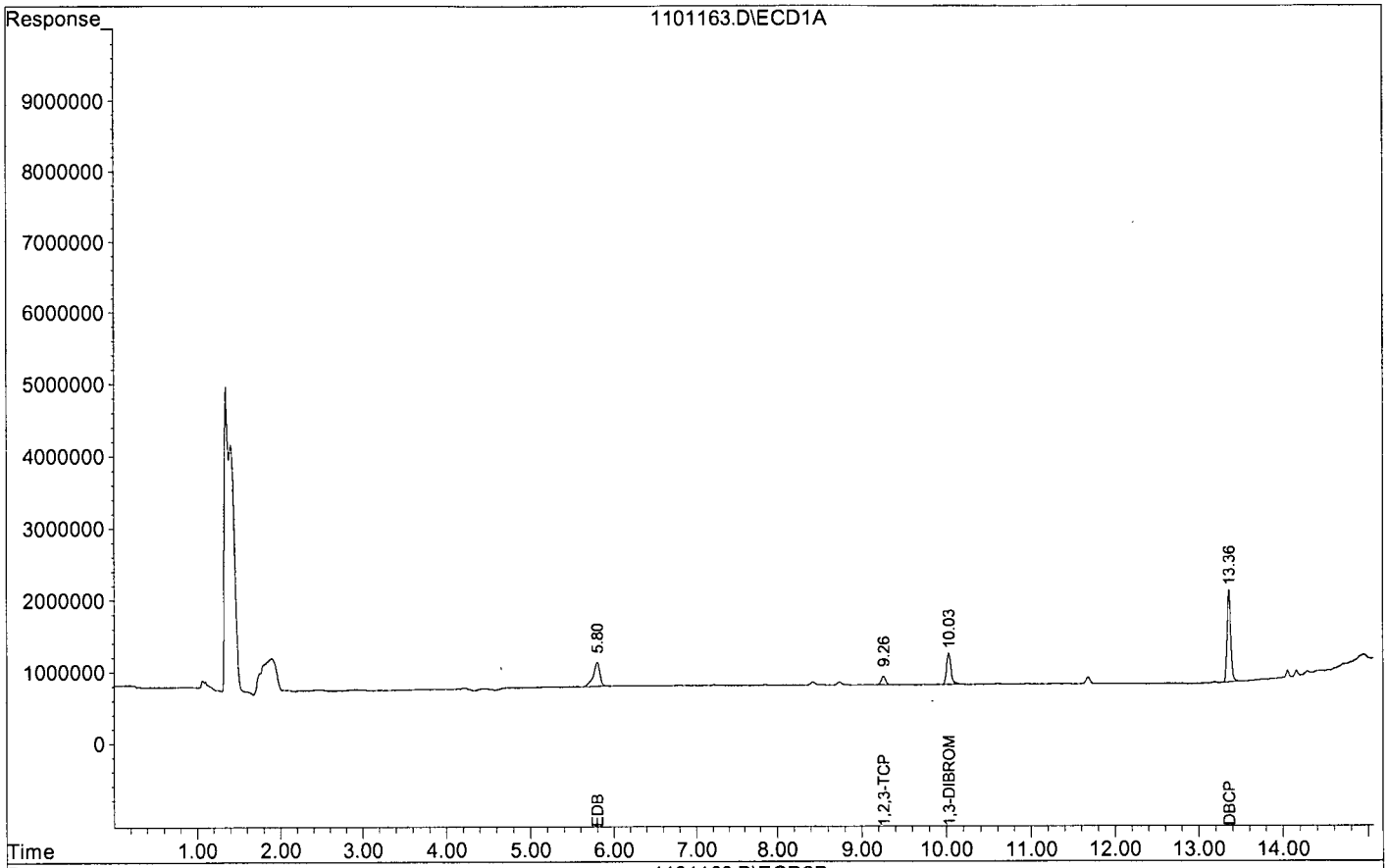
Target Compounds

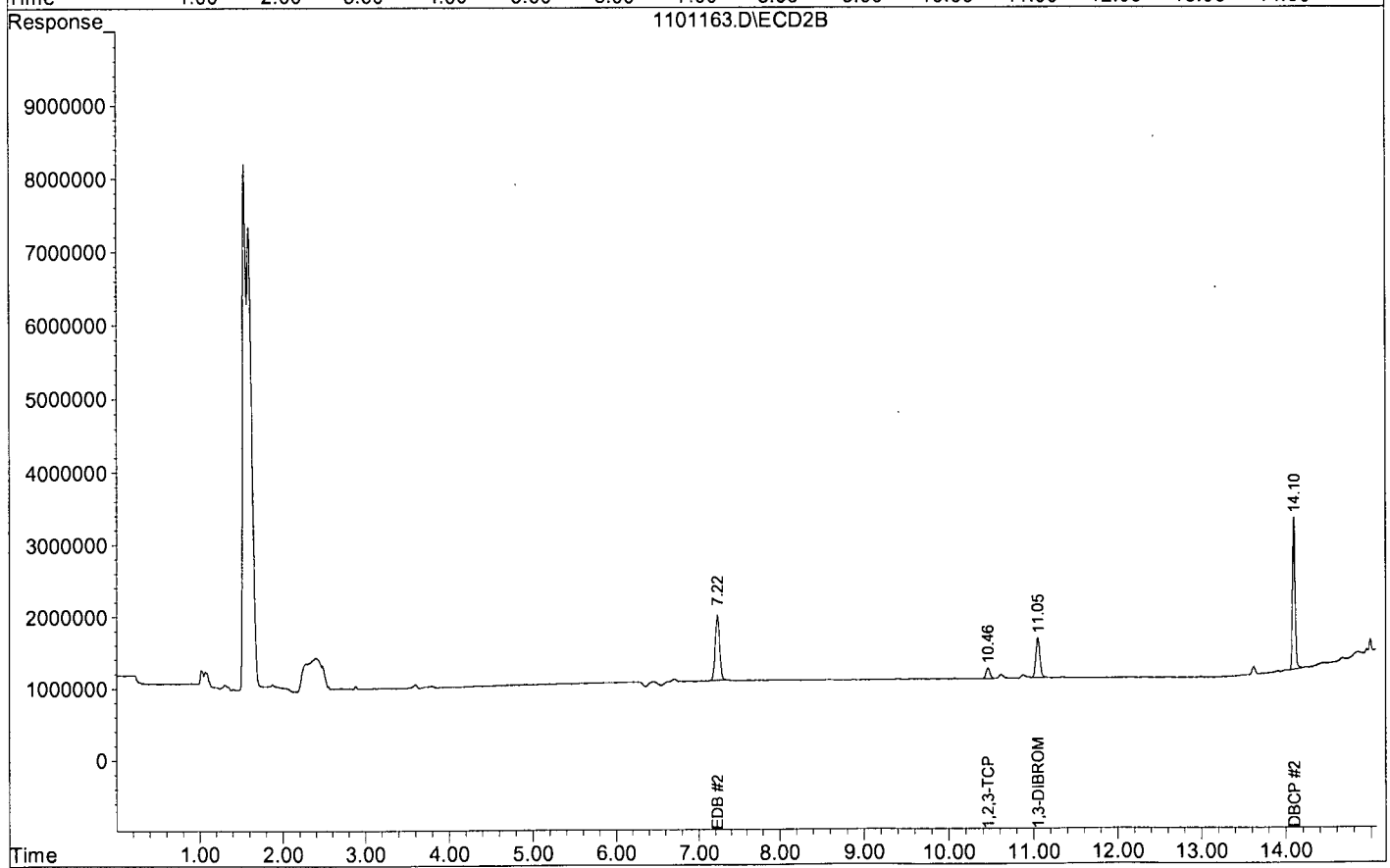
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161101\1101163.D
Acq On : 11-22-16 19:01:36
Sample : 8011 3 11/22/16
Misc :
Quant Method : G:\HERBIE\DATA\161101\80111123.M

Vial: 63
Operator: RH
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161101\1101164.D\ECD1A.CH Vial: 64
Signal #2 : G:\HERBIE\DATA\161101\1101164.D\ECD2B.CH
Acq On : 11-22-16 19:21:27 Operator: RH
Sample : 8011 4 11/22/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Nov 23 9:18 2016 Quant Results File: 80111123.RES

Quant Method : G:\HERBIE\DATA\161101\80111123.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Nov 23 09:16:35 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	746696	976338	0.432	0.462
Spiked Amount	0.350			Recovery	=	123.43%	132.00%
	Target Compounds						
1) TM	EDB	5.80	7.23	548370	1569188	0.466	0.446
2) TM	1,2,3-TCP	9.26	10.46	204104	260248	0.423	0.409
4) TM	DBCP	13.36	14.10	2228201	3278315	0.413	0.385

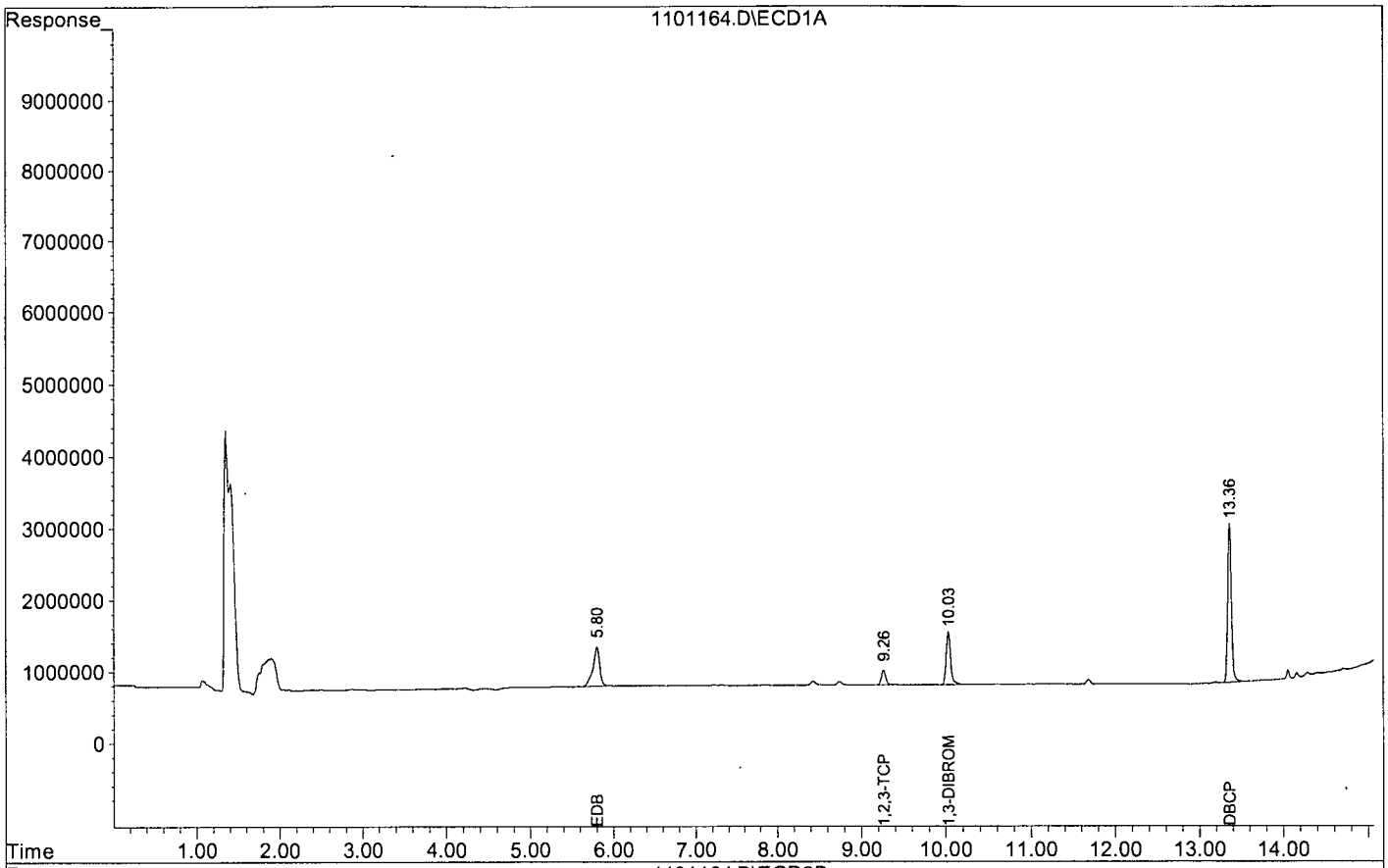
Target Compounds

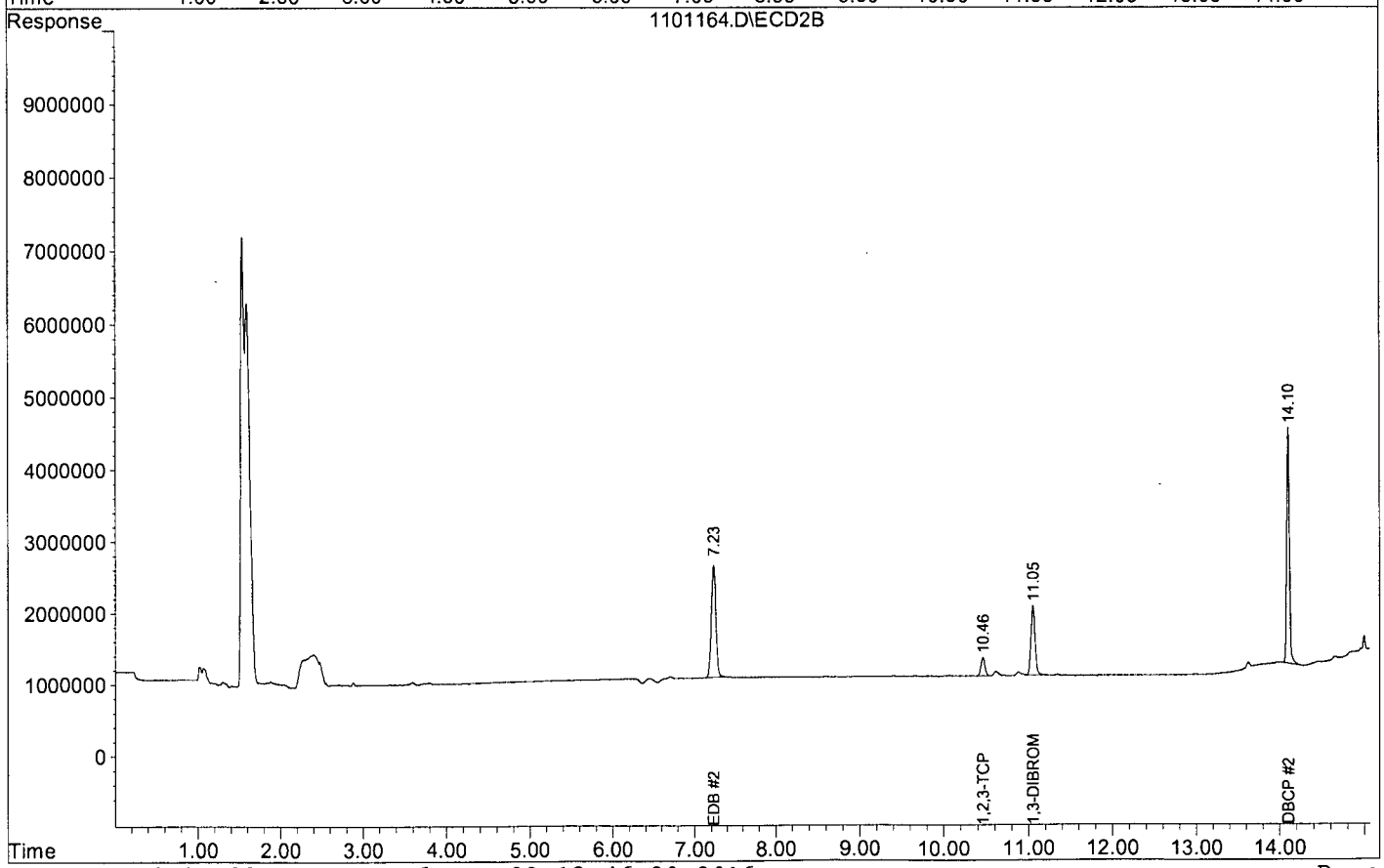
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161101\1101164.D
Acq On : 11-22-16 19:21:27
Sample : 8011 4 11/22/16
Misc :
Quant Method : G:\HERBIE\DATA\161101\80111123.M

Vial: 64
Operator: RH
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161101\1101165.D\ECD1A.CH Vial: 65
Signal #2 : G:\HERBIE\DATA\161101\1101165.D\ECD2B.CH
Acq On : 11-22-16 19:41:21 Operator: RH
Sample : 8011 5 11/22/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Nov 23 9:18 2016 Quant Results File: 80111123.RES

Quant Method : G:\HERBIE\DATA\161101\80111123.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Nov 23 09:16:35 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	1154904	1442002	0.669	0.682
Spiked Amount	0.350			Recovery	=	191.14%	194.86%
	Target Compounds						
1) TM	EDB	5.80	7.23	826365	2423349	0.702	0.689
2) TM	1,2,3-TCP	9.26	10.46	314306	400251	0.707	0.670
4) TM	DBCP	13.36	14.10	3663532	6020512	0.679	0.707

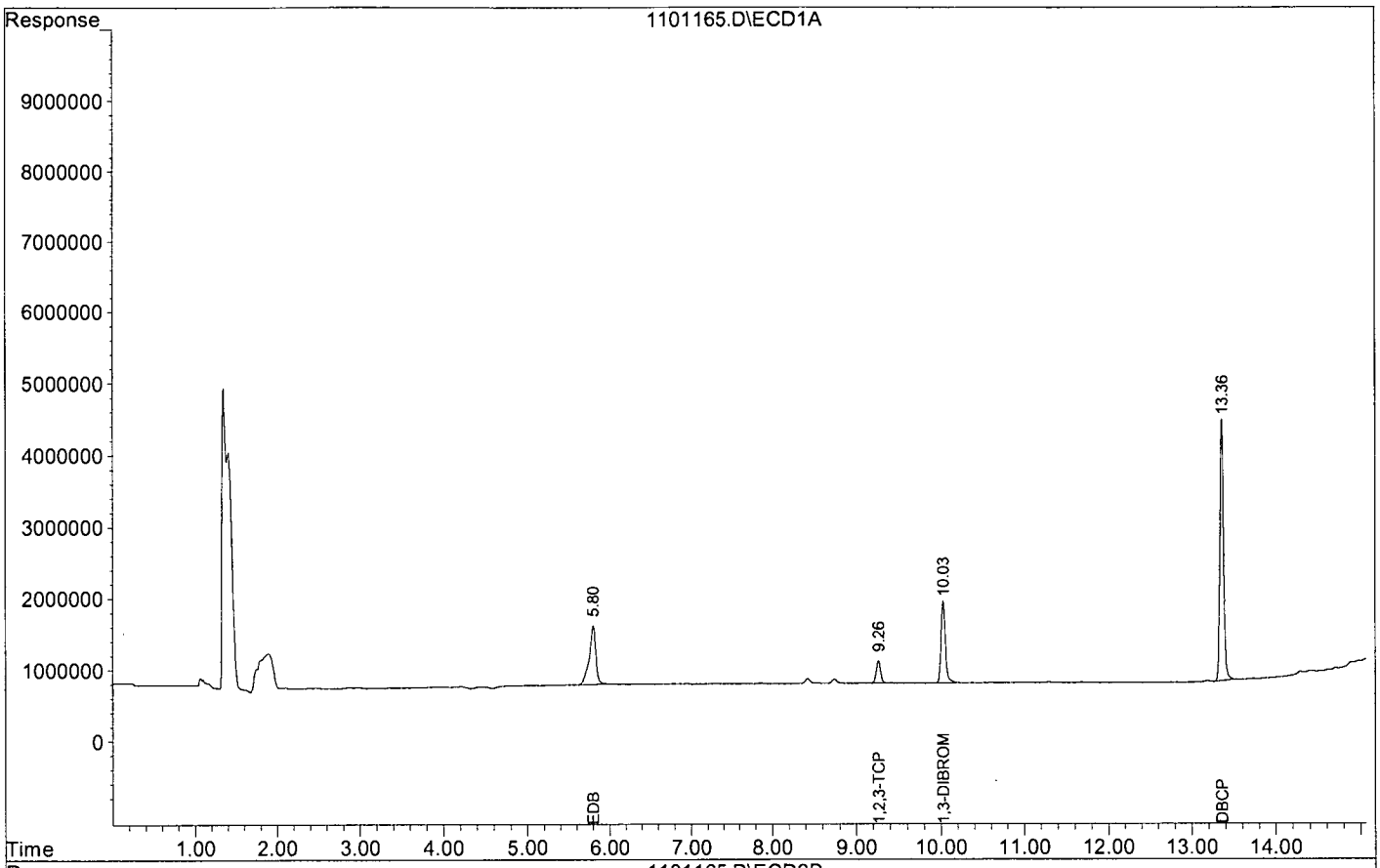
Target Compounds

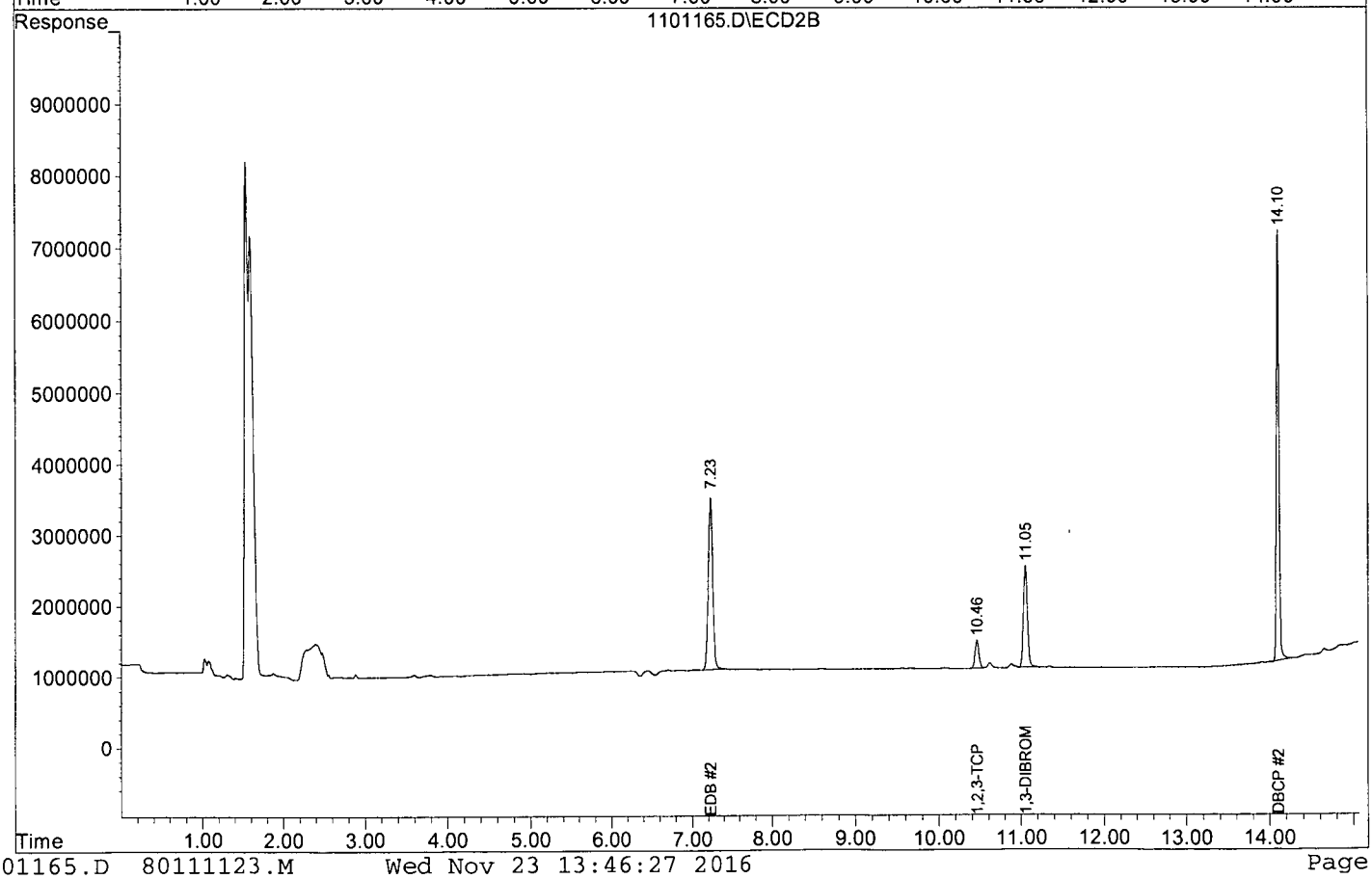
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161101\1101165.D
Acq On : 11-22-16 19:41:21
Sample : 8011 5 11/22/16
Misc :
Quant Method : G:\HERBIE\DATA\161101\80111123.M

Vial: 65
Operator: RH
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161101\1101166.D\ECD1A.CH Vial: 66
Signal #2 : G:\HERBIE\DATA\161101\1101166.D\ECD2B.CH
Acq On : 11-22-16 20:01:16 Operator: RH
Sample : 8011 6 11/22/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Nov 23 9:18 2016 Quant Results File: 80111123.RES

Quant Method : G:\HERBIE\DATA\161101\80111123.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Nov 23 09:16:35 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	1584869	1951836	0.918	0.923
Spiked Amount	0.350			Recovery	=	262.29%	263.71%
	Target Compounds						
1) TM	EDB	5.80	7.23	1169605	3332116	0.993	0.947
2) TM	1,2,3-TCP	9.26	10.46	422892	554715	0.986	0.957
4) TM	DBCP	13.36	14.10	5170442	8678175	0.959	1.020

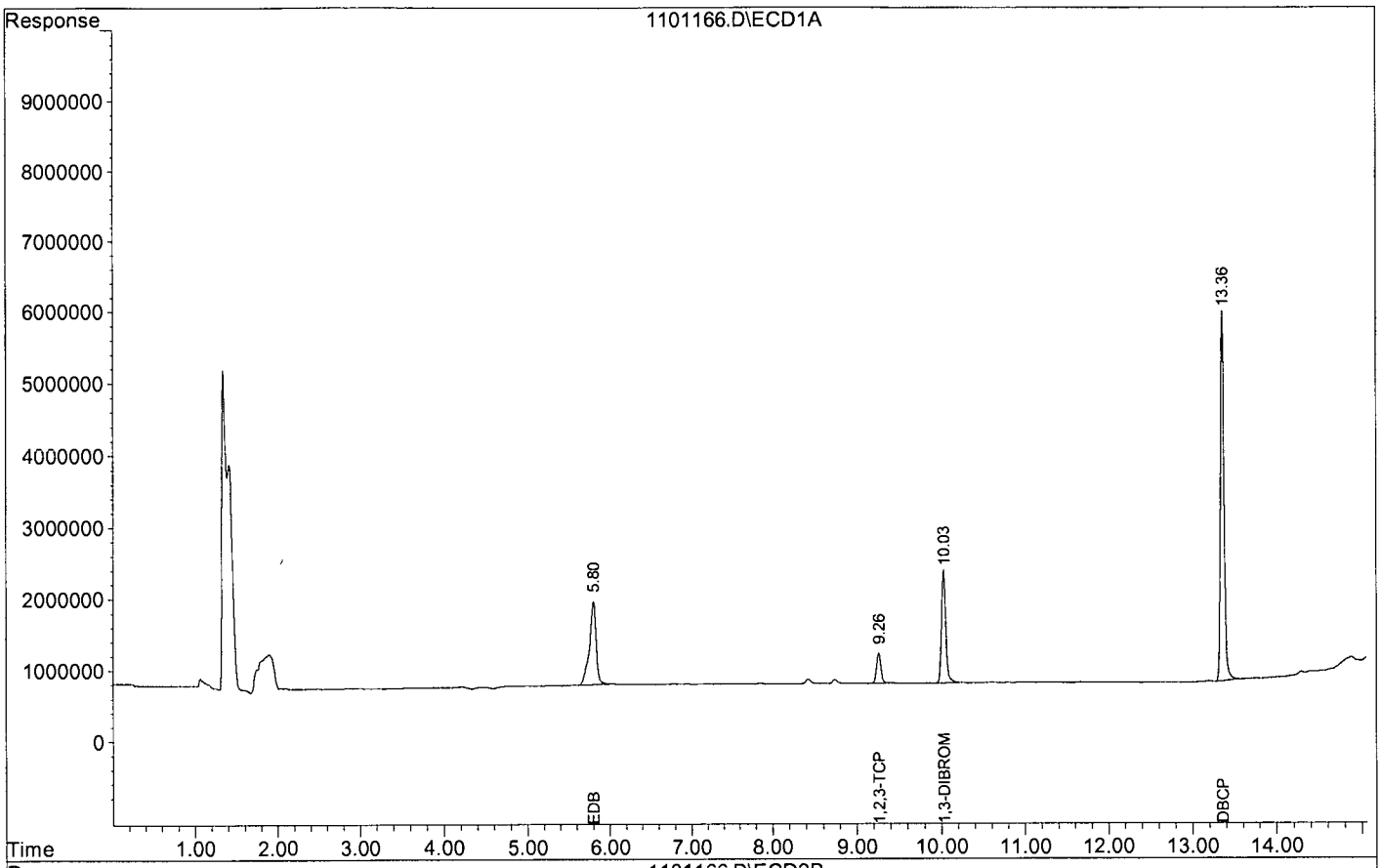
Target Compounds

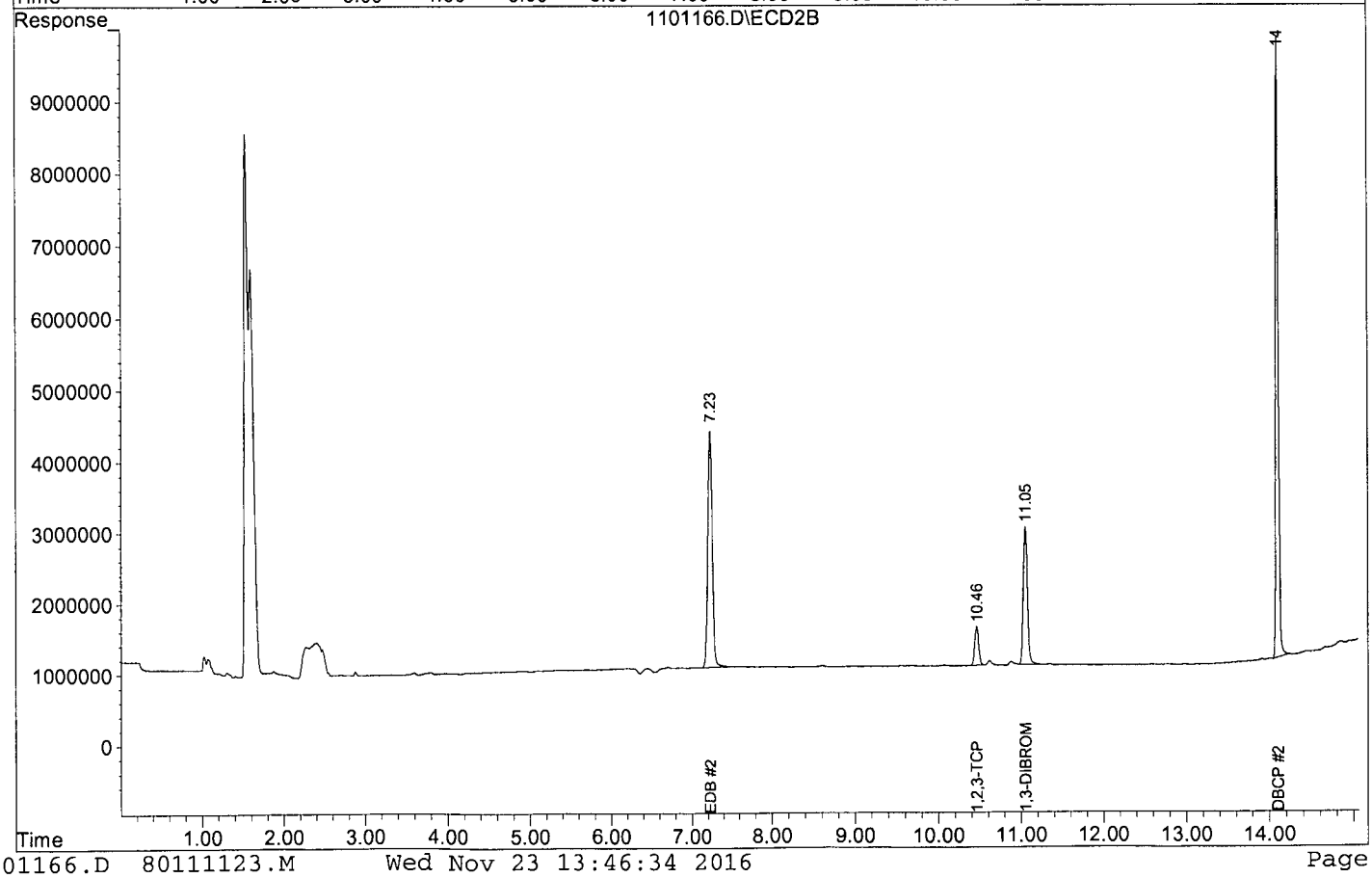
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161101\1101166.D
Acq On : 11-22-16 20:01:16
Sample : 8011 6 11/22/16
Misc :
Quant Method : G:\HERBIE\DATA\161101\80111123.M

Vial: 66
Operator: RH
Inst : Herbie
Multiplr: 1.00





DBCP/EDB/1,2,3-TCP Analysis by
504 8011 0301

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/22/16
Instrument: Herbie
Initial Cal. Date: 11/22/16
Data File: 1101169.D

		Compound	MEAN	CCRF	%D		%Drift	
1	TML	EDB	653016	773310	18	TML	22	*
2	TML	1,2,3-TCP	191112	285775	50	TML	29	*
3	TM	DBCP	2417920	2983980	23	TM		*
4								
5								
6								
7								
8								
9								
10								
11								
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36								
37								
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39								
40								
		Average			30.3			

DBCP/EDB/1,2,3-TCP Analysis by
504 8011 0301

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 11/22/16
Instrument: Herbie
Cal. Date: 11/22/16
Data File: 1101169.D

		Compound	MEAN	CCRF	%D	%Drift	
41	TM	EDB	1691360	1913160	13	TM	
42	TM	1,2,3-TCP	273746	338760	24	TM	*
43	TM	DBCP	3936950	4969590	26	TM	*
44							
45							
46							
47							
48							
49							
50							
51							
52							
53							
54							
55							
56							
57							
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59							
60							
61							
62							
63							
64							
65							
66							
67							
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							
79							
80							
		Average			21.0		

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161101\1101169.D\ECD1A.CH Vial: 69
Signal #2 : G:\HERBIE\DATA\161101\1101169.D\ECD2B.CH
Acq On : 11-22-16 21:00:52 Operator: RH
Sample : 161122A LCS-1 2/35.98G Inst : Herbie
Misc : Multiplr: 0.97
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Nov 23 9:34 2016 Quant Results File: 80111123.RES

Quant Method : G:\HERBIE\DATA\161101\80111123.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Nov 23 09:28:27 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
3) S 1,3-DIBROMOPROPA	10.03	11.05	533687	692288	0.328	0.334
Spiked Amount 0.340			Recovery =		96.34%	98.10%
Target Compounds						
1) TM EDB	5.80	7.23	154662	382632	0.119	0.110
2) TM 1,2,3-TCP	9.26	10.46	57155	67752	0.126	0.120
4) TM DBCP	13.36	14.10	596796	993917	0.120	0.123
Target Compounds						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
1101169.D 80111123.M Wed Nov 23 13:59:33 2016

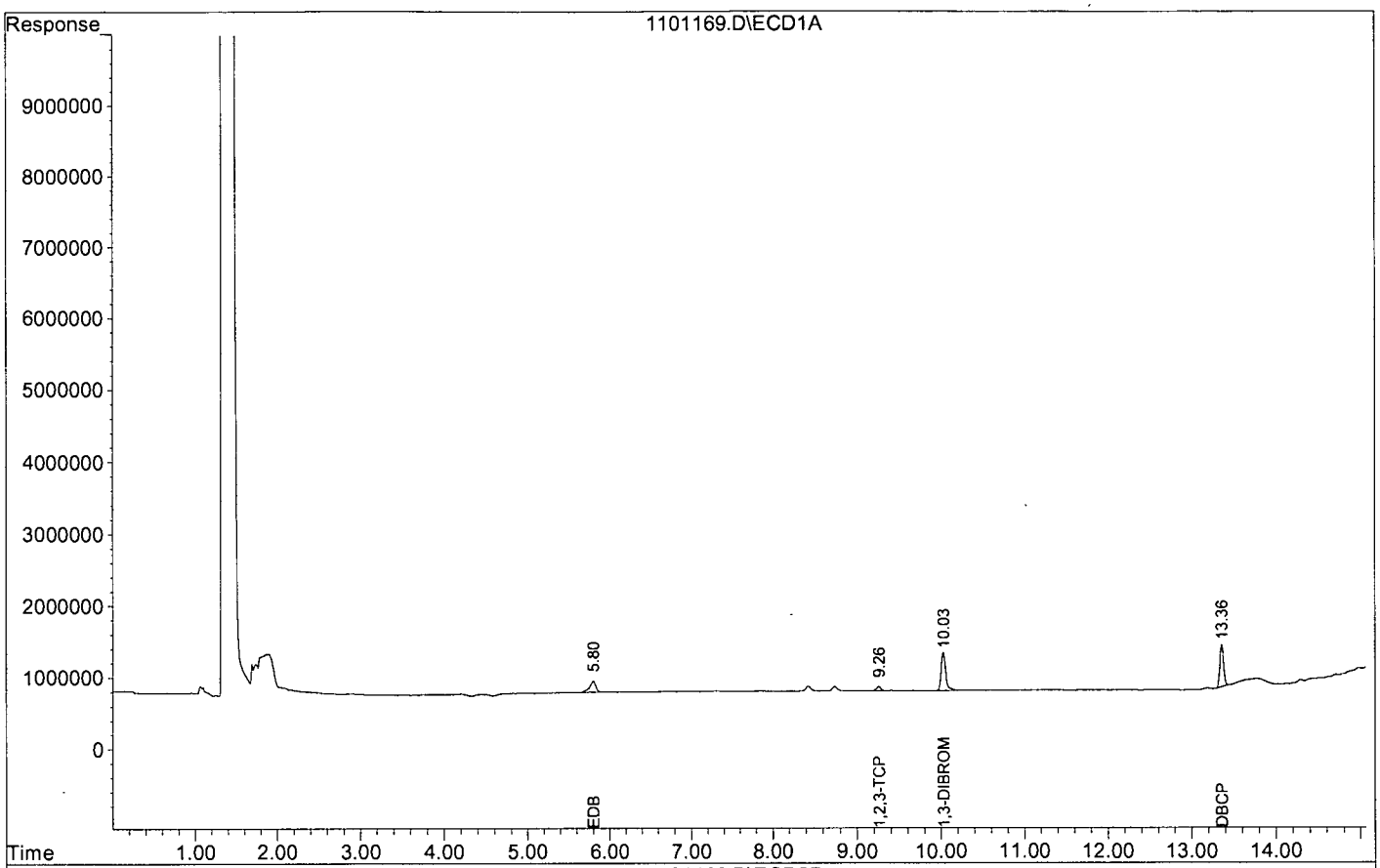
$$\text{Algorithum} = \frac{382632 * 0.97}{1691361 * 2} = 0.1097$$

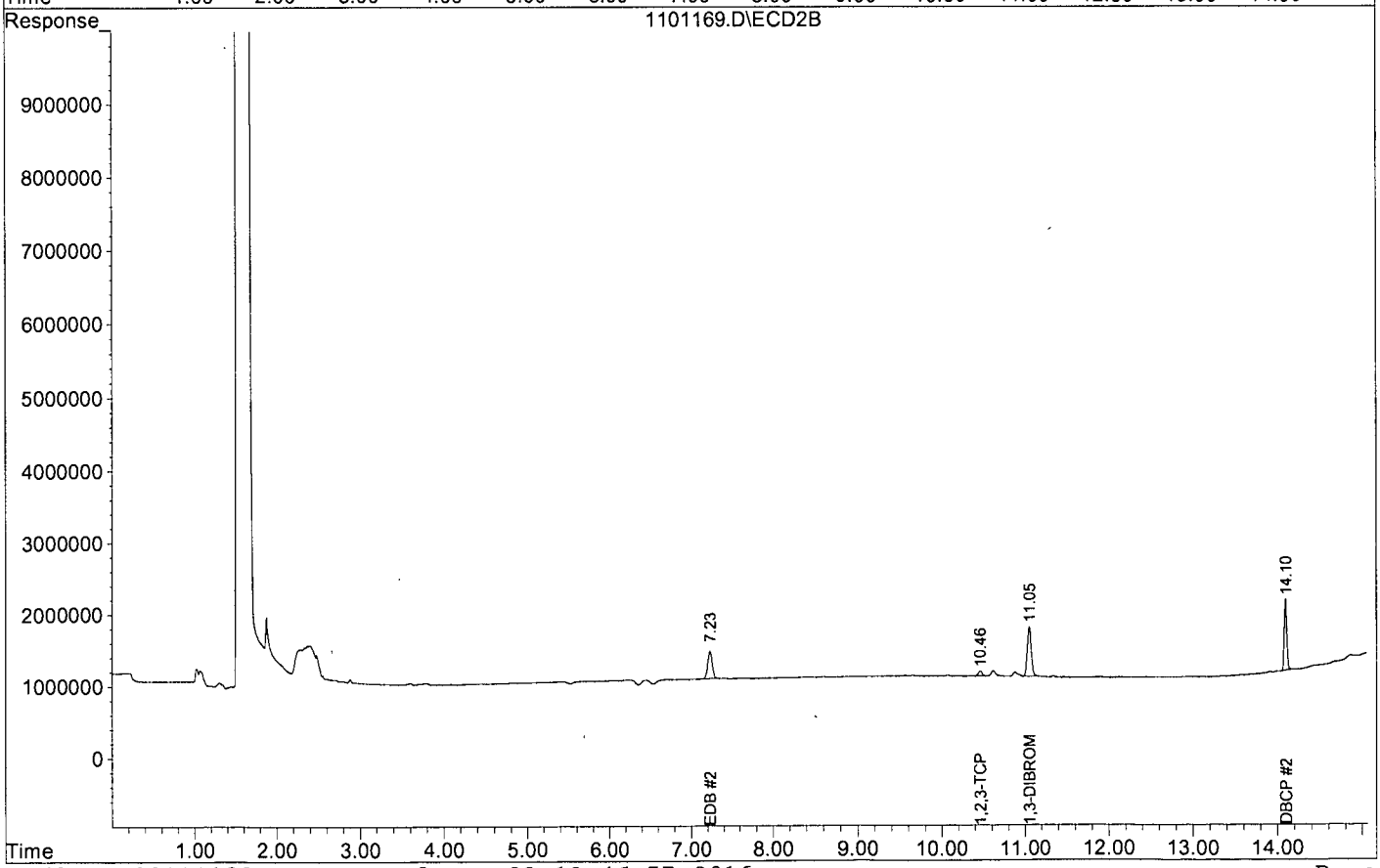
RH 11/23/16

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161101\1101169.D
Acq On : 11-22-16 21:00:52
Sample : 161122A LCS-1 2/35.98G
Misc :
Quant Method : G:\HERBIE\DATA\161101\80111123.M

Vial: 69
Operator: RH
Inst : Herbie
Multiplr: 0.97





DBCP/EDB/1,2,3-TCP Analysis by
504 8011 0301

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/22/16
Instrument: Herbie
Initial Cal. Date: 11/22/16
Data File: 1101176.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TML	EDB	653016	608104	6.9	TML	2.1
2	TML	1,2,3-TCP	191112	250148	31	TML	17
3	S	1,3-DIBROMOPROPANE(S)	791912	904942	14	S	
4	TM	DBCP	2417920	2733050	13	TM	
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			16.2		

DBCP/EDB/1,2,3-TCP Analysis by
504 8011 0301

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 11/22/16
Instrument: Herbie
Cal. Date: 11/22/16
Data File: 1101176.D

		Compound	MEAN	CCRF	%D	%Drift	
41	TM	EDB	1691360	1808100	6.9	TM	
42	TM	1,2,3-TCP	273746	298174	8.9	TM	
43	S	1,3-DIBROMOPROPANE(S)	1009550	1108280	9.8	S	
44	TM	DBCP	3936950	4052980	2.9	TM	
45							
46							
47							
48							
49							
50							
51							
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55							
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66							
67							
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							
79							
80							
		Average			7.1		

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161101\1101176.D\ECD1A.CH Vial: 76
Signal #2 : G:\HERBIE\DATA\161101\1101176.D\ECD2B.CH
Acq On : 11-22-16 23:20:04 Operator: RH
Sample : 8011 3 11/22/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Nov 23 9:29 2016 Quant Results File: 80111123.RES

Quant Method : G:\HERBIE\DATA\161101\80111123.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Nov 23 09:28:27 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	452471	554139	0.286	0.274
Spiked Amount	0.350			Recovery	=	81.71%	78.29%
	Target Compounds						
1) TM	EDB	5.80	7.23	304052	904052	0.255	0.267
2) TM	1,2,3-TCP	9.26	10.46	125074	149087	0.292	0.272
4) TM	DBCP	13.36	14.10	1366527	2026492	0.283	0.257

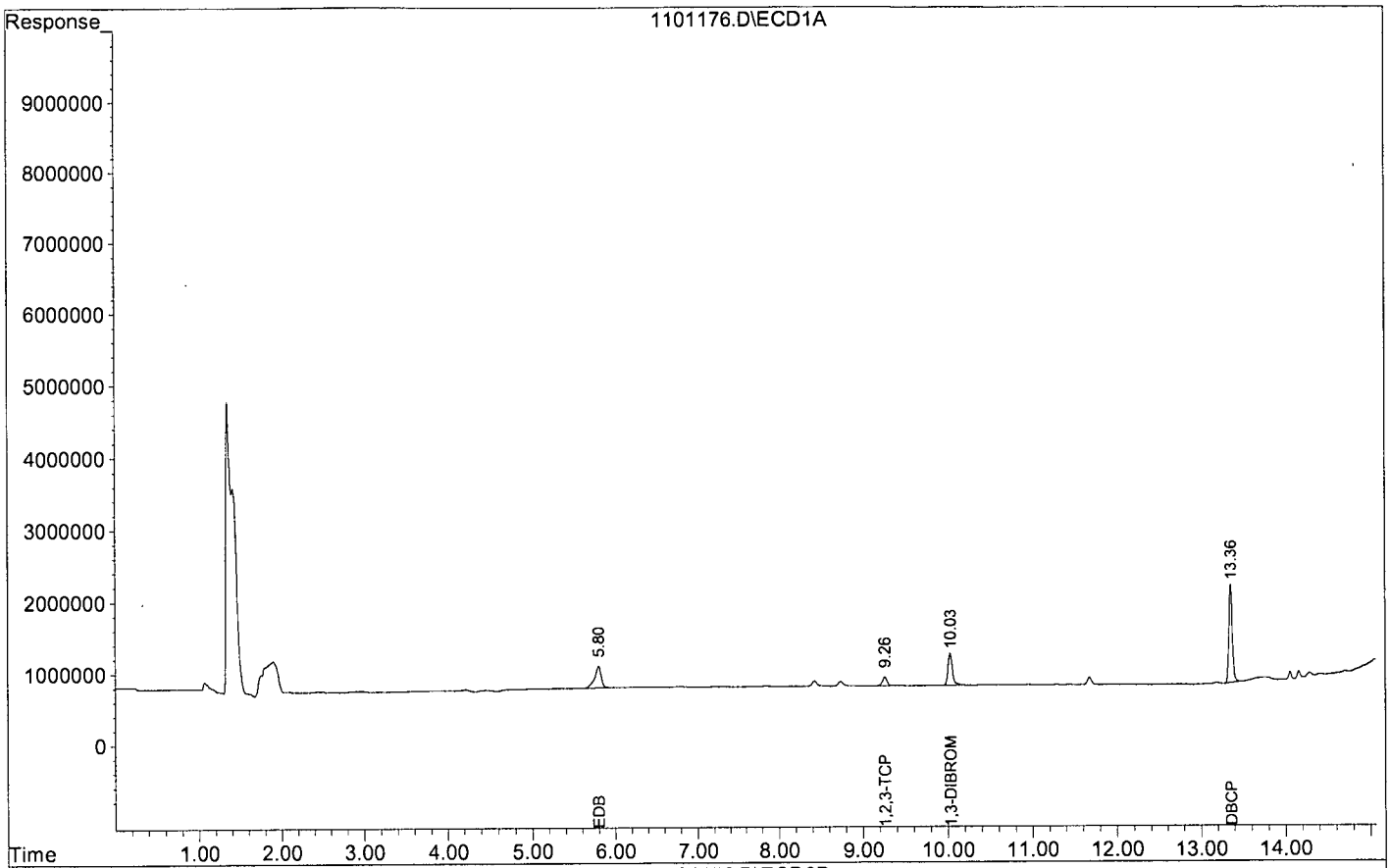
Target Compounds

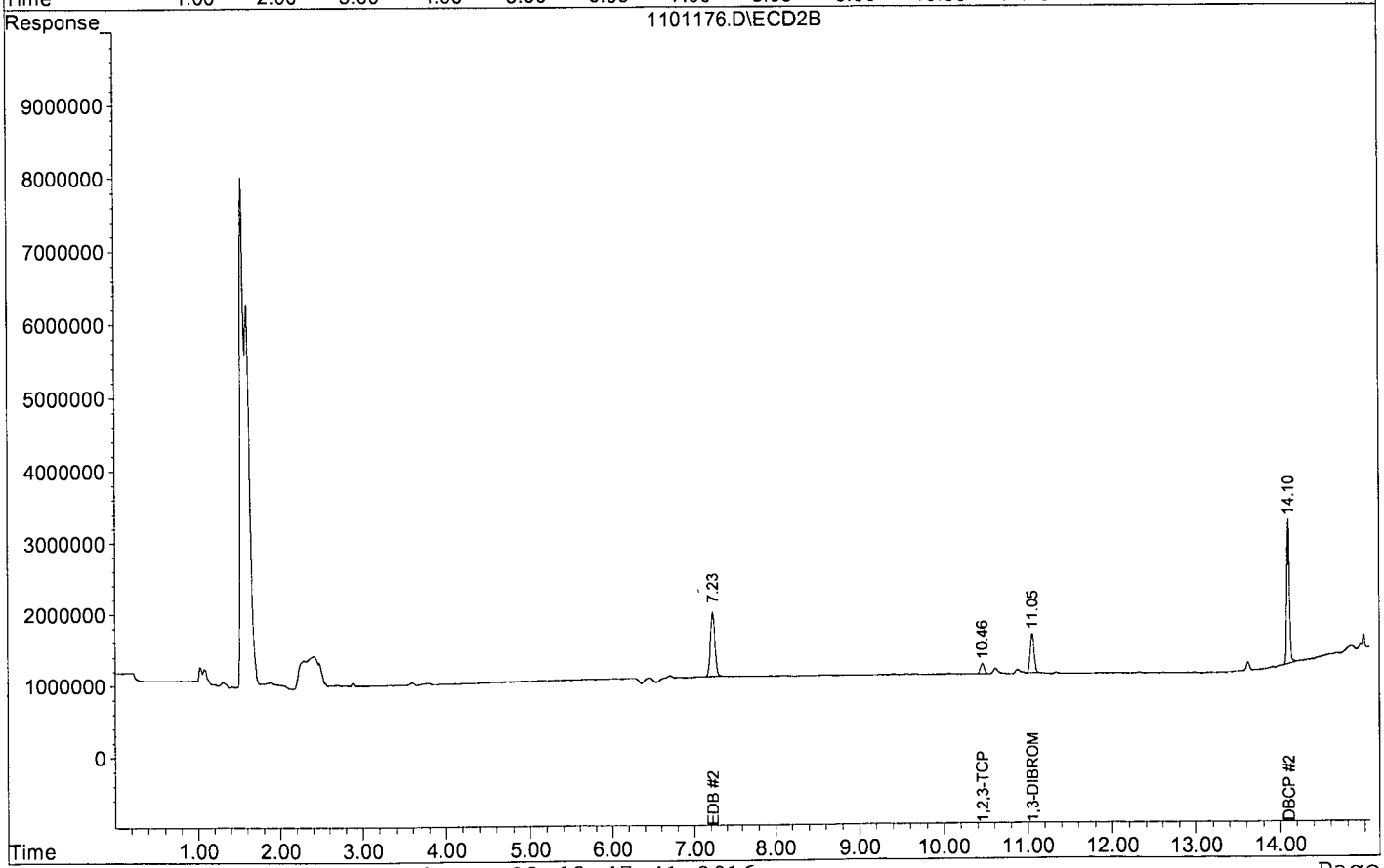
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161101\1101176.D
Acq On : 11-22-16 23:20:04
Sample : 8011 3 11/22/16
Misc :
Quant Method : G:\HERBIE\DATA\161101\80111123.M

Vial: 76
Operator: RH
Inst : Herbie
Multiplr: 1.00





ORGANICS

Raw Data

APPL, INC.

Method Blank
EPA 8011

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161122W-45909 - 213975**
Batch ID: #8011-161122A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	EDB	0.020 U	0.02	0.020	0.010	ug/L	11/22/16	11/22/16
BLANK	SURROGATE: 1,3-DIBROMOPRO	92.0	70-132			%	11/22/16	11/22/16

Quant Method: 80111123.M
Run #: 1101168
Instrument: Herbie
Sequence: 161101
Initials: RHA

GC SC-Blank-REG MDLs-DOD
Printed: 11/23/16 10:52:05 AM

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\161101\1101168.D\ECD1A.CH Vial: 68
Acq On : 11-22-16 20:40:59 Operator: RH
Sample : 161122A BLK 2/34.67G Inst : Herbie
Misc : Multiplr: 1.01
IntFile : rteint.p

Data File : G:\HERBIE\DATA\161101\1101168.D\ECD2B.CH Vial: 68
Acq On : 11-22-16 20:41:00 Operator: RH
Sample : 161122A BLK 2/34.67G Inst : Herbie
Misc : Multiplr: 1.01
IntFile : rteint2.p
Quant Time: Nov 23 9:44 2016 Quant Results File: 80111123.RES

Quant Method : G:\HERBIE\DATA\161101\80111123.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Nov 23 09:28:27 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

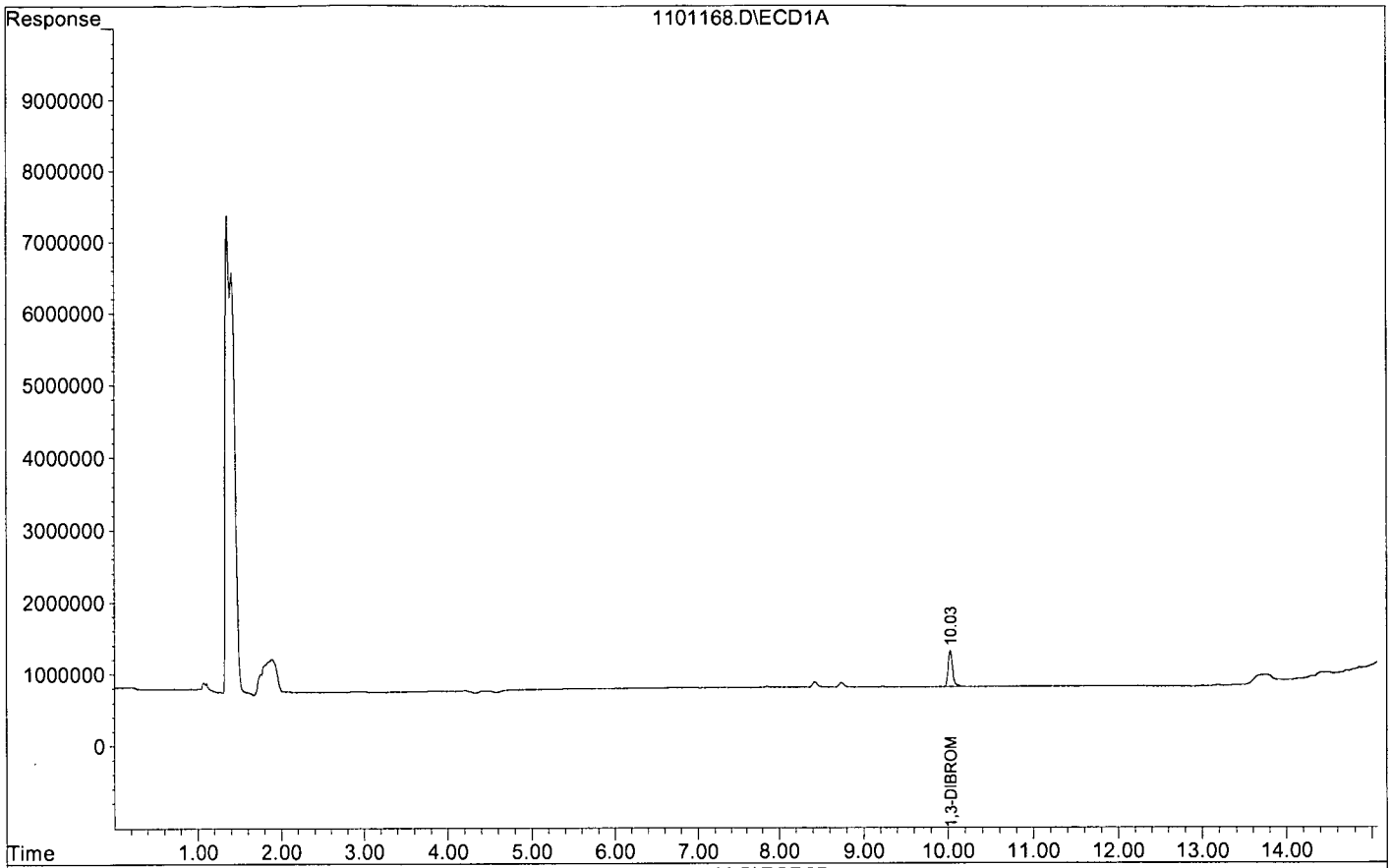
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	509361	661920	0.325	0.331
Spiked Amount	0.353			Recovery	=	91.98%	93.68%
	Target Compounds						
	Target Compounds						
1) TM	EDB	0.00	0.00	0	0	N.D. d	N.D. d
2) TM	1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4) TM	DBCP	0.00	0.00	0	0	N.D. d	N.D. d

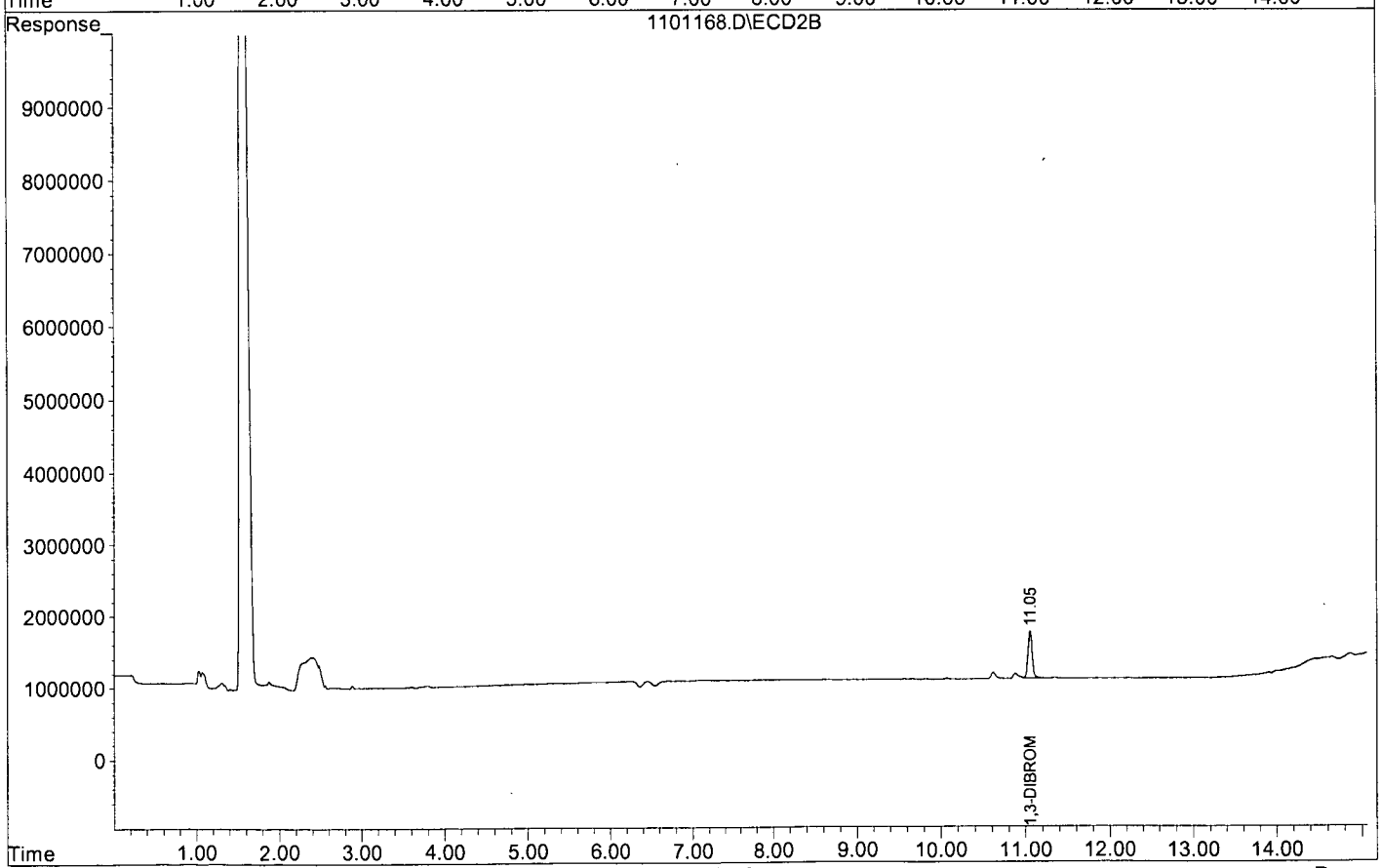
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\161101\1101168.D
Acq On : 11-22-16 20:40:59
Sample : 161122A BLK 2/34.67G
Misc :
Quant Method : G:\HERBIE\DATA\161101\80111123.M

Vial: 68
Operator: RH
Inst : Herbie
Multiplr: 1.01





Laboratory Control Spike Recovery

EPA 8011

APPL ID: **161122W-45909 LCS - 213975**
Batch ID: #8011-161122A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
EDB	0.250	0.241	96.4	60-140
SURROGATE: 1,3-DIBROMOPROPANE (	0.350	0.270	77.1	70-132

Comments: _____

Primary	SPK
Quant Method :	80111123.M
Extraction Date :	11/22/16
Analysis Date :	11/22/16
Instrument :	Herbie
Run :	1101170
Initials :	RHA

Printed: 11/23/16 10:52:00 AM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161101\1101170.D\ECD1A.CH Vial: 70
Signal #2 : G:\HERBIE\DATA\161101\1101170.D\ECD2B.CH
Acq On : 11-22-16 21:20:50 Operator: RH
Sample : 161122A LCS-2 2/35.78G Inst : Herbie
Misc : Multiplr: 0.98
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Nov 23 9:34 2016 Quant Results File: 80111123.RES

Quant Method : G:\HERBIE\DATA\161101\80111123.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Nov 23 09:28:27 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	436902	534468	0.270	0.259
Spiked Amount	0.342			Recovery	=	78.86%	75.65%
	Target Compounds						
1) TM	EDB	5.80	7.22	294717	871121	0.241	0.252
2) TM	1,2,3-TCP	9.26	10.46	120507	144028	0.275	0.257
4) TM	DBCP	13.36	14.10	1293890	2101280	0.262	0.261

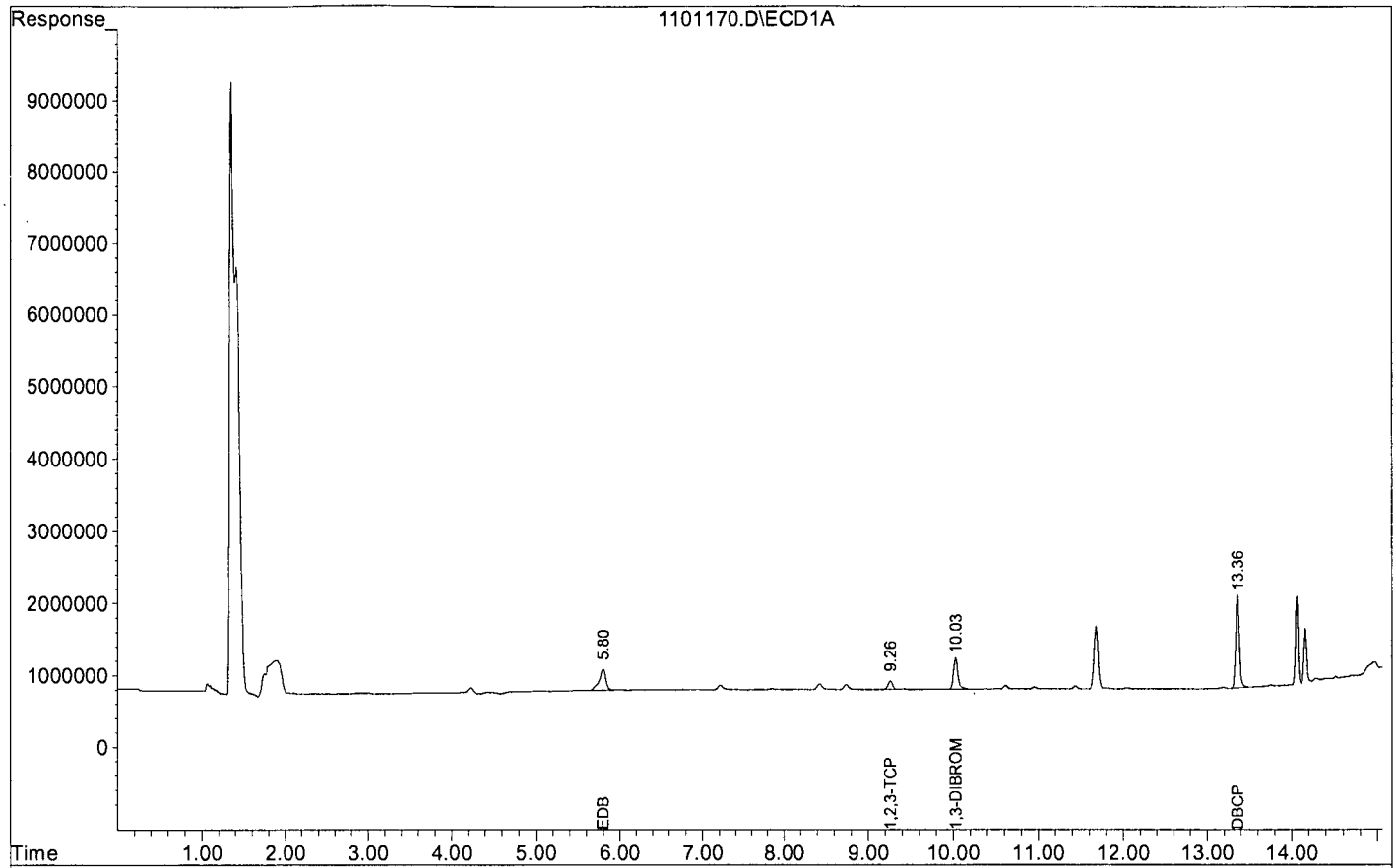
Target Compounds

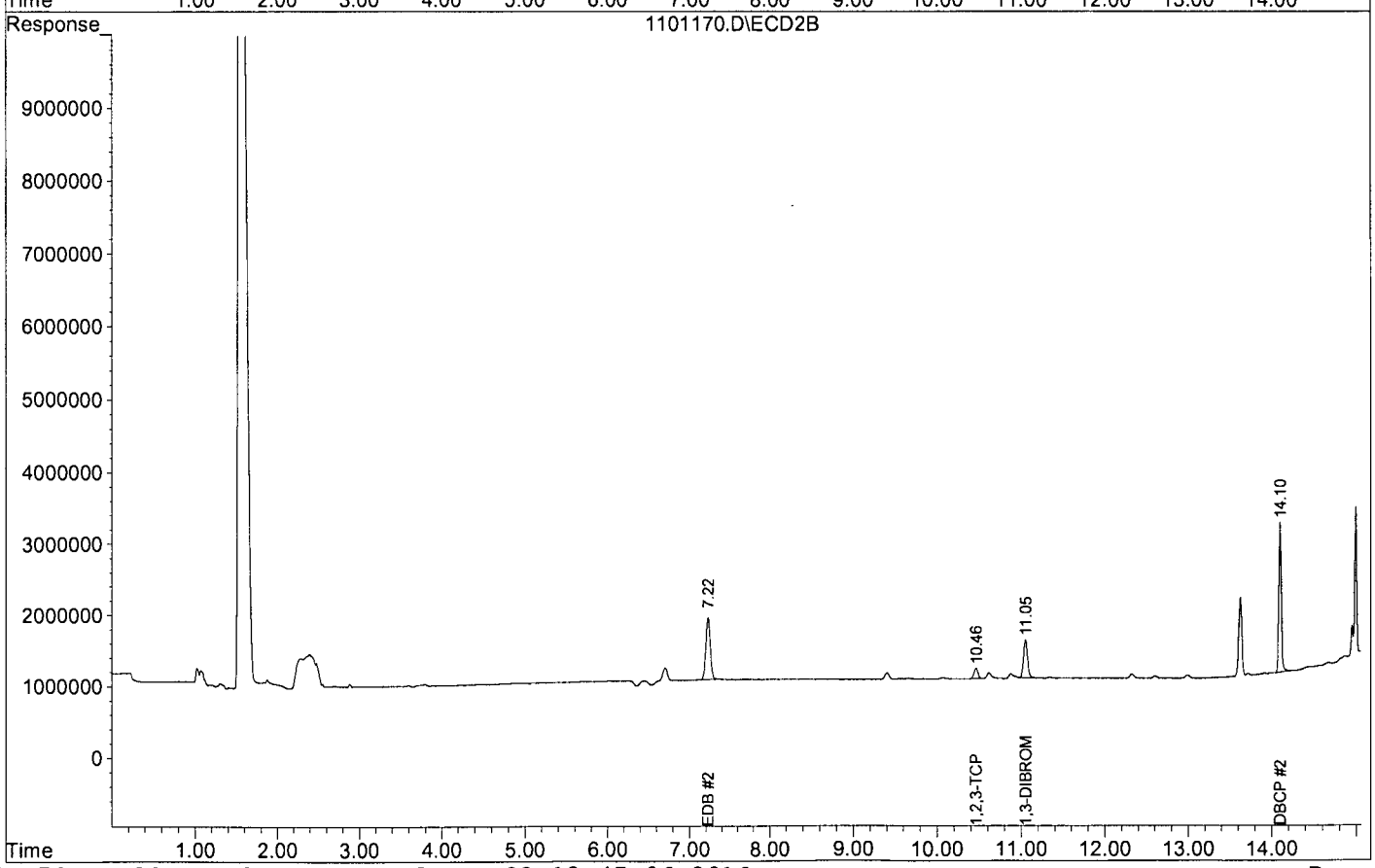
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161101\1101170.D
Acq On : 11-22-16 21:20:50
Sample : 161122A LCS-2 2/35.78G
Misc :
Quant Method : G:\HERBIE\DATA\161101\80111123.M

Vial: 70
Operator: RH
Inst : Herbie
Multiplr: 0.98





	504/8011 SURROGATE					
Prep: 11/22/16-R.H. Ex: 12/30/16						
Compound	**Initial Conc.**	**Source**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
1,3 DBP	100	1,3 DBP STOCK	35ul	10mL	0.35ug/mL	Methanol
		prep.12/30/15				070913A
		exp. 12/30/16				

		504/8011 M STD				
Prep: 11/22/16 Exp: 12/03/16 RH						
Compound	**Initial Conc.**	**Source**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
EDB	0.35ug/mL	504/8011 M STD STK	1000uL	10mL	0.035ug/mL	Methanol
TCP		prep.08/03/16				010616A
DBCP		exp: 12/03/16				
1,3 DBP						

		504/8011 SS				
Prep:03/11/16-L.H. Ex: 12/30/16						
Compound	**Initial Conc.**	**Source**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
EDB	0.35ug/mL	504/8011 SPIKE STOCK	1000uL	10mL	0.035ug/mL	Methanol
TCP		prep. 12/30/15				021915C
DBCP		Exp: 12/30/16				

504/8011 M STD STOCK						
Prep: 08/03/16-R.H.		Ex: 12/03/16				
Compound	**Initial Conc.**	**Source**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
EDB	20ug/mL	504/DOHS STOCK	438uL	25mL	0.35ug/mL	Methanol
TCP		prep. 06/07/16				021915C
DBCP		exp: 06/07/17				
1,3 DBP	100ug/mL	1,3 DBP STOCK	88uL			
		prep.06/07/16				
		exp. 06/07/17				

504/8011 M STD STOCK						
Prep: 12/30/15-L.H.		Ex: 08/24/16				
Compound	**Initial Conc.**	**Source**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
EDB	20ug/mL	504/DOHS STOCK	438uL	25mL	0.35ug/mL	Methanol
TCP		prep. 12/30/15				070913A
DBCP		exp: 08/24/15				
1,3 DBP	100ug/mL	1,3 DBP STOCK	88uL			
		prep.12/30/15				
		exp. 12/30/16				

1,3-DBP STOCK						
Compounds	**Init. Conc.**	**Stock SRC**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
1,3 DBP	1000ug/mL	Absolute	1000uL	10mL	100ug/mL	Methanol
	Cat:	71326				Lot # 021915C
	Lot:	031413-33902				
	Op:	12/30/15				
	Exp:	12/30/16		Prep: 12/30/15 Exp: 12/30/16 LH		

_MWE012

Organic Extraction Worksheet

Method	EPA Method 8011 DBCP/EDB	Extraction Set	161122A	Extraction Method	MWE012	Units	mL

Spiked ID 1	504.1 SS 3-11-16 exp 12-30-16		Surrogate ID 1	504.1 Surrogate 11-22-16 exp 12-30-16	
Spiked ID 2	504.1 M. STD 11-22-16 exp 12-03-16		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	11/22/16 16:30	
Spiked ID 8			Ext. End Time:	11/22/16 17:15	
			GC Requires Extract By:	11/23/16 0:00	

pH1			Water Bath Temp Criteria	
pH2				
pH3				

Spiked By: KY **Date** 11/22/16 **Witnessed By:** DL **Date** 11/22/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	161122A Blk				0.035	1 equip	34.67g	2	7	11/22/16 16:30	
2	161122A LCS-1		0.1	1	0.035	1 equip	35.98g	2	7	11/22/16 16:30	
3	161122A LCS-2		0.250	2	NA	NA equip	35.78g	2	7	11/22/16 16:30	
4	AZ45909	AZ45909W08			0.035	1 equip	35.73g	2	7	11/22/16 16:30	81500 1 WEEK
5	AZ45990	AZ45990W04			0.035	1 equip	35.18g	2	7	11/22/16 16:30	81515 1 WEEK
6	AZ45994	AZ45994W08			0.035	1 equip	35.93g	2	7	11/22/16 16:30	81515 1 WEEK
7	M STD 1		0.020	2	NA	NA equip	35.76g	2	7	11/22/16 16:30	
8	M STD 2		0.1	2	NA	NA equip	35.68g	2	7	11/22/16 16:30	
9	M STD 3		0.250	2	NA	NA equip	35.72g	2	7	11/22/16 16:30	
10	M STD 4		0.5	2	NA	NA equip	35.70g	2	7	11/22/16 16:30	
11	M STD 5		0.750	2	NA	NA equip	35.76g	2	7	11/22/16 16:30	
12	M STD 6		1	2	NA	NA equip	35.86g	2	7	11/22/16 16:30	

11/22/16

Solvent and Lot#	
NaCL	16B100011
Sod. Thiosulfate	24050
GC2 Hexane	DN636

Extraction COC Transfer	
Extraction lab employee Initials	DL
GC analyst's initials	RH
Date	11/22/16
Time	5:30
Refrigerator	Hobert

	Technician's Initials
Scanned By	KY
Sample Preparation	KY
Extraction	KY
Concentration	----------

Modified	11/22/16 5:16:04 PM

Reviewed By: DL **Date** 11/22/16

Injection Log

Directory: G:\HERBIE\DATA\161101\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	61	1101161.D	1	8011 1 11/22/16		11-22-16 18:21:41
2	62	1101162.D	1	8011 2 11/22/16		11-22-16 18:41:37
3	63	1101163.D	1	8011 3 11/22/16		11-22-16 19:01:36
4	64	1101164.D	1	8011 4 11/22/16		11-22-16 19:21:27
5	65	1101165.D	1	8011 5 11/22/16		11-22-16 19:41:21
6	66	1101166.D	1	8011 6 11/22/16		11-22-16 20:01:16
7	68	1101168.D	1.00952	161122A BLK 2/34.67G		11-22-16 20:40:59
8	69	1101169.D	0.97276	161122A LCS-1 2/35.98G		11-22-16 21:00:52
9	70	1101170.D	0.9782	161122A LCS-2 2/35.78G		11-22-16 21:20:50
10	72	1101172.D	0.99488	AZ45990W04 2/35.18G		11-22-16 22:00:35
11	73	1101173.D	0.97412	AZ45994W08 2/35.93G		11-22-16 22:20:30
12	76	1101176.D	1	8011 3 11/22/16		11-22-16 23:20:04

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank
EPA 8015B TPH WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161122W-45988 - 214051**
Batch ID: #DOC53-161122A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	11/22/16	11/24/16
BLANK	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	11/22/16	11/24/16
BLANK	SURROGATE: OCTACOSANE (S)	93.0	60-142			%	11/22/16	11/24/16
BLANK	SURROGATE: ORTHO-TERPHEN	76.6	56-125			%	11/22/16	11/24/16

Quant Method:DOC1103.M
Run #:1123049
Instrument:Apollo
Sequence:161123
Initials:DPO

GC SC-Blank-REG MDLs-DOD
Printed: 11/28/16 2:16:03 PM

Laboratory Control Spike Recoveries
EPA 8015B TPH WATER

APPL ID: **161122W-45988 LCS - 214051**
Batch ID: #DOC53-161122A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
DIESEL (C10-C24)	1330	1070	1070	80.3	80.3	36-132	0.0	30
OIL (C24-C40)	1330	1030	1060	77.3	79.5	41-113	2.9	30
SURROGATE: OCTACOSANE (S)	40.0	36.2	37.3	90.5	93.3	60-142		
SURROGATE: ORTHO-TERPHENYL (S)	40.0	37.8	38.3	94.5	95.8	56-125		

Comments: _____

Primary	SPK	DUP
Quant Method :	DOC1103.M	DOC1103.M
Extraction Date :	11/22/16	11/22/16
Analysis Date :	11/24/16	11/24/16
Instrument :	Apollo	Apollo
Run :	1123050	1123052
Initials :	DPO	

Printed: 11/28/16 2:16:11 PM
APPL Standard LCSD

EPA 8015B-eLL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81515

Case No: 81515 Date Analyzed: 11/24/16

Matrix: WATER Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: OCTACOSANE (S)			SURROGATE: ORTHO-TERPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161122A-BLK	Blank	60-142	93.0		56-125	76.6	
161122A-LCS	Lab Control Spike	60-142	90.5		56-125	94.5	
161122A-LCSD	Lab Control SpikeD	60-142	93.3		56-125	95.8	
AZ45988	ERH118	60-142	94.4		56-125	74.9	
AZ45989	ERH119	60-142	90.8		56-125	72.8	
AZ45991	ERH124	60-142	91.3		56-125	81.0	
AZ45992	ERH125	60-142	92.6		56-125	75.8	
AZ45993	ERH127	60-142	93.3		56-125	76.9	
AZ45994	ERH129	60-142	92.4		56-125	74.2	
AZ45995	ERH130	60-142	88.2		56-125	73.5	
AZ45996	ERH131	60-142	91.8		56-125	73.8	

Comments: Batch: #DOC53-161122A

EPA 8015B-eL

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81515

Case No: 81515 Date Analyzed: 11/24/16

Matrix: WATER Instrument: Apollo

Blank ID: 161122A-BLK Time Analyzed: 0119

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161122A-BLK	Blank	1123049	11/24/16 0119
161122A-LCS	Lab Control Spike	1123050	11/24/16 0140
161122A-LCSD	Lab Control SpikeD	1123052	11/24/16 0220
AZ45988	ERH118	1123054	11/24/16 0301
AZ45989	ERH119	1123055	11/24/16 0321
AZ45991	ERH124	1123056	11/24/16 0342
AZ45992	ERH125	1123057	11/24/16 0402
AZ45993	ERH127	1123058	11/24/16 0422
AZ45994	ERH129	1123059	11/24/16 0443
AZ45995	ERH130	1123060	11/24/16 0503
AZ45996	ERH131	1123061	11/24/16 0523

Comments: Batch: #DOC53-161122A

ORGANICS

Sample Data

APPL, INC.

EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81515

Sample ID: ERH118

APPL ID: AZ45988

Sample Collection Date: 11/15/16

QCG: #DOC53-161122A-214051

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	11/22/16	11/24/16
EPA 8015B-eL	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	11/22/16	11/24/16
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	94.4	60-142			%	11/22/16	11/24/16
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	74.9	56-125			%	11/22/16	11/24/16

Quant Method: DOC1103.M
Run #: 1123054
Instrument: Apollo
Sequence: 161123
Dilution Factor: 1
Initials: DPO

Printed: 11/28/16 2:16:28 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161123\1123054.D Vial: 54
Acq On : 11-24-16 3:01:31 Operator: DP
Sample : AZ45988W13 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Nov 28 14:00 2016 Quant Results File: DOC1103.RES

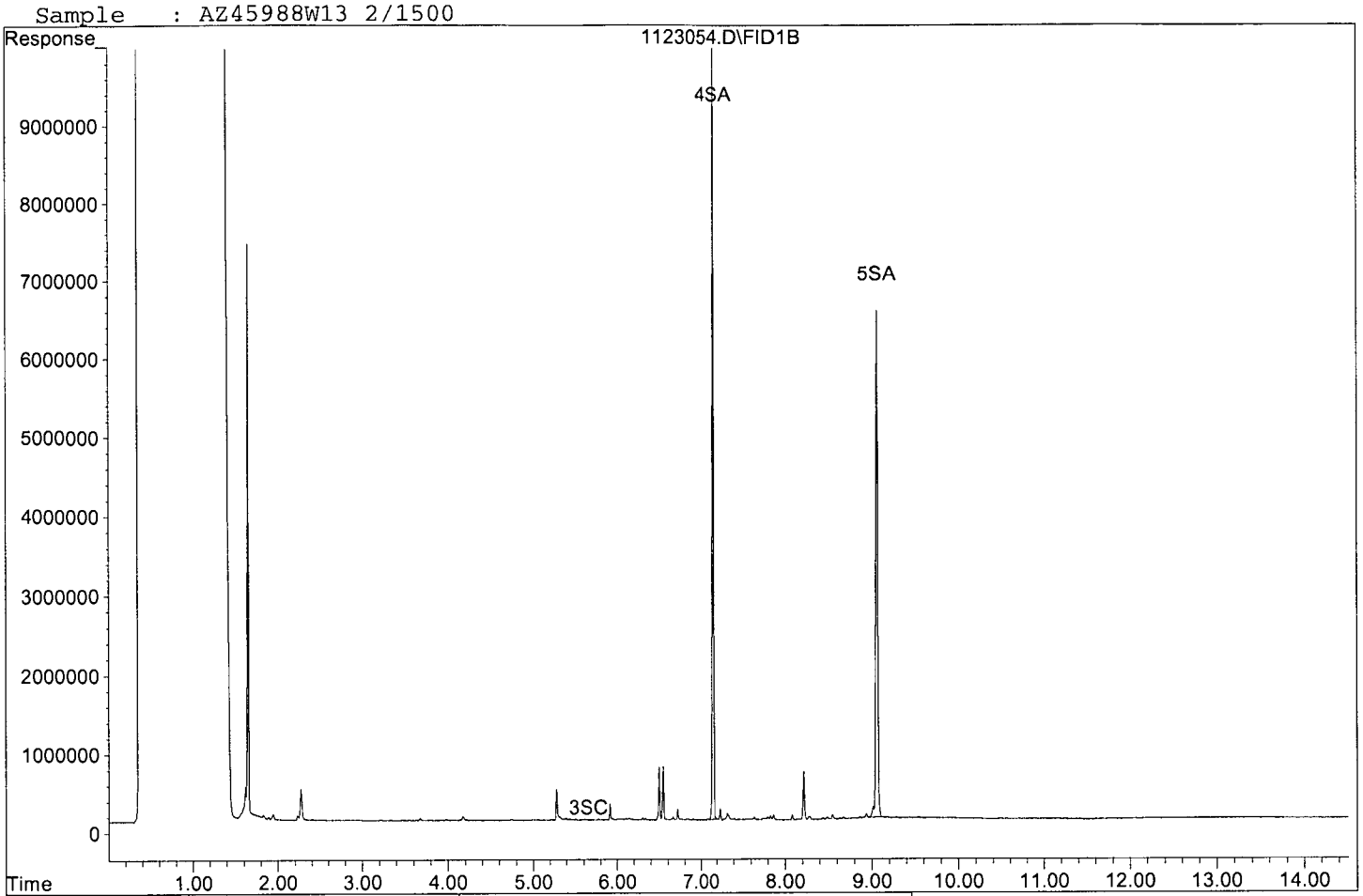
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

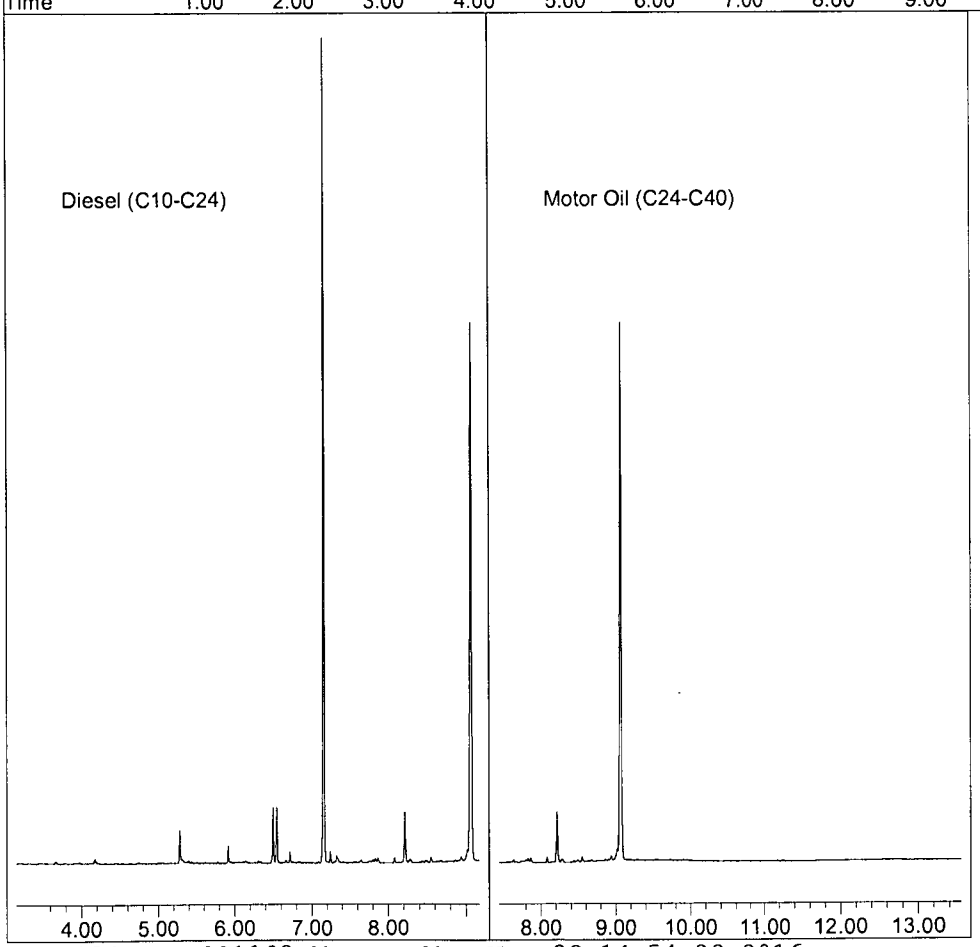
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SC Decanoic Acid(S)	5.66	51251	0.056	ppb
Surrogate Spike 64.000	Recovery =		0.09%	
4) SA Ortho-Terphenyl(S)	7.16	104744851	29.941	ppb
Surrogate Spike 40.000	Recovery =		74.85%	
5) SA Octacosane(S)	9.07	99062593	37.741	ppb
Surrogate Spike 40.000	Recovery =		94.35%	
Target Compounds				

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161123\1123054.D
Sample : AZ45988W13 2/1500





EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81515

Sample ID: ERH119

APPL ID: AZ45989

Sample Collection Date: 11/15/16

QCG: #DOC53-161122A-214051

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	11/22/16	11/24/16
EPA 8015B-eL	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	11/22/16	11/24/16
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	90.8	60-142			%	11/22/16	11/24/16
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	72.8	56-125			%	11/22/16	11/24/16

Quant Method: DOC1103.M
Run #: 1123055
Instrument: Apollo
Sequence: 161123
Dilution Factor: 1
Initials: DPO

Printed: 11/28/16 2:16:28 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161123\1123055.D Vial: 55
Acq On : 11-24-16 3:21:54 Operator: DP
Sample : AZ45989W08 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Nov 28 14:00 2016 Quant Results File: DOC1103.RES

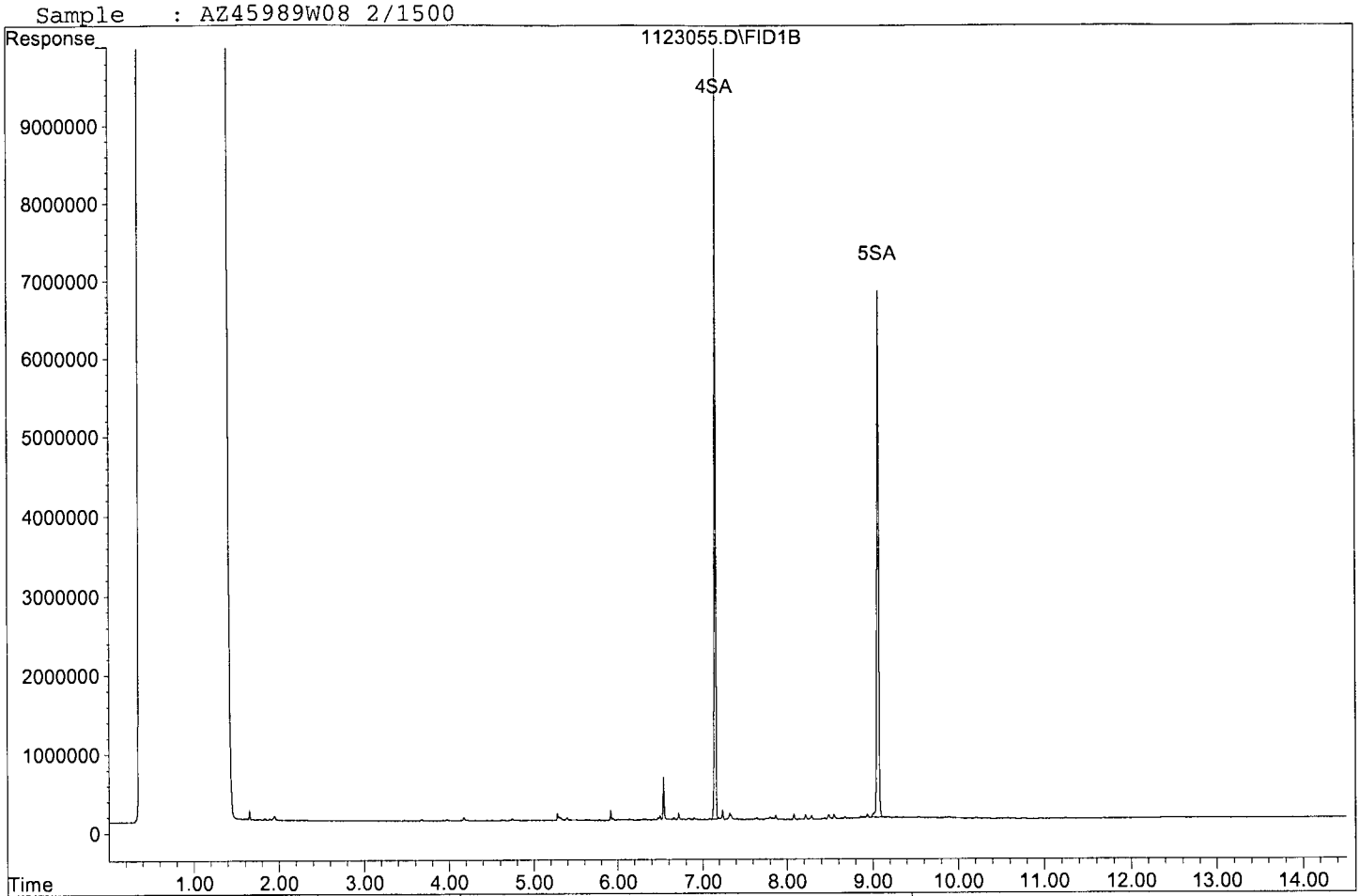
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

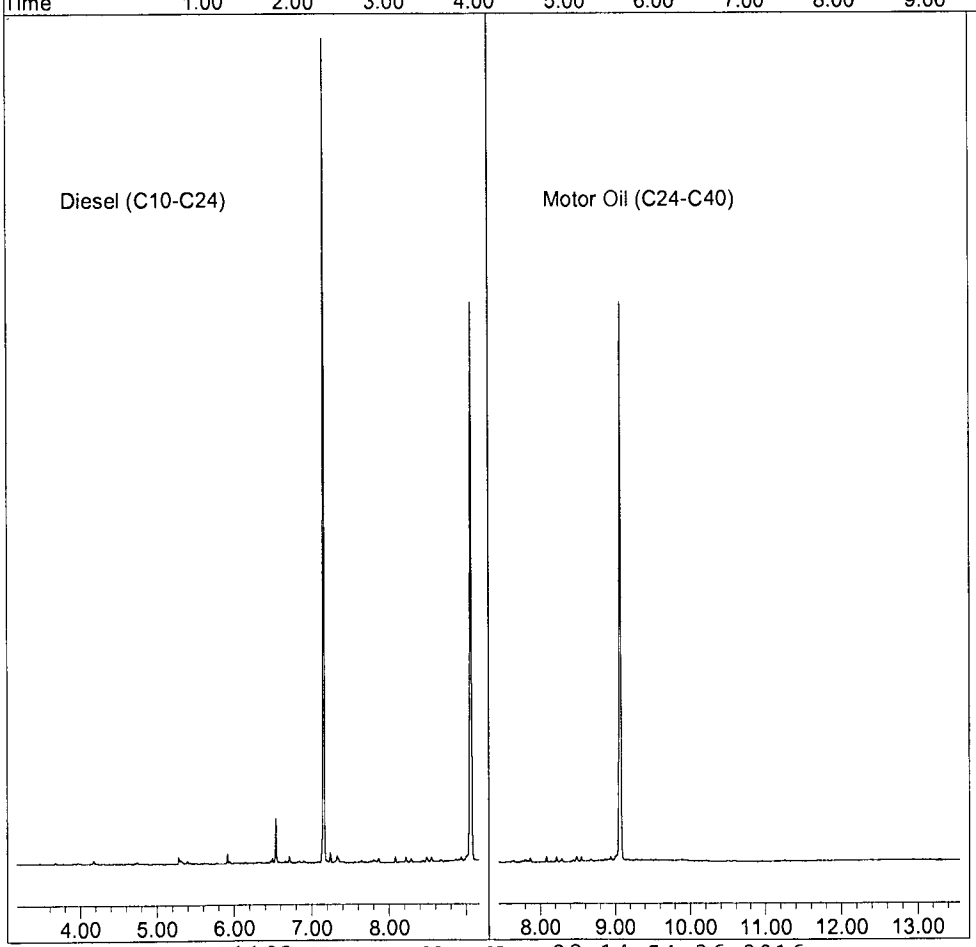
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.16	101929956	29.137	ppb
Surrogate Spike 40.000		Recovery =	72.84%	
5) SA Octacosane(S)	9.07	95272840	36.298	ppb
Surrogate Spike 40.000		Recovery =	90.75%	
Target Compounds				

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161123\1123055.D
Sample : AZ45989W08 2/1500





EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH124
Sample Collection Date: 11/15/16

ARF: 81515
APPL ID: AZ45991
QCG: #DOC53-161122A-214051

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	1300 ++	40.0	25.00	13.07	ug/L	11/22/16	11/24/16
EPA 8015B-eL	OIL (C24-C40)	100	40.0	40.00	5.54	ug/L	11/22/16	11/24/16
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	91.3	60-142			%	11/22/16	11/24/16
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	81.0	56-125			%	11/22/16	11/24/16

++(T6) The analyst has noted that the chromatogram of this sample is mainly a match to hydrocarbons within the range of diesel fuel.

Quant Method: DOC1103.M
Run #: 1123056
Instrument: Apollo
Sequence: 161123
Dilution Factor: 1
Initials: DPO

Printed: 11/28/16 3:02:38 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161123\1123056.D Vial: 56
Acq On : 11-24-16 3:42:11 Operator: DP
Sample : AZ45991W15 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Nov 28 15:00 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

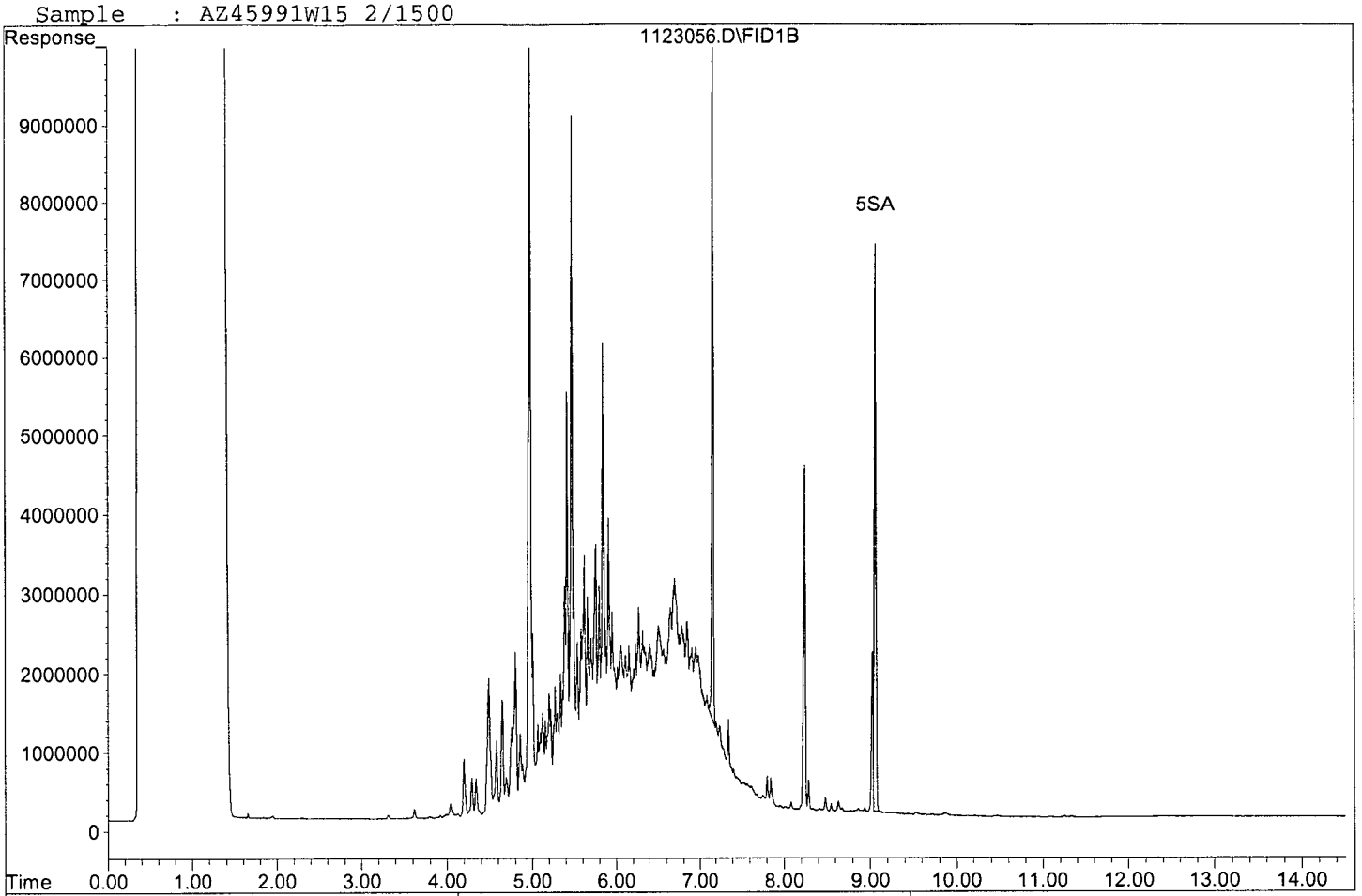
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

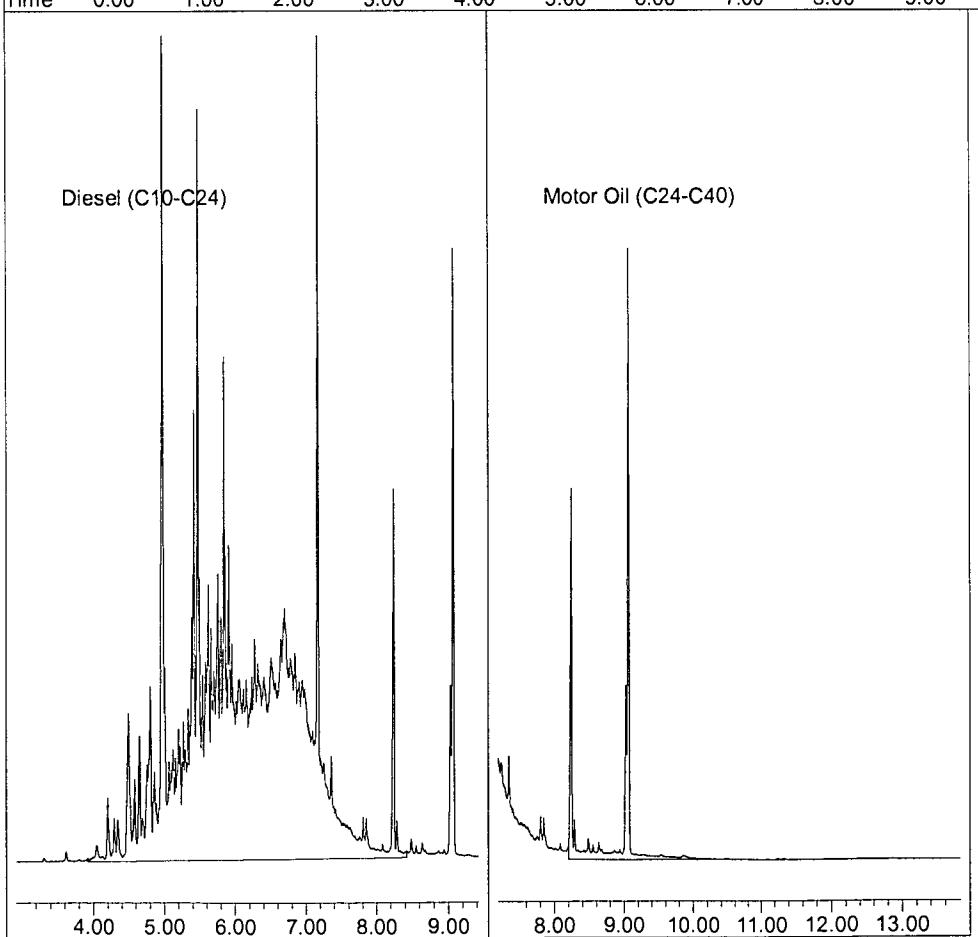
Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds					
4) SA Ortho-Terphenyl(S)	7.17	113358763	32.403	ppb	
Surrogate Spike 40.000		Recovery =	81.01%		
5) SA Octacosane(S)	9.07	95836344	36.512	ppb	m
Surrogate Spike 40.000		Recovery =	91.28%		
Target Compounds					
1) HATM Diesel (C10-C24)	6.17	3377115957	1303.553	ppb	
2) HBTM Motor Oil (C24-C40)	10.50	208336568	99.715	ppb	

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161123\1123056.D
Sample : AZ45991W15 2/1500

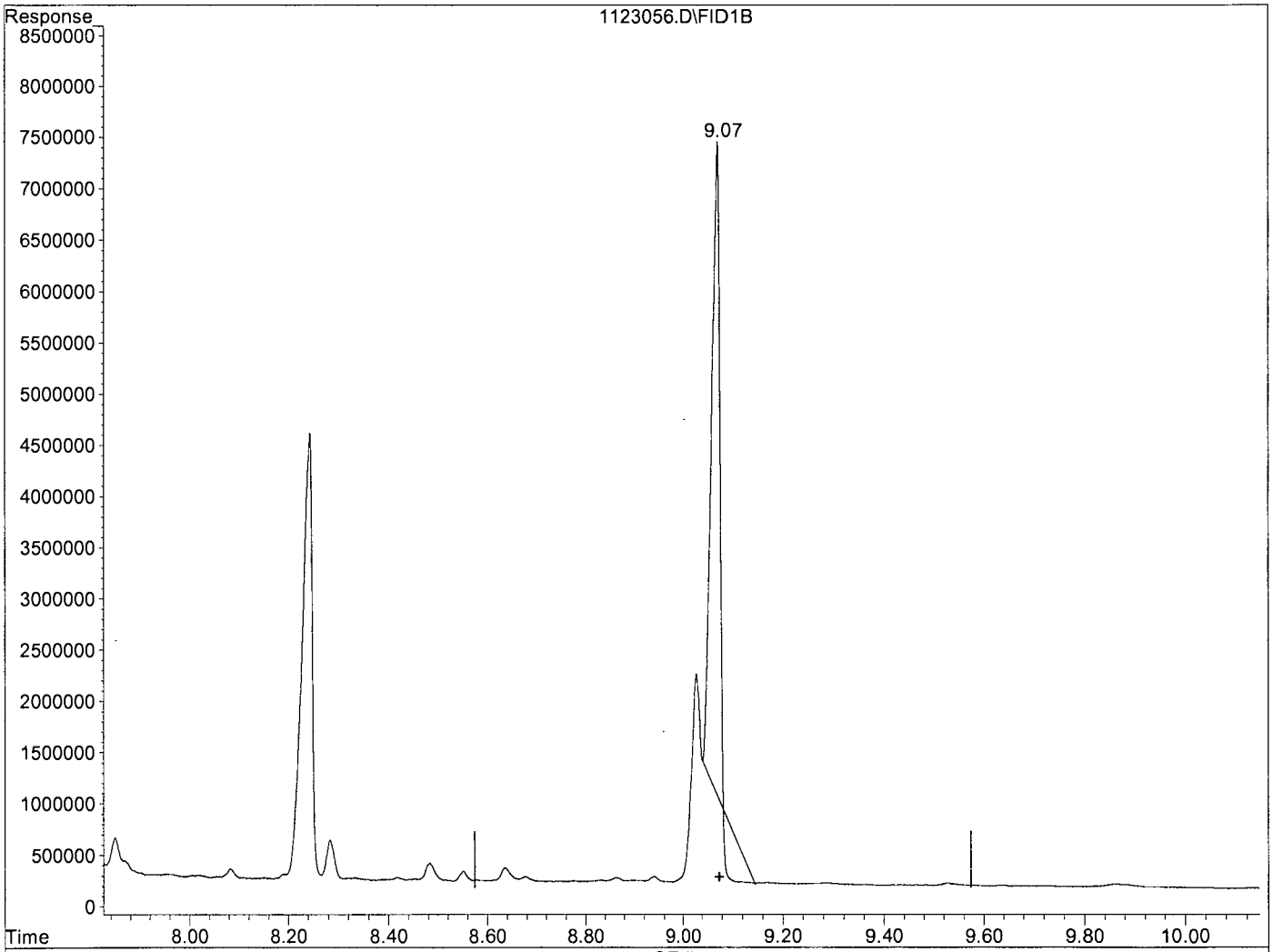




Quantitation Report

Data File : G:\APOLLO\DATA\161123\1123056.D Vial: 56
Acq On : 11-24-16 3:42:11 Operator: DP
Sample : AZ45991W15 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Nov 28 14:01 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration



(5) Octacosane(S) (SA)

9.07min 23.173ppb

response 60823103

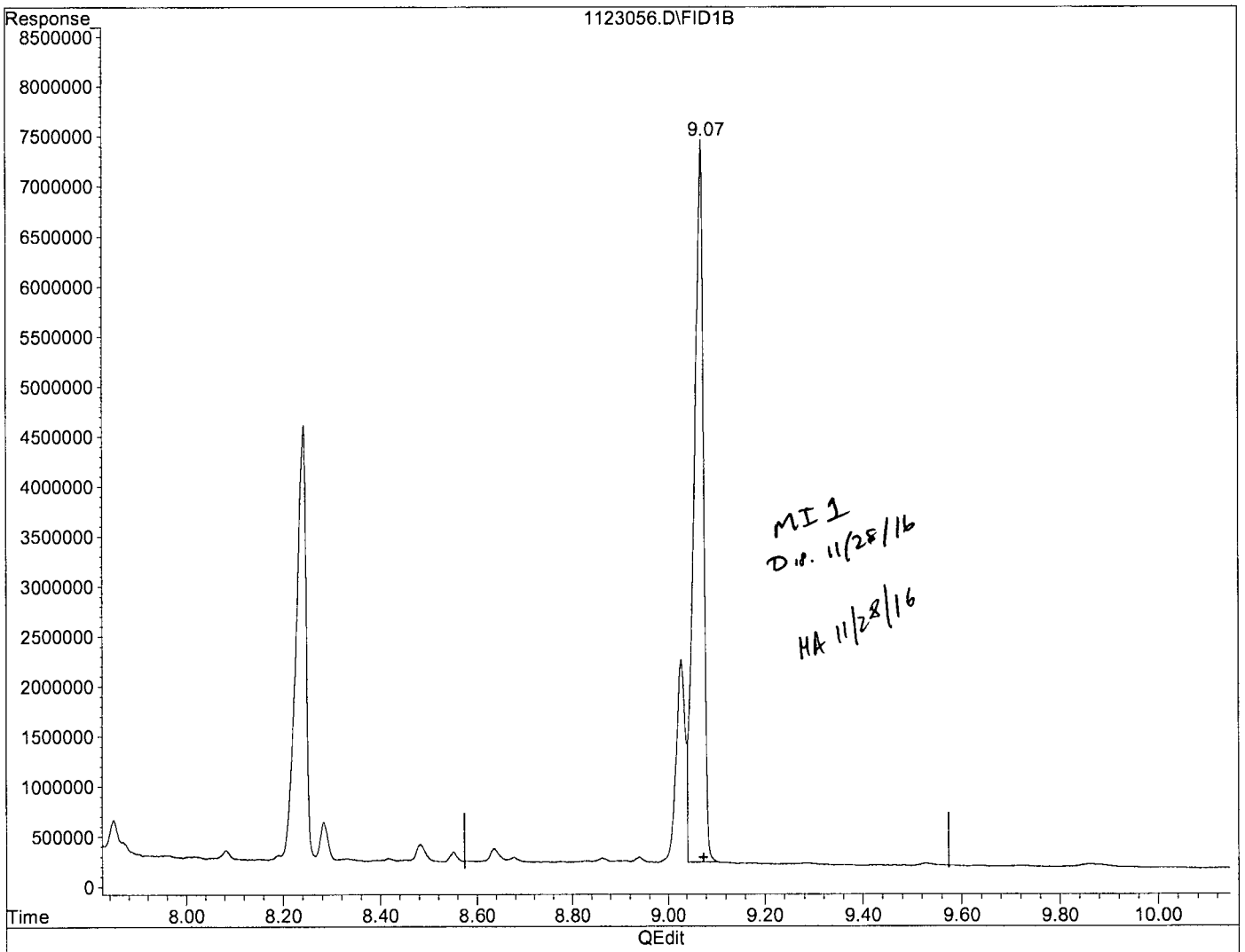
(+) = Expected Retention Time

1123056.D DOC1103.M Mon Nov 28 14:59:36 2016

Quantitation Report

Data File : G:\APOLLO\DATA\161123\1123056.D Vial: 56
Acq On : 11-24-16 3:42:11 Operator: DP
Sample : AZ45991W15 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Nov 28 14:01 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration



(5) Octacosane(S) (SA)

9.07min 36.512ppb m

response 95836344

(+) = Expected Retention Time
1123056.D DOC1103.M Mon Nov 28 15:00:11 2016

EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81515

Sample ID: ERH125

APPL ID: AZ45992

Sample Collection Date: 11/15/16

QCG: #DOC53-161122A-214051

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	51 ++	40.0	25.00	13.07	ug/L	11/22/16	11/24/16
EPA 8015B-eL	OIL (C24-C40)	42	40.0	40.00	5.54	ug/L	11/22/16	11/24/16
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	92.6	60-142			%	11/22/16	11/24/16
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	75.8	56-125			%	11/22/16	11/24/16

++(T3I) The analyst has noted that the chromatogram of this sample includes higher boiling hydrocarbons.

Quant Method: DOC1103.M
Run #: 1123057
Instrument: Apollo
Sequence: 161123
Dilution Factor: 1
Initials: DPO

Printed: 11/28/16 2:16:28 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161123\1123057.D Vial: 57
Acq On : 11-24-16 4:02:27 Operator: DP
Sample : AZ45992W12 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Nov 28 14:02 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

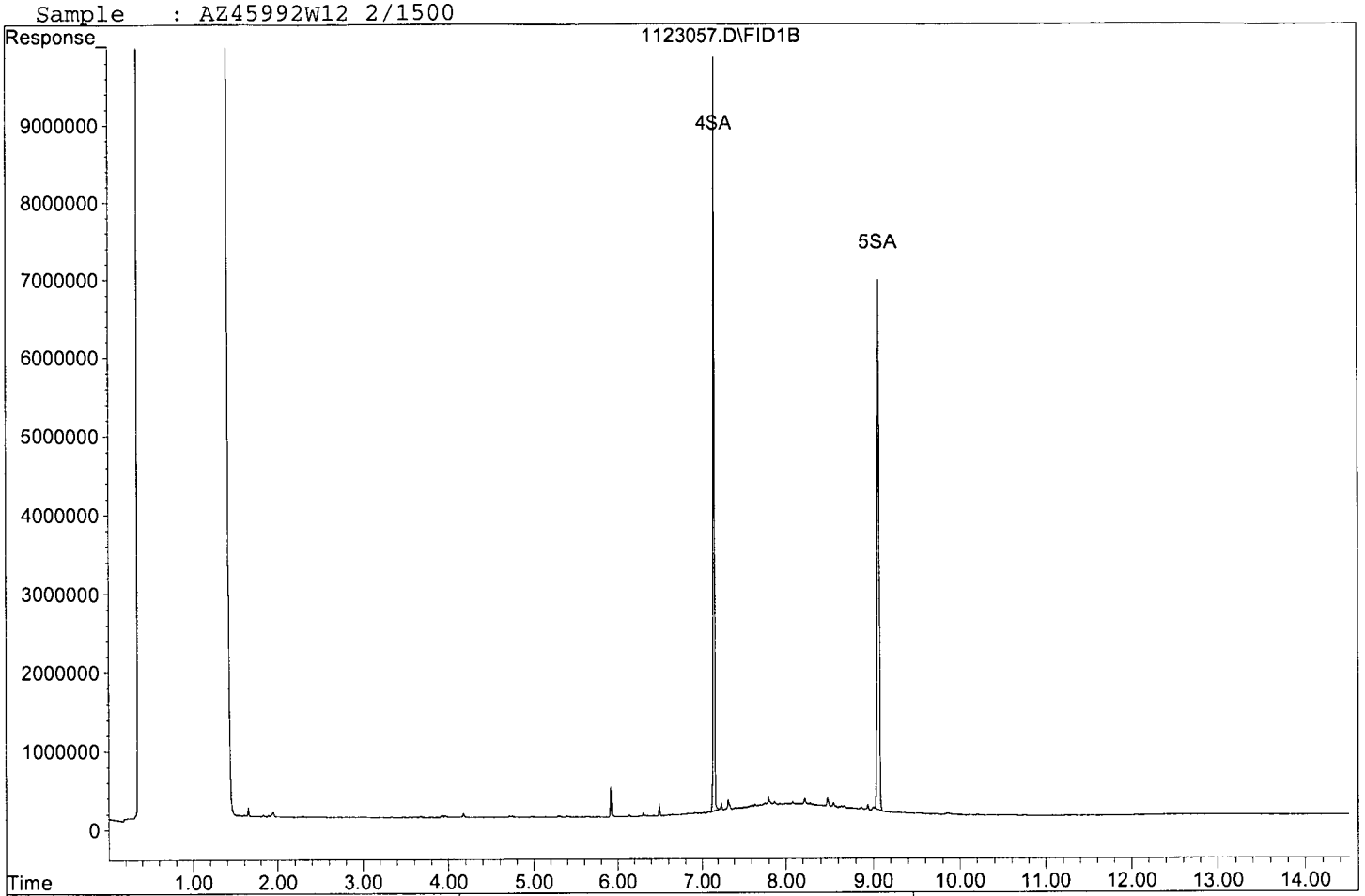
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

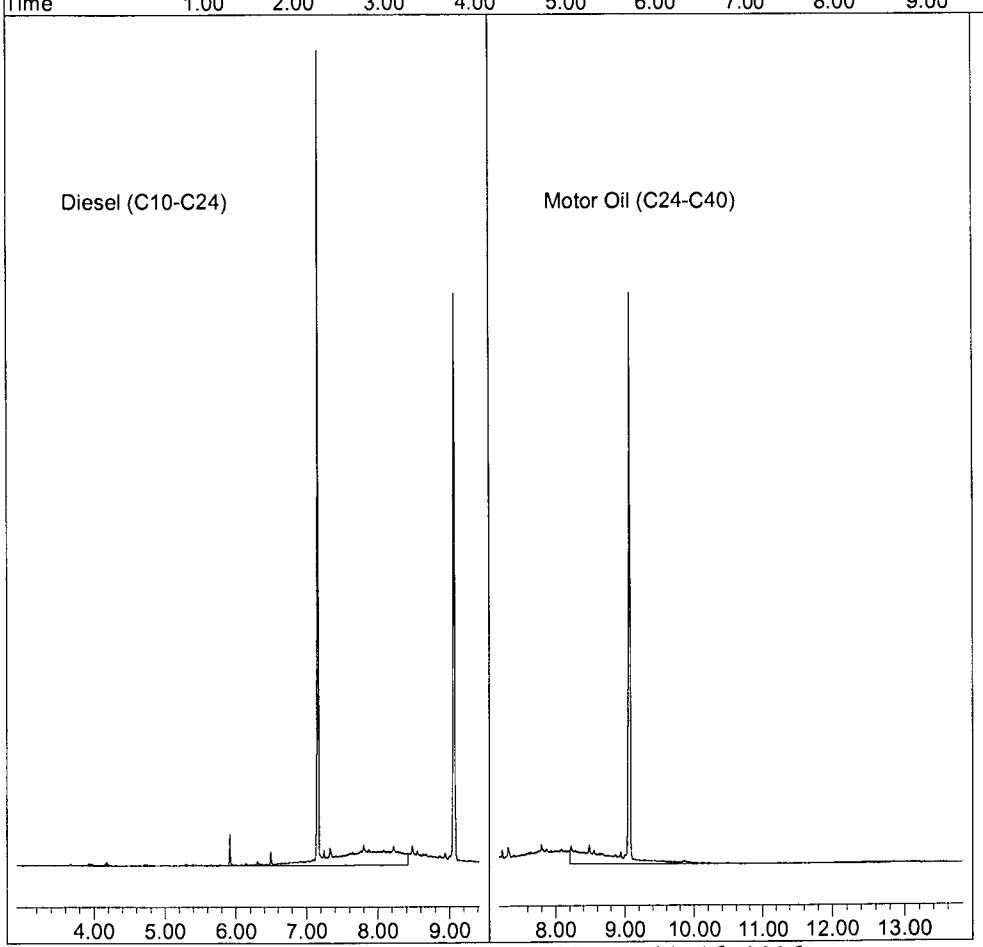
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.16	106076339	30.322 ppb
Surrogate Spike 40.000		Recovery =	75.81%
5) SA Octacosane(S)	9.07	97188178	37.027 ppb
Surrogate Spike 40.000		Recovery =	92.57%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	133189902	51.411 ppb
2) HBTM Motor Oil (C24-C40)	10.50	88751287	42.479 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161123\1123057.D
Sample : AZ45992W12 2/1500





1123057.D DOC1103.M Mon Nov 28 14:54:46 2016

EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH127
Sample Collection Date: 11/16/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515
APPL ID: AZ45993
QCG: #DOC53-161122A-214051

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	11/22/16	11/24/16
EPA 8015B-eL	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	11/22/16	11/24/16
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	93.3	60-142			%	11/22/16	11/24/16
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	76.9	56-125			%	11/22/16	11/24/16

Quant Method: DOC1103.M
Run #: 1123058
Instrument: Apollo
Sequence: 161123
Dilution Factor: 1
Initials: DPO

Printed: 11/28/16 2:16:28 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161123\1123058.D Vial: 58
Acq On : 11-24-16 4:22:44 Operator: DP
Sample : AZ45993W16 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Nov 28 14:03 2016 Quant Results File: DOC1103.RES

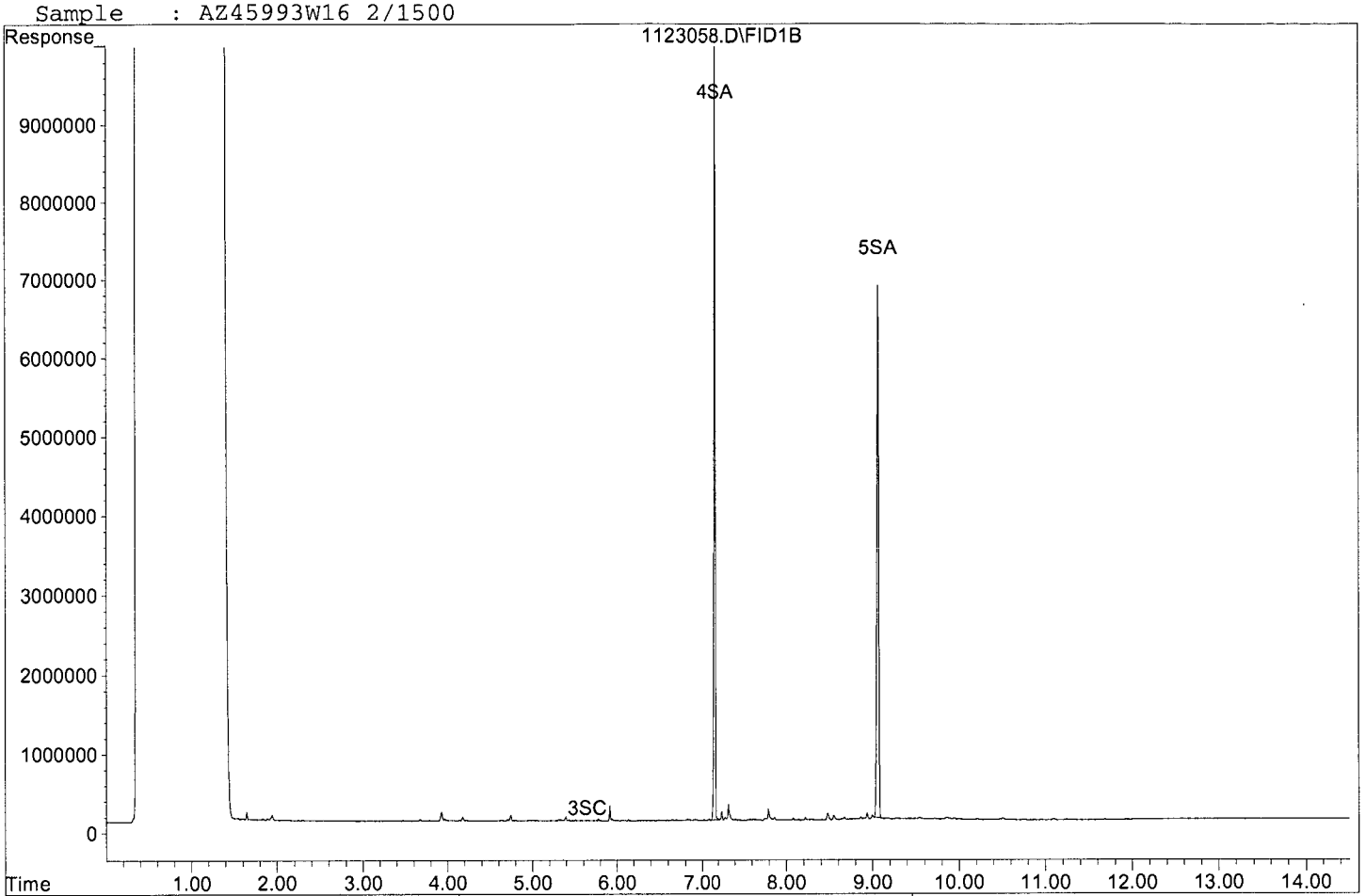
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

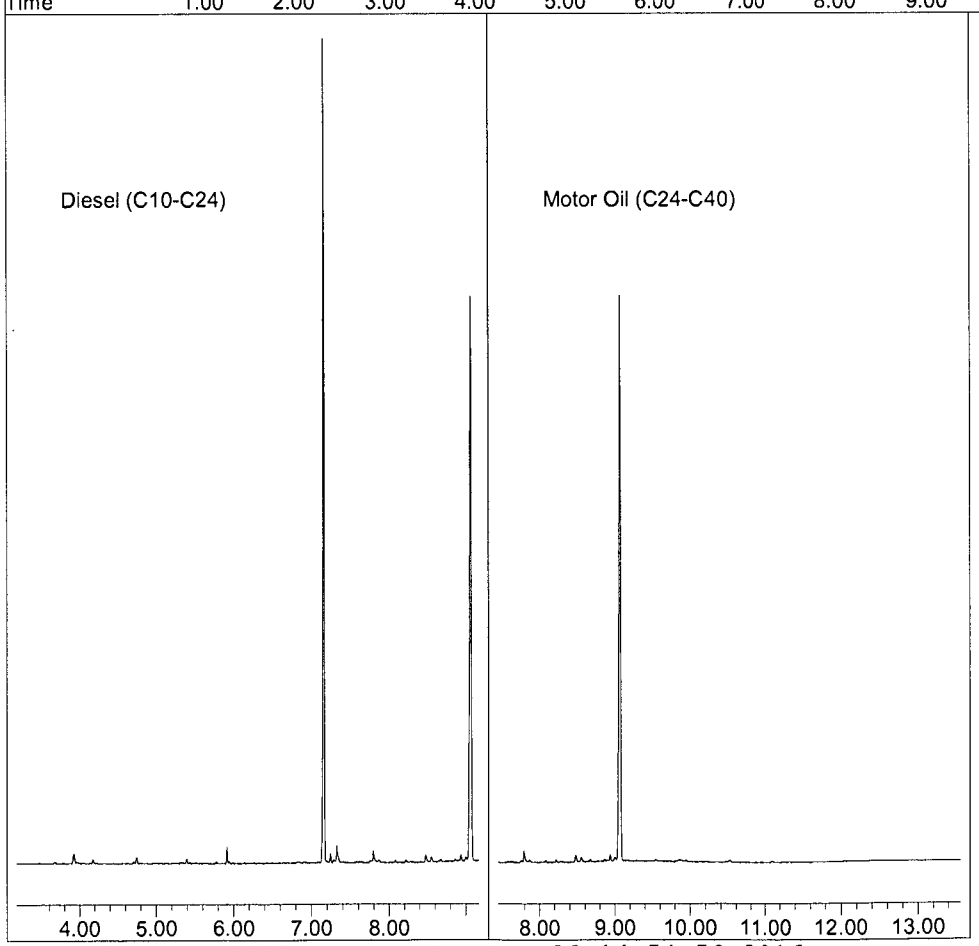
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SC Decanoic Acid(S)	5.65	120145	0.131	ppb
Surrogate Spike 64.000		Recovery =	0.20%	
4) SA Ortho-Terphenyl(S)	7.16	107570650	30.749	ppb
Surrogate Spike 40.000		Recovery =	76.87%	
5) SA Octacosane(S)	9.07	97908425	37.302	ppb
Surrogate Spike 40.000		Recovery =	93.26%	
Target Compounds				

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161123\1123058.D
Sample : AZ45993W16 2/1500





EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81515

Sample ID: ERH129

APPL ID: AZ45994

Sample Collection Date: 11/15/16

QCG: #DOC53-161122A-214051

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	11/22/16	11/24/16
EPA 8015B-eL	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	11/22/16	11/24/16
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	92.4	60-142			%	11/22/16	11/24/16
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	74.2	56-125			%	11/22/16	11/24/16

Quant Method: DOC1103.M
Run #: 1123059
Instrument: Apollo
Sequence: 161123
Dilution Factor: 1
Initials: DPO

Printed: 11/28/16 2:16:28 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161123\1123059.D Vial: 59
Acq On : 11-24-16 4:43:01 Operator: DP
Sample : AZ45994W18 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Nov 28 14:04 2016 Quant Results File: DOC1103.RES

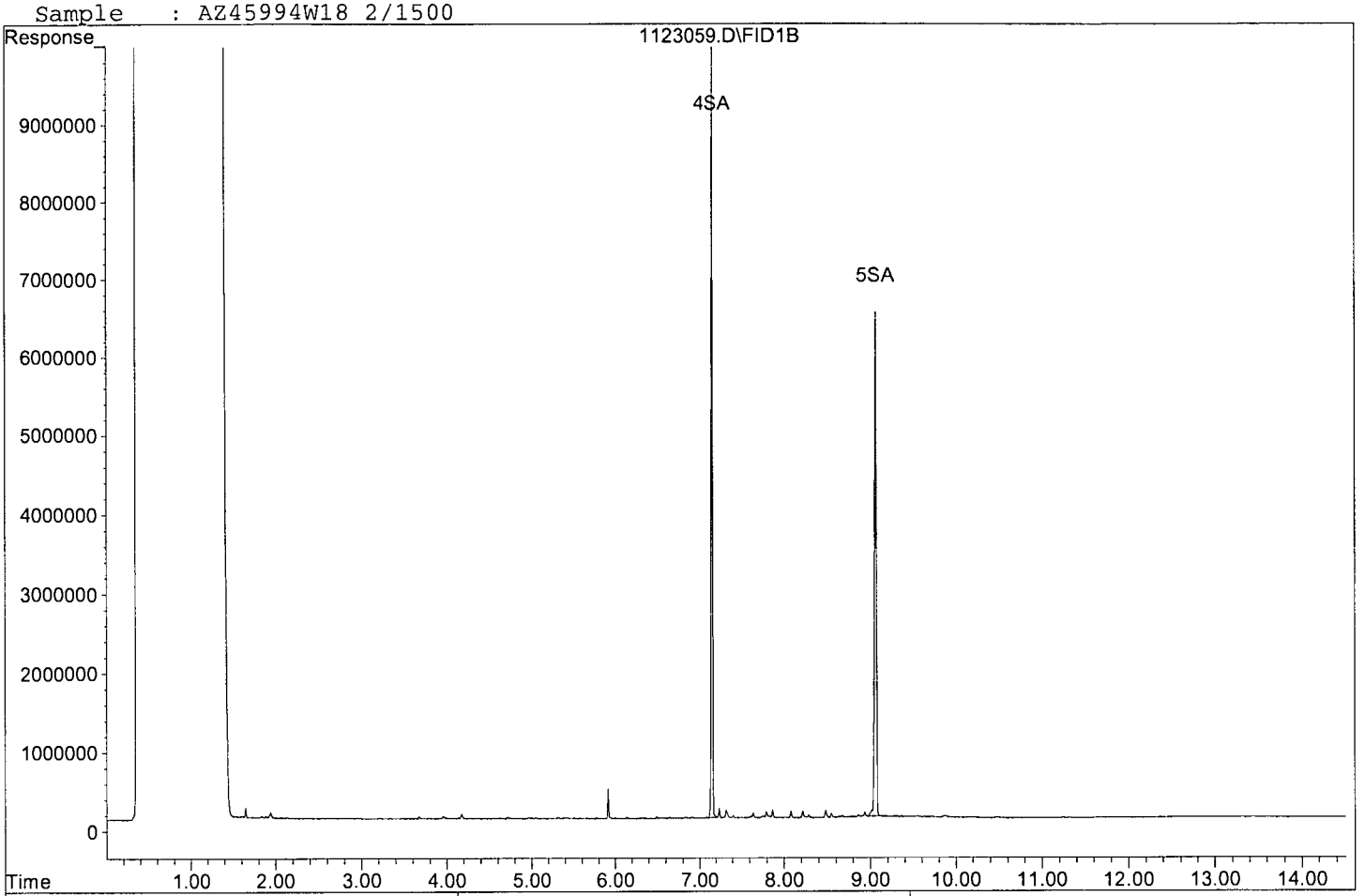
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

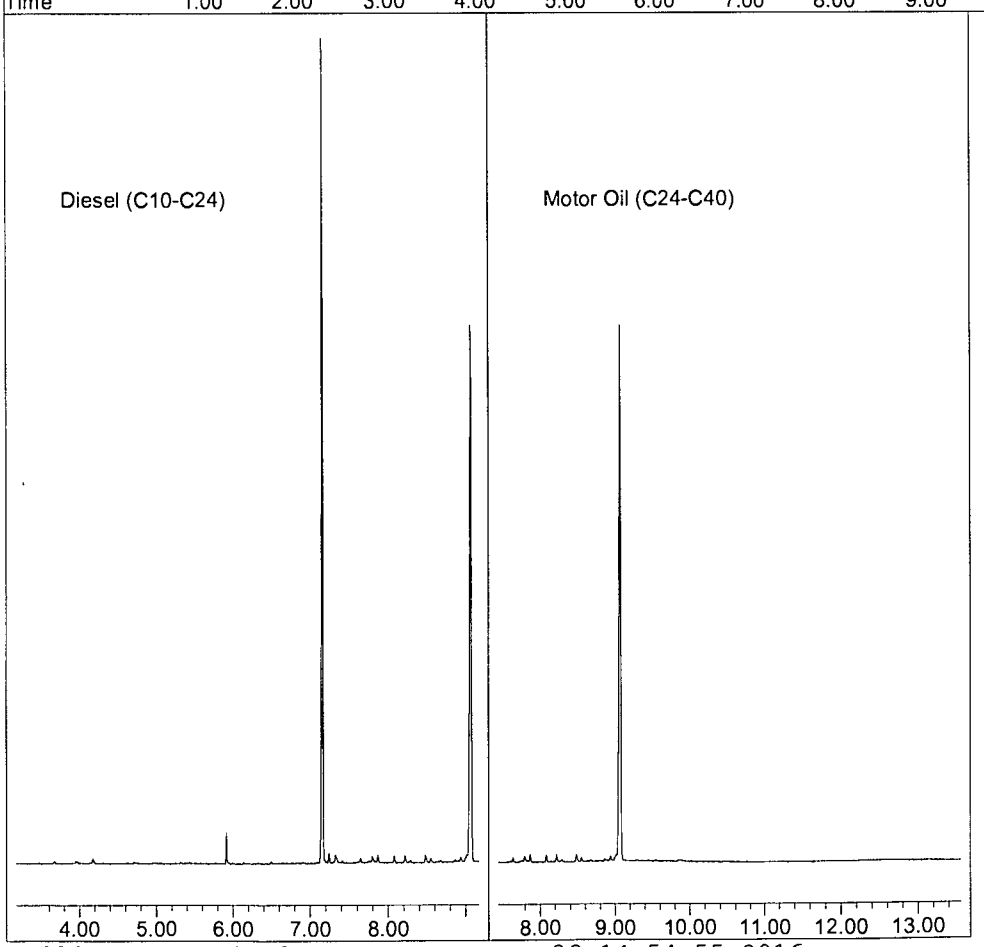
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.16	103846666	29.684	ppb
Surrogate Spike 40.000		Recovery =	74.21%	
5) SA Octacosane(S)	9.07	97001531	36.956	ppb
Surrogate Spike 40.000		Recovery =	92.39%	
Target Compounds				

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161123\1123059.D
Sample : AZ45994W18 2/1500





EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81515

Sample ID: ERH130

APPL ID: AZ45995

Sample Collection Date: 11/16/16

QCG: #DOC53-161122A-214051

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	11/22/16	11/24/16
EPA 8015B-eL	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	11/22/16	11/24/16
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	88.2	60-142			%	11/22/16	11/24/16
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	73.5	56-125			%	11/22/16	11/24/16

Quant Method: DOC1103.M
Run #: 1123060
Instrument: Apollo
Sequence: 161123
Dilution Factor: 1
Initials: DPO

Printed: 11/28/16 2:16:28 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161123\1123060.D Vial: 60
Acq On : 11-24-16 5:03:17 Operator: DP
Sample : AZ45995W10 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Nov 28 14:04 2016 Quant Results File: DOC1103.RES

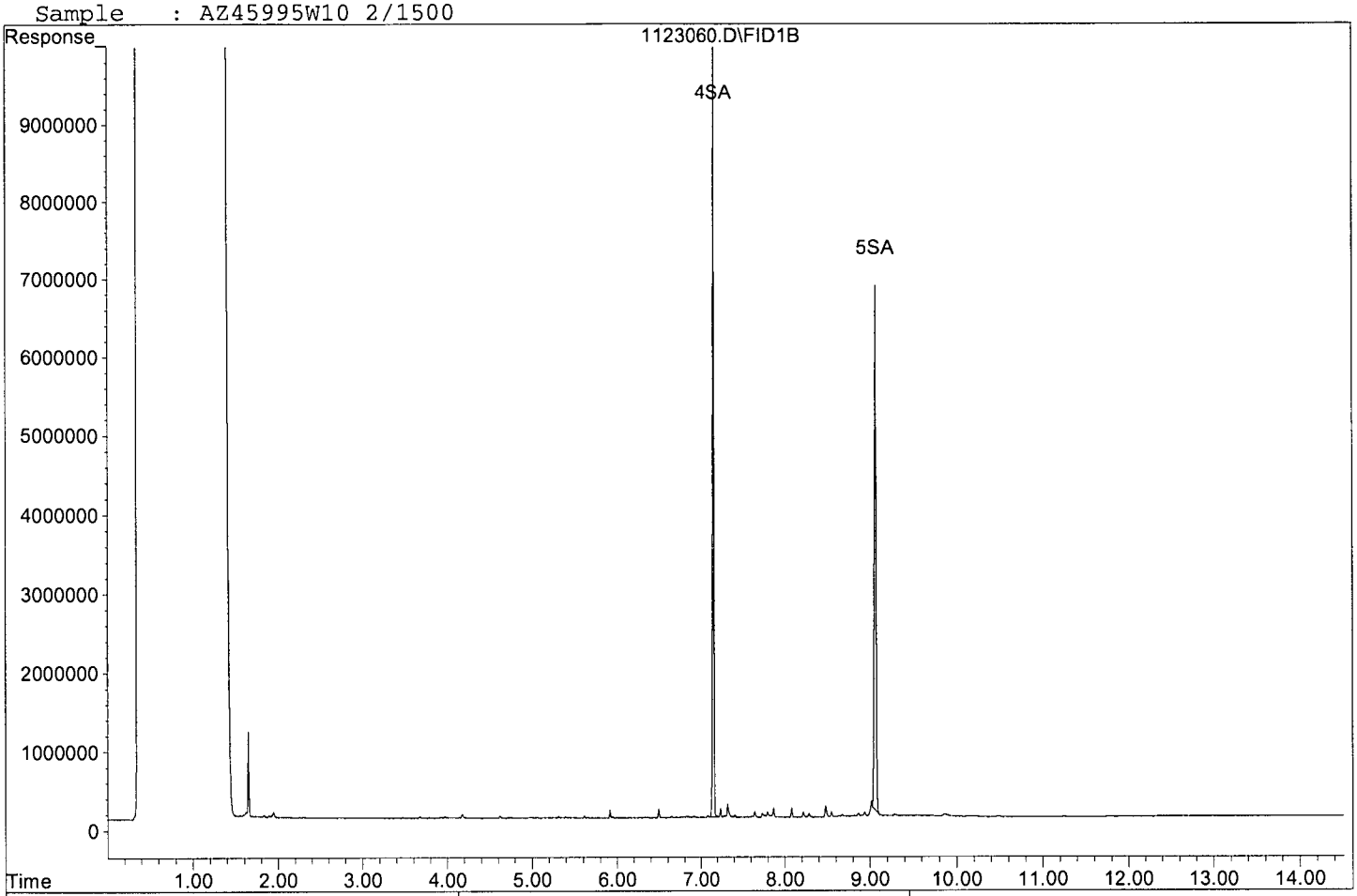
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

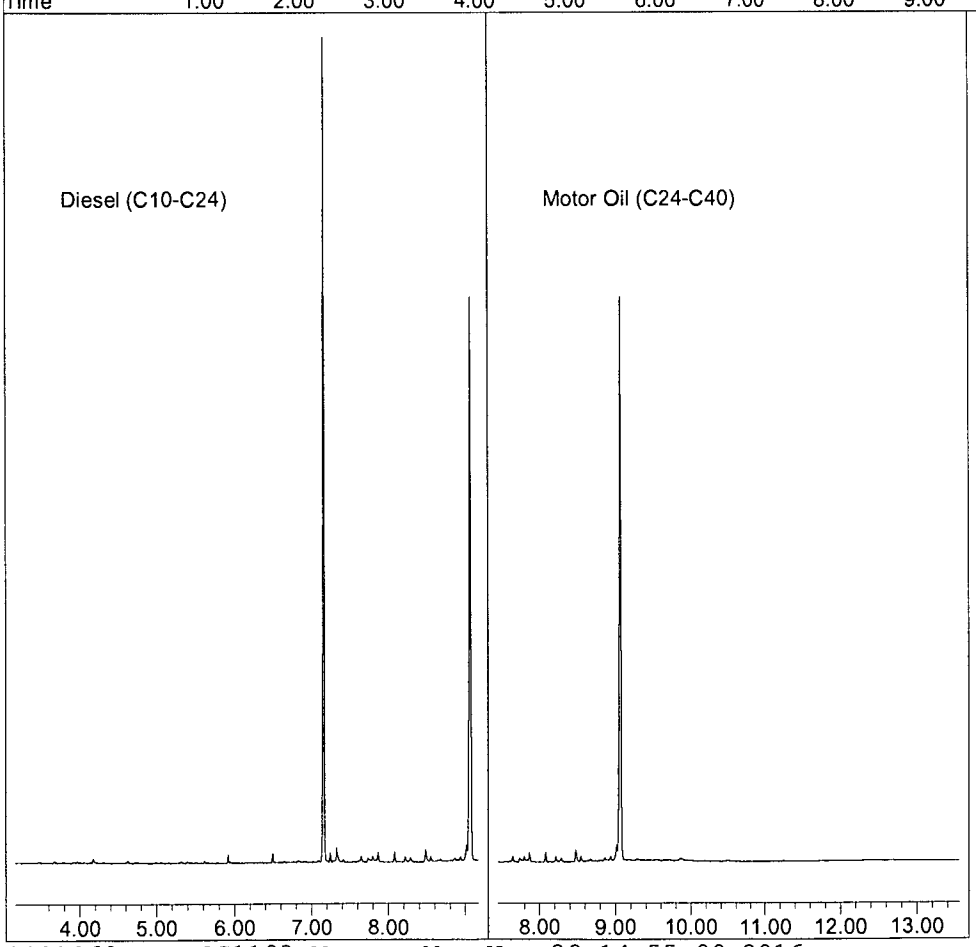
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.16	102782949	29.380	ppb
Surrogate Spike 40.000		Recovery =	73.45%	
5) SA Octacosane(S)	9.07	92601079	35.280	ppb
Surrogate Spike 40.000		Recovery =	88.20%	
Target Compounds				

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161123\1123060.D
Sample : AZ45995W10 2/1500





EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81515

Sample ID: ERH131

APPL ID: AZ45996

Sample Collection Date: 11/16/16

QCG: #DOC53-161122A-214051

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	11/22/16	11/24/16
EPA 8015B-eL	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	11/22/16	11/24/16
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	91.8	60-142			%	11/22/16	11/24/16
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	73.8	56-125			%	11/22/16	11/24/16

Quant Method: DOC1103.M
Run #: 1123061
Instrument: Apollo
Sequence: 161123
Dilution Factor: 1
Initials: DPO

Printed: 11/28/16 2:16:28 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161123\1123061.D Vial: 61
Acq On : 11-24-16 5:23:36 Operator: DP
Sample : AZ45996W10 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Nov 28 14:04 2016 Quant Results File: DOC1103.RES

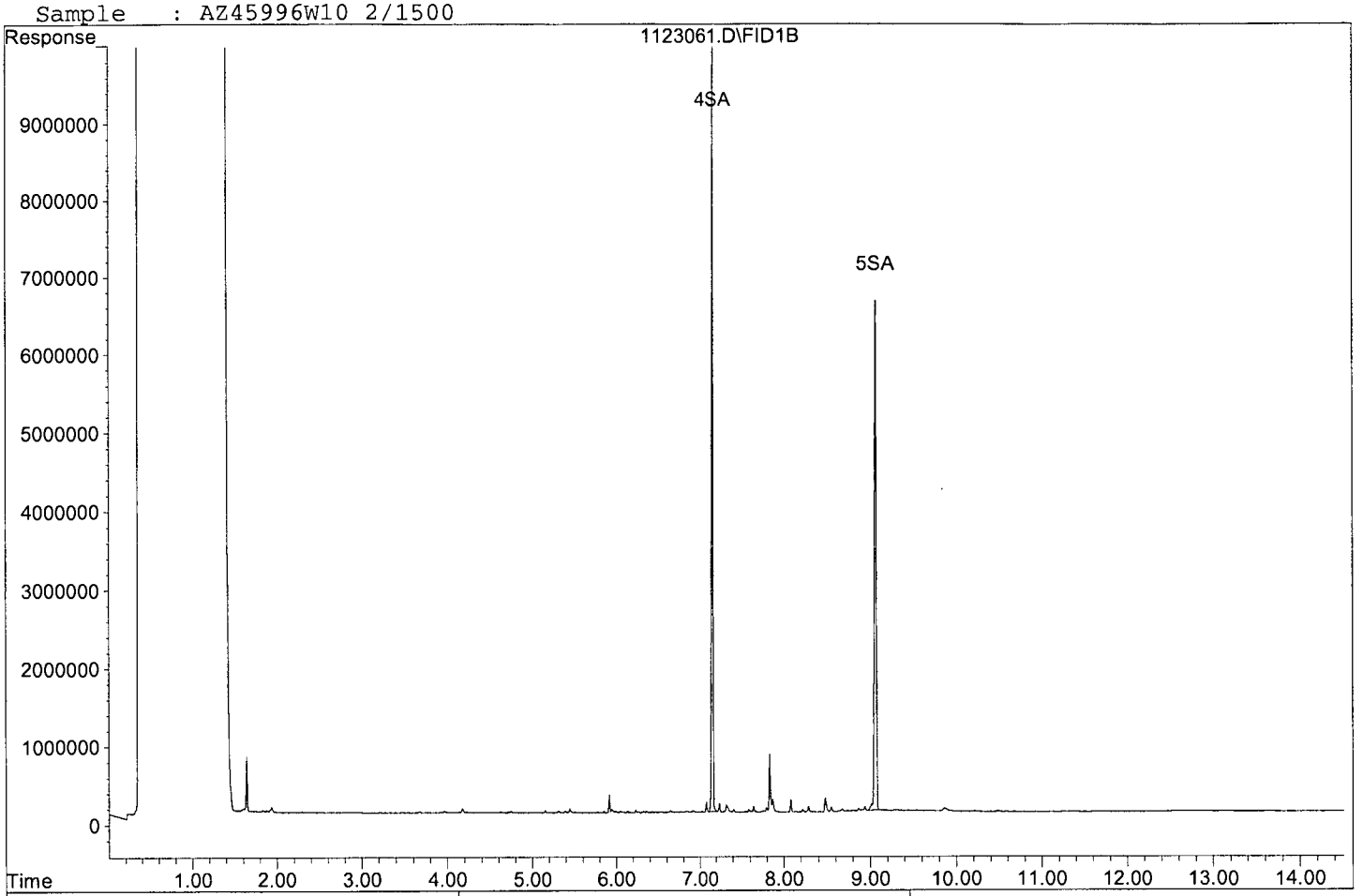
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

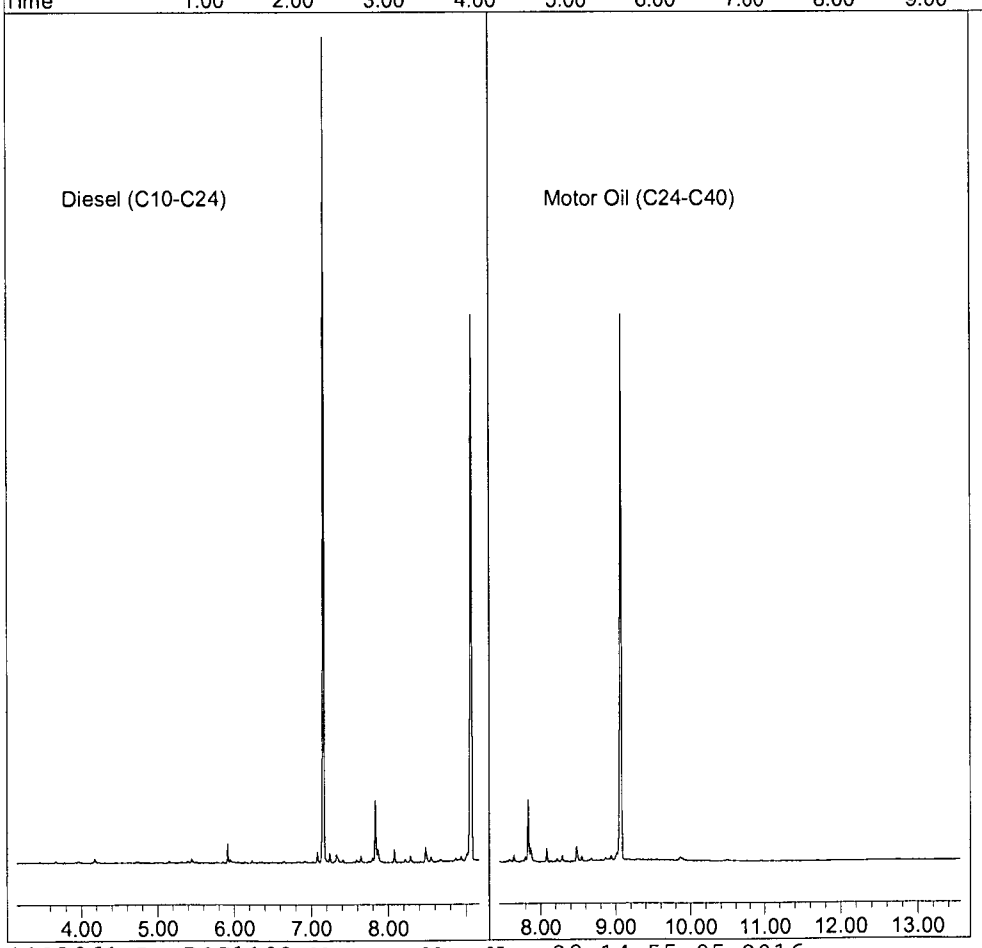
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.16	103303911	29.529	ppb
Surrogate Spike 40.000		Recovery =	73.82%	
5) SA Octacosane(S)	9.07	96348702	36.708	ppb
Surrogate Spike 40.000		Recovery =	91.77%	
Target Compounds				

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161123\1123061.D
Sample : AZ45996W10 2/1500





ORGANICS

Calibration Data

APPL, INC.

TPH Extractables
DOC1103

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 11/03/16
Matrix: Instrument: Apollo
Initials:

Diesel:			1103004.D	1103011.D	1103006 D	1103007.D	1103008.D	1103009.D								
Motor Oil:			1028002.D	1028003 D	1028004.D	1028005.D	1028006.D	1028007.D								

		Compound	1	2	3	4	5	6					Avg	%RSD		
1	HATM	Diesel (C10-C24)	1713970	2056602	1625582	1697733	1643335	1625559					1727130	9.6	HATM	
2	HBTM	Motor Oil (C24-C40)	1562690	1603769	1282978	1340015	1321969	1245819					1392873	11	HBTM	
3	SC	Decanoic Acid(S)	436509	643644	711658	659596	590571	627574					611592	15	SC	
4	SA	Ortho-Terphenyl(S)		2687660	2255130	2296757	2215766	2205848					2332232	8.7	SA	
5	SA	Octacosane(S)	1736016	2067699	1697441	1704564	1657038	1636278					1749839	9.1	SA	
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1.5347542

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161103\1103004.D Vial: 4
Acq On : 11-3-16 9:45:14 Operator: DP
Sample : DIESEL 10ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

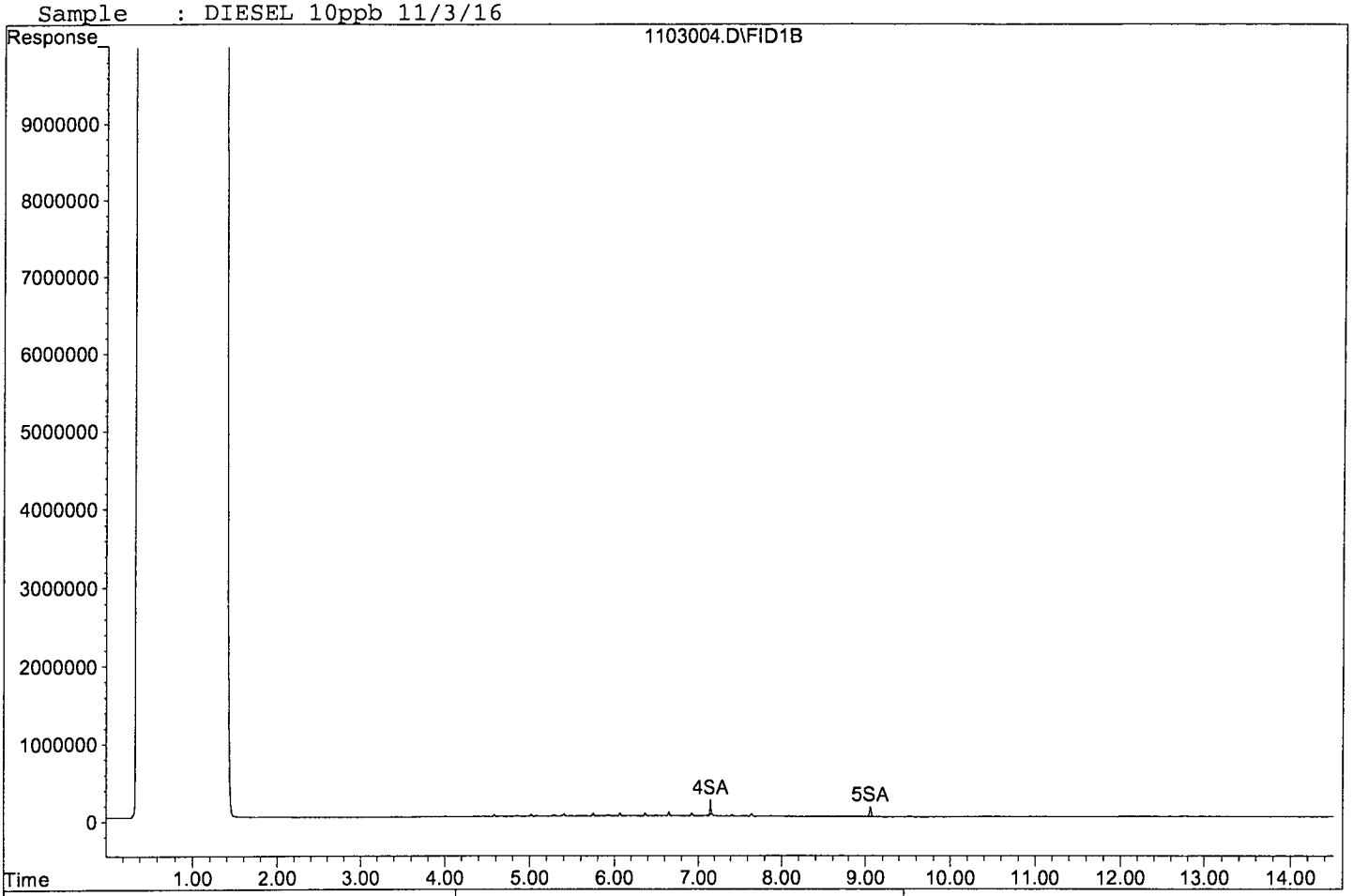
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

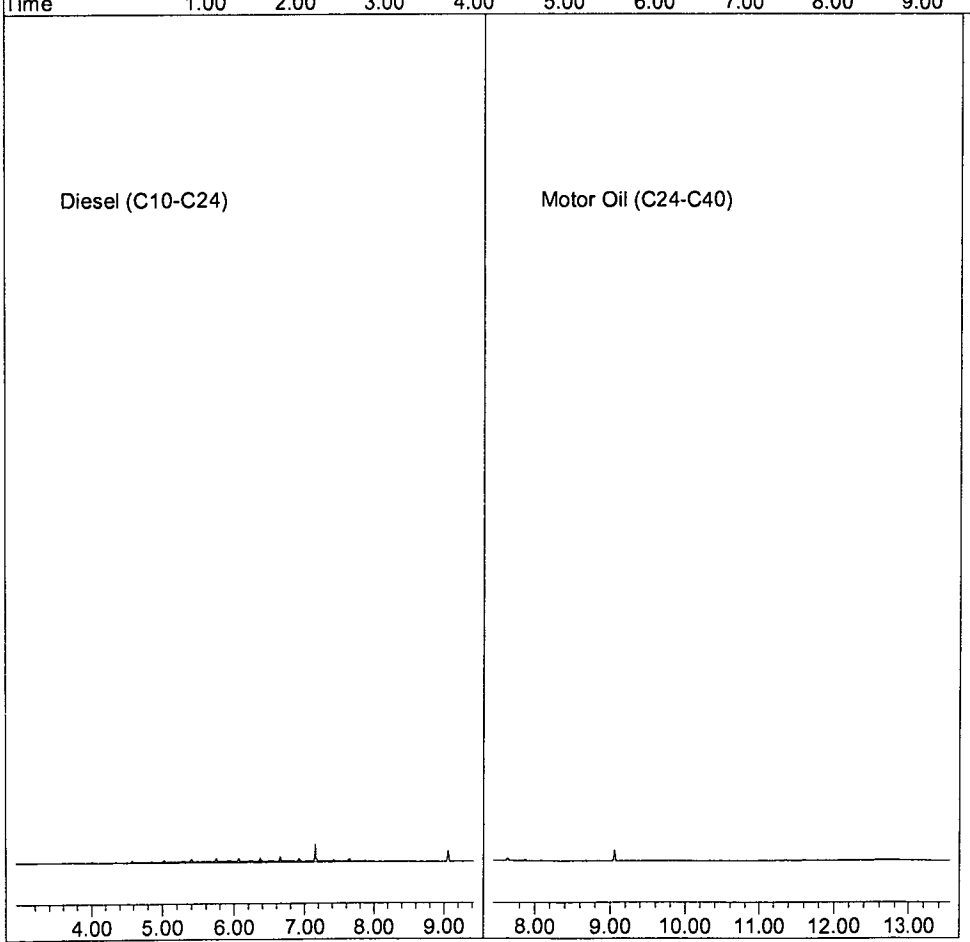
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.15	1320666	0.233 ppb
Surrogate Spike 30.000	Recovery =		0.78%
5) SA Octacosane(S)	9.06	1736016	0.492 ppb
Surrogate Spike 30.000	Recovery =		1.64%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	34279391	10.218 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103004.D
Sample : DIESEL 10ppb 11/3/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161103\1103011.D Vial: 11
Acq On : 11-3-16 12:56:47 Operator: DP
Sample : DIESEL 100ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

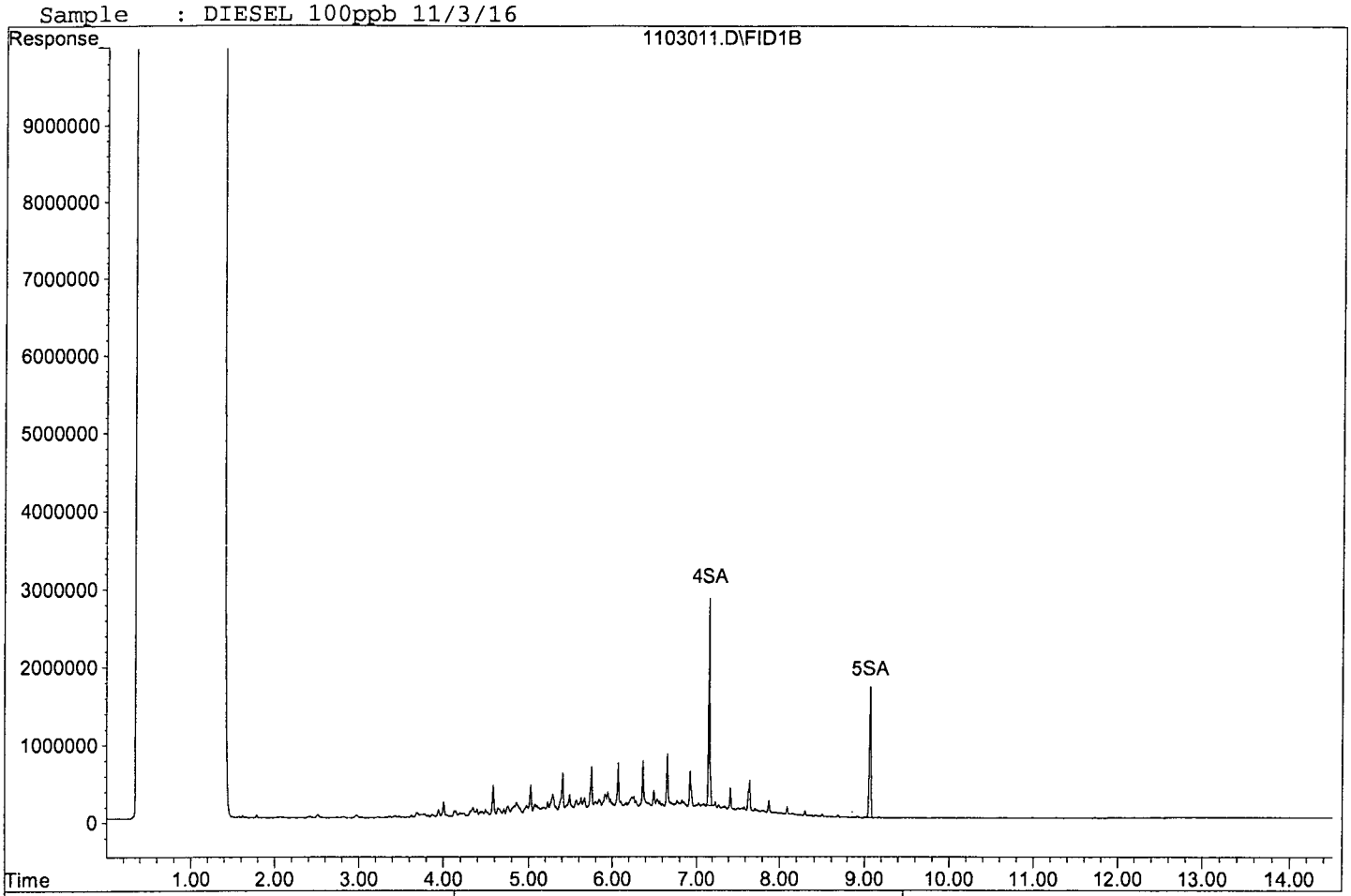
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

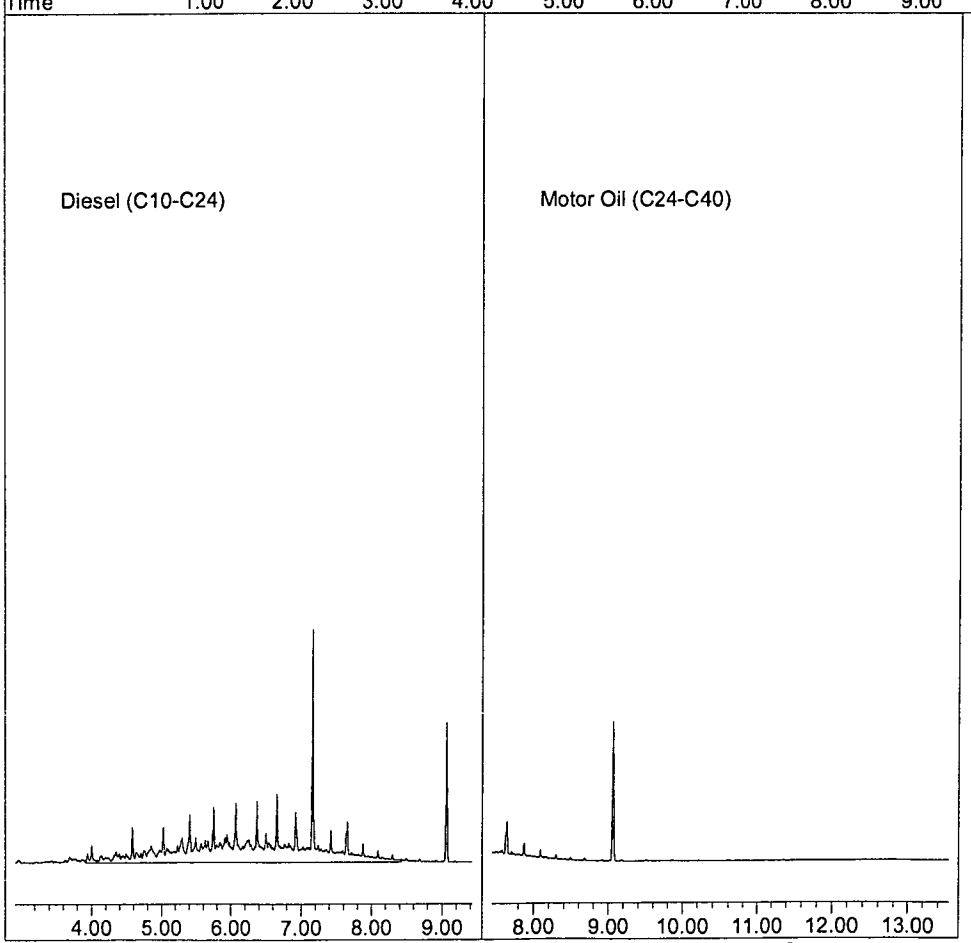
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.16	26876603	4.740 ppb
Surrogate Spike 30.000	Recovery =		15.80%
5) SA Octacosane(S)	9.06	20676993	5.864 ppb
Surrogate Spike 30.000	Recovery =		19.55%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	411320381	122.610 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103011.D
Sample : DIESEL 100ppb 11/3/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103006.D Vial: 6
Acq On : 11-3-16 10:26:16 Operator: DP
Sample : DIESEL 400ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

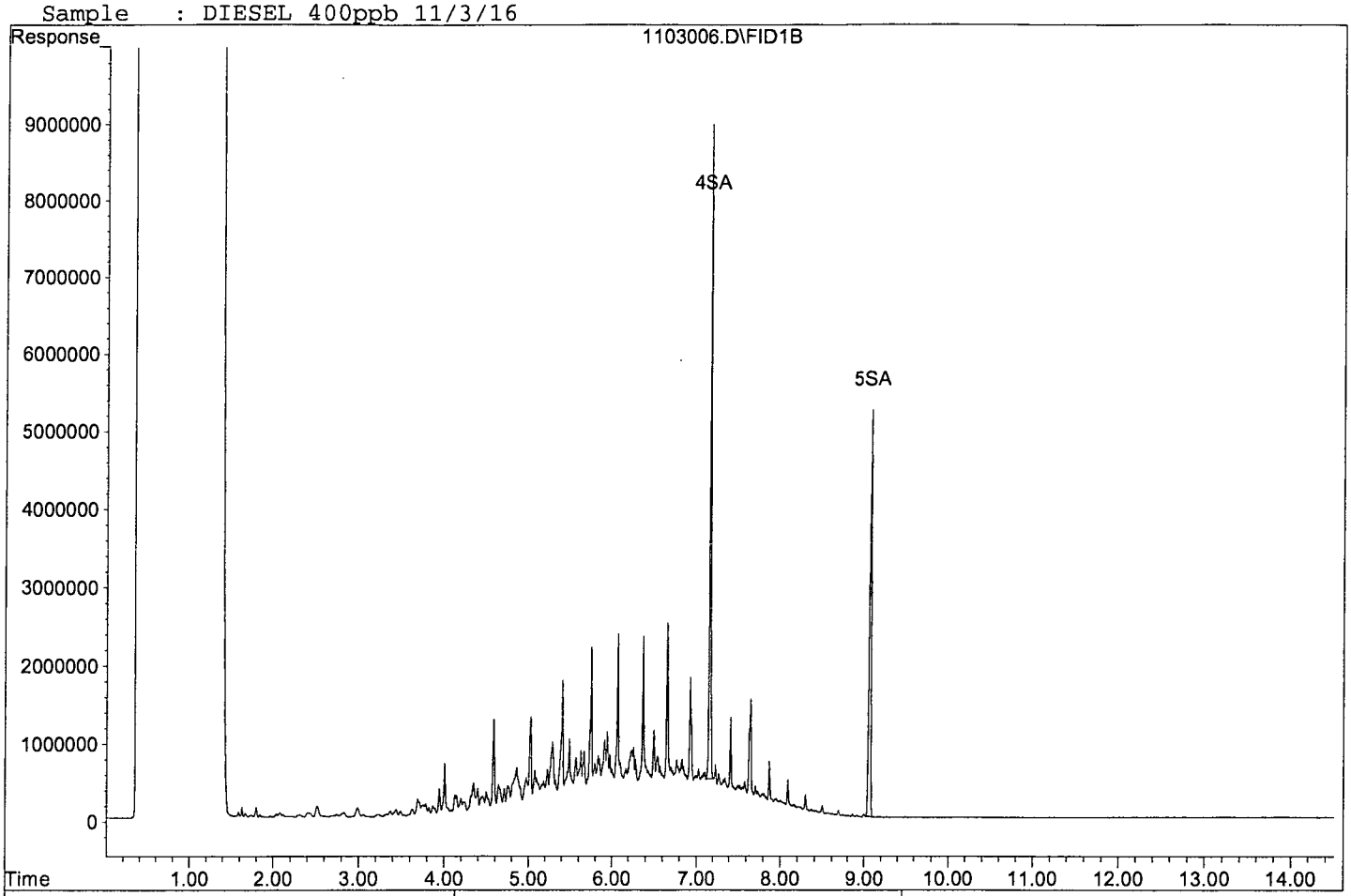
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

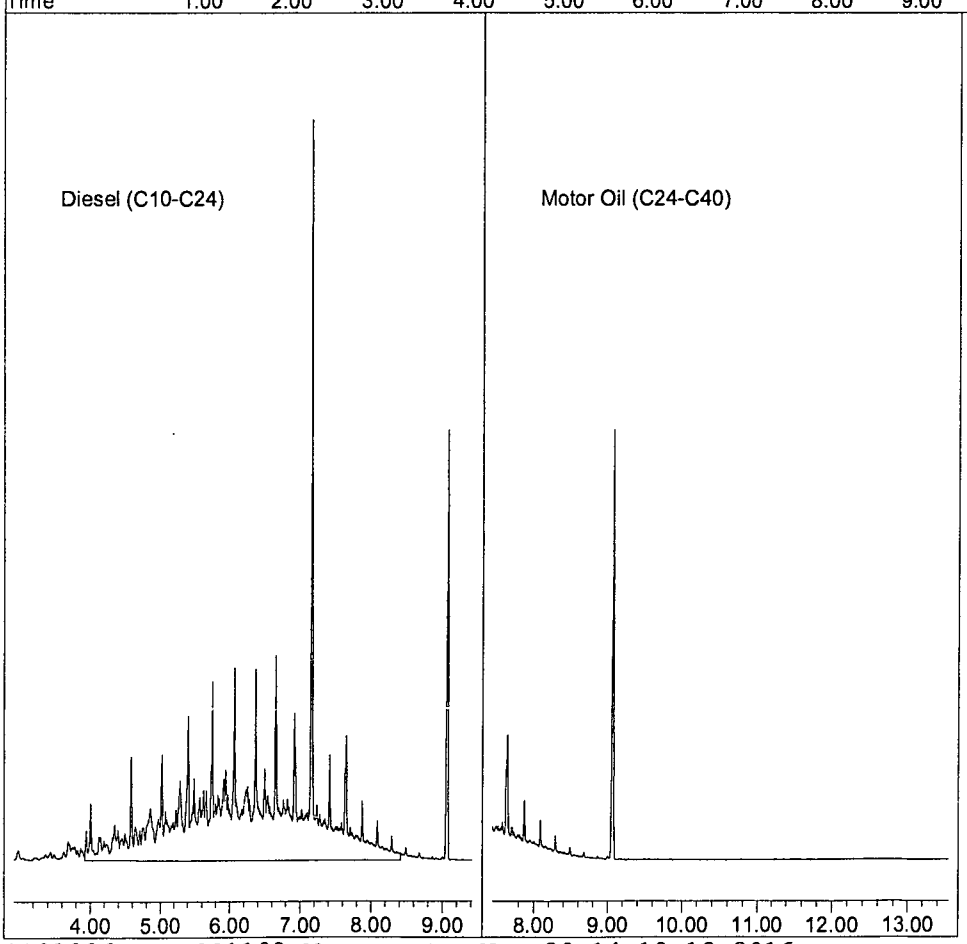
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.16	90205209	15.909 ppb
Surrogate Spike 30.000	Recovery =		53.03%
5) SA Octacosane(S)	9.07	67897660	19.256 ppb
Surrogate Spike 30.000	Recovery =		64.19%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	1300465223	387.653 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103006.D
Sample : DIESEL 400ppb 11/3/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103007.D Vial: 7
Acq On : 11-3-16 10:46:56 Operator: DP
Sample : DIESEL 600ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

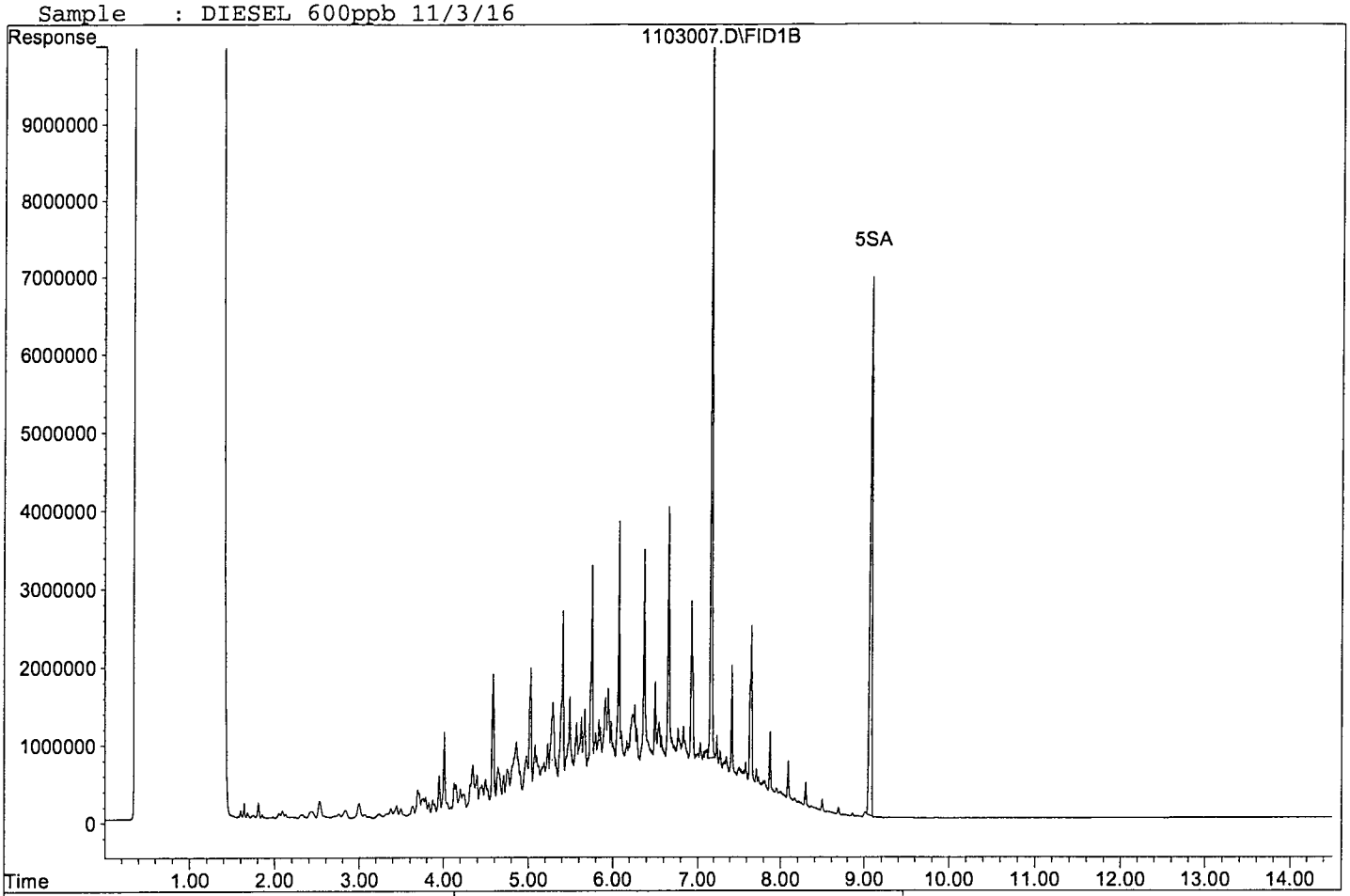
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

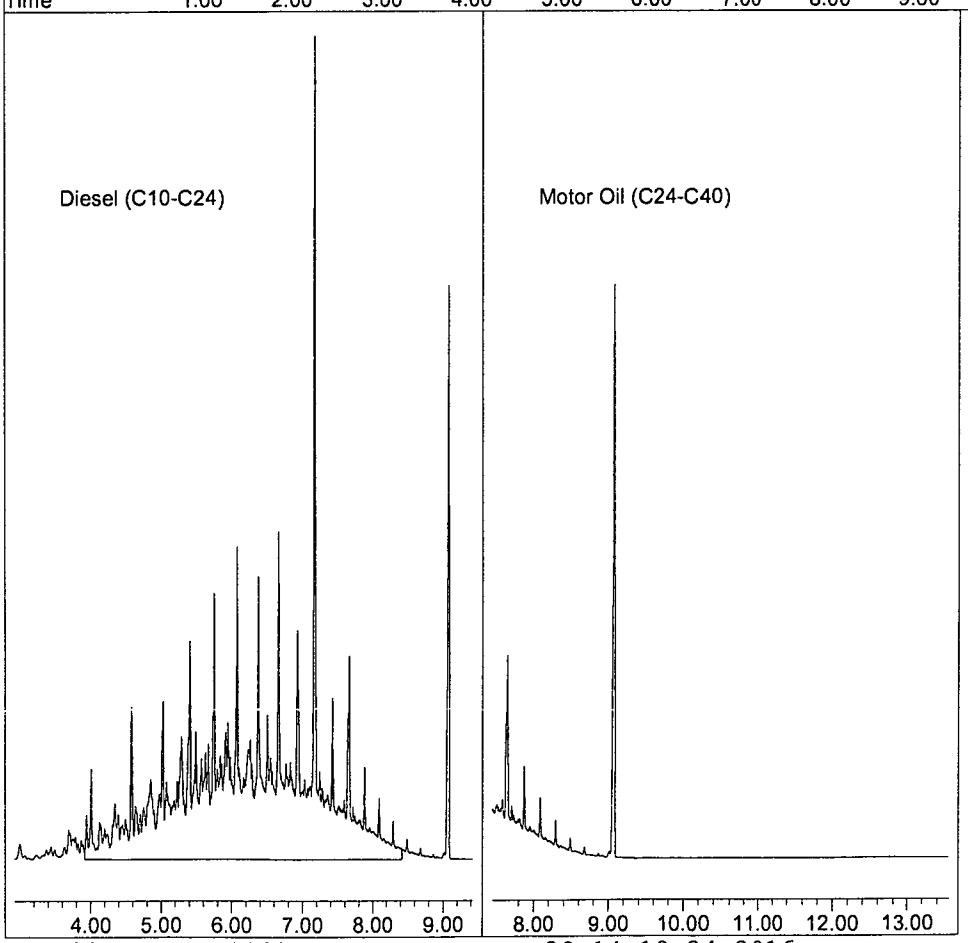
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.17	137805437	24.304 ppb
Surrogate Spike 30.000		Recovery =	81.01%
5) SA Octacosane(S)	9.07	102273844	29.005 ppb
Surrogate Spike 30.000		Recovery =	96.68%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	2037280173	607.288 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103007.D
Sample : DIESEL 600ppb 11/3/16





1103007.D DOC1103.M Mon Nov 28 14:19:24 2016

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103008.D Vial: 8
Acq On : 11-3-16 11:07:39 Operator: DP
Sample : DIESEL 800ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

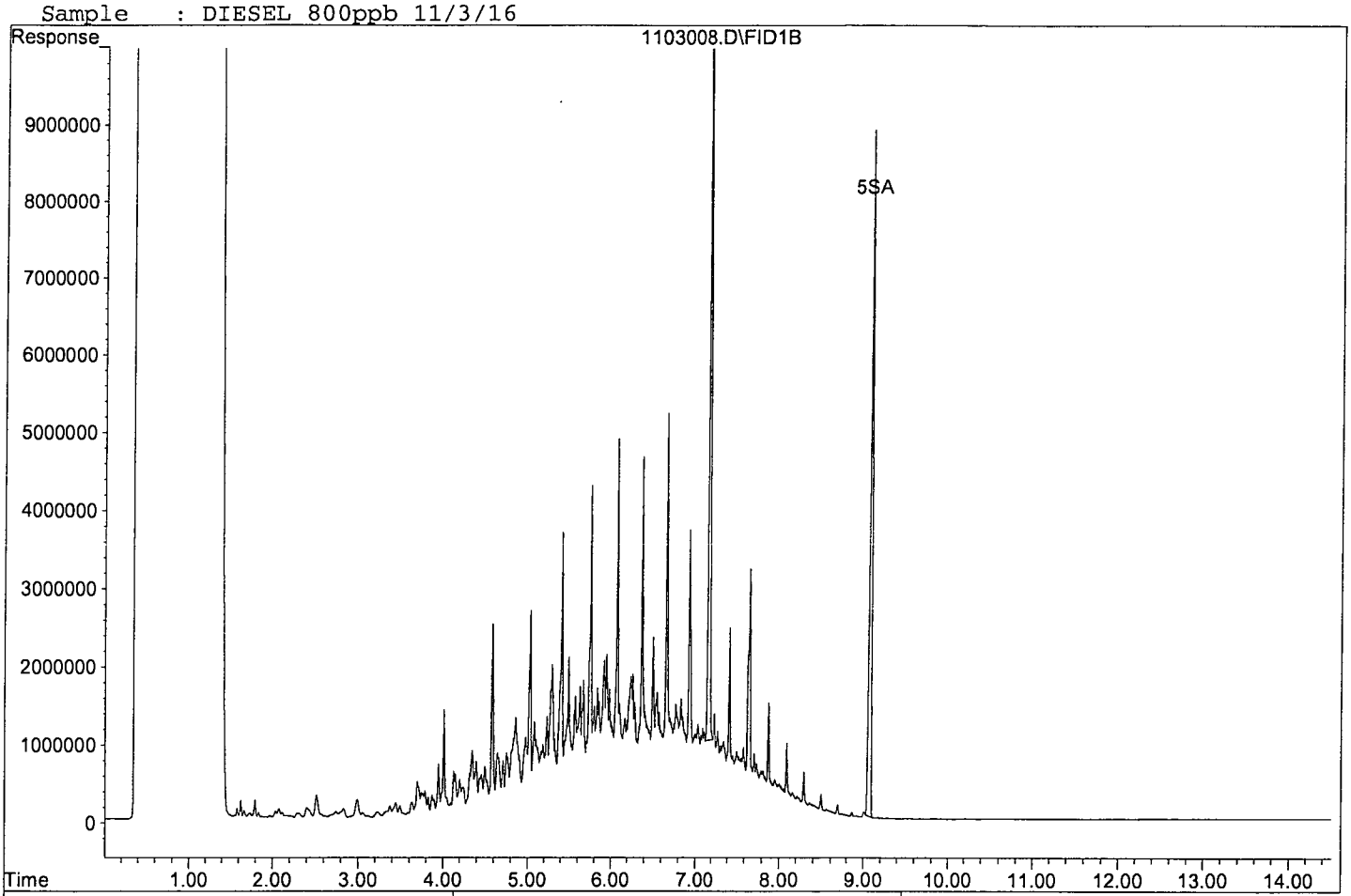
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

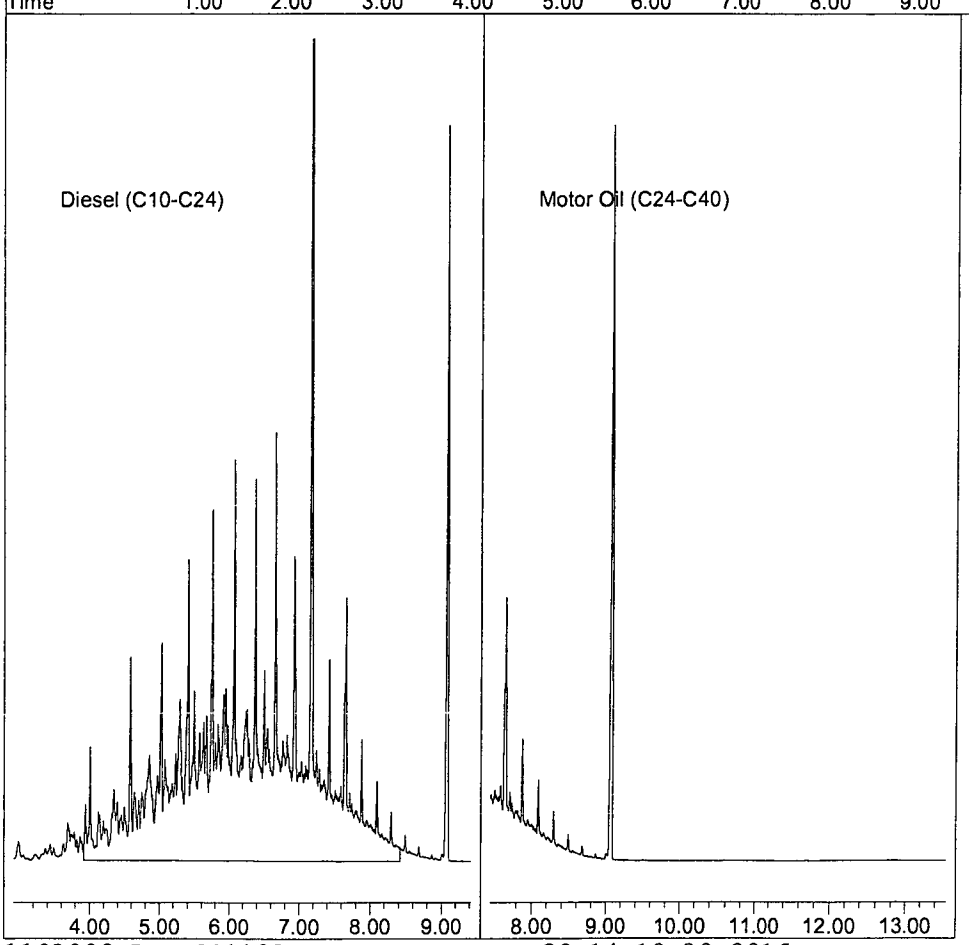
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.17	177261246	31.263	ppb
Surrogate Spike 30.000		Recovery =	104.21%	
5) SA Octacosane(S)	9.08	132563050	37.596	ppb
Surrogate Spike 30.000		Recovery =	125.32%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	2629335633	783.773	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103008.D
Sample : DIESEL 800ppb 11/3/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103009.D Vial: 9
Acq On : 11-3-16 11:28:31 Operator: DP
Sample : DIESEL 1000ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

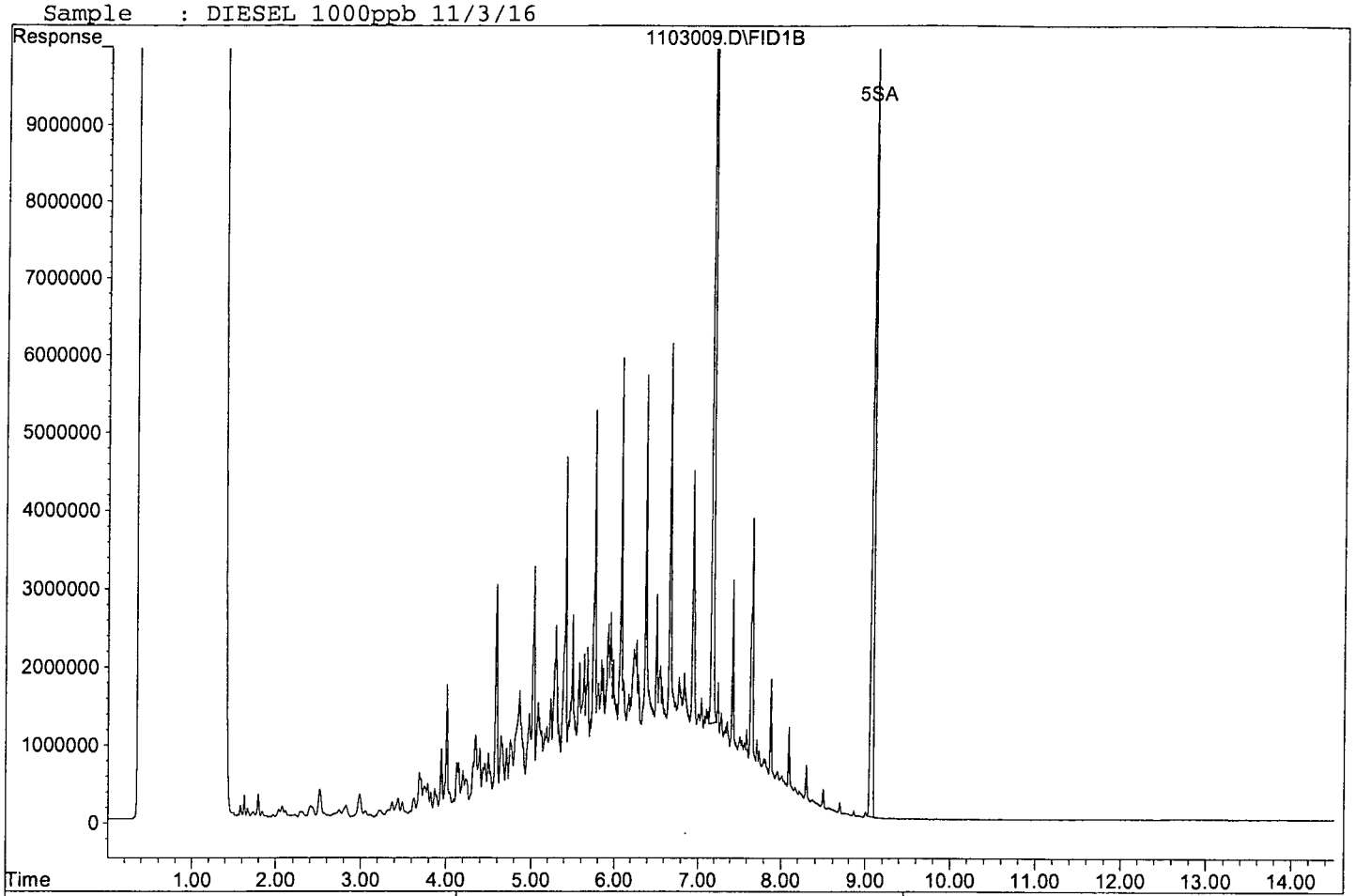
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

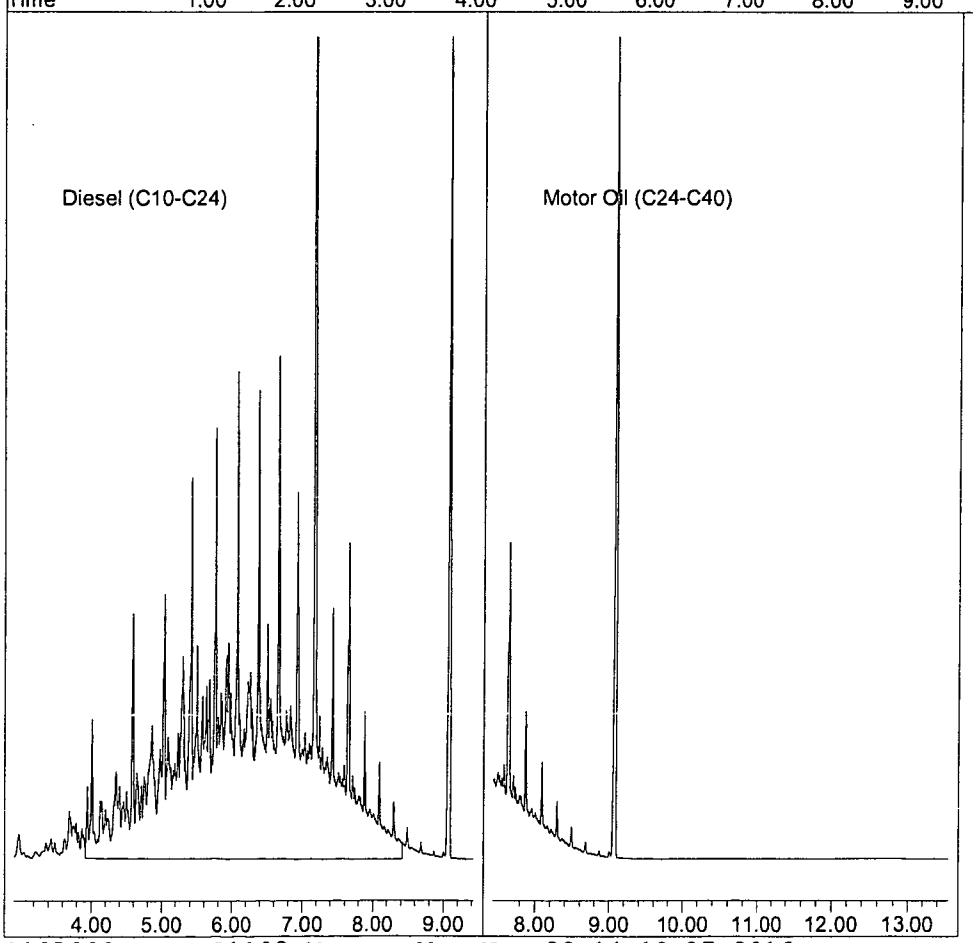
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.18	220584770	38.903	ppb
Surrogate Spike 30.000	Recovery =		129.68%	
5) SA Octacosane(S)	9.08	163627822	46.406	ppb
Surrogate Spike 30.000	Recovery =		154.69%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	3251118324	969.119	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103009.D
Sample : DIESEL 1000ppb 11/3/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028002.D Vial: 2
Acq On : 10-28-16 9:07:30 Operator: DP
Sample : MO 20ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:24 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

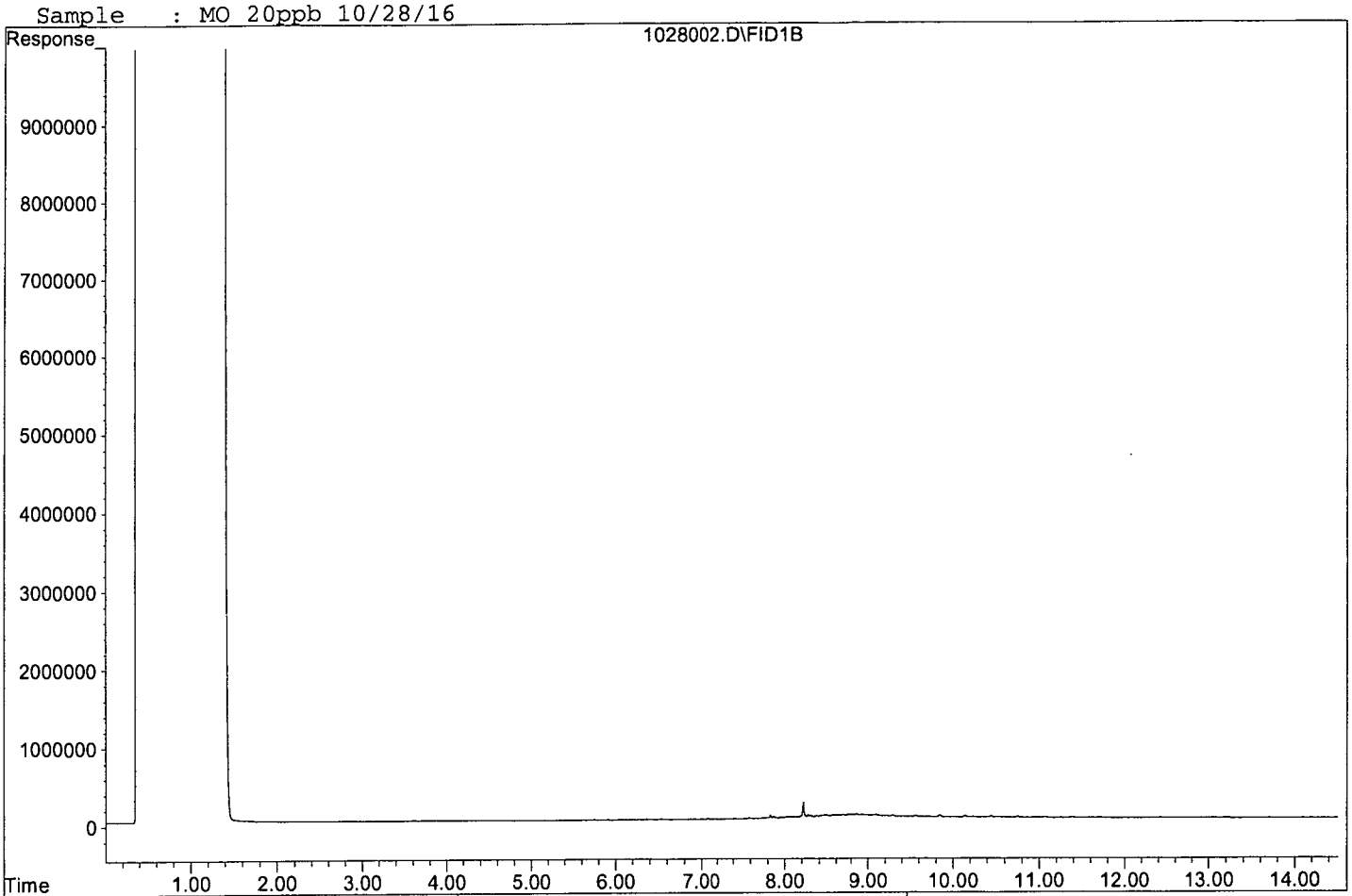
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

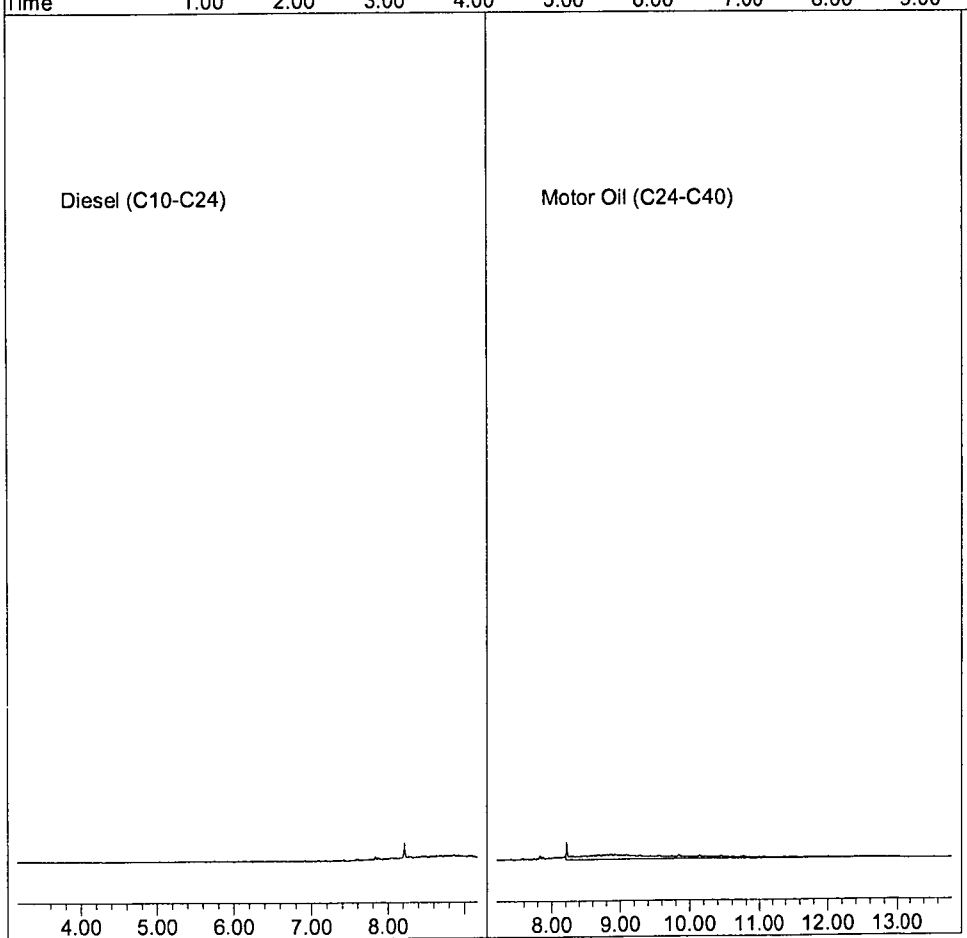
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	62507592	22.438 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161028\1028002.D
Sample : MO 20ppb 10/28/16





1028002.D DOC1103.M Mon Nov 28 14:24:20 2016

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028003.D Vial: 3
Acq On : 10-28-16 9:28:13 Operator: DP
Sample : MO 50ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:24 2016 Quant Results File: DOC1103.RES

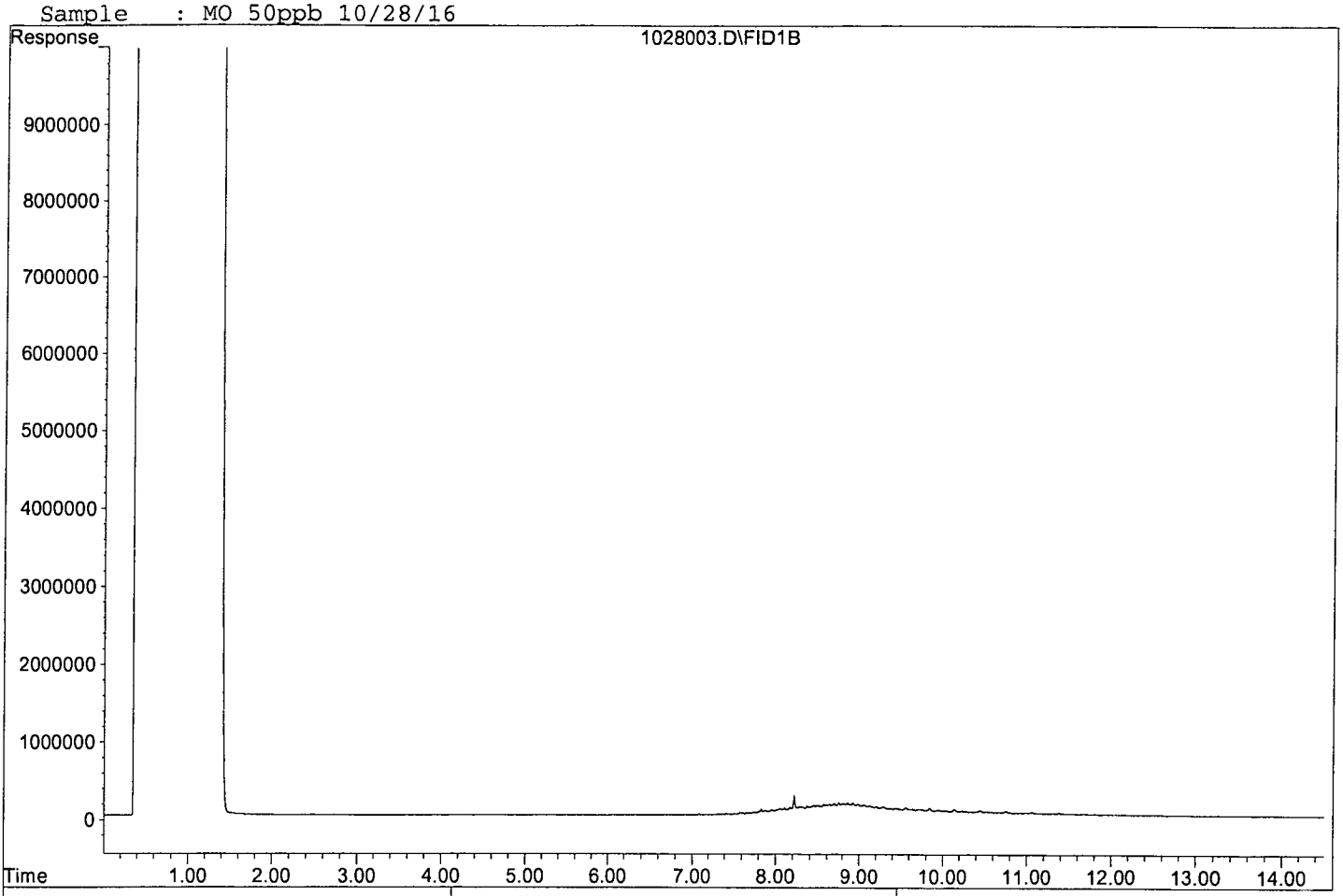
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

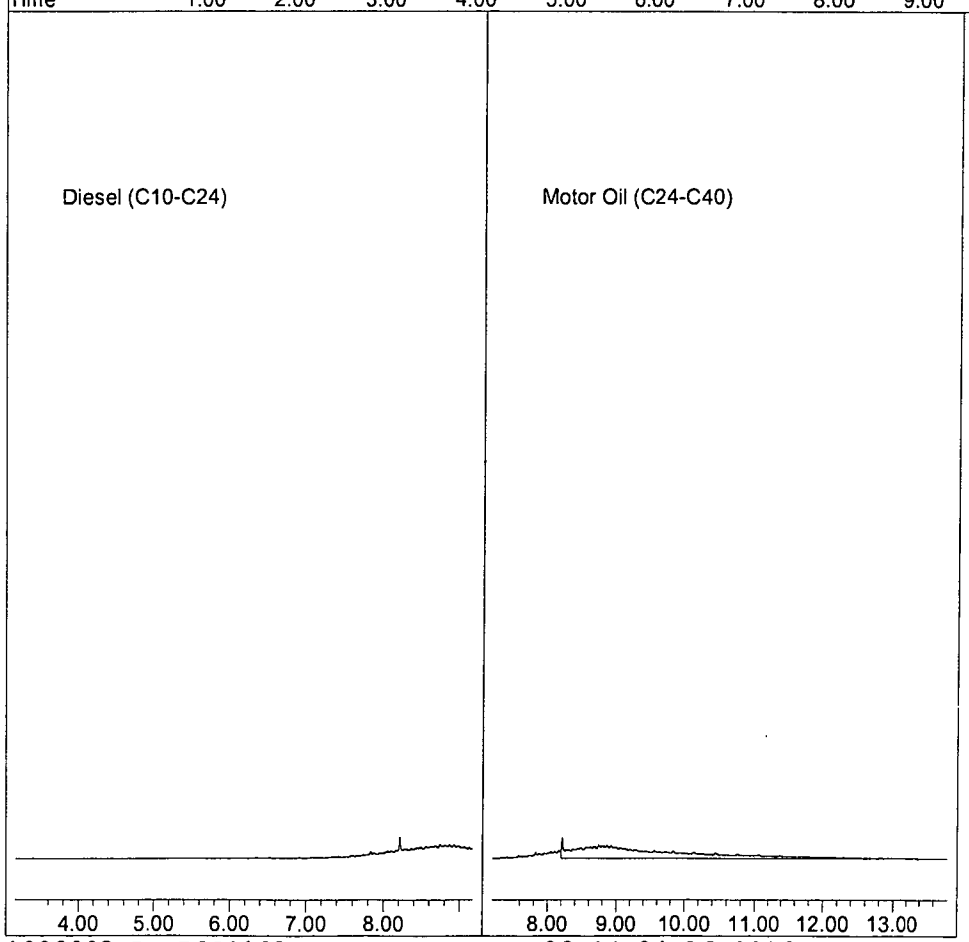
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	160376925	57.571 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028003.D
Sample : MO 50ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028004.D Vial: 4
Acq On : 10-28-16 9:49:06 Operator: DP
Sample : MO 250ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:24 2016 Quant Results File: DOC1103.RES

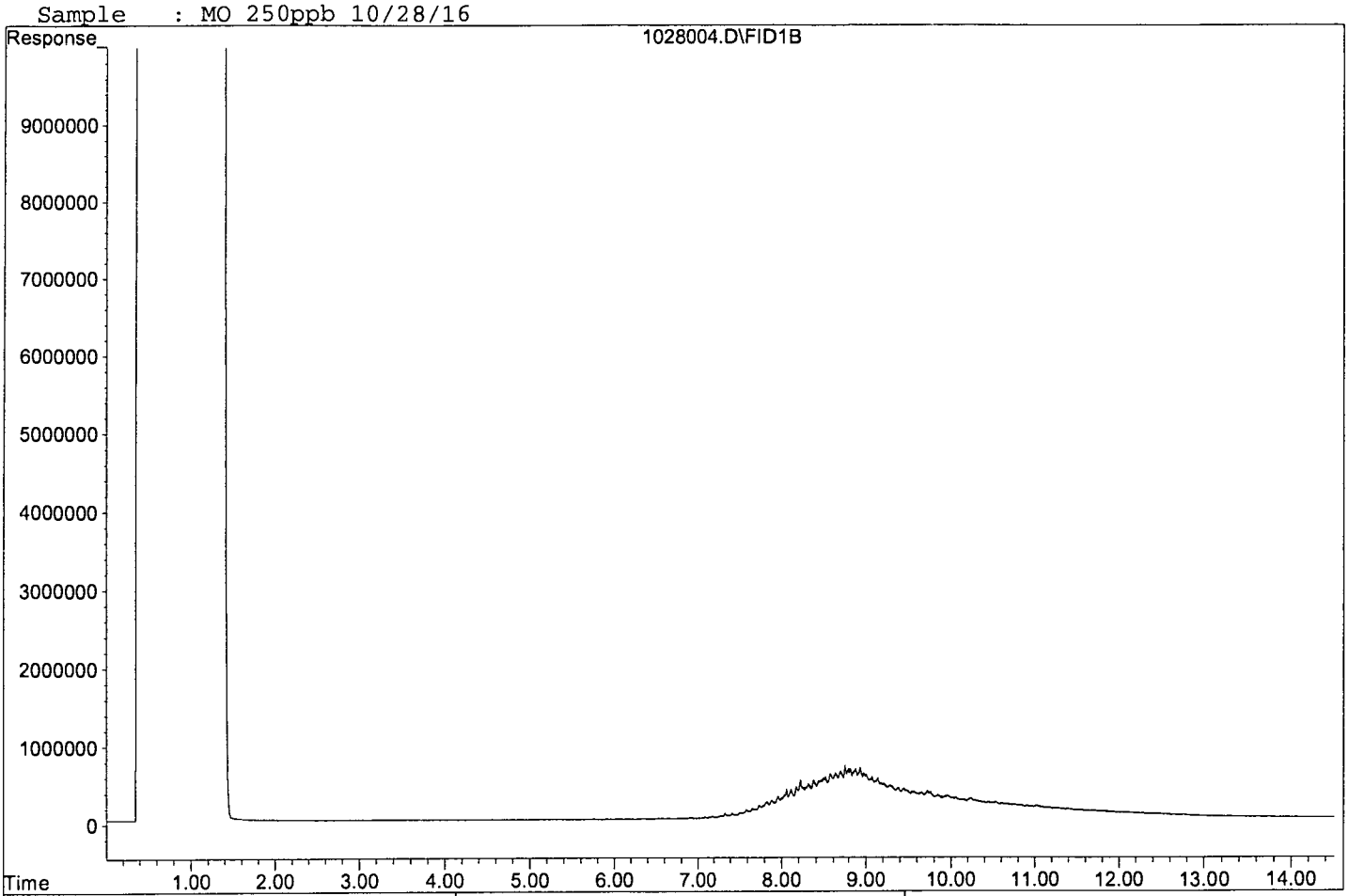
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

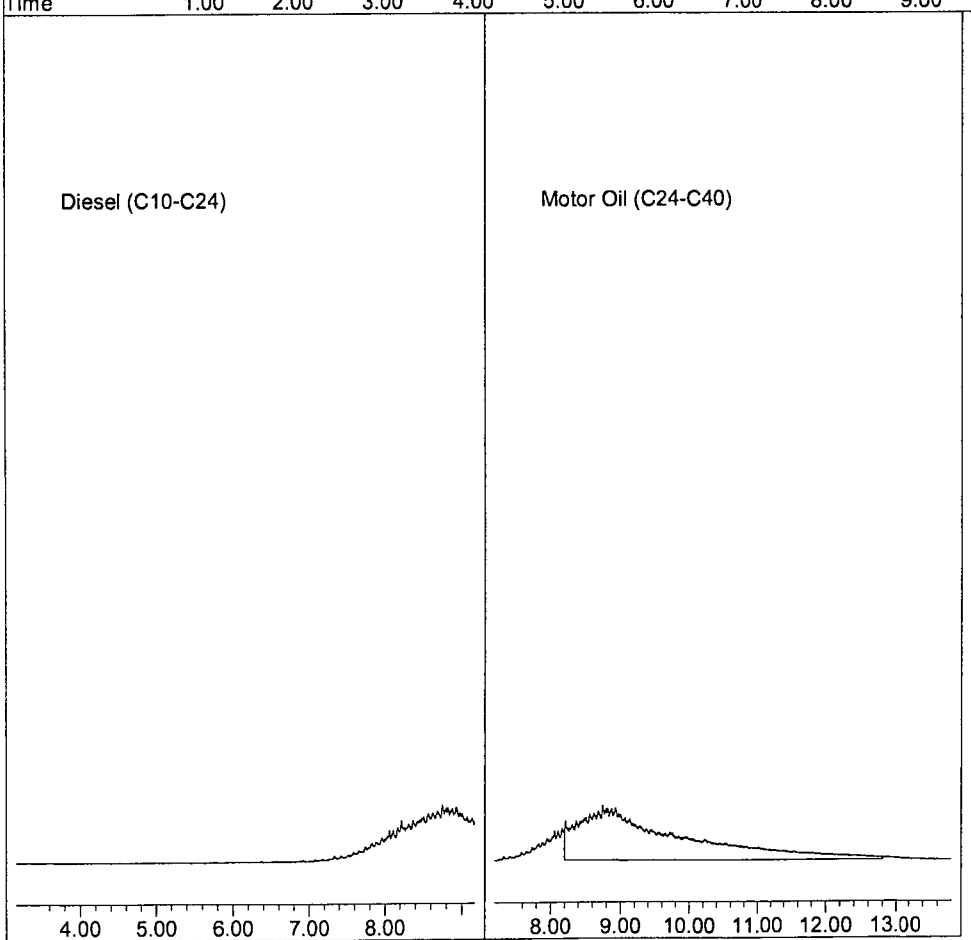
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
Target Compounds				
2) HBTM Motor Oil (C24-C40)	10.50	641488837	230.275	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028004.D
Sample : MO 250ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028005.D Vial: 5
Acq On : 10-28-16 10:09:58 Operator: DP
Sample : MO 1000ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:25 2016 Quant Results File: DOC1103.RES

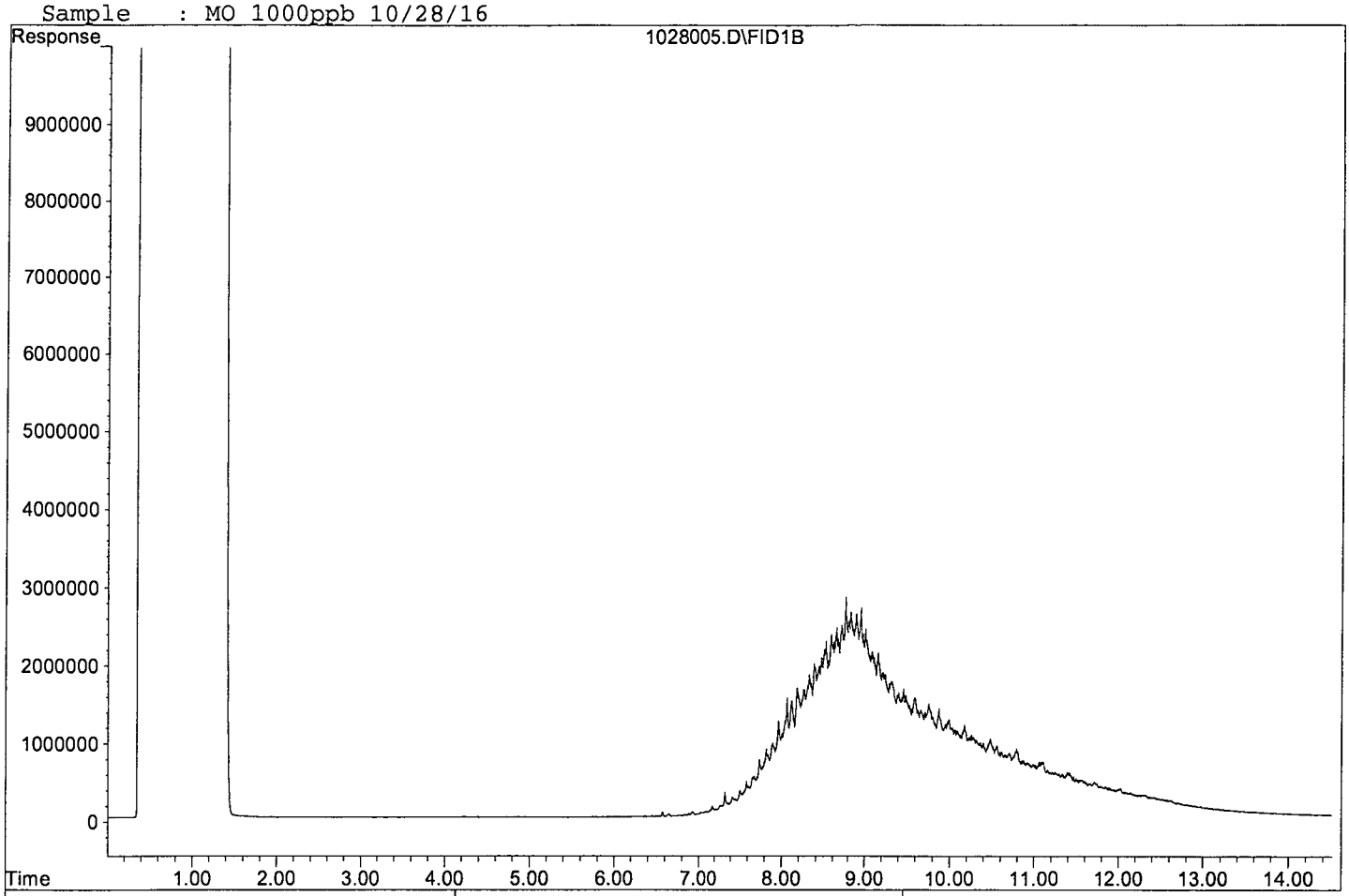
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

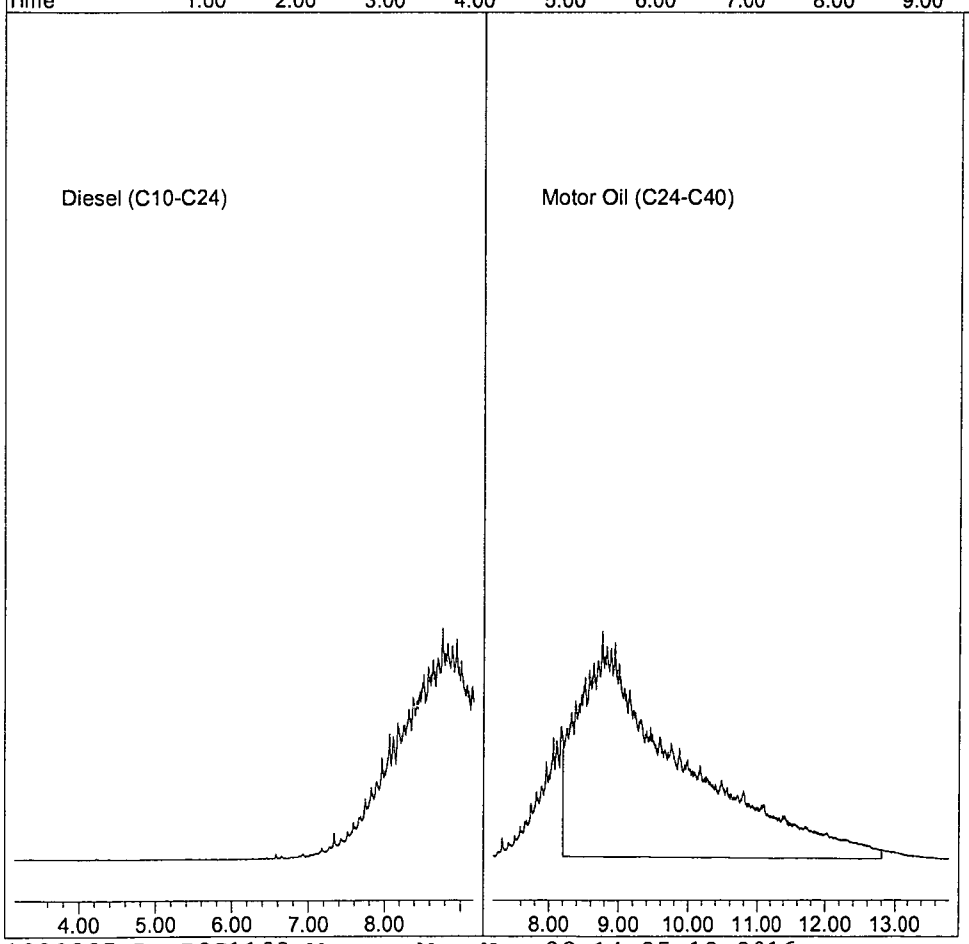
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	2680029704	962.051 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028005.D
Sample : MO 1000ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028006.D Vial: 6
Acq On : 10-28-16 10:30:51 Operator: DP
Sample : MO 1500ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:25 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

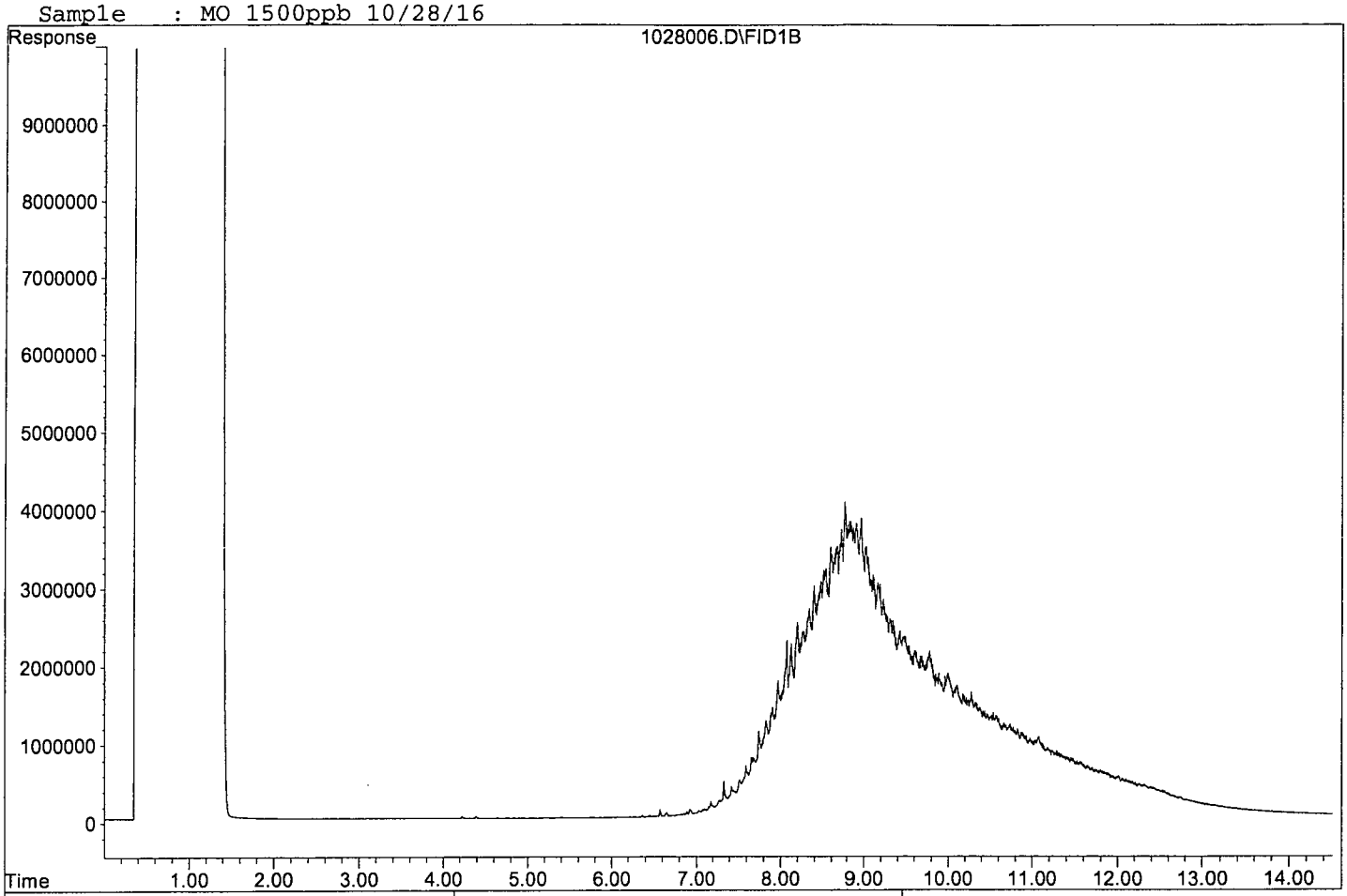
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

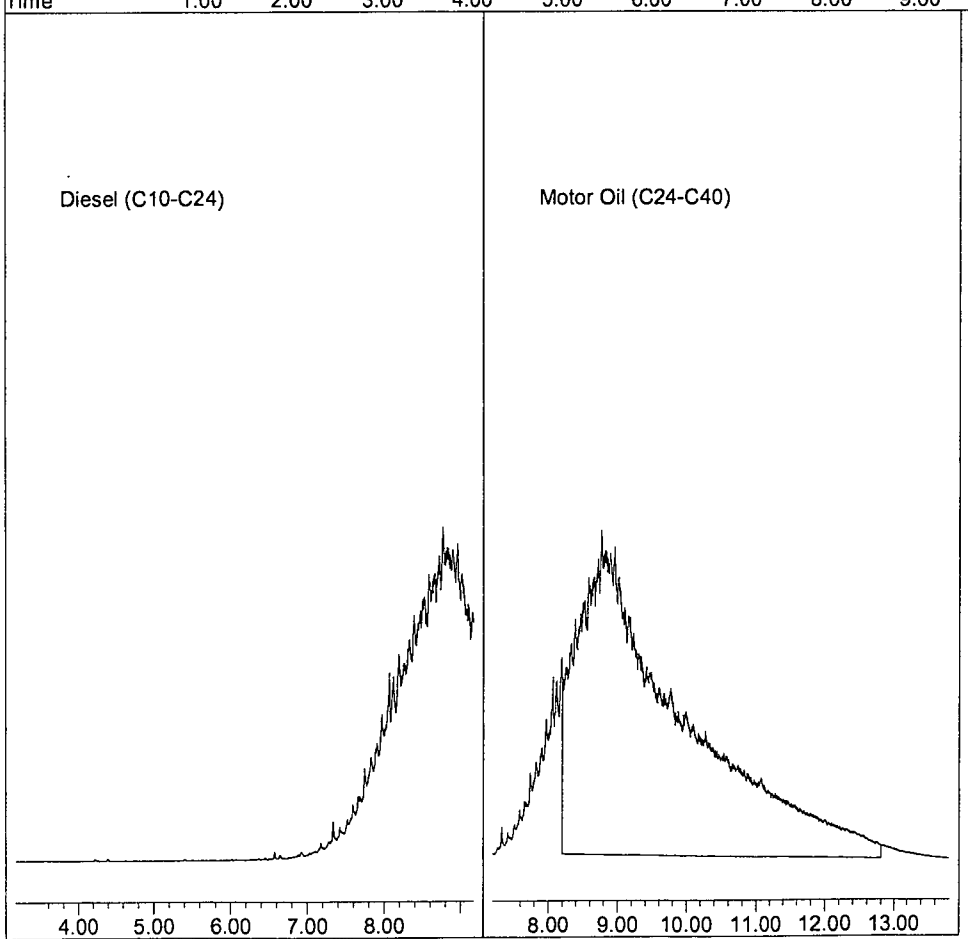
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
Target Compounds				
2) HBTM Motor Oil (C24-C40)	10.50	3965906010	1423.642	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161028\1028006.D
Sample : MO 1500ppb 10/28/16





1028006.D DOC1103.M Mon Nov 28 14:25:34 2016

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028007.D Vial: 7
Acq On : 10-28-16 10:51:50 Operator: DP
Sample : MO 2000ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:25 2016 Quant Results File: DOC1103.RES

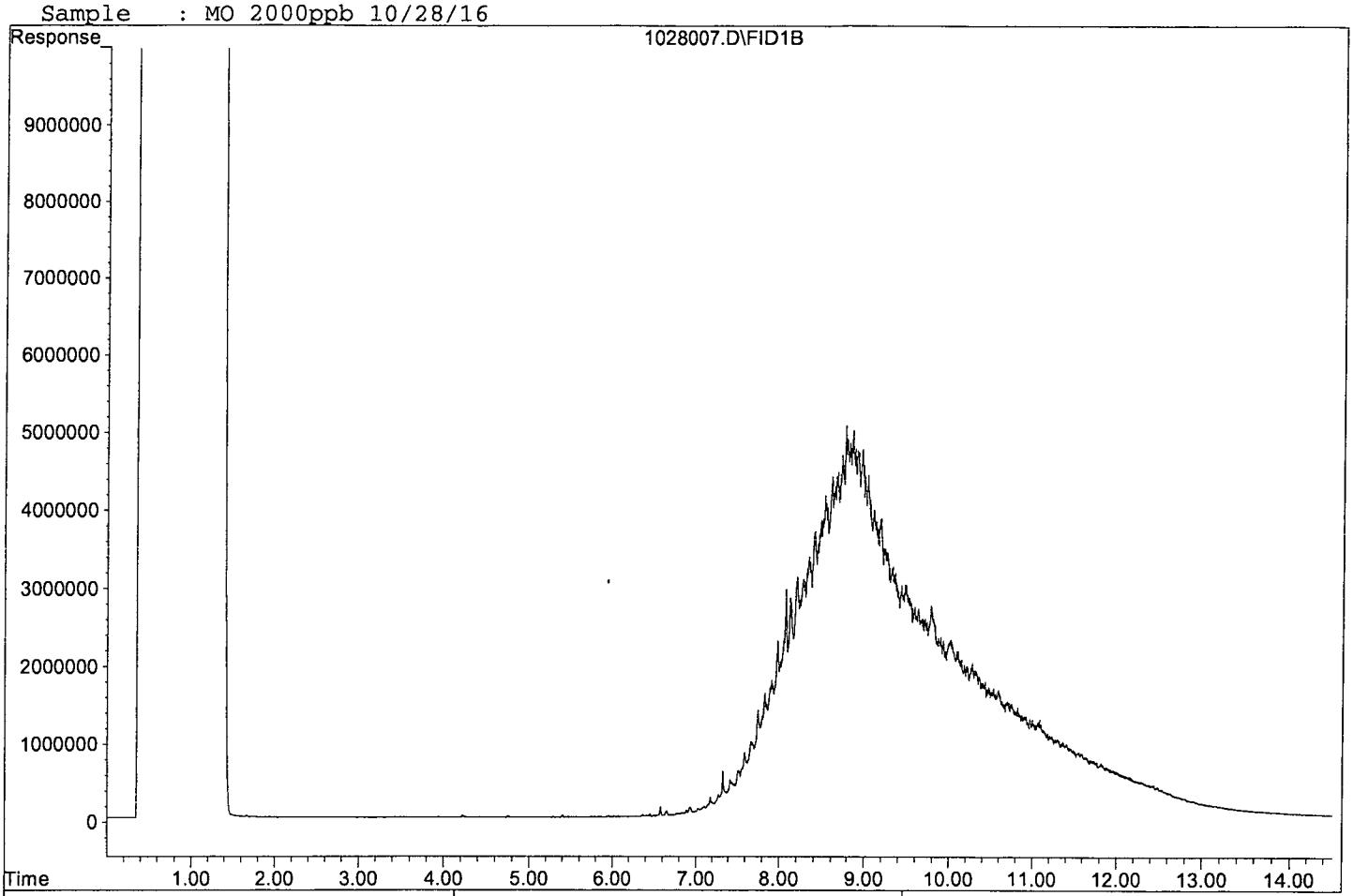
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

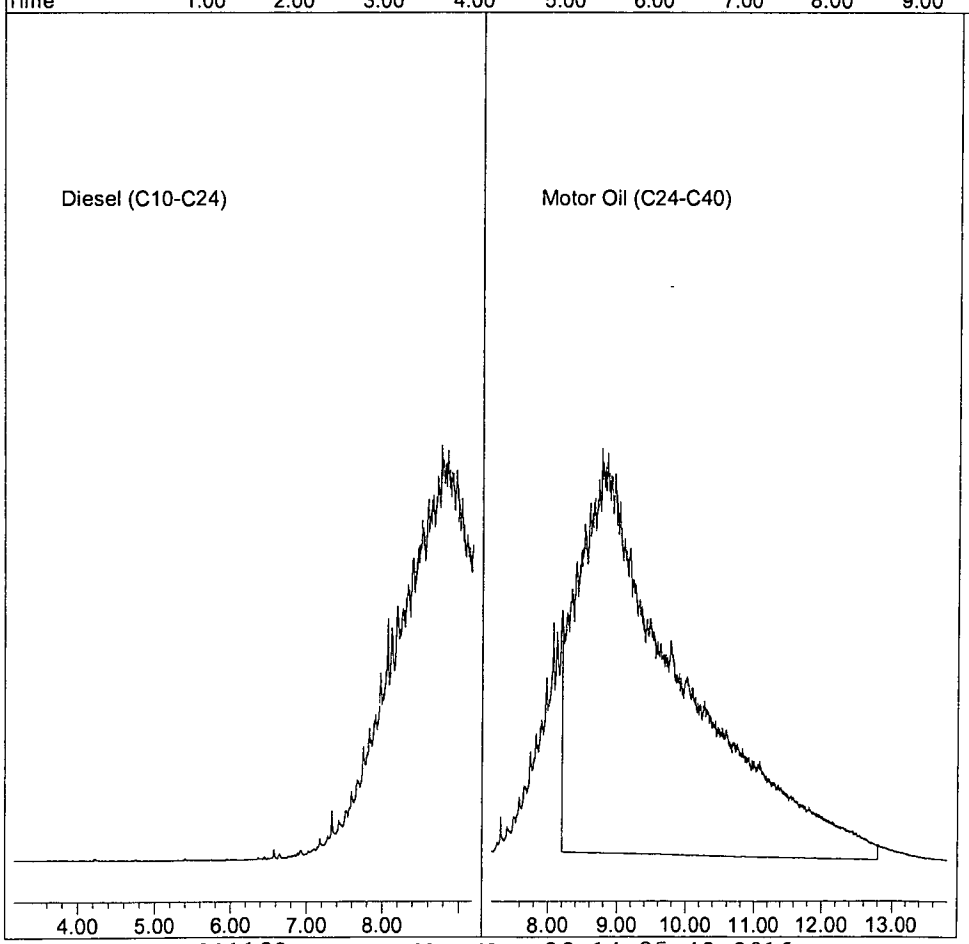
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
Target Compounds				
2) HBTM Motor Oil (C24-C40)	10.50	4983276169	1788.848	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028007.D
Sample : MO 2000ppb 10/28/16





TPH Extractables
DOC1103

Form 7

Second Source Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 11/03/16
Matrix: Instrument: Apollo
Initial Cal. Date: 11/03/16
Data File: 1103012.D 1028008.D
Diesel Motor Oil

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C24)	1727130	1667670	3.4	HATM	
2	HBTM	Motor Oil (C24-C40)	1392870	1239910	11	HBTM	
3							
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40							
		Average			7.2		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103012.D Vial: 12
Acq On : 11-3-16 13:25:11 Operator: DP
Sample : DIESEL-SS 400ppb 8/1/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 15:21 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SC Decanoic Acid(S)	5.67	4681185	3.827 ppb
Surrogate Spike 48.000	Recovery =		7.97%
4) SA Ortho-Terphenyl(S)	7.18	9886456	2.120 ppb
Surrogate Spike 30.000	Recovery =		7.07%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	1345831567	389.615 ppb
2) HBTM Motor Oil (C24-C40)	10.50	43170153	15.497 ppb

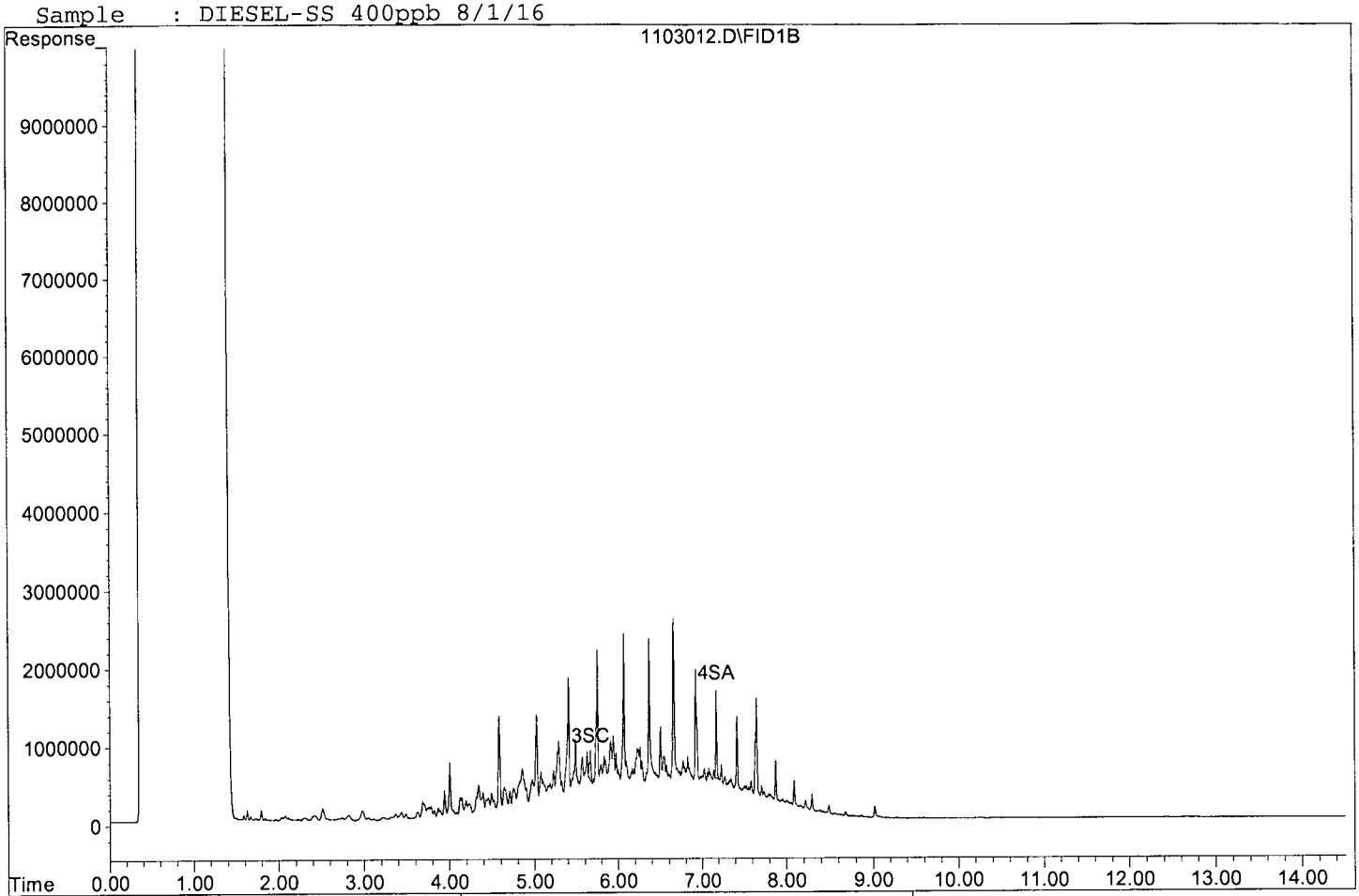
algorithm check: $\frac{1345831567 \times 1}{1727130 \times 2} = 389.6150165$

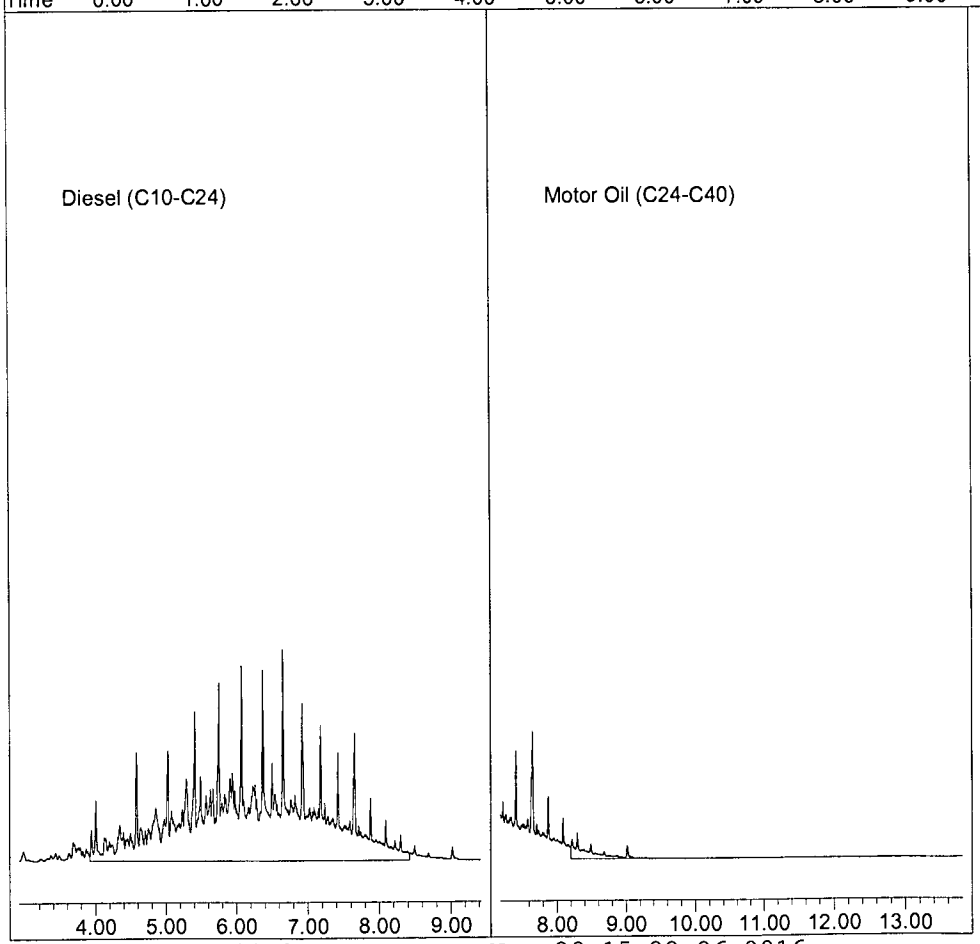
D.P. 11/28/16

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161103\1103012.D
Sample : DIESEL-SS 400ppb 8/1/16





1103012.D DOC1103.M Mon Nov 28 15:22:26 2016

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161028\1028008.D Vial: 8
Acq On : 10-28-16 11:12:44 Operator: DP
Sample : MO SS 1000ppb 7/6/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 15:22 2016 Quant Results File: DOC1103.RES

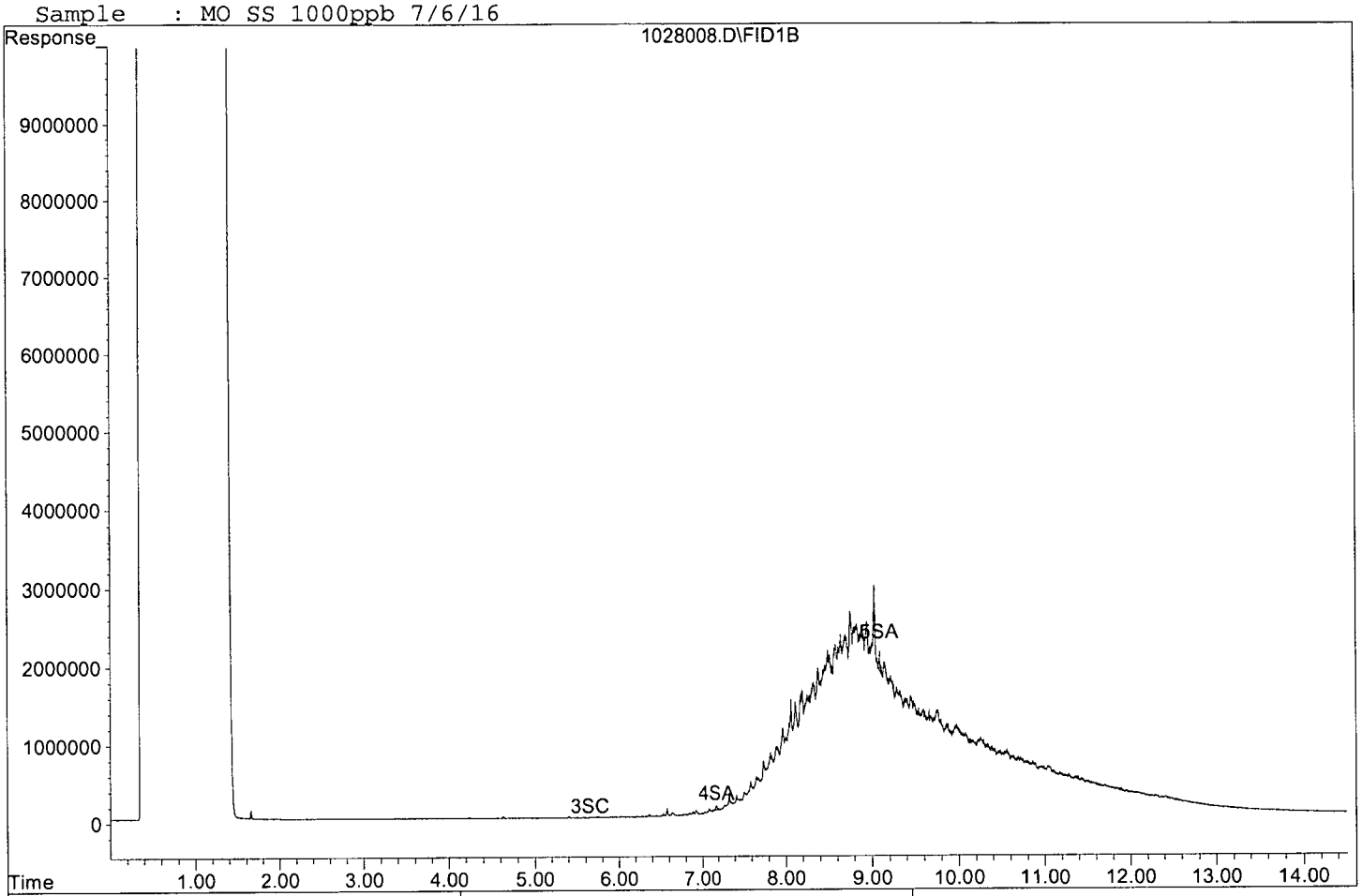
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

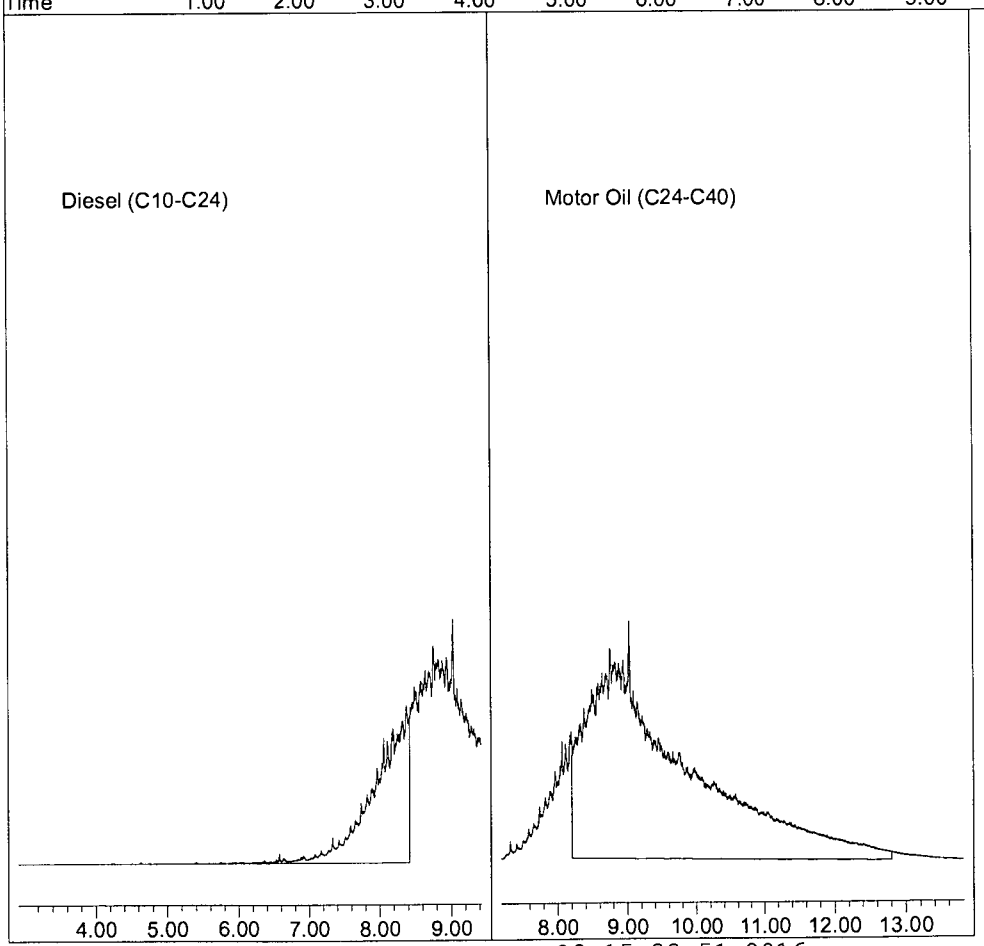
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SC Decanoic Acid(S)	5.65	6816	0.006	ppb
Surrogate Spike 48.000	Recovery	=	0.01%	
4) SA Ortho-Terphenyl(S)	7.17	747984	0.160	ppb
Surrogate Spike 30.000	Recovery	=	0.53%	
5) SA Octacosane(S)	9.09	2492290	0.712	ppb
Surrogate Spike 30.000	Recovery	=	2.37%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	603419098	174.688	ppb
2) HBTM Motor Oil (C24-C40)	10.50	2511616588	901.596	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028008.D
Sample : MO SS 1000ppb 7/6/16





1028008.D DOC1103.M Mon Nov 28 15:22:51 2016

TPH Extractables
DOC1103

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/24/16
Instrument: Apollo
Initial Cal. Date: 10/19/16
Data File: 1123047-48.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1727130	1732090	0.29	HATM	
2	HBTM	Motor Oil (C24-C40)	1392870	1192630	14	HBTM	
3							
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37							
38							
39							
40							
		Average			7.1		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161123\1123047.D Vial: 47
Acq On : 11-24-16 0:38:55 Operator: DP
Sample : CCV: DIESEL 400ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 12:45 2016 Quant Results File: DOC1103.RES

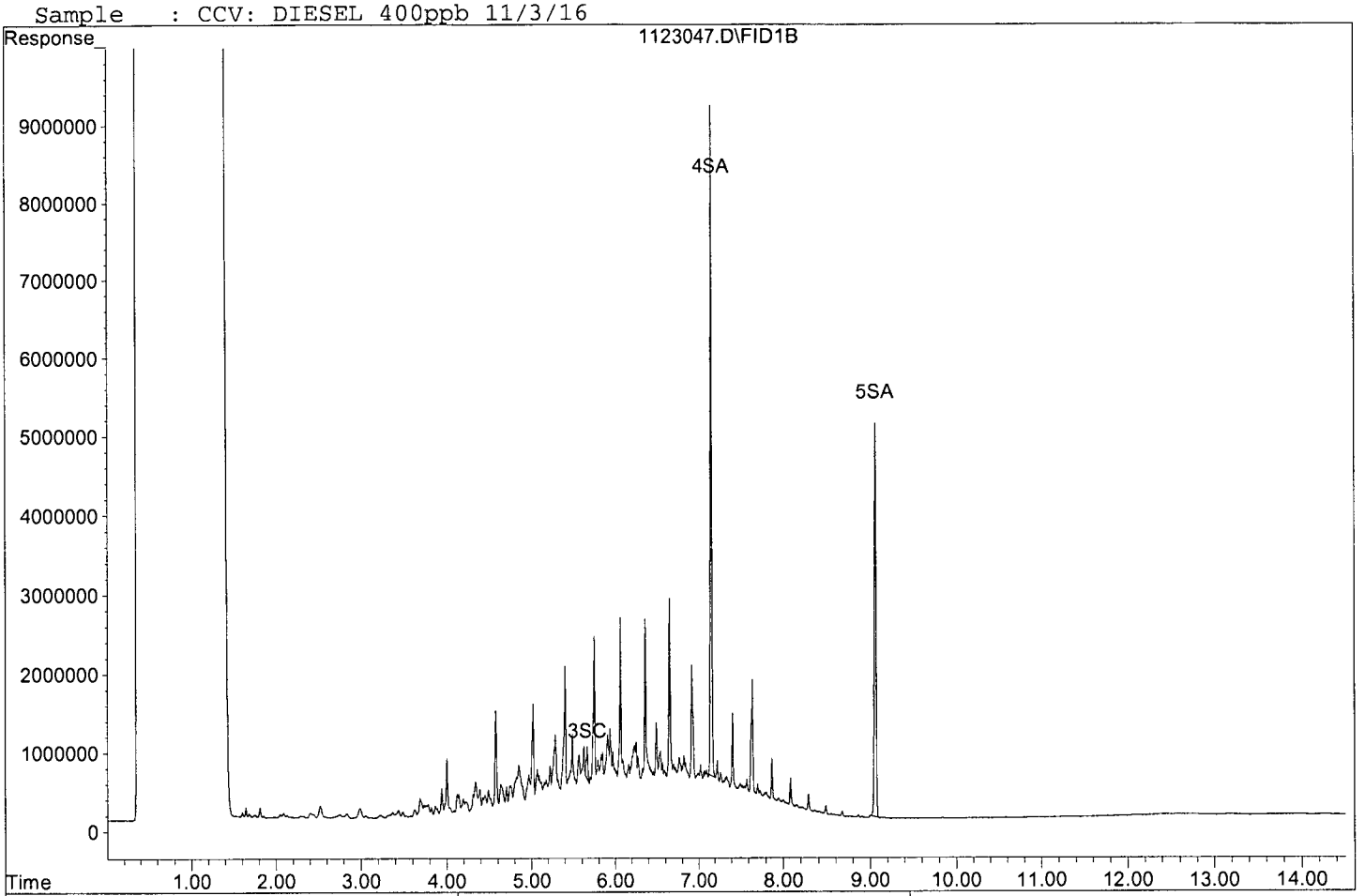
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

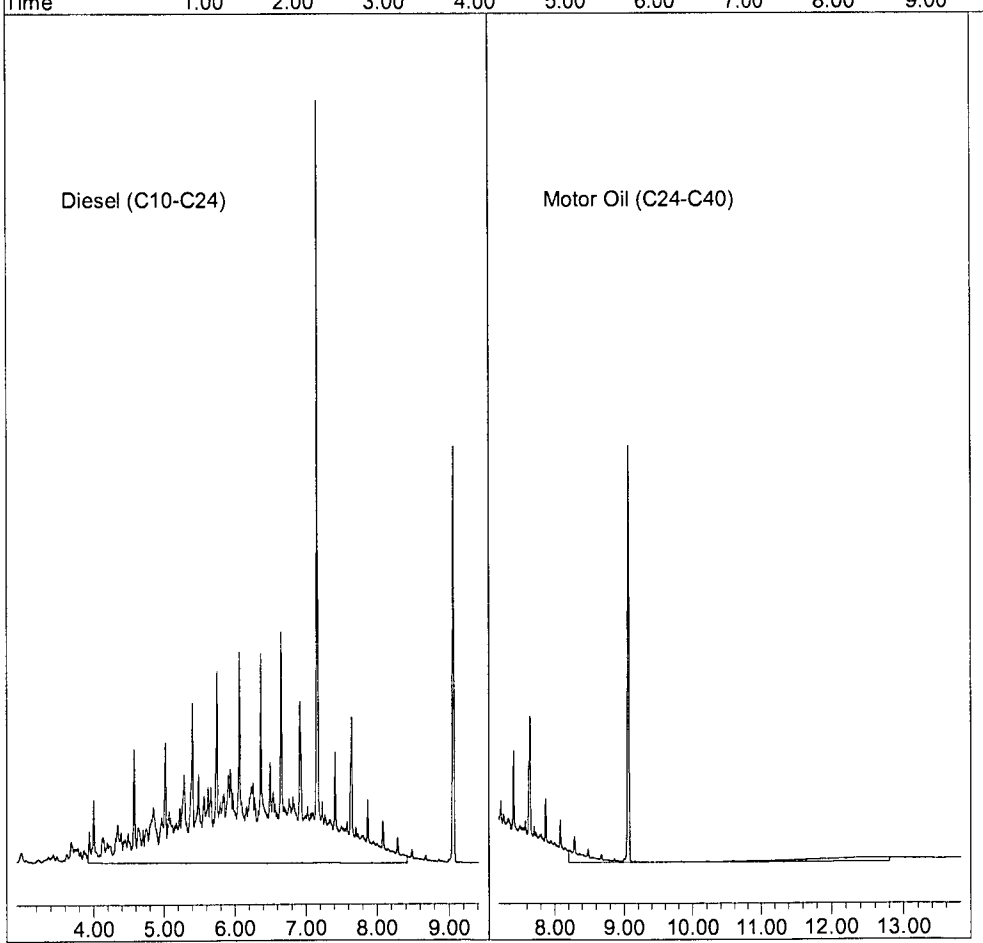
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SC Decanoic Acid(S)	5.66	5430205	4.439	ppb
Surrogate Spike 48.000		Recovery =	9.25%	
4) SA Ortho-Terphenyl(S)	7.16	93451437	20.035	ppb
Surrogate Spike 30.000		Recovery =	66.78%	
5) SA Octacosane(S)	9.06	69342380	19.814	ppb
Surrogate Spike 30.000		Recovery =	66.05%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	1385672417	401.149	ppb
2) HBTM Motor Oil (C24-C40)	10.50	66454652	23.855	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161123\1123047.D
Sample : CCV: DIESEL 400ppb 11/3/16





1123047.D DOC1103.M Mon Nov 28 14:43:44 2016

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161123\1123048.D Vial: 48
Acq On : 11-24-16 0:59:15 Operator: DP
Sample : CCV: MO 1000ppb 11/21/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 12:46 2016 Quant Results File: DOC1103.RES

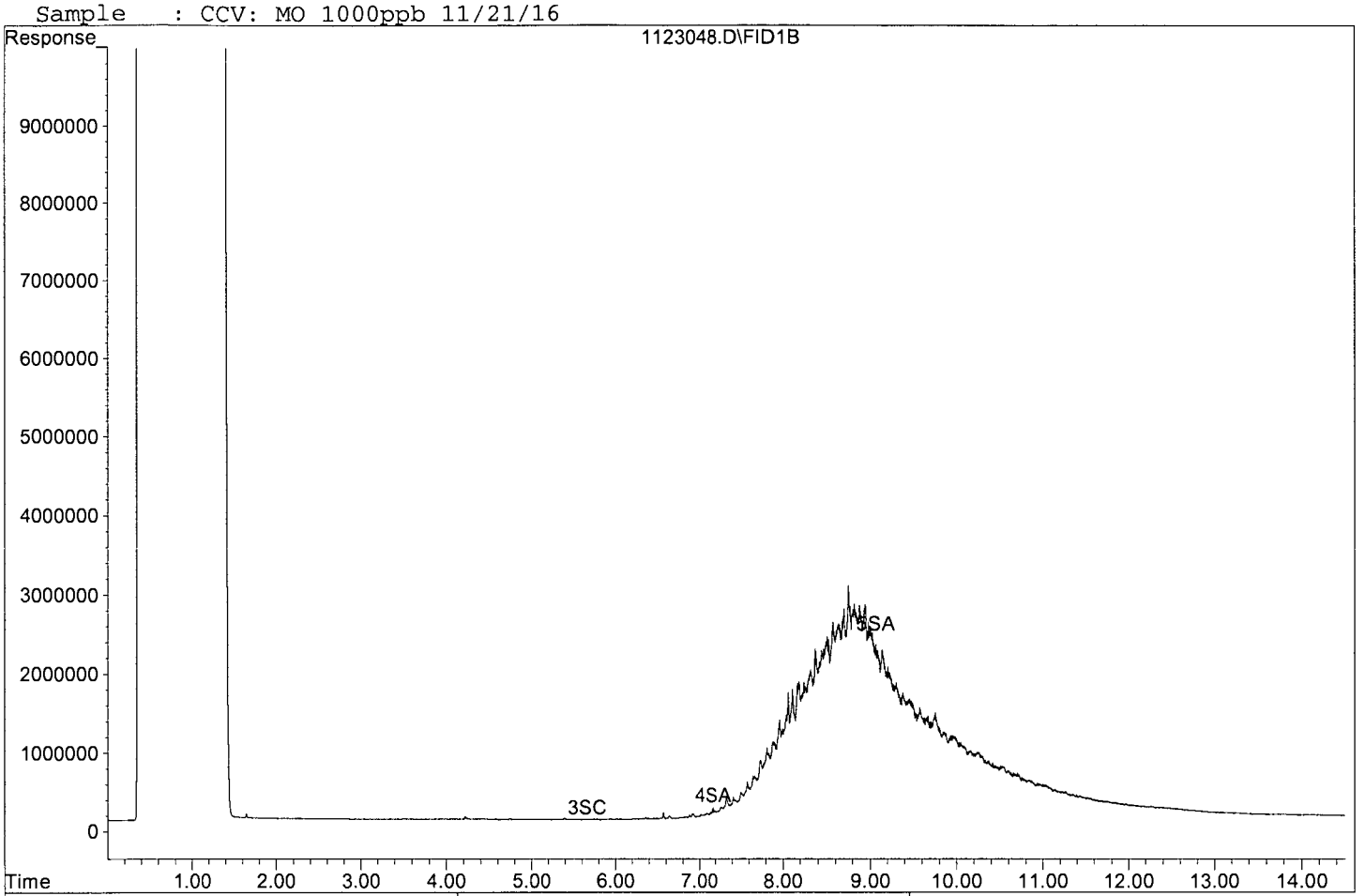
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

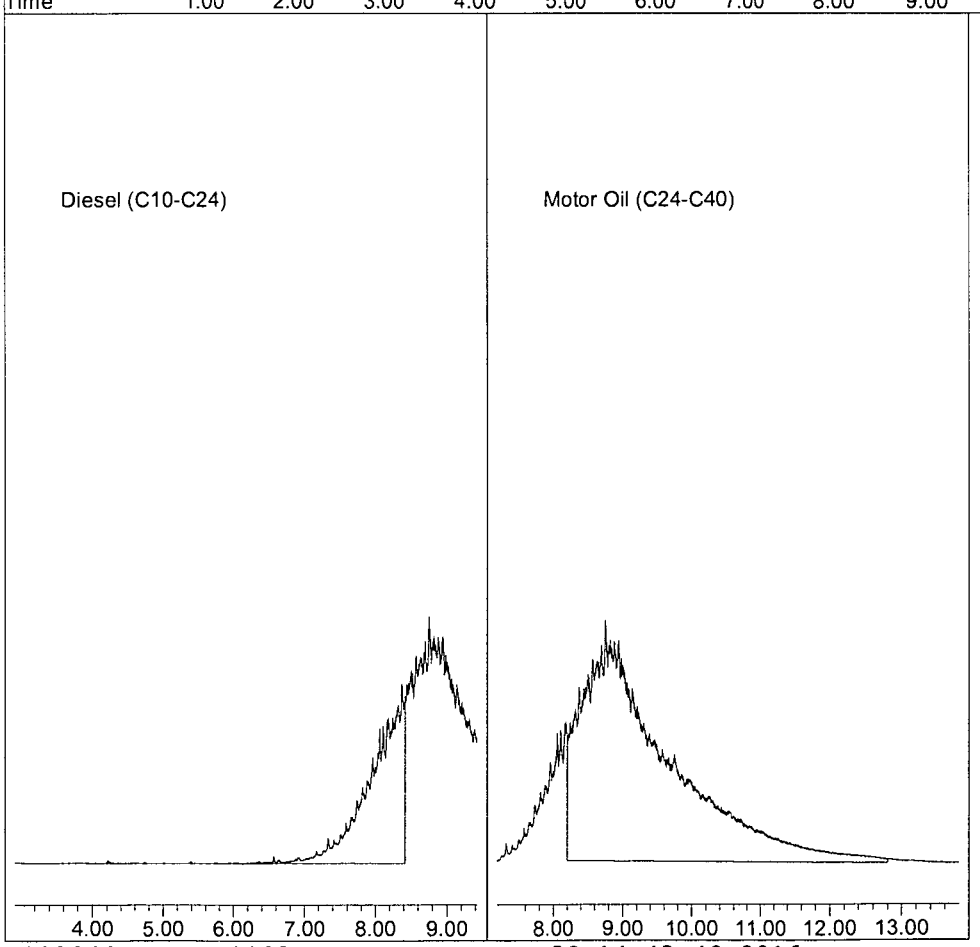
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SC Decanoic Acid(S)	5.66	19465	0.016	ppb
Surrogate Spike 48.000	Recovery	=	0.03%	
4) SA Ortho-Terphenyl(S)	7.17	638734	0.137	ppb
Surrogate Spike 30.000	Recovery	=	0.46%	
5) SA Octacosane(S)	9.06	733464	0.210	ppb
Surrogate Spike 30.000	Recovery	=	0.70%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	664238488	192.295	ppb
2) HBTM Motor Oil (C24-C40)	10.50	2385253848	856.235	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161123\1123048.D
Sample : CCV: MO 1000ppb 11/21/16





TPH Extractables
DOC1103

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/24/16
Instrument: Apollo
Initial Cal. Date: 10/19/16
Data File: 1123062-63.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1727130	1822170	5.5	HATM	
2	HBTM	Motor Oil (C24-C40)	1392870	1241330	11	HBTM	
3							
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40							
		Average			8.3		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161123\1123062.D Vial: 62
Acq On : 11-24-16 5:43:50 Operator: DP
Sample : CCV: DIESEL 400ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 12:45 2016 Quant Results File: DOC1103.RES

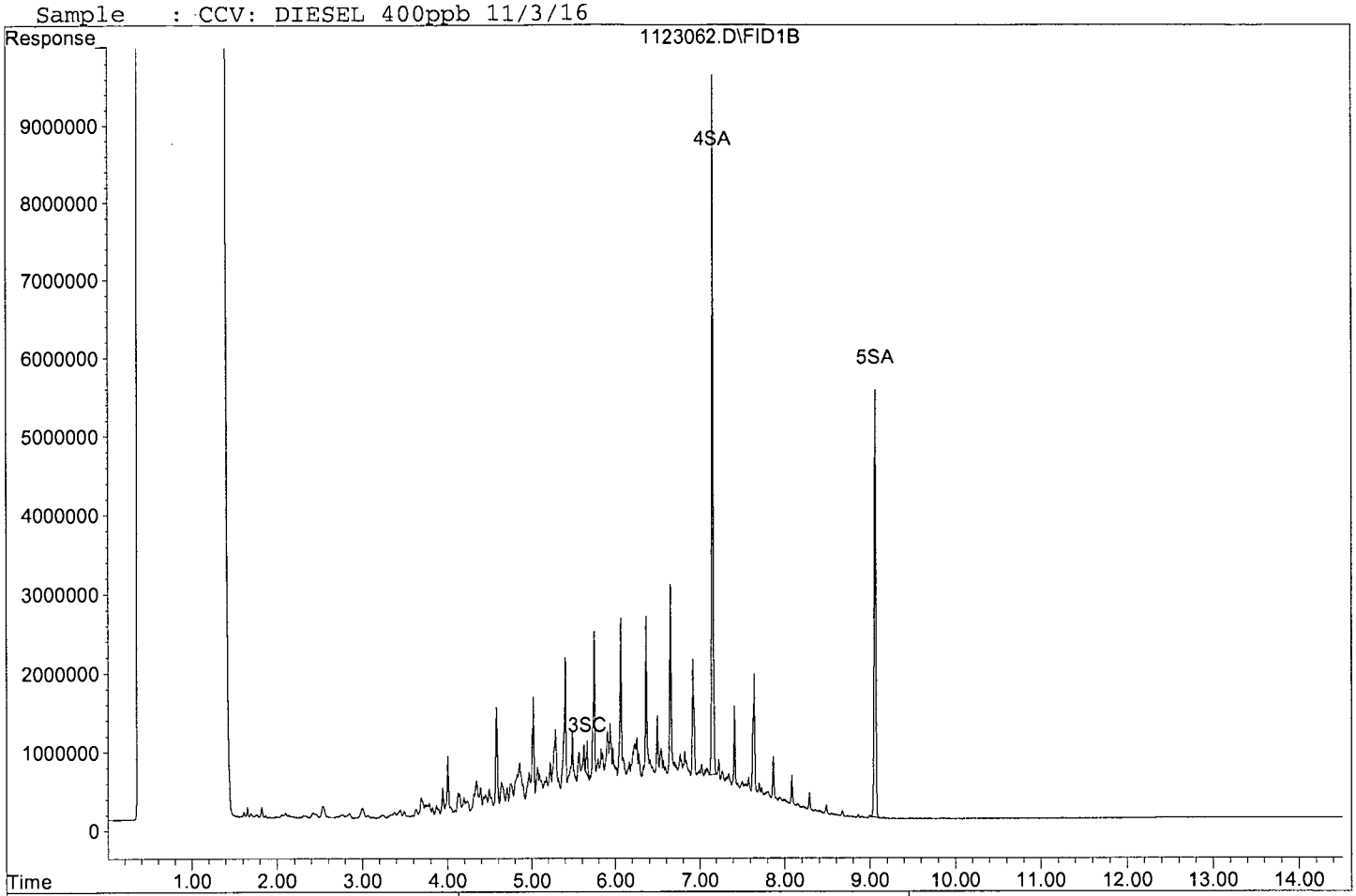
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

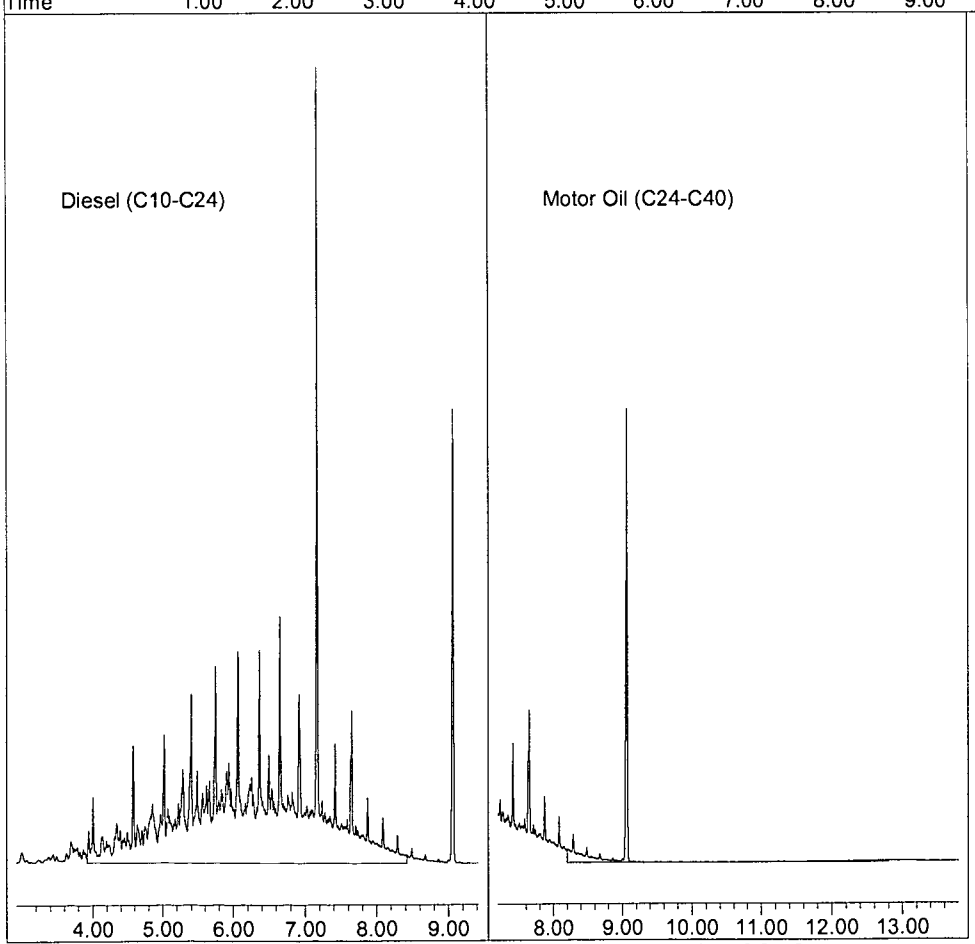
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SC Decanoic Acid(S)	5.66	4942081	4.040	ppb
Surrogate Spike 48.000	Recovery =		8.42%	
4) SA Ortho-Terphenyl(S)	7.16	98752668	21.171	ppb
Surrogate Spike 30.000	Recovery =		70.57%	
5) SA Octacosane(S)	9.06	73592585	21.028	ppb
Surrogate Spike 30.000	Recovery =		70.09%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	1457737296	422.011	ppb
2) HBTM Motor Oil (C24-C40)	10.50	47699342	17.123	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161123\1123062.D
Sample : CCV: DIESEL 400ppb 11/3/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161123\1123063.D Vial: 63
Acq On : 11-24-16 6:04:06 Operator: DP
Sample : CCV: MO 1000ppb 11/21/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 12:45 2016 Quant Results File: DOC1103.RES

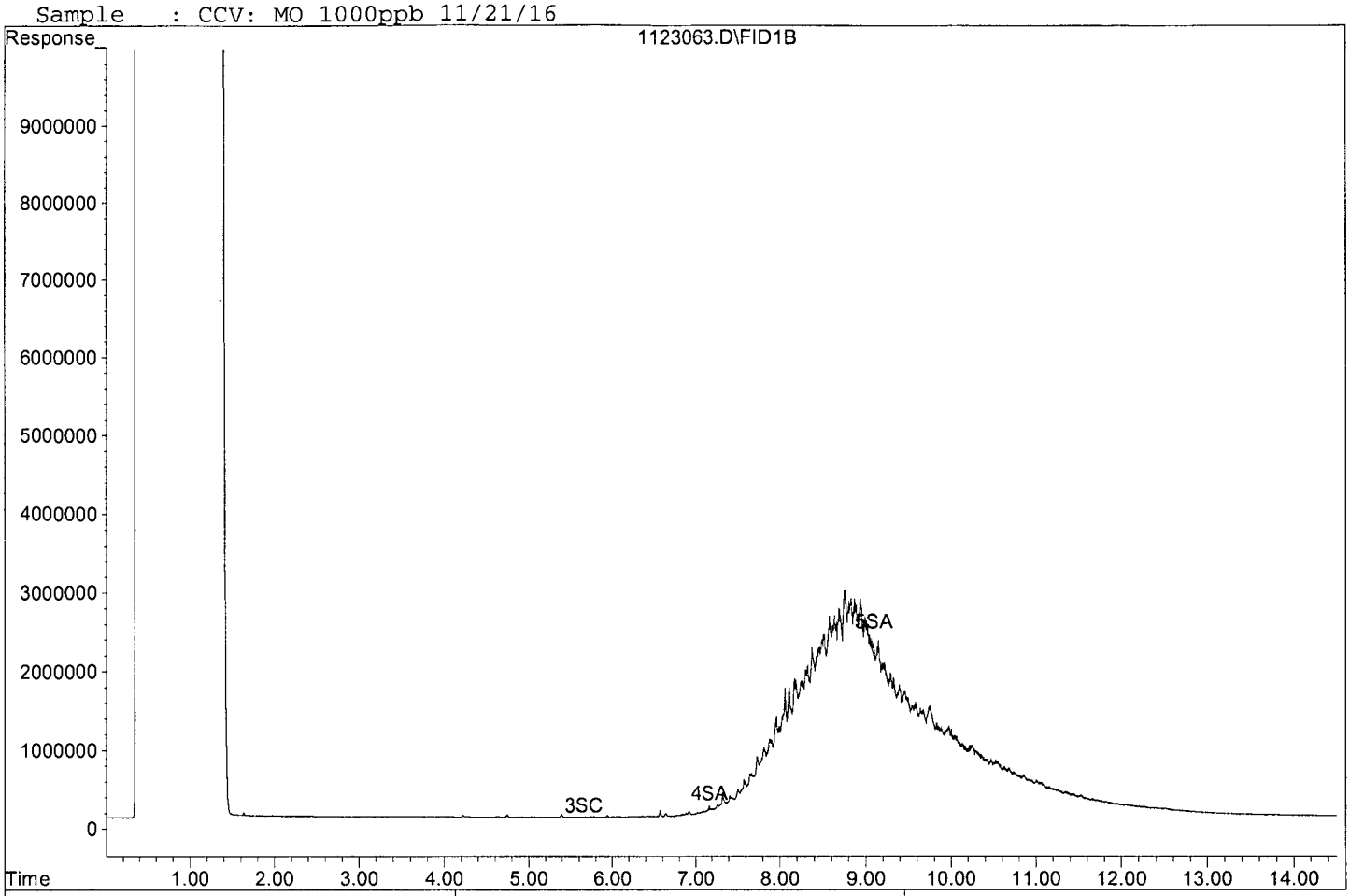
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

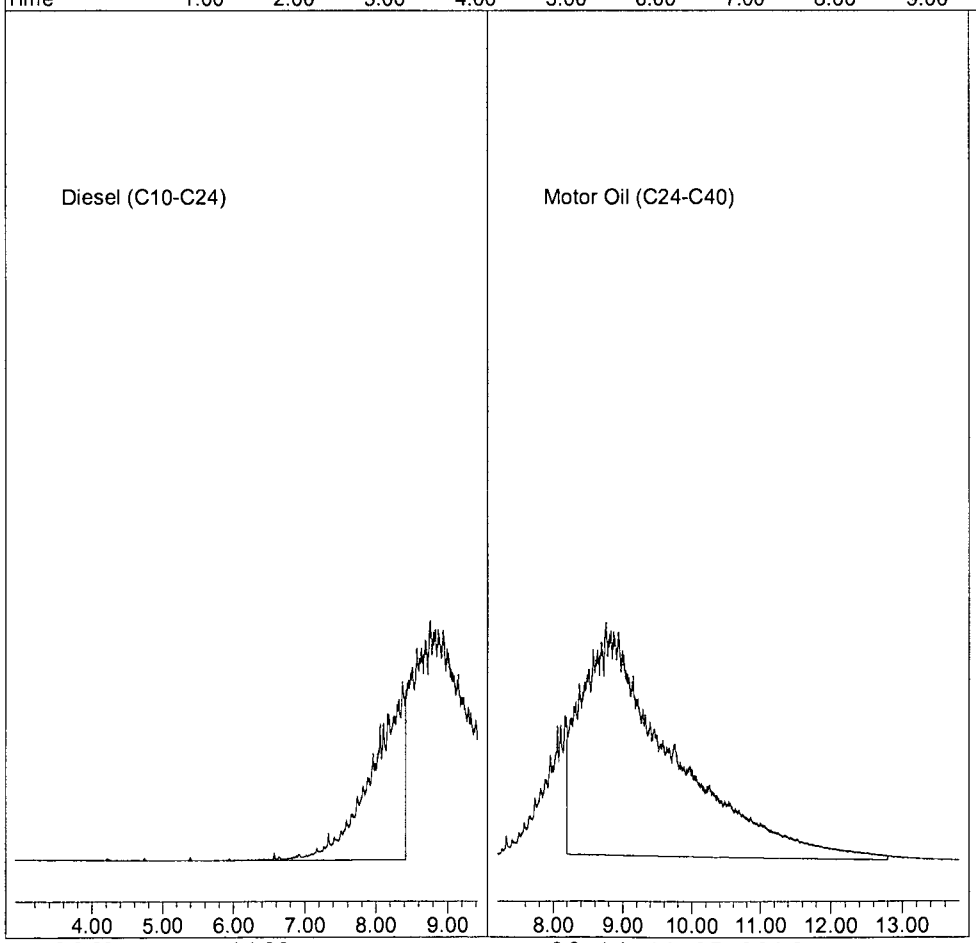
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SC Decanoic Acid(S)	5.66	36515	0.030	ppb
Surrogate Spike 48.000	Recovery =		0.06%	
4) SA Ortho-Terphenyl(S)	7.17	476133	0.102	ppb
Surrogate Spike 30.000	Recovery =		0.34%	
5) SA Octacosane(S)	9.09	2444565	0.699	ppb
Surrogate Spike 30.000	Recovery =		2.33%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	671850036	194.499	ppb
2) HBTM Motor Oil (C24-C40)	10.50	2482656325	891.200	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161123\1123063.D
Sample : CCV: MO 1000ppb 11/21/16





ORGANICS

Raw Data

APPL, INC.

Method Blank
EPA 8015B TPH WATER

Blank Name/QCG: **161122W-45988 - 214051**
Batch ID: #DOC53-161122A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	11/22/16	11/24/16
BLANK	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	11/22/16	11/24/16
BLANK	SURROGATE: OCTACOSANE (S)	93.0	60-142			%	11/22/16	11/24/16
BLANK	SURROGATE: ORTHO-TERPHEN	76.6	56-125			%	11/22/16	11/24/16

Quant Method:DOC1103.M
Run #:1123049
Instrument:Apollo
Sequence:161123
Initials:DPO

GC SC-Blank-REG MDLs-DOD
Printed: 11/28/16 2:16:34 PM

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161123\1123049.D Vial: 49
Acq On : 11-24-16 1:19:42 Operator: DP
Sample : 161122A BLK 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Nov 28 13:58 2016 Quant Results File: DOC1103.RES

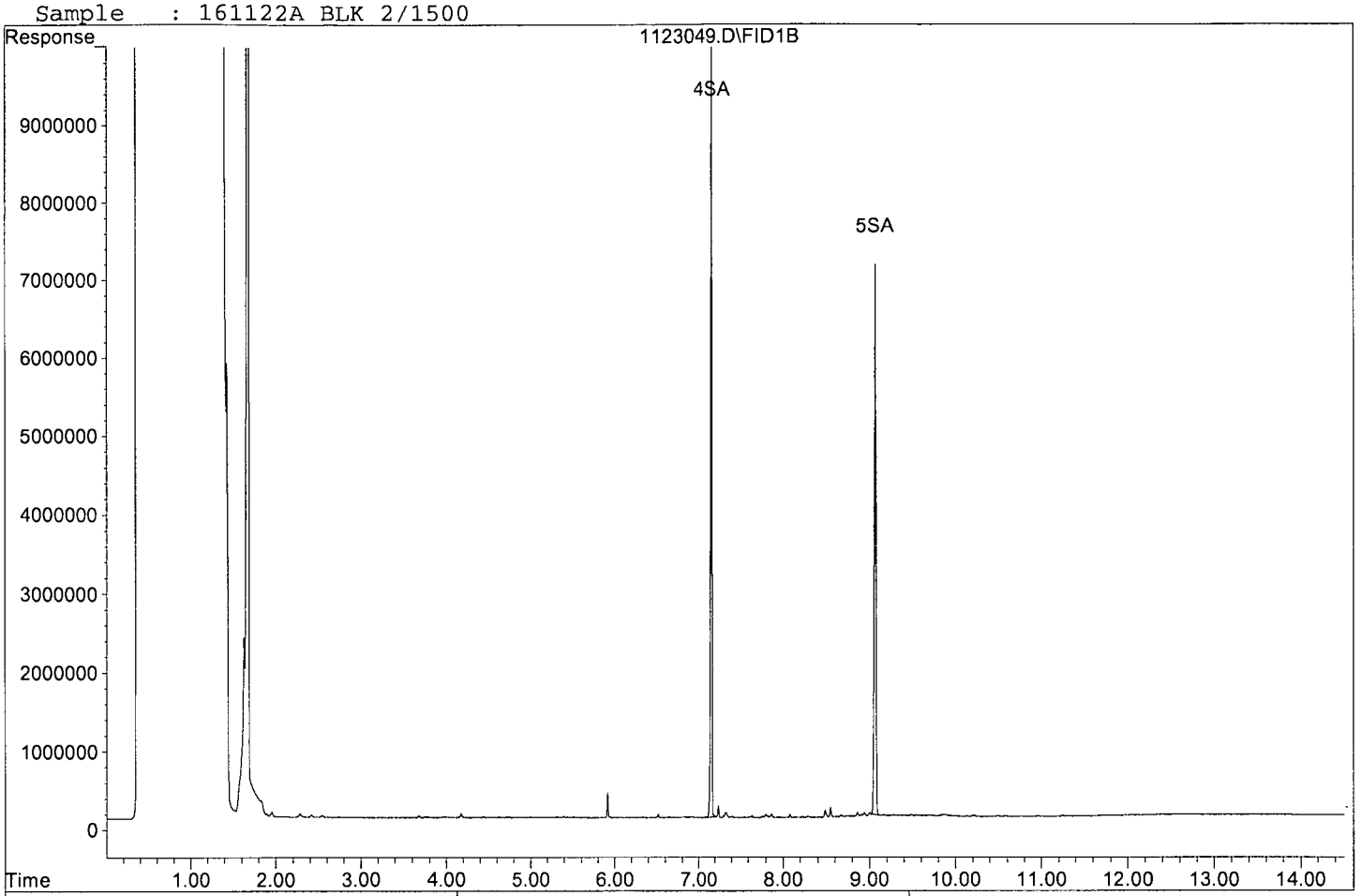
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

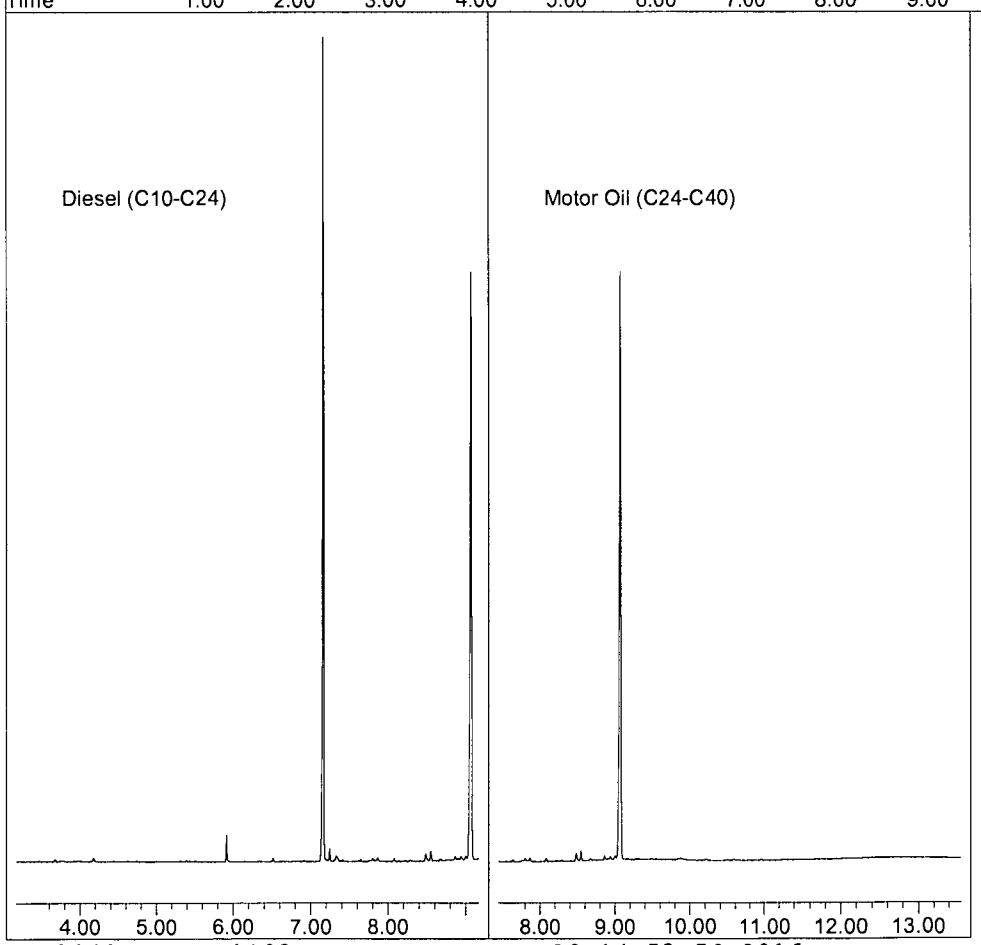
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.16	107173949	30.636	ppb
Surrogate Spike 40.000		Recovery =	76.59%	
5) SA Octacosane(S)	9.07	97671663	37.212	ppb
Surrogate Spike 40.000		Recovery =	93.03%	
Target Compounds				

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161123\1123049.D
Sample : 161122A BLK 2/1500





Laboratory Control Spike Recoveries
EPA 8015B TPH WATER

APPL ID: **161122W-45988 LCS - 214051**
Batch ID: #DOC53-161122A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
DIESEL (C10-C24)	1330	1070	1070	80.3	80.3	36-132	0.0	30
OIL (C24-C40)	1330	1030	1060	77.3	79.5	41-113	2.9	30
SURROGATE: OCTACOSANE (S)	40.0	36.2	37.3	90.5	93.3	60-142		
SURROGATE: ORTHO-TERPHENYL (S)	40.0	37.8	38.3	94.5	95.8	56-125		

Comments: _____

Primary	SPK	DUP
Quant Method :	DOC1103.M	DOC1103.M
Extraction Date :	11/22/16	11/22/16
Analysis Date :	11/24/16	11/24/16
Instrument :	Apollo	Apollo
Run :	1123050	1123052
Initials :	DPO	

Printed: 11/28/16 2:16:37 PM
APPL Standard LCSD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161123\1123050.D Vial: 50
Acq On : 11-24-16 1:40:05 Operator: DP
Sample : 161122A LCS-1 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Nov 28 13:58 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

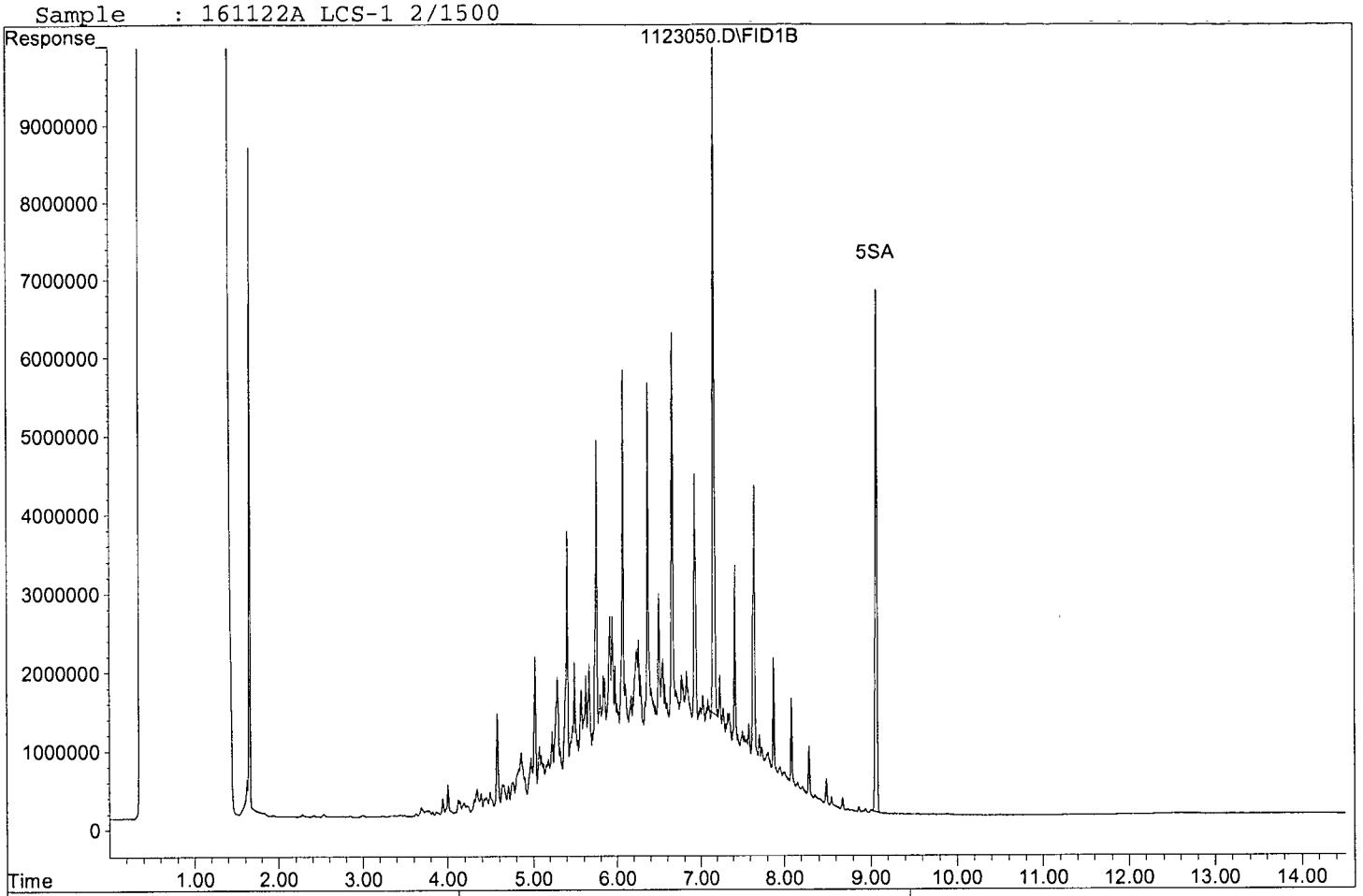
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

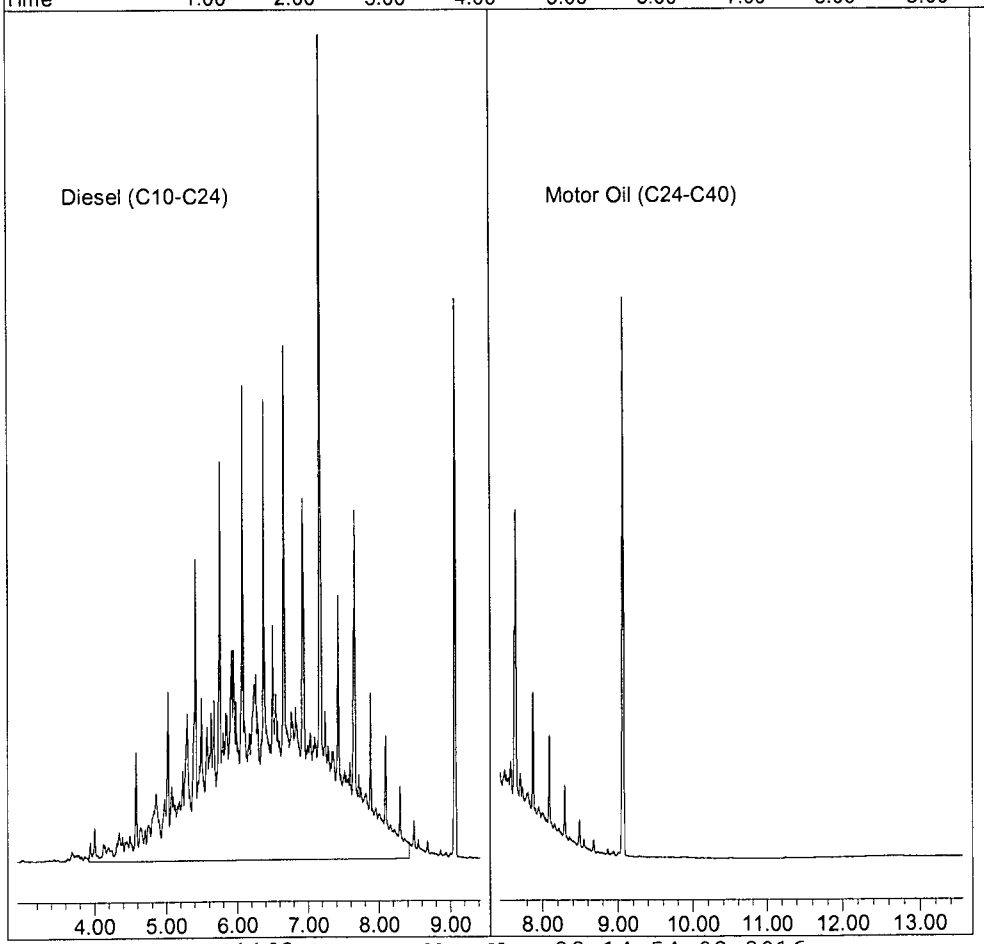
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.17	132358966	37.835	ppb
Surrogate Spike 40.000		Recovery =	94.59%	
5) SA Octacosane(S)	9.07	95106336	36.234	ppb
Surrogate Spike 40.000		Recovery =	90.59%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	2784244509	1074.707	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161123\1123050.D
Sample : 161122A LCS-1 2/1500





1123050.D DOC1103.M Mon Nov 28 14:54:02 2016

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161123\1123051.D Vial: 51
Acq On : 11-24-16 2:00:29 Operator: DP
Sample : 161122A LCS-2 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Nov 28 13:58 2016 Quant Results File: DOC1103.RES

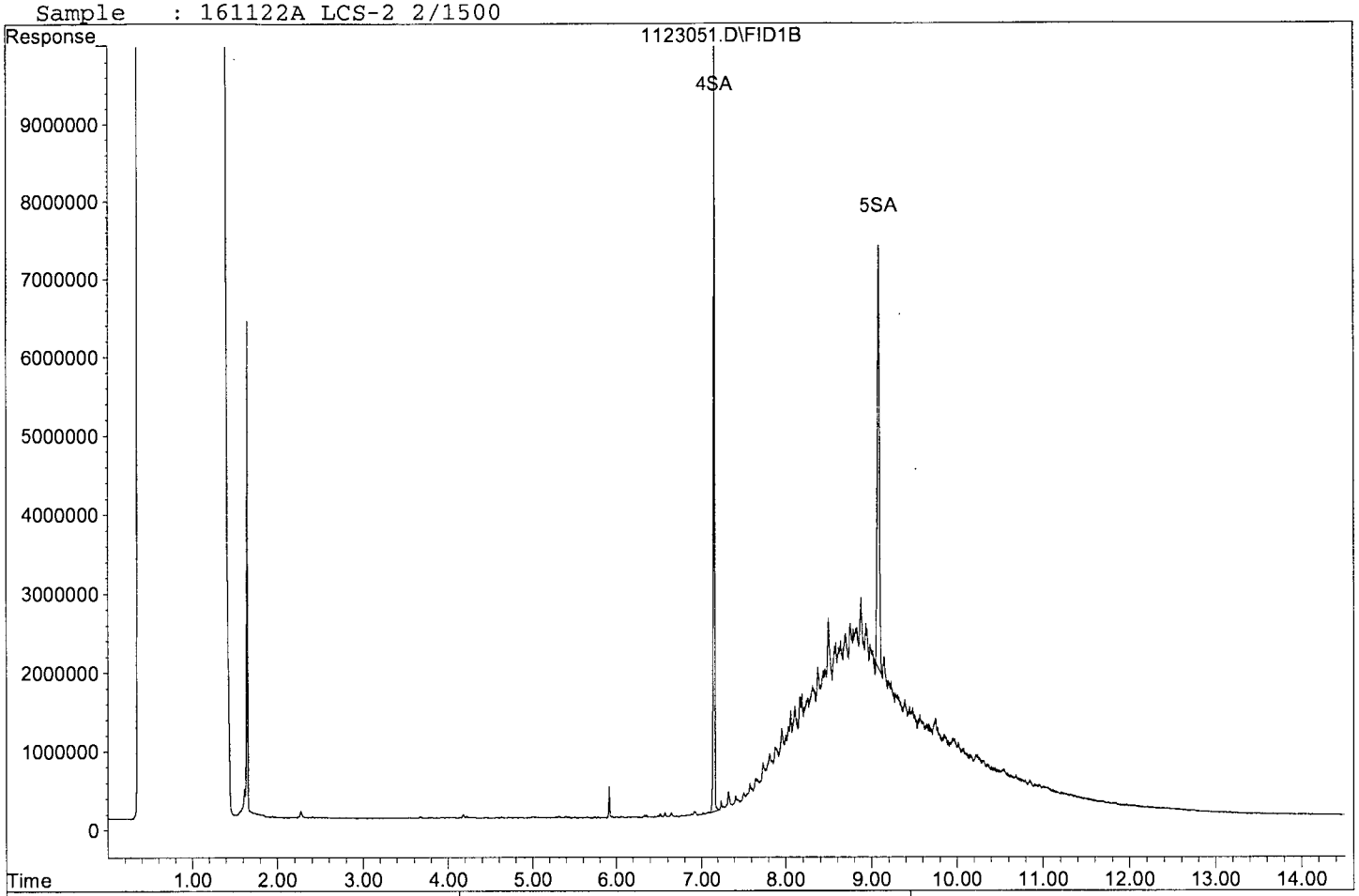
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

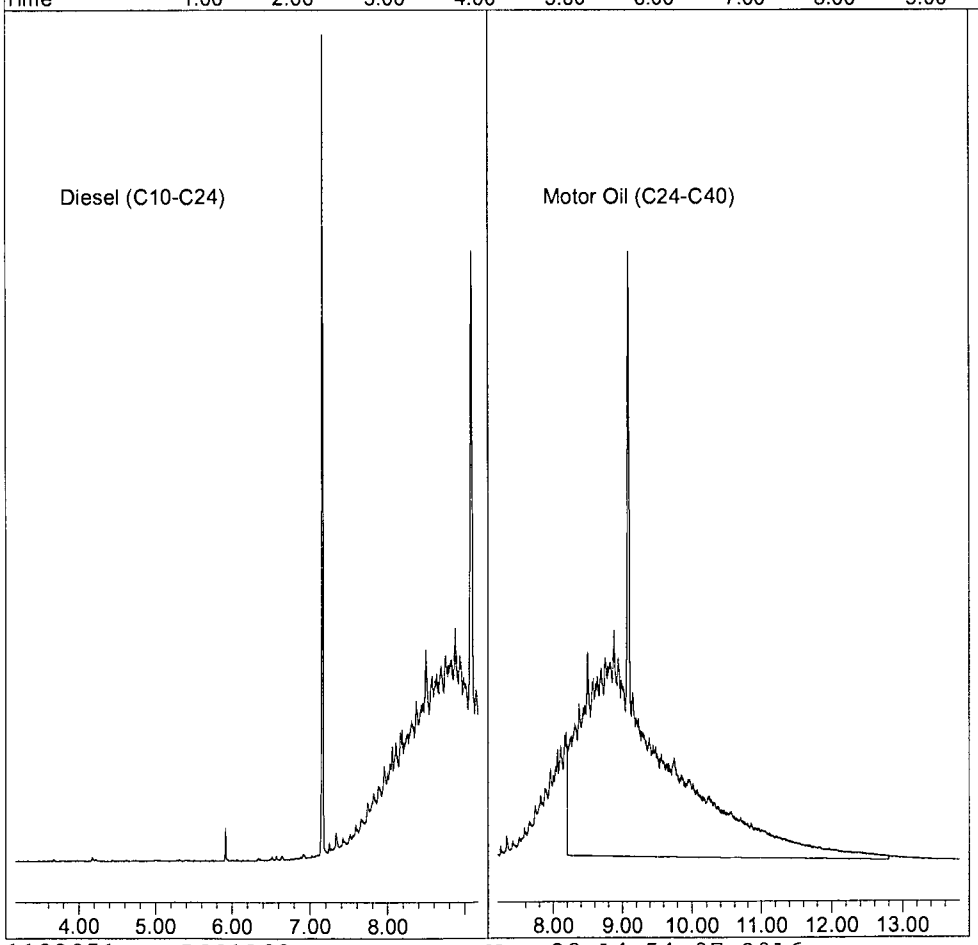
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.16	105795952	30.242	ppb
Surrogate Spike 40.000		Recovery =	75.61%	
5) SA Octacosane(S)	9.09	88168043	33.591	ppb
Surrogate Spike 40.000		Recovery =	83.98%	
Target Compounds				
2) HBTM Motor Oil (C24-C40)	10.50	2147708175	1027.948	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161123\1123051.D
Sample : 161122A LCS-2 2/1500





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161123\1123052.D Vial: 52
Acq On : 11-24-16 2:20:49 Operator: DP
Sample : 161122A LCSD-1 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Nov 28 13:59 2016 Quant Results File: DOC1103.RES

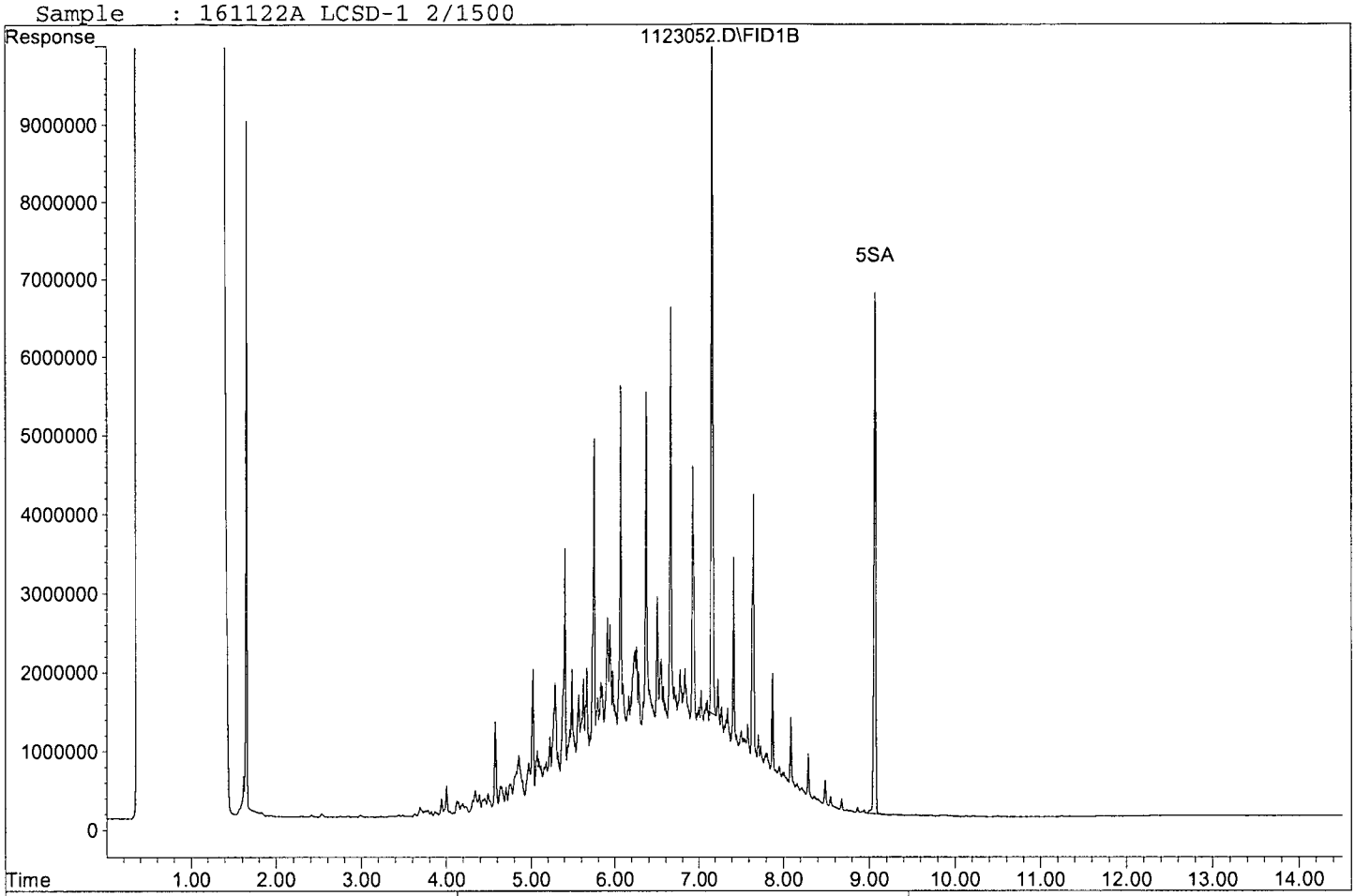
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

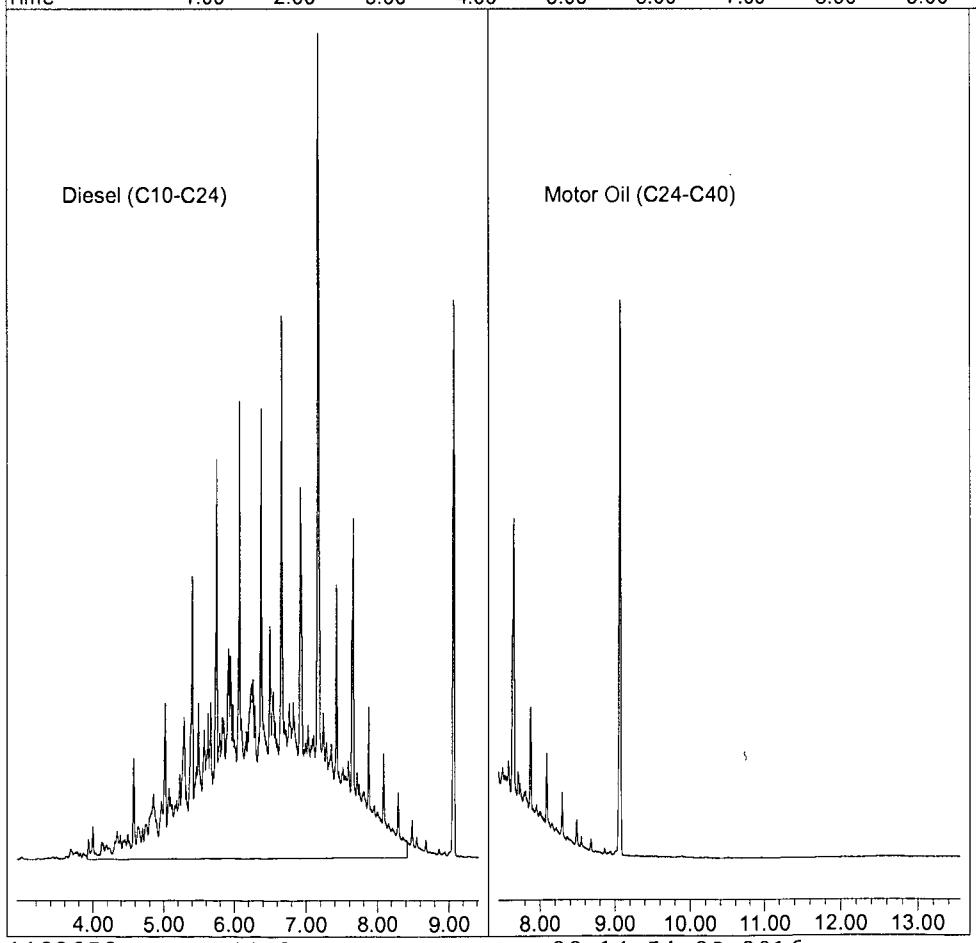
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.17	133952460	38.290	ppb
Surrogate Spike 40.000		Recovery =	95.72%	
5) SA Octacosane(S)	9.07	97963052	37.323	ppb
Surrogate Spike 40.000		Recovery =	93.31%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	2761551979	1065.948	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161123\1123052.D
Sample : 161122A LCSD-1 2/1500





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161123\1123053.D Vial: 53
Acq On : 11-24-16 2:41:11 Operator: DP
Sample : 161122A LCSD-2 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Nov 28 13:59 2016 Quant Results File: DOC1103.RES

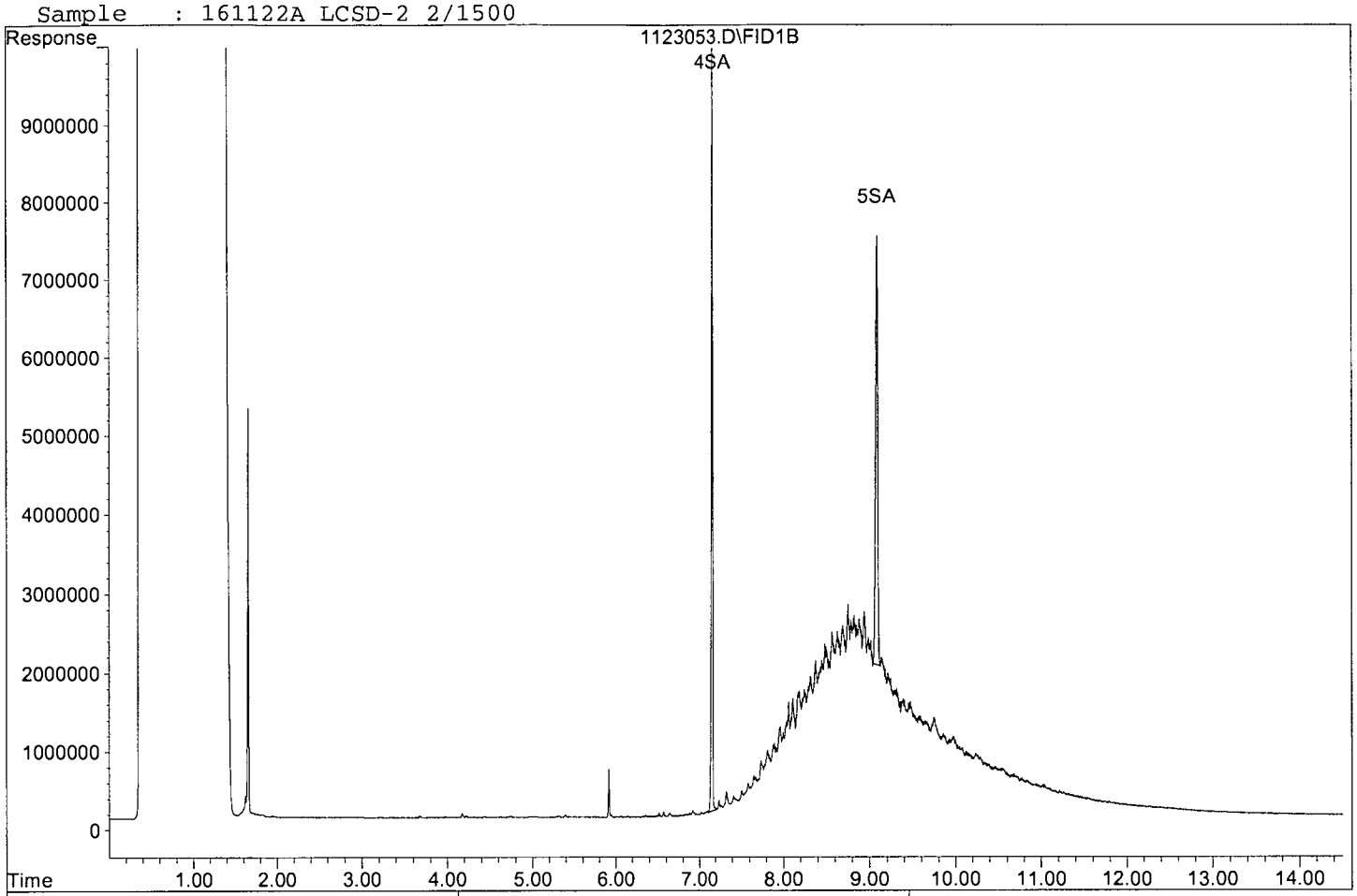
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

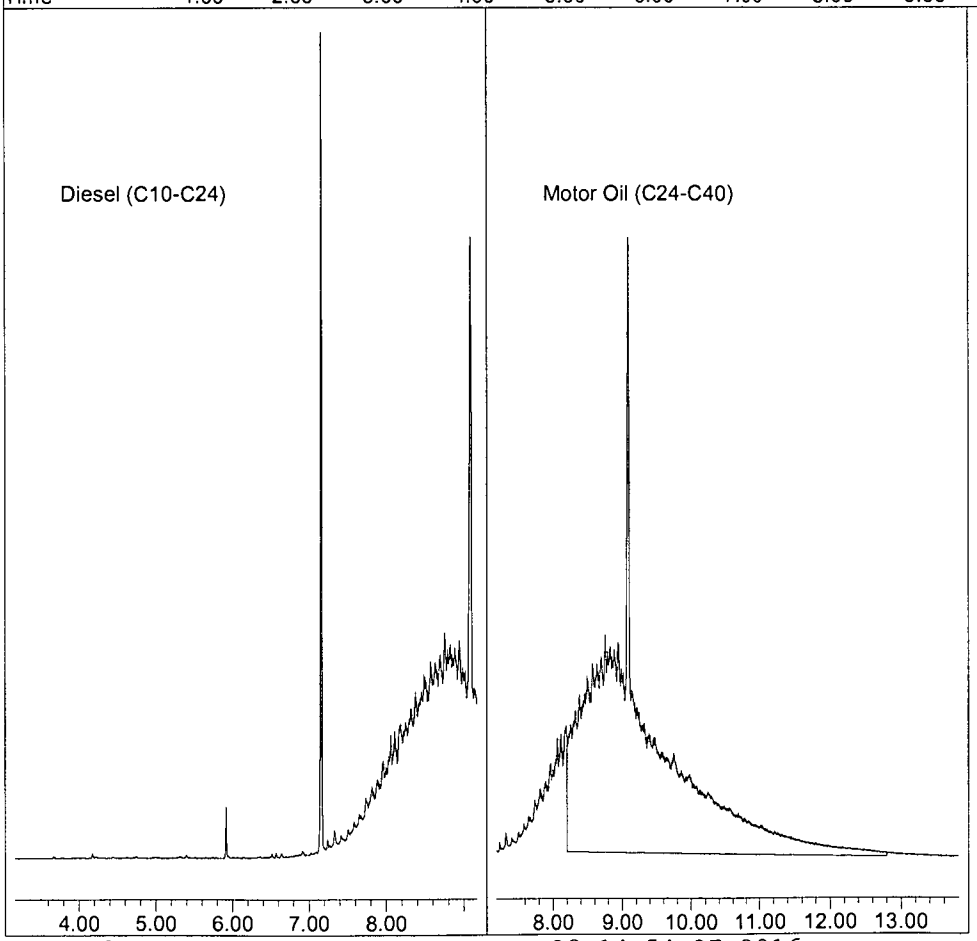
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.16	110755703	31.659	ppb
Surrogate Spike 40.000	Recovery =		79.15%	
5) SA Octacosane(S)	9.09	93941905	35.791	ppb
Surrogate Spike 40.000	Recovery =		89.48%	
Target Compounds				
2) HBTM Motor Oil (C24-C40)	10.50	2221523090	1063.278	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161123\1123053.D
Sample : 161122A LCSD-2 2/1500





DIESEL CURVE		prep:11/03/16-D.P.		ex:6/03/17						
STD	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL
DIESEL	1000	237562-37104	11/03/16	06/03/17	10	10	40	60	80	100
MC	N/A	56098			990	90	60	40	20	NA
				Final VOL.	1000	100	100	100	100	100
				ppm	10	100	400	600	800	1000

MOTOR OIL CURVE		prep: 10/28/16-D.P.		ex:4/26/17						
STD	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL
MOTOR OIL	2000		10/26/16	04/26/17	10	25	125	500	750	200
MC	N/A	56098			990	975	875	500	250	NA
				Final VOL.	1000	1000	1000	1000	1000	200
				ppm	20	50	250	1000	1500	2000

Prep: 11/03/16-D.P. Exp: 6/03/17						
DIESEL CAL STD.						
STD.	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT / LOT#
DIESEL FUEL #2	50,000 ug/mL	O2SI CAT#011598-03 LOT#237562-37104 OP: 11/03/06 EXP: 11/03/17	500 µL	25 mL	1000ug/mL	MC LOT# 56098
O-TERPHENYL OCTACOSANE	600 ug/mL	O2SI CAT#110316-05 LOT#266278-37107 OP: 10/27/16 EXP: 10/27/17	2080 µL		50ug/mL	

Prep: 10/26/16 -D.P. Ex: 4/26/17						
MOTOR OIL CAL STD						
STD.	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT / LOT#
MOTOR OIL	50,000 ug/mL	O2SI CAT#116390-02 LOT#239390-36901 OP:10/26/16 EXP:10/26/17	1mL	25mL	2000ug/mL	MC LOT# 56098

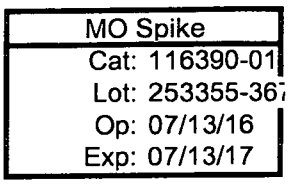
DIESEL SECOND SOURCE prep: 08/01/16-D.P. ex: 07/6/17						
standard	initial conc.	SOURCE DATE	ALIQUOT	FINAL VOL.	FINAL CONC.	SOLVENT LOT
DIESEL SECOND SOURCE	50,000 ug/mL	O2SI CAT#011598-03-SS LOT#244813-34634 OP: 08/28/15 Exp 03/14/19	200uL	10mL	1000ug/mL	MC #56061

MOTOR OIL SECOND SOURCE prep: 07/6/16-L.H. ex: 07/6/17						
standard	initial conc.	SOURCE DATE	ALIQUOT	FINAL VOL.	FINAL CONC.	SOLVENT LOT
MOTOR OIL SECOND SOURCE	50,000 ug/mL	O2SI CAT#116390-02-SS LOT#244814-34637 OP: 07/06/16 Exp 07/06/17	200uL	10mL	1000ug/mL	MC #56061

DIESEL CCV 400ug/ml						
Prep: 11/03/16-D.P. Ex: 02/03/16						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
DIESEL STD.	1000 µg/mL	Diesel Std.	2000µL	5mL	400 µg/ml	MC
	PREP:	11/03/16				56098
	Exp:	06/03/17				

MOTOR OIL CCV 1000ppm						
Prep: 11/21/16-G.A. Ex: 2/21/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
MO STD.	2000 µg/mL	MO Std.	2500µL	5mL	1000 µg/ml	MC
	PREP:	10/26/16				56098
	Exp:	04/26/17				

Diesel Fuel #2
Conc. 50000 ug/ml
O2SI
CAT #011598-03
LOT# 237562-37102
OP: 10/25/16 RH
EXP: 10/25/17


MO Spike
Cat: 116390-01
Lot: 253355-36
Op: 07/13/16
Exp: 07/13/17

THC Surrogate
Cat: 110316-05
Lot: 266278-37
Op: 10/27/16
Exp: 10/27/17

_SEP011LL

Organic Extraction Worksheet

Method	THC Sep Fun Ext 3510C (LOW LEVEL)	Extraction Set	161122A	Extraction Method	SEP011LL	Units	mL

Spiked ID 1	Diesel Spike 11-3-16 exp 11-3-17		Surrogate ID 1	THC Surrogate 11-21-16 exp 11-21-17	
Spiked ID 2	Motor Oil Spike 11-7-16 exp 11-7-17		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	11/22/16 7:45	
Spiked ID 8			Ext. End Time:	11/23/16 15:50	
			GC Requires Extract By:	**11/24/16 0:00**	

pH1			Water Bath Temp Criteria	35,35,35 °
pH2				
pH3				

Spiked By: KY **Date** 11/22/16 **Witnessed By:** DL **Date** 11/22/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	161122A Blk				0.1	1	1500	2	7	11/22/16 7:45	
						equip	E-WB1				
2	161122A LCS-1		0.040	1	0.1	1	1500	2	7	11/22/16 7:45	
						equip	E-WB2				
3	161122A LCS-2		0.040	2	0.1	1	1500	2	7	11/22/16 7:45	
						equip	E-WB3				
4	161122A LCSD-1		0.040	1	0.1	1	1500	2	7	11/22/16 7:45	
						equip	E-WB1				
5	161122A LCSD-2		0.040	2	0.1	1	1500	2	7	11/22/16 7:45	
						equip	E-WB2				
6	AZ45988	AZ45988W13			0.1	1	1500	2	7	11/22/16 7:45	81515 1 WEEK
						equip	E-WB3				
7	AZ45989	AZ45989W08			0.1	1	1500	2	7	11/22/16 7:45	81515 1 WEEK
						equip	E-WB1				
8	AZ45991	AZ45991W15			0.1	1	1500	2	7	11/22/16 7:45	81515 1 WEEK
						equip	E-WB2				
9	AZ45992	AZ45992W12			0.1	1	1500	2	7	11/22/16 7:45	81515 1 WEEK
						equip	E-WB3				
10	AZ45993	AZ45993W16			0.1	1	1500	2	7	11/22/16 7:45	81515 1 WEEK
						equip	E-WB1				
11	AZ45994	AZ45994W18			0.1	1	1500	2	7	11/22/16 7:45	81515 1 WEEK
						equip	E-WB2				
12	AZ45995	AZ45995W10			0.1	1	1500	2	7	11/22/16 7:45	81515 1 WEEK
						equip	E-WB3				
13	AZ45996	AZ45996W10			0.1	1	1500	2	7	11/22/16 7:45	81515 1 WEEK
						equip	E-WB1				

KY 11/23/16

Solvent and Lot#	
MC	56153
Na2SO4	16C255214
ph-indicator strips	HC 574756
Filter Paper	400112

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	RH
Date	11/23/16
Time	4:10
Refrigerator	Hobert

	Technician's Initials
Scanned By	KY
Sample Preparation	KY,DL
Extraction	KY,DL,JR
Concentration	dl

Modified	11/23/16 3:54:45 PM

Reviewed By: Ky **Date** 11/23/16

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank

EPA 8270D SIM RE-EXTRACT

Blank Name/QCG: **161206W-45991 - 214446**
Batch ID: #SIMDO-161206A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/06/16	12/08/16
BLANK	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/06/16	12/08/16
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	12/06/16	12/08/16
BLANK	SURROGATE: 2-FLUORBIPHENY	54.5	53-106			%	12/06/16	12/08/16
BLANK	SURROGATE: NITROBENZENE-	63.9	55-111			%	12/06/16	12/08/16
BLANK	SURROGATE: TERPHENYL-D14 (	70.1	58-132			%	12/06/16	12/08/16

Quant Method: L1026P.M
Run #: 1129L192
Instrument: Linus
Sequence: L161129
Initials: RHA

GC SC-Blank-REG MDLs-DOD
Printed: 12/09/16 10:57:49 AM

Method Blank

EPA 8270D SIM

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161122W-45988 - 214139**
Batch ID: #SIMDO-161122A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	11/22/16	11/23/16
BLANK	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	11/22/16	11/23/16
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	11/22/16	11/23/16
BLANK	SURROGATE: 2-FLUORBIPHENY	52.9	53-106			%	11/22/16	11/23/16
BLANK	SURROGATE: NITROBENZENE-	77.0	55-111			%	11/22/16	11/23/16
BLANK	SURROGATE: TERPHENYL-D14 (	80.9	58-132			%	11/22/16	11/23/16

Quant Method: L1026P.M
Run #: 1026L329
Instrument: Linus
Sequence: L161026
Initials: RHA

GC SC-Blank-REG MDLs-DOD
Printed: 11/30/16 1:07:47 PM

Laboratory Control Spike Recovery

EPA 8270D SIM RE-EXTRACT

APPL ID: **161206W-45991 LCS - 214446**
Batch ID: #SIMDO-161206A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1-METHYLNAPHTHALENE	5.00	3.21	64.2	41-115
2-METHYLNAPHTHALENE	5.00	3.28	65.6	39-114
NAPHTHALENE	5.00	3.07	61.4	43-114
SURROGATE: 2-FLUORBIPHENYL (S)	5.00	2.95	59.0	53-106
SURROGATE: NITROBENZENE-D5 (S)	5.00	3.34	66.8	55-111
SURROGATE: TERPHENYL-D14 (S)	5.00	3.45	69.0	58-132

Comments: _____

Primary	SPK
Quant Method :	L1026P.M
Extraction Date :	12/06/16
Analysis Date :	12/08/16
Instrument :	Linus
Run :	1129L193
Initials :	RHA

Printed: 12/09/16 10:57:41 AM
APPL Standard LCS

Laboratory Control Spike Recoveries

EPA 8270D SIM

APPL ID: **161122W-45988 LCS - 214139**
Batch ID: #SIMDO-161122A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
1-METHYLNAPHTHALENE	5.00	3.47	2.92	69.4	58.4	41-115	17.2	20
2-METHYLNAPHTHALENE	5.00	3.40	2.87	68.0	57.4	39-114	16.9	20
NAPHTHALENE	5.00	3.44	3.00	68.8	60.0	43-114	13.7	20
SURROGATE: 2-FLUORBIPHENYL (S)	5.00	3.01	2.70	60.2	54.0	53-106		
SURROGATE: NITROBENZENE-D5 (S)	5.00	4.20	3.83	84.0	76.6	55-111		
SURROGATE: TERPHENYL-D14 (S)	5.00	4.18	3.77	83.6	75.4	58-132		

Comments: _____

Primary	SPK	DUP
Quant Method :	L1026P.M	L1026P.M
Extraction Date :	11/22/16	11/22/16
Analysis Date :	11/24/16	11/24/16
Instrument :	Linus	Linus
Run :	1026L330	1026L331
Initials :	RHA	

Printed: 11/30/16 1:07:40 PM
APPL Standard LCSD

8270D-SIM

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81515

Case No: 81515 Date Analyzed: 12/08/16

Matrix: WATER Instrument: Linus

Blank ID: 161206A-BLK Time Analyzed: 1914

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161206A-BLK	Blank	1129L192	12/08/16 1914
161206A-LCS	Lab Control Spike	1129L193	12/08/16 1948
AZ45991	ERH124	1129L195	12/08/16 2054
AZ45993	ERH127	1129L196	12/08/16 2128
AZ45995	ERH130	1129L197	12/08/16 2201
AZ45996	ERH131	1129L198	12/08/16 2234

Comments: Batch: #SIMDO-161206A

Printed: 12/09/16 10:57:38 AM
Form 4, Blank Summary

8270D-SIM

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81515

Case No: 81515 Date Analyzed: 11/23/16

Matrix: WATER Instrument: Linus

Blank ID: 161122A-BLK Time Analyzed: 2359

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161122A-BLK	Blank	1026L329	11/23/16 2359
161122A-LCS	Lab Control Spike	1026L330	11/24/16 0032
161122A-LCSD	Lab Control SpikeD	1026L331	11/24/16 0104
AZ45988	ERH118	1026L332	11/24/16 0136
AZ45991	ERH124	1026L334	11/24/16 0241
AZ45989	ERH119	1129L009	11/29/16 1831
AZ45992	ERH125	1129L010	11/29/16 1903
AZ45993	ERH127	1129L011	11/29/16 1935
AZ45994	ERH129	1129L012	11/29/16 2008
AZ45995	ERH130	1129L013	11/29/16 2040
AZ45996	ERH131	1129L014	11/29/16 2112

Comments: Batch: #SIMDO-161122A

Printed: 11/30/16 1:07:38 PM
Form 4, Blank Summary

8270D-SIM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81515

Case No: 81515 Date Analyzed: 12/08/16

Matrix: WATER Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: 2-FLUORBIPHENYL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161206A-BLK	Blank	53-106	54.5		55-111	63.9	
161206A-LCS	Lab Control Spike	53-106	59.0		55-111	66.8	
AZ45991	ERH124	53-106	57.4		55-111	71.2	
AZ45993	ERH127	53-106	55.4		55-111	62.1	
AZ45995	ERH130	53-106	62.6		55-111	69.8	
AZ45996	ERH131	53-106	64.5		55-111	74.5	

Comments: Batch: #SIMDO-161206A

8270D-SIM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81515

Case No: 81515 Date Analyzed: 12/08/16

Matrix: WATER Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: TERPHENYL-D14 (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
161206A-BLK	Blank	58-132	70.1				
161206A-LCS	Lab Control Spike	58-132	69.0				
AZ45991	ERH124	58-132	74.5				
AZ45993	ERH127	58-132	72.7				
AZ45995	ERH130	58-132	76.0				
AZ45996	ERH131	58-132	79.9				

Comments: Batch: #SIMDO-161206A

8270D-SIM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81515

Case No: 81515 Date Analyzed: 11/23/16

Matrix: WATER Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: 2-FLUORBIPHENYL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161122A-BLK	Blank	53-106	52.9		55-111	77.0	
161122A-LCS	Lab Control Spike	53-106	60.2		55-111	84.0	
161122A-LCSD	Lab Control SpikeD	53-106	54.0		55-111	76.6	
AZ45988	ERH118	53-106	55.8		55-111	76.2	
AZ45991	ERH124	53-106	51.1	#	55-111	89.9	
AZ45989	ERH119	53-106	62.1		55-111	86.3	
AZ45992	ERH125	53-106	53.7		55-111	89.0	
AZ45993	ERH127	53-106	48.3	#	55-111	83.7	
AZ45994	ERH129	53-106	52.5		55-111	86.1	
AZ45995	ERH130	53-106	52.1	#	55-111	85.0	
AZ45996	ERH131	53-106	51.3	#	55-111	81.6	

Comments: Batch: #SIMDO-161122A

= Recovery outside of Control Limits on Sample.

8270D-SIM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81515

Case No: 81515 Date Analyzed: 11/23/16

Matrix: WATER Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: TERPHENYL-D14 (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
161122A-BLK	Blank	58-132	80.9				
161122A-LCS	Lab Control Spike	58-132	83.6				
161122A-LCSD	Lab Control SpikeD	58-132	75.4				
AZ45988	ERH118	58-132	77.4				
AZ45991	ERH124	58-132	80.3				
AZ45989	ERH119	58-132	98.0				
AZ45992	ERH125	58-132	97.0				
AZ45993	ERH127	58-132	99.6				
AZ45994	ERH129	58-132	97.3				
AZ45995	ERH130	58-132	95.9				
AZ45996	ERH131	58-132	90.0				

Comments: Batch: #SIMDO-161122A

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 81515

Lab File ID (Standard): 1026L007.D Date Analyzed: 10/26/16

Instrument ID: Linus Time Analyzed: 13:33

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Napthalene-D8(IS)		Acenaphthene-D10(IS)		Phenanthrene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	2942	5.89	1477	7.94	2585	9.87
	UPPER LIMIT	5884	6.39	2954	8.44	5170	10.37
	LOWER LIMIT	1471	5.39	739	7.44	1293	9.37
	SAMPLE NO.						
01	161206A BLK 1/1000	2047	5.88	1144	7.92	2075	9.85
02	161206A LCS-1 1/1000	2029	5.88	1127	7.92	2068	9.85
03	AZ45991W12 1/980	2039	5.87	1155	7.92	2055	9.85
04	AZ45993W13 1/1060	2031	5.88	1136	7.92	2035	9.85
05	AZ45995W09 1/980	2084	5.88	1150	7.92	2099	9.85
06	AZ45996W09 1/1000	2094	5.88	1166	7.92	2116	9.85
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81515

Lab File ID (Standard): 1026L007.D Date Analyzed: 10/26/16

Instrument ID: Linus Time Analyzed: 13:33

GC Column: ID: Heated Purge: (Y/N)

		Chrysene-D12(IS)		Perylene-D12(IS)			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	3262	16.84	2933	20.60		
	UPPER LIMIT	6524	17.34	5866	21.10		
	LOWER LIMIT	1631	16.34	1467	20.10		
	SAMPLE NO.						
01	161206A BLK 1/1000	2531	16.80	2409	20.56		
02	161206A LCS-1 1/1000	2614	16.80	2408	20.55		
03	AZ45991W12 1/980	2706	16.80	2546	20.55		
04	AZ45993W13 1/1060	2566	16.80	2396	20.55		
05	AZ45995W09 1/980	2590	16.80	2483	20.55		
06	AZ45996W09 1/1000	2607	16.80	2514	20.55		
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 81515

Lab File ID (Standard): 1026L007.D Date Analyzed: 10/26/16

Instrument ID: Linus Time Analyzed: 13:33

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Napthalene-D8(IS)		Acenaphthene-D10(IS)		Phenanthrene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	2942	5.89	1477	7.94	2585	9.87
	UPPER LIMIT	5884	6.39	2954	8.44	5170	10.37
	LOWER LIMIT	1471	5.39	739	7.44	1293	9.37
	SAMPLE NO.						
01	161122A BLK 1/1000	2458	5.90	1295	7.95	2257	9.90
02	161122A LCS-1 1/1000	2275	5.90	1201	7.95	2158	9.89
03	161122A LCSD-1 1/100(	2503	5.90	1317	7.95	2347	9.89
04	AZ45988W12 1/1070	2637	5.90	1376	7.95	2403	9.90
05	AZ45991W11 1/950	2370	5.90	1203	7.94	2197	9.89
06	AZ45989W09 1/1070	2445	5.89	1292	7.94	2247	9.90
07	AZ45992W16 1/940	2580	5.89	1372	7.94	2377	9.89
08	AZ45993W14 1/960	2603	5.90	1405	7.94	2447	9.89
09	AZ45994W15 1/1070	2671	5.90	1428	7.94	2470	9.90
10	AZ45995W07 1/960	2614	5.89	1364	7.94	2367	9.90
11	AZ45996W08 1/1020	2774	5.89	1441	7.94	2534	9.90
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 81515

Lab File ID (Standard): 1026L007.D Date Analyzed: 10/26/16

Instrument ID: Linus Time Analyzed: 13:33

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Chrysene-D12(IS)		Perylene-D12(IS)			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	3262	16.84	2933	20.60		
	UPPER LIMIT	6524	17.34	5866	21.10		
	LOWER LIMIT	1631	16.34	1467	20.10		
	SAMPLE NO.						
01	161122A BLK 1/1000	2940	16.91	2739	20.69		
02	161122A LCS-1 1/1000	2837	16.89	2678	20.65		
03	161122A LCSD-1 1/100	3096	16.89	2898	20.65		
04	AZ45988W12 1/1070	3129	16.91	2921	20.69		
05	AZ45991W11 1/950	2988	16.88	2783	20.67		
06	AZ45989W09 1/1070	2783	16.90	2545	20.68		
07	AZ45992W16 1/940	2974	16.88	2719	20.66		
08	AZ45993W14 1/960	3017	16.89	2711	20.68		
09	AZ45994W15 1/1070	3075	16.90	2806	20.68		
10	AZ45995W07 1/960	2955	16.91	2679	20.69		
11	AZ45996W08 1/1020	3137	16.90	2862	20.69		
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81515
Matrix: Water
ID: SV TUNE 9/22/16

SDG No: 81515
Date Analyzed: 10/26/16
Instrument: Linus
Time Analyzed: 10:58

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.1 ug/ml PAH 10/26/	1026L003.D	10/26/16 11:23
2		0.2 ug/ml PAH 10/26/	1026L004.D	10/26/16 11:56
3		0.5 ug/ml PAH 10/26/	1026L005.D	10/26/16 12:28
4		1.0 ug/ml PAH 10/26/	1026L006.D	10/26/16 13:01
5		5.0 ug/ml PAH 10/26/	1026L007.D	10/26/16 13:33
6		10.0 ug/ml PAH 10/26	1026L008.D	10/26/16 14:05
7		50.0 ug/ml PAH 10/26	1026L009.D	10/26/16 14:37
8		100.0 ug/ml PAH 10/2	1026L010.D	10/26/16 15:09
9		SS PAH 10/26/16	1026L011.D	10/26/16 15:42
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	30 - 60% of mass 198	31.3
68	0 - 2% of mass 69	0.0
69	100 - 100% of mass 69	100.0
70	0 - 2% of mass 69	0.4
127	40 - 60% of mass 198	50.4
197	0 - 1% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.9
275	10 - 30% of mass 198	25.7
365	1 - 100% of mass 198	2.6
441	0.01 - 100% of mass 443	76.7
442	40 - 150% of mass 198	57.8
443	17 - 23% of mass 442	21.6

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81515
Matrix: Water
ID: SV TUNE 9/22/16

SDG No: 81515
Date Analyzed: 11/29/16
Instrument: Linus
Time Analyzed: 15:03

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		5.0 ug/ml PAH 11/28/	1129L003.D	11/29/16 15:19
2	ERH119	AZ45989W09 1/1070	1129L009.D	11/29/16 18:31
3	ERH125	AZ45992W16 1/940	1129L010.D	11/29/16 19:03
4	ERH127	AZ45993W14 1/960	1129L011.D	11/29/16 19:35
5	ERH129	AZ45994W15 1/1070	1129L012.D	11/29/16 20:08
6	ERH130	AZ45995W07 1/960	1129L013.D	11/29/16 20:40
7	ERH131	AZ45996W08 1/1020	1129L014.D	11/29/16 21:12
8		5.0 ug/ml PAH 11/28/	1129L021.D	11/30/16 0:25
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	30 - 60% of mass 198	30.3
68	0 - 2% of mass 69	0.0
69	100 - 100% of mass 69	100.0
70	0 - 2% of mass 69	0.5
127	40 - 60% of mass 198	48.9
197	0 - 1% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.8
275	10 - 30% of mass 198	26.9
365	1 - 100% of mass 198	2.8
441	0.01 - 100% of mass 443	75.2
442	40 - 150% of mass 198	70.2
443	17 - 23% of mass 442	21.6

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81515
Matrix: Water
ID: SV Tune 11/15/16

SDG No: 81515
Date Analyzed: 11/23/16
Instrument: Linus
Time Analyzed: 16:46

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		2.5 ug/ml PAH 10/26/	1026L316.D	11/23/16 17:01
2	Blank	161122A BLK 1/1000	1026L329.D	11/23/16 23:59
3	Lab Control Spike	161122A LCS-1 1/1000	1026L330.D	11/24/16 0:32
4	Lab Control SpikeD	161122A LCSD-1 1/100	1026L331.D	11/24/16 1:04
5	ERH118	AZ45988W12 1/1070	1026L332.D	11/24/16 1:36
6	ERH124	AZ45991W11 1/950	1026L334.D	11/24/16 2:41
7		2.5 ug/ml PAH 10/26/	1026L338.D	11/24/16 4:16
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	30 - 60% of mass 198	31.0
68	0 - 2% of mass 69	0.0
69	100 - 100% of mass 69	100.0
70	0 - 2% of mass 69	1.5
127	40 - 60% of mass 198	49.8
197	0 - 1% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.9
275	10 - 30% of mass 198	27.9
365	1 - 100% of mass 198	2.9
441	0.01 - 100% of mass 443	78.6
442	40 - 150% of mass 198	76.2
443	17 - 23% of mass 442	21.2

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81515
Matrix: Water
ID: SV Tune 11/15/16

SDG No: 81515
Date Analyzed: 12/08/16
Instrument: Linus
Time Analyzed: 17:50

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		5.0 ug/ml PAH 12/7/1	1129L190.D	12/08/16 18:08
2	Blank	161206A BLK 1/1000	1129L192.D	12/08/16 19:14
3	Lab Control Spike	161206A LCS-1 1/1000	1129L193.D	12/08/16 19:48
4	ERH124	AZ45991W12 1/980	1129L195.D	12/08/16 20:54
5	ERH127	AZ45993W13 1/1060	1129L196.D	12/08/16 21:28
6	ERH130	AZ45995W09 1/980	1129L197.D	12/08/16 22:01
7	ERH131	AZ45996W09 1/1000	1129L198.D	12/08/16 22:34
8		5.0 ug/ml PAH 12/07/	1129L200.D	12/08/16 23:41
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	30 - 60% of mass 198	30.6
68	0 - 2% of mass 69	0.0
69	100 - 100% of mass 69	100.0
70	0 - 2% of mass 69	0.3
127	40 - 60% of mass 198	50.1
197	0 - 1% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.8
275	10 - 30% of mass 198	26.8
365	1 - 100% of mass 198	2.7
441	0.01 - 100% of mass 443	76.7
442	40 - 150% of mass 198	64.9
443	17 - 23% of mass 442	21.5

ORGANICS

Sample Data

APPL, INC.

EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81515

Sample ID: ERH118

APPL ID: AZ45988

Sample Collection Date: 11/15/16

QCG: #SIMDO-161122A-214139

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	11/22/16	11/24/16
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	11/22/16	11/24/16
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	11/22/16	11/24/16
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	55.8	53-106			%	11/22/16	11/24/16
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	76.2	55-111			%	11/22/16	11/24/16
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	77.4	58-132			%	11/22/16	11/24/16

Quant Method: L1026P.M
Run #: 1026L332
Instrument: Linus
Sequence: L161026
Dilution Factor: 1
Initials: RHA

Printed: 11/30/16 1:07:35 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L332.D Vial: 32
Acq On : 24 Nov 16 1:36 Operator: MA
Sample : AZ45988W12 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Nov 30 11:13 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	5.90	136	2637	2.50000 ppb	0.01
6) Acenaphthene-D10(IS)	7.95	164	1376	2.50000 ppb	0.01
11) Phenanthrene-D10(IS)	9.90	188	2403	2.50000 ppb	0.02
15) Chrysene-D12(IS)	16.91	240	3129	2.50000 ppb	0.07
21) Perylene-D12(IS)	20.69	264	2921	2.50000 ppb	0.09
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.06	82	1216	3.56205 ppb	0.01
Spiked Amount 4.673			Recovery = 76.227%		
7) Surrogate Recovery (FBP)	7.16	172	2475	2.60611 ppb	0.00
Spiked Amount 4.673			Recovery = 55.768%		
17) Surrogate Recovery (TPH)	13.90	244	4160	3.61459 ppb	0.02
Spiked Amount 4.673			Recovery = 77.361%		

Target Compounds Qvalue

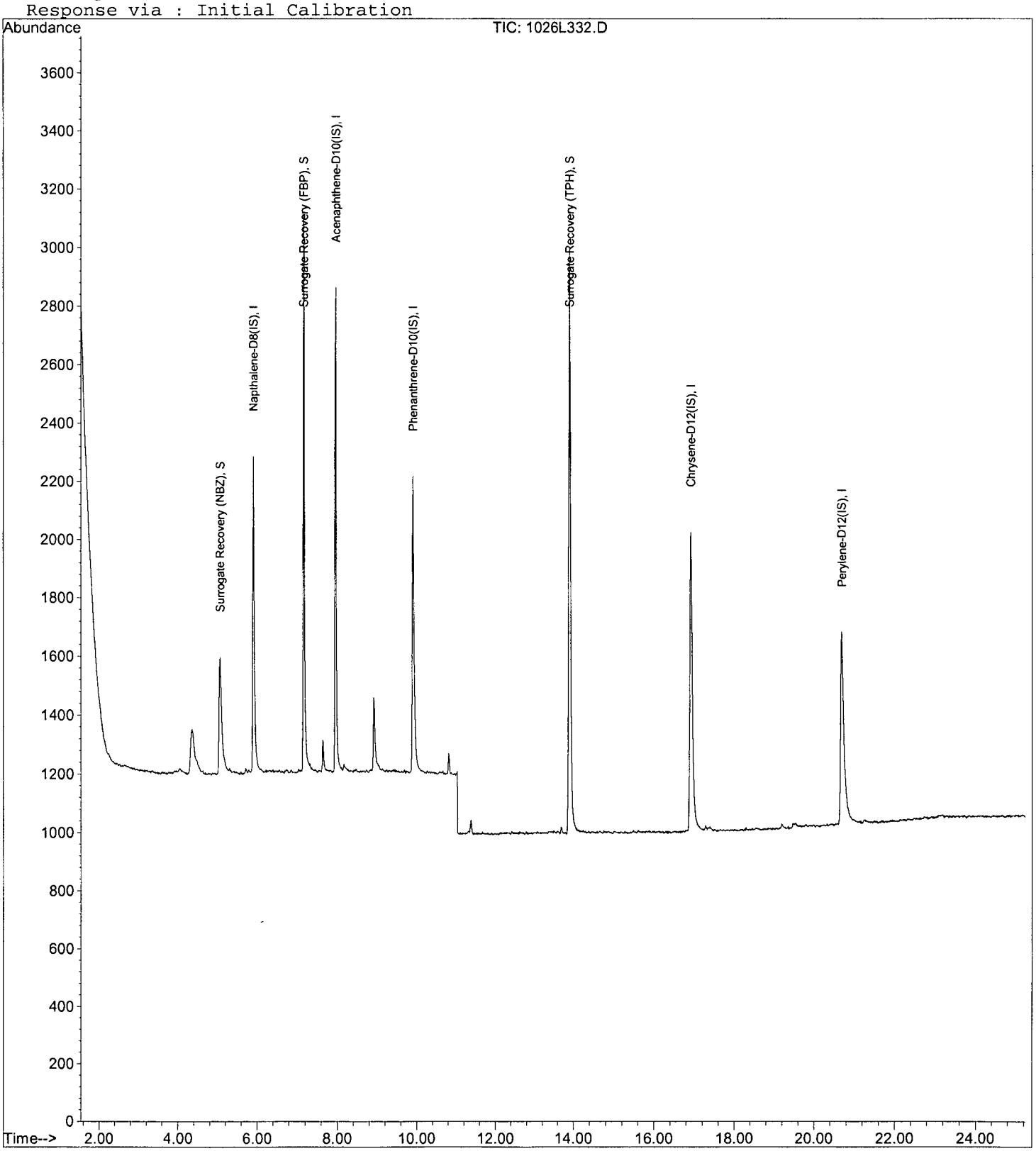
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161026\1026L332.D Vial: 32
Acq On : 24 Nov 16 1:36 Operator: MA
Sample : AZ45988W12 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Nov 30 11:13 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81515

Sample ID: ERH119

APPL ID: AZ45989

Sample Collection Date: 11/15/16

QCG: #SIMDO-161122A-214139

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	11/22/16	11/29/16
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	11/22/16	11/29/16
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	11/22/16	11/29/16
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	62.1	53-106			%	11/22/16	11/29/16
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	86.3	55-111			%	11/22/16	11/29/16
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	98.0	58-132			%	11/22/16	11/29/16

Quant Method: L1026P.M
Run #: 1129L009
Instrument: Linus
Sequence: L161129
Dilution Factor: 1
Initials: RHA

Printed: 11/30/16 1:07:35 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161129\1129L009.D Vial: 9
Acq On : 29 Nov 16 18:31 Operator: MA
Sample : AZ45989W09 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Nov 30 11:26 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.89	136	2445	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	7.94	164	1292	2.50000	ppb	0.00
11) Phenanthrene-D10(IS)	9.90	188	2247	2.50000	ppb	0.02
15) Chrysene-D12(IS)	16.90	240	2783	2.50000	ppb	0.06
21) Perylene-D12(IS)	20.68	264	2545	2.50000	ppb	0.08
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.05	82	1275	4.03316	ppb	0.00
Spiked Amount 4.673			Recovery = 86.306%			
7) Surrogate Recovery (FBP)	7.16	172	2587	2.90115	ppb	0.00
Spiked Amount 4.673			Recovery = 62.081%			
17) Surrogate Recovery (TPH)	13.89	244	4687	4.57882	ppb	0.01
Spiked Amount 4.673			Recovery = 97.991%			

Target Compounds	Qvalue

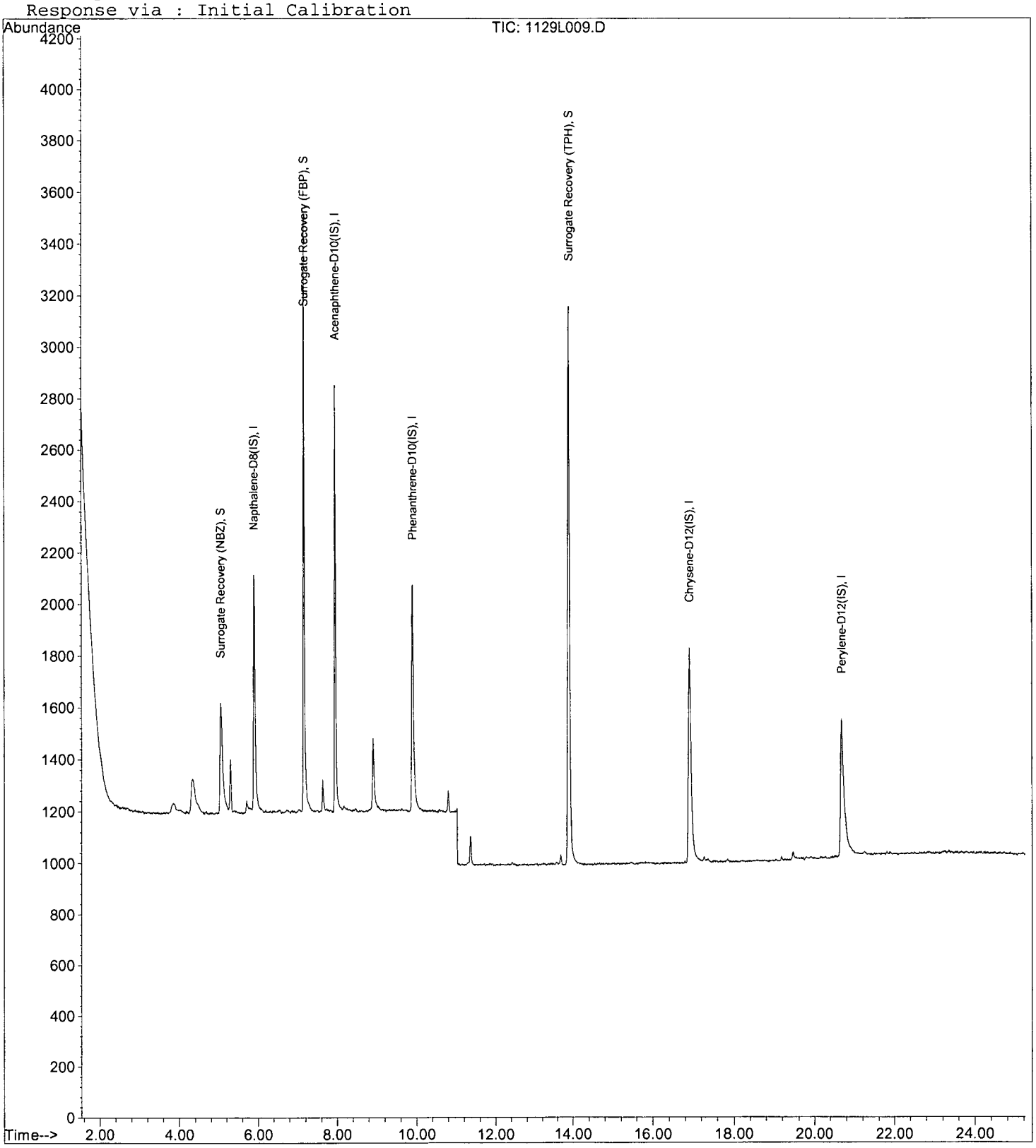
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161129\1129L009.D Vial: 9
Acq On : 29 Nov 16 18:31 Operator: MA
Sample : AZ45989W09 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Nov 30 11:26 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH124

Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515

APPL ID: AZ45991

QCG: #SIMDO-161122A-214139

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	29	0.2	0.10	0.06	ug/L	11/22/16	11/24/16
8270D-SIM	2-METHYLNAPHTHALENE	12	0.2	0.10	0.06	ug/L	11/22/16	11/24/16
8270D-SIM	NAPHTHALENE	58	0.2	0.10	0.05	ug/L	11/22/16	11/24/16
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	51.1 #	53-106			%	11/22/16	11/24/16
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	89.9	55-111			%	11/22/16	11/24/16
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	80.3	58-132			%	11/22/16	11/24/16

= Recovery (or RPD) is outside QC limits.

Quant Method: L1026P.M
Run #: 1026L334
Instrument: Linus
Sequence: L161026
Dilution Factor: 1
Initials: RHA

Printed: 11/30/16 1:07:35 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L334.D Vial: 34
Acq On : 24 Nov 16 2:41 Operator: MA
Sample : AZ45991W11 1/950 Inst : Linus
Misc : water Multiplr: 1.05

Quant Time: Nov 30 11:14 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

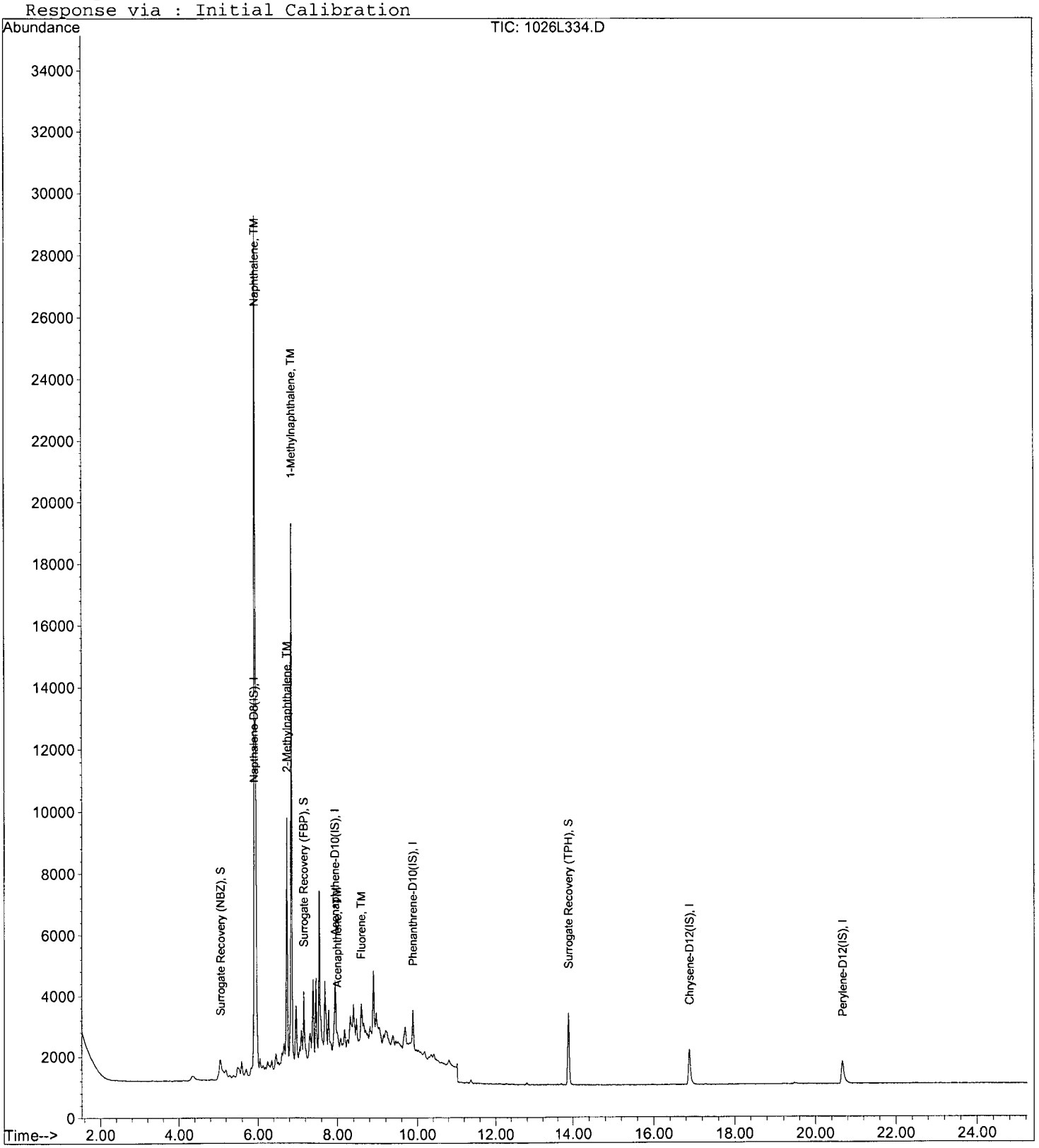
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.90	136	2370	2.50000	ppb	0.01
6) Acenaphthene-D10(IS)	7.94	164	1203	2.50000	ppb	0.00
11) Phenanthrene-D10(IS)	9.89	188	2197	2.50000	ppb	0.01
15) Chrysene-D12(IS)	16.88	240	2988	2.50000	ppb	0.04
21) Perylene-D12(IS)	20.67	264	2783	2.50000	ppb	0.07
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.06	82	1286	4.72852	ppb	0.01
Spiked Amount 5.263			Recovery = 89.851%			
7) Surrogate Recovery (FBP)	7.16	172	1983	2.69000	ppb	0.00
Spiked Amount 5.263			Recovery = 51.110%			
17) Surrogate Recovery (TPH)	13.88	244	4122	4.22433	ppb	0.00
Spiked Amount 5.263			Recovery = 80.256%			
Target Compounds						Qvalue
3) Naphthalene	5.93	128	53315	58.04267	ppb	98
4) 2-Methylnaphthalene	6.74	142	6867	11.97604	ppb	100
5) 1-Methylnaphthalene	6.86	142	17083	29.12471	ppb	99
9) Acenaphthene	7.99	154	206	0.36455	ppb	90
10) Fluorene	8.59	166	150	0.23014	ppb	97

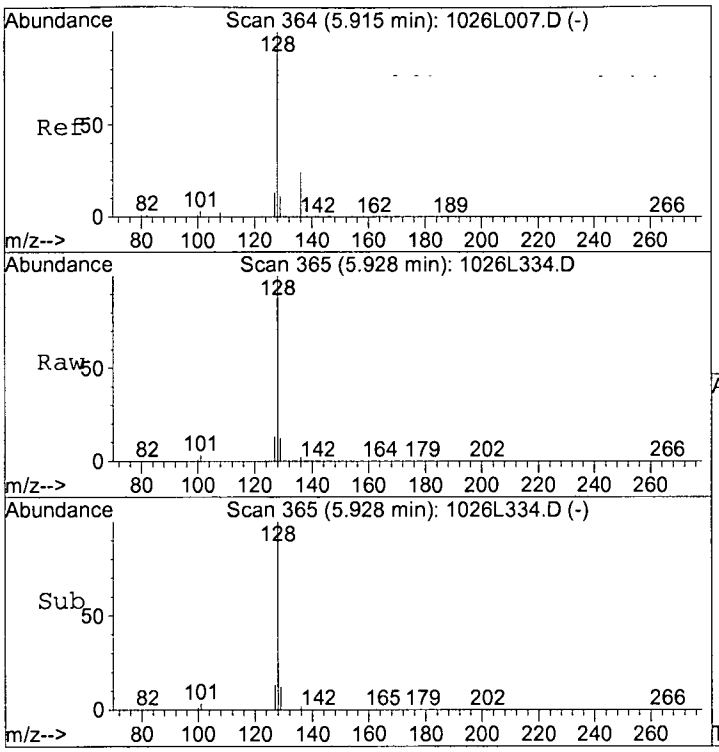
(#) = qualifier out of range (m) = manual integration

Data File : M:\LINUS\DATA\L161026\1026L334.D Vial: 34
Acq On : 24 Nov 16 2:41 Operator: MA
Sample : AZ45991W11 1/950 Inst : Linus
Misc : water Multiplr: 1.05

Quant Time: Nov 30 11:14 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration

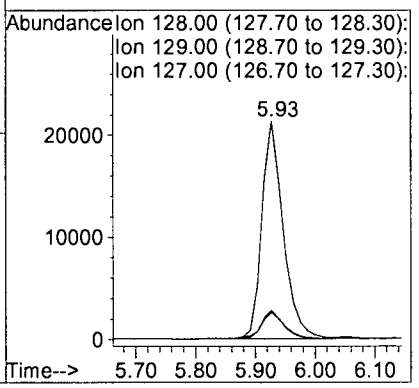


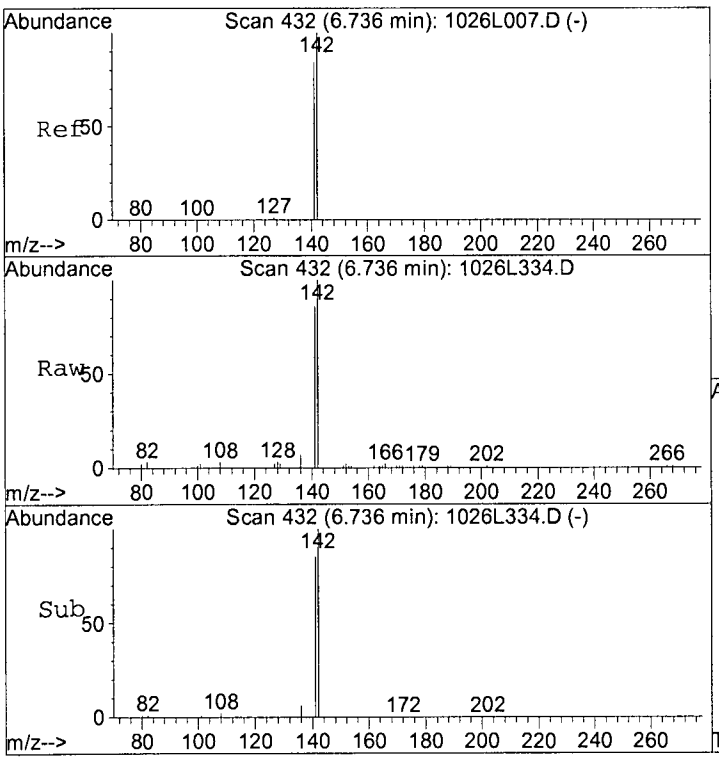


#3
Naphthalene
Concen: 58.04267 ppb
RT: 5.93 min Scan# 365
Delta R.T. 0.01 min
Lab File: 1026L334.D
Acq: 24 Nov 16 2:41

Tgt Ion:128 Resp: 53315

Ion	Ratio	Lower	Upper
128	100		
129	12.2	7.6	14.2
127	13.2	8.8	16.4

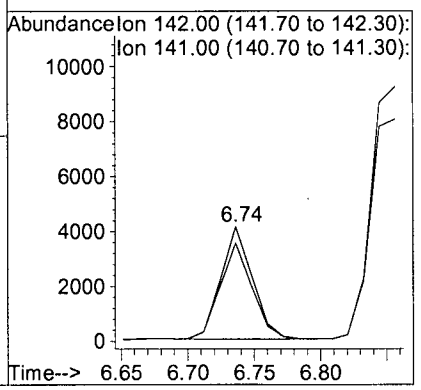


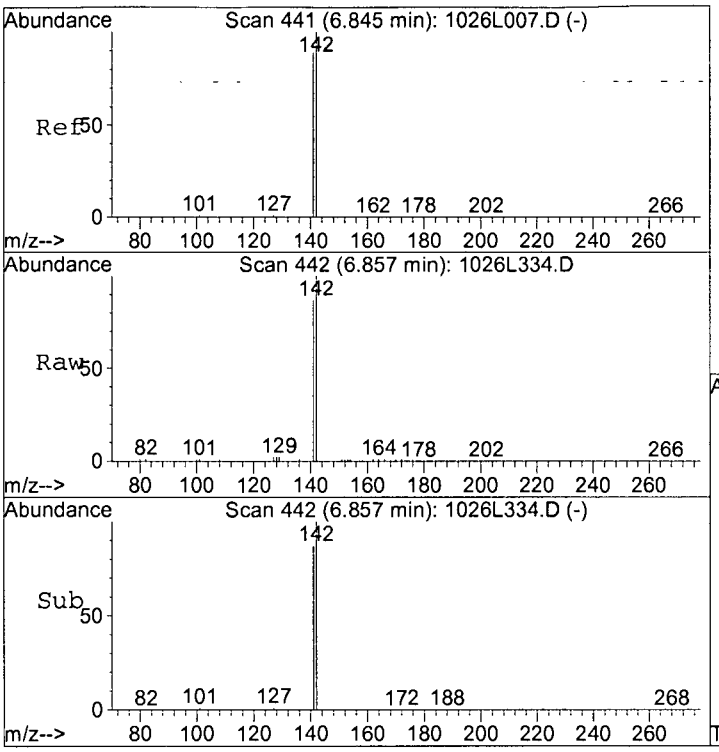


#4
2-Methylnaphthalene
Concen: 11.97604 ppb
RT: 6.74 min Scan# 432
Delta R.T. -0.00 min
Lab File: 1026L334.D
Acq: 24 Nov 16 2:41

Tgt Ion:142 Resp: 6867

Ion	Ratio	Lower	Upper
142	100		
141	84.9	59.4	110.4

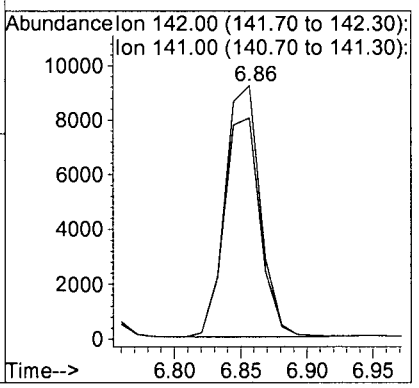


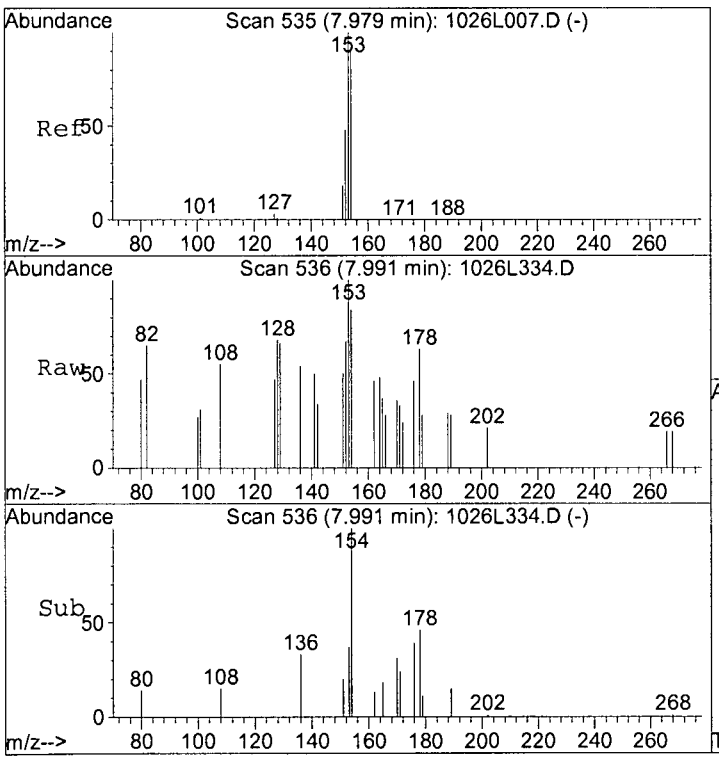


#5
1-Methylnaphthalene
Concen: 29.12471 ppb
RT: 6.86 min Scan# 442
Delta R.T. 0.01 min
Lab File: 1026L334.D
Acq: 24 Nov 16 2:41

Tgt Ion:142 Resp: 17083

Ion	Ratio	Lower	Upper
142	100		
141	86.9	60.2	111.8

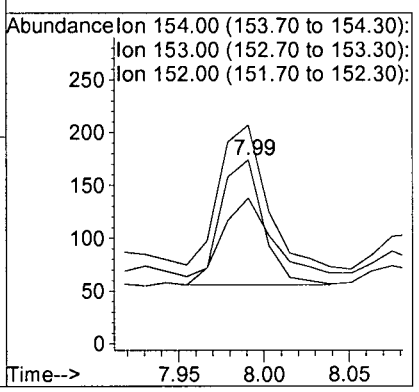


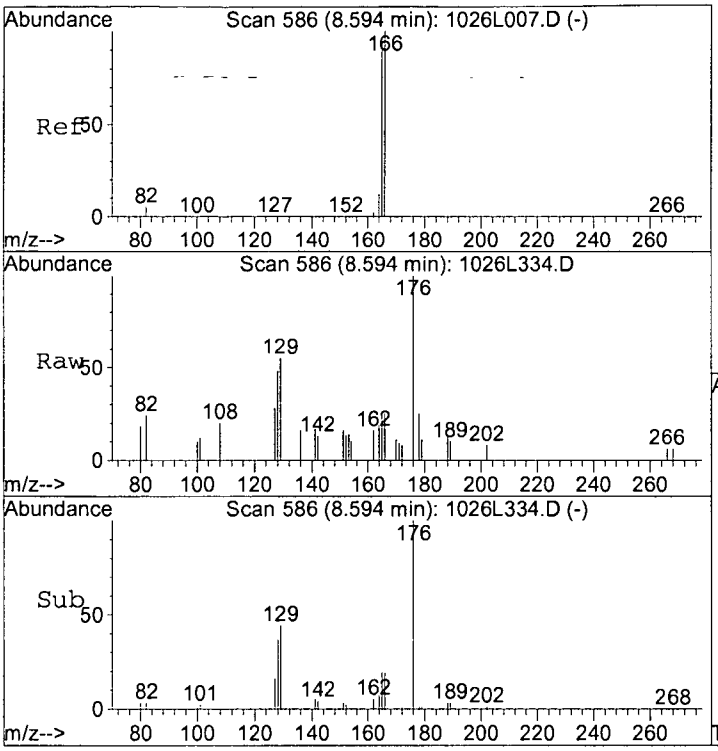


#9
Acenaphthene
Concen: 0.36455 ppb
RT: 7.99 min Scan# 536
Delta R.T. 0.01 min
Lab File: 1026L334.D
Acq: 24 Nov 16 2:41

Tgt Ion:154 Resp: 206

Ion	Ratio	Lower	Upper
154	100		
153	113.6	74.6	138.6
152	62.7	35.5	65.9

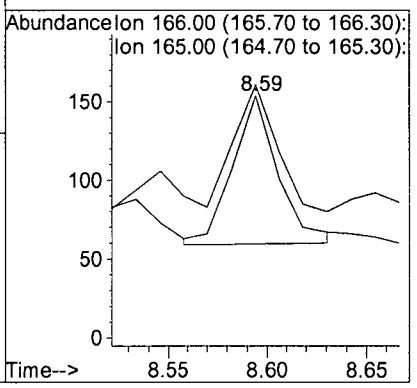




#10
Fluorene
Concen: 0.23014 ppb
RT: 8.59 min Scan# 586
Delta R.T. -0.00 min
Lab File: 1026L334.D
Acq: 24 Nov 16 2:41

Tgt Ion:166 Resp: 150

Ion	Ratio	Lower	Upper
166	100		
165	89.0	64.1	119.1



EPA 8270D SIM RE-EXTRACT

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH124
Sample Collection Date: 11/15/16

ARF: 81515
APPL ID: AZ45991
QCG: #SIMDO-161206A-214446

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	26	0.2	0.10	0.06	ug/L	12/06/16	12/08/16
8270D-SIM	2-METHYLNAPHTHALENE	10	0.2	0.10	0.06	ug/L	12/06/16	12/08/16
8270D-SIM	NAPHTHALENE	50	0.2	0.10	0.05	ug/L	12/06/16	12/08/16
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	57.4	53-106			%	12/06/16	12/08/16
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	71.2	55-111			%	12/06/16	12/08/16
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	74.5	58-132			%	12/06/16	12/08/16

Quant Method: L1026P.M
Run #: 1129L195
Instrument: Linus
Sequence: L161129
Dilution Factor: 1
Initials: RHA

Printed: 12/09/16 10:57:35 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161129\1129L195.D Vial: 95
Acq On : 8 Dec 16 20:54 Operator: MA
Sample : AZ45991W12 1/980 Inst : Linus
Misc : water Multiplr: 1.02

Quant Time: Dec 9 10:52 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.87	136	2039	2.50000	ppb	-0.02
6) Acenaphthene-D10(IS)	7.92	164	1155	2.50000	ppb	-0.02
11) Phenanthrene-D10(IS)	9.85	188	2055	2.50000	ppb	-0.02
15) Chrysene-D12(IS)	16.80	240	2706	2.50000	ppb	-0.04
21) Perylene-D12(IS)	20.55	264	2546	2.50000	ppb	-0.05
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.03	82	879	3.63314	ppb	-0.01
Spiked Amount 5.102			Recovery = 71.207%			
7) Surrogate Recovery (FBP)	7.13	172	2140	2.93107	ppb	-0.02
Spiked Amount 5.102			Recovery = 57.448%			
17) Surrogate Recovery (TPH)	13.82	244	3466	3.80216	ppb	-0.06
Spiked Amount 5.102			Recovery = 74.519%			
Target Compounds						Qvalue
3) Naphthalene	5.90	128	40939	50.21868	ppb	98
4) 2-Methylnaphthalene	6.71	142	5154	10.12793	ppb	99
5) 1-Methylnaphthalene	6.82	142	13590	26.10640	ppb	96

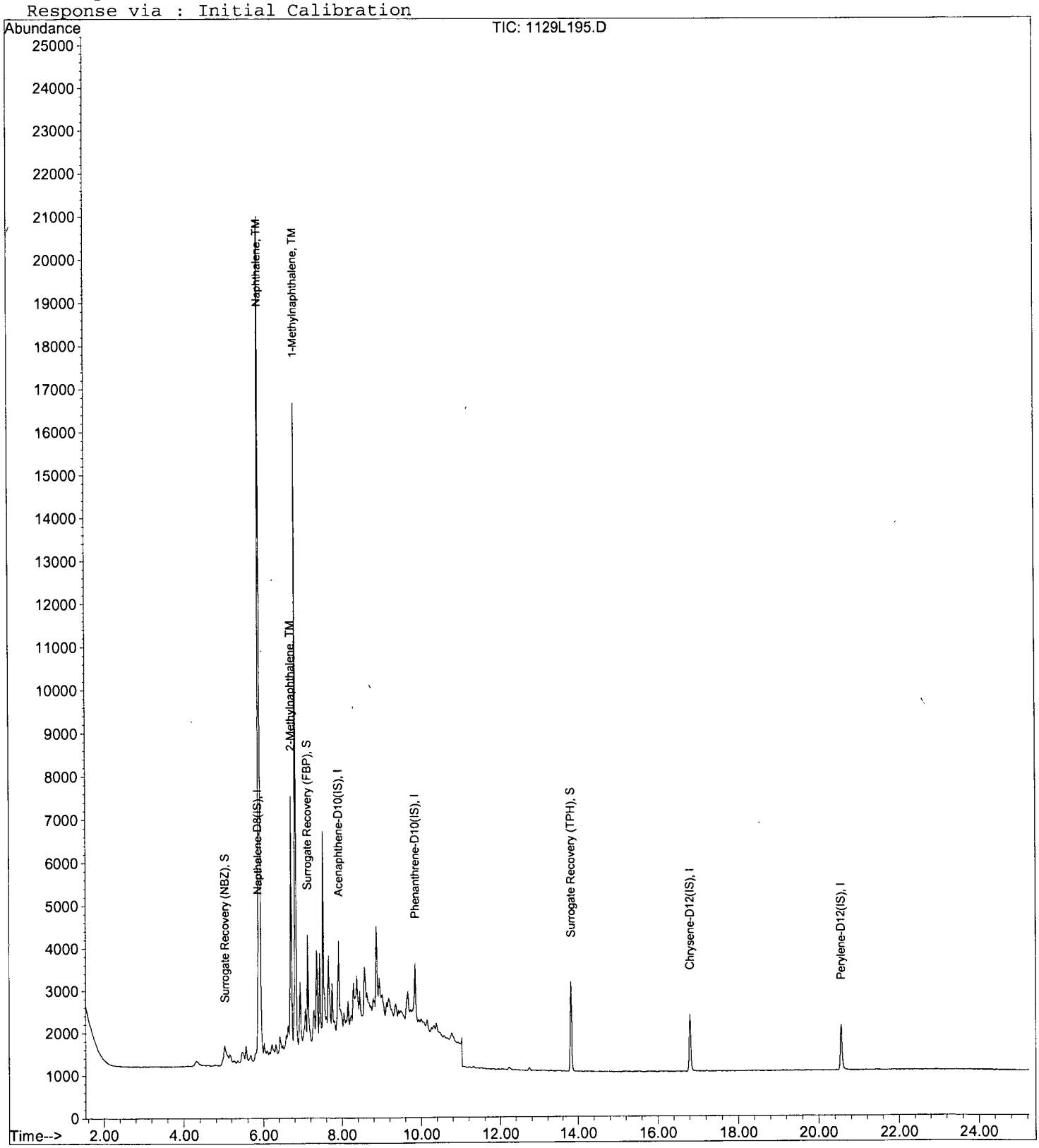
(#) = qualifier out of range (m) = manual integration

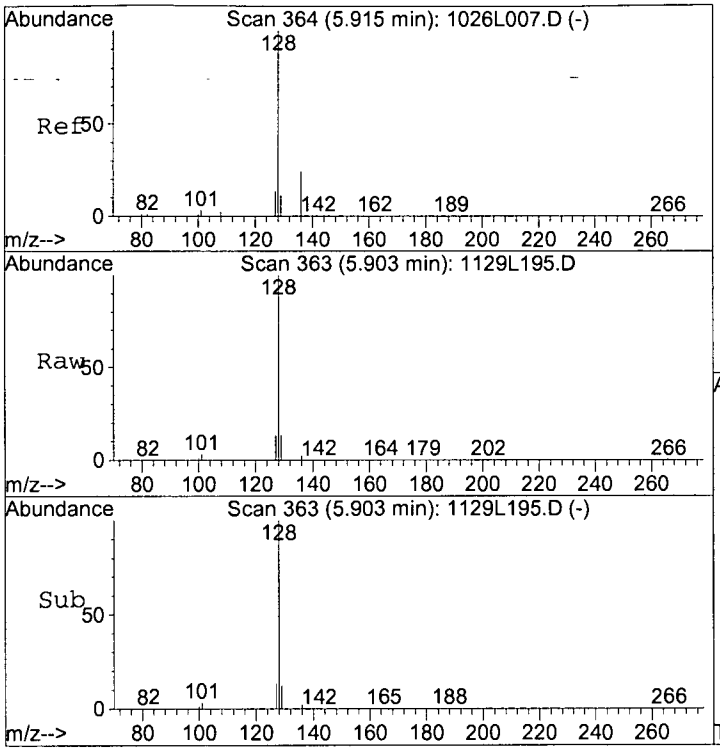
Quantitation Report

Data File : M:\LINUS\DATA\L161129\1129L195.D Vial: 95
Acq On : 8 Dec 16 20:54 Operator: MA
Sample : AZ45991W12 1/980 Inst : Linus
Misc : water Multiplr: 1.02

Quant Time: Dec 9 10:52 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration

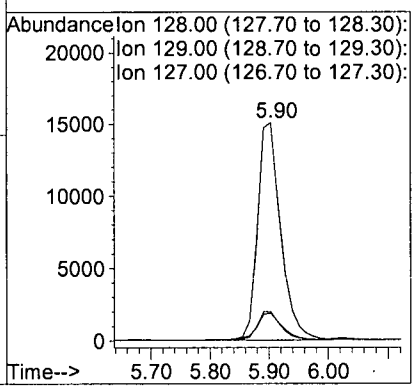


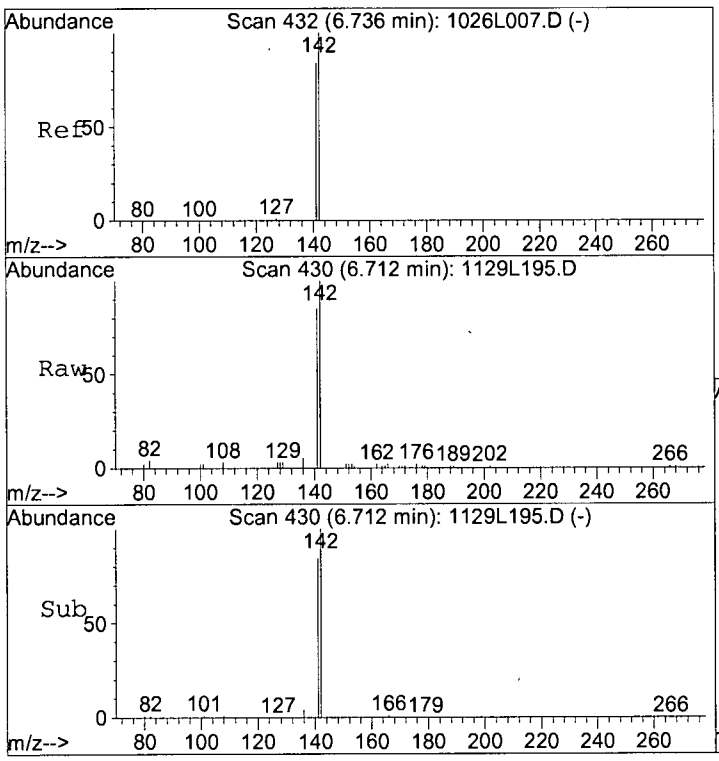


#3
Naphthalene
Concen: 50.21868 ppb
RT: 5.90 min Scan# 363
Delta R.T. -0.01 min
Lab File: 1129L195.D
Acq: 8 Dec 16 20:54

Tgt Ion:128 Resp: 40939

Ion	Ratio	Lower	Upper
128	100		
129	12.3	7.6	14.2
127	13.1	8.8	16.4

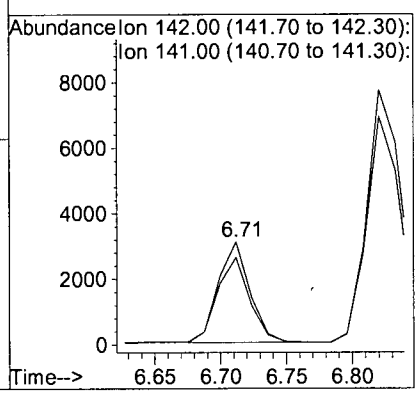


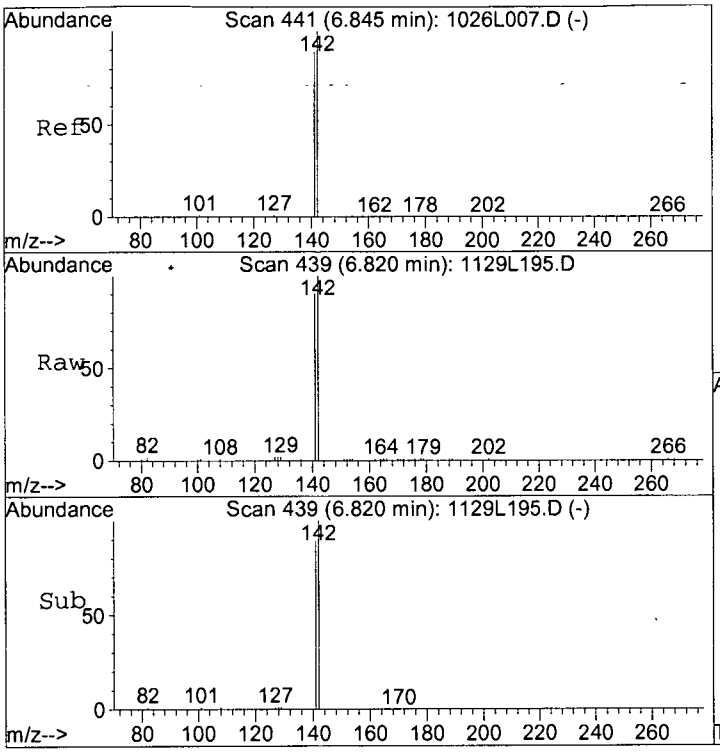


#4
2-Methylnaphthalene
Concen: 10.12793 ppb
RT: 6.71 min Scan# 430
Delta R.T. -0.02 min
Lab File: 1129L195.D
Acq: 8 Dec 16 20:54

Tgt Ion:142 Resp: 5154

Ion	Ratio	Lower	Upper
142	100		
141	83.9	59.4	110.4

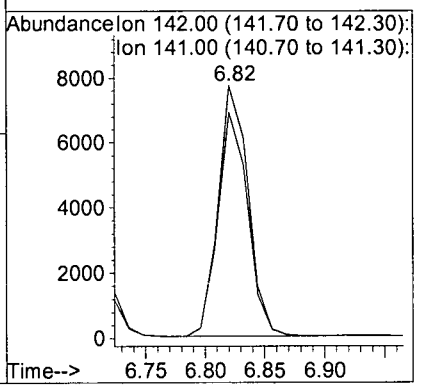




#5
1-Methylnaphthalene
Concen: 26.10640 ppb
RT: 6.82 min Scan# 439
Delta R.T. -0.02 min
Lab File: 1129L195.D
Acq: 8 Dec 16 20:54

Tgt Ion:142 Resp: 13590

Ion	Ratio	Lower	Upper
142	100		
141	89.3	60.2	111.8



EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH125
Sample Collection Date: 11/15/16

ARF: 81515
APPL ID: AZ45992
QCG: #SIMDO-161122A-214139

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	11/22/16	11/29/16
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	11/22/16	11/29/16
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	11/22/16	11/29/16
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	53.7	53-106			%	11/22/16	11/29/16
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	89.0	55-111			%	11/22/16	11/29/16
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	97.0	58-132			%	11/22/16	11/29/16

Quant Method: L1026P.M
Run #: 1129L010
Instrument: Linus
Sequence: L161129
Dilution Factor: 1
Initials: RHA

Printed: 11/30/16 1:07:35 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161129\1129L010.D Vial: 10
Acq On : 29 Nov 16 19:03 Operator: MA
Sample : AZ45992W16 1/940 Inst : Linus
Misc : water Multiplr: 1.06

Quant Time: Nov 30 11:27 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.89	136	2580	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	7.94	164	1372	2.50000	ppb	0.00
11) Phenanthrene-D10(IS)	9.89	188	2377	2.50000	ppb	0.01
15) Chrysene-D12(IS)	16.88	240	2974	2.50000	ppb	0.04
21) Perylene-D12(IS)	20.66	264	2719	2.50000	ppb	0.06
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.05	82	1387	4.73423	ppb	0.00
Spiked Amount 5.319			Recovery = 88.999%			
7) Surrogate Recovery (FBP)	7.16	172	2378	2.85857	ppb	0.00
Spiked Amount 5.319			Recovery = 53.749%			
17) Surrogate Recovery (TPH)	13.88	244	4956	5.15724	ppb	0.00
Spiked Amount 5.319			Recovery = 96.952%			

Target Compounds Qvalue

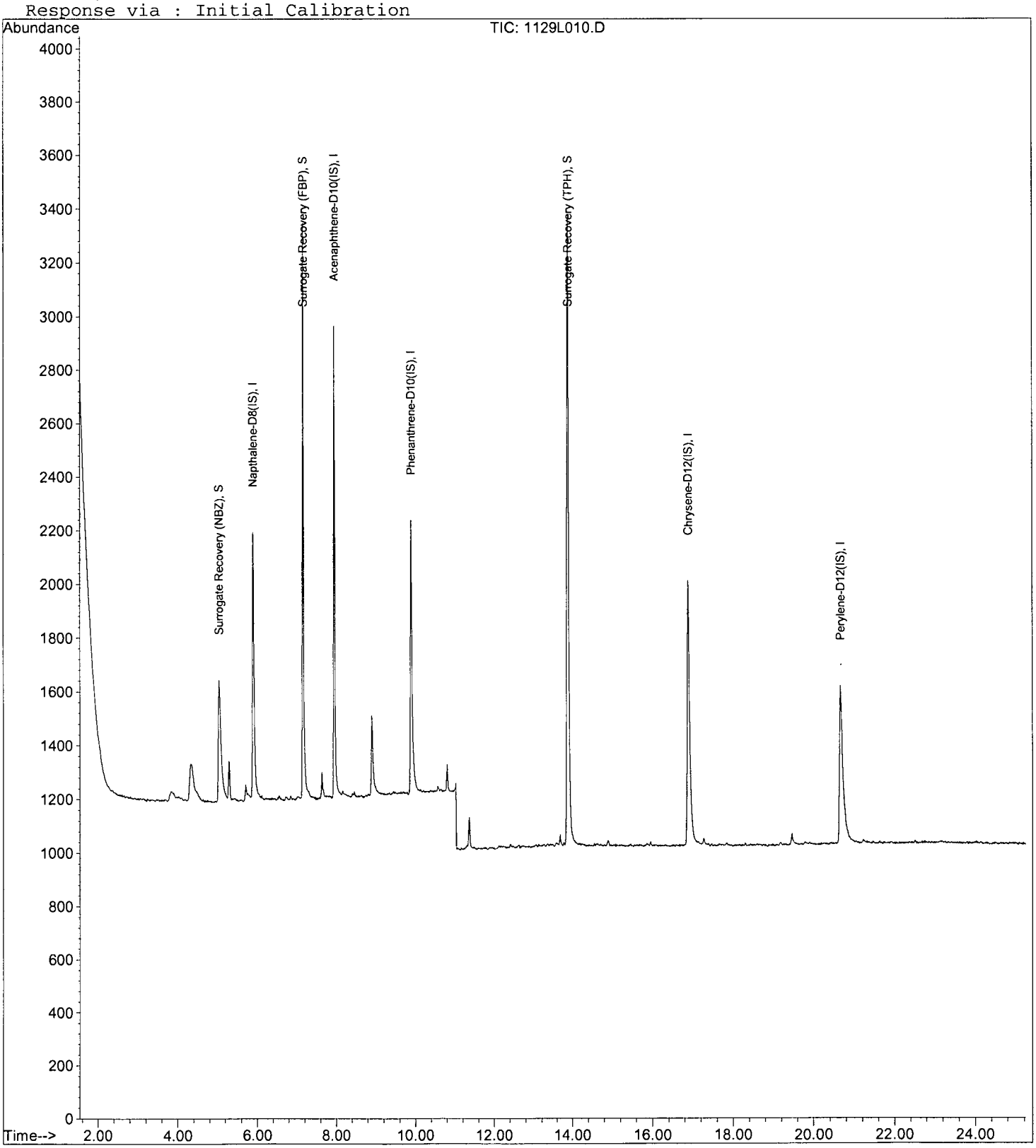
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161129\1129L010.D Vial: 10
Acq On : 29 Nov 16 19:03 Operator: MA
Sample : AZ45992W16 1/940 Inst : Linus
Misc : water Multiplr: 1.06

Quant Time: Nov 30 11:27 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH127

Sample Collection Date: 11/16/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515

APPL ID: AZ45993

QCG: #SIMDO-161122A-214139

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	11/22/16	11/29/16
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	11/22/16	11/29/16
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	11/22/16	11/29/16
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	48.3 #	53-106			%	11/22/16	11/29/16
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	83.7	55-111			%	11/22/16	11/29/16
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	99.6	58-132			%	11/22/16	11/29/16

= Recovery (or RPD) is outside QC limits.

Quant Method: L1026P.M
Run #: 1129L011
Instrument: Linus
Sequence: L161129
Dilution Factor: 1
Initials: RHA

Printed: 11/30/16 1:07:36 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161129\1129L011.D Vial: 11
Acq On : 29 Nov 16 19:35 Operator: MA
Sample : AZ45993W14 1/960 Inst : Linus
Misc : water Multiplr: 1.04

Quant Time: Nov 30 9:37 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.90	136	2603	2.50000	ppb	0.01
6) Acenaphthene-D10(IS)	7.94	164	1405	2.50000	ppb	0.00
11) Phenanthrene-D10(IS)	9.89	188	2447	2.50000	ppb	0.01
15) Chrysene-D12(IS)	16.89	240	3017	2.50000	ppb	0.05
21) Perylene-D12(IS)	20.68	264	2711	2.50000	ppb	0.08
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.05	82	1317	4.36027	ppb	0.00
Spiked Amount 5.208			Recovery = 83.712%			
7) Surrogate Recovery (FBP)	7.16	172	2186	2.51260	ppb	0.00
Spiked Amount 5.208			Recovery = 48.250%			
17) Surrogate Recovery (TPH)	13.88	244	5162	5.18475	ppb	0.00
Spiked Amount 5.208			Recovery = 99.552%			
Target Compounds						Qvalue

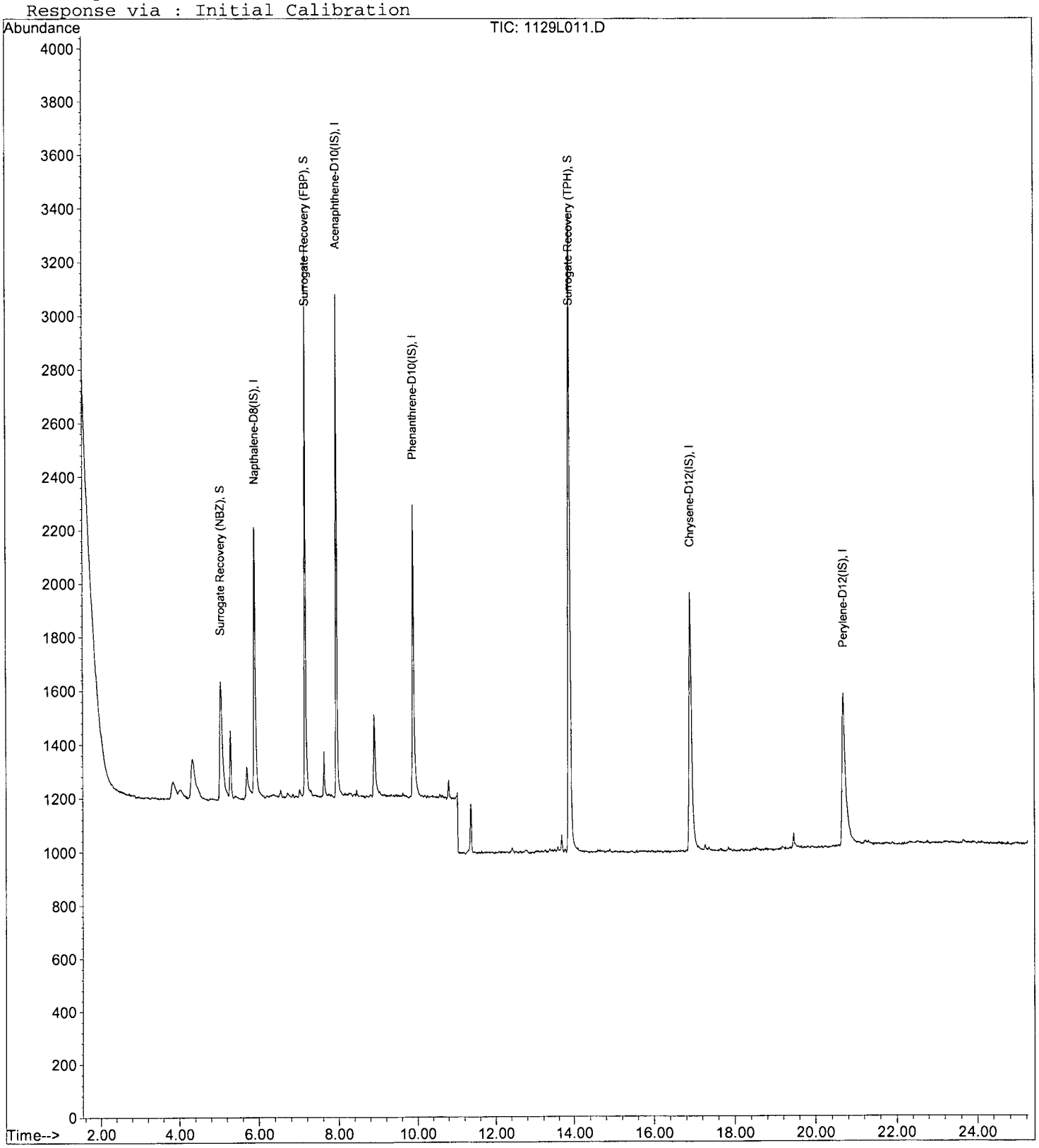
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161129\1129L011.D Vial: 11
Acq On : 29 Nov 16 19:35 Operator: MA
Sample : AZ45993W14 1/960 Inst : Linus
Misc : water Multiplr: 1.04

Quant Time: Nov 30 9:37 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



EPA 8270D SIM RE-EXTRACT

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH127
Sample Collection Date: 11/16/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515
APPL ID: AZ45993
QCG: #SIMDO-161206A-214446

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/06/16	12/08/16
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/06/16	12/08/16
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	12/06/16	12/08/16
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	55.4	53-106			%	12/06/16	12/08/16
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	62.1	55-111			%	12/06/16	12/08/16
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	72.7	58-132			%	12/06/16	12/08/16

Quant Method: L1026P.M
Run #: 1129L196
Instrument: Linus
Sequence: L161129
Dilution Factor: 1
Initials: RHA

Printed: 12/09/16 10:57:35 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161129\1129L196.D Vial: 96
Acq On : 8 Dec 16 21:28 Operator: MA
Sample : AZ45993W13 1/1060 Inst : Linus
Misc : water Multiplr: 0.94

Quant Time: Dec 9 10:52 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	2031	2.50000	ppb	-0.01
6) Acenaphthene-D10(IS)	7.92	164	1136	2.50000	ppb	-0.02
11) Phenanthrene-D10(IS)	9.85	188	2035	2.50000	ppb	-0.02
15) Chrysene-D12(IS)	16.80	240	2566	2.50000	ppb	-0.04
21) Perylene-D12(IS)	20.55	264	2396	2.50000	ppb	-0.05
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.03	82	765	2.92997	ppb	-0.01
Spiked Amount 4.717			Recovery = 62.116%			
7) Surrogate Recovery (FBP)	7.13	172	2029	2.61228	ppb	-0.02
Spiked Amount 4.717			Recovery = 55.374%			
17) Surrogate Recovery (TPH)	13.82	244	3208	3.43106	ppb	-0.06
Spiked Amount 4.717			Recovery = 72.737%			

Target Compounds Qvalue

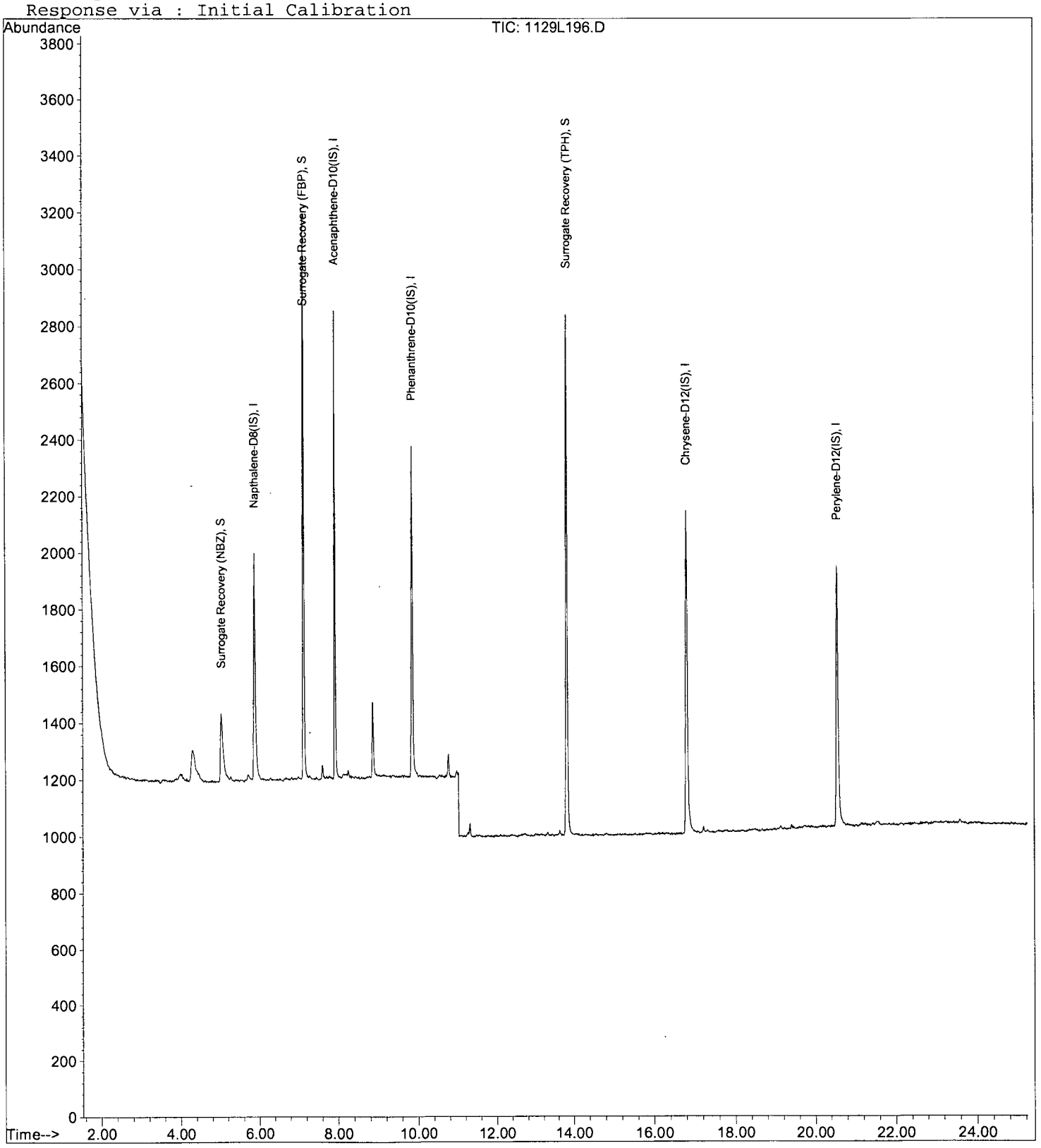
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161129\1129L196.D Vial: 96
Acq On : 8 Dec 16 21:28 Operator: MA
Sample : AZ45993W13 1/1060 Inst : Linus
Misc : water Multiplr: 0.94

Quant Time: Dec 9 10:52 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH129

Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515

APPL ID: AZ45994

QCG: #SIMDO-161122A-214139

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	11/22/16	11/29/16
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	11/22/16	11/29/16
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	11/22/16	11/29/16
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	52.5	53-106			%	11/22/16	11/29/16
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	86.1	55-111			%	11/22/16	11/29/16
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	97.3	58-132			%	11/22/16	11/29/16

Quant Method: L1026P.M
Run #: 1129L012
Instrument: Linus
Sequence: L161129
Dilution Factor: 1
Initials: RHA

Printed: 11/30/16 1:07:36 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161129\1129L012.D Vial: 12
Acq On : 29 Nov 16 20:08 Operator: MA
Sample : AZ45994W15 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Nov 30 11:28 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.90	136	2671	2.50000	ppb	0.01
6) Acenaphthene-D10(IS)	7.94	164	1428	2.50000	ppb	0.00
11) Phenanthrene-D10(IS)	9.90	188	2470	2.50000	ppb	0.02
15) Chrysene-D12(IS)	16.90	240	3075	2.50000	ppb	0.06
21) Perylene-D12(IS)	20.68	264	2806	2.50000	ppb	0.08
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.05	82	1389	4.02190	ppb	0.00
Spiked Amount 4.673			Recovery = 86.071%			
7) Surrogate Recovery (FBP)	7.16	172	2417	2.45236	ppb	0.00
Spiked Amount 4.673			Recovery = 52.473%			
17) Surrogate Recovery (TPH)	13.89	244	5142	4.54630	ppb	0.00
Spiked Amount 4.673			Recovery = 97.284%			

Target Compounds Qvalue

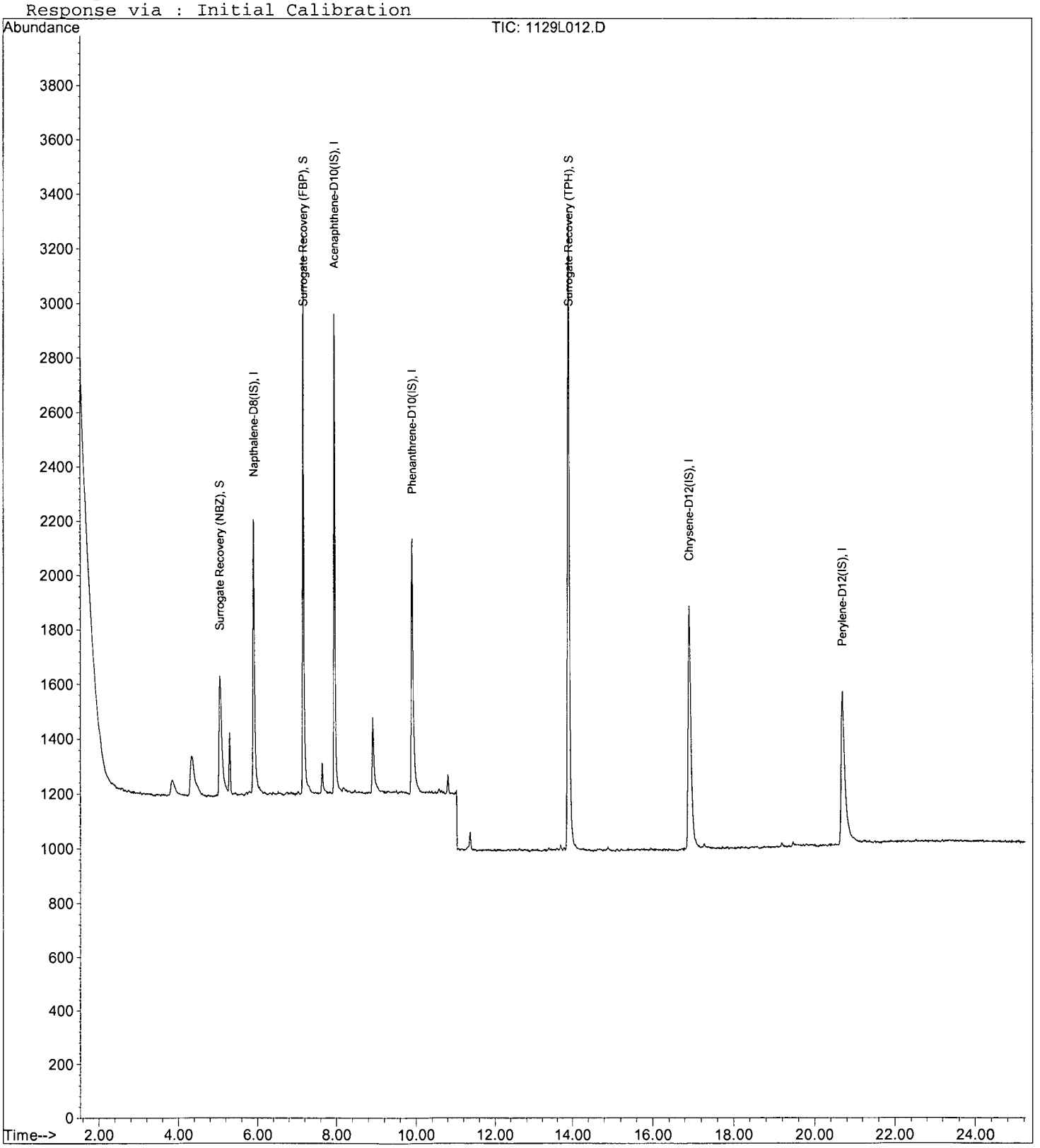
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161129\1129L012.D Vial: 12
Acq On : 29 Nov 16 20:08 Operator: MA
Sample : AZ45994W15 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Nov 30 11:28 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Project: 60481245 CIV0053 Red Hill Fuel Storage
ARF: 81515

Sample ID: ERH130
APPL ID: AZ45995

Sample Collection Date: 11/16/16
QCG: #SIMDO-161122A-214139

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	11/22/16	11/29/16
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	11/22/16	11/29/16
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	11/22/16	11/29/16
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	52.1 #	53-106			%	11/22/16	11/29/16
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	85.0	55-111			%	11/22/16	11/29/16
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	95.9	58-132			%	11/22/16	11/29/16

= Recovery (or RPD) is outside QC limits.

Quant Method: L1026P.M
Run #: 1129L013
Instrument: Linus
Sequence: L161129
Dilution Factor: 1
Initials: RHA

Printed: 11/30/16 1:07:36 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161129\1129L013.D Vial: 13
Acq On : 29 Nov 16 20:40 Operator: MA
Sample : AZ45995W07 1/960 Inst : Linus
Misc : water Multiplr: 1.04

Quant Time: Nov 30 9:37 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	5.89	136	2614	2.50000 ppb	0.00
6) Acenaphthene-D10(IS)	7.94	164	1364	2.50000 ppb	0.00
11) Phenanthrene-D10(IS)	9.90	188	2367	2.50000 ppb	0.02
15) Chrysene-D12(IS)	16.91	240	2955	2.50000 ppb	0.07
21) Perylene-D12(IS)	20.69	264	2679	2.50000 ppb	0.09
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.05	82	1343	4.42829 ppb	0.00
Spiked Amount 5.208			Recovery = 85.018%		
7) Surrogate Recovery (FBP)	7.16	172	2293	2.71481 ppb	0.00
Spiked Amount 5.208			Recovery = 52.128%		
17) Surrogate Recovery (TPH)	13.89	244	4871	4.99512 ppb	0.00
Spiked Amount 5.208			Recovery = 95.904%		

Target Compounds Qvalue

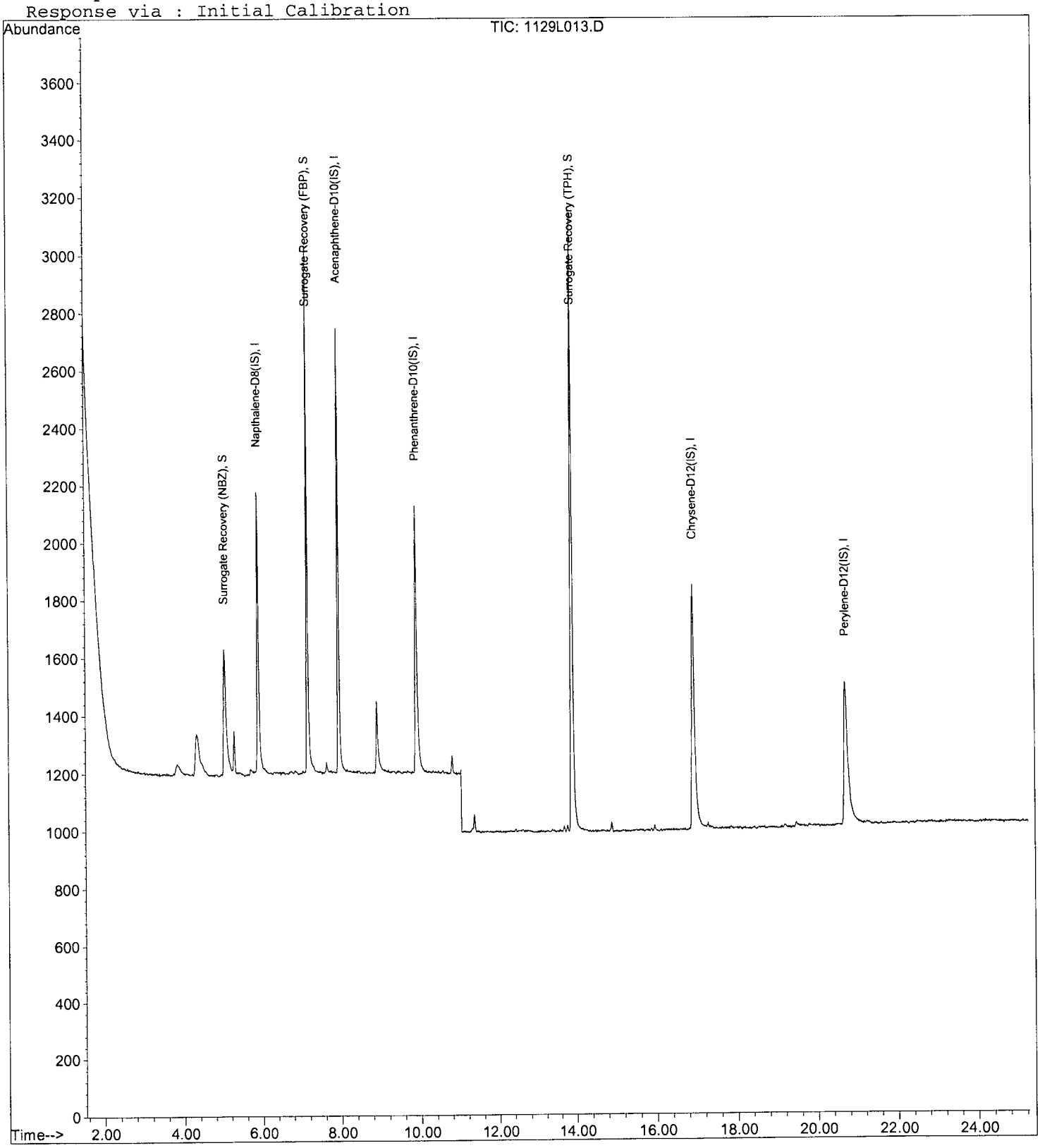
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161129\1129L013.D Vial: 13
Acq On : 29 Nov 16 20:40 Operator: MA
Sample : AZ45995W07 1/960 Inst : Linus
Misc : water Multiplr: 1.04

Quant Time: Nov 30 9:37 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



EPA 8270D SIM RE-EXTRACT

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH130

Sample Collection Date: 11/16/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515

APPL ID: AZ45995

QCG: #SIMDO-161206A-214446

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/06/16	12/08/16
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/06/16	12/08/16
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	12/06/16	12/08/16
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	62.6	53-106			%	12/06/16	12/08/16
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	69.8	55-111			%	12/06/16	12/08/16
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	76.0	58-132			%	12/06/16	12/08/16

Quant Method: L1026P.M
Run #: 1129L197
Instrument: Linus
Sequence: L161129
Dilution Factor: 1
Initials: RHA

Printed: 12/09/16 10:57:35 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161129\1129L197.D Vial: 97
Acq On : 8 Dec 16 22:01 Operator: MA
Sample : AZ45995W09 1/980 Inst : Linus
Misc : water Multiplr: 1.02

Quant Time: Dec 9 10:53 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	2084	2.50000 ppb	-0.01
6) Acenaphthene-D10(IS)	7.92	164	1150	2.50000 ppb	-0.02
11) Phenanthrene-D10(IS)	9.85	188	2099	2.50000 ppb	-0.02
15) Chrysene-D12(IS)	16.80	240	2590	2.50000 ppb	-0.04
21) Perylene-D12(IS)	20.55	264	2483	2.50000 ppb	-0.05
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.03	82	881	3.56197 ppb	-0.01
Spiked Amount 5.102			Recovery = 69.815%		
7) Surrogate Recovery (FBP)	7.13	172	2321	3.19280 ppb	-0.02
Spiked Amount 5.102			Recovery = 62.583%		
17) Surrogate Recovery (TPH)	13.82	244	3385	3.87961 ppb	-0.06
Spiked Amount 5.102			Recovery = 76.048%		

Target Compounds Qvalue

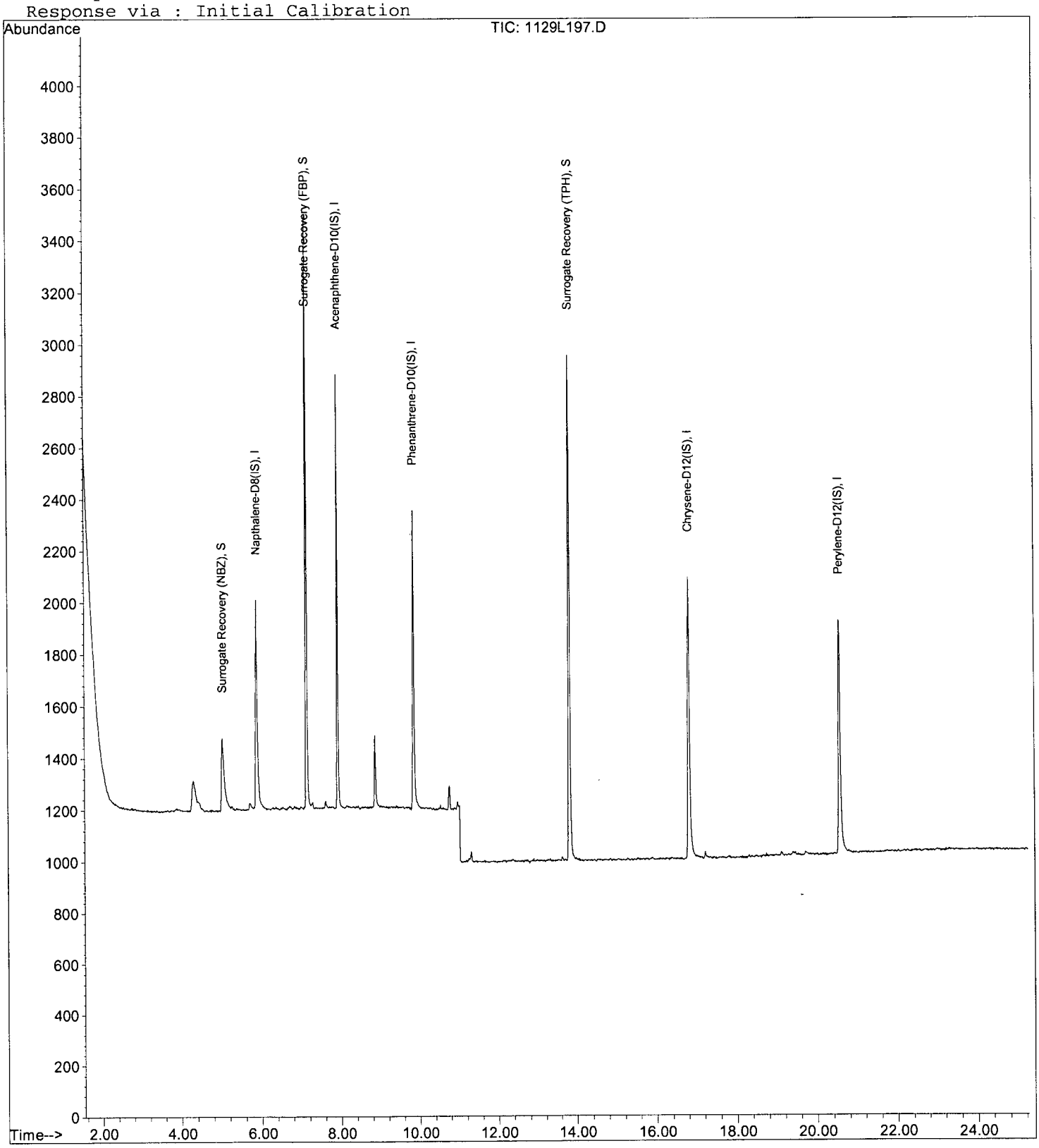
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161129\1129L197.D Vial: 97
Acq On : 8 Dec 16 22:01 Operator: MA
Sample : AZ45995W09 1/980 Inst : Linus
Misc : water Multiplr: 1.02

Quant Time: Dec 9 10:53 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH131
Sample Collection Date: 11/16/16

ARF: 81515
APPL ID: AZ45996
QCG: #SIMDO-161122A-214139

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	11/22/16	11/29/16
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	11/22/16	11/29/16
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	11/22/16	11/29/16
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	51.3 #	53-106			%	11/22/16	11/29/16
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	81.6	55-111			%	11/22/16	11/29/16
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	90.0	58-132			%	11/22/16	11/29/16

= Recovery (or RPD) is outside QC limits.

Quant Method: L1026P.M
Run #: 1129L014
Instrument: Linus
Sequence: L161129
Dilution Factor: 1
Initials: RHA

Printed: 11/30/16 1:07:36 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161129\1129L014.D Vial: 14
Acq On : 29 Nov 16 21:12 Operator: MA
Sample : AZ45996W08 1/1020 Inst : Linus
Misc : water Multiplr: 0.98

Quant Time: Nov 30 9:38 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	5.89	136	2774	2.50000 ppb	0.00
6) Acenaphthene-D10(IS)	7.94	164	1441	2.50000 ppb	0.00
11) Phenanthrene-D10(IS)	9.90	188	2534	2.50000 ppb	0.02
15) Chrysene-D12(IS)	16.90	240	3137	2.50000 ppb	0.06
21) Perylene-D12(IS)	20.69	264	2862	2.50000 ppb	0.09
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.05	82	1368	3.99890 ppb	0.00
Spiked Amount 4.902			Recovery =	81.580%	
7) Surrogate Recovery (FBP)	7.16	172	2383	2.51350 ppb	0.00
Spiked Amount 4.902			Recovery =	51.265%	
17) Surrogate Recovery (TPH)	13.89	244	4852	4.41123 ppb	0.01
Spiked Amount 4.902			Recovery =	89.984%	

Target Compounds Qvalue

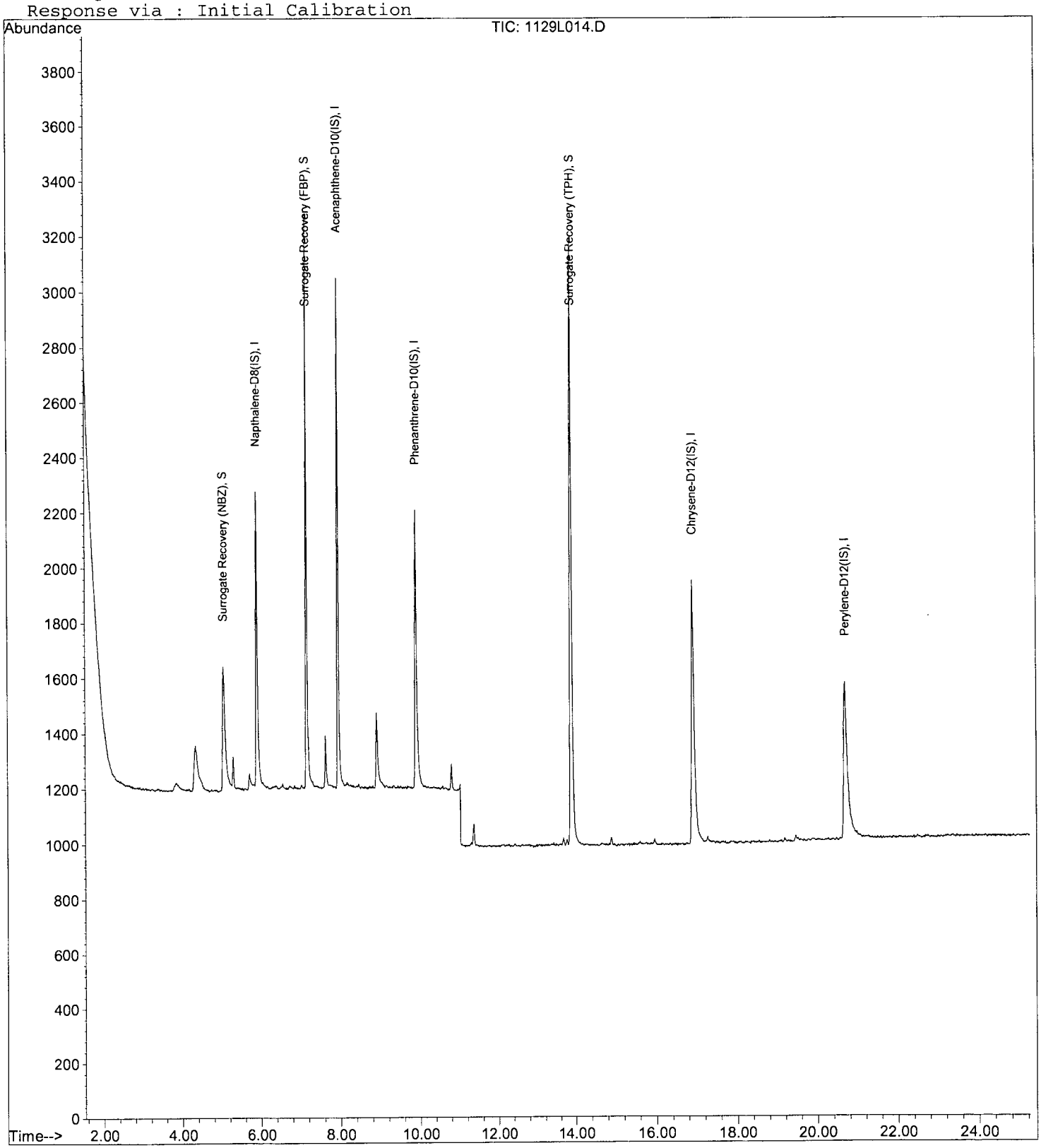
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161129\1129L014.D Vial: 14
Acq On : 29 Nov 16 21:12 Operator: MA
Sample : AZ45996W08 1/1020 Inst : Linus
Misc : water Multiplr: 0.98

Quant Time: Nov 30 9:38 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



EPA 8270D SIM RE-EXTRACT

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH131
Sample Collection Date: 11/16/16

ARF: 81515
APPL ID: AZ45996
QCG: #SIMDO-161206A-214446

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/06/16	12/08/16
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/06/16	12/08/16
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	12/06/16	12/08/16
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	64.5	53-106			%	12/06/16	12/08/16
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	74.5	55-111			%	12/06/16	12/08/16
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	79.9	58-132			%	12/06/16	12/08/16

Quant Method: L1026P.M
Run #: 1129L198
Instrument: Linus
Sequence: L161129
Dilution Factor: 1
Initials: RHA

Printed: 12/09/16 10:57:35 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161129\1129L198.D Vial: 98
Acq On : 8 Dec 16 22:34 Operator: MA
Sample : AZ45996W09 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 9 10:53 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

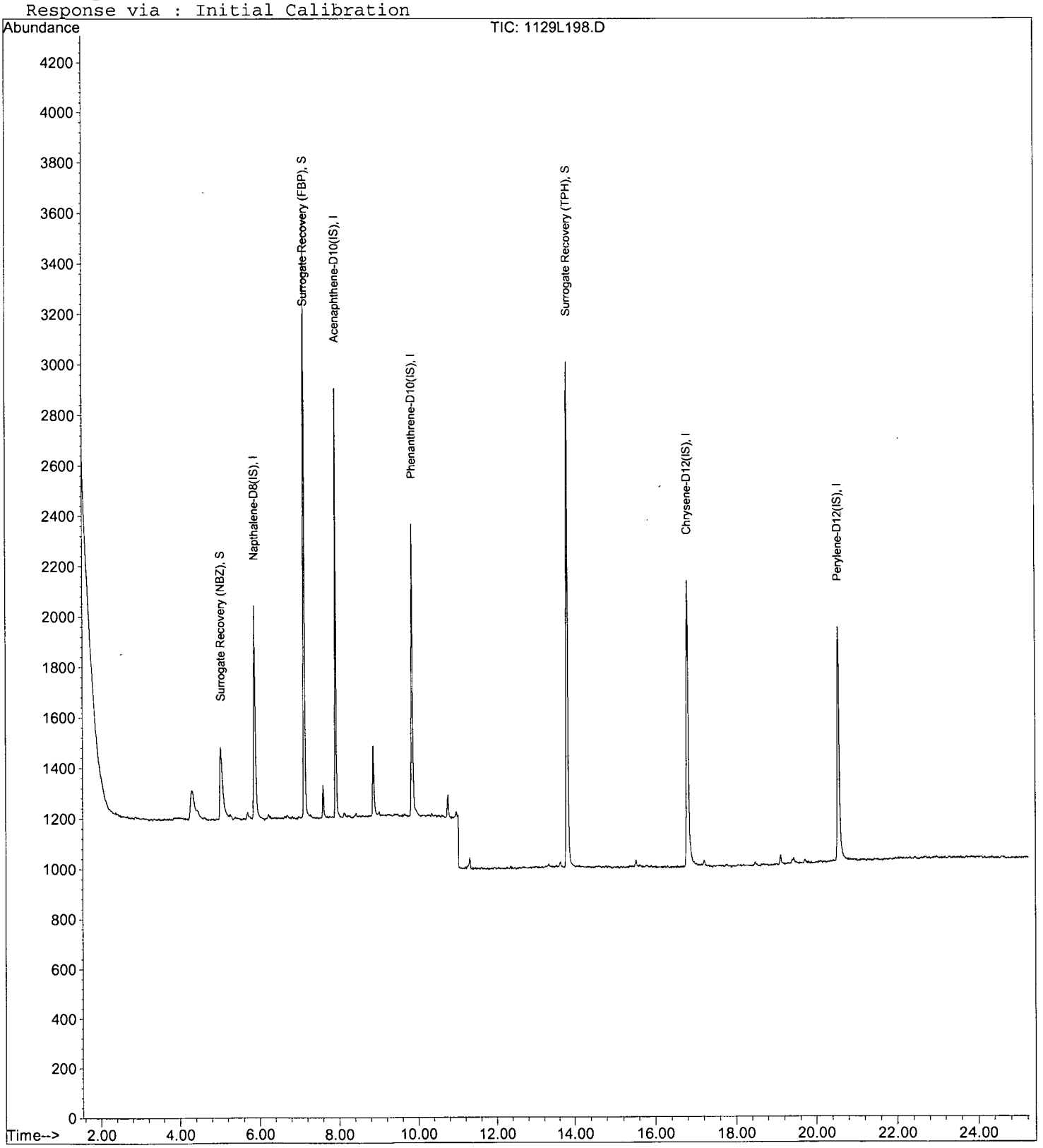
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	2094	2.50000	ppb	-0.01
6) Acenaphthene-D10(IS)	7.92	164	1166	2.50000	ppb	-0.02
11) Phenanthrene-D10(IS)	9.85	188	2116	2.50000	ppb	-0.02
15) Chrysene-D12(IS)	16.80	240	2607	2.50000	ppb	-0.04
21) Perylene-D12(IS)	20.55	264	2514	2.50000	ppb	-0.05
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.03	82	944	3.72519	ppb	-0.01
Spiked Amount 5.000			Recovery = 74.500%			
7) Surrogate Recovery (FBP)	7.13	172	2426	3.22561	ppb	-0.02
Spiked Amount 5.000			Recovery = 64.520%			
17) Surrogate Recovery (TPH)	13.82	244	3579	3.99370	ppb	-0.06
Spiked Amount 5.000			Recovery = 79.880%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration

Data File : M:\LINUS\DATA\L161129\1129L198.D Vial: 98
Acq On : 8 Dec 16 22:34 Operator: MA
Sample : AZ45996W09 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 9 10:53 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



ORGANICS

Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 10/26/16
Matrix: Instrument: Linus
Initials:

		Compound	0.1	0.2	0.5	1	5	10	50	100			Avg	%RSD		
			1026L003.D	1026L004.D	1026L005.D	1026L006.D	1026L007.D	1026L008.D	1026L009.D	1026L010.D						
1	I	Napthalene-D8(IS)														
2	SL	Surrogate Recovery (NBZ)	0.0804	0.3248	0.2336	0.2296	0.3042	0.3217	0.3012	0.2990			0.26	31	SL	1.000
3	TM	Naphthalene	1.093	1.058	0.9776	0.9622	1.079	1.065	0.9798	0.9449			1.0	5.8	TM	
4	TM	2-Methylnaphthalene	0.6190	0.6163	0.5906	0.5922	0.7073	0.7051	0.6480	0.6150			0.64	7.3	TM	
5	TM	1-Methylnaphthalene	0.7154	0.6995	0.6590	0.6161	0.6859	0.6794	0.5923	0.5625			0.65	8.4	TM	
6	I	Acenaphthene-D10(IS)														
7	S	Surrogate Recovery (FBP)	1.836	1.693	1.539	1.472	1.693	1.691	1.497	1.479			1.6	8.3	S	
8	TM	Acenaphthylene	2.007	2.013	1.915	1.895	2.275	2.242	2.059	1.996			2.1	6.8	TM	
9	*TM	Acenaphthene	1.353	1.216	1.158	1.178	1.322	1.313	1.191	1.156			1.2	6.5	*TM	
10	TM	Fluorene	1.493	1.372	1.332	1.314	1.566	1.550	1.413	1.365			1.4	6.9	TM	
11	I	Phenanthrene-D10(IS)														
12	TM	Phenanthrene	1.230	1.150	1.056	1.044	1.240	1.222	1.159	1.146			1.2	6.5	TM	
13	TM	Anthracene	0.9570	1.040	0.9985	0.9861	1.219	1.204	1.097	1.057			1.1	9.1	TM	
14	*TM	Fluoranthene	1.467	1.458	1.392	1.359	1.692	1.703	1.689	1.748			1.6	10	*TM	
15	I	Chrysene-D12(IS)														
16	TM	Pyrene	1.451	1.378	1.226	1.218	1.401	1.386	1.296	1.331			1.3	6.3	TM	
17	S	Surrogate Recovery (TPH)	1.024	0.9543	0.8040	0.7782	0.8541	0.8678	0.7977	0.7947			0.86	10	S	
18	TM	Benz (a) anthracene	1.156	1.102	1.027	1.021	1.221	1.256	1.226	1.133			1.1	7.8	TM	
19	TM	Chrysene	1.280	1.279	1.279	1.191	1.301	1.263	1.139	1.149			1.2	5.3	TM	
20	TM	Indeno (1,2,3-cd) pyrene	1.079	0.9954	1.025	1.057	1.233	1.254	1.210	1.222			1.1	9.3	TM	
21	I	Perylene-D12(IS)														
22	TM	Benzo (b) fluoranthene	1.137	0.9566	0.9689	0.9943	1.184	1.252	1.308	1.404			1.2	15	TM	
23	TML	Benzo (k) fluoranthene	0.8067	0.8751	0.8849	0.8451	1.200	1.135	1.110				0.98	17	TML	1.000
24	*TM	Benzo (a) pyrene	1.154	1.068	1.067	1.007	1.225	1.226	1.208	1.236			1.1	7.8	*TM	
25	TML	Dibenz (a,h) anthracene	0.6534	0.7507	0.9234	0.8434	1.105	1.128	1.115	1.121			0.96	20	TML	1.00
26	TM	Benzo (g,h,i) perylene	1.033	0.9952	0.9584	0.9260	1.106	1.118	1.083	1.084			1.0	6.9	TM	
27																
28																
29																
30																
31																
32																
33																
34																
35																

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L003.D Vial: 3
Acq On : 26 Oct 16 11:23 Operator: MA
Sample : 0.1 ug/ml PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 28 8:24 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.89	136	3110	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.94	164	1607	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.89	188	2743	2.50000	ppb		0.01
15) Chrysene-D12(IS)	16.86	240	3222	2.50000	ppb		0.02
21) Perylene-D12(IS)	20.61	264	3099	2.50000	ppb		0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.03	82	5	-0.02736	ppb		-0.01
Spiked Amount 5.000			Recovery = -0.540%				
7) Surrogate Recovery (FBP)	7.17	172	59	0.05692	ppb		0.01
Spiked Amount 5.000			Recovery = 1.140%				
17) Surrogate Recovery (TPH)	13.91	244	66	0.05959	ppb		0.03
Spiked Amount 5.000			Recovery = 1.200%				
Target Compounds							Qvalue
3) Naphthalene	5.92	128	136	0.10719	ppb		99
4) 2-Methylnaphthalene	6.74	142	77	0.09722	ppb		97
5) 1-Methylnaphthalene	6.84	142	89	0.10985	ppb		95
8) Acenaphthylene	7.79	152	129	0.09789	ppb		100
9) Acenaphthene	7.98	154	87	0.10949	ppb		98
10) Fluorene	8.61	166	96	0.10475	ppb		97
12) Phenanthrene	9.93	178	135	0.10645	ppb		99
13) Anthracene	10.03	178	105	0.08946	ppb		98
14) Fluoranthene	12.72	202	161	0.09385	ppb		97
16) Pyrene	13.35	202	187	0.10863	ppb		98
18) Benz (a) anthracene	16.84	228	149	0.10115	ppb		92
19) Chrysene	16.93	228	165	0.10363	ppb		98
20) Indeno (1,2,3-cd) pyrene	22.95	276	139	0.09508	ppb	#	95
22) Benzo (b) fluoranthene	19.72	252	141	0.09886	ppb		92
24) Benzo (a) pyrene	20.36	252	143	0.10041	ppb		93
25) Dibenz (a,h) anthracene	23.01	278	81	0.15217	ppb		96
26) Benzo (g,h,i) perylene	23.49	276	128	0.09949	ppb		91

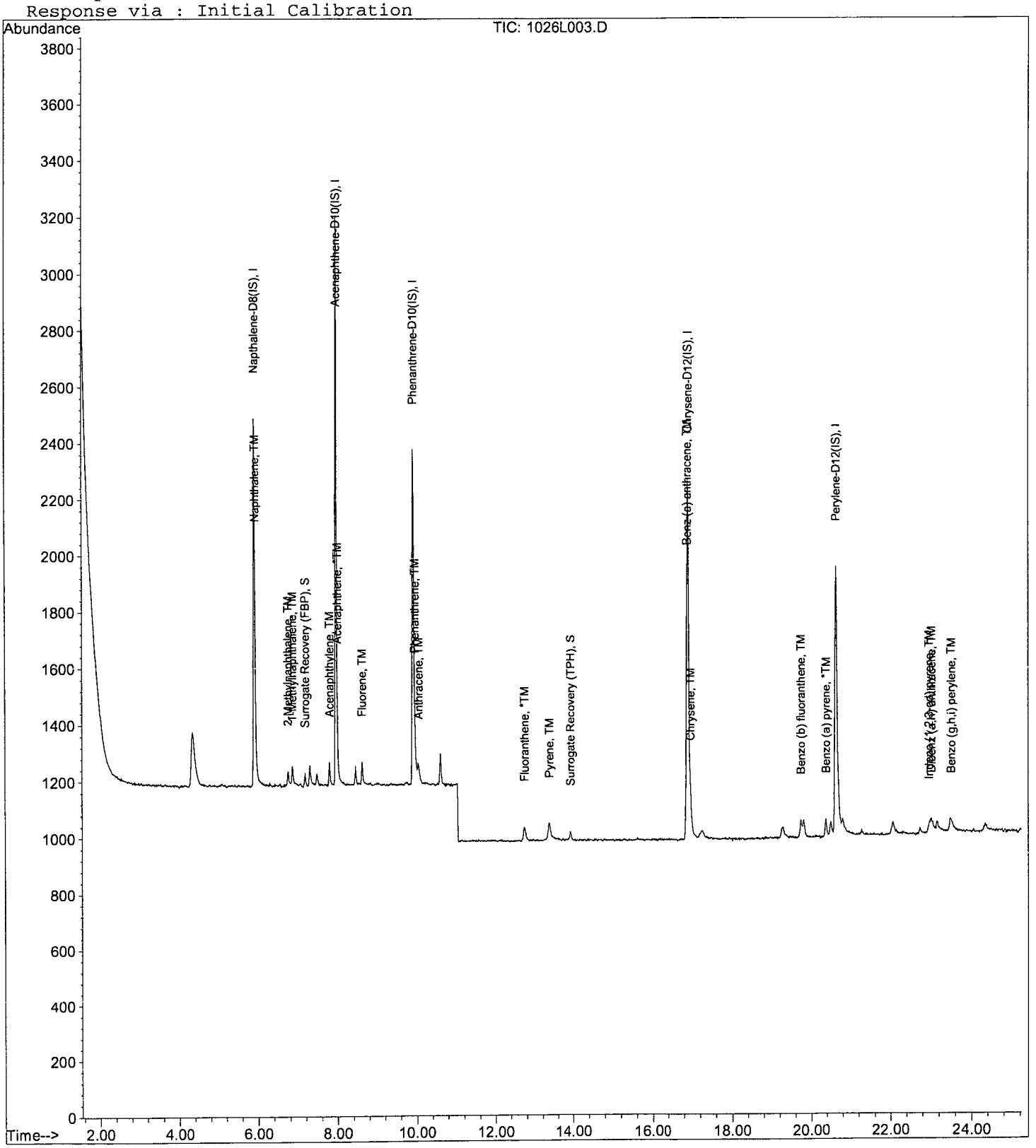
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161026\1026L003.D Vial: 3
Acq On : 26 Oct 16 11:23 Operator: MA
Sample : 0.1 ug/ml PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 28 8:24 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L004.D Vial: 4
Acq On : 26 Oct 16 11:56 Operator: MA
Sample : 0.2 ug/ml PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 15:51 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed Oct 26 15:50:22 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.89	136	3002	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	7.94	164	1521	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.89	188	2597	2.50000 ppb		0.01
15) Chrysene-D12(IS)	16.86	240	3039	2.50000 ppb		0.02
21) Perylene-D12(IS)	20.61	264	2914	2.50000 ppb		0.00
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.05	82	39	0.40403 ppb		0.03
Spiked Amount 5.000			Recovery	= 8.080%		
7) Surrogate Recovery (FBP)	7.17	172	103	0.09222 ppb		0.01
Spiked Amount 5.000			Recovery	= 1.840%		
17) Surrogate Recovery (TPH)	13.91	244	116	0.09317 ppb		0.03
Spiked Amount 5.000			Recovery	= 1.860%		
Target Compounds						Qvalue
3) Naphthalene	5.92	128	254	0.19348 ppb		99
4) 2-Methylnaphthalene	6.74	142	148	0.19912 ppb		99
5) 1-Methylnaphthalene	6.86	142	168	0.19556 ppb		96
8) Acenaphthylene	7.79	152	245	0.20066 ppb		99
9) Acenaphthene	7.98	154	148	0.17973 ppb		96
10) Fluorene	8.61	166	167	0.18379 ppb		98
12) Phenanthrene	9.93	178	239	0.18699 ppb		98
13) Anthracene	10.03	178	216	0.21728 ppb		97
14) Fluoranthene	12.71	202	303	0.19878 ppb		99
16) Pyrene	13.34	202	335	0.18993 ppb		98
18) Benz (a) anthracene	16.84	228	268	0.19070 ppb		98
19) Chrysene	16.93	228	311	0.19983 ppb		96
20) Indeno (1,2,3-cd) pyrene	22.95	276	242	0.18458 ppb	#	98
22) Benzo (b) fluoranthene	19.71	252	223	0.16820 ppb		99
23) Benzo (k) fluoranthene	19.78	252	204	0.21695 ppb		100
24) Benzo (a) pyrene	20.36	252	249	0.18518 ppb		95
25) Dibenz (a,h) anthracene	23.00	278	175	0.22977 ppb		98
26) Benzo (g,h,i) perylene	23.48	276	232	0.19276 ppb		94

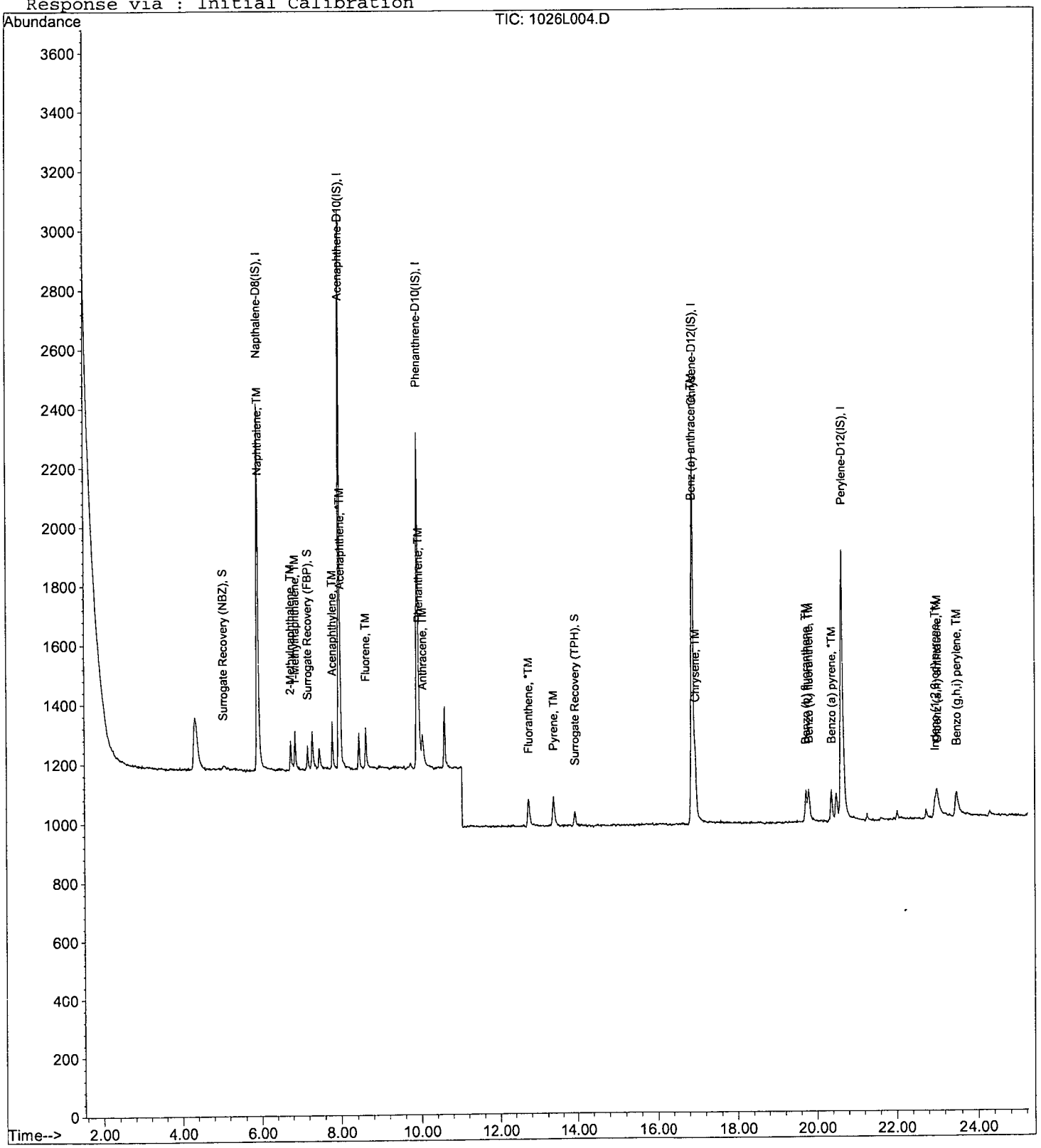
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161026\1026L004.D Vial: 4
Acq On : 26 Oct 16 11:56 Operator: MA
Sample : 0.2 ug/ml PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 15:51 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L005.D Vial: 5
Acq On : 26 Oct 16 12:28 Operator: MA
Sample : 0.5 ug/ml PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 15:51 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed Oct 26 15:50:22 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.89	136	2997	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.94	164	1546	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.89	188	2604	2.50000	ppb		0.01
15) Chrysene-D12(IS)	16.86	240	3072	2.50000	ppb		0.02
21) Perylene-D12(IS)	20.61	264	2859	2.50000	ppb		0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.06	82	70	0.28823	ppb		0.04
Spiked Amount 5.000			Recovery =	5.760%			
7) Surrogate Recovery (FBP)	7.17	172	238	0.21813	ppb		0.01
Spiked Amount 5.000			Recovery =	4.360%			
17) Surrogate Recovery (TPH)	13.90	244	247	0.20320	ppb		0.02
Spiked Amount 5.000			Recovery =	4.060%			
Target Compounds							Qvalue
3) Naphthalene	5.93	128	586	0.45453	ppb		99
4) 2-Methylnaphthalene	6.74	142	354	0.47812	ppb		100
5) 1-Methylnaphthalene	6.84	142	395	0.46573	ppb		97
8) Acenaphthylene	7.79	152	592	0.47623	ppb		100
9) Acenaphthene	7.98	154	358	0.45056	ppb		98
10) Fluorene	8.61	166	412	0.46494	ppb		99
12) Phenanthrene	9.93	178	550	0.44358	ppb		99
13) Anthracene	10.03	178	520	0.50007	ppb		100
14) Fluoranthene	12.71	202	725	0.47580	ppb		97
16) Pyrene	13.34	202	753	0.43324	ppb		98
18) Benz (a) anthracene	16.84	228	631	0.45474	ppb		99
19) Chrysene	16.93	228	786	0.49983	ppb		98
20) Indeno (1,2,3-cd) pyrene	22.94	276	630	0.49442	ppb	#	99
22) Benzo (b) fluoranthene	19.71	252	554	0.46268	ppb		99
23) Benzo (k) fluoranthene	19.78	252	506	0.52618	ppb		100
24) Benzo (a) pyrene	20.36	252	610	0.48017	ppb		96
25) Dibenz (a,h) anthracene	23.00	278	528	0.65763	ppb		99
26) Benzo (g,h,i) perylene	23.47	276	548	0.47262	ppb		96

(#) = qualifier out of range (m) = manual integration

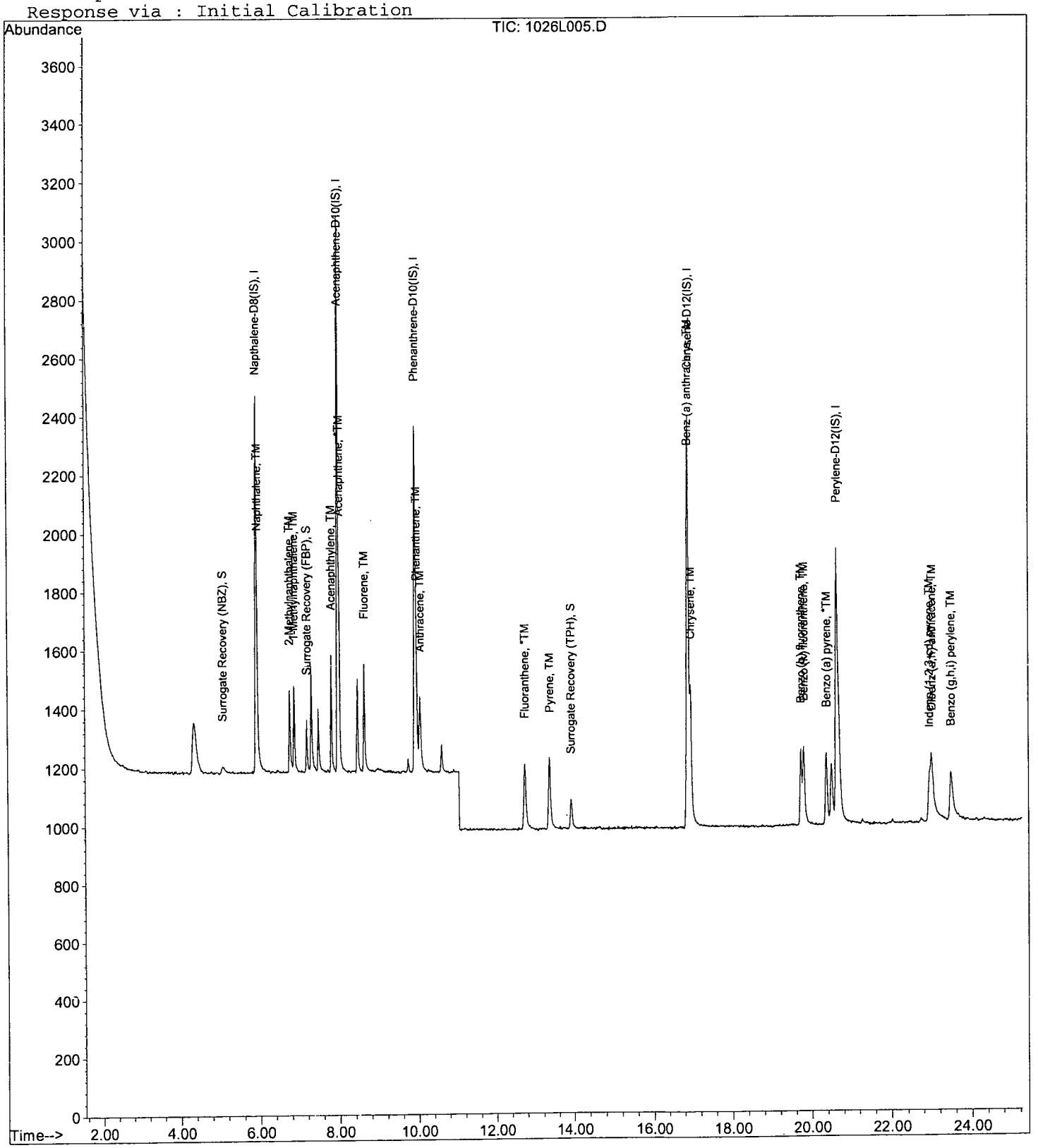
Quantitation Report

Data File : M:\LINUS\DATA\L161026\1026L005.D
Acq On : 26 Oct 16 12:28
Sample : 0.5 ug/ml PAH 10/26/16
Misc : water

Vial: 5
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Oct 26 15:51 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L006.D Vial: 6
Acq On : 26 Oct 16 13:01 Operator: MA
Sample : 1.0 ug/ml PAH 10/26/16 (1) Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 15:51 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed Oct 26 15:50:22 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.89	136	3027	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	7.94	164	1545	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.89	188	2662	2.50000 ppb		0.01
15) Chrysene-D12(IS)	16.85	240	3161	2.50000 ppb		0.01
21) Perylene-D12(IS)	20.61	264	2967	2.50000 ppb		0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.05	82	139	0.53919 ppb		0.03
Spiked Amount 5.000			Recovery	= 10.780%		
7) Surrogate Recovery (FBP)	7.17	172	455	0.43581 ppb		0.01
Spiked Amount 5.000			Recovery	= 8.720%		
17) Surrogate Recovery (TPH)	13.90	244	492	0.41953 ppb		0.02
Spiked Amount 5.000			Recovery	= 8.400%		
Target Compounds						Qvalue
3) Naphthalene	5.93	128	1165	0.92265 ppb		99
4) 2-Methylnaphthalene	6.74	142	717	0.97300 ppb		99
5) 1-Methylnaphthalene	6.84	142	746	0.89122 ppb		98
8) Acenaphthylene	7.79	152	1171	0.95780 ppb		100
9) Acenaphthene	7.98	154	728	0.94806 ppb		97
10) Fluorene	8.61	166	812	0.93887 ppb		99
12) Phenanthrene	9.92	178	1112	0.91159 ppb		99
13) Anthracene	10.02	178	1050	0.98771 ppb		99
14) Fluoranthene	12.70	202	1447	0.94417 ppb		97
16) Pyrene	13.33	202	1540	0.90120 ppb		99
18) Benz (a) anthracene	16.83	228	1291	0.93232 ppb		99
19) Chrysene	16.93	228	1506	0.93083 ppb		99
20) Indeno (1,2,3-cd) pyrene	22.94	276	1337	1.02354 ppb	#	100
22) Benzo (b) fluoranthene	19.71	252	1180	0.97384 ppb		99
23) Benzo (k) fluoranthene	19.77	252	1003	0.98779 ppb		98
24) Benzo (a) pyrene	20.35	252	1195	0.91857 ppb		98
25) Dibenz (a,h) anthracene	22.99	278	1001	1.08714 ppb		95
26) Benzo (g,h,i) perylene	23.46	276	1099	0.93031 ppb		96

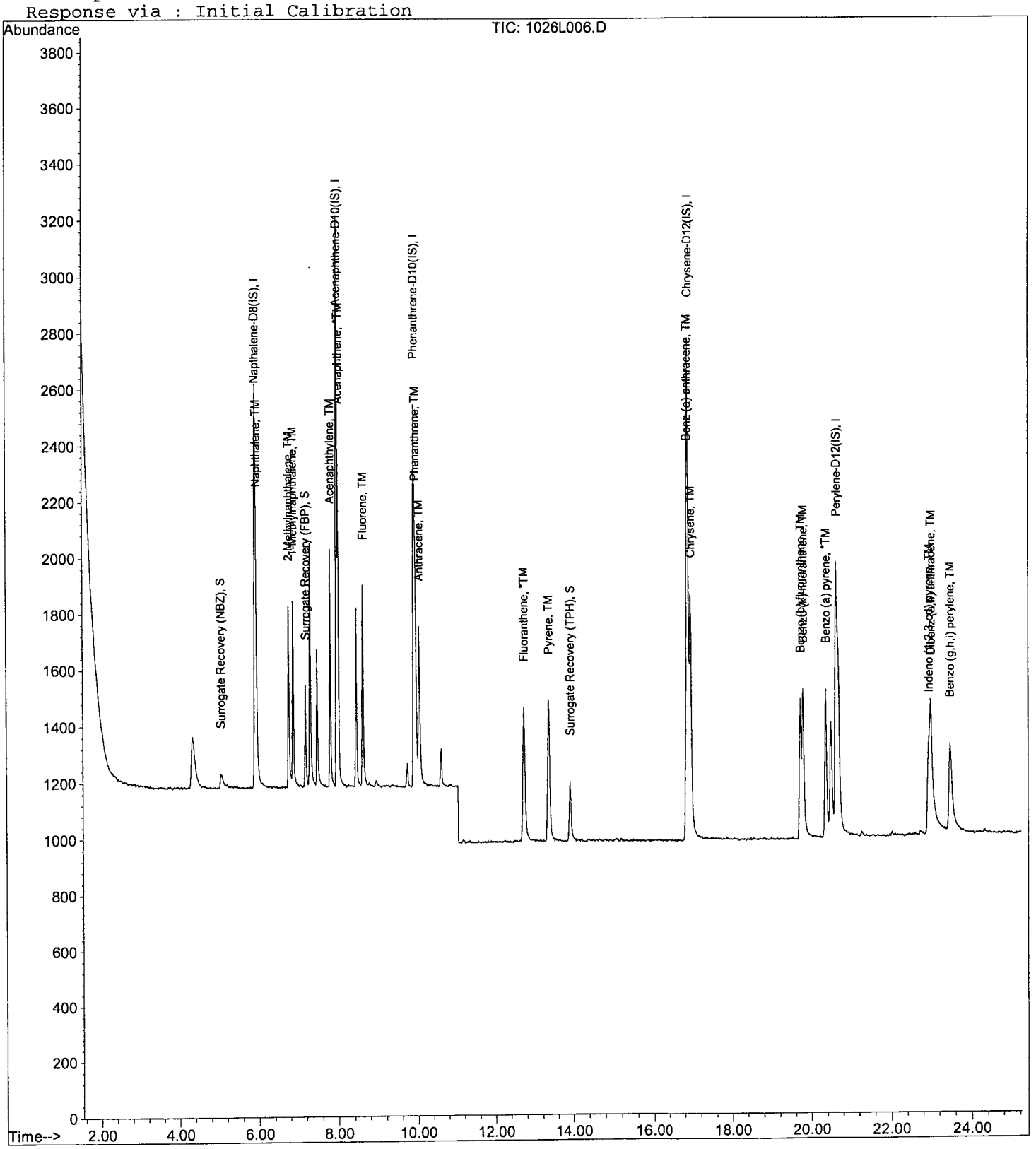
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161026\1026L006.D Vial: 6
Acq On : 26 Oct 16 13:01 Operator: MA
Sample : 1.0 ug/ml PAH 10/26/16 (1) Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 15:51 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L007.D Vial: 7
Acq On : 26 Oct 16 13:33 Operator: MA
Sample : 5.0 ug/ml PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 15:51 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed Oct 26 15:50:22 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.89	136	2942	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	7.94	164	1477	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.87	188	2585	2.50000 ppb		0.00
15) Chrysene-D12(IS)	16.84	240	3262	2.50000 ppb		0.00
21) Perylene-D12(IS)	20.60	264	2933	2.50000 ppb		0.00
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.05	82	895	3.50342 ppb		0.03
Spiked Amount 5.000			Recovery	= 70.060%		
7) Surrogate Recovery (FBP)	7.16	172	2500	2.58785 ppb		0.00
Spiked Amount 5.000			Recovery	= 51.760%		
17) Surrogate Recovery (TPH)	13.88	244	2786	2.39859 ppb		0.00
Spiked Amount 5.000			Recovery	= 47.980%		
Target Compounds						Qvalue
3) Naphthalene	5.92	128	6347	5.27386 ppb		100
4) 2-Methylnaphthalene	6.74	142	4162	5.85067 ppb		99
5) 1-Methylnaphthalene	6.84	142	4036	5.09968 ppb		97
8) Acenaphthylene	7.79	152	6719	5.80999 ppb		99
9) Acenaphthene	7.98	154	3906	5.39090 ppb		98
10) Fluorene	8.59	166	4625	5.68065 ppb		98
12) Phenanthrene	9.91	178	6410	5.53358 ppb		99
13) Anthracene	10.01	178	6300	6.12160 ppb		100
14) Fluoranthene	12.68	202	8746	5.95997 ppb		96
16) Pyrene	13.31	202	9137	5.31261 ppb		99
18) Benz (a) anthracene	16.82	228	7969	5.67276 ppb		99
19) Chrysene	16.92	228	8489	5.17390 ppb		99
20) Indeno (1,2,3-cd) pyrene	22.90	276	8042	5.93101 ppb	#	98
22) Benzo (b) fluoranthene	19.69	252	6943	5.83458 ppb		100
23) Benzo (k) fluoranthene	19.76	252	7038	7.03310 ppb		98
24) Benzo (a) pyrene	20.34	252	7187	5.70464 ppb		96
25) Dibenz (a,h) anthracene	22.96	278	6484	6.97171 ppb		100
26) Benzo (g,h,i) perylene	23.43	276	6490	5.65605 ppb		98

(#) = qualifier out of range (m) = manual integration

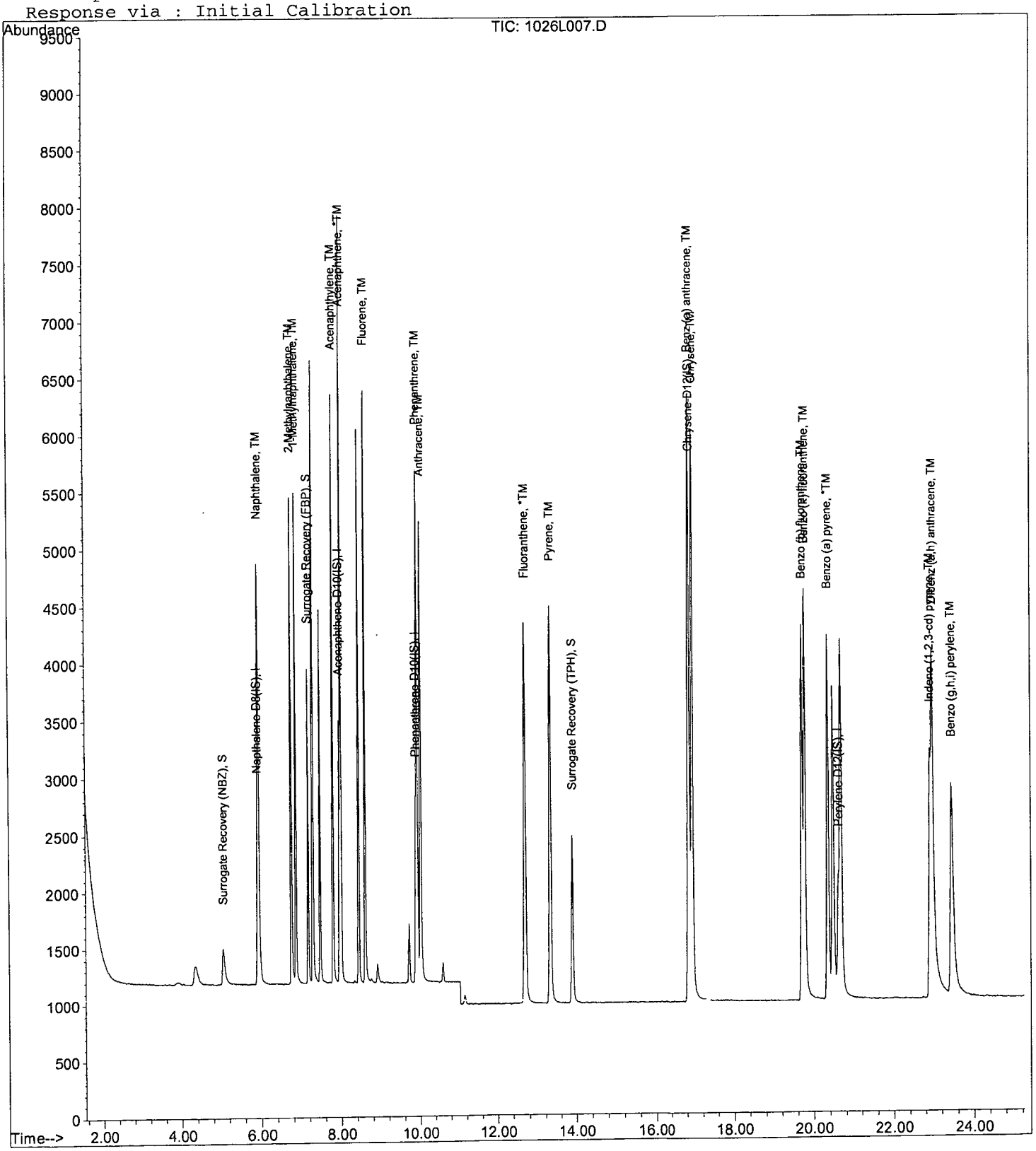
Quantitation Report

Data File : M:\LINUS\DATA\L161026\1026L007.D
Acq On : 26 Oct 16 13:33
Sample : 5.0 ug/ml PAH 10/26/16
Misc : water

Vial: 7
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Oct 26 15:51 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L008.D Vial: 8
Acq On : 26 Oct 16 14:05 Operator: MA
Sample : 10.0 ug/ml PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 15:51 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed Oct 26 15:50:22 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	5.89	136	2986	2.50000 ppb	0.00
6) Acenaphthene-D10(IS)	7.94	164	1505	2.50000 ppb	0.00
11) Phenanthrene-D10(IS)	9.87	188	2677	2.50000 ppb	0.00
15) Chrysene-D12(IS)	16.84	240	3400	2.50000 ppb	0.00
21) Perylene-D12(IS)	20.59	264	3039	2.50000 ppb	-0.01
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.05	82	1921	6.85829 ppb	0.00
Spiked Amount 5.000			Recovery	= 137.160%	
7) Surrogate Recovery (FBP)	7.16	172	5091	5.13577 ppb	0.00
Spiked Amount 5.000			Recovery	= 102.720%	
17) Surrogate Recovery (TPH)	13.88	244	5901	4.91410 ppb	0.00
Spiked Amount 5.000			Recovery	= 98.280%	
Target Compounds					Qvalue
3) Naphthalene	5.93	128	12724	10.30399 ppb	100
4) 2-Methylnaphthalene	6.74	142	8422	11.28079 ppb	99
5) 1-Methylnaphthalene	6.84	142	8115	10.06248 ppb	97
8) Acenaphthylene	7.79	152	13495	11.09277 ppb	99
9) Acenaphthene	7.98	154	7905	10.54234 ppb	99
10) Fluorene	8.58	166	9332	10.95063 ppb	97
12) Phenanthrene	9.91	178	13084	10.67897 ppb	100
13) Anthracene	9.99	178	12890	11.57524 ppb	99
14) Fluoranthene	12.67	202	18238	11.55739 ppb	97
16) Pyrene	13.30	202	18848	10.38432 ppb	100
18) Benz (a) anthracene	16.82	228	17088	11.36461 ppb	99
19) Chrysene	16.91	228	17182	9.97769 ppb	100
20) Indeno (1,2,3-cd) pyrene	22.89	276	17051	11.63162 ppb #	98
22) Benzo (b) fluoranthene	19.69	252	15215	11.94137 ppb	99
23) Benzo (k) fluoranthene	19.75	252	13796	12.30485 ppb	98
24) Benzo (a) pyrene	20.33	252	14907	11.10660 ppb	99
25) Dibenz (a,h) anthracene	22.95	278	13714	13.19086 ppb	99
26) Benzo (g,h,i) perylene	23.42	276	13588	11.13668 ppb	98

(#) = qualifier out of range (m) = manual integration

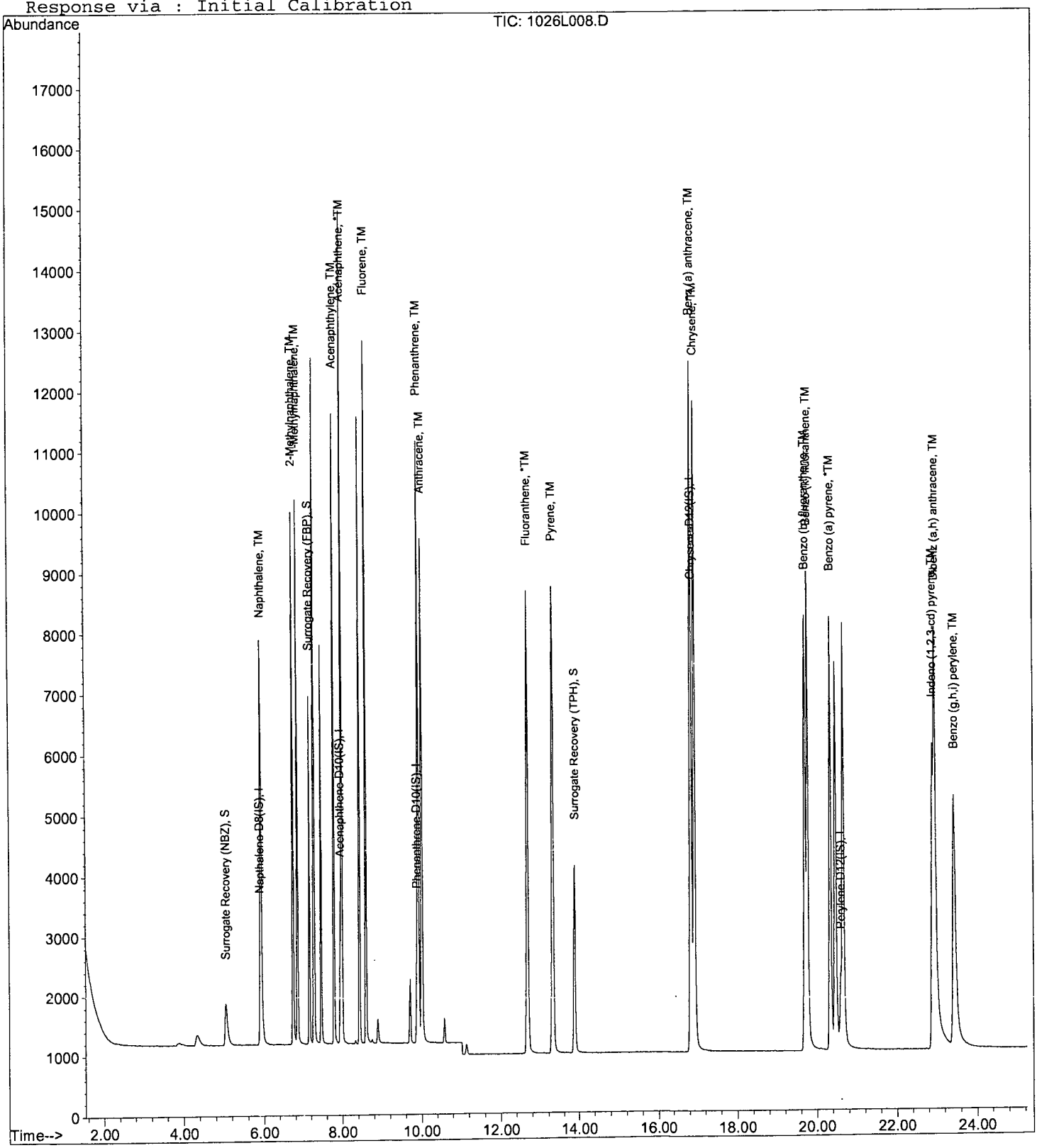
Quantitation Report

Data File : M:\LINUS\DATA\L161026\1026L008.D
Acq On : 26 Oct 16 14:05
Sample : 10.0 ug/ml PAH 10/26/16
Misc : water

Vial: 8
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Oct 26 15:51 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L009.D Vial: 9
Acq On : 26 Oct 16 14:37 Operator: MA
Sample : 50.0 ug/ml PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 15:51 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed Oct 26 15:50:22 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.89	136	2794	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.94	164	1386	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.87	188	2434	2.50000	ppb		0.00
15) Chrysene-D12(IS)	16.85	240	3234	2.50000	ppb		0.01
21) Perylene-D12(IS)	20.60	264	2790	2.50000	ppb		0.00
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.03	82	8415	30.23463	ppb		-0.01
Spiked Amount 5.000			Recovery = 604.700%				
7) Surrogate Recovery (FBP)	7.16	172	20751	22.62838	ppb		0.00
Spiked Amount 5.000			Recovery = 452.560%				
17) Surrogate Recovery (TPH)	13.87	244	25797	22.65018	ppb		-0.01
Spiked Amount 5.000			Recovery = 453.000%				
Target Compounds							Qvalue
3) Naphthalene	5.93	128	54753	47.14744	ppb		100
4) 2-Methylnaphthalene	6.74	142	36210	50.75083	ppb		99
5) 1-Methylnaphthalene	6.84	142	33098	43.81569	ppb		97
8) Acenaphthylene	7.79	152	57065	50.02321	ppb		100
9) Acenaphthene	7.99	154	33025	47.39617	ppb		96
10) Fluorene	8.59	166	39169	49.13071	ppb		99
12) Phenanthrene	9.92	178	56397	50.05941	ppb		99
13) Anthracene	10.01	178	53407	51.39823	ppb		99
14) Fluoranthene	12.68	202	82212	55.84917	ppb		97
16) Pyrene	13.31	202	83805	48.23348	ppb		99
18) Benz (a) anthracene	16.83	228	79293	54.20887	ppb		99
19) Chrysene	16.93	228	73686	45.00303	ppb		100
20) Indeno (1,2,3-cd) pyrene	22.90	276	78247	54.63168	ppb	#	99
22) Benzo (b) fluoranthene	19.71	252	72967	60.42347	ppb		99
23) Benzo (k) fluoranthene	19.78	252	61939	57.94864	ppb		99
24) Benzo (a) pyrene	20.36	252	67423	53.72649	ppb		96
25) Dibenz (a,h) anthracene	22.96	278	62206	61.88207	ppb		99
26) Benzo (g,h,i) perylene	23.43	276	60431	52.94634	ppb		97

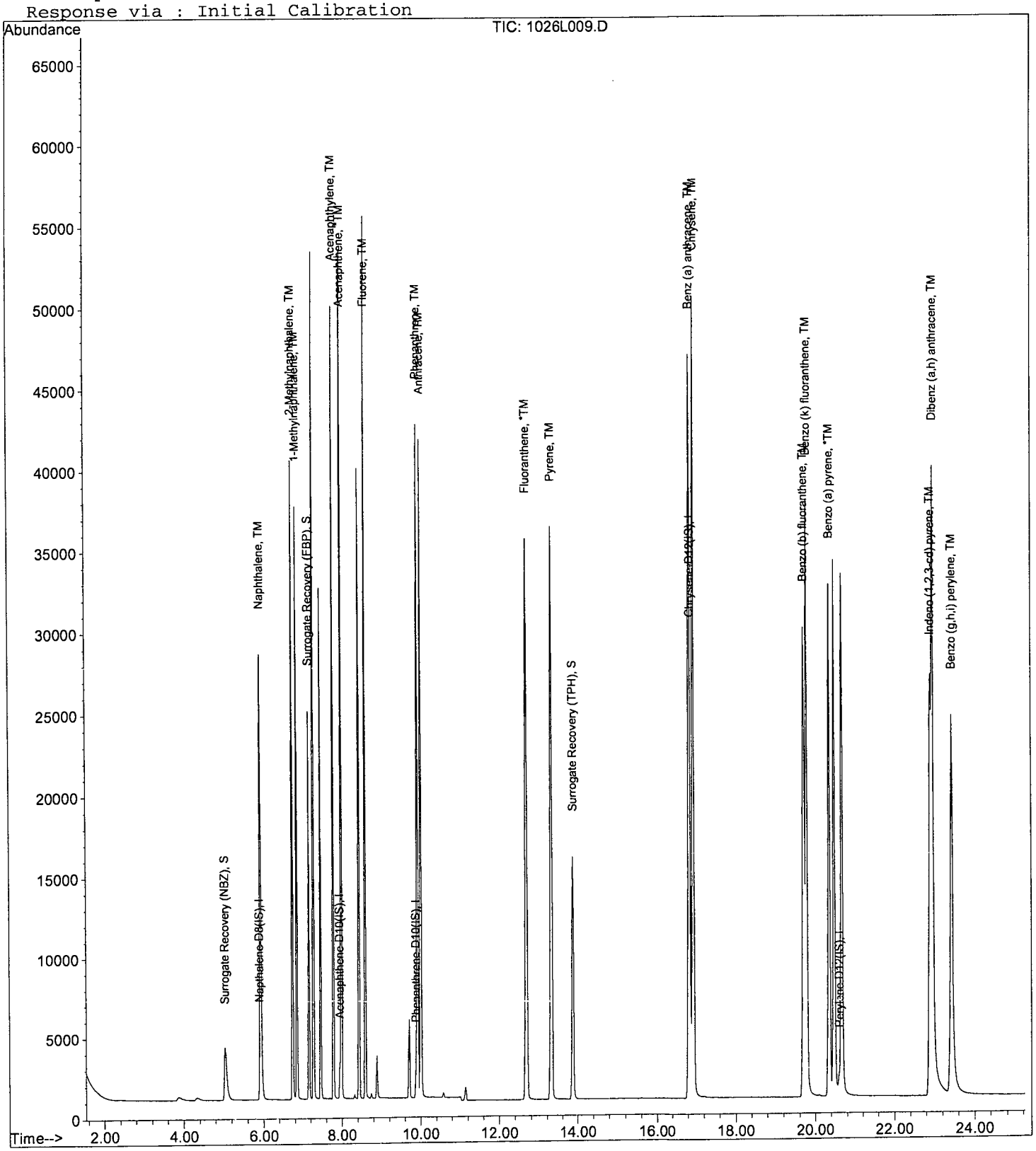
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161026\1026L009.D Vial: 9
Acq On : 26 Oct 16 14:37 Operator: MA
Sample : 50.0 ug/ml PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 15:51 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L010.D Vial: 10
Acq On : 26 Oct 16 15:09 Operator: MA
Sample : 100.0 ug/ml PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 15:51 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed Oct 26 15:50:22 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.90	136	2855	2.50000 ppb		0.01
6) Acenaphthene-D10(IS)	7.95	164	1362	2.50000 ppb		0.01
11) Phenanthrene-D10(IS)	9.89	188	2333	2.50000 ppb		0.01
15) Chrysene-D12(IS)	16.88	240	3111	2.50000 ppb		0.04
21) Perylene-D12(IS)	20.62	264	2663	2.50000 ppb		0.02
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.05	82	17071	58.28135 ppb		0.00
Spiked Amount 5.000			Recovery	= 1165.620%		
7) Surrogate Recovery (FBP)	7.16	172	40283	45.31564 ppb		0.00
Spiked Amount 5.000			Recovery	= 906.320%		
17) Surrogate Recovery (TPH)	13.88	244	49449	45.74789 ppb		0.00
Spiked Amount 5.000			Recovery	= 914.960%		
Target Compounds						Qvalue
3) Naphthalene	5.93	128	107908	91.68077 ppb		99
4) 2-Methylnaphthalene	6.74	142	70232	96.12565 ppb		100
5) 1-Methylnaphthalene	6.86	142	64241	84.72330 ppb		99
8) Acenaphthylene	7.79	152	108768	97.01976 ppb		99
9) Acenaphthene	7.99	154	63005	92.70530 ppb		99
10) Fluorene	8.59	166	74351	95.14008 ppb		99
12) Phenanthrene	9.93	178	106925	99.00134 ppb		99
13) Anthracene	10.02	178	98627	98.63251 ppb		98
14) Fluoranthene	12.70	202	163122	113.71087 ppb		97
16) Pyrene	13.34	202	165586	99.57259 ppb		99
18) Benz (a) anthracene	16.85	228	141018	99.02815 ppb		99
19) Chrysene	16.97	228	143007	92.10839 ppb		99
20) Indeno (1,2,3-cd) pyrene	22.94	276	152037	108.90723 ppb	#	98
22) Benzo (b) fluoranthene	19.73	252	149573	126.01447 ppb		99
23) Benzo (k) fluoranthene	19.82	252	80228	76.89275 ppb		98
24) Benzo (a) pyrene	20.39	252	131607	108.71585 ppb		97
25) Dibenz (a,h) anthracene	23.01	278	119414	120.37099 ppb		96
26) Benzo (g,h,i) perylene	23.48	276	115421	105.06387 ppb		98

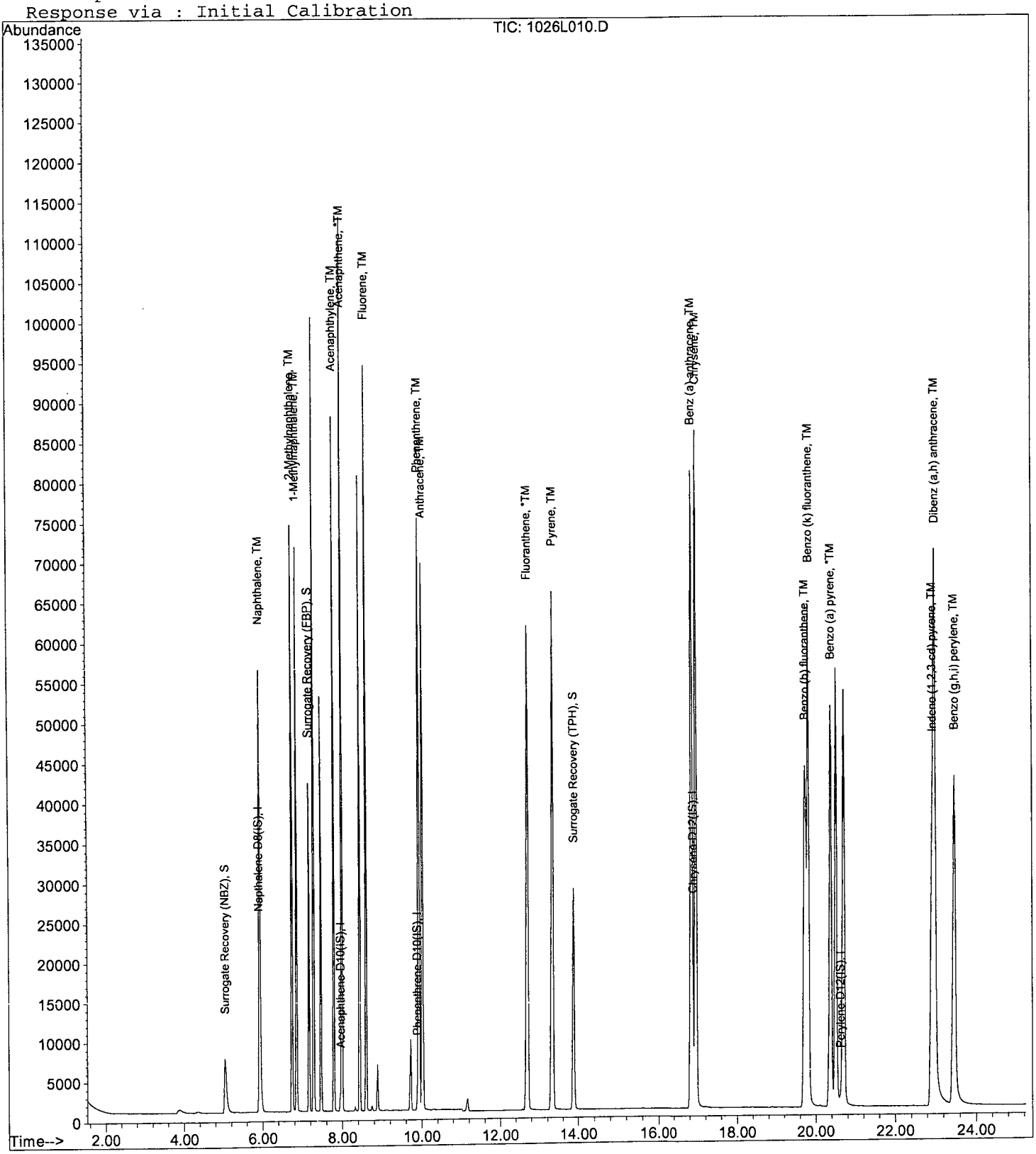
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161026\1026L010.D Vial: 10
Acq On : 26 Oct 16 15:09 Operator: MA
Sample : 100.0 ug/ml PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 15:51 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Form 7

Second Source Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 10/26/16
Matrix: Instrument: Linus
Initial Cal. Date: 10/26/16
Data File: 1026L011.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	Naphthalene	1.020	1.149	13	TM	
2	TM	2-Methylnaphthalene	0.6367	0.7311	15	TM	
3	TM	1-Methylnaphthalene	0.6513	0.7303	12	TM	
4	TM	Acenaphthylene	2.050	2.256	10	TM	
5	*TM	Acenaphthene	1.236	1.335	8.0	*TM	
6	TM	Fluorene	1.426	1.572	10	TM	
7	TM	Phenanthrene	1.156	1.229	6.3	TM	
8	TM	Anthracene	1.070	1.196	12	TM	
9	*TM	Fluoranthene	1.564	1.710	9.4	*TM	
10	TM	Pyrene	1.336	1.394	4.4	TM	
11	TM	Benz (a) anthracene	1.143	1.235	8.0	TM	
12	TM	Chrysene	1.235	1.312	6.2	TM	
13	TM	Indeno (1,2,3-cd) pyrene	1.134	1.292	14	TM	
14	TM	Benzo (b) fluoranthene	1.151	1.183	2.8	TM	
15	TML	Benzo (k) fluoranthene	0.9795	1.143	17	TML	2.5
16	*TM	Benzo (a) pyrene	1.149	1.228	6.9	*TM	
17	TML	Dibenz (a,h) anthracene	0.9550	1.177	23	TML	6.9
18	TM	Benzo (g,h,i) perylene	1.038	1.117	7.6	TM	
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
		Average			10.3		

EPA 8270C SIM
0

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L011.D Vial: 11
Acq On : 26 Oct 16 15:42 Operator: MA
Sample : SS PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 16:20 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed Oct 26 16:16:15 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.90	136	2785	2.50000 ppb		0.01
6) Acenaphthene-D10(IS)	7.94	164	1444	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.87	188	2515	2.50000 ppb		0.00
15) Chrysene-D12(IS)	16.85	240	3169	2.50000 ppb		0.01
21) Perylene-D12(IS)	20.60	264	2834	2.50000 ppb		0.00
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.06	82	1	-0.03779 ppb		0.01
Spiked Amount 5.000			Recovery = -0.760%			
7) Surrogate Recovery (FBP)	7.16	172	7	0.00752 ppb		0.00
Spiked Amount 5.000			Recovery = 0.160%			
17) Surrogate Recovery (TPH)	13.90	244	3	0.00275 ppb		0.02
Spiked Amount 5.000			Recovery = 0.060%			
Target Compounds						Qvalue
3) Naphthalene	5.93	128	6402	5.63457 ppb		100
4) 2-Methylnaphthalene	6.74	142	4072	5.74118 ppb		99
5) 1-Methylnaphthalene	6.84	142	4068	5.60694 ppb		97
8) Acenaphthylene	7.79	152	6514	5.50095 ppb		99
9) Acenaphthene	7.98	154	3856	5.40076 ppb		98
10) Fluorene	8.59	166	4539	5.51180 ppb		100
12) Phenanthrene	9.92	178	6183	5.31717 ppb		99
13) Anthracene	10.01	178	6017	5.59144 ppb		100
14) Fluoranthene	12.68	202	8601	5.46808 ppb		97
16) Pyrene	13.31	202	8838	5.22011 ppb		99
18) Benz (a) anthracene	16.82	228	7826	5.40169 ppb		99
19) Chrysene	16.92	228	8315	5.30991 ppb		99
20) Indeno (1,2,3-cd) pyrene	22.91	276	8191	5.69657 ppb	#	97
22) Benzo (b) fluoranthene	19.69	252	6704	5.14014 ppb		100
23) Benzo (k) fluoranthene	19.76	252	6480	5.12262 ppb		98
24) Benzo (a) pyrene	20.34	252	6962	5.34581 ppb		97
25) Dibenz (a,h) anthracene	22.96	278	6674	5.34490 ppb		99
26) Benzo (g,h,i) perylene	23.44	276	6331	5.38111 ppb		98

$$\text{Algorithum} = \frac{6402 * 1 * 2.5}{1 * 2785 * 1.02} = \frac{16005}{2840.7} = 5.63417$$

RH 10/27/16

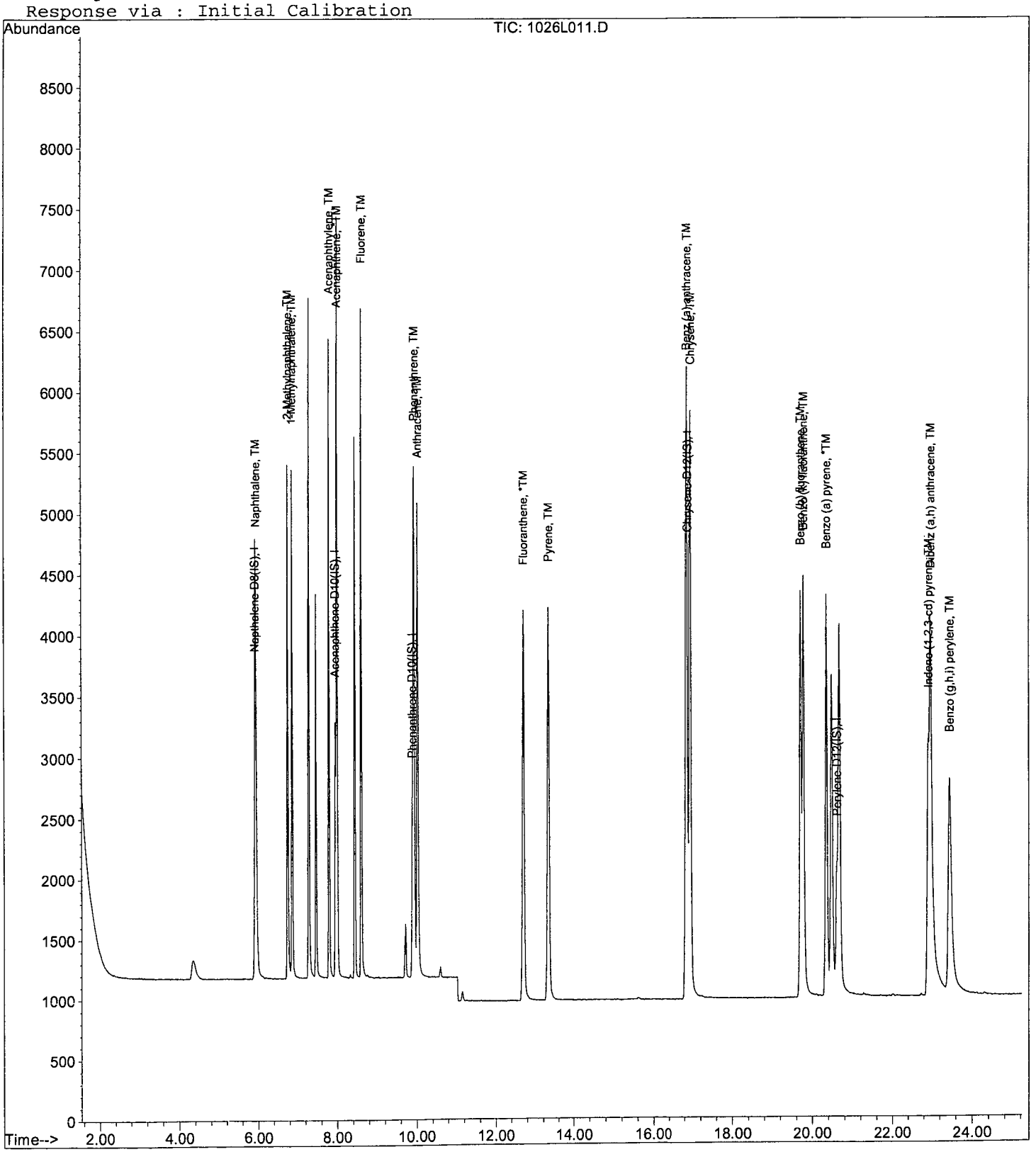
(#) = qualifier out of range (m) = manual integration
1026L011.D L1026P.M Wed Nov 02 15:58:03 2016

Quantitation Report

Data File : M:\LINUS\DATA\L161026\1026L011.D Vial: 11
Acq On : 26 Oct 16 15:42 Operator: MA
Sample : SS PAH 10/26/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Oct 26 16:20 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/23/16
Instrument: Linus
Initial Cal. Date: 10/26/16
Data File: 1026L316.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	SL	Surrogate Recovery (NBZ)	0.2618	0.3477	33	SL	15
3	TM	Naphthalene	1.020	1.054	3.3	TM	
4	TM	2-Methylnaphthalene	0.6367	0.6923	8.7	TM	
5	TM	1-Methylnaphthalene	0.6513	0.6754	3.7	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	S	Surrogate Recovery (FBP)	1.613	1.639	1.7	S	
8	TM	Acenaphthylene	2.050	2.159	5.3	TM	
9	*TM	Acenaphthene	1.236	1.249	1.0	*TM	
10	TM	Fluorene	1.426	1.485	4.2	TM	
11	I	Phenanthrene-D10(IS)	ISTD			I	
12	TM	Phenanthrene	1.156	1.146	0.89	TM	
13	TM	Anthracene	1.070	1.149	7.5	TM	
14	*TM	Fluoranthene	1.564	1.676	7.2	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.336	1.367	2.3	TM	
17	S	Surrogate Recovery (TPH)	0.8594	0.9078	5.6	S	
18	TM	Benz (a) anthracene	1.143	1.272	11	TM	
19	TM	Chrysene	1.235	1.232	0.30	TM	
20	TM	Indeno (1,2,3-cd) pyrene	1.134	1.276	13	TM	
21	I	Perylene-D12(IS)	ISTD			I	
22	TM	Benzo (b) fluoranthene	1.151	1.145	0.47	TM	
23	TML	Benzo (k) fluoranthene	0.9795	1.125	15	TML	0.83
24	*TM	Benzo (a) pyrene	1.149	1.136	1.1	*TM	
25	TML	Dibenz (a,h) anthracene	0.9550	1.122	17	TML	1.9
26	TM	Benzo (g,h,i) perylene	1.038	1.080	4.1	TM	
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			7.0		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L316.D Vial: 16
Acq On : 23 Nov 16 17:01 Operator: MA
Sample : 2.5 ug/ml PAH 10/26/16 (2) Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Nov 23 17:29 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	5.90	136	2301	2.50000 ppb	0.01
6) Acenaphthene-D10(IS)	7.95	164	1220	2.50000 ppb	0.01
11) Phenanthrene-D10(IS)	9.90	188	2212	2.50000 ppb	0.02
15) Chrysene-D12(IS)	16.89	240	2821	2.50000 ppb	0.05
21) Perylene-D12(IS)	20.66	264	2678	2.50000 ppb	0.06
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.05	82	800	2.86361 ppb	0.00
Spiked Amount 5.000			Recovery = 57.280%		
7) Surrogate Recovery (FBP)	7.16	172	2000	2.54150 ppb	0.00
Spiked Amount 5.000			Recovery = 50.820%		
17) Surrogate Recovery (TPH)	13.90	244	2561	2.64096 ppb	0.02
Spiked Amount 5.000			Recovery = 52.820%		
Target Compounds					Qvalue
3) Naphthalene	5.93	128	4850	5.16649 ppb	100
4) 2-Methylnaphthalene	6.74	142	3186	5.43686 ppb	99
5) 1-Methylnaphthalene	6.86	142	3108	5.18483 ppb	99
8) Acenaphthylene	7.79	152	5268	5.26554 ppb	99
9) Acenaphthene	7.99	154	3047	5.05123 ppb	99
10) Fluorene	8.59	166	3624	5.20869 ppb	98
12) Phenanthrene	9.93	178	5068	4.95531 ppb	99
13) Anthracene	10.02	178	5085	5.37264 ppb	99
14) Fluoranthene	12.71	202	7414	5.35910 ppb	97
16) Pyrene	13.34	202	7710	5.11564 ppb	99
18) Benz (a) anthracene	16.87	228	7177	5.56483 ppb	99
19) Chrysene	16.96	228	6949	4.98502 ppb	99
20) Indeno (1,2,3-cd) pyrene	22.98	276	7201	5.62585 ppb #	98
22) Benzo (b) fluoranthene	19.75	252	6133	4.97626 ppb	99
23) Benzo (k) fluoranthene	19.81	252	6027	5.04170 ppb	98
24) Benzo (a) pyrene	20.40	252	6084	4.94376 ppb	96
25) Dibenz (a,h) anthracene	23.03	278	6008	5.09626 ppb	98
26) Benzo (g,h,i) perylene	23.51	276	5786	5.20436 ppb	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

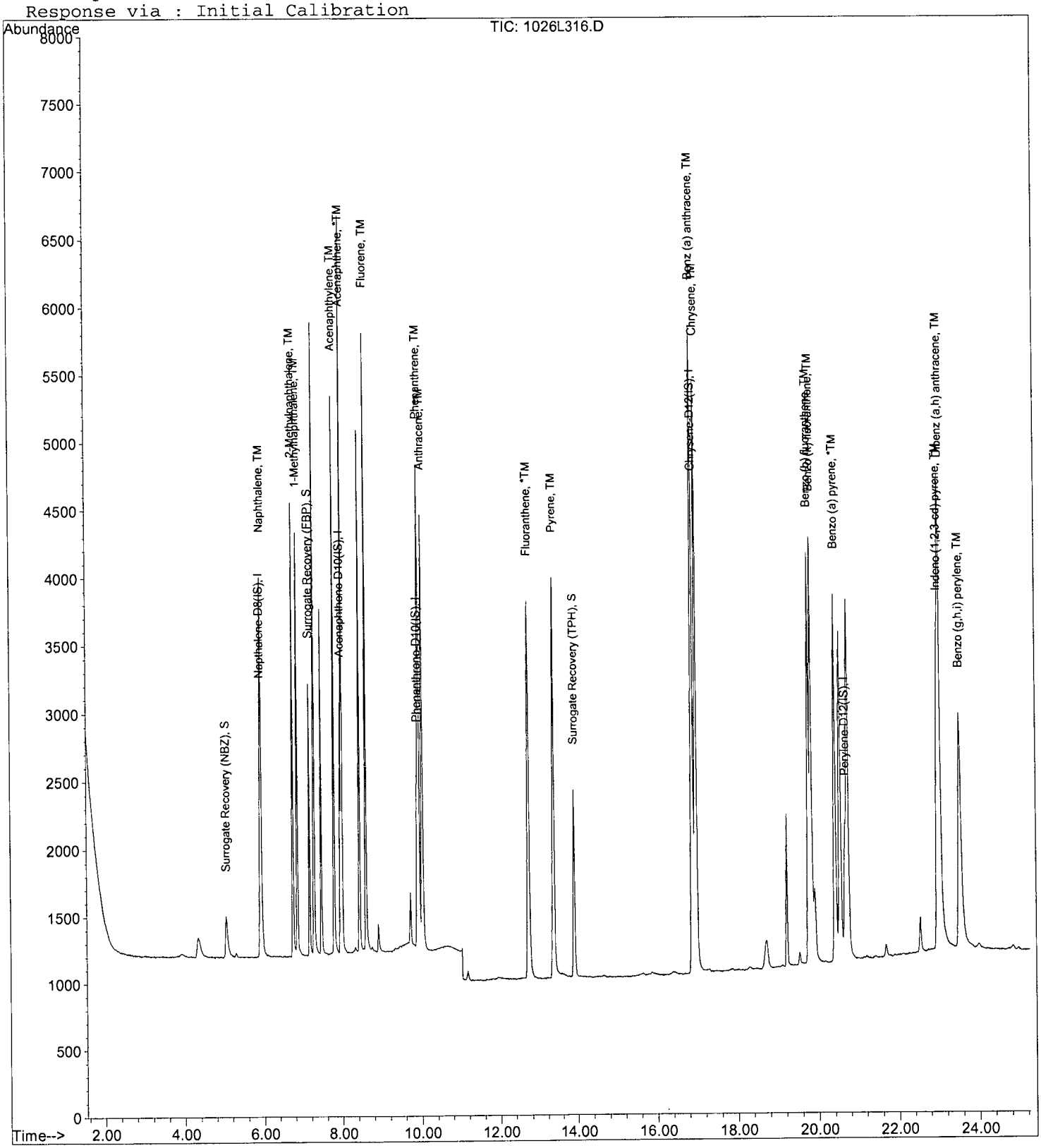
Data File : M:\LINUS\DATA\L161026\1026L316.D
Acq On : 23 Nov 16 17:01
Sample : 2.5 ug/ml PAH 10/26/16 (2)
Misc :

Vial: 16
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Nov 23 17:29 2016

Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Date Analyzed: 11/24/16

Matrix: Instrument: Linus

Initial Cal. Date: 10/26/16

Data File: 1026L338.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	SL	Surrogate Recovery (NBZ)	0.2618	0.3398	30	SL	12
3	TM	Naphthalene	1.020	1.058	3.7	TM	
4	TM	2-Methylnaphthalene	0.6367	0.6852	7.6	TM	
5	TM	1-Methylnaphthalene	0.6513	0.6740	3.5	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	S	Surrogate Recovery (FBP)	1.613	1.653	2.5	S	
8	TM	Acenaphthylene	2.050	2.141	4.4	TM	
9	*TM	Acenaphthene	1.236	1.252	1.3	*TM	
10	TM	Fluorene	1.426	1.471	3.2	TM	
11	I	Phenanthrene-D10(IS)	ISTD			I	
12	TM	Phenanthrene	1.156	1.135	1.8	TM	
13	TM	Anthracene	1.070	1.152	7.7	TM	
14	*TM	Fluoranthene	1.564	1.672	6.9	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.336	1.327	0.67	TM	
17	S	Surrogate Recovery (TPH)	0.8594	0.8817	2.6	S	
18	TM	Benz (a) anthracene	1.143	1.183	3.5	TM	
19	TM	Chrysene	1.235	1.259	1.9	TM	
20	TM	Indeno (1,2,3-cd) pyrene	1.134	1.236	8.9	TM	
21	I	Perylene-D12(IS)	ISTD			I	
22	TM	Benzo (b) fluoranthene	1.151	1.078	6.3	TM	
23	TML	Benzo (k) fluoranthene	0.9795	1.028	4.9	TML	8.0
24	*TM	Benzo (a) pyrene	1.149	1.117	2.8	*TM	
25	TML	Dibenz (a,h) anthracene	0.9550	1.062	11	TML	3.4
26	TM	Benzo (g,h,i) perylene	1.038	1.030	0.74	TM	
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			5.5		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L338.D Vial: 38
Acq On : 24 Nov 16 4:16 Operator: MA
Sample : 2.5 ug/ml PAH 10/26/16 (2) Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Nov 28 8:42 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.90	136	2325	2.50000 ppb		0.01
6) Acenaphthene-D10(IS)	7.94	164	1216	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.89	188	2150	2.50000 ppb		0.01
15) Chrysene-D12(IS)	16.88	240	2816	2.50000 ppb		0.04
21) Perylene-D12(IS)	20.65	264	2604	2.50000 ppb		0.05
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.05	82	790	2.79770 ppb		0.00
Spiked Amount 5.000			Recovery = 55.960%			
7) Surrogate Recovery (FBP)	7.16	172	2010	2.56261 ppb		0.00
Spiked Amount 5.000			Recovery = 51.260%			
17) Surrogate Recovery (TPH)	13.91	244	2483	2.56507 ppb		0.03
Spiked Amount 5.000			Recovery = 51.300%			
Target Compounds						Qvalue
3) Naphthalene	5.93	128	4918	5.18485 ppb		100
4) 2-Methylnaphthalene	6.74	142	3186	5.38073 ppb		99
5) 1-Methylnaphthalene	6.84	142	3134	5.17424 ppb		96
8) Acenaphthylene	7.79	152	5207	5.22169 ppb		100
9) Acenaphthene	7.99	154	3044	5.06286 ppb		98
10) Fluorene	8.59	166	3577	5.15805 ppb		99
12) Phenanthrene	9.93	178	4881	4.91009 ppb		99
13) Anthracene	10.02	178	4952	5.38300 ppb		99
14) Fluoranthene	12.71	202	7190	5.34705 ppb		98
16) Pyrene	13.34	202	7472	4.96652 ppb		98
18) Benz (a) anthracene	16.86	228	6661	5.17391 ppb		99
19) Chrysene	16.96	228	7092	5.09663 ppb		99
20) Indeno (1,2,3-cd) pyrene	22.98	276	6960	5.44722 ppb	#	98
22) Benzo (b) fluoranthene	19.74	252	5616	4.68626 ppb		99
23) Benzo (k) fluoranthene	19.80	252	5352	4.60235 ppb		98
24) Benzo (a) pyrene	20.39	252	5817	4.86113 ppb		97
25) Dibenz (a,h) anthracene	23.03	278	5531	4.82998 ppb		99
26) Benzo (g,h,i) perylene	23.51	276	5365	4.96282 ppb		97

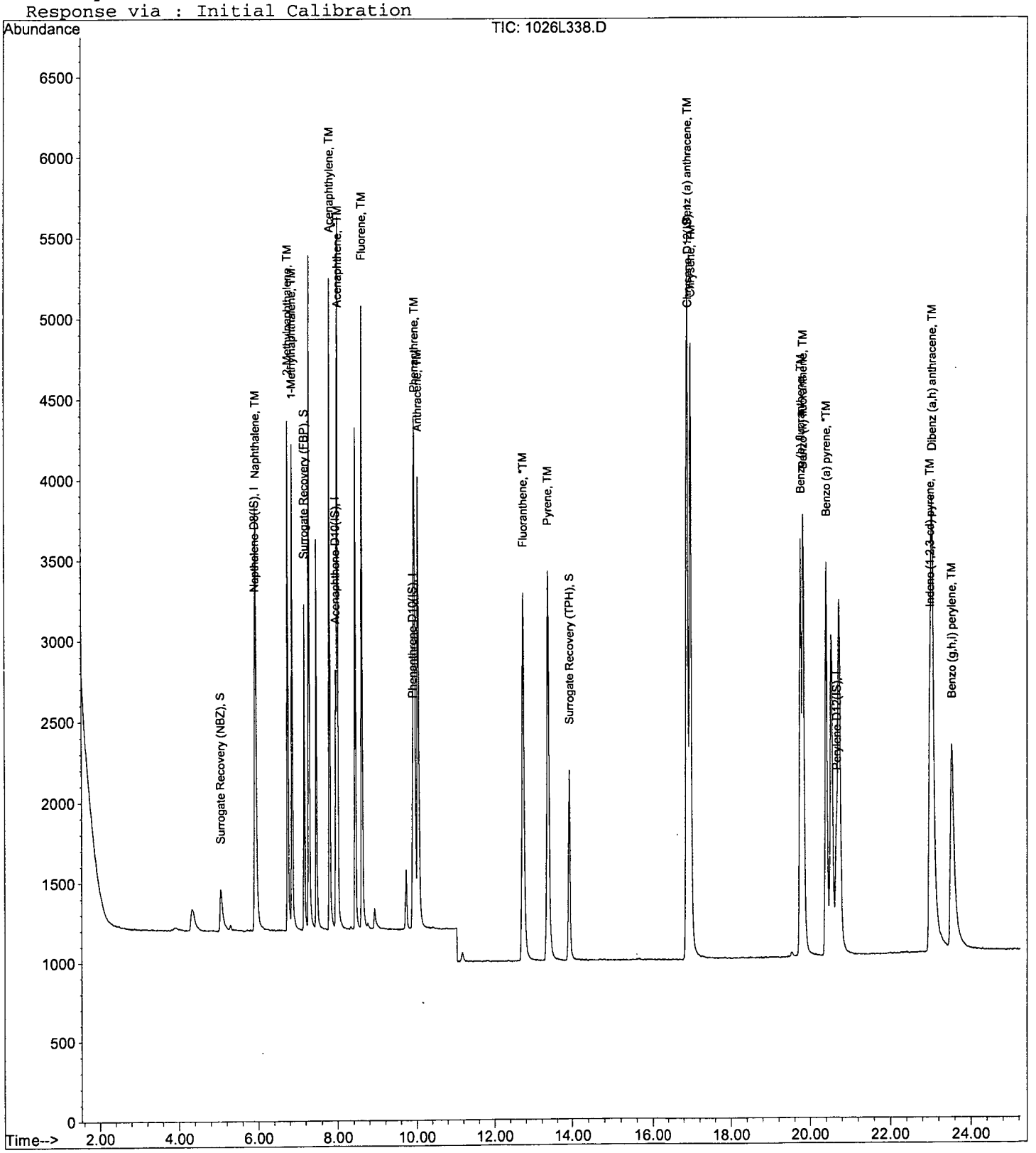
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161026\1026L338.D Vial: 38
Acq On : 24 Nov 16 4:16 Operator: MA
Sample : 2.5 ug/ml PAH 10/26/16 (2) Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Nov 28 8:42 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/29/16
Instrument: Linus
Initial Cal. Date: 10/26/16
Data File: 1129L003.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	SL	Surrogate Recovery (NBZ)	0.2618	0.3290	26	SL	8.3
3	TM	Naphthalene	1.020	1.064	4.4	TM	
4	TM	2-Methylnaphthalene	0.6367	0.7016	10	TM	
5	TM	1-Methylnaphthalene	0.6513	0.6868	5.5	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	S	Surrogate Recovery (FBP)	1.613	1.605	0.48	S	
8	TM	Acenaphthylene	2.050	2.184	6.5	TM	
9	*TM	Acenaphthene	1.236	1.267	2.5	*TM	
10	TM	Fluorene	1.426	1.501	5.3	TM	
11	I	Phenanthrene-D10(IS)	ISTD			I	
12	TM	Phenanthrene	1.156	1.137	1.6	TM	
13	TM	Anthracene	1.070	1.163	8.8	TM	
14	*TM	Fluoranthene	1.564	1.631	4.3	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.336	1.362	2.0	TM	
17	S	Surrogate Recovery (TPH)	0.8594	0.8864	3.1	S	
18	TM	Benz (a) anthracene	1.143	1.204	5.4	TM	
19	TM	Chrysene	1.235	1.279	3.5	TM	
20	TM	Indeno (1,2,3-cd) pyrene	1.134	1.233	8.7	TM	
21	I	Perylene-D12(IS)	ISTD			I	
22	TM	Benzo (b) fluoranthene	1.151	1.025	11	TM	
23	TML	Benzo (k) fluoranthene	0.9795	0.9704	0.93	TML	13
24	*TM	Benzo (a) pyrene	1.149	1.106	3.7	*TM	
25	TML	Dibenz (a,h) anthracene	0.9550	1.081	13	TML	1.7
26	TM	Benzo (g,h,i) perylene	1.038	0.9929	4.3	TM	
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			6.2		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161129\1129L003.D Vial: 3
Acq On : 29 Nov 16 15:19 Operator: MA
Sample : 5.0 ug/ml PAH 11/28/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Nov 29 15:47 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.89	136	2775	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.94	164	1450	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.89	188	2643	2.50000	ppb		0.01
15) Chrysene-D12(IS)	16.88	240	3292	2.50000	ppb		0.04
21) Perylene-D12(IS)	20.64	264	3040	2.50000	ppb		0.04
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.05	82	913	2.70768	ppb		0.00
Spiked Amount 5.000			Recovery = 54.160%				
7) Surrogate Recovery (FBP)	7.16	172	2327	2.48799	ppb		0.00
Spiked Amount 5.000			Recovery = 49.760%				
17) Surrogate Recovery (TPH)	13.90	244	2918	2.57858	ppb		0.02
Spiked Amount 5.000			Recovery = 51.580%				
Target Compounds							Qvalue
3) Naphthalene	5.92	128	5907	5.21765	ppb		100
4) 2-Methylnaphthalene	6.74	142	3894	5.51000	ppb		99
5) 1-Methylnaphthalene	6.84	142	3812	5.27303	ppb		97
8) Acenaphthylene	7.79	152	6333	5.32597	ppb		99
9) Acenaphthene	7.98	154	3673	5.12316	ppb		100
10) Fluorene	8.59	166	4352	5.26285	ppb		99
12) Phenanthrene	9.92	178	6011	4.91891	ppb		99
13) Anthracene	10.01	178	6150	5.43826	ppb		100
14) Fluoranthene	12.70	202	8624	5.21718	ppb		97
16) Pyrene	13.33	202	8967	5.09842	ppb		100
18) Benz (a) anthracene	16.86	228	7930	5.26897	ppb		99
19) Chrysene	16.95	228	8419	5.17545	ppb		99
20) Indeno (1,2,3-cd) pyrene	22.97	276	8120	5.43619	ppb	#	99
22) Benzo (b) fluoranthene	19.73	252	6234	4.45588	ppb		100
23) Benzo (k) fluoranthene	19.80	252	5900	4.34469	ppb		98
24) Benzo (a) pyrene	20.38	252	6724	4.81319	ppb		98
25) Dibenz (a,h) anthracene	23.03	278	6572	4.91427	ppb		100
26) Benzo (g,h,i) perylene	23.51	276	6037	4.78351	ppb		99

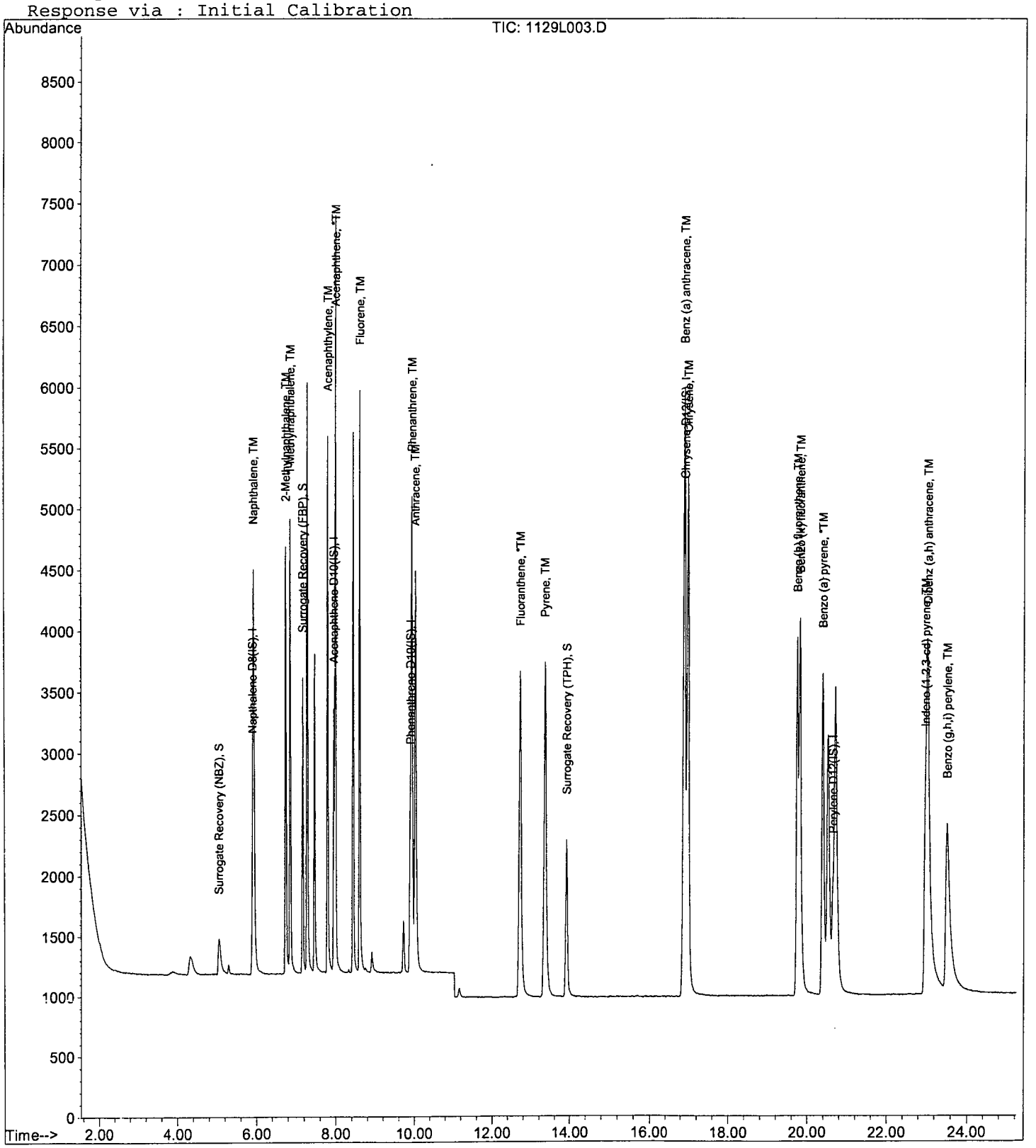
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161129\1129L003.D Vial: 3
Acq On : 29 Nov 16 15:19 Operator: MA
Sample : 5.0 ug/ml PAH 11/28/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Nov 29 15:47 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/30/16
Instrument: Linus
Initial Cal. Date: 10/26/16
Data File: 1129L021.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	SL	Surrogate Recovery (NBZ)	0.2618	0.3155	21	SL	3.8
3	TM	Naphthalene	1.020	1.064	4.3	TM	
4	TM	2-Methylnaphthalene	0.6367	0.6965	9.4	TM	
5	TM	1-Methylnaphthalene	0.6513	0.6883	5.7	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	S	Surrogate Recovery (FBP)	1.613	1.613	0.01	S	
8	TM	Acenaphthylene	2.050	2.181	6.4	TM	
9	*TM	Acenaphthene	1.236	1.276	3.2	*TM	
10	TM	Fluorene	1.426	1.489	4.5	TM	
11	I	Phenanthrene-D10(IS)	ISTD			I	
12	TM	Phenanthrene	1.156	1.160	0.32	TM	
13	TM	Anthracene	1.070	1.186	11	TM	
14	*TM	Fluoranthene	1.564	1.675	7.1	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.336	1.367	2.4	TM	
17	S	Surrogate Recovery (TPH)	0.8594	0.8749	1.8	S	
18	TM	Benz (a) anthracene	1.143	1.233	7.8	TM	
19	TM	Chrysene	1.235	1.262	2.2	TM	
20	TM	Indeno (1,2,3-cd) pyrene	1.134	1.235	8.9	TM	
21	I	Perylene-D12(IS)	ISTD			I	
22	TM	Benzo (b) fluoranthene	1.151	1.057	8.1	TM	
23	TML	Benzo (k) fluoranthene	0.9795	0.9922	1.3	TML	11
24	*TM	Benzo (a) pyrene	1.149	1.114	3.0	*TM	
25	TML	Dibenz (a,h) anthracene	0.9550	1.095	15	TML	0.43
26	TM	Benzo (g,h,i) perylene	1.038	0.9969	4.0	TM	
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			6.1		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161129\1129L021.D Vial: 21
Acq On : 30 Nov 16 00:25 Operator: MA
Sample : 5.0 ug/ml PAH 11/28/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Nov 30 9:17 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	5.89	136	2751	2.50000 ppb	0.00
6) Acenaphthene-D10(IS)	7.94	164	1441	2.50000 ppb	0.00
11) Phenanthrene-D10(IS)	9.89	188	2547	2.50000 ppb	0.01
15) Chrysene-D12(IS)	16.88	240	3278	2.50000 ppb	0.04
21) Perylene-D12(IS)	20.64	264	3020	2.50000 ppb	0.04
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.05	82	868	2.59501 ppb	0.00
Spiked Amount 5.000			Recovery	= 51.900%	
7) Surrogate Recovery (FBP)	7.16	172	2324	2.50030 ppb	0.00
Spiked Amount 5.000			Recovery	= 50.000%	
17) Surrogate Recovery (TPH)	13.90	244	2868	2.54522 ppb	0.02
Spiked Amount 5.000			Recovery	= 50.900%	
Target Compounds					Qvalue
3) Naphthalene	5.92	128	5853	5.21505 ppb	100
4) 2-Methylnaphthalene	6.74	142	3832	5.46958 ppb	99
5) 1-Methylnaphthalene	6.84	142	3787	5.28415 ppb	97
8) Acenaphthylene	7.79	152	6286	5.31946 ppb	100
9) Acenaphthene	7.98	154	3677	5.16077 ppb	99
10) Fluorene	8.59	166	4292	5.22271 ppb	100
12) Phenanthrene	9.92	178	5907	5.01599 ppb	100
13) Anthracene	10.02	178	6040	5.54230 ppb	99
14) Fluoranthene	12.70	202	8532	5.35607 ppb	98
16) Pyrene	13.34	202	8965	5.11905 ppb	98
18) Benz (a) anthracene	16.85	228	8081	5.39223 ppb	99
19) Chrysene	16.95	228	8276	5.10927 ppb	100
20) Indeno (1,2,3-cd) pyrene	22.97	276	8098	5.44462 ppb #	99
22) Benzo (b) fluoranthene	19.73	252	6387	4.59548 ppb	100
23) Benzo (k) fluoranthene	19.80	252	5993	4.44290 ppb	99
24) Benzo (a) pyrene	20.38	252	6729	4.84867 ppb	97
25) Dibenz (a,h) anthracene	23.02	278	6616	4.97867 ppb	99
26) Benzo (g,h,i) perylene	23.50	276	6021	4.80243 ppb	97

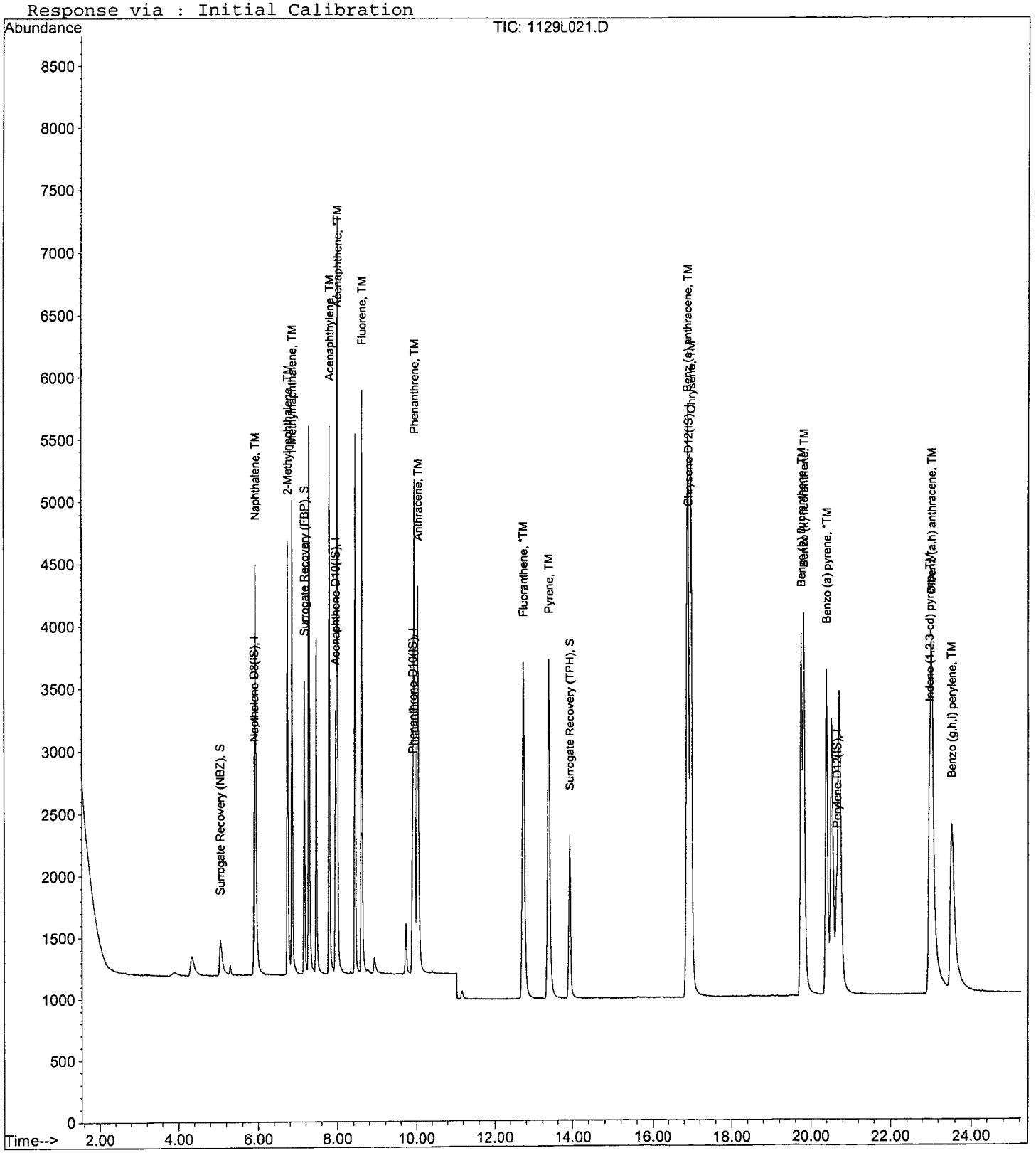
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161129\1129L021.D Vial: 21
Acq On : 30 Nov 16 00:25 Operator: MA
Sample : 5.0 ug/ml PAH 11/28/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Nov 30 9:17 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 8 Dec 16 18:08
Instrument: Linus
Initial Cal. Date: 10/26/16
Data File: 1129L190.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Napthalene-D8(IS)	ISTD			I	
2	SL	Surrogate Recovery (NBZ)	0.2618	0.3050	16	SL	0.27
3	TM	Naphthalene	1.020	1.087	6.6	TM	
4	TM	2-Methylnaphthalene	0.6367	0.7225	13	TM	
5	TM	1-Methylnaphthalene	0.6513	0.7142	9.7	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	S	Surrogate Recovery (FBP)	1.613	1.599	0.87	S	
8	TM	Acenaphthylene	2.050	2.115	3.2	TM	
9	*TM	Acenaphthene	1.236	1.265	2.4	*TM	
10	TM	Fluorene	1.426	1.483	4.0	TM	
11	I	Phenanthrene-D10(IS)	ISTD			I	
12	TM	Phenanthrene	1.156	1.186	2.6	TM	
13	TM	Anthracene	1.070	1.149	7.4	TM	
14	*TM	Fluoranthene	1.564	1.664	6.4	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.336	1.354	1.4	TM	
17	S	Surrogate Recovery (TPH)	0.8594	0.8954	4.2	S	
18	TM	Benz (a) anthracene	1.143	1.220	6.7	TM	
19	TM	Chrysene	1.235	1.268	2.6	TM	
20	TM	Indeno (1,2,3-cd) pyrene	1.134	1.270	12	TM	
21	I	Perylene-D12(IS)	ISTD			I	
22	TM	Benzo (b) fluoranthene	1.151	1.219	6.0	TM	
23	TML	Benzo (k) fluoranthene	0.9795	1.072	9.5	TML	3.9
24	*TM	Benzo (a) pyrene	1.149	1.167	1.6	*TM	
25	TML	Dibenz (a,h) anthracene	0.9550	1.137	19	TML	3.3
26	TM	Benzo (g,h,i) perylene	1.038	1.071	3.2	TM	
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			6.6		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161129\1129L190.D Vial: 90
Acq On : 8 Dec 16 18:08 Operator: MA
Sample : 5.0 ug/ml PAH 12/7/16 (2) Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 9 10:09 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.88	136	1692	2.50000 ppb		-0.01
6) Acenaphthene-D10(IS)	7.92	164	954	2.50000 ppb		-0.02
11) Phenanthrene-D10(IS)	9.85	188	1743	2.50000 ppb		-0.02
15) Chrysene-D12(IS)	16.80	240	2218	2.50000 ppb		-0.04
21) Perylene-D12(IS)	20.55	264	2068	2.50000 ppb		-0.05
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.03	82	516	2.50682 ppb		-0.01
Spiked Amount 5.000			Recovery = 50.140%			
7) Surrogate Recovery (FBP)	7.13	172	1525	2.47823 ppb		-0.02
Spiked Amount 5.000			Recovery = 49.560%			
17) Surrogate Recovery (TPH)	13.83	244	1986	2.60479 ppb		-0.05
Spiked Amount 5.000			Recovery = 52.100%			
Target Compounds						Qvalue
3) Naphthalene	5.90	128	3680	5.33112 ppb		100
4) 2-Methylnaphthalene	6.71	142	2445	5.67410 ppb		100
5) 1-Methylnaphthalene	6.82	142	2417	5.48336 ppb		96
8) Acenaphthylene	7.76	152	4035	5.15765 ppb		100
9) Acenaphthene	7.95	154	2414	5.11769 ppb		98
10) Fluorene	8.57	166	2829	5.19978 ppb		99
12) Phenanthrene	9.89	178	4135	5.13094 ppb		99
13) Anthracene	9.97	178	4005	5.37016 ppb		99
14) Fluoranthene	12.63	202	5801	5.32144 ppb		96
16) Pyrene	13.26	202	6006	5.06841 ppb		99
18) Benz (a) anthracene	16.77	228	5411	5.33615 ppb		99
19) Chrysene	16.87	228	5624	5.13134 ppb		99
20) Indeno (1,2,3-cd) pyrene	22.84	276	5632	5.59628 ppb	#	98
22) Benzo (b) fluoranthene	19.64	252	5042	5.29777 ppb		100
23) Benzo (k) fluoranthene	19.71	252	4435	4.80325 ppb		98
24) Benzo (a) pyrene	20.29	252	4828	5.08038 ppb		97
25) Dibenz (a,h) anthracene	22.90	278	4704	5.16582 ppb		97
26) Benzo (g,h,i) perylene	23.37	276	4428	5.15770 ppb		100

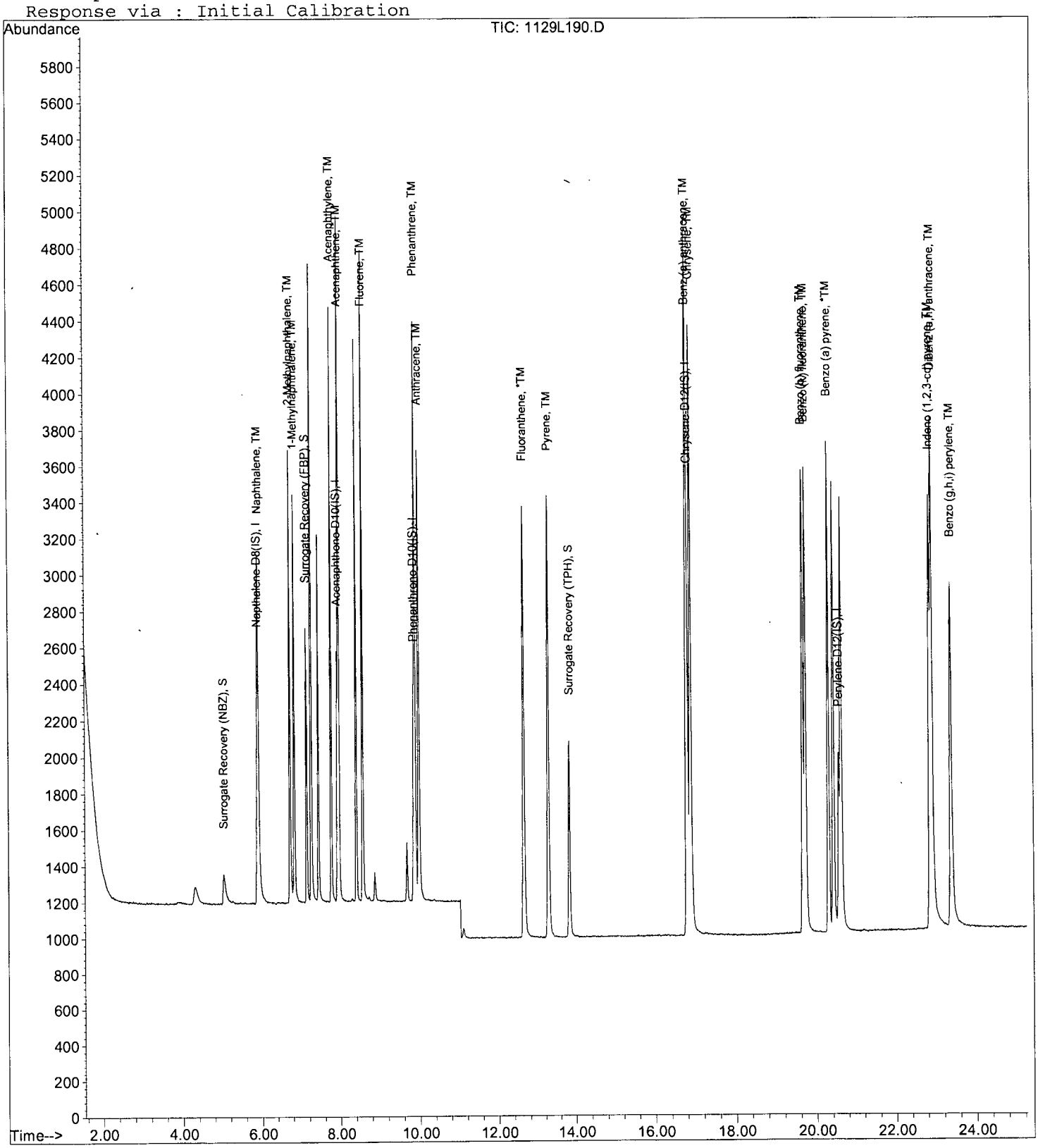
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161129\1129L190.D Vial: 90
Acq On : 8 Dec 16 18:08 Operator: MA
Sample : 5.0 ug/ml PAH 12/7/16 (2) Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 9 10:09 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 8 Dec 16 23:41
Instrument: Linus
Initial Cal. Date: 10/26/16
Data File: 1129L200.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	SL	Surrogate Recovery (NBZ)	0.2618	0.2843	8.6	SL	6.6
3	TM	Naphthalene	1.020	1.076	5.5	TM	
4	TM	2-Methylnaphthalene	0.6367	0.7057	11	TM	
5	TM	1-Methylnaphthalene	0.6513	0.7159	9.9	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	S	Surrogate Recovery (FBP)	1.613	1.557	3.4	S	
8	TM	Acenaphthylene	2.050	2.103	2.6	TM	
9	*TM	Acenaphthene	1.236	1.274	3.1	*TM	
10	TM	Fluorene	1.426	1.509	5.9	TM	
11	I	Phenanthrene-D10(IS)	ISTD			I	
12	TM	Phenanthrene	1.156	1.188	2.8	TM	
13	TM	Anthracene	1.070	1.129	5.5	TM	
14	*TM	Fluoranthene	1.564	1.657	6.0	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.336	1.339	0.26	TM	
17	S	Surrogate Recovery (TPH)	0.8594	0.8357	2.8	S	
18	TM	Benz (a) anthracene	1.143	1.182	3.4	TM	
19	TM	Chrysene	1.235	1.260	2.0	TM	
20	TM	Indeno (1,2,3-cd) pyrene	1.134	1.295	14	TM	
21	I	Perylene-D12(IS)	ISTD			I	
22	TM	Benzo (b) fluoranthene	1.151	1.301	13	TM	
23	TML	Benzo (k) fluoranthene	0.9795	1.070	9.2	TML	4.2
24	*TM	Benzo (a) pyrene	1.149	1.229	7.0	*TM	
25	TML	Dibenz (a,h) anthracene	0.9550	1.193	25	TML	8.3
26	TM	Benzo (g,h,i) perylene	1.038	1.140	9.8	TM	
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			7.2		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161129\1129L200.D Vial: 100
Acq On : 8 Dec 16 23:41 Operator: MA
Sample : 5.0 ug/ml PAH 12/07/16 (2) Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 9 10:09 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.88	136	1850	2.50000	ppb		-0.01
6) Acenaphthene-D10(IS)	7.92	164	1005	2.50000	ppb		-0.02
11) Phenanthrene-D10(IS)	9.85	188	1828	2.50000	ppb		-0.02
15) Chrysene-D12(IS)	16.79	240	2325	2.50000	ppb		-0.05
21) Perylene-D12(IS)	20.55	264	2097	2.50000	ppb		-0.05
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.03	82	526	2.33440	ppb		-0.01
Spiked Amount 5.000			Recovery = 46.680%				
7) Surrogate Recovery (FBP)	7.13	172	1565	2.41417	ppb		-0.02
Spiked Amount 5.000			Recovery = 48.280%				
17) Surrogate Recovery (TPH)	13.82	244	1943	2.43111	ppb		-0.06
Spiked Amount 5.000			Recovery = 48.620%				
Target Compounds							Qvalue
3) Naphthalene	5.90	128	3980	5.27329	ppb		100
4) 2-Methylnaphthalene	6.71	142	2611	5.54184	ppb		100
5) 1-Methylnaphthalene	6.82	142	2649	5.49643	ppb		97
8) Acenaphthylene	7.76	152	4227	5.12889	ppb		100
9) Acenaphthene	7.95	154	2561	5.15381	ppb		98
10) Fluorene	8.57	166	3034	5.29358	ppb		100
12) Phenanthrene	9.89	178	4345	5.14082	ppb		99
13) Anthracene	9.97	178	4127	5.27643	ppb		99
14) Fluoranthene	12.63	202	6057	5.29792	ppb		96
16) Pyrene	13.26	202	6227	5.01307	ppb		99
18) Benz (a) anthracene	16.77	228	5494	5.16866	ppb		99
19) Chrysene	16.87	228	5860	5.10061	ppb		99
20) Indeno (1,2,3-cd) pyrene	22.84	276	6023	5.70938	ppb	#	94
22) Benzo (b) fluoranthene	19.64	252	5455	5.65245	ppb		100
23) Benzo (k) fluoranthene	19.71	252	4487	4.79231	ppb		97
24) Benzo (a) pyrene	20.29	252	5156	5.35049	ppb		96
25) Dibenz (a,h) anthracene	22.90	278	5002	5.41255	ppb		97
26) Benzo (g,h,i) perylene	23.36	276	4781	5.49186	ppb		99

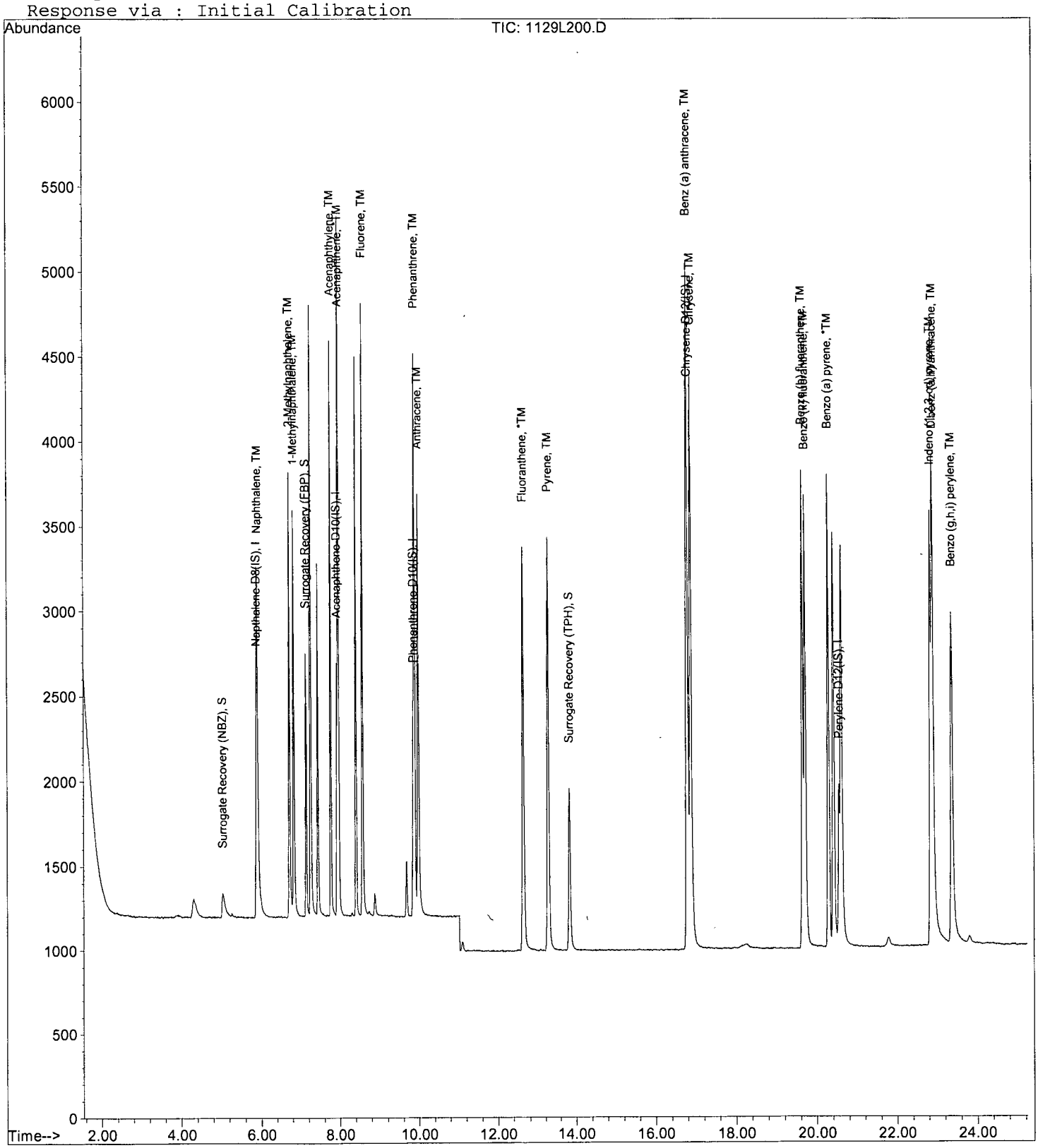
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161129\1129L200.D Vial: 100
Acq On : 8 Dec 16 23:41 Operator: MA
Sample : 5.0 ug/ml PAH 12/07/16 (2) Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 9 10:09 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



ORGANICS

Raw Data

APPL, INC.

Method Blank

EPA 8270D SIM RE-EXTRACT

Blank Name/QCG: **161206W-45991 - 214446**
Batch ID: #SIMDO-161206A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/06/16	12/08/16
BLANK	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/06/16	12/08/16
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	12/06/16	12/08/16
BLANK	SURROGATE: 2-FLUORBIPHENY	54.5	53-106			%	12/06/16	12/08/16
BLANK	SURROGATE: NITROBENZENE-	63.9	55-111			%	12/06/16	12/08/16
BLANK	SURROGATE: TERPHENYL-D14 (	70.1	58-132			%	12/06/16	12/08/16

Quant Method: L1026P.M
Run #: 1129L192
Instrument: Linus
Sequence: L161129
Initials: RHA

GC SC-Blank-REG MDLs-DOD
Printed: 12/09/16 10:57:49 AM

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161129\1129L192.D Vial: 92
Acq On : 8 Dec 16 19:14 Operator: MA
Sample : 161206A BLK 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 9 10:49 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	2047	2.50000 ppb	-0.01
6) Acenaphthene-D10(IS)	7.92	164	1144	2.50000 ppb	-0.02
11) Phenanthrene-D10(IS)	9.85	188	2075	2.50000 ppb	-0.02
15) Chrysene-D12(IS)	16.80	240	2531	2.50000 ppb	-0.04
21) Perylene-D12(IS)	20.56	264	2409	2.50000 ppb	-0.04
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.03	82	793	3.19543 ppb	-0.01
Spiked Amount 5.000			Recovery = 63.900%		
7) Surrogate Recovery (FBP)	7.13	172	2011	2.72524 ppb	-0.02
Spiked Amount 5.000			Recovery = 54.500%		
17) Surrogate Recovery (TPH)	13.82	244	3051	3.50675 ppb	-0.06
Spiked Amount 5.000			Recovery = 70.140%		

Target Compounds Qvalue

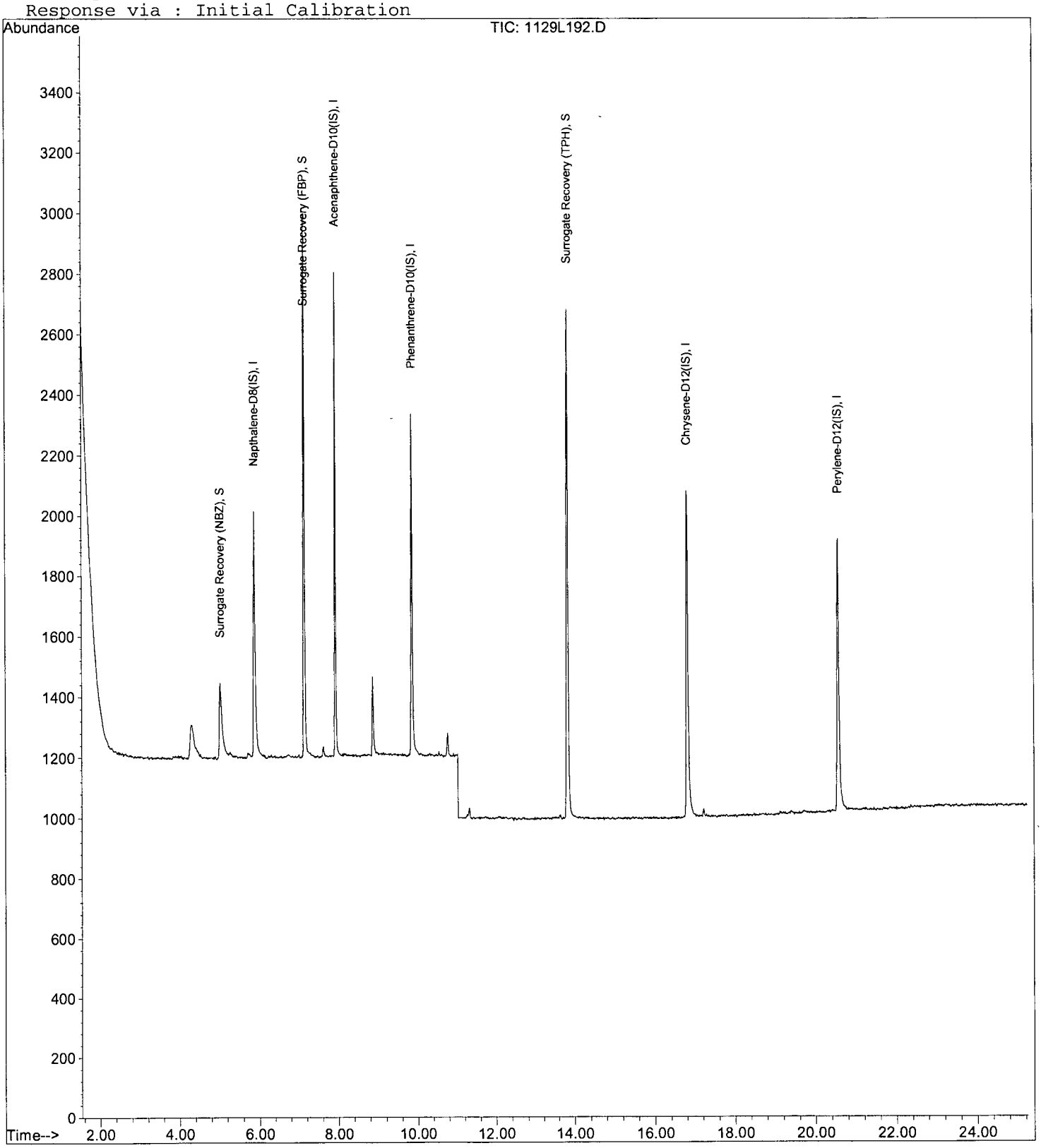
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161129\1129L192.D Vial: 92
Acq On : 8 Dec 16 19:14 Operator: MA
Sample : 161206A BLK 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 9 10:49 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Method Blank
EPA 8270D SIM

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161122W-45988 - 214139**
Batch ID: #SIMDO-161122A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	11/22/16	11/23/16
BLANK	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	11/22/16	11/23/16
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	11/22/16	11/23/16
BLANK	SURROGATE: 2-FLUORBIPHENY	52.9	53-106			%	11/22/16	11/23/16
BLANK	SURROGATE: NITROBENZENE-	77.0	55-111			%	11/22/16	11/23/16
BLANK	SURROGATE: TERPHENYL-D14 (	80.9	58-132			%	11/22/16	11/23/16

Quant Method: L1026P.M
Run #: 1026L329
Instrument: Linus
Sequence: L161026
Initials: RHA

GC SC-Blank-REG MDLs-DOD
Printed: 11/30/16 1:07:47 PM

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L329.D Vial: 29
Acq On : 23 Nov 16 23:59 Operator: MA
Sample : 161122A BLK 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Nov 30 11:11 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.90	136	2458	2.50000	ppb	0.01
6) Acenaphthene-D10(IS)	7.95	164	1295	2.50000	ppb	0.01
11) Phenanthrene-D10(IS)	9.90	188	2257	2.50000	ppb	0.02
15) Chrysene-D12(IS)	16.91	240	2940	2.50000	ppb	0.07
21) Perylene-D12(IS)	20.69	264	2739	2.50000	ppb	0.09
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.06	82	1145	3.85062	ppb	0.01
Spiked Amount 5.000			Recovery = 77.020%			
7) Surrogate Recovery (FBP)	7.16	172	2210	2.64571	ppb	0.00
Spiked Amount 5.000			Recovery = 52.920%			
17) Surrogate Recovery (TPH)	13.90	244	4086	4.04302	ppb	0.02
Spiked Amount 5.000			Recovery = 80.860%			

Target Compounds Qvalue

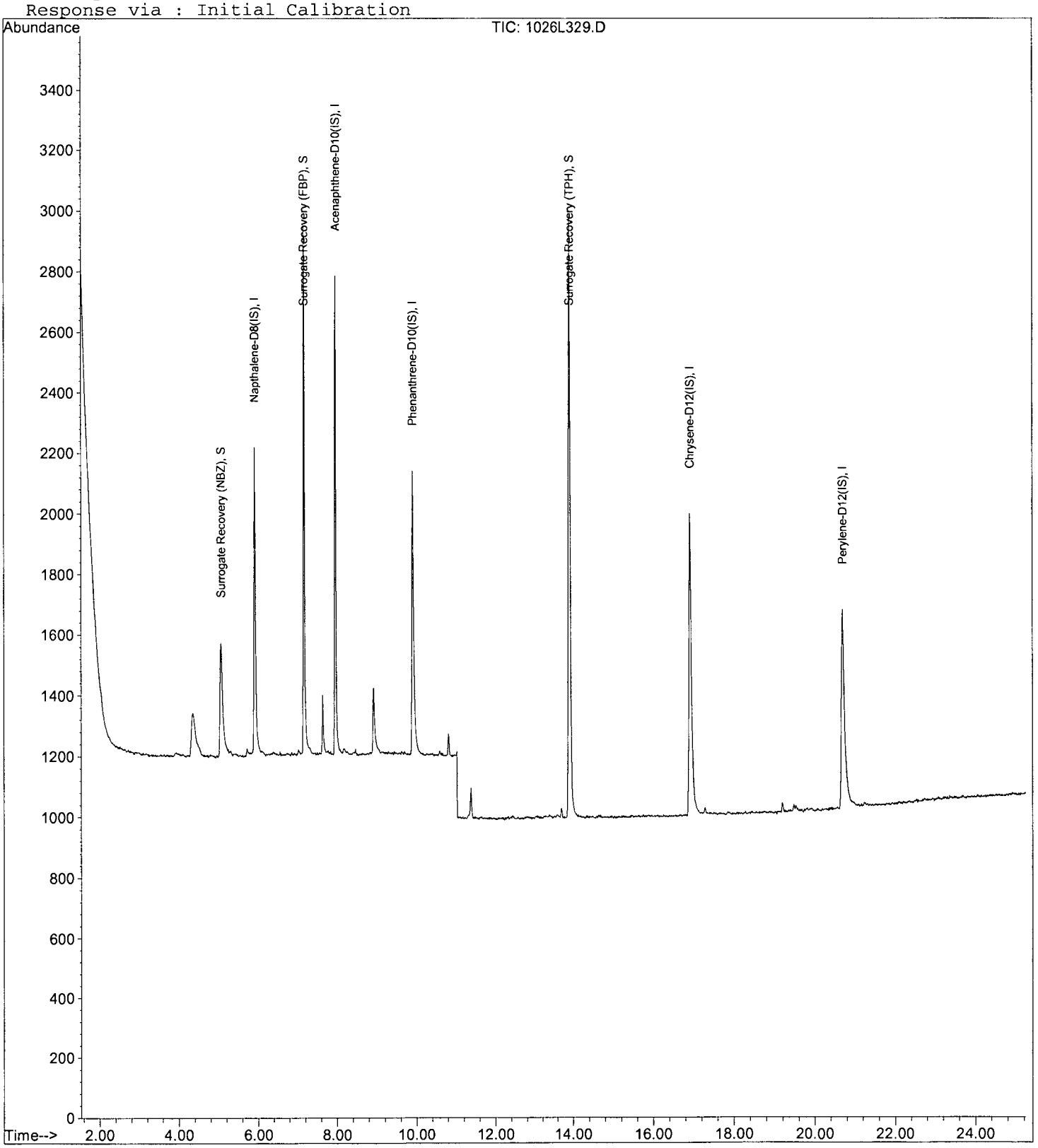
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161026\1026L329.D Vial: 29
Acq On : 23 Nov 16 23:59 Operator: MA
Sample : 161122A BLK 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Nov 30 11:11 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Laboratory Control Spike Recovery

EPA 8270D SIM RE-EXTRACT

APPL ID: **161206W-45991 LCS - 214446**
Batch ID: #SIMDO-161206A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1-METHYLNAPHTHALENE	5.00	3.21	64.2	41-115
2-METHYLNAPHTHALENE	5.00	3.28	65.6	39-114
NAPHTHALENE	5.00	3.07	61.4	43-114
SURROGATE: 2-FLUORBIPHENYL (S)	5.00	2.95	59.0	53-106
SURROGATE: NITROBENZENE-D5 (S)	5.00	3.34	66.8	55-111
SURROGATE: TERPHENYL-D14 (S)	5.00	3.45	69.0	58-132

Comments: _____

Primary	SPK
Quant Method :	L1026P.M
Extraction Date :	12/06/16
Analysis Date :	12/08/16
Instrument :	Linus
Run :	1129L193
Initials :	RHA

Printed: 12/09/16 10:57:41 AM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161129\1129L193.D Vial: 93
Acq On : 8 Dec 16 19:48 Operator: MA
Sample : 161206A LCS-1 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 9 10:09 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.88	136	2029	2.50000	ppb		-0.01
6) Acenaphthene-D10(IS)	7.92	164	1127	2.50000	ppb		-0.02
11) Phenanthrene-D10(IS)	9.85	188	2068	2.50000	ppb		-0.02
15) Chrysene-D12(IS)	16.80	240	2614	2.50000	ppb		-0.04
21) Perylene-D12(IS)	20.55	264	2408	2.50000	ppb		-0.05
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.03	82	820	3.33531	ppb		-0.01
Spiked Amount 5.000			Recovery = 66.700%				
7) Surrogate Recovery (FBP)	7.13	172	2142	2.94656	ppb		-0.02
Spiked Amount 5.000			Recovery = 58.940%				
17) Surrogate Recovery (TPH)	13.82	244	3097	3.44660	ppb		-0.06
Spiked Amount 5.000			Recovery = 68.940%				
Target Compounds							Qvalue
3) Naphthalene	5.90	128	2543	3.07210	ppb		100
4) 2-Methylnaphthalene	6.71	142	1696	3.28218	ppb		98
5) 1-Methylnaphthalene	6.82	142	1695	3.20670	ppb		97
8) Acenaphthylene	7.76	152	3036	3.28500	ppb		100
9) Acenaphthene	7.95	154	1821	3.26792	ppb		99
10) Fluorene	8.57	166	2302	3.58164	ppb		100
12) Phenanthrene	9.89	178	3422	3.57889	ppb		99
13) Anthracene	9.97	178	3250	3.67295	ppb		99
14) Fluoranthene	12.63	202	4912	3.79780	ppb		96
16) Pyrene	13.26	202	5098	3.65042	ppb		99
18) Benz (a) anthracene	16.77	228	4540	3.79894	ppb		99
19) Chrysene	16.87	228	4765	3.68897	ppb		99
20) Indeno (1,2,3-cd) pyrene	22.84	276	4734	3.99136	ppb	#	96
22) Benzo (b) fluoranthene	19.64	252	4345	3.92079	ppb		99
23) Benzo (k) fluoranthene	19.71	252	3673	3.40987	ppb		99
24) Benzo (a) pyrene	20.29	252	4147	3.74763	ppb		97
25) Dibenz (a,h) anthracene	22.90	278	3845	3.65427	ppb		97
26) Benzo (g,h,i) perylene	23.37	276	3837	3.83826	ppb		98

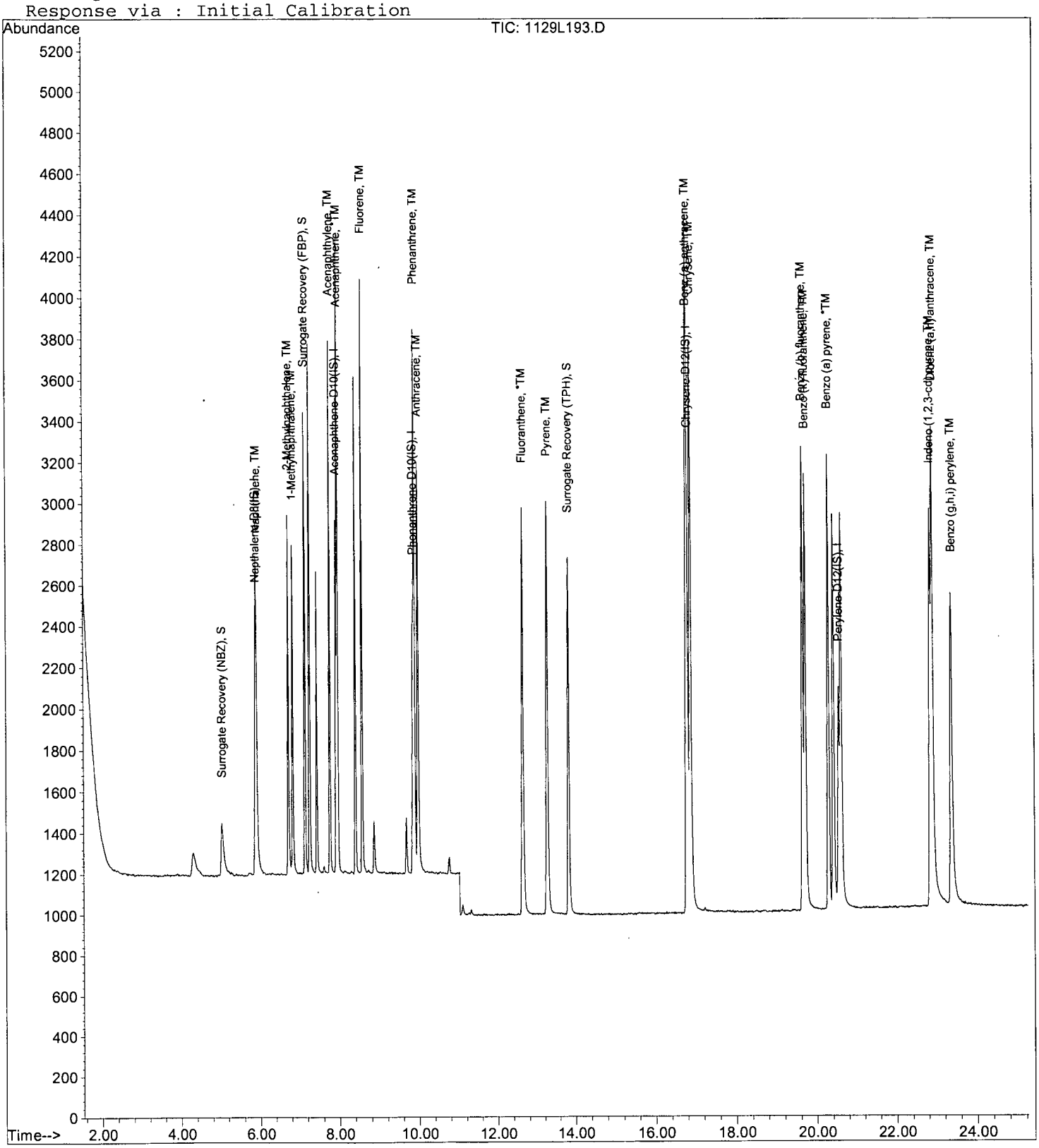
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161129\1129L193.D Vial: 93
Acq On : 8 Dec 16 19:48 Operator: MA
Sample : 161206A LCS-1 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 9 10:09 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Laboratory Control Spike Recoveries

EPA 8270D SIM

APPL ID: **161122W-45988 LCS - 214139**
Batch ID: #SIMDO-161122A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
1-METHYLNAPHTHALENE	5.00	3.47	2.92	69.4	58.4	41-115	17.2	20
2-METHYLNAPHTHALENE	5.00	3.40	2.87	68.0	57.4	39-114	16.9	20
NAPHTHALENE	5.00	3.44	3.00	68.8	60.0	43-114	13.7	20
SURROGATE: 2-FLUORBIPHENYL (S)	5.00	3.01	2.70	60.2	54.0	53-106		
SURROGATE: NITROBENZENE-D5 (S)	5.00	4.20	3.83	84.0	76.6	55-111		
SURROGATE: TERPHENYL-D14 (S)	5.00	4.18	3.77	83.6	75.4	58-132		

Comments: _____

Primary	SPK	DUP
Quant Method :	L1026P.M	L1026P.M
Extraction Date :	11/22/16	11/22/16
Analysis Date :	11/24/16	11/24/16
Instrument :	Linus	Linus
Run :	1026L330	1026L331
Initials :	RHA	

Printed: 11/30/16 1:07:40 PM
APPL Standard LCSD

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L330.D Vial: 30
Acq On : 24 Nov 16 00:32 Operator: MA
Sample : 161122A LCS-1 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Nov 28 8:45 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.90	136	2275	2.50000	ppb		0.01
6) Acenaphthene-D10(IS)	7.95	164	1201	2.50000	ppb		0.01
11) Phenanthrene-D10(IS)	9.89	188	2158	2.50000	ppb		0.01
15) Chrysene-D12(IS)	16.89	240	2837	2.50000	ppb		0.05
21) Perylene-D12(IS)	20.65	264	2678	2.50000	ppb		0.05
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.06	82	1155	4.20036	ppb		0.01
Spiked Amount 5.000			Recovery = 84.000%				
7) Surrogate Recovery (FBP)	7.16	172	2331	3.00898	ppb		0.00
Spiked Amount 5.000			Recovery = 60.180%				
17) Surrogate Recovery (TPH)	13.90	244	4080	4.18365	ppb		0.02
Spiked Amount 5.000			Recovery = 83.680%				
Target Compounds							Qvalue
3) Naphthalene	5.93	128	3191	3.43808	ppb		100
4) 2-Methylnaphthalene	6.74	142	1970	3.40019	ppb		99
5) 1-Methylnaphthalene	6.86	142	2054	3.46569	ppb		98
8) Acenaphthylene	7.79	152	4079	4.14160	ppb		99
9) Acenaphthene	7.99	154	2324	3.91361	ppb		98
10) Fluorene	8.59	166	2955	4.31434	ppb		99
12) Phenanthrene	9.93	178	4403	4.41282	ppb		99
13) Anthracene	10.02	178	4225	4.57570	ppb		99
14) Fluoranthene	12.71	202	6850	5.07532	ppb		97
16) Pyrene	13.34	202	7107	4.68895	ppb		99
18) Benz (a) anthracene	16.86	228	6339	4.88735	ppb		99
19) Chrysene	16.96	228	6834	4.87487	ppb		99
20) Indeno (1,2,3-cd) pyrene	22.98	276	6684	5.19249	ppb	#	99
22) Benzo (b) fluoranthene	19.74	252	5273	4.27846	ppb		100
23) Benzo (k) fluoranthene	19.81	252	5152	4.30652	ppb		98
24) Benzo (a) pyrene	20.39	252	5678	4.61385	ppb		98
25) Dibenz (a,h) anthracene	23.03	278	5423	4.60918	ppb		99
26) Benzo (g,h,i) perylene	23.52	276	5129	4.61340	ppb		98

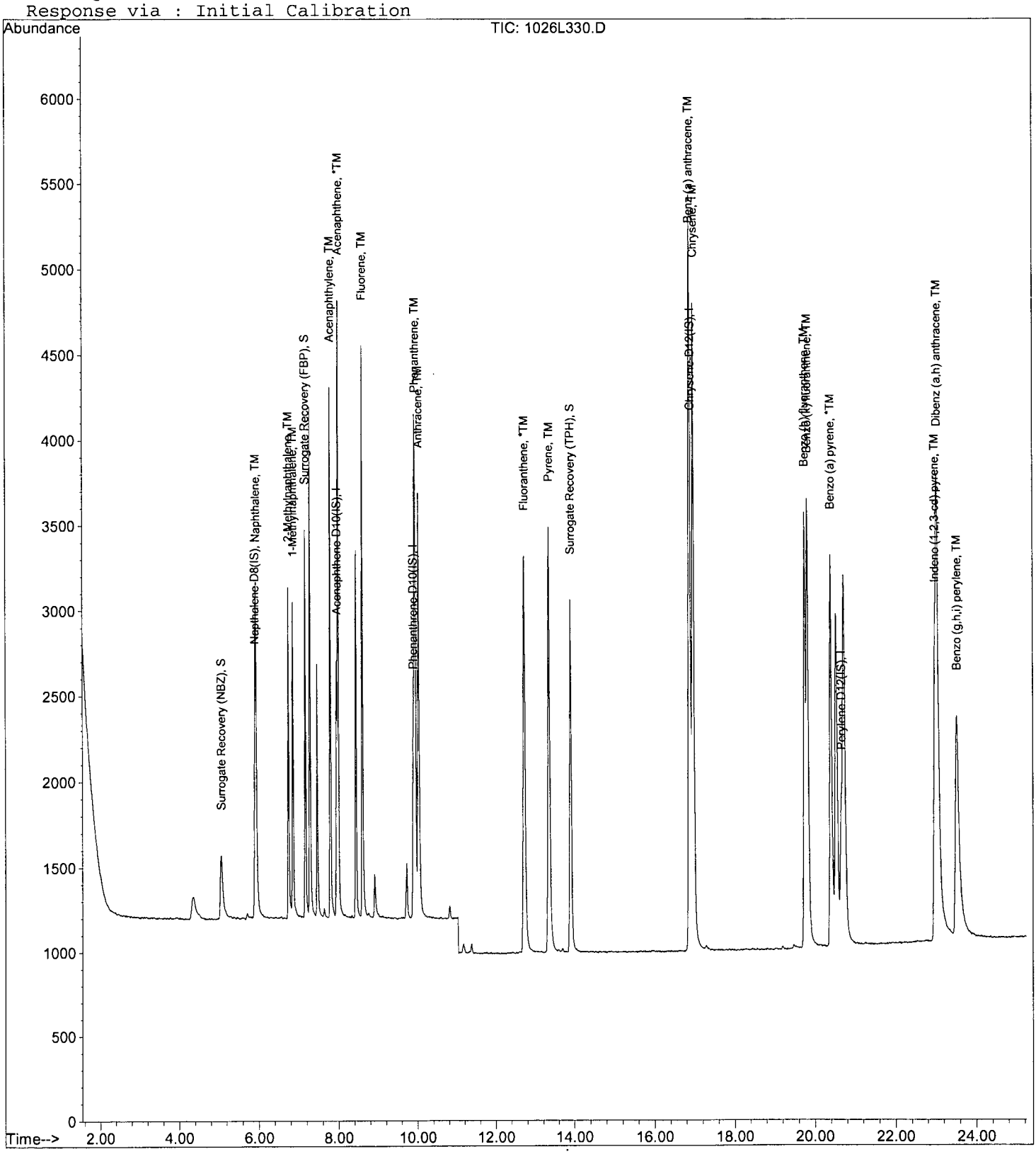
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161026\1026L330.D Vial: 30
Acq On : 24 Nov 16 00:32 Operator: MA
Sample : 161122A LCS-1 1/1000 Inst : Linus
Misc : water Multip1r: 1.00

Quant Time: Nov 28 8:45 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161026\1026L331.D Vial: 31
Acq On : 24 Nov 16 1:04 Operator: MA
Sample : 161122A LCSD-1 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Nov 28 8:45 2016 Quant Results File: L1026P.RES

Quant Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.90	136	2503	2.50000	ppb		0.01
6) Acenaphthene-D10(IS)	7.95	164	1317	2.50000	ppb		0.01
11) Phenanthrene-D10(IS)	9.89	188	2347	2.50000	ppb		0.01
15) Chrysene-D12(IS)	16.89	240	3096	2.50000	ppb		0.05
21) Perylene-D12(IS)	20.65	264	2898	2.50000	ppb		0.05
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.06	82	1161	3.83406	ppb		0.01
Spiked Amount 5.000			Recovery = 76.680%				
7) Surrogate Recovery (FBP)	7.16	172	2297	2.70393	ppb		0.00
Spiked Amount 5.000			Recovery = 54.080%				
17) Surrogate Recovery (TPH)	13.90	244	4017	3.77447	ppb		0.02
Spiked Amount 5.000			Recovery = 75.480%				
Target Compounds							Qvalue
3) Naphthalene	5.93	128	3064	3.00053	ppb		100
4) 2-Methylnaphthalene	6.74	142	1827	2.86613	ppb		99
5) 1-Methylnaphthalene	6.86	142	1906	2.92302	ppb		98
8) Acenaphthylene	7.79	152	3804	3.52218	ppb		100
9) Acenaphthene	7.99	154	2108	3.23720	ppb		97
10) Fluorene	8.59	166	2773	3.69202	ppb		99
12) Phenanthrene	9.92	178	4175	3.84736	ppb		100
13) Anthracene	10.02	178	4147	4.12955	ppb		99
14) Fluoranthene	12.70	202	6665	4.54058	ppb		100
16) Pyrene	13.34	202	6984	4.22232	ppb		99
18) Benz (a) anthracene	16.86	228	6207	4.38523	ppb		99
19) Chrysene	16.96	228	6631	4.33436	ppb		99
20) Indeno (1,2,3-cd) pyrene	22.98	276	6585	4.68763	ppb	#	98
22) Benzo (b) fluoranthene	19.74	252	5230	3.92143	ppb		100
23) Benzo (k) fluoranthene	19.81	252	5028	3.88162	ppb		99
24) Benzo (a) pyrene	20.39	252	5577	4.18776	ppb		99
25) Dibenz (a,h) anthracene	23.04	278	5282	4.15792	ppb		99
26) Benzo (g,h,i) perylene	23.51	276	4998	4.15429	ppb		97

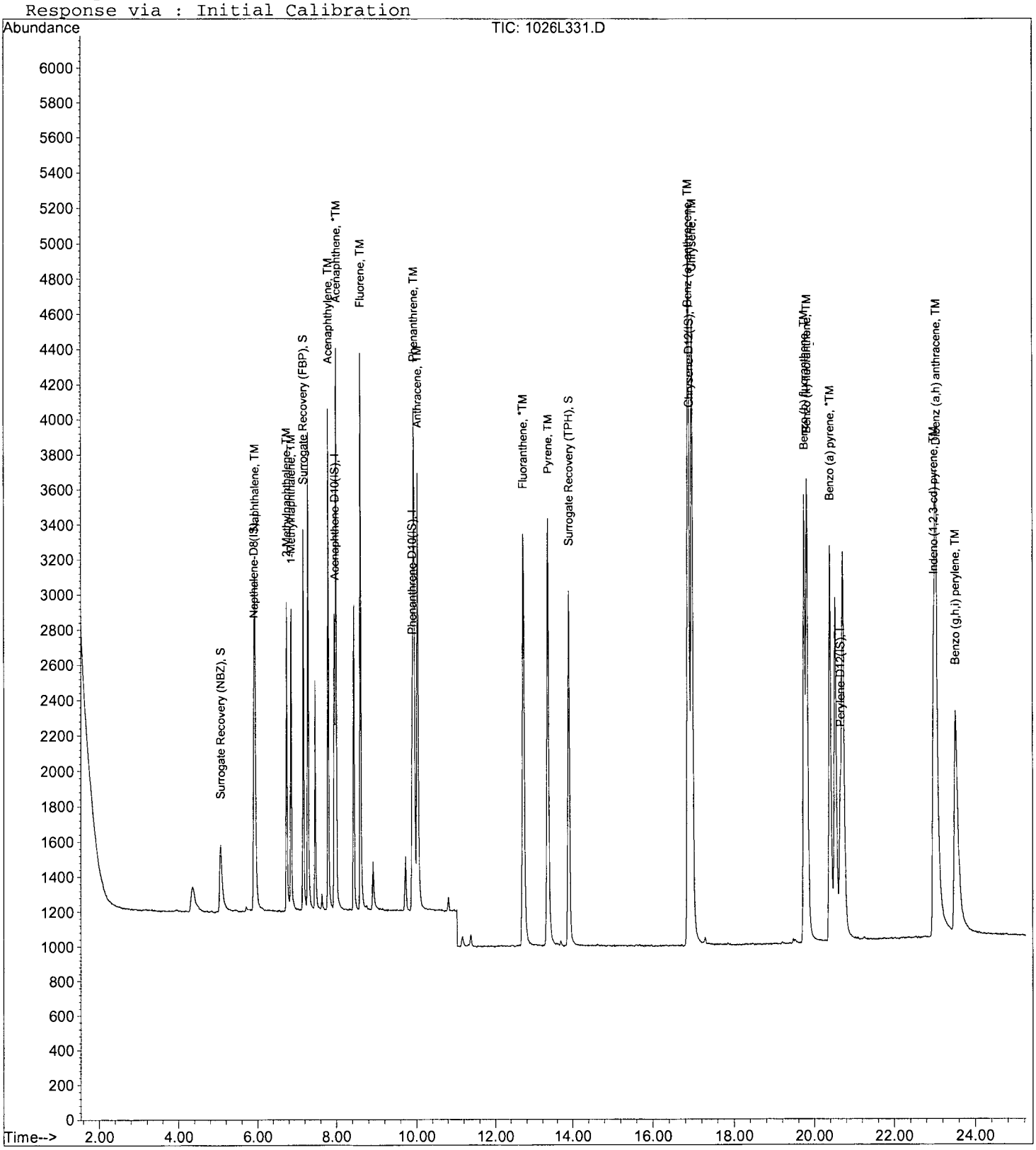
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161026\1026L331.D Vial: 31
Acq On : 24 Nov 16 1:04 Operator: MA
Sample : 161122A LCSD-1 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

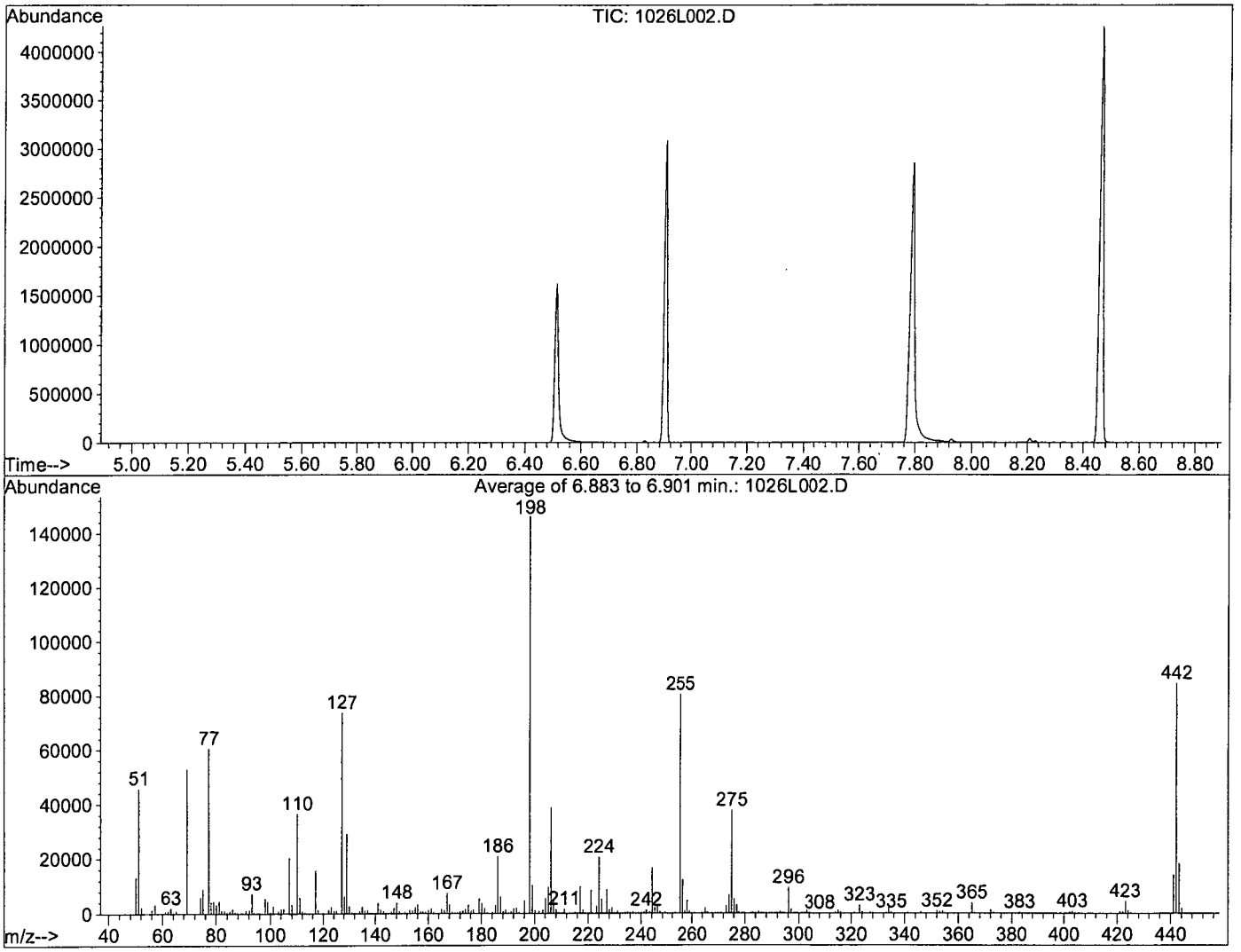
Quant Time: Nov 28 8:45 2016 Quant Results File: L1026P.RES

Method : M:\LINUS\DATA\L161026\L1026P.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Oct 27 13:04:20 2016
Response via : Initial Calibration



Data File : M:\LINUS\DATA\L161026\1026L002.D Vial: 2
Acq On : 26 Oct 16 10:58 Operator: MA
Sample : SV TUNE 9/22/16 Inst : Linus
Misc : water Multiplr: 1.00

Method : M:\LINUS\DATA\L161026\DFTPP2.M (Chemstation Integrator)
Title :



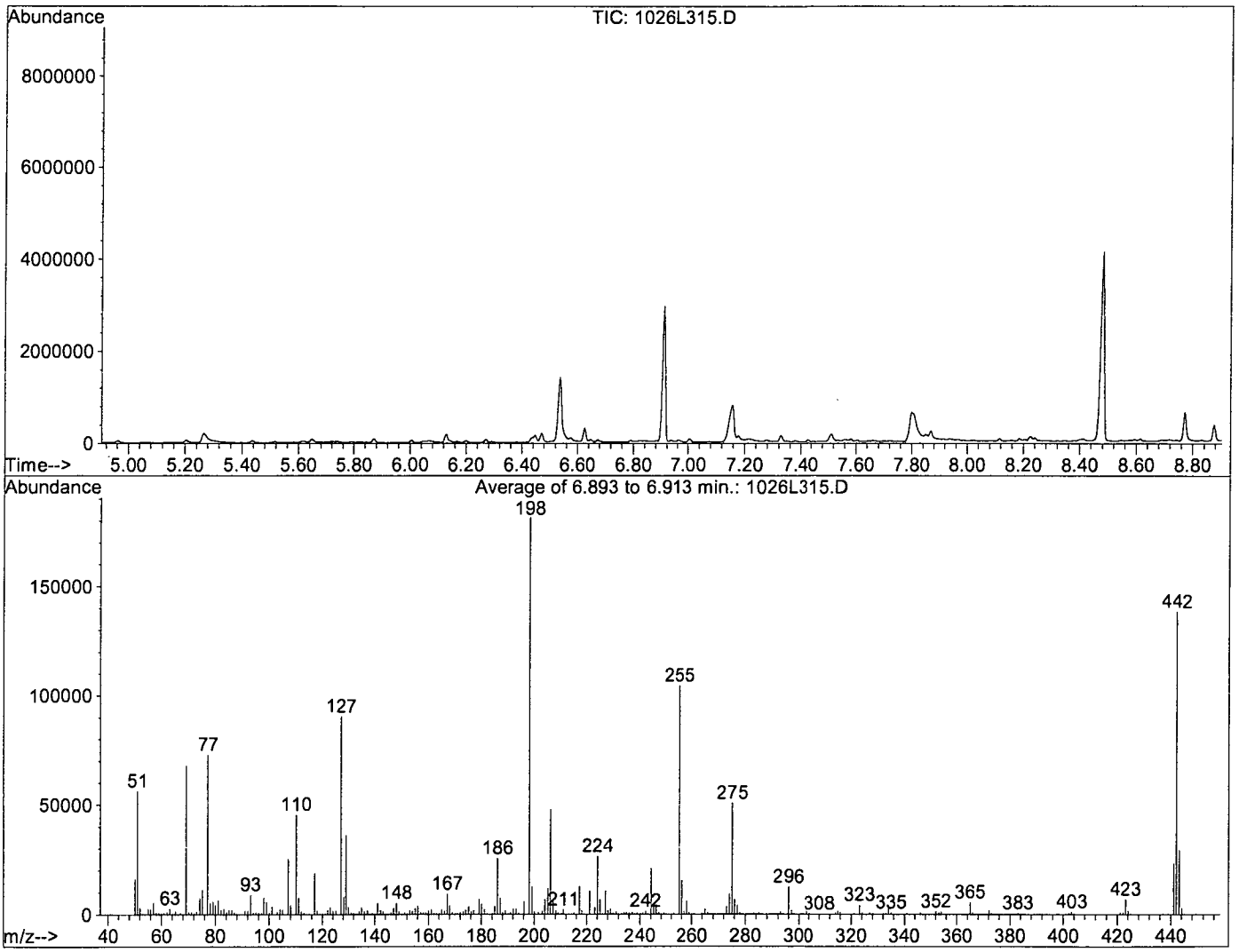
Spectrum Information: Average of 6.883 to 6.901 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	31.3	45754	PASS
68	69	0.00	2	0.0	0	PASS
69	69	100	100	100.0	52873	PASS
70	69	0.00	2	0.4	194	PASS
127	198	40	60	50.4	73640	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	146234	PASS
199	198	5	9	6.9	10141	PASS
275	198	10	30	25.7	37577	PASS
365	198	1	100	2.6	3776	PASS
441	443	0.01	100	76.7	13986	PASS
442	198	40	150	57.8	84489	PASS
443	442	17	23	21.6	18242	PASS

1026L002.D DFTPP2.M Wed Oct 26 16:35:21 2016

Data File : M:\LINUS\DATA\L161026\1026L315.D Vial: 15
Acq On : 23 Nov 16 16:46 Operator: MA
Sample : SV Tune 11/15/16 Inst : Linus
Misc : Multiplr: 1.00

Method : M:\LINUS\DATA\L161026\DFTPP2.M (Chemstation Integrator)
Title :



Spectrum Information: Average of 6.893 to 6.913 min.

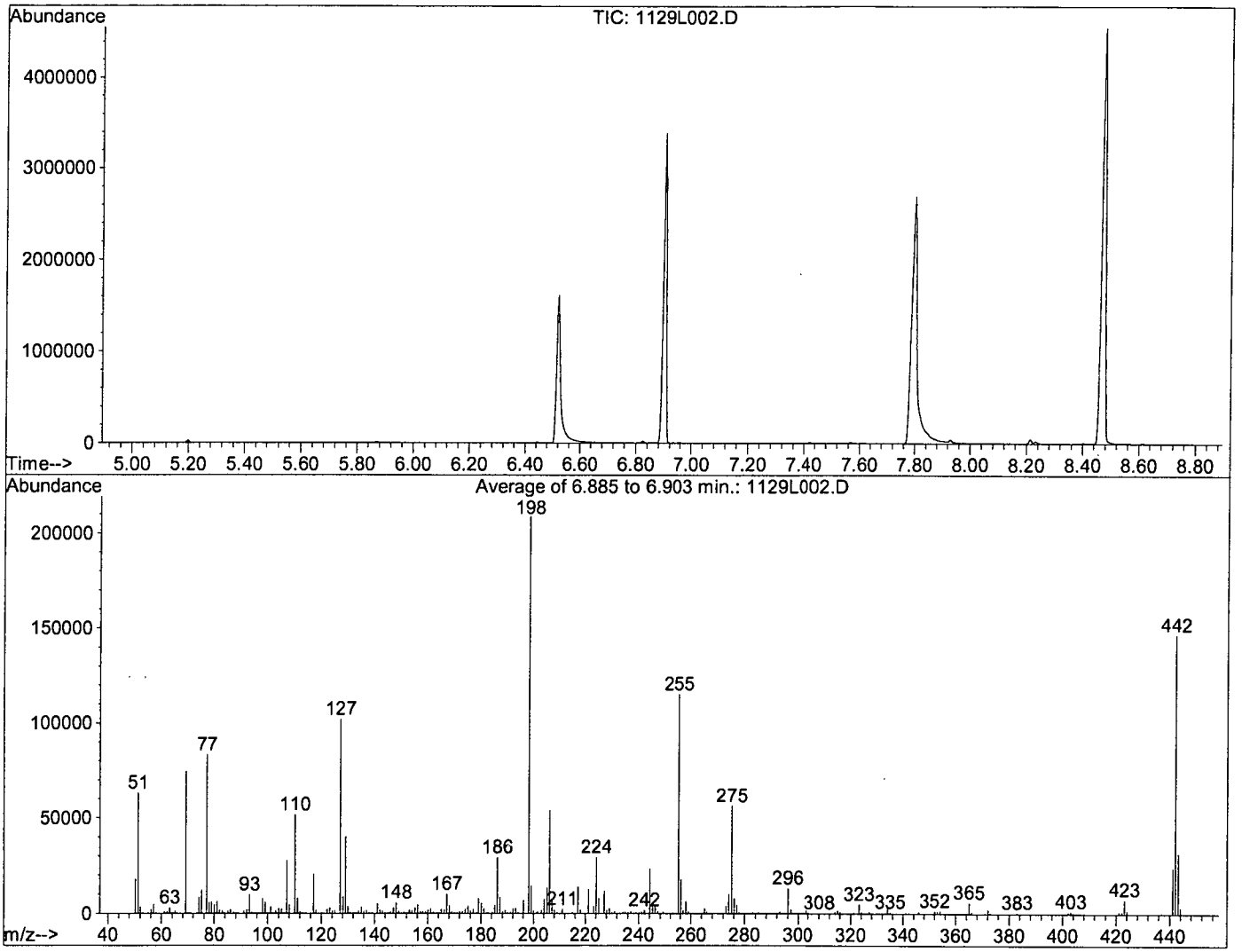
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	31.0	56286	PASS
68	69	0.00	2	0.0	0	PASS
69	69	100	100	100.0	67964	PASS
70	69	0.00	2	1.5	1008	PASS
127	198	40	60	49.8	90422	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	181637	PASS
199	198	5	9	6.9	12512	PASS
275	198	10	30	27.9	50648	PASS
365	198	1	100	2.9	5336	PASS
441	443	0.01	100	78.6	23035	PASS
442	198	40	150	76.2	138447	PASS
443	442	17	23	21.2	29298	PASS

1026L315.D DFTPP2.M Wed Nov 23 16:58:41 2016

DFTPP

Data File : M:\LINUS\DATA\L161129\1129L002.D Vial: 2
Acq On : 29 Nov 16 15:03 Operator: MA
Sample : SV TUNE 9/22/16 Inst : Linus
Misc : water Multiplr: 1.00

Method : M:\LINUS\DATA\L161026\DFTPP2.M (Chemstation Integrator)
Title :



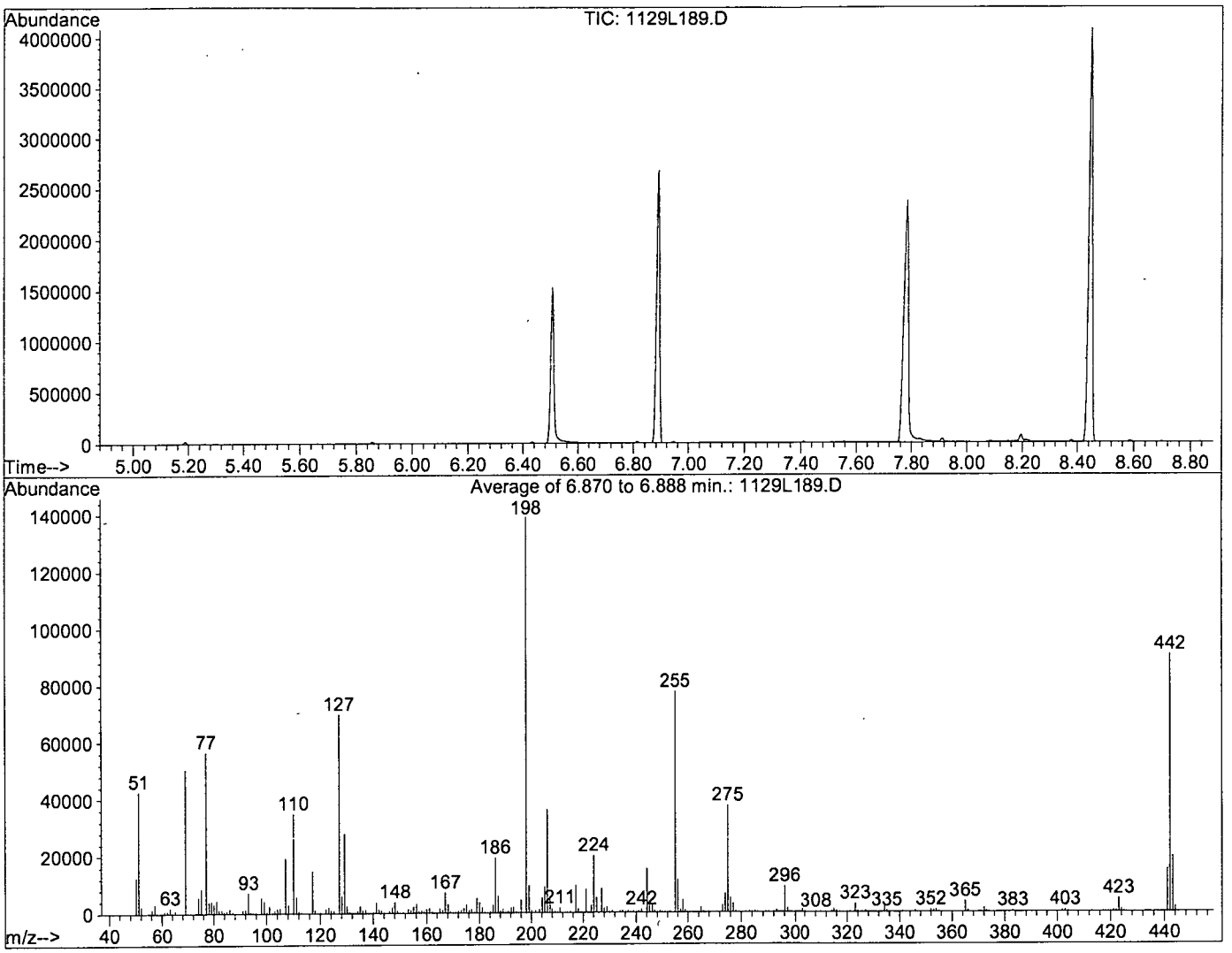
Spectrum Information: Average of 6.885 to 6.903 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	30.3	63248	PASS
68	69	0.00	2	0.0	0	PASS
69	69	100	100	100.0	74577	PASS
70	69	0.00	2	0.5	410	PASS
127	198	40	60	48.9	102048	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	208746	PASS
199	198	5	9	6.8	14279	PASS
275	198	10	30	26.9	56225	PASS
365	198	1	100	2.8	5768	PASS
441	443	0.01	100	75.2	23822	PASS
442	198	40	150	70.2	146636	PASS
443	442	17	23	21.6	31677	PASS

1129L002.D DFTPP2.M Tue Nov 29 15:16:08 2016

Data File : M:\LINUS\DATA\L161129\1129L189.D Vial: 89
Acq On : 8 Dec 16 17:50 Operator: MA
Sample : SV Tune 11/15/16 Inst : Linus
Misc : water Multiplr: 1.00

Method : M:\LINUS\DATA\L161026\DFTPP2.M (Chemstation Integrator)
Title :



Spectrum Information: Average of 6.870 to 6.888 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	30.6	42650	PASS
68	69	0.00	2	0.0	0	PASS
69	69	100	100	100.0	50517	PASS
70	69	0.00	2	0.3	148	PASS
127	198	40	60	50.1	69722	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	139198	PASS
199	198	5	9	6.8	9493	PASS
275	198	10	30	26.8	37311	PASS
365	198	1	100	2.7	3712	PASS
441	443	0.01	100	76.7	14921	PASS
442	198	40	150	64.9	90346	PASS
443	442	17	23	21.5	19453	PASS

1129L189.D DFTPP2.M Fri Dec 09 14:00:38 2016

8270 PAH SIM Standard Curve

PREP DATE:	10/26/16 RH												
8270 PAH SIM STANDARD CURVE													
Exp.DATE:	**12/20/16**					0.1	0.2	0.5	1	5	10	50	100
		Conc.		Date									
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL	µL	µL	µL	µL	µL
O2si	8270 PAH SIM S	200	278353-36992	9/12/16	9/12/17	0	0	0	0	5	5	25	50
	5.0ug/mL	5		9/12/16	7/29/17	0	0	10	20	0	0	0	0
	1.0ug/mL	1		9/12/16	7/29/17	10	20	0	0	0	0	0	0
O2SI	BNA SURR.	100/200		10/18/16	1/18/17	0	0	0	0	5	5	25	50
EM Science	Methylene Chloride		56061			90	80	90	80	190	90	50	0
Supelco	SV Internal St	2000	XA14020V-36768	10/10/16	10/10/17	2	2	2	2	4	2	2	2
				Final Vol.		102	102	102	102	204	102	102	102

8270 PAH SIM 2ND SRC

8270 PAH SIM 2ND SRC			Prep: 09/06/16 Exp 01/12/17 RH		
Supplier	**Standard**	**Conc.**	**Prep**	**Exp**	**µL**
O2SI	8270 2ND SRC	VARIOUS	06/03/16	01/21/17	25
	Methylene Chloride				75
o2si	CV Internal Standar	2000	10/10/16	10/10/17	2
LOT#	XA10079V-35507			Final Vol.	102

8270 SIM PAH Internal Standard						
PREP DATE:	10/10/16 RH.					
8270 SIM PAH Internal Standard Mix 125ug/ml						
Exp.DATE:	10/10/17					
		Conc.		Date	Exp.	125
Supplier	ID #	µg/mL	Lot #	Code	Date	µL
Supelco	SV Internal	2000	XA14020V-36768	10/10/16	10/10/17	350
EM Science	Methylene Chloride		56061			5250
				Final Vol.		5600

PAH SIM STD prep: 09/12/16-R.H.						
Exp:	19/12/17					
		Conc.				
Supplier	ID #	mg/L	Lot #	Open Date	Exp.Date	µL
o2si	110780-01	200	278353-36992	6/22/16	6/22/17	1000
				Fin Vol.		1000

8270 Surrog Mix 100/200ppm						
Prep: 10/18/16 -RH Ex: 01/18/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
8270 Acid Surrog Mix	10000 ug/ml	Restek Cat# 33029 Lot# A0118884-36874 Op: 10/03/16 EX: 10/03/17	2.0 mL	100 mL	200 µg/mL	MC
8270 B/N surrog Mix	5000 µg/mL	Restek Cat# 31086 Lot# A0119223-36869 Op: 10/03/16 EX: 10/03/17	2.0 mL	100 mL	100 ug/mL	MC

SIM SPIKE	
CAT:	110780-01
Lot:	278353-36
OP: 10/21/16-R.H.	
EX: 10/21/17	

Semivolatile (SV) Tuning Solution -G.A.						
PREP DATE:	10/19/16	RH				
Semivolatile (SV) Tune Solution 50ug/ml						
Exp:	01/19/17					
		Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
Ultra Scient	Semivolatile	1000	N081628-37012	08/23/16	8/23/17	200
EM Science	Methylene Chloride		55098			3800
				Final Vol.		4000

Semivolatile (SV) Tuning Solution -G.A.						
PREP DATE:	11/15/16	RH				
Semivolatile (SV) Tune Solution 50ug/ml						
Exp:	8/26/17					
		Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
Ultra Scient	Semivolatile GC	1000	N081628-37012	08/23/16	8/23/17	200
EM Science	Methylene Chloride		55098			3800
				Final Vol.		4000

8270 PAH SIM Standard Curve

PREP DATE:	11/28/16 RH					
8270 PAH SIM STANDARD CURVE						
Exp.DATE:	**12/20/16**					**5**
		Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
O2si	8270 PAH SIM S	200	278353-36992	9/12/16	9/12/17	5
	5.0ug/mL	5		9/12/16	7/29/17	0
	1.0ug/mL	1		9/12/16	7/29/17	0
O2SI	BNA SURR.	100/200		11/7/16	12/23/16	5
EM Science	Methylene Chloride		56061			190
Supelco	SV Internal St	2000	XA14020V-36768	10/10/16	10/10/17	4
				Final Vol.		204

8270 PAH SIM Standard CCV

PREP DATE:	12/07/16 RH					
8270 PAH SIM STANDARD CURVE						
Exp.DATE:	**1/20/16**					**5**
		Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
O2si	8270 PAH SIM S	200	278353-36992	9/12/16	9/12/17	5
	5.0ug/mL	5		9/12/16	7/29/17	0
	1.0ug/mL	1		9/12/16	7/29/17	0
O2SI	BNA SURR.	100/200		11/7/16	12/23/16	5
EM Science	Methylene Chloride		56061			190
Supelco	SV Internal St	2000	XA14020V-36768	10/10/16	10/10/17	4
				Final Vol.		204

_SEP004S

Organic Extraction Worksheet

Method	SIM Separatory Funnel Extra 3510C	Extraction Set	161122A	Extraction Method	SEP004S	Units	mL

Spiked ID 1	PAH SIM Spike 10-21-16 EXP 10-21-17		Surrogate ID 1	8270 Surrogate 11-7-16 EXP 12-23-16	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	11/22/16 16:25	
Spiked ID 8			Ext. End Time:	11/23/16 12:20	
			GC Requires Extract By:	11/24/16 0:00	

pH1	2	11/22/16 4:40:00 PM	Water Bath Temp Criteria	75 °C
pH2	14	11/22/16 6:00:00 PM		
pH3				

Spiked By: KY **Date** 11/22/16 **Witnessed By:** DL **Date** 11/22/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	161122A Blk				0.050	1 equip	1000 E-WB7	1	2/1	11/22/16 16:25	
2	161122A LCS-1		0.0250	1	0.050	1 equip	1000 E-WB7	1	2/1	11/22/16 16:25	
3	161122A LCSD-1		0.0250	1	0.050	1 equip	1000 E-WB7	1	2/1	11/22/16 16:25	
4	AZ45988	AZ45988W12			0.050	1 equip	1070 E-WB7	1	2/1	11/22/16 16:25	81515 1 WEEK
5	AZ45989	AZ45989W09			0.050	1 equip	1070 E-WB7	1	2/1	11/22/16 16:25	81515 1 WEEK
6	AZ45991	AZ45991W11			0.050	1 equip	950 E-WB7	1	2/1	11/22/16 16:25	81515 1 WEEK
7	AZ45992	AZ45992W16			0.050	1 equip	940 E-WB7	1	2/1	11/22/16 16:25	81515 1 WEEK
8	AZ45993	AZ45993W14			0.050	1 equip	960 E-WB7	1	2/1	11/22/16 16:25	81515 1 WEEK
9	AZ45994	AZ45994W15			0.050	1 equip	1070 E-WB7	1	2/1	11/22/16 16:25	81515 1 WEEK
10	AZ45995	AZ45995W07			0.050	1 equip	960 E-WB7	1	2/1	11/22/16 16:25	81515 1 WEEK
11	AZ45996	AZ45996W08			0.050	1 equip	1020 E-WB7	1	2/1	11/22/16 16:25	81515 1 WEEK

KY 11/23/16

Solvent and Lot#	
1+1 Acid	9-28-16
PH STRIP	HC 574756
MC	56153
A. Na2SO4	11-3-16
10N NaOH	11-22-16
B. Na2SO4	16C255214
FILTER PAPER	4000112

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	GA
Date	11/23/16
Time	1330
Refrigerator	Hobart

	Technician's Initials
Scanned By	KY
Sample Preparation	KY,DL,JR
Extraction	KY,DL,JR
Concentration	KY

Modified	11/23/16 12:36:08 PM

Reviewed By: KY **Date** 11/23/16

11/23/16 12:37:20 PM

Ext_ID 314 53377

_SEP004S

Organic Extraction Worksheet

Method	SIM Separatory Funnel Extra 3510C	Extraction Set	161206A	Extraction Method	SEP004S	Units	mL

Spiked ID 1	PAH SIM Spike 11-21-16 EXP 11-21-17		Surrogate ID 1	8270 Surrogate 11-15-16 EXP 2-15-17	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	12/06/16 13:55	
Spiked ID 8			Ext. End Time:	12/07/16 13:30	
			GC Requires Extract By:	11/24/16 0:00	

pH1	2	12/06/16 2:05:00 PM	Water Bath Temp Criteria	75 °C
pH2	14	12/06/16 3:40:00 PM		
pH3				

Spiked By: KY **Date** 12/06/16 **Witnessed By:** JR **Date** 12/06/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	161206A Blk				0.050	1	1000	1	2/1	12/06/16 13:55	
						equip	E-WB6				
2	161206A LCS-1		0.0250	1	0.050	1	1000	1	2/1	12/06/16 13:55	
						equip	E-WB6				
3	161206A LCSD-1		0.0250	1	0.050	1	1000	1	2/1	12/06/16 13:55	
						equip	E-WB6				
4	AZ45991	AZ45991W12			0.050	1	980	1	2/1	12/06/16 13:55	81515 1 WEEK RX
						equip	E-WB6				
5	AZ45993	AZ45993W13			0.050	1	1060	1	2/1	12/06/16 13:55	81515 1 WEEK RX
						equip	E-WB6				
6	AZ45995	AZ45995W09			0.050	1	980	1	2/1	12/06/16 13:55	81515 1 WEEK RX
						equip	E-WB6				
7	AZ45996	AZ45996W09			0.050	1	1000	1	2/1	12/06/16 13:55	81515 1 WEEK RX
						equip	E-WB6				

KY 12/07/16

Solvent and Lot#	
1+1 Acid	9-28-16
PH STRIP	hc 574756
MC	56153
A. Na2SO4	11-3-16
10N NaOH	11-22-16
B. Na2SO4	16c255214

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	RH
Date	12/07/16
Time	2:15
Refrigerator	GC-C

	Technician's Initials
Scanned By	KY
Sample Preparation	KY,JR,DL
Extraction	KY,JR,DL
Concentration	KY

Modified	12/07/16 1:38:28 PM

Reviewed By: KY **Date** 12/07/16

Injection Log

Directory: M:\LINUS\DATA\L161026\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	1026L002.D	1	SV TUNE 9/22/16	water	26 Oct 16 10:58
2	3	1026L003.D	1	0.1 ug/ml PAH 10/26/16	water	26 Oct 16 11:23
3	4	1026L004.D	1	0.2 ug/ml PAH 10/26/16	water	26 Oct 16 11:56
4	5	1026L005.D	1	0.5 ug/ml PAH 10/26/16	water	26 Oct 16 12:28
5	6	1026L006.D	1	1.0 ug/ml PAH 10/26/16 (1)	water	26 Oct 16 13:01
6	7	1026L007.D	1	5.0 ug/ml PAH 10/26/16	water	26 Oct 16 13:33
7	8	1026L008.D	1	10.0 ug/ml PAH 10/26/16	water	26 Oct 16 14:05
8	9	1026L009.D	1	50.0 ug/ml PAH 10/26/16	water	26 Oct 16 14:37
9	10	1026L010.D	1	100.0 ug/ml PAH 10/26/16	water	26 Oct 16 15:09
10	11	1026L011.D	1	SS PAH 10/26/16	water	26 Oct 16 15:42
11	15	1026L315.D	1	SV Tune 11/15/16		23 Nov 16 16:46
12	16	1026L316.D	1	2.5 ug/ml PAH 10/26/16 (2)		23 Nov 16 17:01
13	29	1026L329.D	1	161122A BLK 1/1000	water	23 Nov 16 23:59
14	30	1026L330.D	1	161122A LCS-1 1/1000	water	24 Nov 16 00:32
15	31	1026L331.D	1	161122A LCSD-1 1/1000	water	24 Nov 16 1:04
16	32	1026L332.D	0.934579	AZ45988W12 1/1070	water	24 Nov 16 1:36
17	34	1026L334.D	1.05263	AZ45991W11 1/950	water	24 Nov 16 2:41
18	38	1026L338.D	1	2.5 ug/ml PAH 10/26/16 (2)		24 Nov 16 4:16
19	2	1129L002.D	1	SV TUNE 9/22/16	water	29 Nov 16 15:03
20	3	1129L003.D	1	5.0 ug/ml PAH 11/28/16	water	29 Nov 16 15:19
21	9	1129L009.D	0.93458	AZ45989W09 1/1070	water	29 Nov 16 18:31
22	10	1129L010.D	1.06383	AZ45992W16 1/940	water	29 Nov 16 19:03
23	11	1129L011.D	1.04167	AZ45993W14 1/960	water	29 Nov 16 19:35
24	12	1129L012.D	0.93458	AZ45994W15 1/1070	water	29 Nov 16 20:08
25	13	1129L013.D	1.04167	AZ45995W07 1/960	water	29 Nov 16 20:40
26	14	1129L014.D	0.98039	AZ45996W08 1/1020	water	29 Nov 16 21:12
27	21	1129L021.D	1	5.0 ug/ml PAH 11/28/16	water	30 Nov 16 00:25
28	89	1129L189.D	1	SV Tune 11/15/16	water	8 Dec 16 17:50
29	90	1129L190.D	1	5.0 ug/ml PAH 12/7/16 (2)	water	8 Dec 16 18:08
30	92	1129L192.D	1	161206A BLK 1/1000	water	8 Dec 16 19:14
31	93	1129L193.D	1	161206A LCS-1 1/1000	water	8 Dec 16 19:48
32	95	1129L195.D	1.02041	AZ45991W12 1/980	water	8 Dec 16 20:54
33	96	1129L196.D	0.9434	AZ45993W13 1/1060	water	8 Dec 16 21:28
34	97	1129L197.D	1.02041	AZ45995W09 1/980	water	8 Dec 16 22:01
35	98	1129L198.D	1	AZ45996W09 1/1000	water	8 Dec 16 22:34
36	100	1129L200.D	1	5.0 ug/ml PAH 12/07/16 (2)	water	8 Dec 16 23:41

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank
EPA 8270D WATER

Blank Name/QCG: **161122W-45988 - 214094**
Batch ID: #87DC5-161122B

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	11/22/16	11/28/16
BLANK	SURROGATE: 2,4,6-TRIBROMOP	72.1	43-140			%	11/22/16	11/28/16
BLANK	SURROGATE: 2-FLUORBIPHENY	64.6	44-119			%	11/22/16	11/28/16
BLANK	SURROGATE: 2-FLUOROPHENO	35.5	19-119			%	11/22/16	11/28/16
BLANK	SURROGATE: NITROBENZENE-	66.2	44-120			%	11/22/16	11/28/16
BLANK	SURROGATE: PHENOL-D6 (S)	20.6	10-115			%	11/22/16	11/28/16
BLANK	SURROGATE: TERPHENYL-D14 (	75.7	50-134			%	11/22/16	11/28/16

Quant Method: Y1117.M
Run #: 1117Y130
Instrument: Yoda
Sequence: Y161117
Initials: MA

GC SC-Blank-REG MDLs-DOD
Printed: 11/29/16 12:51:44 PM

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81515

Case No: 81515 Date Analyzed: 11/28/16

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2,4,6-TRIBROMOPHENOL (S)			SURROGATE: 2-FLUORBIPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161122B-BLK	Blank	43-140	72.1		44-119	64.6	
161122B-LCS	Lab Control Spike	43-140	84.5		44-119	67.8	
161122B-LCSD	Lab Control SpikeD	43-140	48.2		44-119	38.0	*
AZ45988	ERH118	43-140	73.8		44-119	60.1	
AZ45989	ERH119	43-140	68.3		44-119	51.9	
AZ45991	ERH124	43-140	83.1		44-119	56.0	
AZ45992	ERH125	43-140	56.9		44-119	44.5	
AZ45993	ERH127	43-140	66.9		44-119	59.5	
AZ45994	ERH129	43-140	70.6		44-119	61.6	
AZ45995	ERH130	43-140	56.4		44-119	48.9	
AZ45996	ERH131	43-140	74.4		44-119	64.4	

Comments: Batch: #87DC5-161122B

* = Recovery outside of Control Limits on QC Sample.

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81515

Case No: 81515 Date Analyzed: 11/28/16

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2-FLUOROPHENOL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161122B-BLK	Blank	19-119	35.5		44-120	66.2	
161122B-LCS	Lab Control Spike	19-119	42.2		44-120	73.0	
161122B-LCSD	Lab Control SpikeD	19-119	26.8		44-120	41.9	*
AZ45988	ERH118	19-119	34.6		44-120	61.5	
AZ45989	ERH119	19-119	35.3		44-120	61.6	
AZ45991	ERH124	19-119	34.3		44-120	68.1	
AZ45992	ERH125	19-119	30.9		44-120	48.9	
AZ45993	ERH127	19-119	37.5		44-120	63.4	
AZ45994	ERH129	19-119	32.0		44-120	64.2	
AZ45995	ERH130	19-119	29.1		44-120	50.6	
AZ45996	ERH131	19-119	37.8		44-120	65.9	

Comments: Batch: #87DC5-161122B

* = Recovery outside of Control Limits on QC Sample.

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81515

Case No: 81515 Date Analyzed: 11/28/16

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: PHENOL-D6 (S)			SURROGATE: TERPHENYL-D14 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161122B-BLK	Blank	10-115	20.6		50-134	75.7	
161122B-LCS	Lab Control Spike	10-115	25.2		50-134	82.7	
161122B-LCSD	Lab Control SpikeD	10-115	18.0		50-134	51.9	
AZ45988	ERH118	10-115	20.1		50-134	69.3	
AZ45989	ERH119	10-115	19.7		50-134	66.8	
AZ45991	ERH124	10-115	20.4		50-134	76.0	
AZ45992	ERH125	10-115	18.8		50-134	58.2	
AZ45993	ERH127	10-115	21.2		50-134	67.5	
AZ45994	ERH129	10-115	17.8		50-134	73.0	
AZ45995	ERH130	10-115	16.4		50-134	56.9	
AZ45996	ERH131	10-115	21.9		50-134	73.7	

Comments: Batch: #87DC5-161122B

Laboratory Control Spike Recoveries
EPA 8270D WATER

APPL ID: **161122W-45988 LCS - 214094**
Batch ID: #87DC5-161122B

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
PHENOL	50.0	20.5	17.5	41.0	35.0	10-115	15.8	20
SURROGATE: 2,4,6-TRIBROMOPHENOL	200	169	96.4	84.5	48.2	43-140		
SURROGATE: 2-FLUORBIPHENYL (S)	100	67.8	38.0	67.8	38.0 #	44-119		
SURROGATE: 2-FLUOROPHENOL (S)	200	84.4	53.5	42.2	26.8	19-119		
SURROGATE: NITROBENZENE-D5 (S)	100	73.0	41.9	73.0	41.9 #	44-120		
SURROGATE: PHENOL-D6 (S)	200	50.4	36.0	25.2	18.0	10-115		
SURROGATE: TERPHENYL-D14 (S)	100	82.7	51.9	82.7	51.9	50-134		

= Recovery is outside QC limits.

Comments:

Primary	SPK	DUP
Quant Method :	Y1117.M	Y1117.M
Extraction Date :	11/22/16	11/22/16
Analysis Date :	11/28/16	11/28/16
Instrument :	Yoda	Yoda
Run :	1117Y131	1117Y132
Initials :	MA	

Printed: 11/29/16 12:51:53 PM
APPL Standard LCSD

EPA 8270D

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81515

Case No: 81515 Date Analyzed: 11/28/16

Matrix: WATER Instrument: Yoda

Blank ID: 161122B-BLK Time Analyzed: 1735

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161122B-BLK	Blank	1117Y130	11/28/16 1735
161122B-LCS	Lab Control Spike	1117Y131	11/28/16 1805
161122B-LCSD	Lab Control SpikeD	1117Y132	11/28/16 1834
AZ45988	ERH118	1117Y133	11/28/16 1904
AZ45989	ERH119	1117Y134	11/28/16 1933
AZ45991	ERH124	1117Y135	11/28/16 2002
AZ45992	ERH125	1117Y136	11/28/16 2032
AZ45993	ERH127	1117Y140	11/28/16 2156
AZ45994	ERH129	1117Y141	11/28/16 2225
AZ45995	ERH130	1117Y142	11/28/16 2254
AZ45996	ERH131	1117Y143	11/28/16 2324

Comments: Batch: #87DC5-161122B

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: Water
ID: SV Tune 10/19/16

SDG No:
Date Analyzed: 11/17/16
Instrument: Yoda
Time Analyzed: 11:17

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		5ug/ml SVOC 11/15/16	1117Y003.D	11/17/16 11:32
2		10ug/ml SVOC 11/15/1	1117Y004.D	11/17/16 12:02
3		20ug/ml SVOC 11/15/1	1117Y005.D	11/17/16 12:31
4		40ug/ml SVOC 11/15/1	1117Y006.D	11/17/16 13:00
5		50ug/ml SVOC 11/15/1	1117Y007.D	11/17/16 13:29
6		60ug/ml SVOC 11/15/1	1117Y008.D	11/17/16 13:59
7		80ug/ml SVOC 11/15/1	1117Y009.D	11/17/16 14:28
8		100ug/ml SVOC 11/15/	1117Y010.D	11/17/16 14:58
9		2ND SRC SVOC 11/15/1	1117Y011.D	11/17/16 15:27
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	45.2
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.1
127	40 - 60% of mass 198	57.0
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 197.95	100.0
199	5 - 9% of mass 198	6.1
275	10 - 30% of mass 198	22.5
365	1 - 100% of mass 198	3.4
441	0.01 - 100% of mass 443	80.8
442	50 - 150% of mass 197.95	91.2
443	17 - 23% of mass 442	20.4

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81515
Matrix: Water
ID: SV Tune 11/15/16

SDG No: 81515
Date Analyzed: 11/28/16
Instrument: Yoda
Time Analyzed: 9:47

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		50ug/ml SVOC 11/15/1	1117Y116.D	11/28/16 10:42
2	Blank	161122B BLK 1/1000	1117Y130.D	11/28/16 17:35
3	Lab Control Spike	161122B LCS-1 1/1000	1117Y131.D	11/28/16 18:05
4	Lab Control SpikeD	161122B LCSD-1 1/100	1117Y132.D	11/28/16 18:34
5	ERH118	AZ45988W14 1/1010	1117Y133.D	11/28/16 19:04
6	ERH119	AZ45989W07 1/1010	1117Y134.D	11/28/16 19:33
7	ERH124	AZ45991W16 1/1020	1117Y135.D	11/28/16 20:02
8	ERH125	AZ45992W11 1/940	1117Y136.D	11/28/16 20:32
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	45.4
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.5
127	40 - 60% of mass 198	54.8
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 197.95	100.0
199	5 - 9% of mass 198	6.1
275	10 - 30% of mass 198	23.1
365	1 - 100% of mass 198	3.4
441	0.01 - 100% of mass 443	83.1
442	50 - 150% of mass 197.95	91.6
443	17 - 23% of mass 442	19.9

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81515
Matrix: Water
ID: SV Tune 11/15/16

SDG No: 81515
Date Analyzed: 11/28/16
Instrument: Yoda
Time Analyzed: 21:10

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		50ug/ml SVOC 11/15/1	1117Y139.D	11/28/16 21:26
2	ERH127	AZ45993W11 1/960	1117Y140.D	11/28/16 21:56
3	ERH129	AZ45994W20 1/1070	1117Y141.D	11/28/16 22:25
4	ERH130	AZ45995W12 1/950	1117Y142.D	11/28/16 22:54
5	ERH131	AZ45996W12 1/960	1117Y143.D	11/28/16 23:24
6		50ug/ml SVOC 11/15/1	1117Y149.D	11/29/16 2:20
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	43.7
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.6
127	40 - 60% of mass 198	56.3
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	7.1
275	10 - 30% of mass 198	25.1
365	1 - 100% of mass 198	3.8
441	0.01 - 100% of mass 443	83.8
442	50 - 150% of mass 198	100.6
443	17 - 23% of mass 442	19.7

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81515

Lab File ID (Standard): 1117Y007.D Date Analyzed: 11/17/16

Instrument ID: Yoda Time Analyzed: 13:29

GC Column: ID: Heated Purge: (Y/N)

		1,4-dichlorobenzene-D4(IS)		Napthalene-D8(IS)		Acenaphthene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	181943	5.04	778154	6.46	463295	8.47
	UPPER LIMIT	363886	5.54	1556308	6.96	926590	8.97
	LOWER LIMIT	90972	4.54	389077	5.96	231648	7.97
	SAMPLE NO.						
01	50ug/ml SVOC 11/15/16	137102	5.03	602305	6.46	371946	8.47
02	161122B BLK 1/1000	163355	5.03	734357	6.46	437471	8.46
03	161122B LCS-1 1/1000	152921	5.03	669097	6.46	410269	8.47
04	161122B LCSD-1 1/100	171103	5.03	764878	6.46	466301	8.47
05	AZ45988W14 1/1010	179313	5.04	782469	6.46	467755	8.46
06	AZ45989W07 1/1010	158435	5.04	700038	6.46	421744	8.46
07	AZ45991W16 1/1020	160418	5.03	699633	6.45	424075	8.47
08	AZ45992W11 1/940	161225	5.03	736325	6.46	441734	8.47
09	50ug/ml SVOC 11/15/16	137005	5.03	602961	6.46	369334	8.47
10	AZ45993W11 1/960	160327	5.03	716001	6.46	437625	8.46
11	AZ45994W20 1/1070	180953	5.03	790135	6.46	479977	8.47
12	AZ45995W12 1/950	211369	5.03	939805	6.46	566945	8.46
13	AZ45996W12 1/960	164678	5.03	734490	6.46	437285	8.46
14	50ug/ml SVOC 11/15/16	149934	5.03	668262	6.46	409676	8.47
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81515

Lab File ID (Standard): 1117Y007.D Date Analyzed: 11/17/16

Instrument ID: Yoda Time Analyzed: 13:29

GC Column: ID: Heated Purge: (Y/N)

		Phenanthrene-D10(IS)		Chrysene-D12(IS)		Perylene-D12(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	862854	10.20	815722	13.29	770325	14.98
	UPPER LIMIT	1725708	10.70	1631444	13.79	1540650	15.48
	LOWER LIMIT	431427	9.70	407861	12.79	385163	14.48
	SAMPLE NO.						
01	50ug/ml SVOC 11/15/16	674600	10.20	658175	13.28	614866	14.98
02	161122B BLK 1/1000	822121	10.19	801165	13.27	753907	14.97
03	161122B LCS-1 1/1000	780741	10.19	742444	13.28	703257	14.97
04	161122B LCSD-1 1/100	858993	10.20	839094	13.28	786907	14.97
05	AZ45988W14 1/1010	886564	10.19	869620	13.28	797688	14.97
06	AZ45989W07 1/1010	784594	10.19	775680	13.27	712640	14.97
07	AZ45991W16 1/1020	803586	10.19	805892	13.28	721822	14.97
08	AZ45992W11 1/940	820110	10.19	800864	13.28	733782	14.97
09	50ug/ml SVOC 11/15/16	673860	10.19	677907	13.28	616110	14.97
10	AZ45993W11 1/960	815491	10.19	803309	13.27	724369	14.97
11	AZ45994W20 1/1070	897982	10.19	878920	13.27	801322	14.97
12	AZ45995W12 1/950	1079620	10.19	1055840	13.28	960711	14.97
13	AZ45996W12 1/960	834251	10.19	823699	13.27	739221	14.97
14	50ug/ml SVOC 11/15/16	759945	10.20	740150	13.28	684415	14.98
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

ORGANICS

Sample Data

APPL, INC.

EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH118

Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515

APPL ID: AZ45988

QCG: #87DC5-161122B-214094

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	11/22/16	11/28/16
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	73.8	43-140			%	11/22/16	11/28/16
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	60.1	44-119			%	11/22/16	11/28/16
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	34.6	19-119			%	11/22/16	11/28/16
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	61.5	44-120			%	11/22/16	11/28/16
EPA 8270D	SURROGATE: PHENOL-D6 (S)	20.1	10-115			%	11/22/16	11/28/16
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	69.3	50-134			%	11/22/16	11/28/16

Quant Method: Y1117.M
Run #: 1117Y133
Instrument: Yoda
Sequence: Y161117
Dilution Factor: 1
Initials: MA

Printed: 11/29/16 12:52:11 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y133.D Vial: 33
Acq On : 28 Nov 16 19:04 Operator: MA
Sample : AZ45988W14 1/1010 Inst : Yoda
Misc : water Multiplr: 0.99

Quant Time: Nov 29 9:30 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	179313	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.46	136	782469	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.46	164	467755	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.19	188	886564	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.28	240	869620	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.97	264	797688	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.54	112	389064	68.45010 ppb	0.00
Spiked Amount 198.020			Recovery =	34.567%	
5) Phenol-D6 (S)	4.68	99	317942	39.86314 ppb	0.00
Spiked Amount 198.020			Recovery =	20.131%	
21) Nitrobenzene-D5(S)	5.66	82	504088	60.90977 ppb	0.00
Spiked Amount 99.010			Recovery =	61.519%	
45) 2-Fluorobiphenyl(S)	7.69	172	895466	59.51368 ppb	0.00
Spiked Amount 99.010			Recovery =	60.109%	
63) 2,4,6-Tribromophenol(S)	9.40	330	337678	146.19306 ppb	0.00
Spiked Amount 198.020			Recovery =	73.827%	
81) Terphenyl-D14(S)	12.06	244	1368458	68.62781 ppb	0.00
Spiked Amount 99.010			Recovery =	69.314%	
Target Compounds					Qvalue
36) Caprolactum	6.96	55	15436	4.88439 ppb	94
49) Dimethyl phthalate	8.18	163	55030	3.20688 ppb	100

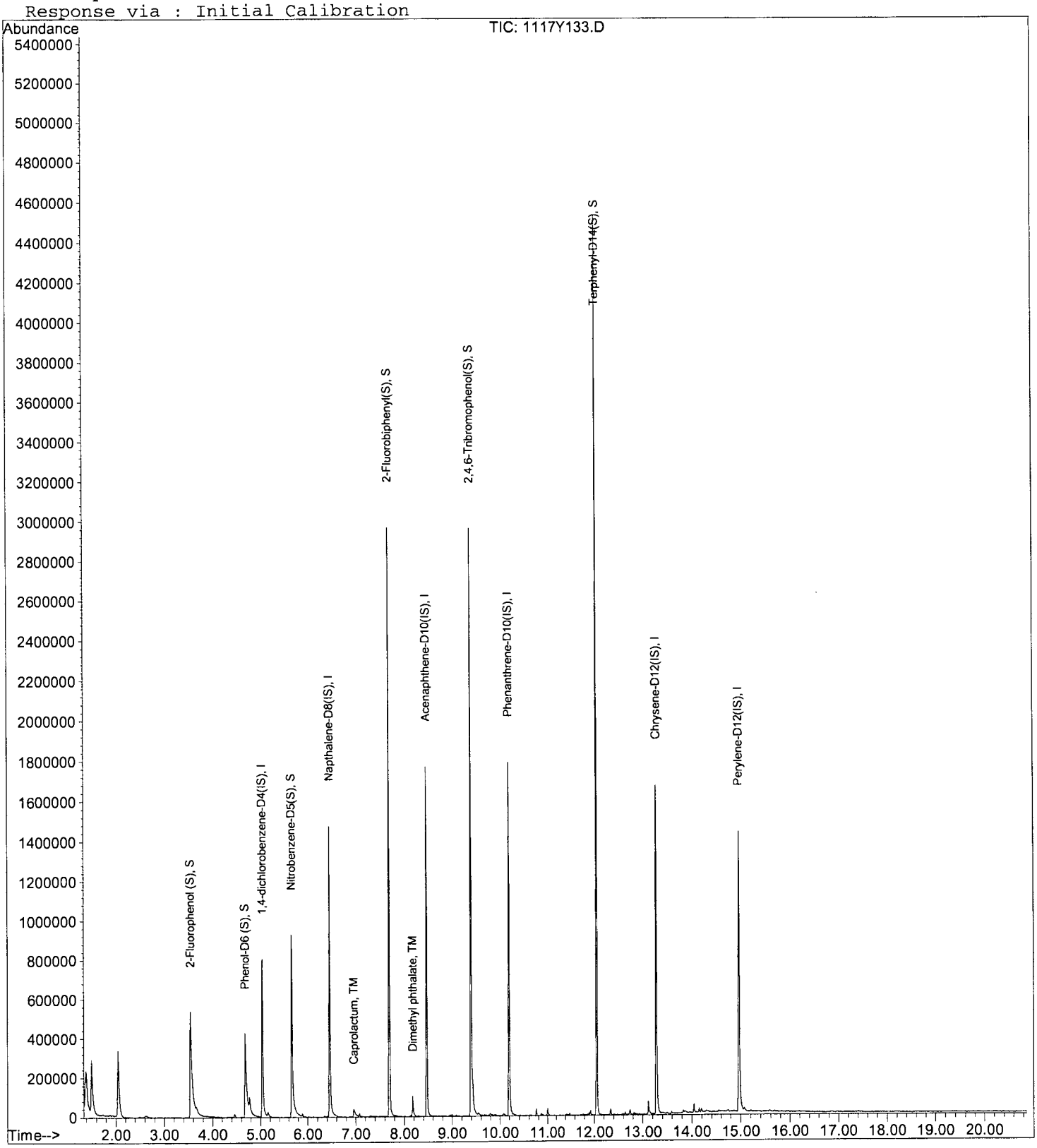
(#) = qualifier out of range (m) = manual integration
1117Y133.D Y1117.M Tue Nov 29 09:45:21 2016 Page 1

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y133.D Vial: 33
Acq On : 28 Nov 16 19:04 Operator: MA
Sample : AZ45988W14 1/1010 Inst : Yoda
Misc : water Multiplr: 0.99

Quant Time: Nov 29 9:30 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration



EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH119

Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515

APPL ID: AZ45989

QCG: #87DC5-161122B-214094

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	11/22/16	11/28/16
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	68.3	43-140			%	11/22/16	11/28/16
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	51.9	44-119			%	11/22/16	11/28/16
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	35.3	19-119			%	11/22/16	11/28/16
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	61.6	44-120			%	11/22/16	11/28/16
EPA 8270D	SURROGATE: PHENOL-D6 (S)	19.7	10-115			%	11/22/16	11/28/16
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	66.8	50-134			%	11/22/16	11/28/16

Quant Method: Y1117.M
Run #: 1117Y134
Instrument: Yoda
Sequence: Y161117
Dilution Factor: 1
Initials: MA

Printed: 11/29/16 12:52:11 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y134.D Vial: 34
Acq On : 28 Nov 16 19:33 Operator: MA
Sample : AZ45989W07 1/1010 Inst : Yoda
Misc : water Multiplr: 0.99

Quant Time: Nov 29 9:30 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	158435	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.46	136	700038	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.46	164	421744	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.19	188	784594	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.27	240	775680	40.00000 ppb	-0.02
88) Perylene-D12(IS)	14.97	264	712640	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.54	112	351356	69.96181 ppb	0.00
Spiked Amount 198.020			Recovery =	35.331%	
5) Phenol-D6 (S)	4.68	99	274908	39.00962 ppb	0.00
Spiked Amount 198.020			Recovery =	19.700%	
21) Nitrobenzene-D5(S)	5.66	82	451370	60.96195 ppb	0.00
Spiked Amount 99.010			Recovery =	61.572%	
45) 2-Fluorobiphenyl(S)	7.69	172	697290	51.39852 ppb	0.00
Spiked Amount 99.010			Recovery =	51.913%	
63) 2,4,6-Tribromophenol(S)	9.40	330	281502	135.16835 ppb	0.00
Spiked Amount 198.020			Recovery =	68.260%	
81) Terphenyl-D14(S)	12.06	244	1176643	66.15464 ppb	0.00
Spiked Amount 99.010			Recovery =	66.817%	

Target Compounds Qvalue

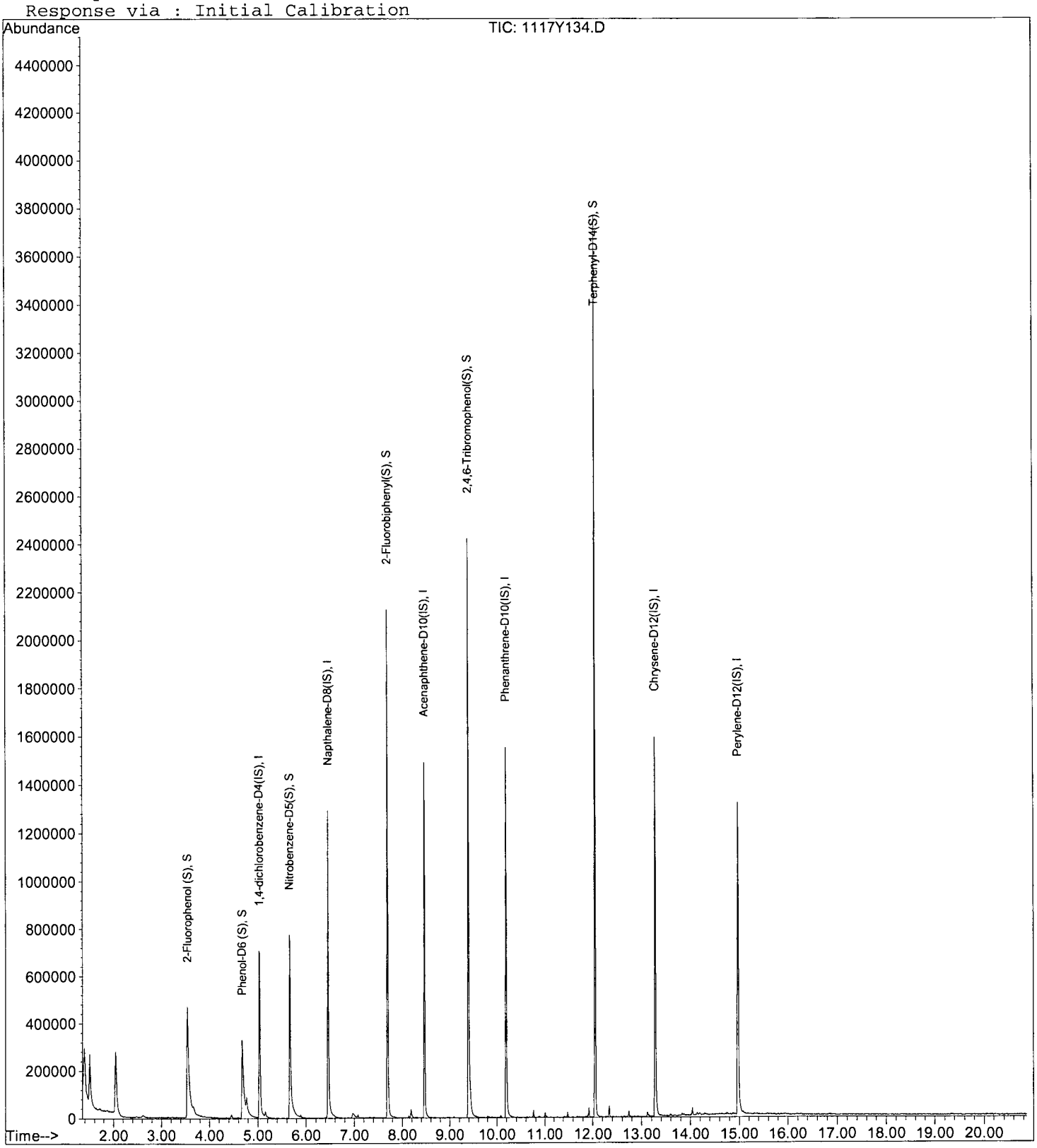
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y134.D Vial: 34
Acq On : 28 Nov 16 19:33 Operator: MA
Sample : AZ45989W07 1/1010 Inst : Yoda
Misc : water Multiplr: 0.99

Quant Time: Nov 29 9:30 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration



EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH124
Sample Collection Date: 11/15/16

ARF: 81515
APPL ID: AZ45991
QCG: #87DC5-161122B-214094

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	11/22/16	11/28/16
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	83.1	43-140			%	11/22/16	11/28/16
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	56.0	44-119			%	11/22/16	11/28/16
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	34.3	19-119			%	11/22/16	11/28/16
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	68.1	44-120			%	11/22/16	11/28/16
EPA 8270D	SURROGATE: PHENOL-D6 (S)	20.4	10-115			%	11/22/16	11/28/16
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	76.0	50-134			%	11/22/16	11/28/16

Quant Method: Y1117.M
Run #: 1117Y135
Instrument: Yoda
Sequence: Y161117
Dilution Factor: 1
Initials: MA

Printed: 11/29/16 12:52:11 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y135.D Vial: 35
Acq On : 28 Nov 16 20:02 Operator: MA
Sample : AZ45991W16 1/1020 Inst : Yoda
Misc : water Multiplr: 0.98

Quant Time: Nov 29 9:32 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	160418	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.45	136	699633	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.47	164	424075	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.19	188	803586	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.28	240	805892	40.00000 ppb	-0.02
88) Perylene-D12(IS)	14.97	264	721822	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.55	112	345687	67.31542 ppb	0.00
Spiked Amount 196.078			Recovery =	34.331%	
5) Phenol-D6 (S)	4.68	99	287638	39.91613 ppb	0.00
Spiked Amount 196.078			Recovery =	20.357%	
21) Nitrobenzene-D5(S)	5.66	82	499258	66.80706 ppb	0.00
Spiked Amount 98.039			Recovery =	68.143%	
45) 2-Fluorobiphenyl(S)	7.70	172	756937	54.94434 ppb	0.00
Spiked Amount 98.039			Recovery =	56.043%	
63) 2,4,6-Tribromophenol(S)	9.40	330	344680	162.98051 ppb	0.00
Spiked Amount 196.078			Recovery =	83.120%	
81) Terphenyl-D14(S)	12.06	244	1391404	74.55802 ppb	0.00
Spiked Amount 98.039			Recovery =	76.049%	
Target Compounds					Qvalue

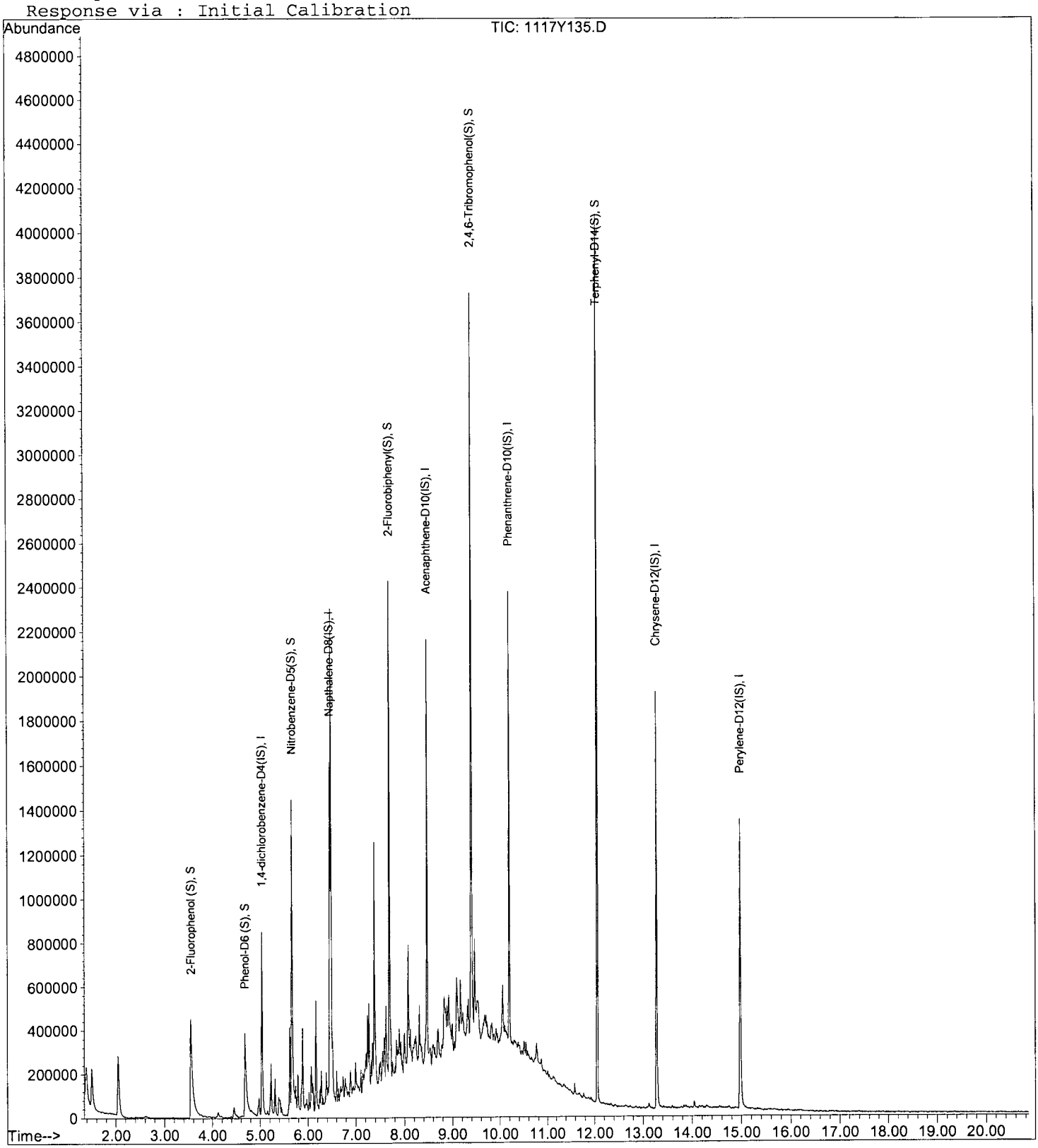
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y135.D Vial: 35
Acq On : 28 Nov 16 20:02 Operator: MA
Sample : AZ45991W16 1/1020 Inst : Yoda
Misc : water Multiplr: 0.98

Quant Time: Nov 29 9:32 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration



EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH125
Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515
APPL ID: AZ45992
QCG: #87DC5-161122B-214094

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	11/22/16	11/28/16
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	56.9	43-140			%	11/22/16	11/28/16
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	44.5	44-119			%	11/22/16	11/28/16
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	30.9	19-119			%	11/22/16	11/28/16
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	48.9	44-120			%	11/22/16	11/28/16
EPA 8270D	SURROGATE: PHENOL-D6 (S)	18.8	10-115			%	11/22/16	11/28/16
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	58.2	50-134			%	11/22/16	11/28/16

Quant Method: Y1117.M
Run #: 1117Y136
Instrument: Yoda
Sequence: Y161117
Dilution Factor: 1
Initials: MA

Printed: 11/29/16 12:52:11 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y136.D Vial: 36
Acq On : 28 Nov 16 20:32 Operator: MA
Sample : AZ45992W11 1/940 Inst : Yoda
Misc : water Multiplr: 1.06

Quant Time: Nov 29 9:32 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	161225	40.00000	ppb	0.00
20) Napthalene-D8(IS)	6.46	136	736325	40.00000	ppb	0.00
40) Acenaphthene-D10(IS)	8.47	164	441734	40.00000	ppb	0.00
64) Phenanthrene-D10(IS)	10.19	188	820110	40.00000	ppb	0.00
78) Chrysene-D12(IS)	13.28	240	800864	40.00000	ppb	-0.02
88) Perylene-D12(IS)	14.97	264	733782	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.55	112	312354	65.67085	ppb	0.00
Spiked Amount 212.766			Recovery = 30.865%			
5) Phenol-D6 (S)	4.68	99	267053	40.01232	ppb	0.00
Spiked Amount 212.766			Recovery = 18.806%			
21) Nitrobenzene-D5(S)	5.66	82	376966	52.00841	ppb	0.00
Spiked Amount 106.383			Recovery = 48.888%			
45) 2-Fluorobiphenyl(S)	7.70	172	626740	47.39209	ppb	0.00
Spiked Amount 106.383			Recovery = 44.548%			
63) 2,4,6-Tribromophenol(S)	9.40	330	245984	121.16624	ppb	0.00
Spiked Amount 212.766			Recovery = 56.948%			
81) Terphenyl-D14(S)	12.06	244	1057602	61.88064	ppb	0.00
Spiked Amount 106.383			Recovery = 58.168%			
Target Compounds						Qvalue

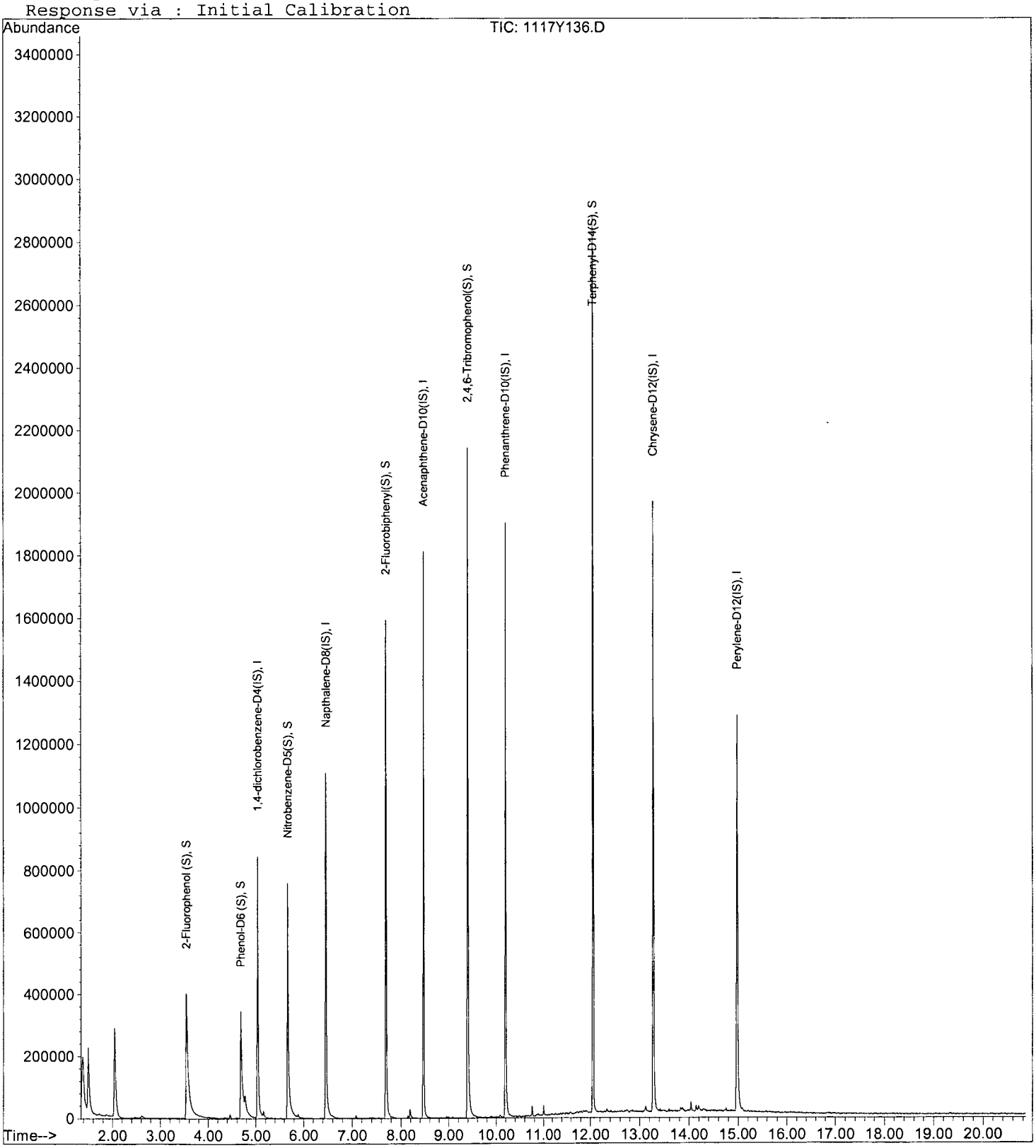
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y136.D Vial: 36
Acq On : 28 Nov 16 20:32 Operator: MA
Sample : AZ45992W11 1/940 Inst : Yoda
Misc : water Multiplr: 1.06

Quant Time: Nov 29 9:32 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration



EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH127

Sample Collection Date: 11/16/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515

APPL ID: AZ45993

QCG: #87DC5-161122B-214094

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	11/22/16	11/28/16
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	66.9	43-140			%	11/22/16	11/28/16
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	59.5	44-119			%	11/22/16	11/28/16
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	37.5	19-119			%	11/22/16	11/28/16
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	63.4	44-120			%	11/22/16	11/28/16
EPA 8270D	SURROGATE: PHENOL-D6 (S)	21.2	10-115			%	11/22/16	11/28/16
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	67.5	50-134			%	11/22/16	11/28/16

Quant Method: Y1117.M
Run #: 1117Y140
Instrument: Yoda
Sequence: Y161117
Dilution Factor: 1
Initials: MA

Printed: 11/29/16 12:52:11 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y140.D Vial: 40
Acq On : 28 Nov 16 21:56 Operator: MA
Sample : AZ45993W11 1/960 Inst : Yoda
Misc : water Multiplr: 1.04

Quant Time: Nov 29 9:34 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	160327	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.46	136	716001	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.46	164	437625	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.19	188	815491	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.27	240	803309	40.00000 ppb	-0.02
88) Perylene-D12(IS)	14.97	264	724369	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.54	112	376999	78.04578 ppb	0.00
Spiked Amount 208.333			Recovery =	37.462%	
5) Phenol-D6 (S)	4.68	99	299902	44.24449 ppb	0.00
Spiked Amount 208.333			Recovery =	21.237%	
21) Nitrobenzene-D5(S)	5.66	82	475576	66.07013 ppb	0.00
Spiked Amount 104.167			Recovery =	63.427%	
45) 2-Fluorobiphenyl(S)	7.69	172	828867	61.94695 ppb	0.00
Spiked Amount 104.167			Recovery =	59.469%	
63) 2,4,6-Tribromophenol(S)	9.39	330	286268	139.36837 ppb	0.00
Spiked Amount 208.333			Recovery =	66.897%	
81) Terphenyl-D14(S)	12.06	244	1230765	70.29780 ppb	0.00
Spiked Amount 104.167			Recovery =	67.486%	

Target Compounds	Qvalue

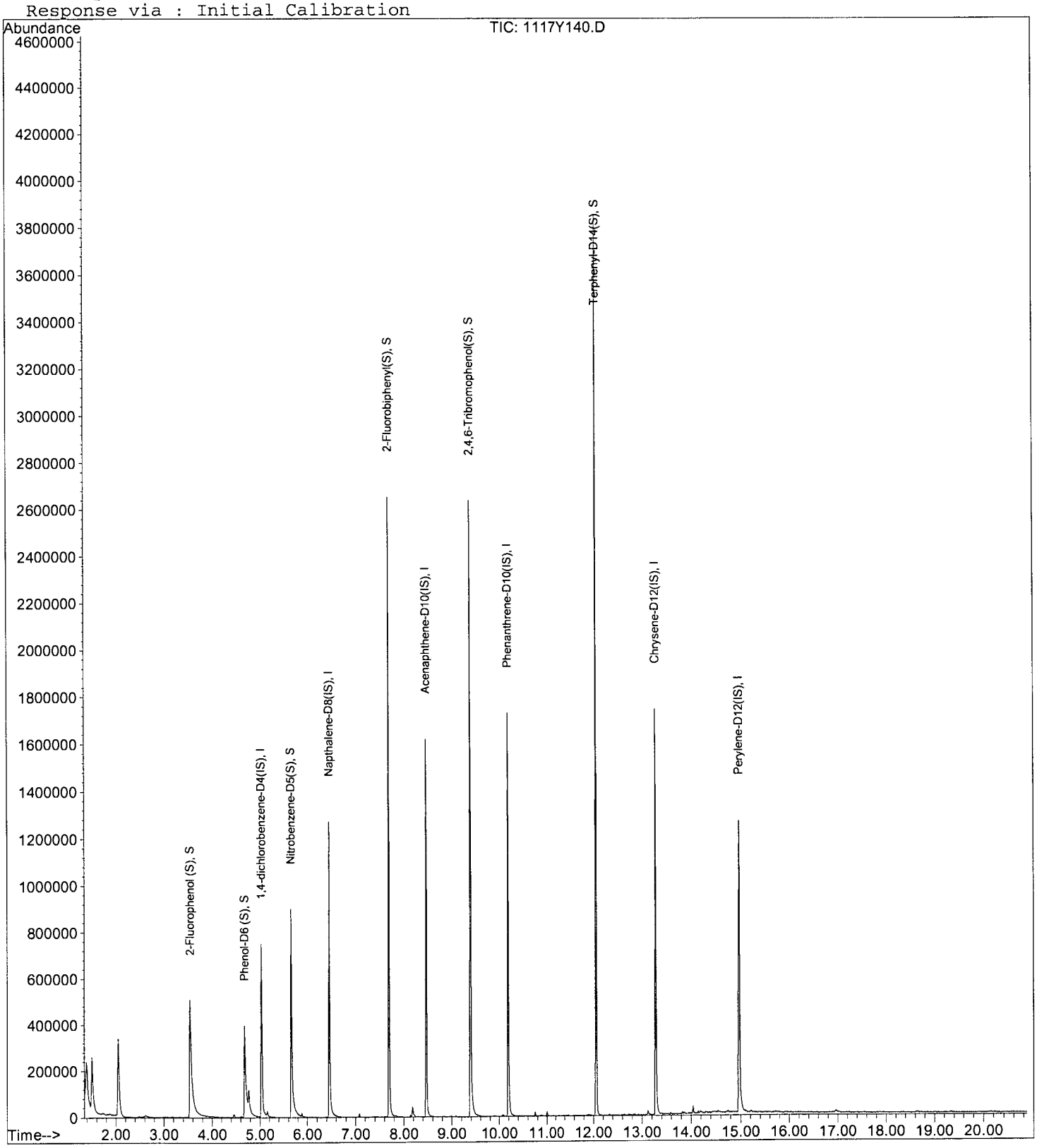
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y140.D Vial: 40
Acq On : 28 Nov 16 21:56 Operator: MA
Sample : AZ45993W11 1/960 Inst : Yoda
Misc : water Multiplr: 1.04

Quant Time: Nov 29 9:34 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration



EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH129

Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515

APPL ID: AZ45994

QCG: #87DC5-161122B-214094

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	11/22/16	11/28/16
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	70.6	43-140			%	11/22/16	11/28/16
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	61.6	44-119			%	11/22/16	11/28/16
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	32.0	19-119			%	11/22/16	11/28/16
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	64.2	44-120			%	11/22/16	11/28/16
EPA 8270D	SURROGATE: PHENOL-D6 (S)	17.8	10-115			%	11/22/16	11/28/16
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	73.0	50-134			%	11/22/16	11/28/16

Quant Method: Y1117.M
Run #: 1117Y141
Instrument: Yoda
Sequence: Y161117
Dilution Factor: 1
Initials: MA

Printed: 11/29/16 12:52:11 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y141.D Vial: 41
Acq On : 28 Nov 16 22:25 Operator: MA
Sample : AZ45994W20 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Nov 29 9:35 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	180953	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.46	136	790135	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.47	164	479977	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.19	188	897982	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.27	240	878920	40.00000 ppb	-0.02
88) Perylene-D12(IS)	14.97	264	801322	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.54	112	362955	59.72955 ppb	0.00
Spiked Amount 186.916			Recovery = 31.956%		
5) Phenol-D6 (S)	4.68	99	283037	33.19329 ppb	0.00
Spiked Amount 186.916			Recovery = 17.758%		
21) Nitrobenzene-D5(S)	5.66	82	531188	59.99736 ppb	0.00
Spiked Amount 93.458			Recovery = 64.197%		
45) 2-Fluorobiphenyl(S)	7.69	172	940998	57.52966 ppb	0.00
Spiked Amount 93.458			Recovery = 61.557%		
63) 2,4,6-Tribromophenol(S)	9.39	330	331230	131.91346 ppb	0.00
Spiked Amount 186.916			Recovery = 70.573%		
81) Terphenyl-D14(S)	12.06	244	1456153	68.20139 ppb	0.00
Spiked Amount 93.458			Recovery = 72.975%		

Target Compounds	Qvalue

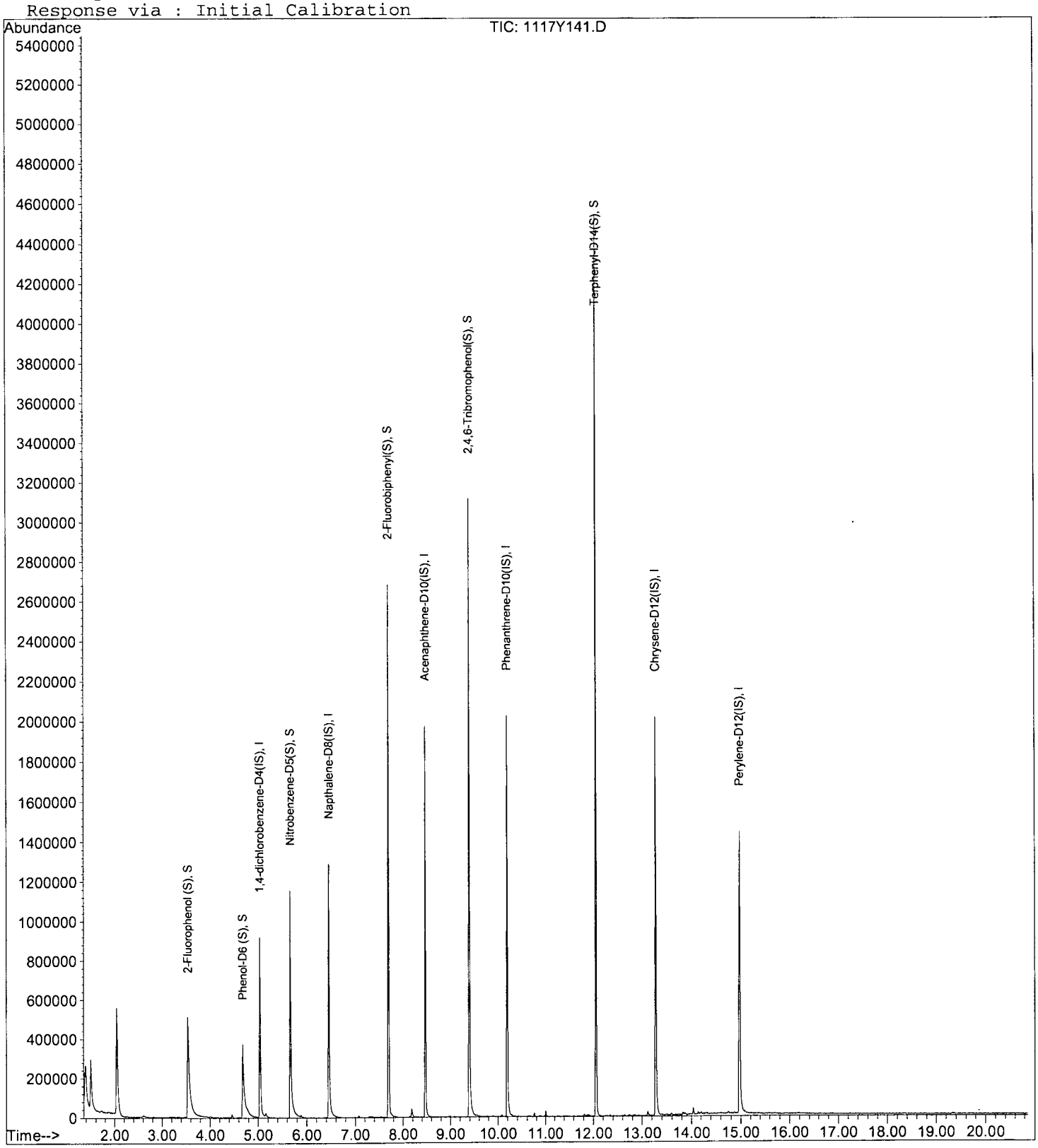
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y141.D Vial: 41
Acq On : 28 Nov 16 22:25 Operator: MA
Sample : AZ45994W20 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Nov 29 9:35 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration



EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH130
Sample Collection Date: 11/16/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515
APPL ID: AZ45995
QCG: #87DC5-161122B-214094

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	11/22/16	11/28/16
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	56.4	43-140			%	11/22/16	11/28/16
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	48.9	44-119			%	11/22/16	11/28/16
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	29.1	19-119			%	11/22/16	11/28/16
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	50.6	44-120			%	11/22/16	11/28/16
EPA 8270D	SURROGATE: PHENOL-D6 (S)	16.4	10-115			%	11/22/16	11/28/16
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	56.9	50-134			%	11/22/16	11/28/16

Quant Method: Y1117.M
Run #: 1117Y142
Instrument: Yoda
Sequence: Y161117
Dilution Factor: 1
Initials: MA

Printed: 11/29/16 12:52:11 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y142.D Vial: 42
Acq On : 28 Nov 16 22:54 Operator: MA
Sample : AZ45995W12 1/950 Inst : Yoda
Misc : water Multiplr: 1.05

Quant Time: Nov 29 9:37 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	211369	40.00000	ppb	0.00
20) Napthalene-D8(IS)	6.46	136	939805	40.00000	ppb	0.00
40) Acenaphthene-D10(IS)	8.46	164	566945	40.00000	ppb	0.00
64) Phenanthrene-D10(IS)	10.19	188	1079624	40.00000	ppb	0.00
78) Chrysene-D12(IS)	13.28	240	1055840	40.00000	ppb	0.00
88) Perylene-D12(IS)	14.97	264	960711	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.53	112	386007	61.25131	ppb	0.00
Spiked Amount 210.526			Recovery =	29.094%		
5) Phenol-D6 (S)	4.68	99	305440	34.53955	ppb	0.00
Spiked Amount 210.526			Recovery =	16.407%		
21) Nitrobenzene-D5(S)	5.66	82	498039	53.26845	ppb	0.00
Spiked Amount 105.263			Recovery =	50.605%		
45) 2-Fluorobiphenyl(S)	7.69	172	882834	51.46606	ppb	0.00
Spiked Amount 105.263			Recovery =	48.893%		
63) 2,4,6-Tribromophenol(S)	9.40	330	312475	118.66249	ppb	0.00
Spiked Amount 210.526			Recovery =	56.364%		
81) Terphenyl-D14(S)	12.06	244	1365055	59.94416	ppb	0.00
Spiked Amount 105.263			Recovery =	56.947%		

Target Compounds Qvalue

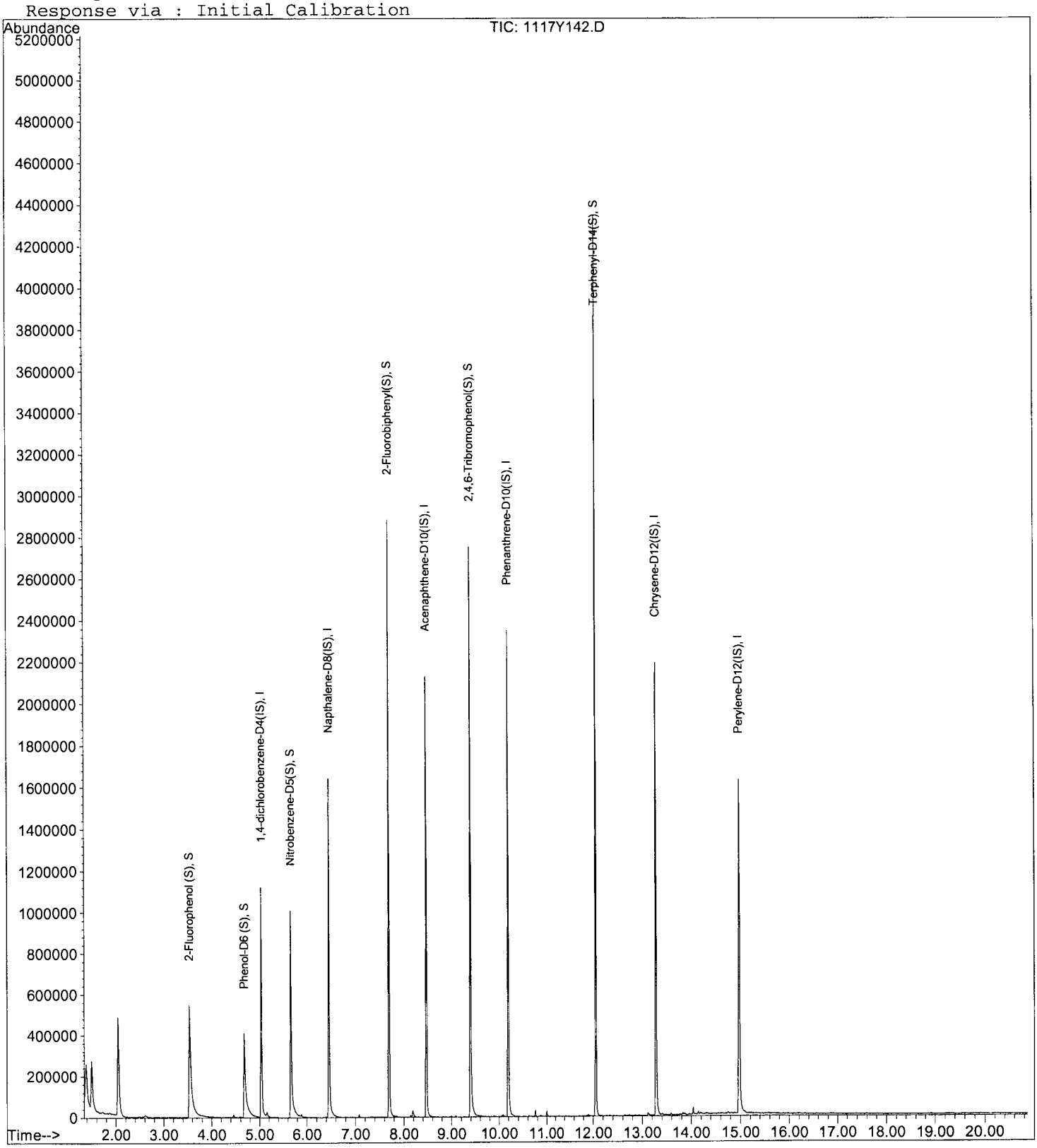
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y142.D Vial: 42
Acq On : 28 Nov 16 22:54 Operator: MA
Sample : AZ45995W12 1/950 Inst : Yoda
Misc : water Multiplr: 1.05

Quant Time: Nov 29 9:37 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration



EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH131

Sample Collection Date: 11/16/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515

APPL ID: AZ45996

QCG: #87DC5-161122B-214094

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	11/22/16	11/28/16
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	74.4	43-140			%	11/22/16	11/28/16
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	64.4	44-119			%	11/22/16	11/28/16
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	37.8	19-119			%	11/22/16	11/28/16
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	65.9	44-120			%	11/22/16	11/28/16
EPA 8270D	SURROGATE: PHENOL-D6 (S)	21.9	10-115			%	11/22/16	11/28/16
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	73.7	50-134			%	11/22/16	11/28/16

Quant Method: Y1117.M
Run #: 1117Y143
Instrument: Yoda
Sequence: Y161117
Dilution Factor: 1
Initials: MA

Printed: 11/29/16 12:52:11 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y143.D Vial: 43
Acq On : 28 Nov 16 23:24 Operator: MA
Sample : AZ45996W12 1/960 Inst : Yoda
Misc : water Multiplr: 1.04

Quant Time: Nov 29 9:38 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	164678	40.00000	ppb	0.00
20) Napthalene-D8(IS)	6.46	136	734490	40.00000	ppb	0.00
40) Acenaphthene-D10(IS)	8.46	164	437285	40.00000	ppb	0.00
64) Phenanthrene-D10(IS)	10.19	188	834251	40.00000	ppb	0.00
78) Chrysene-D12(IS)	13.27	240	823699	40.00000	ppb	-0.02
88) Perylene-D12(IS)	14.97	264	739221	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.53	112	390950	78.79552	ppb	0.00
Spiked Amount 208.333			Recovery =	37.822%		
5) Phenol-D6 (S)	4.68	99	317764	45.64105	ppb	0.00
Spiked Amount 208.333			Recovery =	21.908%		
21) Nitrobenzene-D5(S)	5.66	82	507131	68.68045	ppb	0.00
Spiked Amount 104.167			Recovery =	65.933%		
45) 2-Fluorobiphenyl(S)	7.69	172	897289	67.11274	ppb	0.00
Spiked Amount 104.167			Recovery =	64.428%		
63) 2,4,6-Tribromophenol(S)	9.40	330	317926	154.90128	ppb	0.00
Spiked Amount 208.333			Recovery =	74.352%		
81) Terphenyl-D14(S)	12.06	244	1378598	76.79242	ppb	0.00
Spiked Amount 104.167			Recovery =	73.720%		

Target Compounds Qvalue

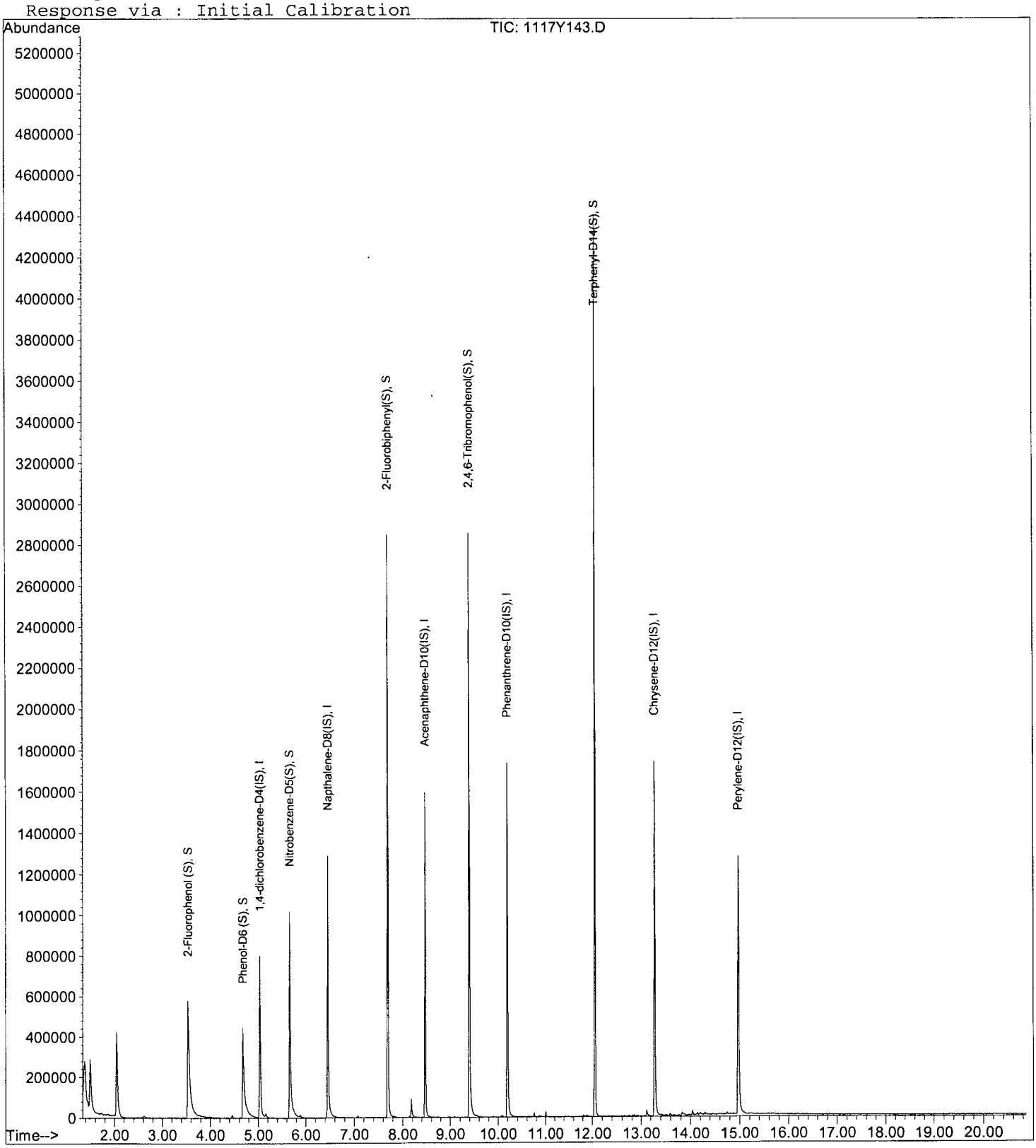
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y143.D Vial: 43
Acq On : 28 Nov 16 23:24 Operator: MA
Sample : AZ45996W12 1/960 Inst : Yoda
Misc : water Multiplr: 1.04

Quant Time: Nov 29 9:38 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration



ORGANICS

Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 11/17/16
Matrix: Instrument: Yoda
Initials:

			1117Y003.D	1117Y004.D	1117Y005.D	1117Y006.D	1117Y007.D	1117Y008.D	1117Y009.D	1117Y010.D						
		Compound	5	10	20	40	50	60	80	100			Avg	%RSD		
1	I	1,4-dichlorobenzene-D4(IS)														
2	TM	n-Nitrosodimethylamine	0.8767	0.9297	0.9993	0.9385	0.9504	0.9096	0.9453	1.051			0.95	5.7	TM	
3	TM	Pyridine	1.846	1.847	1.987	2.030	2.186	2.174	2.102	1.994			2.0	6.5	TM	
4	S	2-Fluorophenol (S)	0.8584	1.249	1.256	1.338	1.360	1.312	1.331	1.340			1.3	13	S	
5	S	Phenol-D6 (S)	1.779	1.865	1.723	1.758	1.788	1.709	1.716	1.755			1.8	2.9	S	
6	*TM	Phenol	1.968	2.028	1.977	2.010	2.042	1.971	1.974	1.997			2.0	1.4	*TM	
7	TM	Aniline	1.767	1.937	1.959	2.018	2.041	2.029	2.009	2.059			2.0	4.8	TM	
8	TM	Bis (2-chloroethyl) ether	0.8304	0.9093	0.9069	0.9191	0.9504	0.9073	0.8914	0.9307			0.91	3.9	TM	
9	TM	2-Chlorophenol	1.521	1.652	1.526	1.549	1.527	1.524	1.501	1.530			1.5	3.0	TM	
10	TM	1,3-DCB	1.688	1.749	1.697	1.671	1.710	1.638	1.618	1.667			1.7	2.4	TM	
11	*TM	1,4-DCB	1.781	1.762	1.709	1.737	1.724	1.680	1.654	1.691			1.7	2.5	*TM	
12	TM	Benzyl alcohol	0.8001	0.7934	0.8495	0.8899	0.8869	0.8719	0.8644	0.9061			0.86	4.8	TM	
13	TM	1,2-DCB	1.686	1.669	1.554	1.596	1.612	1.554	1.537	1.560			1.6	3.5	TM	
14	TM	2-Methylphenol	1.236	1.165	1.138	1.160	1.195	1.171	1.154	1.182			1.2	2.6	TM	
15	TM	Bis (2-chloroisopropyl) ether	1.904	1.923	1.786	1.771	1.790	1.736	1.727	1.719			1.8	4.4	TM	
16	TM	Acetophenone	2.239	2.266	2.125	2.199	2.247	2.164	2.129	2.201			2.2	2.4	TM	
17	TM	3&4-Methylphenol	1.539	1.633	1.511	1.538	1.569	1.538	1.521	1.555			1.6	2.4	TM	
18	**TM	n-Nitrosodi-n-propylamine	1.207	1.144	1.119	1.111	1.132	1.106	1.122	1.149			1.1	2.8	**TM	
19	TM	Hexachloroethane	0.7457	0.7268	0.7078	0.7126	0.7162	0.7028	0.6894	0.7071			0.71	2.4	TM	
20	I	Napthalene-D8(IS)														
21	S	Nitrobenzene-D5(S)	0.4332	0.4370	0.4213	0.4076	0.4248	0.3993	0.4068	0.4210			0.42	3.2	S	
22	TM	Nitrobenzene	0.4295	0.4309	0.4171	0.4270	0.4390	0.4237	0.4276	0.4424			0.43	1.9	TM	
23	TM	Isophorone	0.7247	0.7042	0.6896	0.6988	0.7327	0.6988	0.6991	0.7239			0.71	2.2	TM	
24	*TM	2-Nitrophenol	0.1932	0.2016	0.1966	0.2040	0.2115	0.2042	0.2042	0.2129			0.20	3.3	*TM	
25	TM	2,4-Dimethylphenol	0.3340	0.3144	0.3095	0.3090	0.3241	0.3090	0.3179	0.3242			0.32	2.9	TM	
26	TMQ	Benzoic acid	0.0719	0.1514	0.1913	0.2342	0.2570	0.2511	0.2607	0.2430			0.21	32	TMQ	0.997
27	TM	Bis (2-chloroethoxy) methane	0.3988	0.3691	0.3694	0.3697	0.3888	0.3654	0.3686	0.3821			0.38	3.2	TM	
28	*TM	2,4-Dichlorophenol	0.2902	0.3057	0.3020	0.3010	0.3107	0.3060	0.3071	0.3114			0.30	2.2	*TM	
29	TM	1,2,4-Trichlorobenzene	0.3536	0.3470	0.3243	0.3335	0.3488	0.3309	0.3242	0.3395			0.34	3.3	TM	
30	TM	3,4-Dimethylphenol	0.5541	0.5065	0.4845	0.4960	0.5109	0.4973	0.4916	0.5103			0.51	4.2	TM	
31	TM	Naphthalene	1.093	1.056	1.036	1.035	1.055	1.033	1.036	1.066			1.1	2.0	TM	
32	TM	4-Chloroaniline	0.3183	0.3776	0.3888	0.3921	0.4000	0.3809	0.3763	0.3680			0.38	6.7	TM	
33	TM	2,6-Dichlorophenol	0.3039	0.3083	0.2942	0.2904	0.3039	0.2873	0.2874	0.2959			0.30	2.7	TM	
34	TM	Hexachloropropene	0.2546	0.2601	0.2601	0.2662	0.2769	0.2730	0.2741	0.2845			0.27	3.8	TM	
35	*TM	Hexachlorobutadiene	0.2212	0.2159	0.2138	0.2125	0.2187	0.2103	0.2124	0.2192			0.22	1.8	*TM	

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 11/17/16
Matrix: Instrument: Yoda Initials:

		Compound	5	10	20	40	50	60	80	100			Avg	%RSD		
36	TM	Caprolactum	0.1651	0.1526	0.1600	0.1569	0.1637	0.1591	0.1588	0.1634			0.16	2.6	TM	
37	*TM	4-Chloro-3-methylphenol	0.3618	0.3334	0.3375	0.3472	0.3617	0.3561	0.3495	0.3671			0.35	3.4	*TM	
38	TM	2-Methylnaphthalene	0.7173	0.7093	0.7058	0.6996	0.7156	0.6981	0.6915	0.7283			0.71	1.7	TM	
39	TM	1-Methylnaphthalene	0.6863	0.6706	0.6709	0.6841	0.6964	0.6717	0.6690	0.6960			0.68	1.7	TM	
40	I	Acenaphthene-D10(IS)														
41	**TMQ	Hexachlorocyclopentadiene	0.0369	0.0603	0.1198	0.1905	0.2160	0.2348	0.2549	0.2883			0.18	53	**TMQ	0.999
42	TM	1,2,4,5-Tetrachlorobenzene	0.5685	0.5509	0.5514	0.5420	0.5405	0.5332	0.5167	0.5313			0.54	2.9	TM	
43	*TM	2,4,6-Trichlorophenol	0.3659	0.3576	0.3590	0.3614	0.3711	0.3594	0.3547	0.3624			0.36	1.4	*TM	
44	TM	2,4,5-Trichlorophenol	0.4206	0.3683	0.3806	0.3726	0.3846	0.3801	0.3707	0.3846			0.38	4.3	TM	
45	S	2-Fluorobiphenyl(S)	1.335	1.387	1.287	1.240	1.285	1.216	1.207	1.235			1.3	4.9	S	
46	TM	1,1'-Biphenyl	1.574	1.536	1.534	1.533	1.537	1.495	1.468	1.497			1.5	2.2	TM	
47	TM	2-Chloronaphthalene	1.254	1.206	1.172	1.193	1.205	1.180	1.145	1.179			1.2	2.7	TM	
48	TM	2-Nitroaniline	0.3775	0.4231	0.4274	0.4306	0.4382	0.4262	0.4241	0.4356			0.42	4.5	TM	
49	TM	Dimethyl phthalate	1.485	1.466	1.482	1.426	1.465	1.434	1.408	1.457			1.5	1.9	TM	
50	TM	2,6-DNT	0.3164	0.3095	0.3300	0.3225	0.3386	0.3287	0.3246	0.3321			0.33	2.8	TM	
51	TM	Acenaphthylene	1.925	1.884	1.887	1.849	1.895	1.793	1.797	1.851			1.9	2.5	TM	
52	TM	3-Nitroaniline	0.3201	0.3273	0.3321	0.3522	0.3587	0.3393	0.3335	0.3373			0.34	3.7	TM	
53	*TM	Acenaphthene	1.176	1.147	1.170	1.128	1.150	1.126	1.089	1.126			1.1	2.5	*TM	
54	**TML	2,4-Dinitrophenol		0.0456	0.1181	0.1571	0.1500	0.1783	0.1669	0.1813			0.14	33	**TML	0.995
55	**TML	4-Nitrophenol		0.0379	0.2280	0.2741	0.2816	0.2852	0.2899	0.3033			0.24	38	**TML	0.999
56	TM	Dibenzofuran	1.733	1.653	1.660	1.667	1.685	1.644	1.574	1.631			1.7	2.7	TM	
57	TM	2,4-DNT	0.4502	0.4413	0.4587	0.4575	0.4715	0.4569	0.4482	0.4677			0.46	2.2	TM	
58	TM	2,3,4,6-Tetrachlorophenol	0.2574	0.2950	0.2937	0.2843	0.3008	0.2922	0.2958	0.3124			0.29	5.5	TM	
59	TM	Diethyl phthalate	1.551	1.505	1.500	1.488	1.509	1.486	1.420	1.467			1.5	2.5	TM	
60	TM	4-Chlorophenyl phenyl ether	0.7199	0.6938	0.6647	0.6518	0.6641	0.6522	0.6617	0.7092			0.68	3.9	TM	
61	TM	Fluorene	1.420	1.401	1.340	1.320	1.355	1.329	1.334	1.425			1.4	3.2	TM	
62	TM	4-Nitroaniline	0.3032	0.3382	0.3427	0.3168	0.3196	0.3136	0.2981	0.3070			0.32	5.0	TM	
63	S	2,4,6-Tribromophenol(S)	0.1934	0.2058	0.1919	0.1906	0.1984	0.1911	0.1914	0.2019			0.20	3.0	S	
64	I	Phenanthrene-D10(IS)														
65	TM	4,6-Dinitro-2-methylphenol	0.1063	0.1246	0.1323	0.1512	0.1579	0.1497	0.1516	0.1592			0.14	13	TM	
66	TM	Diphenyl amine	0.5921	0.5629	0.5353	0.5467	0.5417	0.5203	0.5237	0.5445			0.55	4.2	TM	
67	*TM	n-Nitrosodiphenylamine	0.5921	0.5629	0.5353	0.5467	0.5417	0.5203	0.5237	0.5445			0.55	4.2	*TM	
68	TM	1,2-Diphenylhydrazine	0.8834	0.8524	0.8084	0.8230	0.9893	0.9572	0.9284	0.9300			0.90	7.3	TM	
69	TM	4-Bromophenyl phenyl ether	0.2190	0.2123	0.2068	0.2159	0.2154	0.2078	0.2046	0.2149			0.21	2.4	TM	
70	TM	Hexachlorobenzene	0.2403	0.2357	0.2177	0.2265	0.2269	0.2207	0.2217	0.2259			0.23	3.4	TM	

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 11/17/16
Matrix: Instrument: Yoda Initials:

		Compound	5	10	20	40	50	60	80	100			Avg	%RSD		
71	TM	Atrazine	0.2257	0.2133	0.2218	0.2263	0.2272	0.2159	0.2140	0.2232			0.22	2.6	TM	
72	*TMQ	Pentachlorophenol	0.0453	0.0466	0.0460	0.0678	0.0747	0.0721	0.0840	0.0918			0.07	28	*TMQ	0.998
73	TM	Phenanthrene	1.180	1.146	1.099	1.108	1.104	1.074	1.057	1.096			1.1	3.5	TM	
74	TM	Anthracene	1.224	1.216	1.124	1.157	1.167	1.136	1.113	1.126			1.2	3.7	TM	
75	TM	Carbazol	1.058	1.036	0.9944	1.020	1.014	0.9948	0.9918	1.015			1.0	2.3	TM	
76	TM	Di-n-butylphthalate	1.462	1.412	1.363	1.396	1.380	1.361	1.347	1.344			1.4	2.9	TM	
77	*TM	Fluoranthene	1.270	1.265	1.198	1.221	1.225	1.193	1.192	1.219			1.2	2.5	*TM	
78	I	Chrysene-D12(IS)														
79	TM	Benzidine	0.3946	0.4216	0.4411	0.4650	0.4775	0.4667	0.4453	0.4292			0.44	6.2	TM	
80	TM	Pyrene	1.403	1.326	1.289	1.330	1.365	1.325	1.285	1.277			1.3	3.3	TM	
81	S	Terphenyl-D14(S)	0.9882	0.9665	0.8976	0.8931	0.9110	0.8676	0.8830	0.8580			0.91	5.1	S	
82	TM	Butyl benzylphthalate	0.7130	0.6490	0.6557	0.6750	0.6887	0.6721	0.6496	0.6378			0.67	3.7	TM	
83	TM	3,3'-Dichlorobenzidine	0.3908	0.4253	0.4217	0.4193	0.4214	0.4152	0.3901	0.3756			0.41	4.6	TM	
84	TM	Benz (a) anthracene	1.298	1.306	1.228	1.264	1.289	1.278	1.258	1.225			1.3	2.4	TM	
85	TM	Bis (2-ethylhexyl) phthalate	0.9971	0.9443	0.9087	0.9552	0.9669	0.9473	0.9208	0.9292			0.95	2.9	TM	
86	TM	Chrysene	1.269	1.236	1.188	1.238	1.256	1.222	1.183	1.186			1.2	2.7	TM	
87	*TM	Di-n-octylphthalate	1.740	1.667	1.598	1.629	1.674	1.643	1.653	1.589			1.6	2.9	*TM	
88	I	Perylene-D12(IS)														
89	TM	Benzo (b) fluoranthene	1.487	1.345	1.328	1.284	1.470	1.402	1.312	1.372			1.4	5.3	TM	
90	TM	Benzo (k) fluoranthene	1.230	1.363	1.330	1.354	1.209	1.217	1.234	1.319			1.3	5.1	TM	
91	*TM	Benzo (a) pyrene	1.292	1.289	1.277	1.278	1.279	1.253	1.225	1.266			1.3	1.7	*TM	
92	TM	Indeno (1,2,3-cd) pyrene	1.486	1.520	1.448	1.455	1.481	1.433	1.385	1.426			1.5	2.9	TM	
93	TM	Dibenz (a,h) anthracene	1.286	1.284	1.214	1.241	1.243	1.218	1.171	1.221			1.2	3.1	TM	
94	TM	Benzo (g,h,i) perylene	1.248	1.244	1.234	1.216	1.235	1.191	1.148	1.191			1.2	2.8	TM	
95																
96																
97																
98																
99																
100																
101																
102																
103																
104																
105																

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y003.D Vial: 3
Acq On : 17 Nov 16 11:32 Operator: MA
Sample : 5ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:03:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	186655	40.00000	ppb		0.00
20) Napthalene-D8(IS)	6.46	136	811731	40.00000	ppb		0.00
40) Acenaphthene-D10(IS)	8.47	164	481288	40.00000	ppb		0.00
64) Phenanthrene-D10(IS)	10.20	188	871758	40.00000	ppb		0.00
78) Chrysene-D12(IS)	13.28	240	846746	40.00000	ppb		0.00
88) Perylene-D12(IS)	14.98	264	786880	40.00000	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol (S)	3.59	112	40058	4.74233	ppb		0.05
Spiked Amount 200.000			Recovery =	2.371%			
5) Phenol-D6 (S)	4.70	99	83025	7.57969	ppb		0.03
Spiked Amount 200.000			Recovery =	3.790%			
21) Nitrobenzene-D5(S)	5.68	82	43960	4.38254	ppb		0.00
Spiked Amount 100.000			Recovery =	4.383%			
45) 2-Fluorobiphenyl(S)	7.69	172	80290	5.33147	ppb		0.00
Spiked Amount 100.000			Recovery =	5.331%			
63) 2,4,6-Tribromophenol(S)	9.40	330	23274	10.21956	ppb		0.00
Spiked Amount 200.000			Recovery =	5.110%			
81) Terphenyl-D14(S)	12.06	244	104592	5.54620	ppb		0.00
Spiked Amount 100.000			Recovery =	5.546%			
Target Compounds							Qvalue
2) n-Nitrosodimethylamine	1.88	42	20454	3.70679	ppb		100
3) Pyridine	1.89	79	43077	3.83922	ppb		82
6) Phenol	4.72	94	45924	3.51779	ppb		94
7) Aniline	4.71	66	41234	3.37636	ppb		93
8) Bis (2-chloroethyl) ether	4.76	63	19374	3.25558	ppb		88
9) 2-Chlorophenol	4.84	128	35488	3.57195	ppb		89
10) 1,3-DCB	4.97	146	39374	3.61470	ppb		95
11) 1,4-DCB	5.06	146	41555	3.72196	ppb		95
12) Benzyl alcohol	5.25	108	18667	3.30711	ppb		91
13) 1,2-DCB	5.22	146	39344	3.81131	ppb		98
14) 2-Methylphenol	5.37	107	28841	3.73704	ppb		84
15) Bis (2-chloroisopropyl) et	5.34	45	44432	3.63432	ppb		94
16) Acetophenone	5.51	105	52237	3.68814	ppb		93
17) 3&4-Methylphenol	5.56	107	71793	7.15362	ppb		97
18) n-Nitrosodi-n-propylamine	5.49	70	28150	3.75423	ppb		91
19) Hexachloroethane	5.59	117	17398	3.83140	ppb		91
22) Nitrobenzene	5.70	77	43575	4.10858	ppb		98
23) Isophorone	5.95	82	73536	4.11900	ppb		98
24) 2-Nitrophenol	6.06	139	19605	3.80758	ppb		89
25) 2,4-Dimethylphenol	6.12	122	33888	4.31573	ppb		94
26) Benzoic acid	6.31	105	7294	7.11700	ppb	#	71
27) Bis (2-chloroethoxy) metha	6.20	93	40462	4.24091	ppb		96
28) 2,4-Dichlorophenol	6.37	162	29444	3.91857	ppb		96
29) 1,2,4-Trichlorobenzene	6.40	180	35876	4.30822	ppb		99
30) 3,4-Dimethylphenol	6.47	107	56222	4.52002	ppb		88
31) Naphthalene	6.49	128	110932	4.24975	ppb		100
32) 4-Chloroaniline	6.59	127	32298	3.56583	ppb		93
33) 2,6-Dichlorophenol	6.58	162	30836	4.25747	ppb		93
34) Hexachloropropene	6.58	213	25829	4.02245	ppb		95
35) Hexachlorobutadiene	6.62	225	22448	4.29550	ppb		90
36) Caprolactum	6.96	55	16755	4.08655	ppb	#	87
37) 4-Chloro-3-methylphenol	7.17	107	36714	4.18425	ppb		91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y003.D Vial: 3
Acq On : 17 Nov 16 11:32 Operator: MA
Sample : 5ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:03:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.27	142	72783	4.14303	ppb		98
39)	1-Methylnaphthalene	7.39	142	69633	4.06022	ppb		94
41)	Hexachlorocyclopentadiene	7.45	237	2217	7.00281	ppb		99
42)	1,2,4,5-Tetrachlorobenzene	7.48	216	34199	5.26632	ppb		97
43)	2,4,6-Trichlorophenol	7.63	196	22011	5.17286	ppb		97
44)	2,4,5-Trichlorophenol	7.71	196	25306	5.57341	ppb		94
46)	1,1'-Biphenyl	7.81	154	94682	5.13211	ppb		99
47)	2-Chloronaphthalene	7.83	162	75454	5.20180	ppb		96
48)	2-Nitroaniline	7.99	65	22709	4.38315	ppb		98
49)	Dimethyl phthalate	8.18	163	89346	5.06593	ppb		98
50)	2,6-DNT	8.26	165	19033	4.76838	ppb		96
51)	Acenaphthylene	8.31	152	115831	5.10681	ppb		97
52)	3-Nitroaniline	8.48	138	19258	4.65743	ppb	#	69
53)	Acenaphthene	8.51	154	70771	5.07941	ppb		98
54)	2,4-Dinitrophenol	8.69	184	2504	8.23519	ppb		95
55)	4-Nitrophenol	8.70	65	1447	12.54645	ppb	#	45
56)	Dibenzofuran	8.71	168	104236	5.13640	ppb		95
57)	2,4-DNT	8.74	165	27082	4.85019	ppb		85
58)	2,3,4,6-Tetrachlorophenol	8.89	232	15485	6.85515	ppb		97
59)	Diethyl phthalate	8.98	149	93304	5.20290	ppb		97
60)	4-Chlorophenyl phenyl ethe	9.11	204	43307	5.46797	ppb		90
61)	Fluorene	9.11	166	85433	5.20109	ppb		92
62)	4-Nitroaniline	9.19	138	18241	4.61005	ppb		90
65)	4,6-Dinitro-2-methylphenol	9.22	198	11583	3.93591	ppb		92
66)	Diphenyl amine	9.25	169	129052	11.23992	ppb		98
67)	n-Nitrosodiphenylamine	9.25	169	129052	11.23992	ppb		98
68)	1,2-Diphenylhydrazine	9.29	77	96269	5.15494	ppb		90
69)	4-Bromophenyl phenyl ether	9.68	248	23866	5.33693	ppb		97
70)	Hexachlorobenzene	9.75	284	26184	5.55790	ppb	#	70
71)	Atrazine	9.88	200	12297	2.58214	ppb		94
72)	Pentachlorophenol	10.01	266	4931	12.83279	ppb		88
73)	Phenanthrene	10.23	178	128534	5.50629	ppb		99
74)	Anthracene	10.29	178	133419	5.44194	ppb		99
75)	Carbazol	10.50	167	115285	5.31295	ppb		96
76)	Di-n-butylphthalate	10.89	149	159274	5.45549	ppb		98
77)	Fluoranthene	11.61	202	138379	5.36498	ppb		97
79)	Benzidine	11.81	184	41761	4.61245	ppb		97
80)	Pyrene	11.88	202	148527	5.29107	ppb		99
82)	Butyl benzylphthalate	12.63	149	75463	5.42104	ppb		89
83)	3,3'-Dichlorobenzidine	13.25	252	41366	4.70594	ppb	#	97
84)	Benz (a) anthracene	13.27	228	137348	5.19425	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.29	149	105533	5.37243	ppb	#	97
86)	Chrysene	13.31	228	134311	5.20963	ppb		99
87)	Di-n-octylphthalate	14.01	149	184159	5.37229	ppb		95
89)	Benzo (b) fluoranthene	14.50	252	146218	6.29055	ppb		99
90)	Benzo (k) fluoranthene	14.53	252	120958	5.79126	ppb	#	97
91)	Benzo (a) pyrene	14.91	252	127111	6.09950	ppb		98
92)	Indeno (1,2,3-cd) pyrene	16.64	276	146137	6.14875	ppb		98
93)	Dibenz (a,h) anthracene	16.65	278	126516	6.29407	ppb		96
94)	Benzo (g,h,i) perylene	17.13	276	122771	6.25659	ppb		97

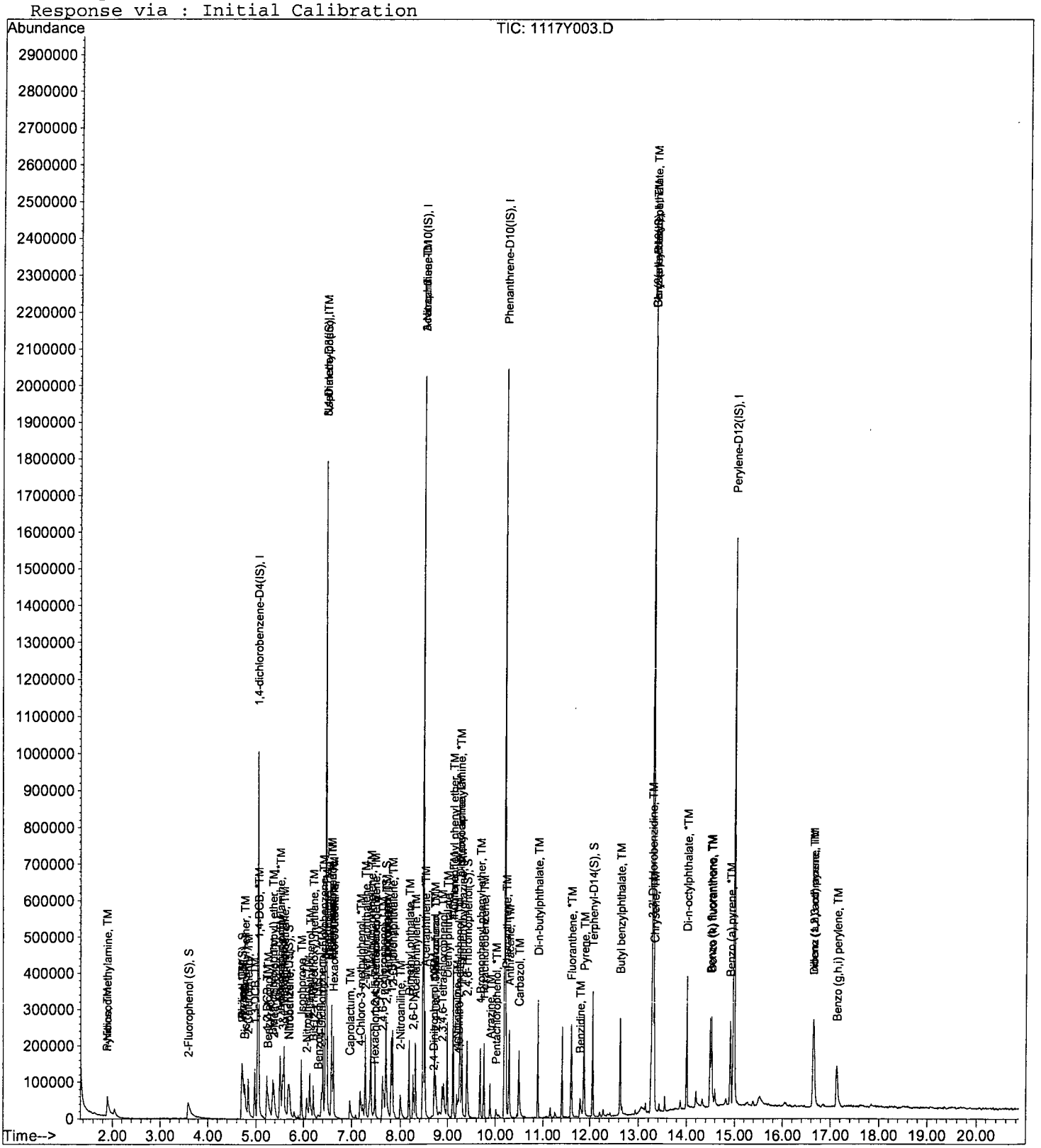
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y003.D Vial: 3
Acq On : 17 Nov 16 11:32 Operator: MA
Sample : 5ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:23:23 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y004.D Vial: 4
Acq On : 17 Nov 16 12:02 Operator: MA
Sample : 10ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:03:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	185154	40.00000	ppb		0.00
20) Napthalene-D8(IS)	6.46	136	822109	40.00000	ppb		0.00
40) Acenaphthene-D10(IS)	8.47	164	481361	40.00000	ppb		0.00
64) Phenanthrene-D10(IS)	10.20	188	875161	40.00000	ppb		0.00
78) Chrysene-D12(IS)	13.28	240	863627	40.00000	ppb		0.00
88) Perylene-D12(IS)	14.98	264	781590	40.00000	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol (S)	3.57	112	115623	13.79919	ppb		0.03
Spiked Amount 200.000			Recovery =	6.900%			
5) Phenol-D6 (S)	4.69	99	172613	15.88629	ppb		0.01
Spiked Amount 200.000			Recovery =	7.943%			
21) Nitrobenzene-D5(S)	5.67	82	89823	8.84175	ppb		0.00
Spiked Amount 100.000			Recovery =	8.842%			
45) 2-Fluorobiphenyl(S)	7.69	172	166902	11.08106	ppb		0.00
Spiked Amount 100.000			Recovery =	11.081%			
63) 2,4,6-Tribromophenol(S)	9.40	330	49541	21.75003	ppb		0.00
Spiked Amount 200.000			Recovery =	10.875%			
81) Terphenyl-D14(S)	12.06	244	208667	10.84870	ppb		0.00
Spiked Amount 100.000			Recovery =	10.849%			
Target Compounds							Qvalue
2) n-Nitrosodimethylamine	1.86	42	43035	7.86228	ppb		84
3) Pyridine	1.88	79	85516	7.68336	ppb		88
6) Phenol	4.70	94	93876	7.24922	ppb		88
7) Aniline	4.70	66	89655	7.40073	ppb		89
8) Bis (2-chloroethyl) ether	4.76	63	42089	7.12992	ppb		93
9) 2-Chlorophenol	4.83	128	76449	7.75715	ppb		95
10) 1,3-DCB	4.96	146	80941	7.49096	ppb		95
11) 1,4-DCB	5.05	146	81578	7.36593	ppb		97
12) Benzyl alcohol	5.23	108	36724	6.55888	ppb		98
13) 1,2-DCB	5.22	146	77247	7.54369	ppb		98
14) 2-Methylphenol	5.36	107	53916	7.04274	ppb		90
15) Bis (2-chloroisopropyl) et	5.35	45	89023	7.34069	ppb	#	89
16) Acetophenone	5.50	105	104901	7.46646	ppb		98
17) 3&4-Methylphenol	5.54	107	151141	15.18213	ppb		97
18) n-Nitrosodi-n-propylamine	5.49	70	52931	7.11639	ppb		98
19) Hexachloroethane	5.59	117	33644	7.46917	ppb		89
22) Nitrobenzene	5.69	77	88552	8.24395	ppb		97
23) Isophorone	5.95	82	144735	8.00476	ppb		97
24) 2-Nitrophenol	6.05	139	41430	7.94474	ppb		90
25) 2,4-Dimethylphenol	6.12	122	64613	8.12478	ppb		97
26) Benzoic acid	6.29	105	31117	11.63161	ppb		85
27) Bis (2-chloroethoxy) metha	6.20	93	75854	7.85007	ppb		97
28) 2,4-Dichlorophenol	6.36	162	62824	8.25541	ppb		97
29) 1,2,4-Trichlorobenzene	6.40	180	71311	8.45537	ppb		94
30) 3,4-Dimethylphenol	6.46	107	104096	8.26325	ppb		90
31) Naphthalene	6.48	128	217078	8.21117	ppb		98
32) 4-Chloroaniline	6.58	127	77605	8.45974	ppb		96
33) 2,6-Dichlorophenol	6.58	162	63356	8.63702	ppb		97
34) Hexachloropropene	6.58	213	53462	8.22074	ppb		97
35) Hexachlorobutadiene	6.62	225	44372	8.38355	ppb		96
36) Caprolactum	6.96	55	31361	7.55240	ppb		92
37) 4-Chloro-3-methylphenol	7.16	107	68532	7.71191	ppb		93

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y004.D Vial: 4
Acq On : 17 Nov 16 12:02 Operator: MA
Sample : 10ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:03:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

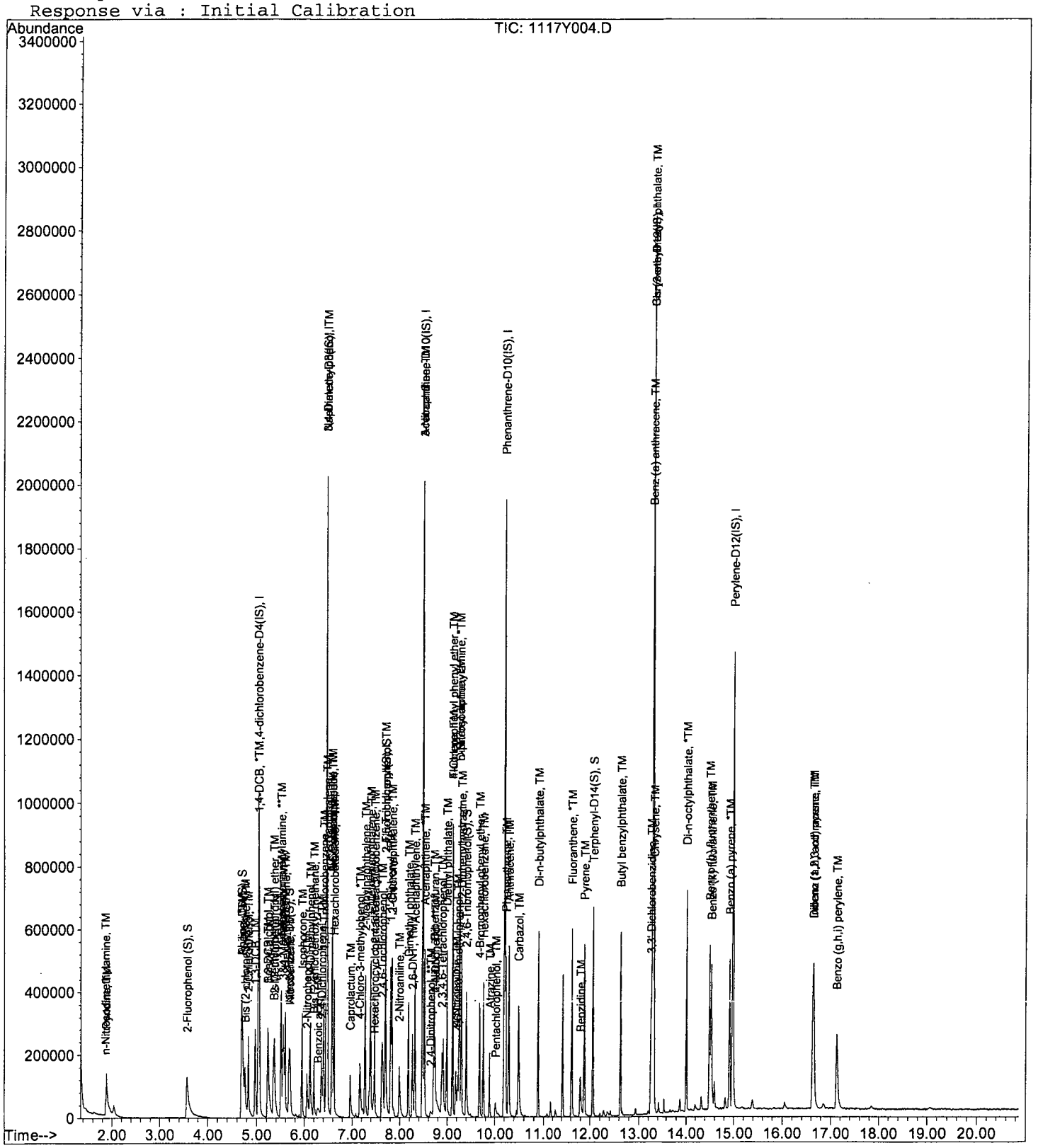
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.28	142	145777	8.19332	ppb		97
39)	1-Methylnaphthalene	7.39	142	137825	7.93496	ppb		95
41)	Hexachlorocyclopentadiene	7.45	237	7259	9.14615	ppb	#	87
42)	1,2,4,5-Tetrachlorobenzene	7.47	216	66290	10.20647	ppb		98
43)	2,4,6-Trichlorophenol	7.63	196	43037	10.11270	ppb		95
44)	2,4,5-Trichlorophenol	7.70	196	44326	9.76091	ppb		94
46)	1,1'-Biphenyl	7.81	154	184829	10.01689	ppb	#	95
47)	2-Chloronaphthalene	7.83	162	145165	10.00616	ppb		96
48)	2-Nitroaniline	7.98	65	50918	9.82639	ppb		86
49)	Dimethyl phthalate	8.18	163	176468	10.00424	ppb		98
50)	2,6-DNT	8.26	165	37246	9.32992	ppb		96
51)	Acenaphthylene	8.31	152	226683	9.99259	ppb		98
52)	3-Nitroaniline	8.47	138	39392	9.52526	ppb	#	52
53)	Acenaphthene	8.51	154	138001	9.90317	ppb		98
54)	2,4-Dinitrophenol	8.65	184	5483	10.16039	ppb	#	77
55)	4-Nitrophenol	8.74	65	4566	13.31663	ppb	#	4
56)	Dibenzofuran	8.72	168	198937	9.80146	ppb		92
57)	2,4-DNT	8.73	165	53111	9.51036	ppb		91
58)	2,3,4,6-Tetrachlorophenol	8.88	232	35502	12.10025	ppb		93
59)	Diethyl phthalate	8.98	149	181071	10.09551	ppb		99
60)	4-Chlorophenyl phenyl ethe	9.11	204	83495	10.54054	ppb		93
61)	Fluorene	9.11	166	168575	10.26115	ppb		96
62)	4-Nitroaniline	9.18	138	40694	10.28304	ppb	#	79
65)	4,6-Dinitro-2-methylphenol	9.22	198	27272	9.23101	ppb		95
66)	Diphenyl amine	9.25	169	246303	21.36861	ppb		98
67)	n-Nitrosodiphenylamine	9.25	169	246303	21.36861	ppb		98
68)	1,2-Diphenylhydrazine	9.29	77	186489	9.94715	ppb		96
69)	4-Bromophenyl phenyl ether	9.68	248	46454	10.34767	ppb		91
70)	Hexachlorobenzene	9.76	284	51564	10.90257	ppb	#	84
71)	Atrazine	9.89	200	23339	4.88169	ppb	#	94
72)	Pentachlorophenol	10.01	266	10205	15.84073	ppb		86
73)	Phenanthrene	10.23	178	250811	10.70276	ppb		99
74)	Anthracene	10.28	178	266091	10.81121	ppb		99
75)	Carbazol	10.49	167	226586	10.40169	ppb		99
76)	Di-n-butylphthalate	10.89	149	308919	10.54001	ppb		99
77)	Fluoranthene	11.61	202	276700	10.68599	ppb		99
79)	Benzidine	11.80	184	91034	9.85806	ppb		99
80)	Pyrene	11.87	202	286211	9.99657	ppb		100
82)	Butyl benzylphthalate	12.62	149	140130	9.86976	ppb		84
83)	3,3'-Dichlorobenzidine	13.25	252	91816	10.24115	ppb		95
84)	Benz (a) anthracene	13.26	228	281961	10.45481	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.29	149	203887	10.17651	ppb	#	97
86)	Chrysene	13.31	228	266760	10.14479	ppb		99
87)	Di-n-octylphthalate	14.01	149	359854	10.29247	ppb		92
89)	Benzo (b) fluoranthene	14.49	252	262768	11.38125	ppb		97
90)	Benzo (k) fluoranthene	14.53	252	266245	12.83362	ppb	#	98
91)	Benzo (a) pyrene	14.91	252	251923	12.17049	ppb		98
92)	Indeno (1,2,3-cd) pyrene	16.63	276	297054	12.58320	ppb		98
93)	Dibenz (a,h) anthracene	16.65	278	250820	12.56255	ppb		99
94)	Benzo (g,h,i) perylene	17.13	276	243169	12.47613	ppb		97

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y161117\1117Y004.D Vial: 4
Acq On : 17 Nov 16 12:02 Operator: MA
Sample : 10ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:23:23 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y005.D Vial: 5
Acq On : 17 Nov 16 12:31 Operator: MA
Sample : 20ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:03:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	186808	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.46	136	805441	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.47	164	466214	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.20	188	881586	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.28	240	855940	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.98	264	778856	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.55	112	234571	27.74734 ppb	0.01
Spiked Amount 200.000			Recovery = 13.874%		
5) Phenol-D6 (S)	4.68	99	321881	29.36176 ppb	0.00
Spiked Amount 200.000			Recovery = 14.681%		
21) Nitrobenzene-D5(S)	5.67	82	169685	17.04864 ppb	0.00
Spiked Amount 100.000			Recovery = 17.049%		
45) 2-Fluorobiphenyl(S)	7.69	172	299927	20.55990 ppb	0.00
Spiked Amount 100.000			Recovery = 20.560%		
63) 2,4,6-Tribromophenol(S)	9.40	330	89455	40.54949 ppb	0.00
Spiked Amount 200.000			Recovery = 20.275%		
81) Terphenyl-D14(S)	12.06	244	384136	20.15078 ppb	0.00
Spiked Amount 100.000			Recovery = 20.151%		
Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.86	42	93342	16.90213 ppb	95
3) Pyridine	1.87	79	185625	16.53020 ppb	89
6) Phenol	4.70	94	184614	14.12989 ppb	79
7) Aniline	4.70	66	183002	14.97248 ppb	86
8) Bis (2-chloroethyl) ether	4.75	63	84706	14.22224 ppb	95
9) 2-Chlorophenol	4.83	128	142504	14.33162 ppb	91
10) 1,3-DCB	4.96	146	158480	14.53721 ppb	99
11) 1,4-DCB	5.05	146	159654	14.28802 ppb	95
12) Benzyl alcohol	5.22	108	79344	14.04532 ppb	93
13) 1,2-DCB	5.22	146	145187	14.05295 ppb	98
14) 2-Methylphenol	5.35	107	106252	13.75621 ppb	97
15) Bis (2-chloroisopropyl) et	5.35	45	166842	13.63570 ppb	95
16) Acetophenone	5.50	105	198516	14.00452 ppb	99
17) 3&4-Methylphenol	5.53	107	282311	28.10708 ppb	99
18) n-Nitrosodi-n-propylamine	5.49	70	104539	13.93046 ppb	99
19) Hexachloroethane	5.59	117	66112	14.54731 ppb	98
22) Nitrobenzene	5.69	77	167982	15.96231 ppb	97
23) Isophorone	5.95	82	277710	15.67697 ppb	98
24) 2-Nitrophenol	6.05	139	79188	15.49958 ppb	94
25) 2,4-Dimethylphenol	6.11	122	124623	15.99504 ppb	99
26) Benzoic acid	6.26	105	77046	19.99875 ppb	99
27) Bis (2-chloroethoxy) metha	6.20	93	148781	15.71585 ppb	99
28) 2,4-Dichlorophenol	6.35	162	121620	16.31225 ppb	95
29) 1,2,4-Trichlorobenzene	6.40	180	130621	15.80829 ppb	96
30) 3,4-Dimethylphenol	6.46	107	195130	15.81017 ppb	98
31) Naphthalene	6.49	128	417345	16.11314 ppb	99
32) 4-Chloroaniline	6.57	127	156564	17.42028 ppb	95
33) 2,6-Dichlorophenol	6.57	162	118484	16.48661 ppb	99
34) Hexachloropropene	6.58	213	104734	16.43801 ppb	97
35) Hexachlorobutadiene	6.62	225	86094	16.60305 ppb	94
36) Caprolactum	6.97	55	64421	15.83501 ppb	98
37) 4-Chloro-3-methylphenol	7.16	107	135905	15.60988 ppb	89

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y005.D Vial: 5
Acq On : 17 Nov 16 12:31 Operator: MA
Sample : 20ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:03:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.28	142	284227	16.30542	ppb		97
39)	1-Methylnaphthalene	7.39	142	270185	15.87720	ppb		95
41)	Hexachlorocyclopentadiene	7.45	237	27915	17.66565	ppb		98
42)	1,2,4,5-Tetrachlorobenzene	7.47	216	128526	20.43169	ppb		95
43)	2,4,6-Trichlorophenol	7.62	196	83695	20.30533	ppb		99
44)	2,4,5-Trichlorophenol	7.69	196	88724	20.17245	ppb		95
46)	1,1'-Biphenyl	7.81	154	357632	20.01174	ppb	#	97
47)	2-Chloronaphthalene	7.83	162	273307	19.45100	ppb		97
48)	2-Nitroaniline	7.98	65	99623	19.85034	ppb		97
49)	Dimethyl phthalate	8.18	163	345482	20.22224	ppb		99
50)	2,6-DNT	8.26	165	76926	19.89559	ppb		89
51)	Acenaphthylene	8.31	152	439881	20.02073	ppb		99
52)	3-Nitroaniline	8.46	138	77411	19.32668	ppb	#	79
53)	Acenaphthene	8.51	154	272781	20.21118	ppb		98
54)	2,4-Dinitrophenol	8.62	184	27527	23.31233	ppb		87
55)	4-Nitrophenol	8.74	65	53144	25.71548	ppb		84
56)	Dibenzofuran	8.72	168	386865	19.67978	ppb		92
57)	2,4-DNT	8.73	165	106929	19.76940	ppb		83
58)	2,3,4,6-Tetrachlorophenol	8.88	232	68474	21.32398	ppb		97
59)	Diethyl phthalate	8.98	149	349765	20.13452	ppb		98
60)	4-Chlorophenyl phenyl ethe	9.11	204	154935	20.19471	ppb		94
61)	Fluorene	9.11	166	312299	19.62722	ppb		100
62)	4-Nitroaniline	9.17	138	79884	20.84187	ppb		93
65)	4,6-Dinitro-2-methylphenol	9.22	198	58308	19.59222	ppb		81
66)	Diphenyl amine	9.25	169	471888	40.64141	ppb		98
67)	n-Nitrosodiphenylamine	9.25	169	471888	40.64141	ppb		98
68)	1,2-Diphenylhydrazine	9.29	77	356315	18.86700	ppb		92
69)	4-Bromophenyl phenyl ether	9.68	248	91166	20.15932	ppb		91
70)	Hexachlorobenzene	9.75	284	95977	20.14526	ppb	#	83
71)	Atrazine	9.88	200	48880	10.14946	ppb		93
72)	Pentachlorophenol	10.01	266	20289	21.37277	ppb		96
73)	Phenanthrene	10.23	178	484457	20.52237	ppb		99
74)	Anthracene	10.28	178	495624	19.99032	ppb		99
75)	Carbazol	10.49	167	438345	19.97608	ppb		98
76)	Di-n-butylphthalate	10.89	149	600610	20.34288	ppb		98
77)	Fluoranthene	11.61	202	528222	20.25095	ppb		98
79)	Benzidine	11.79	184	188771	20.62557	ppb		97
80)	Pyrene	11.87	202	551797	19.44585	ppb		99
82)	Butyl benzylphthalate	12.63	149	280605	19.94131	ppb		89
83)	3,3'-Dichlorobenzidine	13.25	252	180461	20.30937	ppb		95
84)	Benz (a) anthracene	13.27	228	525577	19.66285	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.29	149	388901	19.58535	ppb	#	98
86)	Chrysene	13.31	228	508358	19.50629	ppb		98
87)	Di-n-octylphthalate	14.01	149	684072	19.74139	ppb		94
89)	Benzo (b) fluoranthene	14.49	252	517242	22.48191	ppb		97
90)	Benzo (k) fluoranthene	14.53	252	517784	25.04599	ppb		99
91)	Benzo (a) pyrene	14.91	252	497474	24.11752	ppb		98
92)	Indeno (1,2,3-cd) pyrene	16.63	276	563885	23.97001	ppb		96
93)	Dibenz (a,h) anthracene	16.65	278	472599	23.75364	ppb		98
94)	Benzo (g,h,i) perylene	17.13	276	480397	24.73397	ppb		97

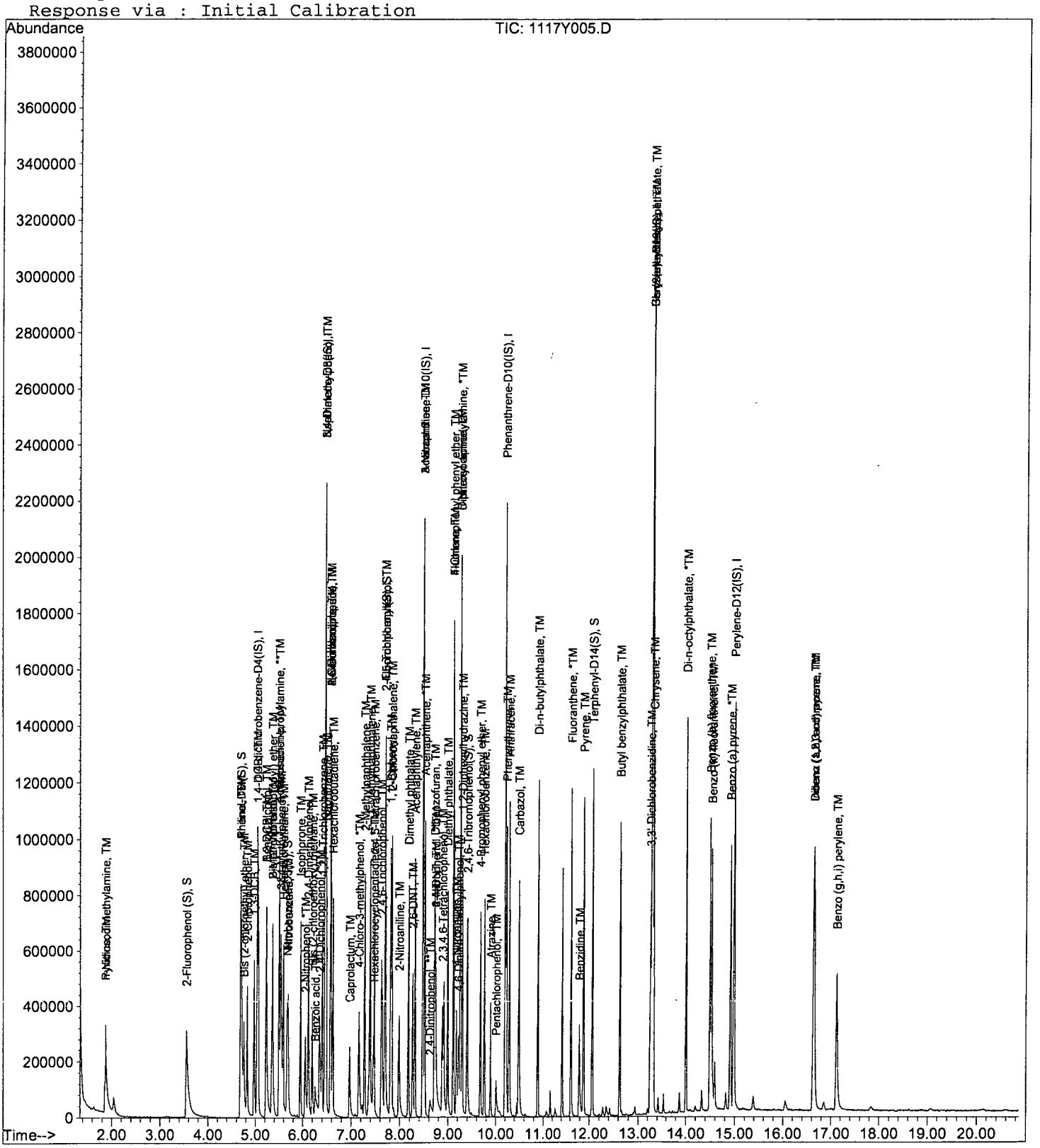
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y005.D Vial: 5
Acq On : 17 Nov 16 12:31 Operator: MA
Sample : 20ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:23:23 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y006.D Vial: 6
Acq On : 17 Nov 16 13:00 Operator: MA
Sample : 40ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:03:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	182920	40.00000	ppb		0.00
20) Napthalene-D8(IS)	6.46	136	799601	40.00000	ppb		0.00
40) Acenaphthene-D10(IS)	8.47	164	471497	40.00000	ppb		0.00
64) Phenanthrene-D10(IS)	10.20	188	857196	40.00000	ppb		0.00
78) Chrysene-D12(IS)	13.28	240	827115	40.00000	ppb		0.00
88) Perylene-D12(IS)	14.98	264	775756	40.00000	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol (S)	3.54	112	489327	59.11266	ppb		0.00
Spiked Amount 200.000			Recovery = 29.557%				
5) Phenol-D6 (S)	4.68	99	643202	59.91953	ppb		0.00
Spiked Amount 200.000			Recovery = 29.960%				
21) Nitrobenzene-D5(S)	5.67	82	325882	32.98125	ppb		0.00
Spiked Amount 100.000			Recovery = 32.981%				
45) 2-Fluorobiphenyl(S)	7.69	172	584742	39.63474	ppb		0.00
Spiked Amount 100.000			Recovery = 39.635%				
63) 2,4,6-Tribromophenol(S)	9.40	330	179721	80.55378	ppb		0.00
Spiked Amount 200.000			Recovery = 40.277%				
81) Terphenyl-D14(S)	12.06	244	738732	40.10248	ppb		0.00
Spiked Amount 100.000			Recovery = 40.102%				
Target Compounds							Qvalue
2) n-Nitrosodimethylamine	1.85	42	171667	31.74575	ppb		98
3) Pyridine	1.87	79	371406	33.77730	ppb		87
6) Phenol	4.69	94	367596	28.73289	ppb		96
7) Aniline	4.69	66	369124	30.84213	ppb		99
8) Bis (2-chloroethyl) ether	4.75	63	168115	28.82667	ppb		94
9) 2-Chlorophenol	4.82	128	283409	29.10825	ppb		96
10) 1,3-DCB	4.96	146	305742	28.64152	ppb		100
11) 1,4-DCB	5.05	146	317670	29.03373	ppb		95
12) Benzyl alcohol	5.21	108	162789	29.42910	ppb		94
13) 1,2-DCB	5.22	146	292026	28.86659	ppb		98
14) 2-Methylphenol	5.35	107	212274	28.06679	ppb		98
15) Bis (2-chloroisopropyl) et	5.34	45	323912	27.03543	ppb		97
16) Acetophenone	5.49	105	402204	28.97700	ppb		94
17) 3&4-Methylphenol	5.53	107	562583	57.20169	ppb		99
18) n-Nitrosodi-n-propylamine	5.50	70	203201	27.65332	ppb		98
19) Hexachloroethane	5.59	117	130351	29.29214	ppb		90
22) Nitrobenzene	5.69	77	341457	32.68355	ppb		99
23) Isophorone	5.95	82	558780	31.77399	ppb		95
24) 2-Nitrophenol	6.04	139	163133	32.16347	ppb	#	81
25) 2,4-Dimethylphenol	6.11	122	247045	31.93917	ppb		99
26) Benzoic acid	6.28	105	187229	37.43946	ppb		92
27) Bis (2-chloroethoxy) metha	6.20	93	295592	31.45166	ppb		99
28) 2,4-Dichlorophenol	6.34	162	240696	32.51908	ppb		99
29) 1,2,4-Trichlorobenzene	6.40	180	266693	32.51201	ppb		99
30) 3,4-Dimethylphenol	6.45	107	396588	32.36774	ppb		99
31) Naphthalene	6.49	128	827320	32.17503	ppb		98
32) 4-Chloroaniline	6.57	127	313519	35.13884	ppb		99
33) 2,6-Dichlorophenol	6.57	162	232199	32.54561	ppb		97
34) Hexachloropropene	6.58	213	212849	33.65066	ppb		97
35) Hexachlorobutadiene	6.62	225	169930	33.00999	ppb		95
36) Caprolactum	6.99	55	125478	31.06839	ppb		98
37) 4-Chloro-3-methylphenol	7.15	107	277582	32.11558	ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y006.D Vial: 6
Acq On : 17 Nov 16 13:00 Operator: MA
Sample : 40ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:03:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

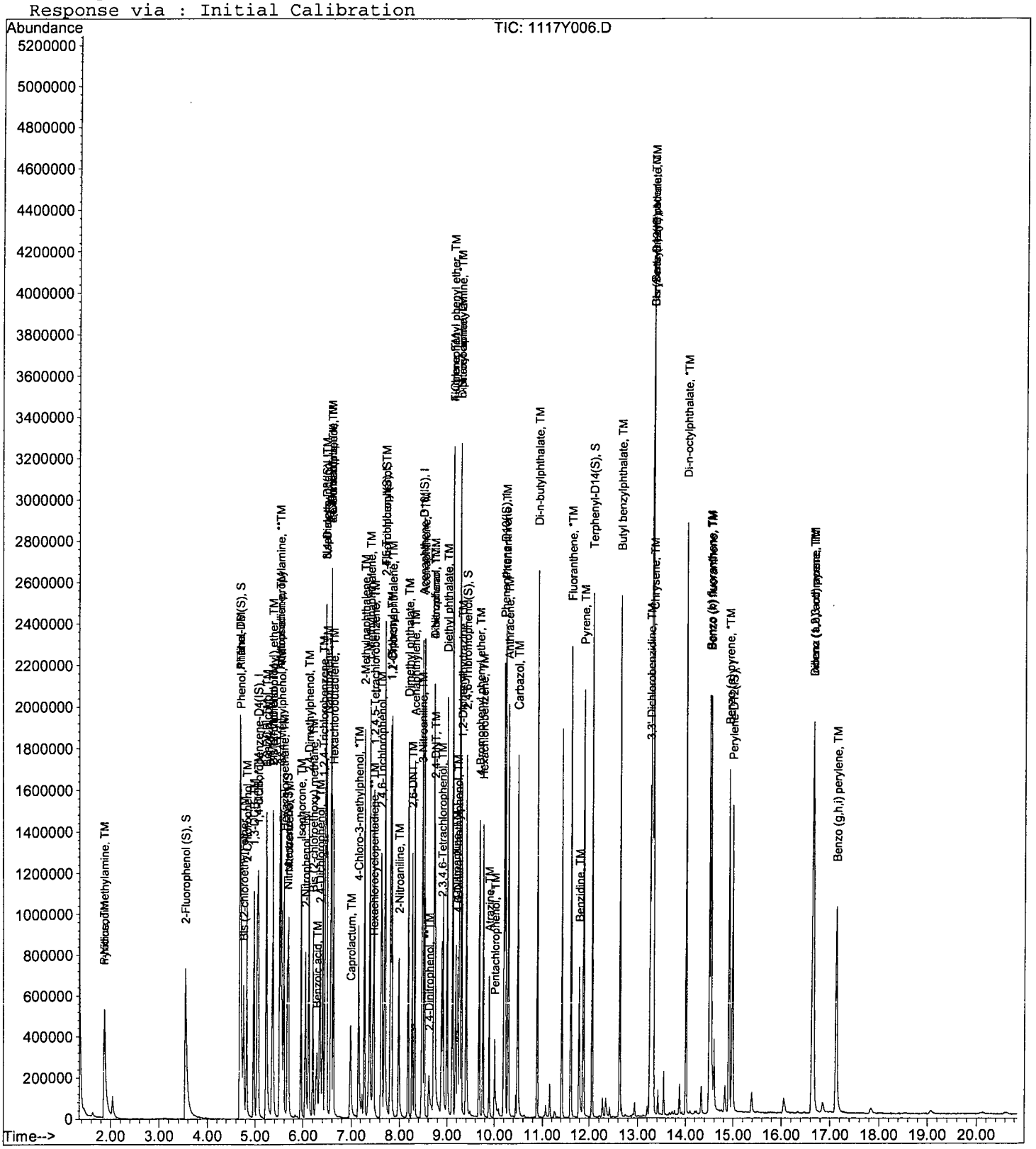
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	2-Methylnaphthalene	7.28	142	559401	32.32588 ppb		99
39)	1-Methylnaphthalene	7.39	142	547044	32.38138 ppb		99
41)	Hexachlorocyclopentadiene	7.45	237	89800	38.46180 ppb		95
42)	1,2,4,5-Tetrachlorobenzene	7.47	216	255571	40.17271 ppb		99
43)	2,4,6-Trichlorophenol	7.62	196	170380	40.87291 ppb		99
44)	2,4,5-Trichlorophenol	7.68	196	175659	39.49066 ppb		98
46)	1,1'-Biphenyl	7.81	154	723037	40.00510 ppb		99
47)	2-Chloronaphthalene	7.83	162	562260	39.56714 ppb		97
48)	2-Nitroaniline	7.97	65	203038	40.00296 ppb		82
49)	Dimethyl phthalate	8.18	163	672349	38.91391 ppb		99
50)	2,6-DNT	8.26	165	152051	38.88475 ppb		95
51)	Acenaphthylene	8.31	152	871568	39.22405 ppb		99
52)	3-Nitroaniline	8.45	138	166055	40.99330 ppb		83
53)	Acenaphthene	8.51	154	531893	38.96801 ppb		98
54)	2,4-Dinitrophenol	8.61	184	74069	44.79952 ppb		95
55)	4-Nitrophenol	8.72	65	129227	44.62260 ppb		94
56)	Dibenzofuran	8.71	168	785919	39.53164 ppb		94
57)	2,4-DNT	8.73	165	215731	39.43818 ppb		92
58)	2,3,4,6-Tetrachlorophenol	8.88	232	134037	38.65745 ppb		97
59)	Diethyl phthalate	8.99	149	701587	39.93492 ppb		99
60)	4-Chlorophenyl phenyl ethe	9.11	204	307329	39.60937 ppb		95
61)	Fluorene	9.11	166	622270	38.66994 ppb		99
62)	4-Nitroaniline	9.18	138	149377	38.53602 ppb		92
65)	4,6-Dinitro-2-methylphenol	9.22	198	129630	44.79665 ppb		91
66)	Diphenyl amine	9.26	169	937261	83.01851 ppb		99
67)	n-Nitrosodiphenylamine	9.26	169	937261	83.01851 ppb		99
68)	1,2-Diphenylhydrazine	9.30	77	705458	38.41708 ppb		95
69)	4-Bromophenyl phenyl ether	9.68	248	185079	42.09055 ppb		95
70)	Hexachlorobenzene	9.76	284	194123	41.90514 ppb		98
71)	Atrazine	9.89	200	97002	20.71462 ppb		99
72)	Pentachlorophenol	10.01	266	58149	41.55046 ppb		93
73)	Phenanthrene	10.23	178	949598	41.37106 ppb		100
74)	Anthracene	10.28	178	992145	41.15543 ppb		99
75)	Carbazol	10.49	167	874240	40.97411 ppb		100
76)	Di-n-butylphthalate	10.89	149	1196594	41.68226 ppb		99
77)	Fluoranthene	11.61	202	1046675	41.26913 ppb		99
79)	Benzidine	11.79	184	384636	43.49087 ppb		98
80)	Pyrene	11.88	202	1100278	40.12615 ppb		99
82)	Butyl benzylphthalate	12.63	149	558340	41.06147 ppb		99
83)	3,3'-Dichlorobenzidine	13.25	252	346782	40.38751 ppb		98
84)	Benz (a) anthracene	13.27	228	1045755	40.48718 ppb		100
85)	Bis (2-ethylhexyl) phthala	13.29	149	790052	41.17421 ppb		99
86)	Chrysene	13.32	228	1024348	40.67523 ppb		99
87)	Di-n-octylphthalate	14.01	149	1347084	40.22982 ppb		98
89)	Benzo (b) fluoranthene	14.50	252	995876	43.45869 ppb		99
90)	Benzo (k) fluoranthene	14.53	252	1050014	50.99371 ppb	#	98
91)	Benzo (a) pyrene	14.91	252	991743	48.27179 ppb	#	97
92)	Indeno (1,2,3-cd) pyrene	16.64	276	1128982	48.18332 ppb		99
93)	Dibenz (a,h) anthracene	16.65	278	962401	48.56523 ppb		95
94)	Benzo (g,h,i) perylene	17.13	276	943136	48.75283 ppb		99

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y161117\1117Y006.D Vial: 6
Acq On : 17 Nov 16 13:00 Operator: MA
Sample : 40ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:23:23 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y007.D Vial: 7
Acq On : 17 Nov 16 13:29 Operator: MA
Sample : 50ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:03:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	181943	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.46	136	778154	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.47	164	463295	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.20	188	862854	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.29	240	815722	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.98	264	770325	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.54	112	618430	75.10999 ppb	0.00
Spiked Amount 200.000			Recovery =	37.555%	
5) Phenol-D6 (S)	4.68	99	813183	76.16144 ppb	0.00
Spiked Amount 200.000			Recovery =	38.081%	
21) Nitrobenzene-D5(S)	5.67	82	413217	42.97271 ppb	0.00
Spiked Amount 100.000			Recovery =	42.973%	
45) 2-Fluorobiphenyl(S)	7.69	172	744145	51.33229 ppb	0.00
Spiked Amount 100.000			Recovery =	51.332%	
63) 2,4,6-Tribromophenol(S)	9.40	330	229822	104.83349 ppb	0.00
Spiked Amount 200.000			Recovery =	52.417%	
81) Terphenyl-D14(S)	12.06	244	928859	51.12789 ppb	0.00
Spiked Amount 100.000			Recovery =	51.128%	
Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.85	42	216155	40.18739 ppb	100
3) Pyridine	1.86	79	497169	45.45753 ppb	100
6) Phenol	4.69	94	464369	36.49199 ppb	100
7) Aniline	4.69	66	464226	38.99666 ppb	100
8) Bis (2-chloroethyl) ether	4.75	63	216148	37.26190 ppb	100
9) 2-Chlorophenol	4.82	128	347178	35.84929 ppb	100
10) 1,3-DCB	4.96	146	388921	36.62926 ppb	100
11) 1,4-DCB	5.06	146	392126	36.03115 ppb	100
12) Benzyl alcohol	5.21	108	201704	36.65999 ppb	100
13) 1,2-DCB	5.22	146	366617	36.43446 ppb	100
14) 2-Methylphenol	5.35	107	271756	36.12443 ppb	100
15) Bis (2-chloroisopropyl) et	5.34	45	407085	34.15995 ppb	100
16) Acetophenone	5.50	105	510953	37.00956 ppb	100
17) 3&4-Methylphenol	5.53	107	713751	72.96168 ppb	100
18) n-Nitrosodi-n-propylamine	5.50	70	257477	35.22782 ppb	100
19) Hexachloroethane	5.59	117	162886	36.79987 ppb	100
22) Nitrobenzene	5.69	77	426963	41.99439 ppb	100
23) Isophorone	5.96	82	712673	41.64175 ppb	100
24) 2-Nitrophenol	6.05	139	205718	41.67745 ppb	100
25) 2,4-Dimethylphenol	6.11	122	315229	41.87757 ppb	100
26) Benzoic acid	6.29	105	249982	47.09062 ppb	100
27) Bis (2-chloroethoxy) metha	6.20	93	378139	41.34378 ppb	100
28) 2,4-Dichlorophenol	6.34	162	302250	41.96077 ppb	100
29) 1,2,4-Trichlorobenzene	6.40	180	339275	42.50028 ppb	100
30) 3,4-Dimethylphenol	6.45	107	496951	41.67678 ppb	100
31) Naphthalene	6.49	128	1026450	41.01956 ppb	100
32) 4-Chloroaniline	6.57	127	389058	44.80698 ppb	100
33) 2,6-Dichlorophenol	6.57	162	295647	42.58075 ppb	100
34) Hexachloropropene	6.58	213	269357	43.75805 ppb	100
35) Hexachlorobutadiene	6.63	225	212704	42.45792 ppb	100
36) Caprolactum	7.00	55	159271	40.52245 ppb	100
37) 4-Chloro-3-methylphenol	7.15	107	351811	41.82555 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y007.D Vial: 7
Acq On : 17 Nov 16 13:29 Operator: MA
Sample : 50ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:03:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

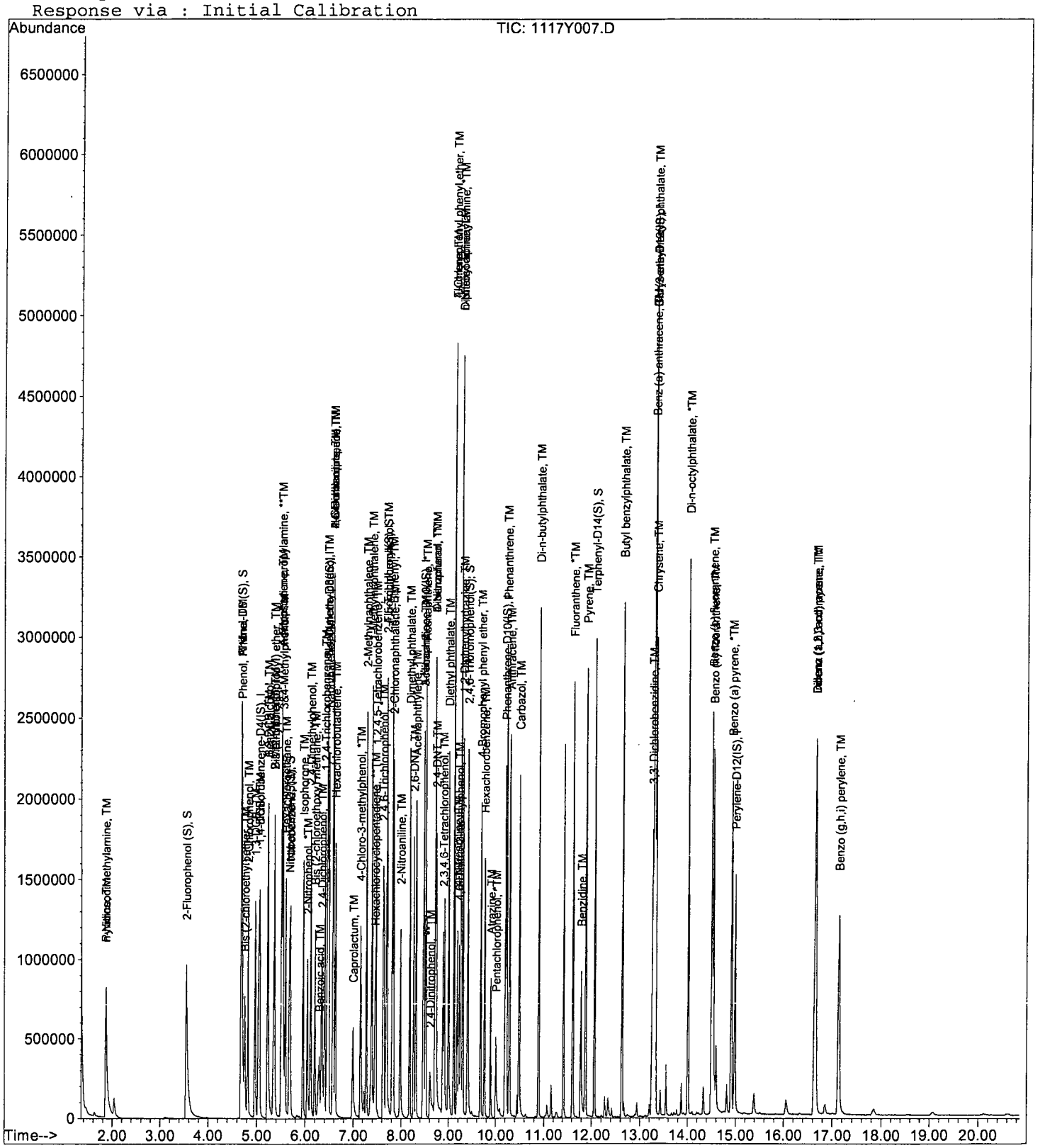
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
38) 2-Methylnaphthalene	7.28	142	696045	41.33064 ppb	100
39) 1-Methylnaphthalene	7.39	142	677368	41.20079 ppb	100
41) Hexachlorocyclopentadiene	7.45	237	125106	49.24610 ppb	100
42) 1,2,4,5-Tetrachlorobenzene	7.47	216	312985	50.06848 ppb	100
43) 2,4,6-Trichlorophenol	7.62	196	214891	52.46341 ppb	100
44) 2,4,5-Trichlorophenol	7.68	196	222710	50.95479 ppb	100
46) 1,1'-Biphenyl	7.81	154	890153	50.12343 ppb	100
47) 2-Chloronaphthalene	7.83	162	697990	49.98826 ppb	100
48) 2-Nitroaniline	7.98	65	253755	50.88042 ppb	100
49) Dimethyl phthalate	8.18	163	848219	49.96196 ppb	100
50) 2,6-DNT	8.26	165	196067	51.02886 ppb	100
51) Acenaphthylene	8.32	152	1097193	50.25224 ppb	100
52) 3-Nitroaniline	8.46	138	207701	52.18201 ppb	100
53) Acenaphthene	8.51	154	666149	49.66800 ppb	100
54) 2,4-Dinitrophenol	8.61	184	86865	50.53357 ppb	100
55) 4-Nitrophenol	8.72	65	163056	53.78218 ppb	100
56) Dibenzofuran	8.71	168	975560	49.93929 ppb	100
57) 2,4-DNT	8.73	165	273072	50.80458 ppb	100
58) 2,3,4,6-Tetrachlorophenol	8.88	232	174221	50.23368 ppb	100
59) Diethyl phthalate	8.99	149	873862	50.62155 ppb	100
60) 4-Chlorophenyl phenyl ethe	9.11	204	384584	50.44370 ppb	100
61) Fluorene	9.11	166	784486	49.61365 ppb	100
62) 4-Nitroaniline	9.18	138	185067	48.58850 ppb	100
65) 4,6-Dinitro-2-methylphenol	9.22	198	170321	58.47241 ppb	100
66) Diphenyl amine	9.26	169	1168598	102.83060 ppb	100
67) n-Nitrosodiphenylamine	9.26	169	1168598	102.83060 ppb	100
68) 1,2-Diphenylhydrazine	9.30	77	1067009	57.72503 ppb	100
69) 4-Bromophenyl phenyl ether	9.68	248	232342	52.49259 ppb	100
70) Hexachlorobenzene	9.76	284	244690	52.47462 ppb	100
71) Atrazine	9.89	200	122547	25.99810 ppb	100
72) Pentachlorophenol	10.00	266	80566	52.08769 ppb	100
73) Phenanthrene	10.23	178	1191263	51.55934 ppb	100
74) Anthracene	10.29	178	1258645	51.86783 ppb	100
75) Carbazol	10.49	167	1093880	50.93207 ppb	100
76) Di-n-butylphthalate	10.89	149	1488154	51.49856 ppb	100
77) Fluoranthene	11.61	202	1321409	51.75991 ppb	100
79) Benzidine	11.79	184	486917	55.82475 ppb	100
80) Pyrene	11.88	202	1392284	51.48451 ppb	100
82) Butyl benzylphthalate	12.63	149	702283	52.36868 ppb	100
83) 3,3'-Dichlorobenzidine	13.24	252	429687	50.74187 ppb	100
84) Benz (a) anthracene	13.27	228	1313858	51.57743 ppb	100
85) Bis (2-ethylhexyl) phthala	13.29	149	985933	52.10036 ppb	100
86) Chrysene	13.32	228	1281161	51.58340 ppb	100
87) Di-n-octylphthalate	14.01	149	1707218	51.69710 ppb	100
89) Benzo (b) fluoranthene	14.50	252	1415938	62.22526 ppb	100
90) Benzo (k) fluoranthene	14.53	252	1164096	56.93266 ppb	100
91) Benzo (a) pyrene	14.92	252	1232001	60.38881 ppb	100
92) Indeno (1,2,3-cd) pyrene	16.64	276	1426210	61.29772 ppb	100
93) Dibenz (a,h) anthracene	16.66	278	1197308	60.84521 ppb	100
94) Benzo (g,h,i) perylene	17.13	276	1188963	61.89349 ppb	100

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y161117\1117Y007.D Vial: 7
Acq On : 17 Nov 16 13:29 Operator: MA
Sample : 50ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:23:23 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y008.D Vial: 8
Acq On : 17 Nov 16 13:59 Operator: MA
Sample : 60ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:03:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	186866	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.46	136	805709	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.47	164	477826	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.20	188	888712	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.29	240	837026	40.00000 ppb		0.00
88) Perylene-D12(IS)	14.98	264	783819	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.54	112	735510	86.97628 ppb		0.00
Spiked Amount 200.000			Recovery = 43.488%			
5) Phenol-D6 (S)	4.68	99	958103	87.37035 ppb		0.00
Spiked Amount 200.000			Recovery = 43.685%			
21) Nitrobenzene-D5(S)	5.67	82	482547	48.46648 ppb		0.00
Spiked Amount 100.000			Recovery = 48.466%			
45) 2-Fluorobiphenyl(S)	7.69	172	871894	58.31558 ppb		0.00
Spiked Amount 100.000			Recovery = 58.316%			
63) 2,4,6-Tribromophenol(S)	9.40	330	273874	121.12871 ppb		0.00
Spiked Amount 200.000			Recovery = 60.565%			
81) Terphenyl-D14(S)	12.06	244	1089245	58.43013 ppb		0.00
Spiked Amount 100.000			Recovery = 58.430%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.85	42	254946	46.15065 ppb		97
3) Pyridine	1.86	79	609331	54.24505 ppb		91
6) Phenol	4.70	94	552567	42.27897 ppb		97
7) Aniline	4.69	66	568762	46.51935 ppb		96
8) Bis (2-chloroethyl) ether	4.75	63	254311	42.68586 ppb		93
9) 2-Chlorophenol	4.82	128	427298	42.96000 ppb		99
10) 1,3-DCB	4.96	146	459257	42.11411 ppb		98
11) 1,4-DCB	5.06	146	470815	42.12189 ppb		98
12) Benzyl alcohol	5.22	108	244400	43.24979 ppb		91
13) 1,2-DCB	5.22	146	435654	42.15475 ppb		100
14) 2-Methylphenol	5.35	107	328296	42.49057 ppb		98
15) Bis (2-chloroisopropyl) et	5.35	45	486534	39.75122 ppb		96
16) Acetophenone	5.50	105	606524	42.77460 ppb		99
17) 3&4-Methylphenol	5.53	107	862404	85.83491 ppb		98
18) n-Nitrosodi-n-propylamine	5.50	70	309969	41.29245 ppb		93
19) Hexachloroethane	5.59	117	197001	43.33473 ppb		97
22) Nitrobenzene	5.69	77	512125	48.64793 ppb		97
23) Isophorone	5.96	82	844597	47.66236 ppb		98
24) 2-Nitrophenol	6.04	139	246827	48.29574 ppb	#	82
25) 2,4-Dimethylphenol	6.11	122	373486	47.92002 ppb		98
26) Benzoic acid	6.30	105	303410	52.82971 ppb		99
27) Bis (2-chloroethoxy) metha	6.20	93	441550	46.62576 ppb		100
28) 2,4-Dichlorophenol	6.34	162	369799	49.58271 ppb		98
29) 1,2,4-Trichlorobenzene	6.40	180	399963	48.38905 ppb		98
30) 3,4-Dimethylphenol	6.45	107	601030	48.68151 ppb		100
31) Naphthalene	6.49	128	1248556	48.18908 ppb		99
32) 4-Chloroaniline	6.57	127	460313	51.20023 ppb		98
33) 2,6-Dichlorophenol	6.57	162	347254	48.30303 ppb		99
34) Hexachloropropene	6.58	213	329921	51.76390 ppb		96
35) Hexachlorobutadiene	6.63	225	254211	49.00775 ppb		98
36) Caprolactum	7.00	55	192288	47.24964 ppb		96
37) 4-Chloro-3-methylphenol	7.15	107	430421	49.42117 ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y008.D Vial: 8
Acq On : 17 Nov 16 13:59 Operator: MA
Sample : 60ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:03:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

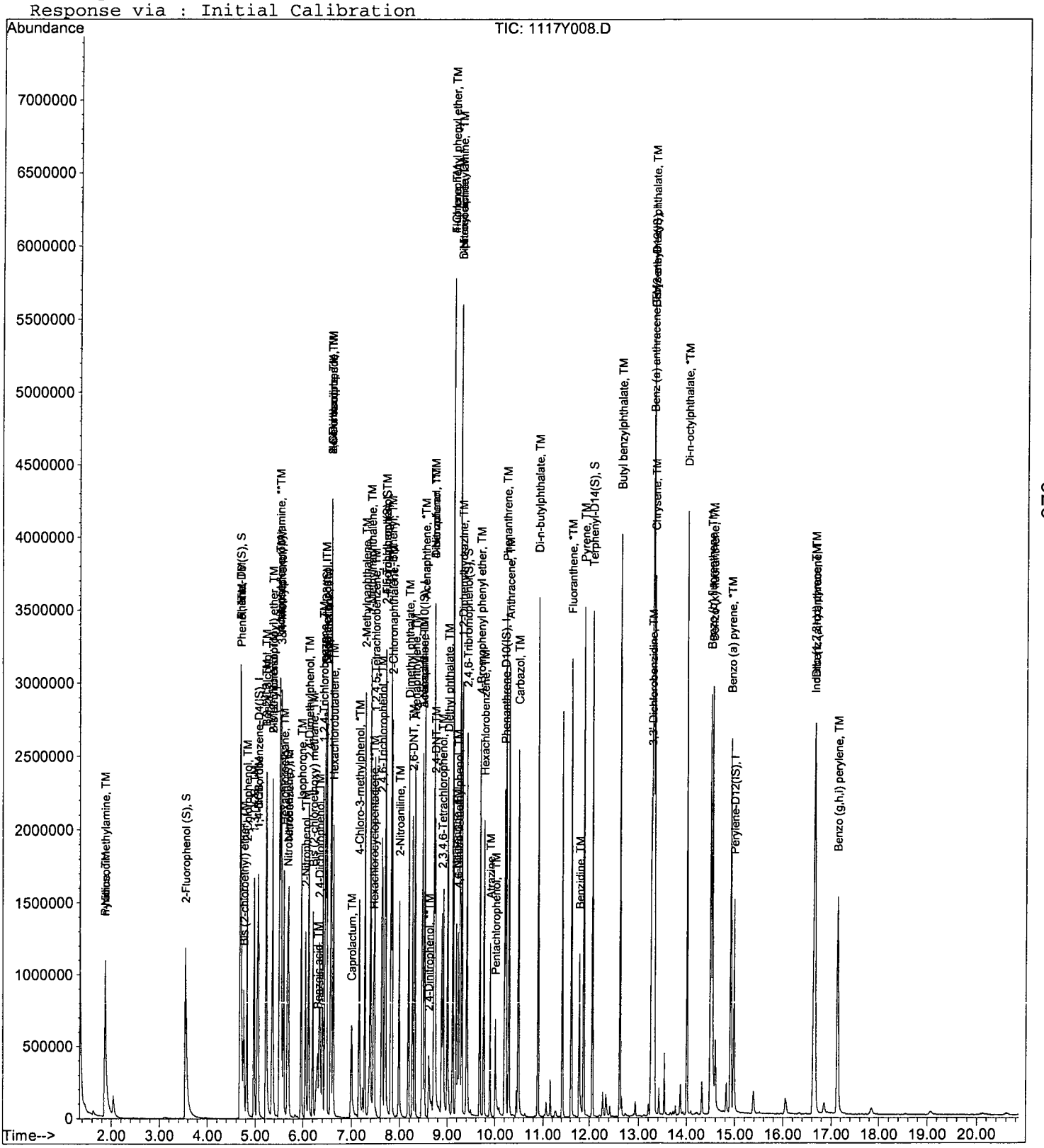
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.28	142	843672	48.38334	ppb		98
39)	1-Methylnaphthalene	7.39	142	811794	47.68854	ppb		98
41)	Hexachlorocyclopentadiene	7.45	237	168291	59.38046	ppb		97
42)	1,2,4,5-Tetrachlorobenzene	7.47	216	382146	59.27316	ppb		99
43)	2,4,6-Trichlorophenol	7.62	196	257604	60.97878	ppb		98
44)	2,4,5-Trichlorophenol	7.68	196	272433	60.43560	ppb		98
46)	1,1'-Biphenyl	7.81	154	1071723	58.51221	ppb		99
47)	2-Chloronaphthalene	7.83	162	845644	58.72111	ppb		97
48)	2-Nitroaniline	7.98	65	305489	59.39084	ppb		98
49)	Dimethyl phthalate	8.18	163	1027561	58.68497	ppb		99
50)	2,6-DNT	8.26	165	235563	59.44376	ppb		94
51)	Acenaphthylene	8.31	152	1285124	57.06966	ppb		98
52)	3-Nitroaniline	8.46	138	243169	59.23498	ppb		97
53)	Acenaphthene	8.51	154	806703	58.31857	ppb		99
54)	2,4-Dinitrophenol	8.60	184	127764	64.23896	ppb		92
55)	4-Nitrophenol	8.72	65	204441	62.68770	ppb		99
56)	Dibenzofuran	8.72	168	1178060	58.47142	ppb		97
57)	2,4-DNT	8.73	165	327460	59.07065	ppb		98
58)	2,3,4,6-Tetrachlorophenol	8.88	232	209402	58.07892	ppb		95
59)	Diethyl phthalate	9.00	149	1065086	59.82257	ppb		95
60)	4-Chlorophenyl phenyl ethe	9.11	204	467459	59.44935	ppb		98
61)	Fluorene	9.11	166	952692	58.41929	ppb		98
62)	4-Nitroaniline	9.18	138	224758	57.21468	ppb		94
65)	4,6-Dinitro-2-methylphenol	9.23	198	199515	66.50199	ppb	#	73
66)	Diphenyl amine	9.26	169	1387160	118.51138	ppb		99
67)	n-Nitrosodiphenylamine	9.26	169	1387160	118.51138	ppb		99
68)	1,2-Diphenylhydrazine	9.30	77	1275971	67.02134	ppb		99
69)	4-Bromophenyl phenyl ether	9.68	248	276970	60.75462	ppb		97
70)	Hexachlorobenzene	9.76	284	294248	61.26647	ppb		98
71)	Atrazine	9.89	200	143923	29.64459	ppb		97
72)	Pentachlorophenol	10.01	266	96171	57.95150	ppb		100
73)	Phenanthrene	10.23	178	1431666	60.16136	ppb		99
74)	Anthracene	10.29	178	1513959	60.57385	ppb		99
75)	Carbazol	10.49	167	1326110	59.94838	ppb		100
76)	Di-n-butylphthalate	10.89	149	1814107	60.95178	ppb		100
77)	Fluoranthene	11.61	202	1590817	60.49964	ppb		100
79)	Benzidine	11.79	184	585939	65.46776	ppb		99
80)	Pyrene	11.88	202	1663029	59.93104	ppb		99
82)	Butyl benzylphthalate	12.63	149	843860	61.32437	ppb		96
83)	3,3'-Dichlorobenzidine	13.25	252	521291	59.99260	ppb	#	94
84)	Benz (a) anthracene	13.27	228	1604071	61.36746	ppb		100
85)	Bis (2-ethylhexyl) phthala	13.29	149	1189376	61.25136	ppb		100
86)	Chrysene	13.32	228	1534121	60.19620	ppb		100
87)	Di-n-octylphthalate	14.01	149	2062468	60.86500	ppb		100
89)	Benzo (b) fluoranthene	14.50	252	1648657	71.20509	ppb		99
90)	Benzo (k) fluoranthene	14.54	252	1431150	68.78853	ppb		99
91)	Benzo (a) pyrene	14.92	252	1472933	70.95558	ppb		100
92)	Indeno (1,2,3-cd) pyrene	16.64	276	1684608	71.15704	ppb		99
93)	Dibenz (a,h) anthracene	16.66	278	1432341	71.53608	ppb		99
94)	Benzo (g,h,i) perylene	17.14	276	1400790	71.66513	ppb		100

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y161117\1117Y008.D Vial: 8
Acq On : 17 Nov 16 13:59 Operator: MA
Sample : 60ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:23:23 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y009.D Vial: 9
Acq On : 17 Nov 16 14:28 Operator: MA
Sample : 80ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:03:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	185570	40.00000	ppb		0.00
20) Napthalene-D8(IS)	6.46	136	796769	40.00000	ppb		0.00
40) Acenaphthene-D10(IS)	8.47	164	481968	40.00000	ppb		0.00
64) Phenanthrene-D10(IS)	10.20	188	892921	40.00000	ppb		0.00
78) Chrysene-D12(IS)	13.29	240	844482	40.00000	ppb		0.00
88) Perylene-D12(IS)	14.98	264	793228	40.00000	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol (S)	3.54	112	987627	117.60552	ppb		0.00
Spiked Amount 200.000			Recovery = 58.803%				
5) Phenol-D6 (S)	4.69	99	1273775	116.96802	ppb		0.00
Spiked Amount 200.000			Recovery = 58.484%				
21) Nitrobenzene-D5(S)	5.67	82	648272	65.84229	ppb		0.00
Spiked Amount 100.000			Recovery = 65.842%				
45) 2-Fluorobiphenyl(S)	7.70	172	1163651	77.16054	ppb		0.00
Spiked Amount 100.000			Recovery = 77.161%				
63) 2,4,6-Tribromophenol(S)	9.41	330	368987	161.79270	ppb		0.00
Spiked Amount 200.000			Recovery = 80.897%				
81) Terphenyl-D14(S)	12.07	244	1491374	79.29511	ppb		0.00
Spiked Amount 100.000			Recovery = 79.295%				
Target Compounds							Qvalue
2) n-Nitrosodimethylamine	1.85	42	350835	63.95214	ppb		97
3) Pyridine	1.86	79	780223	69.94362	ppb		90
6) Phenol	4.70	94	732452	56.43403	ppb		93
7) Aniline	4.70	66	745585	61.40768	ppb	#	68
8) Bis (2-chloroethyl) ether	4.75	63	330830	55.91731	ppb		96
9) 2-Chlorophenol	4.82	128	557148	56.40616	ppb		99
10) 1,3-DCB	4.96	146	600633	55.46302	ppb		98
11) 1,4-DCB	5.06	146	614009	55.31652	ppb		97
12) Benzyl alcohol	5.22	108	320815	57.16893	ppb		98
13) 1,2-DCB	5.22	146	570533	55.59146	ppb		97
14) 2-Methylphenol	5.35	107	428200	55.80795	ppb		98
15) Bis (2-chloroisopropyl) et	5.34	45	641127	52.74773	ppb		99
16) Acetophenone	5.50	105	790020	56.10462	ppb		97
17) 3&4-Methylphenol	5.53	107	1128891	113.14301	ppb		96
18) n-Nitrosodi-n-propylamine	5.51	70	416391	55.85682	ppb		96
19) Hexachloroethane	5.59	117	255879	56.67934	ppb		99
22) Nitrobenzene	5.69	77	681429	65.45680	ppb		95
23) Isophorone	5.96	82	1113984	63.56979	ppb		95
24) 2-Nitrophenol	6.05	139	325331	64.37058	ppb		99
25) 2,4-Dimethylphenol	6.12	122	506527	65.71902	ppb		97
26) Benzoic acid	6.32	105	415408	66.71840	ppb		99
27) Bis (2-chloroethoxy) metha	6.20	93	587341	62.71655	ppb		99
28) 2,4-Dichlorophenol	6.34	162	489407	66.35604	ppb		97
29) 1,2,4-Trichlorobenzene	6.40	180	516688	63.21228	ppb		96
30) 3,4-Dimethylphenol	6.45	107	783360	64.16159	ppb		99
31) Naphthalene	6.49	128	1650904	64.43297	ppb		99
32) 4-Chloroaniline	6.57	127	599717	67.45448	ppb		98
33) 2,6-Dichlorophenol	6.57	162	457931	64.41292	ppb		97
34) Hexachloropropene	6.58	213	436856	69.31083	ppb		99
35) Hexachlorobutadiene	6.63	225	338496	65.98872	ppb		98
36) Caprolactum	7.02	55	252992	62.86355	ppb		97
37) 4-Chloro-3-methylphenol	7.16	107	556887	64.65951	ppb		91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y009.D Vial: 9
Acq On : 17 Nov 16 14:28 Operator: MA
Sample : 80ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:03:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	2-Methylnaphthalene	7.28	142	1101884	63.90044 ppb		99
39)	1-Methylnaphthalene	7.39	142	1066046	63.32714 ppb		97
41)	Hexachlorocyclopentadiene	7.45	237	245692	76.76041 ppb		96
42)	1,2,4,5-Tetrachlorobenzene	7.47	216	498043	76.58561 ppb		99
43)	2,4,6-Trichlorophenol	7.62	196	341873	80.23106 ppb		99
44)	2,4,5-Trichlorophenol	7.68	196	357356	78.59334 ppb		98
46)	1,1'-Biphenyl	7.81	154	1415314	76.60698 ppb		99
47)	2-Chloronaphthalene	7.84	162	1104129	76.01128 ppb		93
48)	2-Nitroaniline	7.98	65	408811	78.79489 ppb		91
49)	Dimethyl phthalate	8.19	163	1357449	76.85894 ppb		99
50)	2,6-DNT	8.27	165	312851	78.26874 ppb		77
51)	Acenaphthylene	8.32	152	1731901	76.24913 ppb		99
52)	3-Nitroaniline	8.46	138	321468	77.63533 ppb		87
53)	Acenaphthene	8.51	154	1049600	75.22610 ppb		99
54)	2,4-Dinitrophenol	8.60	184	160896	74.49383 ppb		89
55)	4-Nitrophenol	8.71	65	279404	80.43551 ppb		92
56)	Dibenzofuran	8.71	168	1516972	74.64580 ppb		94
57)	2,4-DNT	8.74	165	432051	77.26807 ppb		78
58)	2,3,4,6-Tetrachlorophenol	8.88	232	285163	77.43295 ppb		93
59)	Diethyl phthalate	9.00	149	1369264	76.24637 ppb		98
60)	4-Chlorophenyl phenyl ethe	9.11	204	637877	80.42519 ppb		96
61)	Fluorene	9.11	166	1286145	78.18893 ppb		98
62)	4-Nitroaniline	9.19	138	287336	72.51602 ppb		99
65)	4,6-Dinitro-2-methylphenol	9.23	198	270784	89.83180 ppb		92
66)	Diphenyl amine	9.27	169	1870322	159.03690 ppb		99
67)	n-Nitrosodiphenylamine	9.27	169	1870322	159.03690 ppb		99
68)	1,2-Diphenylhydrazine	9.30	77	1657994	86.67688 ppb		93
69)	4-Bromophenyl phenyl ether	9.68	248	365428	79.78043 ppb		89
70)	Hexachlorobenzene	9.76	284	395833	82.02937 ppb		91
71)	Atrazine	9.89	200	191120	39.18045 ppb		93
72)	Pentachlorophenol	10.01	266	149986	79.96604 ppb		96
73)	Phenanthrene	10.23	178	1887722	78.95179 ppb		99
74)	Anthracene	10.29	178	1987881	79.16067 ppb		99
75)	Carbazol	10.50	167	1771198	79.69169 ppb		96
76)	Di-n-butylphthalate	10.90	149	2405928	80.45520 ppb		97
77)	Fluoranthene	11.62	202	2129288	80.59628 ppb		96
79)	Benzidine	11.79	184	752032	83.28369 ppb		100
80)	Pyrene	11.88	202	2169932	77.50802 ppb		100
82)	Butyl benzylphthalate	12.63	149	1097170	79.02876 ppb		91
83)	3,3'-Dichlorobenzidine	13.25	252	658841	75.15306 ppb	#	95
84)	Benz (a) anthracene	13.27	228	2125416	80.59480 ppb		100
85)	Bis (2-ethylhexyl) phthala	13.29	149	1555195	79.38345 ppb		100
86)	Chrysene	13.32	228	1998485	77.72468 ppb		99
87)	Di-n-octylphthalate	14.02	149	2791653	81.65643 ppb	#	88
89)	Benzo (b) fluoranthene	14.50	252	2081355	88.82693 ppb		98
90)	Benzo (k) fluoranthene	14.54	252	1958330	93.01104 ppb		99
91)	Benzo (a) pyrene	14.92	252	1943111	92.49515 ppb		98
92)	Indeno (1,2,3-cd) pyrene	16.65	276	2197065	91.70218 ppb		99
93)	Dibenz (a,h) anthracene	16.67	278	1858236	91.70592 ppb		98
94)	Benzo (g,h,i) perylene	17.15	276	1820935	92.05493 ppb		96

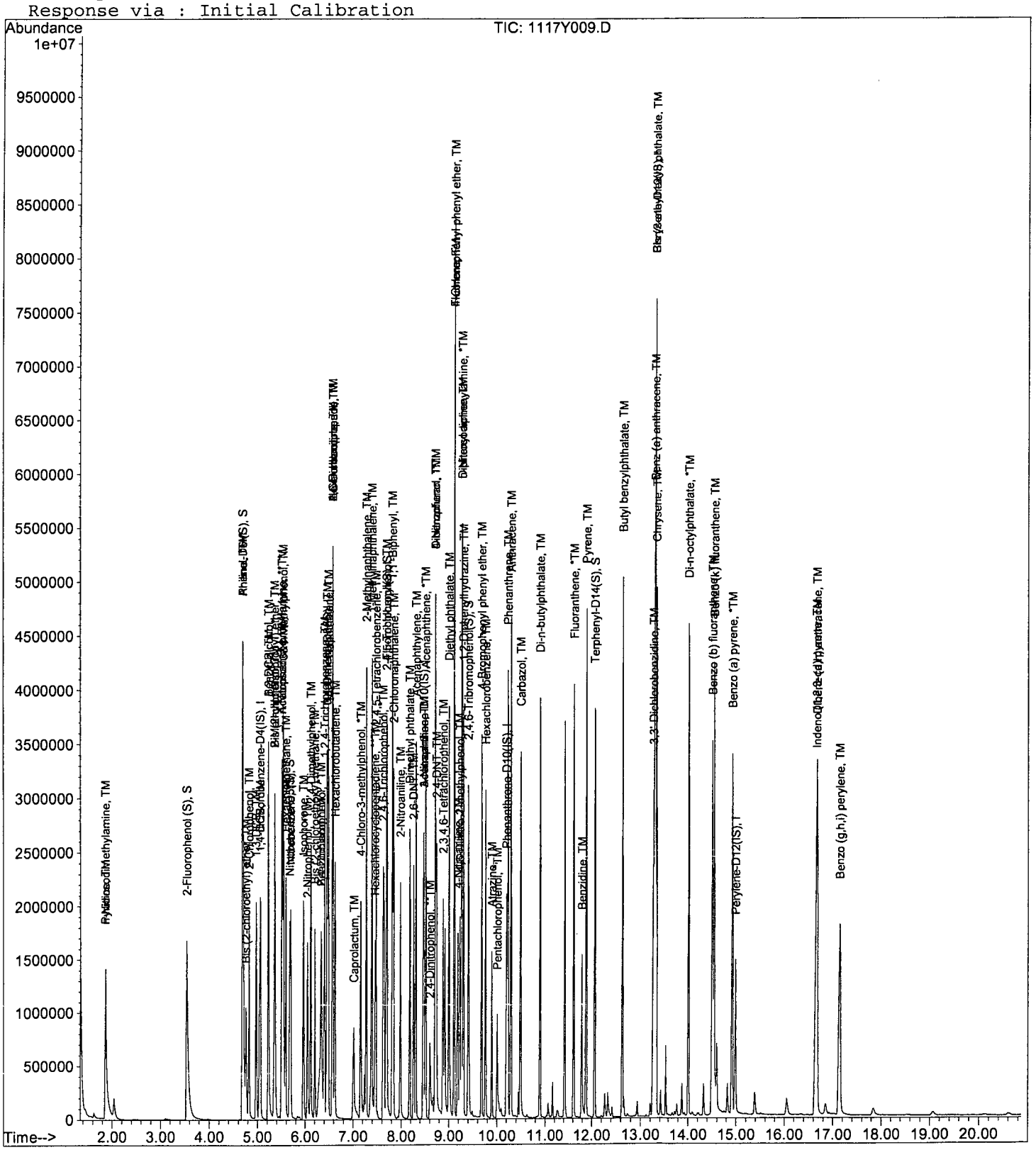
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y009.D Vial: 9
Acq On : 17 Nov 16 14:28 Operator: MA
Sample : 80ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:04 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:23:23 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y010.D Vial: 10
Acq On : 17 Nov 16 14:58 Operator: MA
Sample : 100ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:15 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:05:44 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	180735	40.00000	ppb		0.00
20) Napthalene-D8(IS)	6.46	136	767853	40.00000	ppb		0.00
40) Acenaphthene-D10(IS)	8.48	164	466110	40.00000	ppb		0.00
64) Phenanthrene-D10(IS)	10.20	188	868261	40.00000	ppb		0.00
78) Chrysene-D12(IS)	13.29	240	852168	40.00000	ppb		0.00
88) Perylene-D12(IS)	14.98	264	748584	40.00000	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol (S)	3.55	112	1211162	195.78264	ppb		0.00
Spiked Amount 200.000			Recovery = 97.891%				
5) Phenol-D6 (S)	4.69	99	1585805	184.57518	ppb		0.01
Spiked Amount 200.000			Recovery = 92.287%				
21) Nitrobenzene-D5(S)	5.67	82	808093	96.09095	ppb		0.00
Spiked Amount 100.000			Recovery = 96.091%				
45) 2-Fluorobiphenyl(S)	7.71	172	1438715	97.11149	ppb		0.01
Spiked Amount 100.000			Recovery = 97.111%				
63) 2,4,6-Tribromophenol(S)	9.41	330	470620	206.63639	ppb		0.01
Spiked Amount 200.000			Recovery = 103.318%				
81) Terphenyl-D14(S)	12.06	244	1827975	94.68790	ppb		0.00
Spiked Amount 100.000			Recovery = 94.688%				
Target Compounds							Qvalue
2) n-Nitrosodimethylamine	1.85	42	475029	105.20258	ppb		93
3) Pyridine	1.87	79	901071	93.28727	ppb		87
6) Phenol	4.70	94	902387	92.12178	ppb		96
7) Aniline	4.70	66	930399	96.74525	ppb	#	65
8) Bis (2-chloroethyl) ether	4.75	63	420511	94.59028	ppb		95
9) 2-Chlorophenol	4.82	128	691135	91.68877	ppb		97
10) 1,3-DCB	4.97	146	753369	91.88467	ppb		98
11) 1,4-DCB	5.06	146	764013	90.92745	ppb		99
12) Benzyl alcohol	5.23	108	409415	97.34534	ppb		95
13) 1,2-DCB	5.23	146	704894	90.57849	ppb		99
14) 2-Methylphenol	5.36	107	534032	92.72371	ppb		99
15) Bis (2-chloroisopropyl) et	5.35	45	776745	88.00815	ppb		98
16) Acetophenone	5.51	105	994639	92.54047	ppb		98
17) 3&4-Methylphenol	5.54	107	1405444	185.15109	ppb		97
18) n-Nitrosodi-n-propylamine	5.51	70	519189	93.34169	ppb		97
19) Hexachloroethane	5.59	117	319515	92.03486	ppb		94
22) Nitrobenzene	5.69	77	849213	97.97511	ppb		95
23) Isophorone	5.97	82	1389571	96.85601	ppb		99
24) 2-Nitrophenol	6.04	139	408611	99.34253	ppb	#	79
25) 2,4-Dimethylphenol	6.12	122	622365	96.99760	ppb		97
26) Benzoic acid	6.33	105	466413	79.98489	ppb		98
27) Bis (2-chloroethoxy) metha	6.20	93	733563	96.39497	ppb		99
28) 2,4-Dichlorophenol	6.33	162	597686	97.17196	ppb		96
29) 1,2,4-Trichlorobenzene	6.41	180	651784	95.87147	ppb		98
30) 3,4-Dimethylphenol	6.45	107	979615	96.24118	ppb		98
31) Naphthalene	6.49	128	2045797	96.72628	ppb		98
32) 4-Chloroaniline	6.57	127	706390	94.24475	ppb		97
33) 2,6-Dichlorophenol	6.57	162	568037	95.46137	ppb		99
34) Hexachloropropene	6.58	213	546175	101.50369	ppb		99
35) Hexachlorobutadiene	6.63	225	420854	97.58743	ppb		96
36) Caprolactum	7.03	55	313706	96.54835	ppb		96
37) 4-Chloro-3-methylphenol	7.16	107	704662	99.29167	ppb		91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y010.D Vial: 10
Acq On : 17 Nov 16 14:58 Operator: MA
Sample : 100ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:15 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:05:44 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.28	142	1398021	98.17583	ppb		98
39)	1-Methylnaphthalene	7.39	142	1336099	97.24745	ppb		99
41)	Hexachlorocyclopentadiene	7.45	237	335967	97.84989	ppb		95
42)	1,2,4,5-Tetrachlorobenzene	7.47	216	619084	98.06507	ppb		98
43)	2,4,6-Trichlorophenol	7.62	196	422243	100.15060	ppb		98
44)	2,4,5-Trichlorophenol	7.69	196	448137	100.39630	ppb		98
46)	1,1'-Biphenyl	7.82	154	1744589	98.08208	ppb		99
47)	2-Chloronaphthalene	7.84	162	1374326	98.72516	ppb		93
48)	2-Nitroaniline	7.98	65	507600	102.48500	ppb		91
49)	Dimethyl phthalate	8.19	163	1697905	100.38208	ppb		99
50)	2,6-DNT	8.27	165	387010	102.00902	ppb		83
51)	Acenaphthylene	8.32	152	2156734	99.27710	ppb		99
52)	3-Nitroaniline	8.47	138	393000	99.40423	ppb		86
53)	Acenaphthene	8.51	154	1311741	98.49848	ppb		99
54)	2,4-Dinitrophenol	8.61	184	211258	92.21892	ppb		84
55)	4-Nitrophenol	8.72	65	353380	100.85569	ppb		92
56)	Dibenzofuran	8.72	168	1900232	98.26893	ppb		95
57)	2,4-DNT	8.74	165	545001	102.28463	ppb		81
58)	2,3,4,6-Tetrachlorophenol	8.88	232	364053	102.10437	ppb		96
59)	Diethyl phthalate	9.00	149	1709803	98.33523	ppb		100
60)	4-Chlorophenyl phenyl ethe	9.12	204	826395	105.61648	ppb		97
61)	Fluorene	9.12	166	1660776	104.76361	ppb		97
62)	4-Nitroaniline	9.19	138	357729	95.99717	ppb		98
65)	4,6-Dinitro-2-methylphenol	9.23	198	345580	112.95505	ppb		94
66)	Diphenyl amine	9.27	169	2364029	200.68405	ppb		98
67)	n-Nitrosodiphenylamine	9.27	169	2364029	200.68405	ppb		98
68)	1,2-Diphenylhydrazine	9.30	77	2018702	103.85749	ppb		94
69)	4-Bromophenyl phenyl ether	9.68	248	466498	102.11747	ppb		95
70)	Hexachlorobenzene	9.77	284	490430	100.11433	ppb		91
71)	Atrazine	9.90	200	242237	50.72612	ppb		94
72)	Pentachlorophenol	10.01	266	199273	99.70962	ppb		99
73)	Phenanthrene	10.23	178	2379343	99.31447	ppb		100
74)	Anthracene	10.30	178	2444850	97.49590	ppb		100
75)	Carbazol	10.50	167	2204161	100.41596	ppb		96
76)	Di-n-butylphthalate	10.89	149	2917363	97.32775	ppb		100
77)	Fluoranthene	11.62	202	2646038	100.17444	ppb	#	96
79)	Benzidine	11.79	184	914348	97.53793	ppb		98
80)	Pyrene	11.88	202	2719725	96.42132	ppb		100
82)	Butyl benzylphthalate	12.63	149	1358722	95.77817	ppb		92
83)	3,3'-Dichlorobenzidine	13.26	252	800270	92.37119	ppb	#	95
84)	Benz (a) anthracene	13.28	228	2610538	96.82885	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.29	149	1979509	98.60950	ppb		99
86)	Chrysene	13.32	228	2526305	97.50042	ppb		99
87)	Di-n-octylphthalate	14.02	149	3385958	96.74814	ppb	#	90
89)	Benzo (b) fluoranthene	14.50	252	2567812	101.51623	ppb		98
90)	Benzo (k) fluoranthene	14.54	252	2468554	106.62886	ppb	#	98
91)	Benzo (a) pyrene	14.92	252	2368866	102.12948	ppb		98
92)	Indeno (1,2,3-cd) pyrene	16.65	276	2668859	100.45367	ppb		98
93)	Dibenz (a,h) anthracene	16.68	278	2285789	101.57231	ppb		99
94)	Benzo (g,h,i) perylene	17.16	276	2229597	100.58760	ppb		98

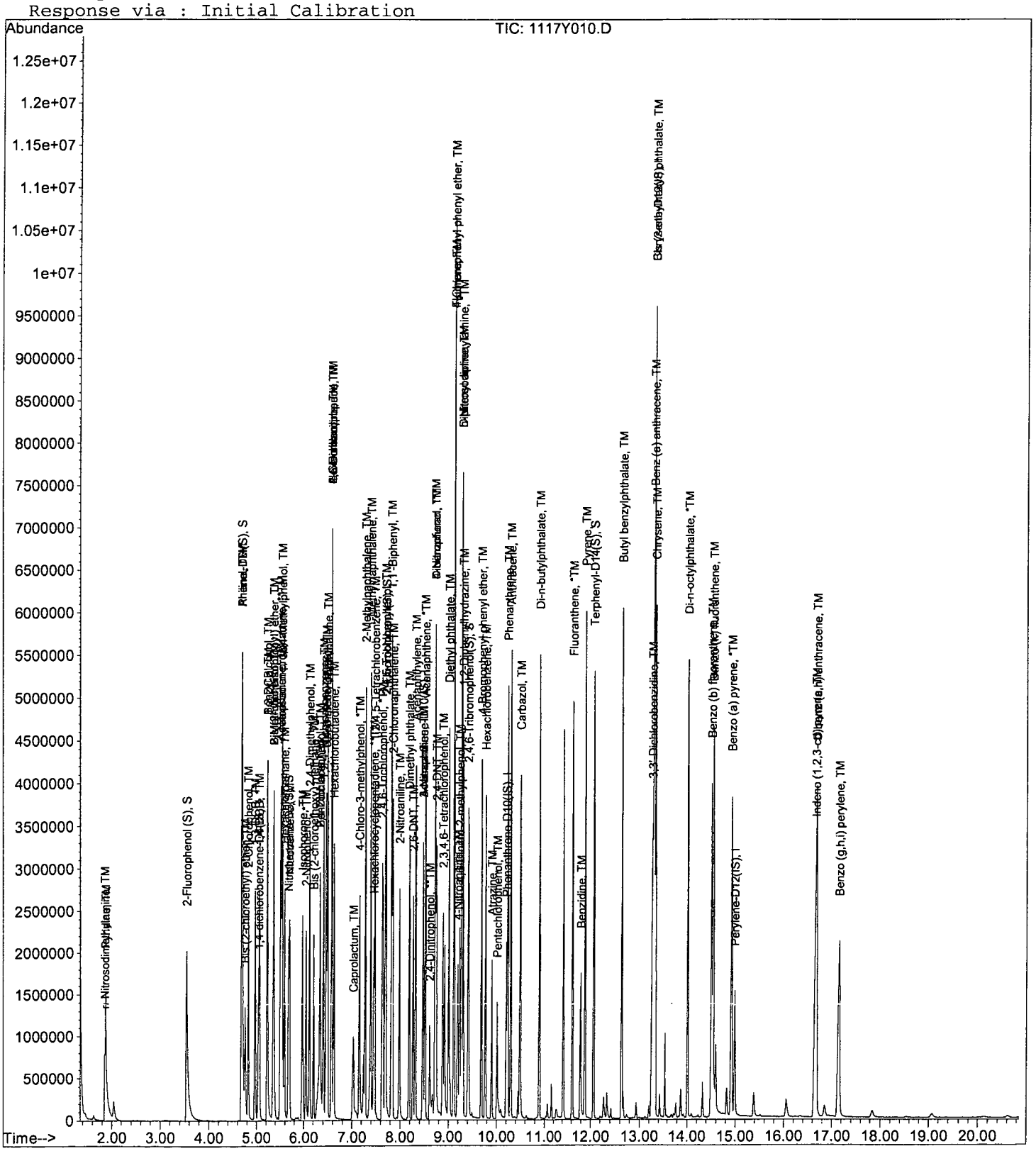
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y010.D Vial: 10
Acq On : 17 Nov 16 14:58 Operator: MA
Sample : 100ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:15 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:23:23 2016
Response via : Initial Calibration



Form 7

Second Source Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Date Analyzed: 11/17/16

Matrix: Instrument: Yoda

Initial Cal. Date: 11/17/16

Data File: 1117Y011.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	n-Nitrosodimethylamine	0.9501	0.8807	7.3	TM	
2	TM	Pyridine	2.021	1.991	1.5	TM	
3	*TM	Phenol	1.996	1.887	5.4	*TM	
4	TM	Aniline	1.977	1.727	13	TM	
5	TM	Bis (2-chloroethyl) ether	0.9057	0.9809	8.3	TM	
6	TM	2-Chlorophenol	1.541	1.467	4.8	TM	
7	TM	1,3-DCB	1.680	1.760	4.8	TM	
8	*TM	1,4-DCB	1.717	1.812	5.5	*TM	
9	TM	Benzyl alcohol	0.8578	0.9107	6.2	TM	
10	TM	1,2-DCB	1.596	1.649	3.3	TM	
11	TM	2-Methylphenol	1.175	1.085	7.7	TM	
12	TM	Bis (2-chloroisopropyl) ether	1.795	1.803	0.46	TM	
13	TM	Acetophenone	2.196	2.205	0.40	TM	
14	TM	3&4-Methylphenol	1.550	1.500	3.2	TM	
15	**TM	n-Nitrosodi-n-propylamine	1.136	1.113	2.0	**TM	
16	TM	Hexachloroethane	0.7136	0.7624	6.8	TM	
17	TM	Nitrobenzene	0.4296	0.4236	1.4	TM	
18	TM	Isophorone	0.7090	0.7729	9.0	TM	
19	*TM	2-Nitrophenol	0.2035	0.1949	4.2	*TM	
20	TM	2,4-Dimethylphenol	0.3177	0.3033	4.5	TM	
21	TMQ	Benzoic acid	0.2076	0.2589	25	TMQ	3.0
22	TM	Bis (2-chloroethoxy) methane	0.3765	0.3892	3.4	TM	
23	*TM	2,4-Dichlorophenol	0.3043	0.2910	4.3	*TM	
24	TM	1,2,4-Trichlorobenzene	0.3377	0.3675	8.8	TM	
25	TM	3,4-Dimethylphenol	0.5064	0.4550	10	TM	
26	TM	Naphthalene	1.051	1.015	3.4	TM	
27	TM	4-Chloroaniline	0.3752	0.3844	2.4	TM	
28	TM	2,6-Dichlorophenol	0.2964	0.2977	0.43	TM	
29	TM	Hexachloropropene	0.2687	0.2650	1.4	TM	
30	*TM	Hexachlorobutadiene	0.2155	0.2342	8.7	*TM	
31	TM	Caprolactum	0.1600	0.1467	8.3	TM	
32	*TM	4-Chloro-3-methylphenol	0.3518	0.3344	4.9	*TM	
33	TM	2-Methylnaphthalene	0.7082	0.6778	4.3	TM	
34	TM	1-Methylnaphthalene	0.6806	0.6425	5.6	TM	
35	**TMQ	Hexachlorocyclopentadiene	0.1752	0.2098	20	**TMQ	0.67
36	TM	1,2,4,5-Tetrachlorobenzene	0.5418	0.5478	1.1	TM	
37	*TM	2,4,6-Trichlorophenol	0.3614	0.3530	2.3	*TM	
38	TM	2,4,5-Trichlorophenol	0.3828	0.3809	0.49	TM	
39	TM	1,1'-Biphenyl	1.522	1.506	1.0	TM	
40	TM	2-Chloronaphthalene	1.192	1.274	6.9	TM	
		Average			5.6		

Form 7

Second Source Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 11/17/16
Matrix: 0 Instrument: Yoda
Cal. Date: 11/17/16
Data File: 1117Y011.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	2-Nitroaniline	0.4228	0.4316	2.1	TM	
42	TM	Dimethyl phthalate	1.453	1.411	2.9	TM	
43	TM	2,6-DNT	0.3253	0.3362	3.4	TM	
44	TM	Acenaphthylene	1.860	1.829	1.6	TM	
45	TM	3-Nitroaniline	0.3375	0.3403	0.81	TM	
46	*TM	Acenaphthene	1.139	1.121	1.6	*TM	
47	**TML	2,4-Dinitrophenol	0.1425	0.1552	8.9	**TML	3.7
48	**TML	4-Nitrophenol	0.2428	0.2544	4.8	**TML	7.3
49	TM	Dibenzofuran	1.656	1.637	1.1	TM	
50	TM	2,4-DNT	0.4565	0.4610	0.99	TM	
51	TM	2,3,4,6-Tetrachlorophenol	0.2915	0.2973	2.0	TM	
52	TM	Diethyl phthalate	1.491	1.486	0.35	TM	
53	TM	4-Chlorophenyl phenyl ether	0.6772	0.6629	2.1	TM	
54	TM	Fluorene	1.365	1.304	4.5	TM	
55	TM	4-Nitroaniline	0.3174	0.3282	3.4	TM	
56	TM	4,6-Dinitro-2-methylphenol	0.1416	0.1374	3.0	TM	
57	TM	Diphenyl amine	0.5459	0.5572	2.1	TM	
58	*TM	n-Nitrosodiphenylamine	0.5459	0.5572	2.1	*TM	
59	TM	1,2-Diphenylhydrazine	0.8965	1.020	14	TM	
60	TM	4-Bromophenyl phenyl ether	0.2121	0.2067	2.5	TM	
61	TM	Hexachlorobenzene	0.2269	0.2410	6.2	TM	
62	TM	Atrazine	0.2209	0.1870	15	TM	
63	*TMQ	Pentachlorophenol	0.0660	0.0621	6.0	*TMQ	9.5
64	TM	Phenanthrene	1.108	1.050	5.2	TM	
65	TM	Anthracene	1.158	1.030	11	TM	
66	TM	Carbazol	1.016	0.9587	5.6	TM	
67	TM	Di-n-butylphthalate	1.383	1.340	3.1	TM	
68	*TM	Fluoranthene	1.223	1.154	5.6	*TM	
69	TM	Benzidine	0.4426	0.4919	11	TM	
70	TM	Pyrene	1.325	1.252	5.5	TM	
71	TM	Butyl benzylphthalate	0.6676	0.6711	0.53	TM	
72	TM	3,3'-Dichlorobenzidine	0.4074	0.4566	12	TM	
73	TM	Benz (a) anthracene	1.268	1.211	4.5	TM	
74	TM	Bis (2-ethylhexyl) phthalate	0.9462	0.9206	2.7	TM	
75	TM	Chrysene	1.222	1.127	7.8	TM	
76	*TM	Di-n-octylphthalate	1.649	1.598	3.1	*TM	
77	TM	Benzo (b) fluoranthene	1.375	1.432	4.1	TM	
78	TM	Benzo (k) fluoranthene	1.282	1.094	15	TM	
79	*TM	Benzo (a) pyrene	1.270	1.249	1.6	*TM	
80	TM	Indeno (1,2,3-cd) pyrene	1.454	1.425	2.0	TM	
		Average			4.8		

0
0

Form 7

Second Source Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 11/17/16
Matrix: 0 Instrument: Yoda
Cal. Date: 11/17/16
Data File: 1117Y011.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	Dibenz (a,h) anthracene	1.235	1.198	3.0	TM	
82	TM	Benzo (g,h,i) perylene	1.213	1.171	3.5	TM	
83							
84							
85							
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115							
116							
117							
118							
119							
120							
		Average			3.3		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y011.D Vial: 11
Acq On : 17 Nov 16 15:27 Operator: MA
Sample : 2ND SRC SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:42 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:23:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	178099	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.46	136	769623	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.47	164	447548	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.20	188	850203	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.28	240	807208	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.98	264	747082	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	0.00	112	0	0.00000 ppb	
Spiked Amount 200.000			Recovery =	0.000%	
5) Phenol-D6 (S)	0.00	99	0	0.00000 ppb	
Spiked Amount 200.000			Recovery =	0.000%	
21) Nitrobenzene-D5(S)	5.59	82	49517	6.14391 ppb	-0.08
Spiked Amount 100.000			Recovery =	6.144%	
45) 2-Fluorobiphenyl(S)	7.68	172	789	0.05535 ppb	0.00
Spiked Amount 100.000			Recovery =	0.055%	
63) 2,4,6-Tribromophenol(S)	0.00	330	0	0.00000 ppb	
Spiked Amount 200.000			Recovery =	0.000%	
81) Terphenyl-D14(S)	12.07	244	513	0.02799 ppb	0.00
Spiked Amount 100.000			Recovery =	0.028%	

Algorithm = $\frac{196055 \times 1 \times 40}{178099 \times 0.9501} = 46.34$ HA 11/18/16

Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.85	42	196055	46.34556 ppb	100
3) Pyridine	1.86	79	443202	49.25354 ppb	99
6) Phenol	4.69	94	420166	47.28299 ppb	96
7) Aniline	4.69	66	384393	43.65810 ppb	85
8) Bis (2-chloroethyl) ether	4.75	63	218382	54.15612 ppb	94
9) 2-Chlorophenol	4.82	128	326695	47.60907 ppb	96
10) 1,3-DCB	4.96	146	391915	52.39951 ppb	99
11) 1,4-DCB	5.06	146	403370	52.75363 ppb	99
12) Benzyl alcohol	5.21	108	202739	53.08397 ppb	99
13) 1,2-DCB	5.22	146	367179	51.66444 ppb	100
14) 2-Methylphenol	5.35	107	241567	46.17052 ppb	96
15) Bis (2-chloroisopropyl) et	5.34	45	401353	50.22919 ppb	97
16) Acetophenone	5.50	105	490861	50.19755 ppb	98
17) 3&4-Methylphenol	5.53	107	667938	96.75444 ppb	99
18) n-Nitrosodi-n-propylamine	5.50	70	247886	49.00292 ppb	98
19) Hexachloroethane	5.59	117	169736	53.42408 ppb	98
22) Nitrobenzene	5.69	77	407484	49.29275 ppb	99
23) Isophorone	5.96	82	743559	54.50863 ppb	100
24) 2-Nitrophenol	6.04	139	187525	47.88802 ppb #	81
25) 2,4-Dimethylphenol	6.11	122	291787	47.72759 ppb	97
26) Benzoic acid	6.29	105	249036	51.50269 ppb	97
27) Bis (2-chloroethoxy) metha	6.20	93	374463	51.69613 ppb	100
28) 2,4-Dichlorophenol	6.34	162	279979	47.82613 ppb	96
29) 1,2,4-Trichlorobenzene	6.40	180	353567	54.40872 ppb	97
30) 3,4-Dimethylphenol	6.45	107	437742	44.92689 ppb	99
31) Naphthalene	6.49	128	976604	48.27987 ppb	100
32) 4-Chloroaniline	6.57	127	369838	51.22487 ppb	99
33) 2,6-Dichlorophenol	6.57	162	286400	50.21749 ppb	99
34) Hexachloropropene	6.58	213	254902	49.30675 ppb	98
35) Hexachlorobutadiene	6.63	225	225339	54.34327 ppb	99
36) Caprolactum	6.99	55	141152	45.86410 ppb	94
37) 4-Chloro-3-methylphenol	7.15	107	321726	47.53260 ppb	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y011.D Vial: 11
Acq On : 17 Nov 16 15:27 Operator: MA
Sample : 2ND SRC SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:42 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:23:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.28	142	652072	47.85629	ppb		99
39)	1-Methylnaphthalene	7.39	142	618136	47.20184	ppb		98
41)	Hexachlorocyclopentadiene	7.45	237	117382	49.66528	ppb		99
42)	1,2,4,5-Tetrachlorobenzene	7.47	216	306459	50.55505	ppb		99
43)	2,4,6-Trichlorophenol	7.62	196	197508	48.84140	ppb		97
44)	2,4,5-Trichlorophenol	7.68	196	213089	49.75647	ppb		98
46)	1,1'-Biphenyl	7.81	154	842477	49.47591	ppb		99
47)	2-Chloronaphthalene	7.83	162	712717	53.44276	ppb		97
48)	2-Nitroaniline	7.98	65	241425	51.03059	ppb		97
49)	Dimethyl phthalate	8.18	163	789457	48.56368	ppb		100
50)	2,6-DNT	8.26	165	188106	51.68479	ppb		98
51)	Acenaphthylene	8.31	152	1023384	49.17611	ppb		99
52)	3-Nitroaniline	8.46	138	190375	50.40729	ppb		97
53)	Acenaphthene	8.51	154	626972	49.19895	ppb		98
54)	2,4-Dinitrophenol	8.61	184	86826	48.13890	ppb		98
55)	4-Nitrophenol	8.73	65	142334	46.34692	ppb	#	68
56)	Dibenzofuran	8.71	168	915643	49.42991	ppb		98
57)	2,4-DNT	8.73	165	257916	50.49503	ppb		96
58)	2,3,4,6-Tetrachlorophenol	8.88	232	166294	50.99391	ppb		98
59)	Diethyl phthalate	8.99	149	831141	49.82672	ppb		100
60)	4-Chlorophenyl phenyl ethe	9.11	204	370836	48.94460	ppb		97
61)	Fluorene	9.11	166	729365	47.74033	ppb		96
62)	4-Nitroaniline	9.18	138	183632	51.71061	ppb		93
65)	4,6-Dinitro-2-methylphenol	9.22	198	146016	48.51210	ppb		98
66)	Diphenyl amine	9.26	169	1184359	102.07189	ppb		99
67)	n-Nitrosodiphenylamine	9.26	169	1184359	102.07189	ppb		99
68)	1,2-Diphenylhydrazine	9.30	77	1083757	56.87464	ppb		98
69)	4-Bromophenyl phenyl ether	9.68	248	219716	48.73712	ppb		97
70)	Hexachlorobenzene	9.76	284	256115	53.10099	ppb		96
71)	Atrazine	9.89	200	99348	21.15512	ppb		100
72)	Pentachlorophenol	10.01	266	66010	45.23149	ppb		91
73)	Phenanthrene	10.23	178	1116078	47.38853	ppb		99
74)	Anthracene	10.28	178	1094278	44.45631	ppb		99
75)	Carbazol	10.49	167	1018908	47.20472	ppb		100
76)	Di-n-butylphthalate	10.89	149	1424538	48.46104	ppb		100
77)	Fluoranthene	11.61	202	1226693	47.19071	ppb		100
79)	Benzidine	11.79	184	496359	55.56966	ppb		99
80)	Pyrene	11.88	202	1263151	47.24097	ppb		100
82)	Butyl benzylphthalate	12.63	149	677173	50.26268	ppb		99
83)	3,3'-Dichlorobenzidine	13.24	252	460722	56.03688	ppb		96
84)	Benz (a) anthracene	13.27	228	1221918	47.74364	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.29	149	928848	48.64546	ppb		99
86)	Chrysene	13.32	228	1136927	46.09322	ppb		99
87)	Di-n-octylphthalate	14.01	149	1612549	48.45476	ppb		100
89)	Benzo (b) fluoranthene	14.50	252	1336971	52.06047	ppb		100
90)	Benzo (k) fluoranthene	14.53	252	1021943	42.68429	ppb	#	96
91)	Benzo (a) pyrene	14.91	252	1166546	49.17870	ppb	#	98
92)	Indeno (1,2,3-cd) pyrene	16.64	276	1331149	49.00834	ppb		98
93)	Dibenz (a,h) anthracene	16.65	278	1118366	48.49271	ppb		97
94)	Benzo (g,h,i) perylene	17.13	276	1093989	48.27170	ppb		97

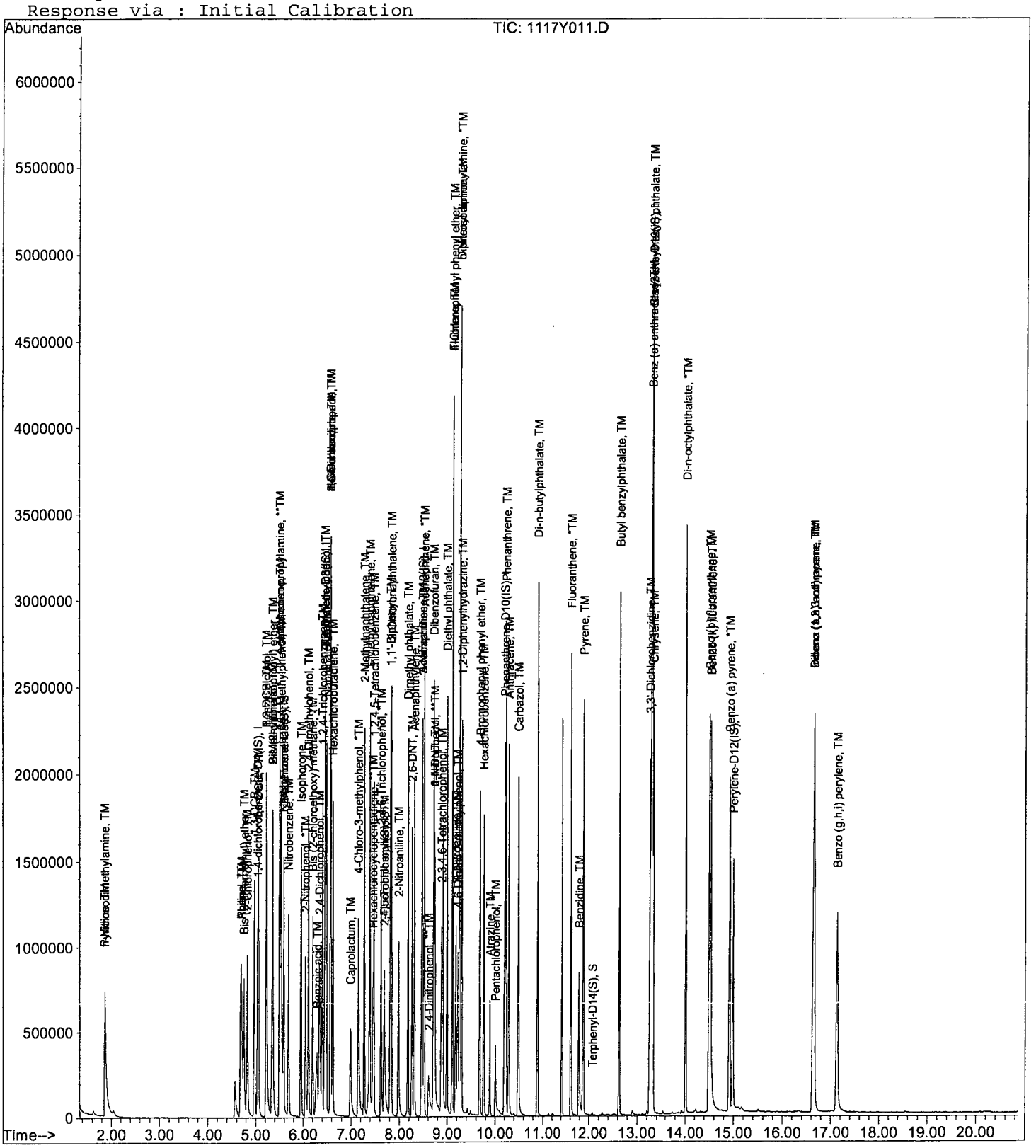
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y011.D Vial: 11
Acq On : 17 Nov 16 15:27 Operator: MA
Sample : 2ND SRC SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 17 15:42 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Nov 17 15:23:23 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Date Analyzed: 11/28/16

Matrix: Instrument: Yoda

Initial Cal. Date: 11/17/16

Data File: 1117Y116.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	n-Nitrosodimethylamine	0.9501	1.046	10	TM	
3	TM	Pyridine	2.021	2.421	20	TM	
4	S	2-Fluorophenol (S)	1.255	1.327	5.7	S	
5	S	Phenol-D6 (S)	1.762	1.786	1.4	S	
6	*TM	Phenol	1.996	2.082	4.3	*TM	
7	TM	Aniline	1.977	2.163	9.4	TM	
8	TM	Bis (2-chloroethyl) ether	0.9057	0.9467	4.5	TM	
9	TM	2-Chlorophenol	1.541	1.596	3.6	TM	
10	TM	1,3-DCB	1.680	1.740	3.6	TM	
11	*TM	1,4-DCB	1.717	1.770	3.1	*TM	
12	TM	Benzyl alcohol	0.8578	0.9320	8.7	TM	
13	TM	1,2-DCB	1.596	1.655	3.7	TM	
14	TM	2-Methylphenol	1.175	1.247	6.1	TM	
15	TM	Bis (2-chloroisopropyl) ether	1.795	1.845	2.8	TM	
16	TM	Acetophenone	2.196	2.243	2.1	TM	
17	TM	3&4-Methylphenol	1.550	1.618	4.4	TM	
18	**TM	n-Nitrosodi-n-propylamine	1.136	1.202	5.8	**TM	
19	TM	Hexachloroethane	0.7136	0.7446	4.4	TM	
20	I	Napthalene-D8(IS)	ISTD			I	
21	S	Nitrobenzene-D5(S)	0.4189	0.4200	0.27	S	
22	TM	Nitrobenzene	0.4296	0.4448	3.5	TM	
23	TM	Isophorone	0.7090	0.7183	1.3	TM	
24	*TM	2-Nitrophenol	0.2035	0.2070	1.7	*TM	
25	TM	2,4-Dimethylphenol	0.3177	0.3294	3.7	TM	
26	TMQ	Benzoic acid	0.2076	0.2473	19	TMQ	1.4
27	TM	Bis (2-chloroethoxy) methane	0.3765	0.3830	1.7	TM	
28	*TM	2,4-Dichlorophenol	0.3043	0.3160	3.9	*TM	
29	TM	1,2,4-Trichlorobenzene	0.3377	0.3514	4.1	TM	
30	TM	3,4-Dimethylphenol	0.5064	0.5166	2.0	TM	
31	TM	Naphthalene	1.051	1.067	1.5	TM	
32	TM	4-Chloroaniline	0.3752	0.4062	8.3	TM	
33	TM	2,6-Dichlorophenol	0.2964	0.3049	2.9	TM	
34	TM	Hexachloropropene	0.2687	0.2875	7.0	TM	
35	*TM	Hexachlorobutadiene	0.2155	0.2233	3.6	*TM	
36	TM	Caprolactum	0.1600	0.1615	0.95	TM	
37	*TM	4-Chloro-3-methylphenol	0.3518	0.3641	3.5	*TM	
38	TM	2-Methylnaphthalene	0.7082	0.7125	0.62	TM	
39	TM	1-Methylnaphthalene	0.6806	0.7016	3.1	TM	
40	I	Acenaphthene-D10(IS)	ISTD			I	
		Average			4.8		

0
0

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 11/28/16
Instrument: Yoda
Cal. Date: 11/17/16
Data File: 1117Y116.D

		Compound	MEAN	CCRF	%D		%Drift
41	**TMQ	Hexachlorocyclopentadiene	0.1752	0.1833	4.6	**TMQ	9.8
42	TM	1,2,4,5-Tetrachlorobenzene	0.5418	0.5417	0.01	TM	
43	*TM	2,4,6-Trichlorophenol	0.3614	0.3615	0.03	*TM	
44	TM	2,4,5-Trichlorophenol	0.3828	0.3756	1.9	TM	
45	S	2-Fluorobiphenyl(S)	1.274	1.241	2.6	S	
46	TM	1,1'-Biphenyl	1.522	1.478	2.9	TM	
47	TM	2-Chloronaphthalene	1.192	1.197	0.46	TM	
48	TM	2-Nitroaniline	0.4228	0.4359	3.1	TM	
49	TM	Dimethyl phthalate	1.453	1.452	0.04	TM	
50	TM	2,6-DNT	0.3253	0.3254	0.04	TM	
51	TM	Acenaphthylene	1.860	1.845	0.83	TM	
52	TM	3-Nitroaniline	0.3375	0.3395	0.57	TM	
53	*TM	Acenaphthene	1.139	1.141	0.17	*TM	
54	**TML	2,4-Dinitrophenol	0.1425	0.1679	18	**TML	2.9
55	**TML	4-Nitrophenol	0.2428	0.2705	11	**TML	2.4
56	TM	Dibenzofuran	1.656	1.679	1.4	TM	
57	TM	2,4-DNT	0.4565	0.4675	2.4	TM	
58	TM	2,3,4,6-Tetrachlorophenol	0.2915	0.3073	5.4	TM	
59	TM	Diethyl phthalate	1.491	1.476	1.0	TM	
60	TM	4-Chlorophenyl phenyl ether	0.6772	0.6622	2.2	TM	
61	TM	Fluorene	1.365	1.335	2.2	TM	
62	TM	4-Nitroaniline	0.3174	0.3133	1.3	TM	
63	S	2,4,6-Tribromophenol(S)	0.1956	0.1969	0.68	S	
64	I	Phenanthrene-D10(IS)	ISTD			I	
65	TM	4,6-Dinitro-2-methylphenol	0.1416	0.1578	11	TM	
66	TM	Diphenyl amine	0.5459	0.5490	0.57	TM	
67	*TM	n-Nitrosodiphenylamine	0.5459	0.5490	0.57	*TM	
68	TM	1,2-Diphenylhydrazine	0.8965	0.8346	6.9	TM	
69	TM	4-Bromophenyl phenyl ether	0.2121	0.2173	2.5	TM	
70	TM	Hexachlorobenzene	0.2269	0.2287	0.78	TM	
71	TM	Atrazine	0.2209	0.2291	3.7	TM	
72	*TMQ	Pentachlorophenol	0.0660	0.0796	20	*TMQ	9.2
73	TM	Phenanthrene	1.108	1.125	1.5	TM	
74	TM	Anthracene	1.158	1.164	0.49	TM	
75	TM	Carbazol	1.016	1.021	0.56	TM	
76	TM	Di-n-butylphthalate	1.383	1.422	2.8	TM	
77	*TM	Fluoranthene	1.223	1.235	1.0	*TM	
78	I	Chrysene-D12(IS)	ISTD			I	
79	TM	Benzidine	0.4426	0.4556	2.9	TM	
80	TM	Pyrene	1.325	1.348	1.7	TM	
		Average			3.2		

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 11/28/16
Instrument: Yoda
Cal. Date: 11/17/16
Data File: 1117Y116.D

		Compound	MEAN	CCRF	%D	%Drift	
81	S	Terphenyl-D14(S)	0.9081	0.9017	0.71	S	
82	TM	Butyl benzylphthalate	0.6676	0.6658	0.28	TM	
83	TM	3,3'-Dichlorobenzidine	0.4074	0.4501	10	TM	
84	TM	Benz (a) anthracene	1.268	1.272	0.33	TM	
85	TM	Bis (2-ethylhexyl) phthalate	0.9462	0.9501	0.42	TM	
86	TM	Chrysene	1.222	1.237	1.2	TM	
87	*TM	Di-n-octylphthalate	1.649	1.680	1.8	*TM	
88	I	Perylene-D12(IS)	ISTD			I	
89	TM	Benzo (b) fluoranthene	1.375	1.341	2.5	TM	
90	TM	Benzo (k) fluoranthene	1.282	1.322	3.1	TM	
91	*TM	Benzo (a) pyrene	1.270	1.282	0.92	*TM	
92	TM	Indeno (1,2,3-cd) pyrene	1.454	1.477	1.6	TM	
93	TM	Dibenz (a,h) anthracene	1.235	1.253	1.5	TM	
94	TM	Benzo (g,h,i) perylene	1.213	1.242	2.4	TM	
95							
96							
97							
98							
99							
100							
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116							
117							
118							
119							
120							
		Average			2.1		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y116.D Vial: 16
Acq On : 28 Nov 16 10:42 Operator: MA
Sample : 50ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 10:59 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	137102	40.00000	ppb		0.00
20) Napthalene-D8(IS)	6.46	136	602305	40.00000	ppb		0.00
40) Acenaphthene-D10(IS)	8.47	164	371946	40.00000	ppb		0.00
64) Phenanthrene-D10(IS)	10.20	188	674600	40.00000	ppb		0.00
78) Chrysene-D12(IS)	13.28	240	658175	40.00000	ppb		0.00
88) Perylene-D12(IS)	14.98	264	614866	40.00000	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol (S)	3.54	112	454825	105.70275	ppb		0.00
Spiked Amount 200.000			Recovery =	52.852%			
5) Phenol-D6 (S)	4.67	99	612139	101.38241	ppb		0.00
Spiked Amount 200.000			Recovery =	50.691%			
21) Nitrobenzene-D5(S)	5.66	82	316207	50.13300	ppb		0.00
Spiked Amount 100.000			Recovery =	50.133%			
45) 2-Fluorobiphenyl(S)	7.69	172	576883	48.69842	ppb		0.00
Spiked Amount 100.000			Recovery =	48.698%			
63) 2,4,6-Tribromophenol(S)	9.40	330	183090	100.68114	ppb		0.00
Spiked Amount 200.000			Recovery =	50.341%			
81) Terphenyl-D14(S)	12.06	244	741824	49.64535	ppb		0.00
Spiked Amount 100.000			Recovery =	49.645%			
Target Compounds							Qvalue
2) n-Nitrosodimethylamine	1.86	42	179205	55.02981	ppb		93
3) Pyridine	1.87	79	414913	59.89775	ppb		86
6) Phenol	4.68	94	356811	52.16028	ppb		82
7) Aniline	4.68	66	370702	54.69304	ppb		95
8) Bis (2-chloroethyl) ether	4.75	63	162243	52.26541	ppb		91
9) 2-Chlorophenol	4.81	128	273574	51.78926	ppb		97
10) 1,3-DCB	4.96	146	298192	51.79037	ppb		99
11) 1,4-DCB	5.05	146	303412	51.54650	ppb		96
12) Benzyl alcohol	5.21	108	159726	54.32747	ppb		98
13) 1,2-DCB	5.21	146	283668	51.84919	ppb		96
14) 2-Methylphenol	5.35	107	213730	53.06527	ppb		96
15) Bis (2-chloroisopropyl) et	5.34	45	316183	51.40269	ppb	#	77
16) Acetophenone	5.49	105	384453	51.07225	ppb		92
17) 3&4-Methylphenol	5.52	107	554685	104.37557	ppb		95
18) n-Nitrosodi-n-propylamine	5.50	70	206057	52.91454	ppb		95
19) Hexachloroethane	5.59	117	127615	52.17741	ppb		80
22) Nitrobenzene	5.69	77	334854	51.75944	ppb		95
23) Isophorone	5.95	82	540802	50.65819	ppb		96
24) 2-Nitrophenol	6.04	139	155855	50.85691	ppb		82
25) 2,4-Dimethylphenol	6.11	122	248033	51.84115	ppb		96
26) Benzoic acid	6.28	105	186152	49.28923	ppb		95
27) Bis (2-chloroethoxy) metha	6.20	93	288356	50.86742	ppb		98
28) 2,4-Dichlorophenol	6.34	162	237900	51.92730	ppb		96
29) 1,2,4-Trichlorobenzene	6.39	180	264587	52.02677	ppb		96
30) 3,4-Dimethylphenol	6.45	107	388919	51.00455	ppb		96
31) Naphthalene	6.48	128	803348	50.74729	ppb		100
32) 4-Chloroaniline	6.56	127	305839	54.12823	ppb		96
33) 2,6-Dichlorophenol	6.57	162	229539	51.42805	ppb		95
34) Hexachloropropene	6.58	213	216479	53.50699	ppb		97
35) Hexachlorobutadiene	6.62	225	168141	51.81370	ppb		97
36) Caprolactum	6.99	55	121575	50.47679	ppb		95
37) 4-Chloro-3-methylphenol	7.14	107	274133	51.75214	ppb		91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y116.D Vial: 16
Acq On : 28 Nov 16 10:42 Operator: MA
Sample : 50ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 10:59 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38) 2-Methylnaphthalene	7.27	142	536460	50.30862	ppb		99
39) 1-Methylnaphthalene	7.38	142	528210	51.53984	ppb		99
41) Hexachlorocyclopentadiene	7.44	237	85208	45.11049	ppb		97
42) 1,2,4,5-Tetrachlorobenzene	7.47	216	251867	49.99461	ppb		98
43) 2,4,6-Trichlorophenol	7.62	196	168096	50.01733	ppb		96
44) 2,4,5-Trichlorophenol	7.68	196	174644	49.06840	ppb		98
46) 1,1'-Biphenyl	7.80	154	687388	48.57328	ppb		98
47) 2-Chloronaphthalene	7.83	162	556712	50.22988	ppb		94
48) 2-Nitroaniline	7.97	65	202643	51.53944	ppb		84
49) Dimethyl phthalate	8.18	163	675264	49.98233	ppb		99
50) 2,6-DNT	8.26	165	151302	50.02240	ppb		86
51) Acenaphthylene	8.31	152	857612	49.58681	ppb		98
52) 3-Nitroaniline	8.45	138	157834	50.28561	ppb	#	78
53) Acenaphthene	8.51	154	530455	50.08596	ppb		100
54) 2,4-Dinitrophenol	8.61	184	78080	51.42814	ppb		97
55) 4-Nitrophenol	8.72	65	125767	48.82108	ppb		88
56) Dibenzofuran	8.70	168	780608	50.70565	ppb		99
57) 2,4-DNT	8.73	165	217346	51.20138	ppb		84
58) 2,3,4,6-Tetrachlorophenol	8.87	232	142878	52.71896	ppb	#	83
59) Diethyl phthalate	8.99	149	686197	49.49897	ppb		97
60) 4-Chlorophenyl phenyl ethe	9.10	204	307883	48.89543	ppb		89
61) Fluorene	9.10	166	620882	48.90005	ppb		99
62) 4-Nitroaniline	9.18	138	145684	49.36315	ppb		91
65) 4,6-Dinitro-2-methylphenol	9.22	198	133035	55.70470	ppb		85
66) Diphenyl amine	9.25	169	925896	100.56834	ppb		100
67) n-Nitrosodiphenylamine	9.25	169	925896	100.56834	ppb		100
68) 1,2-Diphenylhydrazine	9.29	77	703758	46.54643	ppb		91
69) 4-Bromophenyl phenyl ether	9.68	248	183279	51.23741	ppb		88
70) Hexachlorobenzene	9.75	284	192838	50.38909	ppb	#	78
71) Atrazine	9.88	200	96575	25.91775	ppb		93
72) Pentachlorophenol	10.00	266	67102	54.61983	ppb		97
73) Phenanthrene	10.23	178	948584	50.76107	ppb		99
74) Anthracene	10.28	178	981310	50.24447	ppb		99
75) Carbazol	10.49	167	861148	50.28108	ppb		99
76) Di-n-butylphthalate	10.89	149	1199425	51.42426	ppb		98
77) Fluoranthene	11.61	202	1041830	50.51191	ppb		98
79) Benzidine	11.79	184	374802	51.46214	ppb		99
80) Pyrene	11.87	202	1109162	50.87479	ppb		98
82) Butyl benzylphthalate	12.62	149	547738	49.86122	ppb		87
83) 3,3'-Dichlorobenzidine	13.24	252	370326	55.24122	ppb		96
84) Benz (a) anthracene	13.27	228	1046861	50.16566	ppb		99
85) Bis (2-ethylhexyl) phthala	13.29	149	781680	50.20775	ppb	#	96
86) Chrysene	13.31	228	1017845	50.60928	ppb		98
87) Di-n-octylphthalate	14.01	149	1381753	50.92112	ppb		92
89) Benzo (b) fluoranthene	14.49	252	1030863	48.77248	ppb		98
90) Benzo (k) fluoranthene	14.53	252	1015893	51.55575	ppb		98
91) Benzo (a) pyrene	14.91	252	985074	50.45821	ppb		99
92) Indeno (1,2,3-cd) pyrene	16.64	276	1135119	50.77764	ppb		97
93) Dibenz (a,h) anthracene	16.65	278	963386	50.75520	ppb		100
94) Benzo (g,h,i) perylene	17.12	276	954748	51.18659	ppb		99

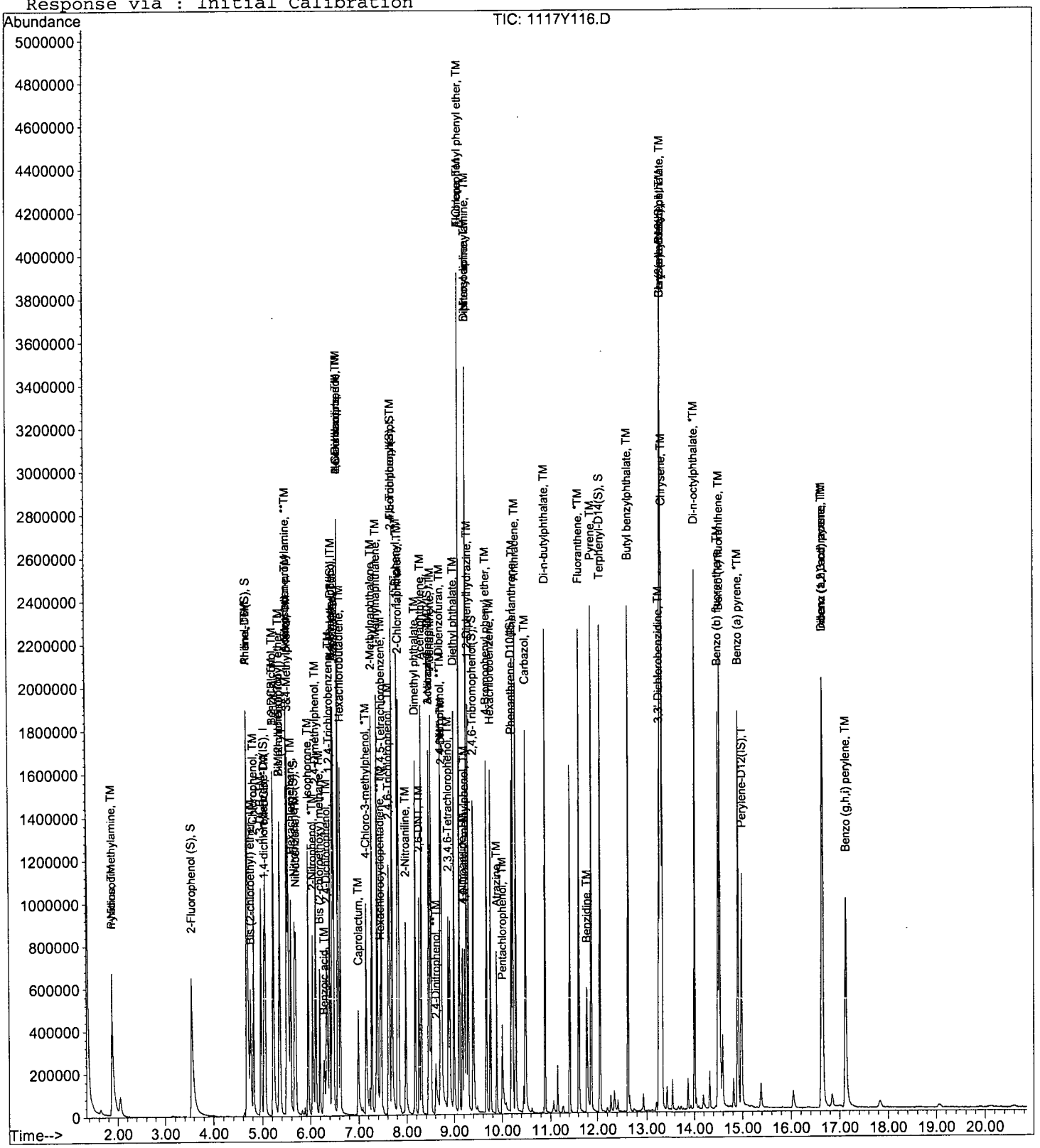
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y116.D Vial: 16
Acq On : 28 Nov 16 10:42 Operator: MA
Sample : 50ug/ml SVOC 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 10:59 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Date Analyzed: 11/28/16

Matrix: Instrument: Yoda

Initial Cal. Date: 11/17/16

Data File: 1117Y139.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	n-Nitrosodimethylamine	0.9501	1.154	21	TM	
3	TM	Pyridine	2.021	2.340	16	TM	
4	S	2-Fluorophenol (S)	1.255	1.298	3.4	S	
5	S	Phenol-D6 (S)	1.762	1.776	0.81	S	
6	*TM	Phenol	1.996	2.052	2.8	*TM	
7	TM	Aniline	1.977	2.149	8.7	TM	
8	TM	Bis (2-chloroethyl) ether	0.9057	0.9573	5.7	TM	
9	TM	2-Chlorophenol	1.541	1.609	4.4	TM	
10	TM	1,3-DCB	1.680	1.728	2.9	TM	
11	*TM	1,4-DCB	1.717	1.759	2.4	*TM	
12	TM	Benzyl alcohol	0.8578	0.9431	10.0	TM	
13	TM	1,2-DCB	1.596	1.677	5.0	TM	
14	TM	2-Methylphenol	1.175	1.229	4.5	TM	
15	TM	Bis (2-chloroisopropyl) ether	1.795	1.899	5.8	TM	
16	TM	Acetophenone	2.196	2.244	2.2	TM	
17	TM	3&4-Methylphenol	1.550	1.614	4.1	TM	
18	**TM	n-Nitrosodi-n-propylamine	1.136	1.203	5.9	**TM	
19	TM	Hexachloroethane	0.7136	0.7421	4.0	TM	
20	I	Napthalene-D8(IS)	ISTD			I	
21	S	Nitrobenzene-D5(S)	0.4189	0.4212	0.56	S	
22	TM	Nitrobenzene	0.4296	0.4295	0.03	TM	
23	TM	Isophorone	0.7090	0.7169	1.1	TM	
24	*TM	2-Nitrophenol	0.2035	0.2079	2.1	*TM	
25	TM	2,4-Dimethylphenol	0.3177	0.3325	4.6	TM	
26	TMQ	Benzoic acid	0.2076	0.2589	25	TMQ	3.0
27	TM	Bis (2-chloroethoxy) methane	0.3765	0.3797	0.85	TM	
28	*TM	2,4-Dichlorophenol	0.3043	0.3132	2.9	*TM	
29	TM	1,2,4-Trichlorobenzene	0.3377	0.3515	4.1	TM	
30	TM	3,4-Dimethylphenol	0.5064	0.5080	0.32	TM	
31	TM	Naphthalene	1.051	1.059	0.72	TM	
32	TM	4-Chloroaniline	0.3752	0.4070	8.5	TM	
33	TM	2,6-Dichlorophenol	0.2964	0.3084	4.0	TM	
34	TM	Hexachloropropene	0.2687	0.2815	4.8	TM	
35	*TM	Hexachlorobutadiene	0.2155	0.2255	4.6	*TM	
36	TM	Caprolactum	0.1600	0.1636	2.3	TM	
37	*TM	4-Chloro-3-methylphenol	0.3518	0.3620	2.9	*TM	
38	TM	2-Methylnaphthalene	0.7082	0.7203	1.7	TM	
39	TM	1-Methylnaphthalene	0.6806	0.7124	4.7	TM	
40	I	Acenaphthene-D10(IS)	ISTD			I	
		Average			5.0		

* NT
MA 11/29/16

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Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 11/28/16
Instrument: Yoda
Cal. Date: 11/17/16
Data File: 1117Y139.D

		Compound	MEAN	CCRF	%D		%Drift
41	**TMQ	Hexachlorocyclopentadiene	0.1752	0.1874	7.0	**TMQ	8.3
42	TM	1,2,4,5-Tetrachlorobenzene	0.5418	0.5611	3.6	TM	
43	*TM	2,4,6-Trichlorophenol	0.3614	0.3551	1.7	*TM	
44	TM	2,4,5-Trichlorophenol	0.3828	0.3883	1.4	TM	
45	S	2-Fluorobiphenyl(S)	1.274	1.248	2.0	S	
46	TM	1,1'-Biphenyl	1.522	1.544	1.4	TM	
47	TM	2-Chloronaphthalene	1.192	1.220	2.3	TM	
48	TM	2-Nitroaniline	0.4228	0.4394	3.9	TM	
49	TM	Dimethyl phthalate	1.453	1.448	0.33	TM	
50	TM	2,6-DNT	0.3253	0.3263	0.32	TM	
51	TM	Acenaphthylene	1.860	1.857	0.19	TM	
52	TM	3-Nitroaniline	0.3375	0.3468	2.7	TM	
53	*TM	Acenaphthene	1.139	1.146	0.63	*TM	
54	**TML	2,4-Dinitrophenol	0.1425	0.1736	22	**TML	5.8
55	**TML	4-Nitrophenol	0.2428	0.2595	6.8	**TML	5.8
56	TM	Dibenzofuran	1.656	1.692	2.2	TM	
57	TM	2,4-DNT	0.4565	0.4692	2.8	TM	
58	TM	2,3,4,6-Tetrachlorophenol	0.2915	0.3059	5.0	TM	
59	TM	Diethyl phthalate	1.491	1.477	0.92	TM	
60	TM	4-Chlorophenyl phenyl ether	0.6772	0.6766	0.08	TM	
61	TM	Fluorene	1.365	1.354	0.83	TM	
62	TM	4-Nitroaniline	0.3174	0.3220	1.4	TM	
63	S	2,4,6-Tribromophenol(S)	0.1956	0.1934	1.1	S	
64	I	Phenanthrene-D10(IS)	ISTD			I	
65	TM	4,6-Dinitro-2-methylphenol	0.1416	0.1568	11	TM	
66	TM	Diphenyl amine	0.5459	0.5536	1.4	TM	
67	*TM	n-Nitrosodiphenylamine	0.5459	0.5536	1.4	*TM	
68	TM	1,2-Diphenylhydrazine	0.8965	0.8532	4.8	TM	
69	TM	4-Bromophenyl phenyl ether	0.2121	0.2189	3.2	TM	
70	TM	Hexachlorobenzene	0.2269	0.2359	4.0	TM	
71	TM	Atrazine	0.2209	0.2339	5.9	TM	
72	*TMQ	Pentachlorophenol	0.0660	0.0858	30	*TMQ	16
73	TM	Phenanthrene	1.108	1.138	2.7	TM	
74	TM	Anthracene	1.158	1.194	3.1	TM	
75	TM	Carbazol	1.016	1.049	3.3	TM	
76	TM	Di-n-butylphthalate	1.383	1.389	0.40	TM	
77	*TM	Fluoranthene	1.223	1.274	4.2	*TM	
78	I	Chrysene-D12(IS)	ISTD			I	
79	TM	Benzidine	0.4426	0.4633	4.7	TM	
80	TM	Pyrene	1.325	1.321	0.29	TM	
		Average			4.0		

0
0

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 11/28/16
Instrument: Yoda
Cal. Date: 11/17/16
Data File: 1117Y139.D

		Compound	MEAN	CCRF	%D		%Drift
81	S	Terphenyl-D14(S)	0.9081	0.8727	3.9	S	
82	TM	Butyl benzylphthalate	0.6676	0.6513	2.4	TM	
83	TM	3,3'-Dichlorobenzidine	0.4074	0.4399	8.0	TM	
84	TM	Benz (a) anthracene	1.268	1.262	0.51	TM	
85	TM	Bis (2-ethylhexyl) phthalate	0.9462	0.9276	2.0	TM	
86	TM	Chrysene	1.222	1.234	0.94	TM	
87	*TM	Di-n-octylphthalate	1.649	1.598	3.1	*TM	
88	I	Perylene-D12(IS)	ISTD			I	
89	TM	Benzo (b) fluoranthene	1.375	1.443	4.9	TM	
90	TM	Benzo (k) fluoranthene	1.282	1.256	2.0	TM	
91	*TM	Benzo (a) pyrene	1.270	1.285	1.2	*TM	
92	TM	Indeno (1,2,3-cd) pyrene	1.454	1.474	1.4	TM	
93	TM	Dibenz (a,h) anthracene	1.235	1.245	0.79	TM	
94	TM	Benzo (g,h,i) perylene	1.213	1.213	0.02	TM	
95							
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119							
120							
		Average			2.4		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y139.D Vial: 39
Acq On : 28 Nov 16 21:26 Operator: MA
Sample : 50ug/ml SVOC 11/15/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Nov 29 8:55 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	137005	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.46	136	602961	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.47	164	369334	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.19	188	673860	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.28	240	677907	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.97	264	616110	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.55	112	444411	103.35562 ppb	0.00
Spiked Amount 200.000			Recovery = 51.678%		
5) Phenol-D6 (S)	4.67	99	608251	100.80981 ppb	0.00
Spiked Amount 200.000			Recovery = 50.405%		
21) Nitrobenzene-D5(S)	5.66	82	317469	50.27833 ppb	0.00
Spiked Amount 100.000			Recovery = 50.278%		
45) 2-Fluorobiphenyl(S)	7.70	172	576117	48.97771 ppb	0.00
Spiked Amount 100.000			Recovery = 48.978%		
63) 2,4,6-Tribromophenol(S)	9.39	330	178565	98.88728 ppb	0.00
Spiked Amount 200.000			Recovery = 49.444%		
81) Terphenyl-D14(S)	12.05	244	739521	48.05068 ppb	0.00
Spiked Amount 100.000			Recovery = 48.051%		
Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.87	42	197690	60.74912 ppb	99
3) Pyridine	1.88	79	400733	57.89165 ppb	85
6) Phenol	4.69	94	351376	51.40214 ppb	87
7) Aniline	4.68	66	368046	54.33962 ppb	96
8) Bis (2-chloroethyl) ether	4.75	63	163936	52.84819 ppb	93
9) 2-Chlorophenol	4.82	128	275627	52.21485 ppb	94
10) 1,3-DCB	4.97	146	295974	51.44154 ppb	97
11) 1,4-DCB	5.05	146	301274	51.21951 ppb	97
12) Benzyl alcohol	5.22	108	161517	54.97553 ppb	95
13) 1,2-DCB	5.22	146	287158	52.52425 ppb	98
14) 2-Methylphenol	5.36	107	210394	52.27398 ppb	93
15) Bis (2-chloroisopropyl) et	5.34	45	325290	52.92068 ppb	91
16) Acetophenone	5.50	105	384278	51.08514 ppb	94
17) 3&4-Methylphenol	5.52	107	552714	104.07832 ppb	99
18) n-Nitrosodi-n-propylamine	5.50	70	206025	52.94378 ppb	92
19) Hexachloroethane	5.58	117	127090	51.99954 ppb	91
22) Nitrobenzene	5.69	77	323736	49.98645 ppb	95
23) Isophorone	5.95	82	540296	50.55573 ppb	97
24) 2-Nitrophenol	6.04	139	156662	51.06463 ppb	92
25) 2,4-Dimethylphenol	6.11	122	250595	52.31965 ppb	92
26) Benzoic acid	6.29	105	195132	51.50898 ppb	94
27) Bis (2-chloroethoxy) metha	6.19	93	286151	50.42353 ppb	98
28) 2,4-Dichlorophenol	6.33	162	236051	51.46766 ppb	99
29) 1,2,4-Trichlorobenzene	6.40	180	264935	52.03852 ppb	98
30) 3,4-Dimethylphenol	6.44	107	382886	50.15872 ppb	99
31) Naphthalene	6.48	128	798089	50.36023 ppb	99
32) 4-Chloroaniline	6.56	127	306727	54.22633 ppb	95
33) 2,6-Dichlorophenol	6.57	162	232415	52.01576 ppb	93
34) Hexachloropropene	6.57	213	212139	52.37723 ppb	98
35) Hexachlorobutadiene	6.62	225	169926	52.30678 ppb	97
36) Caprolactum	6.99	55	123331	51.15015 ppb	97
37) 4-Chloro-3-methylphenol	7.15	107	272826	51.44936 ppb	91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y139.D Vial: 39
Acq On : 28 Nov 16 21:26 Operator: MA
Sample : 50ug/ml SVOC 11/15/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Nov 29 8:55 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.27	142	542925	50.85951	ppb		99
39)	1-Methylnaphthalene	7.38	142	536944	52.33506	ppb		100
41)	Hexachlorocyclopentadiene	7.45	237	86513	45.83009	ppb		95
42)	1,2,4,5-Tetrachlorobenzene	7.46	216	259050	51.78406	ppb		99
43)	2,4,6-Trichlorophenol	7.62	196	163958	49.13109	ppb		92
44)	2,4,5-Trichlorophenol	7.69	196	179264	50.72265	ppb		99
46)	1,1'-Biphenyl	7.81	154	712767	50.72285	ppb		99
47)	2-Chloronaphthalene	7.84	162	563187	51.17346	ppb		92
48)	2-Nitroaniline	7.97	65	202871	51.96234	ppb		93
49)	Dimethyl phthalate	8.17	163	668540	49.83459	ppb		98
50)	2,6-DNT	8.25	165	150652	50.15975	ppb		82
51)	Acenaphthylene	8.31	152	857095	49.90739	ppb		99
52)	3-Nitroaniline	8.46	138	160095	51.36669	ppb		87
53)	Acenaphthene	8.50	154	529136	50.31475	ppb		98
54)	2,4-Dinitrophenol	8.61	184	80153	52.89462	ppb		97
55)	4-Nitrophenol	8.73	65	119782	47.12088	ppb		82
56)	Dibenzofuran	8.71	168	781002	51.09002	ppb		97
57)	2,4-DNT	8.74	165	216601	51.38674	ppb		78
58)	2,3,4,6-Tetrachlorophenol	8.87	232	141240	52.48314	ppb		94
59)	Diethyl phthalate	8.99	149	681966	49.54167	ppb		99
60)	4-Chlorophenyl phenyl ethe	9.11	204	312387	49.96158	ppb		95
61)	Fluorene	9.11	166	625166	49.58567	ppb		99
62)	4-Nitroaniline	9.17	138	148640	50.72094	ppb		93
65)	4,6-Dinitro-2-methylphenol	9.22	198	132112	55.37896	ppb	#	75
66)	Diphenyl amine	9.26	169	932629	101.41091	ppb		99
67)	n-Nitrosodiphenylamine	9.26	169	932629	101.41091	ppb		99
68)	1,2-Diphenylhydrazine	9.29	77	718702	47.58703	ppb		98
69)	4-Bromophenyl phenyl ether	9.67	248	184423	51.61384	ppb		93
70)	Hexachlorobenzene	9.76	284	198726	51.98466	ppb		93
71)	Atrazine	9.89	200	98507	26.46527	ppb		97
72)	Pentachlorophenol	10.01	266	72264	57.79147	ppb		96
73)	Phenanthrene	10.22	178	958235	51.33383	ppb		99
74)	Anthracene	10.29	178	1005464	51.53773	ppb		99
75)	Carbazol	10.49	167	883312	51.63184	ppb		94
76)	Di-n-butylphthalate	10.88	149	1169586	50.20001	ppb		99
77)	Fluoranthene	11.61	202	1073193	52.08965	ppb		97
79)	Benzidine	11.78	184	392602	52.33711	ppb		100
80)	Pyrene	11.87	202	1119518	49.85514	ppb		99
82)	Butyl benzylphthalate	12.63	149	551895	48.77730	ppb		96
83)	3,3'-Dichlorobenzidine	13.25	252	372735	53.98219	ppb	#	97
84)	Benz (a) anthracene	13.27	228	1069203	49.74495	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.28	149	786022	49.01711	ppb		99
86)	Chrysene	13.31	228	1045440	50.46833	ppb		100
87)	Di-n-octylphthalate	14.00	149	1354319	48.45737	ppb		99
89)	Benzo (b) fluoranthene	14.49	252	1111076	52.46140	ppb		99
90)	Benzo (k) fluoranthene	14.53	252	967322	48.99169	ppb		99
91)	Benzo (a) pyrene	14.91	252	989387	50.57681	ppb		99
92)	Indeno (1,2,3-cd) pyrene	16.65	276	1135167	50.67726	ppb		95
93)	Dibenz (a,h) anthracene	16.65	278	958475	50.39451	ppb		99
94)	Benzo (g,h,i) perylene	17.13	276	934345	49.99159	ppb		97

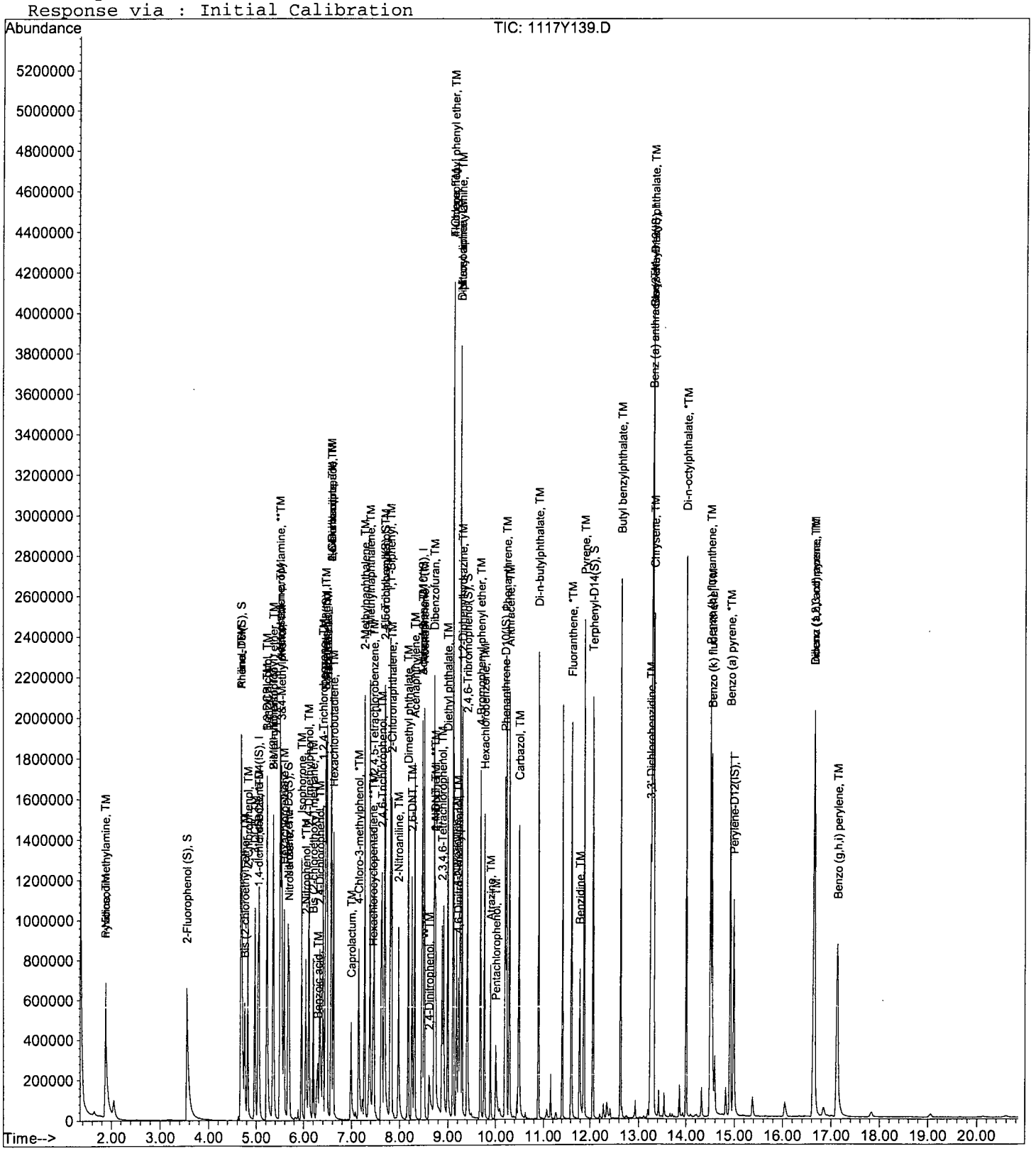
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y139.D Vial: 39
Acq On : 28 Nov 16 21:26 Operator: MA
Sample : 50ug/m1 SVOC 11/15/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Nov 29 8:55 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration



Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Date Analyzed: 11/29/16

Matrix: Instrument: Yoda

Initial Cal. Date: 11/17/16

Data File: 1117Y149.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	n-Nitrosodimethylamine	0.9501	1.236	30	TM	
3	TM	Pyridine	2.021	2.159	6.8	TM	
4	S	2-Fluorophenol (S)	1.255	1.294	3.1	S	
5	S	Phenol-D6 (S)	1.762	1.762	0.02	S	
6	*TM	Phenol	1.996	2.054	2.9	*TM	
7	TM	Aniline	1.977	2.130	7.7	TM	
8	TM	Bis (2-chloroethyl) ether	0.9057	0.9578	5.8	TM	
9	TM	2-Chlorophenol	1.541	1.558	1.1	TM	
10	TM	1,3-DCB	1.680	1.691	0.68	TM	
11	*TM	1,4-DCB	1.717	1.715	0.13	*TM	
12	TM	Benzyl alcohol	0.8578	0.9278	8.2	TM	
13	TM	1,2-DCB	1.596	1.621	1.6	TM	
14	TM	2-Methylphenol	1.175	1.209	2.9	TM	
15	TM	Bis (2-chloroisopropyl) ether	1.795	1.869	4.2	TM	
16	TM	Acetophenone	2.196	2.256	2.7	TM	
17	TM	3&4-Methylphenol	1.550	1.613	4.1	TM	
18	**TM	n-Nitrosodi-n-propylamine	1.136	1.167	2.7	**TM	
19	TM	Hexachloroethane	0.7136	0.7531	5.5	TM	
20	I	Napthalene-D8(IS)	ISTD			I	
21	S	Nitrobenzene-D5(S)	0.4189	0.4130	1.4	S	
22	TM	Nitrobenzene	0.4296	0.4264	0.75	TM	
23	TM	Isophorone	0.7090	0.6932	2.2	TM	
24	*TM	2-Nitrophenol	0.2035	0.2014	1.0	*TM	
25	TM	2,4-Dimethylphenol	0.3177	0.3188	0.34	TM	
26	TMQ	Benzoic acid	0.2076	0.2350	13	TMQ	6.1
27	TM	Bis (2-chloroethoxy) methane	0.3765	0.3793	0.74	TM	
28	*TM	2,4-Dichlorophenol	0.3043	0.3062	0.62	*TM	
29	TM	1,2,4-Trichlorobenzene	0.3377	0.3443	1.9	TM	
30	TM	3,4-Dimethylphenol	0.5064	0.5038	0.52	TM	
31	TM	Naphthalene	1.051	1.052	0.03	TM	
32	TM	4-Chloroaniline	0.3752	0.3991	6.4	TM	
33	TM	2,6-Dichlorophenol	0.2964	0.3043	2.7	TM	
34	TM	Hexachloropropene	0.2687	0.2807	4.5	TM	
35	*TM	Hexachlorobutadiene	0.2155	0.2182	1.2	*TM	
36	TM	Caprolactum	0.1600	0.1626	1.6	TM	
37	*TM	4-Chloro-3-methylphenol	0.3518	0.3615	2.7	*TM	
38	TM	2-Methylnaphthalene	0.7082	0.7114	0.45	TM	
39	TM	1-Methylnaphthalene	0.6806	0.6949	2.1	TM	
40	I	Acenaphthene-D10(IS)	ISTD			I	
		Average			3.6		

0
0

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 11/29/16
Instrument: Yoda
Cal. Date: 11/17/16
Data File: 1117Y149.D

		Compound	MEAN	CCRF	%D		%Drift
41	**TMQ	Hexachlorocyclopentadiene	0.1752	0.1816	3.7	**TMQ	10
42	TM	1,2,4,5-Tetrachlorobenzene	0.5418	0.5471	0.98	TM	
43	*TM	2,4,6-Trichlorophenol	0.3614	0.3550	1.8	*TM	
44	TM	2,4,5-Trichlorophenol	0.3828	0.3783	1.2	TM	
45	S	2-Fluorobiphenyl(S)	1.274	1.249	1.9	S	
46	TM	1,1'-Biphenyl	1.522	1.502	1.3	TM	
47	TM	2-Chloronaphthalene	1.192	1.187	0.38	TM	
48	TM	2-Nitroaniline	0.4228	0.4335	2.5	TM	
49	TM	Dimethyl phthalate	1.453	1.458	0.37	TM	
50	TM	2,6-DNT	0.3253	0.3347	2.9	TM	
51	TM	Acenaphthylene	1.860	1.838	1.2	TM	
52	TM	3-Nitroaniline	0.3375	0.3549	5.2	TM	
53	*TM	Acenaphthene	1.139	1.143	0.32	*TM	
54	**TML	2,4-Dinitrophenol	0.1425	0.1569	10	**TML	2.8
55	**TML	4-Nitrophenol	0.2428	0.2533	4.3	**TML	7.6
56	TM	Dibenzofuran	1.656	1.687	1.9	TM	
57	TM	2,4-DNT	0.4565	0.4657	2.0	TM	
58	TM	2,3,4,6-Tetrachlorophenol	0.2915	0.3046	4.5	TM	
59	TM	Diethyl phthalate	1.491	1.498	0.46	TM	
60	TM	4-Chlorophenyl phenyl ether	0.6772	0.6787	0.23	TM	
61	TM	Fluorene	1.365	1.372	0.51	TM	
62	TM	4-Nitroaniline	0.3174	0.3313	4.4	TM	
63	S	2,4,6-Tribromophenol(S)	0.1956	0.1995	2.0	S	
64	I	Phenanthrene-D10(IS)	ISTD			I	
65	TM	4,6-Dinitro-2-methylphenol	0.1416	0.1463	3.3	TM	
66	TM	Diphenyl amine	0.5459	0.5500	0.76	TM	
67	*TM	n-Nitrosodiphenylamine	0.5459	0.5500	0.76	*TM	
68	TM	1,2-Diphenylhydrazine	0.8965	0.8435	5.9	TM	
69	TM	4-Bromophenyl phenyl ether	0.2121	0.2205	3.9	TM	
70	TM	Hexachlorobenzene	0.2269	0.2321	2.3	TM	
71	TM	Atrazine	0.2209	0.2237	1.2	TM	
72	*TMQ	Pentachlorophenol	0.0660	0.0775	17	*TMQ	7.1
73	TM	Phenanthrene	1.108	1.126	1.7	TM	
74	TM	Anthracene	1.158	1.167	0.74	TM	
75	TM	Carbazol	1.016	1.024	0.80	TM	
76	TM	Di-n-butylphthalate	1.383	1.406	1.7	TM	
77	*TM	Fluoranthene	1.223	1.255	2.6	*TM	
78	I	Chrysene-D12(IS)	ISTD			I	
79	TM	Benzidine	0.4426	0.4445	0.43	TM	
80	TM	Pyrene	1.325	1.344	1.4	TM	
		Average			2.6		

0
0

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 11/29/16
Matrix: 0 Instrument: Yoda
Cal. Date: 11/17/16
Data File: 1117Y149.D

		Compound	MEAN	CCRF	%D	%Drift	
81	S	Terphenyl-D14(S)	0.9081	0.9001	0.88	S	
82	TM	Butyl benzylphthalate	0.6676	0.6528	2.2	TM	
83	TM	3,3'-Dichlorobenzidine	0.4074	0.4623	13	TM	
84	TM	Benz (a) anthracene	1.268	1.292	1.9	TM	
85	TM	Bis (2-ethylhexyl) phthalate	0.9462	0.9775	3.3	TM	
86	TM	Chrysene	1.222	1.251	2.4	TM	
87	*TM	Di-n-octylphthalate	1.649	1.648	0.08	*TM	
88	I	Perylene-D12(IS)	ISTD			I	
89	TM	Benzo (b) fluoranthene	1.375	1.347	2.0	TM	
90	TM	Benzo (k) fluoranthene	1.282	1.370	6.9	TM	
91	*TM	Benzo (a) pyrene	1.270	1.304	2.7	*TM	
92	TM	Indeno (1,2,3-cd) pyrene	1.454	1.471	1.1	TM	
93	TM	Dibenz (a,h) anthracene	1.235	1.236	0.09	TM	
94	TM	Benzo (g,h,i) perylene	1.213	1.207	0.54	TM	
95							
96							
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			2.9		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y149.D Vial: 39
Acq On : 29 Nov 16 2:20 Operator: MA
Sample : 50ug/ml SVOC 11/15/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Nov 29 8:56 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	149934	40.00000 ppb		-0.01
20) Napthalene-D8(IS)	6.46	136	668262	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.47	164	409676	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.20	188	759945	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.28	240	740150	40.00000 ppb		-0.01
88) Perylene-D12(IS)	14.98	264	684415	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.54	112	485107	103.09157 ppb		0.00
Spiked Amount 200.000			Recovery = 51.546%			
5) Phenol-D6 (S)	4.67	99	660455	100.02291 ppb		0.00
Spiked Amount 200.000			Recovery = 50.012%			
21) Nitrobenzene-D5(S)	5.67	82	344995	49.29862 ppb		0.00
Spiked Amount 100.000			Recovery = 49.299%			
45) 2-Fluorobiphenyl(S)	7.69	172	639737	49.03069 ppb		0.00
Spiked Amount 100.000			Recovery = 49.031%			
63) 2,4,6-Tribromophenol(S)	9.40	330	204345	102.02036 ppb		0.00
Spiked Amount 200.000			Recovery = 51.010%			
81) Terphenyl-D14(S)	12.06	244	832804	49.56124 ppb		0.00
Spiked Amount 100.000			Recovery = 49.561%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.85	42	231713	65.06418 ppb		78
3) Pyridine	1.87	79	404711	53.42471 ppb		86
6) Phenol	4.68	94	384870	51.44693 ppb		85
7) Aniline	4.68	66	399268	53.86607 ppb		94
8) Bis (2-chloroethyl) ether	4.75	63	179502	52.87634 ppb		97
9) 2-Chlorophenol	4.81	128	291934	50.53511 ppb		98
10) 1,3-DCB	4.96	146	316971	50.34035 ppb		97
11) 1,4-DCB	5.06	146	321422	49.93277 ppb		99
12) Benzyl alcohol	5.21	108	173887	54.08223 ppb		97
13) 1,2-DCB	5.22	146	303881	50.79007 ppb		98
14) 2-Methylphenol	5.35	107	226533	51.43041 ppb		96
15) Bis (2-chloroisopropyl) et	5.34	45	350346	52.08206 ppb	#	84
16) Acetophenone	5.50	105	422899	51.37147 ppb		98
17) 3&4-Methylphenol	5.52	107	604737	104.05492 ppb		95
18) n-Nitrosodi-n-propylamine	5.50	70	218723	51.36009 ppb		97
19) Hexachloroethane	5.58	117	141139	52.76810 ppb		93
22) Nitrobenzene	5.69	77	356198	49.62440 ppb		99
23) Isophorone	5.96	82	579028	48.88557 ppb		98
24) 2-Nitrophenol	6.04	139	168230	49.47689 ppb	#	78
25) 2,4-Dimethylphenol	6.10	122	266317	50.16880 ppb		97
26) Benzoic acid	6.29	105	196263	46.96011 ppb		97
27) Bis (2-chloroethoxy) metha	6.20	93	316809	50.37069 ppb		99
28) 2,4-Dichlorophenol	6.33	162	255740	50.31178 ppb		97
29) 1,2,4-Trichlorobenzene	6.40	180	287565	50.96407 ppb		96
30) 3,4-Dimethylphenol	6.45	107	420828	49.74210 ppb		96
31) Naphthalene	6.49	128	878467	50.01546 ppb		99
32) 4-Chloroaniline	6.56	127	333402	53.18251 ppb	#	93
33) 2,6-Dichlorophenol	6.57	162	254191	51.33026 ppb		99
34) Hexachloropropene	6.58	213	234486	52.23738 ppb		99
35) Hexachlorobutadiene	6.62	225	182273	50.62476 ppb		98
36) Caprolactum	6.99	55	135808	50.82091 ppb		95
37) 4-Chloro-3-methylphenol	7.14	107	301936	51.37497 ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y149.D Vial: 39
Acq On : 29 Nov 16 2:20 Operator: MA
Sample : 50ug/ml SVOC 11/15/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Nov 29 8:56 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.27	142	594225	50.22567	ppb		99
39)	1-Methylnaphthalene	7.39	142	580461	51.04805	ppb		97
41)	Hexachlorocyclopentadiene	7.45	237	92987	44.81448	ppb		96
42)	1,2,4,5-Tetrachlorobenzene	7.47	216	280156	50.48835	ppb		97
43)	2,4,6-Trichlorophenol	7.62	196	181779	49.10732	ppb		97
44)	2,4,5-Trichlorophenol	7.68	196	193713	49.41359	ppb		97
46)	1,1'-Biphenyl	7.80	154	769278	49.35352	ppb	#	97
47)	2-Chloronaphthalene	7.83	162	608055	49.80968	ppb		95
48)	2-Nitroaniline	7.97	65	221997	51.26189	ppb		82
49)	Dimethyl phthalate	8.17	163	746807	50.18693	ppb		99
50)	2,6-DNT	8.26	165	171408	51.45059	ppb		94
51)	Acenaphthylene	8.30	152	941178	49.40677	ppb		98
52)	3-Nitroaniline	8.45	138	181762	52.57577	ppb		85
53)	Acenaphthene	8.51	154	585126	50.15985	ppb		98
54)	2,4-Dinitrophenol	8.61	184	80351	48.57886	ppb		96
55)	4-Nitrophenol	8.71	65	129731	46.17911	ppb		96
56)	Dibenzofuran	8.71	168	864071	50.95797	ppb		97
57)	2,4-DNT	8.73	165	238485	51.00708	ppb		91
58)	2,3,4,6-Tetrachlorophenol	8.88	232	155982	52.25349	ppb		95
59)	Diethyl phthalate	8.99	149	766985	50.23120	ppb		98
60)	4-Chlorophenyl phenyl ethe	9.10	204	347563	50.11359	ppb		86
61)	Fluorene	9.10	166	702813	50.25502	ppb		98
62)	4-Nitroaniline	9.18	138	169655	52.19117	ppb		92
65)	4,6-Dinitro-2-methylphenol	9.21	198	139008	51.66898	ppb		94
66)	Diphenyl amine	9.26	169	1045013	100.75926	ppb		98
67)	n-Nitrosodiphenylamine	9.26	169	1045013	100.75926	ppb		98
68)	1,2-Diphenylhydrazine	9.29	77	801286	47.04514	ppb		87
69)	4-Bromophenyl phenyl ether	9.68	248	209433	51.97371	ppb		90
70)	Hexachlorobenzene	9.75	284	220463	51.13800	ppb	#	77
71)	Atrazine	9.88	200	106239	25.30934	ppb		96
72)	Pentachlorophenol	10.00	266	73637	53.55177	ppb		96
73)	Phenanthrene	10.23	178	1070023	50.82909	ppb		99
74)	Anthracene	10.28	178	1108266	50.37212	ppb		100
75)	Carbazol	10.49	167	972414	50.40135	ppb		98
76)	Di-n-butylphthalate	10.89	149	1335771	50.83832	ppb		99
77)	Fluoranthene	11.61	202	1192213	51.31153	ppb		99
79)	Benzidine	11.79	184	411250	50.21269	ppb		98
80)	Pyrene	11.87	202	1243412	50.71592	ppb		98
82)	Butyl benzylphthalate	12.62	149	603931	48.88764	ppb		85
83)	3,3'-Dichlorobenzidine	13.24	252	427730	56.73753	ppb		98
84)	Benz (a) anthracene	13.27	228	1195619	50.94857	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.29	149	904374	51.65489	ppb	#	95
86)	Chrysene	13.31	228	1157583	51.18260	ppb		99
87)	Di-n-octylphthalate	14.00	149	1524561	49.96133	ppb		93
89)	Benzo (b) fluoranthene	14.49	252	1152773	48.99803	ppb		97
90)	Benzo (k) fluoranthene	14.52	252	1172149	53.44080	ppb	#	98
91)	Benzo (a) pyrene	14.91	252	1115986	51.35500	ppb		99
92)	Indeno (1,2,3-cd) pyrene	16.64	276	1258246	50.56589	ppb		97
93)	Dibenz (a,h) anthracene	16.65	278	1057399	50.04724	ppb		98
94)	Benzo (g,h,i) perylene	17.12	276	1032468	49.72846	ppb		98

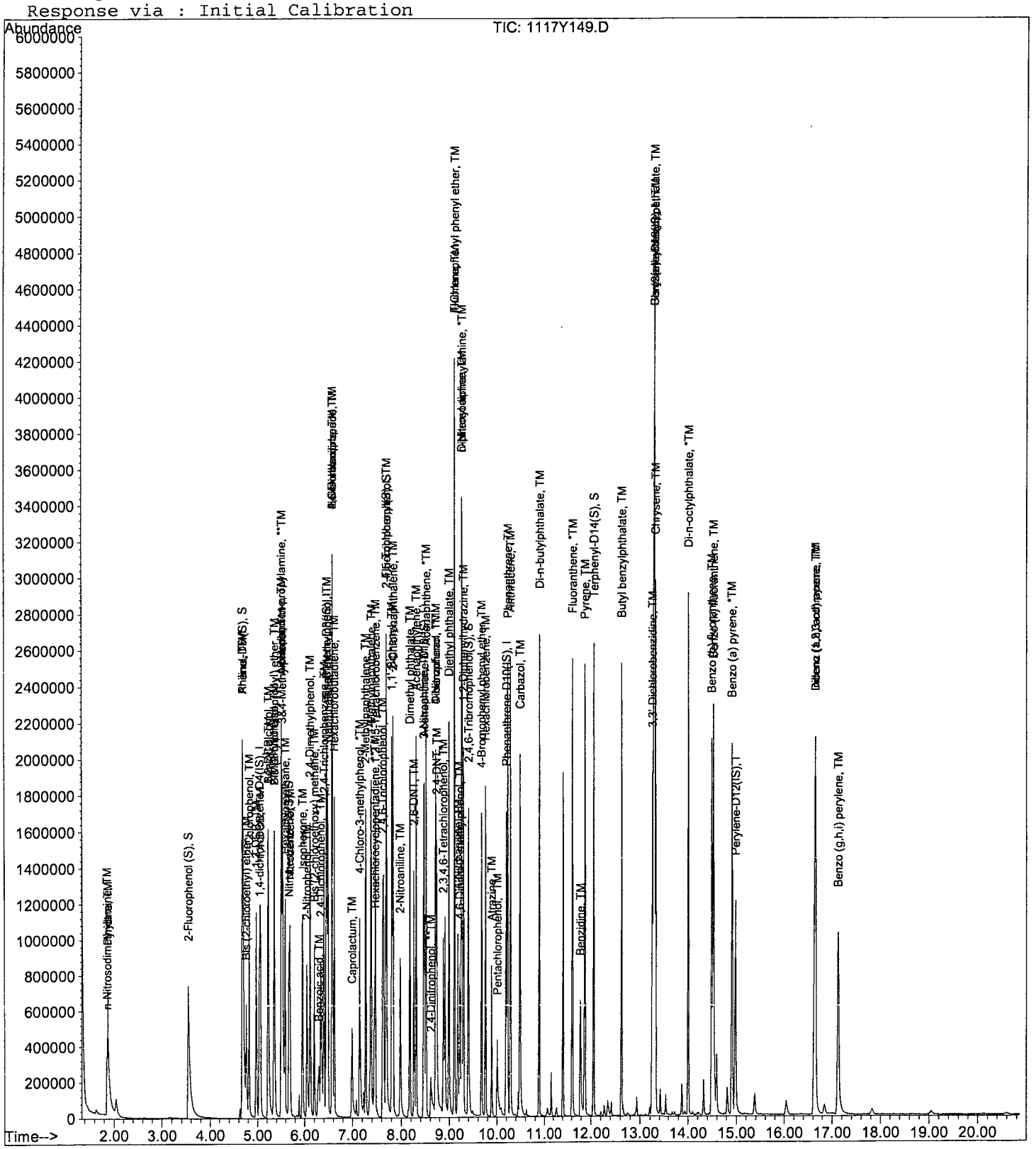
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y149.D Vial: 39
Acq On : 29 Nov 16 2:20 Operator: MA
Sample : 50ug/ml SVOC 11/15/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Nov 29 8:56 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration



ORGANICS

Raw Data

APPL, INC.

Method Blank
EPA 8270D WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161122W-45988 - 214094**
Batch ID: #87DC5-161122B

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	11/22/16	11/28/16
BLANK	SURROGATE: 2,4,6-TRIBROMOP	72.1	43-140			%	11/22/16	11/28/16
BLANK	SURROGATE: 2-FLUORBIPHENY	64.6	44-119			%	11/22/16	11/28/16
BLANK	SURROGATE: 2-FLUOROPHENO	35.5	19-119			%	11/22/16	11/28/16
BLANK	SURROGATE: NITROBENZENE-	66.2	44-120			%	11/22/16	11/28/16
BLANK	SURROGATE: PHENOL-D6 (S)	20.6	10-115			%	11/22/16	11/28/16
BLANK	SURROGATE: TERPHENYL-D14 (	75.7	50-134			%	11/22/16	11/28/16

Quant Method:Y1117.M
Run #:1117Y130
Instrument:Yoda
Sequence:Y161117
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 11/29/16 12:52:17 PM

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y130.D Vial: 30
Acq On : 28 Nov 16 17:35 Operator: MA
Sample : 161122B BLK 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Nov 29 9:21 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	163355	40.00000	ppb	0.00
20) Napthalene-D8(IS)	6.46	136	734357	40.00000	ppb	0.00
40) Acenaphthene-D10(IS)	8.46	164	437471	40.00000	ppb	0.00
64) Phenanthrene-D10(IS)	10.19	188	822121	40.00000	ppb	0.00
78) Chrysene-D12(IS)	13.27	240	801165	40.00000	ppb	-0.02
88) Perylene-D12(IS)	14.97	264	753907	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.53	112	363576	70.91670	ppb	0.00
Spiked Amount 200.000			Recovery =	35.459%		
5) Phenol-D6 (S)	4.68	99	296057	41.15279	ppb	0.00
Spiked Amount 200.000			Recovery =	20.577%		
21) Nitrobenzene-D5(S)	5.66	82	508843	66.16758	ppb	0.00
Spiked Amount 100.000			Recovery =	66.168%		
45) 2-Fluorobiphenyl(S)	7.69	172	900523	64.63274	ppb	0.00
Spiked Amount 100.000			Recovery =	64.633%		
63) 2,4,6-Tribromophenol(S)	9.40	330	308559	144.26213	ppb	0.00
Spiked Amount 200.000			Recovery =	72.131%		
81) Terphenyl-D14(S)	12.06	244	1377250	75.71988	ppb	0.00
Spiked Amount 100.000			Recovery =	75.720%		

Target Compounds Qvalue

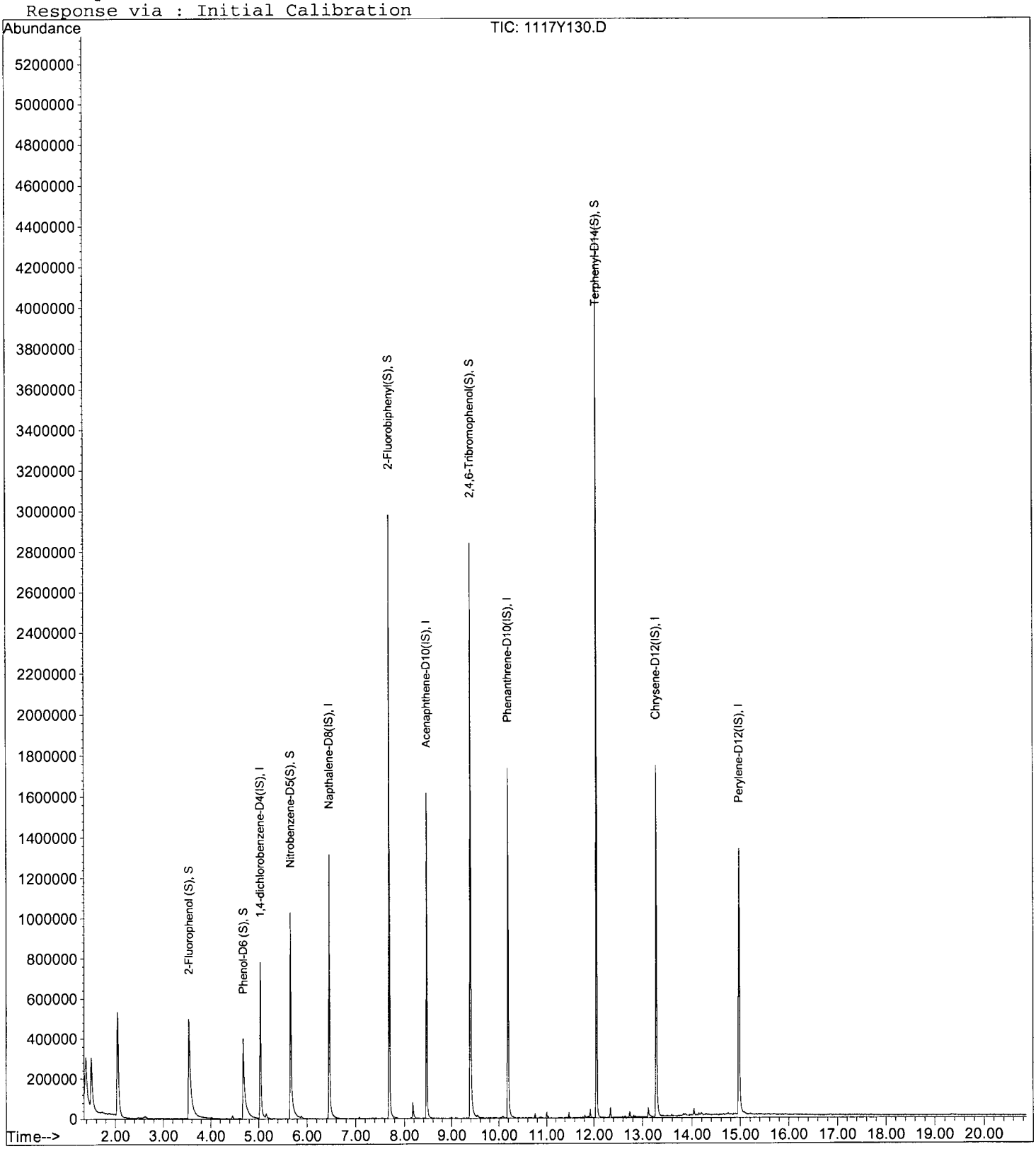
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y130.D Vial: 30
Acq On : 28 Nov 16 17:35 Operator: MA
Sample : 161122B BLK 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Nov 29 9:21 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration



Laboratory Control Spike Recoveries
EPA 8270D WATER

APPL ID: **161122W-45988 LCS - 214094**
Batch ID: #87DC5-161122B

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
PHENOL	50.0	20.5	17.5	41.0	35.0	10-115	15.8	20
SURROGATE: 2,4,6-TRIBROMOPHENOL	200	169	96.4	84.5	48.2	43-140		
SURROGATE: 2-FLUORBIPHENYL (S)	100	67.8	38.0	67.8	38.0 #	44-119		
SURROGATE: 2-FLUOROPHENOL (S)	200	84.4	53.5	42.2	26.8	19-119		
SURROGATE: NITROBENZENE-D5 (S)	100	73.0	41.9	73.0	41.9 #	44-120		
SURROGATE: PHENOL-D6 (S)	200	50.4	36.0	25.2	18.0	10-115		
SURROGATE: TERPHENYL-D14 (S)	100	82.7	51.9	82.7	51.9	50-134		

= Recovery is outside QC limits.

Comments:

Primary	SPK	DUP
Quant Method :	Y1117.M	Y1117.M
Extraction Date :	11/22/16	11/22/16
Analysis Date :	11/28/16	11/28/16
Instrument :	Yoda	Yoda
Run :	1117Y131	1117Y132
Initials :	MA	

Printed: 11/29/16 12:52:20 PM
APPL Standard LCSD

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y131.D Vial: 31
Acq On : 28 Nov 16 18:05 Operator: MA
Sample : 161122B LCS-1 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Nov 29 9:10 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	152921	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.46	136	669097	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.47	164	410269	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.19	188	780741	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.28	240	742444	40.00000 ppb		0.00
88) Perylene-D12(IS)	14.97	264	703257	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.55	112	405295	84.44809 ppb		0.00
Spiked Amount 200.000			Recovery = 42.224%			
5) Phenol-D6 (S)	4.68	99	339333	50.38663 ppb		0.00
Spiked Amount 200.000			Recovery = 25.194%			
21) Nitrobenzene-D5(S)	5.66	82	511837	73.04850 ppb		0.00
Spiked Amount 100.000			Recovery = 73.049%			
45) 2-Fluorobiphenyl(S)	7.70	172	886187	67.82093 ppb		0.00
Spiked Amount 100.000			Recovery = 67.821%			
63) 2,4,6-Tribromophenol(S)	9.40	330	338971	168.98853 ppb		0.00
Spiked Amount 200.000			Recovery = 84.495%			
81) Terphenyl-D14(S)	12.06	244	1393652	82.68177 ppb		0.00
Spiked Amount 100.000			Recovery = 82.682%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.87	42	137289	37.79726 ppb		92
3) Pyridine	1.88	79	212244	27.47044 ppb		79
6) Phenol	4.69	94	156726	20.54090 ppb	#	17
7) Aniline	4.68	66	233425	30.87672 ppb	#	55
8) Bis (2-chloroethyl) ether	4.75	63	164326	47.46040 ppb		97
9) 2-Chlorophenol	4.82	128	264183	44.83802 ppb		92
10) 1,3-DCB	4.97	146	140346	21.85394 ppb		97
11) 1,4-DCB	5.05	146	155668	23.71059 ppb		95
12) Benzyl alcohol	5.22	108	152045	46.36525 ppb		97
13) 1,2-DCB	5.23	146	156197	25.59652 ppb		96
14) 2-Methylphenol	5.36	107	177499	39.51095 ppb		95
15) Bis (2-chloroisopropyl) et	5.35	45	314156	45.78986 ppb	#	74
16) Acetophenone	5.50	105	410259	48.86259 ppb		97
17) 3&4-Methylphenol	5.52	107	422344	71.25173 ppb		99
18) n-Nitrosodi-n-propylamine	5.50	70	217784	50.14068 ppb		90
19) Hexachloroethane	5.58	117	43377	15.90073 ppb		89
22) Nitrobenzene	5.69	77	338997	47.16907 ppb		97
23) Isophorone	5.95	82	601577	50.72593 ppb		97
24) 2-Nitrophenol	6.04	139	162306	47.67506 ppb		83
25) 2,4-Dimethylphenol	6.10	122	196982	37.06117 ppb		98
26) Benzoic acid	6.27	105	52227	15.78881 ppb		88
27) Bis (2-chloroethoxy) metha	6.19	93	300285	47.68390 ppb		99
28) 2,4-Dichlorophenol	6.33	162	256669	50.43153 ppb		99
29) 1,2,4-Trichlorobenzene	6.40	180	157670	27.90839 ppb		94
30) 3,4-Dimethylphenol	6.44	107	380158	44.87880 ppb		100
31) Naphthalene	6.48	128	673104	38.27531 ppb		100
32) 4-Chloroaniline	6.56	127	361845	57.64755 ppb		98
33) 2,6-Dichlorophenol	6.57	162	245026	49.41777 ppb		96
34) Hexachloropropene	6.57	213	75098	16.70900 ppb		98
35) Hexachlorobutadiene	6.62	225	58598	16.25478 ppb		97
36) Caprolactum	6.98	55	44176	16.51054 ppb		99
37) 4-Chloro-3-methylphenol	7.14	107	296321	50.35665 ppb		87

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y161117\1117Y131.D Vial: 31
Acq On : 28 Nov 16 18:05 Operator: MA
Sample : 161122B LCS-1 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Nov 29 9:10 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38) 2-Methylnaphthalene	7.27	142	456720	38.55516 ppb		100
39) 1-Methylnaphthalene	7.38	142	457096	40.14868 ppb		99
41) Hexachlorocyclopentadiene	7.45	237	17360	14.71180 ppb		97
42) 1,2,4,5-Tetrachlorobenzene	7.47	216	209143	37.63626 ppb		96
43) 2,4,6-Trichlorophenol	7.61	196	192271	51.86664 ppb		95
44) 2,4,5-Trichlorophenol	7.68	196	202613	51.60915 ppb		96
46) 1,1'-Biphenyl	7.81	154	688894	44.13256 ppb		99
47) 2-Chloronaphthalene	7.83	162	520933	42.61128 ppb		92
48) 2-Nitroaniline	7.97	65	237308	54.71819 ppb		93
49) Dimethyl phthalate	8.18	163	861522	57.81232 ppb		98
50) 2,6-DNT	8.26	165	181154	54.29739 ppb		81
51) Acenaphthylene	8.31	152	889765	46.64035 ppb		98
52) 3-Nitroaniline	8.46	138	188265	54.37809 ppb		87
53) Acenaphthene	8.50	154	550524	47.12538 ppb		99
54) 2,4-Dinitrophenol	8.61	184	87632	52.18716 ppb		86
55) 4-Nitrophenol	8.74	65	50639	22.39487 ppb	#	23
56) Dibenzofuran	8.71	168	834025	49.11494 ppb		99
57) 2,4-DNT	8.74	165	258358	55.17764 ppb		77
58) 2,3,4,6-Tetrachlorophenol	8.87	232	161265	53.94520 ppb		95
59) Diethyl phthalate	8.99	149	838283	54.82128 ppb		99
60) 4-Chlorophenyl phenyl ethe	9.11	204	347673	50.05699 ppb		93
61) Fluorene	9.11	166	715201	51.06691 ppb		100
62) 4-Nitroaniline	9.17	138	178496	54.83157 ppb		93
65) 4,6-Dinitro-2-methylphenol	9.22	198	150811	54.56300 ppb		82
66) Diphenyl amine	9.26	169	1077058	101.08286 ppb		97
67) n-Nitrosodiphenylamine	9.26	169	1077058	101.08286 ppb		97
68) 1,2-Diphenylhydrazine	9.29	77	810873	46.33992 ppb		93
69) 4-Bromophenyl phenyl ether	9.67	248	217785	52.60678 ppb		93
70) Hexachlorobenzene	9.76	284	227628	51.39358 ppb	#	87
71) Atrazine	9.89	200	109804	25.46186 ppb		98
72) Pentachlorophenol	10.01	266	80897	56.32255 ppb		97
73) Phenanthrene	10.22	178	1113848	51.50155 ppb		99
74) Anthracene	10.29	178	1171013	51.80637 ppb		99
75) Carbazol	10.49	167	1030837	52.00632 ppb		98
76) Di-n-butylphthalate	10.88	149	1413977	52.38135 ppb		99
77) Fluoranthene	11.61	202	1248400	52.29860 ppb	#	96
79) Benzidine	11.79	184	151921	18.49190 ppb		95
80) Pyrene	11.87	202	1304641	53.04889 ppb		99
82) Butyl benzylphthalate	12.63	149	646951	52.20825 ppb		92
83) 3,3'-Dichlorobenzidine	13.25	252	440530	58.25487 ppb	#	95
84) Benz (a) anthracene	13.27	228	1283314	54.51652 ppb		99
85) Bis (2-ethylhexyl) phthala	13.28	149	959961	54.66043 ppb		99
86) Chrysene	13.31	228	1205944	53.15613 ppb		99
87) Di-n-octylphthalate	14.00	149	1642369	53.65571 ppb		97
89) Benzo (b) fluoranthene	14.49	252	1306094	54.02748 ppb		99
90) Benzo (k) fluoranthene	14.53	252	1157306	51.35039 ppb		100
91) Benzo (a) pyrene	14.91	252	1174881	52.61666 ppb		99
92) Indeno (1,2,3-cd) pyrene	16.64	276	1338249	52.34009 ppb		99
93) Dibenz (a,h) anthracene	16.65	278	1133676	52.21985 ppb		99
94) Benzo (g,h,i) perylene	17.13	276	1110958	52.07527 ppb		97

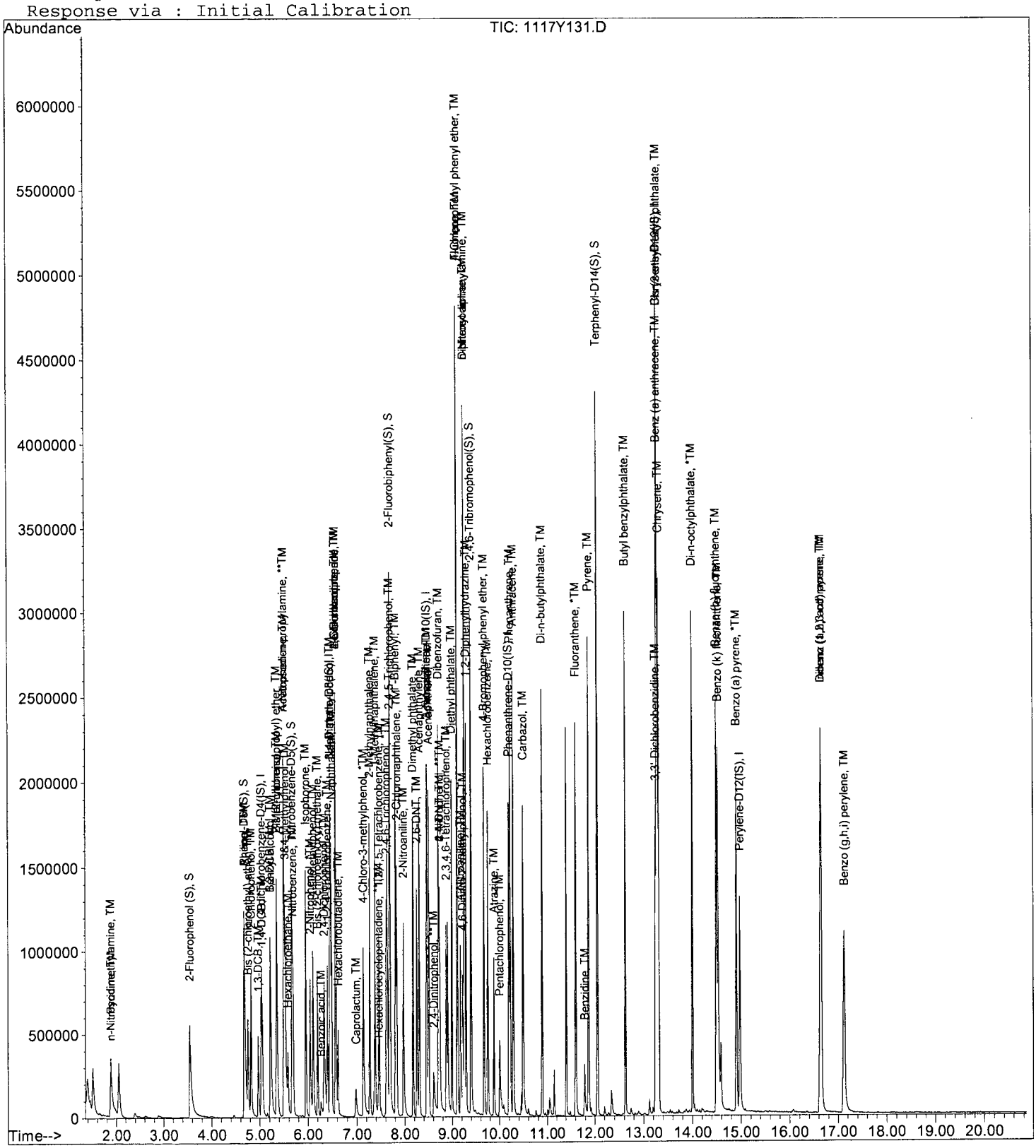
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y131.D Vial: 31
Acq On : 28 Nov 16 18:05 Operator: MA
Sample : 161122B LCS-1 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Nov 29 9:10 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y132.D Vial: 32
Acq On : 28 Nov 16 18:34 Operator: MA
Sample : 161122B LCSD-1 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Nov 29 9:10 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	171103	40.00000	ppb		0.00
20) Napthalene-D8(IS)	6.46	136	764878	40.00000	ppb		0.00
40) Acenaphthene-D10(IS)	8.47	164	466301	40.00000	ppb		0.00
64) Phenanthrene-D10(IS)	10.20	188	858993	40.00000	ppb		0.00
78) Chrysene-D12(IS)	13.28	240	839094	40.00000	ppb		0.00
88) Perylene-D12(IS)	14.97	264	786907	40.00000	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol (S)	3.54	112	287306	53.50234	ppb		0.00
Spiked Amount 200.000			Recovery = 26.751%				
5) Phenol-D6 (S)	4.68	99	270901	35.95087	ppb		0.00
Spiked Amount 200.000			Recovery = 17.976%				
21) Nitrobenzene-D5(S)	5.66	82	335538	41.89076	ppb		0.00
Spiked Amount 100.000			Recovery = 41.891%				
45) 2-Fluorobiphenyl(S)	7.69	172	564154	37.98730	ppb		0.00
Spiked Amount 100.000			Recovery = 37.987%				
63) 2,4,6-Tribromophenol(S)	9.40	330	219846	96.43076	ppb		0.00
Spiked Amount 200.000			Recovery = 48.216%				
81) Terphenyl-D14(S)	12.06	244	989573	51.94650	ppb		0.00
Spiked Amount 100.000			Recovery = 51.947%				
Target Compounds							Qvalue
2) n-Nitrosodimethylamine	1.86	42	113566	27.94360	ppb		98
3) Pyridine	1.87	79	216953	25.09605	ppb		94
6) Phenol	4.69	94	149450	17.50587	ppb	#	4
7) Aniline	4.68	66	213781	25.27332	ppb	#	49
8) Bis (2-chloroethyl) ether	4.75	63	158596	40.93802	ppb		96
9) 2-Chlorophenol	4.82	128	249762	37.88589	ppb		93
10) 1,3-DCB	4.96	146	141469	19.68795	ppb		99
11) 1,4-DCB	5.05	146	154226	20.99472	ppb		95
12) Benzyl alcohol	5.22	108	140170	38.20191	ppb		98
13) 1,2-DCB	5.22	146	155799	22.81825	ppb		99
14) 2-Methylphenol	5.35	107	165688	32.96265	ppb		94
15) Bis (2-chloroisopropyl) et	5.35	45	311175	40.53575	ppb	#	80
16) Acetophenone	5.49	105	386262	41.11591	ppb		92
17) 3&4-Methylphenol	5.52	107	396707	59.81477	ppb		95
18) n-Nitrosodi-n-propylamine	5.49	70	205515	42.28802	ppb		88
19) Hexachloroethane	5.58	117	44999	14.74246	ppb		90
22) Nitrobenzene	5.69	77	321432	39.12438	ppb		97
23) Isophorone	5.95	82	575171	42.42606	ppb		97
24) 2-Nitrophenol	6.04	139	162136	41.66132	ppb		92
25) 2,4-Dimethylphenol	6.11	122	172980	28.46986	ppb		94
26) Benzoic acid	6.26	105	49244	13.89759	ppb		95
27) Bis (2-chloroethoxy) metha	6.19	93	298726	41.49617	ppb		99
28) 2,4-Dichlorophenol	6.33	162	236020	40.56714	ppb		97
29) 1,2,4-Trichlorobenzene	6.39	180	160088	24.78800	ppb		97
30) 3,4-Dimethylphenol	6.44	107	343546	35.47799	ppb		100
31) Naphthalene	6.48	128	669657	33.31086	ppb		99
32) 4-Chloroaniline	6.56	127	343262	47.83887	ppb		96
33) 2,6-Dichlorophenol	6.57	162	239589	42.27024	ppb		94
34) Hexachloropropene	6.57	213	83840	16.31813	ppb		98
35) Hexachlorobutadiene	6.62	225	63042	15.29767	ppb		98
36) Caprolactum	6.98	55	37848	12.37413	ppb		96
37) 4-Chloro-3-methylphenol	7.14	107	284712	42.32501	ppb		94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161117\1117Y132.D Vial: 32
Acq On : 28 Nov 16 18:34 Operator: MA
Sample : 161122B LCSD-1 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Nov 29 9:10 2016 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38) 2-Methylnaphthalene	7.27	142	443845	32.77636 ppb		99
39) 1-Methylnaphthalene	7.38	142	457392	35.14385 ppb		99
41) Hexachlorocyclopentadiene	7.44	237	24866	16.82180 ppb		96
42) 1,2,4,5-Tetrachlorobenzene	7.47	216	206991	32.77305 ppb		98
43) 2,4,6-Trichlorophenol	7.62	196	175195	41.58133 ppb		93
44) 2,4,5-Trichlorophenol	7.68	196	189807	42.53770 ppb		97
46) 1,1'-Biphenyl	7.81	154	664232	37.43939 ppb		99
47) 2-Chloronaphthalene	7.83	162	501399	36.08515 ppb		94
48) 2-Nitroaniline	7.97	65	226334	45.91678 ppb		91
49) Dimethyl phthalate	8.18	163	796170	47.00697 ppb		99
50) 2,6-DNT	8.26	165	164947	43.49886 ppb		82
51) Acenaphthylene	8.31	152	848894	39.15095 ppb		99
52) 3-Nitroaniline	8.46	138	174035	44.22759 ppb		90
53) Acenaphthene	8.51	154	528825	39.82841 ppb		98
54) 2,4-Dinitrophenol	8.61	184	73168	40.47486 ppb	#	75
55) 4-Nitrophenol	8.73	65	45638	19.24933 ppb	#	10
56) Dibenzofuran	8.71	168	796643	41.27629 ppb		98
57) 2,4-DNT	8.73	165	237899	44.70295 ppb		81
58) 2,3,4,6-Tetrachlorophenol	8.87	232	149370	43.96210 ppb		92
59) Diethyl phthalate	8.98	149	767589	44.16616 ppb		99
60) 4-Chlorophenyl phenyl ethe	9.11	204	323537	40.98454 ppb		88
61) Fluorene	9.11	166	660200	41.47528 ppb		99
62) 4-Nitroaniline	9.17	138	173208	46.81365 ppb		90
65) 4,6-Dinitro-2-methylphenol	9.22	198	143081	47.05054 ppb		83
66) Diphenyl amine	9.25	169	1016346	86.69566 ppb		99
67) n-Nitrosodiphenylamine	9.25	169	1016346	86.69566 ppb		99
68) 1,2-Diphenylhydrazine	9.29	77	772731	40.13730 ppb		92
69) 4-Bromophenyl phenyl ether	9.67	248	202511	44.46106 ppb		86
70) Hexachlorobenzene	9.76	284	216624	44.45362 ppb	#	86
71) Atrazine	9.88	200	104368	21.99666 ppb		97
72) Pentachlorophenol	10.01	266	70086	46.98777 ppb		95
73) Phenanthrene	10.23	178	1048063	44.04525 ppb		99
74) Anthracene	10.28	178	1102749	44.34202 ppb		99
75) Carbazol	10.49	167	978020	44.84678 ppb		96
76) Di-n-butylphthalate	10.89	149	1352571	45.54196 ppb		98
77) Fluoranthene	11.61	202	1189207	45.28049 ppb		98
79) Benzidine	11.79	184	226153	24.35673 ppb		98
80) Pyrene	11.87	202	1255440	45.16836 ppb		99
82) Butyl benzylphthalate	12.62	149	601900	42.97790 ppb		88
83) 3,3'-Dichlorobenzidine	13.25	252	415146	48.57476 ppb	#	96
84) Benz (a) anthracene	13.26	228	1210436	45.49777 ppb		99
85) Bis (2-ethylhexyl) phthala	13.28	149	920860	46.39446 ppb		97
86) Chrysene	13.31	228	1155729	45.07496 ppb		99
87) Di-n-octylphthalate	14.00	149	1548897	44.77348 ppb		96
89) Benzo (b) fluoranthene	14.49	252	1202515	44.45508 ppb		99
90) Benzo (k) fluoranthene	14.53	252	1134367	44.98211 ppb		99
91) Benzo (a) pyrene	14.91	252	1099033	43.98765 ppb		99
92) Indeno (1,2,3-cd) pyrene	16.63	276	1243186	43.45345 ppb		99
93) Dibenz (a,h) anthracene	16.65	278	1067438	43.94202 ppb		100
94) Benzo (g,h,i) perylene	17.13	276	1042452	43.66974 ppb		98

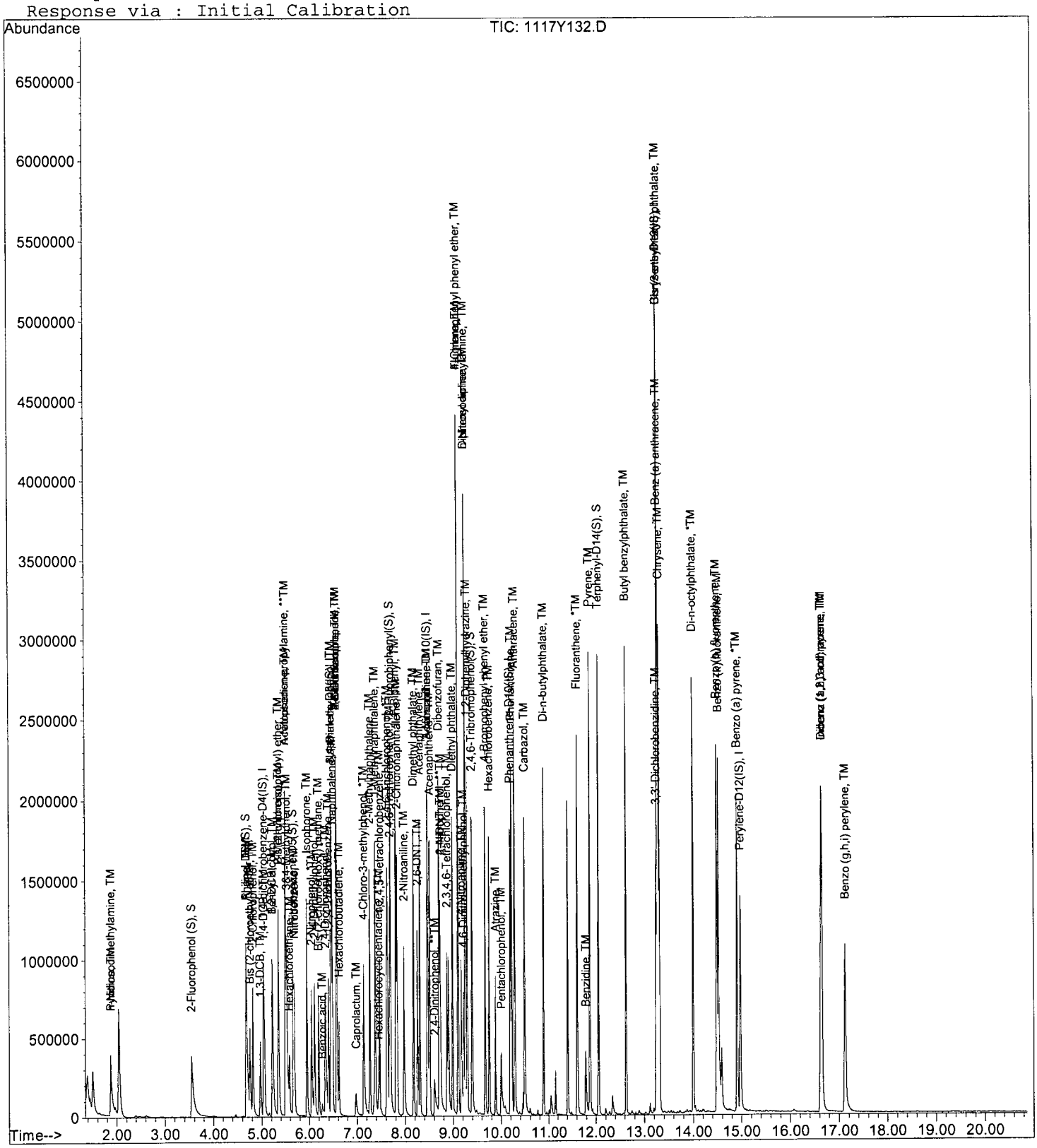
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161117\1117Y132.D Vial: 32
Acq On : 28 Nov 16 18:34 Operator: MA
Sample : 161122B LCSD-1 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

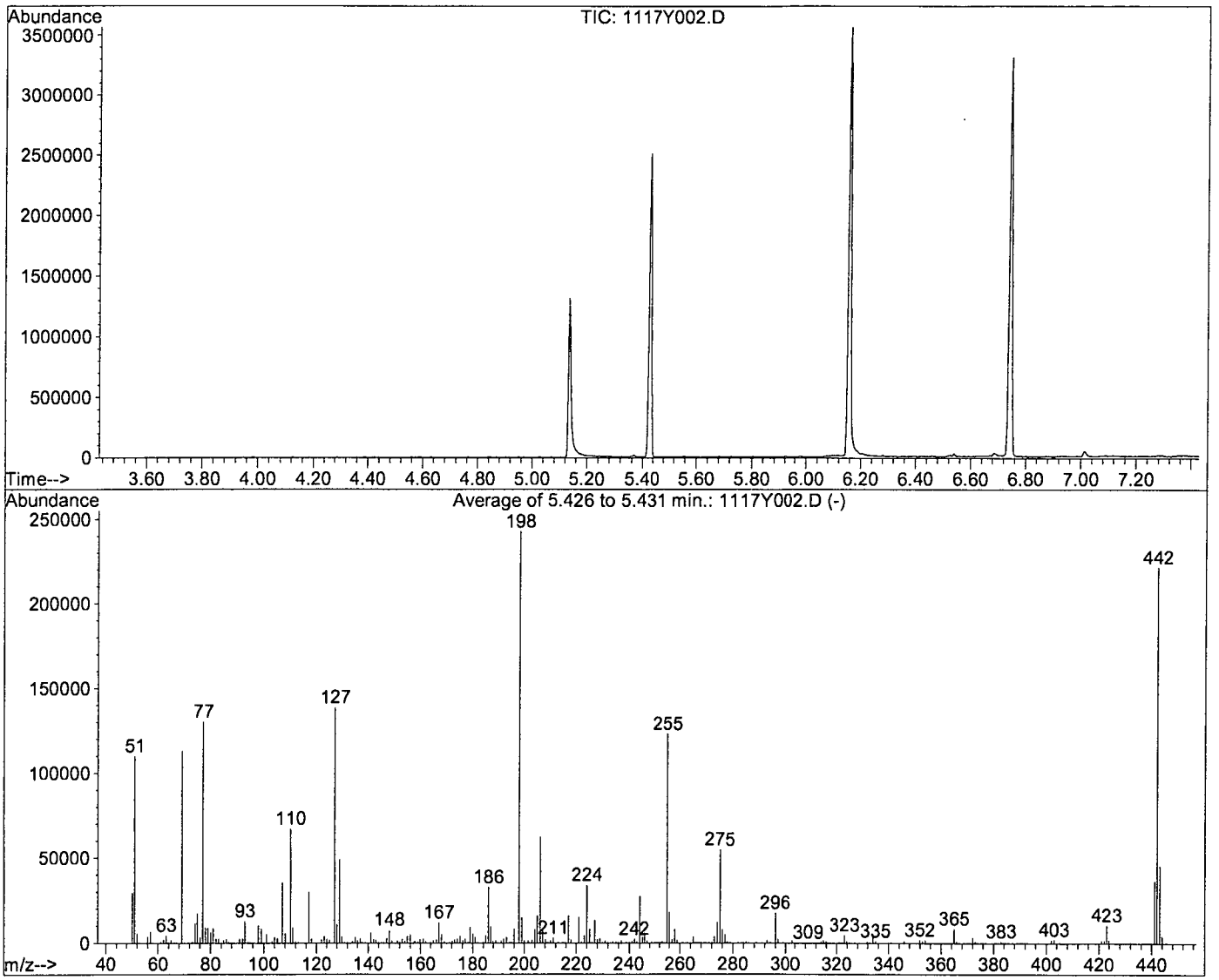
Quant Time: Nov 29 9:10 2016 Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Nov 18 07:48:24 2016
Response via : Initial Calibration



Data File : M:\YODA\DATA\Y161117\1117Y002.D Vial: 2
Acq On : 17 Nov 16 11:17 Operator: MA
Sample : SV Tune 10/19/16 Inst : Yoda
Misc : Multiplr: 1.00

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C



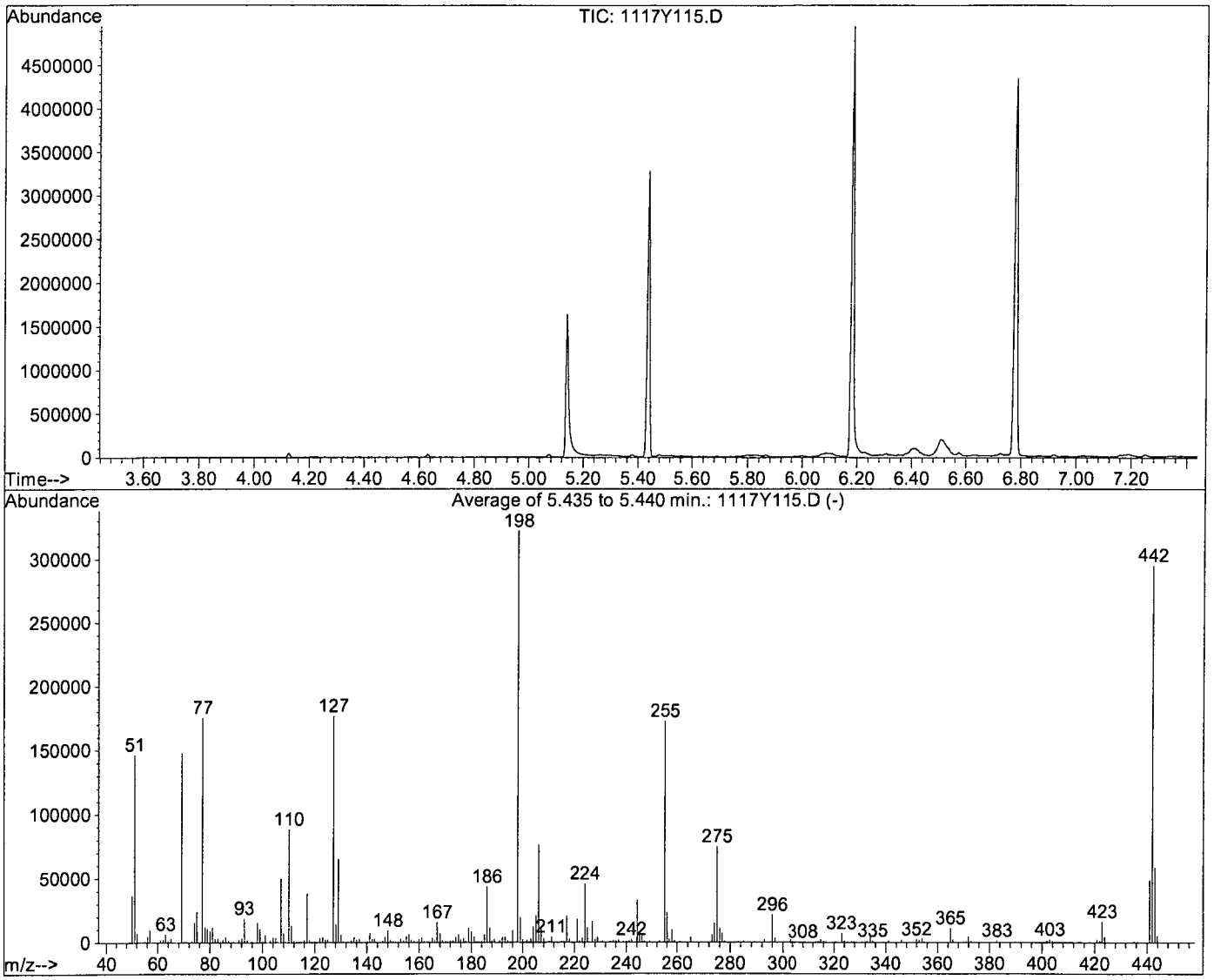
AutoFind: Scans 737, 738, 739; Background Corrected with Scan 729

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	45.2	109960	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.1	156	PASS
127	198	40	60	57.0	138616	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	243008	PASS
199	198	5	9	6.1	14868	PASS
275	198	10	30	22.5	54709	PASS
365	198	1	100	3.4	8289	PASS
441	443	0.01	100	80.8	36571	PASS
442	198	50	150	91.2	221504	PASS
443	442	17	23	20.4	45280	PASS

DFTPP

Data File : M:\YODA\DATA\Y161117\1117Y115.D Vial: 15
Acq On : 28 Nov 16 9:47 Operator: MA
Sample : SV Tune 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C

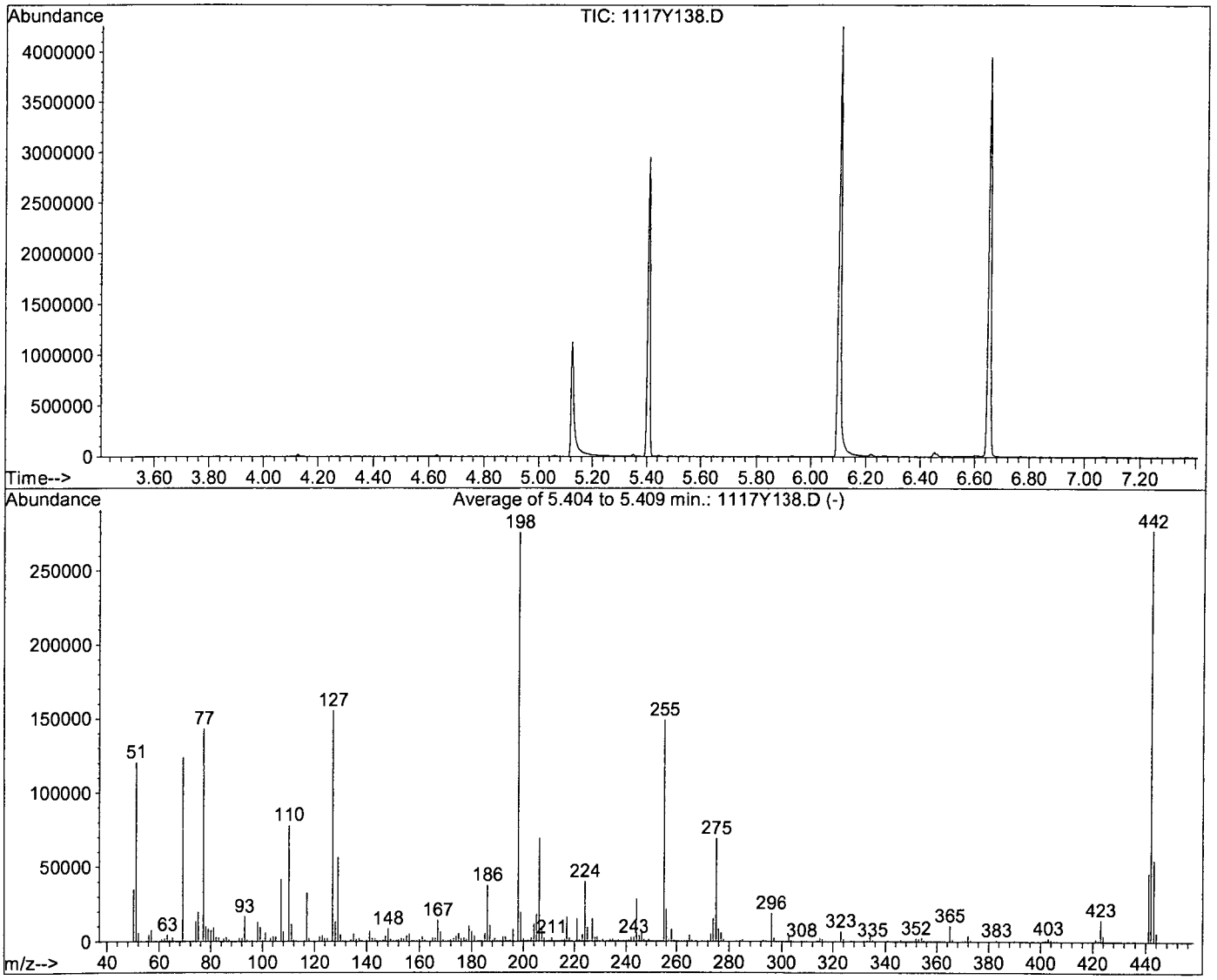


AutoFind: Scans 740, 741, 742; Background Corrected with Scan 729

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	45.4	146296	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.5	708	PASS
127	198	40	60	54.8	176619	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	322240	PASS
199	198	5	9	6.1	19560	PASS
275	198	10	30	23.1	74552	PASS
365	198	1	100	3.4	11068	PASS
441	443	0.01	100	83.1	48733	PASS
442	198	50	150	91.6	295083	PASS
443	442	17	23	19.9	58664	PASS

Data File : M:\YODA\DATA\Y161117\1117Y138.D Vial: 38
Acq On : 28 Nov 16 21:10 Operator: MA
Sample : SV Tune 11/15/16 Inst : Yoda
Misc : water Multiplr: 1.00

Method : M:\YODA\DATA\Y161117\Y1117.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 727, 728, 729; Background Corrected with Scan 719

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	43.7	120621	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.6	723	PASS
127	198	40	60	56.3	155613	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	276224	PASS
199	198	5	9	7.1	19483	PASS
275	198	10	30	25.1	69275	PASS
365	198	1	100	3.8	10520	PASS
441	443	0.01	100	83.8	45797	PASS
442	198	50	150	100.6	277781	PASS
443	442	17	23	19.7	54637	PASS

SV Internal Stanard Stock Prep: 10/19/16 RH EXP: 10/19/17						
		Conc.				
Supplier	ID #	µg/mL	Lot #	Open Date	Exp.Date	µL
Supleco	CRM48902	2000	XA14020V-36611	10/19/16	10/19/17	1000
					fin vol.	1000

8270 Full Scan Standard Curve

PREP DATE:	11/15/16 RH							
8270 Standard Curve								
Exp:	2/11/17					**5**	**10**	**20**
		Conc.		Date				
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL
Absolute	8270 Stock	200	VAR	10/28/16	10/28/17	5	5	10
O2si	8270 BN:A Sur	200/400	277272-36400	6/20/16	12/20/16	5	5	10
EM Science	Methylene Chloride		56098			190	90	80
Supelco	SV Internal Sta	2000	XA14020V-36609	11/09/16	11/09/17	4	2	2
				Final Vol.		204	102	102

8270 Full Scan Second Source (SS)

PREP DATE:	11/15/16 RH					
Exp:	1/18/17	Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
o2si	8270 Stock SS	200	VAR	07/08/16	07/08/17	25
EM Science	Methylene Chloride		56098			75
Supelco	SV Internal Sta	2000	XA14020V-36609	11/09/16	11/09/17	2
				Final Vol.		102

40	**50**	**60**	**80**	**100**
µL	µL	µL	µL	µL
20	25	30	40	50
20	25	30	40	50
60	50	40	20	0
2	2	2	2	2
102	102	102	102	102

8270 Full Scan Second Source (SS)						
PREP DATE:	11/9/16 GA					
Exp:	1/18/17	Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
o2si	8270 Stock SS	200	VAR	07/08/16	07/08/17	25
EM Science	Methylene Chloride		56098			75
Supelco	SV Internal Standa	2000	XA14020V-36611	10/19/16	10/19/17	2
				Final Vol.		102

8270 SVOC Stock 10mL						
8270 Stock/Spike Standard						
prep:	10/28/16 RH					
Exp:	10/28/17					
		Conc.				
Supplier	ID #	µg/mL	Lot #	Open Date	Exp.Date	µL
Absolute	10001	2000	53014-3683	10/17/16	10/17/17	1000
Absolute	10002	2000	11114-3614	10/17/16	10/17/17	1000
Absolute	10004	2000	10815-3646	10/17/16	10/17/17	1000
Absolute	10005	2000	10314-3684	10/17/16	10/17/17	1000
Absolute	10006	2000	81216-3707	10/17/16	10/17/17	1000
Absolute	10007	2000	20515-3685	10/17/16	10/17/17	1000
Absolute	10018	2000	30216-3708	10/17/16	10/17/17	1000
Absolute	70023	1000	42716-3685	10/17/16	10/17/17	1000
Absolute	82705	2000	12516-3686	10/17/16	10/17/17	1000
Absolute	94552	2000	42016-3648	10/17/16	10/17/17	1000
				Final Vol.		10000

8270 Acid Surrog Stock 5000ppm						
Prep: 06/20/16 -LH Ex: 06/20/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
8270 Acid Surrog Mix	10,000 µg/mL	Restek Cat# 33029 Lot# A0115509-36718	10mL	20mL	5000 µg/ml	Acetone
	PREP:	06/20/16				
	Exp:	06/20/17				

8270 Surrog Mix 200/400ppm						
Prep: 06/20/16 -LH Ex: 12/20/16						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
8270 Acid Surrog Mix	5000 µg/mL	06/20/16	8.0mL	100 mL	400 µg/mL	MC
8270 B/N surrog Mix	5000 µg/mL	Restek Cat# 31086 Lot# A0119223-36720	4.0 mL	100 mL	200 ug/mL	MC
	PREP:	06/20/16				
	Exp:	12/20/16				

8270 Full Scan Second Source Stock						
	7/8/16 GA					
8270 Second Source Stock						
Exp:	07/08/17					
		Conc.		Date	Exp.	
Supplier	ID #	µg/mL	Lot #	Code	Date	µL
o2si	116070-02	2000	234696-35233	07/08/16	07/08/17	1000
o2si	110391-01	2000	252133-35880	07/08/16	07/08/17	1000
o2si	010337-01	1000	259144-35881	07/08/16	07/08/17	1000
o2si	110396-01	2000	252136-35882	07/08/16	07/08/17	1000
o2si	110397-01	2000	263077-35835	07/08/16	01/08/17	1000
o2si	110393-01	2000	252141-35248	07/08/16	07/08/17	1000
o2si	110394-01	2000	252143-35884	07/08/16	07/08/17	1000
o2si	**110395-01**	2000	252146-35885	07/08/16	07/08/17	1000
o2si	110392-01	2000	243259-35886	07/08/16	07/08/17	1000
Absolute	10006	2000	091115-35856	07/08/16	07/08/17	1000
				Final Vol.		10000

8270 Surrog Mix 100/200ppm						
Prep: 10/26/16 -RH Ex: 01/26/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
8270 Acid Surrog Mix	10000 ug/ml	Restek Cat# 33029 Lot# A0118884-36874 Op: 10/03/16 EX: 10/03/17	2.0 mL	100 mL	200 µg/mL	MC
8270 B/N surrog Mix	5000 µg/mL	Restek Cat# 31086 Lot# A0119223-36873 Op: 10/26/16 EX: 10/26/17	2.0 mL	100 mL	100 ug/mL	MC

_SEP004

Organic Extraction Worksheet

Method	625/8270 Separatory Funnel Extra 3510C	Extraction Set	161122B	Extraction Method	SEP004	Units	mL

Spiked ID 1	8270T Spike 10-28-16 EXP 10-28-17		Surrogate ID 1	8270 Surrogate 11-7-16 EXP 12-23-16	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	11/22/16 16:25	
Spiked ID 8			Ext. End Time:	11/23/16 12:20	
			GC Requires Extract By:	11/24/16 0:00	

pH1	2	11/22/16 4:40:00 PM	Water Bath Temp Criteria	75 °C
pH2	14	11/22/16 6:00:00 PM		
pH3				

Spiked By: KY **Date** 11/22/16 **Witnessed By:** DL **Date** 11/22/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	161122B Blk				1	1 equip	1000 E-WB6	1	2/1	11/22/16 16:25	
2	161122B LCS-1		0.250	1	1	1 equip	1000 E-WB6	1	2/1	11/22/16 16:25	
3	161122B LCSD-1		0.250	1	1	1 equip	1000 E-WB6	1	2/1	11/22/16 16:25	
4	AZ45988	AZ45988W14			1	1 equip	1010 E-WB6	1	2/1	11/22/16 16:25	81515 1 WEEK
5	AZ45989	AZ45989W07			1	1 equip	1010 E-WB6	1	2/1	11/22/16 16:25	81515 1 WEEK
6	AZ45991	AZ45991W16			1	1 equip	1020 E-WB6	1	2/1	11/22/16 16:25	81515 1 WEEK
7	AZ45992	AZ45992W11			1	1 equip	940 E-WB6	1	2/1	11/22/16 16:25	81515 1 WEEK
8	AZ45993	AZ45993W11			1	1 equip	960 E-WB6	1	2/1	11/22/16 16:25	81515 1 WEEK
9	AZ45994	AZ45994W20			1	1 equip	1070 E-WB6	1	2/1	11/22/16 16:25	81515 1 WEEK
10	AZ45995	AZ45995W12			1	1 equip	950 E-WB6	1	2/1	11/22/16 16:25	81515 1 WEEK
11	AZ45996	AZ45996W12			1	1 equip	960 E-WB6	1	2/1	11/22/16 16:25	81515 1 WEEK

KY 11/23/16

Solvent and Lot#	
MC	56153
1+1 Sulfuric Acid	9-28-16
Acidified Na2SO4	11-03-16
B.Na2SO4	16C255214
10N NaOH	11-22-16
ph strips	HC 574756
Filter Paper	400112

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	GA
Date	11/23/16
Time	1330
Refrigerator	Hobart

	Technician's Initials
Scanned By	KY
Sample Preparation	KY,DL,JR
Extraction	KY,DL,JR
Concentration	KY

Modified	11/23/16 12:35:16 PM

Reviewed By: KY **Date** 11/23/16

11/23/16 12:35:38 PM

Ext_ID 429 53373

Injection Log

Directory: M:\YODA\DATA\Y161117\

Vial	FileName	Multiplier	SampleName	Misc Info	Injected
2	1117Y002.D	1	SV Tune 10/19/16		17 Nov 16 11:17
3	1117Y003.D	1	5ug/ml SVOC 11/15/16		17 Nov 16 11:32
4	1117Y004.D	1	10ug/ml SVOC 11/15/16		17 Nov 16 12:02
5	1117Y005.D	1	20ug/ml SVOC 11/15/16		17 Nov 16 12:31
6	1117Y006.D	1	40ug/ml SVOC 11/15/16		17 Nov 16 13:00
7	1117Y007.D	1	50ug/ml SVOC 11/15/16		17 Nov 16 13:29
8	1117Y008.D	1	60ug/ml SVOC 11/15/16		17 Nov 16 13:59
9	1117Y009.D	1	80ug/ml SVOC 11/15/16		17 Nov 16 14:28
10	1117Y010.D	1	100ug/ml SVOC 11/15/16		17 Nov 16 14:58
11	1117Y011.D	1	2ND SRC SVOC 11/15/16		17 Nov 16 15:27
15	1117Y115.D	1	SV Tune 11/15/16		28 Nov 16 9:47
16	1117Y116.D	1	50ug/ml SVOC 11/15/16		28 Nov 16 10:42
30	1117Y130.D	1	161122B BLK 1/1000	water	28 Nov 16 17:35
31	1117Y131.D	1	161122B LCS-1 1/1000	water	28 Nov 16 18:05
32	1117Y132.D	1	161122B LCSD-1 1/1000	water	28 Nov 16 18:34
33	1117Y133.D	0.9901	AZ45988W14 1/1010	water	28 Nov 16 19:04
34	1117Y134.D	0.9901	AZ45989W07 1/1010	water	28 Nov 16 19:33
35	1117Y135.D	0.98039	AZ45991W16 1/1020	water	28 Nov 16 20:02
36	1117Y136.D	1.06383	AZ45992W11 1/940	water	28 Nov 16 20:32
38	1117Y138.D	1	SV Tune 11/15/16	water	28 Nov 16 21:10
39	1117Y139.D	1	50ug/ml SVOC 11/15/16	water	28 Nov 16 21:26
40	1117Y140.D	1.04167	AZ45993W11 1/960	water	28 Nov 16 21:56
41	1117Y141.D	0.93458	AZ45994W20 1/1070	water	28 Nov 16 22:25
42	1117Y142.D	1.05263	AZ45995W12 1/950	water	28 Nov 16 22:54
43	1117Y143.D	1.04167	AZ45996W12 1/960	water	28 Nov 16 23:24
39	1117Y149.D	1	50ug/ml SVOC 11/15/16	water	29 Nov 16 2:20

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank

EPA 8270D MODIFIED WATER

Blank Name/QCG: **161122W-45988 - 214036**
Batch ID: #87DME-161122A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2-(2-METHOXYETHOXY)-ETHAN	80.0 U	100	80.0	40.0	ug/L	11/22/16	11/23/16

Quant Method: Y0GLYCOL.
Run #: 1123Y026
Instrument: Yoda
Sequence: Y161123
Initials: MA

GC SC-Blank-REG MDLs-DOD
Printed: 11/28/16 10:25:48 AM

Laboratory Control Spike Recoveries
EPA 8270D MODIFIED WATER

APPL ID: **161122W-45988 LCS - 214036**
Batch ID: #87DME-161122A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
2-(2-METHOXYETHOXY)-ETHANOL	500	366	437	73.2	87.4	30-130	17.7	20

Comments: _____

Primary	SPK	DUP
Quant Method :	Y0GLYCOL.M	Y0GLYCOL.M
Extraction Date :	11/22/16	11/22/16
Analysis Date :	11/23/16	11/23/16
Instrument :	Yoda	Yoda
Run :	1123Y027	1123Y028
Initials :	MA	

EPA 8270D

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81515

Case No: 81515 Date Analyzed: 11/23/16

Matrix: WATER Instrument: Yoda

Blank ID: 161122A-BLK Time Analyzed: 2045

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161122A-BLK	Blank	1123Y026	11/23/16 2045
161122A-LCS	Lab Control Spike	1123Y027	11/23/16 2114
161122A-LCSD	Lab Control SpikeD	1123Y028	11/23/16 2144
AZ45988	ERH118	1123Y029	11/23/16 2213
AZ45989	ERH119	1123Y030	11/23/16 2243
AZ45991	ERH124	1123Y031	11/23/16 2312
AZ45992	ERH125	1123Y032	11/23/16 2341
AZ45993	ERH127	1123Y033	11/24/16 0010
AZ45994	ERH129	1123Y034	11/24/16 0040
AZ45995	ERH130	1123Y035	11/24/16 0109
AZ45996	ERH131	1123Y036	11/24/16 0138

Comments: Batch: #87DME-161122A

Printed: 11/28/16 10:26:12 AM

Form 4, Blank Summary

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: Water
ID: SV Tune 11/15/16

SDG No:
Date Analyzed: 11/23/16
Instrument: Yoda
Time Analyzed: 9:15

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		100ug/ml DEG 11/22/1	1123Y004.D	11/23/16 10:00
2		200ug/ml DEG 11/22/1	1123Y005.D	11/23/16 10:29
3		400ug/ml DEG 11/22/1	1123Y006.D	11/23/16 10:59
4		500ug/ml DEG 11/22/1	1123Y007.D	11/23/16 11:28
5		600ug/ml DEG 11/22/1	1123Y008.D	11/23/16 11:58
6		800ug/ml DEG 11/22/1	1123Y009.D	11/23/16 12:28
7		1000ug/ml DEG 11/22/	1123Y010.D	11/23/16 13:11
8		SS2 DEG 11/22/16	1123Y012.D	11/23/16 14:09
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	48.3
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.3
127	40 - 60% of mass 198	56.2
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 197.95	100.0
199	5 - 9% of mass 198	6.3
275	10 - 30% of mass 198	21.5
365	1 - 100% of mass 198	3.4
441	0.01 - 100% of mass 443	82.0
442	50 - 150% of mass 197.95	83.2
443	17 - 23% of mass 442	18.9

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81515
Matrix: Water
ID: SV Tune 11/15/16

SDG No: 81515
Date Analyzed: 11/23/16
Instrument: Yoda
Time Analyzed: 14:35

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1	Blank	161122A BLK 2/500	1123Y026.D	11/23/16 20:45
2	Lab Control Spike	161122A LCS-1 2/500	1123Y027.D	11/23/16 21:14
3	Lab Control SpikeD	161122A LCSD-1 2/500	1123Y028.D	11/23/16 21:44
4	ERH118	AZ45988W11 2/500	1123Y029.D	11/23/16 22:13
5	ERH119	AZ45989W10 2/500	1123Y030.D	11/23/16 22:43
6	ERH124	AZ45991W13 2/500	1123Y031.D	11/23/16 23:12
7	ERH125	AZ45992W14 2/500	1123Y032.D	11/23/16 23:41
8	ERH127	AZ45993W15 2/500	1123Y033.D	11/24/16 0:10
9	ERH129	AZ45994W17 2/500	1123Y034.D	11/24/16 0:40
10	ERH130	AZ45995W08 2/500	1123Y035.D	11/24/16 1:09
11	ERH131	AZ45996W11 2/500	1123Y036.D	11/24/16 1:38
12		50ug/ml DEG 11/22/16	1123Y038.D	11/24/16 2:20
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	42.3
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.9
127	40 - 60% of mass 198	56.2
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 197.95	100.0
199	5 - 9% of mass 198	6.7
275	10 - 30% of mass 198	24.1
365	1 - 100% of mass 198	3.5
441	0.01 - 100% of mass 443	91.3
442	50 - 150% of mass 197.95	97.0
443	17 - 23% of mass 442	18.7

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 81515

Lab File ID (Standard): 1123Y007.D Date Analyzed: 11/23/16

Instrument ID: Yoda Time Analyzed: 11:28

GC Column: _____ ID: Heated Purge: (Y/N) _____

		1,4-dichlorobenzene-D4(IS)		Napthalene-D8(IS)		Acenaphthene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	177940	5.04	800769	6.46	474142	8.47
	UPPER LIMIT	355880	5.54	1601538	6.96	948284	8.97
	LOWER LIMIT	88970	4.54	400385	5.96	237071	7.97
	SAMPLE NO.						
01	SS2 DEG 11/22/16	154792	5.03	678996	6.46	410275	8.47
02	161122A BLK 2/500	167612	5.05	759829	6.46	446708	8.47
03	161122A LCS-1 2/500	178143	5.03	798965	6.45	476707	8.47
04	161122A LCSD-1 2/500	174511	5.04	787511	6.46	464749	8.47
05	AZ45988W11 2/500	176572	5.04	801448	6.46	481378	8.47
06	AZ45989W10 2/500	186755	5.04	834674	6.46	486681	8.47
07	AZ45991W13 2/500	187786	5.04	851369	6.46	510864	8.46
08	AZ45992W14 2/500	190798	5.05	867233	6.46	505896	8.46
09	AZ45993W15 2/500	178017	5.04	801045	6.46	468368	8.46
10	AZ45994W17 2/500	182152	5.05	820094	6.46	476760	8.46
11	AZ45995W08 2/500	181263	5.04	805905	6.46	475034	8.47
12	AZ45996W11 2/500	179783	5.04	831433	6.46	499722	8.47
13	50ug/ml DEG 11/22/16	171742	5.04	775247	6.46	456087	8.46
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 81515

Lab File ID (Standard): 1123Y007.D Date Analyzed: 11/23/16

Instrument ID: Yoda Time Analyzed: 11:28

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Phenanthrene-D10(IS)		Chrysene-D12(IS)		Perylene-D12(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	857113	10.19	818162	13.27	686190	14.97
	UPPER LIMIT	1714226	10.69	1636324	13.77	1372380	15.47
	LOWER LIMIT	428557	9.69	409081	12.77	343095	14.47
	SAMPLE NO.						
01	SS2 DEG 11/22/16	752056	10.20	748077	13.28	520555	14.97
02	161122A BLK 2/500	822401	10.19	776964	13.27	827769	14.97
03	161122A LCS-1 2/500	855230	10.19	806477	13.28	849986	14.97
04	161122A LCSD-1 2/500	857022	10.19	794276	13.27	746914	14.97
05	AZ45988W11 2/500	872036	10.19	810553	13.27	704036	14.97
06	AZ45989W10 2/500	900199	10.19	841207	13.27	744517	14.97
07	AZ45991W13 2/500	929427	10.19	919136	13.28	850758	14.97
08	AZ45992W14 2/500	922757	10.19	868223	13.27	779290	14.97
09	AZ45993W15 2/500	870082	10.19	828776	13.27	821528	14.97
10	AZ45994W17 2/500	890760	10.19	842540	13.27	745775	14.97
11	AZ45995W08 2/500	865388	10.19	819676	13.27	891327	14.97
12	AZ45996W11 2/500	906219	10.19	855408	13.28	781507	14.97
13	50ug/ml DEG 11/22/16	844398	10.19	796087	13.27	689360	14.97
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

ORGANICS

Sample Data

APPL, INC.

EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH118

Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515

APPL ID: AZ45988

QCG: #87DME-161122A-214036

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	11/22/16	11/23/16

Quant Method: Y0GLYCOL.M
Run #: 1123Y029
Instrument: Yoda
Sequence: Y161123
Dilution Factor: 1
Initials: MA

Printed: 11/28/16 10:26:13 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y029.D Vial: 29
Acq On : 23 Nov 16 22:13 Operator: MA
Sample : AZ45988W11 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 9:14 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	176572	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.46	136	801448	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	481378	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.19	188	872036	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.27	240	810553	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.97	264	704036	40.00000	ppb	-0.19

System Monitoring Compounds

Target Compounds Qvalue

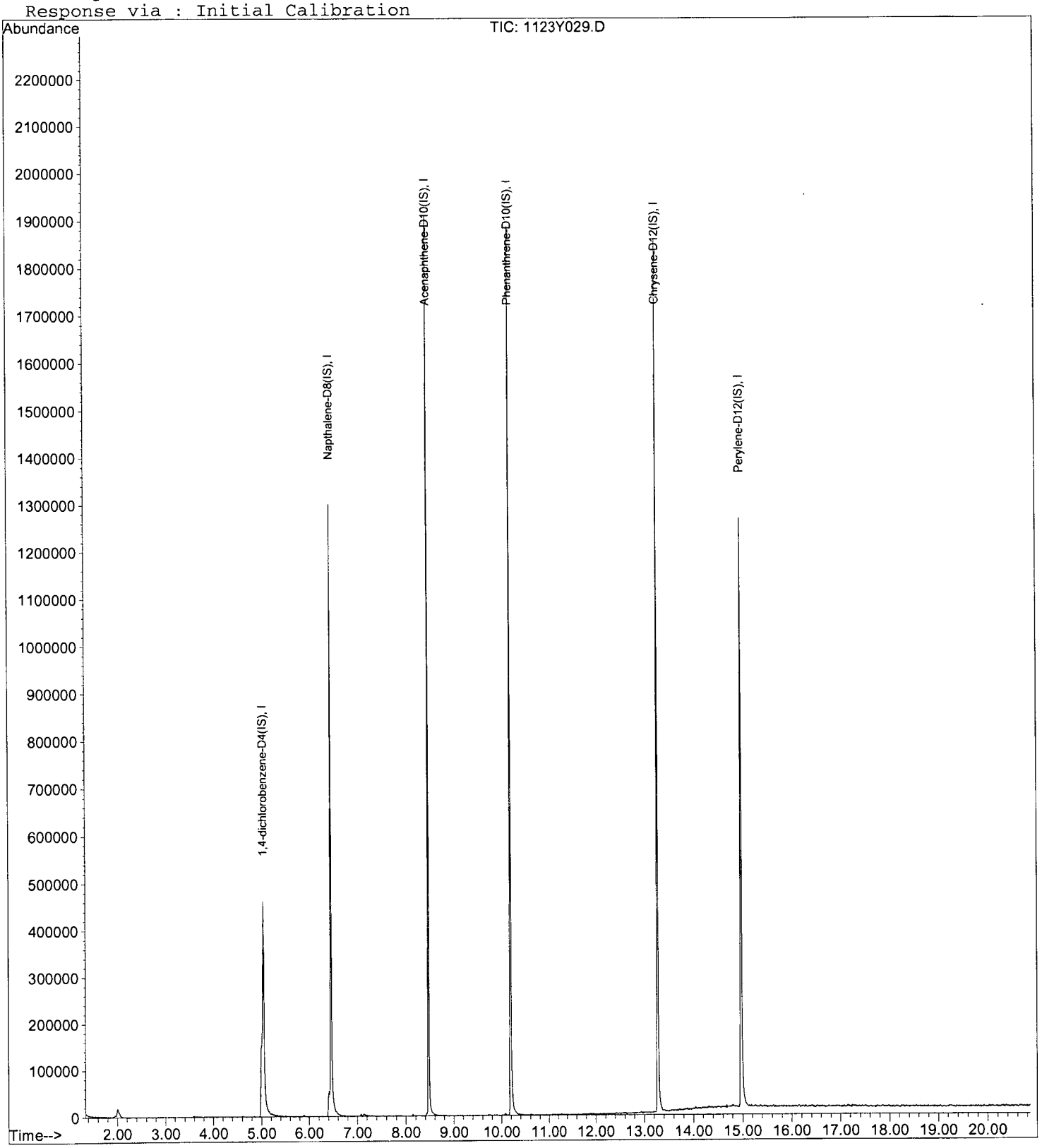
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y029.D Vial: 29
Acq On : 23 Nov 16 22:13 Operator: MA
Sample : AZ45988W11 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 9:14 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH119

Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515

APPL ID: AZ45989

QCG: #87DME-161122A-214036

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	11/22/16	11/23/16

Quant Method:	Y0GLYCOL.M
Run #:	1123Y030
Instrument:	Yoda
Sequence:	Y161123
Dilution Factor:	1
Initials:	MA

Printed: 11/28/16 10:26:13 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y030.D Vial: 30
Acq On : 23 Nov 16 22:43 Operator: MA
Sample : AZ45989W10 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 9:14 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	186755	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.46	136	834674	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	486681	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.19	188	900199	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.27	240	841207	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.97	264	744517	40.00000	ppb	-0.19

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

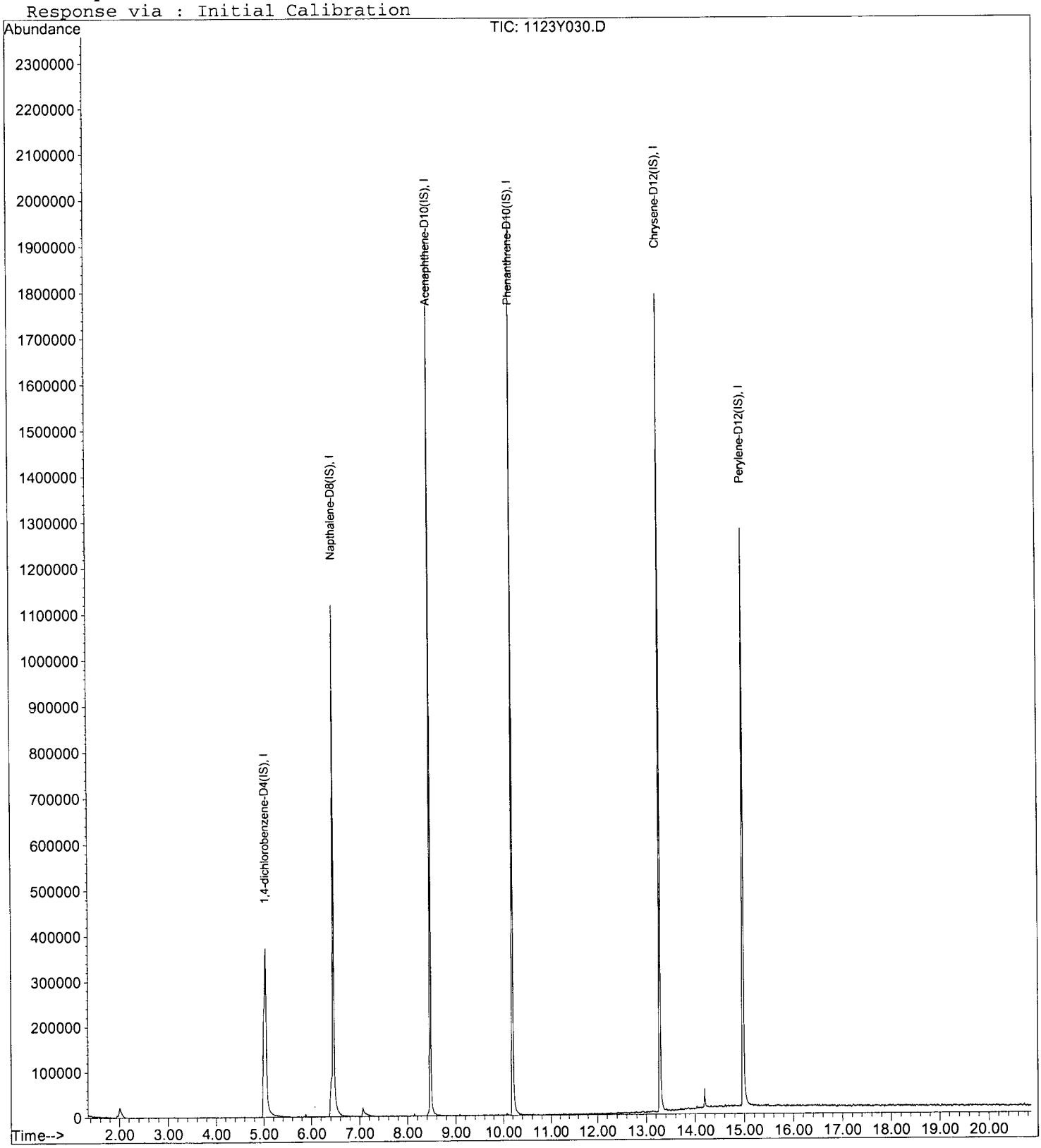
Data File : M:\YODA\DATA\Y161123\1123Y030.D
Acq On : 23 Nov 16 22:43
Sample : AZ45989W10 2/500
Misc :

Vial: 30
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Nov 28 9:14 2016

Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH124

Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515

APPL ID: AZ45991

QCG: #87DME-161122A-214036

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	11/22/16	11/23/16

Quant Method: Y0GLYCOL.M
Run #: 1123Y031
Instrument: Yoda
Sequence: Y161123
Dilution Factor: 1
Initials: MA

Printed: 11/28/16 10:26:13 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y031.D Vial: 31
Acq On : 23 Nov 16 23:12 Operator: MA
Sample : AZ45991W13 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 9:14 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	187786	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.46	136	851369	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.46	164	510864	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.19	188	929427	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.28	240	919136	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.97	264	850758	40.00000	ppb	-0.20

System Monitoring Compounds

Target Compounds Qvalue

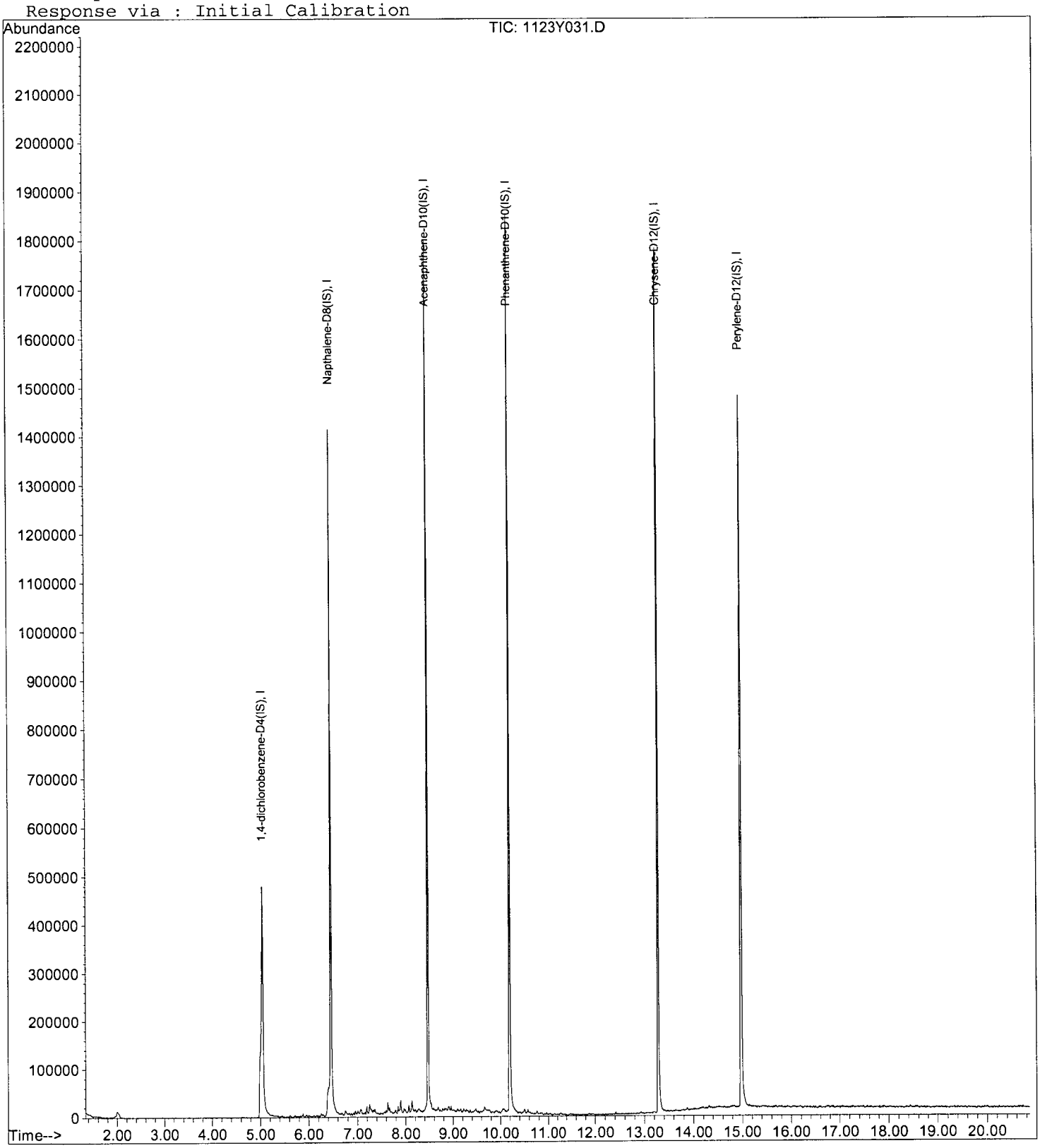
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y031.D Vial: 31
Acq On : 23 Nov 16 23:12 Operator: MA
Sample : AZ45991W13 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 9:14 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH125

Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515

APPL ID: AZ45992

QCG: #87DME-161122A-214036

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	11/22/16	11/23/16

Quant Method: Y0GLYCOL.M
Run #: 1123Y032
Instrument: Yoda
Sequence: Y161123
Dilution Factor: 1
Initials: MA

Printed: 11/28/16 10:26:13 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y032.D Vial: 32
Acq On : 23 Nov 16 23:41 Operator: MA
Sample : AZ45992W14 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 9:15 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	190798	40.00000	ppb	0.01
3) Napthalene-D8(IS)	6.46	136	867233	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.46	164	505896	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.19	188	922757	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.27	240	868223	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.97	264	779290	40.00000	ppb	-0.20

System Monitoring Compounds

Target Compounds Qvalue

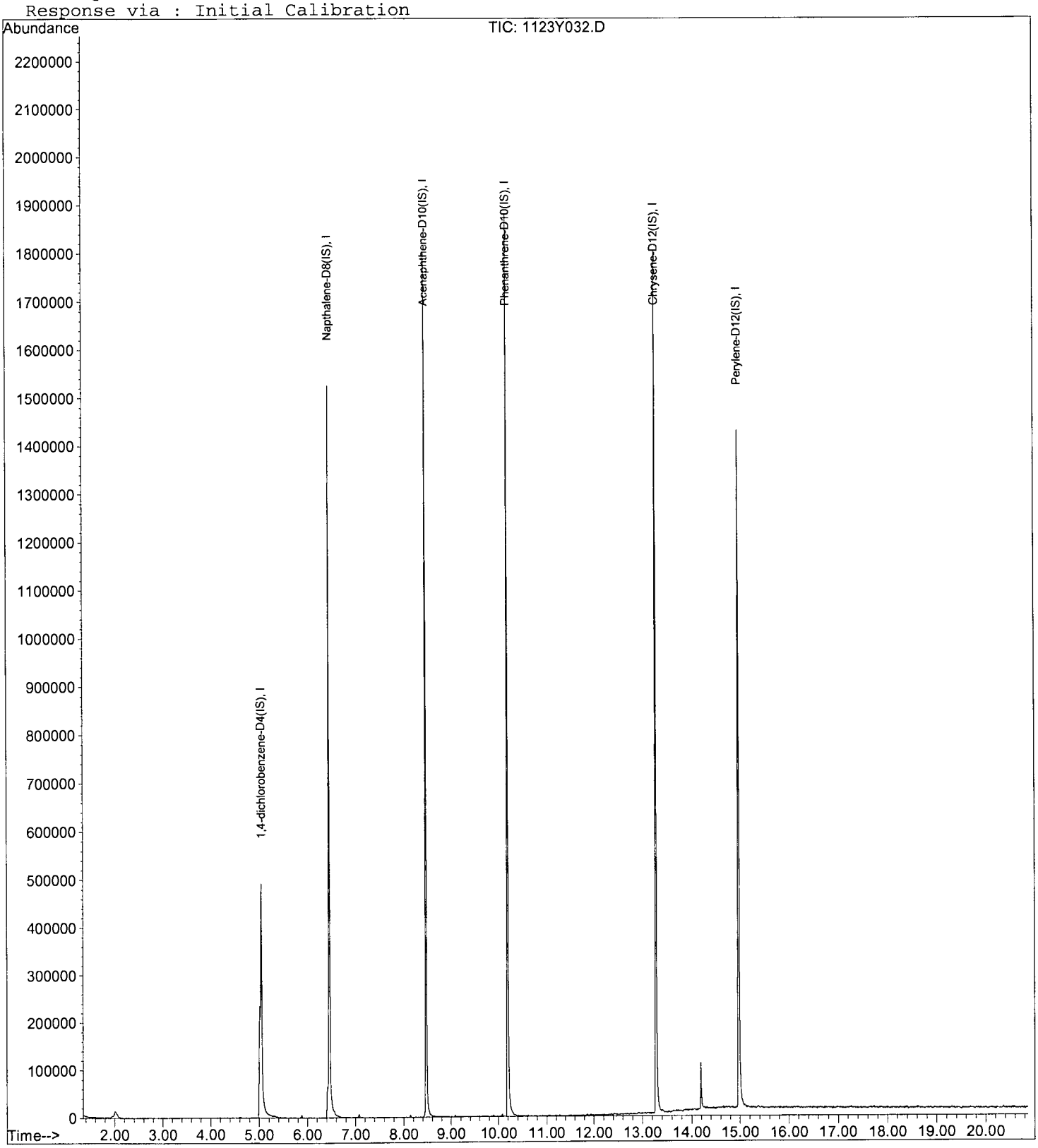
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y032.D Vial: 32
Acq On : 23 Nov 16 23:41 Operator: MA
Sample : AZ45992W14 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 9:15 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH127
Sample Collection Date: 11/16/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515
APPL ID: AZ45993
QCG: #87DME-161122A-214036

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	11/22/16	11/24/16

Quant Method:	Y0GLYCOL.M
Run #:	1123Y033
Instrument:	Yoda
Sequence:	Y161123
Dilution Factor:	1
Initials:	MA

Printed: 11/28/16 10:26:13 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y033.D Vial: 33
Acq On : 24 Nov 16 00:10 Operator: MA
Sample : AZ45993W15 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 9:09 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	178017	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.46	136	801045	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.46	164	468368	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.19	188	870082	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.27	240	828776	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.97	264	821528	40.00000	ppb	-0.20

System Monitoring Compounds

Target Compounds Qvalue

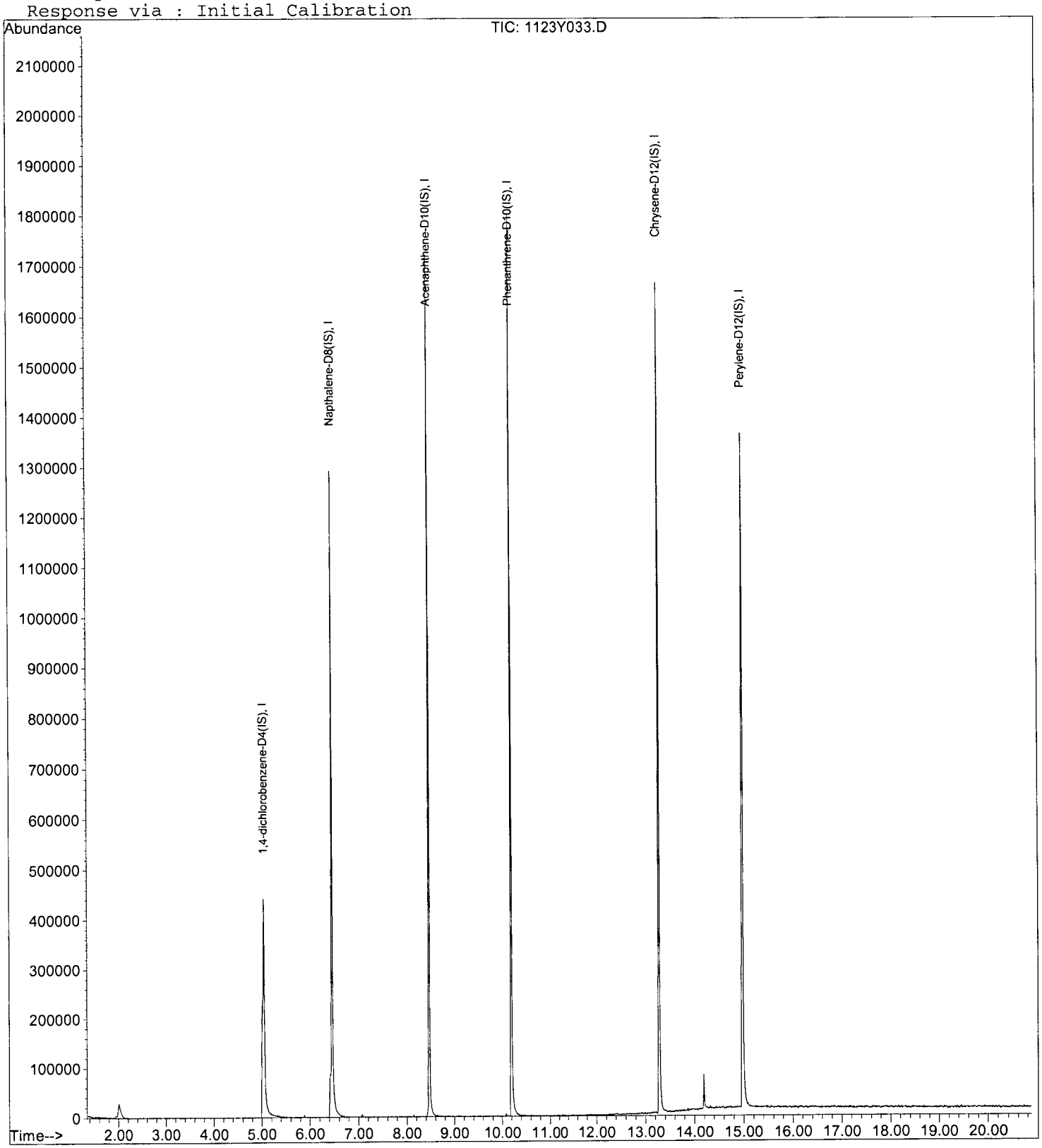
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y033.D Vial: 33
Acq On : 24 Nov 16 00:10 Operator: MA
Sample : AZ45993W15 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 9:09 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH129

Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515

APPL ID: AZ45994

QCG: #87DME-161122A-214036

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	11/22/16	11/24/16

Quant Method: Y0GLYCOL.M
Run #: 1123Y034
Instrument: Yoda
Sequence: Y161123
Dilution Factor: 1
Initials: MA

Printed: 11/28/16 10:26:13 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y034.D Vial: 34
Acq On : 24 Nov 16 00:40 Operator: MA
Sample : AZ45994W17 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 9:15 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	182152	40.00000	ppb	0.01
3) Napthalene-D8(IS)	6.46	136	820094	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.46	164	476760	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.19	188	890760	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.27	240	842540	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.97	264	745775	40.00000	ppb	-0.20

System Monitoring Compounds

Target Compounds Qvalue

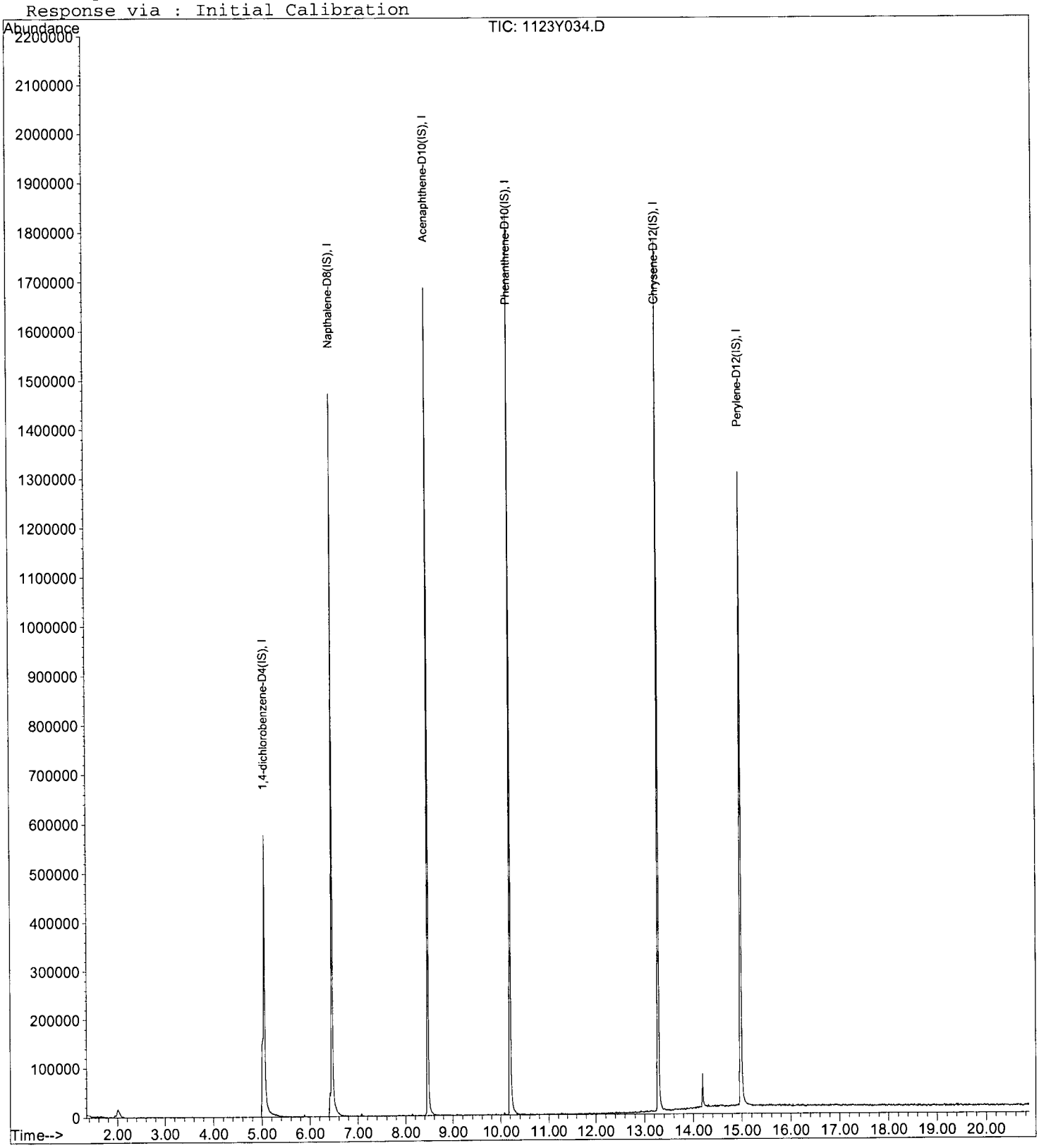
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y034.D Vial: 34
Acq On : 24 Nov 16 00:40 Operator: MA
Sample : AZ45994W17 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 9:15 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH130
Sample Collection Date: 11/16/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515
APPL ID: AZ45995
QCG: #87DME-161122A-214036

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	11/22/16	11/24/16

Quant Method: Y0GLYCOL.M
Run #: 1123Y035
Instrument: Yoda
Sequence: Y161123
Dilution Factor: 1
Initials: MA

Printed: 11/28/16 10:26:13 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y035.D Vial: 35
Acq On : 24 Nov 16 1:09 Operator: MA
Sample : AZ45995W08 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 9:15 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	181263	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.46	136	805905	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	475034	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.19	188	865388	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.27	240	819676	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.97	264	891327	40.00000	ppb	-0.19

System Monitoring Compounds

Target Compounds Qvalue

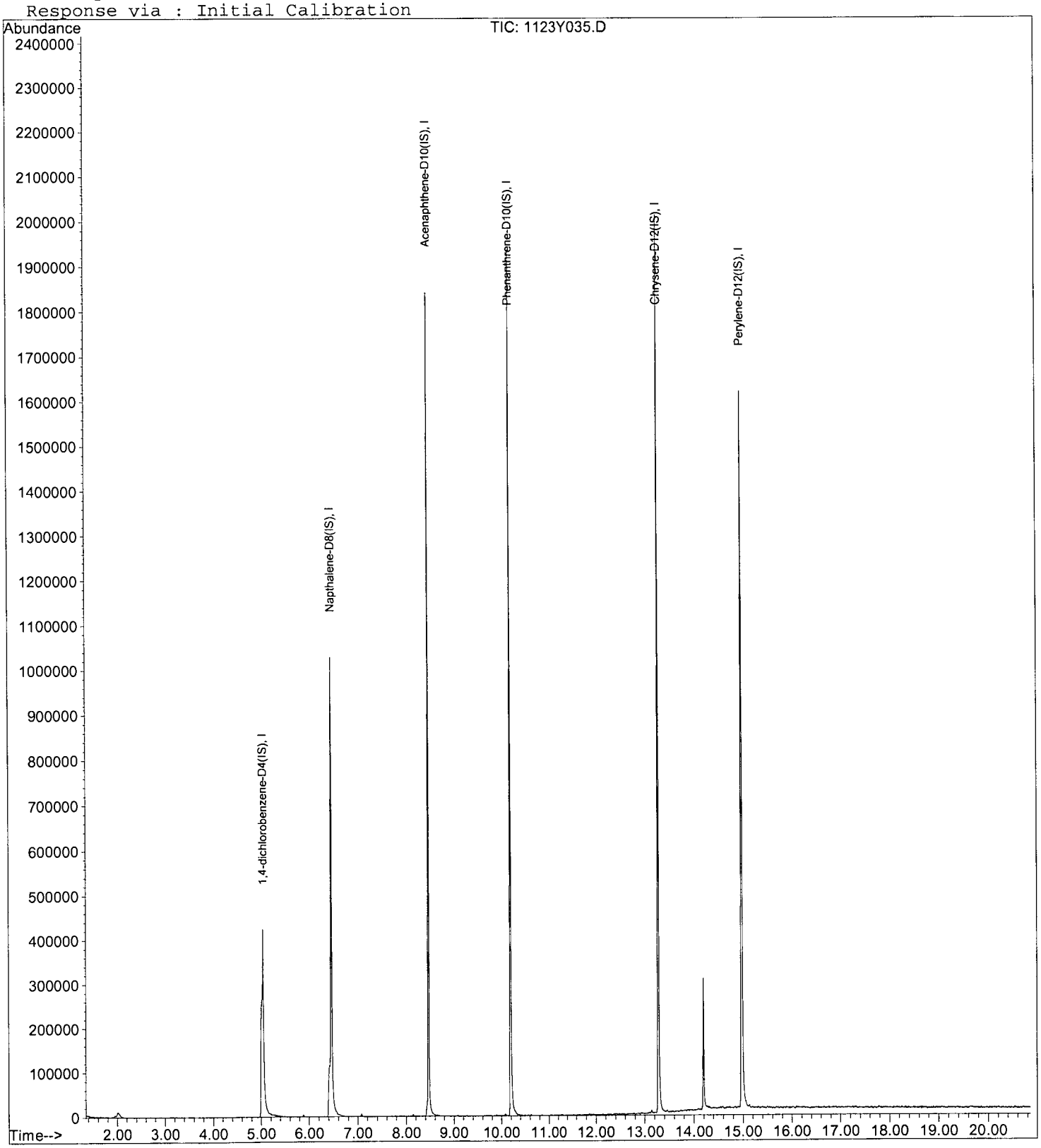
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y035.D Vial: 35
Acq On : 24 Nov 16 1:09 Operator: MA
Sample : AZ45995W08 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 9:15 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH131
Sample Collection Date: 11/16/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515
APPL ID: AZ45996
QCG: #87DME-161122A-214036

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	11/22/16	11/24/16

Quant Method:	Y0GLYCOL.M
Run #:	1123Y036
Instrument:	Yoda
Sequence:	Y161123
Dilution Factor:	1
Initials:	MA

Printed: 11/28/16 10:26:13 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y036.D Vial: 36
Acq On : 24 Nov 16 1:38 Operator: MA
Sample : AZ45996W11 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 9:09 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	179783	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.46	136	831433	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	499722	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.19	188	906219	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.28	240	855408	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.97	264	781507	40.00000	ppb	-0.19

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

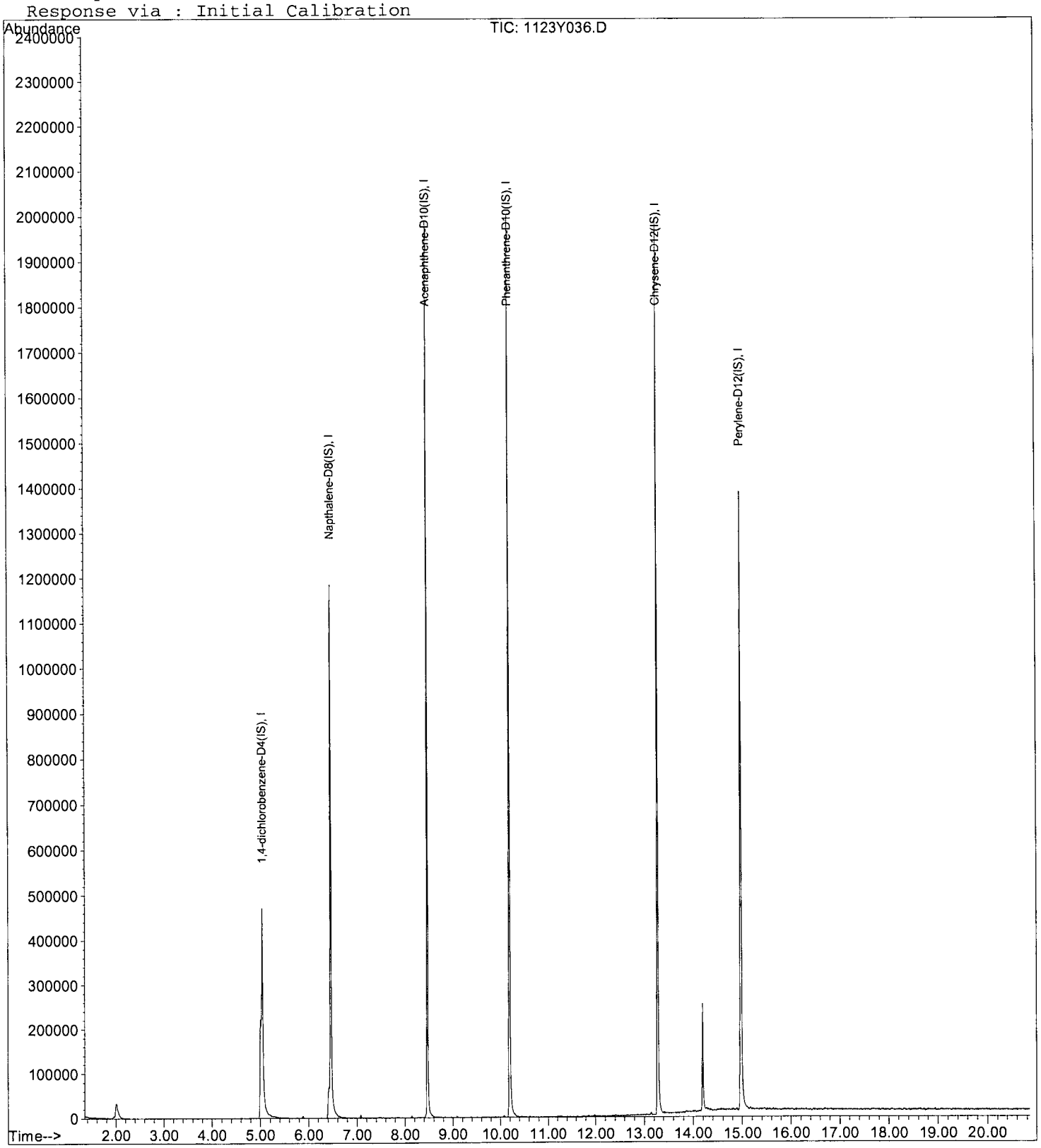
Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y036.D
Acq On : 24 Nov 16 1:38
Sample : AZ45996W11 2/500
Misc :

Vial: 36
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Nov 28 9:09 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



ORGANICS

Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 11/23/16
Matrix: Instrument: Yoda
Initials:

		Compound	1	2	3	4	5	6	7	8			Avg	%RSD		
			1123Y003.D	1123Y004.D	1123Y005.D	1123Y006.D	1123Y007.D	1123Y008.D	1123Y009.D	1123Y010.D						
1	I	1,4-dichlorobenzene-D4(IS)														
2	TML	2-(2-Methoxyethoxy)ethanol		0.0677	0.1017	0.1986	0.2068	0.2153	0.2208	0.2208			0.18	36	TML	0.997
3	I	Napthalene-D8(IS)														
4	I	Acenaphthene-D10(IS)														
5	I	Phenanthrene-D10(IS)														
6	I	Chrysene-D12(IS)														
7	I	Perylene-D12(IS)														
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Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y004.D
Acq On : 23 Nov 16 10:00
Sample : 100ug/ml DEG 11/22/16
Misc :

Vial: 4
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Nov 23 10:57 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 09:52:36 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	191756	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.46	136	848261	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	499918	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.20	188	910901	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.28	240	867420	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.98	264	881223	40.00000	ppb	-0.19
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.35	45	32433	35.04576	ppb	92

(#) = qualifier out of range (m) = manual integration

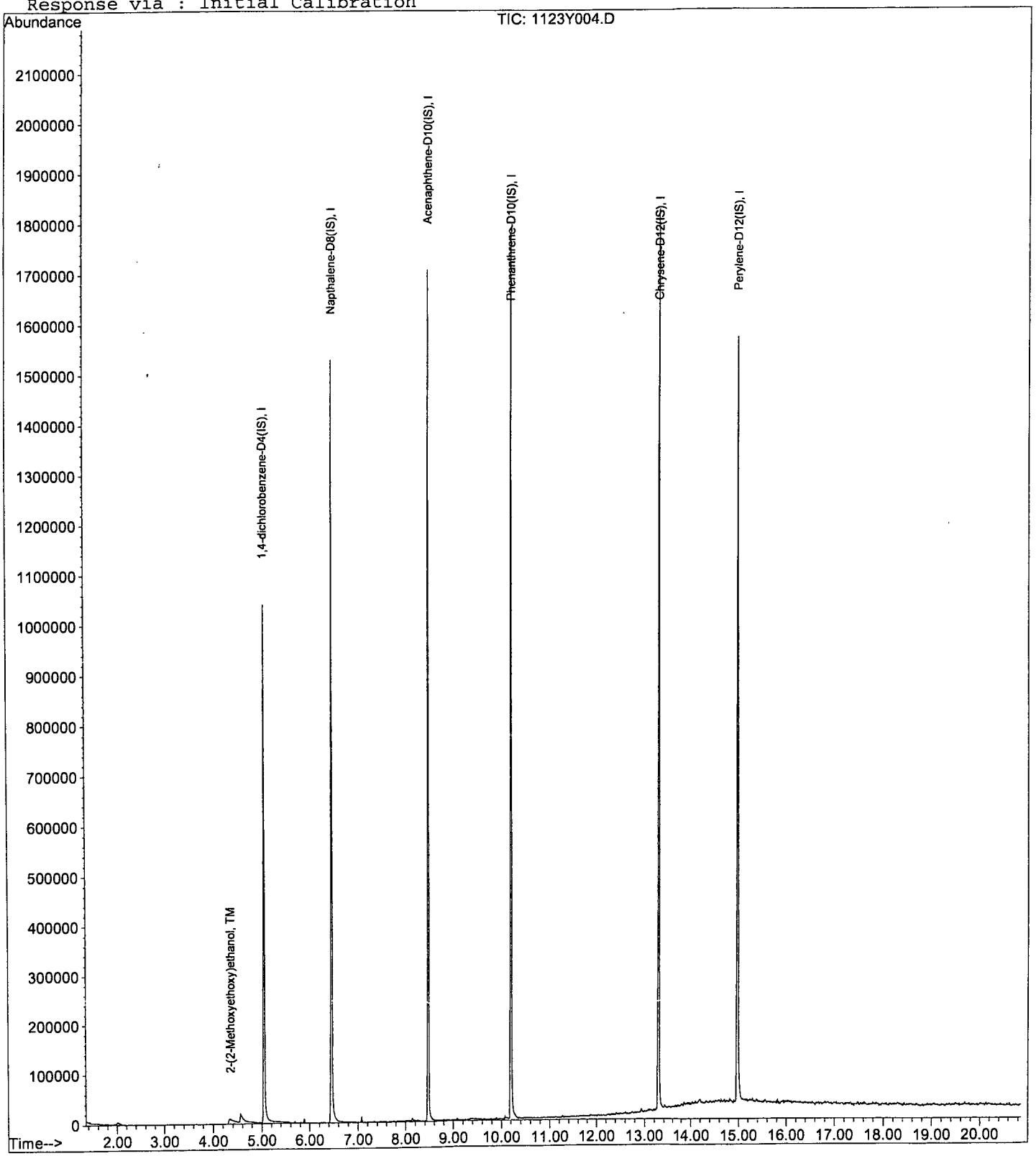
Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y004.D
Acq On : 23 Nov 16 10:00
Sample : 100ug/ml DEG 11/22/16
Misc :

Vial: 4
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Nov 23 10:57 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y005.D Vial: 5
Acq On : 23 Nov 16 10:29 Operator: MA
Sample : 200ug/ml DEG 11/22/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 11:07 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 11:07:08 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	186195	40.00000 ppb	0.00
3) Napthalene-D8(IS)	6.46	136	831906	40.00000 ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	486938	40.00000 ppb	0.00
5) Phenanthrene-D10(IS)	10.20	188	888986	40.00000 ppb	0.00
6) Chrysene-D12(IS)	13.28	240	837900	40.00000 ppb	0.00
7) Perylene-D12(IS)	14.98	264	835350	40.00000 ppb	-0.19
System Monitoring Compounds					
Target Compounds					Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.27	45	94721	105.40849 ppb	100

(#) = qualifier out of range (m) = manual integration

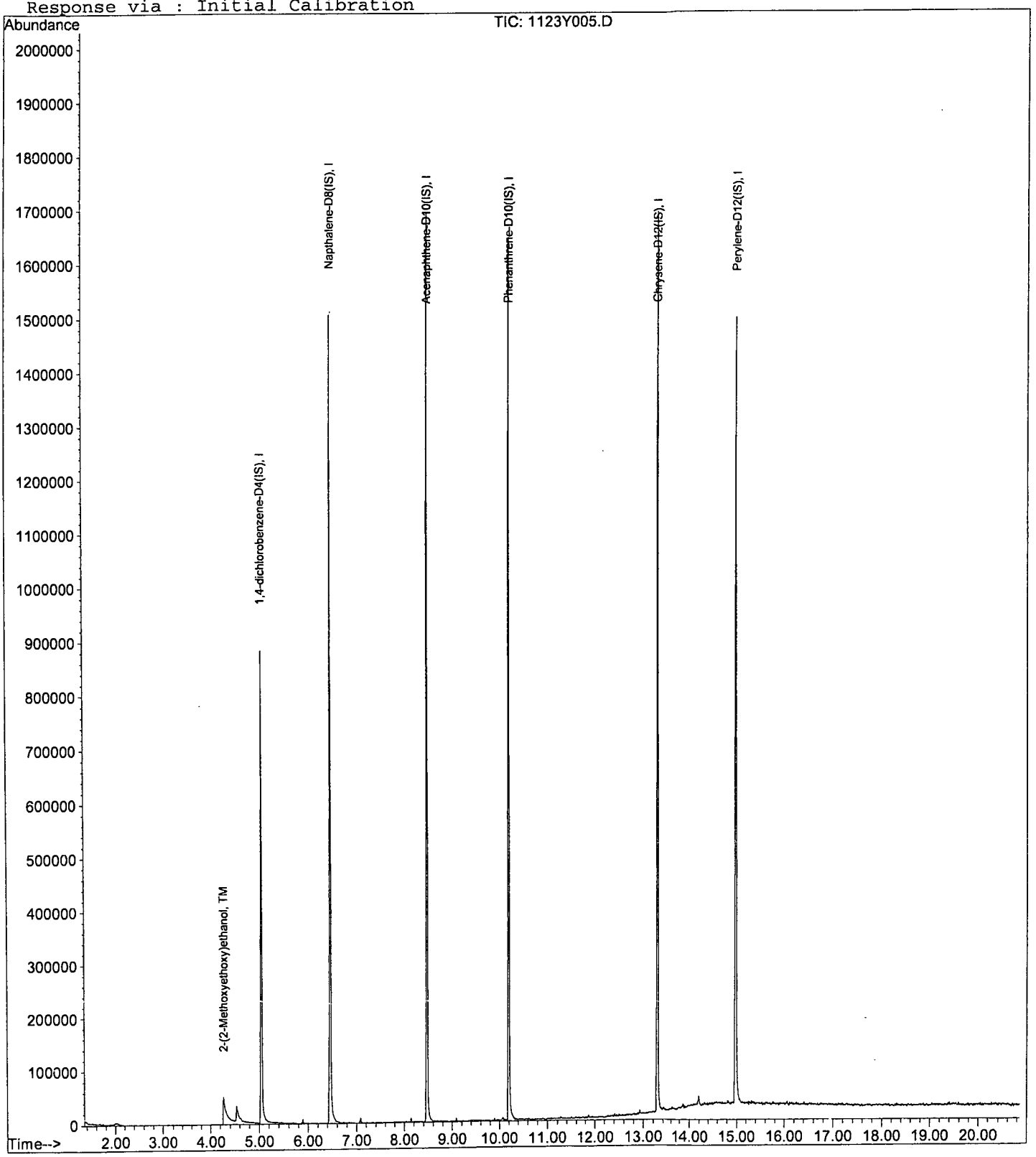
Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y005.D
Acq On : 23 Nov 16 10:29
Sample : 200ug/ml DEG 11/22/16
Misc :

Vial: 5
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Nov 23 11:07 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y006.D Vial: 6
Acq On : 23 Nov 16 10:59 Operator: MA
Sample : 400ug/ml DEG 11/22/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 12:16 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 11:07:08 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	182640	40.00000 ppb	0.00
3) Napthalene-D8(IS)	6.46	136	809322	40.00000 ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	473893	40.00000 ppb	0.00
5) Phenanthrene-D10(IS)	10.20	188	873279	40.00000 ppb	0.00
6) Chrysene-D12(IS)	13.28	240	833981	40.00000 ppb	0.00
7) Perylene-D12(IS)	14.98	264	933788	40.00000 ppb	-0.19
System Monitoring Compounds					
Target Compounds					Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.24	45	362663	411.43825 ppb	92

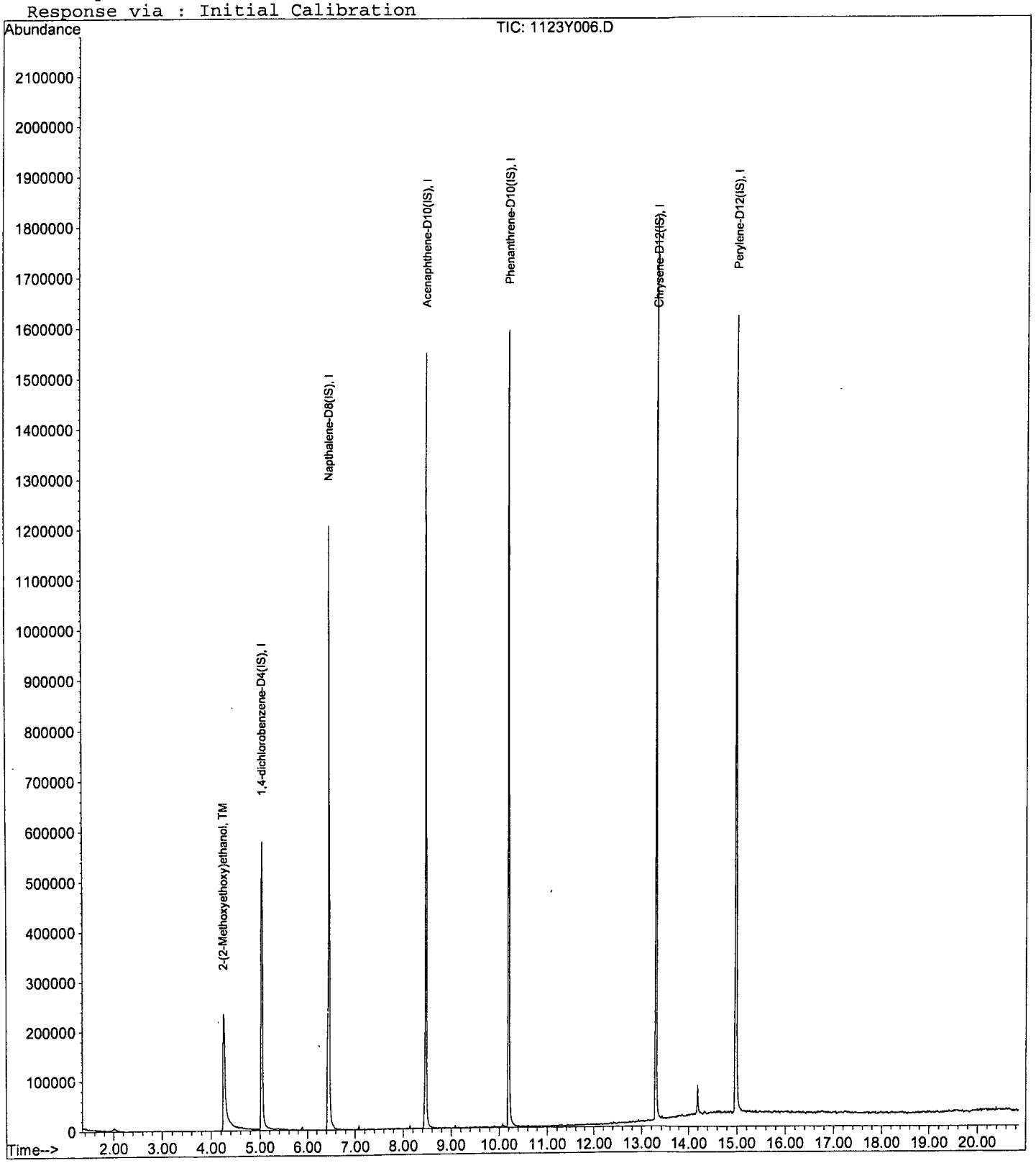
(#) = qualifier out of range (m) = manual integration
1123Y006.D Y0GLYCOL.M Mon Nov 28 09:28:39 2016 Page 1

Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y006.D Vial: 6
Acq On : 23 Nov 16 10:59 Operator: MA
Sample : 400ug/ml DEG 11/22/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 12:16 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y007.D Vial: 7
Acq On : 23 Nov 16 11:28 Operator: MA
Sample : 500ug/ml DEG 11/22/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 13:07 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:06:52 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	177940	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.46	136	800769	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	474142	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.19	188	857113	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.27	240	818162	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.97	264	686190	40.00000	ppb	-0.19
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.24	45	460031	535.68666	ppb	100

(#) = qualifier out of range (m) = manual integration

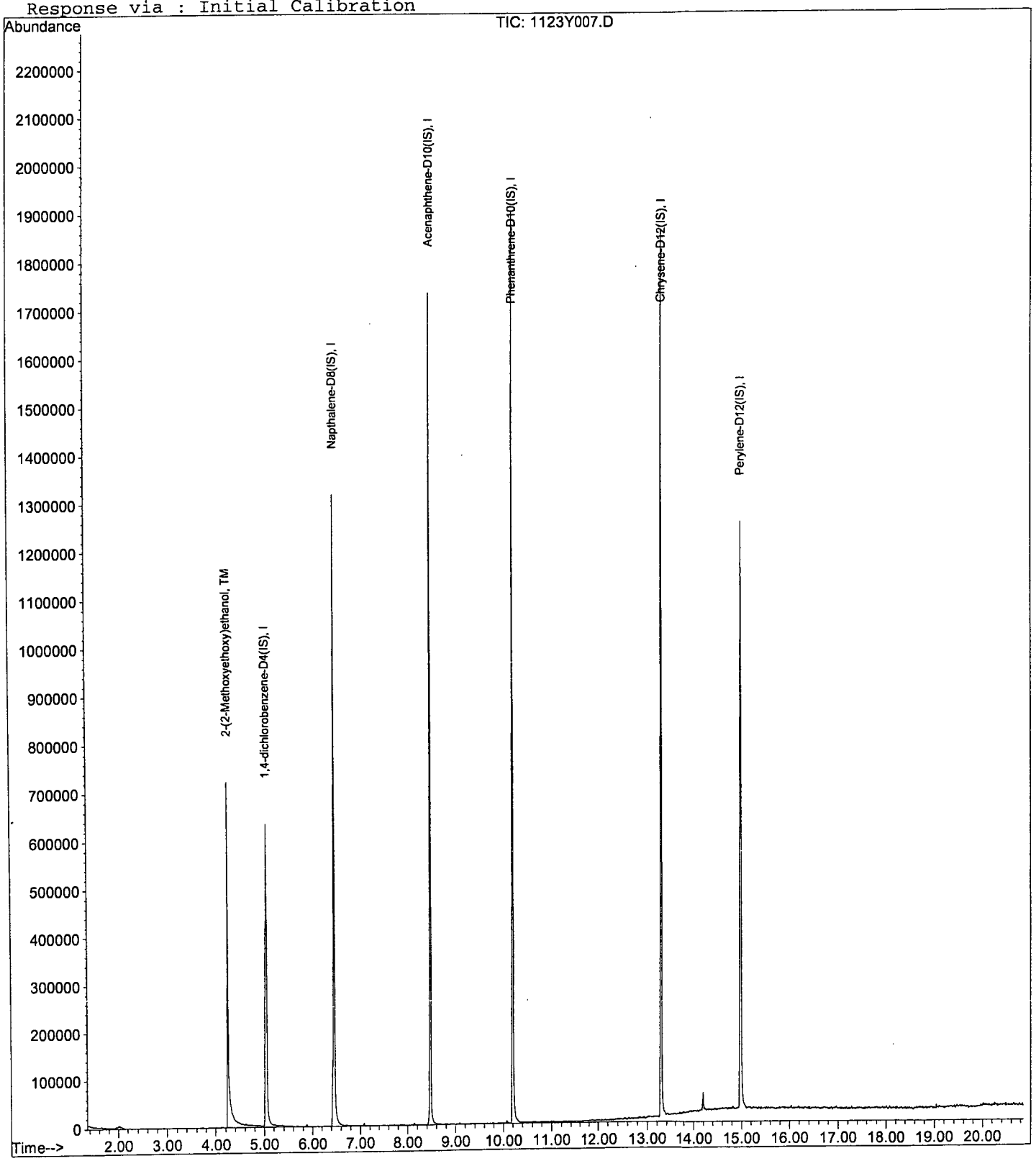
Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y007.D
Acq On : 23 Nov 16 11:28
Sample : 500ug/ml DEG 11/22/16
Misc :

Vial: 7
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Nov 23 13:07 2016 Quant Results File: YOGLYCOL.RES

Method : M:\YODA\DATA\Y161123\YOGLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y008.D Vial: 8
Acq On : 23 Nov 16 11:58 Operator: MA
Sample : 600ug/ml DEG 11/22/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 12:17 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 11:07:08 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	179974	40.00000	ppb	0.01
3) Napthalene-D8(IS)	6.46	136	822851	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	477957	40.00000	ppb	0.01
5) Phenanthrene-D10(IS)	10.20	188	864141	40.00000	ppb	0.01
6) Chrysene-D12(IS)	13.28	240	835483	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.98	264	983628	40.00000	ppb	-0.19

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.26	45	581168	669.09725	ppb	93

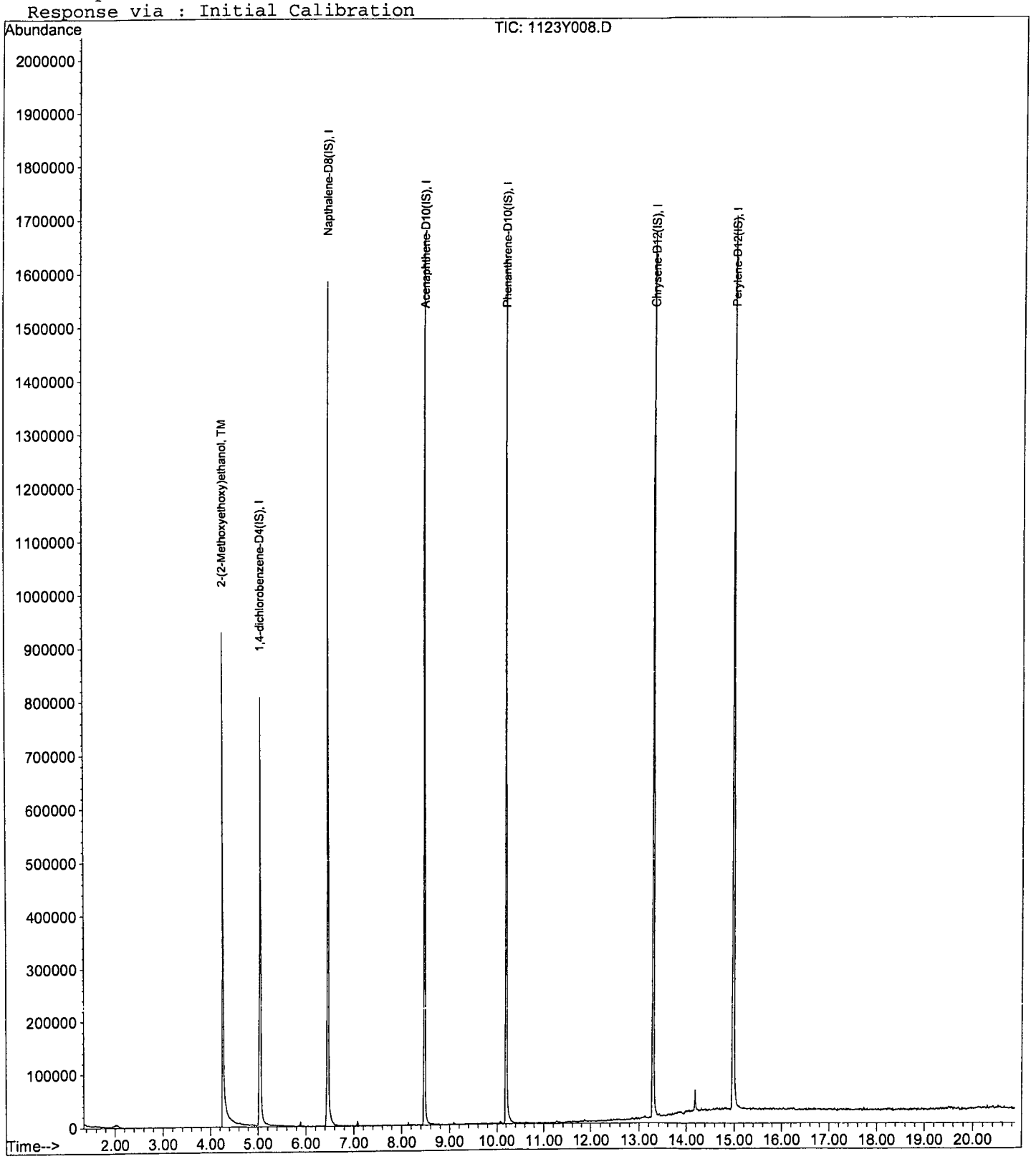
(#) = qualifier out of range (m) = manual integration
1123Y008.D Y0GLYCOL.M Mon Nov 28 09:28:46 2016 Page 1

Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y008.D Vial: 8
Acq On : 23 Nov 16 11:58 Operator: MA
Sample : 600ug/ml DEG 11/22/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 12:17 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y009.D Vial: 9
Acq On : 23 Nov 16 12:28 Operator: MA
Sample : 800ug/ml DEG 11/22/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 13:01 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 11:07:08 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	184046	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.46	136	806129	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	479713	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.19	188	887054	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.28	240	831663	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.97	264	732136	40.00000	ppb	-0.19

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.25	45	812749	915.01324	ppb	94

(#) = qualifier out of range (m) = manual integration
1123Y009.D Y0GLYCOL.M Mon Nov 28 09:28:50 2016 Page 1

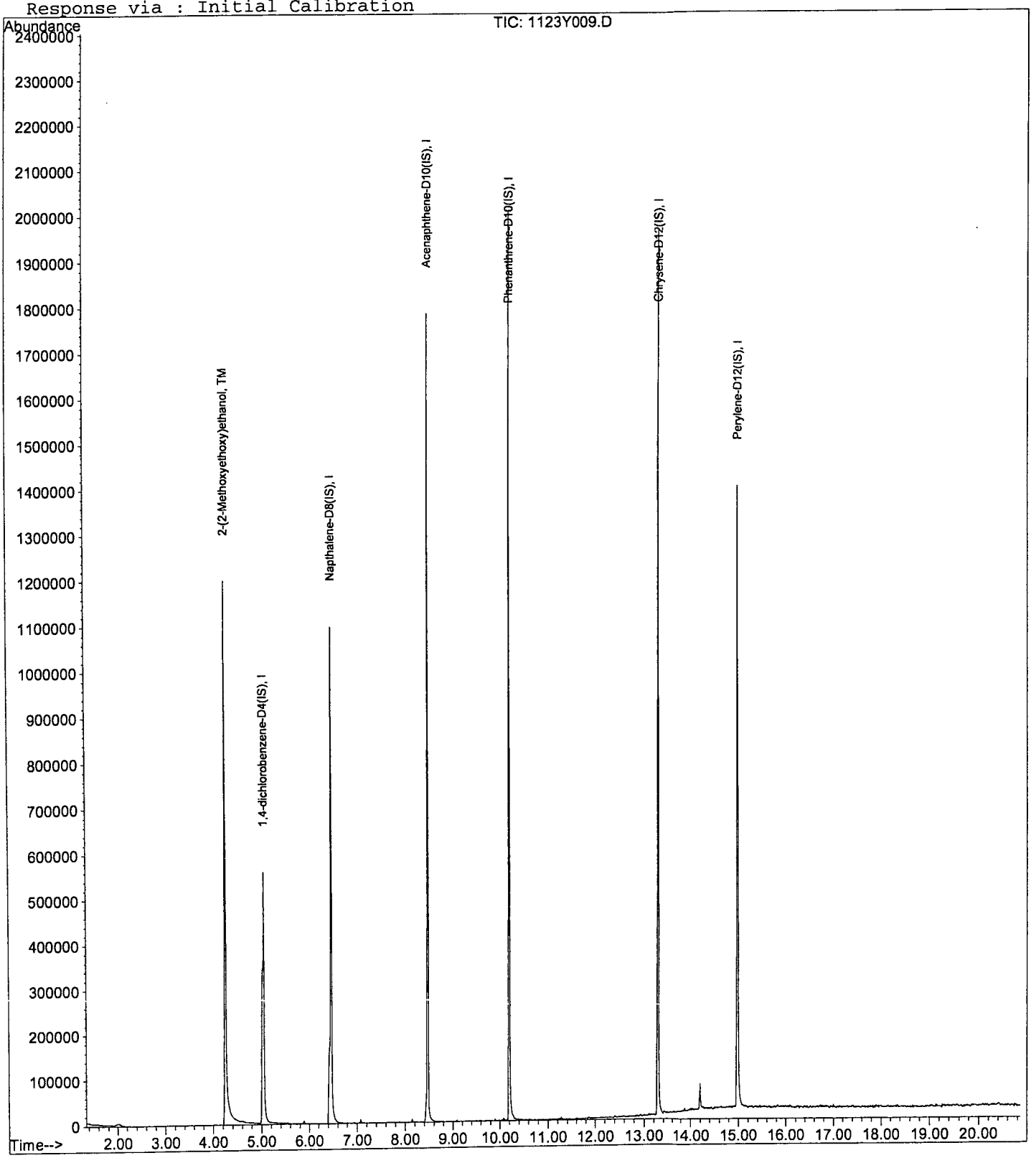
Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y009.D
Acq On : 23 Nov 16 12:28
Sample : 800ug/ml DEG 11/22/16
Misc :

Vial: 9
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Nov 23 13:01 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y010.D
Acq On : 23 Nov 16 13:11
Sample : 1000ug/ml DEG 11/22/16
Misc :

Vial: 10
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Nov 23 13:40 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:12:53 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	183170	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.46	136	813439	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	480140	40.00000	ppb	0.01
5) Phenanthrene-D10(IS)	10.20	188	884921	40.00000	ppb	0.01
6) Chrysene-D12(IS)	13.28	240	830083	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.98	264	571112	40.00000	ppb	-0.19
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.26	45	1011237	971.48281	ppb	99

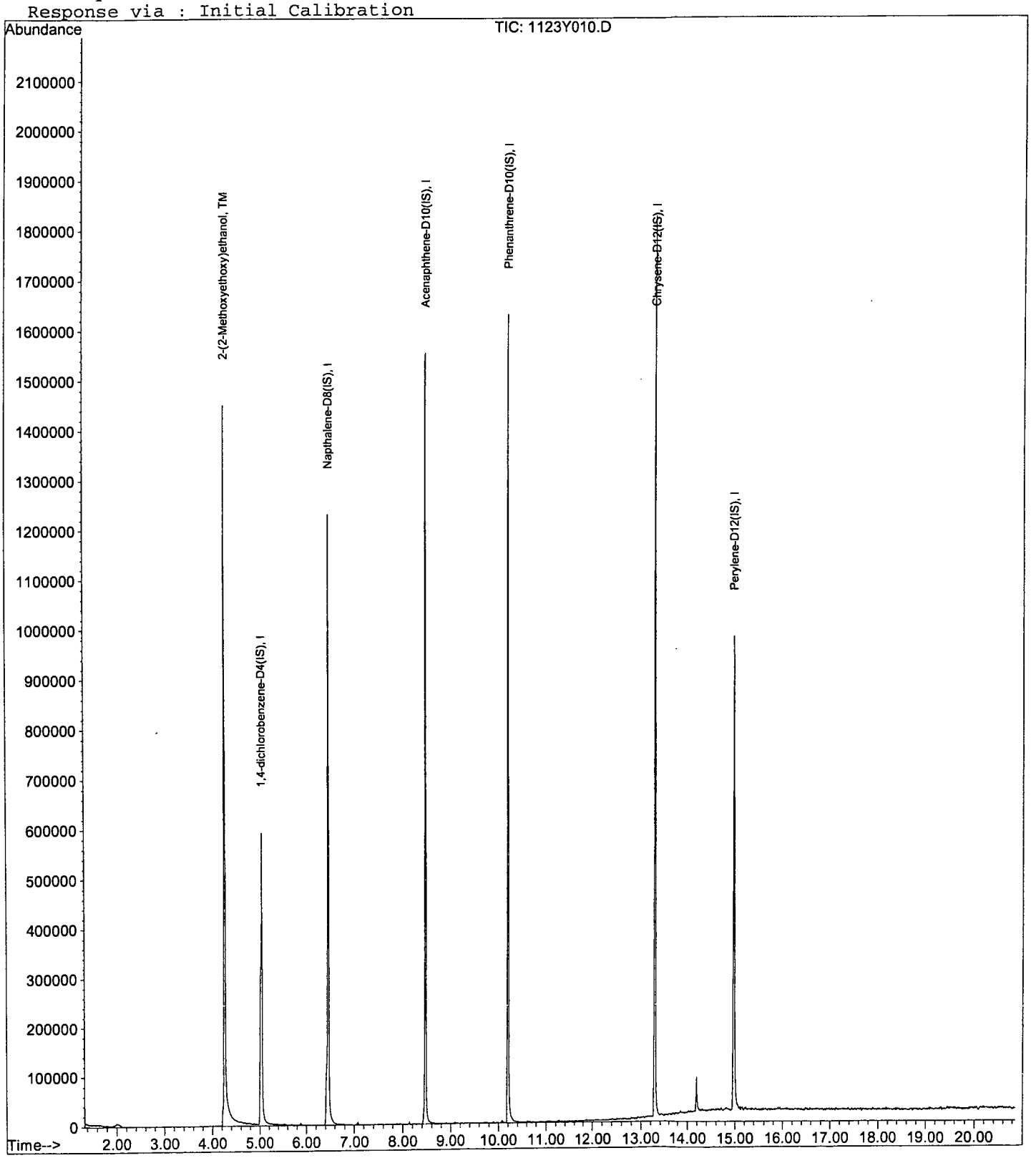
(#) = qualifier out of range (m) = manual integration
1123Y010.D Y0GLYCOL.M Mon Nov 28 09:28:53 2016 Page 1

Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y010.D Vial: 10
Acq On : 23 Nov 16 13:11 Operator: MA
Sample : 1000ug/ml DEG 11/22/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 13:40 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/23/16
Instrument: Yoda
Initial Cal. Date: 11/23/16
Data File: 1123Y012.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TML	2-(2-Methoxyethoxy)ethanol	0.1760	0.2259	28	TML	9.2
3	I	Napthalene-D8(IS)	ISTD			I	
4	I	Acenaphthene-D10(IS)	ISTD			I	
5	I	Phenanthrene-D10(IS)	ISTD			I	
6	I	Chrysene-D12(IS)	ISTD			I	
7	I	Perylene-D12(IS)	ISTD			I	
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
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19							
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31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			28.0		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y012.D Vial: 12
Acq On : 23 Nov 16 14:09 Operator: MA
Sample : SS2 DEG 11/22/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 14:27 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	154792	40.00000 ppb	0.00
3) Napthalene-D8(IS)	6.46	136	678996	40.00000 ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	410275	40.00000 ppb	0.00
5) Phenanthrene-D10(IS)	10.20	188	752056	40.00000 ppb	0.00
6) Chrysene-D12(IS)	13.28	240	748077	40.00000 ppb	0.00
7) Perylene-D12(IS)	14.97	264	520555	40.00000 ppb	-0.20
System Monitoring Compounds					
Target Compounds					Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.22	45	437112	545.83686 ppb	100

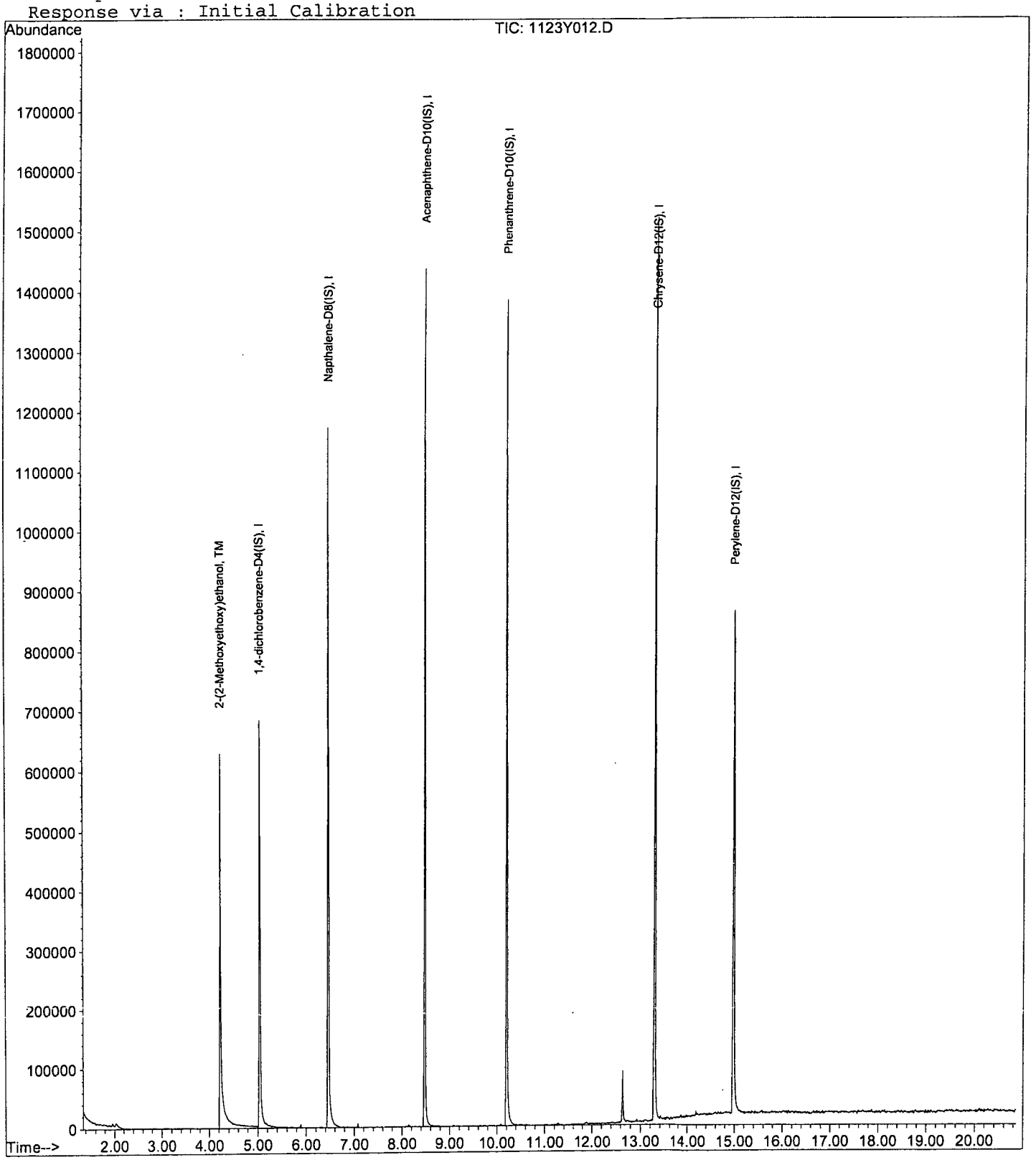
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y012.D Vial: 12
Acq On : 23 Nov 16 14:09 Operator: MA
Sample : SS2 DEG 11/22/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 14:27 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/24/16
Instrument: Yoda
Initial Cal. Date: 11/23/16
Data File: 1123Y038.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TML	2-(2-Methoxyethoxy)ethanol	0.1760	0.1732	1.6	TML	12
3	I	Napthalene-D8(IS)	ISTD			I	
4	I	Acenaphthene-D10(IS)	ISTD			I	
5	I	Phenanthrene-D10(IS)	ISTD			I	
6	I	Chrysene-D12(IS)	ISTD			I	
7	I	Perylene-D12(IS)	ISTD			I	
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
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31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			1.6		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y038.D Vial: 38
Acq On : 24 Nov 16 2:20 Operator: MA
Sample : 50ug/ml DEG 11/22/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 9:01 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	171742	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.46	136	775247	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.46	164	456087	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.19	188	844398	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.27	240	796087	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.97	264	689360	40.00000	ppb	-0.20
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.25	45	371815	438.22291	ppb	99

(#) = qualifier out of range (m) = manual integration

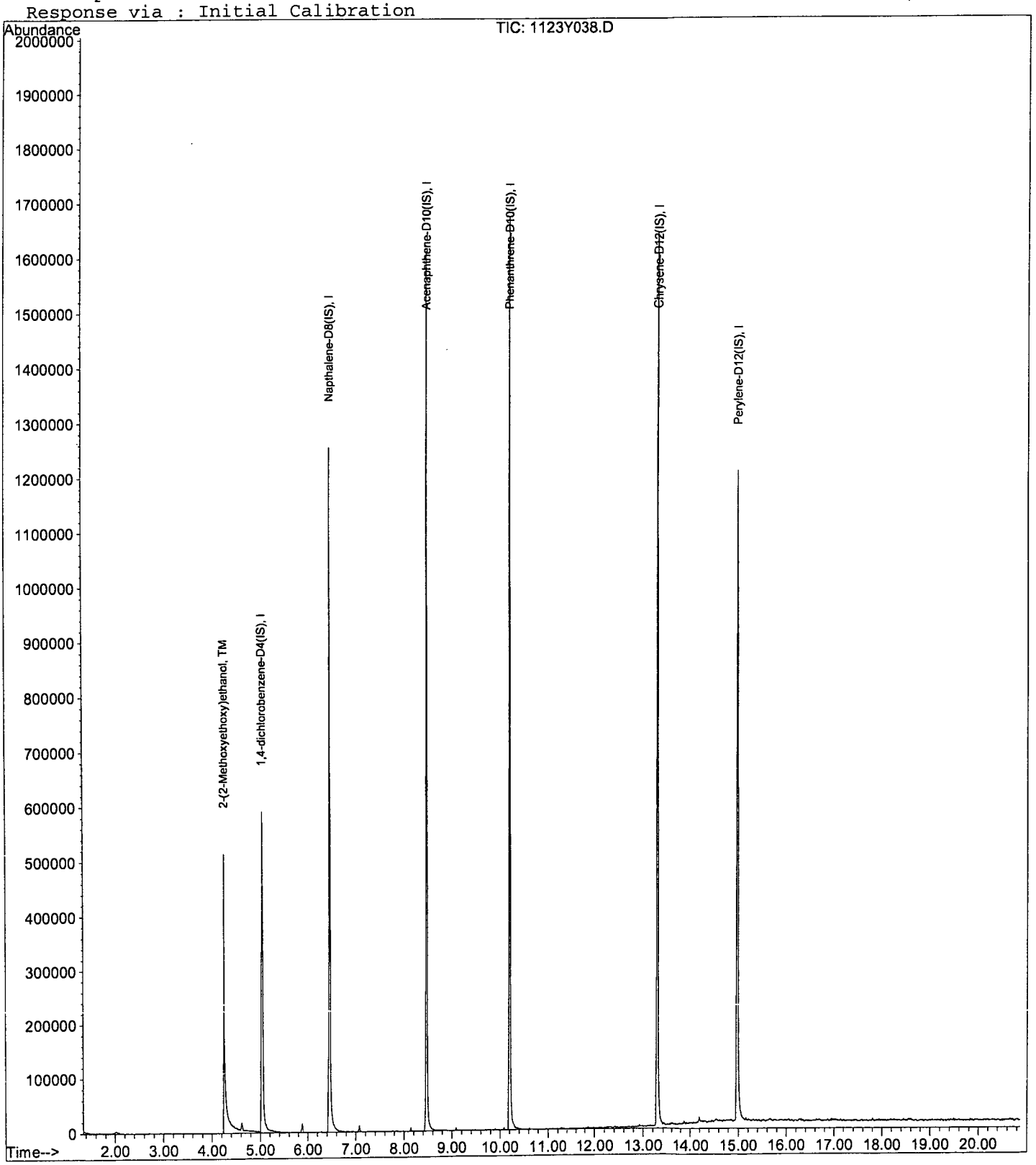
Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y038.D
Acq On : 24 Nov 16 2:20
Sample : 50ug/ml DEG 11/22/16
Misc :

Vial: 38
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Nov 28 9:01 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



ORGANICS

Raw Data

APPL, INC.

Method Blank

EPA 8270D MODIFIED WATER

Blank Name/QCG: **161122W-45988 - 214036**
Batch ID: #87DME-161122A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2-(2-METHOXYETHOXY)-ETHAN	80.0 U	100	80.0	40.0	ug/L	11/22/16	11/23/16

Quant Method:Y0GLYCOL.
Run #:1123Y026
Instrument:Yoda
Sequence:Y161123
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 11/28/16 10:26:19 AM

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y026.D Vial: 26
Acq On : 23 Nov 16 20:45 Operator: MA
Sample : 161122A BLK 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 9:09 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	167612	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.46	136	759829	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	446708	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.19	188	822401	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.27	240	776964	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.97	264	827769	40.00000	ppb	-0.20

System Monitoring Compounds

Target Compounds Qvalue

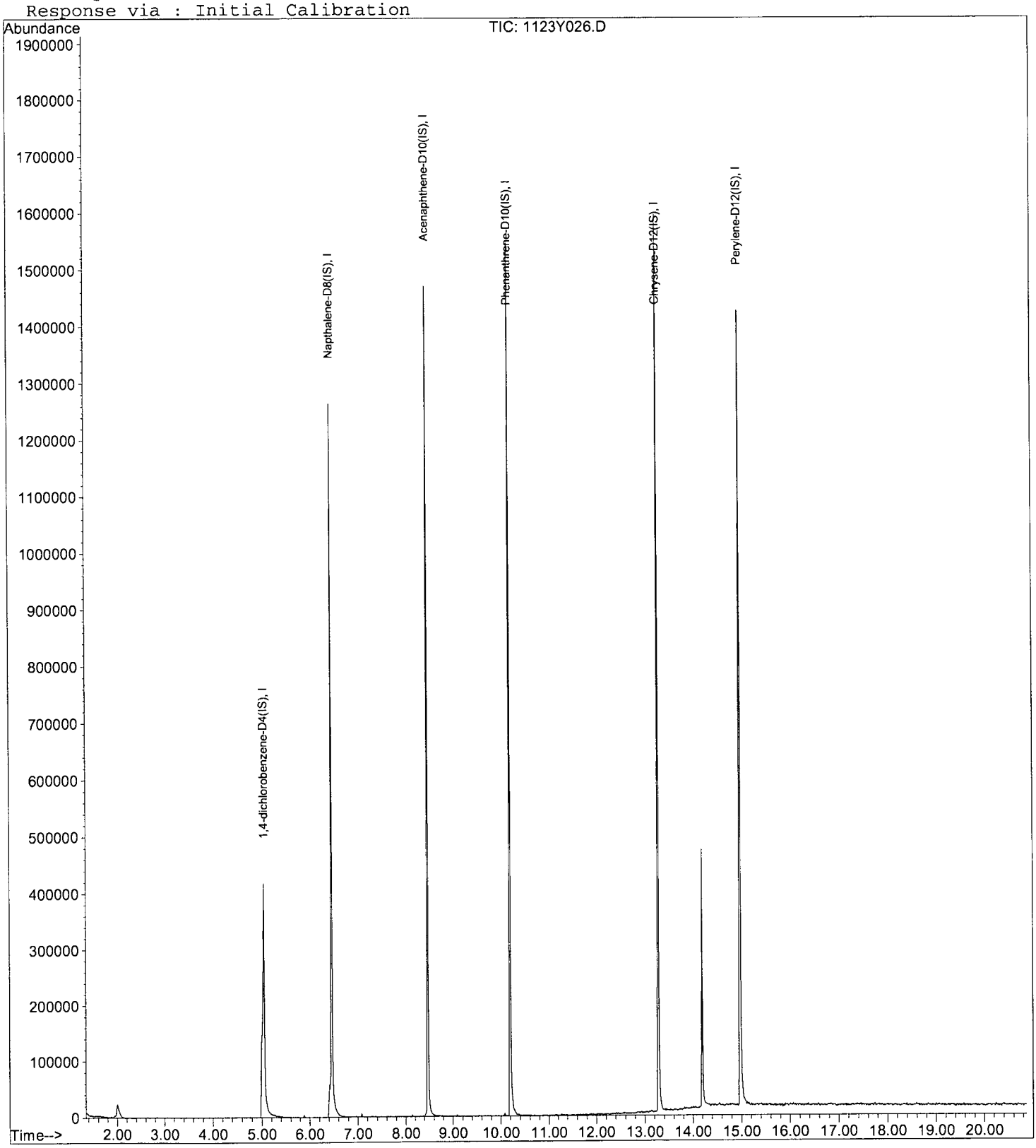
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y026.D Vial: 26
Acq On : 23 Nov 16 20:45 Operator: MA
Sample : 161122A BLK 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 9:09 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



Laboratory Control Spike Recoveries
EPA 8270D MODIFIED WATER

APPL ID: **161122W-45988 LCS - 214036**
Batch ID: #87DME-161122A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
2-(2-METHOXYETHOXY)-ETHANOL	500	366	437	73.2	87.4	30-130	17.7	20

Comments: _____

Primary	SPK	DUP
Quant Method :	Y0GLYCOL.M	Y0GLYCOL.M
Extraction Date :	11/22/16	11/22/16
Analysis Date :	11/23/16	11/23/16
Instrument :	Yoda	Yoda
Run :	1123Y027	1123Y028
Initials :	MA	

Printed: 11/28/16 10:26:23 AM
APPL Standard LCSD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y027.D Vial: 27
Acq On : 23 Nov 16 21:14 Operator: MA
Sample : 161122A LCS-1 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 9:09 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.03	152	178143	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.45	136	798965	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	476707	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.19	188	855230	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.28	240	806477	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.97	264	849986	40.00000	ppb	-0.19
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.27	45	306798	365.90991	ppb	99

(#) = qualifier out of range (m) = manual integration

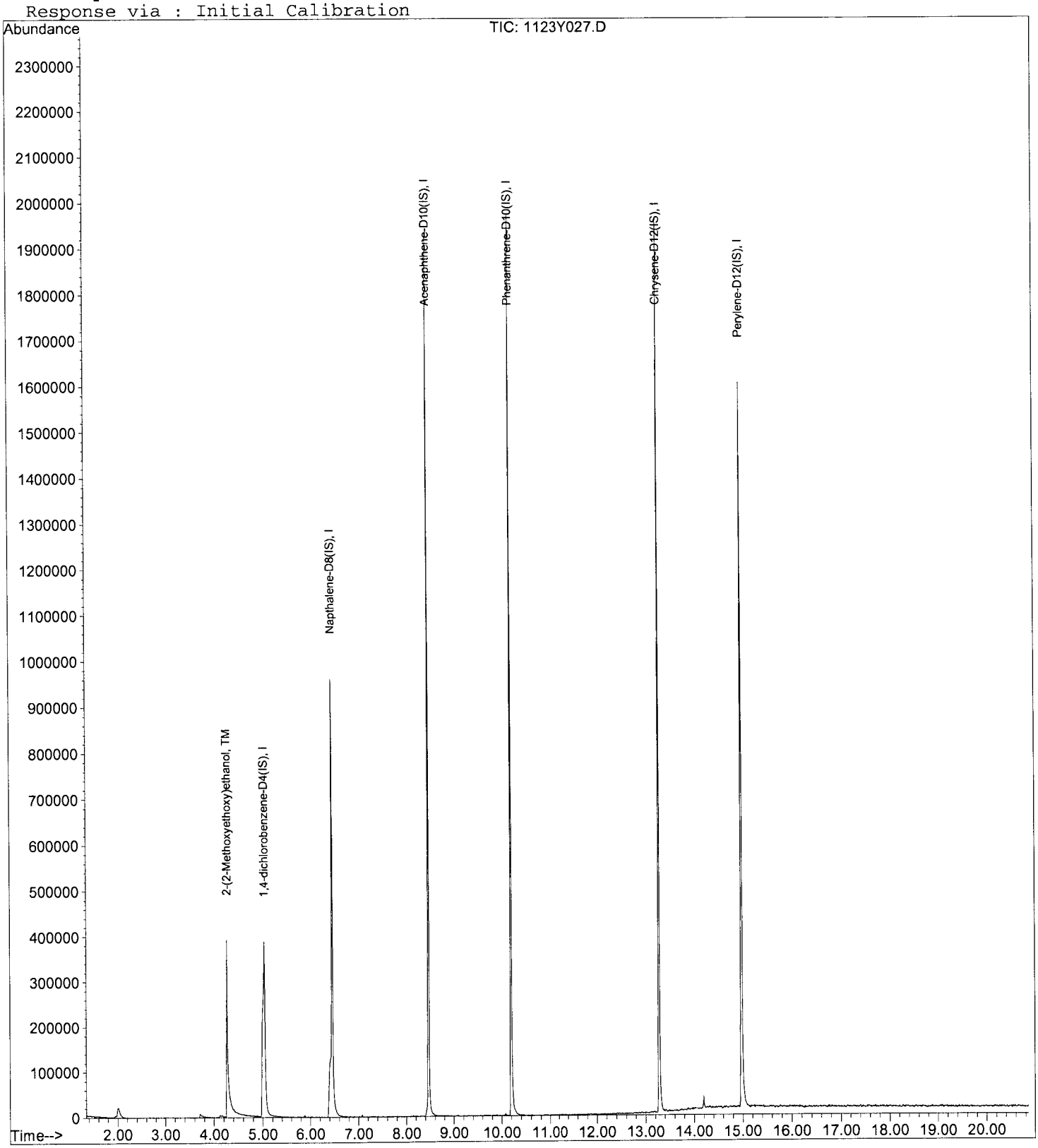
Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y027.D
Acq On : 23 Nov 16 21:14
Sample : 161122A LCS-1 2/500
Misc :

Vial: 27
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Nov 28 9:09 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y028.D Vial: 28
Acq On : 23 Nov 16 21:44 Operator: MA
Sample : 161122A LCSD-1 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 9:09 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.04	152	174511	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.46	136	787511	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	464749	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.19	188	857022	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.27	240	794276	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.97	264	746914	40.00000	ppb	-0.19

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.29	45	376426	436.92785	ppb	99

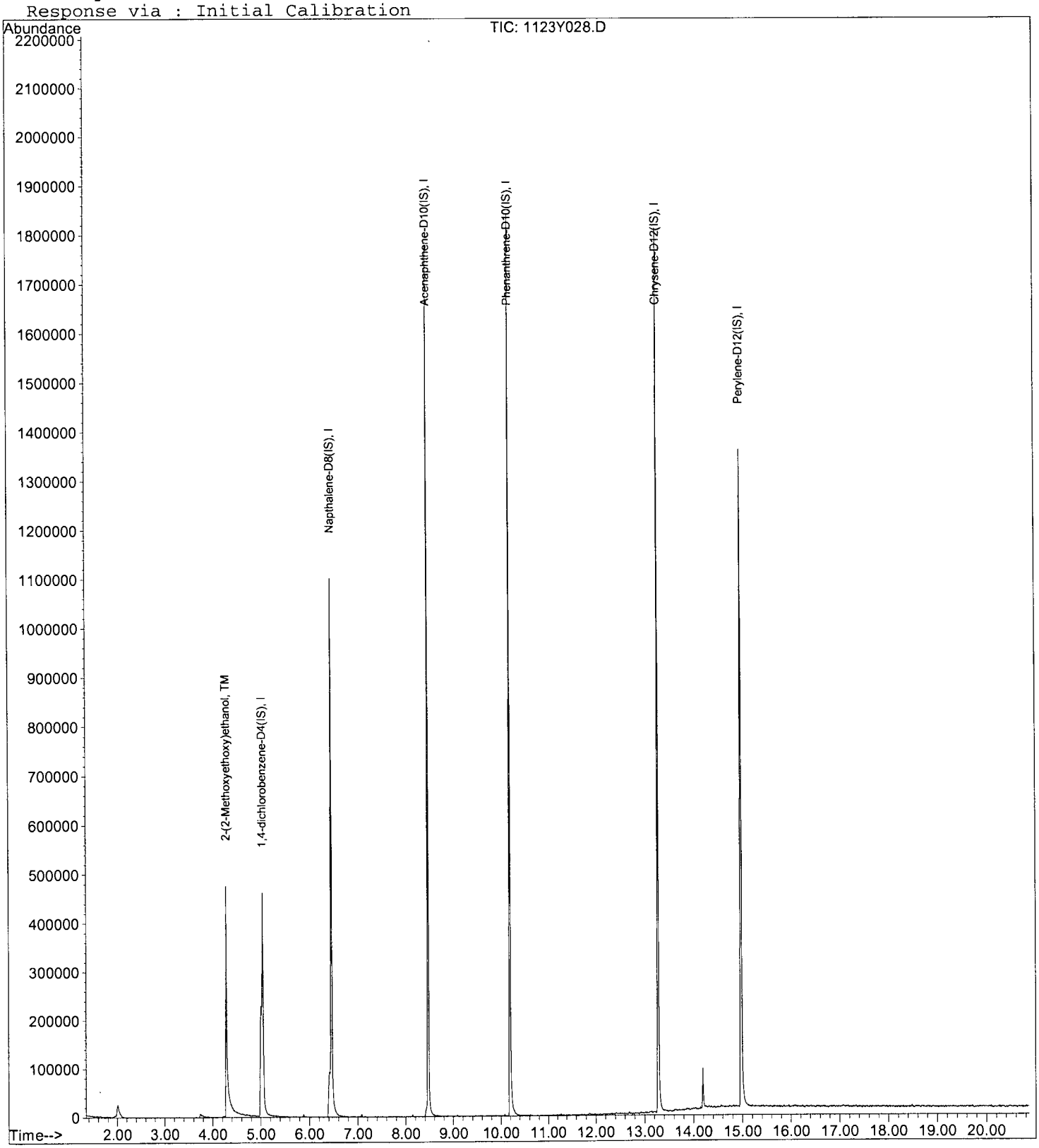
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161123\1123Y028.D Vial: 28
Acq On : 23 Nov 16 21:44 Operator: MA
Sample : 161122A LCSD-1 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 28 9:09 2016 Quant Results File: Y0GLYCOL.RES

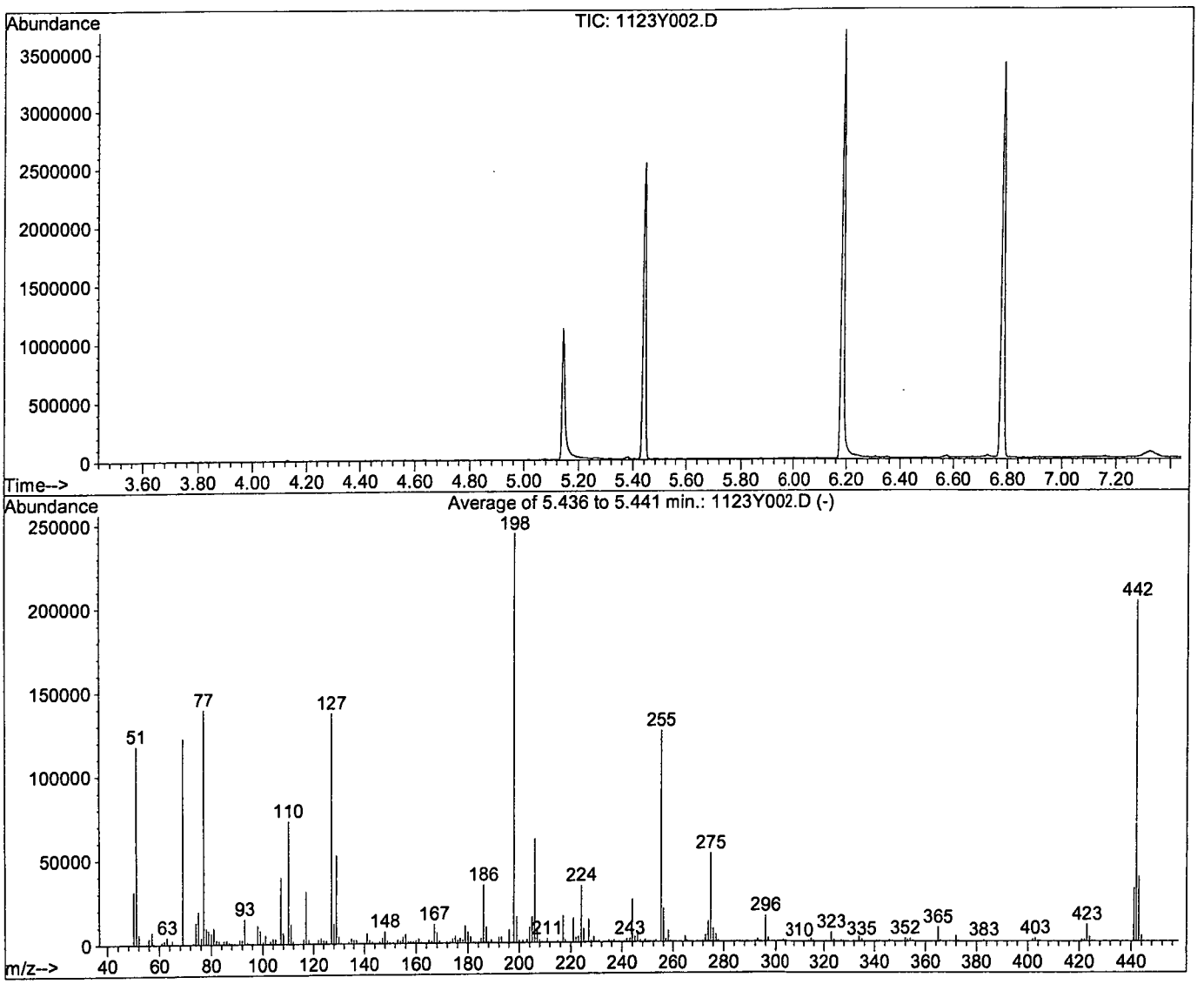
Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration



Data File : M:\YODA\DATA\Y161123\1123Y002.D
Acq On : 23 Nov 16 9:15
Sample : SV Tune 11/15/16
Misc :

Vial: 2
Operator: MA
Inst : Yoda
Multiplr: 1.00

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 740, 741, 742; Background Corrected with Scan 733

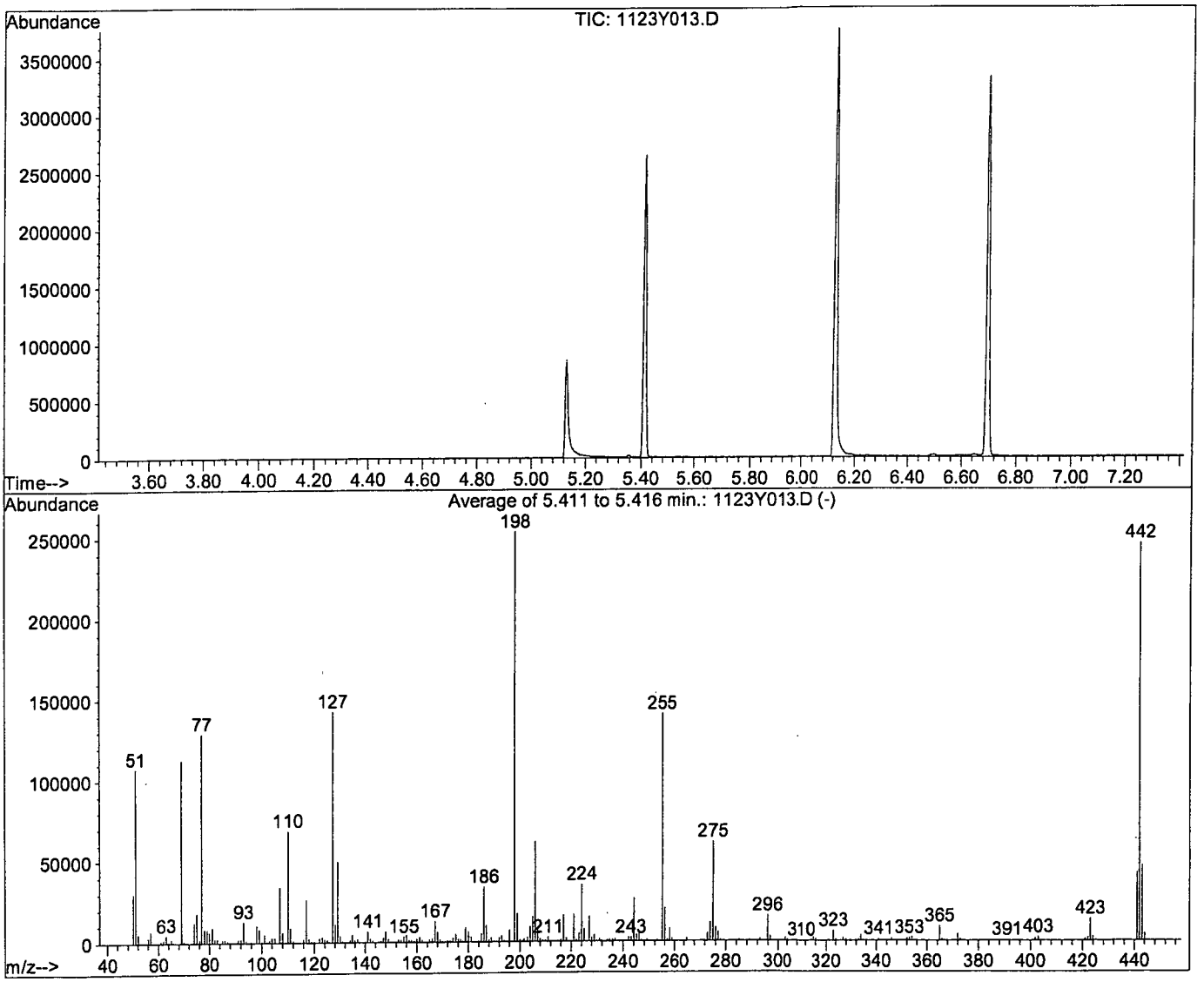
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	48.3	118003	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.3	397	PASS
127	198	40	60	56.2	137144	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	244245	PASS
199	198	5	9	6.3	15388	PASS
275	198	10	30	21.5	52517	PASS
365	198	1	100	3.4	8422	PASS
441	443	0.01	100	82.0	31557	PASS
442	198	50	150	83.2	203229	PASS
443	442	17	23	18.9	38469	PASS

DFTPP

Data File : M:\YODA\DATA\Y161123\1123Y013.D
Acq On : 23 Nov 16 14:35
Sample : SV Tune 11/15/16
Misc :

Vial: 13
Operator: MA
Inst : Yoda
Multiplr: 1.00

Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 731, 732, 733; Background Corrected with Scan 723

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	42.3	107464	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.9	976	PASS
127	198	40	60	56.2	142691	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	253973	PASS
199	198	5	9	6.7	17118	PASS
275	198	10	30	24.1	61248	PASS
365	198	1	100	3.5	8864	PASS
441	443	0.01	100	91.3	42037	PASS
442	198	50	150	97.0	246229	PASS
443	442	17	23	18.7	46037	PASS

Semivolatile (SV) Tuning Solution -G.A.						
PREP DATE:	11/15/16	RH				
Semivolatile (SV) Tune Solution 50ug/ml						
Exp:	8/26/17					
		Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
Ultra Scient	Semivolatile GC	1000	N081628-37012	08/23/16	8/23/17	200
EM Science	Methylene Chloride		55098			3800
				Final Vol.		4000

GED Curve

PREP DATE:	11/22/16 RH							
8270 Standard Curve								
Exp:	2/11/17					**50**	**100**	**200**
		Conc.		Date				
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL
	GED MSTD Std	2000	VAR	11/18/16	11/18/17	5	5	10
EM Science	Methylene Chloride		56098			195	95	90
Supelco	SV Internal	2000	A14020V-3660	11/09/16	11/09/17	4	2	2
				Final Vol.		204	102	102

400	**500**	**600**	**800**	**1000**
µL	µL	µL	µL	µL
20	25	30	40	50
80	75	70	60	50
2	2	2	2	2
102	102	102	102	102

Diethylene Glycol						
Prep: 11/18/16 -GA Ex: 11/18/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
Diethylene glycol monomethyl ether	2000 ug/ml	AcuuStandard Cat# S-72273 Lot# 216101007-37091 and 37092 Op: 11/18/16 EX: 11/1817	2.0 mL	4 ml	1000 ug/ml	Methanol Lot# 010616A

GED Second Source (SS2)						
PREP DATE:	11/22/16 RH					500
Exp:	1/18/17	Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
	GED MSS Stoc	2000	VAR	10/27/16	10/27/17	25
EM Science	Methylene Chloride		56098			75
Supelco	SV Internal	2000	A14020V-3660	11/09/16	11/09/17	2
				Final Vol.		102

Methoxyethoxyethanol-Neat (MEE) Stock: 9/27/16-R.H. ex: 09/27/17 Second Source						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
MEE	Neat 99.5%	HEM SERVIC	0.1154g	10 mL	11540 ug/ml	MC
		Cat: N-12404-1G				
		Lot: 5259000-37082				
		OP: 09/27/16				
		EXP: 09/27/17				

0.087ml were spiked in 500ml of water and extracted on 10/27/16. Final concentration is 2000ug/ml

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161123\1123Y015.D Vial: 15
Acq On : 23 Nov 16 15:21 Operator: MA
Sample : 161118A LCS-1 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Nov 23 15:38 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161123\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Nov 23 13:40:36 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	188487	40.00000 ppb	0.01
3) Napthalene-D8(IS)	6.46	136	846292	40.00000 ppb	0.00
4) Acenaphthene-D10(IS)	8.47	164	497749	40.00000 ppb	0.00
5) Phenanthrene-D10(IS)	10.19	188	920333	40.00000 ppb	0.00
6) Chrysene-D12(IS)	13.27	240	865185	40.00000 ppb	0.00
7) Perylene-D12(IS)	14.97	264	652337	40.00000 ppb	-0.19

System Monitoring Compounds

Target Compounds					Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.31	45	372254	407.19096 ppb	97

$$\frac{\left(\frac{372254}{188487} + 0.518\right) * 40 * 1}{0.245} = 407$$ HA 11/28/16

(#) = qualifier out of range (m) = manual integration
1123Y015.D Y0GLYCOL.M Mon Nov 28 09:29:31 2016 Page 1

_MWE2MEE

Organic Extraction Worksheet

Method	Solid Phase Extraction of 2MEE in Water	Extraction Set	161122A	Extraction Method	MWE2MEE	Units	mL

Spiked ID 1	Diethylene Glycol 11/18/16 exp 11/18/17		Surrogate ID 1		
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	11/22/16 7:55	
Spiked ID 8			Ext. End Time:	11/23/16 12:00	
			GC Requires Extract By:	**11/24/16 0:00**	

pH1			Water Bath Temp Criteria	
pH2				
pH3				

Spiked By: KY **Date** 11/22/16 **Witnessed By:** DL **Date** 11/22/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	161122A Blk				NA	NA equip	500	2	NA	11/22/16 7:55	
2	161122A LCS-1		0.250	1	NA	NA equip	500	2	NA	11/22/16 7:55	
3	161122A LCSD-1		0.250	1	NA	NA equip	500	2	NA	11/22/16 7:55	
4	AZ45988	AZ45988W11			NA	NA equip	500	2	NA	11/22/16 7:55	81515 1 WEEK
5	AZ45989	AZ45989W10			NA	NA equip	500	2	NA	11/22/16 7:55	81515 1 WEEK
6	AZ45991	AZ45991W13			NA	NA equip	500	2	NA	11/22/16 7:55	81515 1 WEEK
7	AZ45992	AZ45992W14			NA	NA equip	500	2	NA	11/22/16 7:55	81515 1 WEEK
8	AZ45993	AZ45993W15			NA	NA equip	500	2	NA	11/22/16 7:55	81515 1 WEEK
9	AZ45994	AZ45994W17			NA	NA equip	500	2	NA	11/22/16 7:55	81515 1 WEEK
10	AZ45995	AZ45995W08			NA	NA equip	500	2	NA	11/22/16 7:55	81515 1 WEEK
11	AZ45996	AZ45996W11			NA	NA equip	500	2	NA	11/22/16 7:55	81515 1 WEEK
12	M STD		1		NA	NA equip	500	2	NA	11/22/16 7:55	

DL 11/23/16

Solvent and Lot#	
ENVI-Carb Plus 400MG/1ML	
Reverible Tube Lot:	8088703
PH Strip	hc 574756
Di Water	11-22-16
Dichloromethane	56153
Methanol	060316c

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	GA
Date	11/23/16
Time	1400
Refrigerator	Hobart

	Technician's Initials
Scanned By	KY
Sample Preparation	KY
Extraction	KY
Concentration	----------

Modified	11/22/16 7:58:40 AM

Reviewed By: DL **Date** 11/23/16

Injection Log

Directory: M:\YODA\DATA\Y161123\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	1123Y002.D	1	SV Tune 11/15/16		23 Nov 16 9:15
3	4	1123Y004.D	1	100ug/ml DEG 11/22/16		23 Nov 16 10:00
4	5	1123Y005.D	1	200ug/ml DEG 11/22/16		23 Nov 16 10:29
5	6	1123Y006.D	1	400ug/ml DEG 11/22/16		23 Nov 16 10:59
6	7	1123Y007.D	1	500ug/ml DEG 11/22/16		23 Nov 16 11:28
7	8	1123Y008.D	1	600ug/ml DEG 11/22/16		23 Nov 16 11:58
8	9	1123Y009.D	1	800ug/ml DEG 11/22/16		23 Nov 16 12:28
9	10	1123Y010.D	1	1000ug/ml DEG 11/22/16		23 Nov 16 13:11
10	12	1123Y012.D	1	SS2 DEG 11/22/16		23 Nov 16 14:09
11	13	1123Y013.D	1	SV Tune 11/15/16		23 Nov 16 14:35
12	26	1123Y026.D	1	161122A BLK 2/500		23 Nov 16 20:45
13	27	1123Y027.D	1	161122A LCS-1 2/500		23 Nov 16 21:14
14	28	1123Y028.D	1	161122A LCSD-1 2/500		23 Nov 16 21:44
15	29	1123Y029.D	1	AZ45988W11 2/500		23 Nov 16 22:13
16	30	1123Y030.D	1	AZ45989W10 2/500		23 Nov 16 22:43
17	31	1123Y031.D	1	AZ45991W13 2/500		23 Nov 16 23:12
18	32	1123Y032.D	1	AZ45992W14 2/500		23 Nov 16 23:41
19	33	1123Y033.D	1	AZ45993W15 2/500		24 Nov 16 00:10
20	34	1123Y034.D	1	AZ45994W17 2/500		24 Nov 16 00:40
21	35	1123Y035.D	1	AZ45995W08 2/500		24 Nov 16 1:09
22	36	1123Y036.D	1	AZ45996W11 2/500		24 Nov 16 1:38
23	38	1123Y038.D	1	50ug/ml DEG 11/22/16		24 Nov 16 2:20

EPA METHOD 8260B
Volatile Organic Compounds

APPL, INC.

EPA METHOD 8260B
Volatile Organic Compounds
QC Summary

APPL, INC.

Method Blank
EPA 8260B WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161119W-45988 - 213869**
Batch ID: #86BXD-161119AL

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	11/20/16	11/20/16
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	11/20/16	11/20/16
BLANK	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	11/20/16	11/20/16
BLANK	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	11/20/16	11/20/16
BLANK	SURROGATE: 1,2-DICHLOROET	107	81-118			%	11/20/16	11/20/16
BLANK	SURROGATE: 4-BROMOFLUOR	95.3	85-114			%	11/20/16	11/20/16
BLANK	SURROGATE: DIBROMOFLUOR	93.2	80-119			%	11/20/16	11/20/16
BLANK	SURROGATE: TOLUENE-D8 (S)	101	89-112			%	11/20/16	11/20/16

Amended Results.

Quant Method: LALLW.M
Run #: 1119L18
Instrument: Loki
Sequence: 161113
Initials: SV

GC SC-Blank-REG MDLs-DOD
Printed: 01/06/17 1:54:36 PM

Method Blank
EPA 8260B WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161119W-45989 - 213873**
Batch ID: #86BXD-161119BL

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	11/21/16	11/21/16
BLANK	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	11/21/16	11/21/16
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	11/21/16	11/21/16
BLANK	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	11/21/16	11/21/16
BLANK	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	11/21/16	11/21/16
BLANK	SURROGATE: 1,2-DICHLOROET	106	81-118			%	11/21/16	11/21/16
BLANK	SURROGATE: 4-BROMOFLUOR	100	85-114			%	11/21/16	11/21/16
BLANK	SURROGATE: DIBROMOFLUOR	92.1	80-119			%	11/21/16	11/21/16
BLANK	SURROGATE: TOLUENE-D8 (S)	106	89-112			%	11/21/16	11/21/16

Amended Results.

Quant Method: LALLW.M
Run #: 1119L38
Instrument: Loki
Sequence: 161113
Initials: SV

GC SC-Blank-REG MDLs-DOD
Printed: 01/06/17 1:54:36 PM

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81515

Case No: 81515 Date Analyzed: 11/20/16

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: 1,2-DICHLOROETHANE-D4 (S)			SURROGATE: 4-BROMOFLUOROBENZENE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161119AL-LCS	Lab Control Spike	81-118	108		85-114	102	
161119AL-BLK	Blank	81-118	107		85-114	95.3	
AZ45990	ERH123	81-118	108		85-114	97.2	
AZ45997	ERH132	81-118	107		85-114	98.8	
AZ45988	ERH118	81-118	114		85-114	96.4	

Comments: Batch: #86BXD-161119AL

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81515

Case No: 81515 Date Analyzed: 11/20/16

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: DIBROMOFLUOROMETHANE (S)			SURROGATE: TOLUENE-D8 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161119AL-LCS	Lab Control Spike	80-119	94.0		89-112	103	
161119AL-BLK	Blank	80-119	93.2		89-112	101	
AZ45990	ERH123	80-119	93.8		89-112	103	
AZ45997	ERH132	80-119	93.0		89-112	107	
AZ45988	ERH118	80-119	98.8		89-112	104	

Comments: Batch: #86BXD-161119AL

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81515

Case No: 81515 Date Analyzed: 11/20/16

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: 1,2-DICHLOROETHANE-D4 (S)			SURROGATE: 4-BROMOFLUOROBENZENE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161119BL-LCS	Lab Control Spike	81-118	104		85-114	103	
161119BL-BLK	Blank	81-118	106		85-114	100	
AZ45989	ERH119	81-118	108		85-114	95.1	
AZ45991	ERH124	81-118	109		85-114	99.8	
AZ45992	ERH125	81-118	107		85-114	98.5	
AZ45993	ERH127	81-118	108		85-114	97.2	
AZ45994	ERH129	81-118	106		85-114	98.6	
AZ45995	ERH130	81-118	109		85-114	97.6	
AZ45996	ERH131	81-118	109		85-114	99.9	

Comments: Batch: #86BXD-161119BL

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81515

Case No: 81515 Date Analyzed: 11/20/16

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: DIBROMOFLUOROMETHANE (S)			SURROGATE: TOLUENE-D8 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161119BL-LCS	Lab Control Spike	80-119	92.8		89-112	106	
161119BL-BLK	Blank	80-119	92.1		89-112	106	
AZ45989	ERH119	80-119	92.4		89-112	101	
AZ45991	ERH124	80-119	94.7		89-112	103	
AZ45992	ERH125	80-119	92.5		89-112	105	
AZ45993	ERH127	80-119	94.5		89-112	104	
AZ45994	ERH129	80-119	93.8		89-112	103	
AZ45995	ERH130	80-119	92.9		89-112	103	
AZ45996	ERH131	80-119	93.9		89-112	106	

Comments: Batch: #86BXD-161119BL

Laboratory Control Spike Recovery
EPA 8260B WATER

APPL ID: **161120W-45988 LCS - 213869**
Batch ID: #86BXD-161119AL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
BENZENE	10.00	10.8	108	79-120
ETHYLBENZENE	10.00	10.8	108	79-121
TOLUENE	10.00	10.4	104	80-121
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	27.0	108	81-118
SURROGATE: 4-BROMOFLUOROBENZE	25.0	25.4	102	85-114
SURROGATE: DIBROMOFLUOROMETH	25.0	23.5	94.0	80-119
SURROGATE: TOLUENE-D8 (S)	25.0	25.8	103	89-112

Comments: _____

Primary	SPK
Quant Method :	LALLW.M
Extraction Date :	11/20/16
Analysis Date :	11/20/16
Instrument :	Loki
Run :	1119L03
Initials :	SV

Printed: 12/02/16 11:05:33 AM
APPL Standard LCS

Laboratory Control Spike Recovery
EPA 8260B WATER

APPL ID: **161120W-45989 LCS - 213873**
Batch ID: #86BXD-161119BL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
BENZENE	10.00	10.9	109	79-120
ETHYLBENZENE	10.00	11.0	110	79-121
TOLUENE	10.00	10.4	104	80-121
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	25.9	104	81-118
SURROGATE: 4-BROMOFLUOROBENZE	25.0	25.7	103	85-114
SURROGATE: DIBROMOFLUOROMETH	25.0	23.2	92.8	80-119
SURROGATE: TOLUENE-D8 (S)	25.0	26.6	106	89-112

Comments: _____

Primary	SPK
Quant Method :	LALLW.M
Extraction Date :	11/20/16
Analysis Date :	11/20/16
Instrument :	Loki
Run :	1119L32
Initials :	SV

Printed: 12/02/16 11:05:33 AM
APPL Standard LCS

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81515

Case No: 81515 Date Analyzed: 11/20/16

Matrix: WATER Instrument: Loki

Blank ID: 161119AL-BLK Time Analyzed: 1719

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161119AL-LCS	Lab Control Spike	1119L03	11/20/16 1017
161119AL-BLK	Blank	1119L18	11/20/16 1719
AZ45990	ERH123	1119L19	11/20/16 1747
AZ45997	ERH132	1119L20	11/20/16 1815
AZ45988	ERH118	1119L21	11/20/16 1843

Comments: Batch: #86BXD-161119AL

Printed: 12/02/16 11:05:30 AM
Form 4, Blank Summary

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81515

Case No: 81515 Date Analyzed: 11/21/16

Matrix: WATER Instrument: Loki

Blank ID: 161119BL-BLK Time Analyzed: 0240

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161119BL-LCS	Lab Control Spike	1119L32	11/20/16 2352
161119BL-BLK	Blank	1119L38	11/21/16 0240
AZ45989	ERH119	1119L40	11/21/16 0336
AZ45991	ERH124	1119L41	11/21/16 0404
AZ45992	ERH125	1119L42	11/21/16 0432
AZ45993	ERH127	1119L43	11/21/16 0500
AZ45994	ERH129	1119L44	11/21/16 0528
AZ45995	ERH130	1119L45	11/21/16 0556
AZ45996	ERH131	1119L46	11/21/16 0624

Comments: Batch: #86BXD-161119BL

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 1113L00.D
Matrix: Water
ID: 5ng- BFB STD 10-12-16

SDG No: Loki
Date Analyzed: 11/13/16
Instrument: Loki
Time Analyzed: 11:20

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.3ug/L VOC STD 11/1	1113L05.D	11/13/16 13:35
2		0.5ug/L VOC STD 11/1	1113L06.D	11/13/16 14:04
3		1.0ug/L VOC STD 11/1	1113L07.D	11/13/16 14:32
4		2.0ug/L VOC STD 11/1	1113L08.D	11/13/16 15:00
5		5.0ug/L VOC STD 11/1	1113L09.D	11/13/16 15:28
6		10ug/L VOC STD 11/13	1113L10.D	11/13/16 15:56
7		20ug/L VOC STD 11/13	1113L11.D	11/13/16 16:24
8		40ug/L VOC STD 11/13	1113L12.D	11/13/16 16:53
9		100ug/L VOC STD 11/1	1113L13.D	11/13/16 17:21
10		(SS) 10ug/L VOC STD	1113L17.D	11/13/16 19:14
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	21.1
75	30 - 60% of mass 95	50.9
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	6.7
173	0 - 2% of mass 174	0.0
174	50 - 100% of mass 95	77.2
175	5 - 9% of mass 174	7.8
176	95 - 101% of mass 174	97.4
177	5 - 9% of mass 176	6.8

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81515
Matrix: Water
ID: 5ng- BFB STD 11-06-16

SDG No: 81515
Date Analyzed: 11/20/16
Instrument: Loki
Time Analyzed: 9:27

	Client Sample No.	APPL ID.	File ID.	Date Analyzed	
1	Lab Control Spike	161119A CCV/LCS 10ug	1119L03.D	11/20/16 10:17	
2	Blank	161119A BLK-1WL	1119L18.D	11/20/16 17:19	
3	ERH123	AZ45990W02	1119L19.D	11/20/16 17:47	
4	ERH132	AZ45997W02	1119L20.D	11/20/16 18:15	
5	ERH118	AZ45988W02	1119L21.D	11/20/16 18:43	
6		Ending CCV 8260 10ug	1119L27.D	11/20/16 21:31	*
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

m/e		
50	15 - 40% of mass 95	22.6
75	30 - 60% of mass 95	54.2
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	6.5
173	0 - 2% of mass 174	0.0
174	50 - 100% of mass 95	80.1
175	5 - 9% of mass 174	7.9
176	95 - 101% of mass 174	95.2
177	5 - 9% of mass 176	6.6

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81515
Matrix: Water
ID: 5ng- BFB STD 11-06-16

SDG No: 81515
Date Analyzed: 11/20/16
Instrument: Loki
Time Analyzed: 23:23

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1	Lab Control Spike	161119B CCV/LCS 10ug	1119L32.D	11/20/16 23:52
2	Blank	161119B BLK-1WL	1119L38.D	11/21/16 2:40
3	ERH119	AZ45989W02	1119L40.D	11/21/16 3:36
4	ERH124	AZ45991W02	1119L41.D	11/21/16 4:04
5	ERH125	AZ45992W02	1119L42.D	11/21/16 4:32
6	ERH127	AZ45993W02	1119L43.D	11/21/16 5:00
7	ERH129	AZ45994W02	1119L44.D	11/21/16 5:28
8	ERH130	AZ45995W02	1119L45.D	11/21/16 5:56
9	ERH131	AZ45996W02	1119L46.D	11/21/16 6:24
10		Ending CCV 8260 10ug	1119L54.D	11/21/16 10:08
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	23.7
75	30 - 60% of mass 95	56.1
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	6.7
173	0 - 2% of mass 174	0.0
174	50 - 100% of mass 95	78.2
175	5 - 9% of mass 174	8.4
176	95 - 101% of mass 174	98.0
177	5 - 9% of mass 176	6.7

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81515

Lab File ID (Standard): 1113L10.D Date Analyzed: 11/13/16

Instrument ID: Loki Time Analyzed: 15:56

GC Column: ID: Heated Purge: (Y/N)

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	817344	5.38	790336	8.70	444864	11.03
	UPPER LIMIT	1634688	5.88	1580672	9.20	889728	11.53
	LOWER LIMIT	408672	4.88	395168	8.20	222432	10.53
	SAMPLE NO.						
01	(SS) 10ug/L VOC STD 1	818661	5.38	787584	8.70	425024	11.03
02	161119A CCV/LCS 10ug	767104	5.38	703552	8.70	384448	11.03
03	161119A BLK-1WL	674496	5.38	622464	8.70	311488	11.03
04	AZ45990W02	664832	5.39	609600	8.70	321792	11.03
05	AZ45997W02	672512	5.38	597888	8.70	307584	11.03
06	AZ45988W02	649408	5.39	612544	8.70	323648	11.03
07	Ending CCV 8260 10ug/	667840	5.38	606272	8.70	328448	11.03
08	161119B CCV/LCS 10ug	696832	5.38	618624	8.70	337472	11.03
09	161119B BLK-1WL	662528	5.38	592192	8.70	302656	11.03
10	AZ45989W02	662251	5.38	622784	8.70	299904	11.03
11	AZ45991W02	641216	5.38	595776	8.70	315392	11.03
12	AZ45992W02	681088	5.38	614208	8.70	320704	11.03
13	AZ45993W02	655040	5.38	598528	8.70	307904	11.03
14	AZ45994W02	662425	5.38	606912	8.70	311296	11.03
15	AZ45995W02	644864	5.38	597952	8.70	298176	11.03
16	AZ45996W02	651328	5.38	584192	8.70	300352	11.03
17	Ending CCV 8260 10ug/	666624	5.38	630144	8.70	327616	11.03
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

EPA METHOD 8260B
Volatile Organic Compounds
Sample Data

APPL, INC.

EPA 8260B WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH118
Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515
APPL ID: AZ45988
QCG: #86BXD-161119AL-213869

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	11/20/16	11/20/16
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	11/20/16	11/20/16
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	11/20/16	11/20/16
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	11/20/16	11/20/16
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	114	81-118			%	11/20/16	11/20/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	96.4	85-114			%	11/20/16	11/20/16
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	98.8	80-119			%	11/20/16	11/20/16
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	104	89-112			%	11/20/16	11/20/16

Amended Results.

Quant Method: LALLW.M
Run #: 1119L21
Instrument: Loki
Sequence: 161113
Dilution Factor: 1
Initials: SV

Printed: 01/06/17 1:54:26 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1119L21.D Vial: 20
Acq On : 20 Nov 16 18:43 Operator: PM,DG,SV,CMM
Sample : AZ45988W02 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 12:11 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.39	96	649408	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	612544	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	323648	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	338572	24.71	ppb	0.00
Spiked Amount 25.000			Recovery = 98.824%			
37) 1,2-DCA-D4(S)	4.93	65	425726	28.50	ppb	0.00
Spiked Amount 25.000			Recovery = 113.984%			
57) Toluene-D8(S)	7.22	98	1213445	25.94	ppb	0.00
Spiked Amount 25.000			Recovery = 103.768%			
65) 4-Bromofluorobenzene(S)	9.89	95	407005	24.11	ppb	0.00
Spiked Amount 25.000			Recovery = 96.432%			

Target Compounds Qvalue

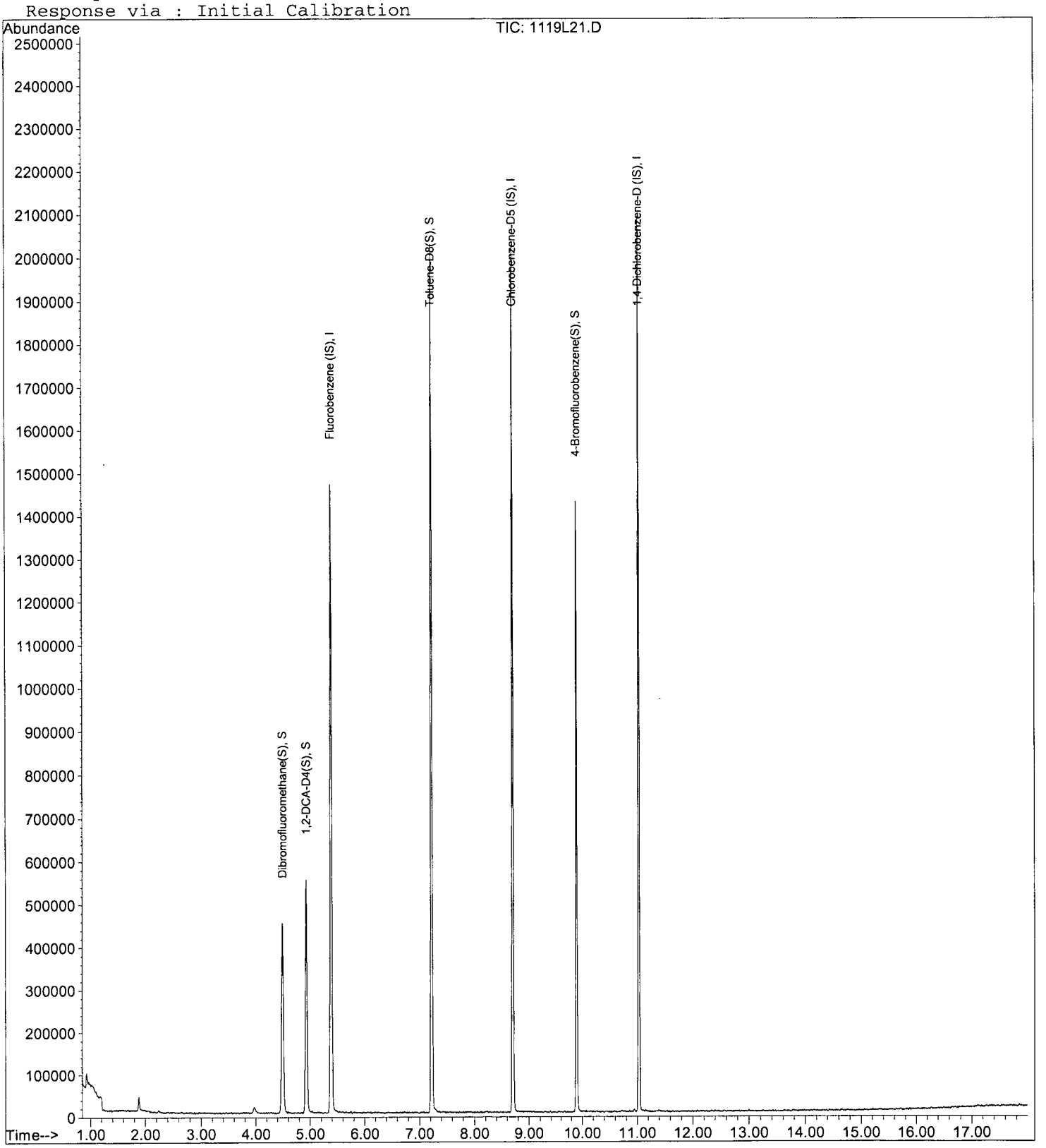
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L21.D Vial: 20
Acq On : 20 Nov 16 18:43 Operator: PM,DG,SV,CMM
Sample : AZ45988W02 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 12:11 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



EPA 8260B WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH119
Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515
APPL ID: AZ45989
QCG: #86BXD-161119BL-213873

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	11/21/16	11/21/16
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	11/21/16	11/21/16
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	11/21/16	11/21/16
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	11/21/16	11/21/16
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	108	81-118			%	11/21/16	11/21/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	95.1	85-114			%	11/21/16	11/21/16
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	92.4	80-119			%	11/21/16	11/21/16
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	101	89-112			%	11/21/16	11/21/16

Amended Results.

Quant Method: LALLW.M
Run #: 1119L40
Instrument: Loki
Sequence: 161113
Dilution Factor: 1
Initials: SV

Printed: 01/06/17 1:54:26 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1119L40.D Vial: 39
Acq On : 21 Nov 16 3:36 Operator: PM,DG,SV,CMM
Sample : AZ45989W02 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 12:22 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	662251	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	622784	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	299904	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	322786	23.10	ppb	0.00
Spiked Amount 25.000			Recovery = 92.388%			
37) 1,2-DCA-D4(S)	4.93	65	410550	26.95	ppb	0.00
Spiked Amount 25.000			Recovery = 107.788%			
57) Toluene-D8(S)	7.22	98	1200623	25.25	ppb	0.00
Spiked Amount 25.000			Recovery = 100.984%			
65) 4-Bromofluorobenzene(S)	9.89	95	408245	23.78	ppb	0.00
Spiked Amount 25.000			Recovery = 95.136%			

Target Compounds Qvalue

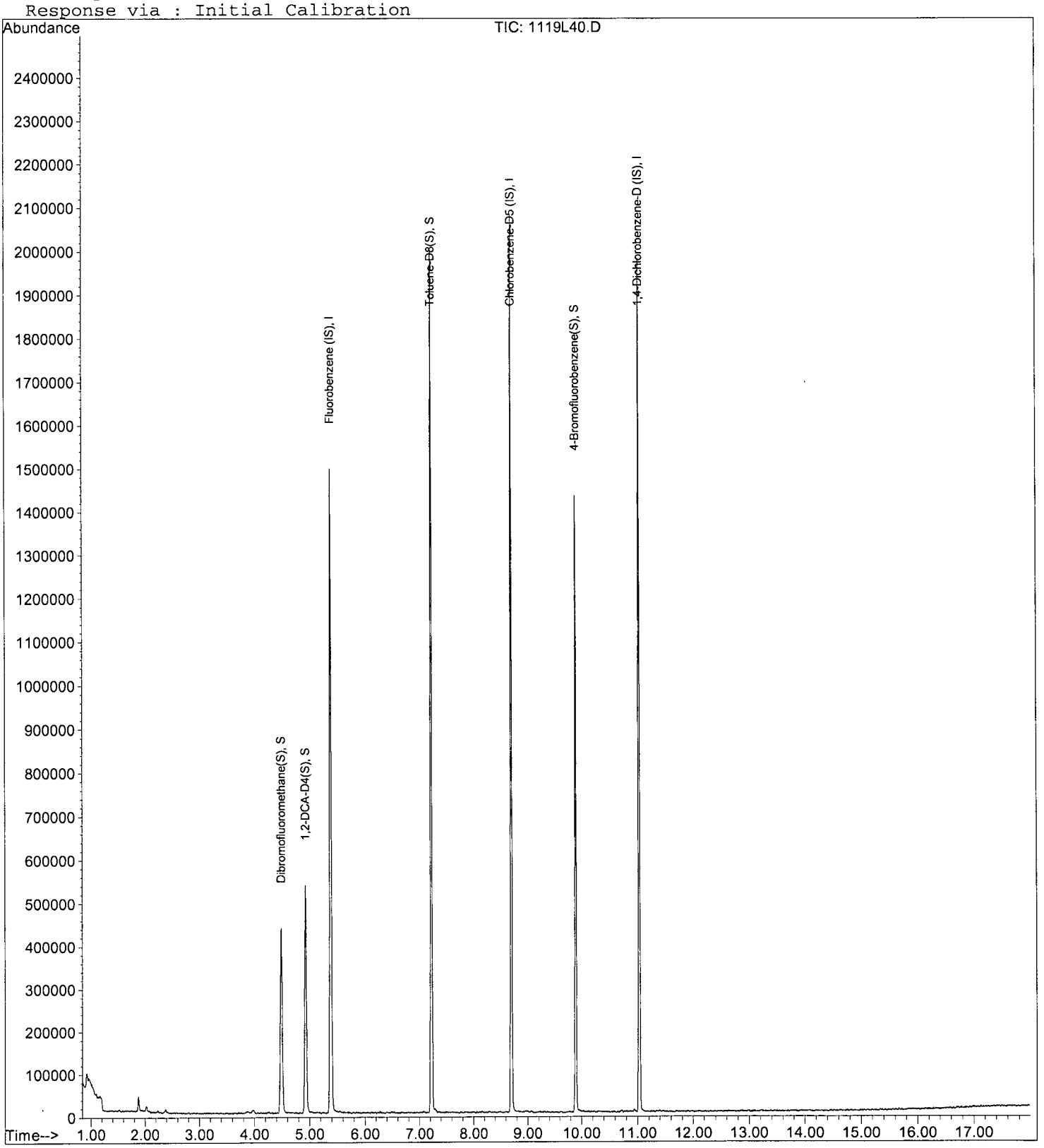
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L40.D Vial: 39
Acq On : 21 Nov 16 3:36 Operator: PM,DG,SV,CMM
Sample : AZ45989W02 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 12:22 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



EPA 8260B WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH123
Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515
APPL ID: AZ45990
QCG: #86BXD-161119AL-213869

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	11/20/16	11/20/16
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	11/20/16	11/20/16
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	11/20/16	11/20/16
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	11/20/16	11/20/16
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	11/20/16	11/20/16
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	108	81-118			%	11/20/16	11/20/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	97.2	85-114			%	11/20/16	11/20/16
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	93.8	80-119			%	11/20/16	11/20/16
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	103	89-112			%	11/20/16	11/20/16

Amended Results.

Quant Method:	LALLW.M
Run #:	1119L19
Instrument:	Loki
Sequence:	161113
Dilution Factor:	1
Initials:	SV

Printed: 01/06/17 1:54:26 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1119L19.D Vial: 18
Acq On : 20 Nov 16 17:47 Operator: PM,DG,SV,CMM
Sample : AZ45990W02 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 12:10 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.39	96	664832	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	609600	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	321792	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	329148	23.46	ppb	0.00
Spiked Amount 25.000			Recovery =	93.844%		
37) 1,2-DCA-D4(S)	4.93	65	414256	27.08	ppb	0.00
Spiked Amount 25.000			Recovery =	108.340%		
57) Toluene-D8(S)	7.22	98	1199913	25.78	ppb	0.00
Spiked Amount 25.000			Recovery =	103.108%		
65) 4-Bromofluorobenzene(S)	9.89	95	408074	24.29	ppb	0.00
Spiked Amount 25.000			Recovery =	97.152%		

Target Compounds Qvalue

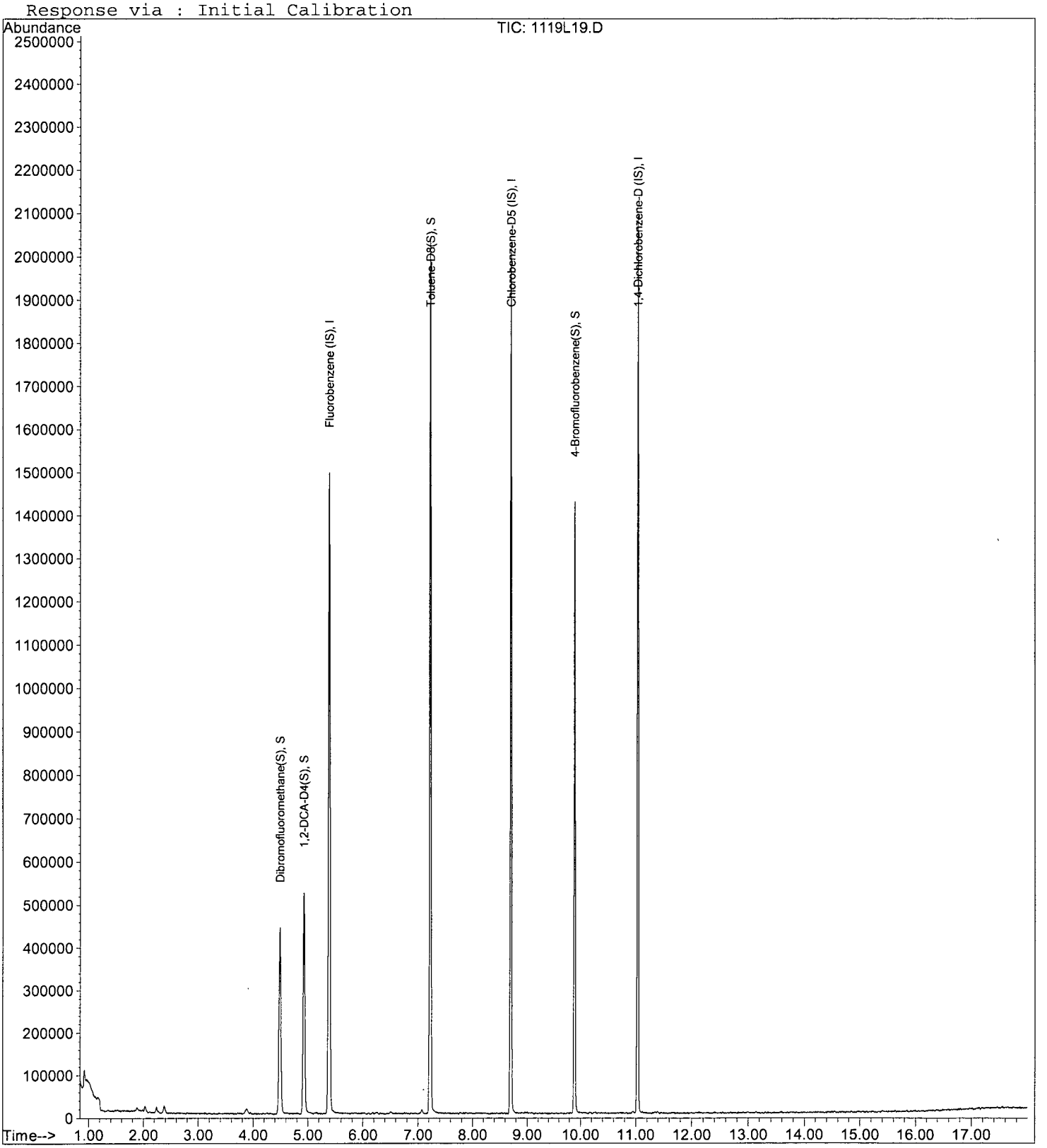
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L19.D Vial: 18
Acq On : 20 Nov 16 17:47 Operator: PM,DG,SV,CMM
Sample : AZ45990W02 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 12:10 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



EPA 8260B WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH124
Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515
APPL ID: AZ45991
QCG: #86BXD-161119BL-213873

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	11/21/16	11/21/16
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	11/21/16	11/21/16
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	11/21/16	11/21/16
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	11/21/16	11/21/16
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	109	81-118			%	11/21/16	11/21/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	99.8	85-114			%	11/21/16	11/21/16
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	94.7	80-119			%	11/21/16	11/21/16
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	103	89-112			%	11/21/16	11/21/16

Amended Results.

Quant Method: LALLW.M
Run #: 1119L41
Instrument: Loki
Sequence: 161113
Dilution Factor: 1
Initials: SV

Printed: 01/06/17 1:54:26 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1119L41.D Vial: 40
Acq On : 21 Nov 16 4:04 Operator: PM,DG,SV,CMM
Sample : AZ45991W02 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 12:23 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	641216	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	595776	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	315392	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	320303	23.67	ppb	0.00
Spiked Amount 25.000			Recovery = 94.688%			
37) 1,2-DCA-D4(S)	4.93	65	402324	27.27	ppb	0.00
Spiked Amount 25.000			Recovery = 109.092%			
57) Toluene-D8(S)	7.22	98	1170044	25.72	ppb	0.00
Spiked Amount 25.000			Recovery = 102.876%			
65) 4-Bromofluorobenzene(S)	9.89	95	409855	24.96	ppb	0.00
Spiked Amount 25.000			Recovery = 99.840%			

Target Compounds Qvalue

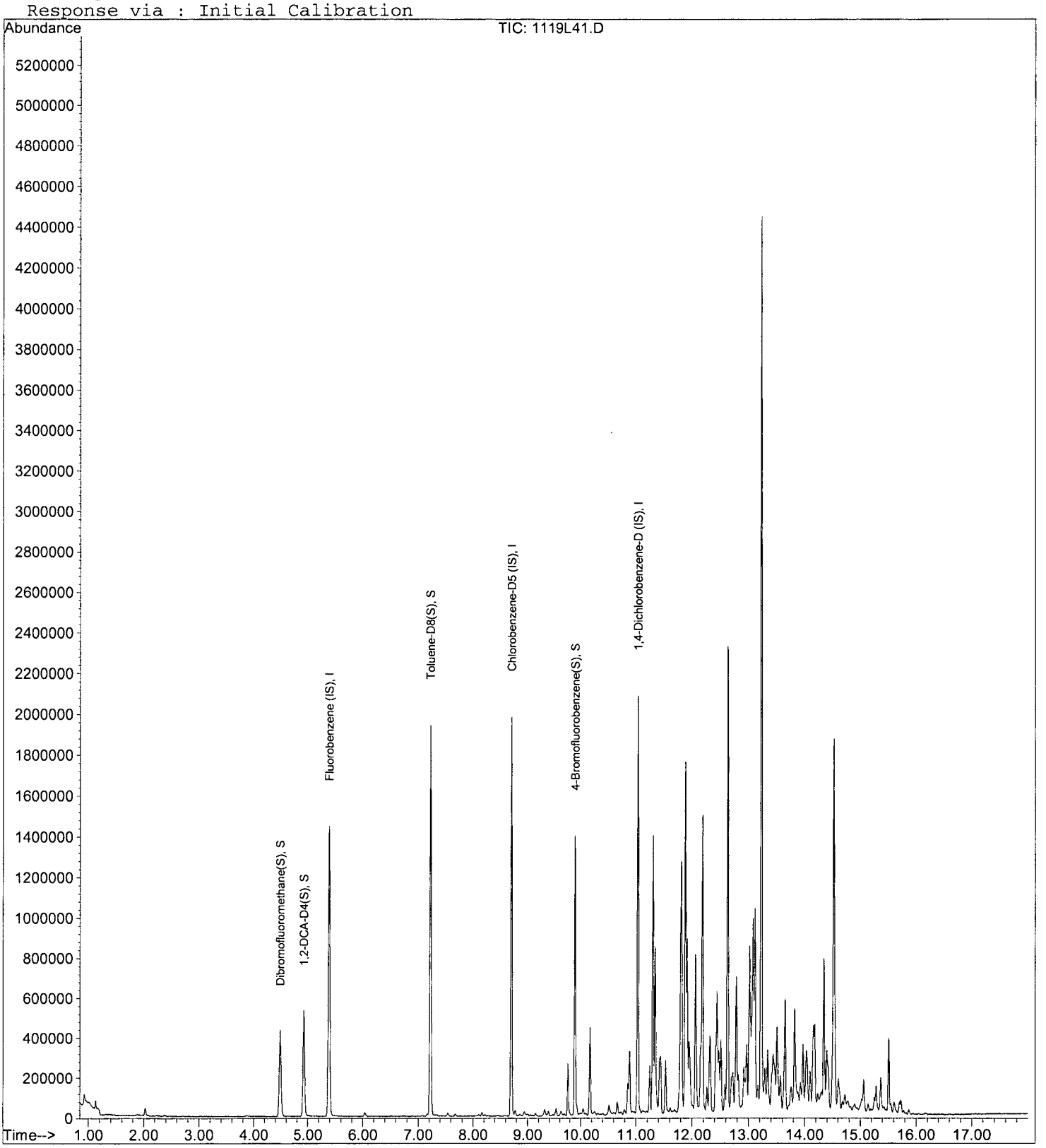
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L41.D Vial: 40
Acq On : 21 Nov 16 4:04 Operator: PM,DG,SV,CMM
Sample : AZ45991W02 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 12:23 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



EPA 8260B WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH125
Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515
APPL ID: AZ45992
QCG: #86BXD-161119BL-213873

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	11/21/16	11/21/16
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	11/21/16	11/21/16
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	11/21/16	11/21/16
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	11/21/16	11/21/16
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	107	81-118			%	11/21/16	11/21/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	98.5	85-114			%	11/21/16	11/21/16
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	92.5	80-119			%	11/21/16	11/21/16
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	105	89-112			%	11/21/16	11/21/16

Amended Results.

Quant Method:	LALLW.M
Run #:	1119L42
Instrument:	Loki
Sequence:	161113
Dilution Factor:	1
Initials:	SV

Printed: 01/06/17 1:54:26 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1119L42.D Vial: 41
Acq On : 21 Nov 16 4:32 Operator: PM,DG,SV,CMM
Sample : AZ45992W02 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 12:23 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	681088	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	614208	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	320704	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	332405	23.13	ppb	0.00
Spiked Amount 25.000			Recovery =	92.512%		
37) 1,2-DCA-D4(S)	4.93	65	418781	26.73	ppb	0.00
Spiked Amount 25.000			Recovery =	106.908%		
57) Toluene-D8(S)	7.22	98	1226496	26.15	ppb	0.00
Spiked Amount 25.000			Recovery =	104.600%		
65) 4-Bromofluorobenzene(S)	9.89	95	416953	24.63	ppb	0.00
Spiked Amount 25.000			Recovery =	98.524%		

Target Compounds Qvalue

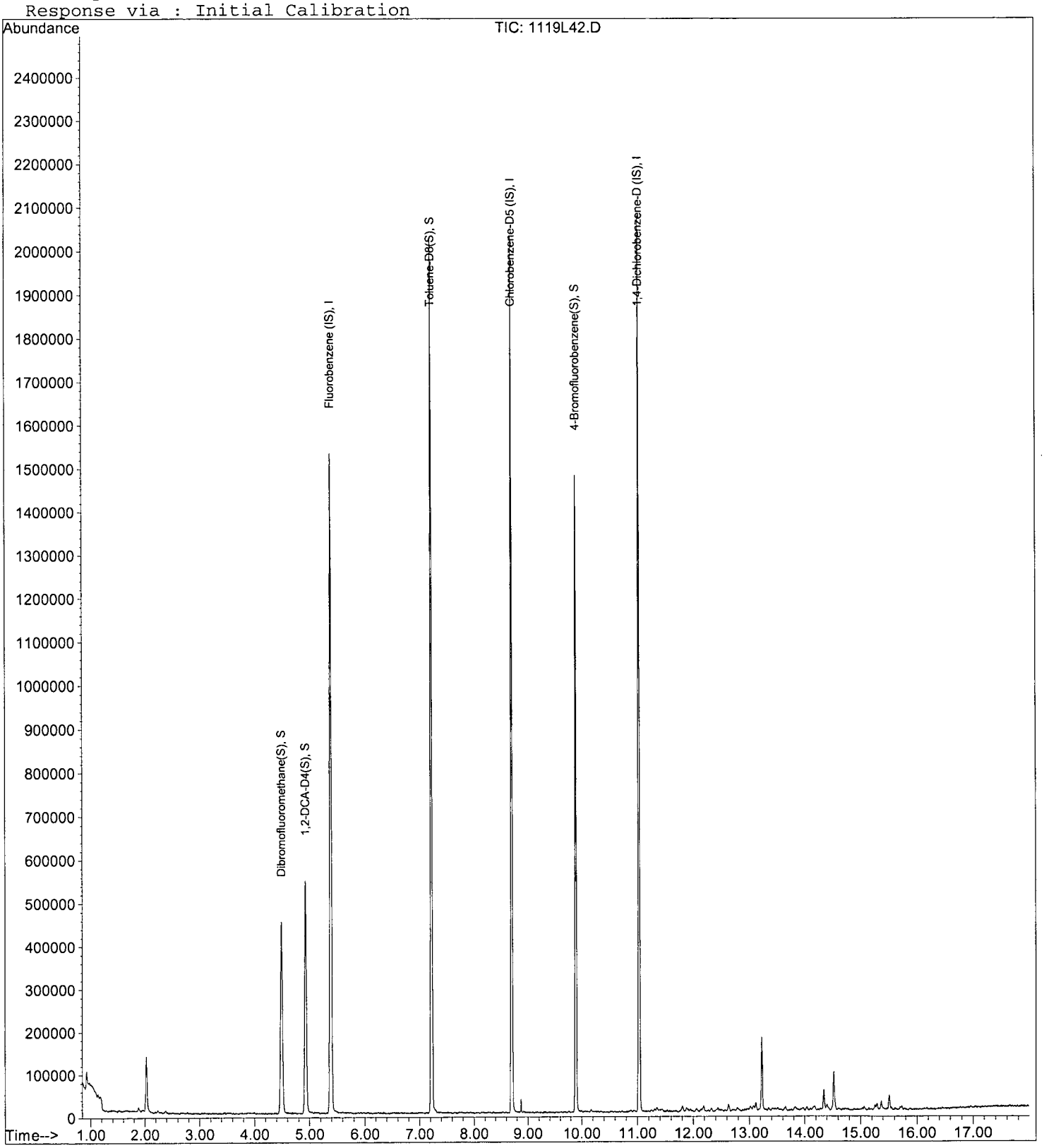
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L42.D Vial: 41
Acq On : 21 Nov 16 4:32 Operator: PM,DG,SV,CMM
Sample : AZ45992W02 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 12:23 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



EPA 8260B WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH127

Sample Collection Date: 11/16/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515

APPL ID: AZ45993

QCG: #86BXD-161119BL-213873

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	11/21/16	11/21/16
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	11/21/16	11/21/16
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	11/21/16	11/21/16
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	11/21/16	11/21/16
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	108	81-118			%	11/21/16	11/21/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	97.2	85-114			%	11/21/16	11/21/16
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	94.5	80-119			%	11/21/16	11/21/16
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	104	89-112			%	11/21/16	11/21/16

Amended Results.

Quant Method: LALLW.M
Run #: 1119L43
Instrument: Loki
Sequence: 161113
Dilution Factor: 1
Initials: SV

Printed: 01/06/17 1:54:26 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1119L43.D Vial: 42
Acq On : 21 Nov 16 5:00 Operator: PM,DG,SV,CMM
Sample : AZ45993W02 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 12:23 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	655040	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	598528	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	307904	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	326675	23.63	ppb	0.00
Spiked Amount 25.000			Recovery = 94.532%			
37) 1,2-DCA-D4(S)	4.93	65	406025	26.94	ppb	0.00
Spiked Amount 25.000			Recovery = 107.772%			
57) Toluene-D8(S)	7.22	98	1186140	25.95	ppb	0.00
Spiked Amount 25.000			Recovery = 103.812%			
65) 4-Bromofluorobenzene(S)	9.89	95	401056	24.31	ppb	0.00
Spiked Amount 25.000			Recovery = 97.248%			

Target Compounds Qvalue

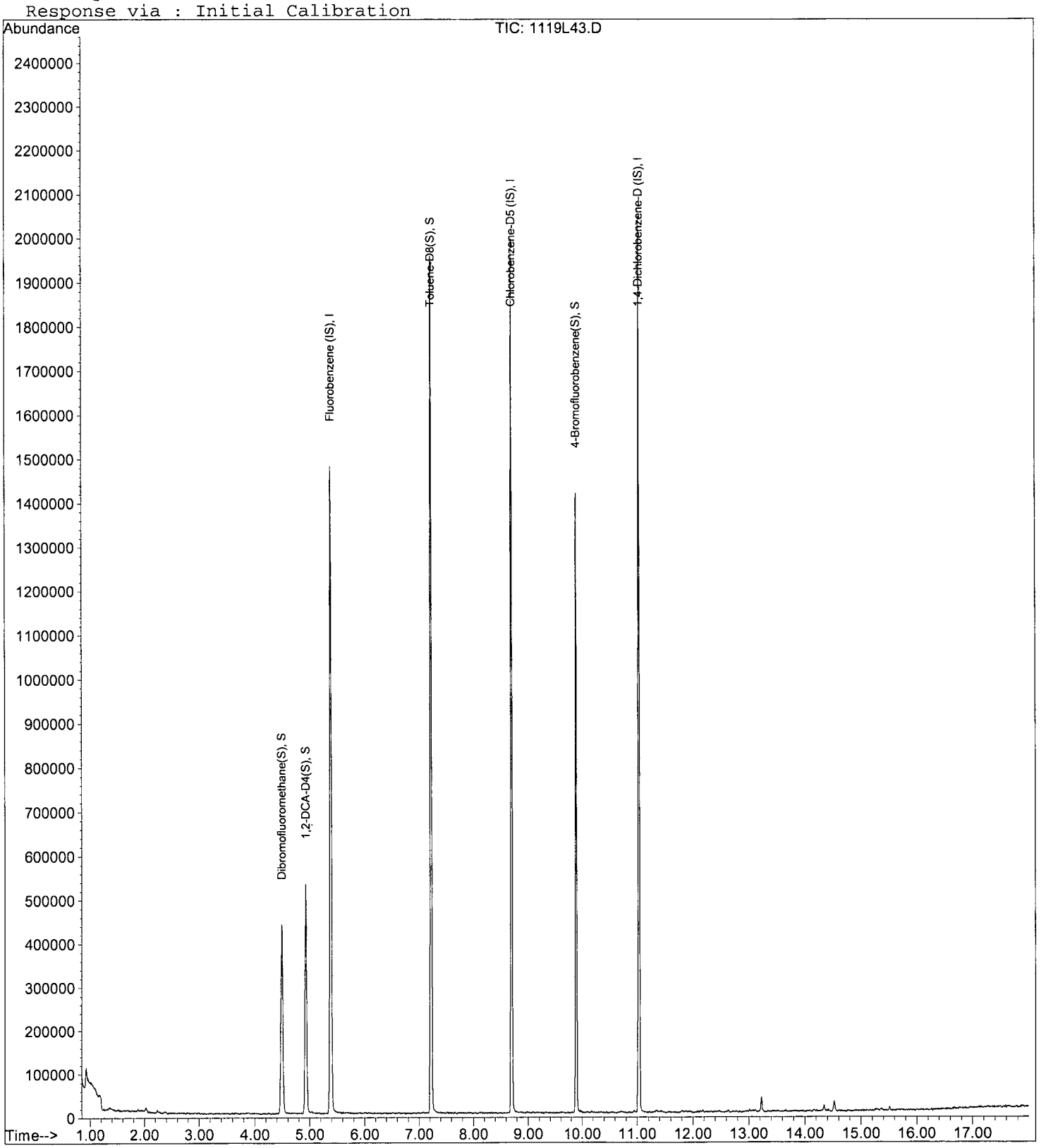
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L43.D Vial: 42
Acq On : 21 Nov 16 5:00 Operator: PM,DG,SV,CMM
Sample : AZ45993W02 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 12:23 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



EPA 8260B WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH129
Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515
APPL ID: AZ45994
QCG: #86BXD-161119BL-213873

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	11/21/16	11/21/16
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	11/21/16	11/21/16
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	11/21/16	11/21/16
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	11/21/16	11/21/16
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	11/21/16	11/21/16
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	106	81-118			%	11/21/16	11/21/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	98.6	85-114			%	11/21/16	11/21/16
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	93.8	80-119			%	11/21/16	11/21/16
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	103	89-112			%	11/21/16	11/21/16

Amended Results.

Quant Method:	LALLW.M
Run #:	1119L44
Instrument:	Loki
Sequence:	161113
Dilution Factor:	1
Initials:	SV

Printed: 01/06/17 1:54:27 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1119L44.D Vial: 43
Acq On : 21 Nov 16 5:28 Operator: PM,DG,SV,CMM
Sample : AZ45994W02 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 12:24 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	662425	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	606912	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	311296	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	327796	23.45	ppb	0.00
Spiked Amount 25.000			Recovery =	93.800%		
37) 1,2-DCA-D4(S)	4.93	65	402589	26.42	ppb	0.00
Spiked Amount 25.000			Recovery =	105.672%		
57) Toluene-D8(S)	7.22	98	1197711	25.84	ppb	0.00
Spiked Amount 25.000			Recovery =	103.376%		
65) 4-Bromofluorobenzene(S)	9.89	95	412488	24.66	ppb	0.00
Spiked Amount 25.000			Recovery =	98.640%		

Target Compounds Qvalue

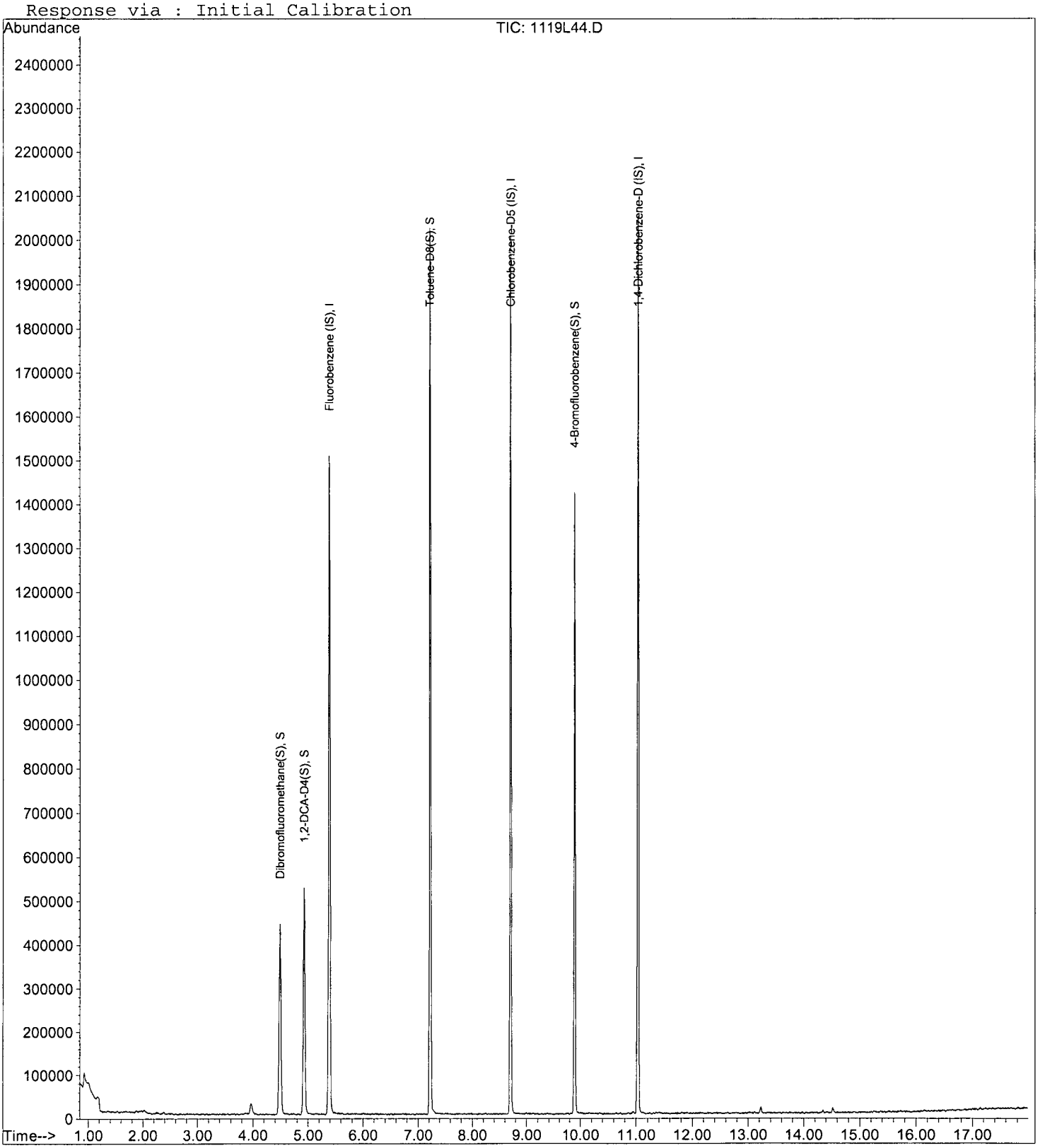
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L44.D Vial: 43
Acq On : 21 Nov 16 5:28 Operator: PM,DG,SV,CMM
Sample : AZ45994W02 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 12:24 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



EPA 8260B WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH130
Sample Collection Date: 11/16/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515
APPL ID: AZ45995
QCG: #86BXD-161119BL-213873

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	11/21/16	11/21/16
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	11/21/16	11/21/16
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	11/21/16	11/21/16
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	11/21/16	11/21/16
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	109	81-118			%	11/21/16	11/21/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	97.6	85-114			%	11/21/16	11/21/16
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	92.9	80-119			%	11/21/16	11/21/16
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	103	89-112			%	11/21/16	11/21/16

Amended Results.

Quant Method: LALLW.M
Run #: 1119L45
Instrument: Loki
Sequence: 161113
Dilution Factor: 1
Initials: SV

Printed: 01/06/17 1:54:27 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1119L45.D Vial: 44
Acq On : 21 Nov 16 5:56 Operator: PM,DG,SV,CMM
Sample : AZ45995W02 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 12:24 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	644864	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	597952	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	298176	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	316029	23.22	ppb	0.00
Spiked Amount 25.000			Recovery =	92.896%		
37) 1,2-DCA-D4(S)	4.93	65	404045	27.24	ppb	0.00
Spiked Amount 25.000			Recovery =	108.940%		
57) Toluene-D8(S)	7.22	98	1181311	25.87	ppb	0.00
Spiked Amount 25.000			Recovery =	103.488%		
65) 4-Bromofluorobenzene(S)	9.89	95	402214	24.41	ppb	0.00
Spiked Amount 25.000			Recovery =	97.624%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

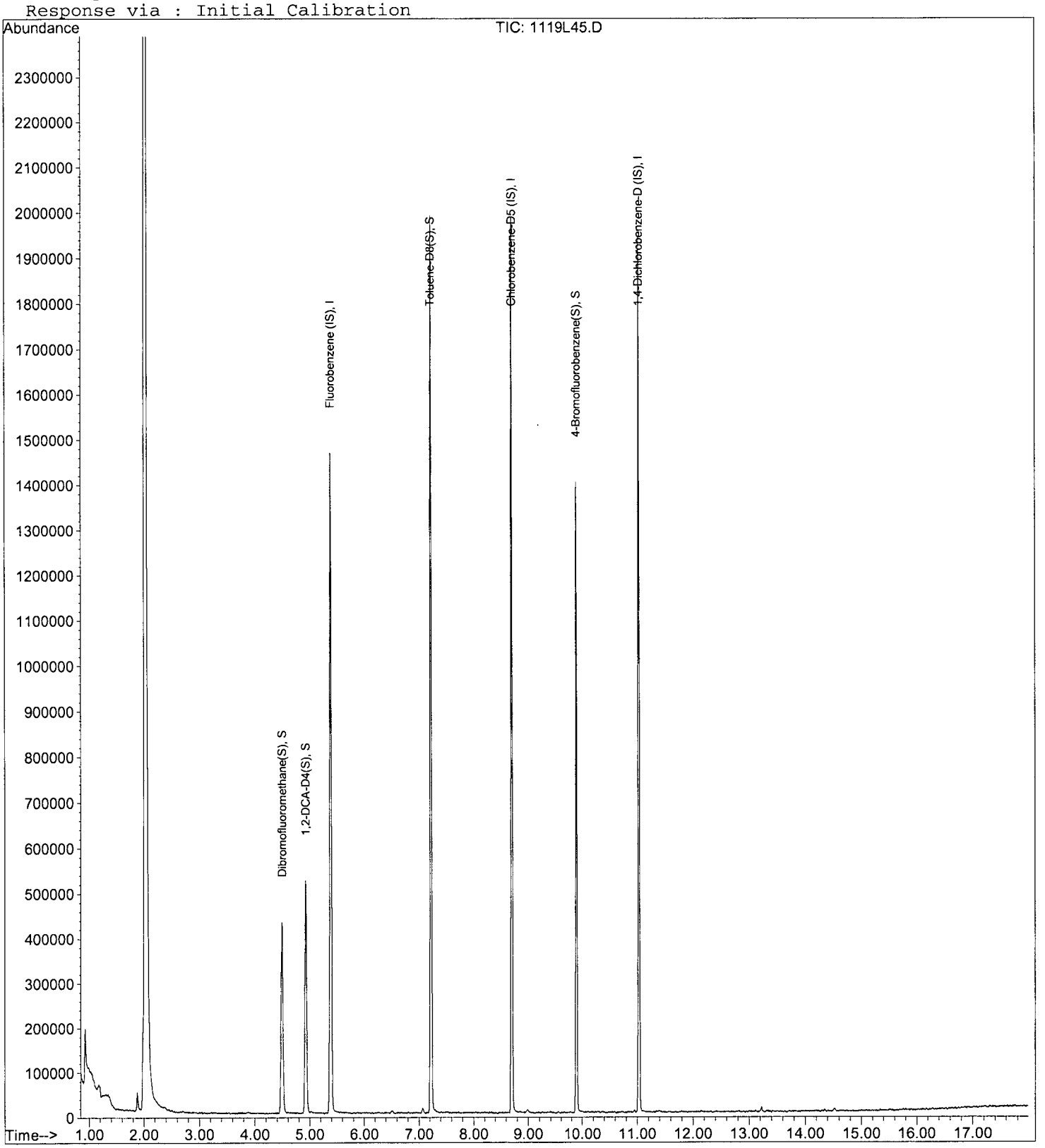
Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L45.D
Acq On : 21 Nov 16 5:56
Sample : AZ45995W02
Misc : W IS&S 10/20/16, 11/04/16

Vial: 44
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 12:24 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



EPA 8260B WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH131
Sample Collection Date: 11/16/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515
APPL ID: AZ45996
QCG: #86BXD-161119BL-213873

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	11/21/16	11/21/16
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	11/21/16	11/21/16
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	11/21/16	11/21/16
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	11/21/16	11/21/16
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	109	81-118			%	11/21/16	11/21/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	99.9	85-114			%	11/21/16	11/21/16
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	93.9	80-119			%	11/21/16	11/21/16
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	106	89-112			%	11/21/16	11/21/16

Amended Results.

Quant Method:	LALLW.M
Run #:	1119L46
Instrument:	Loki
Sequence:	161113
Dilution Factor:	1
Initials:	SV

Printed: 01/06/17 1:54:27 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1119L46.D Vial: 45
Acq On : 21 Nov 16 6:24 Operator: PM,DG,SV,CMM
Sample : AZ45996W02 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 12:25 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	651328	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	584192	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	300352	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	322681	23.48	ppb	0.00
Spiked Amount 25.000			Recovery =	93.908%		
37) 1,2-DCA-D4(S)	4.93	65	407453	27.19	ppb	0.00
Spiked Amount 25.000			Recovery =	108.768%		
57) Toluene-D8(S)	7.22	98	1177609	26.40	ppb	0.00
Spiked Amount 25.000			Recovery =	105.592%		
65) 4-Bromofluorobenzene(S)	9.89	95	402237	24.98	ppb	0.00
Spiked Amount 25.000			Recovery =	99.928%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

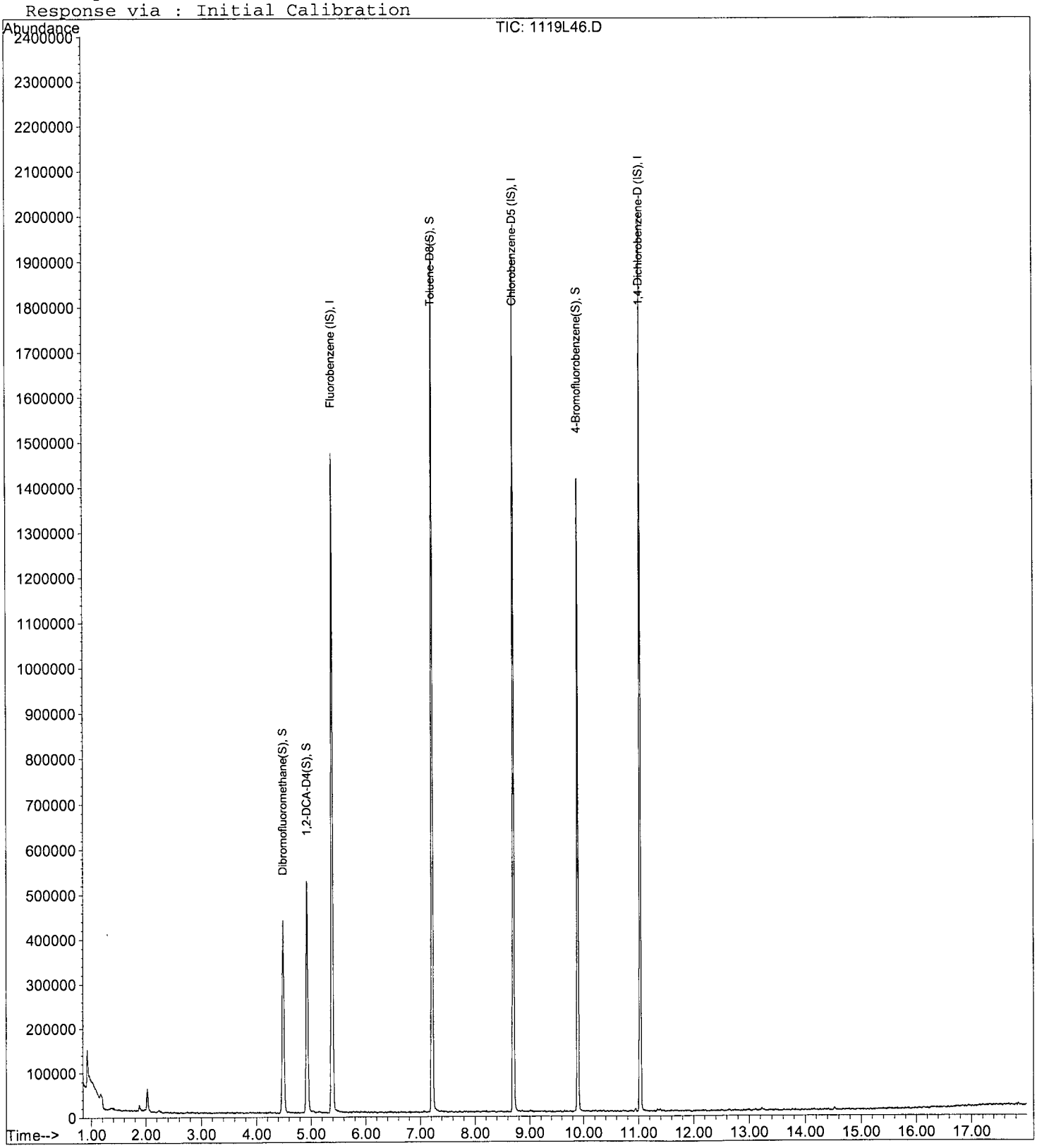
Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L46.D
Acq On : 21 Nov 16 6:24
Sample : AZ45996W02
Misc : W IS&S 10/20/16, 11/04/16

Vial: 45
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 12:25 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



EPA 8260B WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH132

Sample Collection Date: 11/16/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515

APPL ID: AZ45997

QCG: #86BXD-161119AL-213869

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	11/20/16	11/20/16
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	11/20/16	11/20/16
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	11/20/16	11/20/16
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	11/20/16	11/20/16
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	107	81-118			%	11/20/16	11/20/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	98.8	85-114			%	11/20/16	11/20/16
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	93.0	80-119			%	11/20/16	11/20/16
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	107	89-112			%	11/20/16	11/20/16

Amended Results.

Quant Method:	LALLW.M
Run #:	1119L20
Instrument:	Loki
Sequence:	161113
Dilution Factor:	1
Initials:	SV

Printed: 01/06/17 1:54:27 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1119L20.D Vial: 19
Acq On : 20 Nov 16 18:15 Operator: PM,DG,SV,CMM
Sample : AZ45997W02 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 12:11 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	672512	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	597888	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	307584	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	329869	23.24	ppb	0.00
Spiked Amount 25.000			Recovery = 92.976%			
37) 1,2-DCA-D4(S)	4.93	65	412497	26.66	ppb	0.00
Spiked Amount 25.000			Recovery = 106.648%			
57) Toluene-D8(S)	7.22	98	1219427	26.71	ppb	0.00
Spiked Amount 25.000			Recovery = 106.836%			
65) 4-Bromofluorobenzene(S)	9.89	95	407057	24.70	ppb	0.00
Spiked Amount 25.000			Recovery = 98.812%			

Target Compounds Qvalue

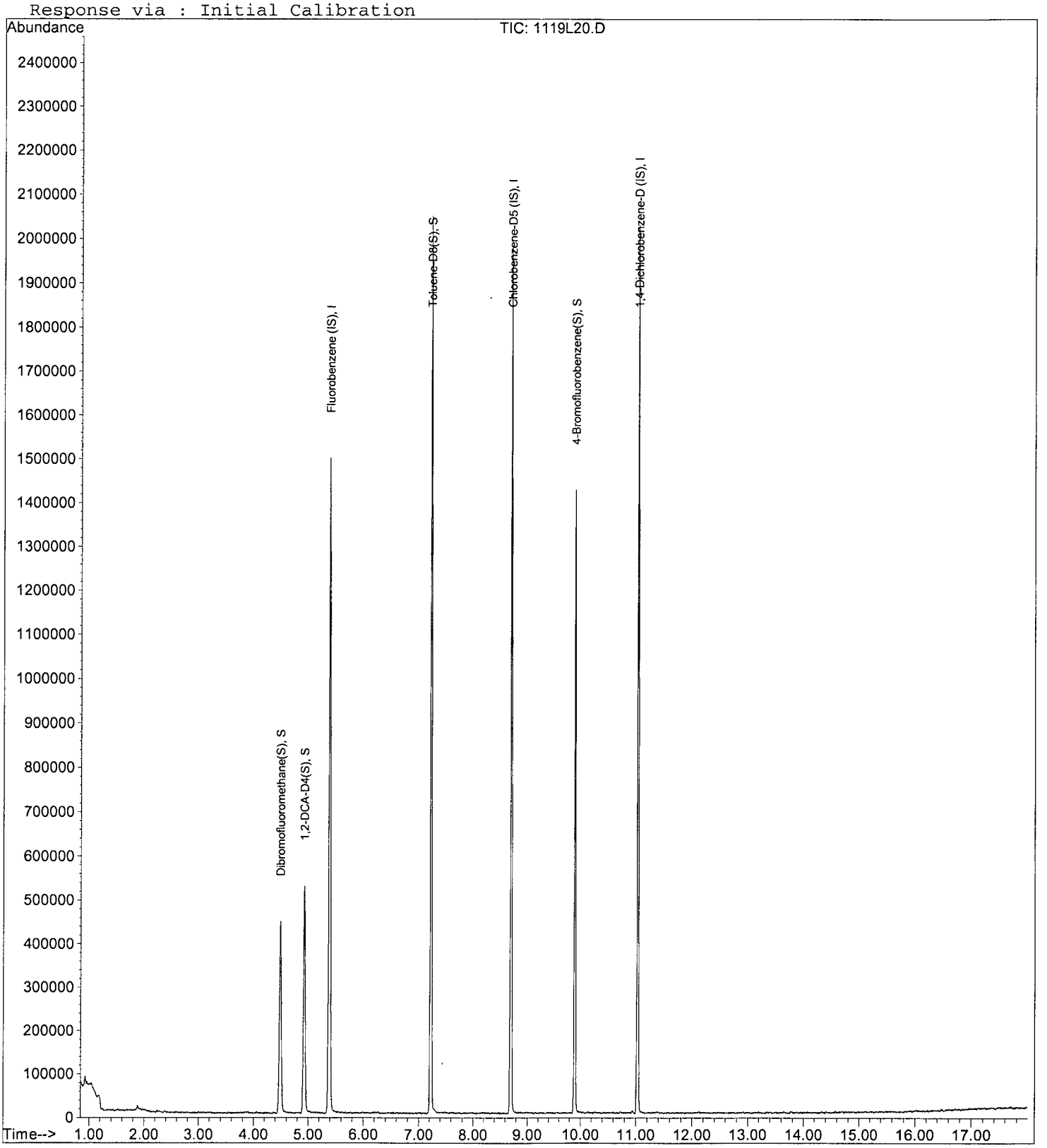
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L20.D Vial: 19
Acq On : 20 Nov 16 18:15 Operator: PM,DG,SV,CMM
Sample : AZ45997W02 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 12:11 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



EPA METHOD 8260B
Volatile Organic Compounds
Calibration Data

APPL, INC.

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:
SDG No:
Initial Cal. Date: 11/13/16
Instrument: Loki
Initials:

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD		
			1113L05.D	1113L06 D	1113L07.D	1113L08.D	1113L09.D	1113L10.D	1113L11.D	1113L12.D	1113L13.D					
1	I	Fluorobenzene (IS)														
2	TM	Dichlorodifluoromethane		0.4807	0.5509	0.5378	0.5579	0.5256	0.5391	0.5150			0.53	4.9	TM	
3	TM	Freon 114		0.3958	0.4108	0.3934	0.3865	0.3873	0.3829	0.3879	0.3861		0.39	2.3	TM	
4	TM**	Chloromethane		0.7378	0.8117	0.6628	0.7834	0.7109	0.7197	0.7025	0.7485		0.73	6.4	TM**	
5	TM*	Vinyl chloride		0.6818	0.6768	0.6393	0.6941	0.6644	0.6612	0.6397	0.6388		0.66	3.2	TM*	
6	TM	Bromomethane		0.2946	0.2806	0.3174	0.3280	0.3373	0.3035	0.2863	0.2794		0.30	7.3	TM	
7	TM	Chloroethane		0.3901	0.3344	0.3412	0.4012	0.3623	0.3619	0.3569			0.36	6.7	TM	
8	TM	Dichlorofluoromethane		1.175	1.209	1.085	1.184	1.123	1.110	1.102	1.156		1.1	3.9	TM	
9	TM	Trichlorofluoromethane		0.6881	0.6679	0.6624	0.7070	0.6960	0.6853	0.6746	0.6949		0.68	2.2	TM	
10	TM	Acrolein		0.0393	0.0429	0.0409	0.0417	0.0431	0.0437	0.0431	0.0424		0.04	3.5	TM	
11	TML	Acetone		0.5116	0.4082	0.1838	0.1884	0.1740	0.1641	0.1623			0.26	56	TML	0.999
12	TM	Freon-113		0.4379	0.3965	0.3800	0.4051	0.3760	0.3823	0.3851	0.3805		0.39	5.2	TM	
13	TM*	1,1-DCE		0.3295	0.3072	0.3080	0.3314	0.3009	0.2961	0.2963	0.2836		0.31	5.4	TM*	
14	TM	t-Butanol	0.0212	0.0202	0.0189	0.0178	0.0187	0.0182	0.0191	0.0175	0.0173		0.02	6.7	TM	
15	TM	Acetonitrile		0.0501	0.0495	0.0454	0.0490	0.0493	0.0504	0.0623			0.05	10	TM	
16	TM	Methyl Acetate		0.3285	0.3952	0.3461	0.3698	0.3436	0.3409	0.3446	0.3525		0.35	5.9	TM	
17	TML	Iodomethane		0.1267	0.1361	0.1303	0.1680	0.1820	0.1893	0.2043			0.16	19	TML	0.999
18	TM	Acrylonitrile		0.1717	0.1343	0.1372	0.1262	0.1179	0.1212	0.1177	0.1211		0.13	14	TM	
19	TM	Methylene chloride		0.6584	0.6303	0.5286	0.5699	0.5297	0.5186	0.5082	0.5275		0.56	10	TM	
20	TM	Carbon disulfide		1.522	1.430	1.244	1.367	1.347	1.311	1.330	1.378		1.4	6.1	TM	
21	TM	Methyl t-butyl ether (MtBE)		1.331	1.407	1.310	1.396	1.334	1.330	1.302	1.332		1.3	2.8	TM	
22	TM	Trans-1,2-DCE		0.5340	0.5072	0.4801	0.5213	0.4783	0.4649	0.4610	0.4733		0.49	5.6	TM	
23	TM	Diisopropyl Ether		1.717	1.636	1.562	1.717	1.650	1.632	1.639	1.728		1.7	3.4	TM	
24	TM**	1,1-DCA		0.9983	0.9643	0.9241	0.9785	0.9234	0.9116	0.9015	0.9202		0.94	3.7	TM**	
25	TM	Vinyl Acetate		0.4425	0.4417	0.4162	0.4271	0.4139	0.4054	0.3516	0.3635		0.41	8.3	TM	
26	TM	Ethyl tert Butyl Ether		1.527	1.542	1.435	1.518	1.492	1.439	1.453	1.519		1.5	2.9	TM	
27	TM	MEK (2-Butanone)			0.2138	0.1735	0.1939	0.1891	0.1912	0.1850	0.1929		0.19	6.3	TM	
28	TM	Cis-1,2-DCE		0.6609	0.6316	0.5585	0.5963	0.5744	0.5420	0.5386	0.5474		0.58	7.7	TM	
29	TM	2,2-Dichloropropane		0.2352	0.2621	0.2436	0.2508	0.2303	0.2282	0.2281	0.2315		0.24	5.2	TM	
30	TM*	Chloroform		0.9548	0.9480	0.9049	0.9684	0.9338	0.9105	0.8890	0.9109		0.93	3.0	TM*	
31	TM	Bromochloromethane		0.3234	0.2864	0.2627	0.2784	0.2631	0.2578	0.2503	0.2513		0.27	9.0	TM	
32	S	Dibromofluoromethane(S)	0.6027	0.5768	0.4948	0.4832	0.5315	0.5349	0.5206	0.5097	0.4938		0.53	7.5	S	
33	TM	1,1,1-TCA		0.7596	0.7494	0.7369	0.7771	0.7457	0.7124	0.7123	0.7223		0.74	3.1	TM	
34	TM	Cyclohexane		0.4079	0.4070	0.3726	0.4122	0.3735	0.3733	0.3815	0.3857		0.39	4.4	TM	
35	TM	1,1-Dichloropropene		0.6681	0.6461	0.6166	0.6699	0.6449	0.6298	0.6216	0.6322		0.64	3.1	TM	

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Initial Cal. Date: 11/13/16
Instrument: Loki

Initials:

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD		
36	TM	2,2,4-Trimethylpentane		1.219	1.160	1.167	1.224	1.149	1.125	1.144	1.152		1.2	3.0	TM	
37	S	1,2-DCA-D4(S)	0.6553	0.6546	0.5528	0.5203	0.5804	0.5661	0.5641	0.5489	0.5338		0.58	8.4	S	
38	TM	Carbon Tetrachloride		0.6047	0.5974	0.5361	0.6255	0.5711	0.5729	0.5756	0.5719		0.58	4.6	TM	
39	TM	Tert Amyl Methyl Ether		1.404	1.385	1.274	1.400	1.340	1.332	1.320	1.368		1.4	3.3	TM	
40	TM	1,2-DCA		0.7136	0.7839	0.7083	0.7677	0.7036	0.7045	0.6870	0.7078		0.72	4.8	TM	
41	TM	Benzene		2.100	1.976	1.891	2.055	1.982	1.921	1.890	1.951		2.0	3.8	TM	
42	TM	TCE		0.3078	0.2772	0.2503	0.2755	0.2616	0.2611	0.2669	0.2708		0.27	6.3	TM	
43	TM	2-Pentanone		0.2890	0.2853	0.2775	0.2967	0.2968	0.3064	0.3049	0.3123		0.30	4.0	TM	
44	TM*	1,2-Dichloropropane		0.5703	0.5961	0.5407	0.5699	0.5422	0.5493	0.5439	0.5608		0.56	3.4	TM*	
45	TM	Bromodichloromethane		0.7355	0.6828	0.6567	0.7283	0.6942	0.6863	0.6865	0.7139		0.70	3.7	TM	
46	TM	Methyl Cyclohexane		0.6119	0.6757	0.6524	0.6820	0.6429	0.6324	0.6490	0.6558		0.65	3.5	TM	
47	TM	Dibromomethane		0.3213	0.2891	0.3155	0.3053	0.3046	0.3028	0.2998	0.3018		0.31	3.2	TM	
48	TM	2-Chloroethyl vinyl ether													TM	
49	TML	MIBK (methyl isobutyl ketone)		0.8618	0.5804	0.5714	0.5652	0.4921	0.4668	0.4267	0.4504		0.55	25	TML	0.999
50	TM	1-Bromo-2-chloroethane		0.3804	0.3767	0.3769	0.4180	0.4125	0.4006	0.3992	0.4130		0.40	4.3	TM	
51	TM	Cis-1,3-Dichloropropene		0.8748	0.8443	0.7773	0.8693	0.8248	0.8292	0.8212	0.8747		0.84	4.0	TM	
52	TM*	Toluene		2.160	2.089	2.024	2.232	2.115	2.050	2.042	2.108		2.1	3.3	TM*	
53	TM	Trans-1,3-Dichloropropene		0.7219	0.7134	0.6768	0.7301	0.7246	0.7029	0.7162	0.7547		0.72	3.1	TM	
54	TM	1,1,2-TCA		0.3971	0.4347	0.3495	0.3770	0.3684	0.3651	0.3606	0.3709		0.38	7.1	TM	
55	TML	2-Hexanone		0.1084	0.1257	0.1373	0.1663	0.1619	0.1736	0.1704	0.1910		0.15	18	TML	0.998
56	I	Chlorobenzene-D5 (IS)														
57	S	Toluene-D8(S)	2.205	2.217	1.741	1.767	1.894	1.894	1.884	1.819	1.760		1.9	9.5	S	
58	TM	1,2-EDB		0.4520	0.4024	0.3970	0.4507	0.4269	0.4362	0.4126	0.4227		0.43	4.8	TM	
59	TM	Tetrachloroethene		0.6060	0.5423	0.4946	0.5379	0.5162	0.5019	0.4839	0.4891		0.52	7.8	TM	
60	TM	1-Chlorohexane		0.6417	0.5737	0.5913	0.6237	0.6069	0.5900	0.5908	0.6067		0.60	3.6	TM	
61	TM	1,1,1,2-Tetrachloroethane		0.5843	0.5139	0.5057	0.5432	0.5293	0.5224	0.5028	0.5193		0.53	5.0	TM	
62	TM	m&p-Xylene		1.001	0.8789	0.8709	0.9420	0.9080	0.8927	0.8684	0.9129		0.91	4.9	TM	
63	TM	o-Xylene		0.9145	0.8550	0.8635	0.9265	0.9102	0.8963	0.8627	0.9191		0.89	3.2	TM	
64	TM	Styrene		0.9254	0.9418	0.9176	1.041	1.021	1.005	0.9764	1.067		0.99	5.6	TM	
65	S	4-Bromofluorobenzene(S)	0.8071	0.7219	0.6403	0.6414	0.6906	0.6903	0.6882	0.6642	0.6572		0.69	7.5	S	
66	TM	1,3-Dichloropropane		0.8887	0.7400	0.7391	0.7991	0.7802	0.7750	0.7408	0.7563		0.78	6.4	TM	
67	TM	Dibromochloromethane		0.5487	0.4902	0.4780	0.5318	0.5191	0.5178	0.5050	0.5250		0.51	4.4	TM	
68	TM**	Chlorobenzene		1.557	1.406	1.389	1.486	1.438	1.418	1.365	1.418		1.4	4.2	TM**	
69	TM*	Ethylbenzene		2.434	2.291	2.317	2.462	2.361	2.332	2.277	2.343		2.4	2.8	TM*	
70	TM**	Bromoform		0.3290	0.2881	0.3026	0.3196	0.3216	0.3109	0.3017	0.3195		0.31	4.3	TM**	

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Initial Cal. Date: 11/13/16
Instrument: Loki

Initials:

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD		
71	I	1,4-Dichlorobenzene-D (IS)														
72	TM	Isopropylbenzene		4.416	3.850	4.109	4.233	3.920	4.011	4.148	3.956		4.1	4.5	TM	
73	TM**	1,1,2,2-Tetrachloroethane		1.032	0.9633	1.007	1.049	0.9864	0.9992	0.9406	0.9699		0.99	3.6	TM**	
74	TM	1,2,3-Trichloropropane		0.1906	0.2108	0.1826	0.1959	0.1900	0.1894	0.1845	0.1789		0.19	5.2	TM	
75	TM	t-1,4-Dichloro-2-Butene				0.2825	0.2608	0.2537	0.2570	0.2653	0.2882		0.27	5.3	TM	
76	TM	Bromobenzene		1.211	1.089	1.168	1.171	1.081	1.102	1.086	1.026		1.1	5.4	TM	
77	TM	n-Propylbenzene		4.639	4.487	4.743	4.857	4.512	4.622	4.819	4.643		4.7	2.9	TM	
78	TM	4-Ethyltoluene		3.843	3.922	4.029	4.181	3.877	4.022	4.096	4.014		4.0	2.8	TM	
79	TM	2-Chlorotoluene		3.238	2.900	3.049	3.084	2.925	2.937	2.985	2.929		3.0	3.8	TM	
80	TM	1,3,5-Trimethylbenzene		3.532	3.085	3.330	3.561	3.340	3.405	3.452	3.397		3.4	4.4	TM	
81	TM	4-Chlorotoluene		3.628	3.383	3.454	3.616	3.310	3.400	3.513	3.468		3.5	3.2	TM	
82	TM	Tert-Butylbenzene		3.272	2.840	2.799	3.066	2.761	2.833	2.899	2.781		2.9	6.1	TM	
83	TM	1,2,4-Trimethylbenzene		3.512	3.226	3.353	3.507	3.328	3.430	3.574	3.551		3.4	3.6	TM	
84	TM	Sec-Butylbenzene		4.229	4.004	4.062	4.300	3.930	4.006	4.153	4.098		4.1	3.0	TM	
85	TM	p-Isopropyltoluene		3.402	3.298	3.346	3.515	3.273	3.398	3.529	3.498		3.4	2.9	TM	
86	TM	Benzyl Chloride		1.064	1.020	0.9909	1.045	1.057	1.154	1.214	1.403		1.1	12	TM	
87	TM	1,3-DCB		1.987	1.998	2.055	2.134	1.980	2.003	2.018	1.978		2.0	2.6	TM	
88	TM	1,4-DCB		2.279	2.055	2.119	2.176	2.008	2.018	2.028	2.036		2.1	4.6	TM	
89	TM	n-Butylbenzene		2.956	2.976	2.939	3.052	2.848	2.919	3.119	3.217		3.0	4.0	TM	
90	TM	1,2-DCB		2.016	1.948	1.986	2.068	1.913	1.939	1.926	1.971		2.0	2.6	TM	
91	TM	Hexachloroethane		0.6643	0.6253	0.6641	0.7370	0.6742	0.7204	0.7250	0.7451		0.69	6.2	TM	
92	TM	1,2-Dibromo-3-chloropropane		0.2391	0.1725	0.1751	0.1833	0.1683	0.1726	0.1825	0.1794		0.18	12	TM	
93	TM	1,2,4-Trichlorobenzene		1.393	1.280	1.309	1.360	1.298	1.315	1.365	1.357		1.3	3.0	TM	
94	TM	Hexachlorobutadiene		0.5424	0.4994	0.5093	0.5550	0.5224	0.5063	0.5110	0.5040		0.52	3.8	TM	
95	TM	Naphthalene		1.525	1.617	1.581	1.709	1.745	1.786	1.843	1.707		1.7	6.4	TM	
96	TM	1,2,3-Trichlorobenzene		0.7972	0.7626	0.7396	0.8855	0.8096	0.8268	0.8879	0.8169		0.82	6.4	TM	
97																
98																
99																
100																
101																
102																
103																
104																
105																

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L05.D
Acq On : 13 Nov 16 13:35
Sample : 0.3ug/L VOC STD 11/13/16J
Misc : 1uL-5ppb

Vial: 5
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:43 2016

Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	821614	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	780352	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	427200	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	99036	5.71210 ppb		0.00
Spiked Amount 25.000			Recovery = 22.848%			
37) 1,2-DCA-D4(S)	4.93	65	107676	5.69665 ppb		0.00
Spiked Amount 25.000			Recovery = 22.788%			
57) Toluene-D8(S)	7.22	98	344140	5.77527 ppb		0.00
Spiked Amount 25.000			Recovery = 23.100%			
65) 4-Bromofluorobenzene(S)	9.89	95	125959	5.85659 ppb		0.00
Spiked Amount 25.000			Recovery = 23.428%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.86	85	5653	0.32481 ppb		99
3) Freon 114	0.93	85	4312	0.33529 ppb		88
4) Chloromethane	0.96	50	8200	0.33962 ppb		96
5) Vinyl chloride	1.03	62	7440	0.34197 ppb	#	71
6) Bromomethane	1.23	96	2853	0.28613 ppb		99
7) Chloroethane	1.29	64	3337	0.27894 ppb		99
8) Dichlorofluoromethane	1.43	67	12630	0.33622 ppb		94
9) Trichlorofluoromethane	1.46	101	7342	0.32636 ppb		89
10) Acrolein	1.76	56	12182	8.79790 ppb	#	83
11) Acetone	1.89	43	6880	0.34173 ppb		96
12) Freon-113	1.85	101	3957	0.30643 ppb		93
13) 1,1-DCE	1.83	96	3531	0.35040 ppb	#	75
14) t-Butanol	2.40	59	6957	11.27590 ppb		99
15) Acetonitrile	2.10	41	17913	10.71863 ppb		90
16) Methyl Acetate	2.17	43	4224	0.36446 ppb	#	80
17) Iodomethane	1.93	142	1047	0.87639 ppb	#	78
18) Acrylonitrile	2.48	52	3822	0.88828 ppb	#	65
19) Methylene chloride	2.24	84	7244	0.39438 ppb		92
20) Carbon disulfide	1.98	76	17633	0.39276 ppb	#	90
21) Methyl t-butyl ether (MtBE	2.52	73	15401	0.34900 ppb		98
22) Trans-1,2-DCE	2.51	96	5434	0.33743 ppb		79
23) Diisopropyl Ether	3.11	45	16893	0.30962 ppb		99
24) 1,1-DCA	2.95	63	9857	0.31898 ppb	#	91
25) Vinyl Acetate	3.11	43	4740	0.35373 ppb	#	83
26) Ethyl tert Butyl Ether	3.60	59	15506	0.31653 ppb	#	78
27) MEK (2-Butanone)	3.82	43	2693	0.40807 ppb		88
28) Cis-1,2-DCE	3.72	96	7901	0.41363 ppb	#	82
29) 2,2-Dichloropropane	3.71	77	2796	0.35637 ppb		95
30) Chloroform	4.26	83	9472	0.31073 ppb		98
31) Bromochloromethane	4.09	128	2858	0.32010 ppb		93
33) 1,1,1-TCA	4.47	97	8133	0.33467 ppb		99
34) Cyclohexane	4.53	41	4618	0.36105 ppb		68
35) 1,1-Dichloropropene	4.73	75	6719	0.31889 ppb	#	80
36) 2,2,4-Trimethylpentane	5.16	57	12117	0.31575 ppb	#	28
38) Carbon Tetrachloride	4.71	119	6409	0.33513 ppb	#	72
39) Tert Amyl Methyl Ether	5.23	73	14063	0.31631 ppb	#	93
40) 1,2-DCA	5.03	62	8817	0.37156 ppb		96
41) Benzene	4.99	78	23478	0.36251 ppb		95
42) TCE	5.84	95	2528	0.28342 ppb		94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L05.D
Acq On : 13 Nov 16 13:35
Sample : 0.3ug/L VOC STD 11/13/16J
Misc : 1uL-5ppb

Vial: 5
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:43 2016

Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43) 2-Pentanone	6.13	43	99727	10.24785	ppb		100
44) 1,2-Dichloropropane	6.09	63	6984	0.38007	ppb	#	93
45) Bromodichloromethane	6.44	83	7812	0.34053	ppb	#	92
46) Methyl Cyclohexane	6.04	83	7018	0.32840	ppb		80
47) Dibromomethane	6.22	93	3679	0.36699	ppb		92
49) MIBK (methyl isobutyl ket	7.16	43	6601	-0.09153	ppb		99
50) 1-Bromo-2-chloroethane	6.75	63	3760	0.28806	ppb		97
51) Cis-1,3-Dichloropropene	6.96	75	9869	0.35772	ppb		95
52) Toluene	7.29	91	22670	0.32810	ppb		99
53) Trans-1,3-Dichloropropene	7.57	75	8042	0.34100	ppb		99
54) 1,1,2-TCA	7.74	83	4464	0.35942	ppb		90
55) 2-Hexanone	8.06	43	1369	1.34758	ppb	#	86
58) 1,2-EDB	8.21	107	4222	0.31821	ppb		96
59) Tetrachloroethene	7.86	166	5264	0.32338	ppb		95
60) 1-Chlorohexane	8.76	91	6301	0.33470	ppb		95
61) 1,1,1,2-Tetrachloroethane	8.83	131	5443	0.33050	ppb		87
62) m&p-Xylene	8.99	106	18857	0.66430	ppb		100
63) o-Xylene	9.38	106	9413	0.33752	ppb		81
64) Styrene	9.40	104	8915	0.28940	ppb		97
66) 1,3-Dichloropropane	7.90	76	8546	0.35219	ppb		100
67) Dibromochloromethane	8.12	129	5297	0.32987	ppb		95
68) Chlorobenzene	8.73	112	15924	0.35561	ppb		86
69) Ethylbenzene	8.87	91	23491	0.31997	ppb		100
70) Bromoform	9.55	173	3036	0.31210	ppb		83
72) Isopropylbenzene	9.76	105	22186	0.31818	ppb		98
73) 1,1,2,2-Tetrachloroethane	10.06	83	5237	0.30849	ppb	#	95
74) 1,2,3-Trichloropropane	10.09	110	1005	0.30899	ppb		93
75) t-1,4-Dichloro-2-Butene	10.13	53	2224	0.48580	ppb		95
76) Bromobenzene	10.02	156	6174	0.32354	ppb		86
77) n-Propylbenzene	10.17	91	25185	0.31593	ppb		95
78) 4-Ethyltoluene	10.29	105	20709	0.30314	ppb		99
79) 2-Chlorotoluene	10.23	91	15745	0.30655	ppb		92
80) 1,3,5-Trimethylbenzene	10.35	105	16669	0.28793	ppb		99
81) 4-Chlorotoluene	10.34	91	19747	0.33288	ppb		93
82) Tert-Butylbenzene	10.66	119	15845	0.31904	ppb		91
83) 1,2,4-Trimethylbenzene	10.71	105	16886	0.28766	ppb		96
84) Sec-Butylbenzene	10.88	105	21309	0.30432	ppb		100
85) p-Isopropyltoluene	11.04	119	18218	0.31289	ppb	#	92
86) Benzyl Chloride	11.20	91	5595	0.29273	ppb	#	91
87) 1,3-DCB	10.96	146	11205	0.32476	ppb		98
88) 1,4-DCB	11.05	146	12229	0.34243	ppb		92
89) n-Butylbenzene	11.44	91	15347	0.29906	ppb	#	92
90) 1,2-DCB	11.41	146	10790	0.32039	ppb		96
91) Hexachloroethane	11.65	117	3723	0.31374	ppb	#	81
92) 1,2-Dibromo-3-chloropropan	12.18	157	904	0.28738	ppb		88
93) 1,2,4-Trichlorobenzene	12.99	180	7498	0.32878	ppb		97
94) Hexachlorobutadiene	13.18	225	2695	0.30405	ppb		91
95) Naphthalene	13.22	128	7388	0.25596	ppb		93
96) 1,2,3-Trichlorobenzene	13.46	180	4437	0.31830	ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

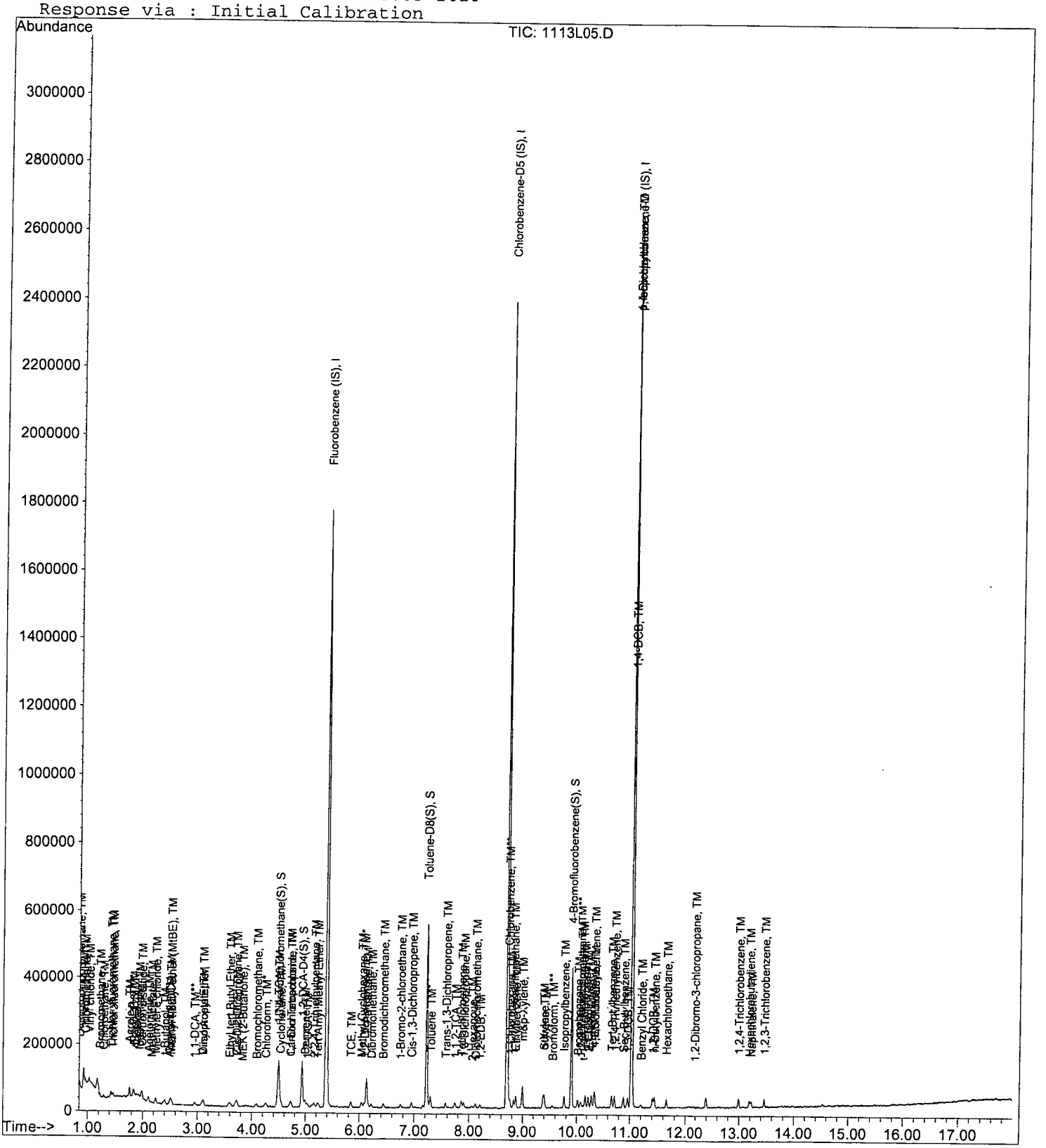
Data File : M:\LOKI\DATA\161113\1113L05.D
Acq On : 13 Nov 16 13:35
Sample : 0.3ug/L VOC STD 11/13/16J
Misc : 1uL-5ppb

Vial: 5
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:43 2016

Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



1113L05.D LALLW.M Tue Nov 15 10:39:52 2016

560

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L06.D
Acq On : 13 Nov 16 14:04
Sample : 0.5ug/L VOC STD 11/13/16K
Misc : 1uL-5ppb

Vial: 6
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:43 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	848000	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	782336	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	423936	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	97825	5.46669 ppb		0.00
Spiked Amount 25.000			Recovery = 21.868%			
37) 1,2-DCA-D4(S)	4.93	65	111019	5.69075 ppb		0.00
Spiked Amount 25.000			Recovery = 22.764%			
57) Toluene-D8(S)	7.22	98	346936	5.80743 ppb		0.00
Spiked Amount 25.000			Recovery = 23.228%			
65) 4-Bromofluorobenzene(S)	9.89	95	124253	5.76261 ppb		0.00
Spiked Amount 25.000			Recovery = 23.052%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.86	85	8153	0.45388 ppb		93
3) Freon 114	0.93	85	6712	0.50566 ppb		98
4) Chloromethane	0.96	50	12513	0.50213 ppb		98
5) Vinyl chloride	1.03	62	11563	0.51494 ppb		90
6) Bromomethane	1.23	96	4997	0.48555 ppb		95
7) Chloroethane	1.29	64	6616	0.53583 ppb		91
8) Dichlorofluoromethane	1.43	67	19930	0.51404 ppb		97
9) Trichlorofluoromethane	1.46	101	11670	0.50261 ppb		99
10) Acrolein	1.76	56	33329	23.32141 ppb	#	98
11) Acetone	1.88	43	8677	0.63589 ppb		85
12) Freon-113	1.84	101	7426	0.55717 ppb		95
13) 1,1-DCE	1.83	96	5588	0.53728 ppb		95
14) t-Butanol	2.40	59	17120	26.88468 ppb		99
15) Acetonitrile	2.10	41	42460	24.61632 ppb		95
16) Methyl Acetate	2.17	43	5571	0.46573 ppb		97
17) Iodomethane	1.93	142	2149	1.02985 ppb	#	93
18) Acrylonitrile	2.48	52	2912	0.65573 ppb		84
19) Methylene chloride	2.24	84	11166	0.58899 ppb		100
20) Carbon disulfide	1.98	76	25808	0.55696 ppb	#	90
21) Methyl t-butyl ether (MtBE	2.53	73	22581	0.49579 ppb		94
22) Trans-1,2-DCE	2.50	96	9056	0.54484 ppb		95
23) Diisopropyl Ether	3.10	45	29116	0.51704 ppb		99
24) 1,1-DCA	2.95	63	16932	0.53089 ppb		97
25) Vinyl Acetate	3.07	43	7505	0.54264 ppb		100
26) Ethyl tert Butyl Ether	3.60	59	25895	0.51216 ppb		95
27) MEK (2-Butanone)	3.82	43	4529	0.66492 ppb	#	82
28) Cis-1,2-DCE	3.73	96	11209	0.56855 ppb		91
29) 2,2-Dichloropropane	3.70	77	3989	0.49260 ppb		98
30) Chloroform	4.26	83	16194	0.51471 ppb		98
31) Bromochloromethane	4.09	128	5485	0.59520 ppb		80
33) 1,1,1-TCA	4.47	97	12882	0.51359 ppb		88
34) Cyclohexane	4.54	41	6918	0.52404 ppb	#	66
35) 1,1-Dichloropropene	4.73	75	11331	0.52104 ppb	#	79
36) 2,2,4-Trimethylpentane	5.16	57	20673	0.52194 ppb	#	61
38) Carbon Tetrachloride	4.70	119	10256	0.51960 ppb		88
39) Tert Amyl Methyl Ether	5.23	73	23805	0.51877 ppb	#	95
40) 1,2-DCA	5.04	62	12102	0.49412 ppb	#	89
41) Benzene	4.99	78	35615	0.53280 ppb		96
42) TCE	5.84	95	5221	0.56712 ppb		85

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161113\1113L06.D
Acq On : 13 Nov 16 14:04
Sample : 0.5ug/L VOC STD 11/13/16K
Misc : 1uL-5ppb

Vial: 6
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:43 2016

Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43) 2-Pentanone	6.13	43	245102	24.40275 ppb		99
44) 1,2-Dichloropropane	6.09	63	9672	0.50997 ppb		98
45) Bromodichloromethane	6.44	83	12474	0.52683 ppb		99
46) Methyl Cyclohexane	6.04	83	10377	0.47048 ppb		97
47) Dibromomethane	6.22	93	5449	0.52664 ppb		97
49) MIBK (methyl isobutyl ket	7.16	43	14616	0.42555 ppb		91
50) 1-Bromo-2-chloroethane	6.75	63	6451	0.47885 ppb		93
51) Cis-1,3-Dichloropropene	6.95	75	14837	0.52107 ppb		94
52) Toluene	7.29	91	36637	0.51374 ppb		92
53) Trans-1,3-Dichloropropene	7.57	75	12244	0.50303 ppb		99
54) 1,1,2-TCA	7.74	83	6735	0.52539 ppb		94
55) 2-Hexanone	8.06	43	1839	1.41350 ppb	#	78
58) 1,2-EDB	8.21	107	7072	0.53166 ppb		97
59) Tetrachloroethene	7.86	166	9482	0.58102 ppb		86
60) 1-Chlorohexane	8.76	91	10040	0.53197 ppb		96
61) 1,1,1,2-Tetrachloroethane	8.83	131	9142	0.55370 ppb		91
62) m&p-Xylene	8.99	106	31340	1.10126 ppb		96
63) o-Xylene	9.38	106	14309	0.51177 ppb		85
64) Styrene	9.40	104	14479	0.46883 ppb		90
66) 1,3-Dichloropropane	7.90	76	13906	0.57162 ppb		96
67) Dibromochloromethane	8.12	129	8586	0.53333 ppb		98
68) Chlorobenzene	8.73	112	24358	0.54257 ppb		96
69) Ethylbenzene	8.87	91	38082	0.51740 ppb		100
70) Bromoform	9.55	173	5148	0.52787 ppb		95
72) Isopropylbenzene	9.76	105	37440	0.54108 ppb		98
73) 1,1,2,2-Tetrachloroethane	10.07	83	8750	0.51939 ppb		93
74) 1,2,3-Trichloropropane	10.09	110	1616	0.50067 ppb	#	63
75) t-1,4-Dichloro-2-Butene	10.13	53	2746	0.60444 ppb		97
76) Bromobenzene	10.02	156	10266	0.54212 ppb		95
77) n-Propylbenzene	10.17	91	39329	0.49716 ppb		99
78) 4-Ethyltoluene	10.29	105	32580	0.48057 ppb		91
79) 2-Chlorotoluene	10.23	91	27454	0.53863 ppb		93
80) 1,3,5-Trimethylbenzene	10.35	105	29949	0.52130 ppb		96
81) 4-Chlorotoluene	10.34	91	30758	0.52249 ppb		93
82) Tert-Butylbenzene	10.67	119	27742	0.56289 ppb		88
83) 1,2,4-Trimethylbenzene	10.71	105	29781	0.51124 ppb		96
84) Sec-Butylbenzene	10.88	105	35854	0.51599 ppb		98
85) p-Isopropyltoluene	11.04	119	28842	0.49917 ppb		97
86) Benzyl Chloride	11.20	91	9018	0.47545 ppb		95
87) 1,3-DCB	10.96	146	16849	0.49211 ppb		90
88) 1,4-DCB	11.05	146	19323	0.54524 ppb		90
89) n-Butylbenzene	11.44	91	25062	0.49214 ppb		98
90) 1,2-DCB	11.41	146	17097	0.51157 ppb		96
91) Hexachloroethane	11.66	117	5632	0.47827 ppb		98
92) 1,2-Dibromo-3-chloropropan	12.17	157	2027	0.64933 ppb		93
93) 1,2,4-Trichlorobenzene	13.00	180	11813	0.52197 ppb		99
94) Hexachlorobutadiene	13.19	225	4599	0.52285 ppb		86
95) Naphthalene	13.22	128	12928	0.45134 ppb		91
96) 1,2,3-Trichlorobenzene	13.46	180	6759	0.48860 ppb	#	91

(#) = qualifier out of range (m) = manual integration

Quantitation Report

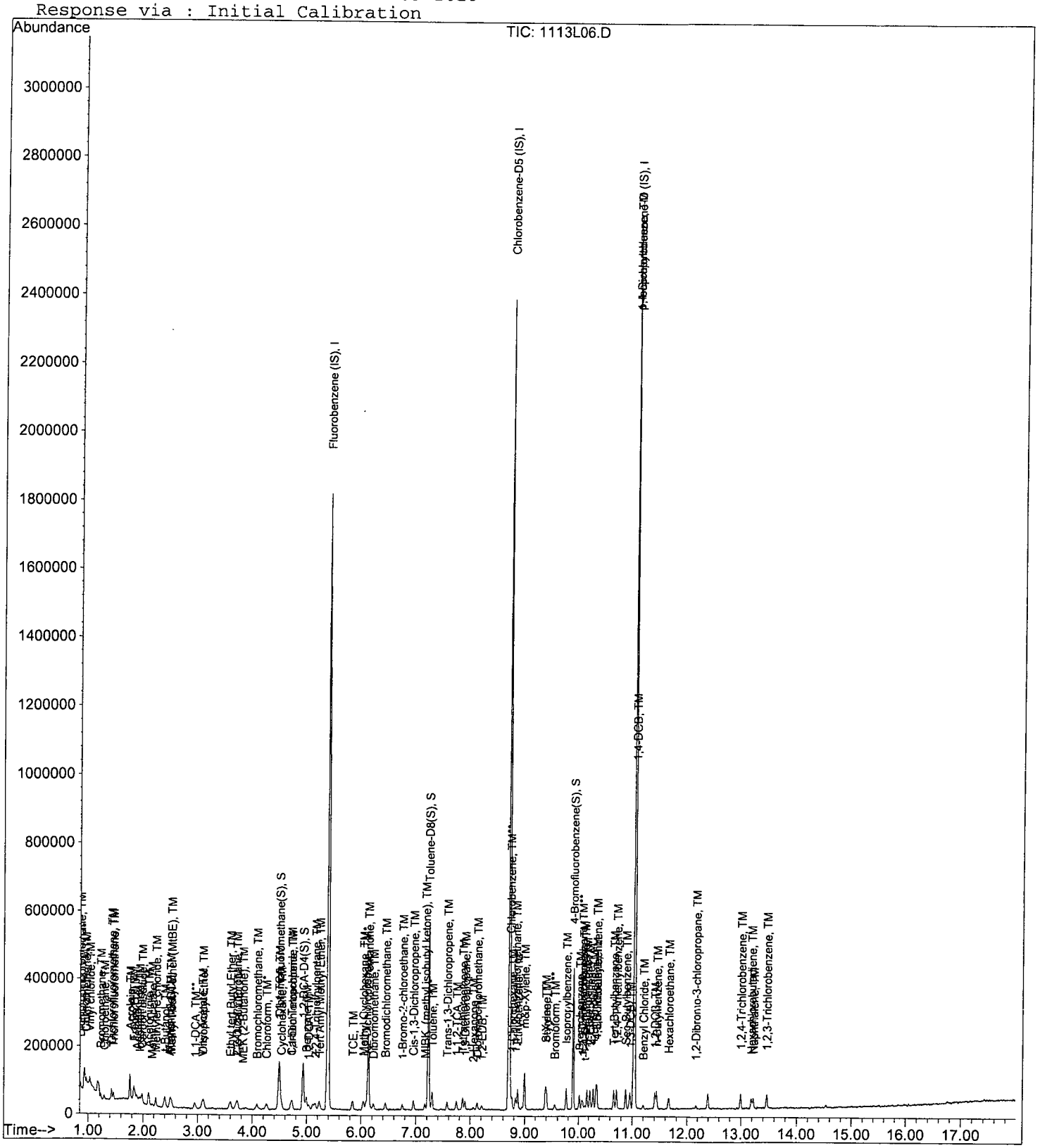
Data File : M:\LOKI\DATA\161113\1113L06.D
Acq On : 13 Nov 16 14:04
Sample : 0.5ug/L VOC STD 11/13/16K
Misc : 1uL-5ppb

Vial: 6
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:43 2016

Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L07.D
Acq On : 13 Nov 16 14:32
Sample : 1.0ug/L VOC STD 11/13/16L
Misc : 2uL-10ppb

Vial: 7
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:43 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.39	96	819008	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	820800	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	438720	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	162096	9.37896 ppb		0.00
Spiked Amount 25.000			Recovery = 37.516%			
37) 1,2-DCA-D4(S)	4.93	65	181084	9.61082 ppb		0.00
Spiked Amount 25.000			Recovery = 38.444%			
57) Toluene-D8(S)	7.22	98	571625	9.12015 ppb		0.00
Spiked Amount 25.000			Recovery = 36.480%			
65) 4-Bromofluorobenzene(S)	9.89	95	210233	9.29329 ppb		0.00
Spiked Amount 25.000			Recovery = 37.172%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.86	85	18047	1.04024 ppb		99
3) Freon 114	0.93	85	13457	1.04970 ppb		94
4) Chloromethane	0.96	50	26593	1.10491 ppb		100
5) Vinyl chloride	1.03	62	22171	1.02230 ppb		91
6) Bromomethane	1.22	96	9193	0.92490 ppb		98
7) Chloroethane	1.29	64	10956	0.91873 ppb		93
8) Dichlorofluoromethane	1.43	67	39601	1.05755 ppb		96
9) Trichlorofluoromethane	1.46	101	21880	0.97569 ppb		97
10) Acrolein	1.76	56	70296	50.92967 ppb		98
11) Acetone	1.88	43	13373	1.60072 ppb		98
12) Freon-113	1.85	101	12990	1.00913 ppb		96
13) 1,1-DCE	1.83	96	10065	1.00199 ppb		93
14) t-Butanol	2.40	59	30921	50.27619 ppb		98
15) Acetonitrile	2.11	41	81157	48.71658 ppb		98
16) Methyl Acetate	2.17	43	12948	1.12075 ppb		88
17) Iodomethane	1.93	142	4459	1.38433 ppb		90
18) Acrylonitrile	2.48	52	4263	0.99393 ppb	#	60
19) Methylene chloride	2.24	84	20648	1.12770 ppb		94
20) Carbon disulfide	1.98	76	46833	1.04648 ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	46110	1.04823 ppb		95
22) Trans-1,2-DCE	2.50	96	16617	1.03513 ppb		96
23) Diisopropyl Ether	3.11	45	53595	0.98544 ppb		99
24) 1,1-DCA	2.95	63	31590	1.02554 ppb		99
25) Vinyl Acetate	3.10	43	14470	1.08327 ppb	#	82
26) Ethyl tert Butyl Ether	3.60	59	50501	1.03418 ppb		96
27) MEK (2-Butanone)	3.82	43	7005	1.06484 ppb		97
28) Cis-1,2-DCE	3.73	96	20693	1.08676 ppb		95
29) 2,2-Dichloropropane	3.70	77	8585	1.09769 ppb		96
30) Chloroform	4.26	83	31058	1.02210 ppb		99
31) Bromochloromethane	4.09	128	9382	1.05413 ppb		90
33) 1,1,1-TCA	4.48	97	24551	1.01347 ppb		99
34) Cyclohexane	4.54	41	13332	1.04565 ppb		95
35) 1,1-Dichloropropene	4.72	75	21165	1.00769 ppb		97
36) 2,2,4-Trimethylpentane	5.15	57	37999	0.99333 ppb	#	42
38) Carbon Tetrachloride	4.70	119	19572	1.02668 ppb		96
39) Tert Amyl Methyl Ether	5.23	73	45376	1.02386 ppb		98
40) 1,2-DCA	5.04	62	25680	1.08562 ppb		95
41) Benzene	4.99	78	64726	1.00257 ppb		98
42) TCE	5.84	95	9081	1.02132 ppb		98

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161113\1113L07.D
Acq On : 13 Nov 16 14:32
Sample : 1.0ug/L VOC STD 11/13/16L
Misc : 2uL-10ppb

Vial: 7
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:43 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	2-Pentanone	6.12	43	467333	48.17549	ppb		99
44)	1,2-Dichloropropane	6.09	63	19527	1.06604	ppb		96
45)	Bromodichloromethane	6.44	83	22368	0.97814	ppb		100
46)	Methyl Cyclohexane	6.04	83	22136	1.03914	ppb		89
47)	Dibromomethane	6.22	93	9472	0.94787	ppb		95
49)	MIBK (methyl isobutyl ket	7.16	43	19014	0.76160	ppb	#	95
50)	1-Bromo-2-chloroethane	6.75	63	12340	0.94840	ppb		95
51)	Cis-1,3-Dichloropropene	6.95	75	27661	1.00582	ppb		96
52)	Toluene	7.29	91	68420	0.99338	ppb		99
53)	Trans-1,3-Dichloropropene	7.57	75	23372	0.99419	ppb		94
54)	1,1,2-TCA	7.74	83	14242	1.15033	ppb		87
55)	2-Hexanone	8.05	43	4119	1.78883	ppb		94
58)	1,2-EDB	8.21	107	13213	0.94679	ppb		94
59)	Tetrachloroethene	7.86	166	17806	1.03996	ppb		95
60)	1-Chlorohexane	8.76	91	18835	0.95120	ppb		98
61)	1,1,1,2-Tetrachloroethane	8.83	131	16873	0.97405	ppb		89
62)	m&p-Xylene	8.99	106	57713	1.93294	ppb		97
63)	o-Xylene	9.38	106	28071	0.95693	ppb		95
64)	Styrene	9.40	104	30920	0.95427	ppb		99
66)	1,3-Dichloropropane	7.90	76	24295	0.95187	ppb		95
67)	Dibromochloromethane	8.12	129	16093	0.95279	ppb		99
68)	Chlorobenzene	8.73	112	46168	0.98020	ppb		97
69)	Ethylbenzene	8.87	91	75230	0.97422	ppb		99
70)	Bromoform	9.55	173	9459	0.92447	ppb		95
72)	Isopropylbenzene	9.76	105	67567	0.94357	ppb		99
73)	1,1,2,2-Tetrachloroethane	10.06	83	16905	0.96965	ppb	#	92
74)	1,2,3-Trichloropropane	10.09	110	3699	1.10740	ppb		81
75)	t-1,4-Dichloro-2-Butene	10.16	53	521	0.11082	ppb		100
76)	Bromobenzene	10.02	156	19111	0.97520	ppb		90
77)	n-Propylbenzene	10.17	91	78739	0.96180	ppb		97
78)	4-Ethyltoluene	10.29	105	68835	0.98114	ppb		96
79)	2-Chlorotoluene	10.23	91	50887	0.96472	ppb		100
80)	1,3,5-Trimethylbenzene	10.35	105	54142	0.91065	ppb		100
81)	4-Chlorotoluene	10.34	91	59371	0.97456	ppb		93
82)	Tert-Butylbenzene	10.67	119	49832	0.97702	ppb		97
83)	1,2,4-Trimethylbenzene	10.71	105	56609	0.93904	ppb		100
84)	Sec-Butylbenzene	10.88	105	70273	0.97725	ppb		97
85)	p-Isopropyltoluene	11.04	119	57874	0.96788	ppb		98
86)	Benzyl Chloride	11.20	91	17896	0.91173	ppb		99
87)	1,3-DCB	10.96	146	35054	0.98932	ppb		97
88)	1,4-DCB	11.05	146	36066	0.98338	ppb		94
89)	n-Butylbenzene	11.44	91	52225	0.99097	ppb		98
90)	1,2-DCB	11.41	146	34187	0.98846	ppb		95
91)	Hexachloroethane	11.66	117	10973	0.90043	ppb		90
92)	1,2-Dibromo-3-chloropropan	12.18	157	3027	0.93700	ppb	#	64
93)	1,2,4-Trichlorobenzene	12.99	180	22460	0.95898	ppb		98
94)	Hexachlorobutadiene	13.19	225	8764	0.96279	ppb	#	83
95)	Naphthalene	13.22	128	28384	0.95755	ppb		98
96)	1,2,3-Trichlorobenzene	13.46	180	13383	0.93484	ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

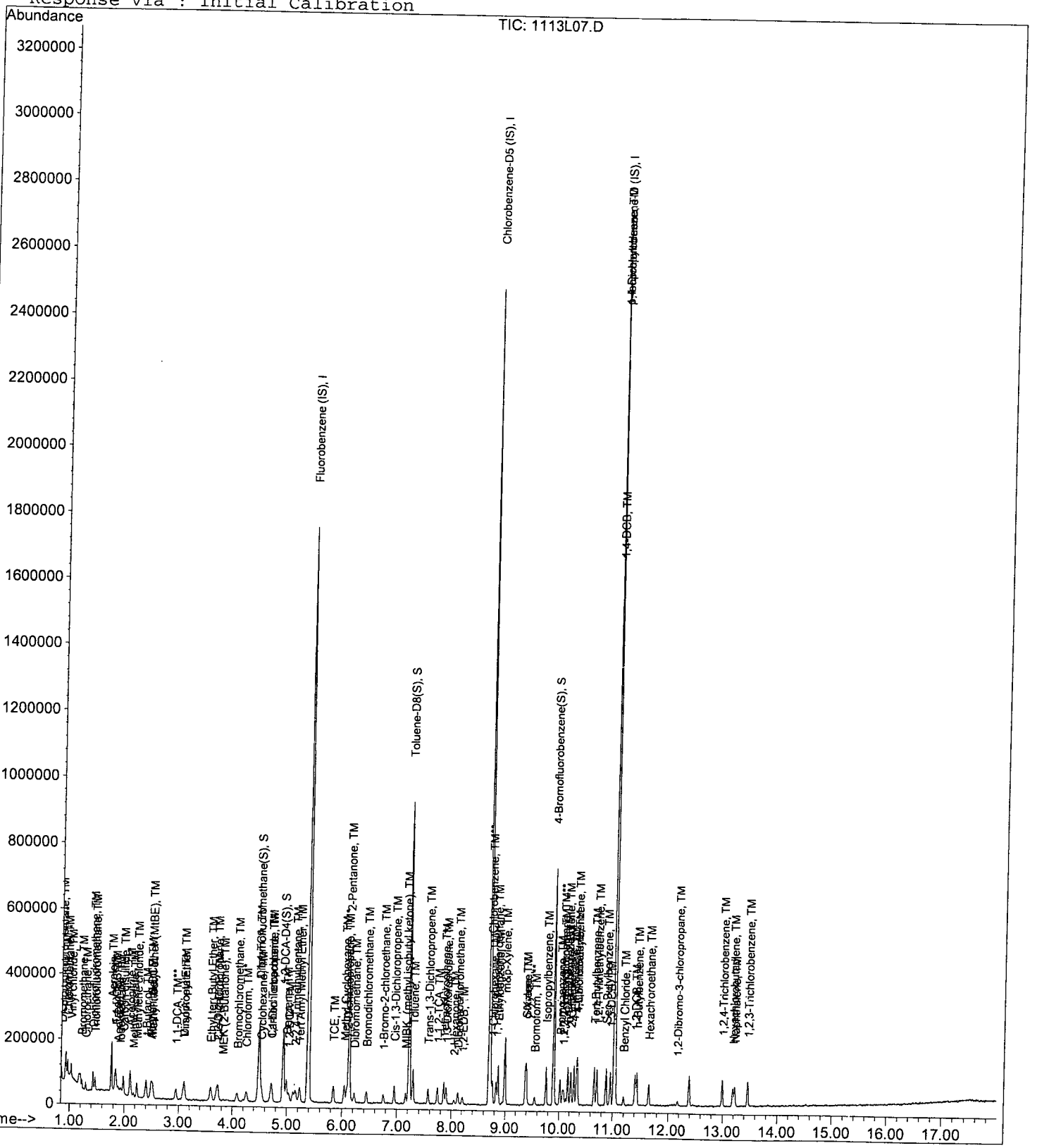
Data File : M:\LOKI\DATA\161113\1113L07.D
Acq On : 13 Nov 16 14:32
Sample : 1.0ug/L VOC STD 11/13/16L
Misc : 2uL-10ppb

Vial: 7
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:43 2016

Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L08.D
Acq On : 13 Nov 16 15:00
Sample : 2.0ug/L VOC STD 11/13/16M
Misc : 2uL-10ppb

Vial: 8
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:43 2016

Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	848479	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	802368	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	417920	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	164004	9.15976 ppb		0.00
Spiked Amount 25.000			Recovery = 36.640%			
37) 1,2-DCA-D4(S)	4.93	65	176601	9.04733 ppb		0.00
Spiked Amount 25.000			Recovery = 36.188%			
57) Toluene-D8(S)	7.22	98	567184	9.25717 ppb		0.00
Spiked Amount 25.000			Recovery = 37.028%			
65) 4-Bromofluorobenzene(S)	9.89	95	205871	9.30953 ppb		0.00
Spiked Amount 25.000			Recovery = 37.240%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.86	85	36508	2.03125 ppb		98
3) Freon 114	0.93	85	26700	2.01037 ppb		99
4) Chloromethane	0.96	50	44990	1.80436 ppb		97
5) Vinyl chloride	1.03	62	43395	1.93144 ppb		92
6) Bromomethane	1.22	96	21543	2.09213 ppb		93
7) Chloroethane	1.29	64	23160	1.87466 ppb		99
8) Dichlorofluoromethane	1.43	67	73674	1.89914 ppb		97
9) Trichlorofluoromethane	1.46	101	44963	1.93539 ppb		95
10) Acrolein	1.76	56	104016	72.74237 ppb	#	98
11) Acetone	1.88	43	12476	1.34364 ppb		94
12) Freon-113	1.84	101	25791	1.93399 ppb		95
13) 1,1-DCE	1.83	96	20908	2.00913 ppb		94
14) t-Butanol	2.40	59	45368	71.20418 ppb		99
15) Acetonitrile	2.11	41	115441	66.88950 ppb		96
16) Methyl Acetate	2.17	43	23495	1.96304 ppb		92
17) Iodomethane	1.93	142	8846	1.99108 ppb		97
18) Acrylonitrile	2.48	52	9312	2.09571 ppb		99
19) Methylene chloride	2.24	84	35882	1.89165 ppb		89
20) Carbon disulfide	1.98	76	84411	1.82065 ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	88934	1.95154 ppb		95
22) Trans-1,2-DCE	2.50	96	32590	1.95962 ppb		95
23) Diisopropyl Ether	3.10	45	106000	1.88130 ppb		98
24) 1,1-DCA	2.95	63	62726	1.96561 ppb		99
25) Vinyl Acetate	3.08	43	28249	2.04136 ppb		93
26) Ethyl tert Butyl Ether	3.60	59	97414	1.92559 ppb		90
27) MEK (2-Butanone)	3.81	43	11775	1.72777 ppb	#	66
28) Cis-1,2-DCE	3.73	96	37912	1.92191 ppb		91
29) 2,2-Dichloropropane	3.70	77	16535	2.04076 ppb		98
30) Chloroform	4.26	83	61423	1.95118 ppb		98
31) Bromochloromethane	4.08	128	17831	1.93384 ppb		95
33) 1,1,1-TCA	4.47	97	50020	1.99312 ppb		99
34) Cyclohexane	4.53	41	25289	1.91456 ppb		90
35) 1,1-Dichloropropene	4.72	75	41852	1.92341 ppb		98
36) 2,2,4-Trimethylpentane	5.15	57	79219	1.99894 ppb	#	66
38) Carbon Tetrachloride	4.70	119	36389	1.84253 ppb		97
39) Tert Amyl Methyl Ether	5.23	73	86507	1.88414 ppb		98
40) 1,2-DCA	5.03	62	48078	1.96190 ppb		100
41) Benzene	4.99	78	128360	1.91917 ppb		99
42) TCE	5.84	95	16992	1.84467 ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L08.D
Acq On : 13 Nov 16 15:00
Sample : 2.0ug/L VOC STD 11/13/16M
Misc : 2uL-10ppb

Vial: 8
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:43 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43) 2-Pentanone	6.12	43	706269	70.27759	ppb		100
44) 1,2-Dichloropropane	6.08	63	36700	1.93398	ppb		99
45) Bromodichloromethane	6.44	83	44577	1.88162	ppb	#	95
46) Methyl Cyclohexane	6.04	83	44281	2.00650	ppb		96
47) Dibromomethane	6.22	93	21413	2.06838	ppb		97
49) MIBK (methyl isobutyl ket	7.16	43	38784	2.02564	ppb		97
50) 1-Bromo-2-chloroethane	6.75	63	25584	1.89798	ppb		100
51) Cis-1,3-Dichloropropene	6.95	75	52764	1.85199	ppb		98
52) Toluene	7.29	91	137412	1.92576	ppb		98
53) Trans-1,3-Dichloropropene	7.56	75	45943	1.88643	ppb		96
54) 1,1,2-TCA	7.74	83	23722	1.84949	ppb		97
55) 2-Hexanone	8.05	43	9319	2.57003	ppb		95
58) 1,2-EDB	8.21	107	25485	1.86810	ppb		99
59) Tetrachloroethene	7.86	166	31748	1.89684	ppb		90
60) 1-Chlorohexane	8.76	91	37958	1.96098	ppb		96
61) 1,1,1,2-Tetrachloroethane	8.83	131	32461	1.91696	ppb		100
62) m&p-Xylene	8.99	106	111804	3.83060	ppb		97
63) o-Xylene	9.38	106	55428	1.93292	ppb		100
64) Styrene	9.40	104	58903	1.85966	ppb		98
66) 1,3-Dichloropropane	7.90	76	47440	1.90139	ppb		98
67) Dibromochloromethane	8.12	129	30684	1.85839	ppb		94
68) Chlorobenzene	8.73	112	89137	1.93595	ppb		98
69) Ethylbenzene	8.87	91	148723	1.97019	ppb		96
70) Bromoform	9.55	173	19425	1.94210	ppb		98
72) Isopropylbenzene	9.76	105	137377	2.01395	ppb		99
73) 1,1,2,2-Tetrachloroethane	10.07	83	33665	2.02709	ppb		98
74) 1,2,3-Trichloropropane	10.08	110	6106	1.91898	ppb		99
75) t-1,4-Dichloro-2-Butene	10.13	53	9446	2.10916	ppb	#	76
76) Bromobenzene	10.02	156	39045	2.09155	ppb		96
77) n-Propylbenzene	10.17	91	158563	2.03324	ppb		99
78) 4-Ethyltoluene	10.29	105	134702	2.01554	ppb		100
79) 2-Chlorotoluene	10.23	91	101947	2.02892	ppb		96
80) 1,3,5-Trimethylbenzene	10.35	105	111350	1.96609	ppb		98
81) 4-Chlorotoluene	10.34	91	115489	1.99008	ppb		95
82) Tert-Butylbenzene	10.66	119	93572	1.92592	ppb		99
83) 1,2,4-Trimethylbenzene	10.71	105	112110	1.95226	ppb		99
84) Sec-Butylbenzene	10.88	105	135808	1.98261	ppb		98
85) p-Isopropyltoluene	11.04	119	111879	1.96417	ppb		97
86) Benzyl Chloride	11.20	91	33129	1.77180	ppb		99
87) 1,3-DCB	10.96	146	68708	2.03565	ppb		95
88) 1,4-DCB	11.05	146	70851	2.02798	ppb		98
89) n-Butylbenzene	11.44	91	98248	1.95704	ppb		97
90) 1,2-DCB	11.41	146	66383	2.01487	ppb		98
91) Hexachloroethane	11.66	117	22202	1.91255	ppb		94
92) 1,2-Dibromo-3-chloropropan	12.17	157	5855	1.90260	ppb		92
93) 1,2,4-Trichlorobenzene	12.99	180	43771	1.96191	ppb		97
94) Hexachlorobutadiene	13.19	225	17028	1.96375	ppb		89
95) Naphthalene	13.22	128	52848	1.87160	ppb		96
96) 1,2,3-Trichlorobenzene	13.46	180	24728	1.81330	ppb		93

(#) = qualifier out of range (m) = manual integration

Quantitation Report

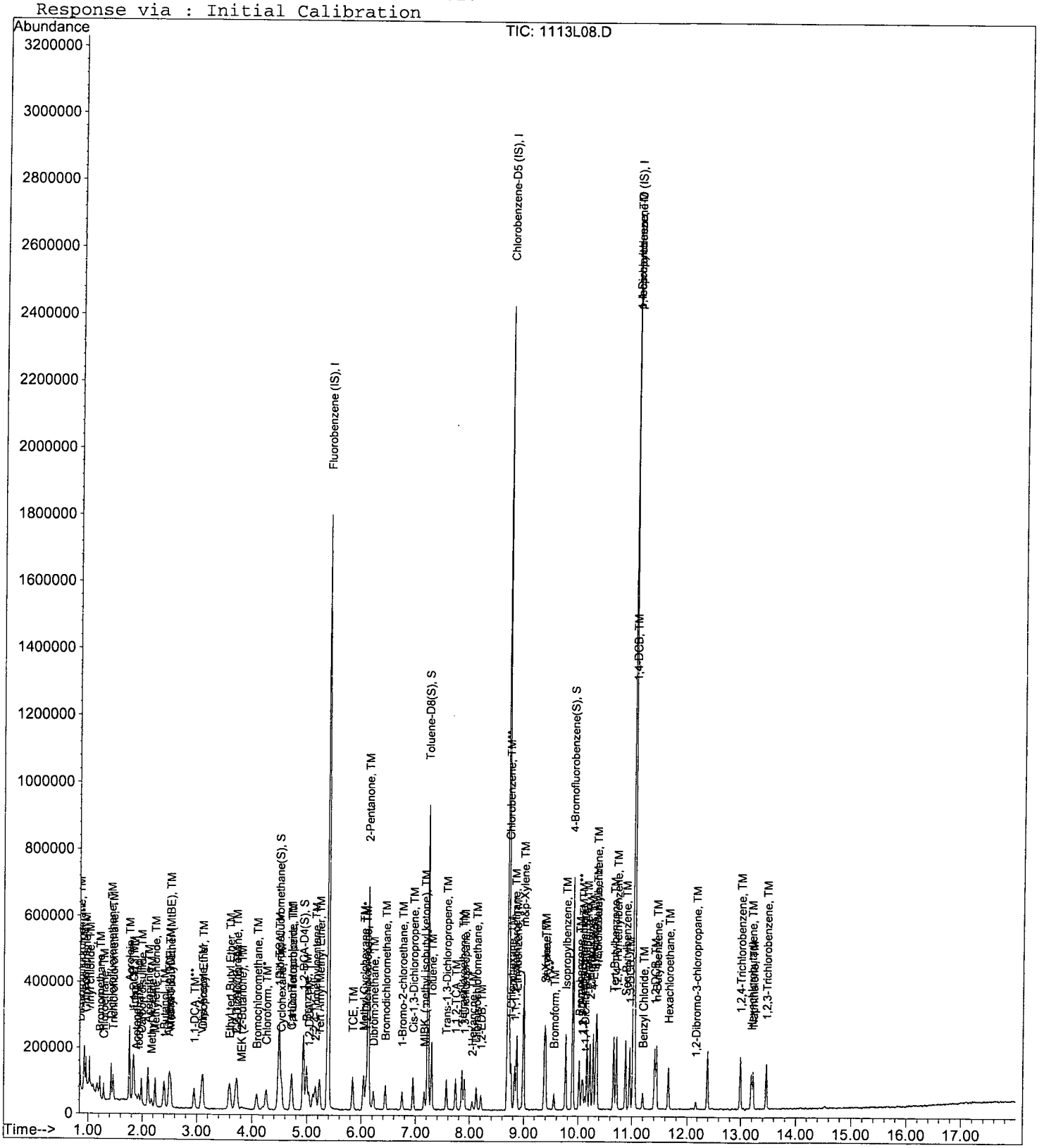
Data File : M:\LOKI\DATA\161113\1113L08.D
Acq On : 13 Nov 16 15:00
Sample : 2.0ug/L VOC STD 11/13/16M
Misc : 2uL-10ppb

Vial: 8
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:43 2016

Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



1113L08.D LALLW.M Tue Nov 15 10:40:13 2016 Page 3

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L09.D
Acq On : 13 Nov 16 15:28
Sample : 5.0ug/L VOC STD 11/13/16AN
Misc : 5uL-25ppb

Vial: 9
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:43 2016

Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	816896	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	796416	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	431296	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	434172	25.18638 ppb		0.00
Spiked Amount 25.000			Recovery = 100.744%			
37) 1,2-DCA-D4(S)	4.93	65	474115	25.22814 ppb		0.00
Spiked Amount 25.000			Recovery = 100.912%			
57) Toluene-D8(S)	7.22	98	1508650	24.80713 ppb		0.00
Spiked Amount 25.000			Recovery = 99.228%			
65) 4-Bromofluorobenzene(S)	9.89	95	550032	25.05844 ppb		0.00
Spiked Amount 25.000			Recovery = 100.232%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.86	85	91142	5.26705 ppb		99
3) Freon 114	0.93	85	63141	4.93800 ppb		93
4) Chloromethane	0.96	50	127987	5.33148 ppb		98
5) Vinyl chloride	1.03	62	113394	5.24211 ppb		95
6) Bromomethane	1.22	96	53582	5.40476 ppb		92
7) Chloroethane	1.29	64	65555	5.51142 ppb		96
8) Dichlorofluoromethane	1.43	67	193515	5.18121 ppb		99
9) Trichlorofluoromethane	1.46	101	115502	5.16389 ppb		100
10) Acrolein	1.76	56	136154	98.89903 ppb	#	96
11) Acetone	1.88	43	30777	4.97944 ppb		93
12) Freon-113	1.84	101	66190	5.15529 ppb		97
13) 1,1-DCE	1.83	96	54144	5.40407 ppb		96
14) t-Butanol	2.40	59	61120	99.63537 ppb		98
15) Acetonitrile	2.10	41	160004	96.29485 ppb	#	96
16) Methyl Acetate	2.17	43	60412	5.24265 ppb		99
17) Iodomethane	1.93	142	27448	4.81388 ppb		96
18) Acrylonitrile	2.48	52	20621	4.82027 ppb		93
19) Methylene chloride	2.24	84	93111	5.09846 ppb		99
20) Carbon disulfide	1.98	76	223399	5.00475 ppb		97
21) Methyl t-butyl ether (MtBE	2.52	73	227998	5.19654 ppb		97
22) Trans-1,2-DCE	2.50	96	85166	5.31899 ppb		99
23) Diisopropyl Ether	3.10	45	280578	5.17225 ppb		98
24) 1,1-DCA	2.95	63	159873	5.20356 ppb		99
25) Vinyl Acetate	3.08	43	69774	5.23702 ppb		94
26) Ethyl tert Butyl Ether	3.60	59	248081	5.09342 ppb		100
27) MEK (2-Butanone)	3.81	43	31680	4.82818 ppb		92
28) Cis-1,2-DCE	3.73	96	97430	5.13007 ppb		92
29) 2,2-Dichloropropane	3.70	77	40976	5.25281 ppb		95
30) Chloroform	4.25	83	158216	5.22024 ppb		100
31) Bromochloromethane	4.08	128	45479	5.12306 ppb		97
33) 1,1,1-TCA	4.47	97	126956	5.25432 ppb		97
34) Cyclohexane	4.53	41	67345	5.29562 ppb		96
35) 1,1-Dichloropropene	4.72	75	109442	5.22414 ppb		99
36) 2,2,4-Trimethylpentane	5.15	57	200047	5.24296 ppb	#	83
38) Carbon Tetrachloride	4.71	119	102196	5.37469 ppb		96
39) Tert Amyl Methyl Ether	5.23	73	228683	5.17333 ppb		98
40) 1,2-DCA	5.03	62	125428	5.31618 ppb		98
41) Benzene	4.99	78	335707	5.21336 ppb		99
42) TCE	5.84	95	45008	5.07503 ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L09.D
Acq On : 13 Nov 16 15:28
Sample : 5.0ug/L VOC STD 11/13/16AN
Misc : 5uL-25ppb

Vial: 9
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:43 2016

Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43) 2-Pentanone	6.12	43	969439	100.19396 ppb		99
44) 1,2-Dichloropropane	6.09	63	93112	5.09644 ppb		97
45) Bromodichloromethane	6.44	83	118989	5.21679 ppb		98
46) Methyl Cyclohexane	6.04	83	111422	5.24405 ppb		99
47) Dibromomethane	6.22	93	49877	5.00412 ppb		98
49) MIBK (methyl isobutyl ket	7.16	43	92344	5.80933 ppb		97
50) 1-Bromo-2-chloroethane	6.75	63	68296	5.26252 ppb		98
51) Cis-1,3-Dichloropropene	6.95	75	142020	5.17756 ppb		98
52) Toluene	7.29	91	364665	5.30820 ppb		99
53) Trans-1,3-Dichloropropene	7.56	75	119281	5.08706 ppb		97
54) 1,1,2-TCA	7.74	83	61586	4.98720 ppb		96
55) 2-Hexanone	8.05	43	27171	5.49307 ppb		97
58) 1,2-EDB	8.21	107	71782	5.30107 ppb		98
59) Tetrachloroethene	7.86	166	85673	5.15693 ppb		97
60) 1-Chlorohexane	8.76	91	99351	5.17101 ppb		98
61) 1,1,1,2-Tetrachloroethane	8.83	131	86528	5.14804 ppb		99
62) m&p-Xylene	8.99	106	300095	10.35861 ppb		100
63) o-Xylene	9.38	106	147570	5.18461 ppb		94
64) Styrene	9.40	104	165888	5.27648 ppb		97
66) 1,3-Dichloropropane	7.90	76	127289	5.13984 ppb		98
67) Dibromochloromethane	8.12	129	84705	5.16853 ppb		99
68) Chlorobenzene	8.73	112	236616	5.17742 ppb		99
69) Ethylbenzene	8.87	91	392088	5.23296 ppb		99
70) Bromoform	9.55	173	50907	5.12770 ppb		98
72) Isopropylbenzene	9.76	105	365150	5.18709 ppb		98
73) 1,1,2,2-Tetrachloroethane	10.06	83	90518	5.28138 ppb		95
74) 1,2,3-Trichloropropane	10.09	110	16896	5.14535 ppb		90
75) t-1,4-Dichloro-2-Butene	10.13	53	22494	4.86684 ppb		89
76) Bromobenzene	10.02	156	100978	5.24140 ppb		95
77) n-Propylbenzene	10.17	91	418948	5.20553 ppb		98
78) 4-Ethyltoluene	10.29	105	360615	5.22851 ppb		98
79) 2-Chlorotoluene	10.23	91	265984	5.12937 ppb		95
80) 1,3,5-Trimethylbenzene	10.35	105	307146	5.25504 ppb		99
81) 4-Chlorotoluene	10.34	91	311903	5.20796 ppb		99
82) Tert-Butylbenzene	10.67	119	264476	5.27467 ppb		98
83) 1,2,4-Trimethylbenzene	10.71	105	302504	5.10438 ppb		98
84) Sec-Butylbenzene	10.88	105	370881	5.24644 ppb		99
85) p-Isopropyltoluene	11.04	119	303190	5.15778 ppb		99
86) Benzyl Chloride	11.19	91	90134	4.67102 ppb		98
87) 1,3-DCB	10.96	146	184044	5.28365 ppb		97
88) 1,4-DCB	11.05	146	187709	5.20619 ppb		99
89) n-Butylbenzene	11.44	91	263234	5.08085 ppb		97
90) 1,2-DCB	11.41	146	178372	5.24609 ppb		99
91) Hexachloroethane	11.66	117	63576	5.30678 ppb		95
92) 1,2-Dibromo-3-chloropropan	12.17	157	15811	4.97850 ppb	#	82
93) 1,2,4-Trichlorobenzene	12.99	180	117324	5.09563 ppb		99
94) Hexachlorobutadiene	13.19	225	47870	5.34938 ppb		99
95) Naphthalene	13.22	128	147456	5.06016 ppb		98
96) 1,2,3-Trichlorobenzene	13.46	180	76384	5.42751 ppb		99

(#) = qualifier out of range (m) = manual integration

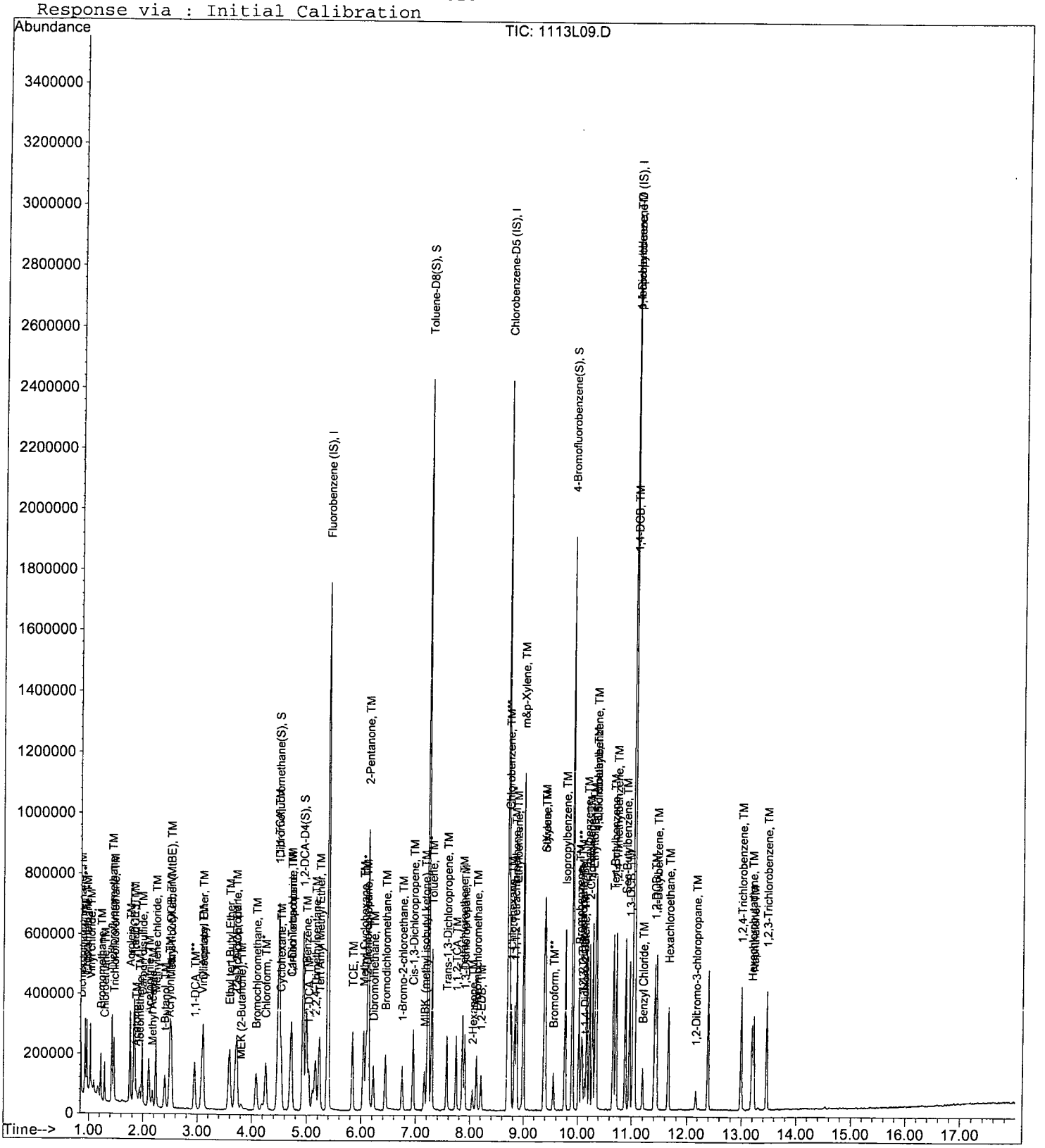
Quantitation Report

Data File : M:\LOKI\DATA\161113\1113L09.D
Acq On : 13 Nov 16 15:28
Sample : 5.0ug/L VOC STD 11/13/16AN
Misc : 5uL-25ppb

Vial: 9
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:43 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



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Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L10.D
Acq On : 13 Nov 16 15:56
Sample : 10ug/L VOC STD 11/13/160
Misc : 5uL-25ppb

Vial: 10
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:43 2016

Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	817344	25.00000 ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	790336	25.00000 ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	444864	25.00000 ppb	0.00
System Monitoring Compounds					
32) Dibromofluoromethane(S)	4.49	111	437231	25.34993 ppb	0.00
Spiked Amount 25.000			Recovery = 101.400%		
37) 1,2-DCA-D4(S)	4.93	65	462687	24.60655 ppb	0.00
Spiked Amount 25.000			Recovery = 98.428%		
57) Toluene-D8(S)	7.22	98	1497085	24.80634 ppb	0.00
Spiked Amount 25.000			Recovery = 99.224%		
65) 4-Bromofluorobenzene(S)	9.89	95	545532	25.04462 ppb	0.00
Spiked Amount 25.000			Recovery = 100.180%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.86	85	171848	9.92556 ppb	100
3) Freon 114	0.93	85	126610	9.89623 ppb	100
4) Chloromethane	0.96	50	232419	9.67644 ppb	100
5) Vinyl chloride	1.03	62	217212	10.03602 ppb	100
6) Bromomethane	1.22	96	110291	11.11884 ppb	100
7) Chloroethane	1.29	64	118452	9.95318 ppb	100
8) Dichlorofluoromethane	1.43	67	367247	9.82735 ppb	100
9) Trichlorofluoromethane	1.46	101	227555	10.16800 ppb	100
10) Acrolein	1.76	56	176200	127.91734 ppb	100
11) Acetone	1.88	43	56895	10.03376 ppb	100
12) Freon-113	1.84	101	122929	9.56923 ppb	100
13) 1,1-DCE	1.83	96	98384	9.81424 ppb	100
14) t-Butanol	2.40	59	74422	121.25326 ppb	100
15) Acetonitrile	2.10	41	201347	121.10979 ppb	100
16) Methyl Acetate	2.17	43	112323	9.74223 ppb	100
17) Iodomethane	1.93	142	59504	9.58880 ppb	100
18) Acrylonitrile	2.48	52	38558	9.00820 ppb	100
19) Methylene chloride	2.24	84	173185	9.47785 ppb	100
20) Carbon disulfide	1.98	76	440464	9.86220 ppb	100
21) Methyl t-butyl ether (MtBE	2.52	73	436026	9.93248 ppb	100
22) Trans-1,2-DCE	2.50	96	156390	9.76188 ppb	100
23) Diisopropyl Ether	3.10	45	539539	9.94055 ppb	100
24) 1,1-DCA	2.95	63	301906	9.82107 ppb	100
25) Vinyl Acetate	3.07	43	135329	10.15180 ppb	100
26) Ethyl tert Butyl Ether	3.59	59	487849	10.01067 ppb	100
27) MEK (2-Butanone)	3.80	43	61836	9.41893 ppb	100
28) Cis-1,2-DCE	3.73	96	187788	9.88236 ppb	100
29) 2,2-Dichloropropane	3.70	77	75303	9.64799 ppb	100
30) Chloroform	4.26	83	305289	10.06730 ppb	100
31) Bromochloromethane	4.08	128	86027	9.68535 ppb	100
33) 1,1,1-TCA	4.47	97	243807	10.08490 ppb	100
34) Cyclohexane	4.53	41	122116	9.59723 ppb	100
35) 1,1-Dichloropropene	4.72	75	210838	10.05870 ppb	100
36) 2,2,4-Trimethylpentane	5.16	57	375728	9.84191 ppb	100
38) Carbon Tetrachloride	4.70	119	186724	9.81480 ppb	100
39) Tert Amyl Methyl Ether	5.23	73	438132	9.90610 ppb	100
40) 1,2-DCA	5.03	62	230035	9.74454 ppb	100
41) Benzene	4.99	78	648060	10.05852 ppb	100
42) TCE	5.84	95	85520	9.63781 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L10.D
Acq On : 13 Nov 16 15:56
Sample : 10ug/L VOC STD 11/13/160
Misc : 5uL-25ppb

Vial: 10
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:43 2016

Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
43) 2-Pentanone	6.12	43	1213054	125.30347 ppb	100
44) 1,2-Dichloropropane	6.09	63	177261	9.69697 ppb	100
45) Bromodichloromethane	6.44	83	226975	9.94572 ppb	100
46) Methyl Cyclohexane	6.04	83	210179	9.88661 ppb	100
47) Dibromomethane	6.22	93	99591	9.98642 ppb	100
49) MIBK (methyl isobutyl ket	7.15	43	160890	10.51853 ppb	100
50) 1-Bromo-2-chloroethane	6.75	63	134876	10.38712 ppb	100
51) Cis-1,3-Dichloropropene	6.95	75	269648	9.82504 ppb	100
52) Toluene	7.29	91	691431	10.05920 ppb	100
53) Trans-1,3-Dichloropropene	7.56	75	236915	10.09834 ppb	100
54) 1,1,2-TCA	7.74	83	120458	9.74927 ppb	100
55) 2-Hexanone	8.04	43	52934	9.62637 ppb	100
58) 1,2-EDB	8.21	107	134963	10.04364 ppb	100
59) Tetrachloroethene	7.86	166	163202	9.89921 ppb	100
60) 1-Chlorohexane	8.76	91	191868	10.06315 ppb	100
61) 1,1,1,2-Tetrachloroethane	8.83	131	167319	10.03134 ppb	100
62) m&p-Xylene	8.99	106	574089	19.96872 ppb	100
63) o-Xylene	9.38	106	287758	10.18763 ppb	100
64) Styrene	9.40	104	322624	10.34081 ppb	100
66) 1,3-Dichloropropane	7.90	76	246634	10.03553 ppb	100
67) Dibromochloromethane	8.12	129	164109	10.09063 ppb	100
68) Chlorobenzene	8.73	112	454689	10.02563 ppb	100
69) Ethylbenzene	8.87	91	746522	10.04002 ppb	100
70) Bromoform	9.55	173	101672	10.31987 ppb	100
72) Isopropylbenzene	9.76	105	697569	9.60700 ppb	100
73) 1,1,2,2-Tetrachloroethane	10.06	83	175525	9.92886 ppb	100
74) 1,2,3-Trichloropropane	10.08	110	33816	9.98393 ppb	100
75) t-1,4-Dichloro-2-Butene	10.13	53	45143	9.46932 ppb	100
76) Bromobenzene	10.01	156	192287	9.67651 ppb	100
77) n-Propylbenzene	10.17	91	802912	9.67211 ppb	100
78) 4-Ethyltoluene	10.29	105	689952	9.69842 ppb	100
79) 2-Chlorotoluene	10.23	91	520453	9.73057 ppb	100
80) 1,3,5-Trimethylbenzene	10.35	105	594418	9.85988 ppb	100
81) 4-Chlorotoluene	10.33	91	588998	9.53477 ppb	100
82) Tert-Butylbenzene	10.66	119	491395	9.50141 ppb	100
83) 1,2,4-Trimethylbenzene	10.71	105	592254	9.68876 ppb	100
84) Sec-Butylbenzene	10.88	105	699257	9.58993 ppb	100
85) p-Isopropyltoluene	11.04	119	582402	9.60548 ppb	100
86) Benzyl Chloride	11.19	91	188150	9.45313 ppb	100
87) 1,3-DCB	10.96	146	352384	9.80792 ppb	100
88) 1,4-DCB	11.05	146	357340	9.60871 ppb	100
89) n-Butylbenzene	11.44	91	506714	9.48212 ppb	100
90) 1,2-DCB	11.41	146	340416	9.70659 ppb	100
91) Hexachloroethane	11.66	117	119972	9.70881 ppb	100
92) 1,2-Dibromo-3-chloropropan	12.17	157	29947	9.14199 ppb	100
93) 1,2,4-Trichlorobenzene	12.99	180	230943	9.72443 ppb	100
94) Hexachlorobutadiene	13.19	225	92951	10.07029 ppb	100
95) Naphthalene	13.22	128	310464	10.32906 ppb	100
96) 1,2,3-Trichlorobenzene	13.46	180	144064	9.92434 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

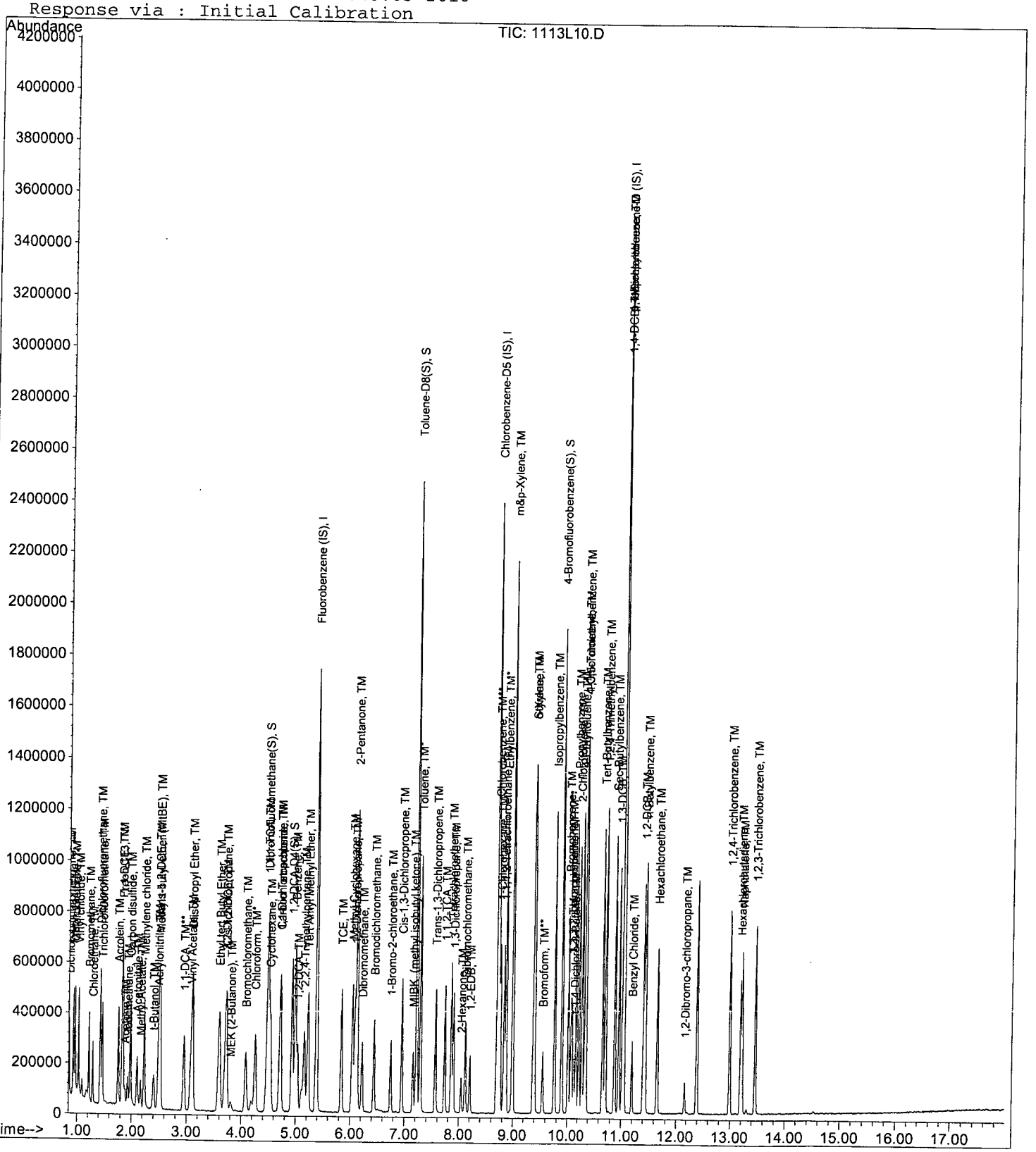
Data File : M:\LOKI\DATA\161113\1113L10.D
Acq On : 13 Nov 16 15:56
Sample : 10ug/L VOC STD 11/13/16O
Misc : 5uL-25ppb

Vial: 10
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:43 2016

Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



575

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L11.D
Acq On : 13 Nov 16 16:24
Sample : 20ug/L VOC STD 11/13/16P
Misc : 10uL-50ppb

Vial: 11
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:44 2016

Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	822357	25.00000 ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	788800	25.00000 ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	427392	25.00000 ppb	0.00
System Monitoring Compounds					
32) Dibromofluoromethane(S)	4.49	111	856205	49.33874 ppb	0.00
Spiked Amount 25.000			Recovery = 197.356%		
37) 1,2-DCA-D4(S)	4.93	65	927747	49.03853 ppb	0.00
Spiked Amount 25.000			Recovery = 196.156%		
57) Toluene-D8(S)	7.22	98	2971626	49.33501 ppb	0.00
Spiked Amount 25.000			Recovery = 197.340%		
65) 4-Bromofluorobenzene(S)	9.89	95	1085660	49.93821 ppb	0.00
Spiked Amount 25.000			Recovery = 199.752%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.86	85	354663	20.35969 ppb	100
3) Freon 114	0.93	85	251900	19.56925 ppb	97
4) Chloromethane	0.96	50	473489	19.59289 ppb	99
5) Vinyl chloride	1.03	62	435008	19.97650 ppb	97
6) Bromomethane	1.22	96	199669	20.00666 ppb	97
7) Chloroethane	1.29	64	238096	19.88456 ppb	98
8) Dichlorofluoromethane	1.43	67	730132	19.41888 ppb	98
9) Trichlorofluoromethane	1.46	101	450873	20.02387 ppb	96
10) Acrolein	1.76	56	215818	155.72404 ppb	97
11) Acetone	1.89	43	107949	19.79264 ppb	96
12) Freon-113	1.84	101	251517	19.45963 ppb	94
13) 1,1-DCE	1.83	96	194783	19.31202 ppb	98
14) t-Butanol	2.41	59	94440	152.92995 ppb	99
15) Acetonitrile	2.11	41	248771	148.72307 ppb	99
16) Methyl Acetate	2.17	43	224285	19.33456 ppb	96
17) Iodomethane	1.93	142	124512	19.16356 ppb	96
18) Acrylonitrile	2.48	52	79723	18.51193 ppb	93
19) Methylene chloride	2.24	84	341187	18.55823 ppb	99
20) Carbon disulfide	1.98	76	862329	19.19026 ppb	100
21) Methyl t-butyl ether (MtBE	2.52	73	874800	19.80608 ppb	97
22) Trans-1,2-DCE	2.50	96	305873	18.97624 ppb	99
23) Diisopropyl Ether	3.10	45	1073733	19.66203 ppb	100
24) 1,1-DCA	2.95	63	599750	19.39107 ppb	99
25) Vinyl Acetate	3.07	43	266709	19.88540 ppb	100
26) Ethyl tert Butyl Ether	3.59	59	946482	19.30343 ppb	99
27) MEK (2-Butanone)	3.80	43	125770	19.04066 ppb	99
28) Cis-1,2-DCE	3.73	96	356573	18.65029 ppb	91
29) 2,2-Dichloropropane	3.70	77	150139	19.11888 ppb	99
30) Chloroform	4.26	83	599014	19.63286 ppb	98
31) Bromochloromethane	4.09	128	169633	18.98172 ppb	100
33) 1,1,1-TCA	4.47	97	468688	19.26876 ppb	98
34) Cyclohexane	4.53	41	245561	19.18126 ppb	93
35) 1,1-Dichloropropene	4.72	75	414306	19.64530 ppb	99
36) 2,2,4-Trimethylpentane	5.15	57	740311	19.27368 ppb	91
38) Carbon Tetrachloride	4.71	119	376894	19.68997 ppb	98
39) Tert Amyl Methyl Ether	5.23	73	876009	19.68571 ppb	99
40) 1,2-DCA	5.03	62	463500	19.51468 ppb	98
41) Benzene	4.99	78	1263716	19.49454 ppb	99
42) TCE	5.84	95	171776	19.24057 ppb	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L11.D
Acq On : 13 Nov 16 16:24
Sample : 20ug/L VOC STD 11/13/16P
Misc : 10uL-50ppb

Vial: 11
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:44 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
43) 2-Pentanone	6.12	43	1511709	155.20140 ppb	100
44) 1,2-Dichloropropane	6.09	63	361372	19.64817 ppb	98
45) Bromodichloromethane	6.44	83	451531	19.66483 ppb	99
46) Methyl Cyclohexane	6.04	83	416051	19.45131 ppb	100
47) Dibromomethane	6.22	93	199240	19.85686 ppb	97
49) MIBK (methyl isobutyl ket	7.15	43	307118	20.44330 ppb	97
50) 1-Bromo-2-chloroethane	6.75	63	263548	20.17272 ppb	99
51) Cis-1,3-Dichloropropene	6.95	75	545534	19.75621 ppb	99
52) Toluene	7.29	91	1348723	19.50213 ppb	99
53) Trans-1,3-Dichloropropene	7.56	75	462443	19.59116 ppb	97
54) 1,1,2-TCA	7.74	83	240209	19.32280 ppb	99
55) 2-Hexanone	8.04	43	114237	19.35544 ppb	94
58) 1,2-EDB	8.21	107	275232	20.52202 ppb	100
59) Tetrachloroethene	7.86	166	316732	19.24916 ppb	99
60) 1-Chlorohexane	8.76	91	372331	19.56614 ppb	98
61) 1,1,1,2-Tetrachloroethane	8.83	131	329640	19.80152 ppb	99
62) m&p-Xylene	8.99	106	1126596	39.26306 ppb	98
63) o-Xylene	9.38	106	565610	20.06355 ppb	95
64) Styrene	9.40	104	634368	20.37248 ppb	98
66) 1,3-Dichloropropane	7.90	76	489029	19.93732 ppb	98
67) Dibromochloromethane	8.12	129	326731	20.12896 ppb	99
68) Chlorobenzene	8.73	112	894855	19.76946 ppb	99
69) Ethylbenzene	8.87	91	1471302	19.82616 ppb	100
70) Bromoform	9.55	173	196197	19.95309 ppb	100
72) Isopropylbenzene	9.76	105	1371534	19.66112 ppb	98
73) 1,1,2,2-Tetrachloroethane	10.06	83	341654	20.11629 ppb	97
74) 1,2,3-Trichloropropane	10.08	110	64752	19.89910 ppb	96
75) t-1,4-Dichloro-2-Butene	10.12	53	87870	19.18536 ppb	97
76) Bromobenzene	10.02	156	376912	19.74284 ppb	98
77) n-Propylbenzene	10.17	91	1580224	19.81403 ppb	98
78) 4-Ethyltoluene	10.29	105	1375049	20.11876 ppb	99
79) 2-Chlorotoluene	10.23	91	1004293	19.54421 ppb	97
80) 1,3,5-Trimethylbenzene	10.35	105	1164345	20.10305 ppb	100
81) 4-Chlorotoluene	10.34	91	1162619	19.59001 ppb	98
82) Tert-Butylbenzene	10.66	119	968620	19.49449 ppb	99
83) 1,2,4-Trimethylbenzene	10.71	105	1172682	19.96830 ppb	98
84) Sec-Butylbenzene	10.88	105	1369823	19.55437 ppb	100
85) p-Isopropyltoluene	11.04	119	1161957	19.94743 ppb	99
86) Benzyl Chloride	11.19	91	394713	20.64209 ppb	99
87) 1,3-DCB	10.96	146	684721	19.83697 ppb	98
88) 1,4-DCB	11.05	146	690147	19.31638 ppb	97
89) n-Butylbenzene	11.44	91	998074	19.44045 ppb	97
90) 1,2-DCB	11.41	146	662820	19.67222 ppb	99
91) Hexachloroethane	11.66	117	246320	20.74850 ppb	99
92) 1,2-Dibromo-3-chloropropan	12.17	157	59001	18.74769 ppb	94
93) 1,2,4-Trichlorobenzene	12.99	180	449582	19.70467 ppb	97
94) Hexachlorobutadiene	13.19	225	173097	19.51994 ppb	97
95) Naphthalene	13.22	128	610624	21.14582 ppb	100
96) 1,2,3-Trichlorobenzene	13.46	180	282688	20.27003 ppb	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

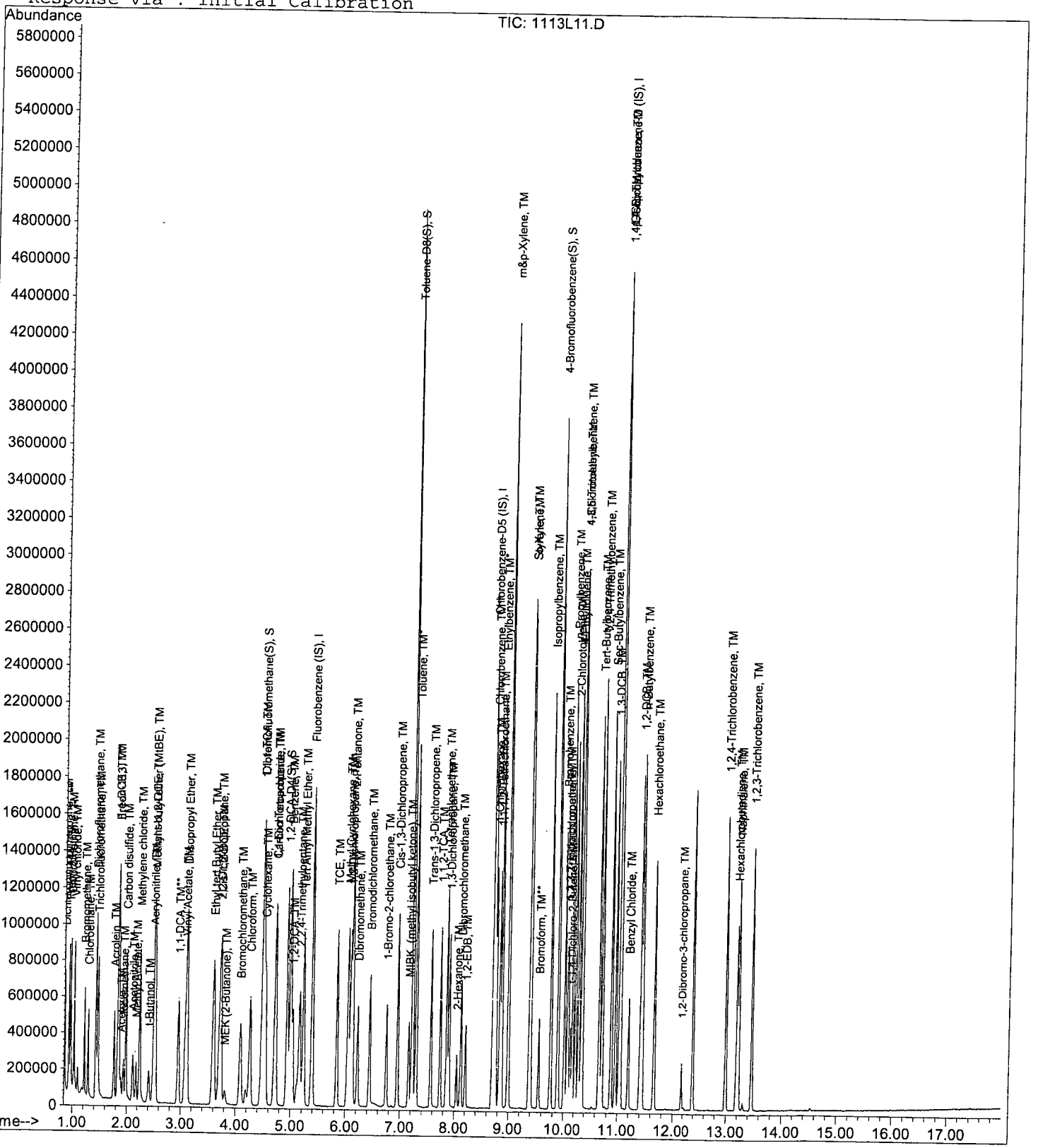
Data File : M:\LOKI\DATA\161113\1113L11.D
Acq On : 13 Nov 16 16:24
Sample : 20ug/L VOC STD 11/13/16P
Misc : 10uL-50ppb

Vial: 11
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:44 2016

Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



1113L11.D LALLW.M Tue Nov 15 10:40:33 2016

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L12.D
Acq On : 13 Nov 16 16:53
Sample : 40ug/L VOC STD 11/13/16Q
Misc : 10uL-50ppb

Vial: 12
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:44 2016

Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	833460	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	819328	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	420224	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	849578	48.30468 ppb		0.00
Spiked Amount 25.000				Recovery = 193.220%		
37) 1,2-DCA-D4(S)	4.93	65	914958	47.71827 ppb		0.00
Spiked Amount 25.000				Recovery = 190.872%		
57) Toluene-D8(S)	7.22	98	2980523	47.63901 ppb		0.00
Spiked Amount 25.000				Recovery = 190.556%		
65) 4-Bromofluorobenzene(S)	9.89	95	1088386	48.19824 ppb		0.00
Spiked Amount 25.000				Recovery = 192.792%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.86	85	686737	38.89747 ppb		100
3) Freon 114	0.93	85	517315	39.65306 ppb		99
4) Chloromethane	0.96	50	936791	38.24784 ppb		100
5) Vinyl chloride	1.03	62	853037	38.65143 ppb		98
6) Bromomethane	1.22	96	381820	37.74838 ppb		98
7) Chloroethane	1.28	64	475938	39.21840 ppb		97
8) Dichlorofluoromethane	1.43	67	1469150	38.55357 ppb		98
9) Trichlorofluoromethane	1.46	101	899616	39.42091 ppb		98
10) Acrolein	1.76	56	251294	178.90635 ppb	#	98
11) Acetone	1.88	43	216417	40.11391 ppb		99
12) Freon-113	1.84	101	513576	39.20555 ppb		96
13) 1,1-DCE	1.83	96	395103	38.65117 ppb		96
14) t-Butanol	2.42	59	102192	163.27854 ppb		98
15) Acetonitrile	2.52	41	363630	214.49339 ppb	#	37
16) Methyl Acetate	2.17	43	459595	39.09174 ppb		100
17) Iodomethane	1.93	142	272384	40.52850 ppb		97
18) Acrylonitrile	2.48	52	156974	35.96428 ppb		93
19) Methylene chloride	2.24	84	677659	36.36896 ppb		100
20) Carbon disulfide	1.98	76	1773711	38.94630 ppb		100
21) Methyl t-butyl ether (MtBE	2.52	73	1736695	38.79618 ppb		99
22) Trans-1,2-DCE	2.50	96	614725	37.62925 ppb		99
23) Diisopropyl Ether	3.10	45	2185240	39.48270 ppb		98
24) 1,1-DCA	2.95	63	1202217	38.35217 ppb		99
25) Vinyl Acetate	3.10	43	468926	34.49663 ppb	#	77
26) Ethyl tert Butyl Ether	3.59	59	1937466	38.98808 ppb		97
27) MEK (2-Butanone)	3.80	43	246641	36.84222 ppb		98
28) Cis-1,2-DCE	3.72	96	718192	37.06409 ppb		92
29) 2,2-Dichloropropane	3.70	77	304243	38.22655 ppb		99
30) Chloroform	4.25	83	1185472	38.33659 ppb		99
31) Bromochloromethane	4.08	128	333724	36.84582 ppb		99
33) 1,1,1-TCA	4.47	97	949840	38.52973 ppb		96
34) Cyclohexane	4.53	41	508715	39.20738 ppb		96
35) 1,1-Dichloropropene	4.72	75	828903	38.78081 ppb		99
36) 2,2,4-Trimethylpentane	5.15	57	1526183	39.20421 ppb		94
38) Carbon Tetrachloride	4.70	119	767576	39.56606 ppb		99
39) Tert Amyl Methyl Ether	5.23	73	1760662	39.03858 ppb		99
40) 1,2-DCA	5.03	62	916121	38.05750 ppb		99
41) Benzene	4.99	78	2520124	38.35844 ppb		100
42) TCE	5.84	95	355968	39.34069 ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L12.D
Acq On : 13 Nov 16 16:53
Sample : 40ug/L VOC STD 11/13/16Q
Misc : 10uL-50ppb

Vial: 12
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:44 2016

Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
43) 2-Pentanone	6.12	43	1778872	180.19709 ppb	99
44) 1,2-Dichloropropane	6.09	63	725249	38.90723 ppb	98
45) Bromodichloromethane	6.44	83	915504	39.34037 ppb	100
46) Methyl Cyclohexane	6.04	83	865467	39.92349 ppb	99
47) Dibromomethane	6.22	93	399784	39.31290 ppb	97
49) MIBK (methyl isobutyl ket	7.15	43	569061	37.82464 ppb	99
50) 1-Bromo-2-chloroethane	6.75	63	532362	40.20569 ppb	100
51) Cis-1,3-Dichloropropene	6.95	75	1095085	39.12959 ppb	97
52) Toluene	7.29	91	2722600	38.84353 ppb	100
53) Trans-1,3-Dichloropropene	7.56	75	955039	39.92076 ppb	97
54) 1,1,2-TCA	7.74	83	480895	38.16864 ppb	99
55) 2-Hexanone	8.04	43	227174	36.89166 ppb	96
58) 1,2-EDB	8.21	107	540882	38.82691 ppb	100
59) Tetrachloroethene	7.86	166	634330	37.11456 ppb	97
60) 1-Chlorohexane	8.76	91	774501	39.18385 ppb	100
61) 1,1,1,2-Tetrachloroethane	8.83	131	659176	38.12143 ppb	99
62) m&p-Xylene	8.99	106	2276888	76.39532 ppb	98
63) o-Xylene	9.38	106	1130922	38.62180 ppb	97
64) Styrene	9.40	104	1280000	39.57506 ppb	99
66) 1,3-Dichloropropane	7.90	76	971116	38.11644 ppb	99
67) Dibromochloromethane	8.12	129	662038	39.26657 ppb	99
68) Chlorobenzene	8.73	112	1789839	38.06845 ppb	98
69) Ethylbenzene	8.87	91	2984545	38.71898 ppb	100
70) Bromoform	9.55	173	395560	38.72927 ppb	97
72) Isopropylbenzene	9.76	105	2789141	40.66470 ppb	99
73) 1,1,2,2-Tetrachloroethane	10.07	83	632400	37.87030 ppb	98
74) 1,2,3-Trichloropropane	10.08	110	124048	38.77176 ppb	91
75) t-1,4-Dichloro-2-Butene	10.13	53	178359	39.60680 ppb	99
76) Bromobenzene	10.02	156	730261	38.90391 ppb	97
77) n-Propylbenzene	10.17	91	3239890	41.31711 ppb	99
78) 4-Ethyltoluene	10.29	105	2753926	40.98084 ppb	100
79) 2-Chlorotoluene	10.23	91	2006856	39.72093 ppb	97
80) 1,3,5-Trimethylbenzene	10.35	105	2320777	40.75297 ppb	100
81) 4-Chlorotoluene	10.33	91	2361824	40.47533 ppb	98
82) Tert-Butylbenzene	10.67	119	1949427	39.90349 ppb	100
83) 1,2,4-Trimethylbenzene	10.71	105	2403303	41.62124 ppb	96
84) Sec-Butylbenzene	10.88	105	2792193	40.53874 ppb	99
85) p-Isopropyltoluene	11.04	119	2372617	41.42572 ppb	99
86) Benzyl Chloride	11.19	91	816368	43.42139 ppb	100
87) 1,3-DCB	10.96	146	1356952	39.98267 ppb	99
88) 1,4-DCB	11.05	146	1363231	38.80602 ppb	98
89) n-Butylbenzene	11.44	91	2097179	41.54555 ppb	97
90) 1,2-DCB	11.41	146	1295204	39.09683 ppb	100
91) Hexachloroethane	11.66	117	487492	41.76380 ppb	99
92) 1,2-Dibromo-3-chloropropan	12.17	157	122683	39.64772 ppb	94
93) 1,2,4-Trichlorobenzene	12.99	180	917886	40.91612 ppb	98
94) Hexachlorobutadiene	13.19	225	343572	39.40508 ppb	95
95) Naphthalene	13.22	128	1239040	43.63967 ppb	99
96) 1,2,3-Trichlorobenzene	13.46	180	596992	43.53726 ppb	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

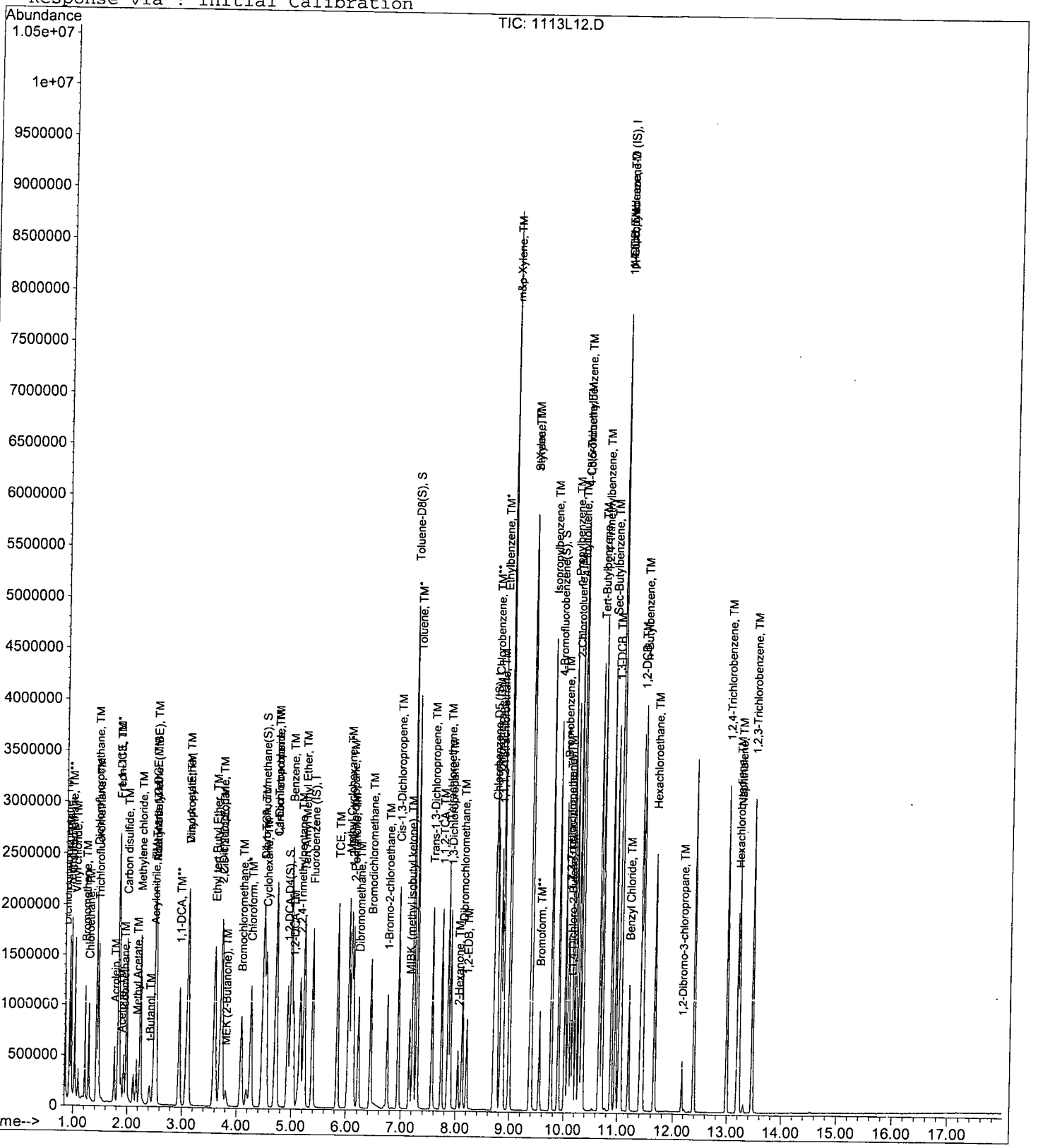
Data File : M:\LOKI\DATA\161113\1113L12.D
Acq On : 13 Nov 16 16:53
Sample : 40ug/L VOC STD 11/13/16Q
Misc : 10uL-50ppb

Vial: 12
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:44 2016

Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



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Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L13.D
Acq On : 13 Nov 16 17:21
Sample : 100ug/L VOC STD 11/13/16R
Misc : 20uL-100ppb

Vial: 13
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:44 2016

Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	813101	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	804096	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	453440	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	1606098	93.60482 ppb		0.00
Spiked Amount 25.000			Recovery = 374.420%			
37) 1,2-DCA-D4(S)	4.93	65	1736238	92.81818 ppb		0.00
Spiked Amount 25.000			Recovery = 371.272%			
57) Toluene-D8(S)	7.22	98	5659435	92.17076 ppb		0.00
Spiked Amount 25.000			Recovery = 368.684%			
65) 4-Bromofluorobenzene(S)	9.89	95	2113780	95.38013 ppb		0.00
Spiked Amount 25.000			Recovery = 381.520%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.93	85	1015570	58.96319 ppb		99
3) Freon 114	0.93	85	1255896	98.67693 ppb		97
4) Chloromethane	0.96	50	2434518	101.88670 ppb		100
5) Vinyl chloride	1.03	62	2077651	96.49628 ppb		99
6) Bromomethane	1.21	96	908871	92.10477 ppb		96
7) Chloroethane	1.27	64	460873	38.92790 ppb		100
8) Dichlorofluoromethane	1.42	67	3758654	101.10462 ppb		98
9) Trichlorofluoromethane	1.45	101	2259955	101.51016 ppb		98
10) Acrolein	1.76	56	275661	201.16815 ppb	#	100
11) Acetone	1.89	43	532432	102.65670 ppb		97
12) Freon-113	1.84	101	1237616	96.84317 ppb		95
13) 1,1-DCE	1.82	96	922240	92.47759 ppb		98
14) t-Butanol	2.44	59	112736	184.63545 ppb		99
15) Acetonitrile	2.52	41	915544	553.57147 ppb	#	37
16) Methyl Acetate	2.17	43	1146392	99.95008 ppb		100
17) Iodomethane	1.93	142	754304	113.71848 ppb		97
18) Acrylonitrile	2.48	52	393878	92.50083 ppb		96
19) Methylene chloride	2.24	84	1715775	94.38876 ppb		100
20) Carbon disulfide	1.97	76	4482658	100.89259 ppb		100
21) Methyl t-butyl ether (MtBE	2.52	73	4330674	99.16562 ppb		99
22) Trans-1,2-DCE	2.50	96	1539303	96.58487 ppb		98
23) Diisopropyl Ether	3.11	45	5621684	104.11525 ppb		99
24) 1,1-DCA	2.95	63	2992955	97.86955 ppb		99
25) Vinyl Acetate	3.10	43	1182248	89.14997 ppb	#	76
26) Ethyl tert Butyl Ether	3.60	59	4940568	101.90955 ppb		99
27) MEK (2-Butanone)	3.80	43	627504	96.08094 ppb		100
28) Cis-1,2-DCE	3.72	96	1780389	94.18201 ppb		89
29) 2,2-Dichloropropane	3.70	77	752965	96.97494 ppb		98
30) Chloroform	4.25	83	2962591	98.20512 ppb		99
31) Bromochloromethane	4.08	128	817483	92.51662 ppb		98
33) 1,1,1-TCA	4.47	97	2349082	97.67513 ppb		97
34) Cyclohexane	4.53	41	1254290	99.09039 ppb		96
35) 1,1-Dichloropropene	4.72	75	2056081	98.60379 ppb		99
36) 2,2,4-Trimethylpentane	5.15	57	3747499	98.67517 ppb		95
38) Carbon Tetrachloride	4.70	119	1860031	98.27926 ppb		99
39) Tert Amyl Methyl Ether	5.23	73	4448301	101.10031 ppb		100
40) 1,2-DCA	5.03	62	2302189	98.03217 ppb		98
41) Benzene	4.99	78	6345637	99.00442 ppb		100
42) TCE	5.84	95	880768	99.77754 ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L13.D
Acq On : 13 Nov 16 17:21
Sample : 100ug/L VOC STD 11/13/16R
Misc : 20uL-100ppb

Vial: 13
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:44 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:42:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
43) 2-Pentanone	6.13	43	2031310	210.92087 ppb	98
44) 1,2-Dichloropropane	6.09	63	1823861	100.29405 ppb	98
45) Bromodichloromethane	6.44	83	2321828	102.27006 ppb	99
46) Methyl Cyclohexane	6.04	83	2132906	100.85327 ppb	99
47) Dibromomethane	6.22	93	981695	98.95245 ppb	98
49) MIBK (methyl isobutyl ket	7.16	43	1464811	100.69141 ppb	99
50) 1-Bromo-2-chloroethane	6.75	63	1343319	103.99198 ppb	99
51) Cis-1,3-Dichloropropene	6.95	75	2844874	104.19833 ppb	97
52) Toluene	7.29	91	6855059	100.25045 ppb	100
53) Trans-1,3-Dichloropropene	7.56	75	2454606	105.17190 ppb	97
54) 1,1,2-TCA	7.74	83	1206304	98.14168 ppb	98
55) 2-Hexanone	8.04	43	621148	101.36110 ppb	96
58) 1,2-EDB	8.21	107	1359622	99.44854 ppb	100
59) Tetrachloroethene	7.86	166	1573260	93.79495 ppb	98
60) 1-Chlorohexane	8.76	91	1951401	100.59620 ppb	95
61) 1,1,1,2-Tetrachloroethane	8.83	131	1670219	98.42175 ppb	100
62) m&p-Xylene	8.99	106	5872256	200.76127 ppb	98
63) o-Xylene	9.38	106	2956152	102.86711 ppb	94
64) Styrene	9.40	104	3430912	108.08642 ppb	97
66) 1,3-Dichloropropane	7.90	76	2432626	97.28960 ppb	100
67) Dibromochloromethane	8.12	129	1688546	102.04761 ppb	99
68) Chlorobenzene	8.73	112	4560965	98.84571 ppb	98
69) Ethylbenzene	8.87	91	7534661	99.60002 ppb	99
70) Bromoform	9.55	173	1027737	102.53187 ppb	100
72) Isopropylbenzene	9.76	105	7175261	96.94956 ppb	98
73) 1,1,2,2-Tetrachloroethane	10.07	83	1759176	97.62862 ppb	98
74) 1,2,3-Trichloropropane	10.09	110	324544	94.00703 ppb	95
75) t-1,4-Dichloro-2-Butene	10.13	53	522694	107.56805 ppb	97
76) Bromobenzene	10.02	156	1861631	91.91148 ppb	98
77) n-Propylbenzene	10.17	91	8421775	99.53236 ppb	100
78) 4-Ethyltoluene	10.29	105	7279780	100.39403 ppb	98
79) 2-Chlorotoluene	10.23	91	5312135	97.43912 ppb	94
80) 1,3,5-Trimethylbenzene	10.35	105	6161616	100.27243 ppb	100
81) 4-Chlorotoluene	10.34	91	6289858	99.89522 ppb	97
82) Tert-Butylbenzene	10.67	119	5044056	95.68522 ppb	98
83) 1,2,4-Trimethylbenzene	10.71	105	6440263	103.36442 ppb	97
84) Sec-Butylbenzene	10.88	105	7432063	99.99891 ppb	99
85) p-Isopropyltoluene	11.04	119	6344403	102.65833 ppb	98
86) Benzyl Chloride	11.19	91	2544631	125.43062 ppb	99
87) 1,3-DCB	10.96	146	3587755	97.96955 ppb	98
88) 1,4-DCB	11.05	146	3692358	97.40798 ppb	98
89) n-Butylbenzene	11.44	91	5834683	107.11919 ppb	97
90) 1,2-DCB	11.41	146	3574885	100.00608 ppb	99
91) Hexachloroethane	11.66	117	1351457	107.29903 ppb	95
92) 1,2-Dibromo-3-chloropropan	12.17	157	325395	97.45536 ppb	93
93) 1,2,4-Trichlorobenzene	12.99	180	2460396	101.64166 ppb	99
94) Hexachlorobutadiene	13.19	225	914103	97.16069 ppb	94
95) Naphthalene	13.22	128	3096576	101.07387 ppb	99
96) 1,2,3-Trichlorobenzene	13.46	180	1481728	100.14334 ppb	100

(#) = qualifier out of range (m) = manual integration
1113L13.D LALLW.M Tue Nov 15 10:40:45 2016

Quantitation Report

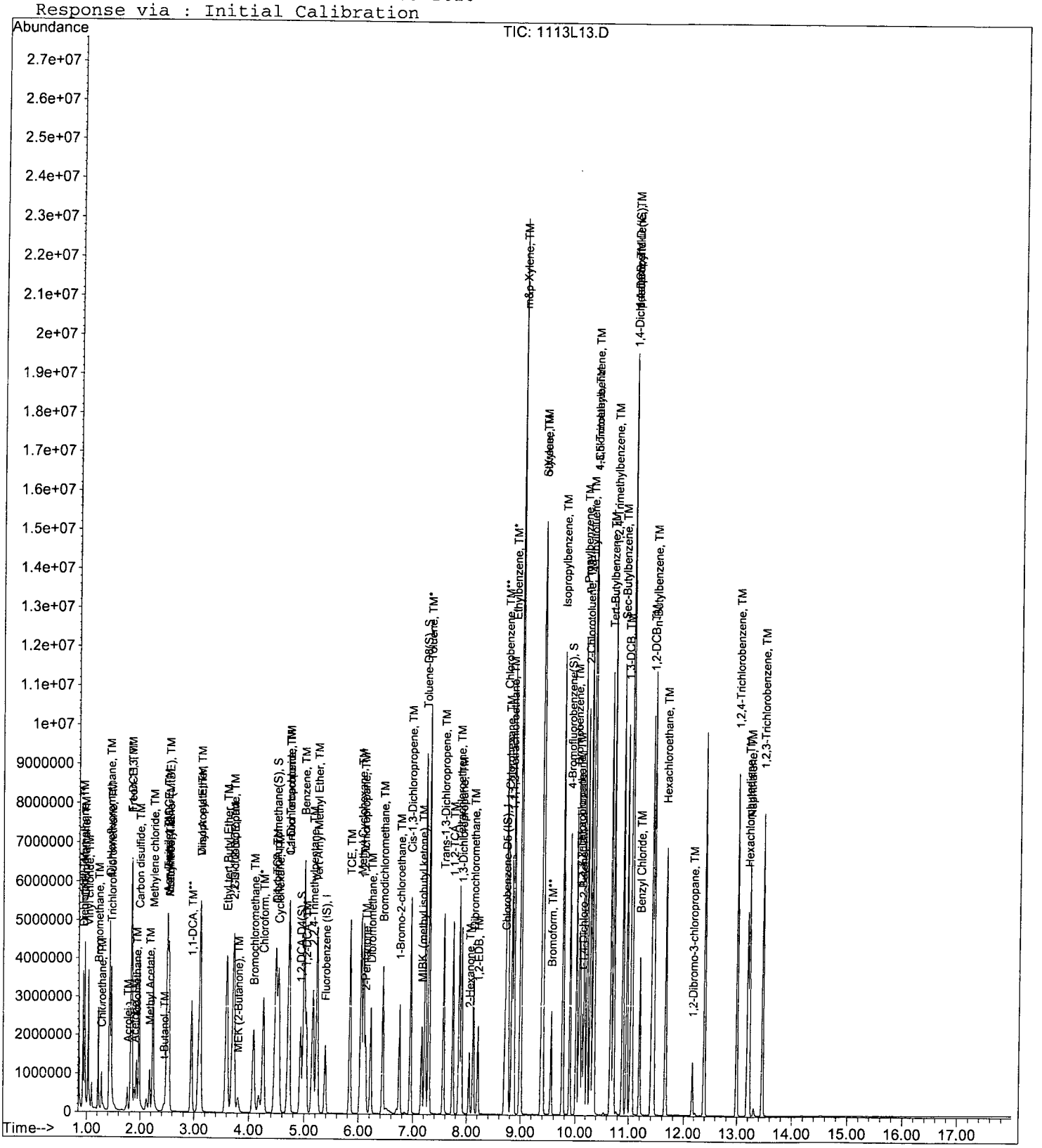
Data File : M:\LOKI\DATA\161113\1113L13.D
Acq On : 13 Nov 16 17:21
Sample : 100ug/L VOC STD 11/13/16R
Misc : 20uL-100ppb

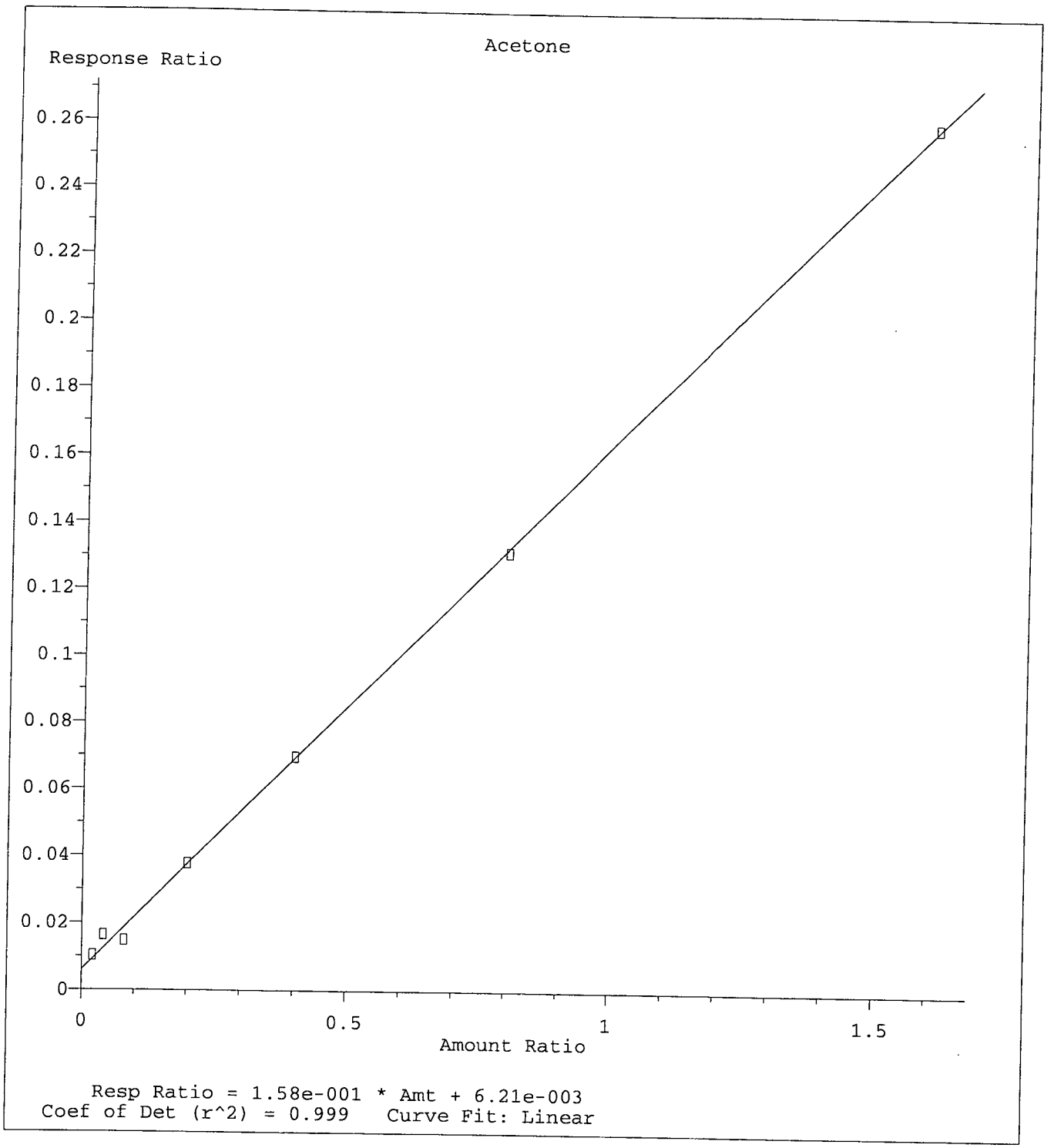
Vial: 13
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:44 2016

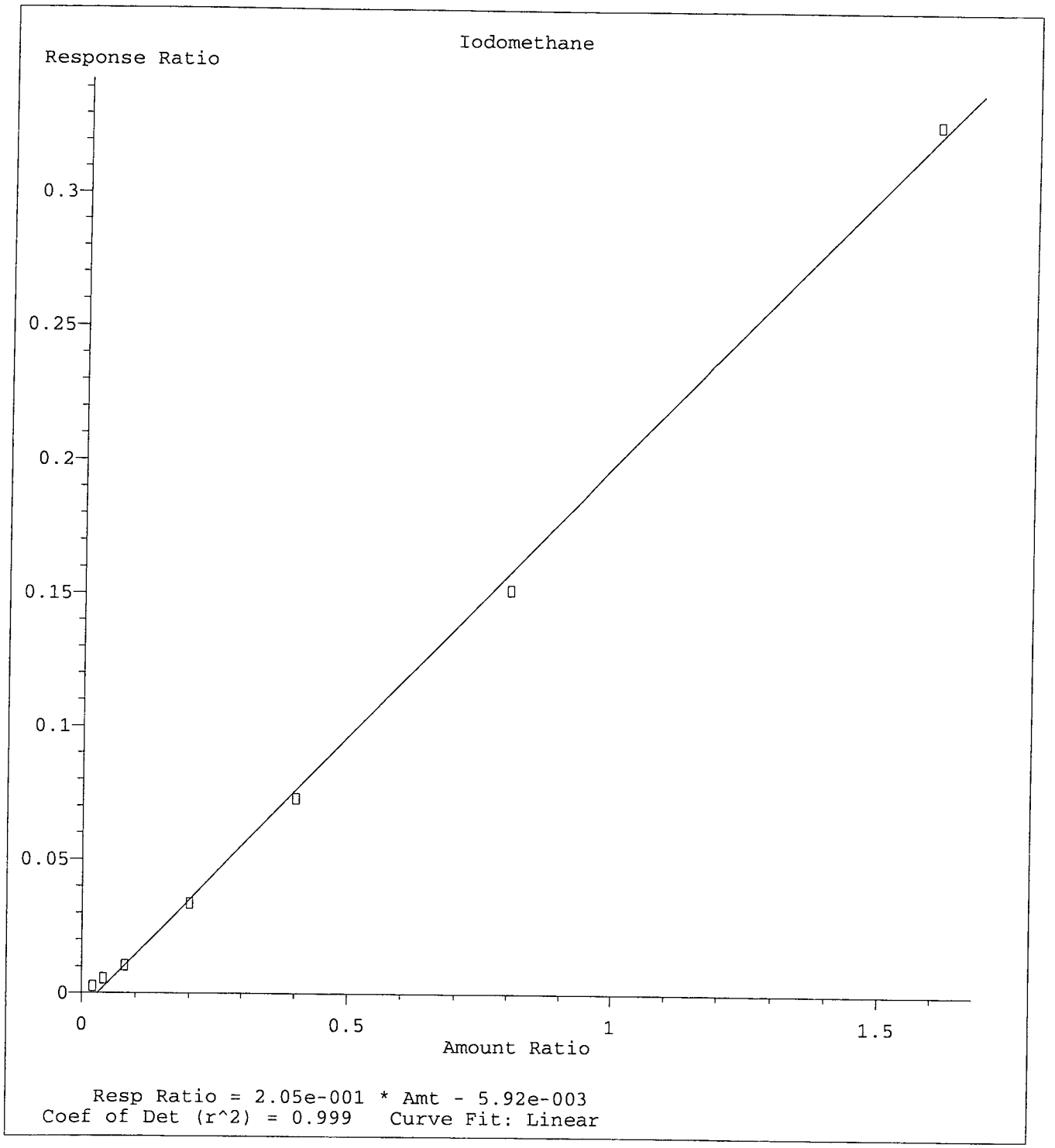
Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration

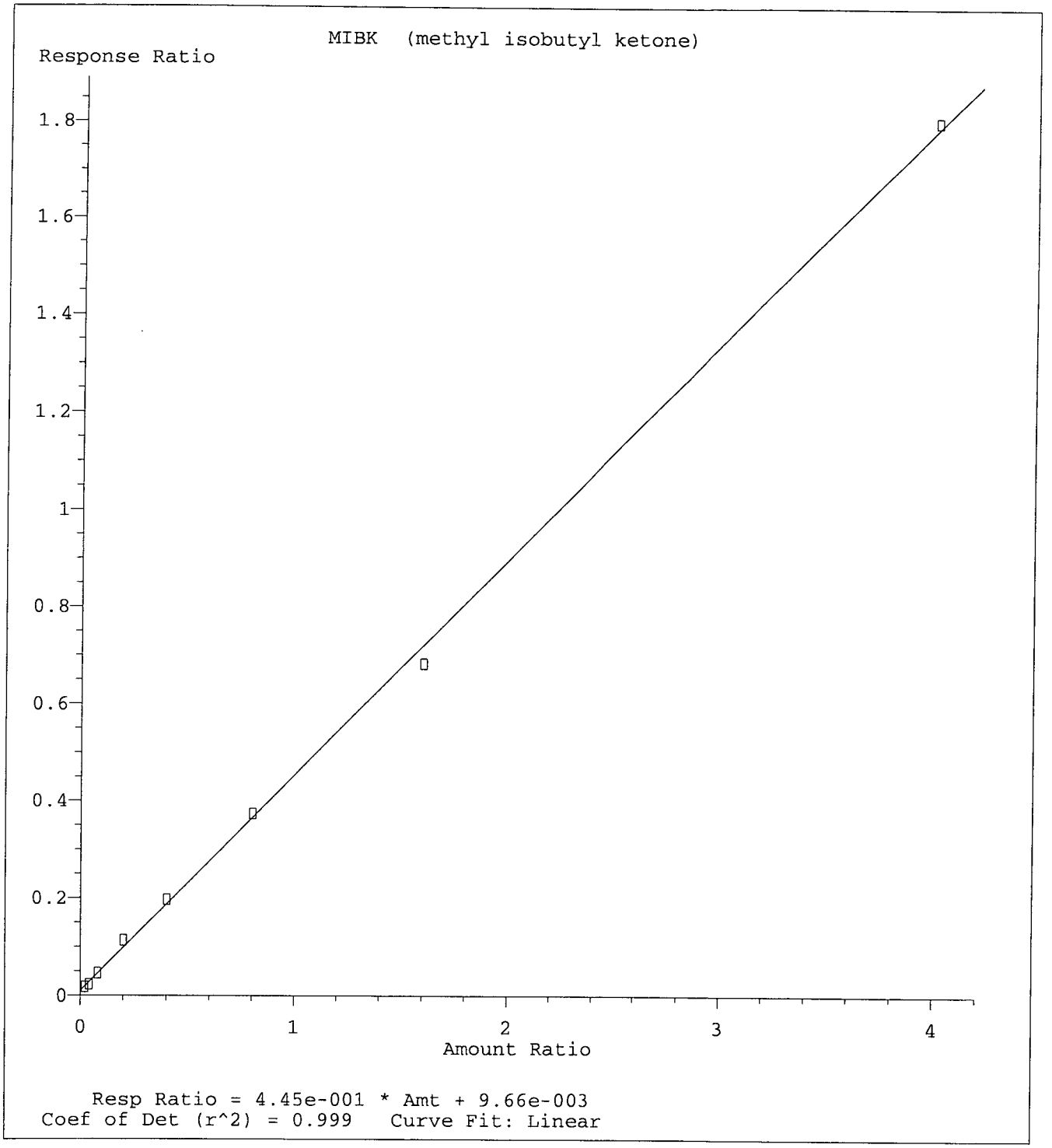




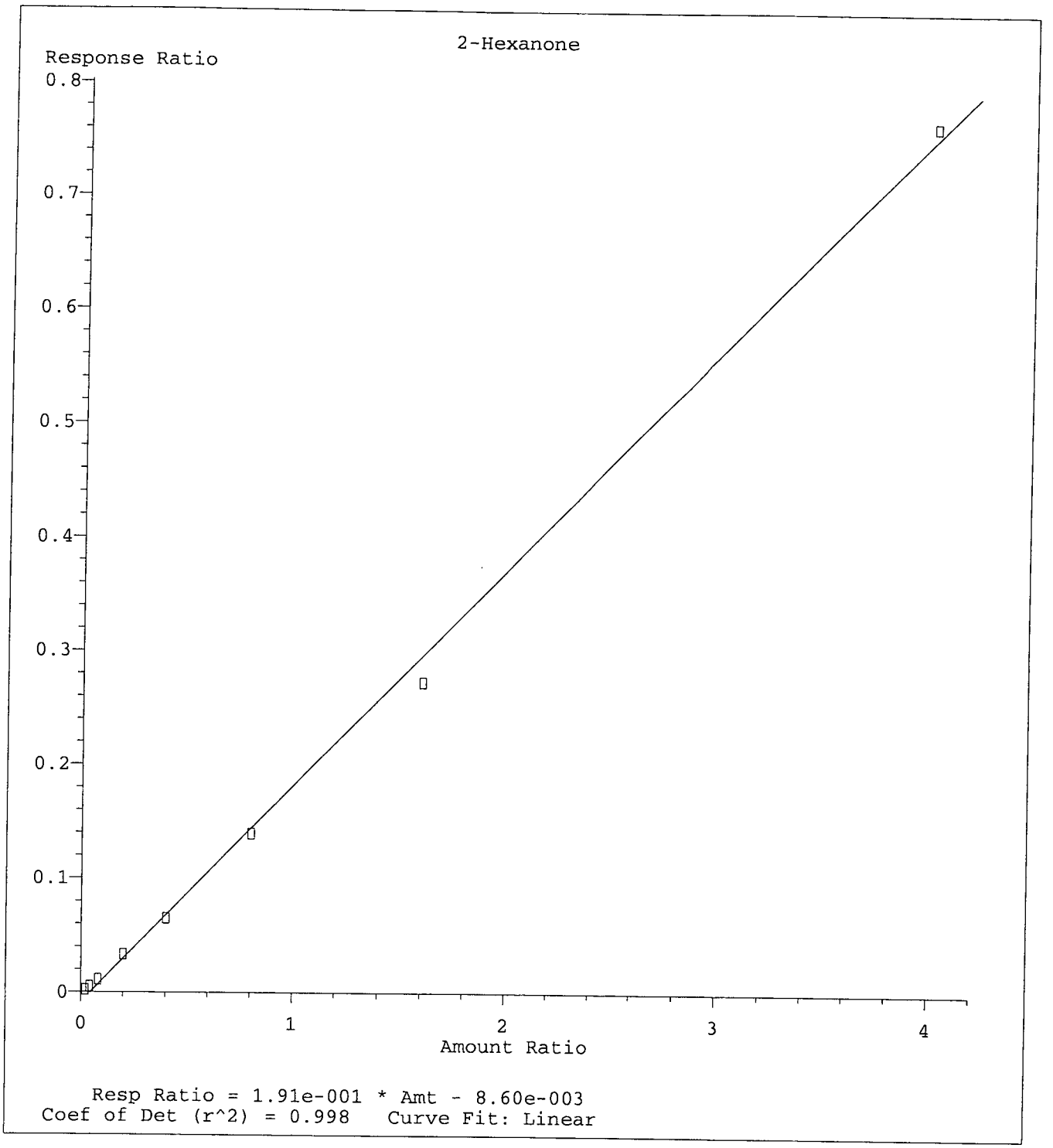
Method Name: M:\LOKI\DATA\161113\LALLW.M
Calibration Table Last Updated: Mon Nov 14 08:45:03 2016



Method Name: M:\LOKI\DATA\161113\LALLW.M
Calibration Table Last Updated: Mon Nov 14 08:45:03 2016



Method Name: M:\LOKI\DATA\161113\LALLW.M
Calibration Table Last Updated: Mon Nov 14 08:45:03 2016



Method Name: M:\LOKI\DATA\161113\LALLW.M
Calibration Table Last Updated: Mon Nov 14 08:45:03 2016

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/13/16
Instrument: Loki
Initial Cal. Date: 11/13/16
Data File: 1113L17.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	Dichlorodifluoromethane	0.5296	0.4968	6.2	TM	
2	TM	Freon 114	0.3913	0.3998	2.2	TM	
3	TM**	Chloromethane	0.7347	0.6634	9.7	TM**	
4	TM*	Vinyl chloride	0.6620	0.6071	8.3	TM*	
5	TM	Bromomethane	0.3034	0.3100	2.2	TM	
6	TM	Chloroethane	0.3640	0.3518	3.4	TM	
7	TM	Dichlorofluoromethane	1.143	1.120	2.0	TM	
8	TM	Trichlorofluoromethane	0.6845	0.6645	2.9	TM	
9	TM	Acrolein	0.0421	0.0339	19	TM	
10	TML	Acetone	0.2561	0.1597	38	TML	8.7
11	TM	Freon-113	0.3929	0.4050	3.1	TM	
12	TM*	1,1-DCE	0.3066	0.3097	0.99	TM*	
13	TM	t-Butanol	0.0188	0.0157	16	TM	
14	TM	Acetonitrile	0.0509	0.0421	17	TM	
15	TM	Methyl Acetate	0.3527	0.3350	5.0	TM	
16	TML	Iodomethane	0.1624	0.1371	16	TML	26 nt
17	TM	Acrylonitrile	0.1309	0.1092	17	TM	
18	TM	Methylene chloride	0.5589	0.5355	4.2	TM	
19	TM	Carbon disulfide	1.366	1.175	14	TM	
20	TM	Methyl t-butyl ether (MtBE)	1.343	1.330	0.91	TM	
21	TM	Trans-1,2-DCE	0.4900	0.4900	0.00	TM	
22	TM	Diisopropyl Ether	1.660	1.626	2.0	TM	
23	TM**	1,1-DCA	0.9403	0.8925	5.1	TM**	
24	TM	Vinyl Acetate	0.4077	0.3853	5.5	TM	
25	TM	Ethyl tert Butyl Ether	1.491	1.529	2.6	TM	
26	TM	MEK (2-Butanone)	0.1913	0.1585	17	TM	
27	TM	Cis-1,2-DCE	0.5812	0.5593	3.8	TM	
28	TM	2,2-Dichloropropane	0.2387	0.2220	7.0	TM	
29	TM*	Chloroform	0.9275	0.8768	5.5	TM*	
30	TM	Bromochloromethane	0.2717	0.2661	2.1	TM	
31	TM	1,1,1-TCA	0.7395	0.7151	3.3	TM	
32	TM	Cyclohexane	0.3892	0.3883	0.22	TM	
33	TM	1,1-Dichloropropene	0.6411	0.6282	2.0	TM	
34	TM	2,2,4-Trimethylpentane	1.168	1.147	1.7	TM	
35	TM	Carbon Tetrachloride	0.5819	0.5644	3.0	TM	
36	TM	Tert Amyl Methyl Ether	1.353	1.314	2.8	TM	
37	TM	1,2-DCA	0.7221	0.6924	4.1	TM	
38	TM	Benzene	1.971	1.965	0.28	TM	
39	TM	TCE	0.2714	0.2575	5.1	TM	
40	TM	2-Pentanone	0.2961	0.2532	14	TM	
		Average			6.9		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 11/13/16
Instrument: Loki
Cal. Date: 11/13/16
Data File: 1113L17.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM*	1,2-Dichloropropane	0.5591	0.5455	2.4	TM*	
42	TM	Bromodichloromethane	0.6980	0.6751	3.3	TM	
43	TM	Methyl Cyclohexane	0.6502	0.6688	2.9	TM	
44	TM	Dibromomethane	0.3050	0.3055	0.15	TM	
45	TM	2-Chloroethyl vinyl ether	0.0000	0.0056	0.00	TM	
46	TML	MIBK (methyl isobutyl ketone)	0.5519	0.4199	24	TML	11
47	TM	1-Bromo-2-chloroethane	0.3972	0.3733	6.0	TM	
48	TM	Cis-1,3-Dichloropropene	0.8395	0.8252	1.7	TM	
49	TM*	Toluene	2.102	2.059	2.0	TM*	
50	TM	Trans-1,3-Dichloropropene	0.7176	0.6717	6.4	TM	
51	TM	1,1,2-TCA	0.3779	0.3468	8.2	TM	
52	TML	2-Hexanone	0.1543	0.1310	15	TML	20
53	TM	1,2-EDB	0.4251	0.4322	1.7	TM	
54	TM	Tetrachloroethene	0.5215	0.5207	0.16	TM	
55	TM	1-Chlorohexane	0.6031	0.5956	1.2	TM	
56	TM	1,1,1,2-Tetrachloroethane	0.5276	0.5047	4.3	TM	
57	TM	m&p-Xylene	0.9094	0.9025	0.76	TM	
58	TM	o-Xylene	0.8935	0.8958	0.26	TM	
59	TM	Styrene	0.9869	0.9926	0.58	TM	
60	TM	1,3-Dichloropropane	0.7774	0.7631	1.8	TM	
61	TM	Dibromochloromethane	0.5144	0.4852	5.7	TM	
62	TM**	Chlorobenzene	1.435	1.430	0.34	TM**	
63	TM*	Ethylbenzene	2.352	2.341	0.49	TM*	
64	TM**	Bromoform	0.3116	0.2872	7.8	TM**	
65	TM	Isopropylbenzene	4.080	4.011	1.7	TM	
66	TM**	1,1,2,2-Tetrachloroethane	0.9935	0.9599	3.4	TM**	
67	TM	1,2,3-Trichloropropane	0.1903	0.1774	6.8	TM	
68	TM	t-1,4-Dichloro-2-Butene	0.2679	0.2198	18	TM	
69	TM	Bromobenzene	1.117	1.098	1.7	TM	
70	TM	n-Propylbenzene	4.665	4.787	2.6	TM	
71	TM	4-Ethyltoluene	3.998	4.042	1.1	TM	
72	TM	2-Chlorotoluene	3.006	2.896	3.6	TM	
73	TM	1,3,5-Trimethylbenzene	3.388	3.379	0.27	TM	
74	TM	4-Chlorotoluene	3.471	3.399	2.1	TM	
75	TM	Tert-Butylbenzene	2.906	2.821	2.9	TM	
76	TM	1,2,4-Trimethylbenzene	3.435	3.465	0.87	TM	
77	TM	Sec-Butylbenzene	4.098	3.980	2.9	TM	
78	TM	p-Isopropyltoluene	3.407	3.354	1.6	TM	
79	TM	Benzyl Chloride	1.119	0.8334	25	TM	nt
80	TM	1,3-DCB	2.019	2.034	0.75	TM	
		Average			4.3		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 11/13/16
Instrument: Loki
Cal. Date: 11/13/16
Data File: 1113L17.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	1,4-DCB	2.090	2.035	2.6	TM	
82	TM	n-Butylbenzene	3.003	2.873	4.3	TM	
83	TM	1,2-DCB	1.971	1.943	1.4	TM	
84	TM	Hexachloroethane	0.6944	0.6354	8.5	TM	
85	TM	1,2-Dibromo-3-chloropropane	0.1841	0.1791	2.7	TM	
86	TM	1,2,4-Trichlorobenzene	1.335	1.334	0.04	TM	
87	TM	Hexachlorobutadiene	0.5187	0.4979	4.0	TM	
88	TM	Naphthalene	1.689	1.732	2.5	TM	
89	TM	1,2,3-Trichlorobenzene	0.8158	0.7879	3.4	TM	
90							
91							
92							
93							
94							
95							
96							
97							
98							
99							
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108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			3.3		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L17.D Vial: 17
Acq On : 13 Nov 16 19:14 Operator: PM,DG,SV,CMM
Sample : (SS) 10ug/L VOC STD 11/13/16 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 14 8:45 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	818661	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	787584	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	425024	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	426943	24.71363 ppb		0.00
Spiked Amount 25.000			Recovery = 98.856%			
37) 1,2-DCA-D4(S)	4.93	65	460938	24.47410 ppb		0.00
Spiked Amount 25.000			Recovery = 97.896%			
57) Toluene-D8(S)	7.22	98	1449269	24.09795 ppb		0.00
Spiked Amount 25.000			Recovery = 96.392%			
65) 4-Bromofluorobenzene(S)	9.89	95	535467	24.66845 ppb		0.00
Spiked Amount 25.000			Recovery = 98.672%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.86	85	162693	9.38168 ppb		99
3) Freon 114	0.93	85	130930	10.21743 ppb		98
4) Chloromethane	0.96	50	217234	9.02969 ppb		98
5) Vinyl chloride	1.03	62	198802	9.17063 ppb		96
6) Bromomethane	1.22	96	101527	10.21885 ppb		99
7) Chloroethane	1.29	64	115205	9.66477 ppb		95
8) Dichlorofluoromethane	1.43	67	366664	9.79597 ppb		97
9) Trichlorofluoromethane	1.46	101	217616	9.70825 ppb		96
10) Acrolein	1.76	56	138931	100.69860 ppb		92
11) Acetone	1.88	43	52304	9.12845 ppb		98
12) Freon-113	1.84	101	132637	10.30833 ppb		97
13) 1,1-DCE	1.83	96	101401	10.09893 ppb		96
14) t-Butanol	2.40	59	64346	104.66812 ppb		99
15) Acetonitrile	2.10	41	172172	103.39449 ppb		99
16) Methyl Acetate	2.17	43	109703	9.49968 ppb		99
17) Iodomethane	1.93	142	44904	7.40226 ppb		97
18) Acrylonitrile	2.48	52	35761	8.34130 ppb		94
19) Methylene chloride	2.24	84	175342	9.58046 ppb		99
20) Carbon disulfide	1.98	76	384701	8.59978 ppb		98
21) Methyl t-butyl ether (MtBE	2.52	73	435686	9.90877 ppb		99
22) Trans-1,2-DCE	2.50	96	160458	9.99969 ppb		98
23) Diisopropyl Ether	3.10	45	532605	9.79701 ppb		99
24) 1,1-DCA	2.95	63	292265	9.49215 ppb		99
25) Vinyl Acetate	3.07	43	126182	9.45040 ppb		96
26) Ethyl tert Butyl Ether	3.59	59	500582	10.25542 ppb		99
27) MEK (2-Butanone)	3.80	43	51891	8.28162 ppb		89
28) Cis-1,2-DCE	3.73	96	183143	9.62241 ppb		94
29) 2,2-Dichloropropane	3.70	77	72710	9.30078 ppb		100
30) Chloroform	4.25	83	287133	9.45335 ppb		99
31) Bromochloromethane	4.08	128	87126	9.79330 ppb		95
33) 1,1,1-TCA	4.47	97	234158	9.67019 ppb		98
34) Cyclohexane	4.53	41	127160	9.97756 ppb		96
35) 1,1-Dichloropropene	4.72	75	205701	9.79784 ppb		98
36) 2,2,4-Trimethylpentane	5.16	57	375725	9.82600 ppb	#	90
38) Carbon Tetrachloride	4.71	119	184834	9.69983 ppb		97
39) Tert Amyl Methyl Ether	5.23	73	430413	9.71592 ppb		99
40) 1,2-DCA	5.03	62	226730	9.58908 ppb		100
41) Benzene	4.99	78	643506	9.97177 ppb		99
42) TCE	5.84	95	84336	9.48909 ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L17.D
Acq On : 13 Nov 16 19:14
Sample : (SS) 10ug/L VOC STD 11/13/16
Misc : W IS&S 10/20/16, 11/04/16

Vial: 17
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 14 8:45 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

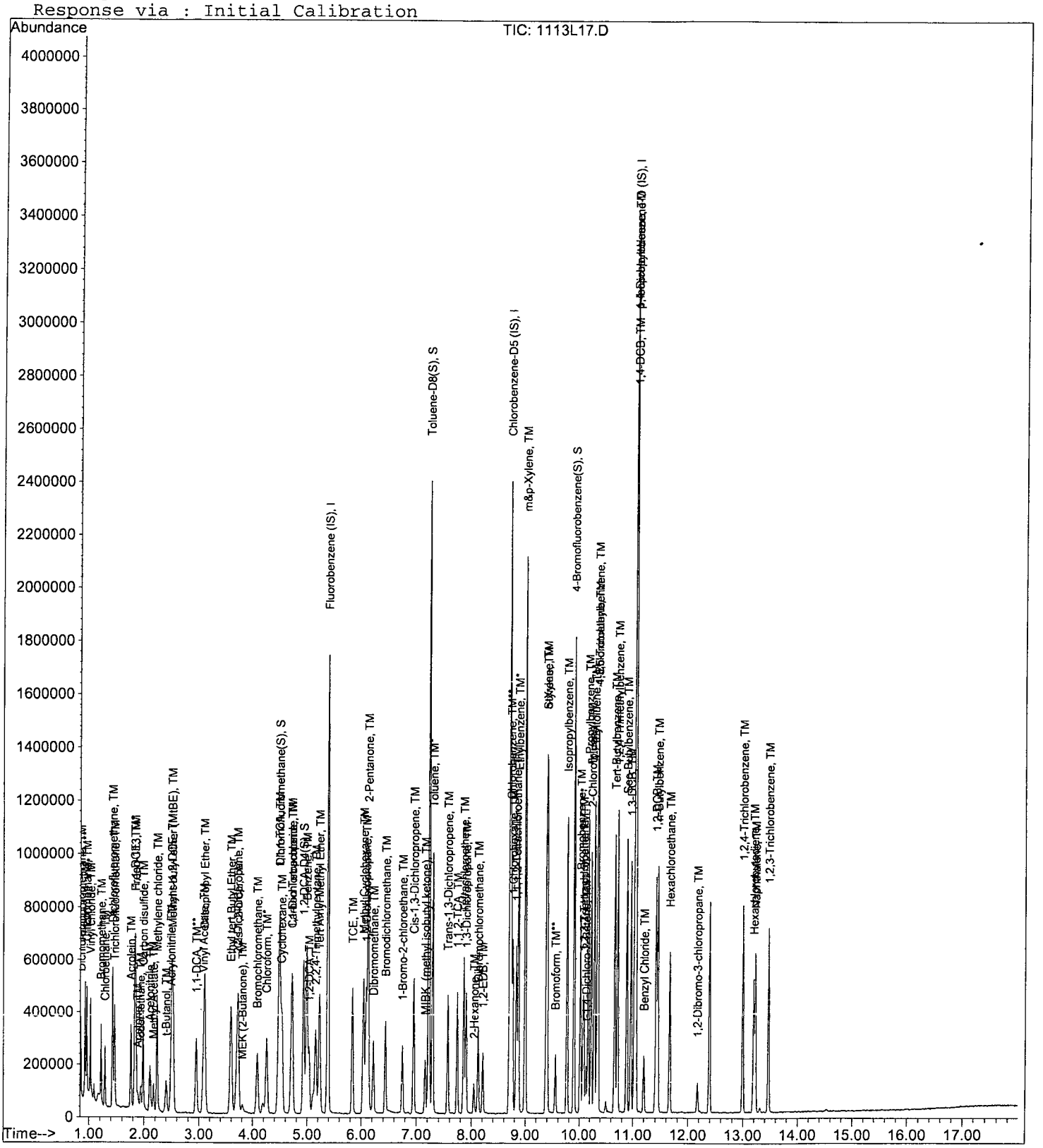
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
43) 2-Pentanone	6.12	43	1036379	106.88145 ppb	99
44) 1,2-Dichloropropane	6.09	63	178638	9.75658 ppb	99
45) Bromodichloromethane	6.44	83	221078	9.67174 ppb	98
46) Methyl Cyclohexane	6.04	83	219002	10.28506 ppb	96
47) Dibromomethane	6.22	93	100041	10.01540 ppb	98
49) MIBK (methyl isobutyl ket	7.15	43	137487	8.89432 ppb	97
50) 1-Bromo-2-chloroethane	6.75	63	122257	9.40015 ppb	98
51) Cis-1,3-Dichloropropene	6.95	75	270233	9.83052 ppb	99
52) Toluene	7.29	91	674411	9.79581 ppb	100
53) Trans-1,3-Dichloropropene	7.56	75	219968	9.36090 ppb	97
54) 1,1,2-TCA	7.74	83	113549	9.17530 ppb	95
55) 2-Hexanone	8.05	43	42887	8.00246 ppb	96
58) 1,2-EDB	8.21	107	136171	10.16894 ppb	100
59) Tetrachloroethene	7.86	166	164032	9.98432 ppb	99
60) 1-Chlorohexane	8.76	91	187629	9.87520 ppb	99
61) 1,1,1,2-Tetrachloroethane	8.83	131	159006	9.56626 ppb	100
62) m&p-Xylene	8.99	106	568650	19.84865 ppb	98
63) o-Xylene	9.38	106	282197	10.02566 ppb	99
64) Styrene	9.40	104	312704	10.05787 ppb	99
66) 1,3-Dichloropropane	7.90	76	240396	9.81588 ppb	99
67) Dibromochloromethane	8.12	129	152853	9.43137 ppb	98
68) Chlorobenzene	8.73	112	450407	9.96592 ppb	97
69) Ethylbenzene	8.87	91	737349	9.95130 ppb	100
70) Bromoform	9.55	173	90481	9.21606 ppb	98
72) Isopropylbenzene	9.76	105	681987	9.83084 ppb	99
73) 1,1,2,2-Tetrachloroethane	10.07	83	163200	9.66261 ppb	95
74) 1,2,3-Trichloropropane	10.09	110	30160	9.32018 ppb	89
75) t-1,4-Dichloro-2-Butene	10.13	53	37376	8.20607 ppb	100
76) Bromobenzene	10.02	156	186679	9.83282 ppb	92
77) n-Propylbenzene	10.17	91	813781	10.26064 ppb	99
78) 4-Ethyltoluene	10.29	105	687117	10.10943 ppb	99
79) 2-Chlorotoluene	10.23	91	492383	9.63549 ppb	96
80) 1,3,5-Trimethylbenzene	10.35	105	574427	9.97305 ppb	99
81) 4-Chlorotoluene	10.34	91	577788	9.78991 ppb	100
82) Tert-Butylbenzene	10.67	119	479671	9.70766 ppb	99
83) 1,2,4-Trimethylbenzene	10.71	105	589117	10.08731 ppb	97
84) Sec-Butylbenzene	10.88	105	676611	9.71251 ppb	100
85) p-Isopropyltoluene	11.04	119	570202	9.84325 ppb	99
86) Benzyl Chloride	11.20	91	141693	7.45133 ppb	99
87) 1,3-DCB	10.96	146	345849	10.07537 ppb	99
88) 1,4-DCB	11.05	146	346024	9.73875 ppb	96
89) n-Butylbenzene	11.44	91	488497	9.56794 ppb	97
90) 1,2-DCB	11.41	146	330258	9.85653 ppb	99
91) Hexachloroethane	11.66	117	108017	9.14939 ppb	99
92) 1,2-Dibromo-3-chloropropan	12.17	157	30443	9.72722 ppb	88
93) 1,2,4-Trichlorobenzene	12.99	180	226813	9.99634 ppb	99
94) Hexachlorobutadiene	13.19	225	84640	9.59793 ppb	91
95) Naphthalene	13.22	128	294400	10.25183 ppb	98
96) 1,2,3-Trichlorobenzene	13.46	180	133952	9.65849 ppb	97

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161113\1113L17.D Vial: 17
Acq On : 13 Nov 16 19:14 Operator: PM,DG,SV,CMM
Sample : (SS) 10ug/L VOC STD 11/13/16 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 14 8:45 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/20/16
Instrument: Loki
Initial Cal. Date: 11/13/16
Data File: 1119L03.D

		Compound	MEAN	CCRF	%D	%Drift		
1	I	Fluorobenzene (IS)	ISTD			I		
2	TM	Dichlorodifluoromethane	0.5296	0.3372	36	TM		nt
3	TM	Freon 114	0.3913	0.3244	17	TM		
4	TM**	Chloromethane	0.7347	0.7293	0.73	TM**		
5	TM*	Vinyl chloride	0.6620	0.6178	6.7	TM*		
6	TM	Bromomethane	0.3034	0.3240	6.8	TM		
7	TM	Chloroethane	0.3640	0.3407	6.4	TM		
8	TM	Dichlorofluoromethane	1.143	1.165	1.9	TM		
9	TM	Trichlorofluoromethane	0.6845	0.5835	15	TM		
10	TM	Acrolein	0.0421	0.0437	3.6	TM		
11	TML	Acetone	0.2561	0.1773	31	TML	2.4	
12	TM	Freon-113	0.3929	0.3178	19	TM		
13	TM*	1,1-DCE	0.3066	0.3024	1.4	TM*		
14	TM	t-Butanol	0.0188	0.0191	1.9	TM		
15	TM	Acetonitrile	0.0509	0.0599	18	TM		
16	TM	Methyl Acetate	0.3527	0.4303	22	TM		nt
17	TML	Iodomethane	0.1624	0.1680	3.5	TML	11	
18	TM	Acrylonitrile	0.1309	0.1367	4.4	TM		
19	TM	Methylene chloride	0.5589	0.5774	3.3	TM		
20	TM	Carbon disulfide	1.366	1.050	23	TM		nt
21	TM	Methyl t-butyl ether (MtBE)	1.343	1.400	4.3	TM		
22	TM	Trans-1,2-DCE	0.4900	0.4911	0.22	TM		
23	TM	Diisopropyl Ether	1.660	2.085	26	TM		nt
24	TM**	1,1-DCA	0.9403	1.049	12	TM**		
25	TM	Vinyl Acetate	0.4077	0.4812	18	TM		
26	TM	Ethyl tert Butyl Ether	1.491	1.675	12	TM		
27	TM	MEK (2-Butanone)	0.1913	0.1879	1.8	TM		
28	TM	Cis-1,2-DCE	0.5812	0.5874	1.1	TM		
29	TM	2,2-Dichloropropane	0.2387	0.2536	6.2	TM		
30	TM*	Chloroform	0.9275	0.9497	2.4	TM*		
31	TM	Bromochloromethane	0.2717	0.2494	8.2	TM		
32	S	Dibromofluoromethane(S)	0.5276	0.4965	5.9	S		
33	TM	1,1,1-TCA	0.7395	0.7049	4.7	TM		
34	TM	Cyclohexane	0.3892	0.3969	2.0	TM		
35	TM	1,1-Dichloropropene	0.6411	0.6506	1.5	TM		
36	TM	2,2,4-Trimethylpentane	1.168	1.186	1.6	TM		
37	S	1,2-DCA-D4(S)	0.5751	0.6214	8.1	S		
38	TM	Carbon Tetrachloride	0.5819	0.5291	9.1	TM		
39	TM	Tert Amyl Methyl Ether	1.353	1.347	0.46	TM		
40	TM	1,2-DCA	0.7221	0.7602	5.3	TM		
		Average			9.0			

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 11/20/16
Matrix: 0 Instrument: Loki
Cal. Date: 11/13/16
Data File: 1119L03.D

		Compound	MEAN	CCRF	%D		%Drift	
41	TM	Benzene	1.971	2.129	8.0	TM		
42	TM	TCE	0.2714	0.2593	4.5	TM		
43	TM	2-Pentanone	0.2961	0.3635	23	TM		nt
44	TM*	1,2-Dichloropropane	0.5591	0.6255	12	TM*		
45	TM	Bromodichloromethane	0.6980	0.6809	2.5	TM		
46	TM	Methyl Cyclohexane	0.6502	0.5535	15	TM		
47	TM	Dibromomethane	0.3050	0.3047	0.11	TM		
48	TM	2-Chloroethyl vinyl ether	0.0000	0.0112	0.00	TM		
49	TML	MIBK (methyl isobutyl ketone)	0.5519	0.5136	6.9	TML	10	
50	TM	1-Bromo-2-chloroethane	0.3972	0.4220	6.3	TM		
51	TM	Cis-1,3-Dichloropropene	0.8395	0.8892	5.9	TM		
52	TM*	Toluene	2.102	2.187	4.0	TM*		
53	TM	Trans-1,3-Dichloropropene	0.7176	0.7269	1.3	TM		
54	TM	1,1,2-TCA	0.3779	0.3617	4.3	TM		
55	TML	2-Hexanone	0.1543	0.1600	3.7	TML	4.7	
56	I	Chlorobenzene-D5 (IS)	ISTD			I		
57	S	Toluene-D8(S)	1.909	1.971	3.3	S		
58	TM	1,2-EDB	0.4251	0.4285	0.81	TM		
59	TM	Tetrachloroethene	0.5215	0.4731	9.3	TM		
60	TM	1-Chlorohexane	0.6031	0.5821	3.5	TM		
61	TM	1,1,1,2-Tetrachloroethane	0.5276	0.5073	3.9	TM		
62	TM	m&p-Xylene	0.9094	0.9460	4.0	TM		
63	TM	o-Xylene	0.8935	0.9503	6.4	TM		
64	TM	Styrene	0.9869	1.062	7.6	TM		
65	S	4-Bromofluorobenzene(S)	0.6890	0.6987	1.4	S		
66	TM	1,3-Dichloropropane	0.7774	0.8447	8.7	TM		
67	TM	Dibromochloromethane	0.5144	0.4739	7.9	TM		
68	TM**	Chlorobenzene	1.435	1.484	3.4	TM**		
69	TM*	Ethylbenzene	2.352	2.546	8.3	TM*		
70	TM**	Bromoform	0.3116	0.2591	17	TM**		
71	I	1,4-Dichlorobenzene-D (IS)	ISTD			I		
72	TM	Isopropylbenzene	4.080	4.117	0.90	TM		
73	TM**	1,1,2,2-Tetrachloroethane	0.9935	1.042	4.9	TM**		
74	TM	1,2,3-Trichloropropane	0.1903	0.1812	4.8	TM		
75	TM	t-1,4-Dichloro-2-Butene	0.2679	0.2724	1.7	TM		
76	TM	Bromobenzene	1.117	1.080	3.3	TM		
77	TM	n-Propylbenzene	4.665	5.041	8.1	TM		
78	TM	4-Ethyltoluene	3.998	4.236	6.0	TM		
79	TM	2-Chlorotoluene	3.006	3.102	3.2	TM		
80	TM	1,3,5-Trimethylbenzene	3.388	3.615	6.7	TM		
		Average			5.9			

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 11/20/16
Instrument: Loki
Cal. Date: 11/13/16
Data File: 1119L03.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	4-Chlorotoluene	3.471	3.718	7.1	TM	
82	TM	Tert-Butylbenzene	2.906	2.797	3.8	TM	
83	TM	1,2,4-Trimethylbenzene	3.435	3.676	7.0	TM	
84	TM	Sec-Butylbenzene	4.098	4.118	0.50	TM	
85	TM	p-Isopropyltoluene	3.407	3.452	1.3	TM	
86	TM	Benzyl Chloride	1.119	1.199	7.2	TM	
87	TM	1,3-DCB	2.019	2.046	1.3	TM	
88	TM	1,4-DCB	2.090	2.106	0.78	TM	
89	TM	n-Butylbenzene	3.003	3.210	6.9	TM	
90	TM	1,2-DCB	1.971	1.911	3.0	TM	
91	TM	Hexachloroethane	0.6944	0.6464	6.9	TM	
92	TM	1,2-Dibromo-3-chloropropane	0.1841	0.1483	19	TM	
93	TM	1,2,4-Trichlorobenzene	1.335	1.228	8.0	TM	
94	TM	Hexachlorobutadiene	0.5187	0.4694	9.5	TM	
95	TM	Naphthalene	1.689	1.668	1.2	TM	
96	TM	1,2,3-Trichlorobenzene	0.8158	0.7644	6.3	TM	
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			5.6		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1119L03.D Vial: 2
Acq On : 20 Nov 16 10:17 Operator: PM,DG,SV,CMM
Sample : 161119A CCV/LCS 10ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 11:43 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	767104	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	703552	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	384448	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	380890	23.52968 ppb		0.00
Spiked Amount 25.000			Recovery = 94.120%			
37) 1,2-DCA-D4(S)	4.93	65	476714	27.01295 ppb		0.00
Spiked Amount 25.000			Recovery = 108.052%			
57) Toluene-D8(S)	7.22	98	1386785	25.81315 ppb		0.00
Spiked Amount 25.000			Recovery = 103.252%			
65) 4-Bromofluorobenzene(S)	9.89	95	491572	25.35111 ppb		0.00
Spiked Amount 25.000			Recovery = 101.404%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.86	85	103467	6.36742 ppb		98
3) Freon 114	0.93	85	99524	8.28858 ppb		93
4) Chloromethane	0.96	50	223777	9.92682 ppb		97
5) Vinyl chloride	1.03	62	189567	9.33235 ppb		97
6) Bromomethane	1.22	96	99416	10.67890 ppb		99
7) Chloroethane	1.29	64	104547	9.36012 ppb		99
8) Dichlorofluoromethane	1.43	67	357361	10.18911 ppb		97
9) Trichlorofluoromethane	1.46	101	179027	8.52351 ppb		99
10) Acrolein	1.76	56	167447	129.52438 ppb		98
11) Acetone	1.88	43	54409	10.24240 ppb		99
12) Freon-113	1.84	101	97503	8.08707 ppb		96
13) 1,1-DCE	1.83	96	92792	9.86264 ppb		95
14) t-Butanol	2.40	59	73338	127.31271 ppb		97
15) Acetonitrile	2.10	41	229777	147.26220 ppb		98
16) Methyl Acetate	2.17	43	132027	12.20121 ppb		86
17) Iodomethane	1.93	142	51560	8.90818 ppb		97
18) Acrylonitrile	2.47	52	41954	10.44354 ppb		90
19) Methylene chloride	2.24	84	177156	10.33014 ppb		98
20) Carbon disulfide	1.98	76	322294	7.68893 ppb		100
21) Methyl t-butyl ether (MtBE	2.52	73	429718	10.42988 ppb		95
22) Trans-1,2-DCE	2.50	96	150694	10.02239 ppb		86
23) Diisopropyl Ether	3.10	45	639690	12.55763 ppb	#	89
24) 1,1-DCA	2.95	63	321851	11.15559 ppb		98
25) Vinyl Acetate	3.09	43	147641	11.80076 ppb	#	80
26) Ethyl tert Butyl Ether	3.59	59	514018	11.23845 ppb		100
27) MEK (2-Butanone)	3.80	43	57666	9.82184 ppb		91
28) Cis-1,2-DCE	3.72	96	180238	10.10624 ppb		84
29) 2,2-Dichloropropane	3.70	77	77800	10.62073 ppb		99
30) Chloroform	4.25	83	291407	10.23889 ppb		99
31) Bromochloromethane	4.08	128	76521	9.17935 ppb		99
33) 1,1,1-TCA	4.47	97	216306	9.53333 ppb		87
34) Cyclohexane	4.53	41	121795	10.19890 ppb		88
35) 1,1-Dichloropropene	4.72	75	199644	10.14845 ppb		95
36) 2,2,4-Trimethylpentane	5.15	57	363990	10.15889 ppb	#	83
38) Carbon Tetrachloride	4.70	119	162349	9.09246 ppb		100
39) Tert Amyl Methyl Ether	5.23	73	413201	9.95428 ppb		95
40) 1,2-DCA	5.03	62	233247	10.52771 ppb		97
41) Benzene	4.98	78	653136	10.80123 ppb		98
42) TCE	5.84	95	79560	9.55336 ppb		93

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1119L03.D Vial: 2
Acq On : 20 Nov 16 10:17 Operator: PM,DG,SV,CMM
Sample : 161119A CCV/LCS 10ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 11:43 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	2-Pentanone	6.12	43	1394026	153.42794	ppb		91
44)	1,2-Dichloropropane	6.08	63	191943	11.18783	ppb	#	96
45)	Bromodichloromethane	6.44	83	208921	9.75418	ppb		97
46)	Methyl Cyclohexane	6.04	83	169843	8.51248	ppb		87
47)	Dibromomethane	6.22	93	93496	9.98926	ppb		93
49)	MIBK (methyl isobutyl ket	7.16	43	157580	11.00051	ppb		97
50)	1-Bromo-2-chloroethane	6.75	63	129495	10.62586	ppb		98
51)	Cis-1,3-Dichloropropene	6.95	75	272851	10.59287	ppb		96
52)	Toluene	7.29	91	670972	10.40087	ppb		100
53)	Trans-1,3-Dichloropropene	7.56	75	223031	10.12916	ppb		93
54)	1,1,2-TCA	7.74	83	110988	9.57113	ppb		99
55)	2-Hexanone	8.05	43	49106	9.52814	ppb		91
58)	1,2-EDB	8.21	107	120595	10.08141	ppb		99
59)	Tetrachloroethene	7.86	166	133144	9.07219	ppb		97
60)	1-Chlorohexane	8.76	91	163804	9.65098	ppb		81
61)	1,1,1,2-Tetrachloroethane	8.83	131	142752	9.61417	ppb		95
62)	m&p-Xylene	8.99	106	532445	20.80470	ppb		95
63)	o-Xylene	9.38	106	267428	10.63576	ppb		94
64)	Styrene	9.40	104	298880	10.76143	ppb		98
66)	1,3-Dichloropropane	7.90	76	237716	10.86579	ppb		98
67)	Dibromochloromethane	8.12	129	133371	9.21219	ppb		97
68)	Chlorobenzene	8.73	112	417534	10.34200	ppb		96
69)	Ethylbenzene	8.87	91	716630	10.82686	ppb		98
70)	Bromoform	9.55	173	72920	8.31448	ppb		97
72)	Isopropylbenzene	9.76	105	633167	10.09041	ppb		98
73)	1,1,2,2-Tetrachloroethane	10.07	83	160192	10.48554	ppb		93
74)	1,2,3-Trichloropropane	10.09	110	27872	9.52220	ppb		85
75)	t-1,4-Dichloro-2-Butene	10.13	53	41888	10.16735	ppb		86
76)	Bromobenzene	10.02	156	166069	9.67046	ppb		97
77)	n-Propylbenzene	10.17	91	775164	10.80529	ppb		98
78)	4-Ethyltoluene	10.29	105	651450	10.59627	ppb		97
79)	2-Chlorotoluene	10.23	91	477066	10.32108	ppb		91
80)	1,3,5-Trimethylbenzene	10.35	105	555835	10.66879	ppb		98
81)	4-Chlorotoluene	10.34	91	571712	10.70936	ppb		96
82)	Tert-Butylbenzene	10.67	119	430063	9.62231	ppb		99
83)	1,2,4-Trimethylbenzene	10.71	105	565303	10.70116	ppb		97
84)	Sec-Butylbenzene	10.88	105	633268	10.04976	ppb		98
85)	p-Isopropyltoluene	11.04	119	530793	10.13003	ppb		99
86)	Benzyl Chloride	11.20	91	184447	10.72340	ppb		99
87)	1,3-DCB	10.96	146	314585	10.13185	ppb		98
88)	1,4-DCB	11.05	146	323880	10.07760	ppb		99
89)	n-Butylbenzene	11.44	91	493607	10.68842	ppb		98
90)	1,2-DCB	11.41	146	293846	9.69541	ppb		99
91)	Hexachloroethane	11.66	117	99401	9.30822	ppb		96
92)	1,2-Dibromo-3-chloropropan	12.17	157	22813	8.05860	ppb	#	88
93)	1,2,4-Trichlorobenzene	13.00	180	188851	9.20170	ppb		96
94)	Hexachlorobutadiene	13.19	225	72191	9.05025	ppb		92
95)	Naphthalene	13.22	128	256576	9.87769	ppb		98
96)	1,2,3-Trichlorobenzene	13.47	180	117544	9.36993	ppb		98

(#) = qualifier out of range (m) = manual integration

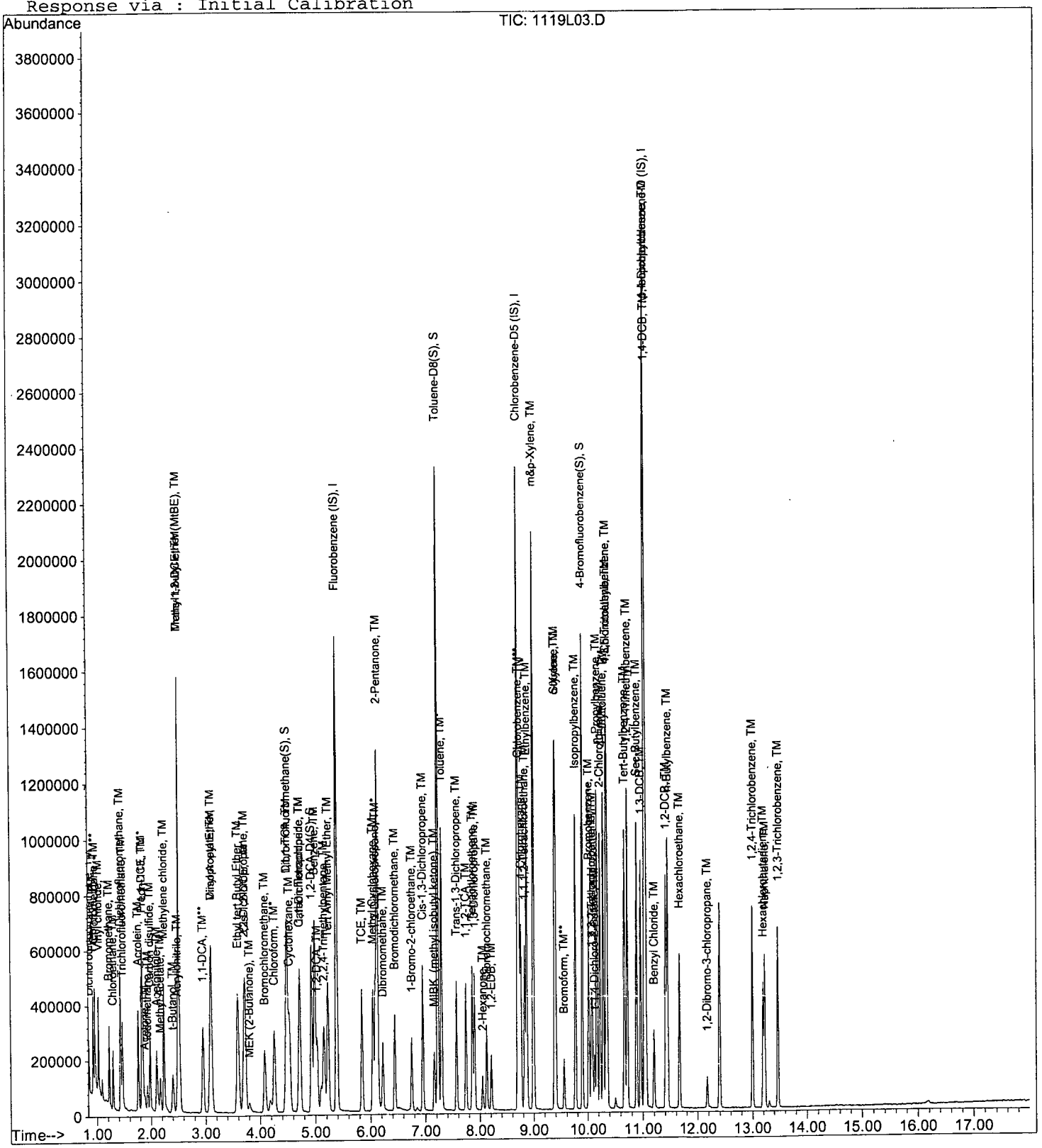
Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L03.D
Acq On : 20 Nov 16 10:17
Sample : 161119A CCV/LCS 10ug/L
Misc : W IS&S 10/20/16, 11/04/16

Vial: 2
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 11:43 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



600

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 11/20/16
Matrix: Instrument: Loki
Initial Cal. Date: 11/13/16
Data File: 1119L27.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TM	Dichlorodifluoromethane	0.5296	0.3658	31	TM	
3	TM	Freon 114	0.3913	0.3439	12	TM	
4	TM**	Chloromethane	0.7347	0.7741	5.4	TM**	
5	TM*	Vinyl chloride	0.6620	0.6243	5.7	TM*	
6	TM	Bromomethane	0.3034	0.4164	37	TM	
7	TM	Chloroethane	0.3640	0.3612	0.79	TM	
8	TM	Dichlorofluoromethane	1.143	1.173	2.6	TM	
9	TM	Trichlorofluoromethane	0.6845	0.5966	13	TM	
10	TM	Acrolein	0.0421	0.0412	2.1	TM	
11	TML	Acetone	0.2561	0.2134	17	TML	25
12	TM	Freon-113	0.3929	0.3340	15	TM	
13	TM*	1,1-DCE	0.3066	0.2941	4.1	TM*	
14	TM	t-Butanol	0.0188	0.0160	15	TM	
15	TM	Acetonitrile	0.0509	0.0625	23	TM	
16	TM	Methyl Acetate	0.3527	0.4537	29	TM	
17	TML	Iodomethane	0.1624	0.1318	19	TML	29
18	TM	Acrylonitrile	0.1309	0.1339	2.3	TM	
19	TM	Methylene chloride	0.5589	0.5970	6.8	TM	
20	TM	Carbon disulfide	1.366	1.027	25	TM	
21	TM	Methyl t-butyl ether (MtBE)	1.343	1.367	1.8	TM	
22	TM	Trans-1,2-DCE	0.4900	0.5014	2.3	TM	
23	TM	Diisopropyl Ether	1.660	2.142	29	TM	
24	TM**	1,1-DCA	0.9403	1.091	16	TM**	
25	TM	Vinyl Acetate	0.4077	0.4896	20	TM	
26	TM	Ethyl tert Butyl Ether	1.491	1.655	11	TM	
27	TM	MEK (2-Butanone)	0.1913	0.2003	4.7	TM	
28	TM	Cis-1,2-DCE	0.5812	0.5996	3.2	TM	
29	TM	2,2-Dichloropropane	0.2387	0.2157	9.6	TM	
30	TM*	Chloroform	0.9275	0.9811	5.8	TM*	
31	TM	Bromochloromethane	0.2717	0.2443	10	TM	
32	S	Dibromofluoromethane(S)	0.5276	0.4949	6.2	S	
33	TM	1,1,1-TCA	0.7395	0.7101	4.0	TM	
34	TM	Cyclohexane	0.3892	0.4170	7.2	TM	
35	TM	1,1-Dichloropropene	0.6411	0.6510	1.5	TM	
36	TM	2,2,4-Trimethylpentane	1.168	1.099	5.8	TM	
37	S	1,2-DCA-D4(S)	0.5751	0.6122	6.4	S	
38	TM	Carbon Tetrachloride	0.5819	0.5183	11	TM	
39	TM	Tert Amyl Methyl Ether	1.353	1.339	1.0	TM	
40	TM	1,2-DCA	0.7221	0.7965	10	TM	
		Average			11.1		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 11/20/16
Instrument: Loki
Cal. Date: 11/13/16
Data File: 1119L27.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	Benzene	1.971	2.223	13	TM	
42	TM	TCE	0.2714	0.2625	3.3	TM	
43	TM	2-Pentanone	0.2961	0.3290	11	TM	
44	TM*	1,2-Dichloropropane	0.5591	0.6708	20	TM*	
45	TM	Bromodichloromethane	0.6980	0.7100	1.7	TM	
46	TM	Methyl Cyclohexane	0.6502	0.5702	12	TM	
47	TM	Dibromomethane	0.3050	0.3155	3.4	TM	
48	TM	2-Chloroethyl vinyl ether	0.0000	0.0065	0.00	TM	
49	TML	MIBK (methyl isobutyl ketone)	0.5519	0.4932	11	TML	5.4
50	TM	1-Bromo-2-chloroethane	0.3972	0.4243	6.8	TM	
51	TM	Cis-1,3-Dichloropropene	0.8395	0.8693	3.6	TM	
52	TM*	Toluene	2.102	2.276	8.3	TM*	
53	TM	Trans-1,3-Dichloropropene	0.7176	0.6980	2.7	TM	
54	TM	1,1,2-TCA	0.3779	0.3879	2.6	TM	
55	TML	2-Hexanone	0.1543	0.1438	6.8	TML	13
56	I	Chlorobenzene-D5 (IS)	ISTD			I	
57	S	Toluene-D8(S)	1.909	1.990	4.3	S	
58	TM	1,2-EDB	0.4251	0.4328	1.8	TM	
59	TM	Tetrachloroethene	0.5215	0.4924	5.6	TM	
60	TM	1-Chlorohexane	0.6031	0.5960	1.2	TM	
61	TM	1,1,1,2-Tetrachloroethane	0.5276	0.5106	3.2	TM	
62	TM	m&p-Xylene	0.9094	0.9694	6.6	TM	
63	TM	o-Xylene	0.8935	0.9648	8.0	TM	
64	TM	Styrene	0.9869	1.040	5.4	TM	
65	S	4-Bromofluorobenzene(S)	0.6890	0.7045	2.2	S	
66	TM	1,3-Dichloropropane	0.7774	0.8821	13	TM	
67	TM	Dibromochloromethane	0.5144	0.4912	4.5	TM	
68	TM**	Chlorobenzene	1.435	1.535	7.0	TM**	
69	TM*	Ethylbenzene	2.352	2.665	13	TM*	
70	TM**	Bromoform	0.3116	0.2612	16	TM**	
71	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
72	TM	Isopropylbenzene	4.080	4.307	5.6	TM	
73	TM**	1,1,2,2-Tetrachloroethane	0.9935	1.085	9.2	TM**	
74	TM	1,2,3-Trichloropropane	0.1903	0.2002	5.2	TM	
75	TM	t-1,4-Dichloro-2-Butene	0.2679	0.2655	0.92	TM	
76	TM	Bromobenzene	1.117	1.117	0.05	TM	
77	TM	n-Propylbenzene	4.665	5.247	12	TM	
78	TM	4-Ethyltoluene	3.998	4.219	5.5	TM	
79	TM	2-Chlorotoluene	3.006	3.319	10	TM	
80	TM	1,3,5-Trimethylbenzene	3.388	3.734	10	TM	
		Average			6.7		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 11/20/16
Instrument: Loki
Cal. Date: 11/13/16
Data File: 1119L27.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	4-Chlorotoluene	3.471	3.892	12	TM	
82	TM	Tert-Butylbenzene	2.906	2.876	1.0	TM	
83	TM	1,2,4-Trimethylbenzene	3.435	3.802	11	TM	
84	TM	Sec-Butylbenzene	4.098	4.266	4.1	TM	
85	TM	p-Isopropyltoluene	3.407	3.510	3.0	TM	
86	TM	Benzyl Chloride	1.119	0.8142	27	TM	
87	TM	1,3-DCB	2.019	2.193	8.6	TM	
88	TM	1,4-DCB	2.090	2.200	5.3	TM	
89	TM	n-Butylbenzene	3.003	3.130	4.2	TM	
90	TM	1,2-DCB	1.971	2.007	1.8	TM	
91	TM	Hexachloroethane	0.6944	0.6478	6.7	TM	
92	TM	1,2-Dibromo-3-chloropropane	0.1841	0.1523	17	TM	
93	TM	1,2,4-Trichlorobenzene	1.335	1.248	6.5	TM	
94	TM	Hexachlorobutadiene	0.5187	0.4335	16	TM	
95	TM	Naphthalene	1.689	1.462	13	TM	
96	TM	1,2,3-Trichlorobenzene	0.8158	0.7866	3.6	TM	
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			8.8		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1119L27.D Vial: 26
Acq On : 20 Nov 16 21:31 Operator: PM,DG,SV,CMM
Sample : Ending CCV 8260 10ug/L 11/19/16 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 11:44 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	667840	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	606272	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	328448	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	330500	23.45145 ppb		0.00
Spiked Amount 25.000			Recovery = 93.804%			
37) 1,2-DCA-D4(S)	4.93	65	408870	26.61222 ppb		0.00
Spiked Amount 25.000			Recovery = 106.448%			
57) Toluene-D8(S)	7.22	98	1206731	26.06579 ppb		0.00
Spiked Amount 25.000			Recovery = 104.264%			
65) 4-Bromofluorobenzene(S)	9.89	95	427120	25.56162 ppb		0.00
Spiked Amount 25.000			Recovery = 102.248%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.86	85	97728	6.90816 ppb		98
3) Freon 114	0.93	85	91870	8.78836 ppb		90
4) Chloromethane	0.96	50	206800	10.53725 ppb		99
5) Vinyl chloride	1.03	62	166769	9.43030 ppb		100
6) Bromomethane	1.22	96	111240	13.72502 ppb		98
7) Chloroethane	1.29	64	96477	9.92146 ppb		99
8) Dichlorofluoromethane	1.43	67	313264	10.25938 ppb		97
9) Trichlorofluoromethane	1.46	101	159371	8.71548 ppb		98
10) Acrolein	1.76	56	137664	122.31405 ppb	#	98
11) Acetone	1.88	43	57002	12.52549 ppb		95
12) Freon-113	1.85	101	89227	8.50064 ppb		94
13) 1,1-DCE	1.83	96	78576	9.59300 ppb		92
14) t-Butanol	2.40	59	53392	106.46350 ppb		98
15) Acetonitrile	2.10	41	208601	153.56171 ppb		99
16) Methyl Acetate	2.17	43	121191	12.86449 ppb		92
17) Iodomethane	1.93	142	35200	7.14119 ppb		95
18) Acrylonitrile	2.48	52	35782	10.23106 ppb		91
19) Methylene chloride	2.24	84	159490	10.68232 ppb		98
20) Carbon disulfide	1.98	76	274435	7.52030 ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	365066	10.17769 ppb		92
22) Trans-1,2-DCE	2.50	96	133940	10.23216 ppb		87
23) Diisopropyl Ether	3.10	45	572165	12.90153 ppb	#	87
24) 1,1-DCA	2.95	63	291457	11.60363 ppb		98
25) Vinyl Acetate	3.09	43	130792	12.00787 ppb	#	80
26) Ethyl tert Butyl Ether	3.59	59	442047	11.10142 ppb		97
27) MEK (2-Butanone)	3.80	43	53495	10.46570 ppb		93
28) Cis-1,2-DCE	3.73	96	160177	10.31633 ppb		88
29) 2,2-Dichloropropane	3.70	77	57624	9.03567 ppb		100
30) Chloroform	4.25	83	262097	10.57783 ppb		97
31) Bromochloromethane	4.08	128	65272	8.99373 ppb		99
33) 1,1,1-TCA	4.47	97	189683	9.60254 ppb		91
34) Cyclohexane	4.53	41	111409	10.71583 ppb		83
35) 1,1-Dichloropropene	4.72	75	173908	10.15418 ppb		98
36) 2,2,4-Trimethylpentane	5.16	57	293713	9.41589 ppb	#	81
38) Carbon Tetrachloride	4.70	119	138455	8.90681 ppb		98
39) Tert Amyl Methyl Ether	5.23	73	357624	9.89594 ppb		93
40) 1,2-DCA	5.03	62	212762	11.03046 ppb		97
41) Benzene	4.99	78	593845	11.28040 ppb		98
42) TCE	5.84	95	70120	9.67131 ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1119L27.D Vial: 26
Acq On : 20 Nov 16 21:31 Operator: PM,DG,SV,CMM
Sample : Ending CCV 8260 10ug/L 11/19/16 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 11:44 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	2-Pentanone	6.12	43	1098552	138.87882	ppb		91
44)	1,2-Dichloropropane	6.09	63	179203	11.99778	ppb	#	96
45)	Bromodichloromethane	6.44	83	189662	10.17117	ppb		99
46)	Methyl Cyclohexane	6.04	83	152328	8.76940	ppb		84
47)	Dibromomethane	6.22	93	84282	10.34325	ppb		91
49)	MIBK (methyl isobutyl ket	7.16	43	131756	10.54336	ppb		94
50)	1-Bromo-2-chloroethane	6.75	63	113352	10.68371	ppb		95
51)	Cis-1,3-Dichloropropene	6.95	75	232234	10.35608	ppb		93
52)	Toluene	7.29	91	607996	10.82550	ppb		99
53)	Trans-1,3-Dichloropropene	7.56	75	186466	9.72724	ppb		100
54)	1,1,2-TCA	7.74	83	103616	10.26350	ppb		98
55)	2-Hexanone	8.05	43	38410	8.67516	ppb		97
58)	1,2-EDB	8.21	107	104964	10.18265	ppb		99
59)	Tetrachloroethene	7.86	166	119407	9.44168	ppb		98
60)	1-Chlorohexane	8.76	91	144529	9.88167	ppb		81
61)	1,1,1,2-Tetrachloroethane	8.83	131	123825	9.67757	ppb		99
62)	m&p-Xylene	8.99	106	470186	21.31989	ppb		95
63)	o-Xylene	9.38	106	233978	10.79854	ppb		92
64)	Styrene	9.40	104	252288	10.54141	ppb		96
66)	1,3-Dichloropropane	7.90	76	213921	11.34710	ppb		98
67)	Dibromochloromethane	8.12	129	119129	9.54878	ppb		98
68)	Chlorobenzene	8.73	112	372286	10.70085	ppb		92
69)	Ethylbenzene	8.87	91	646188	11.32909	ppb		99
70)	Bromoform	9.55	173	63352	8.38258	ppb		95
72)	Isopropylbenzene	9.76	105	565885	10.55576	ppb		97
73)	1,1,2,2-Tetrachloroethane	10.07	83	142592	10.92487	ppb		100
74)	1,2,3-Trichloropropane	10.09	110	26296	10.51549	ppb		99
75)	t-1,4-Dichloro-2-Butene	10.13	53	34875	9.90839	ppb		87
76)	Bromobenzene	10.02	156	146794	10.00547	ppb		96
77)	n-Propylbenzene	10.17	91	689286	11.24639	ppb		98
78)	4-Ethyltoluene	10.29	105	554226	10.55188	ppb		97
79)	2-Chlorotoluene	10.23	91	436111	11.04370	ppb		92
80)	1,3,5-Trimethylbenzene	10.35	105	490571	11.02153	ppb		97
81)	4-Chlorotoluene	10.34	91	511305	11.21081	ppb		95
82)	Tert-Butylbenzene	10.67	119	377906	9.89696	ppb		96
83)	1,2,4-Trimethylbenzene	10.71	105	499474	11.06709	ppb		96
84)	Sec-Butylbenzene	10.88	105	560458	10.41075	ppb		97
85)	p-Isopropyltoluene	11.04	119	461078	10.29985	ppb		98
86)	Benzyl Chloride	11.20	91	106969	7.27930	ppb		98
87)	1,3-DCB	10.96	146	288079	10.86008	ppb		96
88)	1,4-DCB	11.05	146	289029	10.52653	ppb		98
89)	n-Butylbenzene	11.44	91	411254	10.42350	ppb		97
90)	1,2-DCB	11.41	146	263718	10.18491	ppb		99
91)	Hexachloroethane	11.66	117	85101	9.32785	ppb		93
92)	1,2-Dibromo-3-chloropropan	12.18	157	20013	8.27485	ppb		91
93)	1,2,4-Trichlorobenzene	12.99	180	164004	9.35351	ppb		99
94)	Hexachlorobutadiene	13.19	225	56952	8.35714	ppb		97
95)	Naphthalene	13.23	128	192128	8.65767	ppb		98
96)	1,2,3-Trichlorobenzene	13.46	180	103344	9.64255	ppb		99

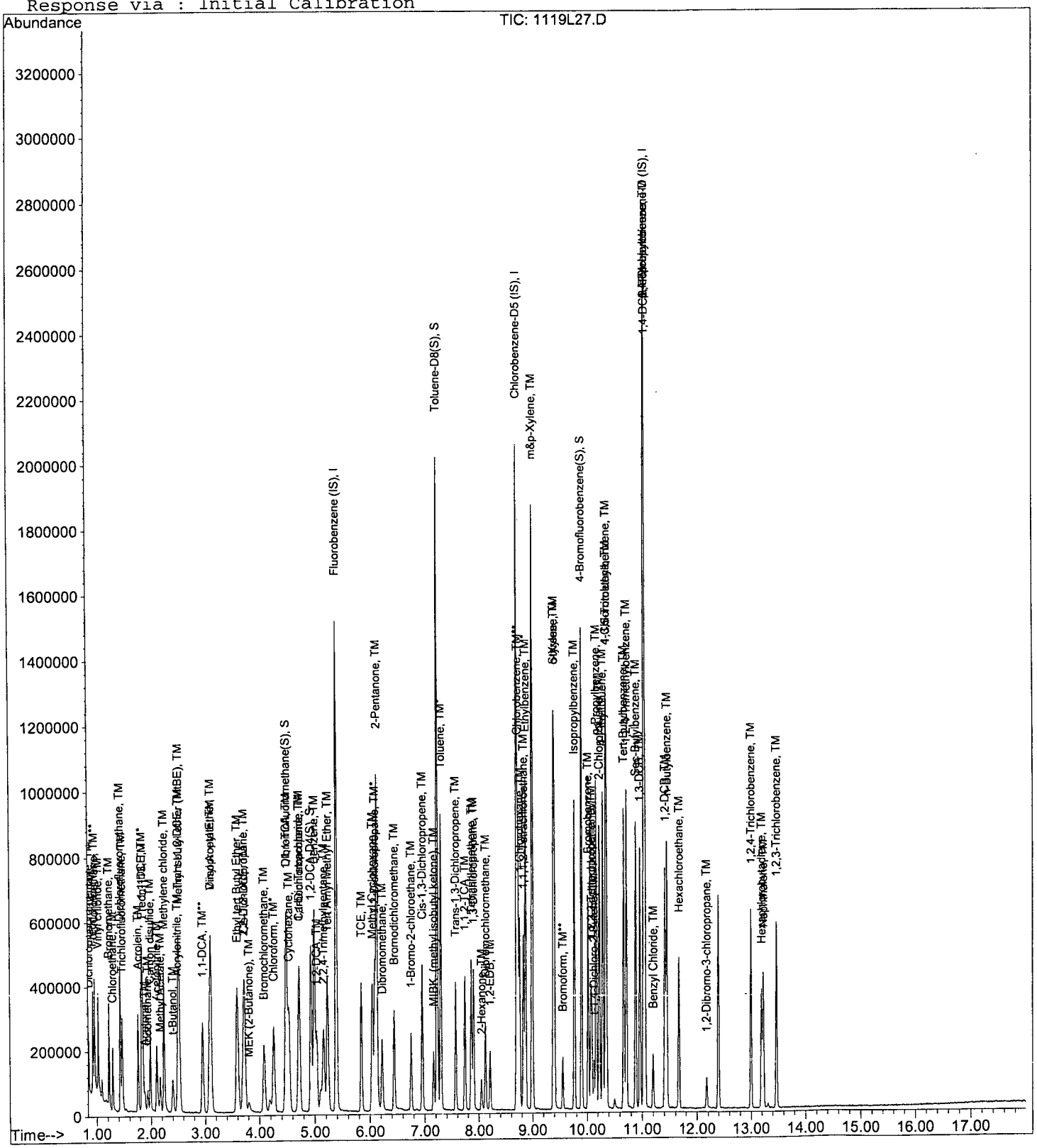
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L27.D Vial: 26
Acq On : 20 Nov 16 21:31 Operator: PM,DG,SV,CMM
Sample : Ending CCV 8260 10ug/L 11/19/16 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 11:44 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



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VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 11/20/16
Matrix: Instrument: Loki
Initial Cal. Date: 11/13/16
Data File: 1119L32.D

		Compound	MEAN	CCRF	%D	%Drift		
1	I	Fluorobenzene (IS)	ISTD			I		
2	TM	Dichlorodifluoromethane	0.5296	0.3468	35	TM		nt
3	TM	Freon 114	0.3913	0.3397	13	TM		
4	TM**	Chloromethane	0.7347	0.7142	2.8	TM**		
5	TM*	Vinyl chloride	0.6620	0.5883	11	TM*		
6	TM	Bromomethane	0.3034	0.3459	14	TM		
7	TM	Chloroethane	0.3640	0.3583	1.6	TM		
8	TM	Dichlorofluoromethane	1.143	1.129	1.3	TM		
9	TM	Trichlorofluoromethane	0.6845	0.5843	15	TM		
10	TM	Acrolein	0.0421	0.0353	16	TM		
11	TML	Acetone	0.2561	0.1822	29	TML	5.5	
12	TM	Freon-113	0.3929	0.3235	18	TM		
13	TM*	1,1-DCE	0.3066	0.3022	1.5	TM*		
14	TM	t-Butanol	0.0188	0.0153	19	TM		
15	TM	Acetonitrile	0.0509	0.0576	13	TM		
16	TM	Methyl Acetate	0.3527	0.4156	18	TM		
17	TML	Iodomethane	0.1624	0.1363	16	TML	26	nt
18	TM	Acrylonitrile	0.1309	0.1273	2.8	TM		
19	TM	Methylene chloride	0.5589	0.5860	4.9	TM		
20	TM	Carbon disulfide	1.366	1.007	26	TM		nt
21	TM	Methyl t-butyl ether (MtBE)	1.343	1.324	1.4	TM		
22	TM	Trans-1,2-DCE	0.4900	0.5002	2.1	TM		
23	TM	Diisopropyl Ether	1.660	2.051	24	TM		nt
24	TM**	1,1-DCA	0.9403	1.064	13	TM**		
25	TM	Vinyl Acetate	0.4077	0.4305	5.6	TM		
26	TM	Ethyl tert Butyl Ether	1.491	1.634	9.6	TM		
27	TM	MEK (2-Butanone)	0.1913	0.1833	4.2	TM		
28	TM	Cis-1,2-DCE	0.5812	0.5889	1.3	TM		
29	TM	2,2-Dichloropropane	0.2387	0.1952	18	TM		
30	TM*	Chloroform	0.9275	0.9537	2.8	TM*		
31	TM	Bromochloromethane	0.2717	0.2455	9.6	TM		
32	S	Dibromofluoromethane(S)	0.5276	0.4895	7.2	S		
33	TM	1,1,1-TCA	0.7395	0.6943	6.1	TM		
34	TM	Cyclohexane	0.3892	0.4224	8.5	TM		
35	TM	1,1-Dichloropropene	0.6411	0.6286	2.0	TM		
36	TM	2,2,4-Trimethylpentane	1.168	1.040	11	TM		
37	S	1,2-DCA-D4(S)	0.5751	0.5965	3.7	S		
38	TM	Carbon Tetrachloride	0.5819	0.5080	13	TM		
39	TM	Tert Amyl Methyl Ether	1.353	1.270	6.2	TM		
40	TM	1,2-DCA	0.7221	0.7639	5.8	TM		
		Average			10.6			

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 11/20/16
Instrument: Loki
Cal. Date: 11/13/16
Data File: 1119L32.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	Benzene	1.971	2.151	9.1	TM	
42	TM	TCE	0.2714	0.2767	1.9	TM	
43	TM	2-Pentanone	0.2961	0.3316	12	TM	
44	TM*	1,2-Dichloropropane	0.5591	0.6419	15	TM*	
45	TM	Bromodichloromethane	0.6980	0.6834	2.1	TM	
46	TM	Methyl Cyclohexane	0.6502	0.5464	16	TM	
47	TM	Dibromomethane	0.3050	0.3051	0.01	TM	
48	TM	2-Chloroethyl vinyl ether	0.0000	0.0158	0.00	TM	
49	TML	MIBK (methyl isobutyl ketone)	0.5519	0.4617	16	TML	1.7
50	TM	1-Bromo-2-chloroethane	0.3972	0.4119	3.7	TM	
51	TM	Cis-1,3-Dichloropropene	0.8395	0.8129	3.2	TM	
52	TM*	Toluene	2.102	2.194	4.3	TM*	
53	TM	Trans-1,3-Dichloropropene	0.7176	0.6771	5.6	TM	
54	TM	1,1,2-TCA	0.3779	0.3689	2.4	TM	
55	TML	2-Hexanone	0.1543	0.1386	10	TML	16
56	I	Chlorobenzene-D5 (IS)	ISTD			I	
57	S	Toluene-D8(S)	1.909	2.027	6.2	S	
58	TM	1,2-EDB	0.4251	0.4204	1.1	TM	
59	TM	Tetrachloroethene	0.5215	0.4906	5.9	TM	
60	TM	1-Chlorohexane	0.6031	0.5817	3.6	TM	
61	TM	1,1,1,2-Tetrachloroethane	0.5276	0.4934	6.5	TM	
62	TM	m&p-Xylene	0.9094	0.9615	5.7	TM	
63	TM	o-Xylene	0.8935	0.9680	8.3	TM	
64	TM	Styrene	0.9869	1.038	5.1	TM	
65	S	4-Bromofluorobenzene(S)	0.6890	0.7071	2.6	S	
66	TM	1,3-Dichloropropane	0.7774	0.8761	13	TM	
67	TM	Dibromochloromethane	0.5144	0.4633	9.9	TM	
68	TM**	Chlorobenzene	1.435	1.516	5.6	TM**	
69	TM*	Ethylbenzene	2.352	2.591	10	TM*	
70	TM**	Bromoform	0.3116	0.2391	23	TM**	nt
71	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
72	TM	Isopropylbenzene	4.080	4.123	1.0	TM	
73	TM**	1,1,2,2-Tetrachloroethane	0.9935	0.9301	6.4	TM**	
74	TM	1,2,3-Trichloropropane	0.1903	0.1700	11	TM	
75	TM	t-1,4-Dichloro-2-Butene	0.2679	0.2439	9.0	TM	
76	TM	Bromobenzene	1.117	1.088	2.6	TM	
77	TM	n-Propylbenzene	4.665	4.986	6.9	TM	
78	TM	4-Ethyltoluene	3.998	4.117	3.0	TM	
79	TM	2-Chlorotoluene	3.006	3.261	8.5	TM	
80	TM	1,3,5-Trimethylbenzene	3.388	3.607	6.5	TM	
		Average			6.9		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 11/20/16
Matrix: 0 Instrument: Loki
Cal. Date: 11/13/16
Data File: 1119L32.D

		Compound	MEAN	CCRF	%D		%Drift	
81	TM	4-Chlorotoluene	3.471	3.727	7.3	TM		
82	TM	Tert-Butylbenzene	2.906	2.753	5.3	TM		
83	TM	1,2,4-Trimethylbenzene	3.435	3.669	6.8	TM		
84	TM	Sec-Butylbenzene	4.098	4.017	2.0	TM		
85	TM	p-Isopropyltoluene	3.407	3.348	1.8	TM		
86	TM	Benzyl Chloride	1.119	0.7203	36	TM		nt
87	TM	1,3-DCB	2.019	2.066	2.3	TM		
88	TM	1,4-DCB	2.090	2.061	1.4	TM		
89	TM	n-Butylbenzene	3.003	2.967	1.2	TM		
90	TM	1,2-DCB	1.971	1.899	3.6	TM		
91	TM	Hexachloroethane	0.6944	0.6172	11	TM		
92	TM	1,2-Dibromo-3-chloropropane	0.1841	0.1407	24	TM		nt
93	TM	1,2,4-Trichlorobenzene	1.335	1.147	14	TM		
94	TM	Hexachlorobutadiene	0.5187	0.4149	20	TM		
95	TM	Naphthalene	1.689	1.446	14	TM		
96	TM	1,2,3-Trichlorobenzene	0.8158	0.6995	14	TM		
97								
98								
99								
100								
101								
102								
103								
104								
105								
106								
107								
108								
109								
110								
111								
112								
113								
114								
115								
116								
117								
118								
119								
120								
		Average			10.3			

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1119L32.D Vial: 31
Acq On : 20 Nov 16 23:52 Operator: PM,DG,SV,CMM
Sample : 161119B CCV/LCS 10ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 11:44 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	696832	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	618624	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	337472	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	341098	23.19646 ppb		0.00
Spiked Amount 25.000			Recovery = 92.784%			
37) 1,2-DCA-D4(S)	4.93	65	415679	25.92975 ppb		0.00
Spiked Amount 25.000			Recovery = 103.720%			
57) Toluene-D8(S)	7.22	98	1254237	26.55100 ppb		0.00
Spiked Amount 25.000			Recovery = 106.204%			
65) 4-Bromofluorobenzene(S)	9.89	95	437455	25.65740 ppb		0.00
Spiked Amount 25.000			Recovery = 102.628%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.86	85	96665	6.54873 ppb		99
3) Freon 114	0.93	85	94698	8.68199 ppb		88
4) Chloromethane	0.96	50	199063	9.72101 ppb		100
5) Vinyl chloride	1.03	62	163979	8.88674 ppb		98
6) Bromomethane	1.22	96	96416	11.40106 ppb		100
7) Chloroethane	1.29	64	99868	9.84289 ppb		98
8) Dichlorofluoromethane	1.43	67	314612	9.87485 ppb		99
9) Trichlorofluoromethane	1.46	101	162851	8.53526 ppb		96
10) Acrolein	1.76	56	123120	104.84046 ppb		93
11) Acetone	1.88	43	50796	10.55385 ppb		98
12) Freon-113	1.85	101	90163	8.23243 ppb		92
13) 1,1-DCE	1.83	96	84224	9.85473 ppb		100
14) t-Butanol	2.40	59	53278	101.81618 ppb		100
15) Acetonitrile	2.10	41	200786	141.65905 ppb		97
16) Methyl Acetate	2.17	43	115842	11.78508 ppb		91
17) Iodomethane	1.93	142	37992	7.36212 ppb		92
18) Acrylonitrile	2.48	52	35480	9.72263 ppb		94
19) Methylene chloride	2.24	84	163342	10.48514 ppb		95
20) Carbon disulfide	1.98	76	280685	7.37156 ppb		100
21) Methyl t-butyl ether (MtBE	2.52	73	368965	9.85842 ppb		96
22) Trans-1,2-DCE	2.50	96	139425	10.20803 ppb		87
23) Diisopropyl Ether	3.10	45	571545	12.35136 ppb	#	88
24) 1,1-DCA	2.95	63	296626	11.31809 ppb		98
25) Vinyl Acetate	3.09	43	120007	10.55931 ppb	#	77
26) Ethyl tert Butyl Ether	3.59	59	455392	10.96074 ppb		100
27) MEK (2-Butanone)	3.80	43	51103	9.58177 ppb		97
28) Cis-1,2-DCE	3.73	96	164154	10.13260 ppb		90
29) 2,2-Dichloropropane	3.70	77	54400	8.17523 ppb		99
30) Chloroform	4.25	83	265817	10.28162 ppb		96
31) Bromochloromethane	4.08	128	68423	9.03565 ppb		100
33) 1,1,1-TCA	4.47	97	193515	9.38895 ppb		86
34) Cyclohexane	4.53	41	117732	10.85287 ppb		88
35) 1,1-Dichloropropene	4.72	75	175202	9.80413 ppb		98
36) 2,2,4-Trimethylpentane	5.16	57	289768	8.90293 ppb	#	80
38) Carbon Tetrachloride	4.70	119	141597	8.72996 ppb		95
39) Tert Amyl Methyl Ether	5.23	73	353878	9.38487 ppb	#	90
40) 1,2-DCA	5.03	62	212919	10.57934 ppb		97
41) Benzene	4.99	78	599506	10.91413 ppb		97
42) TCE	5.84	95	77112	10.19318 ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1119L32.D Vial: 31
Acq On : 20 Nov 16 23:52 Operator: PM,DG,SV,CMM
Sample : 161119B CCV/LCS 10ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 11:44 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	2-Pentanone	6.12	43	1155351	139.98249	ppb		91
44)	1,2-Dichloropropane	6.09	63	178921	11.48051	ppb	#	94
45)	Bromodichloromethane	6.44	83	190480	9.79004	ppb		99
46)	Methyl Cyclohexane	6.04	83	152289	8.40240	ppb		87
47)	Dibromomethane	6.22	93	85030	10.00089	ppb		90
49)	MIBK (methyl isobutyl ket	7.16	43	128678	9.83389	ppb		98
50)	1-Bromo-2-chloroethane	6.75	63	114798	10.36982	ppb		99
51)	Cis-1,3-Dichloropropene	6.95	75	226569	9.68310	ppb		96
52)	Toluene	7.29	91	611442	10.43390	ppb		99
53)	Trans-1,3-Dichloropropene	7.56	75	188735	9.43598	ppb		99
54)	1,1,2-TCA	7.74	83	102834	9.76225	ppb		95
55)	2-Hexanone	8.05	43	38634	8.40338	ppb		90
58)	1,2-EDB	8.21	107	104021	9.88968	ppb		100
59)	Tetrachloroethene	7.86	166	121409	9.40830	ppb		96
60)	1-Chlorohexane	8.76	91	143933	9.64443	ppb		84
61)	1,1,1,2-Tetrachloroethane	8.83	131	122087	9.35122	ppb		97
62)	m&p-Xylene	8.99	106	475861	21.14639	ppb		94
63)	o-Xylene	9.38	106	239523	10.83373	ppb		97
64)	Styrene	9.40	104	256768	10.51438	ppb		96
66)	1,3-Dichloropropane	7.90	76	216797	11.27004	ppb		98
67)	Dibromochloromethane	8.12	129	114639	9.00541	ppb		98
68)	Chlorobenzene	8.73	112	375034	10.56460	ppb		96
69)	Ethylbenzene	8.87	91	641253	11.01809	ppb		98
70)	Bromoform	9.55	173	59162	7.67186	ppb		97
72)	Isopropylbenzene	9.76	105	556511	10.10332	ppb		97
73)	1,1,2,2-Tetrachloroethane	10.07	83	125554	9.36226	ppb		96
74)	1,2,3-Trichloropropane	10.09	110	22952	8.93284	ppb		91
75)	t-1,4-Dichloro-2-Butene	10.13	53	32917	9.10203	ppb		91
76)	Bromobenzene	10.02	156	146832	9.74045	ppb		98
77)	n-Propylbenzene	10.17	91	673055	10.68792	ppb		96
78)	4-Ethyltoluene	10.29	105	555726	10.29752	ppb		98
79)	2-Chlorotoluene	10.23	91	440226	10.84981	ppb		92
80)	1,3,5-Trimethylbenzene	10.35	105	486884	10.64620	ppb		98
81)	4-Chlorotoluene	10.34	91	503053	10.73494	ppb		95
82)	Tert-Butylbenzene	10.67	119	371591	9.47136	ppb		97
83)	1,2,4-Trimethylbenzene	10.71	105	495313	10.68143	ppb		96
84)	Sec-Butylbenzene	10.88	105	542225	9.80274	ppb		97
85)	p-Isopropyltoluene	11.04	119	451894	9.82476	ppb		98
86)	Benzyl Chloride	11.20	91	97238	6.44016	ppb		98
87)	1,3-DCB	10.96	146	278948	10.23467	ppb		99
88)	1,4-DCB	11.05	146	278161	9.85982	ppb		97
89)	n-Butylbenzene	11.44	91	400565	9.88110	ppb		96
90)	1,2-DCB	11.41	146	256395	9.63731	ppb		99
91)	Hexachloroethane	11.66	117	83309	8.88725	ppb		90
92)	1,2-Dibromo-3-chloropropan	12.17	157	18987	7.64070	ppb		95
93)	1,2,4-Trichlorobenzene	13.00	180	154851	8.59534	ppb		98
94)	Hexachlorobutadiene	13.19	225	56013	7.99957	ppb		94
95)	Naphthalene	13.22	128	195200	8.56089	ppb		97
96)	1,2,3-Trichlorobenzene	13.47	180	94424	8.57468	ppb		98

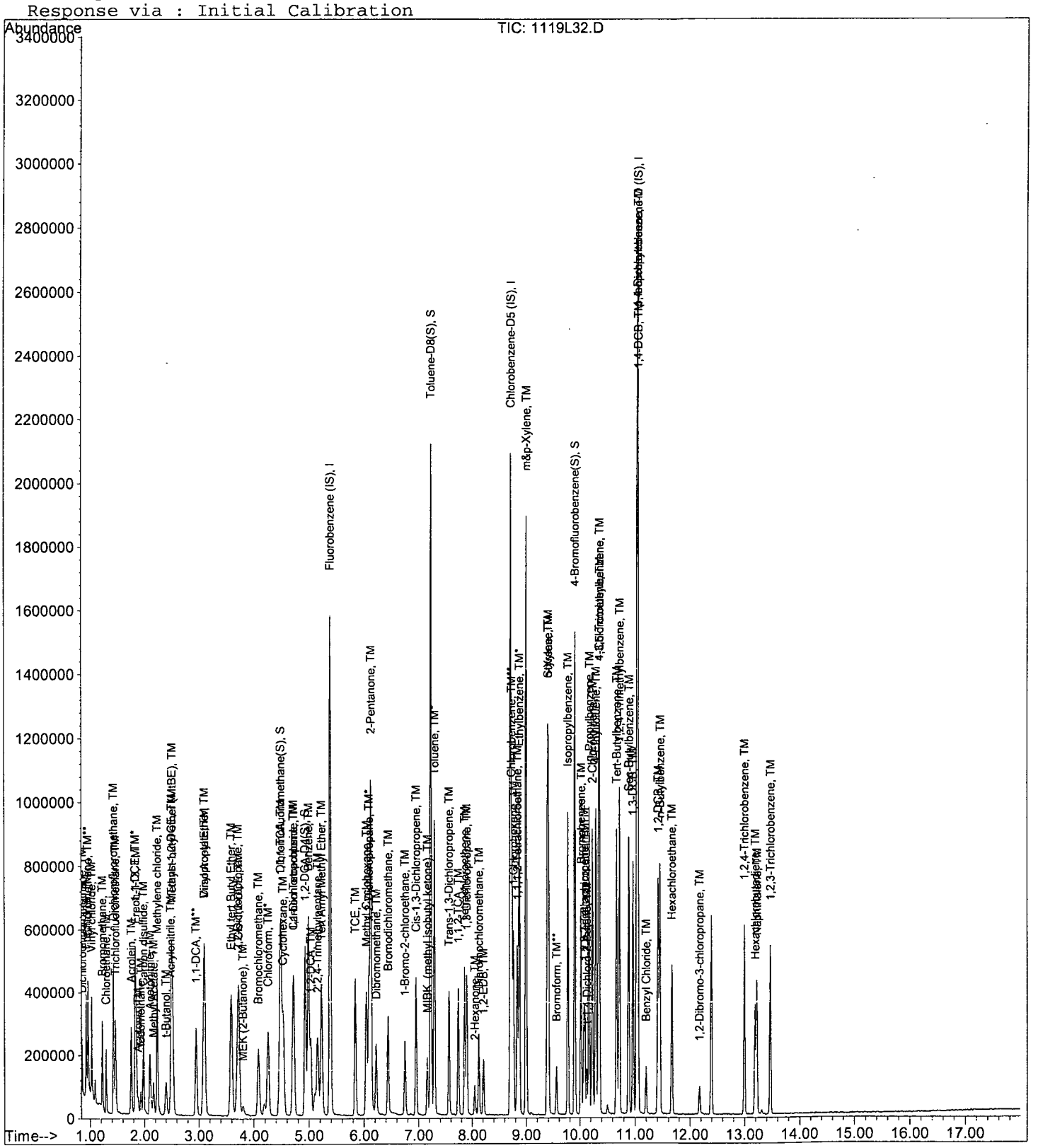
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L32.D Vial: 31
Acq On : 20 Nov 16 23:52 Operator: PM,DG,SV,CMM
Sample : 161119B CCV/LCS 10ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 11:44 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



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VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/21/16
Instrument: Loki
Initial Cal. Date: 11/13/16
Data File: 1119L54.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	TM	Dichlorodifluoromethane	0.5296	0.3489	34	TM	
3	TM	Freon 114	0.3913	0.3484	11	TM	
4	TM**	Chloromethane	0.7347	0.7001	4.7	TM**	
5	TM*	Vinyl chloride	0.6620	0.6268	5.3	TM*	
6	TM	Bromomethane	0.3034	0.3366	11	TM	
7	TM	Chloroethane	0.3640	0.3536	2.9	TM	
8	TM	Dichlorofluoromethane	1.143	1.173	2.6	TM	
9	TM	Trichlorofluoromethane	0.6845	0.6081	11	TM	
10	TM	Acrolein	0.0421	0.0389	7.7	TM	
11	TML	Acetone	0.2561	0.1950	24	TML	14
12	TM	Freon-113	0.3929	0.3341	15	TM	
13	TM*	1,1-DCE	0.3066	0.3075	0.28	TM*	
14	TM	t-Butanol	0.0188	0.0168	11	TM	
15	TM	Acetonitrile	0.0509	0.0620	22	TM	
16	TM	Methyl Acetate	0.3527	0.4464	27	TM	
17	TML	Iodomethane	0.1624	0.1461	10	TML	22
18	TM	Acrylonitrile	0.1309	0.1433	9.5	TM	
19	TM	Methylene chloride	0.5589	0.5975	6.9	TM	
20	TM	Carbon disulfide	1.366	1.023	25	TM	
21	TM	Methyl t-butyl ether (MtBE)	1.343	1.390	3.5	TM	
22	TM	Trans-1,2-DCE	0.4900	0.5114	4.4	TM	
23	TM	Diisopropyl Ether	1.660	2.159	30	TM	
24	TM**	1,1-DCA	0.9403	1.080	15	TM**	
25	TM	Vinyl Acetate	0.4077	0.4887	20	TM	
26	TM	Ethyl tert Butyl Ether	1.491	1.704	14	TM	
27	TM	MEK (2-Butanone)	0.1913	0.2022	5.7	TM	
28	TM	Cis-1,2-DCE	0.5812	0.5908	1.6	TM	
29	TM	2,2-Dichloropropane	0.2387	0.1633	32	TM	
30	TM*	Chloroform	0.9275	0.9761	5.2	TM*	
31	TM	Bromochloromethane	0.2717	0.2567	5.5	TM	
32	S	Dibromofluoromethane(S)	0.5276	0.4970	5.8	S	
33	TM	1,1,1-TCA	0.7395	0.7228	2.3	TM	
34	TM	Cyclohexane	0.3892	0.4422	14	TM	
35	TM	1,1-Dichloropropene	0.6411	0.6693	4.4	TM	
36	TM	2,2,4-Trimethylpentane	1.168	1.086	7.0	TM	
37	S	1,2-DCA-D4(S)	0.5751	0.6173	7.3	S	
38	TM	Carbon Tetrachloride	0.5819	0.5278	9.3	TM	
39	TM	Tert Amyl Methyl Ether	1.353	1.373	1.5	TM	
40	TM	1,2-DCA	0.7221	0.7892	9.3	TM	
		Average			11.2		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 11/21/16
Matrix: 0 Instrument: Loki
Cal. Date: 11/13/16
Data File: 1119L54.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	Benzene	1.971	2.215	12	TM	
42	TM	TCE	0.2714	0.2622	3.4	TM	
43	TM	2-Pentanone	0.2961	0.3327	12	TM	
44	TM*	1,2-Dichloropropane	0.5591	0.6650	19	TM*	
45	TM	Bromodichloromethane	0.6980	0.7173	2.8	TM	
46	TM	Methyl Cyclohexane	0.6502	0.5920	9.0	TM	
47	TM	Dibromomethane	0.3050	0.3122	2.4	TM	
48	TM	2-Chloroethyl vinyl ether	0.0000	0.0081	0.00	TM	
49	TML	MIBK (methyl isobutyl ketone)	0.5519	0.5305	3.9	TML	14
50	TM	1-Bromo-2-chloroethane	0.3972	0.4382	10	TM	
51	TM	Cis-1,3-Dichloropropene	0.8395	0.8317	0.92	TM	
52	TM*	Toluene	2.102	2.245	6.8	TM*	
53	TM	Trans-1,3-Dichloropropene	0.7176	0.6635	7.5	TM	
54	TM	1,1,2-TCA	0.3779	0.3921	3.8	TM	
55	TML	2-Hexanone	0.1543	0.1626	5.3	TML	3.4
56	I	Chlorobenzene-D5 (IS)	ISTD			I	
57	S	Toluene-D8(S)	1.909	1.923	0.72	S	
58	TM	1,2-EDB	0.4251	0.4313	1.5	TM	
59	TM	Tetrachloroethene	0.5215	0.4664	11	TM	
60	TM	1-Chlorohexane	0.6031	0.5611	7.0	TM	
61	TM	1,1,1,2-Tetrachloroethane	0.5276	0.4892	7.3	TM	
62	TM	m&p-Xylene	0.9094	0.9214	1.3	TM	
63	TM	o-Xylene	0.8935	0.9023	0.99	TM	
64	TM	Styrene	0.9869	0.9913	0.44	TM	
65	S	4-Bromofluorobenzene(S)	0.6890	0.6760	1.9	S	
66	TM	1,3-Dichloropropane	0.7774	0.8810	13	TM	
67	TM	Dibromochloromethane	0.5144	0.4670	9.2	TM	
68	TM**	Chlorobenzene	1.435	1.468	2.3	TM**	
69	TM*	Ethylbenzene	2.352	2.517	7.0	TM*	
70	TM**	Bromoform	0.3116	0.2505	20	TM**	
71	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
72	TM	Isopropylbenzene	4.080	4.202	3.0	TM	
73	TM**	1,1,2,2-Tetrachloroethane	0.9935	1.133	14	TM**	
74	TM	1,2,3-Trichloropropane	0.1903	0.1977	3.9	TM	
75	TM	t-1,4-Dichloro-2-Butene	0.2679	0.2549	4.8	TM	
76	TM	Bromobenzene	1.117	1.120	0.26	TM	
77	TM	n-Propylbenzene	4.665	5.143	10	TM	
78	TM	4-Ethyltoluene	3.998	4.190	4.8	TM	
79	TM	2-Chlorotoluene	3.006	3.207	6.7	TM	
80	TM	1,3,5-Trimethylbenzene	3.388	3.678	8.6	TM	
		Average			6.3		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 11/21/16
Matrix: 0 Instrument: Loki
Cal. Date: 11/13/16
Data File: 1119L54.D

		Compound	MEAN	CCRF	%D		%Drift	
81	TM	4-Chlorotoluene	3.471	3.839	11	TM		
82	TM	Tert-Butylbenzene	2.906	2.869	1.3	TM		
83	TM	1,2,4-Trimethylbenzene	3.435	3.754	9.3	TM		
84	TM	Sec-Butylbenzene	4.098	4.232	3.3	TM		
85	TM	p-Isopropyltoluene	3.407	3.382	0.74	TM		
86	TM	Benzyl Chloride	1.119	0.5521	51	TM		nt
87	TM	1,3-DCB	2.019	2.151	6.5	TM		
88	TM	1,4-DCB	2.090	2.134	2.1	TM		
89	TM	n-Butylbenzene	3.003	3.086	2.8	TM		
90	TM	1,2-DCB	1.971	1.943	1.4	TM		
91	TM	Hexachloroethane	0.6944	0.6405	7.8	TM		
92	TM	1,2-Dibromo-3-chloropropane	0.1841	0.1540	16	TM		
93	TM	1,2,4-Trichlorobenzene	1.335	1.172	12	TM		
94	TM	Hexachlorobutadiene	0.5187	0.4263	18	TM		
95	TM	Naphthalene	1.689	1.599	5.3	TM		
96	TM	1,2,3-Trichlorobenzene	0.8158	0.7906	3.1	TM		
97								
98								
99								
100								
101								
102								
103								
104								
105								
106								
107								
108								
109								
110								
111								
112								
113								
114								
115								
116								
117								
118								
119								
120								
		Average			9.5			

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1119L54.D Vial: 53
Acq On : 21 Nov 16 10:08 Operator: PM,DG,SV,CMM
Sample : Ending CCV 8260 10ug/L 11/19/16 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 11:46 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	666624	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	630144	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	327616	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	331339	23.55387 ppb		0.00
Spiked Amount 25.000			Recovery = 94.216%			
37) 1,2-DCA-D4(S)	4.93	65	411492	26.83173 ppb		0.00
Spiked Amount 25.000			Recovery = 107.328%			
57) Toluene-D8(S)	7.22	98	1211645	25.18046 ppb		0.00
Spiked Amount 25.000			Recovery = 100.720%			
65) 4-Bromofluorobenzene(S)	9.89	95	425954	24.52612 ppb		0.00
Spiked Amount 25.000			Recovery = 98.104%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.86	85	93047	6.58927 ppb		98
3) Freon 114	0.93	85	92896	8.90272 ppb		89
4) Chloromethane	0.96	50	186688	9.52982 ppb		99
5) Vinyl chloride	1.03	62	167123	9.46755 ppb		100
6) Bromomethane	1.22	96	89752	11.09399 ppb		98
7) Chloroethane	1.29	64	94279	9.71311 ppb		99
8) Dichlorofluoromethane	1.43	67	312702	10.25966 ppb		100
9) Trichlorofluoromethane	1.46	101	162159	8.88412 ppb		98
10) Acrolein	1.76	56	129680	115.43046 ppb		100
11) Acetone	1.88	43	51995	11.36134 ppb		97
12) Freon-113	1.84	101	89078	8.50192 ppb		93
13) 1,1-DCE	1.83	96	81993	10.02843 ppb		97
14) t-Butanol	2.40	59	55952	111.77164 ppb		99
15) Acetonitrile	2.10	41	206781	152.49958 ppb		99
16) Methyl Acetate	2.17	43	119039	12.65910 ppb		89
17) Iodomethane	1.93	142	38968	7.84139 ppb		91
18) Acrylonitrile	2.48	52	38211	10.94551 ppb		85
19) Methylene chloride	2.24	84	159325	10.69073 ppb		100
20) Carbon disulfide	1.98	76	272755	7.48790 ppb		100
21) Methyl t-butyl ether (MtBE	2.52	73	370542	10.34920 ppb	#	92
22) Trans-1,2-DCE	2.50	96	136364	10.43634 ppb		90
23) Diisopropyl Ether	3.10	45	575590	13.00244 ppb	#	88
24) 1,1-DCA	2.95	63	288054	11.48907 ppb		98
25) Vinyl Acetate	3.09	43	130301	11.98461 ppb	#	79
26) Ethyl tert Butyl Ether	3.59	59	454345	11.43108 ppb		100
27) MEK (2-Butanone)	3.80	43	53906	10.56534 ppb		92
28) Cis-1,2-DCE	3.73	96	157539	10.16494 ppb		80
29) 2,2-Dichloropropane	3.70	77	43539	6.83954 ppb		99
30) Chloroform	4.25	83	260268	10.52317 ppb		99
31) Bromochloromethane	4.08	128	68450	9.44883 ppb		97
33) 1,1,1-TCA	4.47	97	192721	9.77414 ppb		91
34) Cyclohexane	4.53	41	117909	11.36172 ppb		86
35) 1,1-Dichloropropene	4.72	75	178477	10.43997 ppb		98
36) 2,2,4-Trimethylpentane	5.15	57	289684	9.30367 ppb	#	80
38) Carbon Tetrachloride	4.70	119	140742	9.07045 ppb		99
39) Tert Amyl Methyl Ether	5.23	73	366221	10.15232 ppb	#	91
40) 1,2-DCA	5.03	62	210435	10.92972 ppb		95
41) Benzene	4.99	78	590650	11.24018 ppb		97
42) TCE	5.84	95	69920	9.66132 ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1119L54.D Vial: 53
Acq On : 21 Nov 16 10:08 Operator: PM,DG,SV,CMM
Sample : Ending CCV 8260 10ug/L 11/19/16 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 11:46 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	2-Pentanone	6.12	43	1109027	140.45882	ppb		91
44)	1,2-Dichloropropane	6.09	63	177317	11.89316	ppb	#	95
45)	Bromodichloromethane	6.44	83	191259	10.27552	ppb		98
46)	Methyl Cyclohexane	6.04	83	157858	9.10434	ppb		89
47)	Dibromomethane	6.22	93	83257	10.23609	ppb		94
49)	MIBK (methyl isobutyl ket	7.15	43	141460	11.38160	ppb		94
50)	1-Bromo-2-chloroethane	6.75	63	116856	11.03406	ppb		100
51)	Cis-1,3-Dichloropropene	6.95	75	221782	9.90804	ppb		97
52)	Toluene	7.29	91	598748	10.68028	ppb		99
53)	Trans-1,3-Dichloropropene	7.56	75	176932	9.24672	ppb		97
54)	1,1,2-TCA	7.74	83	104559	10.37580	ppb		93
55)	2-Hexanone	8.05	43	43351	9.66143	ppb		92
58)	1,2-EDB	8.21	107	108704	10.14598	ppb		96
59)	Tetrachloroethene	7.86	166	117549	8.94264	ppb		96
60)	1-Chlorohexane	8.76	91	141425	9.30314	ppb		81
61)	1,1,1,2-Tetrachloroethane	8.83	131	123313	9.27245	ppb		99
62)	m&p-Xylene	8.99	106	464475	20.26308	ppb		93
63)	o-Xylene	9.38	106	227443	10.09928	ppb		89
64)	Styrene	9.40	104	249856	10.04429	ppb		96
66)	1,3-Dichloropropane	7.90	76	222052	11.33219	ppb		96
67)	Dibromochloromethane	8.12	129	117723	9.07861	ppb		99
68)	Chlorobenzene	8.73	112	370049	10.23360	ppb		96
69)	Ethylbenzene	8.87	91	634548	10.70356	ppb		99
70)	Bromoform	9.55	173	63153	8.03968	ppb		100
72)	Isopropylbenzene	9.76	105	550592	10.29657	ppb		98
73)	1,1,2,2-Tetrachloroethane	10.07	83	148479	11.40480	ppb		98
74)	1,2,3-Trichloropropane	10.09	110	25912	10.38825	ppb		93
75)	t-1,4-Dichloro-2-Butene	10.13	53	33409	9.51599	ppb	#	76
76)	Bromobenzene	10.02	156	146718	10.02569	ppb		99
77)	n-Propylbenzene	10.17	91	673967	11.02438	ppb		96
78)	4-Ethyltoluene	10.29	105	549083	10.48051	ppb		93
79)	2-Chlorotoluene	10.23	91	420306	10.67050	ppb		92
80)	1,3,5-Trimethylbenzene	10.35	105	481990	10.85625	ppb		98
81)	4-Chlorotoluene	10.34	91	503050	11.05783	ppb		92
82)	Tert-Butylbenzene	10.67	119	375957	9.87092	ppb		99
83)	1,2,4-Trimethylbenzene	10.72	105	491894	10.92682	ppb		95
84)	Sec-Butylbenzene	10.88	105	554560	10.32736	ppb		96
85)	p-Isopropyltoluene	11.04	119	443237	9.92645	ppb		99
86)	Benzyl Chloride	11.20	91	72350	4.93596	ppb		99
87)	1,3-DCB	10.96	146	281903	10.65425	ppb		98
88)	1,4-DCB	11.05	146	279662	10.21125	ppb		99
89)	n-Butylbenzene	11.44	91	404428	10.27652	ppb		97
90)	1,2-DCB	11.41	146	254574	9.85674	ppb		99
91)	Hexachloroethane	11.66	117	83929	9.22275	ppb		95
92)	1,2-Dibromo-3-chloropropan	12.18	157	20186	8.36758	ppb	#	85
93)	1,2,4-Trichlorobenzene	13.00	180	153644	8.78491	ppb		99
94)	Hexachlorobutadiene	13.19	225	55865	8.21845	ppb		98
95)	Naphthalene	13.22	128	209536	9.46609	ppb		98
96)	1,2,3-Trichlorobenzene	13.47	180	103608	9.69174	ppb		98

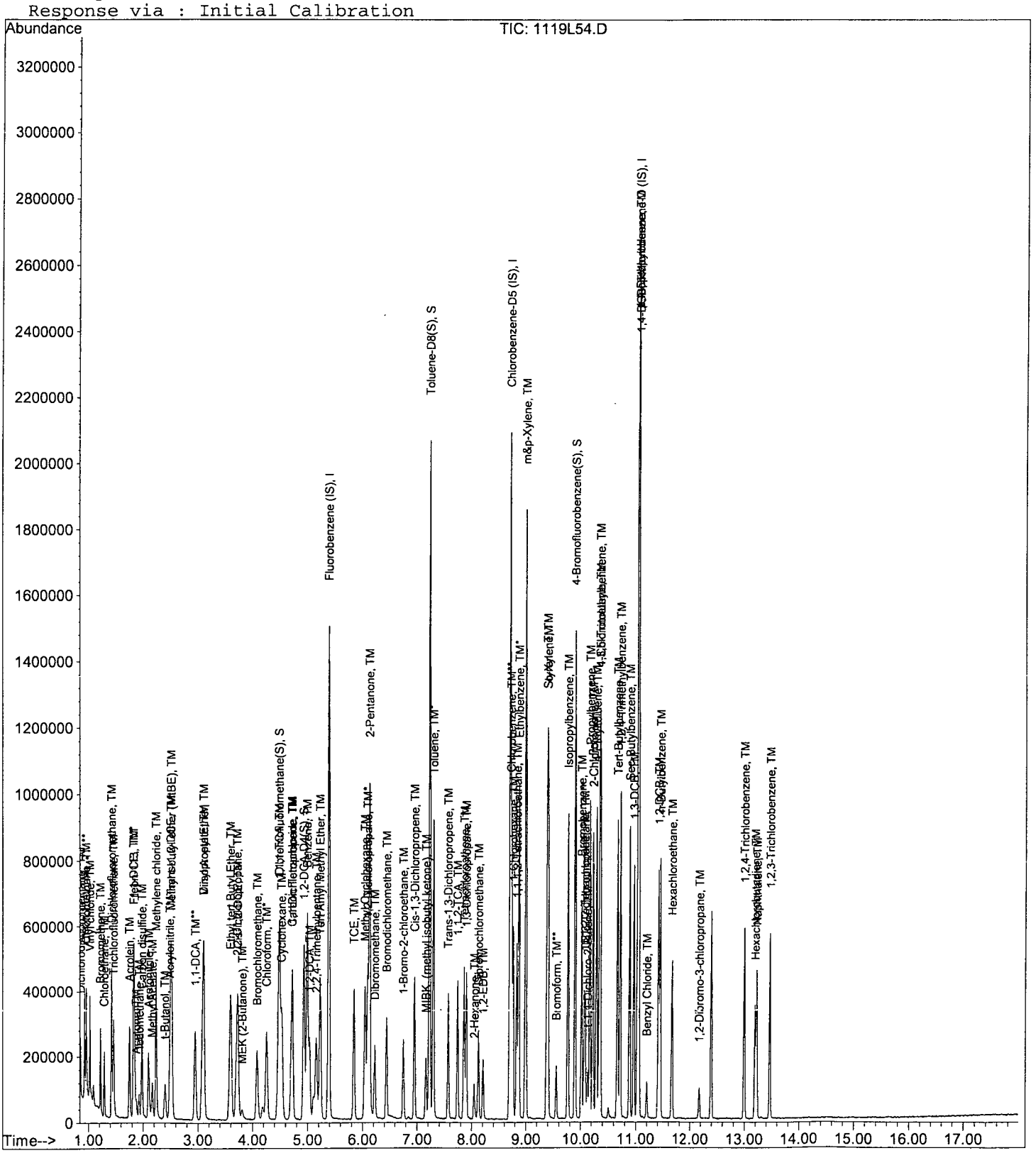
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L54.D Vial: 53
Acq On : 21 Nov 16 10:08 Operator: PM,DG,SV,CMM
Sample : Ending CCV 8260 10ug/L 11/19/16 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 11:46 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



618

EPA METHOD 8260B
Volatile Organic Compounds
Raw Data

APPL, INC.

Method Blank
EPA 8260B WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161119W-45988 - 213869**
Batch ID: #86BXD-161119AL

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	11/20/16	11/20/16
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	11/20/16	11/20/16
BLANK	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	11/20/16	11/20/16
BLANK	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	11/20/16	11/20/16
BLANK	SURROGATE: 1,2-DICHLOROET	107	81-118			%	11/20/16	11/20/16
BLANK	SURROGATE: 4-BROMOFLUOR	95.3	85-114			%	11/20/16	11/20/16
BLANK	SURROGATE: DIBROMOFLUOR	93.2	80-119			%	11/20/16	11/20/16
BLANK	SURROGATE: TOLUENE-D8 (S)	101	89-112			%	11/20/16	11/20/16

Amended Results.

Quant Method: LALLW.M
Run #: 1119L18
Instrument: Loki
Sequence: 161113
Initials: SV

GC SC-Blank-REG MDLs-DOD
Printed: 01/06/17 1:54:30 PM

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1119L18.D
Acq On : 20 Nov 16 17:19
Sample : 161119A BLK-1WL
Misc : W IS&S 10/20/16, 11/04/16

Vial: 17
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 11:48 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	674496	25.00000 ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	622464	25.00000 ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	311488	25.00000 ppb	0.00
System Monitoring Compounds					
32) Dibromofluoromethane(S)	4.49	111	331747	23.30764 ppb	0.00
Spiked Amount 25.000			Recovery =	93.232%	
37) 1,2-DCA-D4(S)	4.93	65	416657	26.85144 ppb	0.00
Spiked Amount 25.000			Recovery =	107.404%	
57) Toluene-D8(S)	7.22	98	1204530	25.34145 ppb	0.00
Spiked Amount 25.000			Recovery =	101.364%	
65) 4-Bromofluorobenzene(S)	9.89	95	408547	23.81408 ppb	0.00
Spiked Amount 25.000			Recovery =	95.256%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

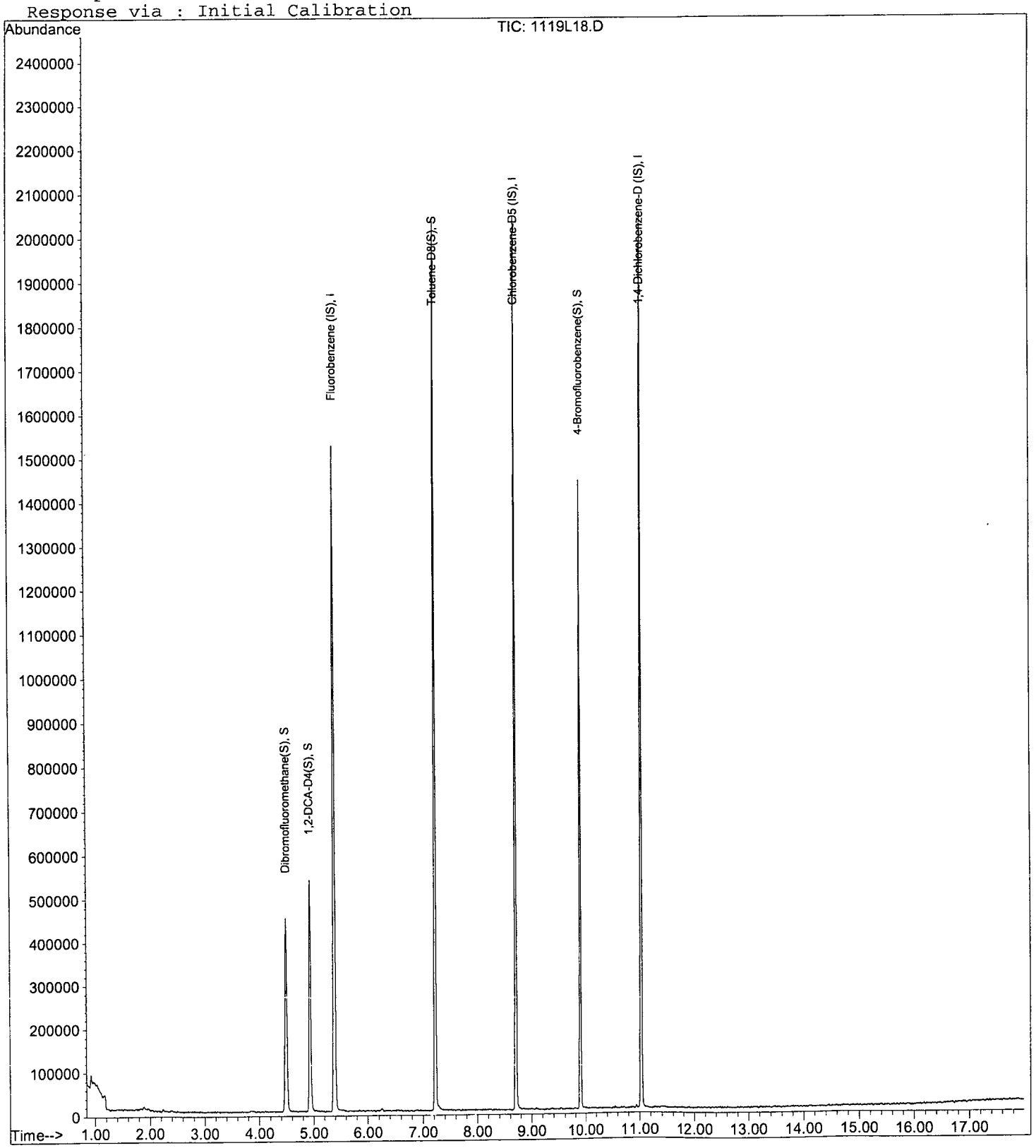
Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L18.D
Acq On : 20 Nov 16 17:19
Sample : 161119A BLK-1WL
Misc : W IS&S 10/20/16, 11/04/16

Vial: 17
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 11:48 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



Method Blank
EPA 8260B WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161119W-45989 - 213873**
Batch ID: #86BXD-161119BL

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	11/21/16	11/21/16
BLANK	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	11/21/16	11/21/16
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	11/21/16	11/21/16
BLANK	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	11/21/16	11/21/16
BLANK	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	11/21/16	11/21/16
BLANK	SURROGATE: 1,2-DICHLOROET	106	81-118			%	11/21/16	11/21/16
BLANK	SURROGATE: 4-BROMOFLUOR	100	85-114			%	11/21/16	11/21/16
BLANK	SURROGATE: DIBROMOFLUOR	92.1	80-119			%	11/21/16	11/21/16
BLANK	SURROGATE: TOLUENE-D8 (S)	106	89-112			%	11/21/16	11/21/16

Amended Results.

Quant Method: LALLW.M
Run #: 1119L38
Instrument: Loki
Sequence: 161113
Initials: SV

GC SC-Blank-REG MDLs-DOD
Printed: 01/06/17 1:54:30 PM

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1119L38.D Vial: 37
Acq On : 21 Nov 16 2:40 Operator: PM,DG,SV,CMM
Sample : 161119B BLK-1WL Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 12:21 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	662528	25.00000 ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	592192	25.00000 ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	302656	25.00000 ppb	0.00
System Monitoring Compounds					
32) Dibromofluoromethane(S)	4.49	111	321883	23.02314 ppb	0.00
Spiked Amount 25.000			Recovery = 92.092%		
37) 1,2-DCA-D4(S)	4.93	65	404603	26.54564 ppb	0.00
Spiked Amount 25.000			Recovery = 106.184%		
57) Toluene-D8(S)	7.22	98	1196088	26.45018 ppb	0.00
Spiked Amount 25.000			Recovery = 105.800%		
65) 4-Bromofluorobenzene(S)	9.89	95	408254	25.01347 ppb	0.00
Spiked Amount 25.000			Recovery = 100.052%		

Target Compounds Qvalue

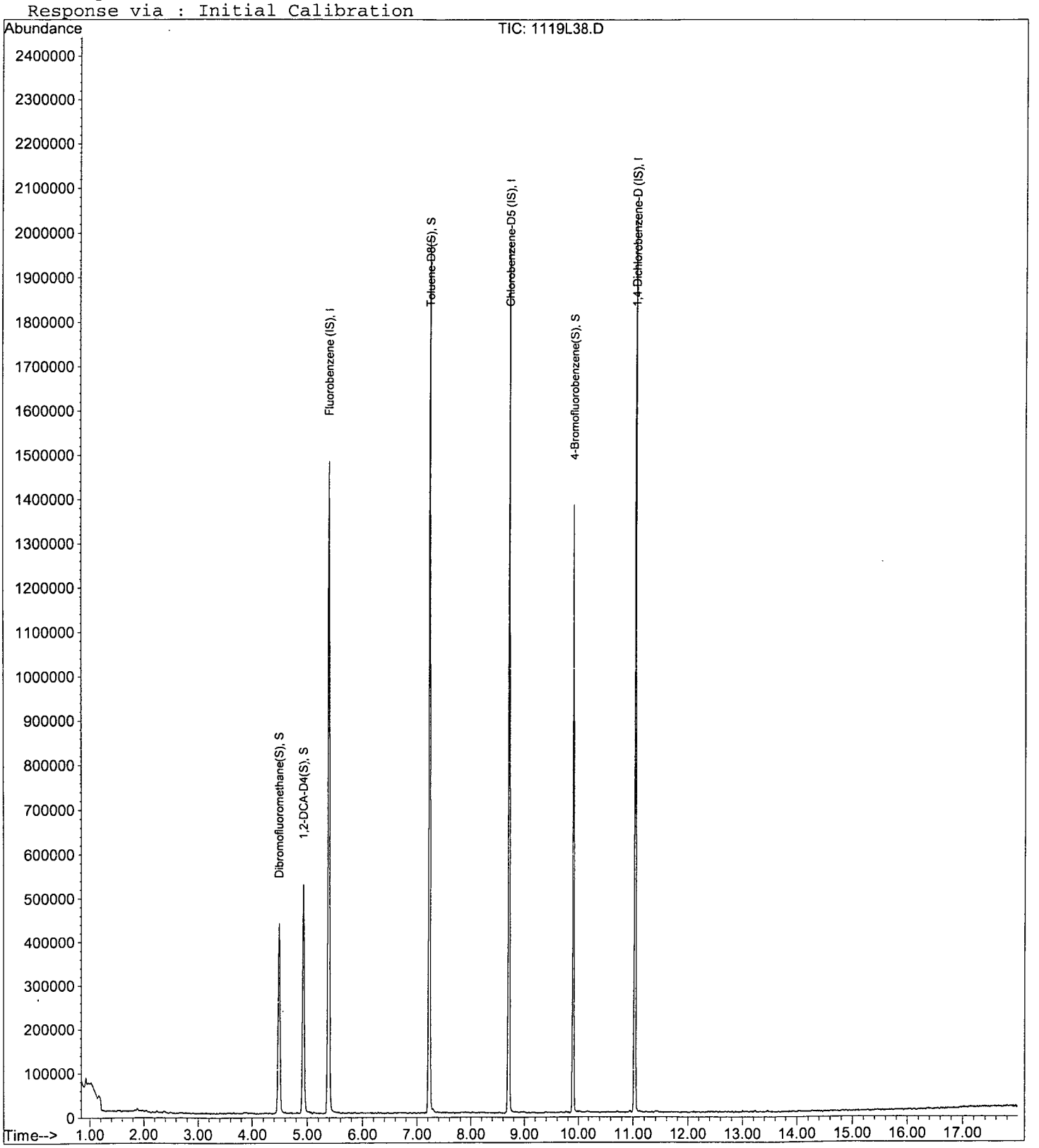
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L38.D Vial: 37
Acq On : 21 Nov 16 2:40 Operator: PM,DG,SV,CMM
Sample : 161119B BLK-1WL Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 12:21 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



Laboratory Control Spike Recovery
EPA 8260B WATER

APPL ID: **161120W-45988 LCS - 213869**
Batch ID: #86BXD-161119AL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
BENZENE	10.00	10.8	108	79-120
ETHYLBENZENE	10.00	10.8	108	79-121
TOLUENE	10.00	10.4	104	80-121
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	27.0	108	81-118
SURROGATE: 4-BROMOFLUOROBENZE	25.0	25.4	102	85-114
SURROGATE: DIBROMOFLUOROMETH	25.0	23.5	94.0	80-119
SURROGATE: TOLUENE-D8 (S)	25.0	25.8	103	89-112

Comments: _____

Primary	SPK
Quant Method :	LALLW.M
Extraction Date :	11/20/16
Analysis Date :	11/20/16
Instrument :	Loki
Run :	1119L03
Initials :	SV

Printed: 12/02/16 11:05:33 AM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1119L03.D Vial: 2
Acq On : 20 Nov 16 10:17 Operator: PM,DG,SV,CMM
Sample : 161119A CCV/LCS 10ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 11:43 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	767104	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	703552	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	384448	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.49	111	380890	23.53	ppb		0.00
Spiked Amount 25.000			Recovery = 94.120%				
37) 1,2-DCA-D4(S)	4.93	65	476714	27.01	ppb		0.00
Spiked Amount 25.000			Recovery = 108.052%				
57) Toluene-D8(S)	7.22	98	1386785	25.81	ppb		0.00
Spiked Amount 25.000			Recovery = 103.252%				
65) 4-Bromofluorobenzene(S)	9.89	95	491572	25.35	ppb		0.00
Spiked Amount 25.000			Recovery = 101.404%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.86	85	103467	6.37	ppb		98
3) Freon 114	0.93	85	99524	8.29	ppb		93
4) Chloromethane	0.96	50	223777	9.93	ppb		97
5) Vinyl chloride	1.03	62	189567	9.33	ppb		97
6) Bromomethane	1.22	96	99416	10.68	ppb		99
7) Chloroethane	1.29	64	104547	9.36	ppb		99
8) Dichlorofluoromethane	1.43	67	357361	10.19	ppb		97
9) Trichlorofluoromethane	1.46	101	179027	8.52	ppb		99
10) Acrolein	1.76	56	167447	129.52	ppb		98
11) Acetone	1.88	43	54409	10.24	ppb		99
12) Freon-113	1.84	101	97503	8.09	ppb		96
13) 1,1-DCE	1.83	96	92792	9.86	ppb		95
14) t-Butanol	2.40	59	73338	127.31	ppb		97
15) Acetonitrile	2.10	41	229777	147.26	ppb		98
16) Methyl Acetate	2.17	43	132027	12.20	ppb		86
17) Iodomethane	1.93	142	51560	8.91	ppb		97
18) Acrylonitrile	2.47	52	41954	10.44	ppb		90
19) Methylene chloride	2.24	84	177156	10.33	ppb		98
20) Carbon disulfide	1.98	76	322294	7.69	ppb		100
21) Methyl t-butyl ether (MtBE	2.52	73	429718	10.43	ppb		95
22) Trans-1,2-DCE	2.50	96	150694	10.02	ppb		86
23) Diisopropyl Ether	3.10	45	639690	12.56	ppb	#	89
24) 1,1-DCA	2.95	63	321851	11.16	ppb		98
25) Vinyl Acetate	3.09	43	147641	11.80	ppb	#	80
26) Ethyl tert Butyl Ether	3.59	59	514018	11.24	ppb		100
27) MEK (2-Butanone)	3.80	43	57666	9.82	ppb		91
28) Cis-1,2-DCE	3.72	96	180238	10.11	ppb		84
29) 2,2-Dichloropropane	3.70	77	77800	10.62	ppb		99
30) Chloroform	4.25	83	291407	10.24	ppb		99
31) Bromochloromethane	4.08	128	76521	9.18	ppb		99
33) 1,1,1-TCA	4.47	97	216306	9.53	ppb		87
34) Cyclohexane	4.53	41	121795	10.20	ppb		88
35) 1,1-Dichloropropene	4.72	75	199644	10.15	ppb		95
36) 2,2,4-Trimethylpentane	5.15	57	363990	10.16	ppb	#	83
38) Carbon Tetrachloride	4.70	119	162349	9.09	ppb		100
39) Tert Amyl Methyl Ether	5.23	73	413201	9.95	ppb		95
40) 1,2-DCA	5.03	62	233247	10.53	ppb		97
41) Benzene	4.98	78	653136	10.80	ppb		98
42) TCE	5.84	95	79560	9.55	ppb		93

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1119L03.D Vial: 2
Acq On : 20 Nov 16 10:17 Operator: PM,DG,SV,CMM
Sample : 161119A CCV/LCS 10ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 11:43 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	2-Pentanone	6.12	43	1394026	153.43	ppb		91
44)	1,2-Dichloropropane	6.08	63	191943	11.19	ppb	#	96
45)	Bromodichloromethane	6.44	83	208921	9.75	ppb		97
46)	Methyl Cyclohexane	6.04	83	169843	8.51	ppb		87
47)	Dibromomethane	6.22	93	93496	9.99	ppb		93
49)	MIBK (methyl isobutyl ket	7.16	43	157580	11.00	ppb		97
50)	1-Bromo-2-chloroethane	6.75	63	129495	10.63	ppb		98
51)	Cis-1,3-Dichloropropene	6.95	75	272851	10.59	ppb		96
52)	Toluene	7.29	91	670972	10.40	ppb		100
53)	Trans-1,3-Dichloropropene	7.56	75	223031	10.13	ppb		93
54)	1,1,2-TCA	7.74	83	110988	9.57	ppb		99
55)	2-Hexanone	8.05	43	49106	9.53	ppb		91
58)	1,2-EDB	8.21	107	120595	10.08	ppb		99
59)	Tetrachloroethene	7.86	166	133144	9.07	ppb		97
60)	1-Chlorohexane	8.76	91	163804	9.65	ppb		81
61)	1,1,1,2-Tetrachloroethane	8.83	131	142752	9.61	ppb		95
62)	m&p-Xylene	8.99	106	532445	20.80	ppb		95
63)	o-Xylene	9.38	106	267428	10.64	ppb		94
64)	Styrene	9.40	104	298880	10.76	ppb		98
66)	1,3-Dichloropropane	7.90	76	237716	10.87	ppb		98
67)	Dibromochloromethane	8.12	129	133371	9.21	ppb		97
68)	Chlorobenzene	8.73	112	417534	10.34	ppb		96
69)	Ethylbenzene	8.87	91	716630	10.83	ppb		98
70)	Bromoform	9.55	173	72920	8.31	ppb		97
72)	Isopropylbenzene	9.76	105	633167	10.09	ppb		98
73)	1,1,2,2-Tetrachloroethane	10.07	83	160192	10.49	ppb		93
74)	1,2,3-Trichloropropane	10.09	110	27872	9.52	ppb		85
75)	t-1,4-Dichloro-2-Butene	10.13	53	41888	10.17	ppb		86
76)	Bromobenzene	10.02	156	166069	9.67	ppb		97
77)	n-Propylbenzene	10.17	91	775164	10.81	ppb		98
78)	4-Ethyltoluene	10.29	105	651450	10.60	ppb		97
79)	2-Chlorotoluene	10.23	91	477066	10.32	ppb		91
80)	1,3,5-Trimethylbenzene	10.35	105	555835	10.67	ppb		98
81)	4-Chlorotoluene	10.34	91	571712	10.71	ppb		96
82)	Tert-Butylbenzene	10.67	119	430063	9.62	ppb		99
83)	1,2,4-Trimethylbenzene	10.71	105	565303	10.70	ppb		97
84)	Sec-Butylbenzene	10.88	105	633268	10.05	ppb		98
85)	p-Isopropyltoluene	11.04	119	530793	10.13	ppb		99
86)	Benzyl Chloride	11.20	91	184447	10.72	ppb		99
87)	1,3-DCB	10.96	146	314585	10.13	ppb		98
88)	1,4-DCB	11.05	146	323880	10.08	ppb		99
89)	n-Butylbenzene	11.44	91	493607	10.69	ppb		98
90)	1,2-DCB	11.41	146	293846	9.70	ppb		99
91)	Hexachloroethane	11.66	117	99401	9.31	ppb		96
92)	1,2-Dibromo-3-chloropropan	12.17	157	22813	8.06	ppb	#	88
93)	1,2,4-Trichlorobenzene	13.00	180	188851	9.20	ppb		96
94)	Hexachlorobutadiene	13.19	225	72191	9.05	ppb		92
95)	Naphthalene	13.22	128	256576	9.88	ppb		98
96)	1,2,3-Trichlorobenzene	13.47	180	117544	9.37	ppb		98

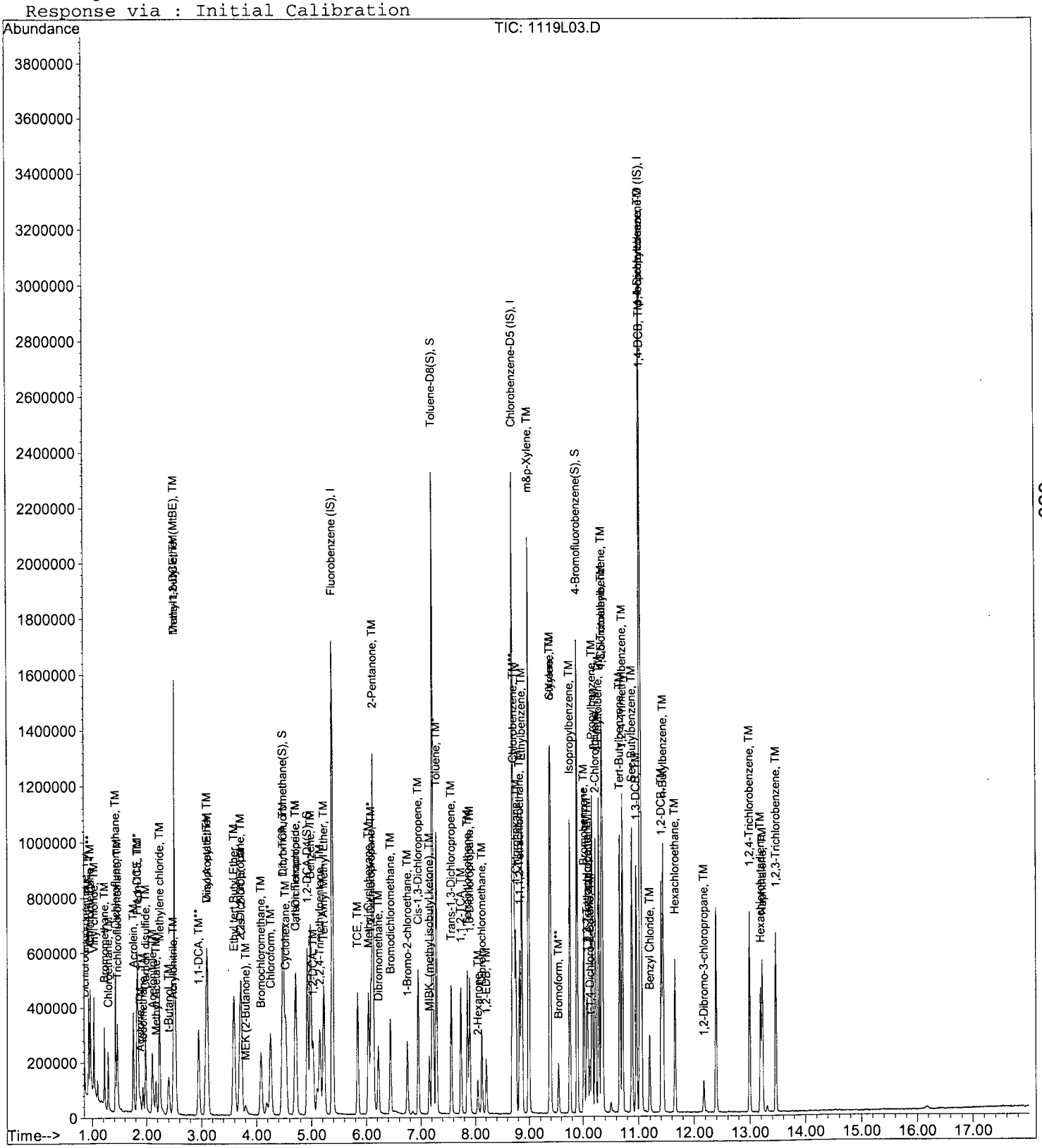
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L03.D Vial: 2
Acq On : 20 Nov 16 10:17 Operator: PM,DG,SV,CMM
Sample : 161119A CCV/LCS 10ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 11:43 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



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Laboratory Control Spike Recovery
EPA 8260B WATER

APPL ID: **161120W-45989 LCS - 213873**
Batch ID: #86BXD-161119BL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
BENZENE	10.00	10.9	109	79-120
ETHYLBENZENE	10.00	11.0	110	79-121
TOLUENE	10.00	10.4	104	80-121
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	25.9	104	81-118
SURROGATE: 4-BROMOFLUOROBENZE	25.0	25.7	103	85-114
SURROGATE: DIBROMOFLUOROMETH	25.0	23.2	92.8	80-119
SURROGATE: TOLUENE-D8 (S)	25.0	26.6	106	89-112

Comments:

Primary	SPK
Quant Method :	LALLW.M
Extraction Date :	11/20/16
Analysis Date :	11/20/16
Instrument :	Loki
Run :	1119L32
Initials :	SV

Printed: 12/02/16 11:05:33 AM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1119L32.D Vial: 31
Acq On : 20 Nov 16 23:52 Operator: PM,DG,SV,CMM
Sample : 161119B CCV/LCS 10ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 11:44 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	696832	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	618624	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	337472	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.49	111	341098	23.20	ppb		0.00
Spiked Amount 25.000			Recovery = 92.784%				
37) 1,2-DCA-D4(S)	4.93	65	415679	25.93	ppb		0.00
Spiked Amount 25.000			Recovery = 103.720%				
57) Toluene-D8(S)	7.22	98	1254237	26.55	ppb		0.00
Spiked Amount 25.000			Recovery = 106.204%				
65) 4-Bromofluorobenzene(S)	9.89	95	437455	25.66	ppb		0.00
Spiked Amount 25.000			Recovery = 102.628%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.86	85	96665	6.55	ppb		99
3) Freon 114	0.93	85	94698	8.68	ppb		88
4) Chloromethane	0.96	50	199063	9.72	ppb		100
5) Vinyl chloride	1.03	62	163979	8.89	ppb		98
6) Bromomethane	1.22	96	96416	11.40	ppb		100
7) Chloroethane	1.29	64	99868	9.84	ppb		98
8) Dichlorofluoromethane	1.43	67	314612	9.87	ppb		99
9) Trichlorofluoromethane	1.46	101	162851	8.54	ppb		96
10) Acrolein	1.76	56	123120	104.84	ppb		93
11) Acetone	1.88	43	50796	10.55	ppb		98
12) Freon-113	1.85	101	90163	8.23	ppb		92
13) 1,1-DCE	1.83	96	84224	9.85	ppb		100
14) t-Butanol	2.40	59	53278	101.82	ppb		100
15) Acetonitrile	2.10	41	200786	141.66	ppb		97
16) Methyl Acetate	2.17	43	115842	11.79	ppb		91
17) Iodomethane	1.93	142	37992	7.36	ppb		92
18) Acrylonitrile	2.48	52	35480	9.72	ppb		94
19) Methylene chloride	2.24	84	163342	10.49	ppb		95
20) Carbon disulfide	1.98	76	280685	7.37	ppb		100
21) Methyl t-butyl ether (MtBE	2.52	73	368965	9.86	ppb		96
22) Trans-1,2-DCE	2.50	96	139425	10.21	ppb		87
23) Diisopropyl Ether	3.10	45	571545	12.35	ppb	#	88
24) 1,1-DCA	2.95	63	296626	11.32	ppb		98
25) Vinyl Acetate	3.09	43	120007	10.56	ppb	#	77
26) Ethyl tert Butyl Ether	3.59	59	455392	10.96	ppb		100
27) MEK (2-Butanone)	3.80	43	51103	9.58	ppb		97
28) Cis-1,2-DCE	3.73	96	164154	10.13	ppb		90
29) 2,2-Dichloropropane	3.70	77	54400	8.18	ppb		99
30) Chloroform	4.25	83	265817	10.28	ppb		96
31) Bromochloromethane	4.08	128	68423	9.04	ppb		100
33) 1,1,1-TCA	4.47	97	193515	9.39	ppb		86
34) Cyclohexane	4.53	41	117732	10.85	ppb		88
35) 1,1-Dichloropropene	4.72	75	175202	9.80	ppb		98
36) 2,2,4-Trimethylpentane	5.16	57	289768	8.90	ppb	#	80
38) Carbon Tetrachloride	4.70	119	141597	8.73	ppb		95
39) Tert Amyl Methyl Ether	5.23	73	353878	9.38	ppb	#	90
40) 1,2-DCA	5.03	62	212919	10.58	ppb		97
41) Benzene	4.99	78	599506	10.91	ppb		97
42) TCE	5.84	95	77112	10.19	ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1119L32.D Vial: 31
Acq On : 20 Nov 16 23:52 Operator: PM,DG,SV,CMM
Sample : 161119B CCV/LCS 10ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 11:44 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

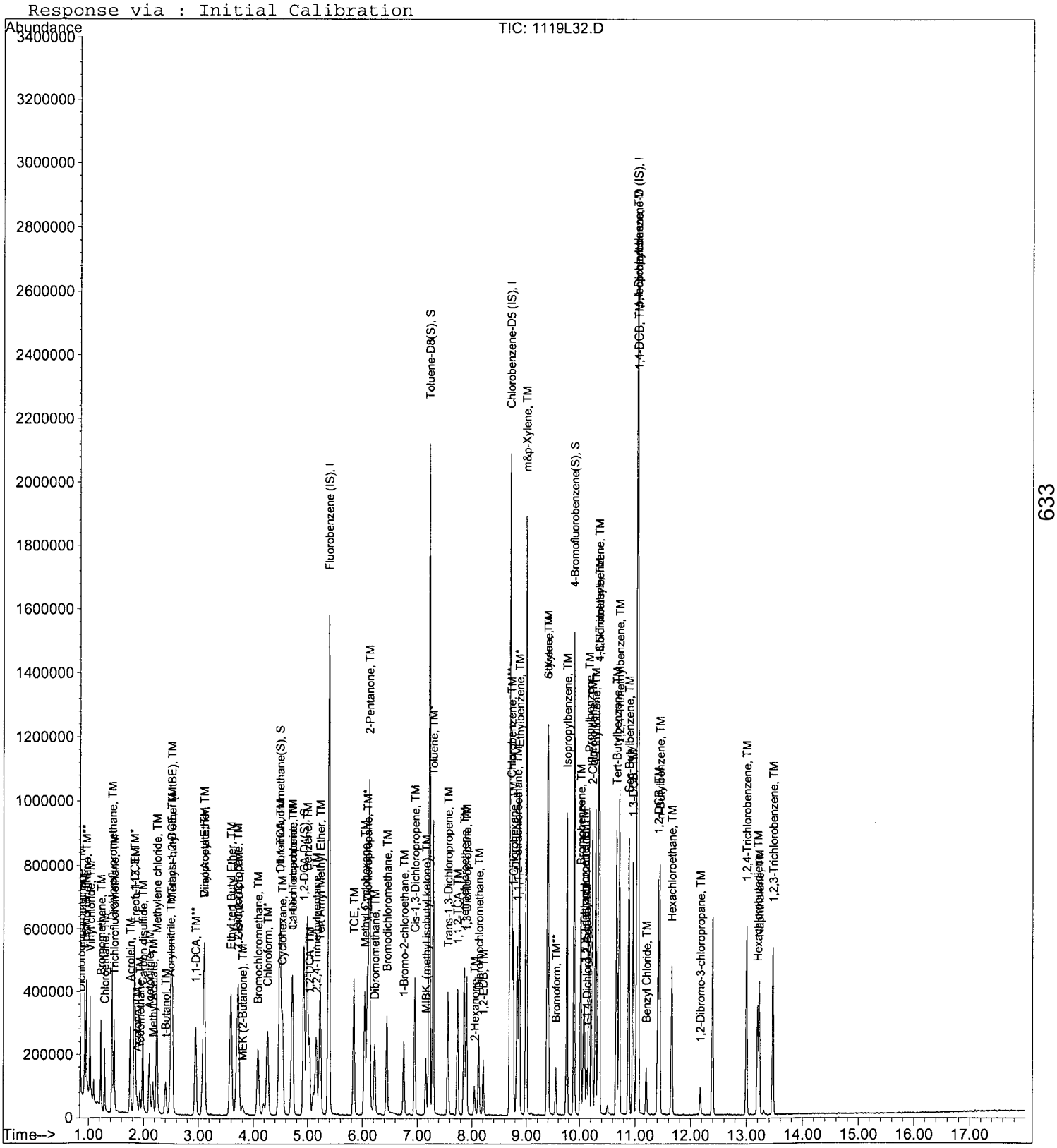
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	2-Pentanone	6.12	43	1155351	139.98	ppb		91
44)	1,2-Dichloropropane	6.09	63	178921	11.48	ppb	#	94
45)	Bromodichloromethane	6.44	83	190480	9.79	ppb		99
46)	Methyl Cyclohexane	6.04	83	152289	8.40	ppb		87
47)	Dibromomethane	6.22	93	85030	10.00	ppb		90
49)	MIBK (methyl isobutyl ket	7.16	43	128678	9.83	ppb		98
50)	1-Bromo-2-chloroethane	6.75	63	114798	10.37	ppb		99
51)	Cis-1,3-Dichloropropene	6.95	75	226569	9.68	ppb		96
52)	Toluene	7.29	91	611442	10.43	ppb		99
53)	Trans-1,3-Dichloropropene	7.56	75	188735	9.44	ppb		99
54)	1,1,2-TCA	7.74	83	102834	9.76	ppb		95
55)	2-Hexanone	8.05	43	38634	8.40	ppb		90
58)	1,2-EDB	8.21	107	104021	9.89	ppb		100
59)	Tetrachloroethene	7.86	166	121409	9.41	ppb		96
60)	1-Chlorohexane	8.76	91	143933	9.64	ppb		84
61)	1,1,1,2-Tetrachloroethane	8.83	131	122087	9.35	ppb		97
62)	m&p-Xylene	8.99	106	475861	21.15	ppb		94
63)	o-Xylene	9.38	106	239523	10.83	ppb		97
64)	Styrene	9.40	104	256768	10.51	ppb		96
66)	1,3-Dichloropropane	7.90	76	216797	11.27	ppb		98
67)	Dibromochloromethane	8.12	129	114639	9.01	ppb		98
68)	Chlorobenzene	8.73	112	375034	10.56	ppb		96
69)	Ethylbenzene	8.87	91	641253	11.02	ppb		98
70)	Bromoform	9.55	173	59162	7.67	ppb		97
72)	Isopropylbenzene	9.76	105	556511	10.10	ppb		97
73)	1,1,2,2-Tetrachloroethane	10.07	83	125554	9.36	ppb		96
74)	1,2,3-Trichloropropane	10.09	110	22952	8.93	ppb		91
75)	t-1,4-Dichloro-2-Butene	10.13	53	32917	9.10	ppb		91
76)	Bromobenzene	10.02	156	146832	9.74	ppb		98
77)	n-Propylbenzene	10.17	91	673055	10.69	ppb		96
78)	4-Ethyltoluene	10.29	105	555726	10.30	ppb		98
79)	2-Chlorotoluene	10.23	91	440226	10.85	ppb		92
80)	1,3,5-Trimethylbenzene	10.35	105	486884	10.65	ppb		98
81)	4-Chlorotoluene	10.34	91	503053	10.73	ppb		95
82)	Tert-Butylbenzene	10.67	119	371591	9.47	ppb		97
83)	1,2,4-Trimethylbenzene	10.71	105	495313	10.68	ppb		96
84)	Sec-Butylbenzene	10.88	105	542225	9.80	ppb		97
85)	p-Isopropyltoluene	11.04	119	451894	9.82	ppb		98
86)	Benzyl Chloride	11.20	91	97238	6.44	ppb		98
87)	1,3-DCB	10.96	146	278948	10.23	ppb		99
88)	1,4-DCB	11.05	146	278161	9.86	ppb		97
89)	n-Butylbenzene	11.44	91	400565	9.88	ppb		96
90)	1,2-DCB	11.41	146	256395	9.64	ppb		99
91)	Hexachloroethane	11.66	117	83309	8.89	ppb		90
92)	1,2-Dibromo-3-chloropropan	12.17	157	18987	7.64	ppb		95
93)	1,2,4-Trichlorobenzene	13.00	180	154851	8.60	ppb		98
94)	Hexachlorobutadiene	13.19	225	56013	8.00	ppb		94
95)	Naphthalene	13.22	128	195200	8.56	ppb		97
96)	1,2,3-Trichlorobenzene	13.47	180	94424	8.57	ppb		98

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161113\1119L32.D Vial: 31
Acq On : 20 Nov 16 23:52 Operator: PM,DG,SV,CMM
Sample : 161119B CCV/LCS 10ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 11:44 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration

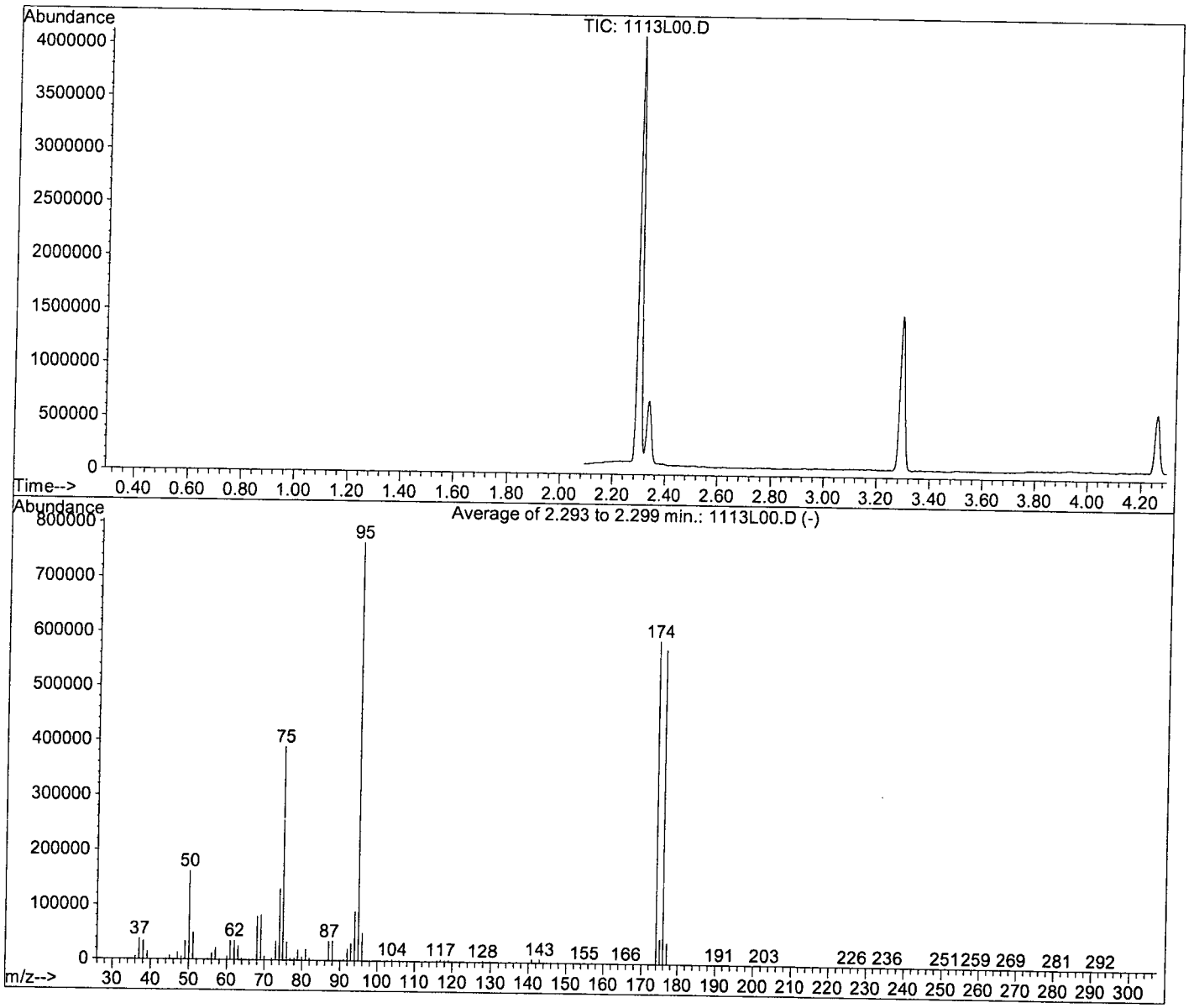


633

Data File : M:\LOKI\DATA\161113\1113L00.D
Acq On : 13 Nov 16 11:20
Sample : 5ng- BFB STD 10-12-16
Misc : 2ul

Vial: 1
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B



AutoFind: Scans 63, 64, 65; Background Corrected with Scan 54

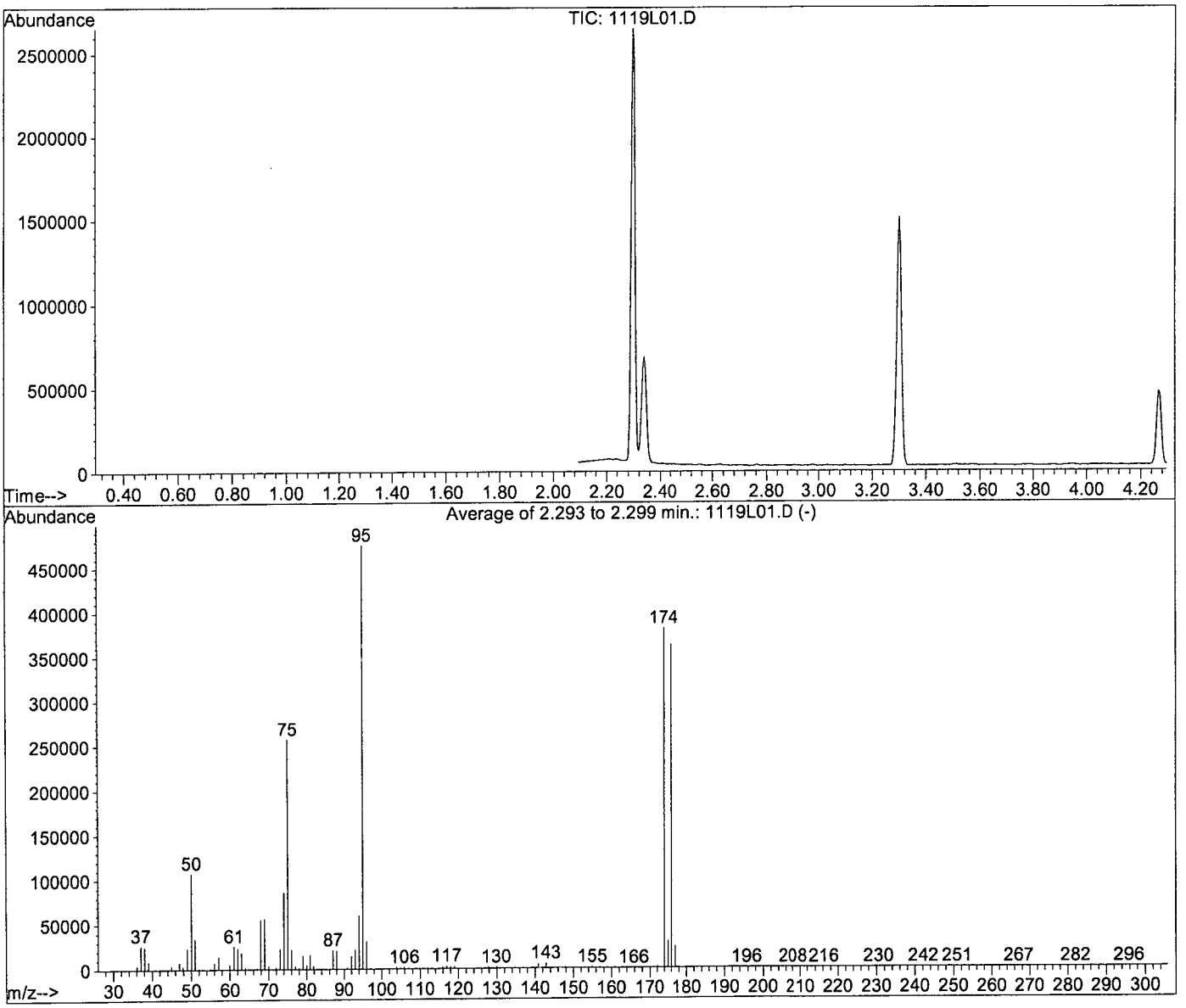
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.1	161951	PASS
75	95	30	60	50.9	390227	PASS
95	95	100	100	100.0	766024	PASS
96	95	5	9	6.7	51629	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	77.2	591488	PASS
175	174	5	9	7.8	45844	PASS
176	174	95	101	97.4	576224	PASS
177	176	5	9	6.8	39248	PASS

1113L00.D LALLW.M Tue Nov 15 10:38:58 2016

Data File : M:\LOKI\DATA\161113\1119L01.D
Acq On : 20 Nov 16 9:27
Sample : 5ng- BFB STD 11-06-16
Misc : W IS&S 10/20/16, 11/04/16

Vial: 1
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B



AutoFind: Scans 63, 64, 65; Background Corrected with Scan 55

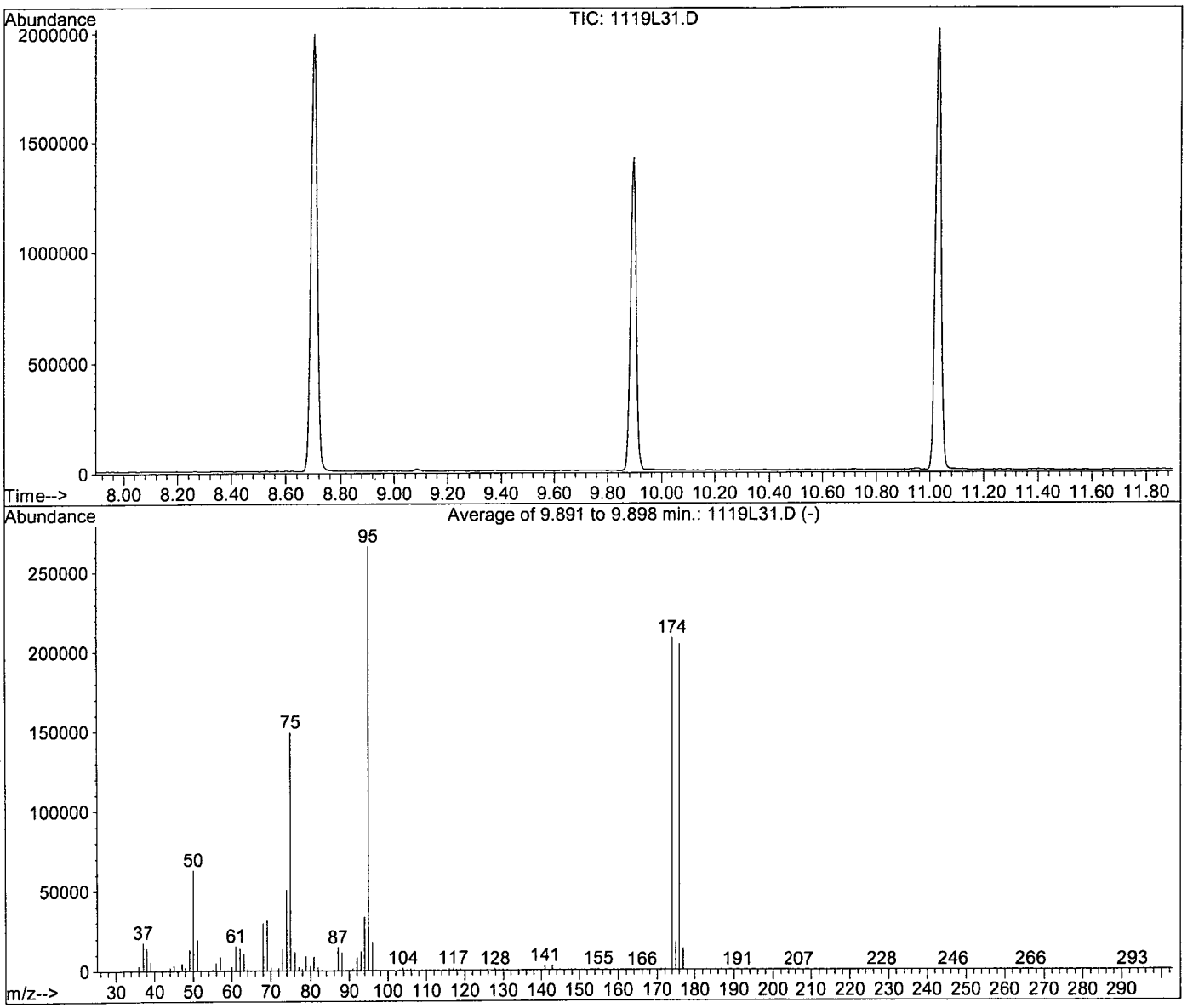
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	22.6	107568	PASS
75	95	30	60	54.2	257530	PASS
95	95	100	100	100.0	475481	PASS
96	95	5	9	6.5	30847	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	80.1	380949	PASS
175	174	5	9	7.9	29912	PASS
176	174	95	101	95.2	362496	PASS
177	176	5	9	6.6	24021	PASS

1119L01.D LALLW.M Mon Nov 21 11:39:05 2016

Data File : M:\LOKI\DATA\161113\1119L31.D
Acq On : 20 Nov 16 23:23
Sample : 5ng- BFB STD 11-06-16
Misc : W IS&S 10/20/16, 11/04/16

Vial: 30
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B



AutoFind: Scans 2815, 2816, 2817; Background Corrected with Scan 2802

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	23.7	63037	PASS
75	95	30	60	56.1	149419	PASS
95	95	100	100	100.0	266283	PASS
96	95	5	9	6.7	17941	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	78.2	208171	PASS
175	174	5	9	8.4	17582	PASS
176	174	95	101	98.0	204032	PASS
177	176	5	9	6.7	13748	PASS

1119L31.D LALLW.M Mon Nov 21 12:19:29 2016

Volatile Standard Curve Preparation for 10mL Purge (8260 water)-LOKI											
Exp Date:	11/14/16	5µg/mL	5µg/mL	5µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	250µg/mL	
		Vol Std #9	Vol Std #10	Vol Std #12	Vol Std #7	Vol Std #8	Vol Std #1	Vol Std #2	TBA	
		11/12/16N	11/12/16O	11/12/16P	11/12/16J	11/12/16L	11/12/16K	11/12/16M	11/12/16Q	Final Vol
	Conc.	12/12/16	12/12/16	12/12/16	12/12/16	12/12/16	12/12/16	12/12/16	12/12/16	w/P&T H2O
Date/code	µg/L	ul	ul	ul	ul	ul	ul	ul	ul	mL
11/13/16J-CMM	0.3	3	3	3	n/a	n/a	n/a	n/a	2	50
11/13/16K-CMM	0.5	5	5	5	n/a	n/a	n/a	n/a	5	50
11/13/16L-CMM	1	10	10	10	n/a	n/a	n/a	n/a	10	50
11/13/16M-CMM	2	20	20	20	n/a	n/a	n/a	n/a	15	50
11/13/16N-CMM	5	n/a	n/a	n/a	5	5	5	5	20	50
11/13/16O-CMM	10	n/a	n/a	n/a	10	10	10	10	25	50
11/13/16P-CMM	20	n/a	n/a	n/a	20	20	20	20	30	50
11/13/16Q-CMM	40	n/a	n/a	n/a	40	40	40	40	35	50
11/13/16R-CMM	100	n/a	n/a	n/a	100	100	100	100	40	50

PRIMARY STANDARD

11/12/16J							
50ug/ml Vol Work Std #7							
Exp:12/12/16							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120016-03	Gas Mix	2000	279822-36647	11/12/16A-CMM	02/19/19	100
02SI	020049-02	HEXACHLOROETHANE	1000	254167-36568	10/27/16B-CMM	11/30/18	200
02SI	020228-02	Benzyl Chloride	1000	279824-36570	10/27/16C-CMM	05/24/18	200
J&T Brand		Purge & Trap MeOH		55344-00862	10/23/16	10/23/17	3500
11/12/16K							
50ug/ml Vol Work Std #1							
Exp:12/12/16					Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	020145-02-02	2-CEVE	2000	229586-35351	11/03/16B-CMM	06/03/17	50
J&T Brand		Purge & Trap MeOH		55344-00862	10/23/16	10/23/17	1950
11/12/16L							
50ug/ml Vol Work Std #8							
Exp:12/12/16							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	122039-02	Volatile Mix, 20-29	2000	258033-37168	11/12/16B-CMM	08/17/17	100
02SI	120023-03	VOC'S-54 COMP	2000	271929-36580	11/12/16C-CMM	02/15/18	100
02SI	020232-02	Vinyl Acetate	2000	287418-37045	10/27/16E-CMM	11/27/16	100
J&T Brand		Purge & Trap MeOH		55344-00862	10/23/16	10/23/17	3700
11/12/16M							
50ug/ml Vol Work Std #2							
Exp:12/12/16							
Supplier	ID #	ID	ug/ml				
02SI	121020-05	HSL'S-Ketone Solution	2000	258036-36072	11/03/16C-CMM	08/17/17	100
J&T Brand		Purge & Trap MeOH		55344-00862	10/23/16	10/23/17	3900
		11/12/16N					
		5ug/ml Vol Work Std #9					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #7		**11/12/16J**	Exp:12/12/16	200	
		50ug/ml Vol Work Std #8		**11/12/16L**	Exp:12/12/16	200	
		J&T Brand		10/23/16	10/23/17	1600	
		11/12/16O					
		5ug/ml Vol Work Std #10					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #1		**11/12/16K**	Exp:12/12/16	200	
		J&T Brand		10/23/16	10/23/17	1800	
		11/12/16P					
		5ug/ml Vol Work Std #12					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #2		**11/12/16M**	Exp:12/12/16	200	
		J&T Brand		10/23/16	10/23/17	1800	
11/12/16Q							
250ug/ml TBA/IBA/Acetonitrile/Cyclohexanone/Acrolein/2-P							
Exp:12/12/16			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
02SI	120166-01	Volatile Mix 4-3	2000	275544-36406	11/12/16D-CMM	10/20/17	500
02SI	020229-09-02	Acrolein	10000	291928-37173	11/12/16E-CMM	12/12/16	100
J&T Brand		Purge & Trap MeOH		55344-00862	10/23/16	10/23/17	3400

SECONDARY SOURCE

11/12/16R							
50ug/ml VOC Std#4							
Exp:12/12/16							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120296-01-SS	Custom 8260 Solution	2000	258037-36087	11/03/16D-CMM	08/18/17	50
J&T Brand		Purge & Trap MeOH		55344-00862	10/23/16	10/23/17	1950
11/12/16S							
50ug/ml VOC Std#5							
Exp:12/12/16							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120016-03-SS	8260 Gases(SS)	2000	279826-36676	11/12/16F-CMM	06/01/19	50
02SI	020145-02-02-SS	2-CEVE (SS)	2000	254171-35394	11/12/16G-CMM	06/21/17	50
J&T Brand		Purge & Trap MeOH		55344-00862	10/23/16	10/23/17	1900
11/12/16T							

50ug/ml VOC Std#6							
Exp:12/12/16							
	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120023-03-SS	VOC'S 54 COMP.	2000	265897-35926	11/12/16H-CMM	11/29/17	50
02SI	020232-02-SS	Vinyl Acetate(SS)	2000	287420-37047	10/27/16J-CMM	11/27/16	50
02SI	020049-02-SS	HEXACHLOROETHANE (SS)	1000	265899-35937	10/27/16K-CMM	11/30/17	100
J&T Brand		Purge & Trap MeOH		55344-00862	10/23/16	10/23/17	1800
11/12/16U							
250ug/ml TBA/IBA/Acetonitrile/Acrolein/2-P							
Exp:12/12/16			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
02SI	120166-01-SS	VOC Mix 4-3 (SS)	2000	229588-34410	10/27/16L-CMM	06/03/17	250
02SI	020229-09-SS	Acrolein SOLUTION (SS)	10000	291929-37175	11/12/16I-CMM	12/12/16	50
J&T Brand		Purge & Trap MeOH		55344-00862	10/23/16	10/23/17	1700
8260 water		spiked with		Total Vol			
CCV/LCS	10ug/L Vol Std	10uL of 50ug/ml Std #7		50mL P&T H2O			
Ending CCV		10uL of 50ug/ml Std #8					
		10uL of 50ug/ml Std #1					
		10uL of 50ug/ml Std #2					
		25uL of 250ug/ml Std TBA					
X4 ketones							
LCS	10ug/L Vol Std	10uL of 50ug/ml Std #7		50mL P&T H2O			
		10uL of 50ug/ml Std #8					
		10uL of 50ug/ml Std #1					
		40uL of 50ug/ml Std #2					
		25uL of 250ug/ml Std TBA					
8260 soil		spiked with		Total Vol			
CCV/LCS	50ug/Kg Vol Std	5uL of 50ug/ml Std #7		5mL P&T H2O			
Ending CCV		5uL of 50ug/ml Std #8					
		5uL of 50ug/ml Std #1					
		5uL of 50ug/ml Std #2					
		5uL of 250ug/ml Std TBA					
Matrix spikes are prepared with same standards as ccv (see above) into the sample.							
8260water		spiked with		Total Vol			
SS	10ug/L STD	10uL of 50ug/ml Std #4		50mL P&T H2O			
		10uL of 50ug/ml Std #5					
		10uL of 50ug/ml Std #6					
		25uL of 250ug/ml Std TBA					
8260 SOIL	50ug/Kg STD	5uL of 50ug/ml Std #4		Total Vol			
SS		5uL of 50ug/ml Std #5		5mL P&T H2O			
		5uL of 50ug/ml Std #6					
		5uL of 250ug/ml Std TBA					

Injection Log

Directory: M:\LOKI\DATA\161113\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1113L00.D	1	5ng- BFB STD 10-12-16	2ul	13 Nov 16 11:20
2	5	1113L05.D	1	0.3ug/L VOC STD 11/13/16J	1uL-5ppb	13 Nov 16 13:35
3	6	1113L06.D	1	0.5ug/L VOC STD 11/13/16K	1uL-5ppb	13 Nov 16 14:04
4	7	1113L07.D	1	1.0ug/L VOC STD 11/13/16L	2uL-10ppb	13 Nov 16 14:32
5	8	1113L08.D	1	2.0ug/L VOC STD 11/13/16M	2uL-10ppb	13 Nov 16 15:00
6	9	1113L09.D	1	5.0ug/L VOC STD 11/13/16AN	5uL-25ppb	13 Nov 16 15:28
7	10	1113L10.D	1	10ug/L VOC STD 11/13/16O	5uL-25ppb	13 Nov 16 15:56
8	11	1113L11.D	1	20ug/L VOC STD 11/13/16P	10uL-50ppb	13 Nov 16 16:24
9	12	1113L12.D	1	40ug/L VOC STD 11/13/16Q	10uL-50ppb	13 Nov 16 16:53
10	13	1113L13.D	1	100ug/L VOC STD 11/13/16R	20uL-100ppb	13 Nov 16 17:21
11	17	1113L17.D	1	(SS) 10ug/L VOC STD 11/13/16	W IS&S 10/20/16, 11/04/16	13 Nov 16 19:14
12	1	1119L01.D	1	5ng- BFB STD 11-06-16	W IS&S 10/20/16, 11/04/16	20 Nov 16 9:27
13	2	1119L03.D	1	161119A CCV/LCS 10ug/L	W IS&S 10/20/16, 11/04/16	20 Nov 16 10:17
14	17	1119L18.D	1	161119A BLK-1WL	W IS&S 10/20/16, 11/04/16	20 Nov 16 17:19
15	18	1119L19.D	1	AZ45990W02	W IS&S 10/20/16, 11/04/16	20 Nov 16 17:47
16	19	1119L20.D	1	AZ45997W02	W IS&S 10/20/16, 11/04/16	20 Nov 16 18:15
17	20	1119L21.D	1	AZ45988W02	W IS&S 10/20/16, 11/04/16	20 Nov 16 18:43
18	26	1119L27.D	1	Ending CCV 8260 10ug/L 11/19/16	W IS&S 10/20/16, 11/04/16	20 Nov 16 21:31
19	30	1119L31.D	1	5ng- BFB STD 11-06-16	W IS&S 10/20/16, 11/04/16	20 Nov 16 23:23
20	31	1119L32.D	1	161119B CCV/LCS 10ug/L	W IS&S 10/20/16, 11/04/16	20 Nov 16 23:52
21	37	1119L38.D	1	161119B BLK-1WL	W IS&S 10/20/16, 11/04/16	21 Nov 16 2:40
22	39	1119L40.D	1	AZ45989W02	W IS&S 10/20/16, 11/04/16	21 Nov 16 3:36
23	40	1119L41.D	1	AZ45991W02	W IS&S 10/20/16, 11/04/16	21 Nov 16 4:04
24	41	1119L42.D	1	AZ45992W02	W IS&S 10/20/16, 11/04/16	21 Nov 16 4:32
25	42	1119L43.D	1	AZ45993W02	W IS&S 10/20/16, 11/04/16	21 Nov 16 5:00
26	43	1119L44.D	1	AZ45994W02	W IS&S 10/20/16, 11/04/16	21 Nov 16 5:28
27	44	1119L45.D	1	AZ45995W02	W IS&S 10/20/16, 11/04/16	21 Nov 16 5:56
28	45	1119L46.D	1	AZ45996W02	W IS&S 10/20/16, 11/04/16	21 Nov 16 6:24
29	53	1119L54.D	1	Ending CCV 8260 10ug/L 11/19/16	W IS&S 10/20/16, 11/04/16	21 Nov 16 10:08

EPA METHOD 8260B
Volatile Organic Compounds

APPL, INC.

EPA METHOD 8260B
Volatile Organic Compounds
QC Summary

APPL, INC.

Method Blank
EPA 8260B GRO WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161119W-45988 - 213857**
Batch ID: #GRO86-161119AL1

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	11/20/16	11/20/16
BLANK	SURROGATE: 4-BROMOFLUORO	95.3	85-114			%	11/20/16	11/20/16

Quant Method: LGAS6718.M
Run #: 1119L18
Instrument: Loki
Sequence: 161113
Initials: SV

GC SC-Blank-REG MDLs-DOD
Printed: 11/28/16 1:15:00 PM

Method Blank
EPA 8260B GRO WATER

Blank Name/QCG: **161119W-45989 - 213862**
Batch ID: #GRO86-161119BL

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	11/21/16	11/21/16
BLANK	SURROGATE: 4-BROMOFLUORO	100	85-114			%	11/21/16	11/21/16

Quant Method: LGAS6718.M
Run #: 1119L38
Instrument: Loki
Sequence: 161113
Initials: SV

GC SC-Blank-REG MDLs-DOD
Printed: 11/28/16 1:15:00 PM

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81515

Case No: 81515 Date Analyzed: 11/20/16

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: 4-BROMOFLUOROBENZENE (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
161119AL1-LCS	Lab Control Spike	85-114	102				
161119AL1-BLK	Blank	85-114	95.3				
AZ45990	ERH123	85-114	97.2				
AZ45997	ERH132	85-114	98.8				
AZ45988	ERH118	85-114	96.4				

Comments: Batch: #GRO86-161119AL

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81515

Case No: 81515 Date Analyzed: 11/21/16

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: 4-BROMOFLUOROBENZENE (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
161119BL-LCS	Lab Control Spike	85-114	98.4				
161119BL-BLK	Blank	85-114	100				
AZ45989	ERH119	85-114	95.1				
AZ45991	ERH124	85-114	99.8				
AZ45992	ERH125	85-114	98.5				
AZ45993	ERH127	85-114	97.2				
AZ45994	ERH129	85-114	98.6				
AZ45995	ERH130	85-114	97.6				
AZ45996	ERH131	85-114	99.9				

Comments: Batch: #GRO86-161119BL

Laboratory Control Spike Recovery
EPA 8260B GRO WATER

APPL ID: **161120W-45988 LCS - 213857**
Batch ID: #GRO86-161119AL1

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
GASOLINE RANGE ORGANICS	300	276	92.0	78-122
SURROGATE: 4-BROMOFLUOROBENZE	25.0	25.5	102	85-114

Comments: _____

Primary	SPK
Quant Method :	LGAS6718.M
Extraction Date :	11/20/16
Analysis Date :	11/20/16
Instrument :	Loki
Run :	1119L07
Initials :	SV

Printed: 11/28/16 1:14:52 PM
APPL Standard LCS

Laboratory Control Spike Recovery
EPA 8260B GRO WATER

APPL ID: **161121W-45989 LCS - 213862**
Batch ID: #GRO86-161119BL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
GASOLINE RANGE ORGANICS	300	264	88.0	78-122
SURROGATE: 4-BROMOFLUOROBENZE	25.0	24.6	98.4	85-114

Comments: _____

Primary	SPK
Quant Method :	LGAS6718.M
Extraction Date :	11/21/16
Analysis Date :	11/21/16
Instrument :	Loki
Run :	1119L34
Initials :	SV

Printed: 11/28/16 1:14:52 PM
APPL Standard LCS

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81515

Case No: 81515 Date Analyzed: 11/20/16

Matrix: WATER Instrument: Loki

Blank ID: 161119AL1-BLK Time Analyzed: 1719

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161119AL1-LCS	Lab Control Spike	1119L07	11/20/16 1210
161119AL1-BLK	Blank	1119L18	11/20/16 1719
AZ45990	ERH123	1119L19	11/20/16 1747
AZ45997	ERH132	1119L20	11/20/16 1815
AZ45988	ERH118	1119L21	11/20/16 1843

Comments: Batch: #GRO86-161119AL

Printed: 11/28/16 1:14:49 PM
Form 4, Blank Summary

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81515

Case No: 81515 Date Analyzed: 11/21/16

Matrix: WATER Instrument: Loki

Blank ID: 161119BL-BLK Time Analyzed: 0240

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161119BL-LCS	Lab Control Spike	1119L34	11/21/16 0047
161119BL-BLK	Blank	1119L38	11/21/16 0240
AZ45989	ERH119	1119L40	11/21/16 0336
AZ45991	ERH124	1119L41	11/21/16 0404
AZ45992	ERH125	1119L42	11/21/16 0432
AZ45993	ERH127	1119L43	11/21/16 0500
AZ45994	ERH129	1119L44	11/21/16 0528
AZ45995	ERH130	1119L45	11/21/16 0556
AZ45996	ERH131	1119L46	11/21/16 0624

Comments: Batch: #GRO86-161119BL

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81515

Lab File ID (Standard): 1113L10.D Date Analyzed: 11/13/16

Instrument ID: Loki Time Analyzed: 15:56

GC Column: ID: Heated Purge: (Y/N)

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	817344	5.38	790336	8.70	444864	11.03
	UPPER LIMIT	1634688	5.88	1580672	9.20	889728	11.53
	LOWER LIMIT	408672	4.88	395168	8.20	222432	10.53
	SAMPLE NO.						
01	161119A CCV/LCS 300	707648	5.38	643136	8.70	339968	11.03
02	161119A BLK-1WL	674496	5.38	622464	8.70	311488	11.03
03	AZ45990W02	664832	5.39	609600	8.70	321792	11.03
04	AZ45997W02	672512	5.38	597888	8.70	307584	11.03
05	AZ45988W02	649408	5.39	612544	8.70	323648	11.03
06	Ending CCV GAS 300ug	673408	5.38	615232	8.70	315968	11.03
07	161119B CCV/LCS 300	681664	5.38	615488	8.70	320000	11.03
08	161119B BLK-1WL	662528	5.38	592192	8.70	302656	11.03
09	AZ45989W02	662251	5.38	622784	8.70	299904	11.03
10	AZ45991W02	641216	5.38	595776	8.70	315392	11.03
11	AZ45992W02	681088	5.38	614208	8.70	320704	11.03
12	AZ45993W02	655040	5.38	598528	8.70	307904	11.03
13	AZ45994W02	662425	5.38	606912	8.70	311296	11.03
14	AZ45995W02	644864	5.38	597952	8.70	298176	11.03
15	AZ45996W02	651328	5.38	584192	8.70	300352	11.03
16	Ending CCV GAS 300ug	663808	5.38	622528	8.70	308096	11.03
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

EPA METHOD 8260B
Volatile Organic Compounds
Sample Data

APPL, INC.

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH118

Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515

APPL ID: AZ45988

QCG: #GRO86-161119AL1-21385

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	11/20/16	11/20/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	96.4	85-114			%	11/20/16	11/20/16

Quant Method:	LGAS6718.M
Run #:	1119L21
Instrument:	Loki
Sequence:	161113
Dilution Factor:	1
Initials:	SV

Printed: 11/28/16 1:14:44 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1119L21.D Vial: 20
Acq On : 20 Nov 16 18:43 Operator: PM,DG,SV,CMM
Sample : AZ45988W02 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 9:00 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1464523	25.00 ppb	-0.10
3) Chlorobenzene-D5 (IS)	8.70	TIC	2020020	25.00 ppb	-0.09
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	2087768	25.00 ppb	-0.09

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
1119L21.D TALLW.M Wed Nov 30 09:19:44 2016 Page 1

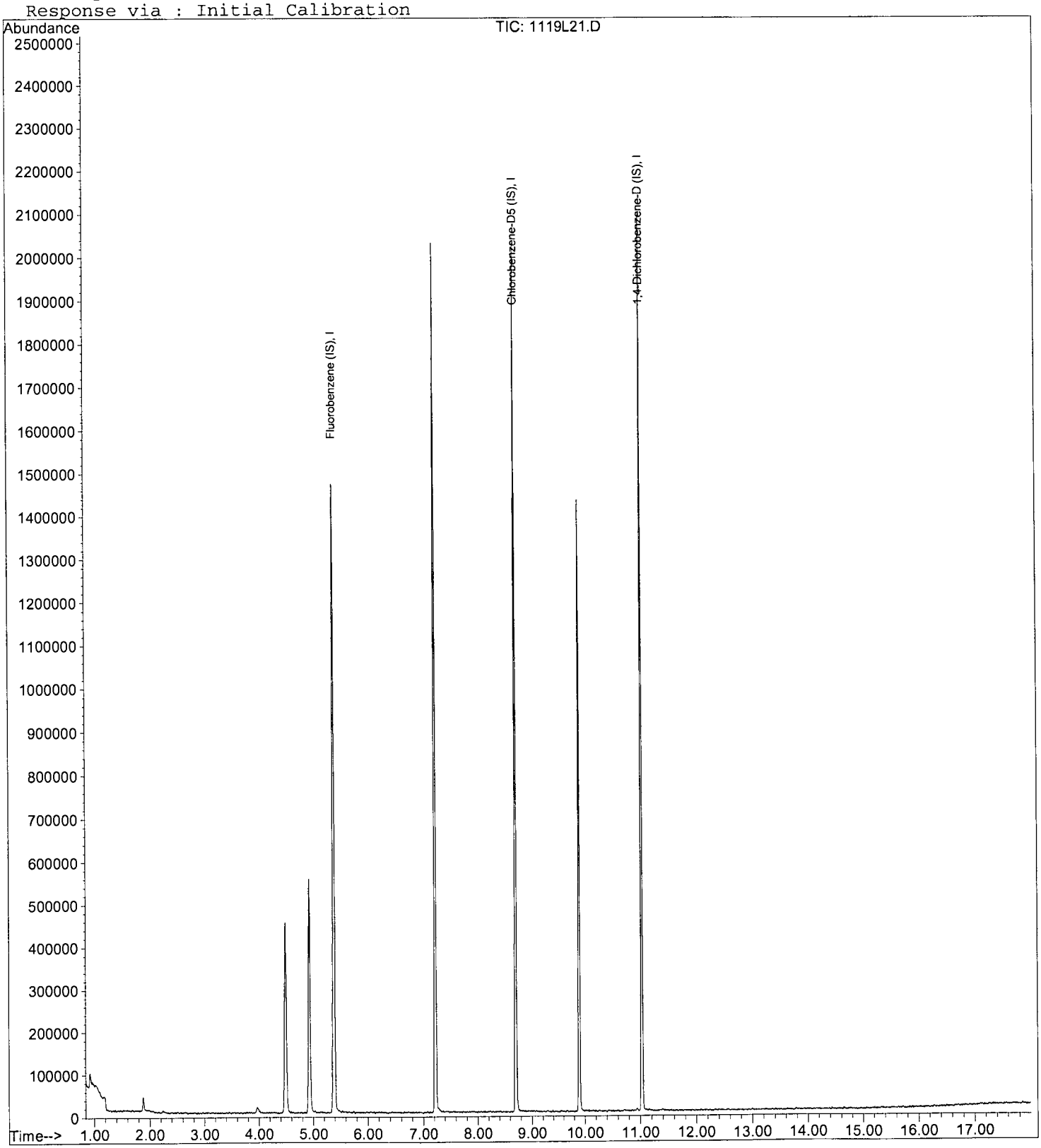
Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L21.D
Acq On : 20 Nov 16 18:43
Sample : AZ45988W02
Misc : W IS&S 10/20/16, 11/04/16

Vial: 20
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 9:00 2016 Quant Results File: LGAS6718.RES

Method : M:\THOR\DATA\T161107\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Nov 16 13:26:13 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1119L21.D Vial: 20
Acq On : 20 Nov 16 18:43 Operator: PM,DG,SV,CMM
Sample : AZ45988W02 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 10:20 2016 Quant Results File: LSUR1113.RES

Quant Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.39	96	649408	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	612544	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	323648	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.49	111	338572	24.71	ppb	0.00
Spiked Amount 25.000			Recovery =	98.824%		
3) 1,2-DCA-D4(S)	4.93	65	425726	28.50	ppb	0.00
Spiked Amount 25.000			Recovery =	113.984%		
5) Toluene-D8(S)	7.22	98	1213445	25.94	ppb	0.00
Spiked Amount 25.000			Recovery =	103.768%		
6) 4-Bromofluorobenzene(S)	9.89	95	407005	24.11	ppb	0.00
Spiked Amount 25.000			Recovery =	96.432%		

Target Compounds Qvalue

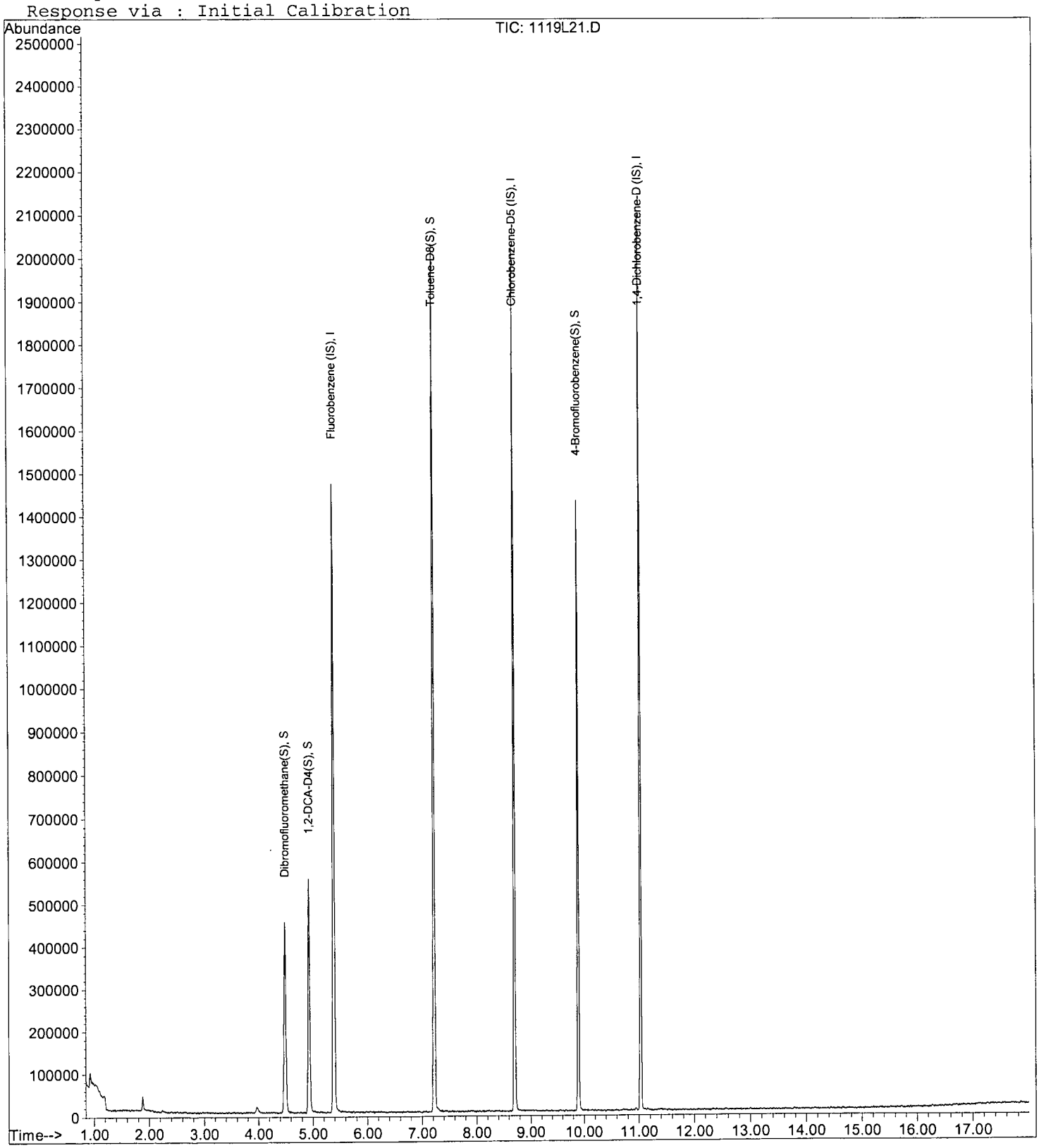
(#) = qualifier out of range (m) = manual integration
1119L21.D LSUR1113.M Wed Nov 30 09:20:40 2016 Page 1

Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L21.D Vial: 20
Acq On : 20 Nov 16 18:43 Operator: PM,DG,SV,CMM
Sample : AZ45988W02 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 10:20 2016 Quant Results File: LSUR1113.RES

Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH119

Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515

APPL ID: AZ45989

QCG: #GRO86-161119BL-213862

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	11/21/16	11/21/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	95.1	85-114			%	11/21/16	11/21/16

Quant Method:	LGAS6718.M
Run #:	1119L40
Instrument:	Loki
Sequence:	161113
Dilution Factor:	1
Initials:	SV

Printed: 11/28/16 1:14:44 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1119L40.D Vial: 39
Acq On : 21 Nov 16 3:36 Operator: PM,DG,SV,CMM
Sample : AZ45989W02 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 9:41 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1489690	25.00	ppb	-0.10
3) Chlorobenzene-D5 (IS)	8.70	TIC	2071758	25.00	ppb	-0.09
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1973658	25.00	ppb	-0.09

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

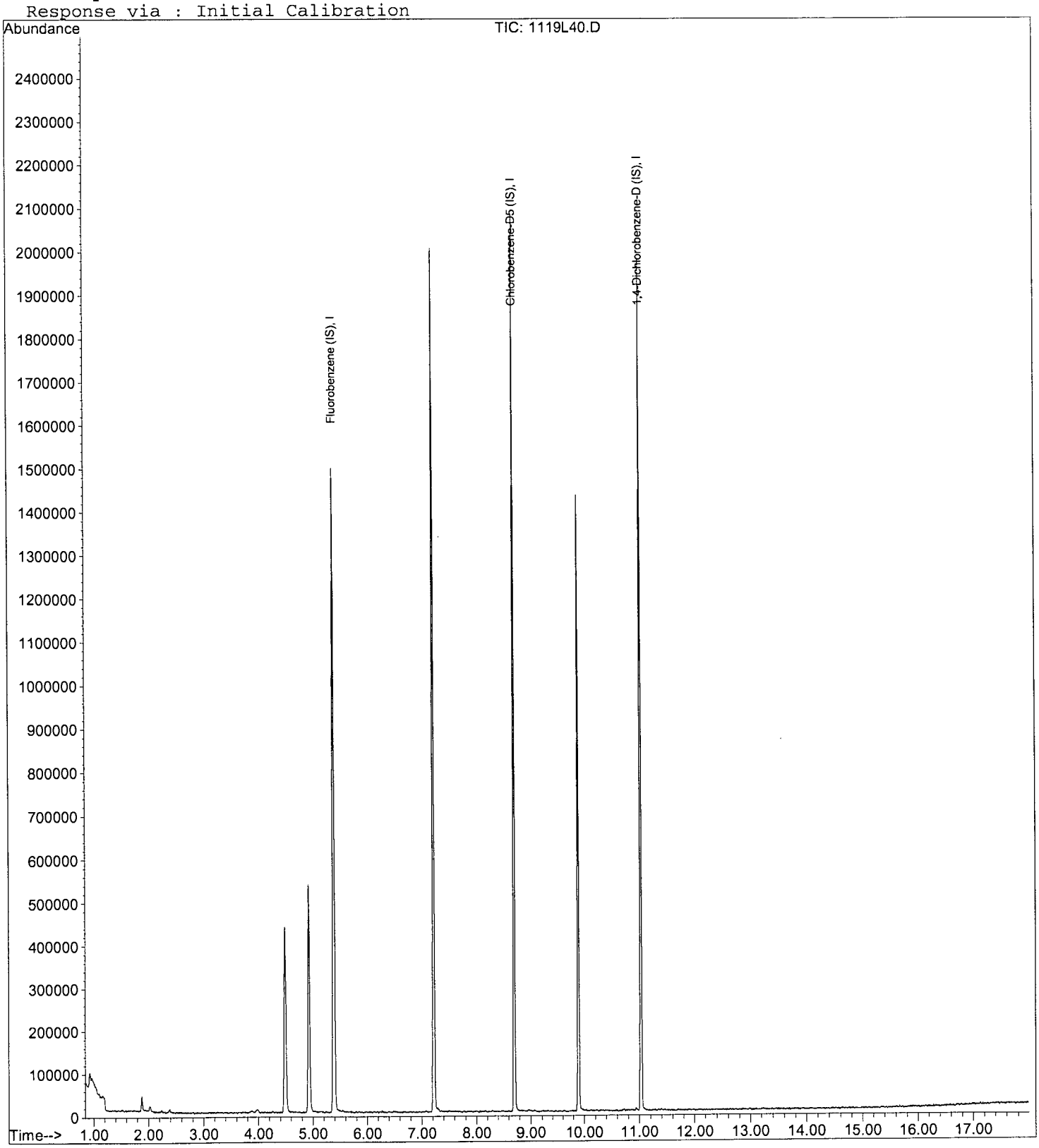
Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L40.D
Acq On : 21 Nov 16 3:36
Sample : AZ45989W02
Misc : W IS&S 10/20/16, 11/04/16

Vial: 39
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 9:41 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1119L40.D
Acq On : 21 Nov 16 3:36
Sample : AZ45989W02
Misc : W IS&S 10/20/16, 11/04/16

Vial: 39
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 12:22 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	662251	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	622784	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	299904	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	322786	23.10	ppb	0.00
Spiked Amount 25.000			Recovery = 92.388%			
37) 1,2-DCA-D4(S)	4.93	65	410550	26.95	ppb	0.00
Spiked Amount 25.000			Recovery = 107.788%			
57) Toluene-D8(S)	7.22	98	1200623	25.25	ppb	0.00
Spiked Amount 25.000			Recovery = 100.984%			
65) 4-Bromofluorobenzene(S)	9.89	95	408245	23.78	ppb	0.00
Spiked Amount 25.000			Recovery = 95.136%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

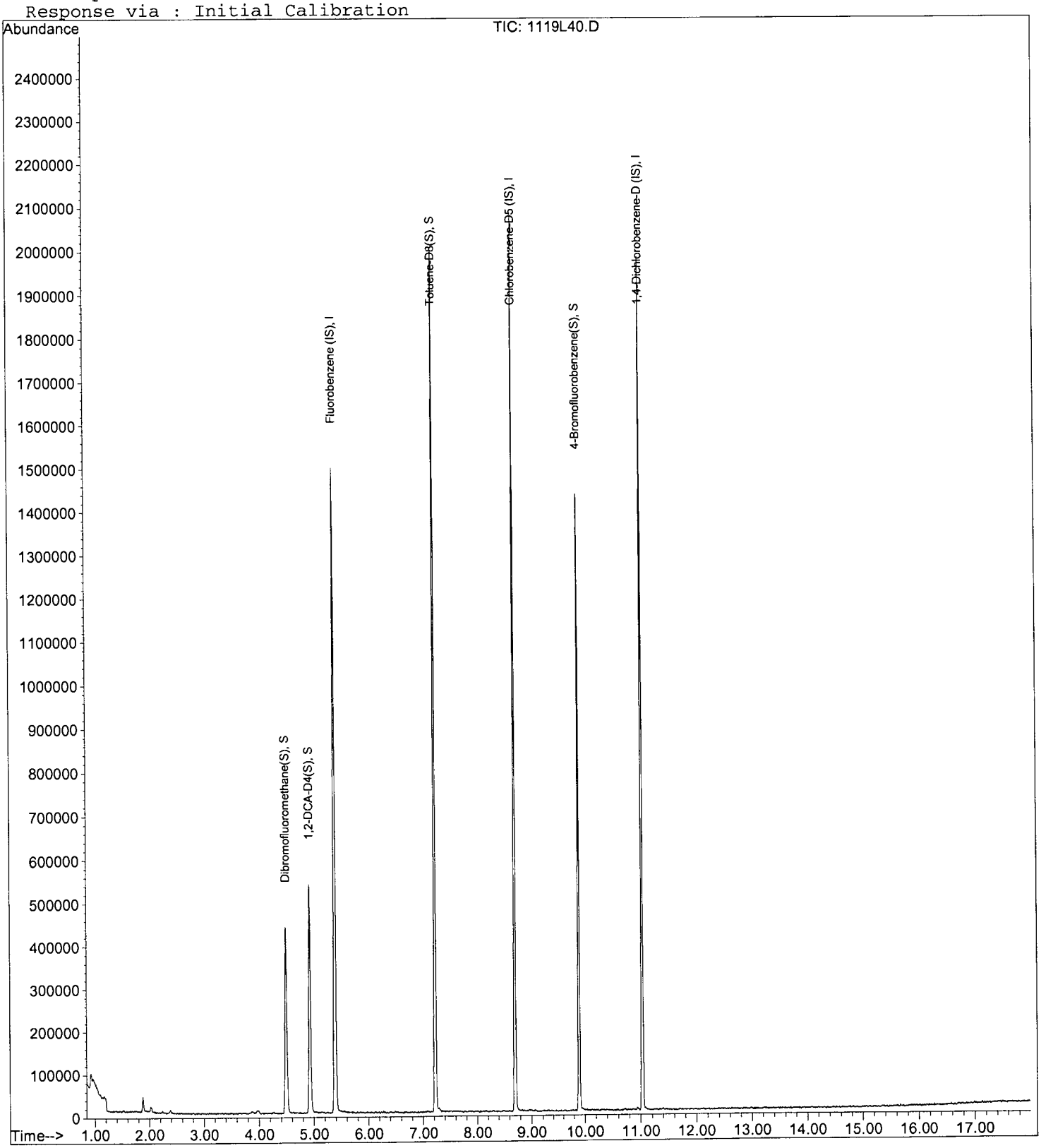
Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L40.D
Acq On : 21 Nov 16 3:36
Sample : AZ45989W02
Misc : W IS&S 10/20/16, 11/04/16

Vial: 39
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 12:22 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH123

Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515

APPL ID: AZ45990

QCG: #GRO86-161119AL1-21385

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	11/20/16	11/20/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	97.2	85-114			%	11/20/16	11/20/16

Quant Method: LGAS6718.M
Run #: 1119L19
Instrument: Loki
Sequence: 161113
Dilution Factor: 1
Initials: SV

Printed: 11/28/16 1:14:44 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1119L19.D Vial: 18
Acq On : 20 Nov 16 17:47 Operator: PM,DG,SV,CMM
Sample : AZ45990W02 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 8:59 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.39	TIC	1490963	25.00	ppb	-0.10
3) Chlorobenzene-D5 (IS)	8.70	TIC	2022435	25.00	ppb	-0.09
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	2082528	25.00	ppb	-0.09

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
1119L19.D TALLW.M Wed Nov 30 09:19:40 2016 Page 1

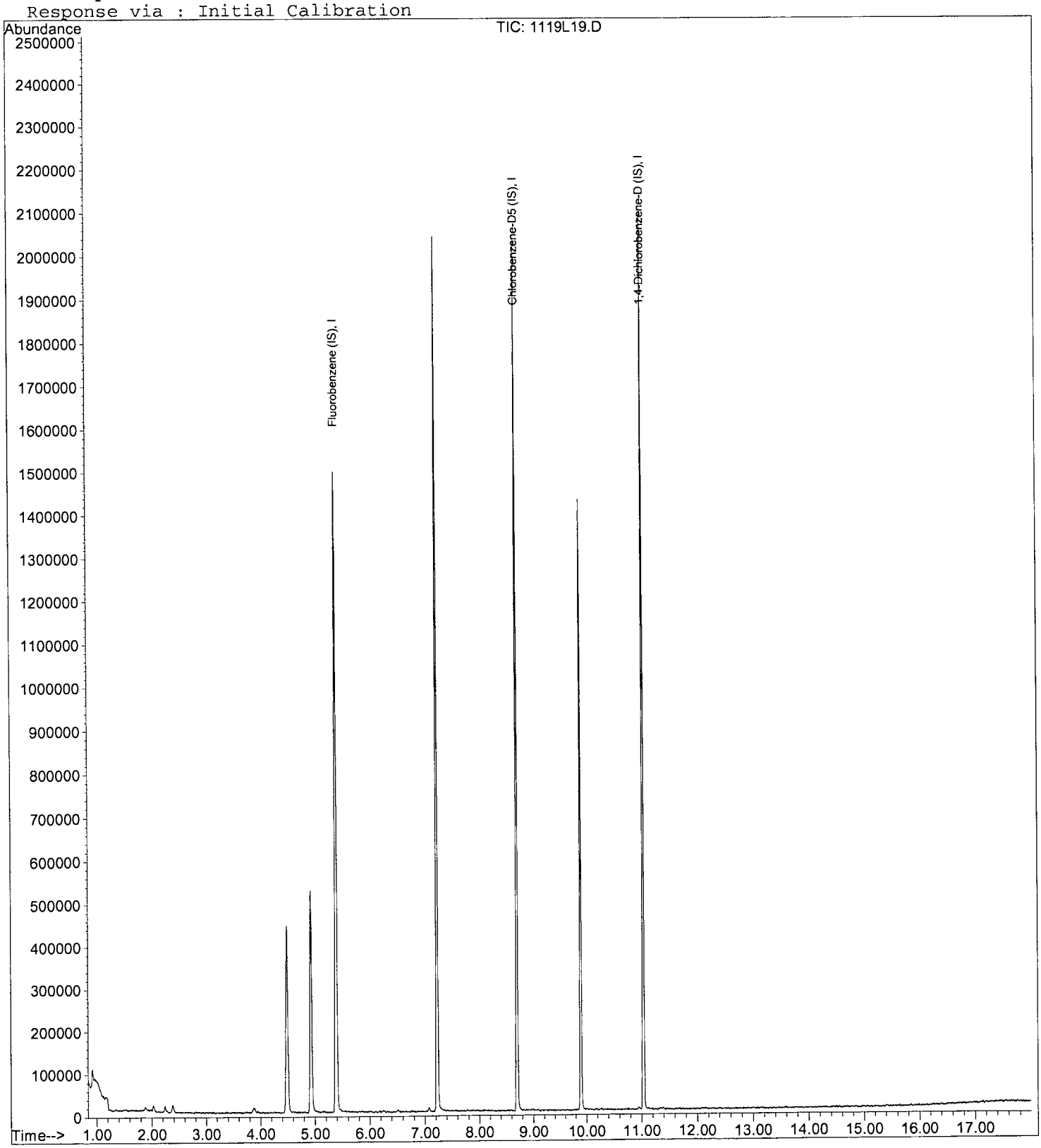
Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L19.D
Acq On : 20 Nov 16 17:47
Sample : AZ45990W02
Misc : W IS&S 10/20/16, 11/04/16

Vial: 18
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 8:59 2016 Quant Results File: LGAS6718.RES

Method : M:\THOR\DATA\T161107\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Nov 16 13:26:13 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1119L19.D Vial: 18
Acq On : 20 Nov 16 17:47 Operator: PM,DG,SV,CMM
Sample : AZ45990W02 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 10:20 2016 Quant Results File: LSUR1113.RES

Quant Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.39	96	664832	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	609600	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	321792	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.49	111	329148	23.46	ppb	0.00
Spiked Amount 25.000			Recovery =	93.844%		
3) 1,2-DCA-D4(S)	4.93	65	414256	27.08	ppb	0.00
Spiked Amount 25.000			Recovery =	108.340%		
5) Toluene-D8(S)	7.22	98	1199913	25.78	ppb	0.00
Spiked Amount 25.000			Recovery =	103.108%		
6) 4-Bromofluorobenzene(S)	9.89	95	408074	24.29	ppb	0.00
Spiked Amount 25.000			Recovery =	97.152%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

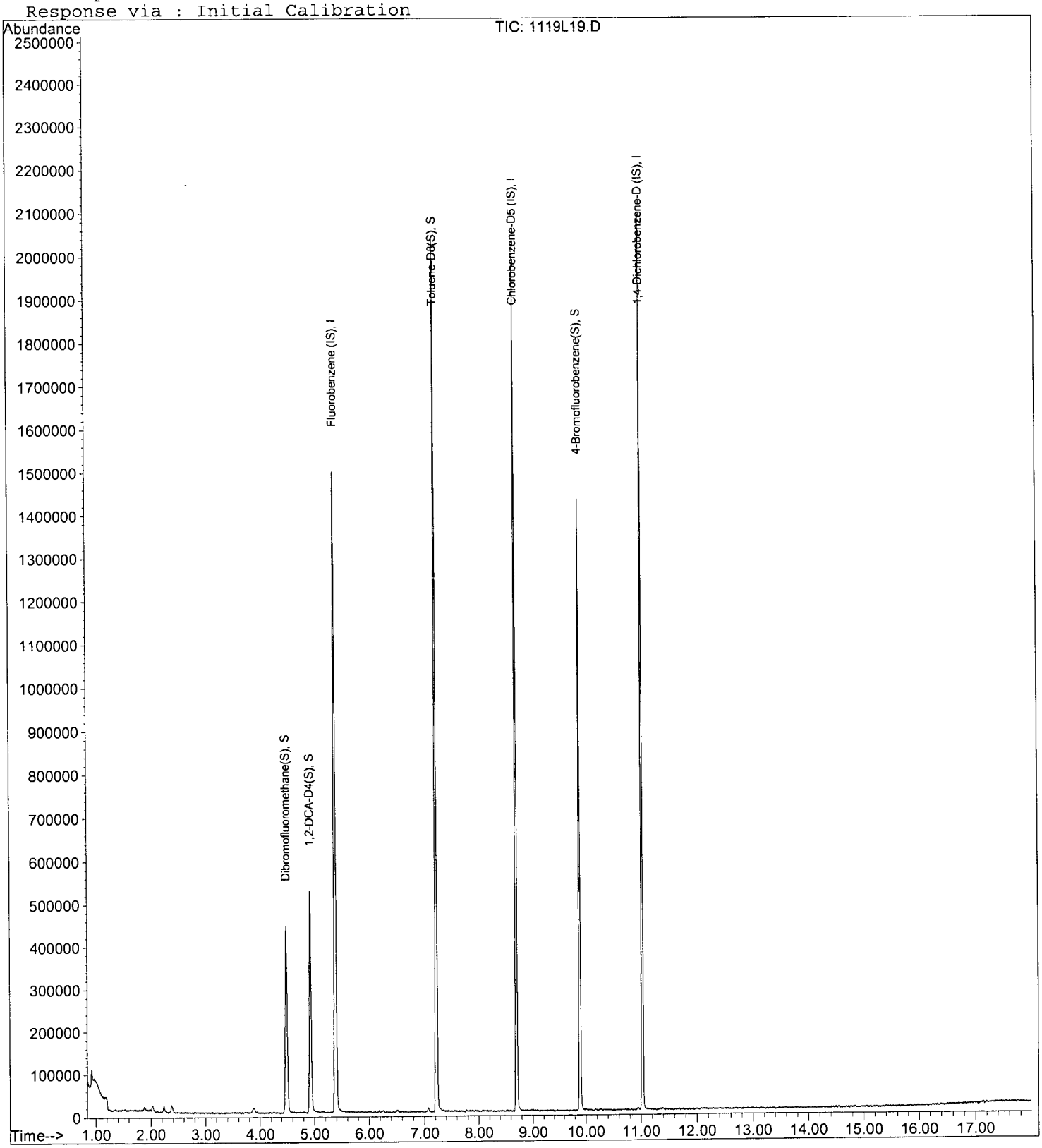
Data File : M:\LOKI\DATA\161113\1119L19.D
Acq On : 20 Nov 16 17:47
Sample : AZ45990W02
Misc : W IS&S 10/20/16, 11/04/16

Vial: 18
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 10:20 2016

Quant Results File: LSUR1113.RES

Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81515

Sample ID: ERH124

APPL ID: AZ45991

Sample Collection Date: 11/15/16

QCG: #GRO86-161119BL-213862

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	26 ++	20	18.0	8.6	ug/L	11/21/16	11/21/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	99.8	85-114			%	11/21/16	11/21/16

++(G3) The analyst has noted that the chromatogram of this sample includes higher boiling hydrocarbons.

Quant Method: LGAS6718.M
Run #: 1119L41
Instrument: Loki
Sequence: 161113
Dilution Factor: 1
Initials: SV

Printed: 11/28/16 1:14:44 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1119L41.D Vial: 40
Acq On : 21 Nov 16 4:04 Operator: PM,DG,SV,CMM
Sample : AZ45991W02 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 9:43 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1442410	25.00	ppb	-0.10
3) Chlorobenzene-D5 (IS)	8.70	TIC	1979203	25.00	ppb	-0.09
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	2069393	25.00	ppb	-0.09
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.70	TIC	15600619m	25.68	ppb	100

(#) = qualifier out of range (m) = manual integration
1119L41.D LGAS6718.M Wed Nov 30 09:23:50 2016 Page 1

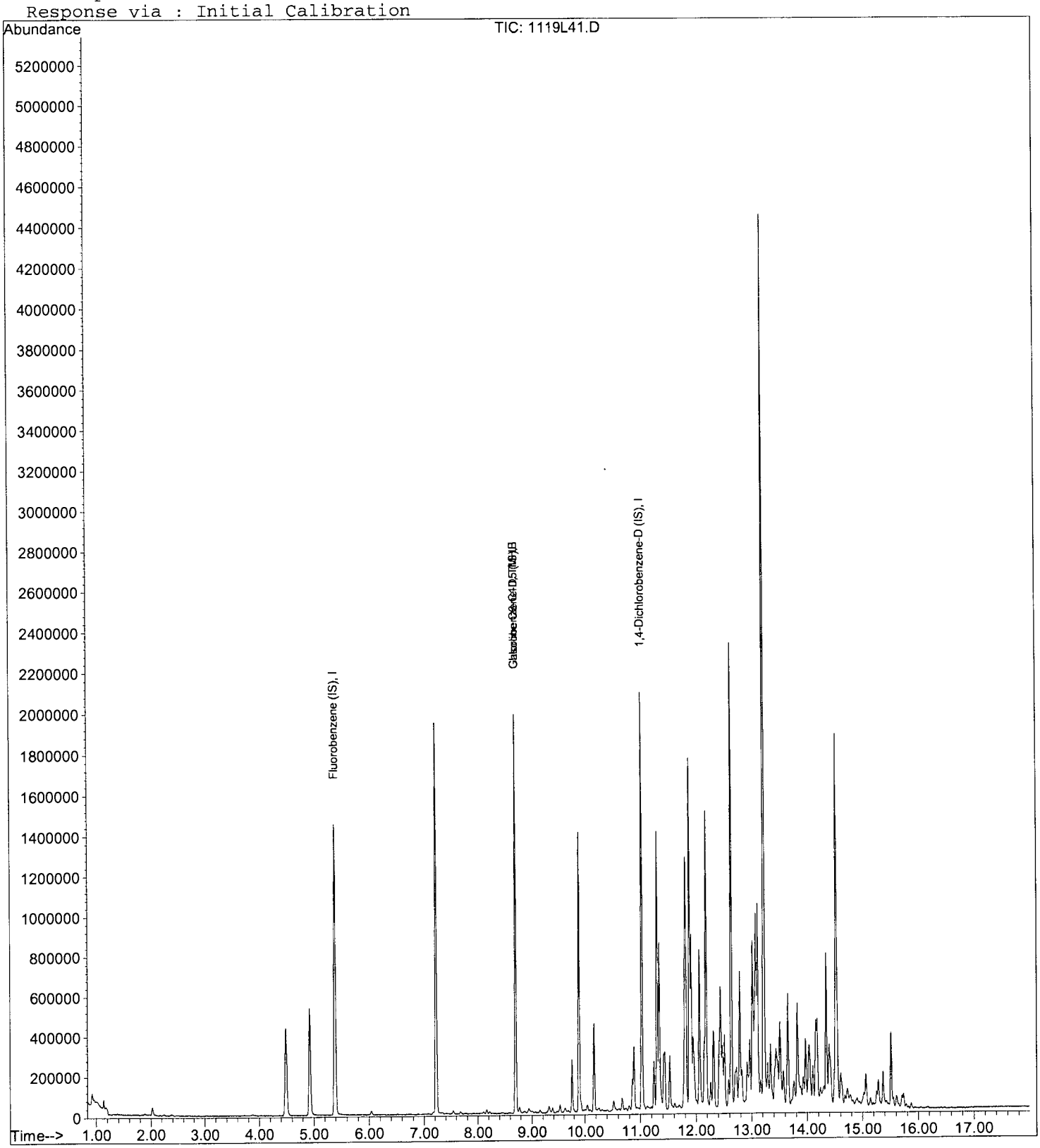
Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L41.D
Acq On : 21 Nov 16 4:04
Sample : AZ45991W02
Misc : W IS&S 10/20/16, 11/04/16

Vial: 40
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 9:43 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1119L41.D Vial: 40
Acq On : 21 Nov 16 4:04 Operator: PM,DG,SV,CMM
Sample : AZ45991W02 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 12:23 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	641216	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	595776	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	315392	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	320303	23.67	ppb	0.00
Spiked Amount 25.000			Recovery = 94.688%			
37) 1,2-DCA-D4(S)	4.93	65	402324	27.27	ppb	0.00
Spiked Amount 25.000			Recovery = 109.092%			
57) Toluene-D8(S)	7.22	98	1170044	25.72	ppb	0.00
Spiked Amount 25.000			Recovery = 102.876%			
65) 4-Bromofluorobenzene(S)	9.89	95	409855	24.96	ppb	0.00
Spiked Amount 25.000			Recovery = 99.840%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
1119L41.D LSUR1113.M Wed Nov 30 09:28:18 2016 Page 1

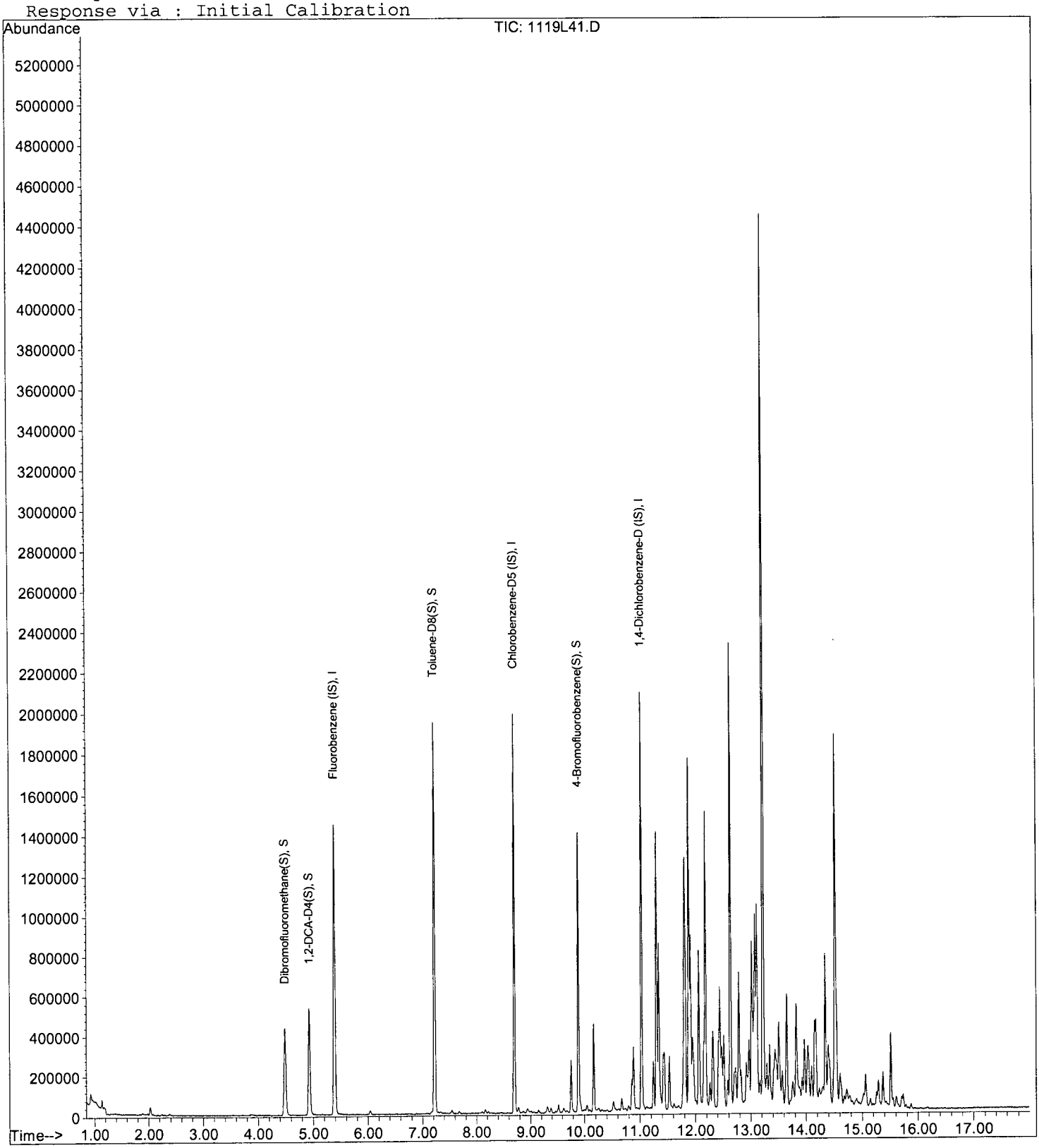
Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L41.D
Acq On : 21 Nov 16 4:04
Sample : AZ45991W02
Misc : W IS&S 10/20/16, 11/04/16

Vial: 40
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 12:23 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH125

Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515

APPL ID: AZ45992

QCG: #GRO86-161119BL-213862

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	11/21/16	11/21/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	98.5	85-114			%	11/21/16	11/21/16

Quant Method: LGAS6718.M
Run #: 1119L42
Instrument: Loki
Sequence: 161113
Dilution Factor: 1
Initials: SV

Printed: 11/28/16 1:14:44 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1119L42.D Vial: 41
Acq On : 21 Nov 16 4:32 Operator: PM,DG,SV,CMM
Sample : AZ45992W02 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 9:42 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1526120	25.00	ppb	-0.10
3) Chlorobenzene-D5 (IS)	8.70	TIC	2022625	25.00	ppb	-0.09
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	2070456	25.00	ppb	-0.09

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
1119L42.D LGAS6718.M Wed Nov 30 09:23:52 2016 Page 1

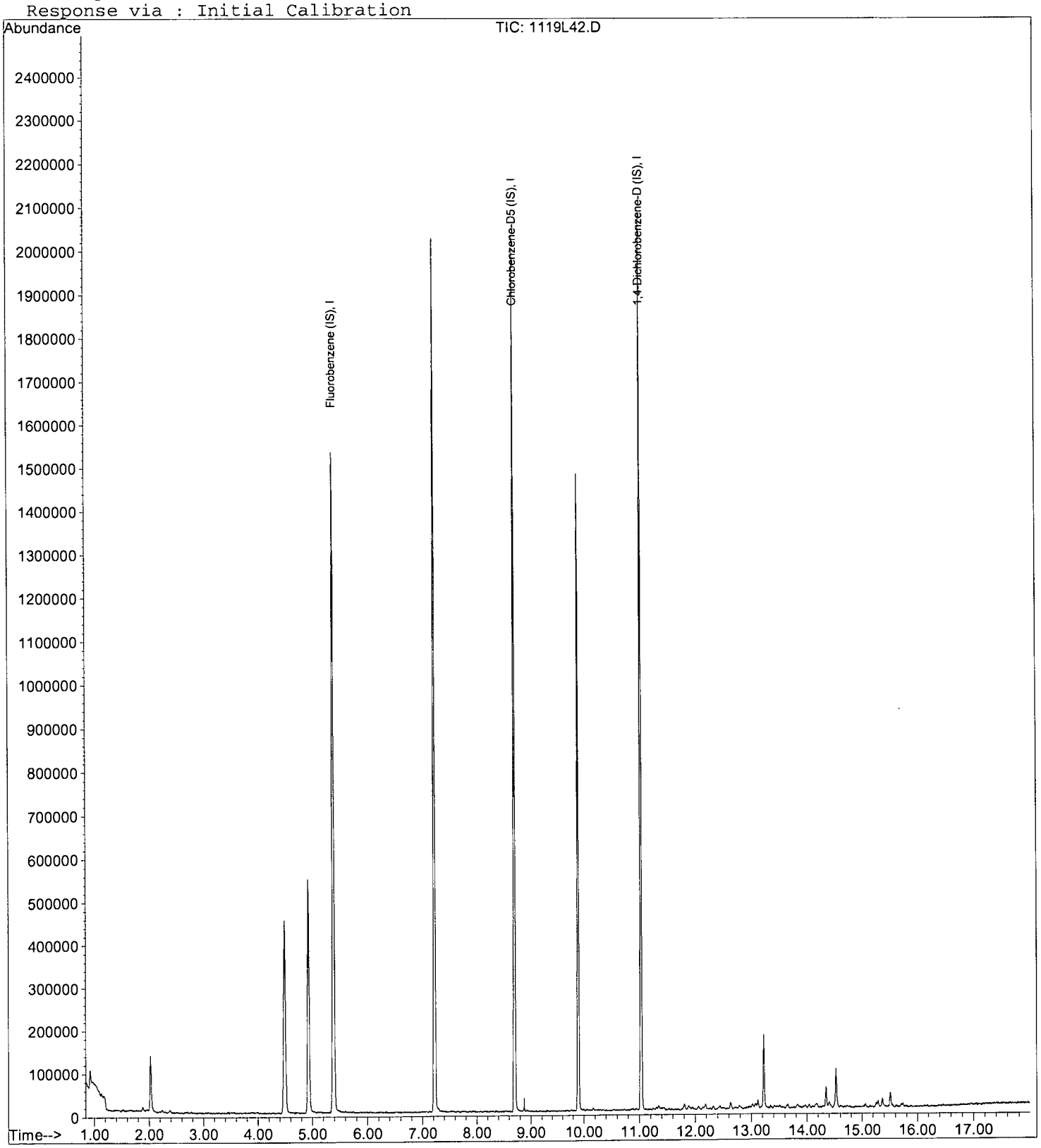
Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L42.D
Acq On : 21 Nov 16 4:32
Sample : AZ45992W02
Misc : W IS&S 10/20/16, 11/04/16

Vial: 41
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 9:42 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1119L42.D
Acq On : 21 Nov 16 4:32
Sample : AZ45992W02
Misc : W IS&S 10/20/16, 11/04/16

Vial: 41
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 12:23 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	681088	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	614208	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	320704	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	332405	23.13	ppb	0.00
Spiked Amount 25.000			Recovery =	92.512%		
37) 1,2-DCA-D4(S)	4.93	65	418781	26.73	ppb	0.00
Spiked Amount 25.000			Recovery =	106.908%		
57) Toluene-D8(S)	7.22	98	1226496	26.15	ppb	0.00
Spiked Amount 25.000			Recovery =	104.600%		
65) 4-Bromofluorobenzene(S)	9.89	95	416953	24.63	ppb	0.00
Spiked Amount 25.000			Recovery =	98.524%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

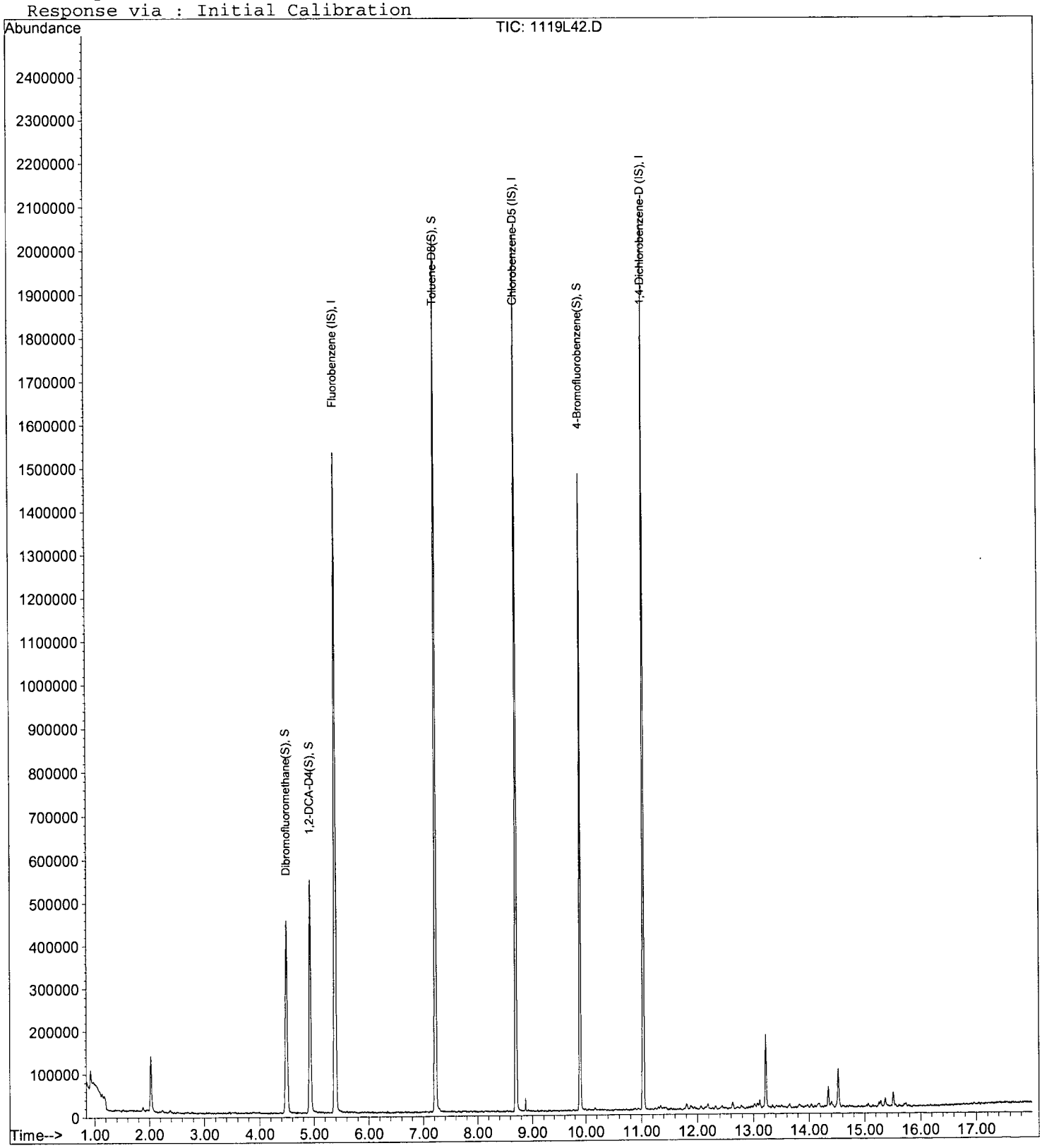
Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L42.D
Acq On : 21 Nov 16 4:32
Sample : AZ45992W02
Misc : W IS&S 10/20/16, 11/04/16

Vial: 41
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 12:23 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH127

Sample Collection Date: 11/16/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515

APPL ID: AZ45993

QCG: #GRO86-161119BL-213862

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	11/21/16	11/21/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	97.2	85-114			%	11/21/16	11/21/16

Quant Method: LGAS6718.M
Run #: 1119L43
Instrument: Loki
Sequence: 161113
Dilution Factor: 1
Initials: SV

Printed: 11/28/16 1:14:44 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1119L43.D Vial: 42
Acq On : 21 Nov 16 5:00 Operator: PM,DG,SV,CMM
Sample : AZ45993W02 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 9:42 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1474319	25.00	ppb	-0.10
3) Chlorobenzene-D5 (IS)	8.70	TIC	1991396	25.00	ppb	-0.09
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	2040741	25.00	ppb	-0.09

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

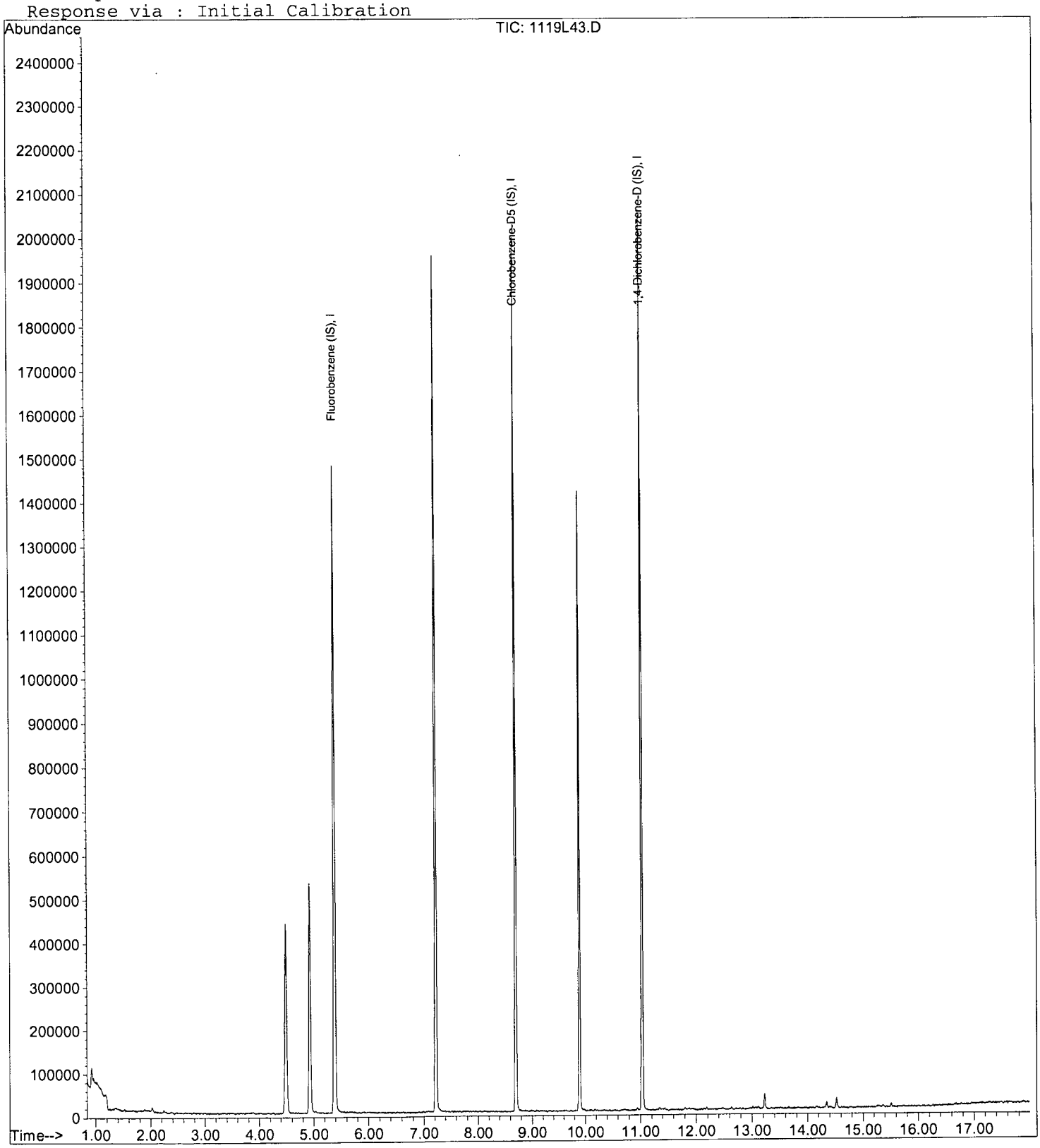
Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L43.D
Acq On : 21 Nov 16 5:00
Sample : AZ45993W02
Misc : W IS&S 10/20/16, 11/04/16

Vial: 42
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 9:42 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1119L43.D Vial: 42
Acq On : 21 Nov 16 5:00 Operator: PM,DG,SV,CMM
Sample : AZ45993W02 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 12:23 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	655040	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	598528	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	307904	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	326675	23.63	ppb	0.00
Spiked Amount 25.000			Recovery = 94.532%			
37) 1,2-DCA-D4(S)	4.93	65	406025	26.94	ppb	0.00
Spiked Amount 25.000			Recovery = 107.772%			
57) Toluene-D8(S)	7.22	98	1186140	25.95	ppb	0.00
Spiked Amount 25.000			Recovery = 103.812%			
65) 4-Bromofluorobenzene(S)	9.89	95	401056	24.31	ppb	0.00
Spiked Amount 25.000			Recovery = 97.248%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
1119L43.D LSUR1113.M Wed Nov 30 09:28:24 2016 Page 1

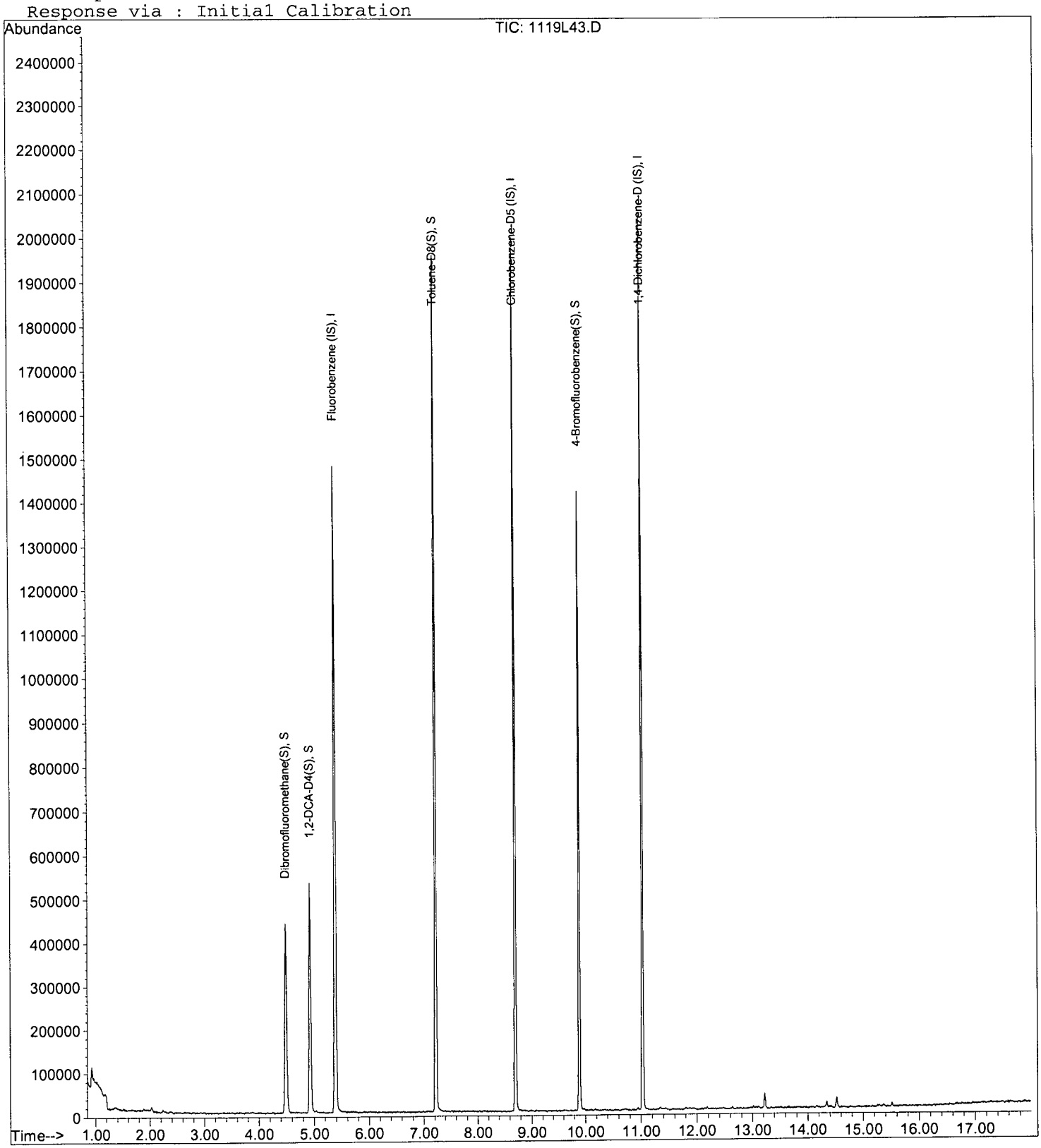
Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L43.D
Acq On : 21 Nov 16 5:00
Sample : AZ45993W02
Misc : W IS&S 10/20/16, 11/04/16

Vial: 42
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 12:23 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initia1 Calibration



EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH129

Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515

APPL ID: AZ45994

QCG: #GRO86-161119BL-213862

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	11/21/16	11/21/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	98.6	85-114			%	11/21/16	11/21/16

Quant Method: LGAS6718.M
Run #: 1119L44
Instrument: Loki
Sequence: 161113
Dilution Factor: 1
Initials: SV

Printed: 11/28/16 1:14:44 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1119L44.D
Acq On : 21 Nov 16 5:28
Sample : AZ45994W02
Misc : W IS&S 10/20/16, 11/04/16

Vial: 43
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 9:43 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1502829	25.00	ppb	-0.10
3) Chlorobenzene-D5 (IS)	8.70	TIC	1997607	25.00	ppb	-0.09
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	2044142	25.00	ppb	-0.09

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

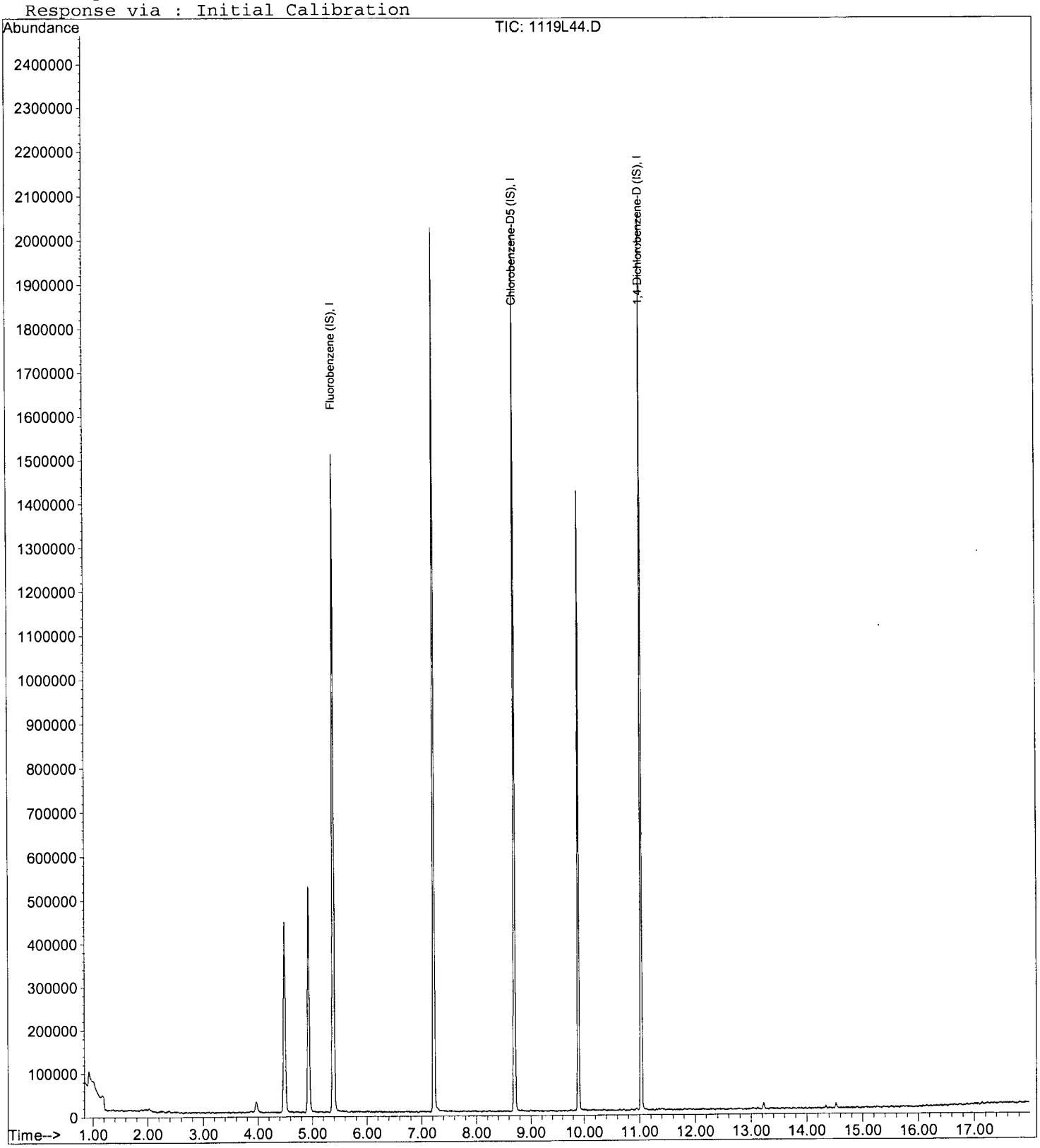
Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L44.D
Acq On : 21 Nov 16 5:28
Sample : AZ45994W02
Misc : W IS&S 10/20/16, 11/04/16

Vial: 43
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 9:43 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1119L44.D Vial: 43
Acq On : 21 Nov 16 5:28 Operator: PM,DG,SV,CMM
Sample : AZ45994W02 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 12:24 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	662425	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	606912	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	311296	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	327796	23.45	ppb	0.00
Spiked Amount 25.000			Recovery =	93.800%		
37) 1,2-DCA-D4(S)	4.93	65	402589	26.42	ppb	0.00
Spiked Amount 25.000			Recovery =	105.672%		
57) Toluene-D8(S)	7.22	98	1197711	25.84	ppb	0.00
Spiked Amount 25.000			Recovery =	103.376%		
65) 4-Bromofluorobenzene(S)	9.89	95	412488	24.66	ppb	0.00
Spiked Amount 25.000			Recovery =	98.640%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
1119L44.D LSUR1113.M Wed Nov 30 09:28:26 2016 Page 1

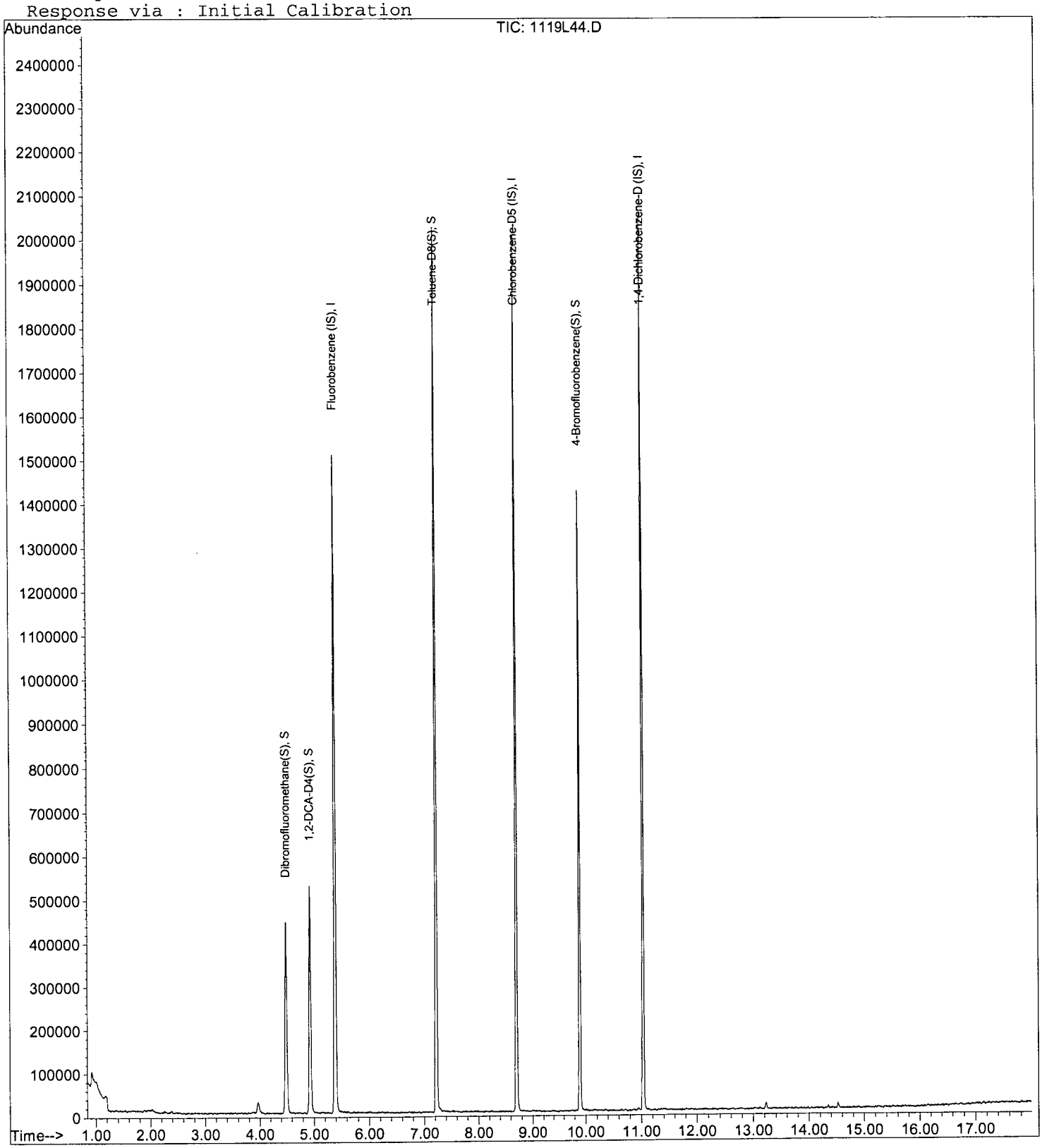
Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L44.D
Acq On : 21 Nov 16 5:28
Sample : AZ45994W02
Misc : W IS&S 10/20/16, 11/04/16

Vial: 43
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 12:24 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH130

Sample Collection Date: 11/16/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515

APPL ID: AZ45995

QCG: #GRO86-161119BL-213862

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	11/21/16	11/21/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	97.6	85-114			%	11/21/16	11/21/16

Quant Method:	LGAS6718.M
Run #:	1119L45
Instrument:	Loki
Sequence:	161113
Dilution Factor:	1
Initials:	SV

Printed: 11/28/16 1:14:44 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1119L45.D Vial: 44
Acq On : 21 Nov 16 5:56 Operator: PM,DG,SV,CMM
Sample : AZ45995W02 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 9:43 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1461248	25.00	ppb	-0.10
3) Chlorobenzene-D5 (IS)	8.70	TIC	1982426	25.00	ppb	-0.09
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1937110	25.00	ppb	-0.09

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
1119L45.D LGAS6718.M Wed Nov 30 09:23:58 2016 Page 1

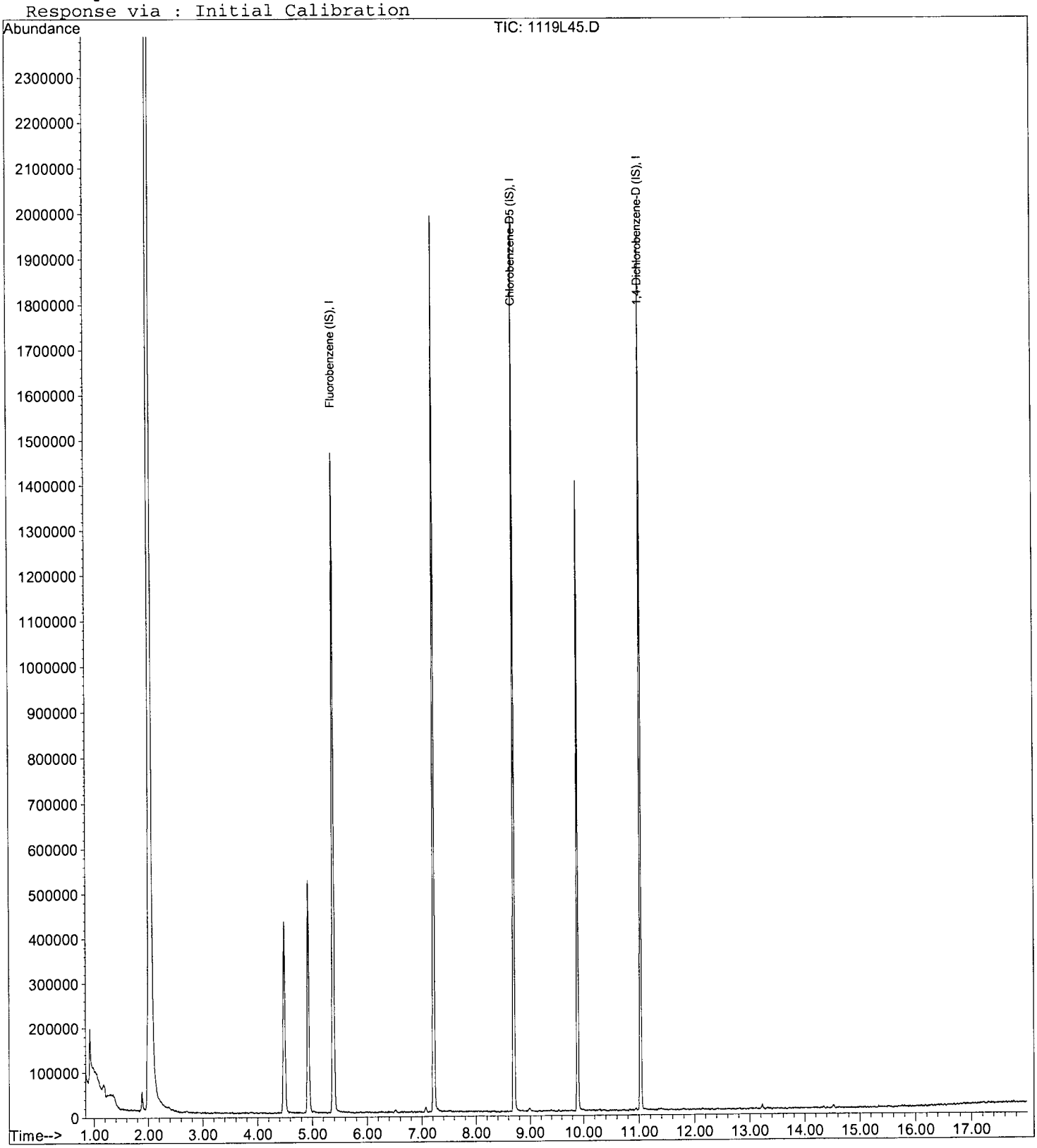
Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L45.D
Acq On : 21 Nov 16 5:56
Sample : AZ45995W02
Misc : W IS&S 10/20/16, 11/04/16

Vial: 44
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 9:43 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1119L45.D
Acq On : 21 Nov 16 5:56
Sample : AZ45995W02
Misc : W IS&S 10/20/16, 11/04/16

Vial: 44
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 12:24 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	644864	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	597952	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	298176	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	316029	23.22	ppb	0.00
Spiked Amount 25.000			Recovery = 92.896%			
37) 1,2-DCA-D4(S)	4.93	65	404045	27.24	ppb	0.00
Spiked Amount 25.000			Recovery = 108.940%			
57) Toluene-D8(S)	7.22	98	1181311	25.87	ppb	0.00
Spiked Amount 25.000			Recovery = 103.488%			
65) 4-Bromofluorobenzene(S)	9.89	95	402214	24.41	ppb	0.00
Spiked Amount 25.000			Recovery = 97.624%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
1119L45.D LSUR1113.M Wed Nov 30 09:28:29 2016

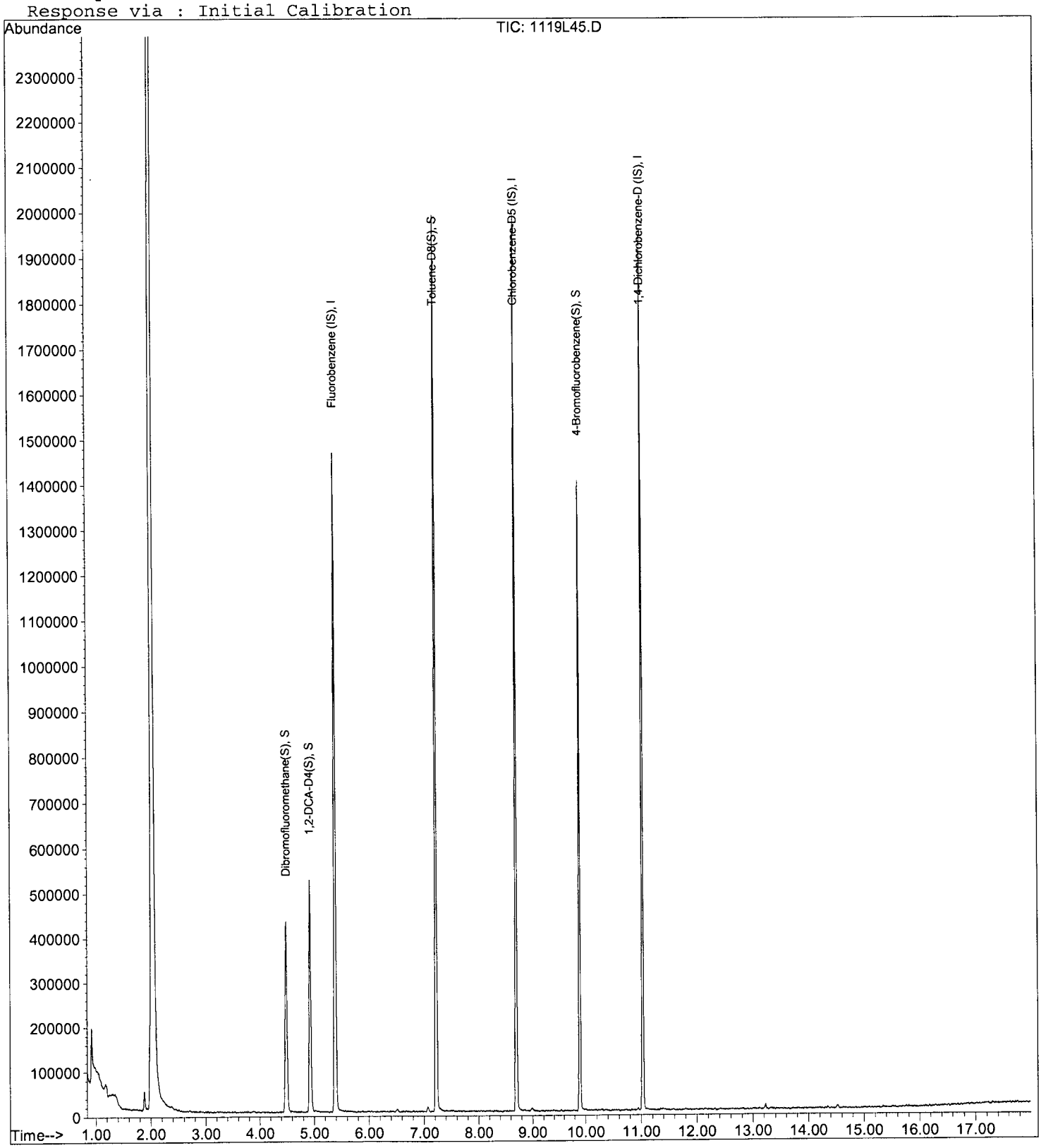
Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L45.D
Acq On : 21 Nov 16 5:56
Sample : AZ45995W02
Misc : W IS&S 10/20/16, 11/04/16

Vial: 44
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 12:24 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81515

Sample ID: ERH131

APPL ID: AZ45996

Sample Collection Date: 11/16/16

QCG: #GRO86-161119BL-213862

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	11/21/16	11/21/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	99.9	85-114			%	11/21/16	11/21/16

Quant Method: LGAS6718.M
Run #: 1119L46
Instrument: Loki
Sequence: 161113
Dilution Factor: 1
Initials: SV

Printed: 11/28/16 1:14:44 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1119L46.D Vial: 45
Acq On : 21 Nov 16 6:24 Operator: PM,DG,SV,CMM
Sample : AZ45996W02 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 9:44 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1467512	25.00 ppb	-0.10
3) Chlorobenzene-D5 (IS)	8.70	TIC	1907182	25.00 ppb	-0.09
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1991441	25.00 ppb	-0.09

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
1119L46.D LGAS6718.M Wed Nov 30 09:24:00 2016 Page 1

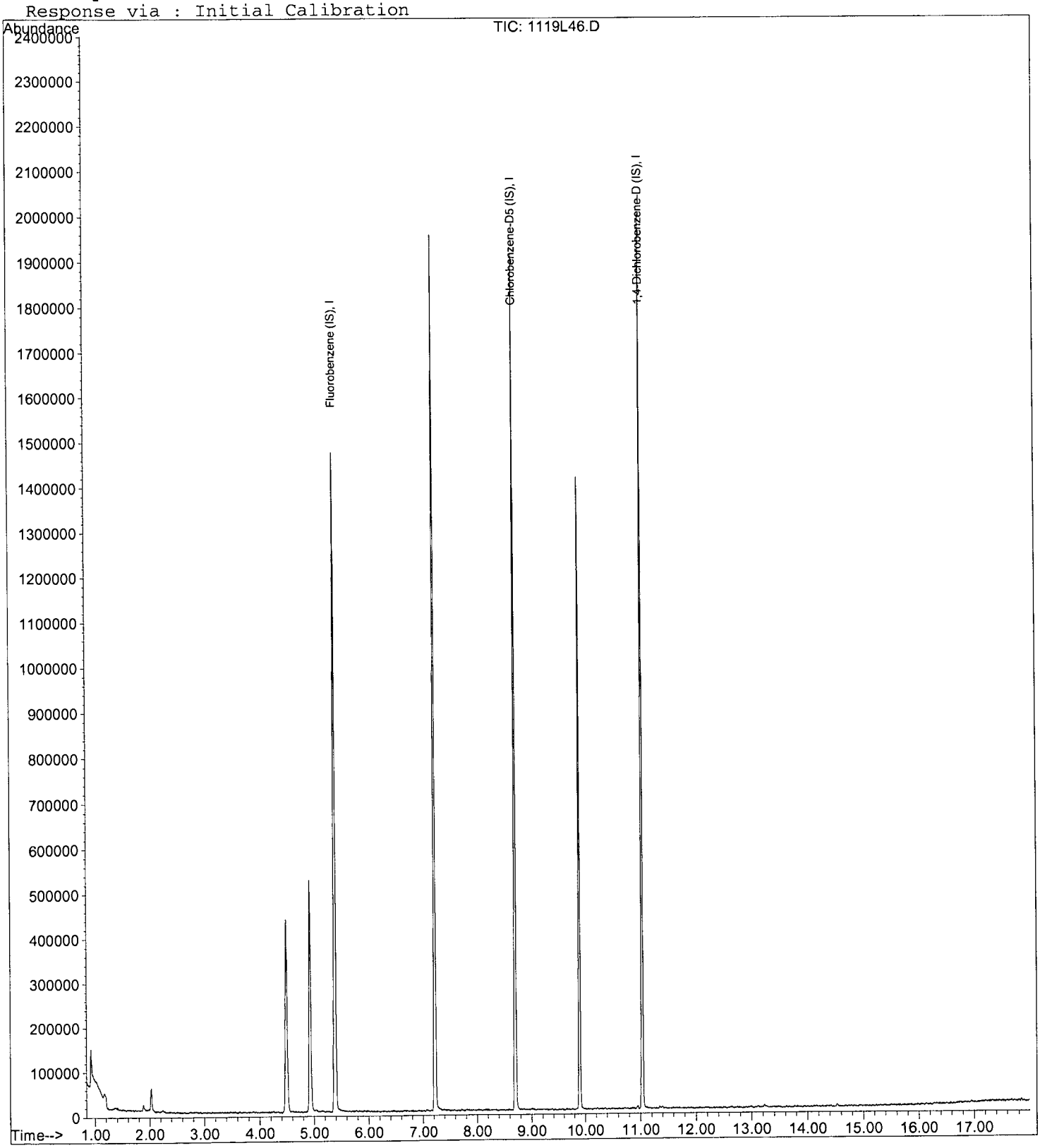
Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L46.D
Acq On : 21 Nov 16 6:24
Sample : AZ45996W02
Misc : W IS&S 10/20/16, 11/04/16

Vial: 45
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 9:44 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1119L46.D
Acq On : 21 Nov 16 6:24
Sample : AZ45996W02
Misc : W IS&S 10/20/16, 11/04/16

Vial: 45
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 12:25 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	651328	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	584192	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	300352	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	322681	23.48	ppb	0.00
Spiked Amount 25.000			Recovery = 93.908%			
37) 1,2-DCA-D4(S)	4.93	65	407453	27.19	ppb	0.00
Spiked Amount 25.000			Recovery = 108.768%			
57) Toluene-D8(S)	7.22	98	1177609	26.40	ppb	0.00
Spiked Amount 25.000			Recovery = 105.592%			
65) 4-Bromofluorobenzene(S)	9.89	95	402237	24.98	ppb	0.00
Spiked Amount 25.000			Recovery = 99.928%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
1119L46.D LSUR1113.M Wed Nov 30 09:28:32 2016

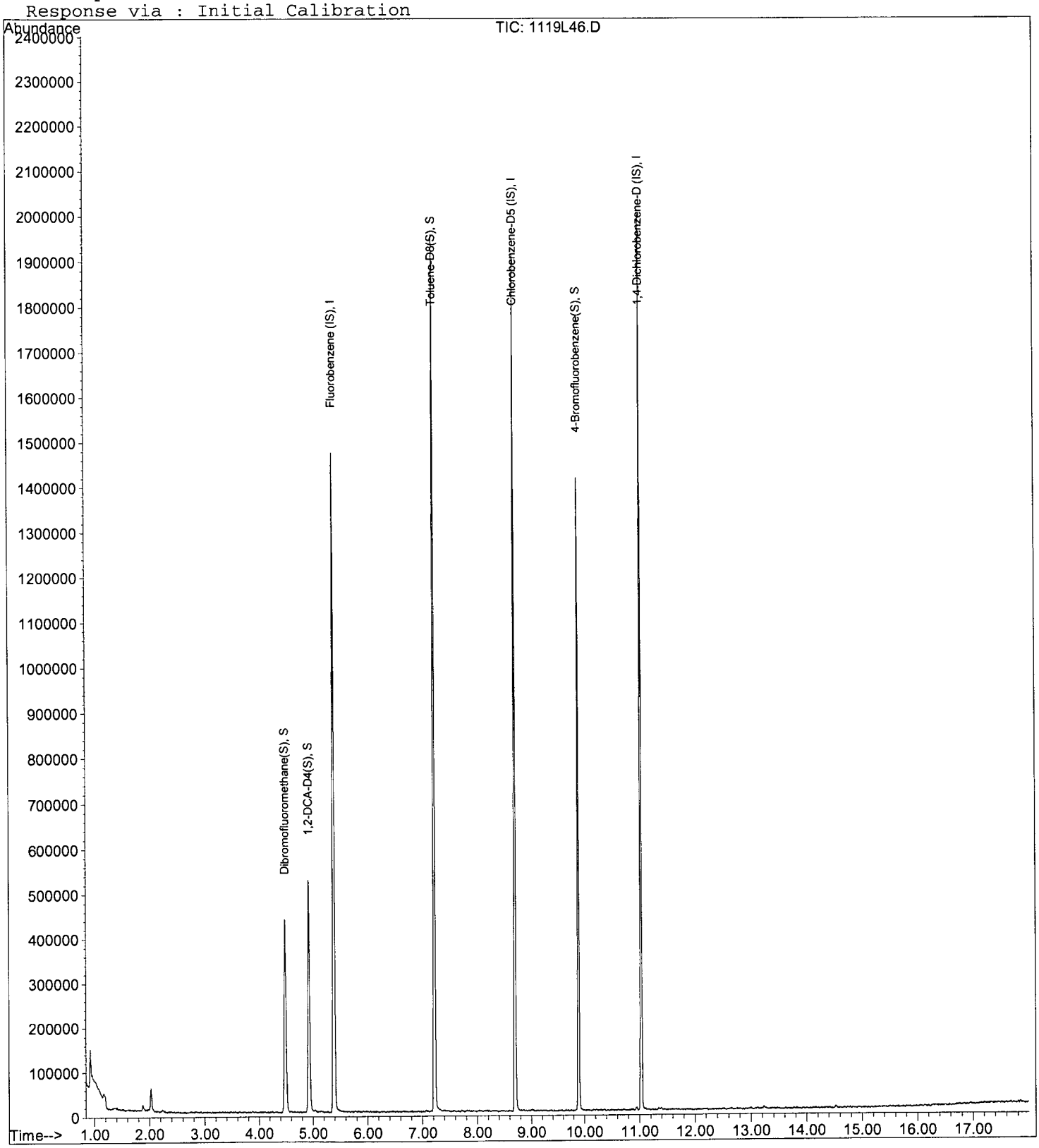
Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L46.D
Acq On : 21 Nov 16 6:24
Sample : AZ45996W02
Misc : W IS&S 10/20/16, 11/04/16

Vial: 45
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 12:25 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH132

Sample Collection Date: 11/16/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515

APPL ID: AZ45997

QCG: #GRO86-161119AL1-21385

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	11/20/16	11/20/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	98.8	85-114			%	11/20/16	11/20/16

Quant Method:	LGAS6718.M
Run #:	1119L20
Instrument:	Loki
Sequence:	161113
Dilution Factor:	1
Initials:	SV

Printed: 11/28/16 1:14:44 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1119L20.D Vial: 19
Acq On : 20 Nov 16 18:15 Operator: PM,DG,SV,CMM
Sample : AZ45997W02 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 8:59 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1493769	25.00	ppb	-0.10
3) Chlorobenzene-D5 (IS)	8.70	TIC	1975496	25.00	ppb	-0.09
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	2023088	25.00	ppb	-0.09

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
1119L20.D TALLW.M Wed Nov 30 09:19:42 2016 Page 1

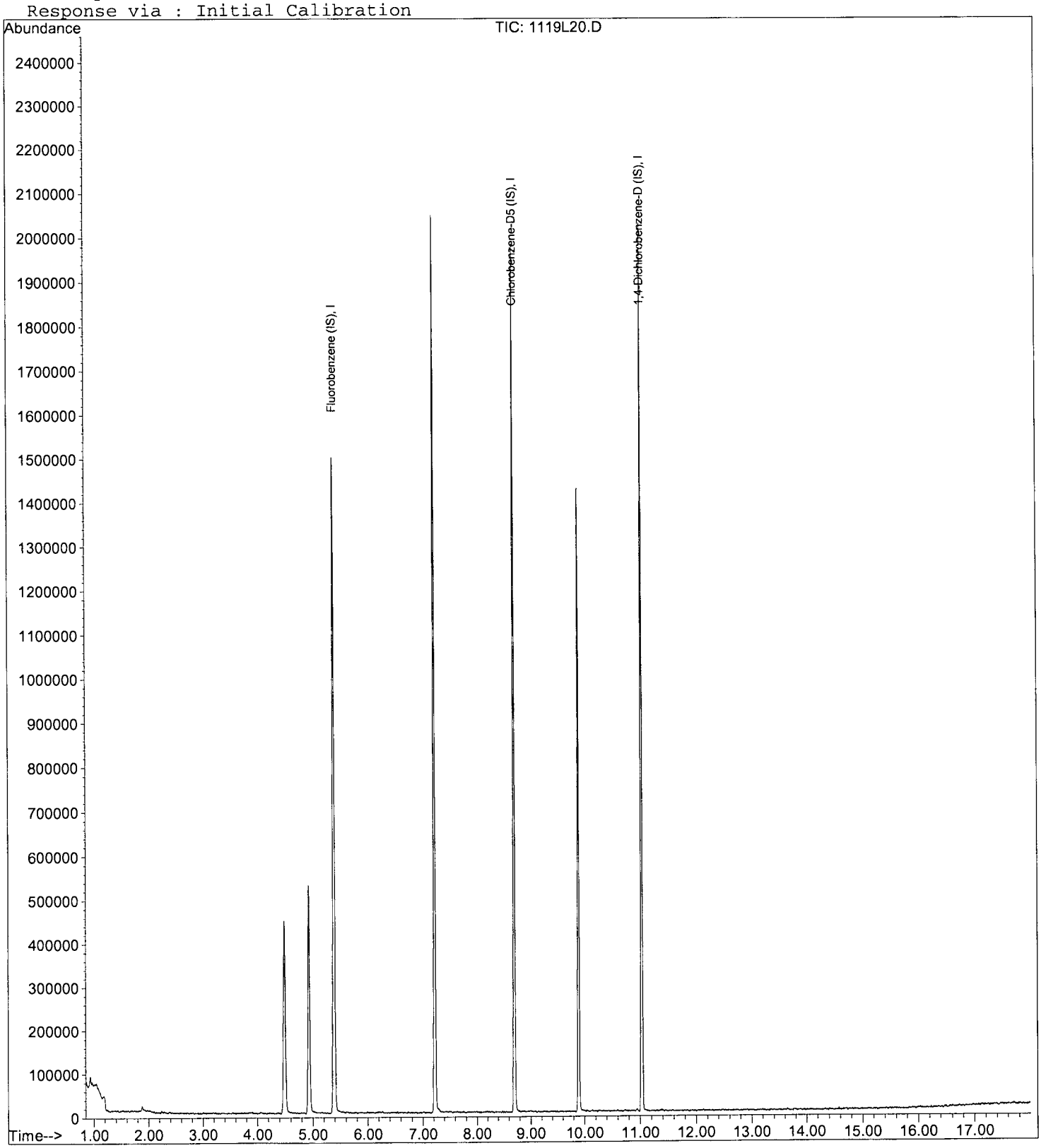
Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L20.D
Acq On : 20 Nov 16 18:15
Sample : AZ45997W02
Misc : W IS&S 10/20/16, 11/04/16

Vial: 19
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 8:59 2016 Quant Results File: LGAS6718.RES

Method : M:\THOR\DATA\T161107\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Nov 16 13:26:13 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1119L20.D
Acq On : 20 Nov 16 18:15
Sample : AZ45997W02
Misc : W IS&S 10/20/16, 11/04/16

Vial: 19
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 10:20 2016 Quant Results File: LSUR1113.RES

Quant Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	672512	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	597888	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	307584	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.49	111	329869	23.24	ppb	0.00
Spiked Amount 25.000			Recovery =	92.976%		
3) 1,2-DCA-D4(S)	4.93	65	412497	26.66	ppb	0.00
Spiked Amount 25.000			Recovery =	106.648%		
5) Toluene-D8(S)	7.22	98	1219427	26.71	ppb	0.00
Spiked Amount 25.000			Recovery =	106.836%		
6) 4-Bromofluorobenzene(S)	9.89	95	407057	24.70	ppb	0.00
Spiked Amount 25.000			Recovery =	98.812%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

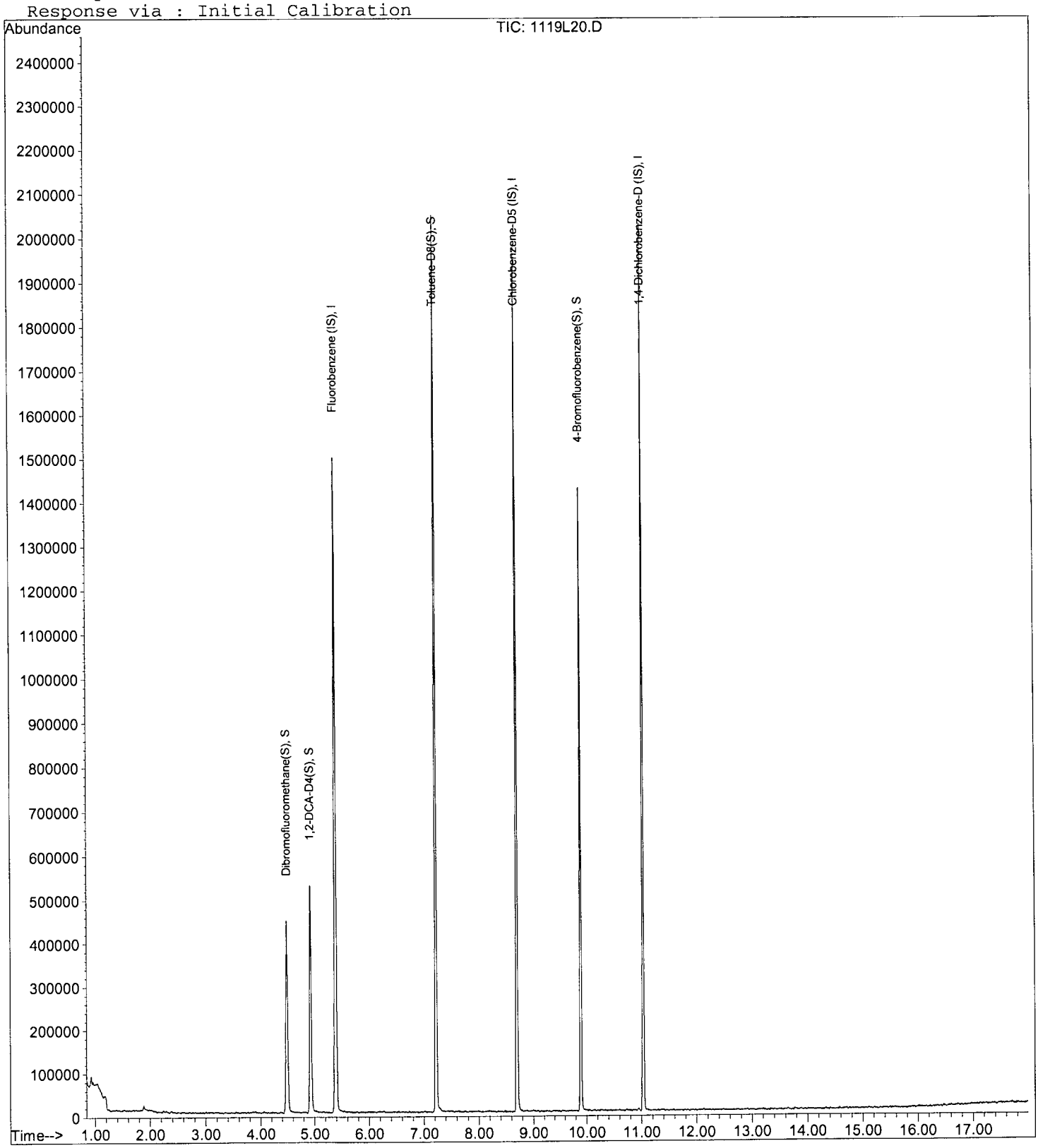
Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L20.D
Acq On : 20 Nov 16 18:15
Sample : AZ45997W02
Misc : W IS&S 10/20/16, 11/04/16

Vial: 19
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 10:20 2016 Quant Results File: LSUR1113.RES

Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



EPA METHOD 8260B
Volatile Organic Compounds
Calibration Data

APPL, INC.

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 07/18/16
Matrix: Instrument: Loki

Initials:

		Compound	0718L21.D	0718L22.D	0718L23.D	0718L24.D	0718L25.D	0718L26.D	0718L27.D				Avg	%RSD		
1	I	Fluorobenzene (IS)														
2	TMHBL	Gasoline C6-C10	13.3	5.813	3.427	1.777	1.379	1.258	1.208				4.0	110	TMHBL	1.000
3	I	Chlorobenzene-D5 (IS)														
4	I	1,4-Dichlorobenzene-D (IS)														
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Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\160718\0718L21.D Vial: 18
Acq On : 18 Jul 16 20:20 Operator: PM,DG,SV,CMM
Sample : 20ug/L GAS STD 7/18/16L Inst : Loki
Misc : 10mL W IS:S 7/16/16,7/18/16 Multiplr: 1.00

Quant Time: Jul 19 8:34 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:13:42 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.49	TIC	2628348	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.79	TIC	3625758	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.12	TIC	4071971	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.31	TIC	28037025m	33.82307	ppb	100

(#) = qualifier out of range (m) = manual integration

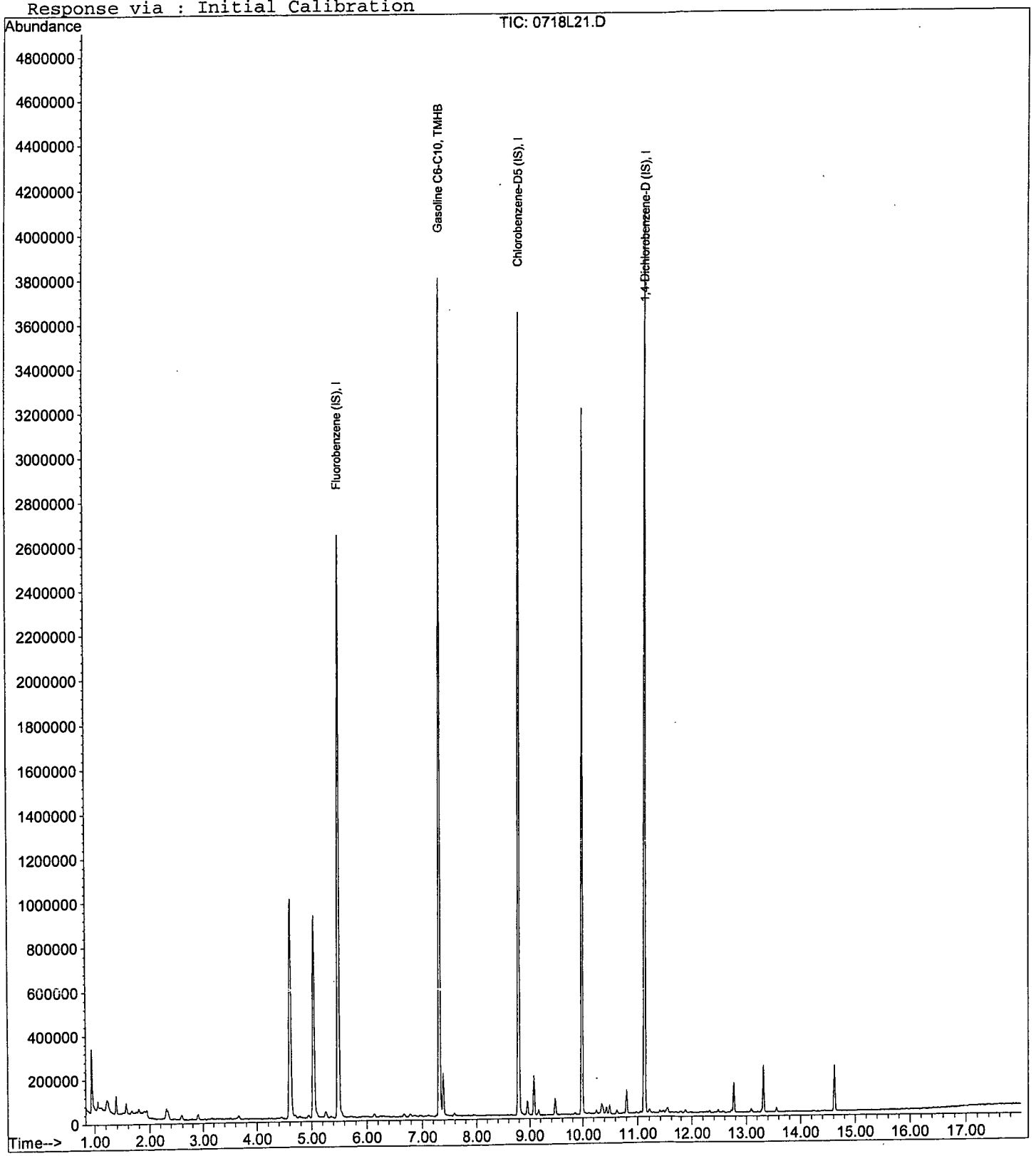
Quantitation Report

Data File : M:\LOKI\DATA\160718\0718L21.D
Acq On : 18 Jul 16 20:20
Sample : 20ug/L GAS STD 7/18/16L
Misc : 10mL W IS:S 7/16/16,7/18/16

Vial: 18
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jul 19 8:34 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\160718\0718L22.D
Acq On : 18 Jul 16 20:48
Sample : 50ug/L GAS STD 7/18/16L
Misc : 10mL W IS:S 7/16/16,7/18/16

Vial: 19
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jul 19 8:18 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:13:42 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.49	TIC	2665649	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.79	TIC	3702347	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.12	TIC	3931343	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.31	TIC	30989589m	55.45075	ppb	100

(#) = qualifier out of range (m) = manual integration

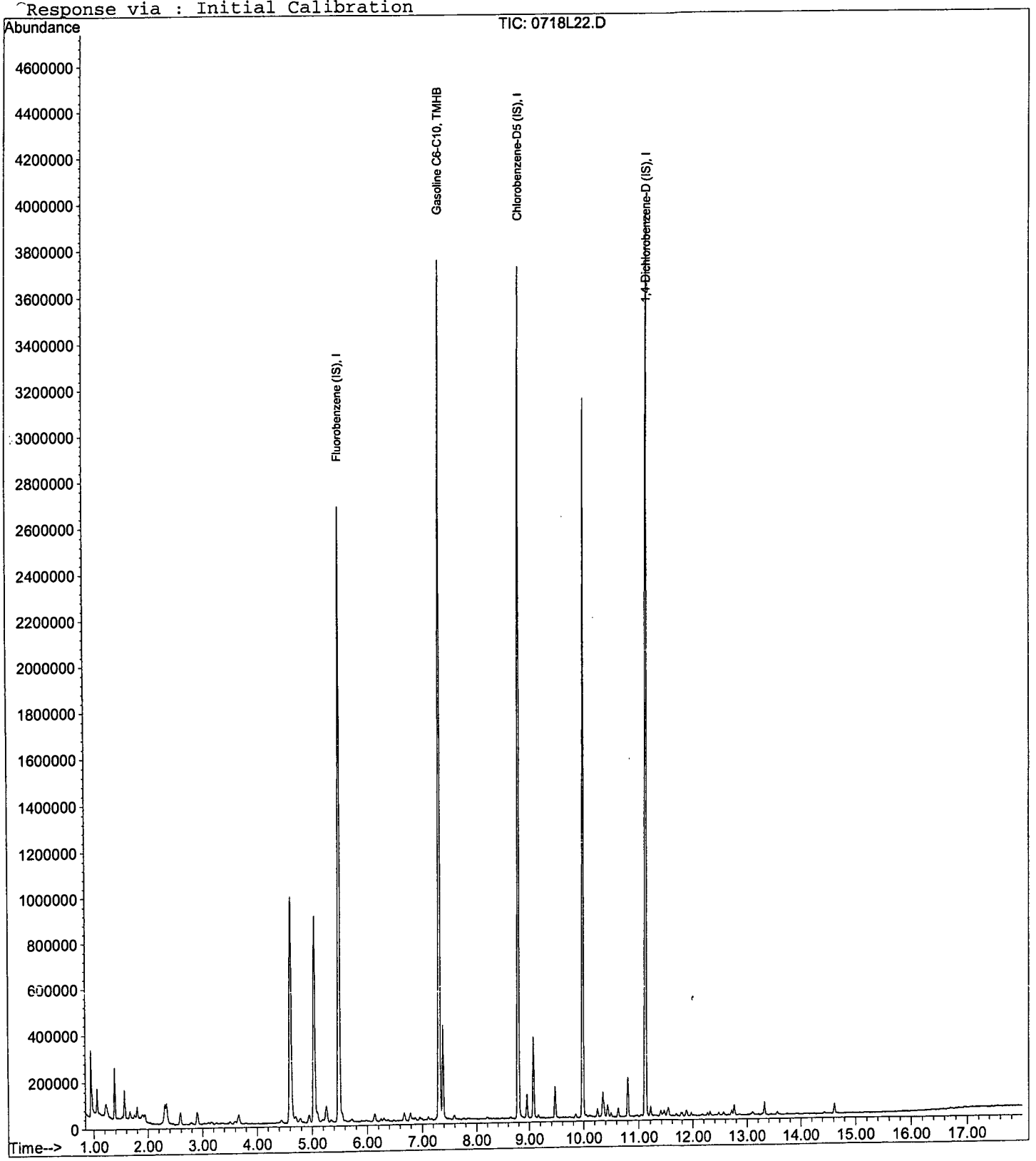
Quantitation Report

Data File : M:\LOKI\DATA\160718\0718L22.D
Acq On : 18 Jul 16 20:48
Sample : 50ug/L GAS STD 7/18/16L
Misc : 10mL W IS:S 7/16/16,7/18/16

Vial: 19
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jul 19 8:18 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\160718\0718L23.D
Acq On : 18 Jul 16 21:17
Sample : 100ug/L GAS STD 7/18/16L
Misc : 10mL W IS:S 7/16/16,7/18/16

Vial: 20
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jul 19 8:31 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:13:42 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.49	TIC	2594632	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.79	TIC	3622041	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.12	TIC	4120406	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.79	TIC	35568341m	102.45607	ppb	100

(#) = qualifier out of range (m) = manual integration

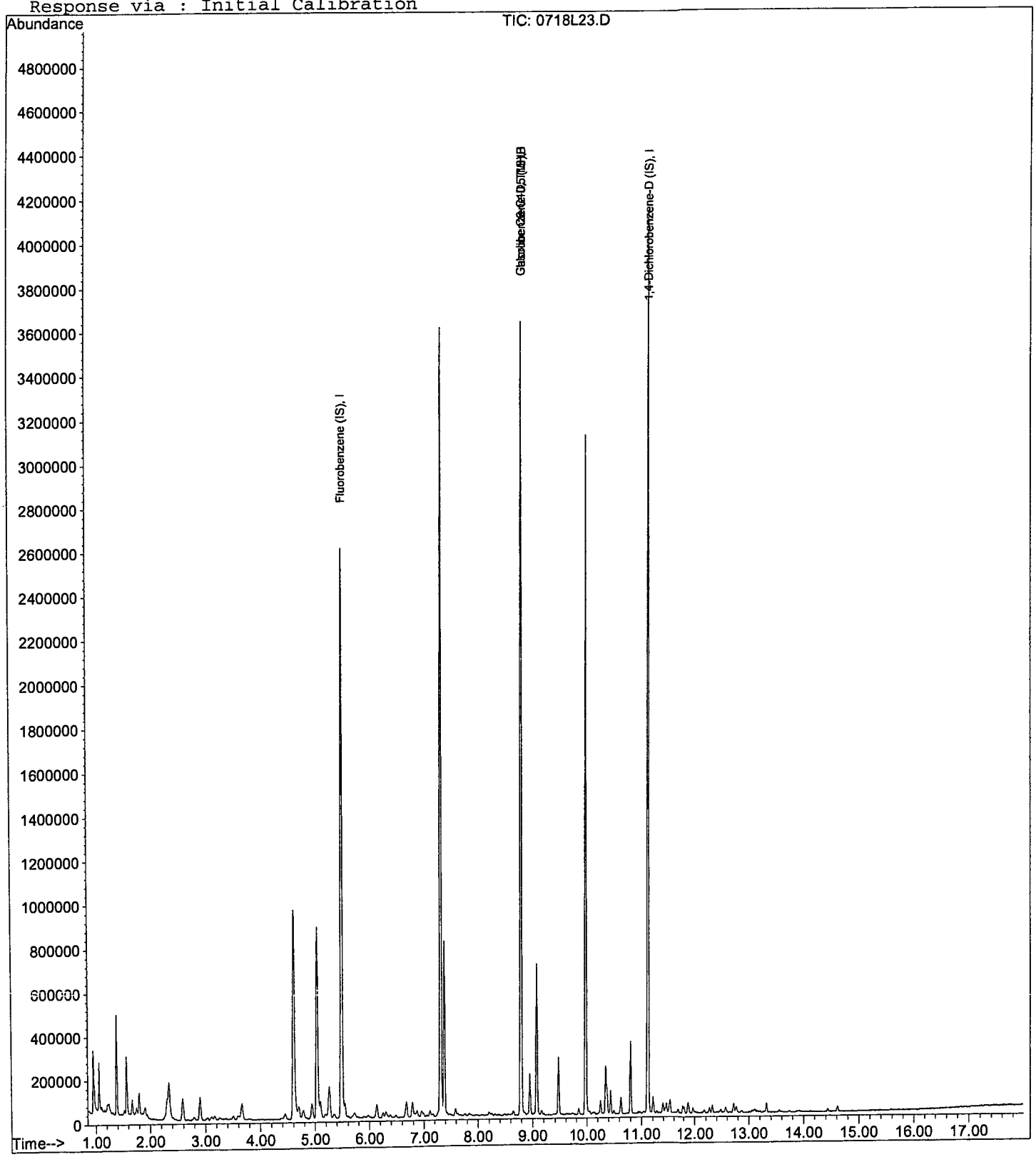
Quantitation Report

Data File : M:\LOKI\DATA\160718\0718L23.D
Acq On : 18 Jul 16 21:17
Sample : 100ug/L GAS STD 7/18/16L
Misc : 10mL W IS:S 7/16/16,7/18/16

Vial: 20
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jul 19 8:31 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\160718\0718L24.D
Acq On : 18 Jul 16 21:45
Sample : 300ug/L GAS STD 7/18/16L
Misc : 10mL W IS:S 7/16/16,7/18/16

Vial: 21
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jul 19 8:30 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:13:42 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.49	TIC	2596571	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.79	TIC	3594145	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.12	TIC	4036889	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.31	TIC	55354541m	274.19024	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

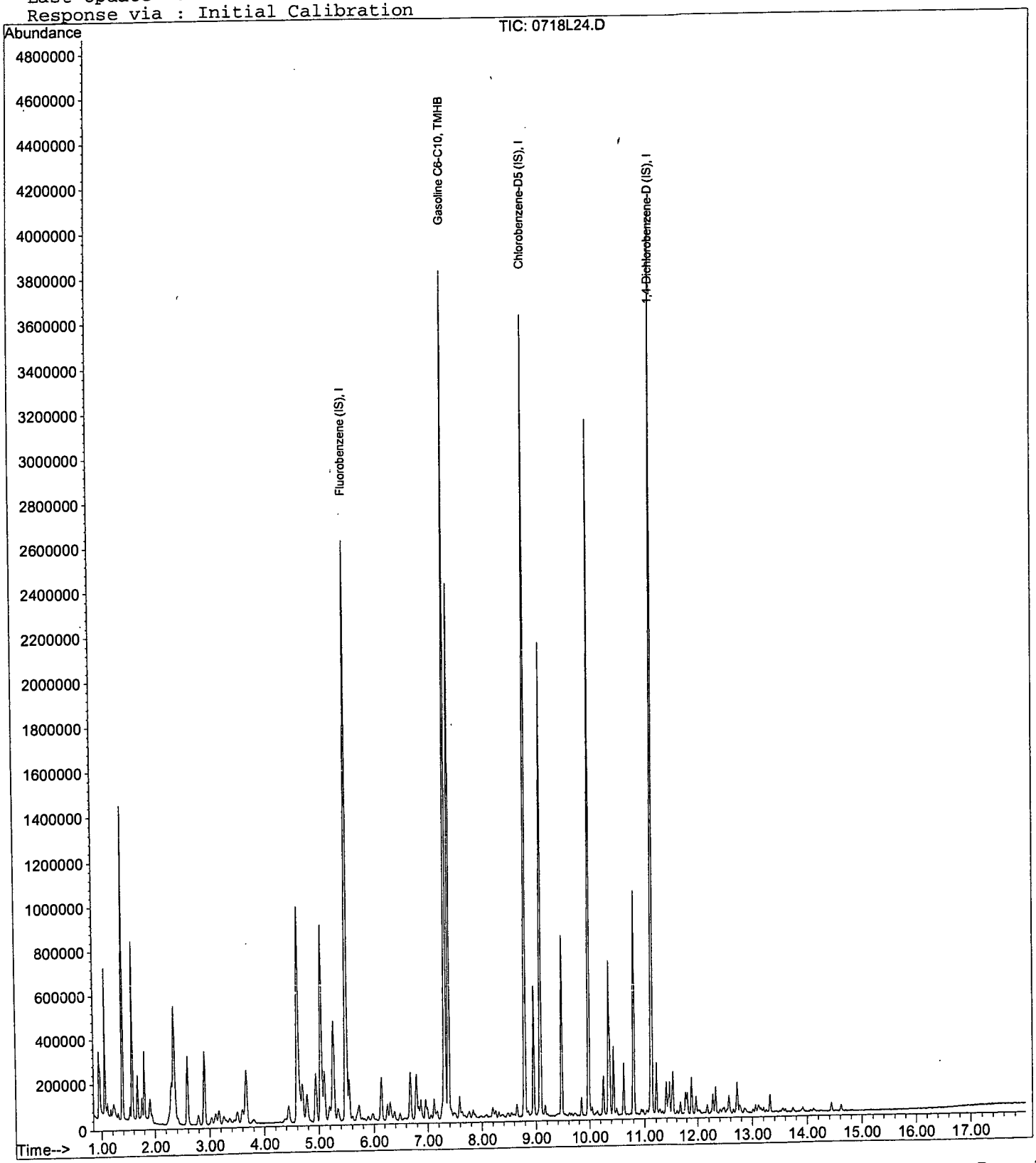
Data File : M:\LOKI\DATA\160718\0718L24.D
Acq On : 18 Jul 16 21:45
Sample : 300ug/L GAS STD 7/18/16L
Misc : 10mL W IS:S 7/16/16,7/18/16

Vial: 21
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jul 19 8:30 2016

Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\160718\0718L25.D
Acq On : 18 Jul 16 22:13
Sample : 600ug/L GAS STD 7/18/16L
Misc : 10mL W IS:S 7/16/16,7/18/16

Vial: 22
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jul 19 8:28 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:13:42 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.49	TIC	2583696	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.79	TIC	3664780	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.12	TIC	4100268	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.38	TIC	85540055m	540.24231	ppb	100

(#) = qualifier out of range (m) = manual integration

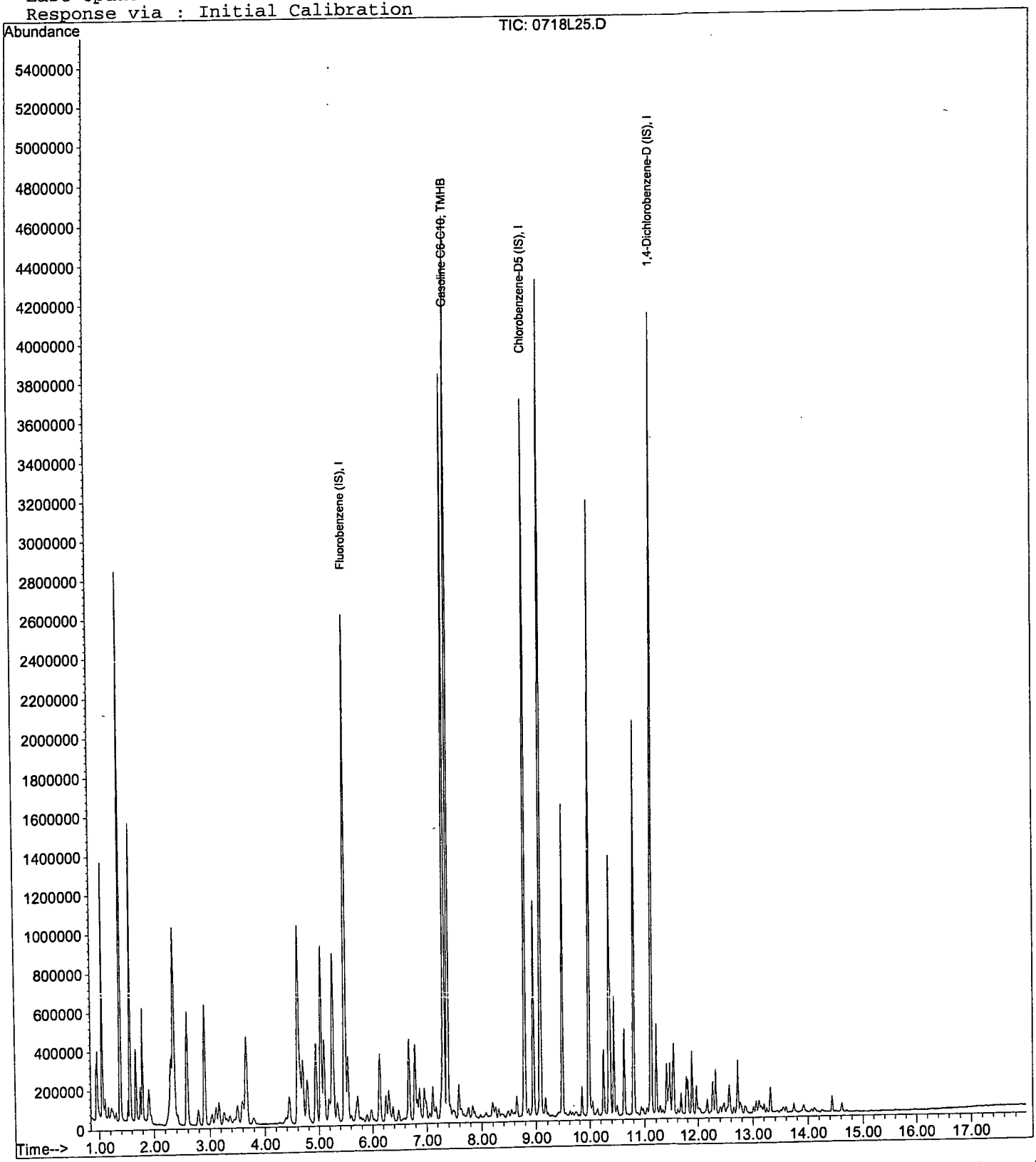
Quantitation Report

Data File : M:\LOKI\DATA\160718\0718L25.D
Acq On : 18 Jul 16 22:13
Sample : 600ug/L GAS STD 7/18/16L
Misc : 10mL W IS:S 7/16/16,7/18/16

Vial: 22
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jul 19 8:28 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\160718\0718L26.D
Acq On : 18 Jul 16 22:41
Sample : 800ug/L GAS STD 7/18/16L
Misc : 10mL W IS:S 7/16/16,7/18/16

Vial: 23
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jul 19 8:20 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:13:42 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.49	TIC	2591760	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.79	TIC	3654291	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.12	TIC	4069639	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.38	TIC	104311053m	701.36237	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

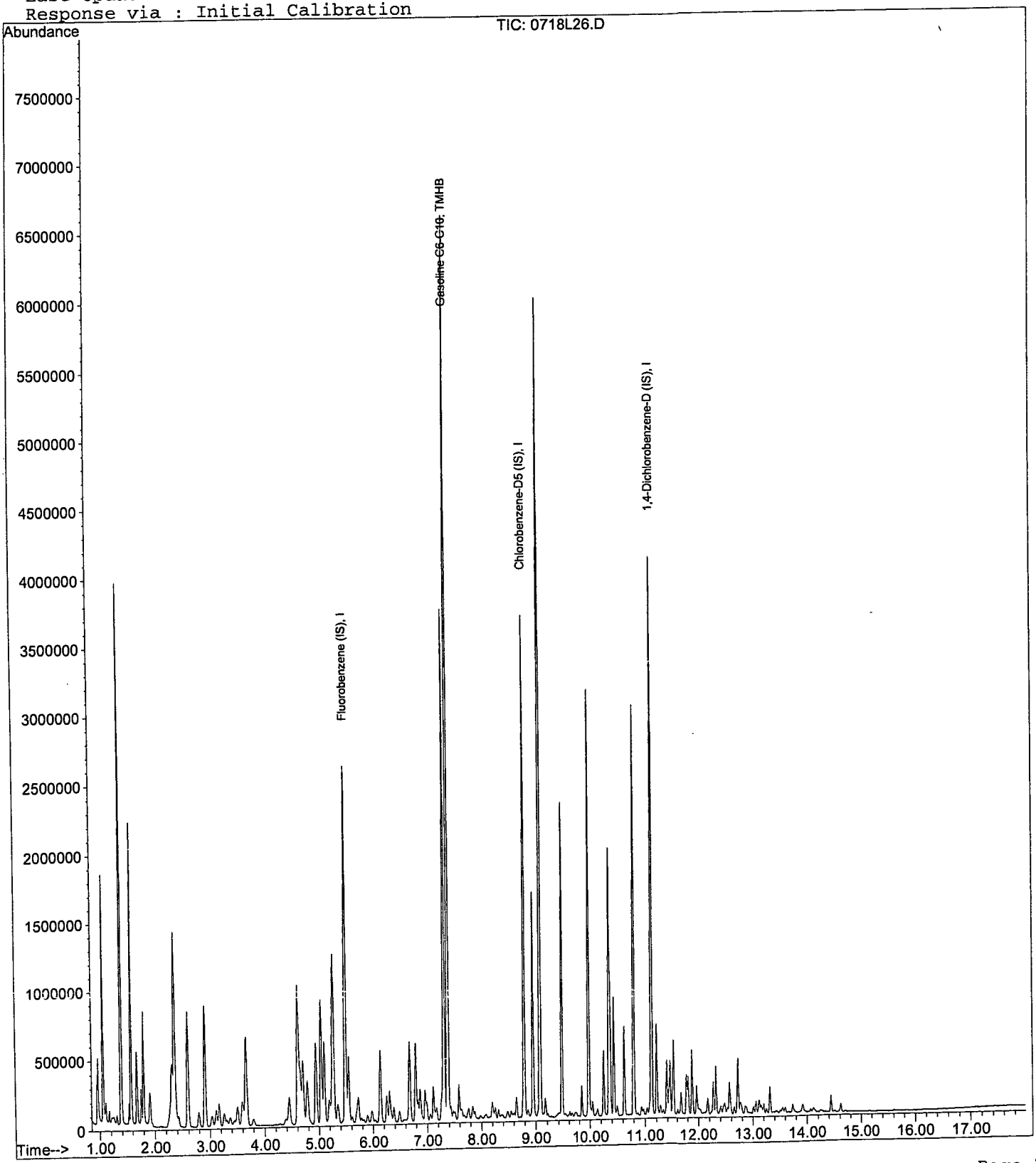
Data File : M:\LOKI\DATA\160718\0718L26.D
Acq On : 18 Jul 16 22:41
Sample : 800ug/L GAS STD 7/18/16L
Misc : 10mL W IS:S 7/16/16,7/18/16

Vial: 23
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jul 19 8:20 2016

Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\160718\0718L27.D
Acq On : 18 Jul 16 23:10
Sample : 1000ug/L GAS STD 7/18/16L
Misc : 10mL W IS:S 7/16/16,7/18/16

Vial: 24
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jul 19 8:33 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:13:42 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.49	TIC	2635141	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.79	TIC	3687466	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.12	TIC	4142548	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.38	TIC	127363032m	883.82618	ppb	100

(#) = qualifier out of range (m) = manual integration

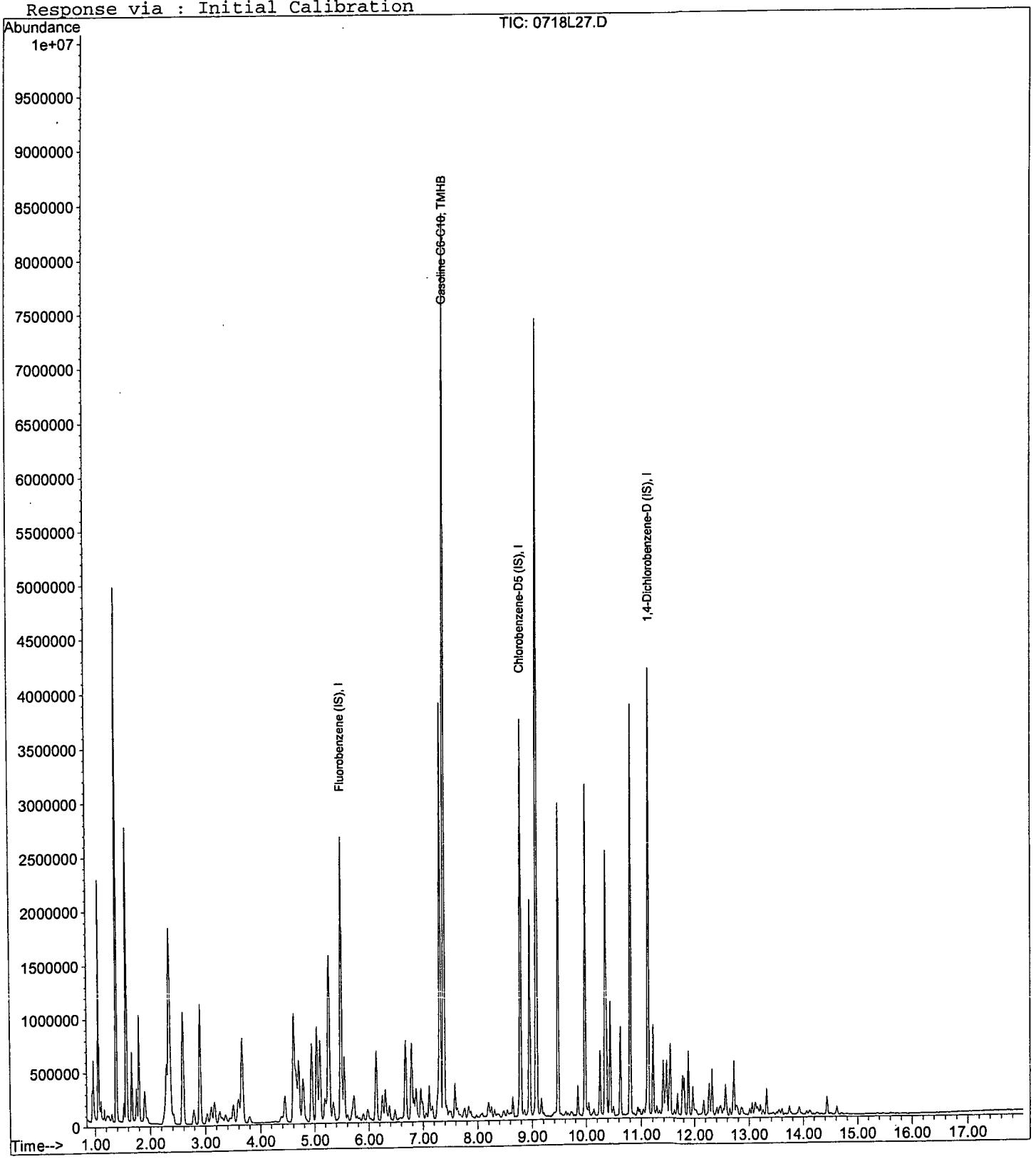
Quantitation Report

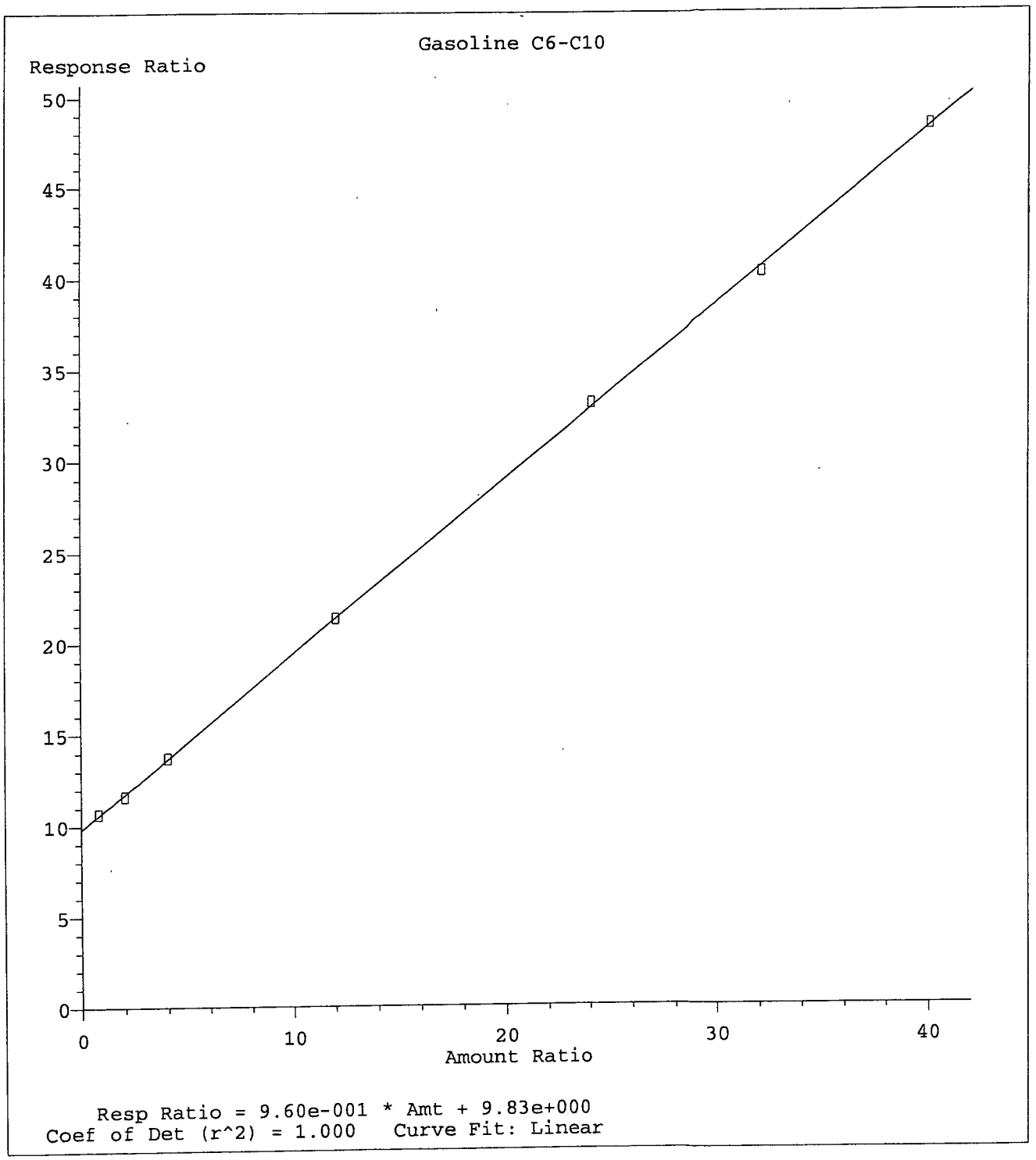
Data File : M:\LOKI\DATA\160718\0718L27.D
Acq On : 18 Jul 16 23:10
Sample : 1000ug/L GAS STD 7/18/16L
Misc : 10mL W IS:S 7/16/16,7/18/16

Vial: 24
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jul 19 8:33 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration





Method Name: M:\LOKI\DATA\160718\LGAS6718.M
Calibration Table Last Updated: Tue Jul 19 08:35:29 2016

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 07/19/16
Instrument: Loki
Initial Cal. Date: 07/18/16
Data File: 0718L30.D

		Compound	MEAN	CCRF	%D		%Drift
1	TMHB	Gasoline C6-C10	4.028	1.758	56	TMHBL	2.2
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
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14							
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16							
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31							
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33							
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35							
36							
37							
38							
39							
40							
		Average			56.0		

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\160718\0718L30.D Vial: 27
Acq On : 19 Jul 16 00:34 Operator: PM,DG,SV,CMM
Sample : (SS)300ug/L GAS STD 7/18/16L Inst : Loki
Misc : 10mL W IS:S 7/16/16,7/18/16 Multiplr: 1.00

Quant Time: Jul 19 8:38 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.49	TIC	2619638	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.79	TIC	3645476	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.12	TIC	4041173	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.31	TIC	55271669m	293.49447	ppb	100

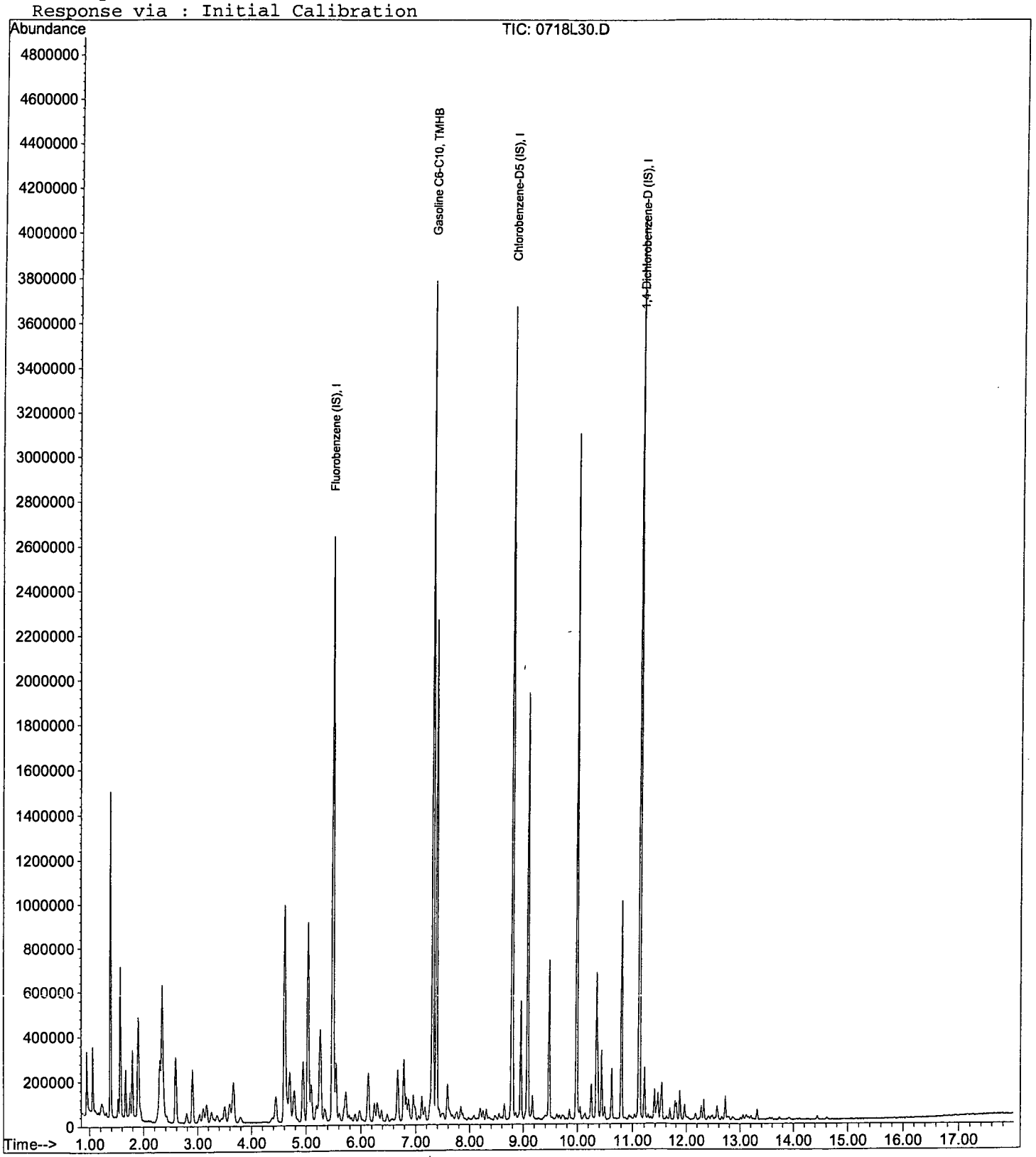
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\160718\0718L30.D Vial: 27
Acq On : 19 Jul 16 00:34 Operator: PM,DG,SV,CMM
Sample : (SS)300ug/L GAS STD 7/18/16L Inst : Loki
Misc : 10mL W IS:S 7/16/16,7/18/16 Multiplr: 1.00

Quant Time: Jul 19 8:38 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\160718\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 11/13/16
Matrix: Instrument: Loki
Initials:

			1113L05.D	1113L06.D	1113L07.D	1113L08.D	1113L09.D	1113L10.D	1113L11.D	1113L12.D	1113L13.D					
		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD		
1	I	Fluorobenzene (IS)														
2	S	Dibromofluoromethane(S)	0.6027	0.5768	0.4948	0.4832	0.5315	0.5349	0.5206	0.5097	0.4938		0.53	7.5	S	
3	S	1,2-DCA-D4(S)	0.6553	0.6546	0.5528	0.5203	0.5804	0.5661	0.5641	0.5489	0.5338		0.58	8.4	S	
4	I	Chlorobenzene-D5 (IS)														
5	S	Toluene-D8(S)	2.205	2.217	1.741	1.767	1.894	1.894	1.884	1.819	1.760		1.9	9.5	S	
6	S	4-Bromofluorobenzene(S)	0.8071	0.7219	0.6403	0.6414	0.6906	0.6903	0.6882	0.6642	0.6572		0.69	7.5	S	
7	I	1,4-Dichlorobenzene-D (IS)														
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Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L05.D Vial: 5
Acq On : 13 Nov 16 13:35 Operator: PM,DG,SV,CMM
Sample : 0.3ug/L VOC STD 11/13/16J Inst : Loki
Misc : 1uL-5ppb Multiplr: 1.00

Quant Time: Nov 17 11:17 2016 Quant Results File: LSUR1113.RES

Quant Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	821614	25.00000	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	780352	25.00000	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	427200	25.00000	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.49	111	99036	5.71210	ppb	0.00
Spiked Amount 25.000			Recovery = 22.848%			
3) 1,2-DCA-D4(S)	4.93	65	107676	5.69665	ppb	0.00
Spiked Amount 25.000			Recovery = 22.788%			
5) Toluene-D8(S)	7.22	98	344140	5.77527	ppb	0.00
Spiked Amount 25.000			Recovery = 23.100%			
6) 4-Bromofluorobenzene(S)	9.89	95	125959	5.85659	ppb	0.00
Spiked Amount 25.000			Recovery = 23.428%			

Target Compounds Qvalue

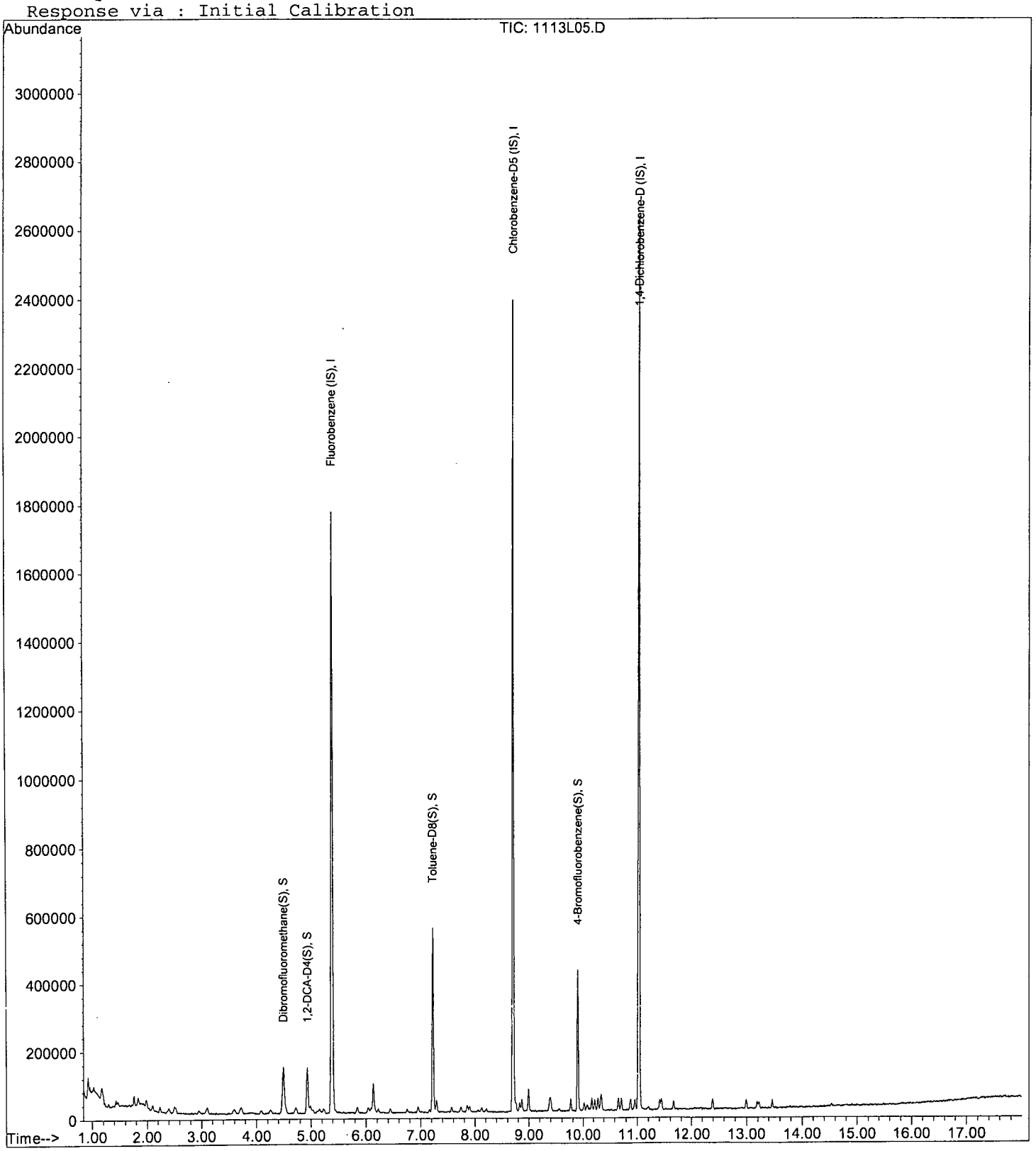
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1113L05.D Vial: 5
Acq On : 13 Nov 16 13:35 Operator: PM,DG,SV,CMM
Sample : 0.3ug/L VOC STD 11/13/16J Inst : Loki
Misc : 1uL-5ppb Multiplr: 1.00

Quant Time: Nov 17 11:17 2016 Quant Results File: LSUR1113.RES

Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L06.D Vial: 6
Acq On : 13 Nov 16 14:04 Operator: PM,DG,SV,CMM
Sample : 0.5ug/L VOC STD 11/13/16K Inst : Loki
Misc : 1uL-5ppb Multiplr: 1.00

Quant Time: Nov 17 11:17 2016 Quant Results File: LSUR1113.RES

Quant Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	848000	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	782336	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	423936	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.49	111	97825	5.46669 ppb	0.00
Spiked Amount 25.000			Recovery	= 21.868%	
3) 1,2-DCA-D4(S)	4.93	65	111019	5.69075 ppb	0.00
Spiked Amount 25.000			Recovery	= 22.764%	
5) Toluene-D8(S)	7.22	98	346936	5.80743 ppb	0.00
Spiked Amount 25.000			Recovery	= 23.228%	
6) 4-Bromofluorobenzene(S)	9.89	95	124253	5.76261 ppb	0.00
Spiked Amount 25.000			Recovery	= 23.052%	

Target Compounds Qvalue

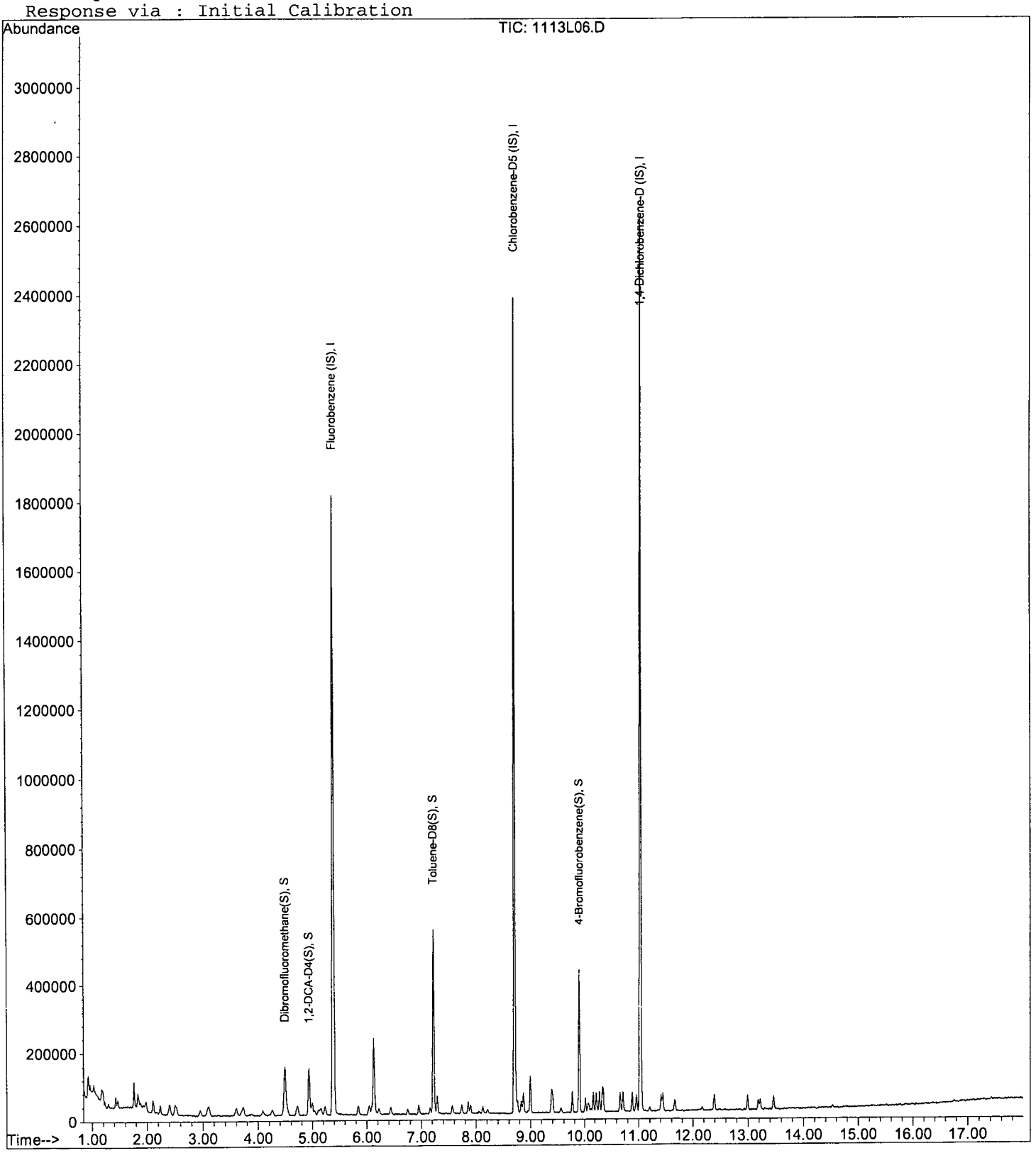
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1113L06.D Vial: 6
Acq On : 13 Nov 16 14:04 Operator: PM,DG,SV,CMM
Sample : 0.5ug/L VOC STD 11/13/16K Inst : Loki
Misc : 1uL-5ppb Multiplr: 1.00

Quant Time: Nov 17 11:17 2016 Quant Results File: LSUR1113.RES

Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L07.D Vial: 7
Acq On : 13 Nov 16 14:32 Operator: PM,DG,SV,CMM
Sample : 1.0ug/L VOC STD 11/13/16L Inst : Loki
Misc : 2uL-10ppb Multiplr: 1.00

Quant Time: Nov 17 11:17 2016 Quant Results File: LSUR1113.RES

Quant Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.39	96	819008	25.00000	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	820800	25.00000	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	438720	25.00000	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.49	111	162096	9.37896	ppb	0.00
Spiked Amount 25.000			Recovery = 37.516%			
3) 1,2-DCA-D4(S)	4.93	65	181084	9.61082	ppb	0.00
Spiked Amount 25.000			Recovery = 38.444%			
5) Toluene-D8(S)	7.22	98	571625	9.12015	ppb	0.00
Spiked Amount 25.000			Recovery = 36.480%			
6) 4-Bromofluorobenzene(S)	9.89	95	210233	9.29329	ppb	0.00
Spiked Amount 25.000			Recovery = 37.172%			

Target Compounds Qvalue

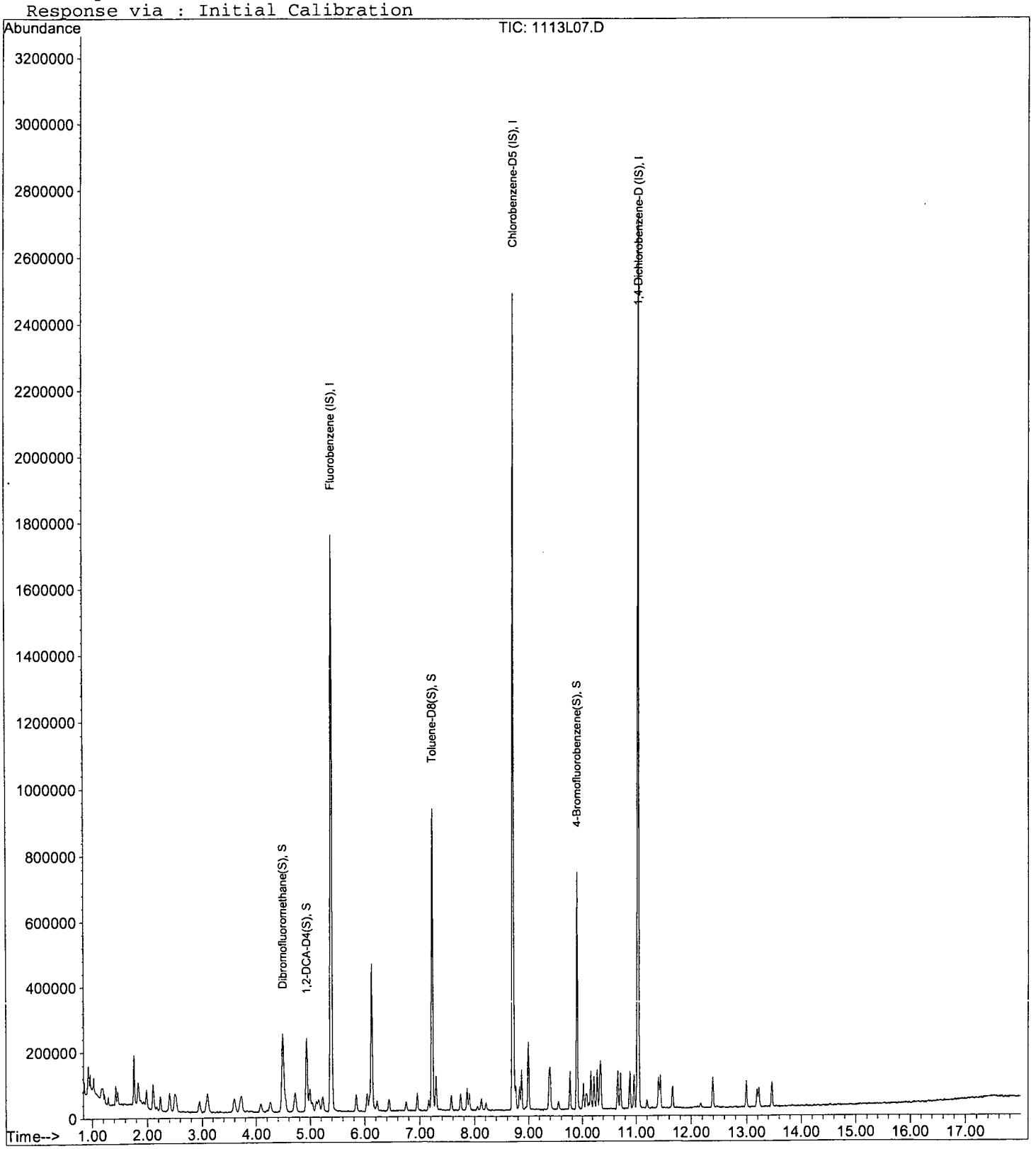
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1113L07.D Vial: 7
Acq On : 13 Nov 16 14:32 Operator: PM,DG,SV,CMM
Sample : 1.0ug/L VOC STD 11/13/16L Inst : Loki
Misc : 2uL-10ppb Multiplr: 1.00

Quant Time: Nov 17 11:17 2016 Quant Results File: LSUR1113.RES

Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L08.D Vial: 8
Acq On : 13 Nov 16 15:00 Operator: PM,DG,SV,CMM
Sample : 2.0ug/L VOC STD 11/13/16M Inst : Loki
Misc : 2uL-10ppb Multiplr: 1.00

Quant Time: Nov 17 11:17 2016 Quant Results File: LSUR1113.RES

Quant Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	848479	25.00000	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	802368	25.00000	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	417920	25.00000	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.49	111	164004	9.15976	ppb	0.00
Spiked Amount 25.000			Recovery	= 36.640%		
3) 1,2-DCA-D4(S)	4.93	65	176601	9.04733	ppb	0.00
Spiked Amount 25.000			Recovery	= 36.188%		
5) Toluene-D8(S)	7.22	98	567184	9.25717	ppb	0.00
Spiked Amount 25.000			Recovery	= 37.028%		
6) 4-Bromofluorobenzene(S)	9.89	95	205871	9.30953	ppb	0.00
Spiked Amount 25.000			Recovery	= 37.240%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

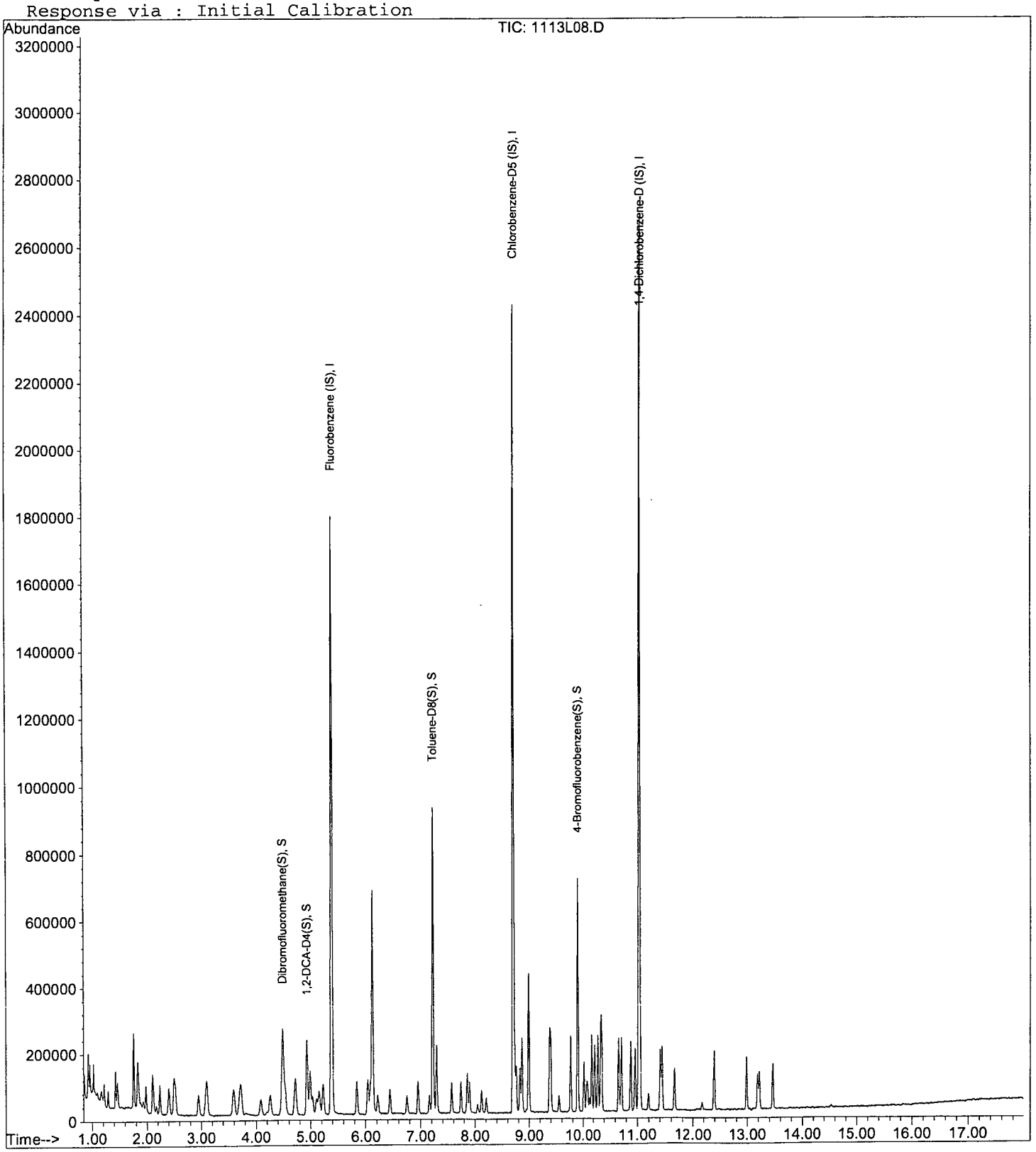
Quantitation Report

Data File : M:\LOKI\DATA\161113\1113L08.D
Acq On : 13 Nov 16 15:00
Sample : 2.0ug/L VOC STD 11/13/16M
Misc : 2uL-10ppb

Vial: 8
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 17 11:17 2016 Quant Results File: LSUR1113.RES

Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L09.D Vial: 9
Acq On : 13 Nov 16 15:28 Operator: PM,DG,SV,CMM
Sample : 5.0ug/L VOC STD 11/13/16AN Inst : Loki
Misc : 5uL-25ppb Multiplr: 1.00

Quant Time: Nov 17 11:17 2016 Quant Results File: LSUR1113.RES

Quant Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	816896	25.00000	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	796416	25.00000	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	431296	25.00000	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.49	111	434172	25.18638	ppb	0.00
Spiked Amount 25.000			Recovery = 100.744%			
3) 1,2-DCA-D4(S)	4.93	65	474115	25.22814	ppb	0.00
Spiked Amount 25.000			Recovery = 100.912%			
5) Toluene-D8(S)	7.22	98	1508650	24.80713	ppb	0.00
Spiked Amount 25.000			Recovery = 99.228%			
6) 4-Bromofluorobenzene(S)	9.89	95	550032	25.05844	ppb	0.00
Spiked Amount 25.000			Recovery = 100.232%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

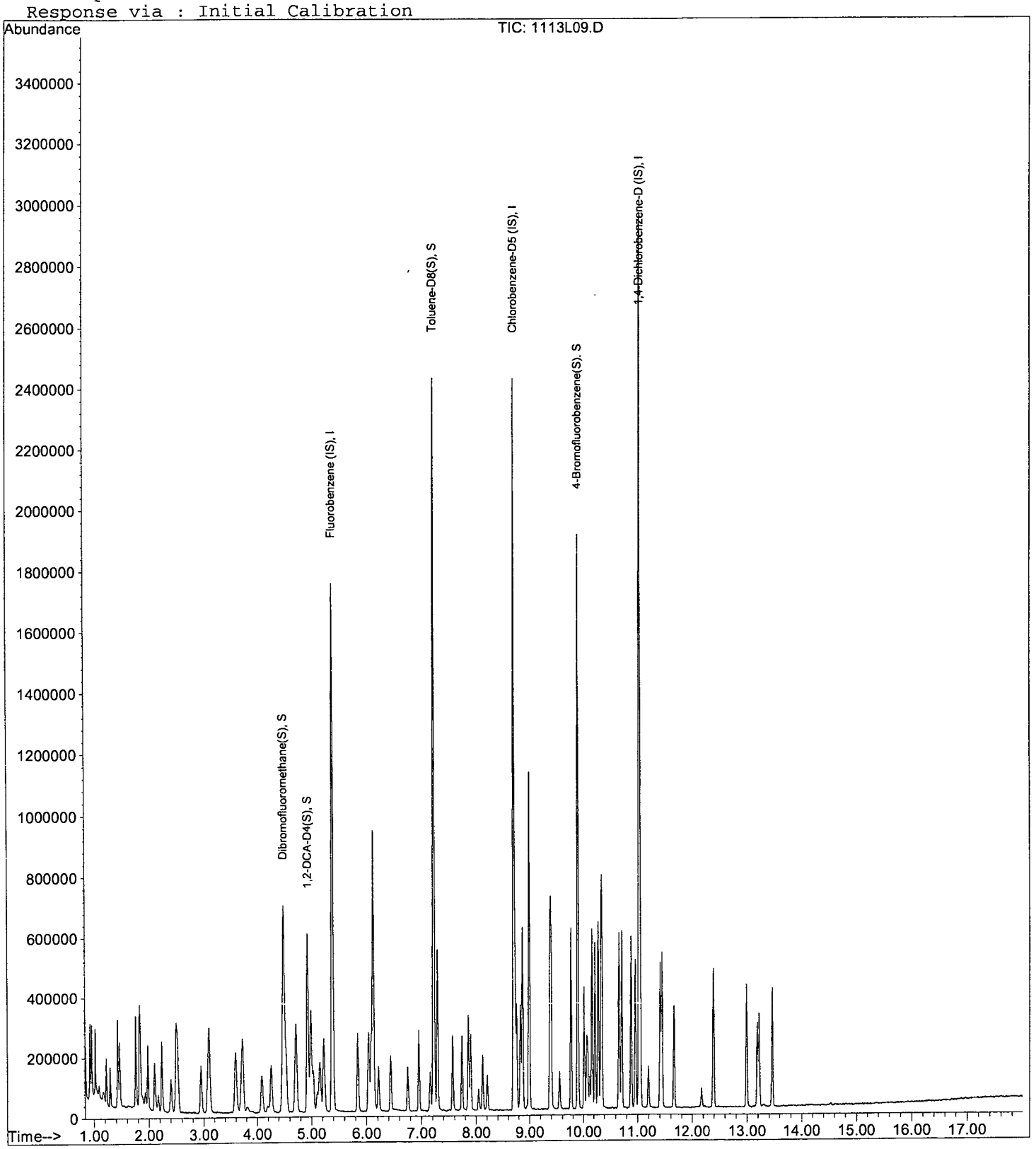
Quantitation Report

Data File : M:\LOKI\DATA\161113\1113L09.D
Acq On : 13 Nov 16 15:28
Sample : 5.0ug/L VOC STD 11/13/16AN
Misc : 5uL-25ppb

Vial: 9
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 17 11:17 2016 Quant Results File: LSUR1113.RES

Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L10.D Vial: 10
Acq On : 13 Nov 16 15:56 Operator: PM,DG,SV,CMM
Sample : 10ug/L VOC STD 11/13/160 Inst : Loki
Misc : 5uL-25ppb Multiplr: 1.00

Quant Time: Nov 17 11:17 2016 Quant Results File: LSUR1113.RES

Quant Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	817344	25.00000	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	790336	25.00000	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	444864	25.00000	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.49	111	437231	25.34993	ppb	0.00
Spiked Amount 25.000			Recovery = 101.400%			
3) 1,2-DCA-D4(S)	4.93	65	462687	24.60655	ppb	0.00
Spiked Amount 25.000			Recovery = 98.428%			
5) Toluene-D8(S)	7.22	98	1497085	24.80634	ppb	0.00
Spiked Amount 25.000			Recovery = 99.224%			
6) 4-Bromofluorobenzene(S)	9.89	95	545532	25.04462	ppb	0.00
Spiked Amount 25.000			Recovery = 100.180%			

Target Compounds Qvalue

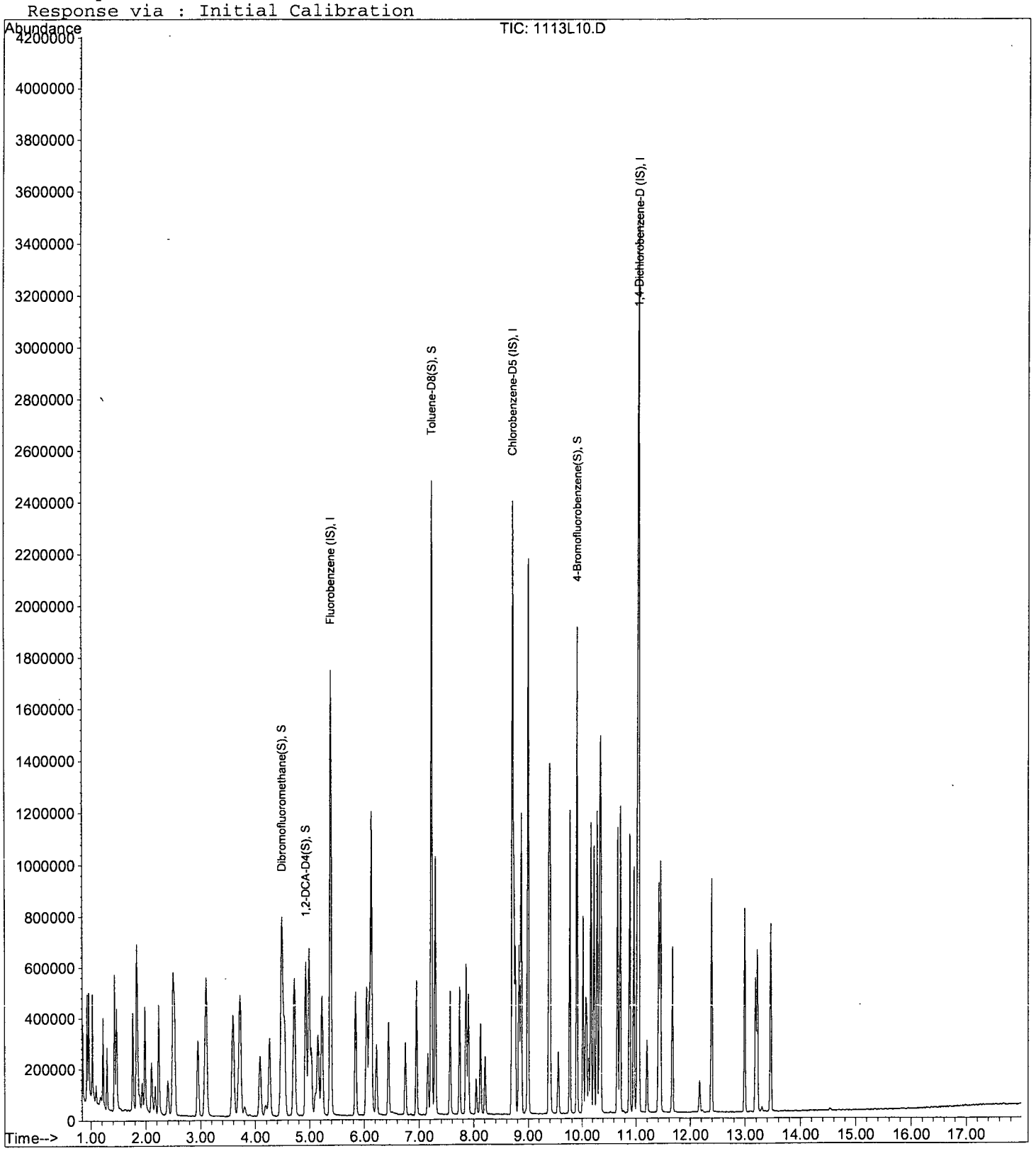
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1113L10.D Vial: 10
Acq On : 13 Nov 16 15:56 Operator: PM,DG,SV,CMM
Sample : 10ug/L VOC STD 11/13/160 Inst : Loki
Misc : 5uL-25ppb Multiplr: 1.00

Quant Time: Nov 17 11:17 2016 Quant Results File: LSUR1113.RES

Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L11.D Vial: 11
Acq On : 13 Nov 16 16:24 Operator: PM,DG,SV,CMM
Sample : 20ug/L VOC STD 11/13/16P Inst : Loki
Misc : 10uL-50ppb Multiplr: 1.00

Quant Time: Nov 17 11:17 2016 Quant Results File: LSUR1113.RES

Quant Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	822357	25.00000	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	788800	25.00000	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	427392	25.00000	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.49	111	856205	49.33874	ppb	0.00
Spiked Amount 25.000			Recovery = 197.356%			
3) 1,2-DCA-D4(S)	4.93	65	927747	49.03853	ppb	0.00
Spiked Amount 25.000			Recovery = 196.156%			
5) Toluene-D8(S)	7.22	98	2971626	49.33501	ppb	0.00
Spiked Amount 25.000			Recovery = 197.340%			
6) 4-Bromofluorobenzene(S)	9.89	95	1085660	49.93821	ppb	0.00
Spiked Amount 25.000			Recovery = 199.752%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

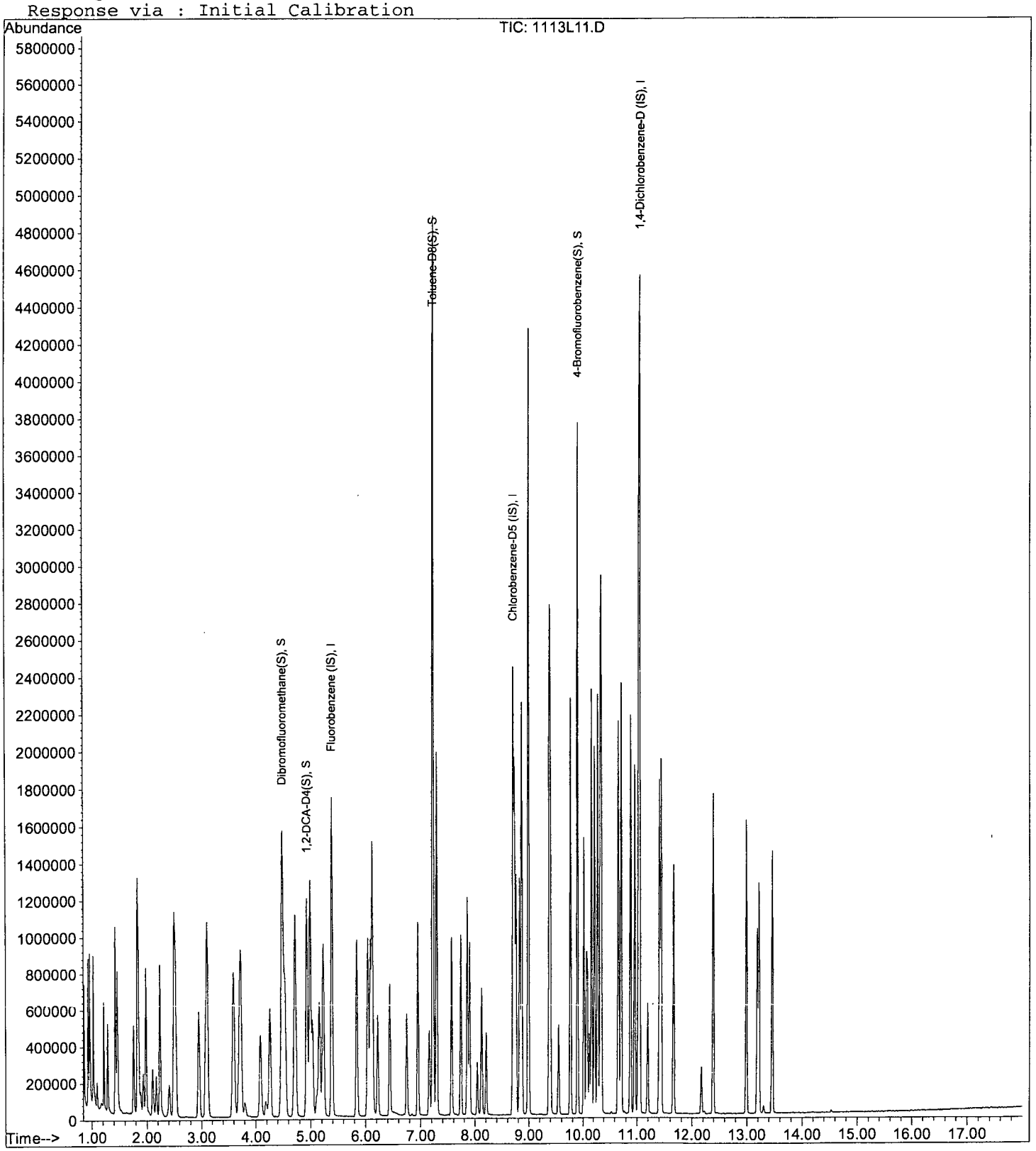
Quantitation Report

Data File : M:\LOKI\DATA\161113\1113L11.D
Acq On : 13 Nov 16 16:24
Sample : 20ug/L VOC STD 11/13/16P
Misc : 10uL-50ppb

Vial: 11
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 17 11:17 2016 Quant Results File: LSUR1113.RES

Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L12.D Vial: 12
Acq On : 13 Nov 16 16:53 Operator: PM,DG,SV,CMM
Sample : 40ug/L VOC STD 11/13/16Q Inst : Loki
Misc : 10uL-50ppb Multiplr: 1.00

Quant Time: Nov 17 11:17 2016 Quant Results File: LSUR1113.RES

Quant Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	833460	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	819328	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	420224	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.49	111	849578	48.30468 ppb	0.00
Spiked Amount 25.000			Recovery	= 193.220%	
3) 1,2-DCA-D4(S)	4.93	65	914958	47.71827 ppb	0.00
Spiked Amount 25.000			Recovery	= 190.872%	
5) Toluene-D8(S)	7.22	98	2980523	47.63901 ppb	0.00
Spiked Amount 25.000			Recovery	= 190.556%	
6) 4-Bromofluorobenzene(S)	9.89	95	1088386	48.19824 ppb	0.00
Spiked Amount 25.000			Recovery	= 192.792%	

Target Compounds Qvalue

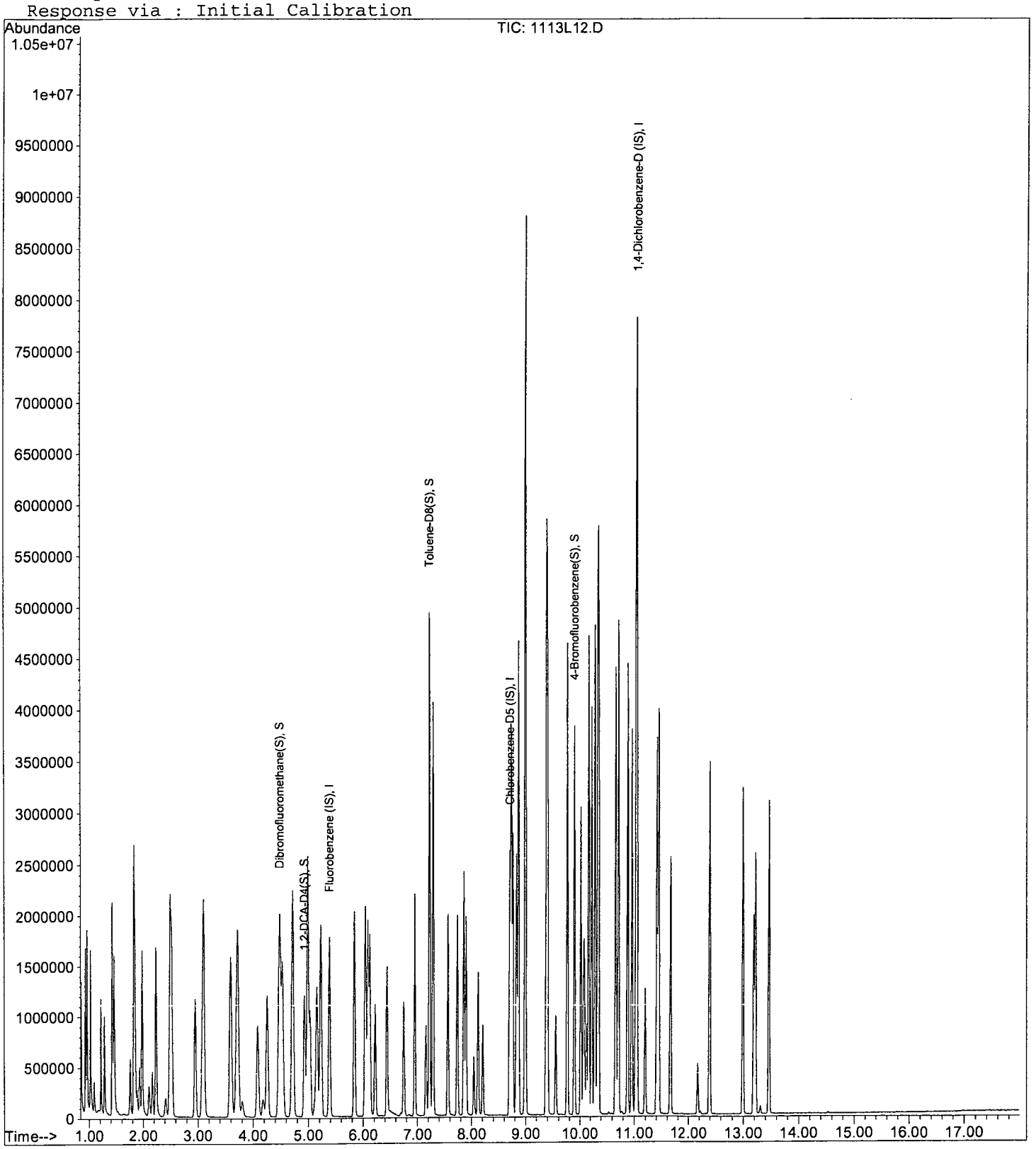
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1113L12.D Vial: 12
Acq On : 13 Nov 16 16:53 Operator: PM,DG,SV,CMM
Sample : 40ug/L VOC STD 11/13/16Q Inst : Loki
Misc : 10uL-50ppb Multiplr: 1.00

Quant Time: Nov 17 11:17 2016 Quant Results File: LSUR1113.RES

Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1113L13.D
Acq On : 13 Nov 16 17:21
Sample : 100ug/L VOC STD 11/13/16R
Misc : 20uL-100ppb

Vial: 13
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 17 11:17 2016 Quant Results File: LSUR1113.RES

Quant Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	813101	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	804096	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	453440	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.49	111	1606098	93.60482 ppb	0.00
Spiked Amount 25.000			Recovery	= 374.420%	
3) 1,2-DCA-D4(S)	4.93	65	1736238	92.81818 ppb	0.00
Spiked Amount 25.000			Recovery	= 371.272%	
5) Toluene-D8(S)	7.22	98	5659435	92.17076 ppb	0.00
Spiked Amount 25.000			Recovery	= 368.684%	
6) 4-Bromofluorobenzene(S)	9.89	95	2113780	95.38013 ppb	0.00
Spiked Amount 25.000			Recovery	= 381.520%	

Target Compounds Qvalue

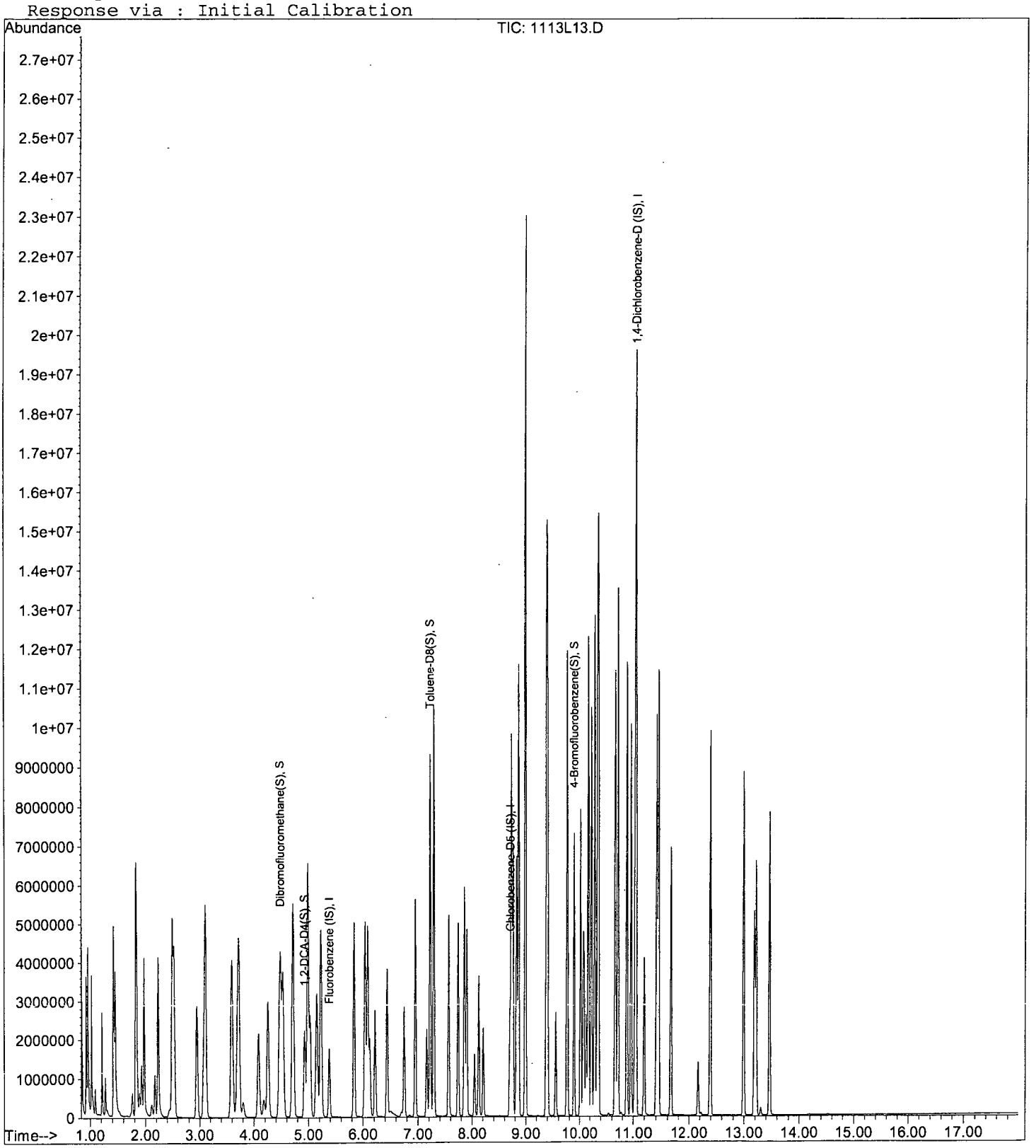
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1113L13.D Vial: 13
Acq On : 13 Nov 16 17:21 Operator: PM,DG,SV,CMM
Sample : 100ug/L VOC STD 11/13/16R Inst : Loki
Misc : 20uL-100ppb Multiplr: 1.00

Quant Time: Nov 17 11:17 2016 Quant Results File: LSUR1113.RES

Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/20/16
Instrument: Loki
Initial Cal. Date: 11/13/16
Data File: 1119L07.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	4.028	1.703	58	TMHBL	7.9
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
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40							
		Average			58.0		

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1119L07.D Vial: 6
Acq On : 20 Nov 16 12:10 Operator: PM,DG,SV,CMM
Sample : 161119A CCV/LCS 300ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 8:57 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1579825	25.00000	ppb	-0.10
3) Chlorobenzene-D5 (IS)	8.57	TIC	36516	25.00000	ppb	-0.22
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	2240252	25.00000	ppb	-0.09

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	32284337m	276.21215	ppb	100

(#) = qualifier out of range (m) = manual integration
1119L07.D LGAS6718.M Mon Nov 21 10:18:56 2016 Page 1

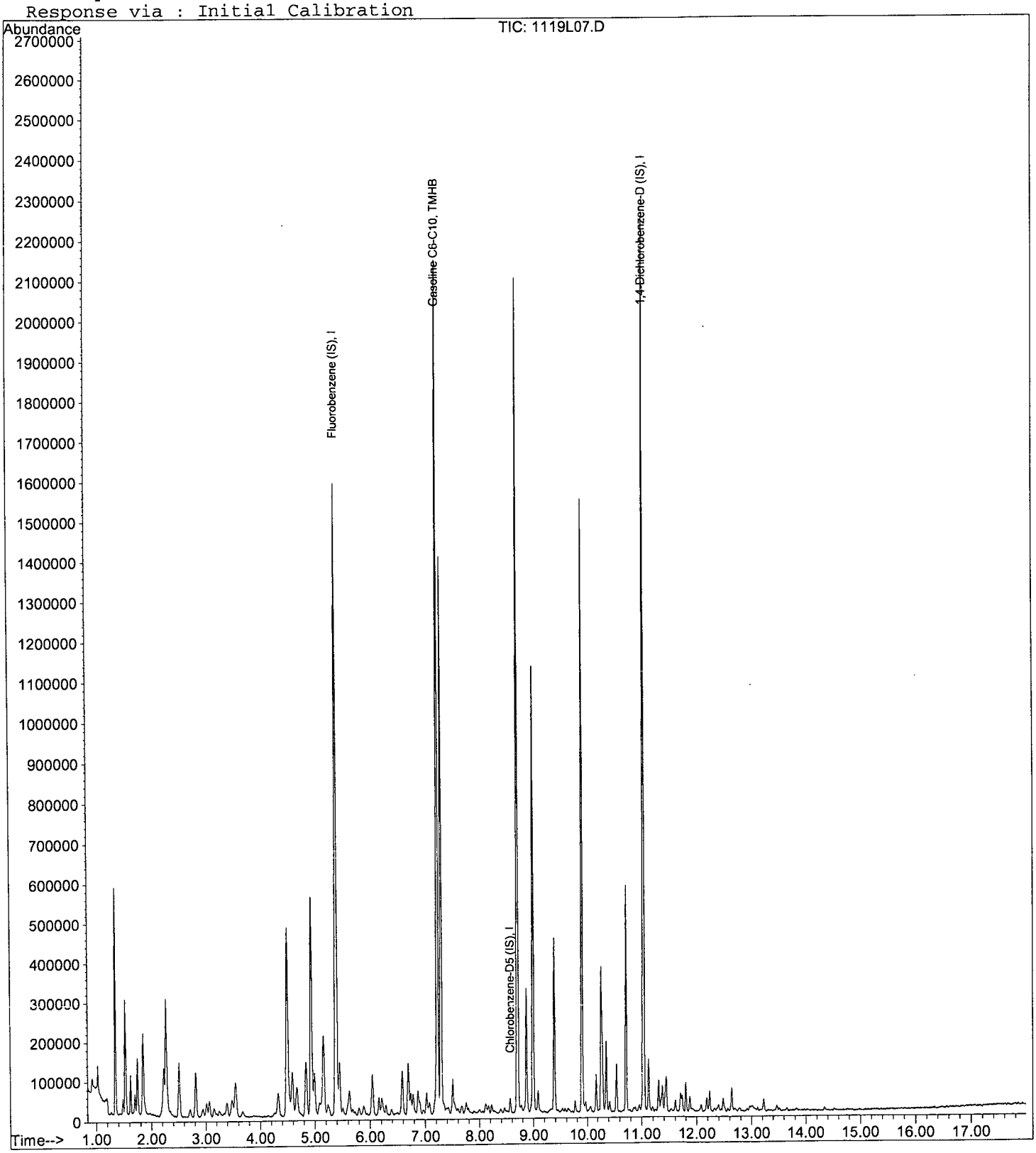
Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L07.D
Acq On : 20 Nov 16 12:10
Sample : 161119A CCV/LCS 300ug/L
Misc : W IS&S 10/20/16, 11/04/16

Vial: 6
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 8:57 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/20/16
Instrument: Loki
Initial Cal. Date: 11/13/16
Data File: 1119L07.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	S	Dibromofluoromethane(S)	0.5276	0.4946	6.2	S	
3	S	1,2-DCA-D4(S)	0.5751	0.6028	4.8	S	
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	S	Toluene-D8(S)	1.909	2.003	4.9	S	
6	S	4-Bromofluorobenzene(S)	0.6890	0.7040	2.2	S	
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
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		Average			4.5		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1119L07.D Vial: 6
Acq On : 20 Nov 16 12:10 Operator: PM,DG,SV,CMM
Sample : 161119A CCV/LCS 300ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multip1r: 1.00

Quant Time: Nov 21 10:00 2016 Quant Results File: LSUR1113.RES

Quant Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	707648	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	643136	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	339968	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.49	111	350018	23.43925 ppb	0.00
Spiked Amount 25.000			Recovery = 93.756%		
3) 1,2-DCA-D4(S)	4.93	65	426582	26.20315 ppb	0.00
Spiked Amount 25.000			Recovery = 104.812%		
5) Toluene-D8(S)	7.22	98	1288179	26.23019 ppb	0.00
Spiked Amount 25.000			Recovery = 104.920%		
6) 4-Bromofluorobenzene(S)	9.89	95	452768	25.54341 ppb	0.00
Spiked Amount 25.000			Recovery = 102.172%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/20/16
Instrument: Loki
Initial Cal. Date: 11/13/16
Data File: 1119L28.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	4.028	1.739	57	TMHBL	4.2
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
5							
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		Average			57.0		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1119L28.D
Acq On : 20 Nov 16 21:59
Sample : Ending CCV GAS 300ug/L 11/19/16
Misc : W IS&S 10/20/16, 11/04/16

Vial: 27
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 8:56 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1514499	25.00000	ppb	-0.10
3) Chlorobenzene-D5 (IS)	8.57	TIC	28859	25.00000	ppb	-0.22
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	2089276	25.00000	ppb	-0.09
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.31	TIC	25302698m	179.10975	ppb	100

(#) = qualifier out of range (m) = manual integration

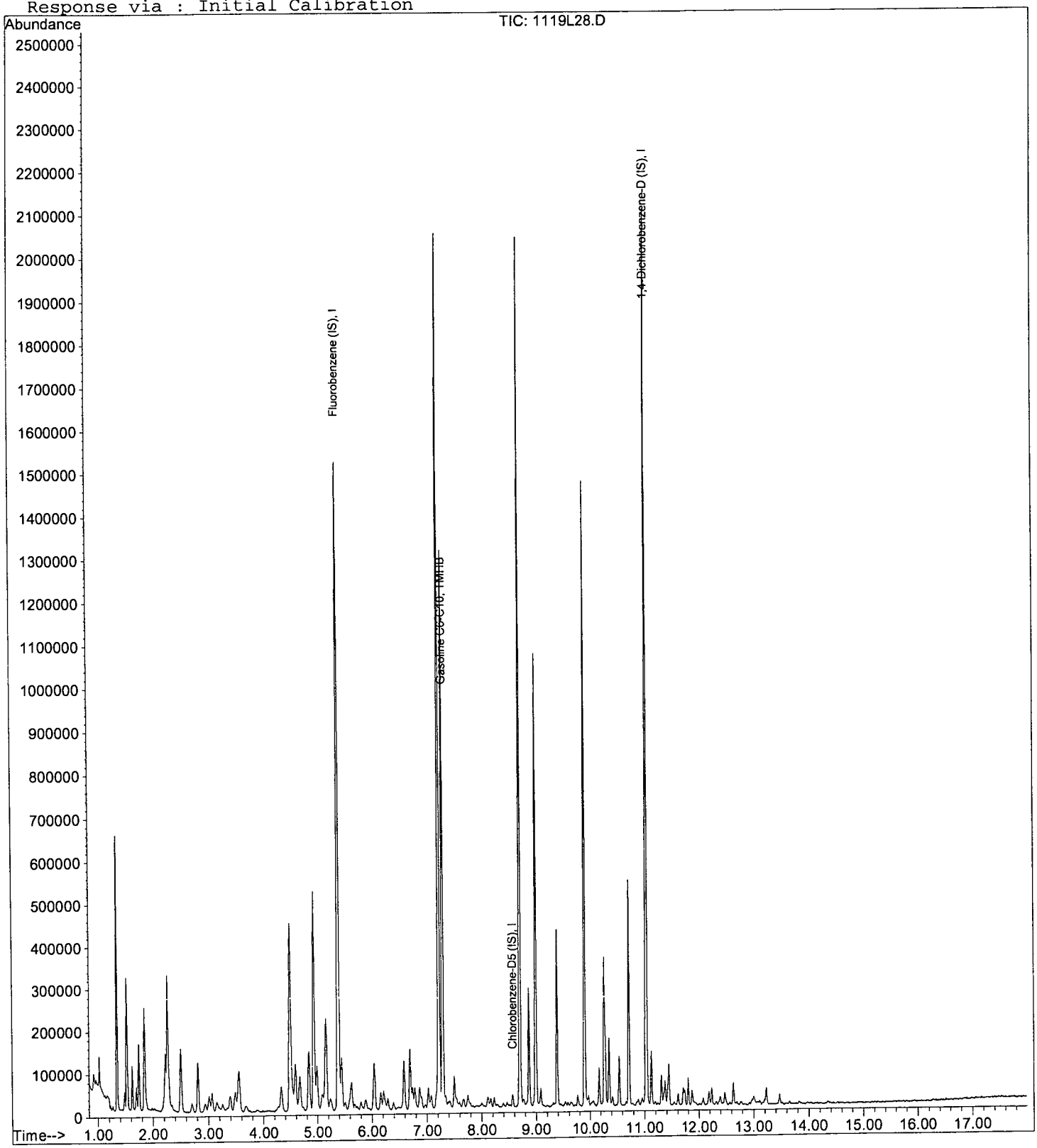
Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L28.D
Acq On : 20 Nov 16 21:59
Sample : Ending CCV GAS 300ug/L 11/19/16
Misc : W IS&S 10/20/16, 11/04/16

Vial: 27
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 8:56 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/20/16
Instrument: Loki
Initial Cal. Date: 11/13/16
Data File: 1119L28.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	S	Dibromofluoromethane(S)	0.5276	0.4846	8.2	S	
3	S	1,2-DCA-D4(S)	0.5751	0.6037	5.0	S	
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	S	Toluene-D8(S)	1.909	1.997	4.6	S	
6	S	4-Bromofluorobenzene(S)	0.6890	0.6994	1.5	S	
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
8							
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40							
		Average			4.8		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1119L28.D Vial: 27
Acq On : 20 Nov 16 21:59 Operator: PM,DG,SV,CMM
Sample : Ending CCV GAS 300ug/L 11/19/16 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 10:01 2016 Quant Results File: LSUR1113.RES

Quant Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	673408	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	615232	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	315968	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.49	111	326306	22.96241 ppb	0.00
Spiked Amount 25.000			Recovery = 91.848%		
3) 1,2-DCA-D4(S)	4.93	65	406538	26.24165 ppb	0.00
Spiked Amount 25.000			Recovery = 104.968%		
5) Toluene-D8(S)	7.22	98	1228547	26.15055 ppb	0.00
Spiked Amount 25.000			Recovery = 104.604%		
6) 4-Bromofluorobenzene(S)	9.89	95	430294	25.37654 ppb	0.00
Spiked Amount 25.000			Recovery = 101.508%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/21/16
Instrument: Loki
Initial Cal. Date: 11/13/16
Data File: 1119L34.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	4.028	1.664	59	TMHBL	12
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
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		Average			59.0		

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1119L34.D Vial: 33
Acq On : 21 Nov 16 00:47 Operator: PM,DG,SV,CMM
Sample : 161119B CCV/LCS 300ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 9:39 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1539478	25.00	ppb	-0.10
3) Chlorobenzene-D5 (IS)	8.56	TIC	26451	25.00	ppb	-0.23
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	2081926	25.00	ppb	-0.09
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	30741936m	264.07	ppb	100

(#) = qualifier out of range (m) = manual integration

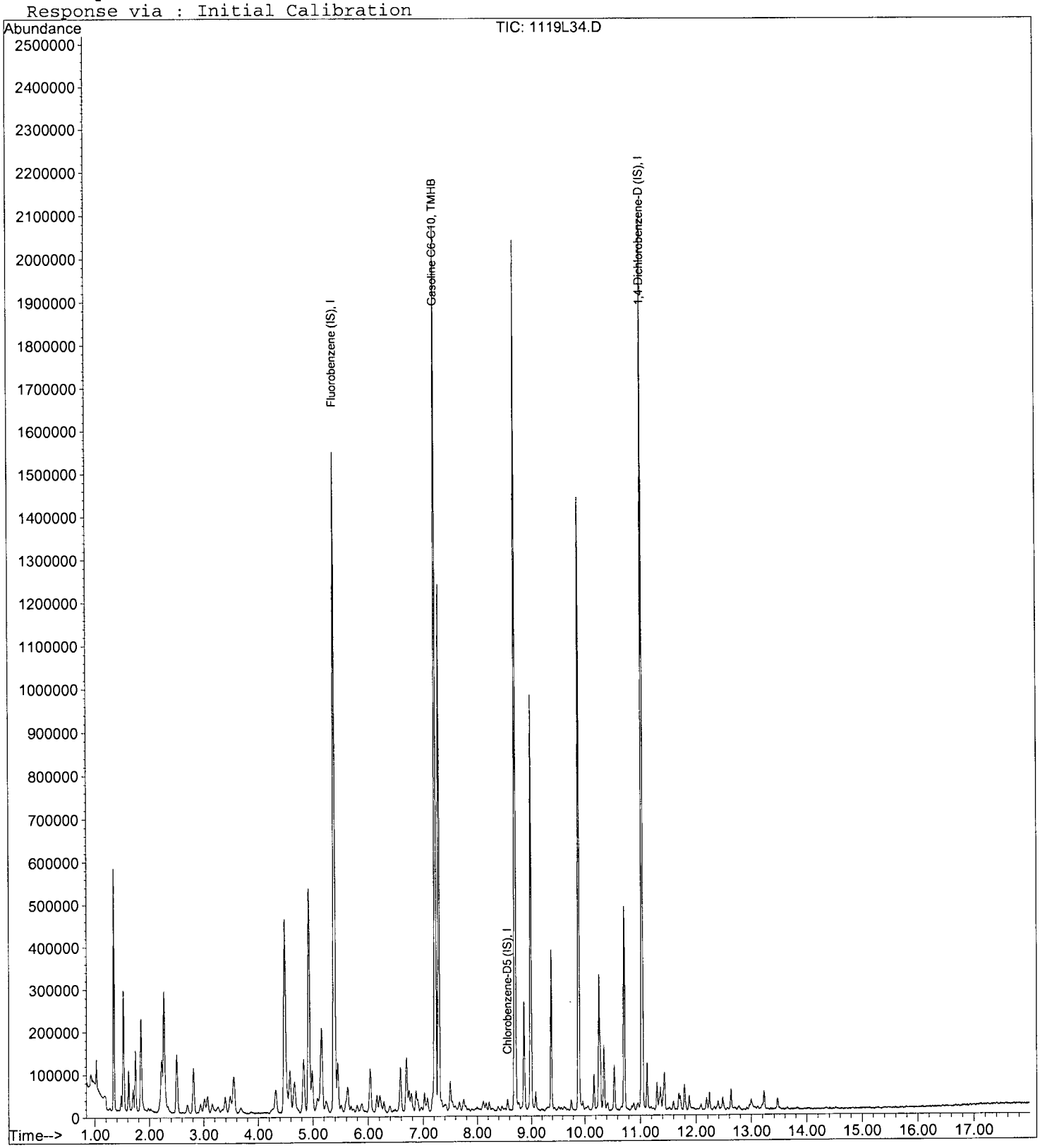
Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L34.D
Acq On : 21 Nov 16 00:47
Sample : 161119B CCV/LCS 300ug/L
Misc : W IS&S 10/20/16, 11/04/16

Vial: 33
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 9:39 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/21/16
Instrument: Loki
Initial Cal. Date: 11/13/16
Data File: 1119L34.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	S	Dibromofluoromethane(S)	0.5276	0.4854	8.0	S	
3	S	1,2-DCA-D4(S)	0.5751	0.6006	4.4	S	
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	S	Toluene-D8(S)	1.909	1.983	3.9	S	
6	S	4-Bromofluorobenzene(S)	0.6890	0.6783	1.6	S	
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
8							
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40							
		Average			4.5		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1119L34.D Vial: 33
Acq On : 21 Nov 16 00:47 Operator: PM,DG,SV,CMM
Sample : 161119B CCV/LCS 300ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 11:45 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	681664	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	615488	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	320000	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.49	111	330895	23.00	ppb		0.00
Spiked Amount 25.000			Recovery = 92.012%				
37) 1,2-DCA-D4(S)	4.93	65	409410	26.11	ppb		0.00
Spiked Amount 25.000			Recovery = 104.428%				
57) Toluene-D8(S)	7.22	98	1220720	25.97	ppb		0.00
Spiked Amount 25.000			Recovery = 103.892%				
65) 4-Bromofluorobenzene(S)	9.89	95	417476	24.61	ppb		0.00
Spiked Amount 25.000			Recovery = 98.440%				
Target Compounds							Qvalue
4) Chloromethane	1.06	50	1691	0.08	ppb		88
6) Bromomethane	1.23	96	936	0.11	ppb		91
7) Chloroethane	1.30	64	807	0.08	ppb	#	43
10) Acrolein	1.75	56	2446	2.13	ppb	#	1
11) Acetone	1.85	43	87556	19.35	ppb	#	58
14) t-Butanol	2.39	59	934	1.82	ppb	#	87
15) Acetonitrile	2.27	41	86387	62.30	ppb	#	35
16) Methyl Acetate	2.16	43	2002	0.21	ppb		97
17) Iodomethane	1.93	142	369	0.79	ppb	#	43
18) Acrylonitrile	2.51	52	1277	0.36	ppb	#	27
19) Methylene chloride	2.24	84	3118	0.20	ppb	#	65
20) Carbon disulfide	1.98	76	6660	0.18	ppb		99
22) Trans-1,2-DCE	2.50	96	1060	0.08	ppb		97
25) Vinyl Acetate	3.01	43	1154	0.10	ppb	#	74
27) MEK (2-Butanone)	3.83	43	2282	0.44	ppb		95
34) Cyclohexane	4.59	41	80628	7.60	ppb	#	4
35) 1,1-Dichloropropene	4.73	75	1333	0.08	ppb	#	68
36) 2,2,4-Trimethylpentane	5.15	57	203450	6.39	ppb		98
41) Benzene	4.99	78	91345	1.70	ppb		99
42) TCE	5.84	95	611	0.08	ppb	#	74
43) 2-Pentanone	6.16	43	37499	4.64	ppb	#	65
46) Methyl Cyclohexane	6.04	83	34499	1.95	ppb		83
49) MIBK (methyl isobutyl ket	7.22	43	15683	0.75	ppb	#	1
52) Toluene	7.29	91	808653	14.11	ppb		99
54) 1,1,2-TCA	7.74	83	1408	0.14	ppb	#	26
55) 2-Hexanone	7.99	43	2180	1.55	ppb	#	36
59) Tetrachloroethene	7.86	166	982	0.08	ppb	#	55
60) 1-Chlorohexane	8.70	91	1815	0.12	ppb	#	1
62) m&p-Xylene	8.99	106	240733	10.75	ppb		94
63) o-Xylene	9.38	106	89199	4.06	ppb		92
64) Styrene	9.38	104	3040	0.13	ppb	#	1
69) Ethylbenzene	8.87	91	168420	2.91	ppb		99
72) Isopropylbenzene	9.76	105	13825	0.26	ppb		99
73) 1,1,2,2-Tetrachloroethane	10.06	83	995	0.08	ppb	#	73
74) 1,2,3-Trichloropropane	10.10	110	340	0.14	ppb	#	21
75) t-1,4-Dichloro-2-Butene	10.17	53	1748	0.51	ppb	#	27
76) Bromobenzene	10.02	156	1216	0.09	ppb		96
77) n-Propylbenzene	10.17	91	59528	1.00	ppb		97
78) 4-Ethyltoluene	10.26	105	241006	4.71	ppb		99

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161113\1119L34.D
Acq On : 21 Nov 16 00:47
Sample : 161119B CCV/LCS 300ug/L
Misc : W IS&S 10/20/16, 11/04/16

Vial: 33
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 11:45 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
79)	2-Chlorotoluene	10.23	91	3896	0.10	ppb	#	78
80)	1,3,5-Trimethylbenzene	10.35	105	72729	1.68	ppb		100
81)	4-Chlorotoluene	10.35	91	12597	0.28	ppb	#	52
82)	Tert-Butylbenzene	10.67	119	3831	0.10	ppb		92
83)	1,2,4-Trimethylbenzene	10.72	105	244209	5.55	ppb		93
84)	Sec-Butylbenzene	10.88	105	9000	0.17	ppb		98
85)	p-Isopropyltoluene	11.00	119	5433	0.12	ppb		99
86)	Benzyl Chloride	11.21	91	1065	0.07	ppb	#	67
87)	1,3-DCB	10.96	146	3759	0.15	ppb		89
88)	1,4-DCB	11.05	146	4779	0.18	ppb		90
89)	n-Butylbenzene	11.44	91	23629	0.61	ppb	#	77
90)	1,2-DCB	11.41	146	3455	0.14	ppb		93
93)	1,2,4-Trichlorobenzene	12.99	180	5827	0.34	ppb		98
94)	Hexachlorobutadiene	13.19	225	1825	0.27	ppb		85
95)	Naphthalene	13.23	128	18992	0.88	ppb		98
96)	1,2,3-Trichlorobenzene	13.47	180	4301	0.41	ppb		80

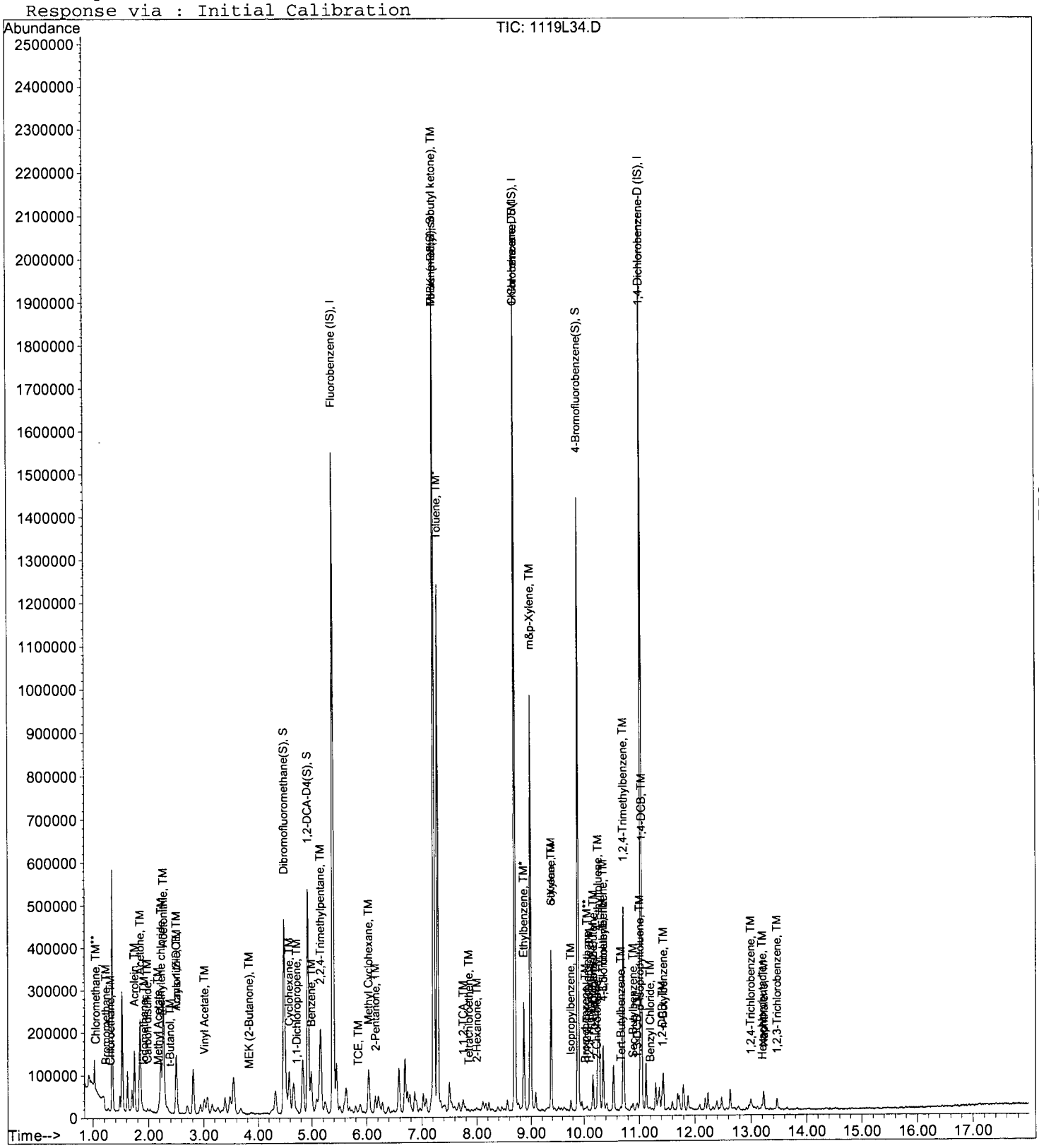
(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161113\1119L34.D
Acq On : 21 Nov 16 00:47
Sample : 161119B CCV/LCS 300ug/L
Misc : W IS&S 10/20/16, 11/04/16

Vial: 33
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 11:45 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



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VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/21/16
Instrument: Loki
Initial Cal. Date: 11/13/16
Data File: 1119L55.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	I	Dichlorodifluoromethane	1.000	1.000	0.00	I	
3	I	Freon 114	1.000	1.000	0.00	I	
4	I	Chloromethane	1.000	1.000	0.00	I	
5	I	Vinyl chloride	1.000	1.000	0.00	I	
6	I	Bromomethane	1.000	1.000	0.00	I	
7	I	Chloroethane	1.000	1.000	0.00	I	
8	I	Dichlorofluoromethane	1.000	1.000	0.00	I	
9	I	Trichlorofluoromethane	1.000	1.000	0.00	I	
10	I	Acrolein	1.000	1.000	0.00	I	
11	I	Acetone	1.000	1.000	0.00	I	
12	I	Freon-113	1.000	1.000	0.00	I	
13	I	1,1-DCE	1.000	1.000	0.00	I	
14	I	t-Butanol	1.000	1.000	0.00	I	
15	I	Acetonitrile	1.000	1.000	0.00	I	
16	I	Methyl Acetate	1.000	1.000	0.00	I	
17	I	Iodomethane	1.000	1.000	0.00	I	
18	I	Acrylonitrile	1.000	1.000	0.00	I	
19	I	Methylene chloride	1.000	1.000	0.00	I	
20	I	Carbon disulfide	1.000	1.000	0.00	I	
21	I	Methyl t-butyl ether (MtBE)	1.000	1.000	0.00	I	
22	I	Trans-1,2-DCE	1.000	1.000	0.00	I	
23	I	Diisopropyl Ether	1.000	1.000	0.00	I	
24	I	1,1-DCA	1.000	1.000	0.00	I	
25	I	Vinyl Acetate	1.000	1.000	0.00	I	
26	I	Ethyl tert Butyl Ether	1.000	1.000	0.00	I	
27	I	MEK (2-Butanone)	1.000	1.000	0.00	I	
28	I	Cis-1,2-DCE	1.000	1.000	0.00	I	
29	I	2,2-Dichloropropane	1.000	1.000	0.00	I	
30	I	Chloroform	1.000	1.000	0.00	I	
31	I	Bromochloromethane	1.000	1.000	0.00	I	
32	S	Dibromofluoromethane(S)	0.5276	0.4947	6.2	S	
33	I	1,1,1-TCA	1.000	1.000	0.00	I	
34	I	Cyclohexane	1.000	1.000	0.00	I	
35	I	1,1-Dichloropropene	1.000	1.000	0.00	I	
36	I	2,2,4-Trimethylpentane	1.000	1.000	0.00	I	
37	S	1,2-DCA-D4(S)	0.5751	0.6170	7.3	S	
38	I	Carbon Tetrachloride	1.000	1.000	0.00	I	
39	I	Tert Amyl Methyl Ether	1.000	1.000	0.00	I	
40	I	1,2-DCA	1.000	1.000	0.00	I	
		Average			0.3		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 11/21/16
Instrument: Loki
Cal. Date: 11/13/16
Data File: 1119L55.D

		Compound	MEAN	CCRF	%D		%Drift
41	I	Benzene	1.000	1.000	0.00	I	
42	I	TCE	1.000	1.000	0.00	I	
43	I	2-Pentanone	1.000	1.000	0.00	I	
44	I	1,2-Dichloropropane	1.000	1.000	0.00	I	
45	I	Bromodichloromethane	1.000	1.000	0.00	I	
46	I	Methyl Cyclohexane	1.000	1.000	0.00	I	
47	I	Dibromomethane	1.000	1.000	0.00	I	
48	I	2-Chloroethyl vinyl ether	1.000	1.000	0.00	I	
49	I	MIBK (methyl isobutyl ketone)	1.000	1.000	0.00	I	
50	I	1-Bromo-2-chloroethane	1.000	1.000	0.00	I	
51	I	Cis-1,3-Dichloropropene	1.000	1.000	0.00	I	
52	I	Toluene	1.000	1.000	0.00	I	
53	I	Trans-1,3-Dichloropropene	1.000	1.000	0.00	I	
54	I	1,1,2-TCA	1.000	1.000	0.00	I	
55	I	2-Hexanone	1.000	1.000	0.00	I	
56	I	Chlorobenzene-D5 (IS)	ISTD			I	
57	S	Toluene-D8(S)	1.909	1.911	0.10	S	
58	I	1,2-EDB	1.000	1.000	0.00	I	
59	I	Tetrachloroethene	1.000	1.000	0.00	I	
60	I	1-Chlorohexane	1.000	1.000	0.00	I	
61	I	1,1,1,2-Tetrachloroethane	1.000	1.000	0.00	I	
62	I	m&p-Xylene	1.000	1.000	0.00	I	
63	I	o-Xylene	1.000	1.000	0.00	I	
64	I	Styrene	1.000	1.000	0.00	I	
65	S	4-Bromofluorobenzene(S)	0.6890	0.6568	4.7	S	
66	I	1,3-Dichloropropane	1.000	1.000	0.00	I	
67	I	Dibromochloromethane	1.000	1.000	0.00	I	
68	I	Chlorobenzene	1.000	1.000	0.00	I	
69	I	Ethylbenzene	1.000	1.000	0.00	I	
70	I	Bromoform	1.000	1.000	0.00	I	
71	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
72	I	Isopropylbenzene	1.000	1.000	0.00	I	
73	I	1,1,2,2-Tetrachloroethane	1.000	1.000	0.00	I	
74	I	1,2,3-Trichloropropane	1.000	1.000	0.00	I	
75	I	t-1,4-Dichloro-2-Butene	1.000	1.000	0.00	I	
76	I	Bromobenzene	1.000	1.000	0.00	I	
77	I	n-Propylbenzene	1.000	1.000	0.00	I	
78	I	4-Ethyltoluene	1.000	1.000	0.00	I	
79	I	2-Chlorotoluene	1.000	1.000	0.00	I	
80	I	1,3,5-Trimethylbenzene	1.000	1.000	0.00	I	
		Average			0.1		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 11/21/16
Instrument: Loki
Cal. Date: 11/13/16
Data File: 1119L55.D

		Compound	MEAN	CCRF	%D		%Drift
81	I	4-Chlorotoluene	1.000	1.000	0.00	I	
82	I	Tert-Butylbenzene	1.000	1.000	0.00	I	
83	I	1,2,4-Trimethylbenzene	1.000	1.000	0.00	I	
84	I	Sec-Butylbenzene	1.000	1.000	0.00	I	
85	I	p-Isopropyltoluene	1.000	1.000	0.00	I	
86	I	Benzyl Chloride	1.000	1.000	0.00	I	
87	I	1,3-DCB	1.000	1.000	0.00	I	
88	I	1,4-DCB	1.000	1.000	0.00	I	
89	I	n-Butylbenzene	1.000	1.000	0.00	I	
90	I	1,2-DCB	1.000	1.000	0.00	I	
91	I	Hexachloroethane	1.000	1.000	0.00	I	
92	I	1,2-Dibromo-3-chloropropane	1.000	1.000	0.00	I	
93	I	1,2,4-Trichlorobenzene	1.000	1.000	0.00	I	
94	I	Hexachlorobutadiene	1.000	1.000	0.00	I	
95	I	Naphthalene	1.000	1.000	0.00	I	
96	I	1,2,3-Trichlorobenzene	1.000	1.000	0.00	I	
97							
98							
99							
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118							
119							
120							
		Average			0.0		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1119L55.D Vial: 54
Acq On : 21 Nov 16 10:36 Operator: PM,DG,SV,CMM
Sample : Ending CCV GAS 300ug/L 11/19/16 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 11:46 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	663808	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	622528	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	308096	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.49	111	328408	23.44	ppb		0.00
Spiked Amount 25.000			Recovery = 93.780%				
37) 1,2-DCA-D4(S)	4.93	65	409549	26.82	ppb		0.00
Spiked Amount 25.000			Recovery = 107.272%				
57) Toluene-D8(S)	7.22	98	1189657	25.03	ppb		0.00
Spiked Amount 25.000			Recovery = 100.104%				
65) 4-Bromofluorobenzene(S)	9.89	95	408879	23.83	ppb		0.00
Spiked Amount 25.000			Recovery = 95.324%				
Target Compounds							Qvalue
4) Chloromethane	0.96	50	3908	0.20	ppb		88
6) Bromomethane	1.23	96	581	0.07	ppb		95
7) Chloroethane	1.31	64	761	0.08	ppb		100
10) Acrolein	1.74	56	1849	1.65	ppb	#	1
11) Acetone	1.85	43	83096	18.83	ppb	#	57
13) 1,1-DCE	1.83	96	447	0.05	ppb	#	44
14) t-Butanol	2.34	59	335	0.67	ppb		100
15) Acetonitrile	2.27	41	81780	60.57	ppb	#	33
16) Methyl Acetate	2.17	43	2651	0.28	ppb	#	52
17) Iodomethane	1.94	142	362	0.79	ppb	#	42
18) Acrylonitrile	2.34	52	1468	0.42	ppb		84
19) Methylene chloride	2.24	84	3221	0.22	ppb	#	18
22) Trans-1,2-DCE	2.50	96	1051	0.08	ppb		91
25) Vinyl Acetate	3.01	43	1033	0.10	ppb	#	74
27) MEK (2-Butanone)	3.83	43	3262	0.64	ppb	#	65
28) Cis-1,2-DCE	3.75	96	727	0.05	ppb	#	50
29) 2,2-Dichloropropane	3.71	77	282	0.04	ppb	#	54
34) Cyclohexane	4.58	41	42279	4.09	ppb	#	7
36) 2,2,4-Trimethylpentane	5.15	57	180032	5.81	ppb		91
40) 1,2-DCA	5.04	62	2637	0.14	ppb	#	62
41) Benzene	4.99	78	92811	1.77	ppb		97
42) TCE	5.85	95	525	0.07	ppb	#	40
43) 2-Pentanone	6.15	43	31142	3.96	ppb	#	66
46) Methyl Cyclohexane	6.04	83	32382	1.88	ppb		78
47) Dibromomethane	6.21	93	789	0.10	ppb	#	1
49) MIBK (methyl isobutyl ket	7.02	43	34272	2.36	ppb	#	28
50) 1-Bromo-2-chloroethane	6.76	63	622	0.06	ppb	#	66
52) Toluene	7.29	91	807576	14.47	ppb		100
53) Trans-1,3-Dichloropropene	7.59	75	909	0.05	ppb	#	45
55) 2-Hexanone	8.07	43	270	1.18	ppb	#	55
60) 1-Chlorohexane	8.70	91	2428	0.16	ppb	#	1
62) m&p-Xylene	8.99	106	246217	10.87	ppb		97
63) o-Xylene	9.38	106	90876	4.08	ppb		96
64) Styrene	9.38	104	2985	0.12	ppb	#	1
68) Chlorobenzene	8.73	112	1827	0.05	ppb	#	80
69) Ethylbenzene	8.87	91	173448	2.96	ppb		98
72) Isopropylbenzene	9.76	105	14809	0.29	ppb		97
73) 1,1,2,2-Tetrachloroethane	10.04	83	1295	0.11	ppb	#	26
74) 1,2,3-Trichloropropane	10.25	110	283	0.12	ppb		78

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1119L55.D Vial: 54
Acq On : 21 Nov 16 10:36 Operator: PM,DG,SV,CMM
Sample : Ending CCV GAS 300ug/L 11/19/16 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 11:46 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
76)	Bromobenzene	10.02	156	1028	0.07	ppb		96
77)	n-Propylbenzene	10.17	91	60591	1.05	ppb		92
78)	4-Ethyltoluene	10.27	105	240255	4.88	ppb		98
79)	2-Chlorotoluene	10.27	91	32357	0.87	ppb	#	38
80)	1,3,5-Trimethylbenzene	10.35	105	73149	1.75	ppb		99
81)	4-Chlorotoluene	10.35	91	12631	0.30	ppb	#	55
82)	Tert-Butylbenzene	10.67	119	3107	0.09	ppb	#	75
83)	1,2,4-Trimethylbenzene	10.72	105	239063	5.65	ppb		96
84)	Sec-Butylbenzene	10.88	105	8758	0.17	ppb		98
85)	p-Isopropyltoluene	11.00	119	6001	0.14	ppb		94
87)	1,3-DCB	10.96	146	2978	0.12	ppb		85
88)	1,4-DCB	11.05	146	3726	0.14	ppb		96
89)	n-Butylbenzene	11.44	91	22717	0.61	ppb	#	68
90)	1,2-DCB	11.41	146	2358	0.10	ppb	#	75
91)	Hexachloroethane	11.66	117	430	0.05	ppb	#	50
92)	1,2-Dibromo-3-chloropropan	12.17	157	230	0.10	ppb	#	65
93)	1,2,4-Trichlorobenzene	12.99	180	4285	0.26	ppb	#	87
94)	Hexachlorobutadiene	13.19	225	1467	0.23	ppb		92
95)	Naphthalene	13.23	128	16148	0.78	ppb		94
96)	1,2,3-Trichlorobenzene	13.47	180	2796	0.28	ppb	#	94

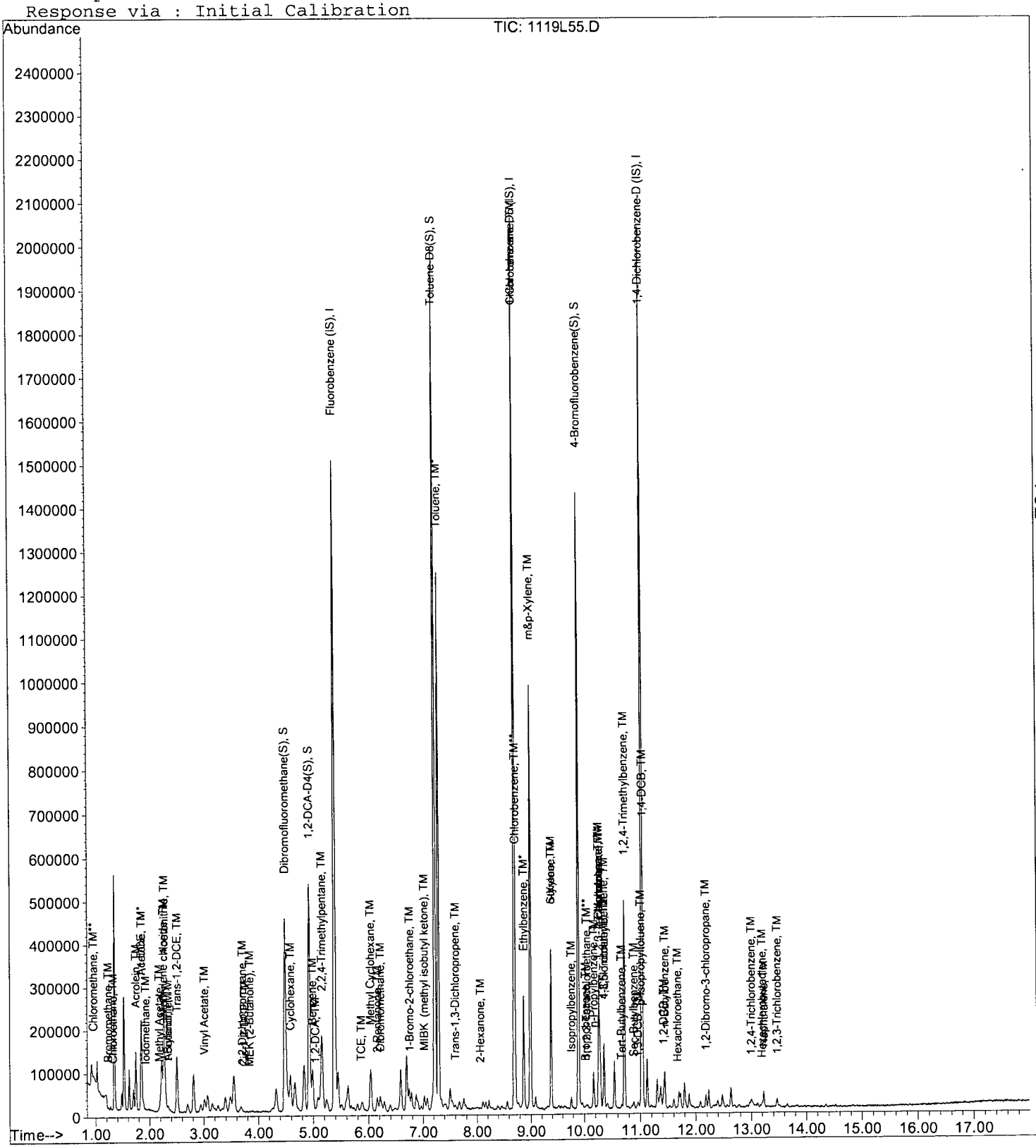
(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161113\1119L55.D
Acq On : 21 Nov 16 10:36
Sample : Ending CCV GAS 300ug/L 11/19/16
Misc : W IS&S 10/20/16, 11/04/16

Vial: 54
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 11:46 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



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VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 11/21/16
Matrix: Instrument: Loki
Initial Cal. Date: 11/13/16
Data File: 1119L55.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	I	Dichlorodifluoromethane	1.000	1.000	0.00	I	
3	I	Freon 114	1.000	1.000	0.00	I	
4	I	Chloromethane	1.000	1.000	0.00	I	
5	I	Vinyl chloride	1.000	1.000	0.00	I	
6	I	Bromomethane	1.000	1.000	0.00	I	
7	I	Chloroethane	1.000	1.000	0.00	I	
8	I	Dichlorofluoromethane	1.000	1.000	0.00	I	
9	I	Trichlorofluoromethane	1.000	1.000	0.00	I	
10	I	Acrolein	1.000	1.000	0.00	I	
11	I	Acetone	1.000	1.000	0.00	I	
12	I	Freon-113	1.000	1.000	0.00	I	
13	I	1,1-DCE	1.000	1.000	0.00	I	
14	I	t-Butanol	1.000	1.000	0.00	I	
15	I	Acetonitrile	1.000	1.000	0.00	I	
16	I	Methyl Acetate	1.000	1.000	0.00	I	
17	I	Iodomethane	1.000	1.000	0.00	I	
18	I	Acrylonitrile	1.000	1.000	0.00	I	
19	I	Methylene chloride	1.000	1.000	0.00	I	
20	I	Carbon disulfide	1.000	1.000	0.00	I	
21	I	Methyl t-butyl ether (MtBE)	1.000	1.000	0.00	I	
22	I	Trans-1,2-DCE	1.000	1.000	0.00	I	
23	I	Diisopropyl Ether	1.000	1.000	0.00	I	
24	I	1,1-DCA	1.000	1.000	0.00	I	
25	I	Vinyl Acetate	1.000	1.000	0.00	I	
26	I	Ethyl tert Butyl Ether	1.000	1.000	0.00	I	
27	I	MEK (2-Butanone)	1.000	1.000	0.00	I	
28	I	Cis-1,2-DCE	1.000	1.000	0.00	I	
29	I	2,2-Dichloropropane	1.000	1.000	0.00	I	
30	I	Chloroform	1.000	1.000	0.00	I	
31	I	Bromochloromethane	1.000	1.000	0.00	I	
32	I	Dibromofluoromethane(S)	1.000	1.000	0.00	I	
33	I	1,1,1-TCA	1.000	1.000	0.00	I	
34	I	Cyclohexane	1.000	1.000	0.00	I	
35	I	1,1-Dichloropropene	1.000	1.000	0.00	I	
36	I	2,2,4-Trimethylpentane	1.000	1.000	0.00	I	
37	I	1,2-DCA-D4(S)	1.000	1.000	0.00	I	
38	I	Carbon Tetrachloride	1.000	1.000	0.00	I	
39	I	Tert Amyl Methyl Ether	1.000	1.000	0.00	I	
40	I	1,2-DCA	1.000	1.000	0.00	I	
		Average			0.0		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 11/21/16
Matrix: 0 Instrument: Loki
Cal. Date: 11/13/16
Data File: 1119L55.D

		Compound	MEAN	CCRF	%D		%Drift
41	I	Benzene	1.000	1.000	0.00	I	
42	I	TCE	1.000	1.000	0.00	I	
43	I	2-Pentanone	1.000	1.000	0.00	I	
44	I	1,2-Dichloropropane	1.000	1.000	0.00	I	
45	I	Bromodichloromethane	1.000	1.000	0.00	I	
46	I	Methyl Cyclohexane	1.000	1.000	0.00	I	
47	I	Dibromomethane	1.000	1.000	0.00	I	
48	I	2-Chloroethyl vinyl ether	1.000	1.000	0.00	I	
49	I	MIBK (methyl isobutyl ketone)	1.000	1.000	0.00	I	
50	I	1-Bromo-2-chloroethane	1.000	1.000	0.00	I	
51	I	Cis-1,3-Dichloropropene	1.000	1.000	0.00	I	
52	I	Toluene	1.000	1.000	0.00	I	
53	I	Trans-1,3-Dichloropropene	1.000	1.000	0.00	I	
54	I	1,1,2-TCA	1.000	1.000	0.00	I	
55	I	2-Hexanone	1.000	1.000	0.00	I	
56	I	Chlorobenzene-D5 (IS)	ISTD			I	
57	I	Toluene-D8(S)	1.000	1.000	0.00	I	
58	I	1,2-EDB	1.000	1.000	0.00	I	
59	I	Tetrachloroethene	1.000	1.000	0.00	I	
60	I	1-Chlorohexane	1.000	1.000	0.00	I	
61	I	1,1,1,2-Tetrachloroethane	1.000	1.000	0.00	I	
62	I	m&p-Xylene	1.000	1.000	0.00	I	
63	I	o-Xylene	1.000	1.000	0.00	I	
64	I	Styrene	1.000	1.000	0.00	I	
65	I	4-Bromofluorobenzene(S)	1.000	1.000	0.00	I	
66	I	1,3-Dichloropropane	1.000	1.000	0.00	I	
67	I	Dibromochloromethane	1.000	1.000	0.00	I	
68	I	Chlorobenzene	1.000	1.000	0.00	I	
69	I	Ethylbenzene	1.000	1.000	0.00	I	
70	I	Bromoform	1.000	1.000	0.00	I	
71	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
72	I	Isopropylbenzene	1.000	1.000	0.00	I	
73	I	1,1,2,2-Tetrachloroethane	1.000	1.000	0.00	I	
74	I	1,2,3-Trichloropropane	1.000	1.000	0.00	I	
75	I	t-1,4-Dichloro-2-Butene	1.000	1.000	0.00	I	
76	I	Bromobenzene	1.000	1.000	0.00	I	
77	I	n-Propylbenzene	1.000	1.000	0.00	I	
78	I	4-Ethyltoluene	1.000	1.000	0.00	I	
79	I	2-Chlorotoluene	1.000	1.000	0.00	I	
80	I	1,3,5-Trimethylbenzene	1.000	1.000	0.00	I	
		Average			0.0		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 11/21/16
Instrument: Loki
Cal. Date: 11/13/16
Data File: 1119L55.D

		Compound	MEAN	CCRF	%D		%Drift
81	I	4-Chlorotoluene	1.000	1.000	0.00	I	
82	I	Tert-Butylbenzene	1.000	1.000	0.00	I	
83	I	1,2,4-Trimethylbenzene	1.000	1.000	0.00	I	
84	I	Sec-Butylbenzene	1.000	1.000	0.00	I	
85	I	p-Isopropyltoluene	1.000	1.000	0.00	I	
86	I	Benzyl Chloride	1.000	1.000	0.00	I	
87	I	1,3-DCB	1.000	1.000	0.00	I	
88	I	1,4-DCB	1.000	1.000	0.00	I	
89	I	n-Butylbenzene	1.000	1.000	0.00	I	
90	I	1,2-DCB	1.000	1.000	0.00	I	
91	I	Hexachloroethane	1.000	1.000	0.00	I	
92	I	1,2-Dibromo-3-chloropropane	1.000	1.000	0.00	I	
93	I	1,2,4-Trichlorobenzene	1.000	1.000	0.00	I	
94	I	Hexachlorobutadiene	1.000	1.000	0.00	I	
95	I	Naphthalene	1.000	1.000	0.00	I	
96	I	1,2,3-Trichlorobenzene	1.000	1.000	0.00	I	
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			0.0		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1119L55.D Vial: 54
Acq On : 21 Nov 16 10:36 Operator: PM,DG,SV,CMM
Sample : Ending CCV GAS 300ug/L 11/19/16 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 11:46 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	663808	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	622528	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	308096	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.49	111	328408	23.44	ppb		0.00
Spiked Amount 25.000			Recovery = 93.780%				
37) 1,2-DCA-D4(S)	4.93	65	409549	26.82	ppb		0.00
Spiked Amount 25.000			Recovery = 107.272%				
57) Toluene-D8(S)	7.22	98	1189657	25.03	ppb		0.00
Spiked Amount 25.000			Recovery = 100.104%				
65) 4-Bromofluorobenzene(S)	9.89	95	408879	23.83	ppb		0.00
Spiked Amount 25.000			Recovery = 95.324%				
Target Compounds							Qvalue
4) Chloromethane	0.96	50	3908	0.20	ppb		88
6) Bromomethane	1.23	96	581	0.07	ppb		95
7) Chloroethane	1.31	64	761	0.08	ppb		100
10) Acrolein	1.74	56	1849	1.65	ppb	#	1
11) Acetone	1.85	43	83096	18.83	ppb	#	57
14) t-Butanol	2.34	59	335	0.67	ppb		100
15) Acetonitrile	2.27	41	81780	60.57	ppb	#	33
16) Methyl Acetate	2.17	43	2651	0.28	ppb	#	52
17) Iodomethane	1.94	142	362	0.79	ppb	#	42
18) Acrylonitrile	2.34	52	1468	0.42	ppb		84
19) Methylene chloride	2.24	84	3221	0.22	ppb	#	18
22) Trans-1,2-DCE	2.50	96	1051	0.08	ppb		91
25) Vinyl Acetate	3.01	43	1033	0.10	ppb	#	74
27) MEK (2-Butanone)	3.83	43	3262	0.64	ppb	#	65
34) Cyclohexane	4.58	41	42279	4.09	ppb	#	7
36) 2,2,4-Trimethylpentane	5.15	57	180032	5.81	ppb		91
40) 1,2-DCA	5.04	62	2637	0.14	ppb	#	62
41) Benzene	4.99	78	92811	1.77	ppb		97
42) TCE	5.85	95	525	0.07	ppb	#	40
43) 2-Pentanone	6.15	43	31142	3.96	ppb	#	66
46) Methyl Cyclohexane	6.04	83	32382	1.88	ppb		78
47) Dibromomethane	6.21	93	789	0.10	ppb	#	1
49) MIBK (methyl isobutyl ket	7.02	43	34272	2.36	ppb	#	28
52) Toluene	7.29	91	807576	14.47	ppb		100
55) 2-Hexanone	8.07	43	270	1.18	ppb	#	55
60) 1-Chlorohexane	8.70	91	2428	0.16	ppb	#	1
62) m&p-Xylene	8.99	106	246217	10.87	ppb		97
63) o-Xylene	9.38	106	90876	4.08	ppb		96
64) Styrene	9.38	104	2985	0.12	ppb	#	1
69) Ethylbenzene	8.87	91	173448	2.96	ppb		98
72) Isopropylbenzene	9.76	105	14809	0.29	ppb		97
73) 1,1,2,2-Tetrachloroethane	10.04	83	1295	0.11	ppb	#	26
74) 1,2,3-Trichloropropane	10.25	110	283	0.12	ppb		78
76) Bromobenzene	10.02	156	1028	0.07	ppb		96
77) n-Propylbenzene	10.17	91	60591	1.05	ppb		92
78) 4-Ethyltoluene	10.27	105	240255	4.88	ppb		98
79) 2-Chlorotoluene	10.27	91	32357	0.87	ppb	#	38
80) 1,3,5-Trimethylbenzene	10.35	105	73149	1.75	ppb		99
81) 4-Chlorotoluene	10.35	91	12631	0.30	ppb	#	55

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161113\1119L55.D
Acq On : 21 Nov 16 10:36
Sample : Ending CCV GAS 300ug/L 11/19/16
Misc : W IS&S 10/20/16, 11/04/16

Vial: 54
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 11:46 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

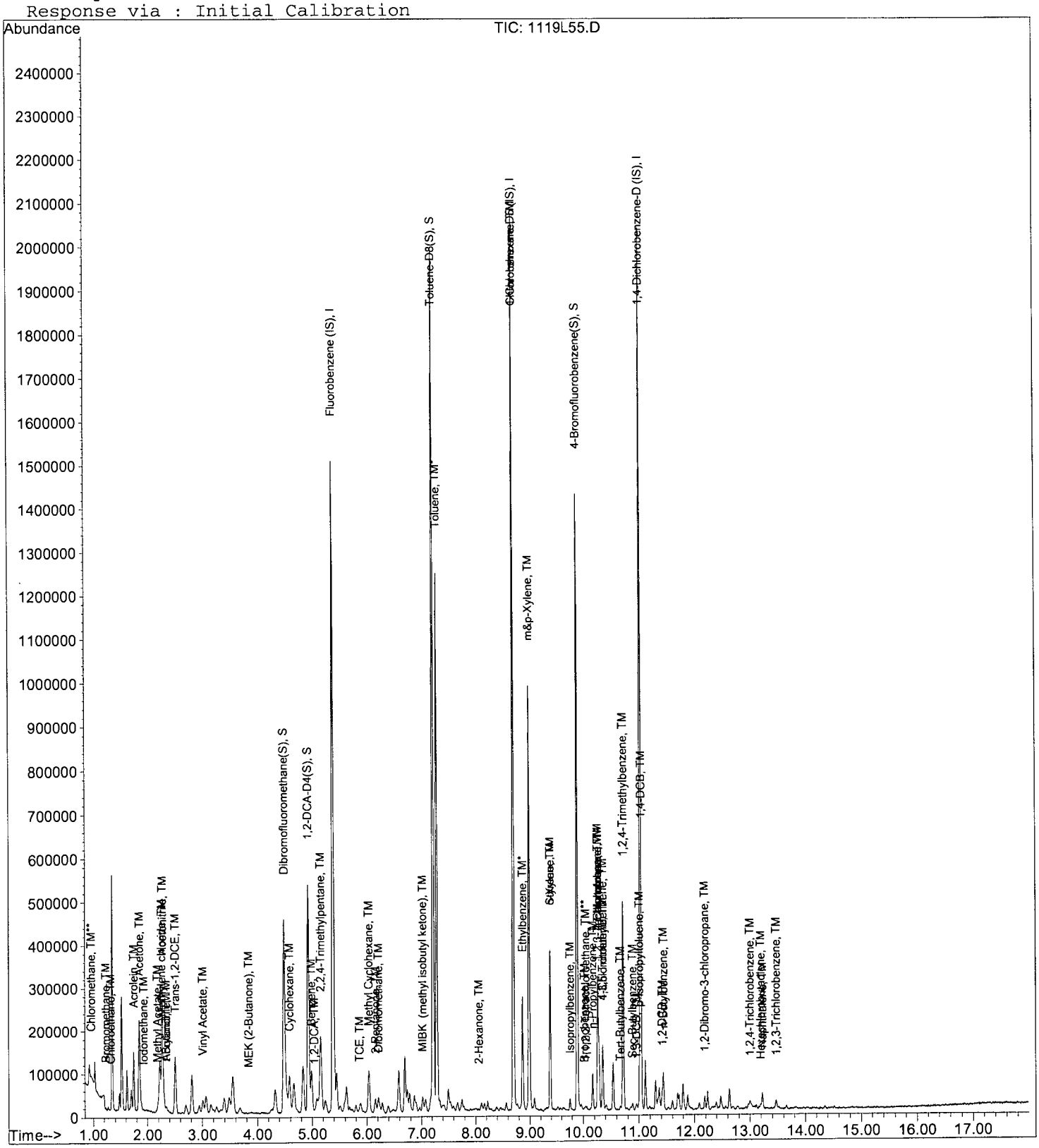
Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
82) Tert-Butylbenzene	10.67	119	3107	0.09	ppb	#	75
83) 1,2,4-Trimethylbenzene	10.72	105	239063	5.65	ppb		96
84) Sec-Butylbenzene	10.88	105	8758	0.17	ppb		98
85) p-Isopropyltoluene	11.00	119	6001	0.14	ppb		94
87) 1,3-DCB	10.96	146	2978	0.12	ppb		85
88) 1,4-DCB	11.05	146	3726	0.14	ppb		96
89) n-Butylbenzene	11.44	91	22717	0.61	ppb	#	68
90) 1,2-DCB	11.41	146	2358	0.10	ppb	#	75
92) 1,2-Dibromo-3-chloropropan	12.17	157	230	0.10	ppb	#	65
93) 1,2,4-Trichlorobenzene	12.99	180	4285	0.26	ppb	#	87
94) Hexachlorobutadiene	13.19	225	1467	0.23	ppb		92
95) Naphthalene	13.23	128	16148	0.78	ppb		94
96) 1,2,3-Trichlorobenzene	13.47	180	2796	0.28	ppb	#	94

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161113\1119L55.D Vial: 54
Acq On : 21 Nov 16 10:36 Operator: PM,DG,SV,CMM
Sample : Ending CCV GAS 300ug/L 11/19/16 Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 11:46 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



EPA METHOD 8260B
Volatile Organic Compounds
Raw Data

APPL, INC.

Method Blank
EPA 8260B GRO WATER

Blank Name/QCG: **161119W-45988 - 213857**
Batch ID: #GRO86-161119AL1

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	11/20/16	11/20/16
BLANK	SURROGATE: 4-BROMOFLUORO	95.3	85-114			%	11/20/16	11/20/16

Quant Method: LGAS6718.M
Run #: 1119L18
Instrument: Loki
Sequence: 161113
Initials: SV

GC SC-Blank-REG MDLs-DOD
Printed: 11/28/16 1:15:00 PM

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1119L18.D
Acq On : 20 Nov 16 17:19
Sample : 161119A BLK-1WL
Misc : W IS&S 10/20/16, 11/04/16

Vial: 17
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 8:59 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1518644	25.00000	ppb	-0.10
3) Chlorobenzene-D5 (IS)	8.70	TIC	2035179	25.00000	ppb	-0.09
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	2039936	25.00000	ppb	-0.09

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

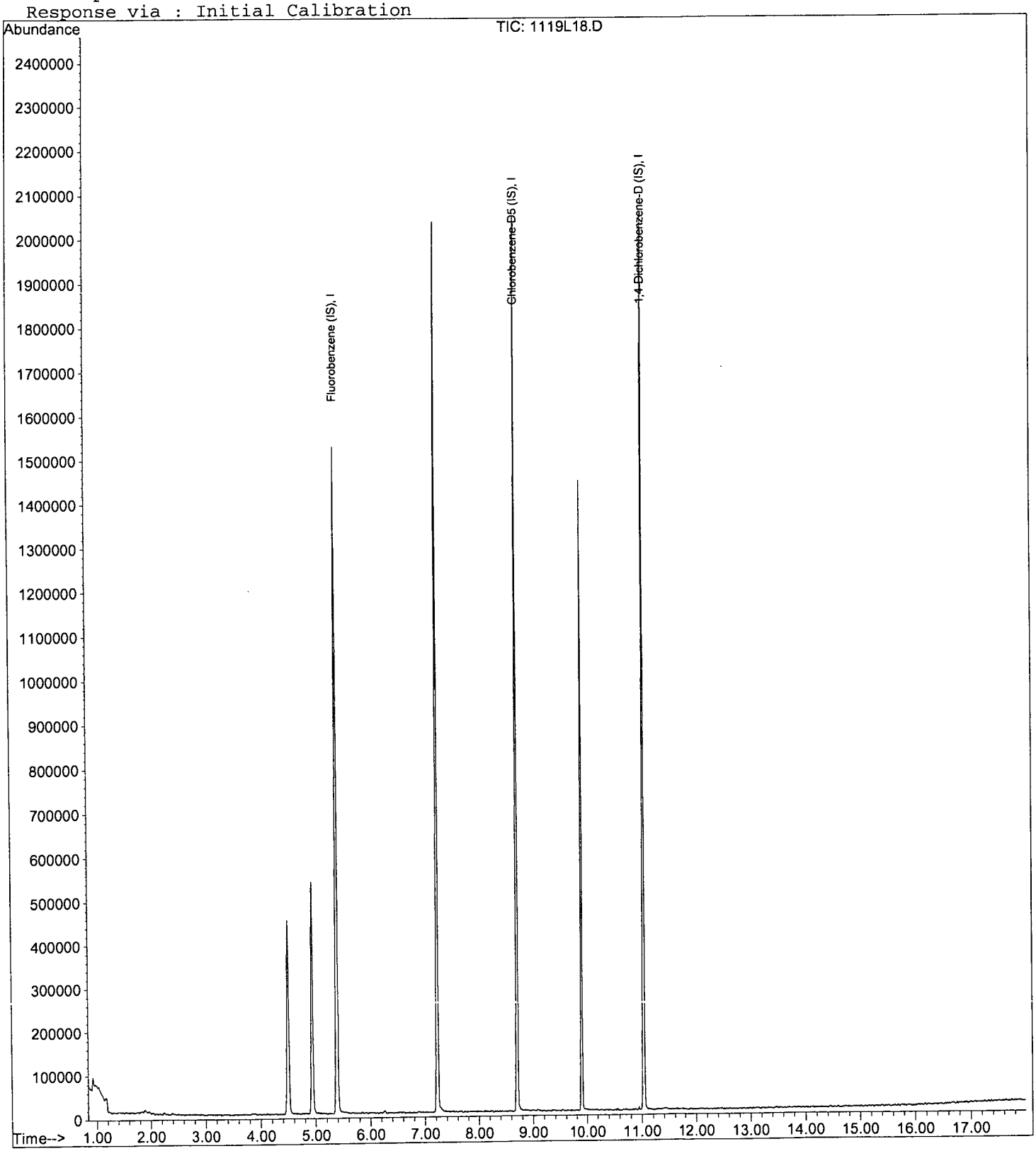
Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L18.D
Acq On : 20 Nov 16 17:19
Sample : 161119A BLK-1WL
Misc : W IS&S 10/20/16, 11/04/16

Vial: 17
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 8:59 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1119L18.D Vial: 17
Acq On : 20 Nov 16 17:19 Operator: PM,DG,SV,CMM
Sample : 161119A BLK-1WL Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 10:00 2016 Quant Results File: LSUR1113.RES

Quant Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	674496	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	622464	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	311488	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.49	111	331747	23.30764 ppb	0.00
Spiked Amount 25.000			Recovery	= 93.232%	
3) 1,2-DCA-D4(S)	4.93	65	416657	26.85144 ppb	0.00
Spiked Amount 25.000			Recovery	= 107.404%	
5) Toluene-D8(S)	7.22	98	1204530	25.34145 ppb	0.00
Spiked Amount 25.000			Recovery	= 101.364%	
6) 4-Bromofluorobenzene(S)	9.89	95	408547	23.81408 ppb	0.00
Spiked Amount 25.000			Recovery	= 95.256%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Method Blank
EPA 8260B GRO WATER

Blank Name/QCG: **161119W-45989 - 213862**
Batch ID: #GRO86-161119BL

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	11/21/16	11/21/16
BLANK	SURROGATE: 4-BROMOFLUORO	100	85-114			%	11/21/16	11/21/16

Quant Method: LGAS6718.M
Run #: 1119L38
Instrument: Loki
Sequence: 161113
Initials: SV

GC SC-Blank-REG MDLs-DOD
Printed: 11/28/16 1:15:00 PM

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1119L38.D Vial: 37
Acq On : 21 Nov 16 2:40 Operator: PM,DG,SV,CMM
Sample : 161119B BLK-1WL Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 9:40 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1474700	25.00	ppb	-0.10
3) Chlorobenzene-D5 (IS)	8.70	TIC	1968031	25.00	ppb	-0.09
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	2026289	25.00	ppb	-0.09

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
1119L38.D LGAS6718.M Wed Nov 30 09:23:46 2016 Page 1

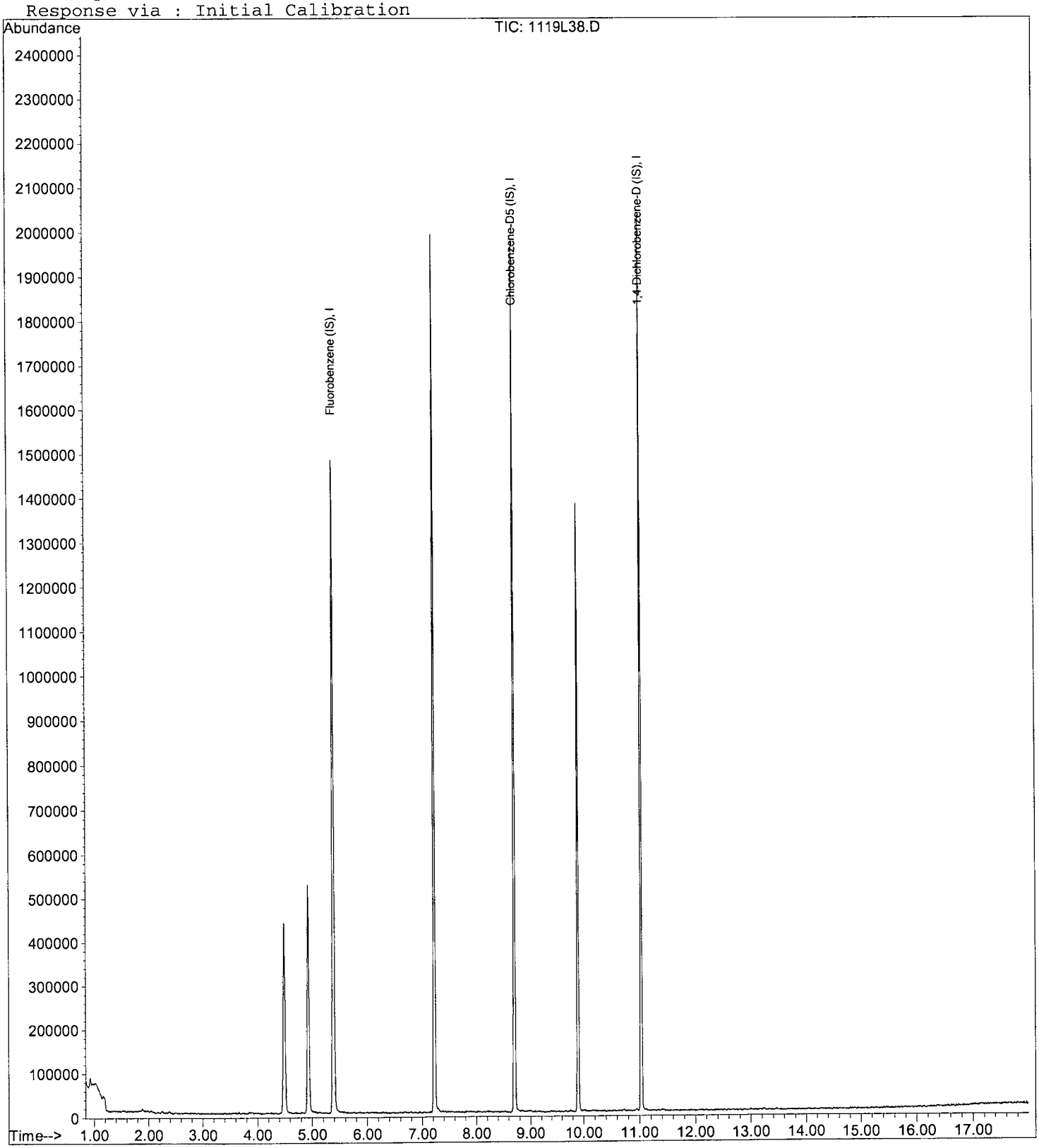
Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L38.D
Acq On : 21 Nov 16 2:40
Sample : 161119B BLK-1WL
Misc : W IS&S 10/20/16, 11/04/16

Vial: 37
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 9:40 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1119L38.D
Acq On : 21 Nov 16 2:40
Sample : 161119B BLK-1WL
Misc : W IS&S 10/20/16, 11/04/16

Vial: 37
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 12:21 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	662528	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	592192	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	302656	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	321883	23.02	ppb	0.00
Spiked Amount 25.000			Recovery =	92.092%		
37) 1,2-DCA-D4(S)	4.93	65	404603	26.55	ppb	0.00
Spiked Amount 25.000			Recovery =	106.184%		
57) Toluene-D8(S)	7.22	98	1196088	26.45	ppb	0.00
Spiked Amount 25.000			Recovery =	105.800%		
65) 4-Bromofluorobenzene(S)	9.89	95	408254	25.01	ppb	0.00
Spiked Amount 25.000			Recovery =	100.052%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

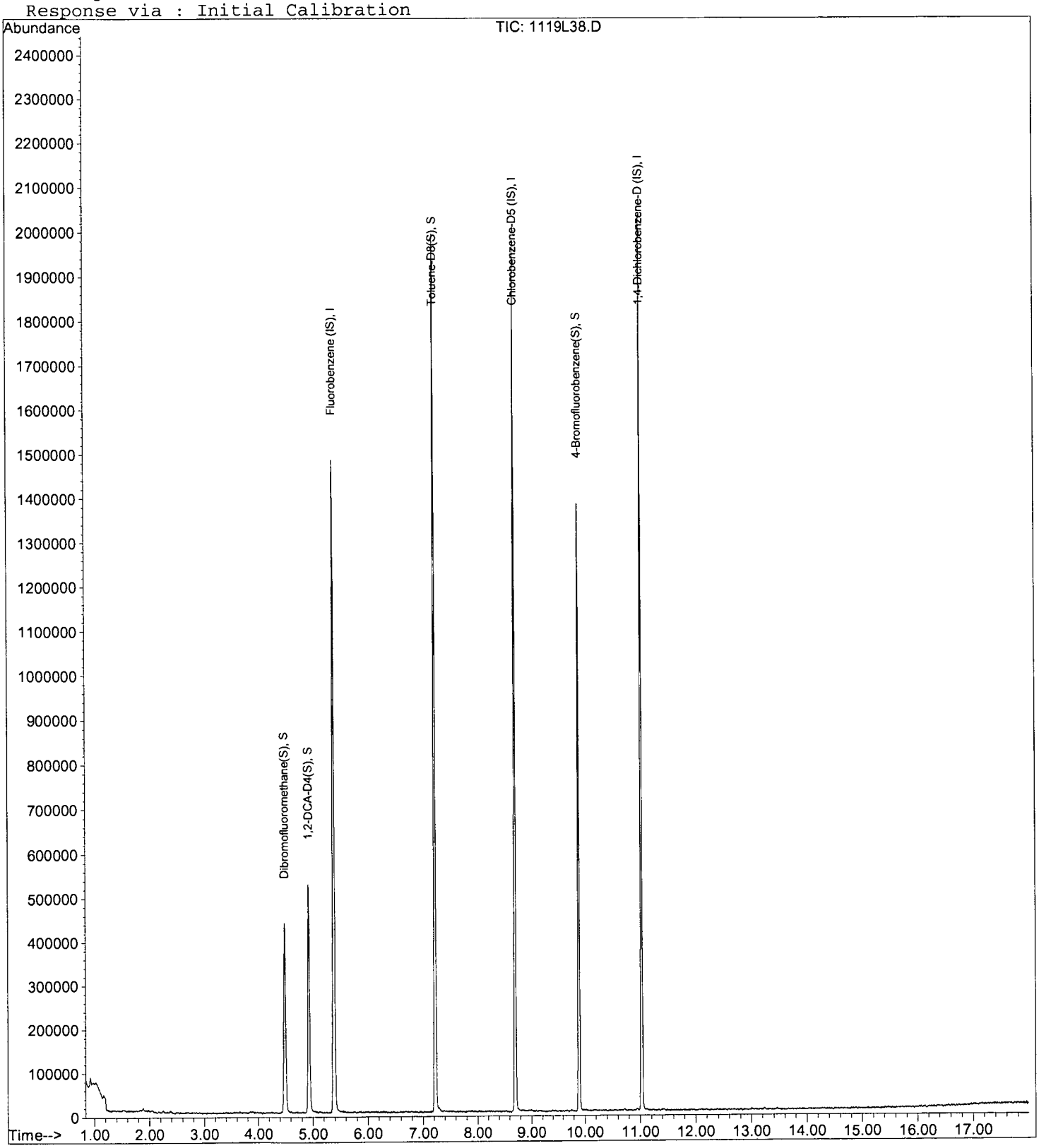
Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L38.D
Acq On : 21 Nov 16 2:40
Sample : 161119B BLK-1WL
Misc : W IS&S 10/20/16, 11/04/16

Vial: 37
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 12:21 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



Laboratory Control Spike Recovery
EPA 8260B GRO WATER

APPL ID: **161120W-45988 LCS - 213857**
Batch ID: #GRO86-161119AL1

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
GASOLINE RANGE ORGANICS	300	276	92.0	78-122
SURROGATE: 4-BROMOFLUOROBENZE	25.0	25.5	102	85-114

Comments: _____

Primary	SPK
Quant Method :	LGAS6718.M
Extraction Date :	11/20/16
Analysis Date :	11/20/16
Instrument :	Loki
Run :	1119L07
Initials :	SV

Printed: 11/28/16 1:14:52 PM
APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1119L07.D Vial: 6
Acq On : 20 Nov 16 12:10 Operator: PM,DG,SV,CMM
Sample : 161119A CCV/LCS 300ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 8:57 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1579825	25.00000	ppb	-0.10
3) Chlorobenzene-D5 (IS)	8.57	TIC	36516	25.00000	ppb	-0.22
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	2240252	25.00000	ppb	-0.09

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	32284337m	276.21215	ppb	100

(#) = qualifier out of range (m) = manual integration
1119L07.D LGAS6718.M Mon Nov 21 10:18:56 2016 Page 1

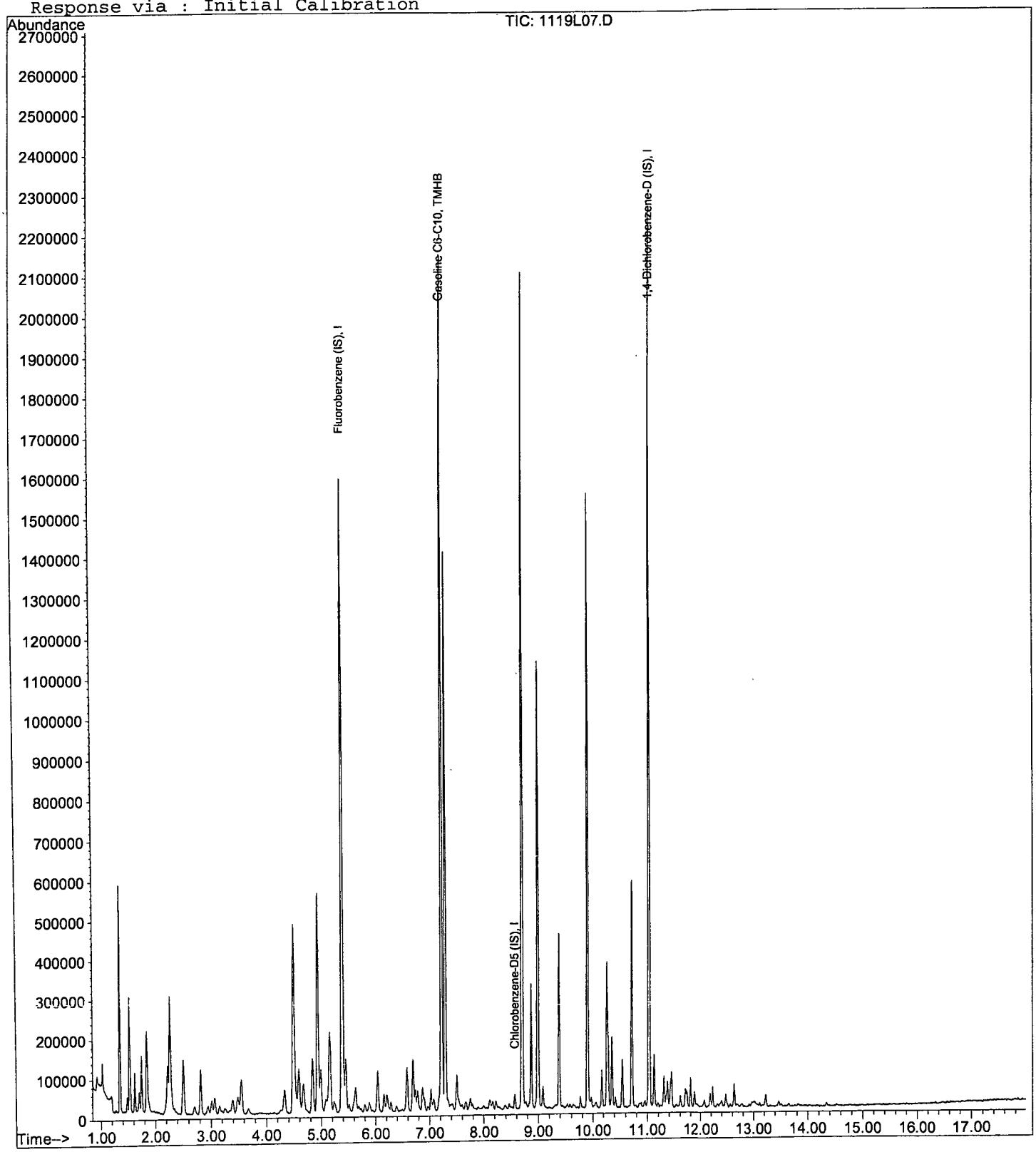
Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L07.D
Acq On : 20 Nov 16 12:10
Sample : 161119A CCV/LCS 300ug/L
Misc : W IS&S 10/20/16, 11/04/16

Vial: 6
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 8:57 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1119L07.D Vial: 6
Acq On : 20 Nov 16 12:10 Operator: PM,DG,SV,CMM
Sample : 161119A CCV/LCS 300ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 10:00 2016 Quant Results File: LSUR1113.RES

Quant Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	707648	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	643136	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	339968	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.49	111	350018	23.43925 ppb	0.00
Spiked Amount 25.000			Recovery = 93.756%		
3) 1,2-DCA-D4(S)	4.93	65	426582	26.20315 ppb	0.00
Spiked Amount 25.000			Recovery = 104.812%		
5) Toluene-D8(S)	7.22	98	1288179	26.23019 ppb	0.00
Spiked Amount 25.000			Recovery = 104.920%		
6) 4-Bromofluorobenzene(S)	9.89	95	452768	25.54341 ppb	0.00
Spiked Amount 25.000			Recovery = 102.172%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Laboratory Control Spike Recovery
EPA 8260B GRO WATER

APPL ID: **161121W-45989 LCS - 213862**
Batch ID: #GRO86-161119BL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
GASOLINE RANGE ORGANICS	300	264	88.0	78-122
SURROGATE: 4-BROMOFLUOROBENZE	25.0	24.6	98.4	85-114

Comments: _____

Primary	SPK
Quant Method :	LGAS6718.M
Extraction Date :	11/21/16
Analysis Date :	11/21/16
Instrument :	Loki
Run :	1119L34
Initials :	SV

Printed: 11/28/16 1:14:52 PM
APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161113\1119L34.D Vial: 33
Acq On : 21 Nov 16 00:47 Operator: PM,DG,SV,CMM
Sample : 161119B CCV/LCS 300ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 9:39 2016 Quant Results File: LGAS6718.RES

Quant Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1539478	25.00	ppb	-0.10
3) Chlorobenzene-D5 (IS)	8.56	TIC	26451	25.00	ppb	-0.23
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	2081926	25.00	ppb	-0.09

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	30741936m	264.07	ppb	100

(#) = qualifier out of range (m) = manual integration
1119L34.D LGAS6718.M Wed Nov 30 09:23:44 2016 Page 1

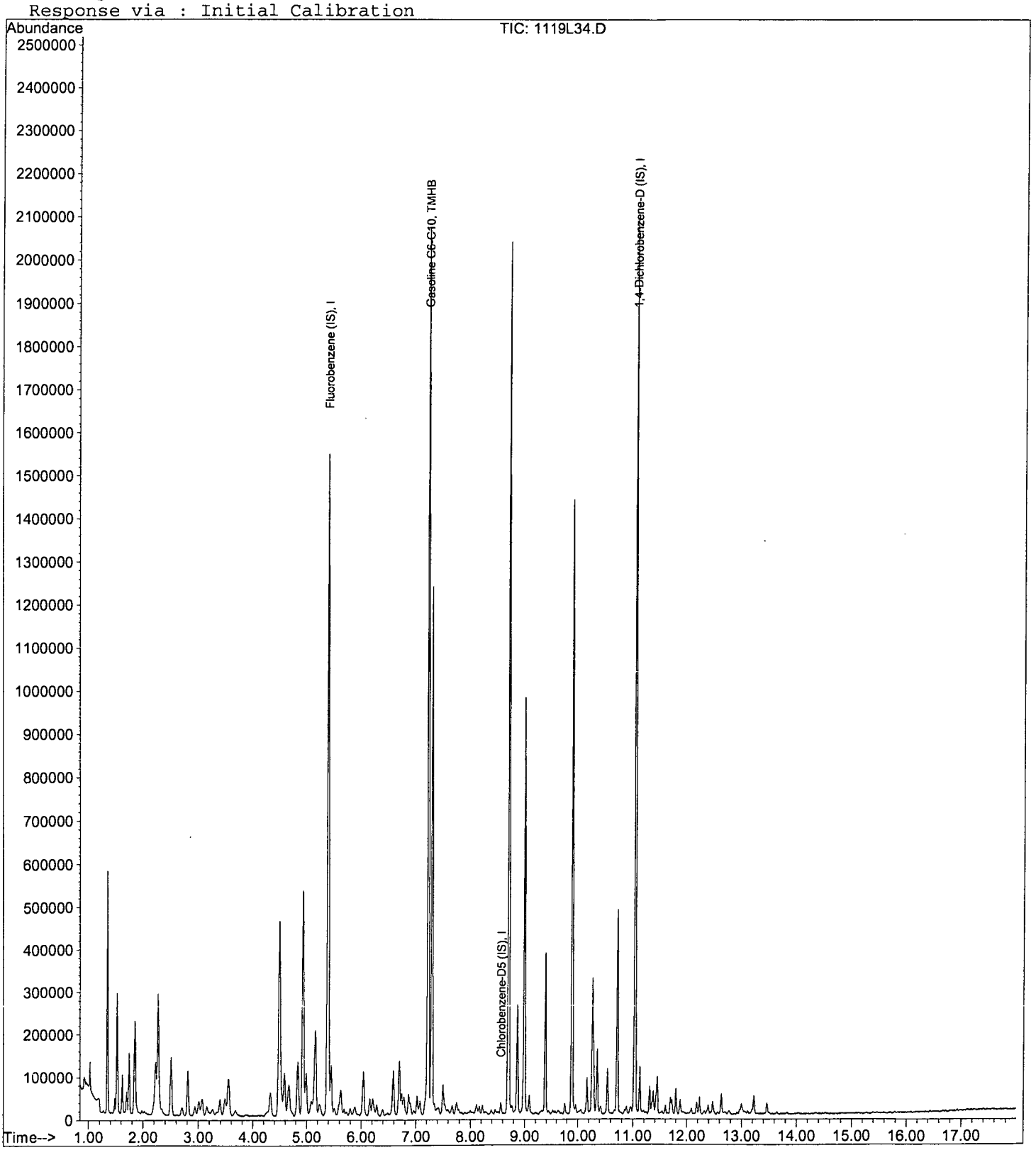
Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L34.D
Acq On : 21 Nov 16 00:47
Sample : 161119B CCV/LCS 300ug/L
Misc : W IS&S 10/20/16, 11/04/16

Vial: 33
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Nov 21 9:39 2016 Quant Results File: LGAS6718.RES

Method : M:\LOKI\DATA\161113\LGAS6718.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 19 08:35:29 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1119L34.D Vial: 33
Acq On : 21 Nov 16 00:47 Operator: PM,DG,SV,CMM
Sample : 161119B CCV/LCS 300ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 11:45 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	681664	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	615488	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	320000	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.49	111	330895	23.00	ppb		0.00
Spiked Amount 25.000			Recovery = 92.012%				
37) 1,2-DCA-D4(S)	4.93	65	409410	26.11	ppb		0.00
Spiked Amount 25.000			Recovery = 104.428%				
57) Toluene-D8(S)	7.22	98	1220720	25.97	ppb		0.00
Spiked Amount 25.000			Recovery = 103.892%				
65) 4-Bromofluorobenzene(S)	9.89	95	417476	24.61	ppb		0.00
Spiked Amount 25.000			Recovery = 98.440%				
Target Compounds							Qvalue
4) Chloromethane	1.06	50	1691	0.08	ppb		88
6) Bromomethane	1.23	96	936	0.11	ppb		91
7) Chloroethane	1.30	64	807	0.08	ppb	#	43
10) Acrolein	1.75	56	2446	2.13	ppb	#	1
11) Acetone	1.85	43	87556	19.35	ppb	#	58
14) t-Butanol	2.39	59	934	1.82	ppb	#	87
15) Acetonitrile	2.27	41	86387	62.30	ppb	#	35
16) Methyl Acetate	2.16	43	2002	0.21	ppb		97
17) Iodomethane	1.93	142	369	0.79	ppb	#	43
18) Acrylonitrile	2.51	52	1277	0.36	ppb	#	27
19) Methylene chloride	2.24	84	3118	0.20	ppb	#	65
20) Carbon disulfide	1.98	76	6660	0.18	ppb		99
22) Trans-1,2-DCE	2.50	96	1060	0.08	ppb		97
25) Vinyl Acetate	3.01	43	1154	0.10	ppb	#	74
27) MEK (2-Butanone)	3.83	43	2282	0.44	ppb		95
34) Cyclohexane	4.59	41	80628	7.60	ppb	#	4
35) 1,1-Dichloropropene	4.73	75	1333	0.08	ppb	#	68
36) 2,2,4-Trimethylpentane	5.15	57	203450	6.39	ppb		98
41) Benzene	4.99	78	91345	1.70	ppb		99
42) TCE	5.84	95	611	0.08	ppb	#	74
43) 2-Pentanone	6.16	43	37499	4.64	ppb	#	65
46) Methyl Cyclohexane	6.04	83	34499	1.95	ppb		83
49) MIBK (methyl isobutyl ket	7.22	43	15683	0.75	ppb	#	1
52) Toluene	7.29	91	808653	14.11	ppb		99
54) 1,1,2-TCA	7.74	83	1408	0.14	ppb	#	26
55) 2-Hexanone	7.99	43	2180	1.55	ppb	#	36
59) Tetrachloroethene	7.86	166	982	0.08	ppb	#	55
60) 1-Chlorohexane	8.70	91	1815	0.12	ppb	#	1
62) m&p-Xylene	8.99	106	240733	10.75	ppb		94
63) o-Xylene	9.38	106	89199	4.06	ppb		92
64) Styrene	9.38	104	3040	0.13	ppb	#	1
69) Ethylbenzene	8.87	91	168420	2.91	ppb		99
72) Isopropylbenzene	9.76	105	13825	0.26	ppb		99
73) 1,1,2,2-Tetrachloroethane	10.06	83	995	0.08	ppb	#	73
74) 1,2,3-Trichloropropane	10.10	110	340	0.14	ppb	#	21
75) t-1,4-Dichloro-2-Butene	10.17	53	1748	0.51	ppb	#	27
76) Bromobenzene	10.02	156	1216	0.09	ppb		96
77) n-Propylbenzene	10.17	91	59528	1.00	ppb		97
78) 4-Ethyltoluene	10.26	105	241006	4.71	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161113\1119L34.D Vial: 33
Acq On : 21 Nov 16 00:47 Operator: PM,DG,SV,CMM
Sample : 161119B CCV/LCS 300ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 11:45 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161113\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
79)	2-Chlorotoluene	10.23	91	3896	0.10	ppb	#	78
80)	1,3,5-Trimethylbenzene	10.35	105	72729	1.68	ppb		100
81)	4-Chlorotoluene	10.35	91	12597	0.28	ppb	#	52
82)	Tert-Butylbenzene	10.67	119	3831	0.10	ppb		92
83)	1,2,4-Trimethylbenzene	10.72	105	244209	5.55	ppb		93
84)	Sec-Butylbenzene	10.88	105	9000	0.17	ppb		98
85)	p-Isopropyltoluene	11.00	119	5433	0.12	ppb		99
86)	Benzyl Chloride	11.21	91	1065	0.07	ppb	#	67
87)	1,3-DCB	10.96	146	3759	0.15	ppb		89
88)	1,4-DCB	11.05	146	4779	0.18	ppb		90
89)	n-Butylbenzene	11.44	91	23629	0.61	ppb	#	77
90)	1,2-DCB	11.41	146	3455	0.14	ppb		93
93)	1,2,4-Trichlorobenzene	12.99	180	5827	0.34	ppb		98
94)	Hexachlorobutadiene	13.19	225	1825	0.27	ppb		85
95)	Naphthalene	13.23	128	18992	0.88	ppb		98
96)	1,2,3-Trichlorobenzene	13.47	180	4301	0.41	ppb		80

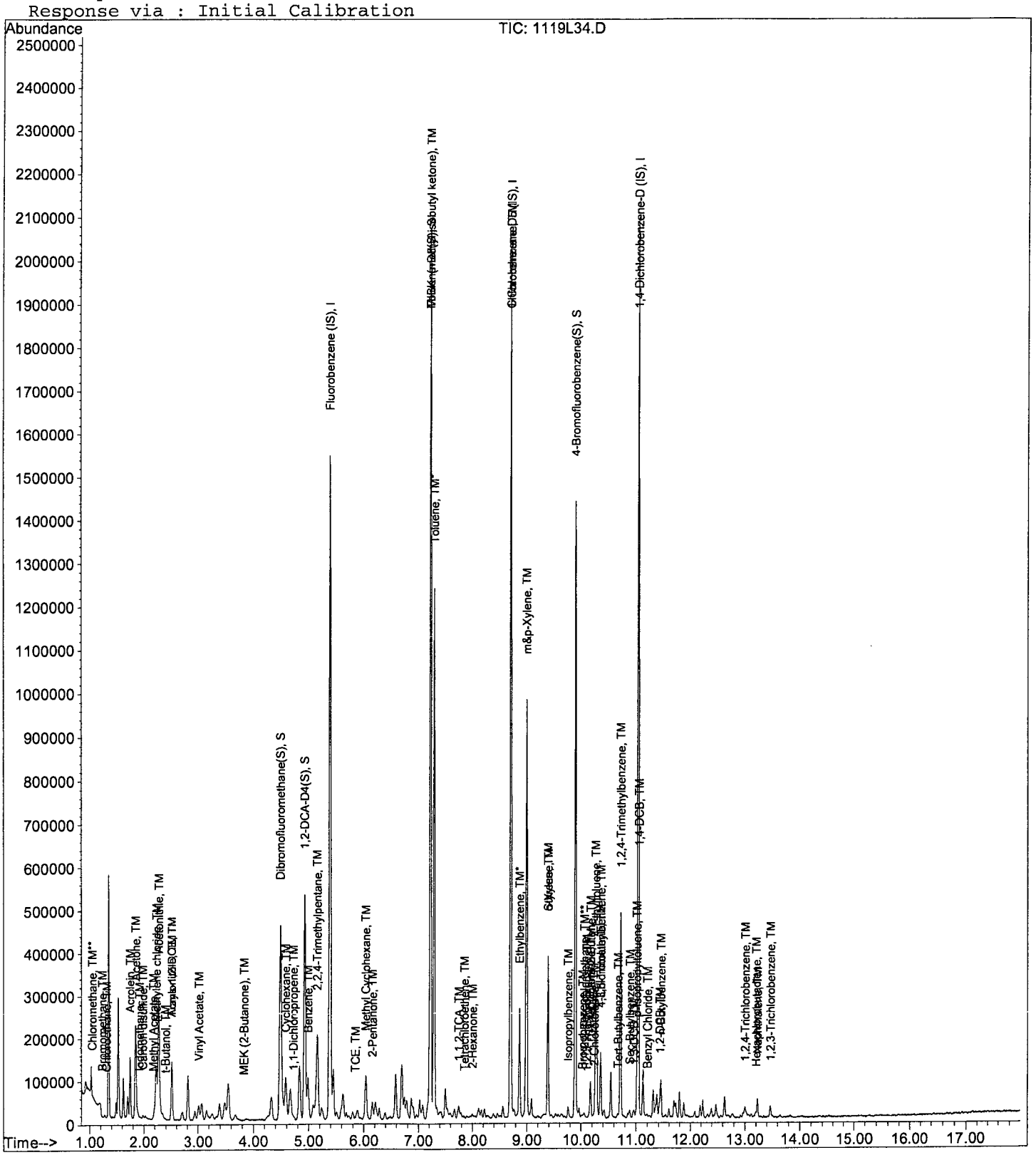
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161113\1119L34.D Vial: 33
Acq On : 21 Nov 16 00:47 Operator: PM,DG,SV,CMM
Sample : 161119B CCV/LCS 300ug/L Inst : Loki
Misc : W IS&S 10/20/16, 11/04/16 Multiplr: 1.00

Quant Time: Nov 21 11:45 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161113\LSUR1113.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Nov 14 08:45:03 2016
Response via : Initial Calibration



PRIMARY STANDARD

11/12/16J							
50ug/ml Vol Work Std #7							
Exp:12/12/16							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120016-03	Gas Mix	2000	279822-36647	11/12/16A-CMM	02/19/19	100
02SI	020049-02	HEXACHLOROETHANE	1000	254167-36568	10/27/16B-CMM	11/30/18	200
02SI	020228-02	Benzyl Chloride	1000	279824-36570	10/27/16C-CMM	05/24/18	200
J&T Brand		Purge & Trap MeOH		55344-00862	10/23/16	10/23/17	3500
11/12/16K							
50ug/ml Vol Work Std #1							
Exp:12/12/16					Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	020145-02-02	2-CEVE	2000	229586-35351	11/03/16B-CMM	06/03/17	50
J&T Brand		Purge & Trap MeOH		55344-00862	10/23/16	10/23/17	1950
11/12/16L							
50ug/ml Vol Work Std #8							
Exp:12/12/16							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	122039-02	Volatile Mix, 20-29	2000	258033-37168	11/12/16B-CMM	08/17/17	100
02SI	120023-03	VOC'S-54 COMP	2000	271929-36580	11/12/16C-CMM	02/15/18	100
02SI	020232-02	Vinyl Acetate	2000	287418-37045	10/27/16E-CMM	11/27/16	100
J&T Brand		Purge & Trap MeOH		55344-00862	10/23/16	10/23/17	3700
11/12/16M							
50ug/ml Vol Work Std #2							
Exp:12/12/16							
Supplier	ID #	ID	ug/ml				
02SI	121020-05	HSL'S-Ketone Solution	2000	258036-36072	11/03/16C-CMM	08/17/17	100
J&T Brand		Purge & Trap MeOH		55344-00862	10/23/16	10/23/17	3900
		11/12/16N					
		5ug/ml Vol Work Std #9					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #7		**11/12/16J**	Exp:12/12/16	200	
		50ug/ml Vol Work Std #8		**11/12/16L**	Exp:12/12/16	200	
		J&T Brand		10/23/16	10/23/17	1600	
		11/12/16O					
		5ug/ml Vol Work Std #10					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #1		**11/12/16K**	Exp:12/12/16	200	
		J&T Brand		10/23/16	10/23/17	1800	
		11/12/16P					
		5ug/ml Vol Work Std #12					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #2		**11/12/16M**	Exp:12/12/16	200	
		J&T Brand		10/23/16	10/23/17	1800	
11/12/16Q							
250ug/ml TBA/IBA/Acetonitrile/Cyclohexanone/Acrolein/2-P							
Exp:12/12/16			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
02SI	120166-01	Volatile Mix 4-3	2000	275544-36406	11/12/16D-CMM	10/20/17	500
02SI	020229-09-02	Acrolein	10000	291928-37173	11/12/16E-CMM	12/12/16	100
J&T Brand		Purge & Trap MeOH		55344-00862	10/23/16	10/23/17	3400

SECONDARY SOURCE

11/12/16R							
50ug/ml VOC Std#4							
Exp:12/12/16							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120296-01-SS	Custom 8260 Solution	2000	258037-36087	11/03/16D-CMM	08/18/17	50
J&T Brand		Purge & Trap MeOH		55344-00862	10/23/16	10/23/17	1950
11/12/16S							
50ug/ml VOC Std#5							
Exp:12/12/16							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120016-03-SS	8260 Gases(SS)	2000	279826-36676	11/12/16F-CMM	06/01/19	50
02SI	020145-02-02-SS	2-CEVE (SS)	2000	254171-35394	11/12/16G-CMM	06/21/17	50
J&T Brand		Purge & Trap MeOH		55344-00862	10/23/16	10/23/17	1900
11/12/16T							

50ug/ml VOC Std#6							
Exp:12/12/16							
	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120023-03-SS	VOC'S 54 COMP.	2000	265897-35926	11/12/16H-CMM	11/29/17	50
02SI	020232-02-SS	Vinyl Acetate(SS)	2000	287420-37047	10/27/16J-CMM	11/27/16	50
02SI	020049-02-SS	HEXACHLOROETHANE (SS)	1000	265899-35937	10/27/16K-CMM	11/30/17	100
J&T Brand		Purge & Trap MeOH		55344-00862	10/23/16	10/23/17	1800
11/12/16U							
250ug/ml TBA/IBA/Acetonitrile/Acrolein/2-P							
Exp:12/12/16			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
02SI	120166-01-SS	VOC Mix 4-3 (SS)	2000	229588-34410	10/27/16L-CMM	06/03/17	250
02SI	020229-09-SS	Acrolein SOLUTION (SS)	10000	291929-37175	11/12/16I-CMM	12/12/16	50
J&T Brand		Purge & Trap MeOH		55344-00862	10/23/16	10/23/17	1700
8260 water		spiked with		Total Vol			
CCV/LCS	10ug/L Vol Std	10uL of 50ug/ml Std #7		50mL P&T H2O			
Ending CCV		10uL of 50ug/ml Std #8					
		10uL of 50ug/ml Std #1					
		10uL of 50ug/ml Std #2					
		25uL of 250ug/ml Std TBA					
X4 ketones							
LCS	10ug/L Vol Std	10uL of 50ug/ml Std #7		50mL P&T H2O			
		10uL of 50ug/ml Std #8					
		10uL of 50ug/ml Std #1					
		40uL of 50ug/ml Std #2					
		25uL of 250ug/ml Std TBA					
8260 soil		spiked with		Total Vol			
CCV/LCS	50ug/Kg Vol Std	5uL of 50ug/ml Std #7		5mL P&T H2O			
Ending CCV		5uL of 50ug/ml Std #8					
		5uL of 50ug/ml Std #1					
		5uL of 50ug/ml Std #2					
		5uL of 250ug/ml Std TBA					
Matrix spikes are prepared with same standards as ccv (see above) into the sample.							
8260water		spiked with		Total Vol			
SS	10ug/L STD	10uL of 50ug/ml Std #4		50mL P&T H2O			
		10uL of 50ug/ml Std #5					
		10uL of 50ug/ml Std #6					
		25uL of 250ug/ml Std TBA					
8260 SOIL	50ug/Kg STD	5uL of 50ug/ml Std #4		Total Vol			
SS		5uL of 50ug/ml Std #5		5mL P&T H2O			
		5uL of 50ug/ml Std #6					
		5uL of 250ug/ml Std TBA					

Volatile Standard Curve Preparation for 10mL Purge (8260 water)-LOKI											
Exp Date:	11/14/16	5µg/mL	5µg/mL	5µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	250µg/mL	
		Vol Std #9	Vol Std #10	Vol Std #12	Vol Std #7	Vol Std #8	Vol Std #1	Vol Std #2	TBA	
		11/12/16N	11/12/16O	11/12/16P	11/12/16J	11/12/16L	11/12/16K	11/12/16M	11/12/16Q	Final Vol
	Conc.	12/12/16	12/12/16	12/12/16	12/12/16	12/12/16	12/12/16	12/12/16	12/12/16	w/P&T H2O
Date/code	µg/L	ul	ul	ul	ul	ul	ul	ul	ul	mL
11/13/16J-CMM	0.3	3	3	3	n/a	n/a	n/a	n/a	2	50
11/13/16K-CMM	0.5	5	5	5	n/a	n/a	n/a	n/a	5	50
11/13/16L-CMM	1	10	10	10	n/a	n/a	n/a	n/a	10	50
11/13/16M-CMM	2	20	20	20	n/a	n/a	n/a	n/a	15	50
11/13/16N-CMM	5	n/a	n/a	n/a	5	5	5	5	20	50
11/13/16O-CMM	10	n/a	n/a	n/a	10	10	10	10	25	50
11/13/16P-CMM	20	n/a	n/a	n/a	20	20	20	20	30	50
11/13/16Q-CMM	40	n/a	n/a	n/a	40	40	40	40	35	50
11/13/16R-CMM	100	n/a	n/a	n/a	100	100	100	100	40	50

Gasoline Curve Preparation for 100mL Purge (water)-LOKI			
Exp Date:	07/19/16	2000ug/ml	
		07/09/16B	Final Volume
	Conc.	Exp.03/31/21	w/ P&T H2O
Date/code	µg/L	uL	mL
07/18/16	20	1	100
07/18/16	50	2.5	100
07/18/16	100	5	100
07/18/16	300	15	100
07/18/16	600	30	100
07/18/16	800	40	100
07/18/16	1000	50	100

Gasoline SECOND SOURCE preparation @300ppb-Loki			
Exp Date:	07/10/16	2000ug/ml	
		07/08/16B	Final Volume
	Conc.	Exp.05-04-18	w/ P&T H2O
Date/code	µg/L	uL	mL
07/11/16	300	15	100

Injection Log

Directory: M:\LOKI\DATA\160718\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	18	0718L21.D	1	20ug/L GAS STD 7/18/16L	10mL W IS:S 7/16/16,7/18/1	18 Jul 16 20:20
2	19	0718L22.D	1	50ug/L GAS STD 7/18/16L	10mL W IS:S 7/16/16,7/18/1	18 Jul 16 20:48
3	20	0718L23.D	1	100ug/L GAS STD 7/18/16L	10mL W IS:S 7/16/16,7/18/1	18 Jul 16 21:17
4	21	0718L24.D	1	300ug/L GAS STD 7/18/16L	10mL W IS:S 7/16/16,7/18/1	18 Jul 16 21:45
5	22	0718L25.D	1	600ug/L GAS STD 7/18/16L	10mL W IS:S 7/16/16,7/18/1	18 Jul 16 22:13
6	23	0718L26.D	1	800ug/L GAS STD 7/18/16L	10mL W IS:S 7/16/16,7/18/1	18 Jul 16 22:41
7	24	0718L27.D	1	1000ug/L GAS STD 7/18/16L	10mL W IS:S 7/16/16,7/18/1	18 Jul 16 23:10
8	27	0718L30.D	1	(SS)300ug/L GAS STD 7/18/16L	10mL W IS:S 7/16/16,7/18/1	19 Jul 16 00:34
9	5	1113L05.D	1	0.3ug/L VOC STD 11/13/16J	1uL-5ppb	13 Nov 16 13:35
10	6	1113L06.D	1	0.5ug/L VOC STD 11/13/16K	1uL-5ppb	13 Nov 16 14:04
11	7	1113L07.D	1	1.0ug/L VOC STD 11/13/16L	2uL-10ppb	13 Nov 16 14:32
12	8	1113L08.D	1	2.0ug/L VOC STD 11/13/16M	2uL-10ppb	13 Nov 16 15:00
13	9	1113L09.D	1	5.0ug/L VOC STD 11/13/16AN	5uL-25ppb	13 Nov 16 15:28
14	10	1113L10.D	1	10ug/L VOC STD 11/13/16O	5uL-25ppb	13 Nov 16 15:56
15	11	1113L11.D	1	20ug/L VOC STD 11/13/16P	10uL-50ppb	13 Nov 16 16:24
16	12	1113L12.D	1	40ug/L VOC STD 11/13/16Q	10uL-50ppb	13 Nov 16 16:53
17	13	1113L13.D	1	100ug/L VOC STD 11/13/16R	20uL-100ppb	13 Nov 16 17:21
18	6	1119L07.D	1	161119A CCV/LCS 300ug/L	W IS&S 10/20/16, 11/04/16	20 Nov 16 12:10
19	17	1119L18.D	1	161119A BLK-1WL	W IS&S 10/20/16, 11/04/16	20 Nov 16 17:19
20	18	1119L19.D	1	AZ45990W02	W IS&S 10/20/16, 11/04/16	20 Nov 16 17:47
21	19	1119L20.D	1	AZ45997W02	W IS&S 10/20/16, 11/04/16	20 Nov 16 18:15
22	20	1119L21.D	1	AZ45988W02	W IS&S 10/20/16, 11/04/16	20 Nov 16 18:43
23	27	1119L28.D	1	Ending CCV GAS 300ug/L 11/19/16	W IS&S 10/20/16, 11/04/16	20 Nov 16 21:59
24	33	1119L34.D	1	161119B CCV/LCS 300ug/L	W IS&S 10/20/16, 11/04/16	21 Nov 16 00:47
25	37	1119L38.D	1	161119B BLK-1WL	W IS&S 10/20/16, 11/04/16	21 Nov 16 2:40
26	39	1119L40.D	1	AZ45989W02	W IS&S 10/20/16, 11/04/16	21 Nov 16 3:36
27	40	1119L41.D	1	AZ45991W02	W IS&S 10/20/16, 11/04/16	21 Nov 16 4:04
28	41	1119L42.D	1	AZ45992W02	W IS&S 10/20/16, 11/04/16	21 Nov 16 4:32
29	42	1119L43.D	1	AZ45993W02	W IS&S 10/20/16, 11/04/16	21 Nov 16 5:00
30	43	1119L44.D	1	AZ45994W02	W IS&S 10/20/16, 11/04/16	21 Nov 16 5:28
31	44	1119L45.D	1	AZ45995W02	W IS&S 10/20/16, 11/04/16	21 Nov 16 5:56
32	45	1119L46.D	1	AZ45996W02	W IS&S 10/20/16, 11/04/16	21 Nov 16 6:24
33	54	1119L55.D	1	Ending CCV GAS 300ug/L 11/19/16	W IS&S 10/20/16, 11/04/16	21 Nov 16 10:36

ORGANICS

APPL, INC.

ORGANICS
QC Summary

APPL, INC.

Method Blank
METHANE

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161119W-45866 - 213991**
Batch ID: #RSKME-161119A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	METHANE	1.00 U	5.0	1.00	0.25	ug/L	11/19/16	11/19/16

Quant Method: RSK0901.M
Run #: 1119001
Instrument: Rocky
Sequence: 160901
Initials: CMO

GC SC-Blank-REG MDLs-DOD
Printed: 11/25/16 1:27:18 PM

Laboratory Control Spike Recovery
METHANE

APPL ID: **161119W-45866 LCS - 213991**
Batch ID: #RSKME-161119A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
METHANE	320	306	95.5	72-125

Primary	SPK
Quant Method :	RSK0901.M
Extraction Date :	11/19/16
Analysis Date :	11/19/16
Instrument :	Rocky
Run :	1119000
Initials :	CMO

Comments: _____

Printed: 11/25/16 1:27:09 PM
APPL Standard LCS

RSK 175

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81515

Case No: 81515 Date Analyzed: 11/19/16

Matrix: WATER Instrument: Rocky

Blank ID: 161119A-BLK Time Analyzed: 1216

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161119A-LCS	Lab Control Spike	1119000	11/19/16 1151
161119A-BLK	Blank	1119001	11/19/16 1216
AZ45988	ERH118	1119014	11/19/16 1248
AZ45990	ERH123	1119015	11/19/16 1251
AZ45992	ERH125	1119017	11/19/16 1255
AZ45993	ERH127	1119018	11/19/16 1257
AZ45994	ERH129	1119020	11/19/16 1301
AZ45997	ERH132	1119021	11/19/16 1303
AZ45991	ERH124	1119027	11/19/16 1400

Comments: Batch: #RSKME-161119A

ORGANICS
Sample Data

APPL, INC.

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH118
Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515
APPL ID: AZ45988
QCG: #RSKME-161119A-213991

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	11/19/16	11/19/16

Quant Method:	RSK0901.M
Run #:	1119014
Instrument:	Rocky
Sequence:	160901
Dilution Factor:	1
Initials:	CMO

Printed: 11/25/16 1:27:13 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1119014.D Vial: 7
Acq On : 19 Nov 16 12:48 Operator: lac
Sample : AZ45988W05 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Nov 25 13:31 2016 Quant Results File: RSK0901.RES

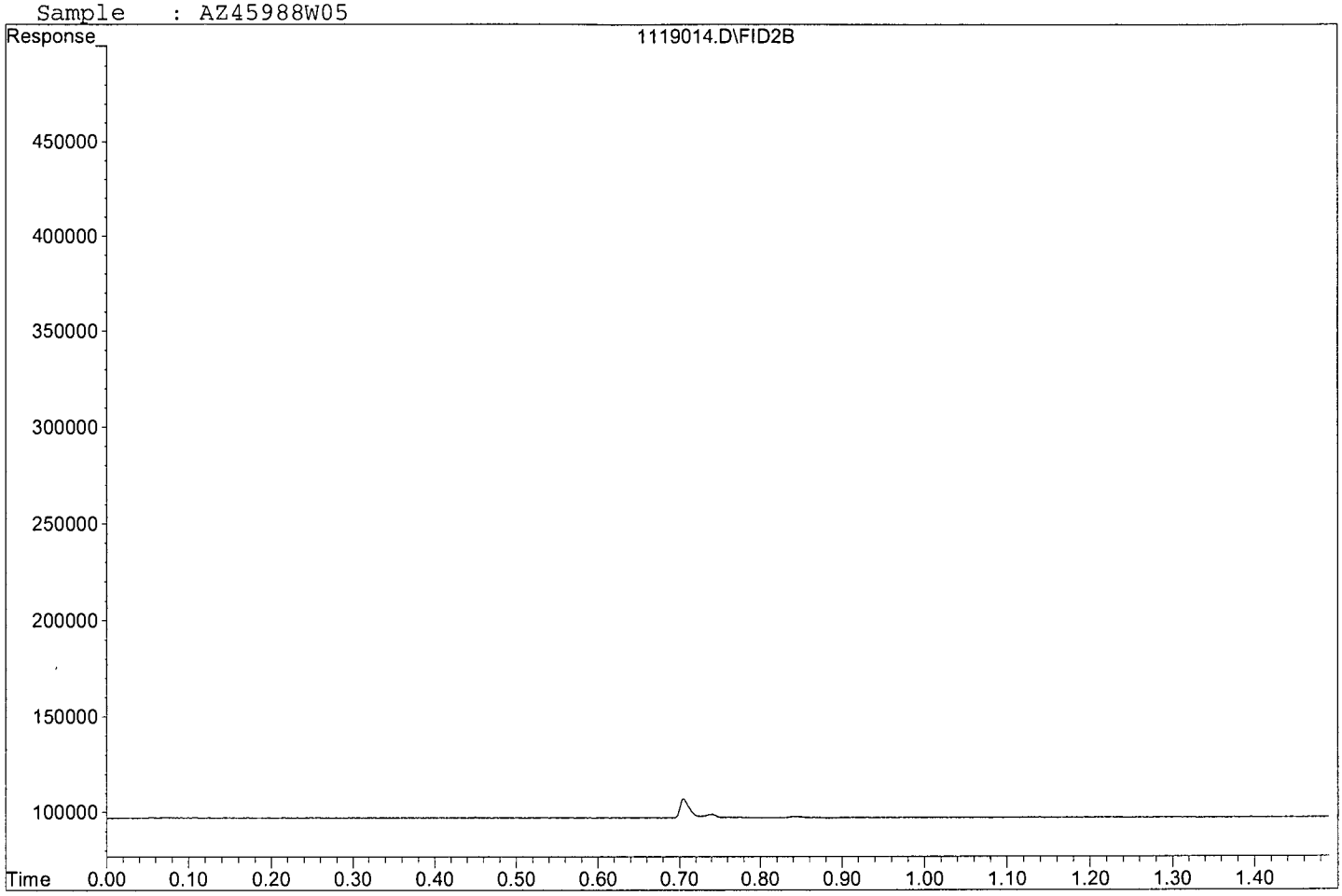
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Nov 23 12:26:39 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.74	2159	N.D.	ppb
2) ATM Ethane	0.87	454	N.D.	ppb
3) ATM Ethene	0.96	370	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1119014.D
Sample : AZ45988W05



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH123
Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515
APPL ID: AZ45990
QCG: #RSKME-161119A-213991

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	11/19/16	11/19/16

Quant Method:	RSK0901.M
Run #:	1119015
Instrument:	Rocky
Sequence:	160901
Dilution Factor:	1
Initials:	CMO

Printed: 11/25/16 1:27:13 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1119015.D Vial: 8
Acq On : 19 Nov 16 12:51 Operator: lac
Sample : AZ45990W03 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Nov 25 13:31 2016 Quant Results File: RSK0901.RES

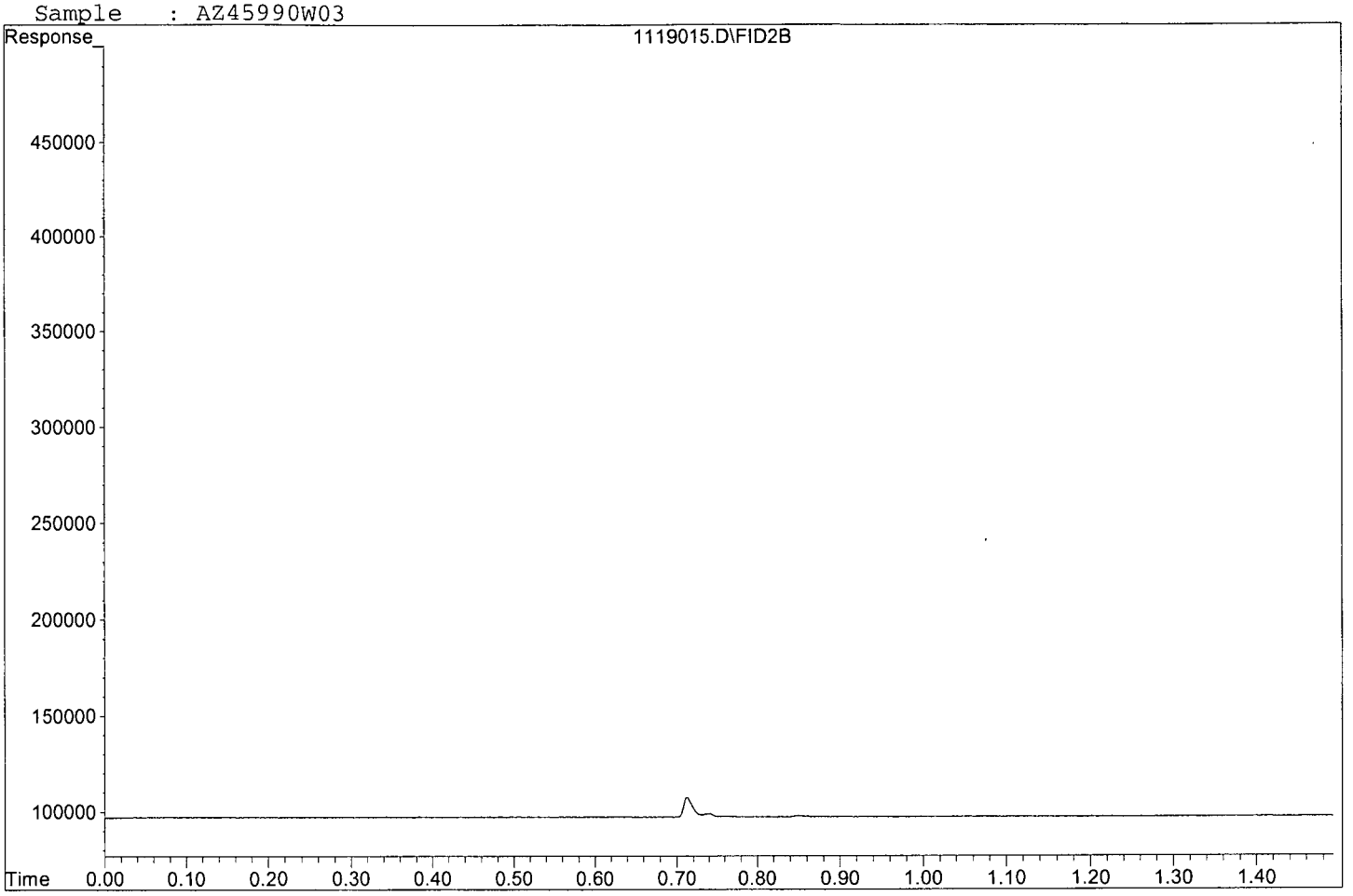
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Nov 23 12:26:39 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.74	1915	N.D.	ppb
2) ATM Ethane	0.88	354	N.D.	ppb
3) ATM Ethene	0.95	365	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1119015.D
Sample : AZ45990W03



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH124
Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515
APPL ID: AZ45991
QCG: #RSKME-161119A-213991

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	20000	250.0	50.00	12.50	ug/L	11/19/16	11/19/16

Quant Method:	RSK0901.M
Run #:	1119027
Instrument:	Rocky
Sequence:	160901
Dilution Factor:	50
Initials:	CMO

Printed: 11/25/16 1:27:13 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1119027.D Vial: 20
Acq On : 19 Nov 16 14:00 Operator: lac
Sample : AZ45991W05 DF50 Inst : 7890
Misc : Multiplr: 50.00
IntFile : autoint1.e
Quant Time: Nov 25 13:31 2016 Quant Results File: RSK0901.RES

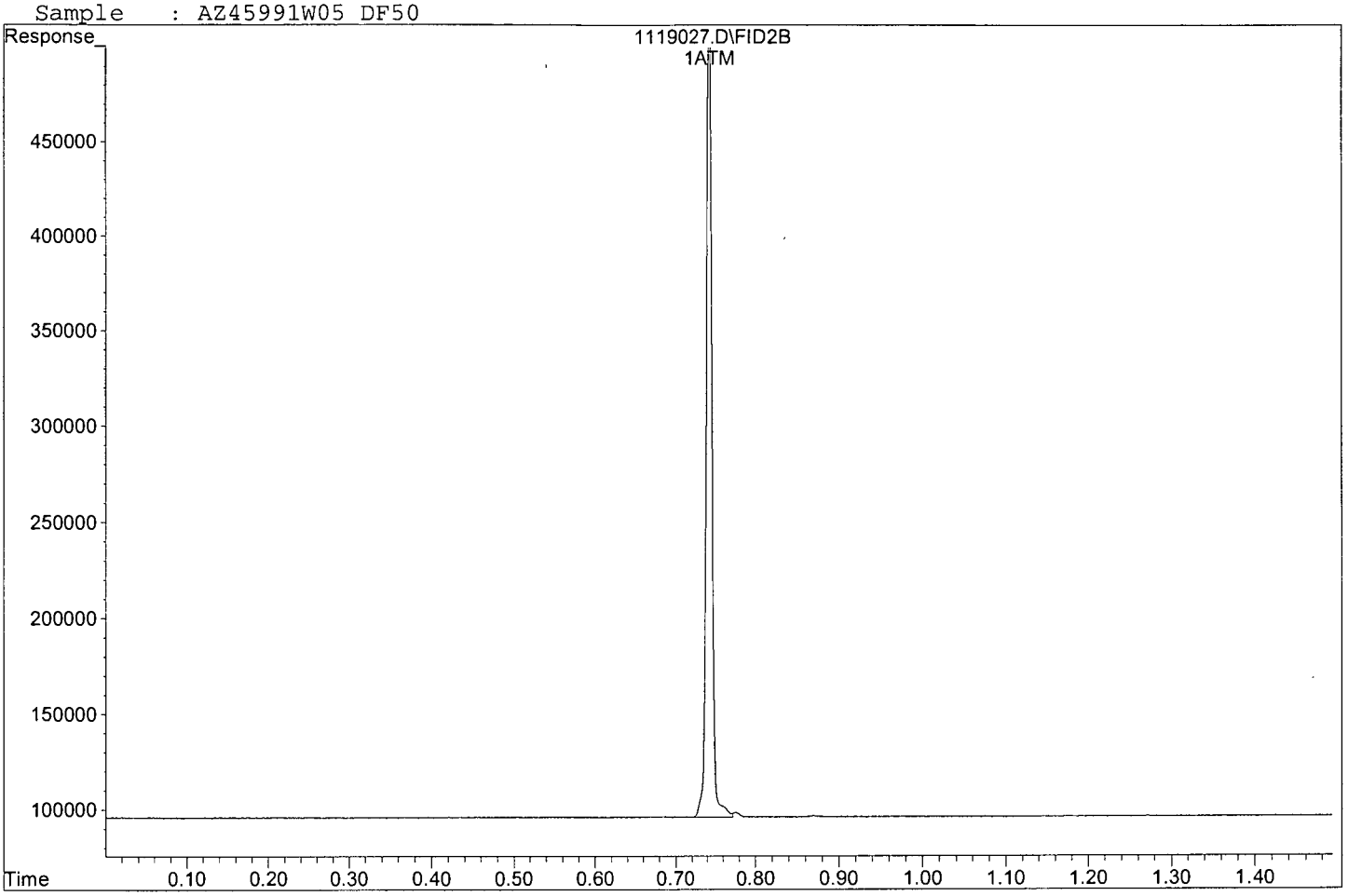
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Nov 23 12:26:39 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.74	445374	19895.473	ppb
Target Compounds				
2) ATM Ethane	0.87	757	N.D.	ppb
3) ATM Ethene	0.94	339	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1119027.D
Sample : AZ45991W05 DF50



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH125
Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515
APPL ID: AZ45992
QCG: #RSKME-161119A-213991

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	11/19/16	11/19/16

Quant Method:	RSK0901.M
Run #:	1119017
Instrument:	Rocky
Sequence:	160901
Dilution Factor:	1
Initials:	CMO

Printed: 11/25/16 1:27:14 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1119017.D Vial: 10
Acq On : 19 Nov 16 12:55 Operator: lac
Sample : AZ45992W05 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Nov 25 13:31 2016 Quant Results File: RSK0901.RES

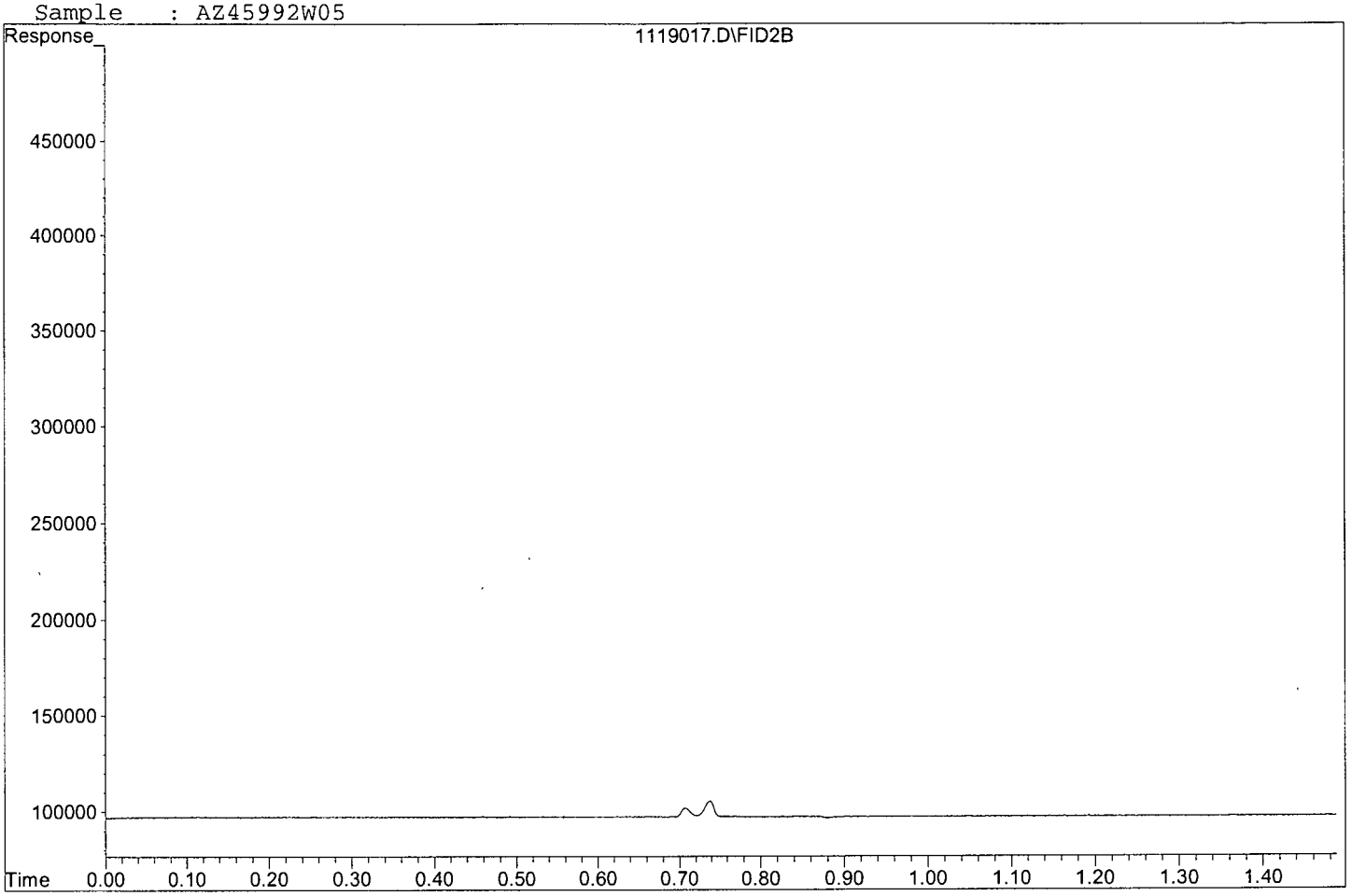
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Nov 23 12:26:39 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.74	8668	N.D.	ppb
2) ATM Ethane	0.87	669	N.D.	ppb
3) ATM Ethene	0.95	568	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1119017.D
Sample : AZ45992W05



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH127
Sample Collection Date: 11/16/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515
APPL ID: AZ45993
QCG: #RSKME-161119A-213991

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	11/19/16	11/19/16

Quant Method:	RSK0901.M
Run #:	1119018
Instrument:	Rocky
Sequence:	160901
Dilution Factor:	1
Initials:	CMO

Printed: 11/25/16 1:27:14 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1119018.D Vial: 11
Acq On : 19 Nov 16 12:57 Operator: lac
Sample : AZ45993W05 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Nov 25 13:31 2016 Quant Results File: RSK0901.RES

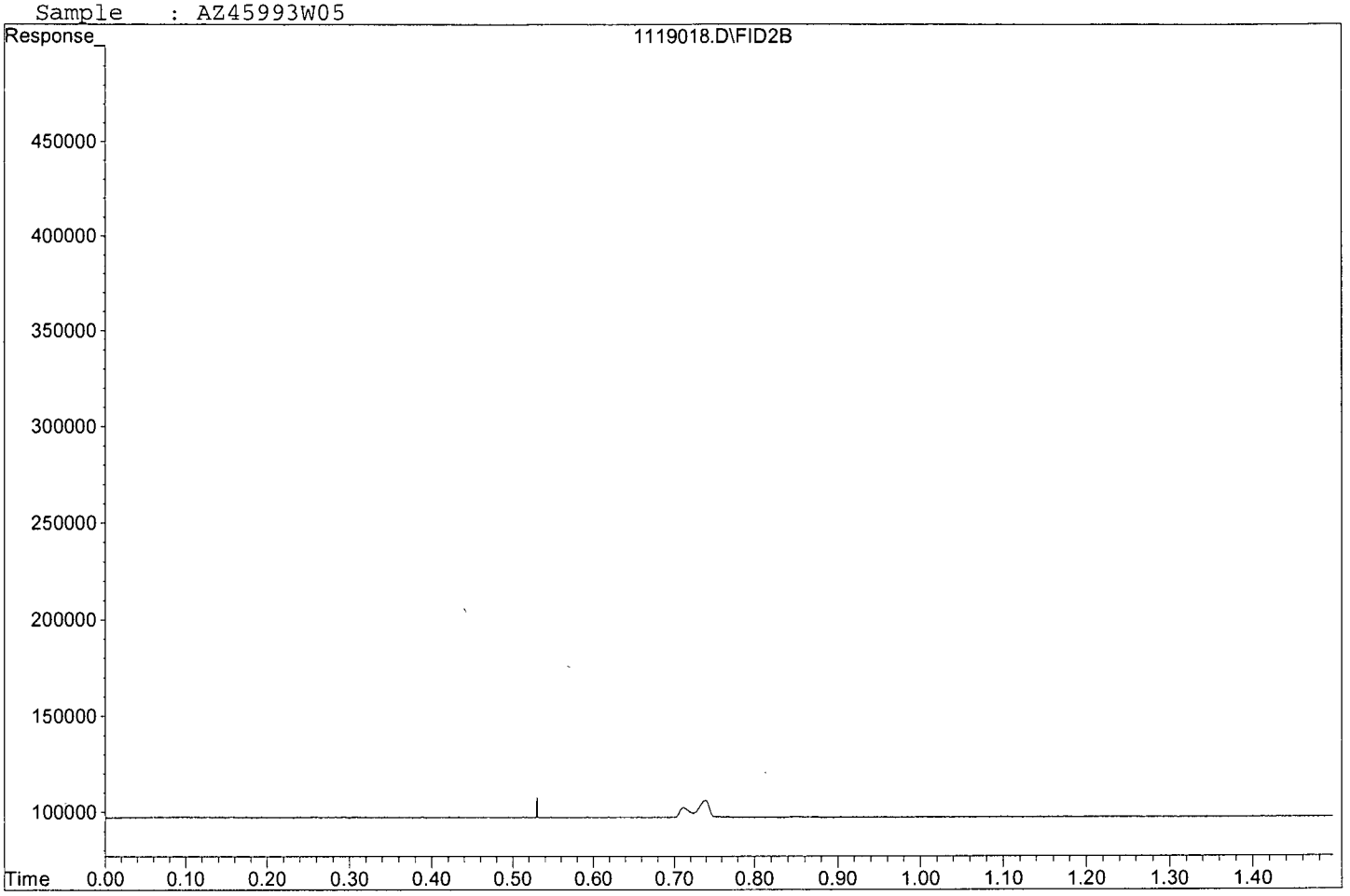
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Nov 23 12:26:39 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.74	8871	N.D.	ppb
2) ATM Ethane	0.87	425	N.D.	ppb
3) ATM Ethene	0.95	348	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1119018.D
Sample : AZ45993W05



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH129
Sample Collection Date: 11/15/16

ARF: 81515
APPL ID: AZ45994
QCG: #RSKME-161119A-213991

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	11/19/16	11/19/16

Quant Method:	RSK0901.M
Run #:	1119020
Instrument:	Rocky
Sequence:	160901
Dilution Factor:	1
Initials:	CMO

Printed: 11/25/16 1:27:14 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1119020.D Vial: 13
Acq On : 19 Nov 16 13:01 Operator: lac
Sample : AZ45994W05 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Nov 25 13:31 2016 Quant Results File: RSK0901.RES

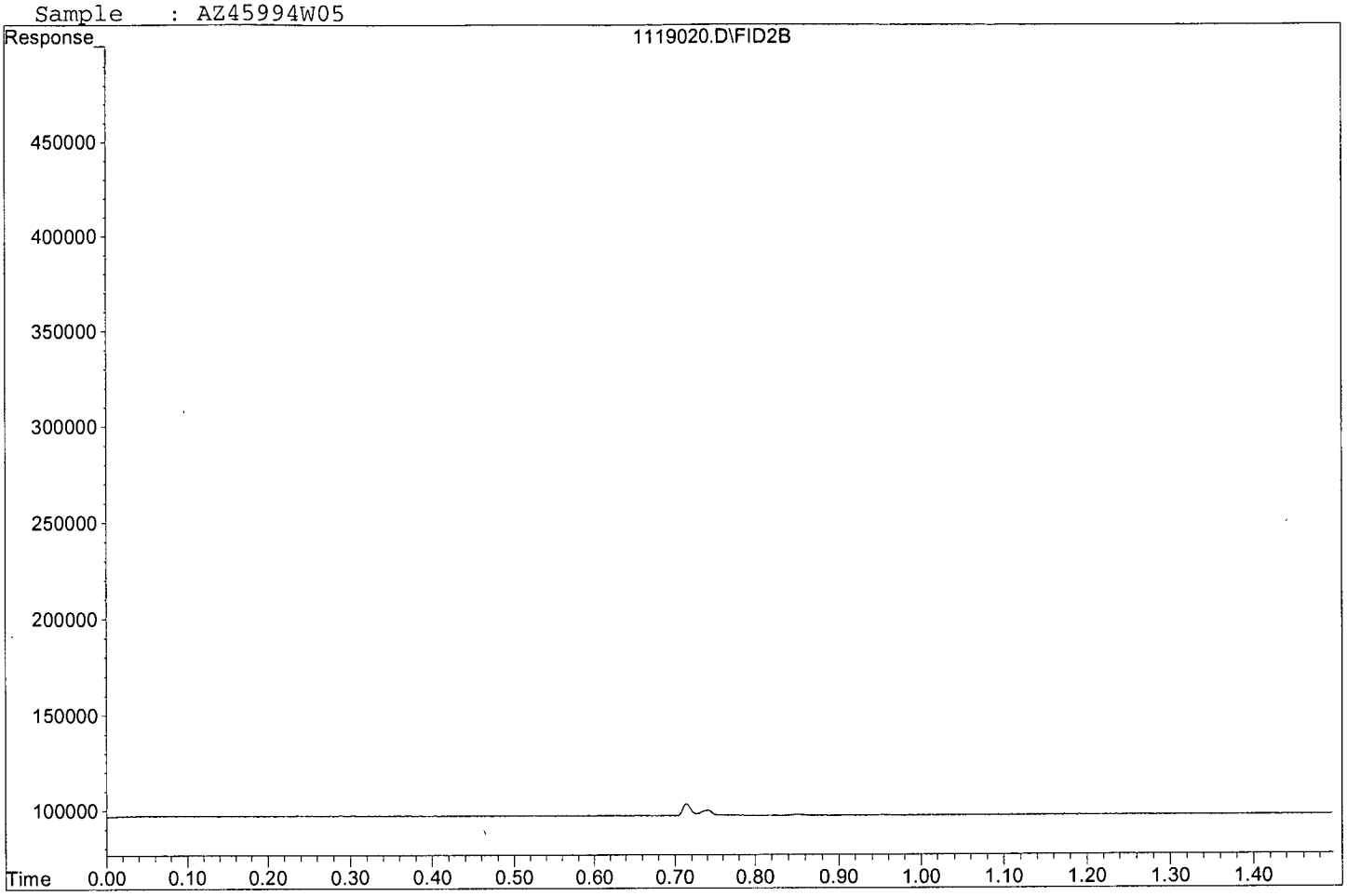
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Nov 23 12:26:39 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.74	3020	N.D.	ppb
2) ATM Ethane	0.87	329	N.D.	ppb
3) ATM Ethene	0.95	437	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1119020.D
Sample : AZ45994W05



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH132
Sample Collection Date: 11/16/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515
APPL ID: AZ45997
QCG: #RSKME-161119A-213991

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	11/19/16	11/19/16

Quant Method:	RSK0901.M
Run #:	1119021
Instrument:	Rocky
Sequence:	160901
Dilution Factor:	1
Initials:	CMO

Printed: 11/25/16 1:27:14 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1119021.D Vial: 14
Acq On : 19 Nov 16 13:03 Operator: lac
Sample : AZ45997W05 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Nov 25 13:31 2016 Quant Results File: RSK0901.RES

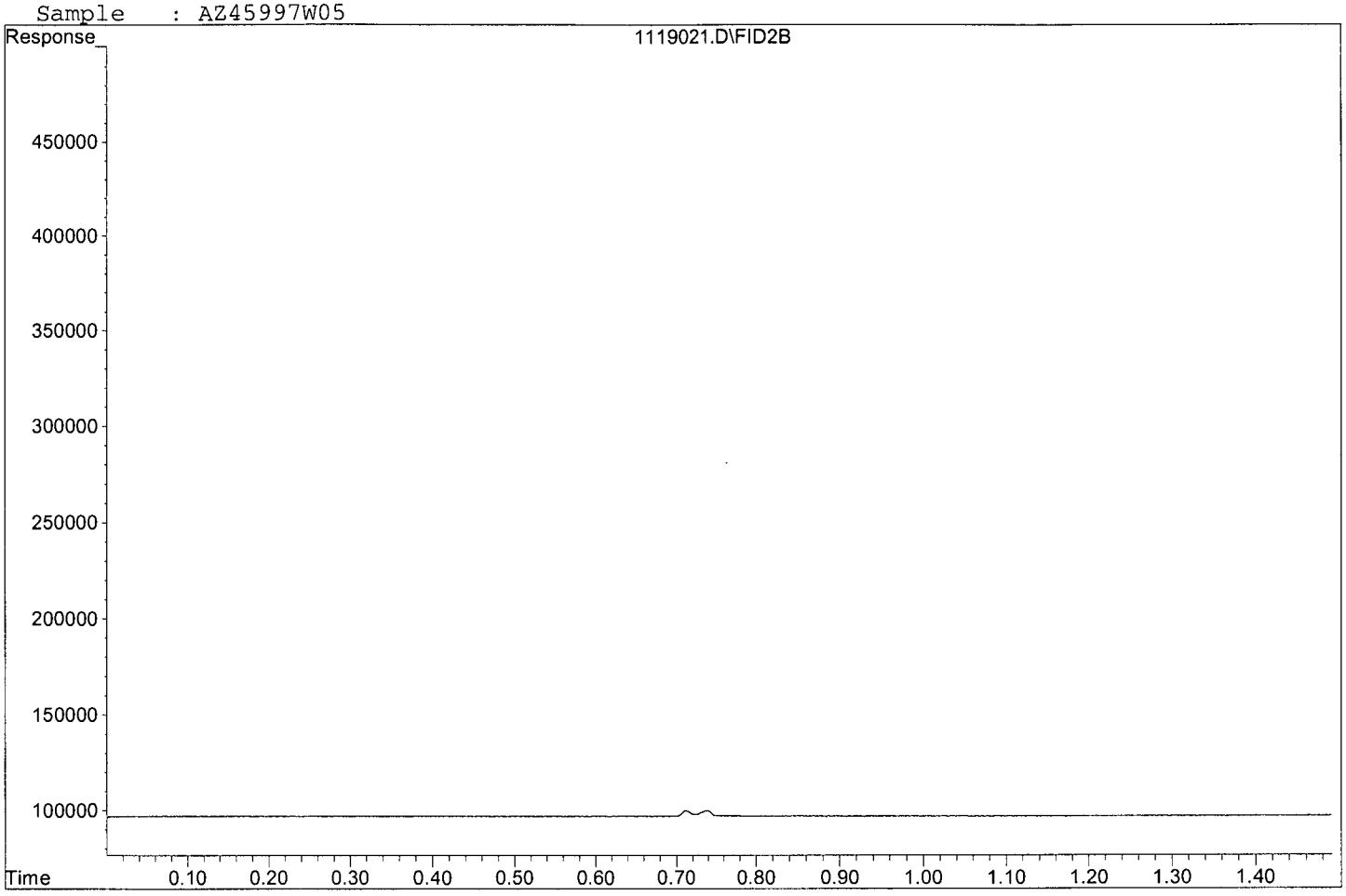
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Nov 23 12:26:39 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.74	3190	N.D.	ppb
2) ATM Ethane	0.87	487	N.D.	ppb
3) ATM Ethene	0.95	353	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1119021.D
Sample : AZ45997W05



ORGANICS
Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:
SDG No:
Initial Cal. Date: 09/01/16
Instrument: 7890
Initials:

		Compound	1	2	3	4	5	6	7	8	9	10	Avg	%RSD		
			0901000.D	0901001.D	0901002.D	0901003.D	0901004.D	0901005.D	0901006.D	0901007.D	0901008.D	0901009.D				
1	ATM	Methane	7448	5672	3042	3435	1074	1006	1184	1314	1084	1089	2635	87	ATM	
2	ATM	Ethane	1509	1521	1416	2554	478	657	816	933	791	798	1147	54	ATM	
3	ATM	Ethene	1826	1525	1280	2301	444	570	693	733	628	626	1063	60	ATM	
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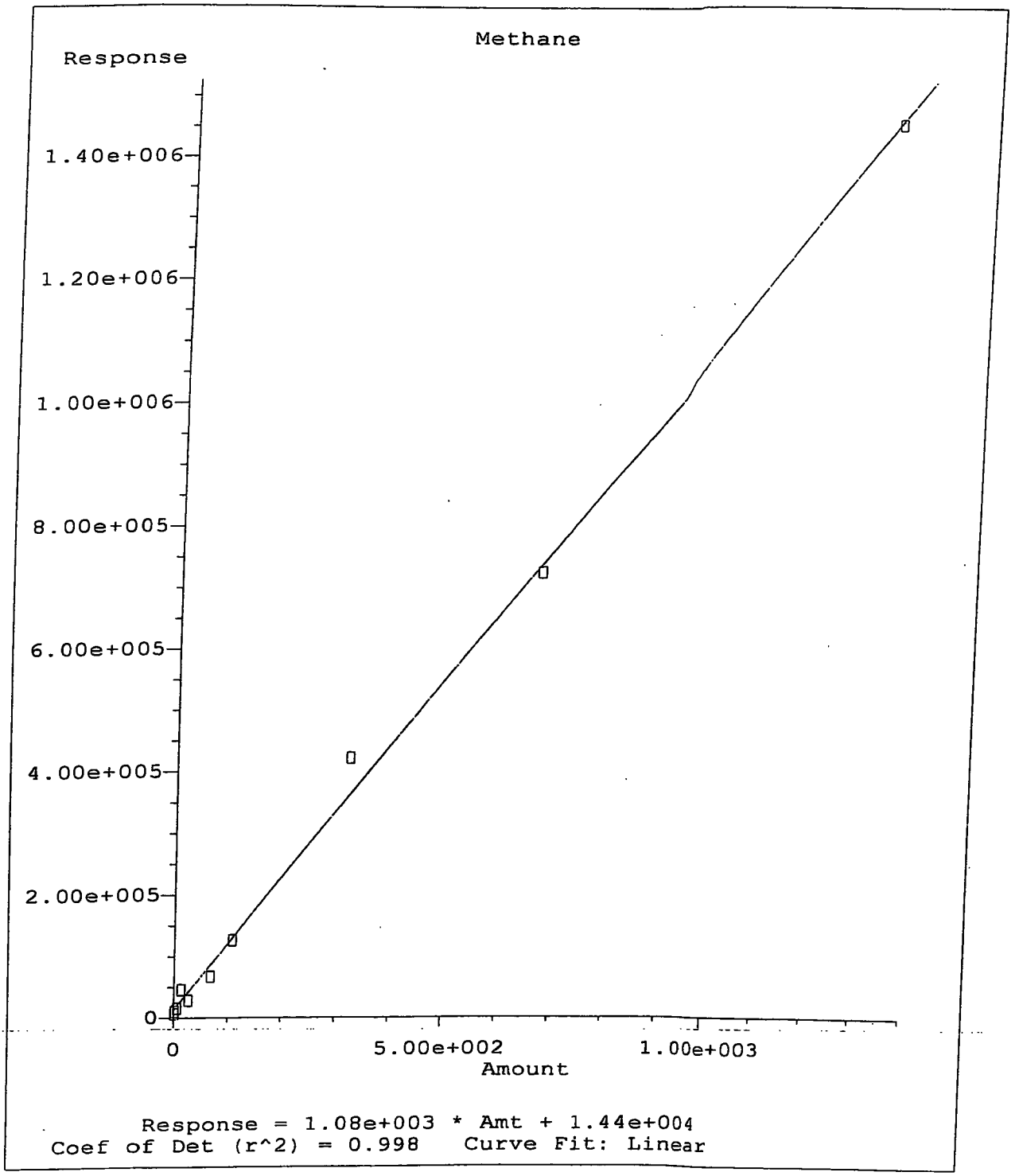
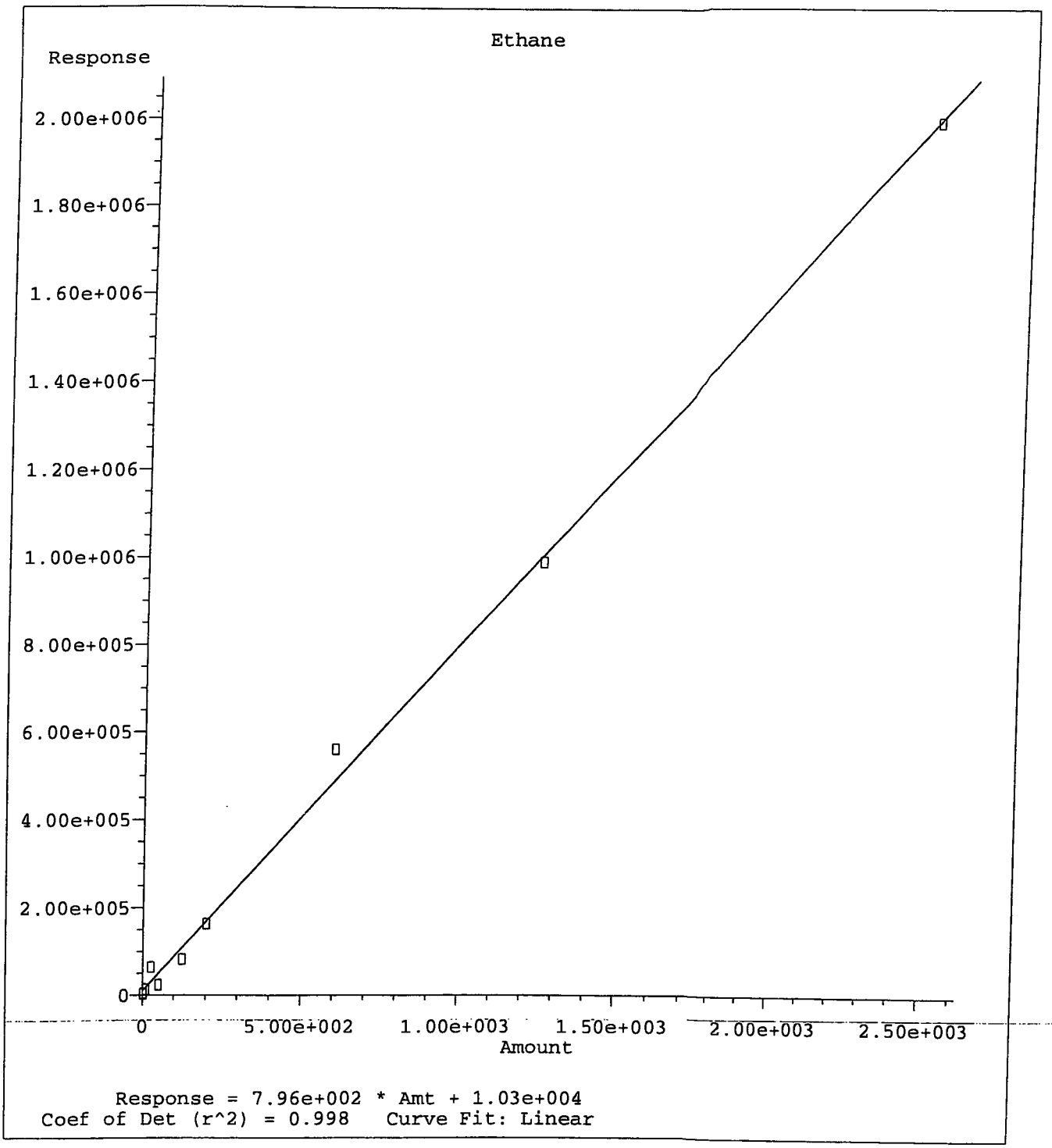
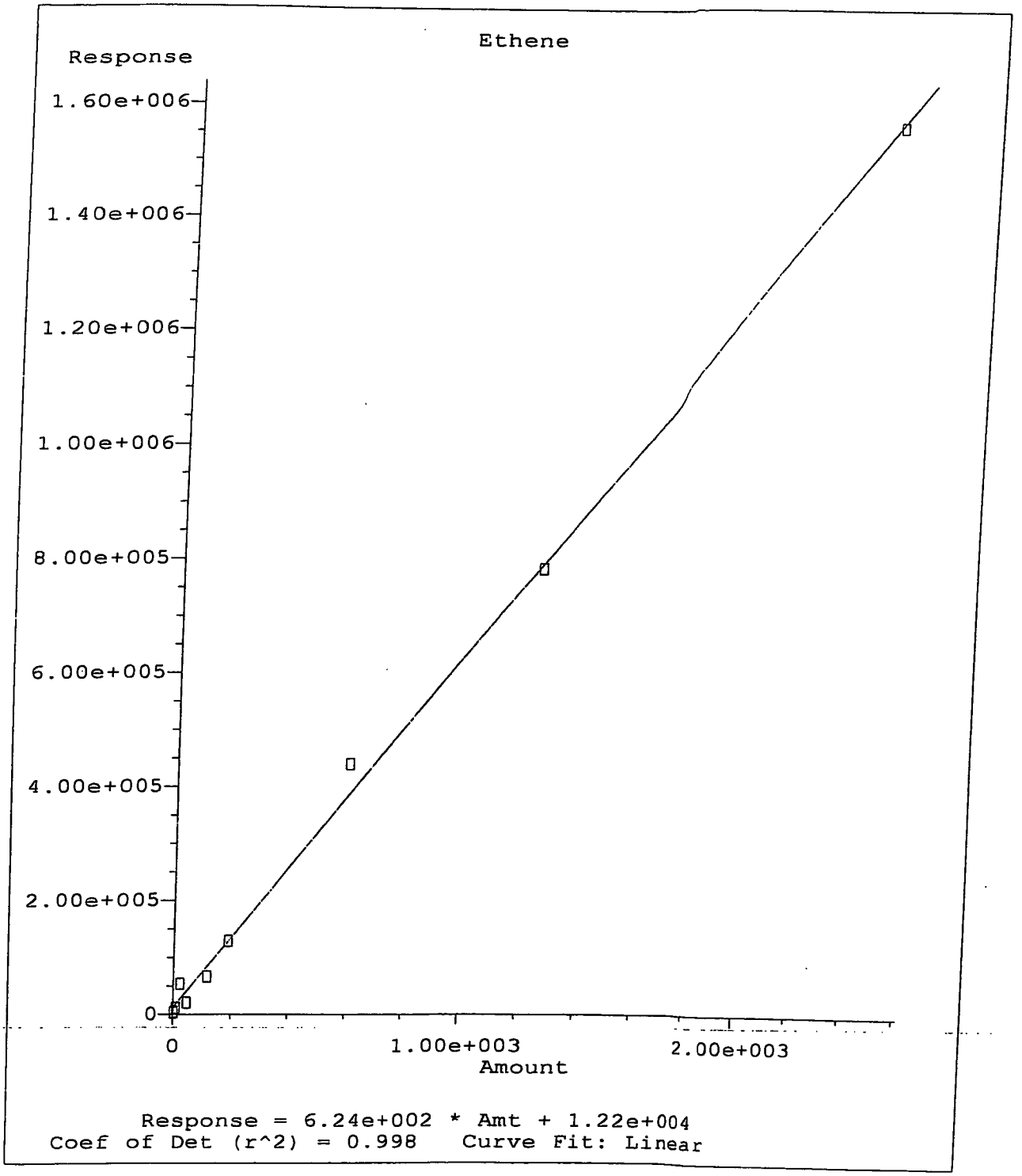


Method Name: G:\ROCKY\DATA\160901R\RSK0901.M
Calibration Table Last Updated: Fri Sep 02 15:25:38 2016



Method Name: G:\ROCKY\DATA\160901R\RSK0901.M
Calibration Table Last Updated: Thu Nov 10 08:49:51 2016



Method Name: G:\ROCKY\DATA\160901R\RSK0901.M
Calibration Table Last Updated: Fri Sep 02 15:25:38 2016

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901000.D Vial: 1
Acq On : 1 Sep 16 11:38 Operator: lac
Sample : RSK Level 1 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

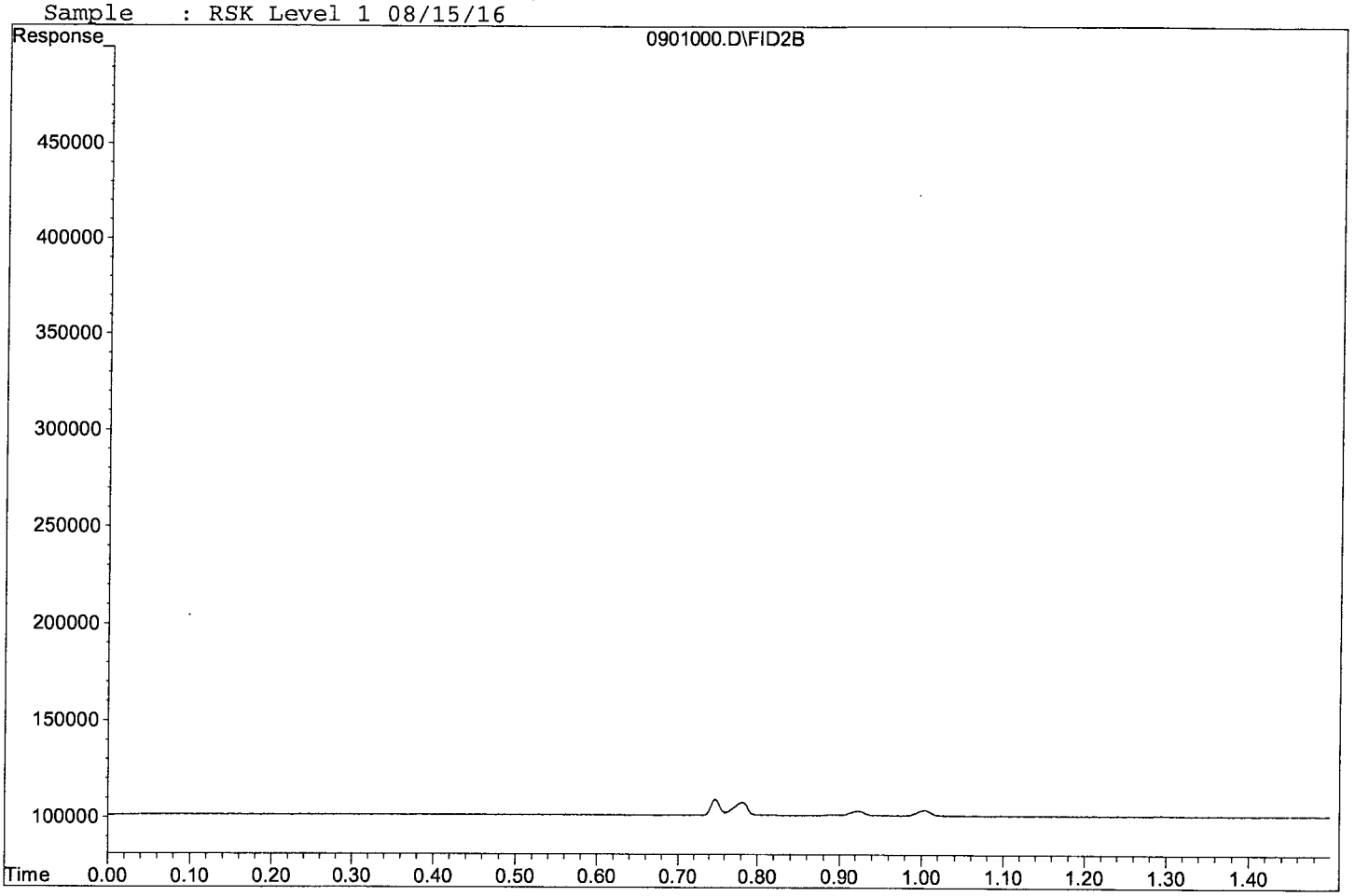
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.78	6703	N.D.	ppb
2) ATM Ethane	0.92	2566	N.D.	ppb
3) ATM Ethene	1.00	2922	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901000.D
Sample : RSK Level 1 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901001.D Vial: 2
Acq On : 1 Sep 16 11:41 Operator: lac
Sample : RSK Level 2 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

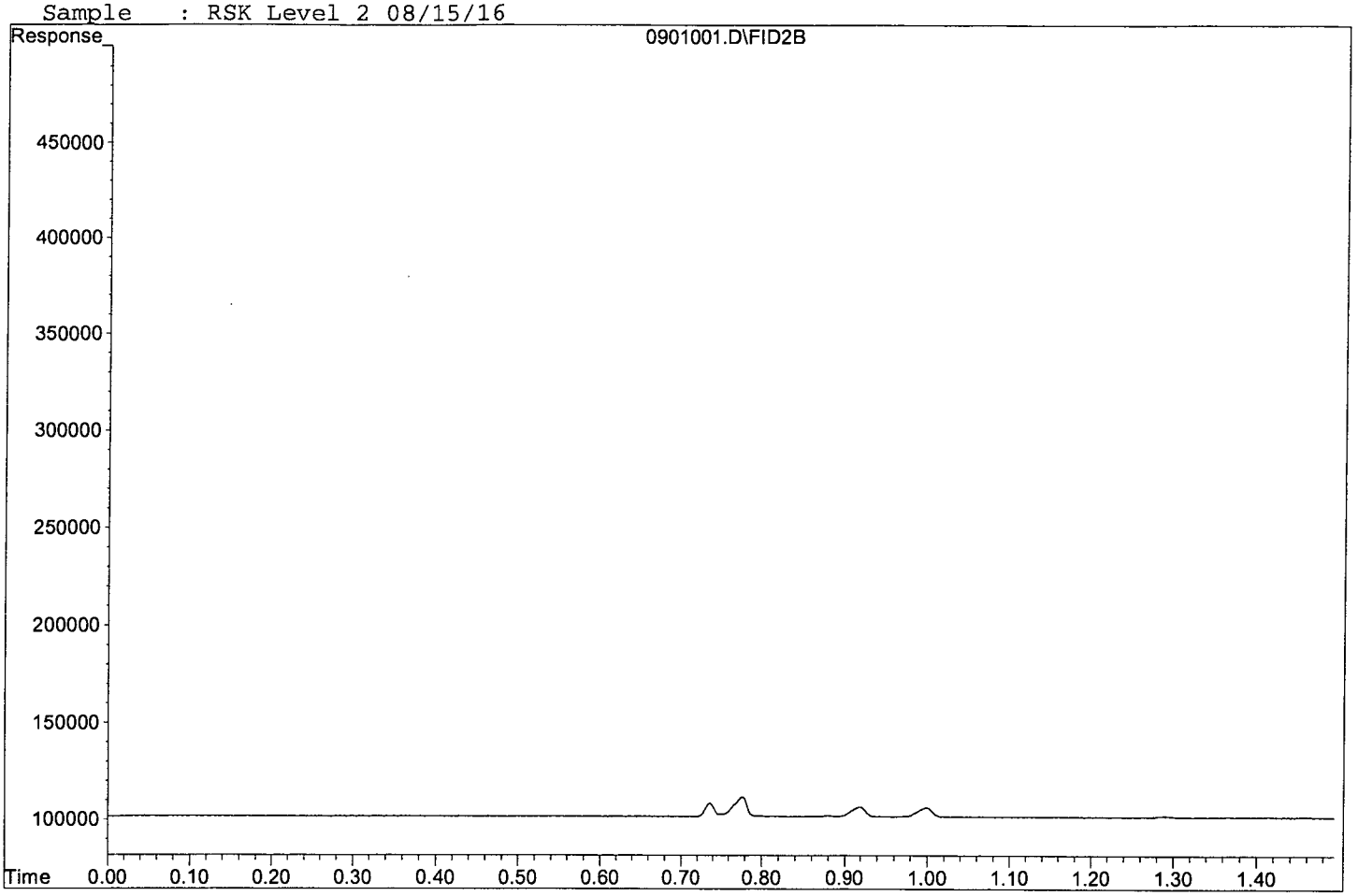
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.79	569	N.D.	ppb
2) ATM Ethane	0.94	352	N.D.	ppb
3) ATM Ethene	1.02	250	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\ROCKY\DATA\160901R\0901001.D
Sample : RSK Level 2 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901002.D Vial: 3
Acq On : 1 Sep 16 11:44 Operator: lac
Sample : RSK Level 3 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 14 13:31 2016 Quant Results File: RSK0901.RES

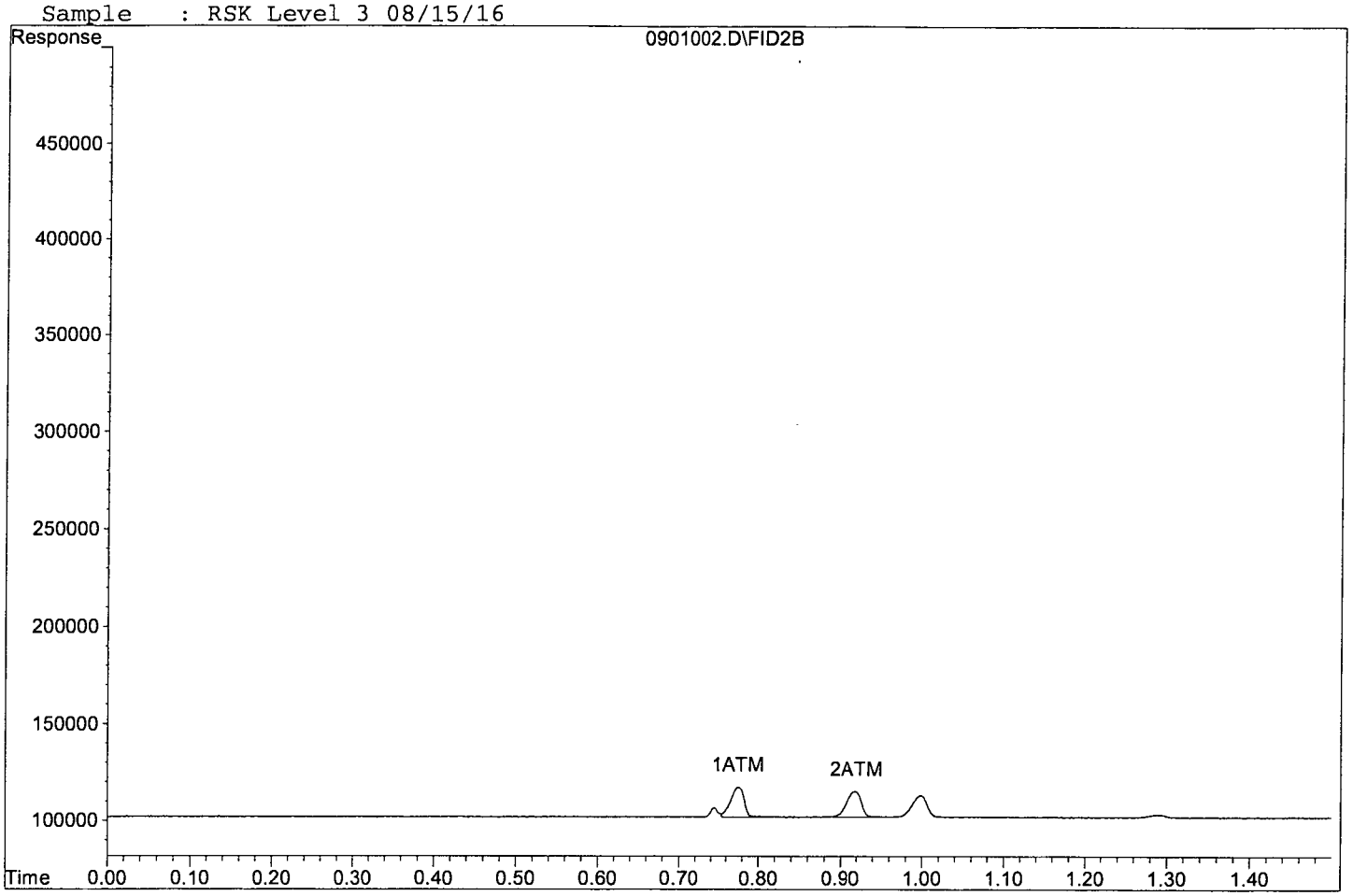
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.77	15515	1.054	ppb
2) ATM Ethane	0.92	13452	3.912	ppb
Target Compounds				
3) ATM Ethene	1.00	11390	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901002.D
Sample : RSK Level 3 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901003.D Vial: 4
Acq On : 1 Sep 16 11:46 Operator: lac
Sample : RSK Level 4 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

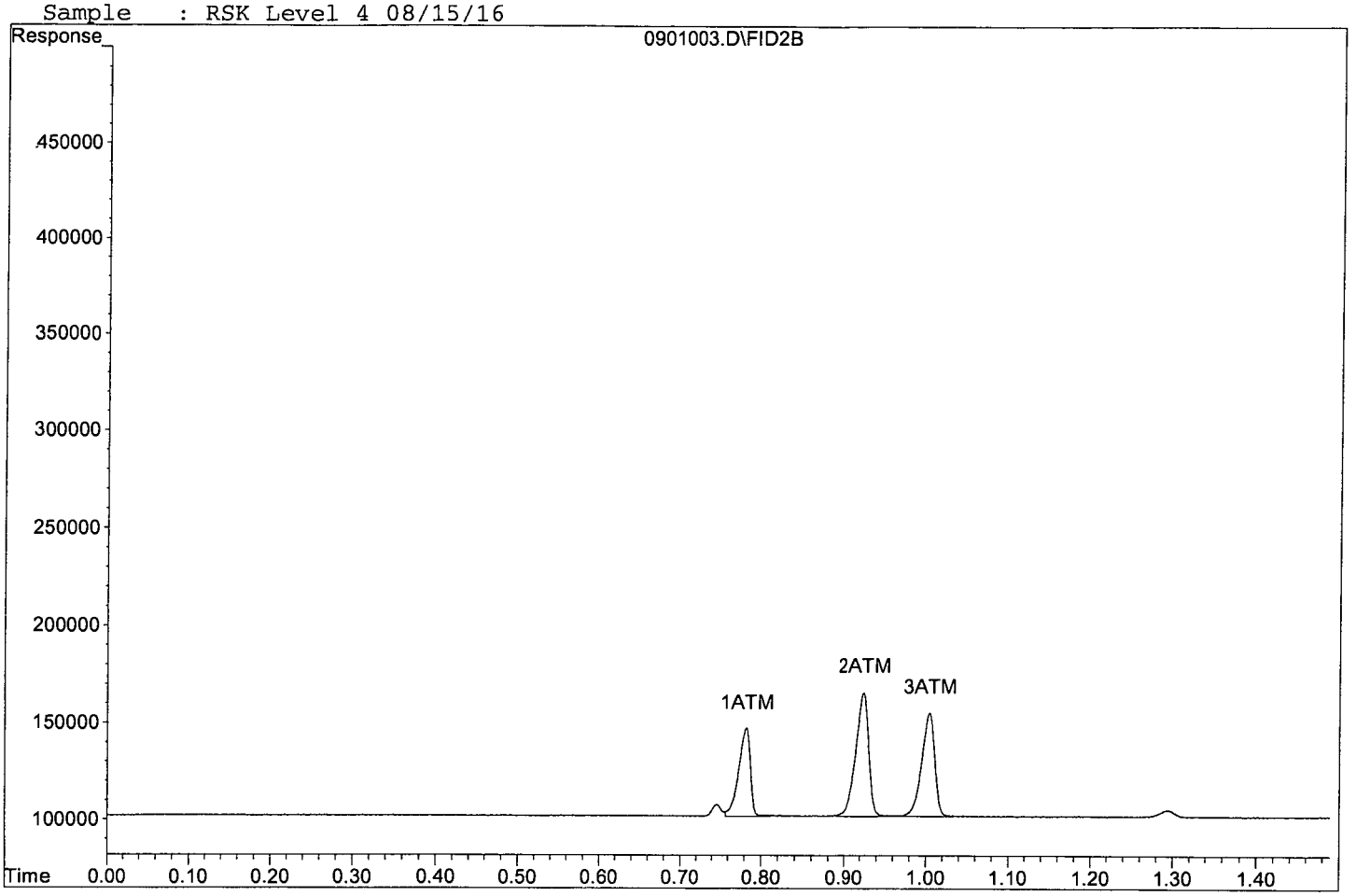
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.78	45792	29.006 ppb
2) ATM Ethane	0.92	63853	67.197 ppb
3) ATM Ethene	1.00	53608	66.354 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901003.D
Sample : RSK Level 4 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901004.D Vial: 5
Acq On : 1 Sep 16 11:48 Operator: lac
Sample : RSK Level 5 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

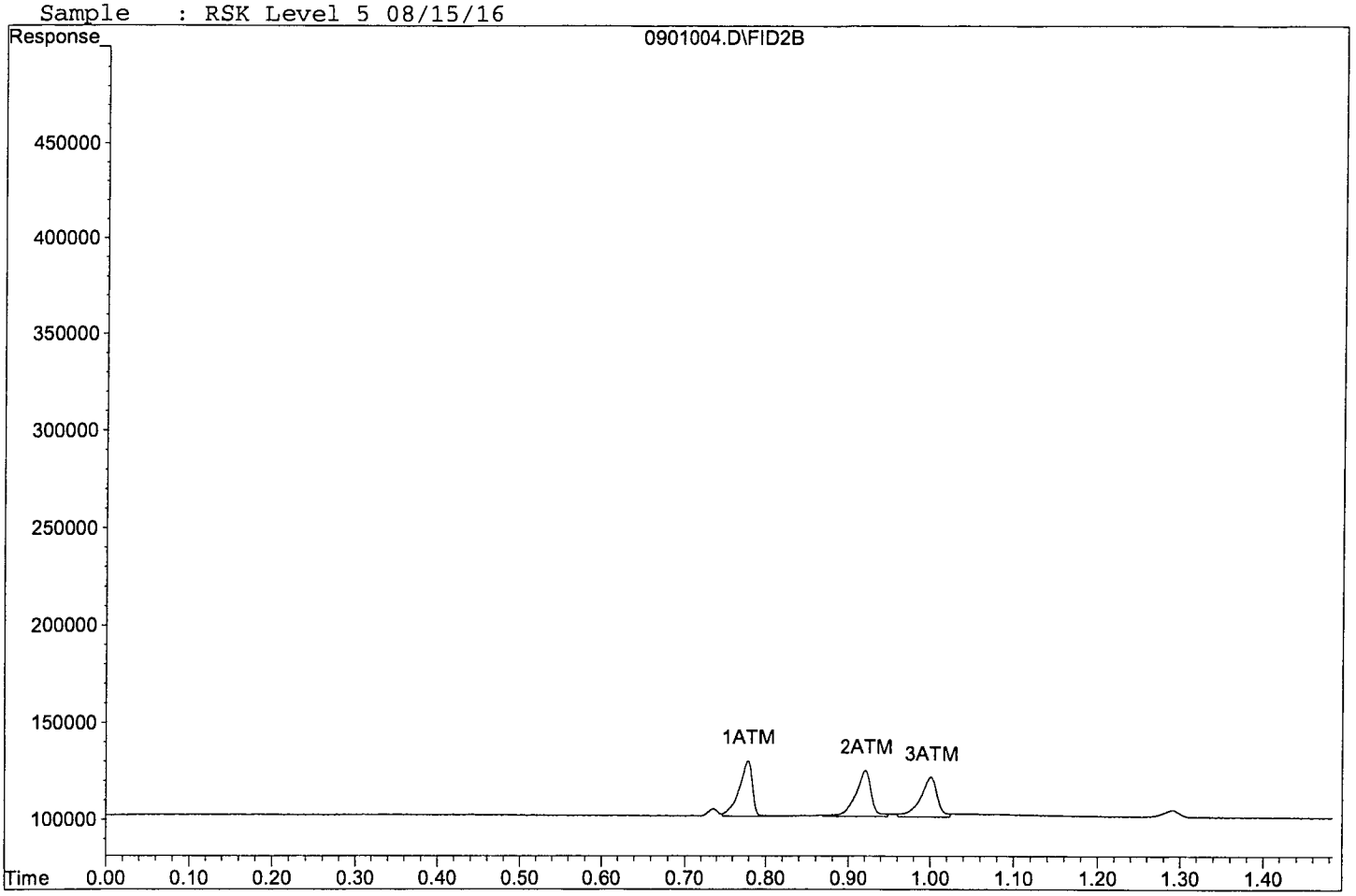
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.78	28664	13.193 ppb
2) ATM Ethane	0.92	23891	17.020 ppb
3) ATM Ethene	1.00	20700	13.631 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901004.D
Sample : RSK Level 5 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901005.D Vial: 6
Acq On : 1 Sep 16 11:50 Operator: lac
Sample : RSK Level 6 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

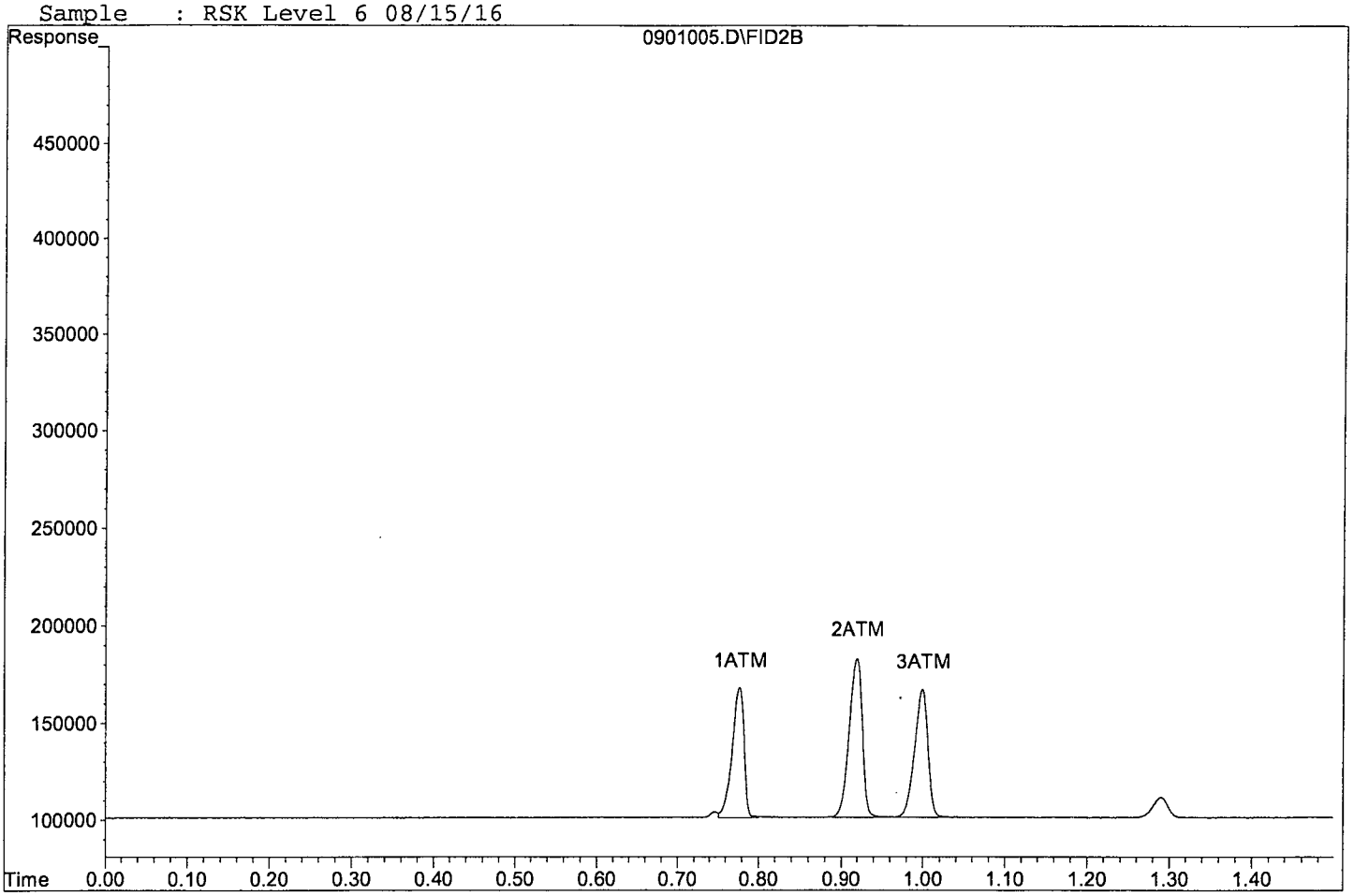
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.78	67137	48.712 ppb
2) ATM Ethane	0.92	82167	90.193 ppb
3) ATM Ethene	1.00	66348	86.764 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901005.D
Sample : RSK Level 6 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901006.D Vial: 7
Acq On : 1 Sep 16 11:52 Operator: lac
Sample : RSK Level 7 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

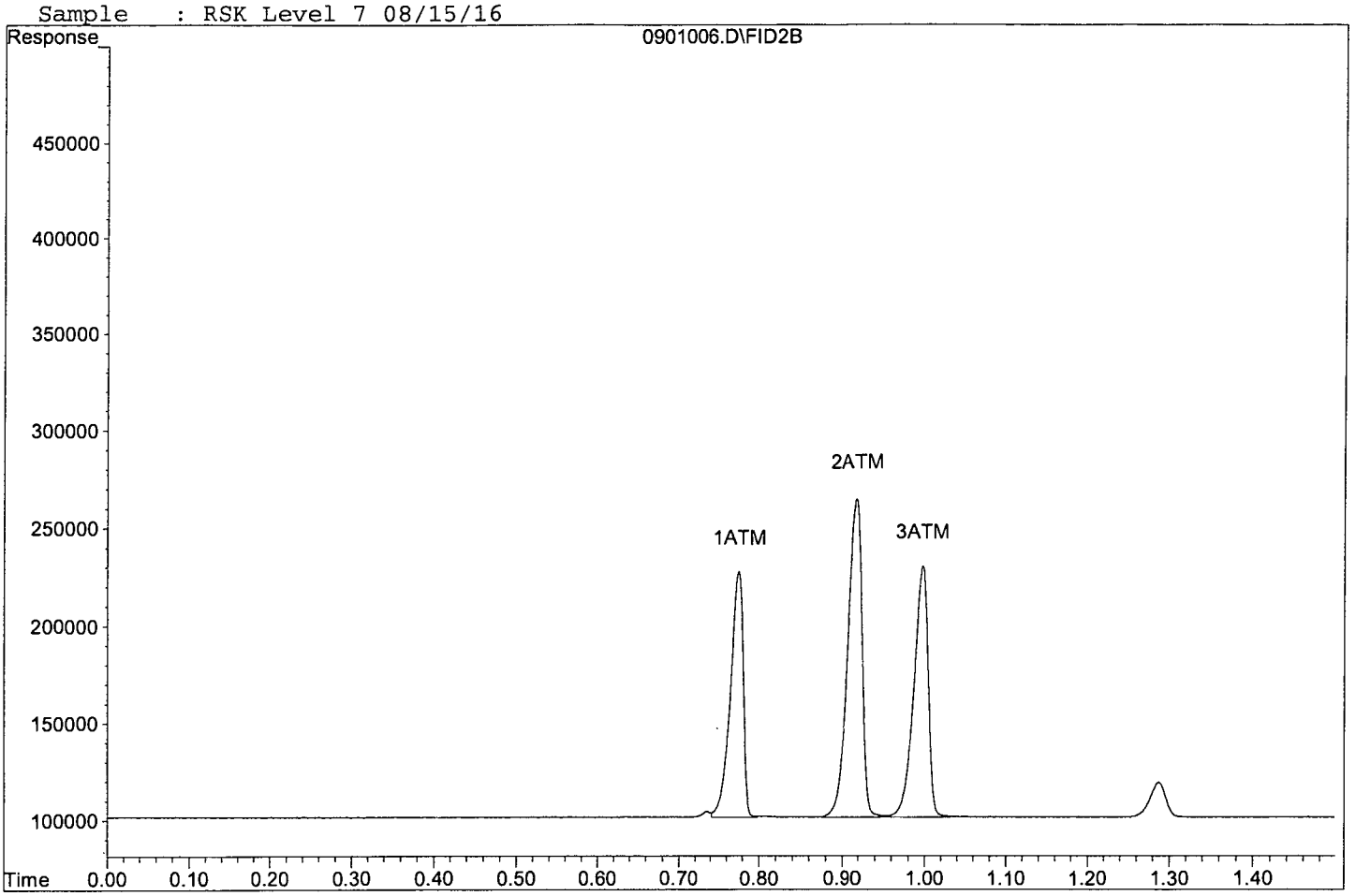
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.78	126422	103.446 ppb
2) ATM Ethane	0.92	163281	192.041 ppb
3) ATM Ethene	1.00	129200	187.460 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901006.D
Sample : RSK Level 7 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901007.D Vial: 8
Acq On : 1 Sep 16 11:55 Operator: lac
Sample : RSK Level 8 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

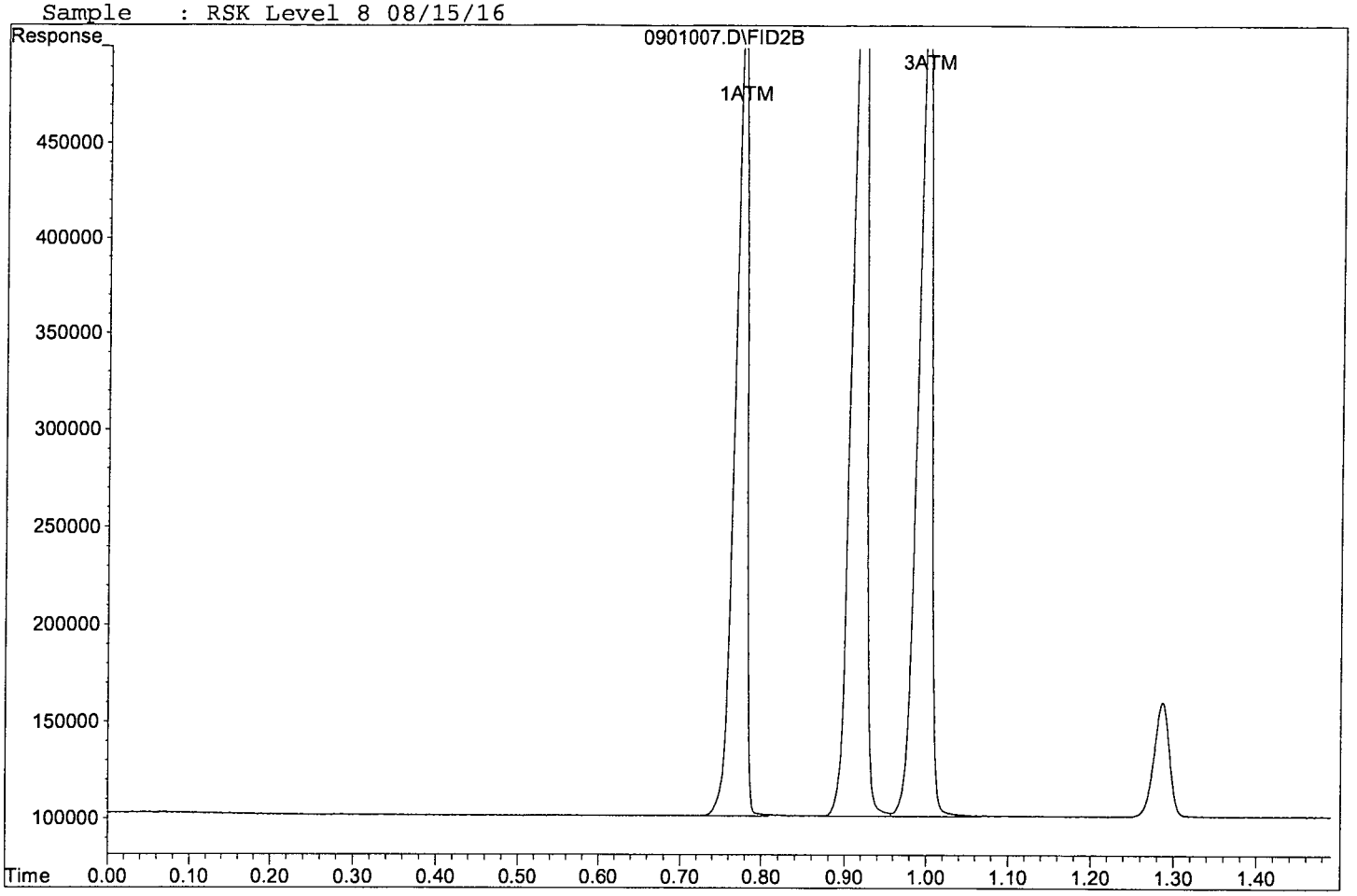
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.77	421052	375.455 ppb
2) ATM Ethane	0.92	559640	689.720 ppb
3) ATM Ethene	1.00	439383	684.403 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901007.D
Sample : RSK Level 8 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901008.D Vial: 9
Acq On : 1 Sep 16 11:57 Operator: lac
Sample : RSK Level 9 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

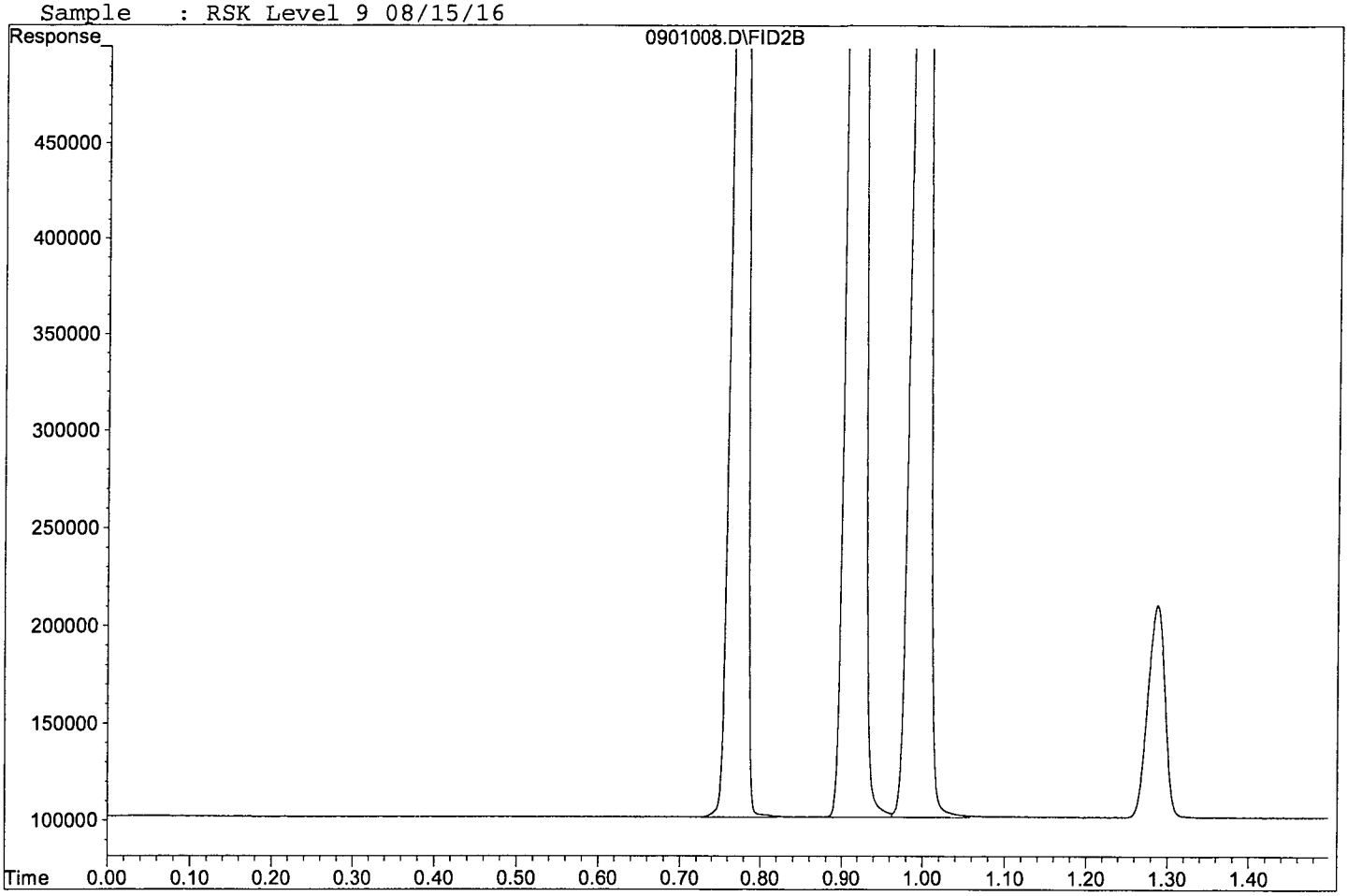
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.78	723824	654.982	ppb
2) ATM Ethane	0.92	989344	1229.268	ppb
3) ATM Ethene	1.00	783615	1235.897	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901008.D
Sample : RSK Level 9 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901009.D Vial: 10
Acq On : 1 Sep 16 11:59 Operator: lac
Sample : RSK Level 10 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

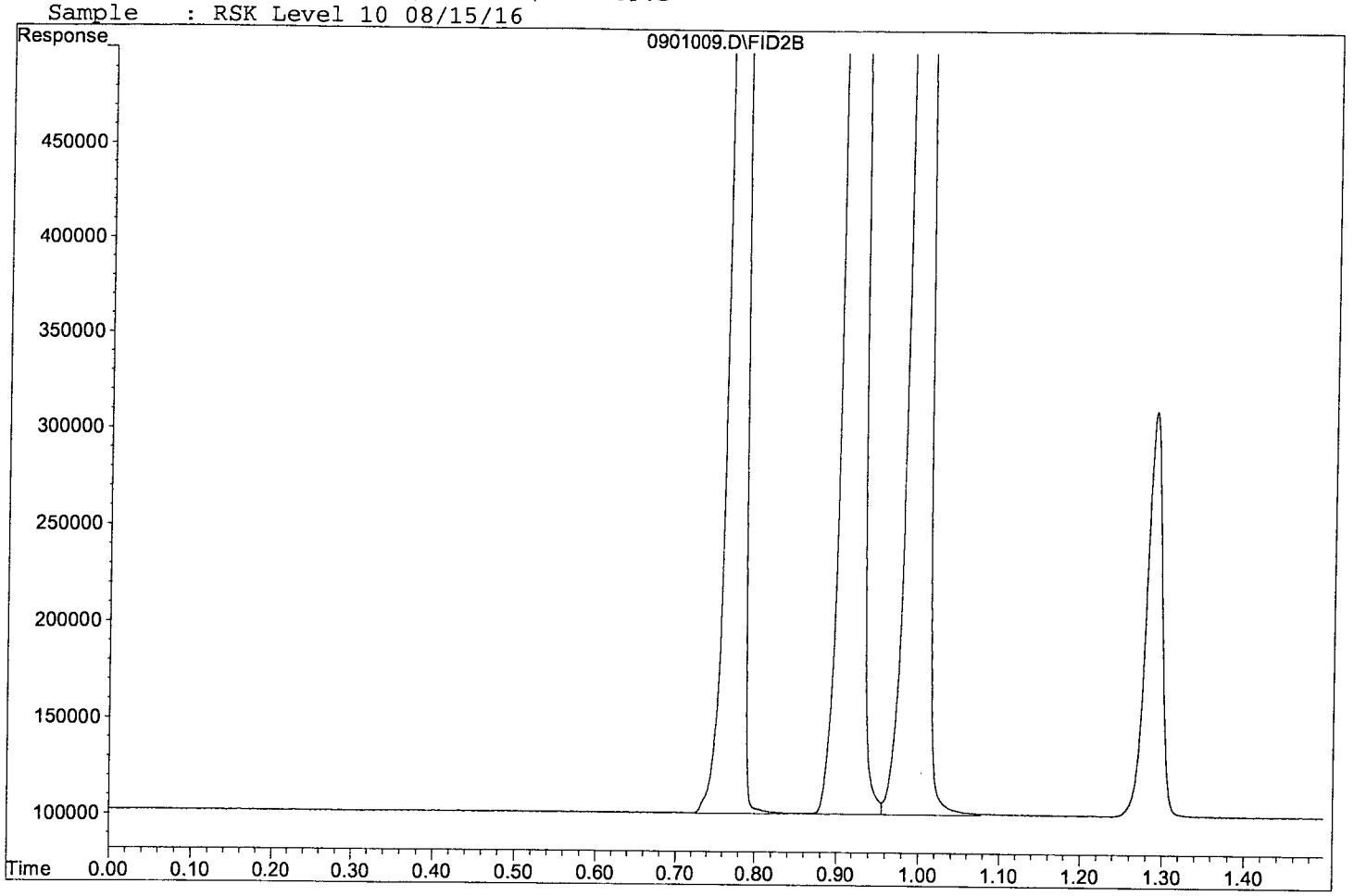
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.78	1454283	1329.358	ppb
2) ATM Ethane	0.92	1994598	2491.490	ppb
3) ATM Ethene	1.00	1562244	2483.337	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901009.D
Sample : RSK Level 10 08/15/16



Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 1 Sep 16 13:11
Instrument: 7890
Initial Cal. Date: 09/01/16
Data File: 0901018.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	2635	1090	59	ATML	19
2	ATML	Ethane	1147	964	16	ATML	11
3	ATML	Ethene	1063	853	20	ATML	20
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
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30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			31.7		

Quantitation Report (Not Reviewed)

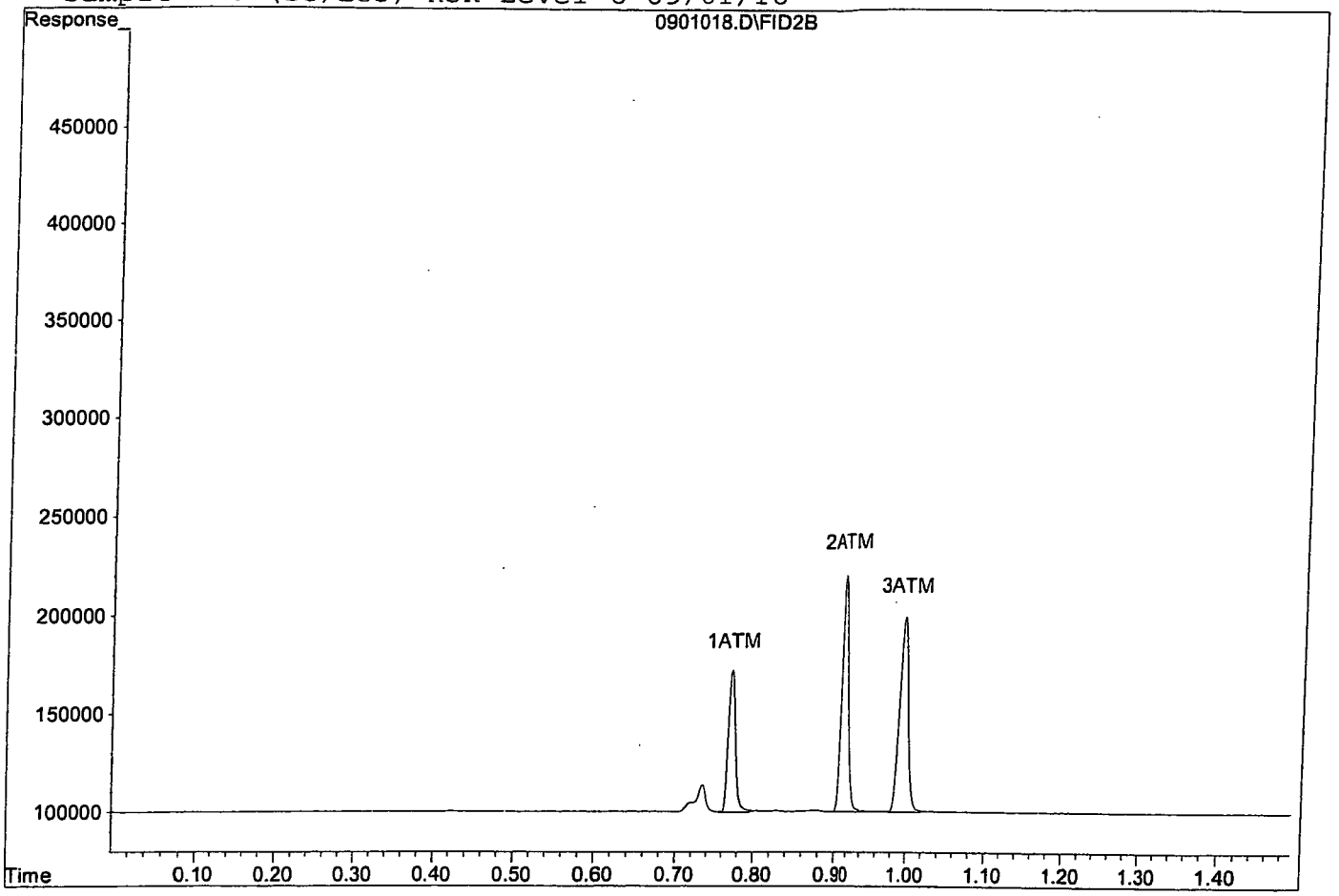
Data File : G:\ROCKY\DATA\160901R\0901018.D Vial: 19
Acq On : 1 Sep 16 13:11 Operator: lac
Sample : (SS/LCS) RSK Level 6 09/01/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 1 13:16 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Thu Sep 01 14:40:19 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.77	72750	53.894 ppb
2) ATM Ethane	0.91	120545	138.382 ppb
3) ATM Ethene	0.99	99349	139.636 ppb

Data File: G:\ROCKY\DATA\160901R\0901018.D
Sample : (SS/LCS) RSK Level 6 09/01/16



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/19/16
Instrument: 7890
Initial Cal. Date: 09/01/16
Data File: 1119000.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	2635	1078	59	ATML	4.6
2	ATML	Ethane	1147	748	35	ATML	8.3
3	ATML	Ethene	1063	559	47	ATML	14
4							
5							
6							
7							
8							
9							
10							
11							
12							
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31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			47.0		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1119000.D Vial: 1
Acq On : 19 Nov 16 11:51 Operator: lac
Sample : 161119A LCS/CCV RSK-Level 8 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Nov 25 12:47 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Nov 23 12:26:39 2016
Response via : Multiple Level Calibration

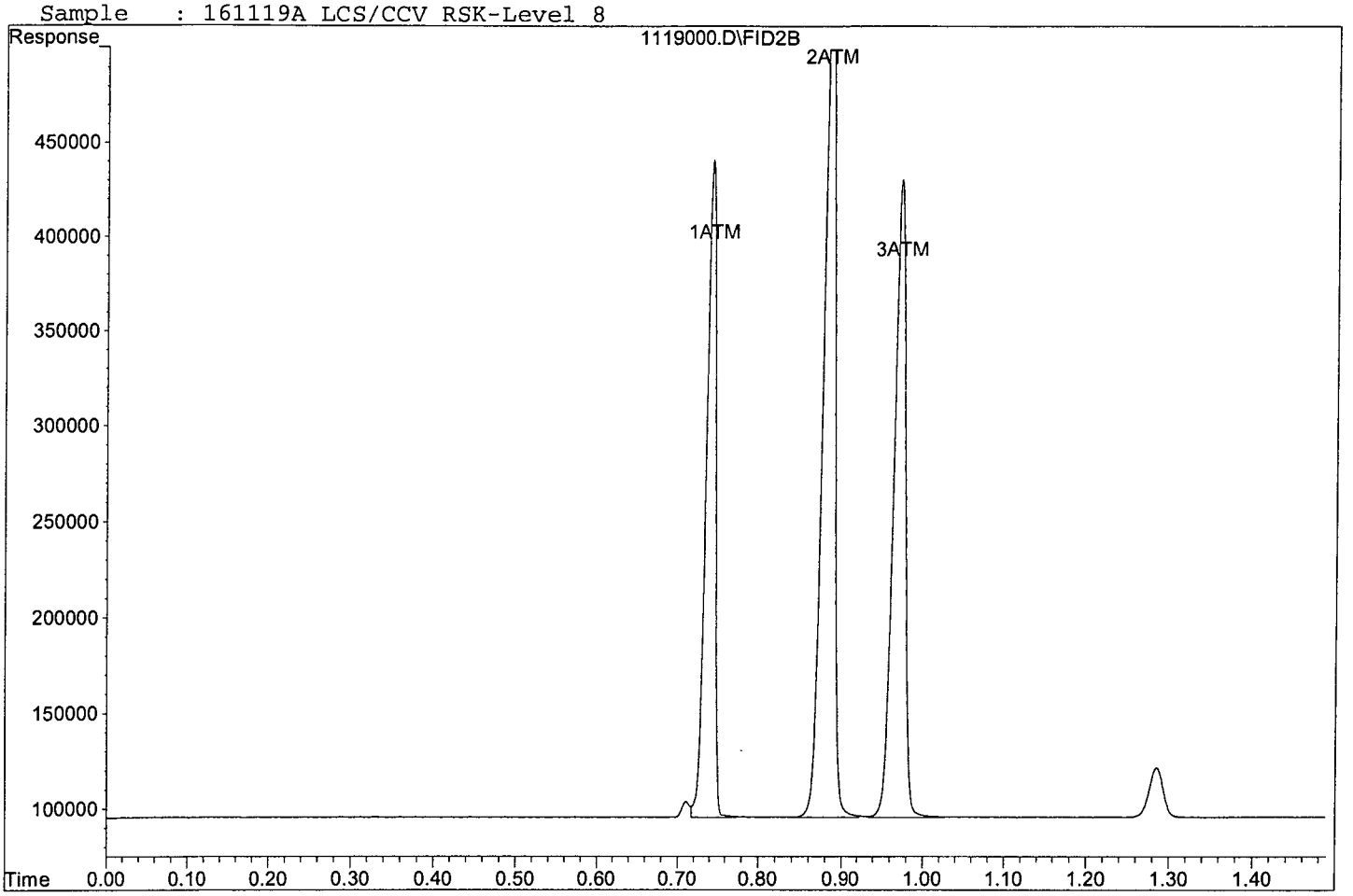
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.74	345484	305.689	ppb
2) ATM Ethane	0.88	448684	550.401	ppb
3) ATM Ethene	0.97	334800	516.852	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1119000.D
Sample : 161119A LCS/CCV RSK-Level 8



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/19/16
Instrument: 7890
Initial Cal. Date: 09/01/16
Data File: 1119025.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	2635	1137	57	ATML	0.83
2	ATML	Ethane	1147	812	29	ATML	0.24
3	ATML	Ethene	1063	628	41	ATML	2.6
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
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31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			42.3		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1119025.D Vial: 18
Acq On : 19 Nov 16 13:55 Operator: lac
Sample : 161119B LCS/CCV RSK Level 8 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Nov 25 12:47 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Nov 23 12:26:39 2016
Response via : Multiple Level Calibration

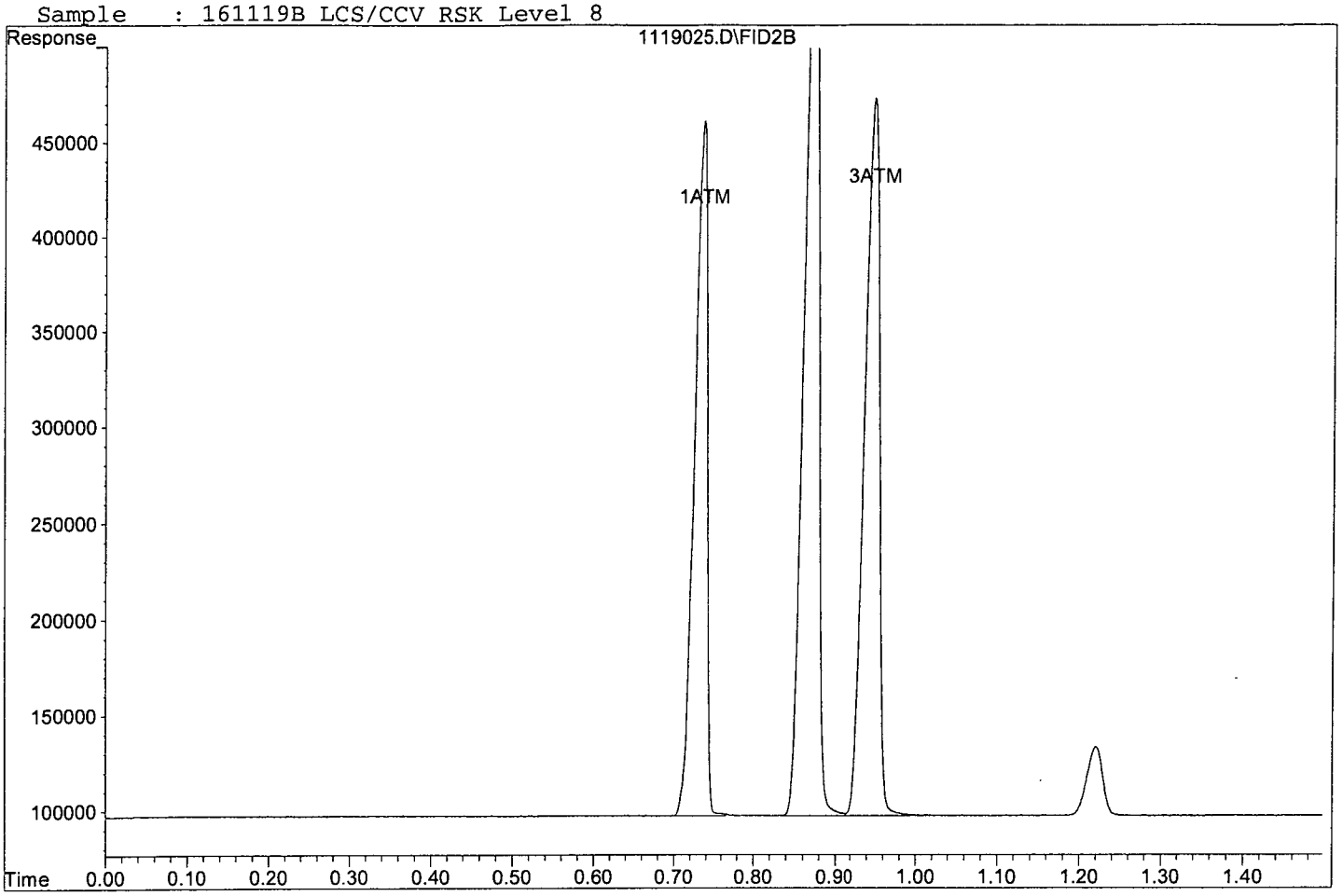
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.74	364304	323.064 ppb
2) ATM Ethane	0.87	487036	598.557 ppb
3) ATM Ethene	0.95	376482	583.630 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1119025.D
Sample : 161119B LCS/CCV RSK Level 8



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/19/16
Instrument: 7890
Initial Cal. Date: 09/01/16
Data File: 1119031.D

		Compound	MEAN	CCRF	%D	%Drift	
1	ATML	Methane	2635	987	63	ATML	13
2	ATML	Ethane	1147	653	43	ATML	20
3	ATML	Ethene	1063	488	54	ATML	25
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
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27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			53.3		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1119031.D Vial: 24
Acq On : 19 Nov 16 14:11 Operator: lac
Sample : Ending CCV RSK Level 8 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Nov 25 12:47 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Nov 23 12:26:39 2016
Response via : Multiple Level Calibration

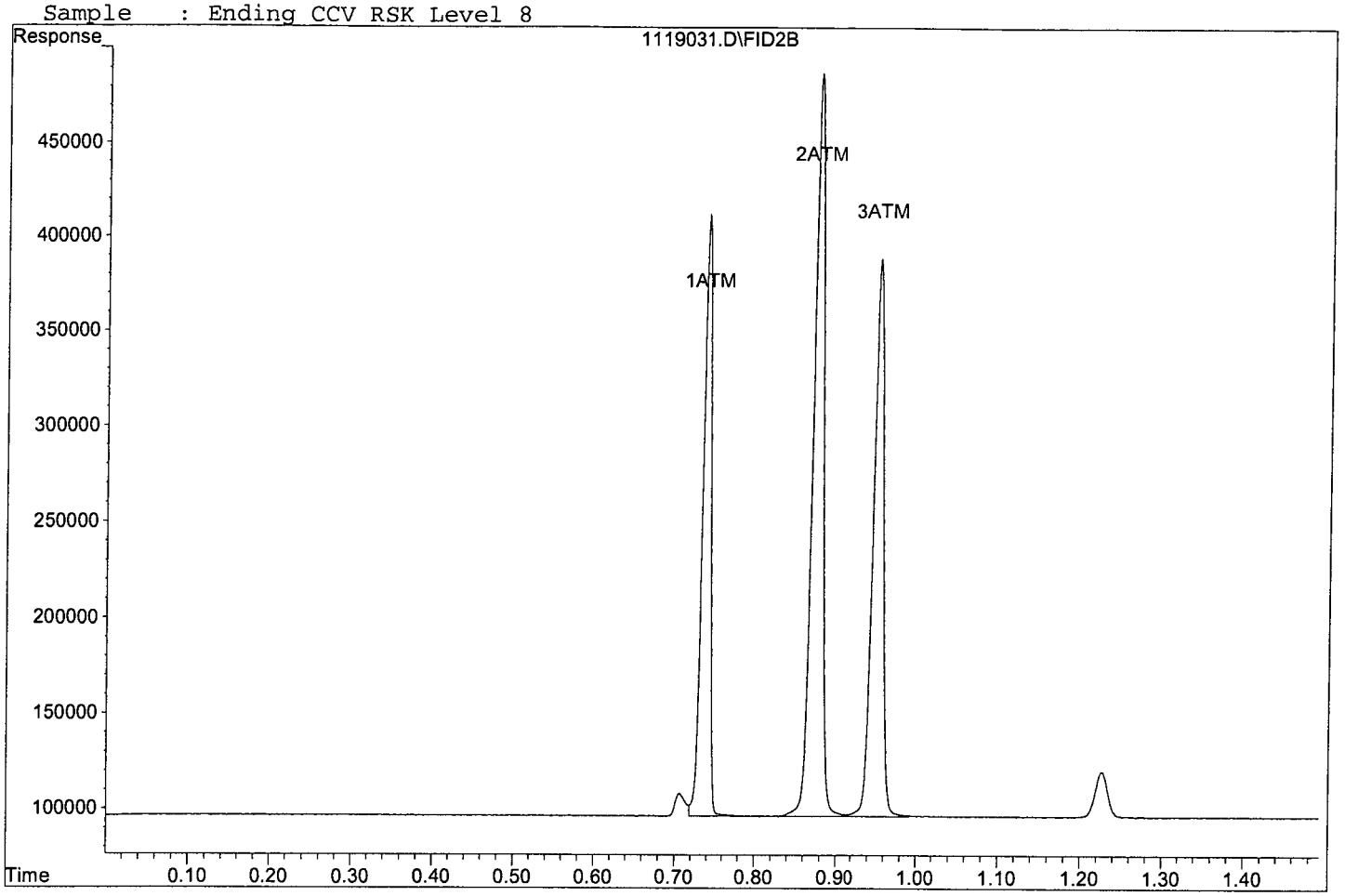
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.74	316096	278.557 ppb
2) ATM Ethane	0.88	391526	478.632 ppb
3) ATM Ethene	0.95	292531	449.132 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1119031.D
Sample : Ending CCV RSK Level 8



ORGANICS
Raw Data

APPL, INC.

Method Blank
METHANE

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161119W-45866 - 213991**
Batch ID: #RSKME-161119A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	METHANE	1.00 U	5.0	1.00	0.25	ug/L	11/19/16	11/19/16

Quant Method: RSK0901.M
Run #: 1119001
Instrument: Rocky
Sequence: 160901
Initials: CMO

GC SC-Blank-REG MDLs-DOD
Printed: 11/25/16 1:27:18 PM

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1119001.D Vial: 1
Acq On : 19 Nov 16 12:16 Operator: lac
Sample : 161119A BLK-RSK Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Nov 25 12:47 2016 Quant Results File: RSK0901.RES

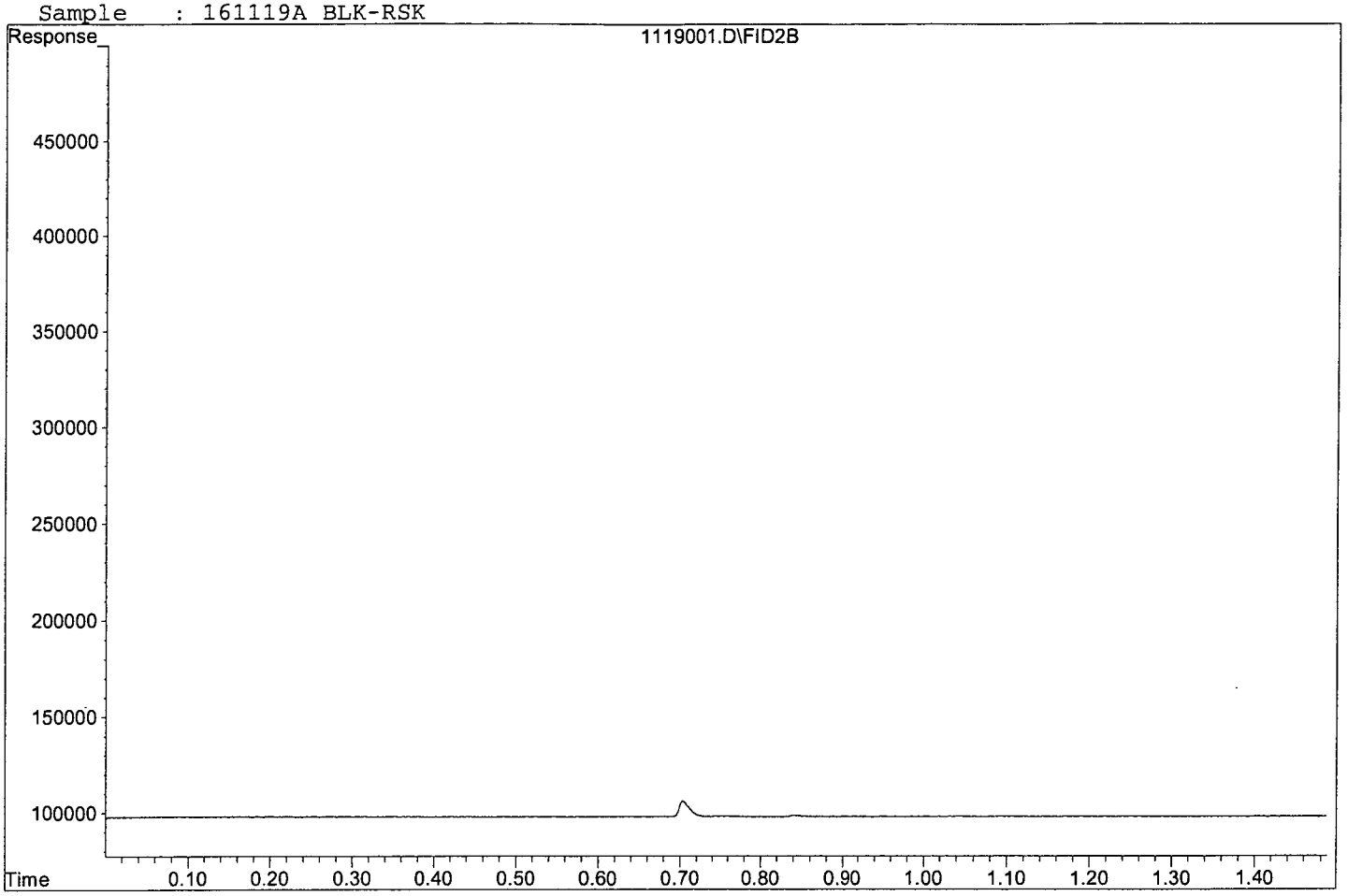
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Nov 23 12:26:39 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.75	449	N.D.	ppb
2) ATM Ethane	0.88	327	N.D.	ppb
3) ATM Ethene	0.95	300	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1119001.D
Sample : 161119A BLK-RSK



Laboratory Control Spike Recovery
METHANE

APPL ID: **161119W-45866 LCS - 213991**
Batch ID: #RSKME-161119A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
METHANE	320	306	95.5	72-125

Comments: _____

Primary	SPK
Quant Method :	RSK0901.M
Extraction Date :	11/19/16
Analysis Date :	11/19/16
Instrument :	Rocky
Run :	1119000
Initials :	CMO

Printed: 11/25/16 1:27:09 PM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1119000.D Vial: 1
Acq On : 19 Nov 16 11:51 Operator: lac
Sample : 161119A LCS/CCV RSK-Level 8 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Nov 25 12:47 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Nov 23 12:26:39 2016
Response via : Multiple Level Calibration

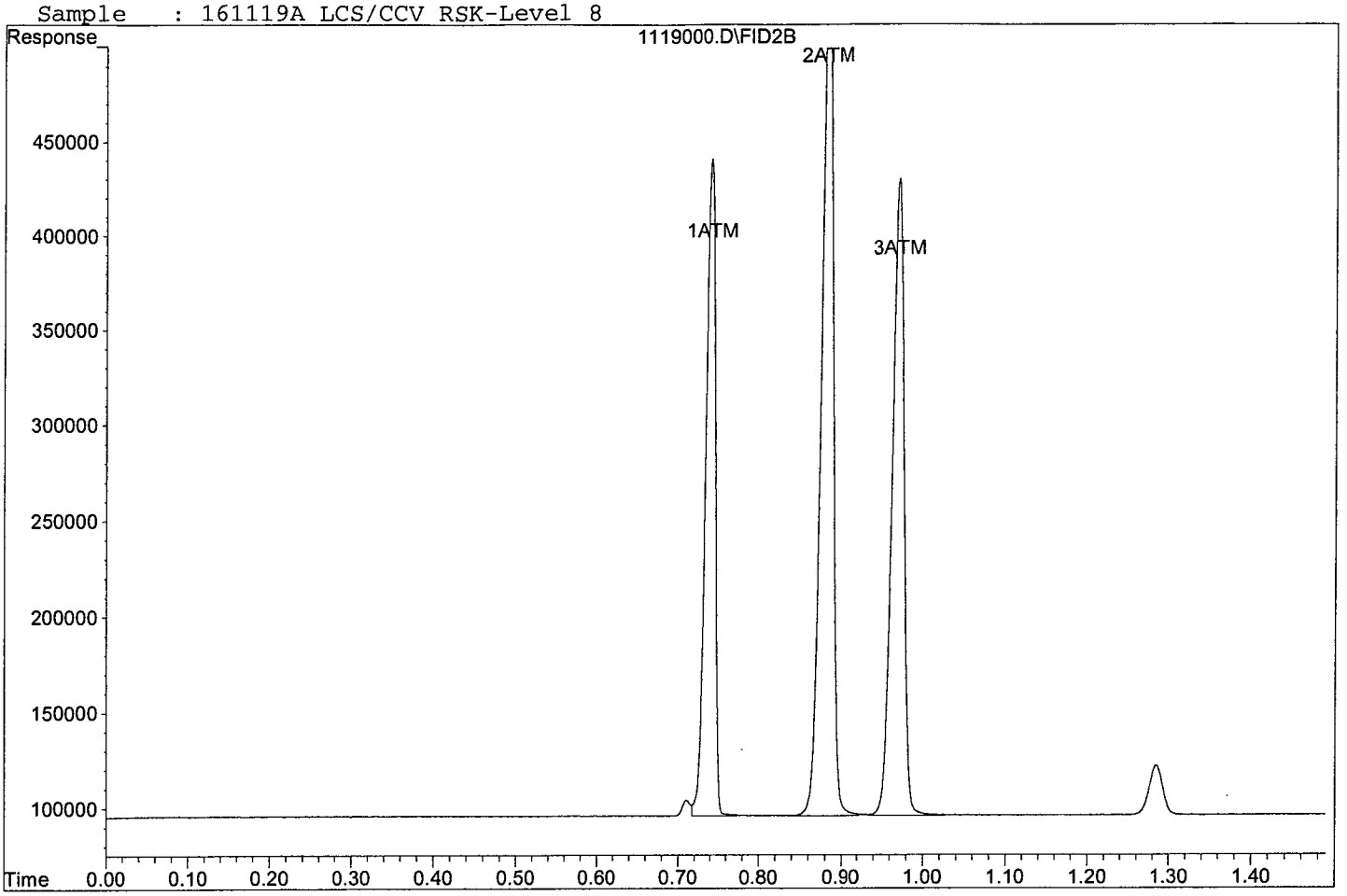
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.74	345484	305.689 ppb
2) ATM Ethane	0.88	448684	550.401 ppb
3) ATM Ethene	0.97	334800	516.852 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1119000.D
Sample : 161119A LCS/CCV RSK-Level 8



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1119026.D Vial: 19
Acq On : 19 Nov 16 13:58 Operator: lac
Sample : 161119B BLK-RSK Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Nov 25 12:47 2016 Quant Results File: RSK0901.RES

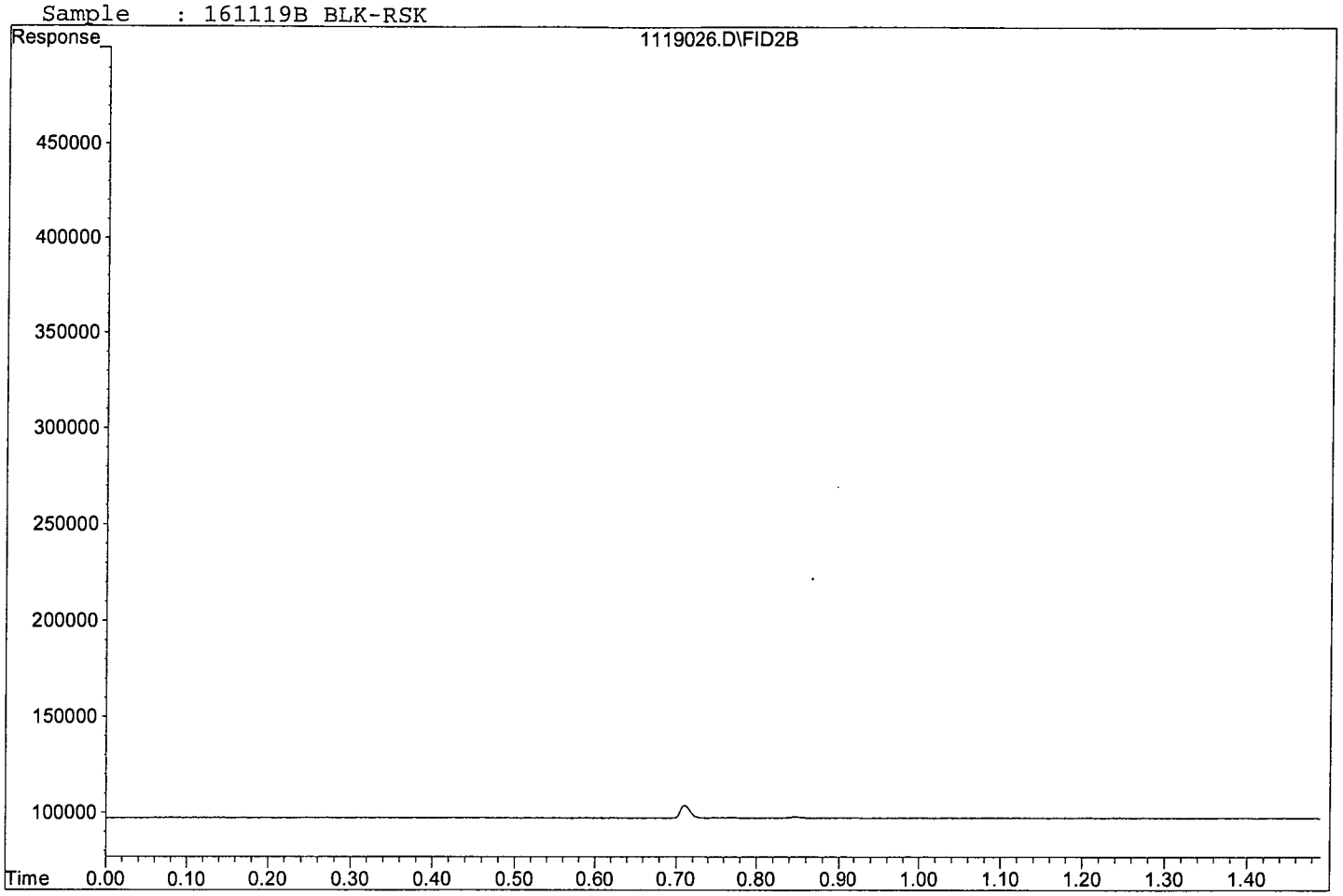
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Nov 23 12:26:39 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.74	336	N.D.	ppb
2) ATM Ethane	0.88	350	N.D.	ppb
3) ATM Ethene	0.95	257	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1119026.D
Sample : 161119B BLK-RSK



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1119025.D Vial: 18
Acq On : 19 Nov 16 13:55 Operator: lac
Sample : 161119B LCS/CCV RSK Level 8 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Nov 25 12:47 2016 Quant Results File: RSK0901.RES

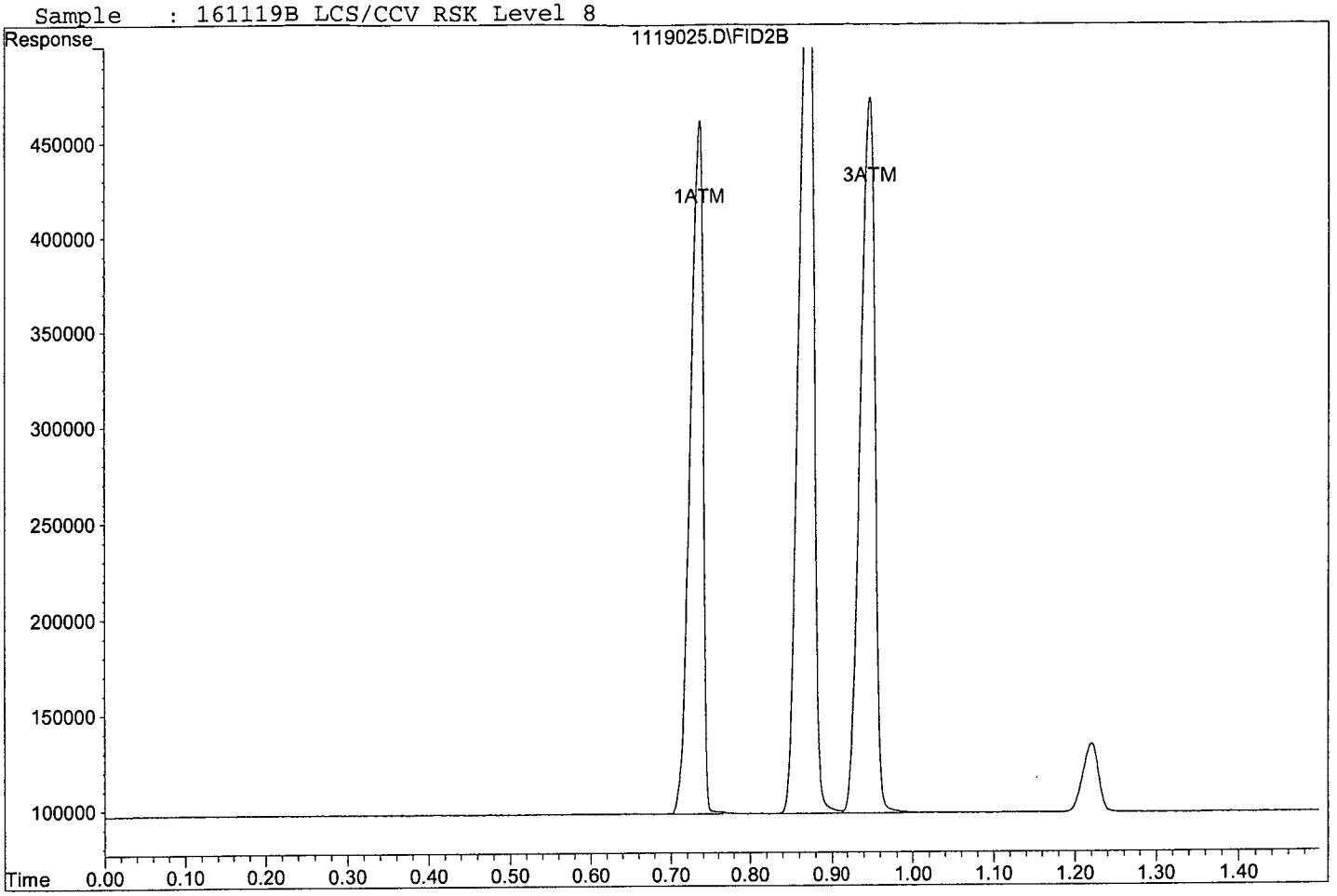
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Nov 23 12:26:39 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.74	364304	323.064 ppb
2) ATM Ethane	0.87	487036	598.557 ppb
3) ATM Ethene	0.95	376482	583.630 ppb

Target Compounds

Data File: G:\ROCKY\DATA\160901R\1119025.D
Sample : 161119B LCS/CCV RSK Level 8



Primary Source Stock Standard 10,000ppmV **Manufacturer Exp date 7-8-2017** CM 8/15/16
RSK Gas Mix (Scott Specialty Gas) Cat.# 23452, Lot # 164PLU4SPC05L-34436
1% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

Intermediate Calibration Stock Standard 100ppmV **Expires 8/15/17** CM 8/15/16
Prepared in a 1 L Tedlar bag. Add 990mL Nitrogen and 10mL of 164PLU4SPC05L-34436 standard.

RSK Calibration Curve **Vial expiration date 9/28/16** CM 9/1/16

Analye	Conc Std 1 (ug/L)	Conc Std 2 (ug/L)	Conc Std 3 (ug/L)	Conc Std 4 (ug/L)	Conc Std 5 (ug/L)	Conc Std 6 (ug/L)	Conc Std 7 (ug/L)	Conc Std 8 (ug/L)	Conc Std 9 (ug/L)	Conc Std 10 (ug/L)
Methane (MW 16.	0.90	1.80	5.10	13.33	26.70	66.75	106.80	320.4	667.5	1335.0
Ethane (MW 30.0	1.70	3.40	9.50	25.00	50.00	125.00	200.00	600.0	1250.0	2500.0
Ethene (MW 28.0	1.60	3.20	8.90	23.30	46.60	116.50	186.40	599.2	1248.0	2496.0
Stock Source	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Primary Source Std #164PLU4S PC05L-34436	Primary Source Std #164PLU4S PC05L-34436	Primary Source Std #164PLU4SP C05L-34436	Primary Source Std #164PLU4S PC05L-34436
Stock Conc (ppr	100 ppmV	100 ppmV	100 ppmV	100 ppmV	100 ppmV	100 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV
Stock Aliquot (m	0.135 mL	0.270 mL	0.760 mL	2.0 mL	4.0 mL	10.0 mL	0.160 mL	0.480 mL	1.00 mL	2.00 mL
Final Volume P&T W	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL

Second Source Stock Standard 10,000ppmV **Manufacturer Exp Date 6-19-18** CM 8/15/16
RSK Gas Mix (Scott Specialty Gas) Cat.# 0104E40028`4, Lot # 170PLU5SPC06L-35410
1% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

Intermediate Second Source Standard 100ppmV **Expires 8/15/17** CM 8/15/16
Prepared in a 1 L Tedlar bag. Add 990mL Nitrogen and 10mL of lot# 170PLU5SPC06L-35410 standard.

Second Source / LCS - Level 6 **Expires 10/1/16** CM 9/1/16
10.0mL of Intermediate SS stock 8/15/16 into 10mL P&T water
final conc:66.7ppb Methane, 125.0ppb Ethane, and 116.5 ppb Ethene

CCV/LCS - Level 6 **Expires 10/1/16** CM 9/2/16
10.0mL of Intermediate calib stock 8/15/16 into 10mL P&T water
final conc:66.7ppb Methane, 125.0ppb Ethane, and 116.5 ppb Ethene

CCV/LCS - Level 7 **Expires 10/1/16** CM 9/2/16
0.160mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:106.8ppb Methane, 200 ppb Ethane, and 186.4 ppb Ethene

CCV/LCS - Level 8 **Expires 10/1/16** CM 9/2/16
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

AZ42293W06/W07 MS/MSD CM 9/2/16
4.0mL of Intermediate calib stock 8/15/16 into 10mL P&T water
final conc:26.7ppb Methane, 50.0ppb Ethane, and 46.6 ppb Ethene

CCV/LCS - Level 9 **Expires 10/3/16** CM 9/3/16
1.0mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:667.5ppb Methane,1250 ppb Ethane, and 1248 ppb Ethene

AZ41575w06 / W07 MS/MSD CM 9/3/16
4.0mL of Intermediate calib stock 8/15/16 into 10mL P&T water
final conc:26.7ppb Methane, 50.0ppb Ethane, and 46.6 ppb Ethene

CCV/LCS - Level 8 **Expires 10/6/16** CM 9/6/16
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

AZ42041w04 / W05 MS/MSD CM 9/6/16
4.0mL of Intermediate calib stock 8/15/16 into 10mL P&T water
final conc:26.7ppb Methane, 50.0ppb Ethane, and 46.6 ppb Ethene

CCV/LCS - Level 8 **Expires 10/8/16** CM 9/8/16
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

CCV/LCS - Level 9 **Expires 10/11/16** CM 9/11/16
1.0mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:667.5ppb Methane,1250 ppb Ethane, and 1248 ppb Ethene

CCV/LCS - Level 8 **Expires 10/13/16** CM 9/13/16
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

AZ42328W06 / W07 MS/MSD CM 9/13/16
4.0mL of Intermediate calib stock 8/15/16 into 10mL P&T water
final conc:26.7ppb Methane, 50.0ppb Ethane, and 46.6 ppb Ethene

CCV/LCS - Level 8 **Expires 10/15/16** CM 9/15/16
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

CCV/LCS - Level 7 **Expires 11/7/16** CM 10/7/16
0.160mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:106.8ppb Methane, 200 ppb Ethane, and 186.4 ppb Ethene

CCV/LCS - Level 8 **Expires 11/7/16** CM 10/7/16
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

CCV/LCS - Level 8 **Expires 11/20/16** CM 10/20/16
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

CCV/LCS - Level 8 **Expires 11/22/16** CM 10/22/16
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water

final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

CCV/LCS - Level 8 **Expires 11/25/16** **CM 10/25/16**
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

AZ44579 W10 and W11 MS/MSD **Expires 11/25/16** **CM 10/25/16**
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL sample AZ44579 water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

CCV/LCS - Level 8 **Expires 11/29/16** **CM 10/29/16**
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

AZ44621 W9 and W10 MS/MSD **Expires 11/29/16** **CM 10/29/16**
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL sample AZ44621 water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

CCV/LCS - Level 8 **Expires 11/30/16** **CM 10/30/16**
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

CCV/LCS - Level 8 **Expires 12/1/16** **CM 11/1/16**
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

CCV/LCS - Level 8 **Expires 12/4/16** **CM 11/4/16**
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

AZ45866W08/W09 MS/MSD **CM 11/19/16**
4.0mL of Intermediate calib stock 8/15/16 into 10mL P&T water
final conc:26.7ppb Methane, 50.0ppb Ethane, and 46.6 ppb Ethene

CCV/LCS - Level 8 **Expires 12/19/16** **CM 11/19/16**
0.480mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water
final conc:320.4ppb Methane, 600 ppb Ethane, and 599.2 ppb Ethene

Injection Log

Directory: G:\ROCKY\DATA\160901R\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0901000.D	1	RSK Level 1 / LOD Chk 08/15/16	Methane 0.9, Ethane, 1.7 Etl	1 Sep 16 11:38
2	2	0901001.D	1	RSK Level 2 08/15/16		1 Sep 16 11:41
3	3	0901002.D	1	RSK Level 3 / LOQ Chk 08/15/16	Methane 5.1, Ethane, 9.5 Etl	1 Sep 16 11:44
4	4	0901003.D	1	RSK Level 4 08/15/16		1 Sep 16 11:46
5	5	0901004.D	1	RSK Level 5 08/15/16		1 Sep 16 11:48
6	6	0901005.D	1	RSK Level 6 08/15/16		1 Sep 16 11:50
7	7	0901006.D	1	RSK Level 7 08/15/16		1 Sep 16 11:52
8	8	0901007.D	1	RSK Level 8 08/15/16		1 Sep 16 11:55
9	9	0901008.D	1	RSK Level 9 08/15/16		1 Sep 16 11:57
10	10	0901009.D	1	RSK Level 10 08/15/16		1 Sep 16 11:59
11	19	0901018.D	1	(SS/LCS) RSK Level 6 09/01/16		1 Sep 16 13:11
12	1	1119000.D	1	161119A LCS/CCV RSK-Level 8		19 Nov 16 11:51
13	1	1119001.D	1	161119A BLK-RSK		19 Nov 16 12:16
14	7	1119014.D	1	AZ45988W05		19 Nov 16 12:48
15	8	1119015.D	1	AZ45990W03		19 Nov 16 12:51
16	10	1119017.D	1	AZ45992W05		19 Nov 16 12:55
17	11	1119018.D	1	AZ45993W05		19 Nov 16 12:57
18	13	1119020.D	1	AZ45994W05		19 Nov 16 13:01
19	14	1119021.D	1	AZ45997W05		19 Nov 16 13:03
20	18	1119025.D	1	161119B LCS/CCV RSK Level 8		19 Nov 16 13:55
21	19	1119026.D	1	161119B BLK-RSK		19 Nov 16 13:58
22	20	1119027.D	50	AZ45991W05 DF50		19 Nov 16 14:00
23	24	1119031.D	1	Ending CCV RSK Level 8		19 Nov 16 14:11

METALS



METALS

QC Summary

APPL, INC.

METALS BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
6010C	CALCIUM (CA)	29.0 J	1000	75.0	27.5	ug/L	11/21/16	11/28/16	#61CDO-161121A-AZ45988
6010C	MAGNESIUM (MG)	30.0 U	500	30.0	12.9	ug/L	11/21/16	11/28/16	#61CDO-161121A-AZ45988
6010C	MANGANESE (MN)	4.00 U	10.0	4.00	1.23	ug/L	11/21/16	11/28/16	#61CDO-161121A-AZ45988
6010C	POTASSIUM (K)	500.0 U	3000	500.0	220.0	ug/L	11/21/16	11/28/16	#61CDO-161121A-AZ45988
6010C	SODIUM (NA)	500.0 U	5000	500.0	111.1	ug/L	11/21/16	11/28/16	#61CDO-161121A-AZ45988

J = Estimated value.

Metals SC-Blank-REG MDLs
Printed: 11/29/16 1:31:25 PM

Laboratory Control Spike Recovery

METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 6010C	CALCIUM (CA)	25000	26000	104	87-113	11/21/16	11/28/16	#61CDO-161121A-AZ45988
EPA 6010C	MAGNESIUM (MG)	25000	25500	102	85-113	11/21/16	11/28/16	#61CDO-161121A-AZ45988
EPA 6010C	MANGANESE (MN)	250	277	111	90-114	11/21/16	11/28/16	#61CDO-161121A-AZ45988
EPA 6010C	POTASSIUM (K)	5000	5100	102	86-114	11/21/16	11/28/16	#61CDO-161121A-AZ45988
EPA 6010C	SODIUM (NA)	25000	25700	103	87-115	11/21/16	11/28/16	#61CDO-161121A-AZ45988

Comments: _____

METALS

Sample Data

APPL, INC.

Metals Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH118
Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515
APPL ID: AZ45988

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	CALCIUM (CA)	115000	20000	1500.0	550.0	ug/L	20	11/21/16	11/28/16
6010C/3010A	MAGNESIUM (MG)	220000	10000	600.0	258.0	ug/L	20	11/21/16	11/28/16
6010C/3010A	MANGANESE (MN)	4.00U	10.0	4.00	1.23	ug/L	1	11/21/16	11/28/16
6010C/3010A	POTASSIUM (K)	7640	3000	500.0	220.0	ug/L	1	11/21/16	11/28/16
6010C/3010A	SODIUM (NA)	350000	100000	10000.0	2220.0	ug/L	20	11/21/16	11/28/16

Printed: 11/29/16 1:31:21 PM
APPL-F1-SC-NoMC-REG MDLs

Sequence No.: 19
Sample ID: AZ45988W17
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 50
Date Collected: 11/28/16 1:25:41 PM
Data Type: Reprocessed on 11/29/16 10:12:03 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ45988W17

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	979833.8	90.70	%	1.572				1.73%
Y 371.029 Radial	918690.8	90.25	%	1.636				1.81%
Ag 338.289†	8.9	0.130	ug/L	0.5103	0.130	ug/L	0.5103	391.88%
Al 308.215†	4.1	-32.49	ug/L	22.197	-32.49	ug/L	22.197	68.32%
As 188.979†	4.6	4.115	ug/L	1.7403	4.115	ug/L	1.7403	42.30%
B†	1446.7	51.46	ug/L	1.190	51.46	ug/L	1.190	2.31%
Ba 233.527†	4755.2	71.84	ug/L	1.449	71.84	ug/L	1.449	2.02%
Be 313.107†	-13.5	-0.087	ug/L	0.0276	-0.087	ug/L	0.0276	31.82%
Ca 315.887†	312316.1	116500	ug/L	2359.1	116500	ug/L	2359.1	2.03%
Cd 214.440†	-140.4	-2.202	ug/L	0.3320	-2.202	ug/L	0.3320	15.08%
Co 228.616†	35.8	0.258	ug/L	0.0594	0.258	ug/L	0.0594	23.02%
Cr 267.716†	702.8	11.94	ug/L	0.243	11.94	ug/L	0.243	2.04%
Cu 327.393†	-88.7	-8.856	ug/L	1.2274	-8.856	ug/L	1.2274	13.86%
Fe 273.955†	192.4	-31.59	ug/L	3.355	-31.59	ug/L	3.355	10.62%
K 766.490†	16801.6	7642	ug/L	221.4	7642	ug/L	221.4	2.90%
Mg 285.213†	922997.8	202500	ug/L	12311.2	202500	ug/L	12311.2	6.08%
Mn 257.610†	-1.9	-8.701	ug/L	0.1156	-8.701	ug/L	0.1156	1.33%
Mo 202.031†	13.3	-3.810	ug/L	0.3242	-3.810	ug/L	0.3242	8.51%
Na 589.592†	2167605.9	342900	ug/L	21491.3	342900	ug/L	21491.3	6.27%
Ni 231.604†	428.6	19.17	ug/L	0.497	19.17	ug/L	0.497	2.59%
P 213.617†	154.3	105.3	ug/L	4.52	105.3	ug/L	4.52	4.29%
Pb 220.353†	33.2	4.430	ug/L	2.8708	4.430	ug/L	2.8708	64.80%
Sb 206.836†	3.0	2.352	ug/L	1.7827	2.352	ug/L	1.7827	75.81%
Se 196.026†	-11.9	-11.91	ug/L	4.291	-11.91	ug/L	4.291	36.04%
Sn 189.927†	-55.6	-15.05	ug/L	1.810	-15.05	ug/L	1.810	12.02%
Sr 421.552†	571173.2	1555	ug/L	98.1	1555	ug/L	98.1	6.31%
Ti 337.279†	-5.2	-2.881	ug/L	1.3873	-2.881	ug/L	1.3873	48.15%
Tl 190.801†	0.3	0.191	ug/L	3.4799	0.191	ug/L	3.4799	>999.9%
V 292.402†	927.6	9.471	ug/L	0.5323	9.471	ug/L	0.5323	5.62%
Zn 206.200†	-38.6	-5.505	ug/L	0.7211	-5.505	ug/L	0.7211	13.10%

Sequence No.: 14
Sample ID: AZ45988W17-1/20
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution: 20X

Autosampler Location: 45
Date Collected: 11/28/16 1:03:45 PM
Data Type: Reprocessed on 11/29/16 10:11:57 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ45988W17-1/20

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1069755.5	99.02	%	0.621				0.63%
Y 371.029 Radial	1008268.3	99.05	%	0.657				0.66%
Ag 338.289†	-10.7	-0.157	ug/L	0.1985	-3.141	ug/L	3.9699	126.40%
Al 308.215†	-7.2	-21.79	ug/L	10.316	-435.8	ug/L	206.31	47.34%
As 188.979†	-1.1	-1.061	ug/L	4.2235	-21.22	ug/L	84.471	398.07%
B†	119.1	4.238	ug/L	0.4436	84.76	ug/L	8.871	10.47%
Ba 233.527†	253.5	3.832	ug/L	0.1447	76.64	ug/L	2.893	3.78%
Be 313.107†	-1.3	-0.008	ug/L	0.0243	-0.164	ug/L	0.4865	296.56%
Ca 315.887†	15450.7	5761	ug/L	210.6	115200	ug/L	4213.0	3.66%
Cd 214.440†	-17.8	-0.263	ug/L	0.0420	-5.256	ug/L	0.8394	15.97%
Co 228.616†	3.6	0.082	ug/L	0.2427	1.632	ug/L	4.8535	297.44%
Cr 267.716†	49.9	0.876	ug/L	0.3084	17.51	ug/L	6.168	35.22%
Cu 327.393†	11.5	-0.244	ug/L	0.2996	-4.884	ug/L	5.9913	122.68%
Fe 273.955†	-31.0	-5.421	ug/L	0.9610	-108.4	ug/L	19.22	17.73%
K 766.490†	628.3	285.4	ug/L	43.98	5708	ug/L	879.6	15.41%
Mg 285.213†	50179.4	11010	ug/L	368.2	220200	ug/L	7363.6	3.34%
Mn 257.610†	0.7	-0.368	ug/L	0.3354	-7.352	ug/L	6.7078	91.24%
Mo 202.031†	5.4	0.384	ug/L	0.2136	7.673	ug/L	4.2728	55.68%
Na 589.592†	110760.5	17520	ug/L	618.2	350400	ug/L	12364.3	3.53%
Ni 231.604†	11.7	0.495	ug/L	0.2171	9.900	ug/L	4.3410	43.85%
P 213.617†	2.6	1.793	ug/L	3.1192	35.87	ug/L	62.383	173.93%
Pb 220.353†	-5.2	-1.317	ug/L	4.7003	-26.33	ug/L	94.006	356.98%
Sb 206.836†	-0.5	-0.364	ug/L	2.8906	-7.286	ug/L	57.8120	793.45%
Se 196.026†	3.8	3.826	ug/L	4.6325	76.52	ug/L	92.650	121.09%
Sn 189.927†	-10.0	-3.215	ug/L	1.8121	-64.31	ug/L	36.243	56.36%
Sr 421.552†	29151.0	79.34	ug/L	2.864	1587	ug/L	57.3	3.61%
Ti 337.279†	-2.3	-0.283	ug/L	0.2089	-5.660	ug/L	4.1780	73.82%
Tl 190.801†	3.4	2.520	ug/L	0.9454	50.39	ug/L	18.909	37.52%
V 292.402†	129.9	1.276	ug/L	0.2200	25.51	ug/L	4.400	17.25%
Zn 206.200†	-5.9	-0.649	ug/L	1.1807	-12.97	ug/L	23.613	182.04%

Metals Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH124
Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515
APPL ID: AZ45991

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	CALCIUM (CA)	12600	1000	75.0	27.5	ug/L	1	11/21/16	11/28/16
6010C/3010A	MAGNESIUM (MG)	24800	500	30.0	12.9	ug/L	1	11/21/16	11/28/16
6010C/3010A	MANGANESE (MN)	1950	10.0	4.00	1.23	ug/L	1	11/21/16	11/28/16
6010C/3010A	POTASSIUM (K)	2440 J	3000	500.0	220.0	ug/L	1	11/21/16	11/28/16
6010C/3010A	SODIUM (NA)	53600	25000	2500.0	556.0	ug/L	5	11/21/16	11/28/16

J = Estimated value.

Printed: 11/29/16 1:31:21 PM
APPL-F1-SC-NoMC-REG MDLs

Sequence No.: 20
Sample ID: AZ45991W17
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 51
Date Collected: 11/28/16 1:31:16 PM
Data Type: Reprocessed on 11/29/16 10:12:04 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ45991W17

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1072610.7	99.28	%	3.875				3.90%
Y 371.029 Radial	1011597.9	99.37	%	4.090				4.12%
Ag 338.289†	-35.8	-0.523	ug/L	0.2439	-0.523	ug/L	0.2439	46.59%
Al 308.215†	3.0	-1.375	ug/L	10.9787	-1.375	ug/L	10.9787	798.30%
As 188.979†	-2.1	-1.567	ug/L	5.0500	-1.567	ug/L	5.0500	322.18%
B†	2546.6	90.59	ug/L	3.563	90.59	ug/L	3.563	3.93%
Ba 233.527†	1478.2	22.11	ug/L	0.970	22.11	ug/L	0.970	4.39%
Be 313.107†	-2.0	-0.013	ug/L	0.0256	-0.013	ug/L	0.0256	204.02%
Ca 315.887†	33860.2	12630	ug/L	746.6	12630	ug/L	746.6	5.91%
Cd 214.440†	-101.6	-1.620	ug/L	0.2707	-1.620	ug/L	0.2707	16.71%
Co 228.616†	8.7	-0.002	ug/L	0.2513	-0.002	ug/L	0.2513	>999.9%
Cr 267.716†	121.4	1.070	ug/L	0.2720	1.070	ug/L	0.2720	25.42%
Cu 327.393†	157.6	1.313	ug/L	1.1891	1.313	ug/L	1.1891	90.57%
Fe 273.955†	27880.2	2437	ug/L	170.0	2437	ug/L	170.0	6.98%
K 766.490†	5347.6	2436	ug/L	190.4	2436	ug/L	190.4	7.82%
Mg 285.213†	113114.9	24820	ug/L	1491.3	24820	ug/L	1491.3	6.01%
Mn 257.610†	15159.1	1945	ug/L	72.2	1945	ug/L	72.2	3.71%
Mo 202.031†	2.2	-0.126	ug/L	0.6889	-0.126	ug/L	0.6889	547.62%
Na 589.592†	325632.3	51510	ug/L	3131.7	51510	ug/L	3131.7	6.08%
Ni 231.604†	-13.2	-1.598	ug/L	0.5215	-1.598	ug/L	0.5215	32.62%
P 213.617†	380.0	259.3	ug/L	7.35	259.3	ug/L	7.35	2.84%
Pb 220.353†	2.1	-0.076	ug/L	0.6052	-0.076	ug/L	0.6052	797.57%
Sb 206.836†	1.1	0.828	ug/L	1.4233	0.828	ug/L	1.4233	171.85%
Se 196.026†	-1.7	-1.713	ug/L	4.9864	-1.713	ug/L	4.9864	291.11%
Sn 189.927†	-21.4	-6.789	ug/L	0.3143	-6.789	ug/L	0.3143	4.63%
Sr 421.552†	36926.2	100.4	ug/L	5.87	100.4	ug/L	5.87	5.85%
Ti 337.279†	23.2	1.120	ug/L	0.9623	1.120	ug/L	0.9623	85.94%
Tl 190.801†	-4.4	-3.278	ug/L	0.3173	-3.278	ug/L	0.3173	9.68%
V 292.402†	135.8	1.244	ug/L	1.0184	1.244	ug/L	1.0184	81.88%
Zn 206.200†	-10.2	-15.25	ug/L	1.377	-15.25	ug/L	1.377	9.03%

Sequence No.: 26
Sample ID: AZ45991W17-1/5
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution: 5X

Autosampler Location: 88
Date Collected: 11/28/16 2:00:48 PM
Data Type: Reprocessed on 11/29/16 10:12:11 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ45991W17-1/5

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1064879.6	98.57	%	1.000				1.01%
Y 371.029 Radial	1003118.3	98.54	%	1.048				1.06%
Ag 338.289†	4.0	0.059	ug/L	0.4439	0.294	ug/L	2.2197	754.80%
Al 308.215†	-0.0	-2.096	ug/L	25.6144	-10.48	ug/L	128.072	>999.9%
As 188.979†	-5.4	-5.123	ug/L	0.9044	-25.62	ug/L	4.522	17.65%
B†	721.5	25.66	ug/L	0.365	128.3	ug/L	1.83	1.42%
Ba 233.527†	311.0	4.653	ug/L	0.3369	23.26	ug/L	1.685	7.24%
Be 313.107†	-4.6	-0.030	ug/L	0.0400	-0.148	ug/L	0.1999	134.99%
Ca 315.887†	7383.9	2753	ug/L	70.8	13770	ug/L	354.0	2.57%
Cd 214.440†	-16.9	-0.277	ug/L	0.1032	-1.383	ug/L	0.5160	37.32%
Co 228.616†	7.4	0.218	ug/L	0.2293	1.090	ug/L	1.1466	105.23%
Cr 267.716†	8.5	-0.093	ug/L	0.2060	-0.464	ug/L	1.0300	222.05%
Cu 327.393†	74.0	0.830	ug/L	0.8892	4.148	ug/L	4.4459	107.19%
Fe 273.955†	5747.1	502.3	ug/L	6.13	2512	ug/L	30.7	1.22%
K 766.490†	902.7	411.1	ug/L	57.88	2056	ug/L	289.4	14.08%
Mg 285.213†	23782.7	5218	ug/L	324.6	26090	ug/L	1623.0	6.22%
Mn 257.610†	3057.0	392.3	ug/L	8.93	1962	ug/L	44.6	2.28%
Mo 202.031†	0.7	-0.002	ug/L	0.2395	-0.011	ug/L	1.1976	>999.9%
Na 589.592†	67735.1	10720	ug/L	632.5	53580	ug/L	3162.4	5.90%
Ni 231.604†	-2.2	-0.306	ug/L	1.1171	-1.528	ug/L	5.5857	365.57%
P 213.617†	71.3	48.67	ug/L	0.424	243.3	ug/L	2.12	0.87%
Pb 220.353†	-17.2	-3.961	ug/L	4.2449	-19.81	ug/L	21.224	107.16%
Sb 206.836†	0.5	0.384	ug/L	2.1824	1.919	ug/L	10.9122	568.69%
Se 196.026†	-5.0	-4.970	ug/L	4.3590	-24.85	ug/L	21.795	87.71%
Sn 189.927†	-6.6	-2.122	ug/L	1.1428	-10.61	ug/L	5.714	53.85%
Sr 421.552†	7609.3	20.70	ug/L	1.063	103.5	ug/L	5.31	5.13%
Ti 337.279†	5.4	0.266	ug/L	0.3444	1.328	ug/L	1.7222	129.69%
Tl 190.801†	0.9	0.668	ug/L	1.6240	3.338	ug/L	8.1201	243.23%
V 292.402†	46.4	0.427	ug/L	0.0388	2.135	ug/L	0.1939	9.08%
Zn 206.200†	-5.6	-3.421	ug/L	1.0134	-17.11	ug/L	5.067	29.62%

Metals Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH125
Sample Collection Date: 11/15/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515
APPL ID: AZ45992

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	CALCIUM (CA)	25000	1000	75.0	27.5	ug/L	1	11/21/16	11/28/16
6010C/3010A	MAGNESIUM (MG)	33400	500	30.0	12.9	ug/L	1	11/21/16	11/28/16
6010C/3010A	MANGANESE (MN)	36.7	10.0	4.00	1.23	ug/L	1	11/21/16	11/28/16
6010C/3010A	POTASSIUM (K)	3700	3000	500.0	220.0	ug/L	1	11/21/16	11/28/16
6010C/3010A	SODIUM (NA)	104000	25000	2500.0	556.0	ug/L	5	11/21/16	11/28/16

Printed: 11/29/16 1:31:21 PM
APPL-F1-SC-NoMC-REG MDLs

Sequence No.: 21
Sample ID: AZ45992W17
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 52
Date Collected: 11/28/16 1:36:37 PM
Data Type: Reprocessed on 11/29/16 10:12:05 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ45992W17

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1036759.6	95.96	%	0.756				0.79%
Y 371.029 Radial	975515.4	95.83	%	0.825				0.86%
Ag 338.289†	51.4	0.752	ug/L	0.0984	0.752	ug/L	0.0984	13.09%
Al 308.215†	54.0	137.7	ug/L	11.50	137.7	ug/L	11.50	8.35%
As 188.979†	-3.9	-3.664	ug/L	2.1658	-3.664	ug/L	2.1658	59.11%
B†	5398.5	192.0	ug/L	0.72	192.0	ug/L	0.72	0.38%
Ba 233.527†	919.8	13.88	ug/L	0.302	13.88	ug/L	0.302	2.17%
Be 313.107†	-9.3	-0.060	ug/L	0.0219	-0.060	ug/L	0.0219	36.72%
Ca 315.887†	66909.3	24950	ug/L	518.7	24950	ug/L	518.7	2.08%
Cd 214.440†	-145.1	-2.133	ug/L	0.1409	-2.133	ug/L	0.1409	6.60%
Co 228.616†	69.6	2.443	ug/L	0.2218	2.443	ug/L	0.2218	9.08%
Cr 267.716†	170.5	2.944	ug/L	0.2235	2.944	ug/L	0.2235	7.59%
Cu 327.393†	89.2	-0.367	ug/L	1.0634	-0.367	ug/L	1.0634	289.40%
Fe 273.955†	1842.9	151.7	ug/L	1.97	151.7	ug/L	1.97	1.30%
K 766.490†	8118.8	3702	ug/L	104.5	3702	ug/L	104.5	2.82%
Mg 285.213†	152375.9	33420	ug/L	687.3	33420	ug/L	687.3	2.06%
Mn 257.610†	296.7	36.71	ug/L	0.325	36.71	ug/L	0.325	0.88%
Mo 202.031†	48.4	4.525	ug/L	0.4547	4.525	ug/L	0.4547	10.05%
Na 589.592†	591368.5	93540	ug/L	2881.1	93540	ug/L	2881.1	3.08%
Ni 231.604†	67.7	2.979	ug/L	0.2915	2.979	ug/L	0.2915	9.79%
P 213.617†	174.3	118.9	ug/L	2.80	118.9	ug/L	2.80	2.35%
Pb 220.353†	7.0	0.995	ug/L	5.3891	0.995	ug/L	5.3891	541.35%
Sb 206.836†	2.0	1.543	ug/L	1.1723	1.543	ug/L	1.1723	75.97%
Se 196.026†	-10.9	-10.83	ug/L	6.414	-10.83	ug/L	6.414	59.21%
Sn 189.927†	-31.2	-9.634	ug/L	0.2870	-9.634	ug/L	0.2870	2.98%
Sr 421.552†	55575.2	151.1	ug/L	2.74	151.1	ug/L	2.74	1.81%
Ti 337.279†	186.3	11.27	ug/L	1.206	11.27	ug/L	1.206	10.70%
Tl 190.801†	0.7	0.517	ug/L	1.2650	0.517	ug/L	1.2650	244.62%
V 292.402†	2186.0	20.88	ug/L	0.464	20.88	ug/L	0.464	2.22%
Zn 206.200†	5.9	-0.033	ug/L	0.6266	-0.033	ug/L	0.6266	>999.9%

Sequence No.: 27
Sample ID: AZ45992W17-1/5
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution: 5X

Autosampler Location: 89
Date Collected: 11/28/16 2:05:10 PM
Data Type: Reprocessed on 11/29/16 10:12:12 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ45992W17-1/5

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1043040.7	96.55	%	0.630				0.65%
Y 371.029 Radial	981204.3	96.39	%	0.642				0.67%
Ag 338.289†	65.9	0.964	ug/L	0.2977	4.821	ug/L	1.4886	30.88%
Al 308.215†	9.0	22.55	ug/L	7.525	112.7	ug/L	37.63	33.37%
As 188.979†	-1.3	-1.225	ug/L	2.6418	-6.125	ug/L	13.2089	215.65%
B†	1272.5	45.26	ug/L	0.357	226.3	ug/L	1.78	0.79%
Ba 233.527†	191.2	2.883	ug/L	0.0767	14.41	ug/L	0.383	2.66%
Be 313.107†	-7.8	-0.050	ug/L	0.0088	-0.250	ug/L	0.0442	17.67%
Ca 315.887†	14249.3	5313	ug/L	43.8	26570	ug/L	218.8	0.82%
Cd 214.440†	-24.9	-0.368	ug/L	0.0538	-1.839	ug/L	0.2690	14.63%
Co 228.616†	16.1	0.573	ug/L	0.2308	2.867	ug/L	1.1542	40.26%
Cr 267.716†	43.5	0.763	ug/L	0.3767	3.815	ug/L	1.8834	49.38%
Cu 327.393†	12.0	-0.183	ug/L	0.3828	-0.915	ug/L	1.9141	209.16%
Fe 273.955†	366.5	30.06	ug/L	0.737	150.3	ug/L	3.68	2.45%
K 766.490†	1558.1	710.4	ug/L	82.54	3552	ug/L	412.7	11.62%
Mg 285.213†	32722.9	7177	ug/L	47.8	35880	ug/L	239.1	0.67%
Mn 257.610†	56.2	6.924	ug/L	0.4933	34.62	ug/L	2.467	7.13%
Mo 202.031†	14.1	1.415	ug/L	0.9604	7.074	ug/L	4.8022	67.88%
Na 589.592†	131903.2	20860	ug/L	122.4	104300	ug/L	612.1	0.59%
Ni 231.604†	11.2	0.488	ug/L	0.3568	2.439	ug/L	1.7842	73.15%
P 213.617†	34.5	23.54	ug/L	4.147	117.7	ug/L	20.74	17.62%
Pb 220.353†	4.5	0.896	ug/L	0.5521	4.481	ug/L	2.7605	61.60%
Sb 206.836†	3.4	2.646	ug/L	1.0202	13.23	ug/L	5.101	38.56%
Se 196.026†	-3.6	-3.551	ug/L	3.2977	-17.75	ug/L	16.489	92.88%
Sn 189.927†	-11.4	-3.681	ug/L	0.5422	-18.40	ug/L	2.711	14.73%
Sr 421.552†	11835.0	32.18	ug/L	0.128	160.9	ug/L	0.64	0.40%
Ti 337.279†	20.6	1.202	ug/L	1.0836	6.009	ug/L	5.4178	90.16%
Tl 190.801†	1.0	0.730	ug/L	1.5216	3.651	ug/L	7.6078	208.37%
V 292.402†	376.7	3.616	ug/L	0.3052	18.08	ug/L	1.526	8.44%
Zn 206.200†	-9.3	-0.998	ug/L	0.6448	-4.992	ug/L	3.2240	64.58%

Metals Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH127
Sample Collection Date: 11/16/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81515
APPL ID: AZ45993

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	CALCIUM (CA)	12900	1000	75.0	27.5	ug/L	1	11/21/16	11/28/16
6010C/3010A	MAGNESIUM (MG)	17500	500	30.0	12.9	ug/L	1	11/21/16	11/28/16
6010C/3010A	MANGANESE (MN)	56.1	10.0	4.00	1.23	ug/L	1	11/21/16	11/28/16
6010C/3010A	POTASSIUM (K)	608J	3000	500.0	220.0	ug/L	1	11/21/16	11/28/16
6010C/3010A	SODIUM (NA)	57100	25000	2500.0	556.0	ug/L	5	11/21/16	11/28/16

J = Estimated value.

Printed: 11/29/16 1:31:21 PM
APPL-F1-SC-NoMC-REG MDLs

Sequence No.: 22
Sample ID: AZ45993W17
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 53
Date Collected: 11/28/16 1:42:19 PM
Data Type: Reprocessed on 11/29/16 10:12:06 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ45993W17

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1034754.2	95.78	%	1.843				1.92%
Y 371.029 Radial	973254.3	95.61	%	1.969				2.06%
Ag 338.289†	-27.3	-0.399	ug/L	0.6700	-0.399	ug/L	0.6700	167.83%
Al 308.215†	7.0	13.97	ug/L	14.552	13.97	ug/L	14.552	104.18%
As 188.979†	-6.0	-4.872	ug/L	5.0785	-4.872	ug/L	5.0785	104.24%
B†	1448.9	51.54	ug/L	0.992	51.54	ug/L	0.992	1.93%
Ba 233.527†	283.0	3.680	ug/L	0.1598	3.680	ug/L	0.1598	4.34%
Be 313.107†	-7.8	-0.050	ug/L	0.0255	-0.050	ug/L	0.0255	50.83%
Ca 315.887†	34563.2	12890	ug/L	715.9	12890	ug/L	715.9	5.56%
Cd 214.440†	-73.2	-1.378	ug/L	0.0331	-1.378	ug/L	0.0331	2.40%
Co 228.616†	4.5	-0.084	ug/L	0.3074	-0.084	ug/L	0.3074	365.54%
Cr 267.716†	32.3	0.419	ug/L	0.3135	0.419	ug/L	0.3135	74.74%
Cu 327.393†	109.6	1.285	ug/L	1.0737	1.285	ug/L	1.0737	83.58%
Fe 273.955†	53827.4	4712	ug/L	62.9	4712	ug/L	62.9	1.34%
K 766.490†	1338.4	608.1	ug/L	79.34	608.1	ug/L	79.34	13.05%
Mg 285.213†	79584.1	17460	ug/L	1001.3	17460	ug/L	1001.3	5.74%
Mn 257.610†	440.2	56.14	ug/L	0.292	56.14	ug/L	0.292	0.52%
Mo 202.031†	1.4	-0.374	ug/L	0.6113	-0.374	ug/L	0.6113	163.44%
Na 589.592†	355505.2	56240	ug/L	3137.7	56240	ug/L	3137.7	5.58%
Ni 231.604†	-12.4	-0.457	ug/L	0.9370	-0.457	ug/L	0.9370	205.24%
P 213.617†	134.3	91.64	ug/L	5.406	91.64	ug/L	5.406	5.90%
Pb 220.353†	-2.4	-0.839	ug/L	0.3533	-0.839	ug/L	0.3533	42.12%
Sb 206.836†	0.8	0.625	ug/L	2.5907	0.625	ug/L	2.5907	414.79%
Se 196.026†	-14.5	-14.48	ug/L	3.011	-14.48	ug/L	3.011	20.79%
Sn 189.927†	-14.1	-4.260	ug/L	1.2312	-4.260	ug/L	1.2312	28.90%
Sr 421.552†	46048.9	125.3	ug/L	7.38	125.3	ug/L	7.38	5.89%
Ti 337.279†	-6.2	-0.616	ug/L	0.6255	-0.616	ug/L	0.6255	101.62%
Tl 190.801†	0.6	0.439	ug/L	1.0969	0.439	ug/L	1.0969	250.05%
V 292.402†	370.9	2.555	ug/L	0.1794	2.555	ug/L	0.1794	7.02%
Zn 206.200†	-10.1	-1.311	ug/L	0.9199	-1.311	ug/L	0.9199	70.16%

Sequence No.: 28
Sample ID: AZ45993W17-1/5
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution: 5X

Autosampler Location: 90
Date Collected: 11/28/16 2:09:39 PM
Data Type: Reprocessed on 11/29/16 10:12:13 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ45993W17-1/5

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1053389.2	97.50	%	0.756				0.78%
Y 371.029 Radial	991918.5	97.44	%	0.789				0.81%
Ag 338.289†	27.4	0.401	ug/L	0.7714	2.007	ug/L	3.8570	192.15%
Al 308.215†	-0.9	-3.413	ug/L	21.2467	-17.07	ug/L	106.234	622.48%
As 188.979†	-6.8	-6.302	ug/L	3.8627	-31.51	ug/L	19.314	61.29%
B†	354.0	12.59	ug/L	0.348	62.97	ug/L	1.738	2.76%
Ba 233.527†	49.7	0.629	ug/L	0.0687	3.146	ug/L	0.3436	10.92%
Be 313.107†	-5.7	-0.037	ug/L	0.0284	-0.183	ug/L	0.1418	77.52%
Ca 315.887†	6997.0	2609	ug/L	11.3	13040	ug/L	56.3	0.43%
Cd 214.440†	-4.2	-0.129	ug/L	0.1295	-0.644	ug/L	0.6476	100.58%
Co 228.616†	12.3	0.425	ug/L	0.3291	2.123	ug/L	1.6453	77.51%
Cr 267.716†	2.5	0.008	ug/L	0.1906	0.038	ug/L	0.9530	>999.9%
Cu 327.393†	3.9	0.011	ug/L	2.3786	0.053	ug/L	11.8932	>999.9%
Fe 273.955†	10915.7	955.6	ug/L	8.72	4778	ug/L	43.6	0.91%
K 766.490†	205.0	93.01	ug/L	32.712	465.0	ug/L	163.56	35.17%
Mg 285.213†	16305.6	3577	ug/L	0.9	17890	ug/L	4.3	0.02%
Mn 257.610†	85.1	10.84	ug/L	0.777	54.21	ug/L	3.886	7.17%
Mo 202.031†	-8.2	-1.123	ug/L	0.1675	-5.615	ug/L	0.8374	14.91%
Na 589.592†	72146.5	11410	ug/L	52.2	57060	ug/L	261.2	0.46%
Ni 231.604†	-1.2	-0.027	ug/L	0.3945	-0.135	ug/L	1.9726	>999.9%
P 213.617†	22.2	15.13	ug/L	1.255	75.63	ug/L	6.275	8.30%
Pb 220.353†	-7.8	-1.811	ug/L	1.6264	-9.056	ug/L	8.1320	89.79%
Sb 206.836†	-0.1	-0.089	ug/L	0.9132	-0.445	ug/L	4.5661	>999.9%
Se 196.026†	-8.7	-8.666	ug/L	2.8703	-43.33	ug/L	14.351	33.12%
Sn 189.927†	-9.8	-3.229	ug/L	0.7650	-16.15	ug/L	3.825	23.69%
Sr 421.552†	9368.3	25.49	ug/L	0.317	127.4	ug/L	1.58	1.24%
Ti 337.279†	-14.0	-0.922	ug/L	0.5811	-4.612	ug/L	2.9057	63.00%
Tl 190.801†	-1.2	-0.921	ug/L	0.4712	-4.605	ug/L	2.3559	51.16%
V 292.402†	2.7	-0.182	ug/L	0.1822	-0.912	ug/L	0.9109	99.89%
Zn 206.200†	-8.9	-0.912	ug/L	0.3893	-4.562	ug/L	1.9464	42.67%

Metals Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH129
Sample Collection Date: 11/15/16

ARF: 81515
APPL ID: AZ45994

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	CALCIUM (CA)	12900	1000	75.0	27.5	ug/L	1	11/21/16	11/28/16
6010C/3010A	MAGNESIUM (MG)	11600	500	30.0	12.9	ug/L	1	11/21/16	11/28/16
6010C/3010A	MANGANESE (MN)	4.00U	10.0	4.00	1.23	ug/L	1	11/21/16	11/28/16
6010C/3010A	POTASSIUM (K)	2110J	3000	500.0	220.0	ug/L	1	11/21/16	11/28/16
6010C/3010A	SODIUM (NA)	36600	5000	500.0	111.1	ug/L	1	11/21/16	11/28/16

J = Estimated value.

Printed: 11/29/16 1:31:21 PM
APPL-F1-SC-NoMC-REG MDLs

Sequence No.: 23
Sample ID: AZ45994W21
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 54
Date Collected: 11/28/16 1:47:42 PM
Data Type: Reprocessed on 11/29/16 10:12:07 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ45994W21

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1002430.3	92.79	%	0.690				0.74%
Y 371.029 Radial	935043.4	91.85	%	0.735				0.80%
Ag 338.289†	-49.7	-0.726	ug/L	0.3855	-0.726	ug/L	0.3855	53.07%
Al 308.215†	17.4	44.09	ug/L	14.454	44.09	ug/L	14.454	32.78%
As 188.979†	-1.7	-1.694	ug/L	1.9909	-1.694	ug/L	1.9909	117.52%
B†	1775.4	63.16	ug/L	1.413	63.16	ug/L	1.413	2.24%
Ba 233.527†	186.2	2.806	ug/L	0.2103	2.806	ug/L	0.2103	7.49%
Be 313.107†	-27.1	-0.174	ug/L	0.0205	-0.174	ug/L	0.0205	11.78%
Ca 315.887†	34679.5	12930	ug/L	353.8	12930	ug/L	353.8	2.74%
Cd 214.440†	-66.9	-0.983	ug/L	0.1744	-0.983	ug/L	0.1744	17.74%
Co 228.616†	12.4	0.382	ug/L	0.4797	0.382	ug/L	0.4797	125.54%
Cr 267.716†	197.3	3.661	ug/L	0.3223	3.661	ug/L	0.3223	8.80%
Cu 327.393†	34.2	-0.166	ug/L	0.5875	-0.166	ug/L	0.5875	352.84%
Fe 273.955†	-8.2	-4.909	ug/L	1.2402	-4.909	ug/L	1.2402	25.27%
K 766.490†	4623.6	2108	ug/L	82.2	2108	ug/L	82.2	3.90%
Mg 285.213†	53047.2	11630	ug/L	306.6	11630	ug/L	306.6	2.64%
Mn 257.610†	-17.0	-2.668	ug/L	0.2764	-2.668	ug/L	0.2764	10.36%
Mo 202.031†	11.6	0.856	ug/L	0.7270	0.856	ug/L	0.7270	84.93%
Na 589.592†	231380.2	36600	ug/L	958.2	36600	ug/L	958.2	2.62%
Ni 231.604†	1.0	-0.024	ug/L	0.5704	-0.024	ug/L	0.5704	>999.9%
P 213.617†	119.9	81.82	ug/L	1.808	81.82	ug/L	1.808	2.21%
Pb 220.353†	-0.3	-0.328	ug/L	1.5098	-0.328	ug/L	1.5098	460.75%
Sb 206.836†	-1.5	-1.206	ug/L	1.6721	-1.206	ug/L	1.6721	138.70%
Se 196.026†	-4.9	-4.927	ug/L	1.5779	-4.927	ug/L	1.5779	32.03%
Sn 189.927†	-23.6	-7.543	ug/L	1.2687	-7.543	ug/L	1.2687	16.82%
Sr 421.552†	29816.2	81.08	ug/L	1.991	81.08	ug/L	1.991	2.46%
Ti 337.279†	-27.6	-1.884	ug/L	1.5726	-1.884	ug/L	1.5726	83.46%
Tl 190.801†	0.7	0.535	ug/L	1.3795	0.535	ug/L	1.3795	257.86%
V 292.402†	1796.4	17.09	ug/L	0.198	17.09	ug/L	0.198	1.16%
Zn 206.200†	-26.0	-2.584	ug/L	0.6670	-2.584	ug/L	0.6670	25.82%

METALS

Calibration Data

APPL, INC.

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No: 81515 SDG: 81515

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 11/28/16 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 12:02	%R(1)	True CCV1	Found 12:46	%R(1)	True CCV2	Found 13:53	%R(1)	
Calcium (Ca)	12500	12060	96.5	25000	25200	101	18750	18970	101	P
Potassium (K)	12500	11230	89.8	10000	9957	99.6	7500	7394	98.6	P
Magnesium (Mg)	12500	12200	97.6	25000	24610	98.4	18750	18730	99.9	P
Manganese (Mn)	500	483.8	96.8	500	503.3	101	375.5	377.1	100	P
Sodium (Na)	12500	11510	92.1	12500	12190	97.5	9375	9306	99.3	P

(1) Control Limits: Metals 90-110

ILM02.0

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No: 81515 SDG: 81515

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 11/28/16 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 12:02	%R(1)	True CCV1	Found 14:31	%R(1)	True	Found	%R(1)	
Calcium (Ca)	12500	12060	96.5	25000	25250	101				P
Potassium (K)	12500	11230	89.8	10000	10010	100				P
Magnesium (Mg)	12500	12200	97.6	25000	24960	99.8				P
Manganese (Mn)	500	483.8	96.8	500	503.6	101				P
Sodium (Na)	12500	11510	92.1	12500	12330	98.6				P

(1) Control Limits: Metals 90-110

ILM02.0

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 81515 SDG: 81515

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analysis Date: 11/28/16

Analyte	Initial Calibration Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
	12:09		12:49		13:56		14:35		12:54		
Calcium (Ca)	1000.00	U	1000.00	U	1000.00	U	1000.00	U	29.00	J	P
Potassium (K)	3000.00	U	3000.00	U	3000.00	U	3000.00	U	3000.00	U	P
Magnesium (Mg)	500.00	U	500.00	U	500.00	U	500.00	U	500.00	U	P
Manganese (Mn)	10.00	U	10.00	U	10.00	U	10.00	U	10.00	U	P
Sodium (Na)	5000.00	U	5000.00	U	5000.00	U	5000.00	U	5000.00	U	P

A.P.P.L. INC.
4
ICP INTERFERENCE CHECK SAMPLE

Lab Name: A.P.P.L. INC. Contract: AECOM
ARF No.: 81515 SDG: 81515
ICP ID Number: Phoebe ICS Source: Environmental Express

Analysis Date: 11/28/16 Concentration Units: ug/L

Analyte	True		Initial Found		
	Sol A	Sol AB	Sol A 12:32	Sol AB 12:42	%R(1)
Aluminum (Al)	100000	100000	117600	117400	117
Calcium (Ca)	100000	100000	120000	116000	116
Iron (Fe)	100000	100000	113600	109700	110
Potassium (K)			7.459	-104.8	
Magnesium (Mg)	100000	100000	115300	111300	111
Manganese (Mn)		250	1.437	281.8	113
Sodium (Na)			136.8	133.3	

(1) Control Limits: Metals 80-120

A.P.P.L. INC.

LLICV Check

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No: 81515 SDG: 81515

Concentration Units: ug/L

Analysis Date: 11/28/16

Analyte	LLICV								
	True LLICV	Found 12:23	%R(1)	True	Found	%R(1)	True	Found	%R(1)
Calcium (Ca)	200	227.4	114						
Potassium (K)	2000	1867	93.3						
Magnesium (Mg)	100	103.7	104						
Manganese (Mn)	10	10.16	102						
Sodium (Na)	2000	1909	95.5						

Reprocessing Begun
Logged In Analyst: chemist_metals Technique: ICP Continuous

Results Data Set (original): 161128A2007X
Results Library (original): C:\PE\chemist\RESULTS\Results.mdb
Results Data Set (reprocessed):
Results Library (reprocessed):

Sequence No.: 1 Autosampler Location: 1
Sample ID: CalBlk 161128RJS I:PB O:R Date Collected: 11/28/16 11:32:24 AM
Analyst: Data Type: Reprocessed on 11/29/16 10:11:39 AM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Mean Data: CalBlk 161128RJS I:PB O:R

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1080360.0	22016.63	2.04%	100.0	%
Y 371.029 Radial	1017965.4	22068.87	2.17%	100.0	%
Ag 338.289†	-509.6	37.75	7.41%	[0.00]	ug/L
Al 308.215†	31.0	6.85	22.13%	[0.00]	ug/L
As 188.979†	-17.4	3.83	21.96%	[0.00]	ug/L
B†	-135.2	7.26	5.37%	[0.00]	ug/L
Ba 233.527†	69.1	4.52	6.53%	[0.00]	ug/L
Be 313.107†	-102.1	1.48	1.45%	[0.00]	ug/L
Ca 315.887†	-18.5	11.70	63.21%	[0.00]	ug/L
Cd 214.440†	128.1	7.94	6.20%	[0.00]	ug/L
Co 228.616†	41.9	6.56	15.67%	[0.00]	ug/L
Cr 267.716†	226.4	15.26	6.74%	[0.00]	ug/L
Cu 327.393†	-196.6	72.17	36.70%	[0.00]	ug/L
Fe 273.955†	-109.1	13.07	11.98%	[0.00]	ug/L
K 766.490†	811.7	91.73	11.30%	[0.00]	ug/L
Mg 285.213†	-44.0	8.16	18.53%	[0.00]	ug/L
Mn 257.610†	-59.3	2.14	3.61%	[0.00]	ug/L
Mo 202.031†	24.1	5.36	22.27%	[0.00]	ug/L
Na 589.592†	-109.1	249.55	228.70%	[0.00]	ug/L
Ni 231.604†	16.1	17.76	110.15%	[0.00]	ug/L
P 213.617†	2.4	1.10	46.23%	[0.00]	ug/L
Pb 220.353†	9.3	9.94	107.27%	[0.00]	ug/L
Sb 206.836†	-8.2	1.95	23.70%	[0.00]	ug/L
Se 196.026†	1.6	4.92	312.29%	[0.00]	ug/L
Sn 189.927†	16.1	1.45	9.06%	[0.00]	ug/L
Sr 421.552†	542.7	59.46	10.96%	[0.00]	ug/L
Ti 337.279†	-151.4	8.75	5.78%	[0.00]	ug/L
Tl 190.801†	-4.7	0.46	9.78%	[0.00]	ug/L
V 292.402†	-447.1	62.60	14.00%	[0.00]	ug/L
Zn 206.200†	-246.3	16.69	6.78%	[0.00]	ug/L

Sequence No.: 2
Sample ID: STD 1 161128RJS I:PB O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 2
Date Collected: 11/28/16 11:36:40 AM
Data Type: Reprocessed on 11/29/16 10:11:43 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: STD 1 161128RJS I:PB O:RJ

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1082977.2	8019.19	0.74%	100.2	%
Y 371.029 Radial	1020628.5	8075.75	0.79%	100.3	%
Ag 338.289†	117.3	38.90	33.16%	[0.5]	ug/L
Al 308.215†	41.5	9.18	22.12%	[50]	ug/L
As 188.979†	3.5	3.87	109.77%	[2]	ug/L
B†	1669.1	22.49	1.35%	[25]	ug/L
Ba 233.527†	241.7	5.37	2.22%	[1.5]	ug/L
Be 313.107†	337.2	6.71	1.99%	[1]	ug/L
Ca 315.887†	836.5	26.31	3.15%	[50]	ug/L
Cd 214.440†	50.9	7.80	15.32%	[0.25]	ug/L
Co 228.616†	148.0	7.05	4.77%	[2.5]	ug/L
Cr 267.716†	66.5	20.53	30.86%	[0.5]	ug/L
Cu 327.393†	476.7	108.76	22.82%	[2.5]	ug/L
Fe 273.955†	665.9	14.06	2.11%	[25]	ug/L
K 766.490†	2349.9	56.86	2.42%	[25]	ug/L
Mg 285.213†	272.8	6.84	2.51%	[25]	ug/L
Mn 257.610†	17.4	2.32	13.38%	[1]	ug/L
Mo 202.031†	18.1	4.07	22.54%	[1]	ug/L
Na 589.592†	7037.9	77.35	1.10%	[500]	ug/L
Ni 231.604†	38.0	10.38	27.31%	[1]	ug/L
P 213.617†	39.5	3.06	7.75%	[12.5]	ug/L
Pb 220.353†	9.5	11.55	121.48%	[1.5]	ug/L
Sb 206.836†	6.7	2.35	35.13%	[2]	ug/L
Se 196.026†	5.5	3.34	60.47%	[2]	ug/L
Sn 189.927†	19.4	2.41	12.40%	[3]	ug/L
Sr 421.552†	881.8	38.27	4.34%	[1]	ug/L
Ti 337.279†	86.6	7.01	8.10%	[2.5]	ug/L
Tl 190.801†	6.8	0.84	12.29%	[2]	ug/L
V 292.402†	130.7	92.75	70.94%	[0.5]	ug/L
Zn 206.200†	704.6	11.83	1.68%	[25]	ug/L

Sequence No.: 3
Sample ID: STD 2 161128RJS I:PB O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 11/28/16 11:41:00 AM
Data Type: Reprocessed on 11/29/16 10:11:44 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: STD 2 161128RJS I:PB O:RJ

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1031786.4	4887.38	0.47%	95.50	%
Y 371.029 Radial	969748.9	4319.56	0.45%	95.26	%
Ag 338.289†	17173.8	154.25	0.90%	[250]	ug/L
Al 308.215†	3673.1	49.77	1.36%	[10000]	ug/L
As 188.979†	522.9	7.67	1.47%	[500]	ug/L
B†	13968.7	164.65	1.18%	[500]	ug/L
Ba 233.527†	33604.5	147.73	0.44%	[500]	ug/L
Be 313.107†	76609.9	1317.65	1.72%	[500]	ug/L
Ca 315.887†	66372.3	669.28	1.01%	[25000]	ug/L
Cd 214.440†	35746.0	237.00	0.66%	[500]	ug/L
Co 228.616†	13163.7	122.41	0.93%	[500]	ug/L
Cr 267.716†	26676.4	133.35	0.50%	[500]	ug/L
Cu 327.393†	37166.3	282.28	0.76%	[500]	ug/L
Fe 273.955†	116448.3	615.04	0.53%	[10000]	ug/L
K 766.490†	21038.7	395.74	1.88%	[10000]	ug/L
Mg 285.213†	112978.9	2019.50	1.79%	[25000]	ug/L
Mn 257.610†	3872.4	37.29	0.96%	[500]	ug/L
Mo 202.031†	4061.0	5.77	0.14%	[500]	ug/L
Na 589.592†	77595.5	1289.26	1.66%	[12500]	ug/L
Ni 231.604†	10813.7	68.82	0.64%	[500]	ug/L
P 213.617†	3664.0	14.41	0.39%	[2500]	ug/L
Pb 220.353†	2264.9	23.50	1.04%	[500]	ug/L
Sb 206.836†	641.6	3.10	0.48%	[500]	ug/L
Se 196.026†	503.7	3.73	0.74%	[500]	ug/L
Sn 189.927†	1481.0	8.56	0.58%	[500]	ug/L
Sr 421.552†	180514.7	2772.41	1.54%	[500]	ug/L
Ti 337.279†	7876.6	75.27	0.96%	[500]	ug/L
Tl 190.801†	683.2	5.14	0.75%	[500]	ug/L
V 292.402†	53571.8	413.42	0.77%	[500]	ug/L
Zn 206.200†	5337.4	34.60	0.65%	[500]	ug/L

Sequence No.: 4
Sample ID: STD 3 161128RJS I:PB O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 11/28/16 11:44:25 AM
Data Type: Reprocessed on 11/29/16 10:11:45 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: STD 3 161128RJS I:PB O:RJ

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	1011920.6	12197.37	1.21%	93.67	%
Y 371.029 Radial	949376.7	12363.79	1.30%	93.26	%
Ag 338.289†	34144.9	258.73	0.76%	[500]	ug/L
Al 308.215†	7406.7	111.00	1.50%	[20000]	ug/L
As 188.979†	1043.2	15.69	1.50%	[1000]	ug/L
B†	28131.2	148.36	0.53%	[1000]	ug/L
Ba 233.527†	65411.4	660.41	1.01%	[1000]	ug/L
Be 313.107†	156159.1	3660.46	2.34%	[1000]	ug/L
Ca 315.887†	134407.1	1894.40	1.41%	[50000]	ug/L
Cd 214.440†	69816.9	822.98	1.18%	[1000]	ug/L
Co 228.616†	25707.2	366.49	1.43%	[1000]	ug/L
Cr 267.716†	52085.3	616.31	1.18%	[1000]	ug/L
Cu 327.393†	73803.7	734.35	1.00%	[1000]	ug/L
Fe 273.955†	227064.3	2515.96	1.11%	[20000]	ug/L
K 766.490†	44275.3	658.30	1.49%	[20000]	ug/L
Mg 285.213†	228306.5	5136.41	2.25%	[50000]	ug/L
Mn 257.610†	7799.5	73.36	0.94%	[1000]	ug/L
Mo 202.031†	8122.1	104.73	1.29%	[1000]	ug/L
Na 589.592†	158711.2	3563.23	2.25%	[25000]	ug/L
Ni 231.604†	21230.9	220.33	1.04%	[1000]	ug/L
P 213.617†	7327.1	108.17	1.48%	[5000]	ug/L
Pb 220.353†	4472.2	52.46	1.17%	[1000]	ug/L
Sb 206.836†	1280.0	18.05	1.41%	[1000]	ug/L
Se 196.026†	1001.5	15.07	1.50%	[1000]	ug/L
Sn 189.927†	2940.6	33.71	1.15%	[1000]	ug/L
Sr 421.552†	368626.0	8026.15	2.18%	[1000]	ug/L
Ti 337.279†	15983.9	202.77	1.27%	[1000]	ug/L
Tl 190.801†	1333.0	23.08	1.73%	[1000]	ug/L
V 292.402†	105346.0	982.78	0.93%	[1000]	ug/L
Zn 206.200†	10539.8	136.39	1.29%	[1000]	ug/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 338.289	3	Lin Thru 0	0.0	68.37	0.00000	0.999995	
Al 308.215	3	Lin Thru 0	0.0	0.3697	0.00000	0.999991	
As 188.979	3	Lin Thru 0	0.0	1.044	0.00000	0.999999	
B	3	Lin Thru 0	0.0	28.11	0.00000	0.999524	
Ba 233.527	3	Lin Thru 0	0.0	65.77	0.00000	0.999938	
Be 313.107	3	Lin Thru 0	0.0	155.6	0.00000	0.999971	
Ca 315.887	3	Lin Thru 0	0.0	2.682	0.00000	0.999977	
Cd 214.440	3	Lin Thru 0	0.0	70.15	0.00000	0.999954	
Co 228.616	3	Lin Thru 0	0.0	25.83	0.00000	0.999950	
Cr 267.716	3	Lin Thru 0	0.0	52.34	0.00000	0.999953	
Cu 327.393	3	Lin Thru 0	0.0	73.91	0.00000	0.999990	
Fe 273.955	3	Lin Thru 0	0.0	11.41	0.00000	0.999947	
K 766.490	3	Lin Thru 0	0.0	2.192	0.00000	0.998705	
Mg 285.213	3	Lin Thru 0	0.0	4.557	0.00000	0.999991	
Mn 257.610	3	Lin Thru 0	0.0	7.789	0.00000	0.999995	
Mo 202.031	3	Lin Thru 0	0.0	8.122	0.00000	0.999999	
Na 589.592	3	Lin Thru 0	0.0	6.323	0.00000	0.999720	
Ni 231.604	3	Lin Thru 0	0.0	21.31	0.00000	0.999972	
P 213.617	3	Lin Thru 0	0.0	1.465	0.00000	0.999997	
Pb 220.353	3	Lin Thru 0	0.0	4.484	0.00000	0.999987	
Sb 206.836	3	Lin Thru 0	0.0	1.281	0.00000	0.999995	
Se 196.026	3	Lin Thru 0	0.0	1.003	0.00000	0.999992	
Sn 189.927	3	Lin Thru 0	0.0	2.945	0.00000	0.999991	
Sr 421.552	3	Lin Thru 0	0.0	367.1	0.00000	0.999965	

Ti 337.279	3	Lin Thru 0	0.0	15.94	0.00000	0.999980
Tl 190.801	3	Lin Thru 0	0.0	1.340	0.00000	0.999947
V 292.402	3	Lin Thru 0	0.0	105.7	0.00000	0.999977
Zn 206.200	3	Lin Thru 0	0.0	10.58	0.00000	0.999295

Sequence No.: 5
Sample ID: ICV 161128RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 11/28/16 12:02:55 PM
Data Type: Reprocessed on 11/29/16 10:11:47 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICV 161128RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1057128.7	97.85	%	1.533				1.57%
Y 371.029 Radial	994798.2	97.72	%	1.681				1.72%
Ag 338.289†	16527.9	241.7	ug/L	3.32	241.7	ug/L	3.32	1.37%
QC value within limits for Ag 338.289 Recovery = 96.70%								
Al 308.215†	4424.2	11970	ug/L	435.5	11970	ug/L	435.5	3.64%
QC value within limits for Al 308.215 Recovery = 95.78%								
As 188.979†	478.6	461.8	ug/L	4.93	461.8	ug/L	4.93	1.07%
QC value within limits for As 188.979 Recovery = 92.36%								
B†	13714.2	487.8	ug/L	7.83	487.8	ug/L	7.83	1.60%
QC value within limits for B Recovery = 97.57%								
Ba 233.527†	32229.9	488.9	ug/L	8.11	488.9	ug/L	8.11	1.66%
QC value within limits for Ba 233.527 Recovery = 97.77%								
Be 313.107†	71912.7	462.2	ug/L	17.49	462.2	ug/L	17.49	3.78%
QC value within limits for Be 313.107 Recovery = 92.45%								
Ca 315.887†	32343.0	12060	ug/L	455.8	12060	ug/L	455.8	3.78%
QC value within limits for Ca 315.887 Recovery = 96.46%								
Cd 214.440†	34321.0	489.0	ug/L	7.73	489.0	ug/L	7.73	1.58%
QC value within limits for Cd 214.440 Recovery = 97.80%								
Co 228.616†	12697.7	490.1	ug/L	6.91	490.1	ug/L	6.91	1.41%
QC value within limits for Co 228.616 Recovery = 98.01%								
Cr 267.716†	25439.4	485.1	ug/L	5.83	485.1	ug/L	5.83	1.20%
QC value within limits for Cr 267.716 Recovery = 97.01%								
Cu 327.393†	35545.6	481.6	ug/L	9.47	481.6	ug/L	9.47	1.97%
QC value within limits for Cu 327.393 Recovery = 96.32%								
Fe 273.955†	139365.6	12170	ug/L	63.6	12170	ug/L	63.6	0.52%
QC value within limits for Fe 273.955 Recovery = 97.36%								
K 766.490†	24648.5	11230	ug/L	487.3	11230	ug/L	487.3	4.34%
QC value less than the lower limit for K 766.490 Recovery = 89.88%								
Mg 285.213†	55550.7	12200	ug/L	449.1	12200	ug/L	449.1	3.68%
QC value within limits for Mg 285.213 Recovery = 97.63%								
Mn 257.610†	3764.6	483.8	ug/L	20.06	483.8	ug/L	20.06	4.15%
QC value within limits for Mn 257.610 Recovery = 96.76%								
Mo 202.031†	3853.0	474.6	ug/L	8.60	474.6	ug/L	8.60	1.81%
QC value within limits for Mo 202.031 Recovery = 94.92%								
Na 589.592†	72713.6	11510	ug/L	444.4	11510	ug/L	444.4	3.86%
QC value within limits for Na 589.592 Recovery = 92.07%								
Ni 231.604†	10511.2	490.4	ug/L	9.47	490.4	ug/L	9.47	1.93%
QC value within limits for Ni 231.604 Recovery = 98.07%								
P 213.617†	3502.9	2390	ug/L	37.0	2390	ug/L	37.0	1.55%
QC value within limits for P 213.617 Recovery = 95.61%								
Pb 220.353†	2192.4	491.9	ug/L	5.16	491.9	ug/L	5.16	1.05%
QC value within limits for Pb 220.353 Recovery = 98.37%								
Sb 206.836†	609.0	475.5	ug/L	10.14	475.5	ug/L	10.14	2.13%
QC value within limits for Sb 206.836 Recovery = 95.10%								
Se 196.026†	486.8	485.5	ug/L	15.79	485.5	ug/L	15.79	3.25%
QC value within limits for Se 196.026 Recovery = 97.09%								
Sn 189.927†	747.6	257.4	ug/L	5.83	257.4	ug/L	5.83	2.26%
QC value within limits for Sn 189.927 Recovery = 102.96%								
Sr 421.552†	169415.4	461.4	ug/L	17.13	461.4	ug/L	17.13	3.71%
QC value within limits for Sr 421.552 Recovery = 92.27%								
Ti 337.279†	7800.8	489.2	ug/L	16.28	489.2	ug/L	16.28	3.33%
QC value within limits for Ti 337.279 Recovery = 97.84%								
Tl 190.801†	666.8	497.7	ug/L	6.39	497.7	ug/L	6.39	1.28%
QC value within limits for Tl 190.801 Recovery = 99.54%								
V 292.402†	51048.4	490.1	ug/L	8.10	490.1	ug/L	8.10	1.65%
QC value within limits for V 292.402 Recovery = 98.02%								
Zn 206.200†	5221.5	495.9	ug/L	7.83	495.9	ug/L	7.83	1.58%
QC value within limits for Zn 206.200 Recovery = 99.18%								

QC Failed. Continue with analysis.

Sequence No.: 6
Sample ID: ICB 161128RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 11/28/16 12:09:30 PM
Data Type: Reprocessed on 11/29/16 10:11:48 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICB 161128RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1078660.9	99.84	%	1.316				1.32%
Y 371.029 Radial	1016698.3	99.88	%	1.419				1.42%
Ag 338.289†	39.6	0.579	ug/L	0.6226	0.579	ug/L	0.6226	107.47%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	2.1	5.623	ug/L	25.8556	5.623	ug/L	25.8556	459.83%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	3.8	3.674	ug/L	7.3581	3.674	ug/L	7.3581	200.27%
QC value within limits for As 188.979 Recovery = Not calculated								
B†	75.8	2.697	ug/L	0.3131	2.697	ug/L	0.3131	11.61%
QC value within limits for B Recovery = Not calculated								
Ba 233.527†	-2.9	-0.044	ug/L	0.0405	-0.044	ug/L	0.0405	91.73%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-0.0	0.000	ug/L	0.0187	0.000	ug/L	0.0187	>999.9%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	21.0	7.853	ug/L	1.4471	7.853	ug/L	1.4471	18.43%
QC value within limits for Ca 315.887 Recovery = Not calculated								
Cd 214.440†	14.5	0.208	ug/L	0.1150	0.208	ug/L	0.1150	55.38%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	0.2	0.012	ug/L	0.2743	0.012	ug/L	0.2743	>999.9%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	3.4	0.067	ug/L	0.1801	0.067	ug/L	0.1801	268.03%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	-60.2	-0.813	ug/L	1.8347	-0.813	ug/L	1.8347	225.76%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	6.9	0.540	ug/L	1.0827	0.540	ug/L	1.0827	200.43%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	-131.8	-60.14	ug/L	106.880	-60.14	ug/L	106.880	177.72%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	12.9	2.840	ug/L	2.4493	2.840	ug/L	2.4493	86.25%
QC value within limits for Mg 285.213 Recovery = Not calculated								
Mn 257.610†	-2.2	-0.289	ug/L	0.4432	-0.289	ug/L	0.4432	153.36%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	13.3	1.634	ug/L	0.4912	1.634	ug/L	0.4912	30.06%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	-95.6	-15.10	ug/L	22.077	-15.10	ug/L	22.077	146.22%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	-5.4	-0.257	ug/L	0.3022	-0.257	ug/L	0.3022	117.68%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	-2.7	-1.859	ug/L	0.5317	-1.859	ug/L	0.5317	28.60%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	-9.8	-2.181	ug/L	1.3734	-2.181	ug/L	1.3734	62.97%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	2.9	2.288	ug/L	0.7603	2.288	ug/L	0.7603	33.23%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	-4.5	-4.456	ug/L	5.8794	-4.456	ug/L	5.8794	131.94%
QC value less than the lower limit for Se 196.026 Recovery = Not calculated								
Sn 189.927†	-1.2	-0.420	ug/L	0.3743	-0.420	ug/L	0.3743	89.13%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	36.6	0.100	ug/L	0.0964	0.100	ug/L	0.0964	96.79%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	-2.9	-0.182	ug/L	0.3706	-0.182	ug/L	0.3706	203.59%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	0.4	0.307	ug/L	1.3582	0.307	ug/L	1.3582	442.12%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	78.4	0.764	ug/L	1.0532	0.764	ug/L	1.0532	137.79%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	2.5	0.238	ug/L	0.4302	0.238	ug/L	0.4302	180.91%
QC value within limits for Zn 206.200 Recovery = Not calculated								

QC Failed. Continue with analysis.

Sequence No.: 7
Sample ID: LLICV 161128RJS I:PB O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 2
Date Collected: 11/28/16 12:23:07 PM
Data Type: Reprocessed on 11/29/16 10:11:49 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: LLICV 161128RJS I:PB O:RJ

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1133480.3	104.9	%	9.48				9.04%
Y 371.029 Radial	1070774.3	105.2	%	9.93				9.44%
Ag 338.289†	207.6	3.037	ug/L	0.7034	3.037	ug/L	0.7034	23.17%
QC value greater than the upper limit for Ag 338.289 Recovery = 151.83%								
Al 308.215†	75.3	203.6	ug/L	26.07	203.6	ug/L	26.07	12.81%
QC value within limits for Al 308.215 Recovery = 101.79%								
As 188.979†	11.1	10.72	ug/L	1.907	10.72	ug/L	1.907	17.78%
QC value greater than the upper limit for As 188.979 Recovery = 153.17%								
B†	2835.1	100.9	ug/L	9.10	100.9	ug/L	9.10	9.03%
QC value within limits for B Recovery = 100.85%								
Ba 233.527†	673.2	10.23	ug/L	0.989	10.23	ug/L	0.989	9.67%
QC value within limits for Ba 233.527 Recovery = 102.28%								
Be 313.107†	598.9	3.849	ug/L	0.2671	3.849	ug/L	0.2671	6.94%
QC value within limits for Be 313.107 Recovery = 96.24%								
Ca 315.887†	610.2	227.4	ug/L	20.32	227.4	ug/L	20.32	8.94%
QC value within limits for Ca 315.887 Recovery = 113.70%								
Cd 214.440†	726.5	10.36	ug/L	1.084	10.36	ug/L	1.084	10.46%
QC value within limits for Cd 214.440 Recovery = 103.59%								
Co 228.616†	280.1	10.81	ug/L	1.219	10.81	ug/L	1.219	11.27%
QC value within limits for Co 228.616 Recovery = 108.12%								
Cr 267.716†	518.9	9.887	ug/L	1.5851	9.887	ug/L	1.5851	16.03%
QC value within limits for Cr 267.716 Recovery = 98.87%								
Cu 327.393†	767.0	10.35	ug/L	1.192	10.35	ug/L	1.192	11.51%
QC value within limits for Cu 327.393 Recovery = 103.50%								
Fe 273.955†	1156.4	100.5	ug/L	8.62	100.5	ug/L	8.62	8.58%
QC value within limits for Fe 273.955 Recovery = 100.50%								
K 766.490†	4091.6	1867	ug/L	246.5	1867	ug/L	246.5	13.20%
QC value within limits for K 766.490 Recovery = 93.33%								
Mg 285.213†	473.8	103.7	ug/L	8.13	103.7	ug/L	8.13	7.84%
QC value within limits for Mg 285.213 Recovery = 103.65%								
Mn 257.610†	79.1	10.16	ug/L	0.233	10.16	ug/L	0.233	2.29%
QC value within limits for Mn 257.610 Recovery = 101.65%								
Mo 202.031†	77.1	9.461	ug/L	1.0143	9.461	ug/L	1.0143	10.72%
QC value within limits for Mo 202.031 Recovery = 94.61%								
Na 589.592†	12071.5	1909	ug/L	149.7	1909	ug/L	149.7	7.84%
QC value within limits for Na 589.592 Recovery = 95.43%								
Ni 231.604†	213.4	9.927	ug/L	1.1355	9.927	ug/L	1.1355	11.44%
QC value within limits for Ni 231.604 Recovery = 99.27%								
P 213.617†	66.8	45.61	ug/L	6.087	45.61	ug/L	6.087	13.35%
QC value within limits for P 213.617 Recovery = 91.22%								
Pb 220.353†	17.9	4.046	ug/L	2.9612	4.046	ug/L	2.9612	73.20%
QC value less than the lower limit for Pb 220.353 Recovery = 67.43%								
Sb 206.836†	11.1	8.659	ug/L	1.1658	8.659	ug/L	1.1658	13.46%
QC value within limits for Sb 206.836 Recovery = 86.59%								
Se 196.026†	9.0	8.935	ug/L	6.5964	8.935	ug/L	6.5964	73.83%
QC value within limits for Se 196.026 Recovery = 89.35%								
Sn 189.927†	24.3	8.335	ug/L	2.3462	8.335	ug/L	2.3462	28.15%
QC value within limits for Sn 189.927 Recovery = 83.35%								
Sr 421.552†	3570.2	9.723	ug/L	0.9188	9.723	ug/L	0.9188	9.45%
QC value within limits for Sr 421.552 Recovery = 97.23%								
Ti 337.279†	157.3	9.865	ug/L	0.1350	9.865	ug/L	0.1350	1.37%
QC value within limits for Ti 337.279 Recovery = 98.65%								
Tl 190.801†	13.7	10.26	ug/L	0.505	10.26	ug/L	0.505	4.92%
QC value within limits for Tl 190.801 Recovery = 102.61%								
V 292.402†	1050.9	10.12	ug/L	0.865	10.12	ug/L	0.865	8.55%
QC value within limits for V 292.402 Recovery = 101.21%								
Zn 206.200†	444.0	42.03	ug/L	2.684	42.03	ug/L	2.684	6.39%
QC value within limits for Zn 206.200 Recovery = 105.07%								

QC Failed. Continue with analysis.

Sequence No.: 8
Sample ID: ICSA 161128RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 11/28/16 12:32:18 PM
Data Type: Reprocessed on 11/29/16 10:11:50 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICSA 161128RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	995937.5	92.19	%	1.519				1.65%
Y 371.029 Radial	933475.7	91.70	%	1.569				1.71%
Ag 338.289†	8.1	0.119	ug/L	0.2633	0.119	ug/L	0.2633	222.18%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	43485.6	117600	ug/L	3922.5	117600	ug/L	3922.5	3.34%
QC value within limits for Al 308.215 Recovery = 117.59%								
As 188.979†	-24.2	-3.164	ug/L	0.3025	-3.164	ug/L	0.3025	9.56%
QC value within limits for As 188.979 Recovery = Not calculated								
B†	-529.2	-18.82	ug/L	1.049	-18.82	ug/L	1.049	5.57%
QC value within limits for B Recovery = Not calculated								
Ba 233.527†	1124.7	3.186	ug/L	0.1745	3.186	ug/L	0.1745	5.48%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-6.9	-0.044	ug/L	0.0115	-0.044	ug/L	0.0115	25.89%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	321804.0	120000	ug/L	3837.4	120000	ug/L	3837.4	3.20%
QC value within limits for Ca 315.887 Recovery = 120.00%								
Cd 214.440†	443.1	0.812	ug/L	0.2108	0.812	ug/L	0.2108	25.97%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	97.3	-1.168	ug/L	0.4745	-1.168	ug/L	0.4745	40.64%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	-48.5	-1.829	ug/L	0.5865	-1.829	ug/L	0.5865	32.07%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	-657.2	-2.155	ug/L	0.7946	-2.155	ug/L	0.7946	36.87%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	1297161.9	113600	ug/L	3174.7	113600	ug/L	3174.7	2.79%
QC value within limits for Fe 273.955 Recovery = 113.65%								
K 766.490†	206.2	7.459	ug/L	26.7498	7.459	ug/L	26.7498	358.63%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	524743.8	115300	ug/L	3684.1	115300	ug/L	3684.1	3.20%
QC value within limits for Mg 285.213 Recovery = 115.29%								
Mn 257.610†	-16.5	1.437	ug/L	0.7947	1.437	ug/L	0.7947	55.31%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	-62.2	-2.420	ug/L	2.1969	-2.420	ug/L	2.1969	90.76%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	82.4	136.8	ug/L	21.59	136.8	ug/L	21.59	15.79%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	-81.6	-0.486	ug/L	0.9572	-0.486	ug/L	0.9572	196.94%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	4.7	3.182	ug/L	4.9338	3.182	ug/L	4.9338	155.03%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	-80.4	2.113	ug/L	3.4049	2.113	ug/L	3.4049	161.15%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	0.7	0.521	ug/L	2.4444	0.521	ug/L	2.4444	468.77%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	-4.5	-4.446	ug/L	8.2209	-4.446	ug/L	8.2209	184.91%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	-48.3	-11.89	ug/L	0.383	-11.89	ug/L	0.383	3.22%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	329.8	-0.341	ug/L	0.0682	-0.341	ug/L	0.0682	20.00%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	6.6	-1.949	ug/L	0.1248	-1.949	ug/L	0.1248	6.40%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	-2.9	-2.159	ug/L	1.8003	-2.159	ug/L	1.8003	83.39%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	2403.4	-2.367	ug/L	0.0689	-2.367	ug/L	0.0689	2.91%
QC value less than the lower limit for V 292.402 Recovery = Not calculated								
Zn 206.200†	2.0	1.615	ug/L	0.7003	1.615	ug/L	0.7003	43.38%
QC value within limits for Zn 206.200 Recovery = Not calculated								

QC Failed. Continue with analysis.

Sequence No.: 9
Sample ID: ICSAB 161128RJS I:PB O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 11/28/16 12:42:04 PM
Data Type: Reprocessed on 11/29/16 10:11:51 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICSAB 161128RJS I:PB O:RJ

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1009912.3	93.48	%	1.480				1.58%
Y 371.029 Radial	947248.8	93.05	%	1.590				1.71%
Ag 338.289†	39567.3	578.7	ug/L	9.86	578.7	ug/L	9.86	1.70%
QC value within limits for Ag 338.289 Recovery = 115.74%								
Al 308.215†	43404.5	117400	ug/L	2121.0	117400	ug/L	2121.0	1.81%
QC value within limits for Al 308.215 Recovery = 117.38%								
As 188.979†	270.0	276.8	ug/L	3.66	276.8	ug/L	3.66	1.32%
QC value within limits for As 188.979 Recovery = 110.70%								
B†	-528.1	-18.78	ug/L	2.231	-18.78	ug/L	2.231	11.88%
QC value within limits for B Recovery = Not calculated								
Ba 233.527†	19341.2	280.8	ug/L	3.50	280.8	ug/L	3.50	1.25%
QC value within limits for Ba 233.527 Recovery = 112.33%								
Be 313.107†	43487.6	279.5	ug/L	6.80	279.5	ug/L	6.80	2.43%
QC value within limits for Be 313.107 Recovery = 111.81%								
Ca 315.887†	310980.0	116000	ug/L	852.4	116000	ug/L	852.4	0.74%
QC value within limits for Ca 315.887 Recovery = 115.96%								
Cd 214.440†	39145.9	552.9	ug/L	9.21	552.9	ug/L	9.21	1.67%
QC value within limits for Cd 214.440 Recovery = 110.58%								
Co 228.616†	7448.5	283.5	ug/L	6.15	283.5	ug/L	6.15	2.17%
QC value within limits for Co 228.616 Recovery = 113.39%								
Cr 267.716†	14531.3	276.2	ug/L	4.77	276.2	ug/L	4.77	1.73%
QC value within limits for Cr 267.716 Recovery = 110.48%								
Cu 327.393†	21203.2	292.4	ug/L	5.03	292.4	ug/L	5.03	1.72%
QC value within limits for Cu 327.393 Recovery = 116.96%								
Fe 273.955†	1252455.7	109700	ug/L	1888.5	109700	ug/L	1888.5	1.72%
QC value within limits for Fe 273.955 Recovery = 109.71%								
K 766.490†	-42.3	-104.8	ug/L	13.81	-104.8	ug/L	13.81	13.18%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	506643.3	111300	ug/L	806.6	111300	ug/L	806.6	0.72%
QC value within limits for Mg 285.213 Recovery = 111.32%								
Mn 257.610†	2167.5	281.8	ug/L	7.97	281.8	ug/L	7.97	2.83%
QC value within limits for Mn 257.610 Recovery = 112.70%								
Mo 202.031†	2163.2	271.3	ug/L	5.53	271.3	ug/L	5.53	2.04%
QC value within limits for Mo 202.031 Recovery = 108.51%								
Na 589.592†	80.1	133.3	ug/L	29.17	133.3	ug/L	29.17	21.88%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	11909.0	560.4	ug/L	12.04	560.4	ug/L	12.04	2.15%
QC value within limits for Ni 231.604 Recovery = 112.08%								
P 213.617†	-33.6	-22.95	ug/L	3.086	-22.95	ug/L	3.086	13.45%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	2420.3	560.5	ug/L	13.65	560.5	ug/L	13.65	2.43%
QC value within limits for Pb 220.353 Recovery = 112.11%								
Sb 206.836†	353.5	276.1	ug/L	4.36	276.1	ug/L	4.36	1.58%
QC value within limits for Sb 206.836 Recovery = 110.43%								
Se 196.026†	271.0	270.2	ug/L	5.40	270.2	ug/L	5.40	2.00%
QC value within limits for Se 196.026 Recovery = 108.09%								
Sn 189.927†	-42.6	-10.09	ug/L	0.681	-10.09	ug/L	0.681	6.75%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	344.3	-0.261	ug/L	0.1811	-0.261	ug/L	0.1811	69.38%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	28.8	-0.476	ug/L	0.8933	-0.476	ug/L	0.8933	187.63%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	361.8	270.1	ug/L	5.80	270.1	ug/L	5.80	2.15%
QC value within limits for Tl 190.801 Recovery = 108.03%								
V 292.402†	31806.0	282.5	ug/L	4.33	282.5	ug/L	4.33	1.53%
QC value within limits for V 292.402 Recovery = 113.00%								
Zn 206.200†	5887.3	559.1	ug/L	12.49	559.1	ug/L	12.49	2.23%
QC value within limits for Zn 206.200 Recovery = 111.81%								

All analyte(s) passed QC.

Sequence No.: 10
Sample ID: CCV1 161128RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 11/28/16 12:46:26 PM
Data Type: Reprocessed on 11/29/16 10:11:53 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCV1 161128RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1022419.2	94.64	%	2.525				2.67%
Y 371.029 Radial	960067.1	94.31	%	2.701				2.86%
Ag 338.289†	17569.4	257.0	ug/L	10.02	257.0	ug/L	10.02	3.90%
QC value within limits for Ag 338.289 Recovery = 102.79%								
Al 308.215†	3745.1	10130	ug/L	123.7	10130	ug/L	123.7	1.22%
QC value within limits for Al 308.215 Recovery = 101.34%								
As 188.979†	531.8	512.2	ug/L	15.53	512.2	ug/L	15.53	3.03%
QC value within limits for As 188.979 Recovery = 102.43%								
B†	14690.4	522.6	ug/L	22.39	522.6	ug/L	22.39	4.28%
QC value within limits for B Recovery = 104.51%								
Ba 233.527†	34859.0	529.1	ug/L	22.67	529.1	ug/L	22.67	4.29%
QC value within limits for Ba 233.527 Recovery = 105.81%								
Be 313.107†	74069.9	476.1	ug/L	2.78	476.1	ug/L	2.78	0.58%
QC value within limits for Be 313.107 Recovery = 95.22%								
Ca 315.887†	67582.0	25200	ug/L	159.9	25200	ug/L	159.9	0.63%
QC value within limits for Ca 315.887 Recovery = 100.80%								
Cd 214.440†	37071.6	528.3	ug/L	23.81	528.3	ug/L	23.81	4.51%
QC value within limits for Cd 214.440 Recovery = 105.66%								
Co 228.616†	13659.5	527.2	ug/L	22.45	527.2	ug/L	22.45	4.26%
QC value within limits for Co 228.616 Recovery = 105.45%								
Cr 267.716†	27713.9	528.4	ug/L	21.98	528.4	ug/L	21.98	4.16%
QC value within limits for Cr 267.716 Recovery = 105.68%								
Cu 327.393†	38842.7	525.7	ug/L	26.45	525.7	ug/L	26.45	5.03%
QC value within limits for Cu 327.393 Recovery = 105.14%								
Fe 273.955†	120839.6	10540	ug/L	457.3	10540	ug/L	457.3	4.34%
QC value within limits for Fe 273.955 Recovery = 105.40%								
K 766.490†	21855.2	9957	ug/L	11.2	9957	ug/L	11.2	0.11%
QC value within limits for K 766.490 Recovery = 99.57%								
Mg 285.213†	112082.7	24610	ug/L	101.9	24610	ug/L	101.9	0.41%
QC value within limits for Mg 285.213 Recovery = 98.43%								
Mn 257.610†	3921.4	503.3	ug/L	7.48	503.3	ug/L	7.48	1.49%
QC value within limits for Mn 257.610 Recovery = 100.65%								
Mo 202.031†	4139.8	509.8	ug/L	10.60	509.8	ug/L	10.60	2.08%
QC value within limits for Mo 202.031 Recovery = 101.95%								
Na 589.592†	76962.1	12190	ug/L	50.9	12190	ug/L	50.9	0.42%
QC value within limits for Na 589.592 Recovery = 97.49%								
Ni 231.604†	11237.4	524.2	ug/L	20.97	524.2	ug/L	20.97	4.00%
QC value within limits for Ni 231.604 Recovery = 104.83%								
P 213.617†	3686.6	2516	ug/L	54.9	2516	ug/L	54.9	2.18%
QC value within limits for P 213.617 Recovery = 100.63%								
Pb 220.353†	2319.8	519.7	ug/L	7.29	519.7	ug/L	7.29	1.40%
QC value within limits for Pb 220.353 Recovery = 103.94%								
Sb 206.836†	655.5	511.9	ug/L	9.15	511.9	ug/L	9.15	1.79%
QC value within limits for Sb 206.836 Recovery = 102.37%								
Se 196.026†	505.4	504.1	ug/L	9.89	504.1	ug/L	9.89	1.96%
QC value within limits for Se 196.026 Recovery = 100.81%								
Sn 189.927†	1507.9	516.1	ug/L	12.24	516.1	ug/L	12.24	2.37%
QC value within limits for Sn 189.927 Recovery = 103.23%								
Sr 421.552†	177458.8	483.1	ug/L	1.91	483.1	ug/L	1.91	0.40%
QC value within limits for Sr 421.552 Recovery = 96.63%								
Ti 337.279†	8009.5	502.1	ug/L	4.99	502.1	ug/L	4.99	0.99%
QC value within limits for Ti 337.279 Recovery = 100.42%								
Tl 190.801†	671.2	501.0	ug/L	5.61	501.0	ug/L	5.61	1.12%
QC value within limits for Tl 190.801 Recovery = 100.20%								
V 292.402†	55763.1	535.9	ug/L	24.38	535.9	ug/L	24.38	4.55%
QC value within limits for V 292.402 Recovery = 107.18%								
Zn 206.200†	5452.4	517.8	ug/L	10.49	517.8	ug/L	10.49	2.03%
QC value within limits for Zn 206.200 Recovery = 103.55%								

All analyte(s) passed QC.

Sequence No.: 11
Sample ID: CCB 161128RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 11/28/16 12:49:48 PM
Data Type: Reprocessed on 11/29/16 10:11:54 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCB 161128RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1096644.9	101.5	%	1.88				1.86%
Y 371.029 Radial	1035330.2	101.7	%	1.96				1.93%
Ag 338.289†	47.0	0.688	ug/L	0.3594	0.688	ug/L	0.3594	52.26%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	4.4	11.75	ug/L	19.367	11.75	ug/L	19.367	164.87%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	-0.5	-0.498	ug/L	3.3884	-0.498	ug/L	3.3884	680.93%
QC value within limits for As 188.979 Recovery = Not calculated								
B†	190.2	6.765	ug/L	0.8650	6.765	ug/L	0.8650	12.79%
QC value within limits for B Recovery = Not calculated								
Ba 233.527†	8.3	0.125	ug/L	0.0616	0.125	ug/L	0.0616	49.32%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	3.4	0.022	ug/L	0.0446	0.022	ug/L	0.0446	204.49%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	29.7	11.07	ug/L	6.094	11.07	ug/L	6.094	55.04%
QC value within limits for Ca 315.887 Recovery = Not calculated								
Cd 214.440†	22.0	0.315	ug/L	0.1222	0.315	ug/L	0.1222	38.83%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	4.9	0.193	ug/L	0.1572	0.193	ug/L	0.1572	81.49%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	-5.4	-0.107	ug/L	0.3477	-0.107	ug/L	0.3477	325.24%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	106.8	1.446	ug/L	0.5979	1.446	ug/L	0.5979	41.35%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	17.9	1.620	ug/L	0.9515	1.620	ug/L	0.9515	58.75%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	67.5	30.79	ug/L	48.605	30.79	ug/L	48.605	157.84%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	27.2	5.968	ug/L	1.0375	5.968	ug/L	1.0375	17.38%
QC value within limits for Mg 285.213 Recovery = Not calculated								
Mn 257.610†	-0.8	-0.105	ug/L	0.3904	-0.105	ug/L	0.3904	371.07%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	19.7	2.424	ug/L	0.1607	2.424	ug/L	0.1607	6.63%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	-101.0	-15.99	ug/L	2.588	-15.99	ug/L	2.588	16.19%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	-4.1	-0.199	ug/L	0.1450	-0.199	ug/L	0.1450	73.00%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	-4.1	-2.828	ug/L	0.6365	-2.828	ug/L	0.6365	22.50%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	-5.7	-1.253	ug/L	1.2696	-1.253	ug/L	1.2696	101.35%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	0.6	0.443	ug/L	0.9666	0.443	ug/L	0.9666	218.25%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	-1.1	-1.076	ug/L	5.5451	-1.076	ug/L	5.5451	515.11%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	3.3	1.139	ug/L	0.8547	1.139	ug/L	0.8547	75.06%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	21.8	0.059	ug/L	0.2199	0.059	ug/L	0.2199	370.17%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	7.9	0.497	ug/L	0.5697	0.497	ug/L	0.5697	114.58%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	2.9	2.156	ug/L	0.7521	2.156	ug/L	0.7521	34.88%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	-56.0	-0.499	ug/L	0.4531	-0.499	ug/L	0.4531	90.83%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	9.4	0.886	ug/L	0.3114	0.886	ug/L	0.3114	35.15%
QC value within limits for Zn 206.200 Recovery = Not calculated								

All analyte(s) passed QC.

Sequence No.: 24
Sample ID: CCV2 161128RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 11/28/16 1:53:04 PM
Data Type: Reprocessed on 11/29/16 10:12:09 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCV2 161128RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1018892.1	94.31	%	3.252				3.45%
Y 371.029 Radial	953044.6	93.62	%	3.454				3.69%
Ag 338.289†	12529.0	183.3	ug/L	7.90	183.3	ug/L	7.90	4.31%
QC value within limits for Ag 338.289 Recovery = 97.73%								
Al 308.215†	2789.6	7548	ug/L	291.4	7548	ug/L	291.4	3.86%
QC value within limits for Al 308.215 Recovery = 100.64%								
As 188.979†	403.3	388.3	ug/L	17.06	388.3	ug/L	17.06	4.39%
QC value within limits for As 188.979 Recovery = 103.55%								
B†	11103.8	395.0	ug/L	19.81	395.0	ug/L	19.81	5.01%
QC value within limits for B Recovery = 105.33%								
Ba 233.527†	25483.0	386.7	ug/L	18.60	386.7	ug/L	18.60	4.81%
QC value within limits for Ba 233.527 Recovery = 103.13%								
Be 313.107†	57163.3	367.4	ug/L	4.09	367.4	ug/L	4.09	1.11%
QC value within limits for Be 313.107 Recovery = 97.98%								
Ca 315.887†	50864.8	18970	ug/L	640.0	18970	ug/L	640.0	3.37%
QC value within limits for Ca 315.887 Recovery = 101.15%								
Cd 214.440†	27805.3	396.2	ug/L	19.56	396.2	ug/L	19.56	4.94%
QC value within limits for Cd 214.440 Recovery = 105.67%								
Co 228.616†	10070.7	388.7	ug/L	17.48	388.7	ug/L	17.48	4.50%
QC value within limits for Co 228.616 Recovery = 103.66%								
Cr 267.716†	20215.6	385.4	ug/L	19.63	385.4	ug/L	19.63	5.09%
QC value within limits for Cr 267.716 Recovery = 102.78%								
Cu 327.393†	27648.3	374.2	ug/L	18.33	374.2	ug/L	18.33	4.90%
QC value within limits for Cu 327.393 Recovery = 99.78%								
Fe 273.955†	89093.8	7772	ug/L	391.7	7772	ug/L	391.7	5.04%
QC value within limits for Fe 273.955 Recovery = 103.63%								
K 766.490†	16228.9	7394	ug/L	316.1	7394	ug/L	316.1	4.28%
QC value within limits for K 766.490 Recovery = 98.58%								
Mg 285.213†	85296.8	18730	ug/L	240.1	18730	ug/L	240.1	1.28%
QC value within limits for Mg 285.213 Recovery = 99.87%								
Mn 257.610†	2938.3	377.1	ug/L	12.36	377.1	ug/L	12.36	3.28%
QC value within limits for Mn 257.610 Recovery = 100.55%								
Mo 202.031†	3071.8	378.3	ug/L	8.49	378.3	ug/L	8.49	2.24%
QC value within limits for Mo 202.031 Recovery = 100.87%								
Na 589.592†	58772.8	9306	ug/L	139.0	9306	ug/L	139.0	1.49%
QC value within limits for Na 589.592 Recovery = 99.27%								
Ni 231.604†	8369.9	390.4	ug/L	20.23	390.4	ug/L	20.23	5.18%
QC value within limits for Ni 231.604 Recovery = 104.11%								
P 213.617†	2799.8	1911	ug/L	57.7	1911	ug/L	57.7	3.02%
QC value within limits for P 213.617 Recovery = 101.90%								
Pb 220.353†	1756.4	393.5	ug/L	11.57	393.5	ug/L	11.57	2.94%
QC value within limits for Pb 220.353 Recovery = 104.92%								
Sb 206.836†	492.1	384.3	ug/L	11.19	384.3	ug/L	11.19	2.91%
QC value within limits for Sb 206.836 Recovery = 102.48%								
Se 196.026†	378.9	377.9	ug/L	9.56	377.9	ug/L	9.56	2.53%
QC value within limits for Se 196.026 Recovery = 100.77%								
Sn 189.927†	1145.0	391.8	ug/L	8.63	391.8	ug/L	8.63	2.20%
QC value within limits for Sn 189.927 Recovery = 104.48%								
Sr 421.552†	132173.1	359.9	ug/L	3.90	359.9	ug/L	3.90	1.08%
QC value within limits for Sr 421.552 Recovery = 95.96%								
Ti 337.279†	5830.9	365.5	ug/L	12.36	365.5	ug/L	12.36	3.38%
QC value within limits for Ti 337.279 Recovery = 97.47%								
Tl 190.801†	500.5	373.6	ug/L	11.06	373.6	ug/L	11.06	2.96%
QC value within limits for Tl 190.801 Recovery = 99.64%								
V 292.402†	40281.2	387.2	ug/L	18.45	387.2	ug/L	18.45	4.76%
QC value within limits for V 292.402 Recovery = 103.26%								
Zn 206.200†	4179.3	396.7	ug/L	11.43	396.7	ug/L	11.43	2.88%
QC value within limits for Zn 206.200 Recovery = 105.79%								

All analyte(s) passed QC.

Sequence No.: 25
Sample ID: CCB 161128RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 11/28/16 1:56:32 PM
Data Type: Reprocessed on 11/29/16 10:12:10 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCB 161128RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1083336.7	100.3	%	1.15				1.14%
Y 371.029 Radial	1020887.1	100.3	%	1.25				1.24%
Ag 338.289†	-31.9	-0.466	ug/L	0.5164	-0.466	ug/L	0.5164	110.76%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	4.5	12.18	ug/L	2.869	12.18	ug/L	2.869	23.55%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	-0.9	-0.900	ug/L	3.1706	-0.900	ug/L	3.1706	352.18%
QC value within limits for As 188.979 Recovery = Not calculated								
B†	353.5	12.58	ug/L	0.095	12.58	ug/L	0.095	0.76%
QC value within limits for B Recovery = Not calculated								
Ba 233.527†	9.2	0.139	ug/L	0.1690	0.139	ug/L	0.1690	121.81%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-2.3	-0.015	ug/L	0.0158	-0.015	ug/L	0.0158	106.69%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	24.7	9.201	ug/L	2.7810	9.201	ug/L	2.7810	30.23%
QC value within limits for Ca 315.887 Recovery = Not calculated								
Cd 214.440†	9.6	0.137	ug/L	0.0122	0.137	ug/L	0.0122	8.95%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	-1.6	-0.058	ug/L	0.2132	-0.058	ug/L	0.2132	366.33%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	-10.0	-0.190	ug/L	0.2769	-0.190	ug/L	0.2769	145.44%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	-23.4	-0.318	ug/L	1.2593	-0.318	ug/L	1.2593	396.30%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	0.8	0.099	ug/L	0.7506	0.099	ug/L	0.7506	755.62%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	52.3	23.86	ug/L	55.749	23.86	ug/L	55.749	233.69%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	7.8	1.720	ug/L	0.7138	1.720	ug/L	0.7138	41.50%
QC value within limits for Mg 285.213 Recovery = Not calculated								
Mn 257.610†	-4.6	-0.585	ug/L	0.0840	-0.585	ug/L	0.0840	14.35%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	5.2	0.641	ug/L	0.8666	0.641	ug/L	0.8666	135.14%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	-87.1	-13.78	ug/L	12.460	-13.78	ug/L	12.460	90.43%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	-9.2	-0.433	ug/L	0.6908	-0.433	ug/L	0.6908	159.65%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	-2.1	-1.459	ug/L	0.4914	-1.459	ug/L	0.4914	33.69%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	-6.7	-1.488	ug/L	1.5801	-1.488	ug/L	1.5801	106.22%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	-0.4	-0.340	ug/L	0.8184	-0.340	ug/L	0.8184	241.06%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	-0.8	-0.812	ug/L	2.5863	-0.812	ug/L	2.5863	318.47%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	1.7	0.567	ug/L	1.3092	0.567	ug/L	1.3092	230.94%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	-2.5	-0.007	ug/L	0.1439	-0.007	ug/L	0.1439	>999.9%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	-1.3	-0.083	ug/L	0.8297	-0.083	ug/L	0.8297	998.20%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	3.0	2.256	ug/L	1.8975	2.256	ug/L	1.8975	84.12%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	-34.4	-0.318	ug/L	0.8809	-0.318	ug/L	0.8809	276.98%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	-7.6	-0.718	ug/L	0.7470	-0.718	ug/L	0.7470	103.98%
QC value within limits for Zn 206.200 Recovery = Not calculated								

All analyte(s) passed QC.

Sequence No.: 33
Sample ID: CCV1 161128RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 11/28/16 2:31:45 PM
Data Type: Reprocessed on 11/29/16 10:12:19 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCV1 161128RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1039584.1	96.23	%	1.428				1.48%
Y 371.029 Radial	977361.1	96.01	%	1.503				1.57%
Ag 338.289†	16797.8	245.7	ug/L	6.90	245.7	ug/L	6.90	2.81%
QC value within limits for Ag 338.289 Recovery = 98.27%								
Al 308.215†	3781.7	10230	ug/L	305.9	10230	ug/L	305.9	2.99%
QC value within limits for Al 308.215 Recovery = 102.33%								
As 188.979†	515.0	496.1	ug/L	10.12	496.1	ug/L	10.12	2.04%
QC value within limits for As 188.979 Recovery = 99.22%								
B†	14402.2	512.3	ug/L	20.47	512.3	ug/L	20.47	4.00%
QC value within limits for B Recovery = 102.46%								
Ba 233.527†	33792.8	512.9	ug/L	14.18	512.9	ug/L	14.18	2.76%
QC value within limits for Ba 233.527 Recovery = 102.57%								
Be 313.107†	73851.7	474.7	ug/L	16.48	474.7	ug/L	16.48	3.47%
QC value within limits for Be 313.107 Recovery = 94.94%								
Ca 315.887†	67725.8	25250	ug/L	715.7	25250	ug/L	715.7	2.83%
QC value within limits for Ca 315.887 Recovery = 101.01%								
Cd 214.440†	35908.4	511.7	ug/L	14.12	511.7	ug/L	14.12	2.76%
QC value within limits for Cd 214.440 Recovery = 102.35%								
Co 228.616†	13138.0	507.1	ug/L	12.09	507.1	ug/L	12.09	2.38%
QC value within limits for Co 228.616 Recovery = 101.41%								
Cr 267.716†	26913.2	513.1	ug/L	14.62	513.1	ug/L	14.62	2.85%
QC value within limits for Cr 267.716 Recovery = 102.62%								
Cu 327.393†	37573.9	508.5	ug/L	14.48	508.5	ug/L	14.48	2.85%
QC value within limits for Cu 327.393 Recovery = 101.71%								
Fe 273.955†	117591.9	10260	ug/L	281.6	10260	ug/L	281.6	2.75%
QC value within limits for Fe 273.955 Recovery = 102.57%								
K 766.490†	21979.2	10010	ug/L	327.9	10010	ug/L	327.9	3.27%
QC value within limits for K 766.490 Recovery = 100.14%								
Mg 285.213†	113715.5	24960	ug/L	761.0	24960	ug/L	761.0	3.05%
QC value within limits for Mg 285.213 Recovery = 99.86%								
Mn 257.610†	3924.3	503.6	ug/L	19.68	503.6	ug/L	19.68	3.91%
QC value within limits for Mn 257.610 Recovery = 100.72%								
Mo 202.031†	4047.3	498.4	ug/L	10.56	498.4	ug/L	10.56	2.12%
QC value within limits for Mo 202.031 Recovery = 99.68%								
Na 589.592†	77897.2	12330	ug/L	405.0	12330	ug/L	405.0	3.28%
QC value within limits for Na 589.592 Recovery = 98.67%								
Ni 231.604†	10866.0	506.8	ug/L	10.24	506.8	ug/L	10.24	2.02%
QC value within limits for Ni 231.604 Recovery = 101.36%								
P 213.617†	3563.9	2432	ug/L	53.1	2432	ug/L	53.1	2.18%
QC value within limits for P 213.617 Recovery = 97.28%								
Pb 220.353†	2262.9	507.0	ug/L	6.61	507.0	ug/L	6.61	1.30%
QC value within limits for Pb 220.353 Recovery = 101.40%								
Sb 206.836†	640.5	500.1	ug/L	15.41	500.1	ug/L	15.41	3.08%
QC value within limits for Sb 206.836 Recovery = 100.02%								
Se 196.026†	485.6	484.3	ug/L	8.09	484.3	ug/L	8.09	1.67%
QC value within limits for Se 196.026 Recovery = 96.86%								
Sn 189.927†	1481.3	507.1	ug/L	11.97	507.1	ug/L	11.97	2.36%
QC value within limits for Sn 189.927 Recovery = 101.42%								
Sr 421.552†	178909.3	487.1	ug/L	15.74	487.1	ug/L	15.74	3.23%
QC value within limits for Sr 421.552 Recovery = 97.42%								
Ti 337.279†	8066.8	505.7	ug/L	17.57	505.7	ug/L	17.57	3.47%
QC value within limits for Ti 337.279 Recovery = 101.14%								
Tl 190.801†	636.9	475.4	ug/L	10.45	475.4	ug/L	10.45	2.20%
QC value within limits for Tl 190.801 Recovery = 95.09%								
V 292.402†	54261.6	521.5	ug/L	13.61	521.5	ug/L	13.61	2.61%
QC value within limits for V 292.402 Recovery = 104.30%								
Zn 206.200†	5377.5	510.5	ug/L	12.78	510.5	ug/L	12.78	2.50%
QC value within limits for Zn 206.200 Recovery = 102.10%								

All analyte(s) passed QC.

Sequence No.: 34
Sample ID: CCB 161128RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 11/28/16 2:35:14 PM
Data Type: Reprocessed on 11/29/16 10:12:20 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCB 161128RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1096948.3	101.5	%	4.11				4.04%
Y 371.029 Radial	1035227.6	101.7	%	4.35				4.27%
Ag 338.289†	28.1	0.411	ug/L	0.6927	0.411	ug/L	0.6927	168.37%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	3.3	8.886	ug/L	7.1323	8.886	ug/L	7.1323	80.27%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	1.3	1.218	ug/L	1.3456	1.218	ug/L	1.3456	110.44%
QC value within limits for As 188.979 Recovery = Not calculated								
B†	182.4	6.487	ug/L	0.6304	6.487	ug/L	0.6304	9.72%
QC value within limits for B Recovery = Not calculated								
Ba 233.527†	2.7	0.041	ug/L	0.1717	0.041	ug/L	0.1717	414.35%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-0.5	-0.003	ug/L	0.0426	-0.003	ug/L	0.0426	>999.9%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	36.6	13.65	ug/L	1.917	13.65	ug/L	1.917	14.04%
QC value within limits for Ca 315.887 Recovery = Not calculated								
Cd 214.440†	8.5	0.122	ug/L	0.0846	0.122	ug/L	0.0846	69.24%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	6.0	0.238	ug/L	0.4443	0.238	ug/L	0.4443	186.97%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	5.9	0.113	ug/L	0.2396	0.113	ug/L	0.2396	212.22%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	-23.5	-0.319	ug/L	0.6433	-0.319	ug/L	0.6433	201.43%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	-17.4	-1.587	ug/L	0.3302	-1.587	ug/L	0.3302	20.81%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	185.6	84.66	ug/L	5.889	84.66	ug/L	5.889	6.96%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	16.7	3.668	ug/L	1.1292	3.668	ug/L	1.1292	30.78%
QC value within limits for Mg 285.213 Recovery = Not calculated								
Mn 257.610†	0.1	0.009	ug/L	0.9570	0.009	ug/L	0.9570	>999.9%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	11.6	1.433	ug/L	0.5970	1.433	ug/L	0.5970	41.67%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	-102.9	-16.32	ug/L	15.682	-16.32	ug/L	15.682	96.12%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	-1.7	-0.083	ug/L	0.0847	-0.083	ug/L	0.0847	101.54%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	-5.3	-3.595	ug/L	1.5844	-3.595	ug/L	1.5844	44.07%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	-13.2	-2.939	ug/L	1.6672	-2.939	ug/L	1.6672	56.73%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	0.4	0.312	ug/L	0.7838	0.312	ug/L	0.7838	251.40%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	-1.7	-1.713	ug/L	4.4752	-1.713	ug/L	4.4752	261.23%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	1.2	0.422	ug/L	1.0342	0.422	ug/L	1.0342	245.02%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	29.3	0.080	ug/L	0.2073	0.080	ug/L	0.2073	259.85%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	-6.8	-0.427	ug/L	0.6822	-0.427	ug/L	0.6822	159.83%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	2.3	1.720	ug/L	0.3480	1.720	ug/L	0.3480	20.23%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	79.6	0.774	ug/L	0.3349	0.774	ug/L	0.3349	43.29%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	7.4	0.703	ug/L	1.4504	0.703	ug/L	1.4504	206.46%
QC value within limits for Zn 206.200 Recovery = Not calculated								

All analyte(s) passed QC.

METALS

Raw Data

APPL, INC.

METALS BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
6010C	CALCIUM (CA)	29.0 J	1000	75.0	27.5	ug/L	11/21/16	11/28/16	#61CDO-161121A-AZ45988
6010C	MAGNESIUM (MG)	30.0 U	500	30.0	12.9	ug/L	11/21/16	11/28/16	#61CDO-161121A-AZ45988
6010C	MANGANESE (MN)	4.00 U	10.0	4.00	1.23	ug/L	11/21/16	11/28/16	#61CDO-161121A-AZ45988
6010C	POTASSIUM (K)	500.0 U	3000	500.0	220.0	ug/L	11/21/16	11/28/16	#61CDO-161121A-AZ45988
6010C	SODIUM (NA)	500.0 U	5000	500.0	111.1	ug/L	11/21/16	11/28/16	#61CDO-161121A-AZ45988

J = Estimated value.

Metals SC-Blank-REG MDLs
Printed: 11/29/16 1:31:25 PM

Sequence No.: 12
Sample ID: 161121A-3010-BLK
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 43
Date Collected: 11/28/16 12:54:03 PM
Data Type: Reprocessed on 11/29/16 10:11:55 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: 161121A-3010-BLK

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1083016.3	100.2	%	2.32				2.31%
Y 371.029 Radial	1021341.2	100.3	%	2.42				2.41%
Ag 338.289†	56.0	0.819	ug/L	0.6533	0.819	ug/L	0.6533	79.73%
Al 308.215†	-2.3	-6.110	ug/L	12.3565	-6.110	ug/L	12.3565	202.24%
As 188.979†	-4.2	-4.005	ug/L	6.0849	-4.005	ug/L	6.0849	151.94%
B†	45.6	1.622	ug/L	0.3672	1.622	ug/L	0.3672	22.64%
Ba 233.527†	6.2	0.094	ug/L	0.0267	0.094	ug/L	0.0267	28.30%
Be 313.107†	-1.9	-0.012	ug/L	0.0080	-0.012	ug/L	0.0080	64.88%
Ca 315.887†	77.7	28.96	ug/L	2.122	28.96	ug/L	2.122	7.33%
Cd 214.440†	23.8	0.339	ug/L	0.0911	0.339	ug/L	0.0911	26.83%
Co 228.616†	10.6	0.414	ug/L	0.4953	0.414	ug/L	0.4953	119.61%
Cr 267.716†	-4.3	-0.081	ug/L	0.0838	-0.081	ug/L	0.0838	103.19%
Cu 327.393†	-47.5	-0.644	ug/L	0.9984	-0.644	ug/L	0.9984	155.14%
Fe 273.955†	-40.1	-3.553	ug/L	1.4440	-3.553	ug/L	1.4440	40.64%
K 766.490†	0.3	0.126	ug/L	110.2698	0.126	ug/L	110.2698	>999.9%
Mg 285.213†	4.6	1.011	ug/L	0.9377	1.011	ug/L	0.9377	92.80%
Mn 257.610†	-3.6	-0.462	ug/L	0.8468	-0.462	ug/L	0.8468	183.28%
Mo 202.031†	4.3	0.532	ug/L	0.6382	0.532	ug/L	0.6382	119.97%
Na 589.592†	-22.9	-3.625	ug/L	15.3158	-3.625	ug/L	15.3158	422.49%
Ni 231.604†	-14.8	-0.699	ug/L	0.9256	-0.699	ug/L	0.9256	132.42%
P 213.617†	2.3	1.592	ug/L	2.6442	1.592	ug/L	2.6442	166.05%
Pb 220.353†	-17.2	-3.839	ug/L	1.6956	-3.839	ug/L	1.6956	44.16%
Sb 206.836†	-1.3	-1.024	ug/L	0.2664	-1.024	ug/L	0.2664	26.02%
Se 196.026†	-2.4	-2.374	ug/L	7.2779	-2.374	ug/L	7.2779	306.57%
Sn 189.927†	-5.2	-1.764	ug/L	1.2905	-1.764	ug/L	1.2905	73.17%
Sr 421.552†	12.5	0.034	ug/L	0.1046	0.034	ug/L	0.1046	310.03%
Ti 337.279†	-10.6	-0.662	ug/L	0.9597	-0.662	ug/L	0.9597	144.95%
Tl 190.801†	1.7	1.243	ug/L	1.7834	1.243	ug/L	1.7834	143.50%
V 292.402†	45.1	0.434	ug/L	0.4406	0.434	ug/L	0.4406	101.51%
Zn 206.200†	4.9	0.468	ug/L	0.6992	0.468	ug/L	0.6992	149.24%

Laboratory Control Spike Recovery

METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 6010C	CALCIUM (CA)	25000	26000	104	87-113	11/21/16	11/28/16	#61CDO-161121A-AZ45988
EPA 6010C	MAGNESIUM (MG)	25000	25500	102	85-113	11/21/16	11/28/16	#61CDO-161121A-AZ45988
EPA 6010C	MANGANESE (MN)	250	277	111	90-114	11/21/16	11/28/16	#61CDO-161121A-AZ45988
EPA 6010C	POTASSIUM (K)	5000	5100	102	86-114	11/21/16	11/28/16	#61CDO-161121A-AZ45988
EPA 6010C	SODIUM (NA)	25000	25700	103	87-115	11/21/16	11/28/16	#61CDO-161121A-AZ45988

Comments: _____

Sequence No.: 13
Sample ID: 161121A-3010-LCS
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 44
Date Collected: 11/28/16 12:58:29 PM
Data Type: Reprocessed on 11/29/16 10:11:56 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: 161121A-3010-LCS

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	1065041.4	98.58	%	2.319				2.35%
Y 371.029 Radial	1003302.7	98.56	%	2.545				2.58%
Ag 338.289†	6618.7	96.81	ug/L	3.346	96.81	ug/L	3.346	3.46%
Al 308.215†	778.7	2106	ug/L	37.1	2106	ug/L	37.1	1.76%
As 188.979†	258.2	247.8	ug/L	9.55	247.8	ug/L	9.55	3.85%
B†	6764.2	240.6	ug/L	8.39	240.6	ug/L	8.39	3.49%
Ba 233.527†	18119.5	275.5	ug/L	8.00	275.5	ug/L	8.00	2.90%
Be 313.107†	7919.0	50.90	ug/L	0.829	50.90	ug/L	0.829	1.63%
Ca 315.887†	69718.8	26000	ug/L	325.8	26000	ug/L	325.8	1.25%
Cd 214.440†	3696.1	52.81	ug/L	0.903	52.81	ug/L	0.903	1.71%
Co 228.616†	6805.2	262.7	ug/L	6.41	262.7	ug/L	6.41	2.44%
Cr 267.716†	14206.8	270.7	ug/L	8.10	270.7	ug/L	8.10	2.99%
Cu 327.393†	19594.8	264.2	ug/L	7.61	264.2	ug/L	7.61	2.88%
Fe 273.955†	12868.8	1100	ug/L	28.3	1100	ug/L	28.3	2.58%
K 766.490†	11198.4	5101	ug/L	114.1	5101	ug/L	114.1	2.24%
Mg 285.213†	116157.5	25490	ug/L	359.2	25490	ug/L	359.2	1.41%
Mn 257.610†	2163.3	276.8	ug/L	4.39	276.8	ug/L	4.39	1.58%
Mo 202.031†	2107.8	259.0	ug/L	3.93	259.0	ug/L	3.93	1.52%
Na 589.592†	162556.5	25720	ug/L	365.0	25720	ug/L	365.0	1.42%
Ni 231.604†	5677.7	264.4	ug/L	8.61	264.4	ug/L	8.61	3.26%
P 213.617†	3027.6	2066	ug/L	26.0	2066	ug/L	26.0	1.26%
Pb 220.353†	1191.1	265.9	ug/L	6.57	265.9	ug/L	6.57	2.47%
Sb 206.836†	317.5	247.9	ug/L	1.73	247.9	ug/L	1.73	0.70%
Se 196.026†	239.1	238.5	ug/L	5.26	238.5	ug/L	5.26	2.21%
Sn 189.927†	734.8	252.0	ug/L	3.61	252.0	ug/L	3.61	1.43%
Sr 421.552†	93428.0	254.2	ug/L	4.05	254.2	ug/L	4.05	1.59%
Ti 337.279†	4095.1	256.6	ug/L	3.39	256.6	ug/L	3.39	1.32%
Tl 190.801†	340.5	254.2	ug/L	3.96	254.2	ug/L	3.96	1.56%
V 292.402†	28455.2	274.4	ug/L	7.52	274.4	ug/L	7.52	2.74%
Zn 206.200†	5574.1	527.7	ug/L	7.65	527.7	ug/L	7.65	1.45%

1%HNO3 / 5%HCl BLK		PREPPED BY RJS			6010B/6010C ICSA				
AMOUNT	REAGENT	MANUFACTURER	LOT	OPEN DATE	AMOUNT	STD	MANUFACTURER	LOT	EXP DATE
100 mL	HCL	BDH	4115022	11/28/16	1mL	Al	CPI	14D237-33868	01/15/16
20 mL	HNO3	EMD	55043	11/28/16	1mL	Ca	CPI	14D176-33867	01/15/16
Prepared in 2000 ml DI Water					1mL	Mg	CPI	14F190-33865	01/15/16
STD 1 / LDL 6010B/6010C					1mL	Fe	O2SI	1062942-33880	01/12/16
AMOUNT	STD	MANUFACTURER	LOT	EXP DATE	Prepared in 50 ml 1%HNO3/5%HCl				
0.5 mL	6010 LDL	O2SI	1078402-35590	09/01/16	6010B/6010C ICSAB				
Prepared in 50 ml 1%HNO3/5%HCl					1mL	Al	CPI	14D237-33868	01/15/16
STD 3 / HDL 6010B/6010C					1mL	Ca	CPI	14D176-33867	01/15/16
1ML	CCV-A	Environmental Express	1602141-36120	01/27/17	1mL	Mg	CPI	14F190-33865	01/15/16
1ML	CCV-B	Environmental Express	1602140-36119	01/27/17	1mL	Fe	O2SI	1062942-33880	01/12/16
1ML	CCV-C	Environmental Express	1602139-36118	01/27/17	0.5mL	INT SPECIAL MIX	O2SI	1070553-34624	03/01/16
Prepared in 100 ml 1%HNO3 / 5%HCl					Prepared in 50 ml 1%HNO3/5%HCl				
STD 2 / CCV1 6010B/6010C/6010C					6010B/6010C ICV				
AMOUNT	STD	PREP DATE	EXP DATE		0.5ML	QCS ICV A	CPI	15C180-34943	09/19/16
25mL	STD 3	TODAY	1 week		0.5ML	QCS ICV B	CPI	15C181-34944	09/19/16
25mL	1%HNO3/5%HCl	TODAY	1 week		Prepared in 50ml 1%HNO3/5%HCl				
CCV2 6010B/6010C					6010B/6010C Internal Standard				
AMOUNT	STD	PREP DATE	EXP DATE		AMOUNT	STD	MANUFACTURER		
15mL	STD 3	TODAY	1 week		2mL	Yttrium	O2SI	1073310-35027	10/01/16
25mL	1%HNO3/5%HCl	TODAY	1 week		Prepared in 2L 1%HNO3 / 5%HCl				

_M3010

Metals Digestion Worksheet

Method Name 3010A Digestion **Prep Method** M3010 **Set** 161121A **Units** mL

Spikes	
Spiked ID 1	LCSW LOT# 1095239-37014
Spiked ID 2	LCSW LOT# 1095111-37013
Spiked ID 3	
Spiked ID 4	
Spiked By	NM Date: 11/21/16 9:15:00 AM
Witnessed By	RJS Date: 11/21/16 9:15:00 AM

Starting Temp:	95c Slot 6
Ending Temp:	94c Slot 6
Temperature Type:	Mod Block
Sufficient Vol for Matrix QC:	Yes
End Date/Time	11/21/16 13:00

	Sample	Sample Container	Spike Amount	Spike ID	Digested Amount	Final Volume	Start Date/Time	Comments
1	161121A Blk				50mL	50mL	11/21/16 9:15	equip: Modblock4
2	161121A LCS		500uL	1+2	50mL	50mL	11/21/16 9:15	equip: Modblock4
3	AZ45967	AZ45967W02			50mL	50mL	11/21/16 9:15	equip: Modblock4
4	AZ45968	AZ45968W03			50mL	50mL	11/21/16 9:15	equip: Modblock4
5	AZ45969	AZ45969W02			50mL	50mL	11/21/16 9:15	equip: Modblock4
6	AZ45970	AZ45970W03			50mL	50mL	11/21/16 9:15	equip: Modblock4
7	AZ45971	AZ45971W04			50mL	50mL	11/21/16 9:15	equip: Modblock4
8	AZ45972	AZ45972W03			50mL	50mL	11/21/16 9:15	equip: Modblock4
9	AZ45988	AZ45988W17			50mL	50mL	11/21/16 9:15	equip: Modblock4
10	AZ45991	AZ45991W17			50mL	50mL	11/21/16 9:15	equip: Modblock4
11	AZ45992	AZ45992W17			50mL	50mL	11/21/16 9:15	equip: Modblock4
12	AZ45993	AZ45993W17			50mL	50mL	11/21/16 9:15	equip: Modblock4
13	AZ45994	AZ45994W21			50mL	50mL	11/21/16 9:15	equip: Modblock4
14	AZ46091	AZ46091M01			1mL	50mL	11/21/16 9:15	equip: Modblock4 DF 50
15	AZ46138	AZ46138W10			50mL	50mL	11/21/16 9:15	equip: Modblock4
16	AZ46138 MS	AZ46138W10	500uL	1+2	50mL	50mL	11/21/16 9:15	equip: Modblock4
17	AZ46138 MSD	AZ46138W10	500uL	1+2	50mL	50mL	11/21/16 9:15	equip: Modblock4
18	AZ46139	AZ46139W04			50mL	50mL	11/21/16 9:15	equip: Modblock4
19	AZ46140	AZ46140W04			50mL	50mL	11/21/16 9:15	equip: Modblock4

Solvent and Lot#
HNO3 J.T.B. 145075 7712
1:1 HCL 11-17-16

Sample COC Transfer	
Sample prep employee Initials	nm
Analyst's initials	RJS
Date	11/21/16
Time	1630
Moved to	METALS

Technician's Initials	
Scanned By	nm
Sample Preparation	nm
Digestion	nm
Bring up to volume	nm
Modified	11/21/16 9:01:05 AM

Reviewed By: RJS **Date:** 11/21/16

200.7 Injection Log

Directory: K:\ICAP PHOEBE\Backup Excel\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	28 Nov 2016	11:32	CalBlk 161128RJS I:PB O:R		161128A2007	1.
2	28 Nov 2016	11:36	STD 1 161128RJS I:PB O:RJ		161128A2007	1.
3	28 Nov 2016	11:41	STD 2 161128RJS I:PB O:RJ		161128A2007	1.
4	28 Nov 2016	11:44	STD 3 161128RJS I:PB O:RJ		161128A2007	1.
5	28 Nov 2016	12:02	ICV 161128RJS I:PB O:RJS		161128A2007	1.
6	28 Nov 2016	12:09	ICB 161128RJS I:PB O:RJS		161128A2007	1.
7	28 Nov 2016	12:23	LLICV 161128RJS I:PB O:RJ		161128A2007	1.
8	28 Nov 2016	12:32	ICSA 161128RJS I:PB O:RJS		161128A2007	1.
9	28 Nov 2016	12:42	ICSAB 161128RJS I:PB O:RJ		161128A2007	1.
10	28 Nov 2016	12:46	CCV1 161128RJS I:PB O:RJS		161128A2007	1.
11	28 Nov 2016	12:49	CCB 161128RJS I:PB O:RJS		161128A2007	1.
12	28 Nov 2016	12:54	161121A-3010-BLK		161128A2007	1.
13	28 Nov 2016	12:58	161121A-3010-LCS		161128A2007	1.
14	28 Nov 2016	13:03	AZ45988W17-1/20		161128A2007	20.
19	28 Nov 2016	13:25	AZ45988W17		161128A2007	1.
20	28 Nov 2016	13:31	AZ45991W17		161128A2007	1.
21	28 Nov 2016	13:36	AZ45992W17		161128A2007	1.
22	28 Nov 2016	13:42	AZ45993W17		161128A2007	1.
23	28 Nov 2016	13:47	AZ45994W21		161128A2007	1.
24	28 Nov 2016	13:53	CCV2 161128RJS I:PB O:RJS		161128A2007	1.
25	28 Nov 2016	13:56	CCB 161128RJS I:PB O:RJS		161128A2007	1.
26	28 Nov 2016	14:00	AZ45991W17-1/5		161128A2007	5.
27	28 Nov 2016	14:05	AZ45992W17-1/5		161128A2007	5.
28	28 Nov 2016	14:09	AZ45993W17-1/5		161128A2007	5.
33	28 Nov 2016	14:31	CCV1 161128RJS I:PB O:RJS		161128A2007	1.
34	28 Nov 2016	14:35	CCB 161128RJS I:PB O:RJS		161128A2007	1.

INORGANIC ANALYSIS

APPL, INC.

INORGANIC ANALYSIS
QC Summary

APPL, INC.

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	11/18/16	11/18/16	#300WD-161118A-AZ45988
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	11/18/16	11/18/16	#300WD-161118A-AZ45988
SM 4500-S	SILICA W	0.80 U	1.0	0.80	0.53	mg/L	11/21/16	11/21/16	#SIO2-161121A-AZ45866
SM 4500-S	DISSOLVED SILICA	0.80 U	1.0	0.80	0.53	mg/L	11/21/16	11/21/16	#SIO2D-161121B-AZ45866
SM 2320B	BICARBONATE AS	1.70 U	2.0	1.70	0.85	mg/L	11/21/16	11/21/16	#232W-161121A1-AZ45991
SM 2320B	CARBONATE AS CA	1.70 U	2.0	1.70	0.85	mg/L	11/21/16	11/21/16	#232W-161121A1-AZ45991
SM 2320B	TOTAL ALKALINITY	1.70 U	2.0	1.70	0.85	mg/L	11/21/16	11/21/16	#232W-161121A1-AZ45991
EPA 300.0	BROMIDE	0.16 U	0.5	0.16	0.05	mg/L	11/17/16	11/17/16	#300W-161117A-AZ45991
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	11/17/16	11/17/16	#300W-161117A-AZ45991
EPA 300.0	FLUORIDE	0.09 U	0.1	0.09	0.08	mg/L	11/17/16	11/17/16	#300W-161117A-AZ45991
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	11/17/16	11/17/16	#300W-161117A-AZ45991
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	11/17/16	11/17/16	#300W-161117A-AZ45991
SM3500Fe	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	11/17/16	11/17/16	#35FE-161117A-AZ45994

Wetlab SC-Blank-REG MDLs
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Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
SM3500Fe	FERROUS IRON	3.00	2.89	96.3	80-120	11/17/16	11/17/16	#35FE-161117A-AZ45994

Comments: _____

Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 300.0	BROMIDE	12.5	12.1	96.8	90-110	11/17/16	11/17/16	#300W-161117A-AZ45991
EPA 300.0	CHLORIDE	20.0	18.7	93.5	90-110	11/17/16	11/17/16	#300W-161117A-AZ45991
EPA 300.0	FLUORIDE	2.50	2.57	103	90-110	11/17/16	11/17/16	#300W-161117A-AZ45991
EPA 300.0	NITRATE	22.1	20.4	92.3	90-110	11/17/16	11/17/16	#300W-161117A-AZ45991
EPA 300.0	SULFATE	20.0	18.4	92.0	90-110	11/17/16	11/17/16	#300W-161117A-AZ45991
SM 2320B	BICARBONATE AS CACO3	250	242	96.8	90-110	11/21/16	11/21/16	#232W-161121A1-AZ45991
SM 2320B	TOTAL ALKALINITY AS CACO3	250	242	96.8	90-110	11/21/16	11/21/16	#232W-161121A1-AZ45991

Comments: _____

Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	20.0	18.9	94.5	90-110	11/18/16	11/18/16	#300WD-161118A-AZ45988
EPA 300.0	SULFATE	20.0	18.5	92.5	90-110	11/18/16	11/18/16	#300WD-161118A-AZ45988
SM 4500-Si	SILICA W	4.00	4.29	107	80-120	11/21/16	11/21/16	#SIO2-161121A-AZ45866
SM 4500-Si	DISSOLVED SILICA	4.00	4.38	110	80-120	11/21/16	11/21/16	#SIO2D-161121B-AZ45866

Comments: _____

Matrix Spike Recoveries

WETLAB

APPL ID: **161121W-45991 MS - 213934**

Sample ID: AZ45991

Client ID: ERH124

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	Matrix Res mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
SM 2320B	BICARBONATE AS CA	250	196	421	428	90.0	92.8	1.6	20	90-110	11/21/16	11/21/16	11/21/16	11/21/16	213934	AZ45991
SM 2320B	TOTAL ALKALINITY AS	250	196	421	428	90.0	92.8	1.6	20	90-110	11/21/16	11/21/16	11/21/16	11/21/16	213934	AZ45991

Comments: _____

INORGANIC ANALYSIS
Sample Data

APPL, INC.

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH118

APPL ID: AZ45988

Sample Collection Date: 11/15/16

ARF: 81515

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	CHLORIDE	1070	100.0	20.00	8.00	mg/L	100	11/18/16	11/18/16
EPA 300.0	SULFATE	368	100.0	20.00	9.00	mg/L	100	11/18/16	11/18/16
EPA 300.0	BROMIDE	3.2	2.5	0.80	0.25	mg/L	5	11/17/16	11/17/16
EPA 300.0	FLUORIDE	0.45 U	0.5	0.45	0.40	mg/L	5	11/17/16	11/17/16
EPA 300.0	NITRATE	8.1	2.5	0.90	0.20	mg/L	5	11/17/16	11/17/16
SM 2320B	BICARBONATE AS CACO3	161	2.0	1.70	0.85	mg/L	1	11/21/16	11/21/16
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	11/21/16	11/21/16
SM 2320B	TOTAL ALKALINITY AS CACO3	161	2.0	1.70	0.85	mg/L	1	11/21/16	11/21/16
SM 4500-Si D	SILICA W	64.4	5.0	4.00	2.65	mg/L	5	11/21/16	11/21/16
SM 4500-Si D	DISSOLVED SILICA	58.9	5.0	4.00	2.65	mg/L	5	11/21/16	11/21/16
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	11/17/16	11/17/16

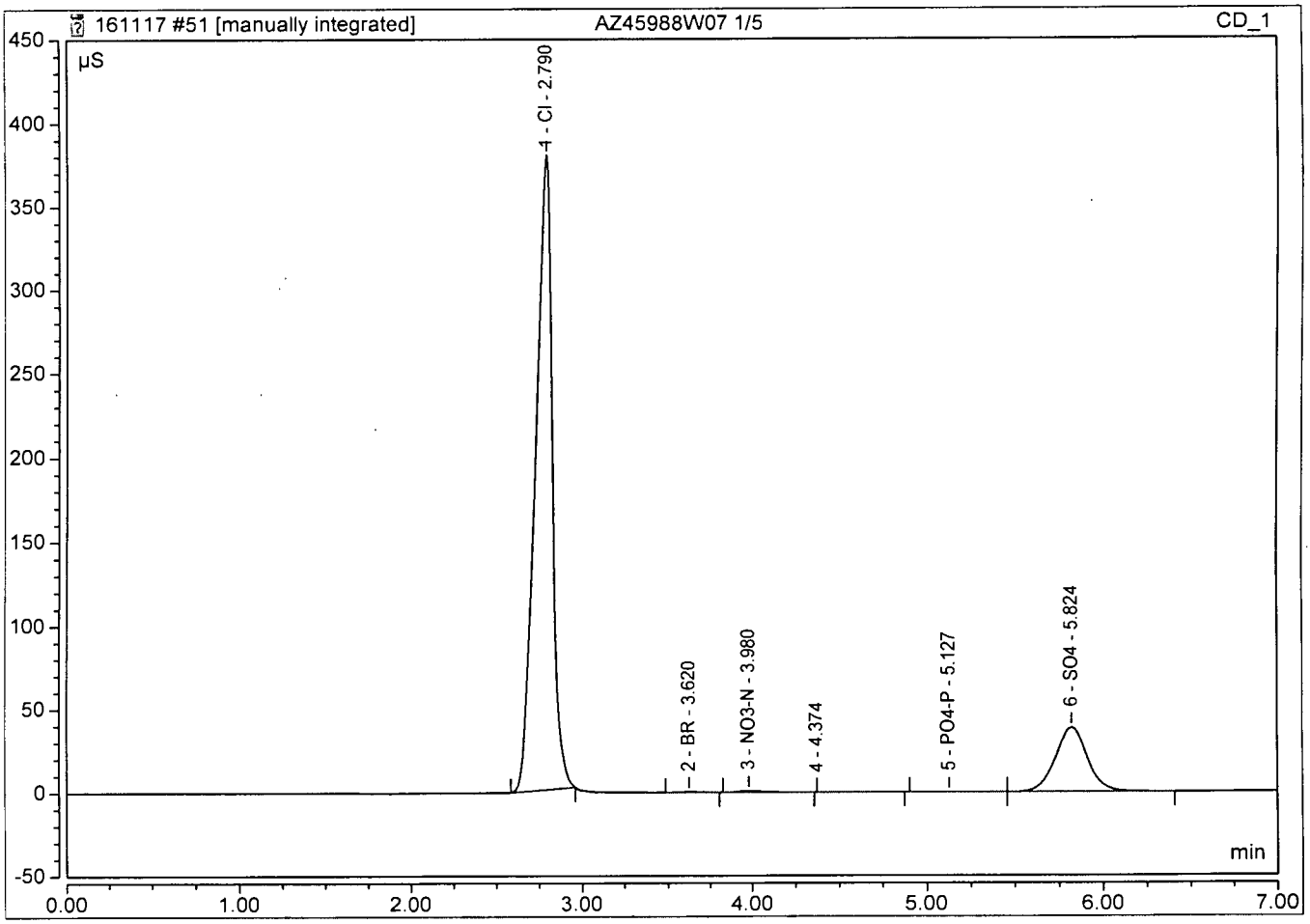
Printed: 11/29/16 3:06:20 PM

APPL-F1-SC-NoMC-REG MDLs

Peak Integration Report

Sample Name:	**AZ45988W07 1/5**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**5.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**17-Nov-2016 / 19:50**	*Run Time:*	**7.00**

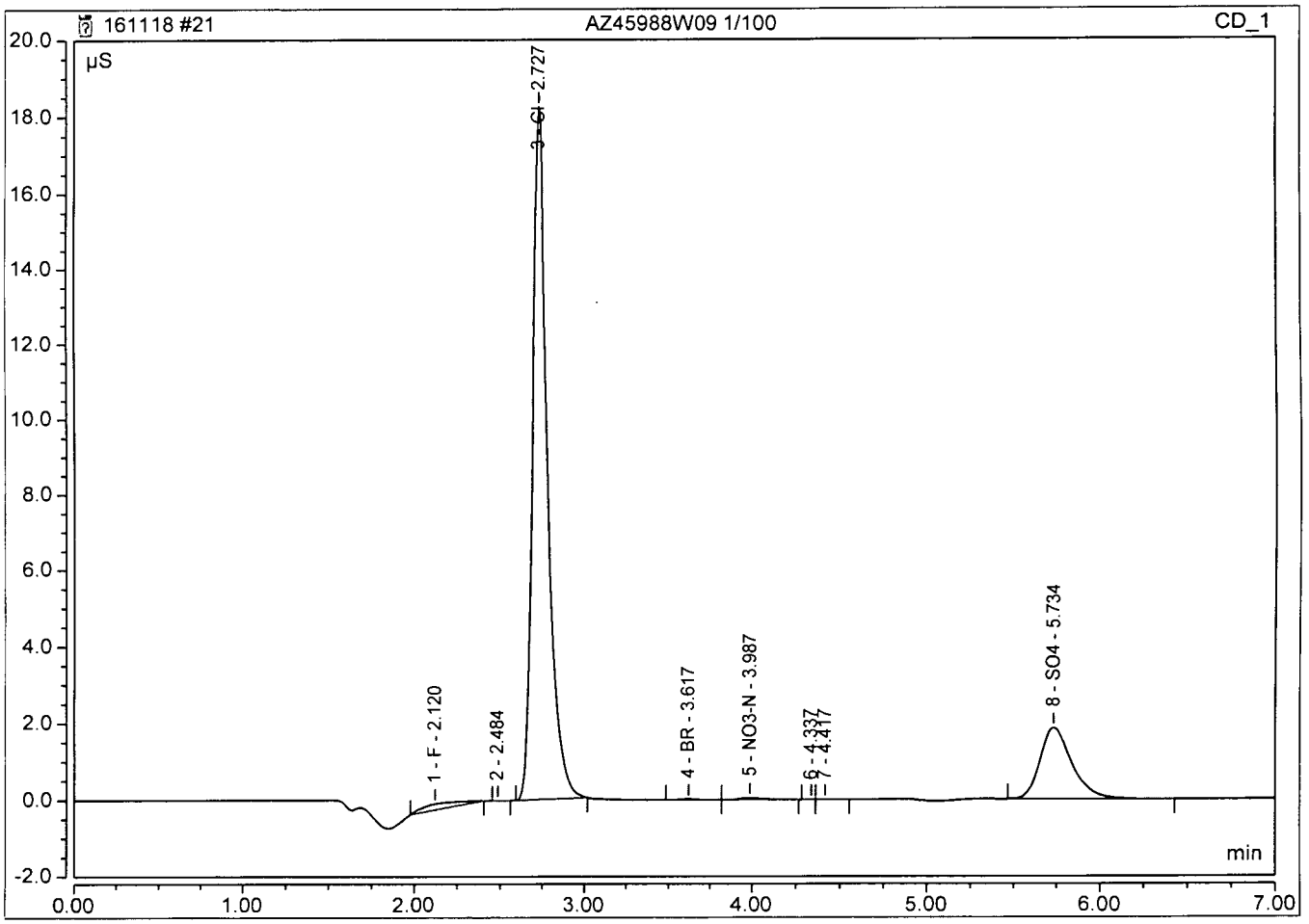
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.79	**Cl**	BMB	42.616	379.193	1175.9235
2	3.62	**BR**	BMB	0.032	0.269	3.1817
3	3.98	**NO3-N**	BMB	0.111	0.790	1.8277
5	5.13	**PO4-P**	BMB	0.016	0.058	0.9783
6	5.82	**SO4**	BMB	7.909	38.052	326.2961
TOTAL:				50.68	418.36	1508.21



Peak Integration Report

Sample Name:	**AZ45988W09 1/100**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**100.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**18-Nov-2016 / 14:09**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.12	F	BMB	0.042	0.157	22.4709
3	2.73	Cl	BMB	1.857	18.247	1074.4608
4	3.62	BR	BMB	0.002	0.016	15.6665
5	3.99	NO3-N	BMB	0.007	0.044	11.2421
8	5.73	SO4	BMB	0.389	1.839	367.8124
TOTAL:				2.30	20.30	1491.65



Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH124

Sample Collection Date: 11/15/16

APPL ID: AZ45991

ARF: 81515

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date Analysis Date
EPA 300.0	BROMIDE	0.26 J	0.5	0.16	0.05	mg/L	1	11/17/16 11/17/16
EPA 300.0	CHLORIDE	39.0	1.0	0.20	0.08	mg/L	1	11/17/16 11/17/16
EPA 300.0	FLUORIDE	0.78	0.1	0.09	0.08	mg/L	1	11/17/16 11/17/16
EPA 300.0	NITRATE	0.45 J	0.5	0.18	0.04	mg/L	1	11/17/16 11/17/16
EPA 300.0	SULFATE	1.2	1.0	0.20	0.09	mg/L	1	11/17/16 11/17/16
SM 2320B	BICARBONATE AS CACO3	196	2.0	1.70	0.85	mg/L	1	11/21/16 11/21/16
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	11/21/16 11/21/16
SM 2320B	TOTAL ALKALINITY AS CACO3	196	2.0	1.70	0.85	mg/L	1	11/21/16 11/21/16
SM 4500-Si D	SILICA W	83.7	5.0	4.00	2.65	mg/L	5	11/21/16 11/21/16
SM 4500-Si D	DISSOLVED SILICA	84.4	5.0	4.00	2.65	mg/L	5	11/21/16 11/21/16
SM3500FeB	FERROUS IRON	2.9	1.0	0.32	0.16	mg/L	1	11/17/16 11/17/16

J = Estimated value.

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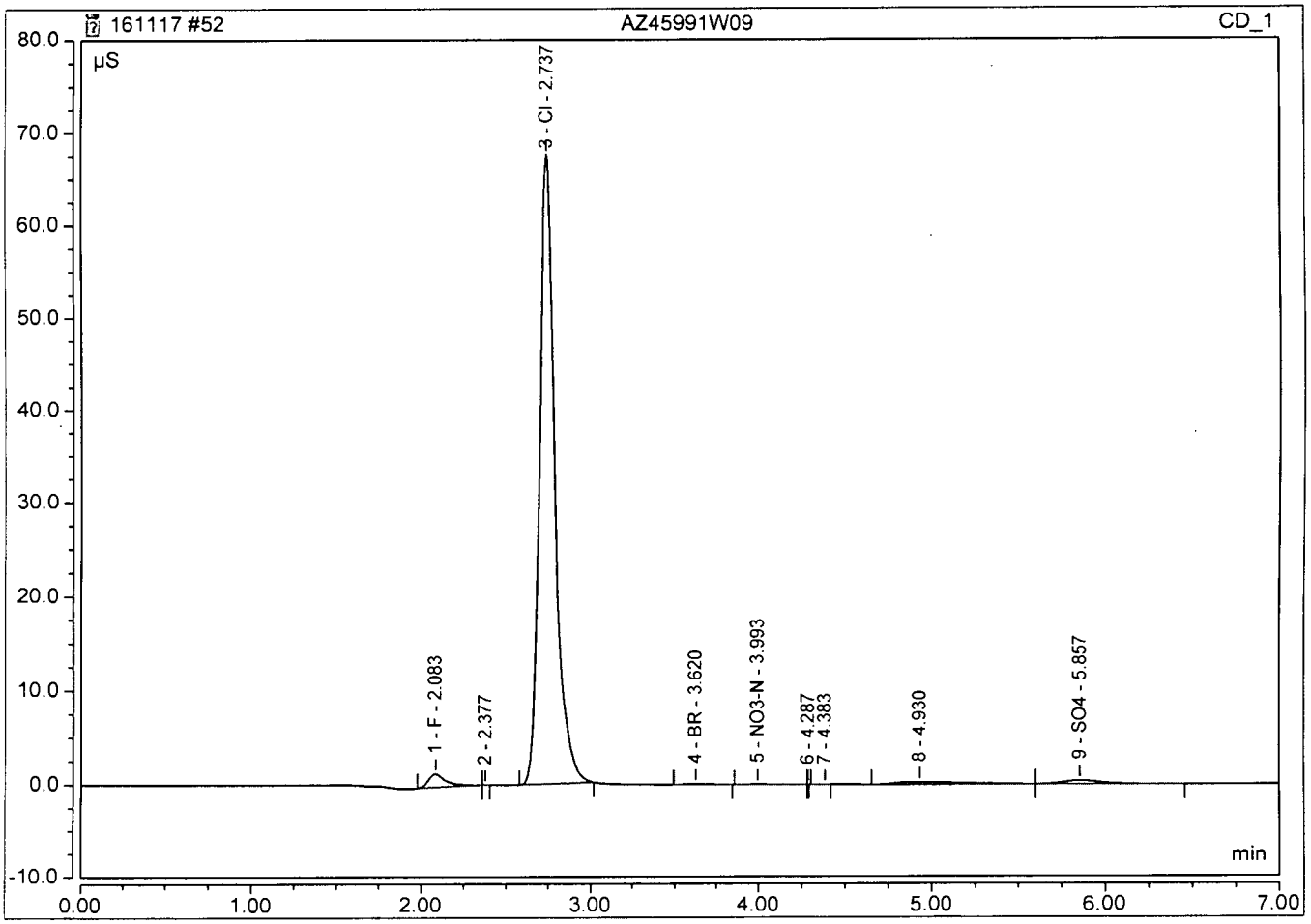
APPL-F1-SC-NoMC-REG MDLs

Peak Integration Report

Sample Name:	**AZ45991W09**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**17-Nov-2016 / 20:03**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.08	F	BMB	0.167	1.419	0.7804
3	2.74	Cl	BMB	6.981	67.546	38.9592
4	3.62	BR	BMB	0.008	0.066	0.2556
5	3.99	NO3-N	BMB	0.003	0.020	0.1027
9	5.86	SO4	BMB	0.090	0.368	1.2341
TOTAL:				7.25	69.42	41.33



Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH125

Sample Collection Date: 11/15/16

APPL ID: AZ45992

ARF: 81515

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	BROMIDE	0.29 J	0.5	0.16	0.05	mg/L	1	11/17/16	11/17/16
EPA 300.0	CHLORIDE	47.2	1.0	0.20	0.08	mg/L	1	11/17/16	11/17/16
EPA 300.0	FLUORIDE	0.25	0.1	0.09	0.08	mg/L	1	11/17/16	11/17/16
EPA 300.0	NITRATE	7.6	0.5	0.18	0.04	mg/L	1	11/17/16	11/17/16
EPA 300.0	SULFATE	45.7	1.0	0.20	0.09	mg/L	1	11/17/16	11/17/16
SM 2320B	BICARBONATE AS CACO3	285	2.0	1.70	0.85	mg/L	1	11/21/16	11/21/16
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	11/21/16	11/21/16
SM 2320B	TOTAL ALKALINITY AS CACO3	285	2.0	1.70	0.85	mg/L	1	11/21/16	11/21/16
SM 4500-Si D	SILICA W	87.4	5.0	4.00	2.65	mg/L	5	11/21/16	11/21/16
SM 4500-Si D	DISSOLVED SILICA	83.5	5.0	4.00	2.65	mg/L	5	11/21/16	11/21/16
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	11/17/16	11/17/16

J = Estimated value.

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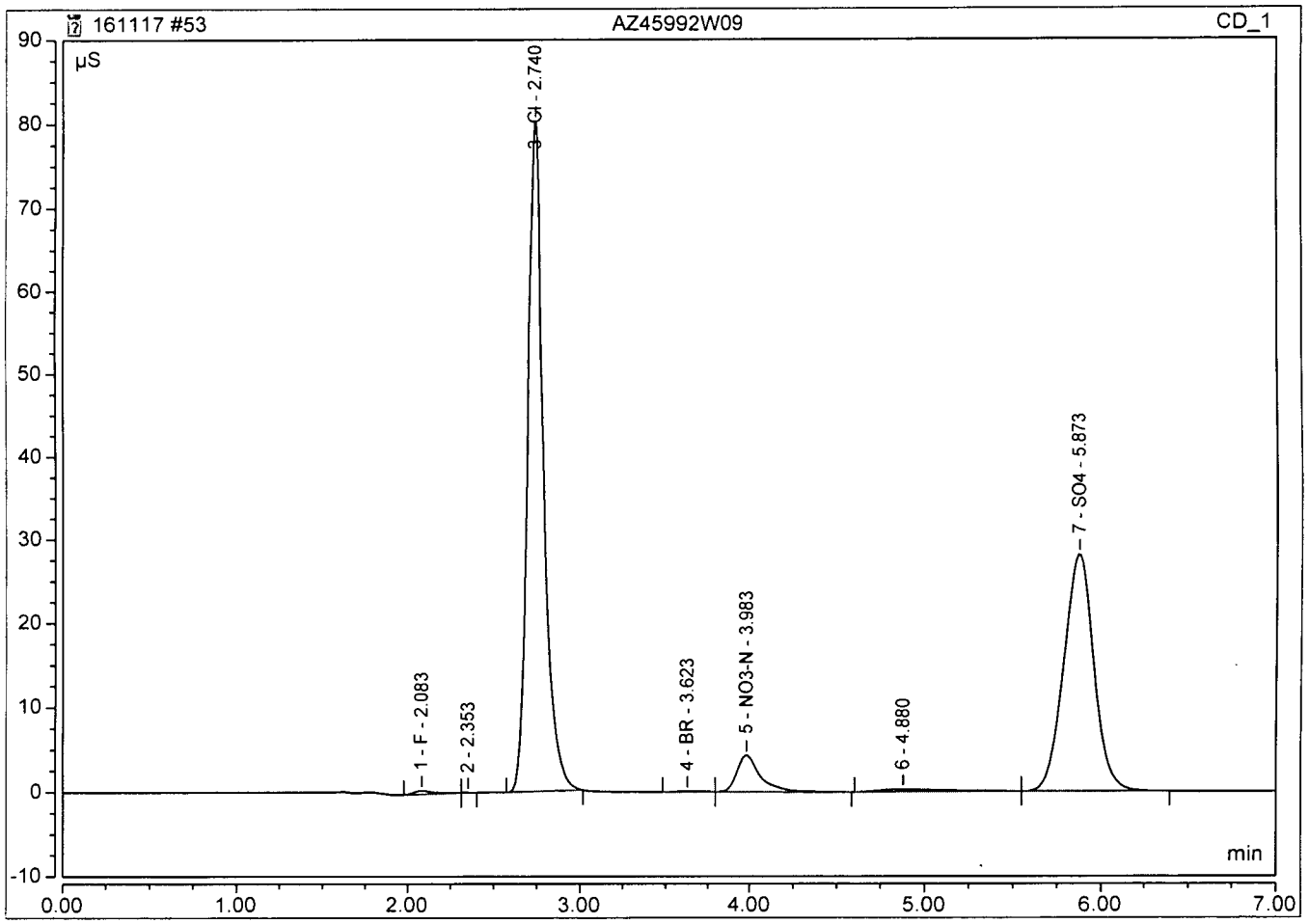
APPL-F1-SC-NoMC-REG MDLs

Peak Integration Report

Sample Name:	**AZ45992W09**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**17-Nov-2016 / 20:16**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.08	F	BMB	0.047	0.398	0.2462
3	2.74	Cl	BMB	8.473	80.282	47.1739
4	3.62	BR	BMB	0.010	0.084	0.2868
5	3.98	NO3-N	BMB	0.664	4.313	1.7067
7	5.87	SO4	BMB	5.517	28.051	45.6751
TOTAL:				14.71	113.13	95.09



Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH127

Sample Collection Date: 11/16/16

APPL ID: AZ45993

ARF: 81515

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	CHLORIDE	84.7	5.0	1.00	0.40	mg/L	5	11/18/16	11/18/16
EPA 300.0	BROMIDE	0.37 J	0.5	0.16	0.05	mg/L	1	11/17/16	11/17/16
EPA 300.0	FLUORIDE	0.17	0.1	0.09	0.08	mg/L	1	11/17/16	11/17/16
EPA 300.0	NITRATE	1.2	0.5	0.18	0.04	mg/L	1	11/17/16	11/17/16
EPA 300.0	SULFATE	27.6	1.0	0.20	0.09	mg/L	1	11/17/16	11/17/16
SM 2320B	BICARBONATE AS CACO3	50.0	2.0	1.70	0.85	mg/L	1	11/21/16	11/21/16
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	11/21/16	11/21/16
SM 2320B	TOTAL ALKALINITY AS CACO3	50.0	2.0	1.70	0.85	mg/L	1	11/21/16	11/21/16
SM 4500-Si D	SILICA W	67.0	5.0	4.00	2.65	mg/L	5	11/21/16	11/21/16
SM 4500-Si D	DISSOLVED SILICA	62.7	5.0	4.00	2.65	mg/L	5	11/21/16	11/21/16
SM3500FeB	FERROUS IRON	2.4	1.0	0.32	0.16	mg/L	1	11/17/16	11/17/16

J = Estimated value.

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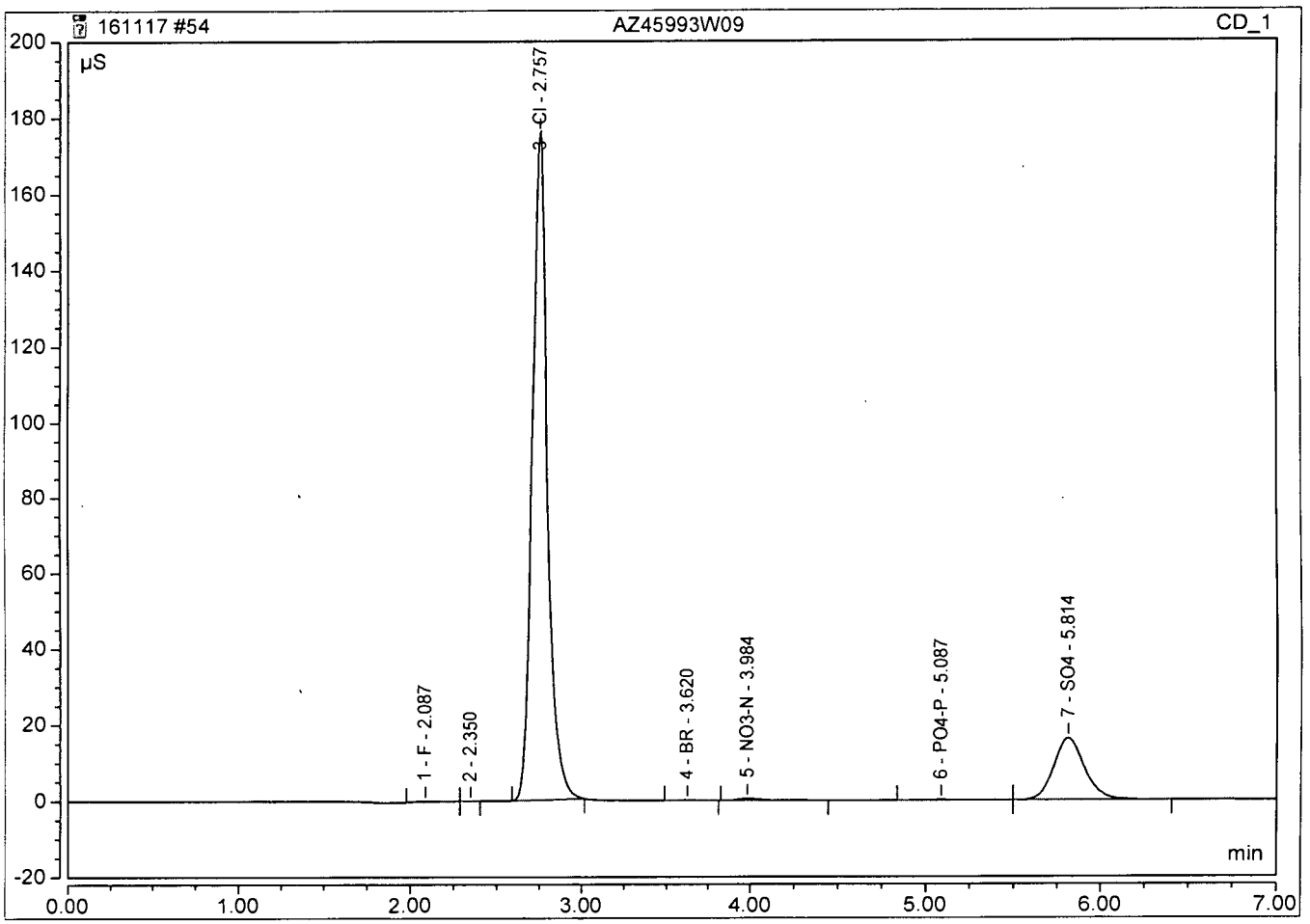
APPL-F1-SC-NoMC-REG MDLs

Peak Integration Report

Sample Name:	**AZ45993W09**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**17-Nov-2016 / 20:29**	*Run Time:*	**7.00**

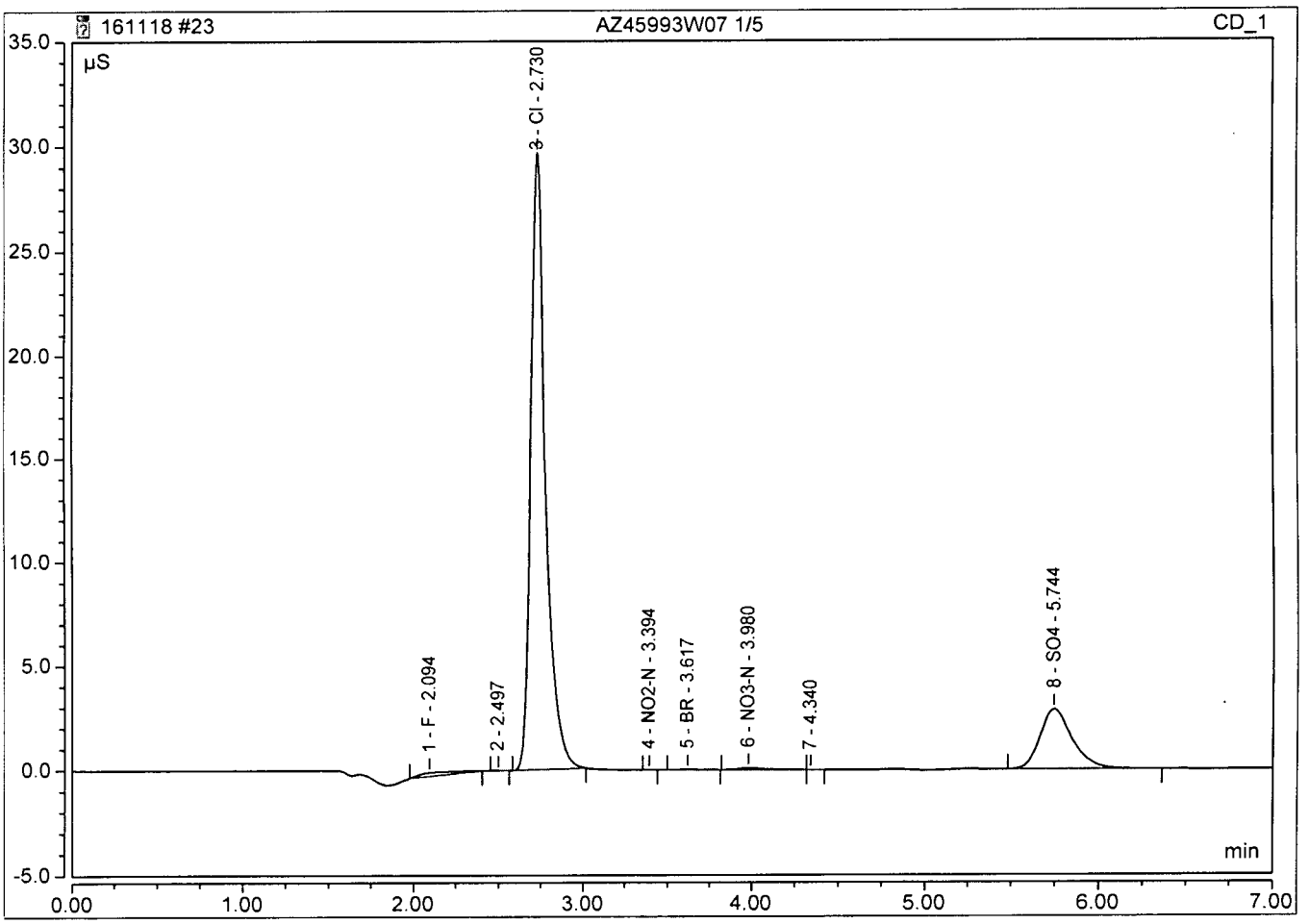
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.09	F	BMB	0.031	0.237	0.1741
3	2.76	Cl	BMB	18.131	175.888	100.3597
4	3.62	BR	BMB	0.015	0.126	0.3700
5	3.98	NO3-N	BMB	0.068	0.474	0.2607
6	5.09	PO4-P	BMB	0.030	0.094	0.3104
7	5.81	SO4	BMB	3.315	16.159	27.6393
TOTAL:				21.59	192.98	129.11



Peak Integration Report

Sample Name:	**AZ45993W07 1/5**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**5.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**18-Nov-2016 / 14:35**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.09	F	BMB	0.043	0.174	1.1379
3	2.73	Cl	BMB	2.982	29.643	84.7039
4	3.39	NO2-N	BMB	0.000	0.001	0.1083
5	3.62	BR	BMB	0.003	0.026	0.8830
6	3.98	NO3-N	BMB	0.012	0.083	0.6283
8	5.74	SO4	BMB	0.602	2.855	27.1296
TOTAL:				3.64	32.78	114.59



Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH129

Sample Collection Date: 11/15/16

APPL ID: AZ45994

ARF: 81515

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	CHLORIDE	51.5	2.0	0.40	0.16	mg/L	2	11/18/16	11/18/16
EPA 300.0	BROMIDE	0.29 J	0.5	0.16	0.05	mg/L	1	11/17/16	11/17/16
EPA 300.0	FLUORIDE	0.17	0.1	0.09	0.08	mg/L	1	11/17/16	11/17/16
EPA 300.0	NITRATE	2.3	0.5	0.18	0.04	mg/L	1	11/17/16	11/17/16
EPA 300.0	SULFATE	10.1	1.0	0.20	0.09	mg/L	1	11/17/16	11/17/16
SM 2320B	BICARBONATE AS CACO3	66.5	2.0	1.70	0.85	mg/L	1	11/21/16	11/21/16
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	11/21/16	11/21/16
SM 2320B	TOTAL ALKALINITY AS CACO3	66.5	2.0	1.70	0.85	mg/L	1	11/21/16	11/21/16
SM 4500-Si D	SILICA W	46.7	5.0	4.00	2.65	mg/L	5	11/21/16	11/21/16
SM 4500-Si D	DISSOLVED SILICA	53.7	5.0	4.00	2.65	mg/L	5	11/21/16	11/21/16
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	11/17/16	11/17/16

J = Estimated value.

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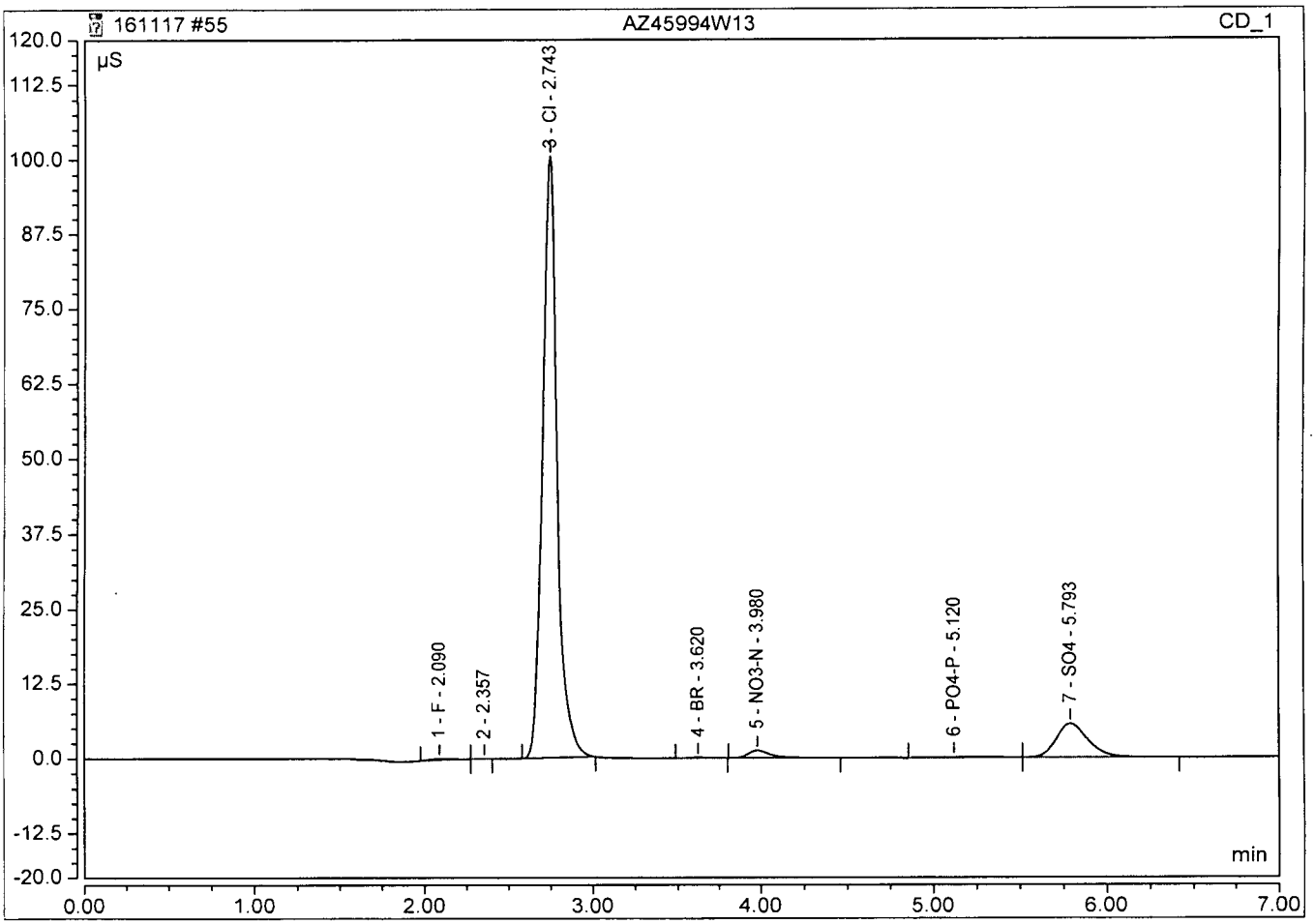
APPL-F1-SC-NoMC-REG MDLs

Peak Integration Report

Sample Name:	**AZ45994W13**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**17-Nov-2016 / 20:42**	*Run Time:*	**7.00**

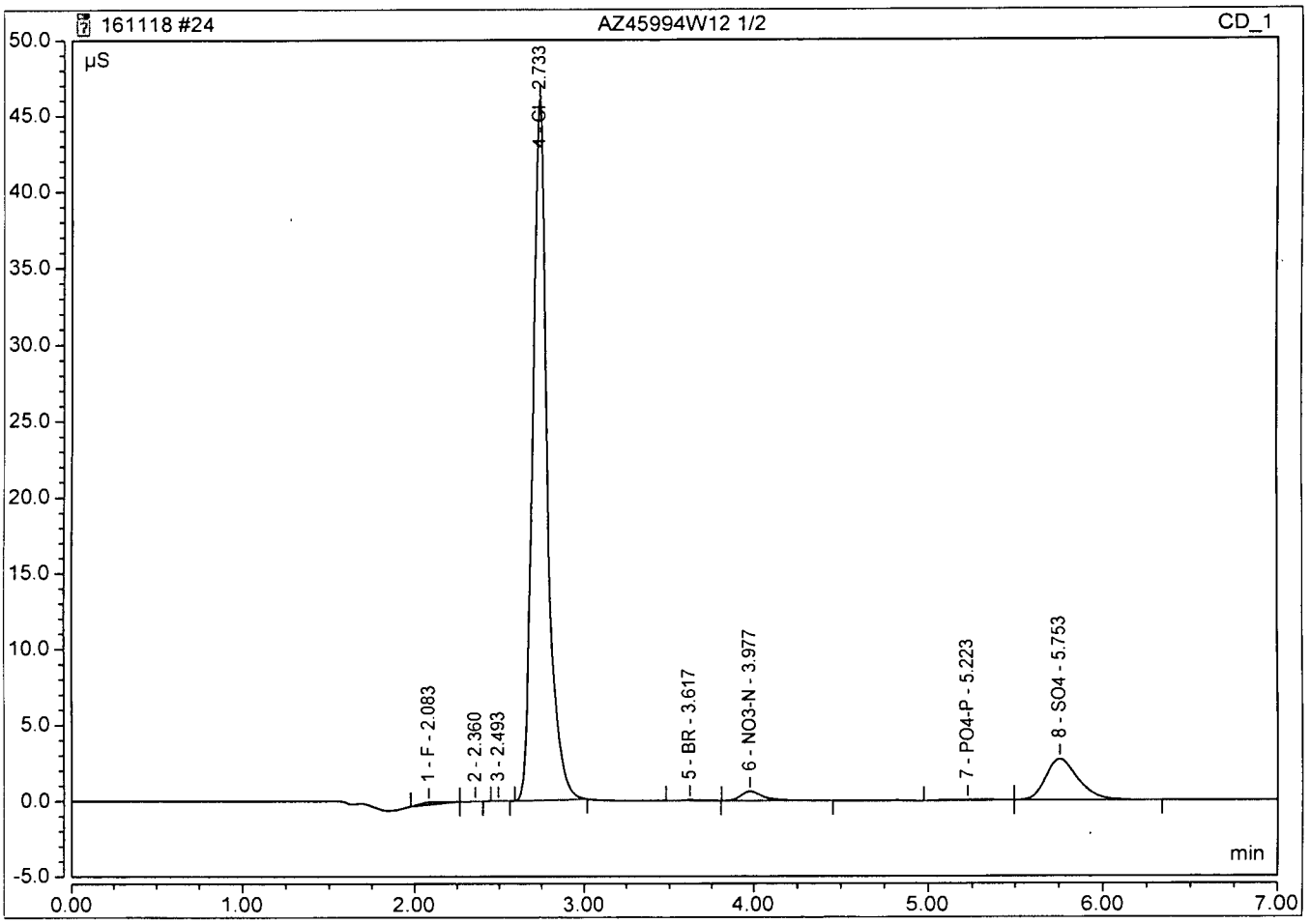
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.09	F	BMB	0.029	0.212	0.1671
3	2.74	Cl	BMB	10.054	100.472	55.8822
4	3.62	BR	BMB	0.011	0.088	0.2932
5	3.98	NO3-N	BMB	0.176	1.235	0.5239
6	5.12	PO4-P	BMB	0.029	0.079	0.3024
7	5.79	SO4	BMB	1.175	5.627	10.1167
TOTAL:				11.47	107.71	67.29



Peak Integration Report

Sample Name:	**AZ45994W12 1/2**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**2.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**18-Nov-2016 / 14:48**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.08	F	BMB	0.025	0.168	0.3030
4	2.73	Cl	BMB	4.586	45.987	51.5387
5	3.62	BR	BMB	0.005	0.043	0.4227
6	3.98	NO3-N	BMB	0.087	0.609	0.6161
7	5.22	PO4-P	BMB	0.013	0.045	0.3436
8	5.75	SO4	BMB	0.571	2.710	10.3424
TOTAL:				5.29	49.56	63.57



INORGANIC ANALYSIS
Calibration Data

APPL, INC.

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM
ARF No: 81515 SDG: 81515
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 05/20/16

Analyte	Calibration Verification									M
	True ICV	Found 12:41	%R(1)	True CCV1	Found 18:31	%R(1)	True CCV1	Found 18:42	%R(1)	
Ferrous Iron	3	3.01396	100	4	3.93307	98.3	4	3.98302	99.6	

(1) Control Limits: 90-110

ILM02.0

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 81515 SDG: 81515

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	ICB 05/20/16 12:42	C	CCB 11/17/16 18:32	C	CCB 11/17/16 18:43	C		C		C	
Ferrous Iron	1.000	U	1.000	U	1.000	U					

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No: 81515 SDG: 81515

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 10/20/16

Analyte	Calibration Verification									M
	True ICV	Found 12:37	%R(1)	True	Found	%R(1)	True	Found	%R(1)	
bromide	12.5	11.8422	94.7							
chloride	20	18.2183	91.1							
fluoride	2.5	2.55939	102							
Nitrate(NO3)	22.1	20.0573	90.8							
sulfate	20	18.4058	92.0							

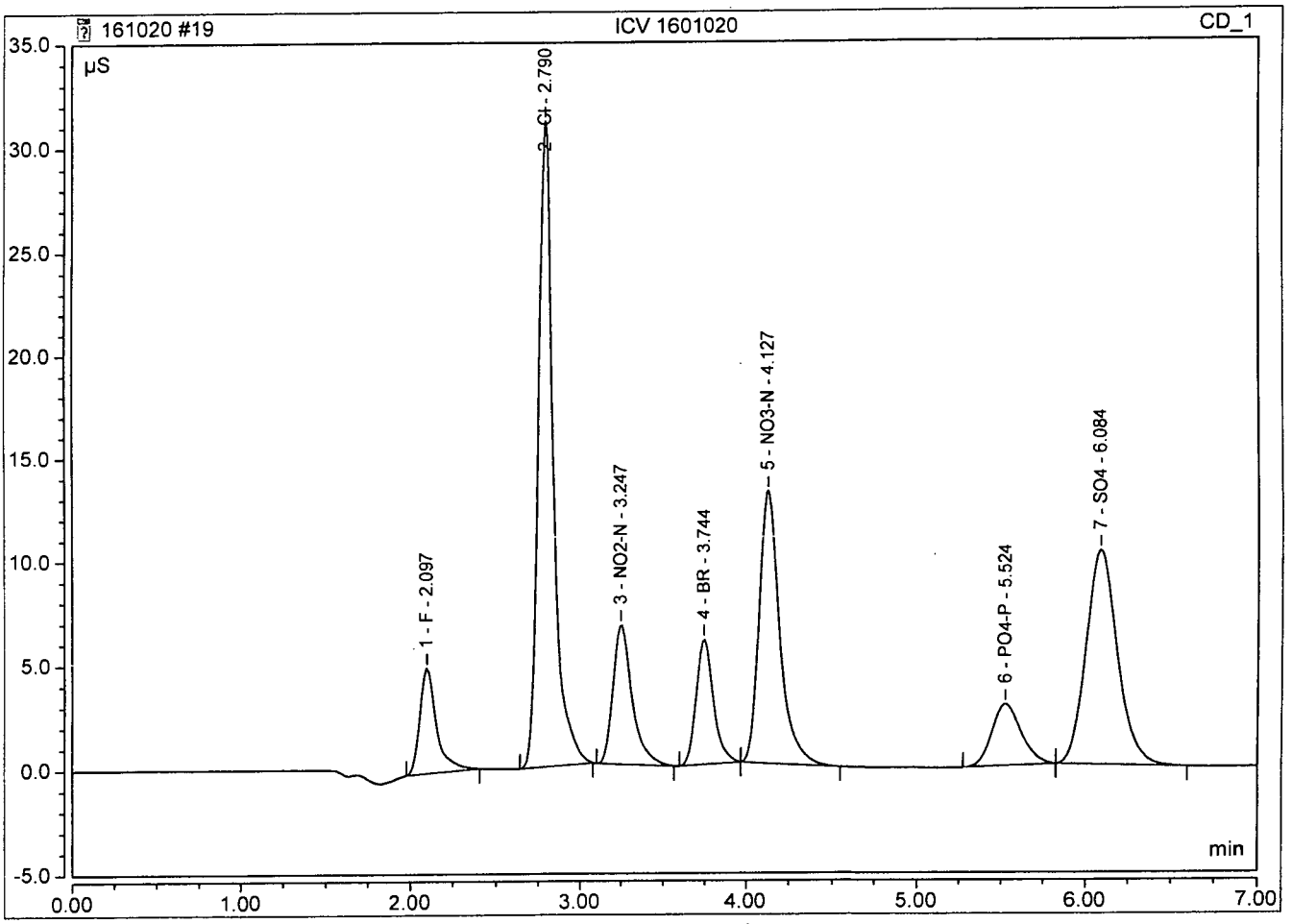
(1) Control Limits: 90-110

ILM02.0

Peak Integration Report

Sample Name:	**ICV 1601020**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:37**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB	0.568	5.018	2.5594
2	2.79	Cl	BMB	3.214	31.139	18.2184
3	3.25	NO2-N	BMB	0.894	6.653	2.9873
4	3.74	BR	BMB	0.739	5.970	11.8423
5	4.13	NO3-N	BMB	1.827	13.075	4.5291
6	5.52	PO4-P	BMB	0.590	2.913	4.8011
7	6.08	SO4	BMB	2.187	10.255	18.4058
TOTAL:				10.02	75.02	63.34



Algorithm Check
$y = .122|x - .0603$ y = Peak Area
$x = 18.4$ ✓ x = Amnt
mm 12/6/16

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 81515 SDG: 81515

Preparation Blank Matrix (soil/water): water

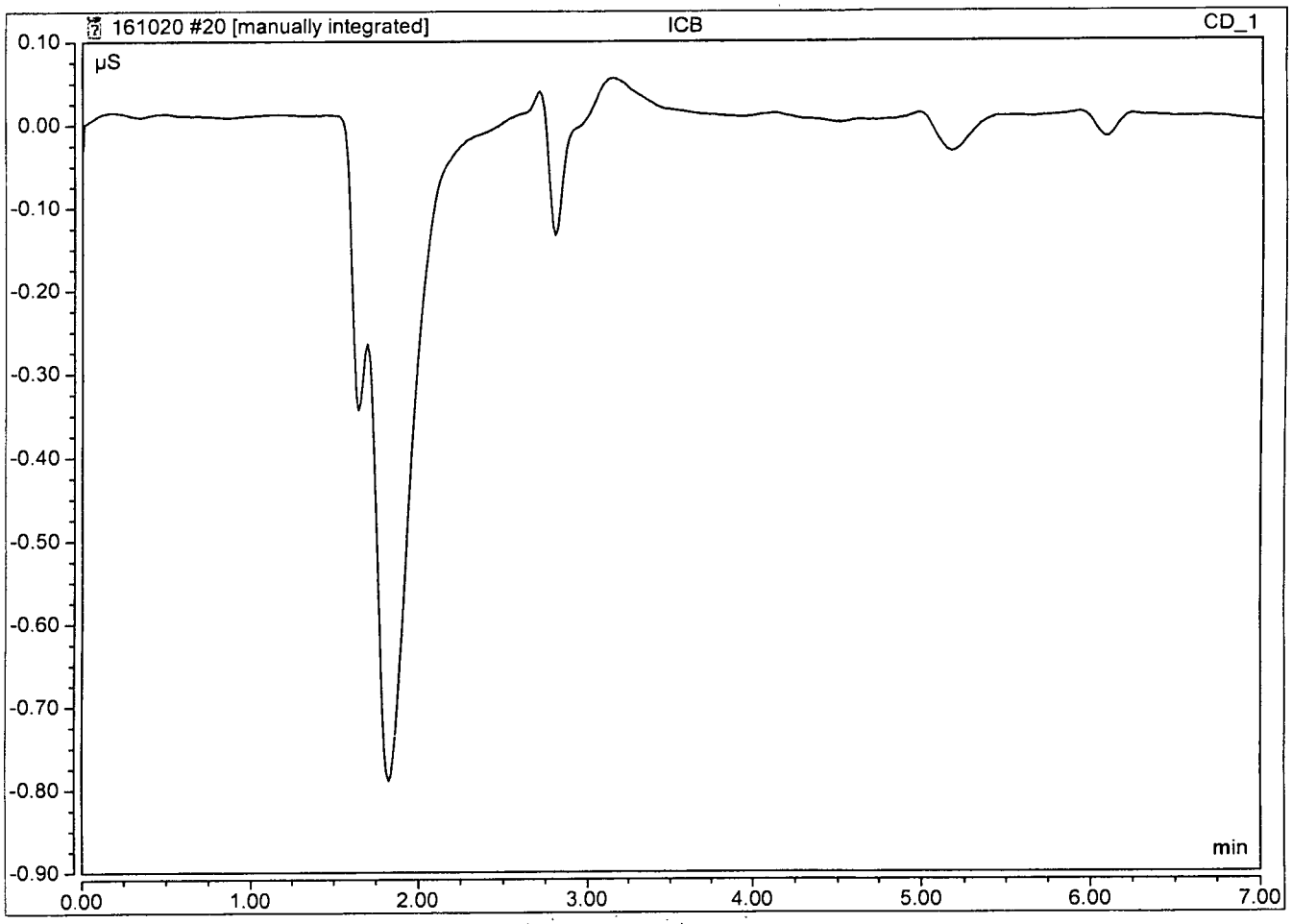
Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	ICB 10/20/16 12:50	C		C		C		C		C	
bromide	.500	U									
chloride	1.000	U									
fluoride	.100	U									
Nitrate(NO3)	.500	U									
sulfate	1.000	U									

Peak Integration Report

Sample Name:	**ICB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:50**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
TOTAL:				0.00	0.00	0.00



A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No: 81515 SDG: 81515

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 11/17/16

Analyte	Calibration Verification									M
	True CCV1	Found 13:04	%R(1)	True CCV1	Found 17:13	%R(1)	True CCV1	Found 19:24	%R(1)	
bromide	12.5	11.9857	95.9	12.5	12.1037	96.8	12.5	12.1119	96.9	
chloride	25	23.592	94.4	25	23.7184	94.9	25	23.7225	94.9	
fluoride	2.5	2.6279	105	2.5	2.6539	106	2.5	2.6436	106	
Nitrate(NO3)	22.1	21.1106	95.5	22.1	21.2050	96.0	22.1	21.2023	95.9	
sulfate	25	23.002	92.0	25	23.0273	92.1	25	23.0379	92.2	

(1) Control Limits: 90-110

ILM02.0

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM
ARF No: 81515 SDG: 81515
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 11/17/16

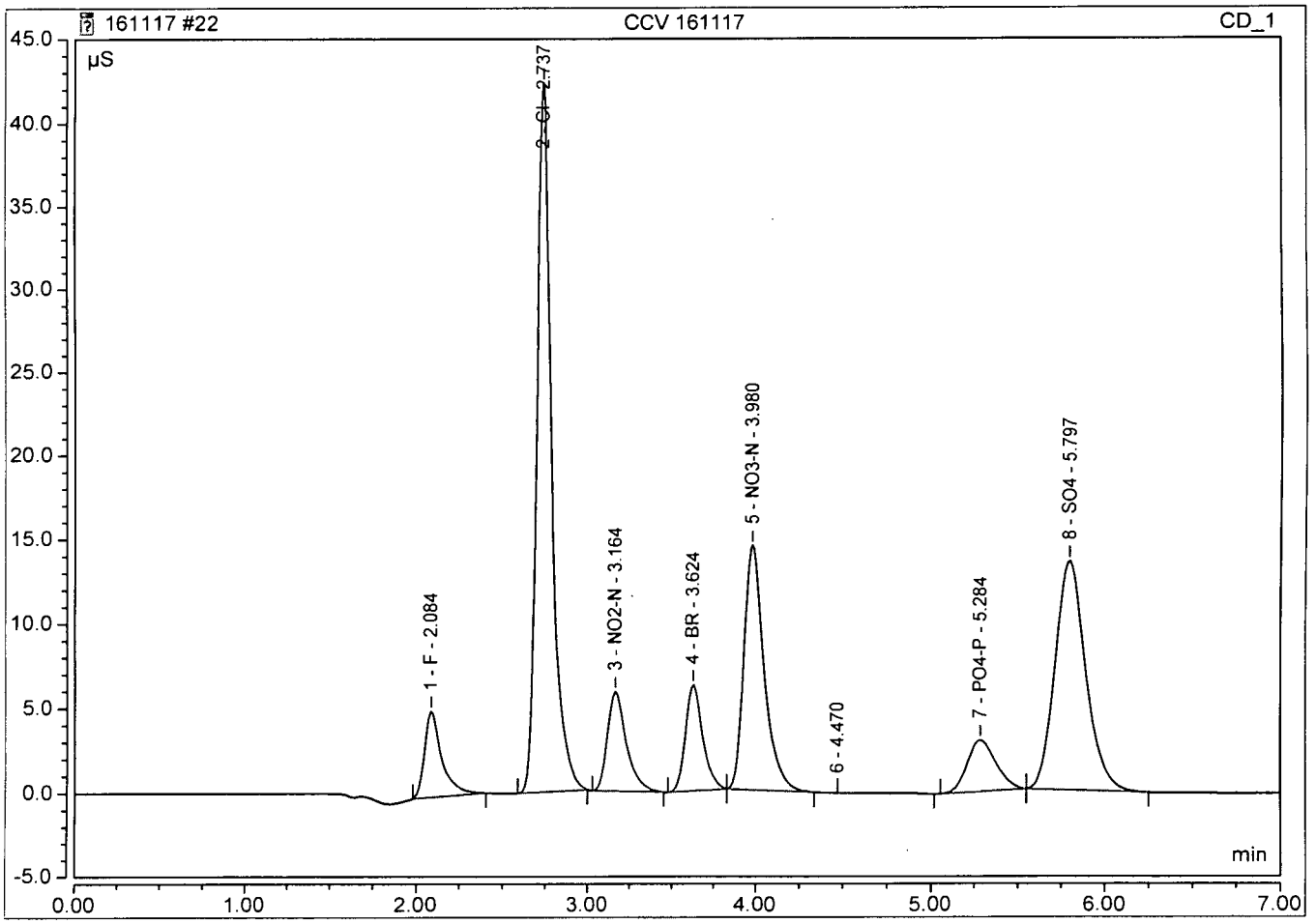
Analyte	Calibration Verification									M
	True CCV1	Found 21:21	%R(1)	True	Found	%R(1)	True	Found	%R(1)	
bromide	12.5	12.0384	96.3							
chloride	25	23.6166	94.5							
fluoride	2.5	2.6436	106							
Nitrate(NO3)	22.1	21.1279	95.6							
sulfate	25	23.0085	92.0							

(1) Control Limits: 90-110

Peak Integration Report

Sample Name:	**CCV 161117**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**17-Nov-2016 / 13:04**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.08	F	BMB	0.583	5.069	2.6279
2	2.74	Cl	BMB	4.190	42.309	23.5920
3	3.16	NO2-N	BMB	0.761	5.838	2.5468
4	3.62	BR	BMB	0.748	6.226	11.9857
5	3.98	NO3-N	BMB	1.925	14.384	4.7669
7	5.28	PO4-P	BMB	0.581	3.017	4.7260
8	5.80	SO4	BMB	2.749	13.460	23.0020
TOTAL:				11.54	90.30	73.25

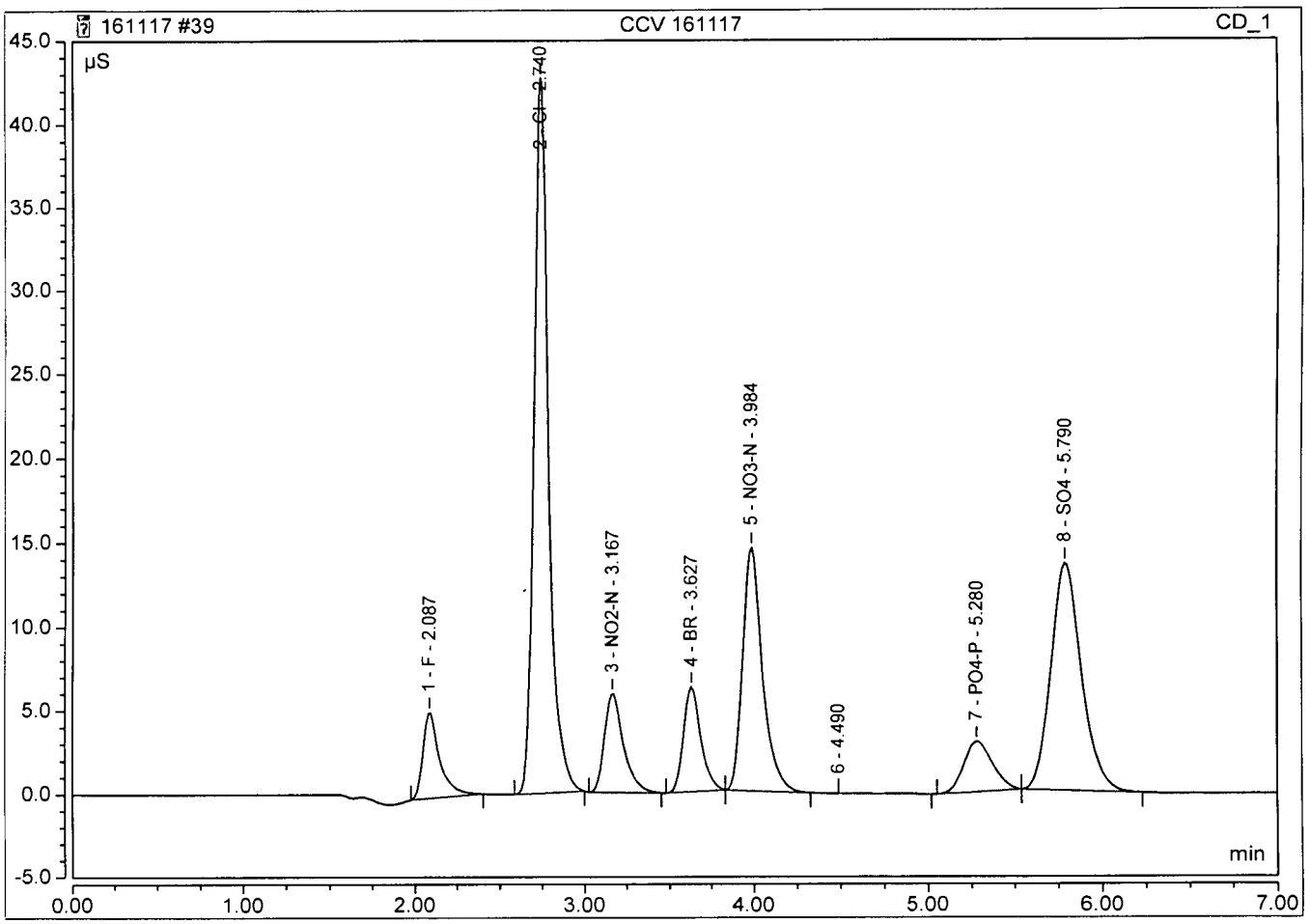


Algorithm Check
y = .1221x - .0603
x = 23.00 ✓
y = Peak Area
x = Amt
MM 12/6/16

Peak Integration Report

Sample Name:	**CCV 161117**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**17-Nov-2016 / 17:13**	*Run Time:*	**7.00**

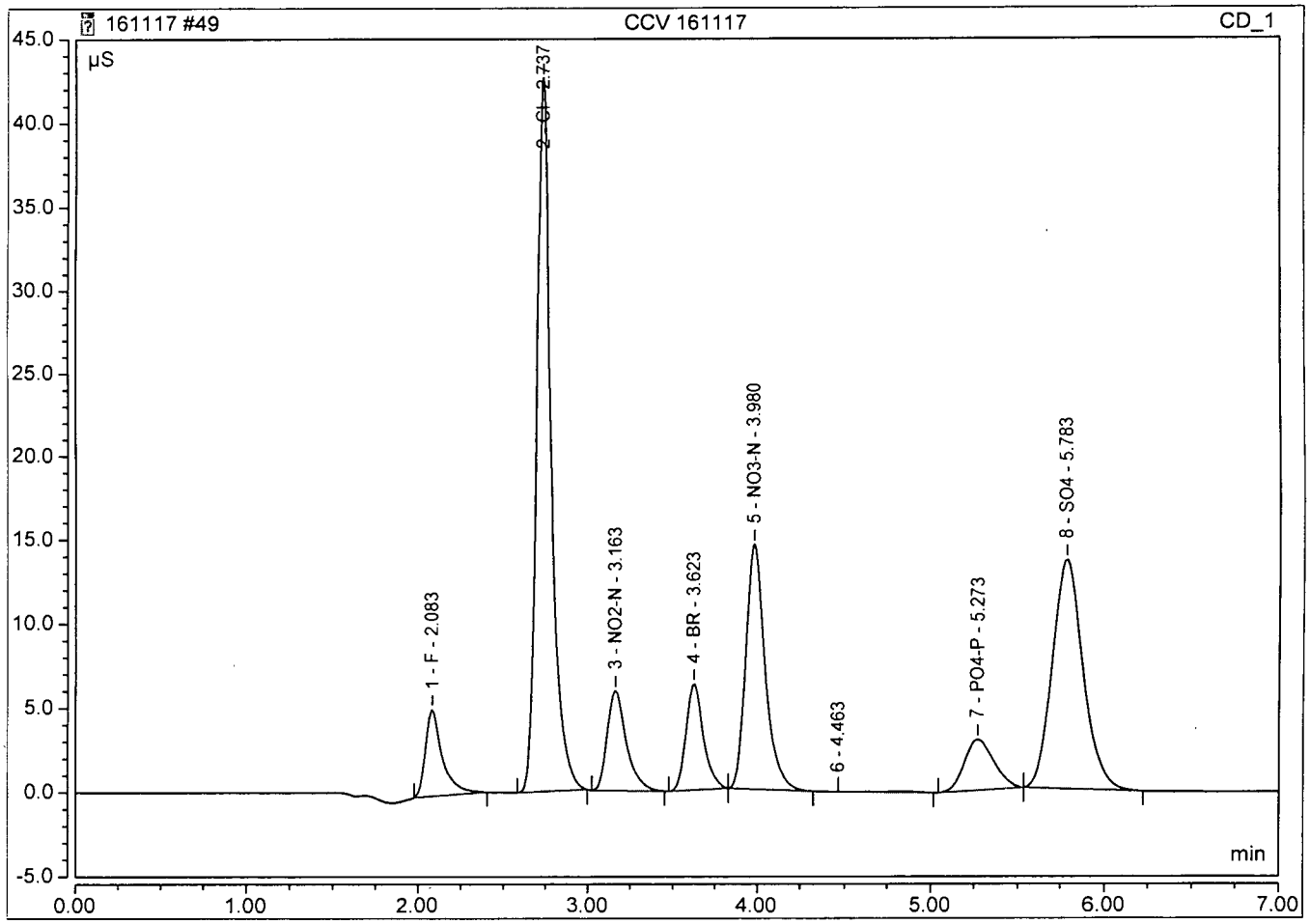
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.09	F	BMB	0.589	5.146	2.6539
2	2.74	Cl	BMB	4.213	42.702	23.7184
3	3.17	NO2-N	BMB	0.771	5.917	2.5794
4	3.63	BR	BMB	0.756	6.287	12.1037
5	3.98	NO3-N	BMB	1.933	14.518	4.7882
7	5.28	PO4-P	BMB	0.577	3.000	4.6961
8	5.79	SO4	BMB	2.752	13.556	23.0273
TOTAL:				11.59	91.13	73.57



Peak Integration Report

Sample Name:	**CCV 161117**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**17-Nov-2016 / 19:24**	*Run Time:*	**7.00**

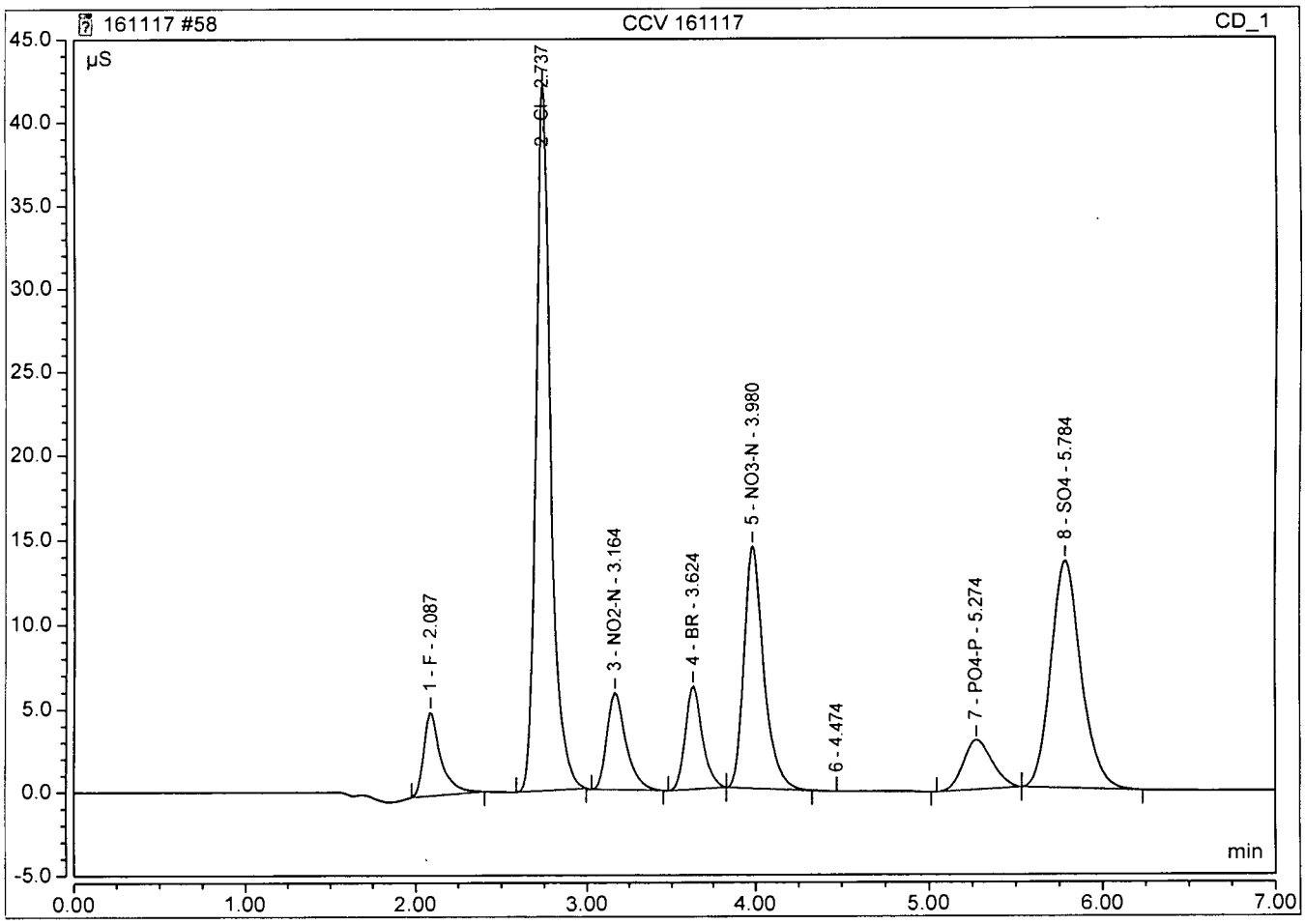
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.08	F	BMB	0.587	5.133	2.6436
2	2.74	Cl	BMB	4.214	42.627	23.7225
3	3.16	NO2-N	BMB	0.771	5.915	2.5805
4	3.62	BR	BMB	0.756	6.282	12.1119
5	3.98	NO3-N	BMB	1.933	14.501	4.7876
7	5.27	PO4-P	BMB	0.578	3.006	4.7025
8	5.78	SO4	BMB	2.753	13.575	23.0379
TOTAL:				11.59	91.04	73.59



Peak Integration Report

Sample Name:	**CCV 161117**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**17-Nov-2016 / 21:21**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.09	F	BMB	0.587	5.082	2.6436
2	2.74	Cl	BMB	4.195	42.128	23.6166
3	3.16	NO2-N	BMB	0.765	5.840	2.5608
4	3.62	BR	BMB	0.752	6.210	12.0384
5	3.98	NO3-N	BMB	1.926	14.350	4.7708
7	5.27	PO4-P	BMB	0.577	3.003	4.6990
8	5.78	SO4	BMB	2.749	13.491	23.0085
TOTAL:				11.55	90.10	73.34



A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 81515 SDG: 81515

Preparation Blank Matrix (soil/water): water

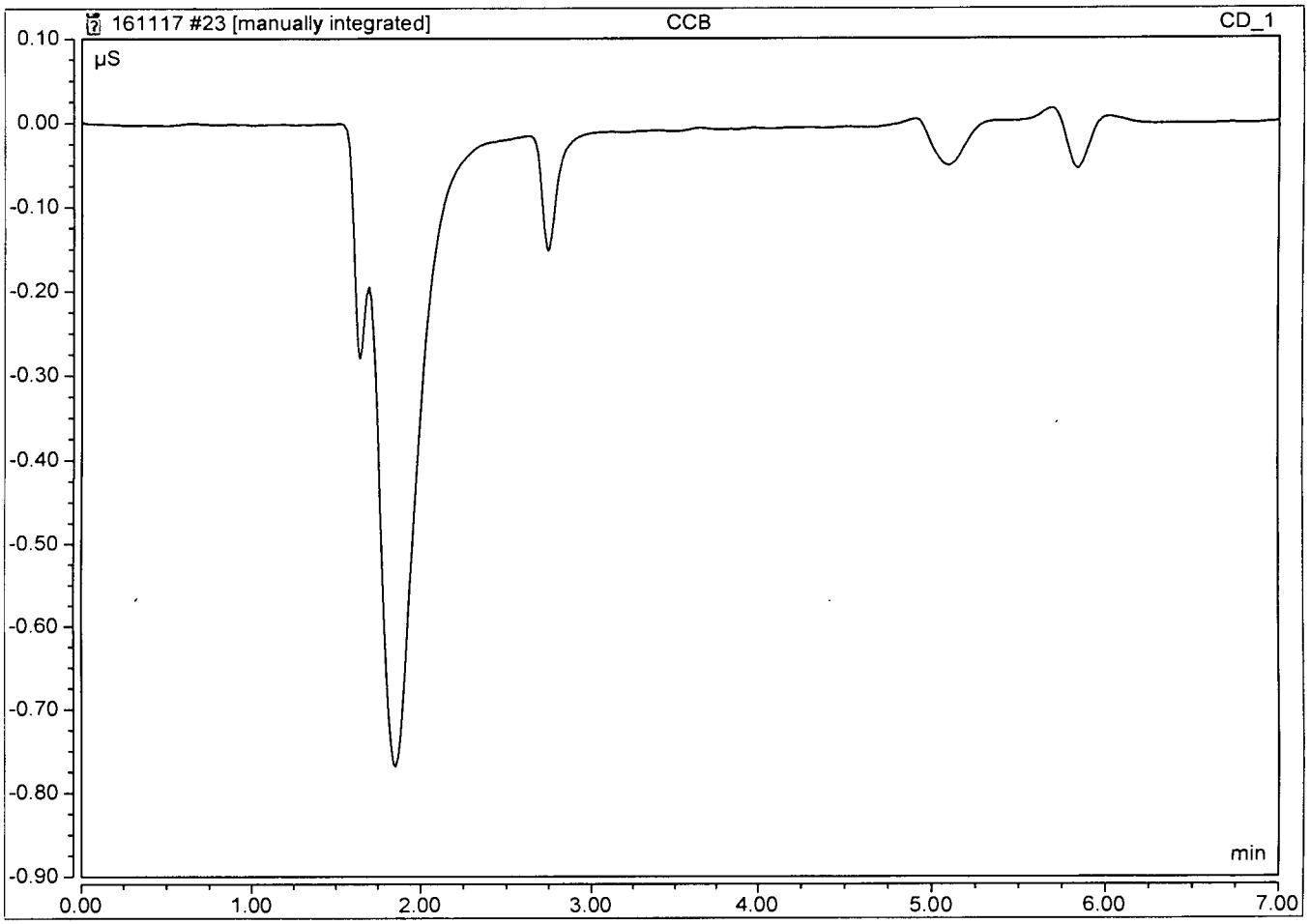
Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	CCB 11/17/16 13:17	C	CCB 11/17/16 17:26	C	CCB 11/17/16 19:37	C	CCB 11/17/16 21:34	C		C	
bromide	.500	U	.500	U	.500	U	.500	U			
chloride	1.000	U	1.000	U	1.000	U	1.000	U			
fluoride	.100	U	.100	U	.100	U	.100	U			
Nitrate(NO3)	.500	U	.500	U	.500	U	.500	U			
sulfate	1.000	U	1.000	U	1.000	U	1.000	U			

Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**17-Nov-2016 / 13:17**	*Run Time:*	**7.00**

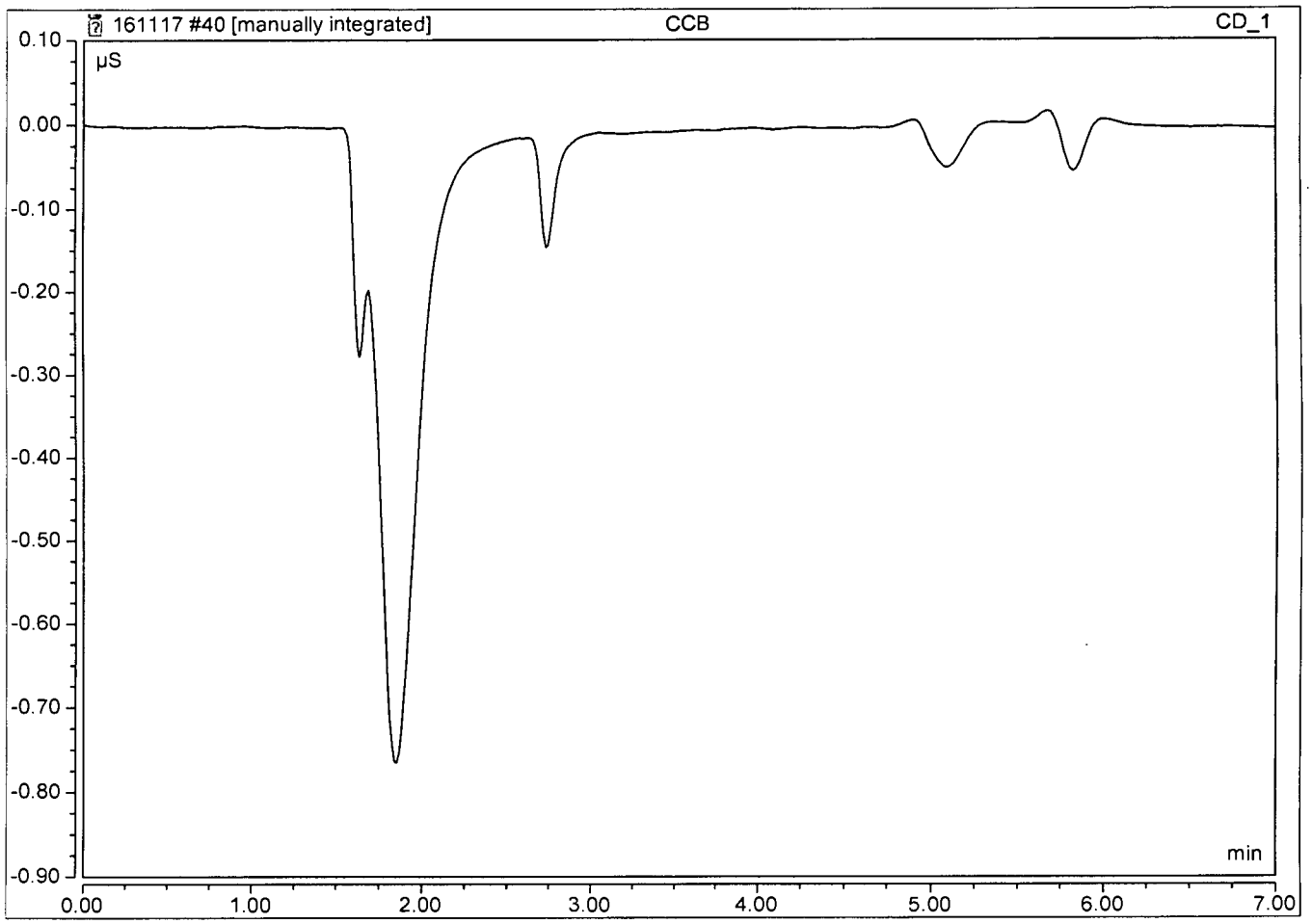
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
		TOTAL:		0.00	0.00	0.00



Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**17-Nov-2016 / 17:26**	*Run Time:*	**7.00**

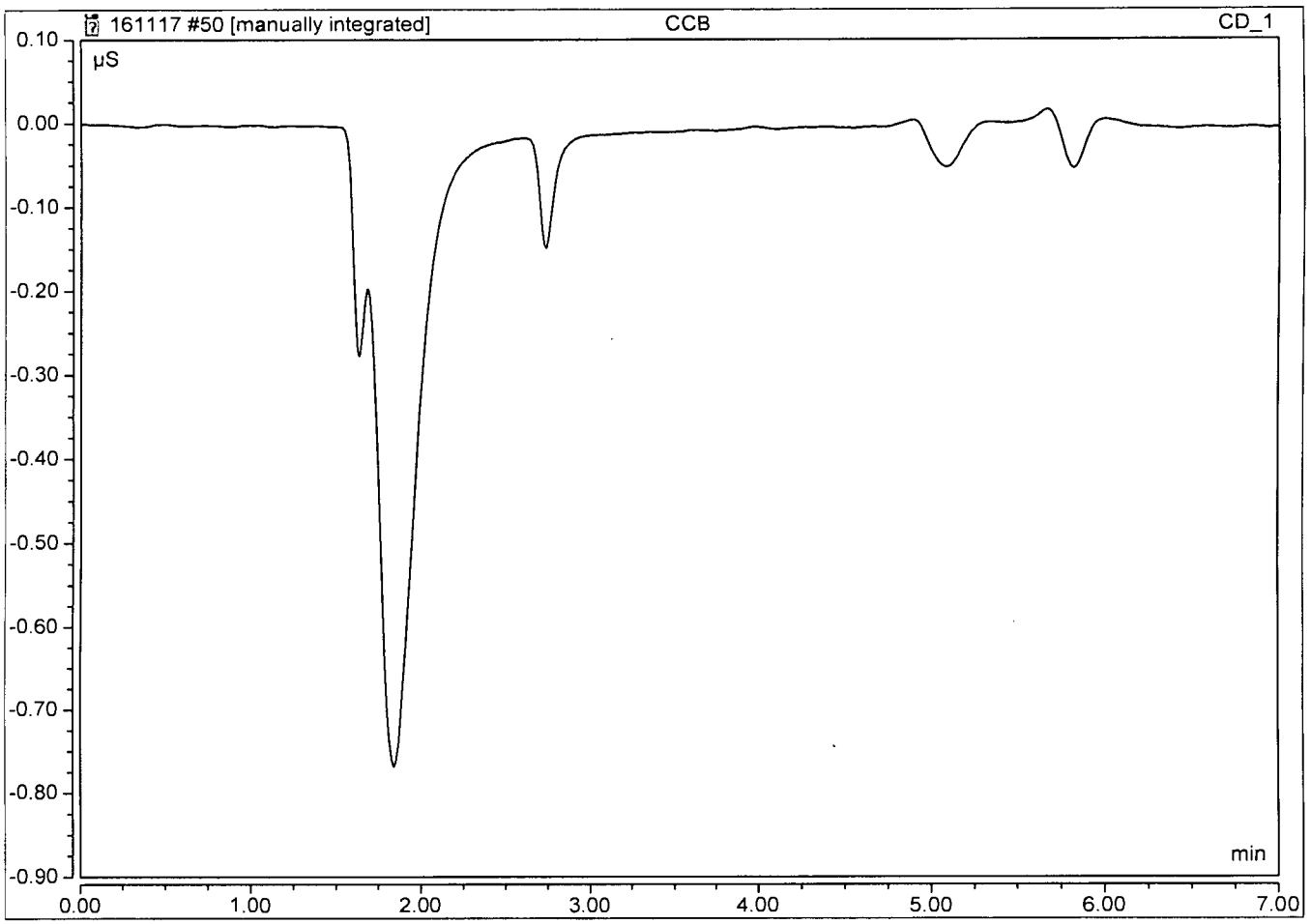
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
		TOTAL:		0.00	0.00	0.00



Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**17-Nov-2016 / 19:37**	*Run Time:*	**7.00**

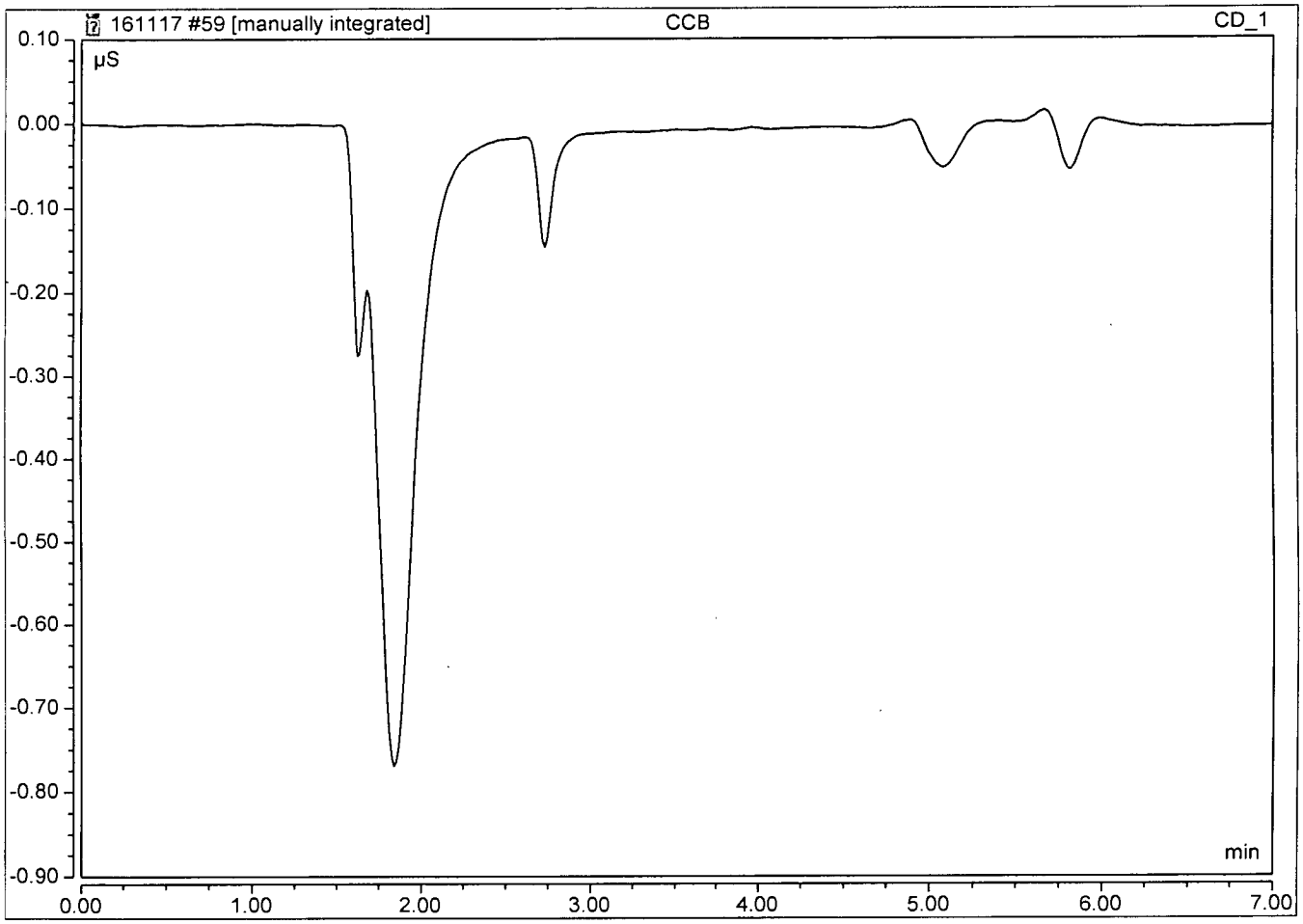
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
		TOTAL:		0.00	0.00	0.00



Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**17-Nov-2016 / 21:34**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
		TOTAL:		0.00	0.00	0.00



A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM
ARF No: 81515 SDG: 81515
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 11/18/16

Analyte	Calibration Verification									M
	True CCV1	Found 10:14	%R(1)	True CCV1	Found 13:30	%R(1)	True CCV1	Found 15:01	%R(1)	
chloride	25	23.7394	95.0	25	23.834	95.3	25	23.7237	94.9	
sulfate	25	23.1082	92.4	25	23.1404	92.6	25	23.109	92.4	

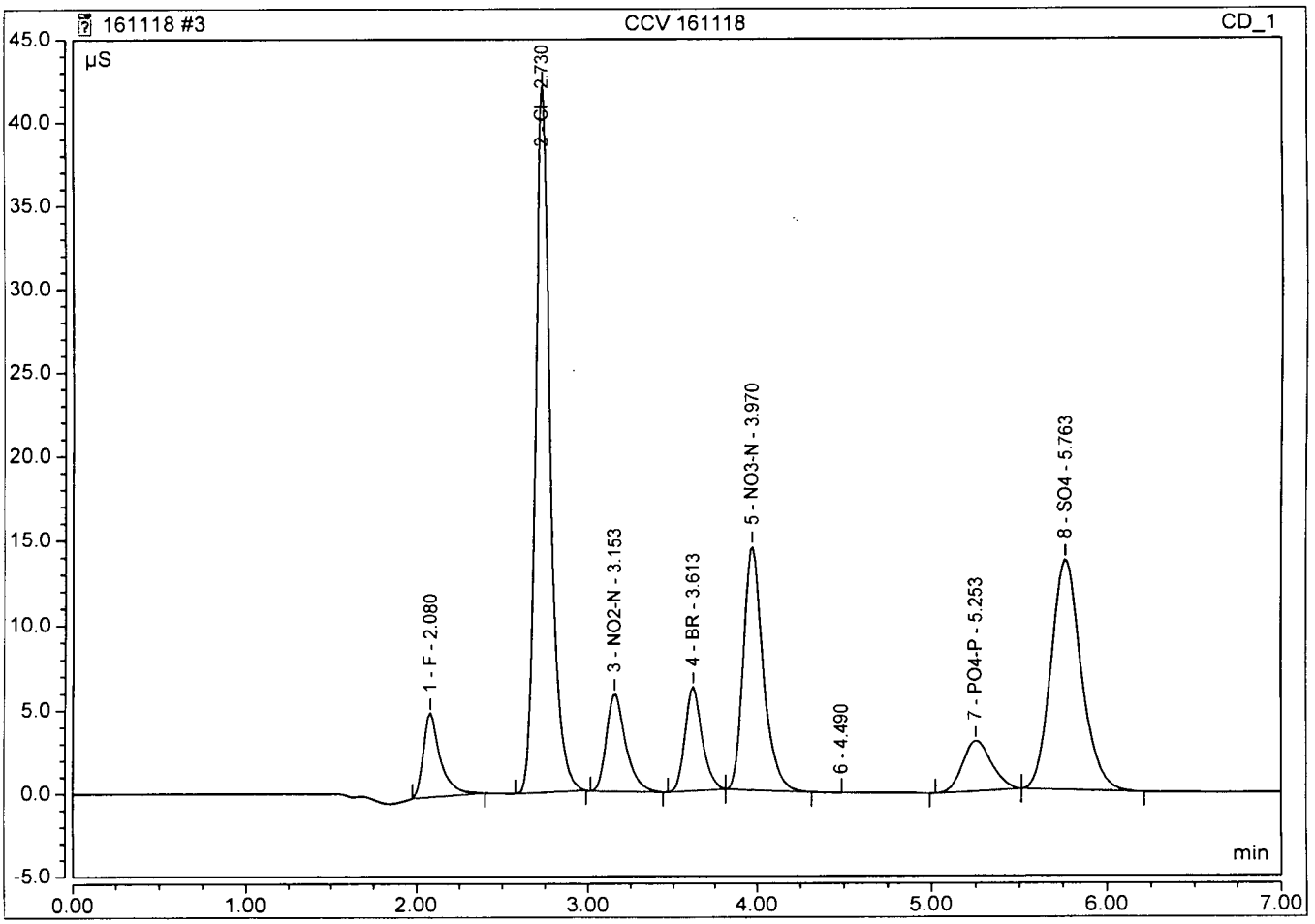
(1) Control Limits: 90-110

ILM02.0

Peak Integration Report

Sample Name:	**CCV 161118**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**18-Nov-2016 / 10:14**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.08	F	BMB	0.584	5.060	2.6306
2	2.73	Cl	BMB	4.217	42.102	23.7394
3	3.15	NO2-N	BMB	0.769	5.845	2.5730
4	3.61	BR	BMB	0.758	6.227	12.1333
5	3.97	NO3-N	BMB	1.938	14.404	4.7998
7	5.25	PO4-P	BMB	0.584	3.054	4.7561
8	5.76	SO4	BMB	2.762	13.606	23.1082
TOTAL:				11.61	90.30	73.74

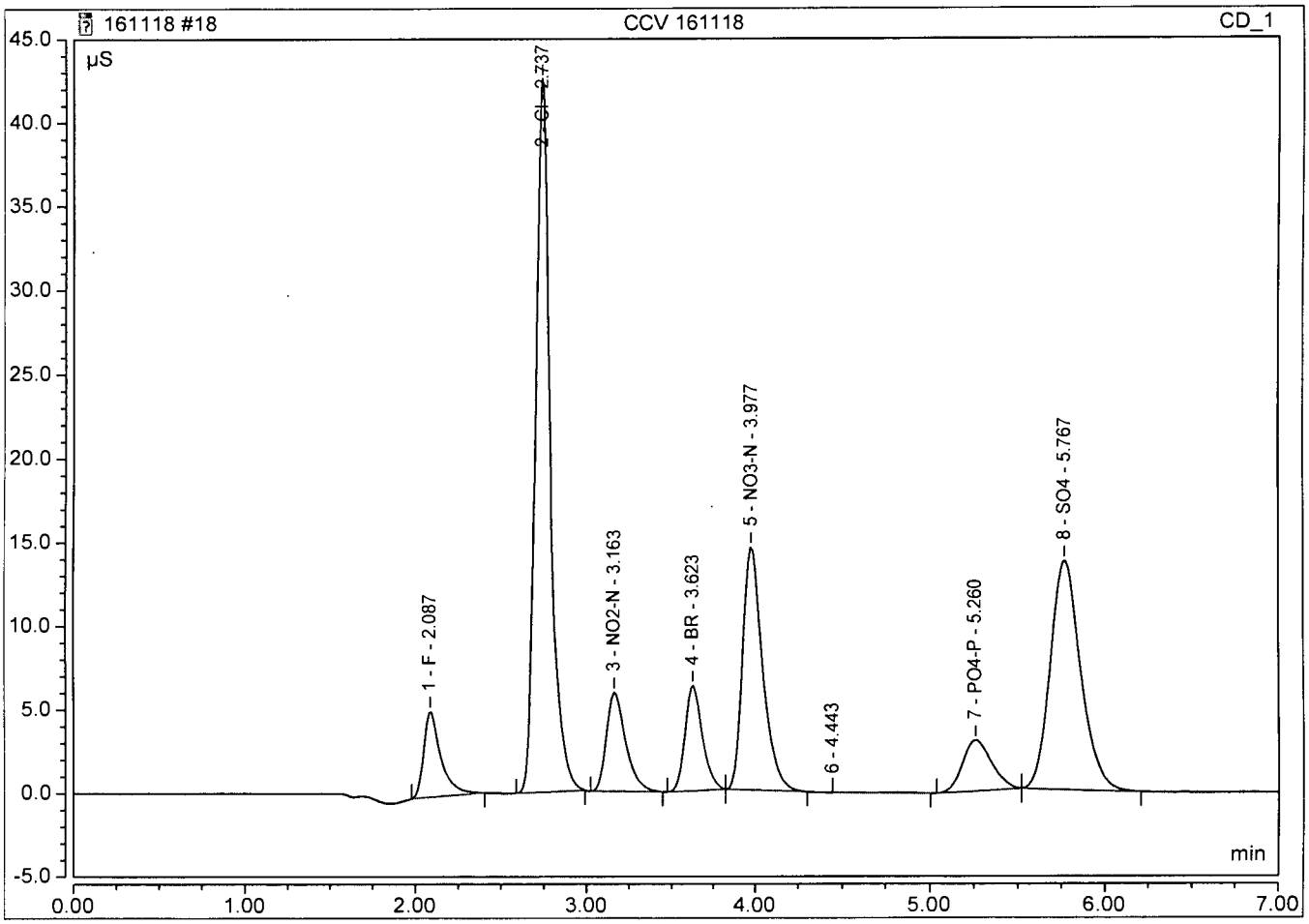


Algorithm Check
y = .1221x − .0603
x = 23.11 ✓
y = Peak Area
x = Amount
MM 12/6/16

Peak Integration Report

Sample Name:	**CCV 161118**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**18-Nov-2016 / 13:30**	*Run Time:*	**7.00**

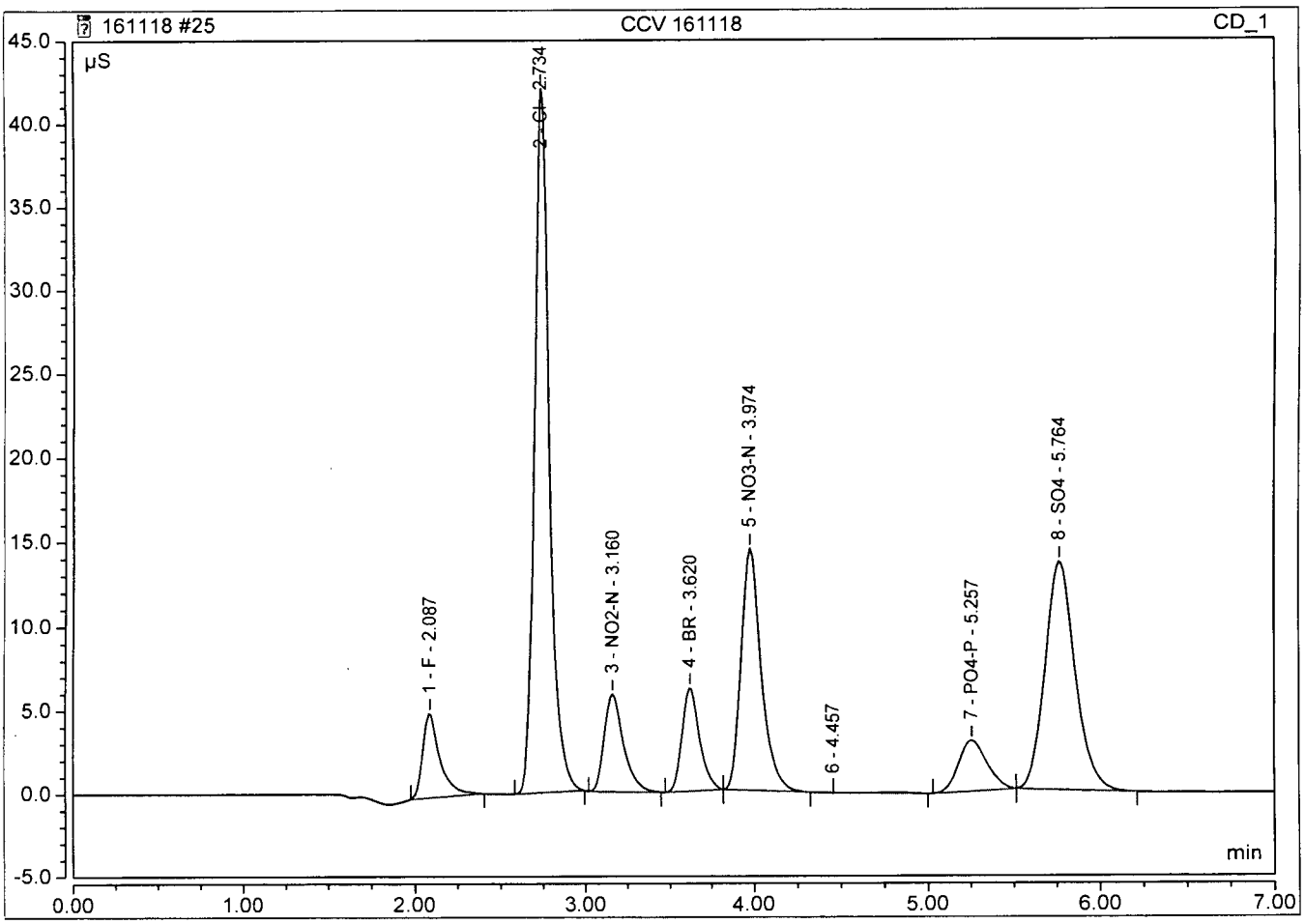
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.09	F	BMB	0.593	5.140	2.6692
2	2.74	Cl	BMB	4.234	42.532	23.8340
3	3.16	NO2-N	BMB	0.778	5.930	2.6018
4	3.62	BR	BMB	0.764	6.292	12.2331
5	3.98	NO3-N	BMB	1.946	14.549	4.8185
7	5.26	PO4-P	BMB	0.581	3.036	4.7262
8	5.77	SO4	BMB	2.766	13.694	23.1404
TOTAL:				11.66	91.17	74.02



Peak Integration Report

Sample Name:	**CCV 161118**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**18-Nov-2016 / 15:01**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.09	F	BMB	0.589	5.071	2.6537
2	2.73	Cl	BMB	4.214	42.007	23.7237
3	3.16	NO2-N	BMB	0.772	5.852	2.5819
4	3.62	BR	BMB	0.758	6.212	12.1391
5	3.97	NO3-N	BMB	1.938	14.384	4.7987
7	5.26	PO4-P	BMB	0.583	3.042	4.7411
8	5.76	SO4	BMB	2.762	13.600	23.1090
TOTAL:				11.61	90.17	73.75



A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 81515 SDG: 81515

Preparation Blank Matrix (soil/water): water

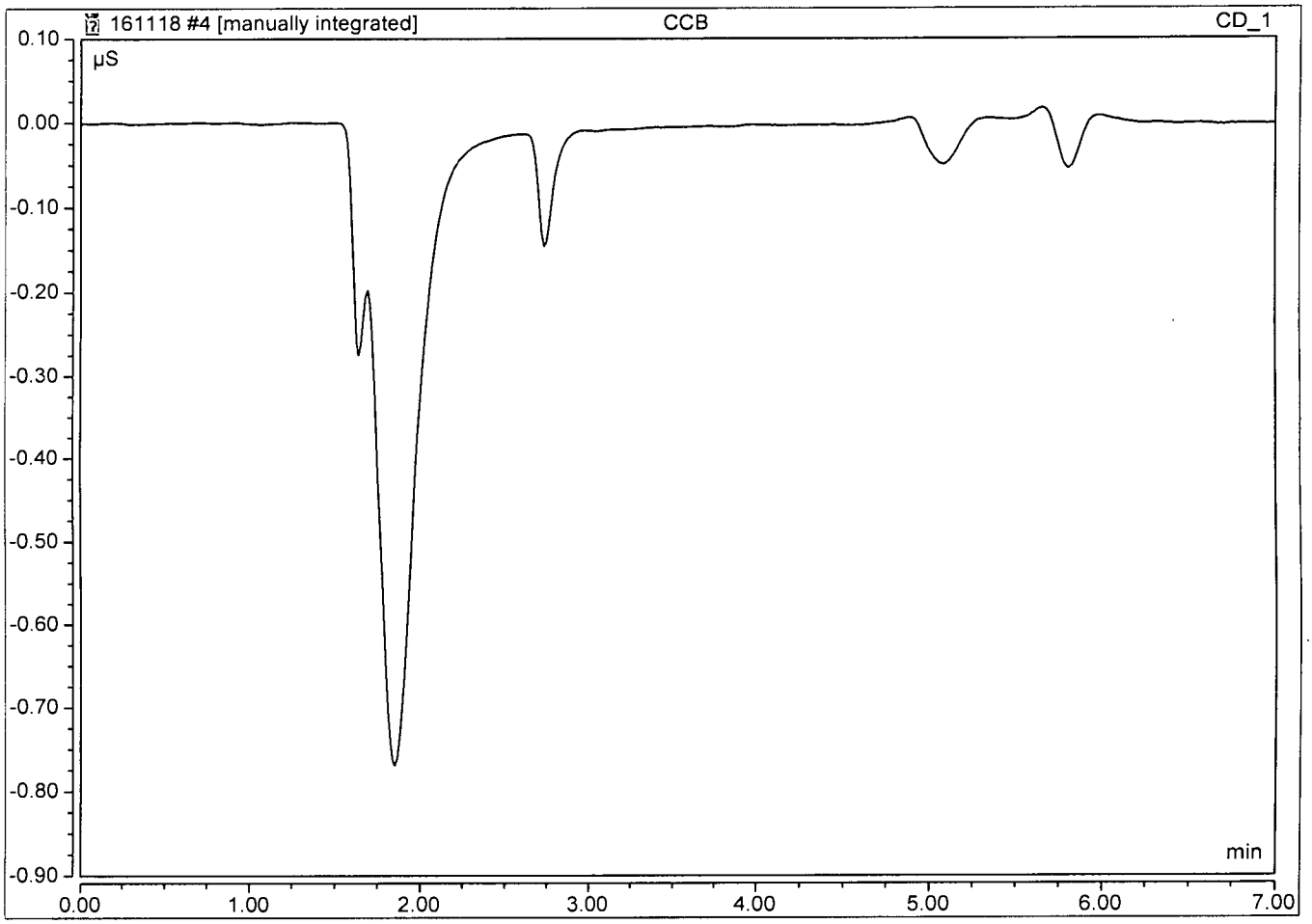
Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	CCB 11/18/16 10:27	C	CCB 11/18/16 13:43	C	CCB 11/18/16 15:14	C		C		C	
chloride	1.000	U	1.000	U	1.000	U					
sulfate	1.000	U	1.000	U	1.000	U					

Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**18-Nov-2016 / 10:27**	*Run Time:*	**7.00**

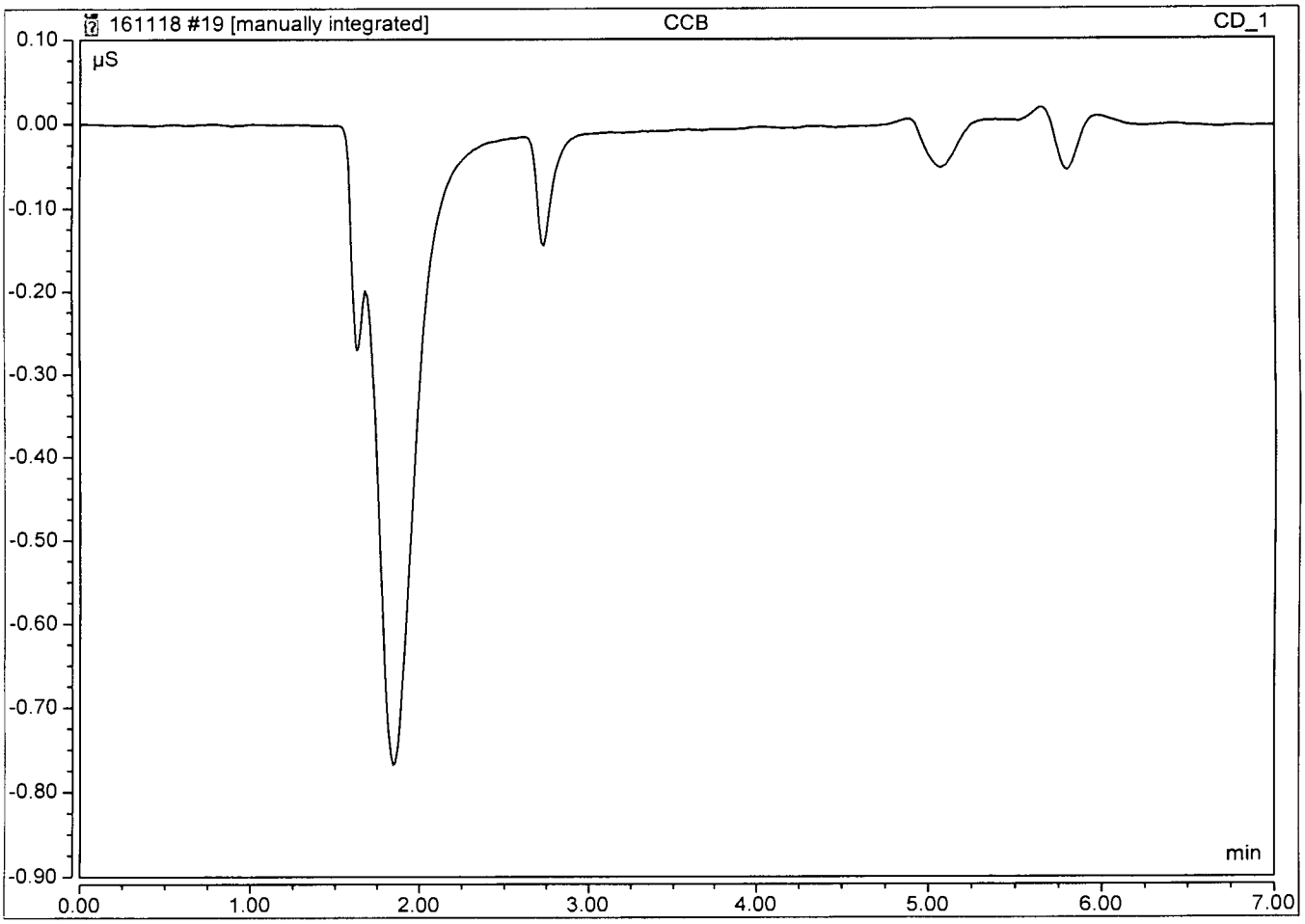
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
		TOTAL:		0.00	0.00	0.00



Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**18-Nov-2016 / 13:43**	*Run Time:*	**7.00**

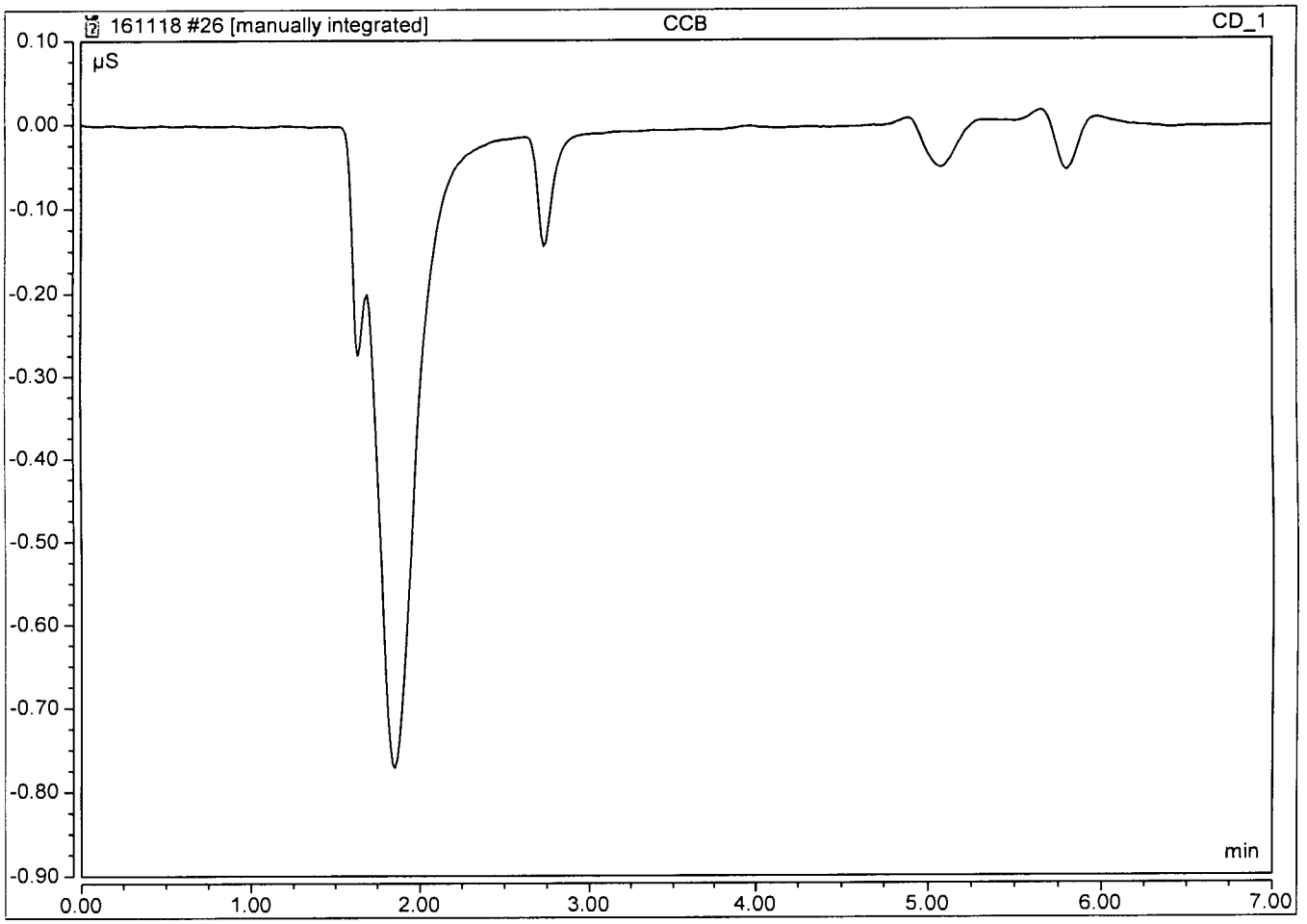
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
		TOTAL:		0.00	0.00	0.00



Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**18-Nov-2016 / 15:14**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
		TOTAL:		0.00	0.00	0.00



A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No: 81515 SDG: 81515

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 11/21/16

Analyte	Calibration Verification									M
	True ICV	Found 11:09	%R(1)	True CCV2	Found 12:35	%R(1)	True CCV1	Found 12:52	%R(1)	
Silica	4	4.11366	103	10	9.24250	92.4	4	4.28901	107	

(1) Control Limits: 90-110

ILM02.0

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No: 81515 SDG: 81515

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 11/21/16

Analyte	Calibration Verification									M
	True CCV2	Found 15:15	%R(1)	True CCV1	Found 15:22	%R(1)	True	Found	%R(1)	
Silica	10	10.1192	101	4	4.02599	101				

(1) Control Limits: 90-110

ILM02.0

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

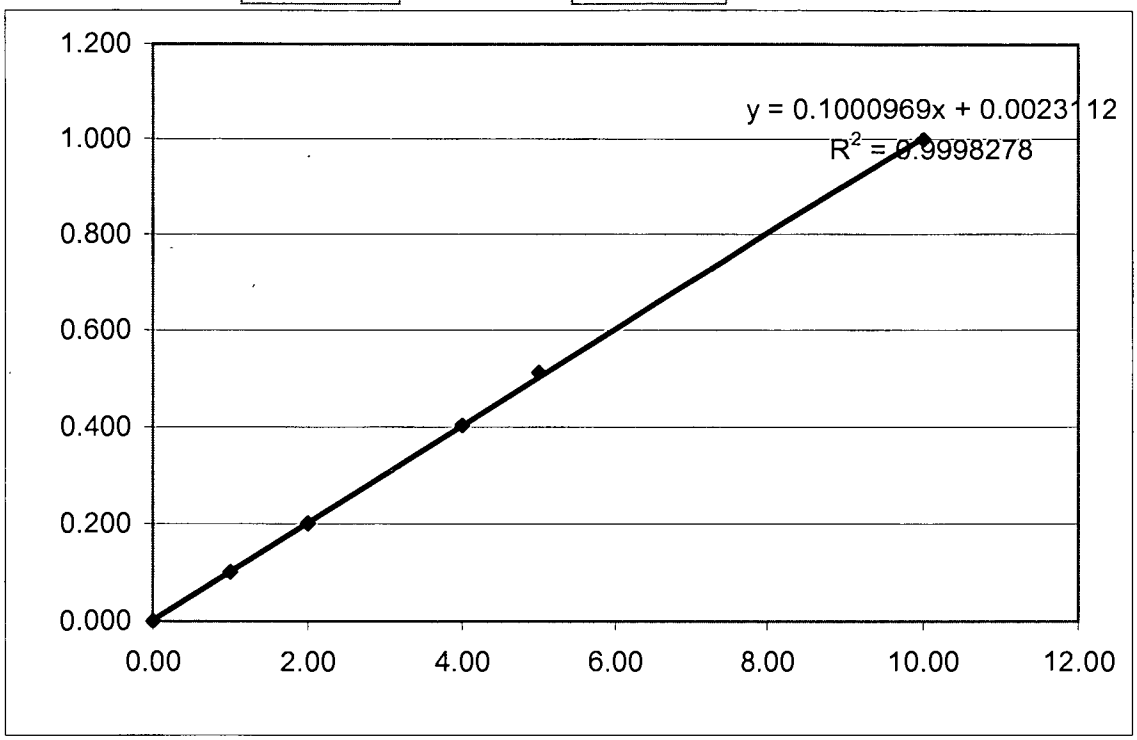
ARF No.: 81515 SDG: 81515

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	ICB 11/21/16 11:10	C	CCB 11/21/16 12:36	C	CCB 11/21/16 12:53	C	CCB 11/21/16 15:16	C	CCB 11/21/16 15:23	C	
Silica	1.000	U	1.000	U	1.000	U	1.000	U	1.0000	U	

Ferrous Iron **161117A**



X	Y
0.00	0.000
1.00	0.101
2.00	0.201
4.00	0.403
5.00	0.512
10.00	0.999

Algorithm Check

reading (y)= 0.292 11/17/16 18:33

dilution= 1

result (x)= 2.89 ✓ mm 12/6/16

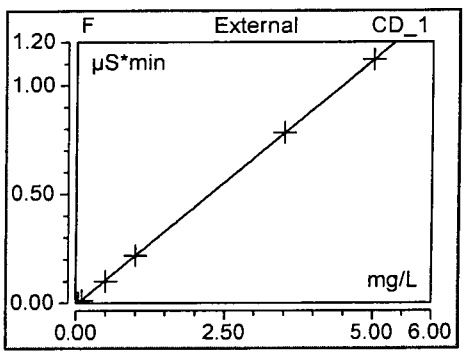
Calibration Batch Report

Sequence:	**161020**	*Injection Volume:*	**25.00**
Instrument Method:	**Program 1**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:24**	*Run Time:*	**7**

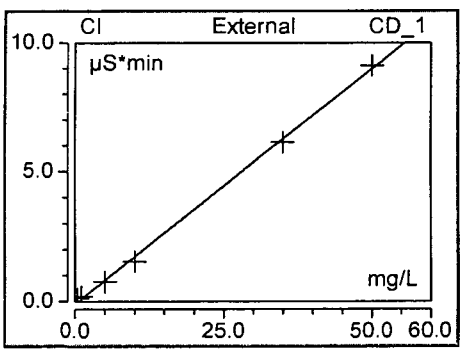
Calibration Summary

Peak Name	Eval.Type	Cal.Type	Points	Offset (C0)	Slope (C1)	Curve (C2)	Coeff.Det. %
F	Area	WithOffset,	6.000	-0.009	0.225	0.000	99.9840
Cl	Area	in, WithOffse	6.000	-0.094	0.182	0.000	99.8613
NO2-N	Area	in, WithOffse	6.000	-0.007	0.301	0.000	99.9917
BR	Area	in, WithOffse	6.000	-0.008	0.063	0.000	99.9802
NO3-N	Area	in, WithOffse	6.000	-0.039	0.412	0.000	99.9329
PO4-P	Area	in, WithOffse	6.000	-0.008	0.125	0.000	99.9563
SO4	Area	in, WithOffse	6.000	-0.060	0.122	0.000	99.9400
		AVERAGE:		-0.0322	0.2043	0.0000	99.9495

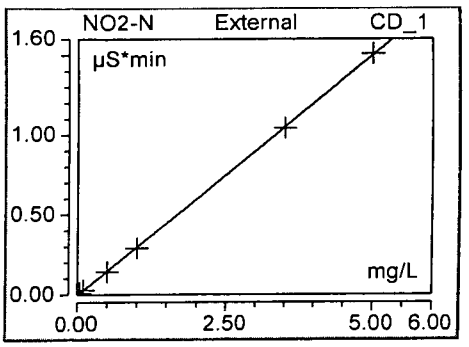
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	F	F	F	F
ICAL 1 10/20/16	2.123	0.0012	0.022	0.044
ICAL 2 10/20/16	2.107	0.0123	0.139	0.093
ICAL 3 10/20/16	2.100	0.1000	0.922	0.483
ICAL 4 10/20/16	2.104	0.2174	1.958	1.004
ICAL 5 10/20/16	2.097	0.7826	6.953	3.513
ICAL 6 10/20/16	2.103	1.1183	9.996	5.004
Average	2.106			
Rel. Std. Dev.	0.443 %			



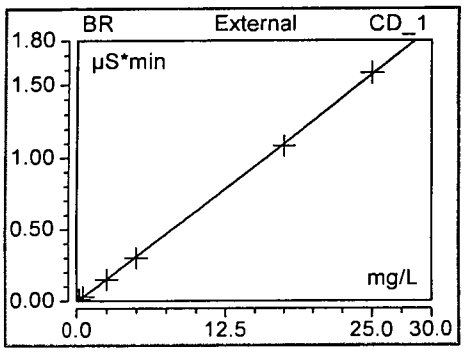
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	Cl	Cl	Cl	Cl
ICAL 1 10/20/16	2.793	0.1132	1.052	1.143
ICAL 2 10/20/16	2.790	0.1861	1.743	1.544
ICAL 3 10/20/16	2.790	0.7617	7.117	4.714
ICAL 4 10/20/16	2.797	1.5419	14.708	9.010
ICAL 5 10/20/16	2.793	6.1288	59.398	34.268
ICAL 6 10/20/16	2.803	9.1171	87.978	50.723
Average	2.795			
Rel. Std. Dev.	0.179 %			



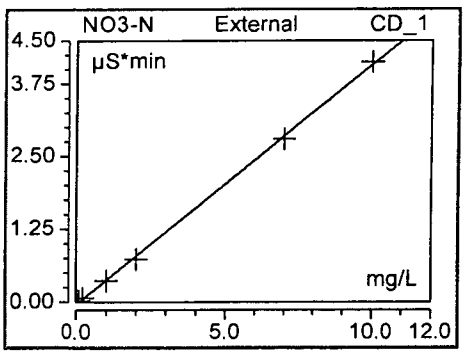
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	NO2-N	NO2-N	NO2-N	NO2-N
ICAL 1 10/20/16	3.250	0.0095	0.073	0.053
ICAL 2 10/20/16	3.247	0.0276	0.209	0.113
ICAL 3 10/20/16	3.250	0.1420	1.072	0.493
ICAL 4 10/20/16	3.254	0.2907	2.188	0.986
ICAL 5 10/20/16	3.250	1.0405	7.775	3.473
ICAL 6 10/20/16	3.257	1.5072	11.205	5.022
Average	3.251			
Rel. Std. Dev.	0.106 %			



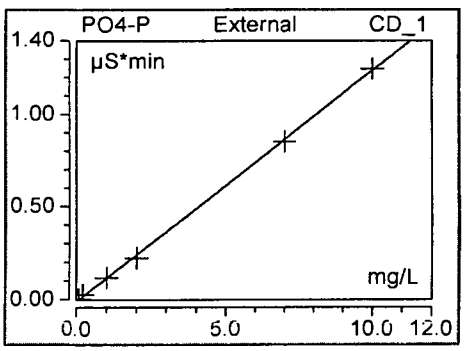
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	BR	BR	BR	BR
ICAL 1 10/20/16	3.757	0.0109	0.087	0.299
ICAL 2 10/20/16	3.753	0.0293	0.232	0.589
ICAL 3 10/20/16	3.750	0.1485	1.179	2.478
ICAL 4 10/20/16	3.754	0.2993	2.389	4.870
ICAL 5 10/20/16	3.743	1.0832	8.801	17.295
ICAL 6 10/20/16	3.747	1.5800	13.023	25.169
Average	3.751			
Rel. Std. Dev.	0.131 %			



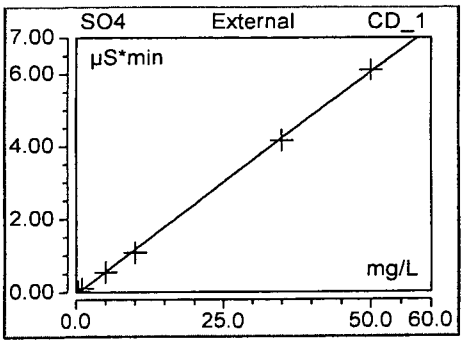
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	NO3-N	NO3-N	NO3-N	NO3-N
ICAL 1 10/20/16	4.143	0.0290	0.196	0.166
ICAL 2 10/20/16	4.140	0.0717	0.496	0.270
ICAL 3 10/20/16	4.137	0.3656	2.533	0.983
ICAL 4 10/20/16	4.140	0.7330	5.168	1.875
ICAL 5 10/20/16	4.123	2.7923	20.144	6.873
ICAL 6 10/20/16	4.123	4.1278	30.098	10.114
Average	4.135			
Rel. Std. Dev.	0.215 %			



Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	PO4-P	PO4-P	PO4-P	PO4-P
ICAL 1 10/20/16	5.540	0.0032	0.021	0.092
ICAL 2 10/20/16	5.540	0.0284	0.107	0.295
ICAL 3 10/20/16	5.537	0.1191	0.557	1.022
ICAL 4 10/20/16	5.537	0.2251	1.103	1.873
ICAL 5 10/20/16	5.520	0.8544	4.243	6.922
ICAL 6 10/20/16	5.523	1.2473	6.244	10.075
Average	5.533			
Rel. Std. Dev.	0.160 %			



Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	SO4	SO4	SO4	SO4
ICAL 1 10/20/16	6.090	0.0385	0.159	0.808
ICAL 2 10/20/16	6.093	0.1046	0.455	1.350
ICAL 3 10/20/16	6.097	0.5456	2.464	4.961
ICAL 4 10/20/16	6.100	1.0756	4.975	9.302
ICAL 5 10/20/16	6.097	4.1512	19.714	34.487
ICAL 6 10/20/16	6.110	6.1057	29.270	50.492
Average	6.098			
Rel. Std. Dev.	0.113 %			

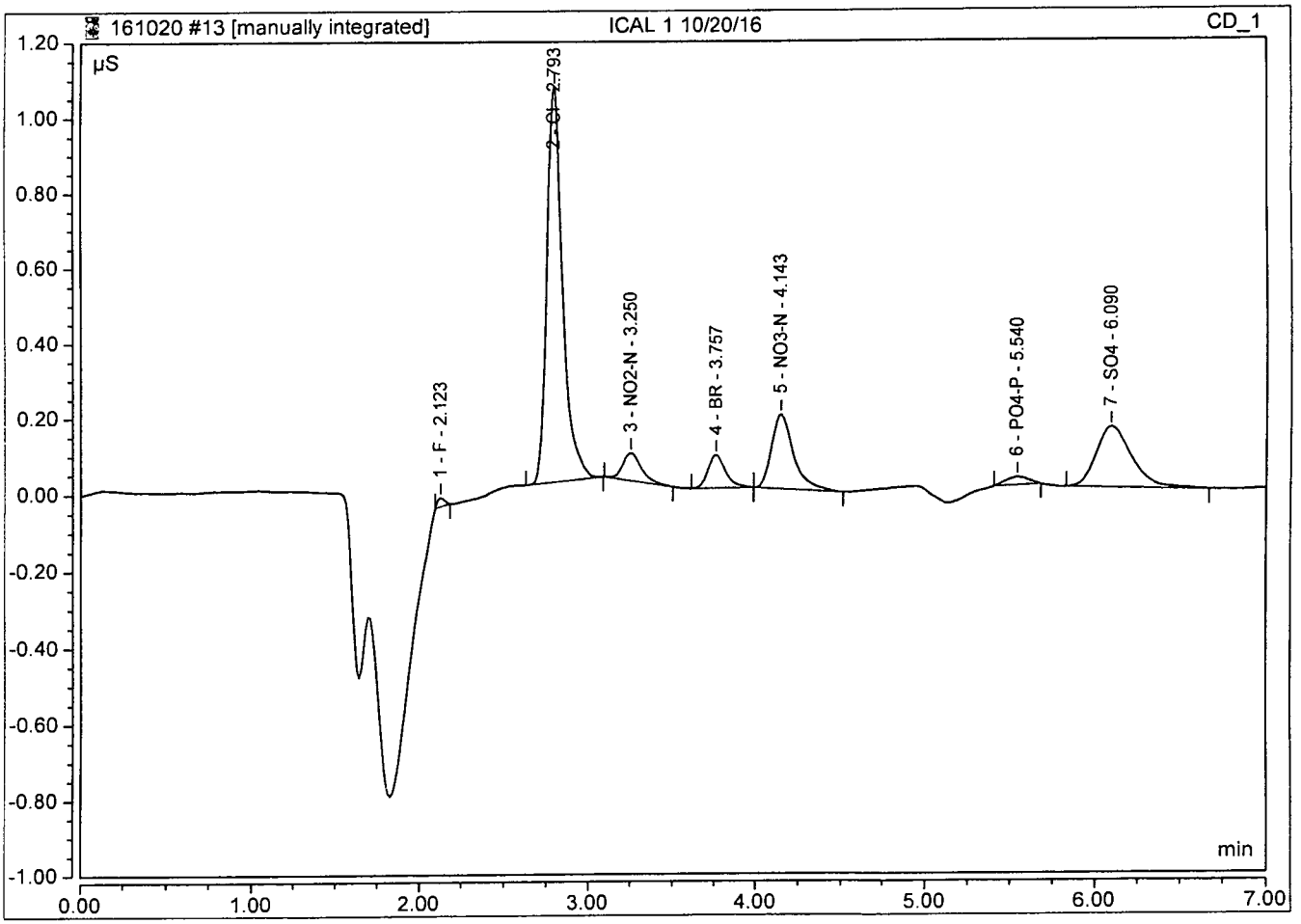


mm 11/30/16 11-30-16

Peak Integration Report

Sample Name:	**ICAL 1 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:19**	*Run Time:*	**7.00**

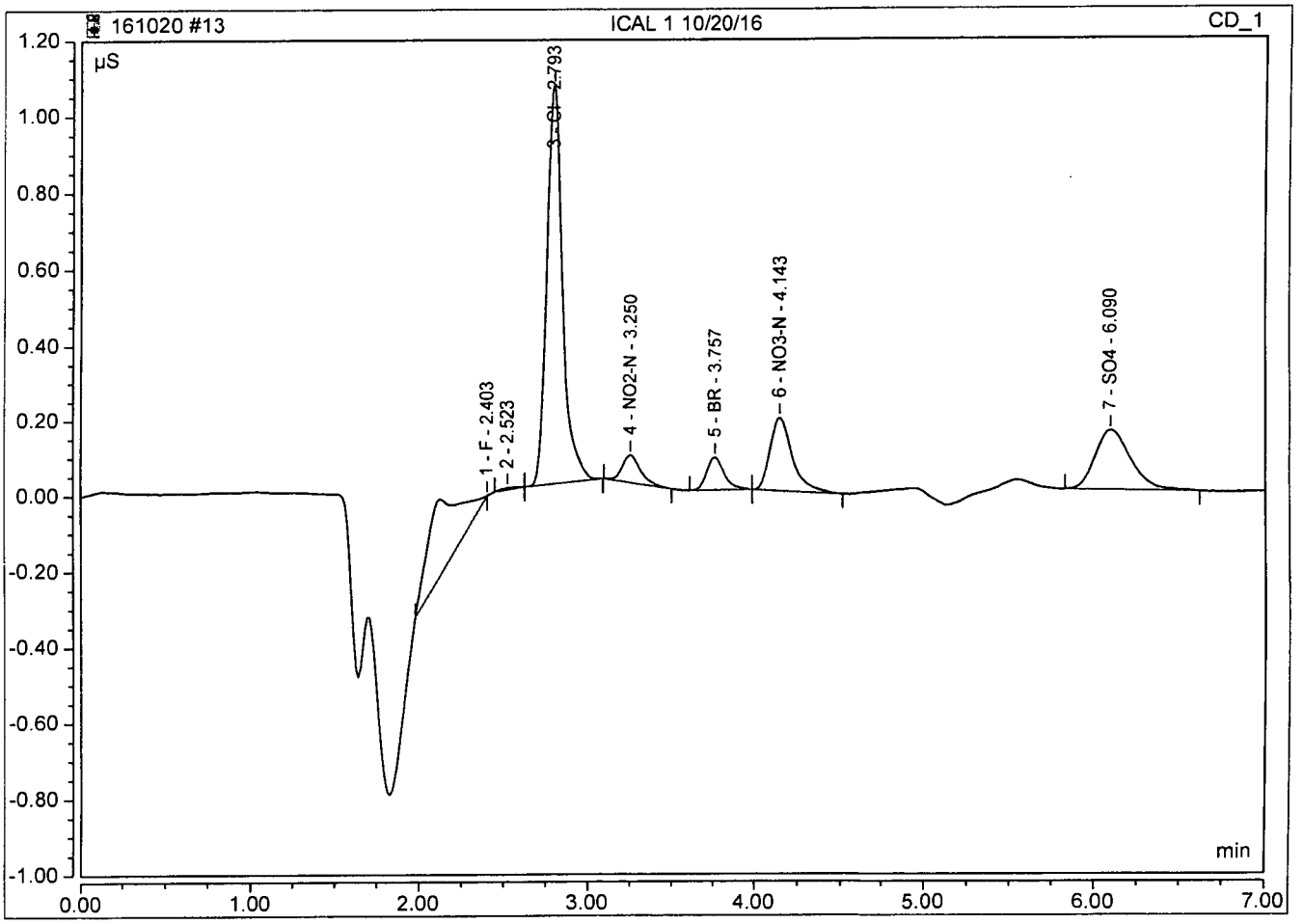
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.12	F	BMB*	0.001	0.022	0.0438
2	2.79	Cl	BMB	0.113	1.052	1.1427
3	3.25	NO2-N	BMB	0.009	0.073	0.0531
4	3.76	BR	BMB	0.011	0.087	0.2985
5	4.14	NO3-N	BMB	0.029	0.196	0.1660
6	5.54	PO4-P	BMB*	0.003	0.021	0.0923
7	6.09	SO4	BMB	0.038	0.159	0.8084
TOTAL:				0.21	1.61	2.60



Peak Integration Report

Sample Name:	**ICAL 1 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:19**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.40	F	BMB	0.044	0.000	0.2342
3	2.79	Cl	BMB	0.113	1.052	1.1427
4	3.25	NO2-N	BMB	0.009	0.073	0.0531
5	3.76	BR	BMB	0.011	0.087	0.2985
6	4.14	NO3-N	BMB	0.029	0.196	0.1660
7	6.09	SO4	BMB	0.038	0.159	0.8063
TOTAL:				0.24	1.57	2.70

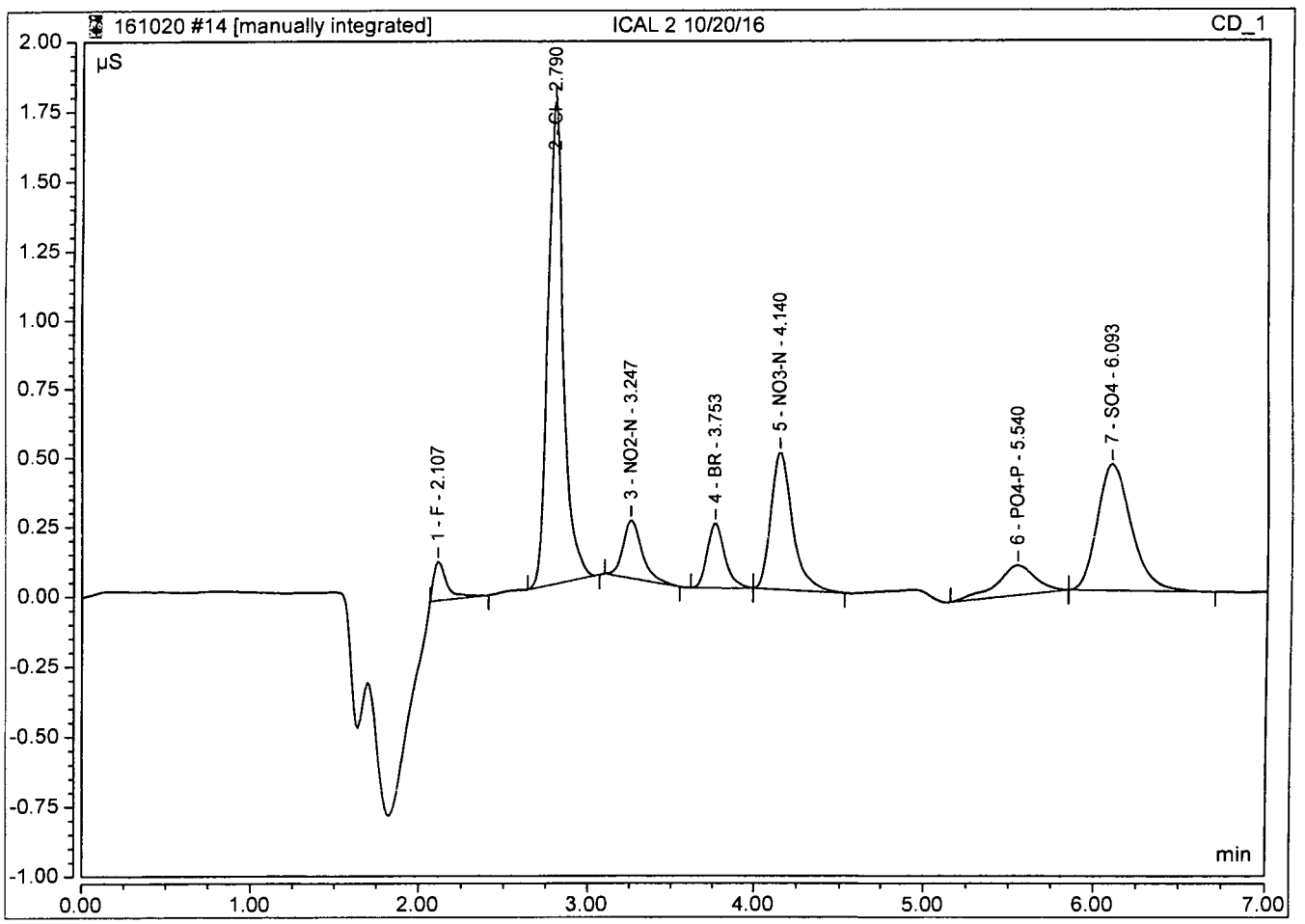


mi mm 11/30/16 BD 11-30-16

Peak Integration Report

Sample Name:	ICAL 2 10/20/16	*Inj. Vol.:*	25.00
Injection Type:	Calibration Standard	*Dilution Factor:*	1.0000
Program:	Analytical Processing Method 161020 ND	*Operator:*	chemist_wetlab
Inj. Date / Time:	20-Oct-2016 / 11:32	*Run Time:*	7.00

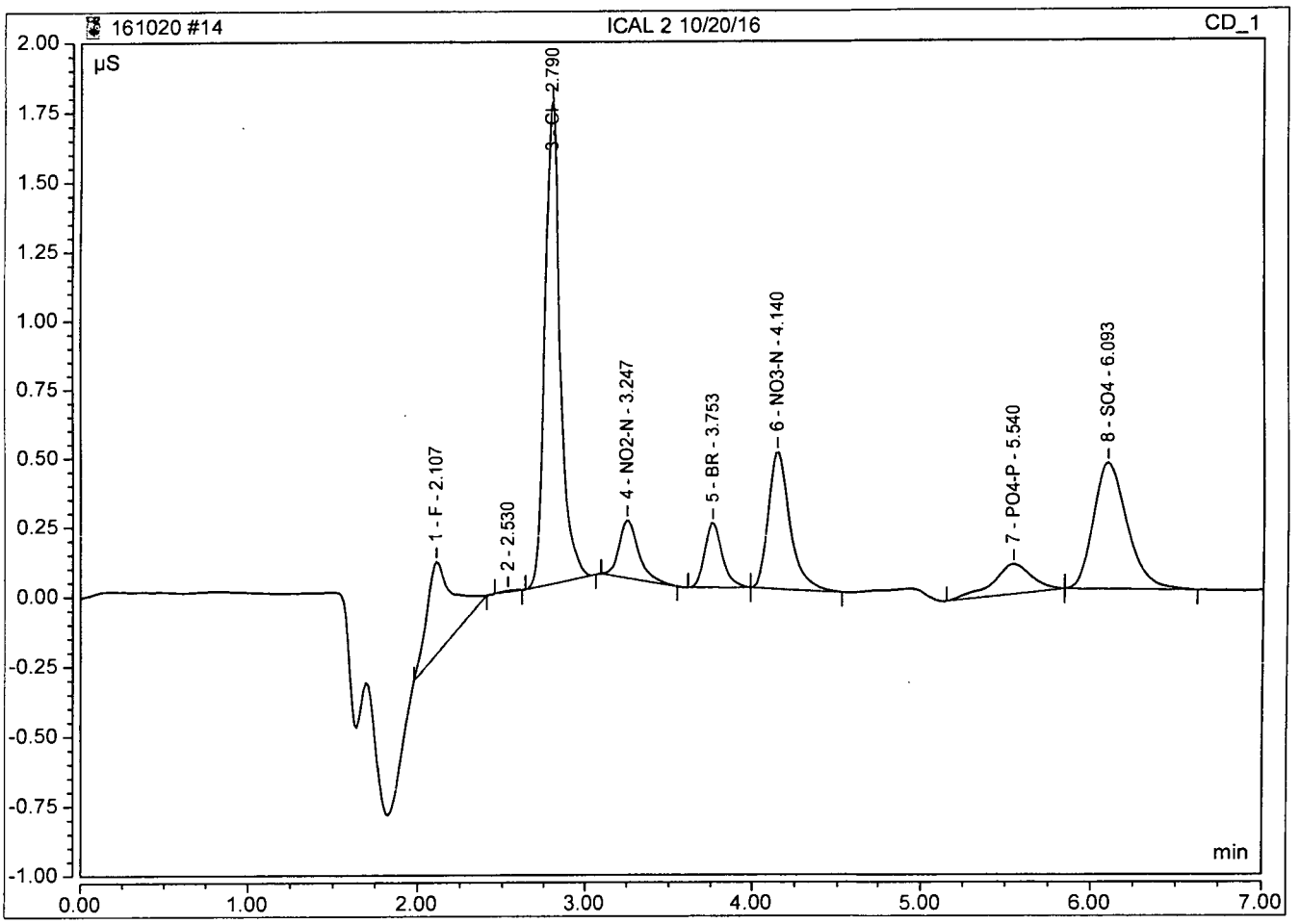
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.11	F	BMB*	0.012	0.139	0.0933
2	2.79	Cl	BMB	0.186	1.743	1.5439
3	3.25	NO2-N	BMB	0.028	0.209	0.1132
4	3.75	BR	BMB	0.029	0.232	0.5894
5	4.14	NO3-N	BMB	0.072	0.496	0.2699
6	5.54	PO4-P	BMB	0.028	0.107	0.2946
7	6.09	SO4	BMB	0.105	0.455	1.3496
TOTAL:				0.46	3.38	4.25



Peak Integration Report

Sample Name:	**ICAL 2 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:32**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.11	F	BMB	0.059	0.334	0.3000
3	2.79	Cl	BMB	0.186	1.743	1.5439
4	3.25	NO2-N	BMB	0.028	0.209	0.1132
5	3.75	BR	BMB	0.029	0.232	0.5894
6	4.14	NO3-N	BMB	0.072	0.496	0.2699
7	5.54	PO4-P	BMB	0.028	0.107	0.2946
8	6.09	SO4	BMB	0.104	0.455	1.3489
TOTAL:				0.51	3.58	4.46

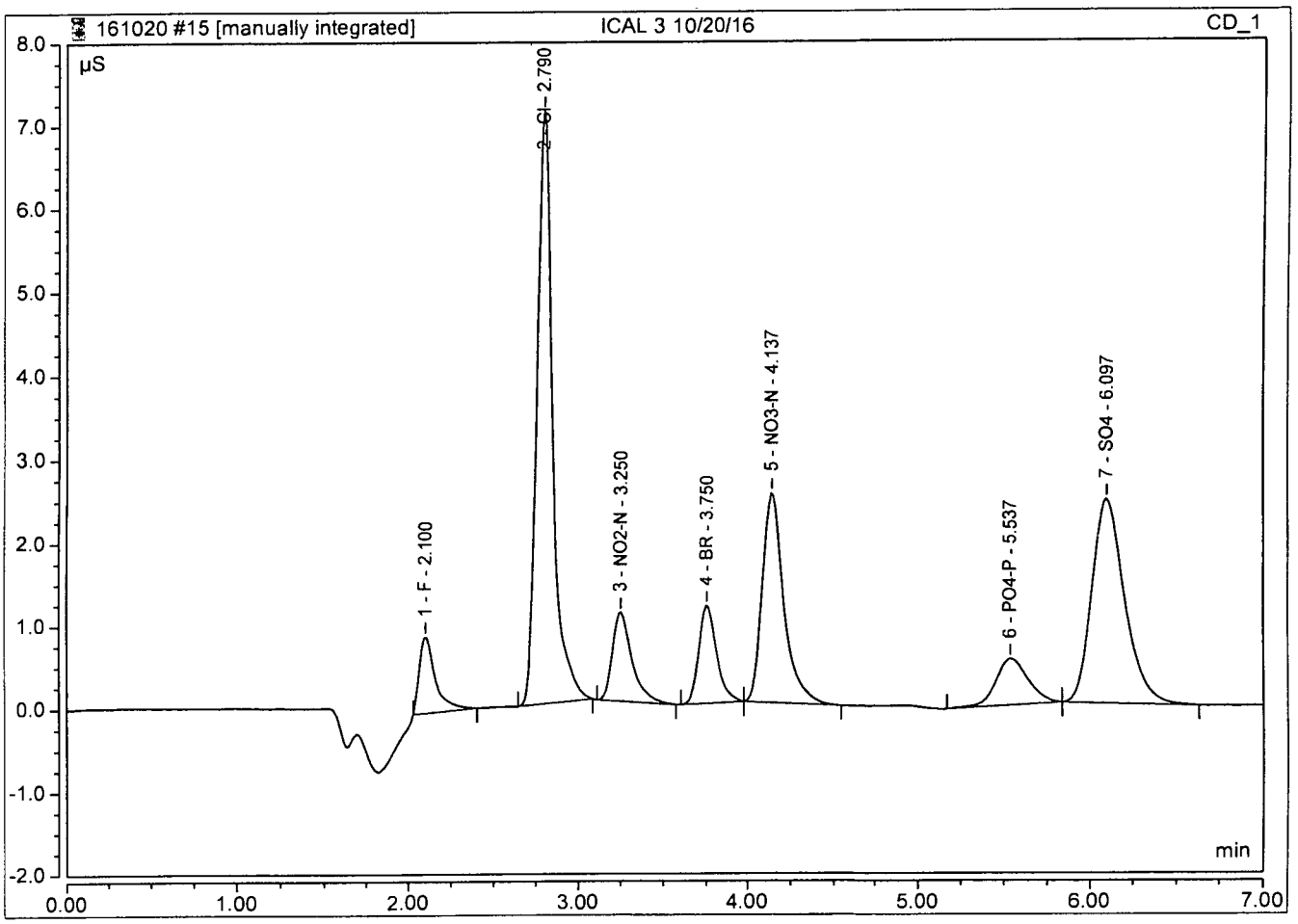


MI MM 11/30/16 JL 11-30-16

Peak Integration Report

Sample Name:	**ICAL 3 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:45**	*Run Time:*	**7.00**

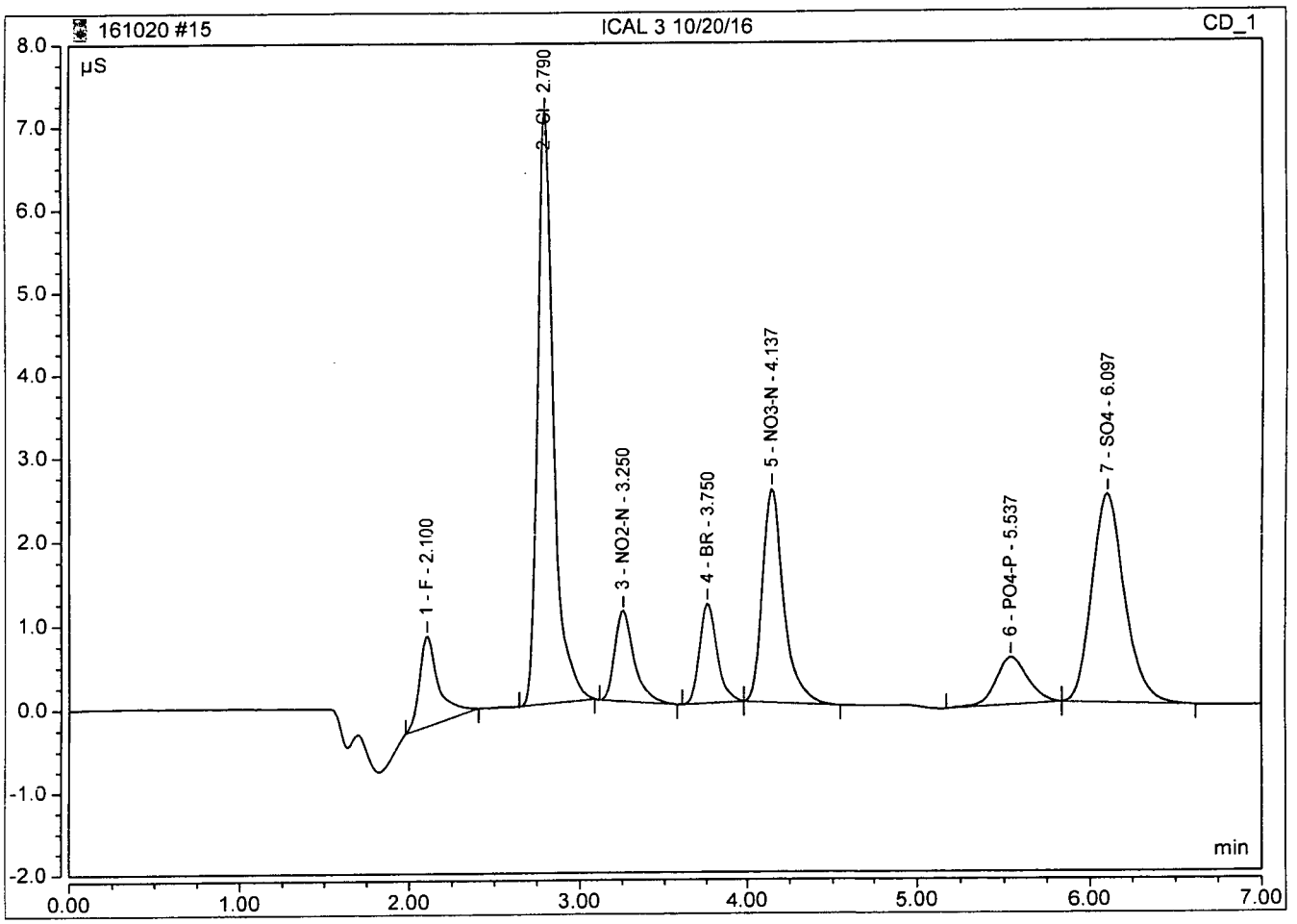
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB*	0.100	0.922	0.4827
2	2.79	Cl	BMB	0.762	7.117	4.7137
3	3.25	NO2-N	BMB	0.142	1.072	0.4926
4	3.75	BR	BMB	0.148	1.179	2.4784
5	4.14	NO3-N	BMB	0.366	2.533	0.9830
6	5.54	PO4-P	BMB	0.119	0.557	1.0221
7	6.10	SO4	BMB	0.546	2.464	4.9609
TOTAL:				2.18	15.84	15.13



Peak Integration Report

Sample Name:	**ICAL 3 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:45**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB	0.140	1.077	0.6592
2	2.79	Cl	BMB	0.762	7.117	4.7137
3	3.25	NO2-N	BMB	0.142	1.072	0.4926
4	3.75	BR	BMB	0.148	1.179	2.4784
5	4.14	NO3-N	BMB	0.366	2.533	0.9830
6	5.54	PO4-P	BMB	0.119	0.557	1.0221
7	6.10	SO4	BMB	0.545	2.464	4.9599
TOTAL:				2.22	16.00	15.31



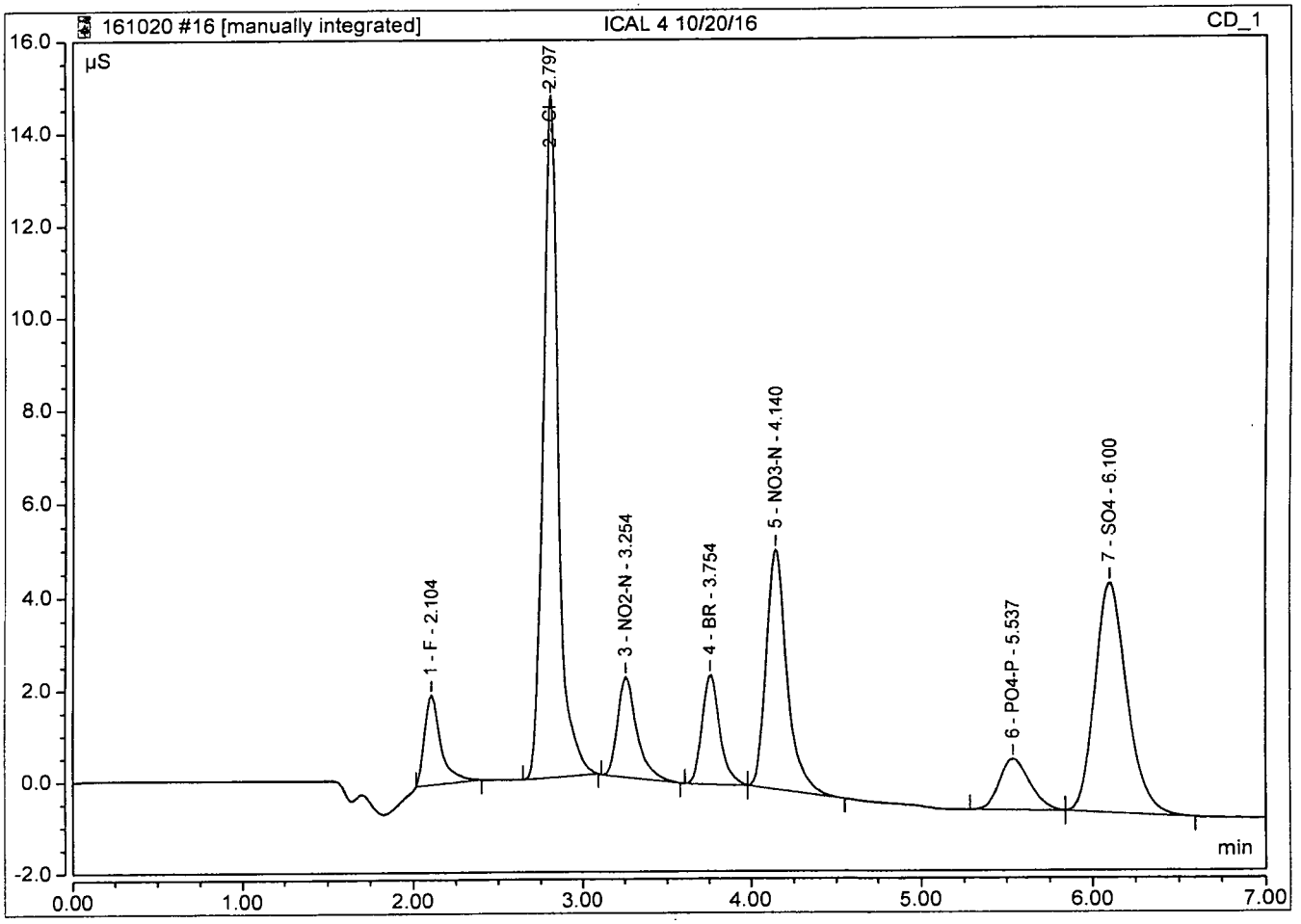
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

MI mm 11/30/16 JR 11-30-16

Peak Integration Report

Sample Name:	**ICAL 4 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:58**	*Run Time:*	**7.00**

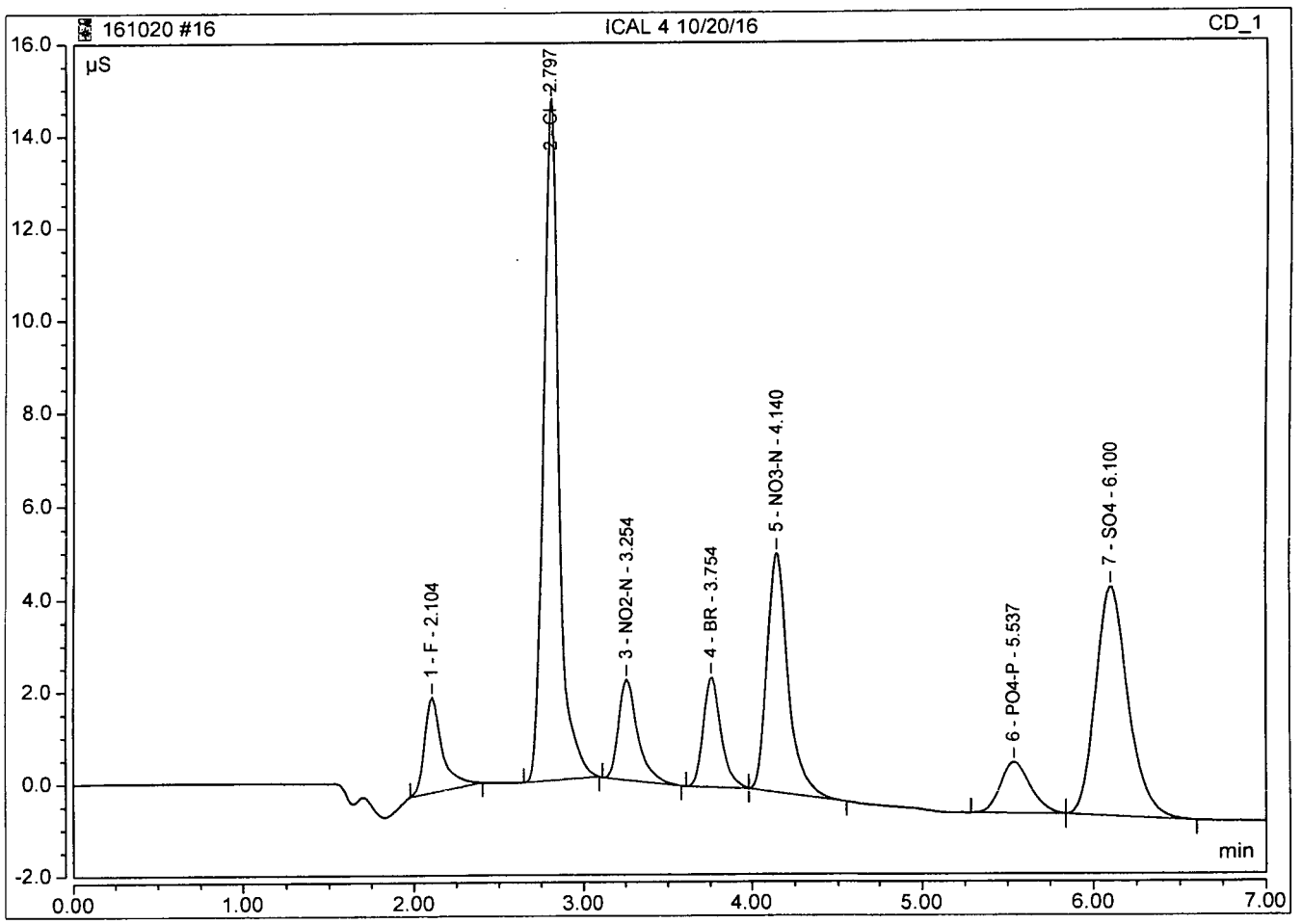
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB*	0.217	1.958	1.0036
2	2.80	Cl	BMB	1.542	14.708	9.0096
3	3.25	NO2-N	BMB	0.291	2.188	0.9859
4	3.75	BR	BMB	0.299	2.389	4.8695
5	4.14	NO3-N	BMB	0.733	5.168	1.8746
6	5.54	PO4-P	BMB	0.225	1.103	1.8731
7	6.10	SO4	BMB	1.076	4.975	9.3015
TOTAL:				4.38	32.49	28.92



Peak Integration Report

Sample Name:	**ICAL 4 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:58**	*Run Time:*	**7.00**

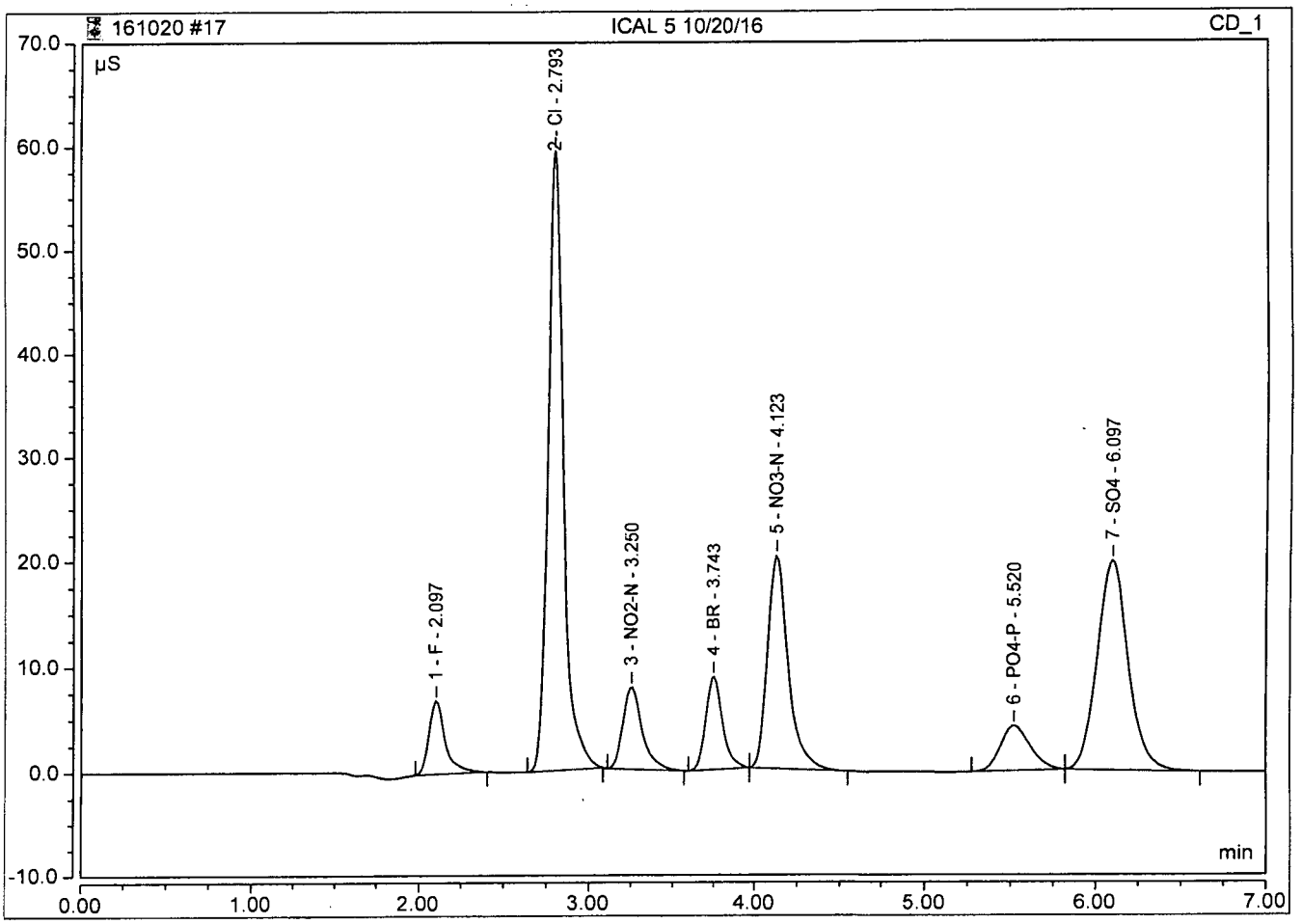
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB	0.248	2.072	1.1402
2	2.80	Cl	BMB	1.542	14.708	9.0096
3	3.25	NO2-N	BMB	0.291	2.188	0.9859
4	3.75	BR	BMB	0.299	2.389	4.8695
5	4.14	NO3-N	BMB	0.733	5.168	1.8746
6	5.54	PO4-P	BMB	0.225	1.103	1.8731
7	6.10	SO4	BMB	1.076	4.975	9.3015
TOTAL:				4.41	32.60	29.05



Peak Integration Report

Sample Name:	**ICAL 5 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:11**	*Run Time:*	**7.00**

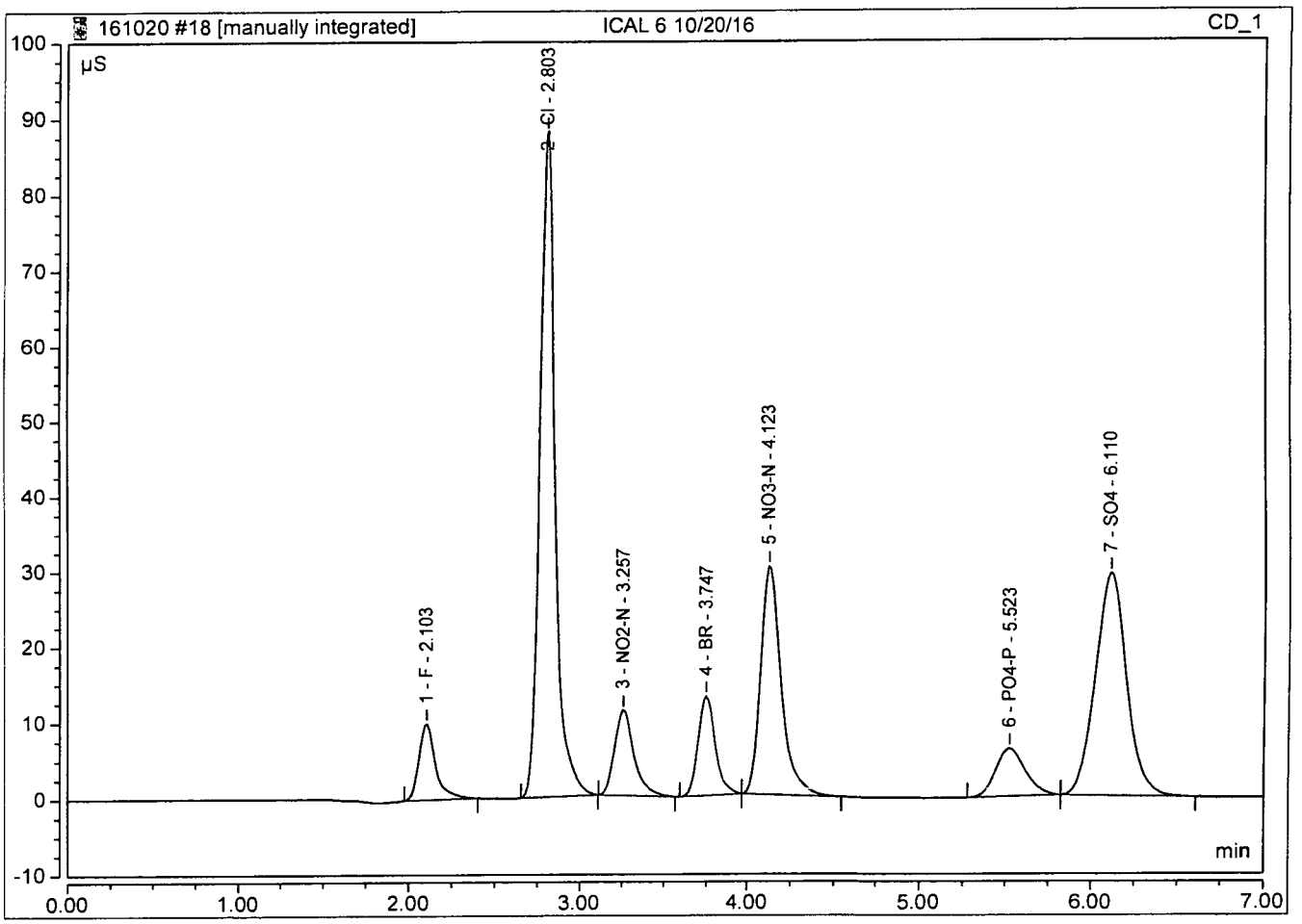
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB	0.783	6.953	3.5131
2	2.79	Cl	BMB	6.129	59.398	34.2675
3	3.25	NO2-N	BMB	1.040	7.775	3.4734
4	3.74	BR	BMB	1.083	8.801	17.2948
5	4.12	NO3-N	BMB	2.792	20.144	6.8727
6	5.52	PO4-P	BMB	0.854	4.243	6.9225
7	6.10	SO4	BMB	4.151	19.714	34.4871
TOTAL:				16.83	127.03	106.83



Peak Integration Report

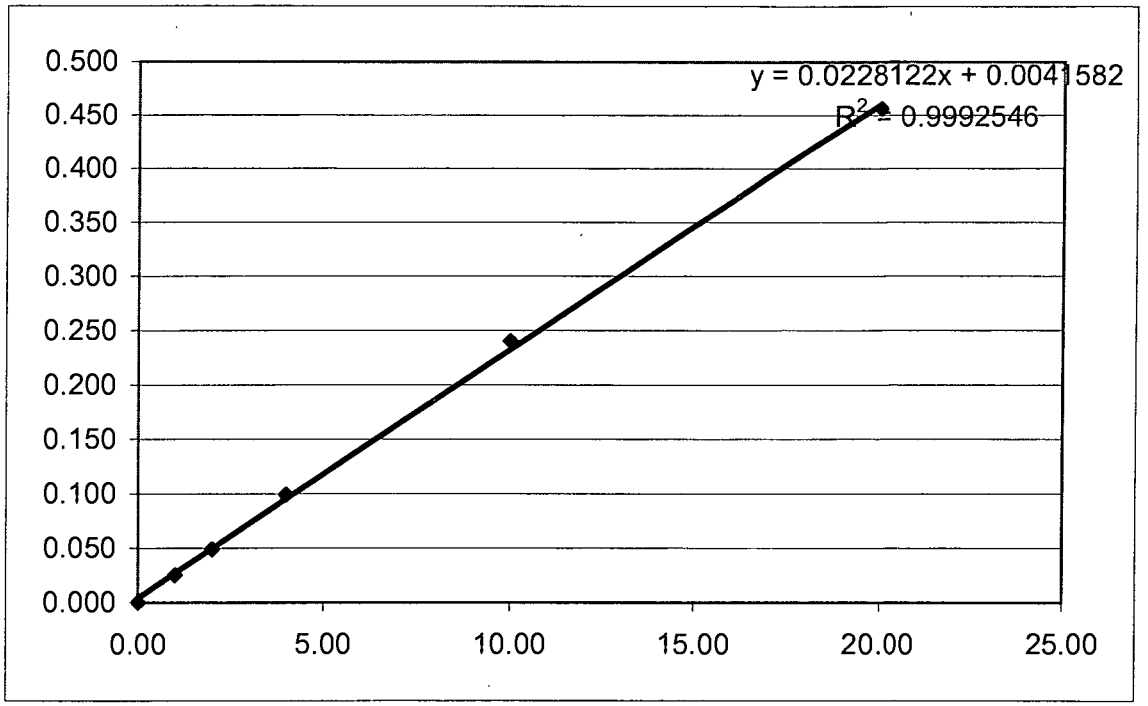
Sample Name:	**ICAL 6 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:24**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB	1.118	9.996	5.0036
2	2.80	Cl	BMB*	9.117	87.978	50.7226
3	3.26	NO2-N	BMB	1.507	11.205	5.0218
4	3.75	BR	BMB	1.580	13.023	25.1693
5	4.12	NO3-N	BMB	4.128	30.098	10.1138
6	5.52	PO4-P	BMB	1.247	6.244	10.0755
7	6.11	SO4	BMB	6.106	29.270	50.4924
TOTAL:				24.80	187.81	156.60



Silica

11/21/16



X	Y
0.00	0.000
1.00	0.025
2.00	0.049
4.00	0.099
10.00	0.240
20.00	0.456

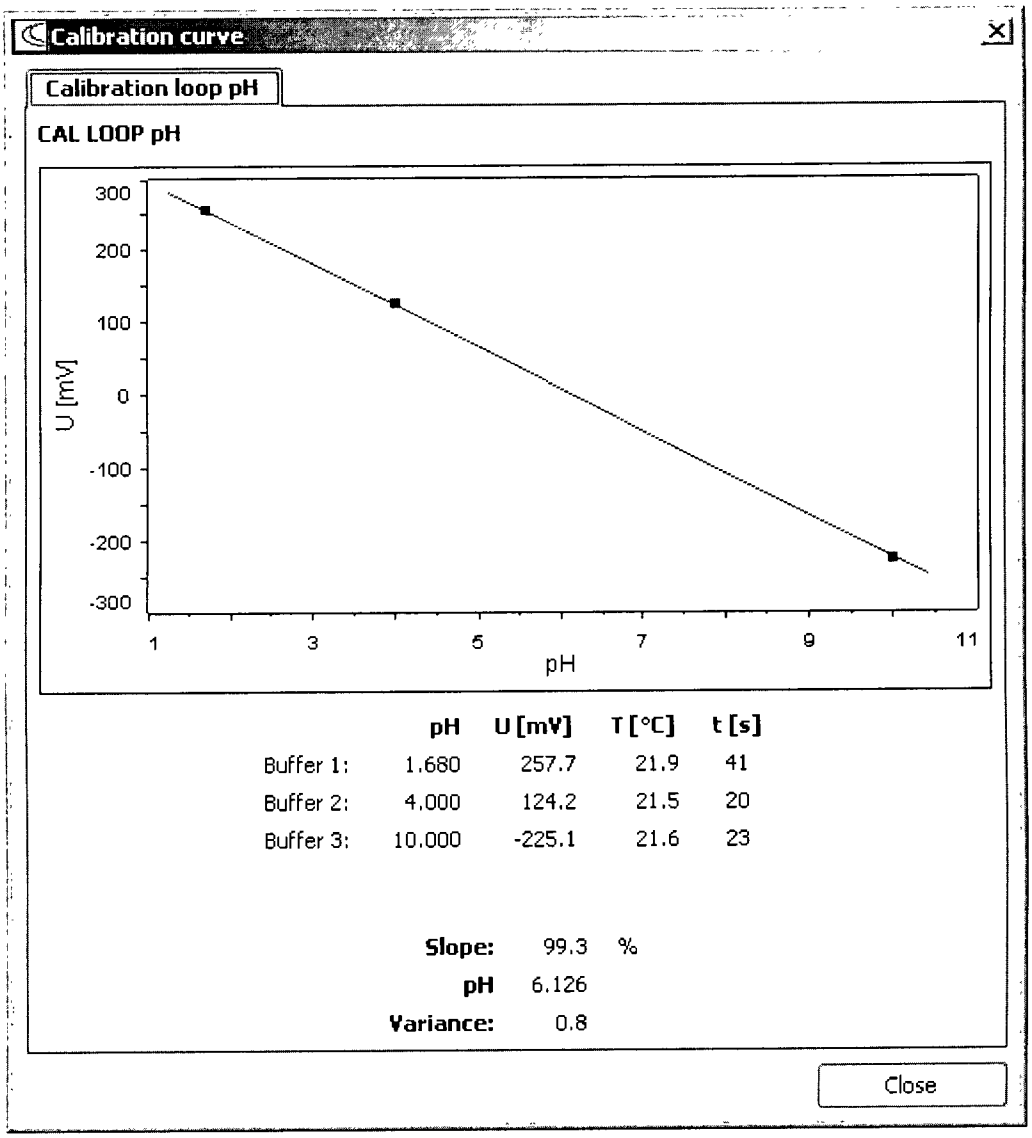
ALGORITHM CHECK

y= 0.098 11/21/16 11:09

dilution= 1

x*dil.= 4.114 ✓ mm 12/6/16

Tiamo Calibration Curve
11/21/16



INORGANIC ANALYSIS
Raw Data

APPL, INC.

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	11/18/16	11/18/16	#300WD-161118A-AZ45988
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	11/18/16	11/18/16	#300WD-161118A-AZ45988
SM 4500-S	SILICA W	0.80 U	1.0	0.80	0.53	mg/L	11/21/16	11/21/16	#SIO2-161121A-AZ45866
SM 4500-S	DISSOLVED SILICA	0.80 U	1.0	0.80	0.53	mg/L	11/21/16	11/21/16	#SIO2D-161121B-AZ45866
SM 2320B	BICARBONATE AS	1.70 U	2.0	1.70	0.85	mg/L	11/21/16	11/21/16	#232W-161121A1-AZ45991
SM 2320B	CARBONATE AS CA	1.70 U	2.0	1.70	0.85	mg/L	11/21/16	11/21/16	#232W-161121A1-AZ45991
SM 2320B	TOTAL ALKALINITY	1.70 U	2.0	1.70	0.85	mg/L	11/21/16	11/21/16	#232W-161121A1-AZ45991
EPA 300.0	BROMIDE	0.16 U	0.5	0.16	0.05	mg/L	11/17/16	11/17/16	#300W-161117A-AZ45991
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	11/17/16	11/17/16	#300W-161117A-AZ45991
EPA 300.0	FLUORIDE	0.09 U	0.1	0.09	0.08	mg/L	11/17/16	11/17/16	#300W-161117A-AZ45991
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	11/17/16	11/17/16	#300W-161117A-AZ45991
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	11/17/16	11/17/16	#300W-161117A-AZ45991
SM3500Fe	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	11/17/16	11/17/16	#35FE-161117A-AZ45994

Wetlab SC-Blank-REG MDLs
Printed: 11/29/16 3:06:25 PM

Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
SM3500Fe	FERROUS IRON	3.00	2.89	96.3	80-120	11/17/16	11/17/16	#35FE-161117A-AZ45994

Comments: _____

Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

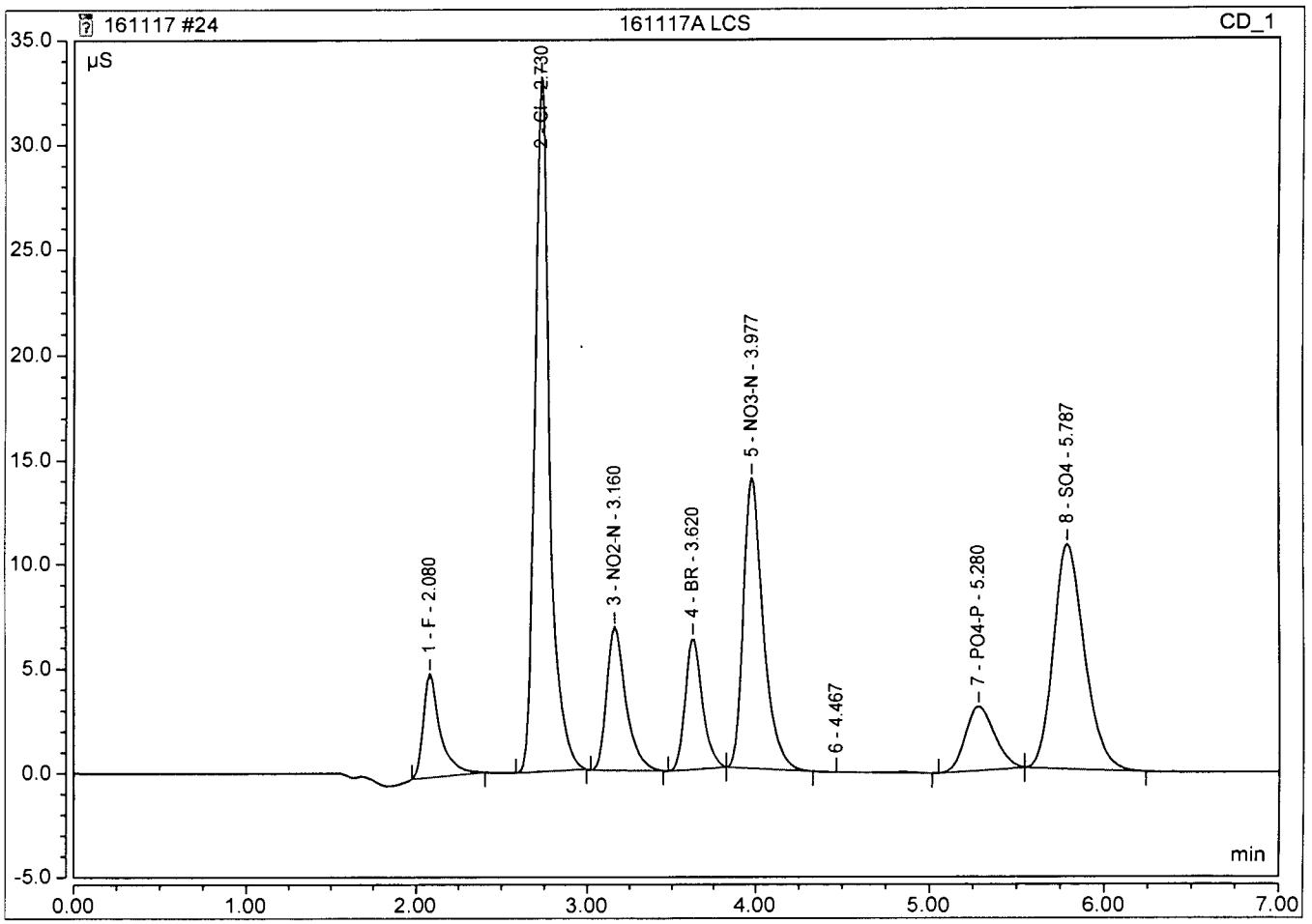
Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 300.0	BROMIDE	12.5	12.1	96.8	90-110	11/17/16	11/17/16	#300W-161117A-AZ45991
EPA 300.0	CHLORIDE	20.0	18.7	93.5	90-110	11/17/16	11/17/16	#300W-161117A-AZ45991
EPA 300.0	FLUORIDE	2.50	2.57	103	90-110	11/17/16	11/17/16	#300W-161117A-AZ45991
EPA 300.0	NITRATE	22.1	20.4	92.3	90-110	11/17/16	11/17/16	#300W-161117A-AZ45991
EPA 300.0	SULFATE	20.0	18.4	92.0	90-110	11/17/16	11/17/16	#300W-161117A-AZ45991
SM 2320B	BICARBONATE AS CACO3	250	242	96.8	90-110	11/21/16	11/21/16	#232W-161121A1-AZ45991
SM 2320B	TOTAL ALKALINITY AS CACO3	250	242	96.8	90-110	11/21/16	11/21/16	#232W-161121A1-AZ45991

Comments: _____

Peak Integration Report

Sample Name:	**161117A LCS**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**17-Nov-2016 / 13:30**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.08	F	BMB	0.570	4.965	2.5705
2	2.73	Cl	BMB	3.299	33.146	18.6834
3	3.16	NO2-N	BMB	0.899	6.848	3.0035
4	3.62	BR	BMB	0.755	6.285	12.0991
5	3.98	NO3-N	BMB	1.863	13.921	4.6176
7	5.28	PO4-P	BMB	0.593	3.076	4.8211
8	5.79	SO4	BMB	2.189	10.720	18.4182
TOTAL:				10.17	78.96	64.21



Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

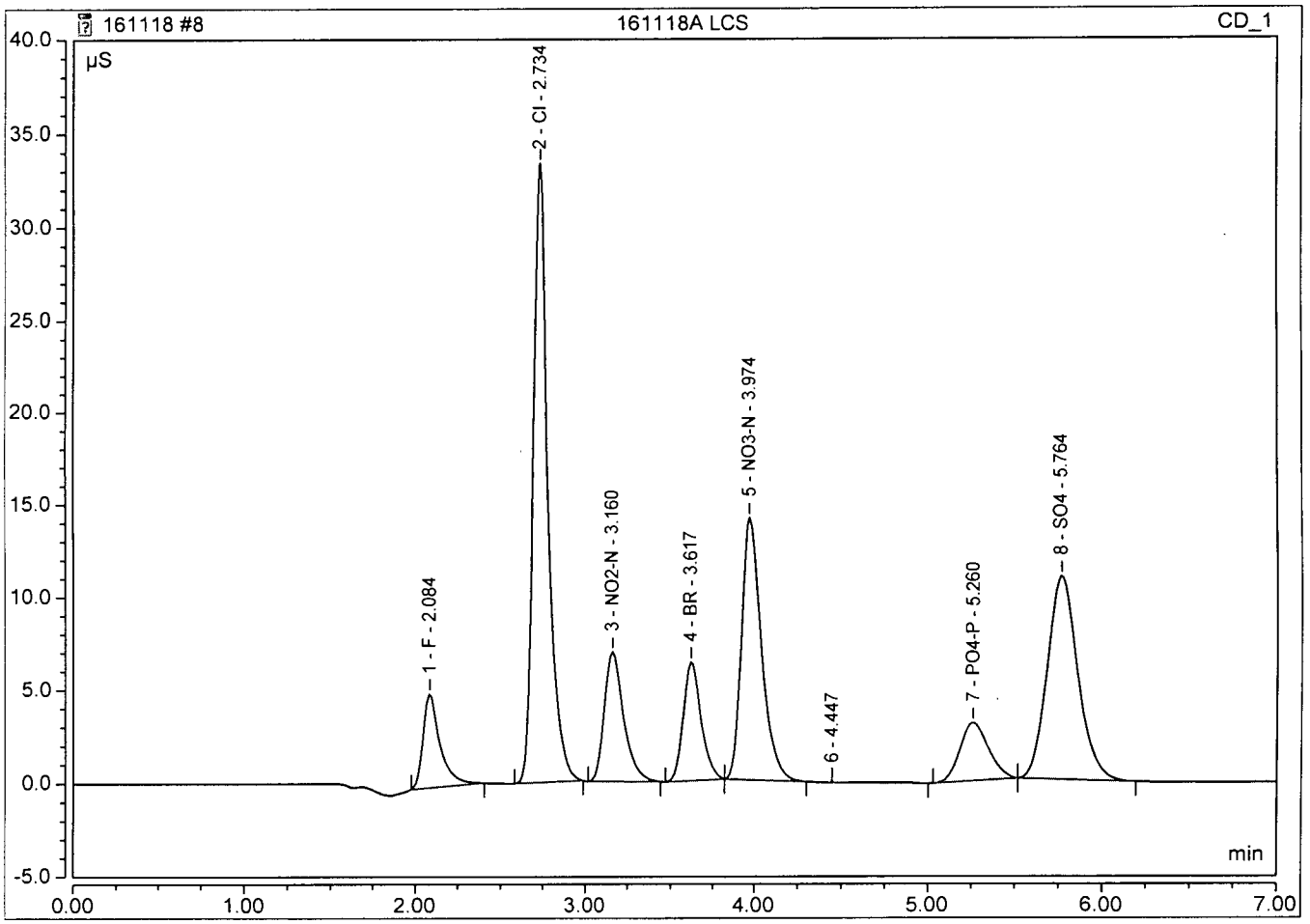
Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	20.0	18.9	94.5	90-110	11/18/16	11/18/16	#300WD-161118A-AZ45988
EPA 300.0	SULFATE	20.0	18.5	92.5	90-110	11/18/16	11/18/16	#300WD-161118A-AZ45988
SM 4500-Si	SILICA W	4.00	4.29	107	80-120	11/21/16	11/21/16	#SIO2-161121A-AZ45866
SM 4500-Si	DISSOLVED SILICA	4.00	4.38	110	80-120	11/21/16	11/21/16	#SIO2D-161121B-AZ45866

Comments: _____

Peak Integration Report

Sample Name:	**161118A LCS**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**18-Nov-2016 / 11:19**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.08	F	BMB	0.578	5.029	2.6051
2	2.73	Cl	BMB	3.331	33.337	18.8592
3	3.16	NO2-N	BMB	0.914	6.934	3.0542
4	3.62	BR	BMB	0.771	6.358	12.3508
5	3.97	NO3-N	BMB	1.884	14.088	4.6685
7	5.26	PO4-P	BMB	0.595	3.107	4.8445
8	5.76	SO4	BMB	2.204	10.913	18.5433
TOTAL:				10.28	79.77	64.93



Matrix Spike Recoveries

WETLAB

APPL ID: **161121W-45991 MS - 213934**

Sample ID: AZ45991

Client ID: ERH124

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	Matrix Res mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
SM 2320B	BICARBONATE AS CA	250	196	421	428	90.0	92.8	1.6	20	90-110	11/21/16	11/21/16	11/21/16	11/21/16	213934	AZ45991
SM 2320B	TOTAL ALKALINITY AS	250	196	421	428	90.0	92.8	1.6	20	90-110	11/21/16	11/21/16	11/21/16	11/21/16	213934	AZ45991

Comments: _____

SPECTROPHOTOMETRIC ANALYSIS (Ferrous Iron)

Method: SM3500Fe
Analyte: Ferrous Iron
Analyst: MM
Units: mg/L
QCG: 161117A
Notes:
Final Volume: 50mL

Instrument: GENESYS 10UV
Raw Spec: abs. @ 510nm
R-Squared: 0.99983
Reagent (lot#): COLORIZING REAGENT (11/17/16)
BUFFER (05/20/16)

Date	Time	APPL ID	25mL	Raw Result	SubSample Amt	Raw BLK	Calc Conc	Result	QC True	QC%	Row Complete
05/20/16	12:37	0 BB 5/20/16	1	0.000							
05/20/16	12:38	1	1	0.101							
05/20/16	12:39	2	1	0.201							
05/20/16	12:39	4	1	0.403							
05/20/16	12:40	5	1	0.512							
05/20/16	12:40	10	1	0.999							
05/20/16	12:41	160520A ICV 3.0	1	0.304	25mL		3.01	3.01	3.000	100.5%	
05/20/16	12:42	160520A ICB	1	0.000	25mL		-0.02	-0.02			
11/17/16	18:31	CCV 4.0 161117	1	0.396	25mL		3.93	3.933	4.000	*98.33*	
11/17/16	18:32	CCB 161117	1	0.001	25mL		-0.01	-0.013			
11/17/16	18:33	161117A LCS 3.0	1	0.292	25mL		2.89	2.894	3.000	*96.47*	
11/17/16	18:34	AZ45988W10	1	0.010	25mL		0.08	0.077			
11/17/16	18:35	AZ45991W10	1	0.295	25mL		2.92	2.924			
11/17/16	18:36	AZ45992W10	1	0.017	25mL		0.15	0.147			
11/17/16	18:37	AZ45993W10	1	0.241	25mL		2.38	2.385			
11/17/16	18:38	AZ45994W10	1	0.008	25mL		0.06	0.057			
11/17/16	18:39	AZ45994W10 MS	1	0.311	25mL		3.08	3.084	3.00	*102.80*	
11/17/16	18:40	LOD Q4	1	0.026	25mL		0.24	0.237	0.32	*73.96*	
11/17/16	18:41	LOQ Q4	1	0.198	25mL		1.95	1.955	2.00	*97.75*	
11/17/16	18:42	CCV 4.0 161117	1	0.401	25mL		3.98	3.983	4.00	*99.58*	
11/17/16	18:43	CCB 161117	1	-0.001	25mL		-0.03	-0.033			

SPECTROPHOTOMETRIC ANALYSIS (Silica)

Method: SM4500SiD
Analyte: Silica
Analyst: FJR
Units: mg/L
QCG: 161121A
Notes:
Final Volume: 25mL

Instrument: GENESYS 10UV
Raw Spec: abs. @ 410nm
R-Squared: 0.99925
Reagent (lot#): 1+1 HCL prep 11-15-16
Ammonium Molybdate prep 11-15-16
Oxalic Acid prep 11-15-16

Date	Time	APPL ID	DF	Raw Result	SubSample Amt	Raw BLK	Calc Conc	Result	QC True	QC%
11/21/16	11:03	0 11/21/16 FJR		0.000						
11/21/16	11:04	1		0.025						
11/21/16	11:05	2		0.049						
11/21/16	11:06	4		0.099						
11/21/16	11:07	10		0.240						
11/21/16	11:08	20		0.456						
11/21/16	11:09	161121 ICV 4	1	0.098	25mL		4.11	4.11	4.00	102.8%
11/21/16	11:10	ICB	1	0.000	25mL		-0.18	-0.18		
11/21/16	12:35	CCV2 10 161121	1	0.215	25mL		9.24	9.24	10.00	92.4%
11/21/16	12:36	CCB	1	0.002	25mL		-0.09	-0.09		
11/21/16	12:37	161121A BLK	1	0.002	25mL		-0.09	-0.09		
11/21/16	12:38	161121A 4 LCS	1	0.102	25mL		4.29	4.29	4.00	107.2%
11/21/16	12:39	161121A 4 LCSD	1	0.101	25mL		4.25	4.25	4.00	106.1%
11/21/16	12:40	AZ44821W01 Total DF5	5	0.450	5mL		19.54	97.72		
11/21/16	12:41	AZ45866W14 Total MS DF5	5	0.362	5mL		15.69	78.43		
11/21/16	12:42	AZ45866W14 Total MSDDF5	5	0.343	5mL		14.85	74.27		
11/21/16	12:43	AZ45866W14 Total DF5	5	0.241	5mL		10.38	51.91		
11/21/16	12:44	AZ45868W08 Total DF5	5	0.333	5mL		14.42	72.08		
11/21/16	12:45	AZ45907W07 Total DF5	5	0.305	5mL		13.19	65.94		
11/21/16	12:46	AZ45908W09 Total DF5	5	0.360	5mL		15.60	77.99		
11/21/16	12:47	AZ45909W10 Total DF5	5	0.170	5mL		7.27	36.35		
11/21/16	12:48	AZ45910W09 Total DF5	5	0.381	5mL		16.52	82.60		
11/21/16	12:49	AZ45911W08 Total DF5	5	0.265	5mL		11.43	57.17		
11/21/16	12:50	AZ45988W09 Total DF5	5	0.298	5mL		12.88	64.40		
11/21/16	12:51	AZ45991W08 Total DF5	5	0.386	5mL		16.74	83.69		
11/21/16	12:52	CCV1 4 161121	1	0.102	25mL		4.29	4.29	4.000	107.2%
11/21/16	12:53	CCB	1	0.003	25mL		-0.05	-0.05		
11/21/16	15:00	AZ45992W07 Total DF5	5	0.403	5mL		17.48	87.42		
11/21/16	15:01	AZ45993W07 Total DF5	5	0.310	5mL		13.41	67.03		
11/21/16	15:02	AZ45994W12 Total DF5	5	0.217	5mL		9.33	46.65		

11/21/16	15:03	161121B BLK	1	0.001	25mL	-0.14	-0.14	4.000	-3.5%
11/21/16	15:04	161121B 4 LCS	1	0.104	25mL	4.38	4.38	4.000	109.4%
11/21/16	15:05	161121B 4 LCSD	1	0.102	25mL	4.29	4.29	4.000	107.2%
11/21/16	15:06	AZ45866W15 Dissolved DF5	5	0.246	5mL	10.60	53.01		
11/21/16	15:07	AZ45866W15 Dissolved MS DF5	5	0.341	5mL	14.77	73.83		
11/21/16	15:08	AZ45866W15 Dissolved MSD DF5	5	0.338	5mL	14.63	73.17		
11/21/16	15:09	AZ45868W09 Dissolved DF5	5	0.329	5mL	14.24	71.20		
11/21/16	15:10	AZ45907W09 Dissolved DF5	5	0.315	5mL	13.63	68.13		
11/21/16	15:11	AZ45908W08 Dissolved DF5	5	0.354	5mL	15.34	76.68		
11/21/16	15:12	AZ45909W12 Dissolved DF5	5	0.182	5mL	7.80	38.98		
11/21/16	15:13	AZ45910W07 Dissolved DF5	5	0.394	5mL	17.09	85.45		
11/21/16	15:14	AZ45911W09 Dissolved DF5	5	0.289	5mL	12.49	62.43		
11/21/16	15:15	CCV2 10 161121	1	0.235	25mL	10.12	10.12	10.00	101.2%
11/21/16	15:16	CCB	1	0.007	25mL	0.12	0.12		
11/21/16	15:17	AZ45988W08 Dissolved DF5	5	0.273	5mL	11.79	58.93		
11/21/16	15:18	AZ45991W07 Dissolved DF5	5	0.389	5mL	16.87	84.35		
11/21/16	15:19	AZ45992W08 Dissolved DF5	5	0.385	5mL	16.69	83.47		
11/21/16	15:20	AZ45993W08 Dissolved DF5	5	0.290	5mL	12.53	62.65		
11/21/16	15:21	AZ45994W11 Dissolved DF5	5	0.249	5mL	10.73	53.66		
11/21/16	15:22	CCV1 4 161121	1	0.096	25mL	4.03	4.03	4.00	100.6%
11/21/16	15:23	CCB	1	0.009	25mL	0.21	0.21		

Metrohm 814/809 Titrando Data

Sample ID	Analysis Date/Time	Method	Titration Volume (to 8.3)	Titration Volume (total)	OH	CO3	HCO3	Total Alk	Unit	Sample Vol	N	Batch	Initials
AZ45994W13	2016-11-21 17:22:54 UTC-8	Alkalinity	0.000	1.614	0.00	0.00	66.50	66.50	mg/L	25 mL	0.0206	161121A	AH
AZ45993W09	2016-11-21 17:17:32 UTC-8	Alkalinity	0.000	1.214	0.00	0.00	50.02	50.02	mg/L	25 mL	0.0206	161121A	AH
AZ45992W09	2016-11-21 17:02:25 UTC-8	Alkalinity	0.000	6.924	0.00	0.00	285.27	285.27	mg/L	25 mL	0.0206	161121A	AH
AZ45991W09	2016-11-21 16:09:02 UTC-8	Alkalinity	0.000	4.768	0.00	0.00	196.44	196.44	mg/L	25 mL	0.0206	161121A	AH
AZ45988W07	2016-11-21 16:00:42 UTC-8	Alkalinity	0.000	3.908	0.00	0.00	161.01	161.01	mg/L	25 mL	0.0206	161121A	AH
161121A LCS	2016-11-21 15:26:37 UTC-8	Alkalinity	0.000	5.880	0.00	0.00	242.26	242.26	mg/L	25 mL	0.0206	161121A	AH
161121A Blk	2016-11-21 15:10:30 UTC-8	Alkalinity	0.000	0.000	0.00	0.00	0.00	0.00	mg/L	25 mL	0.0206	161121A	AH

Ferrous Iron Standard Prep

Stock Standard Prep:

Prep Date: 5/20/16
Exp Date: 5/20/17
Prep'd By: BB

CCV Stock (200 mg/L): 0.3502 g $Fe(NH_4)2(SO_4)_2*6H_2O$ EMD Lot #2013050298 up to 250 mL with DI

ICV Stock (200 mg/L): 0.3500 g $Fe(NH_4)2(SO_4)_2*6H_2O$ JT Baker Lot #0000068681 up to 250 mL with DI

Curve Prep

Prep Date: 5/20/16
Exp Date: 5/20/17
Prep'd By: BB

METHOD 3500FeBc								
				ICAL #1	ICAL#2	ICAL #3 (CCV)	ICAL #4	ICAL #5
ID#	mg/L	Prep Date	EXP. DATE	mL	mL	mL	mL	mL
Fe CCV Stock	200	5/20/16	5/20/17	0.25	0.5	1	1.25	2.5
Brought up w/ DI Water to final volume of (mL):				50	50	50	50	50
	Final Conc Fe (mg/L):			1	2	4	5	10
Standards are then carried through the sample prep procedure according to the SOP								

ICV (3.0 mg/L): 0.75 mL of ICV Stock (prep: 05/20/16) brought up to 50 mL with DI then carried through the sample prep procedure

Ferrous Iron Standard Prep

Stock Standard Prep:

Prep Date: 5/20/16
Exp Date: 5/20/17
Prep'd By: BB

CCV Stock (200 mg/L): 0.3502 g $Fe(NH_4)2(SO_4)_2*6H_2O$ EMD Lot #2013050298 up to 250 mL with DI

ICV Stock (200 mg/L): 0.3500 g $Fe(NH_4)2(SO_4)_2*6H_2O$ JT Baker Lot #0000068681 up to 250 mL with DI

QC Prep

Prep Date: 11/17/16
Exp Date: 11/18/16
Prep'd By: MM

CCV (4.0 mg/L): 0.5 mL of CCV Stock (prep: 5/20/16) into 25 mL DI then carried through sample prep procedure

LCS (3.0 mg/L): 0.375 mL of ICV Stock (prep: 5/20/16) into 25 mL DI then carried through sample prep procedure

MS/MSD (3.0 mg/L): 0.375 mL of ICV Stock (prep: 5/20/16) into 25 mL sample then carried through sample prep procedure

PW 10/20/16

METHOD 300 / 9056		ANION STOCK				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
O2SI	F-	1,000	1085520-36282	07/24/17	0.25	5
O2SI*	Cl-	5,000	1069557-34558	01/08/17	0.5	50
O2SI	NO2-N	1,000	1088548-36281	09/26/17	0.25	5
Ultra Scientific	Br-	1,000	CL-3274-36926	08/31/20	1.25	25
O2SI	NO3-N	1,000	1078397-35587	01/30/17	0.5	10
O2SI	PO4-P	1,000	1072004-34911	09/03/16	0.5	10
Ultra Scientific	SO4	5,000	CP-1469-36296	04/30/18	0.5	50
Brought up with milipore water to Final Volume of:					50	

METHOD 300 / 9056		ANION ICV / LCS/MS/MSD				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
CPI	F-	1,000	16B115-36204	09/03/17	0.125	2.50
CPI	Cl-	1,000	16E065-36694	12/06/17	1.00	20.00
CPI	NO2-N	304	15J001-36257	09/24/17	0.50	3.04
CPI	Br-	1,000	15L093-36101	07/21/17	0.625	12.50
CPI	NO3-N	1,000	16E022-36783	12/30/17	0.25	5.00
CPI	PO4-P	1,000	15B116-36258	09/24/17	0.25	5.00
CPI	SO4	1,000	16E104-36693	12/06/17	1.00	20.00
Brought up with milipore water to Final Volume of:					50	

METHOD 300 / 9056		ANION CAL CURVE							
				ICAL #1	ICAL#2	ICAL #3	ICAL #4	ICAL #5	ICAL #6
ID#	mg/L	Prep Date	EXP. DATE	mL	mL	mL	mL	mL	mL
ANION STOCK	100	08/19/16	08/21/16	0.4	2	10	2	7	10
Brought up w/ Milipore Water to final volume of (mL):				50	100	100	10	10	na
Final Conc F (mg/L):				0.04	0.1	0.5	1	3.5	5
Final Conc Cl (mg/L):				0.4	1	5	10	35	50
Final Conc NO2-N (mg/L):				0.04	0.1	0.5	1	3.5	5
Final Conc Br (mg/L):				0.2	0.5	2.5	5	17.5	25
Final Conc NO3-N (mg/L):				0.08	0.2	1	2	7	10
Final Conc PO4-P (mg/L):				0.08	0.2	1	2	7	10
Final Conc SO4 (mg/L):				0.4	1	5	10	35	50

161117 PW

		CCV				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
O2SI	F-	1,000	1085520-36282	07/24/17	0.125	2.50
O2SI	Cl-	5,000	1069557-34558	01/08/17	0.25	25.0
O2SI	NO2-N	1,000	1088548-36281	09/26/17	0.125	2.5
Ultra Scientific	Br-	1,000	CL-3274-36926	08/31/20	0.625	12.50
O2SI	NO3-N	1,000	1078397-35587	01/30/17	0.25	5.0
O2SI	PO4-P	1,000	1072004-34911	09/03/16	0.25	5.0
Ultra Scientific	SO4	5,000	CP-1469-36296	04/30/18	0.25	25.0
Brought up with milipore water to Final Volume of:					50	

METHOD 300 / 9056		ICV LCS MS				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
CPI	F-	1,000	16B115-36204	09/03/17	0.125	2.50
CPI	Cl-	1,000	16E065-36694	12/06/17	1.00	20.00
CPI	NO2-N	304	15C058-35411	09/24/17	0.50	3.04
CPI	Br-	1,000	15L093-36101	07/21/17	0.63	12.50
CPI	NO3-N	1,000	16E022-36783	12/30/17	0.250	5.00
CPI	PO4-P	1,000	15B116-36258	09/24/17	0.25	5.00
CPI	SO4	1,000	16E104-36693	12/06/17	1.00	20.00
Final Volume of Sample: (mL)					50	

161118 PW

		CCV				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
O2SI	F-	1,000	1085520-36282	07/24/17	0.125	2.50
O2SI	Cl-	5,000	1069557-34558	01/08/17	0.25	25.0
O2SI	NO2-N	1,000	1088548-36281	09/26/17	0.125	2.5
Ultra Scientific	Br-	1,000	CL-3274-36926	08/31/20	0.625	12.50
O2SI	NO3-N	1,000	1078397-35587	01/30/17	0.25	5.0
O2SI	PO4-P	1,000	1072004-34911	09/03/16	0.25	5.0
Ultra Scientific	SO4	5,000	CP-1469-36296	04/30/18	0.25	25.0
Brought up with milipore water to Final Volume of:					50	

METHOD 300 / 9056		ICV LCS MS				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
CPI	F-	1,000	16B115-36204	09/03/17	0.125	2.50
CPI	Cl-	1,000	16E065-36694	12/06/17	1.00	20.00
CPI	NO2-N	304	15C058-35411	09/24/17	0.50	3.04
CPI	Br-	1,000	15L093-36101	07/21/17	0.63	12.50
CPI	NO3-N	1,000	16E022-36783	12/30/17	0.250	5.00
CPI	PO4-P	1,000	15B116-36258	09/24/17	0.25	5.00
CPI	SO4	1,000	16E104-36693	12/06/17	1.00	20.00
Final Volume of Sample: (mL)					50	

SiO_2 For Method 370.1 or SM4500 Si D

1000ppm SiO_2 o2si lot 1074114-35161 (exp: 10/21/16)

	X 25 uL / 25mL DI		→ 1ppm SiO_2
↓	X 50uL	↓	→ 2ppm SiO_2
↓	X 100uL	↓	→ 4ppm SiO_2
↓	X 250uL	↓	→ 10ppm SiO_2
↓	X 500uL	↓	→ 20ppm SiO_2

ICV = 4ppm SiO_2
1000ppm SiO_2 Ultra Scientific Lot P01064-32895 (exp: 11/30/19) X 100uL / 25mL DI

LCS = 4ppm SiO_2
1000ppm SiO_2 Ultra Scientific Lot P01064-32895 (exp: 11/30/19) X 100uL / 25mL DI

MS = 4ppm SiO_2
1000ppm SiO_2 Ultra Scientific Lot P01064-32895 (exp: 11/30/19) X 100uL / 25mL Sample

Expires 11-22-2016

FJR 11/21/16

Inorganic Spiking Solution

3.4999g NaHCO3 BDH lot#1575C510
Final vol 500 mL w/DI water
Prep: 11/01/16
Exp: 10/10/17
AH

0.02N H_2SO_4 Titrant for Alkalinity

400 mL 0.1N H_2SO_4 (prep 11/16/16)
Final vol 2L w/ DI water
Prep 11/21/16
Exp 11/21/17
AH 11/21/16

SM3500 Injection Log

Directory: I:\Spec Sheets\Ferrous Iron (Fe2)\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	20 May 2016	12:37	0 BB 5/20/16		161117a	1.
2	20 May 2016	12:38	1		161117a	1.
3	20 May 2016	12:39	2		161117a	1.
4	20 May 2016	12:39	4		161117a	1.
5	20 May 2016	12:40	10		161117a	1.
6	20 May 2016	12:40	5		161117a	1.
7	20 May 2016	12:41	160520A ICV 3.0		161117a	1.
8	20 May 2016	12:42	160520A ICB		161117a	1.
9	17 Nov 2016	18:31	CCV 4.0 161117		161117a	1.
10	17 Nov 2016	18:32	CCB 161117		161117a	1.
11	17 Nov 2016	18:33	161117A LCS 3.0		161117a	1.
12	17 Nov 2016	18:34	AZ45988W10		161117a	1.
13	17 Nov 2016	18:35	AZ45991W10		161117a	1.
14	17 Nov 2016	18:36	AZ45992W10		161117a	1.
15	17 Nov 2016	18:37	AZ45993W10		161117a	1.
16	17 Nov 2016	18:38	AZ45994W10		161117a	1.
20	17 Nov 2016	18:42	CCV 4.0 161117		161117a	1.
21	17 Nov 2016	18:43	CCB 161117		161117a	1.

300/9056A Injection Log

Directory: I:\Dionex\Charlie\Anions\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
14	20 Oct 2016	11:19	ICAL 1 10/20/16		161020	1.
15	20 Oct 2016	11:32	ICAL 2 10/20/16		161020	1.
16	20 Oct 2016	11:45	ICAL 3 10/20/16		161020	1.
17	20 Oct 2016	11:58	ICAL 4 10/20/16		161020	1.
18	20 Oct 2016	12:11	ICAL 5 10/20/16		161020	1.
19	20 Oct 2016	12:24	ICAL 6 10/20/16		161020	1.
20	20 Oct 2016	12:37	ICV 1601020		161020	1.
21	20 Oct 2016	12:50	ICB		161020	1.

300/9056A Injection Log

Directory: I:\Dionex\Charlie\Anions\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
22	17 Nov 2016	13:04	CCV 161117		161117	1.
23	17 Nov 2016	13:17	CCB		161117	1.
24	17 Nov 2016	13:30	161117A LCS		161117	1.
39	17 Nov 2016	17:13	CCV 161117		161117	1.
40	17 Nov 2016	17:26	CCB		161117	1.
49	17 Nov 2016	19:24	CCV 161117		161117	1.
50	17 Nov 2016	19:37	CCB		161117	1.
51	17 Nov 2016	19:50	AZ45988W07 1/5		161117	5.
52	17 Nov 2016	20:03	AZ45991W09		161117	1.
53	17 Nov 2016	20:16	AZ45992W09		161117	1.
54	17 Nov 2016	20:29	AZ45993W09		161117	1.
55	17 Nov 2016	20:42	AZ45994W13		161117	1.
58	17 Nov 2016	21:21	CCV 161117		161117	1.
59	17 Nov 2016	21:34	CCB		161117	1.

300/9056A Injection Log

Directory: I:\Dionex\Charlie\Anions\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
3	18 Nov 2016	10:14	CCV 161118		161118	1.
4	18 Nov 2016	10:27	CCB		161118	1.
8	18 Nov 2016	11:19	161118A LCS		161118	1.
18	18 Nov 2016	13:30	CCV 161118		161118	1.
19	18 Nov 2016	13:43	CCB		161118	1.
21	18 Nov 2016	14:09	AZ45988W09 1/100		161118	100.
23	18 Nov 2016	14:35	AZ45993W07 1/5		161118	5.
24	18 Nov 2016	14:48	AZ45994W12 1/2		161118	2.
25	18 Nov 2016	15:01	CCV 161118		161118	1.
26	18 Nov 2016	15:14	CCB		161118	1.

370.1/SM4500 Injection Log

Directory: I:\Spec Sheets\Silica (SiO2)\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	21 Nov 2016	11:03	0 11/21/16 FJR		161121A	21.
2	21 Nov 2016	11:04	1		161121A	1.
3	21 Nov 2016	11:05	2		161121A	1.
4	21 Nov 2016	11:06	4		161121A	1.
5	21 Nov 2016	11:07	10		161121A	1.
6	21 Nov 2016	11:08	20		161121A	1.
7	21 Nov 2016	11:09	161121 ICV 4		161121A	1.
8	21 Nov 2016	11:10	ICB		161121A	1.
9	21 Nov 2016	12:35	CCV2 10 161121		161121A	1.
10	21 Nov 2016	12:36	CCB		161121A	1.
11	21 Nov 2016	12:37	161121A BLK		161121A	1.
12	21 Nov 2016	12:38	161121A 4 LCS		161121A	1.
24	21 Nov 2016	12:50	AZ45988W09 Total DF5		161121A	5.
25	21 Nov 2016	12:51	AZ45991W08 Total DF5		161121A	5.
26	21 Nov 2016	12:52	CCV1 4 161121		161121A	1.
27	21 Nov 2016	12:53	CCB		161121A	1.
28	21 Nov 2016	15:00	AZ45992W07 Total DF5		161121A	5.
29	21 Nov 2016	15:01	AZ45993W07 Total DF5		161121A	5.
30	21 Nov 2016	15:02	AZ45994W12 Total DF5		161121A	5.
31	21 Nov 2016	15:03	161121B BLK		161121A	1.
32	21 Nov 2016	15:04	161121B 4 LCS		161121A	1.
43	21 Nov 2016	15:15	CCV2 10 161121		161121A	1.
44	21 Nov 2016	15:16	CCB		161121A	1.
45	21 Nov 2016	15:17	AZ45988W08 Dissolved DF5		161121A	5.
46	21 Nov 2016	15:18	AZ45991W07 Dissolved DF5		161121A	5.
47	21 Nov 2016	15:19	AZ45992W08 Dissolved DF5		161121A	5.
48	21 Nov 2016	15:20	AZ45993W08 Dissolved DF5		161121A	5.
49	21 Nov 2016	15:21	AZ45994W11 Dissolved DF5		161121A	5.
50	21 Nov 2016	15:22	CCV1 4 161121		161121A	1.
51	21 Nov 2016	15:23	CCB		161121A	1.

310/SM2320B Injection Log

Directory: I:\Tiamo\EXPORT\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	21 Nov 2016	15:10	161121A Blk		161121A_AL	1.
2	21 Nov 2016	15:26	161121A LCS		161121A_AL	1.
4	21 Nov 2016	16:00	AZ45988W07		161121A_AL	1.
5	21 Nov 2016	16:09	AZ45991W09		161121A_AL	1.
8	21 Nov 2016	17:02	AZ45992W09		161121A_AL	1.
9	21 Nov 2016	17:17	AZ45993W09		161121A_AL	1.
10	21 Nov 2016	17:22	AZ45994W13		161121A_AL	1.

908 North Temperance Ave. ∇ Clovis, CA 93611 ∇ Phone 559-275-2175 ∇ Fax 559-275-4422

Certification Number: CA1312
NELAP Certification number: CA00046
DoD-ELAP Certificate number: 4064.01

Data Validatable Report

January 3, 2017

AECOM
1001 Bishop Street, Suite 1600
Honolulu, Hawaii 96813

Attn: Margie Thach

Title: Report of Data: Case 81734

Project: 60481245 CIV0053 Red Hill Fuel Storage. HI

Contract #: Prime contract # for DoD: NAVY CLEAN N62742-12-D-1829, CTO 0053
Subcontract: 14S-16234-HI16

Dear Ms. Thach:

Four water samples were received December 13, 2016. Written results for the requested analyses are being provided on this January 3, 2017.

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

If you have any questions or require further information, please contact your APPL Project Manager, Libby Cheeseborough, libby@applinc.com, at your convenience. Thank you for choosing APPL, Inc.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. These test results meet all requirements of NELAC and DoD QSM. Release of the hard copy has been authorized by the Laboratory Manager or her designee, as verified by the following signature.

Paula McCartney

Paula McCartney, Laboratory Director
APPL, Inc.

PM/rp
Enclosure
cc: File

Number of pages in this report: 765

Data Validation Package
for
60481245 CIV 0053 Red Hill Fuel Storage
APPL SDG 81734
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QC Summary	526
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Calibration Data	549
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Raw Data	670

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QC Summary 685

Sample Data 690

Calibration Data 697

Raw Data 737

SAMPLE RECEIPT INFORMATION

Sample Receipt Information

ARF: 81734

Project: 60481245 CIV0053 Red Hill Fuel Storage. HI

Sample Receipt Information:

Four water samples were received December 13, 2016, at 0.0°C, 0.0°C, 0.5°C, 2.0°C, and 2.0°C. The sample group was assigned Analytical Request Form (ARF) number 81734. The sample numbers and requested analyses were compared to the chains of custody and email communications. A PT sample was added to the log in; the sample was received on November 18, 2016 and logged in as sample ERH155, as instructed. No other exception was encountered.

Sample Table

CLIENT ID	APPL ID	Matrix	Date Sampled	Date Received
ERH137	AZ47343	WATER	12/12/16	12/13/16
ERH141	AZ47344	WATER	12/12/16	12/13/16
ERH135	AZ47345	WATER	12/12/16	12/13/16
ERH155	AZ47431	WATER	11/18/16	11/18/16

The samples and blanks were screened for J-value responses between the detection limit (DL) and limit of quantitation (LOQ).

APPL's Laboratory control limits generated in house statistically do not meet the control limits listed in DoD QSM 5.0 for all analytes. Laboratory control spike recoveries for this project meet all control limits listed in the DoD QSM 5.0 except where noted. A copy of our in house generated control limits is available upon request. In addition, a copy of our LOQ control limits, established using 7 data points, are also available upon request.

Only the portion of the injection log relative to these samples is included. A full sequence log is available upon request.

Measurement uncertainty can be reported upon request.

CASE NARRATIVE

EPA Method 8011

EDB

Sample Preparation:

The water sample was extracted according to EPA method 8011. All holding times were met.

Sample Analysis Information:

The sample was analyzed according to the method using an Agilent Gas Chromatograph with an ECD.

Quality Control/Assurance

Calibrations:

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Blanks:

No target analyte was detected above one-half the limit of quantitation (LOQ) in the method blank.

Spikes:

A Laboratory Control Spike (LCS) was used for quality assurance. All acceptance criteria were met.

No sample was designated by the client for MS/MSD analysis.

Surrogates

The surrogate recoveries are summarized in the Form 2 & 8. All surrogate recoveries were within the control limits.

Summary:

No problem was encountered.

EPA Method 8015B

Total Petroleum Hydrocarbons - Diesel & Oil

Sample Preparation:

The water samples were extracted according to EPA method 3510C. All holding times were met.

Sample Analysis Information:

The samples were analyzed according to the method using an Agilent Gas Chromatograph with a flame ionization detector.

Quality Control/Assurance

Calibrations:

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Blanks:

No target analyte was detected above one-half the LOQ in the method blank.

Spikes:

A Laboratory Control Spike (LCS) was used for quality assurance. All acceptance criteria were met.

Sample ERH135 was designated by the client for MS/MSD analysis. All spike recoveries were within the acceptance limits.

Surrogates:

Surrogate recoveries are summarized on the Form 2 & 8. All surrogate recoveries were acceptable.

Summary:

No analytical problem was encountered. The data generated are acceptable.

EPA Method 8270D-SIM
Polynuclear Aromatic Hydrocarbons

Sample Preparation:

The water samples were extracted according to EPA method 3510C. All holding times were met.

Analysis Information:

The samples were analyzed according to EPA Method 8270D using an Agilent Gas Chromatograph with a mass spectrometer detector, in selective ion monitoring mode (SIM).

Manual integrations were performed in accordance with APPL's SOP. 2-Methyl-naphthalene were manually integrated in a calibration standard. Before and after chromatograms are included in the package.

Quality Control/Assurance

Spike Recovery

A Laboratory Control Spike (LCS) was used for quality assurance. All LCS recoveries met acceptance criteria.

Sample ERH135 was designated by the client for MS/MSD analysis. All spike recoveries were within the acceptance limits.

Method blanks

No target compound was detected at or above one-half the LOQ in the method blank.

Surrogates

Surrogate recoveries are summarized on the Form 2 & 8. All surrogate recoveries met acceptance criteria.

Calibration

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Tuning:

The instrument was tuned using DFTPP. All method criteria were met.

Internal Standards

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8270. All acceptance criteria were met.

Summary:

No other analytical exception was encountered. The data generated are acceptable.

EPA Method 8270D
Semi-Volatile Organic Compounds

Sample Preparation:

The water samples were extracted according to EPA method 3510C. All holding times were met.

Analysis Information:

The samples were analyzed according to EPA Method 8270D using an Agilent Gas Chromatograph with a mass spectrometer detector.

Quality Control/Assurance

Spike Recovery

A Laboratory Control Spike (LCS) was used for quality assurance. All LCS recoveries met acceptance criteria.

Sample ERH135 was designated by the client for MS/MSD analysis. All spike recoveries were within the acceptance limits.

Method blanks

No target compound was detected at or above one-half the LOQ in the method blank.

Surrogates

Surrogate recoveries are summarized on the Form 2 & 8. All other surrogate recoveries met acceptance criteria.

Calibration

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Tuning:

The instrument was tuned using DFTPP. All method criteria were met.

Internal Standards

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8270. All acceptance criteria were met.

Summary:

No analytical exception was encountered. The data generated are acceptable.

APPL SOP ANA2MEE

2-(2-Methoxyethoxy) ethanol by SPE, GC/MS

Sample Preparation:

The water samples were extracted according to EPA method 3535. All holding times were met.

Analysis Information:

The samples were analyzed according to an internal method APPL SOP ANA2MEE using an Agilent Gas Chromatograph with a mass spectrometer detector.

Quality Control/Assurance

Spike Recovery

A Laboratory Control Spike (LCS) was used for quality assurance. All LCS recoveries met acceptance criteria.

Sample ERH135 was designated by the client for MS/MSD analysis. The RPD exceeded the 20% limit. All spike recoveries met acceptance criteria.

Method blanks

No target compound was detected at or above one-half the LOQ in the method blank.

Surrogates

No surrogate was used for this method.

Calibration

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Tuning:

The instrument was tuned using DFTPP. All method criteria were met.

Internal Standards

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8270. All acceptance criteria were met.

Summary:

No other analytical exception was encountered. The data generated are acceptable.

EPA Method 8260B
Volatile Organic Analysis

Sample Preparation:

The water samples were purged according to EPA method 5030B. All holding times were met.

Sample Analysis Information:

The samples were analyzed according to EPA method 8260B using an Agilent Gas Chromatograph with a mass spectrometer detector.

Quality Control/Assurance:

Calibrations:

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Blanks:

No analyte was detected above one-half the limit of quantitation (LOQ) in the method blanks.

Spikes:

Laboratory Control Spikes (LCS) were used for quality assurance. All LCS recovery acceptance criteria were met.

Sample ERH135 was designated by the client for MS/MSD analysis. All spike recoveries were within the acceptance limits.

Surrogates:

Surrogate recoveries are summarized on the Form 2 & 8. All surrogate recoveries were acceptable.

Tuning:

The instrument was tuned using BFB. All method criteria were met.

Internal Standards:

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8260. All method acceptance criteria were met.

Summary:

No problem was encountered. The data generated are acceptable.

EPA Method 8260B
Gasoline

Sample Preparation:

The water samples were purged according to EPA method 5030B. All holding times were met.

Sample Analysis Information:

The samples were analyzed according to EPA method 8260B using an Agilent Gas Chromatograph with a mass spectrometer detector.

Quality Control/Assurance:

Calibrations:

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Blanks:

No analyte was detected above one-half the limit of quantitation (LOQ) in the method blanks.

Spikes:

Laboratory Control Spikes (LCS) were used for quality assurance. All LCS recovery acceptance criteria were met.

Sample ERH135 was designated by the client for MS/MSD analysis. All spike recoveries were within the acceptance limits.

Surrogates:

Surrogate recoveries are summarized on the Form 2 & 8. All surrogate recoveries were acceptable.

Tuning:

The instrument was tuned using BFB. All method criteria were met.

Internal Standards:

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8260. All method acceptance criteria were met.

Summary:

No problem was encountered. The data generated are acceptable.

Methane
RSK-175

Sample Preparation and Analysis

The water samples were analyzed with guidance from RSK-175. The samples were allowed to equilibrate for 10 minutes at 40°C and a portion of the headspace was analyzed using a Hewlett Packard Gas Chromatograph with a flame ionization detector. All holding times were met.

Quality Control/Assurance

Spike Recovery

A Laboratory Control Spike (LCS) was used for quality assurance. All acceptance criteria were met.

Sample ERH135 was designated by the client for MS/MSD analysis. Methane recovered outside of the 72-125% acceptance limits in the MS and MSD.

Method blanks

The blank contained no target analyte above one-half the limit of quantitation (LOQ).

Calibration

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Summary:

No other analytical exception is noted.

EPA Method 300.0 and SM 2320B, and SM 3500 FeB Inorganic Analyses

Sample Preparation Information:

The water samples were prepared according to the methods.

Analysis Information:

Samples:

The samples were analyzed according to the methods. A Dionex DX500 ion chromatograph was used for the EPA 300.0 analysis. The samples were analyzed as soon as possible for ferrous iron.

The samples were analyzed for nitrate seven days after collection. The client was notified and requested the samples to be preserved and analyzed by EPA method 353.2 for total Nitrate-Nitrite as Nitrogen. Both sets of data are included with the report. All other holding times were met.

The conversion between "Nitrate" and "Nitrate as Nitrogen" is as follows:

Conversion between nitrate (NO_3) and nitrate-nitrogen (NO_3-N):

To convert	To	Multiply by
Nitrate (NO_3)	Nitrate-nitrogen (NO_3-N)	0.22
Nitrate-nitrogen (NO_3-N)	Nitrate (NO_3)	4.43

The laboratory results agree between the EPA 300.0 Nitrate and the EPA 353.2 Nitrate as Nitrogen, using the conversion factors listed above.

For sample ERH141 the 300.0 Nitrate result of 2.2mg/L is equivalent to 0.484mg/L Nitrate-Nitrite-N. The sample was preserved and analyzed as Nitrate-Nitrite-N by 353.2 with a result of 0.33mg/L.

For sample ERH135 the 300.0 Nitrate result of 2.5mg/L is equivalent to 0.550mg/L Nitrate-Nitrite-N. The sample was preserved and analyzed as Nitrate-Nitrite-N by 353.2 with a result of 0.40mg/L.

Calibrations:

Initial and continuing calibrations were performed according to the methods and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Blanks:

Bicarbonate and alkalinity were detected above one-half the LOQ in the method blank. The samples contained over ten times the concentration of the concentration detected in the method blank. No other target analyte was detected above one-half the LOQ in the method blanks.

Spikes:

Laboratory Control Spikes (LCS) and matrix spikes (MS/MSD) were used for quality assurance. All recoveries were within acceptance limits in the LCS.

Sample ERH135 was designated by the client for MS/MSD analysis. Chloride recovered above the 110% upper control limit in the MS and MSD. TOXN recovered below the 90% lower control limit in the MSD. All other spike recoveries met acceptance criteria in the MS/MSD.

Summary:

No other analytical exception is noted. All data are acceptable.

APPL Inc.
Abbreviations and Flags

FLAG	DESCRIPTION
#	Recovery or RPD outside control limits
*	Recovery or RPD outside control limits
B	Analyte detected in associated method blank
C1	Reason for correction: wrote incorrect response
C2	Reason for correction: calculated incorrectly
C3	Reason for correction: needs to be rechecked
C4	Reason for correction: data not usable
DO	Diluted out
E	Exceeds linear range
F	Estimated value
G1	Includes a wide range of hydrocarbons which does not match our gasoline standard
G10	Includes a match to hydrocarbon profiles within the range of mineral spirits
G11	Includes a match to hydrocarbon profiles within the range of JP-4
G12	Pattern does not match the gasoline standard; the carbon range for this sample is consistent with JP8
G13	Closely resembles the hydrocarbon profile of aviation gasoline
G14	Analyte concentration may be biased due to carry over
G2	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G3	Includes higher boiling hydrocarbons
G4	Includes dominant peak(s) not indicative of petroleum hydrocarbons
G5	Is mainly dominant peak(s) not indicative of petroleum hydrocarbons
G6	Contains recognizable contaminant peak(s) which has been removed from quantitation
G7	Is mainly a match to hydrocarbons within the range of gasoline
G8	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G9	Includes hydrocarbons within the range of kerosene
J	Estimated value
M	Matrix effect
MI1	Manual integration: integration does not follow baseline
MI2	Manual integration: non-target peak interference
MI3	Manual integration: to split a peak that was integrated as one peak by the computer.
MI4	Manual integration: to integrate a split peak
MI5	Manual integration: the whole peak or part of the peak was not integrated
MI6	Manual integration: computer integrated wrong peak
MI7	Manual integration: other – (See case narrative)
MDL	Method detection limit
ND	Not detected
NT	Non-target
Q	Acceptance criteria not met
T1 I	Includes wide range of hydrocarbons not indicative of diesel
T1 M	Is mainly wide range of hydrocarbons not necessarily indicative of diesel
T2 I	Includes lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T2 M	Is mainly lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T3 I	Includes higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T3 M	Is mainly higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T4 I	Includes dominant peak(s) not indicative of hydrocarbons
T4 M	Is mainly dominant peak(s) not indicative of hydrocarbons
T5	Contains recognizable contaminant peak(s) which has been removed from quantitation
T6	Is mainly a match to hydrocarbons within range of diesel fuel
T7	Closely resembles the boiling point hydrocarbon profile consistent with diesel fuel
T8	Includes a match to hydrocarbon profiles within range of diesel and kerosene fuel
T9 I	Includes non-diesel hydrocarbons within boiling point range of diesel fuel
T9 M	Is mainly non-diesel hydrocarbons within boiling point range of diesel fuel
U	Not detected
Y	Percent difference between primary and confirmation column > 40%

CHAIN OF CUSTODY,

ARF, CRF, AND

CLIENT COMMUNICATION

APPL - Analysis Request Form 81734

Client: AECOM
Address: 1001 Bishop Street, Suite 1600
Honolulu, HI 96813
Attn: Margie Thach
Phone: 808-356-5373 Fax: 808-523-8950
Job: 60481245 CIV0053 Red Hill Fuel Storage
PO #: 14S-16234-HI16, PO# 77265
Chain of Custody (Y/N): Y # 121216
RAD Screen (Y/N): Y pH (Y/N): N
Turn Around Type: ONE WEEK

Received by: SMA
Date Received: 12/13/16 Time: 10:20
Delivered by: FED EX
Shuttle Custody Seals (Y/N): Y Time Zone: -10
Chest Temp(s): 2X2.0,2X0.0,0.5°C
Color: A-FRIGE/VOA/L-PRPBRN
Samples Chilled until Placed in Refrig/Freezer: Y
Project Manager: Libby Cheesebor
QC Report Type: DVP4DOD/EQUIS/HI
Due Date: 12/20/16

Comments:
7 day TAT for Form 1s; 21 day TAT for DVP; F1s, login to Margie.Thach@aecom.com
A: DOD QSM ver 5.0; DOD Forms (LOQ/LOD database/DL) Print ND as LOD w/U Qual.
8260: BTEX & TPH-G only; 8270 SIM: 1-methylnaphthalene, 2-methylnaphthalene & naphthalene only.
TPH D & O; RSK: Methane only; 8011: EDB only;
$87DC53W5: report phenol only; $87DMEEW5: 2-MEE (LCS Spk 80ppb).
CHANGE IN ARF: revise PE sample ID and collection date & time per Margie's email. 12-15-16
FR: HC to LDC, 2 labeled CDs to Margie Thach. Before FR is sent, the PM needs to review after Admin Re
EDD: AECOM EQuIS EDD 2.5.3 to Margie.Thach@aecom.com & jecklund@lab-data.com

Sample Distribution:
GC: 3-$87DC53W5, 4-$87DMEEW5, 3-$DOC53W5, 3-$SIMDOD5W, 1-$8011
Extractions: 4-_MWE2MEE, 3-_SEP004, 3-_SEP004S, 3-_SEP011LL, 1-_MWE012
VOA: 3-$86BTOTXDOD5W, 3-$GASBL, 3-$GRO86BW, 2-$RSKMETH
Wetlab: 2-$232W(HCO3,CO3,ALK), 2-$300W(NO3,CL,SO4), 2-$35FE

Charges:

Invoice To:
ACCOUNTS PAYABLE
1001 Bishop Street, Ste 1600
USAPImaging@aecom.com
mary.basano@aecom.com

	Client ID	APPL ID	Sampled	Analyses Requested
1.	ERH137	AZ47343W	12/12/16 10:20	$86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $SIMDOD5W -- 2-MEE-LCS 80ppb spike
2.	ERH141	AZ47344W	12/12/16 10:50	$232W(HCO3,CO3,ALK), $300W(NO3,CL,SO4), $35FE, $8011, $86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $RSKMETH, $SIMDOD5W -- 8260 BTEX + 1,2-DCA; 2-MEE-LCS 80ppb spk

Note: All times, excluding sample collection times, are Pacific Time Zone unless noted otherwise. Collection times are in: -10 UTC

3.	ERH135	MS/MSD AZ47345W	12/12/16	10:20	$232W(HCO3,CO3,ALK), $300W(NO3,CL,SO4), $35FE, $86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $RSKMETH, $SIMDOD5W -- 2-MEE-LCS 80ppb spike
4.	ERH155	AZ47431W	11/18/16	10:00	$87DMEEW5 -- 2-MEE-LCS 80ppb spike

APPL Sample Receipt Form

ARF# **81734**

Sample	Container Type	Count	p
AZ47343	[3] PL 250mL	1	NA
	[13] VOAs - HCL	6	NA
	[17] Amber Liter	6	NA
	[38] 250mL brn poly, HCl prsvd	1	1.7
AZ47344	[3] PL 250mL	1	1.7
	[13] VOAs - HCL	7	NA
	[15] VOAs - NP	3	NA
	[17] Amber Liter	6	NA
	[38] 250mL brn poly, HCl prsvd	1	NA
AZ47345	[3] PL 250mL	1	NA
	[13] VOAs - HCL	14	NA
	[17] Amber Liter	18	NA
	[38] 250mL brn poly, HCl prsvd	1	1.7
AZ47431	[26] Other	1	NA

Sample	Container Type	Count	p

Renee Patterson

From: Thach, Margie [Margie.Thach@aecom.com]
Sent: Thursday, December 15, 2016 1:44 AM
To: Libby Cheeseborough
Cc: Renee Patterson (rpatterson@applinc.com)
Subject: RE: check sample for dec sampling

Hi Libby,
Can you please login the PT sample as ERH155? Please date and time the sample as the date and time you've received the sample.

Thank you,

Margie Pascua Thach
Environmental Scientist
Environment, West Region, Pacific District
Direct 808.356.5373
Margie.Thach@aecom.com

From: Libby Cheeseborough [mailto:libby@applinc.com]
Sent: Wednesday, December 14, 2016 1:15 PM
To: Thach, Margie
Subject: check sample for dec sampling

Hi Margie,
Would mind telling me again what you'd like the check sample for 2MEE to be named for the Client ID?

thank you,
Libby

Libby Cheeseborough

Agriculture & Priority Pollutants Laboratories, Inc.
WOSB. NELAP Accredited.
t. 559.275-2175 f. 559.275-4422
a. 908 N. Temperance Ave., Clovis, CA 93611

Website • Email

DoD accredited for ISM, Dioxins and PCB congeners.

This is a PRIVATE and CONFIDENTIAL message. If you are not the intended recipient, please delete without copying and kindly advise us by e-mail of the mistake in delivery. NOTE: Regardless of content, this e-mail shall not operate to bind APPL, Inc. to any order or other contract unless pursuant to explicit written agreement or government initiative expressly permitting the use of e-mail for such purpose.

2x2.0 2x0.0, 05

81734

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C.

PLEASE PRINT

Report to:
Company Name: AECOM Phone: 808-356-5373
Address: 1001 Bishop St. Suite 1600
Honolulu, Hawaii 96813 Fax:
Attn: Margie Thach Email: margie.thach@aecom.com

Invoice to:
Company Name: AECOM Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600
Honolulu, Hawaii 96813 Fax:
Attn: Mary Basano Email: mary.basano@aecom.com

Project Name/Number: CIV 53 / 60481245
Purchase Order Number: 77265
Sampler (Print): Margie Thach
Sampler (Signature):

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil		8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O w/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate,Sulfate,Chloride	RSK175M Methane
MT 12/12/16 ~~ERH130~~ ERH137	RHMW2254-09	12/12/16	1020	HST	14	X				X	X			X	X		X	X			

MT 12/12/16

Date Shipped: 12/12/16
Carrier: FedEx
Tracking No.:
Comments:

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	12/12/16	1500					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					12/13/16	1020	

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C.

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number	Sampler (Print)	Date Shipped: 12/12/16
CIV 53 / 60481245	Margie Thach	Carrier: FedEx
Purchase Order Number 77265	Sampler (Signature)	Tracking No.:
		Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil		8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O w/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate,Sulfate,Chloride	RSK175M Methane	SM2320B Alk
ERH141	RHMW08	12/12/16	1050	HST	18	X				X	X	X	X	X	X		X	X	X	X	X	X

MT 12/12/16

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other _____

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler: Margie Thach	Date 12/12/16	Time 1500	Received by:	Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date 12/13/16	Time 1020	Received at lab by:

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

APPL LABS

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C.

Report to: PLEASE PRINT

Company Name: AECOM Phone: 808-356-5373
Address: 1001 Bishop St. Suite 1600
Honolulu, Hawaii 96813 Fax:
Attn: Margie Thach Email: margie.thach@aecom.com

Invoice to: PLEASE PRINT

Company Name: AECOM Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600
Honolulu, Hawaii 96813 Fax:
Attn: Mary Basano Email: mary.basano@aecom.com

Project Name/Number: CIV 53 / 60481245
Purchase Order Number: 77265
Sampler (Print): Margie Thach
Sampler (Signature):

Date Shipped: 12/12/14
Carrier: FedEx
Tracking No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil	8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O W SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate, Sulfate, Chloride	RSK175M Methane	SM2320B Alk	
ERH135	RHMW2254-01	12/12/14	1020	HST	3	X			X	X			X	X		X	X	X	X	X	X	MS/MSD

MT 12/12/14

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	12/12/14	1500					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					12/13/14	1020	

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

COOLER RECEIPT FORM **ARF: 81734**

1) Project: 60481245 CIV0053 Red Hill Fuel Storage Date Received: 12/13/16

2) Coolers: Number of Coolers: 5

3) YES Were custody seals present and intact?
How many? 10 Name/Date on seal? See Below

4) YES Was there a shipping slip? Carrier name: FED EX

5) Type of packing in cooler: X bubble wrap __ popcorn __ foam X plastic bags
X wet ice __ dry ice __ no ice __ other

6) YES Were cooler temperatures acceptable?

7) Serial number of certified NIST thermometer use J5297

8) Cooler temp(s): In °C
1: 2.0 2: 2.0 3: 0.0 4: 0.0 5: 0.5 6: _____
7: _____ 8: _____ 9: _____ 10: _____ 11: _____ 12: _____

Chain of custody:

9) YES Was a chain of custody received?

10) YES Were the custody papers complete/signed in the appropriate places?

Sample Labels:

11) YES Were all sample labels complete (sample ID, date/time of sampling, etc.)?

12) YES Did all container labels agree with custody papers?

Sample Containers:

13) YES Were all containers sealed in separate bags?

14) YES Did all containers arrive in good condition:(unbroken, no leakage, no cracked/broken lids)?

15) YES Were correct containers and preservatives used for the tests indicated?

16) YES Was a sufficient amount of sample sent for tests indicated?

17) NA Were bubbles present in volatile samples?
If yes, the following were received with air bubbles:
Larger than a pea: _____
Smaller than a pea: _____

Preservation Hold time:

18) Yes Was a sufficient amount of holding time remaining to analyze the samples?

19) NA Was the pH taken of all non-VOA preserved samples and written on the sample container?

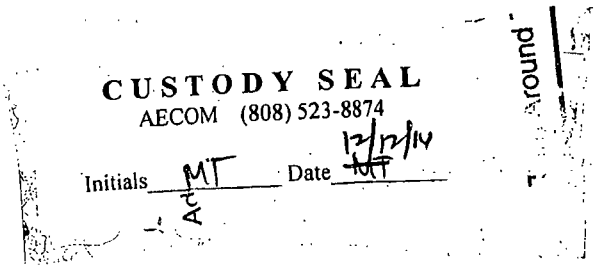
20) NA Was the pH of acid preserved non-VOA samples < 2?

21) NA Was the pH of sodium hydroxide preserved samples for Cyanide > 12 and Sulfide >9?

22) NO Were unpreserved VOA Vials received?

23) NA Are unpreserved VOA vials noted in the ADD TEST FIELD on the ARF?
pH strip lot number: _____
Lab notified if pH was not adequate: _____

Notes/Deficiencies:



Personnel receiving samples: sm Second reviewer: YC
Personnel labeling samples: sm
Project manager notified: _____ Date/Time of notification _____
Name of client notified: _____ Date/Time of notification _____

Revision: 22, November 5, 2013

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank
EPA 8011

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161219W-47344 - 214793**
Batch ID: #8011-161219A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	EDB	0.020 U	0.02	0.020	0.010	ug/L	12/19/16	12/19/16
BLANK	SURROGATE: 1,3-DIBROMOPRO	79.4	70-132			%	12/19/16	12/19/16

Quant Method: 80111219.M
Run #: 1214059
Instrument: Herbie
Sequence: 161214
Initials: RHA

GC SC-Blank-REG MDLs-DOD
Printed: 12/20/16 1:54:32 PM

Laboratory Control Spike Recovery
EPA 8011

APPL ID: **161219W-47344 LCS - 214793**
Batch ID: #8011-161219A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
EDB	0.250	0.164	65.6	60-140
SURROGATE: 1,3-DIBROMOPROPANE (	0.350	0.382	109	70-132

Primary	SPK
Quant Method :	80111219.M
Extraction Date :	12/19/16
Analysis Date :	12/20/16
Instrument :	Herbie
Run :	1214071
Initials :	RHA

Comments: _____

Printed: 12/20/16 4:03:42 PM
APPL Standard LCS

8011

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81734

Case No: 81734 Date Analyzed: 12/19/16

Matrix: WATER Instrument: Herbie

APPL ID.	Client Sample No.	SURROGATE: 1,3-DIBROMOPROPANE (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
161219A-BLK	Blank	70-132	79.4				
161219A-LCS	Lab Control Spike	70-132	109				
AZ47344	ERH141	70-132	90.57				

Comments: Batch: #8011-161219A

8011

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81734

Case No: 81734 Date Analyzed: 12/19/16

Matrix: WATER Instrument: Herbie

Blank ID: 161219A-BLK Time Analyzed: 1718

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161219A-BLK	Blank	1214059	12/19/16 1718
161219A-LCS	Lab Control Spike	1214071	12/20/16 1448
AZ47344	ERH141	1214072	12/20/16 1509

Comments: Batch: #8011-161219A

Printed: 12/20/16 4:03:35 PM
Form 4, Blank Summary

ORGANICS

Sample Data

APPL, INC.

EPA 8011

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH141
Sample Collection Date: 12/12/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81734
APPL ID: AZ47344
QCG: #8011-161219A-214793

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8011	EDB	0.020 U	0.02	0.020	0.010	ug/L	12/19/16	12/20/16
8011	SURROGATE: 1,3-DIBROMOPROPANE	90.57	70-132			%	12/19/16	12/20/16

Quant Method:	80111219.M
Run #:	1214072
Instrument:	Herbie
Sequence:	161214
Dilution Factor:	1
Initials:	RHA

Printed: 12/20/16 4:03:29 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\161214\1214072.D\ECD1A.CH Vial: 70
Acq On : 12-20-16 15:09:53 Operator: RH
Sample : AZ47344W11 2/36.04G Inst : Herbie
Misc : Multiplr: 1.00
IntFile : rteint.p

Data File : G:\HERBIE\DATA\161214\1214072.D\ECD2B.CH Vial: 70
Acq On : 12-20-16 15:09:54 Operator: RH
Sample : AZ47344W11 2/36.04G Inst : Herbie
Misc : Multiplr: 1.00
IntFile : rteint2.p
Quant Time: Dec 20 15:46 2016 Quant Results File: 80111219.RES

Quant Method : G:\HERBIE\DATA\161214\80111219.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Mon Dec 19 17:47:48 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

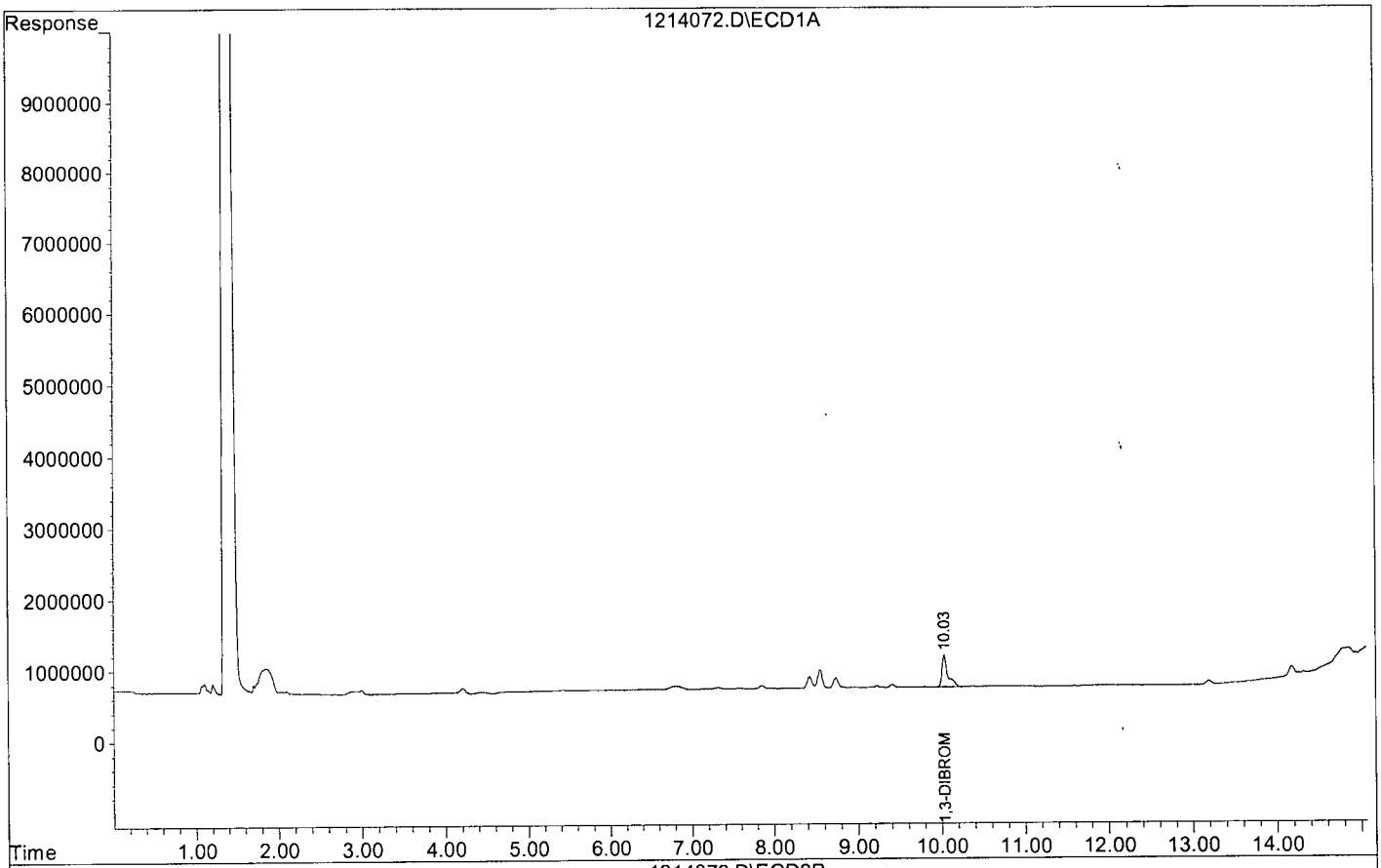
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	444911	663952	0.317	0.310
Spiked Amount	0.350			Recovery	=	90.57%	88.57%
	Target Compounds						
	Target Compounds						
1) TM	EDB	0.00	0.00	0	0	N.D. d	N.D. d
2) TM	1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4) TM	DBCP	0.00	0.00	0	0	N.D.	N.D.

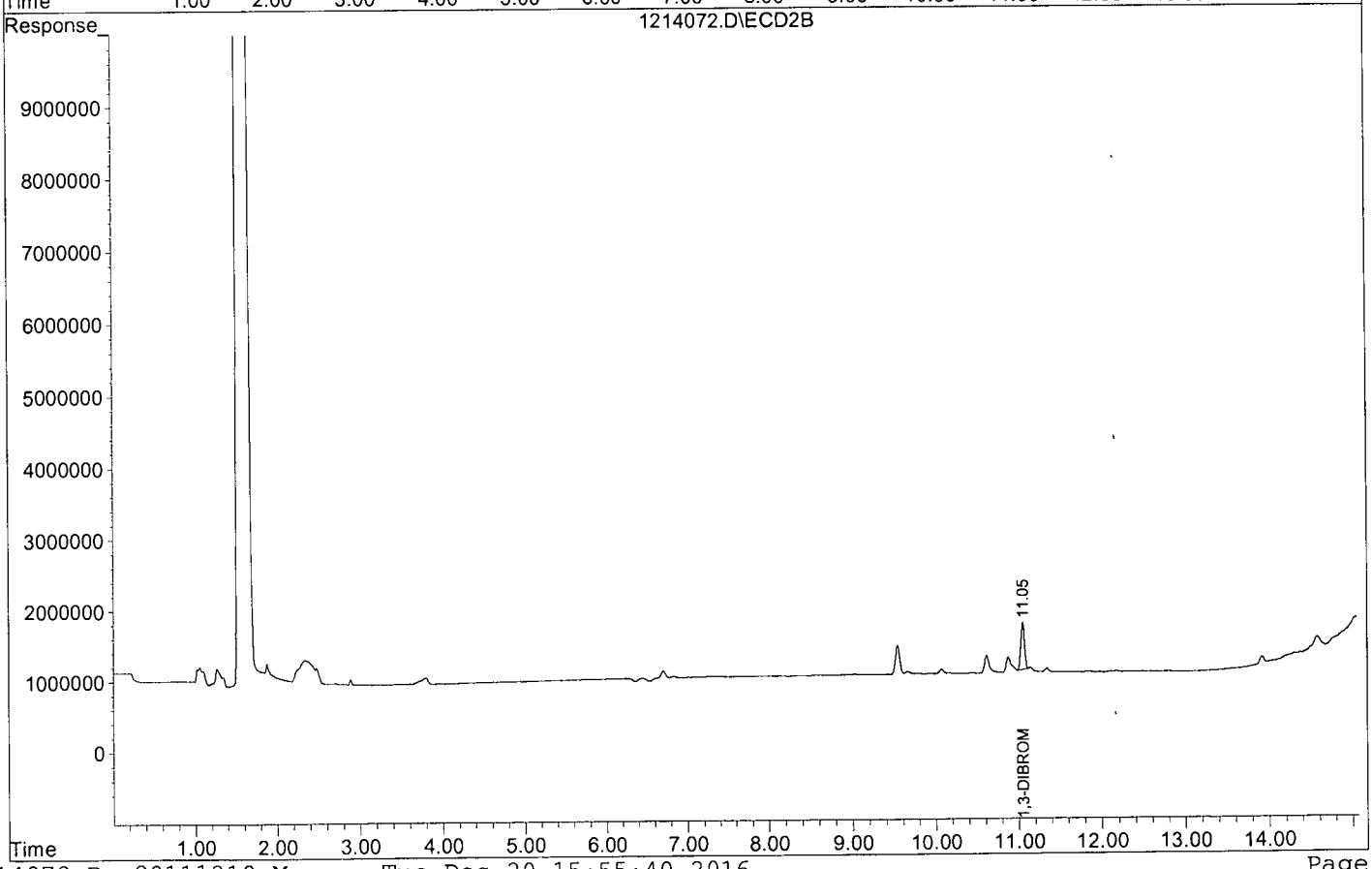
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\161214\1214072.D
Acq On : 12-20-16 15:09:53
Sample : AZ47344W11 2/36.04G
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111219.M

Vial: 70
Operator: RH
Inst : Herbie
Multiplr: 1.00





ORGANICS

Calibration Data

APPL, INC.

DBCP/EDB/1,2,3-TCP Analysis by
504 8011 1215

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No: _____
Case No: _____ Initial Cal. Date: 12/19/16
Matrix: _____ Instrument: Herbie Initials: _____

1214052 D 1214053 D 1214054.D 1214055.D 1214056 D 1214057 D

		Compound	1	2	3	4	5	6					Avg	%RSD		
1	TM	EDB	873625	967260	828524	859828	770339	723408					837164	10	TM	
2	TML	1,2,3-TCP	160700	211255	258720	223482	171353	160078					197598	20	TML	0.954
3	S	1,3-DIBROMOPROPANE(S)	655750	771165	896448	741845	583189	561360					701626	18	S	
4	TM	DBCP	2197150	2404550	2968840	2612366	2029578	1973502					2364331	16	TM	
5		Signal #2											0	0		
6																
7																
8																
9																
10																
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35																

1.8455668

DBCP/EDB/1,2,3-TCP Analysis by
504 8011 1215

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/19/16
Matrix: Instrument: Herbie Initials:

1214052.D 1214053.D 1214054.D 1214055 D 1214056.D 1214057.D

		Compound	1	2	3	4	5	6					Avg	%RSD		
36	TM	EDB #2	1880775	1948345	2064282	1821074	1898779	1739248					1892084	5.9	TM	
37	TM	1,2,3-TCP #2	355225	345420	344306	304029	326521	296394					328649	7.3	TM	
38	S	1,3-DIBROMOPROPANE(S) #2	966525	1131525	1144918	1056264	1116207	1004216					1069942	6.8	S	
39	TM	DBCP #2	4474700	5111245	5183136	4796967	5564877	5211727					5057109	7.4	TM	
40																
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0.7839632

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214052.D\ECD1A.CH Vial: 50
Signal #2 : G:\HERBIE\DATA\161214\1214052.D\ECD2B.CH
Acq On : 12-19-16 14:53:31 Operator: RH
Sample : 8011 1 12/19/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 19 17:47 2016 Quant Results File: 80111219.RES

Quant Method : G:\HERBIE\DATA\161214\80111219.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Mon Dec 19 17:47:12 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

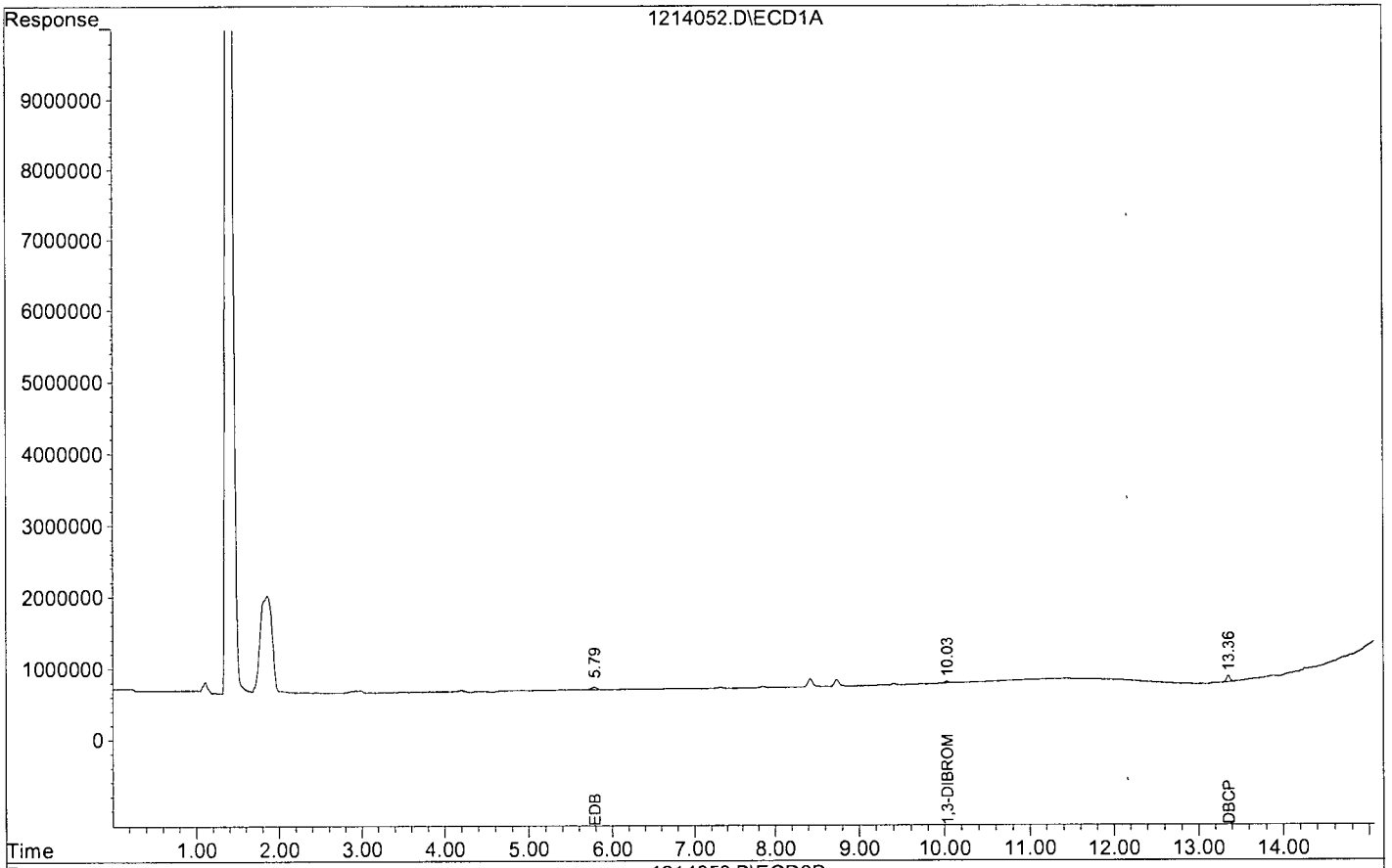
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	26230	38661	0.019	0.018
	Spiked Amount 0.350			Recovery	=	5.43%	5.14%
	Target Compounds						
1) TM	EDB	5.79	7.22	34945	75231	0.020	0.020
4) TM	DBCP	13.36	14.09	87886	178988	0.018	0.018
	Target Compounds						
2) TM	1,2,3-TCP	9.25	10.46	6428	14209	N.D.	0.023

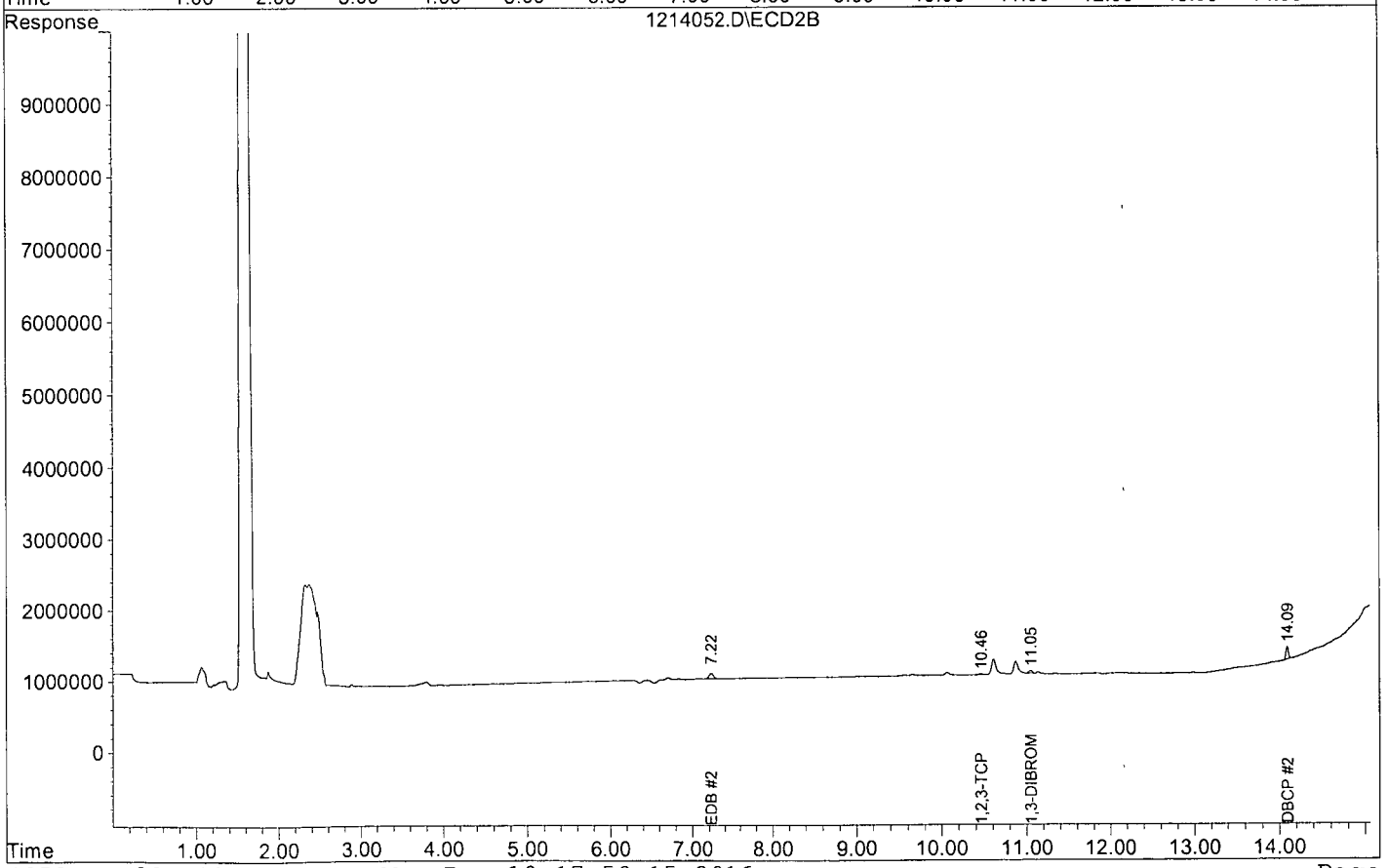
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214052.D
Acq On : 12-19-16 14:53:31
Sample : 8011 1 12/19/16
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111219.M

Vial: 50
Operator: RH
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214053.D\ECD1A.CH Vial: 51
Acq On : 12-19-16 15:14:07 Operator: RH
Sample : 8011 2 12/19/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile : rteint.p

Data File : G:\HERBIE\DATA\161214\1214053.D\ECD2B.CH Vial: 51
Acq On : 12-19-16 15:14:08 Operator: RH
Sample : 8011 2 12/19/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile : rteint2.p
Quant Time: Dec 19 17:47 2016 Quant Results File: 80111219.RES

Quant Method : G:\HERBIE\DATA\161214\80111219.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Mon Dec 19 17:47:12 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	System Monitoring Compounds							
3) S	1,3-DIBROMOPROPA	10.03	11.05	154233	226305	0.110	0.107	
	Spiked Amount 0.350			Recovery	=	31.43%	30.57%	
	Target Compounds							
1) TM	EDB	5.79	7.23	193452	389669	0.113	0.104	
2) TM	1,2,3-TCP	9.26	10.46	42251	69084	0.065	0.112	#
4) TM	DBCP	13.36	14.10	480910	1022249	0.100	0.105	

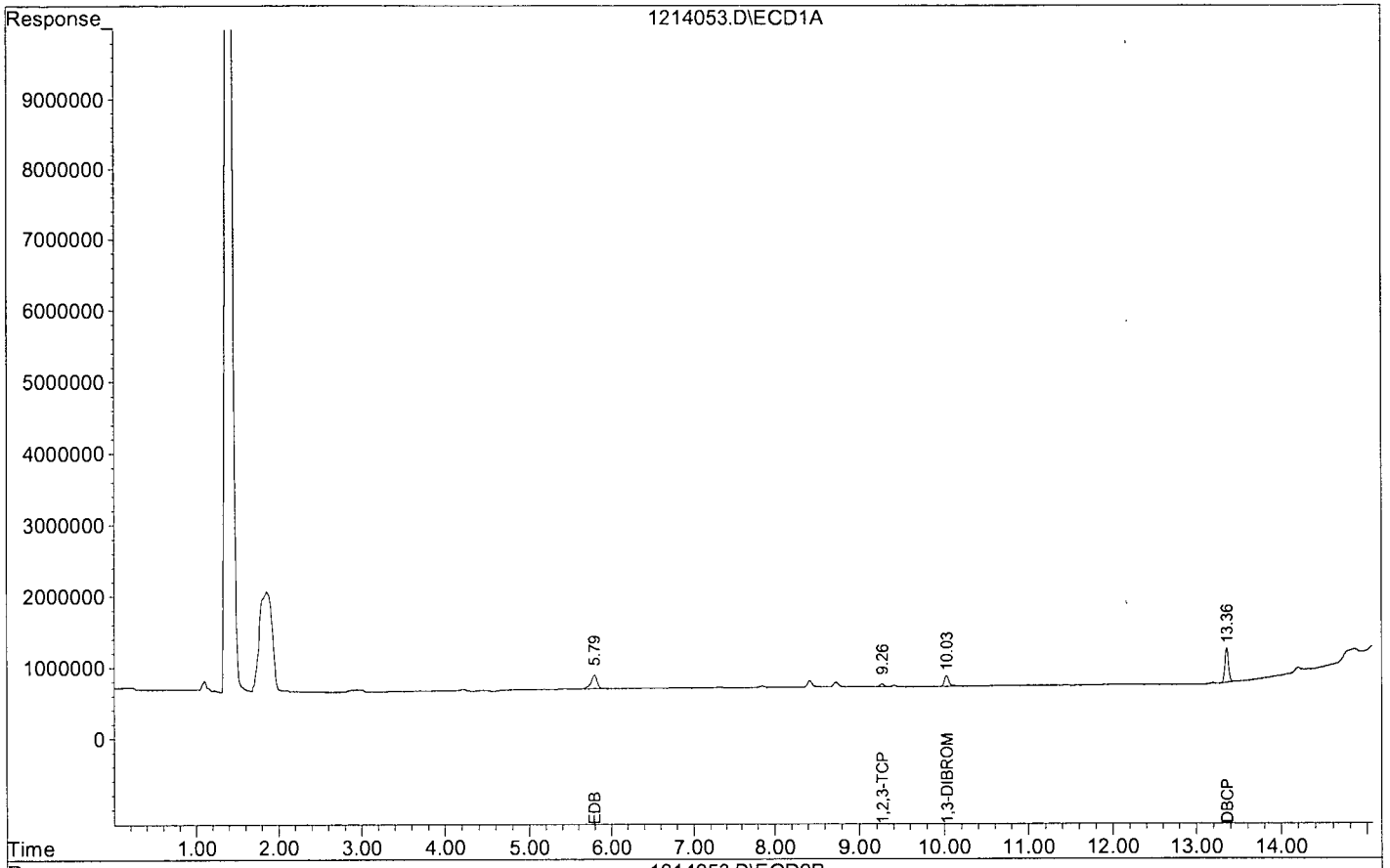
Target Compounds

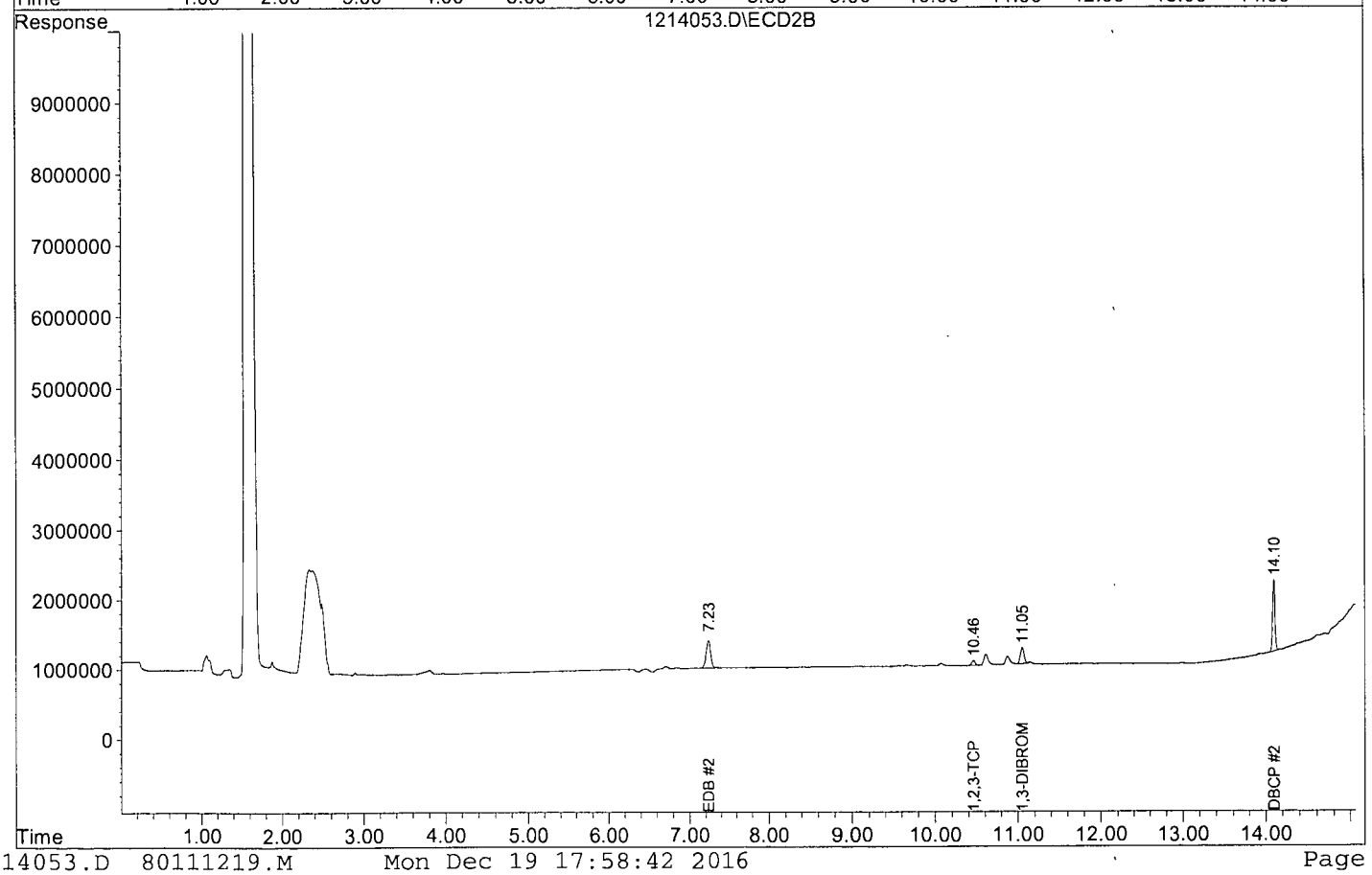
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214053.D
Acq On : 12-19-16 15:14:07
Sample : 8011 2 12/19/16
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111219.M

Vial: 51
Operator: RH
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214054.D\ECD1A.CH Vial: 52
Signal #2 : G:\HERBIE\DATA\161214\1214054.D\ECD2B.CH
Acq On : 12-19-16 15:34:48 Operator: RH
Sample : 8011 3 12/19/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 19 17:47 2016 Quant Results File: 80111219.RES

Quant Method : G:\HERBIE\DATA\161214\80111219.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Mon Dec 19 17:47:12 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	448224	572459	0.321	0.270
Spiked Amount	0.350			Recovery	=	91.71%	77.14%
	Target Compounds						
1) TM	EDB	5.81	7.23	414262	1032141	0.242	0.277
2) TM	1,2,3-TCP	9.26	10.46	129360	172153	0.310	0.278
4) TM	DBCP	13.36	14.10	1484420	2591568	0.310	0.267

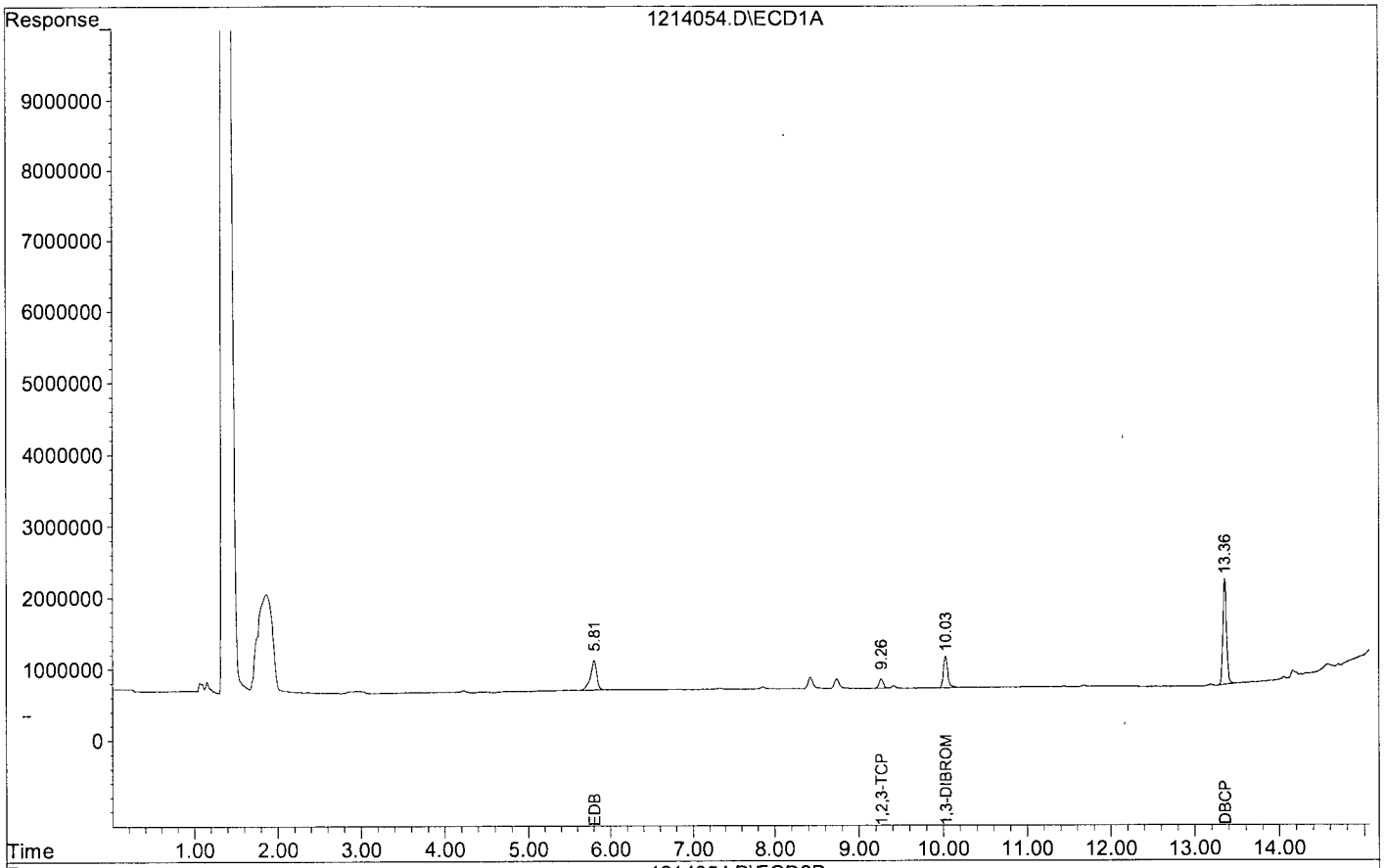
Target Compounds

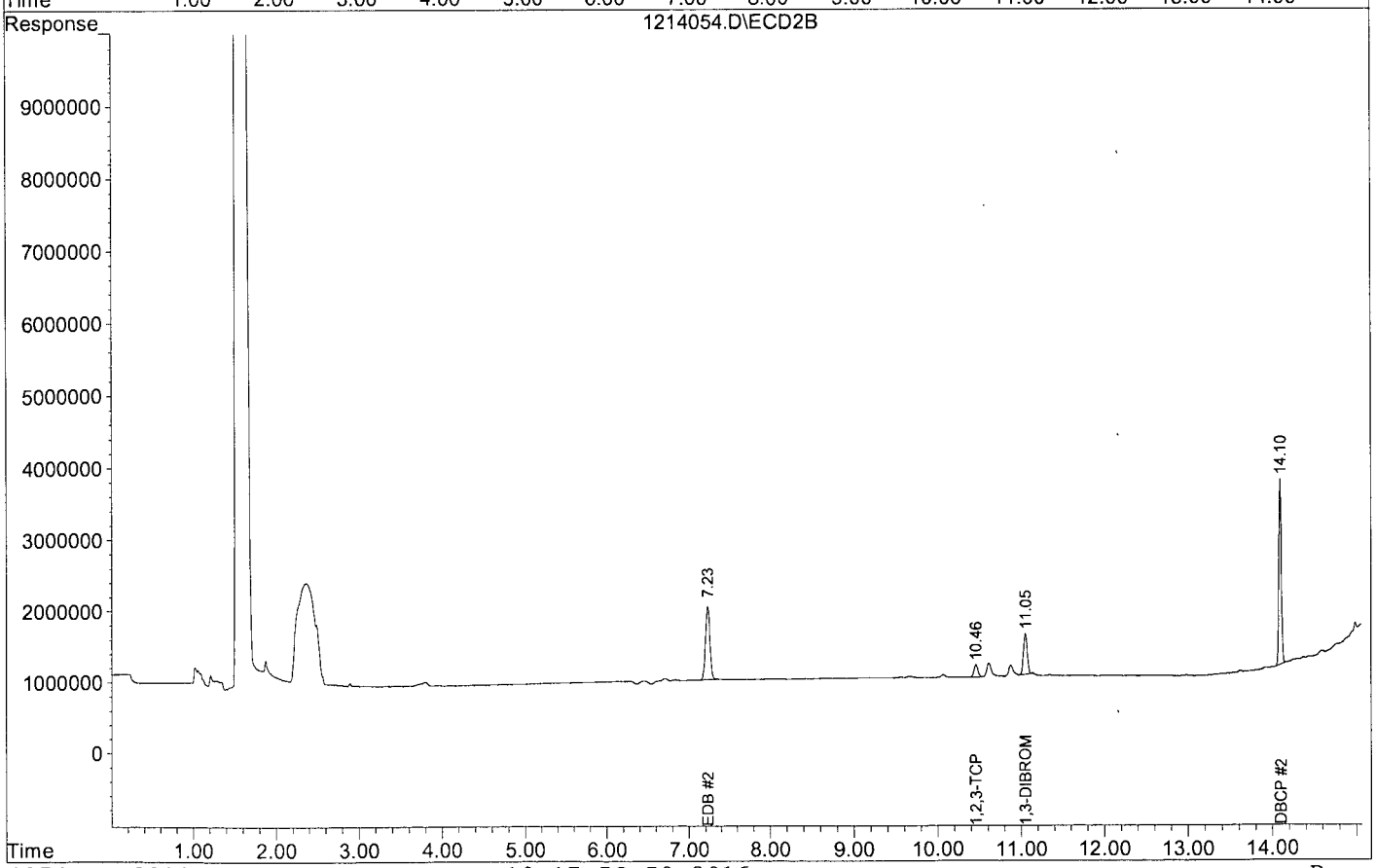
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214054.D
Acq On : 12-19-16 15:34:48
Sample : 8011 3 12/19/16
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111219.M

Vial: 52
Operator: RH
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214055.D\ECD1A.CH Vial: 53
Signal #2 : G:\HERBIE\DATA\161214\1214055.D\ECD2B.CH
Acq On : 12-19-16 15:55:37 Operator: RH
Sample : 8011 4 12/19/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 19 17:47 2016 Quant Results File: 80111219.RES

Quant Method : G:\HERBIE\DATA\161214\80111219.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Mon Dec 19 17:47:12 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	741845	1056264	0.531	0.498
Spiked Amount	0.350			Recovery	=	151.71%	142.29%
	Target Compounds						
1) TM	EDB	5.80	7.23	859828	1821074	0.502	0.488
2) TM	1,2,3-TCP	9.26	10.46	223482	304029	0.575	0.491
4) TM	DBCP	13.36	14.09	2612366	4796967	0.545	0.494

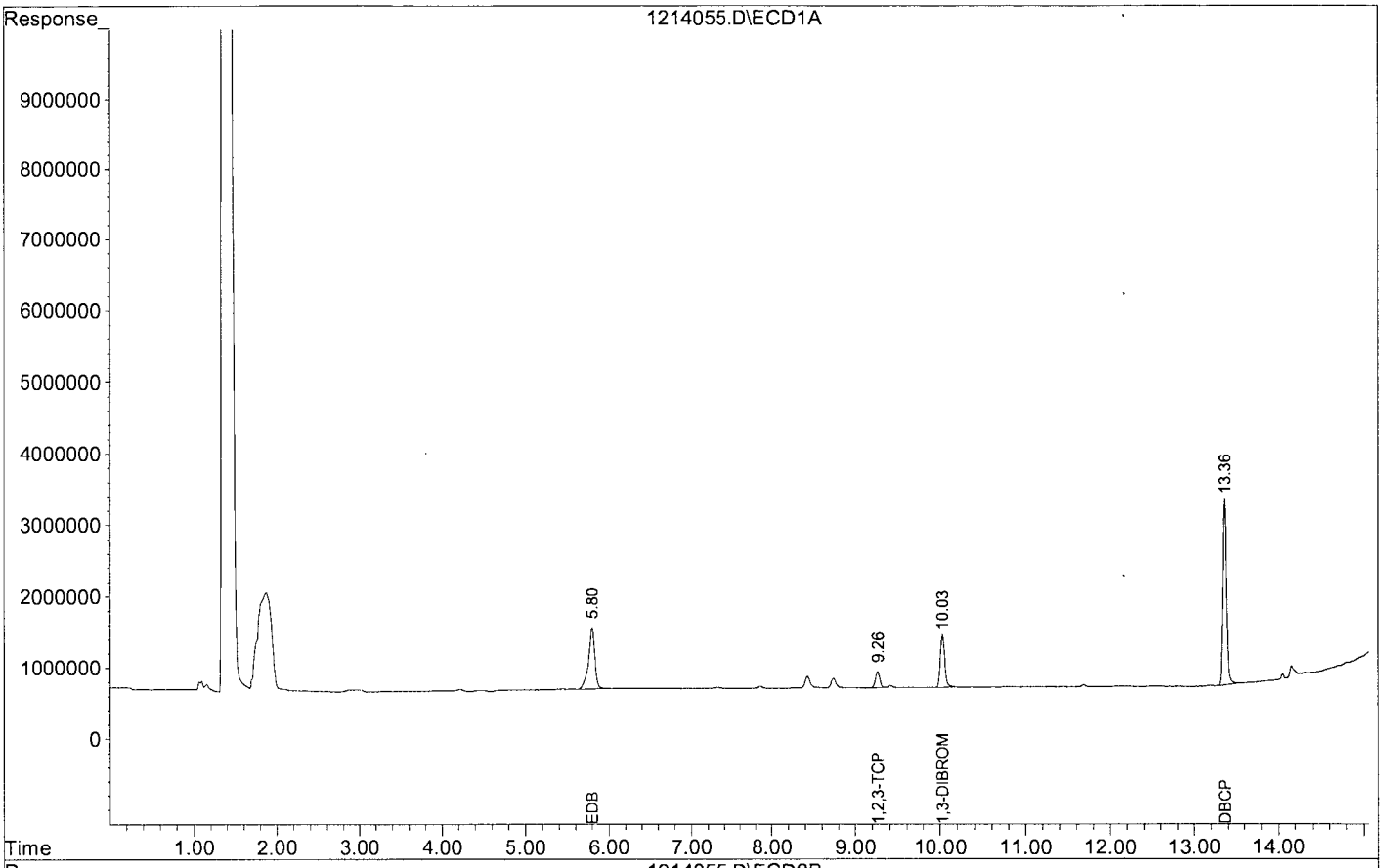
Target Compounds

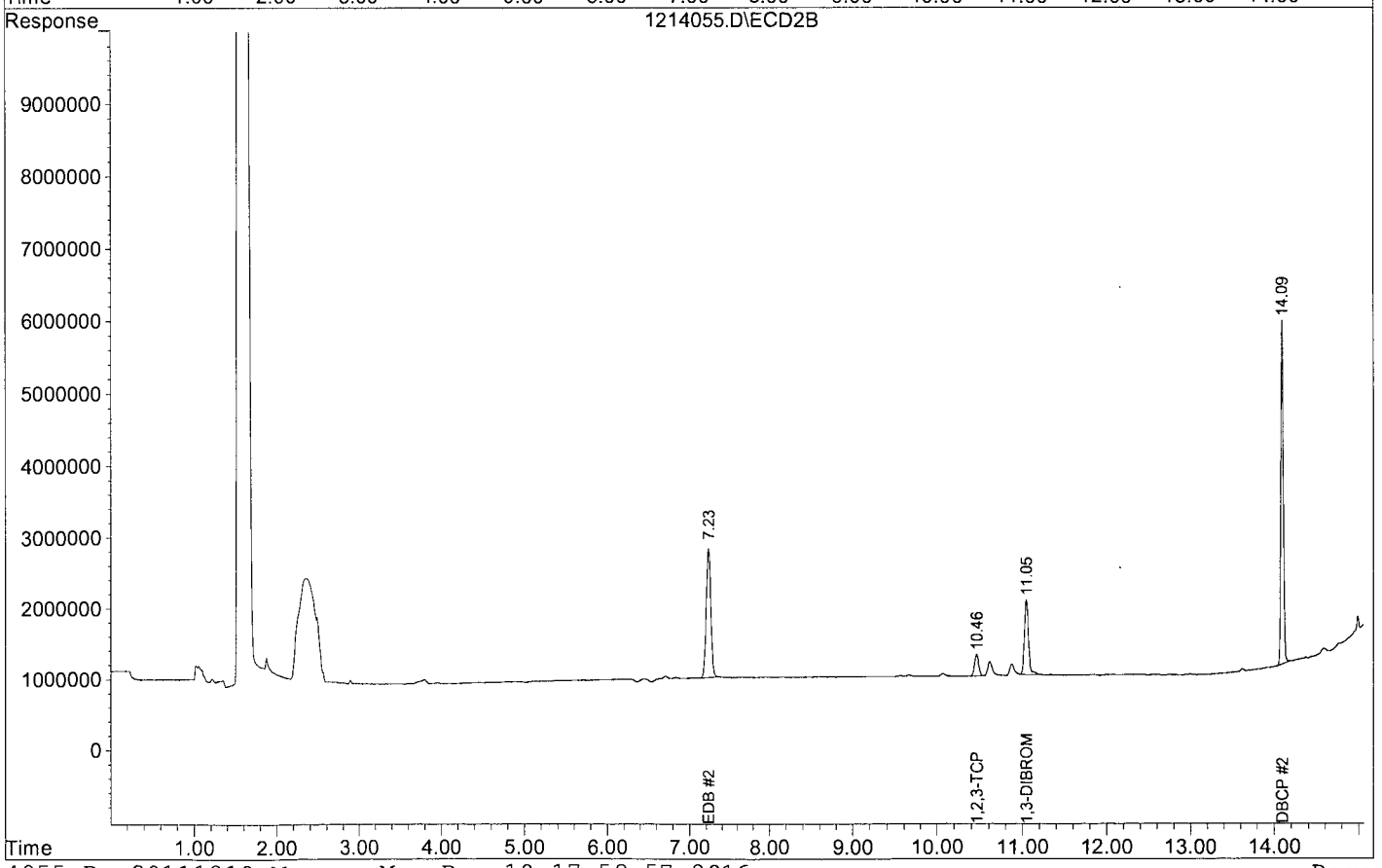
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214055.D
Acq On : 12-19-16 15:55:37
Sample : 8011 4 12/19/16
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111219.M

Vial: 53
Operator: RH
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214056.D\ECD1A.CH Vial: 54
Signal #2 : G:\HERBIE\DATA\161214\1214056.D\ECD2B.CH
Acq On : 12-19-16 16:16:20 Operator: RH
Sample : 8011 5 12/19/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 19 17:47 2016 Quant Results File: 80111219.RES

Quant Method : G:\HERBIE\DATA\161214\80111219.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Mon Dec 19 17:47:12 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	System Monitoring Compounds							
3)	S 1,3-DIBROMOPROPA	10.03	11.05	874783	1674310	0.627	0.790	#
	Spiked Amount 0.350			Recovery	=	179.14%	225.71%	
	Target Compounds							
1)	TM EDB	5.78	7.23	1155509	2848168	0.674	0.763	
2)	TM 1,2,3-TCP	9.26	10.46	257029	489782	0.669	0.791	
4)	TM DBCP	13.36	14.10	3044367	8347316	0.636	0.860	#

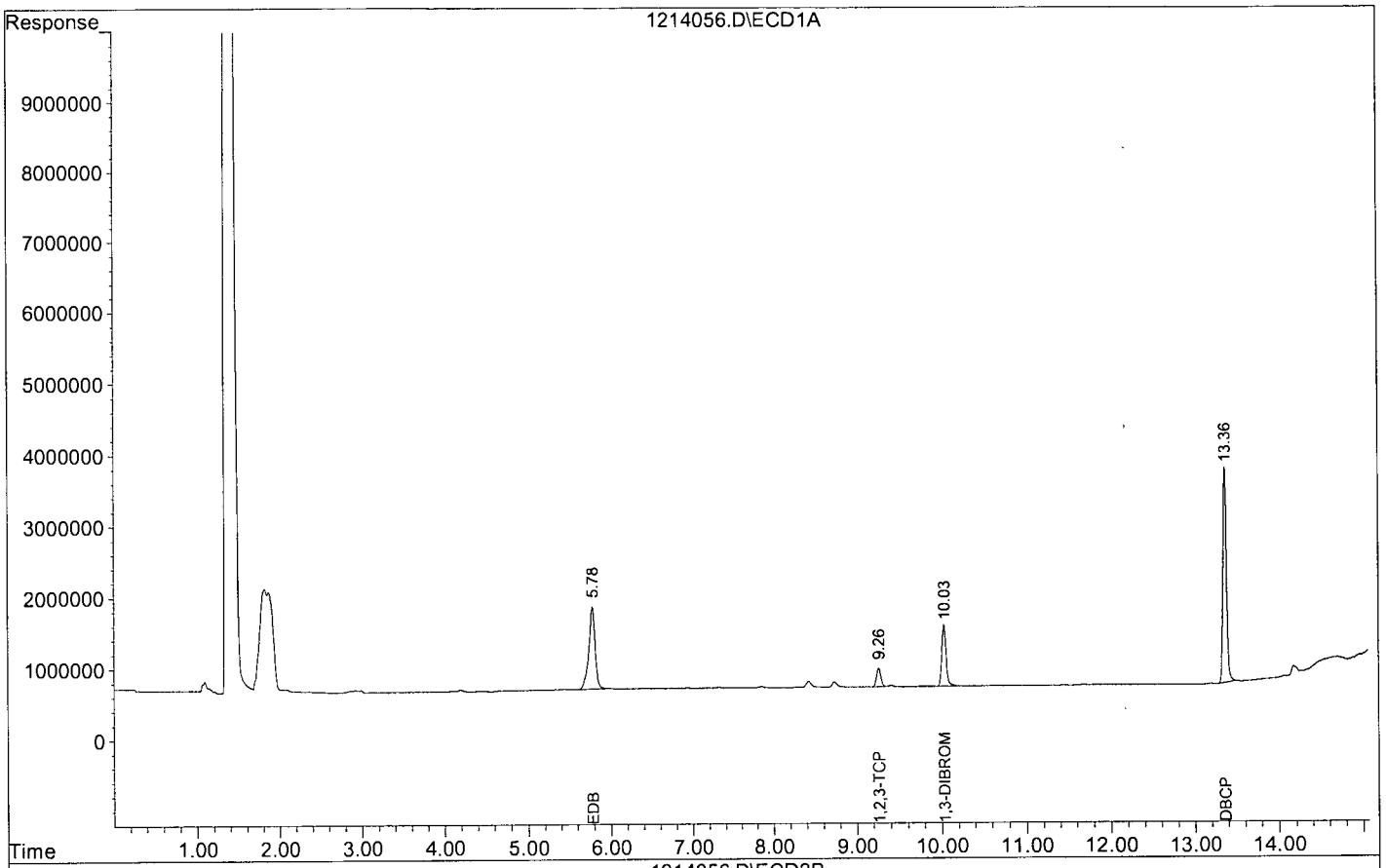
Target Compounds

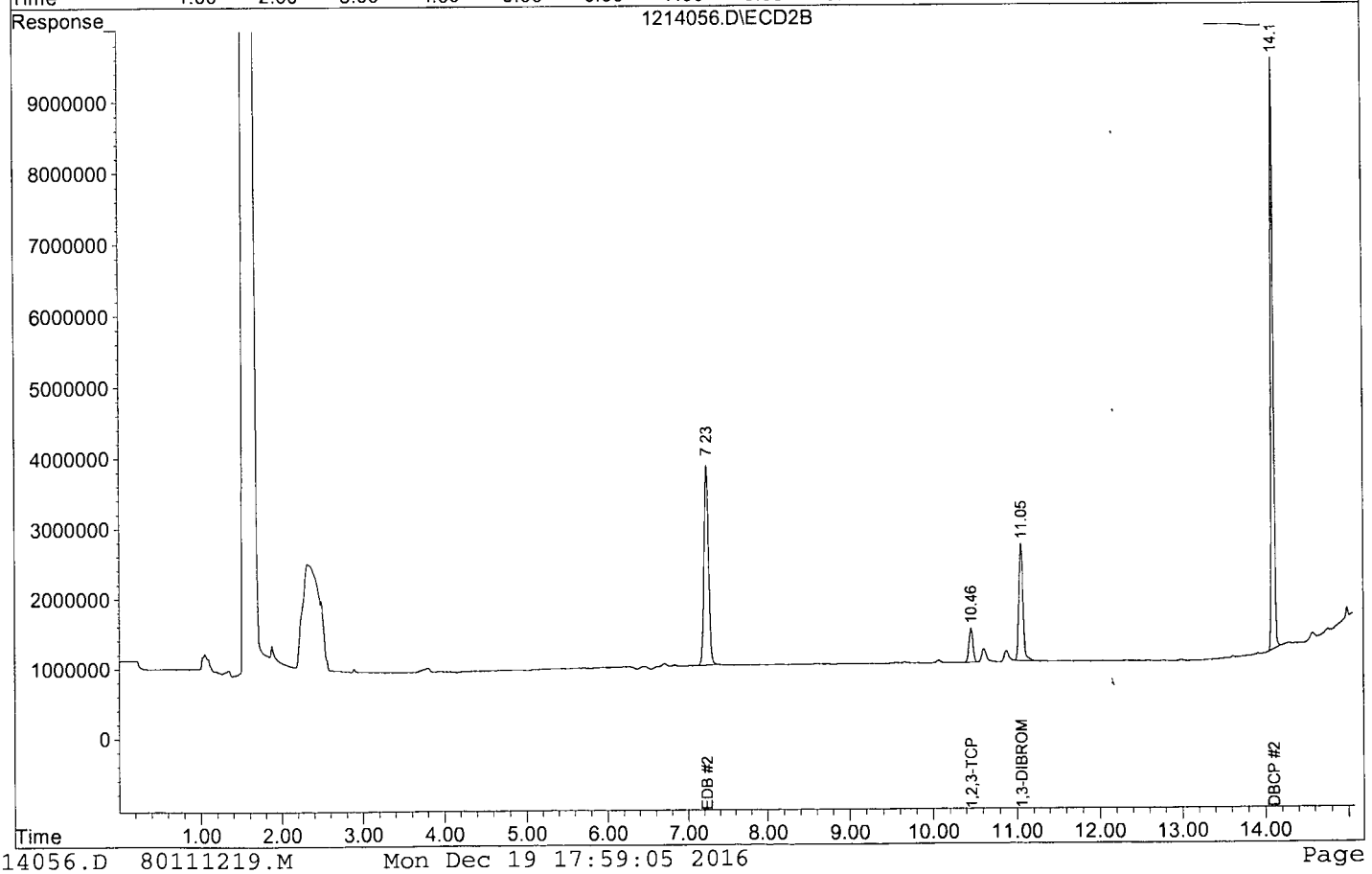
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214056.D
Acq On : 12-19-16 16:16:20
Sample : 8011 5 12/19/16
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111219.M

Vial: 54
Operator: RH
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214057.D\ECD1A.CH Vial: 55
Signal #2 : G:\HERBIE\DATA\161214\1214057.D\ECD2B.CH
Acq On : 12-19-16 16:37:03 Operator: RH
Sample : 8011 6 12/19/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 19 17:47 2016 Quant Results File: 80111219.RES

Quant Method : G:\HERBIE\DATA\161214\80111219.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Mon Dec 19 17:47:12 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	System Monitoring Compounds							
3) S	1,3-DIBROMOPROPA	10.03	11.05	1122719	2008432	0.804	0.948	
Spiked Amount	0.350			Recovery	=	229.71%	270.86%	
	Target Compounds							
1) TM	EDB	5.78	7.23	1446815	3478496	0.844	0.932	
2) TM	1,2,3-TCP	9.26	10.46	320155	592788	0.846	0.958	
4) TM	DBCP	13.36	14.10	3947003	10423454	0.824	1.073	#

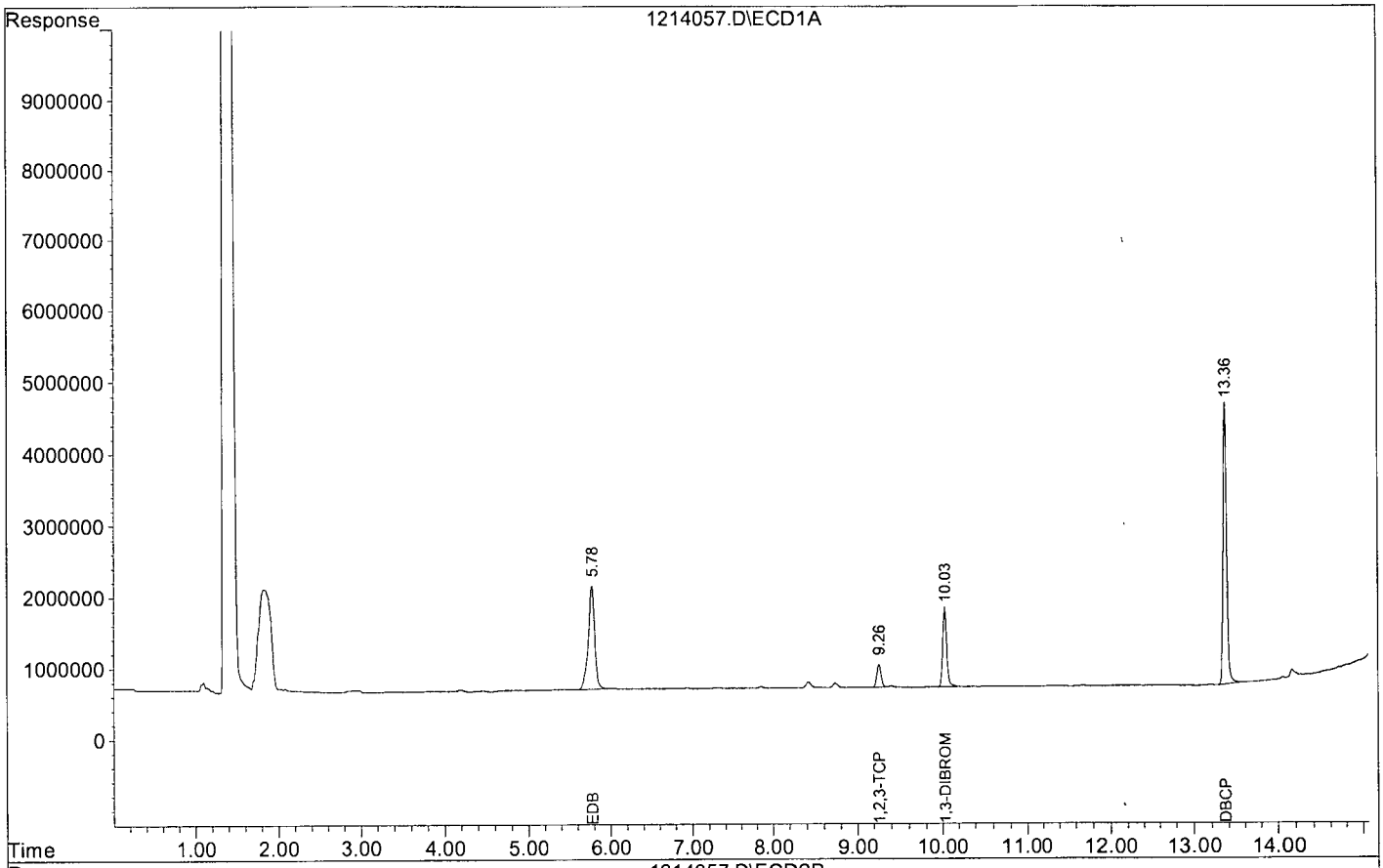
Target Compounds

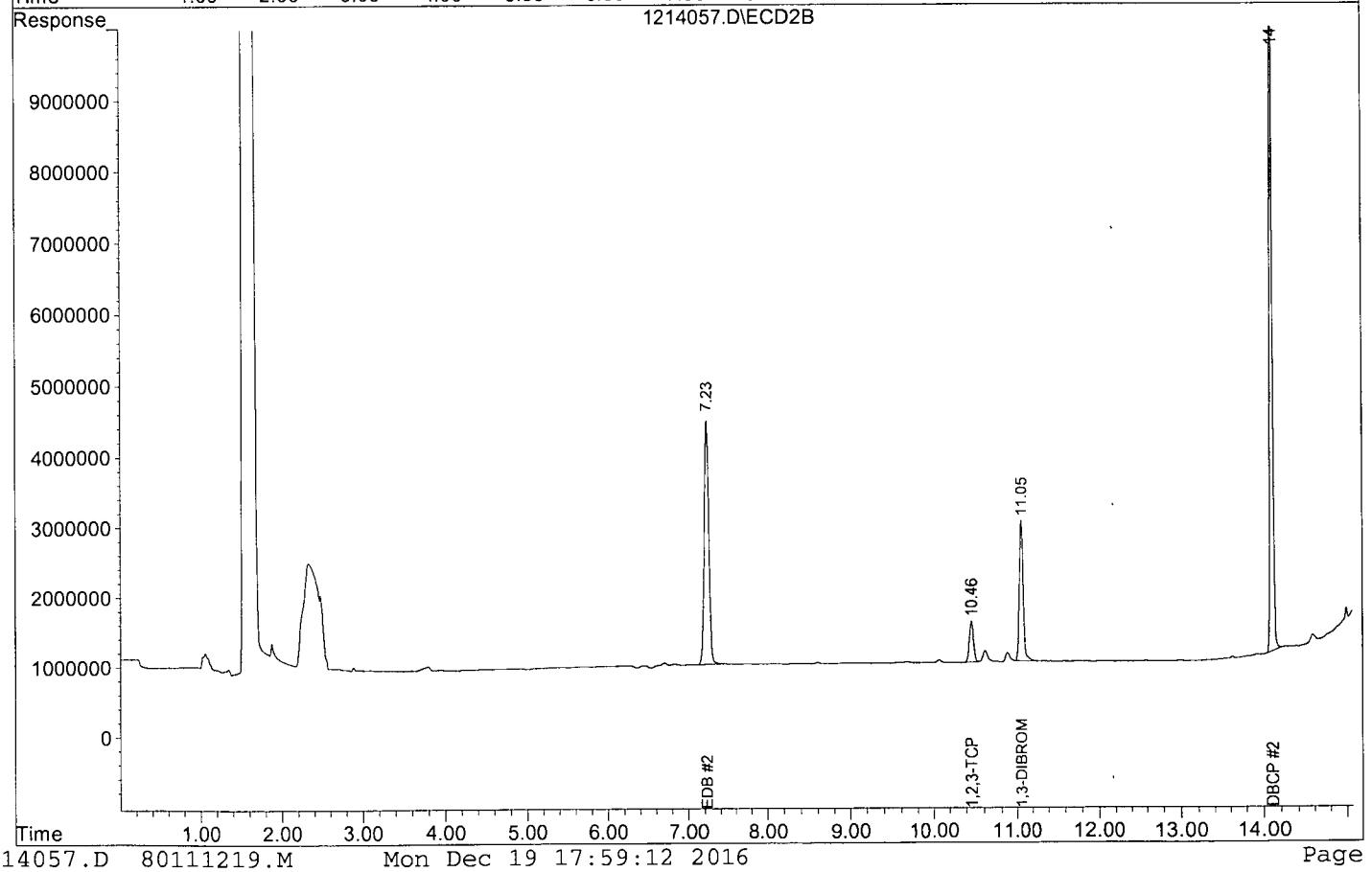
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214057.D
Acq On : 12-19-16 16:37:03
Sample : 8011 6 12/19/16
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111219.M

Vial: 55
Operator: RH
Inst : Herbie
Multiplr: 1.00





DBCP/EDB/1,2,3-TCP Analysis by
504 8011 1215

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 12/19/16
Instrument: Herbie
Initial Cal. Date: 12/19/16
Data File: 1214060.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TM	EDB	837164	937210	12	TM	
2	TML	1,2,3-TCP	197598	249185	26	TML	22
3	TM	DBCP	2364330	2477520	4.8	TM	
4							
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37							
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39							
40							
		Average			14.3		

* NT RH 12/20/16

DBCP/EDB/1,2,3-TCP Analysis by
504 8011 1215

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 12/19/16
Instrument: Herbie
Cal. Date: 12/19/16
Data File: 1214060.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	EDB	1892080	1909140	0.90	TM	
42	TM	1,2,3-TCP	328649	367655	12	TM	
43	TM	DBCP	5057110	5561150	10	TM	
44							
45							
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79							
80							
		Average			7.6		

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214060.D\ECD1A.CH Vial: 58
Signal #2 : G:\HERBIE\DATA\161214\1214060.D\ECD2B.CH
Acq On : 12-19-16 17:39:13 Operator: RH
Sample : 161219A LCS-1 2/30.96G Inst : Herbie
Misc : water Multiplr: 1.13
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 20 13:39 2016 Quant Results File: 80111219.RES

Quant Method : G:\HERBIE\DATA\161214\80111219.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Mon Dec 19 17:47:48 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
3) S 1,3-DIBROMOPROPA	10.03	11.05	444419	716359	0.358	0.378
Spiked Amount 0.396			Recovery =		90.48%	95.53%
Target Compounds						
1) TM EDB	5.79	7.23	187442	381827	0.127	0.114
2) TM 1,2,3-TCP	9.25	10.46	49837	73531	0.088	0.126 #
4) TM DBCP	13.36	14.10	495503	1112229	0.118	0.124

Target Compounds

$$\text{Algorithm} = \frac{187442 * 1.13}{837164 * 2} = \frac{211809.46}{1674328} = 0.1265$$

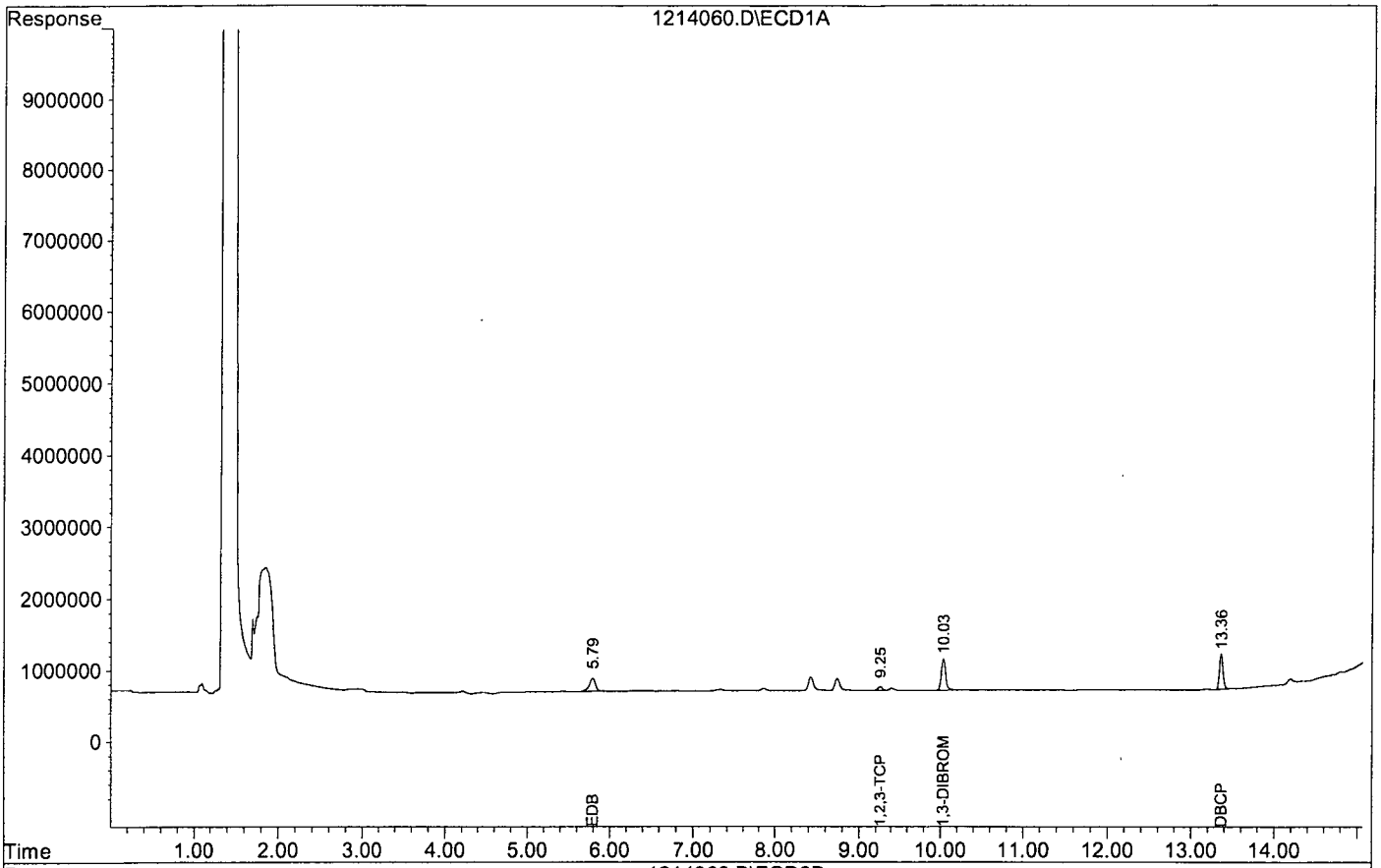
RH 12/20/16.

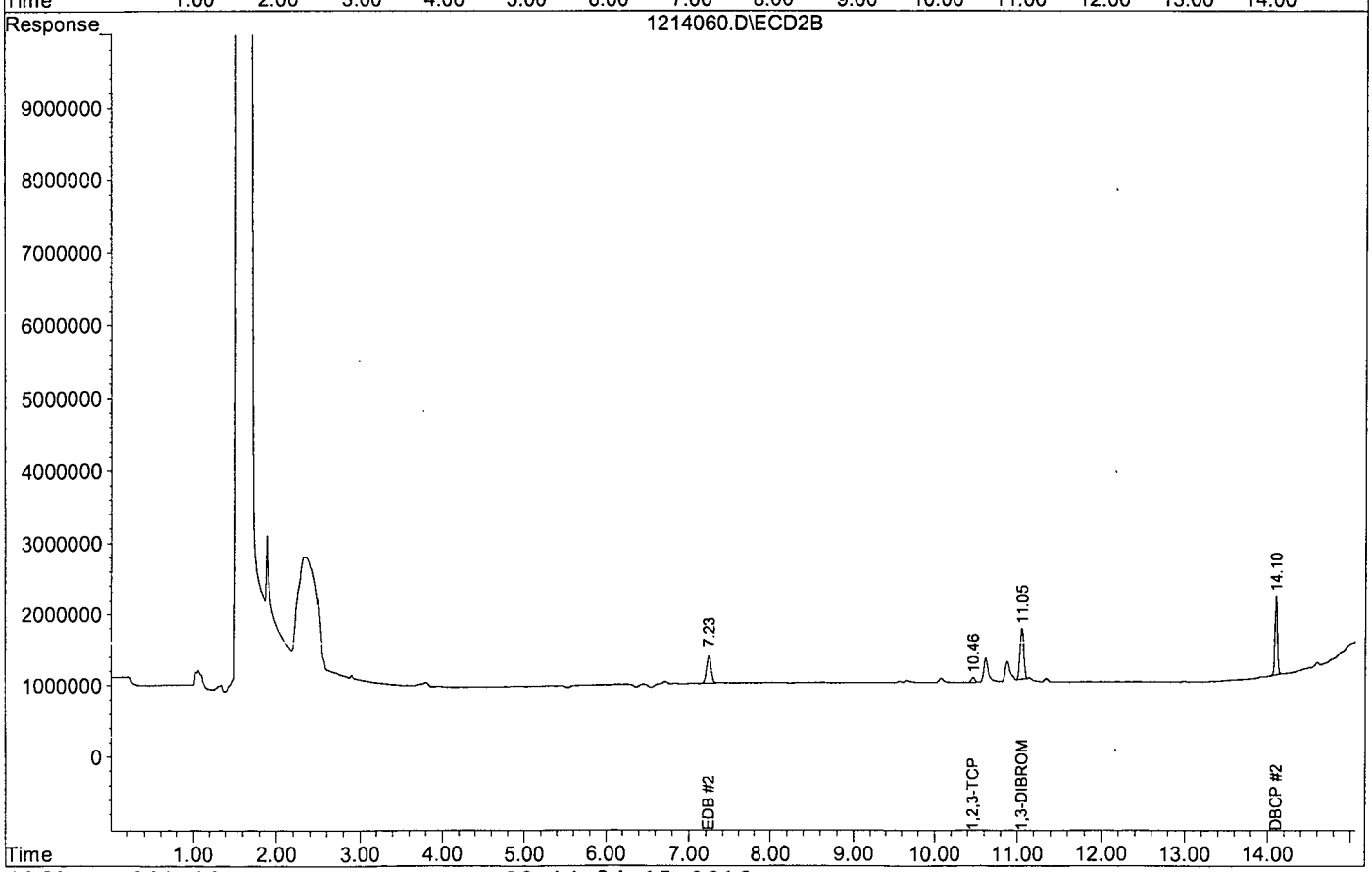
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214060.D
Acq On : 12-19-16 17:39:13
Sample : 161219A LCS-1 2/30.96G
Misc : water
Quant Method : G:\HERBIE\DATA\161214\80111219.M

Vial: 58
Operator: RH
Inst : Herbie
Multiplr: 1.13





DBCP/EDB/1,2,3-TCP Analysis by
504 8011 1215

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/19/16
Instrument: Herbie
Initial Cal. Date: 12/19/16
Data File: 1214068.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TM	EDB	837164	800084	4.4	TM	
2	TML	1,2,3-TCP	197598	180240	8.8	TML	18
3	S	1,3-DIBROMOPROPANE(S)	701626	642426	8.4	S	
4	TM	DBCP	2364330	2057850	13	TM	
5							
6							
7							
8							
9							
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36							
37							
38							
39							
40							
		Average			8.7		

DBCP/EDB/1,2,3-TCP Analysis by
504 8011 1215

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 12/19/16
Matrix: 0 Instrument: Herbie
Cal. Date: 12/19/16
Data File: 1214068.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	EDB	1892080	1842350	2.6	TM	
42	TM	1,2,3-TCP	328649	320826	2.4	TM	
43	S	1,3-DIBROMOPROPANE(S)	1069940	1056430	1.3	S	
44	TM	DBCP	5057110	4951280	2.1	TM	
45							
46							
47							
48							
49							
50							
51							
52							
53							
54							
55							
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67							
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							
79							
80							
		Average			2.1		

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214068.D\ECD1A.CH Vial: 66
Signal #2 : G:\HERBIE\DATA\161214\1214068.D\ECD2B.CH
Acq On : 12-19-16 20:23:57 Operator: RH
Sample : 8011 3 12/19/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 20 13:46 2016 Quant Results File: 80111219.RES

Quant Method : G:\HERBIE\DATA\161214\80111219.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Mon Dec 19 17:47:48 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	321213	528217	0.229	0.247
Spiked Amount	0.350			Recovery	=	65.43%	70.57%
	Target Compounds						
1) TM	EDB	5.78	7.22	400042	921174	0.239	0.243
2) TM	1,2,3-TCP	9.26	10.46	90120	160413	0.205	0.244
4) TM	DBCP	13.36	14.10	1028925	2475640	0.218	0.245

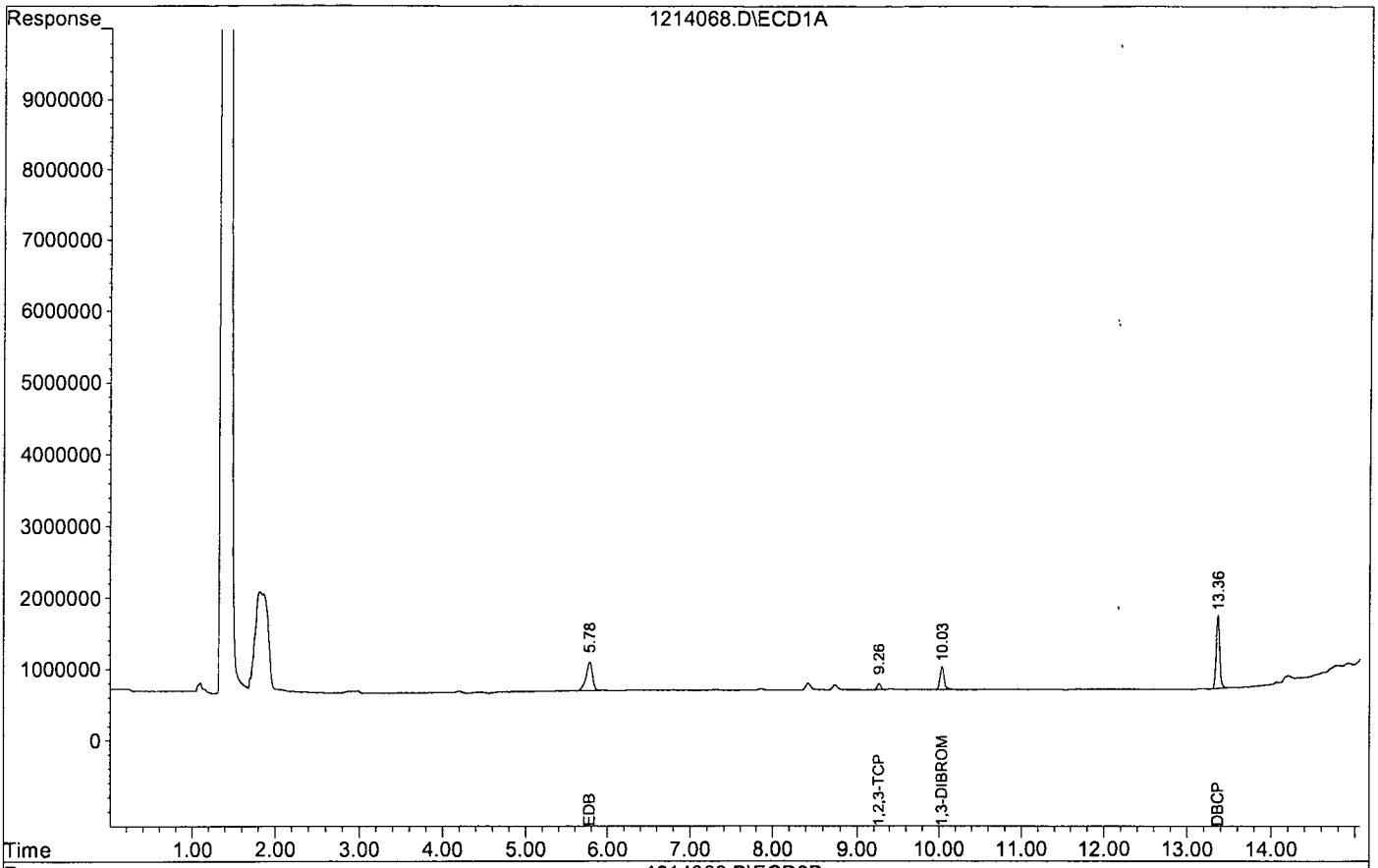
Target Compounds

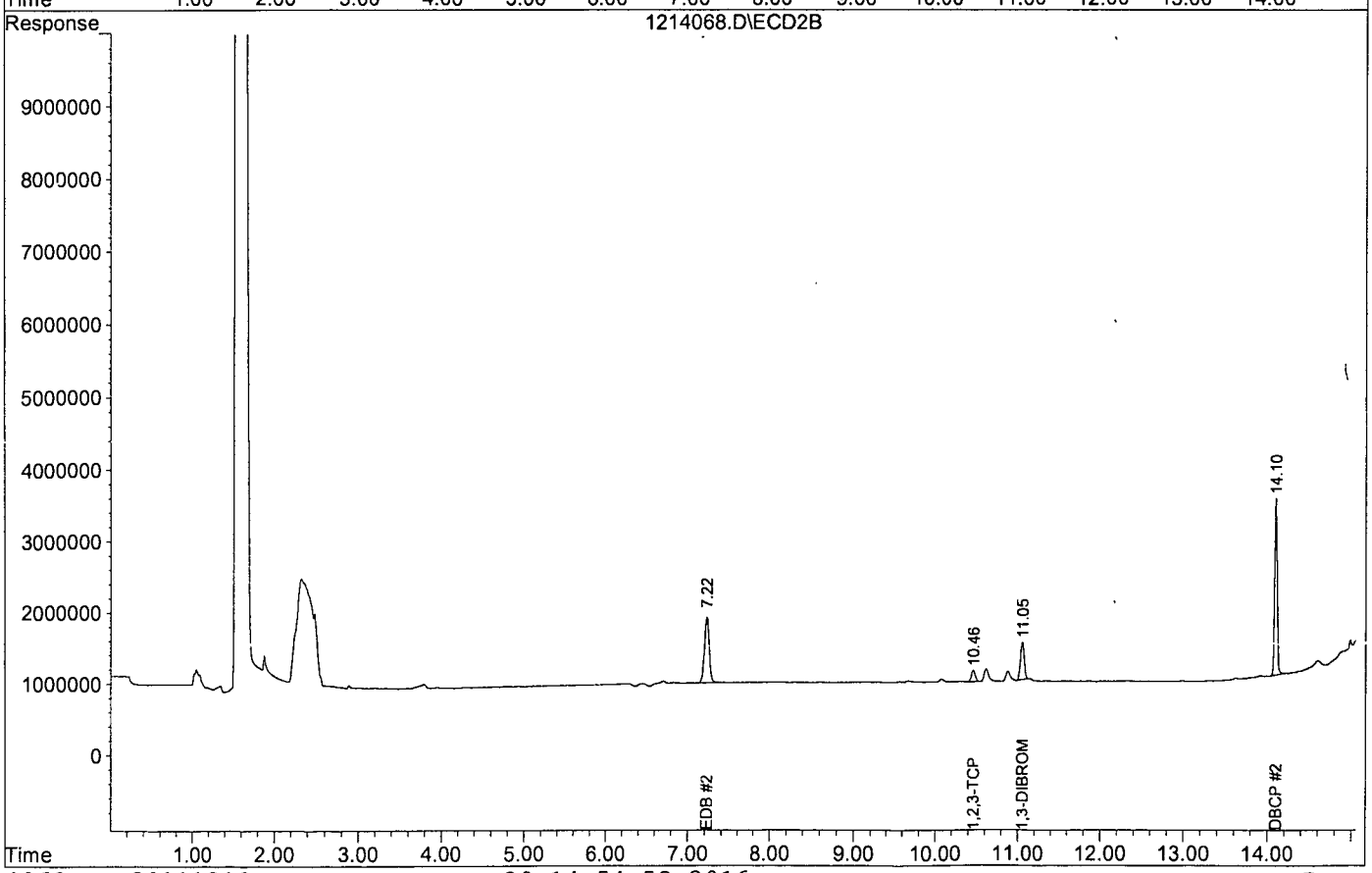
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214068.D
Acq On : 12-19-16 20:23:57
Sample : 8011 3 12/19/16
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111219.M

Vial: 66
Operator: RH
Inst : Herbie
Multiplr: 1.00





DBCP/EDB/1,2,3-TCP Analysis by
504 8011 1215

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/20/16
Instrument: Herbie
Initial Cal. Date: 12/19/16
Data File: 1214070.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TM	EDB	837164	895160	6.9	TM	
2	TML	1,2,3-TCP	197598	194732	1.5	TML	8.7
3	S	1,3-DIBROMOPROPANE(S)	701626	692740	1.3	S	
4	TM	DBCP	2364330	2134300	9.7	TM	
5							
6							
7							
8							
9							
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31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			4.9		

DBCP/EDB/1,2,3-TCP Analysis by
504 8011 1215

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/20/16
Instrument: Herbie
Cal. Date: 12/19/16
Data File: 1214070.D

		Compound	MEAN	CCRF	%D	%Drift	
41	TM	EDB	1892080	2139080	13	TM	
42	TM	1,2,3-TCP	328649	360504	9.7	TM	
43	S	1,3-DIBROMOPROPANE(S)	1069940	1177590	10	S	
44	TM	DBCP	5057110	5296540	4.7	TM	
45							
46							
47							
48							
49							
50							
51							
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77							
78							
79							
80							
		Average			9.4		

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214070.D\ECD1A.CH Vial: 68
Signal #2 : G:\HERBIE\DATA\161214\1214070.D\ECD2B.CH
Acq On : 12-20-16 14:28:00 Operator: RH
Sample : 8011 3 12/19/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 20 14:43 2016 Quant Results File: 80111219.RES

Quant Method : G:\HERBIE\DATA\161214\80111219.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Mon Dec 19 17:47:48 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	346370	588793	0.247	0.275
Spiked Amount	0.350			Recovery	=	70.57%	78.57%
	Target Compounds						
1) TM	EDB	5.79	7.23	447580	1069541	0.267	0.283
2) TM	1,2,3-TCP	9.26	10.46	97366	180252	0.228	0.274
4) TM	DBCP	13.36	14.09	1067149	2648269	0.226	0.262

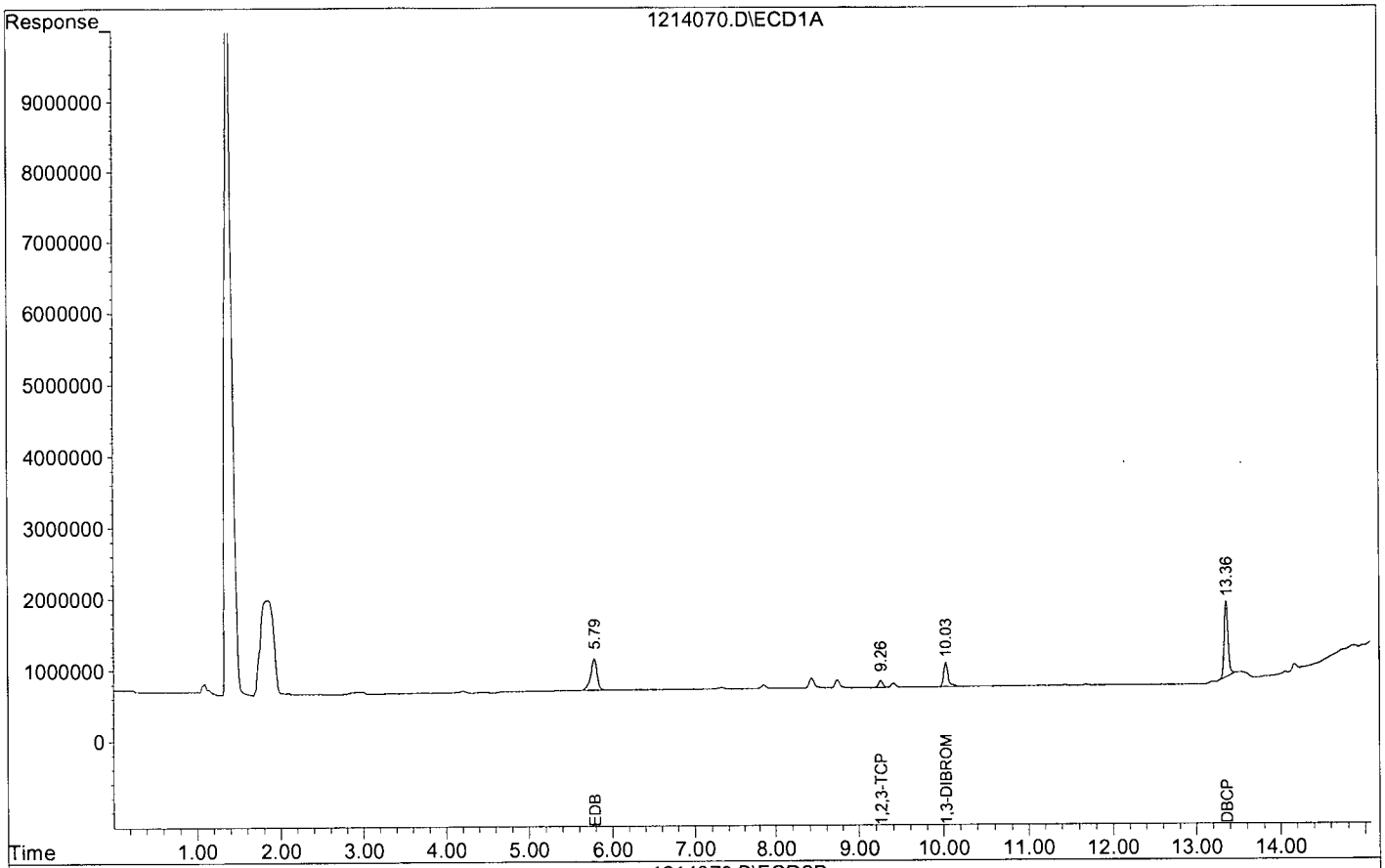
Target Compounds

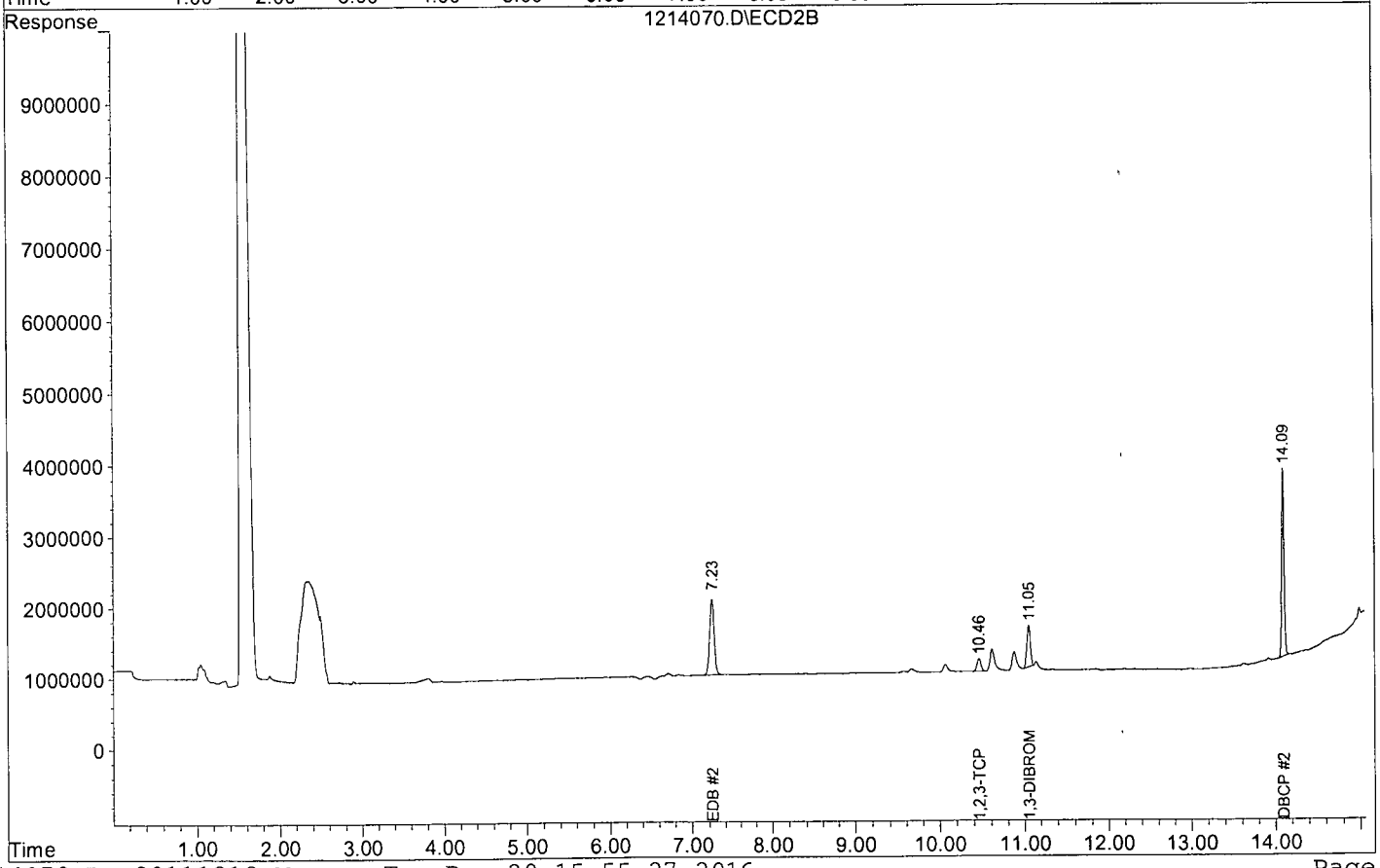
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214070.D
Acq On : 12-20-16 14:28:00
Sample : 8011 3 12/19/16
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111219.M

Vial: 68
Operator: RH
Inst : Herbie
Multiplr: 1.00





DBCP/EDB/1,2,3-TCP Analysis by
504 8011 1215

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/20/16
Instrument: Herbie
Initial Cal. Date: 12/19/16
Data File: 1214073.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	EDB	837164	838110	0.11	TM	
2	TML	1,2,3-TCP	197598	184598	6.6	TML	15
3	S	1,3-DIBROMOPROPANE(S)	701626	668892	4.7	S	
4	TM	DBCP	2364330	2130320	9.9	TM	
5							
6							
7							
8							
9							
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32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			5.3		

DBCP/EDB/1,2,3-TCP Analysis by
504 8011 1215

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/20/16
Instrument: Herbie
Cal. Date: 12/19/16
Data File: 1214073.D

		Compound	MEAN	CCRF	%D	%Drift	
41	TM	EDB	1892080	1861000	1.6	TM	
42	TM	1,2,3-TCP	328649	307828	6.3	TM	
43	S	1,3-DIBROMOPROPANE(S)	1069940	975182	8.9	S	
44	TM	DBCP	5057110	4846810	4.2	TM	
45							
46							
47							
48							
49							
50							
51							
52							
53							
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73							
74							
75							
76							
77							
78							
79							
80							
		Average			5.3		

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214073.D\ECD1A.CH Vial: 71
Signal #2 : G:\HERBIE\DATA\161214\1214073.D\ECD2B.CH
Acq On : 12-20-16 15:30:55 Operator: RH
Sample : 8011 3 12/19/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 20 15:54 2016 Quant Results File: 80111219.RES

Quant Method : G:\HERBIE\DATA\161214\80111219.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Mon Dec 19 17:47:48 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	334446	487591	0.238	0.228
Spiked Amount	0.350			Recovery	=	68.00%	65.14%
	Target Compounds						
1) TM	EDB	5.79	7.23	419055	930501	0.250	0.246
2) TM	1,2,3-TCP	9.26	10.46	92299	153914	0.212	0.234
4) TM	DBCP	13.36	14.10	1065161	2423406	0.225	0.240

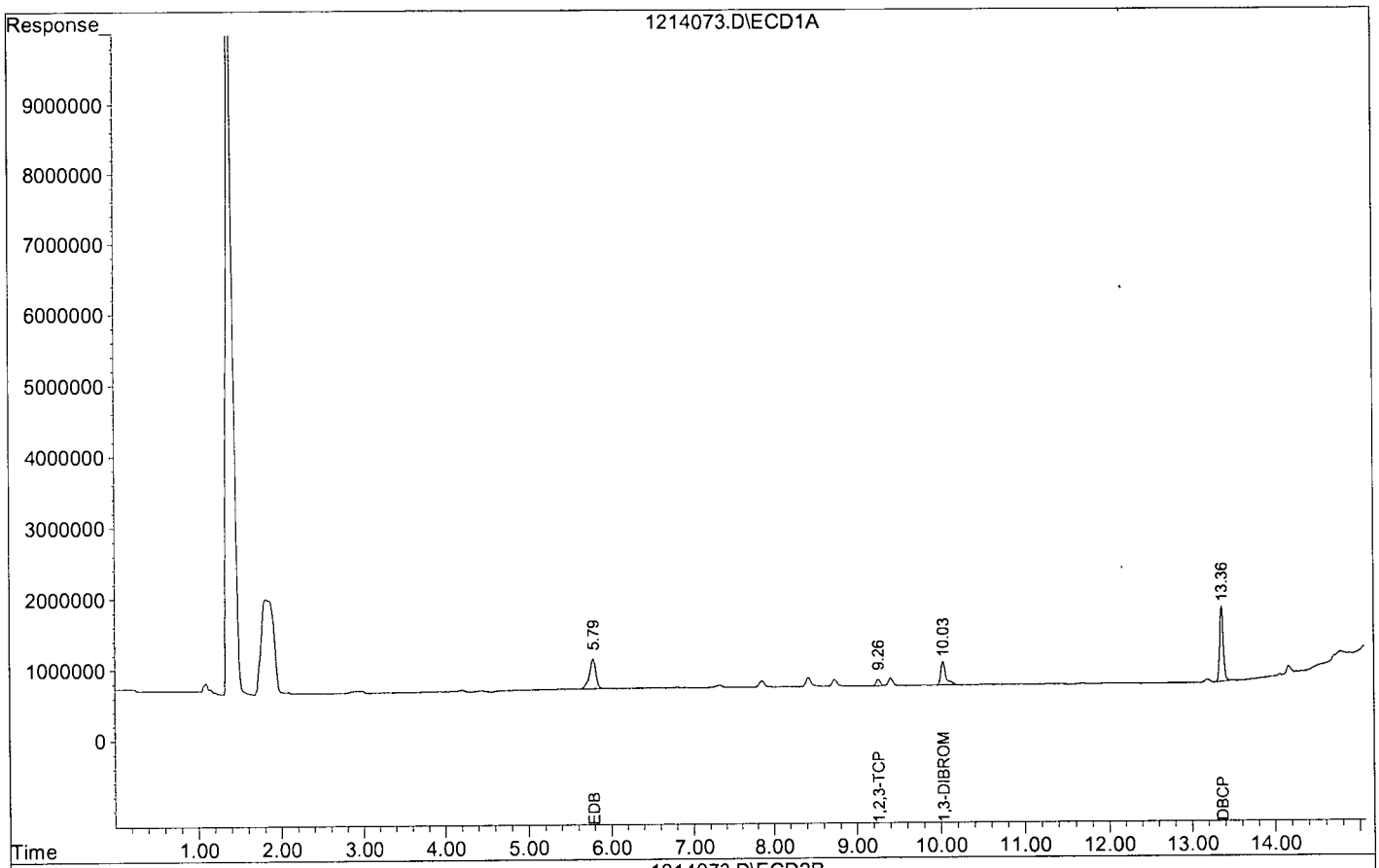
Target Compounds

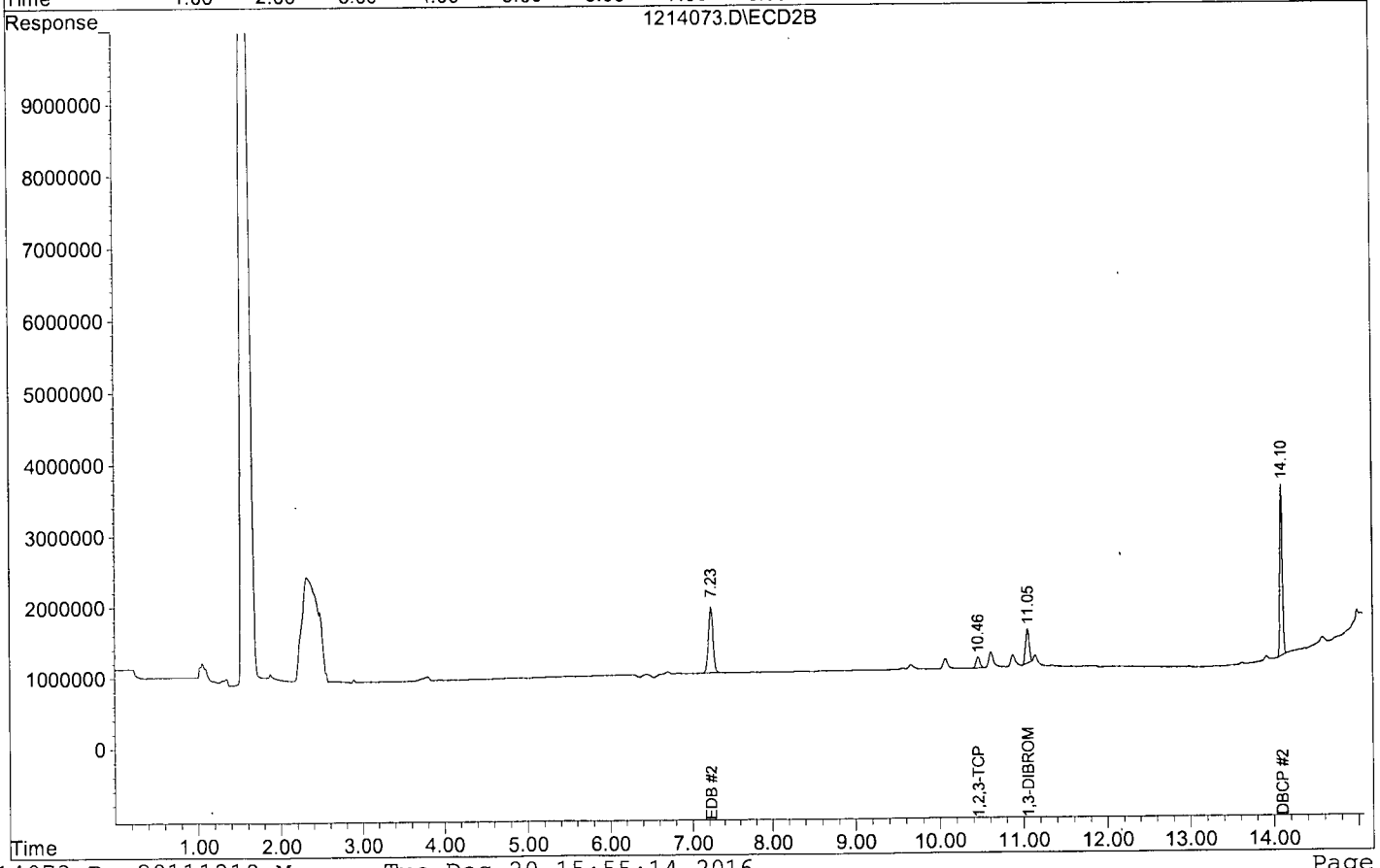
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214073.D
Acq On : 12-20-16 15:30:55
Sample : 8011 3 12/19/16
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111219.M

Vial: 71
Operator: RH
Inst : Herbie
Multiplr: 1.00





ORGANICS

Raw Data

APPL, INC.

Method Blank
EPA 8011

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161219W-47344 - 214793**
Batch ID: #8011-161219A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	EDB	0.020 U	0.02	0.020	0.010	ug/L	12/19/16	12/19/16
BLANK	SURROGATE: 1,3-DIBROMOPRO	79.4	70-132			%	12/19/16	12/19/16

Quant Method: 80111219.M
Run #: 1214059
Instrument: Herbie
Sequence: 161214
Initials: RHA

GC SC-Blank-REG MDLs-DOD
Printed: 12/20/16 1:54:32 PM

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214059.D\ECD1A.CH Vial: 57
Signal #2 : G:\HERBIE\DATA\161214\1214059.D\ECD2B.CH
Acq On : 12-19-16 17:18:34 Operator: RH
Sample : 161219A BLK 2/30.98G Inst : Herbie
Misc : water Multiplr: 1.13
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 20 13:41 2016 Quant Results File: 80111219.RES

Quant Method : G:\HERBIE\DATA\161214\80111219.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Mon Dec 19 17:47:48 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

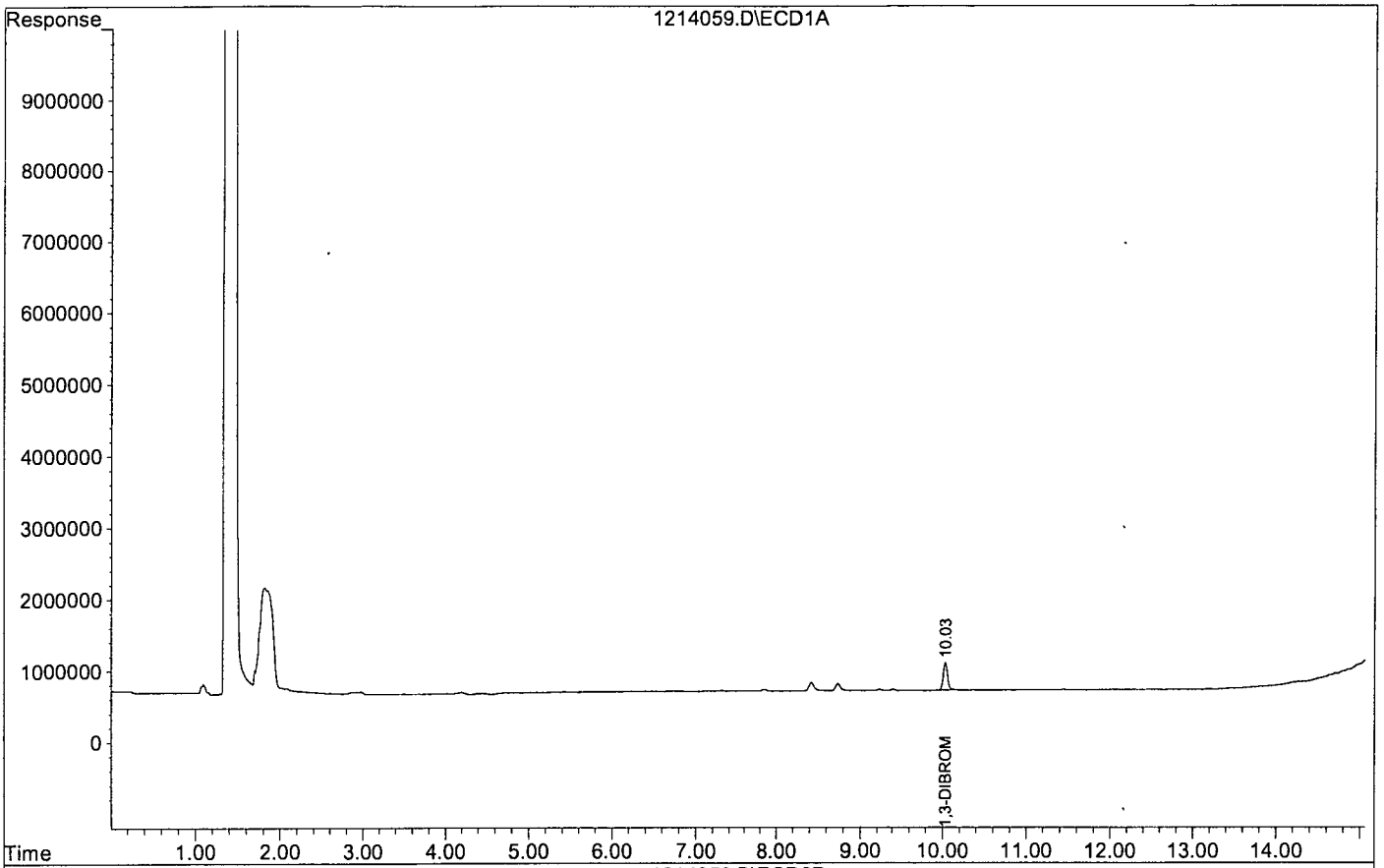
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	389817	616964	0.314	0.326
Spiked Amount	0.395			Recovery	=	79.41%	82.44%
	Target Compounds						
	Target Compounds						
1) TM	EDB	0.00	0.00	0	0	N.D. d	N.D. d
2) TM	1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4) TM	DBCP	0.00	0.00	0	0	N.D. d	N.D. d

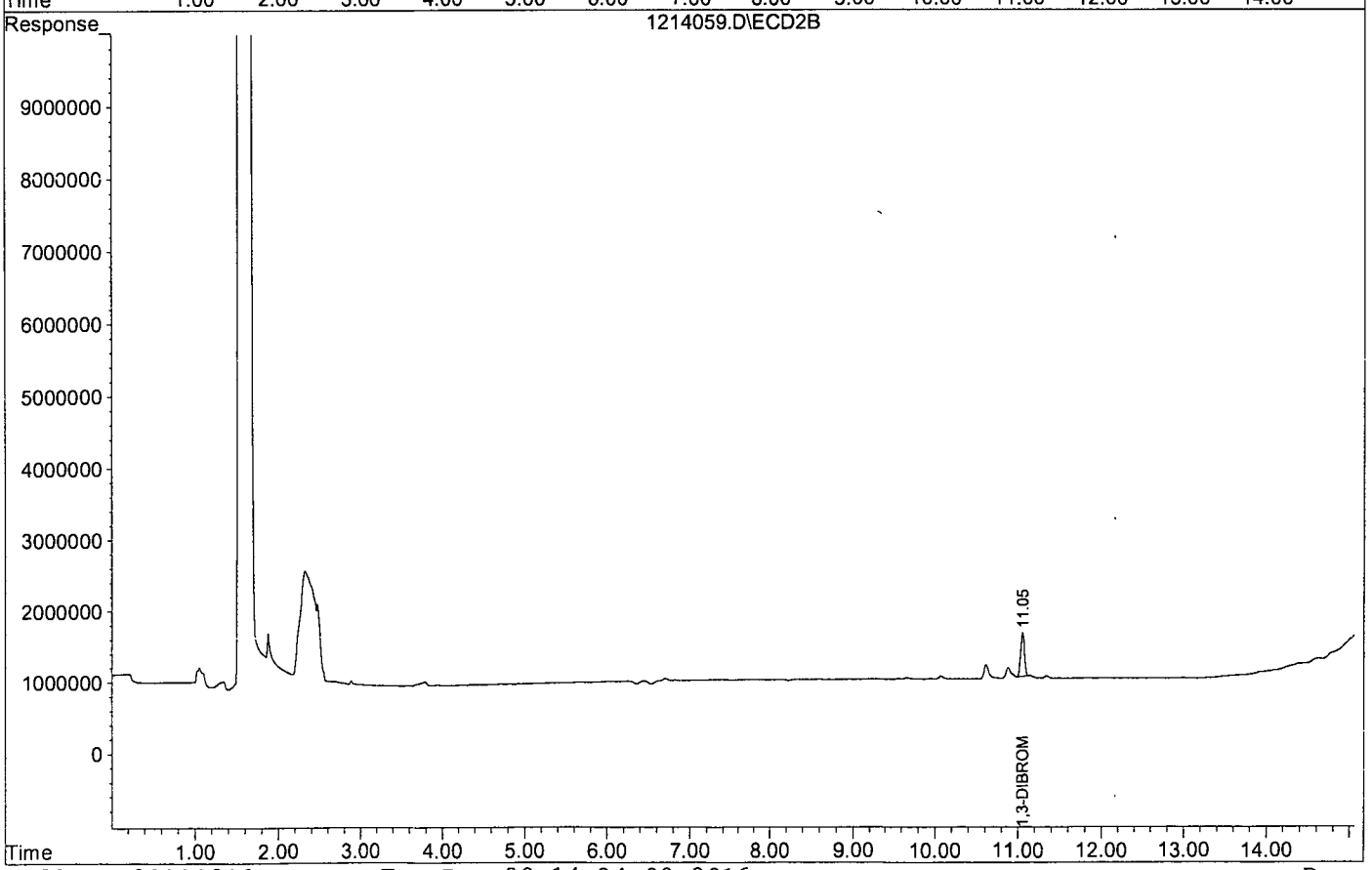
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\161214\1214059.D
Acq On : 12-19-16 17:18:34
Sample : 161219A BLK 2/30.98G
Misc : water
Quant Method : G:\HERBIE\DATA\161214\80111219.M

Vial: 57
Operator: RH
Inst : Herbie
Multiplr: 1.13





Laboratory Control Spike Recovery

EPA 8011

APPL ID: **161219W-47344 LCS - 214793**
Batch ID: #8011-161219A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
EDB	0.250	0.164	65.6	60-140
SURROGATE: 1,3-DIBROMOPROPANE (	0.350	0.382	109	70-132

Primary	SPK
Quant Method :	80111219.M
Extraction Date :	12/19/16
Analysis Date :	12/20/16
Instrument :	Herbie
Run :	1214071
Initials :	RHA

Comments: _____

Printed: 12/20/16 4:03:42 PM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214071.D\ECD1A.CH Vial: 69
Signal #2 : G:\HERBIE\DATA\161214\1214071.D\ECD2B.CH
Acq On : 12-20-16 14:48:53 Operator: RH
Sample : 161219A LCS-2 2/35.92G Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 20 15:17 2016 Quant Results File: 80111219.RES

Quant Method : G:\HERBIE\DATA\161214\80111219.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Mon Dec 19 17:47:48 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	System Monitoring Compounds							
3) S	1,3-DIBROMOPROPA	10.04	11.05	536613	617492	0.382	0.289	
Spiked Amount	0.350			Recovery	=	109.14%	82.57%	
	Target Compounds							
1) TM	EDB	5.81	7.23	275414	1015382	0.164	0.268	#
2) TM	1,2,3-TCP	9.27	10.46	138151	187585	0.358	0.285	
4) TM	DBCP	13.36	14.10	1791182	2879222	0.379	0.285	

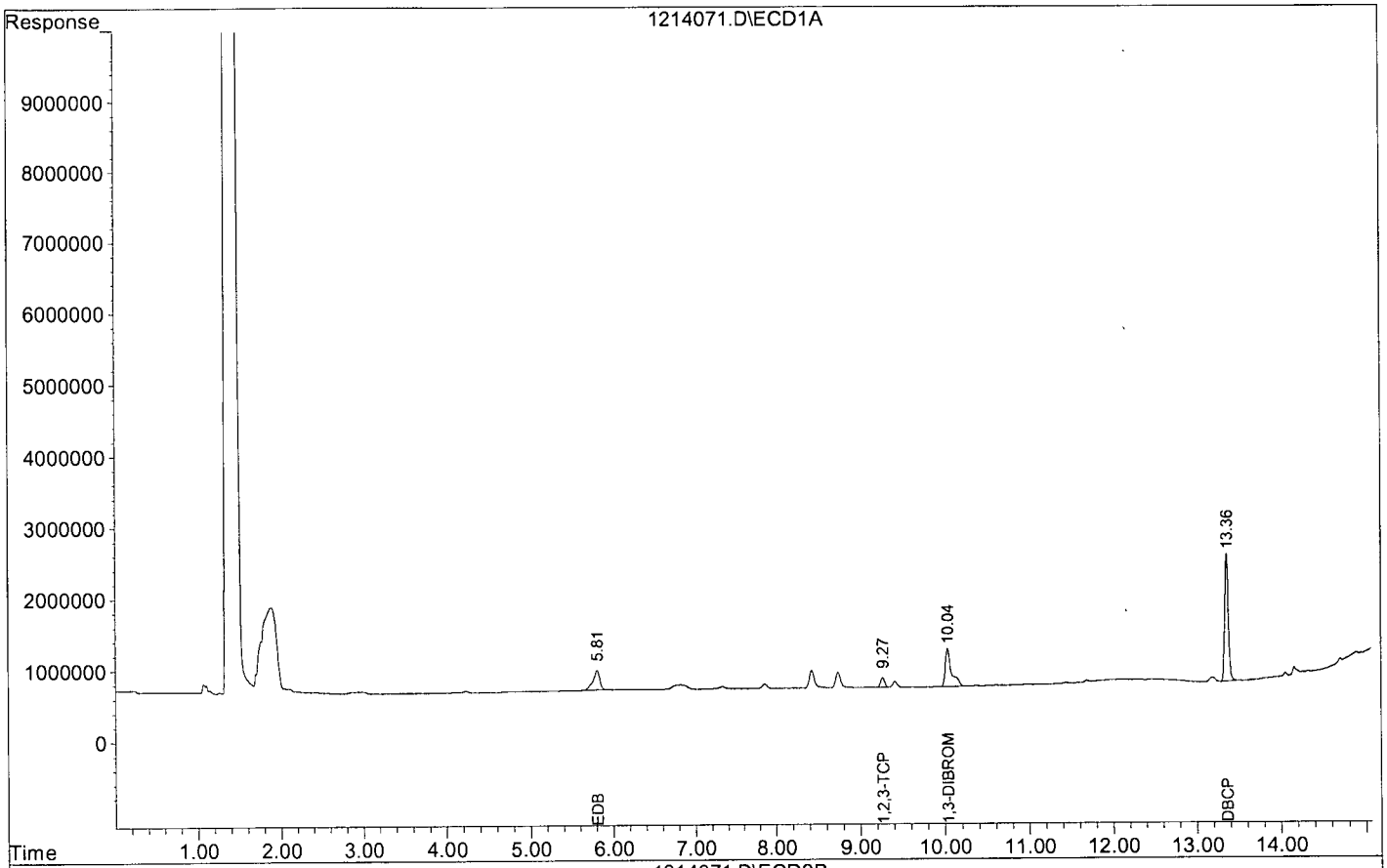
Target Compounds

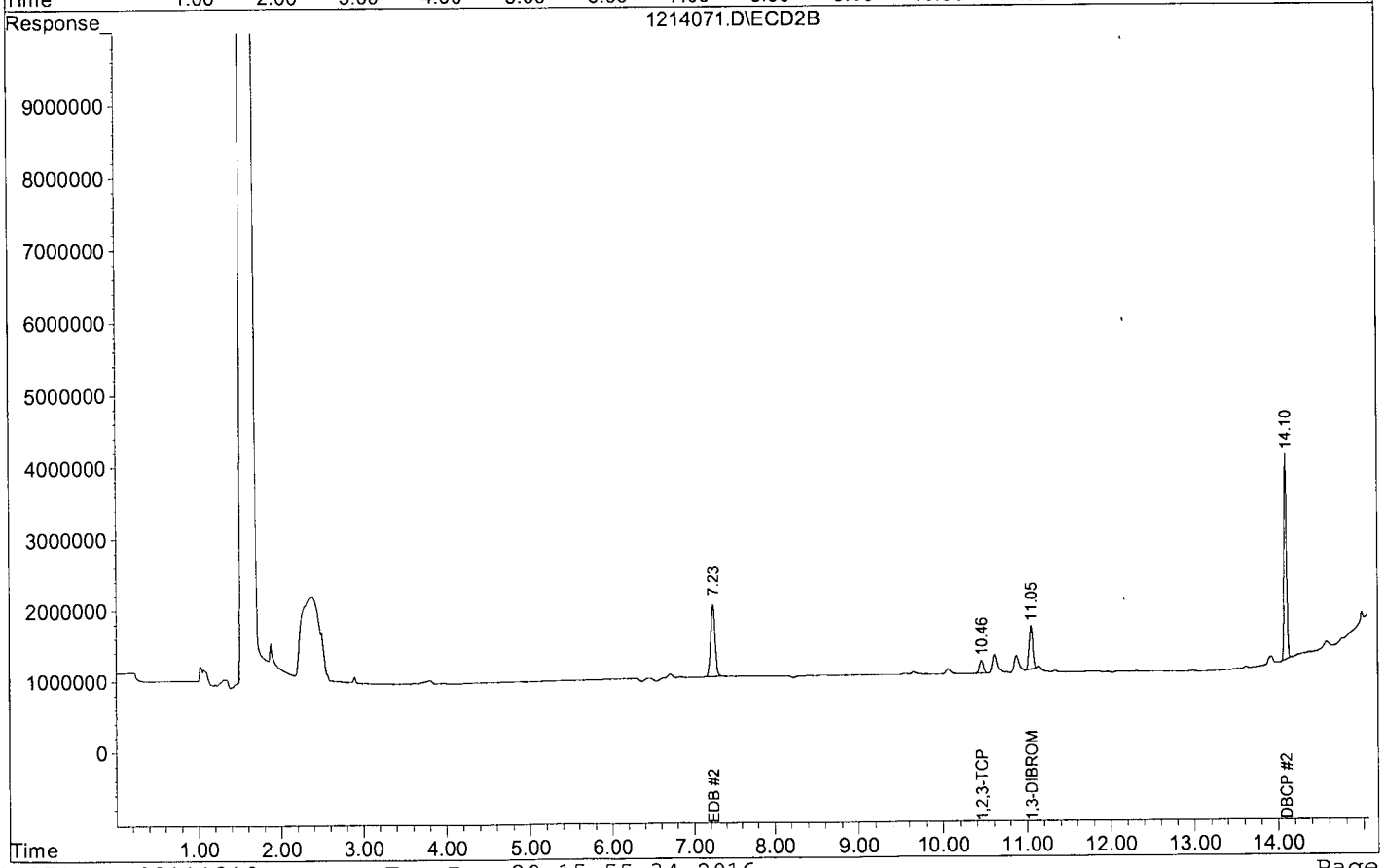
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214071.D
Acq On : 12-20-16 14:48:53
Sample : 161219A LCS-2 2/35.92G
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111219.M

Vial: 69
Operator: RH
Inst : Herbie
Multiplr: 1.00





		504/8011 M STD					
Prep: 12/19/16 Exp: 04/19/17 RH							
Compound	Initial Conc.	Source	Aliquot	Final Vol.	Final Conc.	Solvent	
EDB	0.35ug/mL	504/8011 M STD STK	1000uL	10mL	0.035ug/mL	Methanol	
TCP		prep.12/08/16				021915C	
DBCP		exp: 04/08/17					
1,3 DBP							

504/8011 M STD STOCK						
Prep: 12/08/16-R.H.		Ex: 04/08/17				
Compound	**Initial Conc.**	**Source**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
EDB	20ug/mL	504/DOHS STOCK	438uL	25mL	0.35ug/mL	Methanol
TCP		prep. 06/07/16				021915C
DBCP		exp: 06/07/17				
1,3 DBP	100ug/mL	1,3 DBP STOCK	88uL			
		prep.06/07/16				
		exp. 06/07/17				

1,3-DBP STOCK						
Compounds	**Init. Conc.**	**Stock SRC**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
1,3 DBP	1000ug/mL	Absolute	1000uL	10mL	100ug/mL	Methanol
	Cat:	71326				Lot # 021915C
	Lot:	031413-33900				
	Op:	06/07/16				
	Exp:	06/07/17		Prep: 6/7/16 Exp: 6/7/17 LH		

504 DOHS STOCK prep: 6/7/16 Exp: 6/7/17 LH						
Compounds	**Init. Conc.**	**Stock SRC**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
EDB	1000ug/mL	O2SI	500uL	25mL	20ug/mL	Methanol
TCP	Cat:	130271-08				Lot # 021915C
DBCP	Lot:	270815-36134				
	Op:	06/07/16				
	Exp:	06/07/17				

		504/8011 SS				
Prep:03/11/16-L.H. Ex: 12/30/16						
Compound	**Initial Conc.**	**Source**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
EDB	0.35ug/mL	504/8011 SPIKE STOCK	1000uL	10mL	0.035ug/mL	Methanol
TCP		prep. 12/30/15				021915C
DBCP		Exp: 12/30/16				

		504/8011 SS STOCK				
Prep: 12/30/15-L.H. Ex: 12/30/16						
Compound	Initial Conc.	**Source**	**Aliquot**	**Final Vol.**	Final Conc.	**Solvent**
EDB	200ug/mL	Absolute	44uL	25mL	0.35ug/mL	Methanol
TCP		CAT 30096				070913A
DBCP		Lot 010615-34593				
		open 12/30/15				
		exp 12/30/16				

	504/8011 SURROGATE					
Prep: 11/22/16-R.H. Ex: 12/30/16						
Compound	**Initial Conc.**	**Source**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
1,3 DBP	100	1,3 DBP STOCK	35ul	10mL	0.35ug/mL	Methanol
		prep.12/30/15				070913A
		exp. 12/30/16				

_MWE012

Organic Extraction Worksheet

Method	EPA Method 8011 DBCP/EDB	Extraction Set	161219A	Extraction Method	MWE012	Units	mL

Spiked ID 1	504.1 SS 3-11-16 exp 12-30-16	Surrogate ID 1	504.1 Surrogate 11-22-16 exp 12-30-16
Spiked ID 2	504.1 M. STD 12-19-16 exp 4-8-17	Surrogate ID 2	
Spiked ID 3		Surrogate ID 3	
Spiked ID 4		Surrogate ID 4	
Spiked ID 5		Surrogate ID 5	
Spiked ID 6		Sufficient Vol for Matrix QC:	NO
Spiked ID 7		Ext. Start Time:	12/19/16 13:25
Spiked ID 8		Ext. End Time:	12/19/16 14:00
		GC Requires Extract By:	12/20/16 0:00

			Water Bath Temp Criteria	
pH1				
pH2				
pH3				

Spiked By: KY **Date** 12/19/16 **Witnessed By:** JR **Date** 12/19/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	161219A Blk				0.035	1 equip	30.98g	2	7	12/19/16 13:25	
2	161219A LCS-1		0.1	1	0.035	1 equip	30.96g	2	7	12/19/16 13:25	
3	161219A LCS-2		0.250	2	NA	NA equip	35.92g	2	7	12/19/16 13:25	
4	AZ47344	AZ47344W11			0.035	1 equip	36.04g	2	7	12/19/16 13:25	81734 RUSH 1 WEEK
5	AZ47493	AZ47493W07			0.035	1 equip	35.57g	2	7	12/19/16 13:25	81760 1 WEEK
6	AZ47498	AZ47498W10			0.035	1 equip	35.79g	2	7	12/19/16 13:25	81760 1 WEEK
7	AZ47657	AZ47657W05			0.035	1 equip	35.72g	2	7	12/19/16 13:25	81776 1 WEEK
8	M STD 1		0.020	2	NA	NA equip	36.01g	2	7	12/19/16 13:25	
9	M STD 2		0.1	2	NA	NA equip	60.06g	2	7	12/19/16 13:25	
10	M STD 3		0.250	2	NA	NA equip	35.95g	2	7	12/19/16 13:25	
11	M STD 4		0.5	2	NA	NA equip	36.08g	2	7	12/19/16 13:25	
12	M STD 5		0.750	2	NA	NA equip	36.11g	2	7	12/19/16 13:25	
13	M STD 6		1	2	NA	NA equip	35.93g	2	7	12/19/16 13:25	

DL 12/19/16

Solvent and Lot#	
NaCL	15B100011
Sod. Thiosulfate	24050
GC2 Hexane	DN636

Extraction COC Transfer	
Extraction lab employee Initials	DL
GC analyst's initials	RH
Date	12/19/16
Time	2:30
Refrigerator	Solvent

	Technician's Initials
Scanned By	KY
Sample Preparation	KY
Extraction	KY
Concentration	----------

Modified	12/19/16 2:03:42 PM

Reviewed By: DL **Date** 12/19/16

12/19/16 2:08:13 PM

Ext_ID 82 53565

Injection Log

Directory: G:\HERBIE\DATA\161214\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	50	1214052.D	1	8011 1 12/19/16		12-19-16 14:53:31
2	51	1214053.D	1	8011 2 12/19/16		12-19-16 15:14:07
3	52	1214054.D	1	8011 3 12/19/16		12-19-16 15:34:48
4	53	1214055.D	1	8011 4 12/19/16		12-19-16 15:55:37
5	54	1214056.D	1	8011 5 12/19/16		12-19-16 16:16:20
6	55	1214057.D	1	8011 6 12/19/16		12-19-16 16:37:03
7	57	1214059.D	1.12976	161219A BLK 2/30.98G	water	12-19-16 17:18:34
8	58	1214060.D	1.13049	161219A LCS-1 2/30.96G	water	12-19-16 17:39:13
9	66	1214068.D	1	8011 3 12/19/16		12-19-16 20:23:57
10	68	1214070.D	1	8011 3 12/19/16		12-20-16 14:28:00
11	69	1214071.D	1	161219A LCS-2 2/35.92G		12-20-16 14:48:53
12	70	1214072.D	1	AZ47344W11 2/36.04G		12-20-16 15:09:53
13	71	1214073.D	1	8011 3 12/19/16		12-20-16 15:30:55

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank

EPA 8015B TPH WATER

Blank Name/QCG: **161214W-47345 - 214777**

Batch ID: #DOC53-161214A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	12/14/16	12/19/16
BLANK	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	12/14/16	12/19/16
BLANK	SURROGATE: OCTACOSANE (S)	92.4	60-142			%	12/14/16	12/19/16
BLANK	SURROGATE: ORTHO-TERPHEN	77.8	56-125			%	12/14/16	12/19/16

Quant Method:DOC1103.M
Run #:1219004
Instrument:Apollo
Sequence:161219
Initials:DPO

GC SC-Blank-REG MDLs-DOD
Printed: 12/20/16 10:30:51 AM

Laboratory Control Spike Recovery
EPA 8015B TPH WATER

APPL ID: **161214W-47345 LCS - 214777**
Batch ID: #DOC53-161214A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
DIESEL (C10-C24)	1330	1010	75.8	36-132
OIL (C24-C40)	1330	1000	75.0	41-113
SURROGATE: OCTACOSANE (S)	40.0	35.9	89.8	60-142
SURROGATE: ORTHO-TERPHENYL (S)	40.0	37.4	93.5	56-125

Comments: _____

Primary	SPK
Quant Method :	DOC1103.M
Extraction Date :	12/14/16
Analysis Date :	12/19/16
Instrument :	Apollo
Run :	1219005
Initials :	DPO

Printed: 12/20/16 10:30:46 AM
APPL Standard LCS

Matrix Spike Recoveries
EPA 8015B TPH WATER

APPL ID: **161214W-47345 MS - 214777**
Batch ID: #DOC53-161214A
Sample ID: AZ47345
Client ID: ERH135

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
DIESEL (C10-C24)	1330	14	1050	1020	77.7	75.5	36-132	2.9	30
OIL (C24-C40)	1330	16	1010	997	74.6	73.6	41-113	1.3	30
SURROGATE: OCTACOSANE (S)	40.0	NA	37.1	37.4	92.8	93.5	60-142		
SURROGATE: ORTHO-TERPHENYL (S)	40.0	NA	38.6	32.4	96.5	81.0	56-125		

Comments: _____

Primary	SPK	DUP
Quant Method :	DOC1103.M	DOC1103.M
Extraction Date :	12/14/16	12/14/16
Analysis Date :	12/19/16	12/19/16
Instrument :	Apollo	Apollo
Run :	1219010	1219013
Initials :	DPO	

Printed: 12/20/16 10:30:44 AM
APPL MSD SCII

EPA 8015B-eLL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81734

Case No: 81734 Date Analyzed: 12/19/16

Matrix: WATER Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: OCTACOSANE (S)			SURROGATE: ORTHO-TERPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161214A-BLK	Blank	60-142	92.4		56-125	77.8	
161214A-LCS	Lab Control Spike	60-142	89.8		56-125	93.5	
AZ47343	ERH137	60-142	95.5		56-125	78.0	
AZ47344	ERH141	60-142	97.5		56-125	81.6	
AZ47345	ERH135	60-142	97.2		56-125	81.5	
AZ47345-MS	Matrix Spike	60-142	92.8		56-125	96.5	
AZ47345-MSD	Matrix SpikeD	60-142	93.5		56-125	81.0	

Comments: Batch: #DOC53-161214A

EPA 8015B-eL

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81734

Case No: 81734 Date Analyzed: 12/19/16

Matrix: WATER Instrument: Apollo

Blank ID: 161214A-BLK Time Analyzed: 1053

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161214A-BLK	Blank	1219004	12/19/16 1053
161214A-LCS	Lab Control Spike	1219005	12/19/16 1113
AZ47343	ERH137	1219007	12/19/16 1153
AZ47344	ERH141	1219008	12/19/16 1214
AZ47345	ERH135	1219009	12/19/16 1234
161214A-MS	Matrix Spike	1219010	12/19/16 1254
161214A-MSD	Matrix SpikeD	1219013	12/19/16 1355

Comments: Batch: #DOC53-161214A

ORGANICS

Sample Data

APPL, INC.

EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH137
Sample Collection Date: 12/12/16

ARF: 81734
APPL ID: AZ47343
QCG: #DOC53-161214A-214777

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	12/14/16	12/19/16
EPA 8015B-eL	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	12/14/16	12/19/16
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	95.5	60-142			%	12/14/16	12/19/16
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	78.0	56-125			%	12/14/16	12/19/16

Quant Method: DOC1103.M
Run #: 1219007
Instrument: Apollo
Sequence: 161219
Dilution Factor: 1
Initials: DPO

Printed: 12/20/16 10:30:39 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161219\1219007.D Vial: 7
Acq On : 12-19-16 11:53:39 Operator: DP
Sample : AZ47343W13 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Dec 20 10:11 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

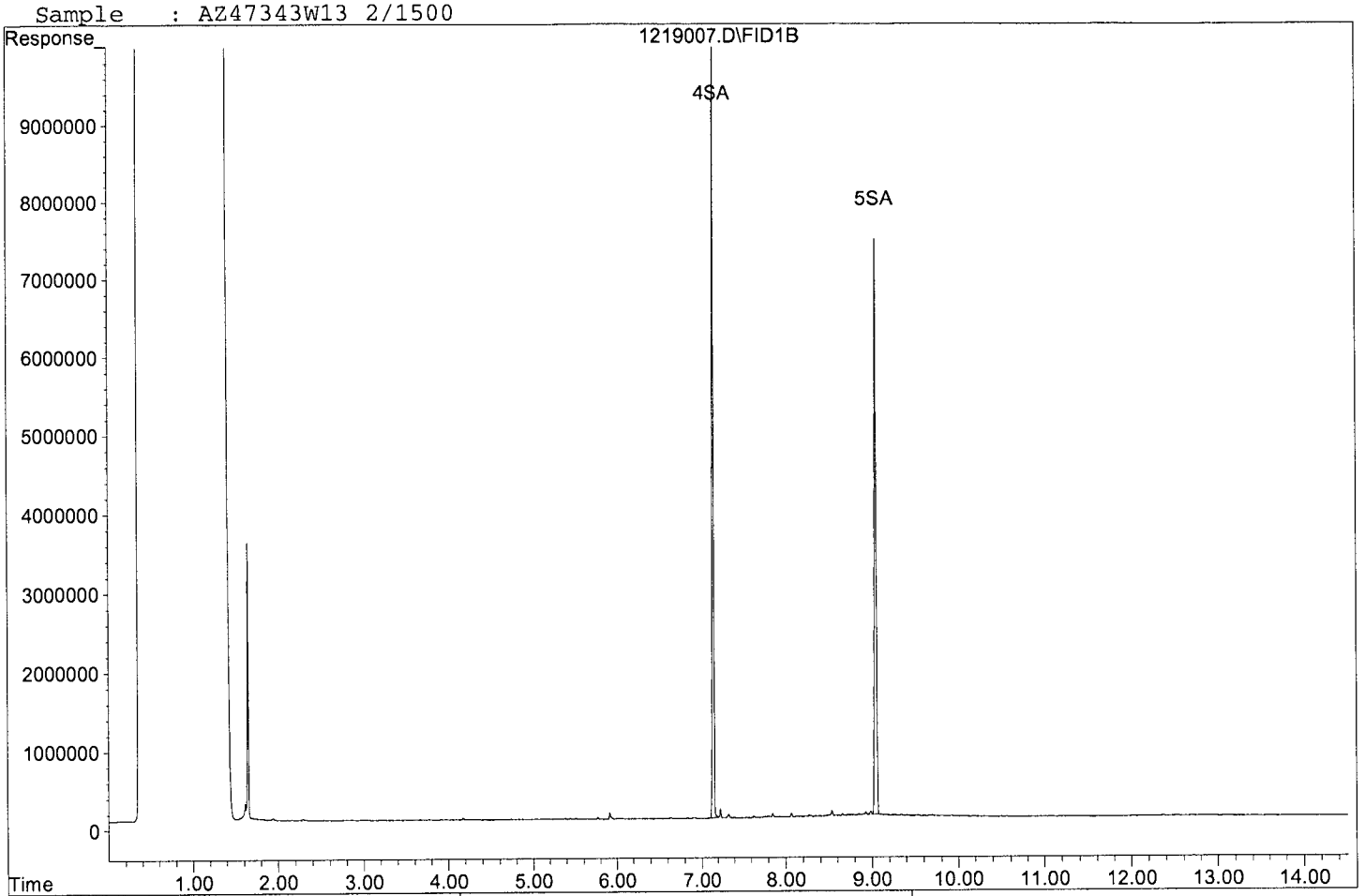
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

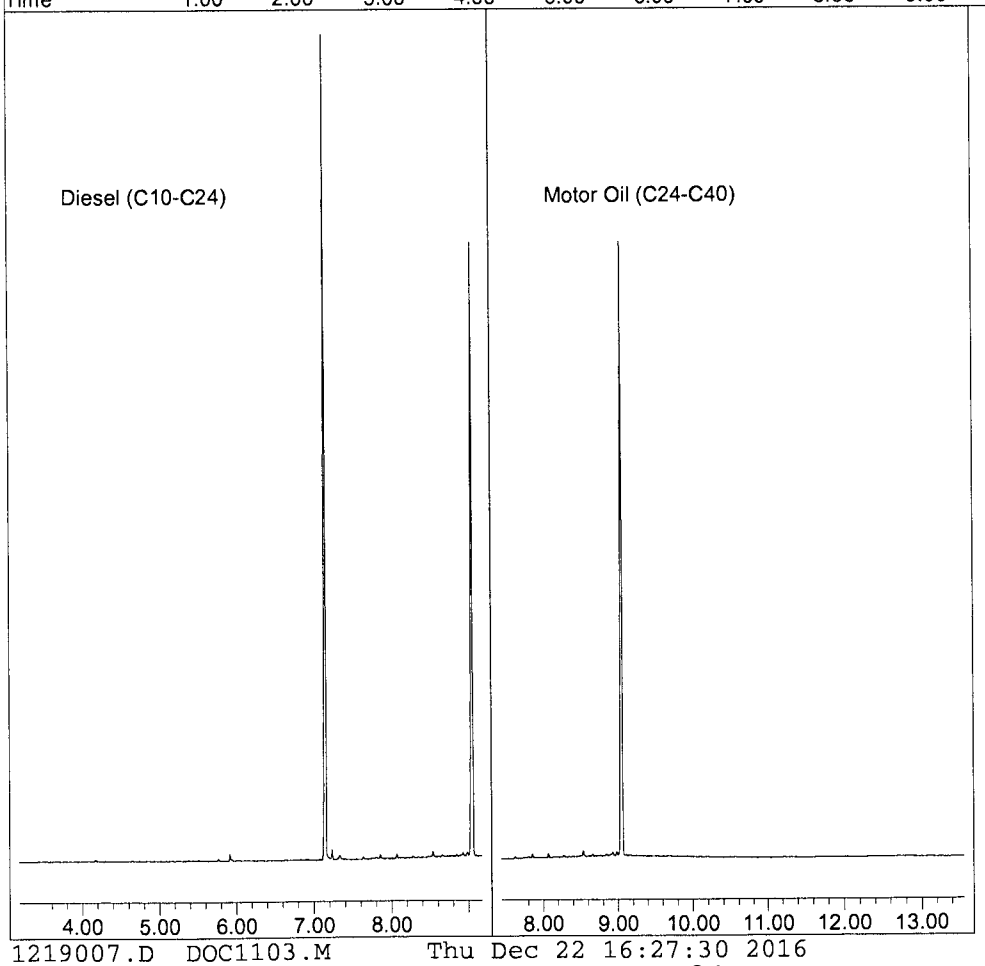
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.15	109077417	31.180 ppb
Surrogate Spike 40.000		Recovery =	77.95%
5) SA Octacosane(S)	9.05	100262894	38.199 ppb
Surrogate Spike 40.000		Recovery =	95.50%
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161219\1219007.D
Sample : AZ47343W13 2/1500





1219007.D DOC1103.M Thu Dec 22 16:27:30 2016

EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH141
Sample Collection Date: 12/12/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81734
APPL ID: AZ47344
QCG: #DOC53-161214A-214777

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	27 ++J	40.0	25.00	13.07	ug/L	12/14/16	12/19/16
EPA 8015B-eL	OIL (C24-C40)	29 J	40.0	40.00	5.54	ug/L	12/14/16	12/19/16
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	97.5	60-142			%	12/14/16	12/19/16
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	81.6	56-125			%	12/14/16	12/19/16

J = Estimated value.
++(T3I) The analyst has noted that the chromatogram of this sample includes higher boiling hydrocarbons.

Quant Method: DOC1103.M
Run #: 1219008
Instrument: Apollo
Sequence: 161219
Dilution Factor: 1
Initials: DPO

Printed: 12/20/16 10:30:39 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161219\1219008.D Vial: 8
Acq On : 12-19-16 12:14:02 Operator: DP
Sample : AZ47344W14 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Dec 20 10:12 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

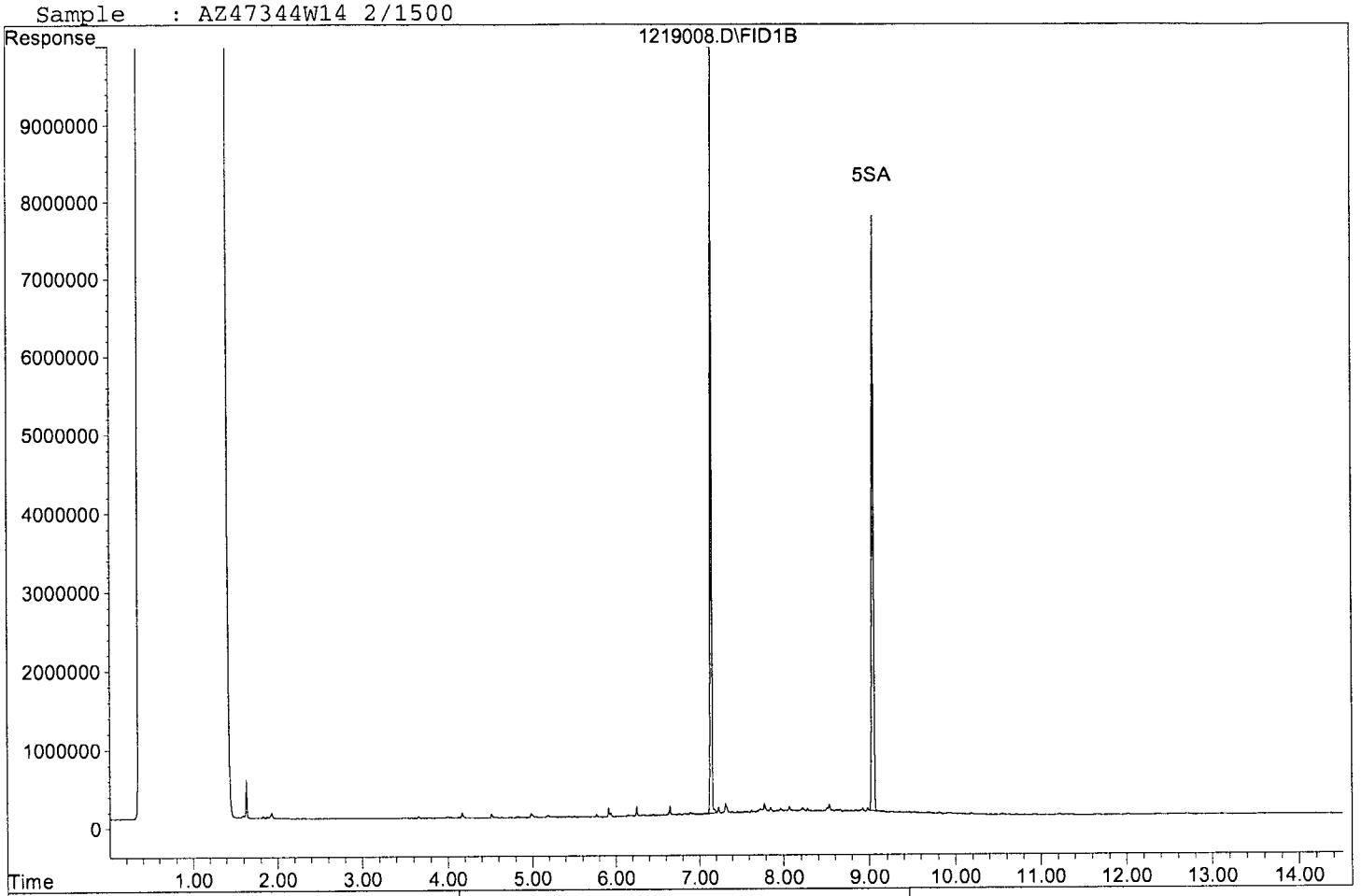
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

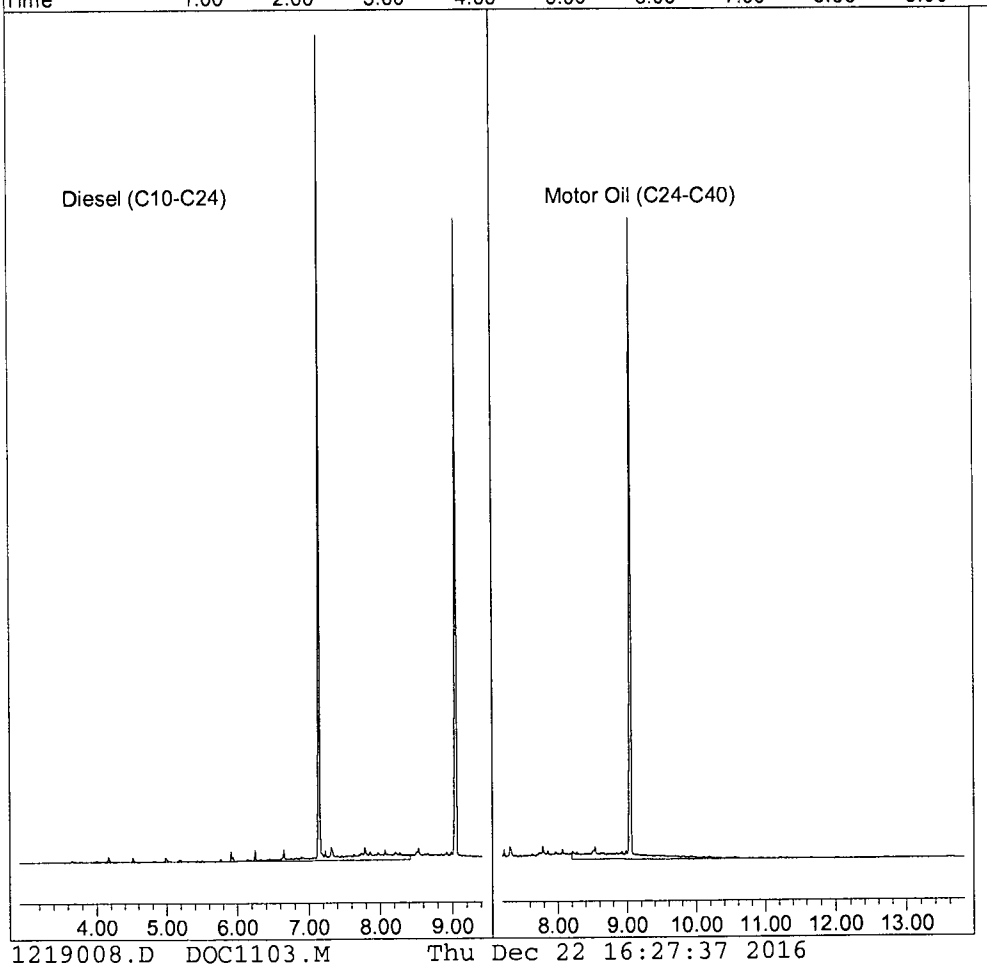
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.15	114118187	32.621	ppb
Surrogate Spike 40.000		Recovery =	81.55%	
5) SA Octacosane(S)	9.05	102313196	38.980	ppb
Surrogate Spike 40.000		Recovery =	97.45%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	70225590	27.107	ppb
2) HBTM Motor Oil (C24-C40)	10.50	60866001	29.132	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161219\1219008.D
Sample : AZ47344W14 2/1500





EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH135
Sample Collection Date: 12/12/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81734
APPL ID: AZ47345
QCG: #DOC53-161214A-214777

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	14 ++J	40.0	25.00	13.07	ug/L	12/14/16	12/19/16
EPA 8015B-eL	OIL (C24-C40)	16 J	40.0	40.00	5.54	ug/L	12/14/16	12/19/16
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	97.2	60-142			%	12/14/16	12/19/16
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	81.5	56-125			%	12/14/16	12/19/16

J = Estimated value.
++(T3I) The analyst has noted that the chromatogram of this sample includes higher boiling hydrocarbons.

Quant Method: DOC1103.M
Run #: 1219009
Instrument: Apollo
Sequence: 161219
Dilution Factor: 1
Initials: DPO

Printed: 12/20/16 10:30:39 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161219\1219009.D Vial: 9
Acq On : 12-19-16 12:34:20 Operator: DP
Sample : AZ47345W30 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Dec 20 10:20 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

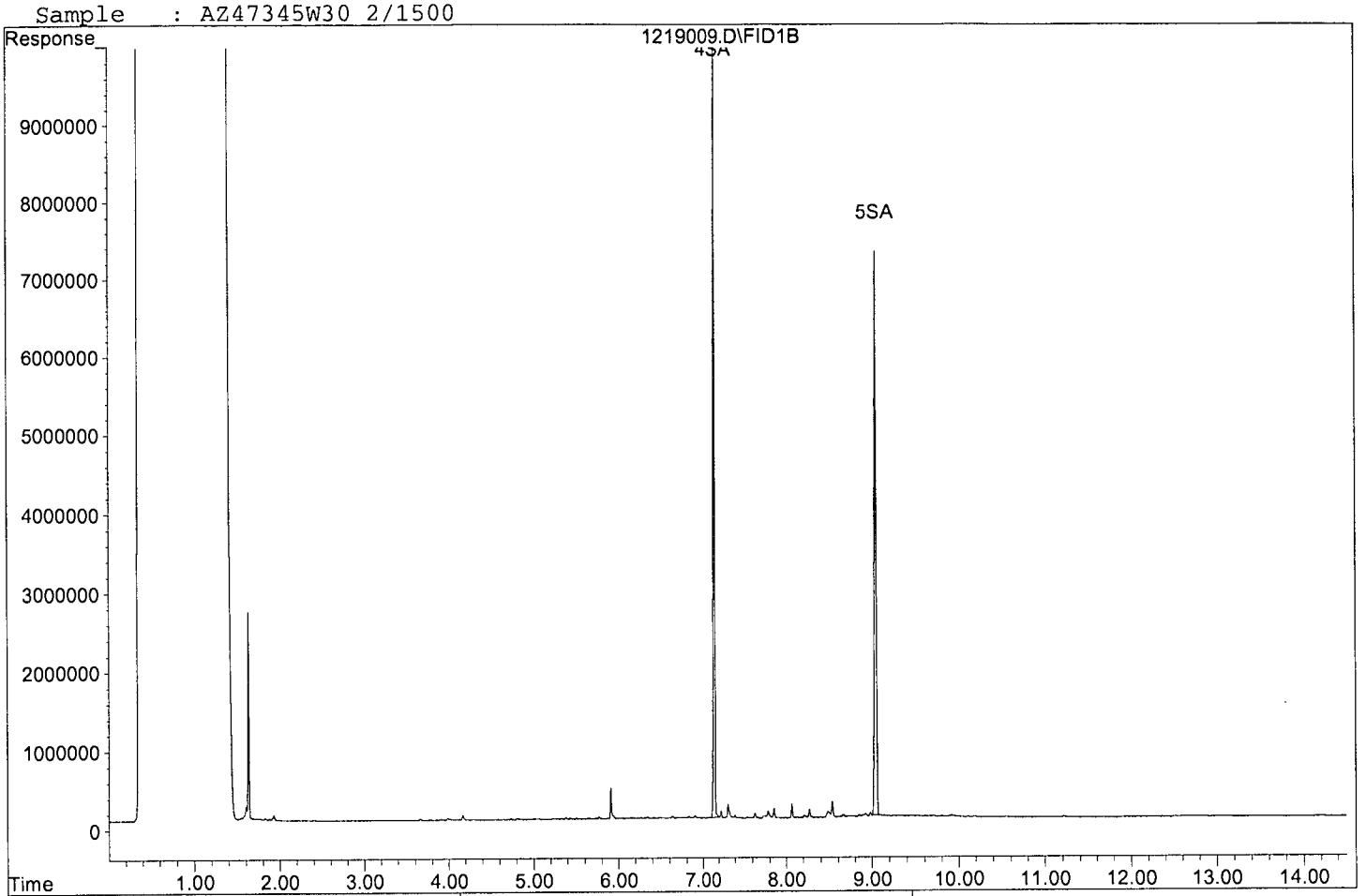
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

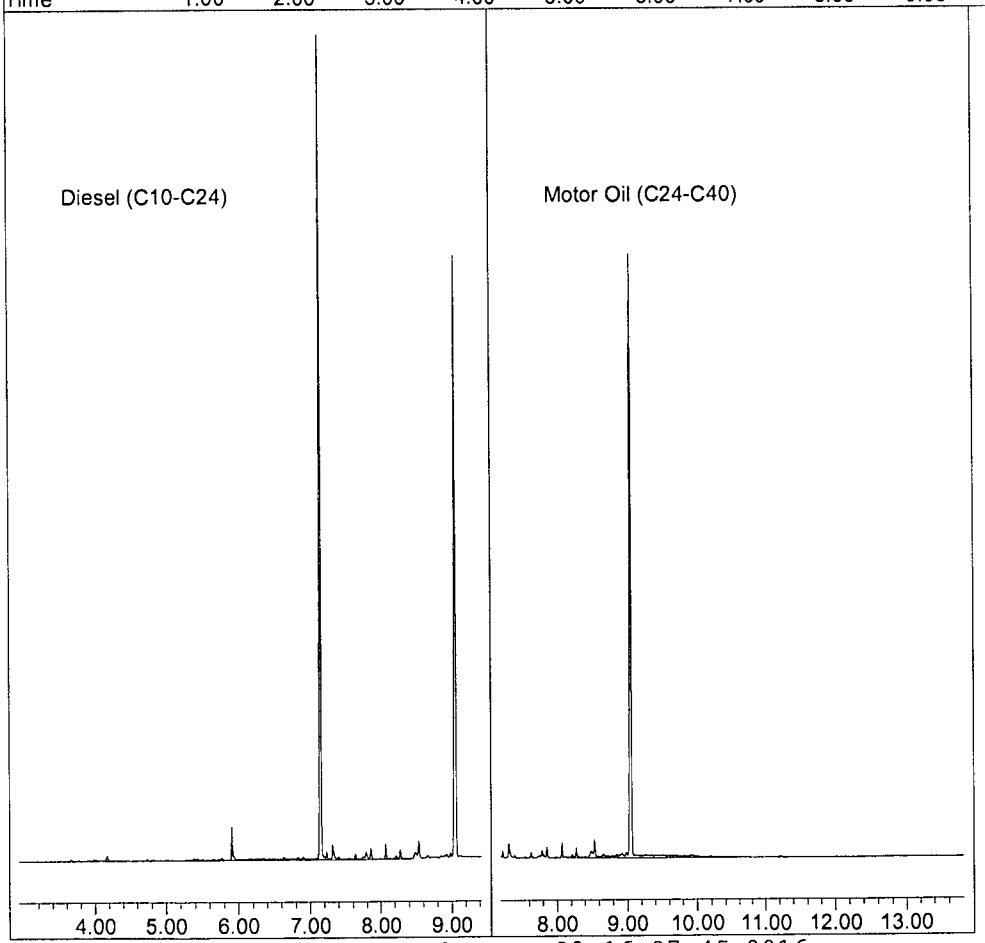
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.15	114008770	32.589 ppb
Surrogate Spike 40.000		Recovery =	81.47%
5) SA Octacosane(S)	9.05	102051757	38.880 ppb
Surrogate Spike 40.000		Recovery =	97.20%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	36768968	14.193 ppb
2) HBTM Motor Oil (C24-C40)	10.50	33949103	16.249 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161219\1219009.D
Sample : AZ47345W30 2/1500





ORGANICS

Calibration Data

APPL, INC.

TPH Extractables
DOC1103

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 11/03/16
Matrix: Instrument: Apollo
Initials:

Diesel:			1103004.D	1103011.D	1103006.D	1103007.D	1103008.D	1103009.D								
Motor Oil:			1028002.D	1028003.D	1028004.D	1028005.D	1028006.D	1028007.D								
		Compound	1	2	3	4	5	6					Avg	%RSD		
1	HATM	Diesel (C10-C24)	1713970	2056602	1625582	1697733	1643335	1625559					1727130	9.6	HATM	
2	HBTM	Motor Oil (C24-C40)	1562690	1603769	1282978	1340015	1321969	1245819					1392873	11	HBTM	
3	SC	Decanoic Acid(S)	436509	643644	711658	659596	590571	627574					611592	15	SC	
4	SA	Ortho-Terphenyl(S)		2687660	2255130	2296757	2215766	2205848					2332232	8.7	SA	
5	SA	Octacosane(S)	1736016	2067699	1697441	1704564	1657038	1636278					1749839	9.1	SA	
6																
7																
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9																
10																
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1.5347542

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161103\1103004.D Vial: 4
Acq On : 11-3-16 9:45:14 Operator: DP
Sample : DIESEL 10ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

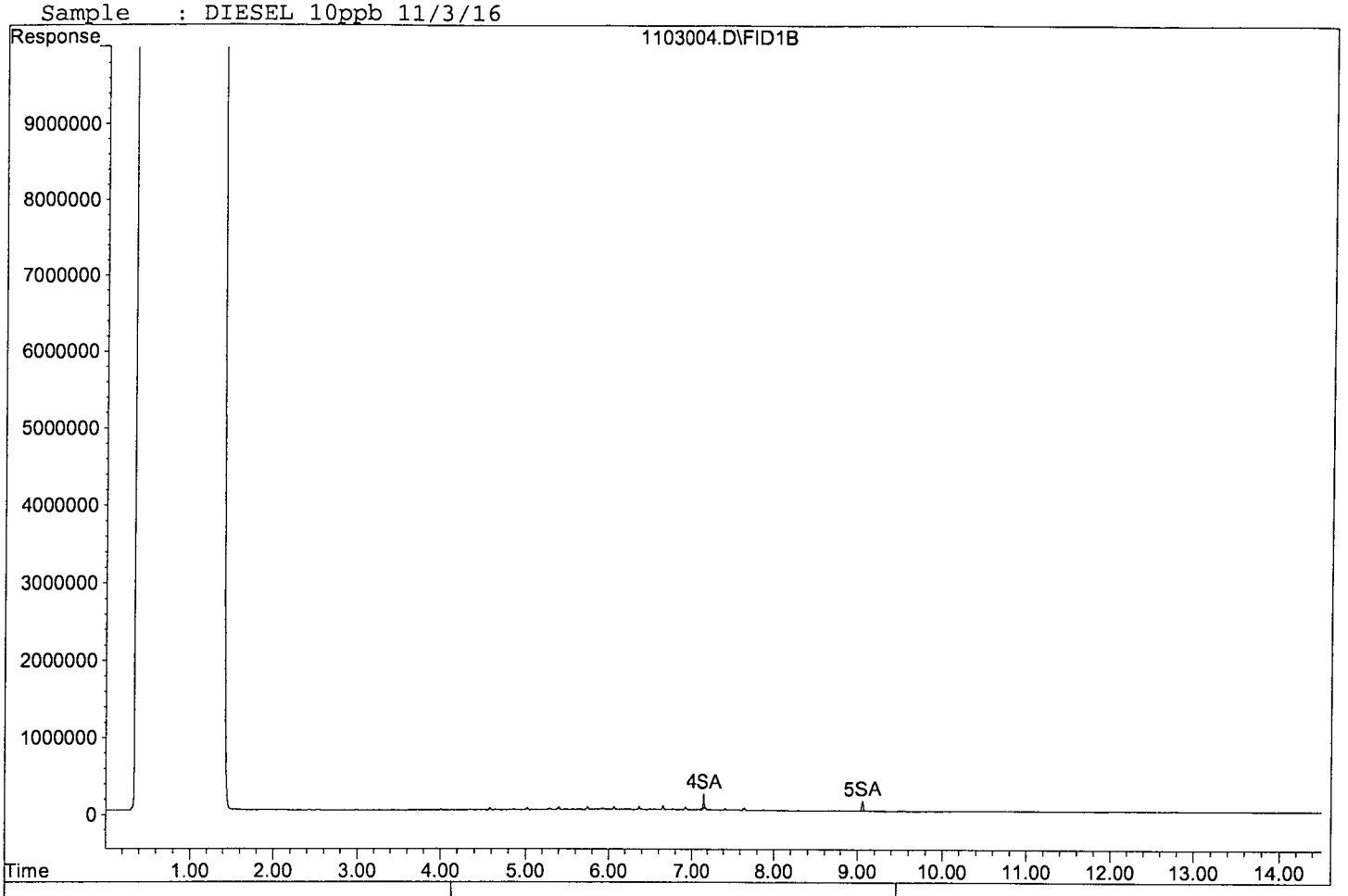
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

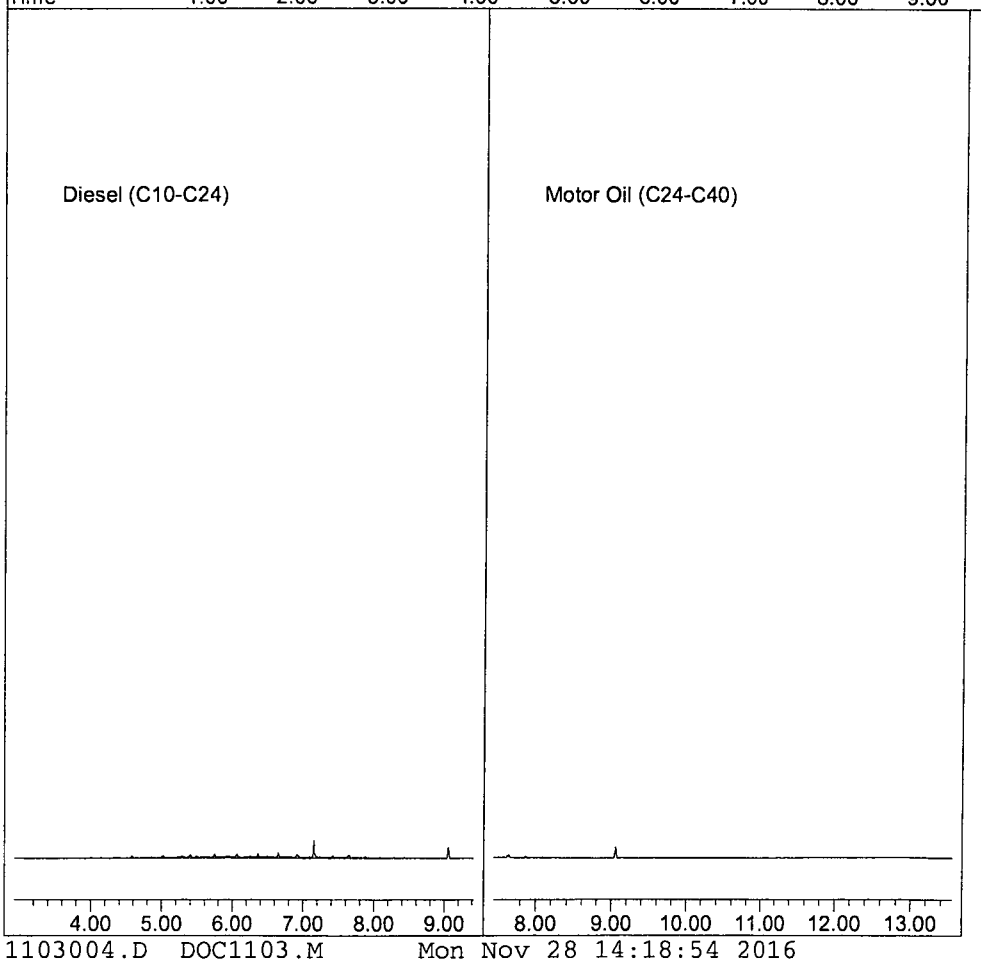
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.15	1320666	0.233 ppb
Surrogate Spike 30.000		Recovery =	0.78%
5) SA Octacosane(S)	9.06	1736016	0.492 ppb
Surrogate Spike 30.000		Recovery =	1.64%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	34279391	10.218 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103004.D
Sample : DIESEL 10ppb 11/3/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161103\1103011.D Vial: 11
Acq On : 11-3-16 12:56:47 Operator: DP
Sample : DIESEL 100ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

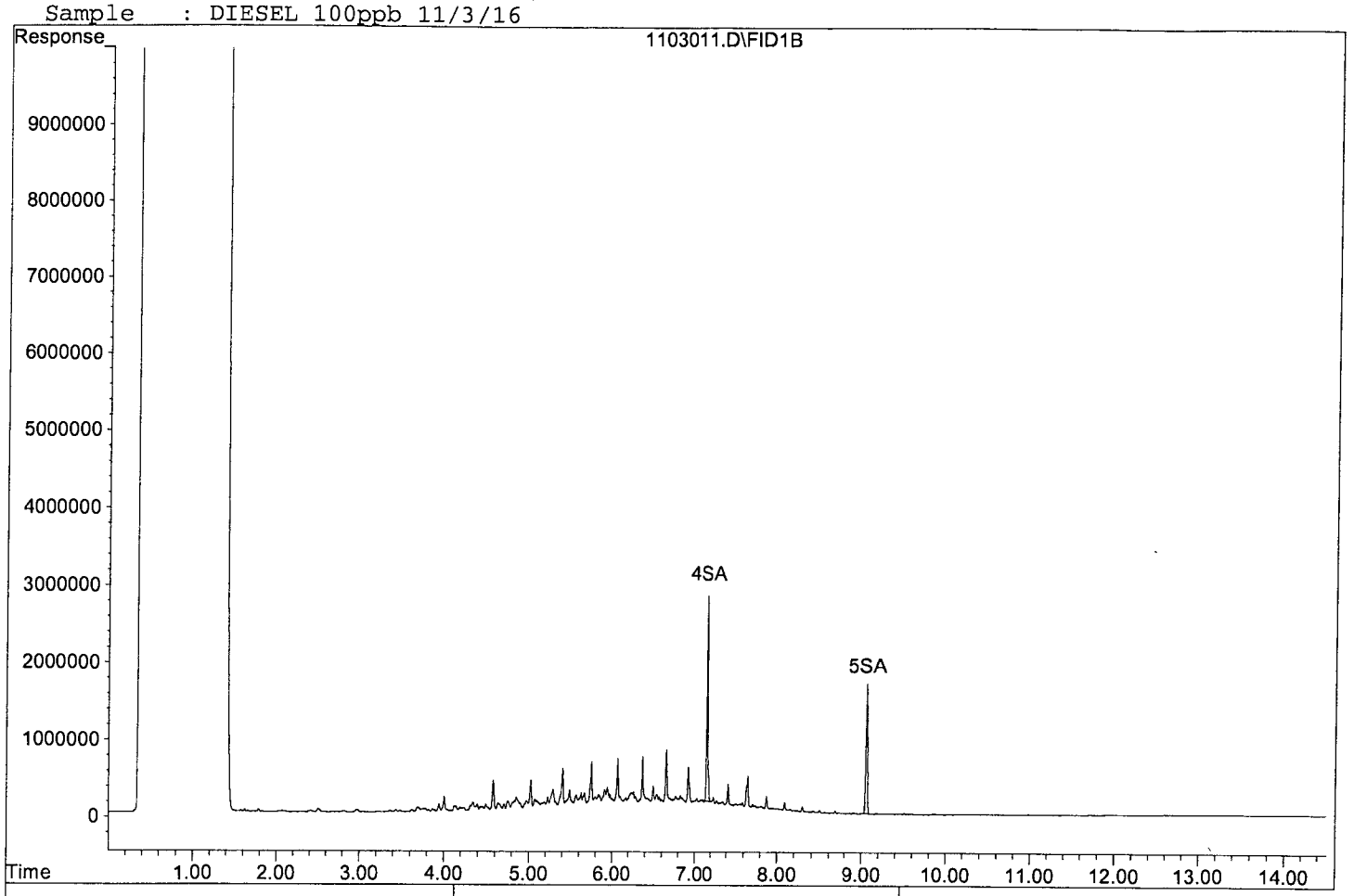
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

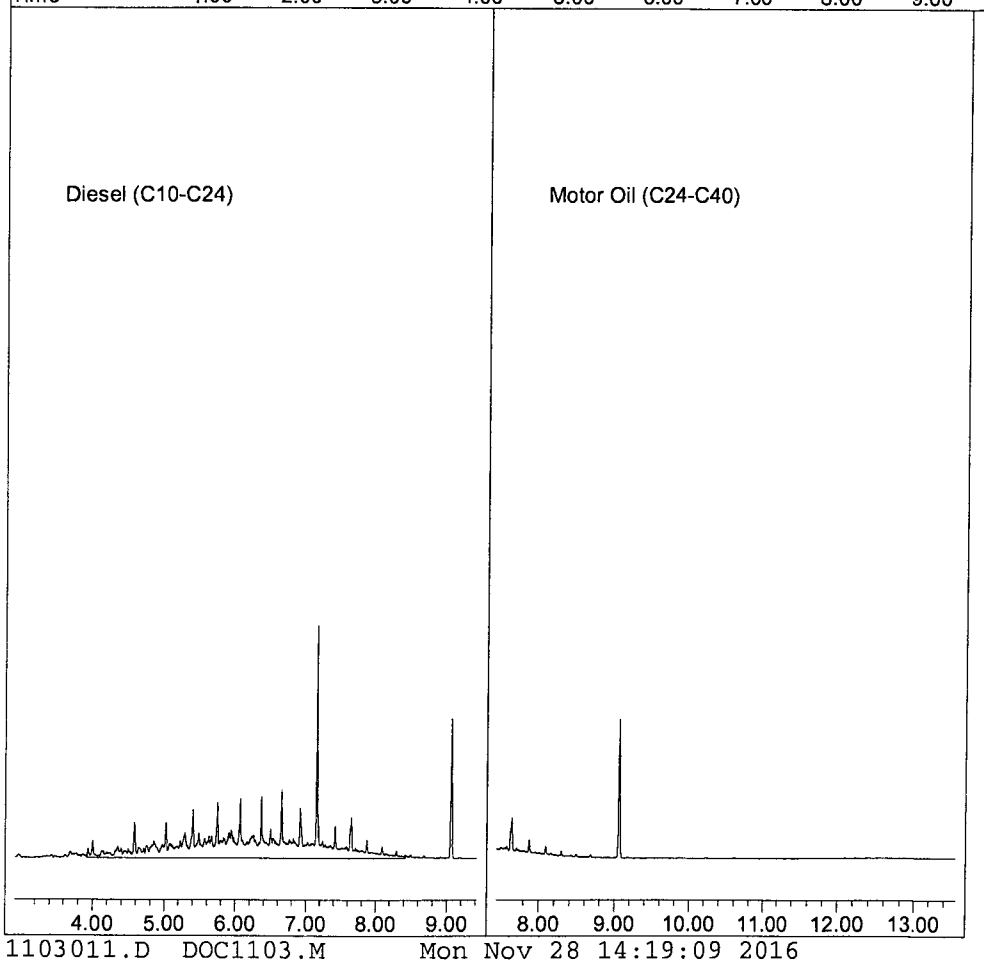
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.16	26876603	4.740 ppb
Surrogate Spike 30.000		Recovery =	15.80%
5) SA Octacosane(S)	9.06	20676993	5.864 ppb
Surrogate Spike 30.000		Recovery =	19.55%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	411320381	122.610 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103011.D
Sample : DIESEL 100ppb 11/3/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103006.D Vial: 6
Acq On : 11-3-16 10:26:16 Operator: DP
Sample : DIESEL 400ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

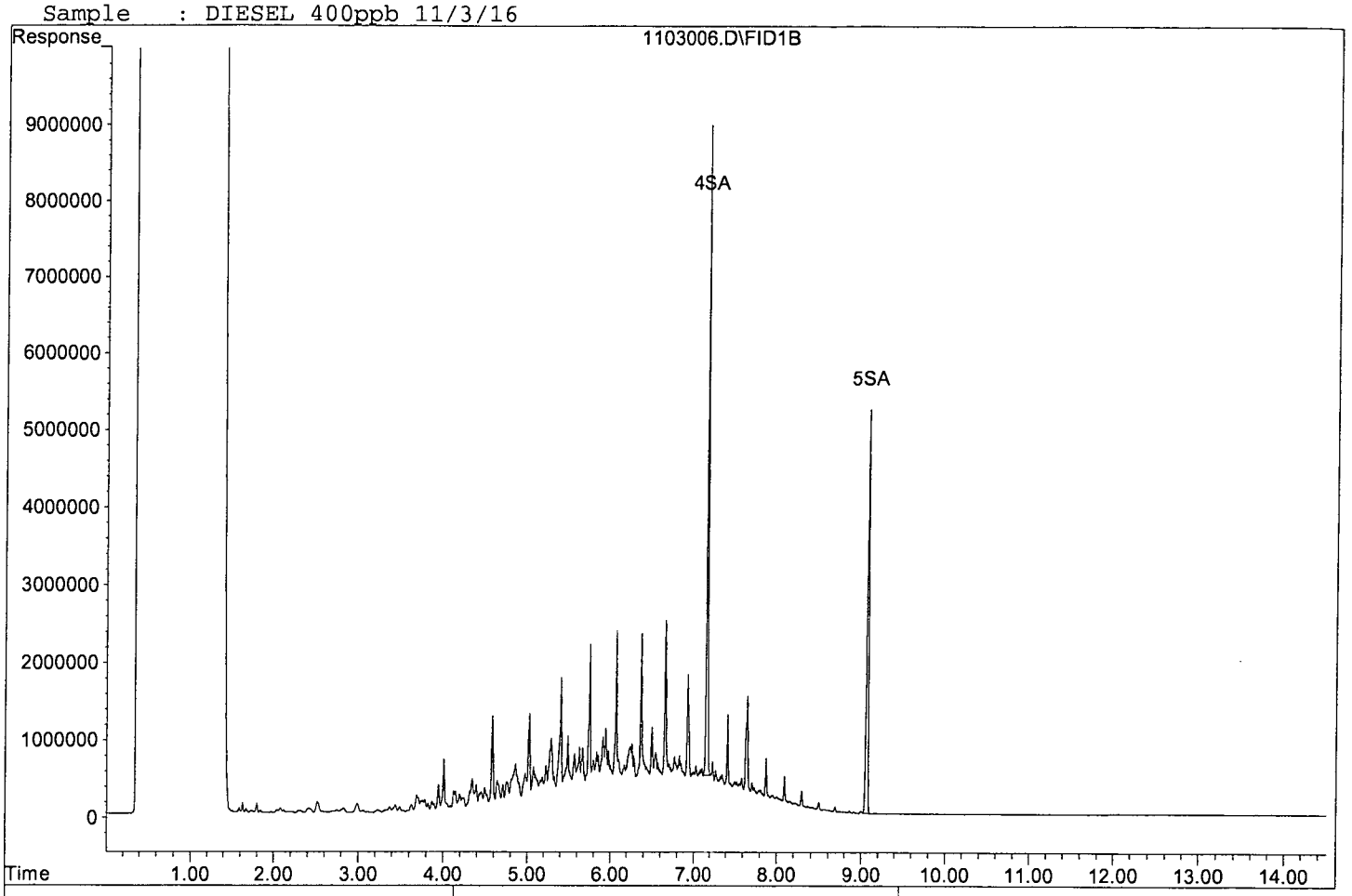
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

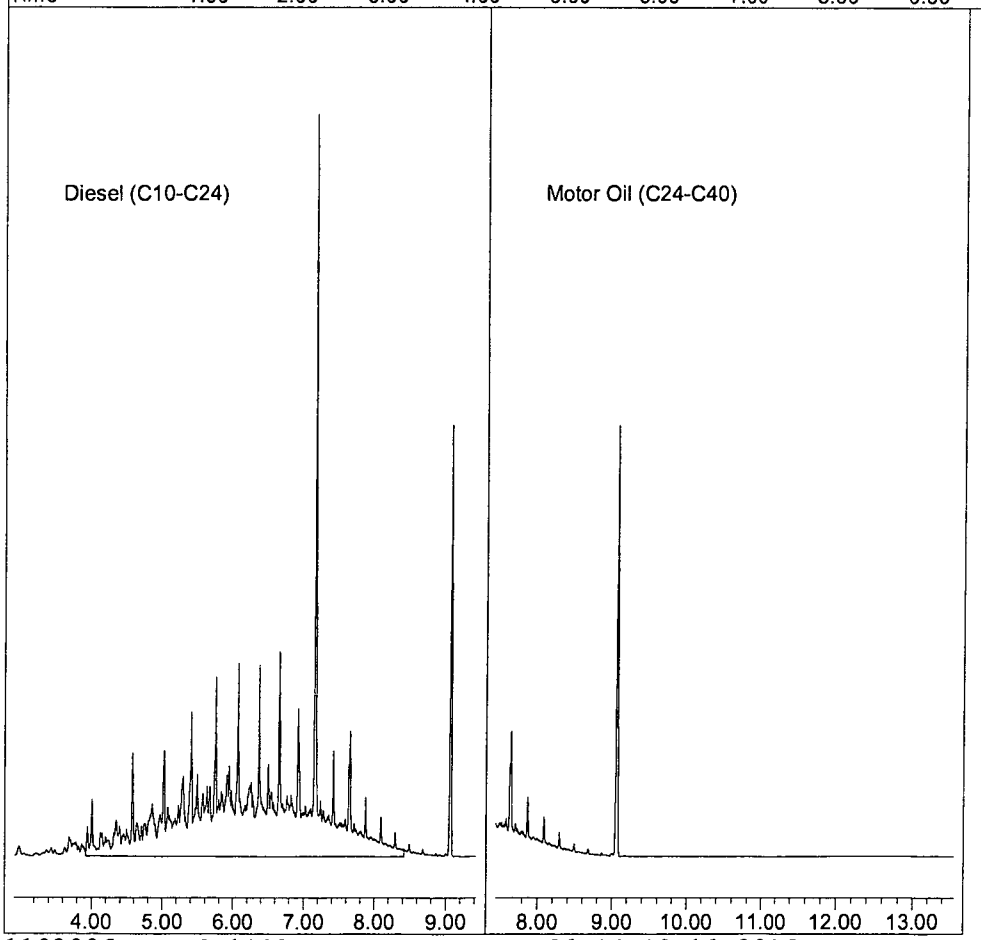
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.16	90205209	15.909 ppb
Surrogate Spike 30.000	Recovery =		53.03%
5) SA Octacosane(S)	9.07	67897660	19.256 ppb
Surrogate Spike 30.000	Recovery =		64.19%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	1300465223	387.653 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103006.D
Sample : DIESEL 400ppb 11/3/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103007.D Vial: 7
Acq On : 11-3-16 10:46:56 Operator: DP
Sample : DIESEL 600ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

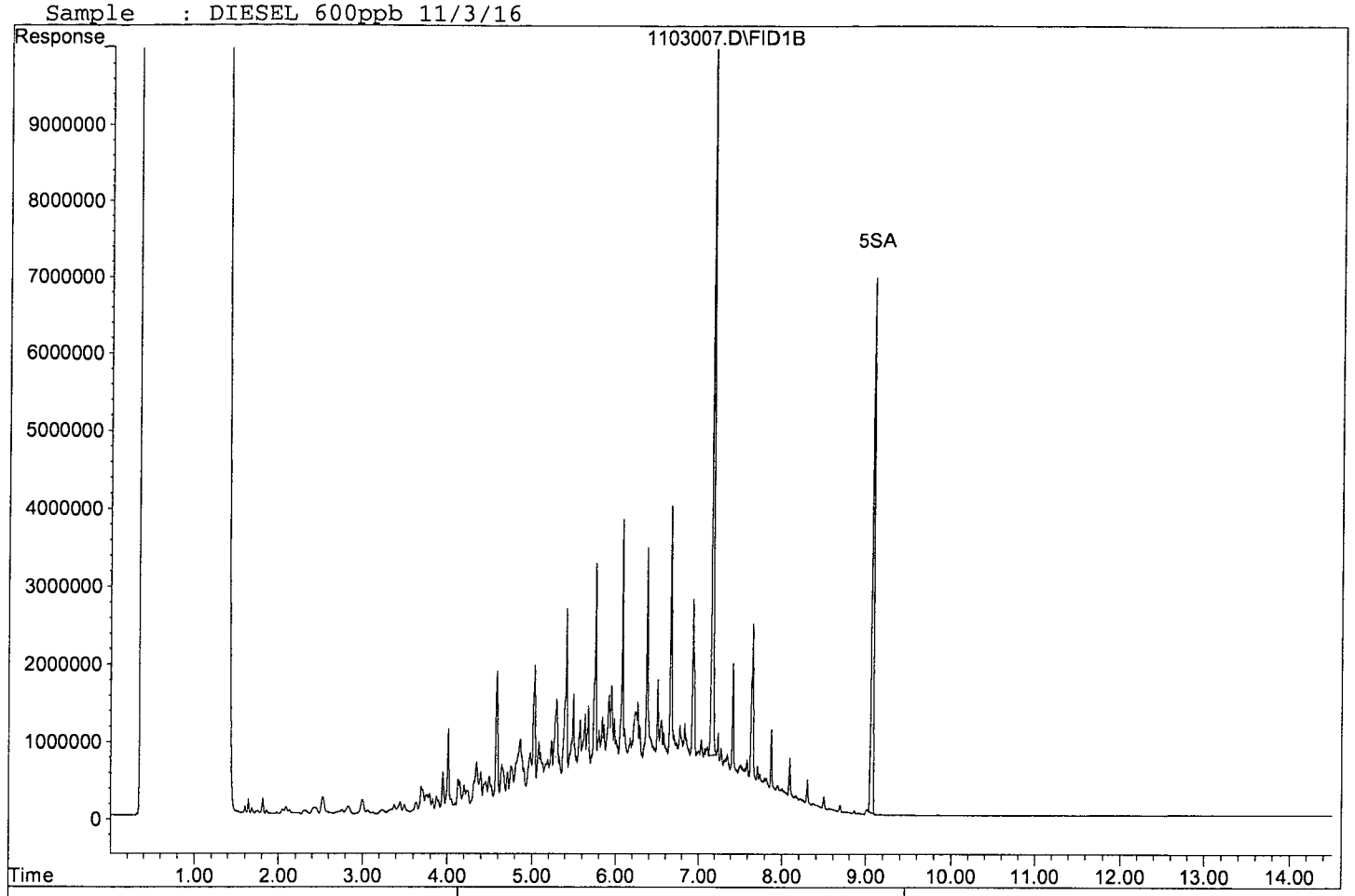
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

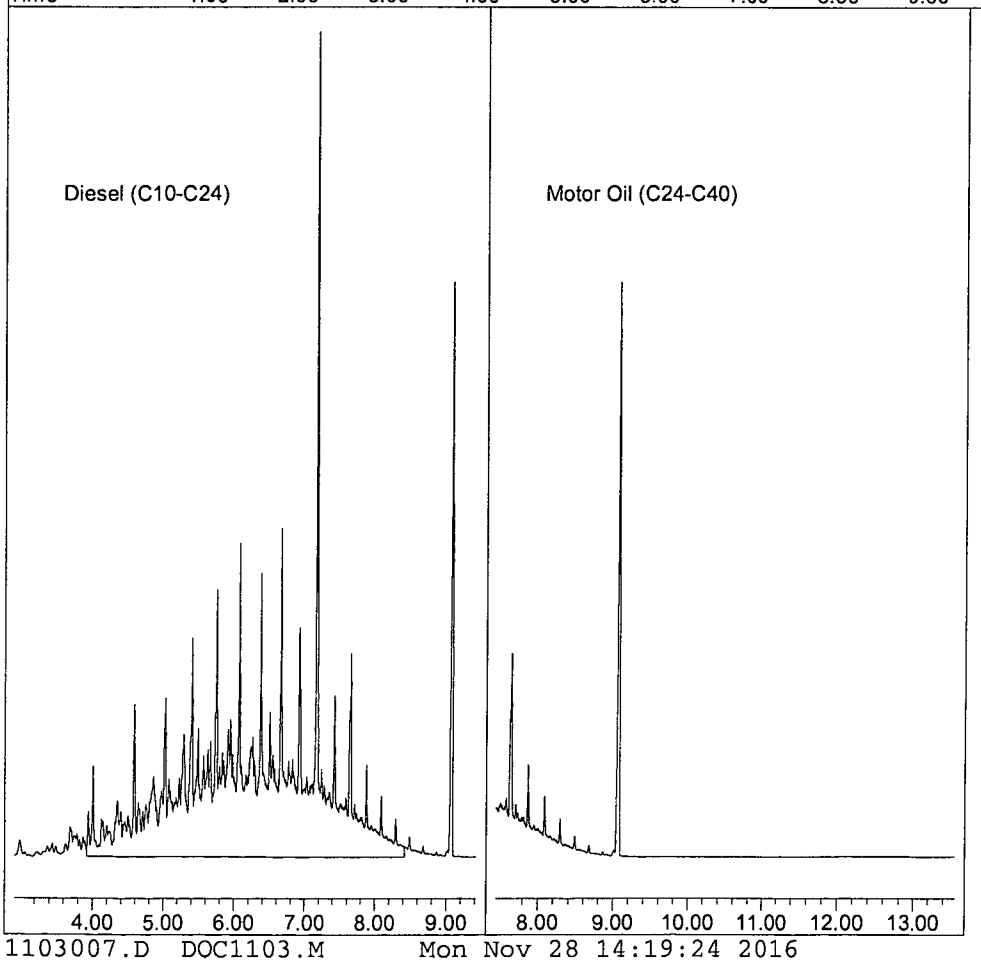
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.17	137805437	24.304 ppb
Surrogate Spike 30.000		Recovery =	81.01%
5) SA Octacosane(S)	9.07	102273844	29.005 ppb
Surrogate Spike 30.000		Recovery =	96.68%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	2037280173	607.288 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103007.D
Sample : DIESEL 600ppb 11/3/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103008.D Vial: 8
Acq On : 11-3-16 11:07:39 Operator: DP
Sample : DIESEL 800ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

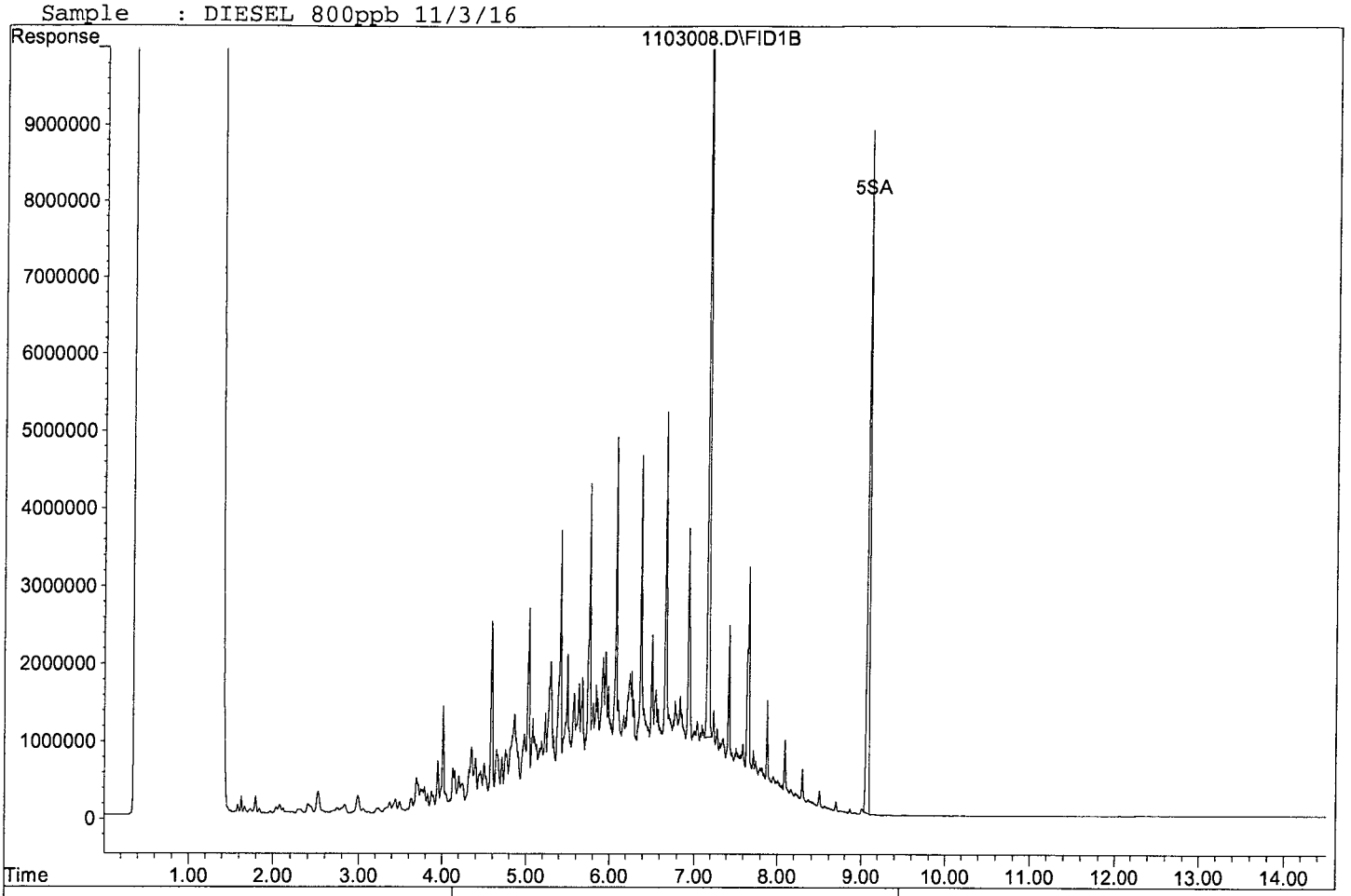
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

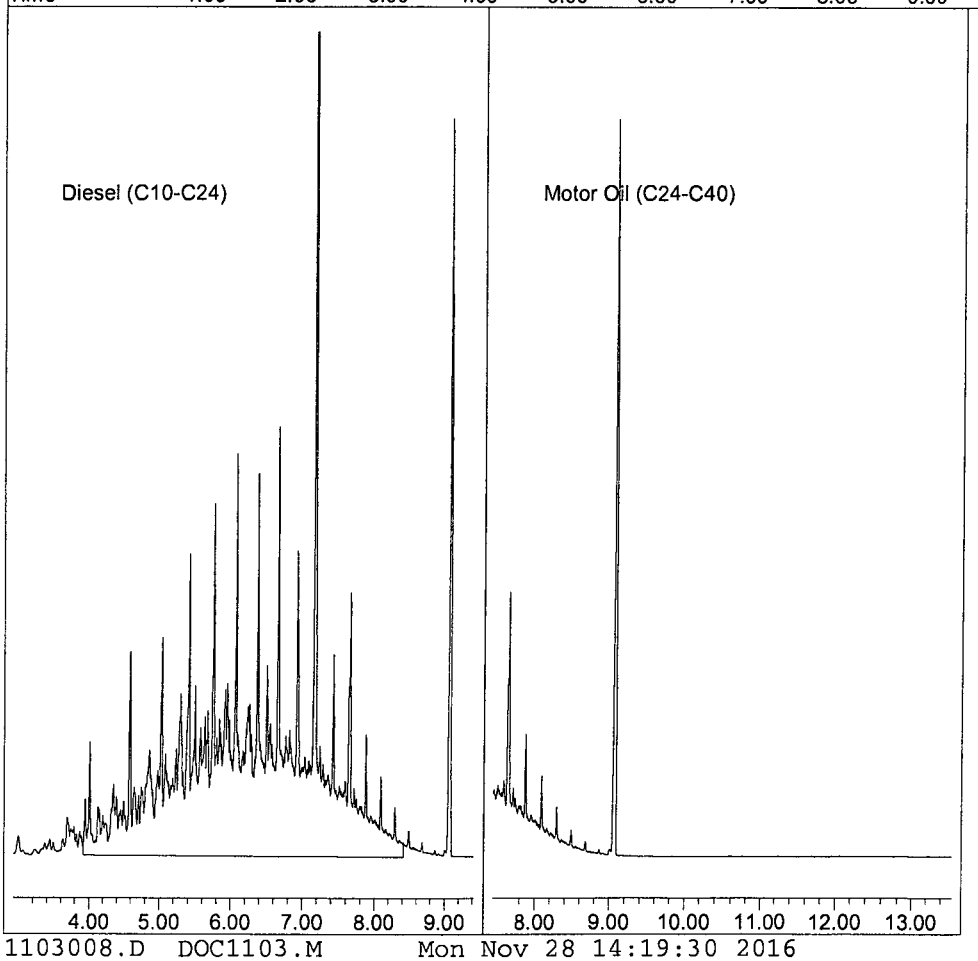
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.17	177261246	31.263 ppb
Surrogate Spike 30.000		Recovery =	104.21%
5) SA Octacosane(S)	9.08	132563050	37.596 ppb
Surrogate Spike 30.000		Recovery =	125.32%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	2629335633	783.773 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103008.D
Sample : DIESEL 800ppb 11/3/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103009.D Vial: 9
Acq On : 11-3-16 11:28:31 Operator: DP
Sample : DIESEL 1000ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

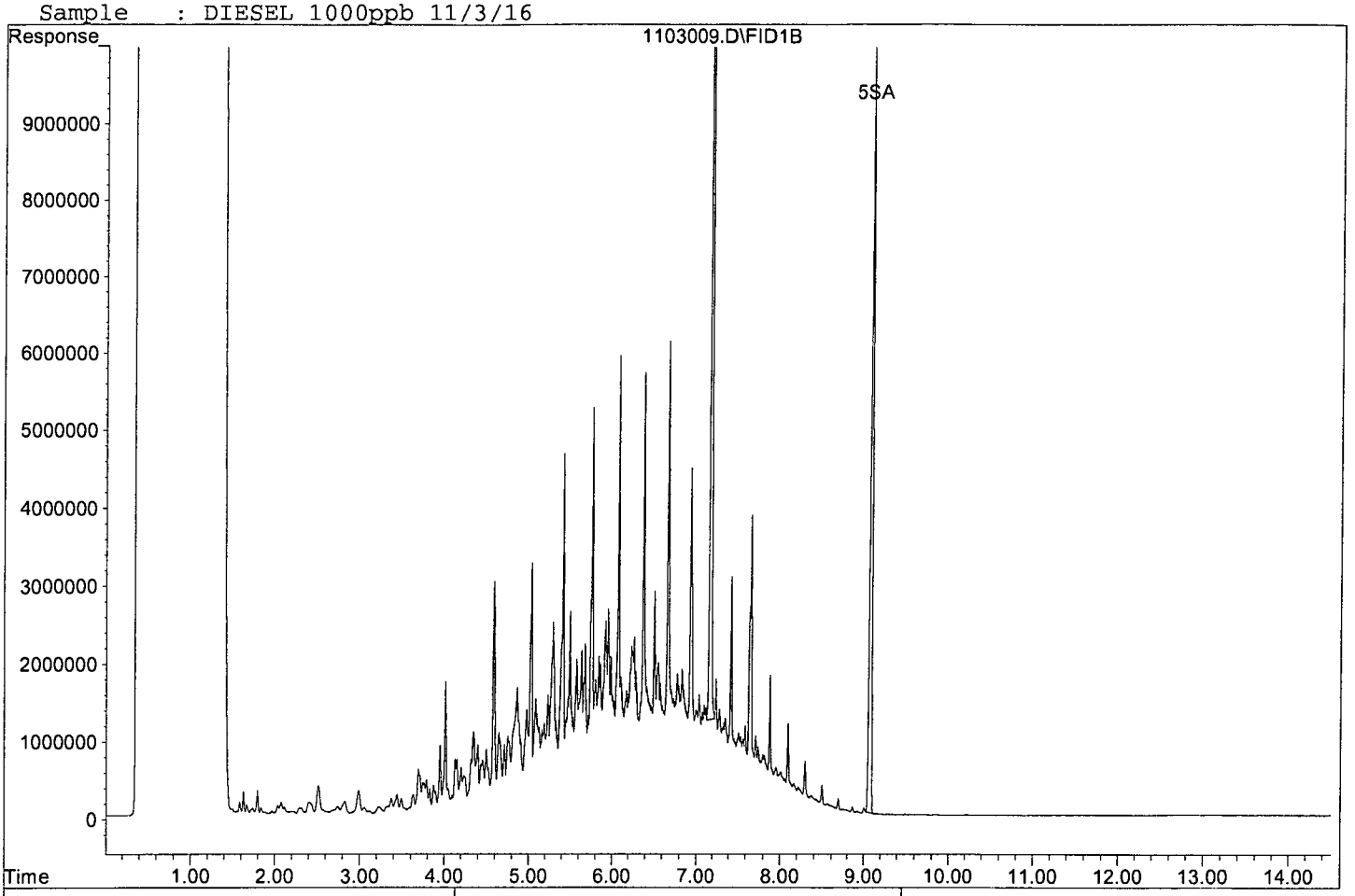
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

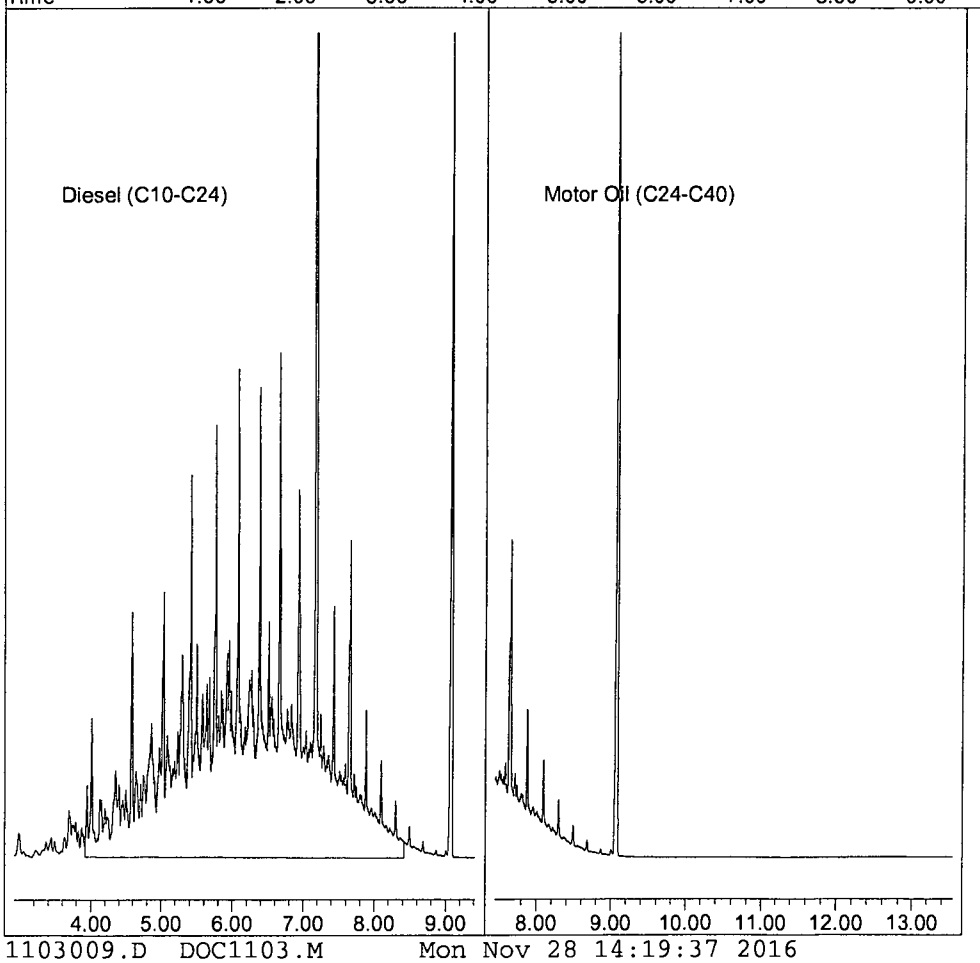
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.18	220584770	38.903	ppb
Surrogate Spike 30.000		Recovery =	129.68%	
5) SA Octacosane(S)	9.08	163627822	46.406	ppb
Surrogate Spike 30.000		Recovery =	154.69%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	3251118324	969.119	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103009.D
Sample : DIESEL 1000ppb 11/3/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028002.D Vial: 2
Acq On : 10-28-16 9:07:30 Operator: DP
Sample : MO 20ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:24 2016 Quant Results File: DOC1103.RES

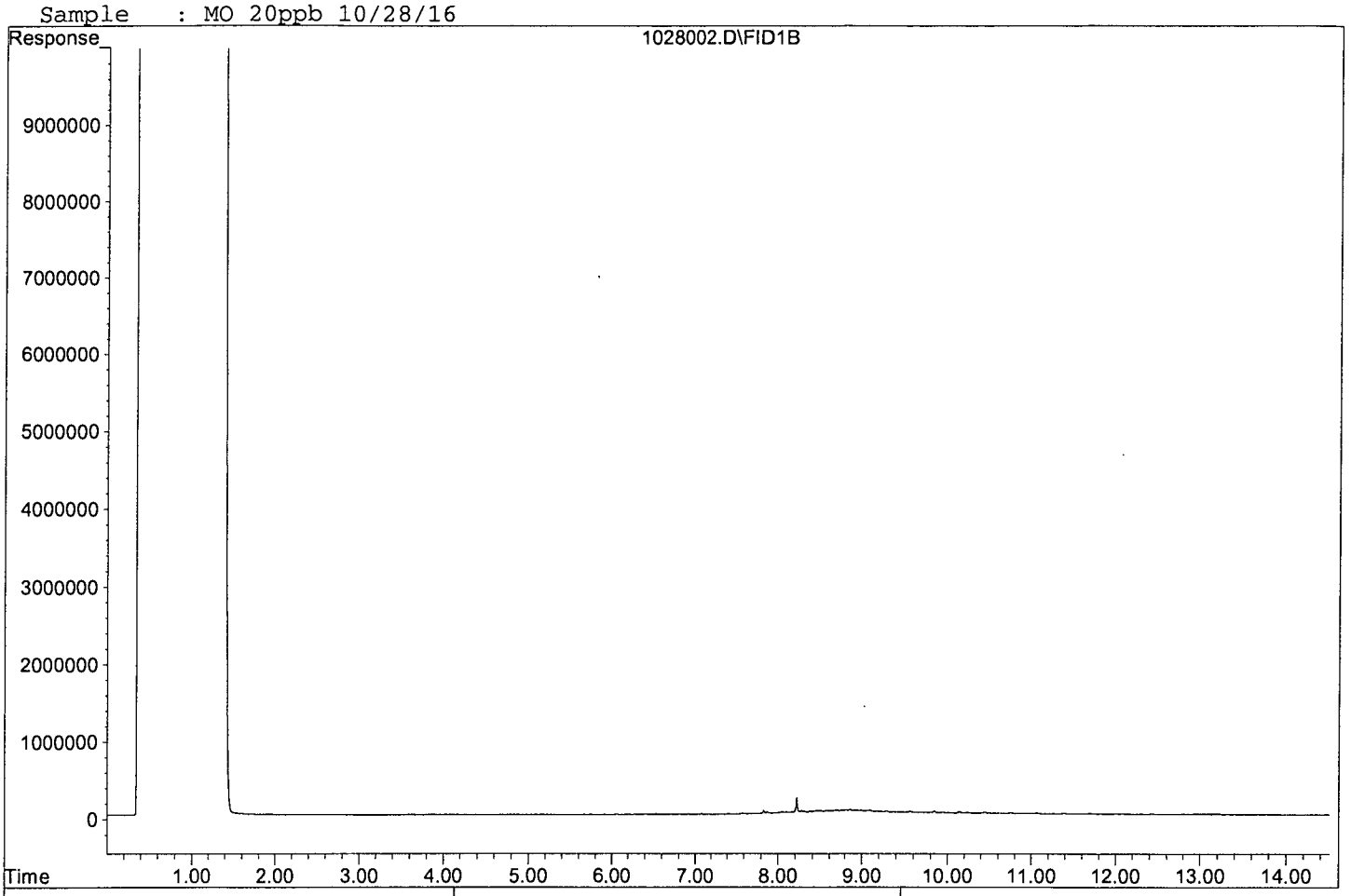
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

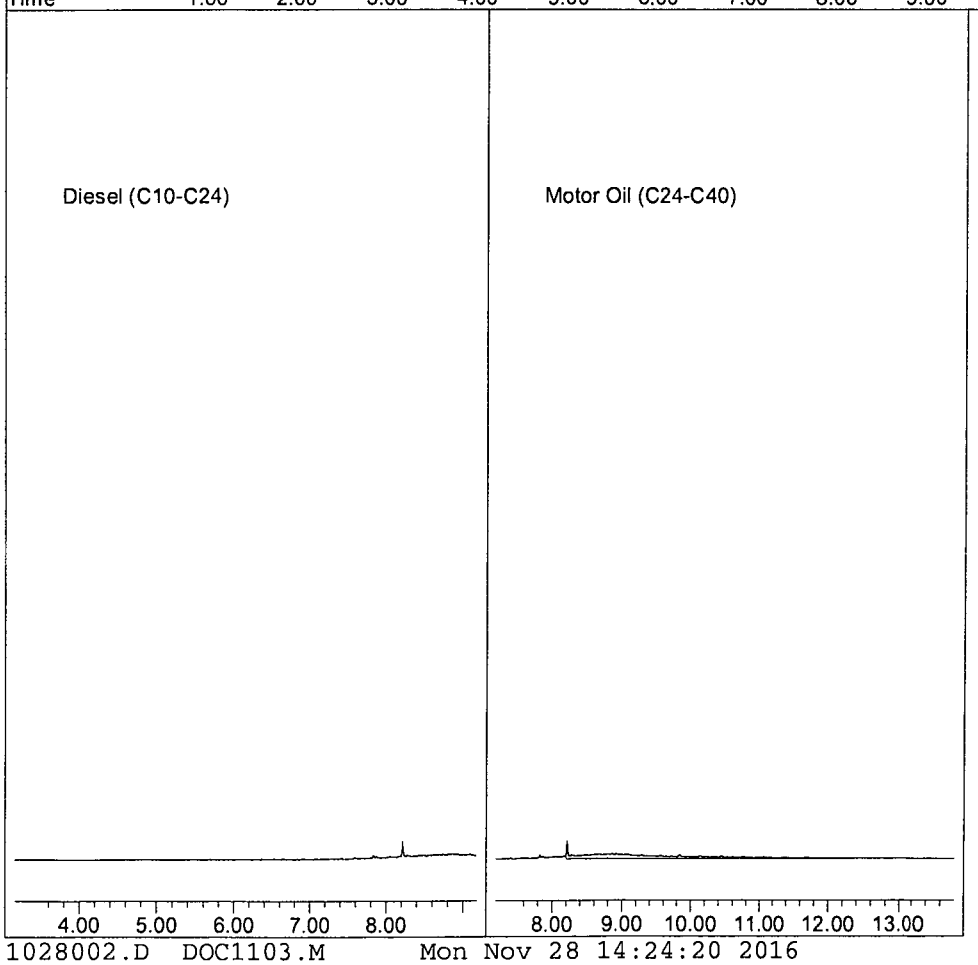
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	62507592	22.438 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028002.D
Sample : MO 20ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028003.D Vial: 3
Acq On : 10-28-16 9:28:13 Operator: DP
Sample : MO 50ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:24 2016 Quant Results File: DOC1103.RES

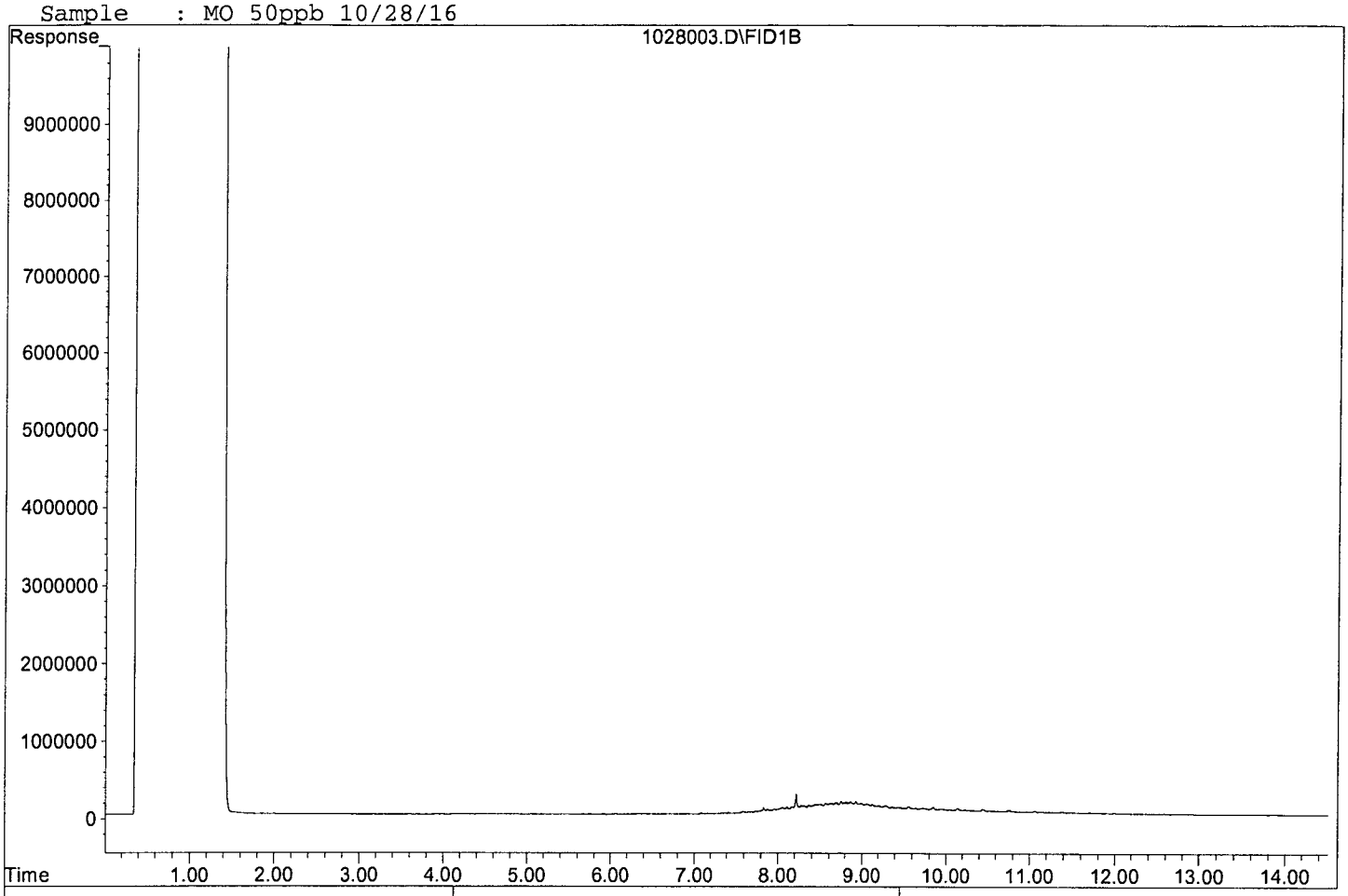
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

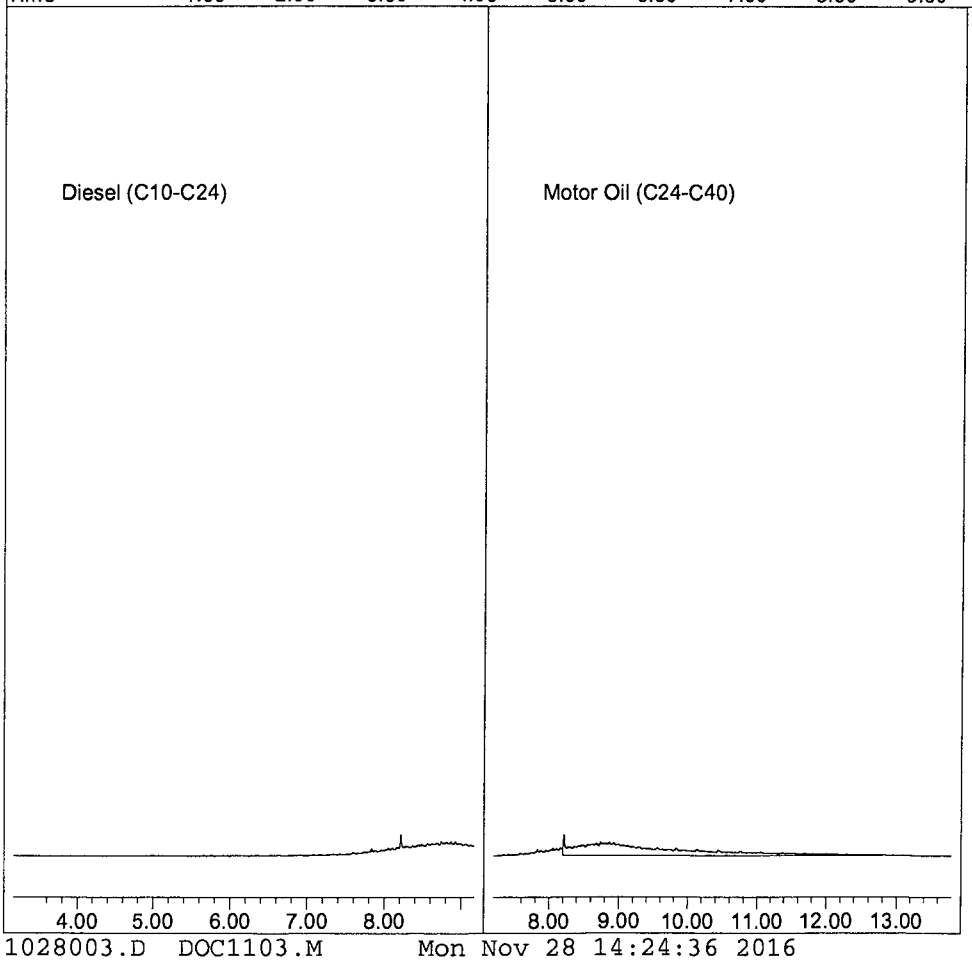
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	160376925	57.571 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028003.D
Sample : MO 50ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028004.D Vial: 4
Acq On : 10-28-16 9:49:06 Operator: DP
Sample : MO 250ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:24 2016 Quant Results File: DOC1103.RES

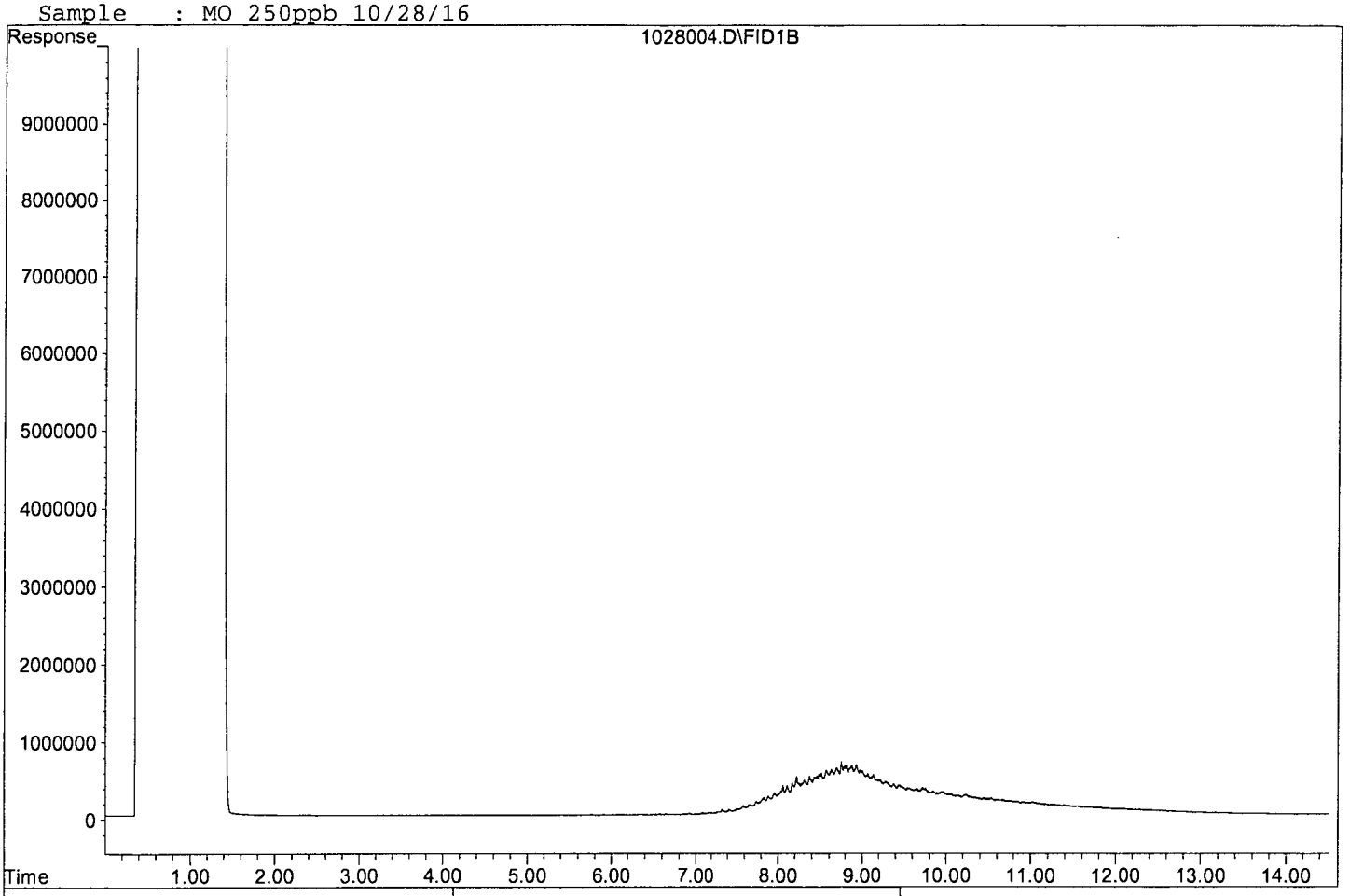
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

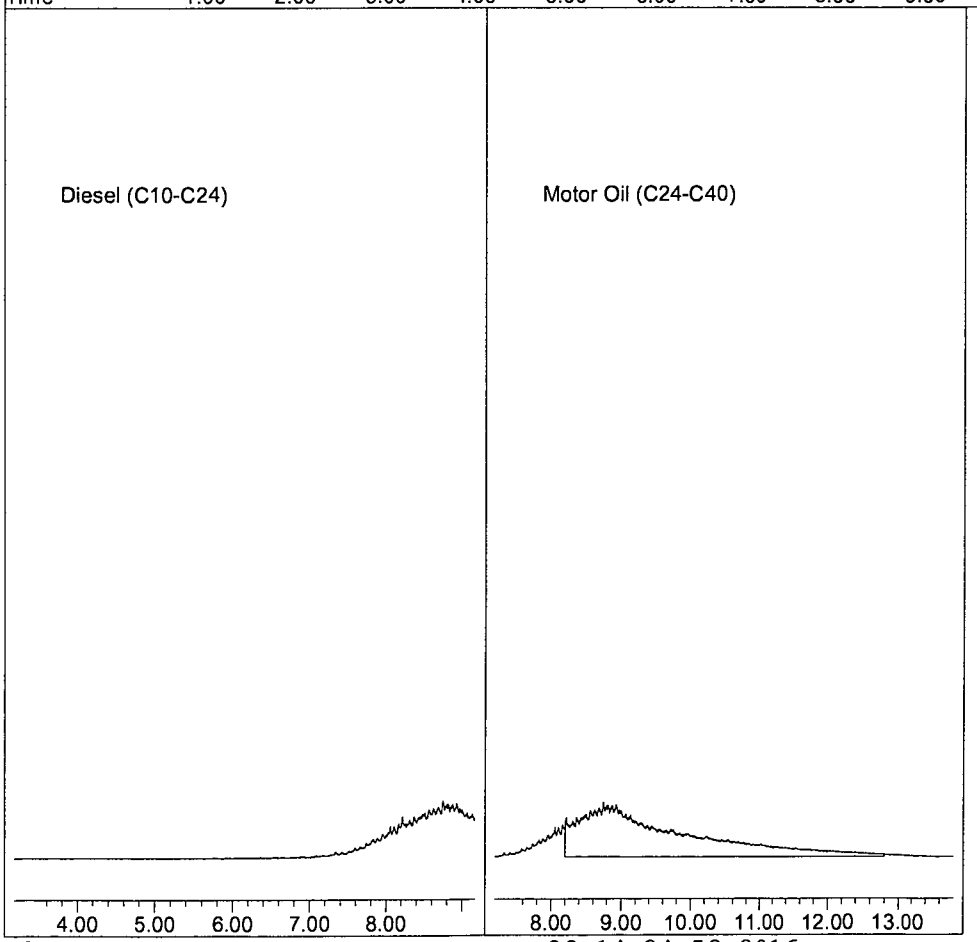
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	641488837	230.275 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028004.D
Sample : MO 250ppb 10/28/16





1028004.D DOC1103.M Mon Nov 28 14:24:58 2016

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028005.D Vial: 5
Acq On : 10-28-16 10:09:58 Operator: DP
Sample : MO 1000ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:25 2016 Quant Results File: DOC1103.RES

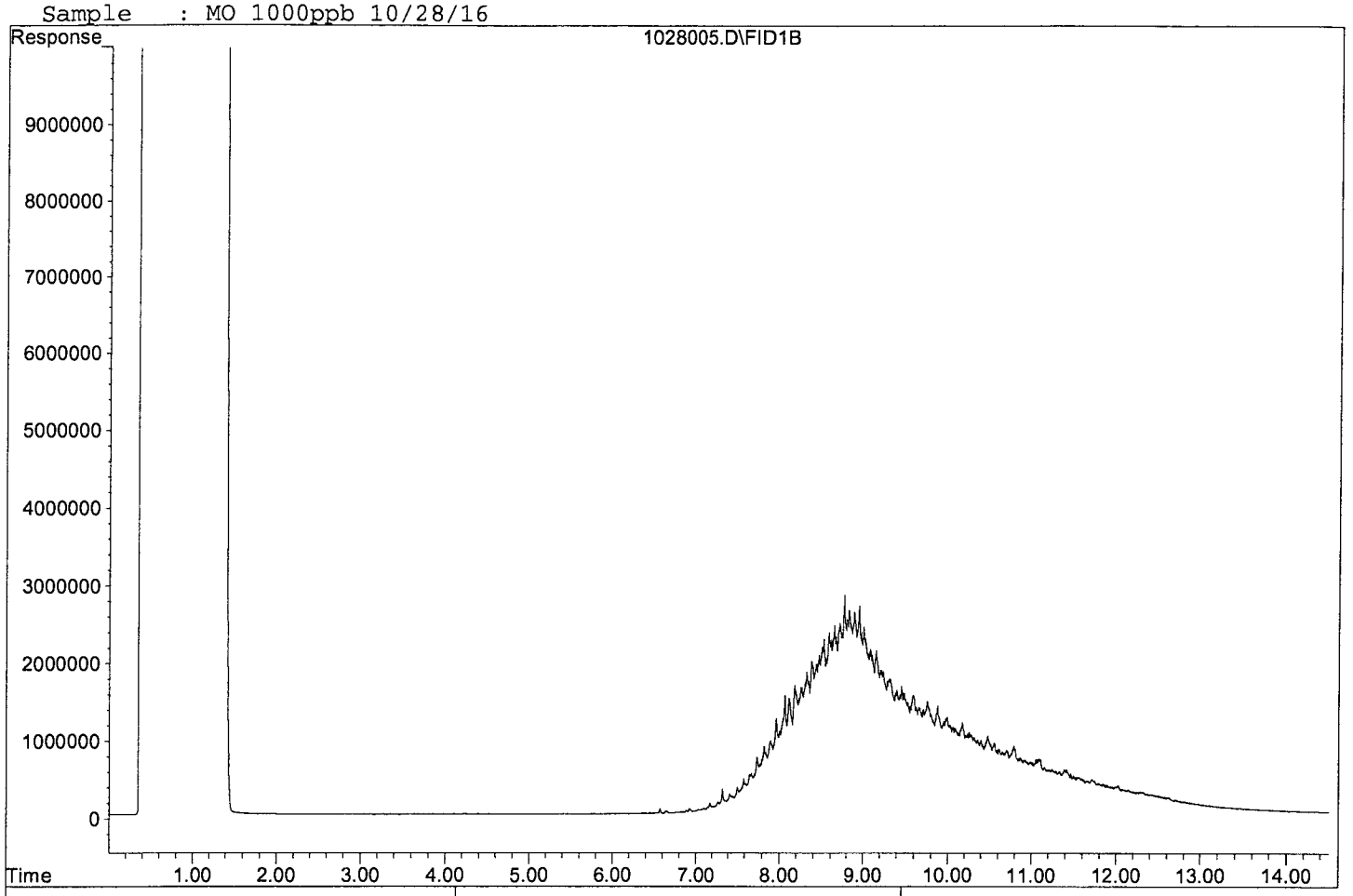
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

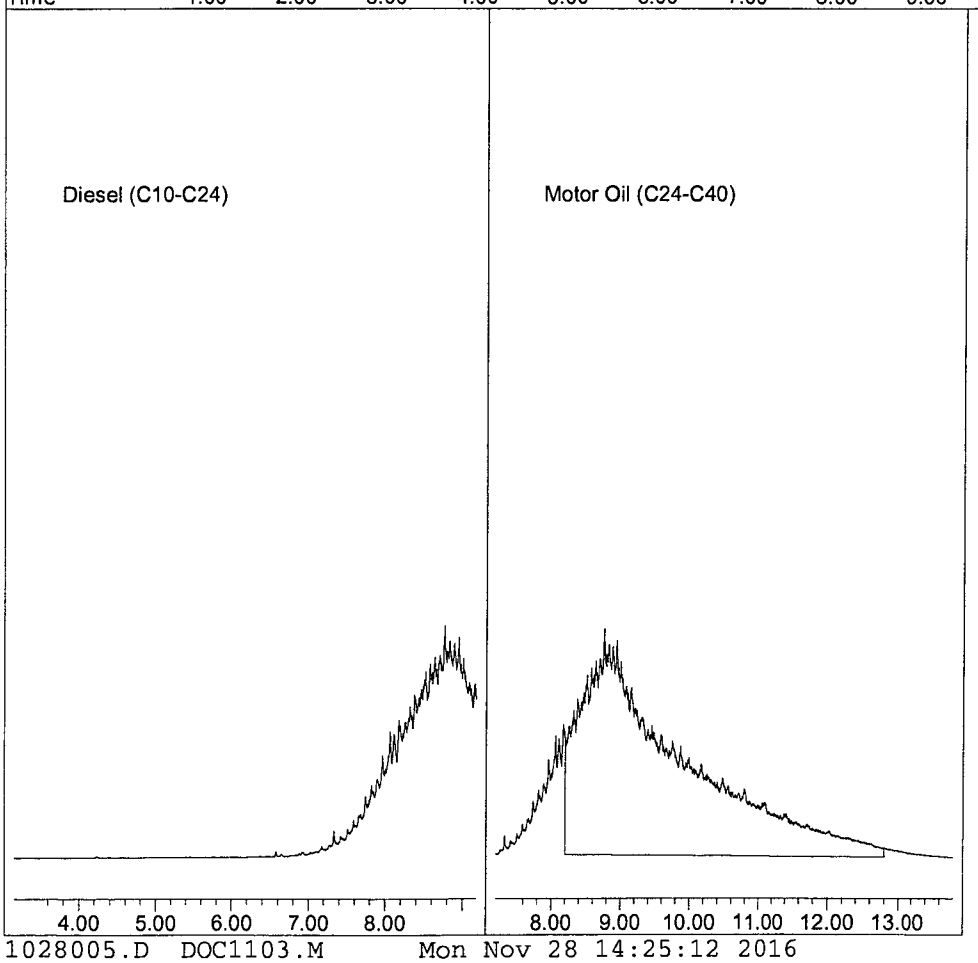
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	2680029704	962.051 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028005.D
Sample : MO 1000ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028006.D Vial: 6
Acq On : 10-28-16 10:30:51 Operator: DP
Sample : MO 1500ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:25 2016 Quant Results File: DOC1103.RES

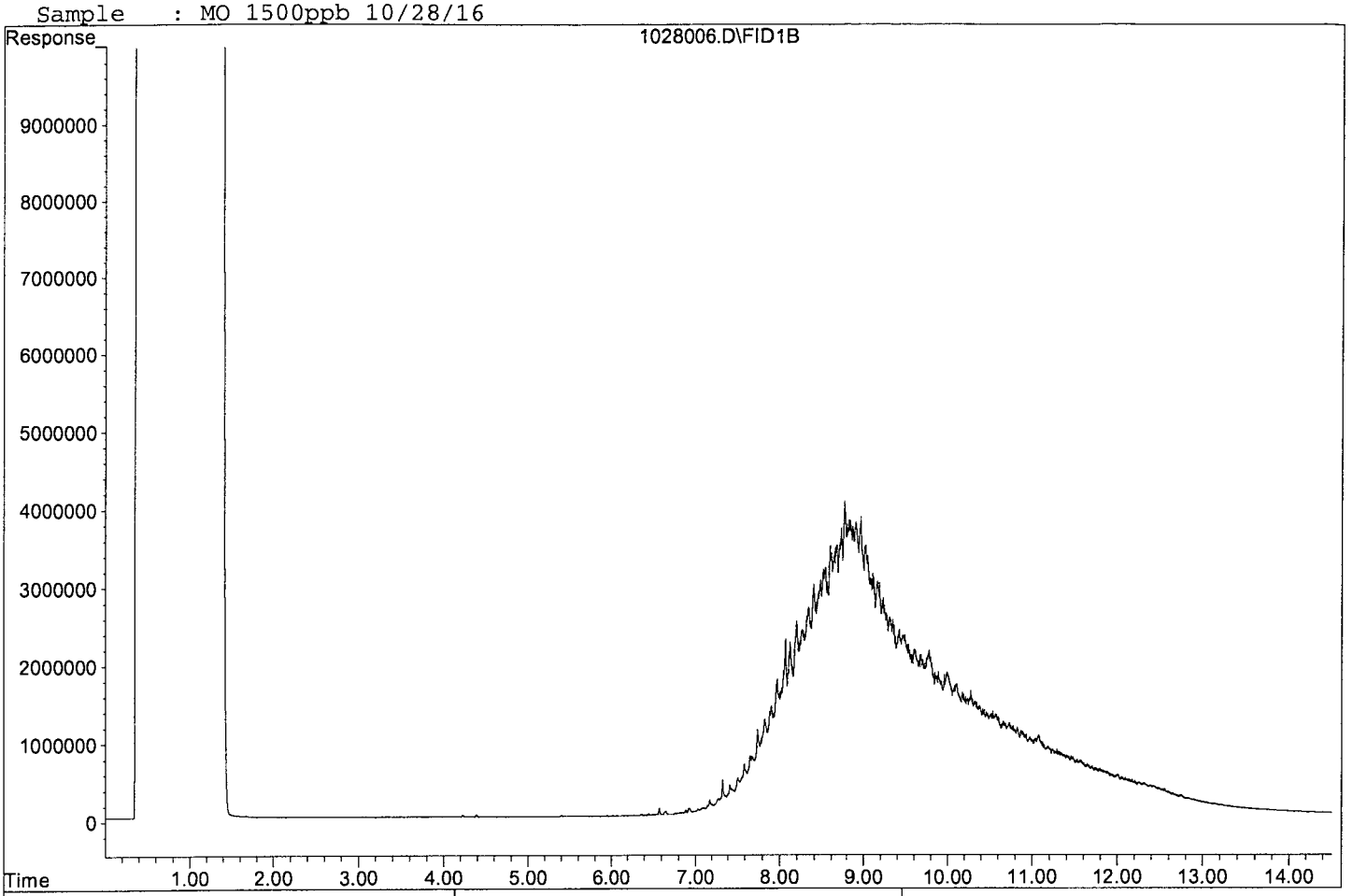
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

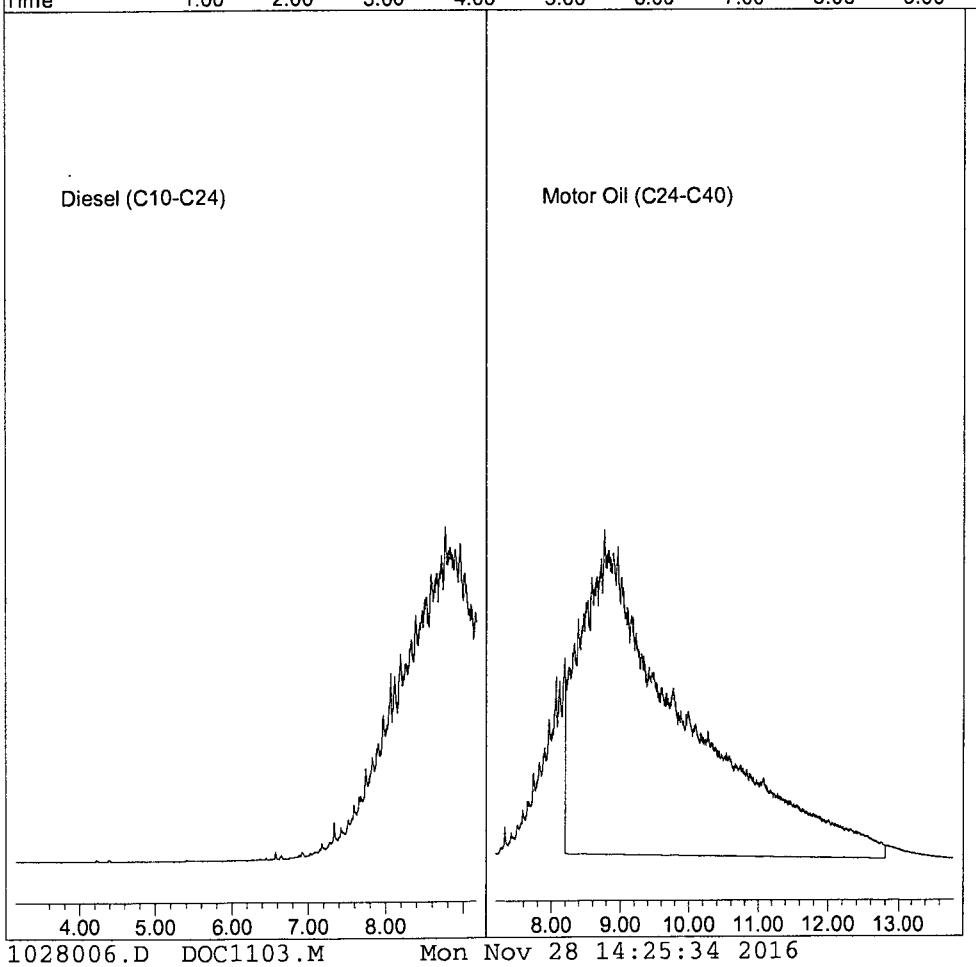
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
Target Compounds				
2) HBTM Motor Oil (C24-C40)	10.50	3965906010	1423.642	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028006.D
Sample : MO 1500ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028007.D Vial: 7
Acq On : 10-28-16 10:51:50 Operator: DP
Sample : MO 2000ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:25 2016 Quant Results File: DOC1103.RES

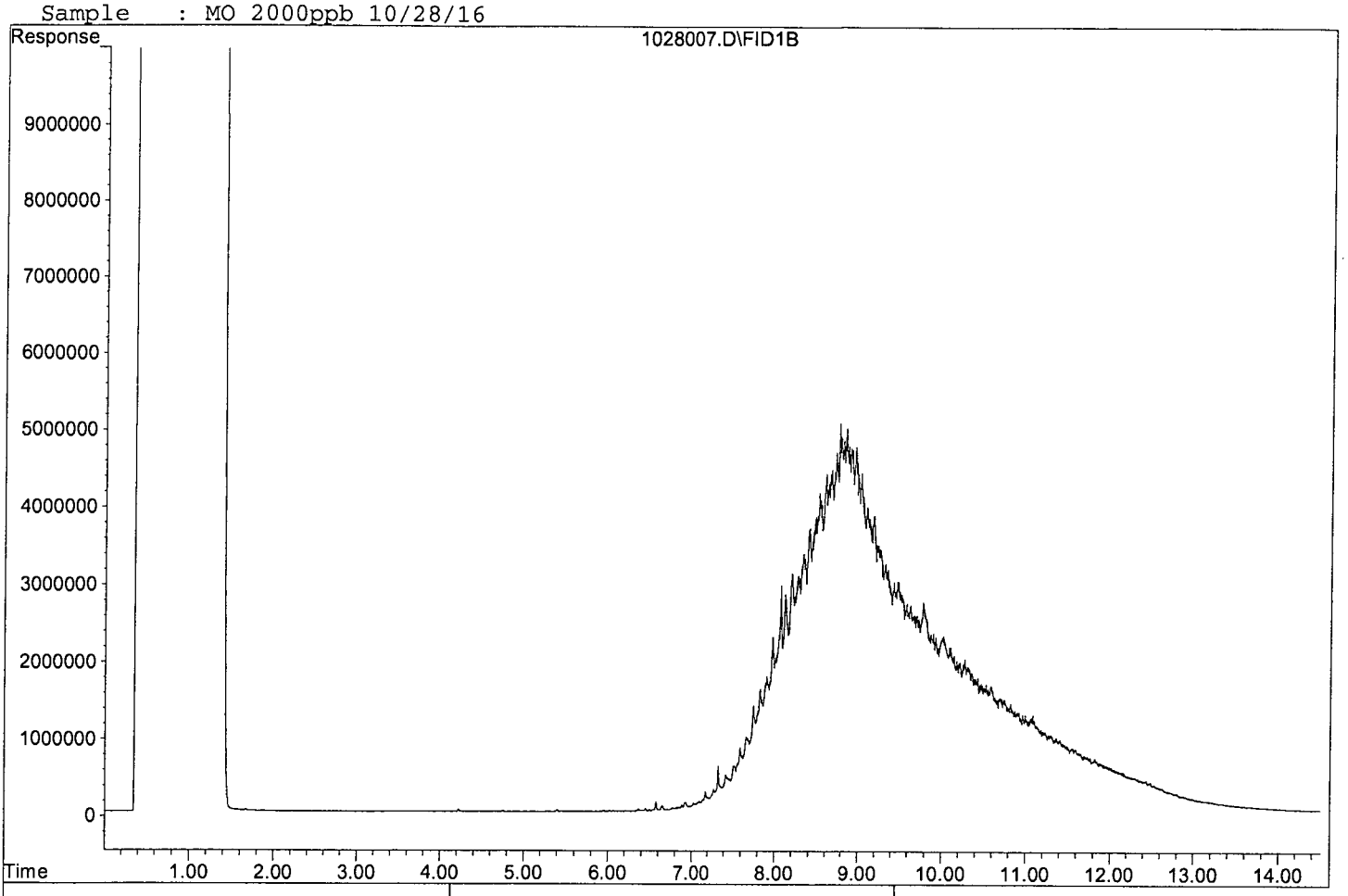
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

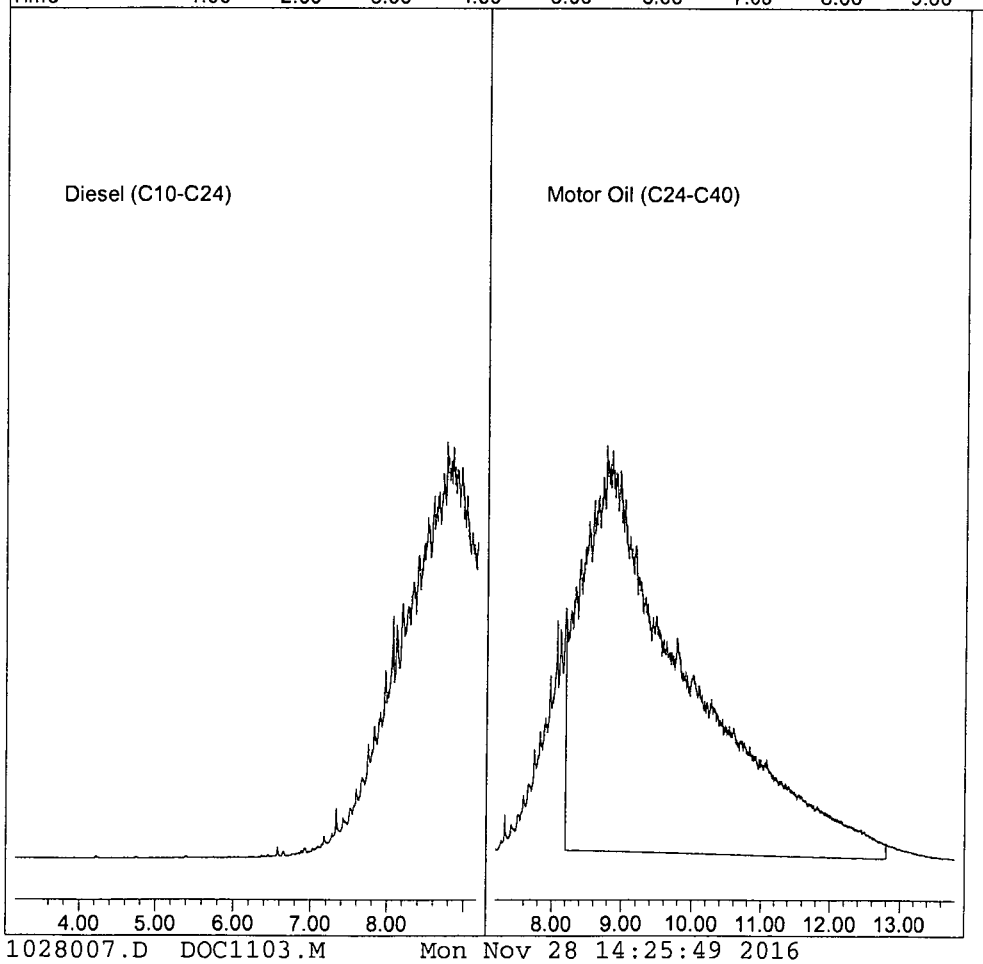
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
Target Compounds				
2) HBTM Motor Oil (C24-C40)	10.50	4983276169	1788.848	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028007.D
Sample : MO 2000ppb 10/28/16





TPH Extractables
DOC1103

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/03/16
Instrument: Apollo
Initial Cal. Date: 11/03/16
Data File: 1103012.D (Diesel) 1028008.D (Motor Oil)

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C24)	1727130	1667670	3.4	HATM	
2	HBTM	Motor Oil (C24-C40)	1392870	1239910	11	HBTM	
3							
4							
5							
6							
7							
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36							
37							
38							
39							
40							
		Average			7.2		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103012.D Vial: 12
Acq On : 11-3-16 13:25:11 Operator: DP
Sample : DIESEL-SS 400ppb 8/1/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 15:21 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

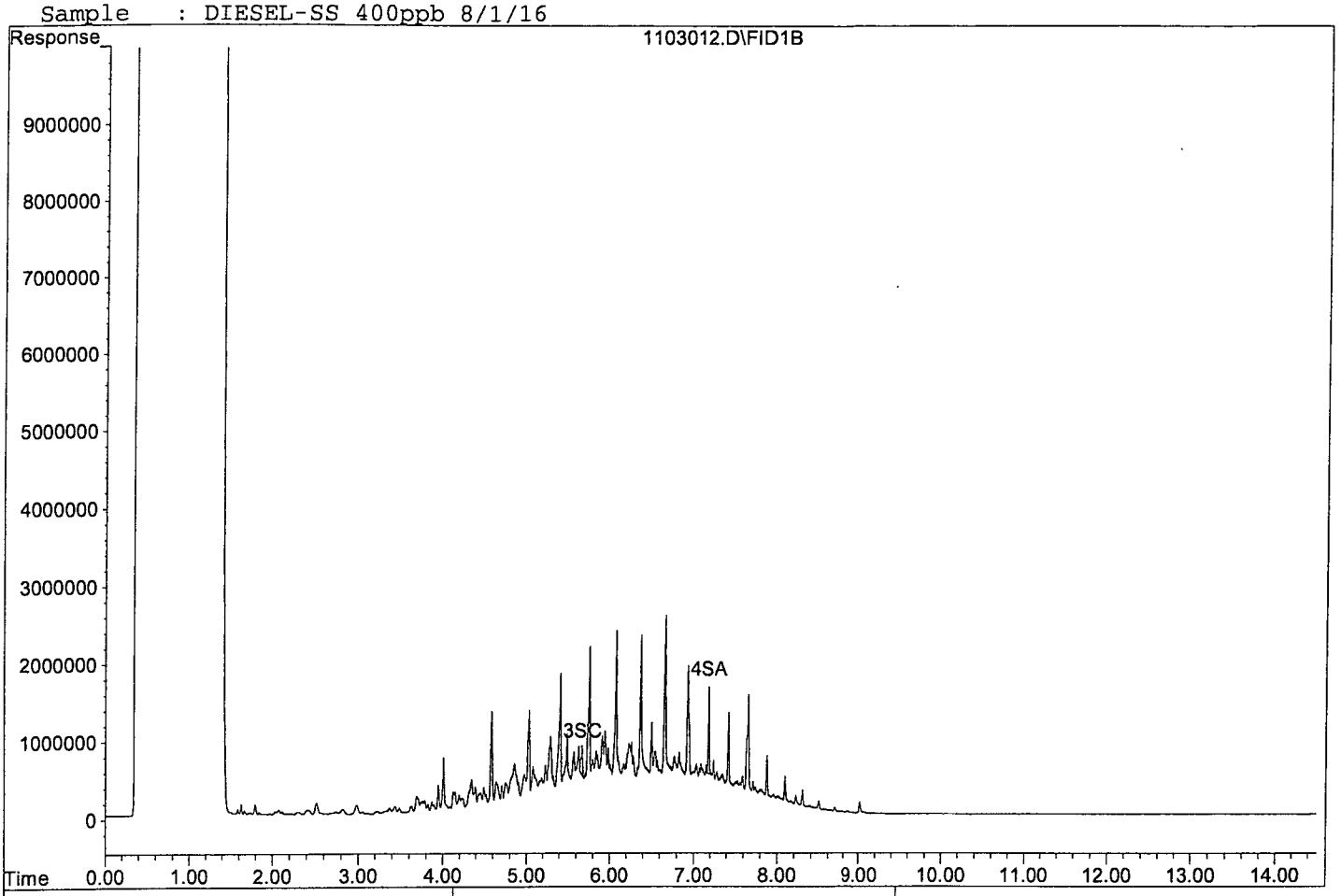
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SC Decanoic Acid(S)	5.67	4681185	3.827 ppb
Surrogate Spike 48.000	Recovery =		7.97%
4) SA Ortho-Terphenyl(S)	7.18	9886456	2.120 ppb
Surrogate Spike 30.000	Recovery =		7.07%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	1345831567	389.615 ppb
2) HBTM Motor Oil (C24-C40)	10.50	43170153	15.497 ppb

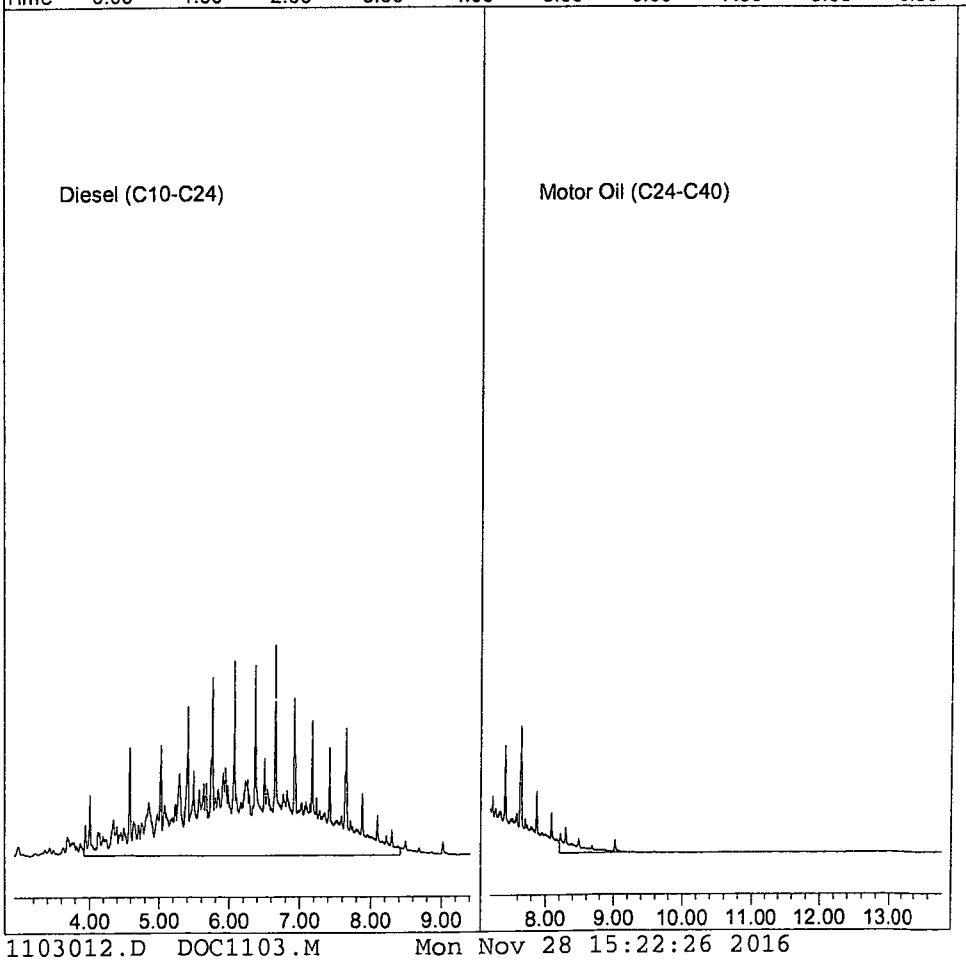
algorithm check: $\frac{1345831567 \times 1}{1727130 \times 2} = 389.6150165$

D.P. 11/28/16

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103012.D
Sample : DIESEL-SS 400ppb 8/1/16





1103012.D DOC1103.M Mon Nov 28 15:22:26 2016

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161028\1028008.D Vial: 8
Acq On : 10-28-16 11:12:44 Operator: DP
Sample : MO SS 1000ppb 7/6/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 15:22 2016 Quant Results File: DOC1103.RES

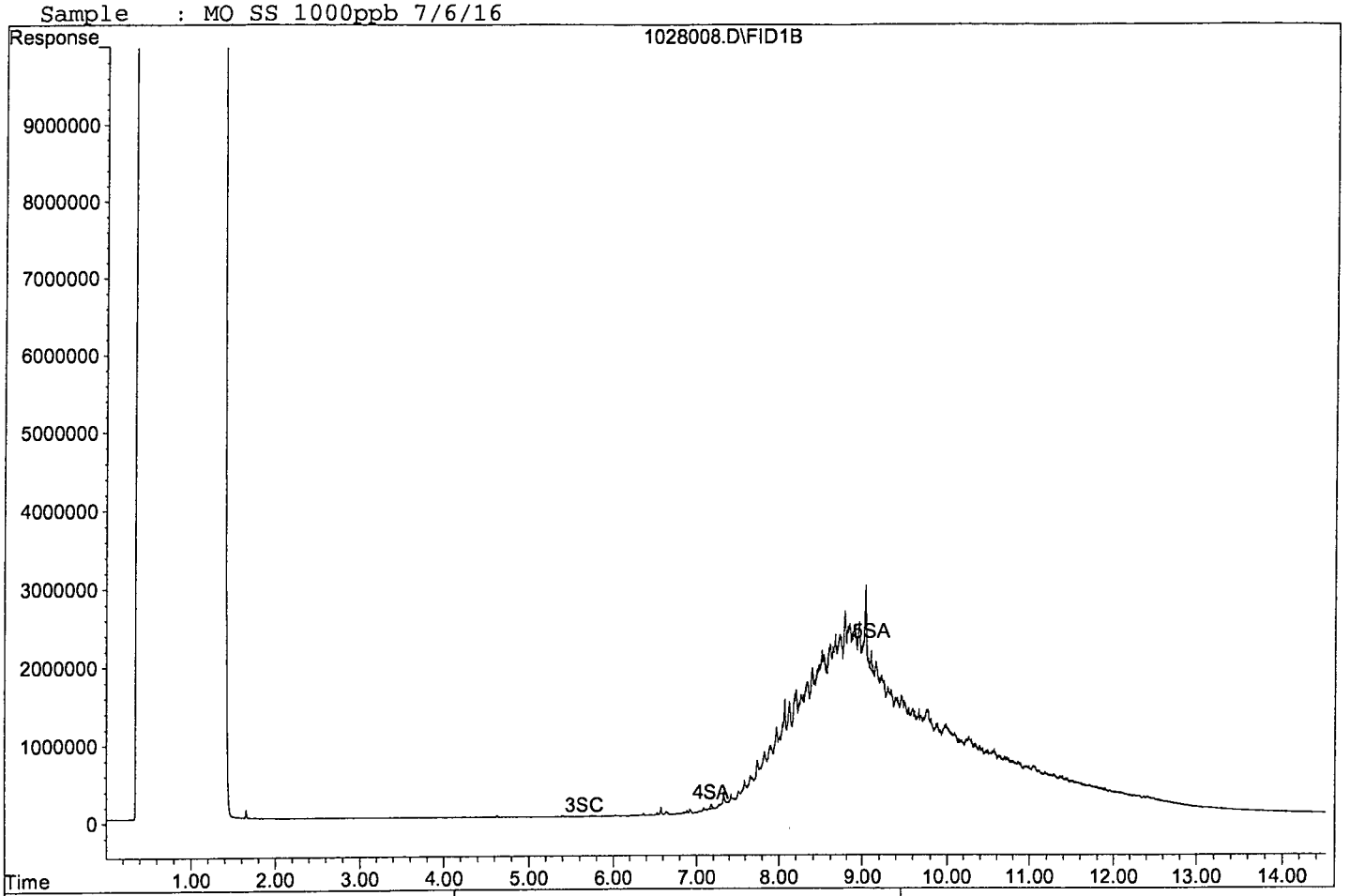
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

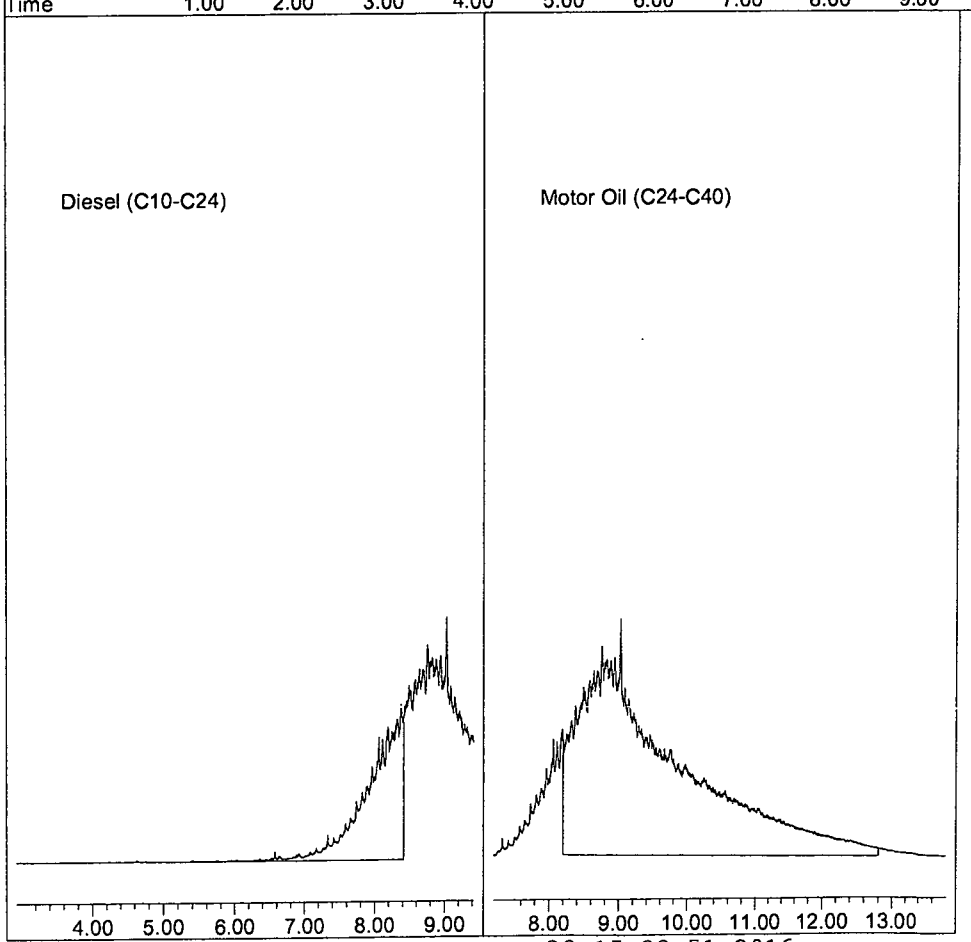
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SC Decanoic Acid(S)	5.65	6816	0.006 ppb
Surrogate Spike 48.000	Recovery	=	0.01%
4) SA Ortho-Terphenyl(S)	7.17	747984	0.160 ppb
Surrogate Spike 30.000	Recovery	=	0.53%
5) SA Octacosane(S)	9.09	2492290	0.712 ppb
Surrogate Spike 30.000	Recovery	=	2.37%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	603419098	174.688 ppb
2) HBTM Motor Oil (C24-C40)	10.50	2511616588	901.596 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028008.D
Sample : MO SS 1000ppb 7/6/16





1028008.D DOC1103.M Mon Nov 28 15:22:51 2016

TPH Extractables
DOC1103

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/19/16
Instrument: Apollo
Initial Cal. Date: 10/19/16
Data File: 1219002-3.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1727130	1715640	0.67	HATM	
2	HBTM	Motor Oil (C24-C40)	1392870	1164660	16	HBTM	
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
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28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			8.3		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161219\1219002.D Vial: 2
Acq On : 12-19-16 10:12:48 Operator: DP
Sample : CCV: DIESEL 400ppb 12/8/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 19 10:50 2016 Quant Results File: DOC1103.RES

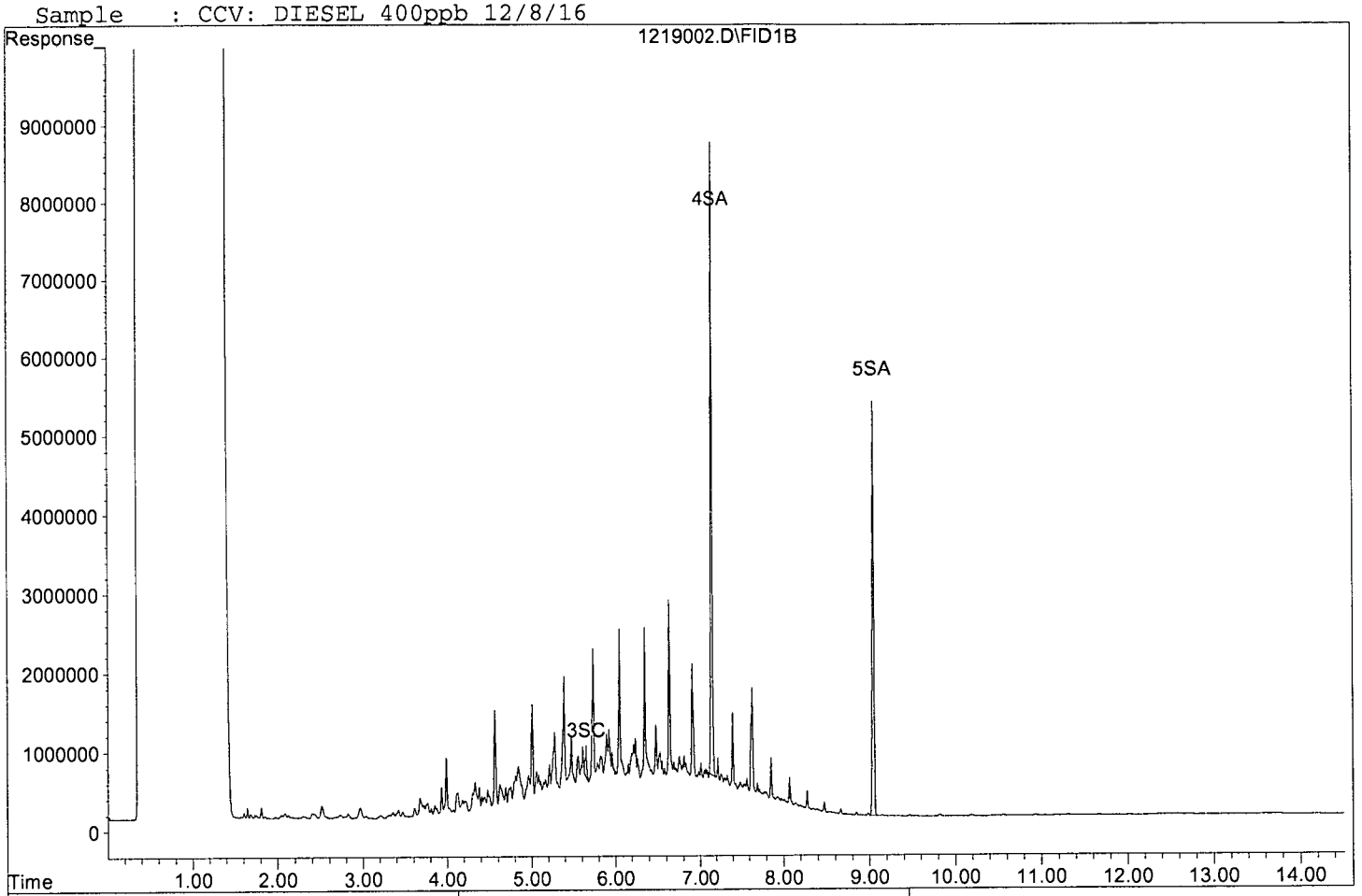
Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

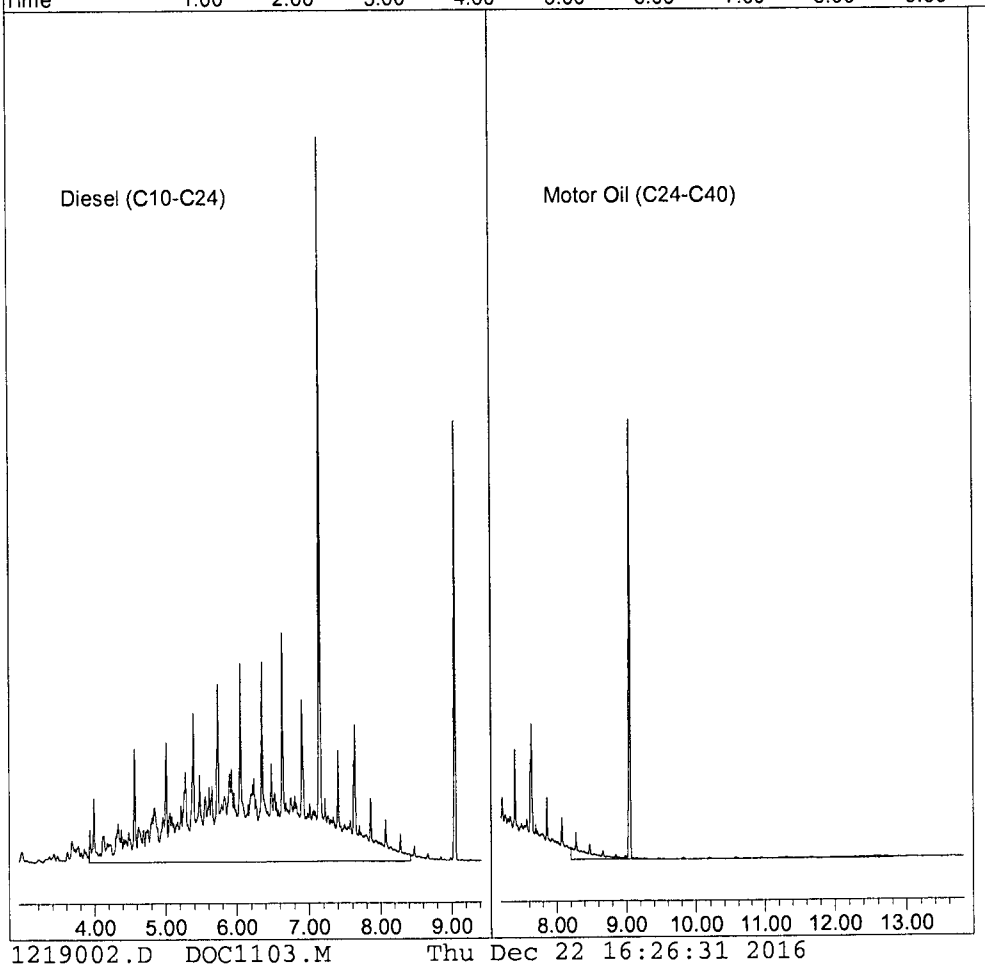
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SC Decanoic Acid(S)	5.65	4641196	3.794	ppb
Surrogate Spike 48.000		Recovery =	7.90%	
4) SA Ortho-Terphenyl(S)	7.15	90866874	19.481	ppb
Surrogate Spike 30.000		Recovery =	64.94%	
5) SA Octacosane(S)	9.05	66962967	19.134	ppb
Surrogate Spike 30.000		Recovery =	63.78%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	1372513607	397.339	ppb
2) HBTM Motor Oil (C24-C40)	10.50	44149239	15.848	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161219\1219002.D
Sample : CCV: DIESEL 400ppb 12/8/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161219\1219003.D Vial: 3
Acq On : 12-19-16 10:32:50 Operator: DP
Sample : CCV: MO 1000ppb 12/8/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 19 10:50 2016 Quant Results File: DOC1103.RES

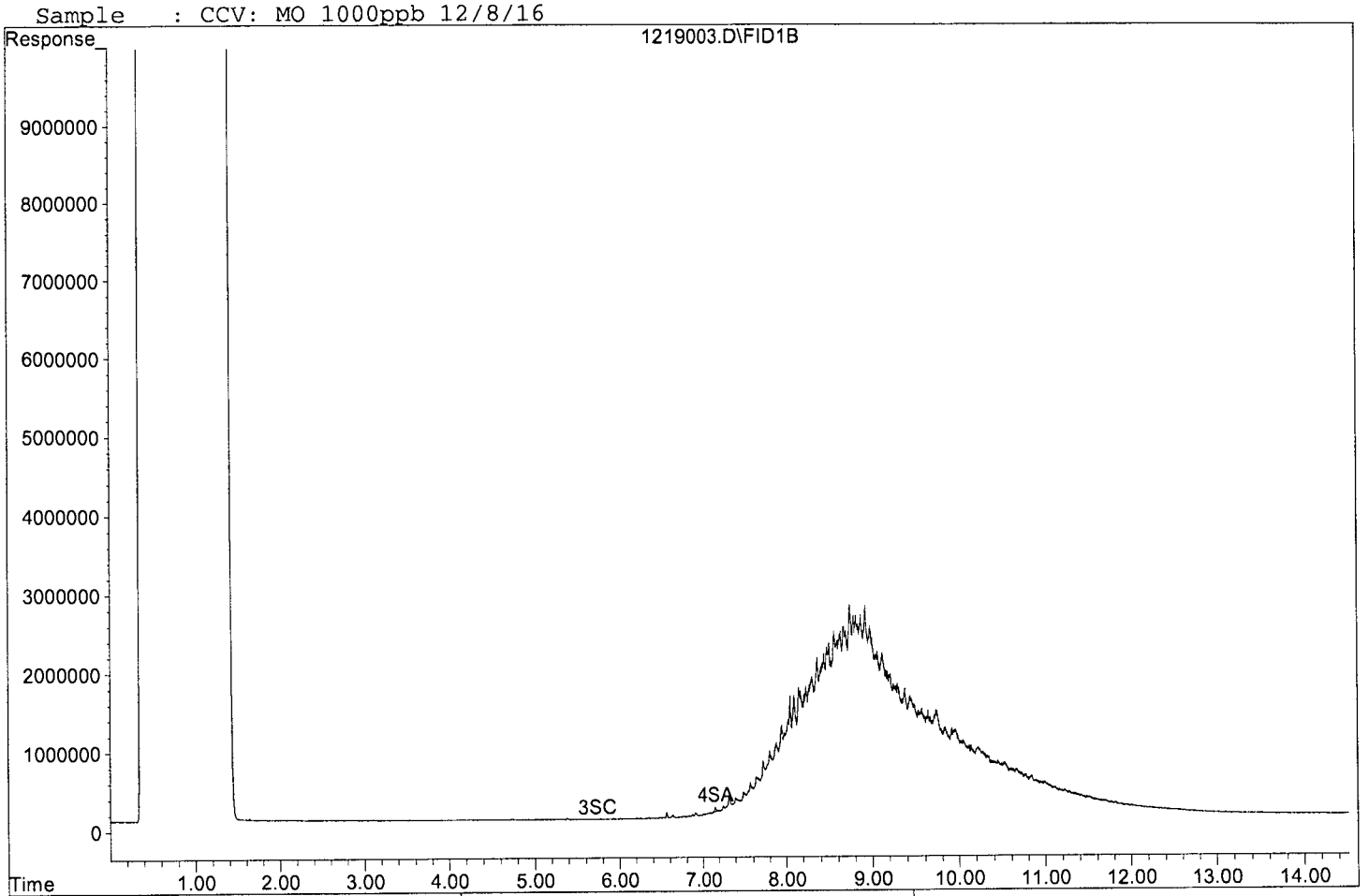
Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

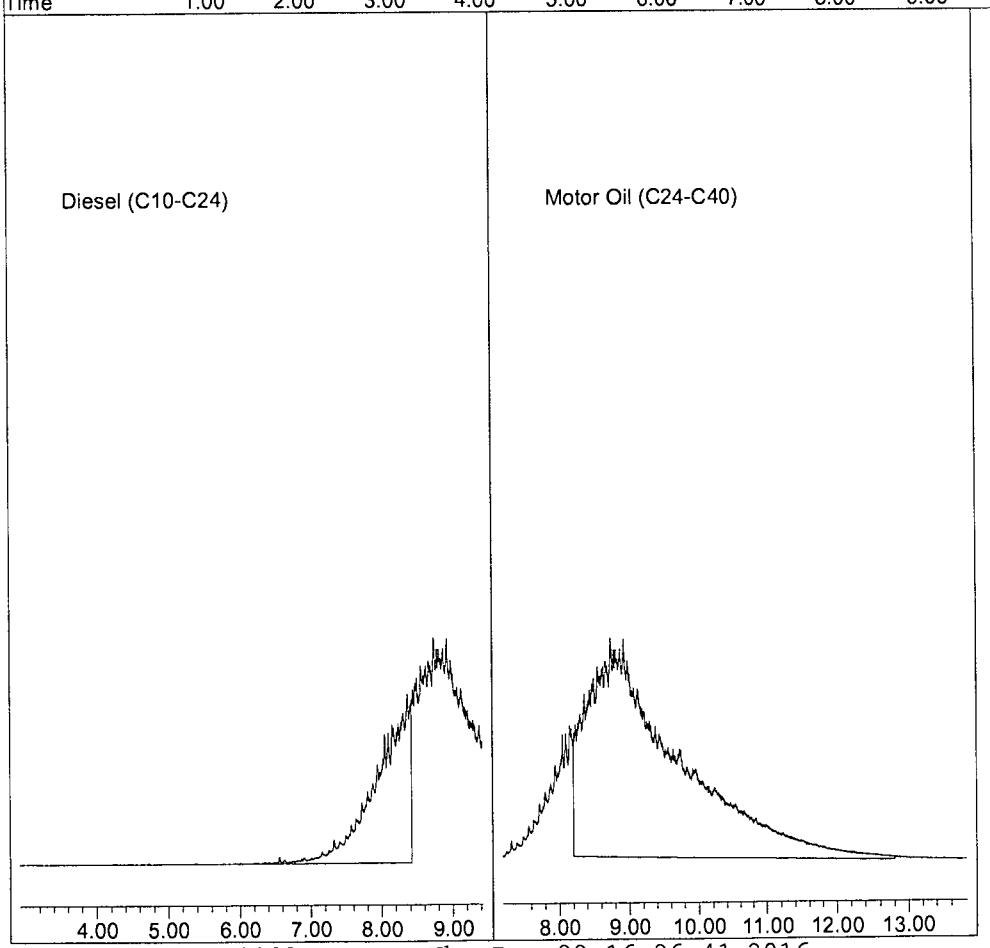
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SC Decanoic Acid(S)	5.73f	38035	0.031 ppb
Surrogate Spike 48.000	Recovery	=	0.06%
4) SA Ortho-Terphenyl(S)	7.16	689735	0.148 ppb
Surrogate Spike 30.000	Recovery	=	0.49%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	641135429	185.607 ppb
2) HBTM Motor Oil (C24-C40)	10.50	2329320455	836.157 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161219\1219003.D
Sample : CCV: MO 1000ppb 12/8/16





TPH Extractables
DOC1103

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/19/16
Instrument: Apollo
Initial Cal. Date: 10/19/16
Data File: 1219024-25.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1727130	1736290	0.53	HATM	
2	HBTM	Motor Oil (C24-C40)	1392870	1140550	18	HBTM	
3							
4							
5							
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34							
35							
36							
37							
38							
39							
40							
		Average			9.3		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161219\1219024.D Vial: 24
Acq On : 12-19-16 17:40:53 Operator: DP
Sample : CCV: DIESEL 400ppb 12/8/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 20 9:36 2016 Quant Results File: DOC1103.RES

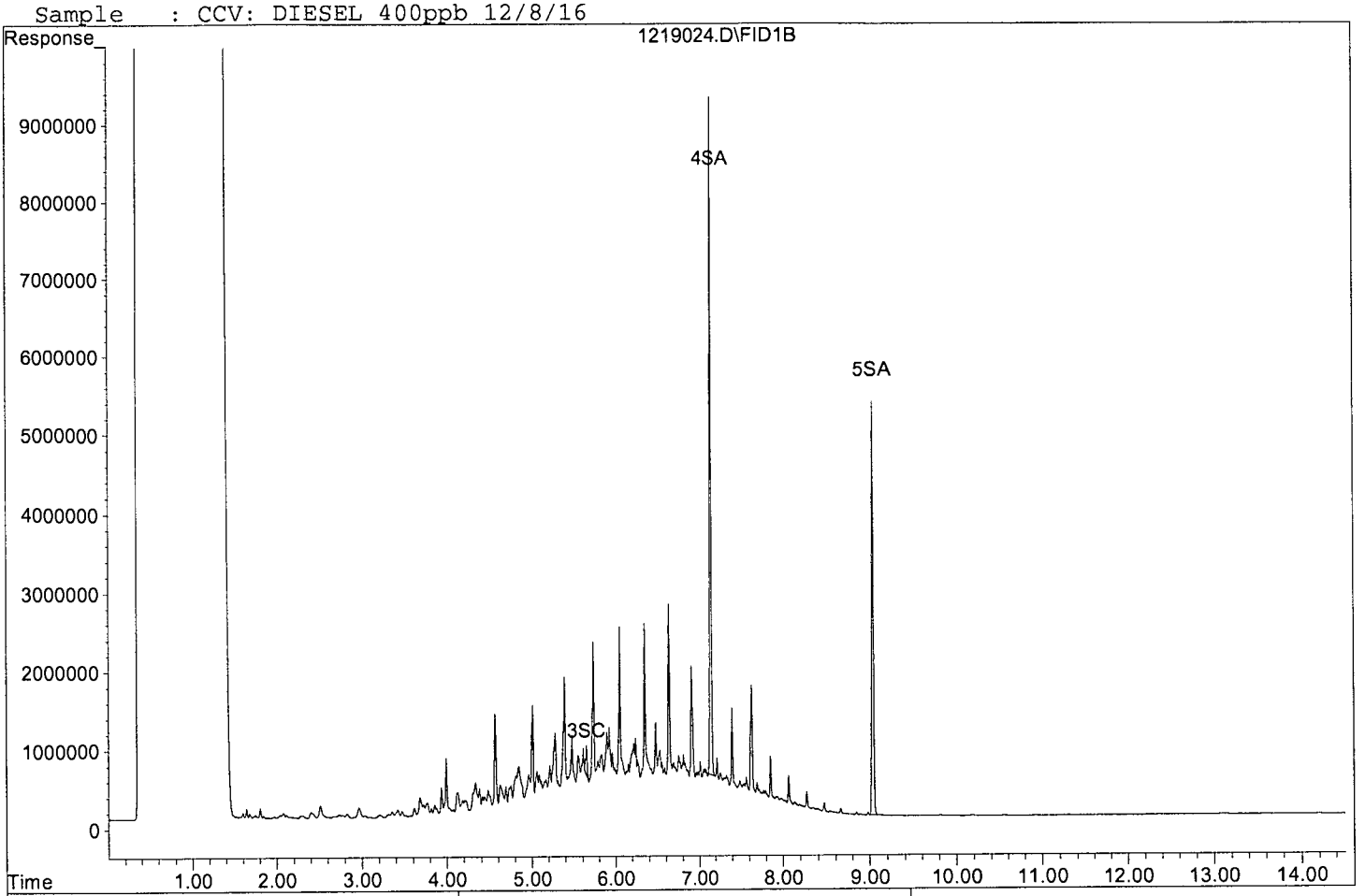
Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

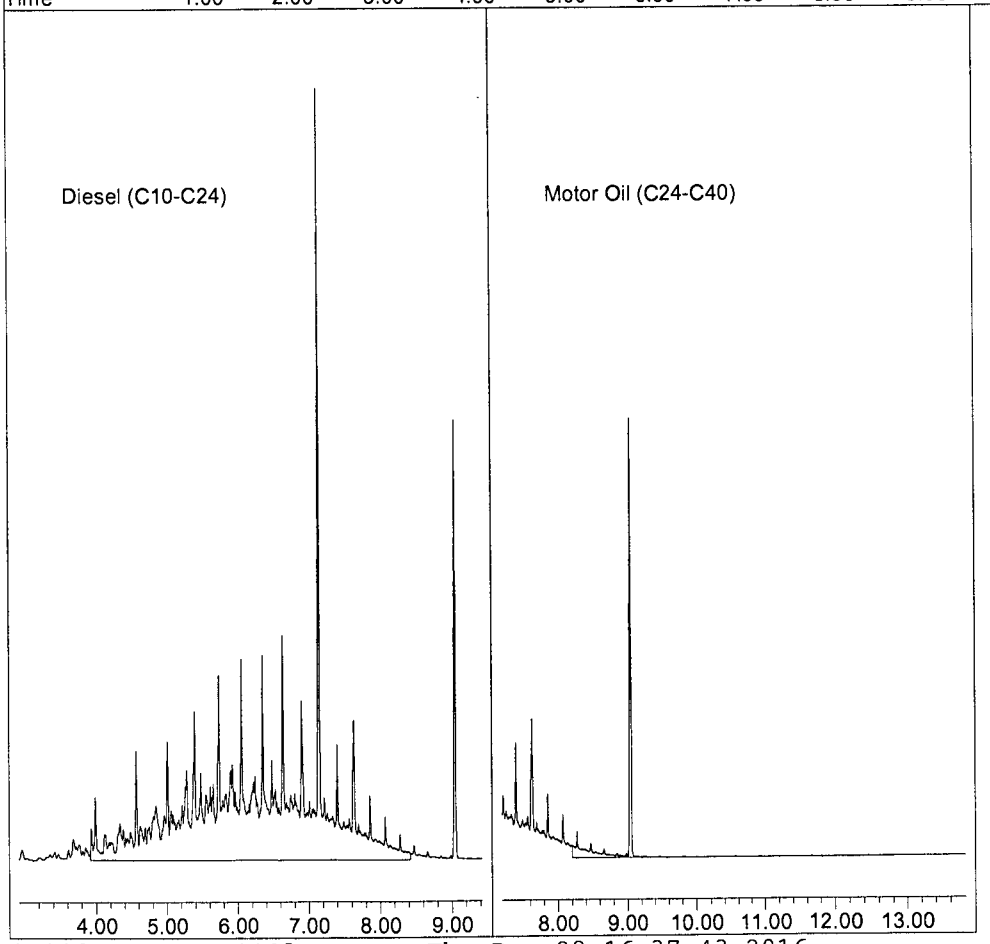
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SC Decanoic Acid(S)	5.65	4588704	3.751	ppb
Surrogate Spike 48.000		Recovery =	7.81%	
4) SA Ortho-Terphenyl(S)	7.15	92795385	19.894	ppb
Surrogate Spike 30.000		Recovery =	66.31%	
5) SA Octacosane(S)	9.05	68157051	19.475	ppb
Surrogate Spike 30.000		Recovery =	64.92%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	1389032952	402.122	ppb
2) HBTM Motor Oil (C24-C40)	10.50	42482426	15.250	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161219\1219024.D
Sample : CCV: DIESEL 400ppb 12/8/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161219\1219025.D Vial: 25
Acq On : 12-19-16 18:01:12 Operator: DP
Sample : CCV: MO 1000ppb 12/8/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 20 9:36 2016 Quant Results File: DOC1103.RES

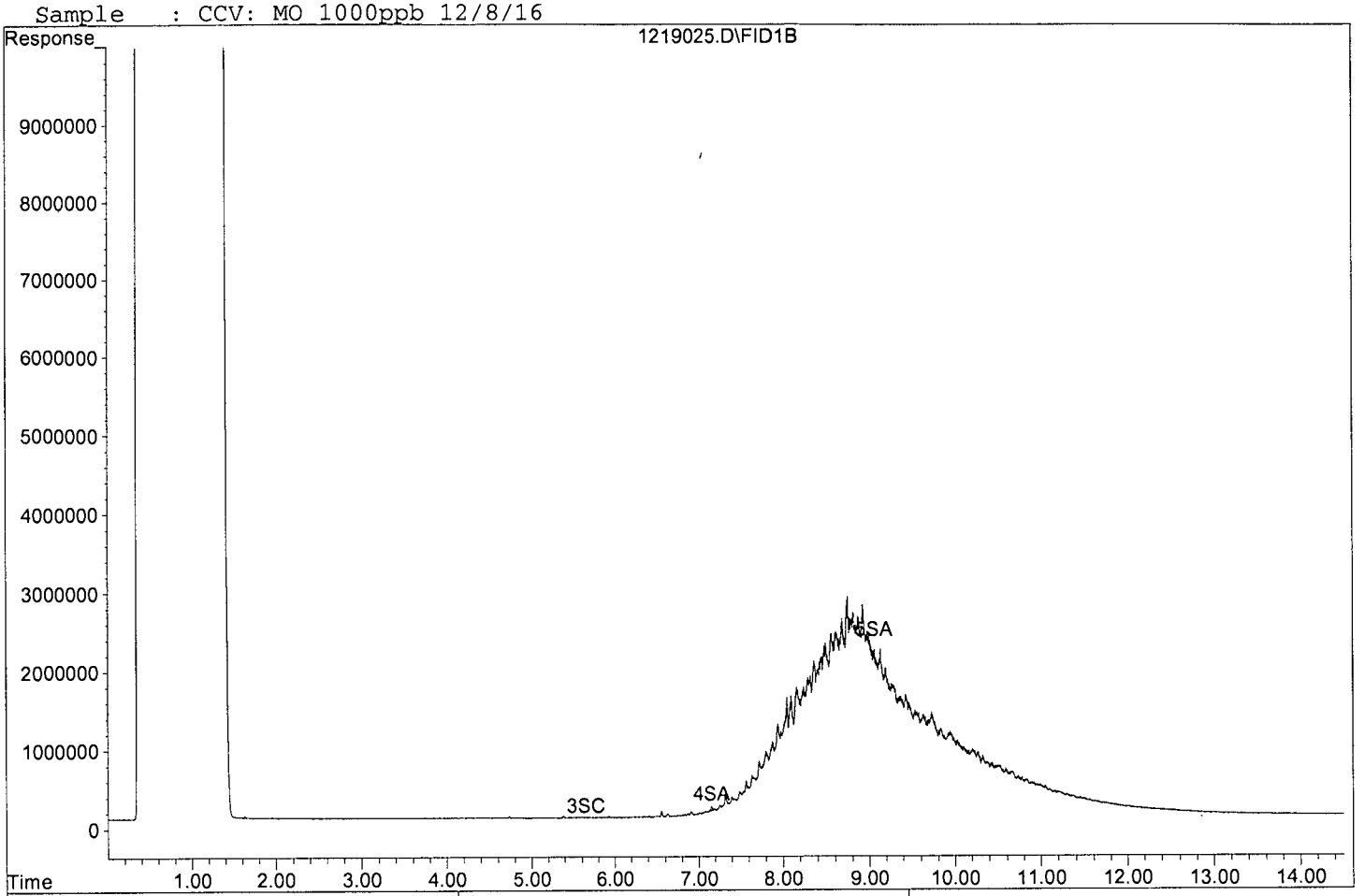
Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

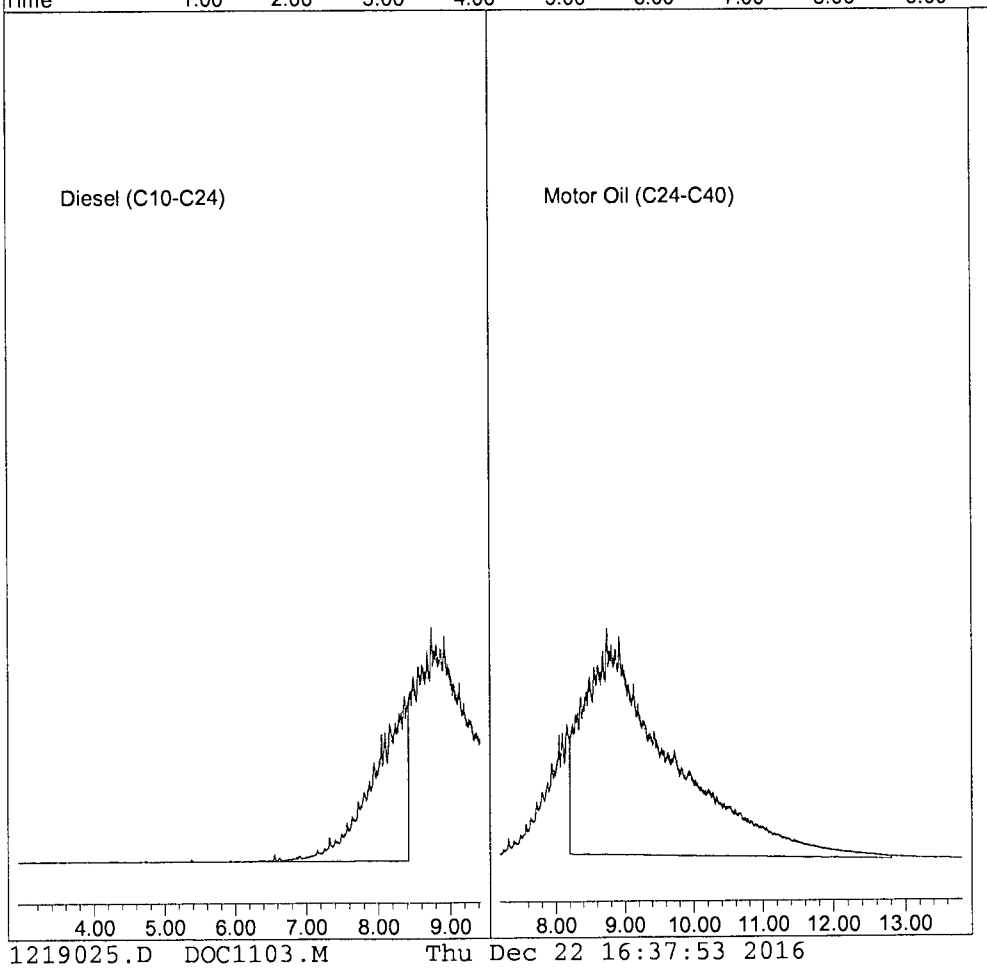
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SC Decanoic Acid(S)	5.65	12524	0.010 ppb
Surrogate Spike 48.000	Recovery	=	0.02%
4) SA Ortho-Terphenyl(S)	7.16	569215	0.122 ppb
Surrogate Spike 30.000	Recovery	=	0.41%
5) SA Octacosane(S)	9.06	253869	0.073 ppb
Surrogate Spike 30.000	Recovery	=	0.24%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	642892523	186.116 ppb
2) HBTM Motor Oil (C24-C40)	10.50	2281096463	818.846 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161219\1219025.D
Sample : CCV: MO 1000ppb 12/8/16





ORGANICS

Raw Data

APPL, INC.

Method Blank
EPA 8015B TPH WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161214W-47345 - 214777**
Batch ID: #DOC53-161214A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	12/14/16	12/19/16
BLANK	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	12/14/16	12/19/16
BLANK	SURROGATE: OCTACOSANE (S)	92.4	60-142			%	12/14/16	12/19/16
BLANK	SURROGATE: ORTHO-TERPHEN	77.8	56-125			%	12/14/16	12/19/16

Quant Method:DOC1103.M
Run #:1219004
Instrument:Apollo
Sequence:161219
Initials:DPO

GC SC-Blank-REG MDLs-DOD
Printed: 12/20/16 10:30:51 AM

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161219\1219004.D Vial: 4
Acq On : 12-19-16 10:53:03 Operator: DP
Sample : 161214A BLK 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Dec 20 17:11 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

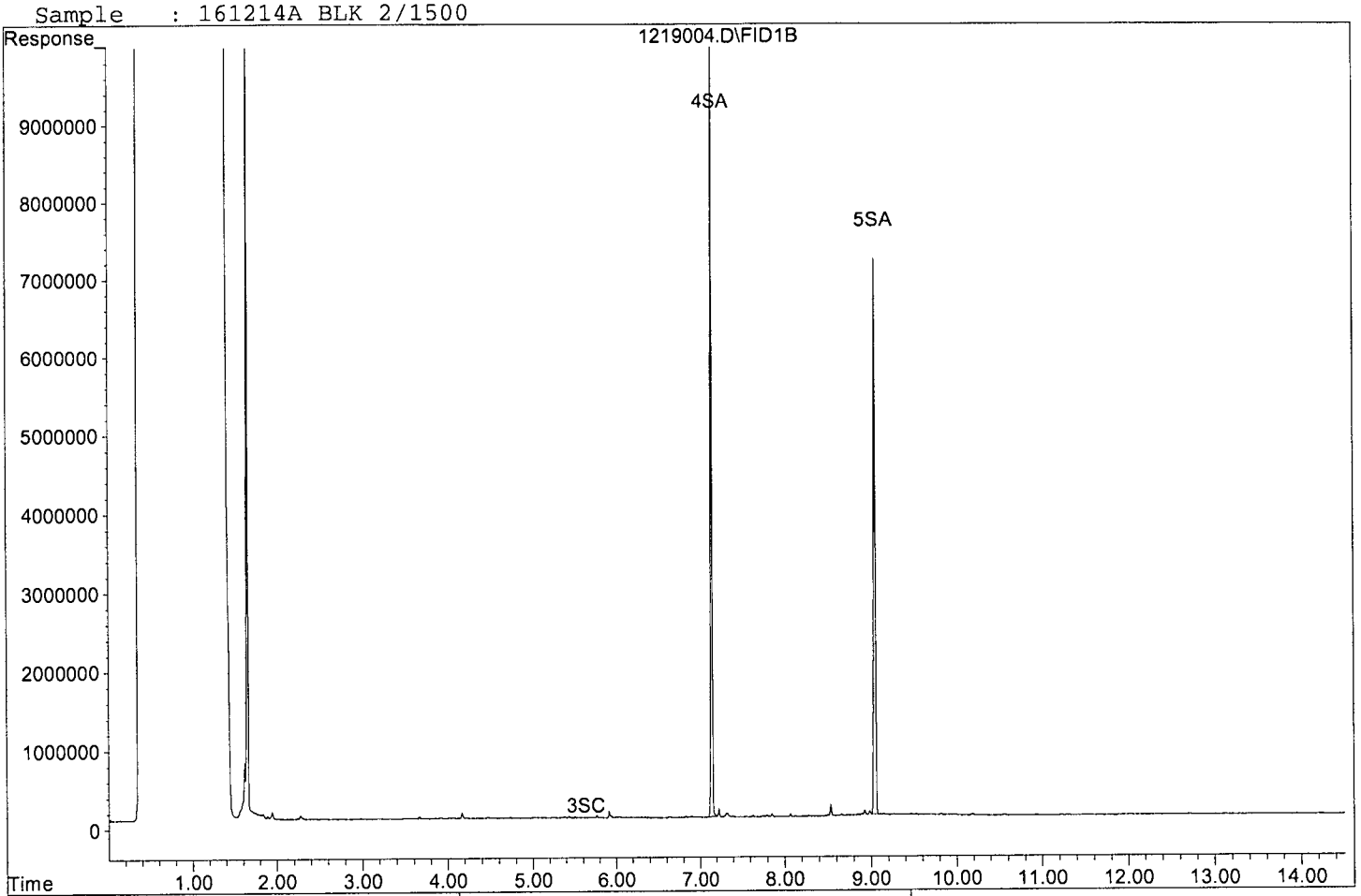
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

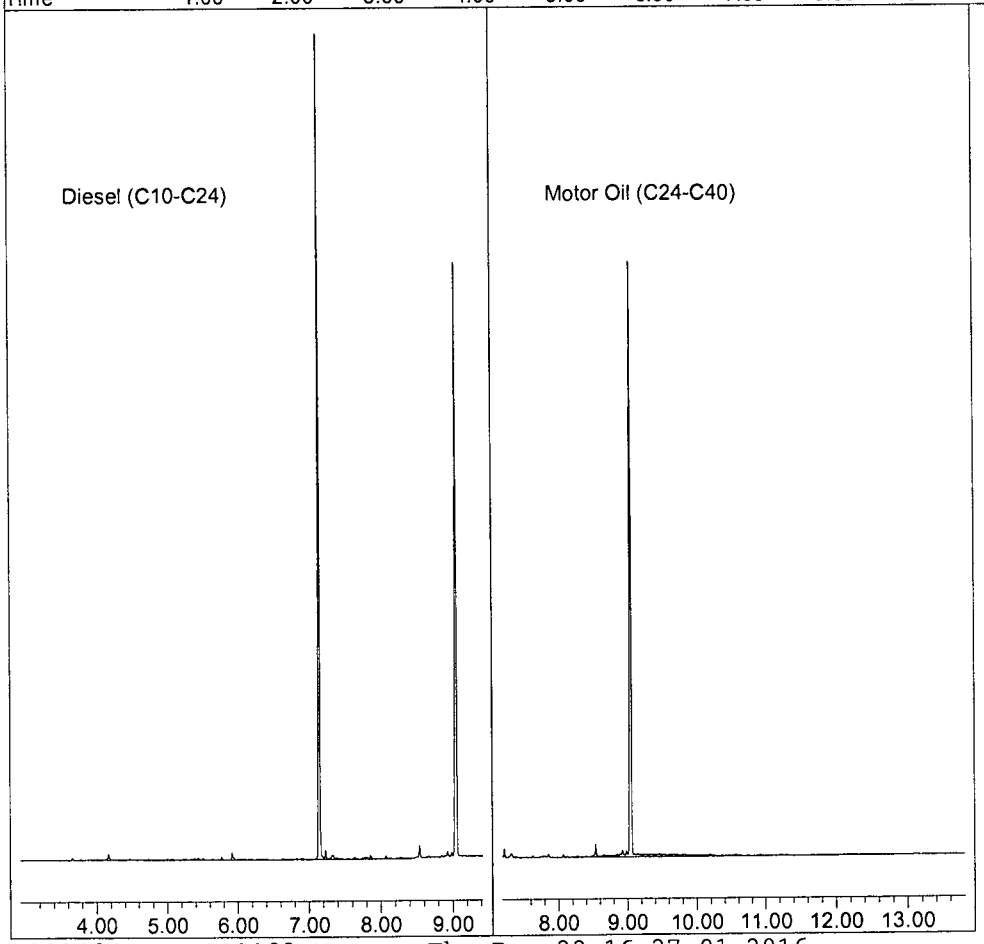
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SC Decanoic Acid(S)	5.64	71214	0.078	ppb
Surrogate Spike 64.000		Recovery =	0.12%	
4) SA Ortho-Terphenyl(S)	7.15	108850151	31.115	ppb
Surrogate Spike 40.000		Recovery =	77.79%	
5) SA Octacosane(S)	9.05	97054287	36.976	ppb
Surrogate Spike 40.000		Recovery =	92.44%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	24425938	9.428	ppb
2) HBTM Motor Oil (C24-C40)	10.50	34318693	16.426	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161219\1219004.D
Sample : 161214A BLK 2/1500





Laboratory Control Spike Recovery

EPA 8015B TPH WATER

APPL ID: **161214W-47345 LCS - 214777**
Batch ID: #DOC53-161214A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
DIESEL (C10-C24)	1330	1010	75.8	36-132
OIL (C24-C40)	1330	1000	75.0	41-113
SURROGATE: OCTACOSANE (S)	40.0	35.9	89.8	60-142
SURROGATE: ORTHO-TERPHENYL (S)	40.0	37.4	93.5	56-125

Comments: _____

Primary	SPK
Quant Method :	DOC1103.M
Extraction Date :	12/14/16
Analysis Date :	12/19/16
Instrument :	Apollo
Run :	1219005
Initials :	DPO

Printed: 12/20/16 10:30:46 AM
APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161219\1219005.D Vial: 5
Acq On : 12-19-16 11:13:14 Operator: DP
Sample : 161214A LCS-1 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Dec 20 10:10 2016 Quant Results File: DOC1103.RES

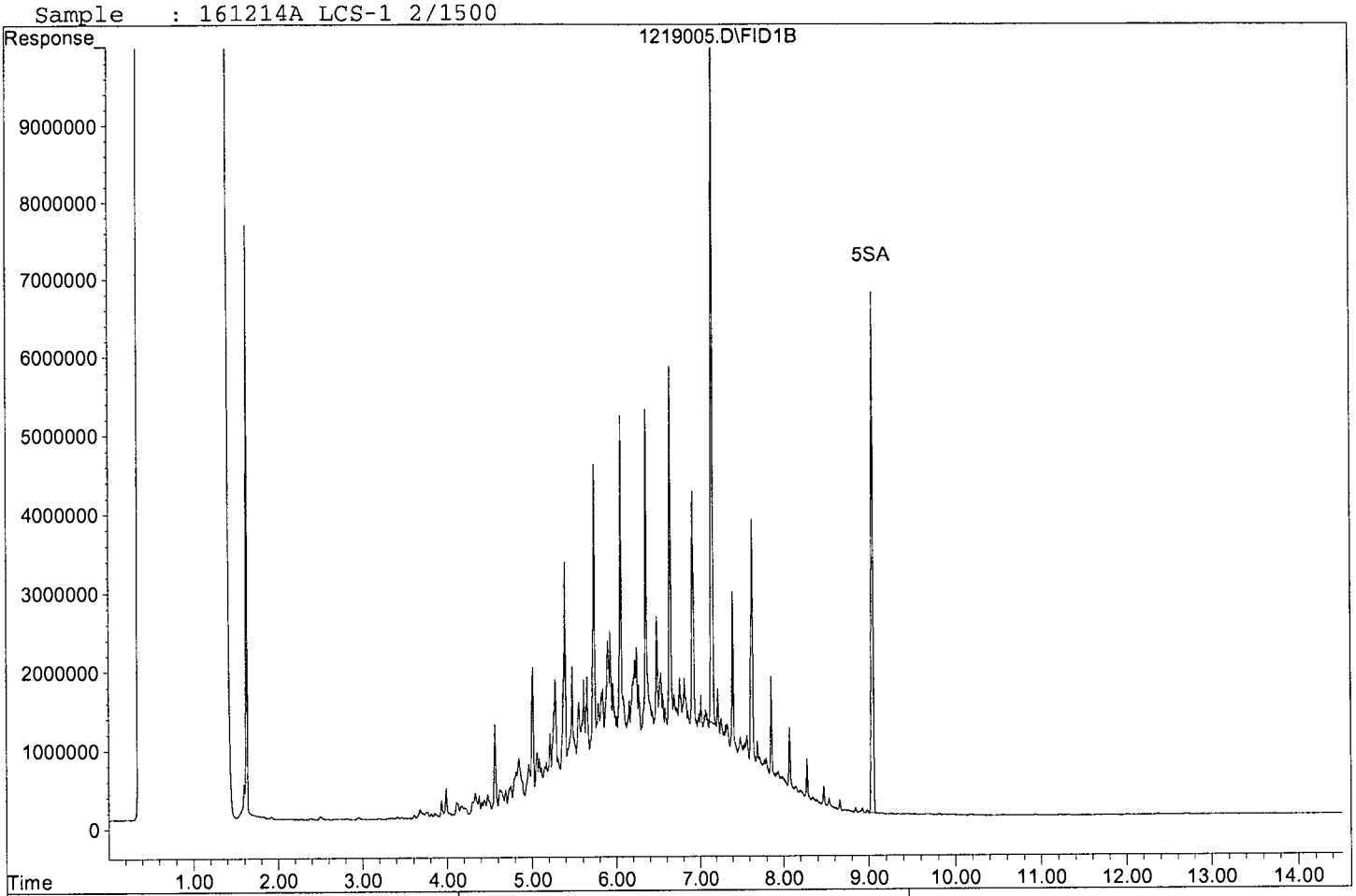
Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

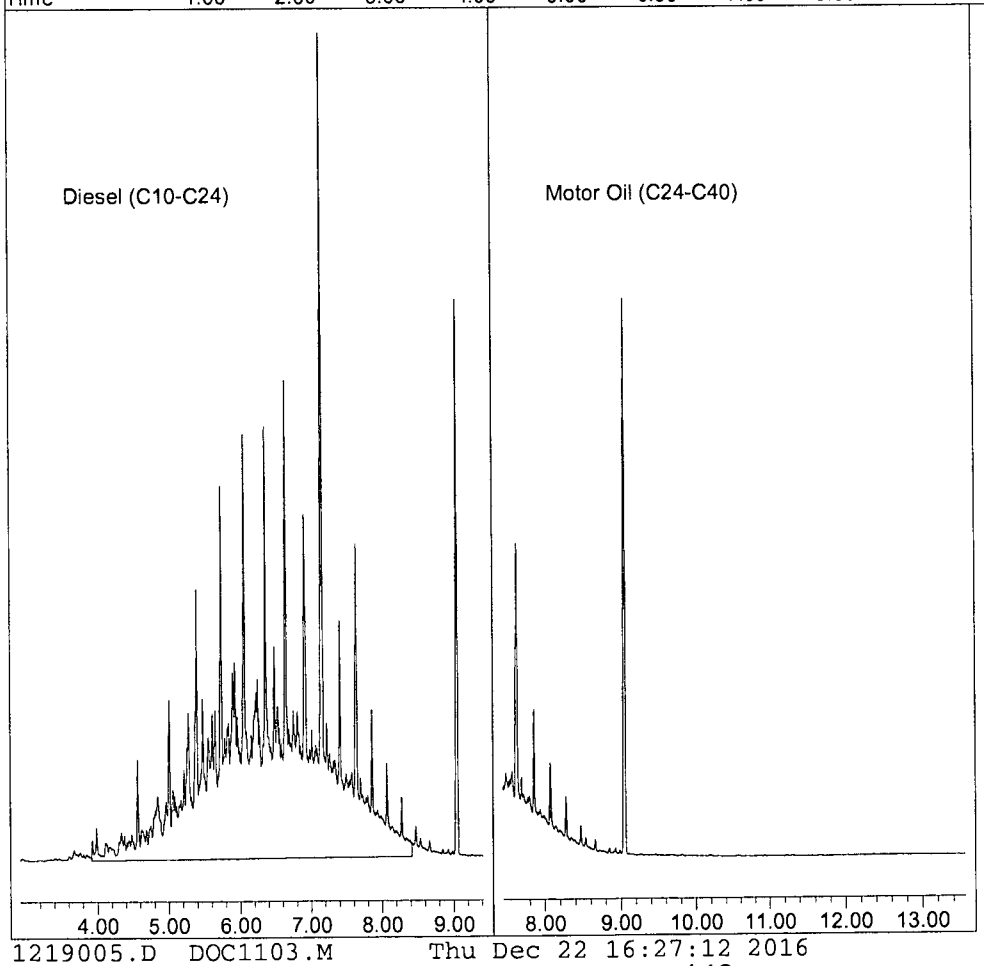
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.16	130790759	37.386 ppb
Surrogate Spike 40.000		Recovery =	93.47%
5) SA Octacosane(S)	9.05	94140786	35.866 ppb
Surrogate Spike 40.000		Recovery =	89.66%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	2615441387	1009.549 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161219\1219005.D
Sample : 161214A LCS-1 2/1500





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161219\1219006.D Vial: 6
Acq On : 12-19-16 11:33:26 Operator: DP
Sample : 161214A LCS-2 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Dec 20 10:10 2016 Quant Results File: DOC1103.RES

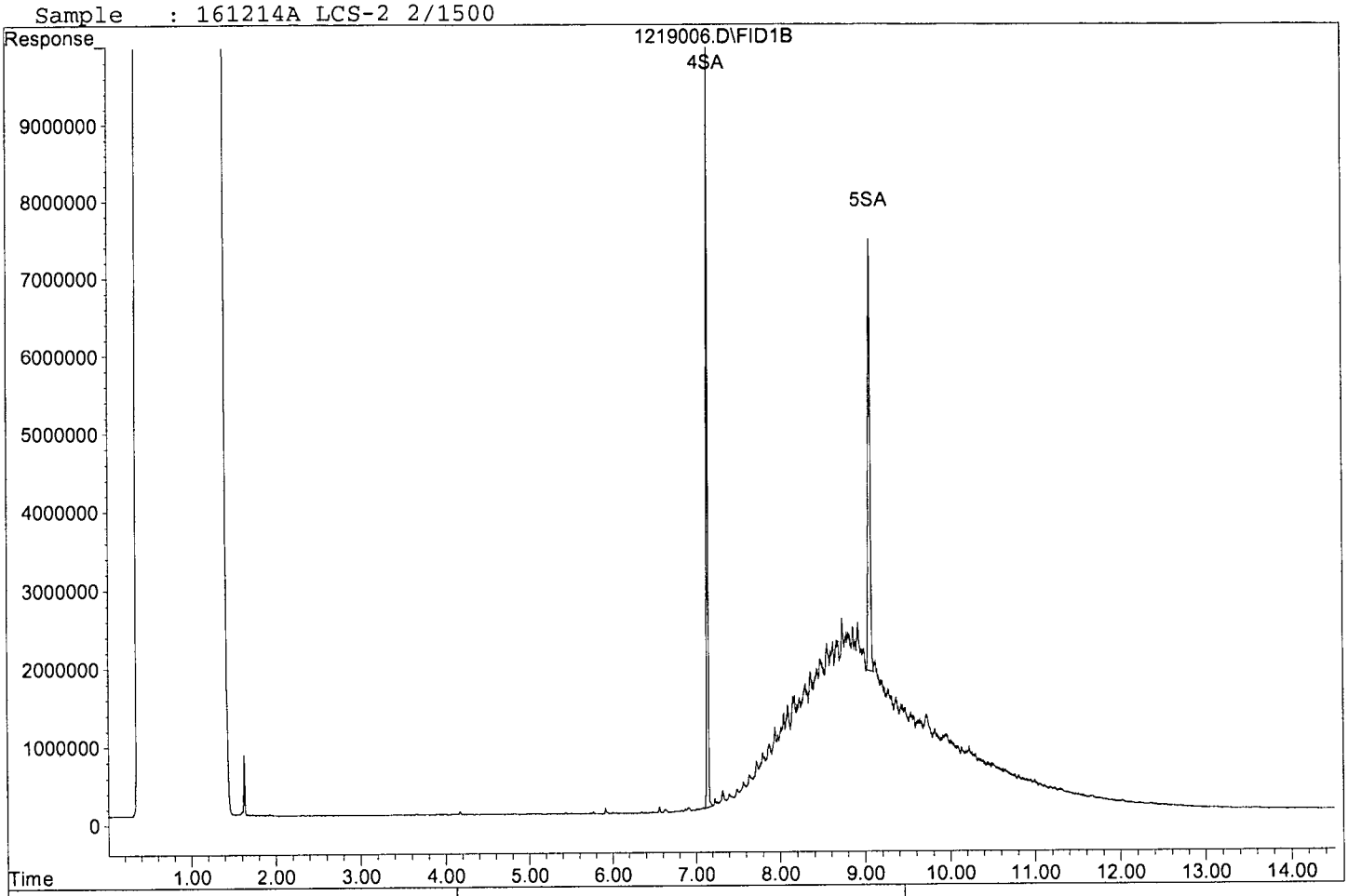
Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

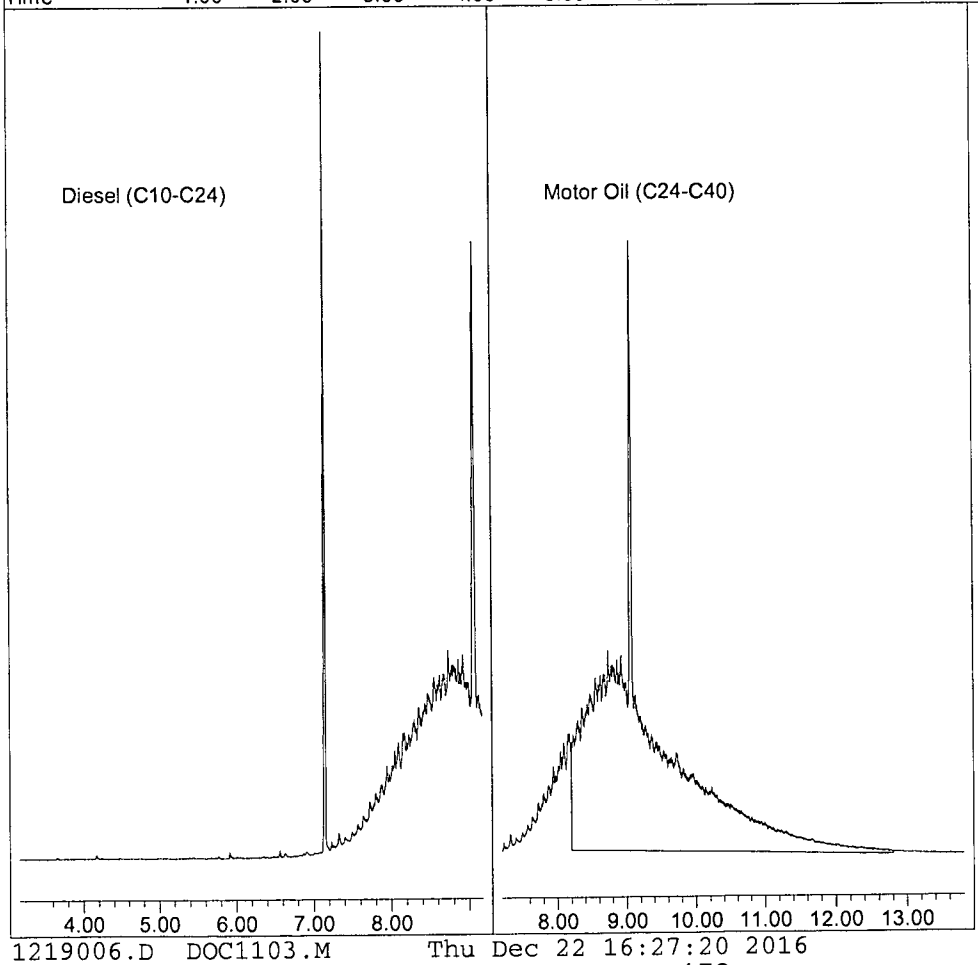
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.15	110998982	31.729 ppb
Surrogate Spike 40.000		Recovery =	79.32%
5) SA Octacosane(S)	9.07	96587272	36.798 ppb
Surrogate Spike 40.000		Recovery =	92.00%
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	2093643735	1002.072 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161219\1219006.D
Sample : 161214A LCS-2 2/1500





Matrix Spike Recoveries

EPA 8015B TPH WATER

APPL ID: **161214W-47345 MS - 214777**
Batch ID: #DOC53-161214A
Sample ID: AZ47345
Client ID: ERH135

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
DIESEL (C10-C24)	1330	14	1050	1020	77.7	75.5	36-132	2.9	30
OIL (C24-C40)	1330	16	1010	997	74.6	73.6	41-113	1.3	30
SURROGATE: OCTACOSANE (S)	40.0	NA	37.1	37.4	92.8	93.5	60-142		
SURROGATE: ORTHO-TERPHENYL (S)	40.0	NA	38.6	32.4	96.5	81.0	56-125		

Comments: _____

Primary	SPK	DUP
Quant Method :	DOC1103.M	DOC1103.M
Extraction Date :	12/14/16	12/14/16
Analysis Date :	12/19/16	12/19/16
Instrument :	Apollo	Apollo
Run :	1219010	1219013
Initials :	DPO	

Printed: 12/20/16 10:30:44 AM
APPL MSD SCII

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161219\1219010.D Vial: 10
Acq On : 12-19-16 12:54:37 Operator: DP
Sample : AZ47345W28 MS-1 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Dec 20 10:20 2016 Quant Results File: DOC1103.RES

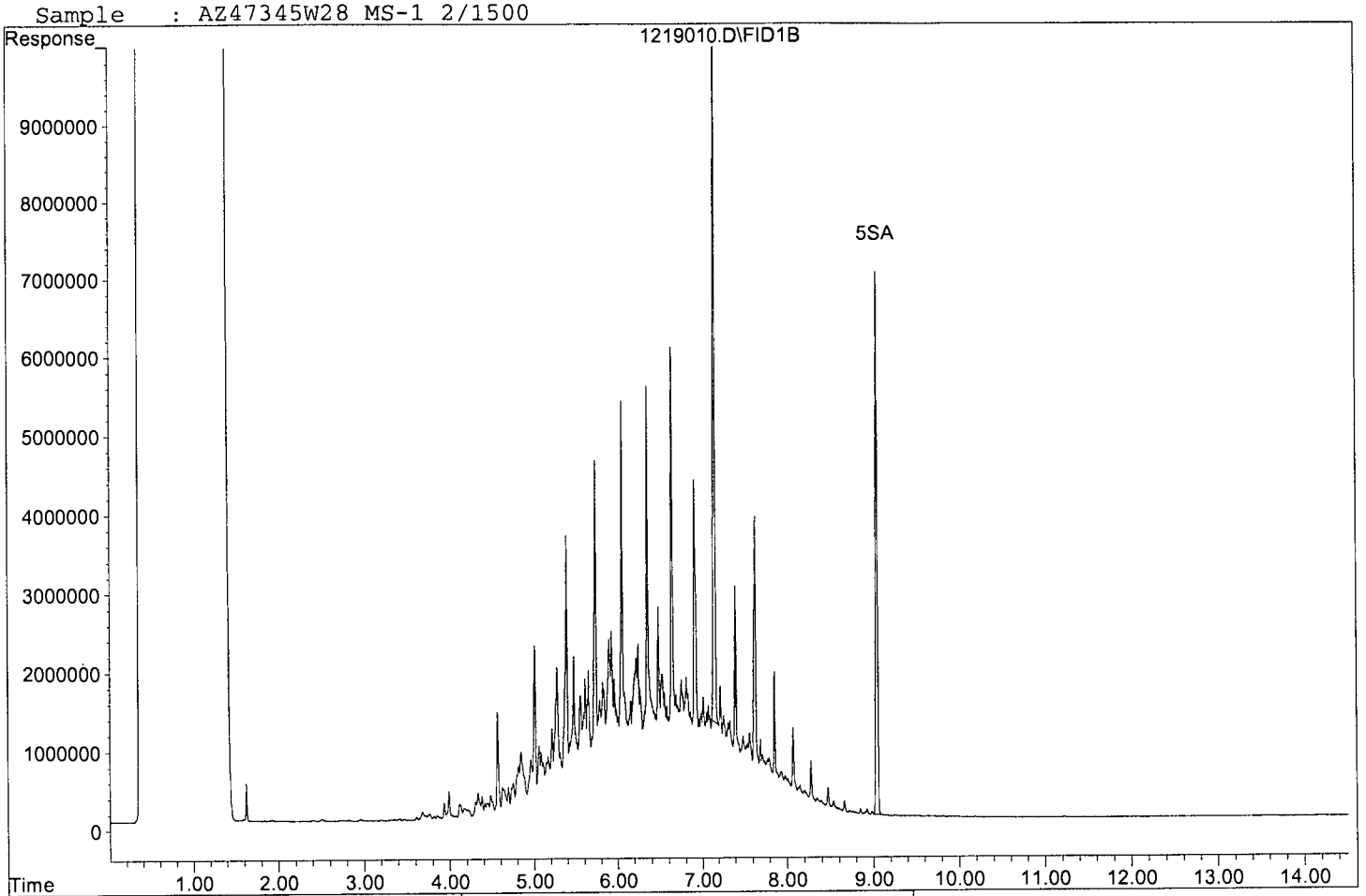
Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

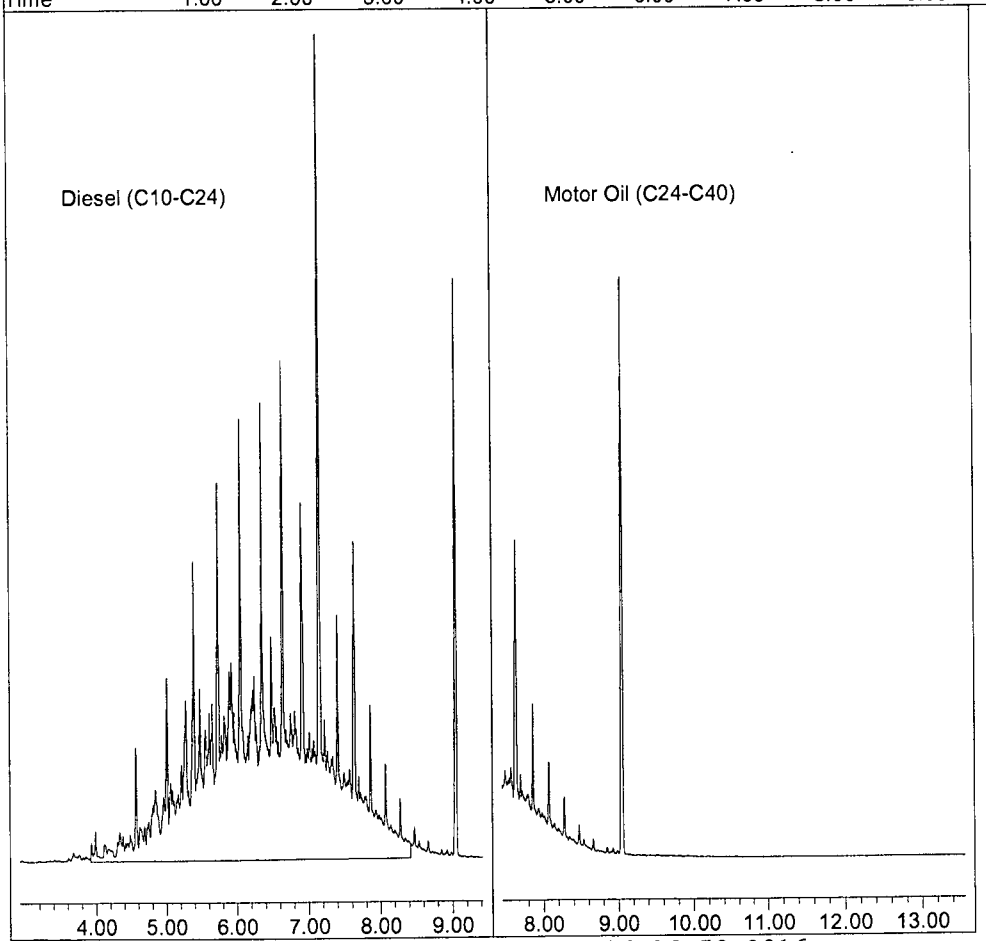
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.16	135006722	38.591 ppb
Surrogate Spike 40.000		Recovery =	96.48%
5) SA Octacosane(S)	9.05	97412092	37.113 ppb
Surrogate Spike 40.000		Recovery =	92.78%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	2727449493	1052.784 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161219\1219010.D
Sample : AZ47345W28 MS-1 2/1500





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161219\1219011.D Vial: 11
Acq On : 12-19-16 13:14:54 Operator: DP
Sample : AZ47345W25 MSD-1 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Dec 20 10:21 2016 Quant Results File: DOC1103.RES

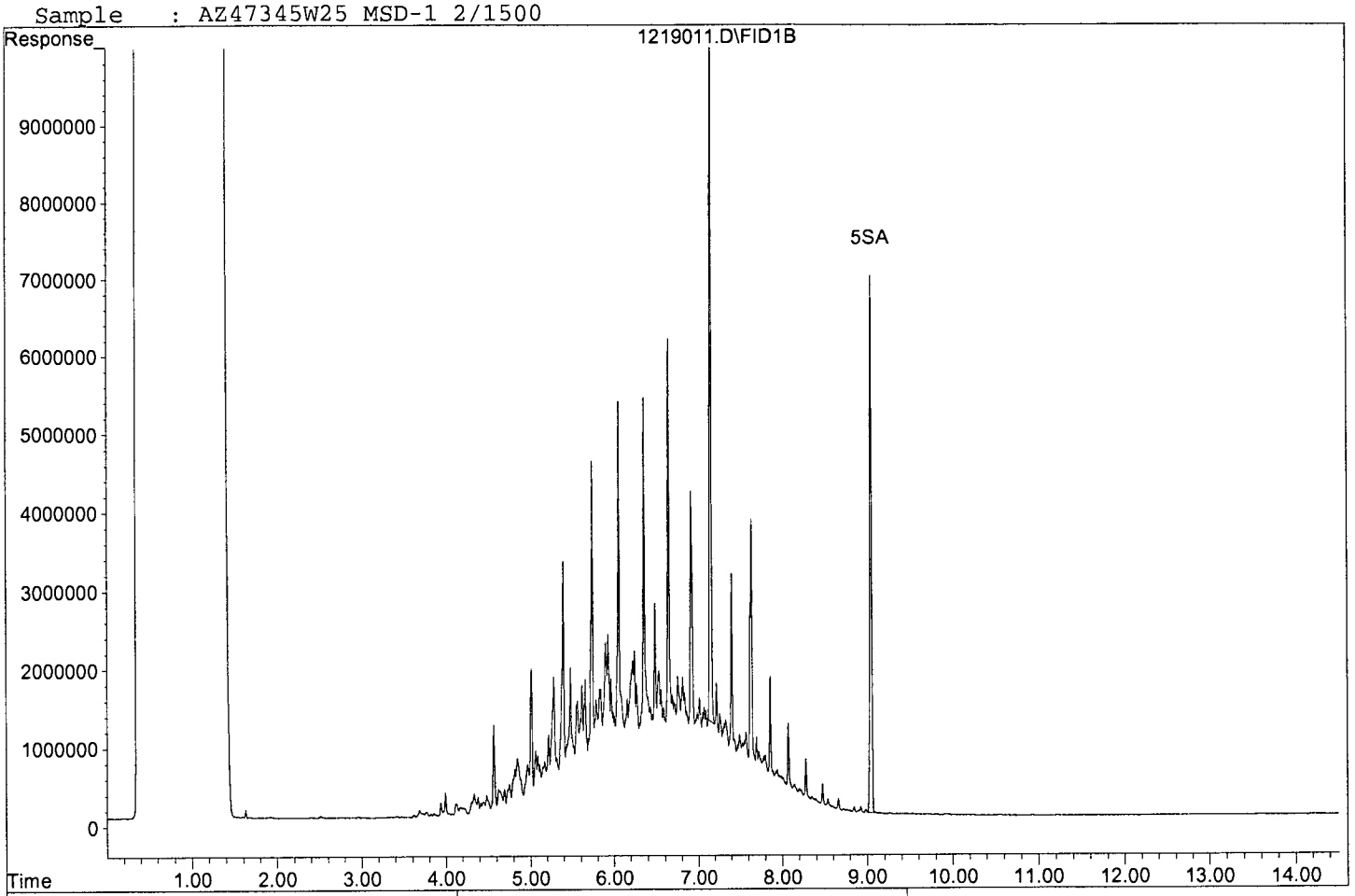
Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

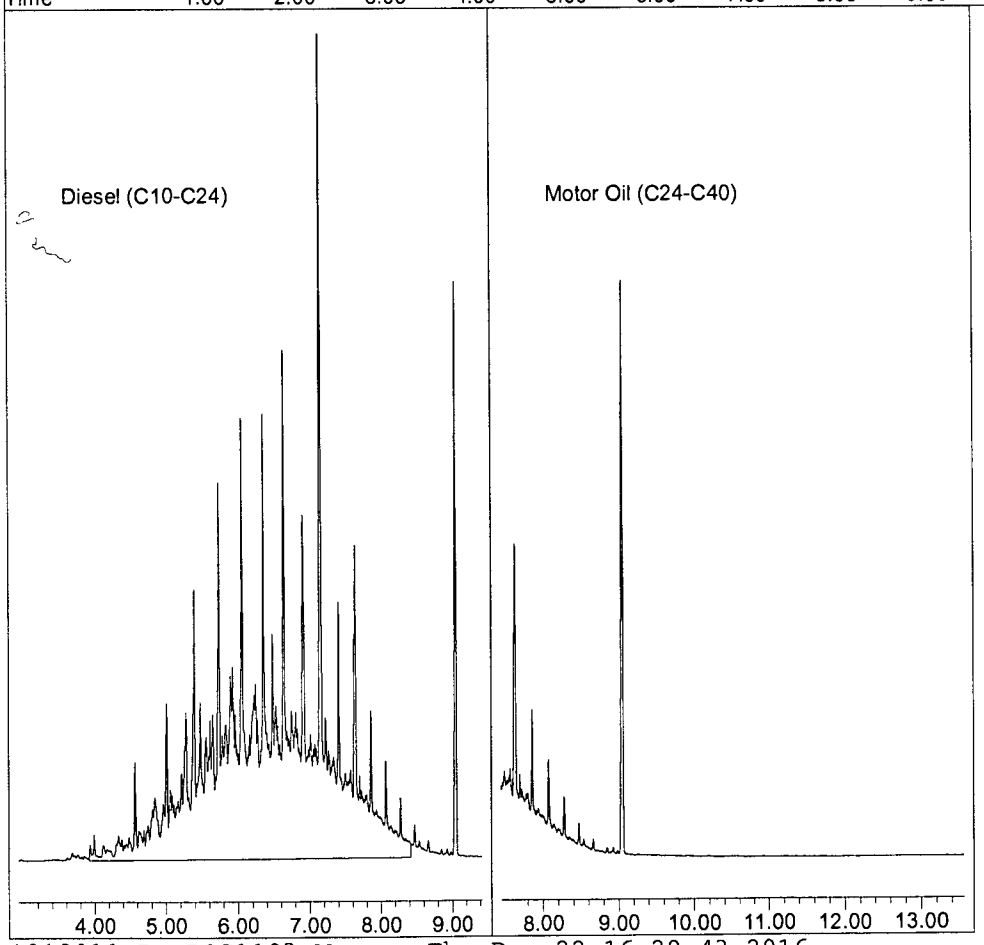
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.16	134483827	38.442 ppb
Surrogate Spike 40.000		Recovery =	96.10%
5) SA Octacosane(S)	9.05	96542615	36.781 ppb
Surrogate Spike 40.000		Recovery =	91.95%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	2638016017	1018.263 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161219\1219011.D
Sample : AZ47345W25 MSD-1 2/1500





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161219\1219012.D Vial: 12
Acq On : 12-19-16 13:35:17 Operator: DP
Sample : AZ47345W34 MS-2 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Dec 20 10:21 2016 Quant Results File: DOC1103.RES

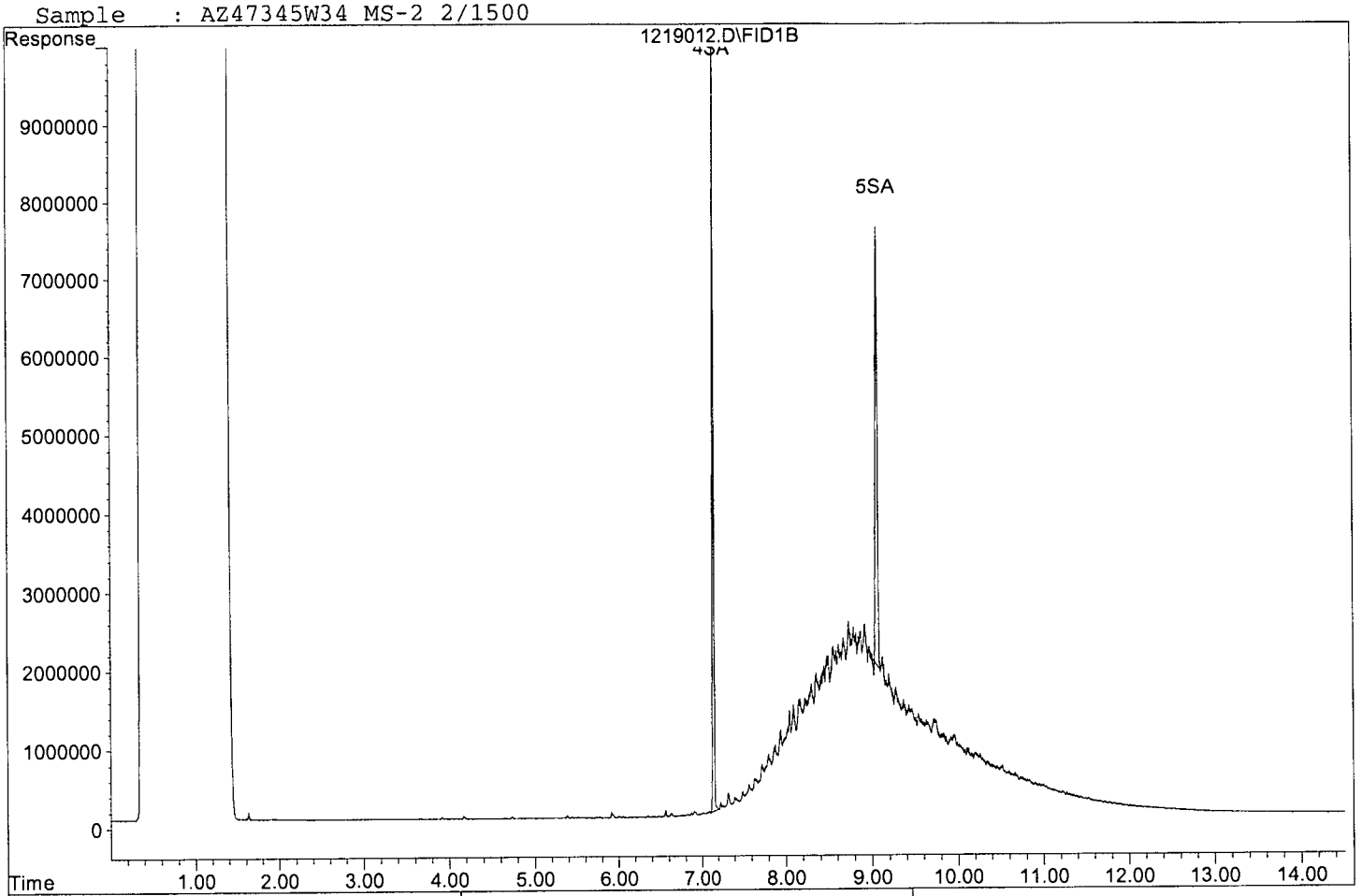
Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

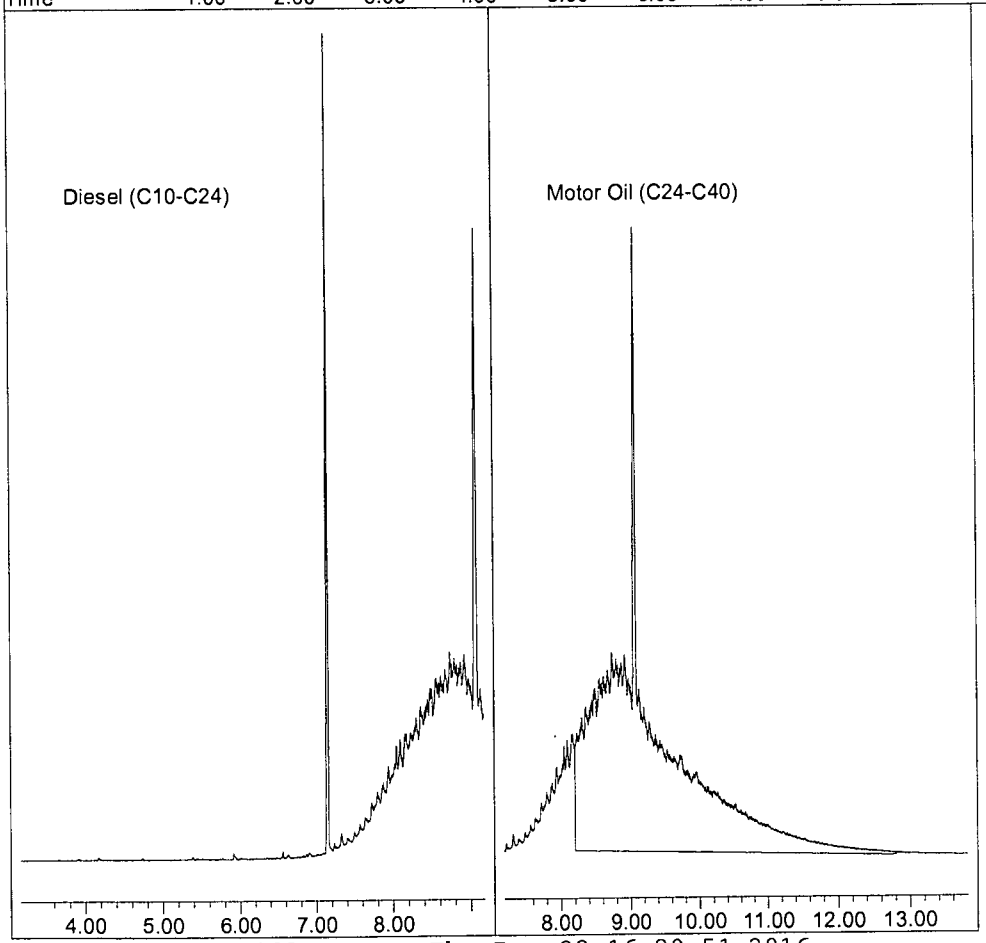
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.15	112982758	32.296	ppb
Surrogate Spike 40.000	Recovery =		80.74%	
5) SA Octacosane(S)	9.07	93624372	35.670	ppb
Surrogate Spike 40.000	Recovery =		89.18%	
Target Compounds				
2) HBTM Motor Oil (C24-C40)	10.50	2119906318	1014.642	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161219\1219012.D
Sample : AZ47345W34 MS-2 2/1500





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161219\1219013.D Vial: 13
Acq On : 12-19-16 13:55:40 Operator: DP
Sample : AZ47345W24 MSD-2 2/1500 Inst : Apollo
Misc : Water Multip1r: 1.33
IntFile : events.e
Quant Time: Dec 20 10:21 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

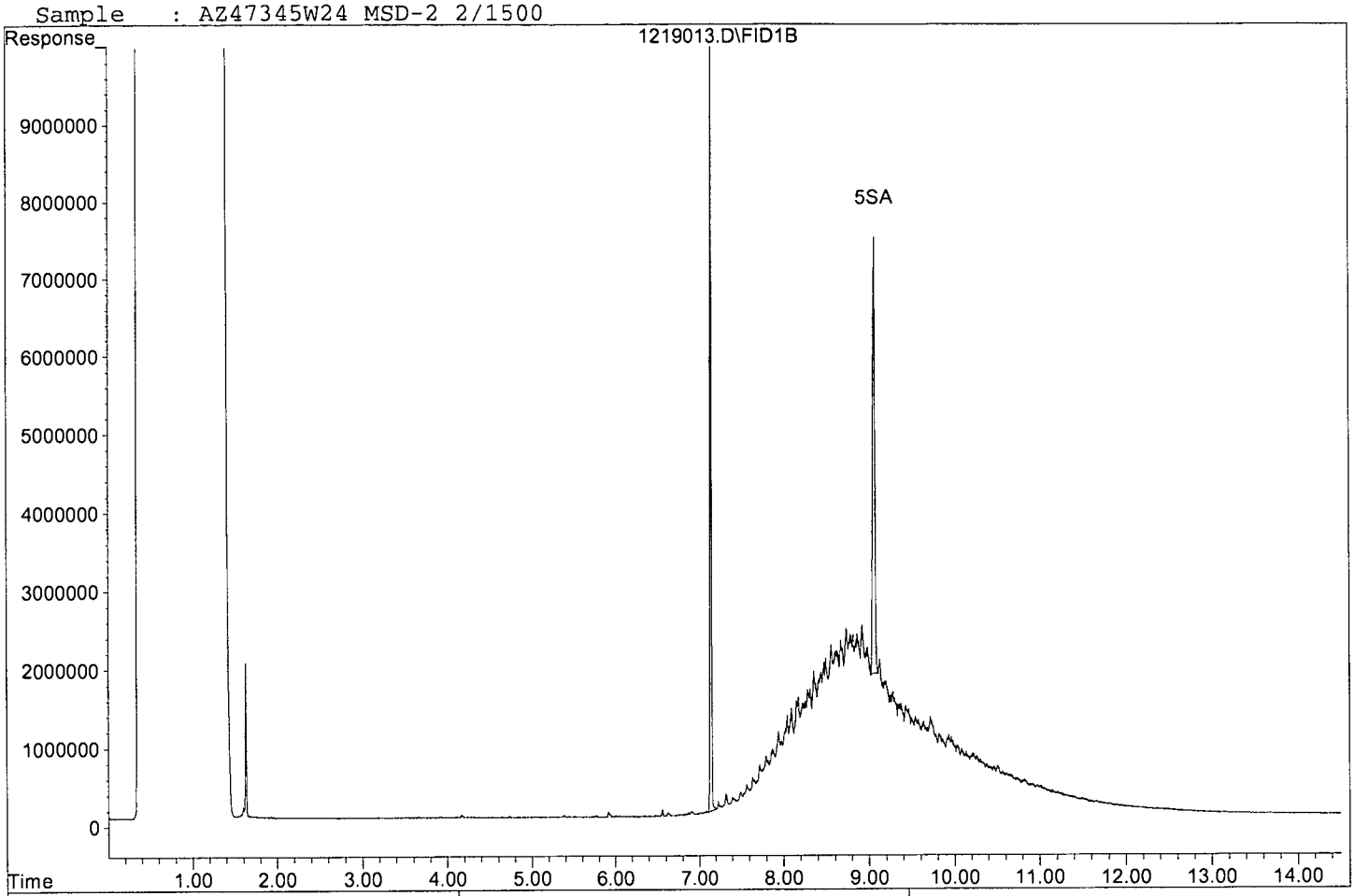
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

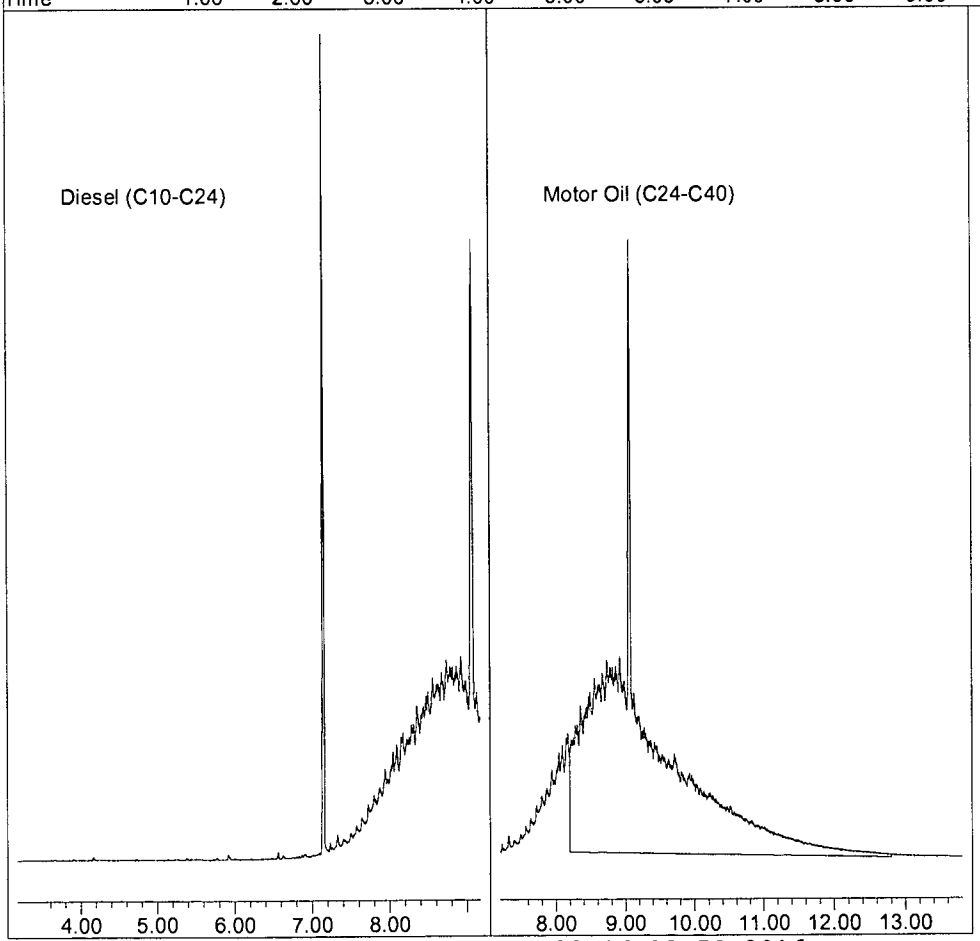
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.15	113425816	32.423 ppb
Surrogate Spike 40.000	Recovery =		81.06%
5) SA Octacosane(S)	9.07	98230772	37.425 ppb
Surrogate Spike 40.000	Recovery =		93.56%
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	2084055793	997.483 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161219\1219013.D
Sample : AZ47345W24 MSD-2 2/1500





DIESEL CURVE		prep:11/03/16-D.P.		ex:6/03/17						
STD	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL
DIESEL	1000	237562-37104	11/03/16	06/03/17	10	10	40	60	80	100
MC	N/A	56098			990	90	60	40	20	NA
				Final VOL.	1000	100	100	100	100	100
				ppm	10	100	400	600	800	1000

MOTOR OIL CURVE		prep: 10/28/16-D.P.		ex:4/26/17						
STD	**[µg/mL]**	**LOT #**	**DATE**	**EXP. DATE**	**µL**	**µL**	**µL**	**µL**	**µL**	**µL**
MOTOR OIL	2000		10/26/16	04/26/17	10	25	125	500	750	200
MC	N/A	56098			990	975	875	500	250	NA
				Final VOL.	1000	1000	1000	1000	1000	200
				ppm	20	50	250	1000	1500	2000

Prep: 11/03/16-D.P. Exp: 6/03/17						
DIESEL CAL STD.						
STD.	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT / LOT#
DIESEL FUEL #2	50,000 ug/mL	O2SI CAT#011598-03 LOT#237562-37104 OP: 11/03/06 EXP: 11/03/17	500 µL	25 mL	1000ug/mL	MC LOT# 56098
O-TERPHENYL OCTACOSANE	600 ug/mL	O2SI CAT#110316-05 LOT#266278-37107 OP: 10/27/16 EXP: 10/27/17	2080 µL		50ug/mL	

Prep: 10/26/16 -D.P. Ex: 4/26/17						
MOTOR OIL CAL STD						
STD.	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT / LOT#
MOTOR OIL	50,000 ug/mL	O2SI CAT#116390-02 LOT#239390-36901 OP:10/26/16 EXP:10/26/17	1mL	25mL	2000ug/mL	MC LOT# 56098

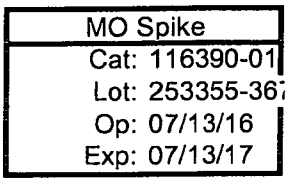
DIESEL SECOND SOURCE prep: 08/01/16-D.P. ex: 07/6/17						
standard	**initial conc.**	**SOURCE DATE**	**ALIQUOT**	**FINAL VOL.**	**FINAL CONC.**	**SOLVENT LOT**
DIESEL SECOND SOURCE	50,000 ug/mL	O2SI CAT#011598-03-SS LOT#244813-34634 OP: 08/28/15 Exp 03/14/19	200uL	10mL	1000ug/mL	MC #56061

MOTOR OIL SECOND SOURCE prep: 07/6/16-L.H. ex: 07/6/17						
standard	initial conc.	SOURCE DATE	ALIQUOT	FINAL VOL.	FINAL CONC.	SOLVENT LOT
MOTOR OIL SECOND SOURCE	50,000 ug/mL	O2SI CAT#116390-02-SS LOT#244814-34637 OP: 07/06/16 Exp 07/06/17	200uL	10mL	1000ug/mL	MC #56061

DIESEL CCV 400ug/ml						
Prep: 11/03/16-D.P. Ex: 02/03/16						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
DIESEL STD.	1000 µg/mL	Diesel Std.	2000µL	5mL	400 µg/ml	MC
	PREP:	11/03/16				56098
	Exp:	06/03/17				

MOTOR OIL CCV 1000ppm						
Prep: 11/21/16-G.A. Ex: 2/21/17						
STANDARD	**INITIAL CONC.**	**SOURCE DATE**	**ALIQUOT**	**FINAL VOL**	**FINAL CONC.**	**SOLVENT /LOT#**
MO STD.	2000 µg/mL	MO Std.	2500µL	5mL	1000 µg/ml	MC
	PREP:	10/26/16				56098
	Exp:	04/26/17				

Diesel Fuel #2
Conc. 50000 ug/ml
O2SI
CAT #011598-03
LOT# 237562-37102
OP: 10/25/16 RH
EXP: 10/25/17


MO Spike
Cat: 116390-01
Lot: 253355-36
Op: 07/13/16
Exp: 07/13/17

THC Surrogate
Cat: 110316-05
Lot: 266278-37
Op: 10/27/16
Exp: 10/27/17

_SEP011LL

Organic Extraction Worksheet

Method	THC Sep Fun Ext 3510C (LOW LEVEL)	Extraction Set	161214A	Extraction Method	SEP011LL	Units	mL

Spiked ID 1	Diesel Spike 12-13-16 exp 12-13-17		Surrogate ID 1	THC Surrogate 12-14-16 exp 12-14-17	
Spiked ID 2	Motor Oil Spike 12-12-16 exp 12-12-17		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	12/14/16 17:00	
Spiked ID 8			Ext. End Time:	12/17/16 11:30	
			GC Requires Extract By:	**12/20/16 0:00**	

pH1			Water Bath Temp Criteria	35,35,35 °
pH2				
pH3				

Spiked By: KY **Date** 12/14/16 **Witnessed By:** JR **Date** 12/14/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	161214A Blk				0.1	1 equip	1500 E-WB1	2	7	12/14/16 17:00	
2	161214A LCS-1		0.040	1	0.1	1 equip	1500 E-WB2	2	7	12/14/16 17:00	
3	161214A LCS-2		0.040	2	0.1	1 equip	1500 E-WB3	2	7	12/14/16 17:00	
4	AZ47343	AZ47343W13			0.1	1 equip	1500 E-WB1	2	7	12/14/16 17:00	81734 RUSH 1 WEEK
5	AZ47344	AZ47344W14			0.1	1 equip	1500 E-WB2	2	7	12/14/16 17:00	81734 RUSH 1 WEEK
6	AZ47345 MS-1	AZ47345W28	0.040	1	0.1	1 equip	1500 E-WB3	2	7	12/14/16 17:00	81734 RUSH 1 WEEK
7	AZ47345 MSD-1	AZ47345W25	0.040	1	0.1	1 equip	1500 E-WB1	2	7	12/14/16 17:00	81734 RUSH 1 WEEK
8	AZ47345 MS-2	AZ47345W34	0.040	2	0.1	1 equip	1500 E-WB2	2	7	12/14/16 17:00	81734 RUSH 1 WEEK
9	AZ47345 MSD-2	AZ47345W24	0.040	2	0.1	1 equip	1500 E-WB3	2	7	12/14/16 17:00	81734 RUSH 1 WEEK
10	AZ47345	AZ47345W30			0.1	1 equip	1500 E-WB1	2	7	12/14/16 17:00	81734 RUSH 1 WEEK

KY 12/17/16

Solvent and Lot#	
MC	56153
Na2SO4	16C255214
ph-indicator strips	HC 574756
Filter Paper	400112

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	D.L.
Date	12/19/16
Time	9:30
Refrigerator	Reboun 4

	Technician's Initials
Scanned By	KY
Sample Preparation	KY,JR,DL
Extraction	KY,JR,DL
Concentration	DL

Modified	12/17/16 12:09:51 PM

Reviewed By: KY **Date** 12/17/16

Injection Log

Directory: G:\APOLLO\DATA\161028\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	1028002.D	1	MO 20ppb 10/28/16	Mix(B)	10-28-16 9:07:30
2	3	1028003.D	1	MO 50ppb 10/28/16	Mix(B)	10-28-16 9:28:13
3	4	1028004.D	1	MO 250ppb 10/28/16	Mix(B)	10-28-16 9:49:06
4	5	1028005.D	1	MO 1000ppb 10/28/16	Mix(B)	10-28-16 10:09:58
5	6	1028006.D	1	MO 1500ppb 10/28/16	Mix(B)	10-28-16 10:30:51
6	7	1028007.D	1	MO 2000ppb 10/28/16	Mix(B)	10-28-16 10:51:50
7	8	1028008.D	1	MO SS 1000ppb 7/6/16	Mix(B)	10-28-16 11:12:44
8	4	1103004.D	1	DIESEL 10ppb 11/3/16	Mix(A)	11-3-16 9:45:14
9	6	1103006.D	1	DIESEL 400ppb 11/3/16	Mix(A)	11-3-16 10:26:16
10	7	1103007.D	1	DIESEL 600ppb 11/3/16	Mix(A)	11-3-16 10:46:56
11	8	1103008.D	1	DIESEL 800ppb 11/3/16	Mix(A)	11-3-16 11:07:39
12	9	1103009.D	1	DIESEL 1000ppb 11/3/16	Mix(A)	11-3-16 11:28:31
13	11	1103011.D	1	DIESEL 100ppb 11/3/16	Mix(A)	11-3-16 12:56:47
14	12	1103012.D	1	DIESEL-SS 400ppb 8/1/16	Mix(A)	11-3-16 13:25:11
15	2	1219002.D	1	CCV: DIESEL 400ppb 12/8/16	Mix(A)	12-19-16 10:12:48
16	3	1219003.D	1	CCV: MO 1000ppb 12/8/16	Mix(B)	12-19-16 10:32:50
17	4	1219004.D	1.33333	161214A BLK 2/1500	Water	12-19-16 10:53:03
18	5	1219005.D	1.33333	161214A LCS-1 2/1500	Water	12-19-16 11:13:14
19	6	1219006.D	1.33333	161214A LCS-2 2/1500	Water	12-19-16 11:33:26
20	7	1219007.D	1.33333	AZ47343W13 2/1500	Water	12-19-16 11:53:39
21	8	1219008.D	1.33333	AZ47344W14 2/1500	Water	12-19-16 12:14:02
22	9	1219009.D	1.33333	AZ47345W30 2/1500	Water	12-19-16 12:34:20
23	10	1219010.D	1.33333	AZ47345W28 MS-1 2/1500	Water	12-19-16 12:54:37
24	11	1219011.D	1.33333	AZ47345W25 MSD-1 2/1500	Water	12-19-16 13:14:54
25	12	1219012.D	1.33333	AZ47345W34 MS-2 2/1500	Water	12-19-16 13:35:17
26	13	1219013.D	1.33333	AZ47345W24 MSD-2 2/1500	Water	12-19-16 13:55:40
27	24	1219024.D	1	CCV: DIESEL 400ppb 12/8/16	Mix(A)	12-19-16 17:40:53
28	25	1219025.D	1	CCV: MO 1000ppb 12/8/16	Mix(B)	12-19-16 18:01:12

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank
EPA 8270D SIM

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161214W-47345 - 214748**
Batch ID: #SIMDO-161214A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/14/16	12/16/16
BLANK	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/14/16	12/16/16
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	12/14/16	12/16/16
BLANK	SURROGATE: 2-FLUORBIPHENY	57.7	53-106			%	12/14/16	12/16/16
BLANK	SURROGATE: NITROBENZENE-	65.3	55-111			%	12/14/16	12/16/16
BLANK	SURROGATE: TERPHENYL-D14 (	75.8	58-132			%	12/14/16	12/16/16

Quant Method: L1212P.M
Run #: 1212L105
Instrument: Linus
Sequence: L161212
Initials: RHA

GC SC-Blank-REG MDLs-DOD
Printed: 12/19/16 1:55:45 PM

Laboratory Control Spike Recovery
EPA 8270D SIM

APPL ID: **161214W-47345 LCS - 214748**
Batch ID: #SIMDO-161214A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1-METHYLNAPHTHALENE	5.00	3.31	66.2	41-115
2-METHYLNAPHTHALENE	5.00	3.73	74.6	39-114
NAPHTHALENE	5.00	3.42	68.4	43-114
SURROGATE: 2-FLUORBIPHENYL (S)	5.00	3.53	70.6	53-106
SURROGATE: NITROBENZENE-D5 (S)	5.00	3.91	78.2	55-111
SURROGATE: TERPHENYL-D14 (S)	5.00	4.21	84.2	58-132

Comments: _____

Primary	SPK
Quant Method :	L1212P.M
Extraction Date :	12/14/16
Analysis Date :	12/16/16
Instrument :	Linus
Run :	1212L106
Initials :	RHA

Printed: 12/19/16 1:55:38 PM
APPL Standard LCS

Matrix Spike Recoveries

EPA 8270D SIM

APPL ID: **161214W-47345 MS - 214748**
Batch ID: #SIMDO-161214A
Sample ID: AZ47345
Client ID: ERH135

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
1-METHYLNAPHTHALENE	5.00	ND	3.01	3.12	60.2	62.4	41-115	3.6	20
2-METHYLNAPHTHALENE	5.00	ND	3.35	3.51	67.0	70.2	39-114	4.7	20
NAPHTHALENE	5.00	ND	3.06	3.13	61.2	62.6	43-114	2.3	20
SURROGATE: 2-FLUORBIPHENYL (S)	5.00	NA	3.06	3.24	61.2	64.8	53-106		
SURROGATE: NITROBENZENE-D5 (S)	5.00	NA	3.25	3.41	65.0	68.2	55-111		
SURROGATE: TERPHENYL-D14 (S)	5.00	NA	3.60	3.86	72.0	77.2	58-132		

Comments: _____

Primary	SPK	DUP
Quant Method :	L1212P.M	L1212P.M
Extraction Date :	12/14/16	12/14/16
Analysis Date :	12/16/16	12/16/16
Instrument :	Linus	Linus
Run :	1212L109	1212L112
Initials :	RHA	

Printed: 12/19/16 1:55:35 PM
APPL MSD SCII

8270D-SIM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81734

Case No: 81734 Date Analyzed: 12/16/16

Matrix: WATER Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: 2-FLUORBIPHENYL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161214A-BLK	Blank	53-106	57.7		55-111	65.3	
161214A-LCS	Lab Control Spike	53-106	70.6		55-111	78.2	
AZ47343	ERH137	53-106	62.5		55-111	69.0	
AZ47344	ERH141	53-106	70.0		55-111	75.9	
AZ47345-MS	Matrix Spike	53-106	61.2		55-111	65.0	
AZ47345-MSD	Matrix SpikeD	53-106	64.8		55-111	68.2	
AZ47345	ERH135	53-106	76.5		55-111	79.2	

Comments: Batch: #SIMDO-161214A

8270D-SIM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81734

Case No: 81734 Date Analyzed: 12/16/16

Matrix: WATER Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: TERPHENYL-D14 (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
161214A-BLK	Blank	58-132	75.8				
161214A-LCS	Lab Control Spike	58-132	84.2				
AZ47343	ERH137	58-132	77.3				
AZ47344	ERH141	58-132	89.0				
AZ47345-MS	Matrix Spike	58-132	72.0				
AZ47345-MSD	Matrix SpikeD	58-132	77.2				
AZ47345	ERH135	58-132	93.7				

Comments: Batch: #SIMDO-161214A

8270D-SIM

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81734

Case No: 81734 Date Analyzed: 12/16/16

Matrix: WATER Instrument: Linus

Blank ID: 161214A-BLK Time Analyzed: 1214

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161214A-BLK	Blank	1212L105	12/16/16 1214
161214A-LCS	Lab Control Spike	1212L106	12/16/16 1247
AZ47343	ERH137	1212L107	12/16/16 1320
AZ47344	ERH141	1212L108	12/16/16 1354
161214A-MS	Matrix Spike	1212L109	12/16/16 1427
161214A-MSD	Matrix SpikeD	1212L112	12/16/16 1607
AZ47345	ERH135	1212L113	12/16/16 1641

Comments: Batch: #SIMDO-161214A

Printed: 12/19/16 1:55:32 PM

Form 4, Blank Summary

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81734
Matrix: Water
ID: SV Tune 11/15/16

SDG No: 81734
Date Analyzed: 12/12/16
Instrument: Linus
Time Analyzed: 10:19

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.1 ug/ml PAH 12/12/	1212L005.D	12/12/16 10:36
2		0.2 ug/ml PAH 12/12/	1212L006.D	12/12/16 11:09
3		5.0 ug/ml PAH 12/12/	1212L009.D	12/12/16 12:49
4		10.0 ug/ml PAH 12/12	1212L010.D	12/12/16 13:22
5		50.0 ug/ml PAH 12/12	1212L011.D	12/12/16 13:54
6		100.0 ug/ml PAH 12/1	1212L012.D	12/12/16 14:28
7		0.5 ug/ml PAH 12/12/	1212L013.D	12/12/16 15:01
8		1.0 ug/ml PAH 12/12/	1212L014.D	12/12/16 15:34
9		SS PAH 12/12/16	1212L015.D	12/12/16 16:07
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	30 - 60% of mass 198	31.0
68	0 - 2% of mass 69	0.0
69	100 - 100% of mass 69	100.0
70	0 - 2% of mass 69	0.6
127	40 - 60% of mass 198	50.3
197	0 - 1% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.9
275	10 - 30% of mass 198	26.2
365	1 - 100% of mass 198	2.6
441	0.01 - 100% of mass 443	76.7
442	40 - 150% of mass 198	65.3
443	17 - 23% of mass 442	21.6

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81734
Matrix: Water
ID: SV Tune 11/15/16

SDG No: 81734
Date Analyzed: 12/16/16
Instrument: Linus
Time Analyzed: 9:49

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		5.0 ug/ml PAH 12/12/	1212L103.D	12/16/16 11:08
2		5.0 ug/ml PAH 12/12/	1212L104.D	12/16/16 11:41
3	Blank	161214A BLK 1/1000	1212L105.D	12/16/16 12:14
4	Lab Control Spike	161214A LCS-1 1/1000	1212L106.D	12/16/16 12:47
5	ERH137	AZ47343W10 1/1070	1212L107.D	12/16/16 13:20
6	ERH141	AZ47344W16 1/1070	1212L108.D	12/16/16 13:54
7		AZ47345W18 MS-1 1/10	1212L109.D	12/16/16 14:27
8		AZ47345W27 MSD-1 1/1	1212L112.D	12/16/16 16:07
9	ERH135	AZ47345W19 1/1070	1212L113.D	12/16/16 16:41
10		5.0 ug/ml PAH 12/12/	1212L115.D	12/16/16 17:28
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	30 - 60% of mass 198	30.5
68	0 - 2% of mass 69	0.0
69	100 - 100% of mass 69	100.0
70	0 - 2% of mass 69	0.9
127	40 - 60% of mass 198	48.6
197	0 - 1% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	7.0
275	10 - 30% of mass 198	26.9
365	1 - 100% of mass 198	2.7
441	0.01 - 100% of mass 443	79.1
442	40 - 150% of mass 198	75.4
443	17 - 23% of mass 442	20.6

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81734

Lab File ID (Standard): 1212L009.D Date Analyzed: 12/12/16

Instrument ID: Linus Time Analyzed: 12:49

GC Column: ID: Heated Purge: (Y/N)

		Napthalene-D8(IS)		Acenaphthene-D10(IS)		Phenanthrene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1900	5.87	1038	7.92	1930	9.84
	UPPER LIMIT	3800	6.37	2076	8.42	3860	10.34
	LOWER LIMIT	950	5.37	519	7.42	965	9.34
	SAMPLE NO.						
01	161214A BLK 1/1000	2192	5.87	1247	7.92	2263	9.85
02	161214A LCS-1 1/1000	2122	5.87	1197	7.92	2200	9.85
03	AZ47343W10 1/1070	2188	5.87	1250	7.92	2273	9.85
04	AZ47344W16 1/1070	2115	5.87	1195	7.92	2164	9.85
05	AZ47345W18 MS-1 1/1(	2222	5.87	1245	7.92	2274	9.85
06	AZ47345W27 MSD-1 1/	1947	5.88	1084	7.92	1976	9.85
07	AZ47345W19 1/1070	2002	5.88	1147	7.92	2068	9.85
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 81734

Lab File ID (Standard): 1212L009.D Date Analyzed: 12/12/16

Instrument ID: Linus Time Analyzed: 12:49

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Chrysene-D12(IS)		Perylene-D12(IS)					
		AREA	#	RT	#	AREA	#	RT	#	AREA	#	RT	#
	12 HOUR STD	2367		16.79		2172		20.54					
	UPPER LIMIT	4734		17.29		4344		21.04					
	LOWER LIMIT	1184		16.29		1086		20.04					
	SAMPLE NO.												
01	161214A BLK 1/1000	2832		16.82		2735		20.58					
02	161214A LCS-1 1/1000	2814		16.80		2657		20.56					
03	AZ47343W10 1/1070	2820		16.82		2787		20.58					
04	AZ47344W16 1/1070	2712		16.81		2604		20.58					
05	AZ47345W18 MS-1 1/1(	2910		16.80		2752		20.56					
06	AZ47345W27 MSD-1 1/	2370		16.81		2165		20.57					
07	AZ47345W19 1/1070	2487		16.82		2266		20.59					
08													
09													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

ORGANICS

Sample Data

APPL, INC.

EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH137
Sample Collection Date: 12/12/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81734
APPL ID: AZ47343
QCG: #SIMDO-161214A-214748

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/14/16	12/16/16
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/14/16	12/16/16
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	12/14/16	12/16/16
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	62.5	53-106			%	12/14/16	12/16/16
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	69.0	55-111			%	12/14/16	12/16/16
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	77.3	58-132			%	12/14/16	12/16/16

Quant Method: L1212P.M
Run #: 1212L107
Instrument: Linus
Sequence: L161212
Dilution Factor: 1
Initials: RHA

Printed: 12/19/16 1:55:29 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L107.D Vial: 7
Acq On : 16 Dec 16 13:20 Operator: MA
Sample : AZ47343W10 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Dec 16 16:37 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	5.87	136	2188	2.50000 ppb	0.00
6) Acenaphthene-D10(IS)	7.92	164	1250	2.50000 ppb	0.00
11) Phenanthrene-D10(IS)	9.85	188	2273	2.50000 ppb	0.01
15) Chrysene-D12(IS)	16.82	240	2820	2.50000 ppb	0.03
21) Perylene-D12(IS)	20.58	264	2787	2.50000 ppb	0.04
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.02	82	906	3.22536 ppb	-0.01
Spiked Amount 4.673			Recovery =	69.015%	
7) Surrogate Recovery (FBP)	7.13	172	2270	2.91969 ppb	0.00
Spiked Amount 4.673			Recovery =	62.488%	
17) Surrogate Recovery (TPH)	13.82	244	3433	3.61378 ppb	0.00
Spiked Amount 4.673			Recovery =	77.340%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

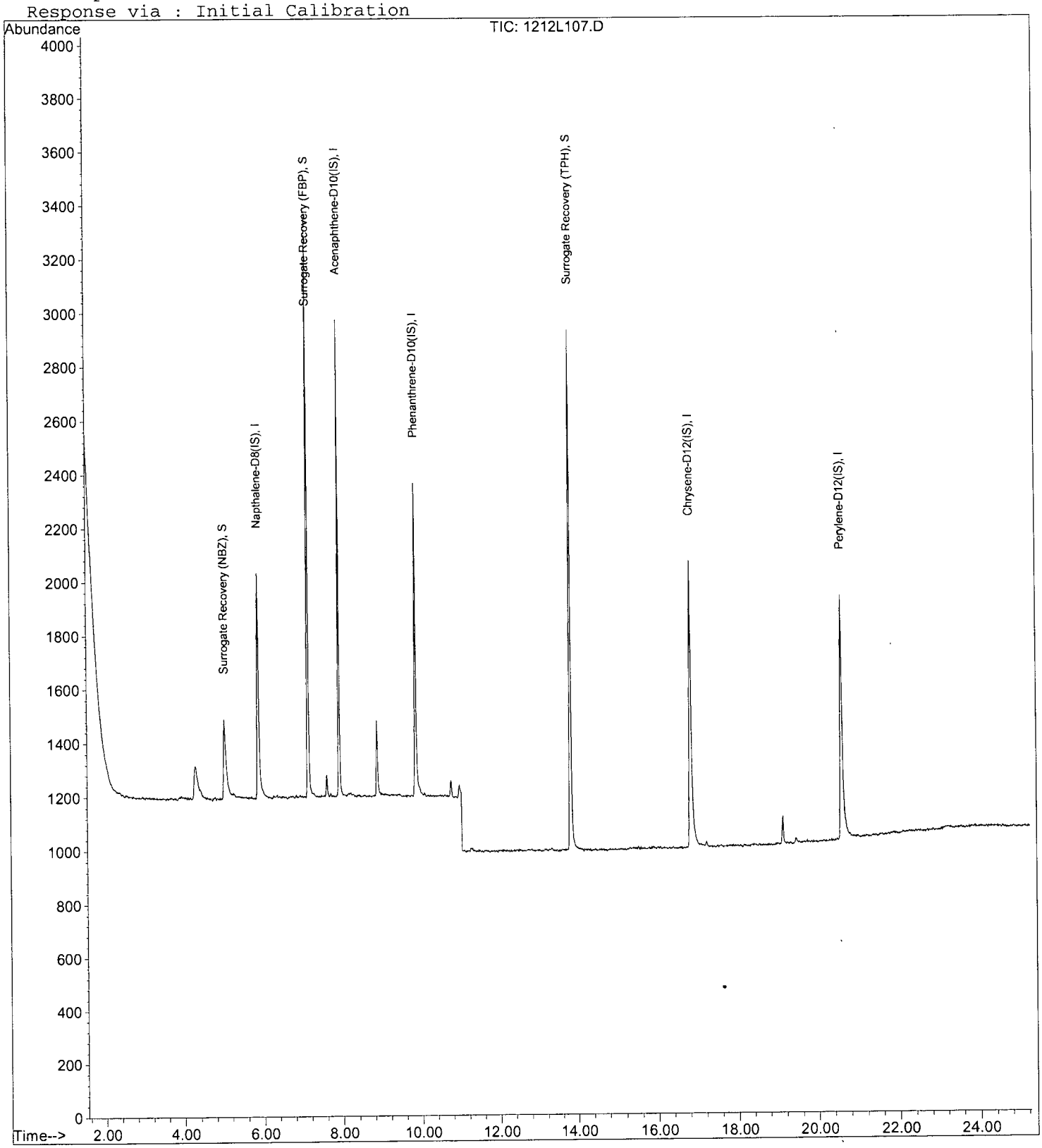
Data File : M:\LINUS\DATA\L161212\1212L107.D
Acq On : 16 Dec 16 13:20
Sample : AZ47343W10 1/1070
Misc : water

Vial: 7
Operator: MA
Inst : Linus
Multiplr: 0.93

Quant Time: Dec 16 16:37 2016

Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH141
Sample Collection Date: 12/12/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81734
APPL ID: AZ47344
QCG: #SIMDO-161214A-214748

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/14/16	12/16/16
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/14/16	12/16/16
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	12/14/16	12/16/16
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	70.0	53-106			%	12/14/16	12/16/16
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	75.9	55-111			%	12/14/16	12/16/16
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	89.0	58-132			%	12/14/16	12/16/16

Quant Method: L1212P.M
Run #: 1212L108
Instrument: Linus
Sequence: L161212
Dilution Factor: 1
Initials: RHA

Printed: 12/19/16 1:55:29 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L108.D Vial: 8
Acq On : 16 Dec 16 13:54 Operator: MA
Sample : AZ47344W16 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Dec 16 16:37 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.87	136	2115	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	7.92	164	1195	2.50000	ppb	0.00
11) Phenanthrene-D10(IS)	9.85	188	2164	2.50000	ppb	0.01
15) Chrysene-D12(IS)	16.81	240	2712	2.50000	ppb	0.02
21) Perylene-D12(IS)	20.58	264	2604	2.50000	ppb	0.04
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.02	82	967	3.54493	ppb	-0.01
Spiked Amount 4.673			Recovery = 75.863%			
7) Surrogate Recovery (FBP)	7.13	172	2417	3.26862	ppb	0.00
Spiked Amount 4.673			Recovery = 69.957%			
17) Surrogate Recovery (TPH)	13.82	244	3784	4.15877	ppb	0.00
Spiked Amount 4.673			Recovery = 89.003%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration

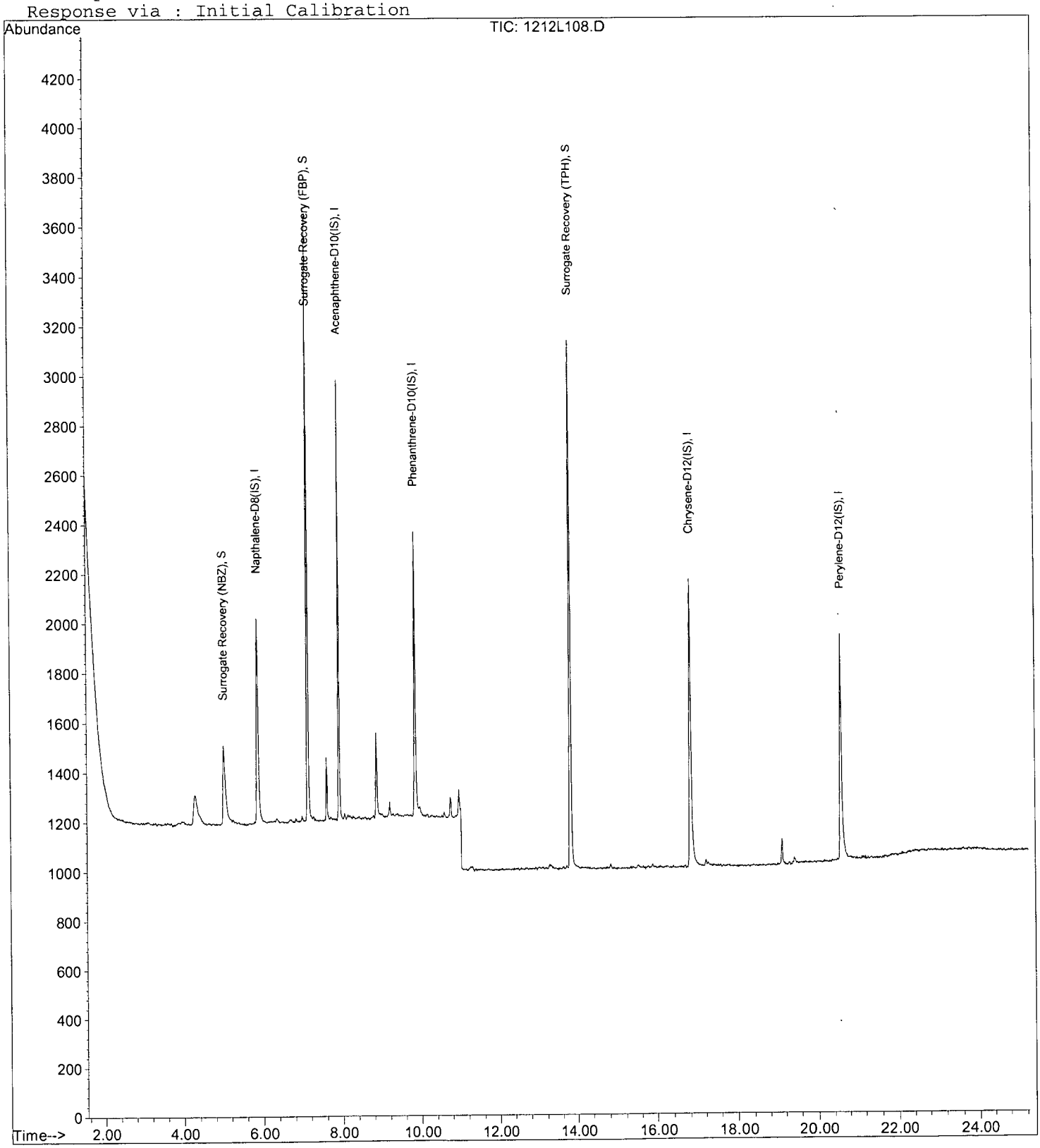
Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L108.D
Acq On : 16 Dec 16 13:54
Sample : AZ47344W16 1/1070
Misc : water

Vial: 8
Operator: MA
Inst : Linus
Multiplr: 0.93

Quant Time: Dec 16 16:37 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH135
Sample Collection Date: 12/12/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81734
APPL ID: AZ47345
QCG: #SIMDO-161214A-214748

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/14/16	12/16/16
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/14/16	12/16/16
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	12/14/16	12/16/16
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	76.5	53-106			%	12/14/16	12/16/16
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	79.2	55-111			%	12/14/16	12/16/16
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	93.7	58-132			%	12/14/16	12/16/16

Quant Method: L1212P.M
Run #: 1212L113
Instrument: Linus
Sequence: L161212
Dilution Factor: 1
Initials: RHA

Printed: 12/19/16 1:55:29 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L113.D Vial: 13
Acq On : 16 Dec 16 16:41 Operator: MA
Sample : AZ47345W19 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Dec 16 17:08 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	2002	2.50000 ppb	0.01
6) Acenaphthene-D10(IS)	7.92	164	1147	2.50000 ppb	0.00
11) Phenanthrene-D10(IS)	9.85	188	2068	2.50000 ppb	0.01
15) Chrysene-D12(IS)	16.82	240	2487	2.50000 ppb	0.03
21) Perylene-D12(IS)	20.59	264	2266	2.50000 ppb	0.05
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.02	82	958	3.70282 ppb	-0.01
Spiked Amount 4.673			Recovery = 79.244%		
7) Surrogate Recovery (FBP)	7.13	172	2527	3.57355 ppb	0.00
Spiked Amount 4.673			Recovery = 76.484%		
17) Surrogate Recovery (TPH)	13.82	244	3650	4.38040 ppb	0.00
Spiked Amount 4.673			Recovery = 93.732%		
Target Compounds					Qvalue

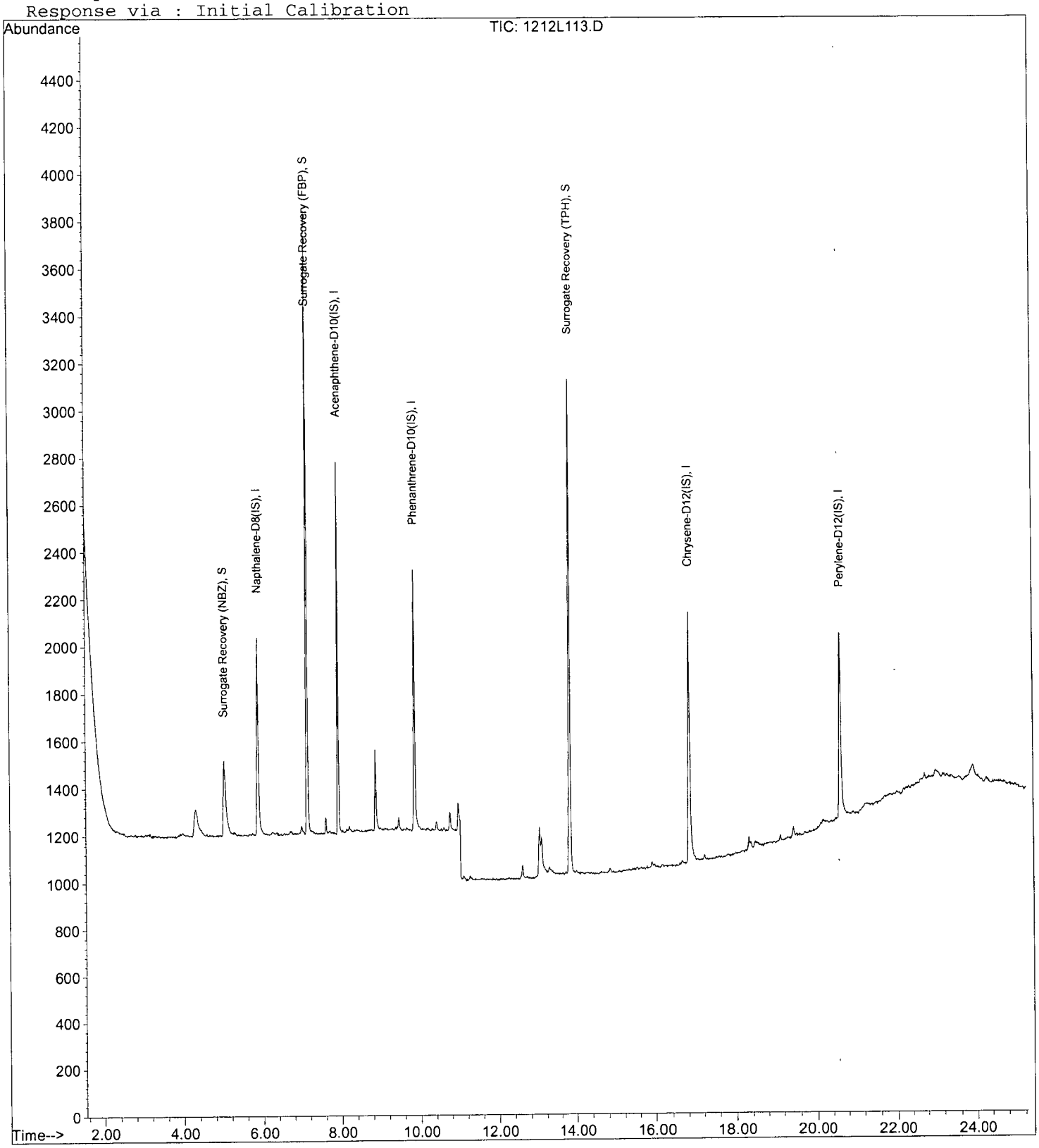
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L113.D Vial: 13
Acq On : 16 Dec 16 16:41 Operator: MA
Sample : AZ47345W19 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Dec 16 17:08 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



ORGANICS

Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/12/16
Matrix: Instrument: Linus
Initials:

		Compound	1212L005.D 0.1	1212L006.D 0.2	1212L013.D 0.5	1212L014.D 1	1212L009.D 5	1212L010.D 10	1212L011.D 50	1212L012.D 100			Avg	%RSD		
1	I	Napthalene-D8(IS)														
2	SL	Surrogate Recovery (NBZ)			0.1025	0.1761	0.2637	0.3064	0.3197	0.3127			0.25	36	SL	1.000
3	TM	Naphthalene	1.031	0.9780	0.9862	0.9477	1.118	1.054	1.003	0.9513			1.0	5.7	TM	
4	TM	2-Methylnaphthalene	0.5550	0.5854	0.5149	0.5323	0.7182	0.6983	0.6712	0.6317			0.61	13	TM	
5	TM	1-Methylnaphthalene	0.7135	0.7853	0.6711	0.6467	0.7284	0.6774	0.6350	0.5896			0.68	8.9	TM	
6	I	Acenaphthene-D10(IS)														
7	SL	Surrogate Recovery (FBP)	2.045	1.941	1.395	1.435	1.344	1.504	1.449	1.373			1.6	17	SL	0.999
8	TM	Acenaphthylene	1.826	1.954	1.831	1.759	2.172	2.083	2.017	1.896			1.9	7.3	TM	
9	*TM	Acenaphthene	1.241	1.216	1.124	1.053	1.283	1.224	1.174	1.102			1.2	6.7	*TM	
10	TM	Fluorene	1.363	1.307	1.278	1.221	1.525	1.462	1.419	1.328			1.4	7.4	TM	
11	I	Phenanthrene-D10(IS)														
12	TM	Phenanthrene	1.035	1.103	0.9894	0.9754	1.171	1.129	1.120	1.072			1.1	6.5	TM	
13	TM	Anthracene	0.9809	0.8442	0.8021	0.8311	1.116	1.103	1.105	1.012			0.97	14	TM	
14	*TM	Fluoranthene	1.499	1.511	1.288	1.295	1.594	1.582	1.618	1.561			1.5	8.8	*TM	
15	I	Chrysene-D12(IS)														
16	TM	Pyrene	1.265	1.248	1.144	1.116	1.350	1.290	1.282	1.228			1.2	6.2	TM	
17	SL	Surrogate Recovery (TPH)	1.141	1.125	0.7856	0.7730	0.6907	0.7963	0.8068	0.7547			0.86	20	SL	0.999
18	TM	Benz (a) anthracene	1.153	0.9846	0.9136	0.8374	1.173	1.136	1.200	1.138			1.1	13	TM	
19	TM	Chrysene	1.231	1.235	1.285	1.193	1.266	1.202	1.143	1.075			1.2	5.7	TM	
20	TM	Indeno (1,2,3-cd) pyrene	1.253	1.162	0.9852	1.016	1.310	1.273	1.125	1.175			1.2	10	TM	
21	I	Perylene-D12(IS)														
22	TM	Benzo (b) fluoranthene	0.9076	0.9504	0.9240	0.9294	1.188	1.191	1.264	1.230			1.1	15	TM	
23	TM	Benzo (k) fluoranthene	1.126	1.186	1.191	1.043	1.104	1.110	1.151	1.129			1.1	4.2	TM	
24	*TM	Benzo (a) pyrene	1.011	1.095	1.051	1.010	1.199	1.156	1.179	1.156			1.1	6.9	*TM	
25	TM	Dibenz (a,h) anthracene	1.011	0.8783	0.8525	0.9697	1.189	1.150	1.168	1.100			1.0	13	TM	
26	TM	Benzo (g,h,i) perylene	0.8732	0.9963	0.9608	0.9222	1.163	1.125	1.141	0.9740			1.0	11	TM	
27																
28																
29																
30																
31																
32																
33																
34																
35																

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L005.D Vial: 3
Acq On : 12 Dec 16 10:36 Operator: MA
Sample : 0.1 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 13 14:49 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:03:27 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	1892	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	7.92	164	1027	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.85	188	1835	2.50000 ppb		0.01
15) Chrysene-D12(IS)	16.80	240	2234	2.50000 ppb		0.01
21) Perylene-D12(IS)	20.55	264	2176	2.50000 ppb		0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.02	82	1	0.13676 ppb		-0.01
Spiked Amount 5.000			Recovery = 2.740%			
7) Surrogate Recovery (FBP)	7.16	172	42	-0.08389 ppb		0.02
Spiked Amount 5.000			Recovery = -1.680%			
17) Surrogate Recovery (TPH)	13.84	244	51	-0.04876 ppb		0.02
Spiked Amount 5.000			Recovery = -0.980%			
Target Compounds						Qvalue
3) Naphthalene	5.89	128	78	0.10219 ppb		97
4) 2-Methylnaphthalene	6.75	142	42m	-0.29925 ppb		62
5) 1-Methylnaphthalene	6.84	142	54	0.10480 ppb		79
8) Acenaphthylene	7.77	152	75	0.09400 ppb		97
9) Acenaphthene	7.95	154	51	0.10546 ppb		92
10) Fluorene	8.59	166	56	0.10002 ppb		95
12) Phenanthrene	9.89	178	76	0.09636 ppb	#	92
13) Anthracene	10.01	178	72	0.10069 ppb	#	89
14) Fluoranthene	12.67	202	110	0.10035 ppb		96
16) Pyrene	13.30	202	113	0.10196 ppb	#	89
18) Benz (a) anthracene	16.78	228	103	0.10803 ppb		95
19) Chrysene	16.87	228	110	0.10226 ppb	#	87
20) Indeno (1,2,3-cd) pyrene	22.93	276	112	0.10781 ppb	#	94
22) Benzo (b) fluoranthene	19.68	252	79	0.08458 ppb		98
23) Benzo (k) fluoranthene	19.75	252	98m	0.24586 ppb		88
24) Benzo (a) pyrene	20.31	252	88	0.09132 ppb		95
25) Dibenz (a,h) anthracene	22.96	278	88	-0.17327 ppb		89
26) Benzo (g,h,i) perylene	23.45	276	76	0.08566 ppb		89

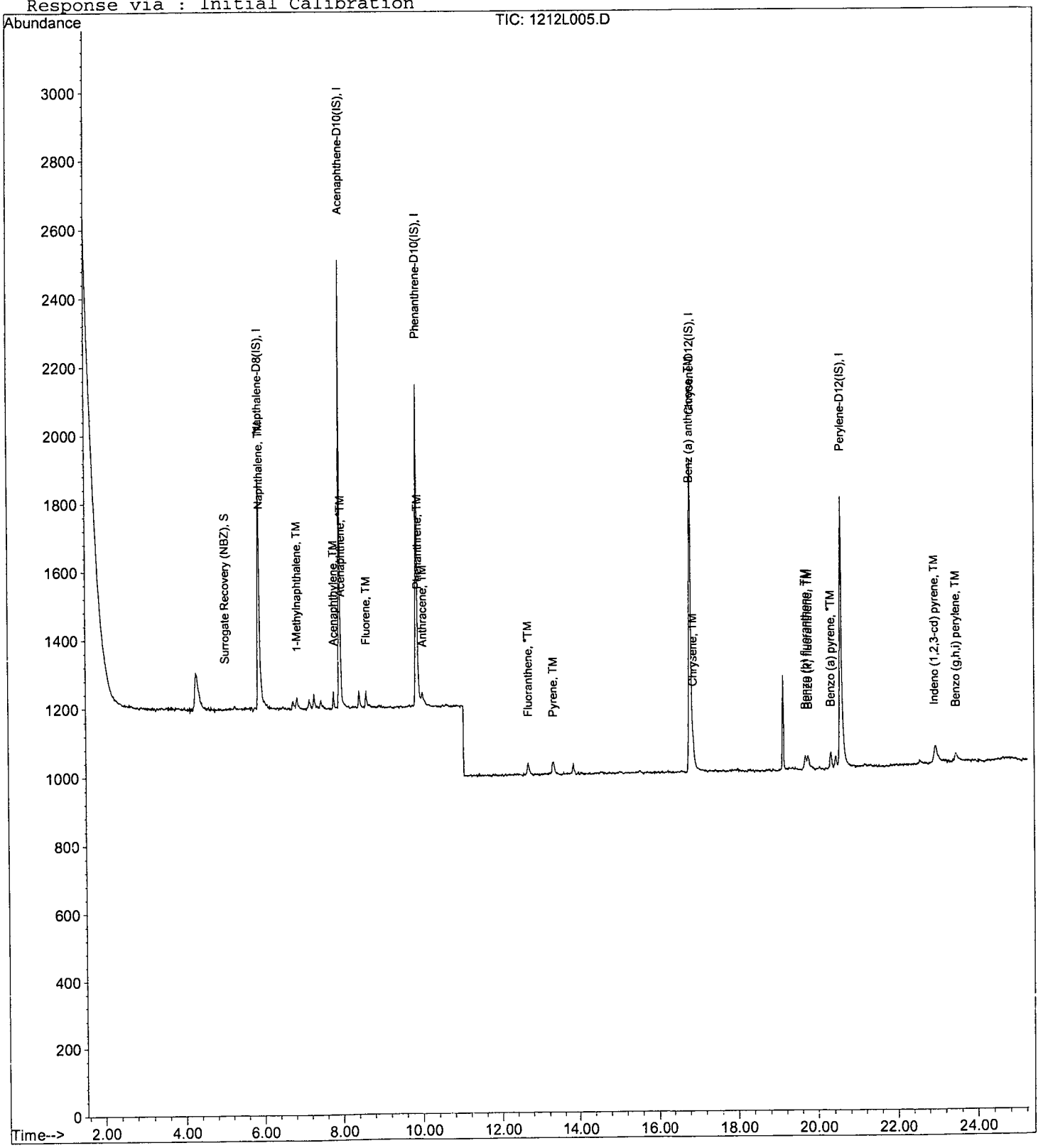
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L005.D Vial: 3
Acq On : 12 Dec 16 10:36 Operator: MA
Sample : 0.1 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 13 14:49 2016 Quant Results File: L1212P.RES

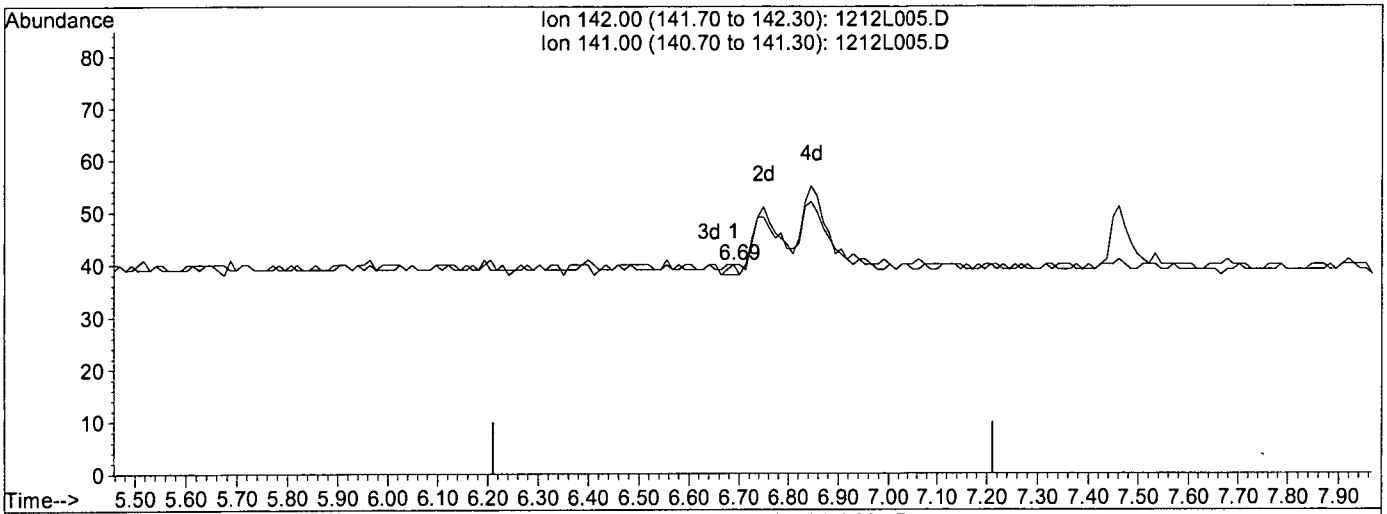
Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration

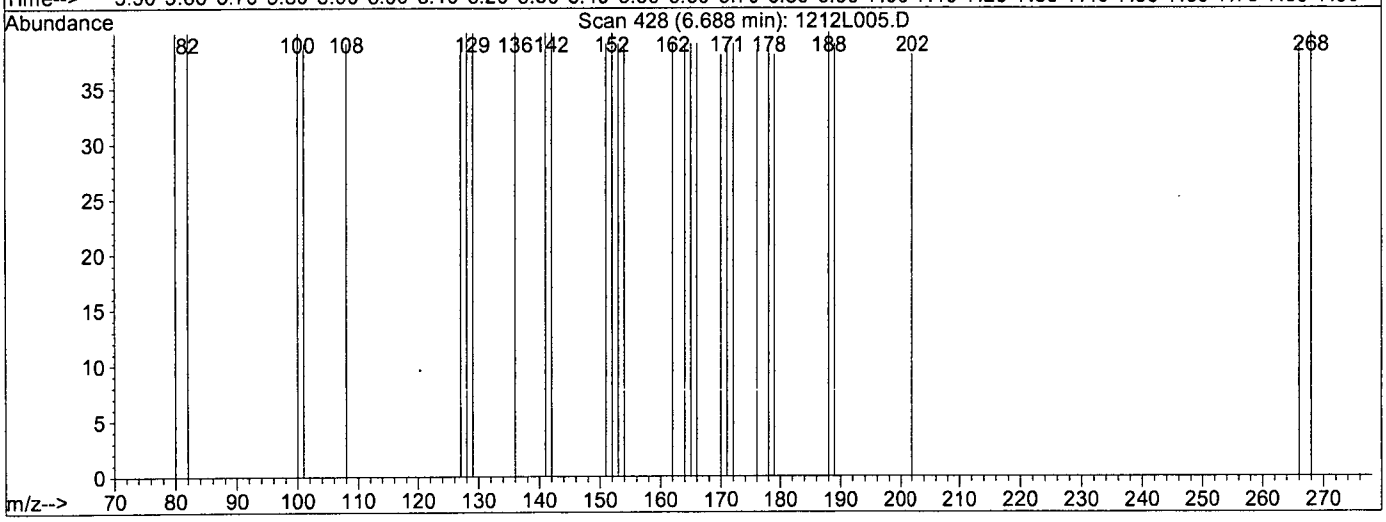


Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L005.D Vial: 3
Acq On : 12 Dec 16 10:36 Operator: MA
Sample : 0.1 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 14:10 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:13:16 2016
Response via : Multiple Level Calibration





TIC: 1212L005.D

(4) 2-Methylnaphthalene (TM)

6.69min -0.3822ppb

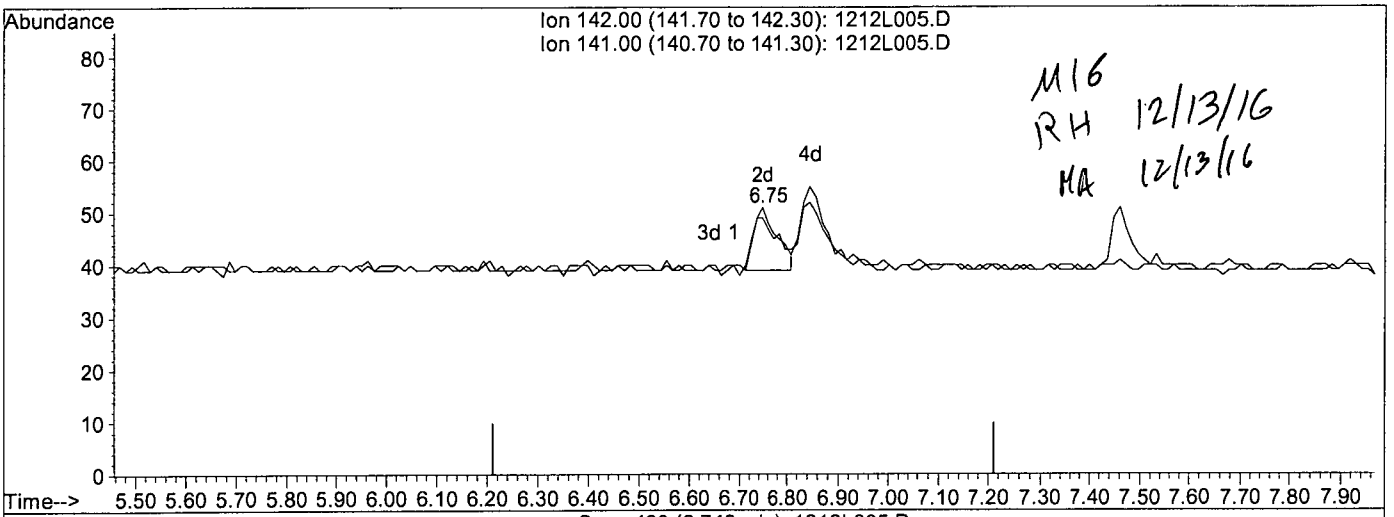
response 2

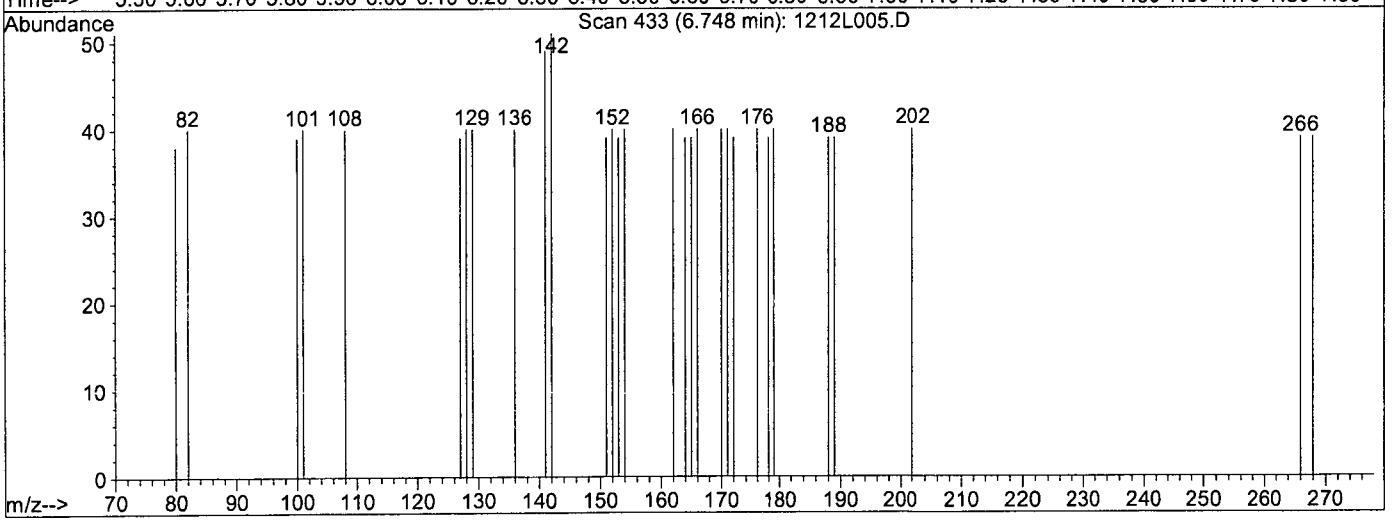
Ion	Exp%	Act%
142.00	100	100
141.00	84.90	50.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L005.D Vial: 3
Acq On : 12 Dec 16 10:36 Operator: MA
Sample : 0.1 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 14:49 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:13:16 2016
Response via : Multiple Level Calibration





TIC: 1212L005.D

(4) 2-Methylnaphthalene (TM)

6.75min -0.2992ppb m

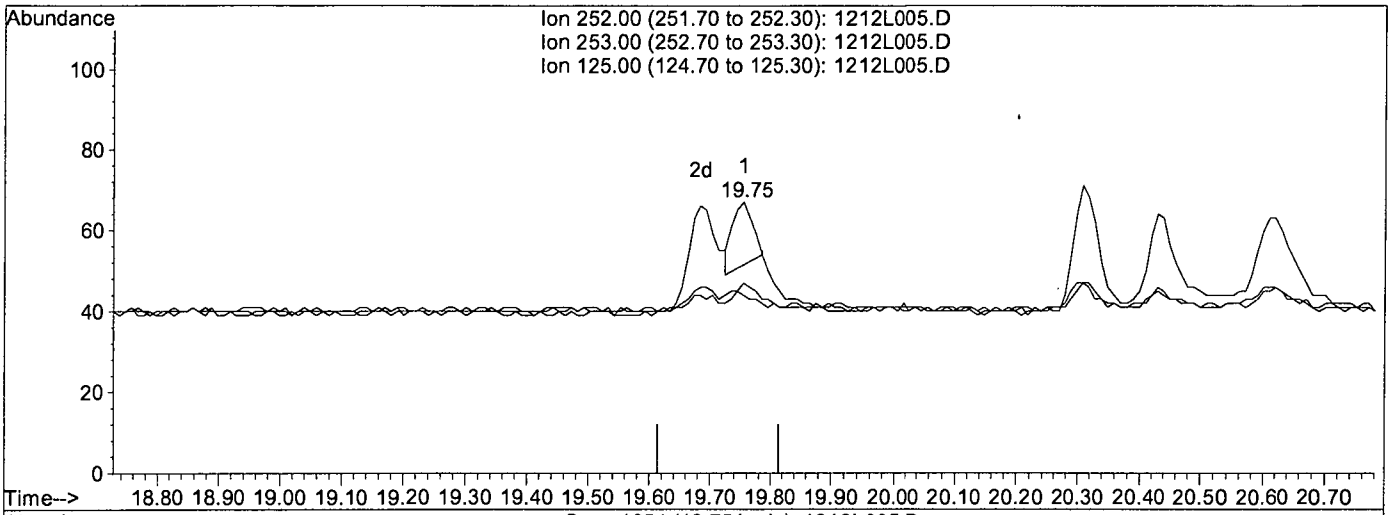
response 42

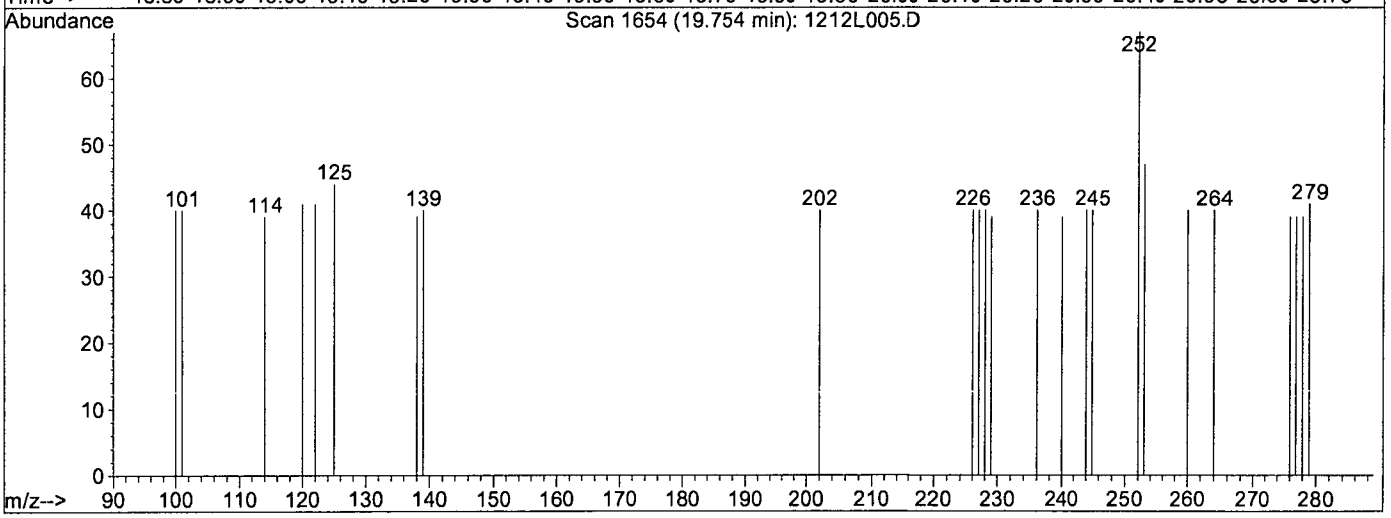
Ion	Exp%	Act%
142.00	100	100
141.00	84.90	96.08
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L005.D Vial: 3
Acq On : 12 Dec 16 10:36 Operator: MA
Sample : 0.1 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 14:04 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:06:14 2016
Response via : Multiple Level Calibration





TIC: 1212L005.D

(23) Benzo (k) fluoranthene (TM)

19.75min 0.1831ppb

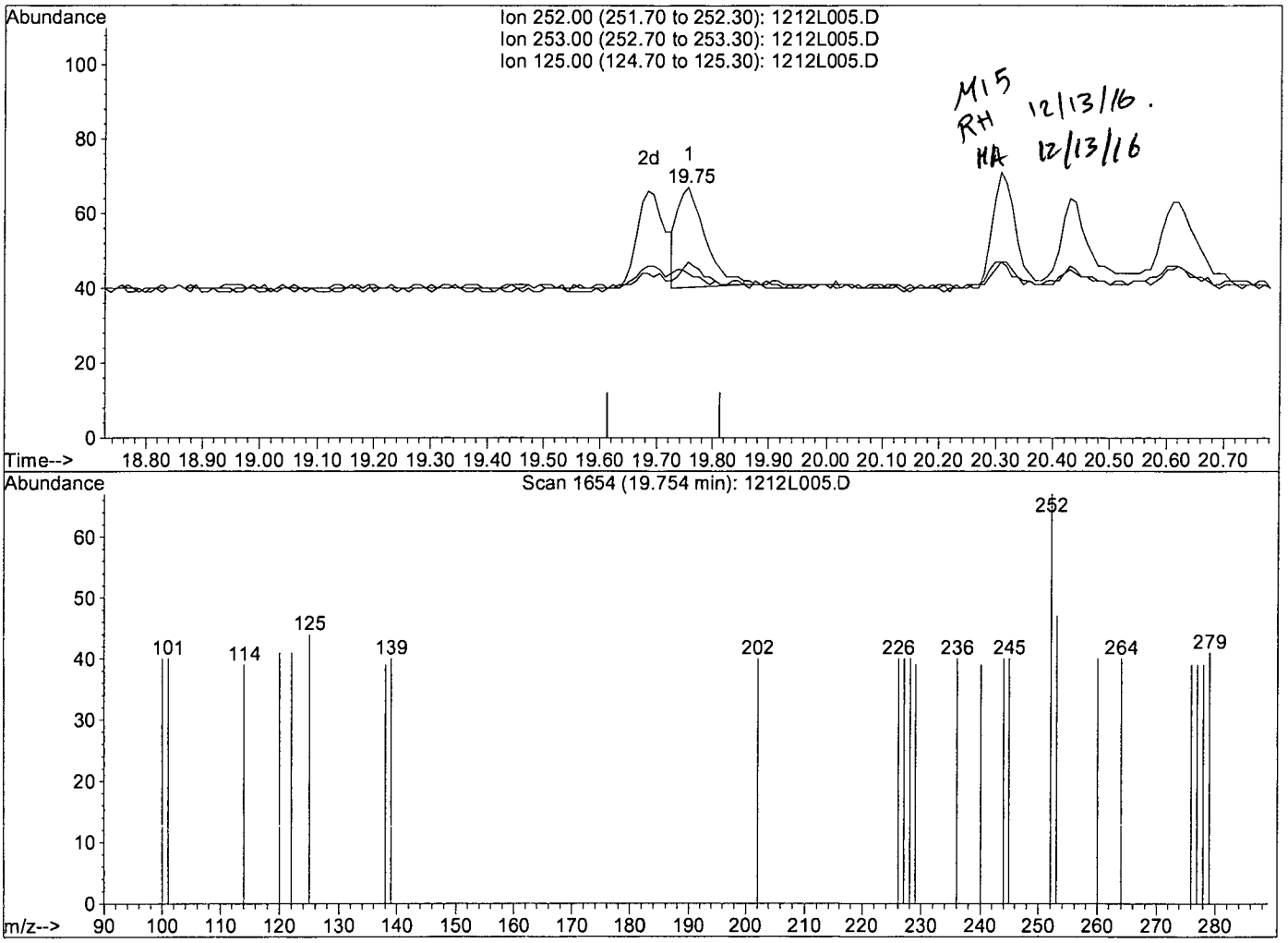
response 36

Ion	Exp%	Act%
252.00	100	100
253.00	23.40	30.77#
125.00	13.10	15.38
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L005.D Vial: 3
Acq On : 12 Dec 16 10:36 Operator: MA
Sample : 0.1 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 14:10 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:06:14 2016
Response via : Multiple Level Calibration



TIC: 1212L005.D

(23) Benzo (k) fluoranthene (TM)

19.75min 0.2459ppb m

response 98

Ion	Exp%	Act%
252.00	100	100
253.00	23.40	70.15#
125.00	13.10	65.67#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L006.D Vial: 4
Acq On : 12 Dec 16 11:09 Operator: MA
Sample : 0.2 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 13 14:11 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:03:42 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.88	136	1751	2.50000	ppb		0.01
6) Acenaphthene-D10(IS)	7.92	164	966	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.85	188	1688	2.50000	ppb		0.01
15) Chrysene-D12(IS)	16.80	240	2044	2.50000	ppb		0.01
21) Perylene-D12(IS)	20.55	264	1907	2.50000	ppb		0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.06	82	4	0.15069	ppb		0.02
Spiked Amount 5.000			Recovery = 3.020%				
7) Surrogate Recovery (FBP)	7.17	172	75	-0.01749	ppb		0.04
Spiked Amount 5.000			Recovery = -0.340%				
17) Surrogate Recovery (TPH)	13.85	244	92	0.02394	ppb		0.03
Spiked Amount 5.000			Recovery = 0.480%				
Target Compounds							Qvalue
3) Naphthalene	5.90	128	137	0.19395	ppb		95
4) 2-Methylnaphthalene	6.75	142	82	-0.20257	ppb		95
5) 1-Methylnaphthalene	6.84	142	110	0.23066	ppb		96
8) Acenaphthylene	7.77	152	151	0.20121	ppb		98
9) Acenaphthene	7.97	154	94	0.20664	ppb		97
10) Fluorene	8.59	166	101	0.19179	ppb		99
12) Phenanthrene	9.90	178	149	0.20537	ppb		95
13) Anthracene	10.01	178	114	0.17332	ppb	#	92
14) Fluoranthene	12.67	202	204	0.20231	ppb	#	91
16) Pyrene	13.30	202	204	0.20118	ppb		95
18) Benz (a) anthracene	16.79	228	161	0.18456	ppb		93
19) Chrysene	16.88	228	202	0.20524	ppb		96
20) Indeno (1,2,3-cd) pyrene	22.92	276	190	0.19989	ppb	#	93
22) Benzo (b) fluoranthene	19.68	252	145	0.17714	ppb		99
23) Benzo (k) fluoranthene	19.75	252	181m	0.35570	ppb		91
24) Benzo (a) pyrene	20.31	252	167	0.19775	ppb		97
25) Dibenz (a,h) anthracene	22.97	278	134	-0.10610	ppb		95
26) Benzo (g,h,i) perylene	23.45	276	152	0.19548	ppb		95

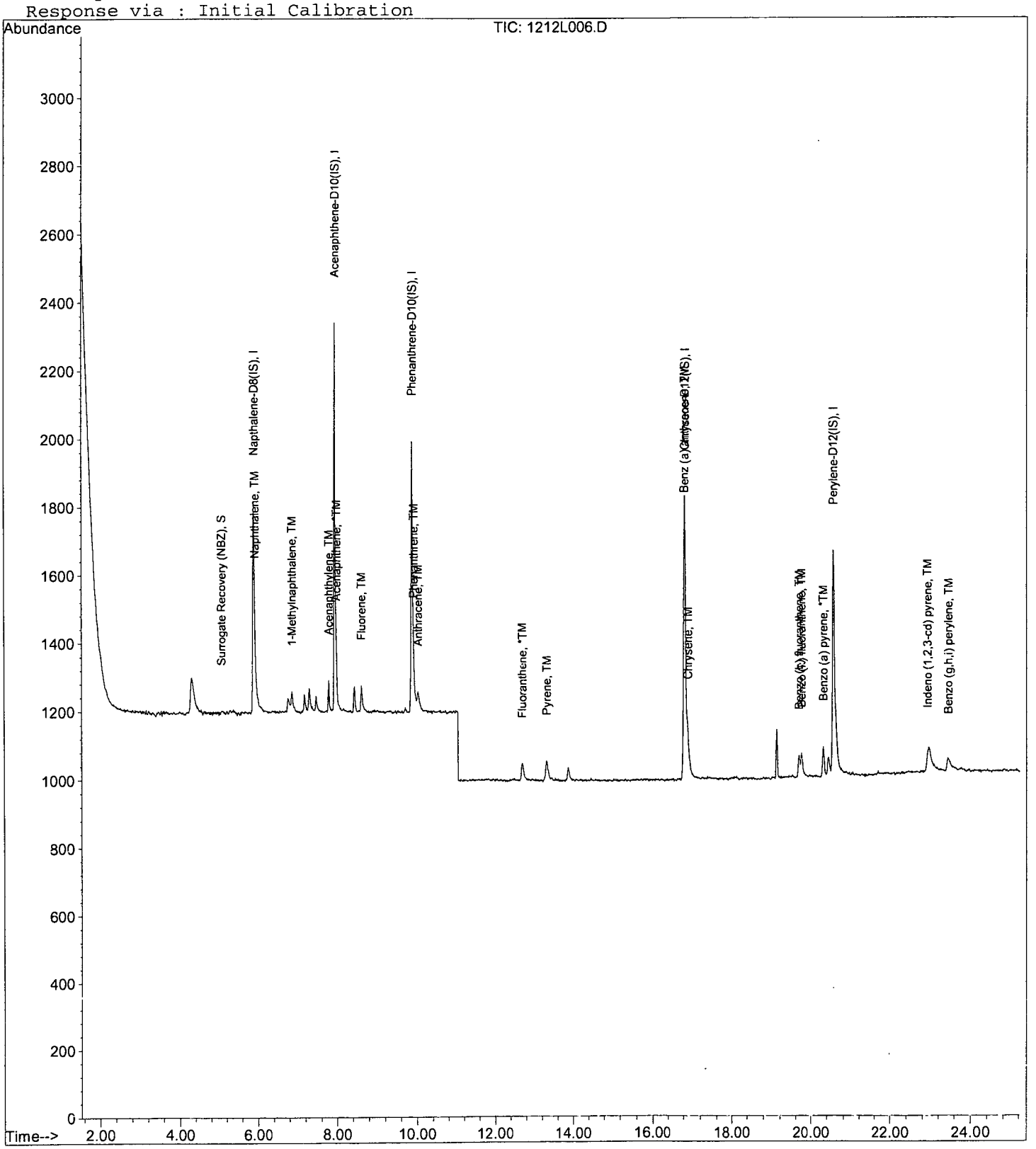
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L006.D Vial: 4
Acq On : 12 Dec 16 11:09 Operator: MA
Sample : 0.2 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 13 14:11 2016 Quant Results File: L1212P.RES

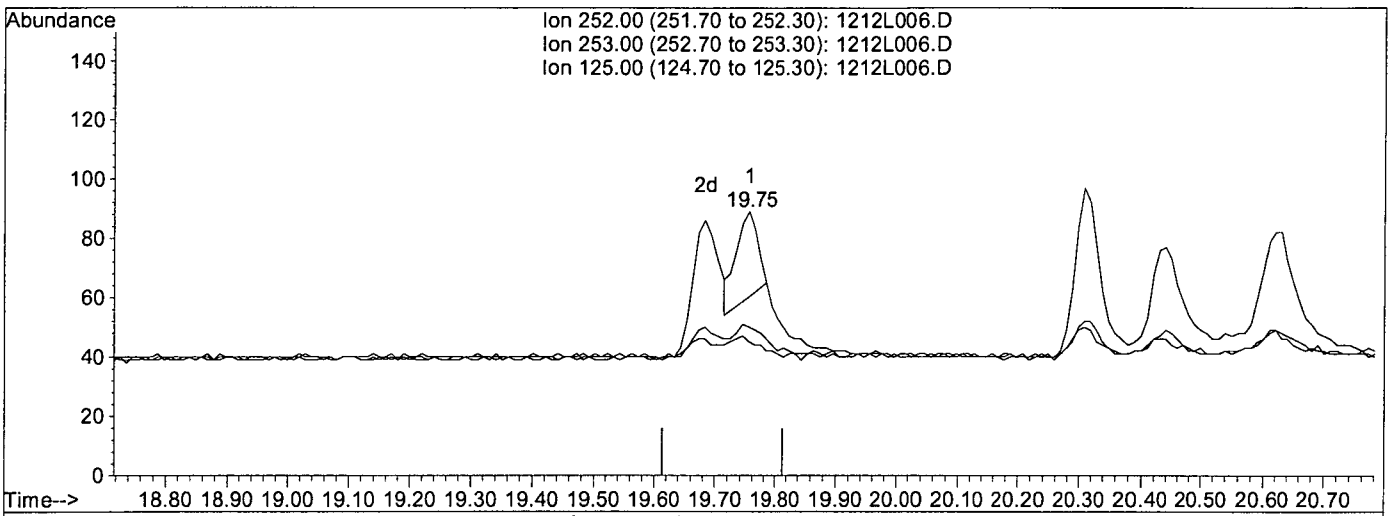
Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration

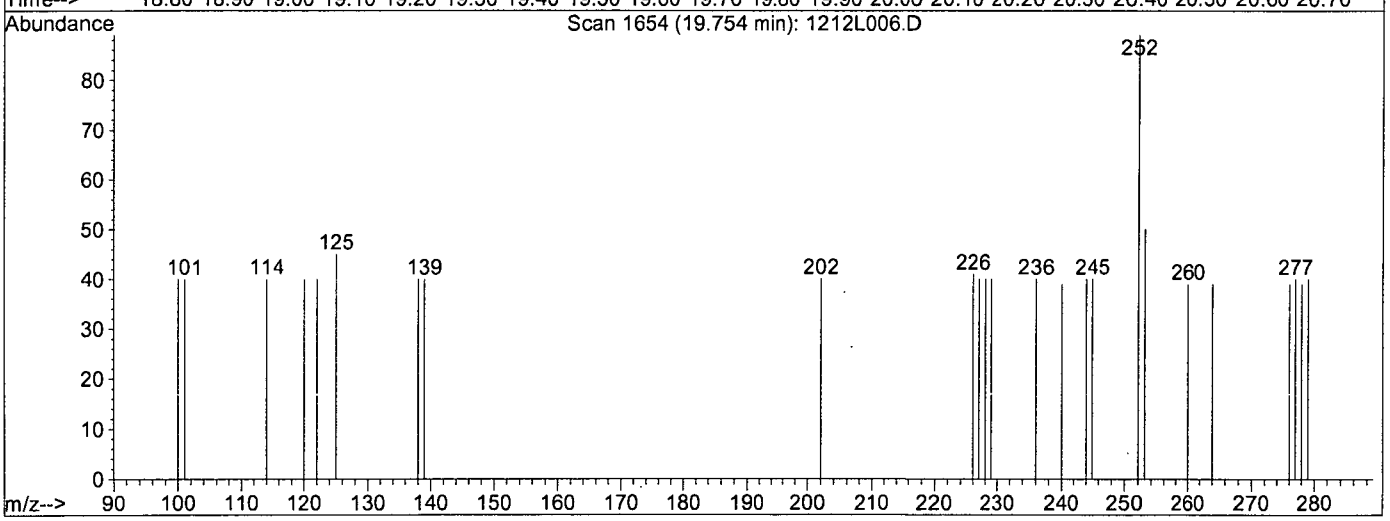


Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L006.D Vial: 4
Acq On : 12 Dec 16 11:09 Operator: MA
Sample : 0.2 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 14:04 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:06:14 2016
Response via : Multiple Level Calibration





TIC: 1212L006.D

(23) Benzo (k) fluoranthene (TM)

19.75min 0.2321ppb

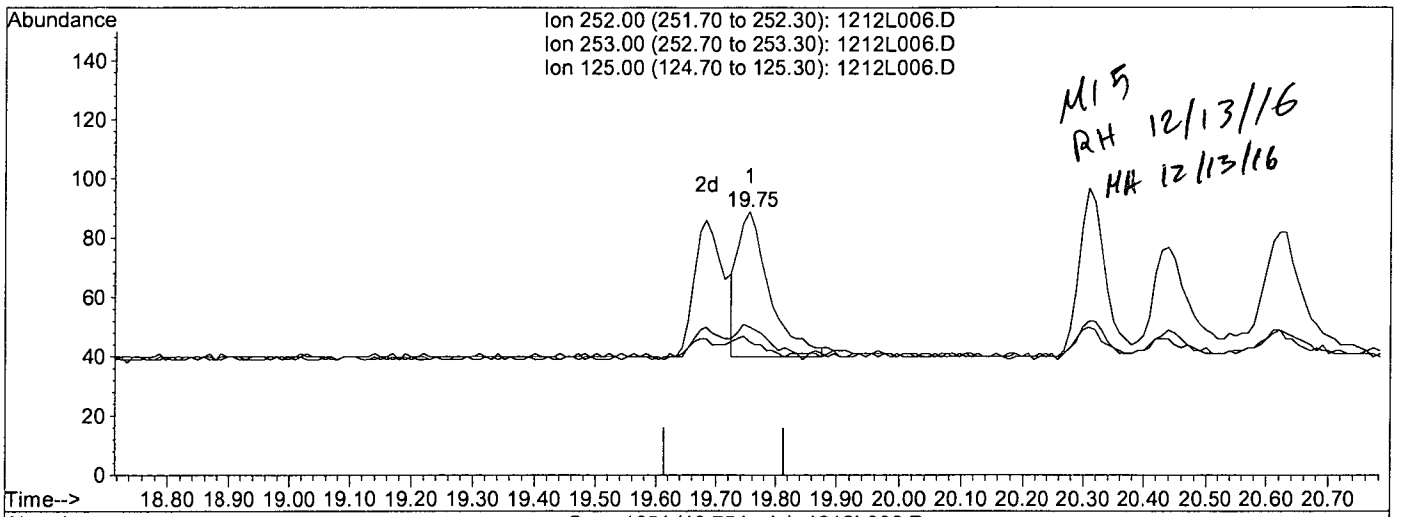
response 74

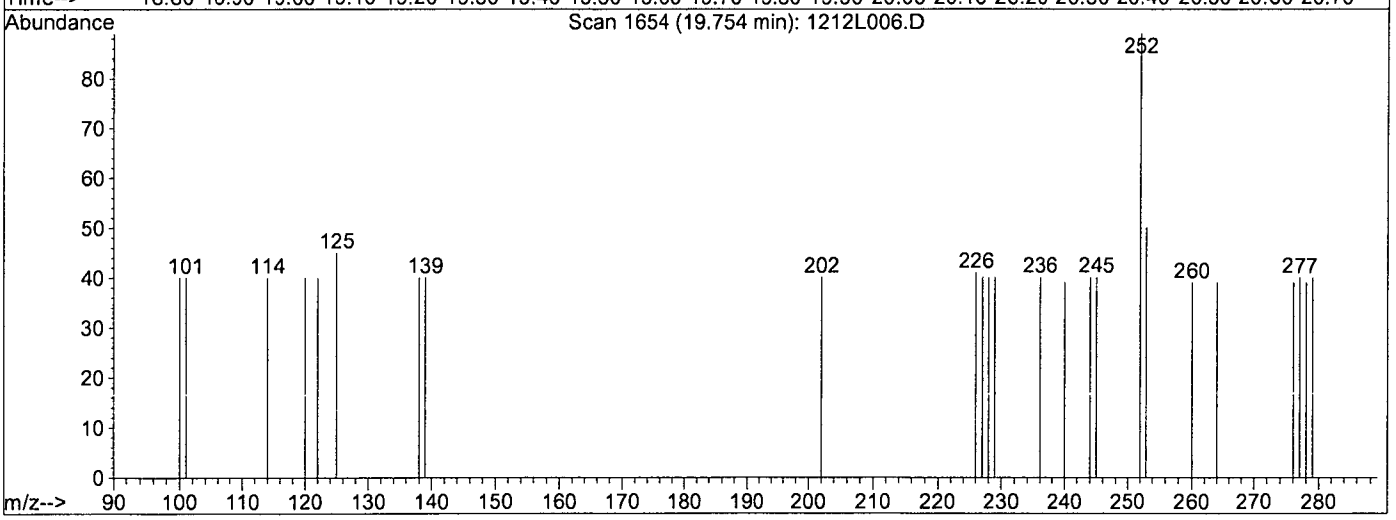
Ion	Exp%	Act%
252.00	100	100
253.00	23.40	16.67
125.00	13.10	12.50
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L006.D Vial: 4
Acq On : 12 Dec 16 11:09 Operator: MA
Sample : 0.2 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 14:11 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:06:14 2016
Response via : Multiple Level Calibration





TIC: 1212L006.D

(23) Benzo (k) fluoranthene (TM)

19.75min 0.3557ppb m

response 181

Ion	Exp%	Act%
252.00	100	100
253.00	23.40	56.18#
125.00	13.10	50.56#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L013.D Vial: 11
Acq On : 12 Dec 16 15:01 Operator: MA
Sample : 0.5 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 13 14:12 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:03:42 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.88	136	1952	2.50000	ppb		0.01
6) Acenaphthene-D10(IS)	7.93	164	1068	2.50000	ppb		0.01
11) Phenanthrene-D10(IS)	9.85	188	1895	2.50000	ppb		0.01
15) Chrysene-D12(IS)	16.81	240	2304	2.50000	ppb		0.02
21) Perylene-D12(IS)	20.56	264	2170	2.50000	ppb		0.02
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.08	82	20	0.21387	ppb		0.05
Spiked Amount 5.000			Recovery =	4.280%			
7) Surrogate Recovery (FBP)	7.17	172	149	0.09433	ppb		0.04
Spiked Amount 5.000			Recovery =	1.880%			
17) Surrogate Recovery (TPH)	13.87	244	181	0.13391	ppb		0.05
Spiked Amount 5.000			Recovery =	2.680%			
Target Compounds							Qvalue
3) Naphthalene	5.90	128	385	0.48892	ppb		99
5) 1-Methylnaphthalene	6.84	142	262	0.49282	ppb		97
8) Acenaphthylene	7.77	152	391	0.47126	ppb		98
9) Acenaphthene	7.97	154	240	0.47721	ppb		99
10) Fluorene	8.59	166	273	0.46889	ppb		100
12) Phenanthrene	9.90	178	375	0.46040	ppb		99
13) Anthracene	10.02	178	304	0.41169	ppb		98
14) Fluoranthene	12.67	202	488	0.43109	ppb		92
16) Pyrene	13.30	202	527	0.46106	ppb		98
18) Benz (a) anthracene	16.79	228	421	0.42815	ppb		100
19) Chrysene	16.88	228	592	0.53363	ppb		96
20) Indeno (1,2,3-cd) pyrene	22.91	276	454	0.42373	ppb	#	97
22) Benzo (b) fluoranthene	19.68	252	401	0.43051	ppb		96
23) Benzo (k) fluoranthene	19.74	252	517m	0.67137	ppb		95
24) Benzo (a) pyrene	20.31	252	456	0.47453	ppb		96
25) Dibenz (a,h) anthracene	22.96	278	370	0.11963	ppb		95
26) Benzo (g,h,i) perylene	23.43	276	417	0.47130	ppb		96

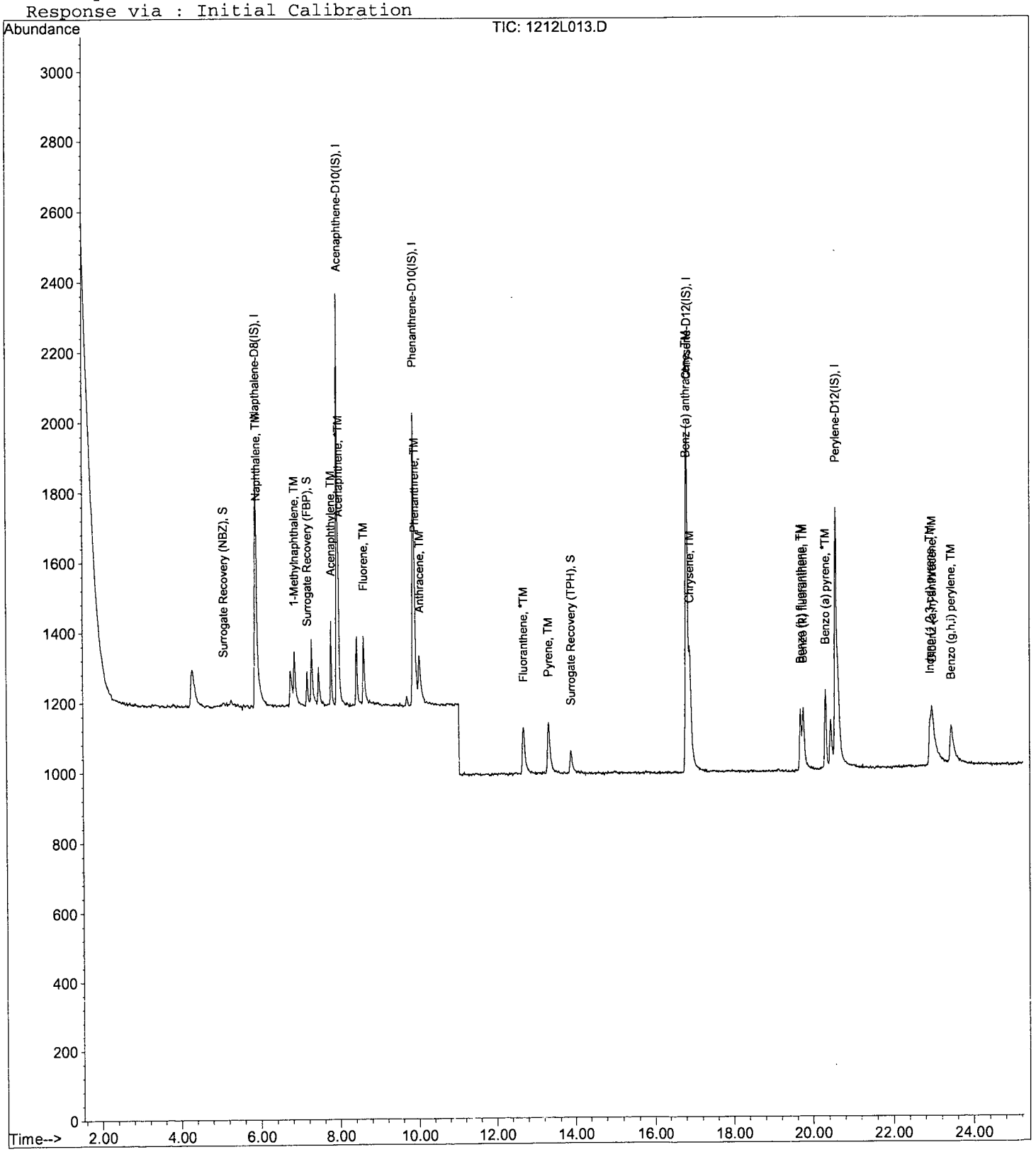
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L013.D Vial: 11
Acq On : 12 Dec 16 15:01 Operator: MA
Sample : 0.5 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 13 14:12 2016 Quant Results File: L1212P.RES

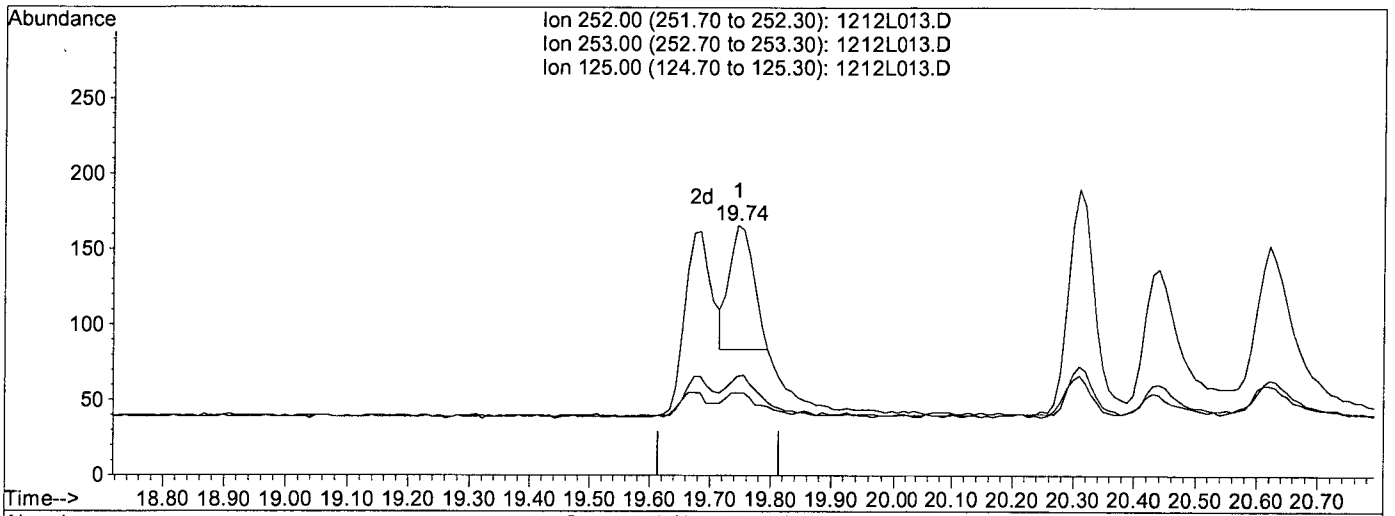
Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration

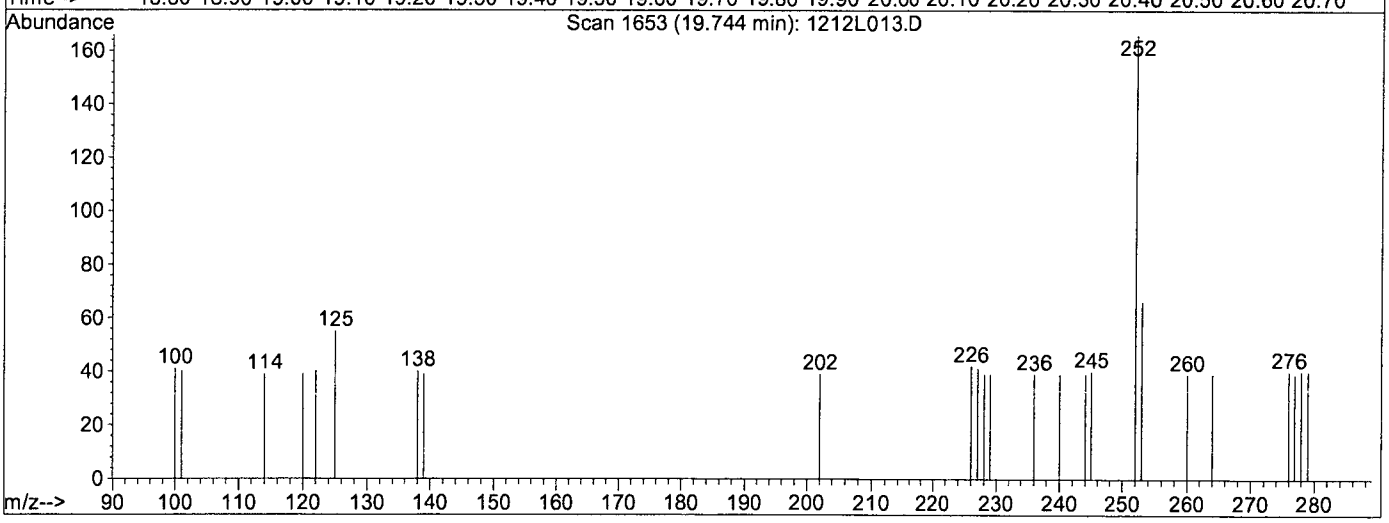


Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L013.D Vial: 11
Acq On : 12 Dec 16 15:01 Operator: MA
Sample : 0.5 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 14:04 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:06:14 2016
Response via : Multiple Level Calibration





TIC: 1212L013.D

(23) Benzo (k) fluoranthene (TM)

19.74min 0.3771ppb

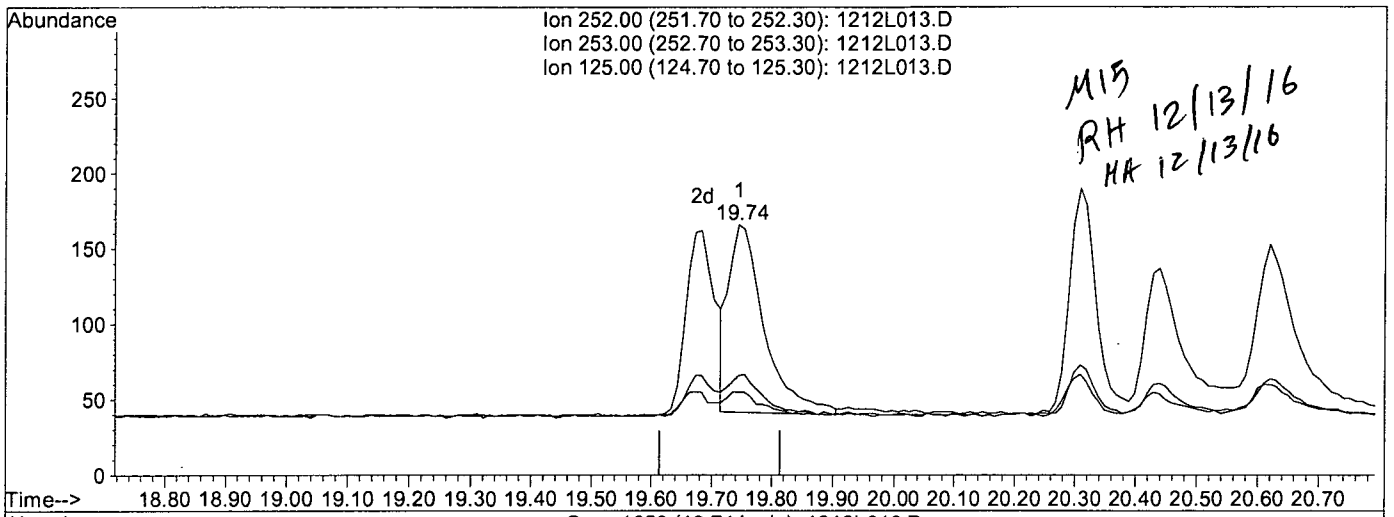
response 227

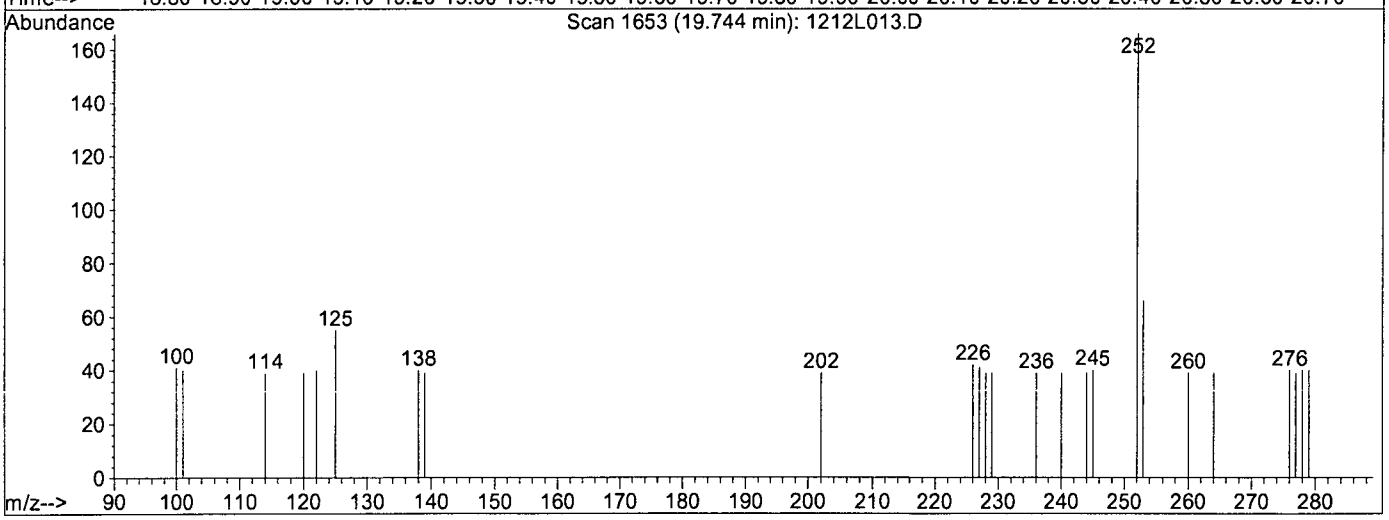
Ion	Exp%	Act%
252.00	100	100
253.00	23.40	20.73
125.00	13.10	10.98
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L013.D Vial: 11
Acq On : 12 Dec 16 15:01 Operator: MA
Sample : 0.5 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 14:12 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:06:14 2016
Response via : Multiple Level Calibration





TIC: 1212L013.D

(23) Benzo (k) fluoranthene (TM)

19.74min 0.6714ppb m

response 517

Ion	Exp%	Act%
252.00	100	100
253.00	23.40	39.76#
125.00	13.10	33.13#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L014.D Vial: 12
Acq On : 12 Dec 16 15:34 Operator: MA
Sample : 1.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 13 14:12 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:03:42 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.88	136	1902	2.50000 ppb		0.01
6) Acenaphthene-D10(IS)	7.92	164	1042	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.85	188	1853	2.50000 ppb		0.01
15) Chrysene-D12(IS)	16.80	240	2251	2.50000 ppb		0.01
21) Perylene-D12(IS)	20.55	264	2109	2.50000 ppb		0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.07	82	67	0.41209 ppb		0.04
Spiked Amount 5.000			Recovery =	8.240%		
7) Surrogate Recovery (FBP)	7.16	172	299	0.36077 ppb		0.02
Spiked Amount 5.000			Recovery =	7.220%		
17) Surrogate Recovery (TPH)	13.86	244	348	0.38315 ppb		0.04
Spiked Amount 5.000			Recovery =	7.660%		
Target Compounds						Qvalue
3) Naphthalene	5.90	128	721	0.93968 ppb		98
4) 2-Methylnaphthalene	6.74	142	405	0.44937 ppb		98
5) 1-Methylnaphthalene	6.83	142	492	0.94978 ppb		96
8) Acenaphthylene	7.77	152	733	0.90551 ppb		98
9) Acenaphthene	7.97	154	439	0.89468 ppb		98
10) Fluorene	8.59	166	509	0.89604 ppb		99
12) Phenanthrene	9.90	178	723	0.90778 ppb		100
13) Anthracene	10.01	178	616	0.85312 ppb		99
14) Fluoranthene	12.66	202	960	0.86727 ppb		92
16) Pyrene	13.29	202	1005	0.89996 ppb		99
18) Benz (a) anthracene	16.79	228	754	0.78487 ppb		96
19) Chrysene	16.88	228	1074	0.99090 ppb		97
20) Indeno (1,2,3-cd) pyrene	22.89	276	915	0.87410 ppb	#	95
22) Benzo (b) fluoranthene	19.66	252	784	0.86604 ppb		96
23) Benzo (k) fluoranthene	19.73	252	880m	1.06561 ppb		96
24) Benzo (a) pyrene	20.31	252	852	0.91226 ppb		94
25) Dibenz (a,h) anthracene	22.94	278	818	0.60911 ppb		95
26) Benzo (g,h,i) perylene	23.41	276	778	0.90474 ppb		95

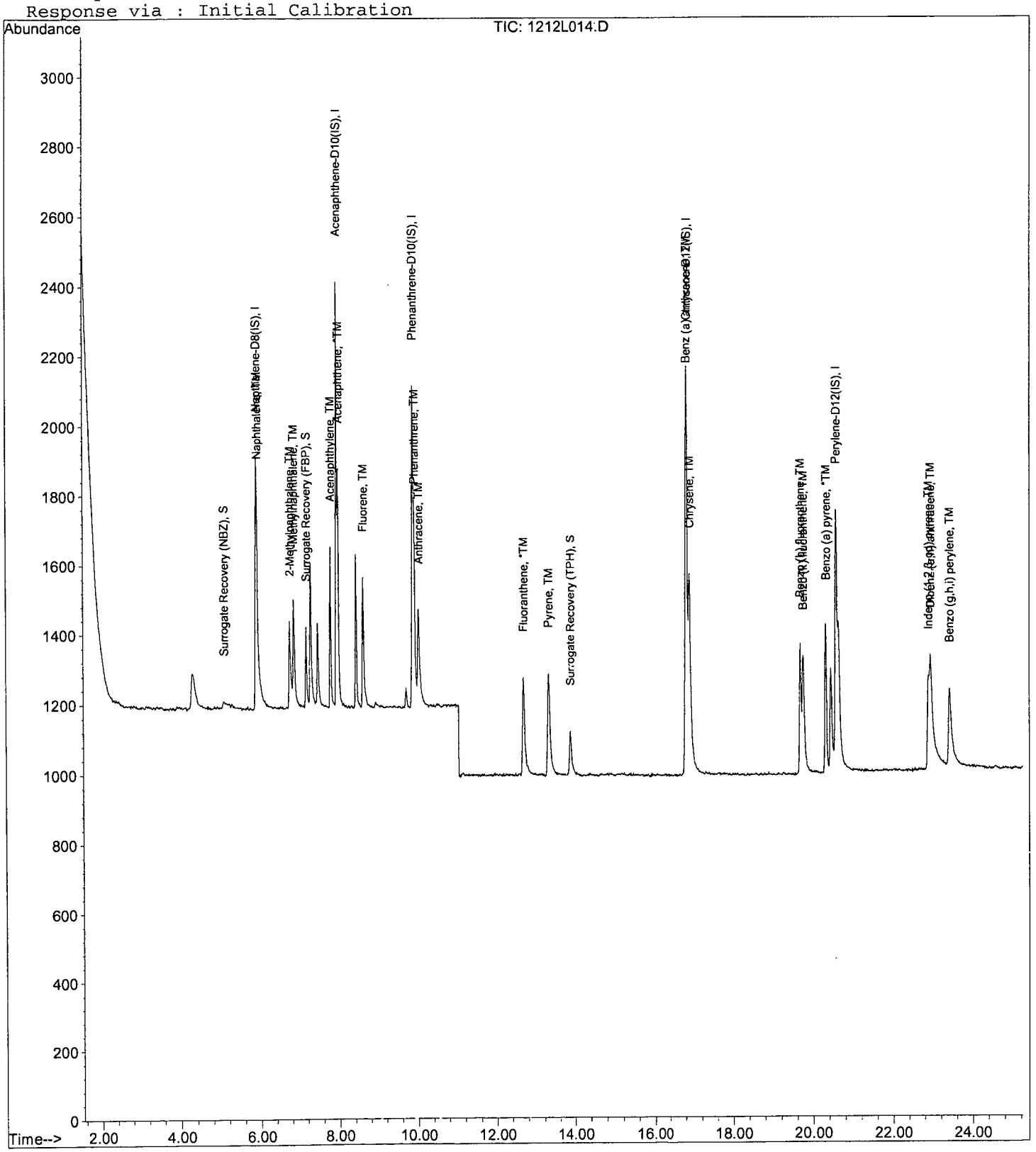
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L014.D Vial: 12
Acq On : 12 Dec 16 15:34 Operator: MA
Sample : 1.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 13 14:12 2016 Quant Results File: L1212P.RES

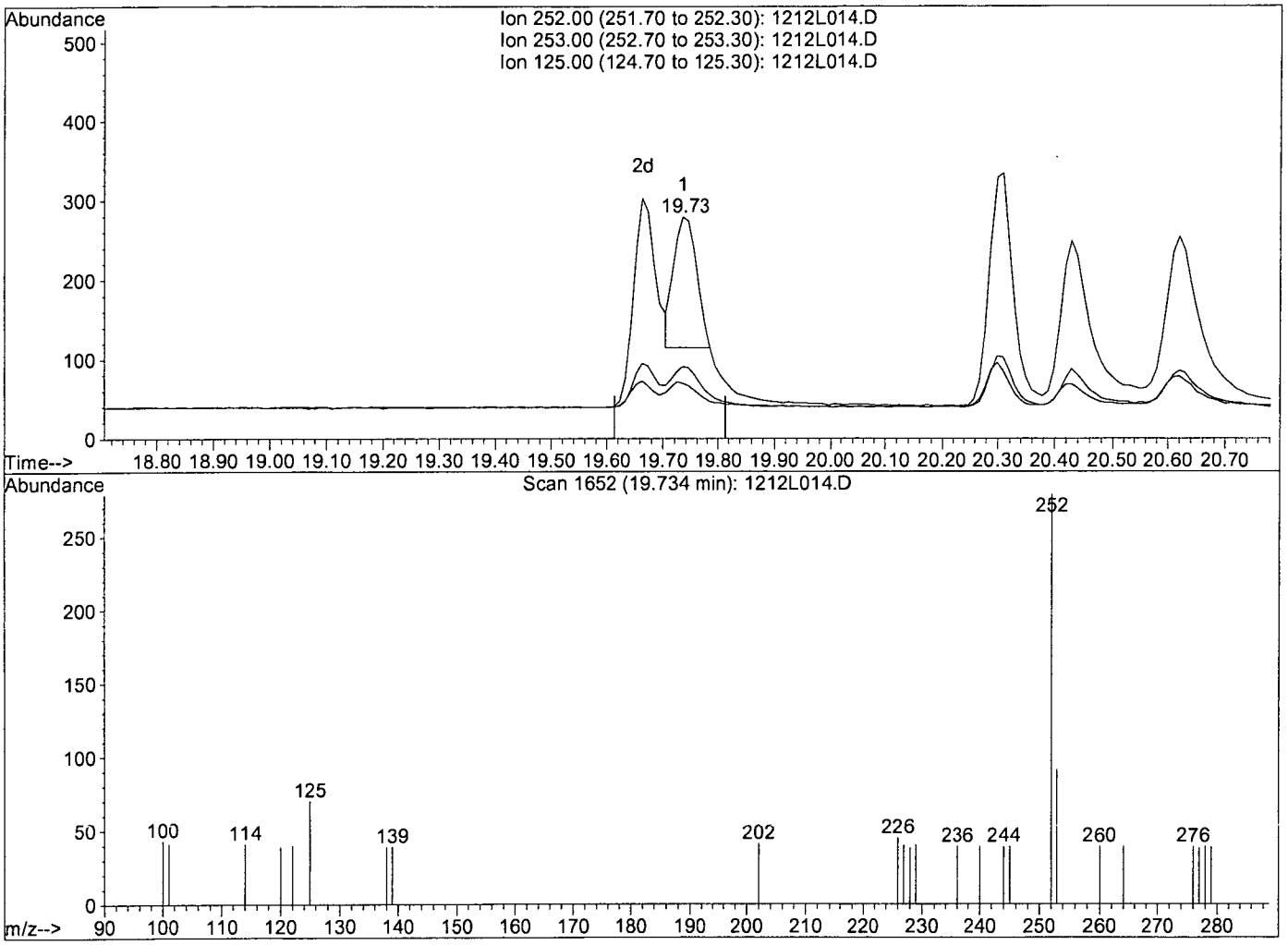
Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L014.D Vial: 12
Acq On : 12 Dec 16 15:34 Operator: MA
Sample : 1.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 14:04 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:06:14 2016
Response via : Multiple Level Calibration



TIC: 1212L014.D

(23) Benzo (k) fluoranthene (TM)

19.73min 0.6322ppb

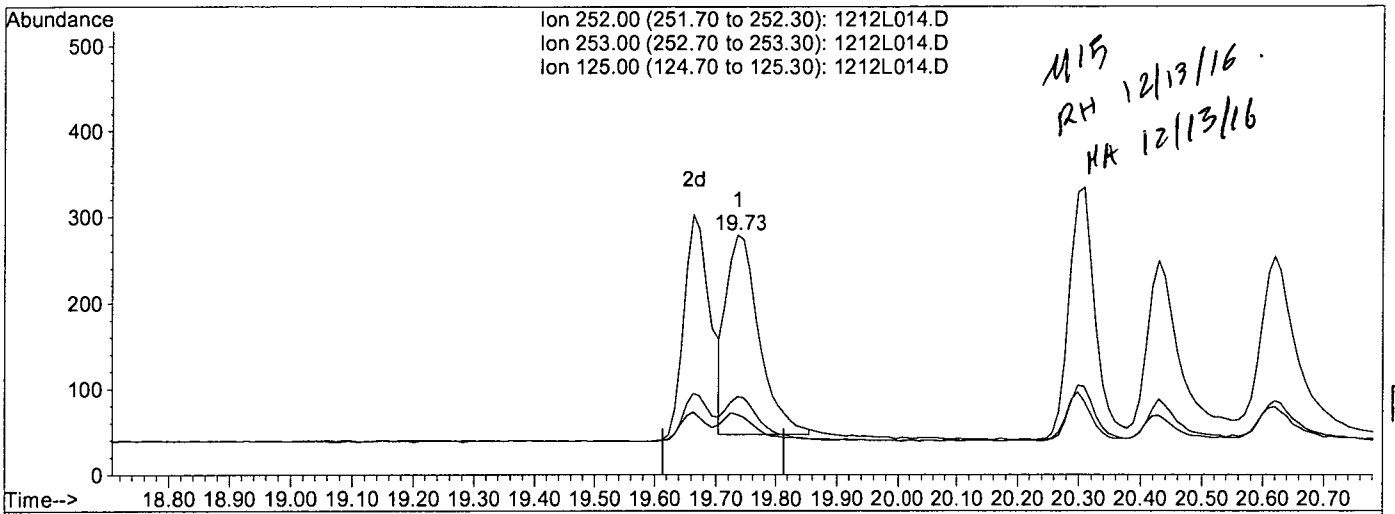
response 465

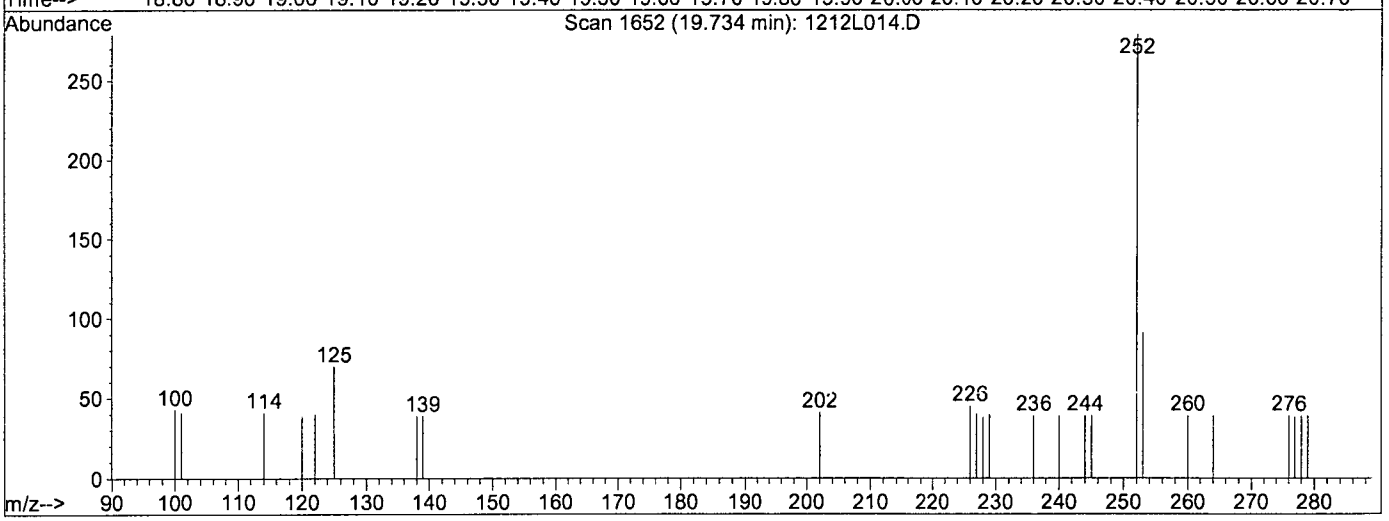
Ion	Exp%	Act%
252.00	100	100
253.00	23.40	21.34
125.00	13.10	14.02
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L014.D Vial: 12
Acq On : 12 Dec 16 15:34 Operator: MA
Sample : 1.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 14:12 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:06:14 2016
Response via : Multiple Level Calibration





TIC: 1212L014.D

(23) Benzo (k) fluoranthene (TM)

19.73min 1.0656ppb m

response 880

Ion	Exp%	Act%
252.00	100	100
253.00	23.40	32.62#
125.00	13.10	25.09#
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L009.D Vial: 7
Acq On : 12 Dec 16 12:49 Operator: MA
Sample : 5.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 13 14:04 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:03:42 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	1900	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.92	164	1038	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.84	188	1930	2.50000	ppb		0.00
15) Chrysene-D12(IS)	16.79	240	2367	2.50000	ppb		0.00
21) Perylene-D12(IS)	20.54	264	2172	2.50000	ppb		0.00
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.03	82	501	2.22494	ppb		0.00
Spiked Amount 5.000			Recovery = 44.500%				
7) Surrogate Recovery (FBP)	7.13	172	1395	2.27095	ppb		0.00
Spiked Amount 5.000			Recovery = 45.420%				
17) Surrogate Recovery (TPH)	13.82	244	1635	2.14055	ppb		0.00
Spiked Amount 5.000			Recovery = 42.820%				
Target Compounds							Qvalue
3) Naphthalene	5.89	128	4247	5.54092	ppb		100
4) 2-Methylnaphthalene	6.71	142	2729	5.25106	ppb		99
5) 1-Methylnaphthalene	6.82	142	2768	5.34910	ppb		97
8) Acenaphthylene	7.76	152	4510	5.59288	ppb		97
9) Acenaphthene	7.95	154	2664	5.45016	ppb		99
10) Fluorene	8.57	166	3165	5.59310	ppb		100
12) Phenanthrene	9.89	178	4521	5.44995	ppb		99
13) Anthracene	9.97	178	4306	5.72563	ppb		100
14) Fluoranthene	12.62	202	6154	5.33775	ppb		95
16) Pyrene	13.26	202	6389	5.44084	ppb		98
18) Benz (a) anthracene	16.77	228	5554	5.49804	ppb		97
19) Chrysene	16.86	228	5994	5.25919	ppb		96
20) Indeno (1,2,3-cd) pyrene	22.84	276	6203	5.63530	ppb	#	96
22) Benzo (b) fluoranthene	19.64	252	5160	5.53465	ppb		96
23) Benzo (k) fluoranthene	19.71	252	4795	5.00856	ppb		96
24) Benzo (a) pyrene	20.28	252	5209	5.41563	ppb		97
25) Dibenz (a,h) anthracene	22.89	278	5166	5.09186	ppb		95
26) Benzo (g,h,i) perylene	23.36	276	5050	5.70231	ppb		95

(#) = qualifier out of range (m) = manual integration

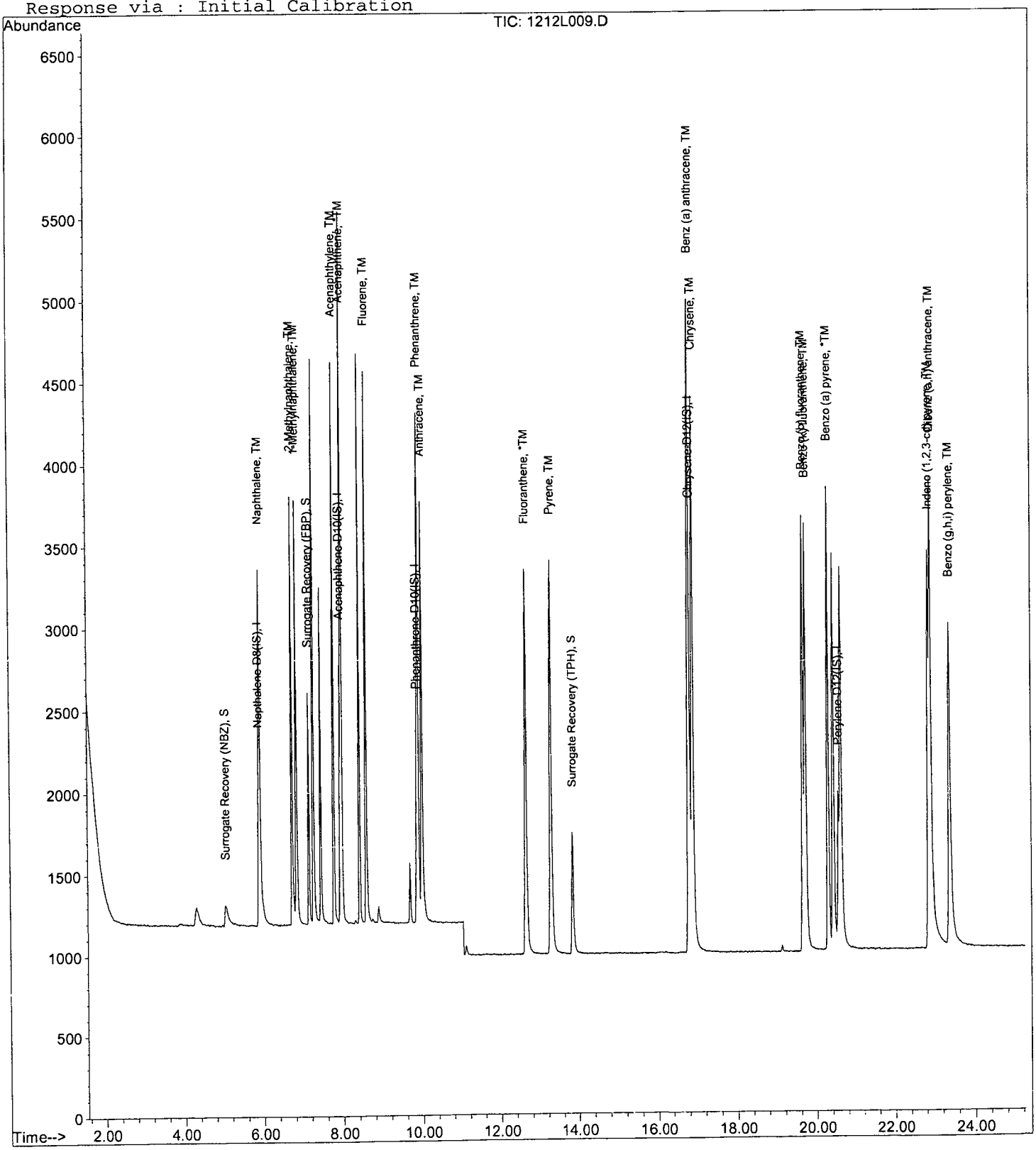
Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L009.D
Acq On : 12 Dec 16 12:49
Sample : 5.0 ug/ml PAH 12/12/16
Misc : water

Vial: 7
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Dec 13 14:04 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L010.D Vial: 8
Acq On : 12 Dec 16 13:22 Operator: MA
Sample : 10.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 13 14:04 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:03:42 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	1924	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	7.92	164	1050	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.84	188	1952	2.50000 ppb		0.00
15) Chrysene-D12(IS)	16.79	240	2464	2.50000 ppb		0.00
21) Perylene-D12(IS)	20.54	264	2236	2.50000 ppb		0.00
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.02	82	1179	4.99512 ppb		-0.01
Spiked Amount 5.000			Recovery = 99.900%			
7) Surrogate Recovery (FBP)	7.13	172	3159	5.27928 ppb		0.00
Spiked Amount 5.000			Recovery = 105.580%			
17) Surrogate Recovery (TPH)	13.82	244	3924	5.09644 ppb		0.00
Spiked Amount 5.000			Recovery = 101.920%			
Target Compounds						Qvalue
3) Naphthalene	5.89	128	8109	10.44758 ppb		100
4) 2-Methylnaphthalene	6.71	142	5374	10.57649 ppb		98
5) 1-Methylnaphthalene	6.82	142	5213	9.94836 ppb		97
8) Acenaphthylene	7.76	152	8747	10.72323 ppb		97
9) Acenaphthene	7.95	154	5139	10.39350 ppb		99
10) Fluorene	8.56	166	6140	10.72642 ppb		98
12) Phenanthrene	9.87	178	8812	10.50292 ppb		100
13) Anthracene	9.97	178	8611	11.32088 ppb		100
14) Fluoranthene	12.62	202	12352	10.59291 ppb		94
16) Pyrene	13.26	202	12712	10.39931 ppb		98
18) Benz (a) anthracene	16.76	228	11201	10.65163 ppb		98
19) Chrysene	16.86	228	11843	9.98209 ppb		97
20) Indeno (1,2,3-cd) pyrene	22.83	276	12547	10.94996 ppb	#	98
22) Benzo (b) fluoranthene	19.64	252	10653	11.09942 ppb		96
23) Benzo (k) fluoranthene	19.70	252	9928	9.92504 ppb		98
24) Benzo (a) pyrene	20.28	252	10342	10.44449 ppb		98
25) Dibenz (a,h) anthracene	22.89	278	10283	10.09209 ppb		93
26) Benzo (g,h,i) perylene	23.36	276	10063	11.03761 ppb		93

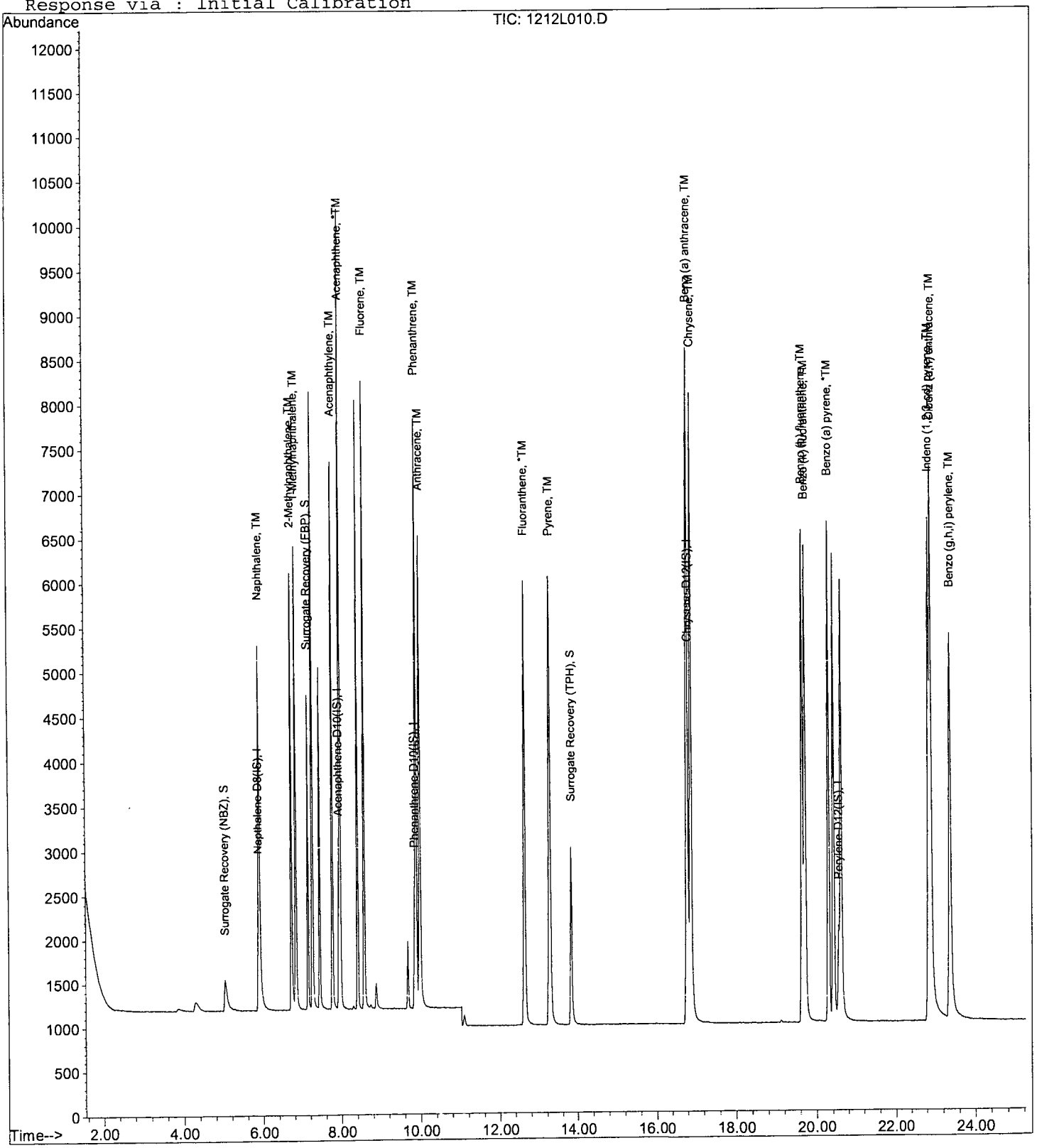
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L010.D Vial: 8
Acq On : 12 Dec 16 13:22 Operator: MA
Sample : 10.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 13 14:04 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L011.D Vial: 9
Acq On : 12 Dec 16 13:54 Operator: MA
Sample : 50.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 13 14:04 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:03:42 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	1851	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.92	164	987	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.84	188	1836	2.50000	ppb		0.00
15) Chrysene-D12(IS)	16.80	240	2363	2.50000	ppb		0.01
21) Perylene-D12(IS)	20.55	264	2104	2.50000	ppb		0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.01	82	5918	25.50280	ppb		-0.02
Spiked Amount 5.000			Recovery = 510.060%				
7) Surrogate Recovery (FBP)	7.13	172	14297	26.02000	ppb		0.00
Spiked Amount 5.000			Recovery = 520.400%				
17) Surrogate Recovery (TPH)	13.82	244	19064	26.32087	ppb		0.00
Spiked Amount 5.000			Recovery = 526.420%				
Target Compounds							Qvalue
3) Naphthalene	5.89	128	37135	49.73138	ppb		100
4) 2-Methylnaphthalene	6.70	142	24848	52.30218	ppb		99
5) 1-Methylnaphthalene	6.82	142	23509	46.63332	ppb		98
8) Acenaphthylene	7.76	152	39815	51.92608	ppb		97
9) Acenaphthene	7.95	154	23180	49.87339	ppb		99
10) Fluorene	8.56	166	28020	52.07471	ppb		97
12) Phenanthrene	9.89	178	41143	52.13612	ppb		99
13) Anthracene	9.97	178	40562	56.69611	ppb		99
14) Fluoranthene	12.63	202	59396	54.15545	ppb		93
16) Pyrene	13.26	202	60604	51.69745	ppb		99
18) Benz (a) anthracene	16.78	228	56712	56.23559	ppb		97
19) Chrysene	16.88	228	54023	47.48052	ppb		97
20) Indeno (1,2,3-cd) pyrene	22.87	276	53175	48.39015	ppb	#	97
22) Benzo (b) fluoranthene	19.66	252	53199	58.90579	ppb		96
23) Benzo (k) fluoranthene	19.73	252	48451	50.86128	ppb		98
24) Benzo (a) pyrene	20.31	252	49594	53.22771	ppb		96
25) Dibenz (a,h) anthracene	22.92	278	49155	52.34757	ppb		93
26) Benzo (g,h,i) perylene	23.39	276	47996	55.94722	ppb		97

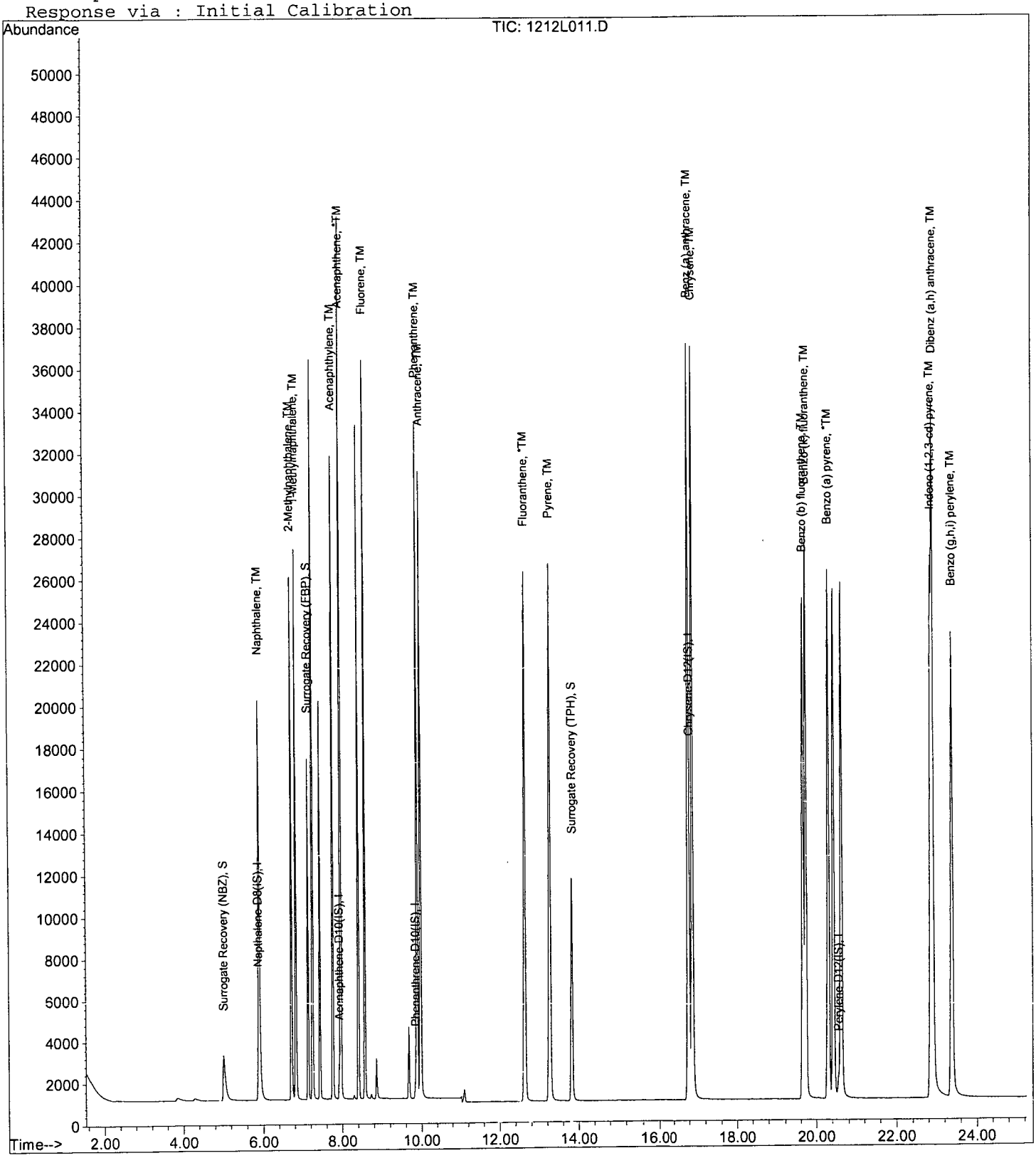
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L011.D Vial: 9
Acq On : 12 Dec 16 13:54 Operator: MA
Sample : 50.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 13 14:04 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L012.D Vial: 10
Acq On : 12 Dec 16 14:28 Operator: MA
Sample : 100.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 13 14:04 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:03:42 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	1964	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.92	164	1044	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.85	188	1914	2.50000	ppb		0.01
15) Chrysene-D12(IS)	16.82	240	2483	2.50000	ppb		0.03
21) Perylene-D12(IS)	20.57	264	2159	2.50000	ppb		0.03
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.01	82	12284	49.76371	ppb		-0.02
Spiked Amount 5.000			Recovery	= 995.280%			
7) Surrogate Recovery (FBP)	7.13	172	28673	49.47606	ppb		0.00
Spiked Amount 5.000			Recovery	= 989.520%			
17) Surrogate Recovery (TPH)	13.82	244	37477	49.34989	ppb		0.00
Spiked Amount 5.000			Recovery	= 987.000%			
Target Compounds							Qvalue
3) Naphthalene	5.89	128	74732	94.32321	ppb		100
4) 2-Methylnaphthalene	6.71	142	49626	98.78791	ppb		98
5) 1-Methylnaphthalene	6.82	142	46322	86.59931	ppb		97
8) Acenaphthylene	7.76	152	79194	97.64449	ppb		98
9) Acenaphthene	7.97	154	46028	93.62552	ppb		96
10) Fluorene	8.57	166	55451	97.42823	ppb		99
12) Phenanthrene	9.90	178	82102	99.79924	ppb		99
13) Anthracene	9.98	178	77479	103.88399	ppb		99
14) Fluoranthene	12.65	202	119546	104.55643	ppb		93
16) Pyrene	13.29	202	121997	99.03848	ppb		98
18) Benz (a) anthracene	16.80	228	112984	106.62039	ppb		97
19) Chrysene	16.91	228	106807	89.33538	ppb		97
20) Indeno (1,2,3-cd) pyrene	22.91	276	116748	101.10810	ppb	#	91
22) Benzo (b) fluoranthene	19.68	252	106244	114.64418	ppb		97
23) Benzo (k) fluoranthene	19.77	252	97479	99.58057	ppb		97
24) Benzo (a) pyrene	20.34	252	99871	104.45787	ppb		97
25) Dibenz (a,h) anthracene	22.96	278	94993	98.81911	ppb		95
26) Benzo (g,h,i) perylene	23.44	276	84112	95.54865	ppb		93

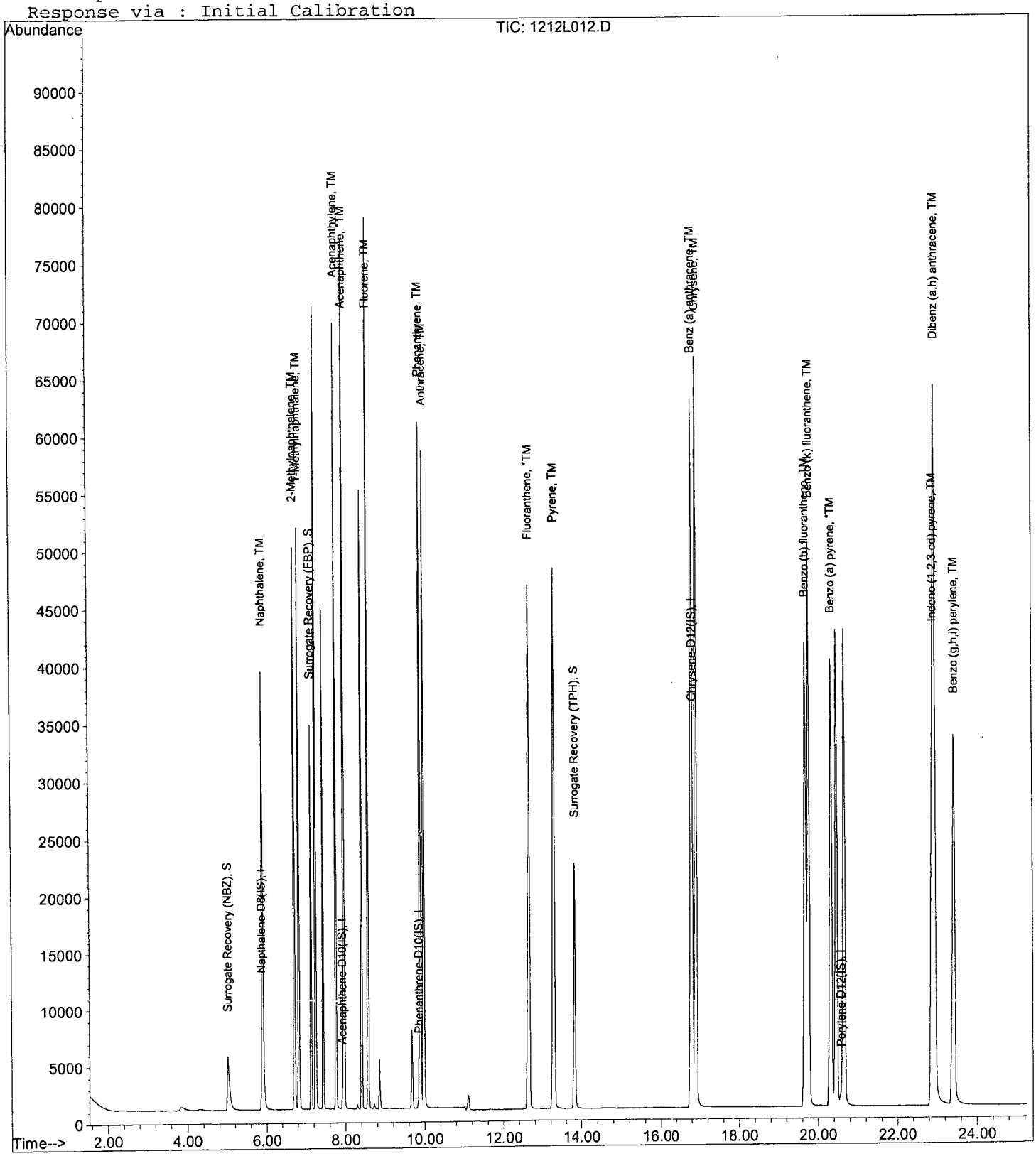
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L012.D Vial: 10
Acq On : 12 Dec 16 14:28 Operator: MA
Sample : 100.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 13 14:04 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/12/16
Instrument: Linus
Initial Cal. Date: 12/12/16
Data File: 1212L015.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	Naphthalene	1.009	0.9374	7.1	TM	
2	TM	2-Methylnaphthalene	0.6134	0.5778	5.8	TM	
3	TM	1-Methylnaphthalene	0.6809	0.6194	9.0	TM	
4	TM	Acenaphthylene	1.942	1.717	12	TM	
5	*TM	Acenaphthene	1.177	1.035	12	*TM	
6	TM	Fluorene	1.363	1.224	10	TM	
7	TM	Phenanthrene	1.075	0.9323	13	TM	
8	TM	Anthracene	0.9742	0.8964	8.0	TM	
9	*TM	Fluoranthene	1.493	1.306	13	*TM	
10	TM	Pyrene	1.240	1.069	14	TM	
11	TM	Benz (a) anthracene	1.067	0.9074	15	TM	
12	TM	Chrysene	1.204	1.018	15	TM	
13	TM	Indeno (1,2,3-cd) pyrene	1.163	1.016	13	TM	
14	TM	Benzo (b) fluoranthene	1.073	0.9137	15	TM	
15	TM	Benzo (k) fluoranthene	1.130	1.060	6.2	TM	
16	*TM	Benzo (a) pyrene	1.107	0.9559	14	*TM	
17	TM	Dibenz (a,h) anthracene	1.040	0.8922	14	TM	
18	TM	Benzo (g,h,i) perylene	1.019	0.8874	13	TM	
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
		Average			11.6		

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L015.D
Acq On : 12 Dec 16 16:07
Sample : SS PAH 12/12/16
Misc : water

Vial: 15
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Dec 13 15:18 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.88	136	1717	2.50000 ppb		0.01
6) Acenaphthene-D10(IS)	7.92	164	946	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.85	188	1728	2.50000 ppb		0.01
15) Chrysene-D12(IS)	16.79	240	2149	2.50000 ppb		0.00
21) Perylene-D12(IS)	20.55	264	1971	2.50000 ppb		0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.08	82	1	0.17309 ppb		0.05
Spiked Amount 5.000			Recovery =	3.460%		
7) Surrogate Recovery (FBP)	7.15	172	9	-0.14061 ppb		0.01
Spiked Amount 5.000			Recovery =	-2.820%		
17) Surrogate Recovery (TPH)	13.50	244	4	-0.11749 ppb		-0.32
Spiked Amount 5.000			Recovery =	-2.340%		
Target Compounds						Qvalue
3) Naphthalene	5.90	128	3219	✓4.64734 ppb		100
4) 2-Methylnaphthalene	6.71	142	1984	4.70973 ppb		100
5) 1-Methylnaphthalene	6.82	142	2127	4.54848 ppb		97
8) Acenaphthylene	7.76	152	3248	4.41958 ppb		98
9) Acenaphthene	7.95	154	1958	4.39536 ppb		99
10) Fluorene	8.57	166	2315	4.48886 ppb		98
12) Phenanthrene	9.89	178	3222	4.33808 ppb		99
13) Anthracene	9.98	178	3098	4.60092 ppb		100
14) Fluoranthene	12.63	202	4512	4.37102 ppb		94
16) Pyrene	13.26	202	4594	4.30910 ppb		99
18) Benz (a) anthracene	16.77	228	3900	4.25234 ppb		97
19) Chrysene	16.86	228	4376	4.22904 ppb		97
20) Indeno (1,2,3-cd) pyrene	22.84	276	4366	4.36878 ppb	#	98
22) Benzo (b) fluoranthene	19.64	252	3602	4.25753 ppb		96
23) Benzo (k) fluoranthene	19.71	252	4177m	4.68818 ppb		97
24) Benzo (a) pyrene	20.29	252	3768	4.31697 ppb		95
25) Dibenz (a,h) anthracene	22.90	278	3517	4.29008 ppb		94
26) Benzo (g,h,i) perylene	23.37	276	3498	4.35264 ppb		94

Algorithum check = $\frac{3219 * 1 * 2.5}{1 * 1717 * 1.009} = \frac{8047.5}{1732.453} = 4.645$

RH 12/14/16

(#) = qualifier out of range (m) = manual integration
1212L015.D L1212P.M Wed Dec 14 09:33:50 2016

Quantitation Report

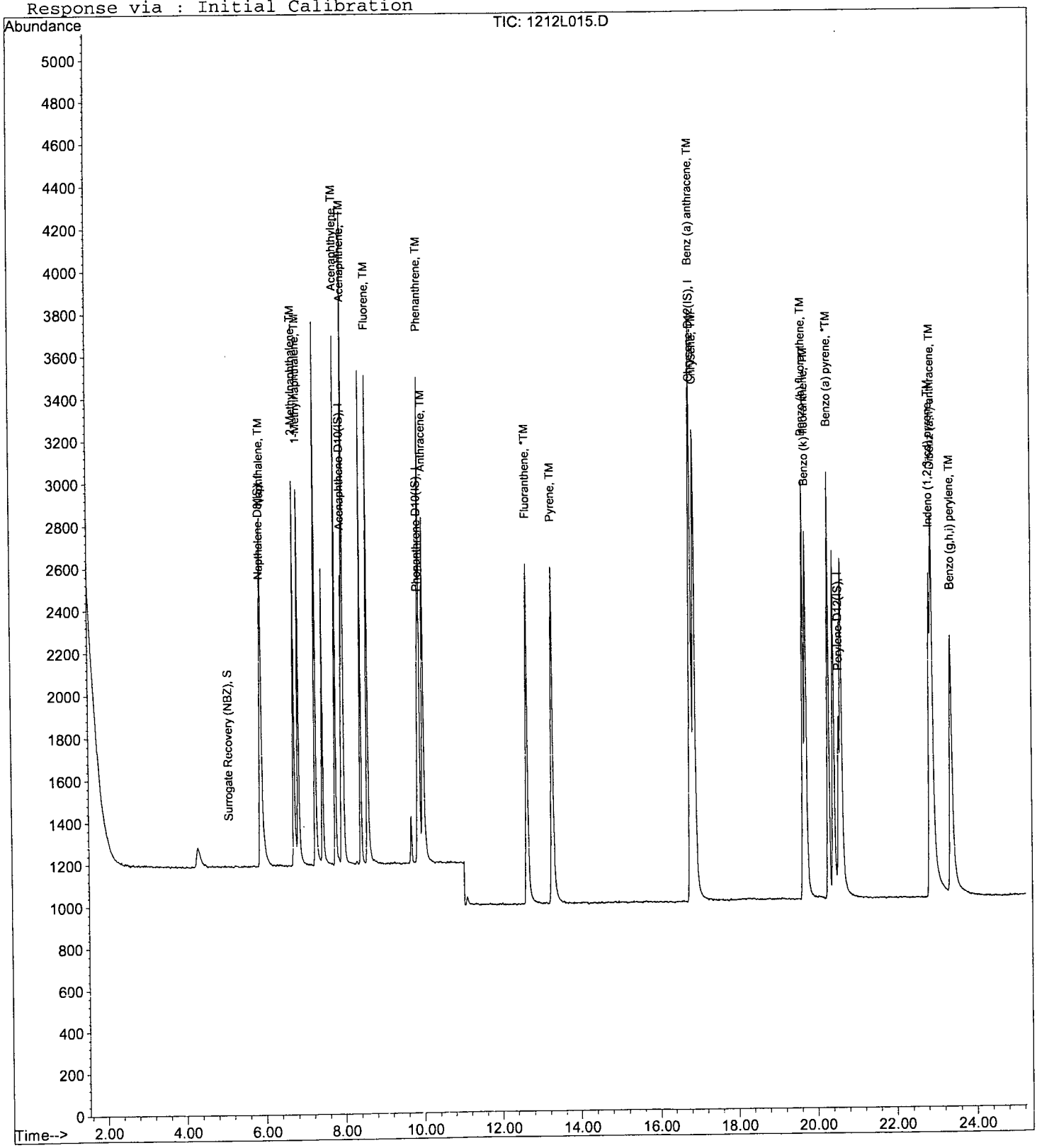
Data File : M:\LINUS\DATA\L161212\1212L015.D
Acq On : 12 Dec 16 16:07
Sample : SS PAH 12/12/16
Misc : water

Vial: 15
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Dec 13 15:18 2016

Quant Results File: L1212P.RES

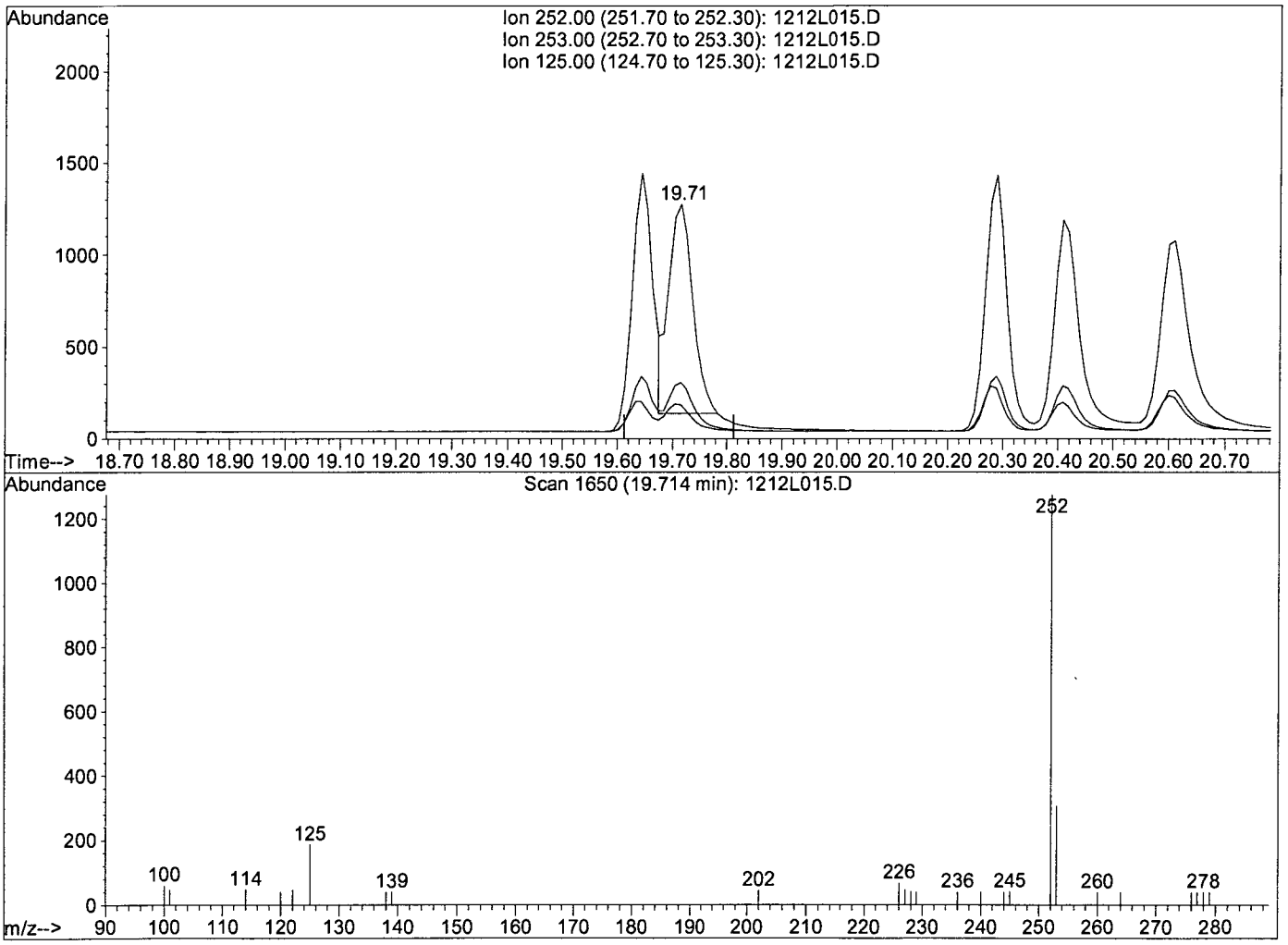
Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L015.D Vial: 15
Acq On : 12 Dec 16 16:07 Operator: MA
Sample : SS PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 15:12 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Multiple Level Calibration



TIC: 1212L015.D

(23) Benzo (k) fluoranthene (TM)

19.71min 3.9238ppb

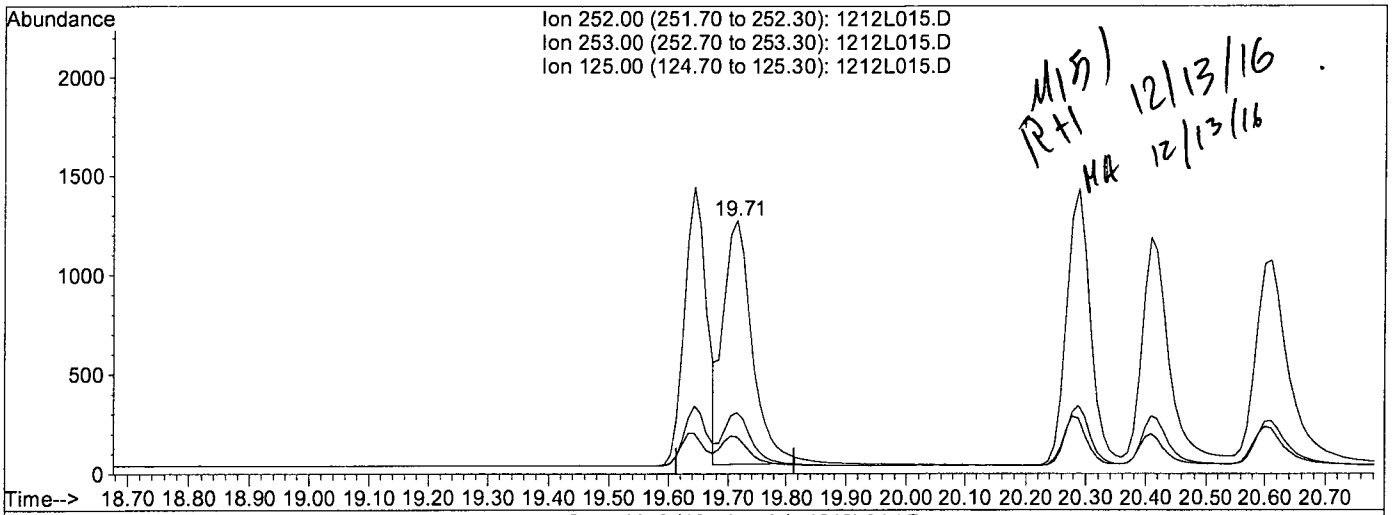
response 3496

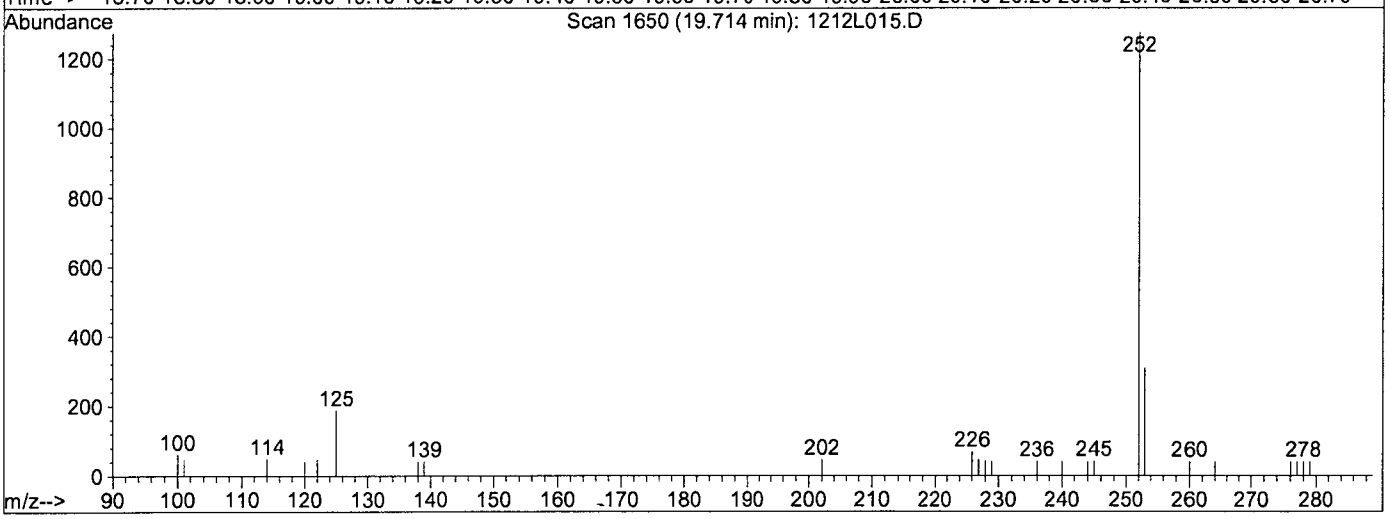
Ion	Exp%	Act%
252.00	100	100
253.00	23.40	21.55
125.00	13.10	11.96
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L015.D Vial: 15
Acq On : 12 Dec 16 16:07 Operator: MA
Sample : SS PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 15:18 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Multiple Level Calibration





TIC: 1212L015.D

(23) Benzo (k) fluoranthene (TM)

19.71min 4.6882ppb m

response 4177

Ion	Exp%	Act%
252.00	100	100
253.00	23.40	24.08
125.00	13.10	14.67
0.00	0.00	0.00

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/16/16
Instrument: Linus
Initial Cal. Date: 12/12/16
Data File: 1212L103.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	SL	Surrogate Recovery (NBZ)	0.2469	0.3288	33	SL	11
3	TM	Naphthalene	1.009	0.9846	2.4	TM	
4	TM	2-Methylnaphthalene	0.6134	0.6539	6.6	TM	
5	TM	1-Methylnaphthalene	0.6809	0.6463	5.1	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	SL	Surrogate Recovery (FBP)	1.561	1.511	3.2	SL	2.9
8	TM	Acenaphthylene	1.942	1.912	1.6	TM	
9	*TM	Acenaphthene	1.177	1.132	3.9	*TM	
10	TM	Fluorene	1.363	1.341	1.6	TM	
11	I	Phenanthrene-D10(IS)	ISTD			I	
12	TM	Phenanthrene	1.075	1.042	3.1	TM	
13	TM	Anthracene	0.9742	1.032	5.9	TM	
14	*TM	Fluoranthene	1.493	1.487	0.41	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.240	1.216	2.0	TM	
17	SL	Surrogate Recovery (TPH)	0.8592	0.8384	2.4	SL	5.0
18	TM	Benz (a) anthracene	1.067	1.094	2.5	TM	
19	TM	Chrysene	1.204	1.134	5.8	TM	
20	TM	Indeno (1,2,3-cd) pyrene	1.163	1.196	2.8	TM	
21	I	Perylene-D12(IS)	ISTD			I	
22	TM	Benzo (b) fluoranthene	1.073	1.101	2.6	TM	
23	TM	Benzo (k) fluoranthene	1.130	0.9597	15	TM	
24	*TM	Benzo (a) pyrene	1.107	1.041	5.9	*TM	
25	TM	Dibenz (a,h) anthracene	1.040	1.031	0.84	TM	
26	TM	Benzo (g,h,i) perylene	1.019	1.002	1.7	TM	
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			5.2		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L103.D Vial: 3
Acq On : 16 Dec 16 11:08 Operator: MA
Sample : 5.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 16 11:53 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

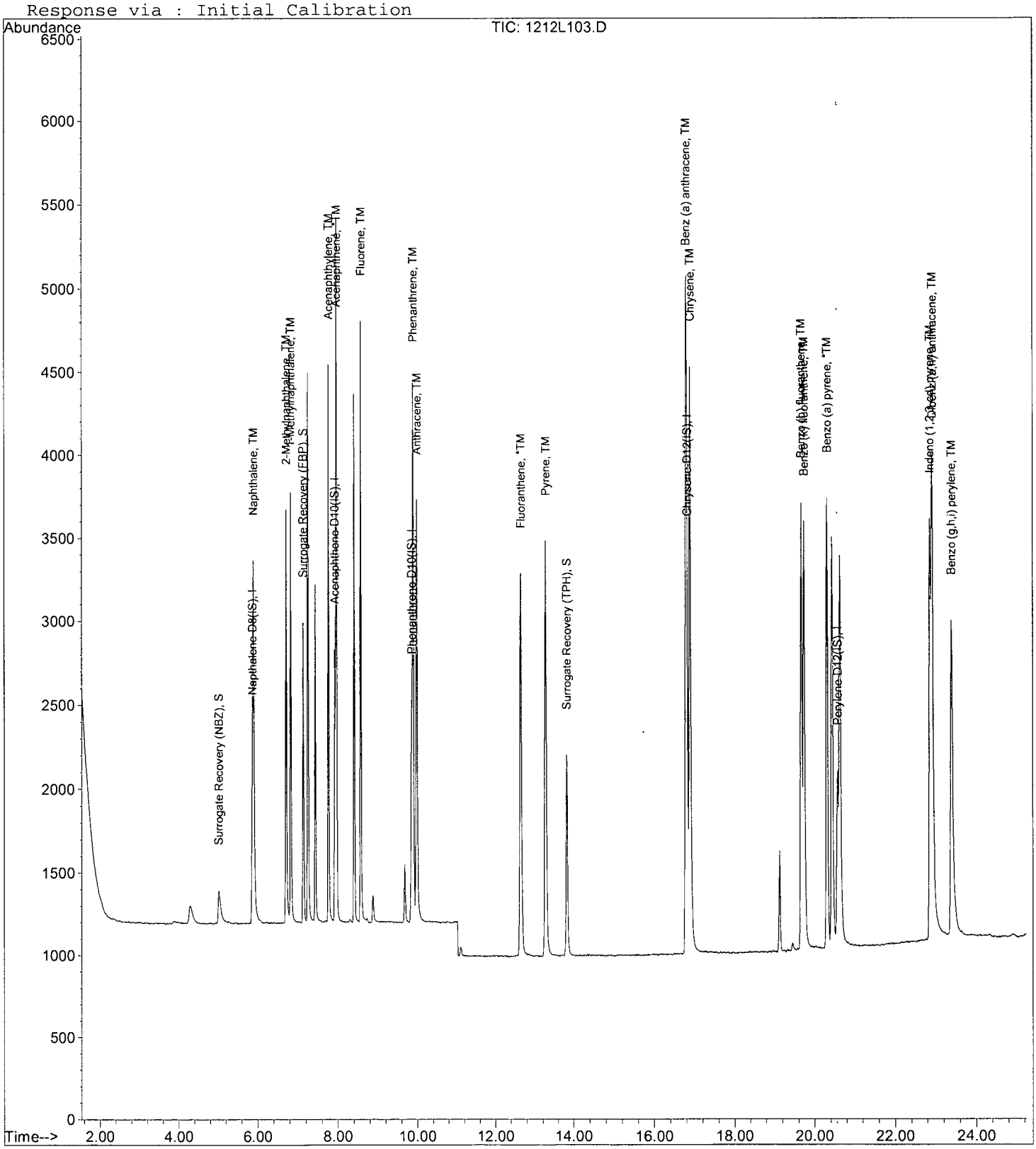
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	1910	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.92	164	1070	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.85	188	1998	2.50000	ppb		0.01
15) Chrysene-D12(IS)	16.81	240	2537	2.50000	ppb		0.02
21) Perylene-D12(IS)	20.57	264	2432	2.50000	ppb		0.03
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.02	82	628	2.77505	ppb		-0.01
Spiked Amount 5.000			Recovery = 55.500%				
7) Surrogate Recovery (FBP)	7.13	172	1617	2.57326	ppb		0.00
Spiked Amount 5.000			Recovery = 51.460%				
17) Surrogate Recovery (TPH)	13.82	244	2127	2.62450	ppb		0.00
Spiked Amount 5.000			Recovery = 52.500%				
Target Compounds							Qvalue
3) Naphthalene	5.89	128	3761	4.88116	ppb		100
4) 2-Methylnaphthalene	6.71	142	2498	5.33069	ppb		99
5) 1-Methylnaphthalene	6.82	142	2469	4.74631	ppb		98
8) Acenaphthylene	7.76	152	4091	4.92155	ppb		97
9) Acenaphthene	7.95	154	2422	4.80688	ppb		99
10) Fluorene	8.57	166	2869	4.91839	ppb		100
12) Phenanthrene	9.89	178	4162	4.84643	ppb		99
13) Anthracene	9.98	178	4122	5.29443	ppb		100
14) Fluoranthene	12.64	202	5943	4.97930	ppb		93
16) Pyrene	13.27	202	6169	4.90146	ppb		98
18) Benz (a) anthracene	16.78	228	5550	5.12593	ppb		97
19) Chrysene	16.88	228	5753	4.70950	ppb		96
20) Indeno (1,2,3-cd) pyrene	22.86	276	6067	5.14241	ppb	#	99
22) Benzo (b) fluoranthene	19.66	252	5355	5.12975	ppb		96
23) Benzo (k) fluoranthene	19.73	252	4668	4.24614	ppb		96
24) Benzo (a) pyrene	20.31	252	5065	4.70295	ppb		95
25) Dibenz (a,h) anthracene	22.92	278	5015	4.95778	ppb		92
26) Benzo (g,h,i) perylene	23.39	276	4876	4.91722	ppb		94

(#) = qualifier out of range (m) = manual integration

Data File : M:\LINUS\DATA\L161212\1212L103.D Vial: 3
Acq On : 16 Dec 16 11:08 Operator: MA
Sample : 5.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 16 11:53 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/16/16
Instrument: Linus
Initial Cal. Date: 12/12/16
Data File: 1212L104.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	SL	Surrogate Recovery (NBZ)	0.2469	0.3094	25	SL	4.9
3	TM	Naphthalene	1.009	1.017	0.80	TM	
4	TM	2-Methylnaphthalene	0.6134	0.6671	8.8	TM	
5	TM	1-Methylnaphthalene	0.6809	0.6687	1.8	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	SL	Surrogate Recovery (FBP)	1.561	1.525	2.3	SL	3.9
8	TM	Acenaphthylene	1.942	1.976	1.7	TM	
9	*TM	Acenaphthene	1.177	1.156	1.8	*TM	
10	TM	Fluorene	1.363	1.378	1.1	TM	
11	I	Phenanthrene-D10(IS)	ISTD			I	
12	TM	Phenanthrene	1.075	1.063	1.1	TM	
13	TM	Anthracene	0.9742	1.047	7.4	TM	
14	*TM	Fluoranthene	1.493	1.520	1.8	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.240	1.248	0.60	TM	
17	SL	Surrogate Recovery (TPH)	0.8592	0.8549	0.51	SL	7.1
18	TM	Benz (a) anthracene	1.067	1.122	5.2	TM	
19	TM	Chrysene	1.204	1.163	3.4	TM	
20	TM	Indeno (1,2,3-cd) pyrene	1.163	1.247	7.3	TM	
21	I	Perylene-D12(IS)	ISTD			I	
22	TM	Benzo (b) fluoranthene	1.073	1.097	2.2	TM	
23	TM	Benzo (k) fluoranthene.	1.130	1.011	11	TM	
24	*TM	Benzo (a) pyrene	1.107	1.082	2.3	*TM	
25	TM	Dibenz (a,h) anthracene	1.040	1.087	4.5	TM	
26	TM	Benzo (g,h,i) perylene	1.019	1.052	3.2	TM	
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			4.5		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L104.D Vial: 4
Acq On : 16 Dec 16 11:41 Operator: MA
Sample : 5.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 16 12:07 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	1897	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.92	164	1074	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.85	188	1988	2.50000	ppb		0.01
15) Chrysene-D12(IS)	16.80	240	2515	2.50000	ppb		0.01
21) Perylene-D12(IS)	20.56	264	2398	2.50000	ppb		0.02
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.02	82	587	2.62157	ppb		-0.01
Spiked Amount 5.000			Recovery = 52.440%				
7) Surrogate Recovery (FBP)	7.13	172	1638	2.59843	ppb		0.00
Spiked Amount 5.000			Recovery = 51.960%				
17) Surrogate Recovery (TPH)	13.82	244	2150	2.67852	ppb		0.00
Spiked Amount 5.000			Recovery = 53.580%				
Target Compounds							Qvalue
3) Naphthalene	5.89	128	3857	5.04006	ppb		100
4) 2-Methylnaphthalene	6.71	142	2531	5.43813	ppb		98
5) 1-Methylnaphthalene	6.82	142	2537	4.91046	ppb		98
8) Acenaphthylene	7.76	152	4244	5.08659	ppb		97
9) Acenaphthene	7.95	154	2483	4.90959	ppb		99
10) Fluorene	8.57	166	2959	5.05378	ppb		99
12) Phenanthrene	9.89	178	4227	4.94688	ppb		99
13) Anthracene	9.97	178	4161	5.37140	ppb		99
14) Fluoranthene	12.63	202	6042	5.08771	ppb		95
16) Pyrene	13.27	202	6276	5.03010	ppb		98
18) Benz (a) anthracene	16.78	228	5646	5.26021	ppb		97
19) Chrysene	16.88	228	5851	4.83162	ppb		96
20) Indeno (1,2,3-cd) pyrene	22.86	276	6272	5.36267	ppb	#	98
22) Benzo (b) fluoranthene	19.66	252	5260	5.11019	ppb		95
23) Benzo (k) fluoranthene	19.72	252	4848	4.47240	ppb		97
24) Benzo (a) pyrene	20.30	252	5189	4.88640	ppb		96
25) Dibenz (a,h) anthracene	22.92	278	5212	5.22559	ppb		92
26) Benzo (g,h,i) perylene	23.39	276	5047	5.16183	ppb		94

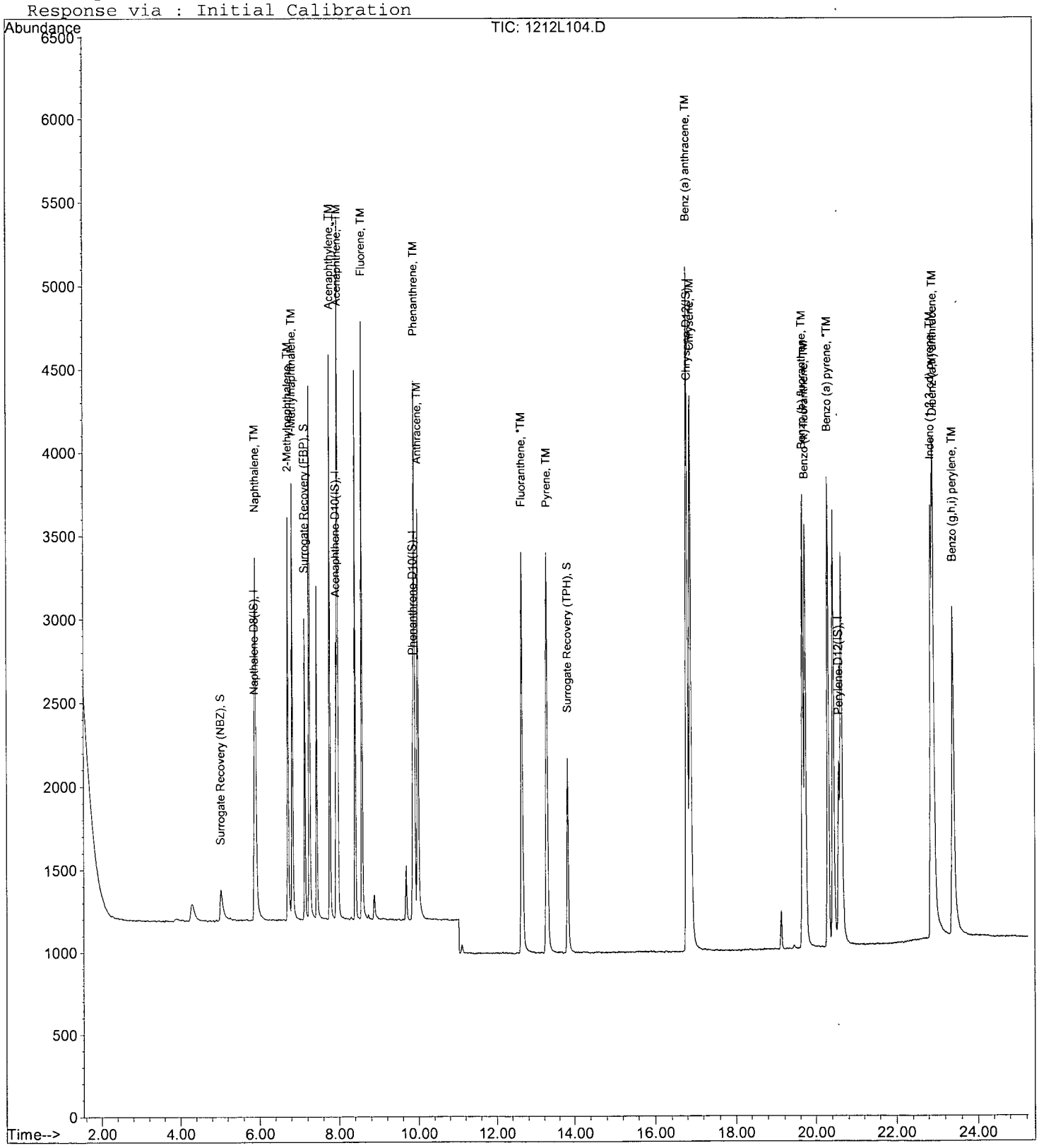
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L104.D Vial: 4
Acq On : 16 Dec 16 11:41 Operator: MA
Sample : 5.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 16 12:07 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/16/16
Instrument: Linus
Initial Cal. Date: 12/12/16
Data File: 1212L115.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	SL	Surrogate Recovery (NBZ)	0.2469	0.3283	33	SL	11
3	TM	Naphthalene	1.009	1.019	1.00	TM	
4	TM	2-Methylnaphthalene	0.6134	0.6744	10.0	TM	
5	TM	1-Methylnaphthalene	0.6809	0.6694	1.7	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	SL	Surrogate Recovery (FBP)	1.561	1.537	1.5	SL	4.8
8	TM	Acenaphthylene	1.942	1.982	2.1	TM	
9	*TM	Acenaphthene	1.177	1.163	1.2	*TM	
10	TM	Fluorene	1.363	1.377	1.0	TM	
11	I	Phenanthrene-D10(IS)	ISTD			I	
12	TM	Phenanthrene	1.075	1.072	0.20	TM	
13	TM	Anthracene	0.9742	1.073	10	TM	
14	*TM	Fluoranthene	1.493	1.542	3.2	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.240	1.290	4.0	TM	
17	SL	Surrogate Recovery (TPH)	0.8592	0.8818	2.6	SL	11
18	TM	Benz (a) anthracene	1.067	1.140	6.8	TM	
19	TM	Chrysene	1.204	1.176	2.3	TM	
20	TM	Indeno (1,2,3-cd) pyrene	1.163	1.010	13	TM	
21	I	Perylene-D12(IS)	ISTD			I	
22	TM	Benzo (b) fluoranthene	1.073	1.098	2.3	TM	
23	TM	Benzo (k) fluoranthene	1.130	1.079	4.5	TM	
24	*TM	Benzo (a) pyrene	1.107	1.084	2.1	*TM	
25	TM	Dibenz (a,h) anthracene	1.040	0.9352	10	TM	
26	TM	Benzo (g,h,i) perylene	1.019	0.8733	14	TM	
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			6.0		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L115.D Vial: 15
Acq On : 16 Dec 16 17:28 Operator: MA
Sample : 5.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 19 10:59 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.88	136	1803	2.50000	ppb		0.01
6) Acenaphthene-D10(IS)	7.92	164	1028	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.85	188	1907	2.50000	ppb		0.01
15) Chrysene-D12(IS)	16.81	240	2326	2.50000	ppb		0.02
21) Perylene-D12(IS)	20.57	264	2091	2.50000	ppb		0.03
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.03	82	592	2.77145	ppb		0.00
Spiked Amount 5.000			Recovery = 55.420%				
7) Surrogate Recovery (FBP)	7.13	172	1580	2.61980	ppb		0.00
Spiked Amount 5.000			Recovery = 52.400%				
17) Surrogate Recovery (TPH)	13.82	244	2051	2.76669	ppb		0.00
Spiked Amount 5.000			Recovery = 55.340%				
Target Compounds							Qvalue
3) Naphthalene	5.89	128	3673	5.04985	ppb		100
4) 2-Methylnaphthalene	6.71	142	2432	5.49784	ppb		100
5) 1-Methylnaphthalene	6.82	142	2414	4.91598	ppb		97
8) Acenaphthylene	7.76	152	4076	5.10384	ppb		98
9) Acenaphthene	7.95	154	2392	4.94129	ppb		98
10) Fluorene	8.57	166	2831	5.05153	ppb		100
12) Phenanthrene	9.89	178	4090	4.98986	ppb		99
13) Anthracene	9.98	178	4091	5.50536	ppb		100
14) Fluoranthene	12.64	202	5881	5.16248	ppb		93
16) Pyrene	13.27	202	6001	5.20050	ppb		99
18) Benz (a) anthracene	16.78	228	5302	5.34109	ppb		97
19) Chrysene	16.88	228	5469	4.88313	ppb		97
20) Indeno (1,2,3-cd) pyrene	22.87	276	4699	4.34419	ppb	#	98
22) Benzo (b) fluoranthene	19.66	252	4593	5.11732	ppb		96
23) Benzo (k) fluoranthene	19.73	252	4512	4.77355	ppb		97
24) Benzo (a) pyrene	20.31	252	4533	4.89538	ppb		95
25) Dibenz (a,h) anthracene	22.92	278	3911	4.49691	ppb		94
26) Benzo (g,h,i) perylene	23.40	276	3652	4.28347	ppb		94

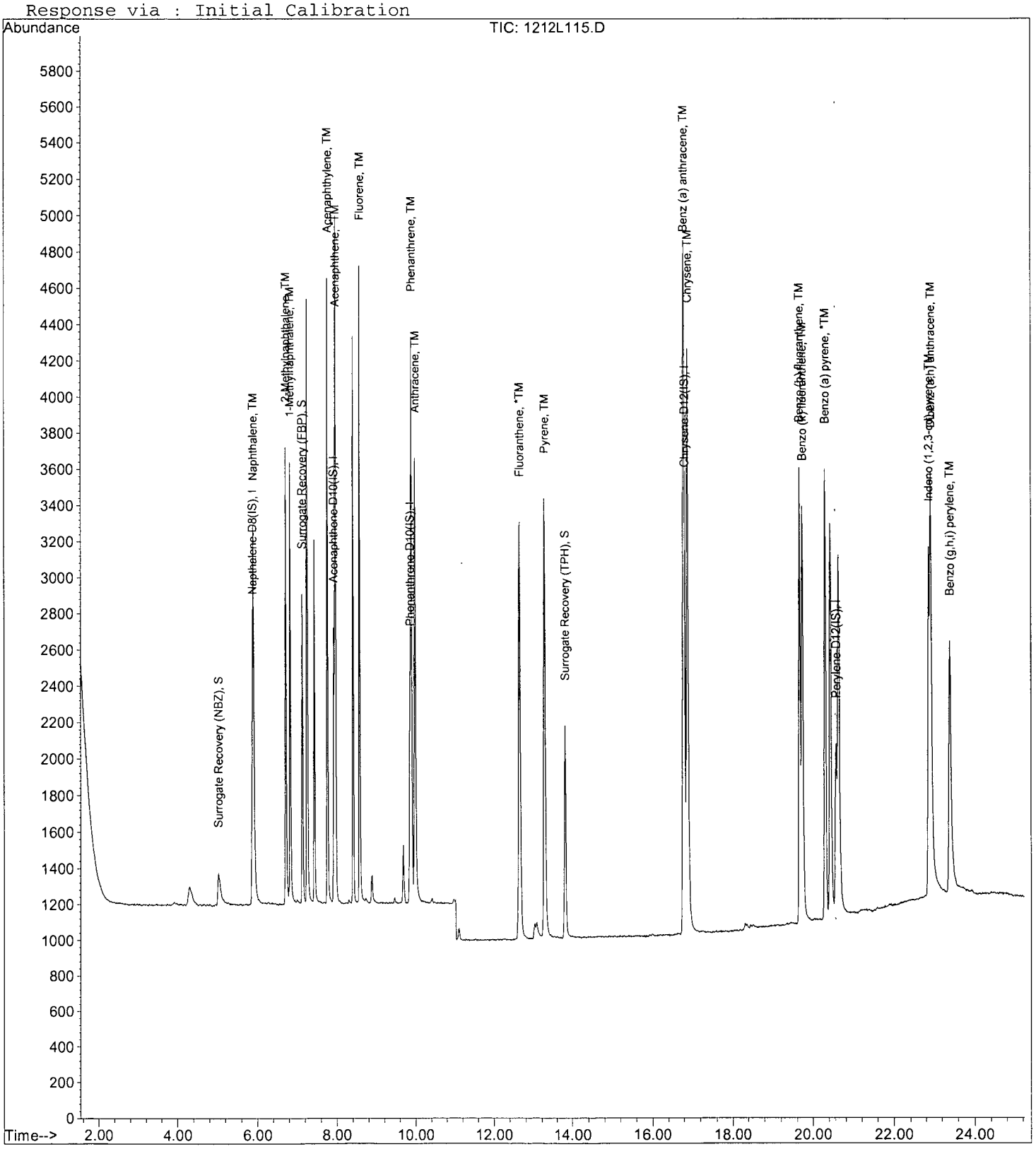
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L115.D Vial: 15
Acq On : 16 Dec 16 17:28 Operator: MA
Sample : 5.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 19 10:59 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



ORGANICS

Raw Data

APPL, INC.

Method Blank
EPA 8270D SIM

Blank Name/QCG: **161214W-47345 - 214748**
Batch ID: #SIMDO-161214A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/14/16	12/16/16
BLANK	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/14/16	12/16/16
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	12/14/16	12/16/16
BLANK	SURROGATE: 2-FLUORBIPHENY	57.7	53-106			%	12/14/16	12/16/16
BLANK	SURROGATE: NITROBENZENE-	65.3	55-111			%	12/14/16	12/16/16
BLANK	SURROGATE: TERPHENYL-D14 (	75.8	58-132			%	12/14/16	12/16/16

Quant Method: L1212P.M
Run #: 1212L105
Instrument: Linus
Sequence: L161212
Initials: RHA

GC SC-Blank-REG MDLs-DOD
Printed: 12/19/16 1:55:45 PM

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L105.D Vial: 5
Acq On : 16 Dec 16 12:14 Operator: MA
Sample : 161214A BLK 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 16 16:37 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.87	136	2192	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	7.92	164	1247	2.50000	ppb	0.00
11) Phenanthrene-D10(IS)	9.85	188	2263	2.50000	ppb	0.01
15) Chrysene-D12(IS)	16.82	240	2832	2.50000	ppb	0.03
21) Perylene-D12(IS)	20.58	264	2735	2.50000	ppb	0.04
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.02	82	856	3.26431	ppb	-0.01
Spiked Amount 5.000			Recovery = 65.280%			
7) Surrogate Recovery (FBP)	7.13	172	2100	2.88559	ppb	0.00
Spiked Amount 5.000			Recovery = 57.720%			
17) Surrogate Recovery (TPH)	13.82	244	3383	3.79196	ppb	0.00
Spiked Amount 5.000			Recovery = 75.840%			

Target Compounds Qvalue

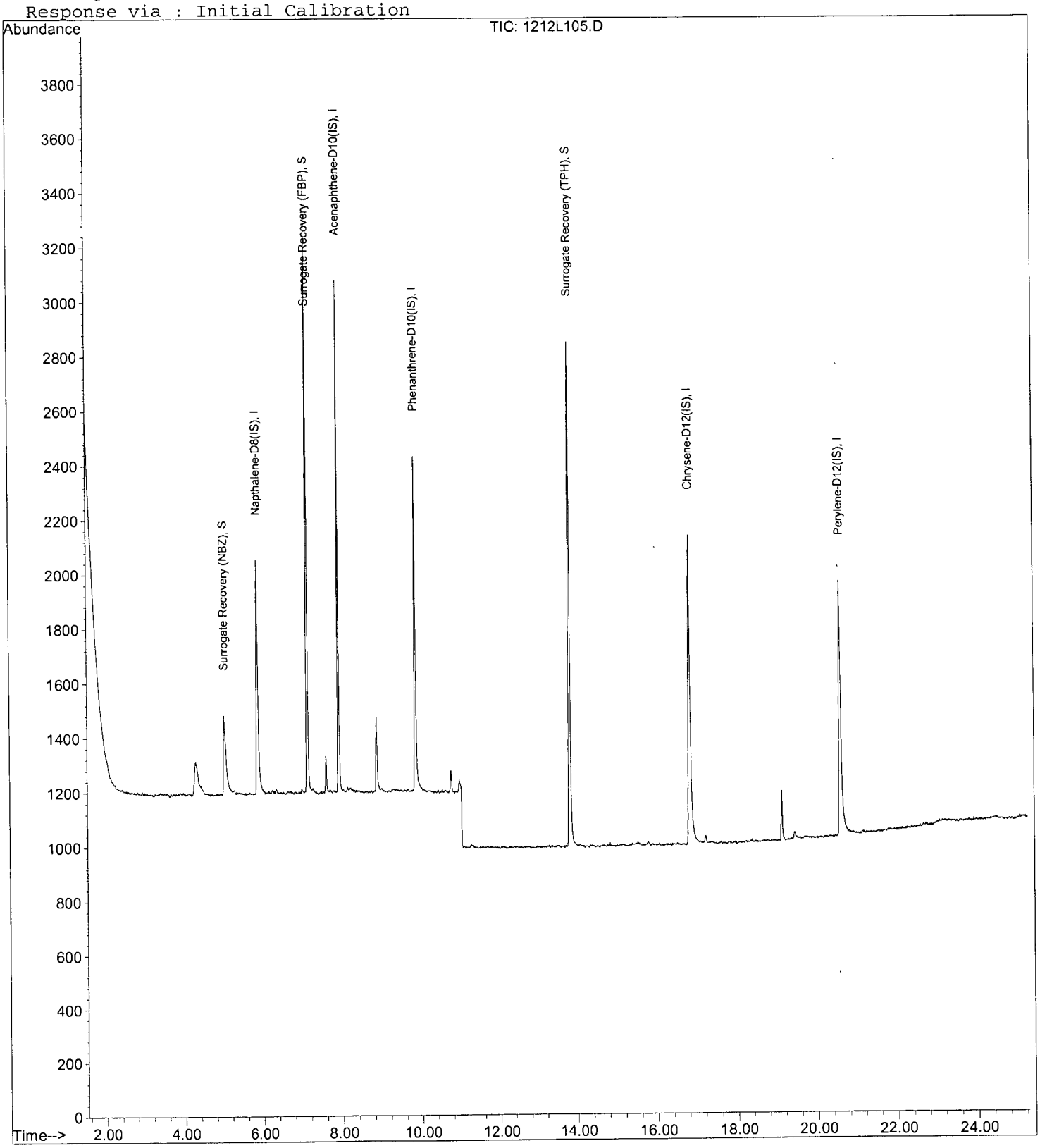
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L105.D Vial: 5
Acq On : 16 Dec 16 12:14 Operator: MA
Sample : 161214A BLK 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 16 16:37 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



Laboratory Control Spike Recovery
EPA 8270D SIM

APPL ID: **161214W-47345 LCS - 214748**
Batch ID: #SIMDO-161214A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1-METHYLNAPHTHALENE	5.00	3.31	66.2	41-115
2-METHYLNAPHTHALENE	5.00	3.73	74.6	39-114
NAPHTHALENE	5.00	3.42	68.4	43-114
SURROGATE: 2-FLUORBIPHENYL (S)	5.00	3.53	70.6	53-106
SURROGATE: NITROBENZENE-D5 (S)	5.00	3.91	78.2	55-111
SURROGATE: TERPHENYL-D14 (S)	5.00	4.21	84.2	58-132

Comments: _____

Primary	SPK
Quant Method :	L1212P.M
Extraction Date :	12/14/16
Analysis Date :	12/16/16
Instrument :	Linus
Run :	1212L106
Initials :	RHA

Printed: 12/19/16 1:55:38 PM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L106.D Vial: 6
Acq On : 16 Dec 16 12:47 Operator: MA
Sample : 161214A LCS-1 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 16 16:37 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	2122	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.92	164	1197	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.85	188	2200	2.50000	ppb		0.01
15) Chrysene-D12(IS)	16.80	240	2814	2.50000	ppb		0.01
21) Perylene-D12(IS)	20.56	264	2657	2.50000	ppb		0.02
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.02	82	1002	3.91188	ppb		-0.01
Spiked Amount 5.000			Recovery	= 78.240%			
7) Surrogate Recovery (FBP)	7.13	172	2445	3.53359	ppb		0.00
Spiked Amount 5.000			Recovery	= 70.680%			
17) Surrogate Recovery (TPH)	13.82	244	3722	4.21188	ppb		0.00
Spiked Amount 5.000			Recovery	= 84.240%			
Target Compounds							Qvalue
3) Naphthalene	5.89	128	2925	3.41691	ppb		100
4) 2-Methylnaphthalene	6.71	142	1940	3.72633	ppb		99
5) 1-Methylnaphthalene	6.82	142	1912	3.30835	ppb		98
8) Acenaphthylene	7.76	152	3603	3.87459	ppb		97
9) Acenaphthene	7.95	154	2127	3.77351	ppb		99
10) Fluorene	8.57	166	2740	4.19887	ppb		99
12) Phenanthrene	9.89	178	4055	4.28828	ppb		99
13) Anthracene	9.97	178	3805	4.43852	ppb		99
14) Fluoranthene	12.63	202	5901	4.49015	ppb		95
16) Pyrene	13.27	202	6120	4.38388	ppb		97
18) Benz (a) anthracene	16.78	228	5507	4.58555	ppb		97
19) Chrysene	16.87	228	5669	4.18391	ppb		97
20) Indeno (1,2,3-cd) pyrene	22.86	276	6041	4.61634	ppb	#	99
22) Benzo (b) fluoranthene	19.66	252	5101	4.47264	ppb		96
23) Benzo (k) fluoranthene	19.72	252	4688	3.90322	ppb		98
24) Benzo (a) pyrene	20.30	252	5069	4.30809	ppb		96
25) Dibenz (a,h) anthracene	22.91	278	4946	4.47551	ppb		95
26) Benzo (g,h,i) perylene	23.39	276	4860	4.48605	ppb		95

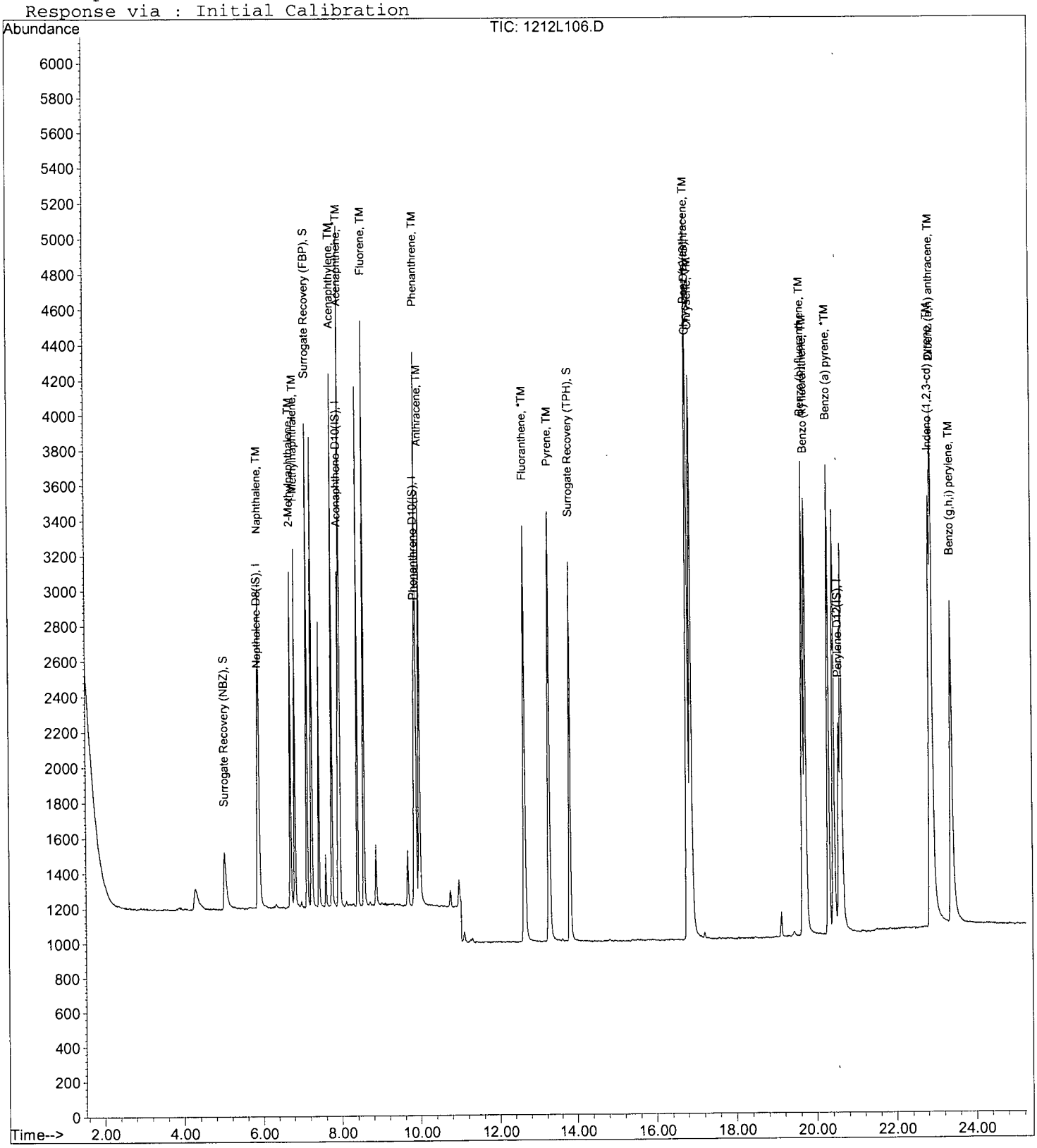
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L106.D Vial: 6
Acq On : 16 Dec 16 12:47 Operator: MA
Sample : 161214A LCS-1 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 16 16:37 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



Matrix Spike Recoveries

EPA 8270D SIM

APPL ID: **161214W-47345 MS - 214748**
Batch ID: #SIMDO-161214A
Sample ID: AZ47345
Client ID: ERH135

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
1-METHYLNAPHTHALENE	5.00	ND	3.01	3.12	60.2	62.4	41-115	3.6	20
2-METHYLNAPHTHALENE	5.00	ND	3.35	3.51	67.0	70.2	39-114	4.7	20
NAPHTHALENE	5.00	ND	3.06	3.13	61.2	62.6	43-114	2.3	20
SURROGATE: 2-FLUORBIPHENYL (S)	5.00	NA	3.06	3.24	61.2	64.8	53-106		
SURROGATE: NITROBENZENE-D5 (S)	5.00	NA	3.25	3.41	65.0	68.2	55-111		
SURROGATE: TERPHENYL-D14 (S)	5.00	NA	3.60	3.86	72.0	77.2	58-132		

Comments: _____

Primary	SPK	DUP
Quant Method :	L1212P.M	L1212P.M
Extraction Date :	12/14/16	12/14/16
Analysis Date :	12/16/16	12/16/16
Instrument :	Linus	Linus
Run :	1212L109	1212L112
Initials :	RHA	

Printed: 12/19/16 1:55:35 PM
APPL MSD SCII

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L109.D Vial: 9
Acq On : 16 Dec 16 14:27 Operator: MA
Sample : AZ47345W18 MS-1 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Dec 16 16:37 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	2222	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.92	164	1245	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.85	188	2274	2.50000	ppb		0.01
15) Chrysene-D12(IS)	16.80	240	2910	2.50000	ppb		0.01
21) Perylene-D12(IS)	20.56	264	2752	2.50000	ppb		0.02
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.02	82	928	3.25177	ppb		-0.01
Spiked Amount 4.673			Recovery = 69.593%				
7) Surrogate Recovery (FBP)	7.13	172	2363	3.05817	ppb		0.00
Spiked Amount 4.673			Recovery = 65.441%				
17) Surrogate Recovery (TPH)	13.82	244	3526	3.59634	ppb		0.00
Spiked Amount 4.673			Recovery = 76.954%				
Target Compounds							Qvalue
3) Naphthalene	5.89	128	2939	3.06426	ppb		99
4) 2-Methylnaphthalene	6.71	142	1957	3.35496	ppb		99
5) 1-Methylnaphthalene	6.82	142	1951	3.01299	ppb		97
8) Acenaphthylene	7.76	152	3501	3.38295	ppb		97
9) Acenaphthene	7.95	154	2084	3.32214	ppb		99
10) Fluorene	8.57	166	2641	3.63657	ppb		100
12) Phenanthrene	9.89	178	3852	3.68322	ppb		99
13) Anthracene	9.98	178	3576	3.77164	ppb		100
14) Fluoranthene	12.63	202	5614	3.86239	ppb		95
16) Pyrene	13.27	202	5779	3.74117	ppb		98
18) Benz (a) anthracene	16.78	228	5143	3.87026	ppb		97
19) Chrysene	16.88	228	5402	3.60312	ppb		96
20) Indeno (1,2,3-cd) pyrene	22.86	276	5672	3.91717	ppb	#	98
22) Benzo (b) fluoranthene	19.66	252	4831	3.82213	ppb		96
23) Benzo (k) fluoranthene	19.72	252	4339	3.25975	ppb		97
24) Benzo (a) pyrene	20.31	252	4776	3.66258	ppb		94
25) Dibenz (a,h) anthracene	22.92	278	4736	3.86687	ppb		93
26) Benzo (g,h,i) perylene	23.39	276	4565	3.80214	ppb		95

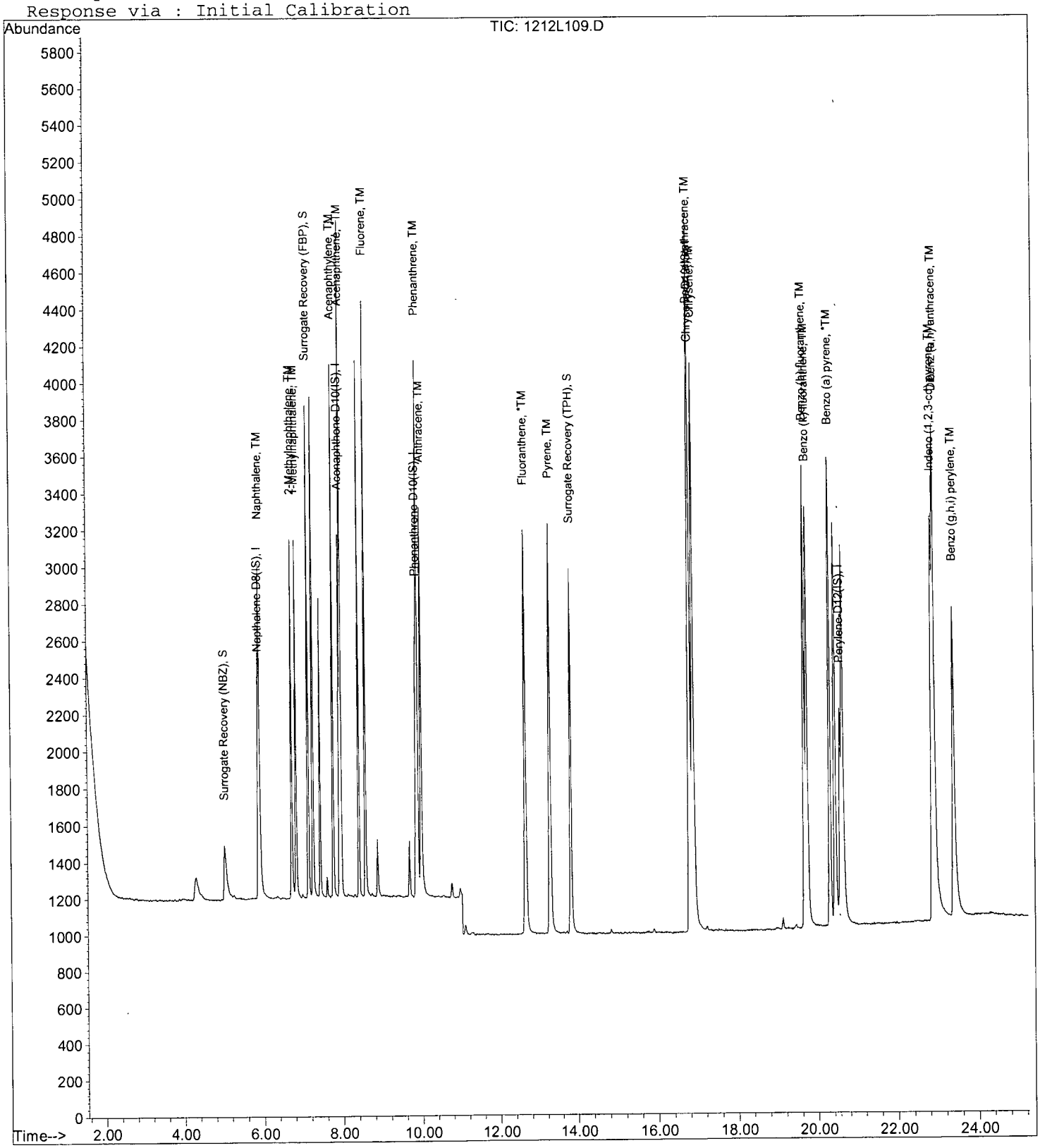
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L109.D Vial: 9
Acq On : 16 Dec 16 14:27 Operator: MA
Sample : AZ47345W18 MS-1 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Dec 16 16:37 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L112.D Vial: 12
Acq On : 16 Dec 16 16:07 Operator: MA
Sample : AZ47345W27 MSD-1 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Dec 16 16:37 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	1947	2.50000 ppb	0.01
6) Acenaphthene-D10(IS)	7.92	164	1084	2.50000 ppb	0.00
11) Phenanthrene-D10(IS)	9.85	188	1976	2.50000 ppb	0.01
15) Chrysene-D12(IS)	16.81	240	2370	2.50000 ppb	0.02
21) Perylene-D12(IS)	20.57	264	2165	2.50000 ppb	0.03
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.02	82	854	3.40722 ppb	-0.01
Spiked Amount 4.673			Recovery	= 72.910%	
7) Surrogate Recovery (FBP)	7.13	172	2172	3.23669 ppb	0.00
Spiked Amount 4.673			Recovery	= 69.272%	
17) Surrogate Recovery (TPH)	13.82	244	3073	3.85655 ppb	0.00
Spiked Amount 4.673			Recovery	= 82.540%	
Target Compounds					Qvalue
3) Naphthalene	5.90	128	2628	3.12701 ppb	100
4) 2-Methylnaphthalene	6.71	142	1792	3.50601 ppb	100
5) 1-Methylnaphthalene	6.82	142	1772	3.12308 ppb	96
8) Acenaphthylene	7.76	152	3347	3.71449 ppb	97
9) Acenaphthene	7.95	154	1945	3.56106 ppb	99
10) Fluorene	8.57	166	2464	3.89676 ppb	100
12) Phenanthrene	9.89	178	3586	3.94598 ppb	99
13) Anthracene	9.98	178	3385	4.10861 ppb	100
14) Fluoranthene	12.64	202	5178	4.09967 ppb	92
16) Pyrene	13.28	202	5284	4.20013 ppb	97
18) Benz (a) anthracene	16.79	228	4778	4.41483 ppb	96
19) Chrysene	16.88	228	4681	3.83360 ppb	96
20) Indeno (1,2,3-cd) pyrene	22.87	276	4093	3.47075 ppb #	98
22) Benzo (b) fluoranthene	19.67	252	4245	4.26910 ppb	95
23) Benzo (k) fluoranthene	19.73	252	3862	3.68806 ppb	97
24) Benzo (a) pyrene	20.31	252	3991	3.89040 ppb	96
25) Dibenz (a,h) anthracene	22.93	278	3332	3.45815 ppb	91
26) Benzo (g,h,i) perylene	23.40	276	3193	3.38047 ppb	95

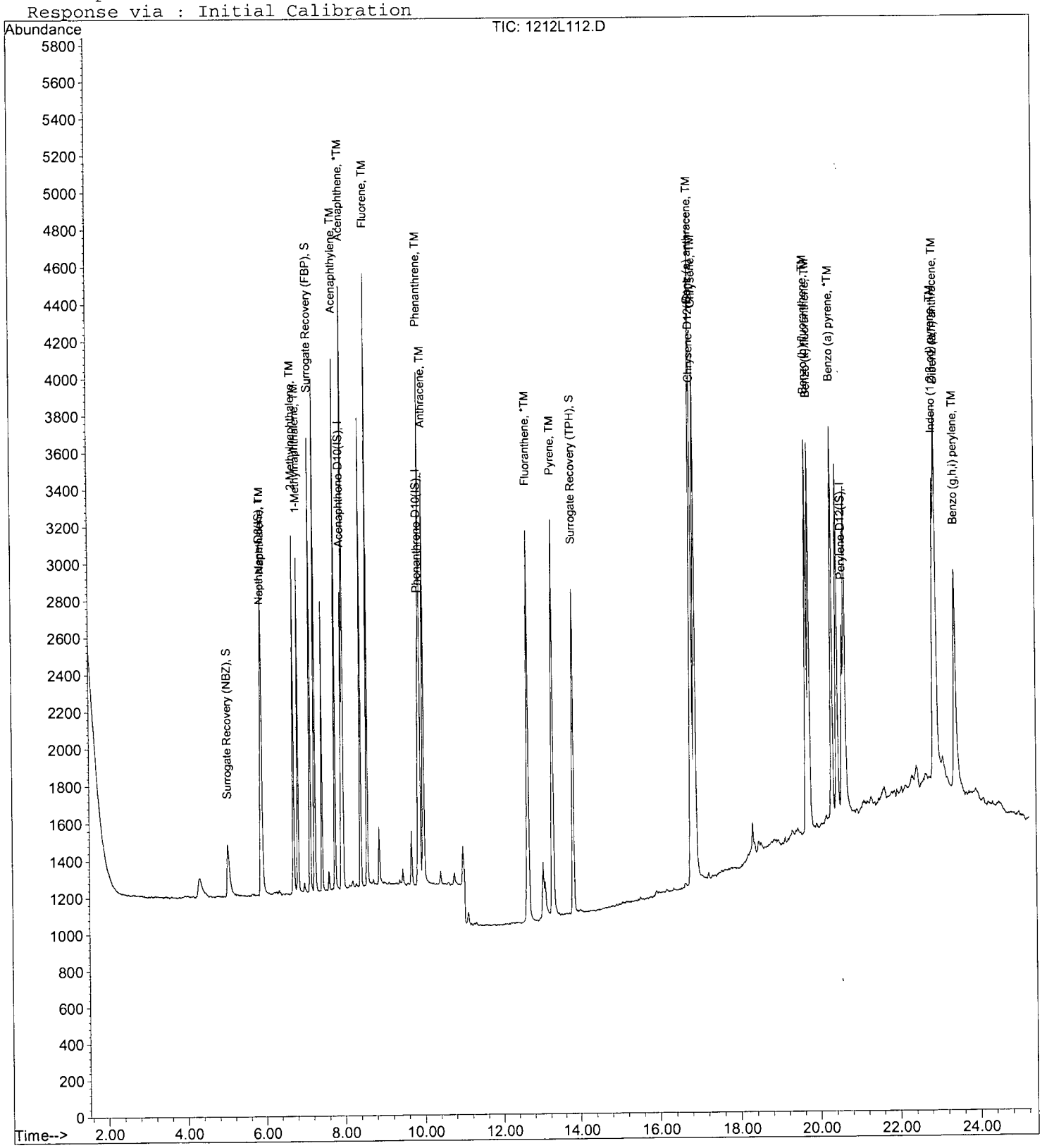
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L112.D Vial: 12
Acq On : 16 Dec 16 16:07 Operator: MA
Sample : AZ47345W27 MSD-1 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

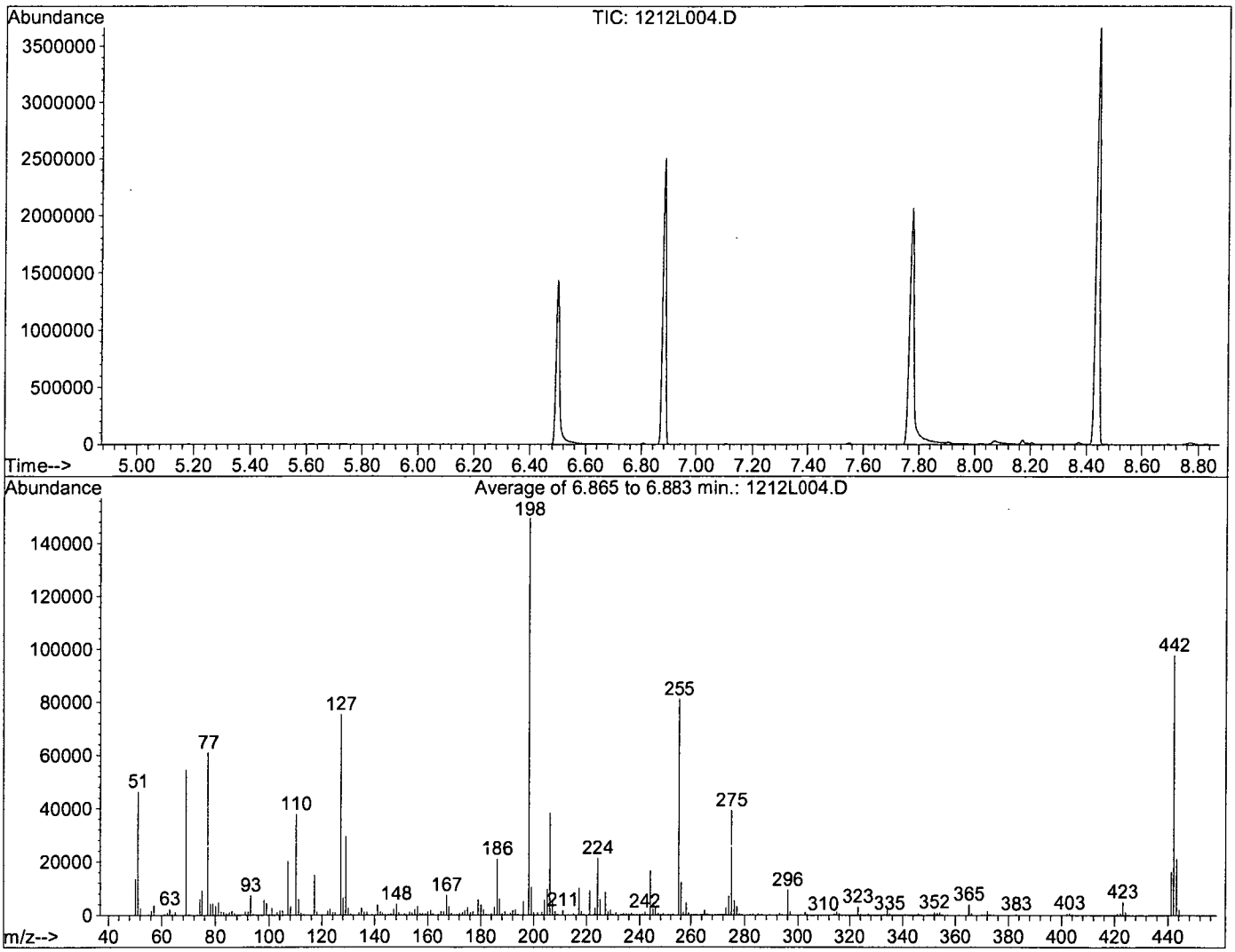
Quant Time: Dec 16 16:37 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



Data File : M:\LINUS\DATA\L161212\1212L004.D Vial: 2
Acq On : 12 Dec 16 10:19 Operator: MA
Sample : SV Tune 11/15/16 Inst : Linus
Misc : water Multiplr: 1.00

Method : M:\LINUS\DATA\L161026\DFTPP2.M (Chemstation Integrator)
Title :



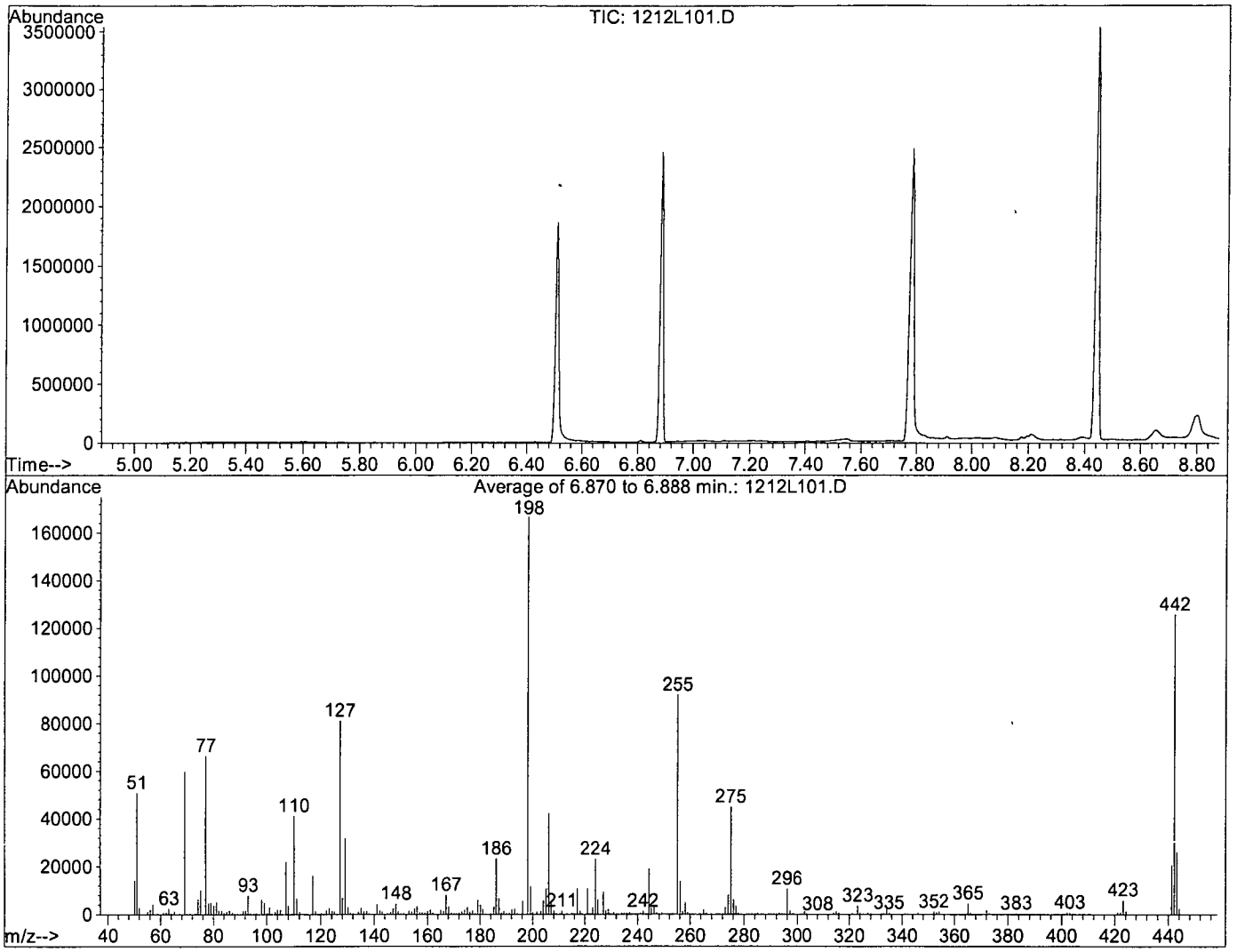
Spectrum Information: Average of 6.865 to 6.883 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	31.0	46351	PASS
68	69	0.00	2	0.0	0	PASS
69	69	100	100	100.0	54581	PASS
70	69	0.00	2	0.6	344	PASS
127	198	40	60	50.3	75268	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	149562	PASS
199	198	5	9	6.9	10325	PASS
275	198	10	30	26.2	39172	PASS
365	198	1	100	2.6	3864	PASS
441	443	0.01	100	76.7	16188	PASS
442	198	40	150	65.3	97607	PASS
443	442	17	23	21.6	21119	PASS

1212L004.D DFTPP2.M Mon Dec 12 10:39:40 2016

Data File : M:\LINUS\DATA\L161212\1212L101.D Vial: 1
Acq On : 16 Dec 16 9:49 Operator: MA
Sample : SV Tune 11/15/16 Inst : Linus
Misc : water Multiplr: 1.00

Method : M:\LINUS\DATA\L161026\DFTPP2.M (Chemstation Integrator)
Title :



Spectrum Information: Average of 6.870 to 6.888 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	30.5	50862	PASS
68	69	0.00	2	0.0	0	PASS
69	69	100	100	100.0	59900	PASS
70	69	0.00	2	0.9	525	PASS
127	198	40	60	48.6	81047	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	166714	PASS
199	198	5	9	7.0	11615	PASS
275	198	10	30	26.9	44820	PASS
365	198	1	100	2.7	4541	PASS
441	443	0.01	100	79.1	20462	PASS
442	198	40	150	75.4	125703	PASS
443	442	17	23	20.6	25879	PASS

1212L101.D DFTPP2.M Mon Dec 19 17:13:46 2016

8270 PAH SIM Standard Curve

PREP DATE:	12/12/16 RH											
8270 PAH SIM STANDARD CURVE												
Exp.DATE:	2/15/17					0.1	0.2	0.5	1	5	10	50
		Conc.		Date								
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL	µL	µL	µL	µL
O2si	8270 PAH SIM Stock	200	278353-36992	9/12/16	9/12/17	0	0	0	0	5	5	25
	5.0ug/mL	5		9/12/16	7/29/17	0	0	10	20	0	0	0
	1.0ug/mL	1		9/12/16	7/29/17	10	20	0	0	0	0	0
O2SI	BNA SURR.	100/200		11/15/16	2/15/17	0	0	0	0	5	5	25
EM Science	Methylene Chloride		56061			90	80	90	80	190	90	50
Supelco	SV Internal Standar	2000	XA14020V-36768	10/10/16	10/10/17	2	2	2	2	4	2	2
				Final Vol.		102	102	102	102	204	102	102

100
µL
50
0
0
50
0
2
102

8270 PAH SIM 2ND SRC

8270 PAH SIM 2ND SRC			Prep: 09/06/16 Exp 01/12/17 RH		
Supplier	**Standard**	**Conc.**	**Prep**	**Exp**	**µL**
O2SI	8270 2ND SRC	VARIOUS	06/03/16	01/21/17	25
	Methylene Chloride				75
o2si	8V Internal Standar	2000	10/10/16	10/10/17	2
LOT#	XA10079V-35507			Final Vol.	102

SIM SPIKE	
CAT:	110780-01
Lot:	278353-369
OP: 11/21/16-R.H.	
EX: 11/21/17	

8270 SIM PAH Internal Standard						
PREP DATE:	10/10/16 RH.					
8270 SIM PAH Internal Standard Mix 125ug/ml						
Exp.DATE:	10/10/17					
		Conc.		Date	Exp.	125
Supplier	ID #	µg/mL	Lot #	Code	Date	µL
Supelco	SV Internal	2000	XA14020V-36768	10/10/16	10/10/17	350
EM Science	Methylene Chloride		56061			5250
				Final Vol.		5600

PAH SIM STD prep: 09/12/16-R.H.						
Exp:	19/12/17					
		Conc.				
Supplier	ID #	mg/L	Lot #	Open Date	Exp.Date	µL
o2si	110780-01	200	278353-36992	6/22/16	6/22/17	1000
				Fin Vol.		1000

Semivolatile (SV) Tuning Solution -G.A.						
PREP DATE:	11/15/16	RH				
Semivolatile (SV) Tune Solution 50ug/ml						
Exp:	8/26/17					
		Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
Ultra Scient	Semivolatile GC	1000	N081628-37012	08/23/16	8/23/17	200
EM Science	Methylene Chloride		55098			3800
				Final Vol.		4000

8270 Surrog Mix 100/200ppm						
Prep: 11/15/16 -RH Ex: 2/15/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
8270 Acid Surrog Mix	10000 ug/ml	Restek Cat# 33029 Lot# A0118884-36875 Op: 11/15/16 EX: 11/15/17	2.0 mL	100 mL	200 ug/mL	MC
8270 B/N surrog Mix	5000 µg/mL	Restek Cat# 31086 Lot# A0119223-36871 Op: 11/15/16 EX: 11/15/17	2.0 mL	100 mL	100 ug/mL	MC

_SEP004S

Organic Extraction Worksheet

Method	SIM Separatory Funnel Extra 3510C	Extraction Set	161214A	Extraction Method	SEP004S	Units	mL

Spiked ID 1	PAH SIM Spike 11-21-16 exp 11-21-17		Surrogate ID 1	8270 Surrogate 12-08-16 exp 3-8-17	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	12/14/16 16:30	
Spiked ID 8			Ext. End Time:	12/15/16 16:25	
			GC Requires Extract By:	**12/20/16** 0:00	

pH1	2	12/14/16 4:40:00 PM	Water Bath Temp Criteria	75 °C
pH2	14	12/14/16 5:30:00 PM		
pH3				

Spiked By: KY **Date** 12/14/16 **Witnessed By:** JR **Date** 12/14/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	161214A Blk				0.050	1	1000	1	2/1	12/14/16 16:30	
						equip	E-WB6				
2	161214A LCS-1		0.0250	1	0.050	1	1000	1	2/1	12/14/16 16:30	
						equip	E-WB6				
3	AZ47343	AZ47343W10			0.050	1	1070	1	2/1	12/14/16 16:30	81734 RUSH 1 WEEK
						equip	E-WB6				
4	AZ47344	AZ47344W16			0.050	1	1070	1	2/1	12/14/16 16:30	81734 RUSH 1 WEEK
						equip	E-WB6				
5	AZ47345 MS-1	AZ47345W18	0.0250	1	0.050	1	1070	1	2/1	12/14/16 16:30	81734 RUSH 1 WEEK
						equip	E-WB6				
6	AZ47345 MSD-1	AZ47345W27	0.0250	1	0.050	1	1070	1	2/1	12/14/16 16:30	81734 RUSH 1 WEEK
						equip	E-WB6				
7	AZ47345	AZ47345W19			0.050	1	1070	1	2/1	12/14/16 16:30	81734 RUSH 1 WEEK
						equip	E-WB6				

RH 12/15/16

Solvent and Lot#	
1+1 SULFURIC ACID	12-5-16
PH STRIP	HC 574756
MC	56153
A. Na2SO4	11-3-16
10N NaOH	11-22-16
B. Na2SO4	16C255214
FILTER PAPER	400112

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	RH
Date	12/15/16
Time	4:30
Refrigerator	GC-C

	Technician's Initials
Scanned By	KY
Sample Preparation	KY,DL,JR
Extraction	KY,DL,JR
Concentration	KY
Modified	12/15/16 4:29:20 PM

Reviewed By: RH **Date** 12/15/16

Injection Log

Directory: M:\LINUS\DATA\L161212\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	1212L004.D	1	SV Tune 11/15/16	water	12 Dec 16 10:19
2	3	1212L005.D	1	0.1 ug/ml PAH 12/12/16	water	12 Dec 16 10:36
3	4	1212L006.D	1	0.2 ug/ml PAH 12/12/16	water	12 Dec 16 11:09
4	7	1212L009.D	1	5.0 ug/ml PAH 12/12/16	water	12 Dec 16 12:49
5	8	1212L010.D	1	10.0 ug/ml PAH 12/12/16	water	12 Dec 16 13:22
6	9	1212L011.D	1	50.0 ug/ml PAH 12/12/16	water	12 Dec 16 13:54
7	10	1212L012.D	1	100.0 ug/ml PAH 12/12/16	water	12 Dec 16 14:28
8	11	1212L013.D	1	0.5 ug/ml PAH 12/12/16	water	12 Dec 16 15:01
9	12	1212L014.D	1	1.0 ug/ml PAH 12/12/16	water	12 Dec 16 15:34
10	15	1212L015.D	1	SS PAH 12/12/16	water	12 Dec 16 16:07
11	1	1212L101.D	1	SV Tune 11/15/16	water	16 Dec 16 9:49
12	3	1212L103.D	1	5.0 ug/ml PAH 12/12/16	water	16 Dec 16 11:08
13	4	1212L104.D	1	5.0 ug/ml PAH 12/12/16	water	16 Dec 16 11:41
14	5	1212L105.D	1	161214A BLK 1/1000	water	16 Dec 16 12:14
15	6	1212L106.D	1	161214A LCS-1 1/1000	water	16 Dec 16 12:47
16	7	1212L107.D	0.93458	AZ47343W10 1/1070	water	16 Dec 16 13:20
17	8	1212L108.D	0.93458	AZ47344W16 1/1070	water	16 Dec 16 13:54
18	9	1212L109.D	0.93458	AZ47345W18 MS-1 1/1070	water	16 Dec 16 14:27
19	12	1212L112.D	0.93458	AZ47345W27 MSD-1 1/1070	water	16 Dec 16 16:07
20	13	1212L113.D	0.934579	AZ47345W19 1/1070	water	16 Dec 16 16:41
21	15	1212L115.D	1	5.0 ug/ml PAH 12/12/16	water	16 Dec 16 17:28

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank

EPA 8270D WATER

Blank Name/QCG: **161214W-47345 - 214732**

Batch ID: #87DC5-161214A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	12/14/16	12/16/16
BLANK	SURROGATE: 2,4,6-TRIBROMOP	65.0	43-140			%	12/14/16	12/16/16
BLANK	SURROGATE: 2-FLUORBIPHENY	63.2	44-119			%	12/14/16	12/16/16
BLANK	SURROGATE: 2-FLUOROPHENO	47.3	19-119			%	12/14/16	12/16/16
BLANK	SURROGATE: NITROBENZENE-	65.4	44-120			%	12/14/16	12/16/16
BLANK	SURROGATE: PHENOL-D6 (S)	30.5	10-115			%	12/14/16	12/16/16
BLANK	SURROGATE: TERPHENYL-D14 (	61.0	50-134			%	12/14/16	12/16/16

Quant Method: Y1207.M
Run #: 1207Y162
Instrument: Yoda
Sequence: Y161207
Initials: MA

GC SC-Blank-REG MDLs-DOD
Printed: 12/19/16 9:48:14 AM

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81734

Case No: 81734 Date Analyzed: 12/16/16

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2,4,6-TRIBROMOPHENOL (S)			SURROGATE: 2-FLUORBIPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161214A-BLK	Blank	43-140	65.0		44-119	63.2	
161214A-LCS	Lab Control Spike	43-140	82.5		44-119	77.2	
AZ47343	ERH137	43-140	76.6		44-119	72.3	
AZ47344	ERH141	43-140	73.7		44-119	72.0	
AZ47345-MS	Matrix Spike	43-140	75.0		44-119	75.2	
AZ47345-MSD	Matrix SpikeD	43-140	82.0		44-119	80.3	
AZ47345	ERH135	43-140	67.0		44-119	65.8	

Comments: Batch: #87DC5-161214A

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81734

Case No: 81734 Date Analyzed: 12/16/16

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2-FLUOROPHENOL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161214A-BLK	Blank	19-119	47.3		44-120	65.4	
161214A-LCS	Lab Control Spike	19-119	52.5		44-120	82.8	
AZ47343	ERH137	19-119	49.1		44-120	76.7	
AZ47344	ERH141	19-119	45.2		44-120	72.5	
AZ47345-MS	Matrix Spike	19-119	47.8		44-120	79.3	
AZ47345-MSD	Matrix SpikeD	19-119	48.9		44-120	87.8	
AZ47345	ERH135	19-119	46.2		44-120	77.9	

Comments: Batch: #87DC5-161214A

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81734

Case No: 81734 Date Analyzed: 12/16/16

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: PHENOL-D6 (S)			SURROGATE: TERPHENYL-D14 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161214A-BLK	Blank	10-115	30.5		50-134	61.0	
161214A-LCS	Lab Control Spike	10-115	31.8		50-134	80.5	
AZ47343	ERH137	10-115	28.3		50-134	74.2	
AZ47344	ERH141	10-115	27.8		50-134	77.7	
AZ47345-MS	Matrix Spike	10-115	29.3		50-134	75.6	
AZ47345-MSD	Matrix SpikeD	10-115	28.6		50-134	76.3	
AZ47345	ERH135	10-115	26.8		50-134	66.6	

Comments: Batch: #87DC5-161214A

Laboratory Control Spike Recovery
EPA 8270D WATER

APPL ID: **161214W-47345 LCS - 214732**
Batch ID: #87DC5-161214A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
PHENOL	50.0	19.3	38.6	10-115
SURROGATE: 2,4,6-TRIBROMOPHENOL	200	165	82.5	43-140
SURROGATE: 2-FLUORBIPHENYL (S)	100	77.2	77.2	44-119
SURROGATE: 2-FLUOROPHENOL (S)	200	105	52.5	19-119
SURROGATE: NITROBENZENE-D5 (S)	100	82.8	82.8	44-120
SURROGATE: PHENOL-D6 (S)	200	63.6	31.8	10-115
SURROGATE: TERPHENYL-D14 (S)	100	80.5	80.5	50-134

Comments: _____

Primary	SPK
Quant Method :	Y1207.M
Extraction Date :	12/14/16
Analysis Date :	12/16/16
Instrument :	Yoda
Run :	1207Y163
Initials :	MA

Printed: 12/19/16 9:48:16 AM
APPL Standard LCS

Matrix Spike Recoveries

EPA 8270D WATER

APPL ID: **161214W-47345 MS - 214732**
Batch ID: #87DC5-161214A
Sample ID: AZ47345
Client ID: ERH135

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
PHENOL	50.0	ND	19.2	19.3	38.4	38.6	10-115	0.52	20
SURROGATE: 2,4,6-TRIBROMOPHENOL	200	NA	150	164	75.0	82.0	43-140		
SURROGATE: 2-FLUORBIPHENYL (S)	100	NA	75.2	80.3	75.2	80.3	44-119		
SURROGATE: 2-FLUOROPHENOL (S)	200	NA	95.5	97.8	47.8	48.9	19-119		
SURROGATE: NITROBENZENE-D5 (S)	100	NA	79.3	87.8	79.3	87.8	44-120		
SURROGATE: PHENOL-D6 (S)	200	NA	58.5	57.3	29.3	28.6	10-115		
SURROGATE: TERPHENYL-D14 (S)	100	NA	75.6	76.3	75.6	76.3	50-134		

Comments: _____

Primary	SPK	DUP
Quant Method :	Y1207.M	Y1207.M
Extraction Date :	12/14/16	12/14/16
Analysis Date :	12/16/16	12/16/16
Instrument :	Yoda	Yoda
Run :	1207Y166	1207Y167
Initials :	MA	

Printed: 12/19/16 9:48:19 AM
APPL MSD SCII

EPA 8270D

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81734

Case No: 81734 Date Analyzed: 12/16/16

Matrix: WATER Instrument: Yoda

Blank ID: 161214A-BLK Time Analyzed: 1230

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161214A-BLK	Blank	1207Y162	12/16/16 1230
161214A-LCS	Lab Control Spike	1207Y163	12/16/16 1300
AZ47343	ERH137	1207Y164	12/16/16 1331
AZ47344	ERH141	1207Y165	12/16/16 1402
161214A-MS	Matrix Spike	1207Y166	12/16/16 1432
161214A-MSD	Matrix SpikeD	1207Y167	12/16/16 1503
AZ47345	ERH135	1207Y168	12/16/16 1533

Comments: Batch: #87DC5-161214A

Printed: 12/19/16 9:48:20 AM
Form 4, Blank Summary

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: water
ID: SV Tune 10/19/16

SDG No:
Date Analyzed: 12/07/16
Instrument: Yoda
Time Analyzed: 9:00

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		5ug/ml SVOC 12/06/16	1207Y004.D	12/07/16 10:01
2		10ug/ml SVOC 12/06/1	1207Y005.D	12/07/16 10:32
3		20ug/ml SVOC 12/06/1	1207Y006.D	12/07/16 11:02
4		40ug/ml SVOC 12/06/1	1207Y007.D	12/07/16 11:32
5		50ug/ml SVOC 12/06/1	1207Y008.D	12/07/16 12:02
6		60ug/ml SVOC 12/06/1	1207Y009.D	12/07/16 12:32
7		80ug/ml SVOC 12/06/1	1207Y010.D	12/07/16 13:02
8		100ug/ml SVOC 12/06/	1207Y011.D	12/07/16 13:32
9		2ND SRC SVOC 12/06/1	1207Y012.D	12/07/16 14:01
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	46.7
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.7
127	40 - 60% of mass 198	56.0
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 197.95	100.0
199	5 - 9% of mass 198	6.9
275	10 - 30% of mass 198	24.0
365	1 - 100% of mass 198	3.1
441	0.01 - 100% of mass 443	86.4
442	50 - 150% of mass 197.95	90.6
443	17 - 23% of mass 442	20.1

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81734
Matrix: Water
ID: SV Tune 10/19/16

SDG No: 81734
Date Analyzed: 12/16/16
Instrument: Yoda
Time Analyzed: 11:14

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		50ug/ml SVOC 12/16/1	1207Y161.D	12/16/16 11:32
2	Blank	161214A BLK 1/1000	1207Y162.D	12/16/16 12:30
3	Lab Control Spike	161214A LCS-1 1/1000	1207Y163.D	12/16/16 13:00
4	ERH137	AZ47343W12 1/1070	1207Y164.D	12/16/16 13:31
5	ERH141	AZ47344W15 1/1070	1207Y165.D	12/16/16 14:02
6		AZ47345W26 MS-1 1/10	1207Y166.D	12/16/16 14:32
7		AZ47345W17 MSD-1 1/1	1207Y167.D	12/16/16 15:03
8	ERH135	AZ47345W23 1/1070	1207Y168.D	12/16/16 15:33
9		50ug/ml SVOC 12/16/1	1207Y169.D	12/16/16 16:04
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	43.6
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.7
127	40 - 60% of mass 198	52.0
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 197.95	100.0
199	5 - 9% of mass 198	6.8
275	10 - 30% of mass 198	23.3
365	1 - 100% of mass 198	3.2
441	0.01 - 100% of mass 443	85.2
442	50 - 150% of mass 197.95	92.6
443	17 - 23% of mass 442	19.1

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 81734

Lab File ID (Standard): 1207Y008.D Date Analyzed: 7 Dec 16 12:02

Instrument ID: Yoda Time Analyzed: 7 Dec 16 12:02

GC Column: _____ ID: Heated Purge: (Y/N) _____

		1,4-dichlorobenzene-D4(IS)		Napthalene-D8(IS)		Acenaphthene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	195270	4.87	816895	6.30	475200	8.31
	UPPER LIMIT	390540	5.37	1633790	6.80	950400	8.81
	LOWER LIMIT	97635	4.37	408448	5.80	237600	7.81
	SAMPLE NO.						
01	50ug/ml SVOC 12/16/16	200615	4.86	835182	6.29	493406	8.31
02	161214A BLK 1/1000	213564	4.86	931388	6.29	548910	8.31
03	161214A LCS-1 1/1000	203293	4.86	841520	6.29	502888	8.31
04	AZ47343W12 1/1070	180287	4.86	863950	6.29	501125	8.31
05	AZ47344W15 1/1070	205879	4.86	890152	6.29	524486	8.31
06	AZ47345W26 MS-1 1/1(	196818	4.87	848344	6.30	519597	8.31
07	AZ47345W17 MSD-1 1/	209740	4.86	826177	6.29	476740	8.31
08	AZ47345W23 1/1070	191656	4.86	817565	6.29	526629	8.31
09	50ug/ml SVOC 12/16/16	190017	4.87	793576	6.30	452842	8.31
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 81734

Lab File ID (Standard): 1207Y008.D Date Analyzed: 7 Dec 16 12:02

Instrument ID: Yoda Time Analyzed: 7 Dec 16 12:02

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Phenanthrene-D10(IS)		Chrysene-D12(IS)		Perylene-D12(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	975541	10.03	853105	13.10	871056	14.75
	UPPER LIMIT	1951082	10.53	1706210	13.60	1742112	15.25
	LOWER LIMIT	487771	9.53	426553	12.60	435528	14.25
	SAMPLE NO.						
01	50ug/ml SVOC 12/16/16	904702	10.03	866784	13.11	698917	14.75
02	161214A BLK 1/1000	1042940	10.03	1031620	13.11	992712	14.75
03	161214A LCS-1 1/1000	953333	10.03	926363	13.11	886110	14.75
04	AZ47343W12 1/1070	938764	10.02	921301	13.11	891084	14.75
05	AZ47344W15 1/1070	985129	10.03	885067	13.11	864783	14.75
06	AZ47345W26 MS-1 1/1(	896554	10.03	868128	13.11	889590	14.75
07	AZ47345W17 MSD-1 1/	917304	10.03	898533	13.11	861263	14.75
08	AZ47345W23 1/1070	896743	10.02	987070	13.11	879673	14.75
09	50ug/ml SVOC 12/16/16	860515	10.03	816283	13.11	609912	14.75
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

ORGANICS

Sample Data

APPL, INC.

EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH137
Sample Collection Date: 12/12/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81734
APPL ID: AZ47343
QCG: #87DC5-161214A-214732

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	12/14/16	12/16/16
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	76.6	43-140			%	12/14/16	12/16/16
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	72.3	44-119			%	12/14/16	12/16/16
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	49.1	19-119			%	12/14/16	12/16/16
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	76.7	44-120			%	12/14/16	12/16/16
EPA 8270D	SURROGATE: PHENOL-D6 (S)	28.3	10-115			%	12/14/16	12/16/16
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	74.2	50-134			%	12/14/16	12/16/16

Quant Method: Y1207.M
Run #: 1207Y164
Instrument: Yoda
Sequence: Y161207
Dilution Factor: 1
Initials: MA

Printed: 12/19/16 9:48:21 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y164.D Vial: 64
Acq On : 16 Dec 16 13:31 Operator: MA
Sample : AZ47343W12 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Dec 16 14:15 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	180287	40.00000	ppb	0.00
20) Napthalene-D8(IS)	6.29	136	863950	40.00000	ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	501125	40.00000	ppb	0.00
64) Phenanthrene-D10(IS)	10.02	188	938764	40.00000	ppb	0.00
78) Chrysene-D12(IS)	13.11	240	921301	40.00000	ppb	0.00
88) Perylene-D12(IS)	14.75	264	891084	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.34	112	582756	91.83195	ppb	0.00
Spiked Amount 186.916			Recovery = 49.130%			
5) Phenol-D6 (S)	4.50	99	443718	52.97707	ppb	0.00
Spiked Amount 186.916			Recovery = 28.343%			
21) Nitrobenzene-D5(S)	5.50	82	672119	71.72757	ppb	0.00
Spiked Amount 93.458			Recovery = 76.749%			
45) 2-Fluorobiphenyl(S)	7.54	172	1141892	67.55364	ppb	0.00
Spiked Amount 93.458			Recovery = 72.283%			
63) 2,4,6-Tribromophenol(S)	9.23	330	384799	143.12575	ppb	0.00
Spiked Amount 186.916			Recovery = 76.572%			
81) Terphenyl-D14(S)	11.89	244	1545227	69.32072	ppb	0.00
Spiked Amount 93.458			Recovery = 74.173%			

Target Compounds Qvalue

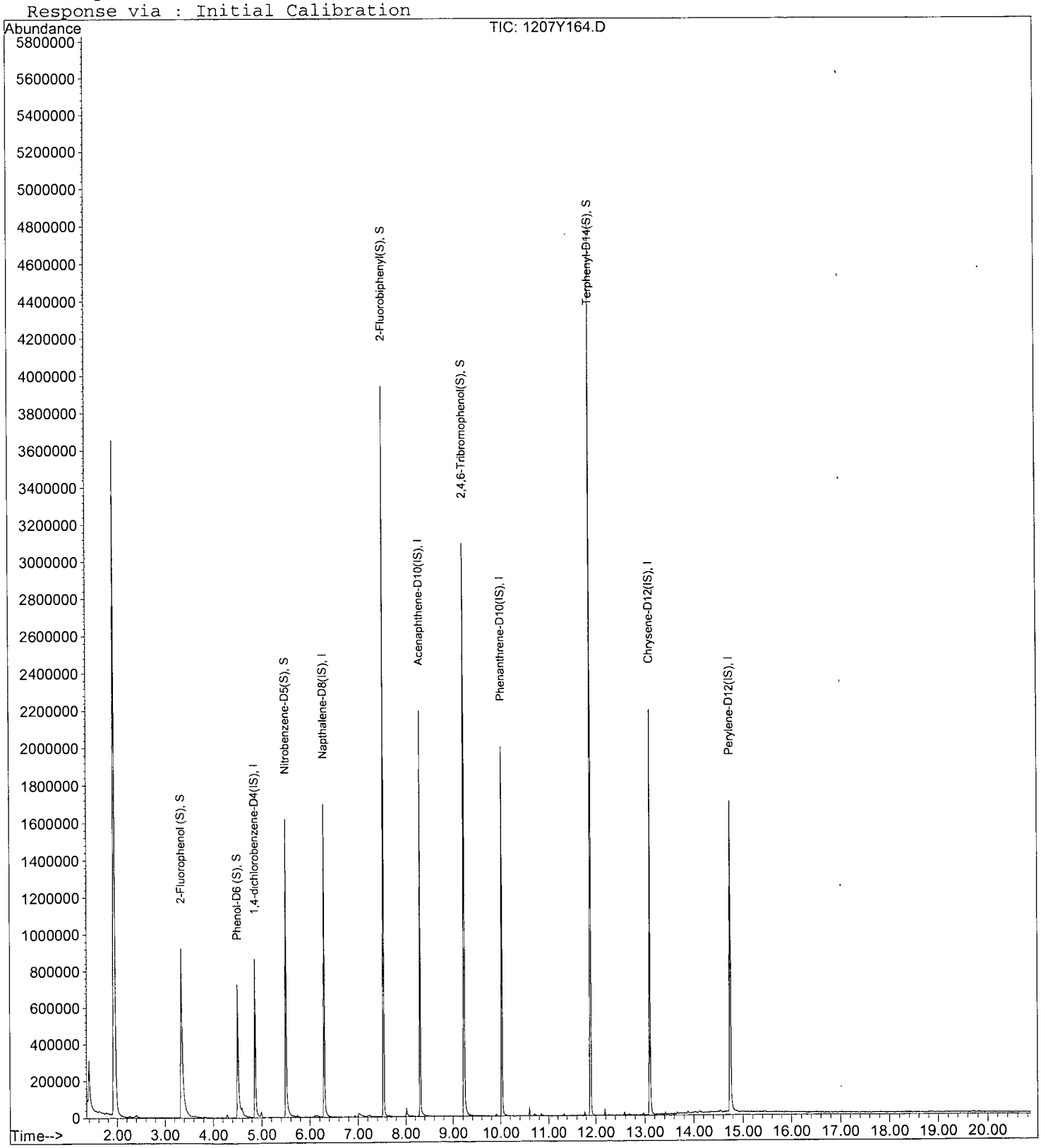
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y164.D Vial: 64
Acq On : 16 Dec 16 13:31 Operator: MA
Sample : AZ47343W12 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Dec 16 14:15 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH141
Sample Collection Date: 12/12/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81734
APPL ID: AZ47344
QCG: #87DC5-161214A-214732

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	12/14/16	12/16/16
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	73.7	43-140			%	12/14/16	12/16/16
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	72.0	44-119			%	12/14/16	12/16/16
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	45.2	19-119			%	12/14/16	12/16/16
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	72.5	44-120			%	12/14/16	12/16/16
EPA 8270D	SURROGATE: PHENOL-D6 (S)	27.8	10-115			%	12/14/16	12/16/16
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	77.7	50-134			%	12/14/16	12/16/16

Quant Method: Y1207.M
Run #: 1207Y165
Instrument: Yoda
Sequence: Y161207
Dilution Factor: 1
Initials: MA

Printed: 12/19/16 9:48:21 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y165.D Vial: 65
Acq On : 16 Dec 16 14:02 Operator: MA
Sample : AZ47344W15 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Dec 16 14:16 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	205879	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.29	136	890152	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	524486	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	985129	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.11	240	885067	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.75	264	864783	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.34	112	612337	84.49868 ppb	0.00
Spiked Amount 186.916			Recovery =	45.207%	
5) Phenol-D6 (S)	4.50	99	496483	51.90840 ppb	0.00
Spiked Amount 186.916			Recovery =	27.771%	
21) Nitrobenzene-D5(S)	5.49	82	654413	67.78230 ppb	0.00
Spiked Amount 93.458			Recovery =	72.527%	
45) 2-Fluorobiphenyl(S)	7.54	172	1190269	67.27923 ppb	0.00
Spiked Amount 93.458			Recovery =	71.989%	
63) 2,4,6-Tribromophenol(S)	9.24	330	387469	137.69969 ppb	0.00
Spiked Amount 186.916			Recovery =	73.669%	
81) Terphenyl-D14(S)	11.89	244	1555270	72.62764 ppb	0.00
Spiked Amount 93.458			Recovery =	77.712%	

Target Compounds Qvalue

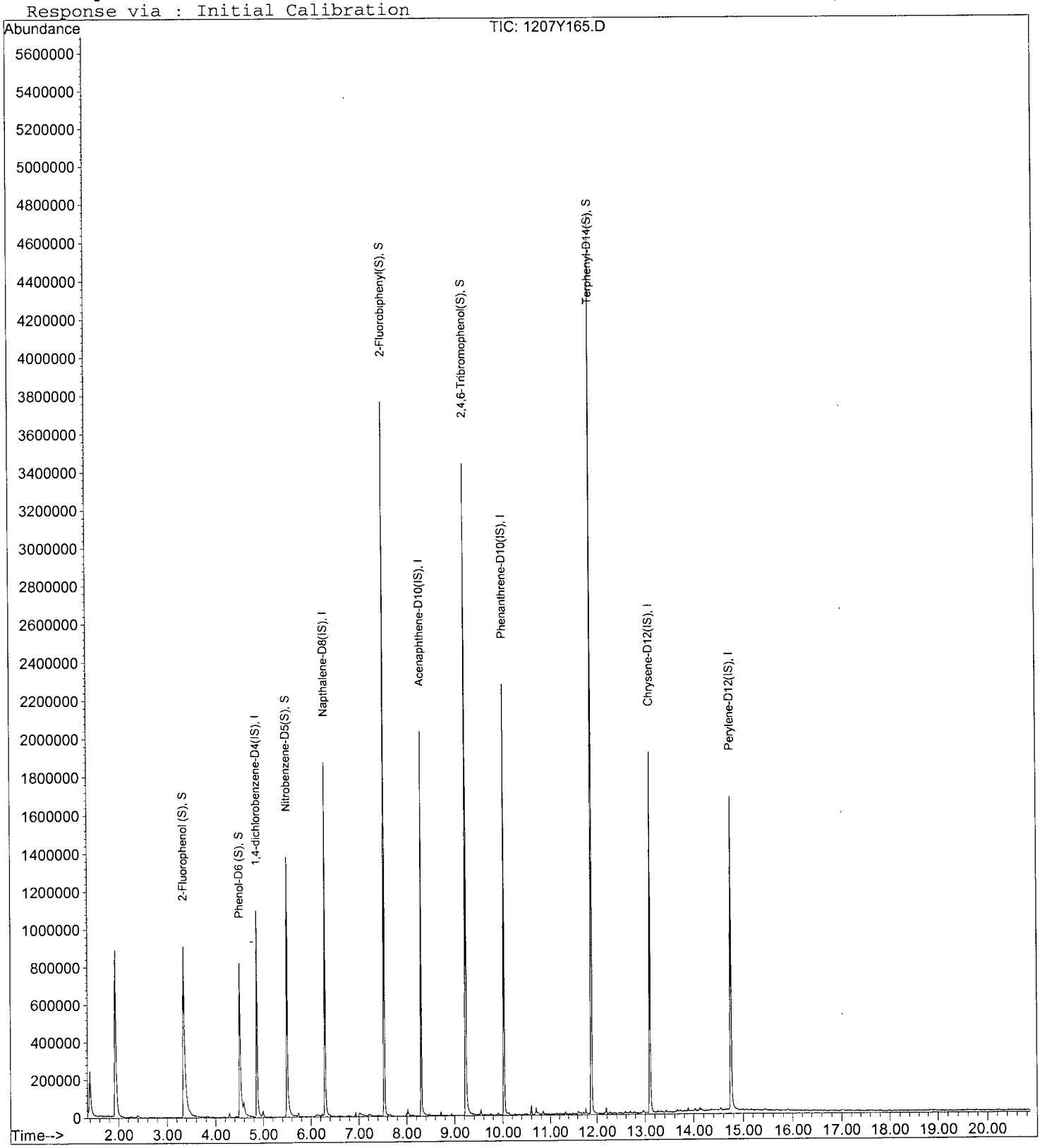
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y165.D Vial: 65
Acq On : 16 Dec 16 14:02 Operator: MA
Sample : AZ47344W15 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Dec 16 14:16 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH135
Sample Collection Date: 12/12/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81734
APPL ID: AZ47345
QCG: #87DC5-161214A-214732

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	12/14/16	12/16/16
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	67.0	43-140			%	12/14/16	12/16/16
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	65.8	44-119			%	12/14/16	12/16/16
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	46.2	19-119			%	12/14/16	12/16/16
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	77.9	44-120			%	12/14/16	12/16/16
EPA 8270D	SURROGATE: PHENOL-D6 (S)	26.8	10-115			%	12/14/16	12/16/16
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	66.6	50-134			%	12/14/16	12/16/16

Quant Method: Y1207.M
Run #: 1207Y168
Instrument: Yoda
Sequence: Y161207
Dilution Factor: 1
Initials: MA

Printed: 12/19/16 9:48:21 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y168.D Vial: 68
Acq On : 16 Dec 16 15:33 Operator: MA
Sample : AZ47345W23 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Dec 19 9:08 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	191656	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.29	136	817565	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	526629	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.02	188	896743	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.11	240	987070	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.75	264	879673	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.34	112	582290	86.31542 ppb	0.00
Spiked Amount 186.916			Recovery =	46.179%	
5) Phenol-D6 (S)	4.50	99	446552	50.15277 ppb	0.00
Spiked Amount 186.916			Recovery =	26.832%	
21) Nitrobenzene-D5(S)	5.50	82	645552	72.80103 ppb	0.00
Spiked Amount 93.458			Recovery =	77.897%	
45) 2-Fluorobiphenyl(S)	7.54	172	1091929	61.46947 ppb	0.00
Spiked Amount 93.458			Recovery =	65.772%	
63) 2,4,6-Tribromophenol(S)	9.23	330	353902	125.25877 ppb	0.00
Spiked Amount 186.916			Recovery =	67.014%	
81) Terphenyl-D14(S)	11.89	244	1485922	62.21862 ppb	0.00
Spiked Amount 93.458			Recovery =	66.574%	

Target Compounds Qvalue

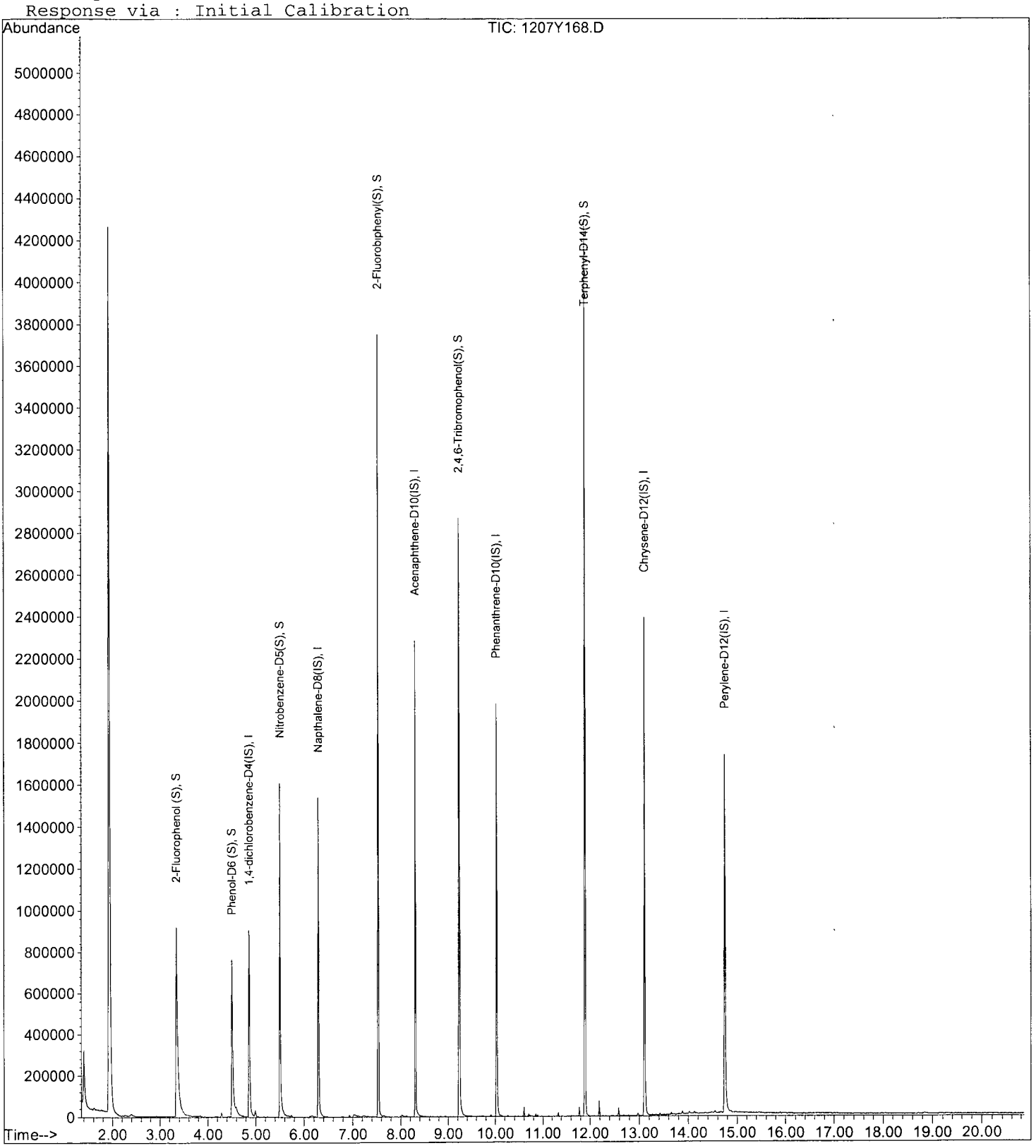
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y168.D Vial: 68
Acq On : 16 Dec 16 15:33 Operator: MA
Sample : AZ47345W23 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Dec 19 9:08 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



ORGANICS

Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/07/16
Matrix: Instrument: Yoda Initials:

		Compound	1207Y004.D 5	1207Y005.D 10	1207Y006.D 20	1207Y007.D 40	1207Y008.D 50	1207Y009.D 60	1207Y010.D 80	1207Y011.D 100			Avg	%RSD		
1	I	1,4-dichlorobenzene-D4(IS)														
2	TM	n-Nitrosodimethylamine	0.7148	0.8188	0.8173	0.8076	0.8521	0.7243	0.8231	0.7956			0.79	6.2	TM	
3	TM	Pyridine	1.581	1.725	1.660	1.936	2.046	1.751	1.878	1.777			1.8	8.5	TM	
4	S	2-Fluorophenol (S)	1.066	1.299	1.267	1.425	1.424	1.318	1.385	1.343			1.3	8.8	S	
5	S	Phenol-D6 (S)	1.822	1.785	1.823	1.762	1.706	1.655	1.706	1.635			1.7	4.2	S	
6	*TM	Phenol	1.948	1.915	2.075	2.002	1.967	1.942	2.023	1.918			2.0	2.8	*TM	
7	TM	Aniline	1.776	1.833	1.896	1.887	1.869	1.829	1.983	1.872			1.9	3.2	TM	
8	TM	Bis (2-chloroethyl) ether	0.8418	0.7909	0.9135	0.8982	0.8478	0.8563	0.9089	0.8610			0.86	4.7	TM	
9	TM	2-Chlorophenol	1.635	1.632	1.616	1.577	1.518	1.543	1.572	1.517			1.6	3.1	TM	
10	TM	1,3-DCB	1.660	1.666	1.674	1.664	1.624	1.596	1.569	1.586			1.6	2.6	TM	
11	*TM	1,4-DCB	1.785	1.781	1.664	1.660	1.668	1.607	1.666	1.605			1.7	4.1	*TM	
12	TM	Benzyl alcohol	0.7838	0.8402	0.9167	0.8614	0.9167	0.8803	0.8909	0.8835			0.87	5.0	TM	
13	TM	1,2-DCB	1.611	1.557	1.581	1.484	1.593	1.492	1.515	1.463			1.5	3.6	TM	
14	TM	2-Methylphenol	1.082	1.139	1.181	1.118	1.137	1.110	1.083	1.109			1.1	2.9	TM	
15	TM	Bis (2-chloroisopropyl) ether	1.873	1.751	1.831	1.685	1.738	1.688	1.621	1.595			1.7	5.6	TM	
16	TM	Acetophenone	2.043	2.072	2.030	2.015	2.091	2.047	2.025	2.028			2.0	1.3	TM	
17	TM	3&4-Methylphenol	1.558	1.530	1.459	1.440	1.525	1.448	1.459	1.455			1.5	3.1	TM	
18	**TM	n-Nitrosodi-n-propylamine	1.068	1.045	1.056	1.027	1.076	1.038	1.050	1.060			1.1	1.5	**TM	
19	TM	Hexachloroethane	0.6682	0.7054	0.6470	0.6617	0.6824	0.6779	0.6684	0.6594			0.67	2.6	TM	
20	I	Napthalene-D8(IS)														
21	S	Nitrobenzene-D5(S)	0.4047	0.4332	0.3921	0.4003	0.4125	0.3872	0.3742	0.4394			0.41	5.5	S	
22	TM	Nitrobenzene	0.4054	0.4067	0.3889	0.4048	0.4175	0.3984	0.3936	0.4509			0.41	4.7	TM	
23	TM	Isophorone	0.6691	0.6862	0.6315	0.6698	0.6921	0.6667	0.6337	0.7606			0.68	6.0	TM	
24	*TM	2-Nitrophenol	0.1845	0.1935	0.1942	0.2063	0.2096	0.2079	0.2003	0.2337			0.20	7.3	*TM	
25	TM	2,4-Dimethylphenol	0.3139	0.3382	0.3012	0.3156	0.3171	0.3192	0.3290	0.3503			0.32	4.8	TM	
26	TML	Benzoic acid	0.0808	0.1551	0.2077	0.2553	0.2737	0.2314	0.2577	0.2655			0.22	31	TML	0.997
27	TM	Bis (2-chloroethoxy) methane	0.3810	0.3848	0.3681	0.3830	0.3880	0.3802	0.3949	0.4047			0.39	2.8	TM	
28	*TM	2,4-Dichlorophenol	0.2878	0.3066	0.3011	0.3098	0.3185	0.3087	0.3182	0.3126			0.31	3.2	*TM	
29	TM	1,2,4-Trichlorobenzene	0.3408	0.3409	0.3112	0.3403	0.3441	0.3301	0.3350	0.3367			0.33	3.1	TM	
30	TM	3,4-Dimethylphenol	0.5455	0.4964	0.4910	0.4802	0.5023	0.4740	0.4772	0.4907			0.49	4.6	TM	
31	TM	Naphthalene	1.044	1.055	1.078	1.053	1.069	1.024	1.025	1.045			1.0	1.8	TM	
32	TM	4-Chloroaniline	0.3632	0.4265	0.4327	0.4002	0.3874	0.3691	0.3641	0.3626			0.39	7.4	TM	
33	TM	2,6-Dichlorophenol	0.3045	0.3311	0.3196	0.2860	0.2901	0.2795	0.2735	0.2922			0.30	6.7	TM	
34	TM	Hexachloropropene	0.2445	0.2667	0.2704	0.2771	0.2732	0.2621	0.2668	0.2819			0.27	4.2	TM	
35	*TM	Hexachlorobutadiene	0.2289	0.2214	0.2210	0.2112	0.2149	0.2010	0.1986	0.2098			0.21	4.9	*TM	

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/07/16
Matrix: Instrument: Yoda Initials:

		Compound	5	10	20	40	50	60	80	100			Avg	%RSD		
36	TM	Caprolactum	0.1439	0.1548	0.1512	0.1546	0.1563	0.1592	0.1531	0.1616			0.15	3.5	TM	
37	*TM	4-Chloro-3-methylphenol	0.3364	0.3339	0.3371	0.3445	0.3342	0.3451	0.3311	0.3589			0.34	2.7	*TM	
38	TM	2-Methylnaphthalene	0.7065	0.6994	0.6918	0.6907	0.6745	0.6786	0.6440	0.6992			0.69	2.9	TM	
39	TM	1-Methylnaphthalene	0.7218	0.7325	0.6455	0.6679	0.6461	0.6599	0.6404	0.6966			0.68	5.3	TM	
40	I	Acenaphthene-D10(IS)														
41	**TMQ	Hexachlorocyclopentadiene	0.0352	0.0821	0.1454	0.1986	0.2357	0.2346	0.2693	0.2817			0.19	48	**TMQ	0.999
42	TM	1,2,4,5-Tetrachlorobenzene	0.5396	0.5929	0.5621	0.5192	0.5592	0.5294	0.5151	0.5315			0.54	4.8	TM	
43	*TM	2,4,6-Trichlorophenol	0.3344	0.3592	0.3491	0.3486	0.3682	0.3537	0.3343	0.3590			0.35	3.4	*TM	
44	TM	2,4,5-Trichlorophenol	0.3919	0.4003	0.4163	0.3688	0.3812	0.3816	0.3456	0.3771			0.38	5.5	TM	
45	S	2-Fluorobiphenyl(S)	1.278	1.499	1.336	1.200	1.255	1.168	1.148	1.204			1.3	9.0	S	
46	TM	1,1'-Biphenyl	1.579	1.616	1.598	1.463	1.490	1.434	1.358	1.453			1.5	6.1	TM	
47	TM	2-Chloronaphthalene	1.172	1.197	1.217	1.145	1.225	1.131	1.043	1.138			1.2	5.1	TM	
48	TM	2-Nitroaniline	0.3683	0.3867	0.3740	0.4057	0.4480	0.3960	0.3888	0.4178			0.40	6.5	TM	
49	TM	Dimethyl phthalate	1.403	1.430	1.345	1.384	1.539	1.344	1.277	1.410			1.4	5.5	TM	
50	TM	2,6-DNT	0.2902	0.3118	0.2967	0.3089	0.3396	0.3115	0.2967	0.3576			0.31	7.4	TM	
51	TM	Acenaphthylene	1.893	2.056	1.776	1.750	1.868	1.798	1.649	1.814			1.8	6.5	TM	
52	TM	3-Nitroaniline	0.3015	0.3535	0.3595	0.3549	0.3535	0.3405	0.3322	0.3482			0.34	5.5	TM	
53	*TM	Acenaphthene	1.206	1.354	1.171	1.111	1.135	1.077	1.054	1.138			1.2	8.1	*TM	
54	**TMQ	2,4-Dinitrophenol		0.0853	0.1314	0.1627	0.1649	0.1601	0.2070	0.2035			0.16	26	**TMQ	0.996
55	**TML	4-Nitrophenol	0.0179	0.2323	0.2452	0.2706	0.3006	0.2760	0.2907	0.3183			0.24	39	**TML	0.997
56	TM	Dibenzofuran	1.728	1.704	1.645	1.541	1.704	1.568	1.548	1.676			1.6	4.6	TM	
57	TM	2,4-DNT	0.3927	0.4369	0.4320	0.4428	0.4994	0.4500	0.4285	0.4667			0.44	7.0	TM	
58	TM	2,3,4,6-Tetrachlorophenol	0.2780	0.2939	0.2952	0.3210	0.3494	0.3145	0.2996	0.3397			0.31	7.8	TM	
59	TM	Diethyl phthalate	1.443	1.475	1.388	1.441	1.458	1.389	1.333	1.529			1.4	4.2	TM	
60	TM	4-Chlorophenyl phenyl ether	0.6635	0.6948	0.6104	0.6191	0.6447	0.5999	0.5965	0.6860			0.64	6.1	TM	
61	TM	Fluorene	1.411	1.429	1.285	1.274	1.358	1.224	1.221	1.393			1.3	6.3	TM	
62	TM	4-Nitroaniline	0.3060	0.3370	0.3011	0.3170	0.3477	0.3210	0.3358	0.3338			0.32	5.0	TM	
63	S	2,4,6-Tribromophenol(S)	0.1946	0.2125	0.1908	0.1921	0.2053	0.1876	0.1977	0.2239			0.20	6.2	S	
64	I	Phenanthrene-D10(IS)														
65	TM	4,6-Dinitro-2-methylphenol		0.1149	0.1515	0.1421	0.1500	0.1692	0.1636	0.1489			0.15	12	TM	
66	TM	Diphenyl amine	0.6122	0.5551	0.6348	0 5246	0.5612	0.5921	0.5417	0.5432			0.57	6.7	TM	
67	*TM	n-Nitrosodiphenylamine	0.6122	0.5551	0.6348	0.5246	0.5612	0.5921	0.5417	0.5432			0.57	6.7	*TM	
68	TM	1,2-Diphenylhydrazine	0.7947	0.7385	0.8154	0.7273	0.7623	0.9632	0.8905	0.8768			0.82	10	TM	
69	TM	4-Bromophenyl phenyl ether	0.2256	0.2010	0.2098	0.2179	0.1993	0.2279	0.1871	0.1888			0.21	7.6	TM	
70	TM	Hexachlorobenzene	0.2229	0.2118	0.2232	0.2136	0.2018	0.2342	0.2007	0.1953			0.21	6.3	TM	

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Initial Cal. Date: 12/07/16

Matrix: Instrument: Yoda Initials:

		Compound	5	10	20	40	50	60	80	100			Avg	%RSD		
71	TM	Atrazine	0.2136	0.1976	0.2108	0.2007	0.2168	0.2165	0.1968	0.1967			0.21	4.4	TM	
72	*TML	Pentachlorophenol		0.0652	0.0888	0.0985	0.0970	0.0990	0.1107	0.1114			0.10	16	*TML	0.998
73	TM	Phenanthrene	1.144	1.128	1.146	1.069	1.069	1.062	1.009	1.014			1.1	5.0	TM	
74	TM	Anthracene	1.227	1.144	1.172	1.109	1.085	1.077	1.032	1.040			1.1	6.0	TM	
75	TM	Carbazol	1.068	1.073	1.153	0.9493	1.043	0.9621	0.9114	0.8832			1.0	9.2	TM	
76	TM	Di-n-butylphthalate	1.394	1.275	1.537	1.286	1.230	1.259	1.180	1.174			1.3	9.3	TM	
77	*TM	Fluoranthene	1.281	1.183	1.301	1.152	1.091	1.169	1.169	1.164			1.2	5.8	*TM	
78	I	Chrysene-D12(IS)														
79	TM	Benzidine	0.3957	0.4105	0.4699	0.4668	0.4739	0.4589	0.4621	0.4870			0.45	7.1	TM	
80	TM	Pyrene	1.421	1.287	1.412	1.333	1.431	1.352	1.245	1.372			1.4	4.9	TM	
81	S	Terphenyl-D14(S)	0.9641	0.9527	1.005	0.8842	0.8995	0.8347	0.8470	0.8492			0.90	6.9	S	
82	TM	Butyl benzylphthalate	0.6615	0.6073	0.6728	0.6922	0.6888	0.6250	0.6287	0.6373			0.65	4.8	TM	
83	TM	3,3'-Dichlorobenzidine	0.3845	0.4505	0.4988	0.4470	0.4416	0.4002	0.3899	0.4057			0.43	9.1	TM	
84	TM	Benz (a) anthracene	1.241	1.281	1.288	1.263	1.262	1.195	1.209	1.251			1.2	2.6	TM	
85	TM	Bis (2-ethylhexyl) phthalate	0.9437	0.8855	0.9320	0.8960	0.9347	0.9382	0.8781	0.9008			0.91	2.9	TM	
86	TM	Chrysene	1.291	1.177	1.223	1.163	1.206	1.256	1.142	1.247			1.2	4.2	TM	
87	*TM	Di-n-octylphthalate	1.601	1.536	1.745	1.580	1.838	1.525	1.513	1.572			1.6	7.2	*TM	
88	I	Perylene-D12(IS)														
89	TM	Benzo (b) fluoranthene	1.137	1.363	1.356	1.287	1.201	1.033	1.428	1.200			1.3	11	TM	
90	TM	Benzo (k) fluoranthene	1.302	1.071	1.186	1.172	1.214	1.184	1.211	1.174			1.2	5.4	TM	
91	*TM	Benzo (a) pyrene	1.164	1.037	1.248	1.228	1.224	1.129	1.192	1.122			1.2	6.0	*TM	
92	TM	Indeno (1,2,3-cd) pyrene	1.367	1.331	1.391	1.324	1.346	1.095	1.395	1.099			1.3	9.6	TM	
93	TM	Dibenz (a,h) anthracene	1.172	1.113	1.158	1.132	1.148	0.9093	1.186	0.9080			1.1	11	TM	
94	TM	Benzo (g,h,i) perylene	1.161	1.064	1.406	1.271	1.253	0.8838	1.091				1.2	15	TM	
95																
96																
97																
98																
99																
100																
101																
102																
103																
104																
105																

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y004.D Vial: 4
Acq On : 7 Dec 16 10:01 Operator: MA
Sample : 5ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	195458	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.29	136	827060	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.30	164	490768	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.03	188	877101	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.10	240	839105	40.00000 ppb		0.00
88) Perylene-D12(IS)	14.74	264	900919	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.38	112	52072	8.41676 ppb		0.03
Spiked Amount 200.000			Recovery =	4.209%		
5) Phenol-D6 (S)	4.51	99	89036	10.40389 ppb		0.00
Spiked Amount 200.000			Recovery =	5.202%		
21) Nitrobenzene-D5(S)	5.51	82	41840	4.84860 ppb		0.00
Spiked Amount 100.000			Recovery =	4.849%		
45) 2-Fluorobiphenyl(S)	7.54	172	78403	5.03098 ppb		0.00
Spiked Amount 100.000			Recovery =	5.031%		
63) 2,4,6-Tribromophenol(S)	9.23	330	23872	9.90525 ppb		0.00
Spiked Amount 200.000			Recovery =	4.953%		
81) Terphenyl-D14(S)	11.88	244	101120	5.31648 ppb		0.00
Spiked Amount 100.000			Recovery =	5.316%		
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.77	42	17464	3.81097 ppb		99
3) Pyridine	1.79	79	38617	3.94469 ppb		99
6) Phenol	4.53	94	47601	4.90399 ppb		95
7) Aniline	4.53	66	43393	4.54015 ppb		90
8) Bis (2-chloroethyl) ether	4.60	63	20566	4.71391 ppb		92
9) 2-Chlorophenol	4.65	128	39939	5.30721 ppb		95
10) 1,3-DCB	4.80	146	40566	4.97403 ppb		98
11) 1,4-DCB	4.88	146	43609	5.21809 ppb		96
12) Benzyl alcohol	5.07	108	19149	4.54883 ppb		90
13) 1,2-DCB	5.06	146	39360	5.05389 ppb		97
14) 2-Methylphenol	5.20	107	26445	4.63400 ppb		97
15) Bis (2-chloroisopropyl) et	5.18	45	45768	5.23802 ppb	#	53
16) Acetophenone	5.34	105	49921	4.69337 ppb		98
17) 3&4-Methylphenol	5.38	107	76111	10.08177 ppb		91
18) n-Nitrosodi-n-propylamine	5.33	70	26103	4.73122 ppb		90
19) Hexachloroethane	5.42	117	16326	4.71012 ppb	#	68
22) Nitrobenzene	5.53	77	41914	4.74777 ppb		98
23) Isophorone	5.78	82	69169	4.75245 ppb		93
24) 2-Nitrophenol	5.90	139	19072	4.53756 ppb		95
25) 2,4-Dimethylphenol	5.95	122	32456	4.95367 ppb		91
26) Benzoic acid	6.13	105	8358	6.59749 ppb		89
27) Bis (2-chloroethoxy) metha	6.04	93	39384	5.06082 ppb		97
28) 2,4-Dichlorophenol	6.19	162	29754	4.71459 ppb		94
29) 1,2,4-Trichlorobenzene	6.24	180	35230	5.05372 ppb		98
30) 3,4-Dimethylphenol	6.29	107	56394	5.39745 ppb		81
31) Naphthalene	6.31	128	107955	4.95797 ppb		100
32) 4-Chloroaniline	6.42	127	37545	4.85948 ppb		96
33) 2,6-Dichlorophenol	6.42	162	31478	5.16618 ppb		97
34) Hexachloropropene	6.42	213	25276	4.55752 ppb		98
35) Hexachlorobutadiene	6.46	225	23664	5.32227 ppb		92
36) Caprolactum	6.79	55	14872	4.52289 ppb		92
37) 4-Chloro-3-methylphenol	6.99	107	34775	4.82802 ppb		87

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y004.D Vial: 4
Acq On : 7 Dec 16 10:01 Operator: MA
Sample : 5ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38) 2-Methylnaphthalene	7.11	142	73035	5.02428	ppb		98
39) 1-Methylnaphthalene	7.22	142	74622	5.35196	ppb		98
41) Hexachlorocyclopentadiene	7.29	237	2162	7.14608	ppb	#	91
42) 1,2,4,5-Tetrachlorobenzene	7.31	216	33104	4.95861	ppb		93
43) 2,4,6-Trichlorophenol	7.46	196	20513	4.63043	ppb		92
44) 2,4,5-Trichlorophenol	7.53	196	24042	5.12505	ppb		88
46) 1,1'-Biphenyl	7.65	154	96876	5.20831	ppb		97
47) 2-Chloronaphthalene	7.67	162	71906	4.90703	ppb		97
48) 2-Nitroaniline	7.82	65	22595	4.34279	ppb		78
49) Dimethyl phthalate	8.01	163	86082	4.79845	ppb		99
50) 2,6-DNT	8.10	165	17800	4.45834	ppb		80
51) Acenaphthylene	8.14	152	116157	5.09910	ppb		99
52) 3-Nitroaniline	8.31	138	18493	4.47392	ppb	#	34
53) Acenaphthene	8.34	154	74001	5.30414	ppb		97
54) 2,4-Dinitrophenol	8.51	184	1898	8.26475	ppb	#	71
55) 4-Nitrophenol	8.54	65	1096	7.02827	ppb	#	38
56) Dibenzofuran	8.54	168	105976	5.20957	ppb		89
57) 2,4-DNT	8.58	165	24091	4.26865	ppb		83
58) 2,3,4,6-Tetrachlorophenol	8.72	232	17055	4.67205	ppb		95
59) Diethyl phthalate	8.83	149	88512	4.85963	ppb		98
60) 4-Chlorophenyl phenyl ethe	8.95	204	40703	4.91663	ppb	#	76
61) Fluorene	8.94	166	86563	5.16554	ppb		96
62) 4-Nitroaniline	9.01	138	18769	4.76703	ppb		93
65) 4,6-Dinitro-2-methylphenol	9.05	198	8901	2.88665	ppb	#	85
66) Diphenyl amine	9.09	169	134244	11.16496	ppb		99
67) n-Nitrosodiphenylamine	9.09	169	134244	11.16496	ppb		99
68) 1,2-Diphenylhydrazine	9.13	77	87129	4.57707	ppb		99
69) 4-Bromophenyl phenyl ether	9.52	248	24730	5.36824	ppb	#	83
70) Hexachlorobenzene	9.59	284	24441	4.98065	ppb	#	74
71) Atrazine	9.72	200	11708	2.43094	ppb		95
72) Pentachlorophenol	9.84	266	6437	7.80595	ppb		92
73) Phenanthrene	10.05	178	125410	5.18209	ppb		98
74) Anthracene	10.12	178	134548	5.34573	ppb		98
75) Carbazol	10.32	167	117070	5.23894	ppb		99
76) Di-n-butylphthalate	10.72	149	152801	5.10773	ppb		100
77) Fluoranthene	11.44	202	140468	5.31106	ppb	#	97
79) Benzidine	11.62	184	41503	4.47439	ppb	#	89
80) Pyrene	11.70	202	149080	5.33068	ppb		99
82) Butyl benzylphthalate	12.46	149	69384	4.95412	ppb		100
83) 3,3'-Dichlorobenzidine	13.07	252	40328	4.68957	ppb	#	98
84) Benz (a) anthracene	13.09	228	130185	4.90624	ppb		99
85) Bis (2-ethylhexyl) phthala	13.13	149	98983	5.00821	ppb		99
86) Chrysene	13.14	228	135366	5.30692	ppb		94
87) Di-n-octylphthalate	13.84	149	167938	4.79507	ppb		99
89) Benzo (b) fluoranthene	14.29	252	127992	4.23678	ppb		95
90) Benzo (k) fluoranthene	14.32	252	146637	5.07643	ppb		97
91) Benzo (a) pyrene	14.68	252	131139	4.60945	ppb		94
92) Indeno (1,2,3-cd) pyrene	16.29	276	153935	4.75506	ppb	#	88
93) Dibenz (a,h) anthracene	16.31	278	131937	4.79035	ppb		96
94) Benzo (g,h,i) perylene	16.76	276	130754	4.77536	ppb		95

(#) = qualifier out of range (m) = manual integration

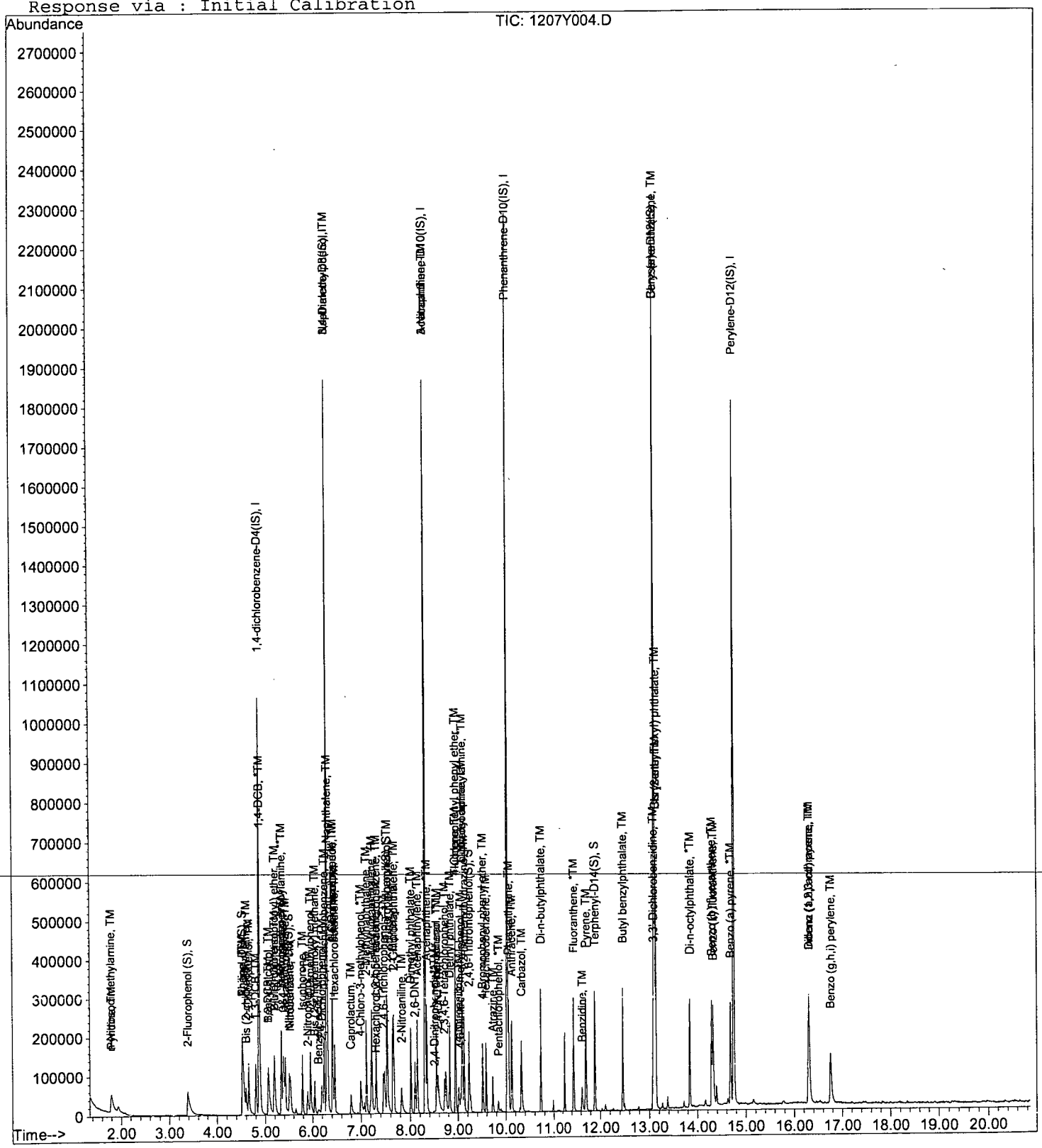
Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y004.D
Acq On : 7 Dec 16 10:01
Sample : 5ug/ml SVOC 12/06/16
Misc :

Vial: 4
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y005.D Vial: 5
Acq On : 7 Dec 16 10:32 Operator: MA
Sample : 10ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	199996	40.00000	ppb		0.00
20) Napthalene-D8(IS)	6.29	136	835678	40.00000	ppb		0.00
40) Acenaphthene-D10(IS)	8.31	164	491315	40.00000	ppb		0.00
64) Phenanthrene-D10(IS)	10.02	188	976841	40.00000	ppb		0.00
78) Chrysene-D12(IS)	13.11	240	927503	40.00000	ppb		0.00
88) Perylene-D12(IS)	14.75	264	990341	40.00000	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol (S)	3.37	112	129921	20.52354	ppb		0.02
Spiked Amount 200.000			Recovery = 10.262%				
5) Phenol-D6 (S)	4.51	99	178462	20.38018	ppb		0.00
Spiked Amount 200.000			Recovery = 10.190%				
21) Nitrobenzene-D5(S)	5.50	82	90507	10.38019	ppb		0.00
Spiked Amount 100.000			Recovery = 10.380%				
45) 2-Fluorobiphenyl(S)	7.54	172	184156	11.80380	ppb		0.00
Spiked Amount 100.000			Recovery = 11.804%				
63) 2,4,6-Tribromophenol(S)	9.23	330	52209	21.63904	ppb		0.00
Spiked Amount 200.000			Recovery = 10.820%				
81) Terphenyl-D14(S)	11.89	244	220919	10.50802	ppb		0.00
Spiked Amount 100.000			Recovery = 10.508%				
Target Compounds							Qvalue
2) n-Nitrosodimethylamine	1.76	42	40937	8.73052	ppb		87
3) Pyridine	1.78	79	86226	8.60805	ppb		94
6) Phenol	4.53	94	95766	9.64222	ppb		94
7) Aniline	4.52	66	91627	9.36928	ppb	#	79
8) Bis (2-chloroethyl) ether	4.59	63	39545	8.85840	ppb		97
9) 2-Chlorophenol	4.65	128	81615	10.59915	ppb		96
10) 1,3-DCB	4.80	146	83321	9.98465	ppb		99
11) 1,4-DCB	4.89	146	89069	10.41583	ppb		97
12) Benzyl alcohol	5.06	108	42008	9.75255	ppb		93
13) 1,2-DCB	5.06	146	77858	9.77026	ppb		96
14) 2-Methylphenol	5.20	107	56924	9.74855	ppb		92
15) Bis (2-chloroisopropyl) et	5.19	45	87550	9.79249	ppb		84
16) Acetophenone	5.33	105	103596	9.51867	ppb		98
17) 3&4-Methylphenol	5.36	107	152989	19.80531	ppb		96
18) n-Nitrosodi-n-propylamine	5.33	70	52236	9.25304	ppb		95
19) Hexachloroethane	5.42	117	35267	9.94382	ppb		92
22) Nitrobenzene	5.53	77	84968	9.52541	ppb		90
23) Isophorone	5.79	82	143360	9.74837	ppb		96
24) 2-Nitrophenol	5.89	139	40432	9.52028	ppb		93
25) 2,4-Dimethylphenol	5.95	122	70653	10.67236	ppb		94
26) Benzoic acid	6.11	105	32406	10.34814	ppb		90
27) Bis (2-chloroethoxy) metha	6.04	93	80395	10.22417	ppb		98
28) 2,4-Dichlorophenol	6.18	162	64057	10.04530	ppb		97
29) 1,2,4-Trichlorobenzene	6.24	180	71216	10.11054	ppb		95
30) 3,4-Dimethylphenol	6.29	107	103715	9.82416	ppb		98
31) Naphthalene	6.32	128	220486	10.02167	ppb		99
32) 4-Chloroaniline	6.40	127	89109	11.41451	ppb		99
33) 2,6-Dichlorophenol	6.41	162	69177	11.23627	ppb		98
34) Hexachloropropene	6.41	213	55717	9.94274	ppb		97
35) Hexachlorobutadiene	6.46	225	46253	10.29548	ppb		97
36) Caprolactum	6.79	55	32338	9.73326	ppb		96
37) 4-Chloro-3-methylphenol	6.99	107	69749	9.58380	ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y005.D Vial: 5
Acq On : 7 Dec 16 10:32 Operator: MA
Sample : 10ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38) 2-Methylnaphthalene	7.11	142	146114	9.94793	ppb		99
39) 1-Methylnaphthalene	7.22	142	153034	10.86256	ppb		99
41) Hexachlorocyclopentadiene	7.28	237	10085	10.30509	ppb		83
42) 1,2,4,5-Tetrachlorobenzene	7.31	216	72826	10.89639	ppb		96
43) 2,4,6-Trichlorophenol	7.46	196	44123	9.94887	ppb		99
44) 2,4,5-Trichlorophenol	7.53	196	49164	10.46865	ppb		96
46) 1,1'-Biphenyl	7.65	154	198489	10.65941	ppb	#	96
47) 2-Chloronaphthalene	7.66	162	146978	10.01894	ppb		94
48) 2-Nitroaniline	7.81	65	47494	9.11824	ppb		90
49) Dimethyl phthalate	8.02	163	175672	9.78154	ppb	#	97
50) 2,6-DNT	8.09	165	38304	9.58326	ppb	#	73
51) Acenaphthylene	8.14	152	252596	11.07621	ppb		99
52) 3-Nitroaniline	8.30	138	43416	10.49172	ppb	#	91
53) Acenaphthene	8.34	154	166258	11.90354	ppb		96
54) 2,4-Dinitrophenol	8.46	184	10475	11.87415	ppb	#	60
55) 4-Nitrophenol	8.57	65	28528	13.90485	ppb		75
56) Dibenzofuran	8.55	168	209346	10.27958	ppb		88
57) 2,4-DNT	8.57	165	53666	9.49842	ppb		97
58) 2,3,4,6-Tetrachlorophenol	8.71	232	36099	9.87795	ppb		95
59) Diethyl phthalate	8.83	149	181223	9.93873	ppb		99
60) 4-Chlorophenyl phenyl ethe	8.95	204	85344	10.29746	ppb		87
61) Fluorene	8.95	166	175510	10.46168	ppb		97
62) 4-Nitroaniline	9.00	138	41396	10.50223	ppb		90
65) 4,6-Dinitro-2-methylphenol	9.05	198	28069	8.17351	ppb	#	74
66) Diphenyl amine	9.09	169	271128	20.24708	ppb		99
67) n-Nitrosodiphenylamine	9.09	169	271128	20.24708	ppb		99
68) 1,2-Diphenylhydrazine	9.13	77	180355	8.50705	ppb	#	91
69) 4-Bromophenyl phenyl ether	9.51	248	49097	9.56948	ppb		92
70) Hexachlorobenzene	9.59	284	51734	9.46606	ppb		86
71) Atrazine	9.73	200	24123	4.49726	ppb		94
72) Pentachlorophenol	9.84	266	15917	12.48338	ppb		97
73) Phenanthrene	10.05	178	275480	10.22088	ppb		98
74) Anthracene	10.12	178	279374	9.96647	ppb		100
75) Carbazol	10.32	167	261994	10.52724	ppb		98
76) Di-n-butylphthalate	10.72	149	311416	9.34691	ppb		97
77) Fluoranthene	11.43	202	289008	9.81159	ppb	#	97
79) Benzidine	11.62	184	95179	9.28318	ppb		97
80) Pyrene	11.69	202	298339	9.65105	ppb		98
82) Butyl benzylphthalate	12.46	149	140818	9.09633	ppb		87
83) 3,3'-Dichlorobenzidine	13.07	252	104450	10.98842	ppb	#	93
84) Benz (a) anthracene	13.09	228	297055	10.12805	ppb		97
85) Bis (2-ethylhexyl) phthala	13.12	149	205324	9.39859	ppb	#	98
86) Chrysene	13.13	228	272893	9.67890	ppb		99
87) Di-n-octylphthalate	13.84	149	356276	9.20309	ppb	#	91
89) Benzo (b) fluoranthene	14.28	252	337345	10.15848	ppb	#	97
90) Benzo (k) fluoranthene	14.31	252	265091	8.34854	ppb		98
91) Benzo (a) pyrene	14.67	252	256785	8.21085	ppb	#	97
92) Indeno (1,2,3-cd) pyrene	16.30	276	329541	9.26038	ppb		96
93) Dibenz (a,h) anthracene	16.31	278	275683	9.10566	ppb		98
94) Benzo (g,h,i) perylene	16.74	276	263509	8.75484	ppb		98

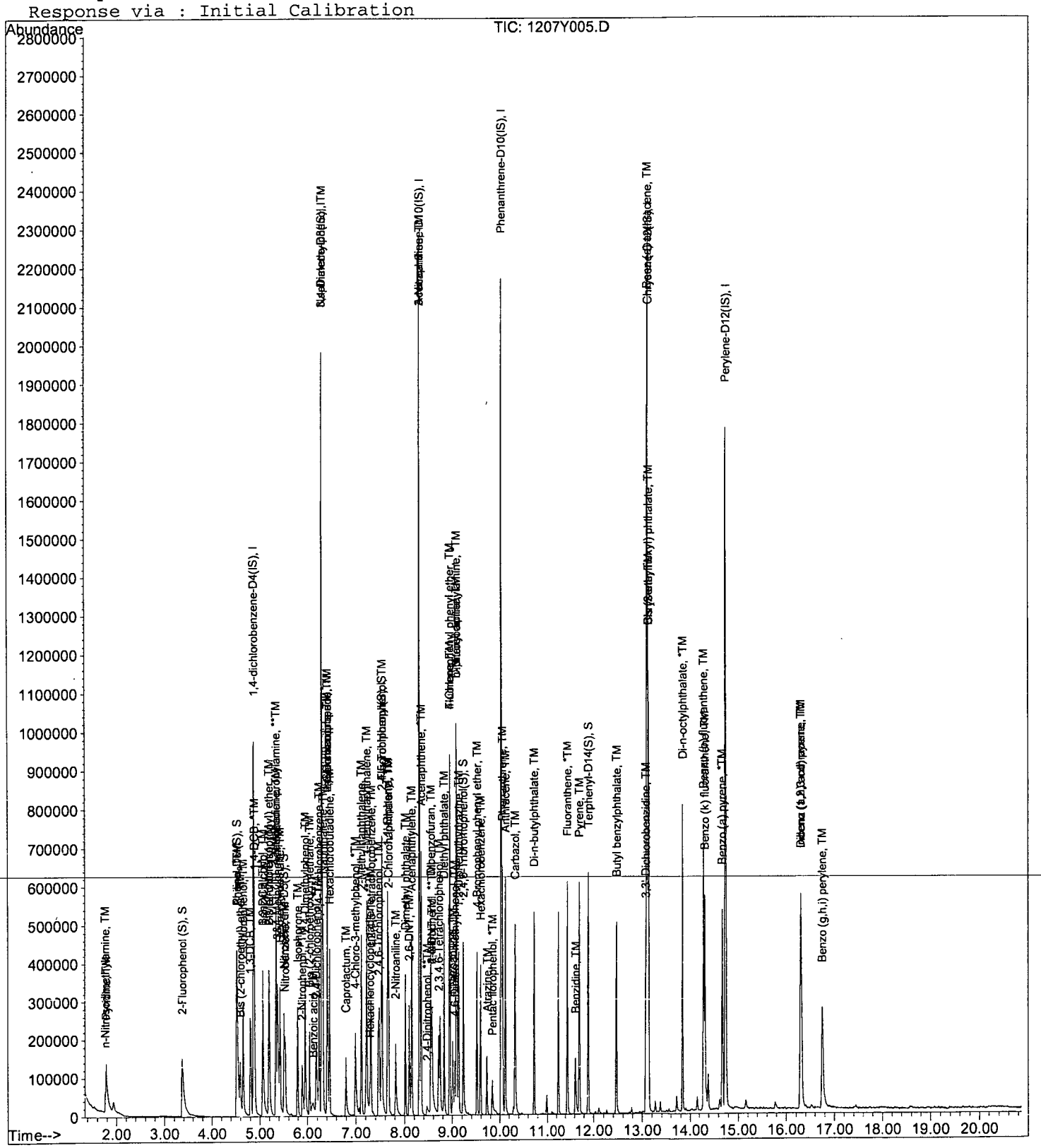
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y005.D Vial: 5
Acq On : 7 Dec 16 10:32 Operator: MA
Sample : 10ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



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Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y006.D Vial: 6
Acq On : 7 Dec 16 11:02 Operator: MA
Sample : 20ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	213922	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.30	136	877521	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	527221	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	919632	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.10	240	874733	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.75	264	909225	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.36	112	271002	40.02316 ppb	0.00
Spiked Amount 200.000			Recovery =	20.012%	
5) Phenol-D6 (S)	4.50	99	390048	41.64340 ppb	0.00
Spiked Amount 200.000			Recovery =	20.822%	
21) Nitrobenzene-D5(S)	5.50	82	172033	18.78955 ppb	0.00
Spiked Amount 100.000			Recovery =	18.790%	
45) 2-Fluorobiphenyl(S)	7.53	172	352090	21.03087 ppb	0.00
Spiked Amount 100.000			Recovery =	21.031%	
63) 2,4,6-Tribromophenol(S)	9.23	330	100581	38.84865 ppb	0.00
Spiked Amount 200.000			Recovery =	19.425%	
81) Terphenyl-D14(S)	11.89	244	439341	22.15795 ppb	0.00
Spiked Amount 100.000			Recovery =	22.158%	
Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.76	42	87421	17.43034 ppb	92
3) Pyridine	1.77	79	177528	16.56912 ppb	97
6) Phenol	4.52	94	221931	20.89054 ppb	96
7) Aniline	4.52	66	202813	19.38850 ppb	86
8) Bis (2-chloroethyl) ether	4.58	63	97711	20.46317 ppb	93
9) 2-Chlorophenol	4.65	128	172852	20.98656 ppb	99
10) 1,3-DCB	4.80	146	179050	20.05944 ppb	100
11) 1,4-DCB	4.89	146	178026	19.46331 ppb	97
12) Benzyl alcohol	5.06	108	98047	21.28071 ppb	97
13) 1,2-DCB	5.06	146	169067	19.83480 ppb	97
14) 2-Methylphenol	5.19	107	126350	20.22952 ppb	97
15) Bis (2-chloroisopropyl) et	5.19	45	195850	20.47984 ppb	93
16) Acetophenone	5.33	105	217146	18.65310 ppb	96
17) 3&4-Methylphenol	5.36	107	312061	37.76824 ppb	99
18) n-Nitrosodi-n-propylamine	5.33	70	112913	18.69926 ppb	99
19) Hexachloroethane	5.42	117	69201	18.24159 ppb	91
22) Nitrobenzene	5.52	77	170617	18.21513 ppb	98
23) Isophorone	5.79	82	277084	17.94308 ppb	99
24) 2-Nitrophenol	5.88	139	85225	19.11054 ppb	95
25) 2,4-Dimethylphenol	5.95	122	132147	19.00942 ppb	99
26) Benzoic acid	6.09	105	91123	19.04059 ppb	95
27) Bis (2-chloroethoxy) metha	6.04	93	161526	19.56243 ppb	97
28) 2,4-Dichlorophenol	6.17	162	132126	19.73177 ppb	98
29) 1,2,4-Trichlorobenzene	6.24	180	136552	18.46189 ppb	97
30) 3,4-Dimethylphenol	6.29	107	215414	19.43164 ppb	99
31) Naphthalene	6.32	128	472793	20.46500 ppb	100
32) 4-Chloroaniline	6.40	127	189841	23.15833 ppb	96
33) 2,6-Dichlorophenol	6.40	162	140216	21.68899 ppb	97
34) Hexachloropropene	6.41	213	118650	20.16357 ppb	99
35) Hexachlorobutadiene	6.46	225	96965	20.55433 ppb	96
36) Caprolactum	6.80	55	66358	19.02041 ppb	94
37) 4-Chloro-3-methylphenol	6.99	107	147903	19.35345 ppb	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y006.D
Acq On : 7 Dec 16 11:02
Sample : 20ug/ml SVOC 12/06/16
Misc :

Vial: 6
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38) 2-Methylnaphthalene	7.11	142	303522	19.67943 ppb		99
39) 1-Methylnaphthalene	7.22	142	283238	19.14597 ppb		99
41) Hexachlorocyclopentadiene	7.29	237	38317	19.84270 ppb		95
42) 1,2,4,5-Tetrachlorobenzene	7.31	216	148167	20.65927 ppb		98
43) 2,4,6-Trichlorophenol	7.46	196	92029	19.33751 ppb		97
44) 2,4,5-Trichlorophenol	7.52	196	109748	21.77747 ppb		97
46) 1,1'-Biphenyl	7.65	154	421333	21.08577 ppb	#	98
47) 2-Chloronaphthalene	7.66	162	320827	20.38017 ppb		97
48) 2-Nitroaniline	7.81	65	98585	17.63805 ppb		95
49) Dimethyl phthalate	8.02	163	354455	18.39218 ppb		99
50) 2,6-DNT	8.09	165	78220	18.23703 ppb	#	70
51) Acenaphthylene	8.15	152	468200	19.13214 ppb		100
52) 3-Nitroaniline	8.29	138	94776	21.34336 ppb		82
53) Acenaphthene	8.34	154	308667	20.59449 ppb		98
54) 2,4-Dinitrophenol	8.44	184	34650	21.05674 ppb		92
55) 4-Nitrophenol	8.55	65	64643	21.85482 ppb		87
56) Dibenzofuran	8.55	168	433602	19.84127 ppb		95
57) 2,4-DNT	8.57	165	113885	18.78390 ppb	#	69
58) 2,3,4,6-Tetrachlorophenol	8.71	232	77826	19.84558 ppb		96
59) Diethyl phthalate	8.83	149	365822	18.69626 ppb		94
60) 4-Chlorophenyl phenyl ethe	8.95	204	160915	18.09343 ppb		95
61) Fluorene	8.95	166	338778	18.81837 ppb		100
62) 4-Nitroaniline	9.00	138	79383	18.76799 ppb		95
65) 4,6-Dinitro-2-methylphenol	9.05	198	69659	21.54609 ppb	#	85
66) Diphenyl amine	9.09	169	583796	46.30830 ppb		100
67) n-Nitrosodiphenylamine	9.09	169	583796	46.30830 ppb		100
68) 1,2-Diphenylhydrazine	9.13	77	374925	18.78473 ppb	#	91
69) 4-Bromophenyl phenyl ether	9.51	248	96477	19.97408 ppb		93
70) Hexachlorobenzene	9.59	284	102637	19.94834 ppb		87
71) Atrazine	9.73	200	48458	9.59604 ppb		94
72) Pentachlorophenol	9.84	266	40851	26.44051 ppb		95
73) Phenanthrene	10.05	178	526900	20.76520 ppb		98
74) Anthracene	10.12	178	538899	20.42079 ppb		99
75) Carbazol	10.32	167	530270	22.63237 ppb		97
76) Di-n-butylphthalate	10.73	149	706599	22.52735 ppb		99
77) Fluoranthene	11.43	202	598343	21.57691 ppb	#	97
79) Benzidine	11.61	184	205525	21.25496 ppb		99
80) Pyrene	11.69	202	617378	21.17657 ppb		99
82) Butyl benzylphthalate	12.46	149	294257	20.15461 ppb		91
83) 3,3'-Dichlorobenzidine	13.07	252	218137	24.33302 ppb	#	95
84) Benz (a) anthracene	13.09	228	563481	20.37081 ppb		100
85) Bis (2-ethylhexyl) phthala	13.12	149	407629	19.78463 ppb	#	96
86) Chrysene	13.13	228	535016	20.12056 ppb		99
87) Di-n-octylphthalate	13.84	149	763144	20.90228 ppb	#	92
89) Benzo (b) fluoranthene	14.28	252	616293	20.21412 ppb	#	98
90) Benzo (k) fluoranthene	14.31	252	538976	18.48836 ppb		98
91) Benzo (a) pyrene	14.67	252	567407	19.76179 ppb		98
92) Indeno (1,2,3-cd) pyrene	16.29	276	632150	19.34875 ppb		97
93) Dibenz (a,h) anthracene	16.31	278	526382	18.93720 ppb		98
94) Benzo (g,h,i) perylene	16.74	276	639018	23.12486 ppb		97

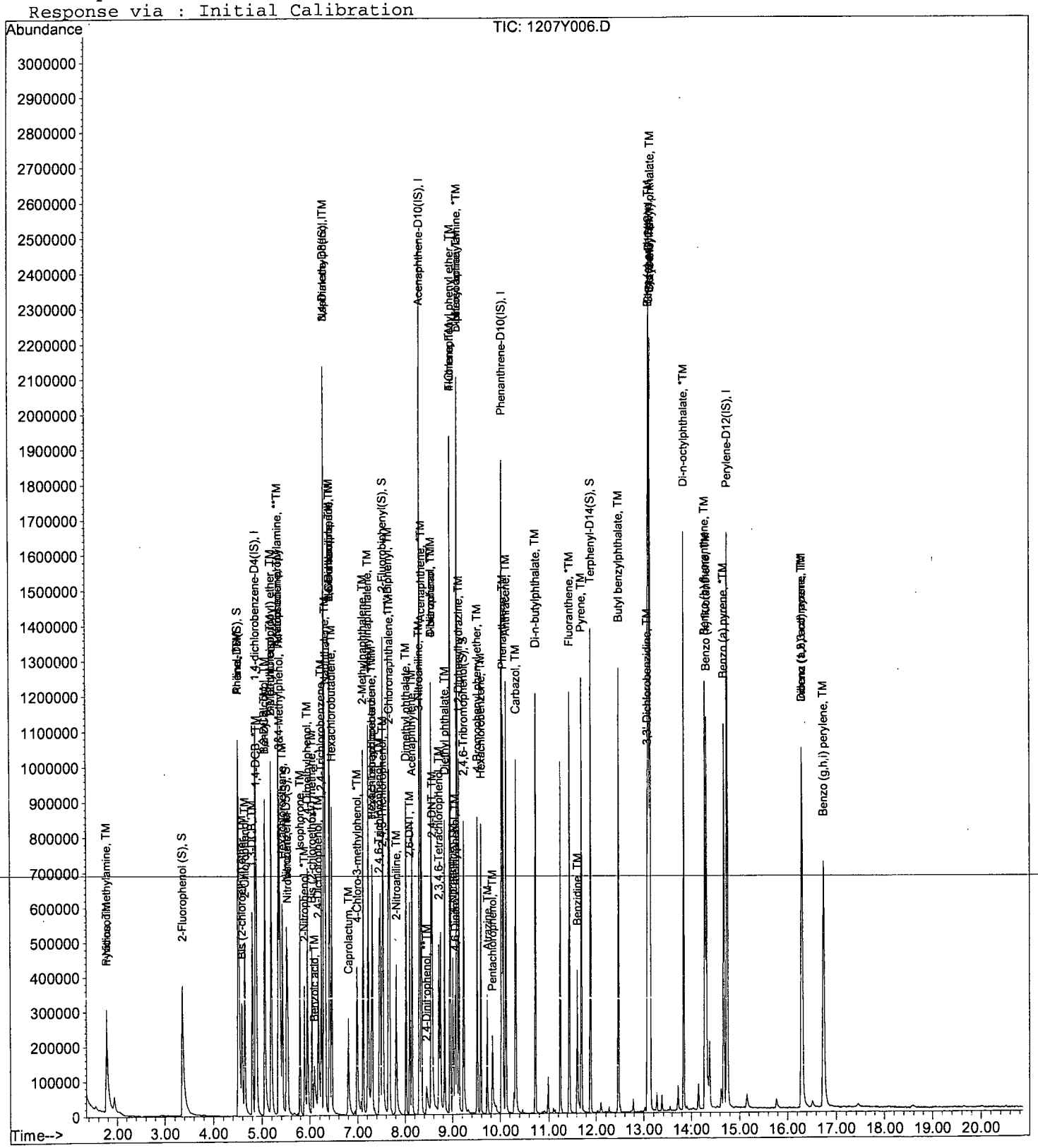
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y006.D Vial: 6
Acq On : 7 Dec 16 11:02 Operator: MA
Sample : 20ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y007.D Vial: 7
Acq On : 7 Dec 16 11:32 Operator: MA
Sample : 40ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	200058	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.30	136	812959	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.31	164	497677	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.03	188	928405	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.11	240	850533	40.00000 ppb		0.00
88) Perylene-D12(IS)	14.75	264	888701	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.35	112	570340	90.06835 ppb		0.00
Spiked Amount 200.000			Recovery =	45.034%		
5) Phenol-D6 (S)	4.50	99	704877	80.47129 ppb		0.00
Spiked Amount 200.000			Recovery =	40.236%		
21) Nitrobenzene-D5(S)	5.50	82	325441	38.36770 ppb		0.00
Spiked Amount 100.000			Recovery =	38.368%		
45) 2-Fluorobiphenyl(S)	7.54	172	597194	37.78888 ppb		0.00
Spiked Amount 100.000			Recovery =	37.789%		
63) 2,4,6-Tribromophenol(S)	9.23	330	191228	78.24500 ppb		0.00
Spiked Amount 200.000			Recovery =	39.123%		
81) Terphenyl-D14(S)	11.89	244	752070	39.00950 ppb		0.00
Spiked Amount 100.000			Recovery =	39.009%		
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.75	42	161566	34.44606 ppb		97
3) Pyridine	1.76	79	387358	38.65847 ppb		98
6) Phenol	4.52	94	400577	40.31969 ppb		93
7) Aniline	4.51	66	377482	38.58729 ppb	#	75
8) Bis (2-chloroethyl) ether	4.59	63	179689	40.23931 ppb		98
9) 2-Chlorophenol	4.64	128	315428	40.95120 ppb		91
10) 1,3-DCB	4.80	146	332809	39.86933 ppb		99
11) 1,4-DCB	4.89	146	332016	38.81430 ppb		99
12) Benzyl alcohol	5.05	108	172333	39.99630 ppb		92
13) 1,2-DCB	5.06	146	296826	37.23663 ppb		100
14) 2-Methylphenol	5.19	107	223633	38.28652 ppb		95
15) Bis (2-chloroisopropyl) et	5.19	45	337003	37.68221 ppb		98
16) Acetophenone	5.34	105	403185	37.03421 ppb		99
17) 3&4-Methylphenol	5.36	107	576124	74.55945 ppb		97
18) n-Nitrosodi-n-propylamine	5.34	70	205499	36.39064 ppb		92
19) Hexachloroethane	5.42	117	132371	37.31150 ppb		93
22) Nitrobenzene	5.52	77	329118	37.92717 ppb		95
23) Isophorone	5.79	82	544538	38.06296 ppb		95
24) 2-Nitrophenol	5.88	139	167729	40.59784 ppb		97
25) 2,4-Dimethylphenol	5.95	122	256596	39.84284 ppb		99
26) Benzoic acid	6.12	105	207583	40.37949 ppb		96
27) Bis (2-chloroethoxy) metha	6.04	93	311390	40.70745 ppb		99
28) 2,4-Dichlorophenol	6.16	162	251852	40.59868 ppb		93
29) 1,2,4-Trichlorobenzene	6.24	180	276620	40.36924 ppb		98
30) 3,4-Dimethylphenol	6.28	107	390385	38.01171 ppb		99
31) Naphthalene	6.32	128	855871	39.98876 ppb		99
32) 4-Chloroaniline	6.40	127	325340	42.83942 ppb		96
33) 2,6-Dichlorophenol	6.40	162	232500	38.81983 ppb		95
34) Hexachloropropene	6.42	213	225297	41.32796 ppb		97
35) Hexachlorobutadiene	6.46	225	171693	39.28527 ppb		94
36) Caprolactum	6.82	55	125688	38.88743 ppb		97
37) 4-Chloro-3-methylphenol	6.98	107	280036	39.55342 ppb		87

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y007.D Vial: 7
Acq On : 7 Dec 16 11:32 Operator: MA
Sample : 40ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38) 2-Methylnaphthalene	7.11	142	561485	39.29610	ppb		100
39) 1-Methylnaphthalene	7.22	142	542998	39.61986	ppb		98
41) Hexachlorocyclopentadiene	7.29	237	98846	39.78650	ppb		94
42) 1,2,4,5-Tetrachlorobenzene	7.31	216	258378	38.16490	ppb		97
43) 2,4,6-Trichlorophenol	7.45	196	173513	38.62362	ppb		100
44) 2,4,5-Trichlorophenol	7.51	196	183541	38.58238	ppb	#	88
46) 1,1'-Biphenyl	7.65	154	728113	38.60182	ppb	#	97
47) 2-Chloronaphthalene	7.67	162	569966	38.35579	ppb		98
48) 2-Nitroaniline	7.81	65	201923	38.27108	ppb		97
49) Dimethyl phthalate	8.02	163	688771	37.86099	ppb		99
50) 2,6-DNT	8.10	165	153741	37.97267	ppb		91
51) Acenaphthylene	8.15	152	870855	37.69841	ppb		100
52) 3-Nitroaniline	8.29	138	176613	42.13394	ppb		87
53) Acenaphthene	8.34	154	553092	39.09340	ppb		100
54) 2,4-Dinitrophenol	8.45	184	80953	41.10463	ppb		83
55) 4-Nitrophenol	8.54	65	134675	40.08311	ppb		98
56) Dibenzofuran	8.55	168	766792	37.17071	ppb		98
57) 2,4-DNT	8.58	165	220382	38.50708	ppb		97
58) 2,3,4,6-Tetrachlorophenol	8.71	232	159761	43.15738	ppb		96
59) Diethyl phthalate	8.84	149	717251	38.83302	ppb		98
60) 4-Chlorophenyl phenyl ethe	8.95	204	308111	36.70089	ppb		96
61) Fluorene	8.95	166	633972	37.30629	ppb		100
62) 4-Nitroaniline	9.01	138	157741	39.50755	ppb		89
65) 4,6-Dinitro-2-methylphenol	9.05	198	131972	40.43428	ppb	#	84
66) Diphenyl amine	9.10	169	974102	76.53830	ppb		99
67) n-Nitrosodiphenylamine	9.10	169	974102	76.53830	ppb		99
68) 1,2-Diphenylhydrazine	9.13	77	675207	33.50998	ppb		95
69) 4-Bromophenyl phenyl ether	9.51	248	202318	41.49103	ppb		94
70) Hexachlorobenzene	9.59	284	198345	38.18569	ppb		91
71) Atrazine	9.73	200	93179	18.27769	ppb		100
72) Pentachlorophenol	9.83	266	91407	50.75984	ppb		95
73) Phenanthrene	10.06	178	992611	38.74928	ppb		99
74) Anthracene	10.12	178	1029607	38.64677	ppb		99
75) Carbazol	10.32	167	881300	37.25919	ppb		99
76) Di-n-butylphthalate	10.73	149	1193622	37.69472	ppb		99
77) Fluoranthene	11.43	202	1069844	38.21520	ppb	#	96
79) Benzidine	11.61	184	397025	42.22773	ppb		99
80) Pyrene	11.70	202	1133899	40.00029	ppb		99
82) Butyl benzylphthalate	12.47	149	588724	41.47093	ppb		93
83) 3,3'-Dichlorobenzidine	13.08	252	380229	43.62107	ppb		97
84) Benz (a) anthracene	13.10	228	1074534	39.95154	ppb		99
85) Bis (2-ethylhexyl) phthala	13.13	149	762045	38.03889	ppb		98
86) Chrysene	13.13	228	989386	38.26692	ppb		100
87) Di-n-octylphthalate	13.84	149	1343797	37.85342	ppb	#	87
89) Benzo (b) fluoranthene	14.28	252	1144127	38.39349	ppb	#	98
90) Benzo (k) fluoranthene	14.32	252	1041436	36.54915	ppb		99
91) Benzo (a) pyrene	14.68	252	1090904	38.87173	ppb		98
92) Indeno (1,2,3-cd) pyrene	16.30	276	1176312	36.83588	ppb		98
93) Dibenz (a,h) anthracene	16.32	278	1006185	37.03465	ppb		99
94) Benzo (g,h,i) perylene	16.75	276	1129852	41.83148	ppb		97

(#) = qualifier out of range (m) = manual integration

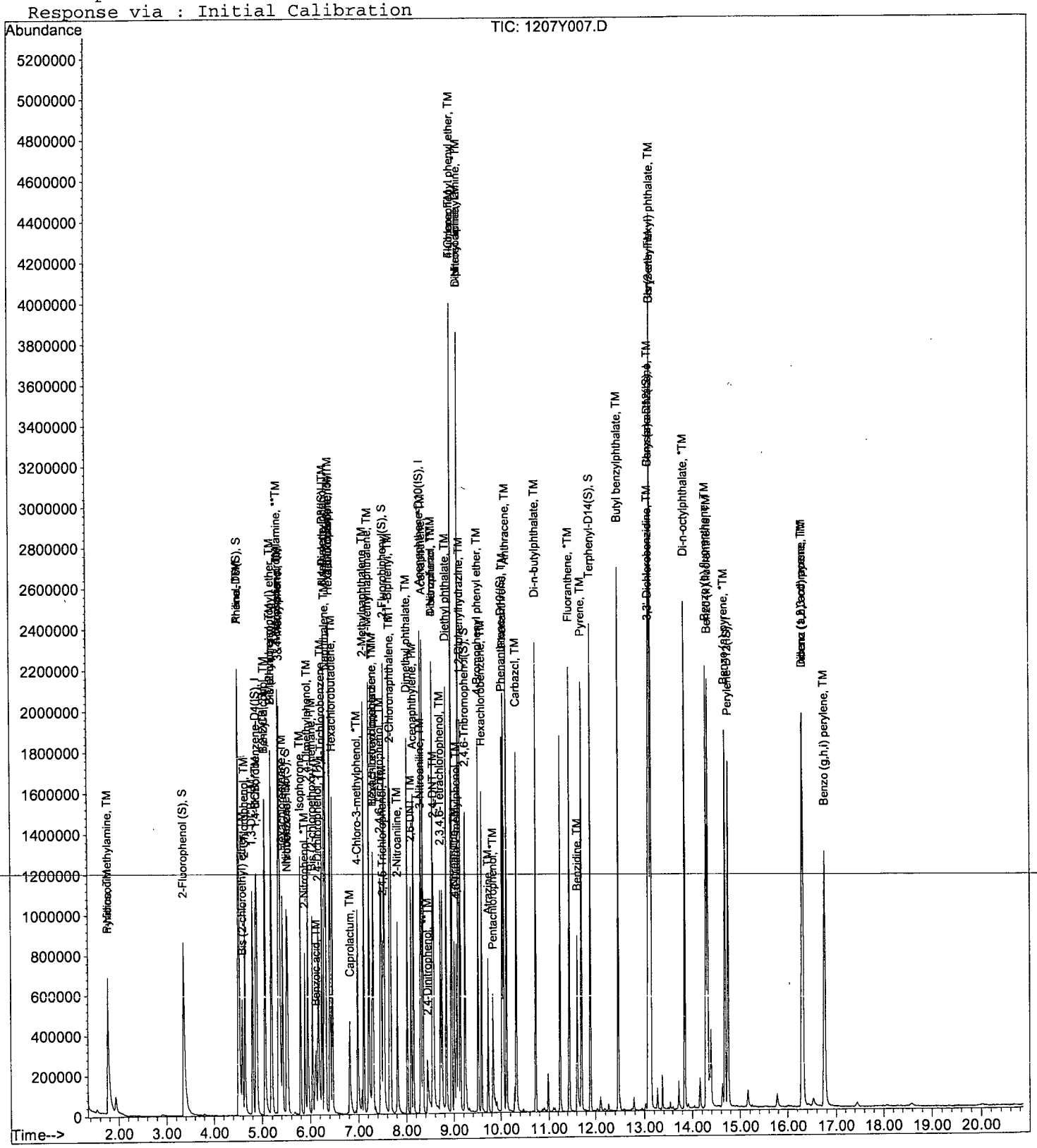
Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y007.D
Acq On : 7 Dec 16 11:32
Sample : 40ug/ml SVOC 12/06/16
Misc :

Vial: 7
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y008.D Vial: 8
Acq On : 7 Dec 16 12:02 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	195270	40.00000	ppb	0.00
20) Napthalene-D8(IS)	6.30	136	816895	40.00000	ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	475200	40.00000	ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	975541	40.00000	ppb	0.00
78) Chrysene-D12(IS)	13.10	240	853105	40.00000	ppb	0.00
88) Perylene-D12(IS)	14.75	264	871056	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.35	112	695029	112.45058	ppb	0.00
Spiked Amount 200.000			Recovery =	56.226%		
5) Phenol-D6 (S)	4.51	99	832830	97.41019	ppb	0.00
Spiked Amount 200.000			Recovery =	48.705%		
21) Nitrobenzene-D5(S)	5.50	82	421258	49.42470	ppb	0.00
Spiked Amount 100.000			Recovery =	49.425%		
45) 2-Fluorobiphenyl(S)	7.53	172	745324	49.39294	ppb	0.00
Spiked Amount 100.000			Recovery =	49.393%		
63) 2,4,6-Tribromophenol(S)	9.23	330	243923	104.52712	ppb	0.00
Spiked Amount 200.000			Recovery =	52.263%		
81) Terphenyl-D14(S)	11.89	244	959232	49.60488	ppb	0.00
Spiked Amount 100.000			Recovery =	49.605%		
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.75	42	207992	45.43145	ppb	100
3) Pyridine	1.76	79	499289	51.05103	ppb	100
6) Phenol	4.52	94	480106	49.50952	ppb	100
7) Aniline	4.52	66	456200	47.77753	ppb	100
8) Bis (2-chloroethyl) ether	4.59	63	206942	47.47862	ppb	100
9) 2-Chlorophenol	4.65	128	370436	49.27197	ppb	100
10) 1,3-DCB	4.80	146	396306	48.64015	ppb	100
11) 1,4-DCB	4.89	146	407144	48.76421	ppb	100
12) Benzyl alcohol	5.06	108	223746	53.20189	ppb	100
13) 1,2-DCB	5.06	146	388817	49.97284	ppb	100
14) 2-Methylphenol	5.19	107	277560	48.68411	ppb	100
15) Bis (2-chloroisopropyl) et	5.19	45	424279	48.60428	ppb	100
16) Acetophenone	5.33	105	510342	48.02645	ppb	100
17) 3&4-Methylphenol	5.36	107	744509	98.71362	ppb	100
18) n-Nitrosodi-n-propylamine	5.34	70	262564	47.63603	ppb	100
19) Hexachloroethane	5.42	117	166560	48.09955	ppb	100
22) Nitrobenzene	5.52	77	426332	48.89327	ppb	100
23) Isophorone	5.80	82	706760	49.16418	ppb	100
24) 2-Nitrophenol	5.88	139	213979	51.54284	ppb	100
25) 2,4-Dimethylphenol	5.95	122	323836	50.04122	ppb	100
26) Benzoic acid	6.13	105	279445	53.40557	ppb	100
27) Bis (2-chloroethoxy) metha	6.04	93	396181	51.54248	ppb	100
28) 2,4-Dichlorophenol	6.17	162	325223	52.17353	ppb	100
29) 1,2,4-Trichlorobenzene	6.24	180	351337	51.02621	ppb	100
30) 3,4-Dimethylphenol	6.29	107	512874	49.69783	ppb	100
31) Naphthalene	6.32	128	1091949	50.77318	ppb	100
32) 4-Chloroaniline	6.40	127	395557	51.83434	ppb	100
33) 2,6-Dichlorophenol	6.41	162	296250	49.22564	ppb	100
34) Hexachloropropene	6.42	213	279000	50.93252	ppb	100
35) Hexachlorobutadiene	6.46	225	219413	49.96224	ppb	100
36) Caprolactum	6.83	55	159640	49.15407	ppb	100
37) 4-Chloro-3-methylphenol	6.99	107	341306	47.97517	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y008.D Vial: 8
Acq On : 7 Dec 16 12:02 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
38) 2-Methylnaphthalene	7.11	142	688780	47.97270 ppb	100
39) 1-Methylnaphthalene	7.22	142	659731	47.90535 ppb	100
41) Hexachlorocyclopentadiene	7.29	237	140004	52.99808 ppb	100
42) 1,2,4,5-Tetrachlorobenzene	7.31	216	332171	51.38560 ppb	100
43) 2,4,6-Trichlorophenol	7.46	196	218731	50.99205 ppb	100
44) 2,4,5-Trichlorophenol	7.52	196	226443	49.85239 ppb	100
46) 1,1'-Biphenyl	7.66	154	885084	49.14334 ppb	100
47) 2-Chloronaphthalene	7.67	162	727438	51.26833 ppb	100
48) 2-Nitroaniline	7.81	65	266093	52.81891 ppb	100
49) Dimethyl phthalate	8.02	163	914001	52.61807 ppb	100
50) 2,6-DNT	8.10	165	201713	52.17789 ppb	100
51) Acenaphthylene	8.15	152	1109739	50.31172 ppb	100
52) 3-Nitroaniline	8.30	138	209961	52.45890 ppb	100
53) Acenaphthene	8.34	154	674472	49.92765 ppb	100
54) 2,4-Dinitrophenol	8.44	184	97936	50.08681 ppb	100
55) 4-Nitrophenol	8.54	65	178570	53.03676 ppb	100
56) Dibenzofuran	8.55	168	1012092	51.38241 ppb	100
57) 2,4-DNT	8.57	165	296625	54.28044 ppb	100
58) 2,3,4,6-Tetrachlorophenol	8.71	232	207535	58.71469 ppb	100
59) Diethyl phthalate	8.83	149	866198	49.11547 ppb	100
60) 4-Chlorophenyl phenyl ethe	8.95	204	382969	47.77538 ppb	100
61) Fluorene	8.95	166	806446	49.70024 ppb	100
62) 4-Nitroaniline	9.01	138	206542	54.17700 ppb	100
65) 4,6-Dinitro-2-methylphenol	9.06	198	182950	53.34482 ppb	100
66) Diphenyl amine	9.10	169	1368741	102.34994 ppb	100
67) n-Nitrosodiphenylamine	9.10	169	1368741	102.34994 ppb	100
68) 1,2-Diphenylhydrazine	9.13	77	929548	43.90369 ppb	100
69) 4-Bromophenyl phenyl ether	9.51	248	243072	47.44020 ppb	100
70) Hexachlorobenzene	9.59	284	246139	45.09743 ppb	100
71) Atrazine	9.73	200	132213	24.68138 ppb	100
72) Pentachlorophenol	9.84	266	118335	60.26116 ppb	100
73) Phenanthrene	10.06	178	1304097	48.44918 ppb	100
74) Anthracene	10.12	178	1323292	47.27041 ppb	100
75) Carbazol	10.32	167	1272051	51.18068 ppb	100
76) Di-n-butylphthalate	10.73	149	1500155	45.08600 ppb	100
77) Fluoranthene	11.44	202	1330020	45.21326 ppb	100
79) Benzidine	11.61	184	505375	53.58983 ppb	100
80) Pyrene	11.70	202	1525772	53.66203 ppb	100
82) Butyl benzylphthalate	12.46	149	734576	51.58904 ppb	100
83) 3,3'-Dichlorobenzidine	13.08	252	470879	53.85786 ppb	100
84) Benz (a) anthracene	13.10	228	1345568	49.87784 ppb	100
85) Bis (2-ethylhexyl) phthala	13.13	149	996708	49.60253 ppb	100
86) Chrysene	13.14	228	1285778	49.58067 ppb	100
87) Di-n-octylphthalate	13.85	149	1959719	55.03689 ppb	100
89) Benzo (b) fluoranthene	14.29	252	1307332	44.75884 ppb	100
90) Benzo (k) fluoranthene	14.32	252	1321701	47.32466 ppb	100
91) Benzo (a) pyrene	14.68	252	1333161	48.46626 ppb	100
92) Indeno (1,2,3-cd) pyrene	16.30	276	1465032	46.80640 ppb	100
93) Dibenz (a,h) anthracene	16.32	278	1249734	46.93076 ppb	100
94) Benzo (g,h,i) perylene	16.76	276	1364184	51.53048 ppb	100

(#) = qualifier out of range (m) = manual integration

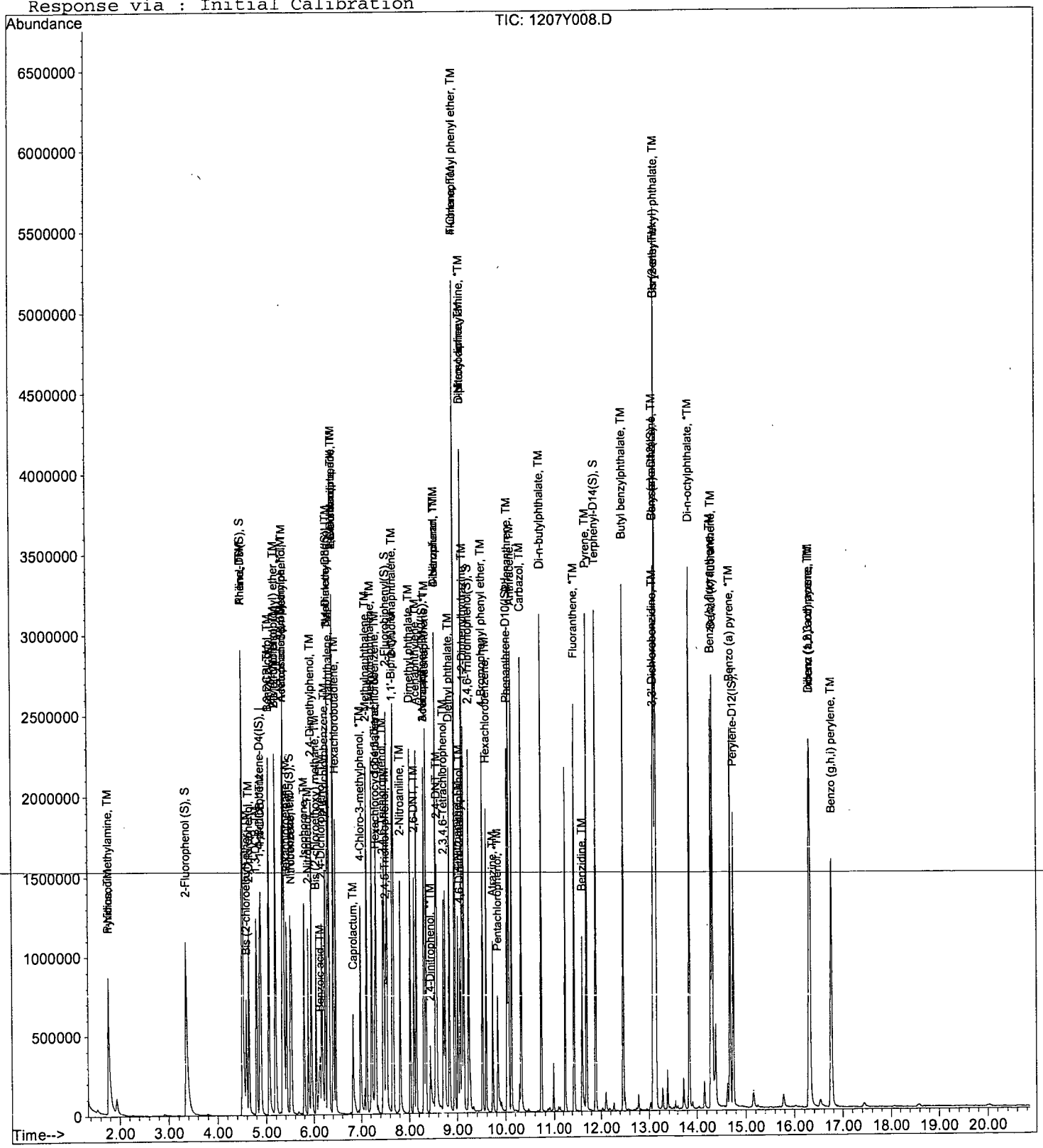
Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y008.D
Acq On : 7 Dec 16 12:02
Sample : 50ug/ml SVOC 12/06/16
Misc :

Vial: 8
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



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Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y009.D Vial: 9
Acq On : 7 Dec 16 12:32 Operator: MA
Sample : 60ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	218783	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.30	136	928479	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	561569	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	933722	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.11	240	884630	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.75	264	1042796	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.35	112	865007	124.91090 ppb	0.00
Spiked Amount 200.000			Recovery =	62.456%	
5) Phenol-D6 (S)	4.51	99	1086222	113.39361 ppb	0.00
Spiked Amount 200.000			Recovery =	56.697%	
21) Nitrobenzene-D5(S)	5.50	82	539284	55.66825 ppb	0.00
Spiked Amount 100.000			Recovery =	55.668%	
45) 2-Fluorobiphenyl(S)	7.54	172	984076	55.18508 ppb	0.00
Spiked Amount 100.000			Recovery =	55.185%	
63) 2,4,6-Tribromophenol(S)	9.23	330	315998	114.58661 ppb	0.00
Spiked Amount 200.000			Recovery =	57.293%	
81) Terphenyl-D14(S)	11.89	244	1107571	55.23485 ppb	0.00
Spiked Amount 100.000			Recovery =	55.235%	
Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.75	42	237687	46.33801 ppb	95
3) Pyridine	1.76	79	574794	52.45498 ppb	95
6) Phenol	4.52	94	637429	58.66854 ppb	94
7) Aniline	4.52	66	600249	56.10761 ppb	94
8) Bis (2-chloroethyl) ether	4.59	63	281001	57.54124 ppb	99
9) 2-Chlorophenol	4.65	128	506460	60.12483 ppb	98
10) 1,3-DCB	4.80	146	523668	57.36438 ppb	99
11) 1,4-DCB	4.89	146	527245	56.36215 ppb	97
12) Benzyl alcohol	5.06	108	288893	61.30992 ppb	96
13) 1,2-DCB	5.06	146	489566	56.15934 ppb	98
14) 2-Methylphenol	5.19	107	364148	57.00727 ppb	99
15) Bis (2-chloroisopropyl) et	5.19	45	554052	56.64941 ppb	96
16) Acetophenone	5.34	105	671773	56.42397 ppb	98
17) 3&4-Methylphenol	5.36	107	950588	112.49194 ppb	98
18) n-Nitrosodi-n-propylamine	5.35	70	340579	55.14933 ppb	98
19) Hexachloroethane	5.42	117	222476	57.34234 ppb	96
22) Nitrobenzene	5.52	77	554825	55.98238 ppb	98
23) Isophorone	5.80	82	928565	56.83073 ppb	99
24) 2-Nitrophenol	5.88	139	289592	61.37308 ppb	94
25) 2,4-Dimethylphenol	5.95	122	444516	60.43441 ppb	98
26) Benzoic acid	6.13	105	322257	54.17674 ppb	95
27) Bis (2-chloroethoxy) metha	6.04	93	529470	60.60482 ppb	99
28) 2,4-Dichlorophenol	6.16	162	429913	60.67973 ppb	96
29) 1,2,4-Trichlorobenzene	6.24	180	459705	58.74120 ppb	95
30) 3,4-Dimethylphenol	6.29	107	660163	56.28233 ppb	98
31) Naphthalene	6.32	128	1425995	58.33701 ppb	99
32) 4-Chloroaniline	6.40	127	513997	59.26021 ppb	98
33) 2,6-Dichlorophenol	6.41	162	389211	56.90000 ppb	98
34) Hexachloropropene	6.42	213	365095	58.63961 ppb	98
35) Hexachlorobutadiene	6.46	225	279947	56.08536 ppb	99
36) Caprolactum	6.84	55	221717	60.06354 ppb	98
37) 4-Chloro-3-methylphenol	6.99	107	480600	59.43613 ppb	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y009.D Vial: 9
Acq On : 7 Dec 16 12:32 Operator: MA
Sample : 60ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
38) 2-Methylnaphthalene	7.11	142	945068	57.91231 ppb	98
39) 1-Methylnaphthalene	7.22	142	919036	58.71429 ppb	98
41) Hexachlorocyclopentadiene	7.29	237	197642	60.29517 ppb	98
42) 1,2,4,5-Tetrachlorobenzene	7.31	216	445973	58.37966 ppb	99
43) 2,4,6-Trichlorophenol	7.46	196	297908	58.76890 ppb	98
44) 2,4,5-Trichlorophenol	7.52	196	321422	59.87920 ppb	94
46) 1,1'-Biphenyl	7.66	154	1207599	56.73829 ppb	98
47) 2-Chloronaphthalene	7.68	162	953118	56.84250 ppb	99
48) 2-Nitroaniline	7.81	65	333570	56.02944 ppb	97
49) Dimethyl phthalate	8.02	163	1131837	55.13729 ppb	99
50) 2,6-DNT	8.10	165	262428	57.44286 ppb	99
51) Acenaphthylene	8.15	152	1514599	58.10577 ppb	100
52) 3-Nitroaniline	8.30	138	286828	60.64227 ppb	100
53) Acenaphthene	8.34	154	907464	56.84338 ppb	99
54) 2,4-Dinitrophenol	8.44	184	134887	57.13945 ppb	90
55) 4-Nitrophenol	8.54	65	232448	57.73526 ppb	99
56) Dibenzofuran	8.55	168	1321081	56.75410 ppb	99
57) 2,4-DNT	8.58	165	379083	58.70069 ppb	99
58) 2,3,4,6-Tetrachlorophenol	8.71	232	264908	63.41964 ppb	97
59) Diethyl phthalate	8.84	149	1169813	56.12946 ppb	95
60) 4-Chlorophenyl phenyl ethe	8.95	204	505362	53.34779 ppb	99
61) Fluorene	8.95	166	1031075	53.77083 ppb	100
62) 4-Nitroaniline	9.01	138	270386	60.01559 ppb	96
65) 4,6-Dinitro-2-methylphenol	9.06	198	237031	72.20927 ppb	96
66) Diphenyl amine	9.10	169	1658613	129.58040 ppb	99
67) n-Nitrosodiphenylamine	9.10	169	1658613	129.58040 ppb	99
68) 1,2-Diphenylhydrazine	9.13	77	1349001	66.56860 ppb	99
69) 4-Bromophenyl phenyl ether	9.51	248	319227	65.09373 ppb	95
70) Hexachlorobenzene	9.59	284	327981	62.78386 ppb	97
71) Atrazine	9.73	200	151588	29.56569 ppb	96
72) Pentachlorophenol	9.84	266	138587	71.04943 ppb	96
73) Phenanthrene	10.06	178	1487228	57.72740 ppb	99
74) Anthracene	10.12	178	1508389	56.29567 ppb	98
75) Carbazol	10.32	167	1347464	56.64305 ppb	100
76) Di-n-butylphthalate	10.73	149	1763308	55.36837 ppb	100
77) Fluoranthene	11.44	202	1636819	58.13481 ppb	100
79) Benzidine	11.61	184	608980	62.27482 ppb	98
80) Pyrene	11.70	202	1793793	60.84019 ppb	99
82) Butyl benzylphthalate	12.47	149	829390	56.17205 ppb	99
83) 3,3'-Dichlorobenzidine	13.08	252	531065	58.57715 ppb	98
84) Benz (a) anthracene	13.10	228	1585364	56.67243 ppb	100
85) Bis (2-ethylhexyl) phthala	13.13	149	1244971	59.74973 ppb	99
86) Chrysene	13.14	228	1666038	61.95439 ppb	99
87) Di-n-octylphthalate	13.85	149	2024092	54.81901 ppb	99
89) Benzo (b) fluoranthene	14.29	252	1616583	46.23147 ppb	100
90) Benzo (k) fluoranthene	14.32	252	1852486	55.40589 ppb	99
91) Benzo (a) pyrene	14.68	252	1766595	53.64641 ppb	99
92) Indeno (1,2,3-cd) pyrene	16.31	276	1712128	45.69210 ppb	98
93) Dibenz (a,h) anthracene	16.32	278	1422360	44.61658 ppb	99
94) Benzo (g,h,i) perylene	16.76	276	1382485	43.62128 ppb	99

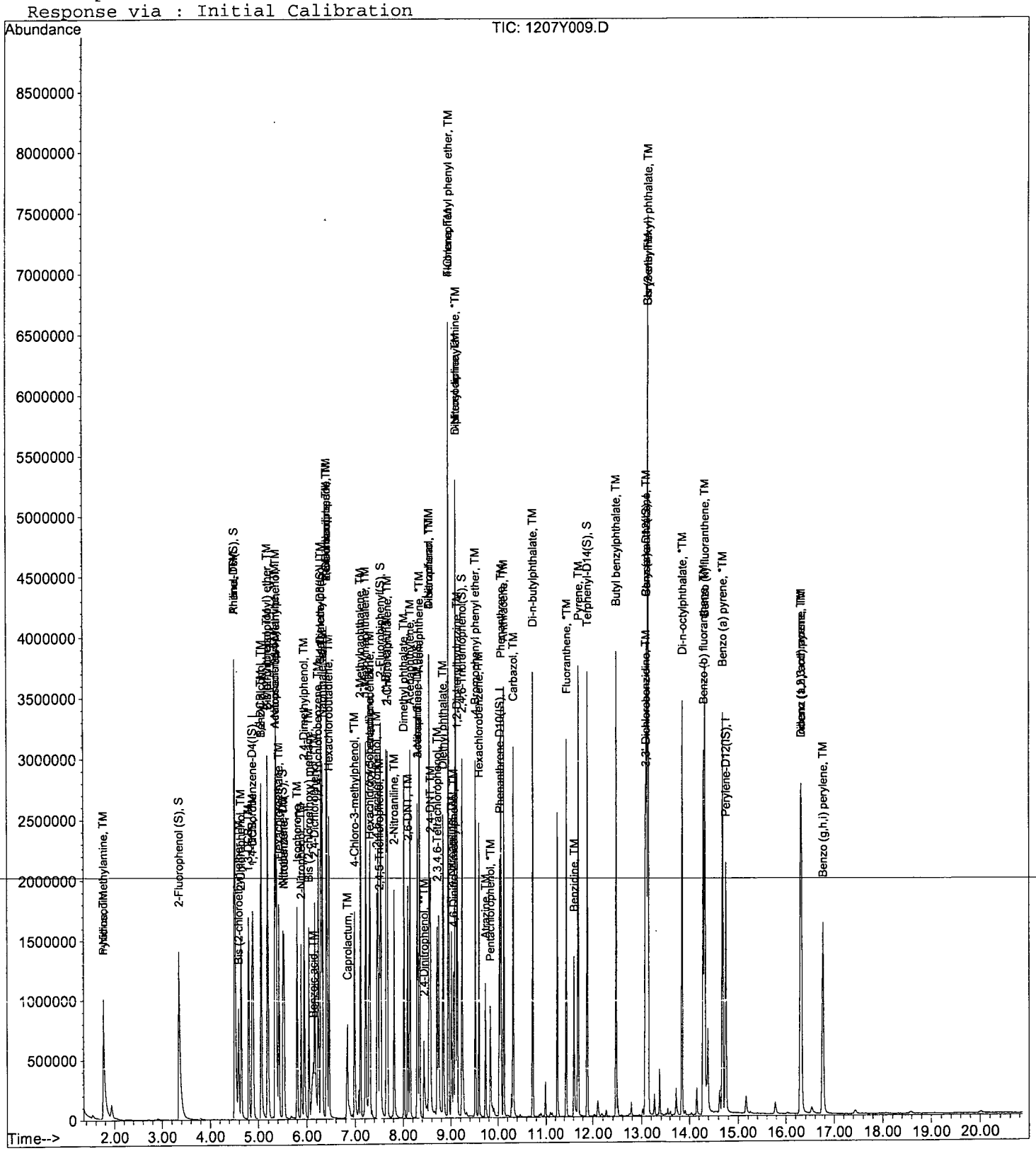
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y009.D Vial: 9
Acq On : 7 Dec 16 12:32 Operator: MA
Sample : 60ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



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Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y010.D Vial: 10
Acq On : 7 Dec 16 13:02 Operator: MA
Sample : 80ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	195710	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.30	136	859926	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	527101	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	1005123	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.11	240	912863	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.75	264	909856	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.35	112	1083940	174.97924 ppb	0.00
Spiked Amount 200.000			Recovery =	87.490%	
5) Phenol-D6 (S)	4.51	99	1335540	155.85741 ppb	0.00
Spiked Amount 200.000			Recovery =	77.929%	
21) Nitrobenzene-D5(S)	5.51	82	643499	71.72142 ppb	0.00
Spiked Amount 100.000			Recovery =	71.721%	
45) 2-Fluorobiphenyl(S)	7.54	172	1210171	72.30179 ppb	0.00
Spiked Amount 100.000			Recovery =	72.302%	
63) 2,4,6-Tribromophenol(S)	9.24	330	416825	161.03215 ppb	0.00
Spiked Amount 200.000			Recovery =	80.516%	
81) Terphenyl-D14(S)	11.89	244	1546385	74.73349 ppb	0.00
Spiked Amount 100.000			Recovery =	74.733%	
Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.75	42	322164	70.21171 ppb	97
3) Pyridine	1.76	79	734964	74.97926 ppb	96
6) Phenol	4.53	94	791696	81.45777 ppb	83
7) Aniline	4.52	66	776371	81.12603 ppb	97
8) Bis (2-chloroethyl) ether	4.59	63	355760	81.43836 ppb	95
9) 2-Chlorophenol	4.65	128	615384	81.66867 ppb	98
10) 1,3-DCB	4.81	146	614066	75.19723 ppb	98
11) 1,4-DCB	4.89	146	652039	77.92005 ppb	98
12) Benzyl alcohol	5.06	108	348718	82.73108 ppb	90
13) 1,2-DCB	5.06	146	592989	76.04278 ppb	98
14) 2-Methylphenol	5.20	107	423761	74.16070 ppb	97
15) Bis (2-chloroisopropyl) et	5.19	45	634640	72.53922 ppb	96
16) Acetophenone	5.34	105	792534	74.41484 ppb	97
17) 3&4-Methylphenol	5.37	107	1142368	151.12477 ppb	98
18) n-Nitrosodi-n-propylamine	5.35	70	410995	74.39769 ppb	97
19) Hexachloroethane	5.42	117	261628	75.38363 ppb	97
22) Nitrobenzene	5.53	77	676884	73.74296 ppb	93
23) Isophorone	5.80	82	1089807	72.01642 ppb	95
24) 2-Nitrophenol	5.88	139	344463	78.82155 ppb	97
25) 2,4-Dimethylphenol	5.95	122	565844	83.06243 ppb	98
26) Benzoic acid	6.15	105	443247	81.69217 ppb	95
27) Bis (2-chloroethoxy) metha	6.05	93	679127	83.93205 ppb	98
28) 2,4-Dichlorophenol	6.17	162	547229	83.39561 ppb	100
29) 1,2,4-Trichlorobenzene	6.24	180	576211	79.49798 ppb	99
30) 3,4-Dimethylphenol	6.29	107	820634	75.54077 ppb	99
31) Naphthalene	6.33	128	1762100	77.83370 ppb	99
32) 4-Chloroaniline	6.41	127	626144	77.94493 ppb	93
33) 2,6-Dichlorophenol	6.41	162	470298	74.23545 ppb	98
34) Hexachloropropene	6.42	213	458828	79.56940 ppb	98
35) Hexachlorobutadiene	6.47	225	341554	73.88292 ppb	97
36) Caprolactum	6.85	55	263295	77.01327 ppb	97
37) 4-Chloro-3-methylphenol	6.99	107	569393	76.03086 ppb	86

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y010.D
Acq On : 7 Dec 16 13:02
Sample : 80ug/ml SVOC 12/06/16
Misc :

Vial: 10
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38) 2-Methylnaphthalene	7.12	142	1107600	73.28275 ppb		99
39) 1-Methylnaphthalene	7.23	142	1101455	75.97821 ppb		100
41) Hexachlorocyclopentadiene	7.29	237	283877	81.78811 ppb		98
42) 1,2,4,5-Tetrachlorobenzene	7.31	216	543057	75.73693 ppb		97
43) 2,4,6-Trichlorophenol	7.46	196	352380	74.06038 ppb		96
44) 2,4,5-Trichlorophenol	7.52	196	364305	72.30607 ppb		98
46) 1,1'-Biphenyl	7.66	154	1431535	71.65801 ppb		99
47) 2-Chloronaphthalene	7.67	162	1099952	69.88911 ppb		96
48) 2-Nitroaniline	7.81	65	409925	73.35725 ppb		87
49) Dimethyl phthalate	8.03	163	1345976	69.85672 ppb		98
50) 2,6-DNT	8.10	165	312732	72.93022 ppb	#	73
51) Acenaphthylene	8.15	152	1738197	71.04441 ppb		100
52) 3-Nitroaniline	8.30	138	350245	78.89239 ppb		86
53) Acenaphthene	8.35	154	1111537	74.17946 ppb		99
54) 2,4-Dinitrophenol	8.44	184	218209	93.07907 ppb		96
55) 4-Nitrophenol	8.54	65	306442	78.35915 ppb		97
56) Dibenzofuran	8.55	168	1632194	74.70485 ppb		94
57) 2,4-DNT	8.57	165	451681	74.51608 ppb	#	80
58) 2,3,4,6-Tetrachlorophenol	8.71	232	315865	80.56372 ppb		96
59) Diethyl phthalate	8.84	149	1405142	71.82968 ppb		99
60) 4-Chlorophenyl phenyl ethe	8.96	204	628797	70.71859 ppb		81
61) Fluorene	8.95	166	1287251	71.52024 ppb		98
62) 4-Nitroaniline	9.02	138	354043	83.72308 ppb		96
65) 4,6-Dinitro-2-methylphenol	9.06	198	328902	93.07921 ppb	#	68
66) Diphenyl amine	9.10	169	2177827	158.05783 ppb		99
67) n-Nitrosodiphenylamine	9.10	169	2177827	158.05783 ppb		99
68) 1,2-Diphenylhydrazine	9.14	77	1790205	82.06506 ppb	#	89
69) 4-Bromophenyl phenyl ether	9.52	248	376085	71.24001 ppb	#	81
70) Hexachlorobenzene	9.60	284	403389	71.73345 ppb	#	79
71) Atrazine	9.73	200	197787	35.83598 ppb		99
72) Pentachlorophenol	9.84	266	222525	97.90203 ppb		97
73) Phenanthrene	10.06	178	2029194	73.16888 ppb		99
74) Anthracene	10.12	178	2073870	71.90210 ppb		99
75) Carbazol	10.32	167	1832065	71.54326 ppb		97
76) Di-n-butylphthalate	10.73	149	2372548	69.20651 ppb		99
77) Fluoranthene	11.44	202	2349024	77.50352 ppb		99
79) Benzidine	11.61	184	843755	83.61455 ppb		99
80) Pyrene	11.70	202	2273483	74.72502 ppb		99
82) Butyl benzylphthalate	12.46	149	1147875	75.33766 ppb		93
83) 3,3'-Dichlorobenzidine	13.08	252	711820	76.08636 ppb		99
84) Benz (a) anthracene	13.10	228	2207148	76.45930 ppb		99
85) Bis (2-ethylhexyl) phthala	13.13	149	1603119	74.55873 ppb		98
86) Chrysene	13.14	228	2085134	75.14105 ppb		99
87) Di-n-octylphthalate	13.85	149	2762190	72.49541 ppb		96
89) Benzo (b) fluoranthene	14.29	252	2598169	85.15963 ppb		98
90) Benzo (k) fluoranthene	14.33	252	2204360	75.56317 ppb		98
91) Benzo (a) pyrene	14.69	252	2169513	75.50794 ppb		99
92) Indeno (1,2,3-cd) pyrene	16.31	276	2538105	77.63207 ppb		98
93) Dibenz (a,h) anthracene	16.34	278	2157371	77.56008 ppb		98
94) Benzo (g,h,i) perylene	16.77	276	1984638	71.77049 ppb		100

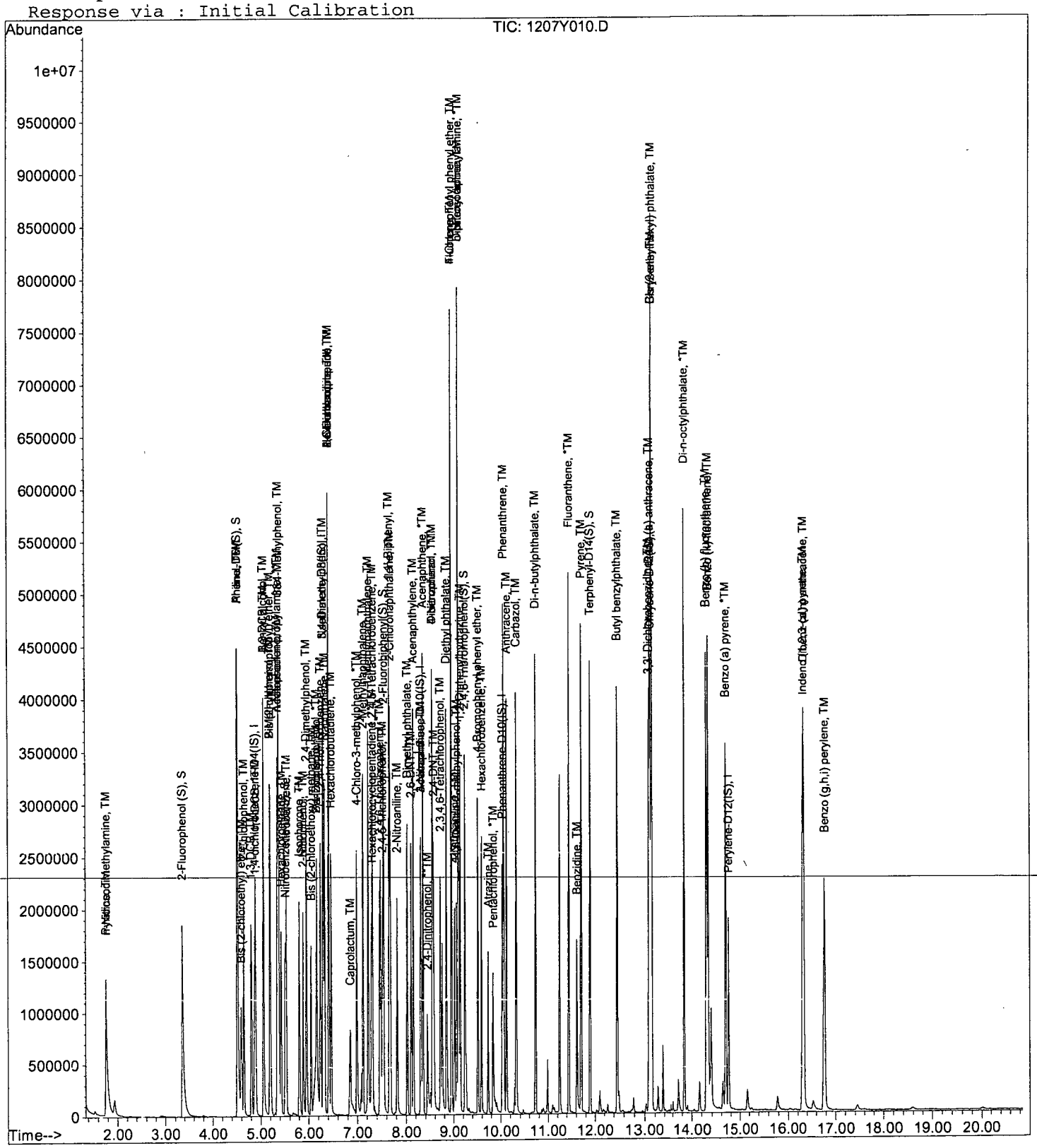
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y010.D Vial: 10
Acq On : 7 Dec 16 13:02 Operator: MA
Sample : 80ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



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Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y011.D Vial: 11
Acq On : 7 Dec 16 13:32 Operator: MA
Sample : 100ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	214746	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.30	136	801273	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.31	164	479807	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.03	188	1038349	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.11	240	897961	40.00000 ppb		0.00
88) Perylene-D12(IS)	14.76	264	1012967	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.36	112	1442400	212.20467 ppb		0.00
Spiked Amount 200.000			Recovery	= 106.103%		
5) Phenol-D6 (S)	4.52	99	1755614	186.71857 ppb		0.00
Spiked Amount 200.000			Recovery	= 93.360%		
21) Nitrobenzene-D5(S)	5.51	82	880245	105.28952 ppb		0.00
Spiked Amount 100.000			Recovery	= 105.290%		
45) 2-Fluorobiphenyl(S)	7.54	172	1444098	94.78208 ppb		0.00
Spiked Amount 100.000			Recovery	= 94.782%		
63) 2,4,6-Tribromophenol(S)	9.24	330	537159	227.97590 ppb		0.00
Spiked Amount 200.000			Recovery	= 113.988%		
81) Terphenyl-D14(S)	11.90	244	1906266	93.65464 ppb		0.00
Spiked Amount 100.000			Recovery	= 93.655%		
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.75	42	427152	84.84044 ppb		98
3) Pyridine	1.76	79	954145	88.71098 ppb		96
6) Phenol	4.53	94	1029962	96.57911 ppb		91
7) Aniline	4.53	66	1005037	95.71079 ppb	#	76
8) Bis (2-chloroethyl) ether	4.59	63	462246	96.43463 ppb		99
9) 2-Chlorophenol	4.65	128	814431	98.50346 ppb		96
10) 1,3-DCB	4.81	146	851310	95.00850 ppb		98
11) 1,4-DCB	4.89	146	861705	93.84739 ppb		99
12) Benzyl alcohol	5.06	108	474310	102.55209 ppb		89
13) 1,2-DCB	5.06	146	785684	91.82209 ppb		98
14) 2-Methylphenol	5.20	107	595539	94.98412 ppb		96
15) Bis (2-chloroisopropyl) et	5.19	45	856467	89.21626 ppb		85
16) Acetophenone	5.34	105	1088689	93.16085 ppb		99
17) 3&4-Methylphenol	5.38	107	1562005	188.32154 ppb		92
18) n-Nitrosodi-n-propylamine	5.35	70	569115	93.88817 ppb		99
19) Hexachloroethane	5.43	117	354007	92.95925 ppb	#	76
22) Nitrobenzene	5.53	77	903147	105.59548 ppb		97
23) Isophorone	5.81	82	1523574	108.05033 ppb		96
24) 2-Nitrophenol	5.88	139	468219	114.98256 ppb		95
25) 2,4-Dimethylphenol	5.96	122	701715	110.54758 ppb		99
26) Benzoic acid	6.17	105	531913	109.09798 ppb		91
27) Bis (2-chloroethoxy) metha	6.05	93	810611	107.51520 ppb		99
28) 2,4-Dichlorophenol	6.17	162	626111	102.40142 ppb		99
29) 1,2,4-Trichlorobenzene	6.24	180	674426	99.85951 ppb		99
30) 3,4-Dimethylphenol	6.29	107	982967	97.10719 ppb		97
31) Naphthalene	6.33	128	2092381	99.18785 ppb		100
32) 4-Chloroaniline	6.41	127	726261	97.02573 ppb		97
33) 2,6-Dichlorophenol	6.41	162	585319	99.15426 ppb		97
34) Hexachloropropene	6.42	213	564663	105.09113 ppb		99
35) Hexachlorobutadiene	6.47	225	420352	97.58395 ppb		96
36) Caprolactum	6.87	55	323697	101.61135 ppb		95
37) 4-Chloro-3-methylphenol	6.99	107	718886	103.01925 ppb		84

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y161207\1207Y011.D Vial: 11
Acq On : 7 Dec 16 13:32 Operator: MA
Sample : 100ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.12	142	1400630	99.45413	ppb		98
39)	1-Methylnaphthalene	7.23	142	1395356	103.29704	ppb		99
41)	Hexachlorocyclopentadiene	7.29	237	337941	98.72624	ppb		99
42)	1,2,4,5-Tetrachlorobenzene	7.31	216	637512	97.67376	ppb		98
43)	2,4,6-Trichlorophenol	7.46	196	430600	99.42051	ppb		98
44)	2,4,5-Trichlorophenol	7.52	196	452384	98.63798	ppb		89
46)	1,1'-Biphenyl	7.66	154	1743421	95.87212	ppb		98
47)	2-Chloronaphthalene	7.67	162	1364913	95.27260	ppb		95
48)	2-Nitroaniline	7.82	65	501195	98.53093	ppb		96
49)	Dimethyl phthalate	8.03	163	1691646	96.45119	ppb		99
50)	2,6-DNT	8.11	165	428985	109.90174	ppb		96
51)	Acenaphthylene	8.15	152	2176158	97.71215	ppb		100
52)	3-Nitroaniline	8.31	138	417728	103.36750	ppb	#	99
53)	Acenaphthene	8.35	154	1365612	100.11850	ppb		99
54)	2,4-Dinitrophenol	8.44	184	244053	112.65730	ppb		86
55)	4-Nitrophenol	8.54	65	381862	104.77768	ppb		94
56)	Dibenzofuran	8.56	168	2009957	101.06274	ppb		97
57)	2,4-DNT	8.58	165	559804	101.45686	ppb		98
58)	2,3,4,6-Tetrachlorophenol	8.71	232	407530	114.18916	ppb		93
59)	Diethyl phthalate	8.85	149	1833935	102.98996	ppb		97
60)	4-Chlorophenyl phenyl ethe	8.96	204	822846	101.66441	ppb		81
61)	Fluorene	8.96	166	1670986	101.99193	ppb		98
62)	4-Nitroaniline	9.03	138	400399	104.01822	ppb		94
65)	4,6-Dinitro-2-methylphenol	9.07	198	386581	105.90161	ppb	#	83
66)	Diphenyl amine	9.11	169	2820080	198.12073	ppb		100
67)	n-Nitrosodiphenylamine	9.11	169	2820080	198.12073	ppb		100
68)	1,2-Diphenylhydrazine	9.14	77	2276128	101.00156	ppb		96
69)	4-Bromophenyl phenyl ether	9.52	248	489978	89.84427	ppb		91
70)	Hexachlorobenzene	9.60	284	507014	87.27573	ppb		86
71)	Atrazine	9.73	200	255247	44.76701	ppb		97
72)	Pentachlorophenol	9.84	266	289057	117.11640	ppb		96
73)	Phenanthrene	10.06	178	2631951	91.86635	ppb		99
74)	Anthracene	10.12	178	2699734	90.60598	ppb		100
75)	Carbazol	10.33	167	2292694	86.66621	ppb		99
76)	Di-n-butylphthalate	10.74	149	3048385	86.07511	ppb		99
77)	Fluoranthene	11.44	202	3022326	96.52752	ppb	#	98
79)	Benzidine	11.62	184	1093324	110.14442	ppb		98
80)	Pyrene	11.71	202	3079365	102.89248	ppb		99
82)	Butyl benzylphthalate	12.47	149	1430703	95.45863	ppb		88
83)	3,3'-Dichlorobenzidine	13.08	252	910729	98.96324	ppb	#	97
84)	Benz (a) anthracene	13.10	228	2808833	98.91745	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.13	149	2022285	95.61439	ppb		96
86)	Chrysene	13.14	228	2799507	102.55881	ppb		98
87)	Di-n-octylphthalate	13.85	149	3529346	94.16713	ppb	#	93
89)	Benzo (b) fluoranthene	14.30	252	3038345	89.45009	ppb		99
90)	Benzo (k) fluoranthene	14.33	252	2973702	91.55930	ppb		100
91)	Benzo (a) pyrene	14.69	252	2841755	88.83710	ppb		97
92)	Indeno (1,2,3-cd) pyrene	16.31	276	2782713	76.44997	ppb		95
93)	Dibenz (a,h) anthracene	16.34	278	2299501	74.25478	ppb		97
94)	Benzo (g,h,i) perylene	16.78	276	2235653	72.61835	ppb		99

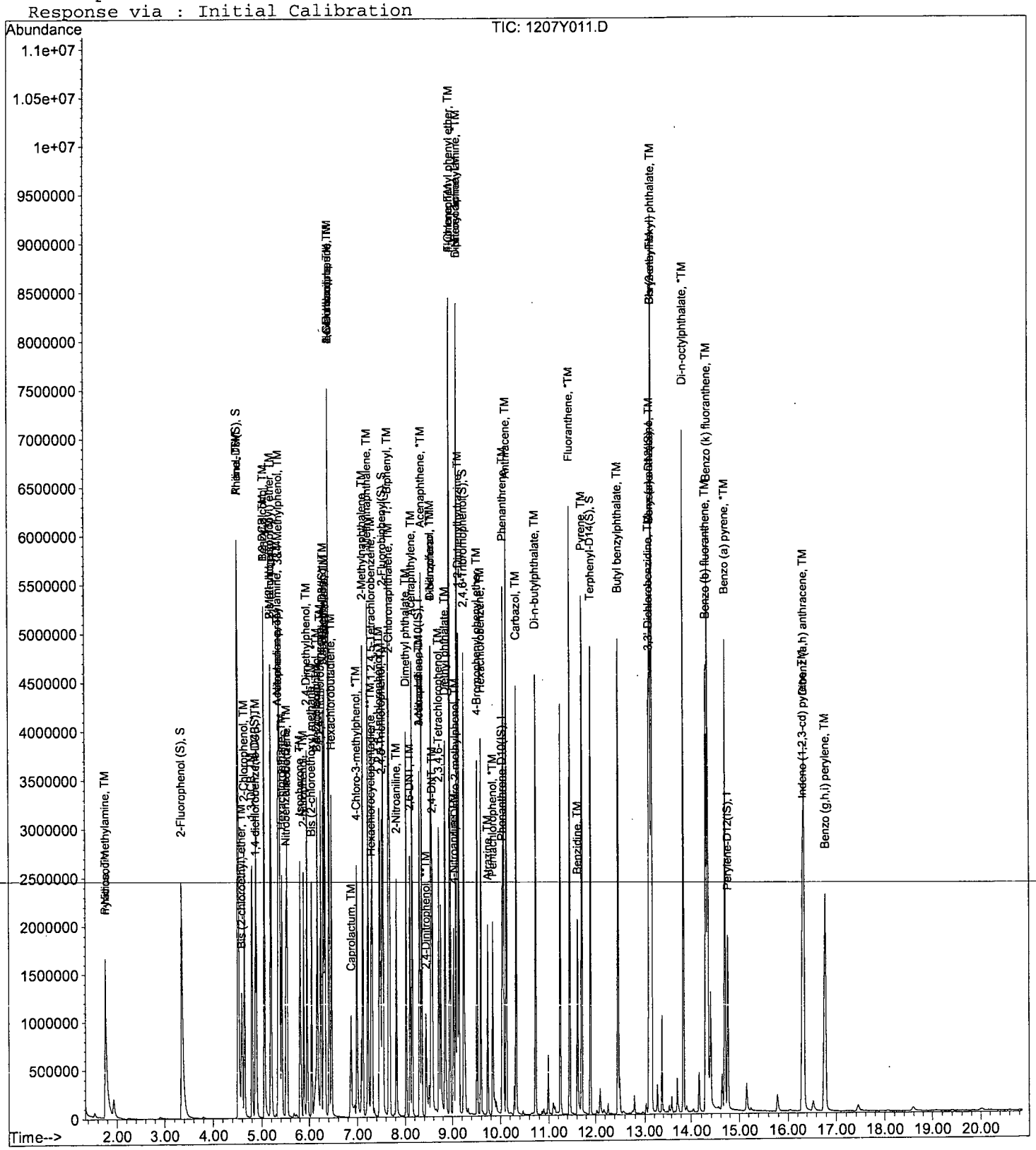
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y011.D Vial: 11
Acq On : 7 Dec 16 13:32 Operator: MA
Sample : 100ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 7 Dec 16 14:01
Instrument: Yoda
Initial Cal. Date: 12/07/16
Data File: 1207Y012.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	n-Nitrosodimethylamine	0.7942	0.8605	8.3	TM	
2	TM	Pyridine	1.794	2.065	15	TM	
3	*TM	Phenol	1.974	1.961	0.64	*TM	
4	TM	Aniline	1.868	1.717	8.1	TM	
5	TM	Bis (2-chloroethyl) ether	0.8648	0.9372	8.4	TM	
6	TM	2-Chlorophenol	1.576	1.492	5.4	TM	
7	TM	1,3-DCB	1.630	1.713	5.1	TM	
8	*TM	1,4-DCB	1.679	1.836	9.3	*TM	
9	TM	Benzyl alcohol	0.8717	0.9544	9.5	TM	
10	TM	1,2-DCB	1.537	1.648	7.2	TM	
11	TM	2-Methylphenol	1.120	1.183	5.6	TM	
12	TM	Bis (2-chloroisopropyl) ether	1.723	1.964	14	TM	
13	TM	Acetophenone	2.044	2.282	12	TM	
14	TM	3&4-Methylphenol	1.484	1.588	7.0	TM	
15	**TM	n-Nitrosodi-n-propylamine	1.052	1.111	5.6	**TM	
16	TM	Hexachloroethane	0.6713	0.7583	13	TM	
17	TM	Nitrobenzene	0.4083	0.4146	1.5	TM	
18	TM	Isophorone	0.6762	0.7401	9.5	TM	
19	*TM	2-Nitrophenol	0.2038	0.1897	6.9	*TM	
20	TM	2,4-Dimethylphenol	0.3231	0.2928	9.4	TM	
21	TML	Benzoic acid	0.2159	0.3029	40	TML	19
22	TM	Bis (2-chloroethoxy) methane	0.3856	0.3755	2.6	TM	
23	*TM	2,4-Dichlorophenol	0.3079	0.3092	0.41	*TM	
24	TM	1,2,4-Trichlorobenzene	0.3349	0.3788	13	TM	
25	TM	3,4-Dimethylphenol	0.4947	0.4722	4.5	TM	
26	TM	Naphthalene	1.049	1.030	1.9	TM	
27	TM	4-Chloroaniline	0.3882	0.3699	4.7	TM	
28	TM	2,6-Dichlorophenol	0.2970	0.2844	4.3	TM	
29	TM	Hexachloropropene	0.2678	0.2625	2.0	TM	
30	*TM	Hexachlorobutadiene	0.2134	0.2282	7.0	*TM	
31	TM	Caprolactum	0.1543	0.1430	7.3	TM	
32	*TM	4-Chloro-3-methylphenol	0.3401	0.3273	3.8	*TM	
33	TM	2-Methylnaphthalene	0.6856	0.6921	0.95	TM	
34	TM	1-Methylnaphthalene	0.6763	0.6628	2.0	TM	
35	**TMQ	Hexachlorocyclopentadiene	0.1853	0.2606	41	**TMQ	12
36	TM	1,2,4,5-Tetrachlorobenzene	0.5436	0.5813	6.9	TM	
37	*TM	2,4,6-Trichlorophenol	0.3508	0.3628	3.4	*TM	
38	TM	2,4,5-Trichlorophenol	0.3829	0.4030	5.3	TM	
39	TM	1,1'-Biphenyl	1.499	1.521	1.5	TM	
40	TM	2-Chloronaphthalene	1.159	1.302	12	TM	
		Average			8.2		

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 7 Dec 16 14:01
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y012.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	2-Nitroaniline	0.3982	0.4094	2.8	TM	
42	TM	Dimethyl phthalate	1.391	1.370	1.6	TM	
43	TM	2,6-DNT	0.3141	0.3323	5.8	TM	
44	TM	Acenaphthylene	1.826	1.754	3.9	TM	
45	TM	3-Nitroaniline	0.3430	0.3329	2.9	TM	
46	*TM	Acenaphthene	1.156	1.094	5.3	*TM	
47	**TMQ	2,4-Dinitrophenol	0.1593	0.1353	15	**TMQ	15
48	**TML	4-Nitrophenol	0.2439	0.2731	12	**TML	5.3
49	TM	Dibenzofuran	1.639	1.588	3.1	TM	
50	TM	2,4-DNT	0.4436	0.4519	1.9	TM	
51	TM	2,3,4,6-Tetrachlorophenol	0.3114	0.3085	0.94	TM	
52	TM	Diethyl phthalate	1.432	1.360	5.0	TM	
53	TM	4-Chlorophenyl phenyl ether	0.6394	0.6265	2.0	TM	
54	TM	Fluorene	1.324	1.241	6.3	TM	
55	TM	4-Nitroaniline	0.3249	0.3379	4.0	TM	
56	TM	4,6-Dinitro-2-methylphenol	0.1486	0.1339	9.9	TM	
57	TM	Diphenyl amine	0.5706	0.5203	8.8	TM	
58	*TM	n-Nitrosodiphenylamine	0.5706	0.5203	8.8	*TM	
59	TM	1,2-Diphenylhydrazine	0.8211	0.7495	8.7	TM	
60	TM	4-Bromophenyl phenyl ether	0.2072	0.2226	7.4	TM	
61	TM	Hexachlorobenzene	0.2130	0.2500	17	TM	
62	TM	Atrazine	0.2062	0.2070	0.41	TM	
63	*TML	Pentachlorophenol	0.0958	0.0912	4.8	*TML	9.9
64	TM	Phenanthrene	1.080	1.064	1.5	TM	
65	TM	Anthracene	1.111	1.042	6.2	TM	
66	TM	Carbazol	1.005	0.8998	11	TM	
67	TM	Di-n-butylphthalate	1.292	1.202	6.9	TM	
68	*TM	Fluoranthene	1.189	1.119	5.8	*TM	
69	TM	Benzidine	0.4531	0.5340	18	TM	
70	TM	Pyrene	1.357	1.408	3.8	TM	
71	TM	Butyl benzylphthalate	0.6517	0.6327	2.9	TM	
72	TM	3,3'-Dichlorobenzidine	0.4273	0.4953	16	TM	
73	TM	Benz (a) anthracene	1.249	1.200	3.9	TM	
74	TM	Bis (2-ethylhexyl) phthalate	0.9136	0.9271	1.5	TM	
75	TM	Chrysene	1.213	1.146	5.5	TM	
76	*TM	Di-n-octylphthalate	1.614	1.629	0.92	*TM	
77	TM	Benzo (b) fluoranthene	1.250	1.211	3.2	TM	
78	TM	Benzo (k) fluoranthene	1.189	1.125	5.4	TM	
79	*TM	Benzo (a) pyrene	1.168	1.100	5.9	*TM	
80	TM	Indeno (1,2,3-cd) pyrene	1.293	1.302	0.66	TM	
		Average			5.9		

0
0

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 7 Dec 16 14:01
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y012.D

		Compound	MEAN	CCRF	%D	%Drift	
81	TM	Dibenz (a,h) anthracene	1.091	1.084	0.59	TM	
82	TM	Benzo (g,h,i) perylene	1.161	1.030	11	TM	
83							
84							
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118							
119							
120							
		Average			5.8		

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y012.D Vial: 12
Acq On : 7 Dec 16 14:01 Operator: MA
Sample : 2ND SRC SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 14:56 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	191057	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.30	136	871568	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	523606	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	1016944	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.11	240	899173	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.75	264	937926	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	0.00	112	0	0.00000 ppb	
Spiked Amount 200.000			Recovery =	0.000%	
5) Phenol-D6 (S)	0.00	99	0	0.00000 ppb	
Spiked Amount 200.000			Recovery =	0.000%	
21) Nitrobenzene-D5(S)	5.42	82	51167	5.79164 ppb	-0.08
Spiked Amount 100.000			Recovery =	5.792%	
45) 2-Fluorobiphenyl(S)	7.54	172	1678	0.10166 ppb	0.00
Spiked Amount 100.000			Recovery =	0.102%	
63) 2,4,6-Tribromophenol(S)	0.00	330	0	0.00000 ppb	
Spiked Amount 200.000			Recovery =	0.000%	
81) Terphenyl-D14(S)	11.90	244	2267	0.11150 ppb	0.01
Spiked Amount 100.000			Recovery =	0.111%	

Algorithm = $\frac{1121605 \times 1 \times 40}{871568 \times 1.049} = 49.07$ HA 12/8/16

Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.75	42	205505	54.17418 ppb	99
3) Pyridine	1.76	79	493077	57.53832 ppb	100
6) Phenol	4.52	94	468384	49.67907 ppb	97
7) Aniline	4.52	66	410130	45.96281 ppb	94
8) Bis (2-chloroethyl) ether	4.58	63	223817	54.18477 ppb	97
9) 2-Chlorophenol	4.65	128	356278	47.32243 ppb	98
10) 1,3-DCB	4.80	146	409122	52.55606 ppb	98
11) 1,4-DCB	4.89	146	438492	54.66182 ppb	100
12) Benzyl alcohol	5.05	108	227935	54.74642 ppb	89
13) 1,2-DCB	5.06	146	393642	53.62112 ppb	98
14) 2-Methylphenol	5.19	107	282490	52.81375 ppb	99
15) Bis (2-chloroisopropyl) et	5.19	45	468942	56.98498 ppb	99
16) Acetophenone	5.34	105	544879	55.81351 ppb	99
17) 3&4-Methylphenol	5.36	107	758574	107.00501 ppb	99
18) n-Nitrosodi-n-propylamine	5.35	70	265350	52.78586 ppb	98
19) Hexachloroethane	5.42	117	181096	56.48025 ppb	95
22) Nitrobenzene	5.52	77	451653	50.77125 ppb	99
23) Isophorone	5.79	82	806347	54.72642 ppb	92
~~24) 2-Nitrophenol~~	~~5.88~~	~~139~~	~~206638~~	~~46.54256 ppb~~	~~97~~
25) 2,4-Dimethylphenol	5.95	122	319047	45.32287 ppb	99
26) Benzoic acid	6.13	105	329992	59.40511 ppb	98
27) Bis (2-chloroethoxy) metha	6.04	93	409113	48.69541 ppb	99
28) 2,4-Dichlorophenol	6.16	162	336842	50.20680 ppb	95
29) 1,2,4-Trichlorobenzene	6.24	180	412682	56.55773 ppb	97
30) 3,4-Dimethylphenol	6.29	107	514459	47.73195 ppb	99
31) Naphthalene	6.32	128	1121605	49.06908 ppb	99
32) 4-Chloroaniline	6.40	127	402969	47.64010 ppb	98
33) 2,6-Dichlorophenol	6.41	162	309823	47.86782 ppb	99
34) Hexachloropropene	6.42	213	285981	49.00147 ppb	99
35) Hexachlorobutadiene	6.46	225	248647	53.48708 ppb	98
36) Caprolactum	6.83	55	155831	46.33822 ppb	95
37) 4-Chloro-3-methylphenol	6.98	107	356630	48.12038 ppb	86

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y012.D Vial: 12
Acq On : 7 Dec 16 14:01 Operator: MA
Sample : 2ND SRC SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 14:56 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38) 2-Methylnaphthalene	7.11	142	754038	50.47743	ppb		99
39) 1-Methylnaphthalene	7.22	142	722080	48.99775	ppb		100
41) Hexachlorocyclopentadiene	7.29	237	170588	55.81613	ppb		99
42) 1,2,4,5-Tetrachlorobenzene	7.31	216	380472	53.46579	ppb		99
43) 2,4,6-Trichlorophenol	7.45	196	237475	51.71288	ppb		98
44) 2,4,5-Trichlorophenol	7.51	196	263784	52.63506	ppb		91
46) 1,1'-Biphenyl	7.65	154	995419	50.73149	ppb	#	98
47) 2-Chloronaphthalene	7.68	162	852397	56.20556	ppb		98
48) 2-Nitroaniline	7.81	65	267928	51.40520	ppb		97
49) Dimethyl phthalate	8.02	163	896431	49.21645	ppb		100
50) 2,6-DNT	8.10	165	217507	52.89516	ppb		97
51) Acenaphthylene	8.15	152	1148034	48.03874	ppb		99
52) 3-Nitroaniline	8.30	138	217900	48.53466	ppb		96
53) Acenaphthene	8.34	154	716245	47.33371	ppb		98
54) 2,4-Dinitrophenol	8.44	184	88575	42.42116	ppb		93
55) 4-Nitrophenol	8.54	65	178738	47.34341	ppb		99
56) Dibenzofuran	8.55	168	1039530	48.44636	ppb		100
57) 2,4-DNT	8.58	165	295792	50.93595	ppb		96
58) 2,3,4,6-Tetrachlorophenol	8.71	232	201912	49.52960	ppb		97
59) Diethyl phthalate	8.84	149	890442	47.50284	ppb		99
60) 4-Chlorophenyl phenyl ethe	8.95	204	410071	48.99615	ppb		97
61) Fluorene	8.95	166	811998	46.83909	ppb		99
62) 4-Nitroaniline	9.01	138	221182	52.00204	ppb		99
65) 4,6-Dinitro-2-methylphenol	9.05	198	170147	45.02904	ppb	#	63
66) Diphenyl amine	9.10	169	1322713	91.17623	ppb		99
67) n-Nitrosodiphenylamine	9.10	169	1322713	91.17623	ppb		99
68) 1,2-Diphenylhydrazine	9.13	77	952702	45.63842	ppb		98
69) 4-Bromophenyl phenyl ether	9.51	248	282914	53.71191	ppb		98
70) Hexachlorobenzene	9.59	284	317774	58.69445	ppb		95
71) Atrazine	9.73	200	131578	25.10242	ppb		95
72) Pentachlorophenol	9.84	266	115962	45.03845	ppb		95
73) Phenanthrene	10.06	178	1351927	49.22811	ppb		100
74) Anthracene	10.12	178	1325118	46.92467	ppb		99
75) Carbazol	10.32	167	1143768	44.74849	ppb		100
76) Di-n-butylphthalate	10.73	149	1528545	46.53939	ppb		100
77) Fluoranthene	11.44	202	1422850	47.07737	ppb		100
79) Benzidine	11.61	184	600230m	58.92898	ppb		99
80) Pyrene	11.70	202	1583034	51.91299	ppb		98
82) Butyl benzylphthalate	12.47	149	711172	48.54397	ppb		99
83) 3,3'-Dichlorobenzidine	13.08	252	556753	57.96756	ppb		98
84) Benz (a) anthracene	13.10	228	1348312	48.02891	ppb		100
85) Bis (2-ethylhexyl) phthala	13.13	149	1042054	50.73897	ppb		97
86) Chrysene	13.13	228	1288110	47.23790	ppb		98
87) Di-n-octylphthalate	13.85	149	1830661	50.46239	ppb		99
89) Benzo (b) fluoranthene	14.29	252	1419865	48.42384	ppb		99
90) Benzo (k) fluoranthene	14.32	252	1318653	47.28739	ppb		99
91) Benzo (a) pyrene	14.68	252	1289082	47.06095	ppb		99
92) Indeno (1,2,3-cd) pyrene	16.30	276	1526262	50.33221	ppb		99
93) Dibenz (a,h) anthracene	16.32	278	1271230	49.70488	ppb		99
94) Benzo (g,h,i) perylene	16.76	276	1208044	44.36041	ppb		99

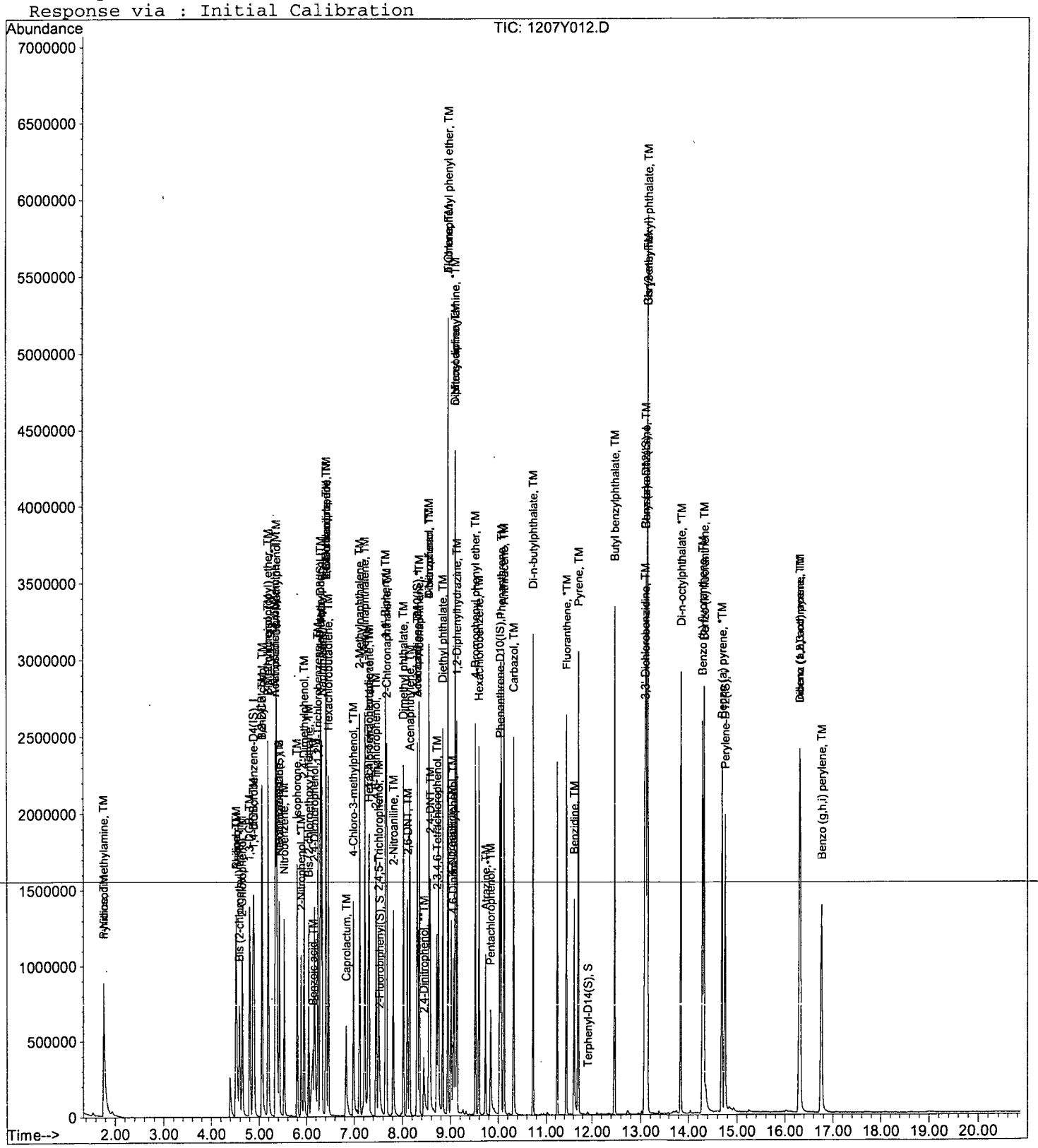
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y012.D Vial: 12
Acq On : 7 Dec 16 14:01 Operator: MA
Sample : 2ND SRC SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 14:56 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration

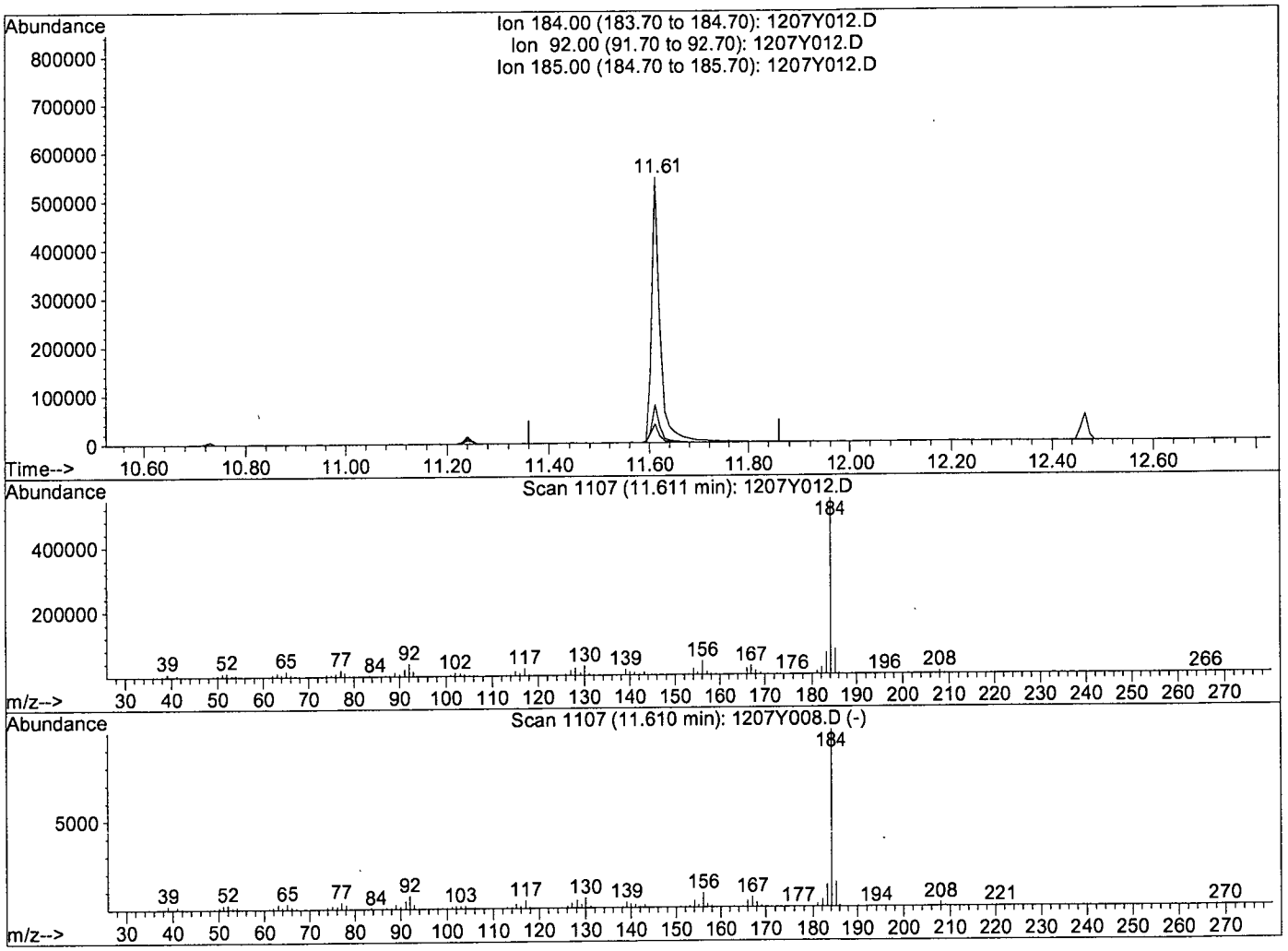


316

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y012.D Vial: 12
Acq On : 7 Dec 16 14:01 Operator: MA
Sample : 2ND SRC SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Dec 7 14:46 2016 Quant Results File: temp.res

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Multiple Level Calibration



TIC: 1207Y012.D

(79) Benzidine (TM)

11.61min 62.5480ppb

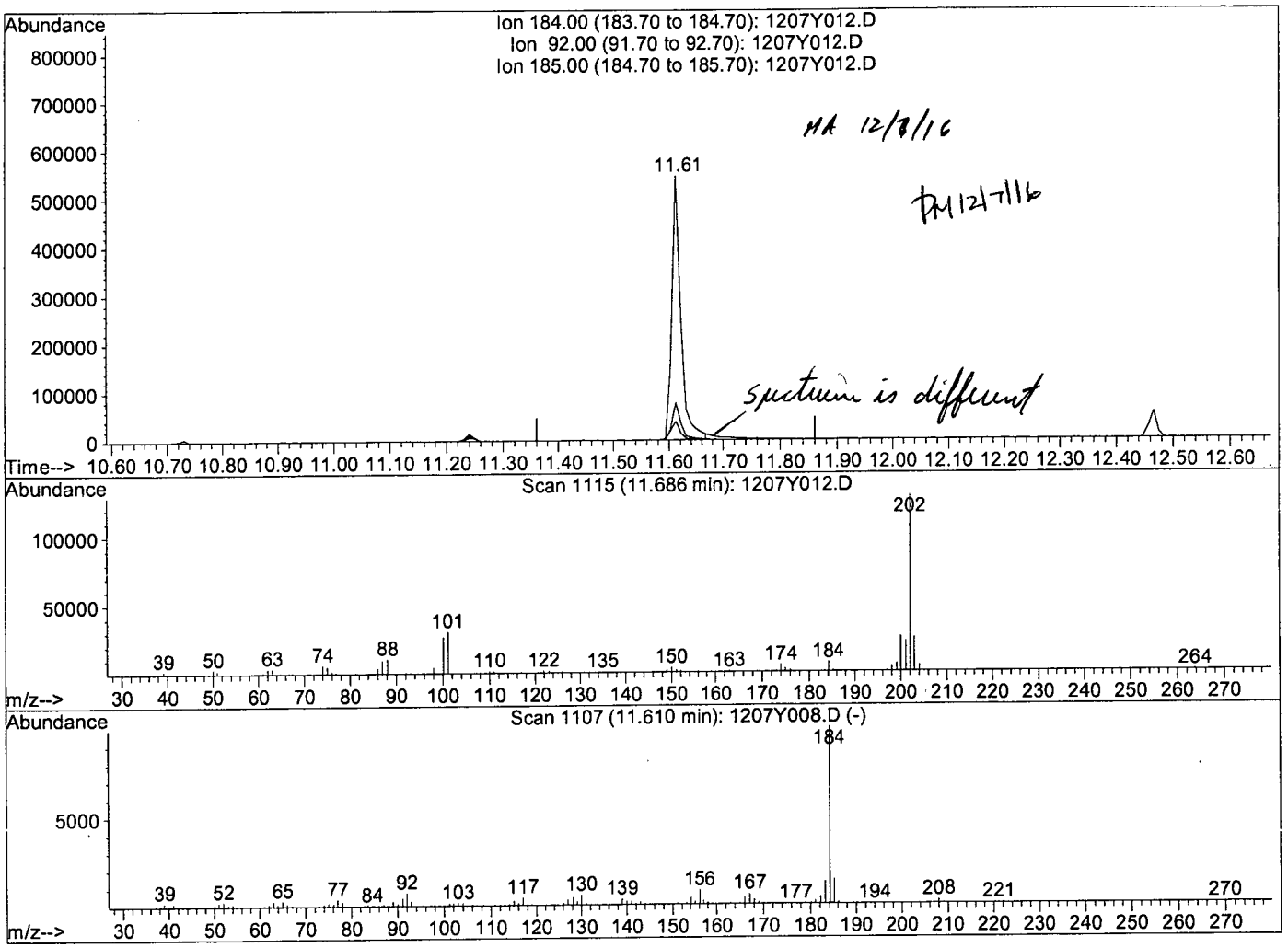
response 637092

Ion	Exp%	Act%
184.00	100	100
92.00	7.20	7.03
185.00	13.80	14.19
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y012.D Vial: 12
Acq On : 7 Dec 16 14:01 Operator: MA
Sample : 2ND SRC SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Dec 7 14:56 2016 Quant Results File: temp.res

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Multiple Level Calibration



TIC: 1207Y012.D

(79) Benzidine (TM)

11.61min 58.9290ppb m

response 600230

Ion	Exp%	Act%
184.00	100	100
92.00	7.20	7.03
185.00	13.80	14.19
0.00	0.00	0.00

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Date Analyzed: 12/16/16

Matrix: Instrument: Yoda

Initial Cal. Date: 12/07/16

Data File: 1207Y161.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	n-Nitrosodimethylamine	0.7942	0.8734	10.0	TM	
3	TM	Pyridine	1.794	1.824	1.6	TM	
4	S	2-Fluorophenol (S)	1.316	1.419	7.9	S	
5	S	Phenol-D6 (S)	1.737	1.765	1.6	S	
6	*TM	Phenol	1.974	2.014	2.0	*TM	
7	TM	Aniline	1.868	1.883	0.77	TM	
8	TM	Bis (2-chloroethyl) ether	0.8648	0.9428	9.0	TM	
9	TM	2-Chlorophenol	1.576	1.558	1.2	TM	
10	TM	1,3-DCB	1.630	1.672	2.6	TM	
11	*TM	1,4-DCB	1.679	1.671	0.53	*TM	
12	TM	Benzyl alcohol	0.8717	0.8950	2.7	TM	
13	TM	1,2-DCB	1.537	1.521	1.0	TM	
14	TM	2-Methylphenol	1.120	1.140	1.8	TM	
15	TM	Bis (2-chloroisopropyl) ether	1.723	1.874	8.8	TM	
16	TM	Acetophenone	2.044	2.066	1.1	TM	
17	TM	3&4-Methylphenol	1.484	1.510	1.7	TM	
18	**TM	n-Nitrosodi-n-propylamine	1.052	1.104	4.9	**TM	
19	TM	Hexachloroethane	0.6713	0.6716	0.05	TM	
20	I	Napthalene-D8(IS)	ISTD			I	
21	S	Nitrobenzene-D5(S)	0.4055	0.4221	4.1	S	
22	TM	Nitrobenzene	0.4083	0.4171	2.2	TM	
23	TM	Isophorone	0.6762	0.6958	2.9	TM	
24	*TM	2-Nitrophenol	0.2038	0.2149	5.5	*TM	
25	TM	2,4-Dimethylphenol	0.3231	0.3216	0.46	TM	
26	TML	Benzoic acid	0.2159	0.2688	25	TML	6.3
27	TM	Bis (2-chloroethoxy) methane	0.3856	0.3999	3.7	TM	
28	*TM	2,4-Dichlorophenol	0.3079	0.3199	3.9	*TM	
29	TM	1,2,4-Trichlorobenzene	0.3349	0.3431	2.5	TM	
30	TM	3,4-Dimethylphenol	0.4947	0.4841	2.1	TM	
31	TM	Naphthalene	1.049	1.079	2.8	TM	
32	TM	4-Chloroaniline	0.3882	0.3829	1.4	TM	
33	TM	2,6-Dichlorophenol	0.2970	0.2893	2.6	TM	
34	TM	Hexachloropropene	0.2678	0.2690	0.42	TM	
35	*TM	Hexachlorobutadiene	0.2134	0.2126	0.36	*TM	
36	TM	Caprolactum	0.1543	0.1666	8.0	TM	
37	*TM	4-Chloro-3-methylphenol	0.3401	0.3416	0.43	*TM	
38	TM	2-Methylnaphthalene	0.6856	0.6886	0.44	TM	
39	TM	1-Methylnaphthalene	0.6763	0.6712	0.77	TM	
40	I	Acenaphthene-D10(IS)	ISTD			I	
		Average			3.5		

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/16/16
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y161.D

		Compound	MEAN	CCRF	%D		%Drift
41	**TMQ	Hexachlorocyclopentadiene	0.1853	0.2214	19	**TMQ	1.4
42	TM	1,2,4,5-Tetrachlorobenzene	0.5436	0.5446	0.17	TM	
43	*TM	2,4,6-Trichlorophenol	0.3508	0.3703	5.6	*TM	
44	TM	2,4,5-Trichlorophenol	0.3829	0.3863	0.91	TM	
45	S	2-Fluorobiphenyl(S)	1.261	1.288	2.1	S	
46	TM	1,1'-Biphenyl	1.499	1.480	1.3	TM	
47	TM	2-Chloronaphthalene	1.159	1.167	0.71	TM	
48	TM	2-Nitroaniline	0.3982	0.4111	3.2	TM	
49	TM	Dimethyl phthalate	1.391	1.396	0.33	TM	
50	TM	2,6-DNT	0.3141	0.3177	1.1	TM	
51	TM	Acenaphthylene	1.826	1.869	2.4	TM	
52	TM	3-Nitroaniline	0.3430	0.3455	0.73	TM	
53	*TM	Acenaphthene	1.156	1.123	2.9	*TM	
54	**TMQ	2,4-Dinitrophenol	0.1593	0.1608	0.96	**TMQ	2.9
55	**TML	4-Nitrophenol	0.2439	0.2767	13	**TML	4.2
56	TM	Dibenzofuran	1.639	1.614	1.6	TM	
57	TM	2,4-DNT	0.4436	0.4443	0.15	TM	
58	TM	2,3,4,6-Tetrachlorophenol	0.3114	0.3087	0.86	TM	
59	TM	Diethyl phthalate	1.432	1.380	3.6	TM	
60	TM	4-Chlorophenyl phenyl ether	0.6394	0.6162	3.6	TM	
61	TM	Fluorene	1.324	1.255	5.3	TM	
62	TM	4-Nitroaniline	0.3249	0.3343	2.9	TM	
63	S	2,4,6-Tribromophenol(S)	0.2006	0.1967	1.9	S	
64	I	Phenanthrene-D10(IS)	ISTD			I	
65	TM	4,6-Dinitro-2-methylphenol	0.1486	0.1567	5.4	TM	
66	TM	Diphenyl amine	0.5706	0.5407	5.2	TM	
67	*TM	n-Nitrosodiphenylamine	0.5706	0.5407	5.2	*TM	
68	TM	1,2-Diphenylhydrazine	0.8211	0.7724	5.9	TM	
69	TM	4-Bromophenyl phenyl ether	0.2072	0.2126	2.6	TM	
70	TM	Hexachlorobenzene	0.2130	0.2188	2.7	TM	
71	TM	Atrazine	0.2062	0.2121	2.9	TM	
72	*TML	Pentachlorophenol	0.0958	0.0963	0.56	*TML	5.5
73	TM	Phenanthrene	1.080	1.071	0.85	TM	
74	TM	Anthracene	1.111	1.131	1.9	TM	
75	TM	Carbazol	1.005	1.007	0.14	TM	
76	TM	Di-n-butylphthalate	1.292	1.290	0.14	TM	
77	*TM	Fluoranthene	1.189	1.200	0.95	*TM	
78	I	Chrysene-D12(IS)	ISTD			I	
79	TM	Benzidine	0.4531	0.4693	3.6	TM	
80	TM	Pyrene	1.357	1.307	3.6	TM	
		Average			3.1		

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/16/16
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y161.D

		Compound	MEAN	CCRF	%D	%Drift	
81	S	Terphenyl-D14(S)	0.9045	0.9082	0.41	S	
82	TM	Butyl benzylphthalate	0.6517	0.6378	2.1	TM	
83	TM	3,3'-Dichlorobenzidine	0.4273	0.4252	0.49	TM	
84	TM	Benz (a) anthracene	1.249	1.208	3.3	TM	
85	TM	Bis (2-ethylhexyl) phthalate	0.9136	0.8635	5.5	TM	
86	TM	Chrysene	1.213	1.183	2.5	TM	
87	*TM	Di-n-octylphthalate	1.614	1.593	1.3	*TM	
88	I	Perylene-D12(IS)	ISTD			I	
89	TM	Benzo (b) fluoranthene	1.250	1.742	39	TM	*NT
90	TM	Benzo (k) fluoranthene	1.189	1.313	10	TM	
91	*TM	Benzo (a) pyrene	1.168	1.506	29	*TM	*NT
92	TM	Indeno (1,2,3-cd) pyrene	1.293	1.619	25	TM	*NT
93	TM	Dibenz (a,h) anthracene	1.091	1.367	25	TM	*NT
94	TM	Benzo (g,h,i) perylene	1.161	1.398	20	TM	
95							
96							
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			12.6		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y161.D Vial: 61
Acq On : 16 Dec 16 11:32 Operator: MA
Sample : 50ug/ml SVOC 12/16/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 16 11:47 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	200615	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.29	136	835182	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	493406	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	904702	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.11	240	866784	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.75	264	698917	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.35	112	711900	107.87257 ppb	0.00
Spiked Amount 200.000			Recovery =	53.937%	
5) Phenol-D6 (S)	4.51	99	884993	101.60281 ppb	0.00
Spiked Amount 200.000			Recovery =	50.802%	
21) Nitrobenzene-D5(S)	5.50	82	440615	52.04640 ppb	0.00
Spiked Amount 100.000			Recovery =	52.046%	
45) 2-Fluorobiphenyl(S)	7.54	172	794331	51.06824 ppb	0.00
Spiked Amount 100.000			Recovery =	51.068%	
63) 2,4,6-Tribromophenol(S)	9.23	330	242639	98.07765 ppb	0.00
Spiked Amount 200.000			Recovery =	49.039%	
81) Terphenyl-D14(S)	11.89	244	983986	50.20354 ppb	0.00
Spiked Amount 100.000			Recovery =	50.204%	
Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.74	42	219019	54.98590 ppb	89
3) Pyridine	1.76	79	457285	50.81933 ppb	100
6) Phenol	4.52	94	504973	51.00810 ppb	93
7) Aniline	4.52	66	472078	50.38466 ppb	90
8) Bis (2-chloroethyl) ether	4.58	63	236436	54.51265 ppb	98
9) 2-Chlorophenol	4.64	128	390687	49.42043 ppb	92
10) 1,3-DCB	4.80	146	419197	51.28469 ppb	99
11) 1,4-DCB	4.88	146	418942	49.73658 ppb	98
12) Benzyl alcohol	5.05	108	224432	51.33682 ppb	96
13) 1,2-DCB	5.06	146	381401	49.47842 ppb	98
14) 2-Methylphenol	5.19	107	285991	50.92087 ppb	97
15) Bis (2-chloroisopropyl) et	5.19	45	470025	54.39535 ppb	92
16) Acetophenone	5.34	105	518165	50.54834 ppb	98
17) 3&4-Methylphenol	5.36	107	757145	101.71495 ppb	97
18) n-Nitrosodi-n-propylamine	5.35	70	276919	52.46272 ppb	98
19) Hexachloroethane	5.42	117	168427	50.02638 ppb	82
22) Nitrobenzene	5.52	77	435472	51.08500 ppb	97
23) Isophorone	5.79	82	726440	51.45114 ppb	95
24) 2-Nitrophenol	5.88	139	224397	52.74451 ppb	91
25) 2,4-Dimethylphenol	5.95	122	335721	49.76929 ppb	98
26) Benzoic acid	6.13	105	280634	53.16321 ppb	98
27) Bis (2-chloroethoxy) metha	6.04	93	417512	51.86016 ppb	98
28) 2,4-Dichlorophenol	6.17	162	333916	51.93901 ppb	98
29) 1,2,4-Trichlorobenzene	6.24	180	358170	51.22546 ppb	96
30) 3,4-Dimethylphenol	6.29	107	505358	48.93028 ppb	98
31) Naphthalene	6.32	128	1126302	51.42129 ppb	99
32) 4-Chloroaniline	6.40	127	399743	49.31761 ppb	98
33) 2,6-Dichlorophenol	6.40	162	302009	48.69339 ppb	96
34) Hexachloropropene	6.41	213	280806	50.21095 ppb	99
35) Hexachlorobutadiene	6.46	225	221923	49.81821 ppb	98
36) Caprolactum	6.83	55	173966	53.98462 ppb	96
37) 4-Chloro-3-methylphenol	6.99	107	356601	50.21273 ppb	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y161.D Vial: 61
Acq On : 16 Dec 16 11:32 Operator: MA
Sample : 50ug/ml SVOC 12/16/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 16 11:47 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38) 2-Methylnaphthalene	7.11	142	718900	50.22184 ppb		98
39) 1-Methylnaphthalene	7.22	142	700674	49.61660 ppb		99
41) Hexachlorocyclopentadiene	7.29	237	136574	49.31730 ppb		98
42) 1,2,4,5-Tetrachlorobenzene	7.31	216	335861	50.08562 ppb		97
43) 2,4,6-Trichlorophenol	7.46	196	228413	52.78394 ppb		99
44) 2,4,5-Trichlorophenol	7.52	196	238278	50.45577 ppb		97
46) 1,1'-Biphenyl	7.65	154	912524	49.35330 ppb	#	97
47) 2-Chloronaphthalene	7.68	162	719650	50.35688 ppb		98
48) 2-Nitroaniline	7.81	65	253522	51.61843 ppb		98
49) Dimethyl phthalate	8.02	163	861033	50.16645 ppb		99
50) 2,6-DNT	8.10	165	195925	50.56299 ppb		91
51) Acenaphthylene	8.14	152	1152702	51.18634 ppb		99
52) 3-Nitroaniline	8.30	138	213086	50.36744 ppb		99
53) Acenaphthene	8.34	154	692542	48.56856 ppb		99
54) 2,4-Dinitrophenol	8.45	184	99170	48.53721 ppb		88
55) 4-Nitrophenol	8.55	65	170657	47.90561 ppb		100
56) Dibenzofuran	8.55	168	995309	49.22461 ppb		97
57) 2,4-DNT	8.58	165	274015	50.07403 ppb		98
58) 2,3,4,6-Tetrachlorophenol	8.72	232	190417	49.56882 ppb		99
59) Diethyl phthalate	8.84	149	851034	48.17936 ppb		99
60) 4-Chlorophenyl phenyl ethe	8.95	204	380042	48.18753 ppb		93
61) Fluorene	8.95	166	773750	47.36465 ppb		100
62) 4-Nitroaniline	9.01	138	206195	51.44569 ppb		97
65) 4,6-Dinitro-2-methylphenol	9.06	198	177218	52.71907 ppb		95
66) Diphenyl amine	9.10	169	1222885	94.75303 ppb		98
67) n-Nitrosodiphenylamine	9.10	169	1222885	94.75303 ppb		98
68) 1,2-Diphenylhydrazine	9.13	77	873456	47.03336 ppb		96
69) 4-Bromophenyl phenyl ether	9.51	248	240380	51.29866 ppb		89
70) Hexachlorobenzene	9.59	284	247425	51.37050 ppb		93
71) Atrazine	9.73	200	119902	25.71285 ppb		95
72) Pentachlorophenol	9.84	266	108935	47.22593 ppb		98
73) Phenanthrene	10.06	178	1211208	49.57585 ppb		99
74) Anthracene	10.12	178	1279574	50.93351 ppb		99
75) Carbazol	10.32	167	1138497	50.06841 ppb		100
76) Di-n-butylphthalate	10.73	149	1458948	49.93140 ppb		99
77) Fluoranthene	11.44	202	1357120	50.47343 ppb	#	97
79) Benzidine	11.61	184	508474	51.78600 ppb		99
80) Pyrene	11.70	202	1416365	48.18294 ppb		99
82) Butyl benzylphthalate	12.47	149	691011	48.93031 ppb		99
83) 3,3'-Dichlorobenzidine	13.08	252	460683	49.75733 ppb		98
84) Benz (a) anthracene	13.10	228	1308327	48.34605 ppb		99
85) Bis (2-ethylhexyl) phthala	13.13	149	935586	47.25715 ppb		96
86) Chrysene	13.14	228	1281886	48.76626 ppb		99
87) Di-n-octylphthalate	13.84	149	1726175	49.36022 ppb	#	89
89) Benzo (b) fluoranthene	14.29	252	1521542	69.63684 ppb		99
90) Benzo (k) fluoranthene	14.32	252	1146717	55.18411 ppb		99
91) Benzo (a) pyrene	14.68	252	1316072	64.47670 ppb		97
92) Indeno (1,2,3-cd) pyrene	16.31	276	1414748	62.60932 ppb		97
93) Dibenz (a,h) anthracene	16.33	278	1194113	62.65609 ppb		98
94) Benzo (g,h,i) perylene	16.76	276	1221623	60.19952 ppb		98

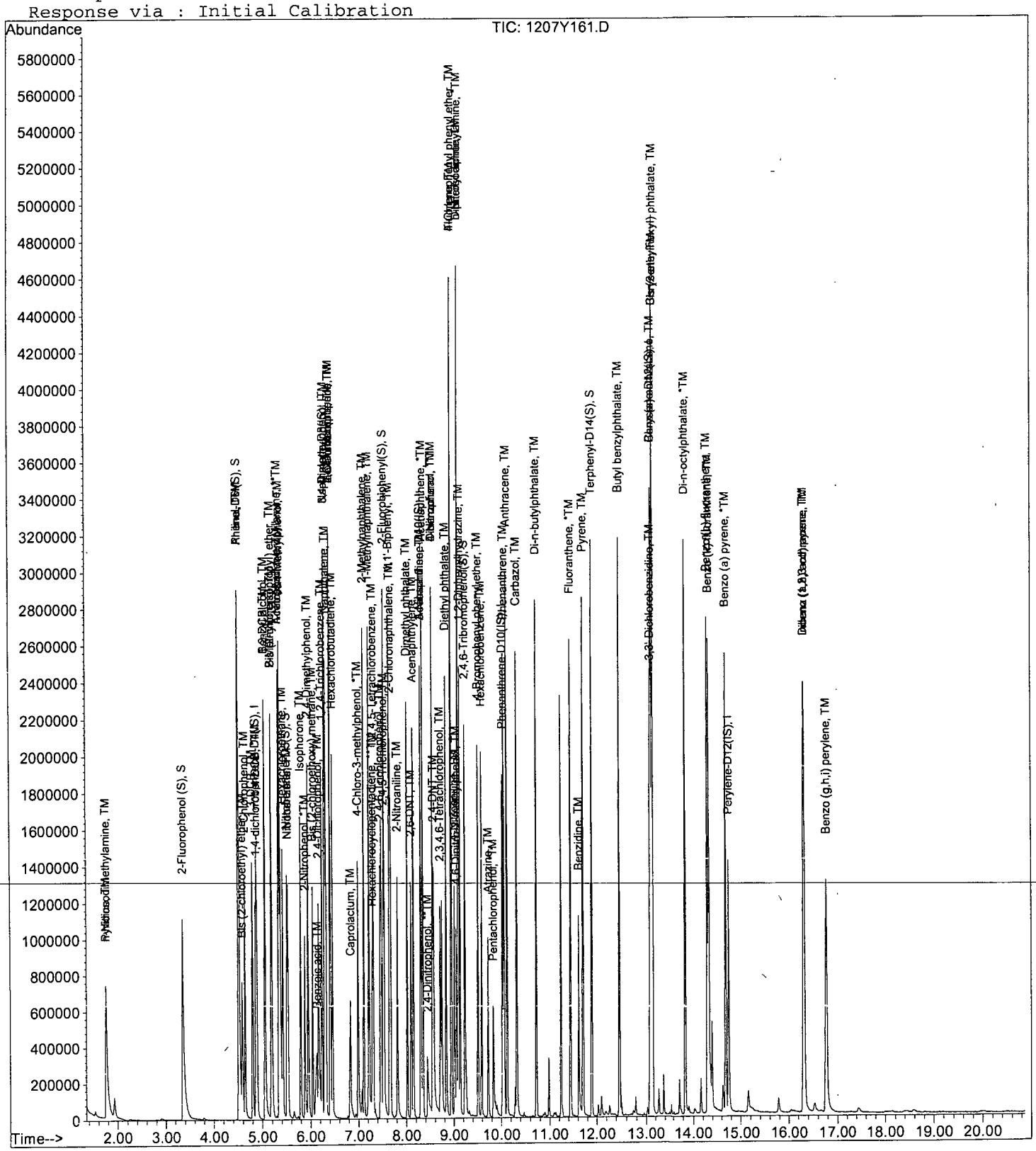
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y161.D Vial: 61
Acq On : 16 Dec 16 11:32 Operator: MA
Sample : 50ug/ml SVOC 12/16/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 16 11:47 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Date Analyzed: 12/16/16

Matrix: Instrument: Yoda

Initial Cal. Date: 12/07/16

Data File: 1207Y169.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	n-Nitrosodimethylamine	0.7942	0.8491	6.9	TM	
3	TM	Pyridine	1.794	1.795	0.03	TM	
4	S	2-Fluorophenol (S)	1.316	1.456	11	S	
5	S	Phenol-D6 (S)	1.737	1.819	4.7	S	
6	*TM	Phenol	1.974	2.046	3.7	*TM	
7	TM	Aniline	1.868	1.922	2.9	TM	
8	TM	Bis (2-chloroethyl) ether	0.8648	0.9345	8.1	TM	
9	TM	2-Chlorophenol	1.576	1.580	0.23	TM	
10	TM	1,3-DCB	1.630	1.666	2.2	TM	
11	*TM	1,4-DCB	1.679	1.736	3.4	*TM	
12	TM	Benzyl alcohol	0.8717	0.9164	5.1	TM	
13	TM	1,2-DCB	1.537	1.539	0.11	TM	
14	TM	2-Methylphenol	1.120	1.140	1.8	TM	
15	TM	Bis (2-chloroisopropyl) ether	1.723	1.944	13	TM	
16	TM	Acetophenone	2.044	2.096	2.6	TM	
17	TM	3&4-Methylphenol	1.484	1.504	1.3	TM	
18	**TM	n-Nitrosodi-n-propylamine	1.052	1.102	4.7	**TM	
19	TM	Hexachloroethane	0.6713	0.7123	6.1	TM	
20	I	Napthalene-D8(IS)	ISTD			I	
21	S	Nitrobenzene-D5(S)	0.4055	0.4261	5.1	S	
22	TM	Nitrobenzene	0.4083	0.4132	1.2	TM	
23	TM	Isophorone	0.6762	0.7017	3.8	TM	
24	*TM	2-Nitrophenol	0.2038	0.2119	4.0	*TM	
25	TM	2,4-Dimethylphenol	0.3231	0.3262	0.96	TM	
26	TML	Benzoic acid	0.2159	0.2642	22	TML	4.7
27	TM	Bis (2-chloroethoxy) methane	0.3856	0.3998	3.7	TM	
28	*TM	2,4-Dichlorophenol	0.3079	0.3163	2.7	*TM	
29	TM	1,2,4-Trichlorobenzene	0.3349	0.3420	2.1	TM	
30	TM	3,4-Dimethylphenol	0.4947	0.4787	3.2	TM	
31	TM	Naphthalene	1.049	1.055	0.60	TM	
32	TM	4-Chloroaniline	0.3882	0.3801	2.1	TM	
33	TM	2,6-Dichlorophenol	0.2970	0.2847	4.2	TM	
34	TM	Hexachloropropene	0.2678	0.2643	1.3	TM	
35	*TM	Hexachlorobutadiene	0.2134	0.2101	1.5	*TM	
36	TM	Caprolactum	0.1543	0.1632	5.8	TM	
37	*TM	4-Chloro-3-methylphenol	0.3401	0.3296	3.1	*TM	
38	TM	2-Methylnaphthalene	0.6856	0.6619	3.5	TM	
39	TM	1-Methylnaphthalene	0.6763	0.6378	5.7	TM	
40	I	Acenaphthene-D10(IS)	ISTD			I	
		Average			4.2		

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/16/16
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y169.D

		Compound	MEAN	CCRF	%D		%Drift
41	**TMQ	Hexachlorocyclopentadiene	0.1853	0.2116	14	**TMQ	4.7
42	TM	1,2,4,5-Tetrachlorobenzene	0.5436	0.5398	0.70	TM	
43	*TM	2,4,6-Trichlorophenol	0.3508	0.3547	1.1	*TM	
44	TM	2,4,5-Trichlorophenol	0.3829	0.3735	2.5	TM	
45	S	2-Fluorobiphenyl(S)	1.261	1.267	0.44	S	
46	TM	1,1'-Biphenyl	1.499	1.462	2.4	TM	
47	TM	2-Chloronaphthalene	1.159	1.144	1.3	TM	
48	TM	2-Nitroaniline	0.3982	0.4126	3.6	TM	
49	TM	Dimethyl phthalate	1.391	1.361	2.2	TM	
50	TM	2,6-DNT	0.3141	0.3191	1.6	TM	
51	TM	Acenaphthylene	1.826	1.800	1.4	TM	
52	TM	3-Nitroaniline	0.3430	0.3486	1.6	TM	
53	*TM	Acenaphthene	1.156	1.112	3.8	*TM	
54	**TMQ	2,4-Dinitrophenol	0.1593	0.1619	1.7	**TMQ	2.4
55	**TML	4-Nitrophenol	0.2439	0.2769	14	**TML	4.1
56	TM	Dibenzofuran	1.639	1.650	0.67	TM	
57	TM	2,4-DNT	0.4436	0.4538	2.3	TM	
58	TM	2,3,4,6-Tetrachlorophenol	0.3114	0.3173	1.9	TM	
59	TM	Diethyl phthalate	1.432	1.443	0.79	TM	
60	TM	4-Chlorophenyl phenyl ether	0.6394	0.6386	0.12	TM	
61	TM	Fluorene	1.324	1.311	1.0	TM	
62	TM	4-Nitroaniline	0.3249	0.3336	2.7	TM	
63	S	2,4,6-Tribromophenol(S)	0.2006	0.2068	3.1	S	
64	I	Phenanthrene-D10(IS)	ISTD			I	
65	TM	4,6-Dinitro-2-methylphenol	0.1486	0.1476	0.66	TM	
66	TM	Diphenyl amine	0.5706	0.5376	5.8	TM	
67	*TM	n-Nitrosodiphenylamine	0.5706	0.5376	5.8	*TM	
68	TM	1,2-Diphenylhydrazine	0.8211	0.7691	6.3	TM	
69	TM	4-Bromophenyl phenyl ether	0.2072	0.2052	0.98	TM	
70	TM	Hexachlorobenzene	0.2130	0.2191	2.9	TM	
71	TM	Atrazine	0.2062	0.2009	2.6	TM	
72	*TML	Pentachlorophenol	0.0958	0.0838	13	*TML	16
73	TM	Phenanthrene	1.080	1.074	0.62	TM	
74	TM	Anthracene	1.111	1.103	0.70	TM	
75	TM	Carbazol	1.005	0.9886	1.7	TM	
76	TM	Di-n-butylphthalate	1.292	1.272	1.5	TM	
77	*TM	Fluoranthene	1.189	1.196	0.61	*TM	
78	I	Chrysene-D12(IS)	ISTD			I	
79	TM	Benzidine	0.4531	0.4647	2.6	TM	
80	TM	Pyrene	1.357	1.300	4.1	TM	
		Average			3.0		

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/16/16
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y169.D

		Compound	MEAN	CCRF	%D	%Drift	
81	S	Terphenyl-D14(S)	0.9045	0.9008	0.40	S	
82	TM	Butyl benzylphthalate	0.6517	0.6272	3.8	TM	
83	TM	3,3'-Dichlorobenzidine	0.4273	0.4306	0.77	TM	
84	TM	Benz (a) anthracene	1.249	1.215	2.7	TM	
85	TM	Bis (2-ethylhexyl) phthalate	0.9136	0.8706	4.7	TM	
86	TM	Chrysene	1.213	1.156	4.7	TM	
87	*TM	Di-n-octylphthalate	1.614	1.581	2.0	*TM	
88	I	Perylene-D12(IS)	ISTD			I	
89	TM	Benzo (b) fluoranthene	1.250	1.845	48	TM	
90	TM	Benzo (k) fluoranthene	1.189	1.496	26	TM	
91	*TM	Benzo (a) pyrene	1.168	1.577	35	*TM	
92	TM	Indeno (1,2,3-cd) pyrene	1.293	1.792	39	TM	
93	TM	Dibenz (a,h) anthracene	1.091	1.527	40	TM	
94	TM	Benzo (g,h,i) perylene	1.161	1.458	26	TM	
95							
96							
97							
98							
99							
100							
101							
102							
103							
104							
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110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			17.9		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y169.D Vial: 69
Acq On : 16 Dec 16 16:04 Operator: MA
Sample : 50ug/ml SVOC 12/16/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 16 16:37 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	190017	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.30	136	793576	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	452842	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	860515	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.11	240	816283	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.75	264	609912	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.35	112	691744	110.66452 ppb	0.00
Spiked Amount 200.000			Recovery =	55.333%	
5) Phenol-D6 (S)	4.51	99	863989	104.72371 ppb	0.00
Spiked Amount 200.000			Recovery =	52.362%	
21) Nitrobenzene-D5(S)	5.50	82	422692	52.54701 ppb	0.00
Spiked Amount 100.000			Recovery =	52.547%	
45) 2-Fluorobiphenyl(S)	7.54	172	716928	50.22069 ppb	0.00
Spiked Amount 100.000			Recovery =	50.221%	
63) 2,4,6-Tribromophenol(S)	9.23	330	234166	103.13142 ppb	0.00
Spiked Amount 200.000			Recovery =	51.566%	
81) Terphenyl-D14(S)	11.89	244	919163	49.79756 ppb	0.00
Spiked Amount 100.000			Recovery =	49.798%	
Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.75	42	201681	53.45711 ppb	96
3) Pyridine	1.76	79	426273	50.01505 ppb	93
6) Phenol	4.52	94	485987	51.82826 ppb	94
7) Aniline	4.52	66	456599	51.45060 ppb	94
8) Bis (2-chloroethyl) ether	4.58	63	221971	54.03198 ppb	95
9) 2-Chlorophenol	4.65	128	375232	50.11277 ppb	96
10) 1,3-DCB	4.80	146	395800	51.12299 ppb	99
11) 1,4-DCB	4.89	146	412381	51.68822 ppb	99
12) Benzyl alcohol	5.05	108	217673	52.56779 ppb	91
13) 1,2-DCB	5.06	146	365467	50.05565 ppb	96
14) 2-Methylphenol	5.19	107	270885	50.92129 ppb	98
15) Bis (2-chloroisopropyl) et	5.19	45	461661	56.40725 ppb	89
16) Acetophenone	5.33	105	497880	51.27839 ppb	99
17) 3&4-Methylphenol	5.36	107	714563	101.34847 ppb	97
18) n-Nitrosodi-n-propylamine	5.34	70	261804	52.36550 ppb	99
19) Hexachloroethane	5.42	117	169185	53.05424 ppb	96
22) Nitrobenzene	5.52	77	409916	50.60817 ppb	98
23) Isophorone	5.79	82	696112	51.88801 ppb	94
24) 2-Nitrophenol	5.88	139	210183	51.99366 ppb	95
25) 2,4-Dimethylphenol	5.95	122	323561	50.48144 ppb	96
26) Benzoic acid	6.13	105	262116	52.32545 ppb	97
27) Bis (2-chloroethoxy) metha	6.04	93	396557	51.83978 ppb	99
28) 2,4-Dichlorophenol	6.17	162	313712	51.35470 ppb	99
29) 1,2,4-Trichlorobenzene	6.24	180	339298	51.07055 ppb	97
30) 3,4-Dimethylphenol	6.29	107	474905	48.39249 ppb	96
31) Naphthalene	6.32	128	1046817	50.29809 ppb	99
32) 4-Chloroaniline	6.40	127	377076	48.96014 ppb	99
33) 2,6-Dichlorophenol	6.41	162	282422	47.92269 ppb	99
34) Hexachloropropene	6.41	213	262208	49.34358 ppb	98
35) Hexachlorobutadiene	6.46	225	208423	49.24068 ppb	98
36) Caprolactum	6.83	55	161912	52.87828 ppb	96
37) 4-Chloro-3-methylphenol	6.99	107	326904	48.44446 ppb	89

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y169.D Vial: 69
Acq On : 16 Dec 16 16:04 Operator: MA
Sample : 50ug/ml SVOC 12/16/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 16 16:37 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38) 2-Methylnaphthalene	7.11	142	656599	48.27440 ppb		99
39) 1-Methylnaphthalene	7.22	142	632682	47.15080 ppb		99
41) Hexachlorocyclopentadiene	7.28	237	119782	47.64509 ppb		96
42) 1,2,4,5-Tetrachlorobenzene	7.31	216	305561	49.64884 ppb		99
43) 2,4,6-Trichlorophenol	7.46	196	200768	50.55140 ppb		96
44) 2,4,5-Trichlorophenol	7.52	196	211395	48.77298 ppb		97
46) 1,1'-Biphenyl	7.65	154	827802	48.78160 ppb	#	98
47) 2-Chloronaphthalene	7.67	162	647507	49.36734 ppb		98
48) 2-Nitroaniline	7.81	65	233545	51.81046 ppb		96
49) Dimethyl phthalate	8.02	163	770491	48.91239 ppb		99
50) 2,6-DNT	8.10	165	180603	50.78384 ppb		99
51) Acenaphthylene	8.15	152	1018810	49.29331 ppb		99
52) 3-Nitroaniline	8.30	138	197307	50.81538 ppb		97
53) Acenaphthene	8.34	154	629386	48.09322 ppb		99
54) 2,4-Dinitrophenol	8.44	184	91670	48.80865 ppb		84
55) 4-Nitrophenol	8.55	65	156731	47.93423 ppb		96
56) Dibenzofuran	8.55	168	934132	50.33734 ppb		98
57) 2,4-DNT	8.57	165	256879	51.14751 ppb		96
58) 2,3,4,6-Tetrachlorophenol	8.71	232	179633	50.95030 ppb		98
59) Diethyl phthalate	8.83	149	816998	50.39563 ppb		99
60) 4-Chlorophenyl phenyl ethe	8.95	204	361495	49.94167 ppb		96
61) Fluorene	8.95	166	742019	49.49102 ppb		99
62) 4-Nitroaniline	9.01	138	188843	51.33688 ppb		92
65) 4,6-Dinitro-2-methylphenol	9.06	198	158817	49.67112 ppb		99
66) Diphenyl amine	9.09	169	1156572	94.21656 ppb		98
67) n-Nitrosodiphenylamine	9.09	169	1156572	94.21656 ppb		98
68) 1,2-Diphenylhydrazine	9.13	77	827275	46.83408 ppb		98
69) 4-Bromophenyl phenyl ether	9.51	248	220673	49.51126 ppb		93
70) Hexachlorobenzene	9.59	284	235652	51.43852 ppb		95
71) Atrazine	9.73	200	108043	24.35945 ppb		96
72) Pentachlorophenol	9.84	266	90109	41.84474 ppb		98
73) Phenanthrene	10.06	178	1154716	49.69054 ppb		99
74) Anthracene	10.12	178	1186382	49.64892 ppb		100
75) Carbazol	10.32	167	1063339	49.16441 ppb		100
76) Di-n-butylphthalate	10.73	149	1368433	49.23848 ppb		100
77) Fluoranthene	11.44	202	1286525	50.30485 ppb		100
79) Benzidine	11.61	184	474131	51.27576 ppb		99
80) Pyrene	11.70	202	1326884	47.93152 ppb		99
82) Butyl benzylphthalate	12.46	149	639982	48.12059 ppb		99
83) 3,3'-Dichlorobenzidine	13.08	252	439324	50.38600 ppb		99
84) Benz (a) anthracene	13.10	228	1240225	48.66484 ppb		99
85) Bis (2-ethylhexyl) phthala	13.13	149	888366	47.64813 ppb		99
86) Chrysene	13.14	228	1179363	47.64174 ppb		99
87) Di-n-octylphthalate	13.85	149	1613057	48.97925 ppb		100
89) Benzo (b) fluoranthene	14.29	252	1406645	73.77310 ppb		97
90) Benzo (k) fluoranthene	14.32	252	1140556	62.89742 ppb		98
91) Benzo (a) pyrene	14.68	252	1202293	67.49815 ppb		99
92) Indeno (1,2,3-cd) pyrene	16.31	276	1366315	69.28977 ppb		97
93) Dibenz (a,h) anthracene	16.33	278	1163805	69.97719 ppb		98
94) Benzo (g,h,i) perylene	16.76	276	1111696	62.77696 ppb		97

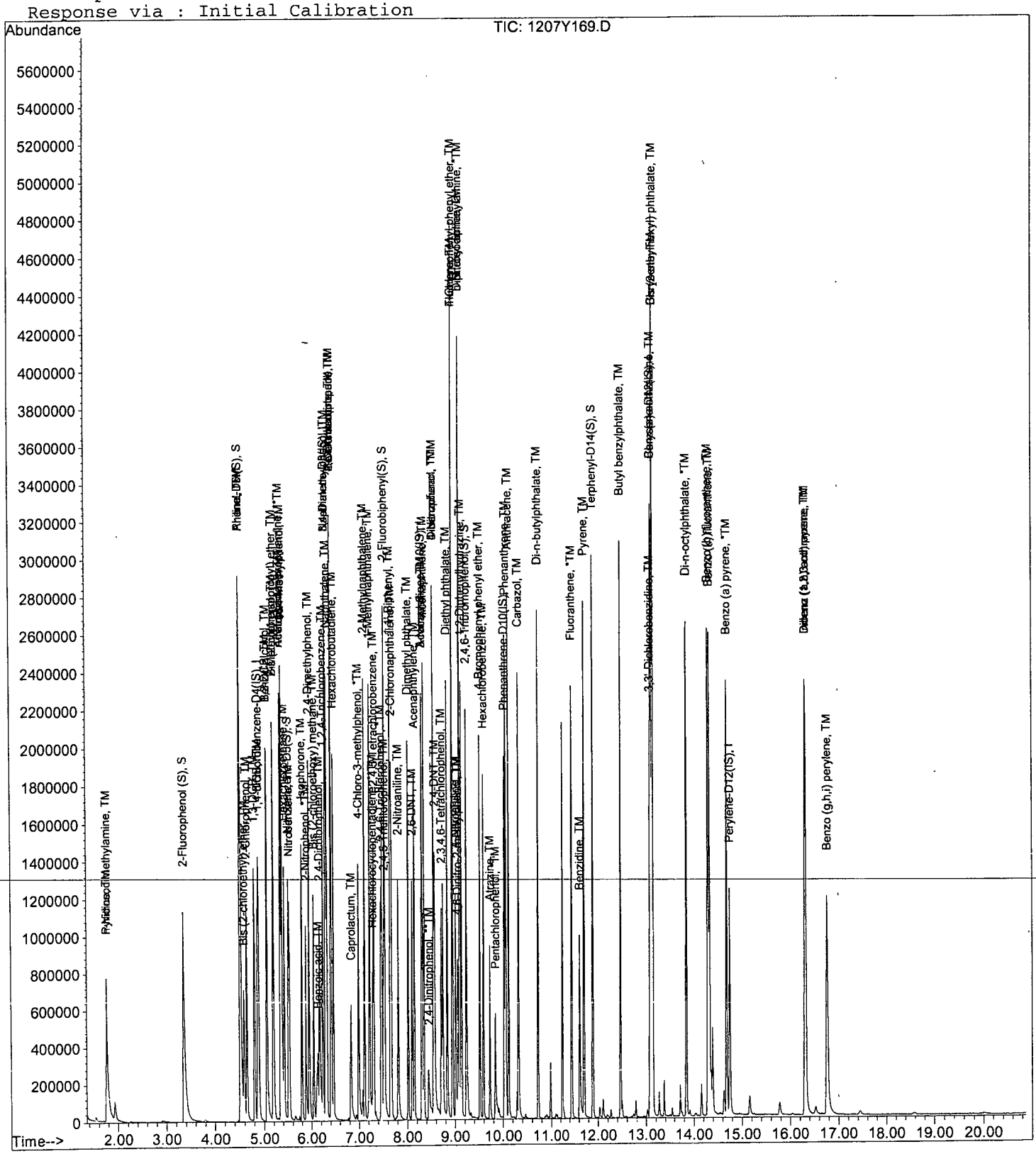
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y169.D Vial: 69
Acq On : 16 Dec 16 16:04 Operator: MA
Sample : 50ug/ml SVOC 12/16/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 16 16:37 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



ORGANICS

Raw Data

APPL, INC.

Method Blank

EPA 8270D WATER

Blank Name/QCG: **161214W-47345 - 214732**
Batch ID: #87DC5-161214A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	12/14/16	12/16/16
BLANK	SURROGATE: 2,4,6-TRIBROMOP	65.0	43-140			%	12/14/16	12/16/16
BLANK	SURROGATE: 2-FLUORBIPHENY	63.2	44-119			%	12/14/16	12/16/16
BLANK	SURROGATE: 2-FLUOROPHENO	47.3	19-119			%	12/14/16	12/16/16
BLANK	SURROGATE: NITROBENZENE-	65.4	44-120			%	12/14/16	12/16/16
BLANK	SURROGATE: PHENOL-D6 (S)	30.5	10-115			%	12/14/16	12/16/16
BLANK	SURROGATE: TERPHENYL-D14 (	61.0	50-134			%	12/14/16	12/16/16

Quant Method: Y1207.M
Run #: 1207Y162
Instrument: Yoda
Sequence: Y161207
Initials: MA

GC SC-Blank-REG MDLs-DOD
Printed: 12/19/16 9:48:21 AM

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y162.D Vial: 62
Acq On : 16 Dec 16 12:30 Operator: MA
Sample : 161214A BLK 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 16 13:08 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	213564	40.00000	ppb	0.00
20) Napthalene-D8(IS)	6.29	136	931388	40.00000	ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	548910	40.00000	ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	1042944	40.00000	ppb	0.00
78) Chrysene-D12(IS)	13.11	240	1031624	40.00000	ppb	0.00
88) Perylene-D12(IS)	14.75	264	992712	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.33	112	664079	94.52510	ppb	-0.02
Spiked Amount 200.000			Recovery = 47.263%			
5) Phenol-D6 (S)	4.50	99	565262	60.96085	ppb	0.00
Spiked Amount 200.000			Recovery = 30.481%			
21) Nitrobenzene-D5(S)	5.50	82	617364	65.39179	ppb	0.00
Spiked Amount 100.000			Recovery = 65.392%			
45) 2-Fluorobiphenyl(S)	7.54	172	1092768	63.15106	ppb	0.00
Spiked Amount 100.000			Recovery = 63.151%			
63) 2,4,6-Tribromophenol(S)	9.23	330	358055	130.09556	ppb	0.00
Spiked Amount 200.000			Recovery = 65.048%			
81) Terphenyl-D14(S)	11.89	244	1422284	60.97070	ppb	0.00
Spiked Amount 100.000			Recovery = 60.971%			

Target Compounds Qvalue

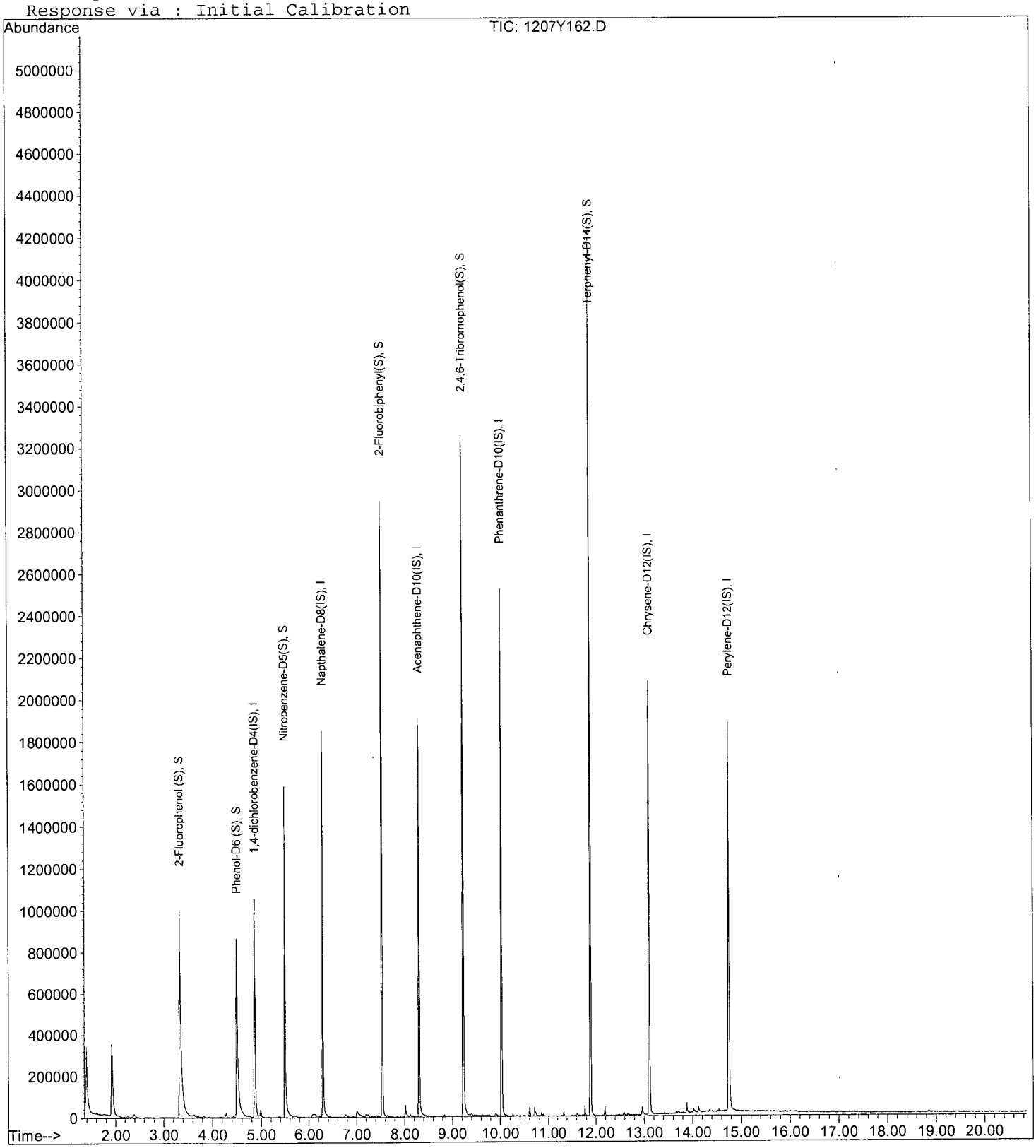
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y162.D Vial: 62
Acq On : 16 Dec 16 12:30 Operator: MA
Sample : 161214A BLK 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 16 13:08 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Laboratory Control Spike Recovery
EPA 8270D WATER

APPL ID: **161214W-47345 LCS - 214732**
Batch ID: #87DC5-161214A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
PHENOL	50.0	19.3	38.6	10-115
SURROGATE: 2,4,6-TRIBROMOPHENOL	200	165	82.5	43-140
SURROGATE: 2-FLUORBIPHENYL (S)	100	77.2	77.2	44-119
SURROGATE: 2-FLUOROPHENOL (S)	200	105	52.5	19-119
SURROGATE: NITROBENZENE-D5 (S)	100	82.8	82.8	44-120
SURROGATE: PHENOL-D6 (S)	200	63.6	31.8	10-115
SURROGATE: TERPHENYL-D14 (S)	100	80.5	80.5	50-134

Comments: _____

Primary	SPK
Quant Method :	Y1207.M
Extraction Date :	12/14/16
Analysis Date :	12/16/16
Instrument :	Yoda
Run :	1207Y163
Initials :	MA

Printed: 12/19/16 9:48:22 AM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y163.D Vial: 63
Acq On : 16 Dec 16 13:00 Operator: MA
Sample : 161214A LCS-1 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 16 14:06 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	203293	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.29	136	841520	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.31	164	502888	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.03	188	953333	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.11	240	926363	40.00000 ppb		0.00
88) Perylene-D12(IS)	14.75	264	886110	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.34	112	702110	104.98764 ppb		0.00
Spiked Amount 200.000			Recovery = 52.494%			
5) Phenol-D6 (S)	4.50	99	561461	63.61015 ppb		0.00
Spiked Amount 200.000			Recovery = 31.805%			
21) Nitrobenzene-D5(S)	5.50	82	706128	82.78117 ppb		0.00
Spiked Amount 100.000			Recovery = 82.781%			
45) 2-Fluorobiphenyl(S)	7.54	172	1224607	77.24658 ppb		0.00
Spiked Amount 100.000			Recovery = 77.247%			
63) 2,4,6-Tribromophenol(S)	9.23	330	415781	164.89491 ppb		0.00
Spiked Amount 200.000			Recovery = 82.448%			
81) Terphenyl-D14(S)	11.89	244	1686317	80.50341 ppb		0.00
Spiked Amount 100.000			Recovery = 80.503%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.75	42	116981	28.98183 ppb		98
3) Pyridine	1.76	79	182920	20.06061 ppb		88
6) Phenol	4.52	94	193442	19.28247 ppb		83
7) Aniline	4.51	66	271613	28.60725 ppb	#	44
8) Bis (2-chloroethyl) ether	4.58	63	205295	46.70926 ppb		91
9) 2-Chlorophenol	4.64	128	324703	40.53264 ppb		93
10) 1,3-DCB	4.80	146	289173	34.91148 ppb		99
11) 1,4-DCB	4.88	146	304116	35.62889 ppb		97
12) Benzyl alcohol	5.05	108	181576	40.98677 ppb		99
13) 1,2-DCB	5.06	146	288493	36.93263 ppb		97
14) 2-Methylphenol	5.19	107	221167	38.86018 ppb		98
15) Bis (2-chloroisopropyl) et	5.19	45	413539	47.22786 ppb		87
16) Acetophenone	5.33	105	466600	44.91842 ppb		98
17) 3&4-Methylphenol	5.36	107	542424	71.90939 ppb		100
18) n-Nitrosodi-n-propylamine	5.34	70	240806	45.02009 ppb		95
19) Hexachloroethane	5.42	117	117779	34.52202 ppb		84
22) Nitrobenzene	5.52	77	374256	43.57311 ppb		96
23) Isophorone	5.79	82	665759	46.79818 ppb		95
24) 2-Nitrophenol	5.88	139	191833	44.75074 ppb		94
25) 2,4-Dimethylphenol	5.95	122	236951	34.86247 ppb		93
26) Benzoic acid	6.10	105	81193	18.06903 ppb		92
27) Bis (2-chloroethoxy) metha	6.04	93	368734	45.45637 ppb		97
28) 2,4-Dichlorophenol	6.16	162	284338	43.89429 ppb		96
29) 1,2,4-Trichlorobenzene	6.24	180	276703	39.27599 ppb		95
30) 3,4-Dimethylphenol	6.29	107	422350	40.58521 ppb		99
31) Naphthalene	6.32	128	923813	41.85901 ppb		100
32) 4-Chloroaniline	6.40	127	345707	42.32978 ppb		96
33) 2,6-Dichlorophenol	6.40	162	264148	42.26824 ppb		96
34) Hexachloropropene	6.41	213	195026	34.60997 ppb		99
35) Hexachlorobutadiene	6.46	225	152449	33.96465 ppb		98
36) Caprolactum	6.81	55	54462	16.77320 ppb		97
37) 4-Chloro-3-methylphenol	6.98	107	306076	42.77374 ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y163.D Vial: 63
Acq On : 16 Dec 16 13:00 Operator: MA
Sample : 161214A LCS-1 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 16 14:06 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38) 2-Methylnaphthalene	7.11	142	597985	41.46017	ppb		99
39) 1-Methylnaphthalene	7.22	142	587248	41.27140	ppb		97
41) Hexachlorocyclopentadiene	7.28	237	63641	27.46099	ppb		96
42) 1,2,4,5-Tetrachlorobenzene	7.30	216	277795	40.64536	ppb		98
43) 2,4,6-Trichlorophenol	7.45	196	199823	45.30641	ppb		98
44) 2,4,5-Trichlorophenol	7.51	196	208273	43.27061	ppb		90
46) 1,1'-Biphenyl	7.65	154	786317	41.72561	ppb	#	98
47) 2-Chloronaphthalene	7.67	162	601654	41.30641	ppb		97
48) 2-Nitroaniline	7.81	65	232159	46.37755	ppb		97
49) Dimethyl phthalate	8.02	163	893302	51.06520	ppb		100
50) 2,6-DNT	8.10	165	181308	45.90849	ppb		92
51) Acenaphthylene	8.14	152	1012473	44.11169	ppb		99
52) 3-Nitroaniline	8.30	138	185060	42.91812	ppb	#	97
53) Acenaphthene	8.34	154	620908	42.72376	ppb		99
54) 2,4-Dinitrophenol	8.44	184	74054	38.06275	ppb		84
55) 4-Nitrophenol	8.57	65	64550	20.82461	ppb	#	52
56) Dibenzofuran	8.55	168	903411	43.83720	ppb		90
57) 2,4-DNT	8.57	165	252991	45.36035	ppb		97
58) 2,3,4,6-Tetrachlorophenol	8.71	232	167141	42.68930	ppb		95
59) Diethyl phthalate	8.83	149	797068	44.27338	ppb		98
60) 4-Chlorophenyl phenyl ethe	8.95	204	345270	42.95315	ppb		93
61) Fluorene	8.95	166	707909	42.51716	ppb		100
62) 4-Nitroaniline	9.01	138	197536	48.35598	ppb		96
65) 4,6-Dinitro-2-methylphenol	9.06	198	150177	42.39594	ppb		93
66) Diphenyl amine	9.09	169	1081979	79.55862	ppb		99
67) n-Nitrosodiphenylamine	9.09	169	1081979	79.55862	ppb		99
68) 1,2-Diphenylhydrazine	9.13	77	977233	49.93718	ppb		97
69) 4-Bromophenyl phenyl ether	9.51	248	233966	47.38287	ppb		91
70) Hexachlorobenzene	9.59	284	232091	45.72876	ppb		95
71) Atrazine	9.73	200	123680	25.17006	ppb		96
72) Pentachlorophenol	9.84	266	91682	38.91484	ppb		90
73) Phenanthrene	10.06	178	1178598	45.78024	ppb		100
74) Anthracene	10.12	178	1198776	45.28320	ppb		100
75) Carbazol	10.32	167	1096301	45.75333	ppb		100
76) Di-n-butylphthalate	10.73	149	1431206	46.48331	ppb		99
77) Fluoranthene	11.44	202	1295886	45.73748	ppb		100
79) Benzidine	11.62	184	92585	8.82295	ppb		99
80) Pyrene	11.70	202	1392710	44.33110	ppb		99
82) Butyl benzylphthalate	12.46	149	632023	41.87508	ppb		99
83) 3,3'-Dichlorobenzidine	13.08	252	419112	42.35597	ppb		98
84) Benz (a) anthracene	13.10	228	1255989	43.42704	ppb		99
85) Bis (2-ethylhexyl) phthala	13.13	149	927160	43.81957	ppb		99
86) Chrysene	13.14	228	1220363	43.43989	ppb		99
87) Di-n-octylphthalate	13.84	149	1570880	42.03054	ppb	#	86
89) Benzo (b) fluoranthene	14.29	252	1421280	51.30654	ppb		98
90) Benzo (k) fluoranthene	14.32	252	1060681	40.26063	ppb		99
91) Benzo (a) pyrene	14.68	252	1190811	46.01548	ppb		97
92) Indeno (1,2,3-cd) pyrene	16.31	276	1349549	47.10712	ppb		97
93) Dibenz (a,h) anthracene	16.32	278	1149278	47.56428	ppb		98
94) Benzo (g,h,i) perylene	16.76	276	1145766	44.53379	ppb		96

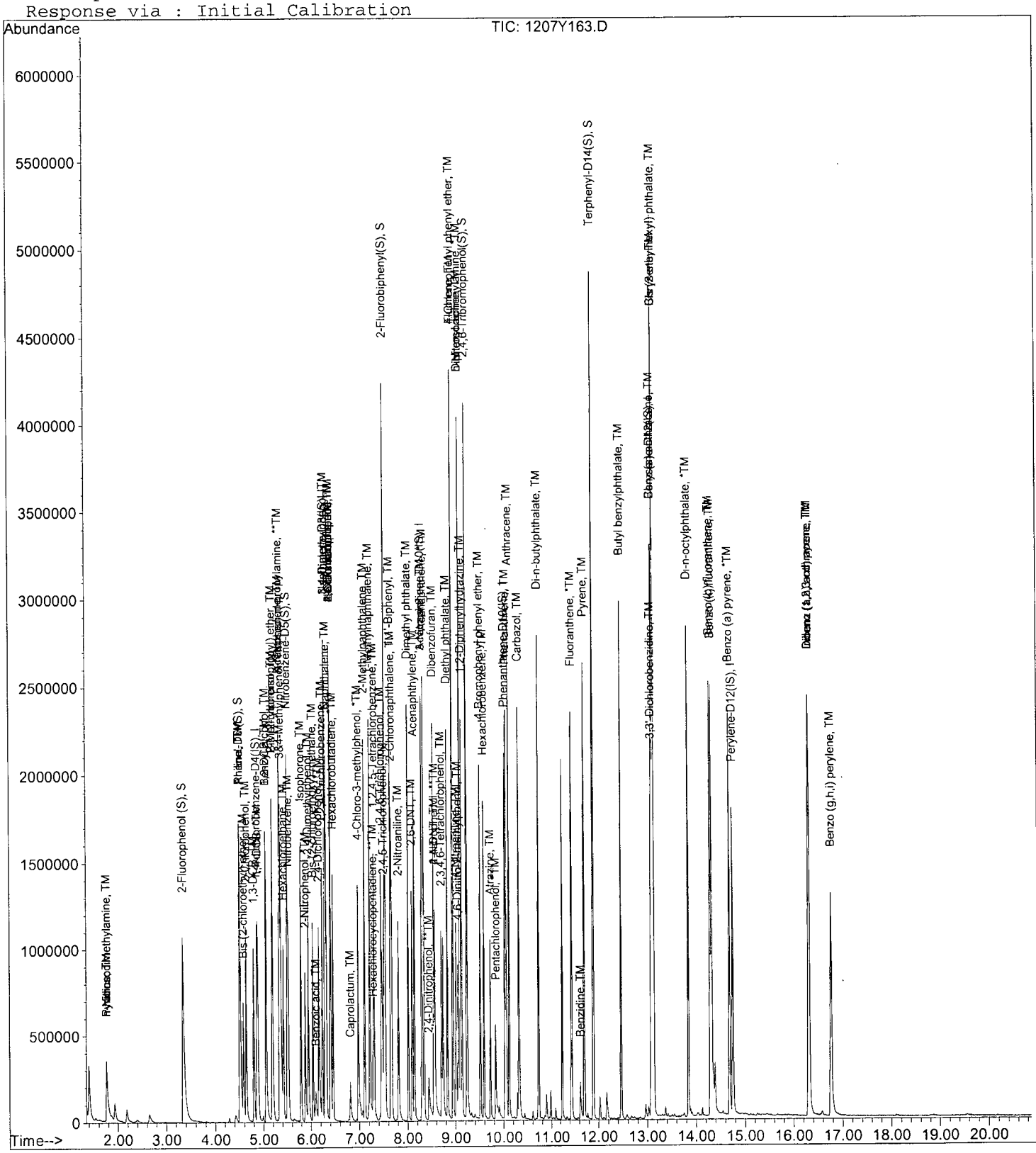
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y163.D Vial: 63
Acq On : 16 Dec 16 13:00 Operator: MA
Sample : 161214A LCS-1 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 16 14:06 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



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Matrix Spike Recoveries

EPA 8270D WATER

APPL ID: **161214W-47345 MS - 214732**
Batch ID: #87DC5-161214A
Sample ID: AZ47345
Client ID: ERH135

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
PHENOL	50.0	ND	19.2	19.3	38.4	38.6	10-115	0.52	20
SURROGATE: 2,4,6-TRIBROMOPHENOL	200	NA	150	164	75.0	82.0	43-140		
SURROGATE: 2-FLUORBIPHENYL (S)	100	NA	75.2	80.3	75.2	80.3	44-119		
SURROGATE: 2-FLUOROPHENOL (S)	200	NA	95.5	97.8	47.8	48.9	19-119		
SURROGATE: NITROBENZENE-D5 (S)	100	NA	79.3	87.8	79.3	87.8	44-120		
SURROGATE: PHENOL-D6 (S)	200	NA	58.5	57.3	29.3	28.6	10-115		
SURROGATE: TERPHENYL-D14 (S)	100	NA	75.6	76.3	75.6	76.3	50-134		

Comments: _____

Primary	SPK	DUP
Quant Method :	Y1207.M	Y1207.M
Extraction Date :	12/14/16	12/14/16
Analysis Date :	12/16/16	12/16/16
Instrument :	Yoda	Yoda
Run :	1207Y166	1207Y167
Initials :	MA	

Printed: 12/19/16 9:48:24 AM
APPL MSD SCII

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y166.D Vial: 66
Acq On : 16 Dec 16 14:32 Operator: MA
Sample : AZ47345W26 MS-1 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Dec 16 14:52 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	196818	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.30	136	848344	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.31	164	519597	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.03	188	896554	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.11	240	868128	40.00000 ppb		0.00
88) Perylene-D12(IS)	14.75	264	889590	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.34	112	661404	95.47144 ppb		0.00
Spiked Amount 186.916			Recovery =	51.077%		
5) Phenol-D6 (S)	4.50	99	534924	58.50225 ppb		0.00
Spiked Amount 186.916			Recovery =	31.299%		
21) Nitrobenzene-D5(S)	5.50	82	729820	79.31811 ppb		0.00
Spiked Amount 93.458			Recovery =	84.870%		
45) 2-Fluorobiphenyl(S)	7.54	172	1317254	75.15757 ppb		0.00
Spiked Amount 93.458			Recovery =	80.419%		
63) 2,4,6-Tribromophenol(S)	9.23	330	419087	150.33754 ppb		0.00
Spiked Amount 186.916			Recovery =	80.431%		
81) Terphenyl-D14(S)	11.89	244	1588330	75.61871 ppb		0.00
Spiked Amount 93.458			Recovery =	80.912%		
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.75	42	113341	27.10636 ppb		100
3) Pyridine	1.77	79	169747	17.97044 ppb		98
6) Phenol	4.52	94	199946	19.23970 ppb	#	71
7) Aniline	4.51	66	261117	26.54815 ppb	#	39
8) Bis (2-chloroethyl) ether	4.58	63	197832	43.45051 ppb		90
9) 2-Chlorophenol	4.64	128	319988	38.55901 ppb		93
10) 1,3-DCB	4.80	146	301161	35.09804 ppb		98
11) 1,4-DCB	4.89	146	311887	35.27231 ppb		99
12) Benzyl alcohol	5.05	108	174175	37.95287 ppb		92
13) 1,2-DCB	5.06	146	293107	36.22220 ppb		99
14) 2-Methylphenol	5.19	107	218966	37.13939 ppb		97
15) Bis (2-chloroisopropyl) et	5.19	45	424597	46.80932 ppb		84
16) Acetophenone	5.34	105	462872	43.01444 ppb		97
17) 3&4-Methylphenol	5.36	107	531914	68.07094 ppb		99
18) n-Nitrosodi-n-propylamine	5.34	70	241285	43.54547 ppb		96
19) Hexachloroethane	5.42	117	121964	34.50910 ppb		92
22) Nitrobenzene	5.52	77	380712	41.09177 ppb		97
23) Isophorone	5.79	82	668082	43.53617 ppb		94
24) 2-Nitrophenol	5.88	139	197810	42.77929 ppb		93
25) 2,4-Dimethylphenol	5.95	122	251182	34.26073 ppb		96
26) Benzoic acid	6.10	105	82916	17.05876 ppb		95
27) Bis (2-chloroethoxy) metha	6.04	93	385034	44.00369 ppb		99
28) 2,4-Dichlorophenol	6.16	162	284581	40.72748 ppb		95
29) 1,2,4-Trichlorobenzene	6.24	180	290346	38.20653 ppb		96
30) 3,4-Dimethylphenol	6.29	107	430687	38.36768 ppb		96
31) Naphthalene	6.32	128	960900	40.36375 ppb		99
32) 4-Chloroaniline	6.40	127	368654	41.84709 ppb		96
33) 2,6-Dichlorophenol	6.40	162	272783	40.46621 ppb		95
34) Hexachloropropene	6.41	213	207293	34.10373 ppb		100
35) Hexachlorobutadiene	6.46	225	163457	33.76094 ppb		98
36) Caprolactum	6.81	55	52391	14.95848 ppb		97
37) 4-Chloro-3-methylphenol	6.98	107	320857	41.56885 ppb		90

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y161207\1207Y166.D
Acq On : 16 Dec 16 14:32
Sample : AZ47345W26 MS-1 1/1070
Misc : water

Vial: 66
Operator: MA
Inst : Yoda
Multiplr: 0.93

Quant Time: Dec 16 14:52 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38) 2-Methylnaphthalene	7.11	142	651919	41.90279 ppb		98
39) 1-Methylnaphthalene	7.22	142	644686	42.00340 ppb		97
41) Hexachlorocyclopentadiene	7.28	237	74126	28.00934 ppb		95
42) 1,2,4,5-Tetrachlorobenzene	7.31	216	308443	40.82086 ppb		97
43) 2,4,6-Trichlorophenol	7.45	196	208521	42.76462 ppb		100
44) 2,4,5-Trichlorophenol	7.51	196	222666	41.84413 ppb		91
46) 1,1'-Biphenyl	7.65	154	857505	41.15877 ppb	#	98
47) 2-Chloronaphthalene	7.67	162	654491	40.64387 ppb		98
48) 2-Nitroaniline	7.81	65	244349	44.15232 ppb		99
49) Dimethyl phthalate	8.02	163	891793	46.11174 ppb		100
50) 2,6-DNT	8.10	165	190269	43.57774 ppb		93
51) Acenaphthylene	8.15	152	1083344	42.69306 ppb		100
52) 3-Nitroaniline	8.30	138	194211	40.74015 ppb		99
53) Acenaphthene	8.34	154	653350	40.66388 ppb		99
54) 2,4-Dinitrophenol	8.45	184	74643	34.89120 ppb		87
55) 4-Nitrophenol	8.58	65	63382	18.72041 ppb	#	52
56) Dibenzofuran	8.55	168	949159	41.65979 ppb		90
57) 2,4-DNT	8.58	165	260777	42.29230 ppb		98
58) 2,3,4,6-Tetrachlorophenol	8.71	232	180131	41.61455 ppb		99
59) Diethyl phthalate	8.84	149	818975	41.14704 ppb		98
60) 4-Chlorophenyl phenyl ethe	8.95	204	362988	40.84596 ppb		94
61) Fluorene	8.95	166	738237	40.10544 ppb		99
62) 4-Nitroaniline	9.01	138	197174	43.65905 ppb		96
65) 4,6-Dinitro-2-methylphenol	9.06	198	160018	44.89251 ppb		97
66) Diphenyl amine	9.10	169	1089518	79.61355 ppb		99
67) n-Nitrosodiphenylamine	9.10	169	1089518	79.61355 ppb		99
68) 1,2-Diphenylhydrazine	9.13	77	813851	41.32901 ppb		98
69) 4-Bromophenyl phenyl ether	9.51	248	222932	44.86681 ppb		91
70) Hexachlorobenzene	9.59	284	229793	44.99374 ppb		93
71) Atrazine	9.73	200	115389	23.33637 ppb		99
72) Pentachlorophenol	9.84	266	84691	35.82196 ppb		98
73) Phenanthrene	10.06	178	1091606	42.13689 ppb		99
74) Anthracene	10.12	178	1150572	43.19138 ppb		100
75) Carbazol	10.32	167	1033453	42.86154 ppb		99
76) Di-n-butylphthalate	10.73	149	1329150	42.89958 ppb		99
77) Fluoranthene	11.44	202	1198943	42.05215 ppb		100
79) Benzidine	11.62	184	130347	12.38762 ppb		97
80) Pyrene	11.70	202	1239962	39.36132 ppb		99
82) Butyl benzylphthalate	12.47	149	599046	39.58187 ppb		99
83) 3,3'-Dichlorobenzidine	13.08	252	423466	42.67923 ppb		96
84) Benz (a) anthracene	13.10	228	1191383	41.08083 ppb		99
85) Bis (2-ethylhexyl) phthala	13.13	149	841210	39.64892 ppb		98
86) Chrysene	13.14	228	1140254	40.47760 ppb		99
87) Di-n-octylphthalate	13.84	149	1455572	38.83909 ppb	#	85
89) Benzo (b) fluoranthene	14.29	252	1316607	44.24488 ppb		99
90) Benzo (k) fluoranthene	14.32	252	1019479	36.02366 ppb		99
91) Benzo (a) pyrene	14.68	252	1159572	41.71311 ppb	#	97
92) Indeno (1,2,3-cd) pyrene	16.31	276	1284008	41.72337 ppb		98
93) Dibenz (a,h) anthracene	16.32	278	1104271	42.54468 ppb		98
94) Benzo (g,h,i) perylene	16.76	276	1068371	38.65713 ppb		98

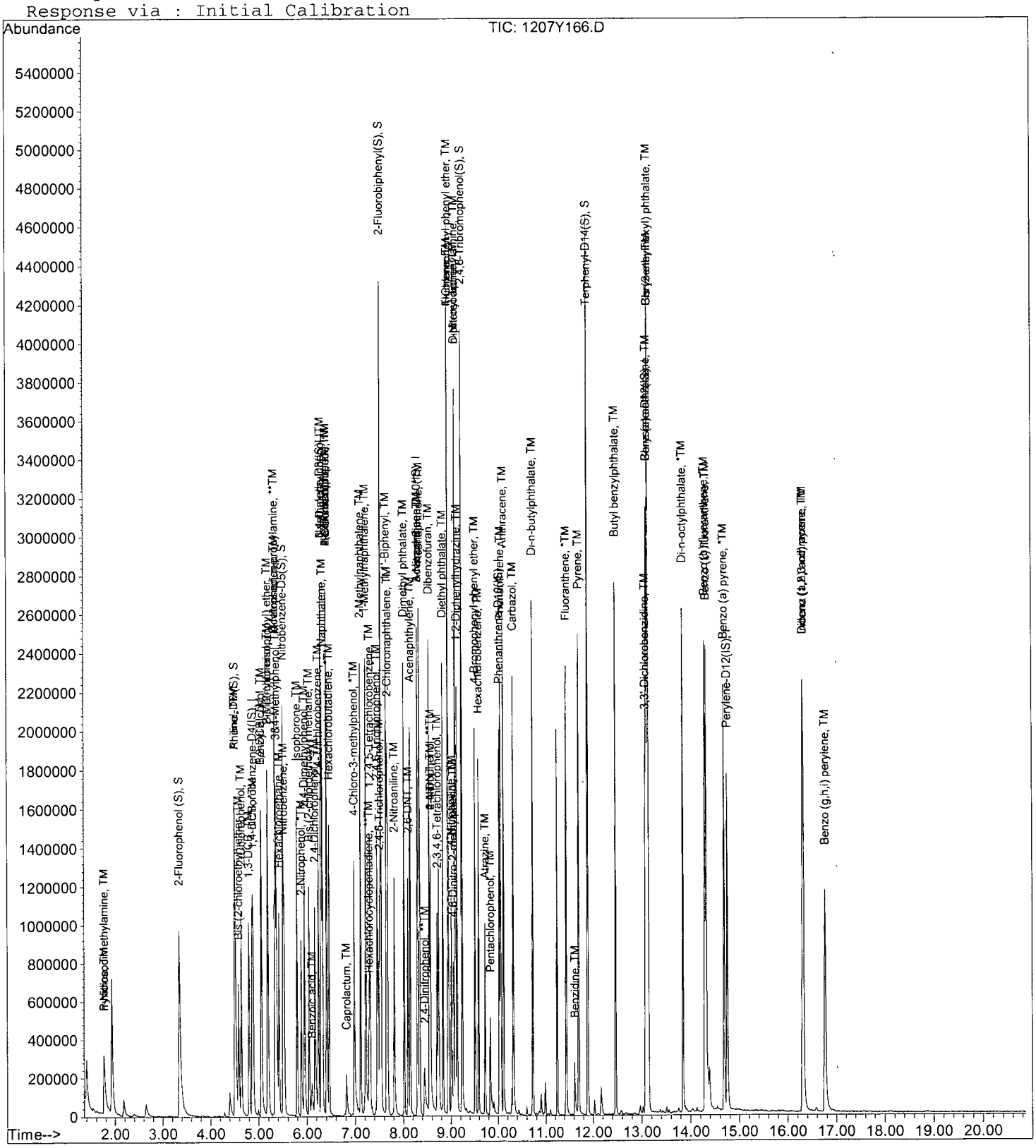
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y166.D Vial: 66
Acq On : 16 Dec 16 14:32 Operator: MA
Sample : AZ47345W26 MS-1 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Dec 16 14:52 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



342

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y167.D Vial: 67
Acq On : 16 Dec 16 15:03 Operator: MA
Sample : AZ47345W17 MSD-1 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Dec 16 15:32 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	209740	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.29	136	826177	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.31	164	476740	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.03	188	917304	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.11	240	898533	40.00000 ppb		0.00
88) Perylene-D12(IS)	14.75	264	861263	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.34	112	722236	97.82939 ppb		0.00
Spiked Amount 186.916			Recovery = 52.339%			
5) Phenol-D6 (S)	4.50	99	558532	57.32078 ppb		0.00
Spiked Amount 186.916			Recovery = 30.667%			
21) Nitrobenzene-D5(S)	5.50	82	787125	87.84138 ppb		0.00
Spiked Amount 93.458			Recovery = 93.990%			
45) 2-Fluorobiphenyl(S)	7.54	172	1292015	80.34443 ppb		0.00
Spiked Amount 93.458			Recovery = 85.968%			
63) 2,4,6-Tribromophenol(S)	9.24	330	419420	163.98248 ppb		0.00
Spiked Amount 186.916			Recovery = 87.730%			
81) Terphenyl-D14(S)	11.89	244	1658237	76.27547 ppb		0.00
Spiked Amount 93.458			Recovery = 81.614%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.75	42	121433	27.25238 ppb		97
3) Pyridine	1.76	79	266458	26.47091 ppb		98
6) Phenol	4.52	94	214256	19.34649 ppb		78
7) Aniline	4.51	66	296975	28.33365 ppb	#	38
8) Bis (2-chloroethyl) ether	4.58	63	226717	46.72679 ppb		93
9) 2-Chlorophenol	4.64	128	354410	40.07575 ppb		95
10) 1,3-DCB	4.80	146	345616	37.79737 ppb		99
11) 1,4-DCB	4.88	146	353232	37.48696 ppb		97
12) Benzyl alcohol	5.05	108	193410	39.54771 ppb		96
13) 1,2-DCB	5.06	146	322846	37.43929 ppb		96
14) 2-Methylphenol	5.19	107	229735	36.56527 ppb		97
15) Bis (2-chloroisopropyl) et	5.19	45	463416	47.94132 ppb		84
16) Acetophenone	5.34	105	494630	43.13377 ppb		97
17) 3&4-Methylphenol	5.36	107	562018	67.49228 ppb		99
18) n-Nitrosodi-n-propylamine	5.35	70	264499	44.79404 ppb		95
19) Hexachloroethane	5.42	117	134932	35.82618 ppb		81
22) Nitrobenzene	5.52	77	417421	46.26275 ppb		98
23) Isophorone	5.79	82	681970	45.63358 ppb		96
24) 2-Nitrophenol	5.88	139	200135	44.44340 ppb		94
25) 2,4-Dimethylphenol	5.95	122	242729	33.99606 ppb		95
26) Benzoic acid	6.10	105	77537	16.52635 ppb		92
27) Bis (2-chloroethoxy) metha	6.04	93	361289	42.39784 ppb		99
28) 2,4-Dichlorophenol	6.16	162	283699	41.69062 ppb		95
29) 1,2,4-Trichlorobenzene	6.24	180	282877	38.22243 ppb		98
30) 3,4-Dimethylphenol	6.28	107	423248	38.71663 ppb		99
31) Naphthalene	6.32	128	989326	42.67285 ppb		99
32) 4-Chloroaniline	6.40	127	376877	43.92834 ppb		97
33) 2,6-Dichlorophenol	6.40	162	266658	40.61896 ppb		96
34) Hexachloropropene	6.41	213	216692	36.60657 ppb		97
35) Hexachlorobutadiene	6.46	225	167546	35.53399 ppb		99
36) Caprolactum	6.81	55	47357	13.88398 ppb		95
37) 4-Chloro-3-methylphenol	6.98	107	298464	39.70519 ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y167.D Vial: 67
Acq On : 16 Dec 16 15:03 Operator: MA
Sample : AZ47345W17 MSD-1 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Dec 16 15:32 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38) 2-Methylnaphthalene	7.11	142	665338	43.91273 ppb		99
39) 1-Methylnaphthalene	7.22	142	655815	43.87493 ppb		97
41) Hexachlorocyclopentadiene	7.29	237	72357	29.31729 ppb		95
42) 1,2,4,5-Tetrachlorobenzene	7.30	216	298217	43.01547 ppb		95
43) 2,4,6-Trichlorophenol	7.45	196	200963	44.91961 ppb		98
44) 2,4,5-Trichlorophenol	7.51	196	212883	43.60203 ppb		95
46) 1,1'-Biphenyl	7.65	154	818093	42.79701 ppb		97
47) 2-Chloronaphthalene	7.68	162	630075	42.64505 ppb		98
48) 2-Nitroaniline	7.82	65	233511	45.98702 ppb		96
49) Dimethyl phthalate	8.02	163	827804	46.65089 ppb		99
50) 2,6-DNT	8.10	165	174935	43.66751 ppb		95
51) Acenaphthylene	8.14	152	1011959	43.46492 ppb		100
52) 3-Nitroaniline	8.30	138	188531	43.10390 ppb		95
53) Acenaphthene	8.34	154	622627	42.23533 ppb		99
54) 2,4-Dinitrophenol	8.45	184	74099	37.10608 ppb		90
55) 4-Nitrophenol	8.58	65	59864	19.13772 ppb	#	62
56) Dibenzofuran	8.55	168	901513	43.12560 ppb		90
57) 2,4-DNT	8.58	165	249427	44.08801 ppb		99
58) 2,3,4,6-Tetrachlorophenol	8.72	232	174009	43.81406 ppb		97
59) Diethyl phthalate	8.84	149	799163	43.76111 ppb		98
60) 4-Chlorophenyl phenyl ethe	8.95	204	352002	43.17050 ppb		90
61) Fluorene	8.95	166	720374	42.65309 ppb		99
62) 4-Nitroaniline	9.01	138	195563	47.19504 ppb		97
65) 4,6-Dinitro-2-methylphenol	9.06	198	151835	41.63323 ppb		97
66) Diphenyl amine	9.10	169	1065054	76.06544 ppb		98
67) n-Nitrosodiphenylamine	9.10	169	1065054	76.06544 ppb		98
68) 1,2-Diphenylhydrazine	9.13	77	962084	47.75142 ppb		96
69) 4-Bromophenyl phenyl ether	9.51	248	218176	42.91636 ppb		89
70) Hexachlorobenzene	9.59	284	223887	42.84571 ppb		89
71) Atrazine	9.73	200	116842	23.09569 ppb		98
72) Pentachlorophenol	9.84	266	83327	34.66076 ppb		97
73) Phenanthrene	10.06	178	1160277	43.77452 ppb		99
74) Anthracene	10.12	178	1190397	43.67554 ppb		100
75) Carbazol	10.32	167	1054493	42.74486 ppb		100
76) Di-n-butylphthalate	10.73	149	1383948	43.65782 ppb		99
77) Fluoranthene	11.45	202	1269343	43.51428 ppb		99
79) Benzidine	11.61	184	315892	29.00515 ppb		99
80) Pyrene	11.71	202	1351703	41.45647 ppb		99
82) Butyl benzylphthalate	12.47	149	641265	40.93770 ppb		97
83) 3,3'-Dichlorobenzidine	13.08	252	461983	44.98562 ppb		98
84) Benz (a) anthracene	13.10	228	1288169	42.91513 ppb		99
85) Bis (2-ethylhexyl) phthala	13.13	149	940515	42.82944 ppb		96
86) Chrysene	13.14	228	1275293	43.73941 ppb		99
87) Di-n-octylphthalate	13.84	149	1580494	40.74534 ppb	#	89
89) Benzo (b) fluoranthene	14.30	252	1265489	43.92576 ppb		99
90) Benzo (k) fluoranthene	14.32	252	1320284	48.18712 ppb		99
91) Benzo (a) pyrene	14.69	252	1203214	44.70662 ppb		98
92) Indeno (1,2,3-cd) pyrene	16.31	276	1352760	45.40320 ppb		97
93) Dibenz (a,h) anthracene	16.32	278	1154956	45.96096 ppb		98
94) Benzo (g,h,i) perylene	16.76	276	1127340	42.13243 ppb		98

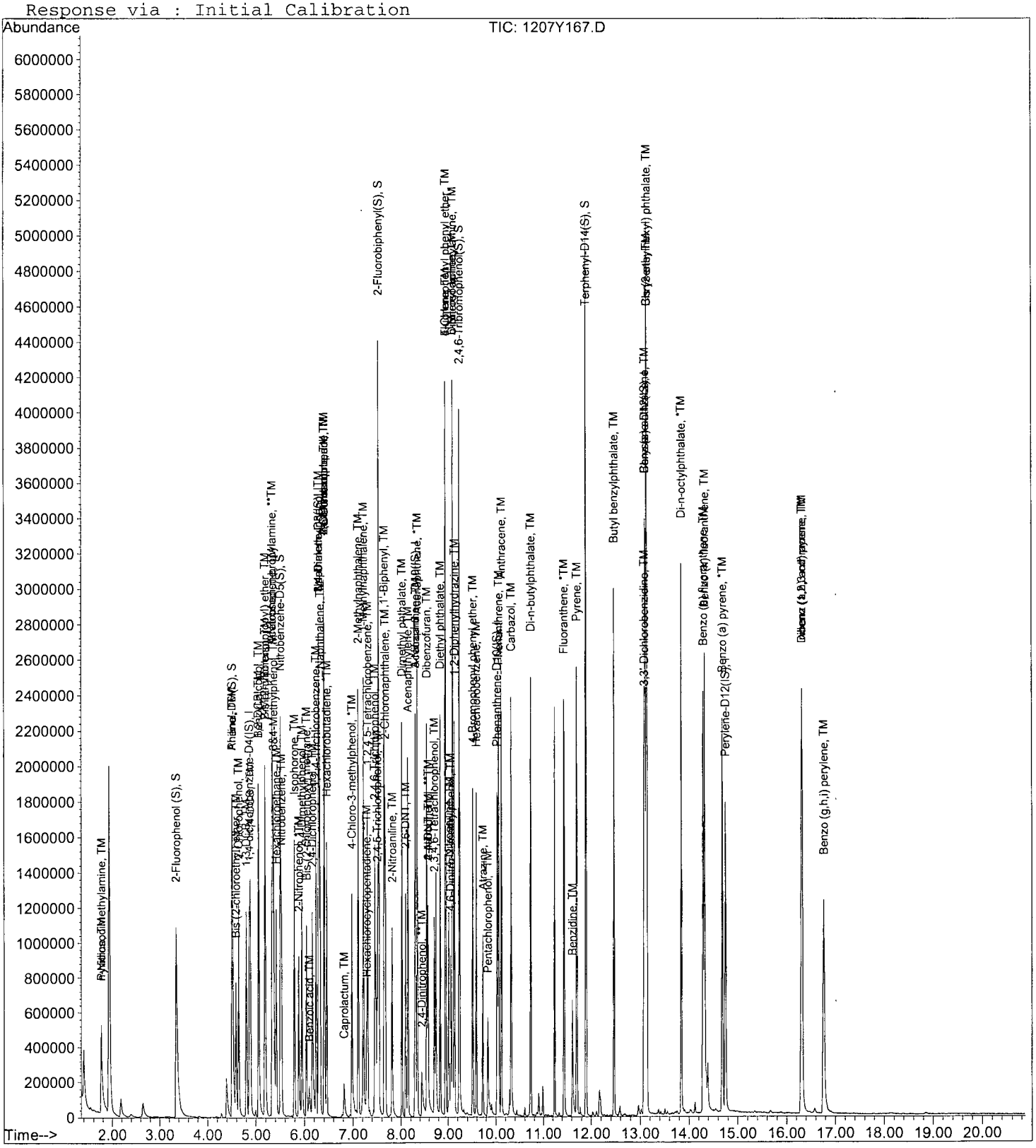
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y167.D Vial: 67
Acq On : 16 Dec 16 15:03 Operator: MA
Sample : AZ47345W17 MSD-1 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Dec 16 15:32 2016 Quant Results File: Y1207.RES

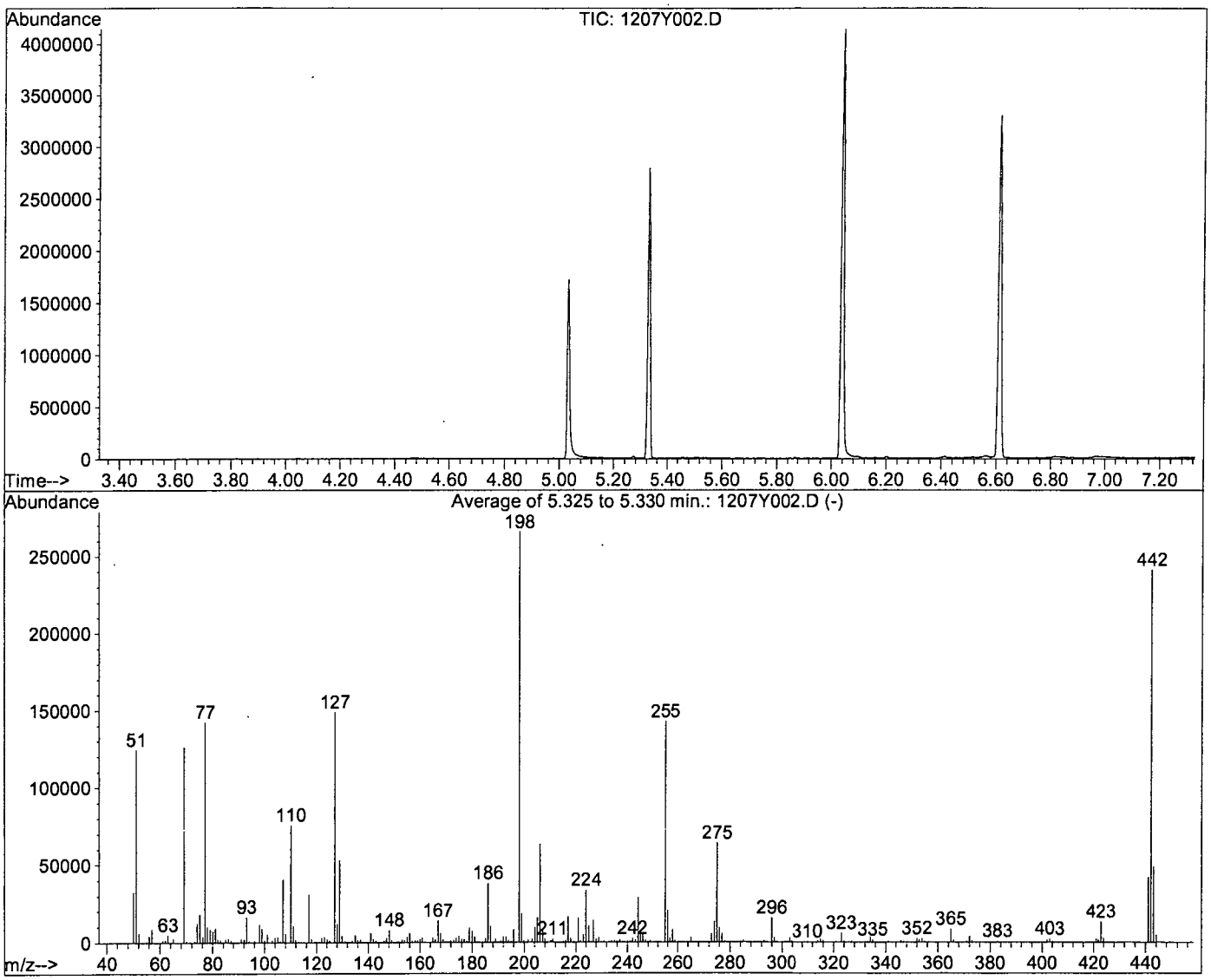
Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



DFTPP

Data File : M:\YODA\DATA\Y161207\1207Y002.D Vial: 2
Acq On : 7 Dec 16 9:00 Operator: MA
Sample : SV Tune 10/19/16 Inst : Yoda
Misc : Multiplr: 1.00

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 696, 697, 698; Background Corrected with Scan 689

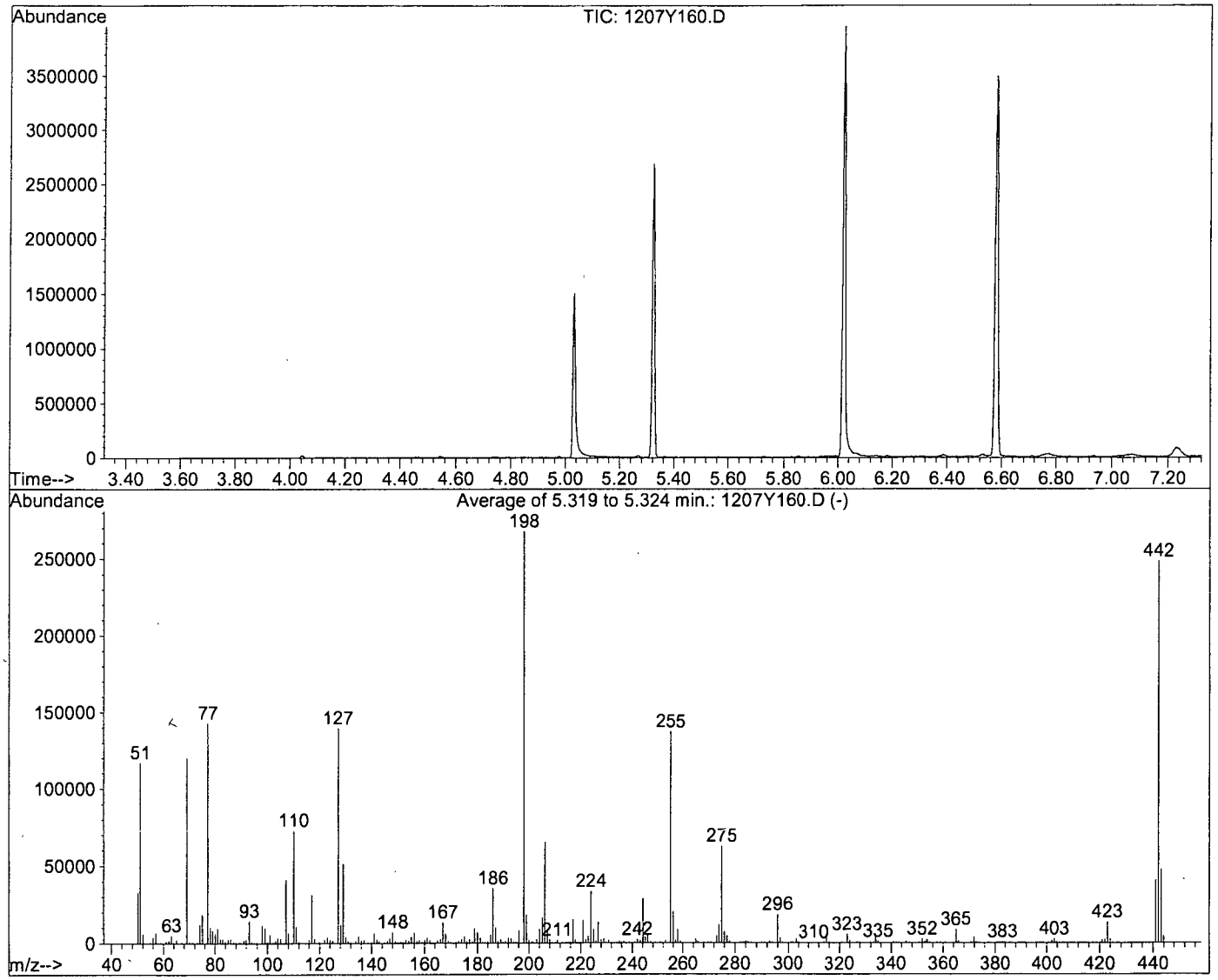
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	46.7	124269	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.7	911	PASS
127	198	40	60	56.0	148757	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	265856	PASS
199	198	5	9	6.9	18432	PASS
275	198	10	30	24.0	63789	PASS
365	198	1	100	3.1	8331	PASS
441	443	0.01	100	86.4	41829	PASS
442	198	50	150	90.6	240747	PASS
443	442	17	23	20.1	48427	PASS

1207Y002.D Y1207.M Wed Dec 07 15:01:22 2016

DFTPP

Data File : M:\YODA\DATA\Y161207\1207Y160.D Vial: 60
Acq On : 16 Dec 16 11:14 Operator: MA
Sample : SV Tune 10/19/16 Inst : Yoda
Misc : water Multiplr: 1.00

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 694, 695, 696; Background Corrected with Scan 684

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	43.6	116899	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.7	810	PASS
127	198	40	60	52.0	139456	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	267947	PASS
199	198	5	9	6.8	18128	PASS
275	198	10	30	23.3	62387	PASS
365	198	1	100	3.2	8674	PASS
441	443	0.01	100	85.2	40467	PASS
442	198	50	150	92.6	248235	PASS
443	442	17	23	19.1	47523	PASS

1207Y160.D Y1207.M Fri Dec 16 11:27:00 2016

SV Internal Stanard Stock Prep: 10/19/16 RH EXP: 10/19/17						
		Conc.				
Supplier	ID #	µg/mL	Lot #	Open Date	Exp.Date	µL
Supleco	CRM48902	2000	XA14020V-36611	10/19/16	10/19/17	1000
					fin vol.	1000

8270 Full Scan Standard Curve

PREP DATE:	12/06/16 RH							
8270 Standard Curve								
Exp:	2/11/17					5	10	20
		Conc.		Date				
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL
Absolute	8270 Stock	200	VAR	11/15/16	11/15/16	5	5	10
o2si	8270 BN:A	200/400	277272-36400	6/20/16	12/20/16	5	5	10
EM Science	Methylene Chloride		56098			190	90	80
Supelco	SV Internal	2000	A14020V-3661	12/06/16	12/16/16	4	2	2
				Final Vol.		204	102	102

8270 Full Scan Second Source (SS)

PREP DATE:	12/06/16 RH					
Exp:	1/18/17	Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
o2si	8270 Stock S	200	VAR	07/08/16	07/08/17	25
EM Science	Methylene Chloride		56098			75
Supelco	SV Internal	2000	A14020V-3661	12/06/16	12/06/16	2
				Final Vol.		102

40	**50**	**60**	**80**	**100**
µL	µL	µL	µL	µL
20	50	30	40	50
20	50	30	40	50
60	100	40	20	0
2	4	2	2	2
102	204	102	102	102

8270 SVOC Stock 10mL						
8270 Stock/Spike Standard						
prep:	11/15/2016 RH					
Exp:	11/15/17					
		Conc.				
Supplier	ID #	µg/mL	Lot #	Open Date	Exp.Date	µL
Absolute	10001	2000	053014-37136	11/15/16	11/15/17	1000
Absolute	10002	2000	062216-37144	11/15/16	11/15/17	1000
Absolute	10004	2000	012516-37147	11/15/16	11/15/17	1000
Absolute	10005	2000	110314-36848	11/15/16	11/15/17	1000
Absolute	10006	2000	022416-36850	11/15/16	11/15/17	1000
Absolute	10007	2000	020515-36853	11/15/16	11/15/17	1000
Absolute	10018	2000	030216-37081	11/15/16	11/15/17	1000
Absolute	70023	1000	042716-36858	11/15/16	11/15/17	1000
Absolute	82705	2000	012516-36862	11/15/16	11/15/17	1000
Absolute	94552	2000	042016-36488	11/15/16	11/15/17	1000
				Final Vol.		10000

8270 Surrog Mix 100/200ppm						
Prep: 11/15/16 -RH Ex: 2/15/17						
STANDARD	**INITIAL CONC.**	**SOURCE DATE**	**ALIQUOT**	**FINAL VOL**	**FINAL CONC.**	**SOLVENT /LOT#**
8270 Acid Surrog Mix	10000 ug/ml	Restek Cat# 33029 Lot# A0118884-36875 Op: 11/15/16 EX: 11/15/17	2.0 mL	100 mL	200 ug/mL	MC
8270 B/N surrog Mix	5000 µg/mL	Restek Cat# 31086 Lot# A0119223-36871 Op: 11/15/16 EX: 11/15/17	2.0 mL	100 mL	100 ug/mL	MC

8270 Acid Surrog Stock 5000ppm						
Prep: 06/20/16 -LH Ex: 06/20/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
8270 Acid Surrog Mix	10,000 µg/mL	Restek Cat# 33029 Lot# A0115509-36718	10mL	20mL	5000 µg/ml	Acetone
	PREP:	06/20/16				
	Exp:	06/20/17				

8270 Surrog Mix 200/400ppm						
Prep: 06/20/16 -LH Ex: 12/20/16						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
8270 Acid Surrog Mix	5000 µg/mL	06/20/16	8.0mL	100 mL	400 µg/mL	MC
8270 B/N surrog Mix	5000 µg/mL	Restek Cat# 31086 Lot# A0119223-36720	4.0 mL	100 mL	200 ug/mL	MC
	PREP:	06/20/16				
	Exp:	12/20/16				

8270 Full Scan Second Source Stock

	7/8/16 GA					
8270 Second Source Stock						
Exp:	07/08/17					
		Conc.		Date	Exp.	
Supplier	ID #	µg/mL	Lot #	Code	Date	µL
o2si	116070-02	2000	234696-35233	07/08/16	07/08/17	1000
o2si	110391-01	2000	252133-35880	07/08/16	07/08/17	1000
o2si	010337-01	1000	259144-35881	07/08/16	07/08/17	1000
o2si	110396-01	2000	252136-35882	07/08/16	07/08/17	1000
o2si	110397-01	2000	263077-35835	07/08/16	01/08/17	1000
o2si	110393-01	2000	252141-35248	07/08/16	07/08/17	1000
o2si	110394-01	2000	252143-35884	07/08/16	07/08/17	1000
o2si	**110395-01**	2000	252146-35885	07/08/16	07/08/17	1000
o2si	110392-01	2000	243259-35886	07/08/16	07/08/17	1000
Absolute	10006	2000	091115-35856	07/08/16	07/08/17	1000
				Final Vol.		10000

_SEP004

Organic Extraction Worksheet

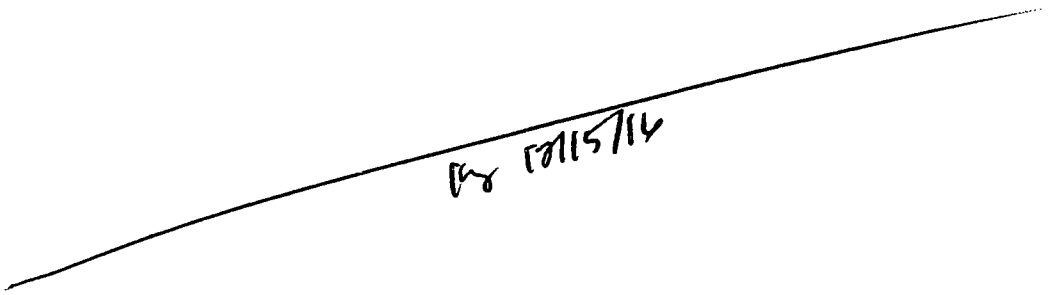
Method	625/8270 Separatory Funnel Extra 3510C	Extraction Set	161214A	Extraction Method	SEP004	Units	mL

Spiked ID 1	8270T Spike 12-08-16 exp 12-8-17		Surrogate ID 1	8270 Surrogate 12-08-16 exp 3-8-17	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	12/14/16 16:30	
Spiked ID 8			Ext. End Time:	12/15/16 16:25	
			GC Requires Extract By:	**12/20/16 0:00**	

pH1	2	12/14/16 4:40:00 PM	Water Bath Temp Criteria	75 °C
pH2	14	12/14/16 5:30:00 PM		
pH3				

Spiked By: KY **Date** 12/14/16 **Witnessed By:** JR **Date** 12/14/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	161214A Blk				1	1	1000	1	2/1	12/14/16 16:30	
						equip	E-WB7				
2	161214A LCS-1		0.250	1	1	1	1000	1	2/1	12/14/16 16:30	
						equip	E-WB7				
3	AZ47343	AZ47343W12			1	1	1070	1	2/1	12/14/16 16:30	81734 RUSH 1 WEEK
						equip	E-WB7				
4	AZ47344	AZ47344W15			1	1	1070	1	2/1	12/14/16 16:30	81734 RUSH 1 WEEK
						equip	E-WB7				
5	AZ47345 MS-1	AZ47345W26	0.250	1	1	1	1070	1	2/1	12/14/16 16:30	81734 RUSH 1 WEEK
						equip	E-WB7				
6	AZ47345 MSD-1	AZ47345W17	0.250	1	1	1	1070	1	2/1	12/14/16 16:30	81734 RUSH 1 WEEK
						equip	E-WB7				
7	AZ47345	AZ47345W23			1	1	1070	1	2/1	12/14/16 16:30	81734 RUSH 1 WEEK
						equip	E-WB7				



Solvent and Lot#	
MC	56153
1+1 Sulfuric Acid	12-5-16
Acidified Na2SO4	11-3-16
B.Na2SO4	16C255214
10N NaOH	11-22-16
ph strips	HC 574756
Filter Paper	400112

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	RH
Date	12/15/16
Time	4:30
Refrigerator	GC-C

	Technician's Initials
Scanned By	KY
Sample Preparation	KY,DL,JR
Extraction	KY,DL,JR
Concentration	KY

Modified	12/15/16 4:27:02 PM

Reviewed By: [signature] **Date** 12/15/16

Injection Log

Directory: M:\YODA\DATA\Y161207\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	1207Y002.D	1	SV Tune 10/19/16		7 Dec 16 9:00
2	4	1207Y004.D	1	5ug/ml SVOC 12/06/16		7 Dec 16 10:01
3	5	1207Y005.D	1	10ug/ml SVOC 12/06/16		7 Dec 16 10:32
4	6	1207Y006.D	1	20ug/ml SVOC 12/06/16		7 Dec 16 11:02
5	7	1207Y007.D	1	40ug/ml SVOC 12/06/16		7 Dec 16 11:32
6	8	1207Y008.D	1	50ug/ml SVOC 12/06/16		7 Dec 16 12:02
7	9	1207Y009.D	1	60ug/ml SVOC 12/06/16		7 Dec 16 12:32
8	10	1207Y010.D	1	80ug/ml SVOC 12/06/16		7 Dec 16 13:02
9	11	1207Y011.D	1	100ug/ml SVOC 12/06/16		7 Dec 16 13:32
10	12	1207Y012.D	1	2ND SRC SVOC 12/06/16		7 Dec 16 14:01
11	60	1207Y160.D	1	SV Tune 10/19/16	water	16 Dec 16 11:14
12	61	1207Y161.D	1	50ug/ml SVOC 12/16/16	water	16 Dec 16 11:32
13	62	1207Y162.D	1	161214A BLK 1/1000	water	16 Dec 16 12:30
14	63	1207Y163.D	1	161214A LCS-1 1/1000	water	16 Dec 16 13:00
15	64	1207Y164.D	0.934579	AZ47343W12 1/1070	water	16 Dec 16 13:31
16	65	1207Y165.D	0.934579	AZ47344W15 1/1070	water	16 Dec 16 14:02
17	66	1207Y166.D	0.934579	AZ47345W26 MS-1 1/1070	water	16 Dec 16 14:32
18	67	1207Y167.D	0.934579	AZ47345W17 MSD-1 1/1070	water	16 Dec 16 15:03
19	68	1207Y168.D	0.934579	AZ47345W23 1/1070	water	16 Dec 16 15:33
20	69	1207Y169.D	1	50ug/ml SVOC 12/16/16	water	16 Dec 16 16:04

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank

EPA 8270D MODIFIED WATER

Blank Name/QCG: **161219W-47345 - 214859**

Batch ID: #87DME-161219A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2-(2-METHOXYETHOXY)-ETHAN	80.0 U	100	80.0	40.0	ug/L	12/19/16	12/20/16

Quant Method:Y0GLYCOL.
Run #:1220Y013
Instrument:Yoda
Sequence:Y161220G
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 12/21/16 12:00:44 PM

Laboratory Control Spike Recovery
EPA 8270D MODIFIED WATER

APPL ID: **161219W-47345 LCS - 214859**
Batch ID: #87DME-161219A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
2-(2-METHOXYETHOXY)-ETHANOL	80.0	43.5	54.4	30-130

Comments: _____

Primary	SPK
Quant Method :	Y0GLYCOL.M
Extraction Date :	12/19/16
Analysis Date :	12/20/16
Instrument :	Yoda
Run :	1220Y017
Initials :	MA

Printed: 12/21/16 12:01:33 PM
APPL Standard LCS

Matrix Spike Recoveries

EPA 8270D MODIFIED WATER

APPL ID: **161219W-47345 MS - 214859**
Batch ID: #87DME-161219A
Sample ID: AZ47345
Client ID: ERH135

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
2-(2-METHOXYETHOXY)-ETHANOL	80.0	ND	52.9	38.4	66.1	48.0	30-130	31.8 #	20

= Recovery is outside QC limits.

Comments:

Primary	SPK	DUP
Quant Method :	Y0GLYCOL.M	Y0GLYCOL.M
Extraction Date :	12/19/16	12/19/16
Analysis Date :	12/20/16	12/20/16
Instrument :	Yoda	Yoda
Run :	1220Y018	1220Y019
Initials :	MA	

Printed: 12/21/16 12:01:46 PM
APPL MSD SCII

EPA 8270D

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81734

Case No: 81734 Date Analyzed: 12/20/16

Matrix: WATER Instrument: Yoda

Blank ID: 161219A-BLK Time Analyzed: 1544

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161219A-BLK	Blank	1220Y013	12/20/16 1544
161219A-BLK	Blank	1220Y013	12/20/16 1544
AZ47343	ERH137	1220Y014	12/20/16 1614
AZ47344	ERH141	1220Y015	12/20/16 1645
AZ47345	ERH135	1220Y016	12/20/16 1715
161219A-LCS	Lab Control Spike	1220Y017	12/20/16 1745
161219A-MS	Matrix Spike	1220Y018	12/20/16 1815
161219A-MSD	Matrix SpikeD	1220Y019	12/20/16 1845
AZ47431	ERH155	1220Y034	12/21/16 0215

Comments: Batch: #87DME-161219A

Printed: 12/21/16 12:01:53 PM

Form 4, Blank Summary

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: ~~1220Y002.D~~ 81734
Matrix: Water mp 1-3-17
ID: SV Tune 11/15/16

SDG No: mp 1-3-17 ~~Yoda~~ 81734
Date Analyzed: 12/20/16
Instrument: Yoda
Time Analyzed: 9:12

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		50ug/ml DEG 11/22/16	1220Y003.D	12/20/16 9:32
2		100ug/ml DEG 11/22/1	1220Y004.D	12/20/16 10:02
3		200ug/ml DEG 11/22/1	1220Y005.D	12/20/16 11:27
4		400ug/ml DEG 11/22/1	1220Y006.D	12/20/16 11:57
5		500ug/ml DEG 11/22/1	1220Y007.D	12/20/16 12:27
6		600ug/ml DEG 11/22/1	1220Y008.D	12/20/16 12:57
7		800ug/ml DEG 11/22/1	1220Y009.D	12/20/16 13:28
8		1000ug/ml DEG 11/22/	1220Y010.D	12/20/16 13:58
9		SS2 DEG 11/22/16	1220Y011.D	12/20/16 15:01
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	44.4
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.0
127	40 - 60% of mass 198	53.6
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 197.95	100.0
199	5 - 9% of mass 198	6.3
275	10 - 30% of mass 198	21.8
365	1 - 100% of mass 198	3.0
441	0.01 - 100% of mass 443	85.0
442	50 - 150% of mass 197.95	98.0
443	17 - 23% of mass 442	19.1

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81734
Matrix: Water
ID: SV Tune 11/15/16

SDG No: 81734
Date Analyzed: 12/20/16
Instrument: Yoda
Time Analyzed: 15:27

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1	Blank	161219A BLK 2/500	1220Y013.D	12/20/16 15:44
2	ERH137	AZ47343W14 2/500	1220Y014.D	12/20/16 16:14
3	ERH141	AZ47344W13 2/500	1220Y015.D	12/20/16 16:45
4	ERH135	AZ47345W31 2/500	1220Y016.D	12/20/16 17:15
5	Lab Control Spike	161219A LCS-1 2/500	1220Y017.D	12/20/16 17:45
6		AZ47345W32 MS-1 2/50	1220Y018.D	12/20/16 18:15
7		AZ47345W32 MSD-1 2/5	1220Y019.D	12/20/16 18:45
8	ERH155	AZ47431W01 2/500 df2	1220Y034.D	12/21/16 2:15
9		500ug/ml DEG 11/22/1	1220Y036.D	12/21/16 2:58
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	42.2
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.6
127	40 - 60% of mass 198	55.1
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 197.95	100.0
199	5 - 9% of mass 198	6.9
275	10 - 30% of mass 198	23.4
365	1 - 100% of mass 198	3.8
441	0.01 - 100% of mass 443	89.8
442	50 - 150% of mass 197.95	95.3
443	17 - 23% of mass 442	18.4

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81734

Lab File ID (Standard): 1220Y007.D Date Analyzed: 12/20/16

Instrument ID: Yoda Time Analyzed: 12:27

GC Column: ID: Heated Purge: (Y/N)

		1,4-dichlorobenzene-D4(IS)		Napthalene-D8(IS)		Acenaphthene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	220710	4.87	916121	6.29	479952	8.31
	UPPER LIMIT	441420	5.37	1832242	6.79	959904	8.81
	LOWER LIMIT	110355	4.37	458061	5.79	239976	7.81
	SAMPLE NO.						
01	SS2 DEG 11/22/16	226449	4.88	946039	6.29	498527	8.31
02	161219A BLK 2/500	207897	4.89	889234	6.30	498710	8.31
03	AZ47343W14 2/500	210365	4.89	928403	6.30	544485	8.31
04	AZ47344W13 2/500	205432	4.89	896509	6.30	515892	8.31
05	AZ47345W31 2/500	210027	4.89	936663	6.30	533440	8.31
06	161219A LCS-1 2/500	189835	4.89	856510	6.30	471037	8.31
07	AZ47345W32 MS-1 2/5(	199630	4.89	867816	6.30	492148	8.31
08	AZ47345W32 MSD-1 2/	196695	4.89	866701	6.30	492244	8.31
09	AZ47431W01 2/500 df2	212992	4.88	916849	6.29	531934	8.31
10	500ug/ml DEG 11/22/16	193156	4.87	829027	6.29	475011	8.30
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 81734

Lab File ID (Standard): 1220Y007.D Date Analyzed: 12/20/16

Instrument ID: Yoda Time Analyzed: 12:27

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Phenanthrene-D10(IS)		Chrysene-D12(IS)		Perylene-D12(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	893005	10.02	850646	13.11	931322	14.75
	UPPER LIMIT	1786010	10.52	1701292	13.61	1862644	15.25
	LOWER LIMIT	446503	9.52	425323	12.61	465661	14.25
	SAMPLE NO.						
01	SS2 DEG 11/22/16	939012	10.02	865583	13.11	853444	14.75
02	161219A BLK 2/500	922012	10.02	877245	13.10	1466320	14.75
03	AZ47343W14 2/500	978244	10.03	858513	13.10	843045	14.74
04	AZ47344W13 2/500	963302	10.02	890654	13.10	657445	14.75
05	AZ47345W31 2/500	998317	10.02	1019130	13.11	1026040	14.75
06	161219A LCS-1 2/500	880654	10.02	842606	13.11	1097660	14.75
07	AZ47345W32 MS-1 2/5(	884267	10.02	845848	13.11	1122380	14.75
08	AZ47345W32 MSD-1 2/	890131	10.02	839478	13.11	838896	14.75
09	AZ47431W01 2/500 df2	977142	10.02	947209	13.11	939912	14.75
10	500ug/ml DEG 11/22/16	879851	10.03	837836	13.10	717154	14.74
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

ORGANICS

Sample Data

APPL, INC.

EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH137
Sample Collection Date: 12/12/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81734
APPL ID: AZ47343
QCG: #87DME-161219A-214859

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	12/19/16	12/20/16

Quant Method: Y0GLYCOL.M
Run #: 1220Y014
Instrument: Yoda
Sequence: Y161220G
Dilution Factor: 1
Initials: MA

Printed: 12/21/16 12:01:53 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y014.D Vial: 14
Acq On : 20 Dec 16 16:14 Operator: MA
Sample : AZ47343W14 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 16:31 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Dec 20 14:47:54 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.89	152	210365	40.00000	ppb	0.02
3) Napthalene-D8(IS)	6.30	136	928403	40.00000	ppb	0.01
4) Acenaphthene-D10(IS)	8.31	164	544485	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	978244	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	858513	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.74	264	843045	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

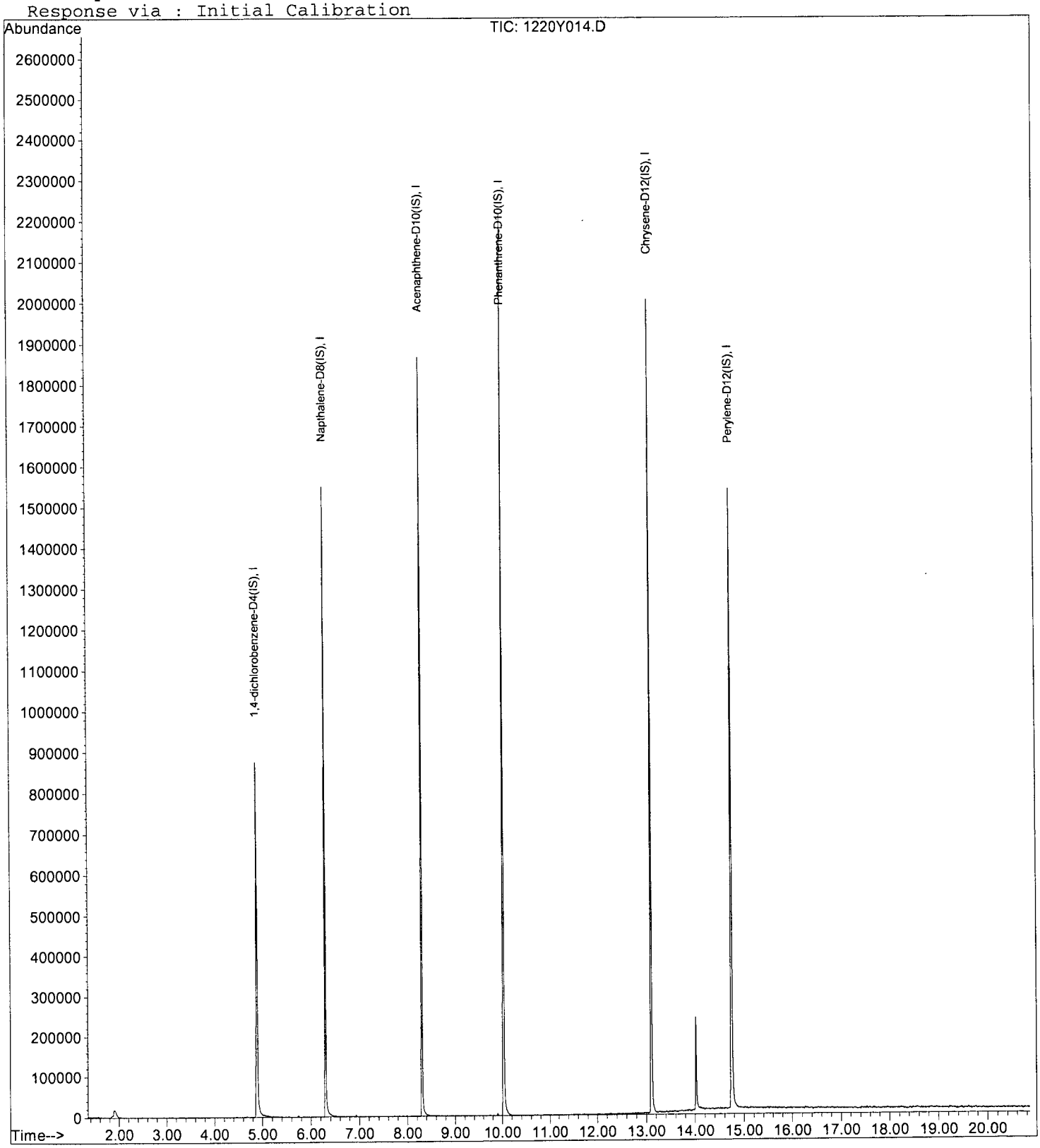
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y014.D Vial: 14
Acq On : 20 Dec 16 16:14 Operator: MA
Sample : AZ47343W14 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 16:31 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 21 10:44:23 2016
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH141
Sample Collection Date: 12/12/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81734
APPL ID: AZ47344
QCG: #87DME-161219A-214859

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	12/19/16	12/20/16

Quant Method: Y0GLYCOL.M
Run #: 1220Y015
Instrument: Yoda
Sequence: Y161220G
Dilution Factor: 1
Initials: MA

Printed: 12/21/16 12:01:54 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y015.D
Acq On : 20 Dec 16 16:45
Sample : AZ47344W13 2/500
Misc :

Vial: 15
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 20 17:01 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Dec 20 14:47:54 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.89	152	205432	40.00000	ppb	0.02
3) Napthalene-D8(IS)	6.30	136	896509	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	515892	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	963302	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	890654	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.75	264	657445	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

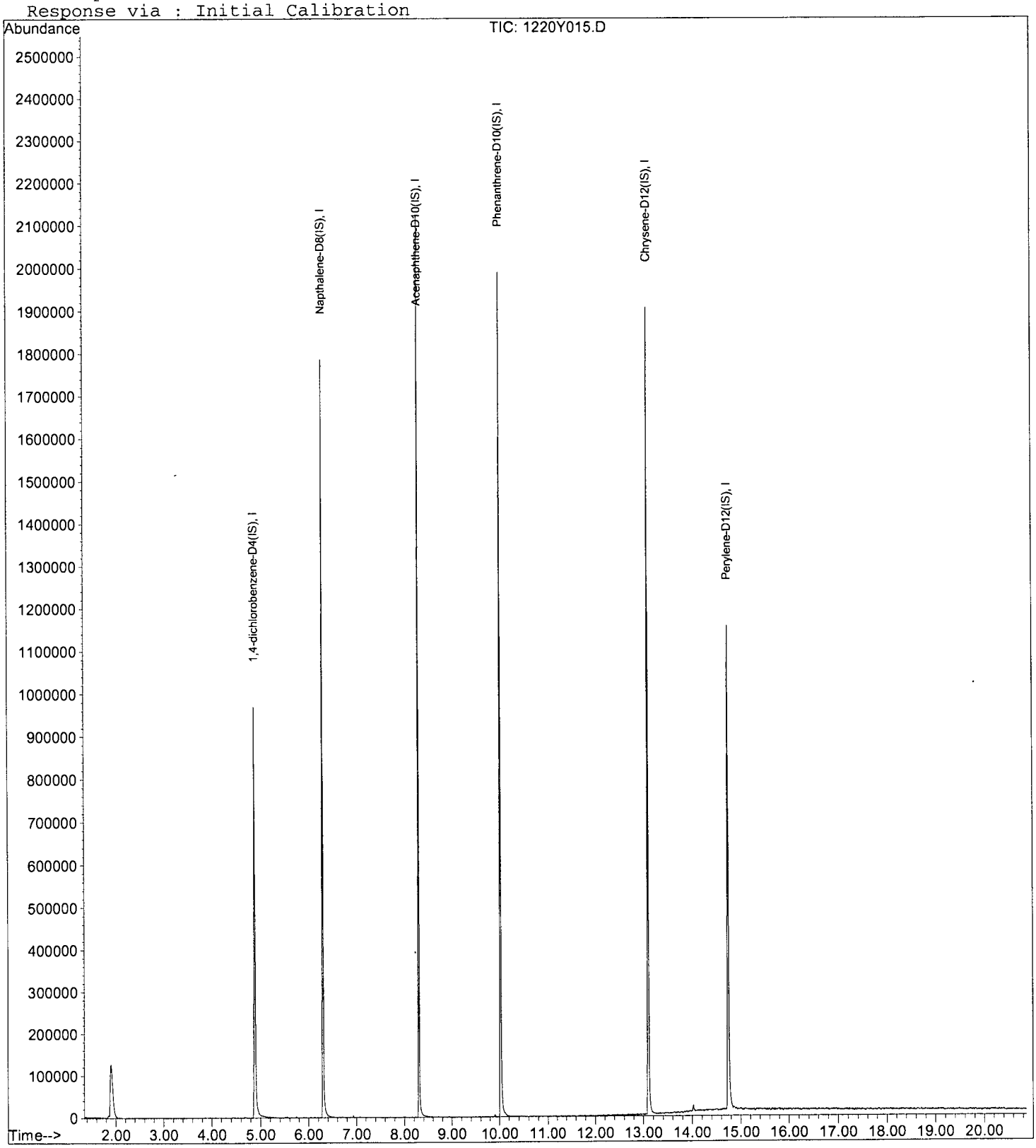
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y015.D Vial: 15
Acq On : 20 Dec 16 16:45 Operator: MA
Sample : AZ47344W13 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 17:01 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 21 10:44:23 2016
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH135
Sample Collection Date: 12/12/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81734
APPL ID: AZ47345
QCG: #87DME-161219A-214859

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	12/19/16	12/20/16

Quant Method: Y0GLYCOL.M
Run #: 1220Y016
Instrument: Yoda
Sequence: Y161220G
Dilution Factor: 1
Initials: MA

Printed: 12/21/16 12:01:54 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y016.D Vial: 16
Acq On : 20 Dec 16 17:15 Operator: MA
Sample : AZ47345W31 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 17:30 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Dec 20 14:47:54 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.89	152	210027	40.00000	ppb	0.02
3) Napthalene-D8(IS)	6.30	136	936663	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	533440	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	998317	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.11	240	1019134	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.75	264	1026036	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

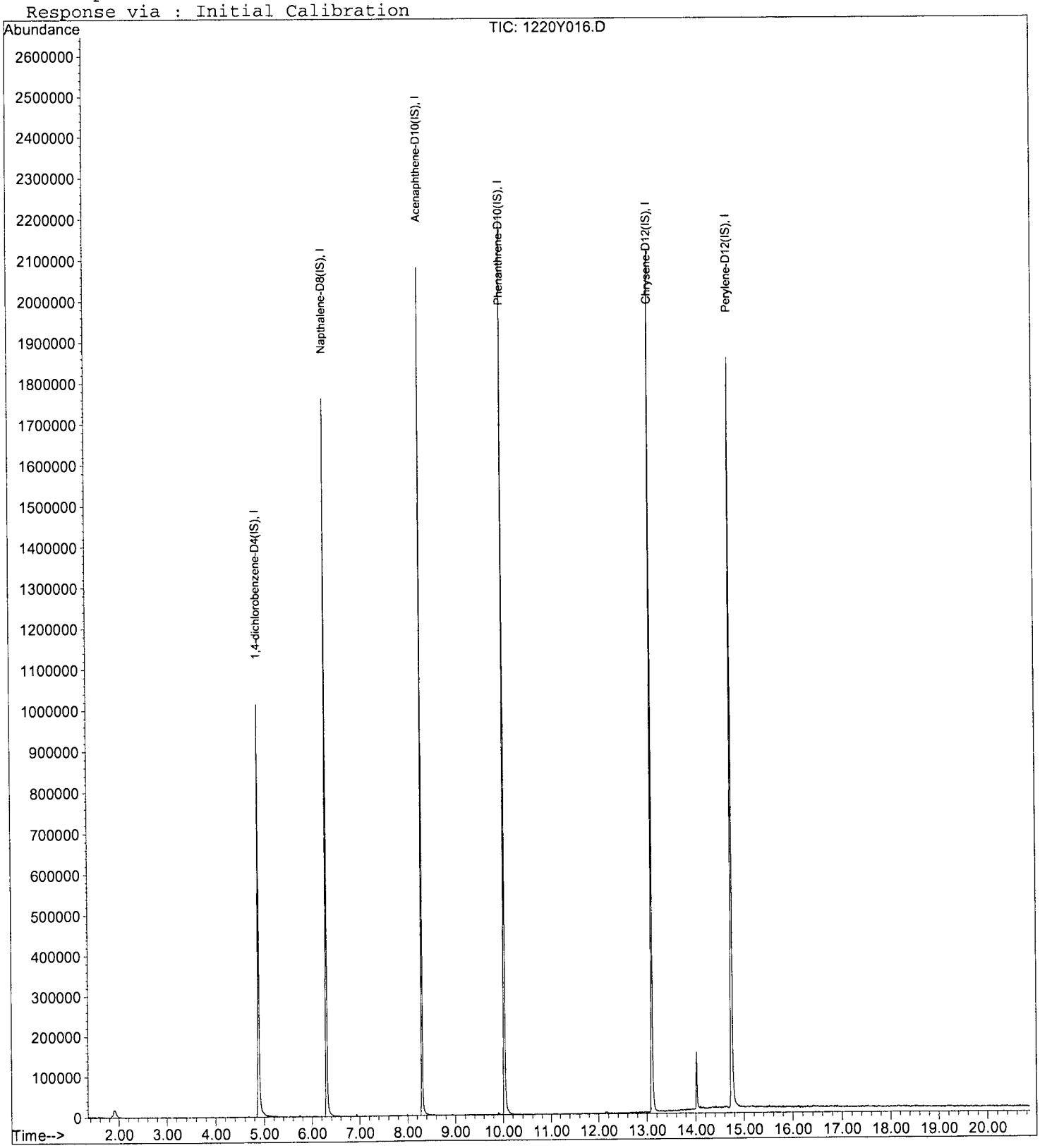
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y016.D
Acq On : 20 Dec 16 17:15
Sample : AZ47345W31 2/500
Misc :

Vial: 16
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 20 17:30 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 21 10:44:23 2016
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH155
Sample Collection Date: 11/18/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81734
APPL ID: AZ47431
QCG: #87DME-161219A-214859

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	700	200	160.0	80.0	ug/L	12/19/16	12/21/16

Quant Method: Y0GLYCOL.M
Run #: 1220Y034
Instrument: Yoda
Sequence: Y161220G
Dilution Factor: 2
Initials: MA

Printed: 12/21/16 12:01:54 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y034.D
Acq On : 21 Dec 16 2:15
Sample : AZ47431W01 2/500 df2
Misc :

Vial: 34
Operator: MA
Inst : Yoda
Multiplr: 2.00

Quant Time: Dec 21 10:16 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Dec 20 14:47:54 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.88	152	212992	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	916849	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	531934	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	977142	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.11	240	947209	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.75	264	939912	40.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.09	45	396891	695.21540	ppb	99

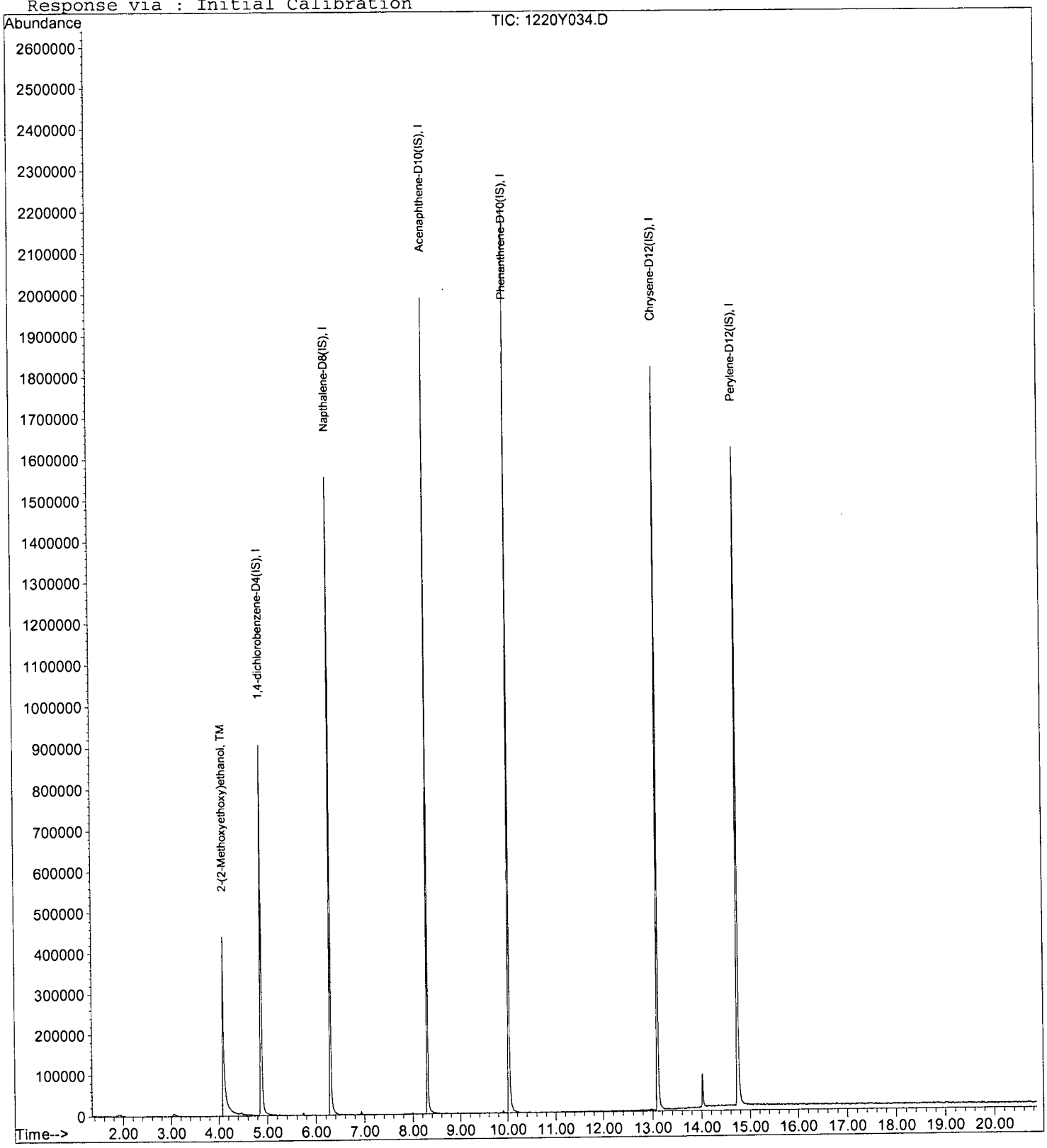
(#) = qualifier out of range (m) = manual integration
1220Y034.D Y0GLYCOL.M Wed Dec 21 12:12:18 2016

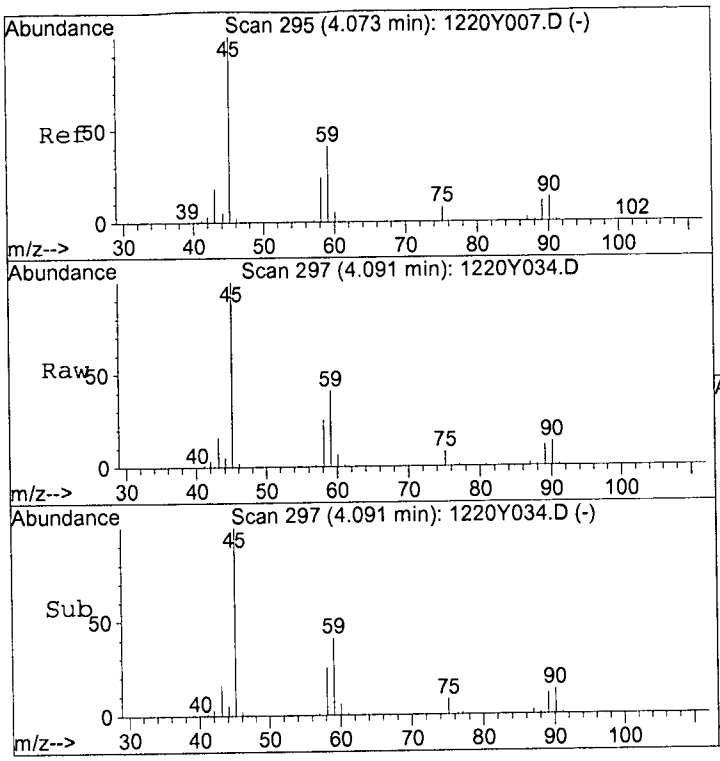
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y034.D Vial: 34
Acq On : 21 Dec 16 2:15 Operator: MA
Sample : AZ47431W01 2/500 df2 Inst : Yoda
Misc : Multiplr: 2.00

Quant Time: Dec 21 10:16 2016 Quant Results File: YOGLYCOL.RES

Method : M:\YODA\DATA\Y161220G\YOGLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 21 10:52:52 2016
Response via : Initial Calibration

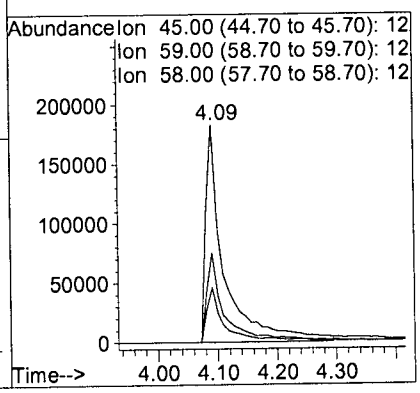




#2
2-(2-Methoxyethoxy)ethanol
Concen: 695.21540 ppb
RT: 4.09 min Scan# 297
Delta R.T. 0.02 min
Lab File: 1220Y034.D
Acq: 21 Dec 16 2:15

Tgt Ion: 45 Resp: 396891

Ion	Ratio	Lower	Upper
45	100		
59	41.0	28.4	52.8
58	25.1	16.9	31.5



ORGANICS

Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Initial Cal. Date: 12/20/16

Matrix: Instrument: Yoda

Initials:

			1220Y003 D	1220Y004.D	1220Y005.D	1220Y006.D	1220Y007 D	1220Y008.D	1220Y009 D	1220Y010.D						
		Compound	1	2	3	4	5	6	7	8			Avg	%RSD		
1	I	1,4-dichlorobenzene-D4(IS)														
2	TM	2-(2-Methoxyethoxy)ethanol	0.1800	0.1823	0.2140	0.2253	0.2267	0.2342	0.2268	0.2261			0.21	9.9	TM	
3	I	Napthalene-D8(IS)														
4	I	Acenaphthene-D10(IS)														
5	I	Phenanthrene-D10(IS)														
6	I	Chrysene-D12(IS)														
7	I	Perylene-D12(IS)														
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Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y003.D Vial: 3
Acq On : 20 Dec 16 9:32 Operator: MA
Sample : 50ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:24 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:24:33 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	235296	40.00	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	1020104	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	566383	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	1039128	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	951820	40.00	ppb	0.00
7) Perylene-D12(IS)	14.74	264	863918	40.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.12	45	52929	41.96	ppb	95

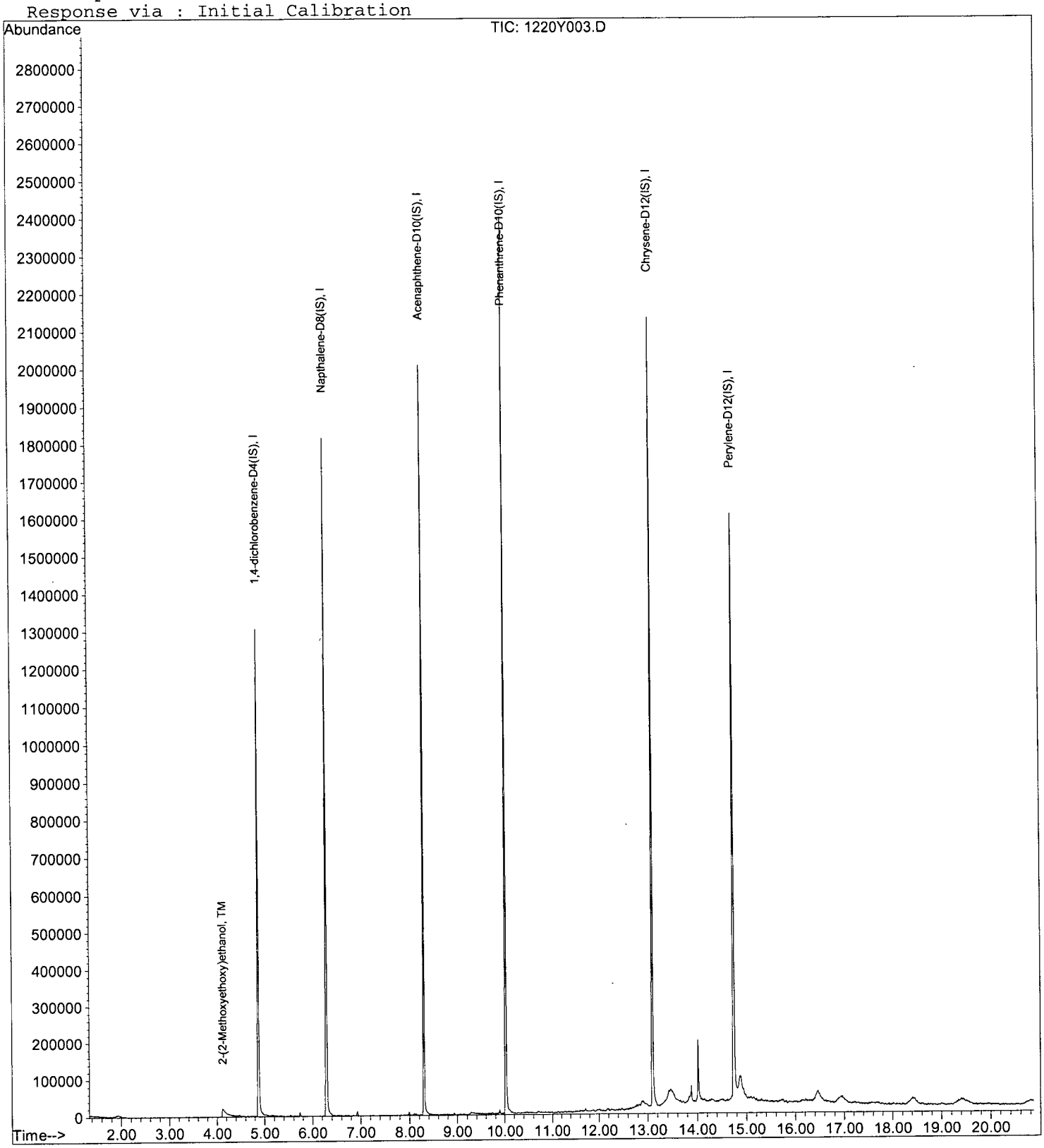
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y003.D Vial: 3
Acq On : 20 Dec 16 9:32 Operator: MA
Sample : 50ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:24 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:24:33 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y004.D Vial: 4
Acq On : 20 Dec 16 10:02 Operator: MA
Sample : 100ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:28 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:27:52 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	236538	40.00	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	1021117	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	569209	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	1067696	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	1009921	40.00	ppb	0.00
7) Perylene-D12(IS)	14.74	264	992895	40.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.09	45	107826	85.04	ppb	92

(#) = qualifier out of range (m) = manual integration

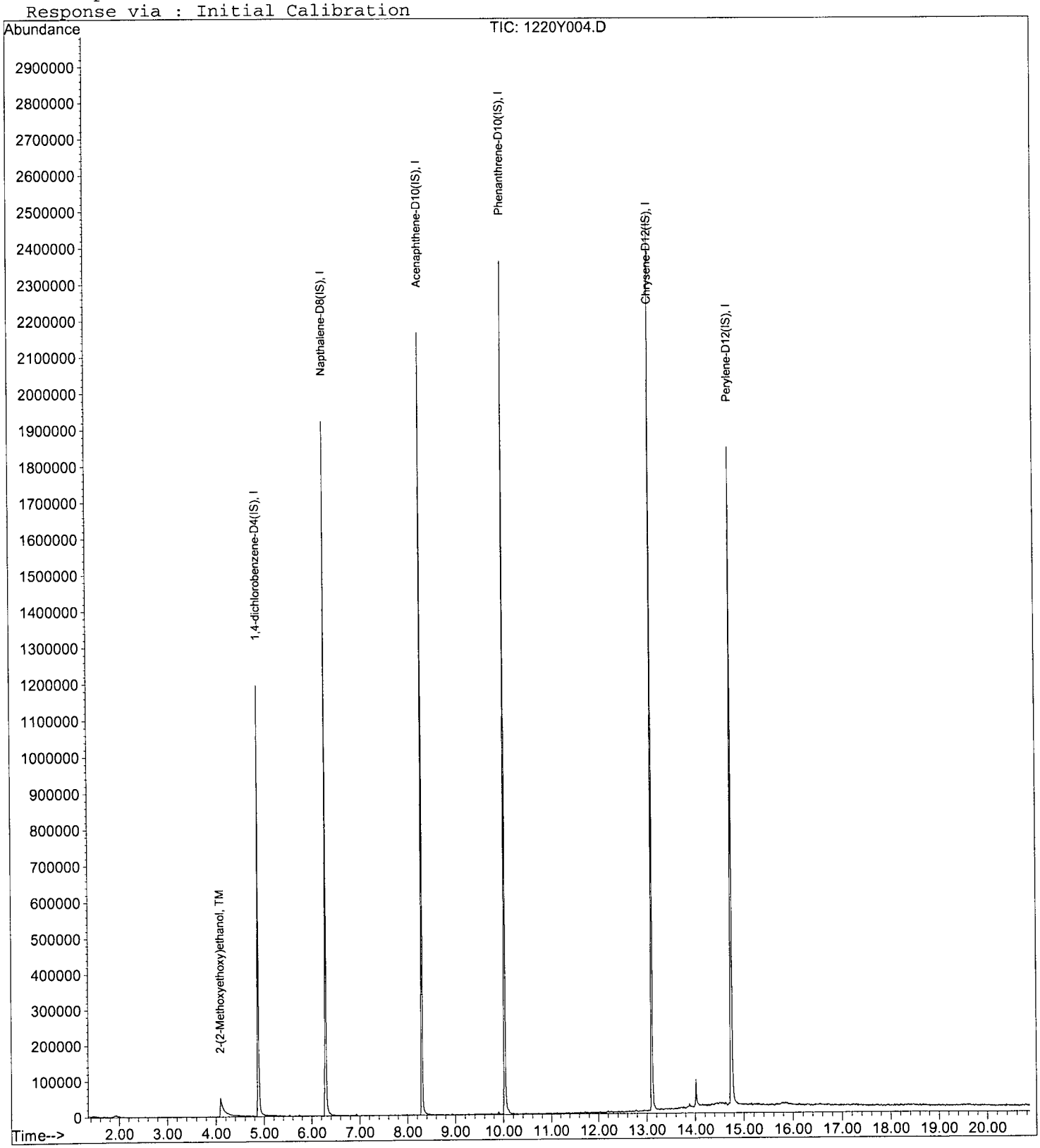
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y004.D
Acq On : 20 Dec 16 10:02
Sample : 100ug/ml DEG 12/20/16
Misc :

Vial: 4
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:28 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:27:52 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y005.D Vial: 5
Acq On : 20 Dec 16 11:27 Operator: MA
Sample : 200ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:31 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:27:52 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	219199	40.00	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	935952	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	541303	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	969145	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.11	240	850962	40.00	ppb	0.00
7) Perylene-D12(IS)	14.75	264	955898	40.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.06	45	234542	199.60	ppb	99

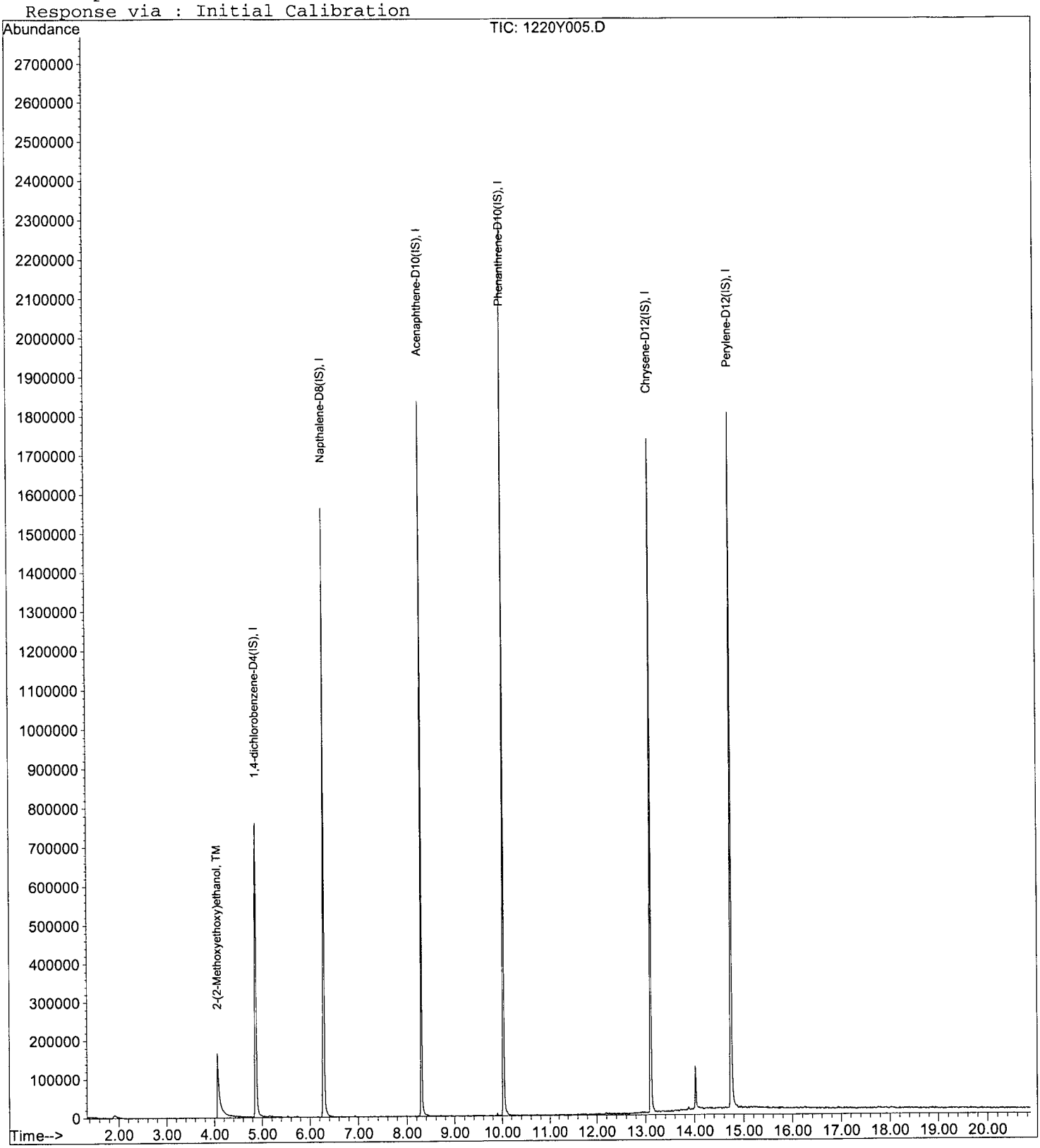
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y005.D Vial: 5
Acq On : 20 Dec 16 11:27 Operator: MA
Sample : 200ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:31 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:27:52 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y006.D Vial: 6
Acq On : 20 Dec 16 11:57 Operator: MA
Sample : 400ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:31 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:27:52 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	219938	40.00	ppb	-0.02
3) Napthalene-D8(IS)	6.29	136	934708	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	524564	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	930250	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	927639	40.00	ppb	0.00
7) Perylene-D12(IS)	14.74	264	801484	40.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.07	45	495610	420.36	ppb	98

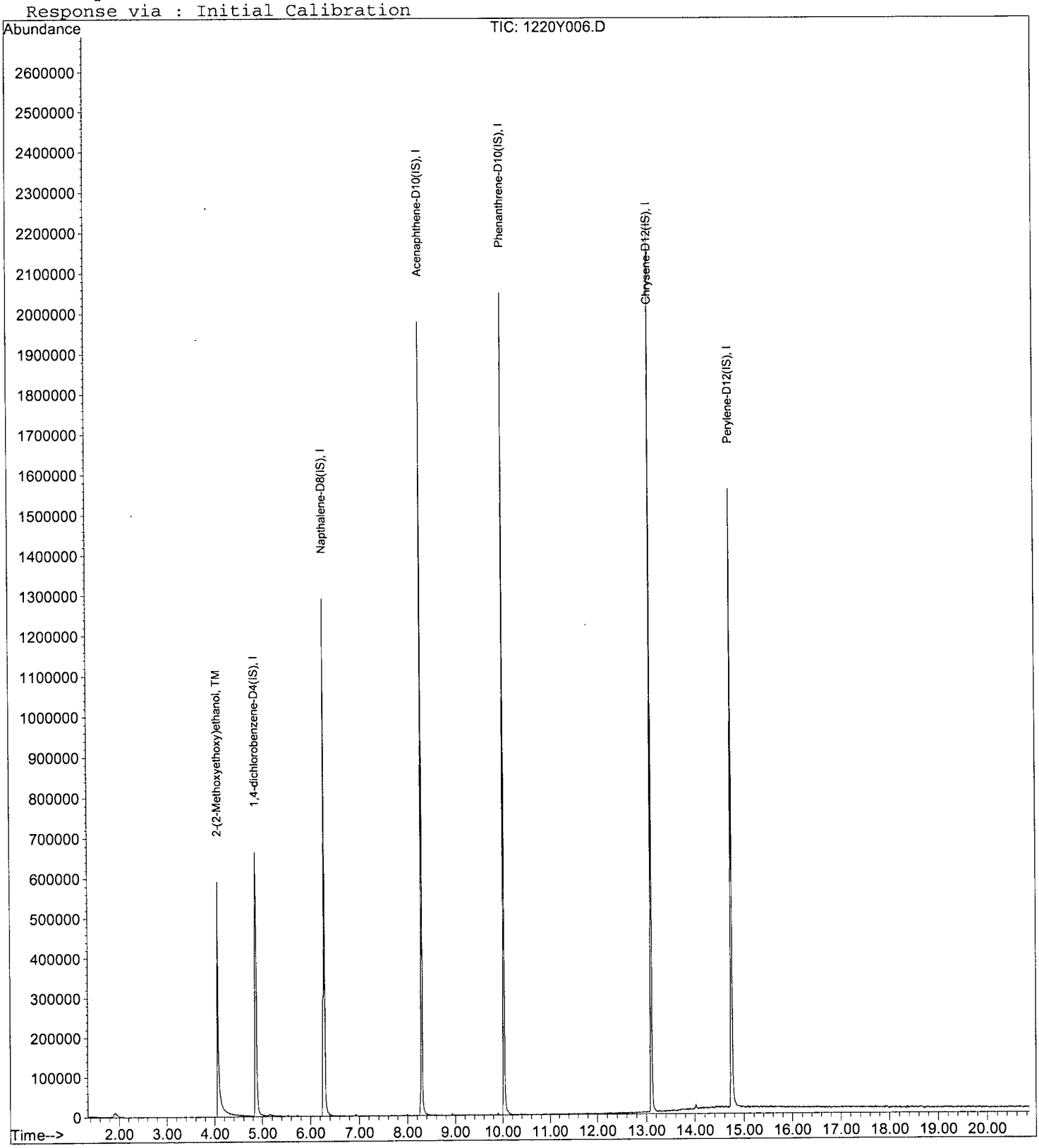
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y006.D Vial: 6
Acq On : 20 Dec 16 11:57 Operator: MA
Sample : 400ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:31 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:27:52 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y007.D
Acq On : 20 Dec 16 12:27
Sample : 500ug/ml DEG 12/20/16
Misc :

Vial: 7
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 20 15:31 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Dec 20 14:47:54 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	220710	40.00000 ppb	0.00
3) Napthalene-D8(IS)	6.29	136	916121	40.00000 ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	479952	40.00000 ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	893005	40.00000 ppb	0.00
6) Chrysene-D12(IS)	13.11	240	850646	40.00000 ppb	0.00
7) Perylene-D12(IS)	14.75	264	931322	40.00000 ppb	0.00

System Monitoring Compounds

Target Compounds					Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.07	45	625337	528.53475 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

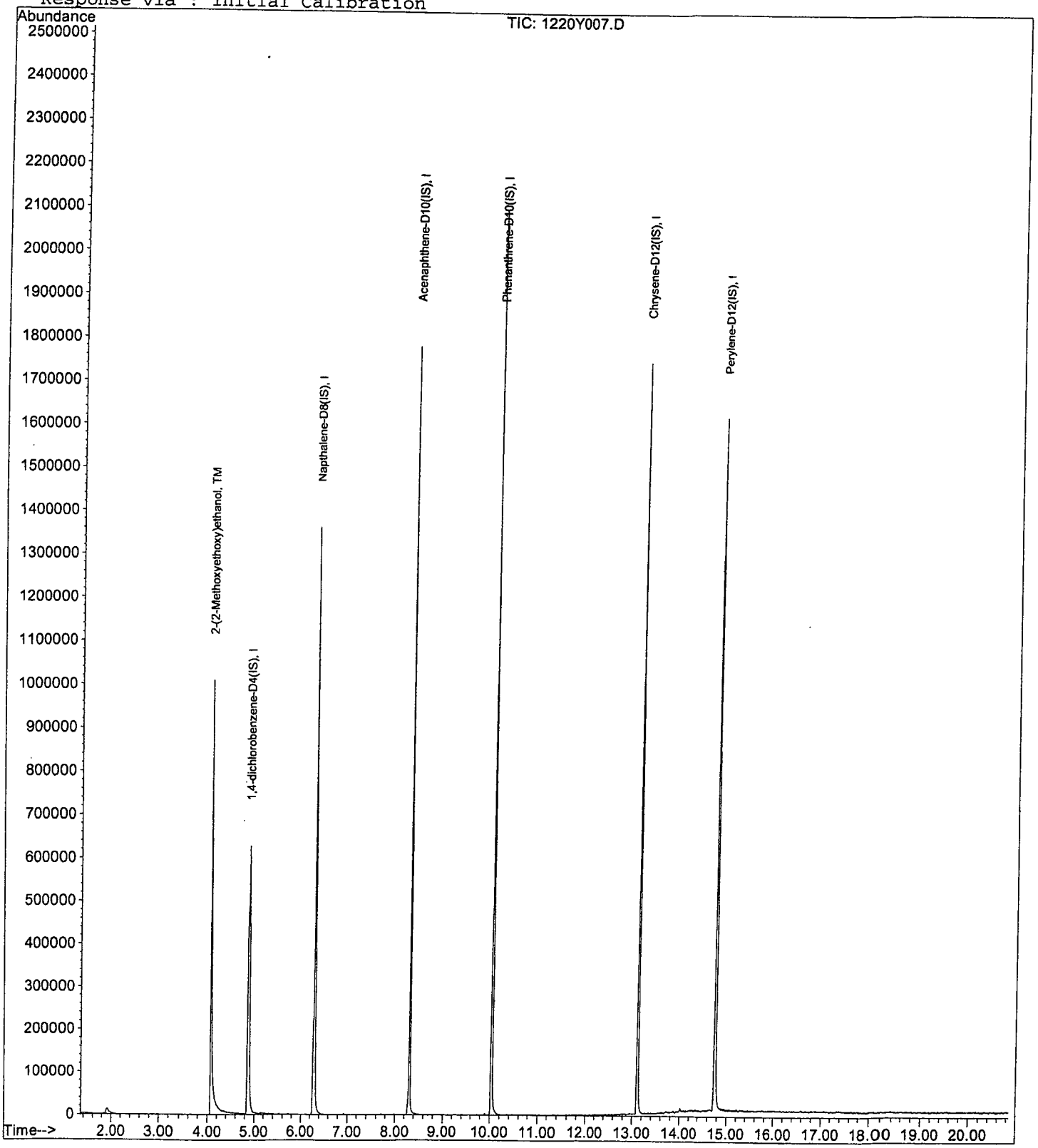
Data File : M:\YODA\DATA\Y161220G\1220Y007.D
Acq On : 20 Dec 16 12:27
Sample : 500ug/ml DEG 12/20/16
Misc :

Vial: 7
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 20 15:31 2016

Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 21 10:52:52 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y008.D Vial: 8
Acq On : 20 Dec 16 12:57 Operator: MA
Sample : 600ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:35 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:35:45 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.88	152	218598	40.00	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	918286	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	502491	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	904865	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.11	240	875224	40.00	ppb	0.00
7) Perylene-D12(IS)	14.75	264	907883	40.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.08	45	767935	655.33	ppb	99

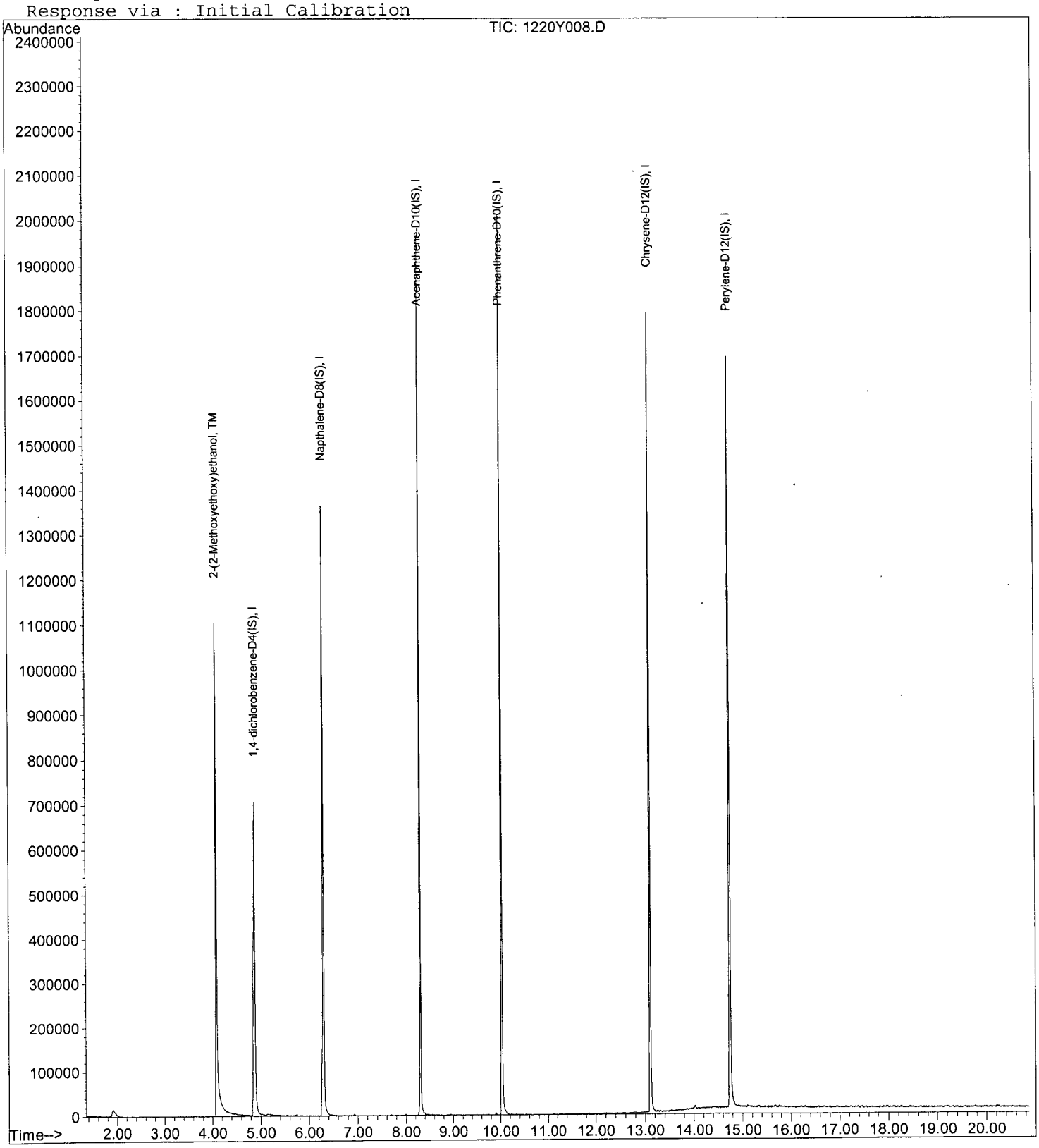
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y008.D Vial: 8
Acq On : 20 Dec 16 12:57 Operator: MA
Sample : 600ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:35 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:35:45 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y009.D Vial: 9
Acq On : 20 Dec 16 13:28 Operator: MA
Sample : 800ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:36 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:35:45 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.88	152	224351	40.00	ppb	0.01
3) Napthalene-D8(IS)	6.29	136	955028	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	537186	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	1003381	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	910308	40.00	ppb	0.00
7) Perylene-D12(IS)	14.75	264	853883	40.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.09	45	1017711	846.21	ppb	98

(#) = qualifier out of range (m) = manual integration

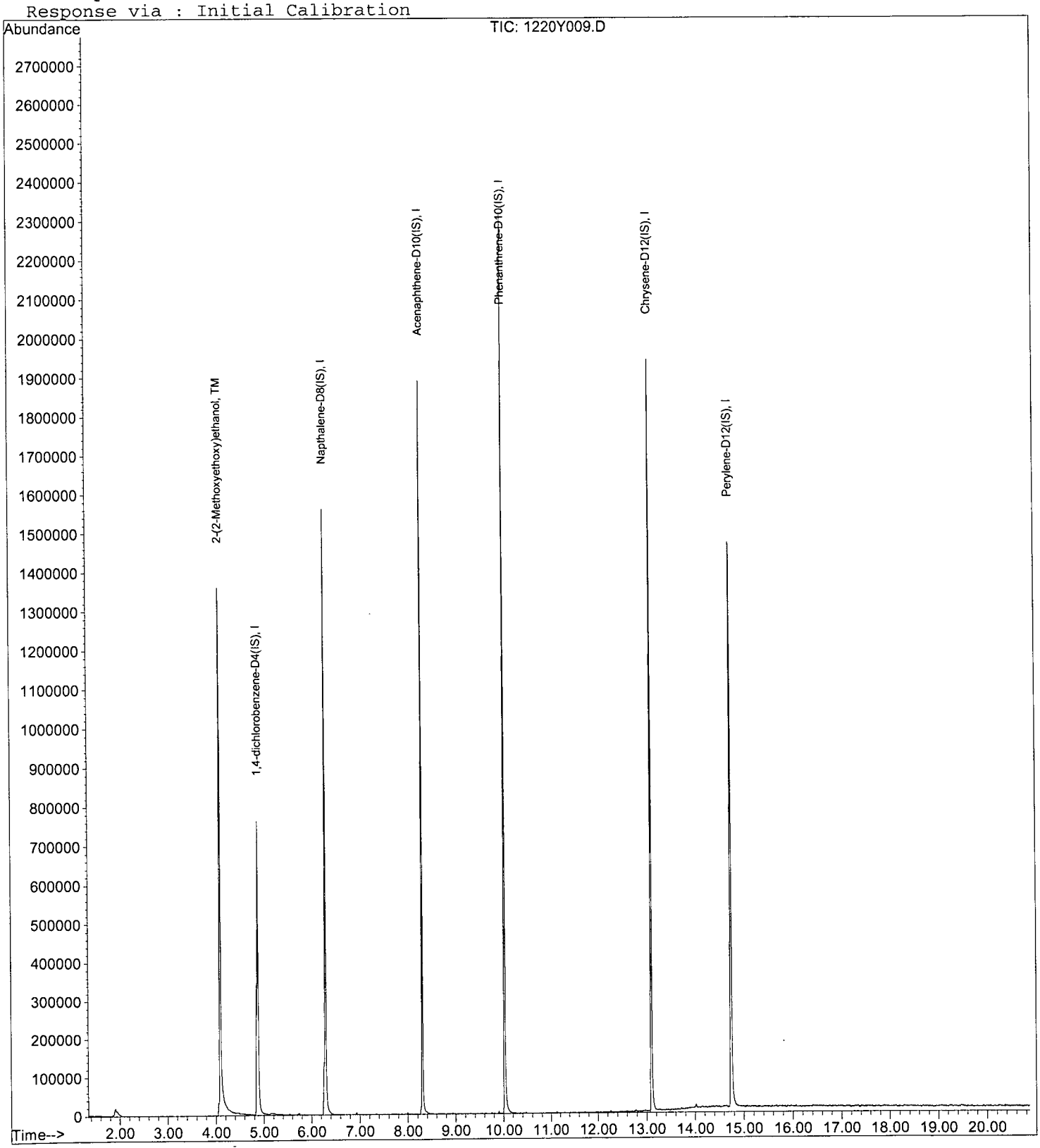
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y009.D
Acq On : 20 Dec 16 13:28
Sample : 800ug/ml DEG 12/20/16
Misc :

Vial: 9
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:36 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:35:45 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y010.D Vial: 10
Acq On : 20 Dec 16 13:58 Operator: MA
Sample : 1000ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:37 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:35:45 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	283148	40.00	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	1210963	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	689185	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	1234610	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.11	240	1201158	40.00	ppb	0.00
7) Perylene-D12(IS)	14.75	264	1162204	40.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.12	45	1600487	1054.44	ppb	99

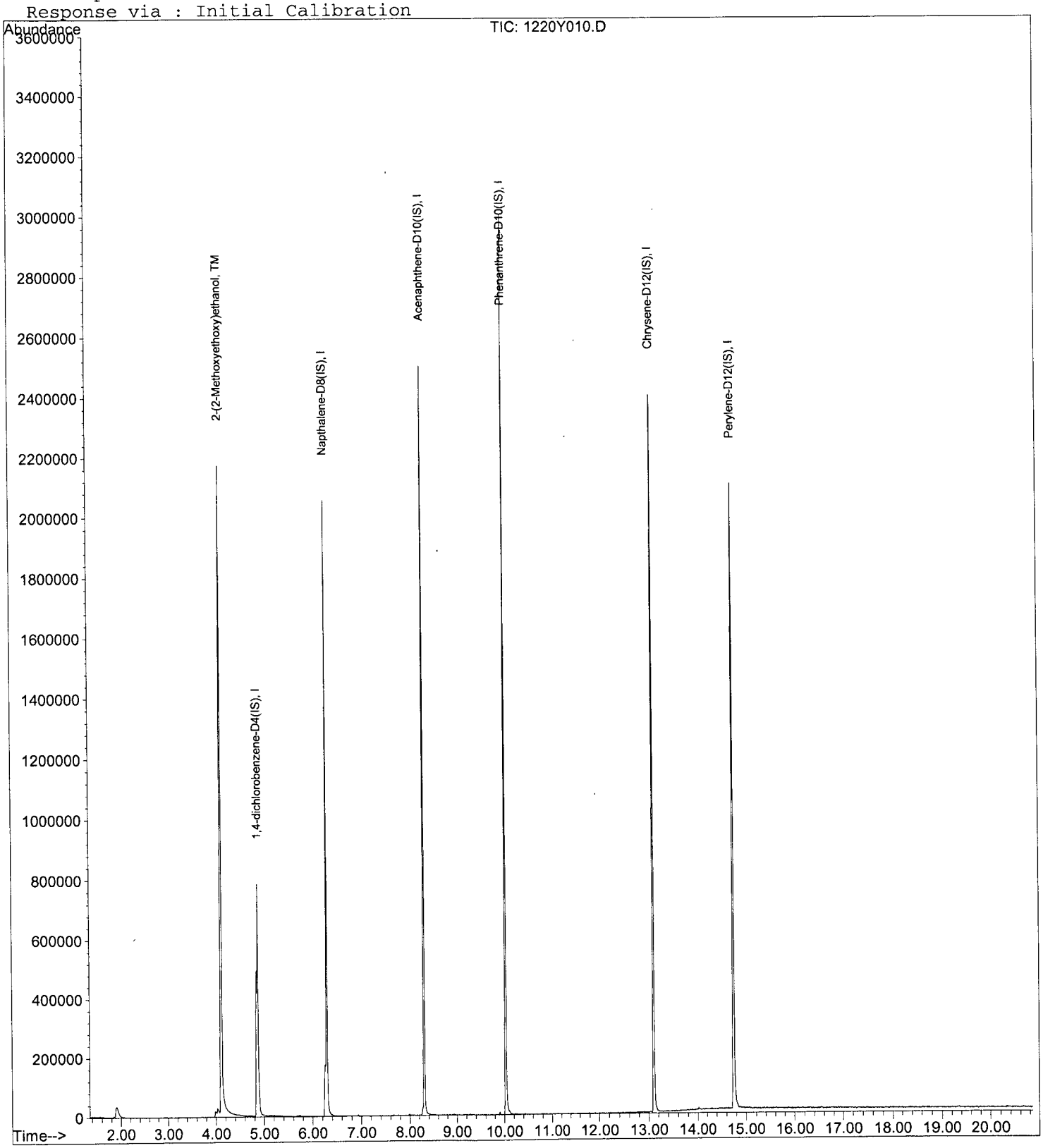
(#) = qualifier out of range (m) = manual integration
1220Y010.D Y0GLYCOL.M Thu Jan 19 15:37:34 2017 Page 1

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y010.D Vial: 10
Acq On : 20 Dec 16 13:58 Operator: MA
Sample : 1000ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:37 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:35:45 2017
Response via : Initial Calibration



Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/20/16
Instrument: Yoda
Initial Cal. Date: 12/20/16
Data File: 1220Y011.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	2-(2-Methoxyethoxy)ethanol	0.2144	0.2388	11	TM	
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			11.0		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y011.D
Acq On : 20 Dec 16 15:01
Sample : SS2 DEG 12/20/16
Misc :

Vial: 11
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 20 15:16 2016

Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Dec 20 14:47:54 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.88	152	226449	40.00000 ppb	0.00
3) Napthalene-D8(IS)	6.29	136	946039	40.00000 ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	498527	40.00000 ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	939012	40.00000 ppb	0.00
6) Chrysene-D12(IS)	13.11	240	865583	40.00000 ppb	0.00
7) Perylene-D12(IS)	14.75	264	853444	40.00000 ppb	0.00

System Monitoring Compounds

Target Compounds					Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.08	45	676019	556.89065 ppb	99

Algorithm = $\frac{676019 \times 40 \times 1}{226449 \times 0.2144} = 556.9$ MA 12/29/16

(#) = qualifier out of range (m) = manual integration
1220Y011.D Y0GLYCOL.M Wed Dec 21 12:44:47 2016 Page 1

Quantitation Report

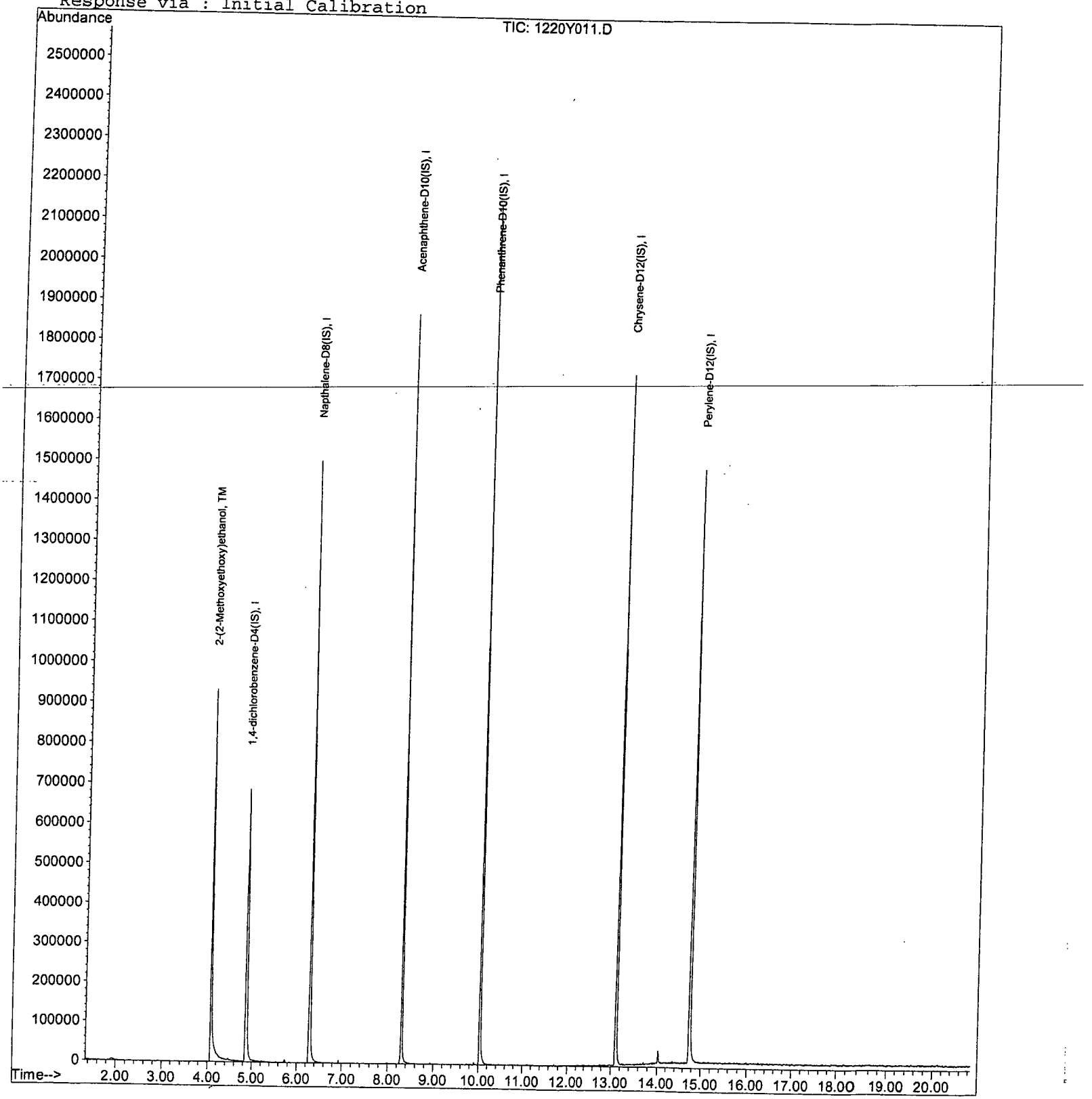
Data File : M:\YODA\DATA\Y161220G\1220Y011.D
Acq On : 20 Dec 16 15:01
Sample : SS2 DEG 12/20/16
Misc :

Vial: 11
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 20 15:16 2016

Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 21 10:52:52 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/21/16
Instrument: Yoda
Initial Cal. Date: 12/20/16
Data File: 1220Y036.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	2-(2-Methoxyethoxy)ethanol	0.2144	0.2292	6.9	TM	
3	I	Napthalene-D8(IS)	ISTD			I	
4	I	Acenaphthene-D10(IS)	ISTD			I	
5	I	Phenanthrene-D10(IS)	ISTD			I	
6	I	Chrysene-D12(IS)	ISTD			I	
7	I	Perylene-D12(IS)	ISTD			I	
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
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28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			6.9		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y036.D Vial: 36
Acq On : 21 Dec 16 2:58 Operator: MA
Sample : 500ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 21 10:11 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Dec 20 14:47:54 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	193156	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	829027	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	475011	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	879851	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	837836	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.74	264	717154	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.08	45	553398	534.45459	ppb	98

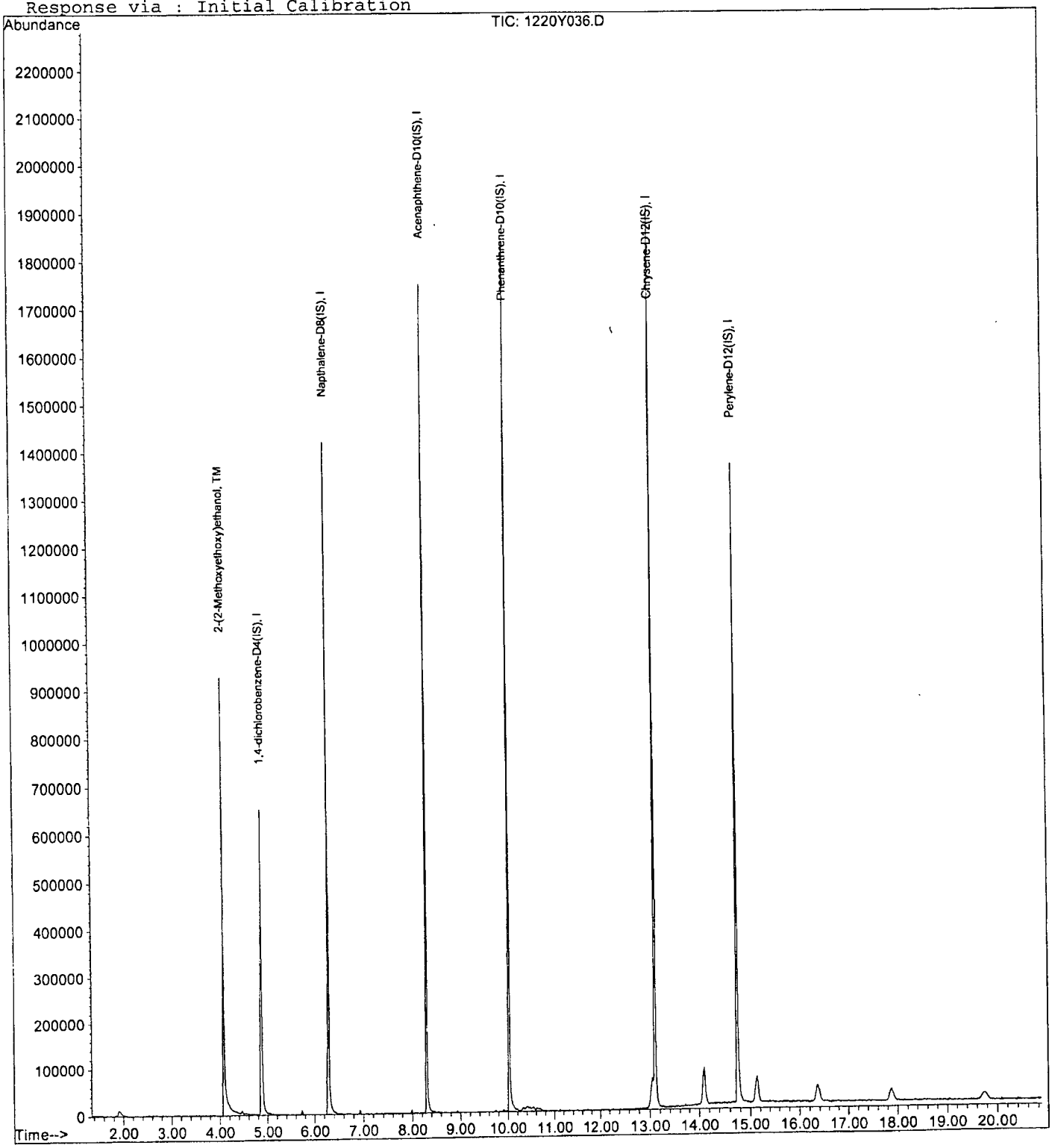
(#) = qualifier out of range (m) = manual integration
1220Y036.D Y0GLYCOL.M Wed Dec 21 12:45:16 2016 Page 1

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y036.D Vial: 36
Acq On : 21 Dec 16 2:58 Operator: MA
Sample : 500ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 21 10:11 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 21 10:52:52 2016
Response via : Initial Calibration



ORGANICS

Raw Data

APPL, INC.

Method Blank

EPA 8270D MODIFIED WATER

Blank Name/QCG: **161219W-47345 - 214859**

Batch ID: #87DME-161219A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2-(2-METHOXYETHOXY)-ETHAN	80.0 U	100	80.0	40.0	ug/L	12/19/16	12/20/16

Quant Method:Y0GLYCOL.
Run #:1220Y013
Instrument:Yoda
Sequence:Y161220G
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 12/21/16 12:01:59 PM

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y013.D Vial: 13
Acq On : 20 Dec 16 15:44 Operator: MA
Sample : 161219A BLK 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 16:14 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Dec 20 14:47:54 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.89	152	207897	40.00000	ppb	0.02
3) Napthalene-D8(IS)	6.30	136	889234	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	498710	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	922012	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	877245	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.75	264	1466318	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

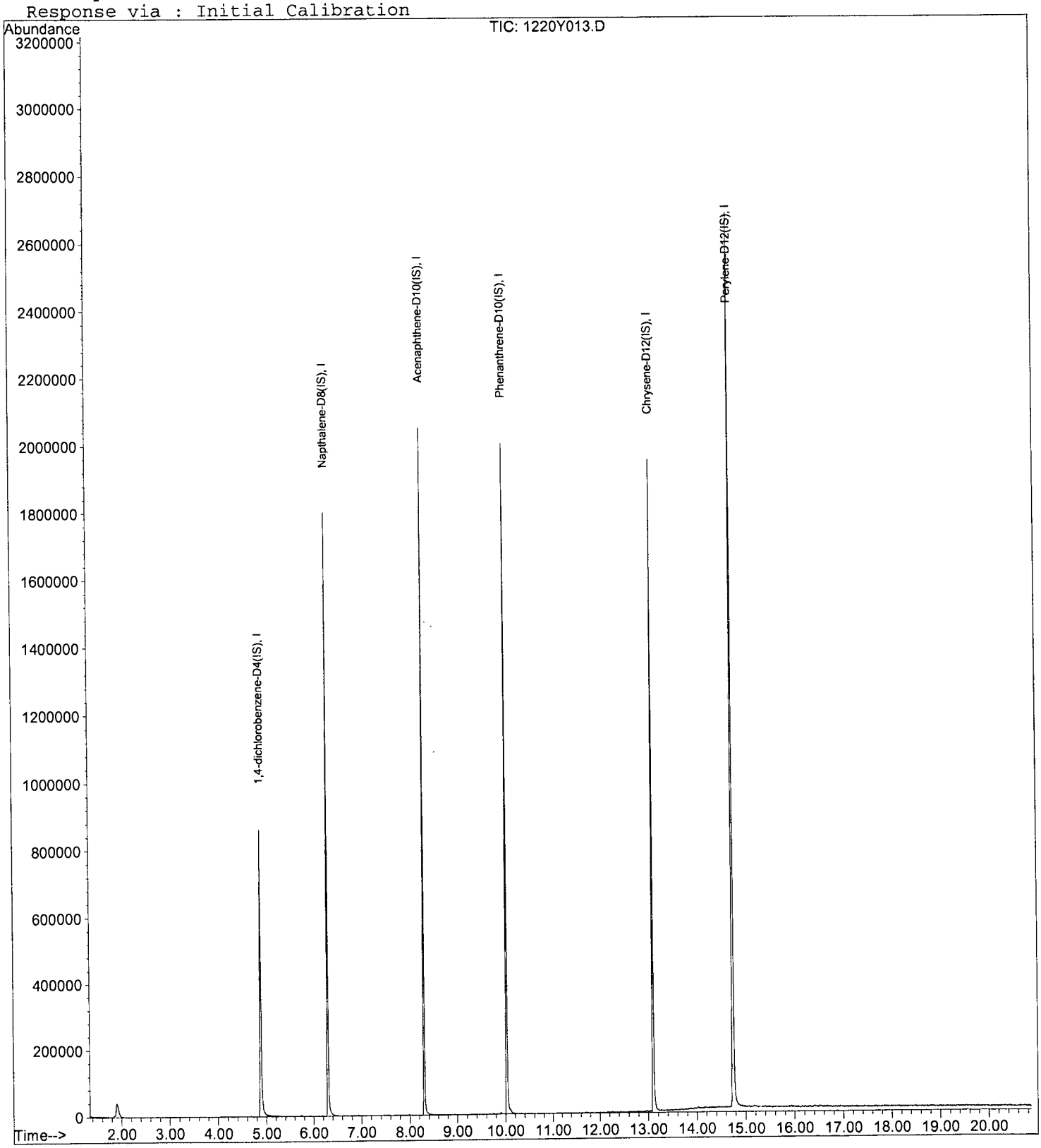
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y013.D
Acq On : 20 Dec 16 15:44
Sample : 161219A BLK 2/500
Misc :

Vial: 13
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 20 16:14 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 21 10:52:52 2016
Response via : Initial Calibration



Laboratory Control Spike Recovery
EPA 8270D MODIFIED WATER

APPL ID: **161219W-47345 LCS - 214859**
Batch ID: #87DME-161219A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
2-(2-METHOXYETHOXY)-ETHANOL	80.0	43.5	54.4	30-130

Comments: _____

Primary	SPK
Quant Method :	Y0GLYCOL.M
Extraction Date :	12/19/16
Analysis Date :	12/20/16
Instrument :	Yoda
Run :	1220Y017
Initials :	MA

Printed: 12/21/16 12:01:59 PM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y017.D Vial: 17
Acq On : 20 Dec 16 17:45 Operator: MA
Sample : 161219A LCS-1 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 21 10:44 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 21 10:44:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.89	152	189835	40.00000	ppb	0.02
3) Napthalene-D8(IS)	6.30	136	856510	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	471037	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	880654	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	842606	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.75	264	1097663	40.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.19	45	44294	43.52613	ppb	97

Algorithm = $\frac{44294 \times 1 \times 40}{189835 \times 0.2144} = 43.5$ MA 12/21/16

(#) = qualifier out of range (m) = manual integration
1220Y017.D Y0GLYCOL.M Wed Dec 21 12:10:02 2016 Page 1

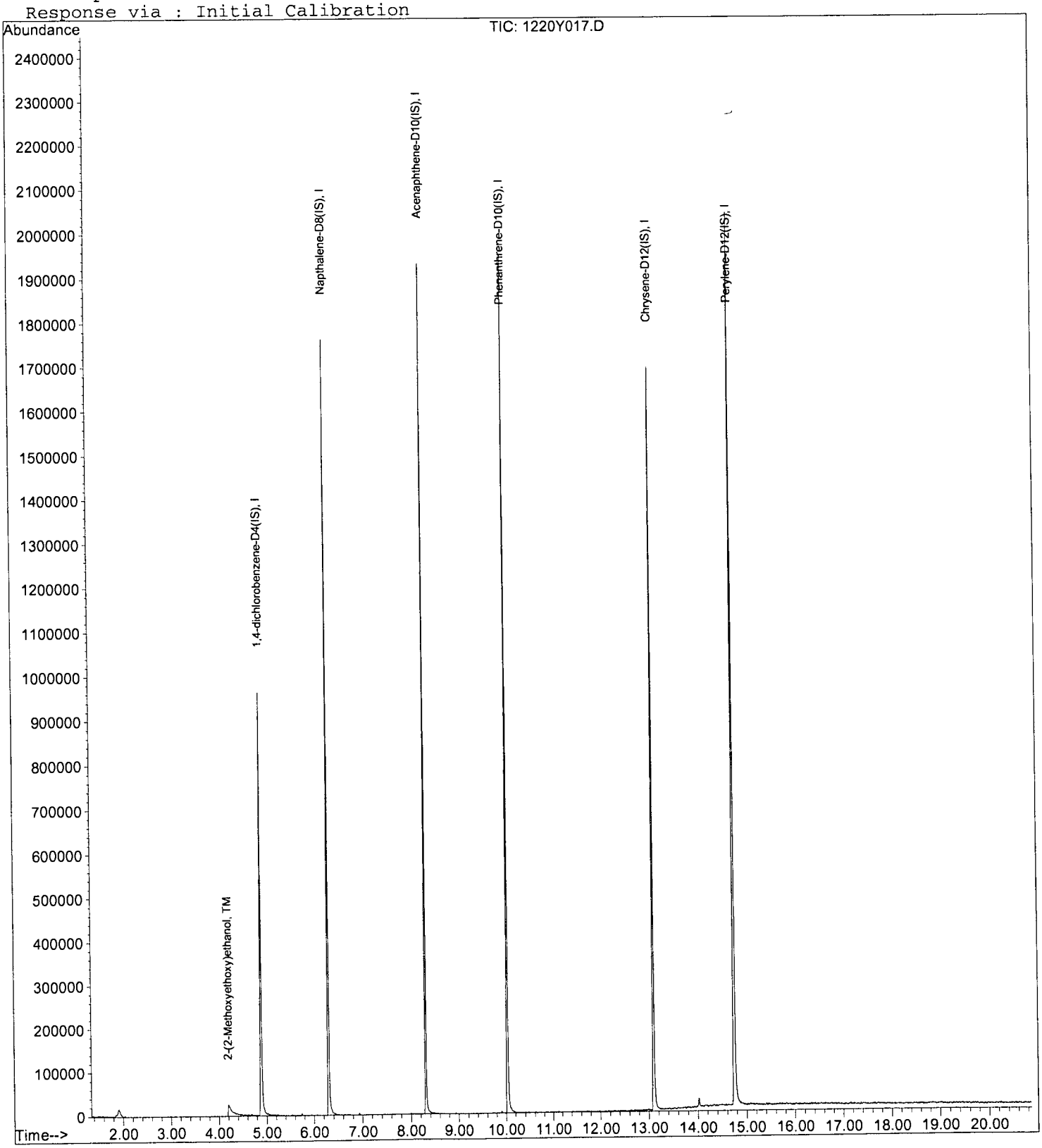
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y017.D
Acq On : 20 Dec 16 17:45
Sample : 161219A LCS-1 2/500
Misc :

Vial: 17
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 21 10:44 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 21 10:52:52 2016
Response via : Initial Calibration



Matrix Spike Recoveries

EPA 8270D MODIFIED WATER

APPL ID: **161219W-47345 MS - 214859**
Batch ID: #87DME-161219A
Sample ID: AZ47345
Client ID: ERH135

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
2-(2-METHOXYETHOXY)-ETHANOL	80.0	ND	52.9	38.4	66.1	48.0	30-130	31.8 #	20

= Recovery is outside QC limits.

Comments:

Primary	SPK	DUP
Quant Method :	Y0GLYCOL.M	Y0GLYCOL.M
Extraction Date :	12/19/16	12/19/16
Analysis Date :	12/20/16	12/20/16
Instrument :	Yoda	Yoda
Run :	1220Y018	1220Y019
Initials :	MA	

Printed: 12/21/16 12:02:07 PM
APPL MSD SCII

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y018.D Vial: 18
Acq On : 20 Dec 16 18:15 Operator: MA
Sample : AZ47345W32 MS-1 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 21 10:44 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 21 10:44:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.89	152	199630	40.00000	ppb	0.02
3) Napthalene-D8(IS)	6.30	136	867816	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	492148	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	884267	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.11	240	845848	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.75	264	1122378	40.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.18	45	56586	52.87673	ppb	91

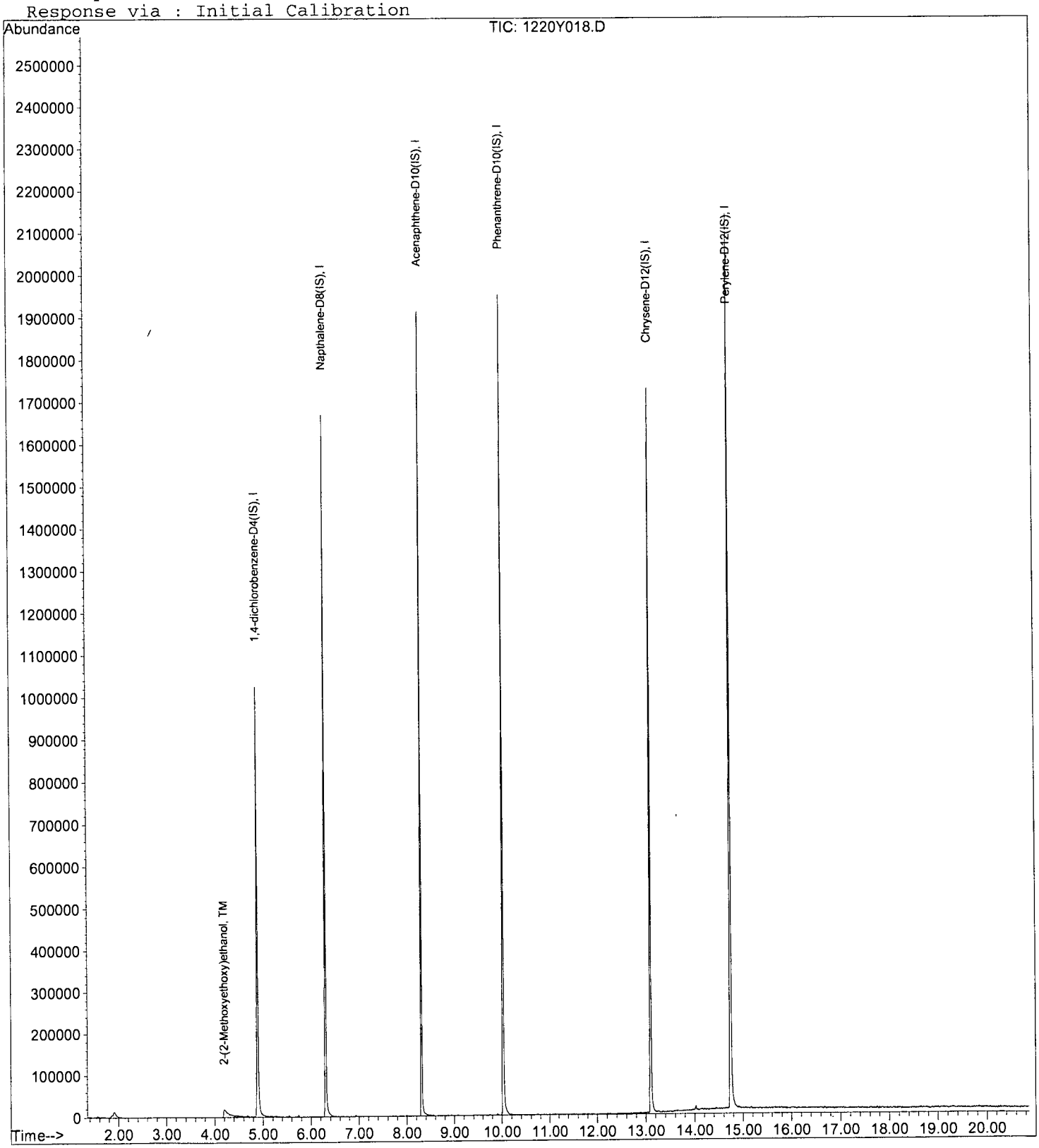
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y018.D Vial: 18
Acq On : 20 Dec 16 18:15 Operator: MA
Sample : AZ47345W32 MS-1 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 21 10:44 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 21 10:44:23 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y019.D Vial: 19
Acq On : 20 Dec 16 18:45 Operator: MA
Sample : AZ47345W32 MSD-1 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 21 10:44 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 21 10:44:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.89	152	196695	40.00000	ppb	0.02
3) Napthalene-D8(IS)	6.30	136	866701	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	492244	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	890131	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.11	240	839478	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.75	264	838896	40.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.19	45	40540	38.44783	ppb	93

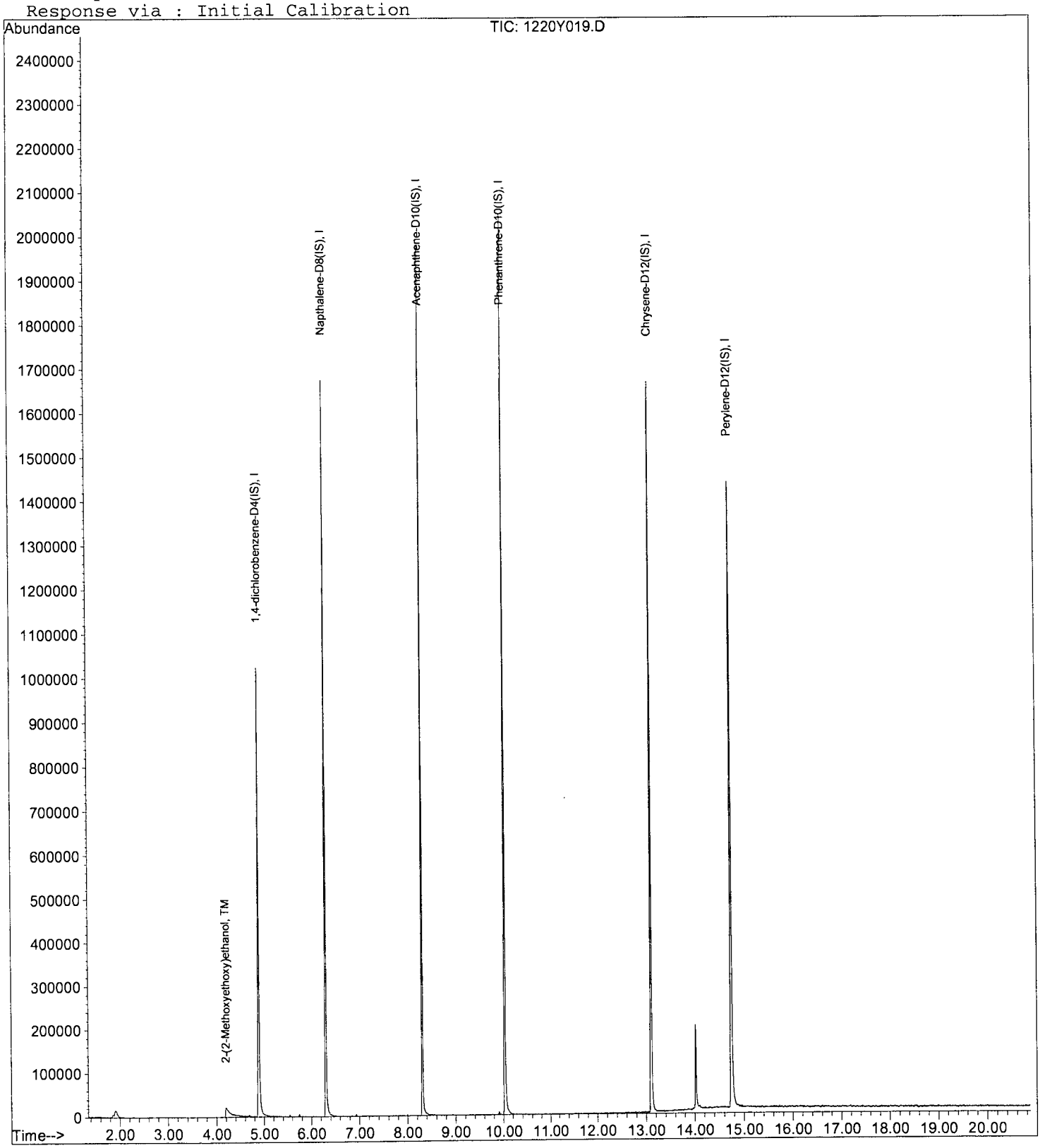
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y019.D Vial: 19
Acq On : 20 Dec 16 18:45 Operator: MA
Sample : AZ47345W32 MSD-1 2/500 Inst : Yoda
Misc : Multip1r: 1.00

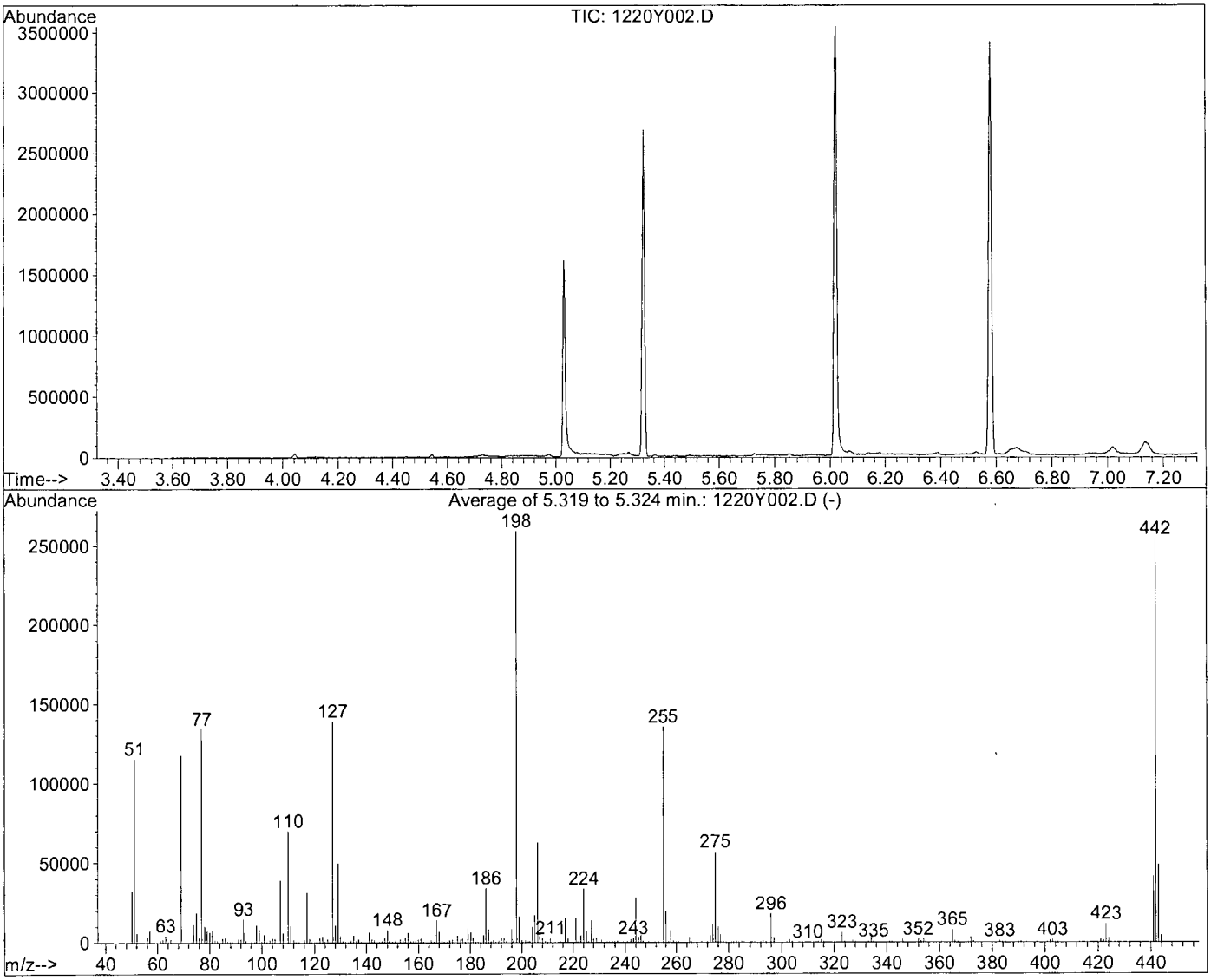
Quant Time: Dec 21 10:44 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 21 10:44:23 2016
Response via : Initial Calibration



Data File : M:\YODA\DATA\Y161220G\1220Y002.D Vial: 2
Acq On : 20 Dec 16 9:12 Operator: MA
Sample : SV Tune 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C



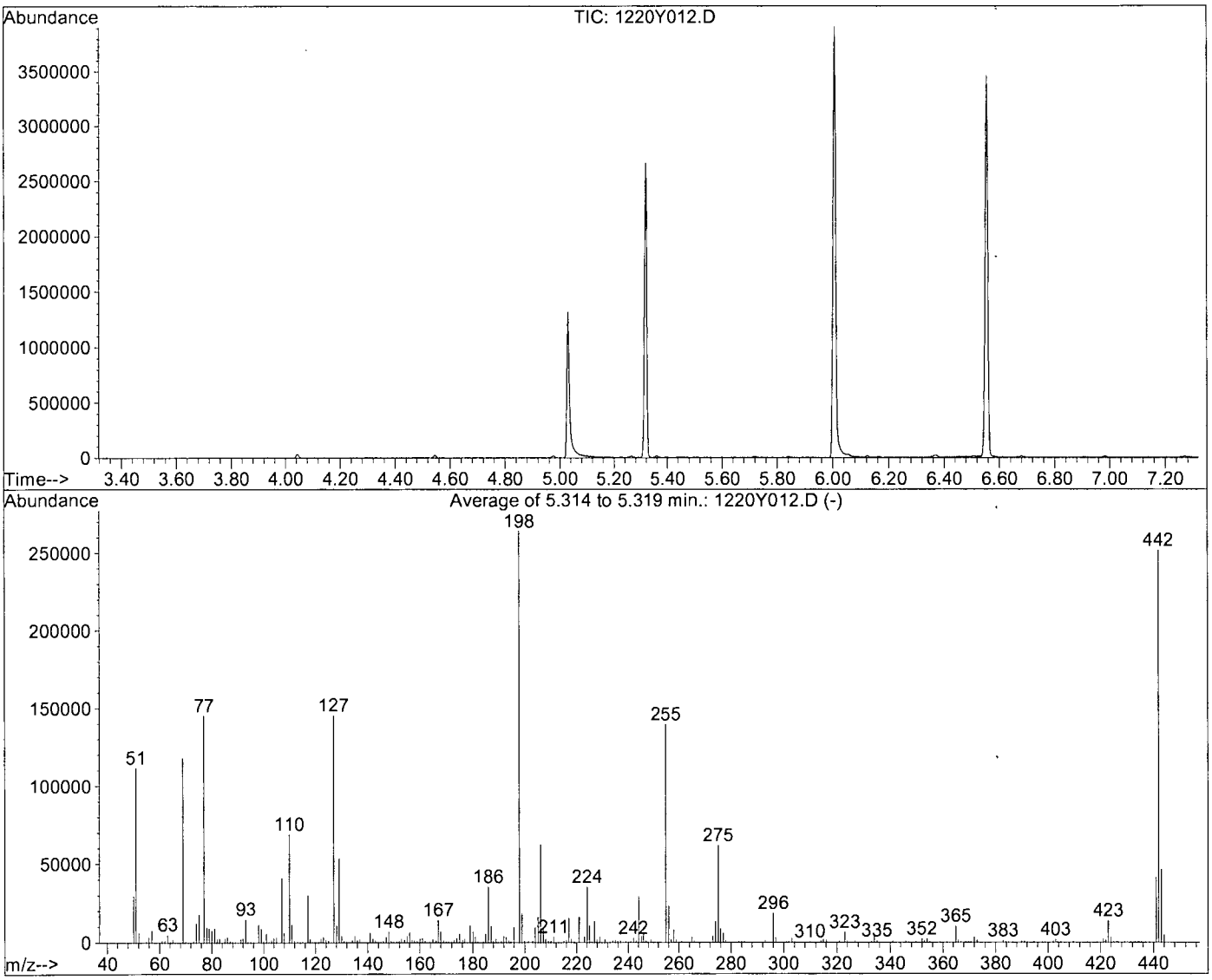
AutoFind: Scans 694, 695, 696; Background Corrected with Scan 686

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	44.4	115264	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.0	0	PASS
127	198	40	60	53.6	139077	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	259413	PASS
199	198	5	9	6.3	16297	PASS
275	198	10	30	21.8	56493	PASS
365	198	1	100	3.0	7796	PASS
441	443	0.01	100	85.0	41237	PASS
442	198	50	150	98.0	254272	PASS
443	442	17	23	19.1	48539	PASS

1220Y002.D Y0GLYCOL.M Tue Dec 20 09:18:08 2016

Data File : M:\YODA\DATA\Y161220G\1220Y012.D Vial: 12
Acq On : 20 Dec 16 15:27 Operator: MA
Sample : SV Tune 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 692, 693, 694; Background Corrected with Scan 685

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	42.2	111504	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.6	671	PASS
127	198	40	60	55.1	145493	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	264085	PASS
199	198	5	9	6.9	18147	PASS
275	198	10	30	23.4	61840	PASS
365	198	1	100	3.8	10103	PASS
441	443	0.01	100	89.8	41592	PASS
442	198	50	150	95.3	251797	PASS
443	442	17	23	18.4	46293	PASS

Semivolatile (SV) Tuning Solution -G.A.						
PREP DATE:	11/15/16	RH				
Semivolatile (SV) Tune Solution 50ug/ml						
Exp:	8/26/17					
		Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
Ultra Scient	Semivolatile GC	1000	N081628-37012	08/23/16	8/23/17	200
EM Science	Methylene Chloride		55098			3800
				Final Vol.		4000

GED Curve

PREP DATE:	12/20/16 RH											
8270 Standard Curve												
Exp:	2/11/17					**50**	**100**	**200**	**400**	**500**	**600**	**800**
		Conc.		Date								
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL	µL	µL	µL	µL
	GED MSTD Stc	2000	VAR	12/19/16	11/18/17	5	5	10	20	50	30	40
EM Science	Methanol		010616			195	95	90	80	150	70	60
Supelco	SV Internal	2000	A14020V-3660	11/09/16	11/09/17	4	2	2	2	4	2	2
				Final Vol.		204	102	102	102	204	102	102

GED Second Source (SS)

PREP DATE:	12/20/16 RH					**500**
Exp:	1/18/17	Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
	GED MSS Stoc	2000	VAR	12/19/16	10/27/17	50
EM Science	Methanol		010616			150
Supelco	SV Internal	2000	A14020V-3660	11/09/16	11/09/17	4
				Final Vol.		204

102
2
50
50
μL
1000

Diethylene Glycol						
Prep: 12/15/16 -RH Ex: 12/15/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
Diethylene glycol monomethyl ether	2000 ug/ml	AcuuStandard Cat# S-72273 Lot# 216101007-37093 Op: 12/15/16 EX: 12/15/17	1.0 mL	2 ml	1000 ug/ml	Methanol Lot# 010616A

Methoxyethoxyethanol-Neat (MEE) Stock: 9/27/16-R.H. ex: 09/27/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
MEE	Neat 99.5%	HEM SERVIC	0.1154g	10 mL	11540 ug/ml	MC
		Cat: N-12404-1G				
		Lot: 5259000-37082				
		OP: 09/27/16				
		EXP: 09/27/17				

_MWE2MEE

Organic Extraction Worksheet

Method	Solid Phase Extraction of 2MEE in Water	Extraction Set	161219A	Extraction Method	MWE2MEE	Units	mL

Spiked ID 1	Diethylene Glycol 12-15-16 EXP 12-15-17		Surrogate ID 1		
Spiked ID 2	MEE 11540ug/mL 9-27-16 EXP 9-27-17		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	12/19/16 9:45	
Spiked ID 8			Ext. End Time:	12/19/16 17:00	
			GC Requires Extract By:	**12/20/16 0:00**	

pH1			Water Bath Temp Criteria	
pH2				
pH3				

Spiked By: KY **Date** 12/19/16 **Witnessed By:** CFM **Date** 12/19/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	161219A Blk				NA	NA equip	500	2	7	12/19/16 9:45	
2	161219A LCS-1		0.040	1	NA	NA equip	500	2	7	12/19/16 9:45	
3	161219A LCS-2		0.250	1	NA	NA equip	500	2	7	12/19/16 9:45	
4	AZ47343	AZ47343W14			NA	NA equip	500	2	7	12/19/16 9:45	81734 RUSH 1 WEEK
5	AZ47344	AZ47344W13			NA	NA equip	500	2	7	12/19/16 9:45	81734 RUSH 1 WEEK
6	AZ47345 MS-1	AZ47345W32	0.040	1	NA	NA equip	500	2	7	12/19/16 9:45	81734 RUSH 1 WEEK
7	AZ47345 MSD-1	AZ47345W32	0.040	1	NA	NA equip	500	2	7	12/19/16 9:45	81734 RUSH 1 WEEK
8	AZ47345	AZ47345W31			NA	NA equip	500	2	7	12/19/16 9:45	81734 RUSH 1 WEEK
9	AZ47494	AZ47494W14			NA	NA equip	500	2	7	12/19/16 9:45	81760 1 WEEK
10	AZ47495	AZ47495W10			NA	NA equip	500	2	7	12/19/16 9:45	81760 1 WEEK
11	AZ47496	AZ47496W11			NA	NA equip	500	2	7	12/19/16 9:45	81760 1 WEEK
12	AZ47497	AZ47497W14			NA	NA equip	500	2	7	12/19/16 9:45	81760 1 WEEK
13	AZ47498	AZ47498W17			NA	NA equip	500	2	7	12/19/16 9:45	81760 1 WEEK
14	AZ47658	AZ47658W14			NA	NA equip	500	2	7	12/19/16 9:45	81776 1 WEEK
15	AZ47659	AZ47659W09			NA	NA equip	500	2	7	12/19/16 9:45	81776 1 WEEK
16	AZ47660	AZ47660W14			NA	NA equip	500	2	7	12/19/16 9:45	81776 1 WEEK

Solvent and Lot#	
ENVI-Carb Plus 400MG/1ML	
Reverible Tube Lot:	8088704
PH Strip	HC 574756
Di Water	12-19-16
Dichloromethane	56153
Methanol	060316C

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	RH
Date	12/19/16
Time	5:00
Refrigerator	GC-C

	Technician's Initials
Scanned By	KY
Sample Preparation	CFM
Extraction	CFM,KY
Concentration	KY

Modified	12/19/16 11:23:17 AM

Reviewed By: RH **Date** 12/19/16

_MWE2MEE

Organic Extraction Worksheet

Method	Solid Phase Extraction of 2MEE in Water	Extraction Set	161219A	Extraction Method	MWE2MEE	Units	mL

Spiked ID 1	Diethylene Glycol 12-15-16 EXP 12-15-17		Surrogate ID 1		
Spiked ID 2	MEE 11540ug/mL 9-27-16 EXP 9-27-17		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	12/19/16 9:45	
Spiked ID 8			Ext. End Time:	12/19/16 17:00	
			GC Requires Extract By:	**12/20/16 0:00**	

pH1			Water Bath Temp Criteria	
pH2				
pH3				

Spiked By: KY **Date** 12/19/16 **Witnessed By:** CFM **Date** 12/19/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
17	AZ47661	AZ47661W06			NA	NA equip	500	2	7	12/19/16 9:45	81776 1 WEEK
18	AZ47662	AZ47662W09			NA	NA equip	500	2	7	12/19/16 9:45	81776 1 WEEK
19	AZ47663	AZ47663W09			NA	NA equip	500	2	7	12/19/16 9:45	81776 1 WEEK
20	AZ47664	AZ47664W12			NA	NA equip	500	2	7	12/19/16 9:45	81776 1 WEEK
21	AZ47665	AZ47665W11			NA	NA equip	500	2	7	12/19/16 9:45	81776 1 WEEK
22	M STD		1	1	NA	NA equip	500	5	7	12/19/16 9:45	
23	SS		0.0870	2	NA	NA equip	500	2	7	12/19/16 9:45	

KY 12/19/16

Solvent and Lot#	
ENVI-Carb Plus 400MG/1ML	
Reverible Tube Lot:	8088704
PH Strip	HC 574756
Di Water	12-19-16
Dichloromethane	56153
Methanol	060316C

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	
Date	
Time	
Refrigerator	

	Technician's Initials
Scanned By	KY
Sample Preparation	CFM
Extraction	CFM,KY
Concentration	KY

Modified	12/19/16 11:23:17 AM

Reviewed By: KY **Date** 12/19/16

Injection Log

Directory: M:\YODA\DATA\Y161220G\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	1220Y002.D	1	SV Tune 11/15/16		20 Dec 16 9:12
2	3	1220Y003.D	1	50ug/ml DEG 12/20/16		20 Dec 16 9:32
3	4	1220Y004.D	1	100ug/ml DEG 12/20/16		20 Dec 16 10:02
4	5	1220Y005.D	1	200ug/ml DEG 12/20/16		20 Dec 16 11:27
5	6	1220Y006.D	1	400ug/ml DEG 12/20/16		20 Dec 16 11:57
6	7	1220Y007.D	1	500ug/ml DEG 12/20/16		20 Dec 16 12:27
7	8	1220Y008.D	1	600ug/ml DEG 12/20/16		20 Dec 16 12:57
8	9	1220Y009.D	1	800ug/ml DEG 12/20/16		20 Dec 16 13:28
9	10	1220Y010.D	1	1000ug/ml DEG 12/20/16		20 Dec 16 13:58
10	11	1220Y011.D	1	SS2 DEG 12/20/16		20 Dec 16 15:01
11	12	1220Y012.D	1	SV Tune 11/15/16		20 Dec 16 15:27
12	13	1220Y013.D	1	161219A BLK 2/500		20 Dec 16 15:44
13	14	1220Y014.D	1	AZ47343W14 2/500		20 Dec 16 16:14
14	15	1220Y015.D	1	AZ47344W13 2/500		20 Dec 16 16:45
15	16	1220Y016.D	1	AZ47345W31 2/500		20 Dec 16 17:15
16	17	1220Y017.D	1	161219A LCS-1 2/500		20 Dec 16 17:45
17	18	1220Y018.D	1	AZ47345W32 MS-1 2/500		20 Dec 16 18:15
18	19	1220Y019.D	1	AZ47345W32 MSD-1 2/500		20 Dec 16 18:45
19	34	1220Y034.D	2	AZ47431W01 2/500 df2		21 Dec 16 2:15
20	36	1220Y036.D	1	500ug/ml DEG 12/20/16		21 Dec 16 2:58

EPA METHOD 8260B
Volatile Organic Compounds

APPL, INC.

EPA METHOD 8260B
Volatile Organic Compounds
QC Summary

APPL, INC.

Method Blank

EPA 8260B BTEX WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161215W-47345 - 214690**
Batch ID: #86BTO-161215AL

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	12/15/16	12/15/16
BLANK	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	12/15/16	12/15/16
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	12/15/16	12/15/16
BLANK	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	12/15/16	12/15/16
BLANK	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	12/15/16	12/15/16
BLANK	SURROGATE: 1,2-DICHLOROET	99.2	81-118			%	12/15/16	12/15/16
BLANK	SURROGATE: 4-BROMOFLUOR	94.1	85-114			%	12/15/16	12/15/16
BLANK	SURROGATE: DIBROMOFLUOR	103	80-119			%	12/15/16	12/15/16
BLANK	SURROGATE: TOLUENE-D8 (S)	96.0	89-112			%	12/15/16	12/15/16

Quant Method: LALLW.M
Run #: 1215L09
Instrument: Loki
Sequence: 161210
Initials: SV

GC SC-Blank-REG MDLs-DOD
Printed: 12/28/16 5:00:03 PM

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81734

Case No: 81734 Date Analyzed: 12/15/16

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: 1,2-DICHLOROETHANE-D4 (S)			SURROGATE: 4-BROMOFLUOROBENZENE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161215AL-LCS	Lab Control Spike	81-118	97.2		85-114	108	
161215AL-BLK	Blank	81-118	99.2		85-114	94.1	
AZ47343	ERH137	81-118	97.1		85-114	96.2	
AZ47344	ERH141	81-118	95.2		85-114	95.6	
AZ47345	ERH135	81-118	96.2		85-114	99.0	
AZ47345-MS	Matrix Spike	81-118	97.2		85-114	107	
AZ47345-MSD	Matrix SpikeD	81-118	90.4		85-114	102	

Comments: Batch: #86BTO-161215AL

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81734

Case No: 81734 Date Analyzed: 12/15/16

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: DIBROMOFLUOROMETHANE (S)			SURROGATE: TOLUENE-D8 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161215AL-LCS	Lab Control Spike	80-119	100		89-112	102	
161215AL-BLK	Blank	80-119	103		89-112	96.0	
AZ47343	ERH137	80-119	104		89-112	98.9	
AZ47344	ERH141	80-119	101		89-112	98.0	
AZ47345	ERH135	80-119	101		89-112	99.1	
AZ47345-MS	Matrix Spike	80-119	101		89-112	103	
AZ47345-MSD	Matrix SpikeD	80-119	98.0		89-112	98.0	

Comments: Batch: #86BTO-161215AL

Laboratory Control Spike Recovery
EPA 8260B BTEX WATER

APPL ID: **161215W-47345 LCS - 214690**
Batch ID: #86BTO-161215AL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1,2-DICHLOROETHANE	10.00	9.63	96.3	73-128
BENZENE	10.00	10.2	102	79-120
ETHYLBENZENE	10.00	10.7	107	79-121
TOLUENE	10.00	10.7	107	80-121
XYLENES (TOTAL)	30.0	33.0	110	79-121
SURROGATE: 1,2-DICHLOROETHANE-	25.0	24.3	97.2	81-118
SURROGATE: 4-BROMOFLUOROBENZ	25.0	27.0	108	85-114
SURROGATE: DIBROMOFLUOROMETH	25.0	25.1	100	80-119
SURROGATE: TOLUENE-D8 (S)	25.0	25.5	102	89-112

Comments: _____

Primary	SPK
Quant Method :	L826AW.M
Extraction Date :	12/15/16
Analysis Date :	12/15/16
Instrument :	Loki
Run :	1215L03
Initials :	SV

Printed: 12/28/16 5:34:55 PM
APPL Standard LCS

Matrix Spike Recoveries

EPA 8260B BTEX WATER

APPL ID: **161215W-47345 MS - 214690**
Batch ID: #86BTO-161215AL
Sample ID: AZ47345
Client ID: ERH135

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
1,2-DICHLOROETHANE	10.00	ND	8.83	8.26	88.3	82.6	73-128	6.7	20
BENZENE	10.00	ND	9.33	8.70	93.3	87.0	79-120	7.0	20
ETHYLBENZENE	10.00	ND	9.84	9.15	98.4	91.5	79-121	7.3	20
TOLUENE	10.00	ND	9.53	9.15	95.3	91.5	80-121	4.1	20
XYLENES (TOTAL)	30.0	ND	29.6	27.4	98.7	91.3	79-121	7.7	20
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	NA	24.3	22.6	97.2	90.4	81-118		
SURROGATE: 4-BROMOFLUOROBENZE	25.0	NA	26.7	25.4	107	102	85-114		
SURROGATE: DIBROMOFLUOROMETH	25.0	NA	25.3	24.5	101	98.0	80-119		
SURROGATE: TOLUENE-D8 (S)	25.0	NA	25.8	24.5	103	98.0	89-112		

Comments: _____

Primary	SPK	DUP
Quant Method :	LALLW.M	LALLW.M
Extraction Date :	12/15/16	12/15/16
Analysis Date :	12/15/16	12/15/16
Instrument :	Loki	Loki
Run :	1215L24	1215L25
Initials :	SV	

Printed: 12/28/16 5:00:06 PM
APPL MSD SCII

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81734

Case No: 81734 Date Analyzed: 12/15/16

Matrix: WATER Instrument: Loki

Blank ID: 161215AL-BLK Time Analyzed: 1440

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161215AL-LCS	Lab Control Spike	1215L03	12/15/16 1151
161215AL-BLK	Blank	1215L09	12/15/16 1440
AZ47343	ERH137	1215L19	12/15/16 1920
AZ47344	ERH141	1215L20	12/15/16 1948
AZ47345	ERH135	1215L21	12/15/16 2016
161215AL-MS	Matrix Spike	1215L24	12/15/16 2141
161215AL-MSD	Matrix SpikeD	1215L25	12/15/16 2209

Comments: Batch: #86BTO-161215AL

Printed: 12/21/16 1:29:18 PM
Form 4, Blank Summary

Form 5
Tune Summary

np 1-3-17

Lab Name: APPL Inc. SDG No: ~~Loki~~ 81734

Case No: ~~1210L01.D~~ 81734 Date Analyzed: 12/10/16

Matrix: Water np 1-3-17 Instrument: Loki

ID: 5ng- BFB STD 11-06-16 Time Analyzed: 11:05

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.3ug/L VOC STD12/10	1210L05.D	12/10/16 12:57
2		0.5ug/L VOC STD12/10	1210L06.D	12/10/16 13:26
3		1.0ug/L VOC STD12/10	1210L07.D	12/10/16 13:54
4		2.0ug/L VOC STD12/10	1210L08.D	12/10/16 14:22
5		5.0ug/L VOC STD12/10	1210L09.D	12/10/16 14:50
6		10ug/L VOC STD12/10/	1210L10.D	12/10/16 15:18
7		20ug/L VOC STD12/10/	1210L11.D	12/10/16 15:46
8		40ug/L VOC STD12/10/	1210L12.D	12/10/16 16:15
9		100ug/L VOC STD12/10	1210L13.D	12/10/16 16:43
10		(SS)10ug/L VOC STD12	1210L17.D	12/10/16 18:36
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	18.3
75	30 - 60% of mass 95	50.9
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	6.8
173	0 - 2% of mass 174	0.0
174	50 - 100% of mass 95	91.4
175	5 - 9% of mass 174	7.5
176	95 - 101% of mass 174	95.9
177	5 - 9% of mass 176	6.4

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81734
Matrix: Water
ID: 5ng- BFB STD 11-06-16

SDG No: 81734
Date Analyzed: 12/15/16
Instrument: Loki
Time Analyzed: 10:55

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1	Lab Control Spike	161215A CCV/LCS-1WL	1215L03.D	12/15/16 11:51
2	Blank	161214A BLK-1WL	1215L09.D	12/15/16 14:40
3	ERH137	AZ47343W01	1215L19.D	12/15/16 19:20
4	ERH141	AZ47344W01	1215L20.D	12/15/16 19:48
5	ERH135	AZ47345W01	1215L21.D	12/15/16 20:16
6		AZ47345W234 MS-1WL 1	1215L24.D	12/15/16 21:41
7		AZ47345W234 MSD-1WL	1215L25.D	12/15/16 22:09
8		Ending CCV 8260 10ug	1215L28.D	12/15/16 23:33 *
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	19.4
75	30 - 60% of mass 95	50.4
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	6.7
173	0 - 2% of mass 174	0.0
174	50 - 100% of mass 95	86.7
175	5 - 9% of mass 174	7.7
176	95 - 101% of mass 174	96.9
177	5 - 9% of mass 176	6.7

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81734

Lab File ID (Standard): 1210L10.D Date Analyzed: 12/10/16

Instrument ID: Loki Time Analyzed: 15:18

GC Column: ID: Heated Purge: (Y/N)

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	570432	5.38	493760	8.70	297152	11.03
	UPPER LIMIT	1140864	5.88	987520	9.20	594304	11.53
	LOWER LIMIT	285216	4.88	246880	8.20	148576	10.53
	SAMPLE NO.						
01	(SS)10ug/L VOC STD12	573248	5.38	504832	8.70	281408	11.03
02	161215A CCV/LCS-1WL	615616	5.38	550272	8.70	310592	11.03
03	161214A BLK-1WL	572416	5.38	546048	8.70	278720	11.03
04	AZ47343W01	548608	5.38	499648	8.70	263232	11.03
05	AZ47344W01	560128	5.38	505664	8.70	252352	11.03
06	AZ47345W01	557568	5.38	506432	8.70	255808	11.03
07	AZ47345W234 MS-1WL	587328	5.38	520000	8.70	306368	11.03
08	AZ47345W234 MSD-1W	619072	5.38	561664	8.70	309184	11.03
09	Ending CCV 8260 10ug/	588224	5.38	544000	8.70	294592	11.03
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

EPA METHOD 8260B
Volatile Organic Compounds
Sample Data

APPL, INC.

EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH137
Sample Collection Date: 12/12/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81734
APPL ID: AZ47343
QCG: #86BTO-161215AL-214690

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	12/15/16	12/15/16
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	12/15/16	12/15/16
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	12/15/16	12/15/16
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	12/15/16	12/15/16
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	97.1	81-118			%	12/15/16	12/15/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	96.2	85-114			%	12/15/16	12/15/16
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	104	80-119			%	12/15/16	12/15/16
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	98.9	89-112			%	12/15/16	12/15/16

Quant Method: LALLW.M
Run #: 1215L19
Instrument: Loki
Sequence: 161210
Dilution Factor: 1
Initials: SV

Printed: 12/21/16 1:29:14 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1215L19.D Vial: 19
Acq On : 15 Dec 16 19:20 Operator: PM,DG,SV,CMM
Sample : AZ47343W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 16 10:04 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161210\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	548608	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	499648	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	263232	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	289931	26.00	ppb	0.00
Spiked Amount 25.000			Recovery = 104.000%			
37) 1,2-DCA-D4(S)	4.93	65	308944	24.28	ppb	0.00
Spiked Amount 25.000			Recovery = 97.132%			
57) Toluene-D8(S)	7.22	98	968265	24.72	ppb	0.00
Spiked Amount 25.000			Recovery = 98.892%			
65) 4-Bromofluorobenzene(S)	9.89	95	316895	24.05	ppb	0.00
Spiked Amount 25.000			Recovery = 96.200%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

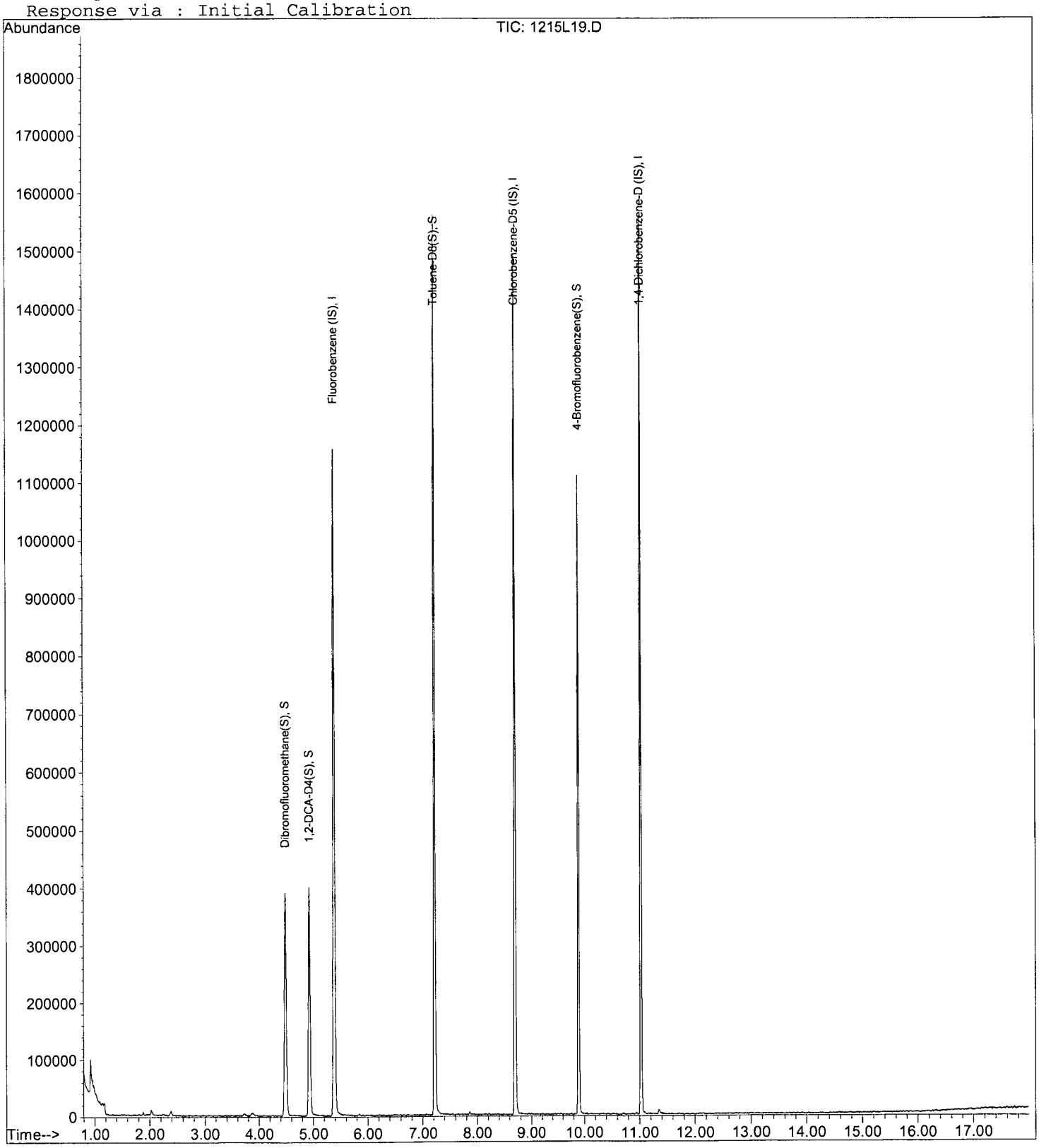
Quantitation Report

Data File : M:\LOKI\DATA\161210\1215L19.D
Acq On : 15 Dec 16 19:20
Sample : AZ47343W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 19
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 16 10:04 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Dec 15 12:07:49 2016
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH141
Sample Collection Date: 12/12/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81734
APPL ID: AZ47344
QCG: #86BTO-161215AL-214690

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	12/15/16	12/15/16
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	12/15/16	12/15/16
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	12/15/16	12/15/16
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	12/15/16	12/15/16
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	12/15/16	12/15/16
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	95.2	81-118			%	12/15/16	12/15/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	95.6	85-114			%	12/15/16	12/15/16
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	101	80-119			%	12/15/16	12/15/16
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	98.0	89-112			%	12/15/16	12/15/16

Quant Method: LALLW.M
Run #: 1215L20
Instrument: Loki
Sequence: 161210
Dilution Factor: 1
Initials: SV

Printed: 12/21/16 1:29:14 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1215L20.D Vial: 20
Acq On : 15 Dec 16 19:48 Operator: PM,DG,SV,CMM
Sample : AZ47344W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 16 10:05 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161210\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	560128	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	505664	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	252352	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	288248	25.32	ppb	0.00
Spiked Amount 25.000			Recovery = 101.268%			
37) 1,2-DCA-D4(S)	4.93	65	309246	23.81	ppb	0.00
Spiked Amount 25.000			Recovery = 95.228%			
57) Toluene-D8(S)	7.22	98	971216	24.50	ppb	0.00
Spiked Amount 25.000			Recovery = 98.012%			
65) 4-Bromofluorobenzene(S)	9.89	95	318757	23.90	ppb	0.00
Spiked Amount 25.000			Recovery = 95.612%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

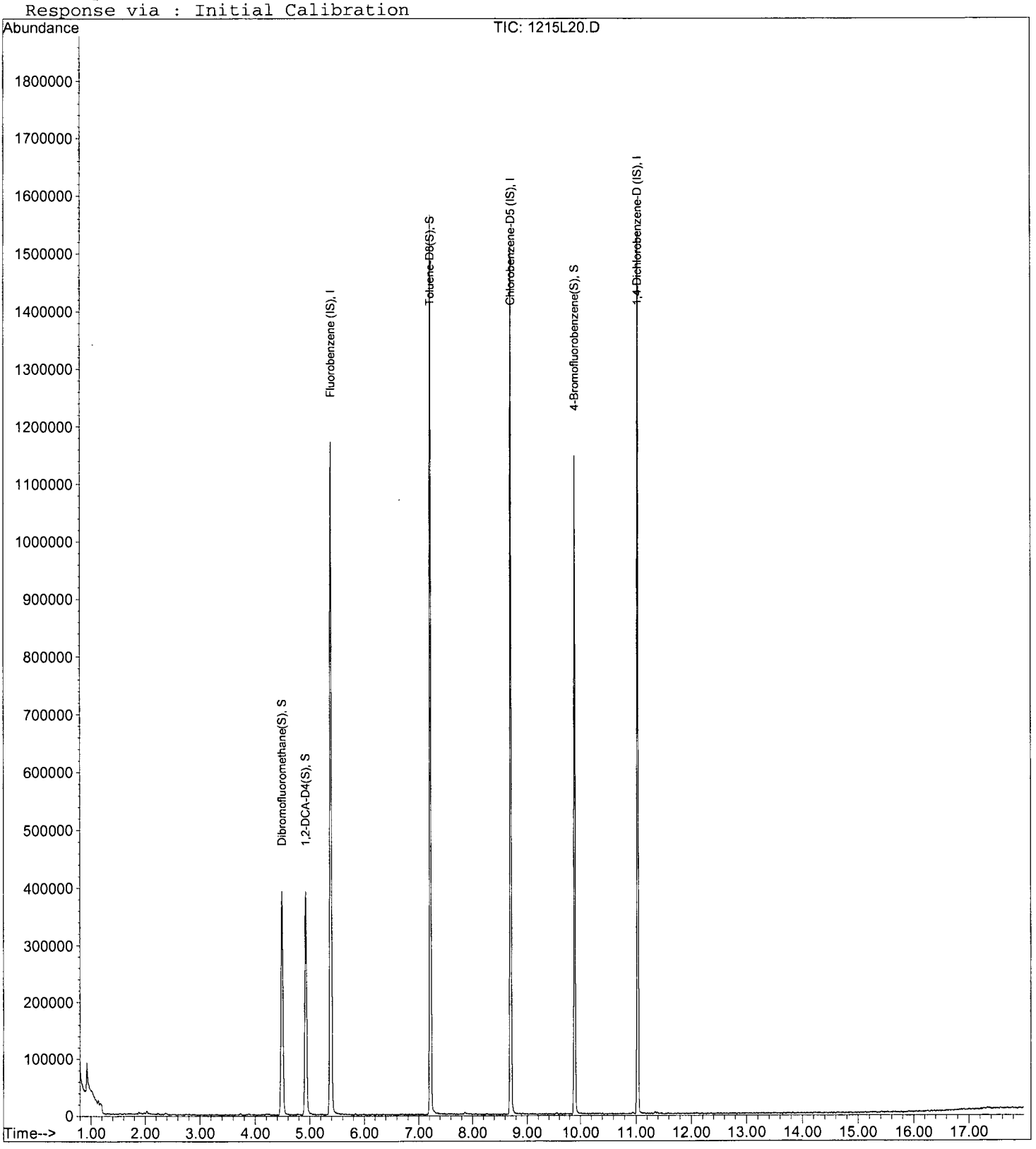
Quantitation Report

Data File : M:\LOKI\DATA\161210\1215L20.D
Acq On : 15 Dec 16 19:48
Sample : AZ47344W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 20
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 16 10:05 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Dec 15 12:07:49 2016
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH135
Sample Collection Date: 12/12/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81734
APPL ID: AZ47345
QCG: #86BTO-161215AL-214690

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	12/15/16	12/15/16
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	12/15/16	12/15/16
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	12/15/16	12/15/16
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	12/15/16	12/15/16
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	96.2	81-118			%	12/15/16	12/15/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	99.0	85-114			%	12/15/16	12/15/16
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	101	80-119			%	12/15/16	12/15/16
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	99.1	89-112			%	12/15/16	12/15/16

Quant Method: LALLW.M
Run #: 1215L21
Instrument: Loki
Sequence: 161210
Dilution Factor: 1
Initials: SV

Printed: 12/21/16 1:29:14 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1215L21.D Vial: 21
Acq On : 15 Dec 16 20:16 Operator: PM,DG,SV,CMM
Sample : AZ47345W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 16 10:05 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161210\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	557568	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	506432	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	255808	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	285064	25.15	ppb	0.00
Spiked Amount 25.000			Recovery = 100.608%			
37) 1,2-DCA-D4(S)	4.93	65	310915	24.05	ppb	0.00
Spiked Amount 25.000			Recovery = 96.184%			
57) Toluene-D8(S)	7.22	98	983871	24.79	ppb	0.00
Spiked Amount 25.000			Recovery = 99.140%			
65) 4-Bromofluorobenzene(S)	9.89	95	330514	24.75	ppb	0.00
Spiked Amount 25.000			Recovery = 98.988%			

Target Compounds Qvalue

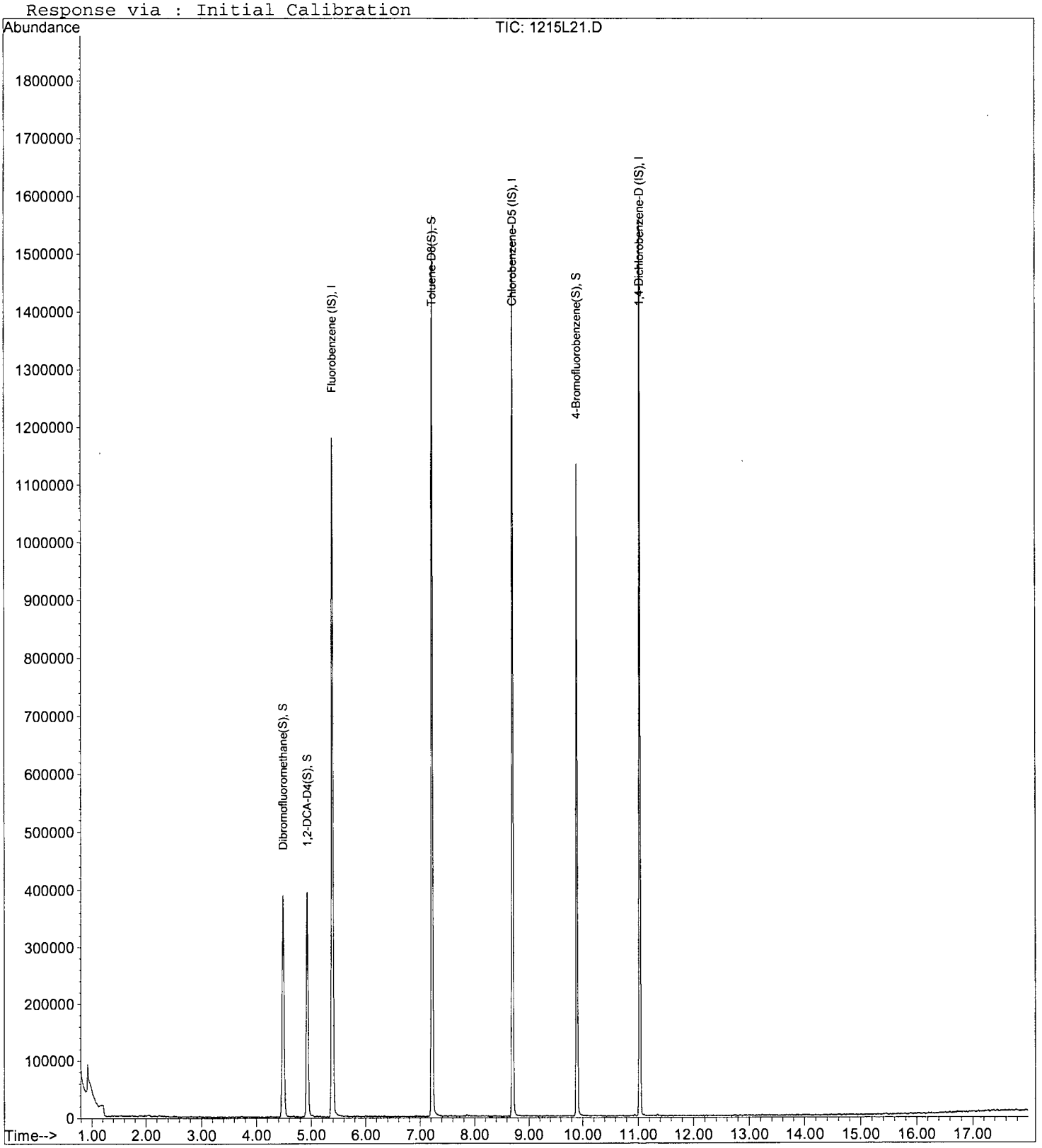
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161210\1215L21.D Vial: 21
Acq On : 15 Dec 16 20:16 Operator: PM,DG,SV,CMM
Sample : AZ47345W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 16 10:05 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Dec 15 12:07:49 2016
Response via : Initial Calibration



EPA METHOD 8260B
Volatile Organic Compounds
Calibration Data

APPL, INC.

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/10/16
Matrix: Instrument: Loki Initials:

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD		
			1210L05.D	1210L06.D	1210L07.D	1210L08.D	1210L09.D	1210L10.D	1210L11.D	1210L12.D	1210L13.D					
1	I	Fluorobenzene (IS)														
2	TM	Dichlorodifluoromethane	0.4511	0.4626	0.4797	0.4364	0.4250	0.4655	0.4812	0.4808	0.4707		0.46	4.4	TM	
3	TM	Freon 114	0.3493	0.3616	0.3695	0.3421	0.2936	0.3103	0.3353	0.3293	0.3350		0.34	7.0	TM	
4	TM**L	Chloromethane	1.265	1.058	0.9903	0.8913	0.8483	0.8439	0.8371	0.8135	0.8151		0.93	16	TM**L	1.00
5	TM*	Vinyl chloride	0.7014	0.6293	0.6537	0.6001	0.5982	0.6157	0.6413	0.6251	0.6337		0.63	4.9	TM*	
6	TML	Bromomethane	0.5973	0.5280	0.4456	0.4129	0.3961	0.3943	0.4162	0.4014	0.3830		0.44	17	TML	1.000
7	TM	Chloroethane		0.3556	0.3121	0.3114	0.3176	0.3336	0.3286	0.3145	0.2015		0.31	15	TM	
8	TM	Dichlorofluoromethane	1.175	1.066	1.081	0.9981	0.9756	1.010	1.011	0.9940	1.014		1.0	6.0	TM	
9	TM	Trichlorofluoromethane	0.6265	0.6653	0.6379	0.5751	0.5840	0.6082	0.6346	0.6375	0.6389		0.62	4.6	TM	
10	TM	Acrolein	0.0226	0.0202	0.0238	0.0218	0.0200	0.0216	0.0214	0.0227	0.0218		0.02	5.4	TM	
11	TML	Acetone		0.5657	0.2877	0.1827	0.1730	0.1322	0.1310	0.1174	0.1158		0.21	72	TML	1.000
12	TM	Freon-113	0.4132	0.3713	0.3820	0.3389	0.3170	0.3412	0.3417	0.3421	0.3433		0.35	8.2	TM	
13	TM*	1,1-DCE	0.3311	0.3489	0.3116	0.3024	0.2680	0.2901	0.2884	0.2801	0.2685		0.30	9.3	TM*	
14	TM	t-Butanol	0.0207	0.0152	0.0161	0.0158	0.0170	0.0167	0.0159	0.0163	0.0158		0.02	9.9	TM	
15	TM	Acetonitrile		0.0687	0.0663	0.0596	0.0594	0.0605	0.0589	0.0673			0.06	6.8	TM	
16	TM	Methyl Acetate		0.4225	0.4673	0.3925	0.4025	0.3894	0.3692	0.3738	0.3777		0.40	8.1	TM	
17	TM	Iodomethane		0.1533	0.1499	0.1504	0.1672	0.1889	0.2074				0.17	14	TM	
18	TM	Acrylonitrile		0.1773	0.1411	0.1329	0.1472	0.1296	0.1337	0.1298	0.1346		0.14	11	TM	
19	TML	Methylene chloride	1.532	1.136	0.8670	0.6653	0.5959	0.5723	0.5659	0.5570	0.5561		0.78	44	TML	1.00
20	TM	Carbon disulfide	1.511	1.355	1.255	1.197	1.072	1.151	1.162	1.168	1.200		1.2	11	TM	
21	TM	Methyl t-butyl ether (MtBE)	1.297	1.276	1.178	1.155	1.209	1.220	1.247	1.241	1.302		1.2	4.1	TM	
22	TM	Trans-1,2-DCE	0.5713	0.4752	0.4875	0.4627	0.4408	0.4556	0.4722	0.4638	0.4717		0.48	7.8	TM	
23	TM	Diisopropyl Ether	1.787	1.768	1.641	1.565	1.635	1.691	1.753	1.767	1.826		1.7	5.0	TM	
24	TM**	1,1-DCA	1.166	0.9947	1.021	0.9416	0.9438	0.9296	0.9679	0.9430	0.9493		0.98	7.6	TM**	
25	TM	Vinyl Acetate		0.4783	0.3893	0.3948	0.3874	0.4039	0.3710	0.3700	0.4093		0.40	8.6	TM	
26	TM	Ethyl tert Butyl Ether	1.305	1.267	1.293	1.191	1.228	1.284	1.309	1.346	1.422		1.3	5.1	TM	
27	TM	MEK (2-Butanone)					0.2023	0.1796	0.1801	0.1806	0.1877		0.19	5.2	TM	
28	TM	Cis-1,2-DCE	0.5934	0.5533	0.5037	0.5228	0.5151	0.5498	0.5497	0.5442	0.5596		0.54	4.9	TM	
29	TM	2,2-Dichloropropane	0.2545	0.2533	0.2332	0.2101	0.1985	0.2191	0.2193	0.2175	0.2199		0.23	8.3	TM	
30	TM*	Chloroform	0.9693	1.022	0.9406	0.9121	0.9011	0.9213	0.9451	0.9137	0.9266		0.94	4.0	TM*	
31	TM	Bromochloromethane	0.2806	0.2892	0.3093	0.2551	0.2519	0.2488	0.2516	0.2439	0.2433		0.26	8.9	TM	
32	S	Dibromofluoromethane(S)	0.5496	0.5451	0.4728	0.4805	0.5108	0.5190	0.5041	0.5104	0.4813		0.51	5.4	S	
33	TM	1,1,1-TCA	0.8261	0.7440	0.6638	0.6464	0.6423	0.6753	0.6750	0.6708	0.6965		0.69	8.4	TM	
34	TM	Cyclohexane		0.4474	0.3466	0.3505	0.3144	0.3356	0.3509	0.3521	0.3624		0.36	11	TM	
35	TM	1,1-Dichloropropene	0.5856	0.5641	0.6124	0.5768	0.5316	0.5860	0.5977	0.6079	0.6227		0.59	4.7	TM	

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/10/16
Matrix: Instrument: Loki Initials:

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD		
36	TM	2,2,4-Trimethylpentane	1.076	1.190	1.104	1.049	1.015	1.085	1.164	1.186	1.227		1.1	6.5	TM	
37	S	1,2-DCA-D4(S)	0.6262	0.6477	0.5609	0.5452	0.5677	0.5998	0.5666	0.5720	0.5316		0.58	6.5	S	
38	TM	Carbon Tetrachloride	0.5819	0.5493	0.5485	0.5010	0.4867	0.5227	0.5366	0.5313	0.5395		0.53	5.2	TM	
39	TM	Tert Amyl Methyl Ether	1.093	1.131	1.138	1.034	1.089	1.113	1.147	1.183	1.243		1.1	5.3	TM	
40	TM	1,2-DCA	0.8377	0.7652	0.7740	0.6612	0.7087	0.7149	0.6967	0.6849	0.6907		0.73	7.7	TM	
41	TM	Benzene	2.405	2.146	1.963	1.850	1.929	1.973	2.011	1.989	2.018		2.0	7.9	TM	
42	TM	TCE	0.3394	0.2652	0.2317	0.2292	0.2362	0.2599	0.2515	0.2625	0.2556		0.26	13	TM	
43	TM	2-Pentanone	0.3364	0.3084	0.3082	0.2950	0.3016	0.3121	0.3089	0.3163	0.3257		0.31	4.0	TM	
44	TM*	1,2-Dichloropropane	0.6792	0.6667	0.5715	0.5827	0.5798	0.5891	0.5960	0.5802	0.5875		0.60	6.6	TM*	
45	TM	Bromodichloromethane	0.7557	0.7636	0.7121	0.6729	0.6719	0.7059	0.6821	0.6808	0.7083		0.71	4.8	TM	
46	TM	Methyl Cyclohexane	0.5946	0.5668	0.5365	0.5413	0.4885	0.5288	0.5643	0.5960	0.6241		0.56	7.4	TM	
47	TM	Dibromomethane	0.3325	0.3487	0.3299	0.3160	0.3055	0.3045	0.3049	0.2974	0.3008		0.32	5.6	TM	
48	TM	2-Chloroethyl vinyl ether													TM	
49	TML	MIBK (methyl isobutyl ketone)		0.8869	0.6807	0.5411	0.4438	0.4363	0.4161	0.4019	0.4168		0.53	33	TML	1.000
50	TM	1-Bromo-2-chloroethane	0.4054	0.4346	0.4419	0.4051	0.4383	0.4273	0.4160	0.4129	0.4165		0.42	3.3	TM	
51	TM	Cis-1,3-Dichloropropene	0.8275	0.7885	0.7041	0.7337	0.7507	0.7652	0.7913	0.8094	0.8567		0.78	6.1	TM	
52	TM*	Toluene	2.251	1.947	2.044	1.979	2.048	2.122	2.133	2.114	2.169		2.1	4.5	TM*	
53	TM	Trans-1,3-Dichloropropene	0.7557	0.7109	0.6451	0.5954	0.6518	0.6570	0.6803	0.6917	0.7379		0.68	7.3	TM	
54	TM	1,1,2-TCA	0.4073	0.4255	0.4197	0.3806	0.3974	0.3883	0.3839	0.3782	0.3828		0.40	4.5	TM	
55	TM	2-Hexanone			0.1034	0.1149	0.1337	0.1278	0.1312	0.1421	0.1652		0.13	15	TM	
56	I	Chlorobenzene-D5 (IS)														
57	S	Toluene-D8(S)	2.062	2.090	1.776	1.804	1.990	2.061	1.979	1.966	1.909		2.0	5.7	S	
58	TM	1,2-EDB	0.4354	0.4868	0.4325	0.4120	0.4440	0.4474	0.4257	0.4231	0.4411		0.44	4.8	TM	
59	TM	Tetrachloroethene	0.4808	0.5115	0.4740	0.4942	0.5054	0.5128	0.4898	0.4828	0.4993		0.49	2.8	TM	
60	TM	1-Chlorohexane	0.6372	0.5233	0.5262	0.4647	0.5178	0.5689	0.5708	0.5775	0.6174		0.56	9.6	TM	
61	TM	1,1,1,2-Tetrachloroethane	0.5394	0.5419	0.4819	0.4790	0.5278	0.5493	0.5120	0.5138	0.5424		0.52	5.0	TM	
62	TM	m&p-Xylene	0.9049	0.8919	0.8095	0.7893	0.8719	0.9537	0.9279	0.9257	0.9707		0.89	6.9	TM	
63	TM	o-Xylene	0.8360	0.7843	0.7747	0.8051	0.8736	0.9205	0.9089	0.9076	0.9742		0.86	8.0	TM	
64	TML	Styrene	0.8170	0.7361	0.8290	0.8010	0.9555	1.053	1.060	1.076	1.166		0.94	16	TML	0.999
65	S	4-Bromofluorobenzene(S)	0.6762	0.5903	0.5989	0.6039	0.6862	0.7181	0.6909	0.6872	0.6819		0.66	7.2	S	
66	TM	1,3-Dichloropropane	0.8951	0.8326	0.8453	0.7716	0.8620	0.8813	0.8185	0.7881	0.8288		0.84	4.8	TM	
67	TM	Dibromochloromethane	0.6187	0.4876	0.5110	0.4540	0.5352	0.5400	0.5072	0.5022	0.5435		0.52	8.8	TM	
68	TM**	Chlorobenzene	1.640	1.690	1.502	1.434	1.485	1.518	1.451	1.417	1.500		1.5	6.1	TM**	
69	TM*	Ethylbenzene	2.627	2.385	2.186	2.161	2.330	2.562	2.466	2.455	2.587		2.4	6.9	TM*	
70	TM**	Bromoform	0.3272	0.3067	0.2896	0.2798	0.3163	0.3284	0.2955	0.2970	0.3328		0.31	6.2	TM**	

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/10/16
Matrix: Instrument: Loki Initials:

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD		
71	I	1,4-Dichlorobenzene-D (IS)														
72	TM	Isopropylbenzene	4.301	3.756	3.775	3.418	3.620	3.709	4.052	3.901	3.885		3.8	6.6	TM	
73	TM**	1,1,2,2-Tetrachloroethane	1.295	1.308	1.240	1.094	1.089	1.069	1.073	0.9751	1.025		1.1	11	TM**	
74	TM	1,2,3-Trichloropropane		0.2068	0.1677	0.1892	0.2098	0.1839	0.1856	0.1746	0.1769		0.19	8.0	TM	
75	TM	t-1,4-Dichloro-2-Butene			0.2813	0.2086	0.2725	0.2576	0.2549	0.2437	0.2661		0.25	9.3	TM	
76	TM	Bromobenzene	1.146	1.121	1.073	1.072	1.072	1.061	1.107	1.036	1.022		1.1	3.7	TM	
77	TM	n-Propylbenzene	5.035	4.697	4.295	4.178	4.546	4.524	5.082	4.723	4.654		4.6	6.5	TM	
78	TM	4-Ethyltoluene	4.076	3.830	3.389	3.555	3.592	3.878	4.168	3.994	3.950		3.8	6.8	TM	
79	TM	2-Chlorotoluene	3.067	3.243	2.831	2.815	2.920	2.989	3.152	2.964	2.876		3.0	4.9	TM	
80	TM	1,3,5-Trimethylbenzene	3.150	3.074	2.981	2.931	3.201	3.377	3.608	3.410	3.340		3.2	6.9	TM	
81	TM	4-Chlorotoluene	3.753	3.326	3.308	3.258	3.457	3.476	3.678	3.440	3.390		3.5	4.8	TM	
82	TM	Tert-Butylbenzene	2.872	2.690	2.415	2.398	2.487	2.571	2.828	2.697	2.712		2.6	6.5	TM	
83	TM	1,2,4-Trimethylbenzene	3.658	3.285	2.995	2.931	3.216	3.324	3.642	3.468	3.467		3.3	7.7	TM	
84	TM	Sec-Butylbenzene	4.533	3.879	3.601	3.583	3.726	3.845	4.168	3.999	4.010		3.9	7.6	TM	
85	TM	p-Isopropyltoluene	3.756	3.379	3.156	3.042	3.164	3.237	3.506	3.373	3.430		3.3	6.5	TM	
86	TM	Benzyl Chloride	1.125	1.104	0.8307	0.8453	0.9610	0.9361	1.001				0.97	12	TM	
87	TM	1,3-DCB	2.209	2.257	2.039	1.999	2.055	2.024	2.109	1.970	1.993		2.1	4.8	TM	
88	TM	1,4-DCB	2.490	2.423	2.126	2.095	2.106	2.043	2.151	1.986	2.051		2.2	8.0	TM	
89	TM	n-Butylbenzene	4.118	3.281	2.964	2.740	2.844	2.909	3.229	3.117	3.240		3.2	13	TM	
90	TM	1,2-DCB	2.259	1.946	1.999	1.901	1.934	1.920	1.989	1.858	1.969		2.0	5.8	TM	
91	TM	Hexachloroethane		0.7548	0.6495	0.6543	0.6168	0.6306	0.6707	0.6551	0.6862		0.66	6.4	TM	
92	TM	1,2-Dibromo-3-chloropropane		0.2029	0.1769	0.1560	0.1599	0.1533	0.1543	0.1549	0.1689		0.17	10	TM	
93	TM	1,2,4-Trichlorobenzene	1.748	1.439	1.331	1.093	1.236	1.151	1.239	1.235	1.324		1.3	15	TM	
94	TML	Hexachlorobutadiene		0.7992	0.5294	0.5692	0.4976	0.4804	0.5109	0.4877	0.5162		0.55	19	TML	1.000
95	TM	Naphthalene	2.058	1.669	1.432	1.259	1.401	1.395	1.540	1.695	1.758		1.6	15	TM	
96	TML	1,2,3-Trichlorobenzene	1.140	0.9457	0.7368	0.6753	0.7430	0.7043	0.7870	0.7538			0.81	19	TML	0.999
97																
98																
99																
100																
101																
102																
103																
104																
105																

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1210L05.D Vial: 4
Acq On : 10 Dec 16 12:57 Operator: PM,DG,SV,CMM
Sample : 0.3ug/L VOC STD12/10/16J Inst : Loki
Misc : W IS-tcpd5-12/6/16, Multiplr: 1.00

Quant Time: Dec 15 11:46 2016 Quant Results File: L826AW.RES

Quant Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	536064	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	482176	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	246720	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	58921	5.40740 ppb		0.00
Spiked Amount 25.000			Recovery = 21.628%			
37) 1,2-DCA-D4(S)	4.93	65	67141	5.40088 ppb		0.00
Spiked Amount 25.000			Recovery = 21.604%			
57) Toluene-D8(S)	7.22	98	198825	5.26065 ppb		0.00
Spiked Amount 25.000			Recovery = 21.044%			
65) 4-Bromofluorobenzene(S)	9.90	95	65214	5.12852 ppb		0.00
Spiked Amount 25.000			Recovery = 20.516%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.86	85	2902	0.29329 ppb		95
3) Freon 114	0.93	85	2247	0.31168 ppb		84
4) Chloromethane	0.96	50	8139	0.42782 ppb		90
5) Vinyl chloride	1.03	62	4512	0.33234 ppb	#	81
6) Bromomethane	1.23	96	3842	0.42439 ppb		93
7) Chloroethane	1.29	64	2704	0.40763 ppb		93
8) Dichlorofluoromethane	1.43	67	7558	0.34024 ppb		91
9) Trichlorofluoromethane	1.46	101	4030	0.30162 ppb		99
10) Acrolein	1.76	56	4846	10.38506 ppb		96
11) Acetone	1.88	43	4371	-0.12189 ppb		86
12) Freon-113	1.85	101	2658	0.34965 ppb	#	87
13) 1,1-DCE	1.83	96	2130	0.33247 ppb	#	90
14) t-Butanol	2.40	59	4447	12.48297 ppb		98
15) Acetonitrile	2.11	41	15547	11.51374 ppb	#	80
16) Methyl Acetate	2.18	43	3883	0.45345 ppb		96
17) Iodomethane	1.94	142	1230	0.33838 ppb		98
18) Acrylonitrile	2.47	52	1250	0.41410 ppb	#	40
19) Methylene chloride	2.24	84	9858	0.38397 ppb		99
20) Carbon disulfide	1.98	76	9719	0.36851 ppb		98
21) Methyl t-butyl ether (MtBE	2.52	73	8341	0.31468 ppb		92
22) Trans-1,2-DCE	2.50	96	3675	0.35866 ppb		82
23) Diisopropyl Ether	3.10	45	11493	0.31257 ppb	#	90
24) 1,1-DCA	2.95	63	7503	0.35554 ppb		95
25) Vinyl Acetate	3.08	43	3353	0.39043 ppb		100
26) Ethyl tert Butyl Ether	3.60	59	8393	0.30249 ppb		96
28) Cis-1,2-DCE	3.74	96	3817	0.32752 ppb		86
29) 2,2-Dichloropropane	3.71	77	1637	0.33923 ppb		91
30) Chloroform	4.26	83	6235	0.30965 ppb		98
31) Bromochloromethane	4.09	128	1805	0.31915 ppb		68
33) 1,1,1-TCA	4.47	97	5314	0.35742 ppb		82
34) Cyclohexane	4.52	41	3285	0.42856 ppb	#	64
35) 1,1-Dichloropropene	4.73	75	3767	0.29918 ppb		94
36) 2,2,4-Trimethylpentane	5.16	57	6921	0.28777 ppb	#	45
38) Carbon Tetrachloride	4.70	119	3743	0.32746 ppb		93
39) Tert Amyl Methyl Ether	5.23	73	7030	0.29014 ppb	#	91
40) 1,2-DCA	5.04	62	5389	0.34617 ppb		94
41) Benzene	4.99	78	15473	0.35517 ppb		94
42) TCE	5.84	95	2183	0.39306 ppb		88
43) 2-Pentanone	6.13	43	72137	10.76494 ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1210L05.D Vial: 4
Acq On : 10 Dec 16 12:57 Operator: PM,DG,SV,CMM
Sample : 0.3ug/L VOC STD12/10/16J Inst : Loki
Misc : W IS-tcpd5-12/6/16, Multiplr: 1.00

Quant Time: Dec 15 11:46 2016 Quant Results File: L826AW.RES

Quant Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
44)	1,2-Dichloropropane	6.09	63	4369	0.33755 ppb	#	82
45)	Bromodichloromethane	6.44	83	4861	0.32114 ppb	#	94
46)	Methyl Cyclohexane	6.04	83	3825	0.31848 ppb		79
47)	Dibromomethane	6.22	93	2139	0.31610 ppb		88
49)	MIBK (methyl isobutyl ket	7.16	43	5226	0.24279 ppb		90
50)	1-Bromo-2-chloroethane	6.75	63	2608	0.28821 ppb		85
51)	Cis-1,3-Dichloropropene	6.95	75	5323	0.31794 ppb		97
52)	Toluene	7.29	91	14481	0.32316 ppb		94
53)	Trans-1,3-Dichloropropene	7.56	75	4861	0.33306 ppb		84
54)	1,1,2-TCA	7.74	83	2620	0.30858 ppb		83
55)	2-Hexanone	8.06	43	775	0.27549 ppb	#	87
58)	1,2-EDB	8.21	107	2519	0.29774 ppb		89
59)	Tetrachloroethene	7.85	166	2782	0.29168 ppb		98
60)	1-Chlorohexane	8.76	91	3687	0.34384 ppb		89
61)	1,1,1,2-Tetrachloroethane	8.83	131	3121	0.31069 ppb		94
62)	m&p-Xylene	8.99	106	10472	0.60736 ppb		98
63)	o-Xylene	9.38	106	4837	0.28994 ppb		75
64)	Styrene	9.40	104	4727	1.05584 ppb		89
66)	1,3-Dichloropropane	7.90	76	5179	0.32123 ppb	#	82
67)	Dibromochloromethane	8.12	129	3580	0.35548 ppb	#	63
68)	Chlorobenzene	8.73	112	9488	0.32466 ppb		90
69)	Ethylbenzene	8.87	91	15201	0.32602 ppb		98
70)	Bromoform	9.55	173	1893	0.31852 ppb		80
72)	Isopropylbenzene	9.76	105	12735	0.33744 ppb		93
73)	1,1,2,2-Tetrachloroethane	10.07	83	3834	0.34386 ppb		98
74)	1,2,3-Trichloropropane	10.09	110	902	0.48926 ppb		93
75)	t-1,4-Dichloro-2-Butene	10.13	53	826	0.32828 ppb	#	73
76)	Bromobenzene	10.02	156	3394	0.31874 ppb	#	59
77)	n-Propylbenzene	10.17	91	14908	0.32576 ppb		98
78)	4-Ethyltoluene	10.29	105	12067	0.31961 ppb		99
79)	2-Chlorotoluene	10.23	91	9079	0.30829 ppb		96
80)	1,3,5-Trimethylbenzene	10.36	105	9327	0.29259 ppb		93
81)	4-Chlorotoluene	10.34	91	11110	0.32593 ppb		98
82)	Tert-Butylbenzene	10.67	119	8504	0.32765 ppb		91
83)	1,2,4-Trimethylbenzene	10.72	105	10831	0.32940 ppb		98
84)	Sec-Butylbenzene	10.89	105	13420	0.34628 ppb		92
85)	p-Isopropyltoluene	11.04	119	11119	0.33752 ppb		94
86)	Benzyl Chloride	11.20	91	3330	0.34720 ppb	#	78
87)	1,3-DCB	10.96	146	6540	0.31972 ppb		88
88)	1,4-DCB	11.05	146	7373	0.34531 ppb		92
89)	n-Butylbenzene	11.44	91	12192	0.39093 ppb		94
90)	1,2-DCB	11.41	146	6687	0.34310 ppb		96
91)	Hexachloroethane	11.66	117	2146	0.32712 ppb	#	77
92)	1,2-Dibromo-3-chloropropan	12.18	157	506	0.30907 ppb	#	71
93)	1,2,4-Trichlorobenzene	13.00	180	5175	0.40009 ppb		94
94)	Hexachlorobutadiene	13.19	225	3550	0.94632 ppb		94
95)	Naphthalene	13.23	128	6094	0.39117 ppb		95
96)	1,2,3-Trichlorobenzene	13.47	180	3375	0.44477 ppb		86

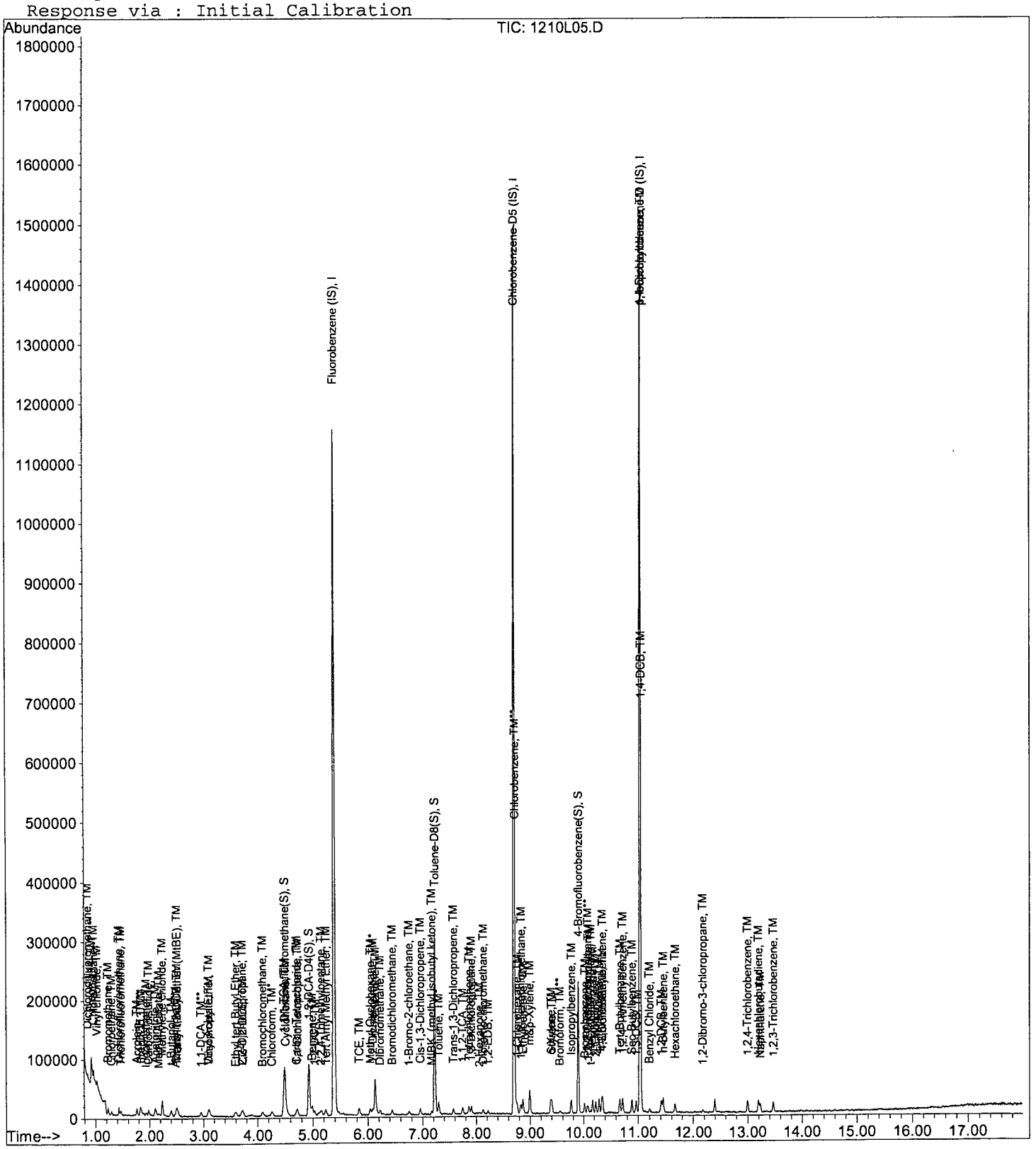
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161210\1210L05.D Vial: 4
Acq On : 10 Dec 16 12:57 Operator: PM,DG,SV,CMM
Sample : 0.3ug/L VOC STD12/10/16J Inst : Loki
Misc : W IS-tcpd5-12/6/16, Multiplr: 1.00

Quant Time: Dec 15 11:46 2016 Quant Results File: L826AW.RES

Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Dec 15 12:18:37 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1210L06.D Vial: 5
Acq On : 10 Dec 16 13:26 Operator: PM,DG,SV,CMM
Sample : 0.5ug/L VOC STD12/10/16K Inst : Loki
Misc : W IS-tcpd5-12/6/16, Multiplr: 1.00

Quant Time: Dec 15 11:47 2016 Quant Results File: L826AW.RES

Quant Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	521920	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	471360	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	245696	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	56896	5.36306 ppb		0.00
Spiked Amount 25.000			Recovery	= 21.452%		
37) 1,2-DCA-D4(S)	4.93	65	67609	5.58591 ppb		0.00
Spiked Amount 25.000			Recovery	= 22.344%		
57) Toluene-D8(S)	7.22	98	197014	5.33235 ppb		0.00
Spiked Amount 25.000			Recovery	= 21.328%		
65) 4-Bromofluorobenzene(S)	9.90	95	61209	4.92402 ppb		0.00
Spiked Amount 25.000			Recovery	= 19.696%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	4829	0.50126 ppb	#	76
3) Freon 114	0.93	85	3774	0.53767 ppb		94
4) Chloromethane	0.96	50	11049	0.59652 ppb		92
5) Vinyl chloride	1.03	62	6569	0.49696 ppb	#	71
6) Bromomethane	1.23	96	5511	0.62525 ppb		93
7) Chloroethane	1.29	64	3685	0.57058 ppb	#	83
8) Dichlorofluoromethane	1.43	67	11129	0.51457 ppb		95
9) Trichlorofluoromethane	1.46	101	6945	0.53388 ppb		90
10) Acrolein	1.76	56	10543	23.20612 ppb	#	79
11) Acetone	1.88	43	5905	0.57366 ppb		85
12) Freon-113	1.84	101	3876	0.52369 ppb		97
13) 1,1-DCE	1.83	96	3642	0.58388 ppb		96
14) t-Butanol	2.40	59	7929	22.86030 ppb		100
15) Acetonitrile	2.11	41	35877	27.28970 ppb		92
16) Methyl Acetate	2.17	43	4410	0.52895 ppb		90
17) Iodomethane	1.93	142	1600	0.45210 ppb		96
18) Acrylonitrile	2.48	52	1851	0.62982 ppb		92
19) Methylene chloride	2.24	84	11855	0.57942 ppb		89
20) Carbon disulfide	1.98	76	14144	0.55082 ppb		93
21) Methyl t-butyl ether (MtBE	2.53	73	13322	0.51622 ppb		92
22) Trans-1,2-DCE	2.50	96	4960	0.49719 ppb		87
23) Diisopropyl Ether	3.11	45	18459	0.51562 ppb		94
24) 1,1-DCA	2.95	63	10383	0.50535 ppb	#	96
25) Vinyl Acetate	3.09	43	4993	0.59715 ppb	#	84
26) Ethyl tert Butyl Ether	3.59	59	13225	0.48955 ppb		91
27) MEK (2-Butanone)	3.82	43	2916	0.75070 ppb	#	54
28) Cis-1,2-DCE	3.73	96	5776	0.50905 ppb		92
29) 2,2-Dichloropropane	3.71	77	2644	0.56275 ppb		96
30) Chloroform	4.26	83	10667	0.54411 ppb		97
31) Bromochloromethane	4.09	128	3019	0.54827 ppb	#	63
33) 1,1,1-TCA	4.47	97	7766	0.53649 ppb		93
34) Cyclohexane	4.53	41	4670	0.62576 ppb	#	64
35) 1,1-Dichloropropene	4.72	75	5888	0.48031 ppb		99
36) 2,2,4-Trimethylpentane	5.15	57	12421	0.53045 ppb	#	51
38) Carbon Tetrachloride	4.71	119	5734	0.51524 ppb	#	89
39) Tert Amyl Methyl Ether	5.23	73	11805	0.50041 ppb		99
40) 1,2-DCA	5.03	62	7987	0.52697 ppb		94
41) Benzene	4.99	78	22403	0.52818 ppb		96
42) TCE	5.84	95	2768	0.51190 ppb		87

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1210L06.D Vial: 5
Acq On : 10 Dec 16 13:26 Operator: PM,DG,SV,CMM
Sample : 0.5ug/L VOC STD12/10/16K Inst : Loki
Misc : W IS-tcpd5-12/6/16, Multiplr: 1.00

Quant Time: Dec 15 11:47 2016 Quant Results File: L826AW.RES

Quant Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	2-Pentanone	6.12	43	160947	24.66885	ppb		99
44)	1,2-Dichloropropane	6.09	63	6959	0.55222	ppb	#	90
45)	Bromodichloromethane	6.44	83	7971	0.54087	ppb	#	94
46)	Methyl Cyclohexane	6.04	83	5917	0.50601	ppb		94
47)	Dibromomethane	6.22	93	3640	0.55249	ppb		89
49)	MIBK (methyl isobutyl ket	7.16	43	9258	0.72640	ppb		98
50)	1-Bromo-2-chloroethane	6.75	63	4537	0.51498	ppb		98
51)	Cis-1,3-Dichloropropene	6.95	75	8231	0.50496	ppb		96
52)	Toluene	7.29	91	20328	0.46594	ppb		92
53)	Trans-1,3-Dichloropropene	7.57	75	7421	0.52225	ppb		95
54)	1,1,2-TCA	7.74	83	4442	0.53735	ppb		90
55)	2-Hexanone	8.06	43	971	0.35452	ppb	#	76
58)	1,2-EDB	8.21	107	4589	0.55485	ppb	#	75
59)	Tetrachloroethene	7.86	166	4822	0.51717	ppb		92
60)	1-Chlorohexane	8.76	91	4933	0.47059	ppb		93
61)	1,1,1,2-Tetrachloroethane	8.83	131	5109	0.52026	ppb		94
62)	m&p-Xylene	8.99	106	16817	0.99775	ppb		74
63)	o-Xylene	9.38	106	7394	0.45338	ppb		92
64)	Styrene	9.40	104	6939	1.16151	ppb		95
66)	1,3-Dichloropropane	7.91	76	7849	0.49800	ppb		86
67)	Dibromochloromethane	8.12	129	4597	0.46694	ppb		96
68)	Chlorobenzene	8.73	112	15931	0.55764	ppb		88
69)	Ethylbenzene	8.87	91	22480	0.49320	ppb		99
70)	Bromoform	9.55	173	2891	0.49760	ppb	#	75
72)	Isopropylbenzene	9.76	105	18457	0.49109	ppb		97
73)	1,1,2,2-Tetrachloroethane	10.07	83	6429	0.57901	ppb	#	86
74)	1,2,3-Trichloropropane	10.08	110	1016	0.55339	ppb		81
75)	t-1,4-Dichloro-2-Butene	10.13	53	1951	0.77862	ppb	#	74
76)	Bromobenzene	10.02	156	5510	0.51962	ppb		96
77)	n-Propylbenzene	10.17	91	23082	0.50647	ppb		96
78)	4-Ethyltoluene	10.29	105	18818	0.50050	ppb		97
79)	2-Chlorotoluene	10.23	91	15938	0.54345	ppb		95
80)	1,3,5-Trimethylbenzene	10.36	105	15103	0.47576	ppb		99
81)	4-Chlorotoluene	10.34	91	16343	0.48145	ppb		100
82)	Tert-Butylbenzene	10.67	119	13218	0.51140	ppb		97
83)	1,2,4-Trimethylbenzene	10.72	105	16144	0.49303	ppb		93
84)	Sec-Butylbenzene	10.88	105	19063	0.49393	ppb		98
85)	p-Isopropyltoluene	11.04	119	16604	0.50613	ppb		97
86)	Benzyl Chloride	11.20	91	5426	0.56809	ppb	#	92
87)	1,3-DCB	10.96	146	11091	0.54446	ppb		95
88)	1,4-DCB	11.05	146	11908	0.56002	ppb		98
89)	n-Butylbenzene	11.44	91	16121	0.51907	ppb		85
90)	1,2-DCB	11.41	146	9562	0.49266	ppb		95
91)	Hexachloroethane	11.66	117	3709	0.56773	ppb		93
92)	1,2-Dibromo-3-chloropropan	12.18	157	997	0.61152	ppb	#	66
93)	1,2,4-Trichlorobenzene	13.00	180	7071	0.54896	ppb		96
94)	Hexachlorobutadiene	13.19	225	3927	1.02389	ppb	#	76
95)	Naphthalene	13.22	128	8200	0.52855	ppb		97
96)	1,2,3-Trichlorobenzene	13.47	180	4647	0.61495	ppb		93

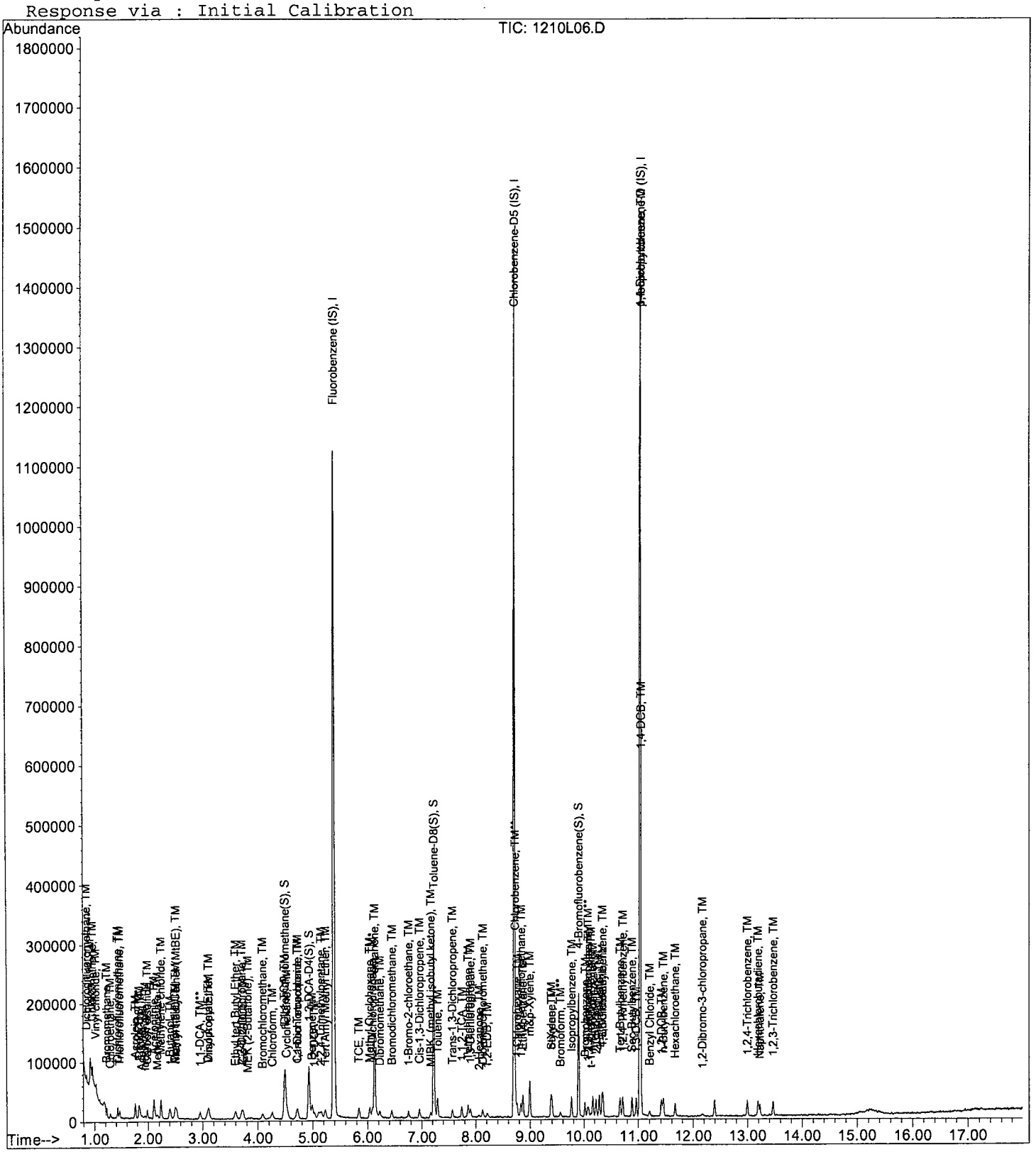
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161210\1210L06.D Vial: 5
Acq On : 10 Dec 16 13:26 Operator: PM,DG,SV,CMM
Sample : 0.5ug/L VOC STD12/10/16K Inst : Loki
Misc : W IS-tcpd5-12/6/16, Multiplr: 1.00

Quant Time: Dec 15 11:47 2016 Quant Results File: L826AW.RES

Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Dec 15 12:18:37 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1210L07.D Vial: 6
Acq On : 10 Dec 16 13:54 Operator: PM,DG,SV,CMM
Sample : 1.0ug/L VOC STD12/10/16L Inst : Loki
Misc : W IS-tcpd5-12/6/16, Multiplr: 1.00

Quant Time: Dec 15 11:47 2016 Quant Results File: L826AW.RES

Quant Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	527168	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	482624	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	253504	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	99689	9.30321 ppb		0.00
Spiked Amount 25.000			Recovery	= 37.212%		
37) 1,2-DCA-D4(S)	4.93	65	118270	9.67429 ppb		0.00
Spiked Amount 25.000			Recovery	= 38.696%		
57) Toluene-D8(S)	7.22	98	342948	9.06553 ppb		0.00
Spiked Amount 25.000			Recovery	= 36.264%		
65) 4-Bromofluorobenzene(S)	9.89	95	115624	9.08440 ppb		0.00
Spiked Amount 25.000			Recovery	= 36.336%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.86	85	10115	1.03951 ppb		98
3) Freon 114	0.93	85	7791	1.09892 ppb		86
4) Chloromethane	0.96	50	20882	1.11616 ppb		96
5) Vinyl chloride	1.03	62	13784	1.03242 ppb		89
6) Bromomethane	1.22	96	9397	1.05552 ppb		87
7) Chloroethane	1.29	64	6581	1.00884 ppb	#	78
8) Dichlorofluoromethane	1.43	67	22785	1.04302 ppb		93
9) Trichlorofluoromethane	1.46	101	13452	1.02379 ppb		91
10) Acrolein	1.76	56	25088	54.67127 ppb		94
11) Acetone	1.88	43	6066	0.61609 ppb		99
12) Freon-113	1.85	101	8056	1.07762 ppb		94
13) 1,1-DCE	1.83	96	6570	1.04280 ppb		95
14) t-Butanol	2.40	59	17008	48.54804 ppb		99
15) Acetonitrile	2.11	41	69938	52.66848 ppb		99
16) Methyl Acetate	2.17	43	9854	1.17016 ppb		92
17) Iodomethane	1.93	142	3160	0.88401 ppb		93
18) Acrylonitrile	2.48	52	2976	1.00253 ppb		69
19) Methylene chloride	2.24	84	18283	1.12028 ppb		94
20) Carbon disulfide	1.98	76	26462	1.02027 ppb		98
21) Methyl t-butyl ether (MtBE	2.52	73	24844	0.95311 ppb		95
22) Trans-1,2-DCE	2.50	96	10279	1.02011 ppb		93
23) Diisopropyl Ether	3.10	45	34607	0.95707 ppb	#	85
24) 1,1-DCA	2.95	63	21532	1.03755 ppb		96
25) Vinyl Acetate	3.10	43	8208	0.97189 ppb	#	82
26) Ethyl tert Butyl Ether	3.59	59	27265	0.99922 ppb		96
27) MEK (2-Butanone)	3.82	43	4884	1.24483 ppb		88
28) Cis-1,2-DCE	3.73	96	10621	0.92672 ppb	#	91
29) 2,2-Dichloropropane	3.71	77	4917	1.03613 ppb	#	85
30) Chloroform	4.26	83	19834	1.00163 ppb		96
31) Bromochloromethane	4.08	128	6523	1.17282 ppb		80
33) 1,1,1-TCA	4.47	97	13998	0.95739 ppb		96
34) Cyclohexane	4.53	41	7308	0.96949 ppb		96
35) 1,1-Dichloropropene	4.72	75	12914	1.04296 ppb		93
36) 2,2,4-Trimethylpentane	5.16	57	23273	0.98400 ppb	#	57
38) Carbon Tetrachloride	4.70	119	11566	1.02895 ppb		99
39) Tert Amyl Methyl Ether	5.23	73	23995	1.00702 ppb		93
40) 1,2-DCA	5.03	62	16322	1.06617 ppb	#	90
41) Benzene	4.99	78	41399	0.96632 ppb		98
42) TCE	5.84	95	4886	0.89459 ppb		89

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1210L07.D Vial: 6
Acq On : 10 Dec 16 13:54 Operator: PM,DG,SV,CMM
Sample : 1.0ug/L VOC STD12/10/16L Inst : Loki
Misc : W IS-tcpd5-12/6/16, Multiplr: 1.00

Quant Time: Dec 15 11:47 2016 Quant Results File: L826AW.RES

Quant Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	2-Pentanone	6.12	43	324991	49.31651	ppb		99
44)	1,2-Dichloropropane	6.08	63	12052	0.94684	ppb		98
45)	Bromodichloromethane	6.44	83	15015	1.00869	ppb		100
46)	Methyl Cyclohexane	6.04	83	11314	0.95793	ppb		99
47)	Dibromomethane	6.22	93	6957	1.04545	ppb		82
49)	MIBK (methyl isobutyl ket	7.16	43	14354	1.30085	ppb		97
50)	1-Bromo-2-chloroethane	6.75	63	9319	1.04723	ppb		98
51)	Cis-1,3-Dichloropropene	6.95	75	14847	0.90178	ppb		100
52)	Toluene	7.29	91	43109	0.97826	ppb		96
53)	Trans-1,3-Dichloropropene	7.57	75	13602	0.94770	ppb		85
54)	1,1,2-TCA	7.74	83	8851	1.06005	ppb		96
55)	2-Hexanone	8.06	43	2181	0.78837	ppb	#	80
58)	1,2-EDB	8.21	107	8350	0.98603	ppb		86
59)	Tetrachloroethene	7.86	166	9151	0.95856	ppb		93
60)	1-Chlorohexane	8.76	91	10158	0.94642	ppb		96
61)	1,1,1,2-Tetrachloroethane	8.83	131	9304	0.92534	ppb		97
62)	m&p-Xylene	8.99	106	31253	1.81096	ppb		96
63)	o-Xylene	9.38	106	14956	0.89565	ppb		94
64)	Styrene	9.40	104	16003	1.55765	ppb		100
66)	1,3-Dichloropropane	7.90	76	16318	1.01118	ppb		99
67)	Dibromochloromethane	8.12	129	9865	0.97866	ppb		87
68)	Chlorobenzene	8.73	112	28990	0.99107	ppb		94
69)	Ethylbenzene	8.87	91	42199	0.90422	ppb		95
70)	Bromoform	9.55	173	5591	0.93987	ppb		89
72)	Isopropylbenzene	9.76	105	38277	0.98708	ppb		99
73)	1,1,2,2-Tetrachloroethane	10.07	83	12571	1.09729	ppb		94
74)	1,2,3-Trichloropropane	10.09	110	1700	0.89742	ppb		86
75)	t-1,4-Dichloro-2-Butene	10.13	53	2852	1.10314	ppb		82
76)	Bromobenzene	10.02	156	10880	0.99443	ppb		98
77)	n-Propylbenzene	10.17	91	43551	0.92618	ppb		91
78)	4-Ethyltoluene	10.29	105	34370	0.88597	ppb		91
79)	2-Chlorotoluene	10.23	91	28710	0.94879	ppb		85
80)	1,3,5-Trimethylbenzene	10.36	105	30231	0.92297	ppb		95
81)	4-Chlorotoluene	10.34	91	33546	0.95779	ppb		100
82)	Tert-Butylbenzene	10.67	119	24485	0.91814	ppb		95
83)	1,2,4-Trimethylbenzene	10.72	105	30366	0.89881	ppb		91
84)	Sec-Butylbenzene	10.88	105	36510	0.91685	ppb		99
85)	p-Isopropyltoluene	11.04	119	31998	0.94533	ppb		99
86)	Benzyl Chloride	11.20	91	8423	0.85471	ppb	#	89
87)	1,3-DCB	10.96	146	20680	0.98392	ppb		97
88)	1,4-DCB	11.05	146	21563	0.98286	ppb		97
89)	n-Butylbenzene	11.44	91	30051	0.93779	ppb		97
90)	1,2-DCB	11.41	146	20271	1.01225	ppb		99
91)	Hexachloroethane	11.65	117	6586	0.97705	ppb		96
92)	1,2-Dibromo-3-chloropropan	12.18	157	1794	1.06648	ppb	#	79
93)	1,2,4-Trichlorobenzene	13.00	180	13494	1.01534	ppb		89
94)	Hexachlorobutadiene	13.19	225	5368	1.27651	ppb		88
95)	Naphthalene	13.22	128	14523	0.90728	ppb		99
96)	1,2,3-Trichlorobenzene	13.47	180	7471	0.95820	ppb		96

(#) = qualifier out of range (m) = manual integration

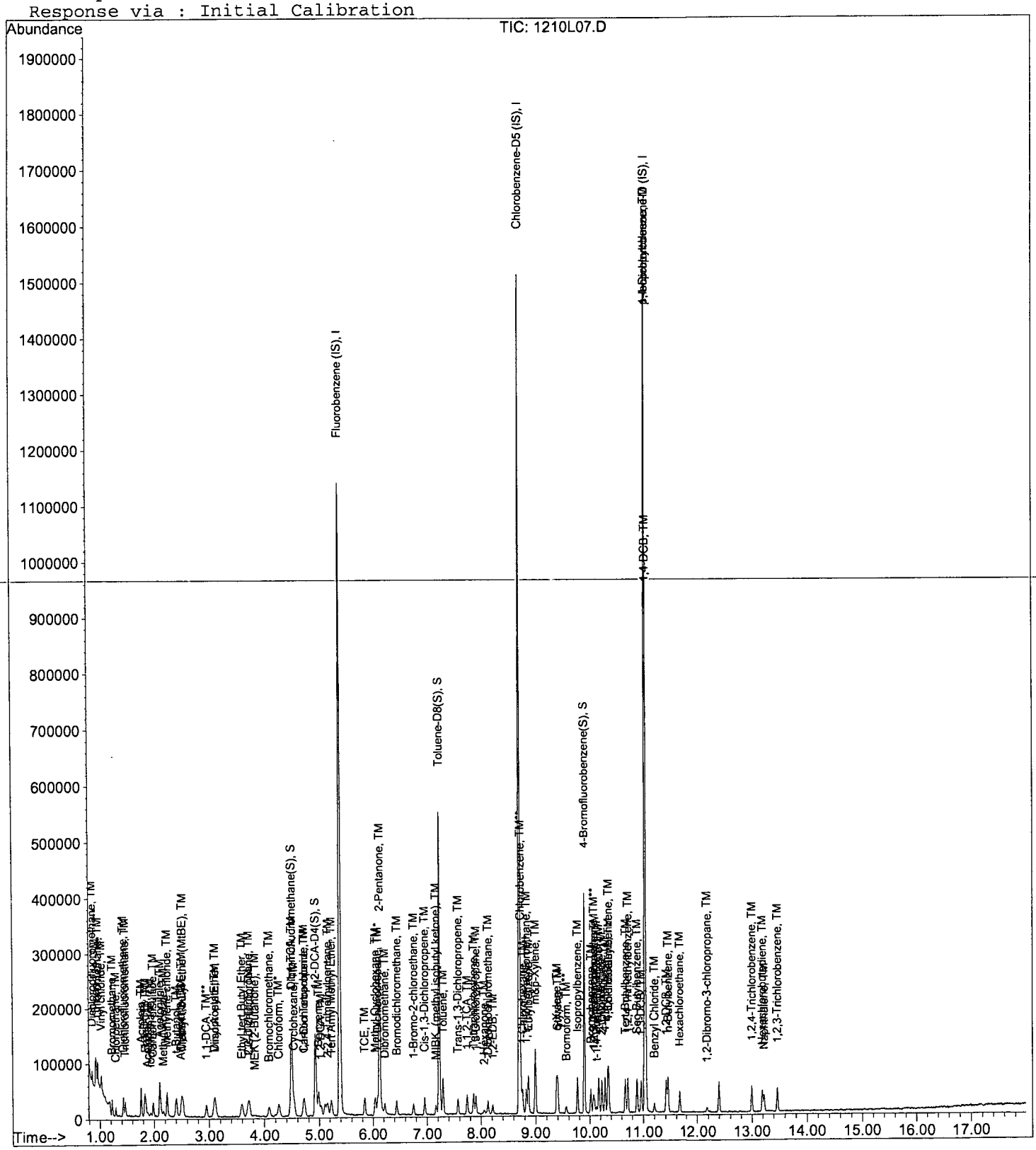
Quantitation Report

Data File : M:\LOKI\DATA\161210\1210L07.D
Acq On : 10 Dec 16 13:54
Sample : 1.0ug/L VOC STD12/10/16L
Misc : W IS-tcpd5-12/6/16,

Vial: 6
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 15 11:47 2016 Quant Results File: L826AW.RES

Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Dec 15 12:18:37 2016
Response via : Initial Calibration



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Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1210L08.D Vial: 7
Acq On : 10 Dec 16 14:22 Operator: PM,DG,SV,CMM
Sample : 2.0ug/L VOC STD12/10/16M Inst : Loki
Misc : W IS-tcpd5-12/6/16, Multiplr: 1.00

Quant Time: Dec 15 11:47 2016 Quant Results File: L826AW.RES

Quant Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	553152	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	502848	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	266944	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	106321	9.45604 ppb		0.00
Spiked Amount 25.000			Recovery	= 37.824%		
37) 1,2-DCA-D4(S)	4.93	65	120634	9.40413 ppb		0.00
Spiked Amount 25.000			Recovery	= 37.616%		
57) Toluene-D8(S)	7.22	98	362837	9.20553 ppb		0.00
Spiked Amount 25.000			Recovery	= 36.824%		
65) 4-Bromofluorobenzene(S)	9.90	95	121458	9.15897 ppb		0.00
Spiked Amount 25.000			Recovery	= 36.636%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.86	85	19312	1.89145 ppb		97
3) Freon 114	0.93	85	15139	2.03505 ppb		95
4) Chloromethane	0.96	50	39442	2.00918 ppb		96
5) Vinyl chloride	1.03	62	26555	1.89553 ppb		99
6) Bromomethane	1.22	96	18272	1.95599 ppb		93
7) Chloroethane	1.29	64	13779	2.01305 ppb	#	79
8) Dichlorofluoromethane	1.43	67	44169	1.92693 ppb		98
9) Trichlorofluoromethane	1.46	101	25450	1.84594 ppb		91
10) Acrolein	1.76	56	36176	75.13084 ppb	#	100
11) Acetone	1.88	43	8085	1.30048 ppb		97
12) Freon-113	1.84	101	14997	1.91185 ppb		95
13) 1,1-DCE	1.83	96	13382	2.02424 ppb		94
14) t-Butanol	2.40	59	26168	71.18583 ppb		98
15) Acetonitrile	2.11	41	98834	70.93303 ppb		96
16) Methyl Acetate	2.17	43	17369	1.96567 ppb		98
17) Iodomethane	1.93	142	6657	1.77481 ppb		96
18) Acrylonitrile	2.48	52	5881	1.88808 ppb		85
19) Methylene chloride	2.24	84	29439	1.95814 ppb		92
20) Carbon disulfide	1.98	76	52961	1.94605 ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	51127	1.86928 ppb		96
22) Trans-1,2-DCE	2.50	96	20474	1.93643 ppb		99
23) Diisopropyl Ether	3.10	45	69273	1.82578 ppb		98
24) 1,1-DCA	2.95	63	41668	1.91352 ppb		97
25) Vinyl Acetate	3.10	43	17472	1.97163 ppb	#	81
26) Ethyl tert Butyl Ether	3.60	59	52724	1.84149 ppb		94
27) MEK (2-Butanone)	3.78	43	668	0.16226 ppb	#	54
28) Cis-1,2-DCE	3.73	96	23133	1.92363 ppb		95
29) 2,2-Dichloropropane	3.71	77	9299	1.86747 ppb		94
30) Chloroform	4.26	83	40364	1.94265 ppb		99
31) Bromochloromethane	4.08	128	11288	1.93422 ppb		94
33) 1,1,1-TCA	4.47	97	28604	1.86446 ppb		97
34) Cyclohexane	4.53	41	15510	1.96093 ppb		82
35) 1,1-Dichloropropene	4.72	75	25523	1.96447 ppb		93
36) 2,2,4-Trimethylpentane	5.15	57	46424	1.87064 ppb	#	75
38) Carbon Tetrachloride	4.70	119	22172	1.87983 ppb		97
39) Tert Amyl Methyl Ether	5.23	73	45740	1.82944 ppb		94
40) 1,2-DCA	5.03	62	29261	1.82158 ppb		100
41) Benzene	4.99	78	81866	1.82112 ppb		98
42) TCE	5.84	95	10143	1.76987 ppb		88

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1210L08.D Vial: 7
Acq On : 10 Dec 16 14:22 Operator: PM,DG,SV,CMM
Sample : 2.0ug/L VOC STD12/10/16M Inst : Loki
Misc : W IS-tcpd5-12/6/16, Multiplr: 1.00

Quant Time: Dec 15 11:47 2016 Quant Results File: L826AW.RES

Quant Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	2-Pentanone	6.12	43	489601	70.80564	ppb		99
44)	1,2-Dichloropropane	6.09	63	25785	1.93059	ppb		98
45)	Bromodichloromethane	6.44	83	29777	1.90642	ppb		95
46)	Methyl Cyclohexane	6.04	83	23953	1.93277	ppb		89
47)	Dibromomethane	6.22	93	13985	2.00285	ppb		94
49)	MIBK (methyl isobutyl ket	7.16	43	23943	2.27275	ppb	#	95
50)	1-Bromo-2-chloroethane	6.75	63	17928	1.92004	ppb		100
51)	Cis-1,3-Dichloropropene	6.95	75	32467	1.87934	ppb		98
52)	Toluene	7.29	91	87574	1.89394	ppb		99
53)	Trans-1,3-Dichloropropene	7.57	75	26347	1.74947	ppb		100
54)	1,1,2-TCA	7.74	83	16841	1.92223	ppb		94
55)	2-Hexanone	8.05	43	5085	1.75174	ppb	#	79
58)	1,2-EDB	8.21	107	16572	1.87823	ppb		98
59)	Tetrachloroethene	7.86	166	19880	1.99867	ppb		97
60)	1-Chlorohexane	8.76	91	18695	1.67175	ppb		89
61)	1,1,1,2-Tetrachloroethane	8.83	131	19270	1.83944	ppb		96
62)	m&p-Xylene	8.99	106	63504	3.53175	ppb		98
63)	o-Xylene	9.38	106	32387	1.86151	ppb		93
64)	Styrene	9.40	104	32224	2.22210	ppb		98
66)	1,3-Dichloropropane	7.90	76	31041	1.84616	ppb		98
67)	Dibromochloromethane	8.12	129	18265	1.73910	ppb		92
68)	Chlorobenzene	8.73	112	57697	1.89313	ppb		98
69)	Ethylbenzene	8.87	91	86927	1.78771	ppb		100
70)	Bromoform	9.55	173	11256	1.81608	ppb		88
72)	Isopropylbenzene	9.76	105	72995	1.78760	ppb		99
73)	1,1,2,2-Tetrachloroethane	10.07	83	23353	1.93580	ppb		94
74)	1,2,3-Trichloropropane	10.09	110	4040	2.02532	ppb		92
75)	t-1,4-Dichloro-2-Butene	10.13	53	4455	1.63641	ppb		88
76)	Bromobenzene	10.02	156	22895	1.98724	ppb		99
77)	n-Propylbenzene	10.17	91	89216	1.80179	ppb		98
78)	4-Ethyltoluene	10.29	105	75913	1.85833	ppb		98
79)	2-Chlorotoluene	10.23	91	60118	1.88671	ppb		98
80)	1,3,5-Trimethylbenzene	10.36	105	62591	1.81472	ppb		96
81)	4-Chlorotoluene	10.34	91	69581	1.88662	ppb		99
82)	Tert-Butylbenzene	10.67	119	51214	1.82373	ppb		97
83)	1,2,4-Trimethylbenzene	10.72	105	62599	1.75959	ppb		100
84)	Sec-Butylbenzene	10.88	105	76507	1.82454	ppb		96
85)	p-Isopropyltoluene	11.04	119	64964	1.82262	ppb		97
86)	Benzyl Chloride	11.20	91	18051	1.73947	ppb	#	93
87)	1,3-DCB	10.96	146	42680	1.92841	ppb		96
88)	1,4-DCB	11.05	146	44737	1.93648	ppb		98
89)	n-Butylbenzene	11.44	91	58514	1.73408	ppb		99
90)	1,2-DCB	11.41	146	40588	1.92476	ppb		99
91)	Hexachloroethane	11.66	117	13973	1.96857	ppb		94
92)	1,2-Dibromo-3-chloropropan	12.17	157	3332	1.88104	ppb		92
93)	1,2,4-Trichlorobenzene	13.00	180	23339	1.66770	ppb		96
94)	Hexachlorobutadiene	13.19	225	12155	2.46168	ppb		88
95)	Naphthalene	13.22	128	26888	1.59517	ppb		100
96)	1,2,3-Trichlorobenzene	13.47	180	14422	1.75659	ppb		95

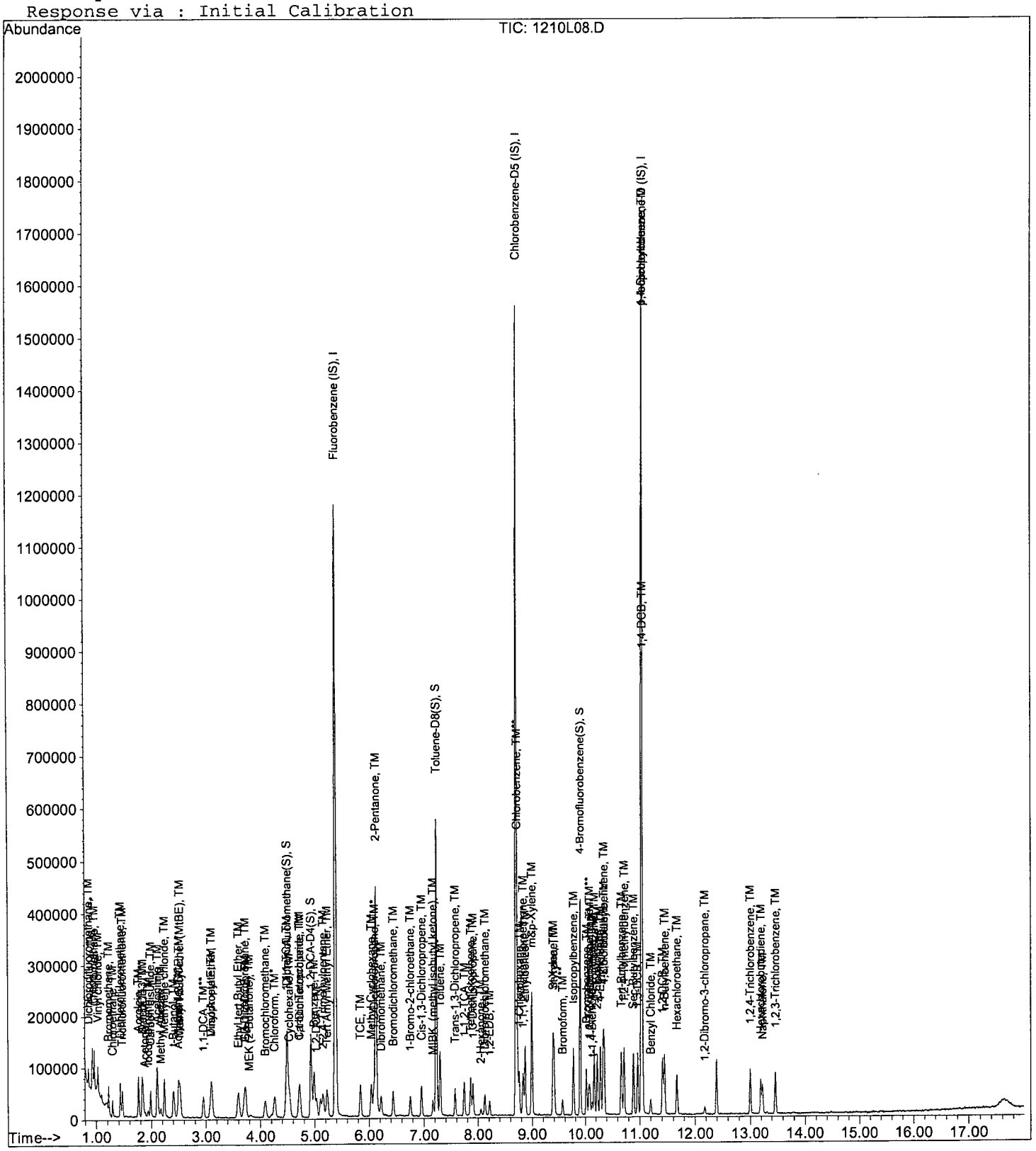
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161210\1210L08.D Vial: 7
Acq On : 10 Dec 16 14:22 Operator: PM,DG,SV,CMM
Sample : 2.0ug/L VOC STD12/10/16M Inst : Loki
Misc : W IS-tcpd5-12/6/16, Multiplr: 1.00

Quant Time: Dec 15 11:47 2016 Quant Results File: L826AW.RES

Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Dec 15 12:18:37 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1210L09.D Vial: 8
Acq On : 10 Dec 16 14:50 Operator: PM,DG,SV,CMM
Sample : 5.0ug/L VOC STD12/10/16N Inst : Loki
Misc : W IS-tcpd5-12/6/16, Multiplr: 1.00

Quant Time: Dec 15 11:47 2016 Quant Results File: L826AW.RES

Quant Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	563328	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	499072	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	286848	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	287750	25.12978 ppb		0.00
Spiked Amount 25.000			Recovery = 100.520%			
37) 1,2-DCA-D4(S)	4.93	65	319815	24.48110 ppb		0.00
Spiked Amount 25.000			Recovery = 97.924%			
57) Toluene-D8(S)	7.22	98	993092	25.38635 ppb		0.00
Spiked Amount 25.000			Recovery = 101.544%			
65) 4-Bromofluorobenzene(S)	9.89	95	342475	26.02092 ppb		0.00
Spiked Amount 25.000			Recovery = 104.084%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.86	85	47880	4.60473 ppb		98
3) Freon 114	0.93	85	33082	4.36669 ppb		98
4) Chloromethane	0.96	50	95572	4.78051 ppb		97
5) Vinyl chloride	1.03	62	67398	4.72404 ppb		98
6) Bromomethane	1.22	96	44624	4.69064 ppb		94
7) Chloroethane	1.29	64	35783	5.13329 ppb		97
8) Dichlorofluoromethane	1.43	67	109912	4.70844 ppb		97
9) Trichlorofluoromethane	1.47	101	65793	4.68590 ppb		98
10) Acrolein	1.76	56	45168	92.11104 ppb	#	94
11) Acetone	1.89	43	19487	5.69732 ppb		95
12) Freon-113	1.85	101	35714	4.47066 ppb		96
13) 1,1-DCE	1.83	96	30192	4.48451 ppb		96
14) t-Butanol	2.40	59	38380	102.52059 ppb		97
15) Acetonitrile	2.11	41	133867	94.34064 ppb		99
16) Methyl Acetate	2.17	43	45343	5.03883 ppb		97
17) Iodomethane	1.93	142	18840	4.93217 ppb		97
18) Acrylonitrile	2.48	52	16580	5.22682 ppb		80
19) Methylene chloride	2.24	84	67141	4.93946 ppb		97
20) Carbon disulfide	1.98	76	120729	4.35606 ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	136236	4.89103 ppb		98
22) Trans-1,2-DCE	2.50	96	49668	4.61274 ppb		96
23) Diisopropyl Ether	3.10	45	184167	4.76627 ppb		96
24) 1,1-DCA	2.95	63	106330	4.79479 ppb		99
25) Vinyl Acetate	3.08	43	43648	4.83650 ppb		100
26) Ethyl tert Butyl Ether	3.59	59	138315	4.74365 ppb		95
27) MEK (2-Butanone)	3.81	43	22788	5.43535 ppb		91
28) Cis-1,2-DCE	3.73	96	58039	4.73907 ppb		96
29) 2,2-Dichloropropane	3.70	77	22368	4.41090 ppb		96
30) Chloroform	4.26	83	101518	4.79764 ppb		95
31) Bromochloromethane	4.09	128	28385	4.77596 ppb		96
33) 1,1,1-TCA	4.47	97	72370	4.63199 ppb		97
34) Cyclohexane	4.53	41	35423	4.39762 ppb		94
35) 1,1-Dichloropropene	4.72	75	59892	4.52652 ppb		98
36) 2,2,4-Trimethylpentane	5.16	57	114302	4.52256 ppb		91
38) Carbon Tetrachloride	4.70	119	54835	4.56515 ppb		90
39) Tert Amyl Methyl Ether	5.23	73	122666	4.81759 ppb		96
40) 1,2-DCA	5.03	62	79844	4.88072 ppb		99
41) Benzene	4.99	78	217367	4.74800 ppb		99
42) TCE	5.84	95	26608	4.55901 ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1210L09.D Vial: 8
Acq On : 10 Dec 16 14:50 Operator: PM,DG,SV,CMM
Sample : 5.0ug/L VOC STD12/10/16N Inst : Loki
Misc : W IS-tcpd5-12/6/16, Multiplr: 1.00

Quant Time: Dec 15 11:47 2016 Quant Results File: L826AW.RES

Quant Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43) 2-Pentanone	6.12	43	679672	96.51795	ppb		100
44) 1,2-Dichloropropane	6.09	63	65323	4.80255	ppb	#	97
45) Bromodichloromethane	6.44	83	75704	4.75926	ppb		93
46) Methyl Cyclohexane	6.04	83	55040	4.36096	ppb		94
47) Dibromomethane	6.22	93	34415	4.83968	ppb		99
49) MIBK (methyl isobutyl ket	7.16	43	50004	5.02574	ppb		95
50) 1-Bromo-2-chloroethane	6.75	63	49376	5.19251	ppb		98
51) Cis-1,3-Dichloropropene	6.95	75	84582	4.80757	ppb		99
52) Toluene	7.29	91	230767	4.90059	ppb		98
53) Trans-1,3-Dichloropropene	7.56	75	73435	4.78807	ppb		97
54) 1,1,2-TCA	7.74	83	44771	5.01785	ppb		96
55) 2-Hexanone	8.05	43	15066	5.09636	ppb		94
58) 1,2-EDB	8.21	107	44315	5.06056	ppb		98
59) Tetrachloroethene	7.86	166	50447	5.11015	ppb		95
60) 1-Chlorohexane	8.76	91	51681	4.65641	ppb		96
61) 1,1,1,2-Tetrachloroethane	8.83	131	52678	5.06648	ppb		93
62) m&p-Xylene	8.99	106	174064	9.75374	ppb		100
63) o-Xylene	9.38	106	87199	5.04986	ppb		93
64) Styrene	9.40	104	95368	4.95101	ppb		95
66) 1,3-Dichloropropane	7.90	76	86041	5.15600	ppb		96
67) Dibromochloromethane	8.12	129	53421	5.12497	ppb		99
68) Chlorobenzene	8.73	112	148253	4.90122	ppb		98
69) Ethylbenzene	8.87	91	232557	4.81887	ppb		100
70) Bromoform	9.55	173	31573	5.13262	ppb		98
72) Isopropylbenzene	9.76	105	207703	4.73357	ppb		99
73) 1,1,2,2-Tetrachloroethane	10.07	83	62498	4.82117	ppb		98
74) 1,2,3-Trichloropropane	10.09	110	12038	5.61611	ppb		95
75) t-1,4-Dichloro-2-Butene	10.13	53	15633	5.34387	ppb		90
76) Bromobenzene	10.01	156	61524	4.96962	ppb		97
77) n-Propylbenzene	10.17	91	260818	4.90194	ppb		99
78) 4-Ethyltoluene	10.29	105	206053	4.69411	ppb		99
79) 2-Chlorotoluene	10.23	91	167506	4.89215	ppb		97
80) 1,3,5-Trimethylbenzene	10.36	105	183619	4.95433	ppb		96
81) 4-Chlorotoluene	10.34	91	198316	5.00402	ppb		98
82) Tert-Butylbenzene	10.67	119	142695	4.72878	ppb		98
83) 1,2,4-Trimethylbenzene	10.72	105	184491	4.82600	ppb		99
84) Sec-Butylbenzene	10.88	105	213759	4.74401	ppb		98
85) p-Isopropyltoluene	11.04	119	181531	4.73960	ppb		99
86) Benzyl Chloride	11.20	91	55135	4.94438	ppb		97
87) 1,3-DCB	10.96	146	117898	4.95735	ppb		99
88) 1,4-DCB	11.05	146	120819	4.86686	ppb		99
89) n-Butylbenzene	11.44	91	163156	4.49968	ppb		98
90) 1,2-DCB	11.41	146	110979	4.89766	ppb		98
91) Hexachloroethane	11.66	117	35387	4.63952	ppb		96
92) 1,2-Dibromo-3-chloropropan	12.18	157	9175	4.82024	ppb		93
93) 1,2,4-Trichlorobenzene	13.00	180	70915	4.71566	ppb		90
94) Hexachlorobutadiene	13.19	225	28546	5.08819	ppb		94
95) Naphthalene	13.22	128	80392	4.43844	ppb		96
96) 1,2,3-Trichlorobenzene	13.46	180	42624	4.83133	ppb		96

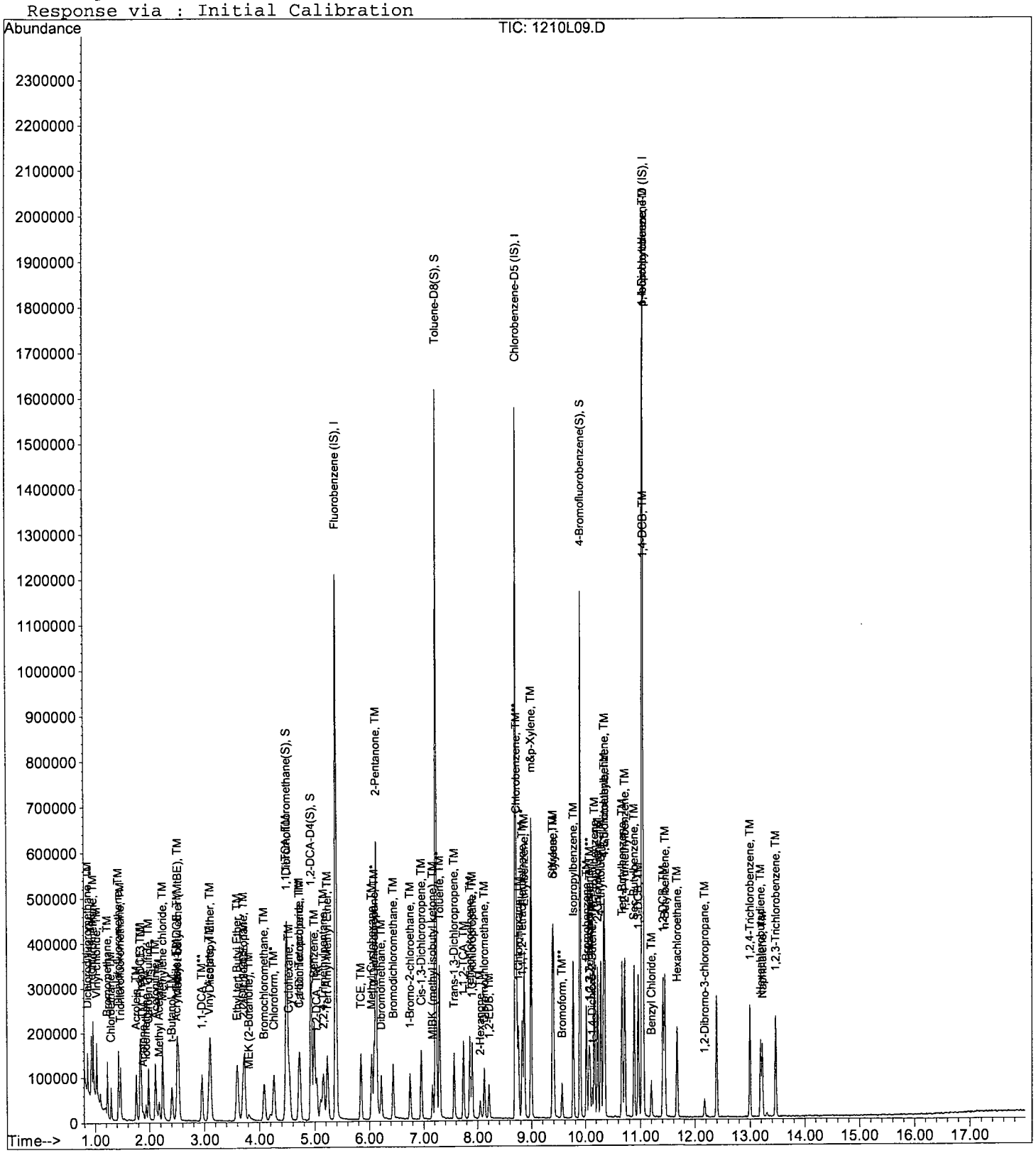
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161210\1210L09.D Vial: 8
Acq On : 10 Dec 16 14:50 Operator: PM,DG,SV,CMM
Sample : 5.0ug/L VOC STD12/10/16N Inst : Loki
Misc : W IS-tcpd5-12/6/16, Multiplr: 1.00

Quant Time: Dec 15 11:47 2016 Quant Results File: L826AW.RES

Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Dec 15 12:18:37 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1210L10.D Vial: 9
Acq On : 10 Dec 16 15:18 Operator: PM,DG,SV,CMM
Sample : 10ug/L VOC STD12/10/16O Inst : Loki
Misc : W IS-tcpd5-12/6/16, Multiplr: 1.00

Quant Time: Dec 15 11:47 2016 Quant Results File: L826AW.RES

Quant Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	570432	25.00000 ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	493760	25.00000 ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	297152	25.00000 ppb	0.00
System Monitoring Compounds					
32) Dibromofluoromethane(S)	4.49	111	296043	25.53205 ppb	0.00
Spiked Amount 25.000			Recovery = 102.128%		
37) 1,2-DCA-D4(S)	4.93	65	342137	25.86364 ppb	0.00
Spiked Amount 25.000			Recovery = 103.456%		
57) Toluene-D8(S)	7.22	98	1017407	26.28771 ppb	0.00
Spiked Amount 25.000			Recovery = 105.152%		
65) 4-Bromofluorobenzene(S)	9.89	95	354576	27.23018 ppb	0.00
Spiked Amount 25.000			Recovery = 108.920%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.86	85	106224	10.08858 ppb	100
3) Freon 114	0.93	85	70791	9.22775 ppb	100
4) Chloromethane	0.96	50	192544	9.51111 ppb	100
5) Vinyl chloride	1.03	62	140488	9.72441 ppb	100
6) Bromomethane	1.22	96	89976	9.34001 ppb	100
7) Chloroethane	1.29	64	76116	10.78333 ppb	100
8) Dichlorofluoromethane	1.43	67	230353	9.74503 ppb	100
9) Trichlorofluoromethane	1.46	101	138777	9.76087 ppb	100
10) Acrolein	1.76	56	61696	124.24969 ppb	100
11) Acetone	1.88	43	30158	9.71990 ppb	100
12) Freon-113	1.84	101	77853	9.62422 ppb	100
13) 1,1-DCE	1.83	96	66184	9.70809 ppb	100
14) t-Butanol	2.40	59	47536	125.39674 ppb	100
15) Acetonitrile	2.11	41	172672	120.17238 ppb	100
16) Methyl Acetate	2.17	43	88847	9.75034 ppb	100
17) Iodomethane	1.93	142	43112	11.14583 ppb	100
18) Acrylonitrile	2.48	52	29563	9.20362 ppb	100
19) Methylene chloride	2.24	84	130575	9.89819 ppb	100
20) Carbon disulfide	1.98	76	262599	9.35691 ppb	100
21) Methyl t-butyl ether (MtBE	2.52	73	278474	9.87303 ppb	100
22) Trans-1,2-DCE	2.50	96	103950	9.53376 ppb	100
23) Diisopropyl Ether	3.10	45	385788	9.85991 ppb	100
24) 1,1-DCA	2.95	63	212118	9.44602 ppb	100
25) Vinyl Acetate	3.08	43	92168	10.08566 ppb	100
26) Ethyl tert Butyl Ether	3.59	59	292987	9.92315 ppb	100
27) MEK (2-Butanone)	3.80	43	40980	9.65274 ppb	100
28) Cis-1,2-DCE	3.73	96	125453	10.11606 ppb	100
29) 2,2-Dichloropropane	3.70	77	49984	9.73395 ppb	100
30) Chloroform	4.26	83	210209	9.81054 ppb	100
31) Bromochloromethane	4.08	128	56770	9.43296 ppb	100
33) 1,1,1-TCA	4.47	97	154096	9.73997 ppb	100
34) Cyclohexane	4.53	41	76580	9.38870 ppb	100
35) 1,1-Dichloropropene	4.72	75	133715	9.98006 ppb	100
36) 2,2,4-Trimethylpentane	5.16	57	247457	9.66913 ppb	100
38) Carbon Tetrachloride	4.71	119	119268	9.80571 ppb	100
39) Tert Amyl Methyl Ether	5.23	73	254027	9.85242 ppb	100
40) 1,2-DCA	5.03	62	163121	9.84712 ppb	100
41) Benzene	4.99	78	450298	9.71348 ppb	100
42) TCE	5.84	95	59312	10.03594 ppb	100

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161210\1210L10.D Vial: 9
Acq On : 10 Dec 16 15:18 Operator: PM,DG,SV,CMM
Sample : 10ug/L VOC STD12/10/16O Inst : Loki
Misc : W IS-tcpd5-12/6/16, Multiplr: 1.00

Quant Time: Dec 15 11:47 2016 Quant Results File: L826AW.RES

Quant Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
43)	2-Pentanone	6.12	43	890203	124.84042	ppb	100
44)	1,2-Dichloropropane	6.09	63	134416	9.75920	ppb	100
45)	Bromodichloromethane	6.44	83	161078	10.00034	ppb	100
46)	Methyl Cyclohexane	6.04	83	120659	9.44105	ppb	100
47)	Dibromomethane	6.22	93	69479	9.64895	ppb	100
49)	MIBK (methyl isobutyl ket	7.16	43	99558	10.21722	ppb	100
50)	1-Bromo-2-chloroethane	6.75	63	97496	10.12525	ppb	100
51)	Cis-1,3-Dichloropropene	6.95	75	174595	9.80024	ppb	100
52)	Toluene	7.29	91	484220	10.15489	ppb	100
53)	Trans-1,3-Dichloropropene	7.56	75	149917	9.65308	ppb	100
54)	1,1,2-TCA	7.74	83	88593	9.80568	ppb	100
55)	2-Hexanone	8.04	43	29170	9.74442	ppb	100
58)	1,2-EDB	8.21	107	88361	10.19895	ppb	100
59)	Tetrachloroethene	7.86	166	101271	10.36886	ppb	100
60)	1-Chlorohexane	8.76	91	112352	10.23171	ppb	100
61)	1,1,1,2-Tetrachloroethane	8.83	131	108483	10.54596	ppb	100
62)	m&p-Xylene	8.99	106	376700	21.33560	ppb	100
63)	o-Xylene	9.38	106	181798	10.64154	ppb	100
64)	Styrene	9.40	104	208064	9.89920	ppb	100
66)	1,3-Dichloropropane	7.90	76	174059	10.54269	ppb	100
67)	Dibromochloromethane	8.12	129	106647	10.34131	ppb	100
68)	Chlorobenzene	8.73	112	299872	10.02037	ppb	100
69)	Ethylbenzene	8.87	91	506043	10.59864	ppb	100
70)	Bromoform	9.55	173	64858	10.65698	ppb	100
72)	Isopropylbenzene	9.76	105	440815	9.69784	ppb	100
73)	1,1,2,2-Tetrachloroethane	10.07	83	127067	9.46219	ppb	100
74)	1,2,3-Trichloropropane	10.09	110	21856	9.84295	ppb	100
75)	t-1,4-Dichloro-2-Butene	10.13	53	30624	10.10528	ppb	100
76)	Bromobenzene	10.02	156	126099	9.83249	ppb	100
77)	n-Propylbenzene	10.17	91	537777	9.75676	ppb	100
78)	4-Ethyltoluene	10.29	105	460917	10.13609	ppb	100
79)	2-Chlorotoluene	10.23	91	355249	10.01557	ppb	100
80)	1,3,5-Trimethylbenzene	10.36	105	401378	10.45428	ppb	100
81)	4-Chlorotoluene	10.34	91	413104	10.06222	ppb	100
82)	Tert-Butylbenzene	10.67	119	305554	9.77466	ppb	100
83)	1,2,4-Trimethylbenzene	10.72	105	395036	9.97520	ppb	100
84)	Sec-Butylbenzene	10.89	105	457002	9.79067	ppb	100
85)	p-Isopropyltoluene	11.04	119	384807	9.69856	ppb	100
86)	Benzyl Chloride	11.20	91	111262	9.63174	ppb	100
87)	1,3-DCB	10.96	146	240581	9.76512	ppb	100
88)	1,4-DCB	11.05	146	242822	9.44224	ppb	100
89)	n-Butylbenzene	11.44	91	345734	9.20436	ppb	100
90)	1,2-DCB	11.41	146	228183	9.72085	ppb	100
91)	Hexachloroethane	11.66	117	74951	9.48594	ppb	100
92)	1,2-Dibromo-3-chloropropan	12.18	157	18225	9.24279	ppb	100
93)	1,2,4-Trichlorobenzene	13.00	180	136839	8.78391	ppb	100
94)	Hexachlorobutadiene	13.19	225	57105	9.59649	ppb	100
95)	Naphthalene	13.22	128	165824	8.83767	ppb	100
96)	1,2,3-Trichlorobenzene	13.46	180	83712	9.15953	ppb	100

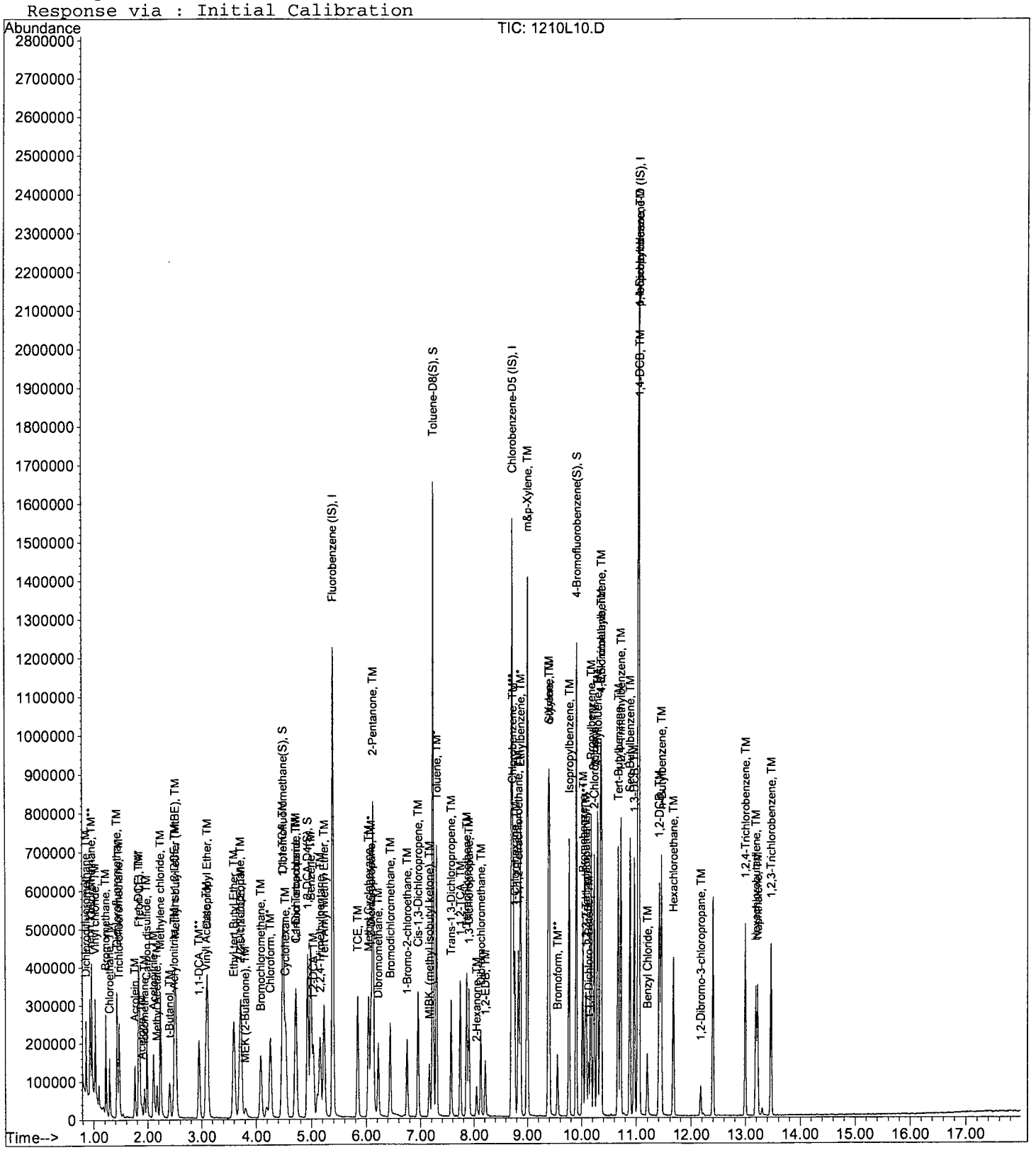
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161210\1210L10.D Vial: 9
Acq On : 10 Dec 16 15:18 Operator: PM,DG,SV,CMM
Sample : 10ug/L VOC STD12/10/160 Inst : Loki
Misc : W IS-tcpd5-12/6/16, Multiplr: 1.00

Quant Time: Dec 15 11:47 2016 Quant Results File: L826AW.RES

Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Dec 15 12:18:37 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1210L11.D Vial: 10
Acq On : 10 Dec 16 15:46 Operator: PM,DG,SV,CMM
Sample : 20ug/L VOC STD12/10/16P Inst : Loki
Misc : W IS-tcpd5-12/6/16, Multiplr: 1.00

Quant Time: Dec 15 11:47 2016 Quant Results File: L826AW.RES

Quant Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	570048	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	525568	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	285248	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	574681	49.59639 ppb		0.00
Spiked Amount 25.000			Recovery	= 198.384%		
37) 1,2-DCA-D4(S)	4.93	65	645983	48.86559 ppb		0.00
Spiked Amount 25.000			Recovery	= 195.464%		
57) Toluene-D8(S)	7.22	98	2079890	50.48768 ppb		0.00
Spiked Amount 25.000			Recovery	= 201.952%		
65) 4-Bromofluorobenzene(S)	9.89	95	726246	52.39766 ppb		0.00
Spiked Amount 25.000			Recovery	= 209.592%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	219456	20.85678 ppb		100
3) Freon 114	0.93	85	152889	19.94281 ppb		100
4) Chloromethane	0.96	50	381728	18.86895 ppb		97
5) Vinyl chloride	1.03	62	292455	20.25703 ppb		99
6) Bromomethane	1.22	96	189824	19.71807 ppb		97
7) Chloroethane	1.29	64	149843	21.24250 ppb		100
8) Dichlorofluoromethane	1.43	67	461025	19.51668 ppb		98
9) Trichlorofluoromethane	1.46	101	289396	20.36836 ppb		98
10) Acrolein	1.76	56	73088	147.29121 ppb		89
11) Acetone	1.88	43	59744	21.15120 ppb		100
12) Freon-113	1.84	101	155838	19.27773 ppb		94
13) 1,1-DCE	1.83	96	131520	19.30478 ppb		97
14) t-Butanol	2.41	59	54512	143.89582 ppb		98
15) Acetonitrile	2.11	41	201555	140.36821 ppb		99
16) Methyl Acetate	2.17	43	168354	18.48813 ppb		96
17) Iodomethane	1.93	142	94576	24.46740 ppb		100
18) Acrylonitrile	2.48	52	60982	18.99784 ppb		90
19) Methylene chloride	2.24	84	258081	20.01415 ppb		100
20) Carbon disulfide	1.98	76	529928	18.89508 ppb		100
21) Methyl t-butyl ether (MtBE	2.52	73	568606	20.17296 ppb		99
22) Trans-1,2-DCE	2.50	96	215321	19.76144 ppb		99
23) Diisopropyl Ether	3.10	45	799289	20.44187 ppb		99
24) 1,1-DCA	2.95	63	441394	19.66937 ppb		99
25) Vinyl Acetate	3.10	43	169193	18.52673 ppb	#	82
26) Ethyl tert Butyl Ether	3.59	59	597031	20.23441 ppb		95
27) MEK (2-Butanone)	3.80	43	82138	19.36044 ppb		99
28) Cis-1,2-DCE	3.73	96	250664	20.22622 ppb		99
29) 2,2-Dichloropropane	3.70	77	100008	19.48880 ppb		98
30) Chloroform	4.26	83	430987	20.12789 ppb		100
31) Bromochloromethane	4.08	128	114755	19.08065 ppb		97
33) 1,1,1-TCA	4.47	97	307848	19.47130 ppb		98
34) Cyclohexane	4.53	41	160001	19.62931 ppb		98
35) 1,1-Dichloropropene	4.72	75	272583	20.35844 ppb		99
36) 2,2,4-Trimethylpentane	5.16	57	530666	20.74921 ppb		92
38) Carbon Tetrachloride	4.71	119	244714	20.13290 ppb		95
39) Tert Amyl Methyl Ether	5.23	73	523059	20.30048 ppb		97
40) 1,2-DCA	5.03	62	317704	19.19174 ppb		98
41) Benzene	4.99	78	917100	19.79630 ppb		100
42) TCE	5.84	95	114704	19.42167 ppb		96

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161210\1210L11.D Vial: 10
Acq On : 10 Dec 16 15:46 Operator: PM,DG,SV,CMM
Sample : 20ug/L VOC STD12/10/16P Inst : Loki
Misc : W IS-tcpd5-12/6/16, Multiplr: 1.00

Quant Time: Dec 15 11:47 2016 Quant Results File: L826AW.RES

Quant Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
43)	2-Pentanone	6.12	43	1056378	148.24429	ppb	99
44)	1,2-Dichloropropane	6.09	63	271819	19.74856	ppb	98
45)	Bromodichloromethane	6.44	83	311063	19.32499	ppb	95
46)	Methyl Cyclohexane	6.04	83	257341	20.14940	ppb	99
47)	Dibromomethane	6.22	93	139065	19.32576	ppb	97
49)	MIBK (methyl isobutyl ket	7.16	43	189752	19.80168	ppb	98
50)	1-Bromo-2-chloroethane	6.75	63	189696	19.71377	ppb	97
51)	Cis-1,3-Dichloropropene	6.95	75	360848	20.26849	ppb	98
52)	Toluene	7.29	91	972899	20.41703	ppb	99
53)	Trans-1,3-Dichloropropene	7.56	75	310265	19.99126	ppb	98
54)	1,1,2-TCA	7.74	83	175069	19.39010	ppb	96
55)	2-Hexanone	8.04	43	59843	20.00439	ppb	97
58)	1,2-EDB	8.21	107	179006	19.41107	ppb	92
59)	Tetrachloroethene	7.86	166	205952	19.81066	ppb	97
60)	1-Chlorohexane	8.76	91	240002	20.53379	ppb	98
61)	1,1,1,2-Tetrachloroethane	8.83	131	215255	19.65915	ppb	97
62)	m&p-Xylene	8.99	106	780283	41.51915	ppb	97
63)	o-Xylene	9.38	106	382163	21.01604	ppb	97
64)	Styrene	9.40	104	445696	19.06607	ppb	95
66)	1,3-Dichloropropane	7.90	76	344160	19.58405	ppb	99
67)	Dibromochloromethane	8.12	129	213236	19.42560	ppb	99
68)	Chlorobenzene	8.73	112	610128	19.15383	ppb	99
69)	Ethylbenzene	8.87	91	1036681	20.39834	ppb	98
70)	Bromoform	9.55	173	124241	19.17885	ppb	99
72)	Isopropylbenzene	9.76	105	924735	21.19299	ppb	100
73)	1,1,2,2-Tetrachloroethane	10.07	83	244792	18.98945	ppb	99
74)	1,2,3-Trichloropropane	10.09	110	42360	19.87314	ppb	94
75)	t-1,4-Dichloro-2-Butene	10.13	53	58166	19.99455	ppb	98
76)	Bromobenzene	10.02	156	252604	20.51861	ppb	98
77)	n-Propylbenzene	10.17	91	1159644	21.91715	ppb	99
78)	4-Ethyltoluene	10.29	105	951139	21.78953	ppb	100
79)	2-Chlorotoluene	10.23	91	719278	21.12494	ppb	98
80)	1,3,5-Trimethylbenzene	10.36	105	823353	22.33996	ppb	98
81)	4-Chlorotoluene	10.34	91	839409	21.29924	ppb	100
82)	Tert-Butylbenzene	10.67	119	645358	21.50654	ppb	98
83)	1,2,4-Trimethylbenzene	10.72	105	831096	21.86211	ppb	100
84)	Sec-Butylbenzene	10.89	105	951128	21.22704	ppb	99
85)	p-Isopropyltoluene	11.04	119	800125	21.00769	ppb	100
86)	Benzyl Chloride	11.19	91	228430	20.59998	ppb	96
87)	1,3-DCB	10.96	146	481177	20.34591	ppb	100
88)	1,4-DCB	11.05	146	490873	19.88439	ppb	98
89)	n-Butylbenzene	11.44	91	736941	20.43810	ppb	100
90)	1,2-DCB	11.41	146	453929	20.14488	ppb	99
91)	Hexachloroethane	11.66	117	153045	20.17799	ppb	95
92)	1,2-Dibromo-3-chloropropan	12.18	157	35209	18.60138	ppb	92
93)	1,2,4-Trichlorobenzene	13.00	180	282689	18.90353	ppb	96
94)	Hexachlorobutadiene	13.19	225	116589	20.13296	ppb	95
95)	Naphthalene	13.22	128	351424	19.51092	ppb	99
96)	1,2,3-Trichlorobenzene	13.46	180	179584	20.46960	ppb	98

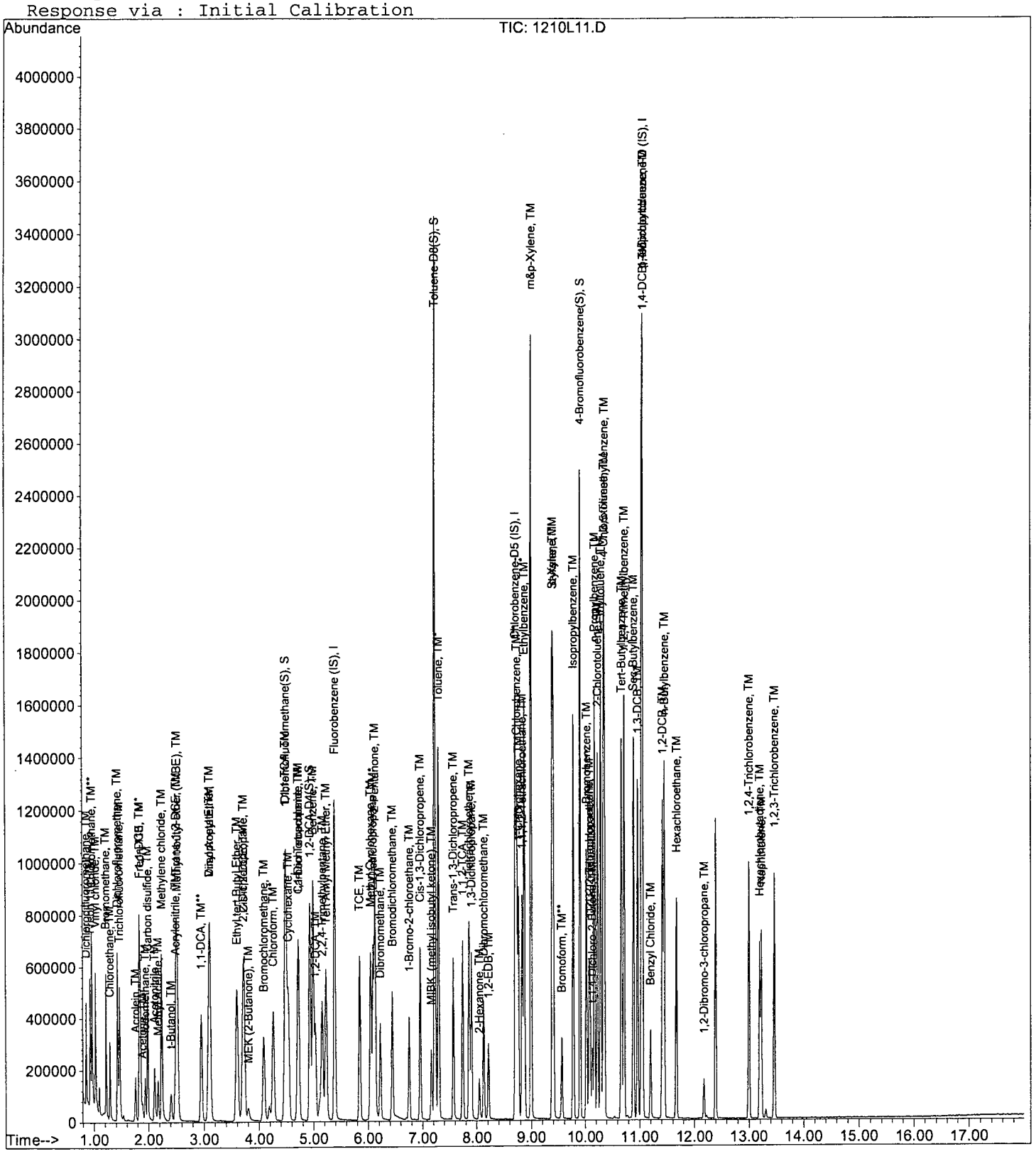
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161210\1210L11.D Vial: 10
Acq On : 10 Dec 16 15:46 Operator: PM,DG,SV,CMM
Sample : 20ug/L VOC STD12/10/16P Inst : Loki
Misc : W IS-tcpd5-12/6/16, Multiplr: 1.00

Quant Time: Dec 15 11:47 2016 Quant Results File: L826AW.RES

Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Dec 15 12:18:37 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1210L12.D Vial: 11
Acq On : 10 Dec 16 16:15 Operator: PM,DG,SV,CMM
Sample : 40ug/L VOC STD12/10/16Q Inst : Loki
Misc : W IS-tcpd5-12/6/16, Multiplr: 1.00

Quant Time: Dec 15 11:47 2016 Quant Results File: L826AW.RES

Quant Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	594496	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	555392	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	316096	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	606913	50.22410 ppb		0.00
Spiked Amount 25.000			Recovery = 200.896%			
37) 1,2-DCA-D4(S)	4.93	65	680155	49.33469 ppb		0.00
Spiked Amount 25.000			Recovery = 197.340%			
57) Toluene-D8(S)	7.22	98	2183875	50.16515 ppb		0.00
Spiked Amount 25.000			Recovery = 200.660%			
65) 4-Bromofluorobenzene(S)	9.89	95	763385	52.11960 ppb		0.00
Spiked Amount 25.000			Recovery = 208.480%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	457344	41.67784 ppb		98
3) Freon 114	0.93	85	313256	39.18068 ppb		96
4) Chloromethane	0.96	50	773781	36.67534 ppb		99
5) Vinyl chloride	1.03	62	594545	39.48789 ppb		98
6) Bromomethane	1.22	96	381824	38.03110 ppb		97
7) Chloroethane	1.28	64	299148	40.66473 ppb		98
8) Dichlorofluoromethane	1.42	67	945457	38.37831 ppb		100
9) Trichlorofluoromethane	1.46	101	606395	40.92433 ppb		98
10) Acrolein	1.76	56	94272	182.16963 ppb		96
11) Acetone	1.88	43	111691	39.43499 ppb		94
12) Freon-113	1.84	101	325399	38.59769 ppb		96
13) 1,1-DCE	1.83	96	266432	37.49919 ppb		98
14) t-Butanol	2.41	59	67808	171.63248 ppb		99
15) Acetonitrile	2.52	41	280062	187.02164 ppb	#	40
16) Methyl Acetate	2.17	43	355588	37.44372 ppb		98
17) Iodomethane	1.93	142	210112	52.12189 ppb		99
18) Acrylonitrile	2.48	52	123477	36.88511 ppb		95
19) Methylene chloride	2.24	84	529787	39.82835 ppb		99
20) Carbon disulfide	1.98	76	1110699	37.97439 ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	1180210	40.14948 ppb		98
22) Trans-1,2-DCE	2.50	96	441182	38.82509 ppb		98
23) Diisopropyl Ether	3.10	45	1681134	41.22698 ppb		98
24) 1,1-DCA	2.95	63	897004	38.32842 ppb		98
25) Vinyl Acetate	3.08	43	351961	36.95502 ppb		99
26) Ethyl tert Butyl Ether	3.59	59	1280547	41.61516 ppb		97
27) MEK (2-Butanone)	3.80	43	170254	38.47963 ppb		93
28) Cis-1,2-DCE	3.73	96	517616	40.04913 ppb		95
29) 2,2-Dichloropropane	3.70	77	206912	38.66326 ppb		99
30) Chloroform	4.26	83	869117	38.92018 ppb		99
31) Bromochloromethane	4.08	128	232024	36.99277 ppb		98
33) 1,1,1-TCA	4.47	97	638087	38.69912 ppb		99
34) Cyclohexane	4.53	41	334921	39.39919 ppb		97
35) 1,1-Dichloropropene	4.72	75	578140	41.40389 ppb		99
36) 2,2,4-Trimethylpentane	5.15	57	1128342	42.30420 ppb		89
38) Carbon Tetrachloride	4.71	119	505406	39.87039 ppb		95
39) Tert Amyl Methyl Ether	5.23	73	1124864	41.86182 ppb		95
40) 1,2-DCA	5.03	62	651430	37.73306 ppb		99
41) Benzene	4.99	78	1892456	39.17018 ppb		99
42) TCE	5.84	95	249664	40.53465 ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1210L12.D Vial: 11
Acq On : 10 Dec 16 16:15 Operator: PM,DG,SV,CMM
Sample : 40ug/L VOC STD12/10/16Q Inst : Loki
Misc : W IS-tcpd5-12/6/16, Multiplr: 1.00

Quant Time: Dec 15 11:47 2016 Quant Results File: L826AW.RES

Quant Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
43)	2-Pentanone	6.12	43	1316114	177.09839	ppb	99
44)	1,2-Dichloropropane	6.09	63	551709	38.43512	ppb	99
45)	Bromodichloromethane	6.44	83	647556	38.57543	ppb	96
46)	Methyl Cyclohexane	6.04	83	566869	42.55969	ppb	96
47)	Dibromomethane	6.22	93	282867	37.69325	ppb	96
49)	MIBK (methyl isobutyl ket	7.16	43	382323	38.58049	ppb	95
50)	1-Bromo-2-chloroethane	6.75	63	392768	39.13904	ppb	100
51)	Cis-1,3-Dichloropropene	6.95	75	769909	41.46666	ppb	99
52)	Toluene	7.29	91	2010538	40.45755	ppb	98
53)	Trans-1,3-Dichloropropene	7.56	75	657951	40.65027	ppb	99
54)	1,1,2-TCA	7.74	83	359767	38.20803	ppb	99
55)	2-Hexanone	8.04	43	135119	43.31027	ppb	96
58)	1,2-EDB	8.21	107	375998	38.58307	ppb	93
59)	Tetrachloroethene	7.86	166	429042	39.05369	ppb	97
60)	1-Chlorohexane	8.76	91	513195	41.54952	ppb	99
61)	1,1,1,2-Tetrachloroethane	8.83	131	456597	39.46151	ppb	99
62)	m&p-Xylene	8.99	106	1645269	82.84427	ppb	96
63)	o-Xylene	9.38	106	806506	41.97002	ppb	97
64)	Styrene	9.40	104	956224	37.83817	ppb	97
66)	1,3-Dichloropropane	7.90	76	700340	37.71206	ppb	99
67)	Dibromochloromethane	8.12	129	446241	38.46915	ppb	97
68)	Chlorobenzene	8.73	112	1259074	37.40376	ppb	99
69)	Ethylbenzene	8.87	91	2181145	40.61286	ppb	99
70)	Bromoform	9.55	173	263956	38.55835	ppb	97
72)	Isopropylbenzene	9.76	105	1973017	40.80462	ppb	100
73)	1,1,2,2-Tetrachloroethane	10.07	83	493145	34.52180	ppb	99
74)	1,2,3-Trichloropropane	10.09	110	88328	37.39491	ppb	98
75)	t-1,4-Dichloro-2-Butene	10.13	53	123272	38.23935	ppb	97
76)	Bromobenzene	10.02	156	524064	38.41455	ppb	99
77)	n-Propylbenzene	10.17	91	2388804	40.74212	ppb	100
78)	4-Ethyltoluene	10.29	105	2020140	41.76274	ppb	100
79)	2-Chlorotoluene	10.23	91	1499043	39.72981	ppb	99
80)	1,3,5-Trimethylbenzene	10.36	105	1724412	42.22222	ppb	98
81)	4-Chlorotoluene	10.34	91	1739934	39.84068	ppb	99
82)	Tert-Butylbenzene	10.67	119	1363958	41.01799	ppb	98
83)	1,2,4-Trimethylbenzene	10.72	105	1753894	41.63398	ppb	100
84)	Sec-Butylbenzene	10.88	105	2022559	40.73383	ppb	98
85)	p-Isopropyltoluene	11.04	119	1705729	40.41422	ppb	99
86)	Benzyl Chloride	11.20	91	512277	41.68907	ppb	96
87)	1,3-DCB	10.96	146	996343	38.01761	ppb	99
88)	1,4-DCB	11.05	146	1004323	36.71302	ppb	98
89)	n-Butylbenzene	11.44	91	1576685	39.45993	ppb	99
90)	1,2-DCB	11.41	146	939450	37.62306	ppb	98
91)	Hexachloroethane	11.66	117	331332	39.42084	ppb	99
92)	1,2-Dibromo-3-chloropropan	12.18	157	78332	37.34516	ppb	91
93)	1,2,4-Trichlorobenzene	13.00	180	624560	37.68875	ppb	95
94)	Hexachlorobutadiene	13.19	225	246633	38.20923	ppb	96
95)	Naphthalene	13.22	128	857152	42.94452	ppb	99
96)	1,2,3-Trichlorobenzene	13.46	180	381248	39.21505	ppb	98

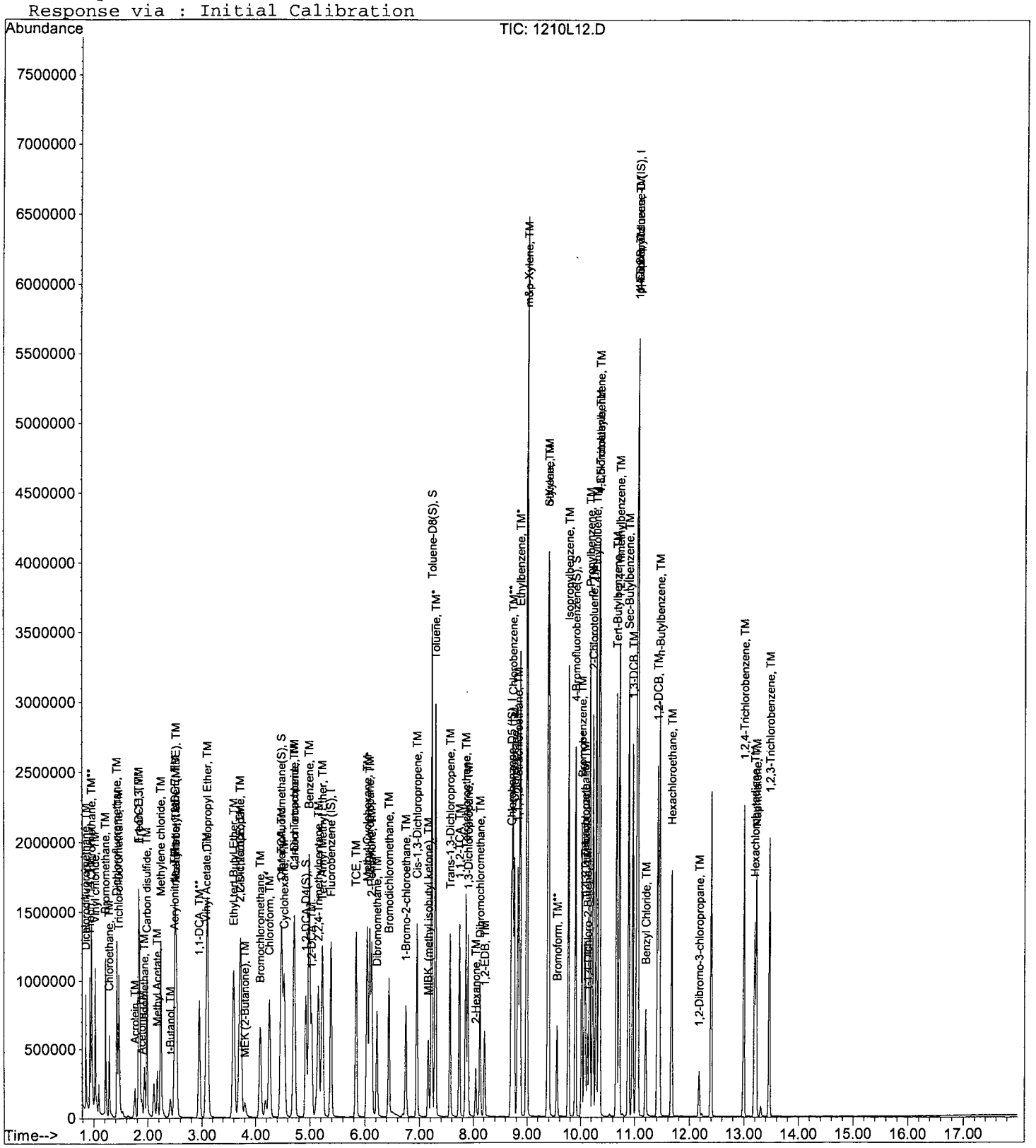
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161210\1210L12.D Vial: 11
Acq On : 10 Dec 16 16:15 Operator: PM,DG,SV,CMM
Sample : 40ug/L VOC STD12/10/16Q Inst : Loki
Misc : W IS-tcpd5-12/6/16, Multiplr: 1.00

Quant Time: Dec 15 11:47 2016 Quant Results File: L826AW.RES

Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Dec 15 12:18:37 2016
Response via : Initial Calibration



474

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1210L13.D Vial: 12
Acq On : 10 Dec 16 16:43 Operator: PM,DG,SV,CMM
Sample : 100ug/L VOC STD12/10/16R Inst : Loki
Misc : W IS-tcpd5-12/6/16, Multiplr: 1.00

Quant Time: Dec 15 11:47 2016 Quant Results File: L826AW.RES

Quant Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	605056	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	559360	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	342464	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	1164816	94.71013 ppb		0.00
Spiked Amount 25.000			Recovery = 378.840%			
37) 1,2-DCA-D4(S)	4.93	65	1286688	91.70039 ppb		0.00
Spiked Amount 25.000			Recovery = 366.800%			
57) Toluene-D8(S)	7.22	98	4271688	97.42761 ppb		0.00
Spiked Amount 25.000			Recovery = 389.712%			
65) 4-Bromofluorobenzene(S)	9.89	95	1525732	103.42938 ppb		0.00
Spiked Amount 25.000			Recovery = 413.716%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	1139200	102.00361 ppb		98
3) Freon 114	0.93	85	810878	99.65094 ppb		99
4) Chloromethane	0.96	50	1972634	91.86625 ppb		99
5) Vinyl chloride	1.02	62	1533615	100.08037 ppb		99
6) Bromomethane	1.21	96	926976	90.71885 ppb		98
7) Chloroethane	1.28	64	487699	65.13838 ppb		96
8) Dichlorofluoromethane	1.42	67	2454031	97.87628 ppb		99
9) Trichlorofluoromethane	1.45	101	1546184	102.52752 ppb		99
10) Acrolein	1.76	56	105344	200.01217 ppb	#	99
11) Acetone	1.89	43	280185	100.00637 ppb		94
12) Freon-113	1.84	101	830743	96.82001 ppb		94
13) 1,1-DCE	1.82	96	649856	89.86819 ppb		97
14) t-Butanol	2.44	59	76284	189.71662 ppb		98
15) Acetonitrile	2.52	41	698369	458.22207 ppb	#	39
16) Methyl Acetate	2.17	43	914147	94.58044 ppb		95
17) Iodomethane	1.93	142	575360	140.23691 ppb		99
18) Acrylonitrile	2.48	52	325731	95.60432 ppb		94
19) Methylene chloride	2.23	84	1345804	100.07802 ppb		99
20) Carbon disulfide	1.98	76	2904403	97.56737 ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	3150254	105.29786 ppb		97
22) Trans-1,2-DCE	2.49	96	1141645	98.71408 ppb		99
23) Diisopropyl Ether	3.10	45	4419486	106.48891 ppb		99
24) 1,1-DCA	2.95	63	2297544	96.45921 ppb		99
25) Vinyl Acetate	3.07	43	990562	102.19131 ppb		99
26) Ethyl tert Butyl Ether	3.59	59	3442572	109.92399 ppb		97
27) MEK (2-Butanone)	3.80	43	454280	100.88126 ppb		94
28) Cis-1,2-DCE	3.72	96	1354438	102.96695 ppb		98
29) 2,2-Dichloropropane	3.70	77	532288	97.72662 ppb		98
30) Chloroform	4.25	83	2242509	98.66979 ppb		98
31) Bromochloromethane	4.08	128	588799	92.23684 ppb		96
33) 1,1,1-TCA	4.47	97	1685805	100.45739 ppb		99
34) Cyclohexane	4.53	41	877015	101.36903 ppb		95
35) 1,1-Dichloropropene	4.72	75	1506995	106.04088 ppb		98
36) 2,2,4-Trimethylpentane	5.15	57	2969925	109.40612 ppb		85
38) Carbon Tetrachloride	4.70	119	1305748	101.20985 ppb		95
39) Tert Amyl Methyl Ether	5.23	73	3008225	109.99722 ppb		93
40) 1,2-DCA	5.03	62	1671726	95.14210 ppb		98
41) Benzene	4.99	78	4882915	99.30297 ppb		99
42) TCE	5.84	95	618496	98.66447 ppb		94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1210L13.D Vial: 12
Acq On : 10 Dec 16 16:43 Operator: PM,DG,SV,CMM
Sample : 100ug/L VOC STD12/10/16R Inst : Loki
Misc : W IS-tcpd5-12/6/16, Multiplr: 1.00

Quant Time: Dec 15 11:47 2016 Quant Results File: L826AW.RES

Quant Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43)	2-Pentanone	6.12	43	1576482	208.43156	ppb	97
44)	1,2-Dichloropropane	6.09	63	1421887	97.32774	ppb	99
45)	Bromodichloromethane	6.44	83	1714269	100.33807	ppb	96
46)	Methyl Cyclohexane	6.04	83	1510556	111.43097	ppb	97
47)	Dibromomethane	6.22	93	727894	95.30216	ppb	97
49)	MIBK (methyl isobutyl ket	7.16	43	1008797	100.57487	ppb	97
50)	1-Bromo-2-chloroethane	6.75	63	1007954	98.68887	ppb	100
51)	Cis-1,3-Dichloropropene	6.95	75	2073343	109.71960	ppb	99
52)	Toluene	7.29	91	5248933	103.77952	ppb	98
53)	Trans-1,3-Dichloropropene	7.56	75	1785871	108.41100	ppb	99
54)	1,1,2-TCA	7.74	83	926410	96.66959	ppb	99
55)	2-Hexanone	8.05	43	399781	125.90702	ppb	98
58)	1,2-EDB	8.21	107	986937	100.55620	ppb	94
59)	Tetrachloroethene	7.86	166	1117153	100.96785	ppb	97
60)	1-Chlorohexane	8.76	91	1381462	111.05311	ppb	96
61)	1,1,1,2-Tetrachloroethane	8.83	131	1213570	104.13908	ppb	98
62)	m&p-Xylene	8.99	106	4343871	217.17544	ppb	97
63)	o-Xylene	9.38	106	2179623	112.62147	ppb	100
64)	Styrene	9.40	104	2608640	101.04846	ppb	97
66)	1,3-Dichloropropane	7.90	76	1854445	99.15018	ppb	99
67)	Dibromochloromethane	8.12	129	1215931	104.07832	ppb	98
68)	Chlorobenzene	8.73	112	3355682	98.98128	ppb	99
69)	Ethylbenzene	8.87	91	5787147	106.99211	ppb	99
70)	Bromoform	9.55	173	744641	108.00456	ppb	97
72)	Isopropylbenzene	9.76	105	5321892	101.58945	ppb	99
73)	1,1,2,2-Tetrachloroethane	10.07	83	1404685	90.76152	ppb	99
74)	1,2,3-Trichloropropane	10.09	110	242368	94.70949	ppb	97
75)	t-1,4-Dichloro-2-Butene	10.13	53	364504	104.36441	ppb	94
76)	Bromobenzene	10.02	156	1399367	94.67757	ppb	98
77)	n-Propylbenzene	10.17	91	6375422	100.36357	ppb	100
78)	4-Ethyltoluene	10.29	105	5411115	103.25197	ppb	100
79)	2-Chlorotoluene	10.23	91	3940096	96.38584	ppb	100
80)	1,3,5-Trimethylbenzene	10.36	105	4575343	103.40172	ppb	98
81)	4-Chlorotoluene	10.34	91	4644385	98.15813	ppb	99
82)	Tert-Butylbenzene	10.67	119	3714443	103.10297	ppb	99
83)	1,2,4-Trimethylbenzene	10.72	105	4749579	104.06477	ppb	100
84)	Sec-Butylbenzene	10.89	105	5493523	102.11959	ppb	99
85)	p-Isopropyltoluene	11.04	119	4698523	102.75184	ppb	99
86)	Benzyl Chloride	11.20	91	1689583	126.91149	ppb	96
87)	1,3-DCB	10.96	146	2730047	96.15019	ppb	99
88)	1,4-DCB	11.05	146	2810251	94.81912	ppb	98
89)	n-Butylbenzene	11.44	91	4437858	102.51534	ppb	100
90)	1,2-DCB	11.41	146	2696969	99.69203	ppb	99
91)	Hexachloroethane	11.66	117	940013	103.22868	ppb	98
92)	1,2-Dibromo-3-chloropropan	12.18	157	231324	101.79346	ppb	92
93)	1,2,4-Trichlorobenzene	13.00	180	1813922	101.03230	ppb	96
94)	Hexachlorobutadiene	13.19	225	707132	100.71104	ppb	94
95)	Naphthalene	13.22	128	2407936	111.35224	ppb	99
96)	1,2,3-Trichlorobenzene	13.47	180	1103360	104.75302	ppb	98

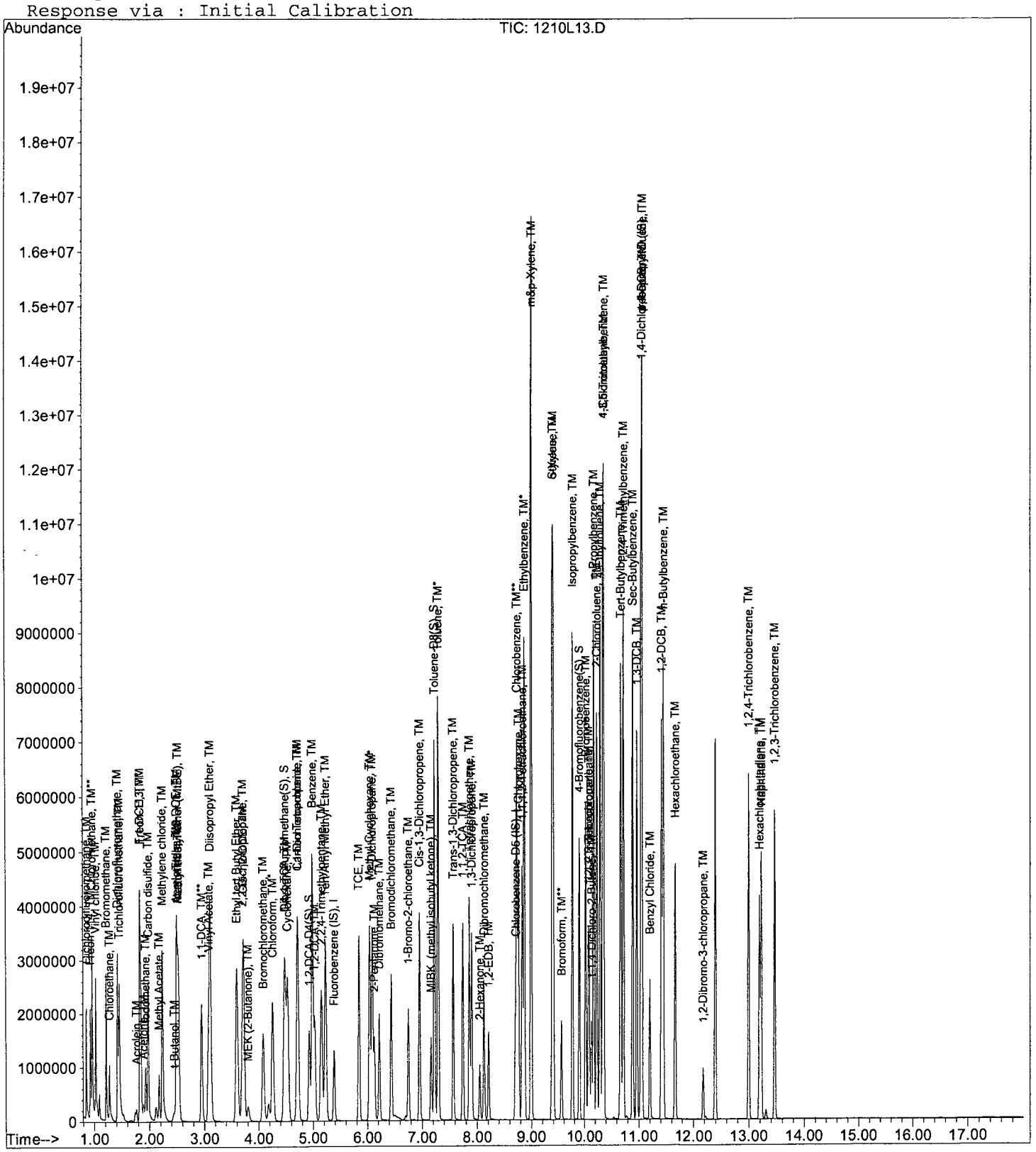
(#) = qualifier out of range (m) = manual integration

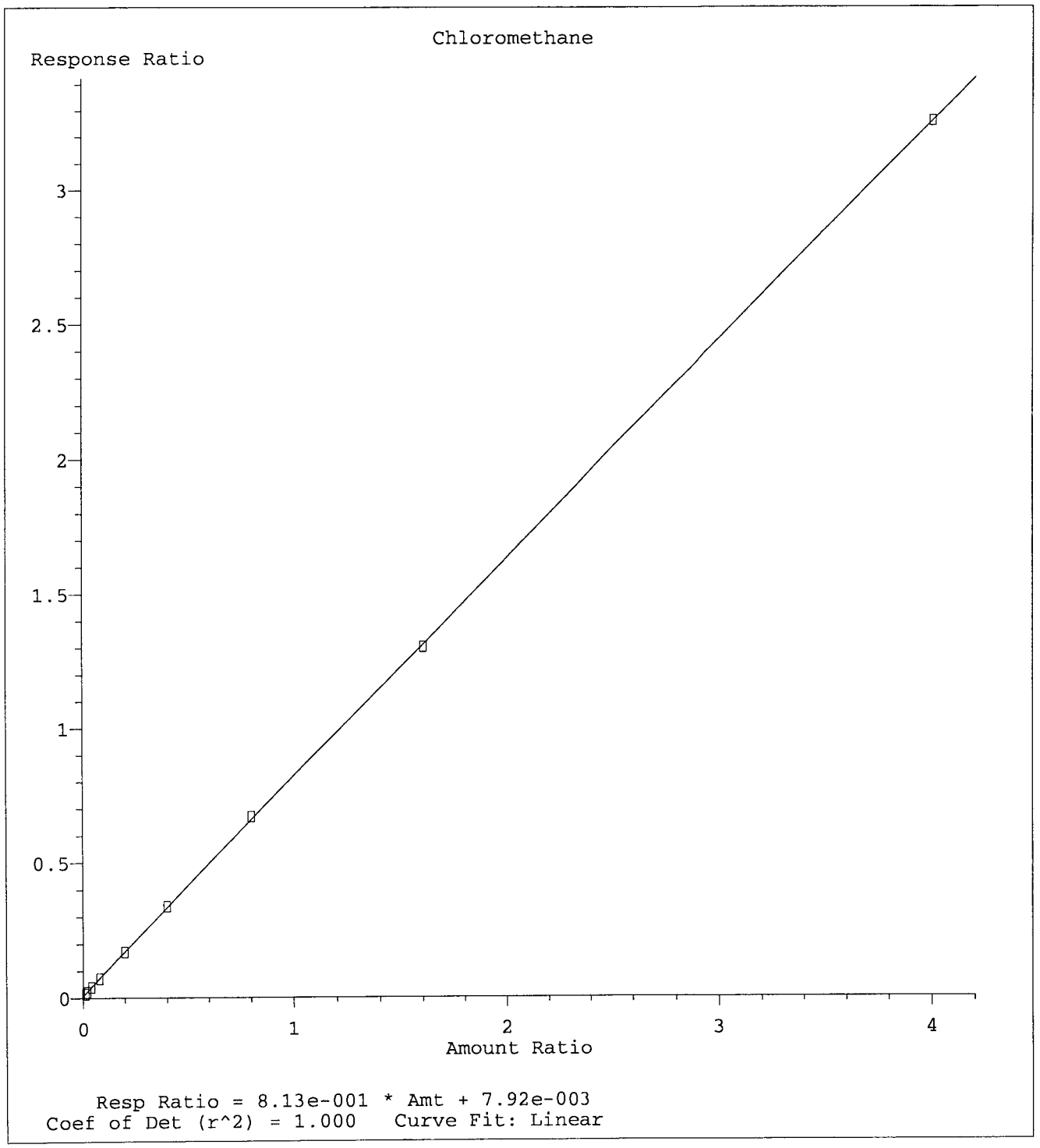
Quantitation Report

Data File : M:\LOKI\DATA\161210\1210L13.D Vial: 12
Acq On : 10 Dec 16 16:43 Operator: PM,DG,SV,CMM
Sample : 100ug/L VOC STD12/10/16R Inst : Loki
Misc : W IS-tcpd5-12/6/16, Multiplr: 1.00

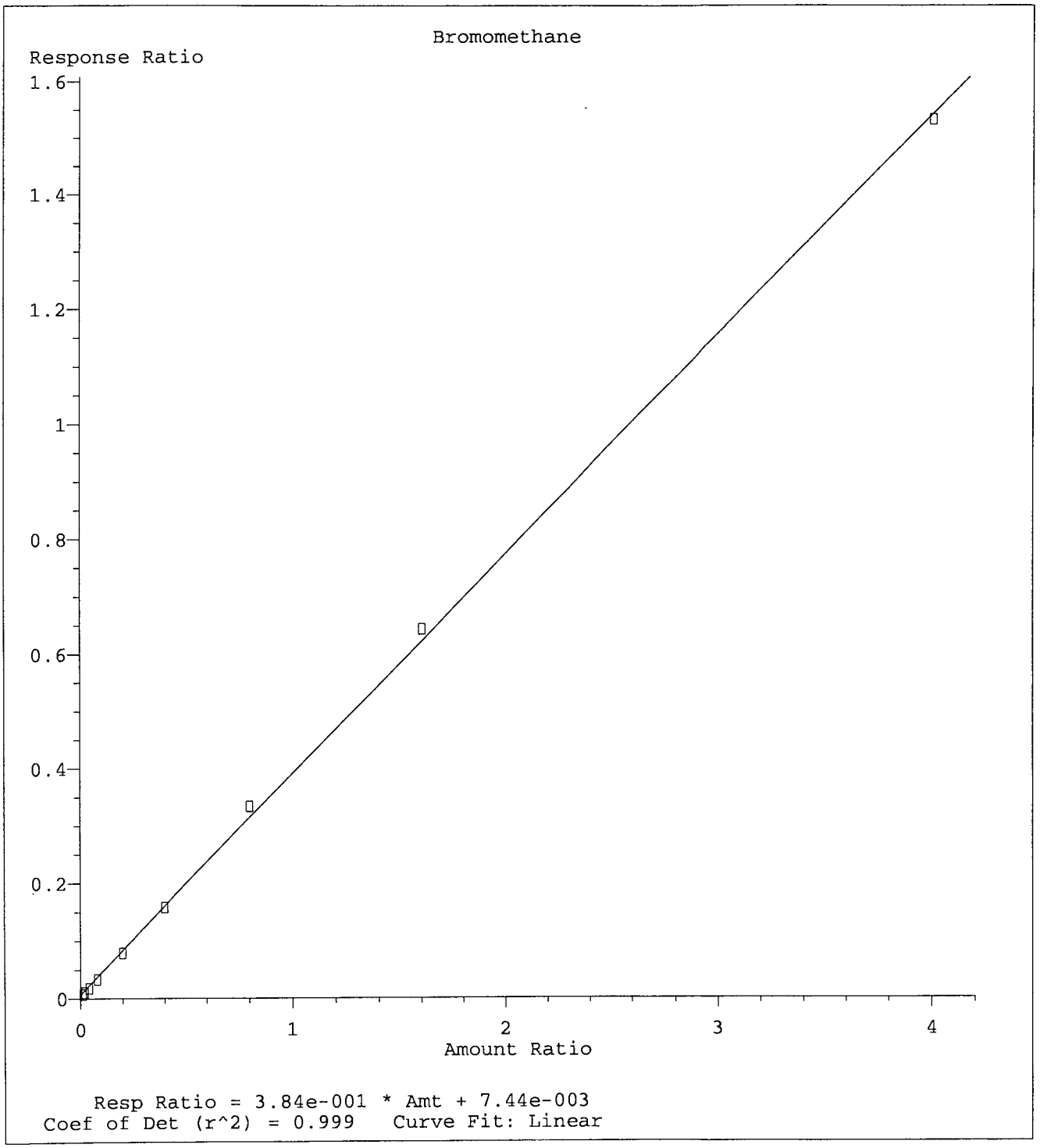
Quant Time: Dec 15 11:47 2016 Quant Results File: L826AW.RES

Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Dec 15 12:18:37 2016
Response via : Initial Calibration

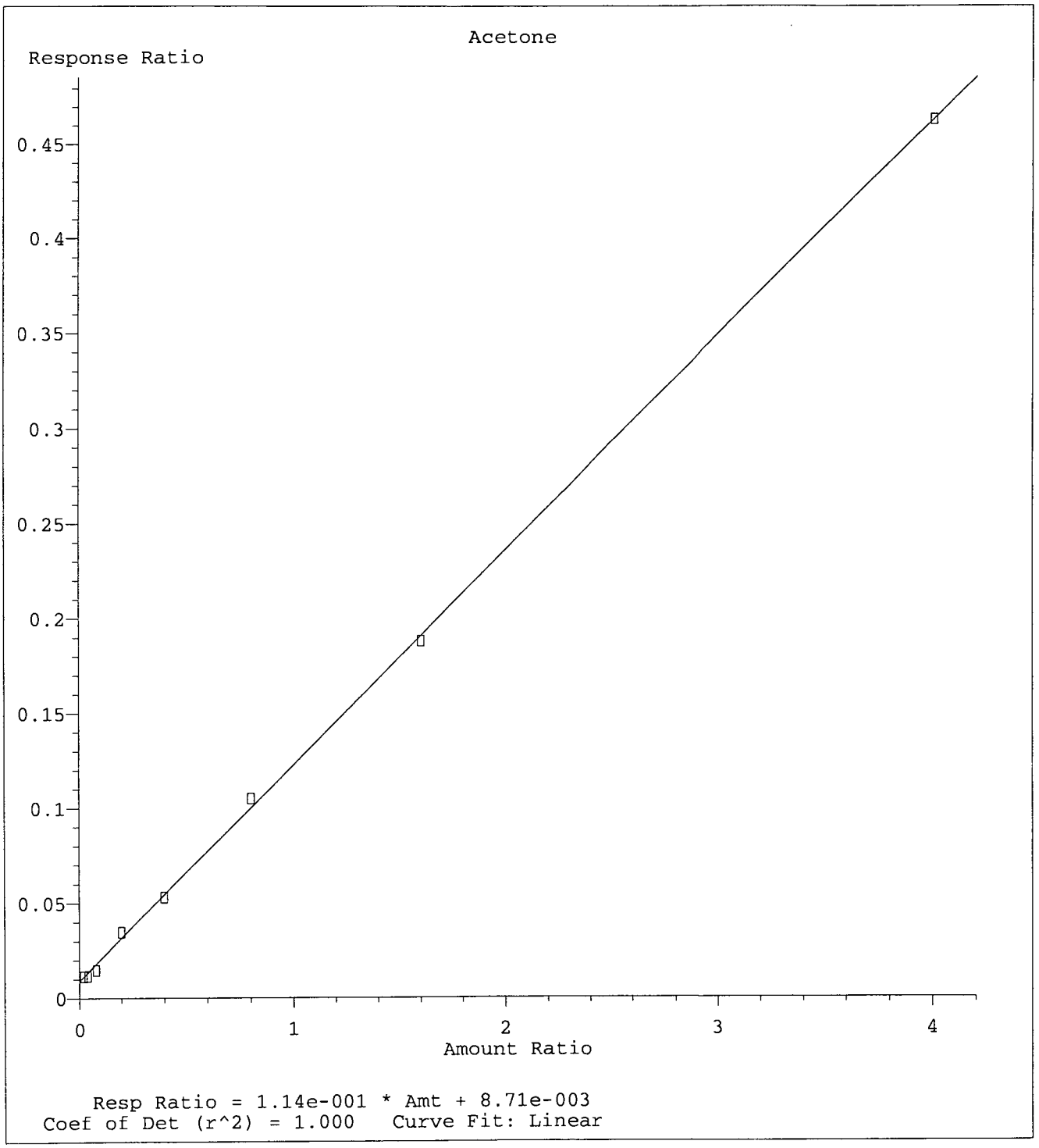




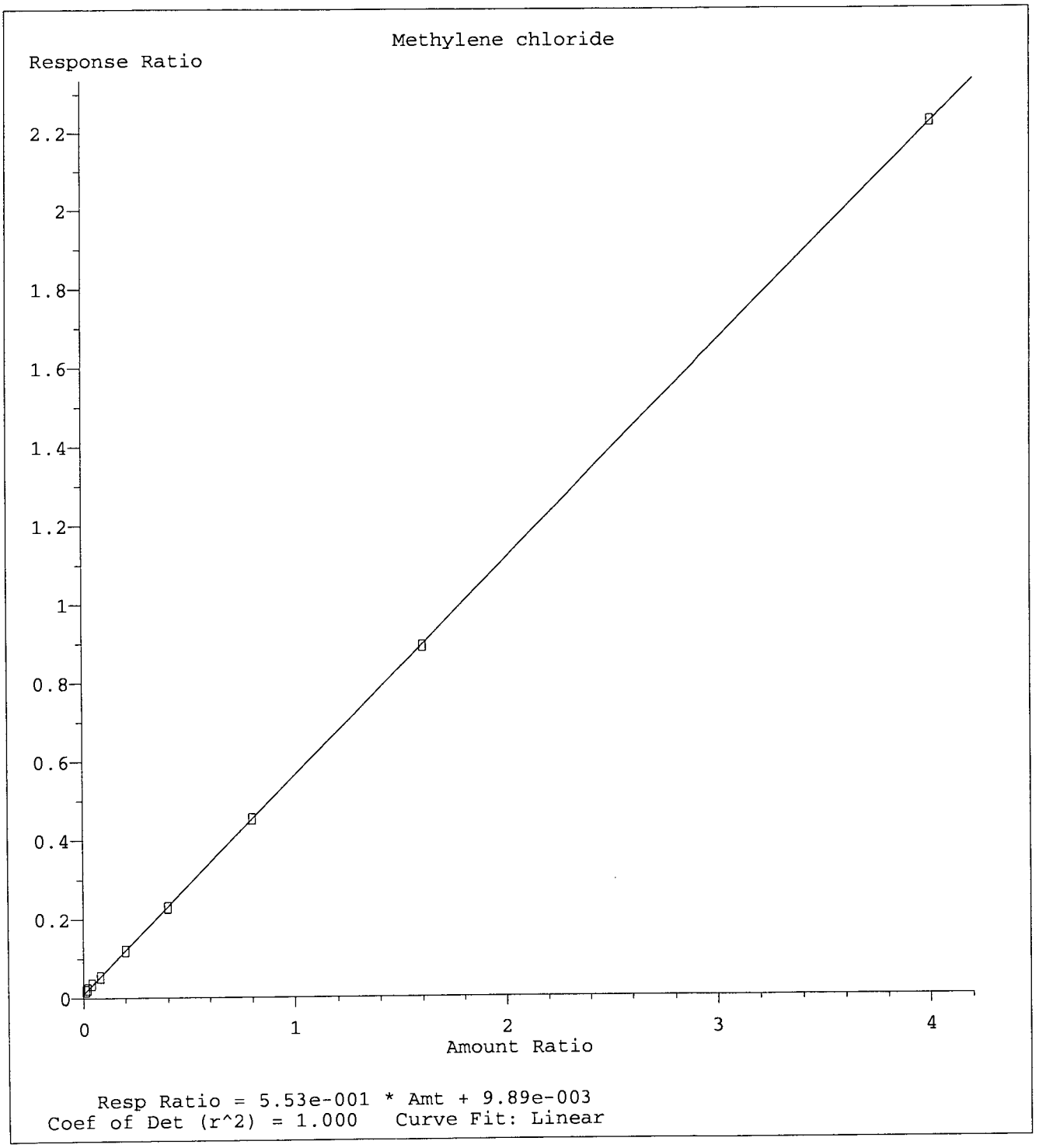
Method Name: M:\LOKI\DATA\161210\L826AW.M
Calibration Table Last Updated: Thu Dec 15 12:18:37 2016



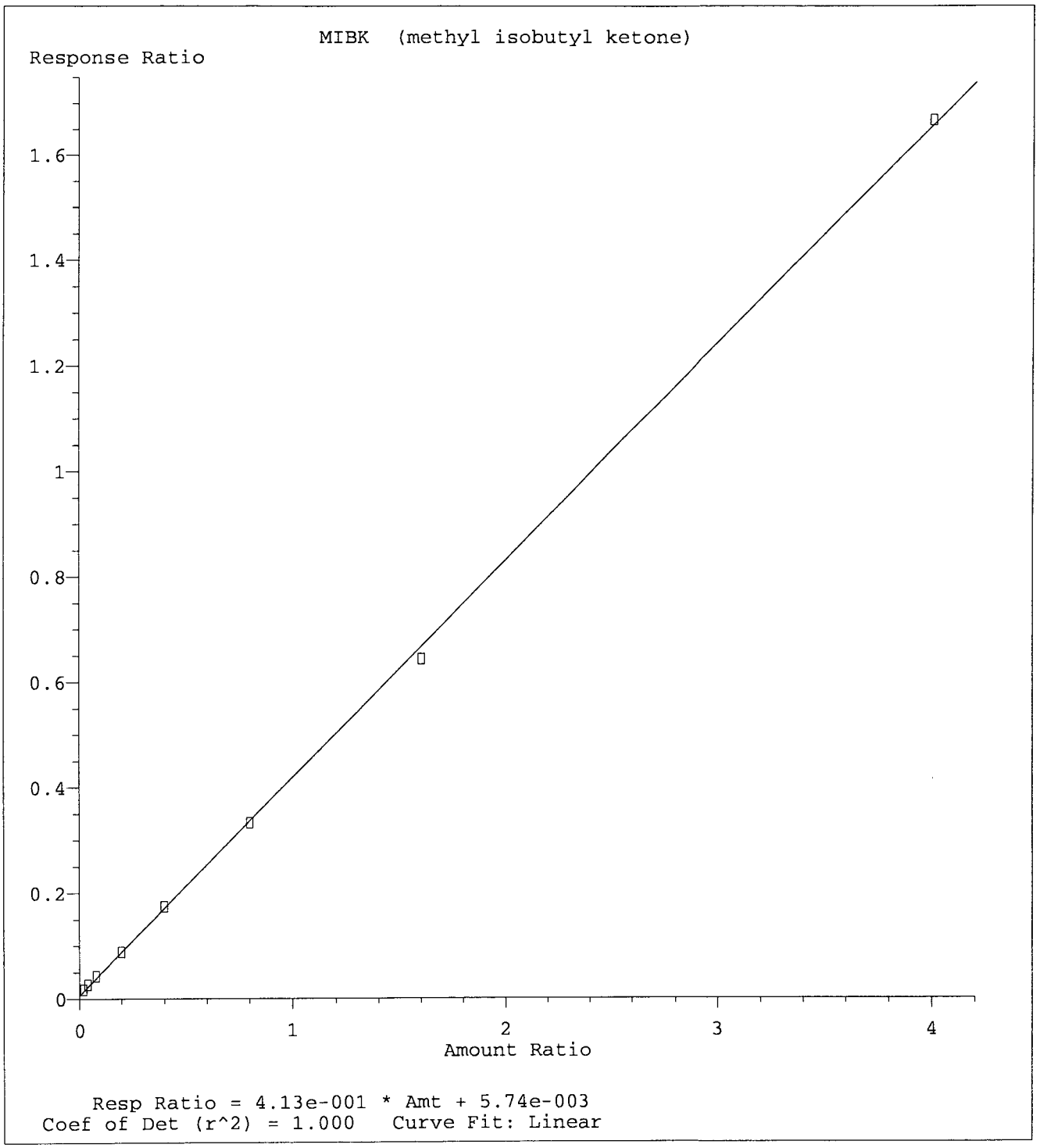
Method Name: M:\LOKI\DATA\161210\L826AW.M
Calibration Table Last Updated: Thu Dec 15 12:18:37 2016



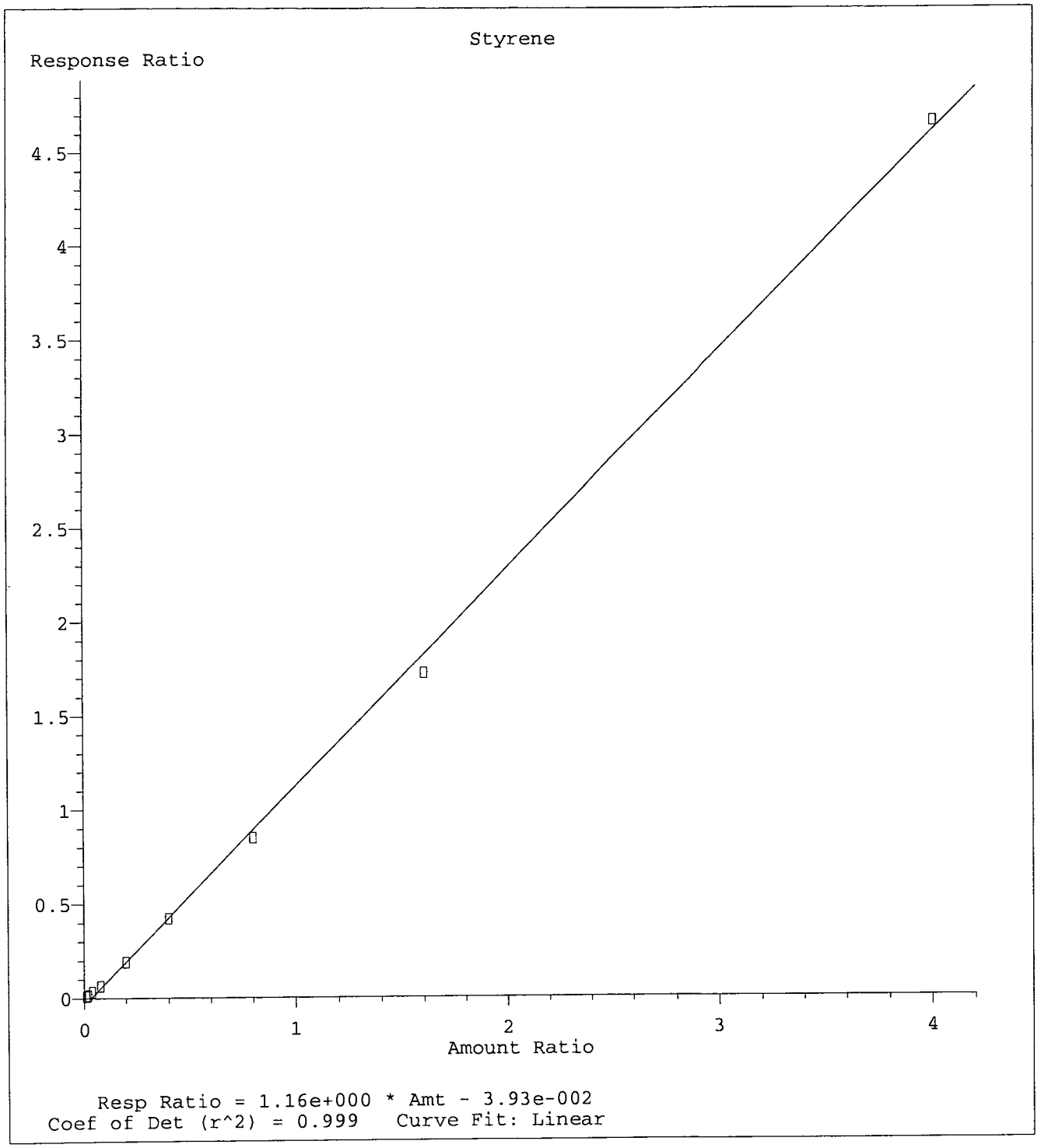
Method Name: M:\LOKI\DATA\161210\L826AW.M
Calibration Table Last Updated: Thu Dec 15 12:18:37 2016



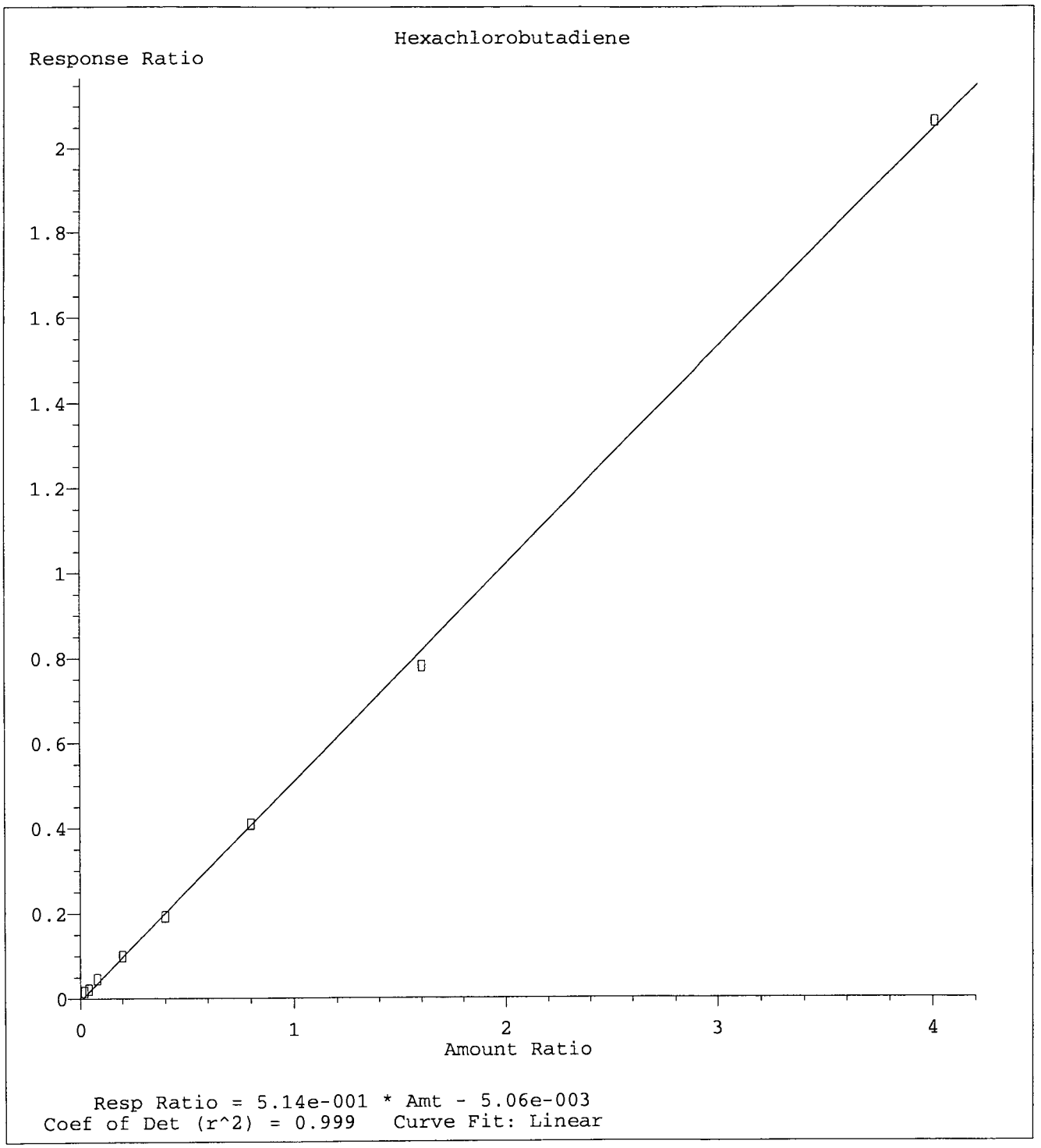
Method Name: M:\LOKI\DATA\161210\L826AW.M
Calibration Table Last Updated: Thu Dec 15 12:18:37 2016



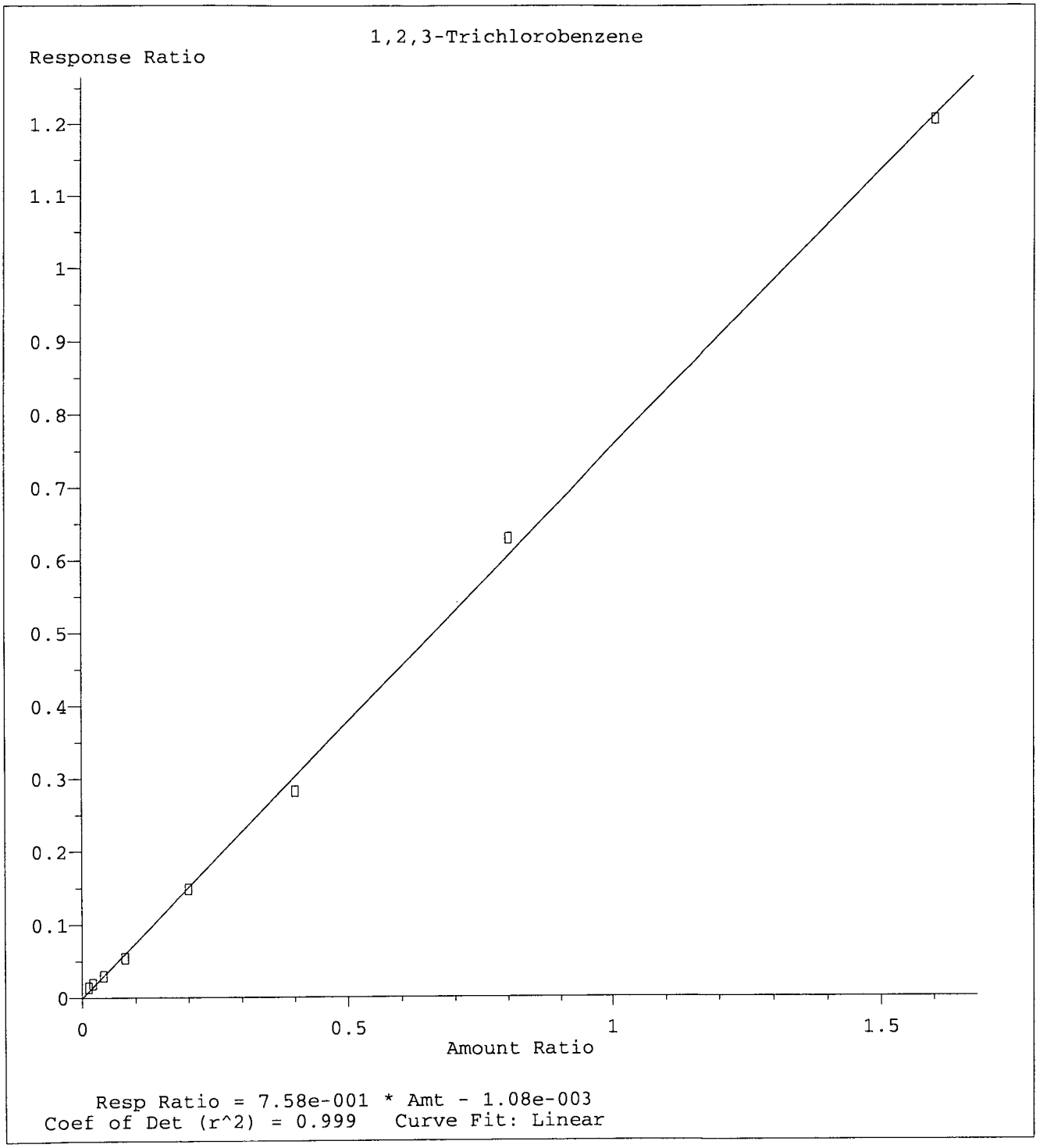
Method Name: M:\LOKI\DATA\161210\L826AW.M
Calibration Table Last Updated: Thu Dec 15 12:18:37 2016



Method Name: M:\LOKI\DATA\161210\L826AW.M
Calibration Table Last Updated: Thu Dec 15 12:18:37 2016



Method Name: M:\LOKI\DATA\161210\L826AW.M
Calibration Table Last Updated: Thu Dec 15 12:18:37 2016



Method Name: M:\LOKI\DATA\161210\L826AW.M
Calibration Table Last Updated: Thu Dec 15 12:18:37 2016

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/10/16
Instrument: Loki
Initial Cal. Date: 12/10/16
Data File: 1210L17.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TM	Dichlorodifluoromethane	0.4615	0.4616	0.03	TM	
2	TM	Freon 114	0.3362	0.3888	16	TM	
3	TM**L	Chloromethane	0.9292	0.7744	17	TM**L	7.2
4	TM*	Vinyl chloride	0.6332	0.5987	5.5	TM*	
5	TML	Bromomethane	0.4416	0.3427	22	TML	16
6	TM	Chloroethane	0.3094	0.3197	3.4	TM	
7	TM	Dichlorofluoromethane	1.036	1.077	3.9	TM	
8	TM	Trichlorofluoromethane	0.6231	0.6613	6.1	TM	
9	TM	Acrolein	0.0218	0.0212	2.5	TM	
10	TML	Acetone	0.2132	0.1546	27	TML	17
11	TM	Freon-113	0.3545	0.3891	9.8	TM	
12	TM*	1,1-DCE	0.2988	0.3036	1.6	TM*	
13	TM	t-Butanol	0.0166	0.0162	2.7	TM	
14	TM	Acetonitrile	0.0630	0.0568	9.8	TM	
15	TM	Methyl Acetate	0.3994	0.3941	1.3	TM	
16	TM	Iodomethane	0.1695	0.1496	12	TM	
17	TM	Acrylonitrile	0.1408	0.1359	3.4	TM	
18	TML	Methylene chloride	0.7831	0.5688	27	TML	1.6
19	TM	Carbon disulfide	1.230	1.120	9.0	TM	
20	TM	Methyl t-butyl ether (MtBE)	1.236	1.333	7.8	TM	
21	TM	Trans-1,2-DCE	0.4779	0.4618	3.4	TM	
22	TM	Diisopropyl Ether	1.715	1.787	4.2	TM	
23	TM**	1,1-DCA	0.9842	0.9124	7.3	TM**	
24	TM	Vinyl Acetate	0.4005	0.3928	1.9	TM	
25	TM	Ethyl tert Butyl Ether	1.294	1.453	12	TM	
26	TM	MEK (2-Butanone)	0.1861	0.1803	3.1	TM	
27	TM	Cis-1,2-DCE	0.5435	0.5381	0.99	TM	
28	TM	2,2-Dichloropropane	0.2251	0.1929	14	TM	
29	TM*	Chloroform	0.9391	0.8644	7.9	TM*	
30	TM	Bromochloromethane	0.2638	0.2490	5.6	TM	
31	TM	1,1,1-TCA	0.6934	0.6508	6.1	TM	
32	TM	Cyclohexane	0.3575	0.3815	6.7	TM	
33	TM	1,1-Dichloropropene	0.5872	0.5712	2.7	TM	
34	TM	2,2,4-Trimethylpentane	1.122	1.226	9.3	TM	
35	TM	Carbon Tetrachloride	0.5331	0.5126	3.8	TM	
36	TM	Tert Amyl Methyl Ether	1.130	1.208	6.9	TM	
37	TM	1,2-DCA	0.7260	0.6757	6.9	TM	
38	TM	Benzene	2.032	1.938	4.6	TM	
39	TM	TCE	0.2590	0.2379	8.2	TM	
40	TM	2-Pentanone	0.3125	0.3229	3.3	TM	
		Average			7.7		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 12/10/16
Matrix: 0 Instrument: Loki
Cal. Date: 12/10/16
Data File: 1210L17.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM*	1,2-Dichloropropane	0.6036	0.5539	8.2	TM*	
42	TM	Bromodichloromethane	0.7059	0.6372	9.7	TM	
43	TM	Methyl Cyclohexane	0.5601	0.6015	7.4	TM	
44	TM	Dibromomethane	0.3156	0.2957	6.3	TM	
45	TM	2-Chloroethyl vinyl ether	0.0000	0.0005	0.00	TM	
46	TML	MIBK (methyl isobutyl ketone)	0.5280	0.4497	15	TML	5.4
47	TM	1-Bromo-2-chloroethane	0.4220	0.3953	6.3	TM	
48	TM	Cis-1,3-Dichloropropene	0.7808	0.7476	4.3	TM	
49	TM*	Toluene	2.090	2.044	2.2	TM*	
50	TM	Trans-1,3-Dichloropropene	0.6806	0.6067	11	TM	
51	TM	1,1,2-TCA	0.3960	0.3454	13	TM	
52	TM	2-Hexanone	0.1312	0.1228	6.4	TM	
53	TM	1,2-EDB	0.4387	0.4205	4.1	TM	
54	TM	Tetrachloroethene	0.4945	0.4919	0.52	TM	
55	TM	1-Chlorohexane	0.5560	0.5918	6.4	TM	
56	TM	1,1,1,2-Tetrachloroethane	0.5208	0.5142	1.3	TM	
57	TM	m&p-Xylene	0.8940	0.9090	1.7	TM	
58	TM	o-Xylene	0.8650	0.8522	1.5	TM	
59	TML	Styrene	0.9438	1.005	6.5	TML	5.1
60	TM	1,3-Dichloropropane	0.8359	0.8247	1.3	TM	
61	TM	Dibromochloromethane	0.5222	0.4916	5.8	TM	
62	TM**	Chlorobenzene	1.515	1.450	4.3	TM**	
63	TM*	Ethylbenzene	2.417	2.404	0.56	TM*	
64	TM**	Bromoform	0.3081	0.2779	9.8	TM**	
65	TM	Isopropylbenzene	3.824	3.834	0.25	TM	
66	TM**	1,1,2,2-Tetrachloroethane	1.130	1.031	8.8	TM**	
67	TM	1,2,3-Trichloropropane	0.1868	0.1910	2.3	TM	
68	TM	t-1,4-Dichloro-2-Butene	0.2550	0.2545	0.20	TM	
69	TM	Bromobenzene	1.079	1.056	2.1	TM	
70	TM	n-Propylbenzene	4.637	4.762	2.7	TM	
71	TM	4-Ethyltoluene	3.826	4.238	11	TM	
72	TM	2-Chlorotoluene	2.984	2.992	0.26	TM	
73	TM	1,3,5-Trimethylbenzene	3.230	3.418	5.8	TM	
74	TM	4-Chlorotoluene	3.454	3.497	1.3	TM	
75	TM	Tert-Butylbenzene	2.630	2.610	0.74	TM	
76	TM	1,2,4-Trimethylbenzene	3.332	3.414	2.5	TM	
77	TM	Sec-Butylbenzene	3.927	3.892	0.89	TM	
78	TM	p-Isopropyltoluene	3.338	3.263	2.3	TM	
79	TM	Benzyl Chloride	0.9719	0.7988	18	TM	
80	TM	1,3-DCB	2.073	2.023	2.4	TM	
		Average			4.9		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/10/16
Instrument: Loki
Cal. Date: 12/10/16
Data File: 1210L17.D

		Compound	MEAN	CCRF	%D	%Drift	
81	TM	1,4-DCB	2.164	2.083	3.7	TM	
82	TM	n-Butylbenzene	3.160	2.869	9.2	TM	
83	TM	1,2-DCB	1.975	1.894	4.1	TM	
84	TM	Hexachloroethane	0.6647	0.6349	4.5	TM	
85	TM	1,2-Dibromo-3-chloropropane	0.1659	0.1615	2.7	TM	
86	TM	1,2,4-Trichlorobenzene	1.311	1.174	10	TM	
87	TML	Hexachlorobutadiene	0.5488	0.5071	7.6	TML	1.2
88	TM	Naphthalene	1.579	1.367	13	TM	
89	TML	1,2,3-Trichlorobenzene	0.8107	0.7317	9.7	TML	3.2
90							
91							
92							
93							
94							
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112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			7.2		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1210L17.D Vial: 16
Acq On : 10 Dec 16 18:36 Operator: PM,DG,SV,CMM
Sample : (SS)10ug/L VOC STD12/10/16 Inst : Loki
Misc : W IS-tcpd5-12/6/16, Multiplr: 1.00

Quant Time: Dec 15 12:19 2016 Quant Results File: L826AW.RES

Quant Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Dec 15 12:07:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	573248	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	504832	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	281408	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	287401	24.66496 ppb		0.00
Spiked Amount 25.000			Recovery = 98.660%			
37) 1,2-DCA-D4(S)	4.93	65	338449	25.45917 ppb		0.00
Spiked Amount 25.000			Recovery = 101.836%			
57) Toluene-D8(S)	7.22	98	998361	25.22985 ppb		0.00
Spiked Amount 25.000			Recovery = 100.920%			
65) 4-Bromofluorobenzene(S)	9.89	95	355159	26.67676 ppb		0.00
Spiked Amount 25.000			Recovery = 106.708%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.86	85	105840	10.00273 ppb		97
3) Freon 114	0.93	85	89157	11.56470 ppb		98
4) Chloromethane	0.96	50	177571	9.28172 ppb		99
5) Vinyl chloride	1.03	62	137270	9.45499 ppb		97
6) Bromomethane	1.22	96	78576	8.44111 ppb		100
7) Chloroethane	1.29	64	73318	10.33591 ppb		98
8) Dichlorofluoromethane	1.43	67	246884	10.39306 ppb		98
9) Trichlorofluoromethane	1.46	101	151624	10.61207 ppb		98
10) Acrolein	1.76	56	60792	121.82771 ppb		94
11) Acetone	1.88	43	35450	11.69463 ppb		100
12) Freon-113	1.84	101	89221	10.97535 ppb		98
13) 1,1-DCE	1.83	96	69608	10.16017 ppb		95
14) t-Butanol	2.40	59	46352	121.67277 ppb		96
15) Acetonitrile	2.11	41	162874	112.79655 ppb		99
16) Methyl Acetate	2.17	43	90377	9.86952 ppb		94
17) Iodomethane	1.93	142	34296	8.82306 ppb		97
18) Acrylonitrile	2.48	52	31171	9.65655 ppb		97
19) Methylene chloride	2.24	84	130419	9.83508 ppb		99
20) Carbon disulfide	1.98	76	256732	9.10292 ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	305616	10.78209 ppb		98
22) Trans-1,2-DCE	2.50	96	105890	9.66398 ppb		96
23) Diisopropyl Ether	3.10	45	409842	10.42322 ppb		97
24) 1,1-DCA	2.95	63	209210	9.27076 ppb		97
25) Vinyl Acetate	3.10	43	90072	9.80788 ppb	#	80
26) Ethyl tert Butyl Ether	3.59	59	333181	11.22904 ppb		97
27) MEK (2-Butanone)	3.80	43	41338	9.68923 ppb		96
28) Cis-1,2-DCE	3.73	96	123387	9.90059 ppb		93
29) 2,2-Dichloropropane	3.71	77	44224	8.56993 ppb		100
30) Chloroform	4.26	83	198208	9.20501 ppb		95
31) Bromochloromethane	4.08	128	57106	9.44218 ppb		93
33) 1,1,1-TCA	4.47	97	149217	9.38525 ppb		96
34) Cyclohexane	4.53	41	87470	10.67113 ppb		99
35) 1,1-Dichloropropene	4.72	75	130980	9.72791 ppb		97
36) 2,2,4-Trimethylpentane	5.16	57	281205	10.93383 ppb		95
38) Carbon Tetrachloride	4.71	119	117544	9.61650 ppb		98
39) Tert Amyl Methyl Ether	5.23	73	277090	10.69413 ppb		98
40) 1,2-DCA	5.03	62	154934	9.30695 ppb		99
41) Benzene	4.99	78	444279	9.53656 ppb		98
42) TCE	5.84	95	54544	9.18383 ppb		93

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1210L17.D Vial: 16
Acq On : 10 Dec 16 18:36 Operator: PM,DG,SV,CMM
Sample : (SS)10ug/L VOC STD12/10/16 Inst : Loki
Misc : W IS-tcpd5-12/6/16, Multiplr: 1.00

Quant Time: Dec 15 12:19 2016 Quant Results File: L826AW.RES

Quant Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Dec 15 12:07:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

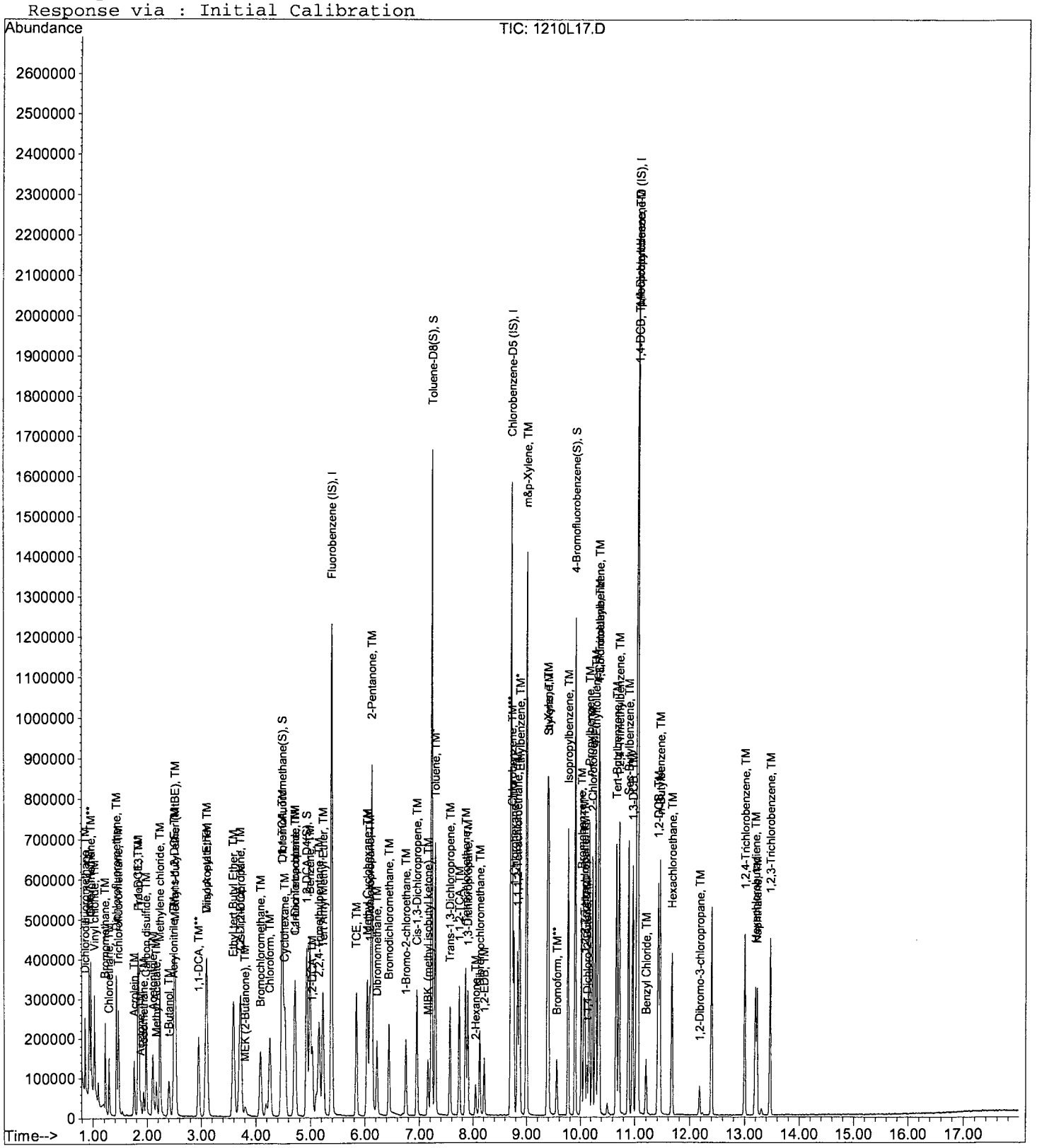
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
43)	2-Pentanone	6.12	43	925420	129.14166	ppb	100
44)	1,2-Dichloropropane	6.09	63	127013	9.17641	ppb	99
45)	Bromodichloromethane	6.44	83	146118	9.02700	ppb	93
46)	Methyl Cyclohexane	6.04	83	137929	10.73934	ppb	97
47)	Dibromomethane	6.22	93	67797	9.36911	ppb	95
49)	MIBK (methyl isobutyl ket	7.16	43	103116	10.54103	ppb	98
50)	1-Bromo-2-chloroethane	6.75	63	90632	9.36617	ppb	98
51)	Cis-1,3-Dichloropropene	6.95	75	171422	9.57486	ppb	95
52)	Toluene	7.29	91	468633	9.77972	ppb	98
53)	Trans-1,3-Dichloropropene	7.56	75	139110	8.91322	ppb	98
54)	1,1,2-TCA	7.74	83	79204	8.72342	ppb	93
55)	2-Hexanone	8.05	43	28168	9.36347	ppb	99
58)	1,2-EDB	8.21	107	84920	9.58681	ppb	98
59)	Tetrachloroethene	7.86	166	99339	9.94798	ppb	96
60)	1-Chlorohexane	8.76	91	119501	10.64407	ppb	95
61)	1,1,1,2-Tetrachloroethane	8.83	131	103838	9.87301	ppb	97
62)	m&p-Xylene	8.99	106	367126	20.33731	ppb	98
63)	o-Xylene	9.38	106	172085	9.85207	ppb	97
64)	Styrene	9.40	104	203008	9.48544	ppb	95
66)	1,3-Dichloropropane	7.90	76	166526	9.86521	ppb	99
67)	Dibromochloromethane	8.12	129	99273	9.41514	ppb	98
68)	Chlorobenzene	8.73	112	292888	9.57235	ppb	98
69)	Ethylbenzene	8.87	91	485442	9.94418	ppb	99
70)	Bromoform	9.55	173	56113	9.01785	ppb	96
72)	Isopropylbenzene	9.76	105	431533	10.02478	ppb	99
73)	1,1,2,2-Tetrachloroethane	10.07	83	116007	9.12190	ppb	99
74)	1,2,3-Trichloropropane	10.09	110	21504	10.22624	ppb	99
75)	t-1,4-Dichloro-2-Butene	10.13	53	28642	9.98003	ppb	99
76)	Bromobenzene	10.02	156	118866	9.78705	ppb	98
77)	n-Propylbenzene	10.17	91	536021	10.26898	ppb	98
78)	4-Ethyltoluene	10.29	105	477043	11.07765	ppb	99
79)	2-Chlorotoluene	10.23	91	336769	10.02575	ppb	100
80)	1,3,5-Trimethylbenzene	10.36	105	384749	10.58181	ppb	99
81)	4-Chlorotoluene	10.34	91	393686	10.12573	ppb	98
82)	Tert-Butylbenzene	10.67	119	293843	9.92593	ppb	98
83)	1,2,4-Trimethylbenzene	10.72	105	384260	10.24595	ppb	99
84)	Sec-Butylbenzene	10.89	105	438121	9.91130	ppb	99
85)	p-Isopropyltoluene	11.04	119	367279	9.77469	ppb	100
86)	Benzyl Chloride	11.20	91	89912	8.21897	ppb	98
87)	1,3-DCB	10.96	146	227737	9.76095	ppb	99
88)	1,4-DCB	11.05	146	234464	9.62732	ppb	99
89)	n-Butylbenzene	11.44	91	322998	9.08017	ppb	99
90)	1,2-DCB	11.41	146	213196	9.59052	ppb	100
91)	Hexachloroethane	11.66	117	71470	9.55144	ppb	97
92)	1,2-Dibromo-3-chloropropan	12.18	157	18176	9.73366	ppb	90
93)	1,2,4-Trichlorobenzene	13.00	180	132137	8.95663	ppb	93
94)	Hexachlorobutadiene	13.19	225	57080	10.11529	ppb	92
95)	Naphthalene	13.23	128	153920	8.66219	ppb	99
96)	1,2,3-Trichlorobenzene	13.47	180	82360	9.68224	ppb	98

(#) = qualifier out of range (m) = manual integration
1210L17.D L826AW.M Thu Dec 15 12:35:02 2016 Page 2

Data File : M:\LOKI\DATA\161210\1210L17.D Vial: 16
Acq On : 10 Dec 16 18:36 Operator: PM,DG,SV,CMM
Sample : (SS)10ug/L VOC STD12/10/16 Inst : Loki
Misc : W IS-tcpd5-12/6/16, Multiplr: 1.00

Quant Time: Dec 15 12:19 2016 Quant Results File: L826AW.RES

Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Dec 15 12:18:37 2016
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 12/15/16
Matrix: Instrument: Loki
Initial Cal. Date: 12/10/16
Data File: 1215L03.D

		Compound	MEAN	CCRF	%D		%Drift	
1	I	Fluorobenzene (IS)	ISTD			I		
2	TM	Dichlorodifluoromethane	0.4615	0.3899	16	TM		
3	TM	Freon 114	0.3362	0.3124	7.1	TM		
4	TM**	Chloromethane	0.8872	0.6890	22	TM**		nt
5	TM*	Vinyl chloride	0.6332	0.5410	15	TM*		
6	TM	Bromomethane	0.4222	0.3400	19	TM		
7	TM	Chloroethane	0.3094	0.3170	2.5	TM		
8	TM	Dichlorofluoromethane	1.036	0.9770	5.7	TM		
9	TM	Trichlorofluoromethane	0.6231	0.6193	0.61	TM		
10	TML	Acetone	0.2132	0.1125	47	TML	20	
11	TM	Freon-113	0.3545	0.3243	8.5	TM		
12	TM*	1,1-DCE	0.2988	0.2972	0.53	TM*		
13	TM	t-Butanol	0.0166	0.0157	5.6	TM		
14	TM	Acetonitrile	0.0630	0.0512	19	TM		
15	TM	Methyl Acetate	0.3994	0.3638	8.9	TM		
16	TM	Iodomethane	0.1695	0.1956	15	TM		
17	TM	Acrylonitrile	0.1408	0.1176	16	TM		
18	TML	Methylene chloride	0.7831	0.6083	22	TML	5.5	
19	TM	Carbon disulfide	1.230	0.9924	19	TM		
20	TM	Methyl t-butyl ether (MtBE)	1.236	1.297	4.9	TM		
21	TM	Trans-1,2-DCE	0.4779	0.5038	5.4	TM		
22	TM	Diisopropyl Ether	1.715	1.650	3.8	TM		
23	TM**	1,1-DCA	0.9842	0.9691	1.5	TM**		
24	TM	Ethyl tert Butyl Ether	1.294	1.373	6.1	TM		
25	TM	MEK (2-Butanone)	0.1861	0.1554	17	TM		
26	TM	Cis-1,2-DCE	0.5435	0.5936	9.2	TM		
27	TM	2,2-Dichloropropane	0.2251	0.2374	5.5	TM		
28	TM*	Chloroform	0.9391	0.9623	2.5	TM*		
29	TM	Bromochloromethane	0.2638	0.2706	2.6	TM		
30	S	Dibromofluoromethane(S)	0.5082	0.5103	0.42	S		
31	TM	1,1,1-TCA	0.6934	0.7153	3.2	TM		
32	TM	Cyclohexane	0.3575	0.3008	16	TM		
33	TM	1,1-Dichloropropene	0.5872	0.5923	0.86	TM		
34	TM	2,2,4-Trimethylpentane	1.122	0.9712	13	TM		
35	S	1,2-DCA-D4(S)	0.5798	0.5637	2.8	S		
36	TM	Carbon Tetrachloride	0.5331	0.5457	2.4	TM		
37	TM	Tert Amyl Methyl Ether	1.130	1.171	3.7	TM		
38	TM	1,2-DCA	0.7260	0.6995	3.7	TM		
39	TM	Benzene	2.032	2.079	2.3	TM		
40	TM	TCE	0.2590	0.2665	2.9	TM		
		Average			9.2			

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/15/16
Instrument: Loki
Cal. Date: 12/10/16
Data File: 1215L03.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	2-Pentanone	0.3125	0.2919	6.6	TM	
42	TM	Bromodichloromethane	0.7059	0.6926	1.9	TM	
43	TM	Methyl Cyclohexane	0.5601	0.4948	12	TM	
44	TM	Dibromomethane	0.3156	0.3085	2.2	TM	
45	TM	2-Chloroethyl vinyl ether	0.0000	0.0020	0.00	TM	
46	TM	1-Bromo-2-chloroethane	0.4220	0.3769	11	TM	
47	TM	Cis-1,3-Dichloropropene	0.7808	0.8223	5.3	TM	
48	TM*	Toluene	2.090	2.244	7.4	TM*	
49	TM	Trans-1,3-Dichloropropene	0.6806	0.6757	0.72	TM	
50	TM	1,1,2-TCA	0.3960	0.3767	4.9	TM	
51	TM	2-Hexanone	0.1312	0.1201	8.5	TM	
52	I	Chlorobenzene-D5 (IS)	ISTD			I	
53	S	Toluene-D8(S)	1.960	2.001	2.1	S	
54	TM	1,2-EDB	0.4387	0.4569	4.1	TM	
55	TM	Tetrachloroethene	0.4945	0.5433	9.9	TM	
56	TM	1-Chlorohexane	0.5560	0.5461	1.8	TM	
57	TM	1,1,1,2-Tetrachloroethane	0.5208	0.5522	6.0	TM	
58	TM	m&p-Xylene	0.8940	0.9823	9.9	TM	
59	TM	o-Xylene	0.8650	0.9539	10	TM	
60	TML	Styrene	0.9438	1.125	19	TML	5.1
61	S	4-Bromofluorobenzene(S)	0.6593	0.7120	8.0	S	
62	TM	1,3-Dichloropropane	0.8359	0.8485	1.5	TM	
63	TM	Dibromochloromethane	0.5222	0.5329	2.1	TM	
64	TM**	Chlorobenzene	1.515	1.574	3.9	TM**	
65	TM*	Ethylbenzene	2.417	2.584	6.9	TM*	
66	TM**	Bromoform	0.3081	0.3051	0.99	TM**	
67	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
68	TM	Isopropylbenzene	3.824	4.046	5.8	TM	
69	TM**	1,1,2,2-Tetrachloroethane	1.130	1.071	5.2	TM**	
70	TM	1,2,3-Trichloropropane	0.1868	0.1917	2.6	TM	
71	TM	t-1,4-Dichloro-2-Butene	0.2550	0.2321	9.0	TM	
72	TM	Bromobenzene	1.079	1.166	8.1	TM	
73	TM	n-Propylbenzene	4.637	4.921	6.1	TM	
74	TM	4-Ethyltoluene	3.826	4.154	8.6	TM	
75	TM	2-Chlorotoluene	2.984	3.177	6.5	TM	
76	TM	1,3,5-Trimethylbenzene	3.230	3.663	13	TM	
77	TM	4-Chlorotoluene	3.454	3.716	7.6	TM	
78	TM	Tert-Butylbenzene	2.630	2.783	5.8	TM	
79	TM	1,2,4-Trimethylbenzene	3.332	3.697	11	TM	
80	TM	Sec-Butylbenzene	3.927	4.009	2.1	TM	
		Average			6.3		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 12/15/16
Matrix: 0 Instrument: Loki
Cal. Date: 12/10/16
Data File: 1215L03.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	p-Isopropyltoluene	3.338	3.489	4.5	TM	
82	TM	Benzyl Chloride	0.9719	1.057	8.8	TM	
83	TM	1,3-DCB	2.073	2.232	7.7	TM	
84	TM	1,4-DCB	2.164	2.272	5.0	TM	
85	TM	n-Butylbenzene	3.160	3.044	3.7	TM	
86	TM	1,2-DCB	1.975	2.022	2.4	TM	
87	TM	Hexachloroethane	0.6647	0.6865	3.3	TM	
88	TM	1,2-Dibromo-3-chloropropane	0.1659	0.1627	2.0	TM	
89	TM	1,2,4-Trichlorobenzene	1.311	1.256	4.2	TM	
90	TML	Hexachlorobutadiene	0.5488	0.4924	10	TML	1.7
91	TM	Naphthalene	1.579	1.555	1.5	TM	
92	TML	1,2,3-Trichlorobenzene	0.8107	0.8101	0.07	TML	7.2
93							
94							
95							
96							
97							
98							
99							
100							
101							
102							
103							
104							
105							
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108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			4.4		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1215L03.D Vial: 3
Acq On : 15 Dec 16 11:51 Operator: PM,DG,SV,CMM
Sample : 161215A CCV/LCS-1WL 10ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 16 10:19 2016 Quant Results File: L826AW.RES

Quant Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Dec 15 12:07:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	615616	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	550272	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	310592	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	314160	25.10589 ppb		0.00
Spiked Amount 25.000			Recovery = 100.424%			
37) 1,2-DCA-D4(S)	4.93	65	347042	24.30892 ppb		0.00
Spiked Amount 25.000			Recovery = 97.236%			
57) Toluene-D8(S)	7.22	98	1100930	25.52444 ppb		0.00
Spiked Amount 25.000			Recovery = 102.096%			
65) 4-Bromofluorobenzene(S)	9.89	95	391804	26.99905 ppb		0.00
Spiked Amount 25.000			Recovery = 107.996%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	96016	8.44977 ppb		99
3) Freon 114	0.93	85	76938	9.29293 ppb		92
4) Chloromethane	0.96	50	169670	7.76605 ppb		99
5) Vinyl chloride	1.02	62	133224	8.54478 ppb		100
6) Bromomethane	1.22	96	83720	8.05274 ppb		95
7) Chloroethane	1.29	64	78061	10.24719 ppb		96
8) Dichlorofluoromethane	1.42	67	240574	9.43044 ppb		100
9) Trichlorofluoromethane	1.46	101	152498	9.93869 ppb		98
10) Acrolein	1.76	56	59000	110.09923 ppb	#	99
11) Acetone	1.88	43	27700	7.98702 ppb		89
12) Freon-113	1.84	101	79853	9.14693 ppb		96
13) 1,1-DCE	1.83	96	73184	9.94697 ppb		94
14) t-Butanol	2.40	59	48296	118.05075 ppb		98
15) Acetonitrile	2.10	41	157472	101.55003 ppb		100
16) Methyl Acetate	2.17	43	89576	9.10883 ppb		97
17) Iodomethane	1.93	142	48160	11.53705 ppb		98
18) Acrylonitrile	2.48	52	28956	8.35300 ppb		94
19) Methylene chloride	2.23	84	149791	10.54961 ppb		98
20) Carbon disulfide	1.98	76	244371	8.06832 ppb		98
21) Methyl t-butyl ether (MtBE	2.52	73	319265	10.48844 ppb		96
22) Trans-1,2-DCE	2.50	96	124050	10.54218 ppb		99
23) Diisopropyl Ether	3.10	45	406354	9.62327 ppb		94
24) 1,1-DCA	2.95	63	238640	9.84711 ppb		99
25) Vinyl Acetate	3.09	43	90992	9.22616 ppb	#	84
26) Ethyl tert Butyl Ether	3.59	59	338086	10.61017 ppb		99
27) MEK (2-Butanone)	3.80	43	38255	8.34951 ppb		94
28) Cis-1,2-DCE	3.73	96	146177	10.92203 ppb		91
29) 2,2-Dichloropropane	3.70	77	58456	10.54826 ppb		98
30) Chloroform	4.25	83	236967	10.24763 ppb		100
31) Bromochloromethane	4.08	128	66629	10.25856 ppb		93
33) 1,1,1-TCA	4.47	97	176143	10.31634 ppb		98
34) Cyclohexane	4.53	41	74067	8.41412 ppb		93
35) 1,1-Dichloropropene	4.72	75	145844	10.08639 ppb		97
36) 2,2,4-Trimethylpentane	5.15	57	239165	8.65923 ppb		99
38) Carbon Tetrachloride	4.70	119	134371	10.23657 ppb		92
39) Tert Amyl Methyl Ether	5.23	73	288435	10.36585 ppb		95
40) 1,2-DCA	5.03	62	172241	9.63451 ppb		98
41) Benzene	4.99	78	511841	10.23066 ppb		100
42) TCE	5.84	95	65616	10.28772 ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1215L03.D Vial: 3
Acq On : 15 Dec 16 11:51 Operator: PM,DG,SV,CMM
Sample : 161215A CCV/LCS-1WL 10ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 16 10:19 2016 Quant Results File: L826AW.RES

Quant Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Dec 15 12:07:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	2-Pentanone	6.12	43	898499	116.75561	ppb		97
44)	1,2-Dichloropropane	6.09	63	143956	9.68472	ppb	#	96
45)	Bromodichloromethane	6.44	83	170550	9.81125	ppb		95
46)	Methyl Cyclohexane	6.04	83	121847	8.83425	ppb		98
47)	Dibromomethane	6.22	93	75975	9.77667	ppb		94
49)	MIBK (methyl isobutyl ket	7.16	43	92659	8.76347	ppb	#	95
50)	1-Bromo-2-chloroethane	6.75	63	92816	8.93174	ppb		99
51)	Cis-1,3-Dichloropropene	6.95	75	202478	10.53117	ppb		97
52)	Toluene	7.29	91	552465	10.73572	ppb		96
53)	Trans-1,3-Dichloropropene	7.56	75	166401	9.92807	ppb		98
54)	1,1,2-TCA	7.74	83	92773	9.51467	ppb		98
55)	2-Hexanone	8.04	43	29569	9.15272	ppb		95
58)	1,2-EDB	8.21	107	100558	10.41478	ppb		92
59)	Tetrachloroethene	7.86	166	119594	10.98737	ppb		94
60)	1-Chlorohexane	8.76	91	120197	9.82199	ppb		98
61)	1,1,1,2-Tetrachloroethane	8.83	131	121540	10.60186	ppb		96
62)	m&p-Xylene	8.99	106	432430	21.97676	ppb		97
63)	o-Xylene	9.38	106	209969	11.02831	ppb		100
64)	Styrene	9.40	104	247552	10.51123	ppb		94
66)	1,3-Dichloropropane	7.90	76	186760	10.15027	ppb		99
67)	Dibromochloromethane	8.12	129	117291	10.20540	ppb		99
68)	Chlorobenzene	8.73	112	346560	10.39118	ppb		98
69)	Ethylbenzene	8.87	91	568743	10.68851	ppb		98
70)	Bromoform	9.55	173	67151	9.90060	ppb		94
72)	Isopropylbenzene	9.76	105	502710	10.58095	ppb		99
73)	1,1,2,2-Tetrachloroethane	10.07	83	133108	9.48313	ppb		99
74)	1,2,3-Trichloropropane	10.09	110	23816	10.26152	ppb		96
75)	t-1,4-Dichloro-2-Butene	10.13	53	28839	9.10448	ppb		92
76)	Bromobenzene	10.02	156	144859	10.80651	ppb		99
77)	n-Propylbenzene	10.17	91	611322	10.61114	ppb		99
78)	4-Ethyltoluene	10.29	105	516048	10.85741	ppb		100
79)	2-Chlorotoluene	10.23	91	394656	10.64510	ppb		98
80)	1,3,5-Trimethylbenzene	10.36	105	455047	11.33927	ppb		97
81)	4-Chlorotoluene	10.34	91	461678	10.75875	ppb		99
82)	Tert-Butylbenzene	10.67	119	345724	10.58112	ppb		99
83)	1,2,4-Trimethylbenzene	10.72	105	459265	11.09524	ppb		98
84)	Sec-Butylbenzene	10.88	105	498029	10.20792	ppb		99
85)	p-Isopropyltoluene	11.04	119	433477	10.45247	ppb		98
86)	Benzyl Chloride	11.19	91	131336	10.87752	ppb		97
87)	1,3-DCB	10.96	146	277348	10.77035	ppb		99
88)	1,4-DCB	11.05	146	282255	10.50067	ppb		99
89)	n-Butylbenzene	11.44	91	378173	9.63231	ppb		99
90)	1,2-DCB	11.41	146	251256	10.24060	ppb		99
91)	Hexachloroethane	11.66	117	85288	10.32712	ppb		94
92)	1,2-Dibromo-3-chloropropan	12.18	157	20208	9.80499	ppb		90
93)	1,2,4-Trichlorobenzene	13.00	180	155981	9.57939	ppb		96
94)	Hexachlorobutadiene	13.19	225	61174	9.82931	ppb		95
95)	Naphthalene	13.22	128	193216	9.85194	ppb		99
96)	1,2,3-Trichlorobenzene	13.46	180	100648	10.71659	ppb		97

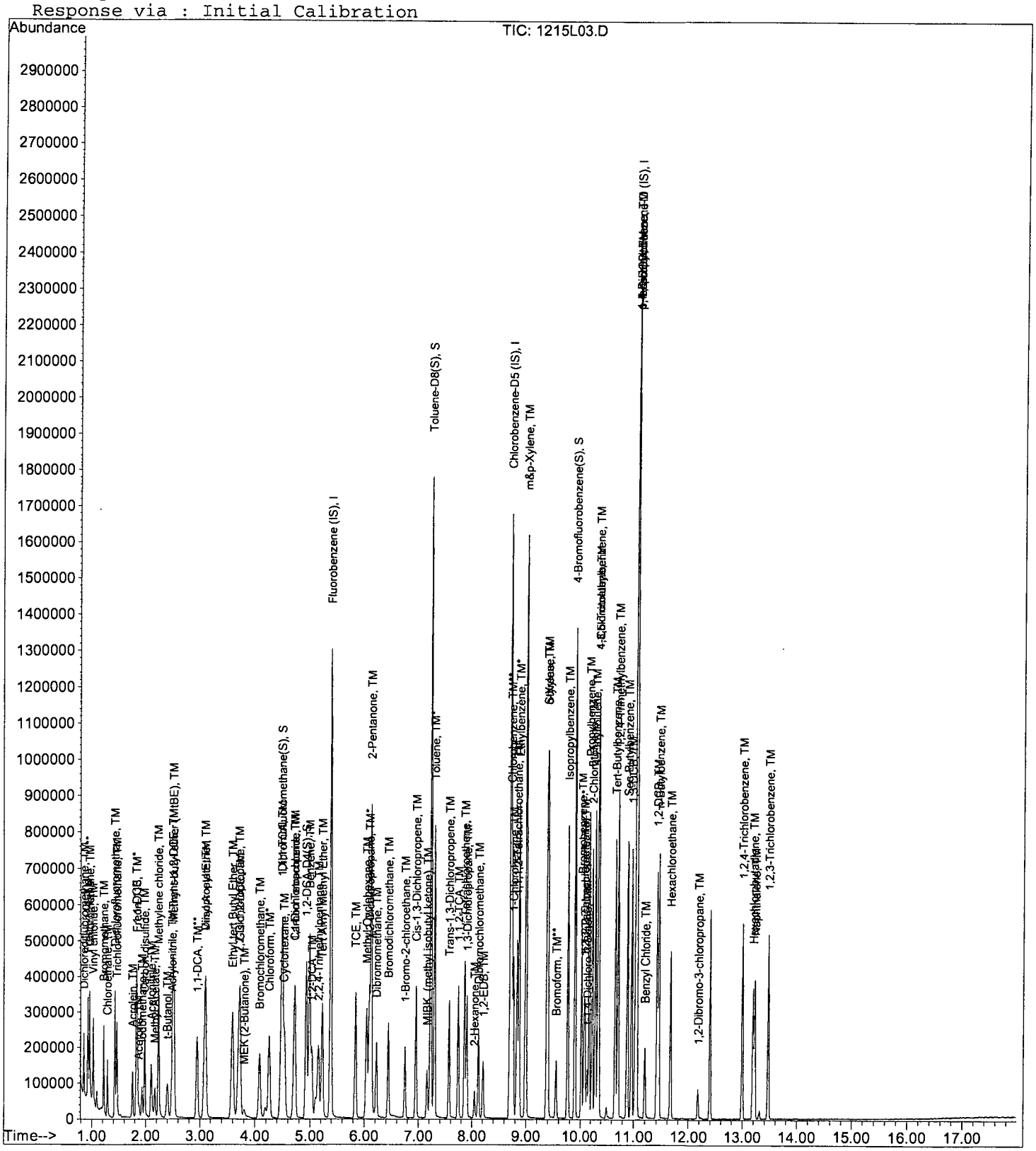
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161210\1215L03.D Vial: 3
Acq On : 15 Dec 16 11:51 Operator: PM,DG,SV,CMM
Sample : 161215A CCV/LCS-1WL 10ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 16 10:19 2016 Quant Results File: L826AW.RES

Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Dec 15 12:07:49 2016
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/15/16
Instrument: Loki
Initial Cal. Date: 12/10/16
Data File: 1215L28.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	TM	Dichlorodifluoromethane	0.4615	0.3900	15	TM	
3	TM	Freon 114	0.3362	0.2999	11	TM	
4	TM**	Chloromethane	0.8872	0.7403	17	TM**	
5	TM*	Vinyl chloride	0.6332	0.5565	12	TM*	
6	TM	Bromomethane	0.4222	0.3242	23	TM	
7	TM	Chloroethane	0.3094	0.3134	1.3	TM	
8	TM	Dichlorofluoromethane	1.036	0.9953	3.9	TM	
9	TM	Trichlorofluoromethane	0.6231	0.6404	2.8	TM	
10	TM	Acrolein	0.0218	0.0173	21	TM	
11	TML	Acetone	0.2132	0.0996	53	TML	31
12	TM	Freon-113	0.3545	0.3189	10	TM	
13	TM*	1,1-DCE	0.2988	0.3010	0.76	TM*	
14	TM	t-Butanol	0.0166	0.0141	15	TM	
15	TM	Acetonitrile	0.0630	0.0469	26	TM	
16	TM	Methyl Acetate	0.3994	0.3330	17	TM	
17	TM	Iodomethane	0.1695	0.1799	6.1	TM	
18	TM	Acrylonitrile	0.1408	0.1134	19	TM	
19	TML	Methylene chloride	0.7831	0.6290	20	TML	9.2
20	TM	Carbon disulfide	1.230	0.9906	19	TM	
21	TM	Methyl t-butyl ether (MtBE)	1.236	1.220	1.3	TM	
22	TM	Trans-1,2-DCE	0.4779	0.5283	11	TM	
23	TM	Diisopropyl Ether	1.715	1.634	4.7	TM	
24	TM**	1,1-DCA	0.9842	0.9983	1.4	TM**	
25	TM	Vinyl Acetate	0.4005	0.3604	10	TM	
26	TM	Ethyl tert Butyl Ether	1.294	1.319	1.9	TM	
27	TM	MEK (2-Butanone)	0.1861	0.1391	25	TM	
28	TM	Cis-1,2-DCE	0.5435	0.6126	13	TM	
29	TM	2,2-Dichloropropane	0.2251	0.2132	5.3	TM	
30	TM*	Chloroform	0.9391	1.020	8.6	TM*	
31	TM	Bromochloromethane	0.2638	0.2764	4.8	TM	
32	S	Dibromofluoromethane(S)	0.5082	0.5104	0.44	S	
33	TM	1,1,1-TCA	0.6934	0.7382	6.5	TM	
34	TM	Cyclohexane	0.3575	0.2867	20	TM	
35	TM	1,1-Dichloropropene	0.5872	0.6144	4.6	TM	
36	TM	2,2,4-Trimethylpentane	1.122	0.8862	21	TM	
37	S	1,2-DCA-D4(S)	0.5798	0.5605	3.3	S	
38	TM	Carbon Tetrachloride	0.5331	0.5787	8.6	TM	
39	TM	Tert Amyl Methyl Ether	1.130	1.123	0.58	TM	
40	TM	1,2-DCA	0.7260	0.7325	0.90	TM	
		Average			11.4		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/15/16
Instrument: Loki
Cal. Date: 12/10/16
Data File: 1215L28.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	Benzene	2.032	2.196	8.1	TM	
42	TM	TCE	0.2590	0.2624	1.3	TM	
43	TM	2-Pentanone	0.3125	0.2533	19	TM	
44	TM*	1,2-Dichloropropane	0.6036	0.6137	1.7	TM*	
45	TM	Bromodichloromethane	0.7059	0.7293	3.3	TM	
46	TM	Methyl Cyclohexane	0.5601	0.5054	9.8	TM	
47	TM	Dibromomethane	0.3156	0.3157	0.04	TM	
48	TM	2-Chloroethyl vinyl ether	0.0000	0.0014	0.00	TM	
49	TML	MIBK (methyl isobutyl ketone)	0.5280	0.3363	36	TML	22
50	TM	1-Bromo-2-chloroethane	0.4220	0.3683	13	TM	
51	TM	Cis-1,3-Dichloropropene	0.7808	0.8177	4.7	TM	
52	TM*	Toluene	2.090	2.293	9.7	TM*	
53	TM	Trans-1,3-Dichloropropene	0.6806	0.6621	2.7	TM	
54	TM	1,1,2-TCA	0.3960	0.3912	1.2	TM	
55	TM	2-Hexanone	0.1312	0.0963	27	TM	
56	I	Chlorobenzene-D5 (IS)	ISTD			I	
57	S	Toluene-D8(S)	1.960	1.900	3.1	S	
58	TM	1,2-EDB	0.4387	0.4369	0.40	TM	
59	TM	Tetrachloroethene	0.4945	0.5339	8.0	TM	
60	TM	1-Chlorohexane	0.5560	0.5123	7.9	TM	
61	TM	1,1,1,2-Tetrachloroethane	0.5208	0.5615	7.8	TM	
62	TM	m&p-Xylene	0.8940	0.9787	9.5	TM	
63	TM	o-Xylene	0.8650	0.9661	12	TM	
64	TML	Styrene	0.9438	1.052	11	TML	1.1
65	S	4-Bromofluorobenzene(S)	0.6593	0.6733	2.1	S	
66	TM	1,3-Dichloropropane	0.8359	0.8300	0.71	TM	
67	TM	Dibromochloromethane	0.5222	0.5182	0.75	TM	
68	TM**	Chlorobenzene	1.515	1.601	5.7	TM**	
69	TM*	Ethylbenzene	2.417	2.595	7.4	TM*	
70	TM**	Bromoform	0.3081	0.2961	3.9	TM**	
71	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
72	TM	Isopropylbenzene	3.824	4.195	9.7	TM	
73	TM**	1,1,2,2-Tetrachloroethane	1.130	1.064	5.8	TM**	
74	TM	1,2,3-Trichloropropane	0.1868	0.1883	0.77	TM	
75	TM	t-1,4-Dichloro-2-Butene	0.2550	0.2111	17	TM	
76	TM	Bromobenzene	1.079	1.187	10	TM	
77	TM	n-Propylbenzene	4.637	5.172	12	TM	
78	TM	4-Ethyltoluene	3.826	4.108	7.4	TM	
79	TM	2-Chlorotoluene	2.984	3.298	11	TM	
80	TM	1,3,5-Trimethylbenzene	3.230	3.740	16	TM	
		Average			8.1		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/15/16
Instrument: Loki
Cal. Date: 12/10/16
Data File: 1215L28.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	4-Chlorotoluene	3.454	3.784	9.6	TM	
82	TM	Tert-Butylbenzene	2.630	2.892	10.0	TM	
83	TM	1,2,4-Trimethylbenzene	3.332	3.805	14	TM	
84	TM	Sec-Butylbenzene	3.927	4.148	5.6	TM	
85	TM	p-Isopropyltoluene	3.338	3.523	5.5	TM	
86	TM	Benzyl Chloride	0.9719	0.7291	25	TM	
87	TM	1,3-DCB	2.073	2.263	9.2	TM	
88	TM	1,4-DCB	2.164	2.298	6.2	TM	
89	TM	n-Butylbenzene	3.160	2.980	5.7	TM	
90	TM	1,2-DCB	1.975	2.056	4.1	TM	
91	TM	Hexachloroethane	0.6647	0.6795	2.2	TM	
92	TM	1,2-Dibromo-3-chloropropane	0.1659	0.1604	3.3	TM	
93	TM	1,2,4-Trichlorobenzene	1.311	1.221	6.8	TM	
94	TML	Hexachlorobutadiene	0.5488	0.5077	7.5	TML	1.3
95	TM	Naphthalene	1.579	1.432	9.3	TM	
96	TML	1,2,3-Trichlorobenzene	0.8107	0.7463	7.9	TML	1.2
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			8.2		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1215L28.D Vial: 28
Acq On : 15 Dec 16 23:33 Operator: PM,DG,SV,CMM
Sample : Ending CCV 8260 10ug/L 12/15/16 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 16 10:20 2016 Quant Results File: L826AW.RES

Quant Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Dec 15 12:07:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	588224	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	544000	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	294592	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	300227	25.10971 ppb		0.00
Spiked Amount 25.000			Recovery = 100.440%			
37) 1,2-DCA-D4(S)	4.92	65	329719	24.17101 ppb		0.00
Spiked Amount 25.000			Recovery = 96.684%			
57) Toluene-D8(S)	7.22	98	1033434	24.23582 ppb		0.00
Spiked Amount 25.000			Recovery = 96.944%			
65) 4-Bromofluorobenzene(S)	9.89	95	366258	25.52967 ppb		0.00
Spiked Amount 25.000			Recovery = 102.120%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	91760	8.45127 ppb		99
3) Freon 114	0.93	85	70552	8.91842 ppb		94
4) Chloromethane	0.96	50	174183	8.34388 ppb		97
5) Vinyl chloride	1.03	62	130942	8.78950 ppb		99
6) Bromomethane	1.22	96	76288	7.67959 ppb		97
7) Chloroethane	1.29	64	73728	10.12909 ppb		94
8) Dichlorofluoromethane	1.43	67	234183	9.60739 ppb		98
9) Trichlorofluoromethane	1.46	101	150676	10.27723 ppb		98
10) Acrolein	1.76	56	50856	99.32113 ppb		95
11) Acetone	1.88	43	23429	6.85008 ppb		94
12) Freon-113	1.84	101	75038	8.99565 ppb		95
13) 1,1-DCE	1.83	96	70832	10.07561 ppb		97
14) t-Butanol	2.40	59	41560	106.31640 ppb		99
15) Acetonitrile	2.11	41	137848	93.03457 ppb		98
16) Methyl Acetate	2.17	43	78347	8.33797 ppb		90
17) Iodomethane	1.93	142	42336	10.61415 ppb		97
18) Acrylonitrile	2.47	52	26676	8.05364 ppb		94
19) Methylene chloride	2.24	84	148002	10.92424 ppb		100
20) Carbon disulfide	1.98	76	233077	8.05378 ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	287039	9.86888 ppb		99
22) Trans-1,2-DCE	2.50	96	124313	11.05649 ppb		97
23) Diisopropyl Ether	3.10	45	384432	9.52807 ppb		96
24) 1,1-DCA	2.95	63	234886	10.14355 ppb		99
25) Vinyl Acetate	3.08	43	84792	8.99788 ppb		96
26) Ethyl tert Butyl Ether	3.59	59	310371	10.19397 ppb		96
27) MEK (2-Butanone)	3.80	43	32717	7.47331 ppb	#	84
28) Cis-1,2-DCE	3.73	96	144142	11.27151 ppb		95
29) 2,2-Dichloropropane	3.70	77	50152	9.47125 ppb		98
30) Chloroform	4.25	83	239911	10.85808 ppb		100
31) Bromochloromethane	4.08	128	65037	10.47974 ppb		92
33) 1,1,1-TCA	4.47	97	173690	10.64639 ppb		98
34) Cyclohexane	4.53	41	67459	8.02031 ppb		96
35) 1,1-Dichloropropene	4.72	75	144557	10.46293 ppb		95
36) 2,2,4-Trimethylpentane	5.15	57	208505	7.90070 ppb		99
38) Carbon Tetrachloride	4.71	119	136172	10.85686 ppb		95
39) Tert Amyl Methyl Ether	5.23	73	264331	9.94197 ppb		97
40) 1,2-DCA	5.03	62	172359	10.09008 ppb		97
41) Benzene	4.99	78	516714	10.80902 ppb		98
42) TCE	5.84	95	61744	10.13145 ppb		95

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161210\1215L28.D Vial: 28
Acq On : 15 Dec 16 23:33 Operator: PM,DG,SV,CMM
Sample : Ending CCV 8260 10ug/L 12/15/16 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 16 10:20 2016 Quant Results File: L826AW.RES

Quant Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Dec 15 12:07:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43)	2-Pentanone	6.12	43	744898	101.30342 ppb		96
44)	1,2-Dichloropropane	6.09	63	144402	10.16711 ppb		100
45)	Bromodichloromethane	6.44	83	171599	10.33129 ppb		99
46)	Methyl Cyclohexane	6.04	83	118907	9.02255 ppb		97
47)	Dibromomethane	6.22	93	74280	10.00367 ppb		95
49)	MIBK (methyl isobutyl ket	7.16	43	79125	7.79502 ppb	#	93
50)	1-Bromo-2-chloroethane	6.75	63	86648	8.72647 ppb		100
51)	Cis-1,3-Dichloropropene	6.95	75	192389	10.47240 ppb		96
52)	Toluene	7.29	91	539480	10.97157 ppb		99
53)	Trans-1,3-Dichloropropene	7.56	75	155793	9.72801 ppb		99
54)	1,1,2-TCA	7.74	83	92056	9.88079 ppb		98
55)	2-Hexanone	8.04	43	22649	7.33719 ppb		92
58)	1,2-EDB	8.21	107	95070	9.95991 ppb		92
59)	Tetrachloroethene	7.86	166	116181	10.79687 ppb		99
60)	1-Chlorohexane	8.76	91	111473	9.21412 ppb		98
61)	1,1,1,2-Tetrachloroethane	8.83	131	122190	10.78145 ppb		98
62)	m&p-Xylene	8.99	106	425933	21.89614 ppb		97
63)	o-Xylene	9.38	106	210221	11.16885 ppb		98
64)	Styrene	9.40	104	228928	9.88709 ppb		98
66)	1,3-Dichloropropane	7.90	76	180609	9.92914 ppb		97
67)	Dibromochloromethane	8.12	129	112771	9.92525 ppb		97
68)	Chlorobenzene	8.73	112	348399	10.56676 ppb		97
69)	Ethylbenzene	8.87	91	564745	10.73574 ppb		99
70)	Bromoform	9.55	173	64439	9.61029 ppb		99
72)	Isopropylbenzene	9.76	105	494321	10.96947 ppb		98
73)	1,1,2,2-Tetrachloroethane	10.07	83	125345	9.41508 ppb		98
74)	1,2,3-Trichloropropane	10.09	110	22184	10.07748 ppb		98
75)	t-1,4-Dichloro-2-Butene	10.13	53	24870	8.27789 ppb		94
76)	Bromobenzene	10.02	156	139917	11.00474 ppb		99
77)	n-Propylbenzene	10.17	91	609477	11.15369 ppb		99
78)	4-Ethyltoluene	10.29	105	484056	10.73745 ppb		99
79)	2-Chlorotoluene	10.23	91	388624	11.05172 ppb		97
80)	1,3,5-Trimethylbenzene	10.36	105	440652	11.57694 ppb		98
81)	4-Chlorotoluene	10.34	91	445907	10.95560 ppb		99
82)	Tert-Butylbenzene	10.66	119	340786	10.99647 ppb		100
83)	1,2,4-Trimethylbenzene	10.72	105	448398	11.42106 ppb		99
84)	Sec-Butylbenzene	10.88	105	488742	10.56165 ppb		100
85)	p-Isopropyltoluene	11.04	119	415161	10.55453 ppb		99
86)	Benzyl Chloride	11.19	91	85915	7.50213 ppb		96
87)	1,3-DCB	10.96	146	266697	10.91923 ppb		100
88)	1,4-DCB	11.05	146	270816	10.62231 ppb		97
89)	n-Butylbenzene	11.44	91	351171	9.43036 ppb		98
90)	1,2-DCB	11.41	146	242328	10.41315 ppb		99
91)	Hexachloroethane	11.66	117	80074	10.22238 ppb		94
92)	1,2-Dibromo-3-chloropropan	12.18	157	18896	9.66636 ppb		91
93)	1,2,4-Trichlorobenzene	13.00	180	143925	9.31905 ppb		95
94)	Hexachlorobutadiene	13.19	225	59821	10.12632 ppb		93
95)	Naphthalene	13.22	128	168704	9.06929 ppb		100
96)	1,2,3-Trichlorobenzene	13.46	180	87944	9.87530 ppb		99

(#) = qualifier out of range (m) = manual integration

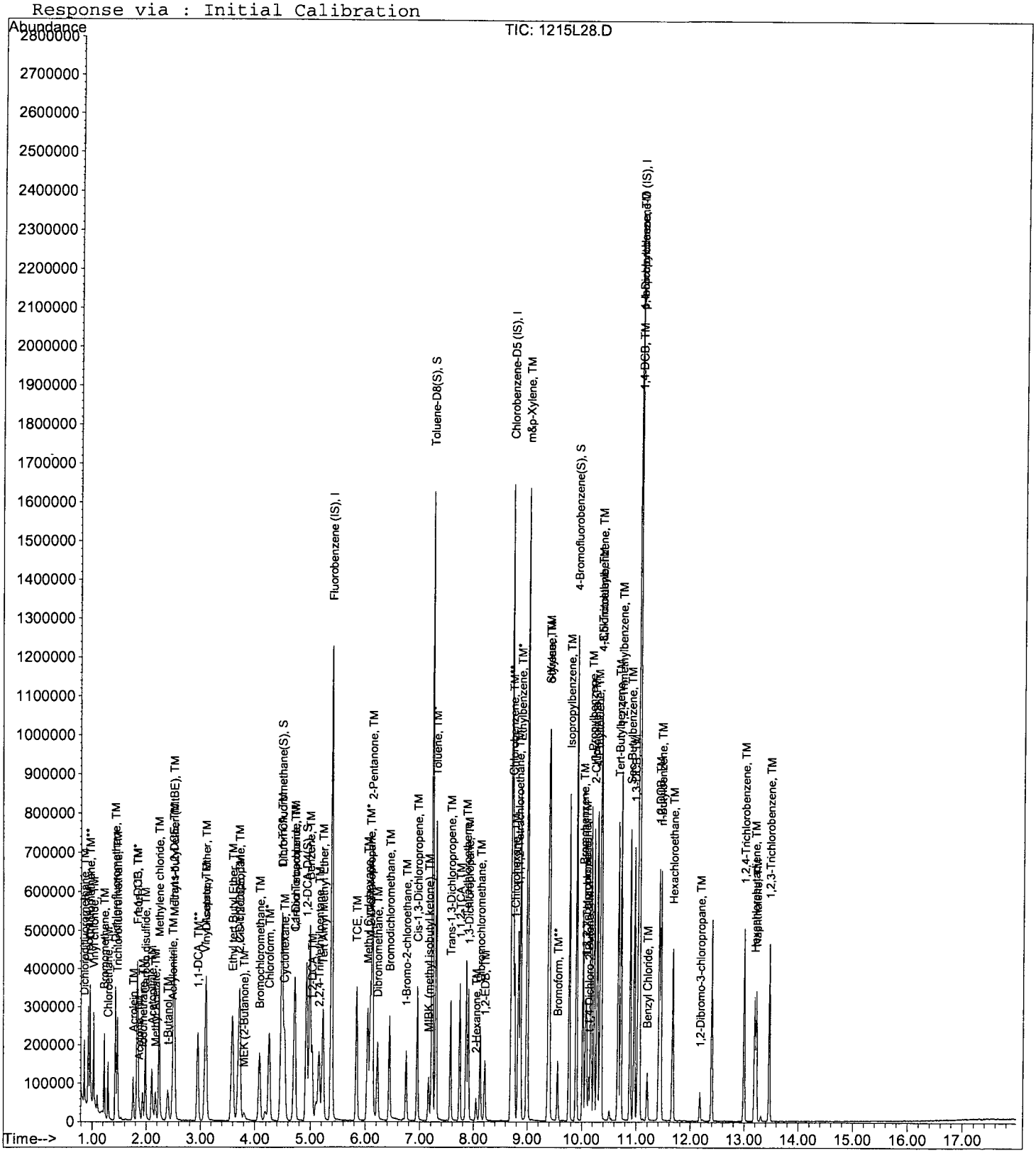
Quantitation Report

Data File : M:\LOKI\DATA\161210\1215L28.D
Acq On : 15 Dec 16 23:33
Sample : Ending CCV 8260 10ug/L 12/15/16
Misc : W IS&S 11/21/16, 11/14/16

Vial: 28
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 16 10:20 2016 Quant Results File: L826AW.RES

Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Dec 15 12:07:49 2016
Response via : Initial Calibration



EPA METHOD 8260B
Volatile Organic Compounds
Raw Data

APPL, INC.

Method Blank
EPA 8260B BTEX WATER

Blank Name/QCG: **161215W-47345 - 214690**
Batch ID: #86BTO-161215AL

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	12/15/16	12/15/16
BLANK	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	12/15/16	12/15/16
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	12/15/16	12/15/16
BLANK	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	12/15/16	12/15/16
BLANK	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	12/15/16	12/15/16
BLANK	SURROGATE: 1,2-DICHLOROET	99.2	81-118			%	12/15/16	12/15/16
BLANK	SURROGATE: 4-BROMOFLUOR	94.1	85-114			%	12/15/16	12/15/16
BLANK	SURROGATE: DIBROMOFLUOR	103	80-119			%	12/15/16	12/15/16
BLANK	SURROGATE: TOLUENE-D8 (S)	96.0	89-112			%	12/15/16	12/15/16

Quant Method: LALLW.M
Run #: 1215L09
Instrument: Loki
Sequence: 161210
Initials: SV

GC SC-Blank-REG MDLs-DOD
Printed: 12/28/16 5:01:42 PM

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1215L09.D Vial: 9
Acq On : 15 Dec 16 14:40 Operator: PM,DG,SV,CMM
Sample : 161214A BLK-1WL Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 16 10:23 2016 Quant Results File: L826AW.RES

Quant Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Dec 15 12:07:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	572416	25.00000 ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	546048	25.00000 ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	278720	25.00000 ppb	0.00
System Monitoring Compounds					
32) Dibromofluoromethane(S)	4.49	111	299484	25.73929 ppb	0.00
Spiked Amount 25.000			Recovery = 102.956%		
37) 1,2-DCA-D4(S)	4.93	65	329153	24.79588 ppb	0.00
Spiked Amount 25.000			Recovery = 99.184%		
57) Toluene-D8(S)	7.22	98	1027572	24.00797 ppb	0.00
Spiked Amount 25.000			Recovery = 96.032%		
65) 4-Bromofluorobenzene(S)	9.89	95	338791	23.52654 ppb	0.00
Spiked Amount 25.000			Recovery = 94.108%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

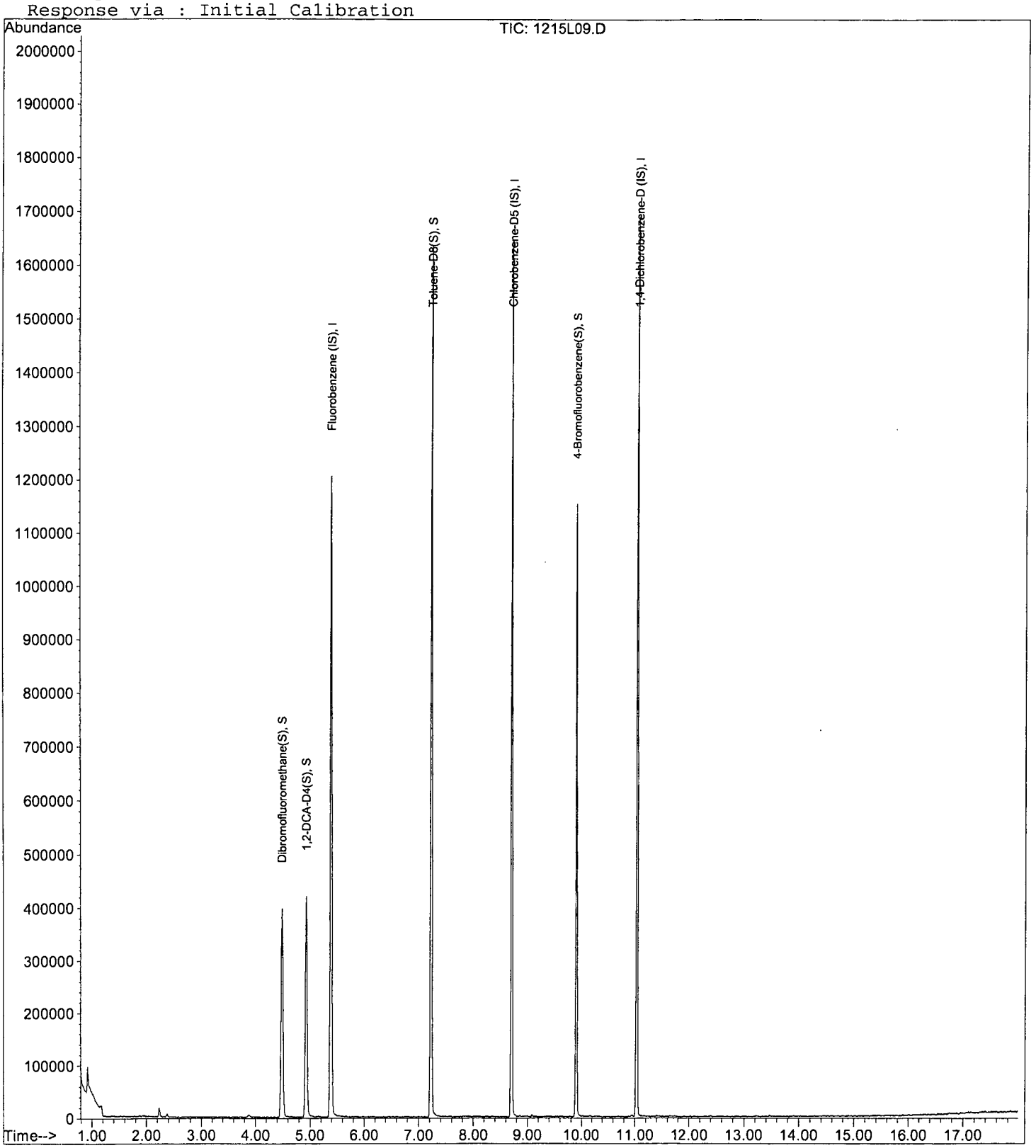
Quantitation Report

Data File : M:\LOKI\DATA\161210\1215L09.D
Acq On : 15 Dec 16 14:40
Sample : 161214A BLK-1WL
Misc : W IS&S 11/21/16, 11/14/16

Vial: 9
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 16 10:23 2016 Quant Results File: L826AW.RES

Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Dec 15 12:07:49 2016
Response via : Initial Calibration



Laboratory Control Spike Recovery

EPA 8260B BTEX WATER

APPL ID: **161215W-47345 LCS - 214690**
Batch ID: #86BTO-161215AL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1,2-DICHLOROETHANE	10.00	9.63	96.3	73-128
BENZENE	10.00	10.2	102	79-120
ETHYLBENZENE	10.00	10.7	107	79-121
TOLUENE	10.00	10.7	107	80-121
XYLENES (TOTAL)	30.0	33.0	110	79-121
SURROGATE: 1,2-DICHLOROETHANE-	25.0	24.3	97.2	81-118
SURROGATE: 4-BROMOFLUOROBENZ	25.0	27.0	108	85-114
SURROGATE: DIBROMOFLUOROMETH	25.0	25.1	100	80-119
SURROGATE: TOLUENE-D8 (S)	25.0	25.5	102	89-112

Comments: _____

Primary	SPK
Quant Method :	L826AW.M
Extraction Date :	12/15/16
Analysis Date :	12/15/16
Instrument :	Loki
Run :	1215L03
Initials :	SV

Printed: 12/28/16 5:34:54 PM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1215L03.D
Acq On : 15 Dec 16 11:51
Sample : 161215A CCV/LCS-1WL 10ug/L
Misc : W IS&S 11/21/16, 11/14/16

Vial: 3
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 16 10:19 2016 Quant Results File: L826AW.RES

Quant Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Dec 15 12:07:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	615616	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	550272	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	310592	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	314160	25.10589 ppb		0.00
Spiked Amount 25.000			Recovery = 100.424%			
37) 1,2-DCA-D4(S)	4.93	65	347042	24.30892 ppb		0.00
Spiked Amount 25.000			Recovery = 97.236%			
57) Toluene-D8(S)	7.22	98	1100930	25.52444 ppb		0.00
Spiked Amount 25.000			Recovery = 102.096%			
65) 4-Bromofluorobenzene(S)	9.89	95	391804	26.99905 ppb		0.00
Spiked Amount 25.000			Recovery = 107.996%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	96016	8.44977 ppb		99
3) Freon 114	0.93	85	76938	9.29293 ppb		92
4) Chloromethane	0.96	50	169670	7.76605 ppb		99
5) Vinyl chloride	1.02	62	133224	8.54478 ppb		100
6) Bromomethane	1.22	96	83720	8.05274 ppb		95
7) Chloroethane	1.29	64	78061	10.24719 ppb		96
8) Dichlorofluoromethane	1.42	67	240574	9.43044 ppb		100
9) Trichlorofluoromethane	1.46	101	152498	9.93869 ppb		98
10) Acrolein	1.76	56	59000	110.09923 ppb	#	99
11) Acetone	1.88	43	27700	7.98702 ppb		89
12) Freon-113	1.84	101	79853	9.14693 ppb		96
13) 1,1-DCE	1.83	96	73184	9.94697 ppb		94
14) t-Butanol	2.40	59	48296	118.05075 ppb		98
15) Acetonitrile	2.10	41	157472	101.55003 ppb		100
16) Methyl Acetate	2.17	43	89576	9.10883 ppb		97
17) Iodomethane	1.93	142	48160	11.53705 ppb		98
18) Acrylonitrile	2.48	52	28956	8.35300 ppb		94
19) Methylene chloride	2.23	84	149791	10.54961 ppb		98
20) Carbon disulfide	1.98	76	244371	8.06832 ppb		98
21) Methyl t-butyl ether (MtBE	2.52	73	319265	10.48844 ppb		96
22) Trans-1,2-DCE	2.50	96	124050	10.54218 ppb		99
23) Diisopropyl Ether	3.10	45	406354	9.62327 ppb		94
24) 1,1-DCA	2.95	63	238640	9.84711 ppb		99
25) Vinyl Acetate	3.09	43	90992	9.22616 ppb	#	84
26) Ethyl tert Butyl Ether	3.59	59	338086	10.61017 ppb		99
27) MEK (2-Butanone)	3.80	43	38255	8.34951 ppb		94
28) Cis-1,2-DCE	3.73	96	146177	10.92203 ppb		91
29) 2,2-Dichloropropane	3.70	77	58456	10.54826 ppb		98
30) Chloroform	4.25	83	236967	10.24763 ppb		100
31) Bromochloromethane	4.08	128	66629	10.25856 ppb		93
33) 1,1,1-TCA	4.47	97	176143	10.31634 ppb		98
34) Cyclohexane	4.53	41	74067	8.41412 ppb		93
35) 1,1-Dichloropropene	4.72	75	145844	10.08639 ppb		97
36) 2,2,4-Trimethylpentane	5.15	57	239165	8.65923 ppb		99
38) Carbon Tetrachloride	4.70	119	134371	10.23657 ppb		92
39) Tert Amyl Methyl Ether	5.23	73	288435	10.36585 ppb		95
40) 1,2-DCA	5.03	62	172241	9.63451 ppb		98
41) Benzene	4.99	78	511841	10.23066 ppb		100
42) TCE	5.84	95	65616	10.28772 ppb		95

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161210\1215L03.D
Acq On : 15 Dec 16 11:51
Sample : 161215A CCV/LCS-1WL 10ug/L
Misc : W IS&S 11/21/16, 11/14/16

Vial: 3
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 16 10:19 2016 Quant Results File: L826AW.RES

Quant Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Dec 15 12:07:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43)	2-Pentanone	6.12	43	898499	116.75561 ppb		97
44)	1,2-Dichloropropane	6.09	63	143956	9.68472 ppb	#	96
45)	Bromodichloromethane	6.44	83	170550	9.81125 ppb		95
46)	Methyl Cyclohexane	6.04	83	121847	8.83425 ppb		98
47)	Dibromomethane	6.22	93	75975	9.77667 ppb		94
49)	MIBK (methyl isobutyl ket	7.16	43	92659	8.76347 ppb	#	95
50)	1-Bromo-2-chloroethane	6.75	63	92816	8.93174 ppb		99
51)	Cis-1,3-Dichloropropene	6.95	75	202478	10.53117 ppb		97
52)	Toluene	7.29	91	552465	10.73572 ppb		96
53)	Trans-1,3-Dichloropropene	7.56	75	166401	9.92807 ppb		98
54)	1,1,2-TCA	7.74	83	92773	9.51467 ppb		98
55)	2-Hexanone	8.04	43	29569	9.15272 ppb		95
58)	1,2-EDB	8.21	107	100558	10.41478 ppb		92
59)	Tetrachloroethene	7.86	166	119594	10.98737 ppb		94
60)	1-Chlorohexane	8.76	91	120197	9.82199 ppb		98
61)	1,1,1,2-Tetrachloroethane	8.83	131	121540	10.60186 ppb		96
62)	m&p-Xylene	8.99	106	432430	21.97676 ppb		97
63)	o-Xylene	9.38	106	209969	11.02831 ppb		100
64)	Styrene	9.40	104	247552	10.51123 ppb		94
66)	1,3-Dichloropropane	7.90	76	186760	10.15027 ppb		99
67)	Dibromochloromethane	8.12	129	117291	10.20540 ppb		99
68)	Chlorobenzene	8.73	112	346560	10.39118 ppb		98
69)	Ethylbenzene	8.87	91	568743	10.68851 ppb		98
70)	Bromoform	9.55	173	67151	9.90060 ppb		94
72)	Isopropylbenzene	9.76	105	502710	10.58095 ppb		99
73)	1,1,2,2-Tetrachloroethane	10.07	83	133108	9.48313 ppb		99
74)	1,2,3-Trichloropropane	10.09	110	23816	10.26152 ppb		96
75)	t-1,4-Dichloro-2-Butene	10.13	53	28839	9.10448 ppb		92
76)	Bromobenzene	10.02	156	144859	10.80651 ppb		99
77)	n-Propylbenzene	10.17	91	611322	10.61114 ppb		99
78)	4-Ethyltoluene	10.29	105	516048	10.85741 ppb		100
79)	2-Chlorotoluene	10.23	91	394656	10.64510 ppb		98
80)	1,3,5-Trimethylbenzene	10.36	105	455047	11.33927 ppb		97
81)	4-Chlorotoluene	10.34	91	461678	10.75875 ppb		99
82)	Tert-Butylbenzene	10.67	119	345724	10.58112 ppb		99
83)	1,2,4-Trimethylbenzene	10.72	105	459265	11.09524 ppb		98
84)	Sec-Butylbenzene	10.88	105	498029	10.20792 ppb		99
85)	p-Isopropyltoluene	11.04	119	433477	10.45247 ppb		98
86)	Benzyl Chloride	11.19	91	131336	10.87752 ppb		97
87)	1,3-DCB	10.96	146	277348	10.77035 ppb		99
88)	1,4-DCB	11.05	146	282255	10.50067 ppb		99
89)	n-Butylbenzene	11.44	91	378173	9.63231 ppb		99
90)	1,2-DCB	11.41	146	251256	10.24060 ppb		99
91)	Hexachloroethane	11.66	117	85288	10.32712 ppb		94
92)	1,2-Dibromo-3-chloropropan	12.18	157	20208	9.80499 ppb		90
93)	1,2,4-Trichlorobenzene	13.00	180	155981	9.57939 ppb		96
94)	Hexachlorobutadiene	13.19	225	61174	9.82931 ppb		95
95)	Naphthalene	13.22	128	193216	9.85194 ppb		99
96)	1,2,3-Trichlorobenzene	13.46	180	100648	10.71659 ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

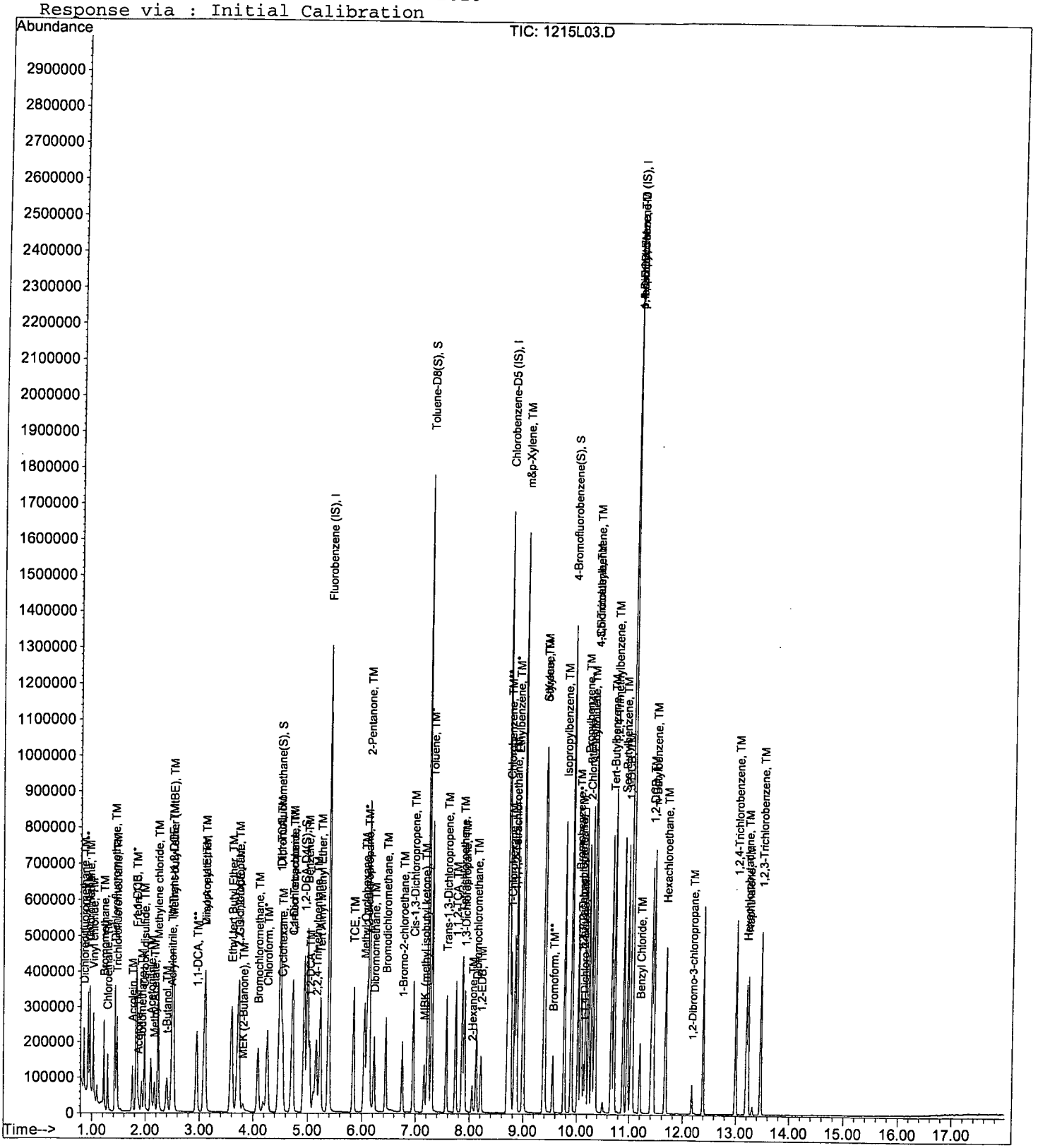
Data File : M:\LOKI\DATA\161210\1215L03.D
Acq On : 15 Dec 16 11:51
Sample : 161215A CCV/LCS-1WL 10ug/L
Misc : W IS&S 11/21/16, 11/14/16

Vial: 3
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 16 10:19 2016

Quant Results File: L826AW.RES

Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Dec 15 12:07:49 2016
Response via : Initial Calibration



Matrix Spike Recoveries
EPA 8260B BTEX WATER

APPL ID: **161215W-47345 MS - 214690**
Batch ID: #86BTO-161215AL
Sample ID: AZ47345
Client ID: ERH135

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
1,2-DICHLOROETHANE	10.00	ND	8.83	8.26	88.3	82.6	73-128	6.7	20
BENZENE	10.00	ND	9.33	8.70	93.3	87.0	79-120	7.0	20
ETHYLBENZENE	10.00	ND	9.84	9.15	98.4	91.5	79-121	7.3	20
TOLUENE	10.00	ND	9.53	9.15	95.3	91.5	80-121	4.1	20
XYLENES (TOTAL)	30.0	ND	29.6	27.4	98.7	91.3	79-121	7.7	20
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	NA	24.3	22.6	97.2	90.4	81-118		
SURROGATE: 4-BROMOFLUOROBENZE	25.0	NA	26.7	25.4	107	102	85-114		
SURROGATE: DIBROMOFLUOROMETH	25.0	NA	25.3	24.5	101	98.0	80-119		
SURROGATE: TOLUENE-D8 (S)	25.0	NA	25.8	24.5	103	98.0	89-112		

Comments: _____

Primary	SPK	DUP
Quant Method :	LALLW.M	LALLW.M
Extraction Date :	12/15/16	12/15/16
Analysis Date :	12/15/16	12/15/16
Instrument :	Loki	Loki
Run :	1215L24	1215L25
Initials :	SV	

Printed: 12/28/16 5:01:44 PM
APPL MSD SCII

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1215L24.D Vial: 24
Acq On : 15 Dec 16 21:41 Operator: PM,DG,SV,CMM
Sample : AZ47345W234 MS-1WL 10ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 16 9:46 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161210\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	587328	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	520000	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	306368	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.49	111	301508	25.26	ppb		0.00
Spiked Amount 25.000			Recovery = 101.020%				
37) 1,2-DCA-D4(S)	4.93	65	331295	24.32	ppb		0.00
Spiked Amount 25.000			Recovery = 97.296%				
57) Toluene-D8(S)	7.22	98	1051305	25.79	ppb		0.00
Spiked Amount 25.000			Recovery = 103.172%				
65) 4-Bromofluorobenzene(S)	9.89	95	366165	26.70	ppb		0.00
Spiked Amount 25.000			Recovery = 106.804%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.85	85	86688	8.00	ppb		93
3) Freon 114	0.93	85	76427	9.68	ppb		92
4) Chloromethane	0.96	50	144174	6.92	ppb		99
5) Vinyl chloride	1.03	62	110932	7.46	ppb		100
6) Bromomethane	1.22	96	67360	6.79	ppb		98
7) Chloroethane	1.29	64	62548	8.61	ppb		94
8) Dichlorofluoromethane	1.43	67	214745	8.82	ppb		98
9) Trichlorofluoromethane	1.46	101	136841	9.35	ppb		96
10) Acrolein	1.75	56	49976	97.75	ppb		98
11) Acetone	1.88	43	23522	6.90	ppb		95
12) Freon-113	1.84	101	78516	9.43	ppb		95
13) 1,1-DCE	1.83	96	64272	9.16	ppb		96
14) t-Butanol	2.40	59	40840	104.63	ppb		97
15) Acetonitrile	2.10	41	130534	88.23	ppb		97
16) Methyl Acetate	2.17	43	73619	7.85	ppb		98
17) Iodomethane	1.93	142	37000	9.29	ppb		95
18) Acrylonitrile	2.47	52	24310	7.35	ppb		98
19) Methylene chloride	2.24	84	123896	9.09	ppb		100
20) Carbon disulfide	1.98	76	225137	7.79	ppb		100
21) Methyl t-butyl ether (MtBE	2.52	73	272026	9.37	ppb		98
22) Trans-1,2-DCE	2.50	96	108514	9.67	ppb		94
23) Diisopropyl Ether	3.10	45	352058	8.74	ppb		97
24) 1,1-DCA	2.95	63	203598	8.81	ppb		98
25) Vinyl Acetate	3.10	43	76895	8.17	ppb	#	82
26) Ethyl tert Butyl Ether	3.59	59	293125	9.64	ppb		99
27) MEK (2-Butanone)	3.81	43	31512	7.21	ppb	#	80
28) Cis-1,2-DCE	3.73	96	125537	9.83	ppb		90
29) 2,2-Dichloropropane	3.70	77	47552	8.99	ppb		98
30) Chloroform	4.26	83	202563	9.18	ppb		97
31) Bromochloromethane	4.08	128	57564	9.29	ppb		100
33) 1,1,1-TCA	4.47	97	153494	9.42	ppb		99
34) Cyclohexane	4.53	41	70775	8.43	ppb		95
35) 1,1-Dichloropropene	4.72	75	131305	9.52	ppb		98
36) 2,2,4-Trimethylpentane	5.15	57	229696	8.72	ppb		95
38) Carbon Tetrachloride	4.70	119	122627	9.79	ppb		94
39) Tert Amyl Methyl Ether	5.23	73	242524	9.14	ppb		97
40) 1,2-DCA	5.03	62	150646	8.83	ppb		97
41) Benzene	4.99	78	445403	9.33	ppb		99
42) TCE	5.84	95	59824	9.83	ppb		99

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161210\1215L24.D Vial: 24
Acq On : 15 Dec 16 21:41 Operator: PM,DG,SV,CMM
Sample : AZ47345W234 MS-1WL 10ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 16 9:46 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161210\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

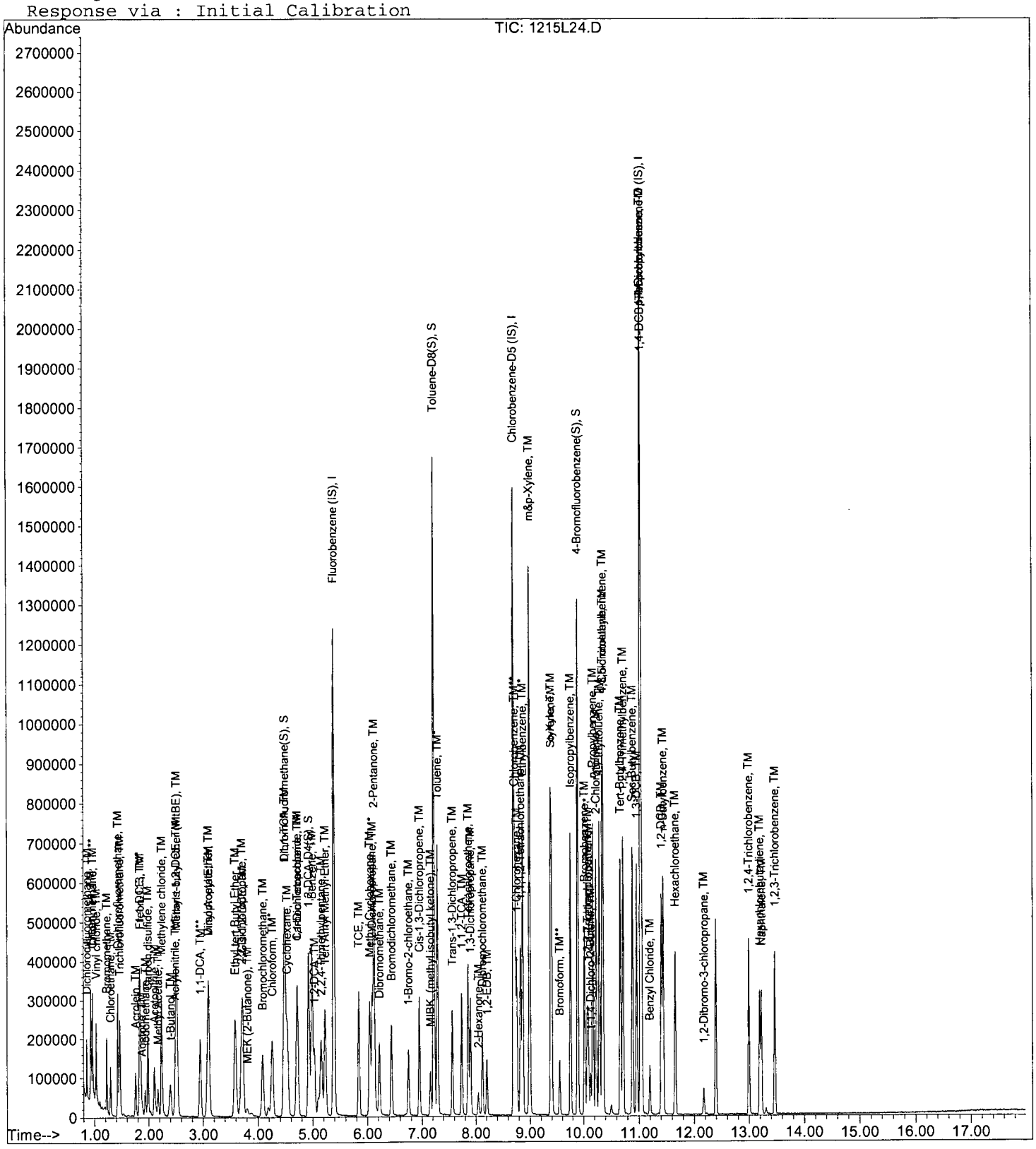
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	2-Pentanone	6.12	43	699653	95.30	ppb		96
44)	1,2-Dichloropropane	6.09	63	121968	8.60	ppb		99
45)	Bromodichloromethane	6.44	83	146961	8.86	ppb		94
46)	Methyl Cyclohexane	6.04	83	118469	9.00	ppb		95
47)	Dibromomethane	6.22	93	67663	9.13	ppb		93
49)	MIBK (methyl isobutyl ket	7.16	43	80340	7.93	ppb	#	96
50)	1-Bromo-2-chloroethane	6.75	63	78816	7.95	ppb		99
51)	Cis-1,3-Dichloropropene	6.95	75	168539	9.19	ppb		96
52)	Toluene	7.29	91	467964	9.53	ppb		96
53)	Trans-1,3-Dichloropropene	7.56	75	139254	8.71	ppb		97
54)	1,1,2-TCA	7.74	83	76243	8.20	ppb		92
55)	2-Hexanone	8.04	43	21754	7.06	ppb		98
58)	1,2-EDB	8.21	107	85944	9.42	ppb		95
59)	Tetrachloroethene	7.86	166	104687	10.18	ppb		97
60)	1-Chlorohexane	8.76	91	113012	9.77	ppb		96
61)	1,1,1,2-Tetrachloroethane	8.83	131	107381	9.91	ppb		99
62)	m&p-Xylene	8.99	106	366934	19.73	ppb		97
63)	o-Xylene	9.38	106	176921	9.83	ppb		99
64)	Styrene	9.40	104	179840	8.28	ppb		96
66)	1,3-Dichloropropane	7.90	76	159891	9.20	ppb		99
67)	Dibromochloromethane	8.12	129	103200	9.50	ppb		96
68)	Chlorobenzene	8.73	112	301019	9.55	ppb		99
69)	Ethylbenzene	8.87	91	494838	9.84	ppb		98
70)	Bromoform	9.55	173	56312	8.79	ppb		99
72)	Isopropylbenzene	9.76	105	432134	9.22	ppb		98
73)	1,1,2,2-Tetrachloroethane	10.07	83	113997	8.23	ppb		97
74)	1,2,3-Trichloropropane	10.09	110	20368	8.90	ppb		96
75)	t-1,4-Dichloro-2-Butene	10.13	53	22601	7.23	ppb		99
76)	Bromobenzene	10.02	156	125475	9.49	ppb		100
77)	n-Propylbenzene	10.17	91	540118	9.50	ppb		100
78)	4-Ethyltoluene	10.29	105	440641	9.40	ppb		99
79)	2-Chlorotoluene	10.23	91	341141	9.33	ppb		97
80)	1,3,5-Trimethylbenzene	10.36	105	379308	9.58	ppb		95
81)	4-Chlorotoluene	10.34	91	397779	9.40	ppb		99
82)	Tert-Butylbenzene	10.66	119	300555	9.33	ppb		99
83)	1,2,4-Trimethylbenzene	10.72	105	371817	9.11	ppb		99
84)	Sec-Butylbenzene	10.88	105	440427	9.15	ppb		99
85)	p-Isopropyltoluene	11.04	119	363630	8.89	ppb		98
86)	Benzyl Chloride	11.19	91	89442	7.51	ppb		98
87)	1,3-DCB	10.96	146	242318	9.54	ppb		98
88)	1,4-DCB	11.05	146	237396	8.95	ppb		96
89)	n-Butylbenzene	11.44	91	316440	8.17	ppb		98
90)	1,2-DCB	11.41	146	215514	8.90	ppb		98
91)	Hexachloroethane	11.66	117	75505	9.27	ppb		96
92)	1,2-Dibromo-3-chloropropan	12.18	157	17069	8.40	ppb		90
93)	1,2,4-Trichlorobenzene	13.00	180	128101	7.98	ppb		97
94)	Hexachlorobutadiene	13.19	225	54199	8.85	ppb		95
95)	Naphthalene	13.22	128	159360	8.24	ppb		98
96)	1,2,3-Trichlorobenzene	13.46	180	78880	8.37	ppb		98

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161210\1215L24.D Vial: 24
Acq On : 15 Dec 16 21:41 Operator: PM,DG,SV,CMM
Sample : AZ47345W234 MS-1WL 10ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 16 9:46 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Dec 15 12:07:49 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1215L25.D Vial: 25
Acq On : 15 Dec 16 22:09 Operator: PM,DG,SV,CMM
Sample : AZ47345W234 MSD-1WL 10ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 16 9:46 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161210\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	619072	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	561664	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	309184	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.49	111	308078	24.48	ppb		0.00
Spiked Amount 25.000			Recovery = 97.928%				
37) 1,2-DCA-D4(S)	4.93	65	324015	22.57	ppb		0.00
Spiked Amount 25.000			Recovery = 90.276%				
57) Toluene-D8(S)	7.22	98	1079121	24.51	ppb		0.00
Spiked Amount 25.000			Recovery = 98.044%				
65) 4-Bromofluorobenzene(S)	9.89	95	375549	25.35	ppb		0.00
Spiked Amount 25.000			Recovery = 101.416%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.85	85	85672	7.50	ppb		96
3) Freon 114	0.93	85	71052	8.53	ppb		86
4) Chloromethane	0.96	50	140258	6.38	ppb		96
5) Vinyl chloride	1.03	62	109514	6.98	ppb		100
6) Bromomethane	1.22	96	67744	6.48	ppb		98
7) Chloroethane	1.29	64	60825	7.94	ppb		95
8) Dichlorofluoromethane	1.43	67	219381	8.55	ppb		97
9) Trichlorofluoromethane	1.46	101	135635	8.79	ppb		99
10) Acrolein	1.76	56	50256	93.26	ppb		99
11) Acetone	1.88	43	24247	6.70	ppb		90
12) Freon-113	1.84	101	78639	8.96	ppb		98
13) 1,1-DCE	1.83	96	61072	8.25	ppb		97
14) t-Butanol	2.40	59	43952	106.83	ppb		97
15) Acetonitrile	2.10	41	124632	79.92	ppb		99
16) Methyl Acetate	2.17	43	70311	7.11	ppb		94
17) Iodomethane	1.93	142	42248	10.06	ppb		98
18) Acrylonitrile	2.47	52	26880	7.71	ppb		92
19) Methylene chloride	2.24	84	123653	8.58	ppb		99
20) Carbon disulfide	1.98	76	221790	7.28	ppb		100
21) Methyl t-butyl ether (MtBE	2.52	73	275653	9.01	ppb		95
22) Trans-1,2-DCE	2.50	96	108291	9.15	ppb		94
23) Diisopropyl Ether	3.10	45	354711	8.35	ppb		93
24) 1,1-DCA	2.95	63	202490	8.31	ppb		98
25) Vinyl Acetate	3.10	43	78504	7.92	ppb	#	82
26) Ethyl tert Butyl Ether	3.59	59	293315	9.15	ppb		95
27) MEK (2-Butanone)	3.80	43	34544	7.50	ppb		95
28) Cis-1,2-DCE	3.73	96	127665	9.49	ppb		95
29) 2,2-Dichloropropane	3.70	77	43968	7.89	ppb		98
30) Chloroform	4.26	83	202690	8.72	ppb		98
31) Bromochloromethane	4.09	128	57206	8.76	ppb		95
33) 1,1,1-TCA	4.47	97	154098	8.97	ppb		98
34) Cyclohexane	4.53	41	67205	7.59	ppb		95
35) 1,1-Dichloropropene	4.72	75	128413	8.83	ppb		97
36) 2,2,4-Trimethylpentane	5.16	57	218525	7.87	ppb		97
38) Carbon Tetrachloride	4.71	119	119437	9.05	ppb		97
39) Tert Amyl Methyl Ether	5.22	73	250993	8.97	ppb		98
40) 1,2-DCA	5.03	62	148532	8.26	ppb		99
41) Benzene	4.99	78	437615	8.70	ppb		99
42) TCE	5.84	95	57008	8.89	ppb		94

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161210\1215L25.D Vial: 25
Acq On : 15 Dec 16 22:09 Operator: PM,DG,SV,CMM
Sample : AZ47345W234 MSD-1WL 10ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 16 9:46 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161210\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
43)	2-Pentanone	6.12	43	722824	93.40	ppb	98
44)	1,2-Dichloropropane	6.09	63	123226	8.24	ppb	99
45)	Bromodichloromethane	6.44	83	148783	8.51	ppb	95
46)	Methyl Cyclohexane	6.04	83	115149	8.30	ppb	96
47)	Dibromomethane	6.22	93	66770	8.54	ppb	98
49)	MIBK (methyl isobutyl ket	7.16	43	80606	7.53	ppb	94
50)	1-Bromo-2-chloroethane	6.75	63	81856	7.83	ppb	97
51)	Cis-1,3-Dichloropropene	6.95	75	165108	8.54	ppb	98
52)	Toluene	7.29	91	473261	9.15	ppb	98
53)	Trans-1,3-Dichloropropene	7.56	75	139785	8.29	ppb	98
54)	1,1,2-TCA	7.74	83	80270	8.19	ppb	98
55)	2-Hexanone	8.04	43	23310	7.18	ppb	93
58)	1,2-EDB	8.20	107	86135	8.74	ppb	97
59)	Tetrachloroethene	7.86	166	105184	9.47	ppb	96
60)	1-Chlorohexane	8.76	91	110616	8.86	ppb	96
61)	1,1,1,2-Tetrachloroethane	8.83	131	104976	8.97	ppb	92
62)	m&p-Xylene	8.99	106	368242	18.34	ppb	99
63)	o-Xylene	9.38	106	175786	9.05	ppb	99
64)	Styrene	9.40	104	179648	7.72	ppb	98
66)	1,3-Dichloropropane	7.90	76	162006	8.63	ppb	96
67)	Dibromochloromethane	8.12	129	101229	8.63	ppb	96
68)	Chlorobenzene	8.73	112	294447	8.65	ppb	98
69)	Ethylbenzene	8.87	91	497133	9.15	ppb	99
70)	Bromoform	9.55	173	56948	8.23	ppb	98
72)	Isopropylbenzene	9.76	105	431336	9.12	ppb	98
73)	1,1,2,2-Tetrachloroethane	10.07	83	114736	8.21	ppb	100
74)	1,2,3-Trichloropropane	10.09	110	21456	9.29	ppb	100
75)	t-1,4-Dichloro-2-Butene	10.13	53	24125	7.65	ppb	91
76)	Bromobenzene	10.01	156	126101	9.45	ppb	97
77)	n-Propylbenzene	10.17	91	514471	8.97	ppb	99
78)	4-Ethyltoluene	10.29	105	450340	9.52	ppb	99
79)	2-Chlorotoluene	10.23	91	340338	9.22	ppb	98
80)	1,3,5-Trimethylbenzene	10.36	105	383292	9.59	ppb	97
81)	4-Chlorotoluene	10.34	91	397333	9.30	ppb	97
82)	Tert-Butylbenzene	10.66	119	299332	9.20	ppb	99
83)	1,2,4-Trimethylbenzene	10.72	105	379437	9.21	ppb	99
84)	Sec-Butylbenzene	10.88	105	440201	9.06	ppb	98
85)	p-Isopropyltoluene	11.04	119	368786	8.93	ppb	99
86)	Benzyl Chloride	11.19	91	95496	7.95	ppb	97
87)	1,3-DCB	10.96	146	234206	9.14	ppb	98
88)	1,4-DCB	11.05	146	243440	9.10	ppb	99
89)	n-Butylbenzene	11.44	91	323447	8.28	ppb	99
90)	1,2-DCB	11.41	146	219794	9.00	ppb	98
91)	Hexachloroethane	11.66	117	74477	9.06	ppb	93
92)	1,2-Dibromo-3-chloropropan	12.18	157	17053	8.31	ppb	90
93)	1,2,4-Trichlorobenzene	13.00	180	136022	8.39	ppb	94
94)	Hexachlorobutadiene	13.19	225	54098	8.76	ppb	96
95)	Naphthalene	13.22	128	163968	8.40	ppb	97
96)	1,2,3-Trichlorobenzene	13.46	180	87296	9.18	ppb	97

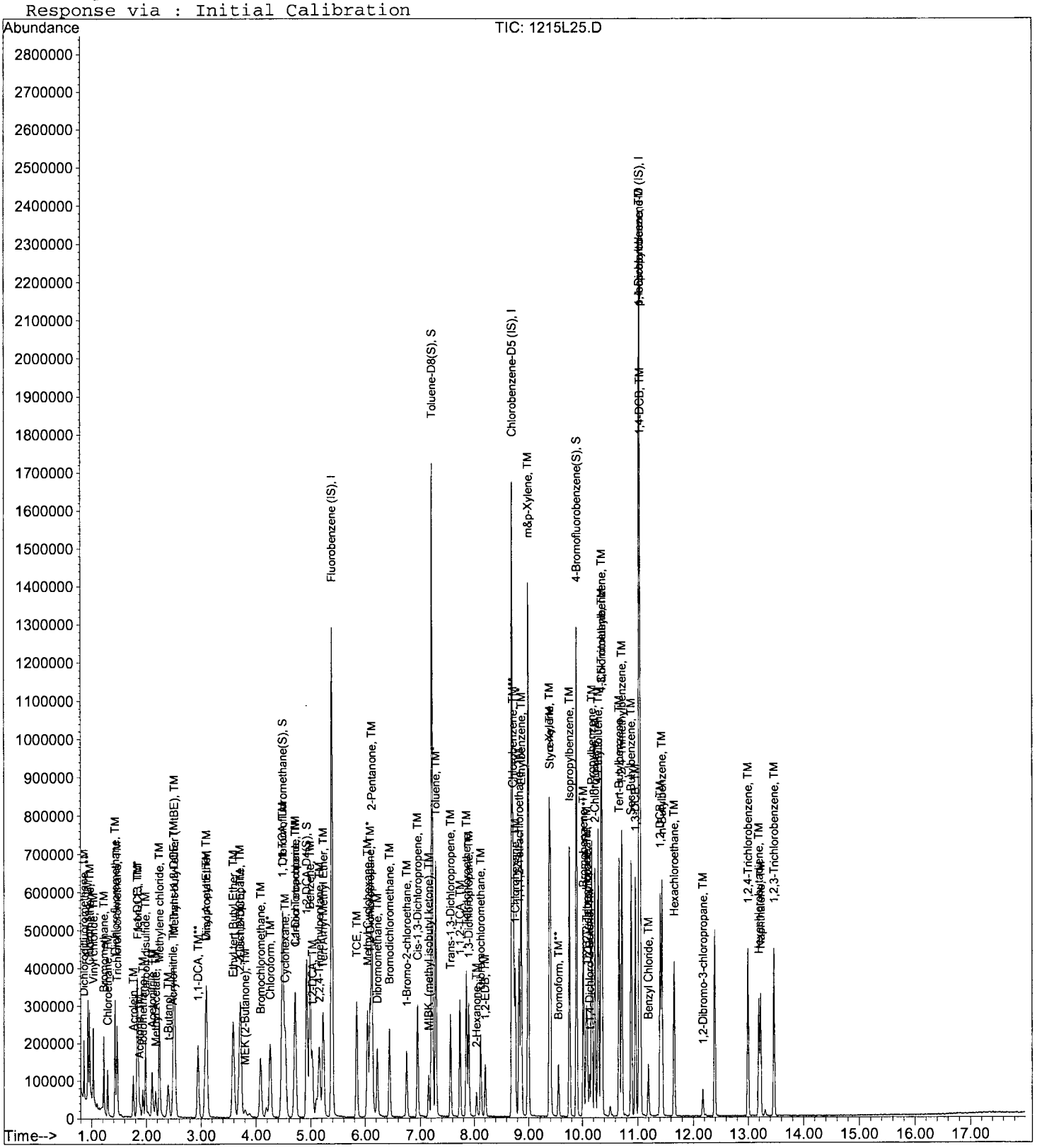
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161210\1215L25.D Vial: 25
Acq On : 15 Dec 16 22:09 Operator: PM,DG,SV,CMM
Sample : AZ47345W234 MSD-1WL 10ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 16 9:46 2016 Quant Results File: LALLW.RES

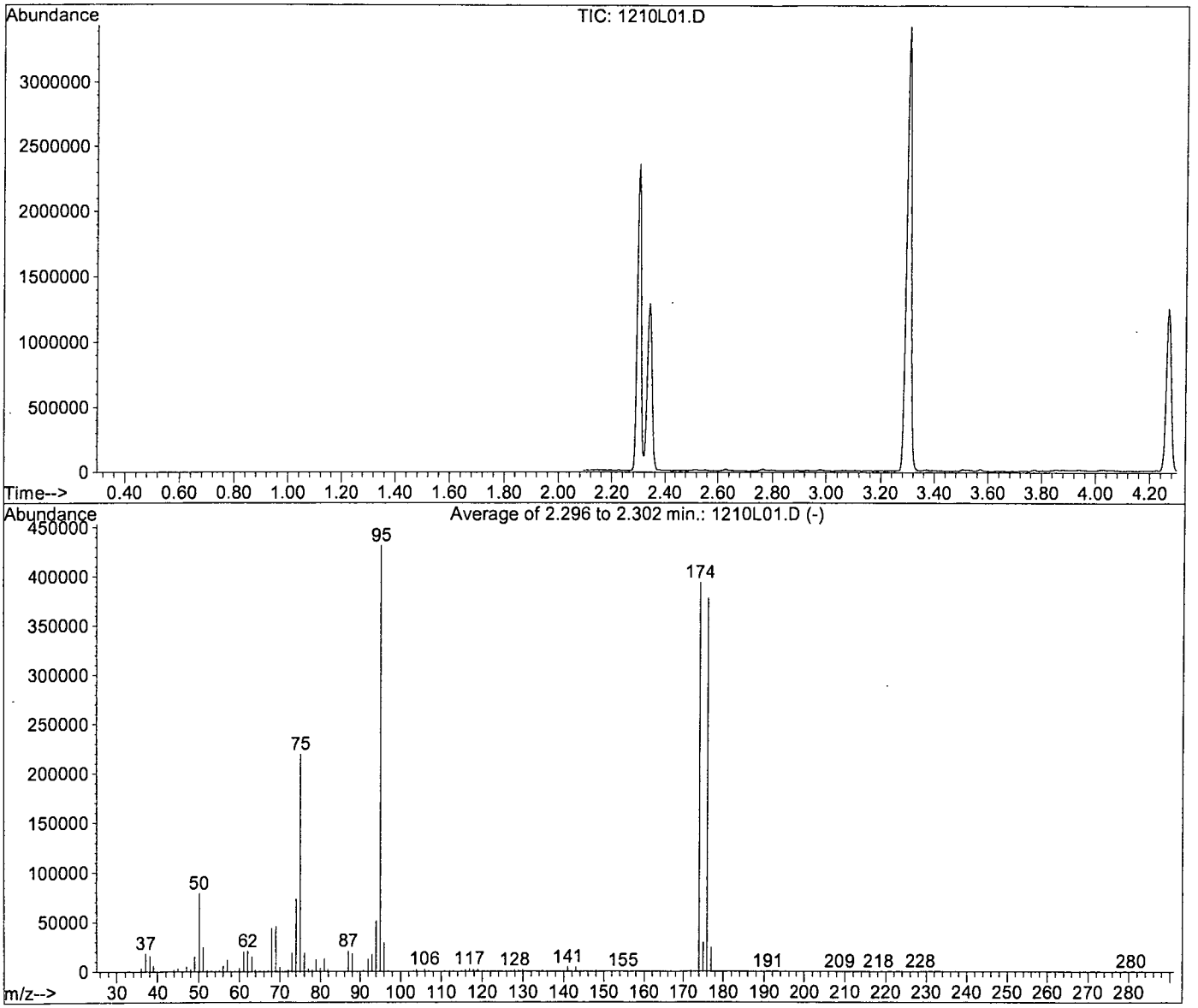
Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Dec 15 12:07:49 2016
Response via : Initial Calibration



Data File : M:\LOKI\DATA\161210\1210L01.D
Acq On : 10 Dec 16 11:05
Sample : 5ng- BFB STD 11-06-16
Misc : 2ul

Vial: 1
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B



AutoFind: Scans 64, 65, 66; Background Corrected with Scan 53

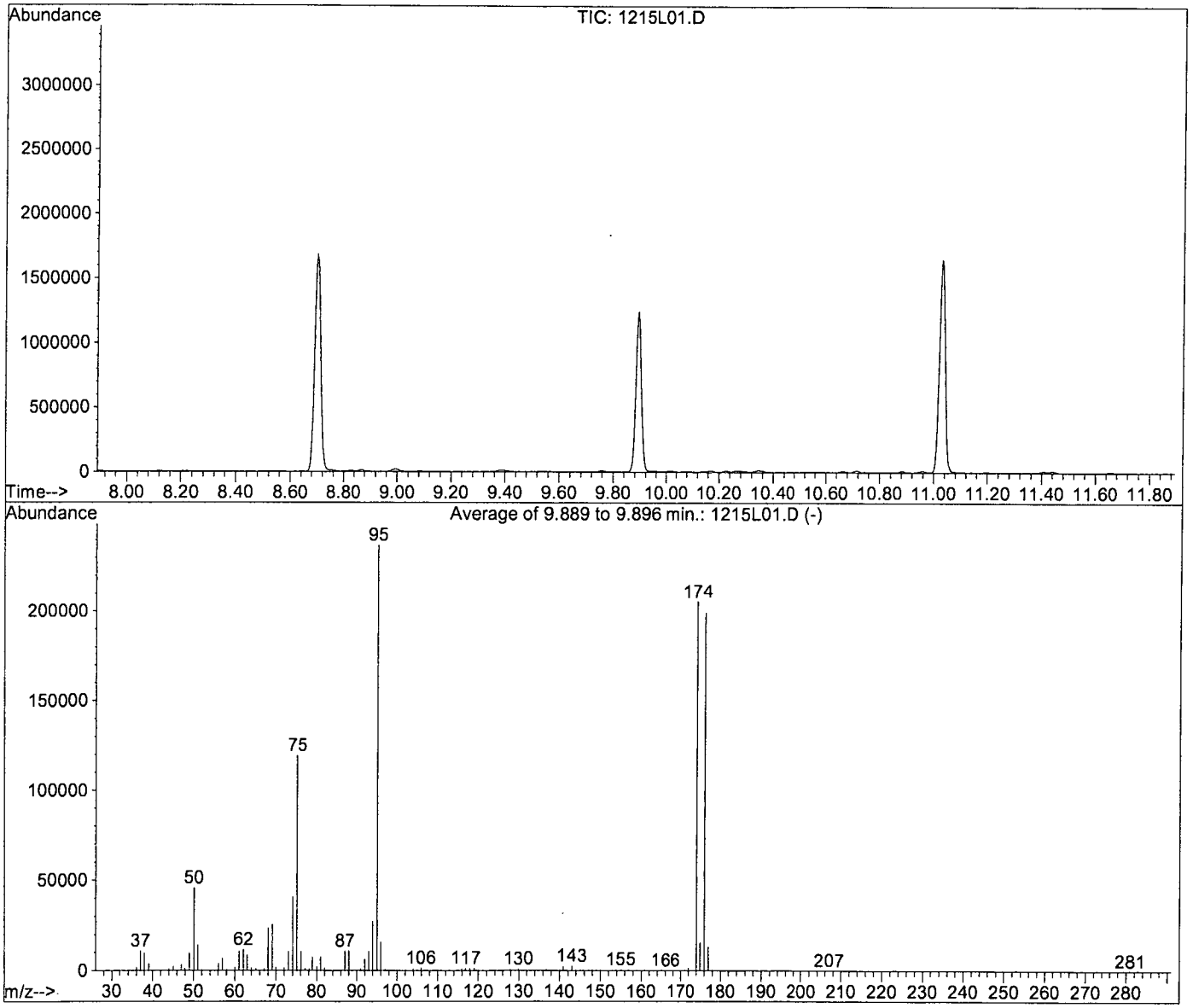
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.3	79059	PASS
75	95	30	60	50.9	219467	PASS
95	95	100	100	100.0	431552	PASS
96	95	5	9	6.8	29148	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	91.4	394389	PASS
175	174	5	9	7.5	29424	PASS
176	174	95	101	95.9	378197	PASS
177	176	5	9	6.4	24285	PASS

1210L01.D L826AW.M Thu Dec 15 12:14:31 2016

Data File : M:\LOKI\DATA\161210\1215L01.D
Acq On : 15 Dec 16 10:55
Sample : 5ng- BFB STD 11-06-16
Misc : W IS&S 11/21/16, 11/14/16

Vial: 1
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Method : M:\LOKI\DATA\161210\L826AW.M (RTE Integrator)
Title : METHOD 8260B



Spectrum Information: Average of 9.889 to 9.896 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.4	45909	PASS
75	95	30	60	50.4	119408	PASS
95	95	100	100	100.0	237056	PASS
96	95	5	9	6.7	15837	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	86.7	205632	PASS
175	174	5	9	7.7	15819	PASS
176	174	95	101	96.9	199339	PASS
177	176	5	9	6.7	13438	PASS

1215L01.D L826AW.M Fri Dec 16 10:21:02 2016

Volatile Standard Curve Preparation for 10mL Purge (8260 water)-LOKI										
Exp Date:	11/24/16	5µg/mL	5µg/mL	5µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	250µg/mL	
		Vol Std #9	Vol Std #10	Vol Std #12	Vol Std #7	Vol Std #8	Vol Std #1	Vol Std #2	TBA	
		11/22/16N	11/22/16O	11/22/16P	11/22/16J	11/22/16L	11/22/16K	11/22/16M	11/22/16Q	Final Vol
	Conc.	12/22/16	12/22/16	12/22/16	12/22/16	12/22/16	12/22/16	12/22/16	12/22/16	w/P&T H2O
Date/code	µg/L	ul	ul	ul	ul	ul	ul	ul	ul	mL
11/23/16A-CMM	0.3	3	3	3	n/a	n/a	n/a	n/a	2	50
11/23/16B-CMM	0.5	5	5	5	n/a	n/a	n/a	n/a	5	50
11/23/16C-CMM	1	10	10	10	n/a	n/a	n/a	n/a	10	50
11/23/16D-CMM	2	20	20	20	n/a	n/a	n/a	n/a	15	50
11/23/16E-CMM	5	n/a	n/a	n/a	5	5	5	5	20	50
11/23/16F-CMM	10	n/a	n/a	n/a	10	10	10	10	25	50
11/23/16G-CMM	20	n/a	n/a	n/a	20	20	20	20	30	50
11/23/16H-CMM	40	n/a	n/a	n/a	40	40	40	40	35	50
11/23/16I-CMM	100	n/a	n/a	n/a	100	100	100	100	40	50

PRIMARY STANDARD

12/06/16H							
50ug/ml Vol Work Std #7							
Exp:01/06/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120016-03	Gas Mix	2000	279822-36645	12/06/16A-CMM	02/19/19	100
02SI	020049-02	HEXACHLOROETHANE	1000	254167-36562	12/06/16B-CMM	12/28/17	200
02SI	020228-02	Benzyl Chloride	1000	279824-36573	12/06/16C-CMM	05/24/18	200
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	3500
12/06/16I							
50ug/ml Vol Work Std #1							
Exp:01/06/17					Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	020145-02-02	2-CEVE	2000	288264-37217	11/22/16C-CMM	09/19/19	50
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	1950
12/06/16J							
50ug/ml Vol Work Std #8							
Exp:01/06/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	122039-02	Volatile Mix, 20-29	2000	258033-37168	11/12/16B-CMM	08/17/17	100
02SI	120023-03	VOC'S-54 COMP	2000	271929-36580	11/12/16C-CMM	02/15/18	100
02SI	020232-02	Vinyl Acetate	2000	292241-37193	11/22/16D-CMM	08/01/17	100
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	3700
12/06/16K							
50ug/ml Vol Work Std #2							
Exp:01/06/17							
Supplier	ID #	ID	ug/ml				
02SI	121020-05	HSL'S-Ketone Solution	2000	292248-37204	11/22/16B-CMM	11/08/18	100
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	3900
		12/06/16L					
		5ug/ml Vol Work Std #9					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #7		**12/06/16H**	Exp:01/06/17	200	
		50ug/ml Vol Work Std #8		**12/06/16J**	Exp:01/06/17	200	
		J&T Brand		11/15/16	11/15/17	1600	
		12/06/16M					
		5ug/ml Vol Work Std #10					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #1		**12/06/16I**	Exp:01/06/17	200	
		J&T Brand		11/15/16	11/15/17	1800	
		12/06/16N					
		5ug/ml Vol Work Std #12					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #2		**12/06/16K**	Exp:01/06/17	200	
		J&T Brand		11/15/16	11/15/17	1800	
12/06/16O							
250ug/ml TBA/IBA/Acetonitrile/Cyclohexanone/Acrolein/2-P							
Exp:01/06/17			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
02SI	120166-01	Volatile Mix 4-3	2000	275544-36407	12/06/16D-CMM	03/28/18	500
02SI	020229-09-02	Acrolein	10000	291928-37174	11/22/16E-CMM	12/12/16	100
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	3400

SECONDARY SOURCE

12/06/16P							
50ug/ml VOC Std#4							
Exp:01/06/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120296-01-SS	Custom 8260 Solution	2000	258037-36087	11/03/16D-CMM	08/18/17	50
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	1950
12/06/16Q							
50ug/ml VOC Std#5							
Exp:01/06/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120016-03-SS	8260 Gases(SS)	2000	279826-36674	12/06/16E-CMM	06/01/19	50
02SI	020145-02-02-SS	2-CEVE (SS)	2000	254171-35384	11/22/16G-CMM	06/21/17	50
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	1900
12/06/16R							

50ug/ml VOC Std#6							
Exp:01/06/17							
	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120023-03-SS	VOC'S 54 COMP.	2000	265897-35926	11/12/16H-CMM	11/29/17	50
02SI	020232-02-SS	Vinyl Acetate(SS)	2000	287420-37046	11/22/16H-CMM	11/27/16	50
02SI	020049-02-SS	HEXACHLOROETHANE (SS)	1000	265899-35938	12/06/16F-CMM	11/30/17	100
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	1800
12/06/16S							
250ug/ml TBA/IBA/Acetonitrile/Acrolein/2-P							
Exp:01/06/17			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
02SI	120166-01-SS	VOC Mix 4-3 (SS)	2000	258040-37229	12/06/16G-CMM	08/22/18	250
02SI	020229-09-SS	Acrolein SOLUTION (SS)	10000	291929-37176	11/22/16I-CMM	12/12/16	50
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	1700
8260 water		spiked with		Total Vol			
CCV/LCS	10ug/L Vol Std	10uL of 50ug/ml Std #7		50mL P&T H2O			
Ending CCV		10uL of 50ug/ml Std #8					
		10uL of 50ug/ml Std #1					
		10uL of 50ug/ml Std #2					
		25uL of 250ug/ml Std TBA					
X4 ketones							
LCS	10ug/L Vol Std	10uL of 50ug/ml Std #7		50mL P&T H2O			
		10uL of 50ug/ml Std #8					
		10uL of 50ug/ml Std #1					
		40uL of 50ug/ml Std #2					
		25uL of 250ug/ml Std TBA					
8260 soil		spiked with		Total Vol			
CCV/LCS	50ug/Kg Vol Std	5uL of 50ug/ml Std #7		5mL P&T H2O			
Ending CCV		5uL of 50ug/ml Std #8					
		5uL of 50ug/ml Std #1					
		5uL of 50ug/ml Std #2					
		5uL of 250ug/ml Std TBA					
Matrix spikes are prepared with same standards as ccv (see above) into the sample.							
8260water		spiked with		Total Vol			
SS	10ug/L STD	10uL of 50ug/ml Std #4		50mL P&T H2O			
		10uL of 50ug/ml Std #5					
		10uL of 50ug/ml Std #6					
		25uL of 250ug/ml Std TBA					
8260 SOIL	50ug/Kg STD	5uL of 50ug/ml Std #4		Total Vol			
SS		5uL of 50ug/ml Std #5		5mL P&T H2O			
		5uL of 50ug/ml Std #6					
		5uL of 250ug/ml Std TBA					

Injection Log

Directory: M:\LOKI\DATA\161210\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1210L01.D	1	5ng- BFB STD 11-06-16	2ul	10 Dec 16 11:05
2	4	1210L05.D	1	0.3ug/L VOC STD12/10/16J	W IS-tcpd5-12/6/16,	10 Dec 16 12:57
3	5	1210L06.D	1	0.5ug/L VOC STD12/10/16K	W IS-tcpd5-12/6/16,	10 Dec 16 13:26
4	6	1210L07.D	1	1.0ug/L VOC STD12/10/16L	W IS-tcpd5-12/6/16,	10 Dec 16 13:54
5	7	1210L08.D	1	2.0ug/L VOC STD12/10/16M	W IS-tcpd5-12/6/16,	10 Dec 16 14:22
6	8	1210L09.D	1	5.0ug/L VOC STD12/10/16N	W IS-tcpd5-12/6/16,	10 Dec 16 14:50
7	9	1210L10.D	1	10ug/L VOC STD12/10/16O	W IS-tcpd5-12/6/16,	10 Dec 16 15:18
8	10	1210L11.D	1	20ug/L VOC STD12/10/16P	W IS-tcpd5-12/6/16,	10 Dec 16 15:46
9	11	1210L12.D	1	40ug/L VOC STD12/10/16Q	W IS-tcpd5-12/6/16,	10 Dec 16 16:15
10	12	1210L13.D	1	100ug/L VOC STD12/10/16R	W IS-tcpd5-12/6/16,	10 Dec 16 16:43
11	16	1210L17.D	1	(SS)10ug/L VOC STD12/10/16	W IS-tcpd5-12/6/16,	10 Dec 16 18:36
12	1	1215L01.D	1	5ng- BFB STD 11-06-16	W IS&S 11/21/16, 11/14/16	15 Dec 16 10:55
13	3	1215L03.D	1	161215A CCV/LCS-1WL 10ug/L	W IS&S 11/21/16, 11/14/16	15 Dec 16 11:51
14	9	1215L09.D	1	161214A BLK-1WL	W IS&S 11/21/16, 11/14/16	15 Dec 16 14:40
15	19	1215L19.D	1	AZ47343W01	W IS&S 11/21/16, 11/14/16	15 Dec 16 19:20
16	20	1215L20.D	1	AZ47344W01	W IS&S 11/21/16, 11/14/16	15 Dec 16 19:48
17	21	1215L21.D	1	AZ47345W01	W IS&S 11/21/16, 11/14/16	15 Dec 16 20:16
18	24	1215L24.D	1	AZ47345W234 MS-1WL 10ug/L	W IS&S 11/21/16, 11/14/16	15 Dec 16 21:41
19	25	1215L25.D	1	AZ47345W234 MSD-1WL 10ug/L	W IS&S 11/21/16, 11/14/16	15 Dec 16 22:09
20	28	1215L28.D	1	Ending CCV 8260 10ug/L 12/15/16	W IS&S 11/21/16, 11/14/16	15 Dec 16 23:33

ORGANICS

APPL, INC.

ORGANICS
QC Summary

APPL, INC.

Method Blank
EPA 8260B GRO WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161215W-47345 - 214691**
Batch ID: #GRO86-161215AL

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	12/15/16	12/15/16
BLANK	SURROGATE: 4-BROMOFLUORO	94.108	85-114			%	12/15/16	12/15/16

Quant Method: LGAS6Z11.M
Run #: 1215L09
Instrument: Loki
Sequence: 161210
Initials: SV

GC SC-Blank-REG MDLs-DOD
Printed: 01/03/17 1:56:01 PM

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81734

Case No: 81734 Date Analyzed: 12/15/16

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: 4-BROMOFLUOROBENZENE (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
161215AL-LCS	Lab Control Spike	85-114	99.6				
161215AL-BLK	Blank	85-114	94.108				
AZ47343	ERH137	85-114	96.2				
AZ47344	ERH141	85-114	95.6				
AZ47345	ERH135	85-114	99.0				
AZ47345-MS	Matrix Spike	85-114	101				
AZ47345-MSD	Matrix SpikeD	85-114	100				

Comments: Batch: #GRO86-161215AL

Printed: 12/27/16 2:21:16 PM

Form 2 & 8, Surrogate Recovery Summary

Laboratory Control Spike Recovery
EPA 8260B GRO WATER

APPL ID: **161215W-47345 LCS - 214691**
Batch ID: #GRO86-161215AL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
GASOLINE RANGE ORGANICS	300	259	86.3	78-122
SURROGATE: 4-BROMOFLUOROBENZE	25.0	24.9	99.6	85-114

Comments: _____

Primary	SPK
Quant Method :	LGAS6Z11.M
Extraction Date :	12/15/16
Analysis Date :	12/15/16
Instrument :	Loki
Run :	1215L05
Initials :	SV

Printed: 12/27/16 2:18:24 PM
APPL Standard LCS

Matrix Spike Recoveries

EPA 8260B GRO WATER

APPL ID: **161215W-47345 MS - 214691**
Batch ID: #GRO86-161215AL
Sample ID: AZ47345
Client ID: ERH135

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
GASOLINE RANGE ORGANICS	300	ND	250	247	83.3	82.3	78-122	1.2	20
SURROGATE: 4-BROMOFLUOROBENZE	25.0	NA	25.2	25.0	101	100	85-114		

Comments: _____

Primary	SPK	DUP
Quant Method :	LGAS6Z11.M	LGAS6Z11.M
Extraction Date :	12/15/16	12/15/16
Analysis Date :	12/15/16	12/15/16
Instrument :	Loki	Loki
Run :	1215L26	1215L27
Initials :	SV	

Printed: 12/27/16 2:18:20 PM
APPL MSD SCII

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81734

Case No: 81734 Date Analyzed: 12/15/16

Matrix: WATER Instrument: Loki

Blank ID: 161215AL-BLK Time Analyzed: 1440

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161215AL-LCS	Lab Control Spike	1215L05	12/15/16 1247
161215AL-BLK	Blank	1215L09	12/15/16 1440
AZ47343	ERH137	1215L19	12/15/16 1920
AZ47344	ERH141	1215L20	12/15/16 1948
AZ47345	ERH135	1215L21	12/15/16 2016
161215AL-MS	Matrix Spike	1215L26	12/15/16 2237
161215AL-MSD	Matrix SpikeD	1215L27	12/15/16 2305

Comments: Batch: #GRO86-161215AL

Printed: 12/27/16 2:18:17 PM

Form 4, Blank Summary

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81734

Lab File ID (Standard): 1210L10.D Date Analyzed: 12/10/16

Instrument ID: Loki Time Analyzed: 15:18

GC Column: ID: Heated Purge: (Y/N)

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	570432	5.38	493760	8.70	297152	11.03
	UPPER LIMIT	1140864	5.88	987520	9.20	594304	11.53
	LOWER LIMIT	285216	4.88	246880	8.20	148576	10.53
	SAMPLE NO.						
01	161215A CCV/LCS-1WL	601856	5.38	548800	8.70	295936	11.03
02	161214A BLK-1WL	572416	5.38	546048	8.70	278720	11.03
03	AZ47343W01	548608	5.38	499648	8.70	263232	11.03
04	AZ47344W01	560128	5.38	505664	8.70	252352	11.03
05	AZ47345W01	557568	5.38	506432	8.70	255808	11.03
06	AZ47345W456 MS-1WL	581760	5.38	535488	8.70	288704	11.03
07	AZ47345W456 MSD-1W	590016	5.38	538880	8.70	288576	11.03
08	Ending CCV GAS 300ug	587456	5.38	546944	8.70	289728	11.03
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

ORGANICS
Sample Data

APPL, INC.

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH137
Sample Collection Date: 12/12/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81734
APPL ID: AZ47343
QCG: #GRO86-161215AL-214691

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	12/15/16	12/15/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	96.2	85-114			%	12/15/16	12/15/16

Quant Method:	LGAS6Z11.M
Run #:	1215L19
Instrument:	Loki
Sequence:	161210
Dilution Factor:	1
Initials:	SV

Printed: 12/27/16 2:18:14 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1215L19.D Vial: 19
Acq On : 15 Dec 16 19:20 Operator: PM,DG,SV,CMM
Sample : AZ47343W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 16 11:19 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1156510	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1491250	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1556919	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

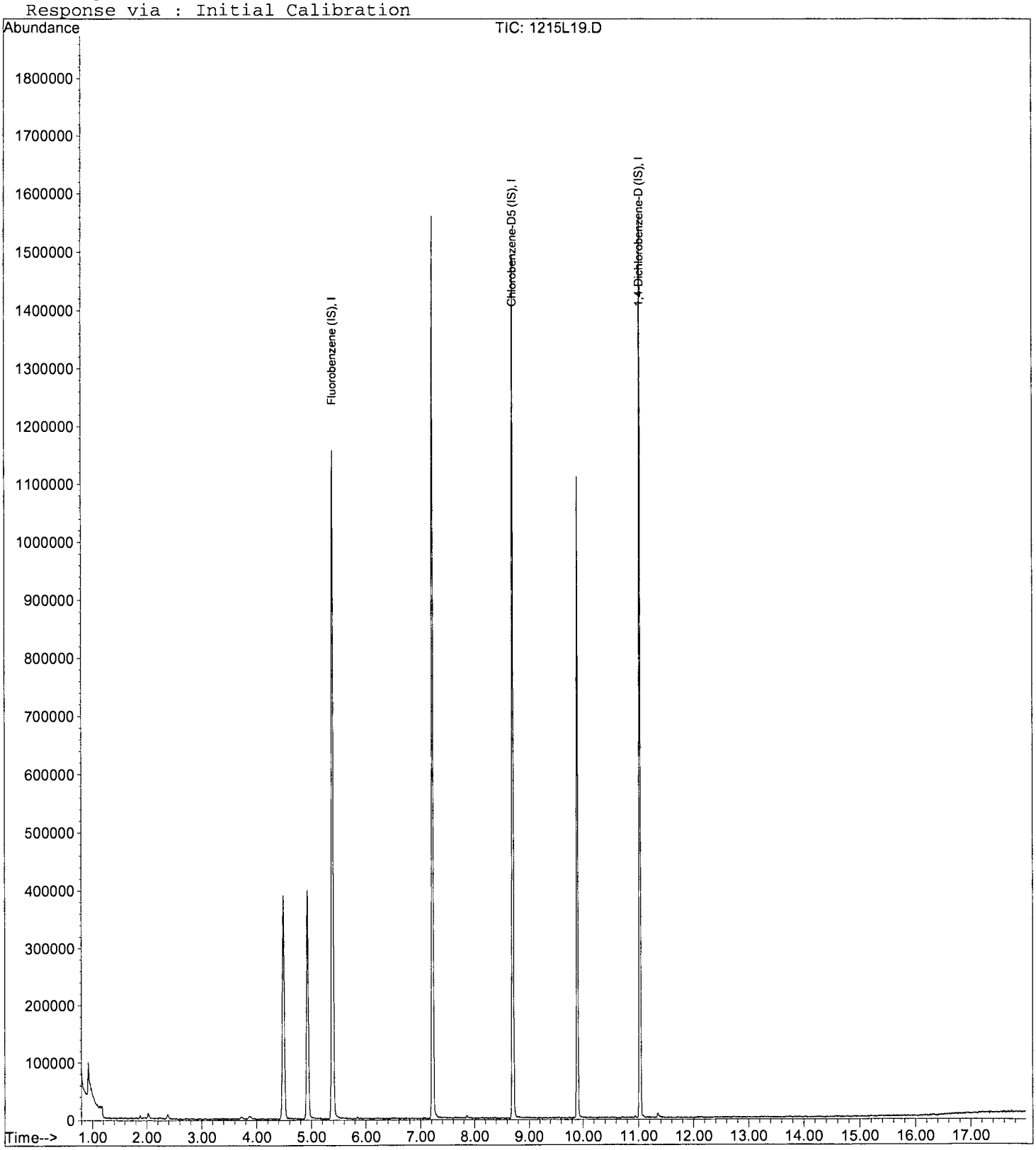
Quantitation Report

Data File : M:\LOKI\DATA\161210\1215L19.D
Acq On : 15 Dec 16 19:20
Sample : AZ47343W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 19
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 16 11:19 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1215L19.D Vial: 19
Acq On : 15 Dec 16 19:20 Operator: PM,DG,SV,CMM
Sample : AZ47343W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 27 13:13 2016 Quant Results File: LSURZ10.RES

Quant Method : M:\LOKI\DATA\161210\LSURZ10.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	548608	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	499648	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	263232	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	289931	26.00	ppb	0.00
Spiked Amount 25.000			Recovery = 104.000%			
3) 1,2-DCA-D4(S)	4.93	65	308944	24.28	ppb	0.00
Spiked Amount 25.000			Recovery = 97.132%			
5) Toluene-D8(S)	7.22	98	968265	24.72	ppb	0.00
Spiked Amount 25.000			Recovery = 98.892%			
6) 4-Bromofluorobenzene(S)	9.89	95	316895	24.05	ppb	0.00
Spiked Amount 25.000			Recovery = 96.200%			

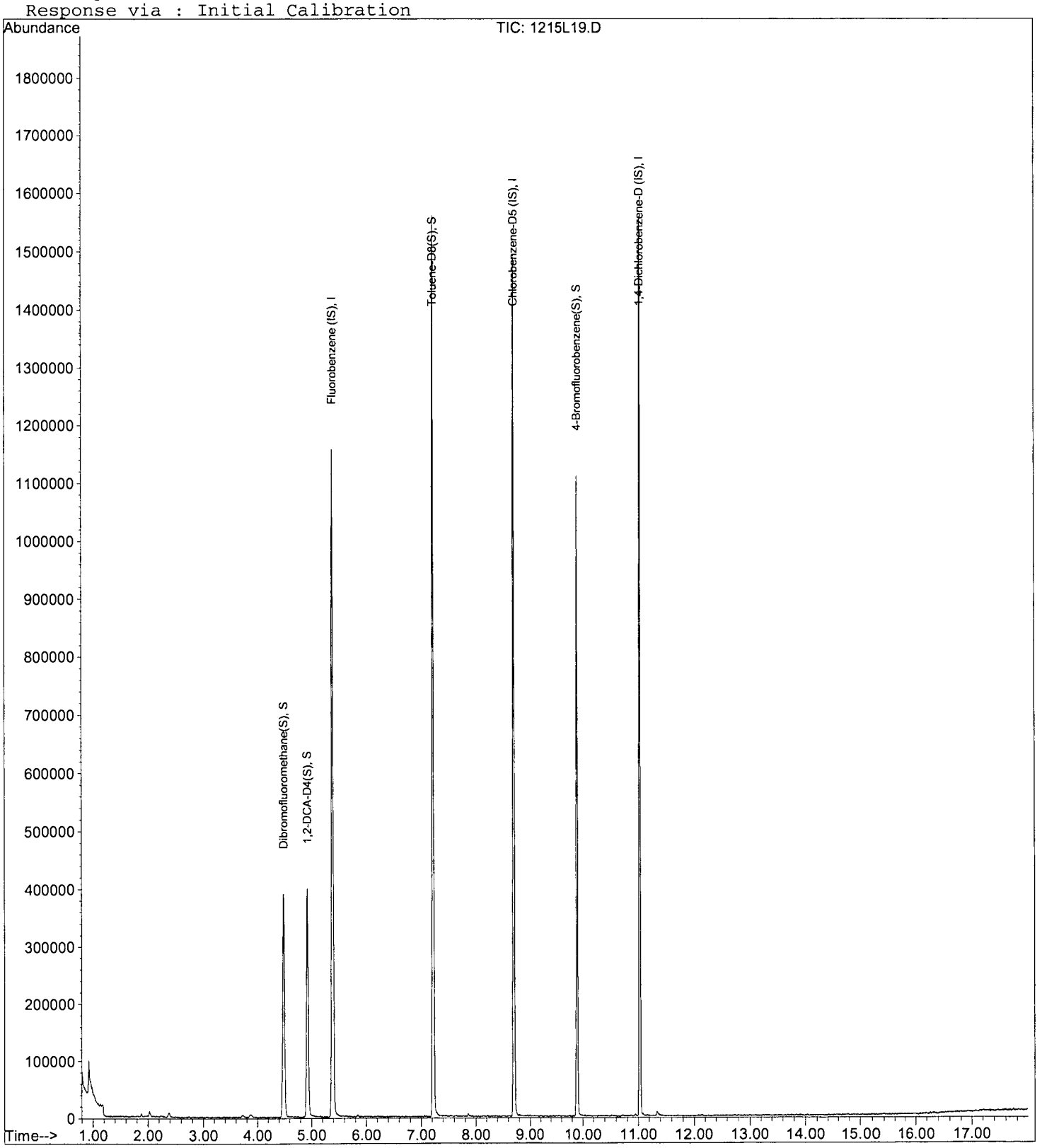
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161210\1215L19.D Vial: 19
Acq On : 15 Dec 16 19:20 Operator: PM,DG,SV,CMM
Sample : AZ47343W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 27 13:13 2016 Quant Results File: LSURZ10.RES

Method : M:\LOKI\DATA\161210\LSURZ10.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration



EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH141
Sample Collection Date: 12/12/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81734
APPL ID: AZ47344
QCG: #GRO86-161215AL-214691

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	12/15/16	12/15/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	95.6	85-114			%	12/15/16	12/15/16

Quant Method: LGAS6Z11.M
Run #: 1215L20
Instrument: Loki
Sequence: 161210
Dilution Factor: 1
Initials: SV

Printed: 12/27/16 2:18:14 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1215L20.D Vial: 20
Acq On : 15 Dec 16 19:48 Operator: PM,DG,SV,CMM
Sample : AZ47344W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 16 11:19 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1169699	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1512485	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1535790	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

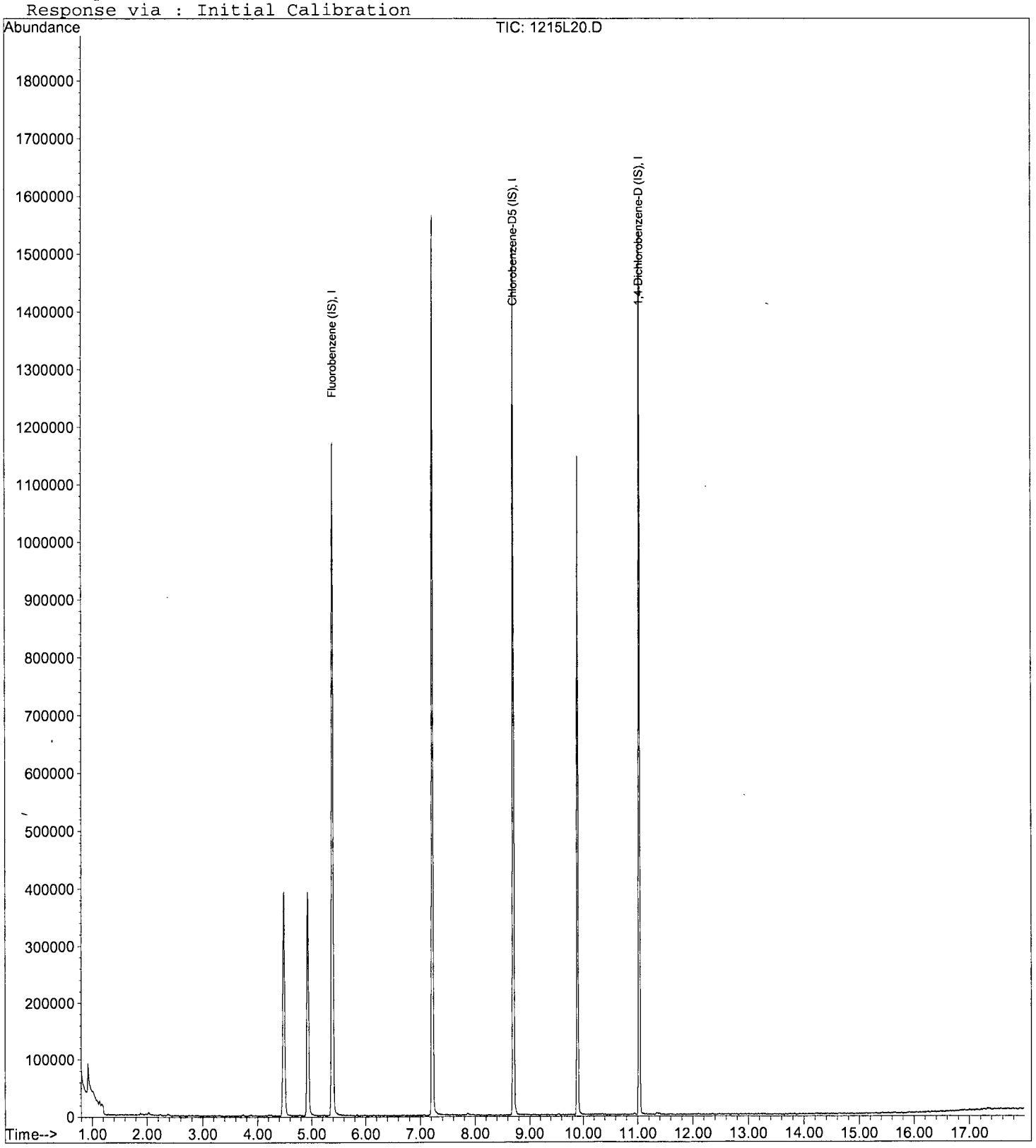
Quantitation Report

Data File : M:\LOKI\DATA\161210\1215L20.D
Acq On : 15 Dec 16 19:48
Sample : AZ47344W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 20
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 16 11:19 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1215L20.D Vial: 20
Acq On : 15 Dec 16 19:48 Operator: PM,DG,SV,CMM
Sample : AZ47344W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 16 11:21 2016 Quant Results File: LSURZ10.RES

Quant Method : M:\LOKI\DATA\161210\LSURZ10.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	560128	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	505664	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	252352	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.49	111	288248	25.32	ppb	0.00
Spiked Amount 25.000			Recovery = 101.268%			
3) 1,2-DCA-D4(S)	4.93	65	309246	23.81	ppb	0.00
Spiked Amount 25.000			Recovery = 95.228%			
5) Toluene-D8(S)	7.22	98	971216	24.50	ppb	0.00
Spiked Amount 25.000			Recovery = 98.012%			
6) 4-Bromofluorobenzene(S)	9.89	95	318757	23.90	ppb	0.00
Spiked Amount 25.000			Recovery = 95.612%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

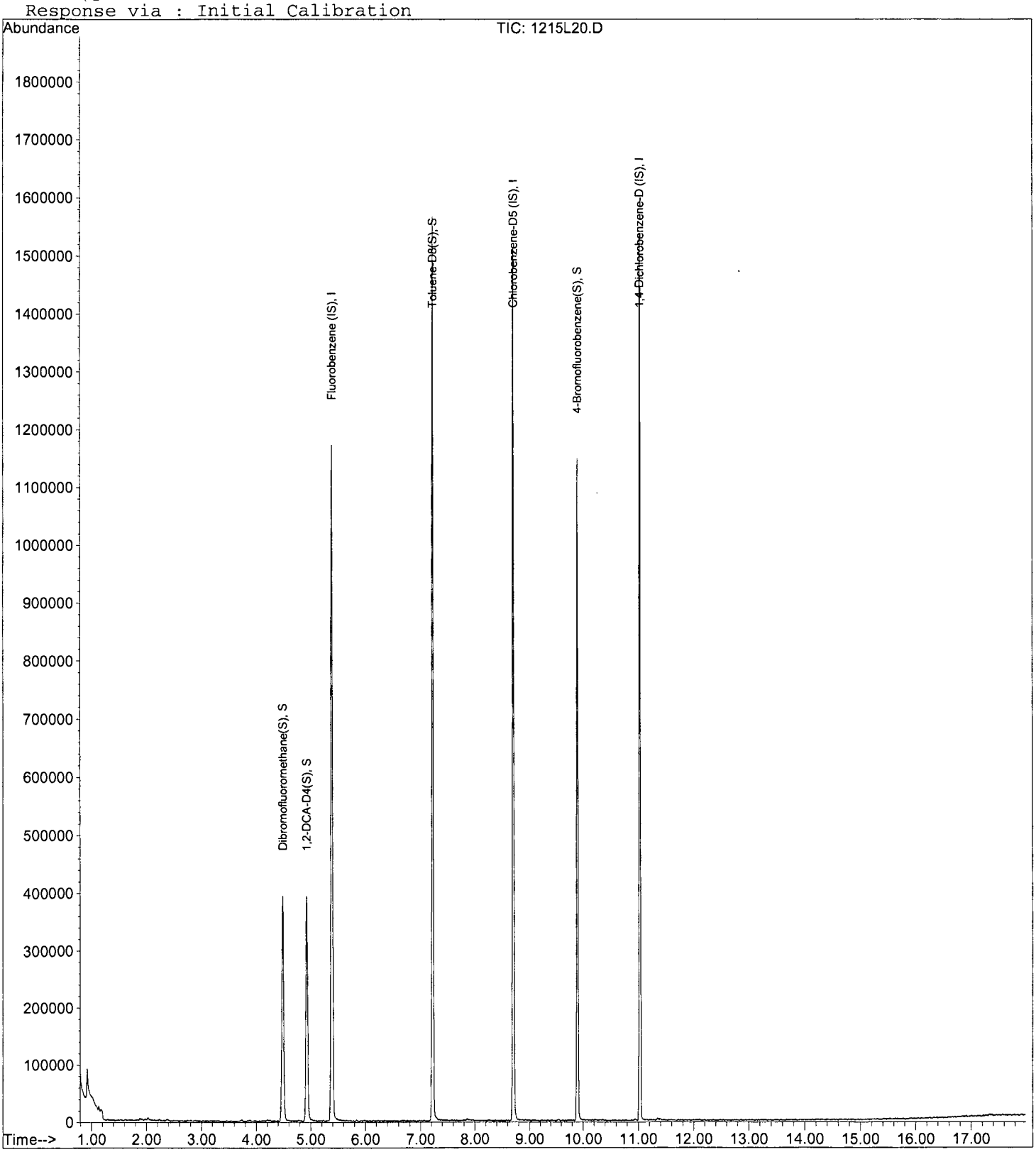
Quantitation Report

Data File : M:\LOKI\DATA\161210\1215L20.D
Acq On : 15 Dec 16 19:48
Sample : AZ47344W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 20
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 16 11:21 2016 Quant Results File: LSURZ10.RES

Method : M:\LOKI\DATA\161210\LSURZ10.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration



EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH135
Sample Collection Date: 12/12/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81734
APPL ID: AZ47345
QCG: #GRO86-161215AL-214691

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	12/15/16	12/15/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	99.0	85-114			%	12/15/16	12/15/16

Quant Method: LGAS6Z11.M
Run #: 1215L21
Instrument: Loki
Sequence: 161210
Dilution Factor: 1
Initials: SV

Printed: 12/27/16 2:18:14 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1215L21.D Vial: 21
Acq On : 15 Dec 16 20:16 Operator: PM,DG,SV,CMM
Sample : AZ47345W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 16 11:19 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1179877	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1525502	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1557136	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

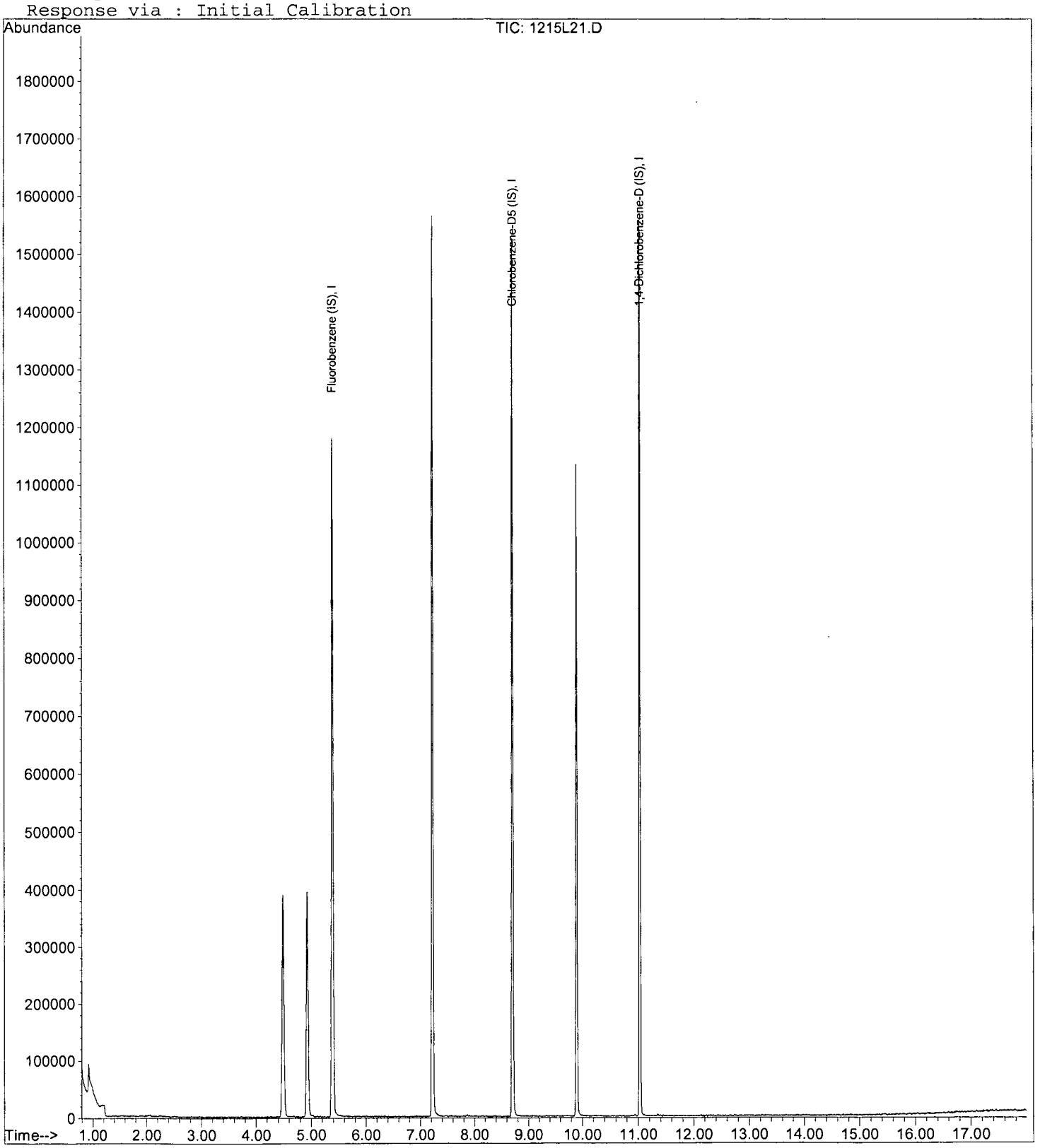
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161210\1215L21.D Vial: 21
Acq On : 15 Dec 16 20:16 Operator: PM,DG,SV,CMM
Sample : AZ47345W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 16 11:19 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1215L21.D Vial: 21
Acq On : 15 Dec 16 20:16 Operator: PM,DG,SV,CMM
Sample : AZ47345W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 16 11:21 2016 Quant Results File: LSURZ10.RES

Quant Method : M:\LOKI\DATA\161210\LSURZ10.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	557568	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	506432	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	255808	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.49	111	285064	25.15	ppb	0.00
Spiked Amount 25.000			Recovery =	100.608%		
3) 1,2-DCA-D4(S)	4.93	65	310915	24.05	ppb	0.00
Spiked Amount 25.000			Recovery =	96.184%		
5) Toluene-D8(S)	7.22	98	983871	24.79	ppb	0.00
Spiked Amount 25.000			Recovery =	99.140%		
6) 4-Bromofluorobenzene(S)	9.89	95	330514	24.75	ppb	0.00
Spiked Amount 25.000			Recovery =	98.988%		

Target Compounds Qvalue

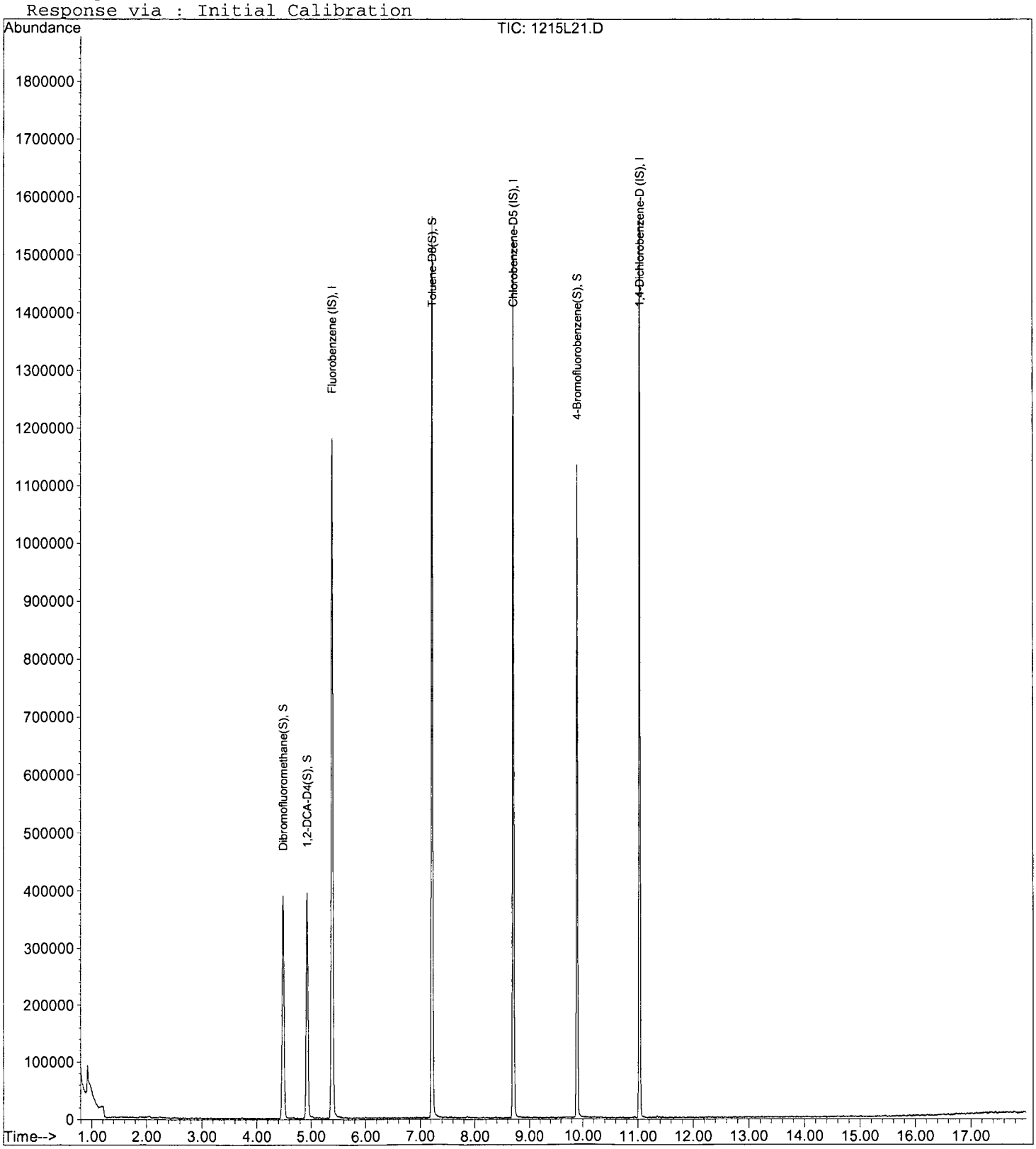
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161210\1215L21.D Vial: 21
Acq On : 15 Dec 16 20:16 Operator: PM,DG,SV,CMM
Sample : AZ47345W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 16 11:21 2016 Quant Results File: LSURZ10.RES

Method : M:\LOKI\DATA\161210\LSURZ10.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration



ORGANICS
Calibration Data

APPL, INC.

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/11/16
Matrix: Instrument: Loki
Initials:

		Compound	1210L05.D	1210L06.D	1210L07.D	1210L08.D	1210L09.D	1210L10.D	1210L11.D	1210L12.D	1210L13.D		Avg	%RSD		
1	I	Fluorobenzene (IS)														
2	S	Dibromofluoromethane(S)	0.5496	0.5451	0.4728	0.4805	0.5108	0.5190	0.5041	0.5104	0.4813		0.51	5.4	S	
3	S	1,2-DCA-D4(S)	0.6262	0.6477	0.5609	0.5452	0.5677	0.5998	0.5666	0.5720	0.5316		0.58	6.5	S	
4	I	Chlorobenzene-D5 (IS)														
5	S	Toluene-D8(S)	2.062	2.090	1.776	1.804	1.990	2.061	1.979	1.966	1.909		2.0	5.7	S	
6	S	4-Bromofluorobenzene(S)	0.6762	0.5903	0.5989	0.6039	0.6862	0.7181	0.6909	0.6872	0.6819		0.66	7.2	S	
7	I	1,4-Dichlorobenzene-D (IS)														
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Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1210L05.D
Acq On : 10 Dec 16 12:57
Sample : 0.3ug/L VOC STD12/10/16J
Misc : W IS-tcpd5-12/6/16,

Vial: 4
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 14 11:32 2016 Quant Results File: LSURZ10.RES

Quant Method : M:\LOKI\DATA\161210\LSURZ10.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	536064	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	482176	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	246720	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.49	111	58921	5.40740 ppb	0.00
Spiked Amount 25.000			Recovery	= 21.628%	
3) 1,2-DCA-D4(S)	4.93	65	67141	5.40088 ppb	0.00
Spiked Amount 25.000			Recovery	= 21.604%	
5) Toluene-D8(S)	7.22	98	198825	5.26065 ppb	0.00
Spiked Amount 25.000			Recovery	= 21.044%	
6) 4-Bromofluorobenzene(S)	9.90	95	65214	5.12852 ppb	0.00
Spiked Amount 25.000			Recovery	= 20.516%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

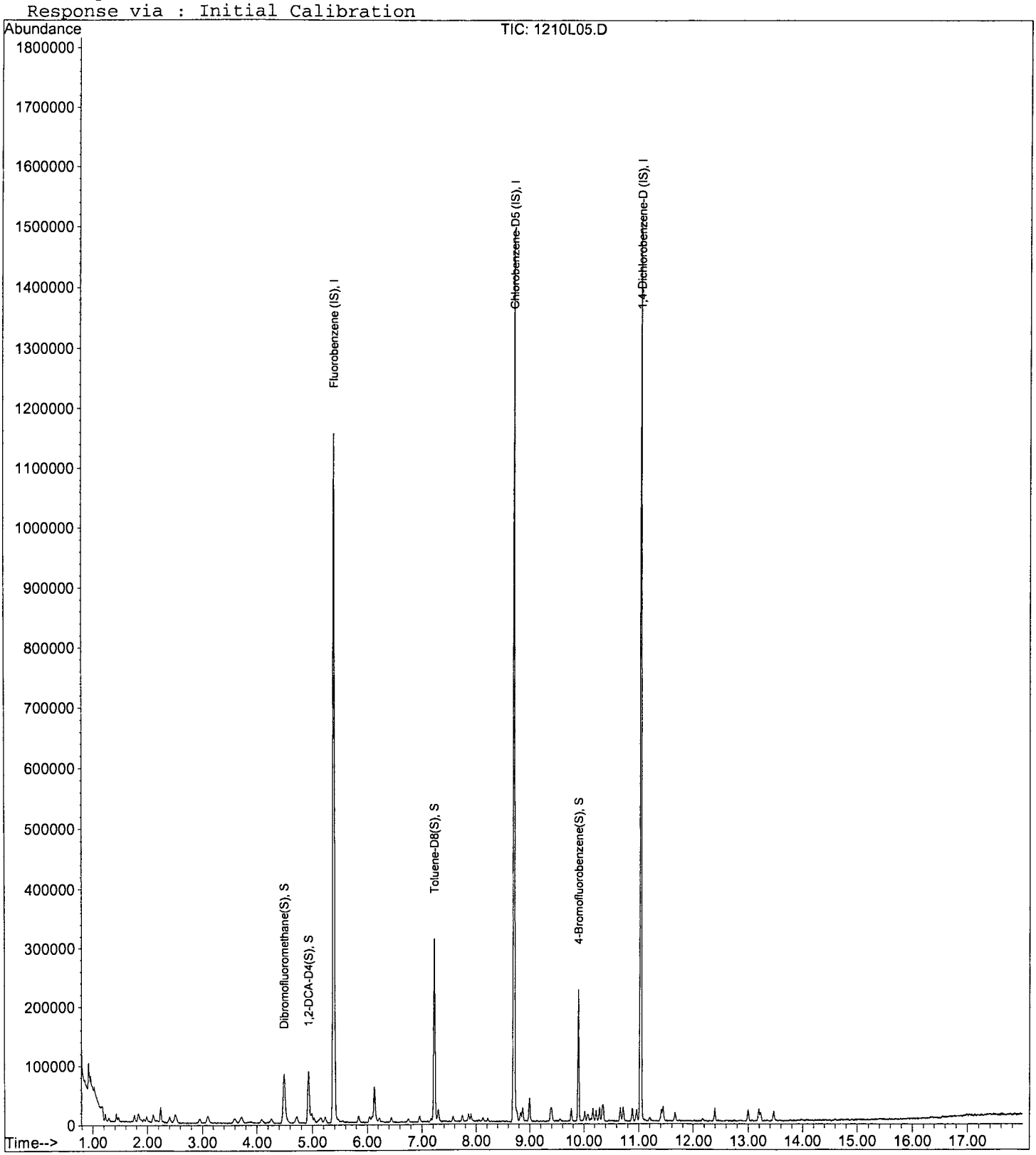
Quantitation Report

Data File : M:\LOKI\DATA\161210\1210L05.D
Acq On : 10 Dec 16 12:57
Sample : 0.3ug/L VOC STD12/10/16J
Misc : W IS-tcpd5-12/6/16,

Vial: 4
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 14 11:32 2016 Quant Results File: LSURZ10.RES

Method : M:\LOKI\DATA\161210\LSURZ10.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1210L06.D Vial: 5
Acq On : 10 Dec 16 13:26 Operator: PM,DG,SV,CMM
Sample : 0.5ug/L VOC STD12/10/16K Inst : Loki
Misc : W IS-tcpd5-12/6/16, Multiplr: 1.00

Quant Time: Dec 14 11:32 2016 Quant Results File: LSURZ10.RES

Quant Method : M:\LOKI\DATA\161210\LSURZ10.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	521920	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	471360	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	245696	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.49	111	56896	5.36306 ppb	0.00
Spiked Amount 25.000			Recovery =	21.452%	
3) 1,2-DCA-D4(S)	4.93	65	67609	5.58591 ppb	0.00
Spiked Amount 25.000			Recovery =	22.344%	
5) Toluene-D8(S)	7.22	98	197014	5.33235 ppb	0.00
Spiked Amount 25.000			Recovery =	21.328%	
6) 4-Bromofluorobenzene(S)	9.90	95	61209	4.92402 ppb	0.00
Spiked Amount 25.000			Recovery =	19.696%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
1210L06.D LSURZ10.M Wed Dec 14 11:33:04 2016 Page 1

Quantitation Report

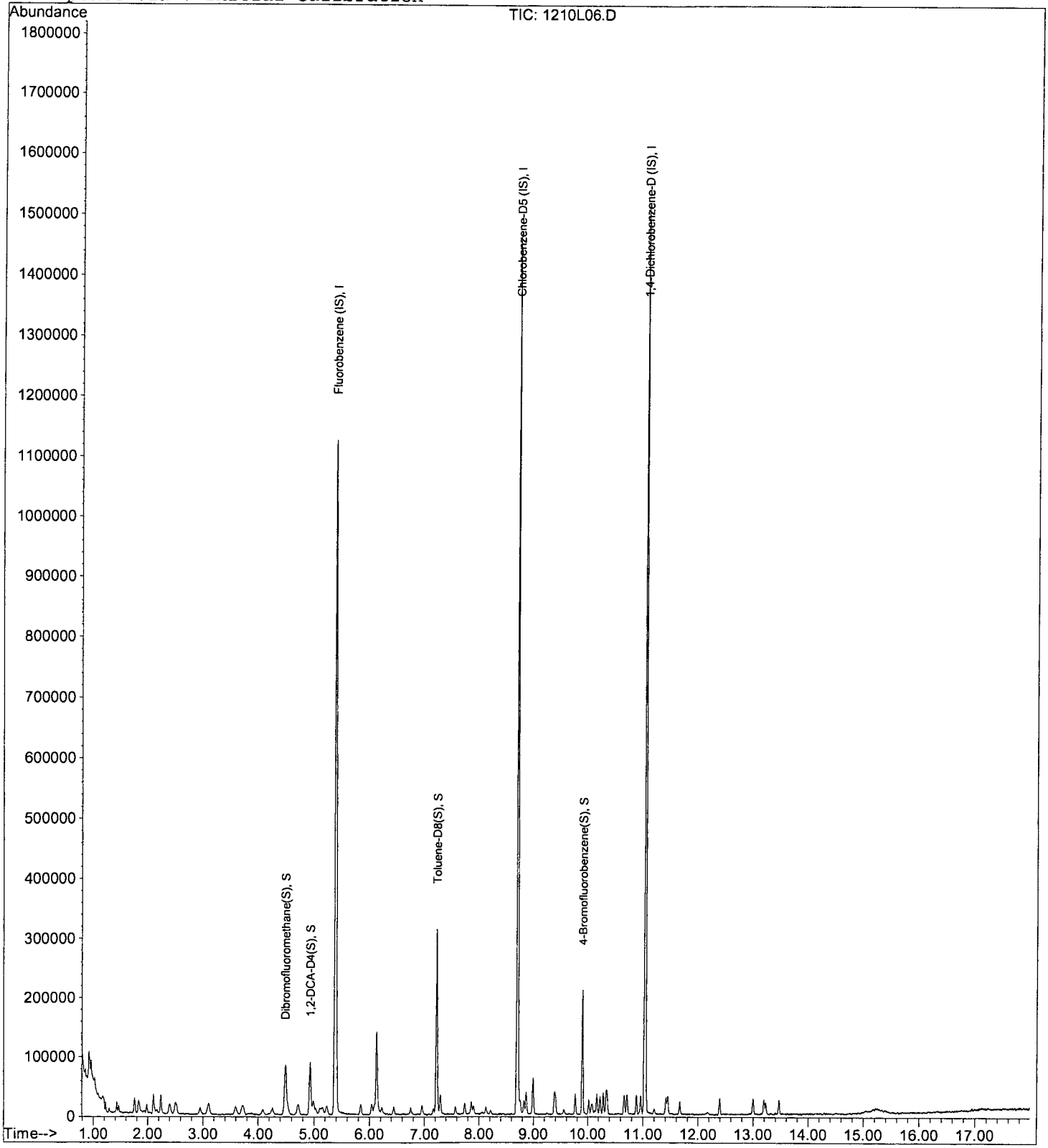
Data File : M:\LOKI\DATA\161210\1210L06.D
Acq On : 10 Dec 16 13:26
Sample : 0.5ug/L VOC STD12/10/16K
Misc : W IS-tcpd5-12/6/16,

Vial: 5
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 14 11:32 2016

Quant Results File: LSURZ10.RES

Method : M:\LOKI\DATA\161210\LSURZ10.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1210L07.D Vial: 6
Acq On : 10 Dec 16 13:54 Operator: PM,DG,SV,CMM
Sample : 1.0ug/L VOC STD12/10/16L Inst : Loki
Misc : W IS-tcpd5-12/6/16, Multiplr: 1.00

Quant Time: Dec 14 11:32 2016 Quant Results File: LSURZ10.RES

Quant Method : M:\LOKI\DATA\161210\LSURZ10.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	527168	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	482624	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	253504	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.49	111	99689	9.30321 ppb	0.00
Spiked Amount 25.000			Recovery	= 37.212%	
3) 1,2-DCA-D4(S)	4.93	65	118270	9.67429 ppb	0.00
Spiked Amount 25.000			Recovery	= 38.696%	
5) Toluene-D8(S)	7.22	98	342948	9.06553 ppb	0.00
Spiked Amount 25.000			Recovery	= 36.264%	
6) 4-Bromofluorobenzene(S)	9.89	95	115624	9.08440 ppb	0.00
Spiked Amount 25.000			Recovery	= 36.336%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

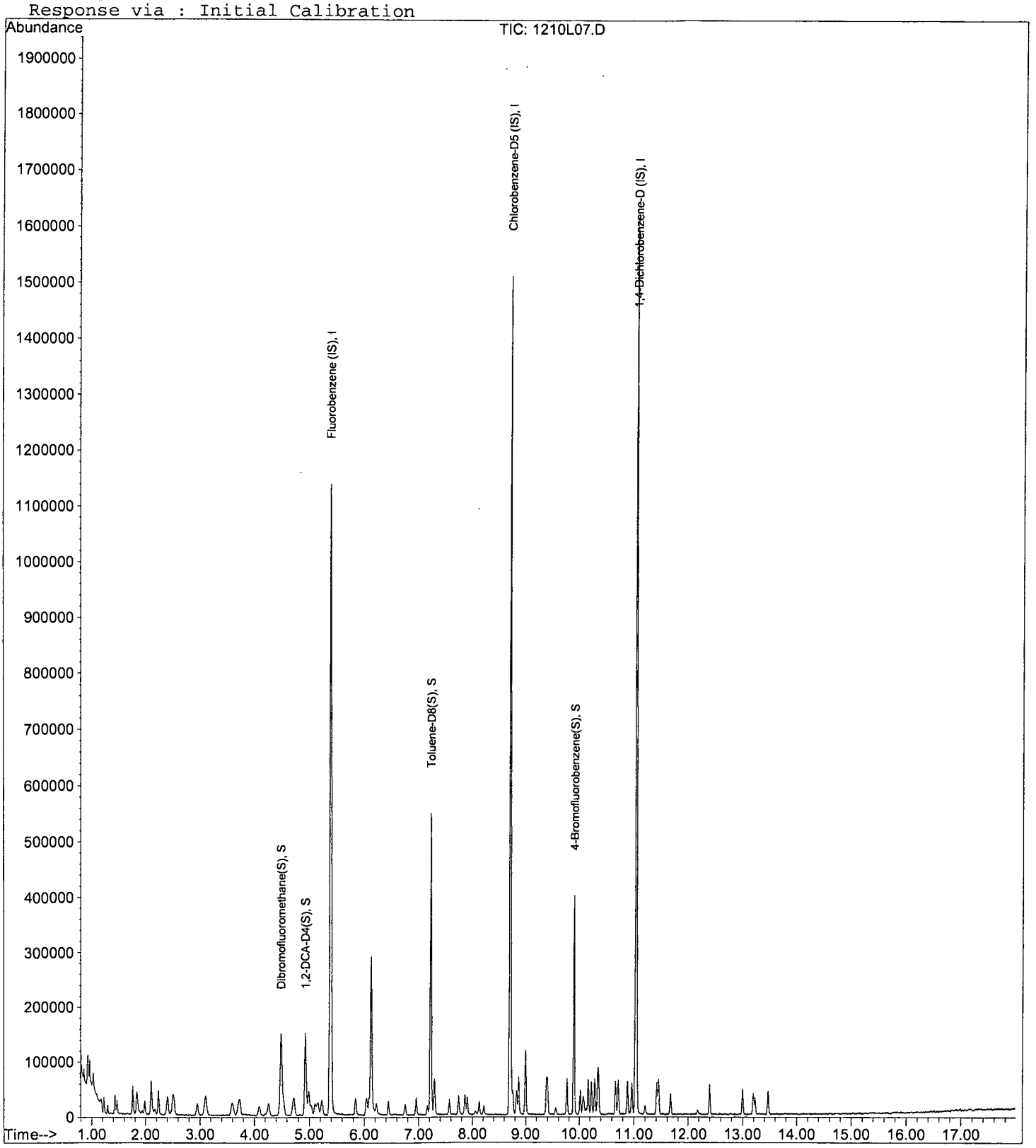
Quantitation Report

Data File : M:\LOKI\DATA\161210\1210L07.D
Acq On : 10 Dec 16 13:54
Sample : 1.0ug/L VOC STD12/10/16L
Misc : W IS-tcpd5-12/6/16,

Vial: 6
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 14 11:32 2016 Quant Results File: LSURZ10.RES

Method : M:\LOKI\DATA\161210\LSURZ10.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1210L08.D Vial: 7
Acq On : 10 Dec 16 14:22 Operator: PM,DG,SV,CMM
Sample : 2.0ug/L VOC STD12/10/16M Inst : Loki
Misc : W IS-tcpd5-12/6/16, Multiplr: 1.00

Quant Time: Dec 14 11:32 2016 Quant Results File: LSURZ10.RES

Quant Method : M:\LOKI\DATA\161210\LSURZ10.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	553152	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	502848	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	266944	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.49	111	106321	9.45604 ppb	0.00
Spiked Amount 25.000			Recovery =	37.824%	
3) 1,2-DCA-D4(S)	4.93	65	120634	9.40413 ppb	0.00
Spiked Amount 25.000			Recovery =	37.616%	
5) Toluene-D8(S)	7.22	98	362837	9.20553 ppb	0.00
Spiked Amount 25.000			Recovery =	36.824%	
6) 4-Bromofluorobenzene(S)	9.90	95	121458	9.15897 ppb	0.00
Spiked Amount 25.000			Recovery =	36.636%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

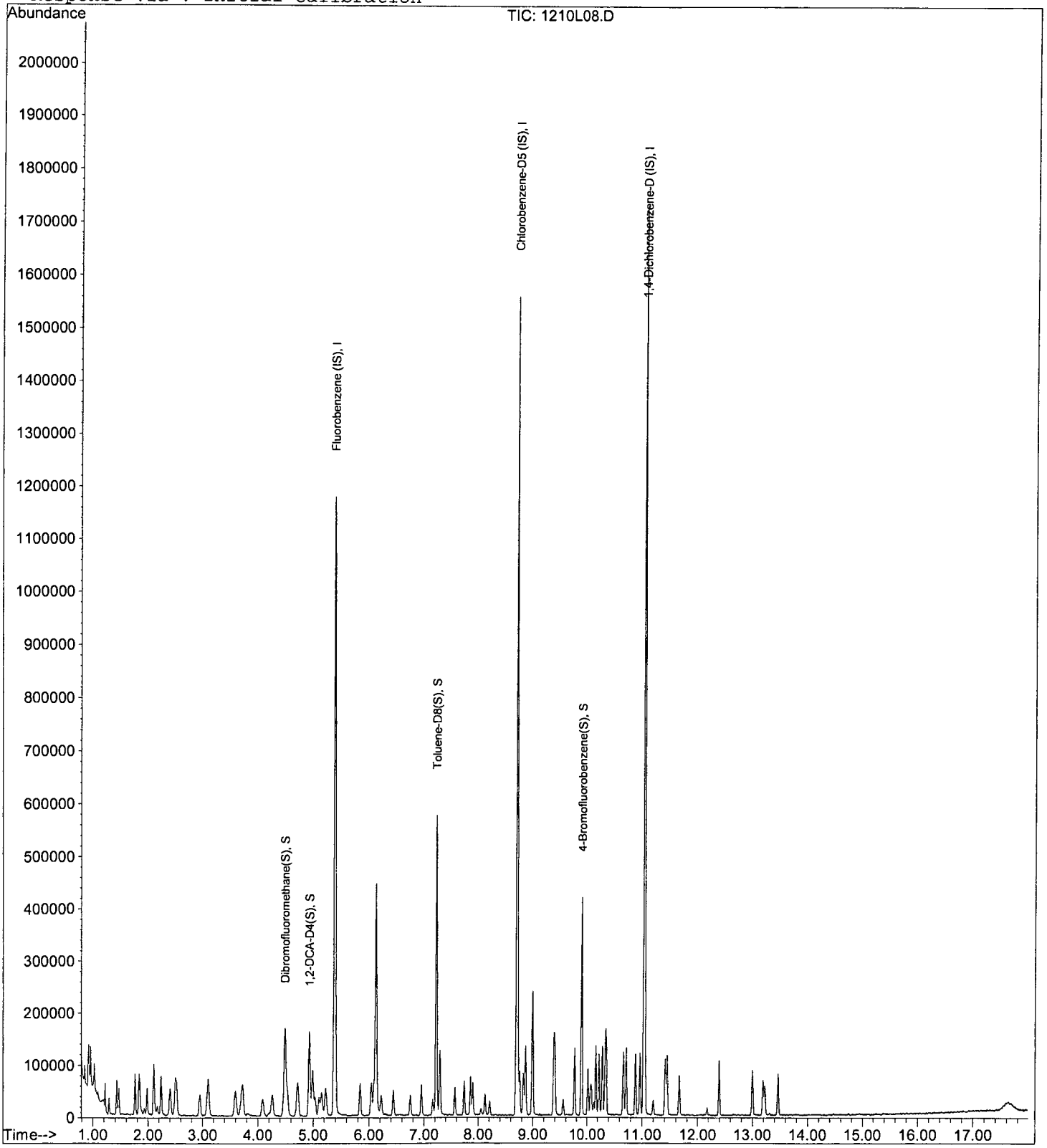
Data File : M:\LOKI\DATA\161210\1210L08.D
Acq On : 10 Dec 16 14:22
Sample : 2.0ug/L VOC STD12/10/16M
Misc : W IS-tcpd5-12/6/16,

Vial: 7
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 14 11:32 2016

Quant Results File: LSURZ10.RES

Method : M:\LOKI\DATA\161210\LSURZ10.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1210L09.D Vial: 8
Acq On : 10 Dec 16 14:50 Operator: PM,DG,SV,CMM
Sample : 5.0ug/L VOC STD12/10/16N Inst : Loki
Misc : W IS-tcpd5-12/6/16, Multiplr: 1.00

Quant Time: Dec 14 11:32 2016 Quant Results File: LSURZ10.RES

Quant Method : M:\LOKI\DATA\161210\LSURZ10.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	563328	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	499072	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	286848	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.49	111	287750	25.12978 ppb	0.00
Spiked Amount 25.000			Recovery = 100.520%		
3) 1,2-DCA-D4(S)	4.93	65	319815	24.48110 ppb	0.00
Spiked Amount 25.000			Recovery = 97.924%		
5) Toluene-D8(S)	7.22	98	993092	25.38635 ppb	0.00
Spiked Amount 25.000			Recovery = 101.544%		
6) 4-Bromofluorobenzene(S)	9.89	95	342475	26.02092 ppb	0.00
Spiked Amount 25.000			Recovery = 104.084%		

Target Compounds Qvalue

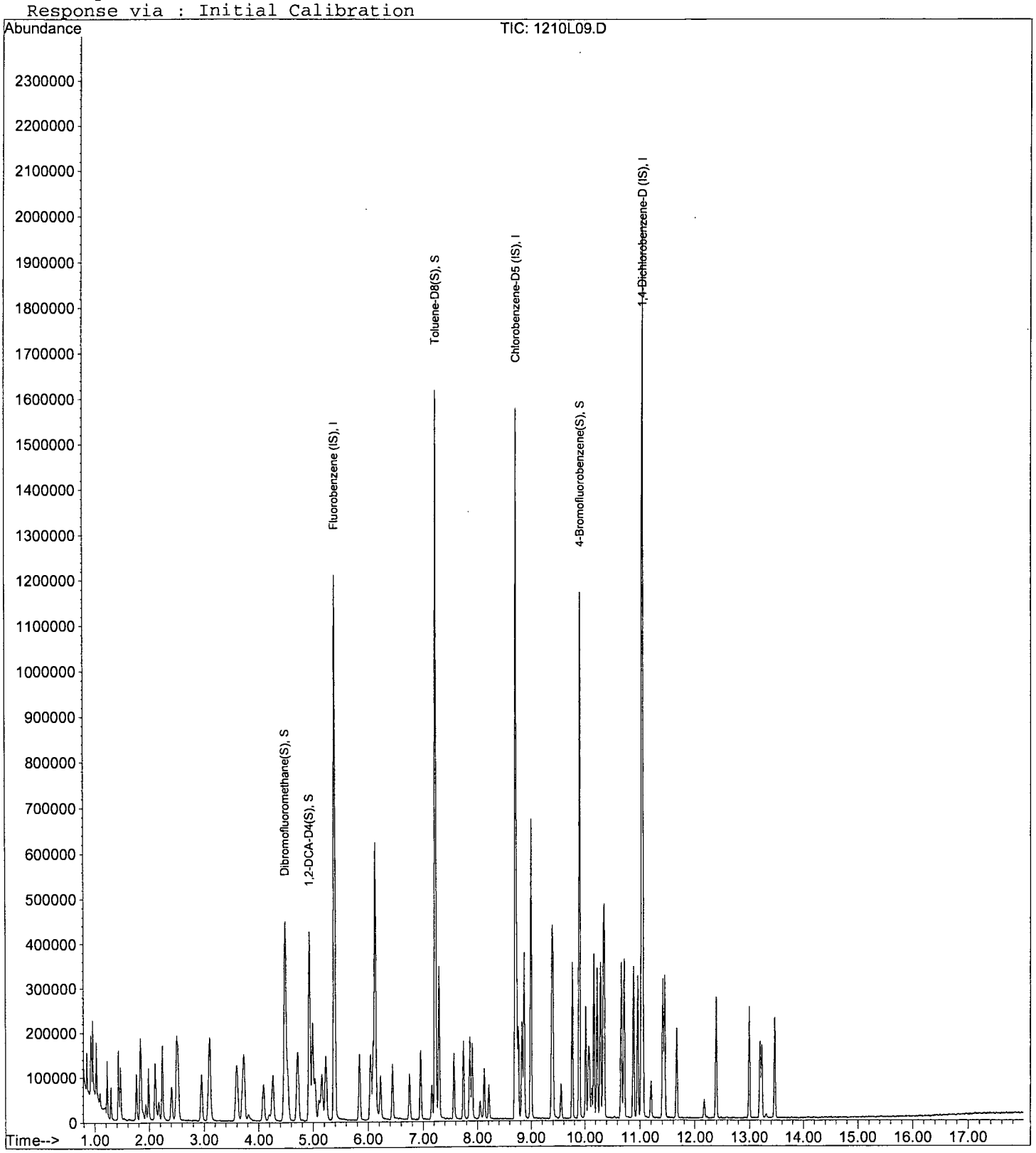
(#) = qualifier out of range (m) = manual integration
1210L09.D LSURZ10.M Wed Dec 14 11:33:16 2016 Page 1

Quantitation Report

Data File : M:\LOKI\DATA\161210\1210L09.D Vial: 8
Acq On : 10 Dec 16 14:50 Operator: PM,DG,SV,CMM
Sample : 5.0ug/L VOC STD12/10/16N Inst : Loki
Misc : W IS-tcpd5-12/6/16, Multiplr: 1.00

Quant Time: Dec 14 11:32 2016 Quant Results File: LSURZ10.RES

Method : M:\LOKI\DATA\161210\LSURZ10.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1210L10.D Vial: 9
Acq On : 10 Dec 16 15:18 Operator: PM,DG,SV,CMM
Sample : 10ug/L VOC STD12/10/160 Inst : Loki
Misc : W IS-tcpd5-12/6/16, Multiplr: 1.00

Quant Time: Dec 14 11:32 2016 Quant Results File: LSURZ10.RES

Quant Method : M:\LOKI\DATA\161210\LSURZ10.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	570432	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	493760	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	297152	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.49	111	296043	25.53205 ppb	0.00
Spiked Amount 25.000			Recovery = 102.128%		
3) 1,2-DCA-D4(S)	4.93	65	342137	25.86364 ppb	0.00
Spiked Amount 25.000			Recovery = 103.456%		
5) Toluene-D8(S)	7.22	98	1017407	26.28771 ppb	0.00
Spiked Amount 25.000			Recovery = 105.152%		
6) 4-Bromofluorobenzene(S)	9.89	95	354576	27.23018 ppb	0.00
Spiked Amount 25.000			Recovery = 108.920%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

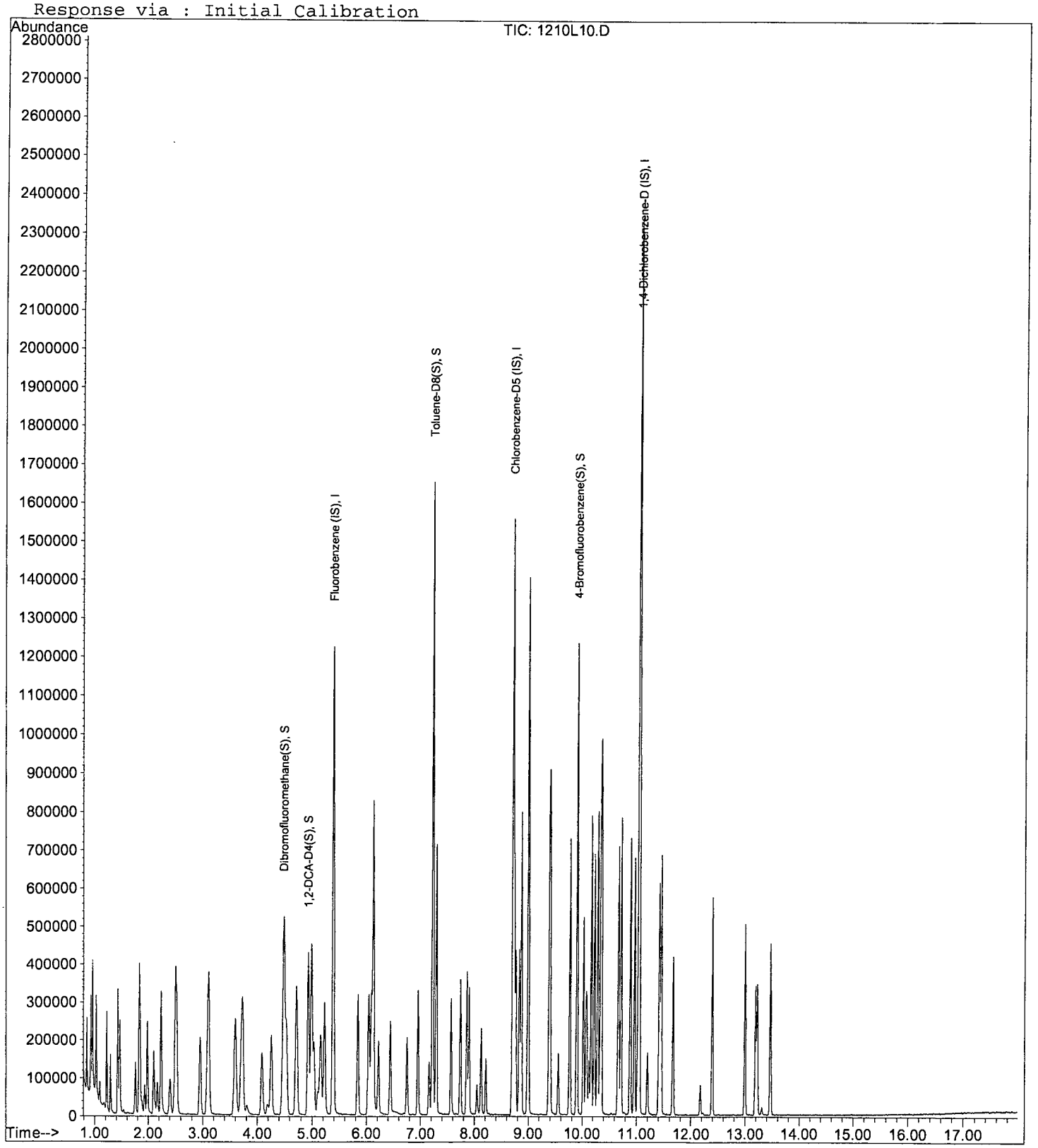
Quantitation Report

Data File : M:\LOKI\DATA\161210\1210L10.D
Acq On : 10 Dec 16 15:18
Sample : 10ug/L VOC STD12/10/160
Misc : W IS-tcpd5-12/6/16,

Vial: 9
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 14 11:32 2016 Quant Results File: LSURZ10.RES

Method : M:\LOKI\DATA\161210\LSURZ10.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1210L11.D Vial: 10
Acq On : 10 Dec 16 15:46 Operator: PM,DG,SV,CMM
Sample : 20ug/L VOC STD12/10/16P Inst : Loki
Misc : W IS-tcpd5-12/6/16, Multiplr: 1.00

Quant Time: Dec 14 11:32 2016 Quant Results File: LSURZ10.RES

Quant Method : M:\LOKI\DATA\161210\LSURZ10.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	570048	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	525568	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	285248	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.49	111	574681	49.59639 ppb	0.00
Spiked Amount 25.000			Recovery	= 198.384%	
3) 1,2-DCA-D4(S)	4.93	65	645983	48.86559 ppb	0.00
Spiked Amount 25.000			Recovery	= 195.464%	
5) Toluene-D8(S)	7.22	98	2079890	50.48768 ppb	0.00
Spiked Amount 25.000			Recovery	= 201.952%	
6) 4-Bromofluorobenzene(S)	9.89	95	726246	52.39766 ppb	0.00
Spiked Amount 25.000			Recovery	= 209.592%	

Target Compounds Qvalue

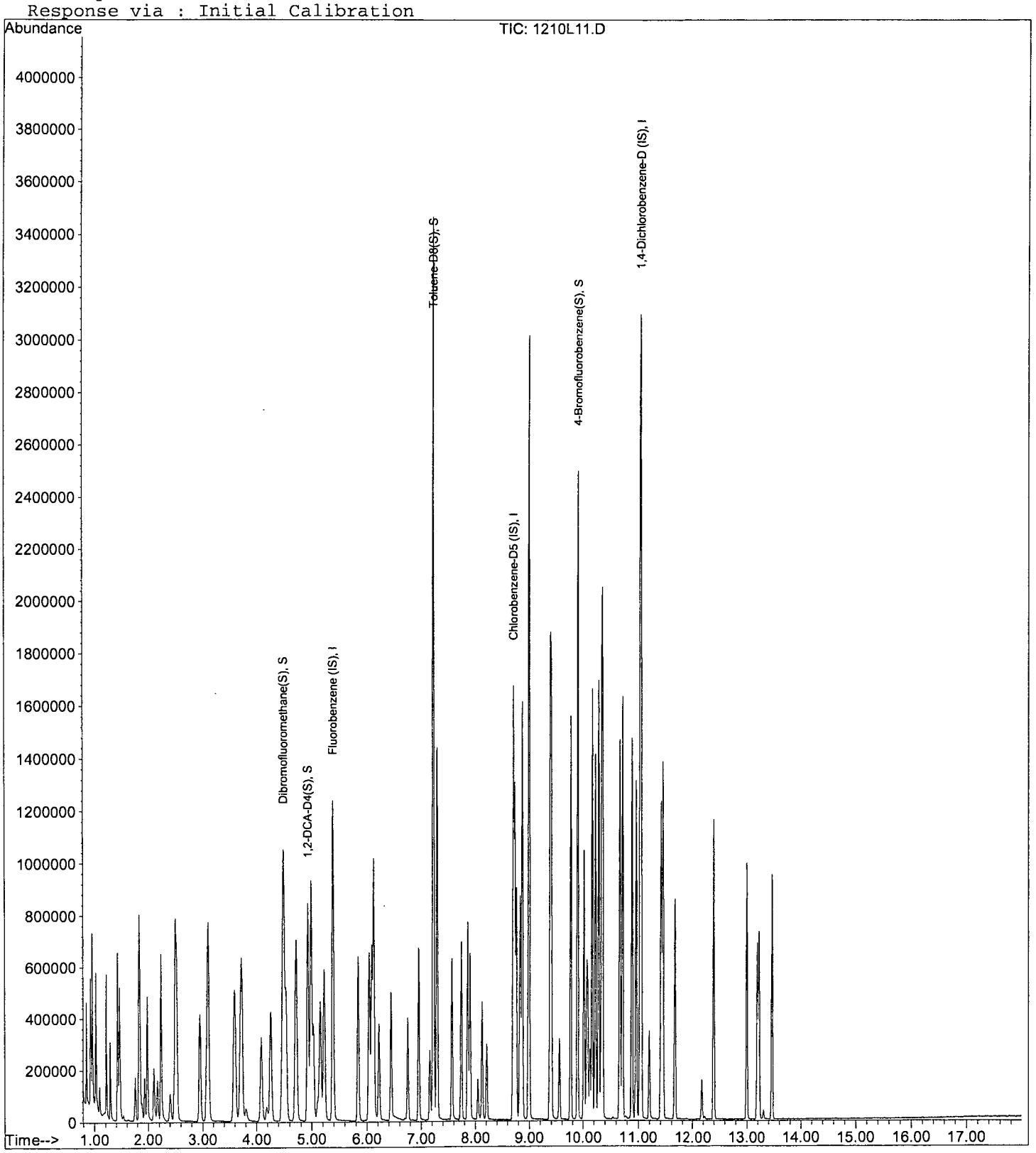
(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161210\1210L11.D
Acq On : 10 Dec 16 15:46
Sample : 20ug/L VOC STD12/10/16P
Misc : W IS-tcpd5-12/6/16,

Vial: 10
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 14 11:32 2016 Quant Results File: LSURZ10.RES

Method : M:\LOKI\DATA\161210\LSURZ10.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1210L12.D Vial: 11
Acq On : 10 Dec 16 16:15 Operator: PM,DG,SV,CMM
Sample : 40ug/L VOC STD12/10/16Q Inst : Loki
Misc : W IS-tcpd5-12/6/16, Multiplr: 1.00

Quant Time: Dec 14 11:32 2016 Quant Results File: LSURZ10.RES

Quant Method : M:\LOKI\DATA\161210\LSURZ10.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	594496	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	555392	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	316096	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.49	111	606913	50.22410 ppb	0.00
Spiked Amount 25.000			Recovery	= 200.896%	
3) 1,2-DCA-D4(S)	4.93	65	680155	49.33469 ppb	0.00
Spiked Amount 25.000			Recovery	= 197.340%	
5) Toluene-D8(S)	7.22	98	2183875	50.16515 ppb	0.00
Spiked Amount 25.000			Recovery	= 200.660%	
6) 4-Bromofluorobenzene(S)	9.89	95	763385	52.11960 ppb	0.00
Spiked Amount 25.000			Recovery	= 208.480%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
1210L12.D LSURZ10.M Wed Dec 14 11:33:28 2016 Page 1

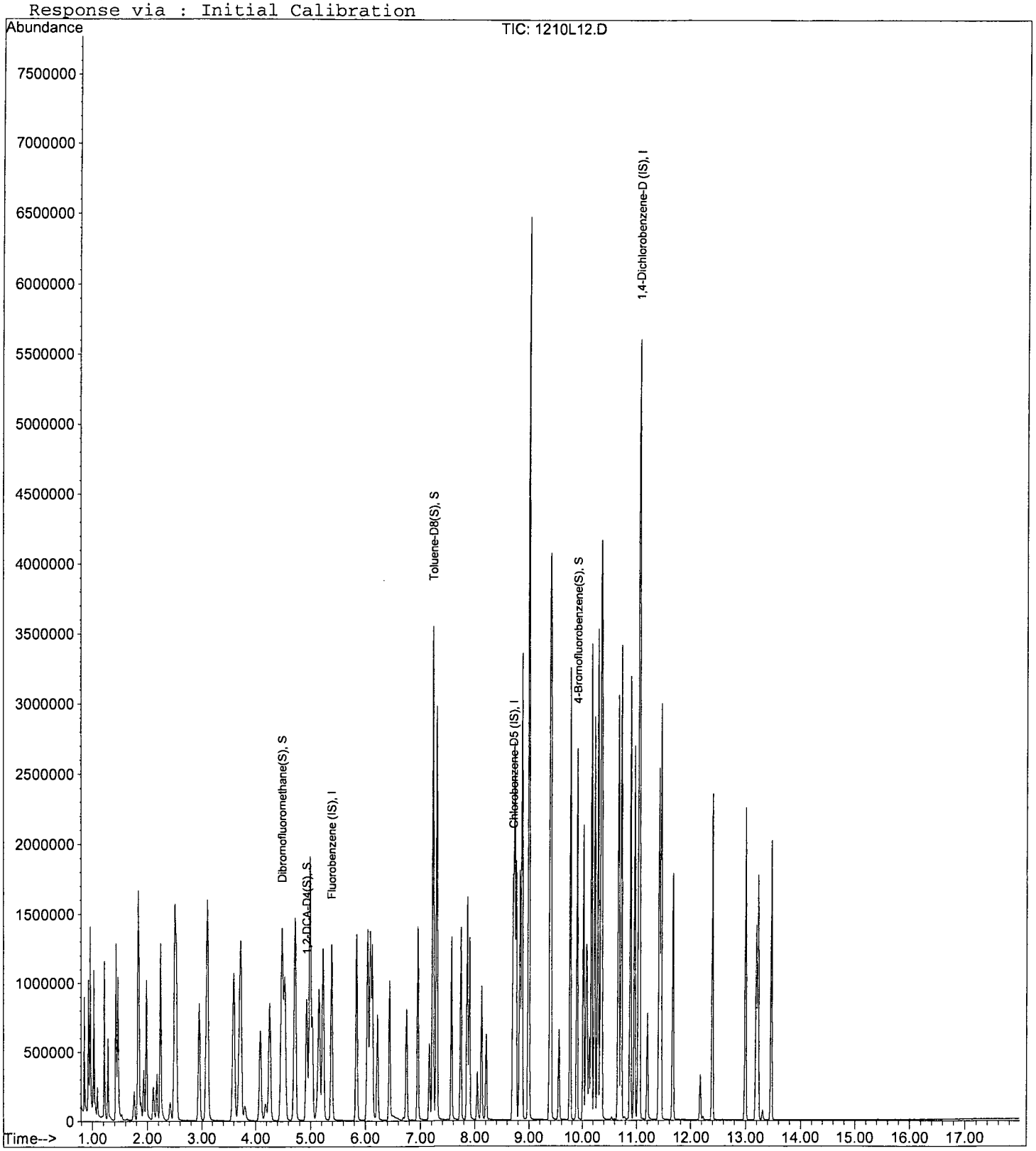
Quantitation Report

Data File : M:\LOKI\DATA\161210\1210L12.D
Acq On : 10 Dec 16 16:15
Sample : 40ug/L VOC STD12/10/16Q
Misc : W IS-tcpd5-12/6/16,

Vial: 11
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 14 11:32 2016 Quant Results File: LSURZ10.RES

Method : M:\LOKI\DATA\161210\LSURZ10.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1210L13.D Vial: 12
Acq On : 10 Dec 16 16:43 Operator: PM,DG,SV,CMM
Sample : 100ug/L VOC STD12/10/16R Inst : Loki
Misc : W IS-tcpd5-12/6/16, Multiplr: 1.00

Quant Time: Dec 14 11:32 2016 Quant Results File: LSURZ10.RES

Quant Method : M:\LOKI\DATA\161210\LSURZ10.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	605056	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	559360	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	342464	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.49	111	1164816	94.71013 ppb	0.00
Spiked Amount 25.000				Recovery = 378.840%	
3) 1,2-DCA-D4(S)	4.93	65	1286688	91.70039 ppb	0.00
Spiked Amount 25.000				Recovery = 366.800%	
5) Toluene-D8(S)	7.22	98	4271688	97.42761 ppb	0.00
Spiked Amount 25.000				Recovery = 389.712%	
6) 4-Bromofluorobenzene(S)	9.89	95	1525732	103.42938 ppb	0.00
Spiked Amount 25.000				Recovery = 413.716%	
Target Compounds					Qvalue

(#) = qualifier out of range (m) = manual integration

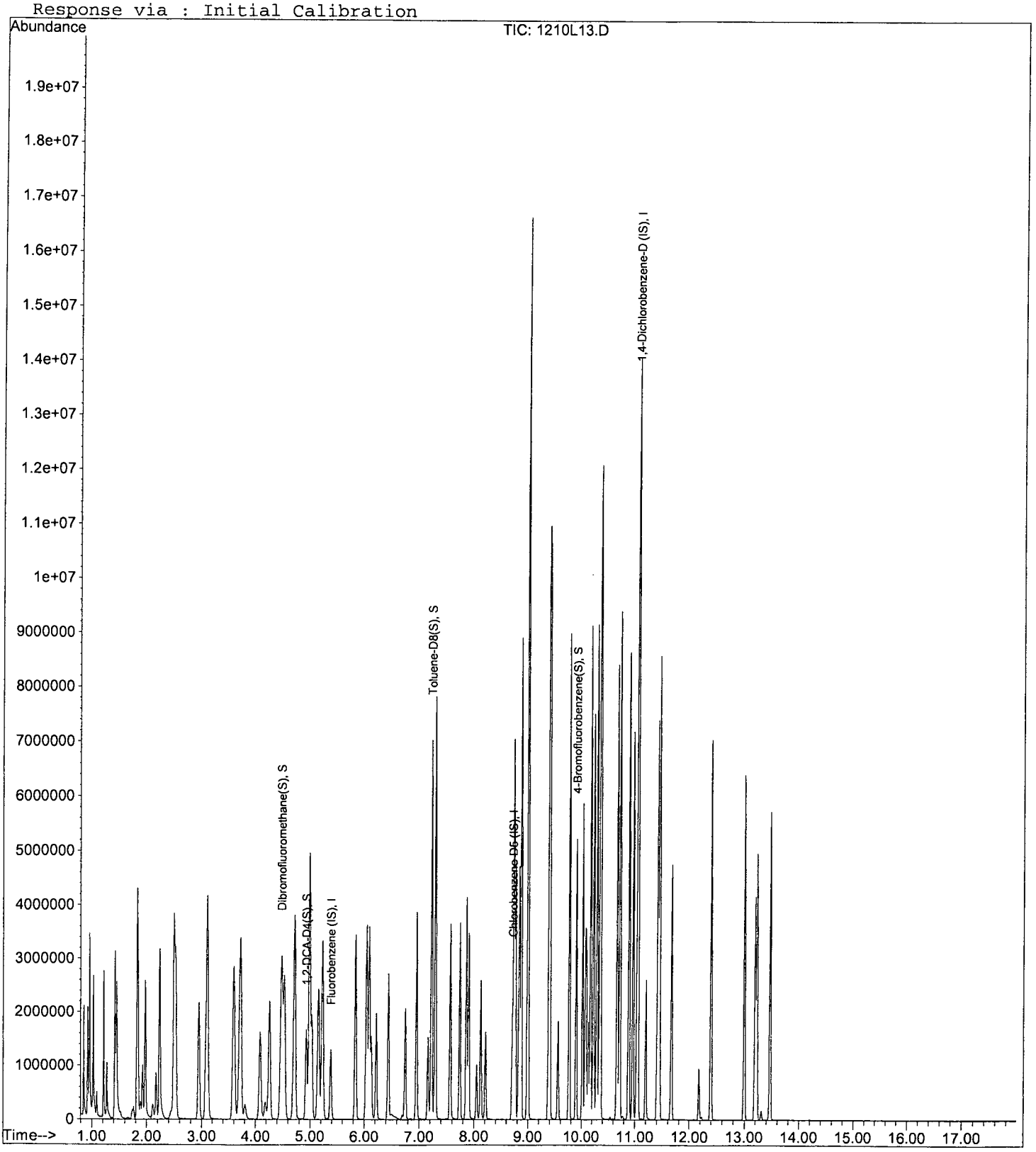
Quantitation Report

Data File : M:\LOKI\DATA\161210\1210L13.D
Acq On : 10 Dec 16 16:43
Sample : 100ug/L VOC STD12/10/16R
Misc : W IS-tcpd5-12/6/16,

Vial: 12
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 14 11:32 2016 Quant Results File: LSURZ10.RES

Method : M:\LOKI\DATA\161210\LSURZ10.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/11/16
Matrix: Instrument: Loki
Initials:

		Compound	1211L06.D	1211L07.D	1211L08.D	1211L09.D	1211L10.D	1211L11.D	1211L12.D				Avg	%RSD		
1	I	Fluorobenzene (IS)														
2	TMHBL	Gasoline C6-C10	12.7	5.590	3.275	1.662	1.266	1.171	1.108				3.8	111	TMHBL	1.00
3	I	Chlorobenzene-D5 (IS)														
4	I	1,4-Dichlorobenzene-D (IS)														
5																
6																
7																
8																
9																
10																
11																
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Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1211L06.D Vial: 6
Acq On : 11 Dec 16 12:39 Operator: PM,DG,SV,CMM
Sample : 20ug/L GAS STD 12/11/16A Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:46 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:37:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1192046	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1555815	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1640058	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	12140223m	22.40865	ppb	100

(#) = qualifier out of range (m) = manual integration
1211L06.D LGAS6Z11.M Wed Dec 14 11:25:09 2016 Page 1

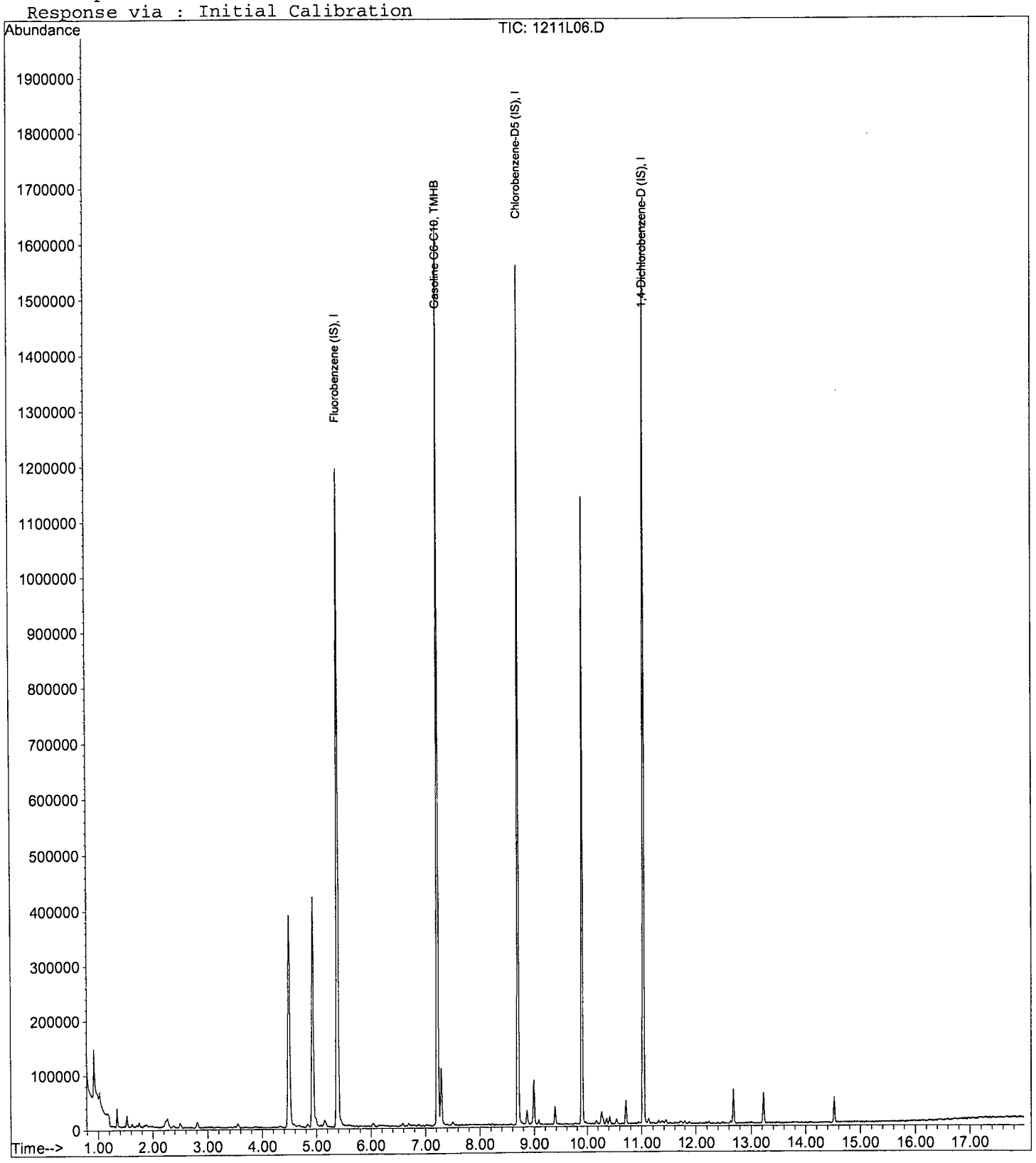
Quantitation Report

Data File : M:\LOKI\DATA\161210\1211L06.D
Acq On : 11 Dec 16 12:39
Sample : 20ug/L GAS STD 12/11/16A
Misc : W IS&S 11/21/16, 11/14/16

Vial: 6
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 13 8:46 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1211L07.D Vial: 7
Acq On : 11 Dec 16 13:07 Operator: PM,DG,SV,CMM
Sample : 50ug/L GAS STD 12/11/16B Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:45 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:37:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1164223	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1556548	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1560800	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	13016126m	51.10504	ppb	100

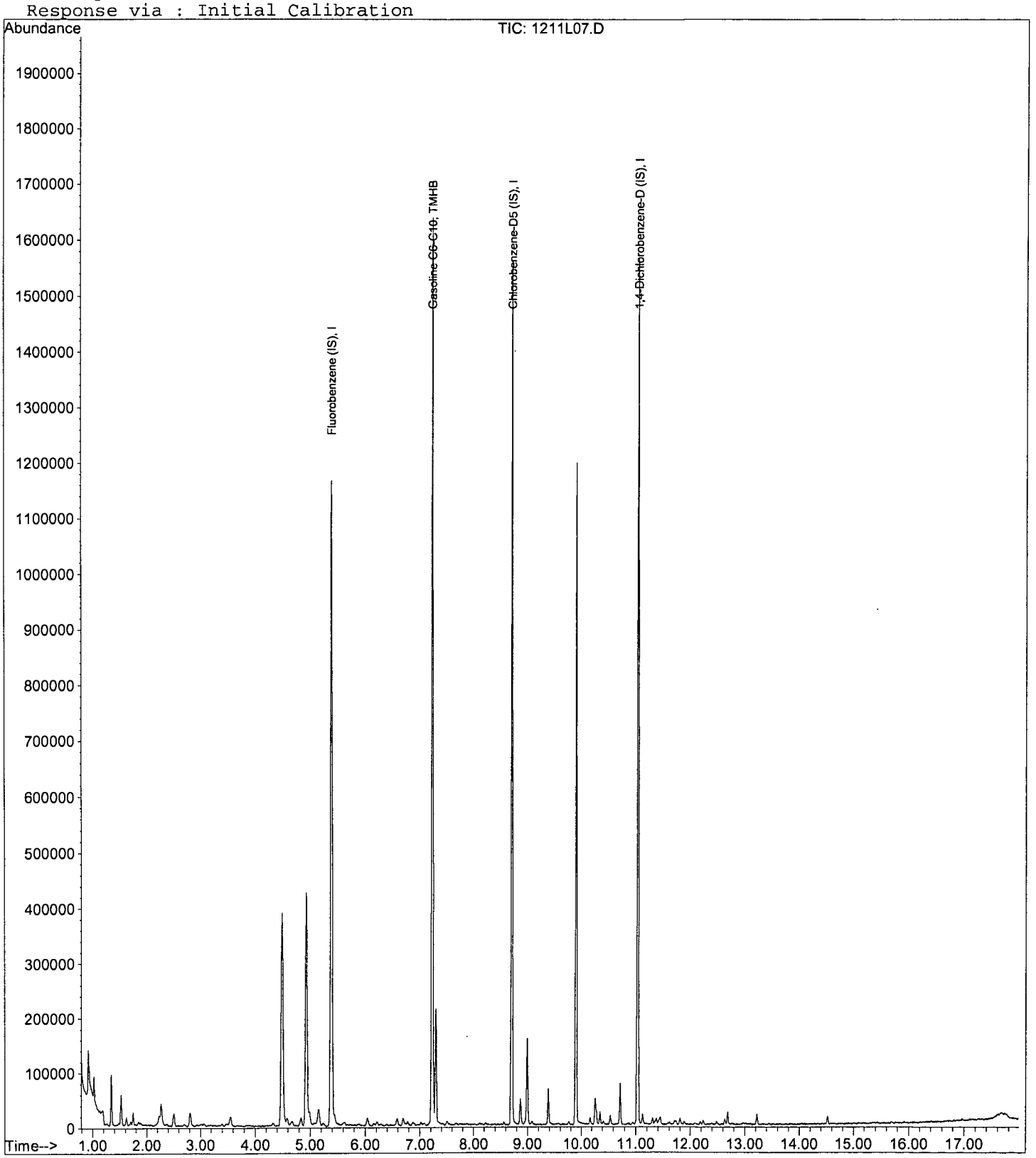
(#) = qualifier out of range (m) = manual integration
1211L07.D LGAS6Z11.M Wed Dec 14 11:25:13 2016 Page 1

Quantitation Report

Data File : M:\LOKI\DATA\161210\1211L07.D Vial: 7
Acq On : 11 Dec 16 13:07 Operator: PM,DG,SV,CMM
Sample : 50ug/L GAS STD 12/11/16B Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:45 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1211L08.D Vial: 8
Acq On : 11 Dec 16 13:35 Operator: PM,DG,SV,CMM
Sample : 100ug/L GAS STD 12/11/16C Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:44 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:37:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1150108	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1536391	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1573350	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	15065779m	106.41914	ppb	100

(#) = qualifier out of range (m) = manual integration

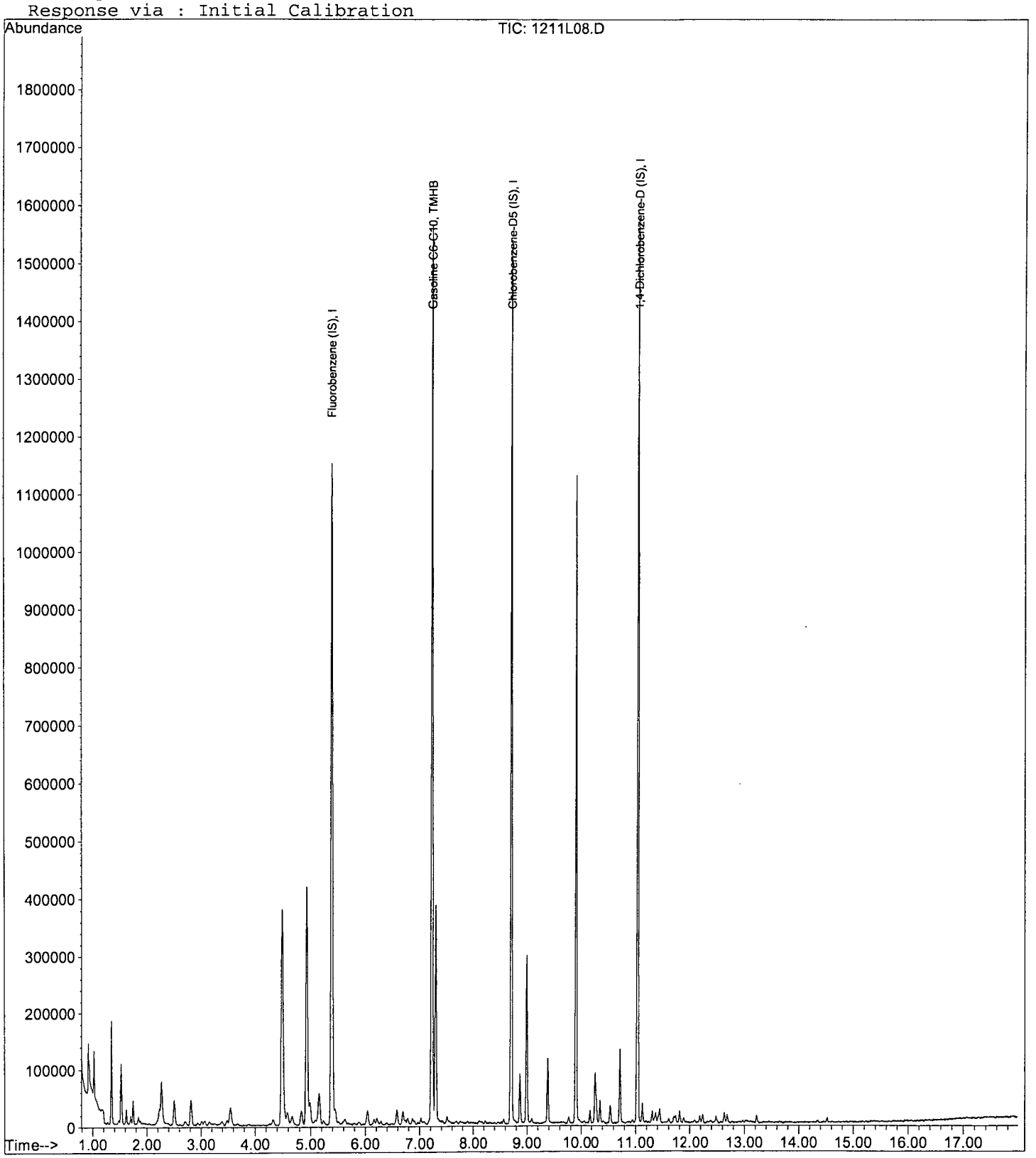
Quantitation Report

Data File : M:\LOKI\DATA\161210\1211L08.D
Acq On : 11 Dec 16 13:35
Sample : 100ug/L GAS STD 12/11/16C
Misc : W IS&S 11/21/16, 11/14/16

Vial: 8
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 13 8:44 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1211L09.D Vial: 9
Acq On : 11 Dec 16 14:03 Operator: PM,DG,SV,CMM
Sample : 300ug/L GAS STD 12/11/16D Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:42 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:37:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1169273	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1551836	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1654152	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	23321195m	303.70347	ppb	100

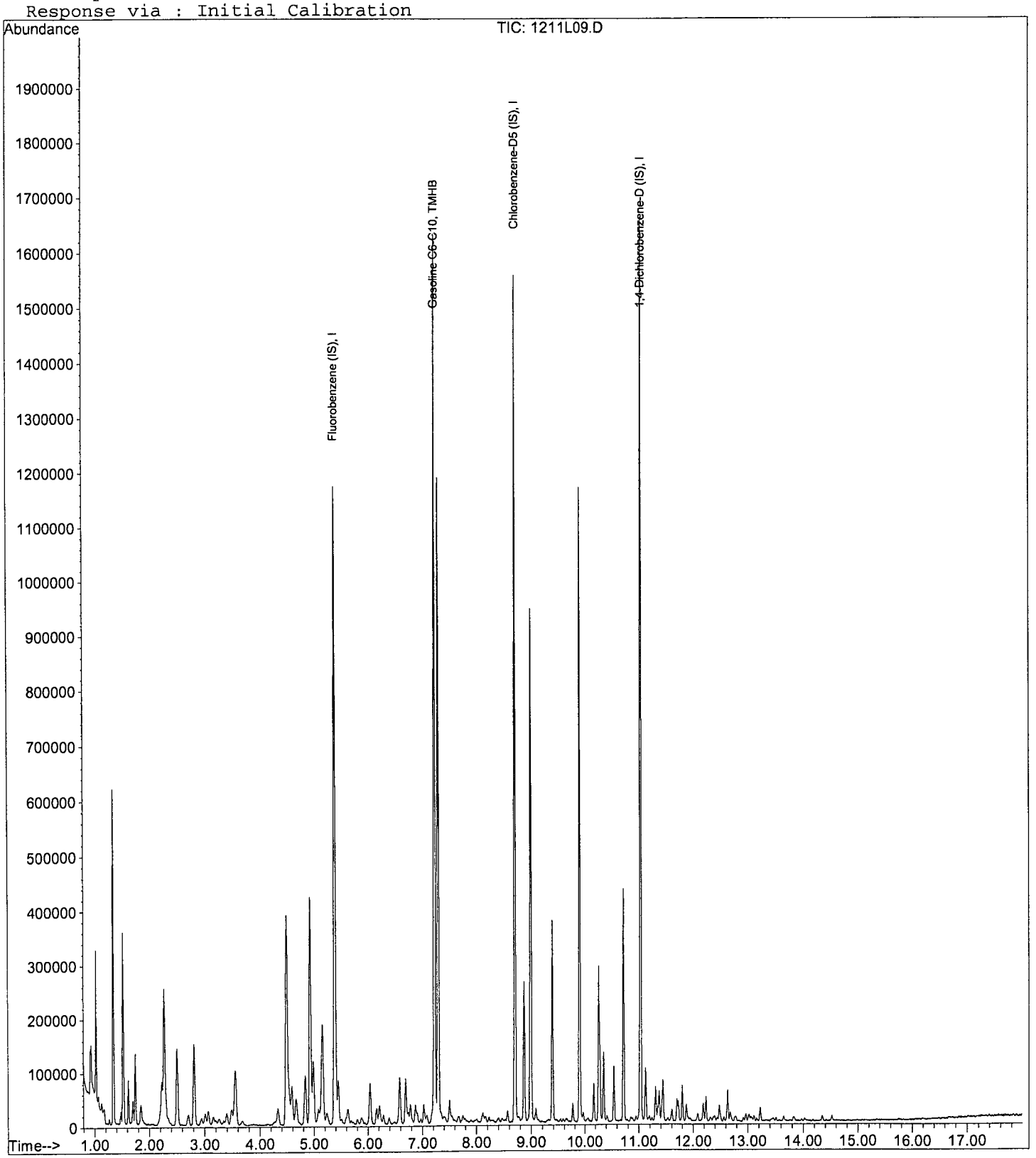
(#) = qualifier out of range (m) = manual integration
1211L09.D LGAS6Z11.M Wed Dec 14 11:25:20 2016 Page 1

Quantitation Report

Data File : M:\LOKI\DATA\161210\1211L09.D Vial: 9
Acq On : 11 Dec 16 14:03 Operator: PM,DG,SV,CMM
Sample : 300ug/L GAS STD 12/11/16D Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:42 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1211L10.D Vial: 10
Acq On : 11 Dec 16 14:32 Operator: PM,DG,SV,CMM
Sample : 600ug/L GAS STD 12/11/16E Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:41 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:37:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1208734	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1596204	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1715661	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.29	TIC	36730733m	604.65448	ppb	100

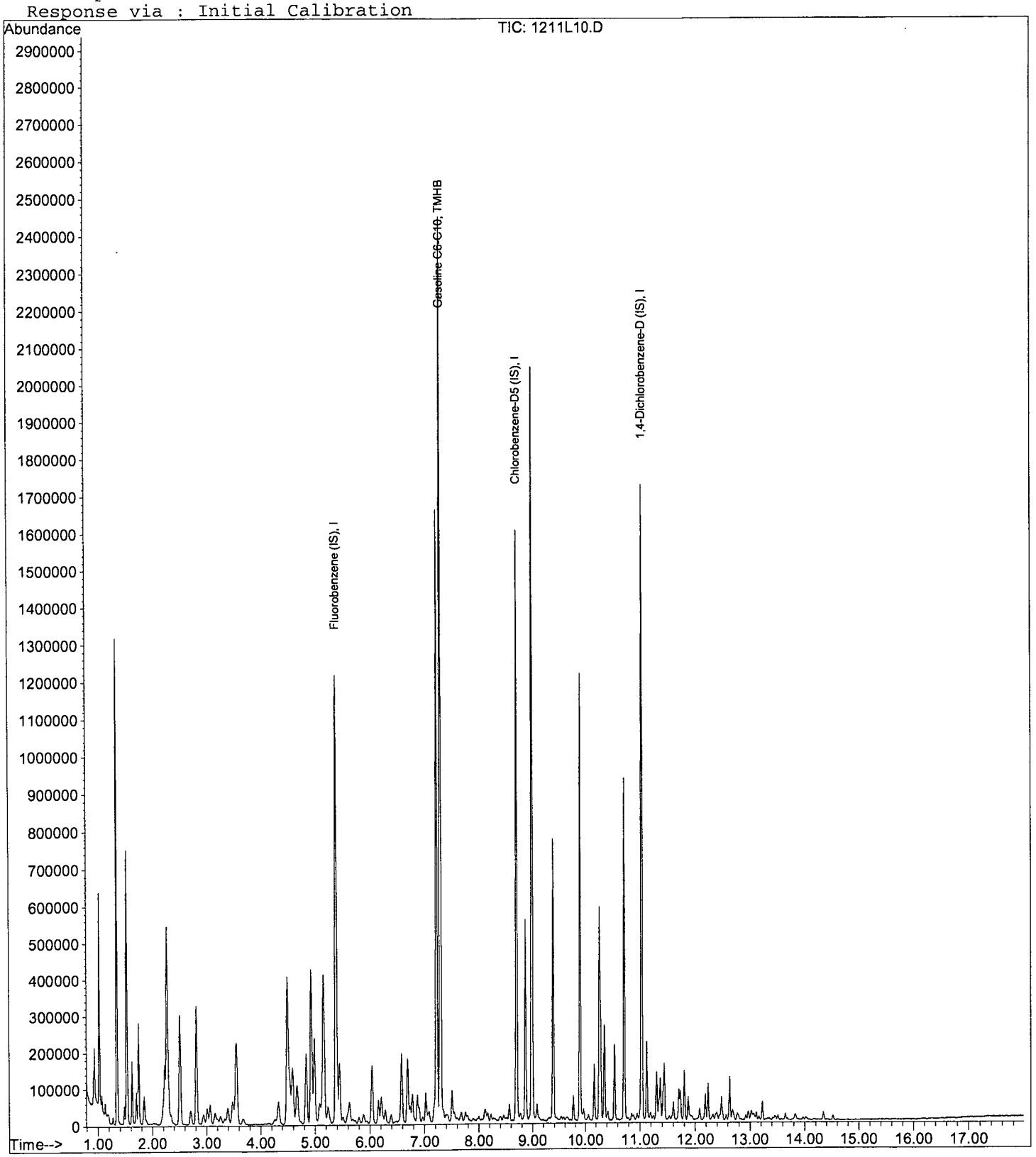
(#) = qualifier out of range (m) = manual integration
1211L10.D LGAS6Z11.M Wed Dec 14 11:25:25 2016 Page 1

Quantitation Report

Data File : M:\LOKI\DATA\161210\1211L10.D Vial: 10
Acq On : 11 Dec 16 14:32 Operator: PM,DG,SV,CMM
Sample : 600ug/L GAS STD 12/11/16E Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:41 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1211L11.D Vial: 11
Acq On : 11 Dec 16 15:00 Operator: PM,DG,SV,CMM
Sample : 800ug/L GAS STD 12/11/16F Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:40 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:37:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1210565	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1627461	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1718776	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.29	TIC	45367431m	808.93848	ppb	100

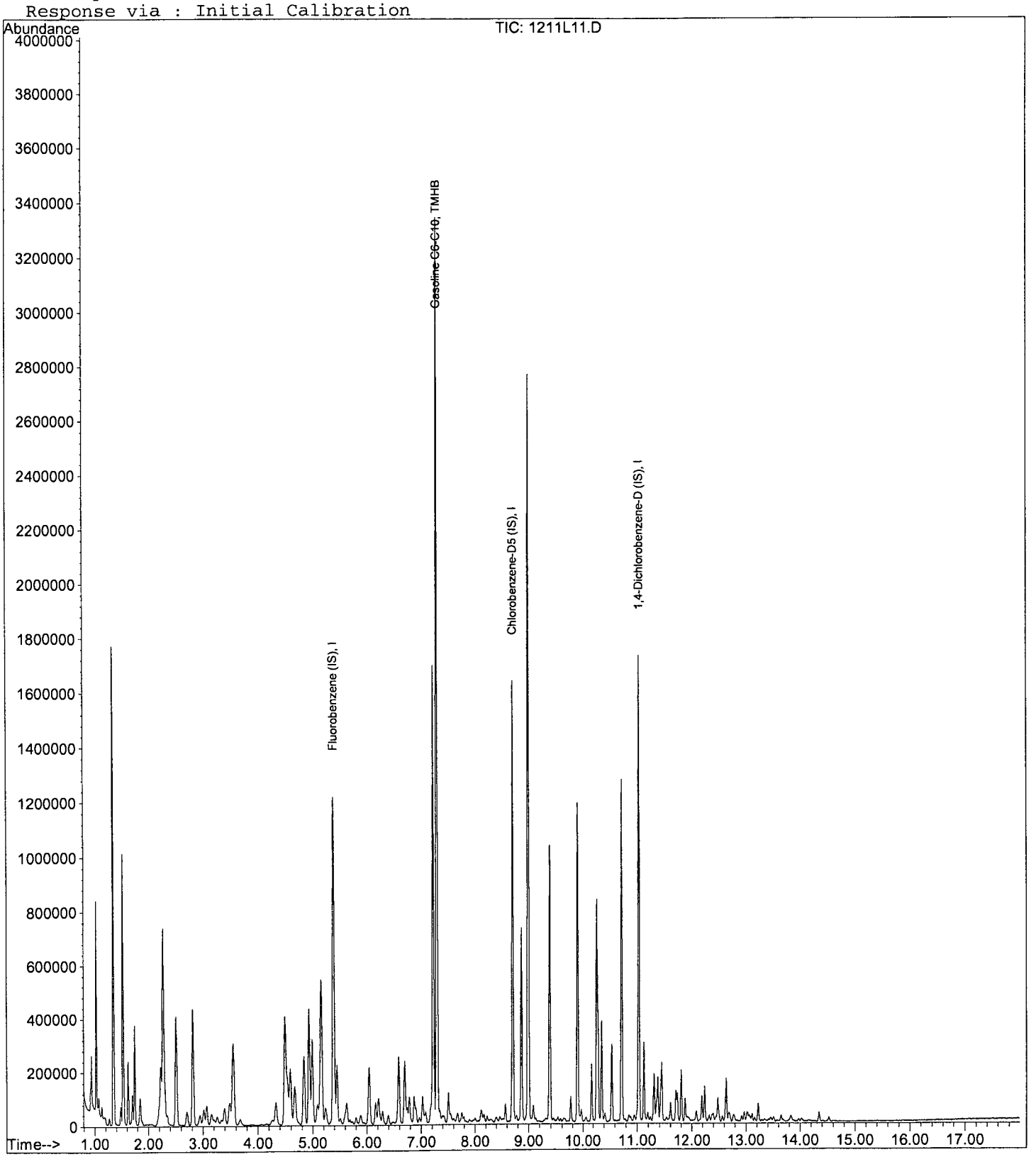
(#) = qualifier out of range (m) = manual integration
1211L11.D LGAS6Z11.M Wed Dec 14 11:25:28 2016 Page 1

Quantitation Report

Data File : M:\LOKI\DATA\161210\1211L11.D Vial: 11
Acq On : 11 Dec 16 15:00 Operator: PM,DG,SV,CMM
Sample : 800ug/L GAS STD 12/11/16F Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:40 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1211L12.D Vial: 12
Acq On : 11 Dec 16 15:28 Operator: PM,DG,SV,CMM
Sample : 1000ug/L GAS STD 12/11/16G Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:39 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:37:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1244641	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1644090	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1763195	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.29	TIC	55171361m	1006.37530	ppb	100

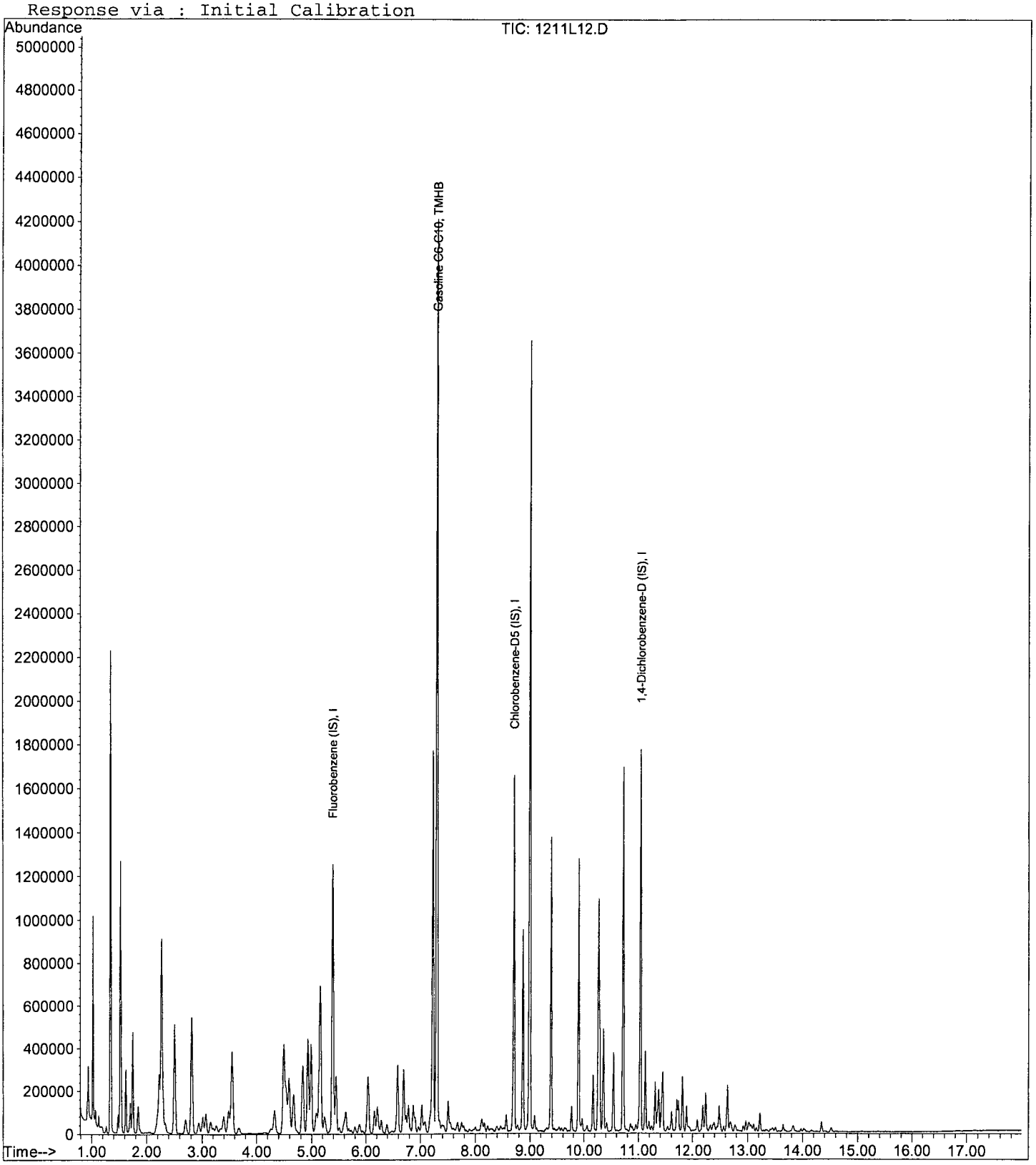
(#) = qualifier out of range (m) = manual integration
1211L12.D LGAS6Z11.M Wed Dec 14 11:25:32 2016 Page 1

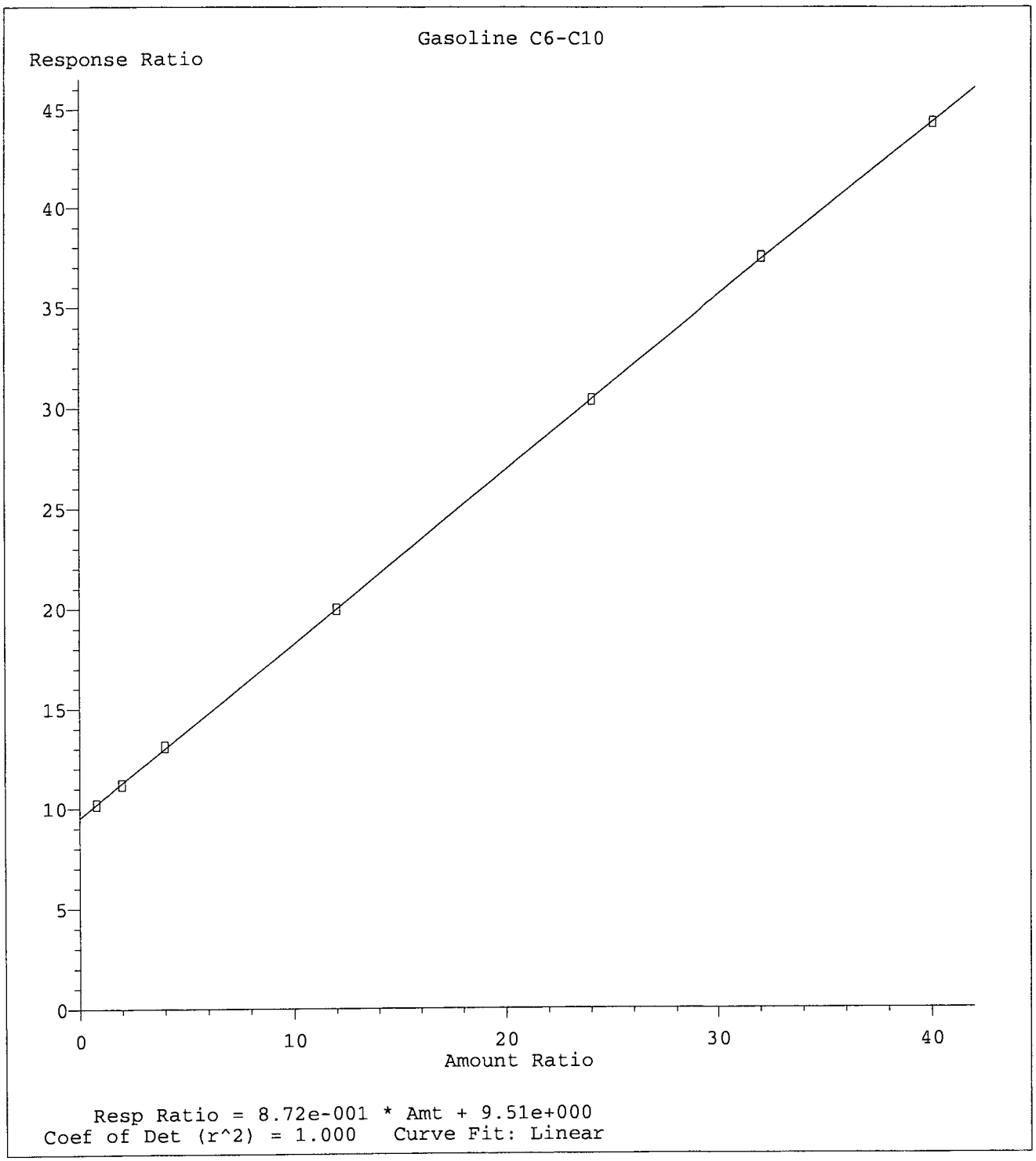
Quantitation Report

Data File : M:\LOKI\DATA\161210\1211L12.D Vial: 12
Acq On : 11 Dec 16 15:28 Operator: PM,DG,SV,CMM
Sample : 1000ug/L GAS STD 12/11/16G Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:39 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration





Method Name: M:\LOKI\DATA\161210\LGAS6Z11.M
Calibration Table Last Updated: Tue Dec 13 08:47:40 2016

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/11/16
Instrument: Loki
Initial Cal. Date: 12/11/16
Data File: 1211L16.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TMHB	Gasoline C6-C10	3.829	1.674	56	TMHBL	1.2
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		Average			56.0		

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1211L16.D Vial: 16
Acq On : 11 Dec 16 17:21 Operator: PM,DG,SV,CMM
Sample : (SS) 300ug/L GAS STD 12/11/16 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:50 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1221661	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1610523	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1685182	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	24545495m	303.64031	ppb	100

(#) = qualifier out of range (m) = manual integration
1211L16.D LGAS6Z11.M Wed Dec 14 11:25:36 2016 Page 1

Quantitation Report

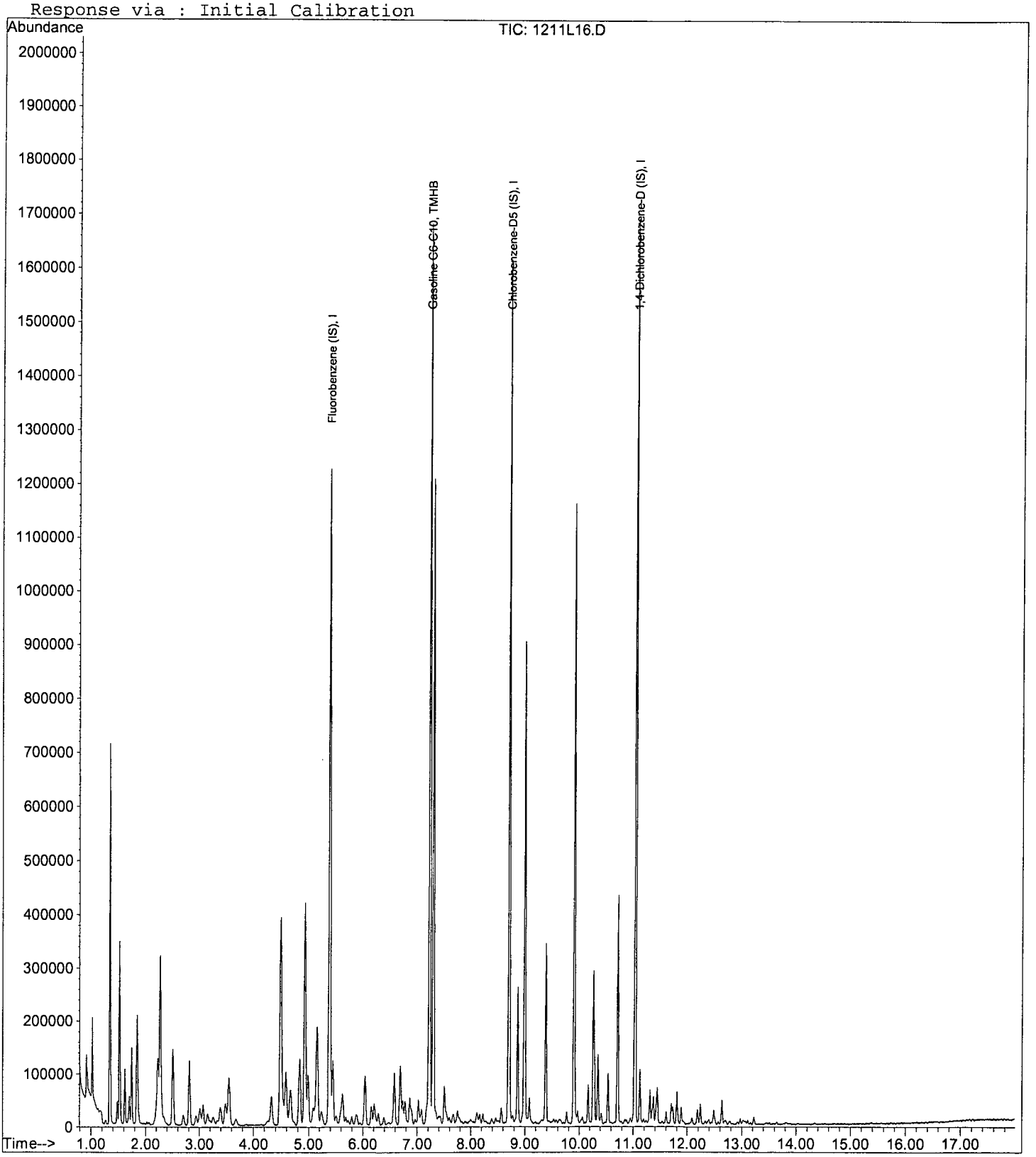
Data File : M:\LOKI\DATA\161210\1211L16.D
Acq On : 11 Dec 16 17:21
Sample : (SS) 300ug/L GAS STD 12/11/16
Misc : W IS&S 11/21/16, 11/14/16

Vial: 16
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 13 8:50 2016

Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/15/16
Instrument: Loki
Initial Cal. Date: 12/10/16
Data File: 1215L05.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	3.829	1.545	60	TMHBL	14
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
5							
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		Average			60.0		

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1215L05.D Vial: 5
Acq On : 15 Dec 16 12:47 Operator: PM,DG,SV,CMM
Sample : 161215A CCV/LCS-1WL 300ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 16 11:05 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1273795	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1685621	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1794197	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	23614765m	259.10	ppb	100

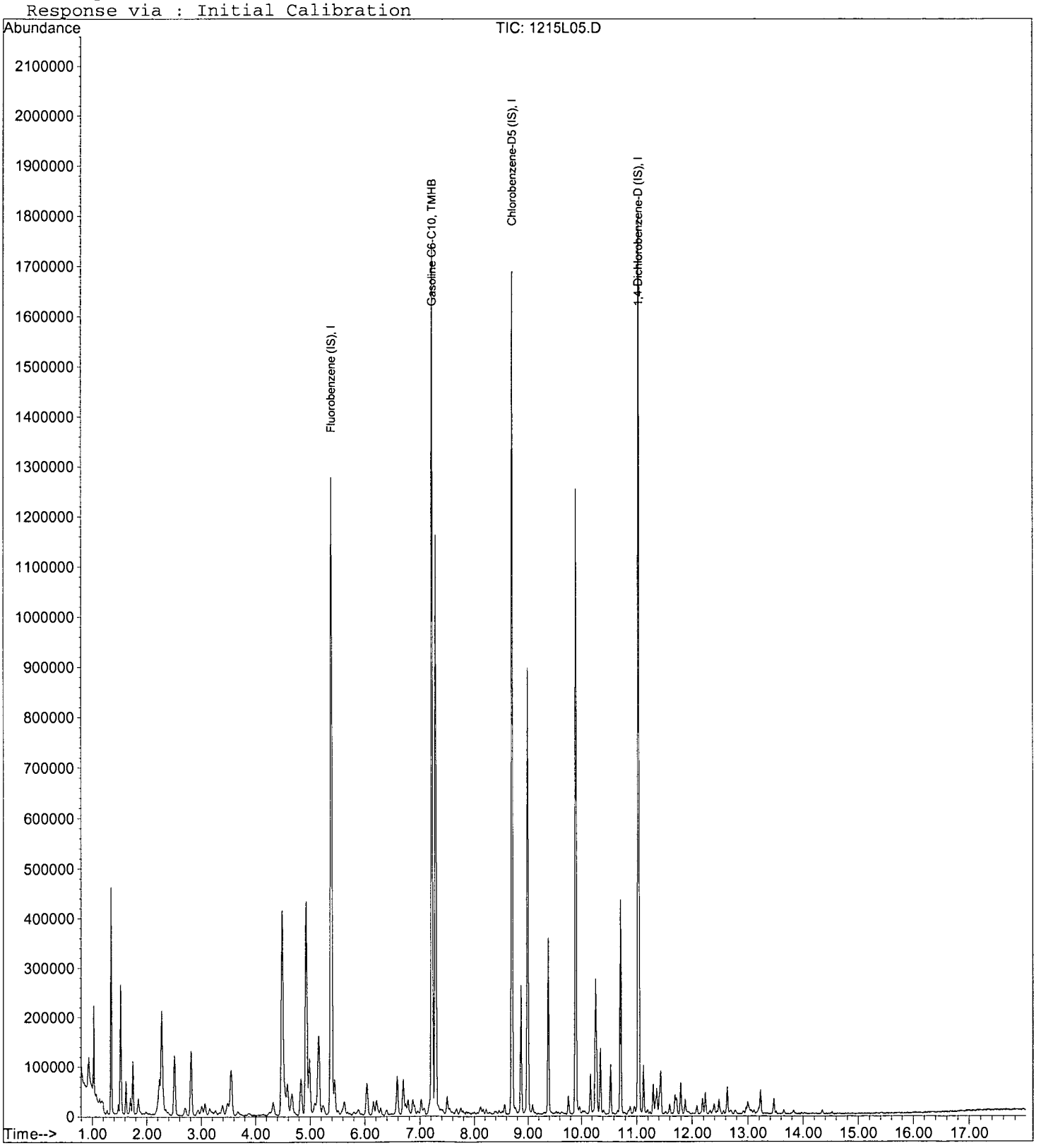
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161210\1215L05.D Vial: 5
Acq On : 15 Dec 16 12:47 Operator: PM,DG,SV,CMM
Sample : 161215A CCV/LCS-1WL 300ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 16 11:05 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/15/16
Instrument: Loki
Initial Cal. Date: 12/10/16
Data File: 1215L05.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	S	Dibromofluoromethane(S)	0.5082	0.5078	0.07	S	
3	S	1,2-DCA-D4(S)	0.5798	0.5615	3.2	S	
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	S	Toluene-D8(S)	1.960	1.971	0.56	S	
6	S	4-Bromofluorobenzene(S)	0.6593	0.6562	0.47	S	
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
8							
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34							
35							
36							
37							
38							
39							
40							
		Average			1.1		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1215L05.D Vial: 5
Acq On : 15 Dec 16 12:47 Operator: PM,DG,SV,CMM
Sample : 161215A CCV/LCS-1WL 300ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 16 11:09 2016 Quant Results File: LSURZ10.RES

Quant Method : M:\LOKI\DATA\161210\LSURZ10.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	601856	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	548800	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	295936	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.49	111	305630	24.98	ppb	0.00
Spiked Amount 25.000			Recovery =	99.932%		
3) 1,2-DCA-D4(S)	4.93	65	337913	24.21	ppb	0.00
Spiked Amount 25.000			Recovery =	96.844%		
5) Toluene-D8(S)	7.22	98	1081448	25.14	ppb	0.00
Spiked Amount 25.000			Recovery =	100.560%		
6) 4-Bromofluorobenzene(S)	9.89	95	360135	24.88	ppb	0.00
Spiked Amount 25.000			Recovery =	99.532%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

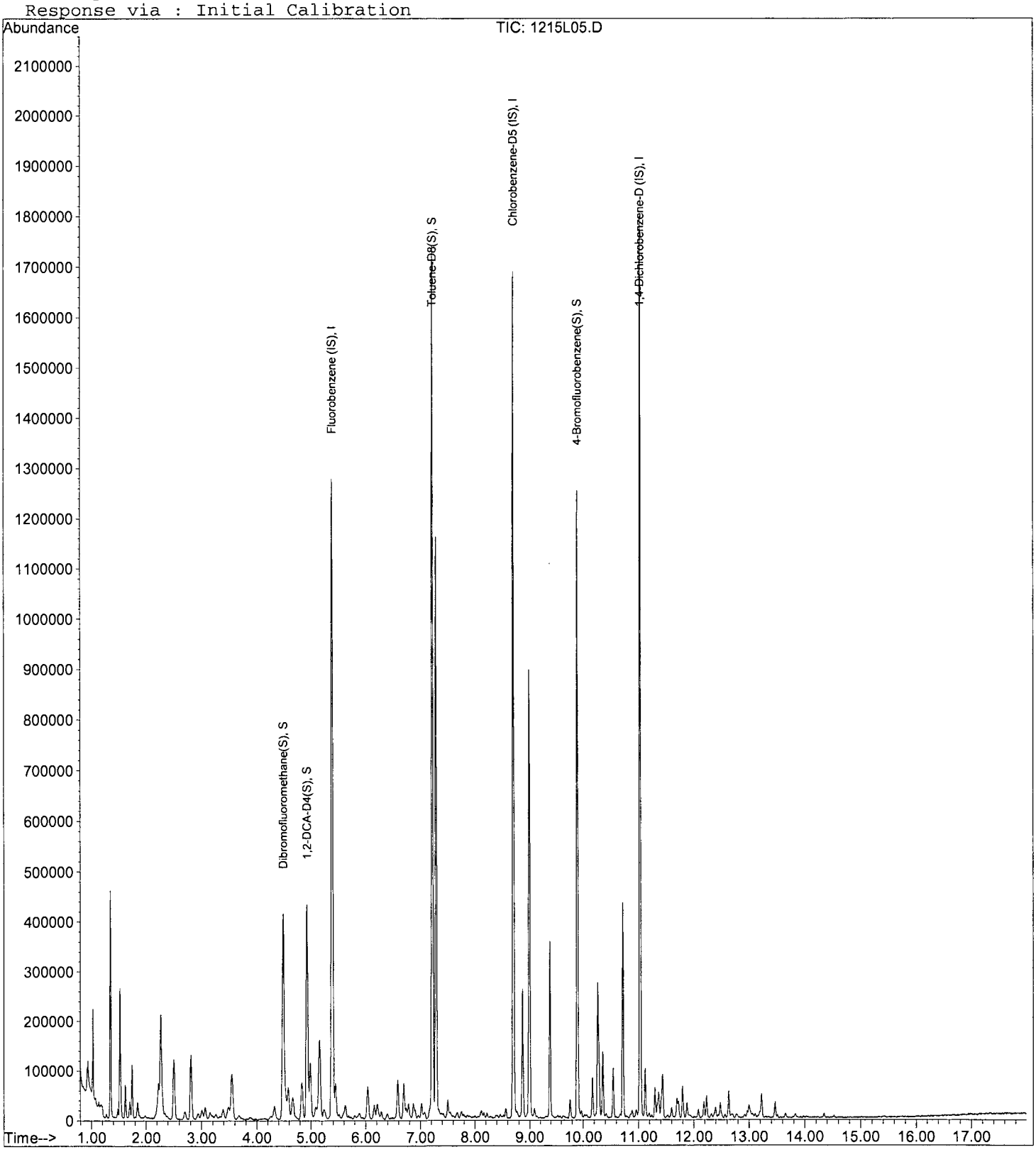
Quantitation Report

Data File : M:\LOKI\DATA\161210\1215L05.D
Acq On : 15 Dec 16 12:47
Sample : 161215A CCV/LCS-1WL 300ug/L
Misc : W IS&S 11/21/16, 11/14/16

Vial: 5
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 16 11:09 2016 Quant Results File: LSURZ10.RES

Method : M:\LOKI\DATA\161210\LSURZ10.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/16/16
Instrument: Loki
Initial Cal. Date: 12/10/16
Data File: 1215L29.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	3.829	1.511	61	TMHBL	18
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
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28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			61.0		

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1215L29.D Vial: 29
Acq On : 16 Dec 16 00:01 Operator: PM,DG,SV,CMM
Sample : Ending CCV GAS 300ug/L 12/15/16 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 16 11:05 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1240203	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1655889	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1756888	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	22488378m	247.45	ppb	100

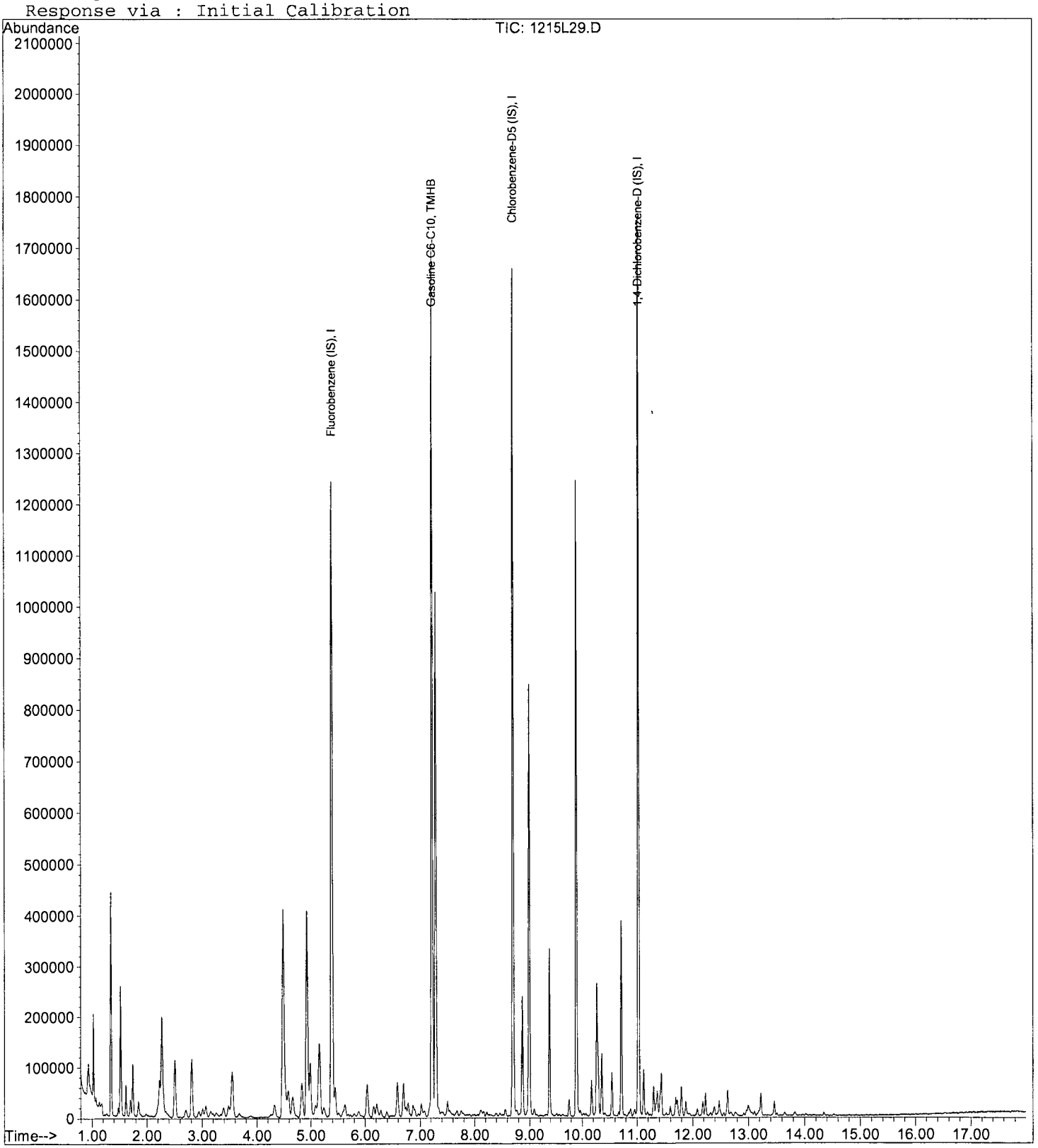
(#) = qualifier out of range (m) = manual integration
1215L29.D LGAS6Z11.M Wed Dec 28 16:47:23 2016 Page 1

Quantitation Report

Data File : M:\LOKI\DATA\161210\1215L29.D Vial: 29
Acq On : 16 Dec 16 00:01 Operator: PM,DG,SV,CMM
Sample : Ending CCV GAS 300ug/L 12/15/16 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 16 11:05 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/16/16
Instrument: Loki
Initial Cal. Date: 12/10/16
Data File: 1215L29.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	S	Dibromofluoromethane(S)	0.5082	0.5201	2.4	S	
3	S	1,2-DCA-D4(S)	0.5798	0.5536	4.5	S	
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	S	Toluene-D8(S)	1.960	1.931	1.4	S	
6	S	4-Bromofluorobenzene(S)	0.6593	0.6550	0.65	S	
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
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30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			2.2		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1215L29.D
Acq On : 16 Dec 16 00:01
Sample : Ending CCV GAS 300ug/L 12/15/16
Misc : W IS&S 11/21/16, 11/14/16

Vial: 29
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 16 11:09 2016 Quant Results File: LSURZ10.RES

Quant Method : M:\LOKI\DATA\161210\LSURZ10.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	587456	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	546944	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	289728	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	305562	25.59	ppb	0.00
Spiked Amount 25.000			Recovery = 102.356%			
3) 1,2-DCA-D4(S)	4.92	65	325237	23.87	ppb	0.00
Spiked Amount 25.000			Recovery = 95.496%			
5) Toluene-D8(S)	7.22	98	1056387	24.64	ppb	0.00
Spiked Amount 25.000			Recovery = 98.564%			
6) 4-Bromofluorobenzene(S)	9.89	95	358272	24.84	ppb	0.00
Spiked Amount 25.000			Recovery = 99.356%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

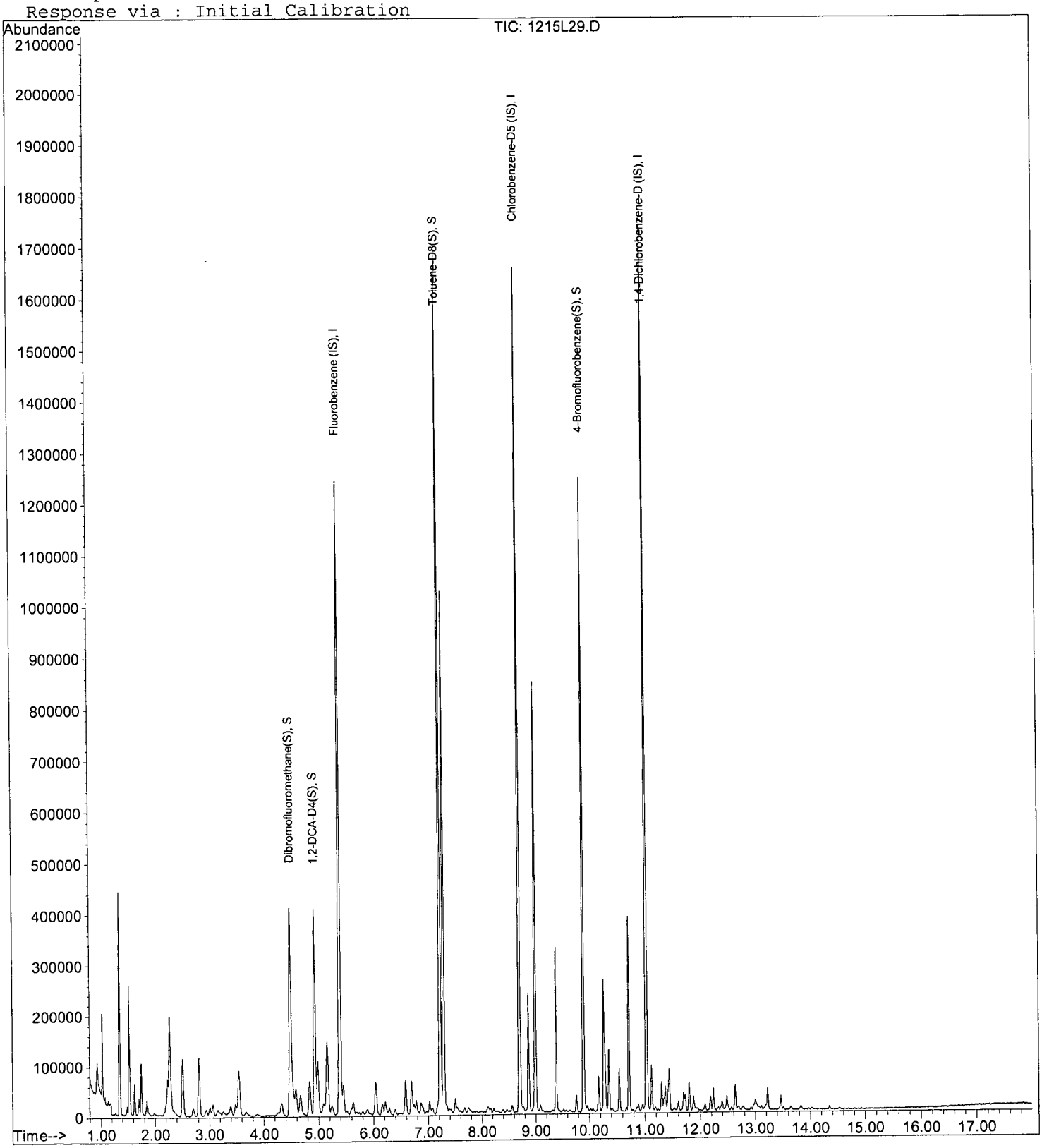
Quantitation Report

Data File : M:\LOKI\DATA\161210\1215L29.D
Acq On : 16 Dec 16 00:01
Sample : Ending CCV GAS 300ug/L 12/15/16
Misc : W IS&S 11/21/16, 11/14/16

Vial: 29
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 16 11:09 2016 Quant Results File: LSURZ10.RES

Method : M:\LOKI\DATA\161210\LSURZ10.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration



ORGANICS
Raw Data

APPL, INC.

Method Blank
EPA 8260B GRO WATER

Blank Name/QCG: **161215W-47345 - 214691**
Batch ID: #GRO86-161215AL

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	12/15/16	12/15/16
BLANK	SURROGATE: 4-BROMOFLUORO	94.108	85-114			%	12/15/16	12/15/16

Quant Method: LGAS6Z11.M
Run #: 1215L09
Instrument: Loki
Sequence: 161210
Initials: SV

GC SC-Blank-REG MDLs-DOD
Printed: 01/03/17 1:56:02 PM

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1215L09.D Vial: 9
Acq On : 15 Dec 16 14:40 Operator: PM,DG,SV,CMM
Sample : 161214A BLK-1WL Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 27 14:10 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1204734	25.00 ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1644922	25.00 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1688417	25.00 ppb	0.00

System Monitoring Compounds

Target Compounds					Qvalue
2) Gasoline C6-C10	7.22	TIC	8523544m	-69.72 ppb	100

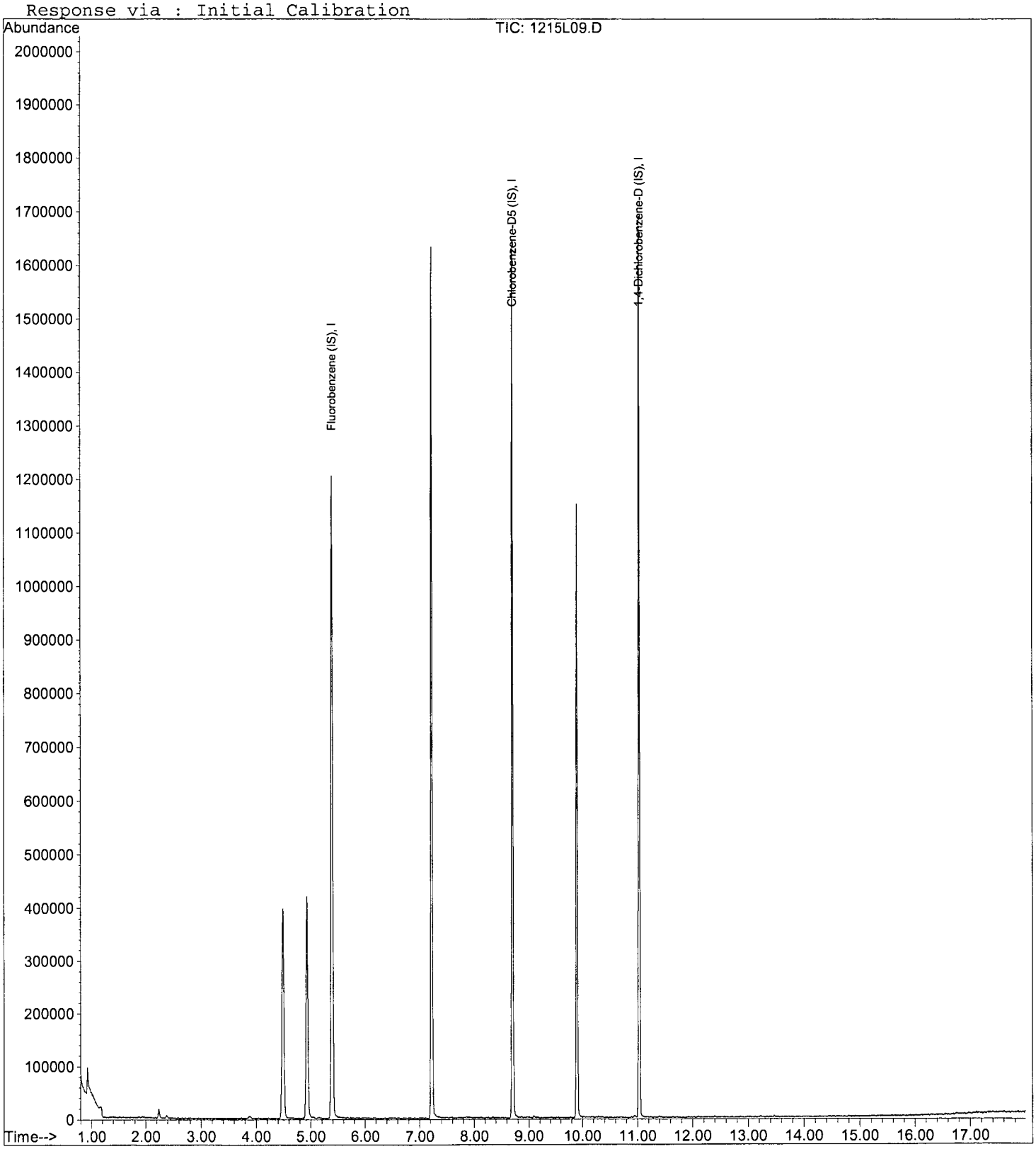
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161210\1215L09.D Vial: 9
Acq On : 15 Dec 16 14:40 Operator: PM,DG,SV,CMM
Sample : 161214A BLK-1WL Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 27 14:10 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1215L09.D Vial: 9
Acq On : 15 Dec 16 14:40 Operator: PM,DG,SV,CMM
Sample : 161214A BLK-1WL Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 16 11:33 2016 Quant Results File: LSURZ10.RES

Quant Method : M:\LOKI\DATA\161210\LSURZ10.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	572416	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	546048	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	278720	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.49	111	299484	25.74	ppb	0.00
Spiked Amount 25.000			Recovery =	102.956%		
3) 1,2-DCA-D4(S)	4.93	65	329153	24.80	ppb	0.00
Spiked Amount 25.000			Recovery =	99.184%		
5) Toluene-D8(S)	7.22	98	1027572	24.01	ppb	0.00
Spiked Amount 25.000			Recovery =	96.032%		
6) 4-Bromofluorobenzene(S)	9.89	95	338791	23.53	ppb	0.00
Spiked Amount 25.000			Recovery =	94.108%		

Target Compounds Qvalue

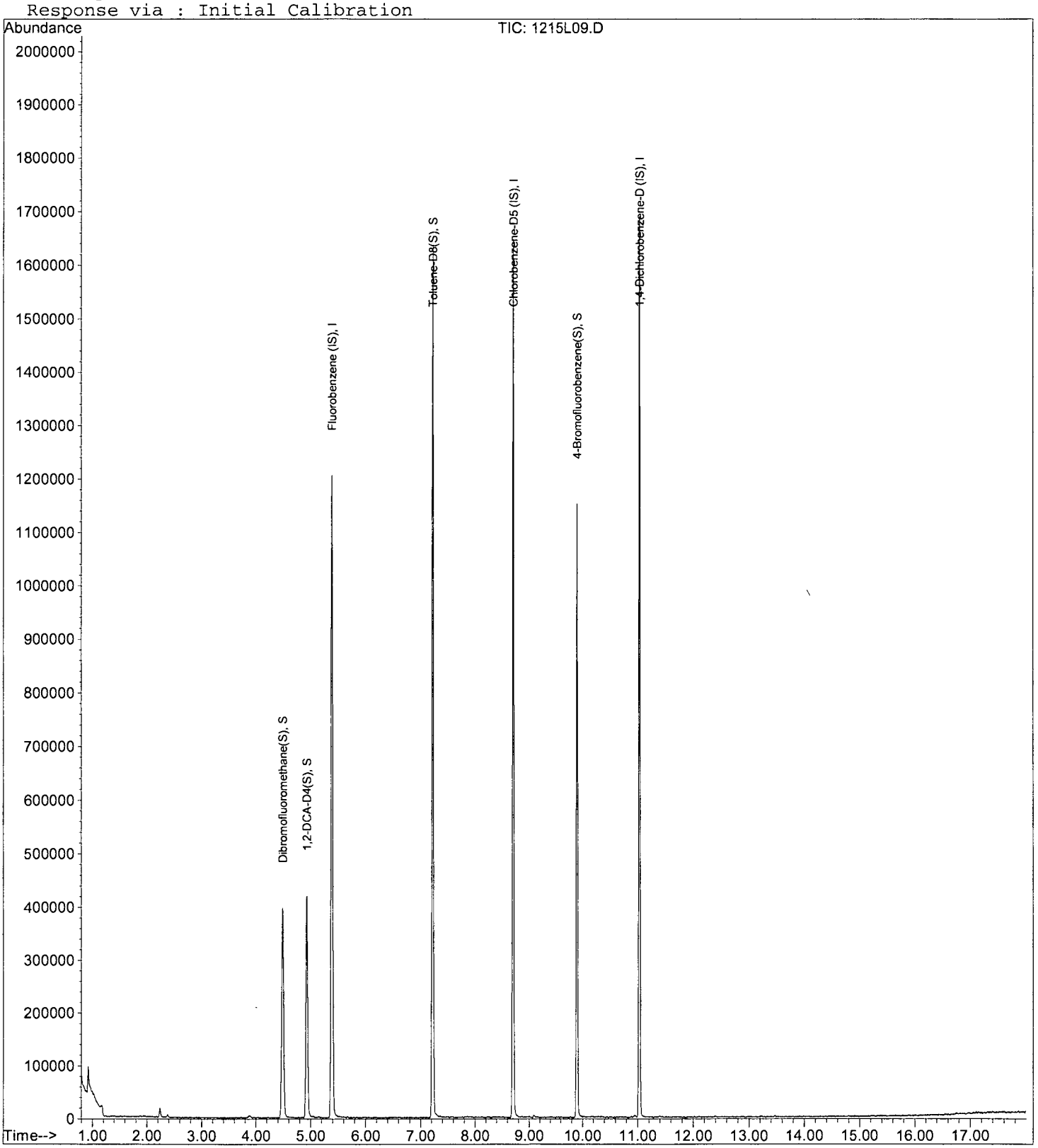
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161210\1215L09.D Vial: 9
Acq On : 15 Dec 16 14:40 Operator: PM,DG,SV,CMM
Sample : 161214A BLK-1WL Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 16 11:33 2016 Quant Results File: LSURZ10.RES

Method : M:\LOKI\DATA\161210\LSURZ10.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration



Laboratory Control Spike Recovery
EPA 8260B GRO WATER

APPL ID: **161215W-47345 LCS - 214691**
Batch ID: #GRO86-161215AL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
GASOLINE RANGE ORGANICS	300	259	86.3	78-122
SURROGATE: 4-BROMOFLUOROBENZE	25.0	24.9	99.6	85-114

Comments: _____

Primary	SPK
Quant Method :	LGAS6Z11.M
Extraction Date :	12/15/16
Analysis Date :	12/15/16
Instrument :	Loki
Run :	1215L05
Initials :	SV

Printed: 12/27/16 2:18:24 PM
APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1215L05.D
Acq On : 15 Dec 16 12:47
Sample : 161215A CCV/LCS-1WL 300ug/L
Misc : W IS&S 11/21/16, 11/14/16

Vial: 5
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 16 11:05 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1273795	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1685621	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1794197	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	23614765m	259.10	ppb	100

(#) = qualifier out of range (m) = manual integration

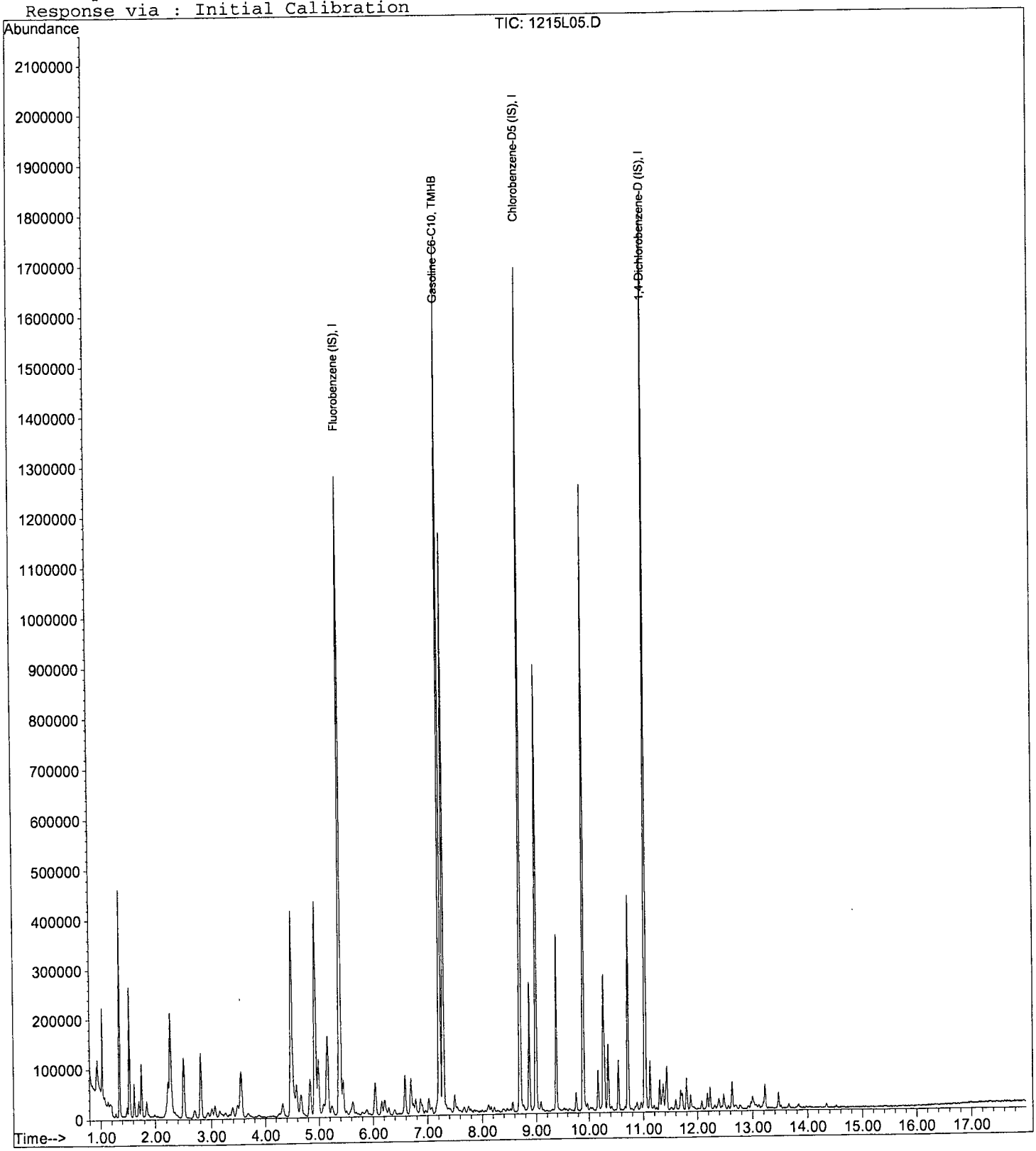
Quantitation Report

Data File : M:\LOKI\DATA\161210\1215L05.D
Acq On : 15 Dec 16 12:47
Sample : 161215A CCV/LCS-1WL 300ug/L
Misc : W IS&S 11/21/16, 11/14/16

Vial: 5
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 16 11:05 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1215L05.D Vial: 5
Acq On : 15 Dec 16 12:47 Operator: PM,DG,SV,CMM
Sample : 161215A CCV/LCS-1WL 300ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 16 11:09 2016 Quant Results File: LSURZ10.RES

Quant Method : M:\LOKI\DATA\161210\LSURZ10.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	601856	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	548800	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	295936	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.49	111	305630	24.98	ppb	0.00
Spiked Amount 25.000			Recovery =	99.932%		
3) 1,2-DCA-D4(S)	4.93	65	337913	24.21	ppb	0.00
Spiked Amount 25.000			Recovery =	96.844%		
5) Toluene-D8(S)	7.22	98	1081448	25.14	ppb	0.00
Spiked Amount 25.000			Recovery =	100.560%		
6) 4-Bromofluorobenzene(S)	9.89	95	360135	24.88	ppb	0.00
Spiked Amount 25.000			Recovery =	99.532%		

Target Compounds Qvalue

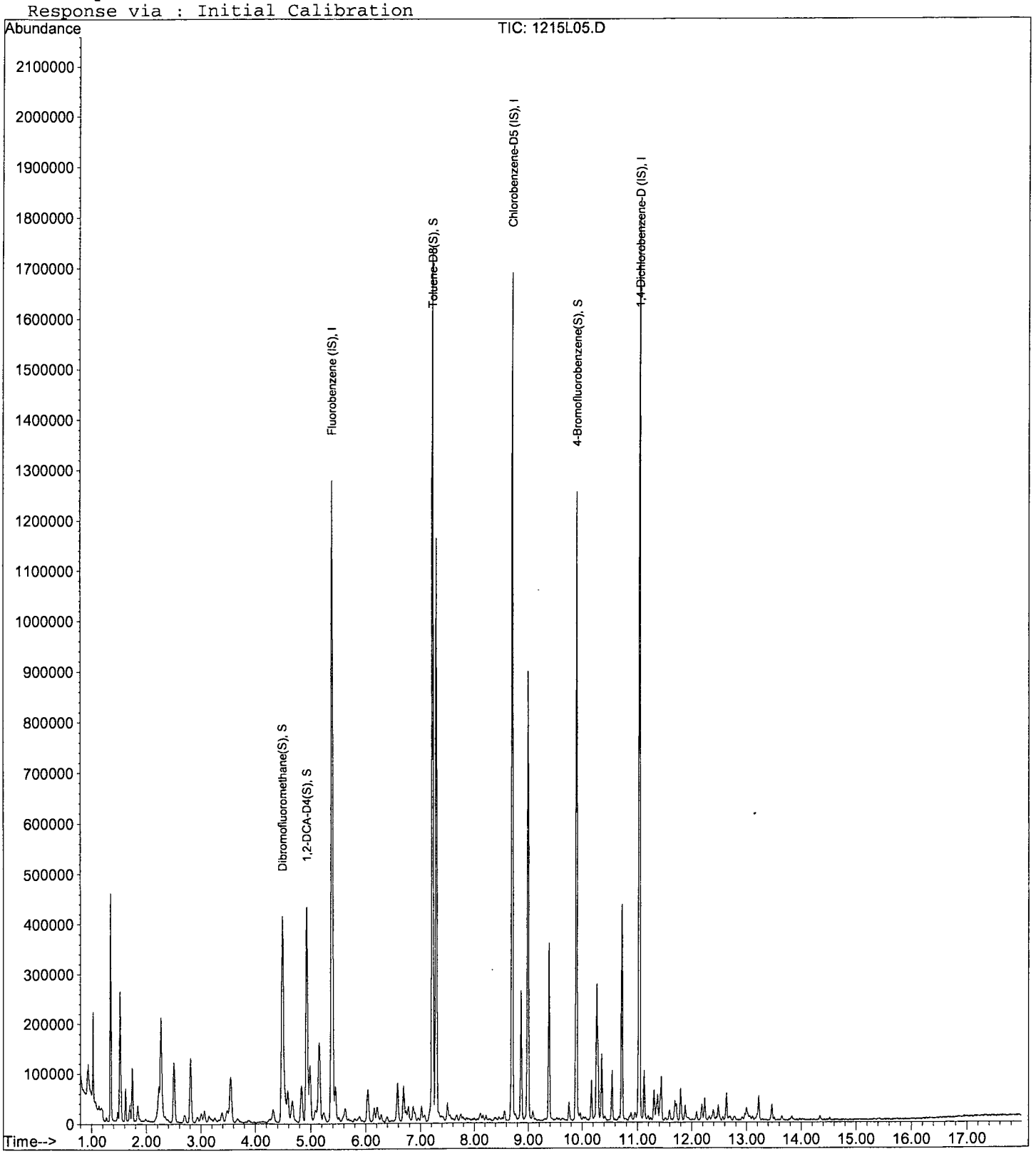
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161210\1215L05.D Vial: 5
Acq On : 15 Dec 16 12:47 Operator: PM,DG,SV,CMM
Sample : 161215A CCV/LCS-1WL 300ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 16 11:09 2016 Quant Results File: LSURZ10.RES

Method : M:\LOKI\DATA\161210\LSURZ10.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1215L26.D Vial: 26
Acq On : 15 Dec 16 22:37 Operator: PM,DG,SV,CMM
Sample : AZ47345W456 MS-1WL 300ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 16 11:07 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1229553	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1620968	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1725989	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	22394563m	249.76	ppb	100

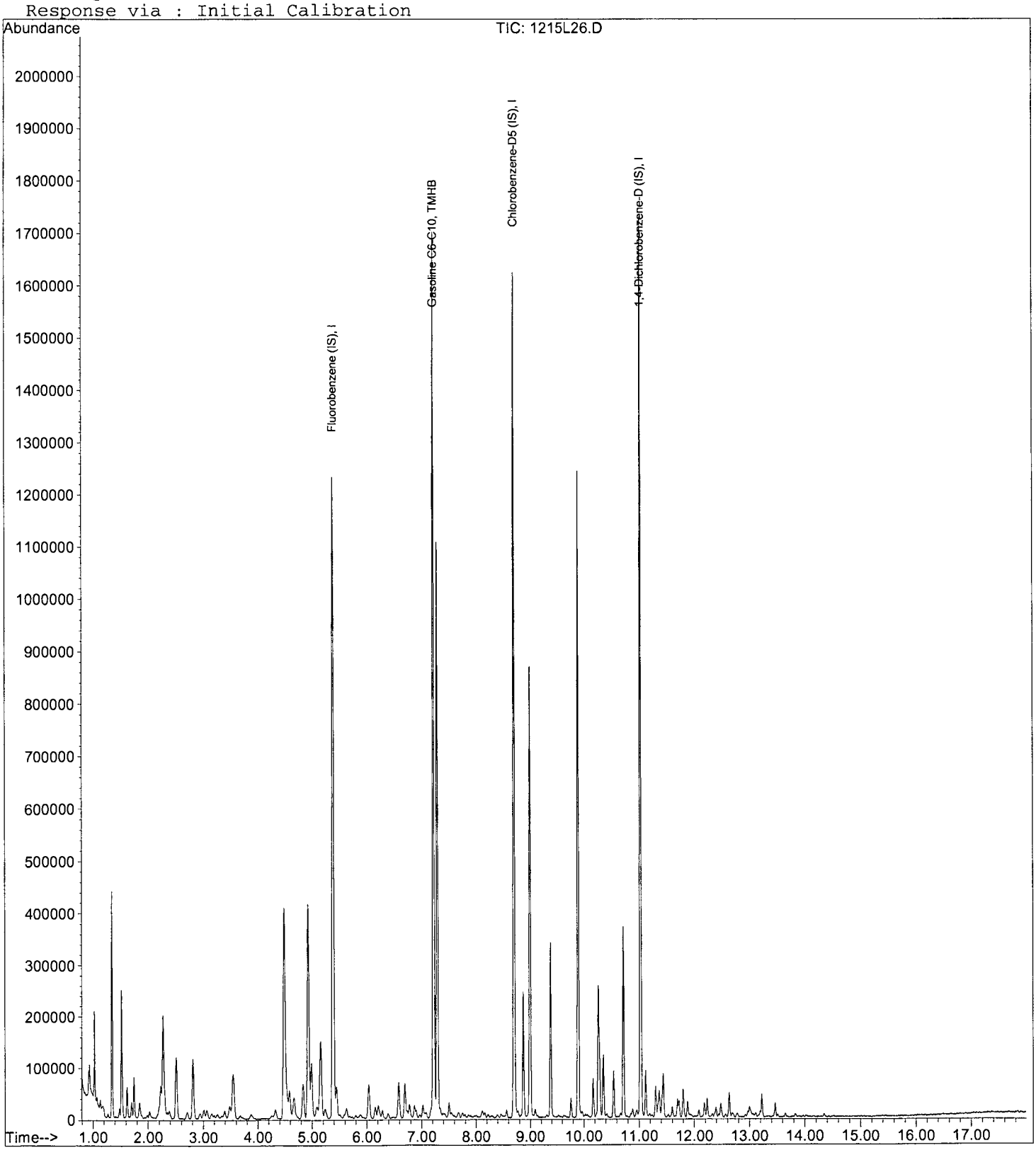
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161210\1215L26.D Vial: 26
Acq On : 15 Dec 16 22:37 Operator: PM,DG,SV,CMM
Sample : AZ47345W456 MS-1WL 300ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 16 11:07 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1215L26.D
Acq On : 15 Dec 16 22:37
Sample : AZ47345W456 MS-1WL 300ug/L
Misc : W IS&S 11/21/16, 11/14/16

Vial: 26
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 16 11:27 2016 Quant Results File: LSURZ10.RES

Quant Method : M:\LOKI\DATA\161210\LSURZ10.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	581760	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	535488	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	288704	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	300534	25.41	ppb	0.00
Spiked Amount 25.000			Recovery =	101.660%		
3) 1,2-DCA-D4(S)	4.93	65	331093	24.54	ppb	0.00
Spiked Amount 25.000			Recovery =	98.164%		
5) Toluene-D8(S)	7.22	98	1059080	25.23	ppb	0.00
Spiked Amount 25.000			Recovery =	100.928%		
6) 4-Bromofluorobenzene(S)	9.89	95	356054	25.21	ppb	0.00
Spiked Amount 25.000			Recovery =	100.852%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

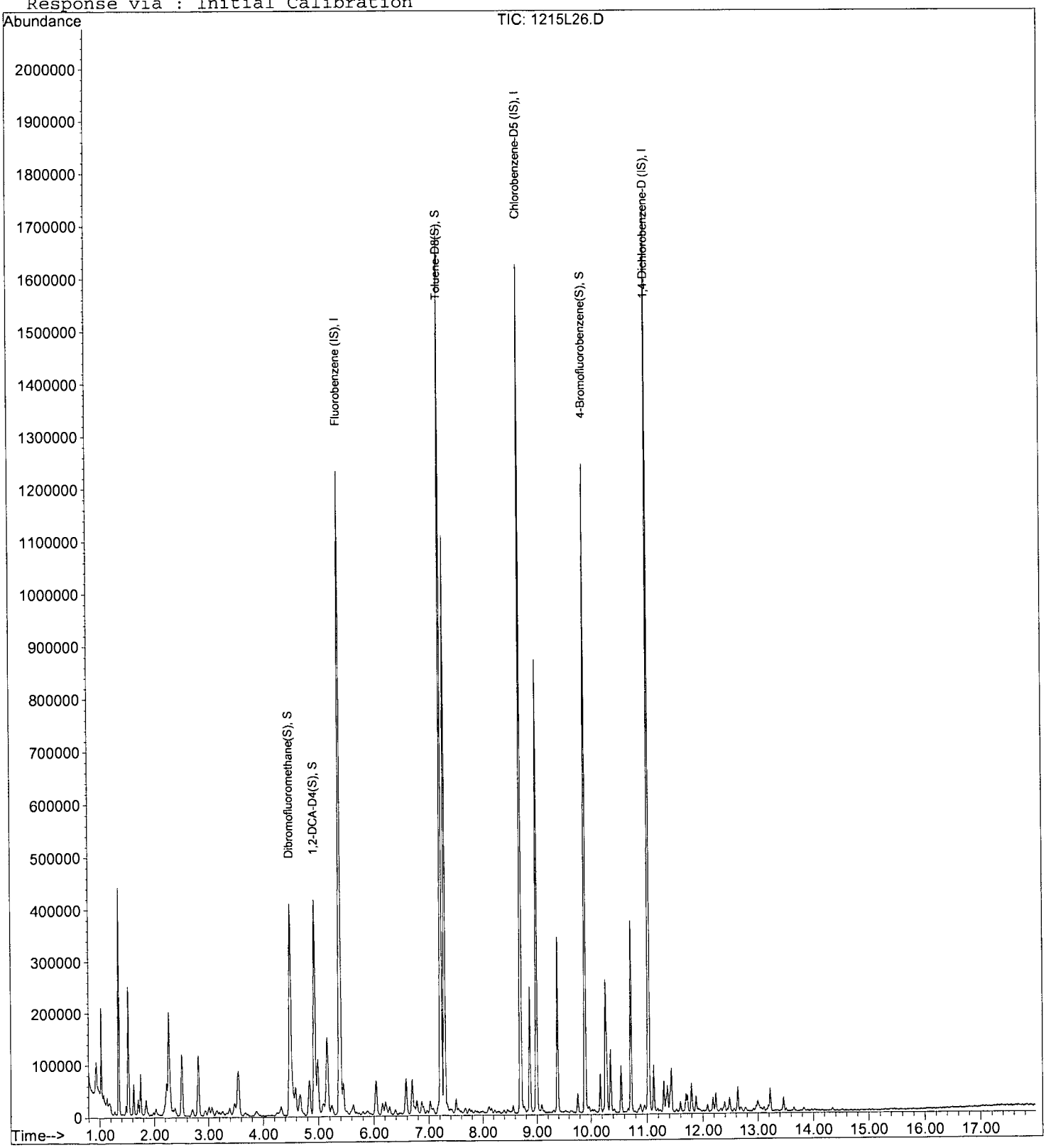
Quantitation Report

Data File : M:\LOKI\DATA\161210\1215L26.D
Acq On : 15 Dec 16 22:37
Sample : AZ47345W456 MS-1WL 300ug/L
Misc : W IS&S 11/21/16, 11/14/16

Vial: 26
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 16 11:27 2016 Quant Results File: LSURZ10.RES

Method : M:\LOKI\DATA\161210\LSURZ10.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1215L27.D Vial: 27
Acq On : 15 Dec 16 23:05 Operator: PM,DG,SV,CMM
Sample : AZ47345W456 MSD-1WL 300ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 16 11:07 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1232431	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1627371	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1750739	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	22335982m	247.18	ppb	100

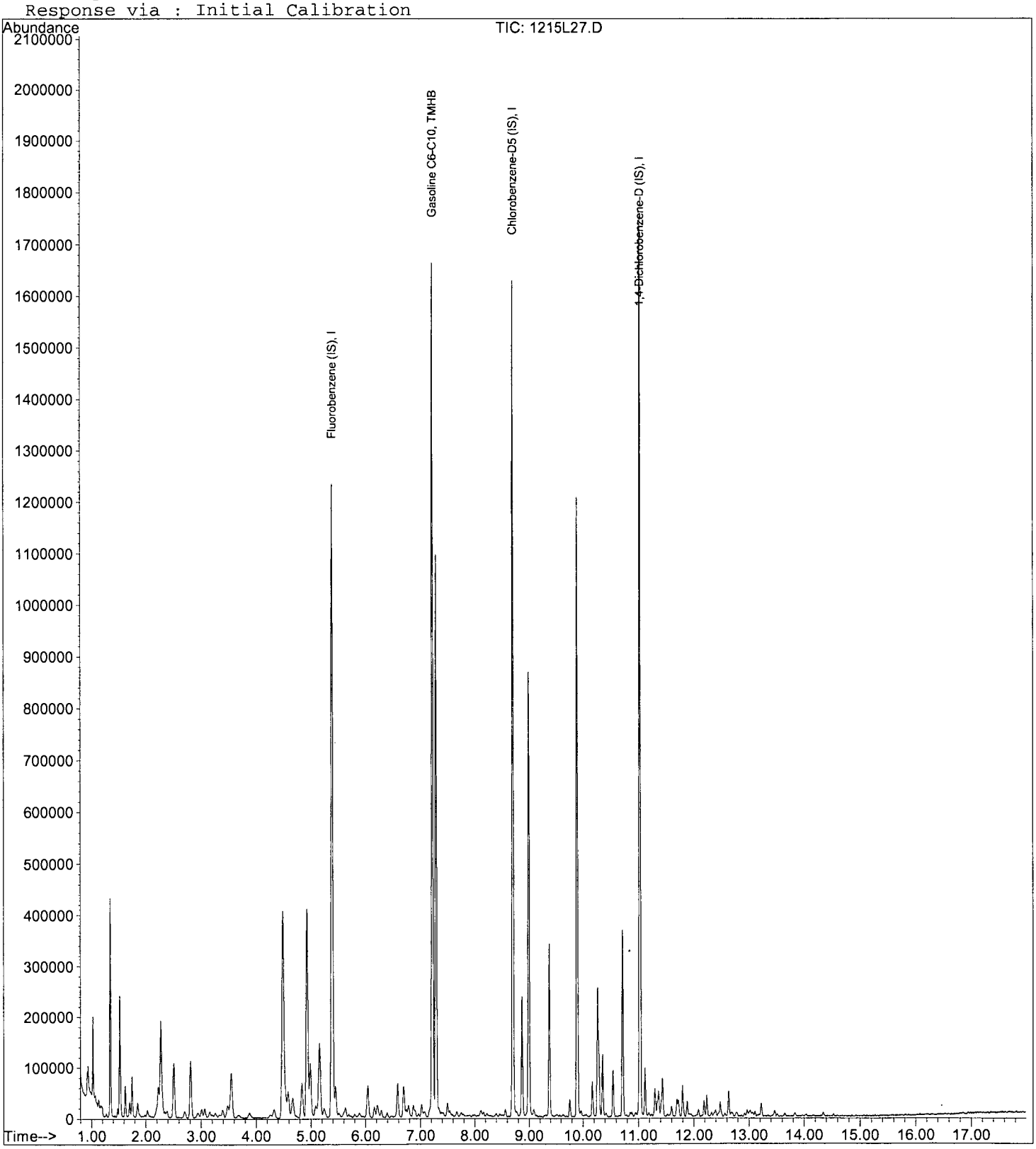
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161210\1215L27.D Vial: 27
Acq On : 15 Dec 16 23:05 Operator: PM,DG,SV,CMM
Sample : AZ47345W456 MSD-1WL 300ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 16 11:07 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161210\1215L27.D
Acq On : 15 Dec 16 23:05
Sample : AZ47345W456 MSD-1WL 300ug/L
Misc : W IS&S 11/21/16, 11/14/16

Vial: 27
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 16 11:27 2016 Quant Results File: LSURZ10.RES

Quant Method : M:\LOKI\DATA\161210\LSURZ10.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	590016	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	538880	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	288576	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.49	111	301252	25.12	ppb	0.00
Spiked Amount 25.000			Recovery =	100.476%		
3) 1,2-DCA-D4(S)	4.93	65	329942	24.11	ppb	0.00
Spiked Amount 25.000			Recovery =	96.456%		
5) Toluene-D8(S)	7.22	98	1046065	24.77	ppb	0.00
Spiked Amount 25.000			Recovery =	99.060%		
6) 4-Bromofluorobenzene(S)	9.89	95	354729	24.96	ppb	0.00
Spiked Amount 25.000			Recovery =	99.844%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

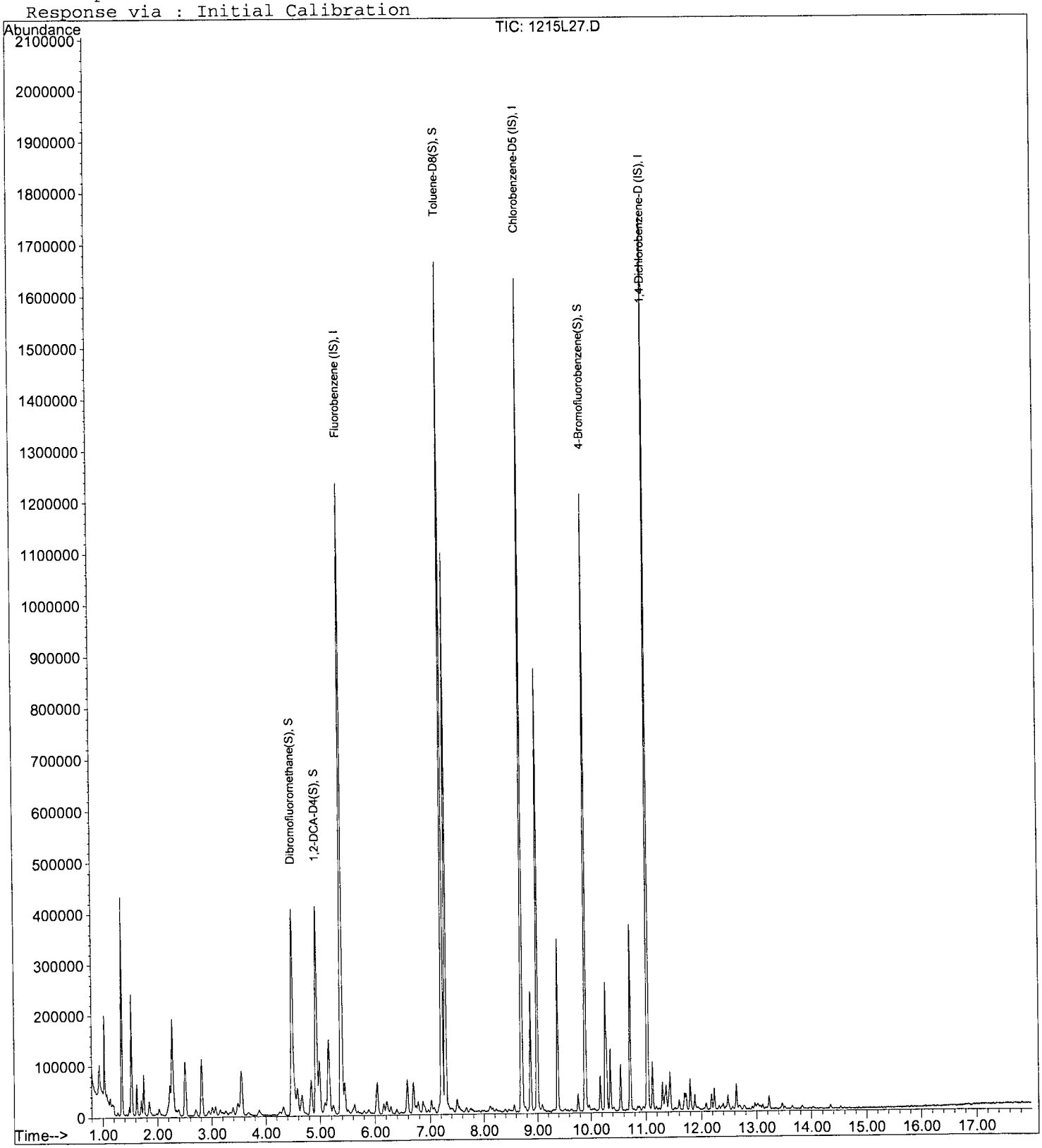
Quantitation Report

Data File : M:\LOKI\DATA\161210\1215L27.D
Acq On : 15 Dec 16 23:05
Sample : AZ47345W456 MSD-1WL 300ug/L
Misc : W IS&S 11/21/16, 11/14/16

Vial: 27
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 16 11:27 2016 Quant Results File: LSURZ10.RES

Method : M:\LOKI\DATA\161210\LSURZ10.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 09:56:19 2016
Response via : Initial Calibration



Volatile Standard Curve Preparation for 10mL Purge (8260 water)-LOKI										
Exp Date:	11/24/16	5µg/mL	5µg/mL	5µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	250µg/mL	
		Vol Std #9	Vol Std #10	Vol Std #12	Vol Std #7	Vol Std #8	Vol Std #1	Vol Std #2	TBA	
		11/22/16N	11/22/16O	11/22/16P	11/22/16J	11/22/16L	11/22/16K	11/22/16M	11/22/16Q	Final Vol
	Conc.	12/22/16	12/22/16	12/22/16	12/22/16	12/22/16	12/22/16	12/22/16	12/22/16	w/P&T H2O
Date/code	µg/L	ul	ul	ul	ul	ul	ul	ul	ul	mL
11/23/16A-CMM	0.3	3	3	3	n/a	n/a	n/a	n/a	2	50
11/23/16B-CMM	0.5	5	5	5	n/a	n/a	n/a	n/a	5	50
11/23/16C-CMM	1	10	10	10	n/a	n/a	n/a	n/a	10	50
11/23/16D-CMM	2	20	20	20	n/a	n/a	n/a	n/a	15	50
11/23/16E-CMM	5	n/a	n/a	n/a	5	5	5	5	20	50
11/23/16F-CMM	10	n/a	n/a	n/a	10	10	10	10	25	50
11/23/16G-CMM	20	n/a	n/a	n/a	20	20	20	20	30	50
11/23/16H-CMM	40	n/a	n/a	n/a	40	40	40	40	35	50
11/23/16I-CMM	100	n/a	n/a	n/a	100	100	100	100	40	50

PRIMARY STANDARD

12/06/16H							
50ug/ml Vol Work Std #7							
Exp:01/06/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120016-03	Gas Mix	2000	279822-36645	12/06/16A-CMM	02/19/19	100
02SI	020049-02	HEXACHLOROETHANE	1000	254167-36562	12/06/16B-CMM	12/28/17	200
02SI	020228-02	Benzyl Chloride	1000	279824-36573	12/06/16C-CMM	05/24/18	200
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	3500
12/06/16I							
50ug/ml Vol Work Std #1							
Exp:01/06/17					Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	020145-02-02	2-CEVE	2000	288264-37217	11/22/16C-CMM	09/19/19	50
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	1950
12/06/16J							
50ug/ml Vol Work Std #8							
Exp:01/06/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	122039-02	Volatile Mix, 20-29	2000	258033-37168	11/12/16B-CMM	08/17/17	100
02SI	120023-03	VOC'S-54 COMP	2000	271929-36580	11/12/16C-CMM	02/15/18	100
02SI	020232-02	Vinyl Acetate	2000	292241-37193	11/22/16D-CMM	08/01/17	100
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	3700
12/06/16K							
50ug/ml Vol Work Std #2							
Exp:01/06/17							
Supplier	ID #	ID	ug/ml				
02SI	121020-05	HSL'S-Ketone Solution	2000	292248-37204	11/22/16B-CMM	11/08/18	100
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	3900
		12/06/16L					
		5ug/ml Vol Work Std #9					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #7		**12/06/16H**	Exp:01/06/17	200	
		50ug/ml Vol Work Std #8		**12/06/16J**	Exp:01/06/17	200	
		J&T Brand		11/15/16	11/15/17	1600	
		12/06/16M					
		5ug/ml Vol Work Std #10					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #1		**12/06/16I**	Exp:01/06/17	200	
		J&T Brand		11/15/16	11/15/17	1800	
		12/06/16N					
		5ug/ml Vol Work Std #12					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #2		**12/06/16K**	Exp:01/06/17	200	
		J&T Brand		11/15/16	11/15/17	1800	
12/06/16O							
250ug/ml TBA/IBA/Acetonitrile/Cyclohexanone/Acrolein/2-P							
Exp:01/06/17			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
02SI	120166-01	Volatile Mix 4-3	2000	275544-36407	12/06/16D-CMM	03/28/18	500
02SI	020229-09-02	Acrolein	10000	291928-37174	11/22/16E-CMM	12/12/16	100
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	3400

SECONDARY SOURCE

12/06/16P							
50ug/ml VOC Std#4							
Exp:01/06/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120296-01-SS	Custom 8260 Solution	2000	258037-36087	11/03/16D-CMM	08/18/17	50
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	1950
12/06/16Q							
50ug/ml VOC Std#5							
Exp:01/06/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120016-03-SS	8260 Gases(SS)	2000	279826-36674	12/06/16E-CMM	06/01/19	50
02SI	020145-02-02-SS	2-CEVE (SS)	2000	254171-35384	11/22/16G-CMM	06/21/17	50
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	1900
12/06/16R							

50ug/ml VOC Std#6							
Exp:01/06/17							
	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120023-03-SS	VOC'S 54 COMP.	2000	265897-35926	11/12/16H-CMM	11/29/17	50
02SI	020232-02-SS	Vinyl Acetate(SS)	2000	287420-37046	11/22/16H-CMM	11/27/16	50
02SI	020049-02-SS	HEXACHLOROETHANE (SS)	1000	265899-35938	12/06/16F-CMM	11/30/17	100
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	1800
12/06/16S							
250ug/ml TBA/IBA/Acetonitrile/Acrolein/2-P							
Exp:01/06/17			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
02SI	120166-01-SS	VOC Mix 4-3 (SS)	2000	258040-37229	12/06/16G-CMM	08/22/18	250
02SI	020229-09-SS	Acrolein SOLUTION (SS)	10000	291929-37176	11/22/16I-CMM	12/12/16	50
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	1700
8260 water		spiked with		Total Vol			
CCV/LCS	10ug/L Vol Std	10uL of 50ug/ml Std #7		50mL P&T H2O			
Ending CCV		10uL of 50ug/ml Std #8					
		10uL of 50ug/ml Std #1					
		10uL of 50ug/ml Std #2					
		25uL of 250ug/ml Std TBA					
X4 ketones							
LCS	10ug/L Vol Std	10uL of 50ug/ml Std #7		50mL P&T H2O			
		10uL of 50ug/ml Std #8					
		10uL of 50ug/ml Std #1					
		40uL of 50ug/ml Std #2					
		25uL of 250ug/ml Std TBA					
8260 soil		spiked with		Total Vol			
CCV/LCS	50ug/Kg Vol Std	5uL of 50ug/ml Std #7		5mL P&T H2O			
Ending CCV		5uL of 50ug/ml Std #8					
		5uL of 50ug/ml Std #1					
		5uL of 50ug/ml Std #2					
		5uL of 250ug/ml Std TBA					
Matrix spikes are prepared with same standards as ccv (see above) into the sample.							
8260water		spiked with		Total Vol			
SS	10ug/L STD	10uL of 50ug/ml Std #4		50mL P&T H2O			
		10uL of 50ug/ml Std #5					
		10uL of 50ug/ml Std #6					
		25uL of 250ug/ml Std TBA					
8260 SOIL	50ug/Kg STD	5uL of 50ug/ml Std #4		Total Vol			
SS		5uL of 50ug/ml Std #5		5mL P&T H2O			
		5uL of 50ug/ml Std #6					
		5uL of 250ug/ml Std TBA					

Injection Log

Directory: M:\LOKI\DATA\161210\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	4	1210L05.D	1	0.3ug/L VOC STD12/10/16J	W IS-tcpd5-12/6/16,	10 Dec 16 12:57
2	5	1210L06.D	1	0.5ug/L VOC STD12/10/16K	W IS-tcpd5-12/6/16,	10 Dec 16 13:26
3	6	1210L07.D	1	1.0ug/L VOC STD12/10/16L	W IS-tcpd5-12/6/16,	10 Dec 16 13:54
4	7	1210L08.D	1	2.0ug/L VOC STD12/10/16M	W IS-tcpd5-12/6/16,	10 Dec 16 14:22
5	8	1210L09.D	1	5.0ug/L VOC STD12/10/16N	W IS-tcpd5-12/6/16,	10 Dec 16 14:50
6	9	1210L10.D	1	10ug/L VOC STD12/10/16O	W IS-tcpd5-12/6/16,	10 Dec 16 15:18
7	10	1210L11.D	1	20ug/L VOC STD12/10/16P	W IS-tcpd5-12/6/16,	10 Dec 16 15:46
8	11	1210L12.D	1	40ug/L VOC STD12/10/16Q	W IS-tcpd5-12/6/16,	10 Dec 16 16:15
9	12	1210L13.D	1	100ug/L VOC STD12/10/16R	W IS-tcpd5-12/6/16,	10 Dec 16 16:43
10	6	1211L06.D	1	20ug/L GAS STD 12/11/16A	W IS&S 11/21/16, 11/14/16	11 Dec 16 12:39
11	7	1211L07.D	1	50ug/L GAS STD 12/11/16B	W IS&S 11/21/16, 11/14/16	11 Dec 16 13:07
12	8	1211L08.D	1	100ug/L GAS STD 12/11/16C	W IS&S 11/21/16, 11/14/16	11 Dec 16 13:35
13	9	1211L09.D	1	300ug/L GAS STD 12/11/16D	W IS&S 11/21/16, 11/14/16	11 Dec 16 14:03
14	10	1211L10.D	1	600ug/L GAS STD 12/11/16E	W IS&S 11/21/16, 11/14/16	11 Dec 16 14:32
15	11	1211L11.D	1	800ug/L GAS STD 12/11/16F	W IS&S 11/21/16, 11/14/16	11 Dec 16 15:00
16	12	1211L12.D	1	1000ug/L GAS STD 12/11/16G	W IS&S 11/21/16, 11/14/16	11 Dec 16 15:28
17	16	1211L16.D	1	(SS) 300ug/L GAS STD 12/11/16	W IS&S 11/21/16, 11/14/16	11 Dec 16 17:21
18	5	1215L05.D	1	161215A CCV/LCS-1WL 300ug/L	W IS&S 11/21/16, 11/14/16	15 Dec 16 12:47
19	9	1215L09.D	1	161214A BLK-1WL	W IS&S 11/21/16, 11/14/16	15 Dec 16 14:40
20	19	1215L19.D	1	AZ47343W01	W IS&S 11/21/16, 11/14/16	15 Dec 16 19:20
21	20	1215L20.D	1	AZ47344W01	W IS&S 11/21/16, 11/14/16	15 Dec 16 19:48
22	21	1215L21.D	1	AZ47345W01	W IS&S 11/21/16, 11/14/16	15 Dec 16 20:16
23	26	1215L26.D	1	AZ47345W456 MS-1WL 300ug/L	W IS&S 11/21/16, 11/14/16	15 Dec 16 22:37
24	27	1215L27.D	1	AZ47345W456 MSD-1WL 300ug/L	W IS&S 11/21/16, 11/14/16	15 Dec 16 23:05
25	29	1215L29.D	1	Ending CCV GAS 300ug/L 12/15/16	W IS&S 11/21/16, 11/14/16	16 Dec 16 00:01

ORGANICS

APPL, INC.

ORGANICS
QC Summary

APPL, INC.

Method Blank
METHANE

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161217W-47345 - 214809**
Batch ID: #RSKME-161217A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	METHANE	1.00 U	5.0	1.00	0.25	ug/L	12/17/16	12/17/16

Quant Method: RSK0901.M
Run #: 1217008
Instrument: Rocky
Sequence: 160901
Initials: CMO

GC SC-Blank-REG MDLs-DOD
Printed: 12/20/16 5:24:34 PM

RSK 175

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81734

Case No: 81734 Date Analyzed: 12/17/16

Matrix: WATER Instrument: Rocky

Blank ID: 161217A-BLK Time Analyzed: 0957

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161217A-LCS	Lab Control Spike	1217007	12/17/16 0948
161217A-BLK	Blank	1217008	12/17/16 0957
AZ47344	ERH141	1217013	12/17/16 1140
AZ47345	ERH135	1217014	12/17/16 1143
161217A-MS	Matrix Spike	1217016	12/17/16 1217
161217A-MSD	Matrix SpikeD	1217017	12/17/16 1221

Comments: Batch: #RSKME-161217A

Printed: 12/20/16 5:24:17 PM

Form 4, Blank Summary

Laboratory Control Spike Recovery
METHANE

APPL ID: **161217W-47345 LCS - 214809**
Batch ID: #RSKME-161217A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
METHANE	668	815	122	72-125

Comments: _____

Primary	SPK
Quant Method :	RSK0901.M
Extraction Date :	12/17/16
Analysis Date :	12/17/16
Instrument :	Rocky
Run :	1217007
Initials :	CMO

Printed: 12/20/16 5:24:26 PM
APPL Standard LCS

Matrix Spike Recoveries

METHANE

APPL ID: **161217W-47345 MS - 214809**
Batch ID: #RSKME-161217A
Sample ID: AZ47345
Client ID: ERH135

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
METHANE	320	ND	194	457	60.5 #	143 #	72-125	80.8 #	30

= Recovery is outside QC limits.

Comments:

Primary	SPK	DUP
Quant Method :	RSK0901.M	RSK0901.M
Extraction Date :	12/17/16	12/17/16
Analysis Date :	12/17/16	12/17/16
Instrument :	Rocky	Rocky
Run :	1217016	1217017
Initials :	CMO	

Printed: 12/20/16 5:24:23 PM
APPL MSD SCII

ORGANICS
Sample Data

APPL, INC.

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH141
Sample Collection Date: 12/12/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81734
APPL ID: AZ47344
QCG: #RSKME-161217A-214809

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	12/17/16	12/17/16

Quant Method:	RSK0901.M
Run #:	1217013
Instrument:	Rocky
Sequence:	160901
Dilution Factor:	1
Initials:	CMO

Printed: 12/20/16 5:24:31 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1217013.D Vial: 1
Acq On : 17 Dec 16 11:40 Operator: lac
Sample : AZ47344W06 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 21 7:49 2016 Quant Results File: RSK0901.RES

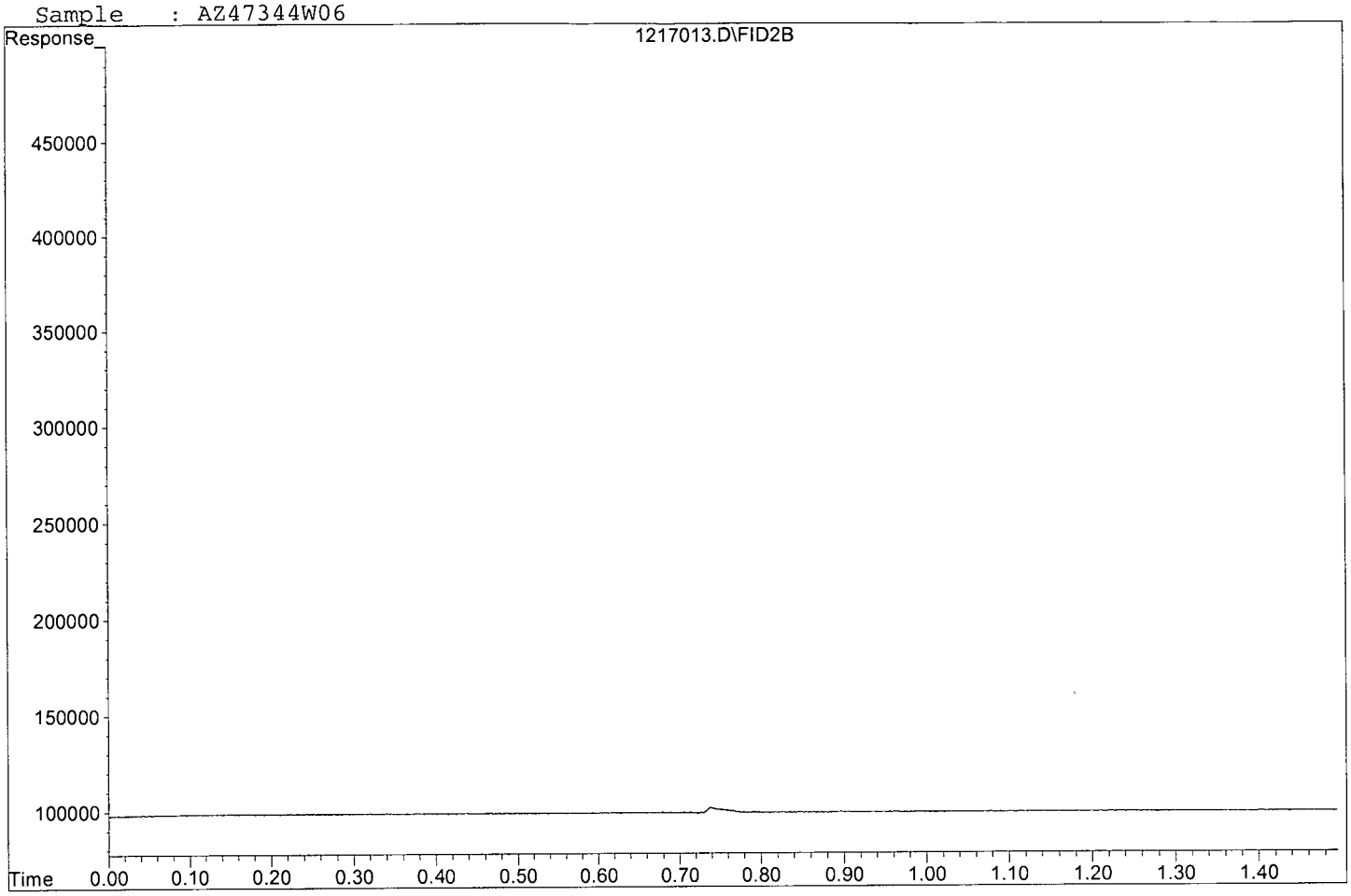
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Dec 20 15:34:53 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.75	1832	N.D.	ppb
2) ATM Ethane	0.90	428	N.D.	ppb
3) ATM Ethene	0.99	325	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1217013.D
Sample : AZ47344W06



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH135
Sample Collection Date: 12/12/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81734
APPL ID: AZ47345
QCG: #RSKME-161217A-214809

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	12/17/16	12/17/16

Quant Method: RSK0901.M
Run #: 1217014
Instrument: Rocky
Sequence: 160901
Dilution Factor: 1
Initials: CMO

Printed: 12/20/16 5:24:31 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1217014.D Vial: 2
Acq On : 17 Dec 16 11:43 Operator: lac
Sample : AZ47345W12 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 21 7:49 2016 Quant Results File: RSK0901.RES

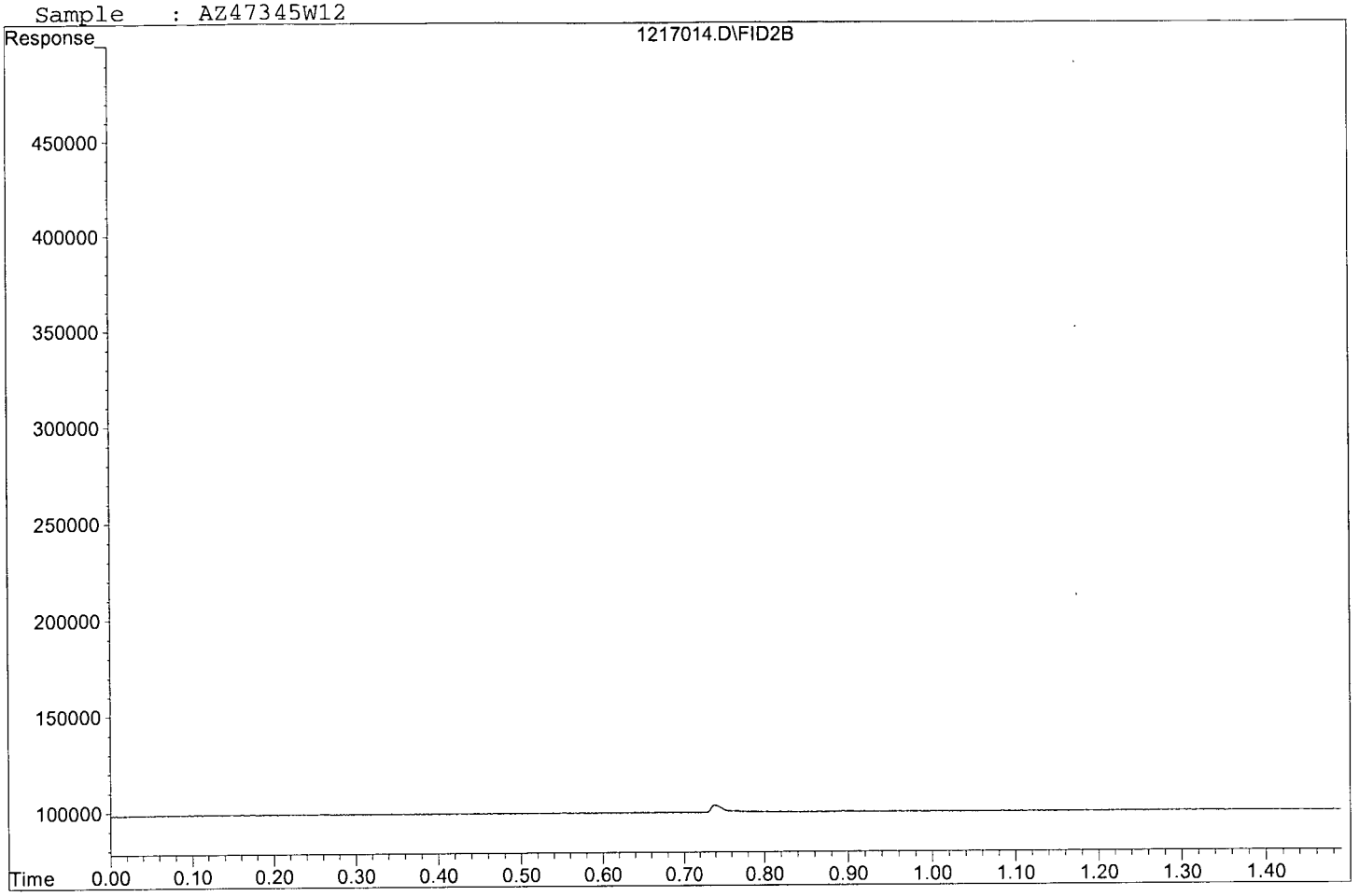
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Dec 20 15:34:53 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.74	3960	N.D.	ppb
2) ATM Ethane	0.90	461	N.D.	ppb
3) ATM Ethene	0.98	241	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1217014.D
Sample : AZ47345W12



ORGANICS
Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:
SDG No:
Initial Cal. Date: 09/01/16
Instrument: 7890
Initials:

		Compound	1	2	3	4	5	6	7	8	9	10	Avg	%RSD		
			0901000.D	0901001.D	0901002.D	0901003.D	0901004.D	0901005.D	0901006.D	0901007.D	0901008.D	0901009.D				
1	ATM	Methane	7448	5672	3042	3435	1074	1006	1184	1314	1084	1089	2635	87	ATM	
2	ATM	Ethane	1509	1521	1416	2554	478	657	816	933	791	798	1147	54	ATM	
3	ATM	Ethene	1826	1525	1280	2301	444	570	693	733	628	626	1063	60	ATM	
4																
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6																
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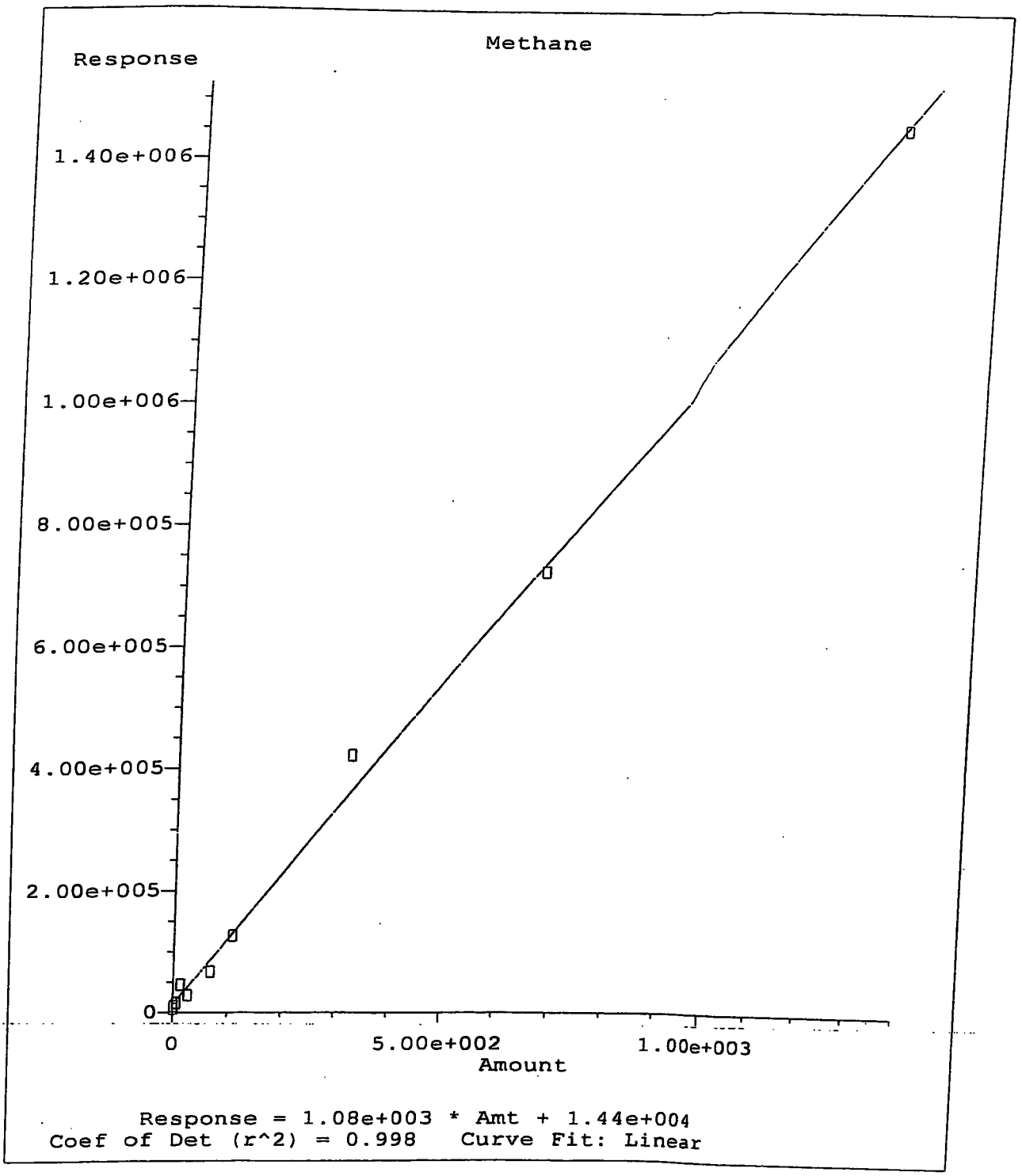
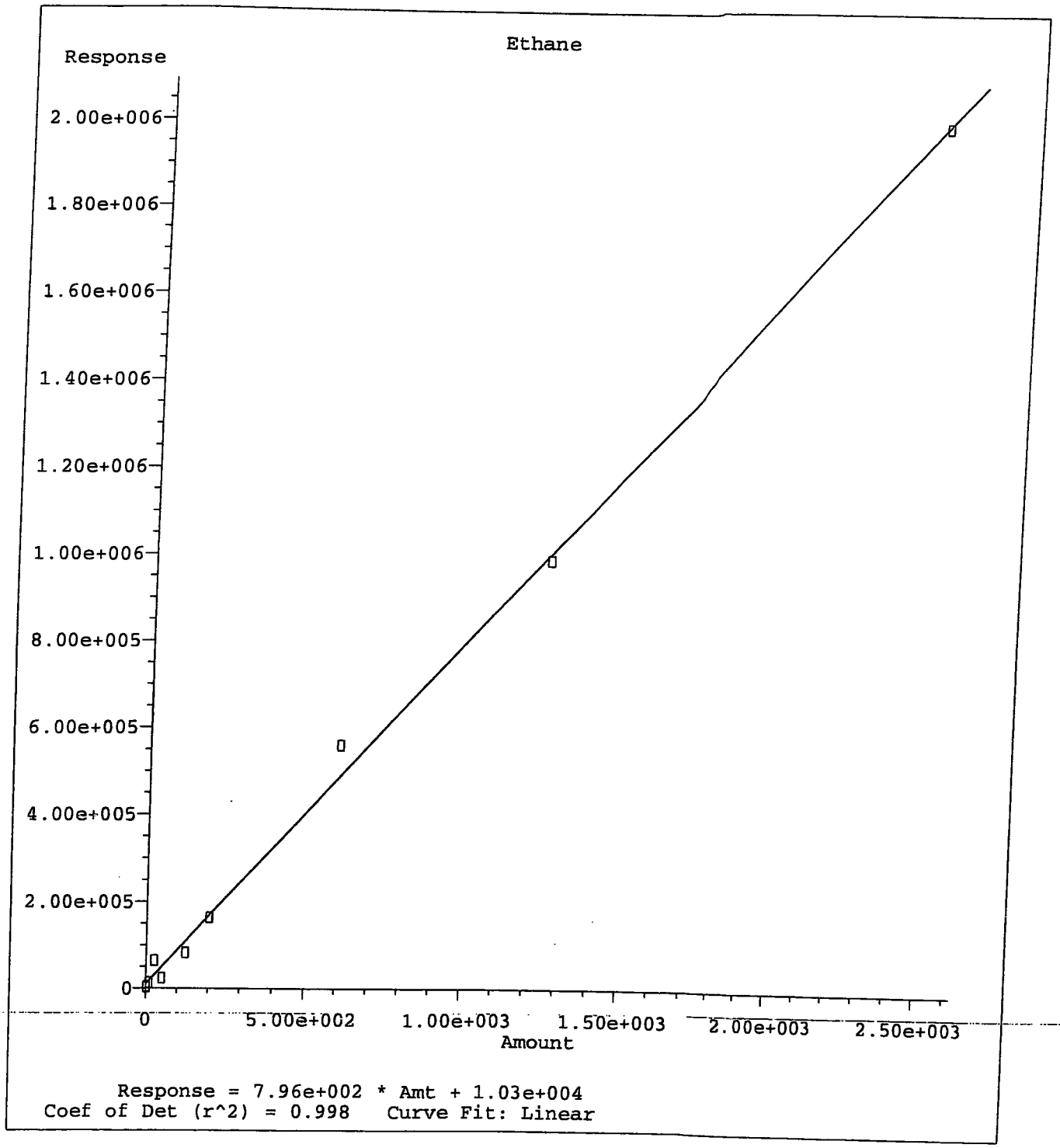
5.7170224

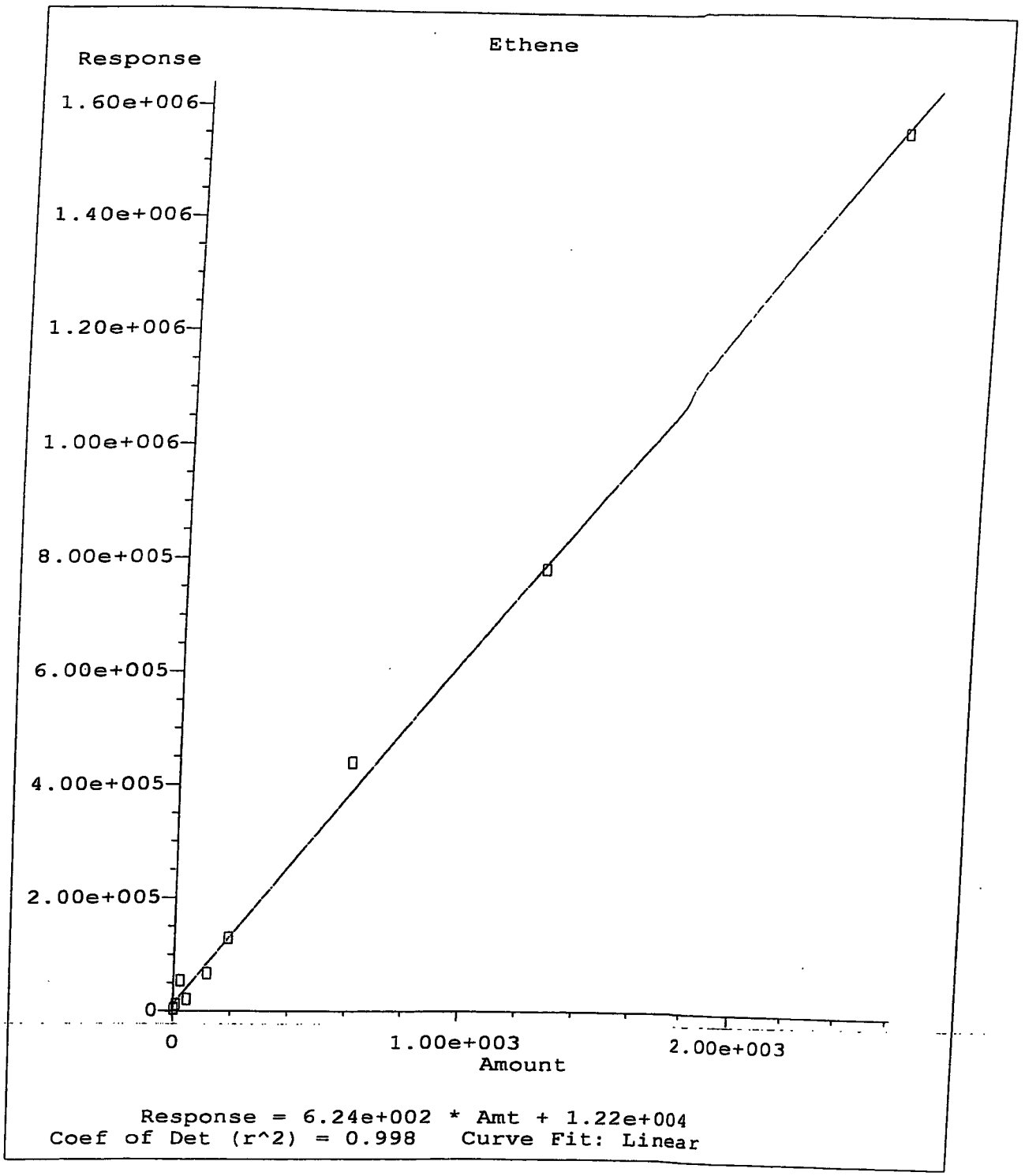
FORM61



Method Name: G:\ROCKY\DATA\160901R\RSK0901.M
Calibration Table Last Updated: Fri Sep 02 15:25:38 2016



Method Name: G:\ROCKY\DATA\160901R\RSK0901.M
Calibration Table Last Updated: Thu Nov 10 08:49:51 2016



Method Name: G:\ROCKY\DATA\160901R\RSK0901.M
Calibration Table Last Updated: Fri Sep 02 15:25:38 2016

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901000.D Vial: 1
Acq On : 1 Sep 16 11:38 Operator: lac
Sample : RSK Level 1 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

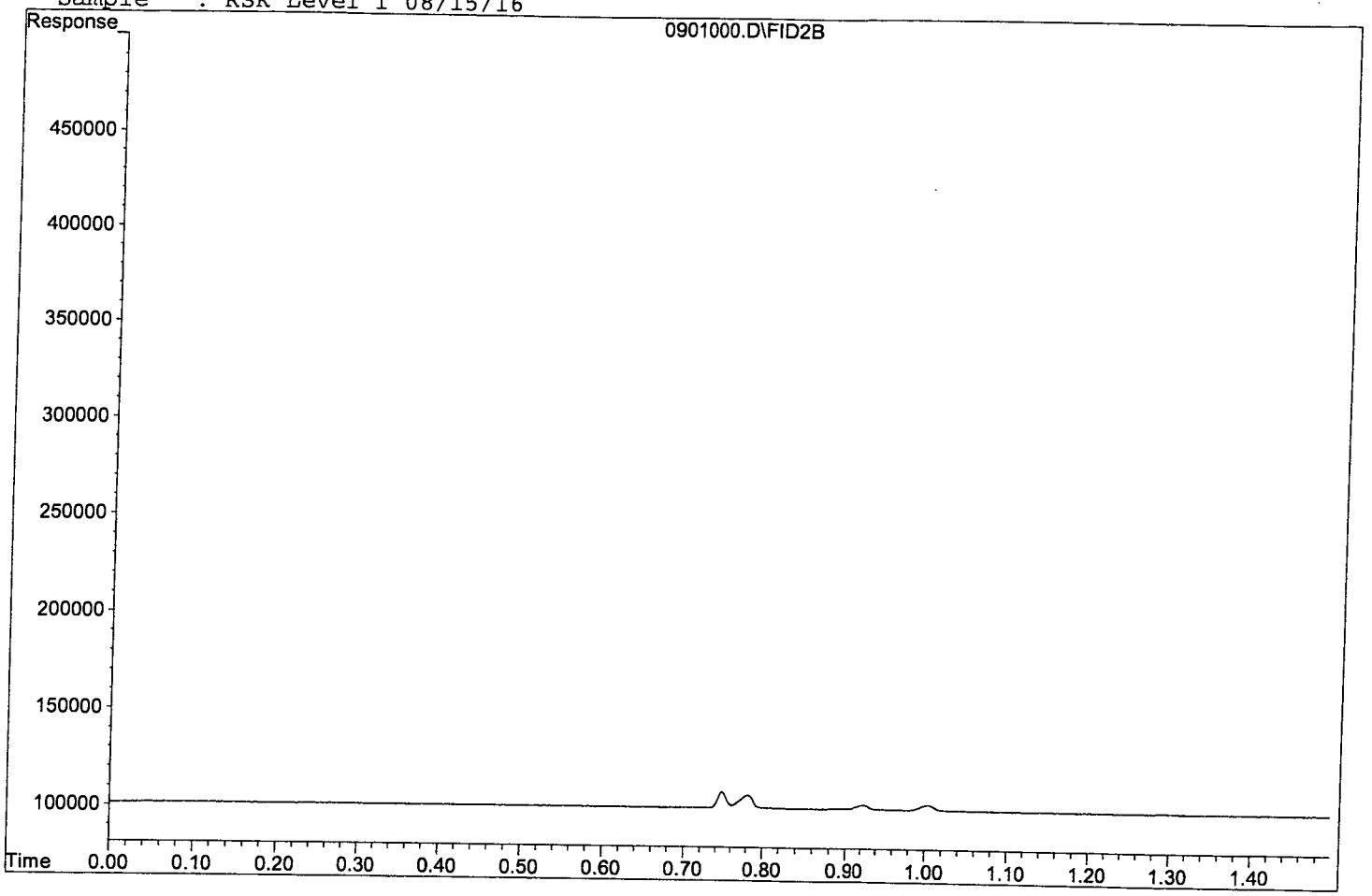
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.78	6703	N.D.	ppb
2) ATM Ethane	0.92	2566	N.D.	ppb
3) ATM Ethene	1.00	2922	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901000.D
Sample : RSK Level 1 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901001.D Vial: 2
Acq On : 1 Sep 16 11:41 Operator: lac
Sample : RSK Level 2 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

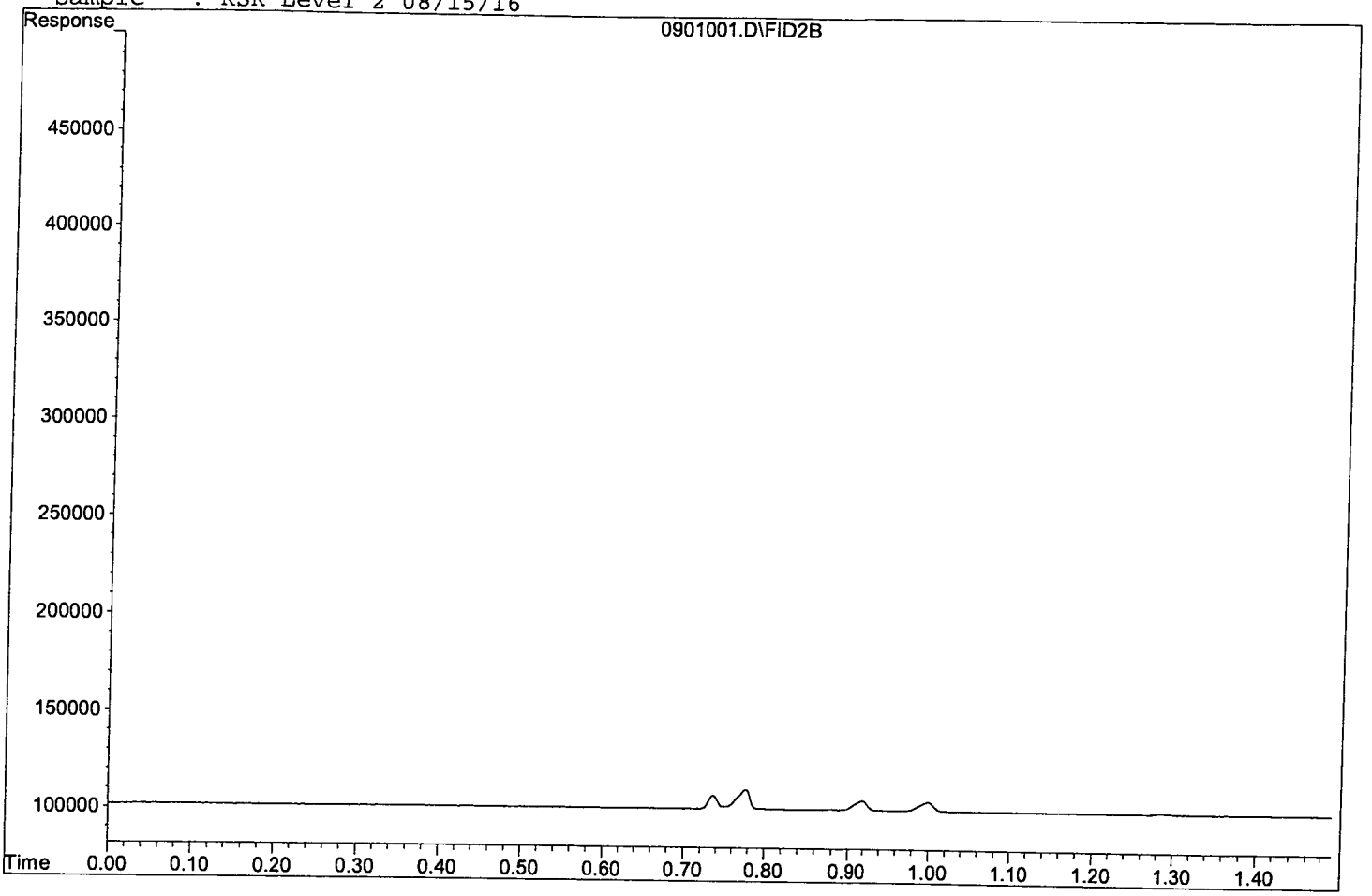
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.79	569	N.D.	ppb
2) ATM Ethane	0.94	352	N.D.	ppb
3) ATM Ethene	1.02	250	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901001.D
Sample : RSK Level 2 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901002.D Vial: 3
Acq On : 1 Sep 16 11:44 Operator: lac
Sample : RSK Level 3 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 14 13:31 2016 Quant Results File: RSK0901.RES

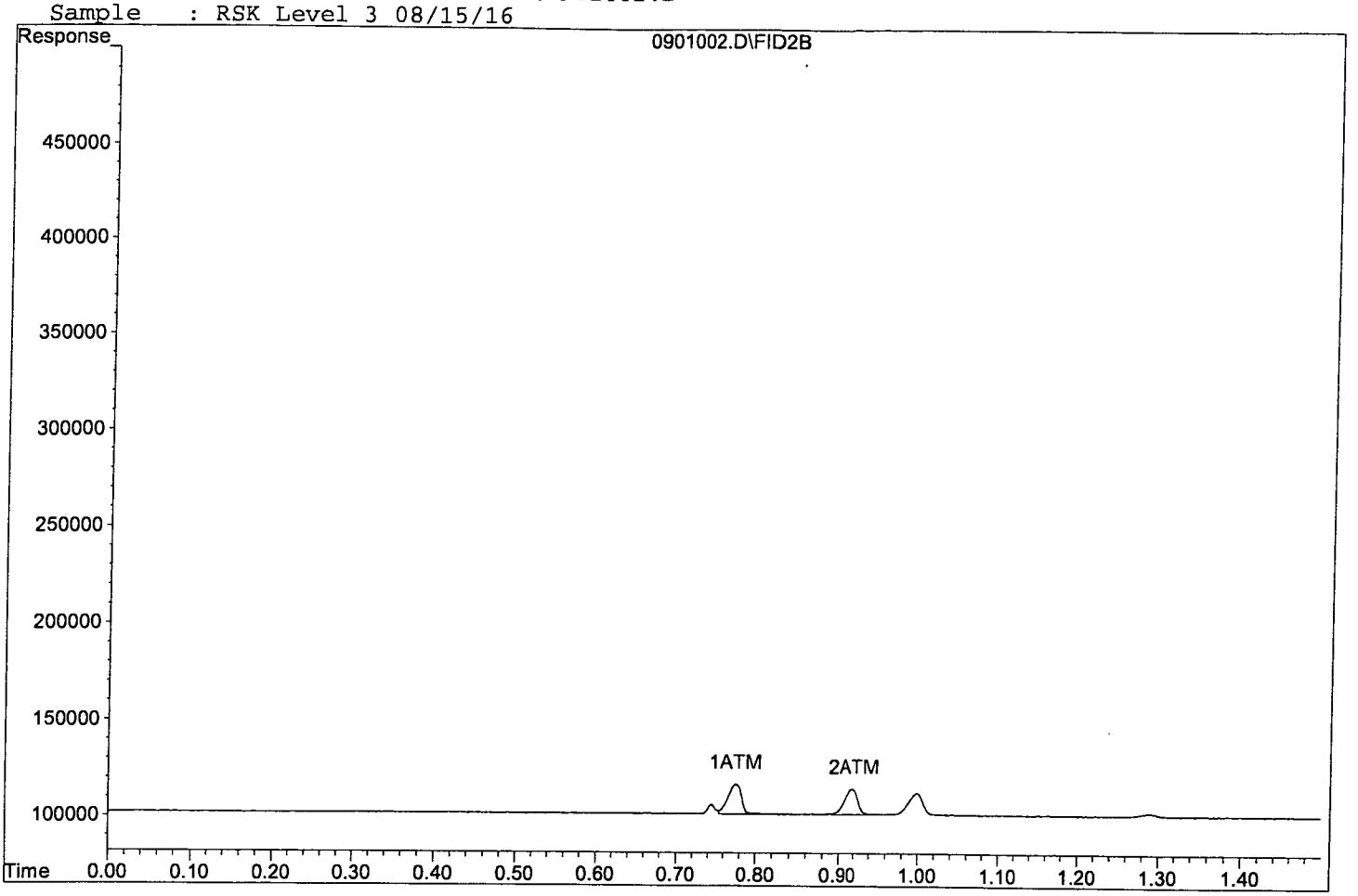
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.77	15515	1.054 ppb
2) ATM Ethane	0.92	13452	3.912 ppb
Target Compounds			
3) ATM Ethene	1.00	11390	N.D. ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901002.D
Sample : RSK Level 3 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901003.D Vial: 4
Acq On : 1 Sep 16 11:46 Operator: lac
Sample : RSK Level 4 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

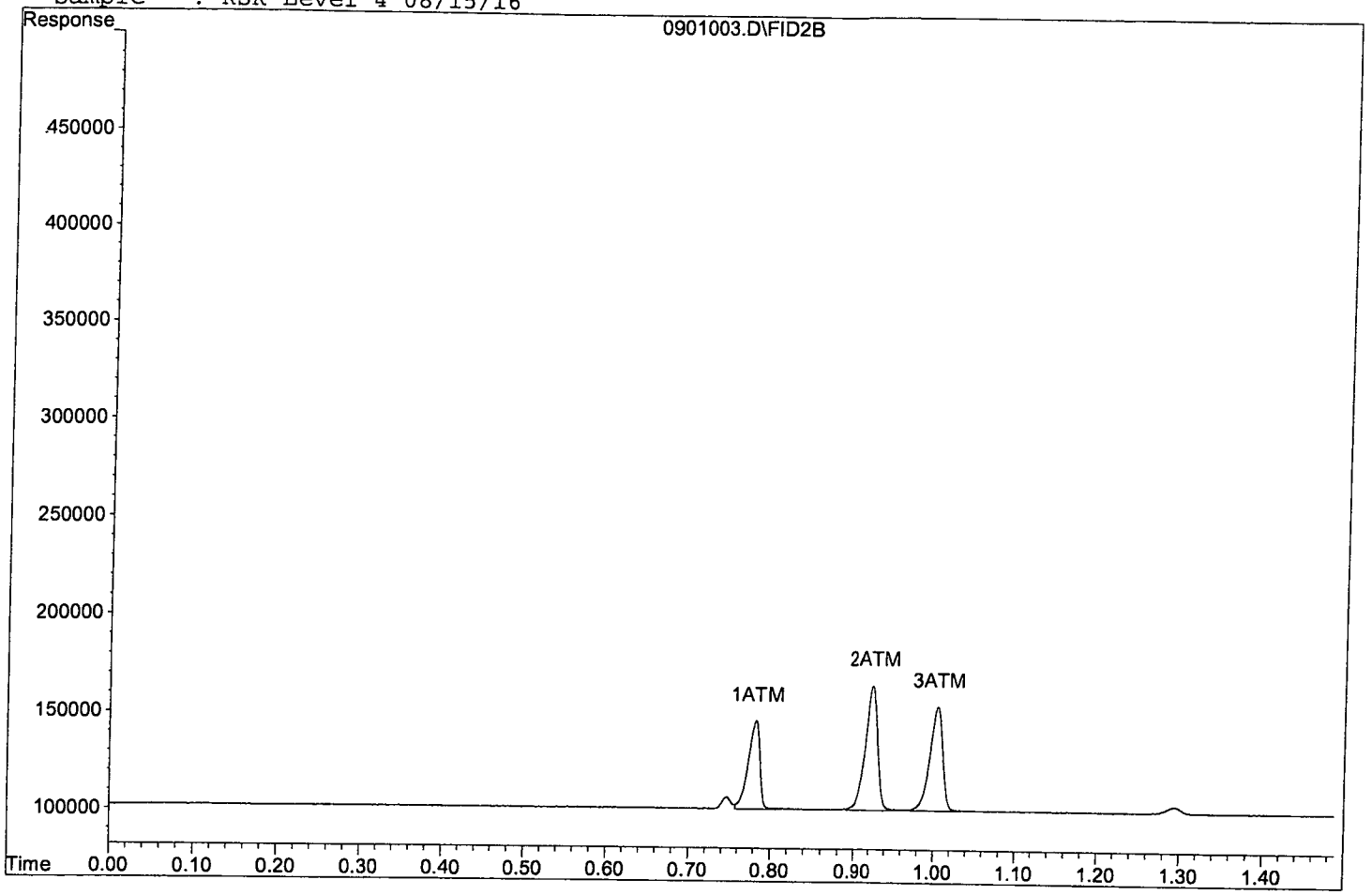
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.78	45792	29.006 ppb
2) ATM Ethane	0.92	63853	67.197 ppb
3) ATM Ethene	1.00	53608	66.354 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901003.D
Sample : RSK Level 4 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901004.D Vial: 5
Acq On : 1 Sep 16 11:48 Operator: lac
Sample : RSK Level 5 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

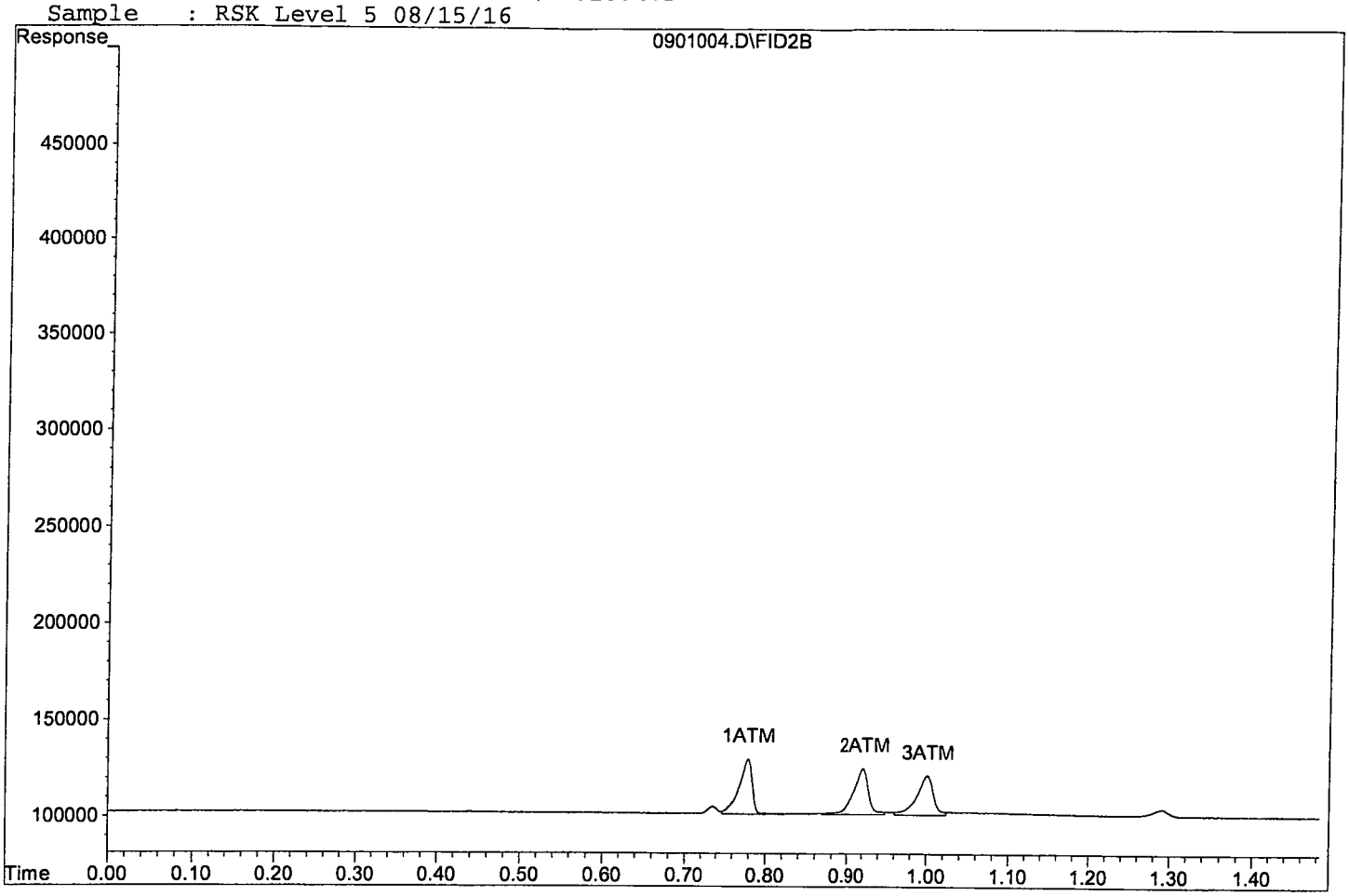
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.78	28664	13.193 ppb
2) ATM Ethane	0.92	23891	17.020 ppb
3) ATM Ethene	1.00	20700	13.631 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901004.D
Sample : RSK Level 5 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901005.D Vial: 6
Acq On : 1 Sep 16 11:50 Operator: lac
Sample : RSK Level 6 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

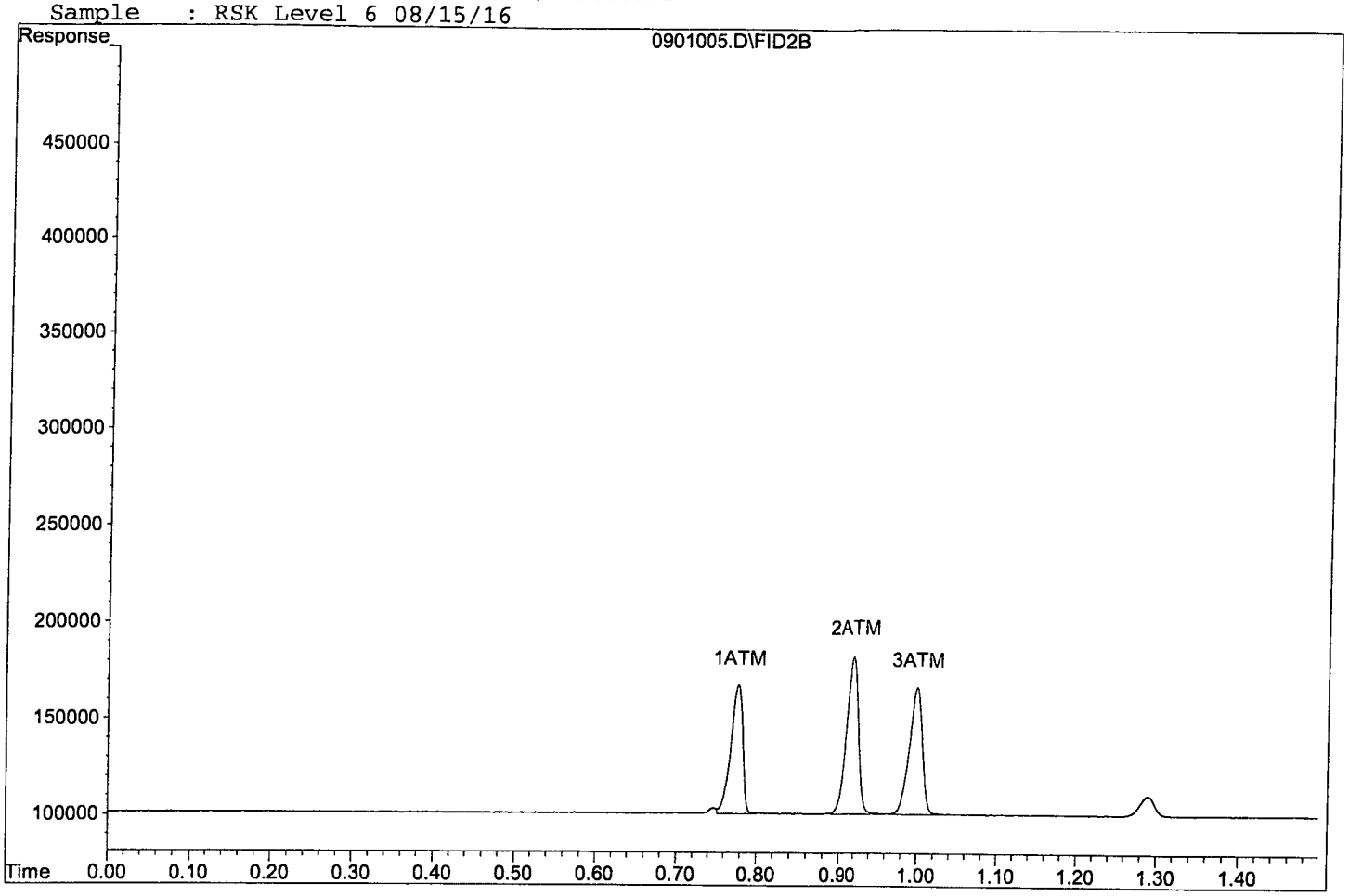
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.78	67137	48.712 ppb
2) ATM Ethane	0.92	82167	90.193 ppb
3) ATM Ethene	1.00	66348	86.764 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901005.D
Sample : RSK Level 6 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901006.D Vial: 7
Acq On : 1 Sep 16 11:52 Operator: lac
Sample : RSK Level 7 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

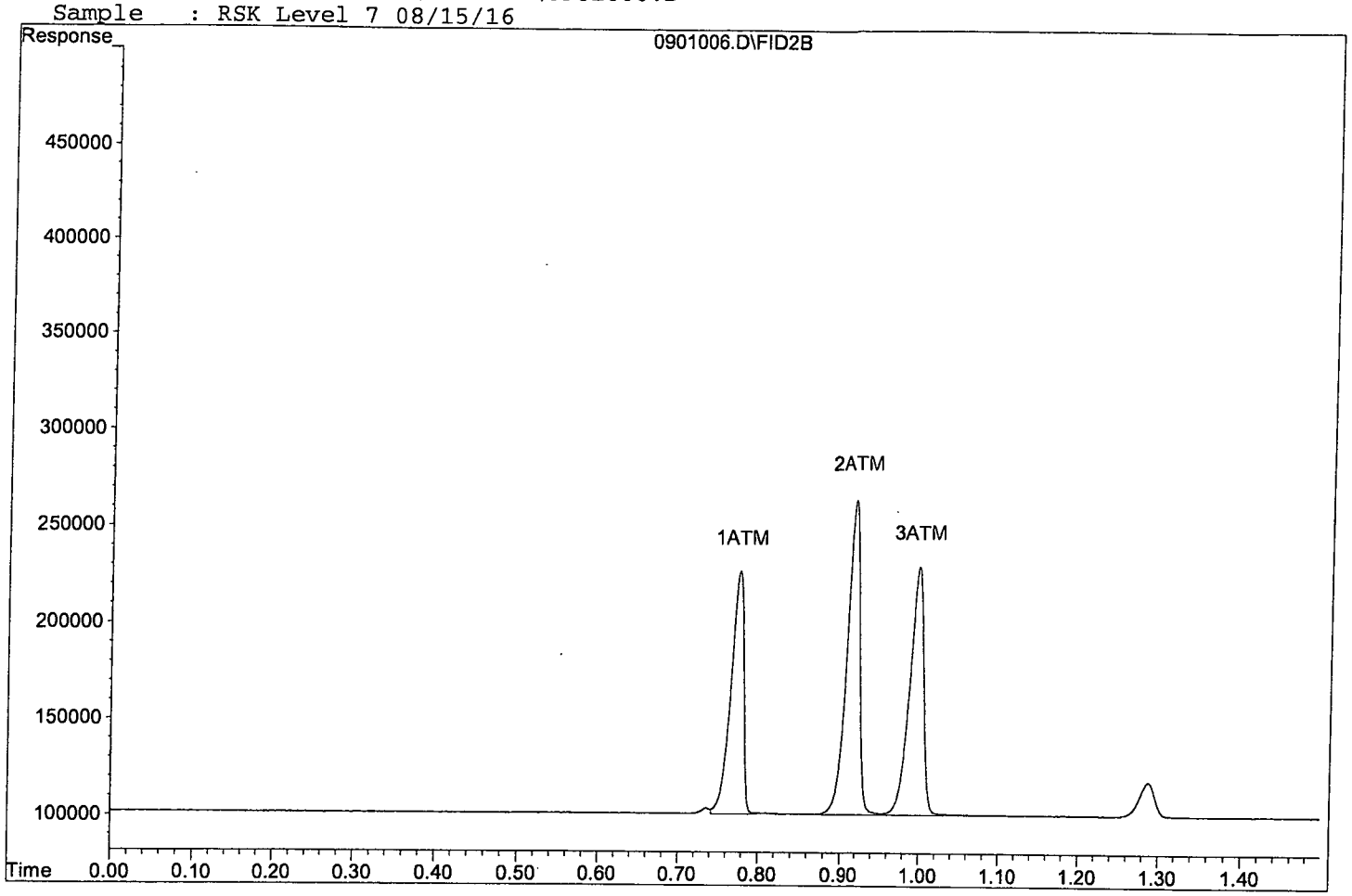
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.78	126422	103.446 ppb
2) ATM Ethane	0.92	163281	192.041 ppb
3) ATM Ethene	1.00	129200	187.460 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901006.D
Sample : RSK Level 7 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901007.D Vial: 8
Acq On : 1 Sep 16 11:55 Operator: lac
Sample : RSK Level 8 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

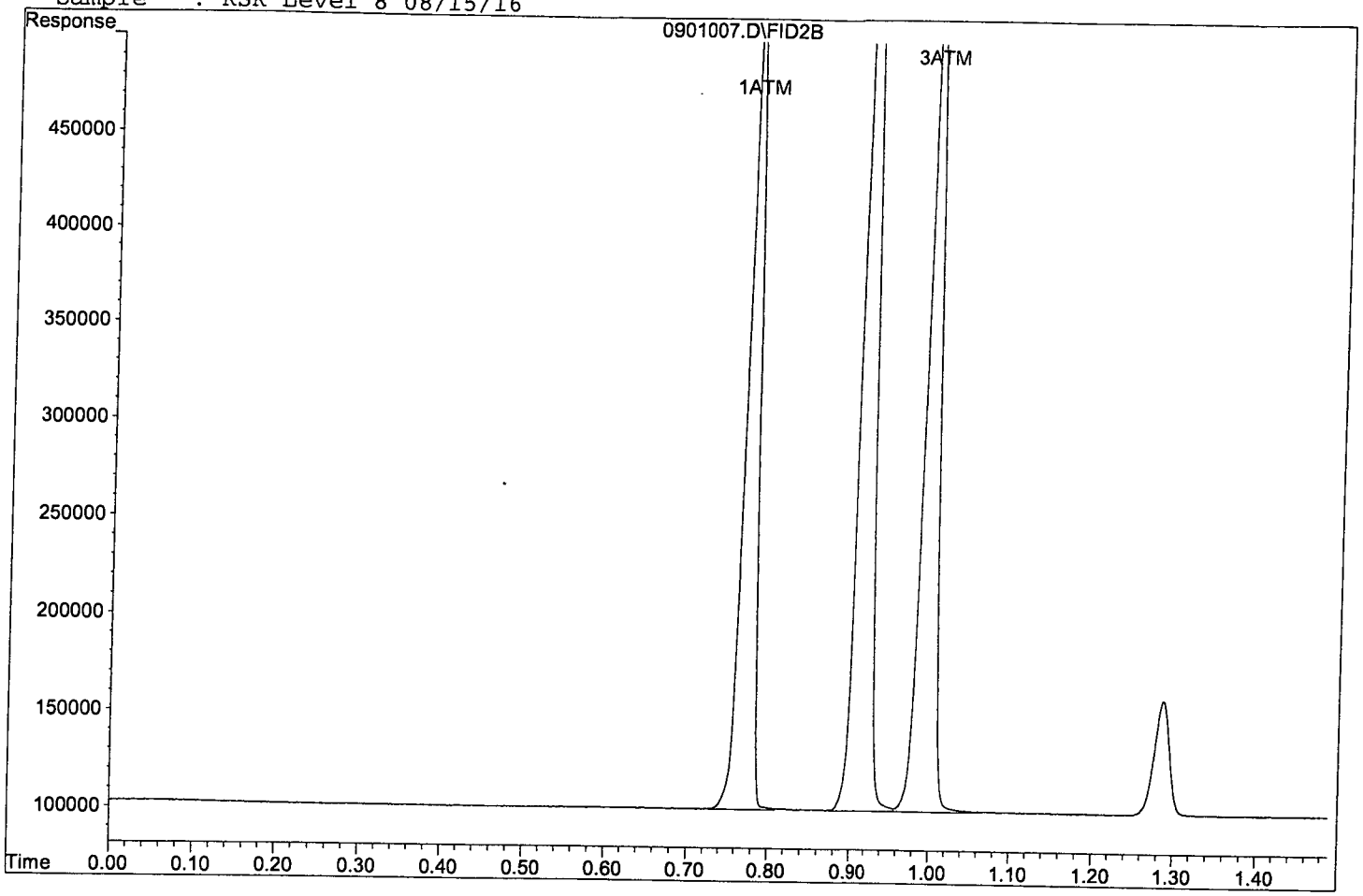
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.77	421052	375.455 ppb
2) ATM Ethane	0.92	559640	689.720 ppb
3) ATM Ethene	1.00	439383	684.403 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901007.D
Sample : RSK Level 8 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901008.D Vial: 9
Acq On : 1 Sep 16 11:57 Operator: lac
Sample : RSK Level 9 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

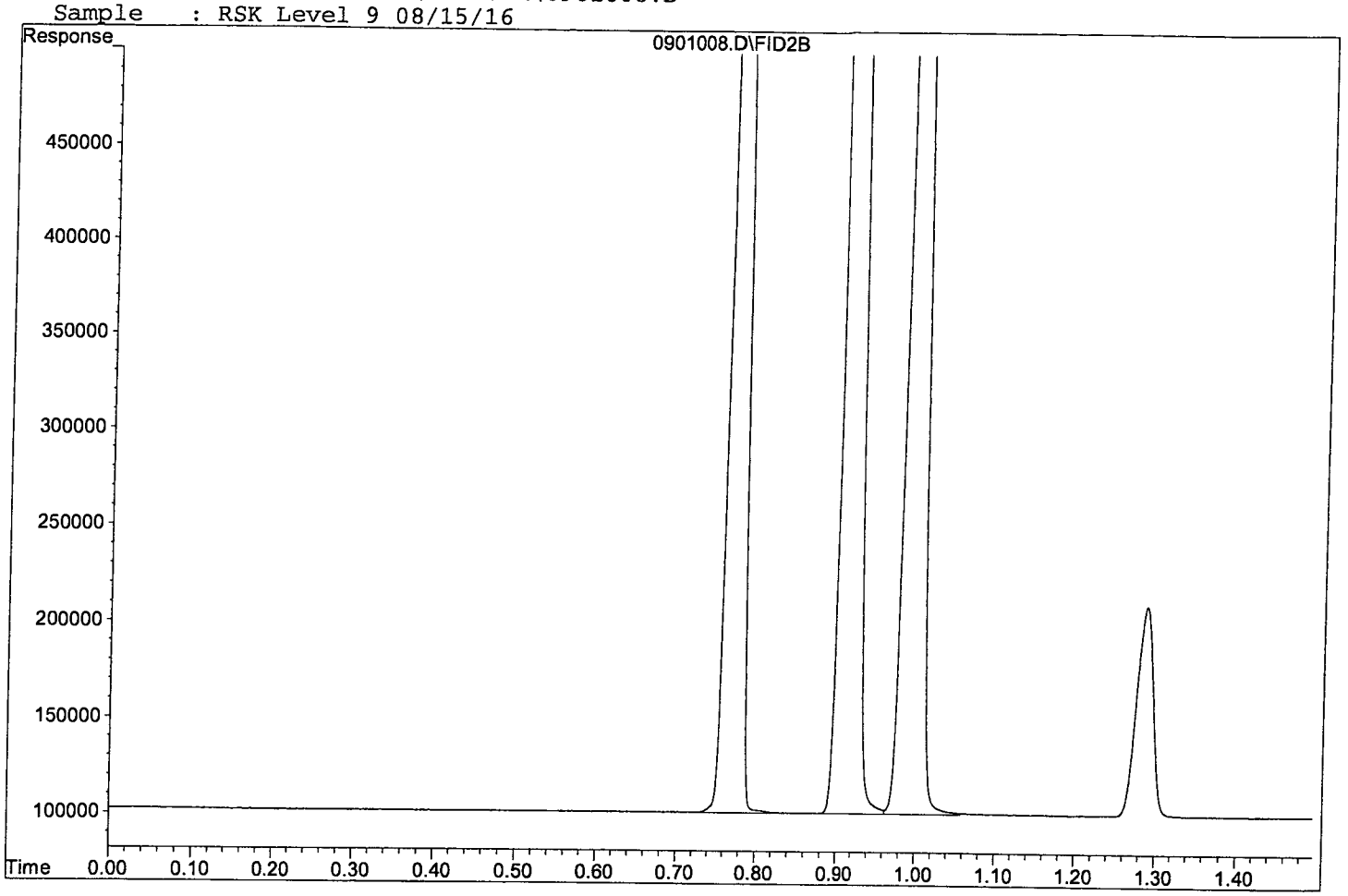
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.78	723824	654.982	ppb
2) ATM Ethane	0.92	989344	1229.268	ppb
3) ATM Ethene	1.00	783615	1235.897	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901008.D
Sample : RSK Level 9 08/15/16



Data File : G:\ROCKY\DATA\160901R\0901009.D Vial: 10
Acq On : 1 Sep 16 11:59 Operator: lac
Sample : RSK Level 10 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

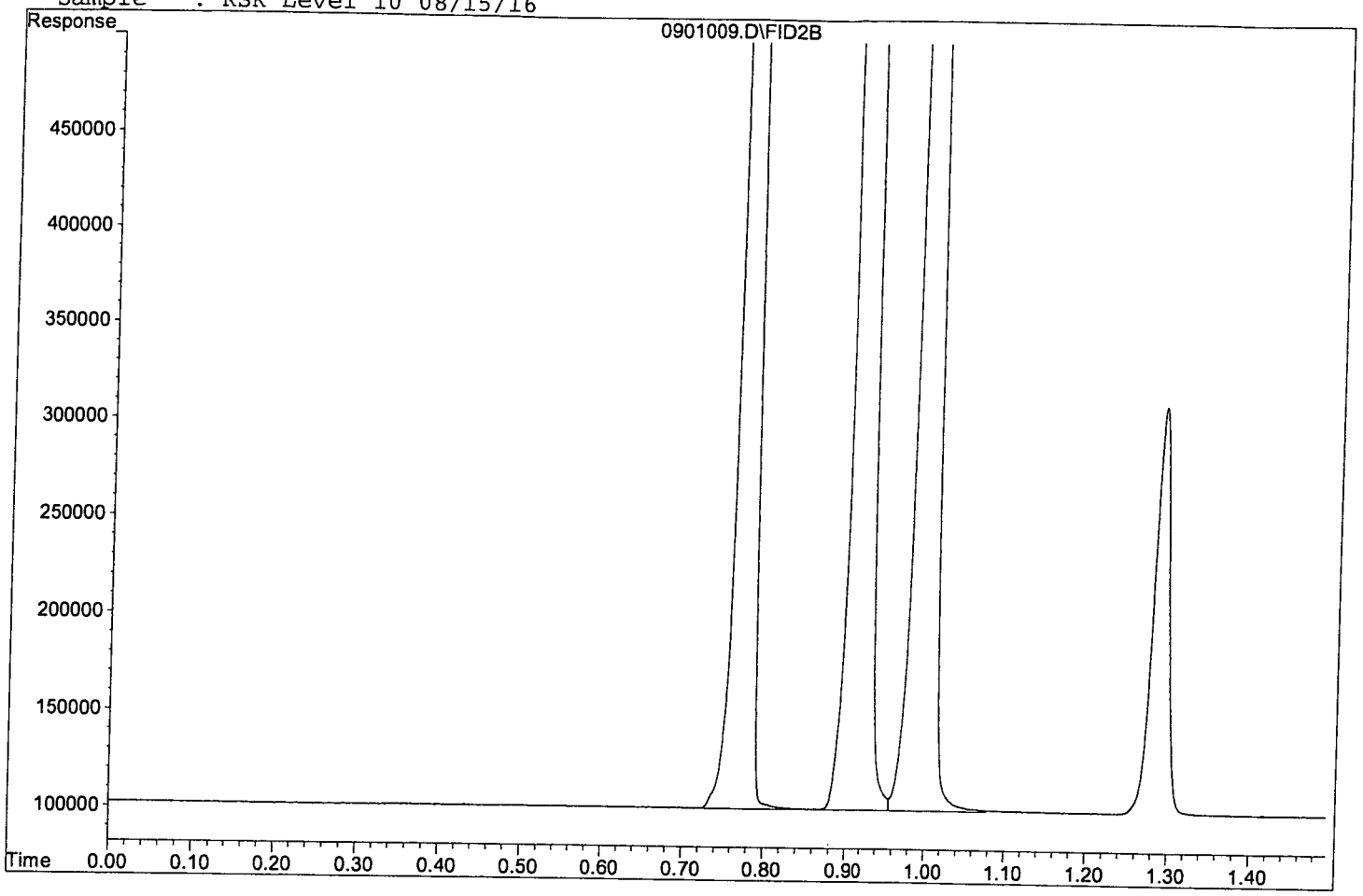
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.78	1454283	1329.358	ppb
2) ATM Ethane	0.92	1994598	2491.490	ppb
3) ATM Ethene	1.00	1562244	2483.337	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901009.D
Sample : RSK Level 10 08/15/16



Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 1 Sep 16 13:11
Instrument: 7890
Initial Cal. Date: 09/01/16
Data File: 0901018.D

		Compound	MEAN	CCRF	%D	%Drift	
1	ATML	Methane	2635	1090	59	ATML	19
2	ATML	Ethane	1147	964	16	ATML	11
3	ATML	Ethene	1063	853	20	ATML	20
4							
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33							
34							
35							
36							
37							
38							
39							
40							
		Average			31.7		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901018.D
Acq On : 1 Sep 16 13:11
Sample : (SS/LCS) RSK Level 6 09/01/16
Misc :
IntFile : autoint1.e
Quant Time: Sep 1 13:16 2016 Quant Results File: RSK0901.RES

Vial: 19
Operator: lac
Inst : 7890
Multiplr: 1.00

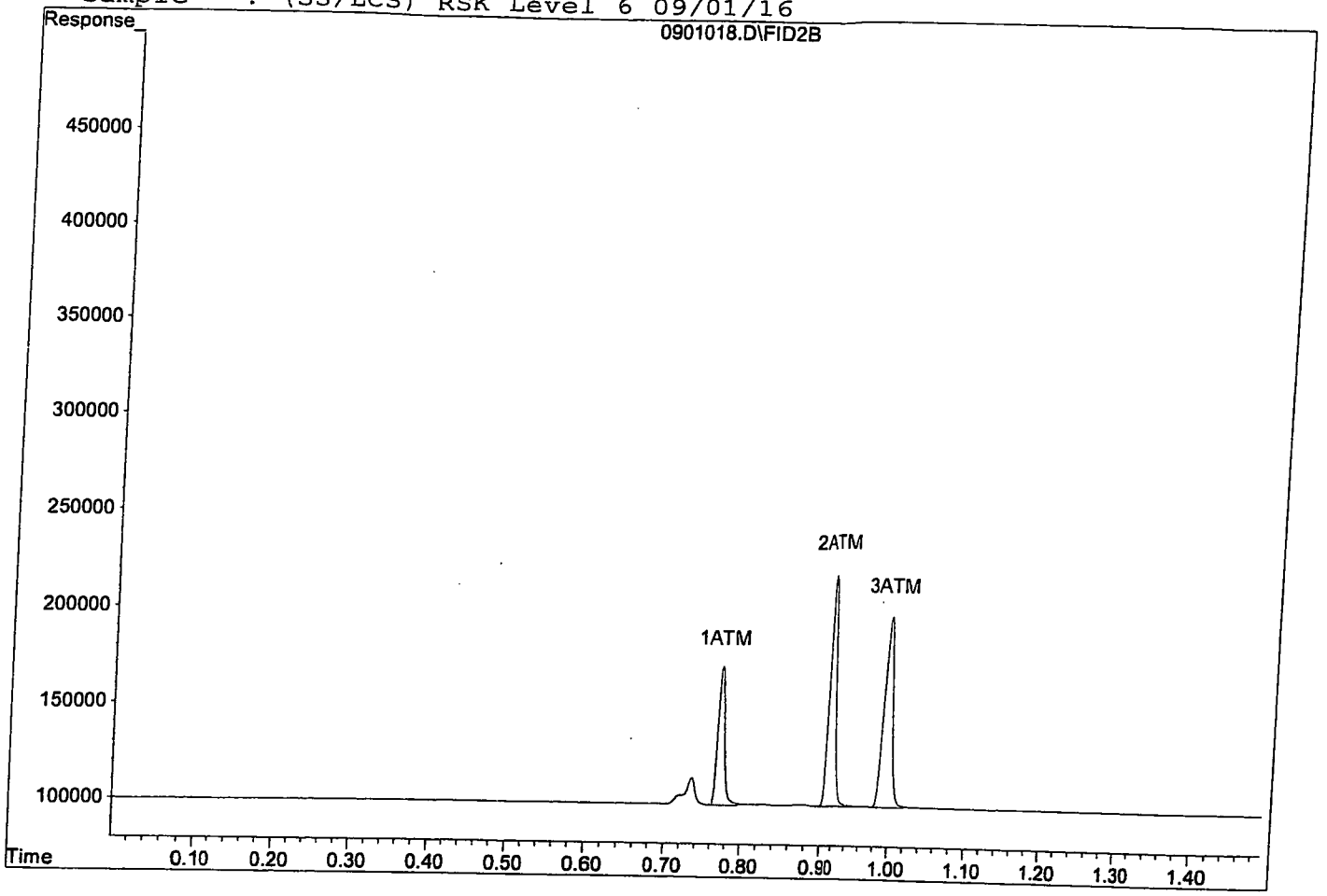
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Thu Sep 01 14:40:19 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.77	72750	53.894 ppb
2) ATM Ethane	0.91	120545	138.382 ppb
3) ATM Ethene	0.99	99349	139.636 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901018.D
Sample : (SS/LCS) RSK Level 6 09/01/16



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/17/16
Instrument: 7890
Initial Cal. Date: 09/01/16
Data File: 1217007.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	2635	1344	49	ATML	22
2	ATML	Ethane	1147	803	30	ATML	0.16
3	ATML	Ethene	1063	588	45	ATML	7.3
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
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28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			41.3		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1217007.D Vial: 8
Acq On : 17 Dec 16 9:48 Operator: lac
Sample : 161217A LCS/CCV RSK Level 9 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 21 7:49 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Dec 20 15:34:53 2016
Response via : Multiple Level Calibration

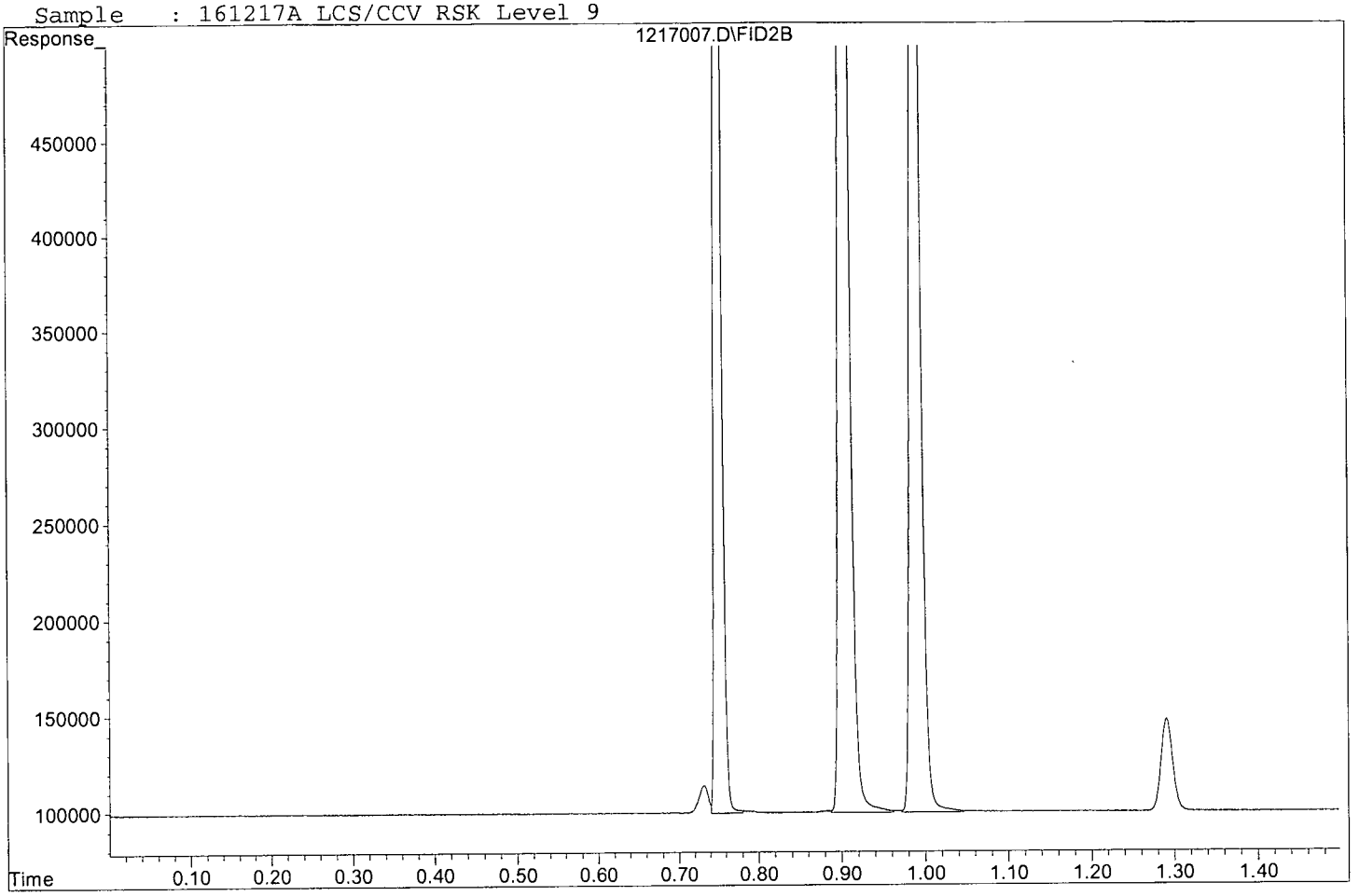
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.75	897206	815.052	ppb
2) ATM Ethane	0.90	1004261	1247.998	ppb
3) ATM Ethene	0.99	734600	1157.369	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1217007.D
Sample : 161217A LCS/CCV RSK Level 9



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/17/16
Instrument: 7890
Initial Cal. Date: 09/01/16
Data File: 1217030.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	2635	948	64	ATML	14
2	ATML	Ethane	1147	634	45	ATML	21
3	ATML	Ethene	1063	479	55	ATML	25
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
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28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			54.7		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1217030.D Vial: 18
Acq On : 17 Dec 16 13:36 Operator: lac
Sample : Ending CCV RSK Level 9 12/17/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 21 7:49 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Dec 20 15:34:53 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

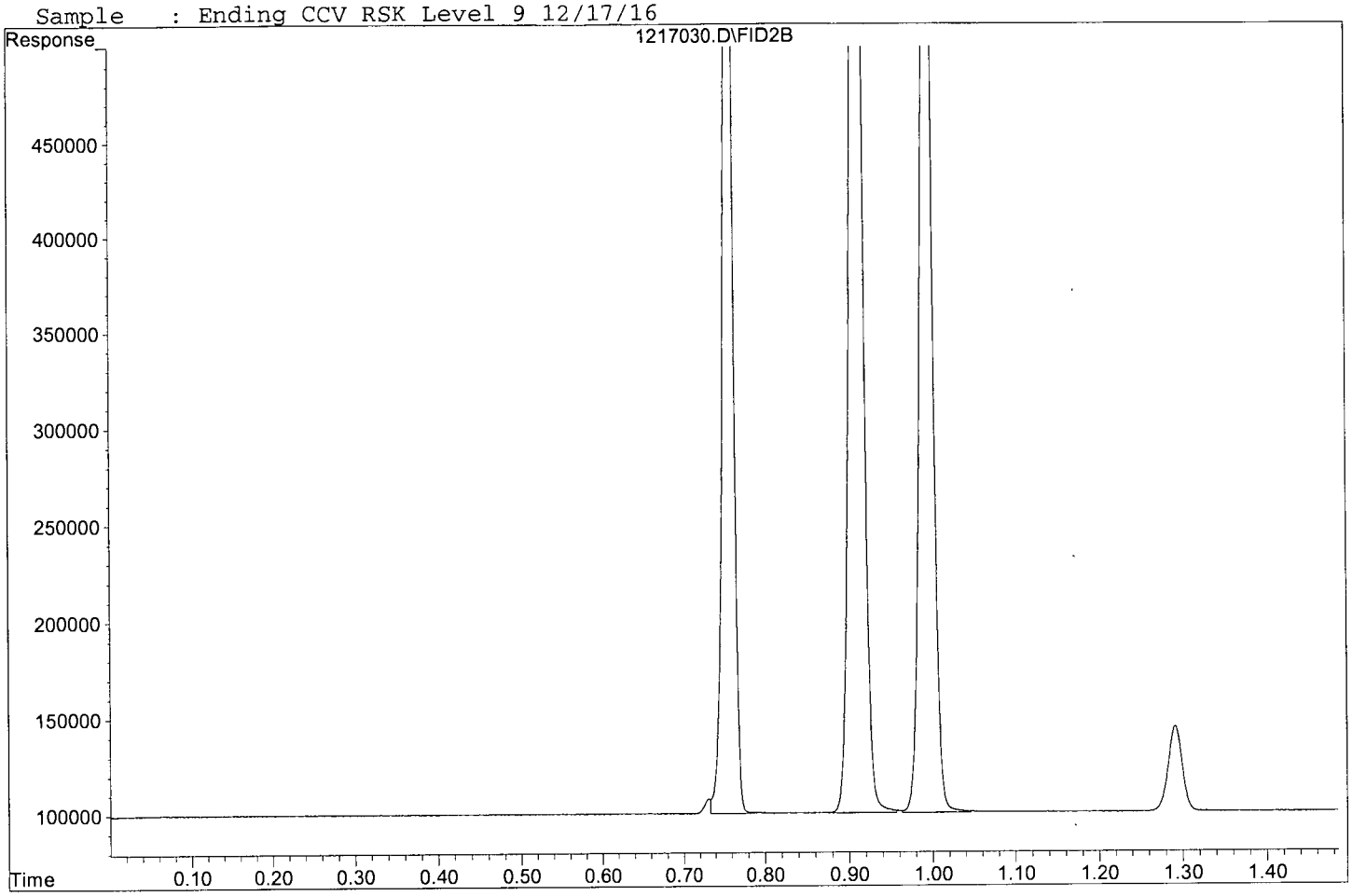
Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.76	633053	571.179 ppb
2) ATM Ethane	0.91	792155	981.672 ppb
3) ATM Ethene	1.00	597866	938.308 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\ROCKY\DATA\160901R\1217030.D
Sample : Ending CCV RSK Level 9 12/17/16



ORGANICS
Raw Data

APPL, INC.

Method Blank
METHANE

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161217W-47345 - 214809**
Batch ID: #RSKME-161217A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	METHANE	1.00 U	5.0	1.00	0.25	ug/L	12/17/16	12/17/16

Quant Method: RSK0901.M
Run #: 1217008
Instrument: Rocky
Sequence: 160901
Initials: CMO

GC SC-Blank-REG MDLs-DOD
Printed: 12/20/16 5:24:34 PM

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1217008.D Vial: 9
Acq On : 17 Dec 16 9:57 Operator: lac
Sample : 161217A BLK RSK Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 21 7:49 2016 Quant Results File: RSK0901.RES

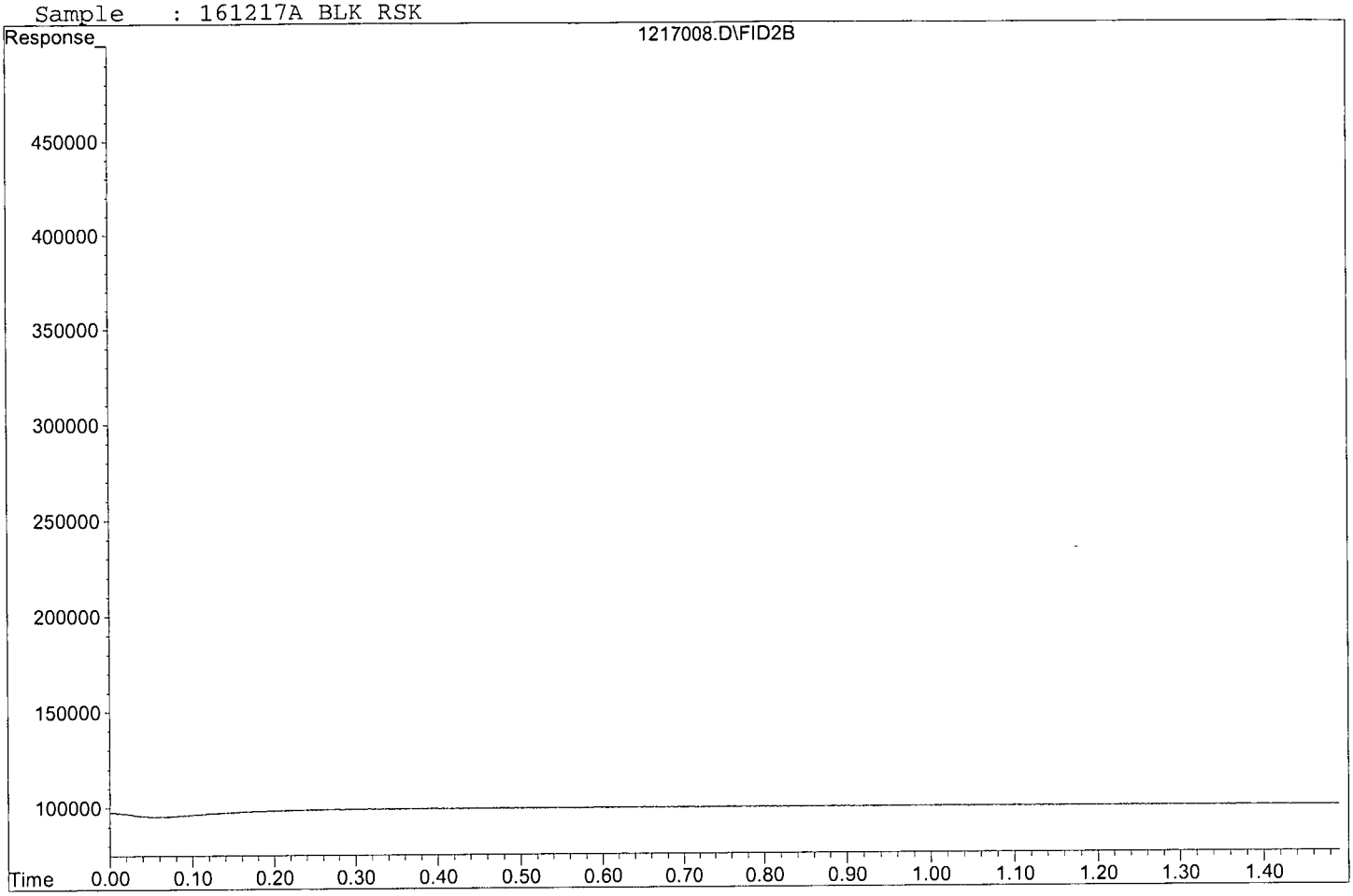
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Dec 20 15:34:53 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.75	2162	N.D.	ppb
2) ATM Ethane	0.90	1714	N.D.	ppb
3) ATM Ethene	0.98	1485	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1217008.D
Sample : 161217A BLK RSK



Laboratory Control Spike Recovery
METHANE

APPL ID: **161217W-47345 LCS - 214809**
Batch ID: #RSKME-161217A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
METHANE	668	815	122	72-125

Primary	SPK
Quant Method :	RSK0901.M
Extraction Date :	12/17/16
Analysis Date :	12/17/16
Instrument :	Rocky
Run :	1217007
Initials :	CMO

Comments: _____

Printed: 12/21/16 9:46:24 AM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1217007.D Vial: 8
Acq On : 17 Dec 16 9:48 Operator: lac
Sample : 161217A LCS/CCV RSK Level 9 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 21 7:49 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Dec 20 15:34:53 2016
Response via : Multiple Level Calibration

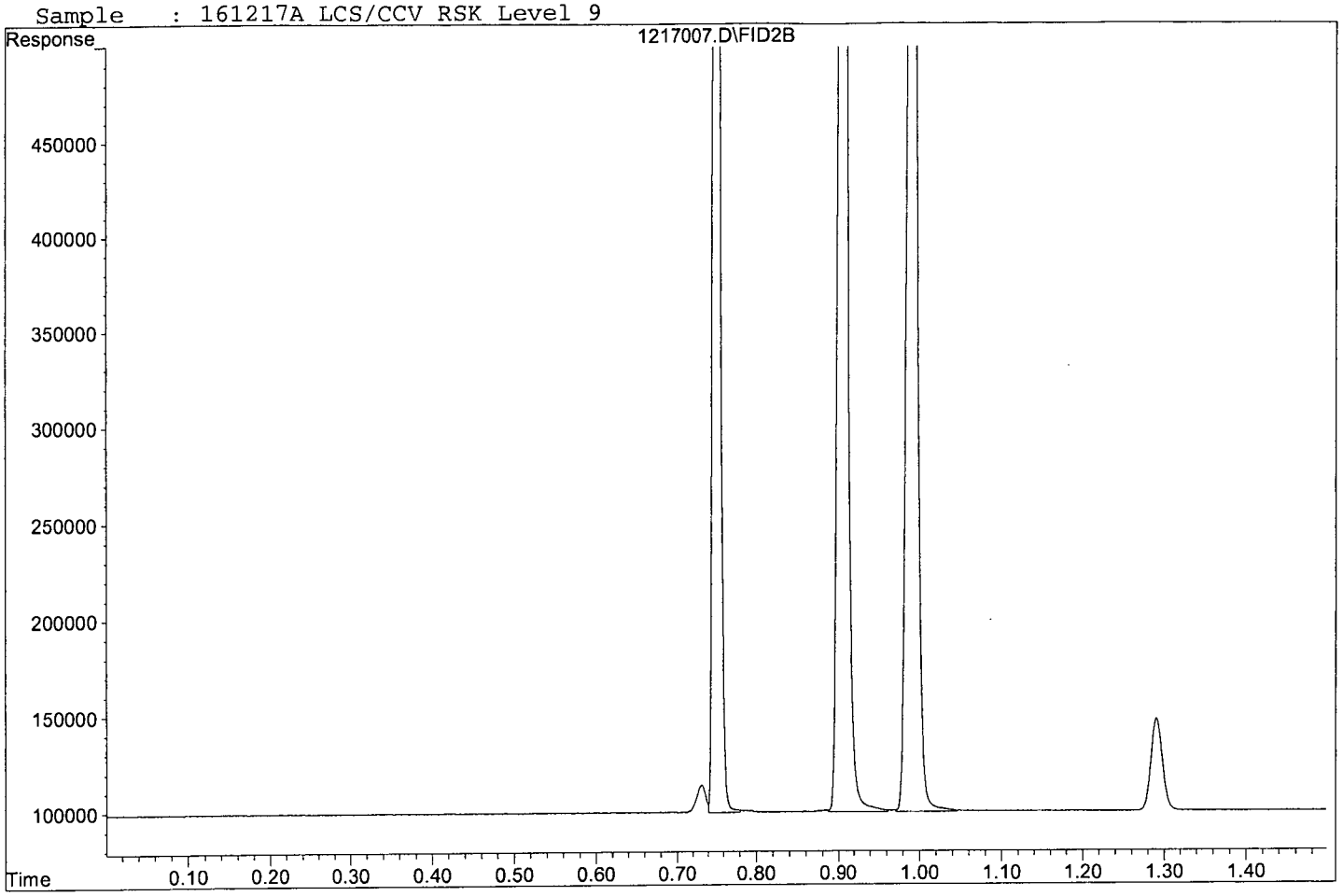
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.75	897206	815.052	ppb
2) ATM Ethane	0.90	1004261	1247.998	ppb
3) ATM Ethene	0.99	734600	1157.369	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1217007.D
Sample : 161217A LCS/CCV RSK Level 9



Matrix Spike Recoveries

METHANE

APPL ID: **161217W-47345 MS - 214809**
Batch ID: #RSKME-161217A
Sample ID: AZ47345
Client ID: ERH135

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
METHANE	320	ND	194	457	60.5 #	143 #	72-125	80.8 #	30

= Recovery is outside QC limits.

Comments: _____

Primary	SPK	DUP
Quant Method :	RSK0901.M	RSK0901.M
Extraction Date :	12/17/16	12/17/16
Analysis Date :	12/17/16	12/17/16
Instrument :	Rocky	Rocky
Run :	1217016	1217017
Initials :	CMO	

Printed: 12/21/16 9:52:44 AM
APPL MSD SCII

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1217016.D Vial: 4
Acq On : 17 Dec 16 12:17 Operator: lac
Sample : AZ47345W13 MS Level 9 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 21 7:49 2016 Quant Results File: RSK0901.RES

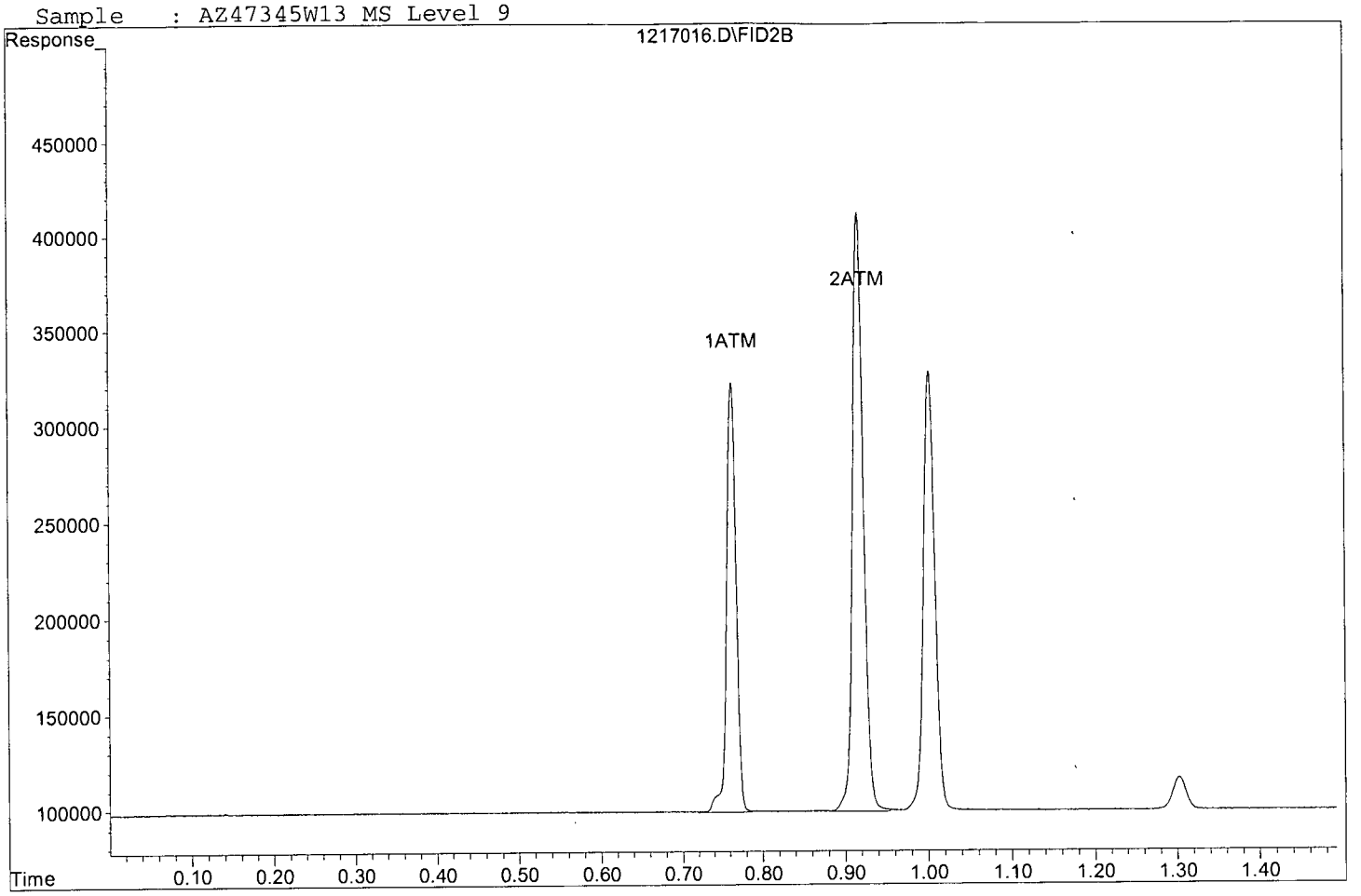
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Dec 20 15:34:53 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.76	224037	193.566	ppb
2) ATM Ethane	0.92	313439	380.584	ppb
Target Compounds				
3) ATM Ethene	0.97	748	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1217016.D
Sample : AZ47345W13 MS Level 9



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1217017.D Vial: 5
Acq On : 17 Dec 16 12:21 Operator: lac
Sample : AZ47345W14 MSD Level 9 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 21 7:49 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Dec 20 15:34:53 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

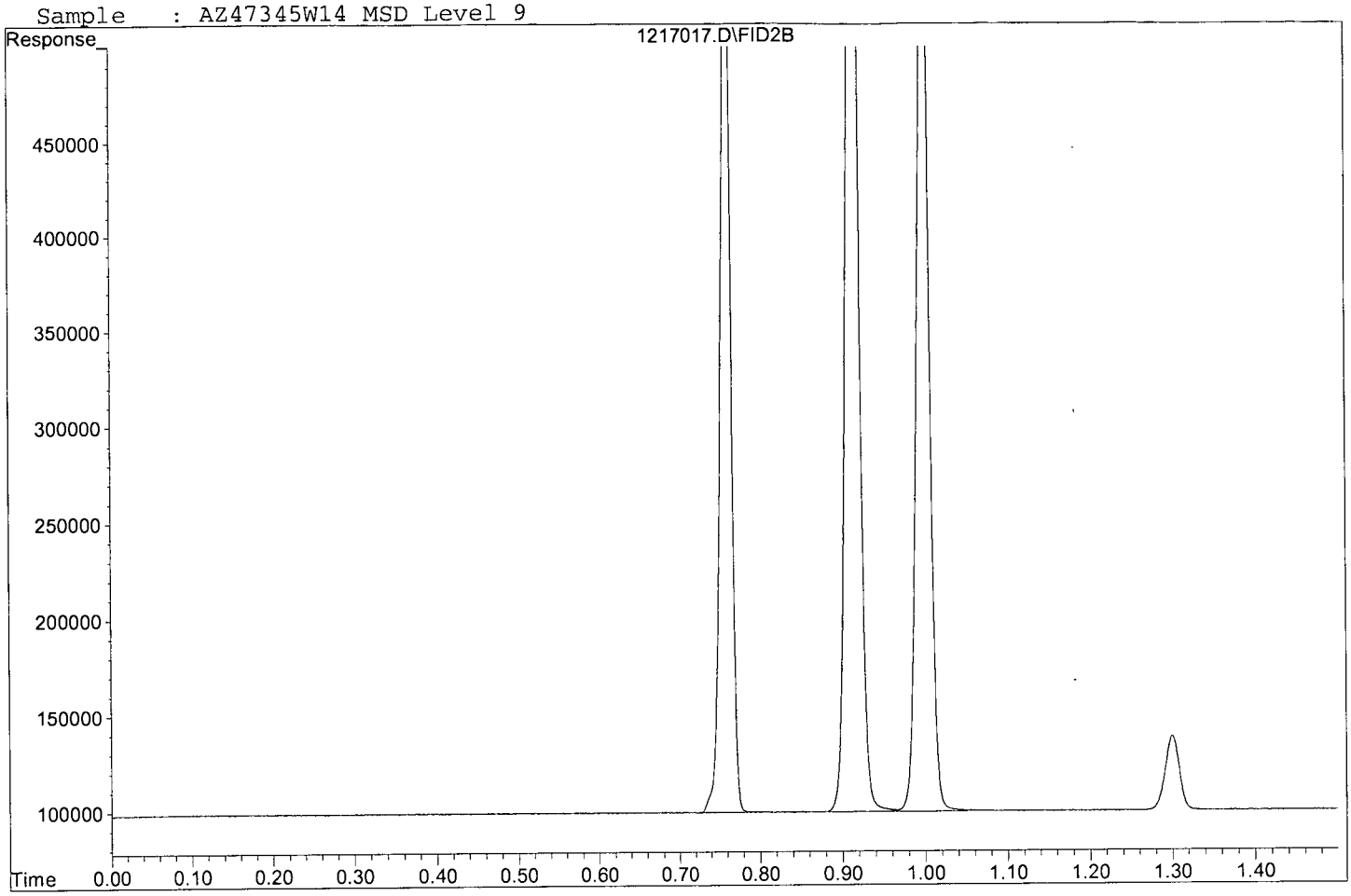
Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.76	509774	457.365 ppb
2) ATM Ethane	0.92	665220	822.290 ppb
3) ATM Ethene	1.00	491490	767.885 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\ROCKY\DATA\160901R\1217017.D
Sample : AZ47345W14 MSD Level 9



Primary Source Stock Standard 10,000ppmV **Manufacturer Exp date 7-8-2017** CM 8/15/16

RSK Gas Mix (Scott Specialty Gas) Cat.# 23452, Lot # 164PLU4SPC05L-34436

1% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

Intermediate Calibration Stock Standard 100ppmV **Expires 8/15/17** CM 8/15/16

Prepared in a 1 L Tedlar bag. Add 990mL Nitrogen and 10mL of 164PLU4SPC05L-34436 standard.

RSK Calibration Curve **Vial expiration date 9/28/16** CM 9/1/16

Analye	Conc Std 1 (ug/L)	Conc Std 2 (ug/L)	Conc Std 3 (ug/L)	Conc Std 4 (ug/L)	Conc Std 5 (ug/L)	Conc Std 6 (ug/L)	Conc Std 7 (ug/L)	Conc Std 8 (ug/L)	Conc Std 9 (ug/L)	Conc Std 10 (ug/L)
Methane (MW 16.	0.90	1.80	5.10	13.33	26.70	66.75	106.80	320.4	667.5	1335.0
Ethane (MW 30.0	1.70	3.40	9.50	25.00	50.00	125.00	200.00	600.0	1250.0	2500.0
Ethene (MW 28.0	1.60	3.20	8.90	23.30	46.60	116.50	186.40	599.2	1248.0	2496.0
Stock Source	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Primary Source Std #164PLU4SPC05L-34436	Primary Source Std #164PLU4SPC05L-34436	Primary Source Std #164PLU4SPC05L-34436	Primary Source Std #164PLU4SPC05L-34436
Stock Conc (ppr	100 ppmV	100 ppmV	100 ppmV	100 ppmV	100 ppmV	100 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV
Stock Aliquot (m	0.135 mL	0.270 mL	0.760 mL	2.0 mL	4.0 mL	10.0 mL	0.160 mL	0.480 mL	1.00 mL	2.00 mL
Final Volume P&T W	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL

Second Source Stock Standard 10,000ppmV **Manufacturer Exp Date 6-19-18** CM 8/15/16

RSK Gas Mix (Scott Specialty Gas) Cat.# 0104E40028`4, Lot # 170PLU5SPC06L-35410

1% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

Intermediate Second Source Standard 100ppmV **Expires 8/15/17** CM 8/15/16

Prepared in a 1 L Tedlar bag. Add 990mL Nitrogen and 10mL of lot# 170PLU5SPC06L-35410 standard.

Second Source / LCS - Level 6 **Expires 10/1/16** CM 9/1/16

10.0mL of Intermediate SS stock 8/15/16 into 10mL P&T water

final conc:66.7ppb Methane, 125.0ppb Ethane, and 116.5 ppb Ethene

CCV/LCS - Level 9 **Expires 01/17/16** CM 12/17/16

1.0mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water

final conc:667.5ppb Methane,1250 ppb Ethane, and 1248 ppb Ethene

AZ47345W13/W14 MS/MSD CM 12/17/16

4.0mL of Intermediate calib stock 8/15/16 into 10mL P&T water

final conc:26.7ppb Methane, 50.0ppb Ethane, and 46.6 ppb Ethene

Injection Log

Directory: G:\ROCKY\DATA\160901R\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0901000.D	1	RSK Level 1 08/15/16	Methane 0.9, Ethane, 1.7 Etl	1 Sep 16 11:38
2	2	0901001.D	1	RSK Level 2 08/15/16		1 Sep 16 11:41
3	3	0901002.D	1	RSK Level 3 08/15/16	Methane 5.1, Ethane, 9.5 Etl	1 Sep 16 11:44
4	4	0901003.D	1	RSK Level 4 08/15/16		1 Sep 16 11:46
5	5	0901004.D	1	RSK Level 5 08/15/16		1 Sep 16 11:48
6	6	0901005.D	1	RSK Level 6 08/15/16		1 Sep 16 11:50
7	7	0901006.D	1	RSK Level 7 08/15/16		1 Sep 16 11:52
8	8	0901007.D	1	RSK Level 8 08/15/16		1 Sep 16 11:55
9	9	0901008.D	1	RSK Level 9 08/15/16		1 Sep 16 11:57
10	10	0901009.D	1	RSK Level 10 08/15/16		1 Sep 16 11:59
11	19	0901018.D	1	(SS/LCS) RSK Level 6 09/01/16		1 Sep 16 13:11
12	8	1217007.D	1	161217A LCS/CCV RSK Level 9		17 Dec 16 9:48
13	9	1217008.D	1	161217A BLK RSK		17 Dec 16 9:57
14	1	1217013.D	1	AZ47344W06		17 Dec 16 11:40
15	2	1217014.D	1	AZ47345W12		17 Dec 16 11:43
16	4	1217016.D	1	AZ47345W13 MS Level 9		17 Dec 16 12:17
17	5	1217017.D	1	AZ47345W14 MSD Level 9		17 Dec 16 12:21
18	18	1217030.D	1	Ending CCV RSK Level 9 12/17/16		17 Dec 16 13:36

INORGANIC ANALYSIS

APPL, INC.

INORGANIC ANALYSIS
QC Summary

APPL, INC.

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	12/19/16	12/19/16	#300W-161219A2-AZ47344
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	12/19/16	12/19/16	#300W-161219A2-AZ47344
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	12/19/16	12/19/16	#300W-161219A2-AZ47344
SM 2320B	BICARBONATE AS	1.5 J	2.0	1.70	0.85	mg/L	12/19/16	12/19/16	#232W-161219A1-AZ47345
SM 2320B	CARBONATE AS CA	1.70 U	2.0	1.70	0.85	mg/L	12/19/16	12/19/16	#232W-161219A1-AZ47345
SM 2320B	TOTAL ALKALINITY	1.5 J	2.0	1.70	0.85	mg/L	12/19/16	12/19/16	#232W-161219A1-AZ47345
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	12/19/16	12/19/16	#300W-161219B-AZ47345
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	12/19/16	12/19/16	#300W-161219B-AZ47345
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	12/19/16	12/19/16	#300WD-161219B-AZ47345
SM3500Fe	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	12/13/16	12/13/16	#35FE-161213A-AZ47345
EPA 353.2	NITRATE-NITRITE-N	0.100 U	0.10	0.100	0.028	mg/L	12/20/16	12/20/16	#35OF-161220A1-AZ47345

Wetlab SC-Blank-REG MDLs
Printed: 12/28/16 5:10:48 PM

Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	20.0	18.5	92.5	90-110	12/19/16	12/19/16	#300W-161219A2-AZ47344
EPA 300.0	NITRATE	22.1	20.6	93.2	90-110	12/19/16	12/19/16	#300W-161219A2-AZ47344
EPA 300.0	SULFATE	20.0	18.2	91.0	90-110	12/19/16	12/19/16	#300W-161219A2-AZ47344

Comments: _____

Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	20.0	18.6	93.0	90-110	12/19/16	12/19/16	#300WD-161219B-AZ47345
EPA 300.0	NITRATE	22.1	20.8	94.1	90-110	12/19/16	12/19/16	#300W-161219B-AZ47345
EPA 300.0	SULFATE	20.0	18.4	92.0	90-110	12/19/16	12/19/16	#300W-161219B-AZ47345
EPA 353.2	NITRATE-NITRITE-N	2.50	2.59	104	90-110	12/20/16	12/20/16	#35OF-161220A1-AZ47345
SM 2320B	BICARBONATE AS CACO3	250	244	97.6	90-110	12/19/16	12/19/16	#232W-161219A1-AZ47345
SM 2320B	TOTAL ALKALINITY AS CACO3	250	244	97.6	90-110	12/19/16	12/19/16	#232W-161219A1-AZ47345
SM3500Fe	FERROUS IRON	3.00	2.93	97.7	80-120	12/13/16	12/13/16	#35FE-161213A-AZ47345

Comments: _____

Matrix Spike Recoveries

WETLAB

APPL ID: **161220W-47345 MS - 214820**

Sample ID: AZ47345

Client ID: ERH135

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	Matrix Res mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
EPA 300.0	CHLORIDE	40.0	85.3	131	131	114 #	114 #	0.0	20	90-110	12/20/16	12/20/16	12/20/16	12/20/16	214820	AZ47345
EPA 300.0	NITRATE	22.1	2.5	22.8	22.7	91.9	91.4	0.44	20	90-110	12/19/16	12/19/16	12/19/16	12/19/16	214819	AZ47345
EPA 300.0	SULFATE	20.0	14.9	33.4	33.6	92.5	93.5	0.60	20	90-110	12/19/16	12/19/16	12/19/16	12/19/16	214819	AZ47345
EPA 353.2	NITRATE-NITRITE-N	2.50	0.40	2.80	2.58	96.0	87.2 #	8.2	20	90-110	12/20/16	12/20/16	12/20/16	12/20/16	214862	AZ47345
SM 2320B	BICARBONATE AS CA	250	61.9	309	297	98.8	94.0	4.0	20	90-110	12/19/16	12/19/16	12/19/16	12/19/16	214808	AZ47345
SM 2320B	TOTAL ALKALINITY AS	250	61.9	309	297	98.8	94.0	4.0	20	90-110	12/19/16	12/19/16	12/19/16	12/19/16	214808	AZ47345
SM3500Fe	FERROUS IRON	3.00	0.067	3.02	3.20	98.4	104	5.8	20	80-120	12/13/16	12/13/16	12/13/16	12/13/16	214796	AZ47345

= Recovery is outside QC limits.

Comments: _____

INORGANIC ANALYSIS
Sample Data

APPL, INC.

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH141

APPL ID: AZ47344

Sample Collection Date: 12/12/16

ARF: 81734

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	NITRATE	2.2	0.5	0.18	0.04	mg/L	1	12/19/16	12/19/16
EPA 300.0	CHLORIDE	171	5.0	1.00	0.40	mg/L	5	12/19/16	12/19/16
EPA 300.0	SULFATE	78.7	5.0	1.00	0.45	mg/L	5	12/19/16	12/19/16
EPA 353.2	NITRATE-NITRITE-N	0.33	0.10	0.100	0.028	mg/L	1	12/20/16	12/20/16
SM 2320B	BICARBONATE AS CACO3	59.1	2.0	1.70	0.85	mg/L	1	12/19/16	12/19/16
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	12/19/16	12/19/16
SM 2320B	TOTAL ALKALINITY AS CACO3	59.1	2.0	1.70	0.85	mg/L	1	12/19/16	12/19/16
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	12/13/16	12/13/16

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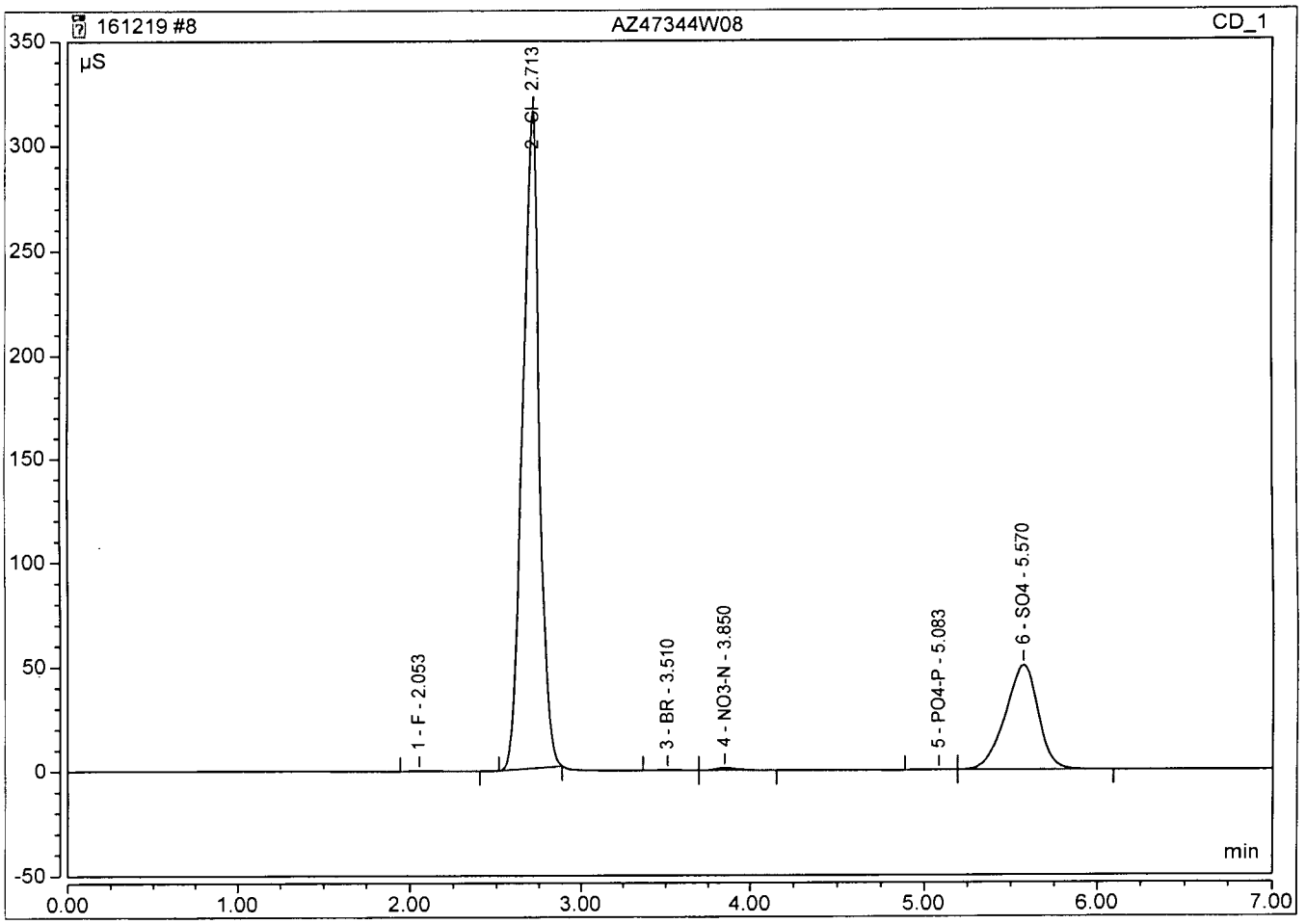
APPL-F1-SC-NoMC-REG MDLs

Peak Integration Report

Sample Name:	**AZ47344W08**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**19-Dec-2016 / 14:51**	*Run Time:*	**7.00**

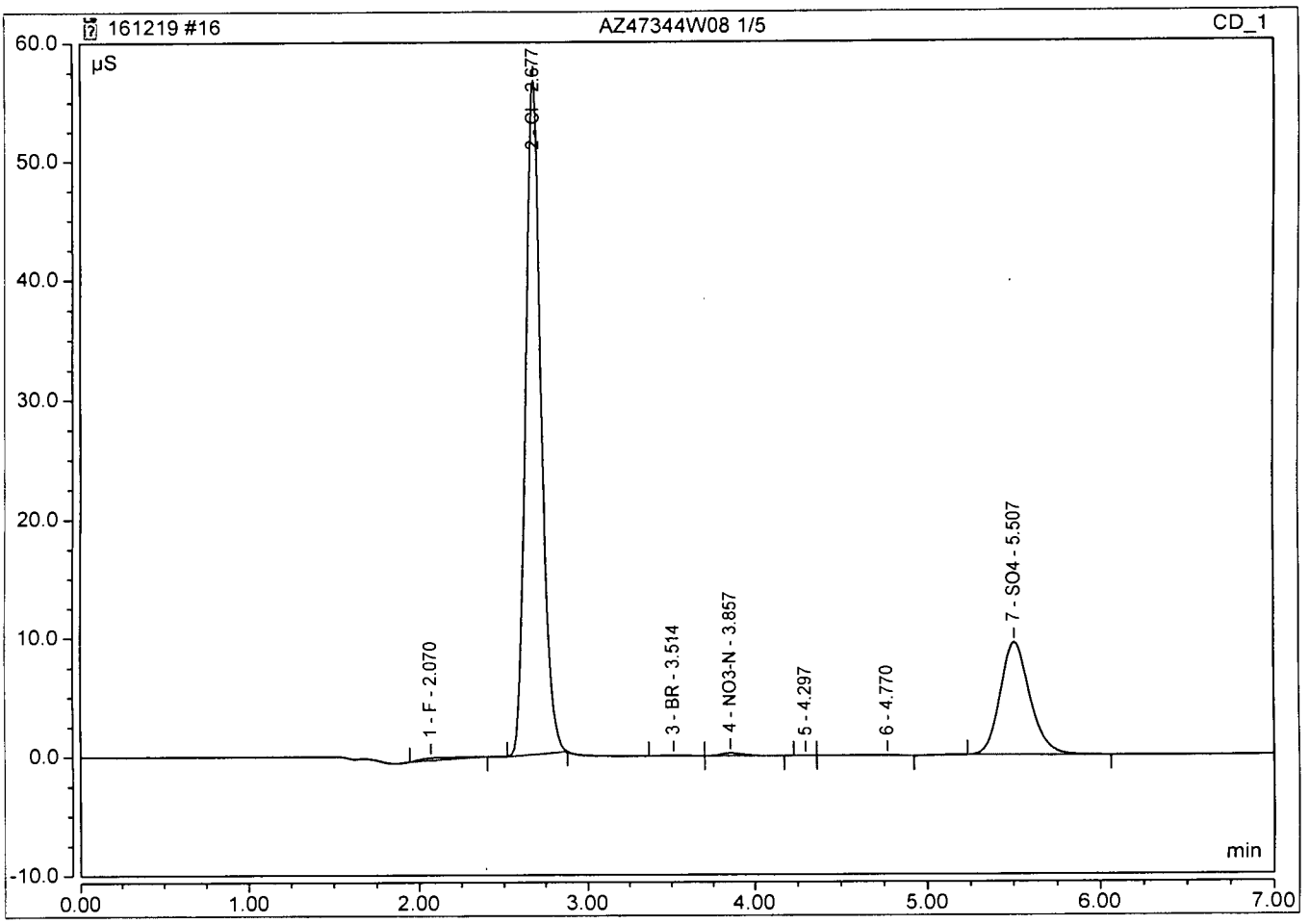
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.05	F	BMB	0.063	0.425	0.3173
2	2.71	Cl	BMB	35.971	315.057	198.5957
3	3.51	BR	BMB	0.034	0.263	0.6575
4	3.85	NO3-N	BMB	0.164	1.133	0.4946
5	5.08	PO4-P	BMB	0.011	0.063	0.1567
6	5.57	SO4	BMB	10.844	49.801	89.2932
TOTAL:				47.09	366.74	289.51



Peak Integration Report

Sample Name:	**AZ47344W08 1/5**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**5.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**19-Dec-2016 / 16:36**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.07	F	BMB	0.057	0.228	1.4594
2	2.68	Cl	BMB	6.103	56.620	170.6332
3	3.51	BR	BMB	0.007	0.054	1.1759
4	3.86	NO3-N	BMB	0.033	0.230	0.8850
7	5.51	SO4	BMB	1.861	9.407	78.6663
TOTAL:				8.06	66.54	252.82



Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH135

APPL ID: AZ47345

Sample Collection Date: 12/12/16

ARF: 81734

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	CHLORIDE	85.3	2.0	0.40	0.16	mg/L	2	12/19/16	12/19/16
EPA 300.0	NITRATE	2.5	0.5	0.18	0.04	mg/L	1	12/19/16	12/19/16
EPA 300.0	SULFATE	14.9	1.0	0.20	0.09	mg/L	1	12/19/16	12/19/16
EPA 353.2	NITRATE-NITRITE-N	0.40	0.10	0.100	0.028	mg/L	1	12/20/16	12/20/16
SM 2320B	BICARBONATE AS CACO3	61.9	2.0	1.70	0.85	mg/L	1	12/19/16	12/19/16
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	12/19/16	12/19/16
SM 2320B	TOTAL ALKALINITY AS CACO3	61.9	2.0	1.70	0.85	mg/L	1	12/19/16	12/19/16
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	12/13/16	12/13/16

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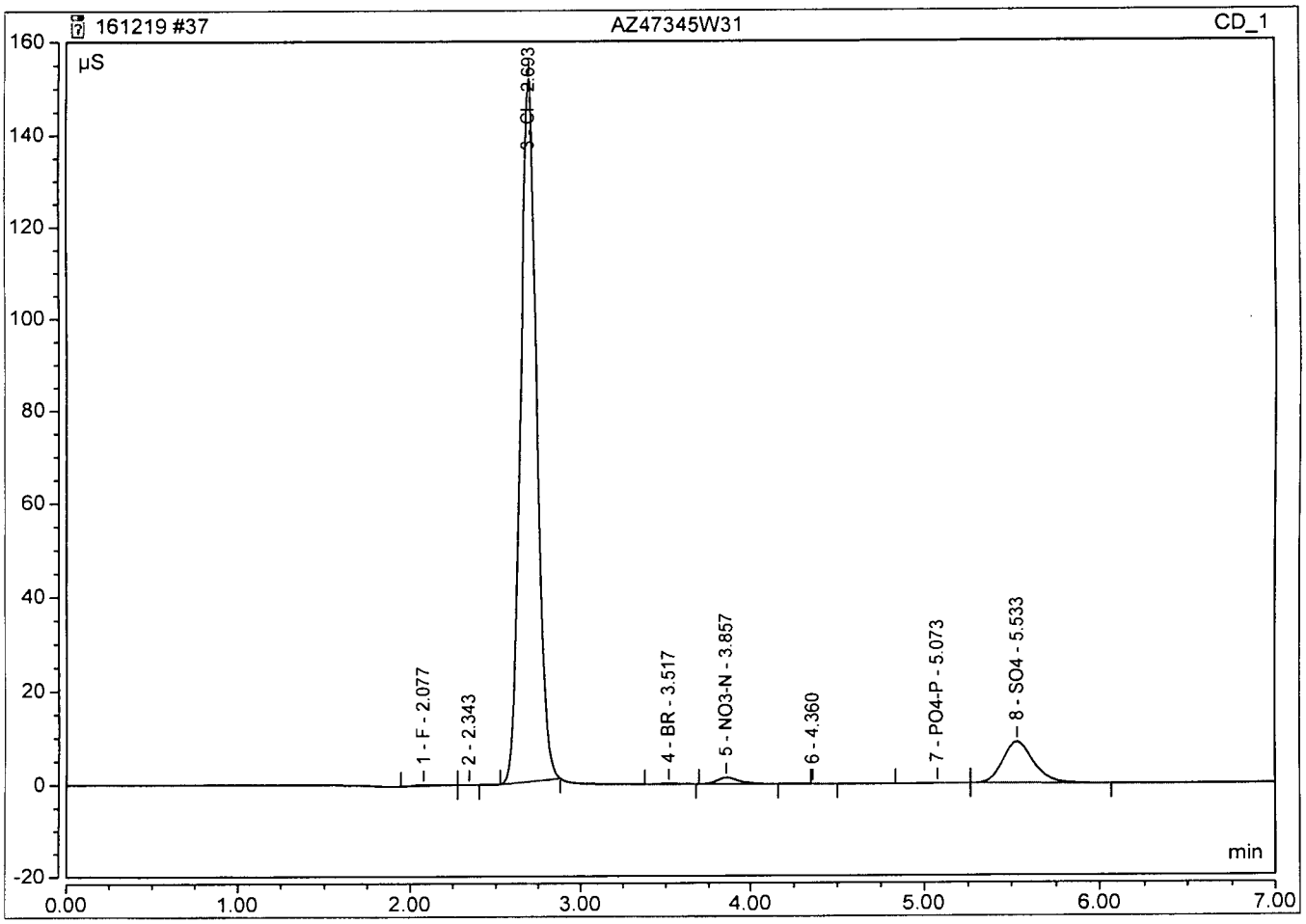
APPL-F1-SC-NoMC-REG MDLs

Peak Integration Report

Sample Name:	**AZ47345W31**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**19-Dec-2016 / 21:10**	*Run Time:*	**7.00**

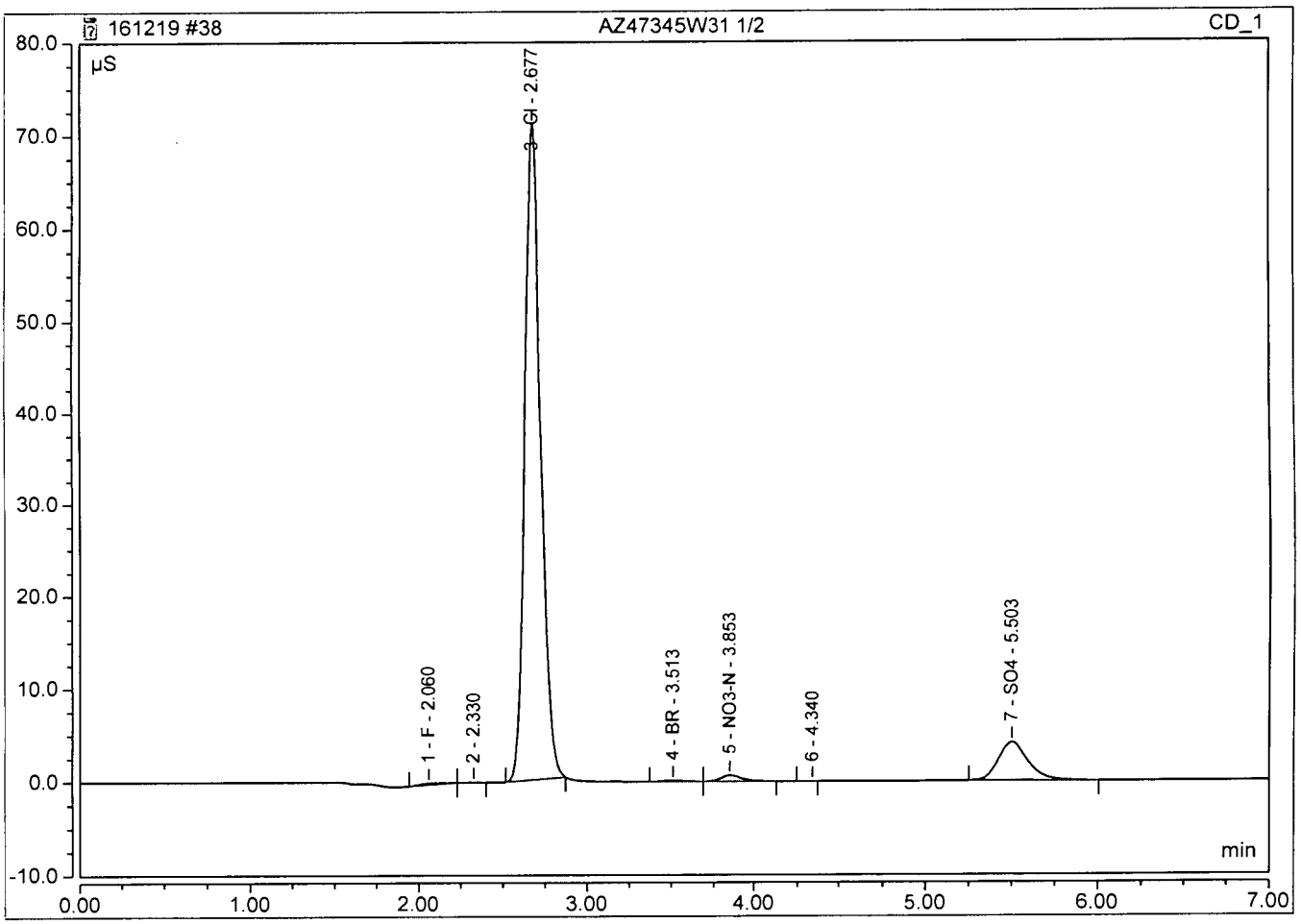
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.08	F	BMB	0.031	0.202	0.1778
3	2.69	Cl	BMB	16.651	151.357	92.2102
4	3.52	BR	BMB	0.017	0.131	0.3882
5	3.86	NO3-N	BMB	0.192	1.320	0.5627
7	5.07	PO4-P	BMB	0.018	0.082	0.2107
8	5.53	SO4	BMB	1.753	8.742	14.8515
TOTAL:				18.66	161.83	108.40



Peak Integration Report

Sample Name:	**AZ47345W31 1/2**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**2.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**19-Dec-2016 / 21:23**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.06	F	BMB	0.024	0.157	0.2927
3	2.68	Cl	BMB	7.650	70.981	85.2843
4	3.51	BR	BMB	0.008	0.067	0.5189
5	3.85	NO3-N	BMB	0.094	0.649	0.6467
7	5.50	SO4	BMB	0.814	4.093	14.3144
TOTAL:				8.59	75.95	101.06



INORGANIC ANALYSIS
Calibration Data

APPL, INC.

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No: 81734 SDG: 81734

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 05/20/16

Analyte	Calibration Verification									M
	True ICV	Found 12:41	%R(1)	True CCV1	Found 14:17	%R(1)	True CCV1	Found 14:26	%R(1)	
Ferrous Iron	3	3.01396	100	4	3.90310	97.6	4	3.93307	98.3	

(1) Control Limits: 90-110

ILM02.0

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 81734 SDG: 81734

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	ICB 05/20/16 12:42	C	CCB 12/13/16 14:18	C	CCB 12/13/16 14:27	C		C		C	
Ferrous Iron	1.000	U	1.000	U	1.000	U					

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No: 81734 SDG: 81734

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 10/20/16

Analyte	Calibration Verification									M
	True ICV	Found 12:37	%R(1)	True	Found	%R(1)	True	Found	%R(1)	
chloride	20	18.2183	91.1							
Nitrate(NO3)	22.1	20.0573	90.8							
sulfate	20	18.4058	92.0							

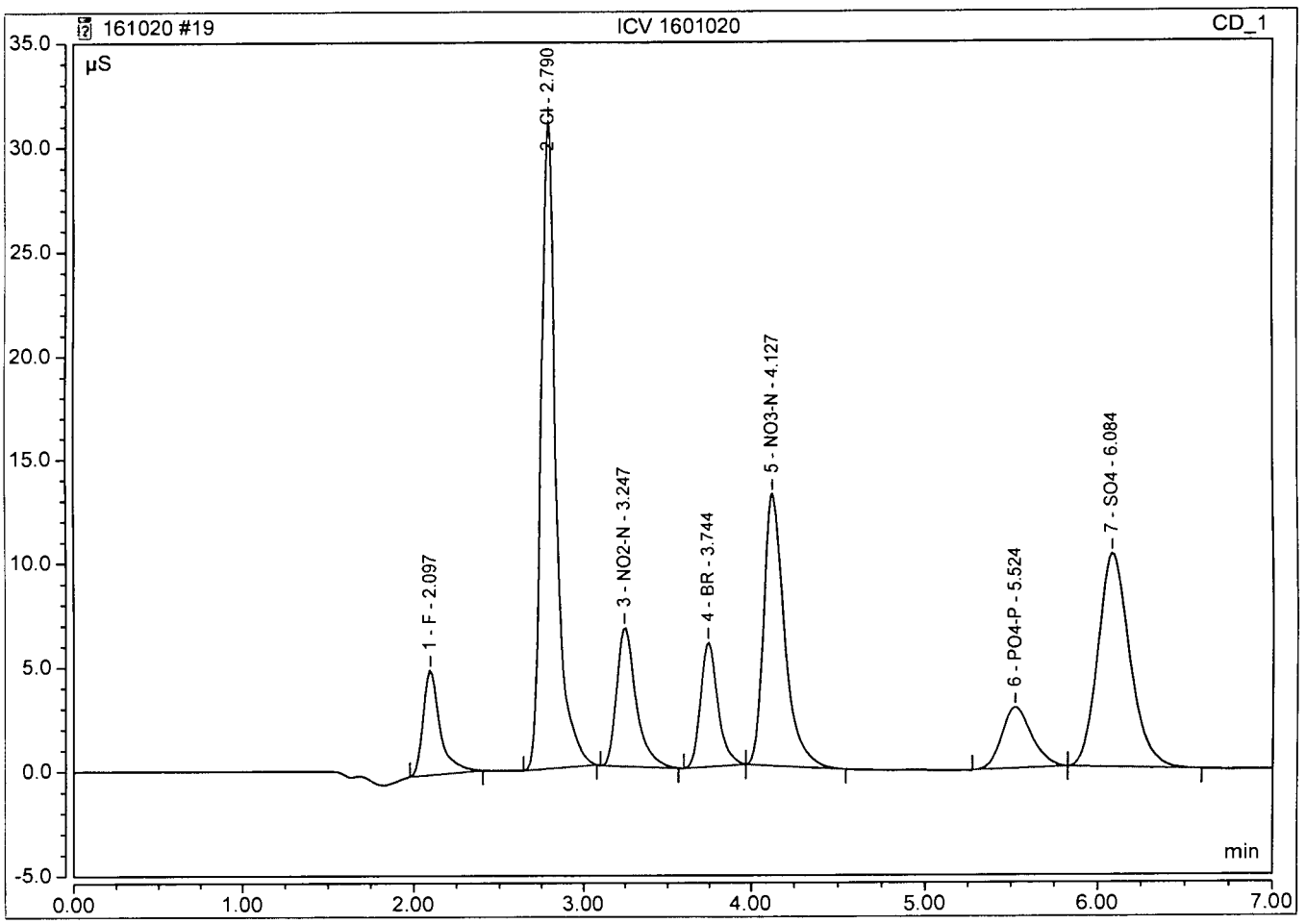
(1) Control Limits: 90-110

ILM02.0

Peak Integration Report

Sample Name:	**ICV 1601020**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:37**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB	0.568	5.018	2.5594
2	2.79	Cl	BMB	3.214	31.139	18.2184
3	3.25	NO2-N	BMB	0.894	6.653	2.9873
4	3.74	BR	BMB	0.739	5.970	11.8423
5	4.13	NO3-N	BMB	1.827	13.075	4.5291
6	5.52	PO4-P	BMB	0.590	2.913	4.8011
7	6.08	SO4	BMB	2.187	10.255	18.4058
TOTAL:				10.02	75.02	63.34



Algorithm Check
$y = .1816x - .0943$ y: Peak Area
x: Amount
$x = 18.22$ ✓ MM 12/28/16

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 81734 SDG: 81734

Preparation Blank Matrix (soil/water): water

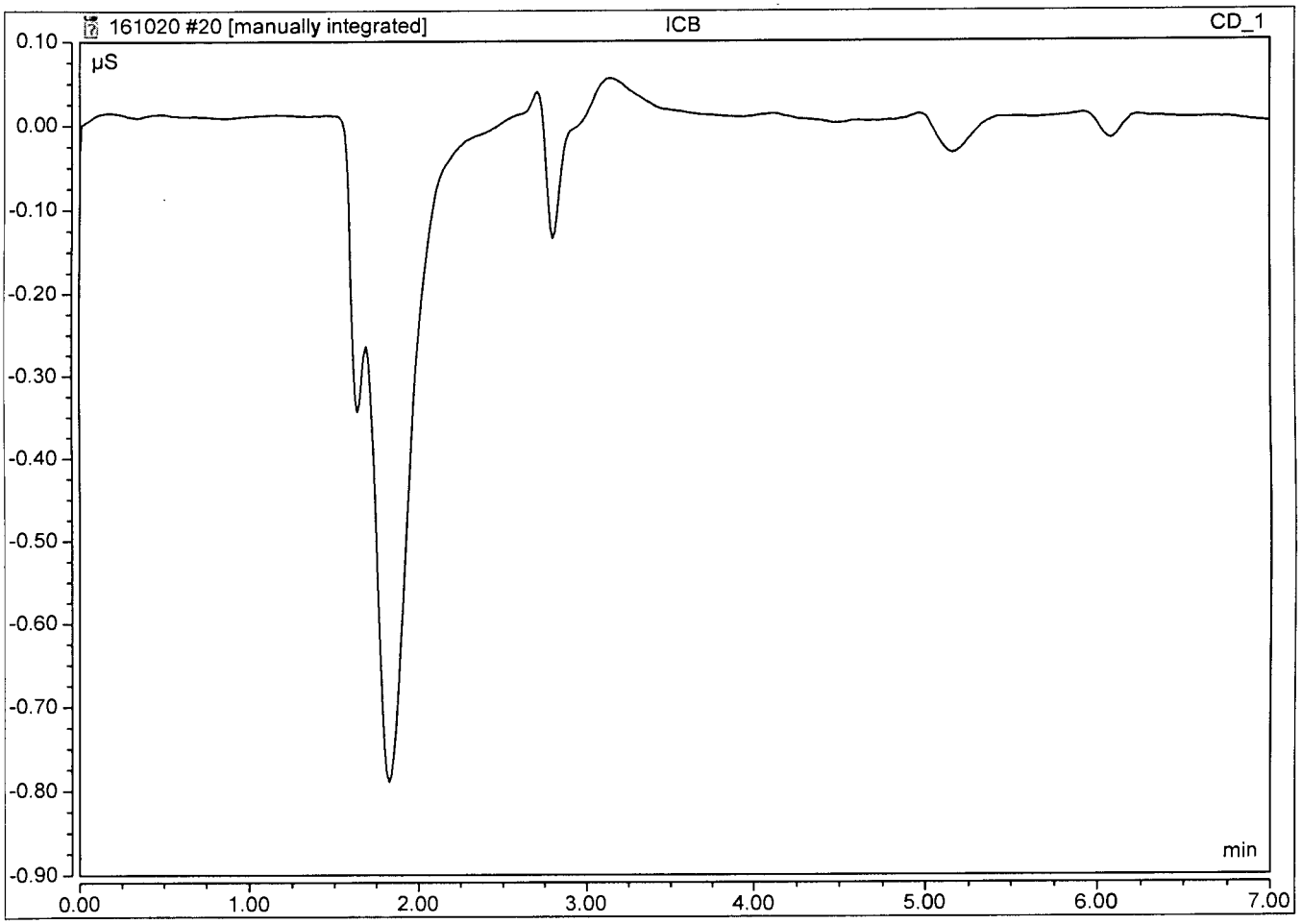
Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	ICB 10/20/16 12:50	C		C		C		C		C	
chloride	1.000	U									
Nitrate(NO3)	.500	U									
sulfate	1.000	U									

Peak Integration Report

Sample Name:	**ICB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:50**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
		TOTAL:		0.00	0.00	0.00



A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM
ARF No: 81734 SDG: 81734
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 12/19/16

Analyte	Calibration Verification									M
	True CCV1	Found 8:34	%R(1)	True CCV1	Found 17:15	%R(1)	True CCV1	Found 19:25	%R(1)	
chloride	25	23.6539	94.6	25	23.7558	95.0	25	23.7815	95.1	
Nitrate(NO3)	22.1	21.2417	96.1	22.1	21.5048	97.3	22.1	21.5043	97.3	
sulfate	25	23.1865	92.7	25	23.3969	93.6	25	23.3963	93.6	

(1) Control Limits: 90-110

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No: 81734 SDG: 81734

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 12/19/16

Analyte	Calibration Verification									M
	True CCV1	Found 22:15	%R(1)	True	Found	%R(1)	True	Found	%R(1)	
chloride	25	23.9223	95.7							
Nitrate(NO3)	22.1	21.6146	97.8							
sulfate	25	23.5775	94.3							

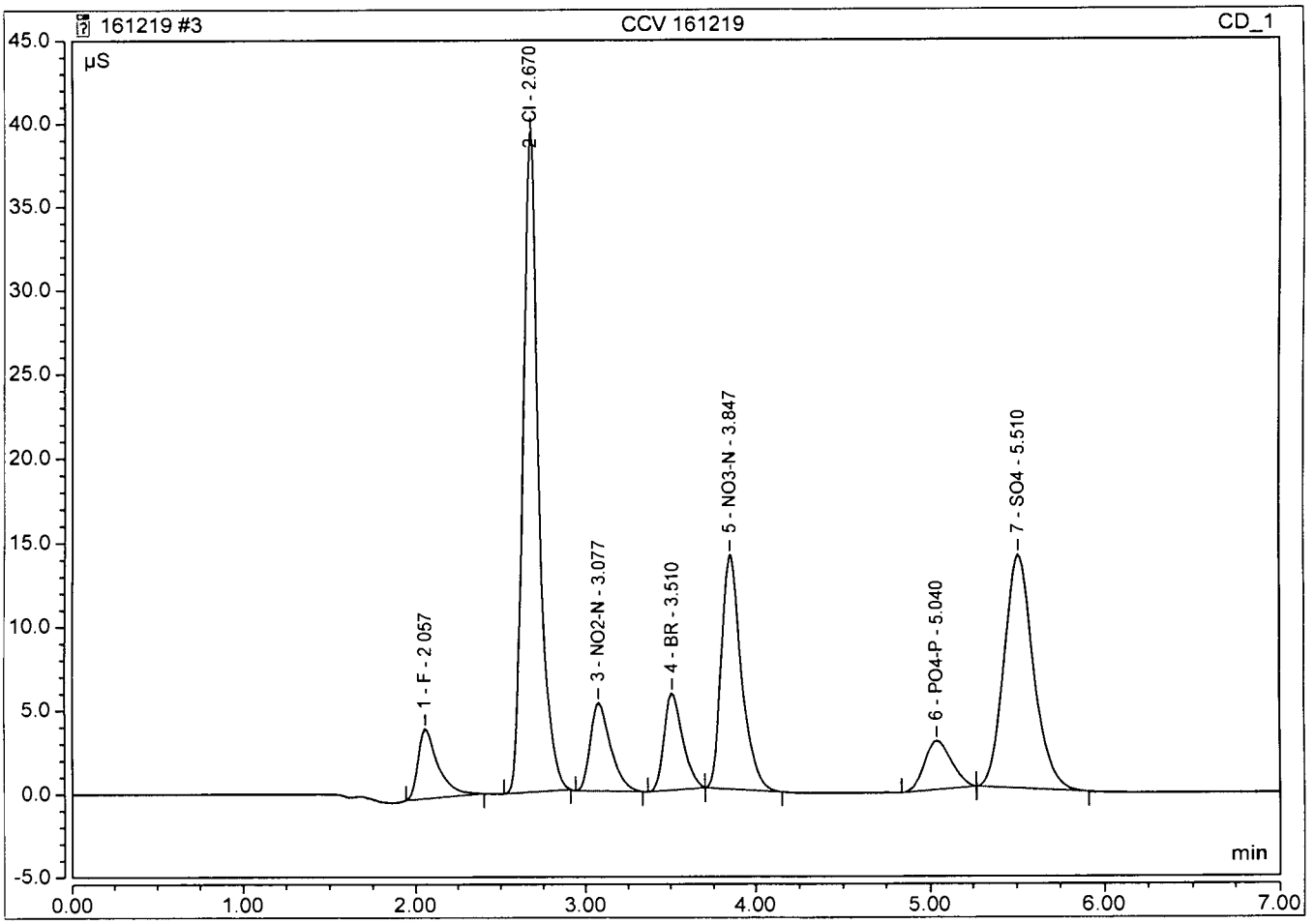
(1) Control Limits: 90-110

ILM02.0

Peak Integration Report

Sample Name:	**CCV 161219**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**19-Dec-2016 / 08:34**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.06	F	BMB	0.571	4.188	2.5748
2	2.67	Cl	BMB	4.201	39.372	23.6539
3	3.08	NO2-N	BMB	0.726	5.279	2.4312
4	3.51	BR	BMB	0.725	5.802	11.6144
5	3.85	NO3-N	BMB	1.937	14.001	4.7965
6	5.04	PO4-P	BMB	0.537	2.931	4.3781
7	5.51	SO4	BMB	2.771	13.986	23.1865
TOTAL:				11.47	85.56	72.64

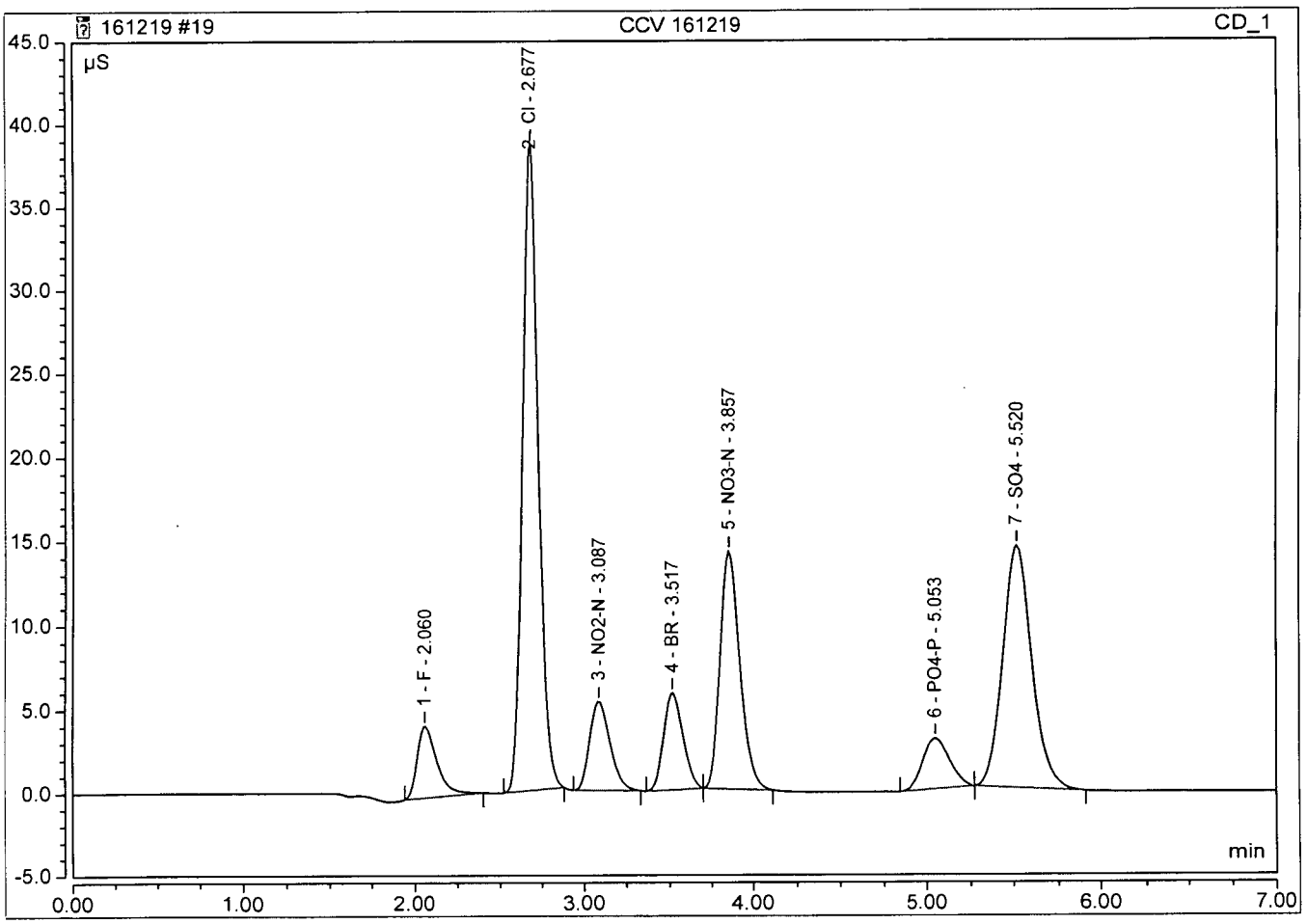


Algorithm Check
y = Peak Area
x = Amount
y = .1816x - .0913
x = 23.65 ✓ mm 12/28/16

Peak Integration Report

Sample Name:	**CCV 161219**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**19-Dec-2016 / 17:15**	*Run Time:*	**7.00**

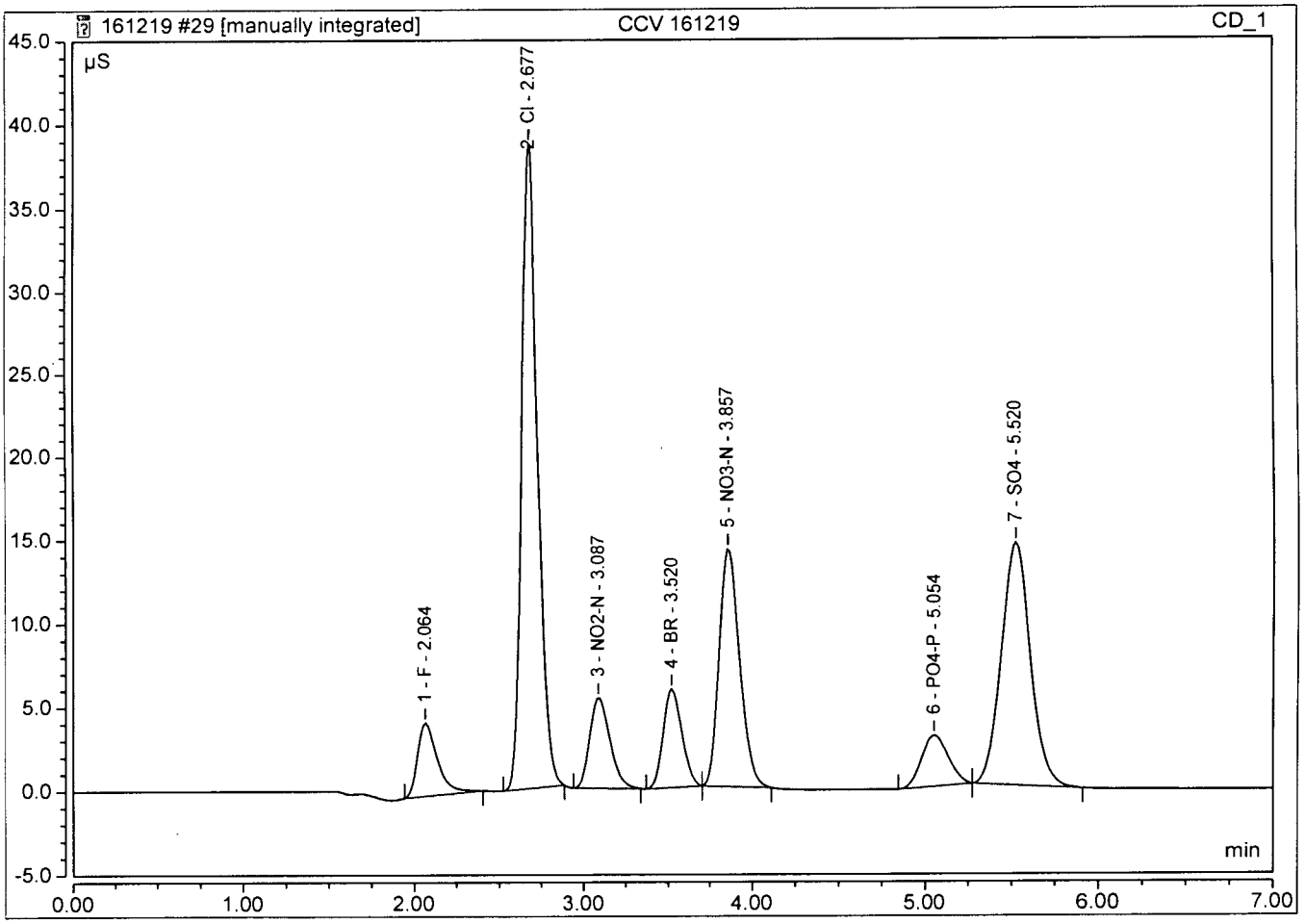
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.06	F	BMB	0.584	4.331	2.6323
2	2.68	Cl	BMB	4.220	38.583	23.7558
3	3.09	NO2-N	BMB	0.745	5.359	2.4924
4	3.52	BR	BMB	0.746	5.845	11.9517
5	3.86	NO3-N	BMB	1.961	14.175	4.8559
6	5.05	PO4-P	BMB	0.550	3.035	4.4831
7	5.52	SO4	BMB	2.797	14.435	23.3969
TOTAL:				11.60	85.76	73.57



Peak Integration Report

Sample Name:	**CCV 161219**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**19-Dec-2016 / 19:25**	*Run Time:*	**7.00**

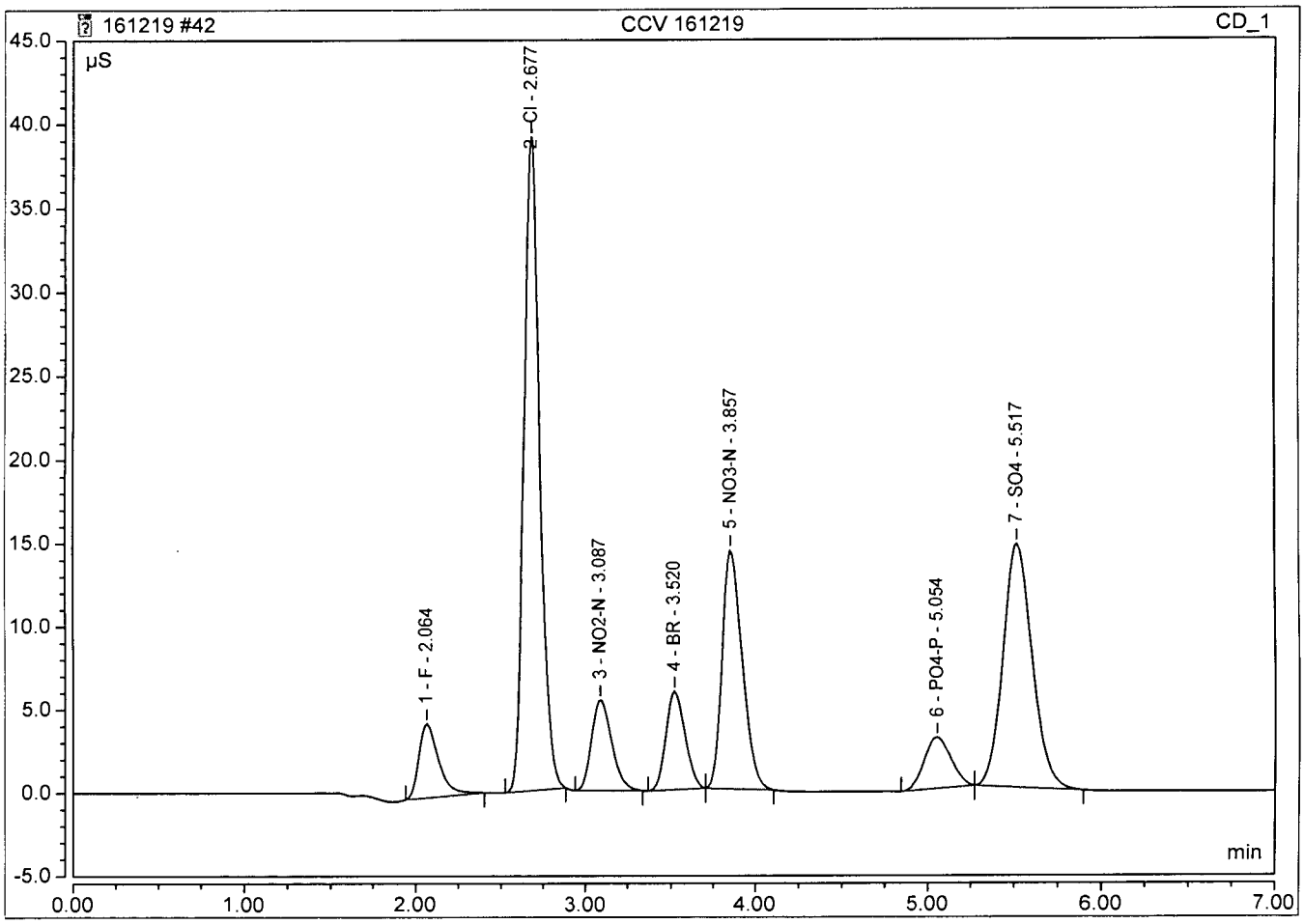
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.06	F	BMB	0.586	4.353	2.6402
2	2.68	Cl	BMB	4.225	38.692	23.7815
3	3.09	NO2-N	BMB	0.746	5.376	2.4966
4	3.52	BR	BMB	0.747	5.859	11.9666
5	3.86	NO3-N	BMB	1.961	14.209	4.8558
6	5.05	PO4-P	BMb*	0.551	3.042	4.4863
7	5.52	SO4	bMB*	2.797	14.462	23.3963
TOTAL:				11.61	85.99	73.62



Peak Integration Report

Sample Name:	**CCV 161219**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**19-Dec-2016 / 22:15**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.06	F	BMB	0.590	4.441	2.6592
2	2.68	Cl	BMB	4.250	39.103	23.9223
3	3.09	NO2-N	BMB	0.754	5.441	2.5224
4	3.52	BR	BMB	0.753	5.917	12.0539
5	3.86	NO3-N	BMB	1.972	14.357	4.8807
6	5.05	PO4-P	BMB	0.558	3.079	4.5420
7	5.52	SO4	BMB	2.819	14.629	23.5775
TOTAL:				11.70	86.97	74.16



A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 81734 SDG: 81734

Preparation Blank Matrix (soil/water): water

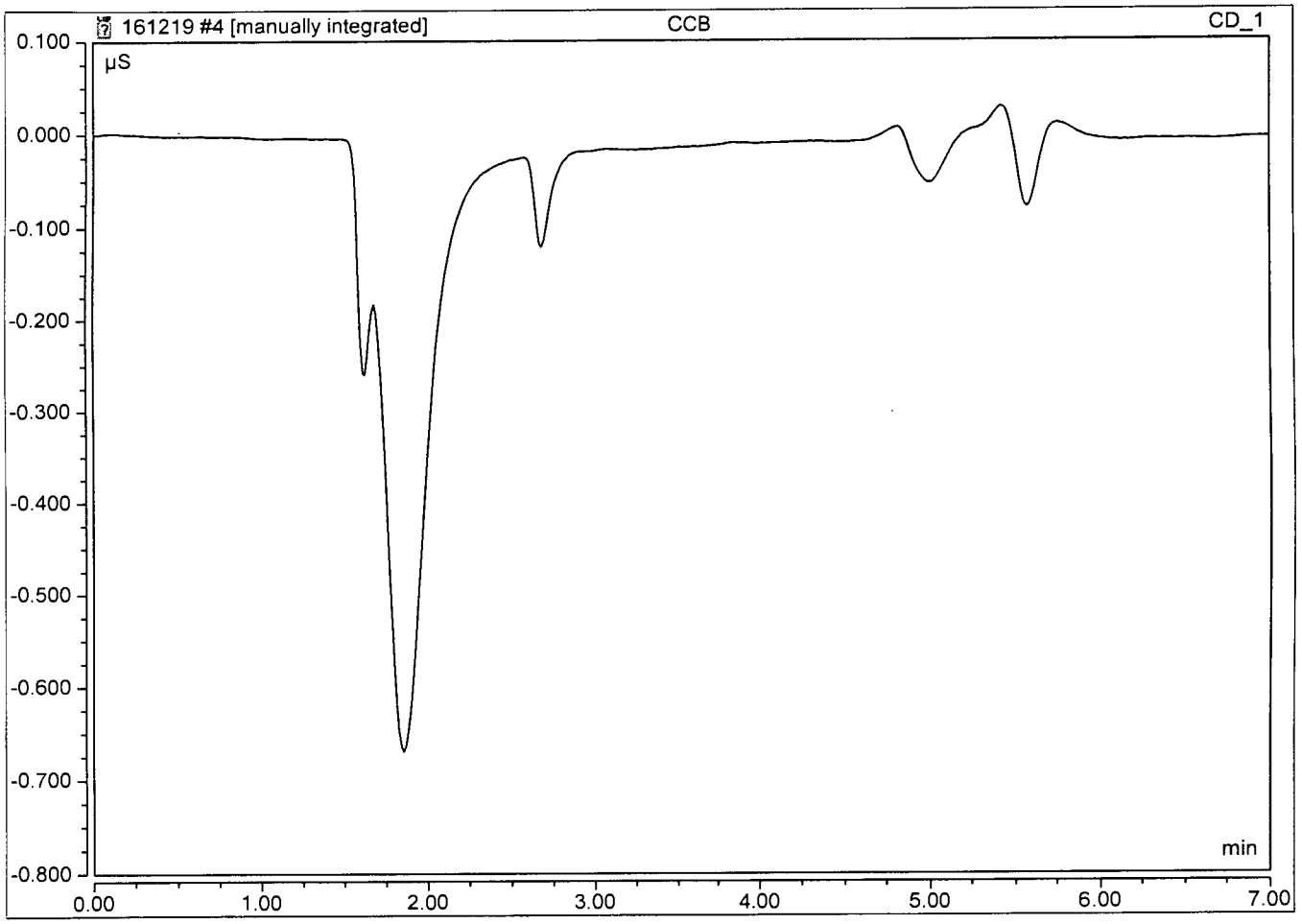
Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	CCB 12/19/16 08:47	C	CCB 12/19/16 17:28	C	CCB 12/19/16 19:38	C	CCB 12/19/16 22:28	C		C	
chloride	1.000	U	1.000	U	1.000	U	1.000	U			
Nitrate(NO3)	.500	U	.500	U	.500	U	.500	U			
sulfate	1.000	U	1.000	U	1.000	U	1.000	U			

Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**19-Dec-2016 / 08:47**	*Run Time:*	**7.00**

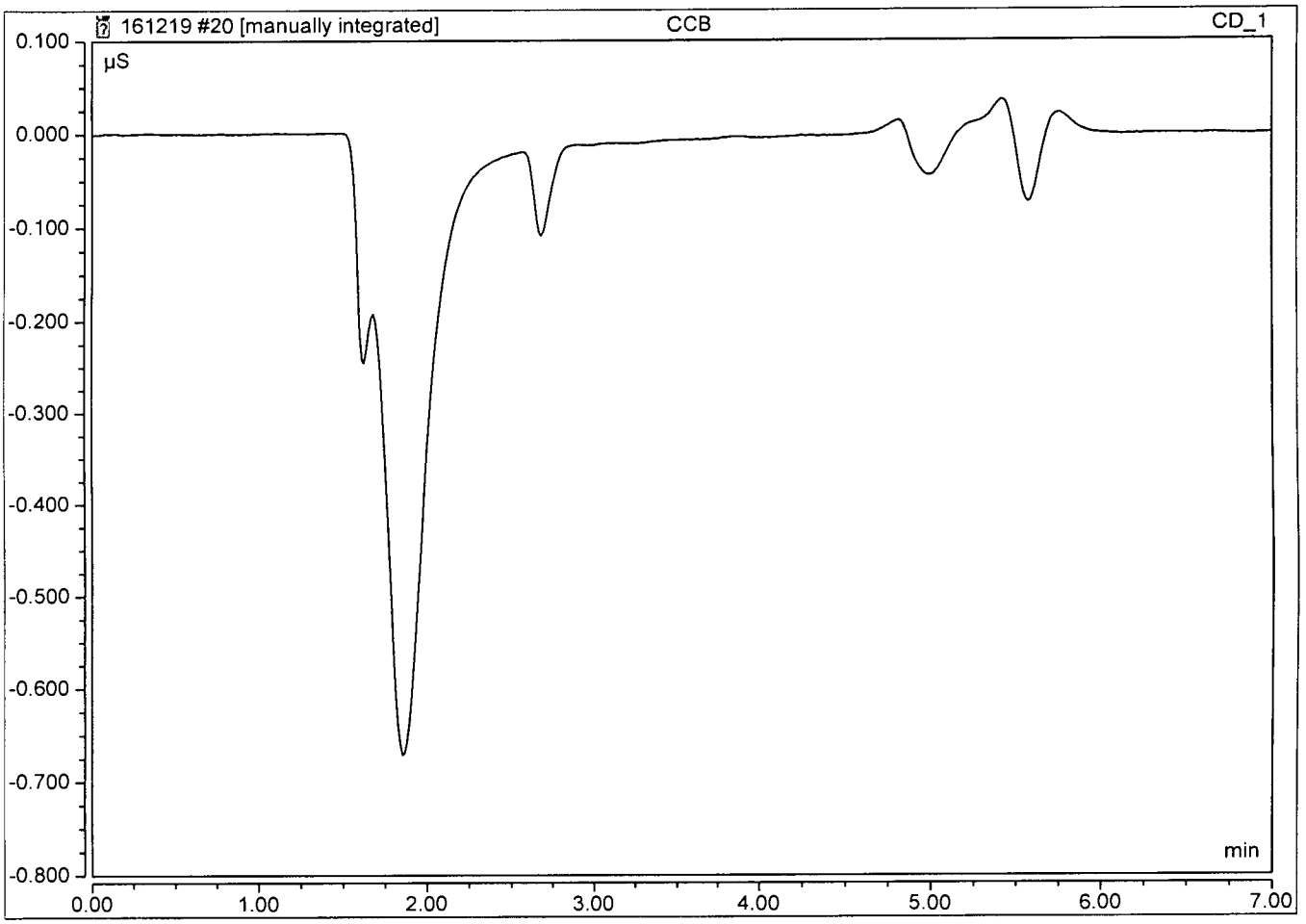
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
		TOTAL:		0.00	0.00	0.00



Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**19-Dec-2016 / 17:28**	*Run Time:*	**7.00**

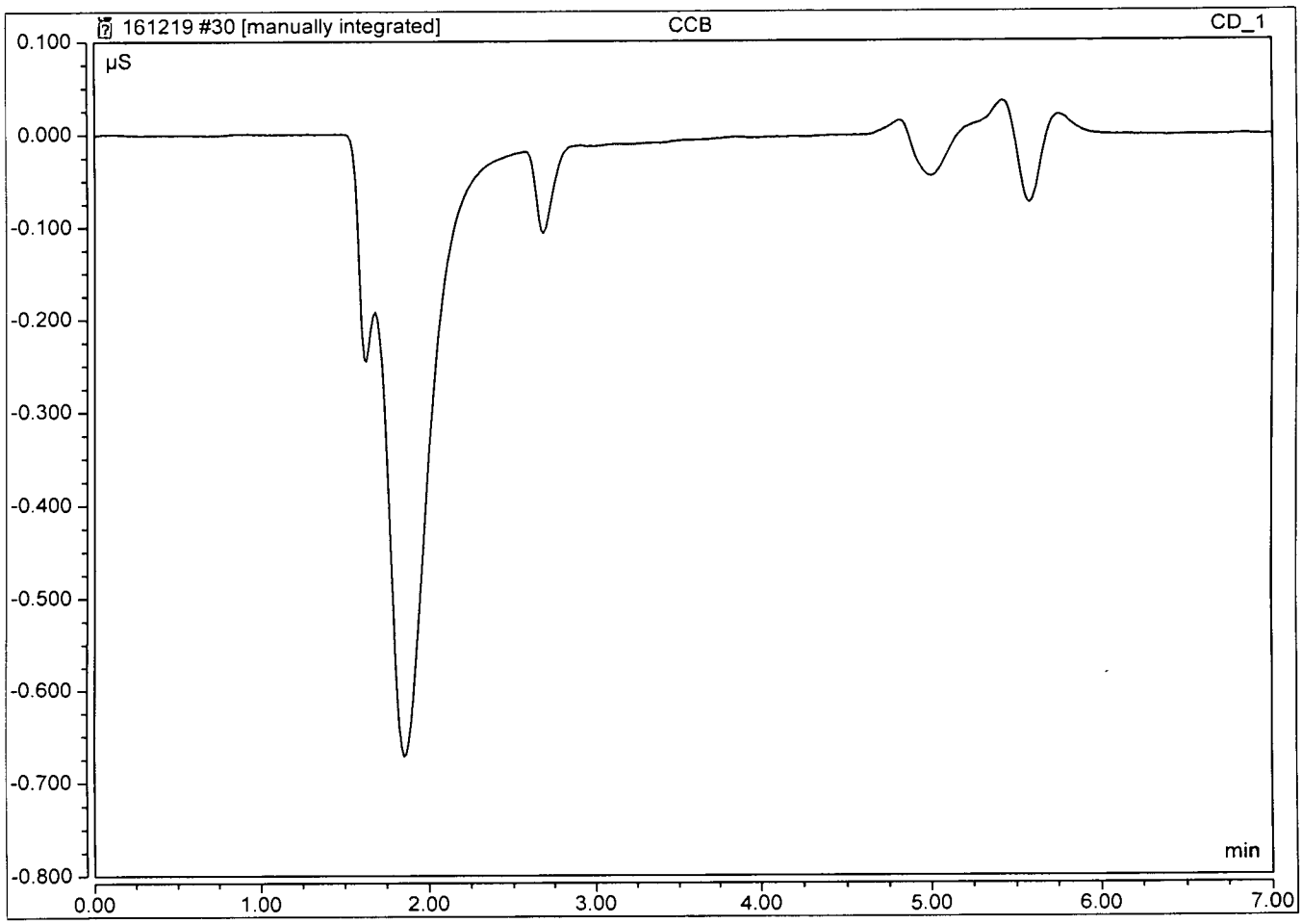
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
TOTAL:				0.00	0.00	0.00



Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**19-Dec-2016 / 19:38**	*Run Time:*	**7.00**

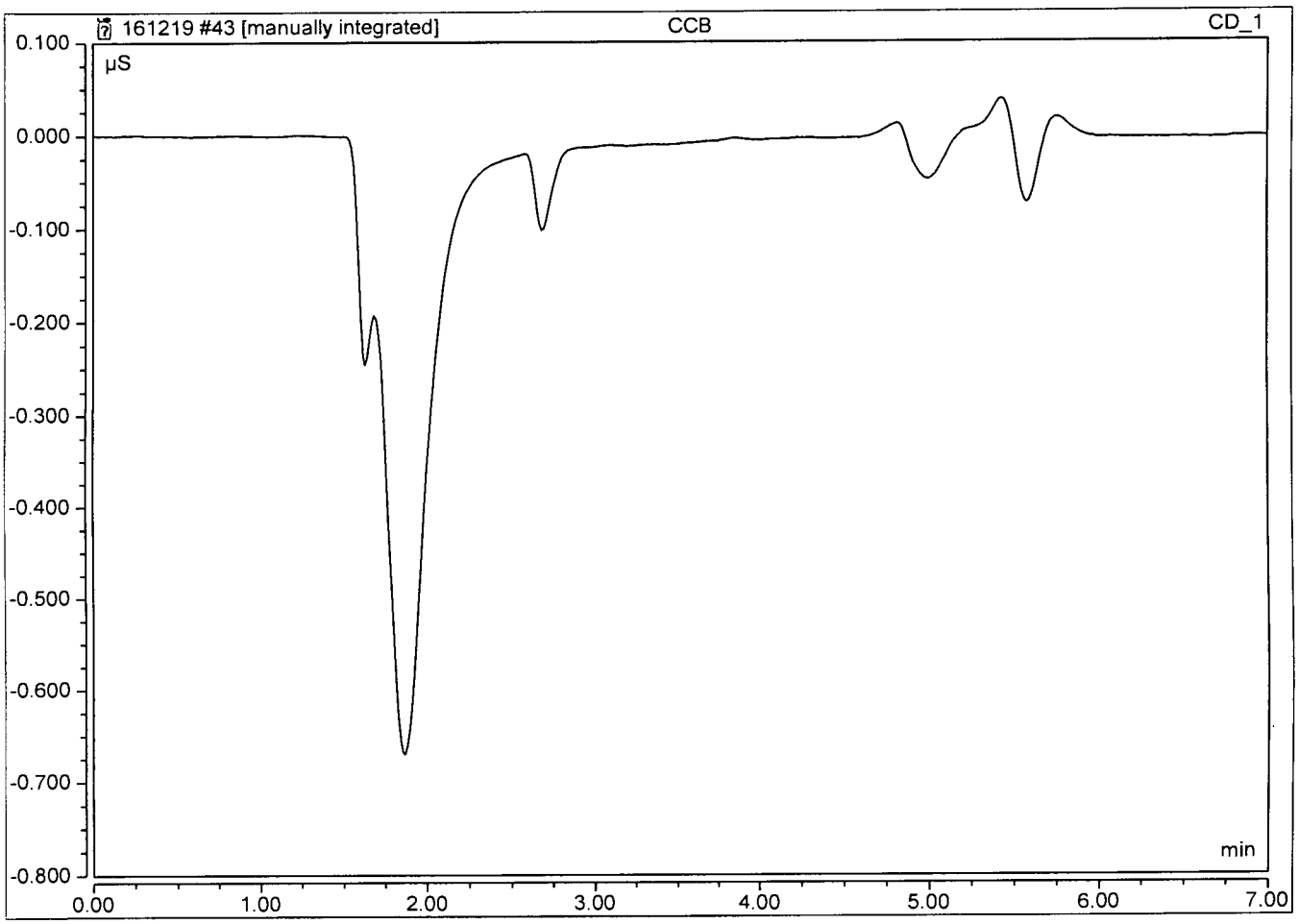
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
		TOTAL:		0.00	0.00	0.00



Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**19-Dec-2016 / 22:28**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
TOTAL:				0.00	0.00	0.00



A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No: 81734 SDG: 81734

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 12/20/16

Analyte	Calibration Verification									M
	True CCV1	Found 9:29	%R(1)	True CCV1	Found 12:05	%R(1)	True CCV1	Found 15:21	%R(1)	
chloride	25	23.6931	94.8	25	23.7338	94.9	25	23.3354	93.3	

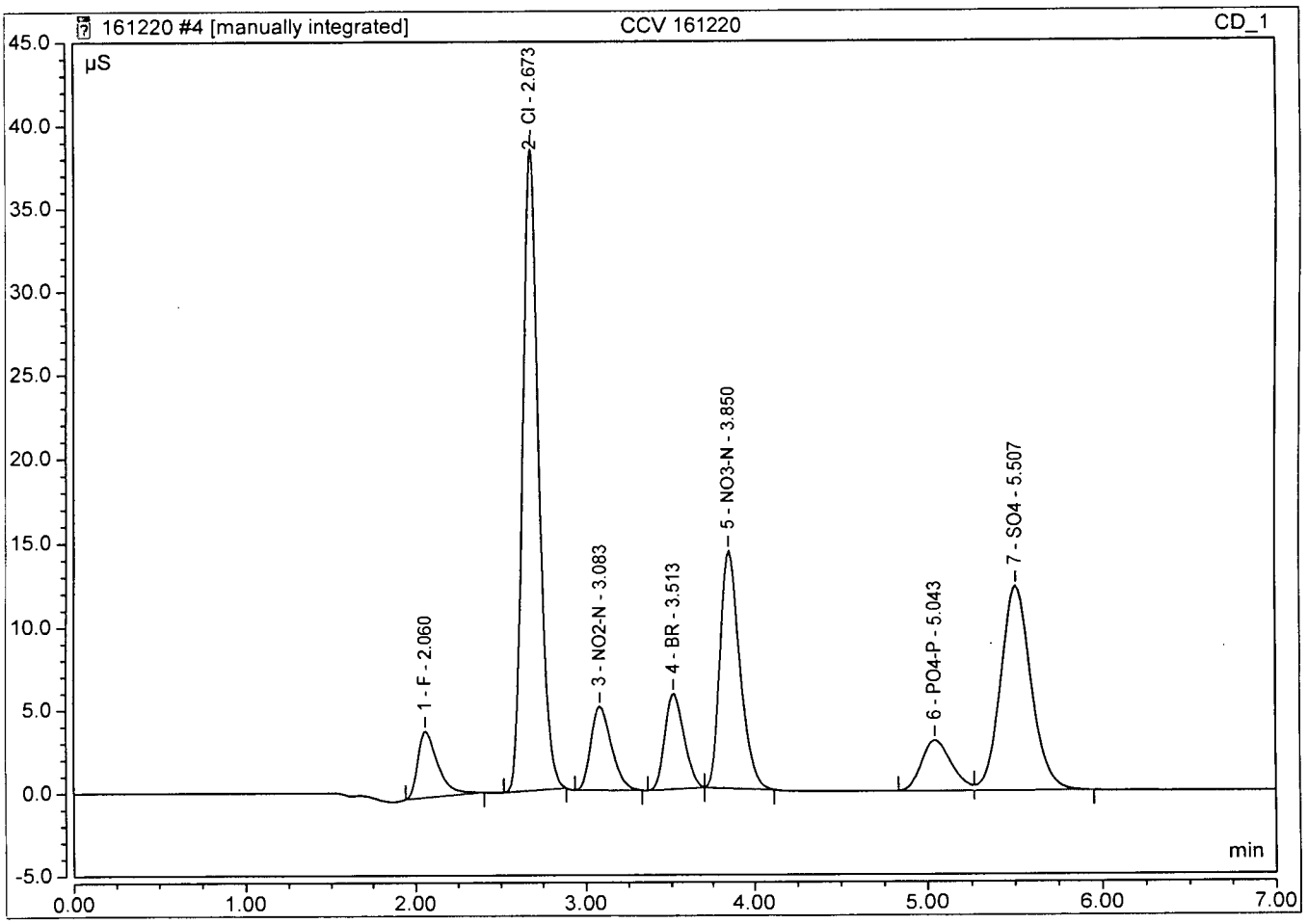
(1) Control Limits: 90-110

ILM02.0

Peak Integration Report

Sample Name:	**CCV 161220**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Dec-2016 / 09:29**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.06	F	BMB	0.546	4.004	2.4631
2	2.67	Cl	BMB	4.208	38.420	23.6931
3	3.08	NO2-N	BMB	0.703	5.042	2.3532
4	3.51	BR	BMB	0.740	5.777	11.8529
5	3.85	NO3-N	BMB	1.983	14.287	4.9091
6	5.04	PO4-P	BM *	0.591	3.035	4.8077
7	5.51	SO4	MB*	2.453	12.325	20.5813
TOTAL:				11.22	82.89	70.66

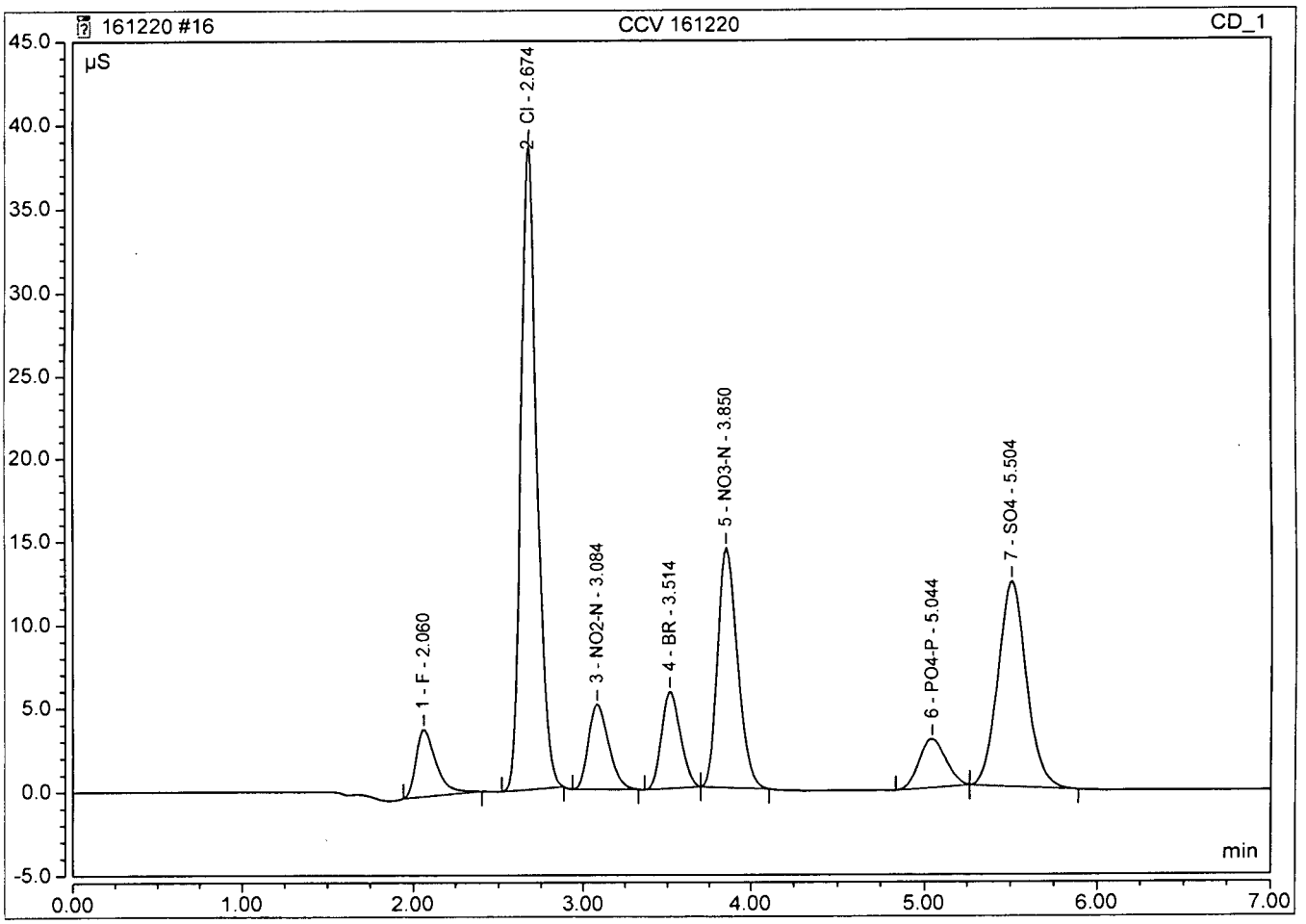


Algorithm Check
y = .1816x - .0943
x = 23.69 ✓
y = Peak Area
x = Amnt
MM 12/28/16

Peak Integration Report

Sample Name:	**CCV 161220**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Dec-2016 / 12:05**	*Run Time:*	**7.00**

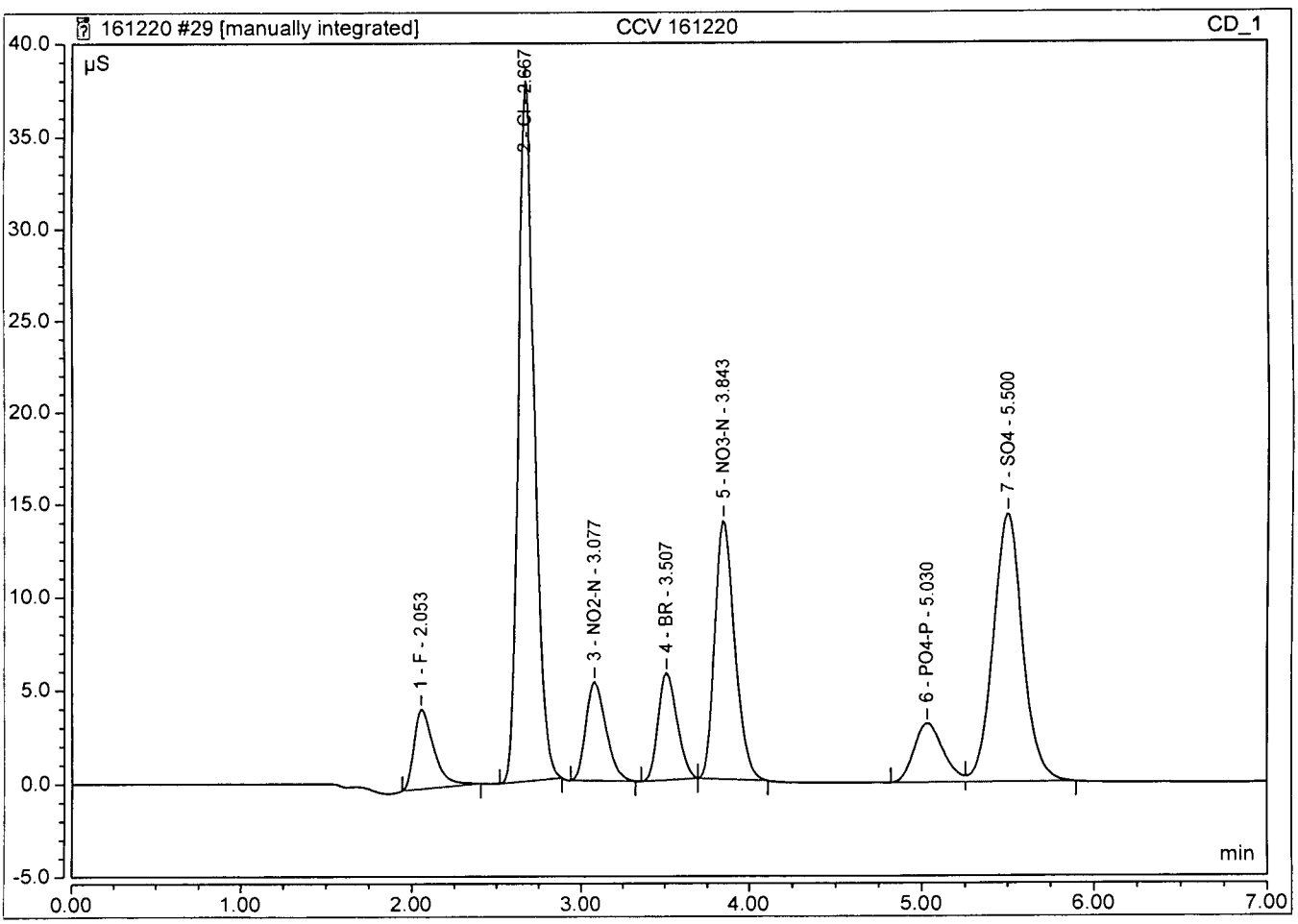
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.06	**F**	BMB	0.548	4.031	2.4697
2	2.67	**Cl**	BMB	4.216	38.534	23.7338
3	3.08	**NO2-N**	BMB	0.707	5.078	2.3666
4	3.51	**BR**	BMB	0.742	5.799	11.8834
5	3.85	**NO3-N**	BMB	1.987	14.364	4.9188
6	5.04	**PO4-P**	BMB	0.528	2.907	4.3032
7	5.50	**SO4**	BMB	2.371	12.280	19.9056
TOTAL:				11.10	82.99	69.58



Peak Integration Report

Sample Name:	**CCV 161220**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Dec-2016 / 15:21**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.05	F	BMB	0.571	4.263	2.5745
2	2.67	Cl	BMB	4.144	37.832	23.3354
3	3.08	NO2-N	BMB	0.735	5.280	2.4614
4	3.51	BR	BMB	0.732	5.725	11.7323
5	3.84	NO3-N	BMB	1.926	13.871	4.7709
6	5.03	PO4-P	BM *	0.612	3.147	4.9810
7	5.50	SO4	MB*	2.852	14.371	23.8518
TOTAL:				11.57	84.49	73.71



A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 81734 SDG: 81734

Preparation Blank Matrix (soil/water): water

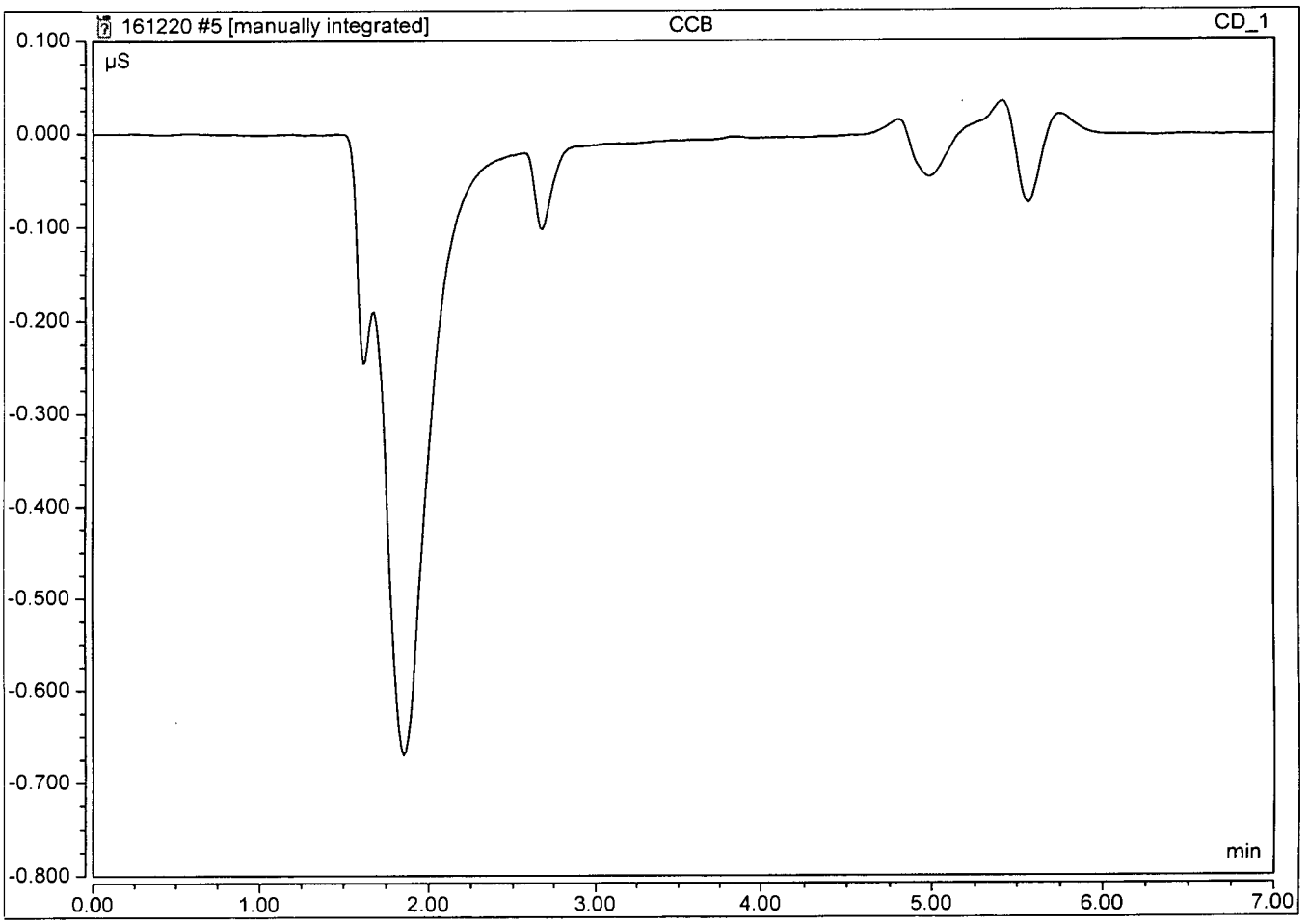
Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	CCB 12/20/16 09:42	C	CCB 12/20/16 12:18	C	CCB 12/20/16 15:34	C		C		C	
chloride	1.000	U	1.000	U	1.000	U					

Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Dec-2016 / 09:42**	*Run Time:*	**7.00**

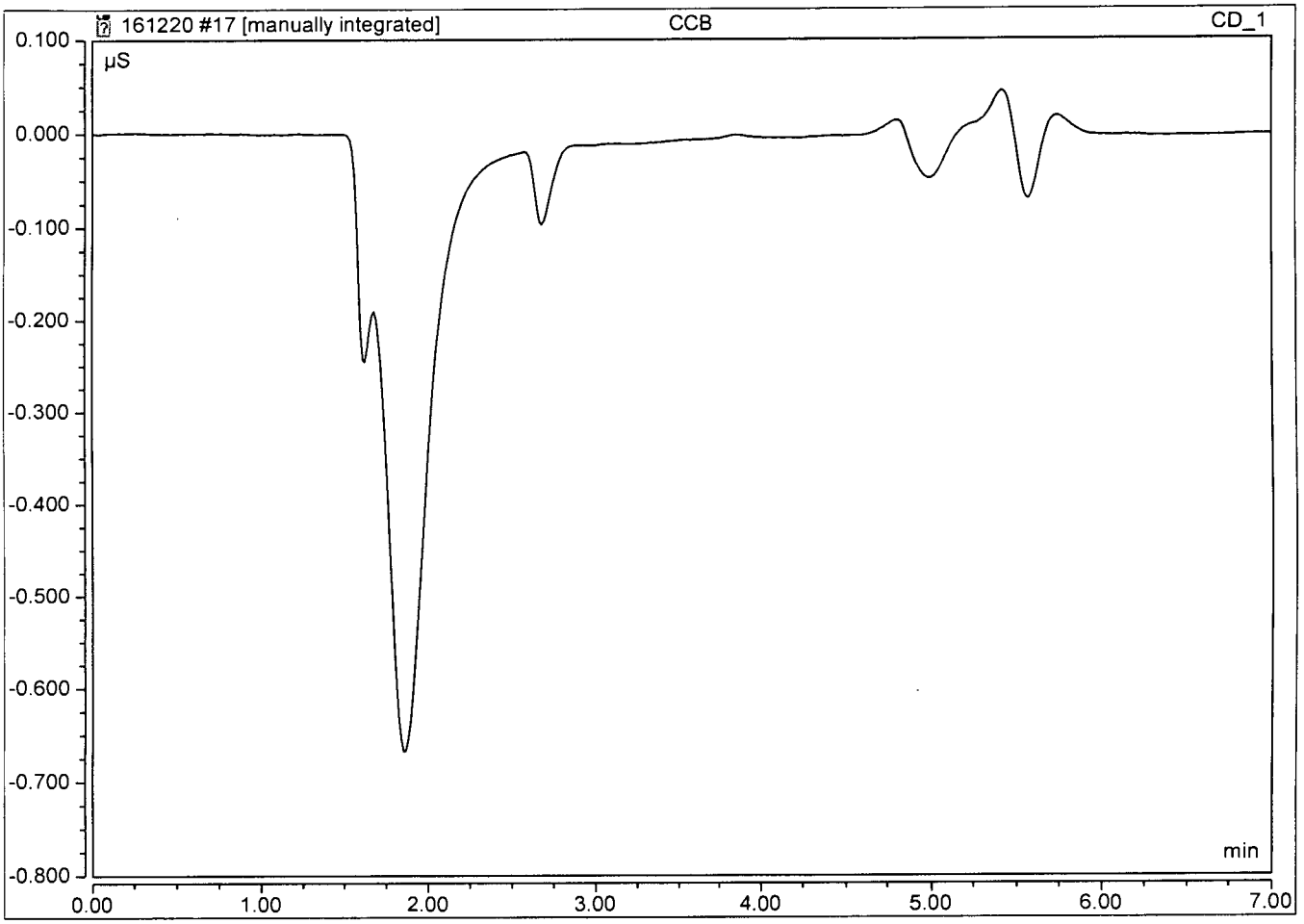
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
TOTAL:				0.00	0.00	0.00



Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Dec-2016 / 12:18**	*Run Time:*	**7.00**

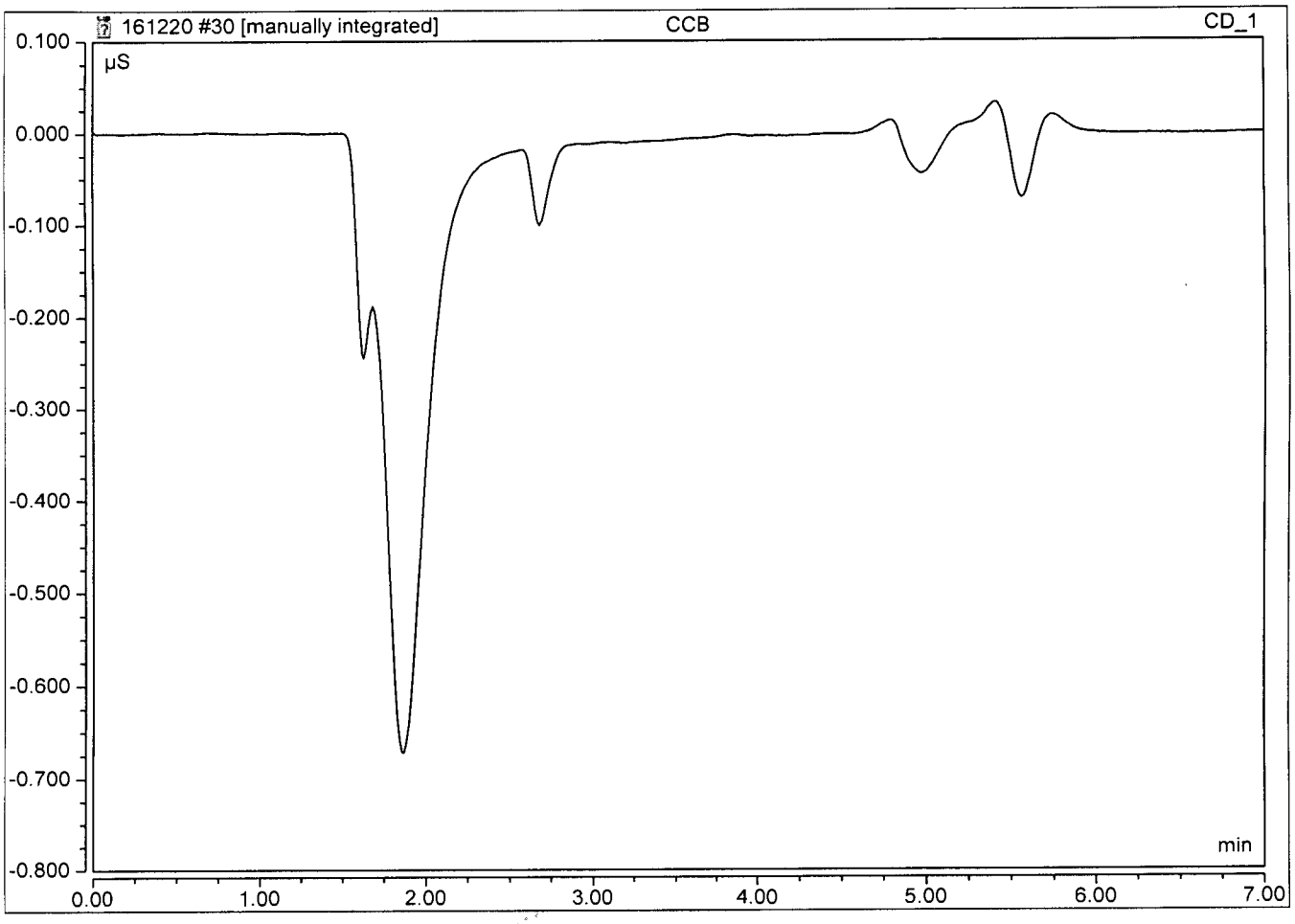
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
		TOTAL:		0.00	0.00	0.00



Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Dec-2016 / 15:34**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
		TOTAL:		0.00	0.00	0.00



A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM
ARF No: 81734 SDG: 81734
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 12/20/16

Analyte	Calibration Verification									M
	True ICV	Found 16:35	%R(1)	True CCV1	Found 16:40	%R(1)	True CCV1	Found 17:06	%R(1)	
TOXN	2.5	2.3539	94.2	3	2.972	99.1	3	3.0165	101	

(1) Control Limits: 90-110

ILM02.0

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No: 81734 SDG: 81734

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 12/20/16

Analyte	Calibration Verification									M
	True CCV1	Found 17:31	%R(1)	True	Found	%R(1)	True	Found	%R(1)	
TOXN	3	2.769	92.3							

(1) Control Limits: 90-110

ILM02.0

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

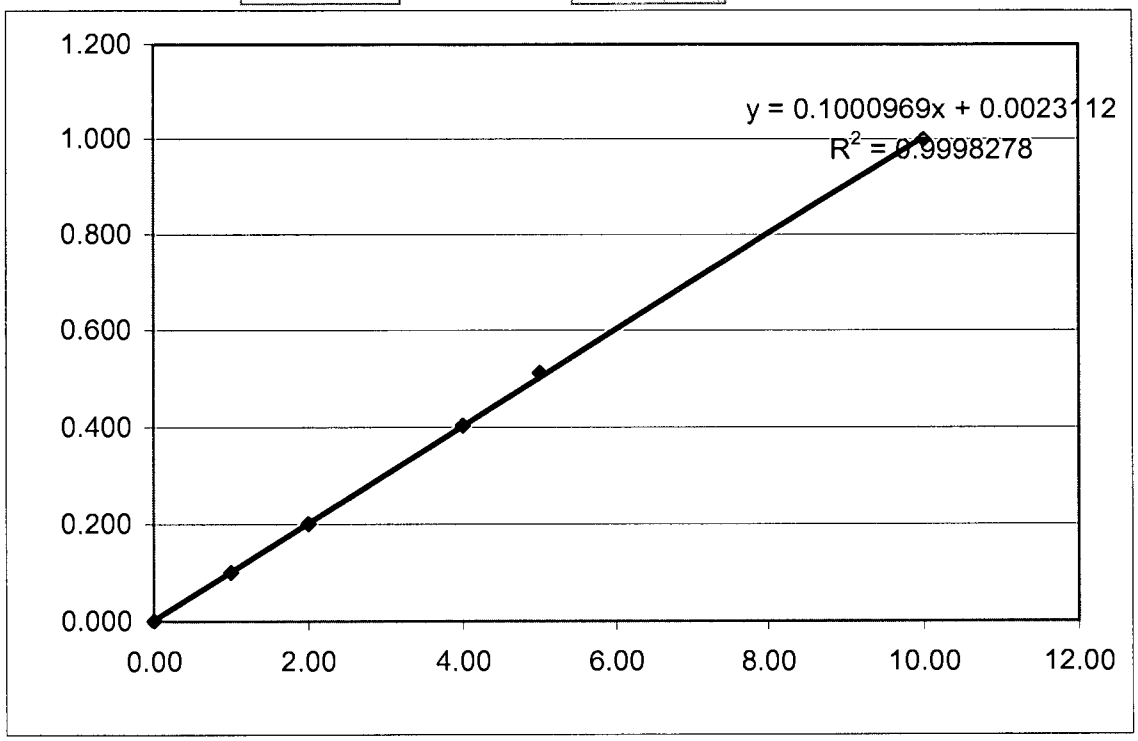
ARF No.: 81734 SDG: 81734

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	ICB 12/20/16 16:37	C	CCB 12/20/16 16:42	C	CCB 12/20/16 17:08	C	CCB 12/20/16 17:32	C		C	
TOXN	.100	U	.100	U	.100	U	.100	U			

Ferrous Iron **161213A**



X	Y
0.00	0.000
1.00	0.101
2.00	0.201
4.00	0.403
5.00	0.512
10.00	0.999

Algorithm Check

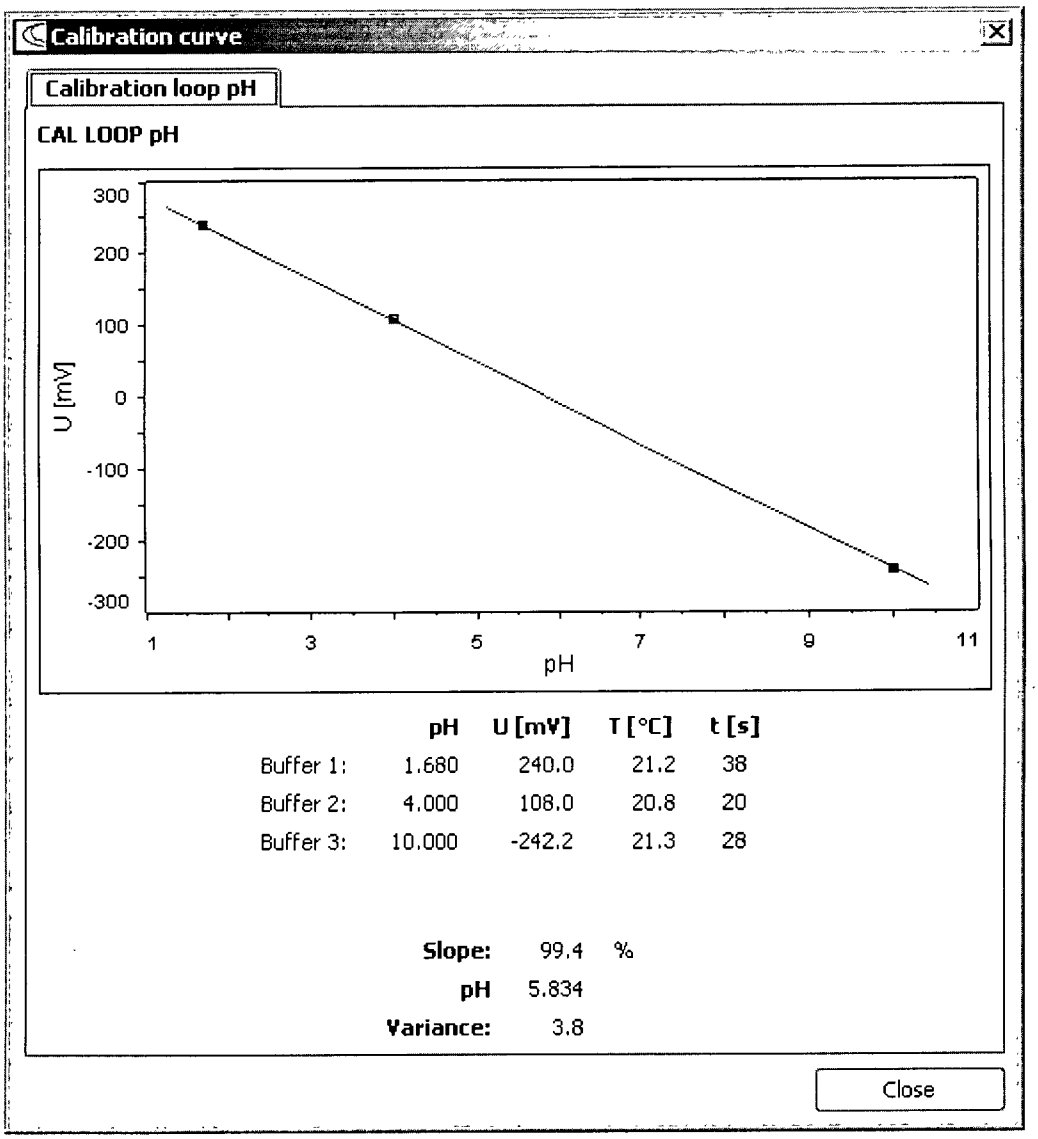
reading (y)= 0.296 12/13/16 14:19

dilution= 1

result (x)= 2.93 ✓

MM 12/28/16

Tiamo Calibration Curve
12/19/16



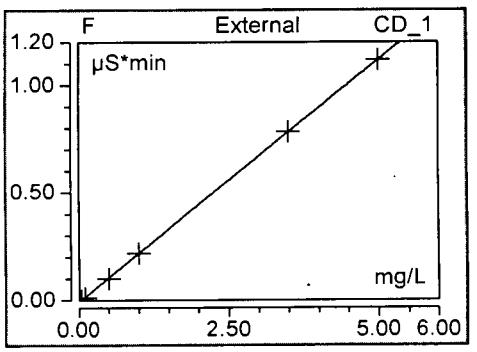
Calibration Batch Report

Sequence:	**161020**	*Injection Volume:*	**25.00**
Instrument Method:	**Program 1**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:24**	*Run Time:*	**7**

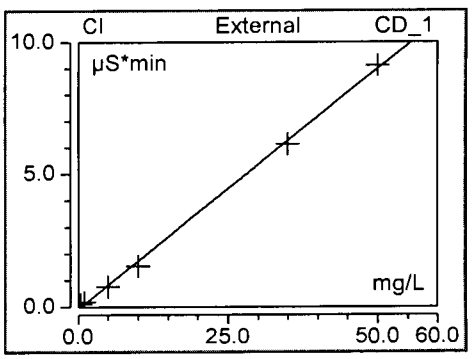
Calibration Summary

Peak Name	Eval.Type	Cal.Type	Points	Offset (C0)	Slope (C1)	Curve (C2)	Coeff.Det. %
F	Area	WithOffset,	6.000	-0.009	0.225	0.000	99.9840
Cl	Area	in, WithOffse	6.000	-0.094	0.182	0.000	99.8613
NO2-N	Area	in, WithOffse	6.000	-0.007	0.301	0.000	99.9917
BR	Area	in, WithOffse	6.000	-0.008	0.063	0.000	99.9802
NO3-N	Area	in, WithOffse	6.000	-0.039	0.412	0.000	99.9329
PO4-P	Area	in, WithOffse	6.000	-0.008	0.125	0.000	99.9563
SO4	Area	in, WithOffse	6.000	-0.060	0.122	0.000	99.9400
		AVERAGE:		-0.0322	0.2043	0.0000	99.9495

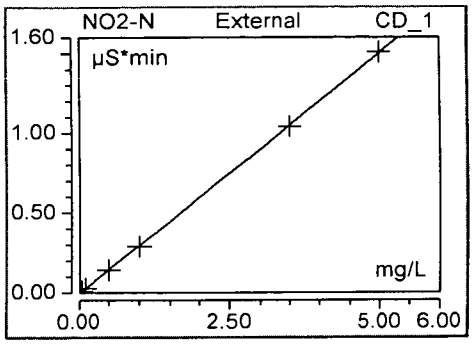
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	F	F	F	F
ICAL 1 10/20/16	2.123	0.0012	0.022	0.044
ICAL 2 10/20/16	2.107	0.0123	0.139	0.093
ICAL 3 10/20/16	2.100	0.1000	0.922	0.483
ICAL 4 10/20/16	2.104	0.2174	1.958	1.004
ICAL 5 10/20/16	2.097	0.7826	6.953	3.513
ICAL 6 10/20/16	2.103	1.1183	9.996	5.004
Average	2.106			
Rel. Std. Dev.	0.443 %			



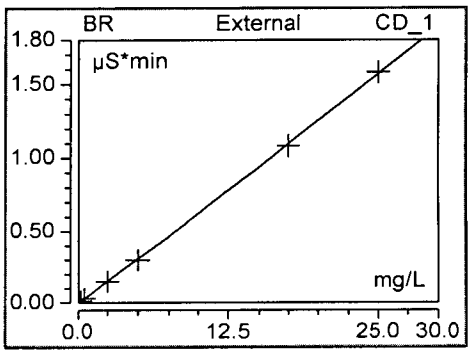
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	Cl	Cl	Cl	Cl
ICAL 1 10/20/16	2.793	0.1132	1.052	1.143
ICAL 2 10/20/16	2.790	0.1861	1.743	1.544
ICAL 3 10/20/16	2.790	0.7617	7.117	4.714
ICAL 4 10/20/16	2.797	1.5419	14.708	9.010
ICAL 5 10/20/16	2.793	6.1288	59.398	34.268
ICAL 6 10/20/16	2.803	9.1171	87.978	50.723
Average	2.795			
Rel. Std. Dev.	0.179 %			



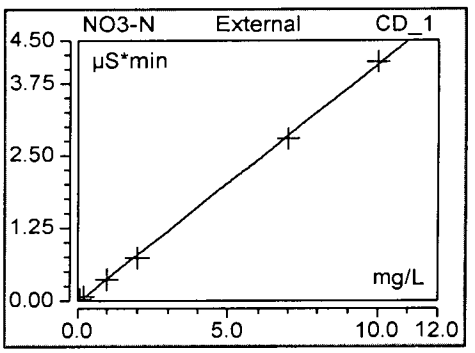
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	NO2-N	NO2-N	NO2-N	NO2-N
ICAL 1 10/20/16	3.250	0.0095	0.073	0.053
ICAL 2 10/20/16	3.247	0.0276	0.209	0.113
ICAL 3 10/20/16	3.250	0.1420	1.072	0.493
ICAL 4 10/20/16	3.254	0.2907	2.188	0.986
ICAL 5 10/20/16	3.250	1.0405	7.775	3.473
ICAL 6 10/20/16	3.257	1.5072	11.205	5.022
Average	3.251			
Rel. Std. Dev.	0.106 %			



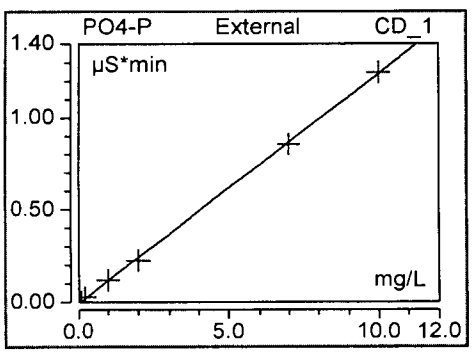
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	BR	BR	BR	BR
ICAL 1 10/20/16	3.757	0.0109	0.087	0.299
ICAL 2 10/20/16	3.753	0.0293	0.232	0.589
ICAL 3 10/20/16	3.750	0.1485	1.179	2.478
ICAL 4 10/20/16	3.754	0.2993	2.389	4.870
ICAL 5 10/20/16	3.743	1.0832	8.801	17.295
ICAL 6 10/20/16	3.747	1.5800	13.023	25.169
Average	3.751			
Rel. Std. Dev.	0.131 %			



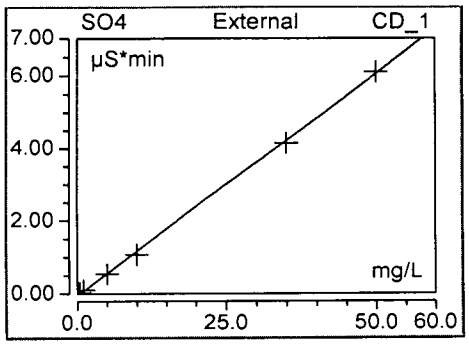
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	NO3-N	NO3-N	NO3-N	NO3-N
ICAL 1 10/20/16	4.143	0.0290	0.196	0.166
ICAL 2 10/20/16	4.140	0.0717	0.496	0.270
ICAL 3 10/20/16	4.137	0.3656	2.533	0.983
ICAL 4 10/20/16	4.140	0.7330	5.168	1.875
ICAL 5 10/20/16	4.123	2.7923	20.144	6.873
ICAL 6 10/20/16	4.123	4.1278	30.098	10.114
Average	4.135			
Rel. Std. Dev.	0.215 %			



Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	PO4-P	PO4-P	PO4-P	PO4-P
ICAL 1 10/20/16	5.540	0.0032	0.021	0.092
ICAL 2 10/20/16	5.540	0.0284	0.107	0.295
ICAL 3 10/20/16	5.537	0.1191	0.557	1.022
ICAL 4 10/20/16	5.537	0.2251	1.103	1.873
ICAL 5 10/20/16	5.520	0.8544	4.243	6.922
ICAL 6 10/20/16	5.523	1.2473	6.244	10.075
Average	5.533			
Rel. Std. Dev.	0.160 %			



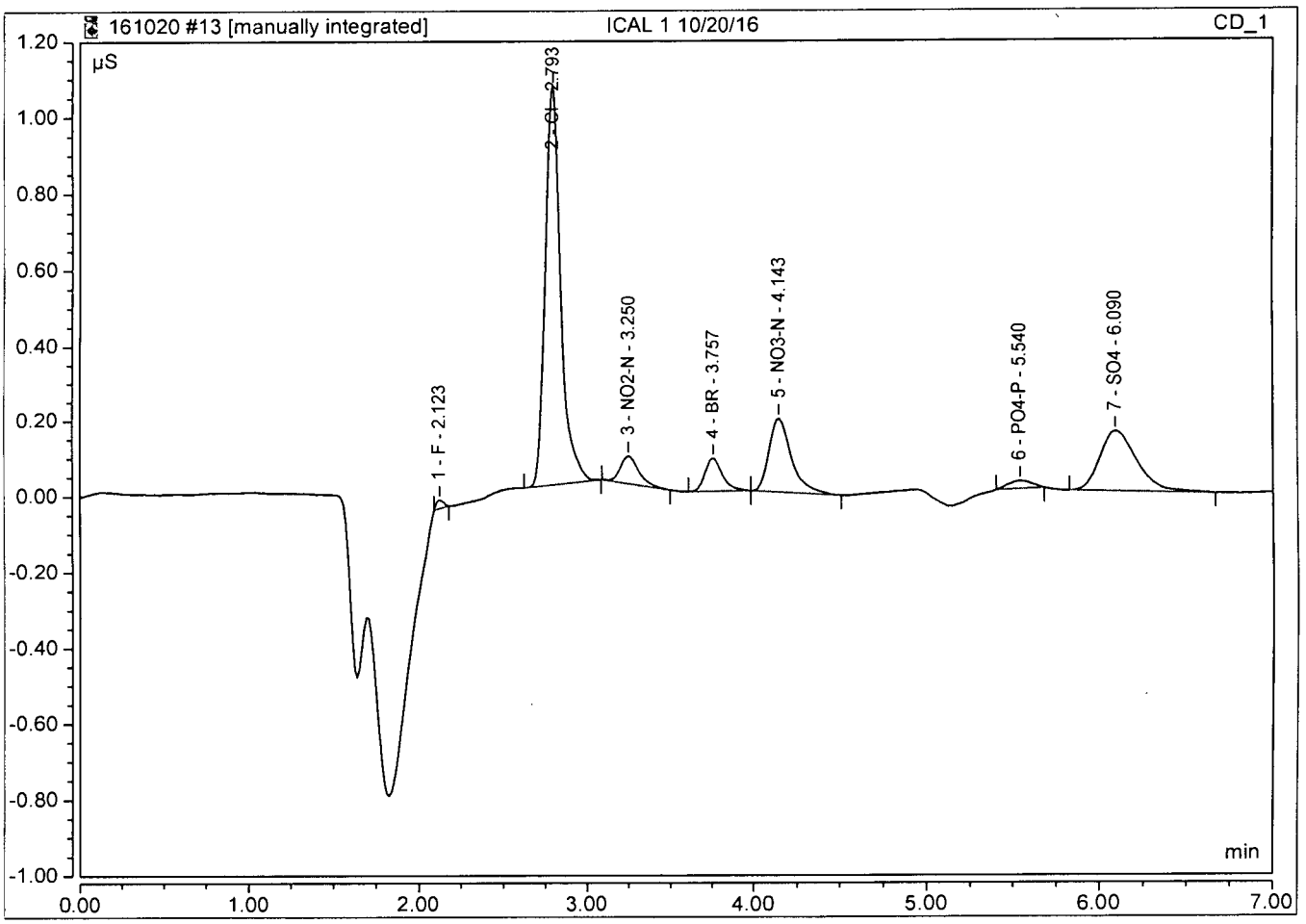
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	SO4	SO4	SO4	SO4
ICAL 1 10/20/16	6.090	0.0385	0.159	0.808
ICAL 2 10/20/16	6.093	0.1046	0.455	1.350
ICAL 3 10/20/16	6.097	0.5456	2.464	4.961
ICAL 4 10/20/16	6.100	1.0756	4.975	9.302
ICAL 5 10/20/16	6.097	4.1512	19.714	34.487
ICAL 6 10/20/16	6.110	6.1057	29.270	50.492
Average	6.098			
Rel. Std. Dev.	0.113 %			



Peak Integration Report

Sample Name:	**ICAL 1 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:19**	*Run Time:*	**7.00**

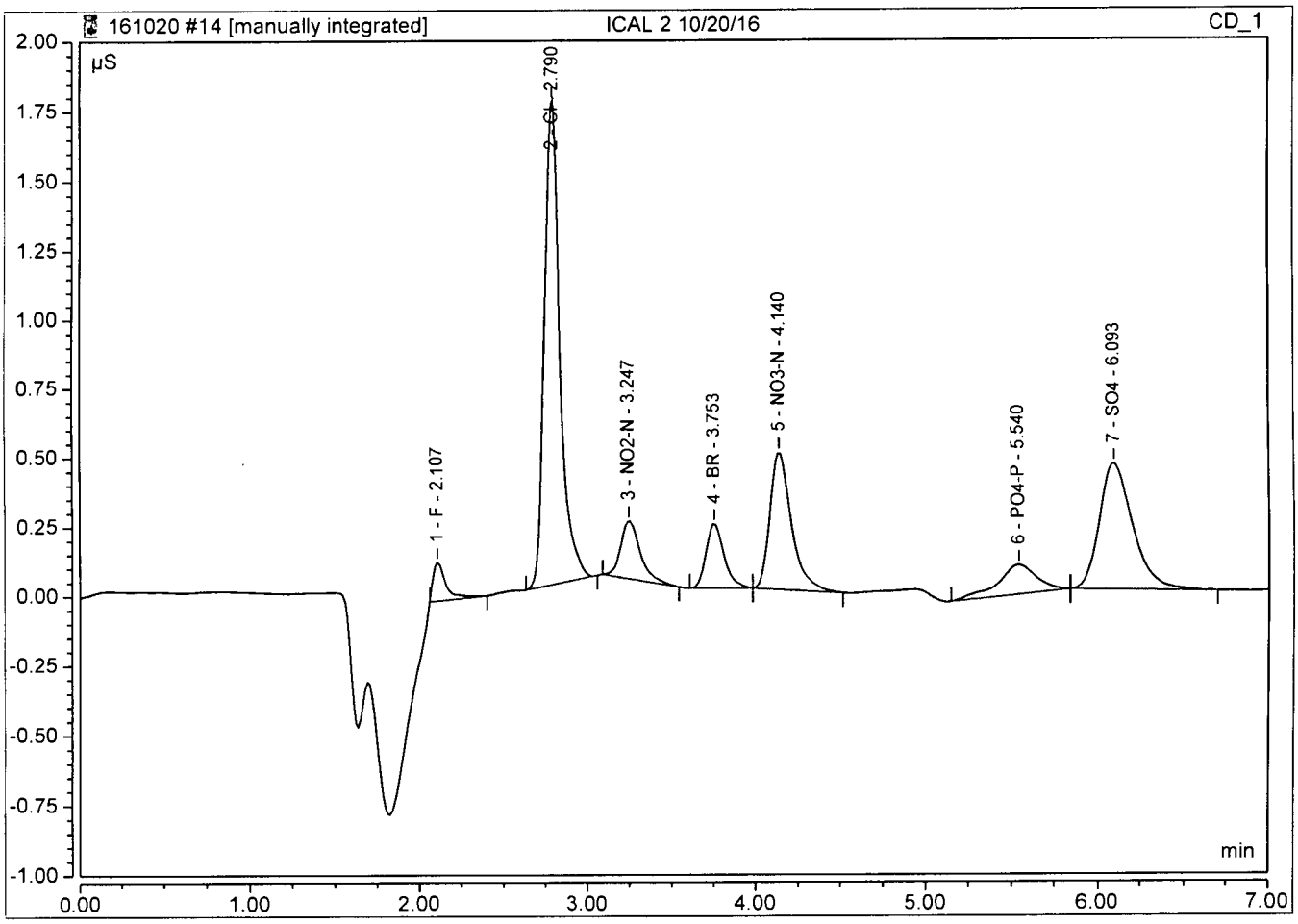
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.12	F	BMB*	0.001	0.022	0.0438
2	2.79	Cl	BMB	0.113	1.052	1.1427
3	3.25	NO2-N	BMB	0.009	0.073	0.0531
4	3.76	BR	BMB	0.011	0.087	0.2985
5	4.14	NO3-N	BMB	0.029	0.196	0.1660
6	5.54	PO4-P	BMB*	0.003	0.021	0.0923
7	6.09	SO4	BMB	0.038	0.159	0.8084
TOTAL:				0.21	1.61	2.60



Peak Integration Report

Sample Name:	**ICAL 2 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:32**	*Run Time:*	**7.00**

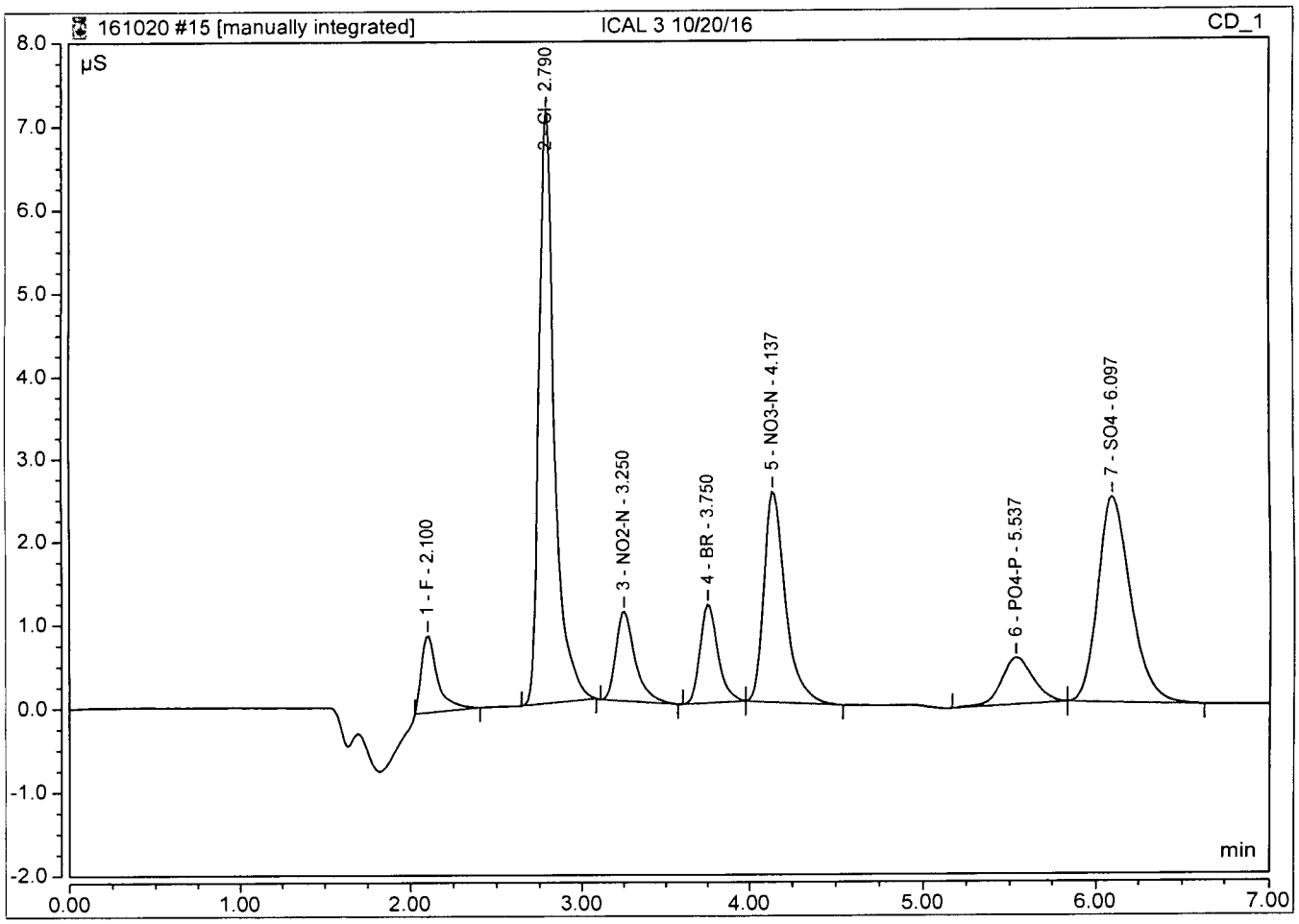
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.11	**F**	BMB*	0.012	0.139	0.0933
2	2.79	**Cl**	BMB	0.186	1.743	1.5439
3	3.25	**NO2-N**	BMB	0.028	0.209	0.1132
4	3.75	**BR**	BMB	0.029	0.232	0.5894
5	4.14	**NO3-N**	BMB	0.072	0.496	0.2699
6	5.54	**PO4-P**	BMB	0.028	0.107	0.2946
7	6.09	**SO4**	BMB	0.105	0.455	1.3496
TOTAL:				0.46	3.38	4.25



Peak Integration Report

Sample Name:	**ICAL 3 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:45**	*Run Time:*	**7.00**

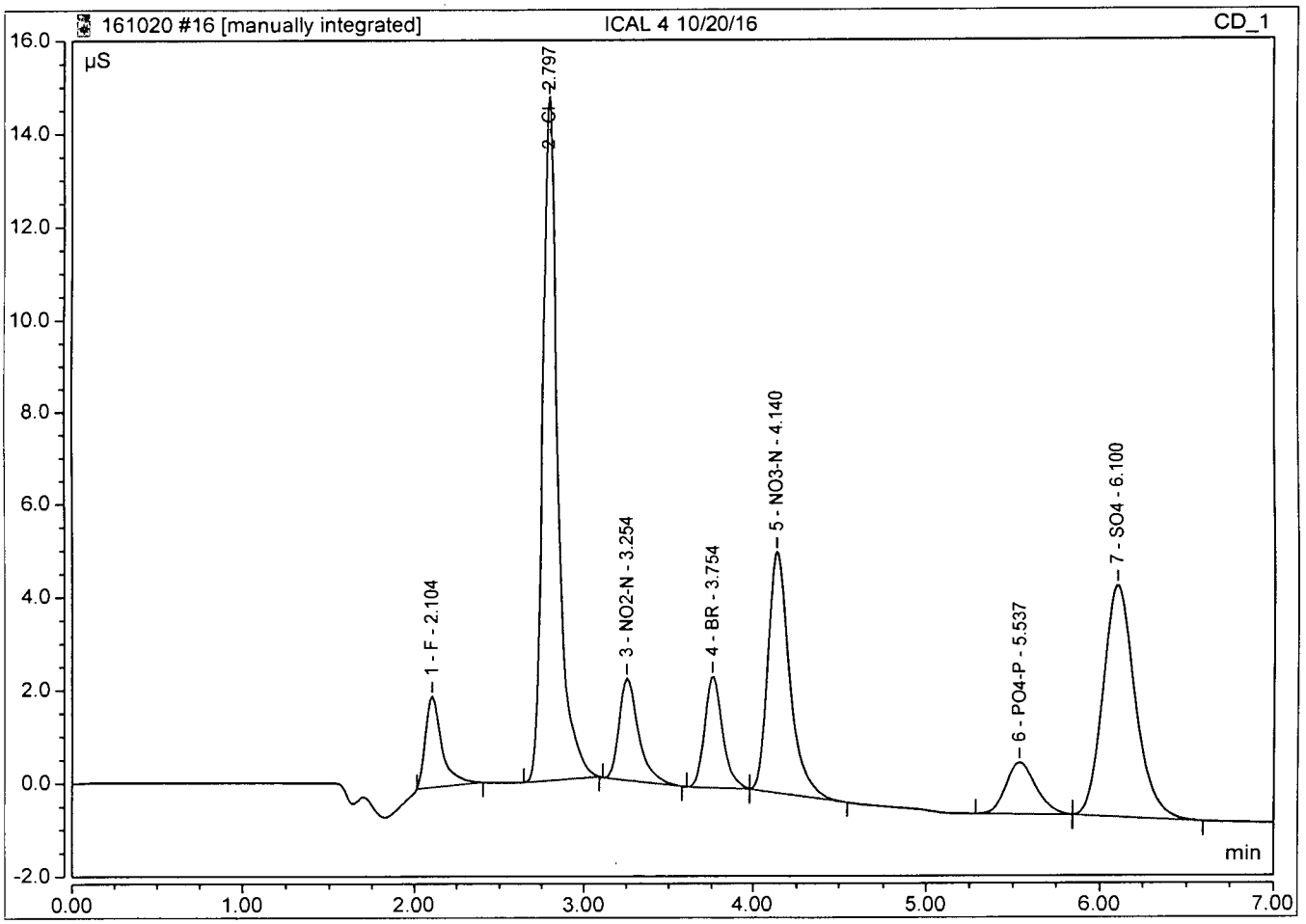
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB*	0.100	0.922	0.4827
2	2.79	Cl	BMB	0.762	7.117	4.7137
3	3.25	NO2-N	BMB	0.142	1.072	0.4926
4	3.75	BR	BMB	0.148	1.179	2.4784
5	4.14	NO3-N	BMB	0.366	2.533	0.9830
6	5.54	PO4-P	BMB	0.119	0.557	1.0221
7	6.10	SO4	BMB	0.546	2.464	4.9609
TOTAL:				2.18	15.84	15.13



Peak Integration Report

Sample Name:	**ICAL 4 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:58**	*Run Time:*	**7.00**

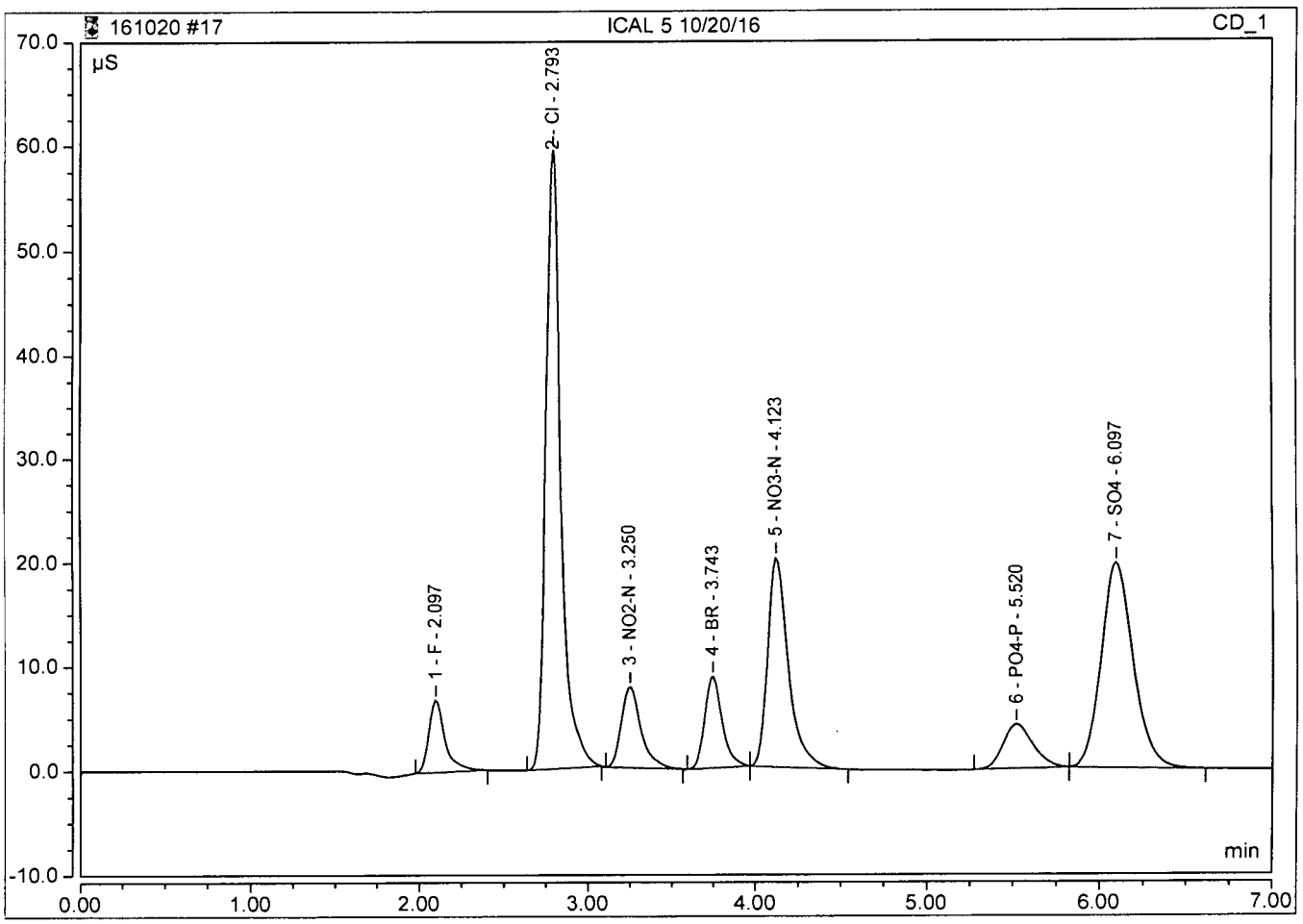
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB*	0.217	1.958	1.0036
2	2.80	Cl	BMB	1.542	14.708	9.0096
3	3.25	NO2-N	BMB	0.291	2.188	0.9859
4	3.75	BR	BMB	0.299	2.389	4.8695
5	4.14	NO3-N	BMB	0.733	5.168	1.8746
6	5.54	PO4-P	BMB	0.225	1.103	1.8731
7	6.10	SO4	BMB	1.076	4.975	9.3015
TOTAL:				4.38	32.49	28.92



Peak Integration Report

Sample Name:	**ICAL 5 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:11**	*Run Time:*	**7.00**

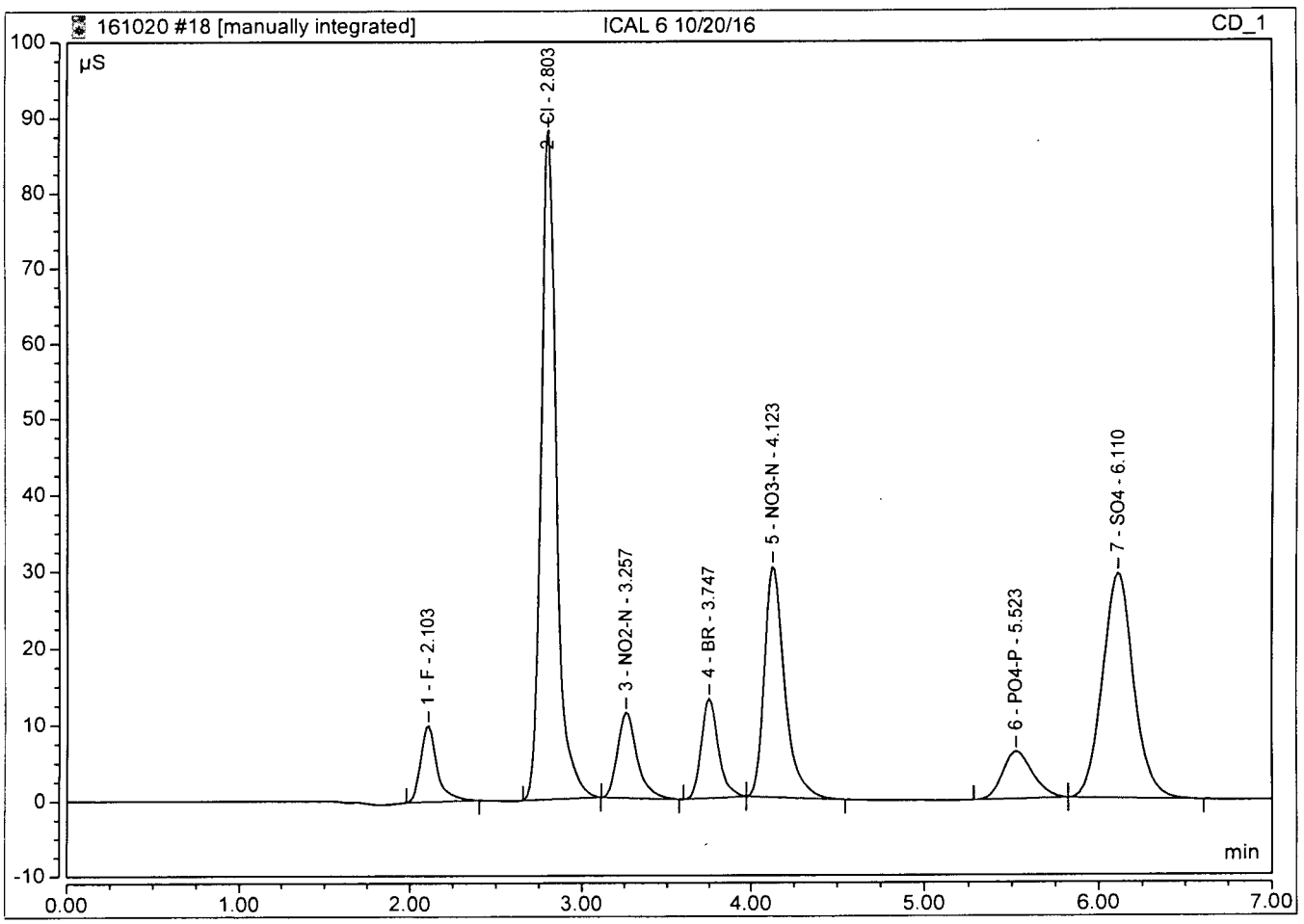
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB	0.783	6.953	3.5131
2	2.79	Cl	BMB	6.129	59.398	34.2675
3	3.25	NO2-N	BMB	1.040	7.775	3.4734
4	3.74	BR	BMB	1.083	8.801	17.2948
5	4.12	NO3-N	BMB	2.792	20.144	6.8727
6	5.52	PO4-P	BMB	0.854	4.243	6.9225
7	6.10	SO4	BMB	4.151	19.714	34.4871
TOTAL:				16.83	127.03	106.83



Peak Integration Report

Sample Name:	**ICAL 6 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:24**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB	1.118	9.996	5.0036
2	2.80	Cl	BMB*	9.117	87.978	50.7226
3	3.26	NO2-N	BMB	1.507	11.205	5.0218
4	3.75	BR	BMB	1.580	13.023	25.1693
5	4.12	NO3-N	BMB	4.128	30.098	10.1138
6	5.52	PO4-P	BMB	1.247	6.244	10.0755
7	6.11	SO4	BMB	6.106	29.270	50.4924
TOTAL:				24.80	187.81	156.60



INORGANIC ANALYSIS
Raw Data

APPL, INC.

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	12/19/16	12/19/16	#300W-161219A2-AZ47344
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	12/19/16	12/19/16	#300W-161219A2-AZ47344
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	12/19/16	12/19/16	#300W-161219A2-AZ47344
SM 2320B	BICARBONATE AS	1.5 J	2.0	1.70	0.85	mg/L	12/19/16	12/19/16	#232W-161219A1-AZ47345
SM 2320B	CARBONATE AS CA	1.70 U	2.0	1.70	0.85	mg/L	12/19/16	12/19/16	#232W-161219A1-AZ47345
SM 2320B	TOTAL ALKALINITY	1.5 J	2.0	1.70	0.85	mg/L	12/19/16	12/19/16	#232W-161219A1-AZ47345
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	12/19/16	12/19/16	#300W-161219B-AZ47345
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	12/19/16	12/19/16	#300W-161219B-AZ47345
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	12/19/16	12/19/16	#300WD-161219B-AZ47345
SM3500Fe	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	12/13/16	12/13/16	#35FE-161213A-AZ47345
EPA 353.2	NITRATE-NITRITE-N	0.100 U	0.10	0.100	0.028	mg/L	12/20/16	12/20/16	#35OF-161220A1-AZ47345

Wetlab SC-Blank-REG MDLs
Printed: 12/28/16 5:10:48 PM

Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

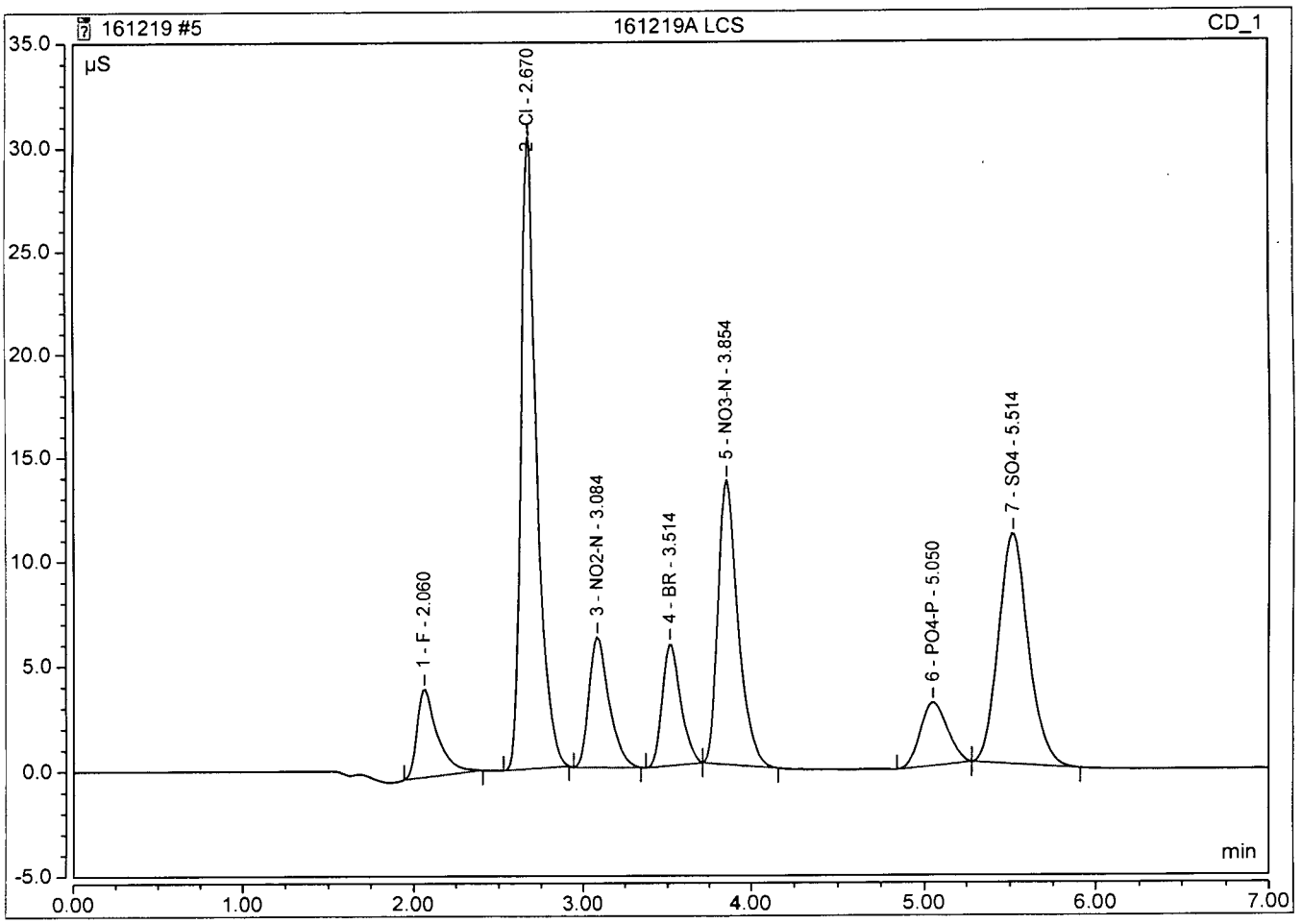
Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	20.0	18.5	92.5	90-110	12/19/16	12/19/16	#300W-161219A2-AZ47344
EPA 300.0	NITRATE	22.1	20.6	93.2	90-110	12/19/16	12/19/16	#300W-161219A2-AZ47344
EPA 300.0	SULFATE	20.0	18.2	91.0	90-110	12/19/16	12/19/16	#300W-161219A2-AZ47344

Comments: _____

Peak Integration Report

Sample Name:	**161219A LCS**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**19-Dec-2016 / 09:00**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.06	F	BMB	0.575	4.199	2.5918
2	2.67	Cl	BMB	3.265	30.391	18.4991
3	3.08	NO2-N	BMB	0.860	6.188	2.8732
4	3.51	BR	BMB	0.724	5.798	11.6038
5	3.85	NO3-N	BMB	1.878	13.551	4.6544
6	5.05	PO4-P	BMB	0.550	2.989	4.4767
7	5.51	SO4	BMB	2.166	10.963	18.2282
TOTAL:				10.02	74.08	62.93



Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

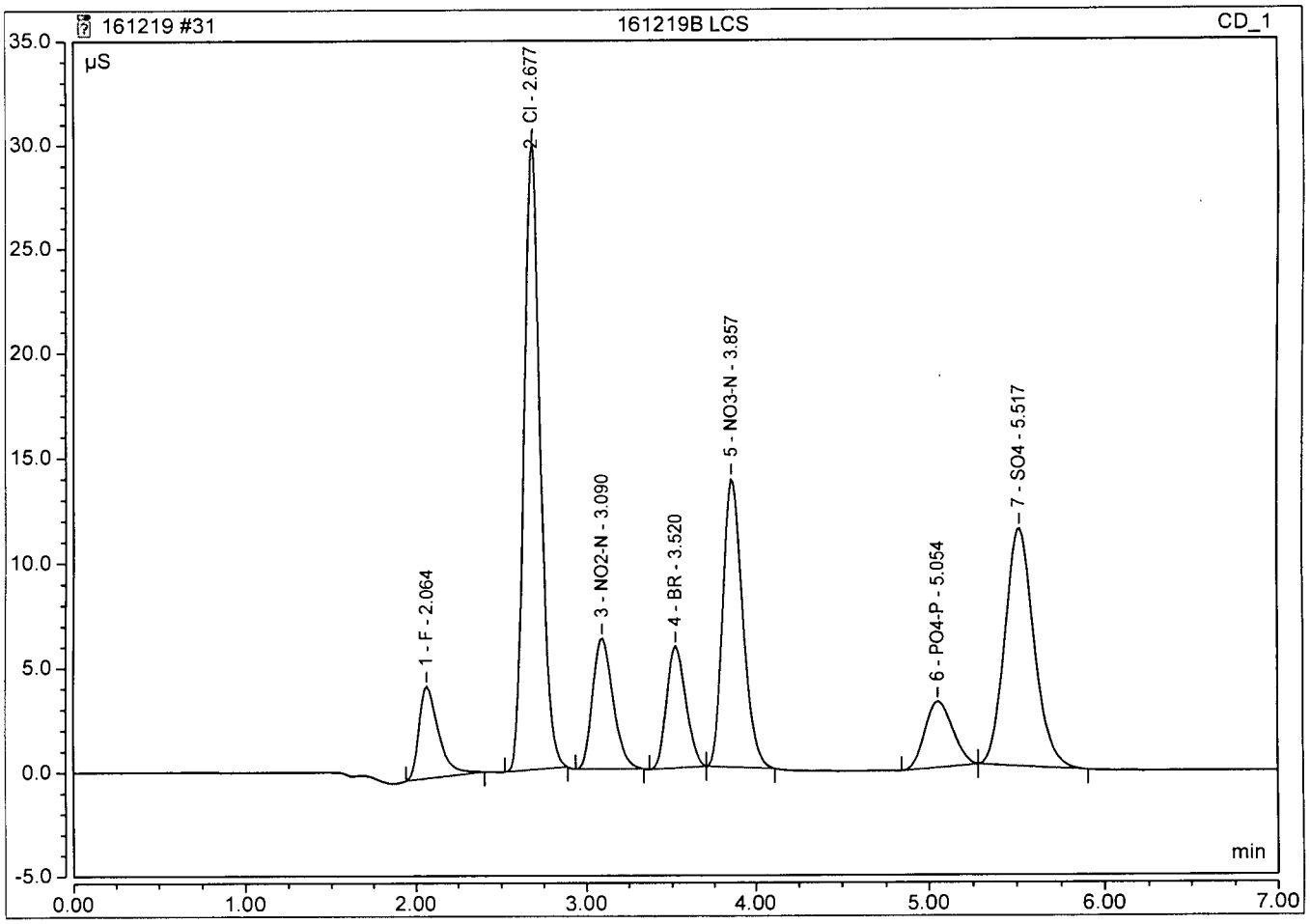
Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	20.0	18.6	93.0	90-110	12/19/16	12/19/16	#300WD-161219B-AZ47345
EPA 300.0	NITRATE	22.1	20.8	94.1	90-110	12/19/16	12/19/16	#300W-161219B-AZ47345
EPA 300.0	SULFATE	20.0	18.4	92.0	90-110	12/19/16	12/19/16	#300W-161219B-AZ47345
EPA 353.2	NITRATE-NITRITE-N	2.50	2.59	104	90-110	12/20/16	12/20/16	#35OF-161220A1-AZ47345
SM 2320B	BICARBONATE AS CACO3	250	244	97.6	90-110	12/19/16	12/19/16	#232W-161219A1-AZ47345
SM 2320B	TOTAL ALKALINITY AS CACO3	250	244	97.6	90-110	12/19/16	12/19/16	#232W-161219A1-AZ47345
SM3500Fe	FERROUS IRON	3.00	2.93	97.7	80-120	12/13/16	12/13/16	#35FE-161213A-AZ47345

Comments: _____

Peak Integration Report

Sample Name:	**161219B LCS**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**19-Dec-2016 / 19:51**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.06	F	BMB	0.593	4.430	2.6711
2	2.68	Cl	BMB	3.281	29.893	18.5857
3	3.09	NO2-N	BMB	0.879	6.296	2.9379
4	3.52	BR	BMB	0.747	5.857	11.9590
5	3.86	NO3-N	BMB	1.900	13.767	4.7068
6	5.05	PO4-P	BMB	0.570	3.144	4.6417
7	5.52	SO4	BMB	2.187	11.359	18.3998
TOTAL:				10.16	74.75	63.90



Matrix Spike Recoveries

WETLAB

APPL ID: **161220W-47345 MS - 214820**

Sample ID: AZ47345

Client ID: ERH135

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	Matrix Res mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
EPA 300.0	CHLORIDE	40.0	85.3	131	131	114 #	114 #	0.0	20	90-110	12/20/16	12/20/16	12/20/16	12/20/16	214820	AZ47345
EPA 300.0	NITRATE	22.1	2.5	22.8	22.7	91.9	91.4	0.44	20	90-110	12/19/16	12/19/16	12/19/16	12/19/16	214819	AZ47345
EPA 300.0	SULFATE	20.0	14.9	33.4	33.6	92.5	93.5	0.60	20	90-110	12/19/16	12/19/16	12/19/16	12/19/16	214819	AZ47345
EPA 353.2	NITRATE-NITRITE-N	2.50	0.40	2.80	2.58	96.0	87.2 #	8.2	20	90-110	12/20/16	12/20/16	12/20/16	12/20/16	214862	AZ47345
SM 2320B	BICARBONATE AS CA	250	61.9	309	297	98.8	94.0	4.0	20	90-110	12/19/16	12/19/16	12/19/16	12/19/16	214808	AZ47345
SM 2320B	TOTAL ALKALINITY AS	250	61.9	309	297	98.8	94.0	4.0	20	90-110	12/19/16	12/19/16	12/19/16	12/19/16	214808	AZ47345
SM3500Fe	FERROUS IRON	3.00	0.067	3.02	3.20	98.4	104	5.8	20	80-120	12/13/16	12/13/16	12/13/16	12/13/16	214796	AZ47345

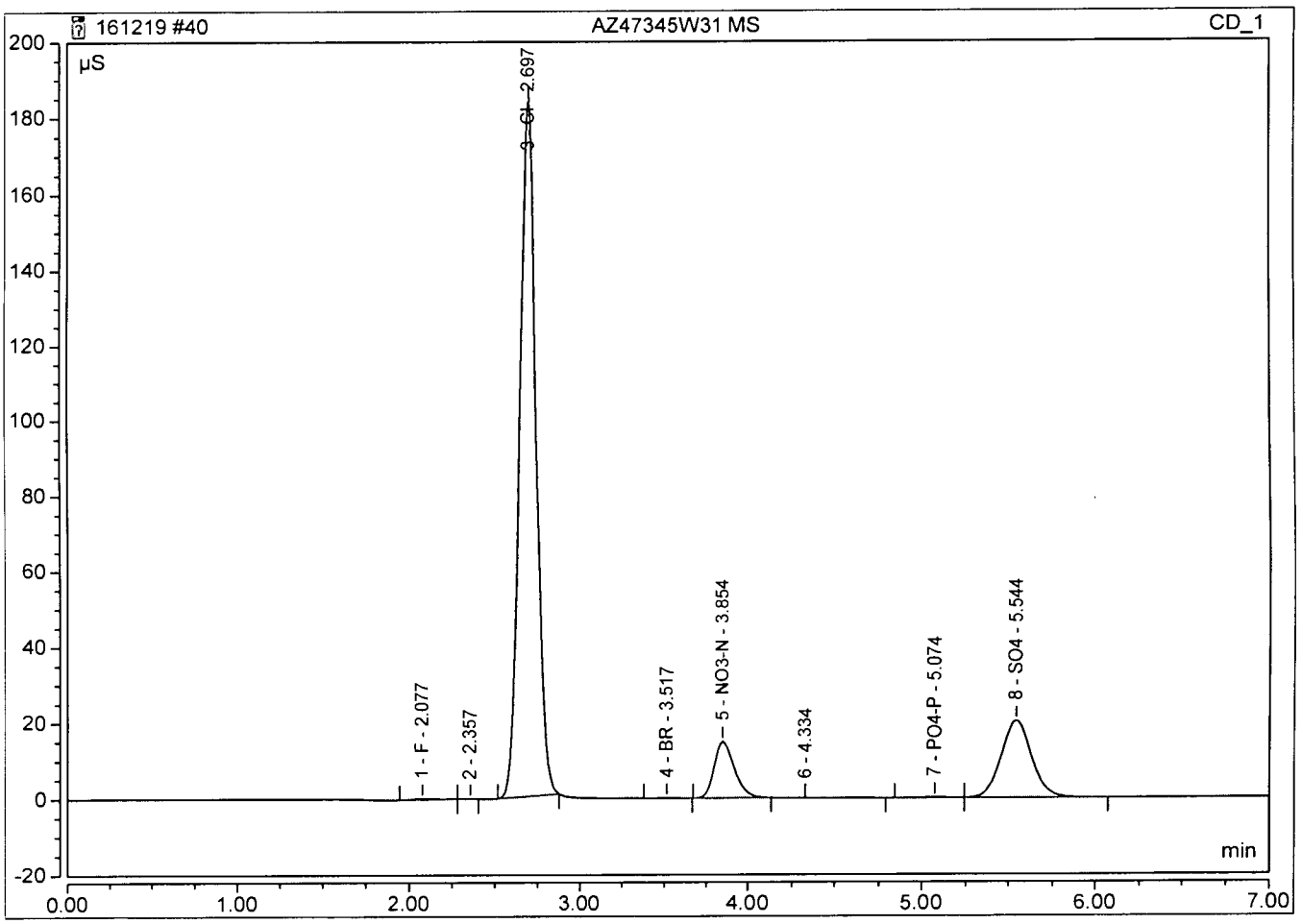
= Recovery is outside QC limits.

Comments: _____

Peak Integration Report

Sample Name:	**AZ47345W31 MS**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**19-Dec-2016 / 21:49**	*Run Time:*	**7.00**

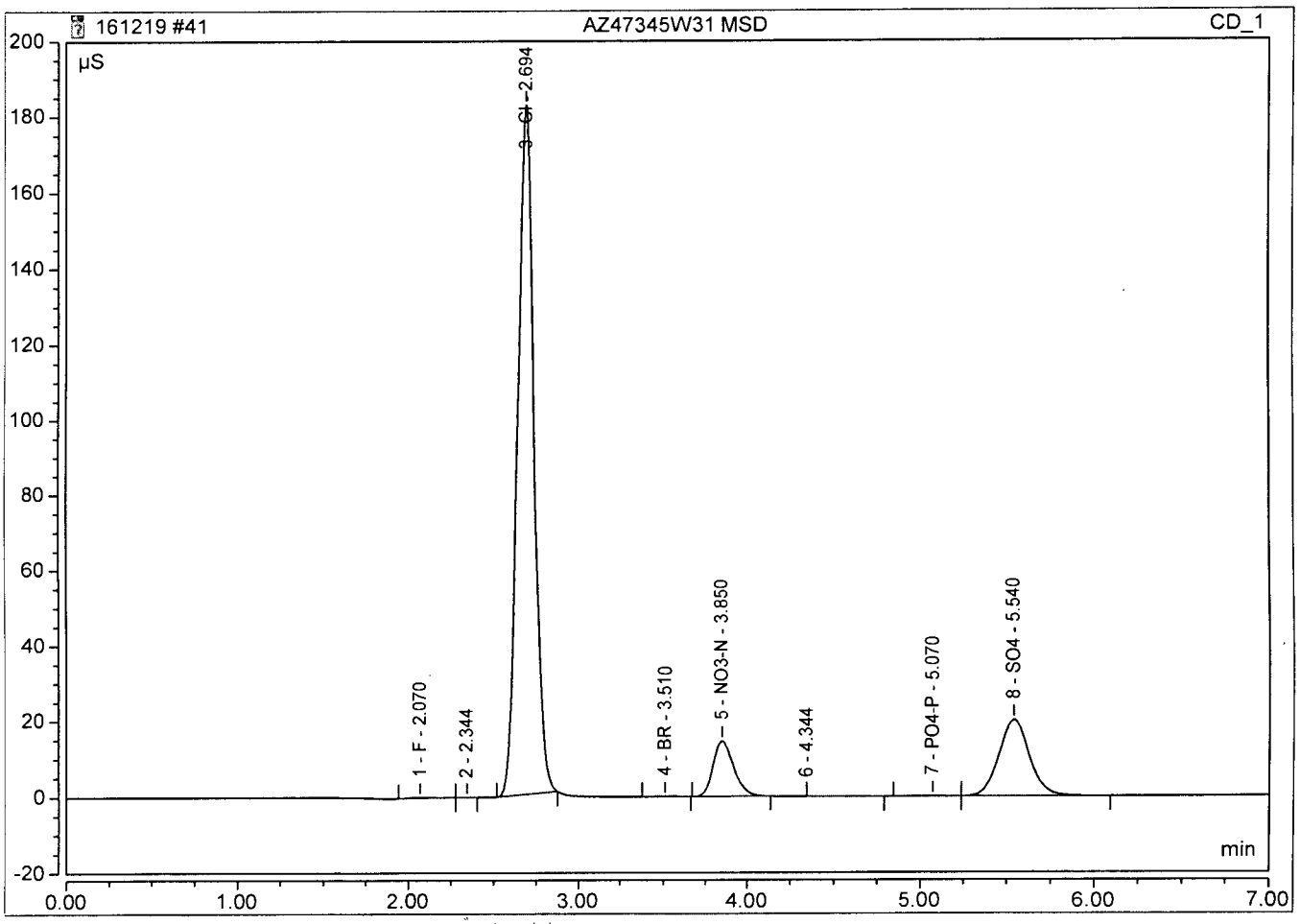
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.08	F	BMB	0.028	0.182	0.1627
3	2.70	Cl	BMB	20.351	183.529	112.5813
4	3.52	BR	BMB	0.016	0.125	0.3713
5	3.85	NO3-N	BMB	2.078	14.793	5.1394
7	5.07	PO4-P	BMB	0.015	0.069	0.1835
8	5.54	SO4	BMB	4.021	20.134	33.4234
TOTAL:				26.51	218.83	151.86



Peak Integration Report

Sample Name:	**AZ47345W31 MSD**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**19-Dec-2016 / 22:02**	*Run Time:*	**7.00**

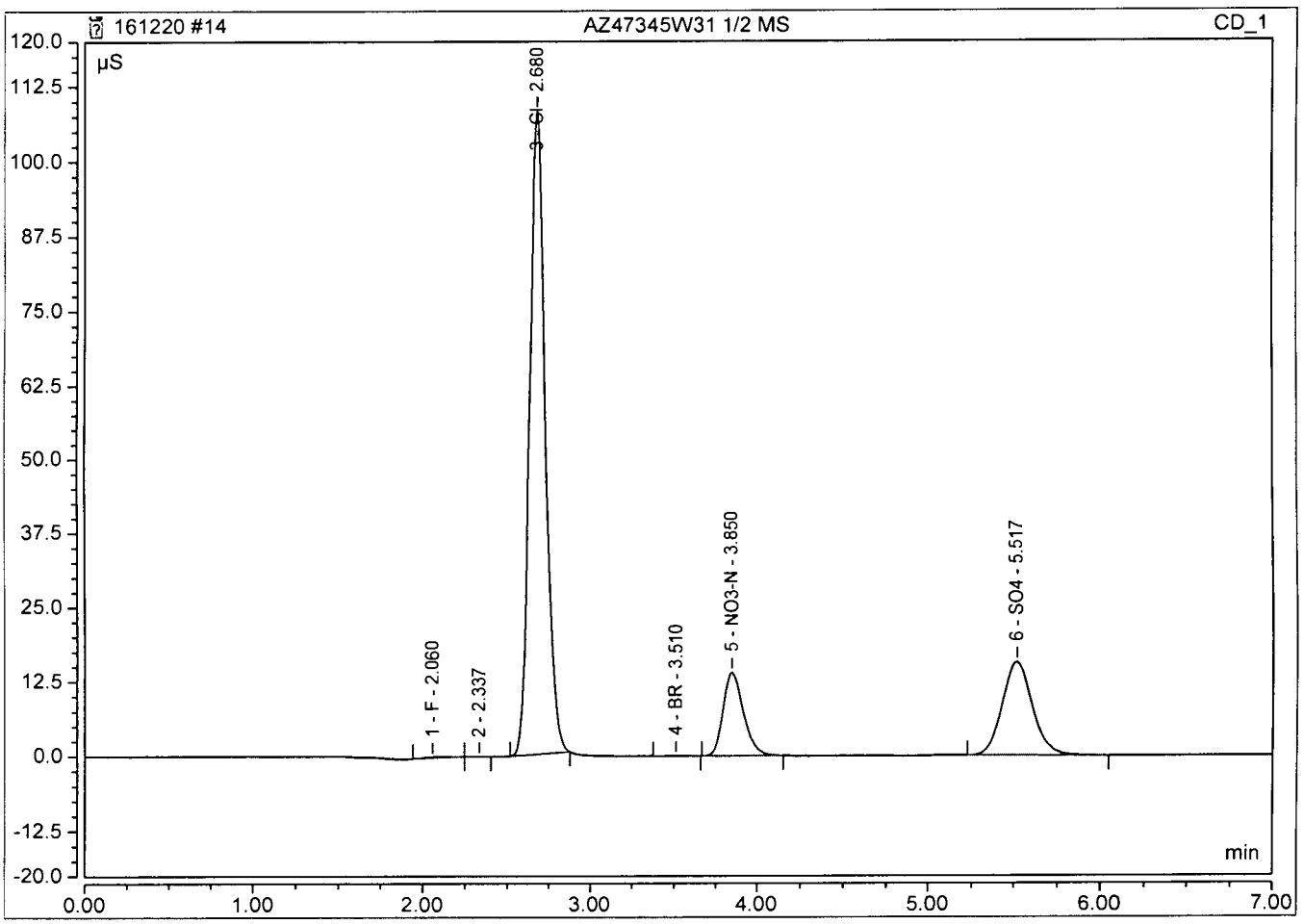
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.07	F	BMB	0.028	0.182	0.1608
3	2.69	Cl	BMB	20.242	182.330	111.9797
4	3.51	BR	BMB	0.015	0.124	0.3674
5	3.85	NO3-N	BMB	2.076	14.703	5.1333
7	5.07	PO4-P	BMB	0.015	0.070	0.1842
8	5.54	SO4	BMB	4.038	20.155	33.5590
TOTAL:				26.41	217.56	151.38



Peak Integration Report

Sample Name:	**AZ47345W31 1/2 MS**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**2.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Dec-2016 / 11:39**	*Run Time:*	**7.00**

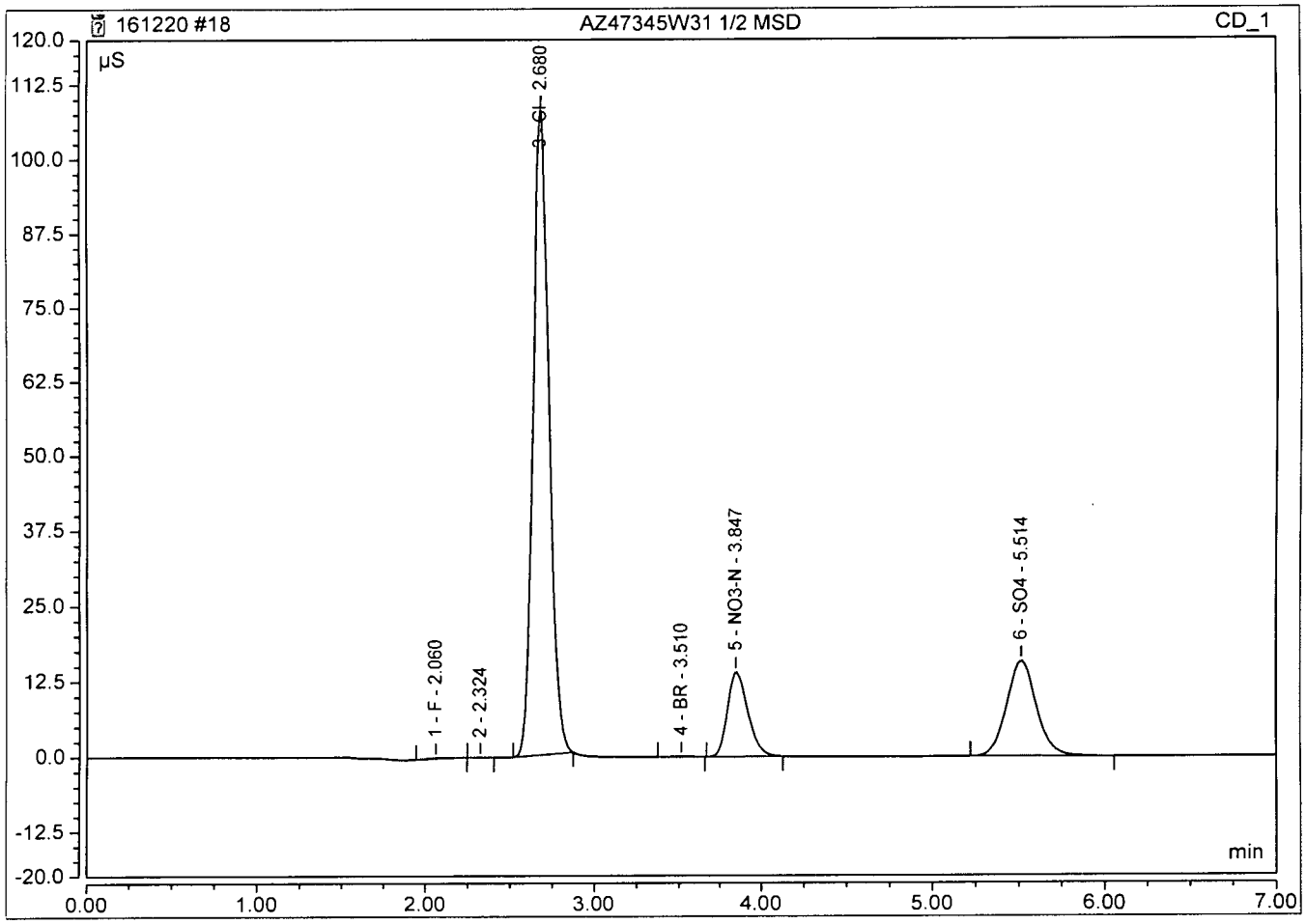
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.06	F	BMB	0.023	0.142	0.2803
3	2.68	Cl	BMB	11.812	108.101	131.1238
4	3.51	BR	BMB	0.008	0.063	0.4956
5	3.85	NO3-N	BMB	1.968	13.925	9.7420
6	5.52	SO4	BMB	3.108	15.616	51.8838
TOTAL:				16.92	137.85	193.53



Peak Integration Report

Sample Name:	**AZ47345W31 1/2 MSD**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**2.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Dec-2016 / 12:31**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.06	F	BMB	0.023	0.143	0.2806
3	2.68	Cl	BMB	11.793	107.890	130.9135
4	3.51	BR	BMB	0.008	0.063	0.4936
5	3.85	NO3-N	BMB	1.962	13.918	9.7128
6	5.51	SO4	BMB	3.104	15.615	51.8218
TOTAL:				16.89	137.63	193.22



SPECTROPHOTOMETRIC ANALYSIS (Ferrous Iron)

Method: SM3500Fe
Analyte: Ferrous Iron
Analyst: MM
Units: mg/L
QCG: 161213A
Notes:
Final Volume: 50mL

Instrument: GENESYS 10UV
Raw Spec: abs. @ 510nm
R-Squared: 0.99983
Reagent (lot#): COLORIZING REAGENT (12/09/16)
BUFFER (12/09/16)

Date	Time	APPL ID	25mL	Raw Result	SubSample Amt	Raw BLK	Calc Conc	Result	QC True	QC%
05/20/16	12:37	0 BB 5/20/16	1	0.000						
05/20/16	12:38	1	1	0.101						
05/20/16	12:39	2	1	0.201						
05/20/16	12:39	4	1	0.403						
05/20/16	12:40	5	1	0.512						
05/20/16	12:40	10	1	0.999						
05/20/16	12:41	160520A ICV 3.0	1	0.304	25mL		3.01	3.01	3.000	100.5%
05/20/16	12:42	160520A ICB	1	0.000	25mL		-0.02	-0.02		
12/13/16	14:17	CCV 4.0 161213	1	0.393	25mL		3.90	3.903	4.000	*97.58*
12/13/16	14:18	CCB 161213	1	0.002	25mL		0.00	-0.003		
12/13/16	14:19	161213A LCS 3.0	1	0.296	25mL		2.93	2.934	3.000	*97.80*
12/13/16	14:20	161213A LCSD 3.0	1	0.301	25mL		2.98	2.984	3.000	*99.47*
12/13/16	14:21	AZ47343W08	1	0.015	25mL		0.13	0.127		
12/13/16	14:22	AZ47344W09	1	0.013	25mL		0.11	0.107		
12/13/16	14:23	AZ47345W16	1	0.009	25mL		0.07	0.067		
12/13/16	14:24	AZ47345W16 MS	1	0.305	25mL		3.02	3.024	3.00	*100.80*
12/13/16	14:25	AZ47345W16 MSD	1	0.323	25mL		3.20	3.204	3.00	*106.79*
12/13/16	14:26	CCV 4.0 161213	1	0.396	25mL		3.93	3.933	4.00	*98.33*
12/13/16	14:27	CCB 161213	1	0.002	25mL					

Metrohm 814/809 Titrando Data

Sample ID	Analysis Date/Time	Method	Titration Volume (to 8.3)	Titration Volume (total)	OH	CO3	HCO3	Total Alk	Unit	Sample Vol	N	Batch	Initials
AZ47345W31 MSD	2016-12-19 17:43:44 UTC-8	Alkalinity	0.000	7.166	0.00	0.00	296.67	296.67	mg/L	25 mL	0.0207	161219A	AH
AZ47345W31 MS	2016-12-19 17:29:26 UTC-8	Alkalinity	0.000	7.452	0.00	0.00	308.51	308.51	mg/L	25 mL	0.0207	161219A	AH
AZ47345W31	2016-12-19 17:24:35 UTC-8	Alkalinity	0.000	1.496	0.00	0.00	61.93	61.93	mg/L	25 mL	0.0207	161219A	AH
AZ47344W08	2016-12-19 17:19:56 UTC-8	Alkalinity	0.000	1.428	0.00	0.00	59.12	59.12	mg/L	25 mL	0.0207	161219A	AH
161219A LCS	2016-12-19 12:14:23 UTC-8	Alkalinity	0.000	5.902	0.00	0.00	244.34	244.34	mg/L	25 mL	0.0207	161219A	AH
161219A Blk	2016-12-19 12:10:56 UTC-8	Alkalinity	0.000	0.036	0.00	0.00	1.49	1.49	mg/L	25 mL	0.0207	161219A	AH

AQ2 Tray Report

Serial Number:	190170
Software Version:	2.1.0
Report Requested By:	Taylor
Date & Time:	2016-12-28 16:53:22
Tray Number:	50
Tray Name:	161220A TOXN

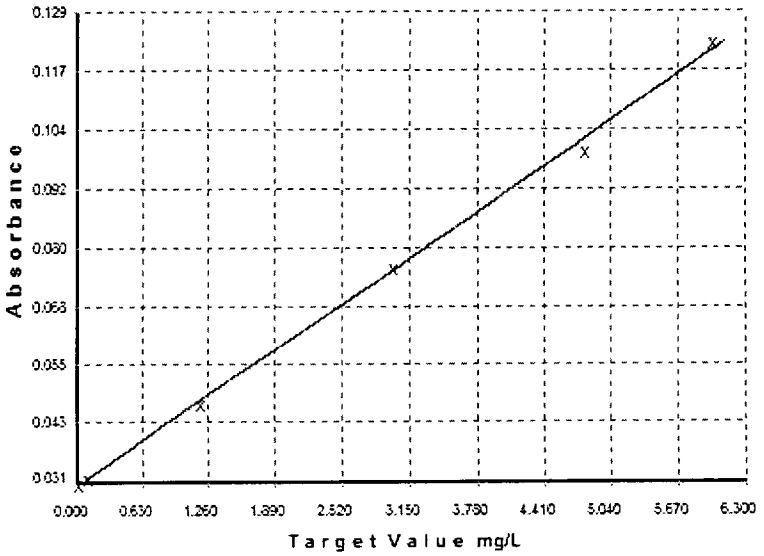
TOXN

Calibration Chart

Type	Absorbance	Calc mg/L	Target mg/L	% Error
S1	0.0310	0.0301	0.0000	
S90	0.0323	0.1121	0.1000	12.10
S91	0.0481	1.1602	1.2000	-3.32
S92	0.0765	3.0474	3.0000	1.58
S93	0.1003	4.6311	4.8000	-3.52
S94	0.1227	6.1192	6.0000	1.99
S0	0.0295	-0.0710	0.0000	

Polynomial Order:	1
Correlation Coefficient:	0.9992
Carryover(%):	-1.7
Calibration equation:	y = bx + a
y =:	Concentration mg/L
x =:	Measured absorbance
a =:	-2.032075E+000
b =:	6.642157E+001
Date & Time:	2016-12-20 16:33:24

Calibration Graph



Reagents

Name	Batch	Prepared By	Expiry Date
NO3 W Buffer			
Sulfa-NEDD			
DI Water (Blank)			

Test Results

Cup	Type	ID	Result	Units	QC Pro	Raw Data	Auto Dil.	Man Dil.	User	Time/Date
	S1	Standard 1	0.0310			0.031046			TH	2016-12-20 16:20:13
	S90	Standard 90	0.0323			0.032281			TH	2016-12-20 16:22:26
	S91	Standard 91	0.0481			0.048060			TH	2016-12-20 16:24:38
	S92	Standard 92	0.0765			0.076473			TH	2016-12-20 16:26:49
	S93	Standard 93	0.1003			0.100317			TH	2016-12-20 16:29:01
	S94	Standard 94	0.1227			0.122720			TH	2016-12-20 16:31:12
	S0	Standard 0	0.0295			0.029525			TH	2016-12-20 16:33:24
3	ICV	ICV	2.3539	mg/L		0.066032			TH	2016-12-20 16:35:36
4	ICB	ICB	-0.1571	mg/L		0.028228			TH	2016-12-20 16:37:48
	CCV	CCV	2.9720	mg/L		0.075338			TH	2016-12-20 16:40:00
	CCB	CCB	-0.0872	mg/L		0.029281			TH	2016-12-20 16:42:12
5	U1	161220A BLK	-0.1924ELL	mg/L		0.027697			TH	2016-12-20 16:44:24
6	U2	161220A LCS	2.5903	mg/L		0.069591			TH	2016-12-20 16:46:38
7	U3	AZ47838-DF 5	13.0695	mg/L		0.069947		x5.0000	TH	2016-12-20 16:48:51
8	U4	AZ47839-DF 5	10.3939	mg/L		0.061891		x5.0000	TH	2016-12-20 16:51:03
9	U5	AZ47840-DF 5	11.2302	mg/L		0.064409		x5.0000	TH	2016-12-20 16:53:15

Algorithm Check
y = 66.42x - 2.032
y = 2.35 ✓
MM 12/28/16

10	U6	AZ47484	6.8982	mg/L	0.040979	x10.0000		TH	2016-12-20 17:58:59
10	U6	AZ47484	7.1234	mg/L	0.137838			TH	2016-12-20 16:55:27
11	U7	AZ47485	1.4932	mg/L	0.053074			TH	2016-12-20 16:57:40
12	U8	AZ47486	1.4591	mg/L	0.052560			TH	2016-12-20 16:59:52
13	U9	AZ47487	0.0308	mg/L	0.031058			TH	2016-12-20 17:02:04
14	U10	AZ47488	-0.0687ELL	mg/L	0.029560			TH	2016-12-20 17:04:17
	CCV	CCV	3.0165	mg/L	0.076008			TH	2016-12-20 17:06:29
	CCB	CCB	-0.0741	mg/L	0.029478			TH	2016-12-20 17:08:43
15	U11	AZ47631	3.6211	mg/L	0.085110			TH	2016-12-20 17:10:56
16	U12	AZ47633	-0.0756ELL	mg/L	0.029455			TH	2016-12-20 17:13:09
17	U13	AZ47671	2.3372	mg/L	0.065780			TH	2016-12-20 17:15:23
18	U14	AZ47672	0.8786	mg/L	0.043822			TH	2016-12-20 17:17:35
19	U15	AZ47738	-0.0571ELL	mg/L	0.029733			TH	2016-12-20 17:19:47
20	U16	AZ47738 MS	2.2319	mg/L	0.064195			TH	2016-12-20 17:21:59
21	U17	AZ47738 MSD	2.2928	mg/L	0.065113			TH	2016-12-20 17:24:11
22	U18	AZ47791	-0.1325ELL	mg/L	0.028598			TH	2016-12-20 17:26:23
23	U19	AZ47344 W08	0.3307	mg/L	0.035573			TH	2016-12-20 17:28:36
24	U20	AZ47345 W31	0.3956	mg/L	0.036550			TH	2016-12-20 17:30:50
	CCV	CCV	2.7690	mg/L	0.072282			TH	2016-12-20 17:31:56
	CCB	CCB	-0.1002	mg/L	0.029084			TH	2016-12-20 17:32:54
25	U21	AZ47345 MS W31	2.7971	mg/L	0.072704			TH	2016-12-20 17:33:51
26	U22	AZ47345 MSD ⊥	2.5801	mg/L	0.069438			TH	2016-12-20 17:34:47
27	U23	AZ47960W01-DF 5	13.9640	mg/L	0.072640		x5.0000	TH	2016-12-20 17:35:43
28	U24	AZ47961W01-DF 5	9.6120	mg/L	0.059536		x5.0000	TH	2016-12-20 17:36:39
29	U25	AZ47962W01-DF 5	10.7179	mg/L	0.062866		x5.0000	TH	2016-12-20 17:37:35
	CCV	CCV	2.6841	mg/L	0.071004			TH	2016-12-20 17:38:31
	CCB	CCB	-0.1425	mg/L	0.028448			TH	2016-12-20 17:39:28
	CCV	CCV	2.8899	mg/L	0.074102				2016-12-20 17:57:03
	CCB	CCB	-0.0317	mg/L	0.030116				2016-12-20 17:58:01
	CCV	CCV	2.9728	mg/L	0.075351				2016-12-20 17:59:55
	CCB	CCB	-0.0039	mg/L	0.030535				2016-12-20 18:00:52

MM 12/28/16

Ferrous Iron Standard Prep

Stock Standard Prep:

Prep Date: 5/20/16
Exp Date: 5/20/17
Prep'd By: BB

CCV Stock (200 mg/L): 0.3502 g $Fe(NH_4)2(SO_4)_2*6H_2O$ EMD Lot #2013050298 up to 250 mL with DI

ICV Stock (200 mg/L): 0.3500 g $Fe(NH_4)2(SO_4)_2*6H_2O$ JT Baker Lot #0000068681 up to 250 mL with DI

QC Prep

Prep Date: 12/13/16
Exp Date: 12/14/16
Prep'd By: MM

CCV (4.0 mg/L): 0.5 mL of CCV Stock (prep: 5/20/16) into 25 mL DI then carried through sample prep procedure

LCS (3.0 mg/L): 0.375 mL of ICV Stock (prep: 5/20/16) into 25 mL DI then carried through sample prep procedure

MS/MSD (3.0 mg/L): 0.375 mL of ICV Stock (prep: 5/20/16) into 25 mL sample then carried through sample prep procedure

Inorganic Spiking Solution

3.4999g $NaHCO_3$ BDH lot#1575C510
Final vol 500 mL w/DI water
Prep: 11/01/16
Exp: 10/10/17
AH

0.02N H_2SO_4 Titrant for Alkalinity

400 mL 0.1N H_2SO_4 (prep 11/16/16)
Final vol 2L w/ DI water
Prep 11/21/16
Exp 11/21/17
AH 11/21/16

METHOD 300 / 9056		ANION STOCK					PW 10/20/16
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)	
O2SI	F-	1,000	1085520-36282	07/24/17	0.25	5	
O2SI*	Cl-	5,000	1069557-34558	01/08/17	0.5	50	
O2SI	NO2-N	1,000	1088548-36281	09/26/17	0.25	5	
Ultra Scientific	Br-	1,000	CL-3274-36926	08/31/20	1.25	25	
O2SI	NO3-N	1,000	1078397-35587	01/30/17	0.5	10	
O2SI	PO4-P	1,000	1072004-34911	09/03/16	0.5	10	
Ultra Scientific	SO4	5,000	CP-1469-36296	04/30/18	0.5	50	
Brought up with milipore water to Final Volume of:						50	

METHOD 300 / 9056		ANION ICV / LCS/MS/MSD				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
CPI	F-	1,000	16B115-36204	09/03/17	0.125	2.50
CPI	Cl-	1,000	16E065-36694	12/06/17	1.00	20.00
CPI	NO2-N	304	15J001-36257	09/24/17	0.50	3.04
CPI	Br-	1,000	15L093-36101	07/21/17	0.625	12.50
CPI	NO3-N	1,000	16E022-36783	12/30/17	0.25	5.00
CPI	PO4-P	1,000	15B116-36258	09/24/17	0.25	5.00
CPI	SO4	1,000	16E104-36693	12/06/17	1.00	20.00
Brought up with milipore water to Final Volume of:					50	

METHOD 300 / 9056			ANION CAL CURVE						
				ICAL #1	ICAL#2	ICAL #3	ICAL #4	ICAL #5	ICAL #6
ID#	mg/L	Prep Date	EXP. DATE	mL	mL	mL	mL	mL	mL
ANION STOCK	100	08/19/16	08/21/16	0.4	2	10	2	7	10
Brought up w/ Milipore Water to final volume of (mL):				50	100	100	10	10	na
Final Conc F (mg/L):				0.04	0.1	0.5	1	3.5	5
Final Conc Cl (mg/L):				0.4	1	5	10	35	50
Final Conc NO2-N (mg/L):				0.04	0.1	0.5	1	3.5	5
Final Conc Br (mg/L):				0.2	0.5	2.5	5	17.5	25
Final Conc NO3-N (mg/L):				0.08	0.2	1	2	7	10
Final Conc PO4-P (mg/L):				0.08	0.2	1	2	7	10
Final Conc SO4 (mg/L):				0.4	1	5	10	35	50

161219 PW

		CCV				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
O2SI	F-	1,000	1085520-36282	07/24/17	0.125	2.50
O2SI	Cl-	5,000	1069557-34558	01/08/17	0.25	25.0
O2SI	NO2-N	1,000	1088548-36281	09/26/17	0.125	2.5
Ultra Scientific	Br-	1,000	CL-3274-36926	08/31/20	0.625	12.50
O2SI	NO3-N	1,000	1078397-35587	01/30/17	0.25	5.0
O2SI	PO4-P	1,000	1072004-34911	09/03/16	0.25	5.0
Ultra Scientific	SO4	5,000	CP-1469-36296	04/30/18	0.25	25.0
Brought up with milipore water to Final Volume of:					50	

METHOD 300 / 9056		ICV LCS MS				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
CPI	F-	1,000	16B115-36204	09/03/17	0.125	2.50
CPI	Cl-	1,000	16E065-36694	12/06/17	1.00	20.00
CPI	NO2-N	304	15C058-35411	09/24/17	0.50	3.04
CPI	Br-	1,000	15L093-36101	07/21/17	0.63	12.50
CPI	NO3-N	1,000	16E022-36783	12/30/17	0.250	5.00
CPI	PO4-P	1,000	15B116-36258	09/24/17	0.25	5.00
CPI	SO4	1,000	16E104-36693	12/06/17	1.00	20.00
Final Volume of Sample: (mL)					50	

161220 PW

		CCV				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
O2SI	F-	1,000	1085520-36282	07/24/17	0.125	2.50
O2SI	Cl-	5,000	1069557-34558	01/08/17	0.25	25.0
O2SI	NO2-N	1,000	1088548-36281	09/26/17	0.125	2.5
Ultra Scientific	Br-	1,000	CL-3274-36926	08/31/20	0.625	12.50
O2SI	NO3-N	1,000	1078397-35587	01/30/17	0.25	5.0
O2SI	PO4-P	1,000	1072004-34911	09/03/16	0.25	5.0
Ultra Scientific	SO4	5,000	CP-1469-36296	04/30/18	0.25	25.0
Brought up with milipore water to Final Volume of:					50	

METHOD 300 / 9056		ICV LCS MS				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
CPI	F-	1,000	16B115-36204	09/03/17	0.125	2.50
CPI	Cl-	1,000	16E065-36694	12/06/17	1.00	20.00
CPI	NO2-N	304	15C058-35411	09/24/17	0.50	3.04
CPI	Br-	1,000	15L093-36101	07/21/17	0.63	12.50
CPI	NO3-N	1,000	16E022-36783	12/30/17	0.250	5.00
CPI	PO4-P	1,000	15B116-36258	09/24/17	0.25	5.00
CPI	SO4	1,000	16E104-36693	12/06/17	1.00	20.00
Final Volume of Sample: (mL)					50	

Nitrite

High Point @ 1.5 mg/L

0.075 mL NO2 O2Si lot 1062905-33877
50 mL DI Water

CCV @ 0.75 mg/L

0.0375 mL NO2 O2Si lot 1062905-33877
50 mL DI Water

ICV @ 0.73 mg/L

0.12mL NO2 CPI lot 15J001-36257
50 mL DI Water

Nitrate/TOXN

High Point @ 6 mg/L

0.30 mL NO3 O2Si lot 1078397-35587
50 mL DI Water

CCV @ 3.0 mg/L

0.15 mL NO3 O2Si lot 1078397-35587
50 mL DI Water

ICV @ 2.5 mg/L

0.125 mL NO3 CPI lot 14J321-34555
50 mL DI Water

Prep 12/14/16
Exp 12/21/16
TH 12/14/16

SM3500 Injection Log

Directory: I:\Spec Sheets\Ferrous Iron (Fe2)\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	20 May 2016	12:37	0 BB 5/20/16		161213a	1.
2	20 May 2016	12:38	1		161213a	1.
3	20 May 2016	12:39	4		161213a	1.
4	20 May 2016	12:39	2		161213a	1.
5	20 May 2016	12:40	10		161213a	1.
6	20 May 2016	12:40	5		161213a	1.
7	20 May 2016	12:41	160520A ICV 3.0		161213a	1.
8	20 May 2016	12:42	160520A ICB		161213a	1.
9	13 Dec 2016	14:17	CCV 4.0 161213		161213a	1.
10	13 Dec 2016	14:18	CCB 161213		161213a	1.
11	13 Dec 2016	14:19	161213A LCS 3.0		161213a	1.
14	13 Dec 2016	14:22	AZ47344W09		161213a	1.
15	13 Dec 2016	14:23	AZ47345W16		161213a	1.
16	13 Dec 2016	14:24	AZ47345W16 MS		161213a	1.
17	13 Dec 2016	14:25	AZ47345W16 MSD		161213a	1.
18	13 Dec 2016	14:26	CCV 4.0 161213		161213a	1.
19	13 Dec 2016	14:27	CCB 161213		161213a	1.

310/SM2320B Injection Log

Directory: I:\Tiamo\EXPORT\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	19 Dec 2016	12:10	161219A Blk		161219A_AL	1.
2	19 Dec 2016	12:14	161219A LCS		161219A_AL	1.
20	19 Dec 2016	17:19	AZ47344W08		161219A_AL	1.
21	19 Dec 2016	17:24	AZ47345W31		161219A_AL	1.
22	19 Dec 2016	17:29	AZ47345W31 MS		161219A_AL	1.
23	19 Dec 2016	17:43	AZ47345W31 MSD		161219A_AL	1.

300/9056A Injection Log

Directory: I:\Dionex\Charlie\Anions\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
14	20 Oct 2016	11:19	ICAL 1 10/20/16		161020	1.
15	20 Oct 2016	11:32	ICAL 2 10/20/16		161020	1.
16	20 Oct 2016	11:45	ICAL 3 10/20/16		161020	1.
17	20 Oct 2016	11:58	ICAL 4 10/20/16		161020	1.
18	20 Oct 2016	12:11	ICAL 5 10/20/16		161020	1.
19	20 Oct 2016	12:24	ICAL 6 10/20/16		161020	1.
20	20 Oct 2016	12:37	ICV 1601020		161020	1.
21	20 Oct 2016	12:50	ICB		161020	1.

300/9056A Injection Log

Directory: I:\Dionex\Charlie\Anions\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
3	19 Dec 2016	08:34	CCV 161219		161219	1.
4	19 Dec 2016	08:47	CCB		161219	1.
5	19 Dec 2016	09:00	161219A LCS		161219	1.
8	19 Dec 2016	14:51	AZ47344W08		161219	1.
16	19 Dec 2016	16:36	AZ47344W08 1/5		161219	5.
19	19 Dec 2016	17:15	CCV 161219		161219	1.
20	19 Dec 2016	17:28	CCB		161219	1.
29	19 Dec 2016	19:25	CCV 161219		161219	1.
30	19 Dec 2016	19:38	CCB		161219	1.
31	19 Dec 2016	19:51	161219B LCS		161219	1.
37	19 Dec 2016	21:10	AZ47345W31		161219	1.
38	19 Dec 2016	21:23	AZ47345W31 1/2		161219	2.
40	19 Dec 2016	21:49	AZ47345W31 MS		161219	1.
41	19 Dec 2016	22:02	AZ47345W31 MSD		161219	1.
42	19 Dec 2016	22:15	CCV 161219		161219	1.
43	19 Dec 2016	22:28	CCB		161219	1.

300/9056A Injection Log

Directory: I:\Dionex\Charlie\Anions\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
7	20 Dec 2016	09:29	CCV 161220		161220	1.
8	20 Dec 2016	09:42	CCB		161220	1.
17	20 Dec 2016	11:39	AZ47345W31 1/2 MS		161220	2.
19	20 Dec 2016	12:05	CCV 161220		161220	1.
20	20 Dec 2016	12:18	CCB		161220	1.
21	20 Dec 2016	12:31	AZ47345W31 1/2 MSD		161220	2.
32	20 Dec 2016	15:21	CCV 161220		161220	1.
33	20 Dec 2016	15:34	CCB		161220	1.

353.2 Injection Log

Directory: I:\EVE\Export\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	20 Dec 2016	16:20	Standard 1 TOXN/NO3		161220A TO	1.
2	20 Dec 2016	16:22	Standard 90 TOXN/NO3		161220A TO	1.
3	20 Dec 2016	16:24	Standard 91 TOXN/NO3		161220A TO	1.
4	20 Dec 2016	16:26	Standard 92 TOXN/NO3		161220A TO	1.
5	20 Dec 2016	16:29	Standard 93 TOXN/NO3		161220A TO	1.
6	20 Dec 2016	16:31	Standard 94 TOXN/NO3		161220A TO	1.
7	20 Dec 2016	16:33	Standard 0 TOXN/NO3		161220A TO	1.
8	20 Dec 2016	16:35	ICV TOXN/NO3		161220A TO	1.
9	20 Dec 2016	16:37	ICB TOXN/NO3		161220A TO	1.
10	20 Dec 2016	16:40	CCV TOXN/NO3		161220A TO	1.
11	20 Dec 2016	16:42	CCB TOXN/NO3		161220A TO	1.
12	20 Dec 2016	16:44	161220A BLK TOXN/NO3		161220A TO	1.
13	20 Dec 2016	16:46	161220A LCS TOXN/NO3		161220A TO	1.
21	20 Dec 2016	17:06	CCV TOXN/NO3		161220A TO	1.
22	20 Dec 2016	17:08	CCB TOXN/NO3		161220A TO	1.
31	20 Dec 2016	17:28	AZ47344 TOXN/NO3 W08		161220A TO	1.
32	20 Dec 2016	17:30	AZ47345 TOXN/NO3 W31		161220A TO	1.
33	20 Dec 2016	17:31	CCV TOXN/NO3		161220A TO	1.
34	20 Dec 2016	17:32	CCB TOXN/NO3		161220A TO	1.
35	20 Dec 2016	17:33	AZ47345 MS TOXN/NO3 W31		161220A TO	1.
36	20 Dec 2016	17:34	AZ47345 MSD TOXN/NO3 ↓		161220A TO	1.
40	20 Dec 2016	17:38	CCV TOXN/NO3		161220A TO	1.
41	20 Dec 2016	17:39	CCB TOXN/NO3		161220A TO	1.

MM 12/28/16

908 North Temperance Ave. ∇ Clovis, CA 93611 ∇ Phone 559-275-2175 ∇ Fax 559-275-4422

Certification Number: CA1312
NELAP Certification number: CA00046
DoD-ELAP Certificate number: 4064.01

Data Validatable Report

January 4, 2017

AECOM
1001 Bishop Street, Suite 1600
Honolulu, Hawaii 96813

Attn: Margie Thach

Title: Report of Data: Case 81760

Project: 60481245 CIV0053 Red Hill Fuel Storage. HI

Contract #: Prime contract # for DoD: NAVY CLEAN N62742-12-D-1829, CTO 0053
Subcontract: 14S-16234-HI16

Dear Ms. Thach:

Six water samples were received December 14, 2016. Written results for the requested analyses are being provided on this January 4, 2017.

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

If you have any questions or require further information, please contact your APPL Project Manager, Libby Cheeseborough, libby@applinc.com, at your convenience. Thank you for choosing APPL, Inc.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. These test results meet all requirements of NELAC and DoD QSM. Release of the hard copy has been authorized by the Laboratory Manager or her designee, as verified by the following signature.

Paula McCartney, Laboratory Director
APPL, Inc.

PM/rp
Enclosure
cc: File

Number of pages in this report: 777

Data Validation Package
for
60481245 CIV 0053 Red Hill Fuel Storage
APPL SDG 81760
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Sample Data 709

Calibration Data 724

Raw Data 756

SAMPLE RECEIPT INFORMATION

Sample Receipt Information

ARF: 81760

Project: 60481245 CIV0053 Red Hill Fuel Storage. HI

Sample Receipt Information:

Six water samples were received December 14, 2016, at 3.5°C, 3.5°C, 3.5°C, 3.5°C, and 3.0°C. The sample group was assigned Analytical Request Form (ARF) number 81760. The sample numbers and requested analyses were compared to the chains of custody and email communications. Methane analysis was added to one sample, as requested. No other exception was encountered.

Sample Table

CLIENT ID	APPL ID	Matrix	Date Sampled	Date Received
ERH134	AZ47493	WATER	12/12/16	12/14/16
ERH139	AZ47494	WATER	12/12/16	12/14/16
ERH136	AZ47495	WATER	12/12/16	12/14/16
ERH143	AZ47496	WATER	12/13/16	12/14/16
ERH145	AZ47497	WATER	12/13/16	12/14/16
ERH146	AZ47498	WATER	12/12/16	12/14/16

The samples and blanks were screened for J-value responses between the detection limit (DL) and limit of quantitation (LOQ).

APPL's Laboratory control limits generated in house statistically do not meet the control limits listed in DoD QSM 5.0 for all analytes. Laboratory control spike recoveries for this project meet all control limits listed in the DoD QSM 5.0 except where noted. A copy of our in house generated control limits is available upon request. In addition, a copy of our LOQ control limits, established using 7 data points, are also available upon request.

Only the portion of the injection log relative to these samples is included. A full sequence log is available upon request.

Measurement uncertainty can be reported upon request.

CASE NARRATIVE

EPA Method 8011

EDB

Sample Preparation:

The water samples were extracted according to EPA method 8011. All holding times were met.

Sample Analysis Information:

The samples were analyzed according to the method using an Agilent Gas Chromatograph with an ECD.

Quality Control/Assurance

Calibrations:

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Blanks:

No target analyte was detected above one-half the limit of quantitation (LOQ) in the method blank.

Spikes:

A Laboratory Control Spike (LCS) was used for quality assurance. All acceptance criteria were met.

No sample was designated by the client for MS/MSD analysis.

Surrogates

The surrogate recoveries are summarized in the Form 2 & 8. All surrogate recoveries were within the control limits.

Summary:

No analytical problem was encountered. The data generated are acceptable.

EPA Method 8015B

Total Petroleum Hydrocarbons - Diesel & Oil

Sample Preparation:

The water samples were extracted according to EPA method 3510C. All holding times were met.

Sample Analysis Information:

The samples were analyzed according to the method using an Agilent Gas Chromatograph with a flame ionization detector.

Quality Control/Assurance

Calibrations:

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Blanks:

No target analyte was detected above one-half the LOQ in the method blank.

Spikes:

A Laboratory Control Spike (LCS) was used for quality assurance. All acceptance criteria were met.

No sample was designated by the client for MS/MSD analysis.

Surrogates:

Surrogate recoveries are summarized on the Form 2 & 8. All surrogate recoveries were acceptable.

Summary:

No analytical problem was encountered. The data generated are acceptable.

EPA Method 8270D-SIM
Polynuclear Aromatic Hydrocarbons

Sample Preparation:

The water samples were extracted according to EPA method 3510C. All holding times were met.

Analysis Information:

The samples were analyzed according to EPA Method 8270D using an Agilent Gas Chromatograph with a mass spectrometer detector, in selective ion monitoring mode (SIM).

Manual integrations were performed in accordance with APPL's SOP. 2-Methyl-naphthalene was manually integrated in a calibration standard. Before and after chromatograms are included in the package.

Quality Control/Assurance

Spike Recovery

A Laboratory Control Spike (LCS) was used for quality assurance. All LCS recoveries met acceptance criteria.

No sample was designated by the client for MS/MSD analysis.

Method blanks

No target compound was detected at or above one-half the LOQ in the method blank.

Surrogates

Surrogate recoveries are summarized on the Form 2 & 8. All surrogate recoveries met acceptance criteria.

Calibration

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Tuning:

The instrument was tuned using DFTPP. All method criteria were met.

Internal Standards

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8270. All acceptance criteria were met.

Summary:

No analytical exception was encountered. The data generated are acceptable.

EPA Method 8270D
Semi-Volatile Organic Compounds

Sample Preparation:

The water samples were extracted according to EPA method 3510C. All holding times were met.

Analysis Information:

The samples were analyzed for Phenol according to EPA Method 8270D using an Agilent Gas Chromatograph with a mass spectrometer detector.

Quality Control/Assurance

Spike Recovery

A Laboratory Control Spike (LCS) was used for quality assurance. All LCS recoveries met acceptance criteria.

No sample was designated by the client for MS/MSD analysis.

Method blanks

No target compound was detected at or above one-half the LOQ in the method blank.

Surrogates

Surrogate recoveries are summarized on the Form 2 & 8. All other surrogate recoveries met acceptance criteria.

Calibration

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Tuning:

The instrument was tuned using DFTPP. All method criteria were met.

Internal Standards

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8270. All acceptance criteria were met.

Summary:

No analytical exception was encountered. The data generated are acceptable.

APPL SOP ANA2MEE

2-(2-Methoxyethoxy) ethanol by SPE, GC/MS

Sample Preparation:

The water samples were extracted according to EPA method 3535. All holding times were met.

Analysis Information:

The samples were analyzed according to an internal method APPL SOP ANA2MEE using an Agilent Gas Chromatograph with a mass spectrometer detector.

Quality Control/Assurance

Spike Recovery

A Laboratory Control Spike (LCS) was used for quality assurance. All LCS recoveries met acceptance criteria.

No sample was designated by the client for MS/MSD analysis.

Method blanks

No target compound was detected at or above one-half the LOQ in the method blank.

Surrogates

No surrogate was used for this method.

Calibration

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Tuning:

The instrument was tuned using DFTPP. All method criteria were met.

Internal Standards

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8270. All acceptance criteria were met.

Summary:

No analytical exception was encountered. The data generated are acceptable.

EPA Method 8260B
Volatile Organic Analysis

Sample Preparation:

The water samples were purged according to EPA method 5030B. All holding times were met.

Sample Analysis Information:

The samples were analyzed according to EPA method 8260B using an Agilent Gas Chromatograph with a mass spectrometer detector.

Quality Control/Assurance:

Calibrations:

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Blanks:

No analyte was detected above one-half the limit of quantitation (LOQ) in the method blank.

Spikes:

Laboratory Control Spike (LCS) was used for quality assurance. All LCS recovery acceptance criteria were met.

No sample was designated by the client for MS/MSD analysis.

Surrogates:

Surrogate recoveries are summarized on the Form 2 & 8. All surrogate recoveries were acceptable.

Tuning:

The instrument was tuned using BFB. All method criteria were met.

Internal Standards:

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8260. All method acceptance criteria were met.

Summary:

No problem was encountered. The data generated are acceptable.

EPA Method 8260B
Gasoline

Sample Preparation:

The water samples were purged according to EPA method 5030B. All holding times were met.

Sample Analysis Information:

The samples were analyzed according to EPA method 8260B using an Agilent Gas Chromatograph with a mass spectrometer detector.

Quality Control/Assurance:

Calibrations:

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Blanks:

No analyte was detected above one-half the limit of quantitation (LOQ) in the method blank.

Spikes:

A Laboratory Control Spike (LCS) was used for quality assurance. All LCS recovery acceptance criteria were met.

No sample was designated by the client for MS/MSD analysis.

Surrogates:

Surrogate recoveries are summarized on the Form 2 & 8. All surrogate recoveries were acceptable.

Tuning:

The instrument was tuned using BFB. All method criteria were met.

Internal Standards:

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8260. All method acceptance criteria were met.

Summary:

No problem was encountered. The data generated are acceptable.

Methane
RSK-175

Sample Preparation and Analysis

The water samples were analyzed with guidance from RSK-175. The samples were allowed to equilibrate for 10 minutes at 40°C and a portion of the headspace was analyzed using a Hewlett Packard Gas Chromatograph with a flame ionization detector. All holding times were met.

Quality Control/Assurance

Spike Recovery

A Laboratory Control Spike (LCS) was used for quality assurance. All acceptance criteria were met.

No sample was designated by the client for MS/MSD analysis.

Method blanks

The blank contained no target analyte above one-half the limit of quantitation (LOQ).

Calibration

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Summary:

No analytical exception is noted.

EPA Method 300.0 and SM 2320B, and SM 3500 FeB

Inorganic Analyses

Sample Preparation Information:

The water samples were prepared according to the methods.

Analysis Information:

Samples:

The samples were analyzed according to the methods. A Dionex DX500 ion chromatograph was used for the EPA 300.0 analysis. Three samples were received more than 24 hours after collection. The samples were analyzed as soon as possible upon arrival for ferrous iron. All other holding times were met.

Calibrations:

Initial and continuing calibrations were performed according to the methods and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Blanks:

Alkalinity and Bicarbonate were detected above one-half the LOQ in the method blank. The samples contained over ten times the concentration detected in the method blank. No other target analyte was detected at or above one-half the LOQ.

Spikes:

Laboratory Control Spikes (LCS) were used for quality assurance. All recoveries were within acceptance limits in the LCS.

No sample was designated by the client for MS/MSD analysis. Sample ERH146 was designated by the laboratory for MS/MSD analysis. All acceptance criteria were met in the MS/MSD.

Summary:

No other analytical exception is noted. All data are acceptable.

APPL Inc.
Abbreviations and Flags

FLAG	DESCRIPTION
#	Recovery or RPD outside control limits
*	Recovery or RPD outside control limits
B	Analyte detected in associated method blank
C1	Reason for correction: wrote incorrect response
C2	Reason for correction: calculated incorrectly
C3	Reason for correction: needs to be rechecked
C4	Reason for correction: data not usable
DO	Diluted out
E	Exceeds linear range
F	Estimated value
G1	Includes a wide range of hydrocarbons which does not match our gasoline standard
G10	Includes a match to hydrocarbon profiles within the range of mineral spirits
G11	Includes a match to hydrocarbon profiles within the range of JP-4
G12	Pattern does not match the gasoline standard; the carbon range for this sample is consistent with JP8
G13	Closely resembles the hydrocarbon profile of aviation gasoline
G14	Analyte concentration may be biased due to carry over
G2	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G3	Includes higher boiling hydrocarbons
G4	Includes dominant peak(s) not indicative of petroleum hydrocarbons
G5	Is mainly dominant peak(s) not indicative of petroleum hydrocarbons
G6	Contains recognizable contaminant peak(s) which has been removed from quantitation
G7	Is mainly a match to hydrocarbons within the range of gasoline
G8	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G9	Includes hydrocarbons within the range of kerosene
J	Estimated value
M	Matrix effect
MI1	Manual integration: integration does not follow baseline
MI2	Manual integration: non-target peak interference
MI3	Manual integration: to split a peak that was integrated as one peak by the computer.
MI4	Manual integration: to integrate a split peak
MI5	Manual integration: the whole peak or part of the peak was not integrated
MI6	Manual integration: computer integrated wrong peak
MI7	Manual integration: other – (See case narrative)
MDL	Method detection limit
ND	Not detected
NT	Non-target
Q	Acceptance criteria not met
T1 I	Includes wide range of hydrocarbons not indicative of diesel
T1 M	Is mainly wide range of hydrocarbons not necessarily indicative of diesel
T2 I	Includes lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T2 M	Is mainly lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T3 I	Includes higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T3 M	Is mainly higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T4 I	Includes dominant peak(s) not indicative of hydrocarbons
T4 M	Is mainly dominant peak(s) not indicative of hydrocarbons
T5	Contains recognizable contaminant peak(s) which has been removed from quantitation
T6	Is mainly a match to hydrocarbons within range of diesel fuel
T7	Closely resembles the boiling point hydrocarbon profile consistent with diesel fuel
T8	Includes a match to hydrocarbon profiles within range of diesel and kerosene fuel
T9 I	Includes non-diesel hydrocarbons within boiling point range of diesel fuel
T9 M	Is mainly non-diesel hydrocarbons within boiling point range of diesel fuel
U	Not detected
Y	Percent difference between primary and confirmation column > 40%

CHAIN OF CUSTODY,

ARF, CRF, AND

CLIENT COMMUNICATION

APPL - Analysis Request Form 81760

Client: **AECOM**
Address: **1001 Bishop Street, Suite 1600**
Honolulu, HI 96813
Attn: **Margie Thach**
Phone: **808-356-5373** Fax: **808-523-8950**
Job: **60481245 CIV0053 Red Hill Fuel Storage**
PO #: **14S-16234-HI16, PO# 77265**
Chain of Custody (Y/N): **Y** # **121316a-e**
RAD Screen (Y/N): **Y** pH (Y/N): **Y**
Turn Around Type: **1 WEEK**

Received by: **CM**
Date Received: **12/14/16** Time: **10:15**
Delivered by: **FED EX**
Shuttle Custody Seals (Y/N): **Y** Time Zone: **-10**
Chest Temp(s): **4X 3.5° 3.0°C**
Color: **VOA/L-PURBRN**
Samples Chilled until Placed in Refrig/Freezer: **Y**
Project Manager: **Libby Cheesebor**
QC Report Type: **DVP4DOD/EQUIS/HI**
Due Date: **12/21/16**

Comments:
7 day TAT for Form 1s; 21 day TAT for DVP; F1s, login to Margie.Thach@aecom.com
A: DOD QSM ver 5.0; DOD Forms (LOQ/LOD database/DL) Print ND as LOD w/U Qual.
8260: BTEX & TPH-G only; 8270 SIM: 1-methylnaphthalene, 2-methylnaphthalene & naphthalene only.
TPH D & O; RSK: Methane only; 8011: EDB only;
$87DC53W5: report phenol only; $87DMEEW5: 2-MEE (LCS Spk 80ppb).
Methane was added to 'ERH134' per client request. Please see attached email. -SM 12-15-16
FR: HC to LDC, 2 labeled CDs to Margie Thach. Before FR is sent, the PM needs to review after Admin Re
EDD: AECOM EQuIS EDD 2.5.3 to Margie.Thach@aecom.com & jecklund@lab-data.com

Sample Distribution:
GC: 2-$8011, 5-$87DC53W5, 5-$87DMEEW5, 5-$DOC53W5, 5-$SIMDOD5W
Extractions: 2-_MWE012, 5-_MWE2MEE, 5-_SEP004, 5-_SEP004S, 5-_SEP011LL
VOA: 6-$86BTOTXDOD5W, 6-$GASBL, 6-$GRO86BW, 6-$RSKMETH
Wetlab: 5-$232W(HCO3,CO3,ALK), 5-$300W(NO3,CL,SO4), 5-$35FE

Charges:

Invoice To:
ACCOUNTS PAYABLE
1001 Bishop Street, Ste 1600
USAPImaging@aecom.com
mary.basano@aecom.com

	Client ID	APPL ID	Sampled	Analyses Requested
1.	ERH134	AZ47493W	12/12/16 08:00	$8011, $86BTOTXDOD5W, $GASBL, $GRO86BW, $RSKMETH -- 8260 BTEX + 1,2-DCA
2.	ERH139	AZ47494W	12/12/16 13:30	$232W(HCO3,CO3,ALK), $300W(NO3,CL,SO4), $35FE, $86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $RSKMETH, $SIMDOD5W -- 2-MEE-LCS 80ppb spike

Note: All times, excluding sample collection times, are Pacific Time Zone unless noted otherwise. Collection times are in: -10 UTC

3.	ERH136	AZ47495W	12/12/16 14:45	$232W(HCO3,CO3,ALK), $300W(NO3,CL,SO4), $35FE, $86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $RSKMETH, $SIMDOD5W -- 2-MEE-LCS 80ppb spike
4.	ERH143	AZ47496W	12/13/16 10:40	$232W(HCO3,CO3,ALK), $300W(NO3,CL,SO4), $35FE, $86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $RSKMETH, $SIMDOD5W -- 2-MEE-LCS 80ppb spike
5.	ERH145	AZ47497W	12/13/16 10:50	$232W(HCO3,CO3,ALK), $300W(NO3,CL,SO4), $35FE, $86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $RSKMETH, $SIMDOD5W -- 2-MEE-LCS 80ppb spike
6.	ERH146	AZ47498W	12/12/16 16:55	$232W(HCO3,CO3,ALK), $300W(NO3,CL,SO4), $35FE, $8011, $86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $RSKMETH, $SIMDOD5W -- 2-MEE-LCS 80ppb spk; 8260 BTEX + 1,2-DCA

APPL Sample Receipt Form

ARF# **81760**

Sample	Container Type	Count	p
AZ47493	[13] VOAs - HCL	4	NA
	[15] VOAs - NP	3	NA
AZ47494	[3] PL 250mL	1	NA
	[13] VOAs - HCL	6	NA
	[17] Amber Liter	6	NA
	[38] 250mL brn poly, HCl prsvd	1	1.7
AZ47495	[3] PL 250mL	1	NA
	[13] VOAs - HCL	6	NA
	[17] Amber Liter	6	NA
	[38] 250mL brn poly, HCl prsvd	1	1.7
AZ47496	[3] PL 250mL	1	NA
	[13] VOAs - HCL	6	NA
	[17] Amber Liter	6	NA
	[38] 250mL brn poly, HCl prsvd	1	1.7
AZ47497	[3] PL 250mL	1	NA
	[13] VOAs - HCL	6	NA
	[17] Amber Liter	6	NA
	[38] 250mL brn poly, HCl prsvd	1	1.7
AZ47498	[3] PL 250mL	1	NA
	[13] VOAs - HCL	7	NA
	[15] VOAs - NP	3	NA
	[17] Amber Liter	6	NA
	[38] 250mL brn poly, HCl prsvd	1	1.7

Sample	Container Type	Count	p

https://www.fedex.com/apps/fedextrack/?tracknumbers=810396228245&cntry_code=us

Also, I think I missed checking Methane in the trip blank COC from yesterday. Can you please add methane analysis on ERH134?

Thank you,

Margie Pascua Thach
Environmental Scientist
Environment, West Region, Pacific District
Direct 808.356.5373
Margie.Thach@aecom.com

From: Thach, Margie
Sent: Tuesday, December 13, 2016 4:54 PM
To: Libby Cheeseborough
Cc: Choy, Terri
Subject: RE: CIV 53: Dec 2016 gwm

Hi Libby,
Please see COC and airway bill for samples shipped today. Again, 5 coolers.
ERH134 (trip blank)
ERH136
ERH139
ERH143
ERH145
ERH146
https://www.fedex.com/apps/fedextrack/?action=track&tracknumbers=808524650450&locale=en_US&cntry_code=us

Thank you,

Margie Pascua Thach
Environmental Scientist
Environment, West Region, Pacific District
Direct 808.356.5373
Margie.Thach@aecom.com

From: Thach, Margie
Sent: Monday, December 12, 2016 5:10 PM
To: Libby Cheeseborough
Cc: Choy, Terri
Subject: CIV 53: Dec 2016 gwm

Hi Libby,

Please see COC and airway bill for the samples shipped today. There are 5 coolers.
ERH135 (includes volume for MS/MSD)
ERH137
ERH141
https://www.fedex.com/apps/fedextrack/?tracknumbers=808524650472&cntry_code=us

81760 4x35 30

LABS

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422

C.O.C. 121316a

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number	Sampler (Print)
CIV 53 / 60481245	Margie Thach
Purchase Order Number	Sampler (Signature)
77265	

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil	Matrix:	8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	8015C TPH-D/O w/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate,Sulfate,Chloride	RSK175M Methane
ERH134	Trip Blank	12/12/16	0800	HST	1	X				X	X	X	X								

Analysis Requested/Method Number

Date Shipped: 12/13/16
Carrier: FedEx
Tracking No.:
Comments:

MT 12/15/16

Shuttle Temperature:	Turnaround Requested: Check one: ☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other	Sample Disposal: ☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	12/13/16	1400					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					12/14/16	10:15	Yang Zu

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

APPL LABS

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C. 12/13/16 b

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number	Sampler (Print)	Purchase Order Number	Sampler (Signature)
CIV 53 / 60481245	Margie Thach	77265	

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil		8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O w/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate,Sulfate,Chloride	RSK175M Methane	SM2320B Alk.
ERH139	RHMW06	12/12/16	1330	HST	14	X				X	X			X	X		X	X	X	X	X	X

Analysis Requested/Method Number

Date Shipped: 12/13/16
Carrier: FedEx
Tracking No.:
Comments:

MT 12/13/16

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	12/13/16	1400					
Relinquished by:	**Date**	**Time**	**Received by:**	**Relinquished by:**	**Date**	**Time**	**Received at lab by:**
					12/14/16	10:15	

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C. 121316c

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number	Sampler (Print)	Date Shipped: 12/13/16
CIV 53 / 60481245	Margie Thach	Carrier: FedEx
Purchase Order Number 77265	Sampler (Signature)	Tracking No.:
		Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil		8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	8015C TPH-D/O w/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate,Sulfate,Chloride	RSK175M Methane	SM2320B Alk
~~ERH137~~ ERH136	RHMW05	12/12/16	1445	HST	14	X				X	X			X	X		X	X	X	X	X	X

MS 12/13/16

Shuttle Temperature:	Turnaround Requested: Check one: ☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other	Sample Disposal: ☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	12/13/16	1400					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					12/14/16	10:15	

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

APPL LABS

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C. 12/3/16 e

Report to: PLEASE PRINT

Company Name: AECOM
Phone: 808-356-5373
Address: 1001 Bishop St. Suite 1600
Honolulu, Hawaii 96813
Fax:
Attn: Margie Thach
Email: margie.thach@aecom.com

Invoice to: PLEASE PRINT

Company Name: AECOM
Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600
Honolulu, Hawaii 96813
Fax:
Attn: Mary Basano
Email: mary.basano@aecom.com

Project Name/Number: CIV 53 / 60481245
Sampler (Print): Margie Thach
Purchase Order Number: 77265
Sampler (Signature):

Date Shipped: 12/13/16
Carrier: FedEX
Tracking No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil		8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O W/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate,Sulfate,Chloride	RSK175M Methane	SM2320B Alk	
ERH143	RHMW01	12/13/16	1040	HST	14	X				X	X			X	X		X	X	X	X	X	X	

MT 12/13/16

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	12/13/16	1400					
Relinquished by:	**Date**	**Time**	**Received by:**	**Relinquished by:**	**Date**	**Time**	**Received at lab by:**
					12/14/16	10:15	Yang Z

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

APPL LABS

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C. 121316f

Report to: PLEASE PRINT

Company Name: AECOM
Phone: 808-356-5373
Address: 1001 Bishop St. Suite 1600
Honolulu, Hawaii 96813
Fax:
Attn: Margie Thach
Email: margie.thach@aecom.com

Invoice to: PLEASE PRINT

Company Name: AECOM
Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600
Honolulu, Hawaii 96813
Fax:
Attn: Mary Basano
Email: mary.basano@aecom.com

Project Name/Number: CIV 53 / 60481245
Sampler (Print): Margie Thach
Purchase Order Number: 77265
Sampler (Signature): [signature]

Date Shipped: 12/13/16
Carrier: FedEX
Tracking No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil		8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O WI SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300 0 Nitrate,Sulfate,Chloride	RSK175M Methane	SM2320B Alk
ERH145	HDMW2253-03	12/13/16	1050	HST	14	X				X	X			X	X		X	X	X	X	X	X

MT 12/13/16

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	12/13/16	1600					
Relinquished by:	**Date**	**Time**	**Received by:**	**Relinquished by:**	**Date**	**Time**	**Received at lab by:**
					12/14/16	10:15	Yang [signature]

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C. 121316 d

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number	Sampler (Print)	Date Shipped: 12/13/16
CIV 53 / 60481245	Margie Thach	Carrier: FedEx
Purchase Order Number 77265	Sampler (Signature)	Tracking No.:
		Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil		8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O w/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate, Sulfate, Chloride	RSK175M Methane	SM2320B Alk.
ERH146	RHMW09	12/12/16	1655	HST	18	X				X	X	X	X	X	X		X	X	X	X	X	X

MT 12/13/16

Shuttle Temperature:	Turnaround Requested: Check one: ☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other	Sample Disposal: ☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	12/13/16	1400					
Relinquished by:	**Date**	**Time**	**Received by:**	**Relinquished by:**	**Date**	**Time**	**Received at lab by:**
					12/14/16	10:15	Yang Zou

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

COOLER RECEIPT FORM **ARF: 81760**

1) Project: 60481245 CIV0053 Red Hill Fuel Storage Date Received: 12/14/16

2) Coolers: Number of Coolers: 5

3) YES Were custody seals present and intact?
How many? 10 Name/Date on seal? See Below

4) YES Was there a shipping slip? Carrier name: FED EX

5) Type of packing in cooler: X bubble wrap __popcorn __foam X plastic bags
X wet ice __dry ice __no ice __other

6) YES Were cooler temperatures acceptable?

7) Serial number of certified NIST thermometer use J5297

8) Cooler temp(s): In °C
1: 3.5 2: 3.5 3: 3.5 4: 3.5 5: 3.0 6: _____
7: _____ 8: _____ 9: _____ 10: _____ 11: _____ 12: _____

Chain of custody:

9) YES Was a chain of custody received?

10) YES Were the custody papers complete/signed in the appropriate places?

Sample Labels:

11) YES Were all sample labels complete (sample ID, date/time of sampling, etc.)?

12) YES Did all container labels agree with custody papers?

Sample Containers:

13) YES Were all containers sealed in separate bags?

14) YES Did all containers arrive in good condition:(unbroken, no leakage, no cracked/broken lids)?

15) YES Were correct containers and preservatives used for the tests indicated?

16) YES Was a sufficient amount of sample sent for tests indicated?

17) NA Were bubbles present in volatile samples?
If yes, the following were received with air bubbles:
Larger than a pea: _____
Smaller than a pea: _____

Preservation Hold time:

18) Yes Was a sufficient amount of holding time remaining to analyze the samples?

19) Yes Was the pH taken of all non-VOA preserved samples and written on the sample container?

20) Yes Was the pH of acid preserved non-VOA samples < 2?

21) NA Was the pH of sodium hydroxide preserved samples for Cyanide > 12 and Sulfide >9?

22) NO Were unpreserved VOA Vials received?

23) NA Are unpreserved VOA vials noted in the ADD TEST FIELD on the ARF?
pH strip lot number: 90B2031
Lab notified if pH was not adequate: _____

Notes/Deficiencies:
For sample ERH136 one of the six VOAs received was empty.

CUSTODY SEAL
APPL, Inc. (559) 275-2175
Initials KS Date 12/13/16

Personnel receiving samples: sm Second reviewer: VC
Personnel labeling samples: sm
Project manager notified: VC Date/Time of notification 12/14/16 11:19
Name of client notified: _____ Date/Time of notification _____

Revision: 22, November 5, 2013

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank
EPA 8011

Blank Name/QCG: **161219W-47344 - 214793**
Batch ID: #8011-161219A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	EDB	0.020 U	0.02	0.020	0.010	ug/L	12/19/16	12/19/16
BLANK	SURROGATE: 1,3-DIBROMOPRO	79.4	70-132			%	12/19/16	12/19/16

Quant Method: 80111219.M
Run #: 1214059
Instrument: Herbie
Sequence: 161214
Initials: RHA

GC SC-Blank-REG MDLs-DOD
Printed: 12/20/16 2:25:25 PM

Laboratory Control Spike Recovery

EPA 8011

APPL ID: **161219W-47344 LCS - 214793**
Batch ID: #8011-161219A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
EDB	0.250	0.164	65.6	60-140
SURROGATE: 1,3-DIBROMOPROPANE (	0.350	0.382	109	70-132

Comments: _____

Primary	SPK
Quant Method :	80111219.M
Extraction Date :	12/19/16
Analysis Date :	12/20/16
Instrument :	Herbie
Run :	1214071
Initials :	RHA

Printed: 12/20/16 4:03:42 PM
APPL Standard LCS

8011

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81760

Case No: 81760 Date Analyzed: 12/19/16

Matrix: WATER Instrument: Herbie

APPL ID.	Client Sample No.	SURROGATE: 1,3-DIBROMOPROPANE (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
161219A-BLK	Blank	70-132	79.4				
AZ47493	ERH134	70-132	93.2				
AZ47498	ERH146	70-132	86.2				
161219A-LCS	Lab Control Spike	70-132	109				

Comments: Batch: #8011-161219A

8011

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81760

Case No: 81760 Date Analyzed: 12/19/16

Matrix: WATER Instrument: Herbie

Blank ID: 161219A-BLK Time Analyzed: 1718

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161219A-BLK	Blank	1214059	12/19/16 1718
AZ47493	ERH134	1214063	12/19/16 1841
AZ47498	ERH146	1214064	12/19/16 1901
161219A-LCS	Lab Control Spike	1214071	12/20/16 1448

Comments: Batch: #8011-161219A

Printed: 12/21/16 8:52:24 AM
Form 4, Blank Summary

ORGANICS

Sample Data

APPL, INC.

EPA 8011

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH134

Sample Collection Date: 12/12/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81760

APPL ID: AZ47493

QCG: #8011-161219A-214793

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8011	EDB	0.020 U	0.02	0.020	0.010	ug/L	12/19/16	12/19/16
8011	SURROGATE: 1,3-DIBROMOPROPANE	93.2	70-132			%	12/19/16	12/19/16

Quant Method: 80111219.M
Run #: 1214063
Instrument: Herbie
Sequence: 161214
Dilution Factor: 1
Initials: RHA

Printed: 12/20/16 2:25:08 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\161214\1214063.D\ECD1A.CH Vial: 61
Acq On : 12-19-16 18:41:11 Operator: RH
Sample : AZ47493W07 2/35.57G Inst : Herbie
Misc : water Multiplr: 0.98
IntFile : rteint.p

Data File : G:\HERBIE\DATA\161214\1214063.D\ECD2B.CH Vial: 61
Acq On : 12-19-16 18:41:12 Operator: RH
Sample : AZ47493W07 2/35.57G Inst : Herbie
Misc : Multiplr: 0.98
IntFile : rteint2.p
Quant Time: Dec 20 13:44 2016 Quant Results File: 80111219.RES

Quant Method : G:\HERBIE\DATA\161214\80111219.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Mon Dec 19 17:47:48 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

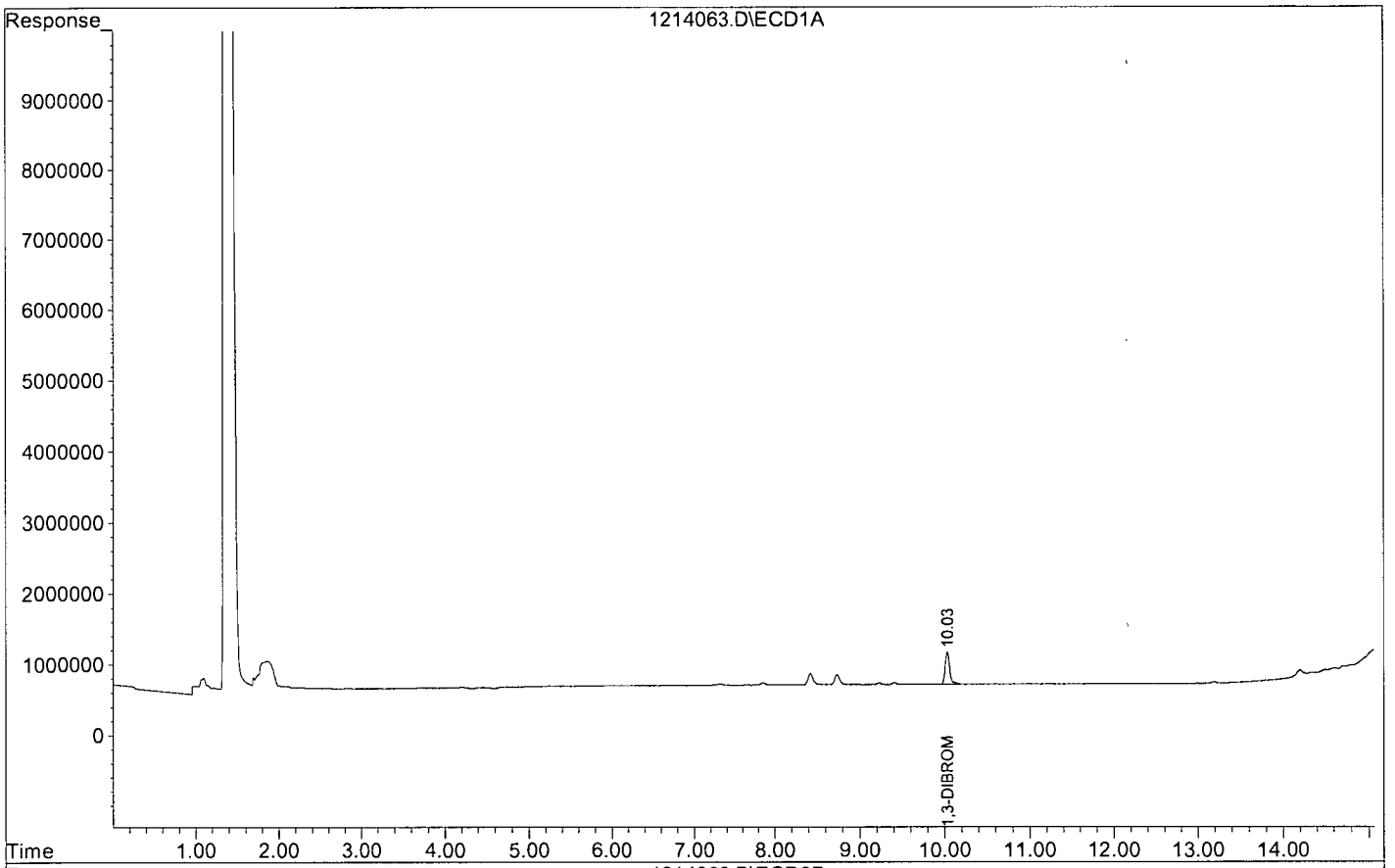
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	457080	720064	0.321	0.331
Spiked Amount	0.344			Recovery	=	93.21%	96.11%
	Target Compounds						
	Target Compounds						
1) TM	EDB	0.00	0.00	0	0	N.D. d	N.D. d
2) TM	1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4) TM	DBCP	0.00	0.00	0	0	N.D. d	N.D. d

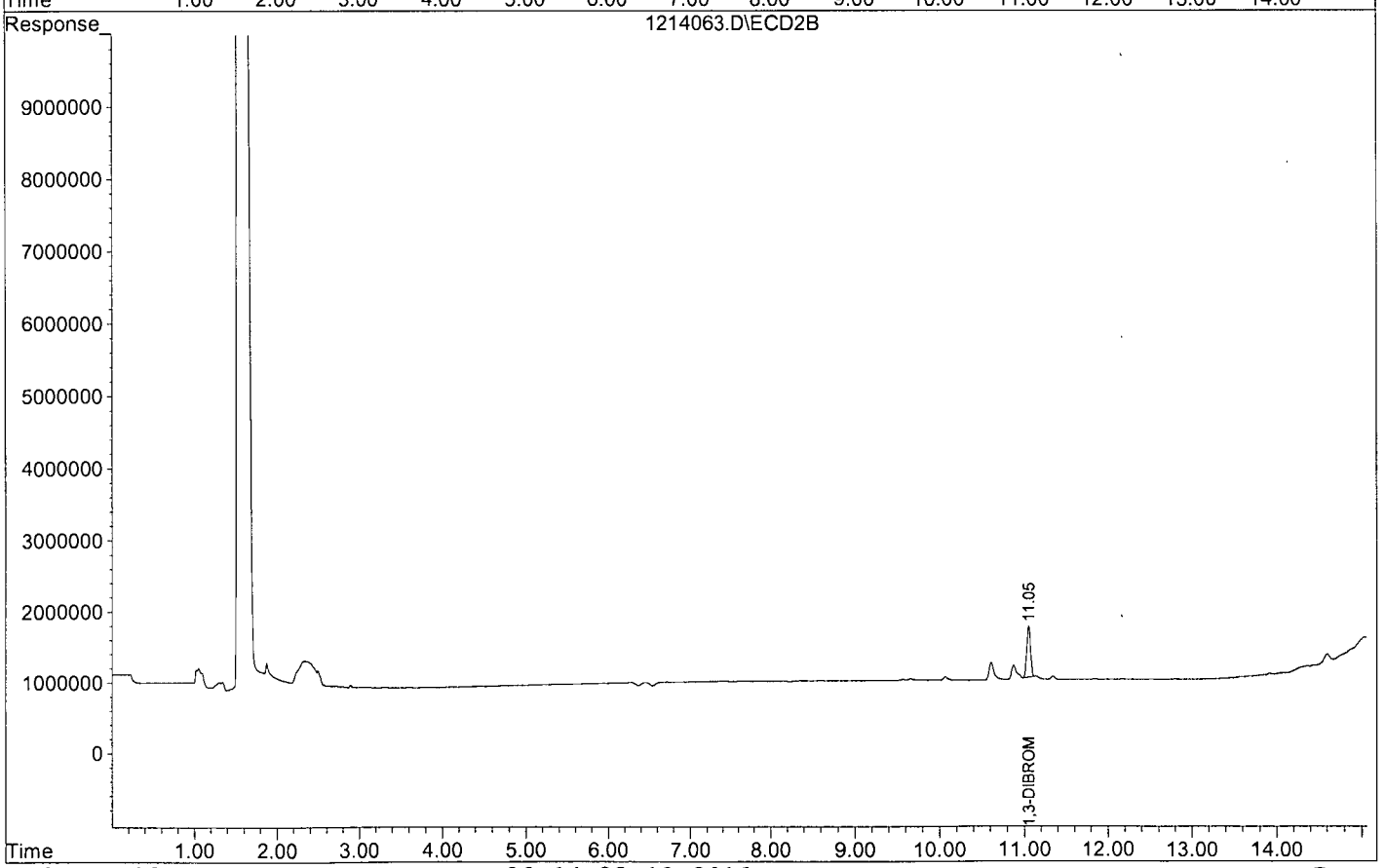
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\161214\1214063.D
Acq On : 12-19-16 18:41:11
Sample : AZ47493W07 2/35.57G
Misc : water
Quant Method : G:\HERBIE\DATA\161214\80111219.M

Vial: 61
Operator: RH
Inst : Herbie
Multiplr: 0.98





EPA 8011

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH146
Sample Collection Date: 12/12/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81760
APPL ID: AZ47498
QCG: #8011-161219A-214793

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8011	EDB	0.020 U	0.02	0.020	0.010	ug/L	12/19/16	12/19/16
8011	SURROGATE: 1,3-DIBROMOPROPANE	86.2	70-132			%	12/19/16	12/19/16

Quant Method: 80111219.M
Run #: 1214064
Instrument: Herbie
Sequence: 161214
Dilution Factor: 1
Initials: RHA

Printed: 12/20/16 2:25:08 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214064.D\ECD1A.CH Vial: 62
Signal #2 : G:\HERBIE\DATA\161214\1214064.D\ECD2B.CH
Acq On : 12-19-16 19:01:50 Operator: RH
Sample : AZ47498W10 2/35.79G Inst : Herbie
Misc : water Multiplr: 0.98
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 20 13:45 2016 Quant Results File: 80111219.RES

Quant Method : G:\HERBIE\DATA\161214\80111219.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Mon Dec 19 17:47:48 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

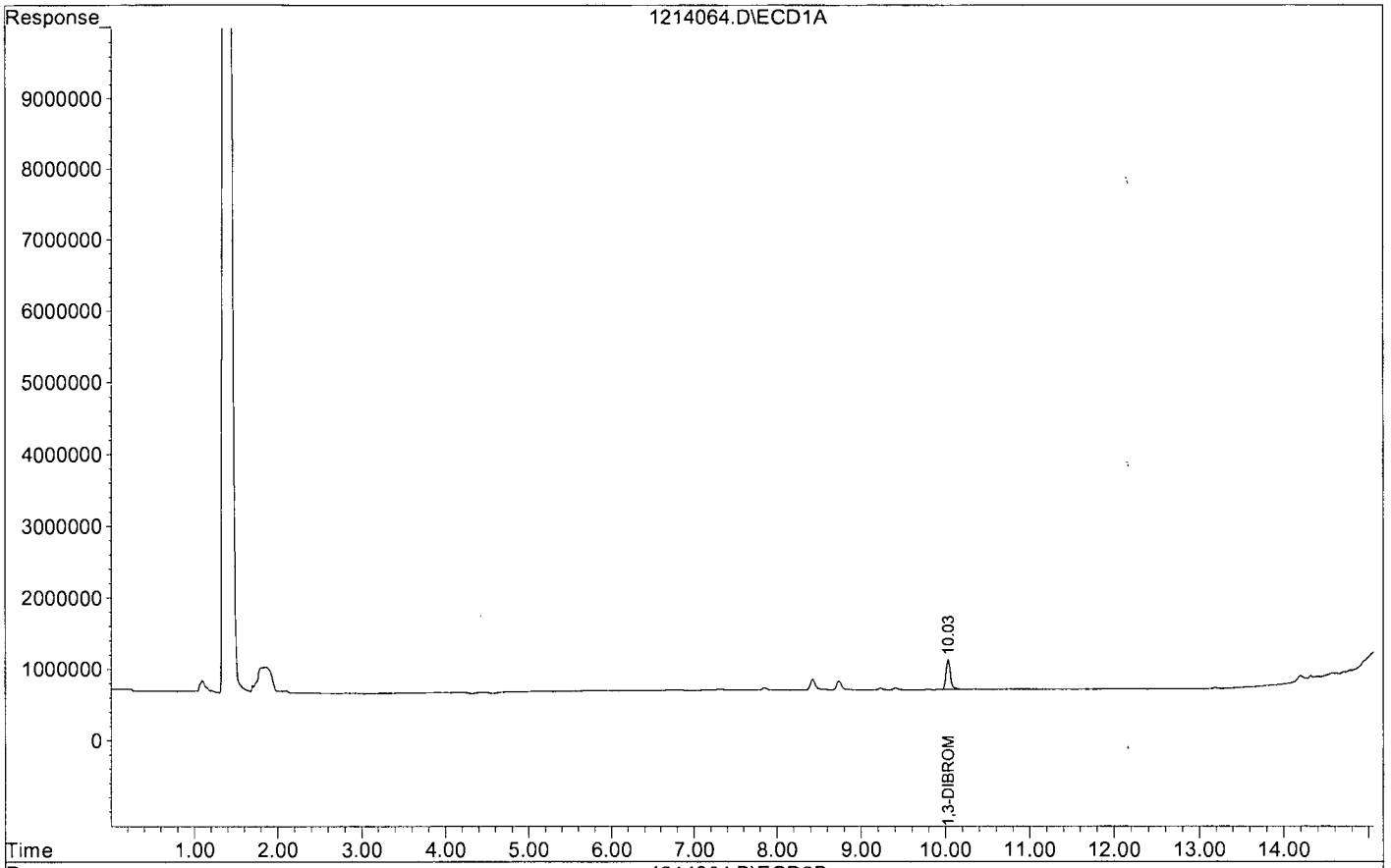
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	422627	641824	0.295	0.293
Spiked Amount	0.342			Recovery	=	86.19%	85.60%
	Target Compounds						
	Target Compounds						
1) TM	EDB	0.00	0.00	0	0	N.D. d	N.D. d
2) TM	1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4) TM	DBCP	0.00	0.00	0	0	N.D. d	N.D. d

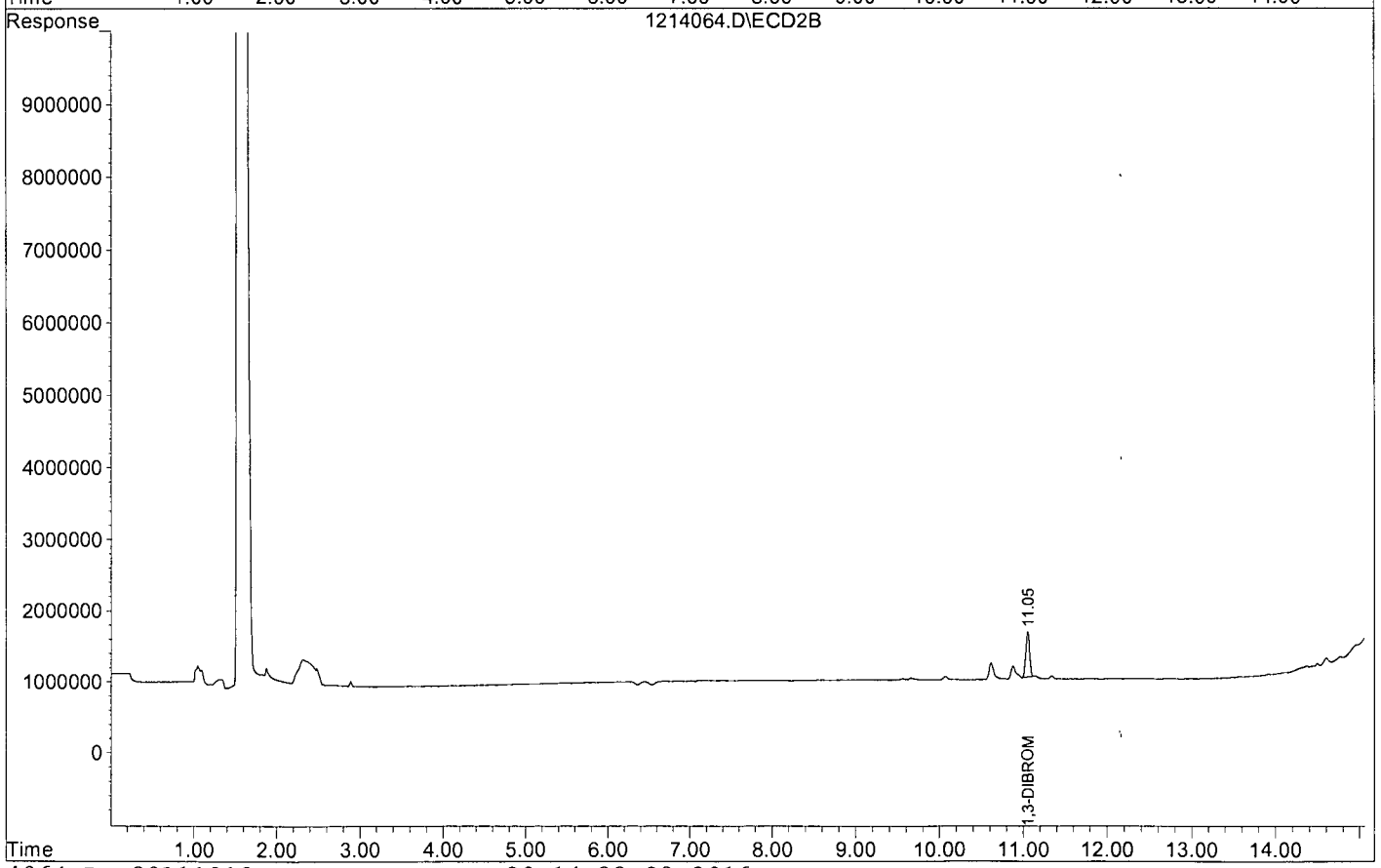
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\161214\1214064.D
Acq On : 12-19-16 19:01:50
Sample : AZ47498W10 2/35.79G
Misc : water
Quant Method : G:\HERBIE\DATA\161214\80111219.M

Vial: 62
Operator: RH
Inst : Herbie
Multiplr: 0.98





ORGANICS

Calibration Data

APPL, INC.

DBCP/EDB/1,2,3-TCP Analysis by
504 8011 1215

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Initial Cal. Date: 12/19/16

Matrix: Instrument: Herbie

Initials:

			1214052.D	1214053.D	1214054.D	1214055.D	1214056.D	1214057.D								
		Compound	1	2	3	4	5	6					Avg	%RSD		
1	TM	EDB	873625	967260	828524	859828	770339	723408					837164	10	TM	
2	TML	1,2,3-TCP	160700	211255	258720	223482	171353	160078					197598	20	TML	0.954
3	S	1,3-DIBROMOPROPANE(S)	655750	771165	896448	741845	583189	561360					701626	18	S	
4	TM	DBCP	2197150	2404550	2968840	2612366	2029578	1973502					2364331	16	TM	
5		Signal #2											0	0		
6																
7																
8																
9																
10																
11																
12																
13																
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34																
35																

1.8455668

DBCP/EDB/1,2,3-TCP Analysis by
504 8011 1215

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/19/16
Matrix: Instrument: Herbie Initials:

1214052.D 1214053.D 1214054 D 1214055 D 1214056.D 1214057.D

		Compound	1	2	3	4	5	6					Avg	%RSD		
36	TM	EDB #2	1880775	1948345	2064282	1821074	1898779	1739248					1892084	5.9	TM	
37	TM	1,2,3-TCP #2	355225	345420	344306	304029	326521	296394					328649	7.3	TM	
38	S	1,3-DIBROMOPROPANE(S) #2	966525	1131525	1144918	1056264	1116207	1004216					1069942	6.8	S	
39	TM	DBCP #2	4474700	5111245	5183136	4796967	5564877	5211727					5057109	7.4	TM	
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0.7839632

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214052.D\ECD1A.CH Vial: 50
Signal #2 : G:\HERBIE\DATA\161214\1214052.D\ECD2B.CH
Acq On : 12-19-16 14:53:31 Operator: RH
Sample : 8011 1 12/19/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 19 17:47 2016 Quant Results File: 80111219.RES

Quant Method : G:\HERBIE\DATA\161214\80111219.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Mon Dec 19 17:47:12 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

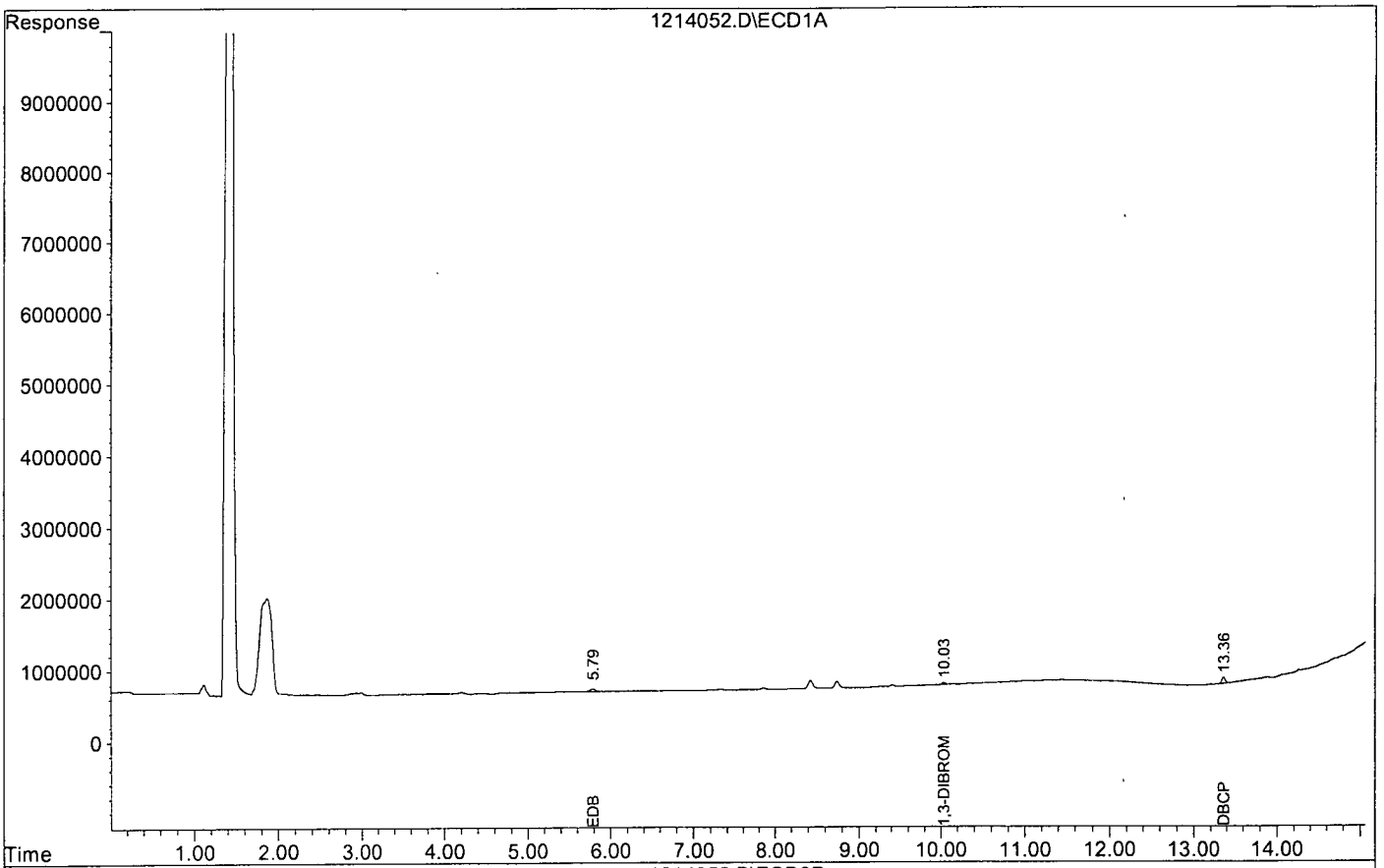
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	26230	38661	0.019	0.018
Spiked Amount	0.350			Recovery	=	5.43%	5.14%
	Target Compounds						
1) TM	EDB	5.79	7.22	34945	75231	0.020	0.020
4) TM	DBCP	13.36	14.09	87886	178988	0.018	0.018
	Target Compounds						
2) TM	1,2,3-TCP	9.25	10.46	6428	14209	N.D.	0.023

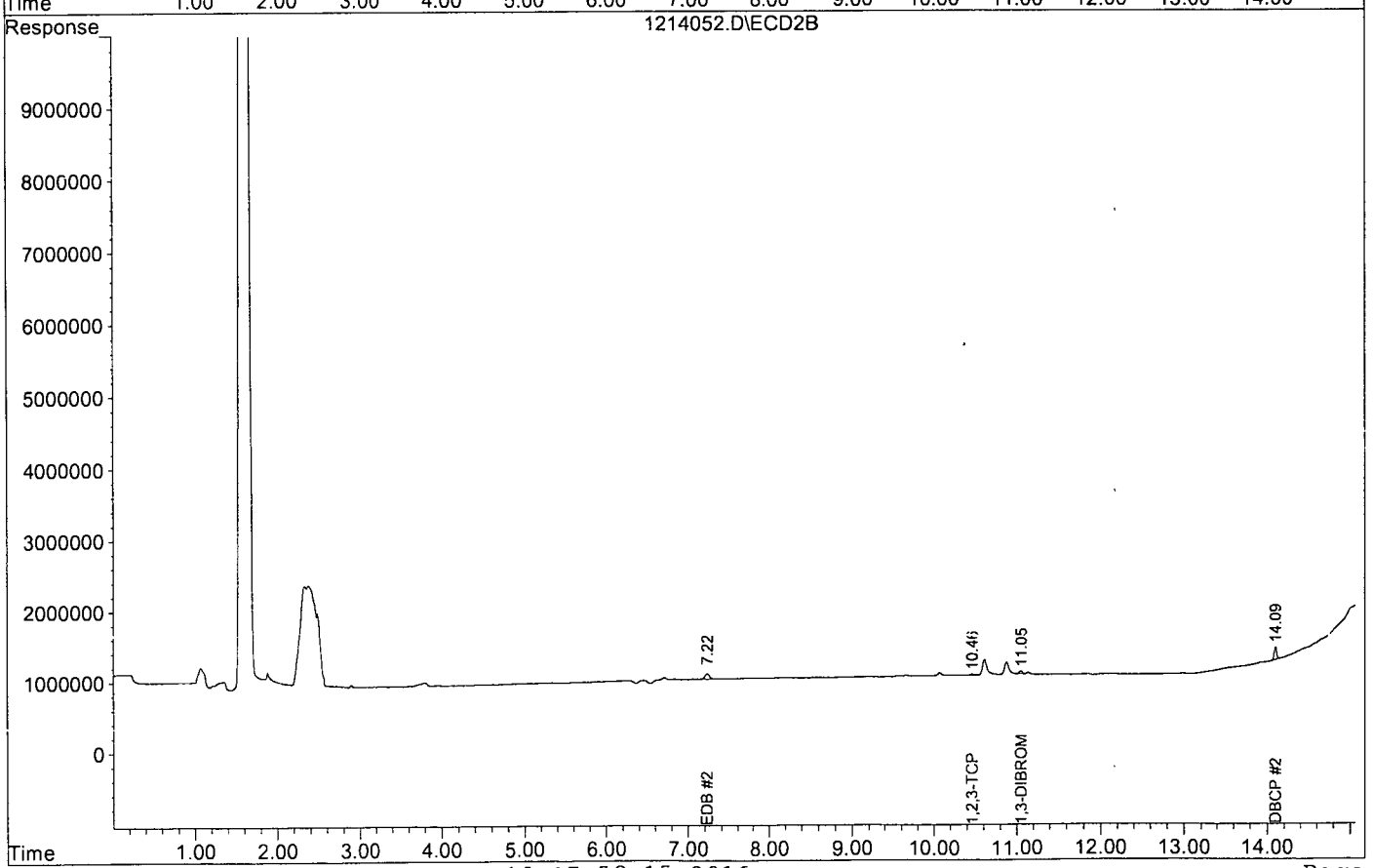
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214052.D
Acq On : 12-19-16 14:53:31
Sample : 8011 1 12/19/16
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111219.M

Vial: 50
Operator: RH
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214053.D\ECD1A.CH Vial: 51
Acq On : 12-19-16 15:14:07 Operator: RH
Sample : 8011 2 12/19/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile : rteint.p

Data File : G:\HERBIE\DATA\161214\1214053.D\ECD2B.CH Vial: 51
Acq On : 12-19-16 15:14:08 Operator: RH
Sample : 8011 2 12/19/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile : rteint2.p
Quant Time: Dec 19 17:47 2016 Quant Results File: 80111219.RES

Quant Method : G:\HERBIE\DATA\161214\80111219.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Mon Dec 19 17:47:12 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	System Monitoring Compounds							
3) S	1,3-DIBROMOPROPA	10.03	11.05	154233	226305	0.110	0.107	
Spiked Amount	0.350			Recovery	=	31.43%	30.57%	
	Target Compounds							
1) TM	EDB	5.79	7.23	193452	389669	0.113	0.104	
2) TM	1,2,3-TCP	9.26	10.46	42251	69084	0.065	0.112	#
4) TM	DBCP	13.36	14.10	480910	1022249	0.100	0.105	

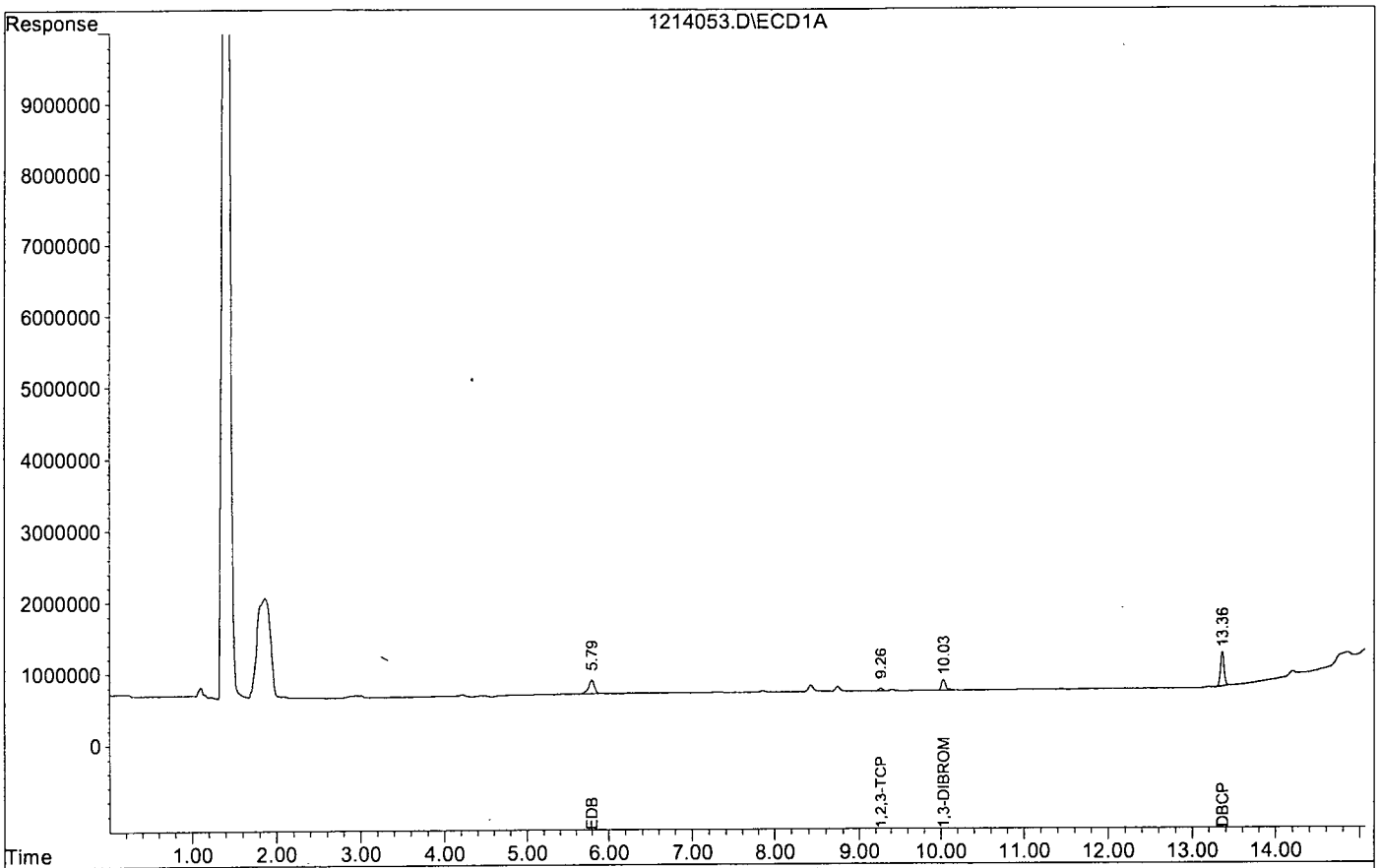
Target Compounds

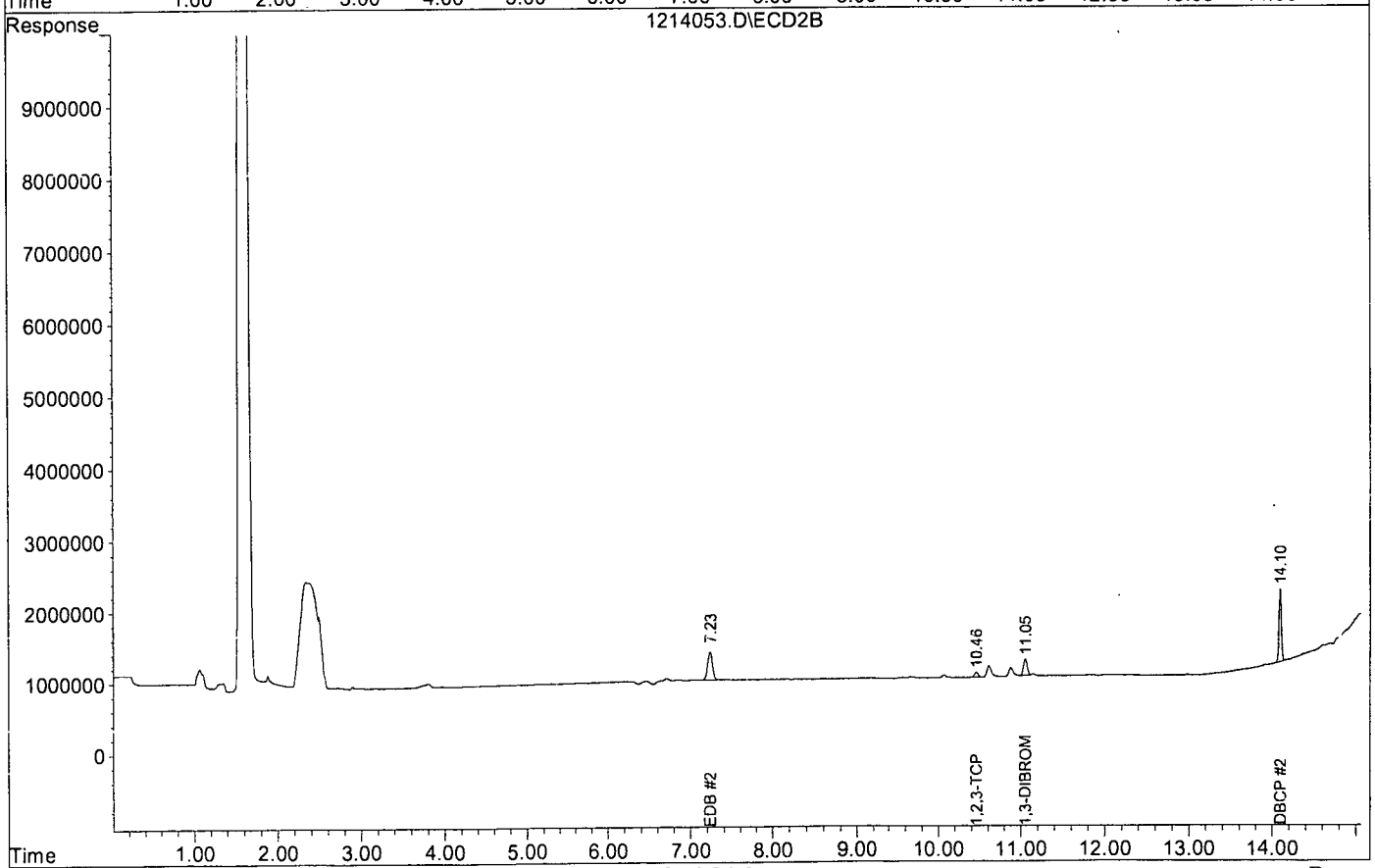
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214053.D
Acq On : 12-19-16 15:14:07
Sample : 8011 2 12/19/16
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111219.M

Vial: 51
Operator: RH
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214054.D\ECD1A.CH Vial: 52
Signal #2 : G:\HERBIE\DATA\161214\1214054.D\ECD2B.CH
Acq On : 12-19-16 15:34:48 Operator: RH
Sample : 8011 3 12/19/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 19 17:47 2016 Quant Results File: 80111219.RES

Quant Method : G:\HERBIE\DATA\161214\80111219.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Mon Dec 19 17:47:12 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	448224	572459	0.321	0.270
Spiked Amount	0.350			Recovery	=	91.71%	77.14%
	Target Compounds						
1) TM	EDB	5.81	7.23	414262	1032141	0.242	0.277
2) TM	1,2,3-TCP	9.26	10.46	129360	172153	0.310	0.278
4) TM	DBCP	13.36	14.10	1484420	2591568	0.310	0.267

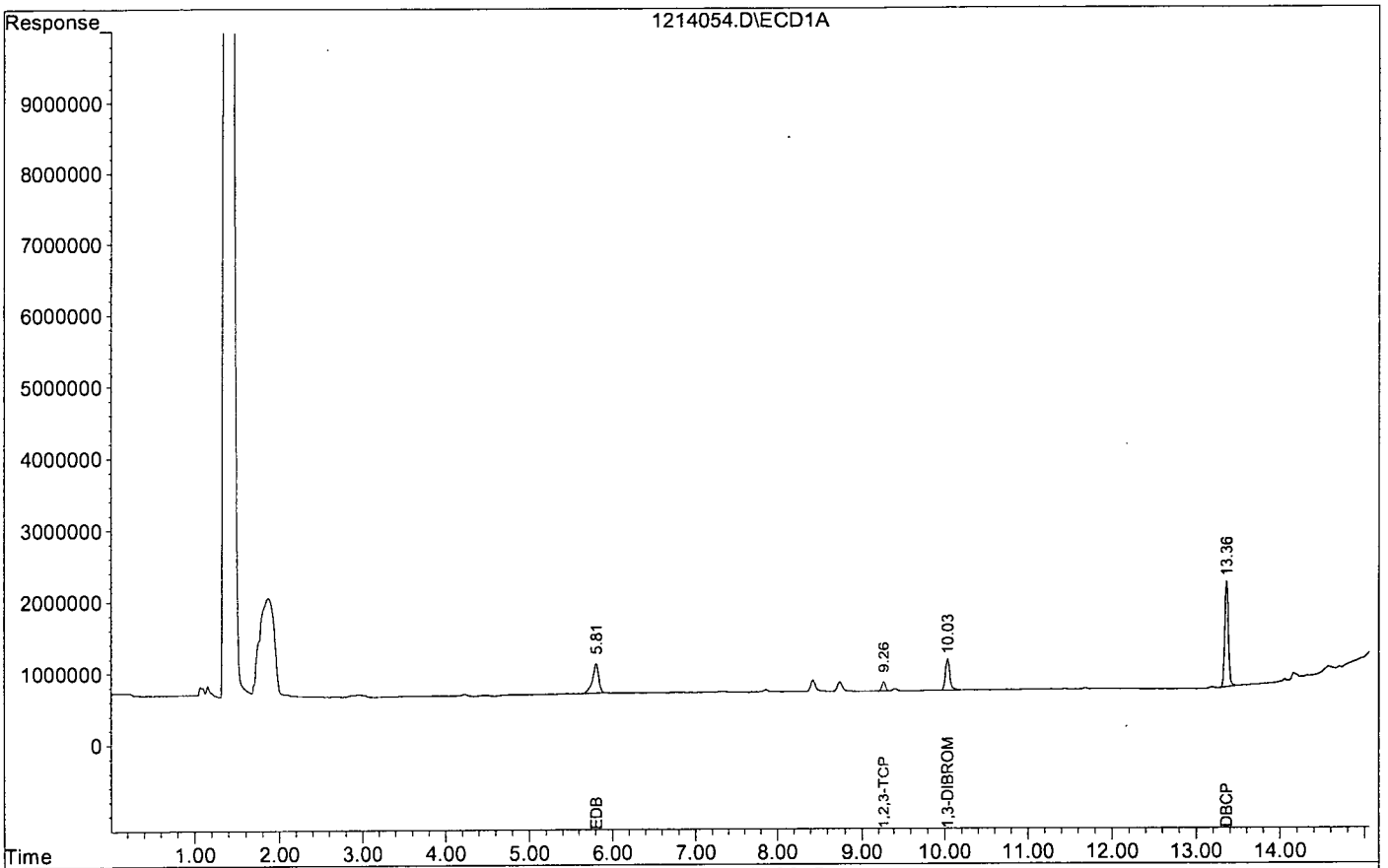
Target Compounds

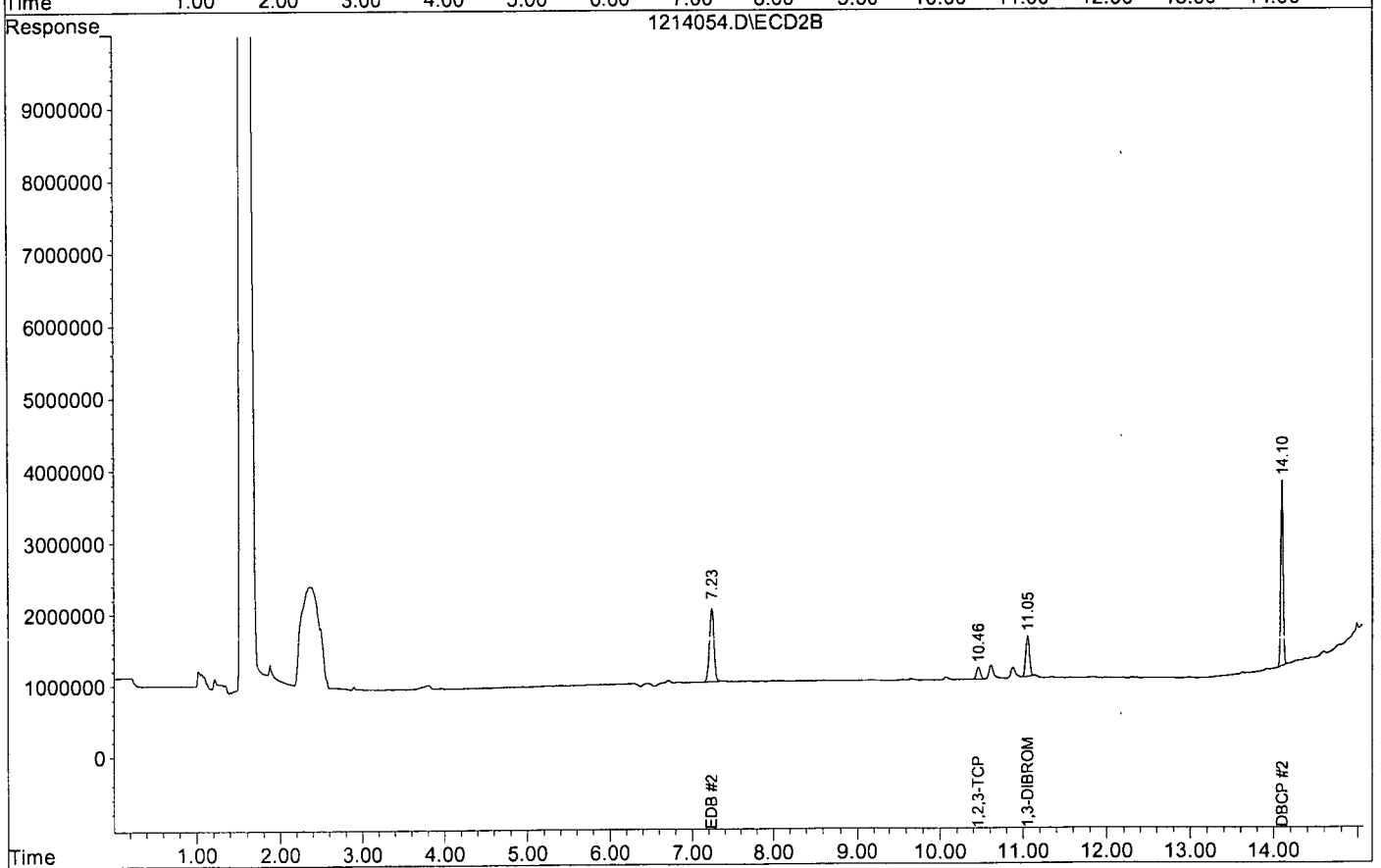
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214054.D
Acq On : 12-19-16 15:34:48
Sample : 8011 3 12/19/16
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111219.M

Vial: 52
Operator: RH
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214055.D\ECD1A.CH Vial: 53
Signal #2 : G:\HERBIE\DATA\161214\1214055.D\ECD2B.CH
Acq On : 12-19-16 15:55:37 Operator: RH
Sample : 8011 4 12/19/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 19 17:47 2016 Quant Results File: 80111219.RES

Quant Method : G:\HERBIE\DATA\161214\80111219.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Mon Dec 19 17:47:12 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
3) S 1,3-DIBROMOPROPA	10.03	11.05	741845	1056264	0.531	0.498
Spiked Amount 0.350			Recovery =		151.71%	142.29%
Target Compounds						
1) TM EDB	5.80	7.23	859828	1821074	0.502	0.488
2) TM 1,2,3-TCP	9.26	10.46	223482	304029	0.575	0.491
4) TM DBCP	13.36	14.09	2612366	4796967	0.545	0.494

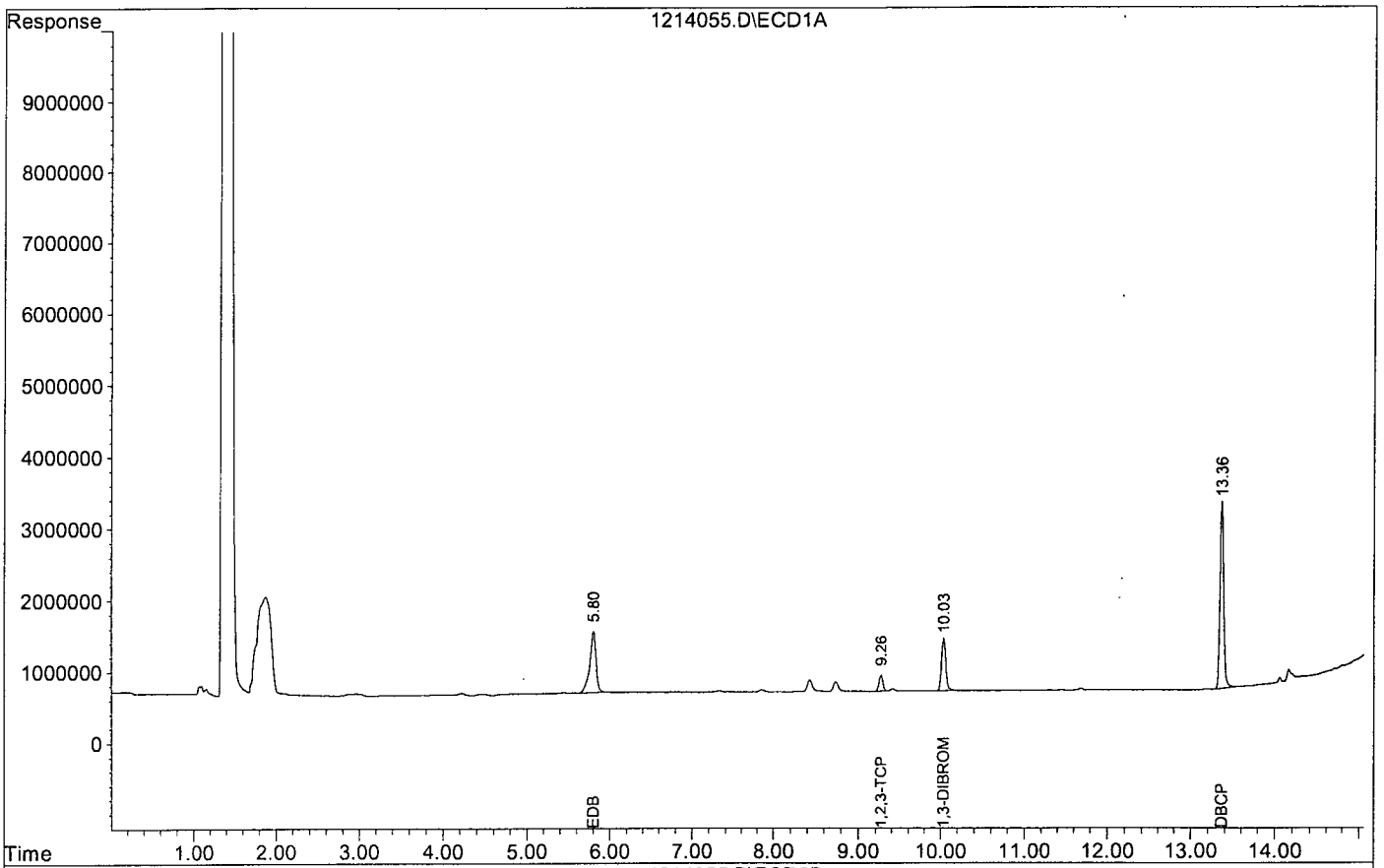
Target Compounds

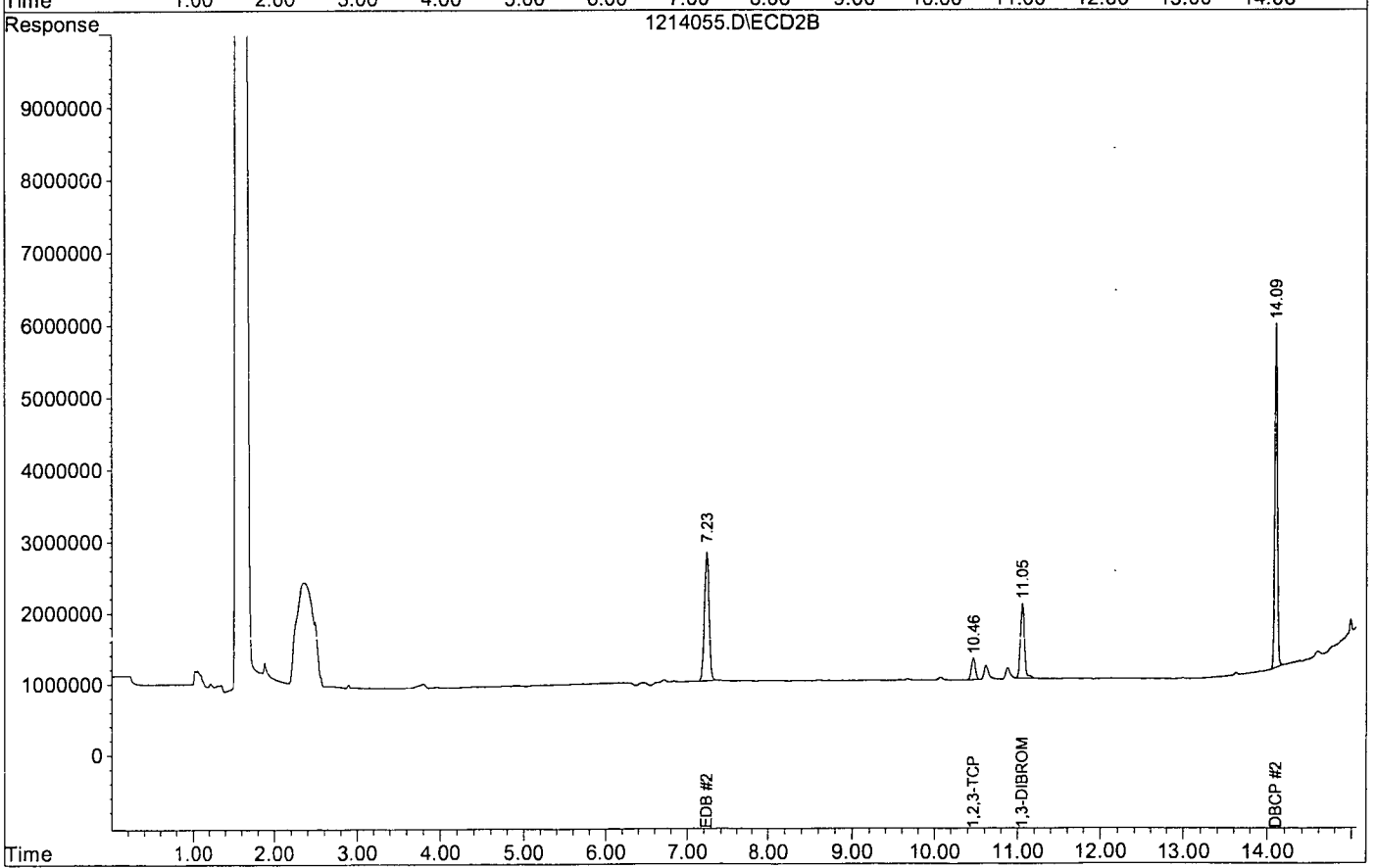
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214055.D
Acq On : 12-19-16 15:55:37
Sample : 8011 4 12/19/16
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111219.M

Vial: 53
Operator: RH
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214056.D\ECD1A.CH Vial: 54
Signal #2 : G:\HERBIE\DATA\161214\1214056.D\ECD2B.CH
Acq On : 12-19-16 16:16:20 Operator: RH
Sample : 8011 5 12/19/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 19 17:47 2016 Quant Results File: 80111219.RES

Quant Method : G:\HERBIE\DATA\161214\80111219.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Mon Dec 19 17:47:12 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

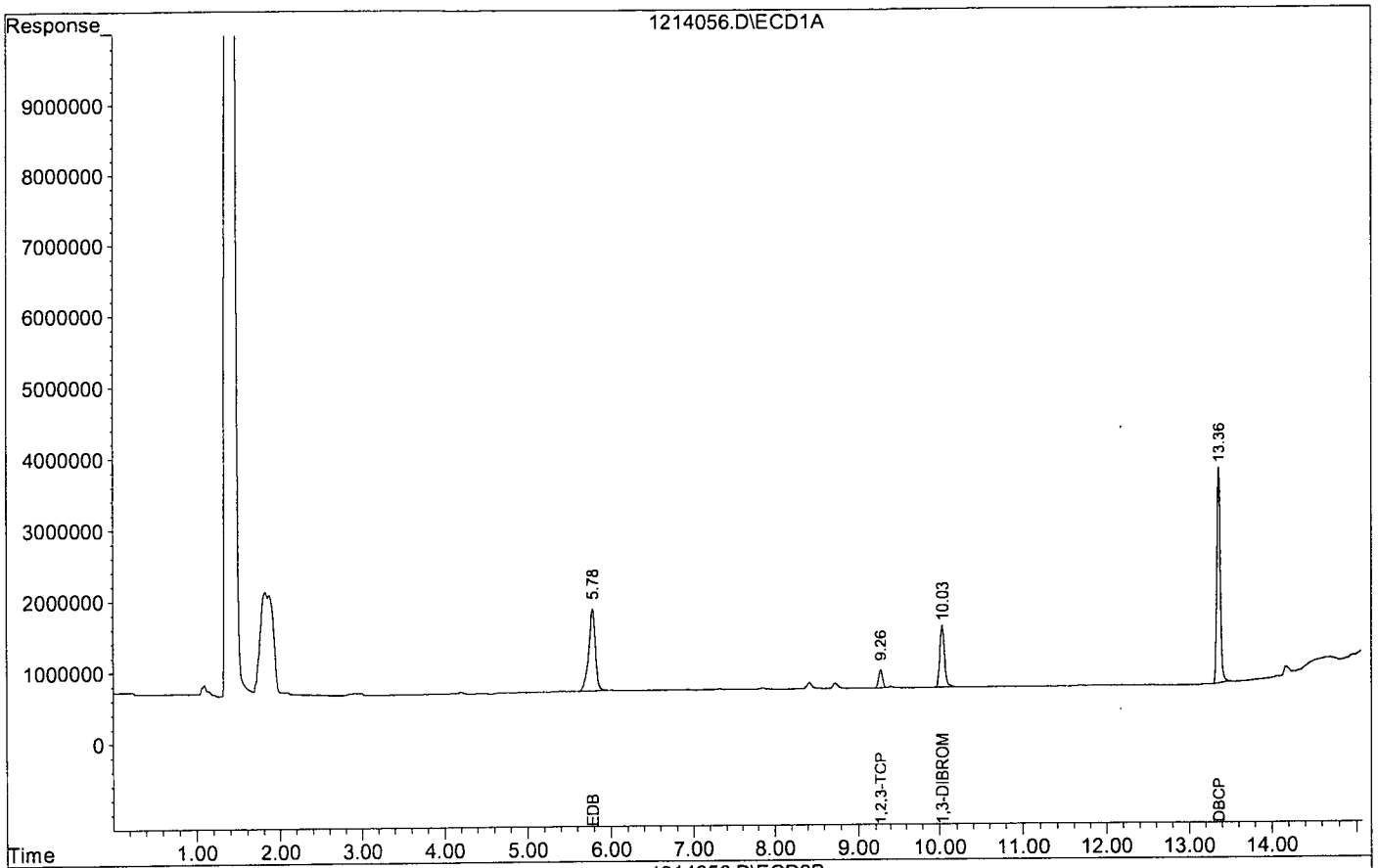
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	System Monitoring Compounds							
3)	S 1,3-DIBROMOPROPA	10.03	11.05	874783	1674310	0.627	0.790	#
	Spiked Amount 0.350			Recovery	=	179.14%	225.71%	
	Target Compounds							
1)	TM EDB	5.78	7.23	1155509	2848168	0.674	0.763	
2)	TM 1,2,3-TCP	9.26	10.46	257029	489782	0.669	0.791	
4)	TM DBCP	13.36	14.10	3044367	8347316	0.636	0.860	#
	Target Compounds							

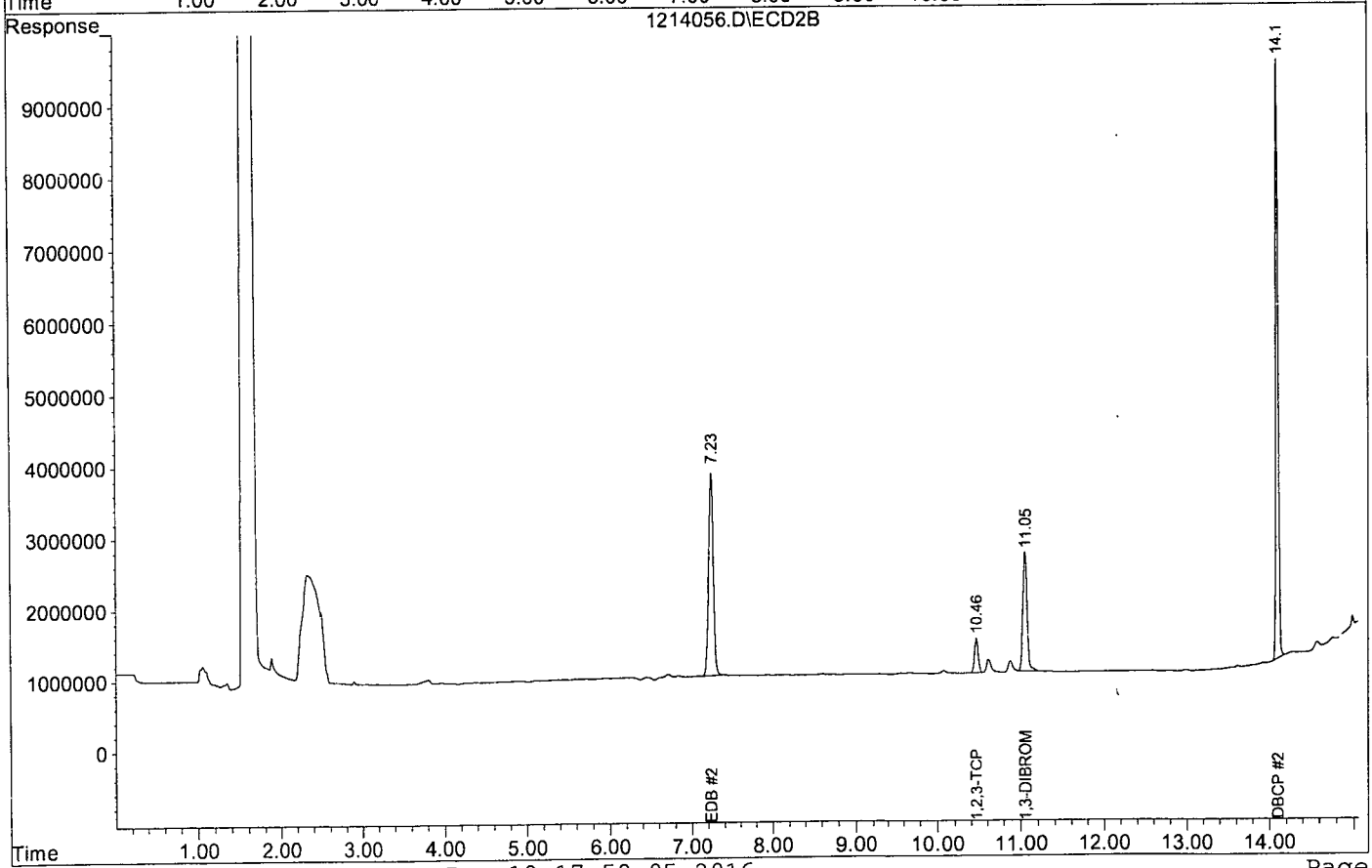
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214056.D
Acq On : 12-19-16 16:16:20
Sample : 8011 5 12/19/16
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111219.M

Vial: 54
Operator: RH
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214057.D\ECD1A.CH Vial: 55
Signal #2 : G:\HERBIE\DATA\161214\1214057.D\ECD2B.CH
Acq On : 12-19-16 16:37:03 Operator: RH
Sample : 8011 6 12/19/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 19 17:47 2016 Quant Results File: 80111219.RES

Quant Method : G:\HERBIE\DATA\161214\80111219.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Mon Dec 19 17:47:12 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

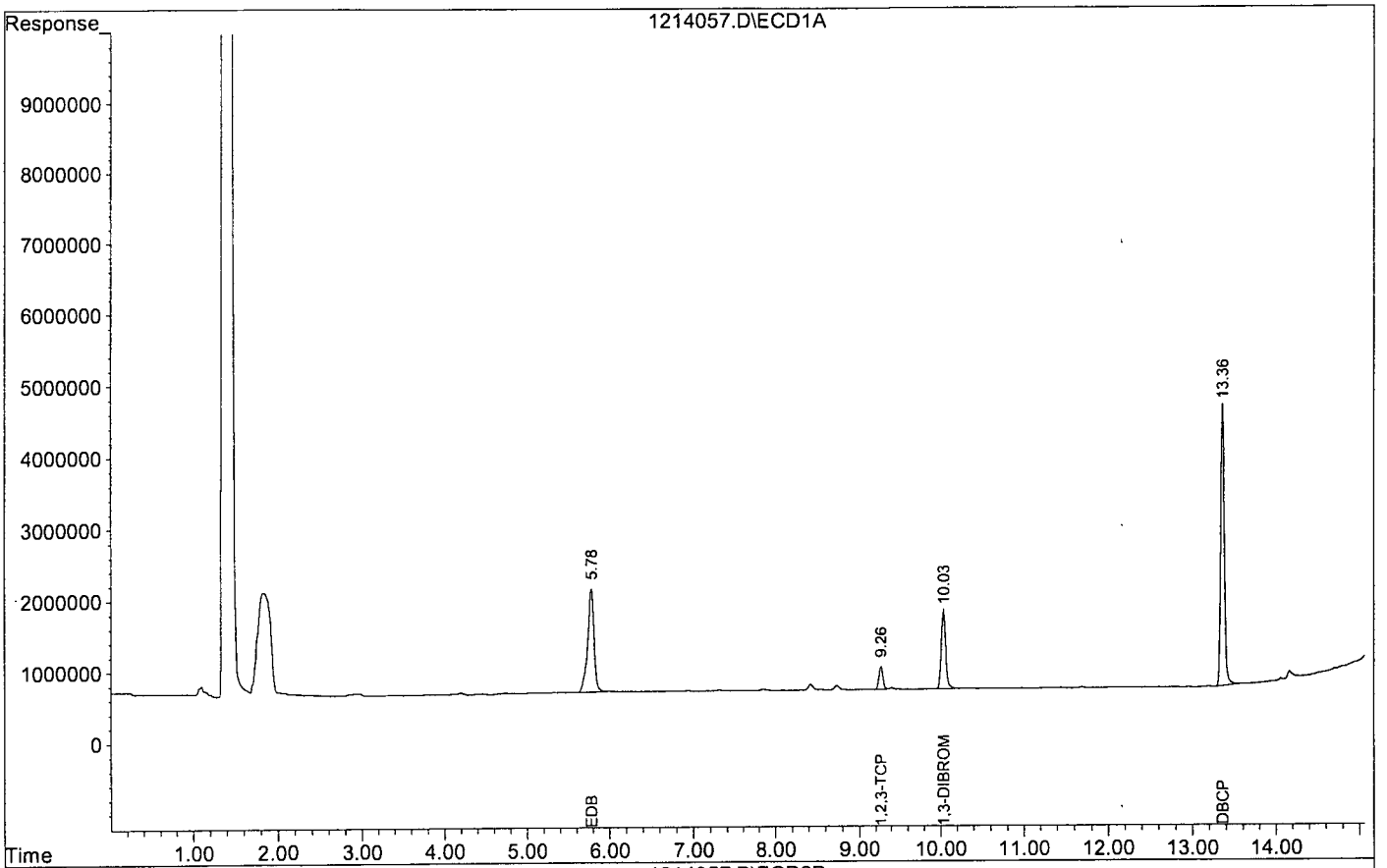
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	System Monitoring Compounds							
3)	S 1,3-DIBROMOPROPA	10.03	11.05	1122719	2008432	0.804	0.948	
	Spiked Amount 0.350			Recovery	=	229.71%	270.86%	
	Target Compounds							
1)	TM EDB	5.78	7.23	1446815	3478496	0.844	0.932	
2)	TM 1,2,3-TCP	9.26	10.46	320155	592788	0.846	0.958	
4)	TM DBCP	13.36	14.10	3947003	10423454	0.824	1.073	#
	Target Compounds							

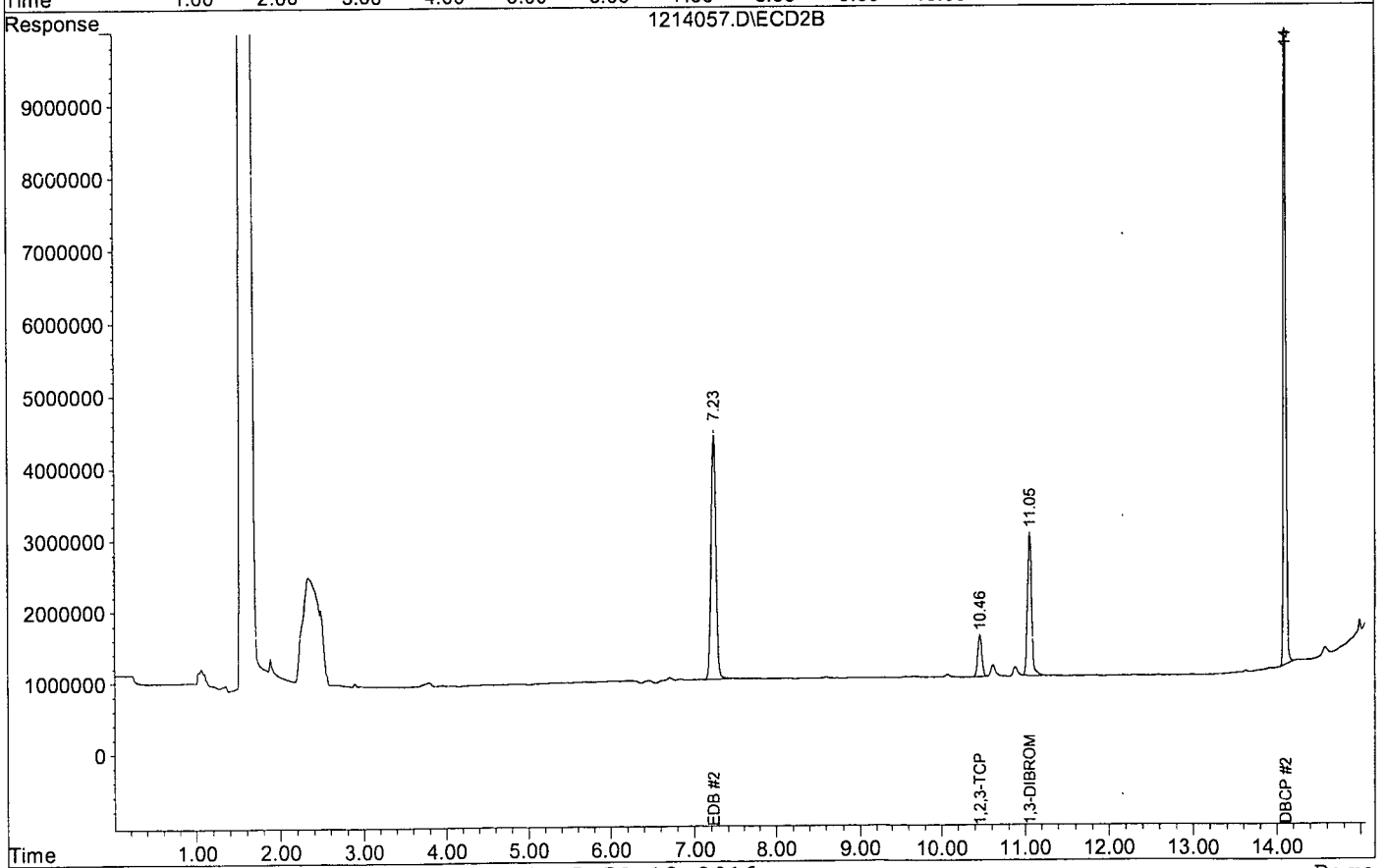
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214057.D
Acq On : 12-19-16 16:37:03
Sample : 8011 6 12/19/16
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111219.M

Vial: 55
Operator: RH
Inst : Herbie
Multiplr: 1.00





DBCP/EDB/1,2,3-TCP Analysis by
504 8011 1215

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 12/19/16
Instrument: Herbie
Initial Cal. Date: 12/19/16
Data File: 1214060.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TM	EDB	837164	937210	12	TM	
2	TML	1,2,3-TCP	197598	249185	26	TML	22
3	TM	DBCP	2364330	2477520	4.8	TM	
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40							
		Average			14.3		

* NT RH 12/20/16

DBCP/EDB/1,2,3-TCP Analysis by
504 8011 1215

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 12/19/16
Instrument: Herbie
Cal. Date: 12/19/16
Data File: 1214060.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	EDB	1892080	1909140	0.90	TM	
42	TM	1,2,3-TCP	328649	367655	12	TM	
43	TM	DBCP	5057110	5561150	10	TM	
44							
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		Average			7.6		

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214060.D\ECD1A.CH Vial: 58
Signal #2 : G:\HERBIE\DATA\161214\1214060.D\ECD2B.CH
Acq On : 12-19-16 17:39:13 Operator: RH
Sample : 161219A LCS-1 2/30.96G Inst : Herbie
Misc : water Multiplr: 1.13
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 20 13:39 2016 Quant Results File: 80111219.RES

Quant Method : G:\HERBIE\DATA\161214\80111219.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Mon Dec 19 17:47:48 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	System Monitoring Compounds							
3) S	1,3-DIBROMOPROPA	10.03	11.05	444419	716359	0.358	0.378	
Spiked Amount	0.396			Recovery	=	90.48%	95.53%	
	Target Compounds							
1) TM	EDB	5.79	7.23	187442	381827	0.127	0.114	
2) TM	1,2,3-TCP	9.25	10.46	49837	73531	0.088	0.126	#
4) TM	DBCP	13.36	14.10	495503	1112229	0.118	0.124	

Target Compounds

$$\text{Algorithum} = \frac{187442 * 1.13}{837164 * 2} = \frac{211809.46}{1674328} = 0.1265$$

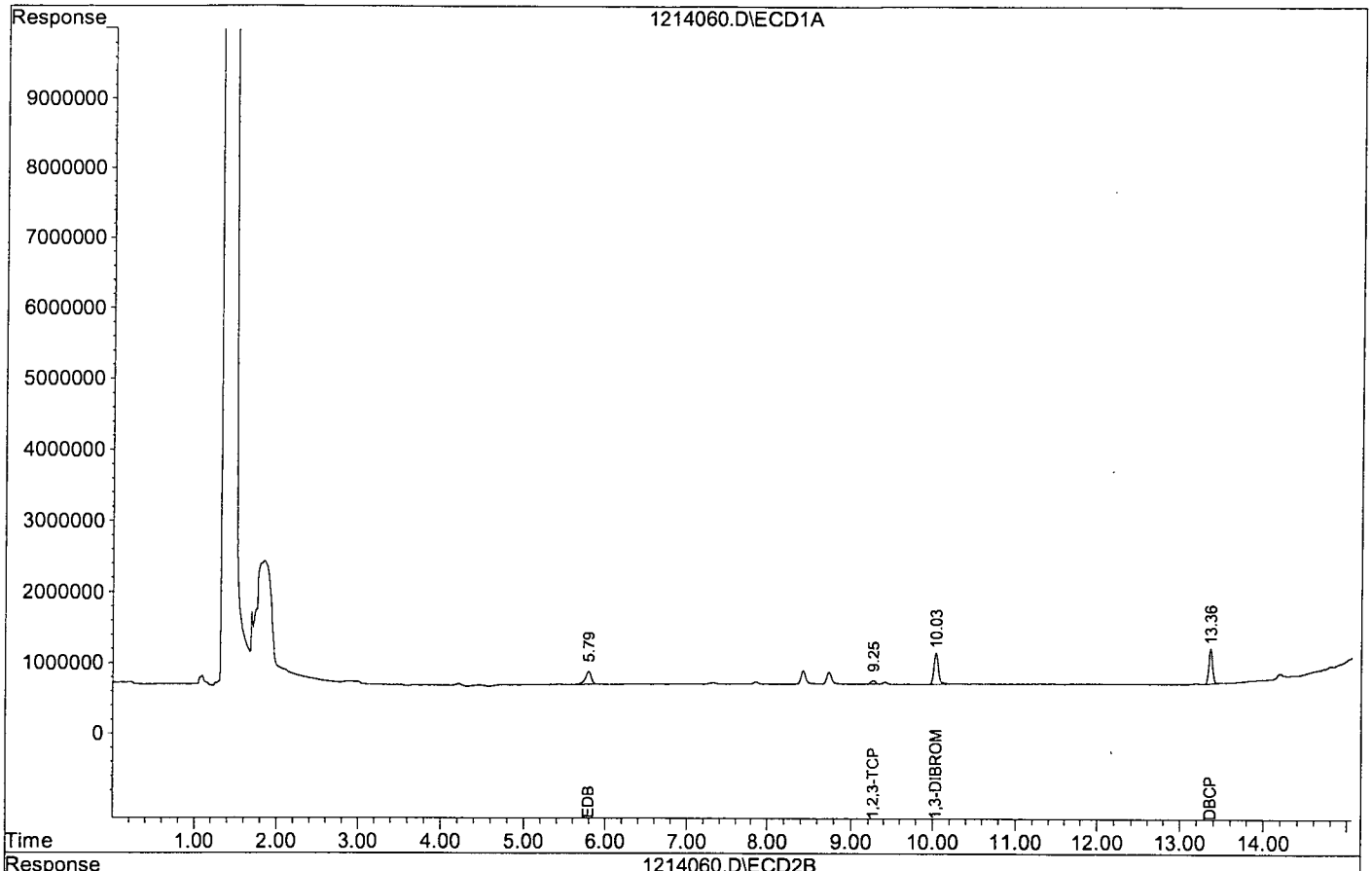
RH 12/20/16.

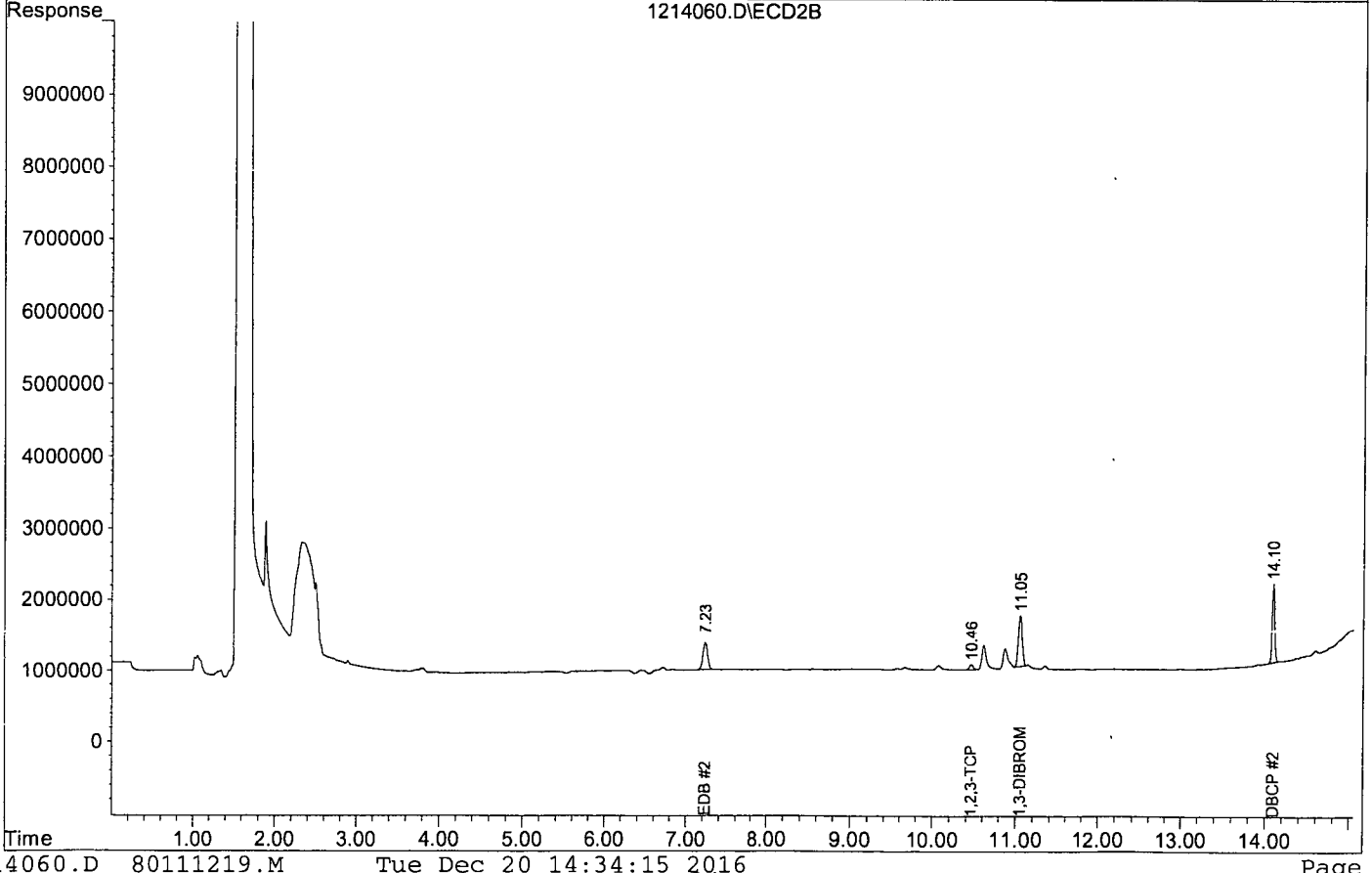
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214060.D
Acq On : 12-19-16 17:39:13
Sample : 161219A LCS-1 2/30.96G
Misc : water
Quant Method : G:\HERBIE\DATA\161214\80111219.M

Vial: 58
Operator: RH
Inst : Herbie
Multiplr: 1.13





DBCP/EDB/1,2,3-TCP Analysis by
504 8011 1215

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/19/16
Instrument: Herbie
Initial Cal. Date: 12/19/16
Data File: 1214068.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TM	EDB	837164	800084	4.4	TM	
2	TML	1,2,3-TCP	197598	180240	8.8	TML	18
3	S	1,3-DIBROMOPROPANE(S)	701626	642426	8.4	S	
4	TM	DBCP	2364330	2057850	13	TM	
5							
6							
7							
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33							
34							
35							
36							
37							
38							
39							
40							
		Average			8.7		

DBCP/EDB/1,2,3-TCP Analysis by
504 8011 1215

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/19/16
Instrument: Herbie
Cal. Date: 12/19/16
Data File: 1214068.D

		Compound	MEAN	CCRF	%D	%Drift	
41	TM	EDB	1892080	1842350	2.6	TM	
42	TM	1,2,3-TCP	328649	320826	2.4	TM	
43	S	1,3-DIBROMOPROPANE(S)	1069940	1056430	1.3	S	
44	TM	DBCP	5057110	4951280	2.1	TM	
45							
46							
47							
48							
49							
50							
51							
52							
53							
54							
55							
56							
57							
58							
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67							
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							
79							
80							
		Average			2.1		

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214068.D\ECD1A.CH Vial: 66
Signal #2 : G:\HERBIE\DATA\161214\1214068.D\ECD2B.CH
Acq On : 12-19-16 20:23:57 Operator: RH
Sample : 8011 3 12/19/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 20 13:46 2016 Quant Results File: 80111219.RES

Quant Method : G:\HERBIE\DATA\161214\80111219.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Mon Dec 19 17:47:48 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	321213	528217	0.229	0.247
Spiked Amount	0.350			Recovery	=	65.43%	70.57%
	Target Compounds						
1) TM	EDB	5.78	7.22	400042	921174	0.239	0.243
2) TM	1,2,3-TCP	9.26	10.46	90120	160413	0.205	0.244
4) TM	DBCP	13.36	14.10	1028925	2475640	0.218	0.245

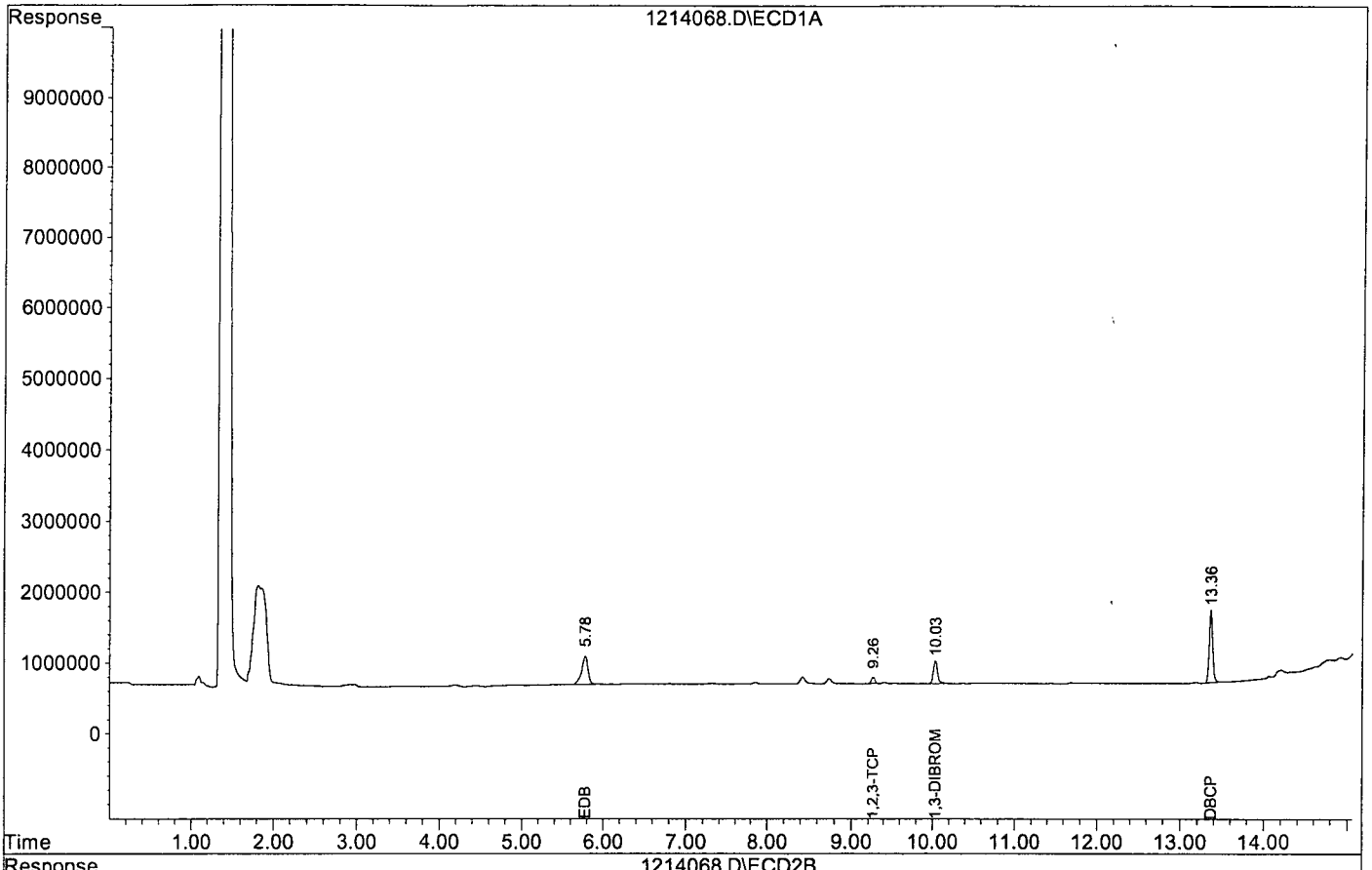
Target Compounds

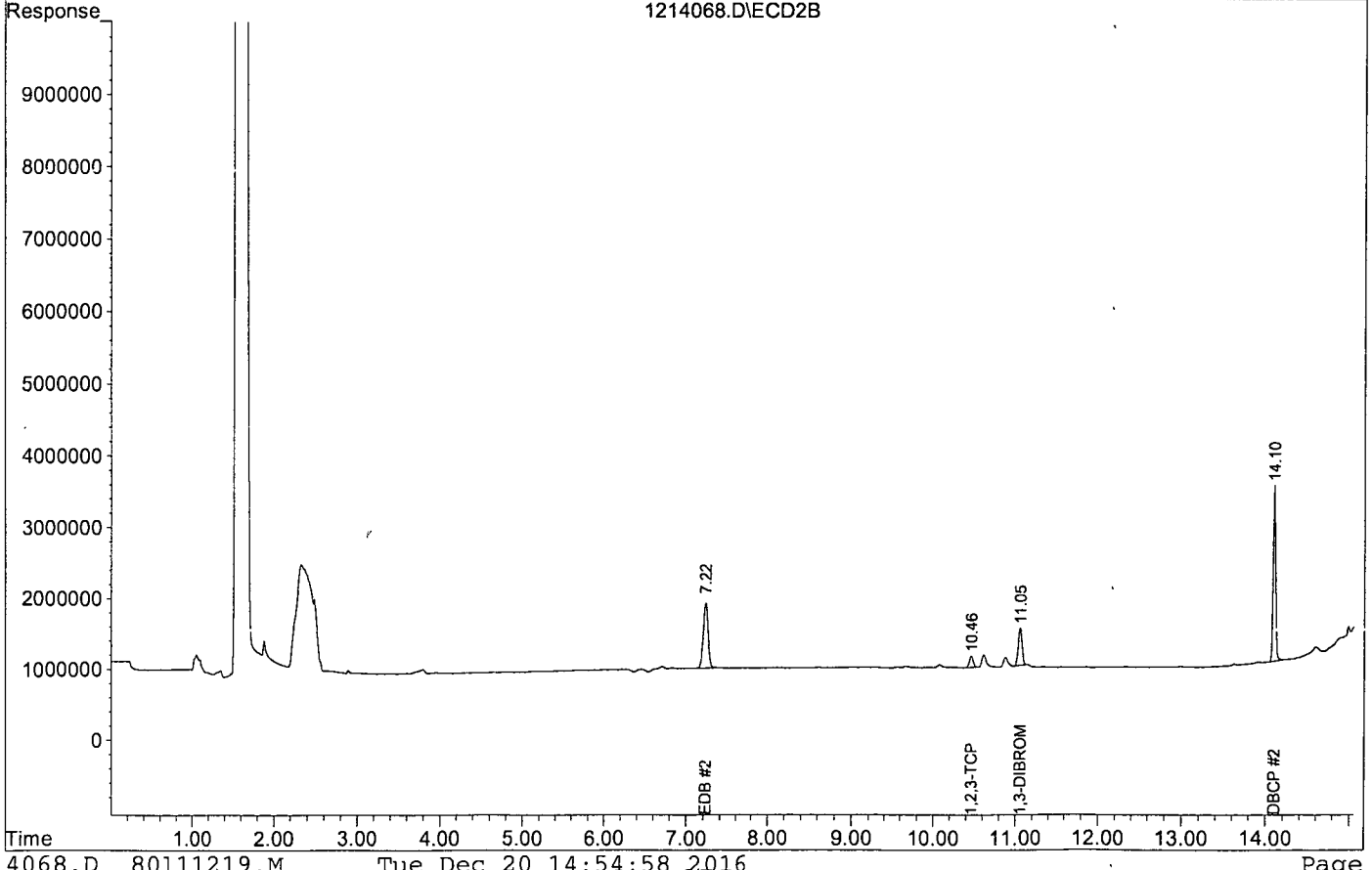
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214068.D
Acq On : 12-19-16 20:23:57
Sample : 8011 3 12/19/16
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111219.M

Vial: 66
Operator: RH
Inst : Herbie
Multiplr: 1.00





DBCP/EDB/1,2,3-TCP Analysis by
504 8011 1215

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/20/16
Instrument: Herbie
Initial Cal. Date: 12/19/16
Data File: 1214070.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	EDB	837164	895160	6.9	TM	
2	TML	1,2,3-TCP	197598	194732	1.5	TML	8.7
3	S	1,3-DIBROMOPROPANE(S)	701626	692740	1.3	S	
4	TM	DBCP	2364330	2134300	9.7	TM	
5							
6							
7							
8							
9							
10							
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12							
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30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			4.9		

DBCP/EDB/1,2,3-TCP Analysis by
504 8011 1215

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/20/16
Instrument: Herbie
Cal. Date: 12/19/16
Data File: 1214070.D

		Compound	MEAN	CCRF	%D	%Drift	
41	TM	EDB	1892080	2139080	13	TM	
42	TM	1,2,3-TCP	328649	360504	9.7	TM	
43	S	1,3-DIBROMOPROPANE(S)	1069940	1177590	10	S	
44	TM	DBCP	5057110	5296540	4.7	TM	
45							
46							
47							
48							
49							
50							
51							
52							
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75							
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77							
78							
79							
80							
		Average			9.4		

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214070.D\ECD1A.CH Vial: 68
Signal #2 : G:\HERBIE\DATA\161214\1214070.D\ECD2B.CH
Acq On : 12-20-16 14:28:00 Operator: RH
Sample : 8011 3 12/19/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 20 14:43 2016 Quant Results File: 80111219.RES

Quant Method : G:\HERBIE\DATA\161214\80111219.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Mon Dec 19 17:47:48 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	346370	588793	0.247	0.275
Spiked Amount	0.350			Recovery	=	70.57%	78.57%
	Target Compounds						
1) TM	EDB	5.79	7.23	447580	1069541	0.267	0.283
2) TM	1,2,3-TCP	9.26	10.46	97366	180252	0.228	0.274
4) TM	DBCP	13.36	14.09	1067149	2648269	0.226	0.262

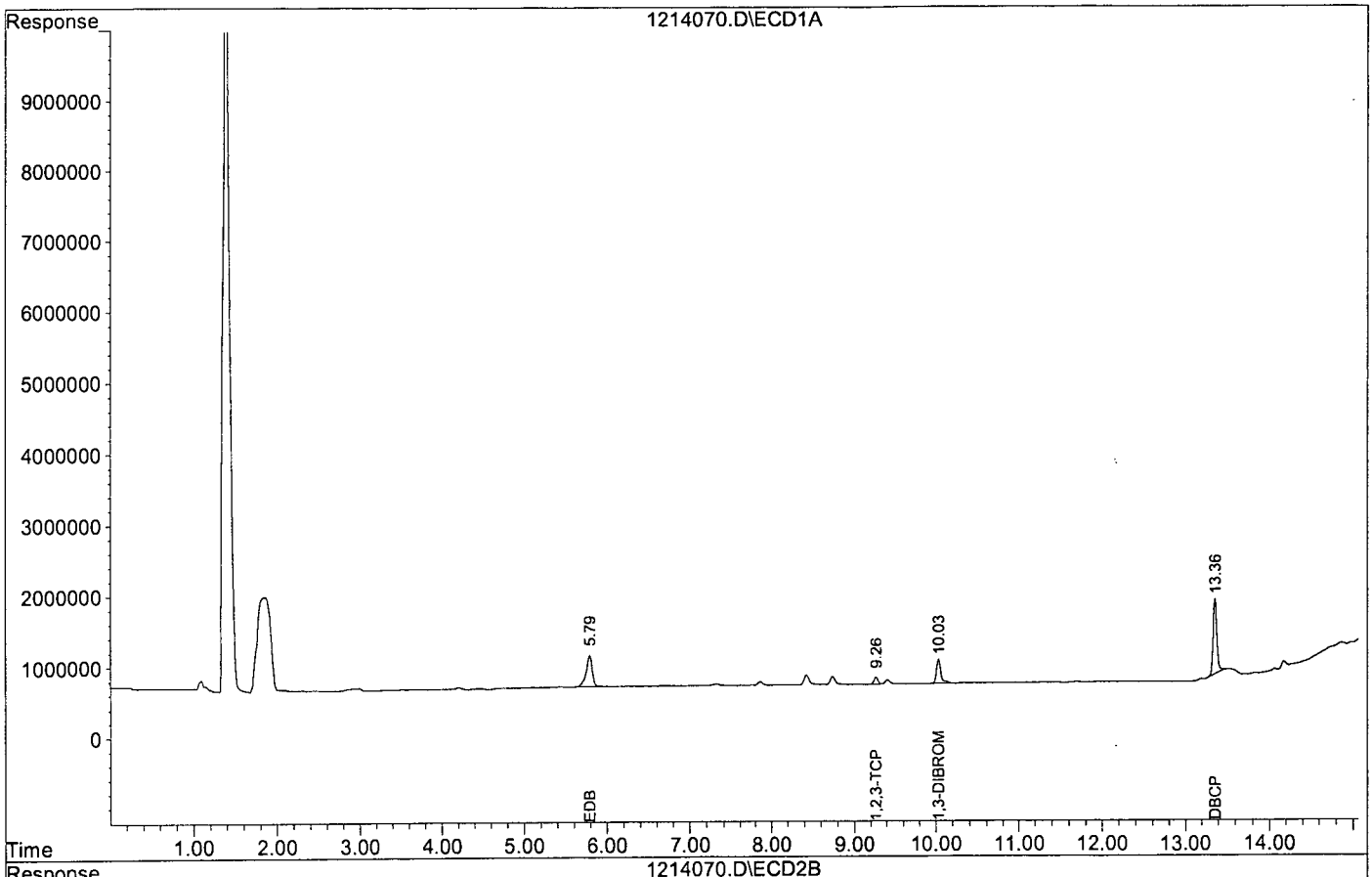
Target Compounds

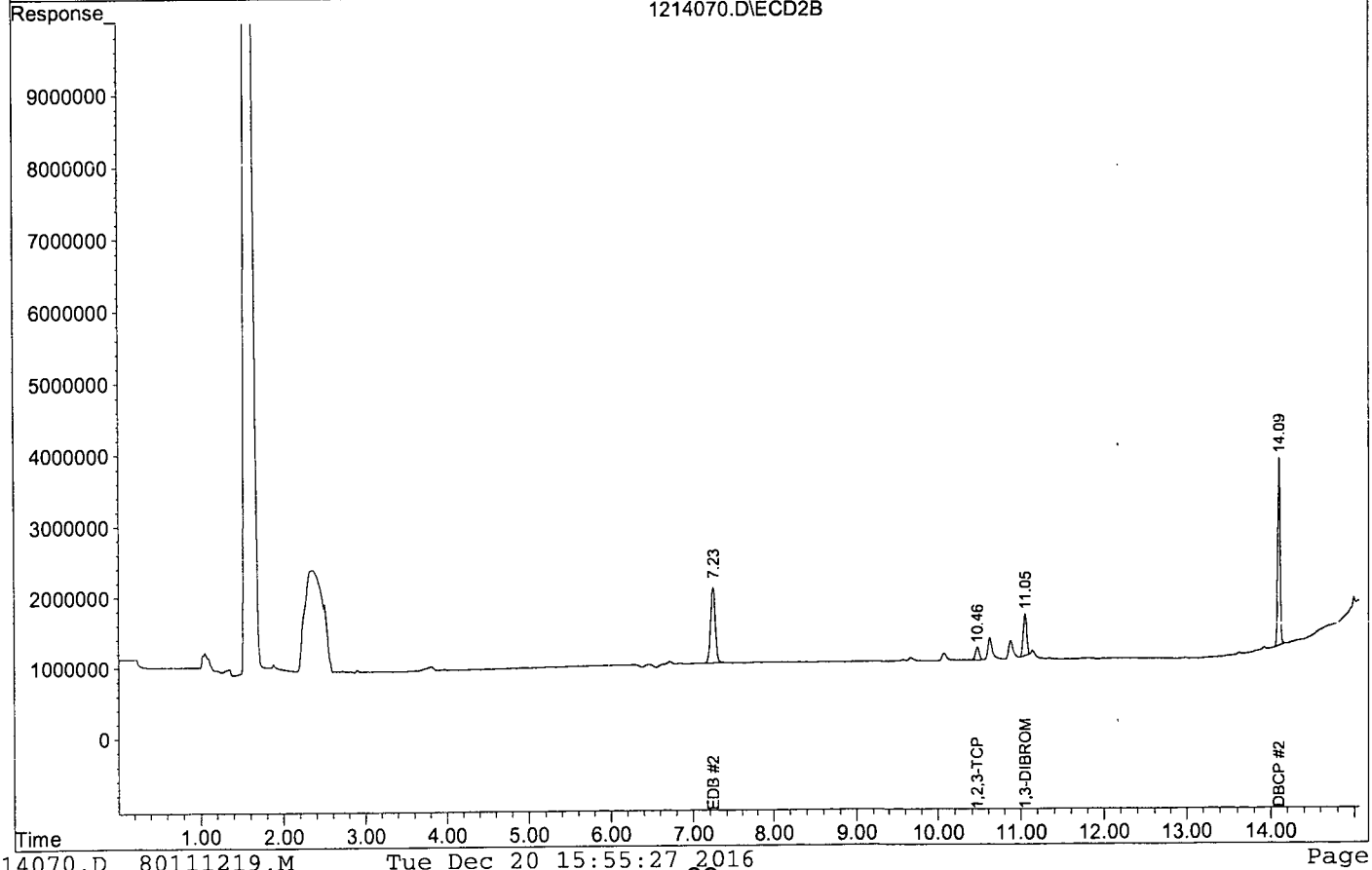
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214070.D
Acq On : 12-20-16 14:28:00
Sample : 8011 3 12/19/16
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111219.M

Vial: 68
Operator: RH
Inst : Herbie
Multiplr: 1.00





DBCP/EDB/1,2,3-TCP Analysis by
504 8011 1215

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/20/16
Instrument: Herbie
Initial Cal. Date: 12/19/16
Data File: 1214073.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TM	EDB	837164	838110	0.11	TM	
2	TML	1,2,3-TCP	197598	184598	6.6	TML	15
3	S	1,3-DIBROMOPROPANE(S)	701626	668892	4.7	S	
4	TM	DBCP	2364330	2130320	9.9	TM	
5							
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34							
35							
36							
37							
38							
39							
40							
		Average			5.3		

DBCP/EDB/1,2,3-TCP Analysis by
504 8011 1215

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/20/16
Instrument: Herbie
Cal. Date: 12/19/16
Data File: 1214073.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	EDB	1892080	1861000	1.6	TM	
42	TM	1,2,3-TCP	328649	307828	6.3	TM	
43	S	1,3-DIBROMOPROPANE(S)	1069940	975182	8.9	S	
44	TM	DBCP	5057110	4846810	4.2	TM	
45							
46							
47							
48							
49							
50							
51							
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75							
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77							
78							
79							
80							
		Average			5.3		

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214073.D\ECD1A.CH Vial: 71
Signal #2 : G:\HERBIE\DATA\161214\1214073.D\ECD2B.CH
Acq On : 12-20-16 15:30:55 Operator: RH
Sample : 8011 3 12/19/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 20 15:54 2016 Quant Results File: 80111219.RES

Quant Method : G:\HERBIE\DATA\161214\80111219.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Mon Dec 19 17:47:48 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
3) S 1,3-DIBROMOPROPA	10.03	11.05	334446	487591	0.238	0.228
Spiked Amount 0.350			Recovery =		68.00%	65.14%
Target Compounds						
1) TM EDB	5.79	7.23	419055	930501	0.250	0.246
2) TM 1,2,3-TCP	9.26	10.46	92299	153914	0.212	0.234
4) TM DBCP	13.36	14.10	1065161	2423406	0.225	0.240

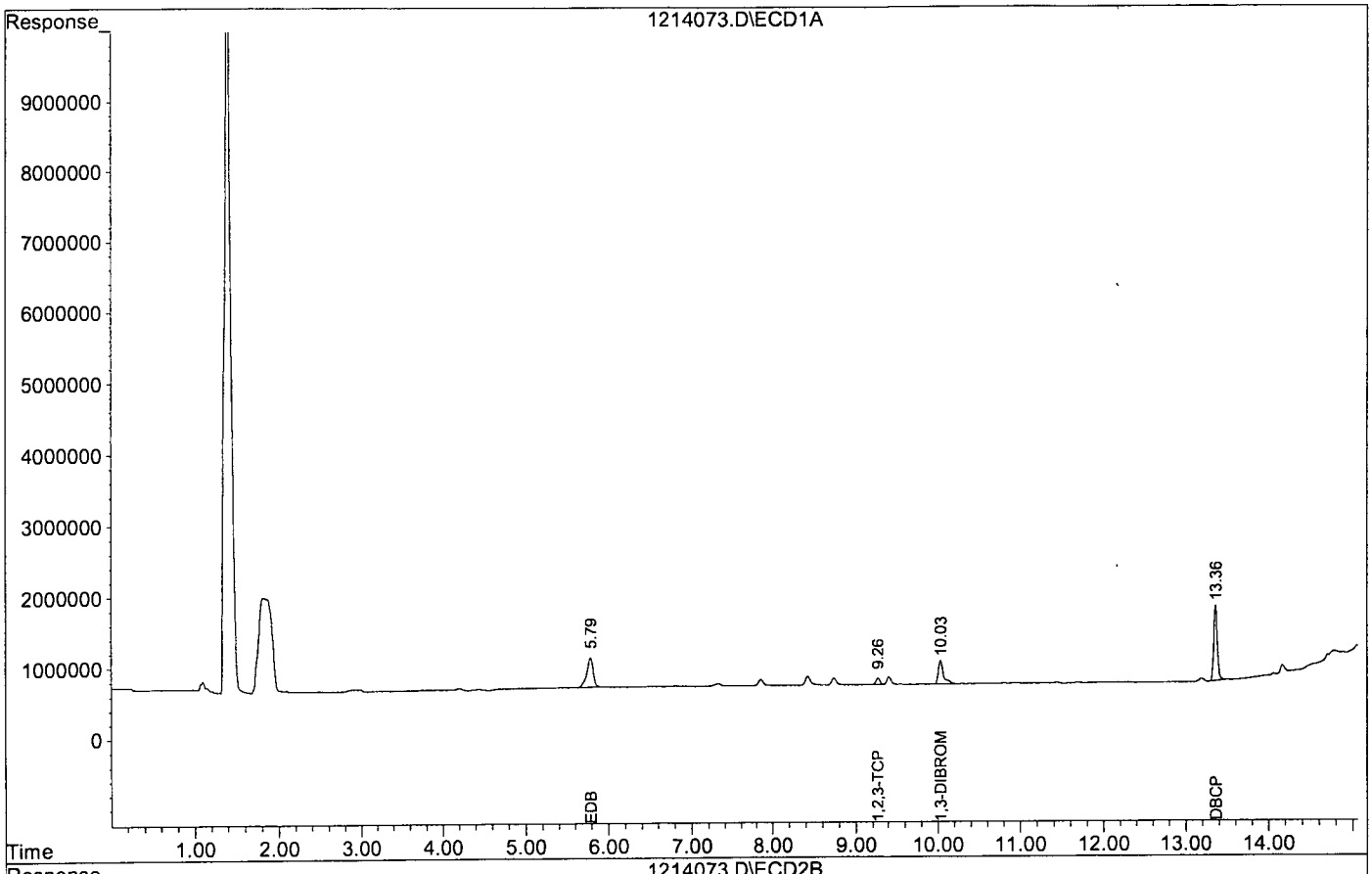
Target Compounds

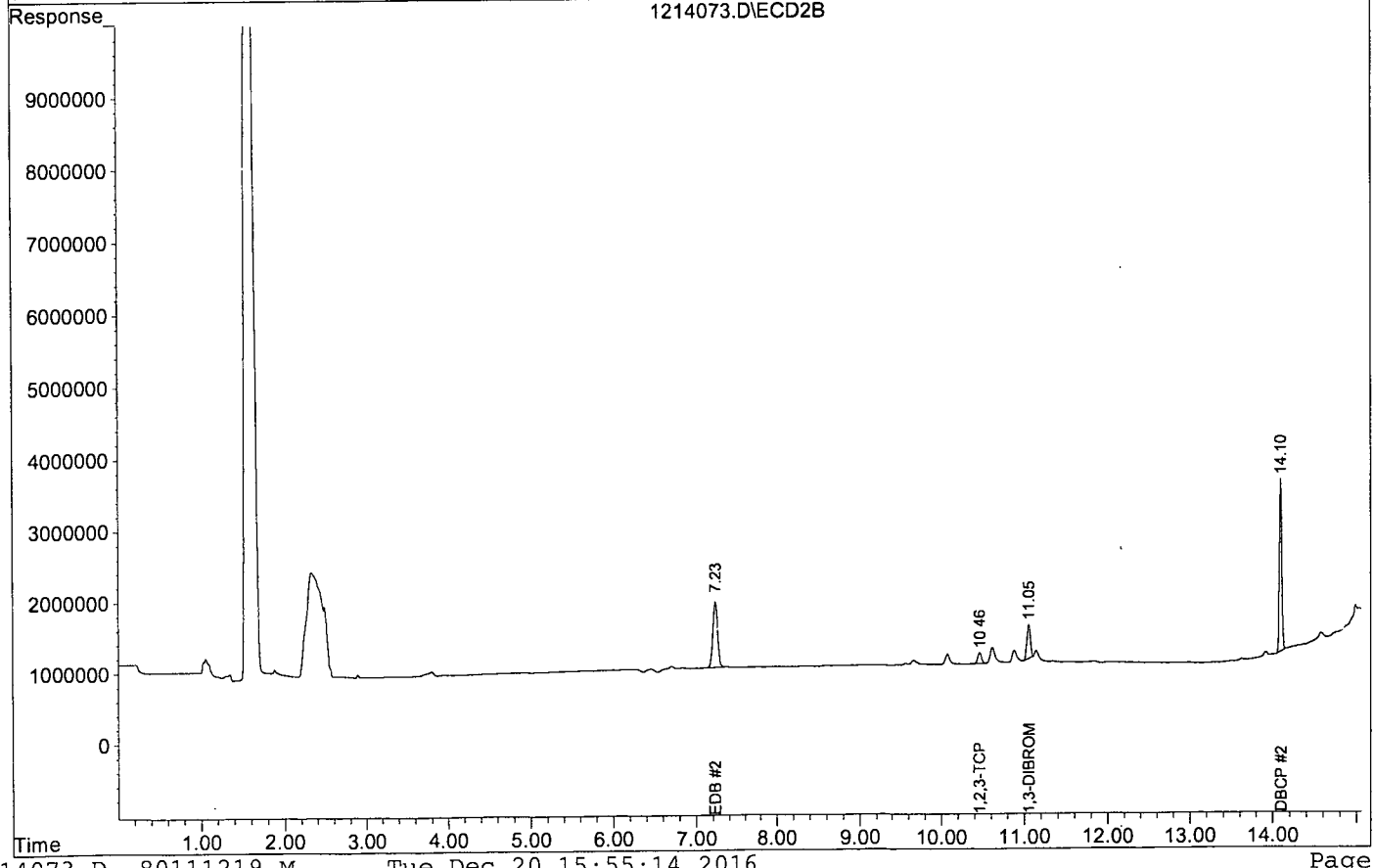
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214073.D
Acq On : 12-20-16 15:30:55
Sample : 8011 3 12/19/16
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111219.M

Vial: 71
Operator: RH
Inst : Herbie
Multiplr: 1.00





ORGANICS

Raw Data

APPL, INC.

Method Blank
EPA 8011

Blank Name/QCG: **161219W-47344 - 214793**
Batch ID: #8011-161219A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	EDB	0.020 U	0.02	0.020	0.010	ug/L	12/19/16	12/19/16
BLANK	SURROGATE: 1,3-DIBROMOPRO	79.4	70-132			%	12/19/16	12/19/16

Quant Method: 80111219.M
Run #: 1214059
Instrument: Herbie
Sequence: 161214
Initials: RHA

GC SC-Blank-REG MDLs-DOD
Printed: 12/20/16 1:54:32 PM

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214059.D\ECD1A.CH Vial: 57
Signal #2 : G:\HERBIE\DATA\161214\1214059.D\ECD2B.CH
Acq On : 12-19-16 17:18:34 Operator: RH
Sample : 161219A BLK 2/30.98G Inst : Herbie
Misc : water Multiplr: 1.13
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 20 13:41 2016 Quant Results File: 80111219.RES

Quant Method : G:\HERBIE\DATA\161214\80111219.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Mon Dec 19 17:47:48 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

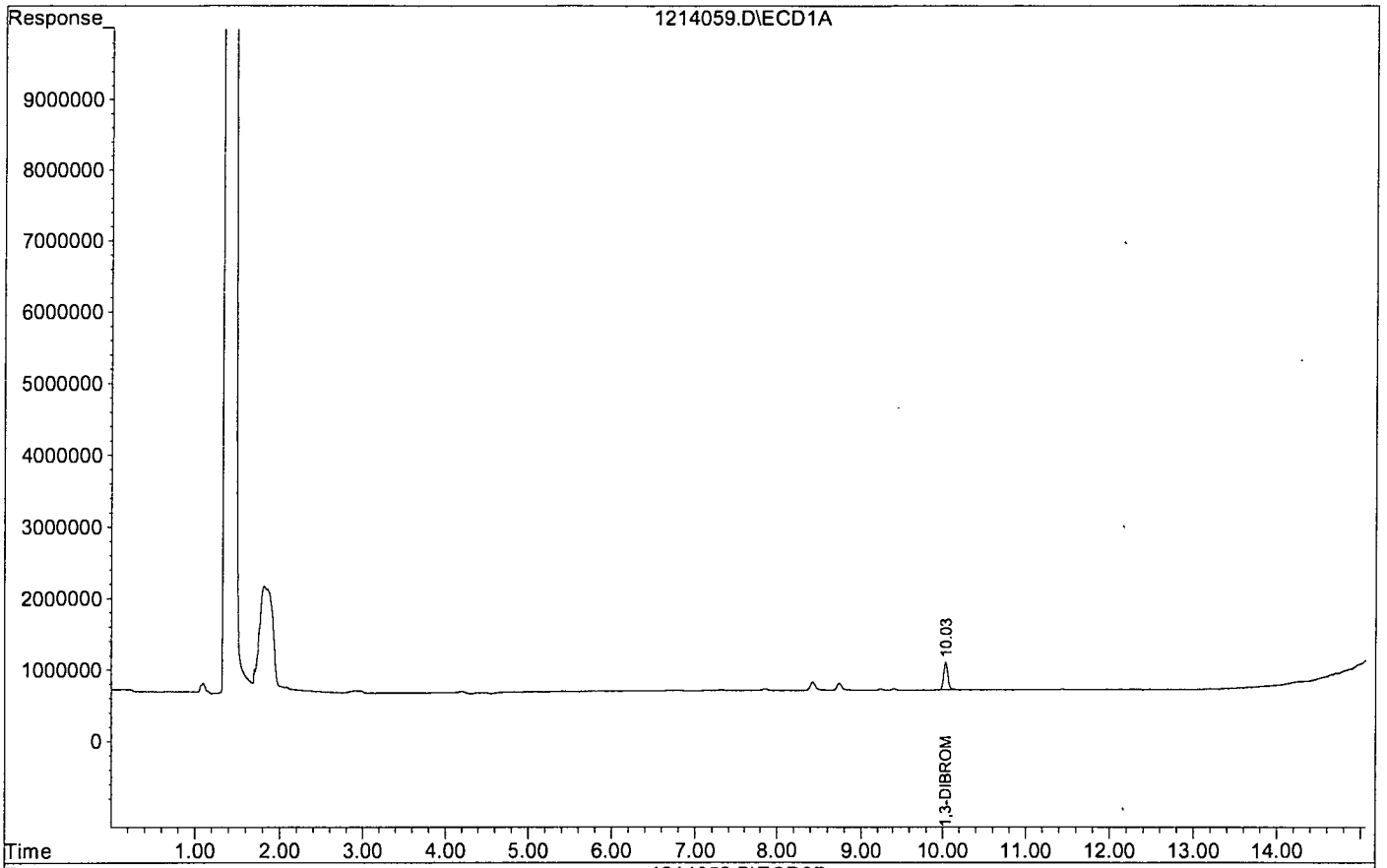
Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

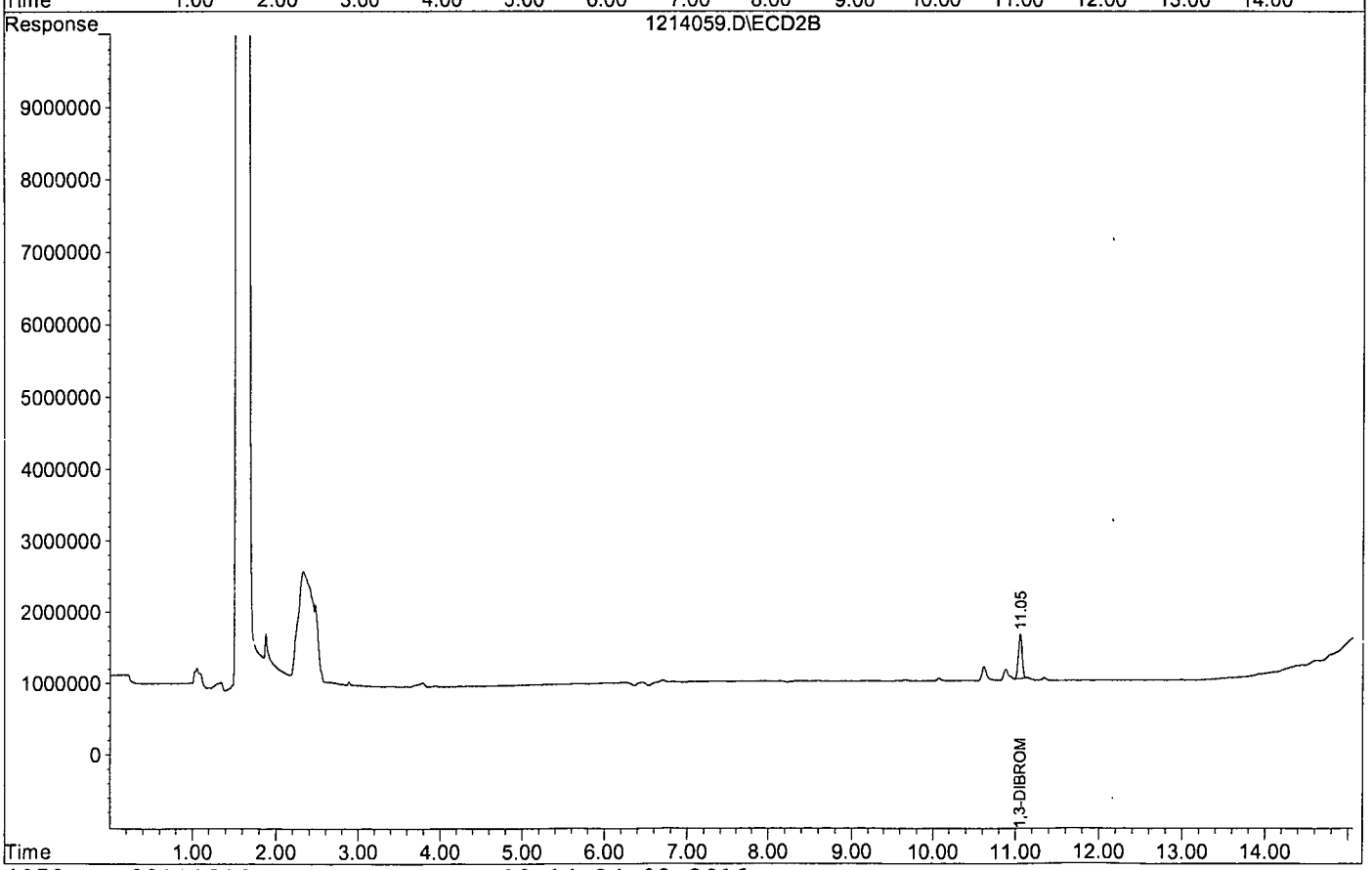
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	389817	616964	0.314	0.326
Spiked Amount	0.395			Recovery	=	79.41%	82.44%
	Target Compounds						
	Target Compounds						
1) TM	EDB	0.00	0.00	0	0	N.D. d	N.D. d
2) TM	1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4) TM	DBCP	0.00	0.00	0	0	N.D. d	N.D. d

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\161214\1214059.D Vial: 57
Acq On : 12-19-16 17:18:34 Operator: RH
Sample : 161219A BLK 2/30.98G Inst : Herbie
Misc : water Multiplr: 1.13
Quant Method : G:\HERBIE\DATA\161214\80111219.M





Laboratory Control Spike Recovery

EPA 8011

APPL ID: **161219W-47344 LCS - 214793**
Batch ID: #8011-161219A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
EDB	0.250	0.164	65.6	60-140
SURROGATE: 1,3-DIBROMOPROPANE (	0.350	0.382	109	70-132

Comments: _____

Primary	SPK
Quant Method :	80111219.M
Extraction Date :	12/19/16
Analysis Date :	12/20/16
Instrument :	Herbie
Run :	1214071
Initials :	RHA

Printed: 12/20/16 4:03:42 PM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214071.D\ECD1A.CH Vial: 69
Signal #2 : G:\HERBIE\DATA\161214\1214071.D\ECD2B.CH
Acq On : 12-20-16 14:48:53 Operator: RH
Sample : 161219A LCS-2 2/35.92G Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 20 15:17 2016 Quant Results File: 80111219.RES

Quant Method : G:\HERBIE\DATA\161214\80111219.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Mon Dec 19 17:47:48 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	System Monitoring Compounds							
3)	S 1,3-DIBROMOPROPA	10.04	11.05	536613	617492	0.382	0.289	
	Spiked Amount 0.350			Recovery =		109.14%	82.57%	
	Target Compounds							
1)	TM EDB	5.81	7.23	275414	1015382	0.164	0.268	#
2)	TM 1,2,3-TCP	9.27	10.46	138151	187585	0.358	0.285	
4)	TM DBCP	13.36	14.10	1791182	2879222	0.379	0.285	

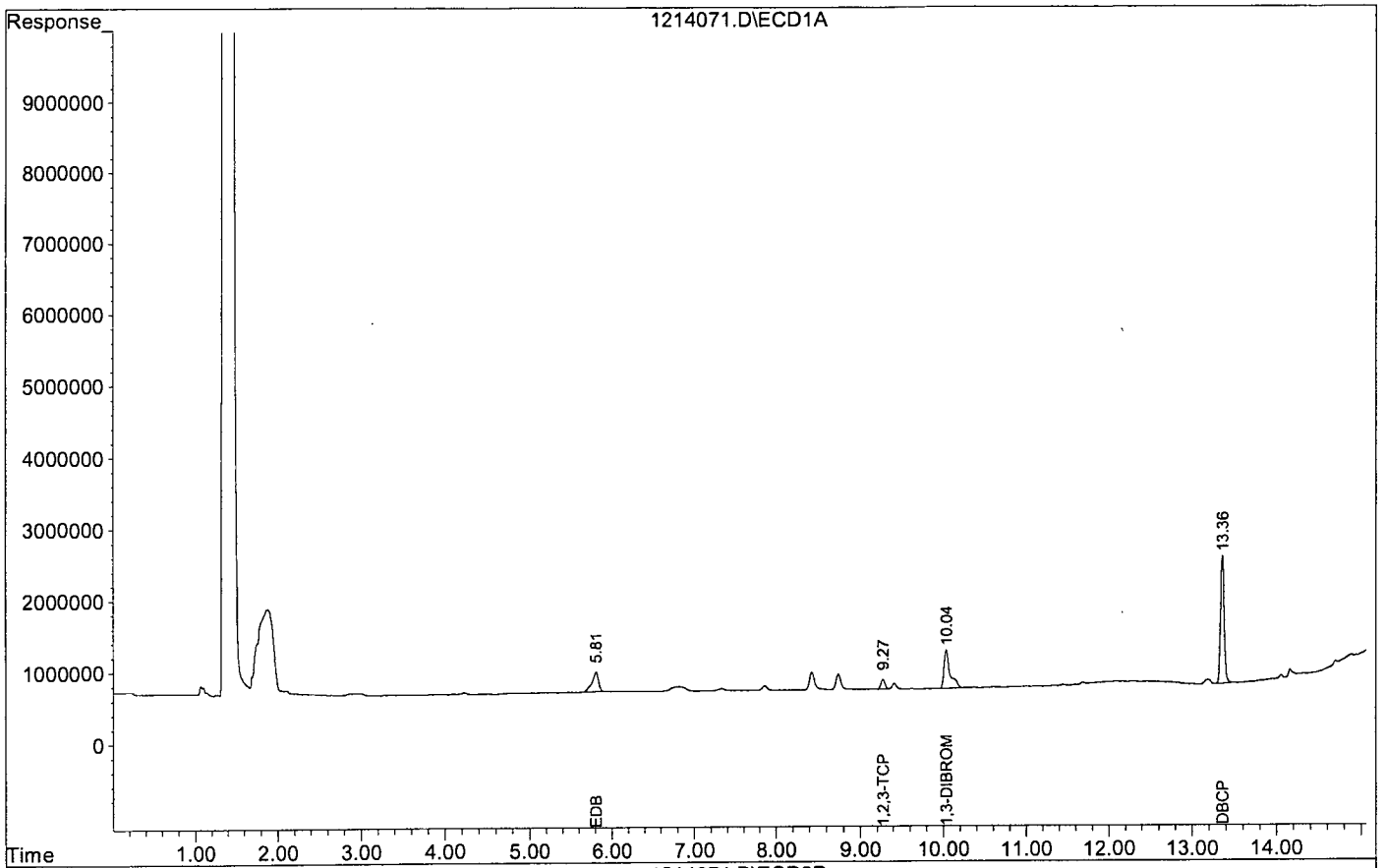
Target Compounds

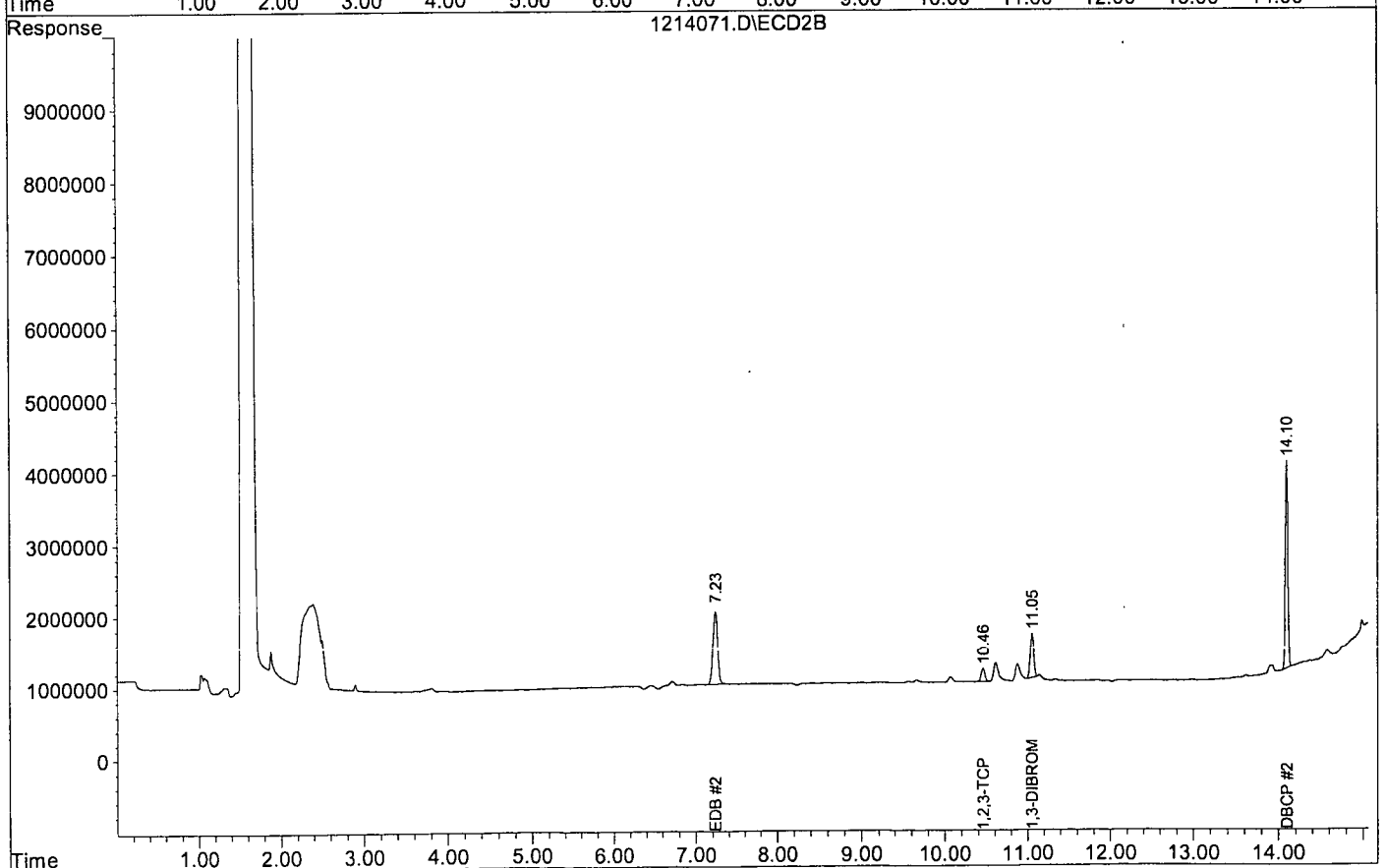
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214071.D
Acq On : 12-20-16 14:48:53
Sample : 161219A LCS-2 2/35.92G
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111219.M

Vial: 69
Operator: RH
Inst : Herbie
Multiplr: 1.00





		504/8011 M STD					
Prep: 12/19/16 Exp: 04/19/17 RH							
Compound	**Initial Conc.**	**Source**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**	
EDB	0.35ug/mL	504/8011 M STD STK	1000uL	10mL	0.035ug/mL	Methanol	
TCP		prep.12/08/16				021915C	
DBCP		exp: 04/08/17					
1,3 DBP							

504/8011 M STD STOCK						
Prep: 12/08/16-R.H.		Ex: 04/08/17				
Compound	**Initial Conc.**	**Source**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
EDB	20ug/mL	504/DOHS STOCK	438uL	25mL	0.35ug/mL	Methanol
TCP		prep. 06/07/16				021915C
DBCP		exp: 06/07/17				
1,3 DBP	100ug/mL	1,3 DBP STOCK	88uL			
		prep.06/07/16				
		exp. 06/07/17				

1,3-DBP STOCK						
Compounds	**Init. Conc.**	**Stock SRC**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
1,3 DBP	1000ug/mL	Absolute	1000uL	10mL	100ug/mL	Methanol
	Cat:	71326				Lot # 021915C
	Lot:	031413-33900				
	Op:	06/07/16				
	Exp:	06/07/17		Prep: 6/7/16 Exp: 6/7/17 LH		

504 DOHS STOCK prep: 6/7/16 Exp: 6/7/17 LH						
Compounds	**Init. Conc.**	**Stock SRC**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
EDB	1000ug/mL	O2SI	500uL	25mL	20ug/mL	Methanol
TCP	Cat:	130271-08				Lot # 021915C
DBCP	Lot:	270815-36134				
	Op:	06/07/16				
	Exp:	06/07/17				

		504/8011 SS				
Prep:03/11/16-L.H. Ex: 12/30/16						
Compound	**Initial Conc.**	**Source**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
EDB	0.35ug/mL	504/8011 SPIKE STOCK	1000uL	10mL	0.035ug/mL	Methanol
TCP		prep. 12/30/15				021915C
DBCP		Exp: 12/30/16				

		504/8011 SS STOCK				
Prep: 12/30/15-L.H. Ex: 12/30/16						
Compound	**Initial Conc.**	**Source**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
EDB	200ug/mL	Absolute	44uL	25mL	0.35ug/mL	Methanol
TCP		CAT 30096				070913A
DBCP		Lot 010615-34593				
		open 12/30/15				
		exp 12/30/16				

	504/8011 SURROGATE					
Prep: 11/22/16-R.H. Ex: 12/30/16						
Compound	**Initial Conc.**	**Source**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
1,3 DBP	100	1,3 DBP STOCK	35ul	10mL	0.35ug/mL	Methanol
		prep.12/30/15				070913A
		exp. 12/30/16				

_MWE012

Organic Extraction Worksheet

Method	EPA Method 8011 DBCP/EDB	Extraction Set	161219A	Extraction Method	MWE012	Units	mL

Spiked ID 1	504.1 SS 3-11-16 exp 12-30-16	Surrogate ID 1	504.1 Surrogate 11-22-16 exp 12-30-16
Spiked ID 2	504.1 M. STD 12-19-16 exp 4-8-17	Surrogate ID 2	
Spiked ID 3		Surrogate ID 3	
Spiked ID 4		Surrogate ID 4	
Spiked ID 5		Surrogate ID 5	
Spiked ID 6		Sufficient Vol for Matrix QC:	NO
Spiked ID 7		Ext. Start Time:	12/19/16 13:25
Spiked ID 8		Ext. End Time:	12/19/16 14:00
		GC Requires Extract By:	12/20/16 0:00

			Water Bath Temp Criteria
pH1			
pH2			
pH3			

Spiked By: KY **Date** 12/19/16 **Witnessed By:** JR **Date** 12/19/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	161219A Blk				0.035	1 equip	30.98g	2	7	12/19/16 13:25	
2	161219A LCS-1		0.1	1	0.035	1 equip	30.96g	2	7	12/19/16 13:25	
3	161219A LCS-2		0.250	2	NA	NA equip	35.92g	2	7	12/19/16 13:25	
4	AZ47344	AZ47344W11			0.035	1 equip	36.04g	2	7	12/19/16 13:25	81734 RUSH 1 WEEK
5	AZ47493	AZ47493W07			0.035	1 equip	35.57g	2	7	12/19/16 13:25	81760 1 WEEK
6	AZ47498	AZ47498W10			0.035	1 equip	35.79g	2	7	12/19/16 13:25	81760 1 WEEK
7	AZ47657	AZ47657W05			0.035	1 equip	35.72g	2	7	12/19/16 13:25	81776 1 WEEK
8	M STD 1		0.020	2	NA	NA equip	36.01g	2	7	12/19/16 13:25	
9	M STD 2		0.1	2	NA	NA equip	60.06g	2	7	12/19/16 13:25	
10	M STD 3		0.250	2	NA	NA equip	35.95g	2	7	12/19/16 13:25	
11	M STD 4		0.5	2	NA	NA equip	36.08g	2	7	12/19/16 13:25	
12	M STD 5		0.750	2	NA	NA equip	36.11g	2	7	12/19/16 13:25	
13	M STD 6		1	2	NA	NA equip	35.93g	2	7	12/19/16 13:25	

DL 12/19/16

Solvent and Lot#	
NaCL	16B100011
Sod. Thiosulfate	24050
GC2 Hexane	DN636

Extraction COC Transfer	
Extraction lab employee Initials	DL
GC analyst's initials	RH
Date	12/19/16
Time	2:30
Refrigerator	Solvent

	Technician's Initials
Scanned By	KY
Sample Preparation	KY
Extraction	KY
Concentration	----------

Modified	12/19/16 2:03:42 PM

Reviewed By: DL **Date** 12/19/16

88

Ext_ID 53565

12/19/16 2:08:13 PM

Injection Log

Directory: G:\HERBIE\DATA\161214\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	50	1214052.D	1	8011 1 12/19/16		12-19-16 14:53:31
2	51	1214053.D	1	8011 2 12/19/16		12-19-16 15:14:07
3	52	1214054.D	1	8011 3 12/19/16		12-19-16 15:34:48
4	53	1214055.D	1	8011 4 12/19/16		12-19-16 15:55:37
5	54	1214056.D	1	8011 5 12/19/16		12-19-16 16:16:20
6	55	1214057.D	1	8011 6 12/19/16		12-19-16 16:37:03
7	57	1214059.D	1.12976	161219A BLK 2/30.98G	water	12-19-16 17:18:34
8	58	1214060.D	1.13049	161219A LCS-1 2/30.96G	water	12-19-16 17:39:13
9	61	1214063.D	0.983975	AZ47493W07 2/35.57G	water	12-19-16 18:41:11
10	62	1214064.D	0.977927	AZ47498W10 2/35.79G	water	12-19-16 19:01:50
11	66	1214068.D	1	8011 3 12/19/16		12-19-16 20:23:57
12	68	1214070.D	1	8011 3 12/19/16		12-20-16 14:28:00
13	69	1214071.D	1	161219A LCS-2 2/35.92G		12-20-16 14:48:53
14	71	1214073.D	1	8011 3 12/19/16		12-20-16 15:30:55

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank
EPA 8015B TPH WATER

Blank Name/QCG: **161219W-47494 - 214843**
Batch ID: #DOC53-161219A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	12/19/16	12/20/16
BLANK	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	12/19/16	12/20/16
BLANK	SURROGATE: OCTACOSANE (S)	88.0	60-142			%	12/19/16	12/20/16
BLANK	SURROGATE: ORTHO-TERPHEN	75.4	56-125			%	12/19/16	12/20/16

Quant Method:DOC1103.M
Run #:1220025
Instrument:Apollo
Sequence:161220
Initials:DPO

GC SC-Blank-REG MDLs-DOD
Printed: 12/21/16 9:10:08 AM

Laboratory Control Spike Recovery
EPA 8015B TPH WATER

APPL ID: **161219W-47494 LCS - 214843**
Batch ID: #DOC53-161219A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
DIESEL (C10-C24)	1330	1020	76.5	36-132
OIL (C24-C40)	1330	1140	85.5	41-113
SURROGATE: OCTACOSANE (S)	40.0	36.0	90.0	60-142
SURROGATE: ORTHO-TERPHENYL (S)	40.0	36.8	92.0	56-125

Comments: _____

Primary	SPK
Quant Method :	DOC1103.M
Extraction Date :	12/19/16
Analysis Date :	12/20/16
Instrument :	Apollo
Run :	1220026
Initials :	DPO

Printed: 12/21/16 9:09:59 AM
APPL Standard LCS

EPA 8015B-eLL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81760

Case No: 81760 Date Analyzed: 12/20/16

Matrix: WATER Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: OCTACOSANE (S)			SURROGATE: ORTHO-TERPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161219A-BLK	Blank	60-142	88.0		56-125	75.4	
161219A-LCS	Lab Control Spike	60-142	90.0		56-125	92.0	
161219A-LCSD	Lab Control SpikeD	60-142	92.5		56-125	96.0	
AZ47494	ERH139	60-142	96.7		56-125	77.6	
AZ47495	ERH136	60-142	94.6		56-125	75.9	
AZ47496	ERH143	60-142	96.0		56-125	77.1	
AZ47497	ERH145	60-142	92.6		56-125	73.4	
AZ47498	ERH146	60-142	97.1		56-125	78.9	

Comments: Batch: #DOC53-161219A

EPA 8015B-eL

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81760

Case No: 81760 Date Analyzed: 12/20/16

Matrix: WATER Instrument: Apollo

Blank ID: 161219A-BLK Time Analyzed: 1826

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161219A-BLK	Blank	1220025	12/20/16 1826
161219A-LCS	Lab Control Spike	1220026	12/20/16 1847
161219A-LCSD	Lab Control SpikeD	1220028	12/20/16 1927
AZ47494	ERH139	1220030	12/20/16 2008
AZ47495	ERH136	1220031	12/20/16 2028
AZ47496	ERH143	1220032	12/20/16 2048
AZ47497	ERH145	1220033	12/20/16 2108
AZ47498	ERH146	1220034	12/20/16 2129

Comments: Batch: #DOC53-161219A

Printed: 12/21/16 9:09:55 AM

Form 4, Blank Summary

ORGANICS

Sample Data

APPL, INC.

EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81760

Sample ID: ERH139

APPL ID: AZ47494

Sample Collection Date: 12/12/16

QCG: #DOC53-161219A-214843

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	12/19/16	12/20/16
EPA 8015B-eL	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	12/19/16	12/20/16
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	96.7	60-142			%	12/19/16	12/20/16
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	77.6	56-125			%	12/19/16	12/20/16

Quant Method: DOC1103.M
Run #: 1220030
Instrument: Apollo
Sequence: 161220
Dilution Factor: 1
Initials: DPO

Printed: 12/21/16 9:09:50 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161220\1220030.D Vial: 30
Acq On : 12-20-16 20:08:13 Operator: DP
Sample : AZ47494W10 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Dec 21 8:58 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

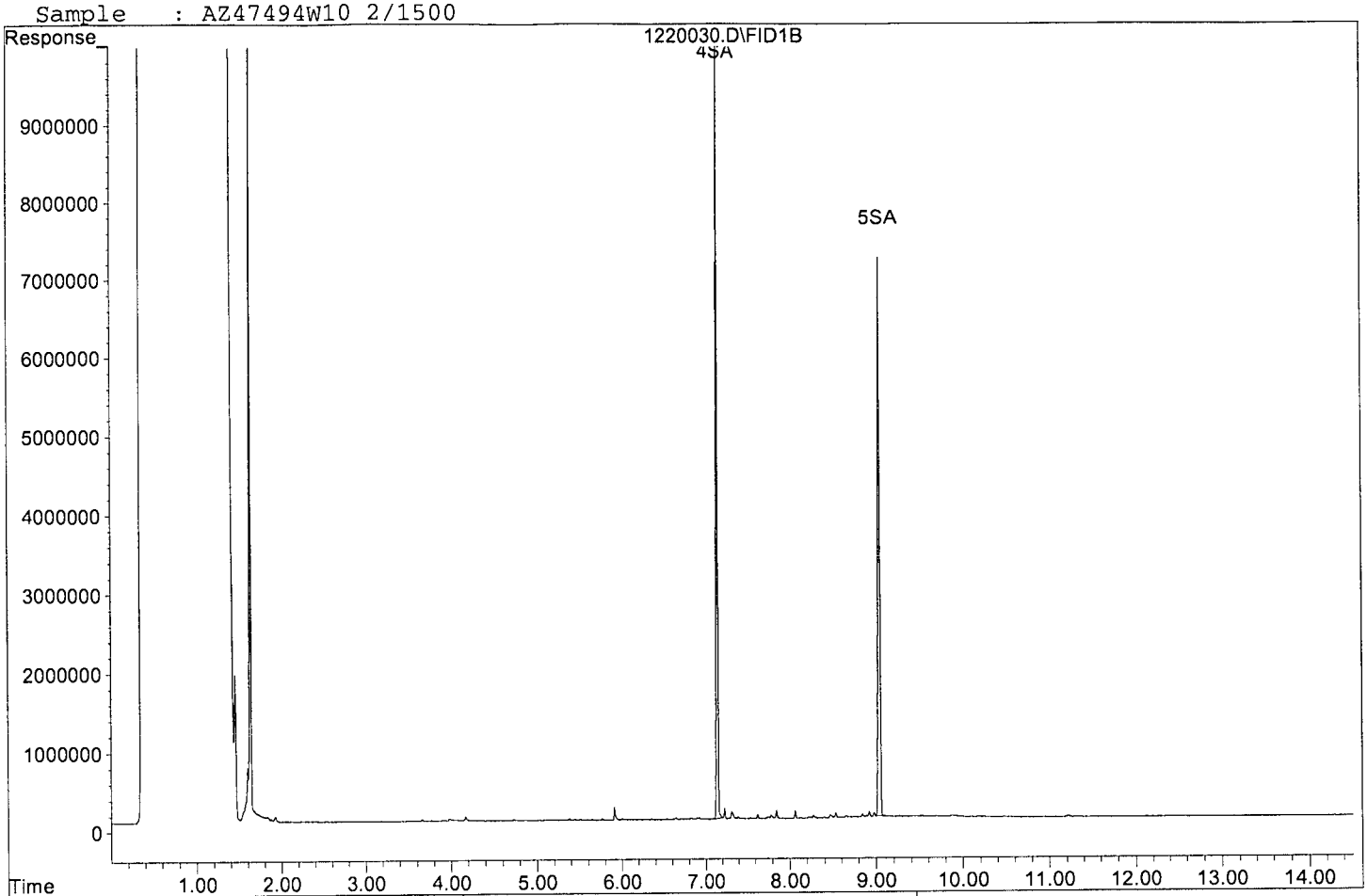
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

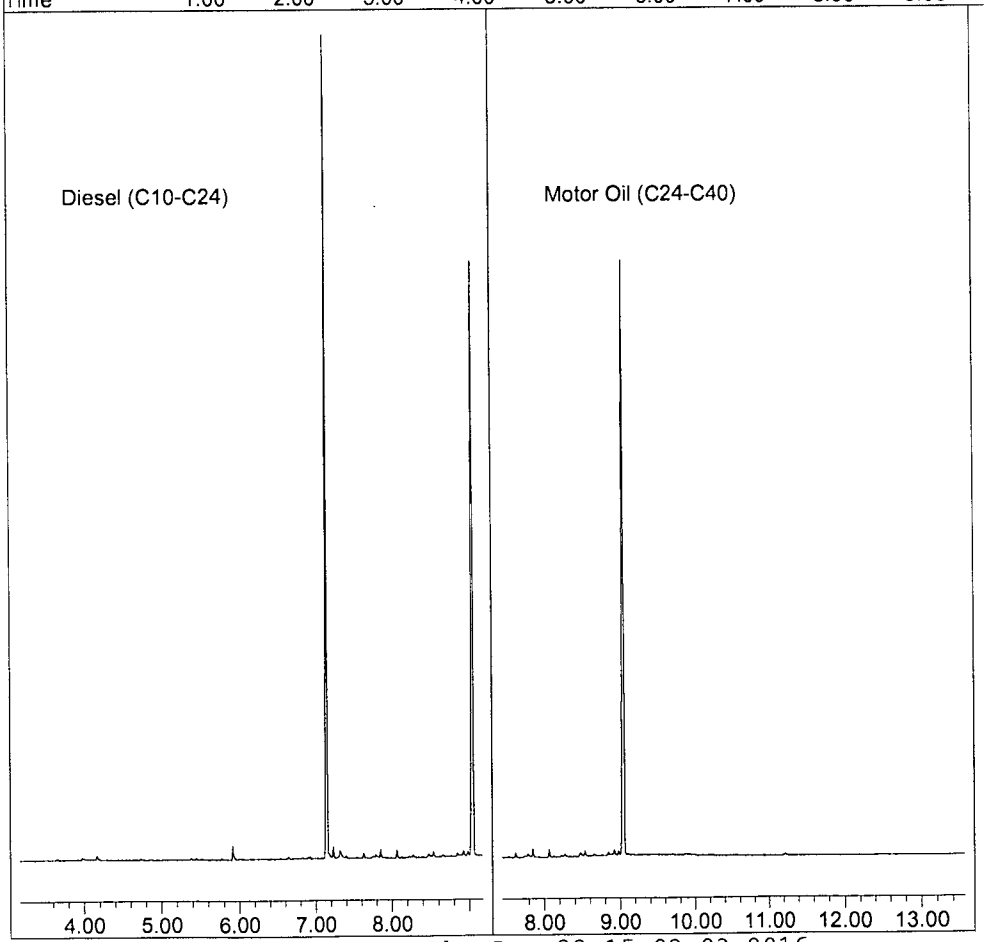
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.15	108544916	31.027 ppb
Surrogate Spike 40.000	Recovery =		77.57%
5) SA Octacosane(S)	9.05	101492630	38.667 ppb
Surrogate Spike 40.000	Recovery =		96.67%
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161220\1220030.D
Sample : AZ47494W10 2/1500





1220030.D DOC1103.M Thu Dec 22 15:02:03 2016

EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81760

Sample ID: ERH136

APPL ID: AZ47495

Sample Collection Date: 12/12/16

QCG: #DOC53-161219A-214843

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	12/19/16	12/20/16
EPA 8015B-eL	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	12/19/16	12/20/16
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	94.6	60-142			%	12/19/16	12/20/16
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	75.9	56-125			%	12/19/16	12/20/16

Quant Method: DOC1103.M
Run #: 1220031
Instrument: Apollo
Sequence: 161220
Dilution Factor: 1
Initials: DPO

Printed: 12/21/16 9:09:50 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161220\1220031.D Vial: 31
Acq On : 12-20-16 20:28:23 Operator: DP
Sample : AZ47495W14 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Dec 21 8:58 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

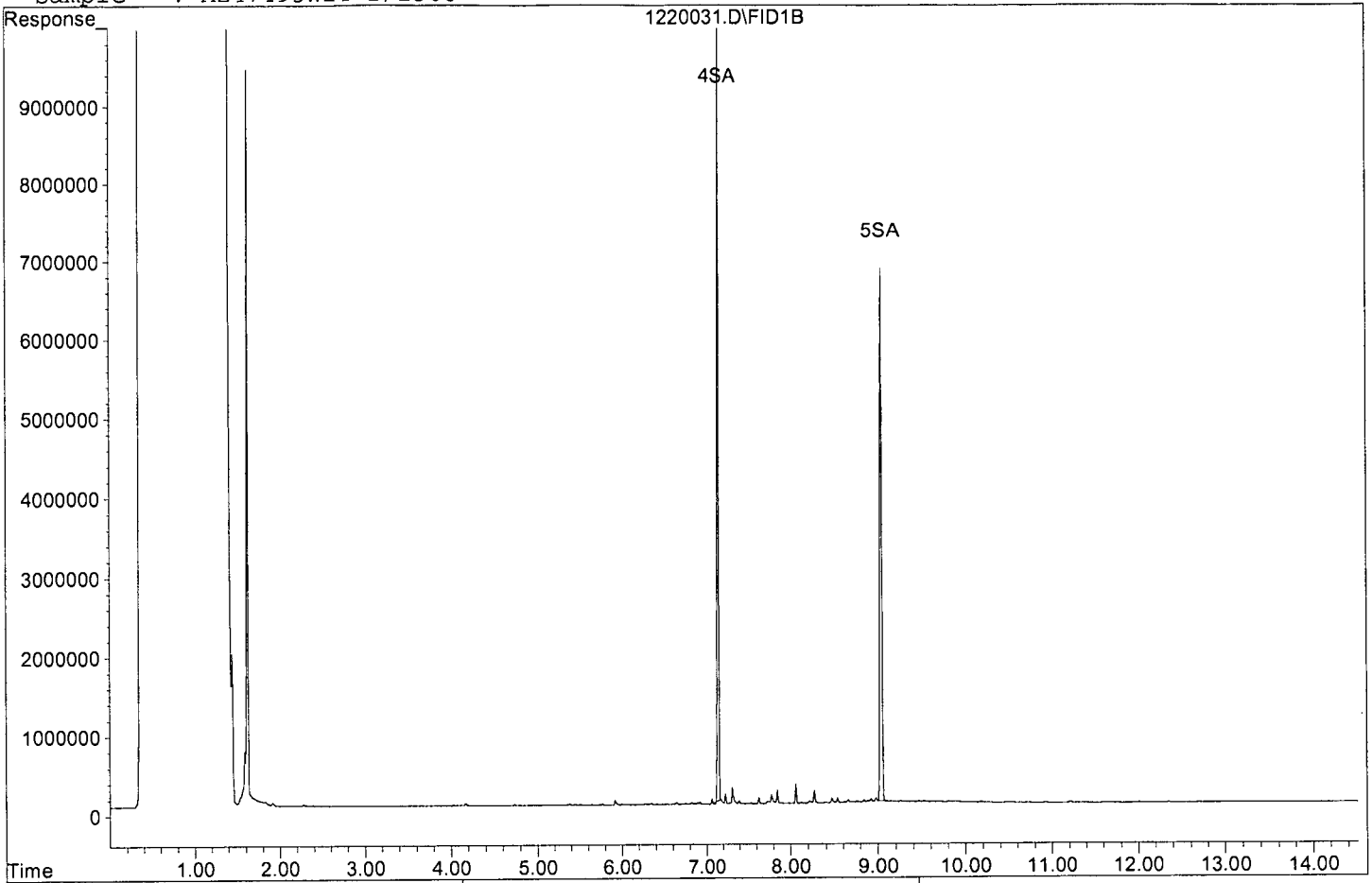
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

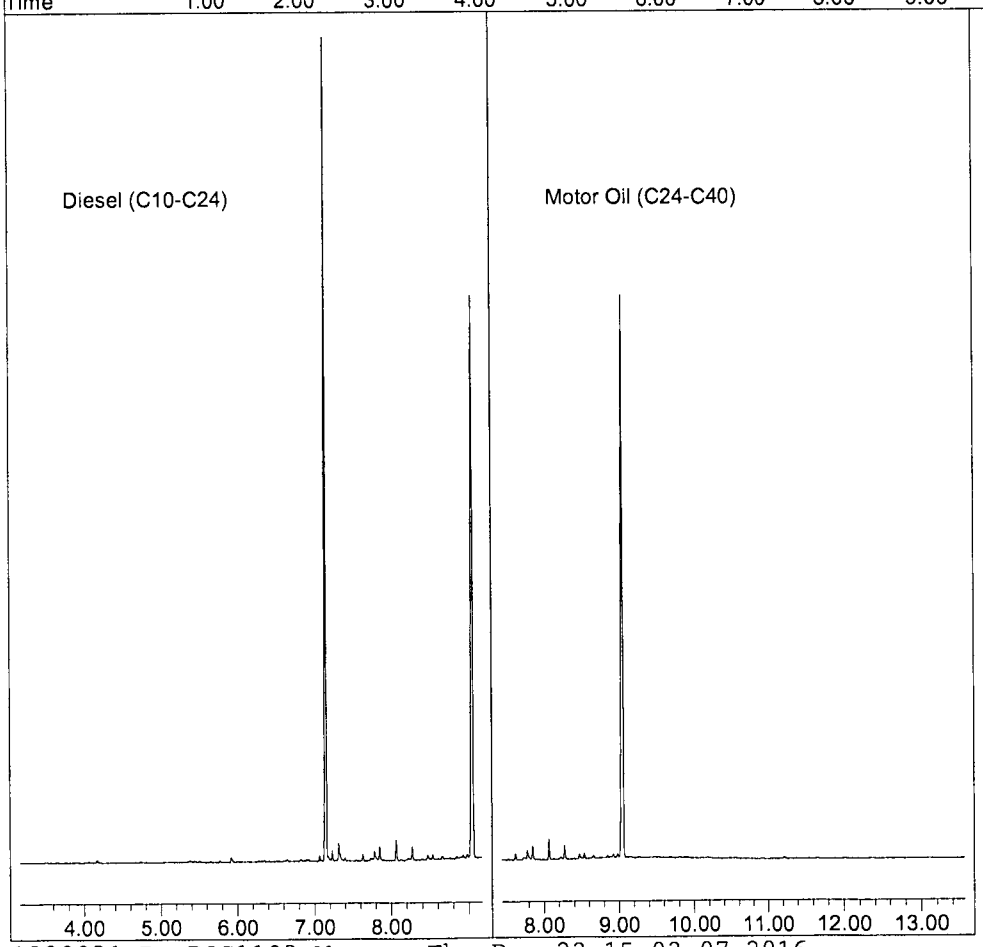
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.15	106152966	30.344	ppb
Surrogate Spike 40.000	Recovery =		75.86%	
5) SA Octacosane(S)	9.05	99329745	37.843	ppb
Surrogate Spike 40.000	Recovery =		94.61%	
Target Compounds				

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161220\1220031.D
Sample : AZ47495W14 2/1500





1220031.D DOC1103.M Thu Dec 22 15:02:07 2016

EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81760

Sample ID: ERH143

APPL ID: AZ47496

Sample Collection Date: 12/13/16

QCG: #DOC53-161219A-214843

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	96 ++	40.0	25.00	13.07	ug/L	12/19/16	12/20/16
EPA 8015B-eL	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	12/19/16	12/20/16
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	96.0	60-142			%	12/19/16	12/20/16
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	77.1	56-125			%	12/19/16	12/20/16

++(T6) The analyst has noted that the chromatogram of this sample is mainly a match to hydrocarbons within the range of diesel fuel.

Quant Method: DOC1103.M
Run #: 1220032
Instrument: Apollo
Sequence: 161220
Dilution Factor: 1
Initials: DPO

Printed: 12/21/16 9:09:50 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161220\1220032.D Vial: 32
Acq On : 12-20-16 20:48:40 Operator: DP
Sample : AZ47496W12 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Dec 21 8:58 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

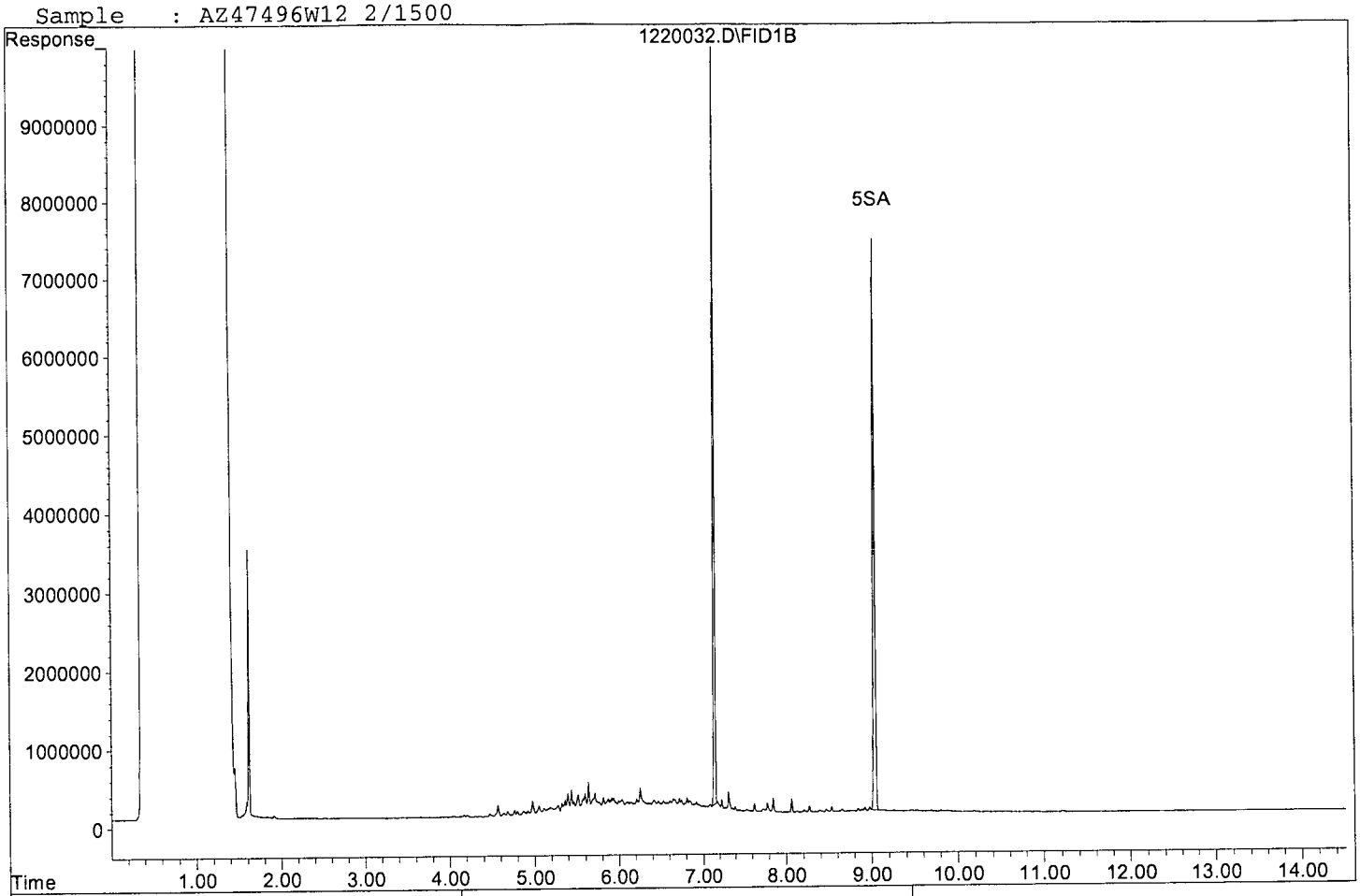
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

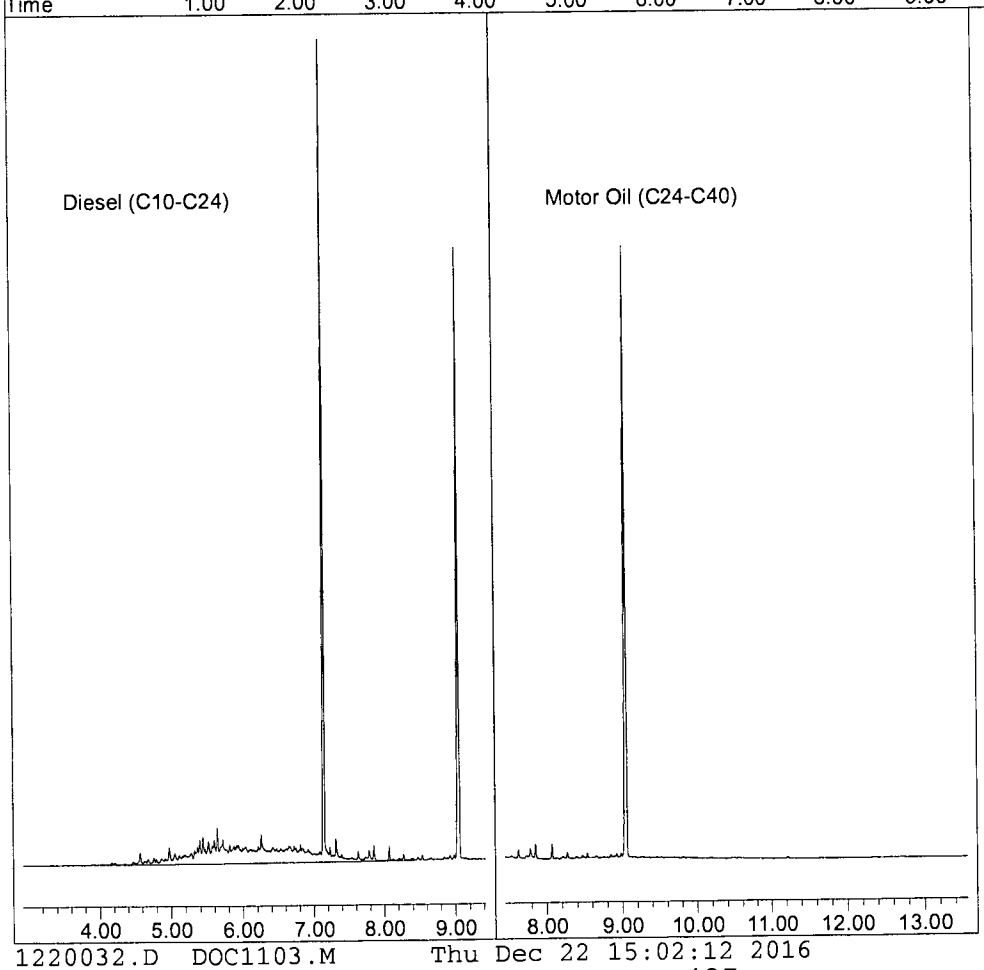
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.15	107909425	30.846 ppb
Surrogate Spike 40.000	Recovery =		77.11%
5) SA Octacosane(S)	9.05	100820730	38.411 ppb
Surrogate Spike 40.000	Recovery =		96.03%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	248693541	95.995 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161220\1220032.D
Sample : AZ47496W12 2/1500





1220032.D DOC1103.M Thu Dec 22 15:02:12 2016

EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81760

Sample ID: ERH145

APPL ID: AZ47497

Sample Collection Date: 12/13/16

QCG: #DOC53-161219A-214843

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	12/19/16	12/20/16
EPA 8015B-eL	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	12/19/16	12/20/16
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	92.6	60-142			%	12/19/16	12/20/16
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	73.4	56-125			%	12/19/16	12/20/16

Quant Method: DOC1103.M
Run #: 1220033
Instrument: Apollo
Sequence: 161220
Dilution Factor: 1
Initials: DPO

Printed: 12/21/16 9:09:50 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161220\1220033.D Vial: 33
Acq On : 12-20-16 21:08:53 Operator: DP
Sample : AZ47497W13 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Dec 21 8:58 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

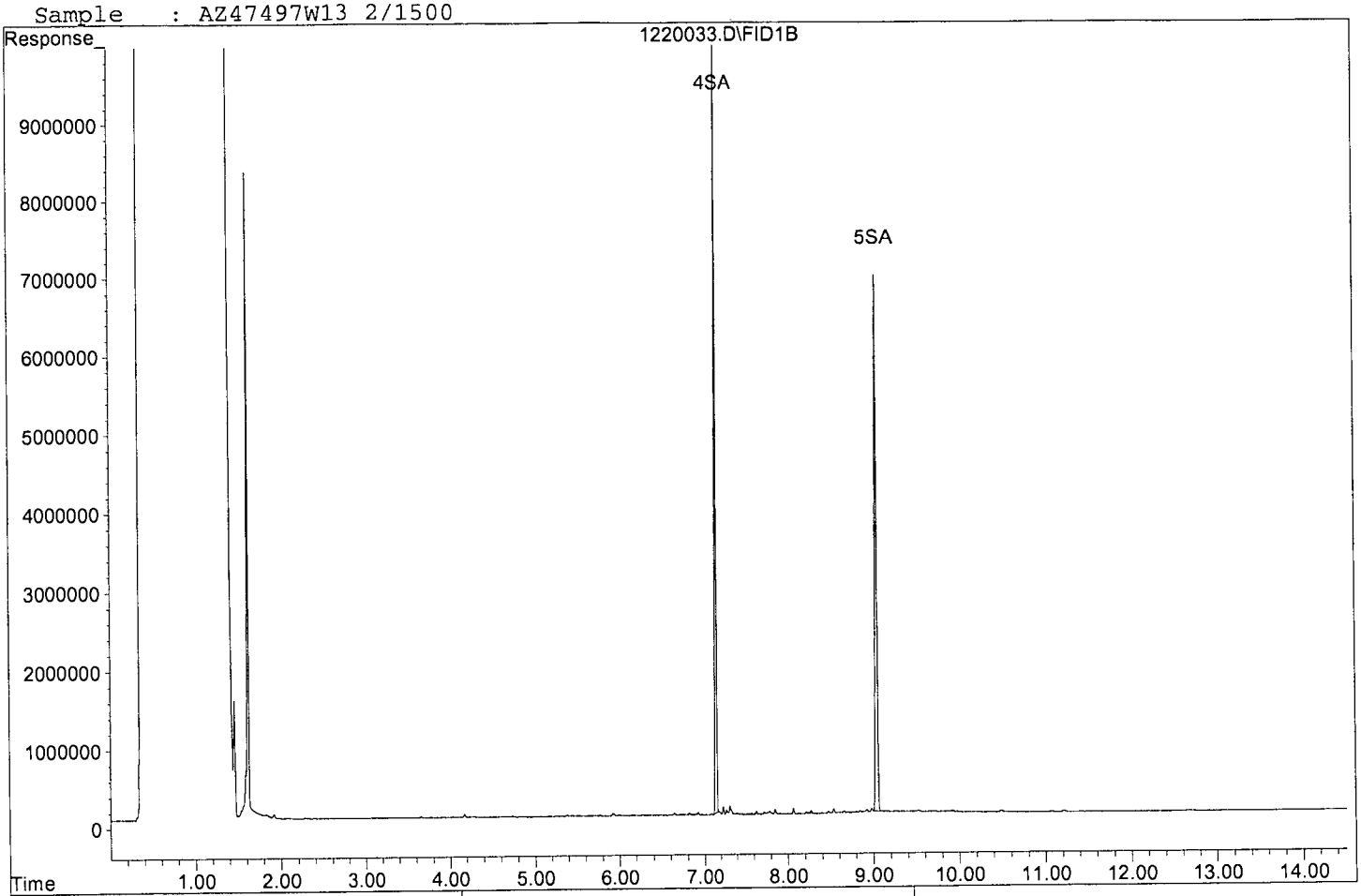
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

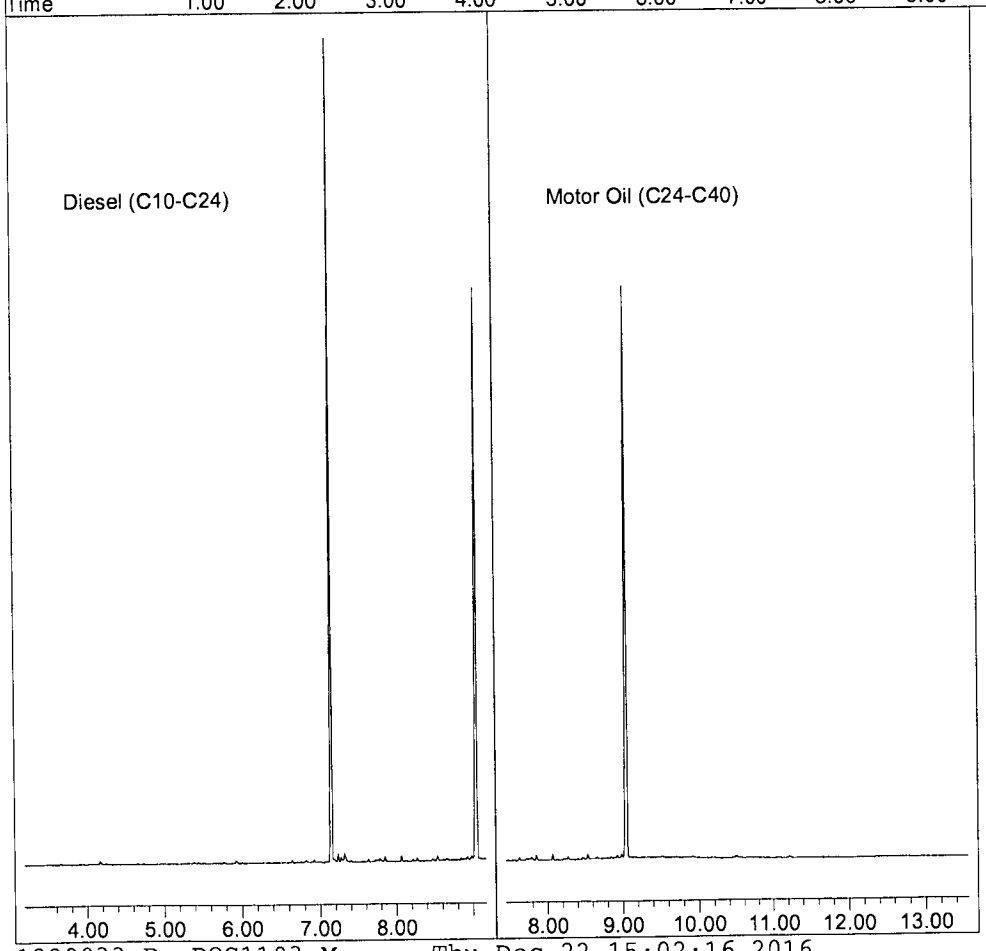
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.15	102669327	29.348	ppb
Surrogate Spike 40.000	Recovery =		73.37%	
5) SA Octacosane(S)	9.05	97166071	37.019	ppb
Surrogate Spike 40.000	Recovery =		92.55%	
Target Compounds				

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161220\1220033.D
Sample : AZ47497W13 2/1500





1220033.D DOC1103.M Thu Dec 22 15:02:16 2016

EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH146
Sample Collection Date: 12/12/16

ARF: 81760
APPL ID: AZ47498
QCG: #DOC53-161219A-214843

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	12/19/16	12/20/16
EPA 8015B-eL	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	12/19/16	12/20/16
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	97.1	60-142			%	12/19/16	12/20/16
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	78.9	56-125			%	12/19/16	12/20/16

Quant Method: DOC1103.M
Run #: 1220034
Instrument: Apollo
Sequence: 161220
Dilution Factor: 1
Initials: DPO

Printed: 12/21/16 9:09:50 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161220\1220034.D Vial: 34
Acq On : 12-20-16 21:29:01 Operator: DP
Sample : AZ47498W18 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Dec 21 8:59 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

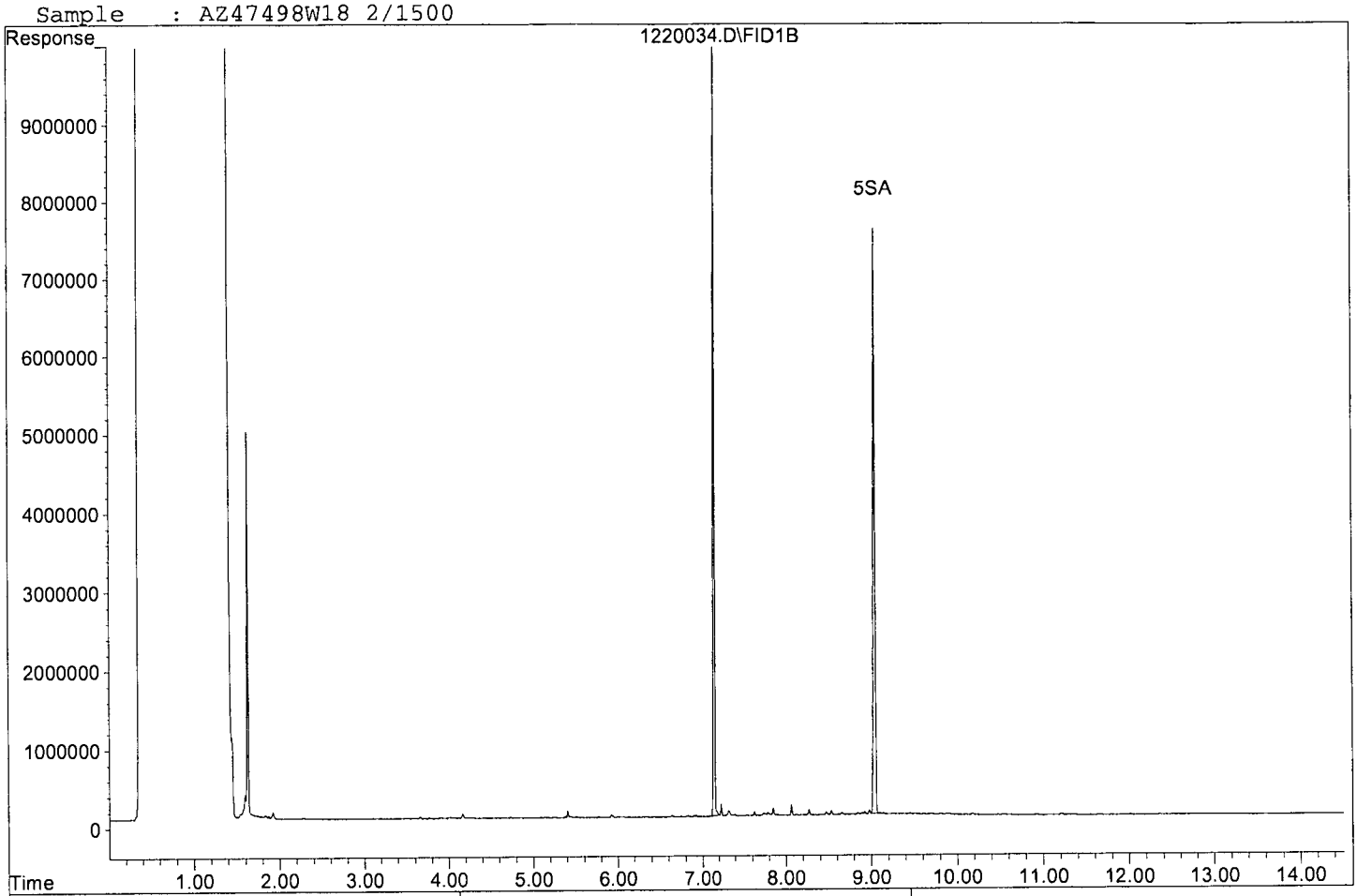
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

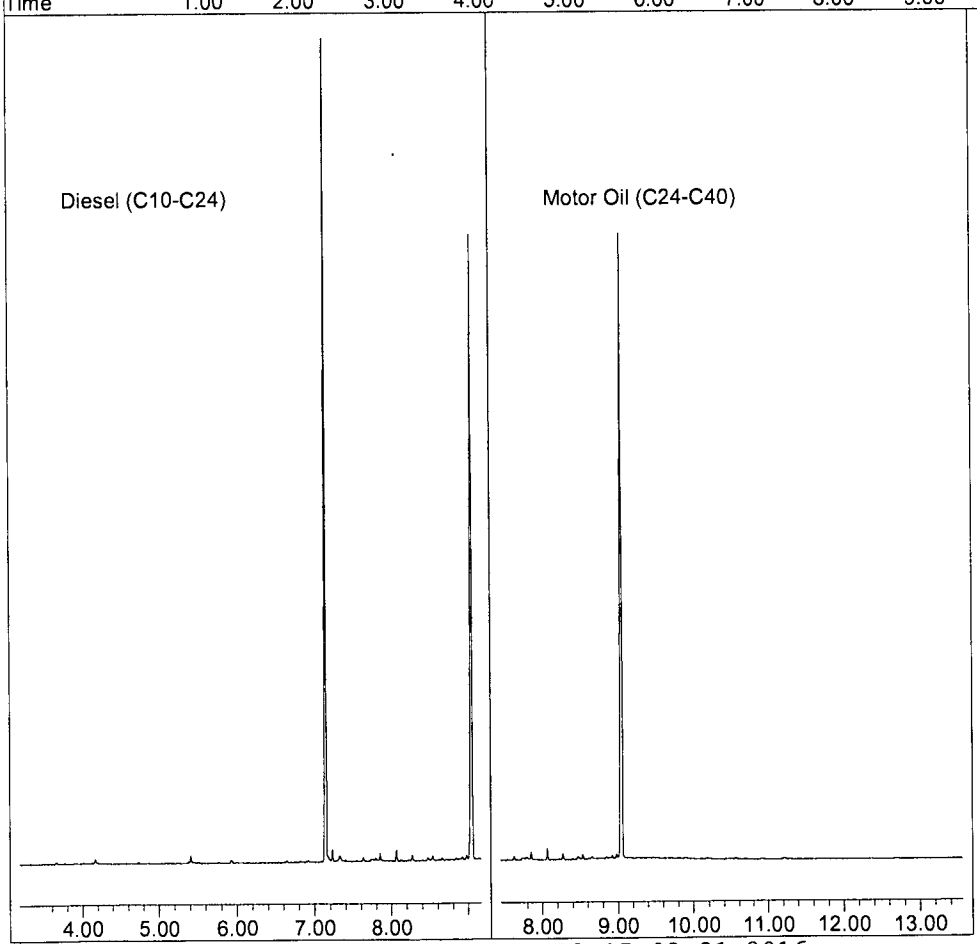
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.15	110399403	31.557	ppb
Surrogate Spike 40.000		Recovery =	78.89%	
5) SA Octacosane(S)	9.05	101940501	38.838	ppb
Surrogate Spike 40.000		Recovery =	97.10%	
Target Compounds				

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161220\1220034.D
Sample : AZ47498W18 2/1500





1220034.D DOC1103.M Thu Dec 22 15:02:21 2016

ORGANICS

Calibration Data

APPL, INC.

TPH Extractables
DOC1103

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 11/03/16
Matrix: Instrument: Apollo
Initials:

			1	2	3	4	5	6					Avg	%RSD		
Diesel:			1103004.D	1103011.D	1103006.D	1103007.D	1103008.D	1103009.D								
Motor Oil:			1028002.D	1028003.D	1028004.D	1028005.D	1028006.D	1028007.D								
		Compound	1	2	3	4	5	6					Avg	%RSD		
1	HATM	Diesel (C10-C24)	1713970	2056602	1625582	1697733	1643335	1625559					1727130	9.6	HATM	
2	HBTM	Motor Oil (C24-C40)	1562690	1603769	1282978	1340015	1321969	1245819					1392873	11	HBTM	
3	SC	Decanoic Acid(S)	436509	643644	711658	659596	590571	627574					611592	15	SC	
4	SA	Ortho-Terphenyl(S)		2687660	2255130	2296757	2215766	2205848					2332232	8.7	SA	
5	SA	Octacosane(S)	1736016	2067699	1697441	1704564	1657038	1636278					1749839	9.1	SA	
6																
7																
8																
9																
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1.5347542

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161103\1103004.D Vial: 4
Acq On : 11-3-16 9:45:14 Operator: DP
Sample : DIESEL 10ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

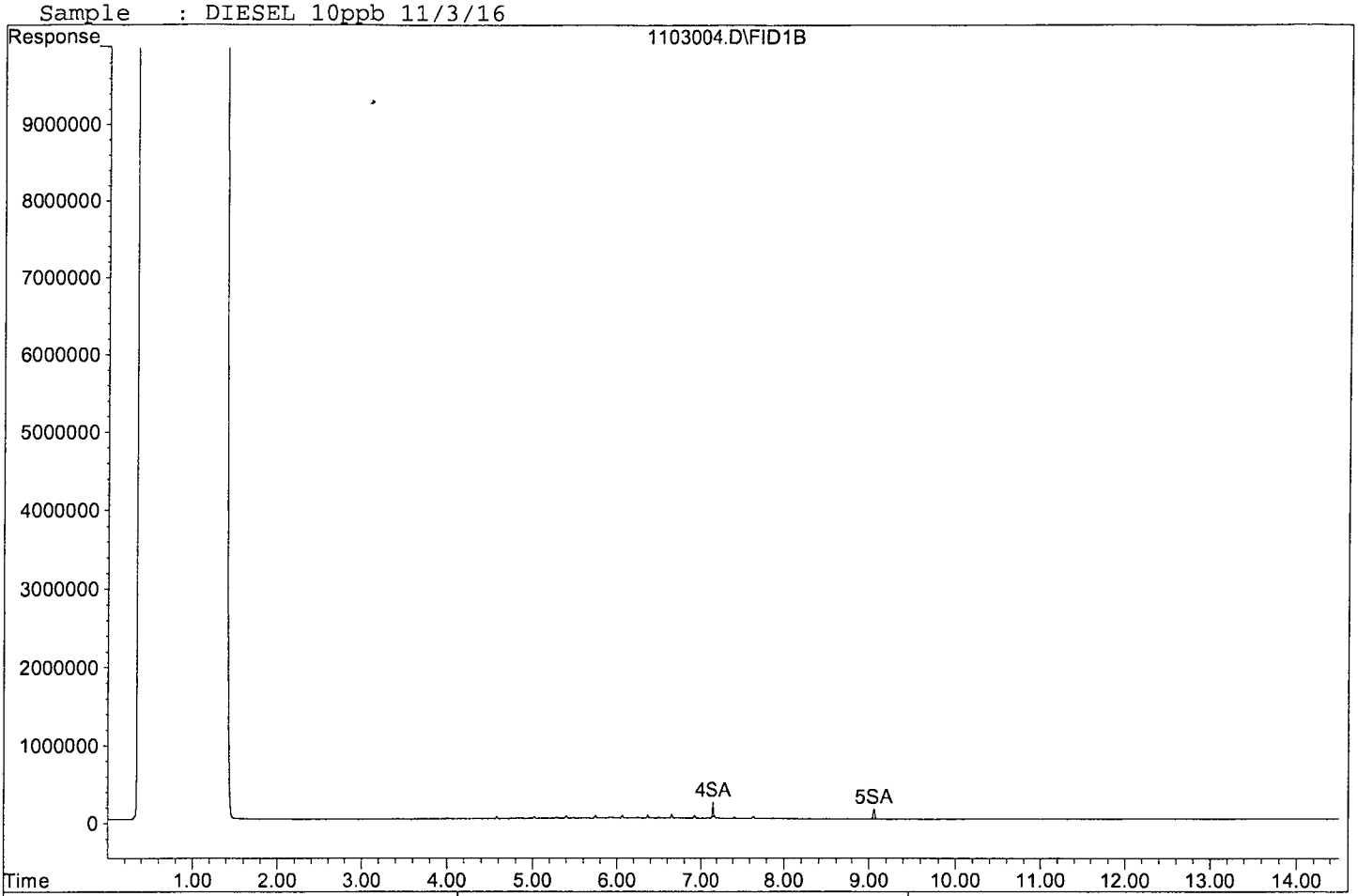
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

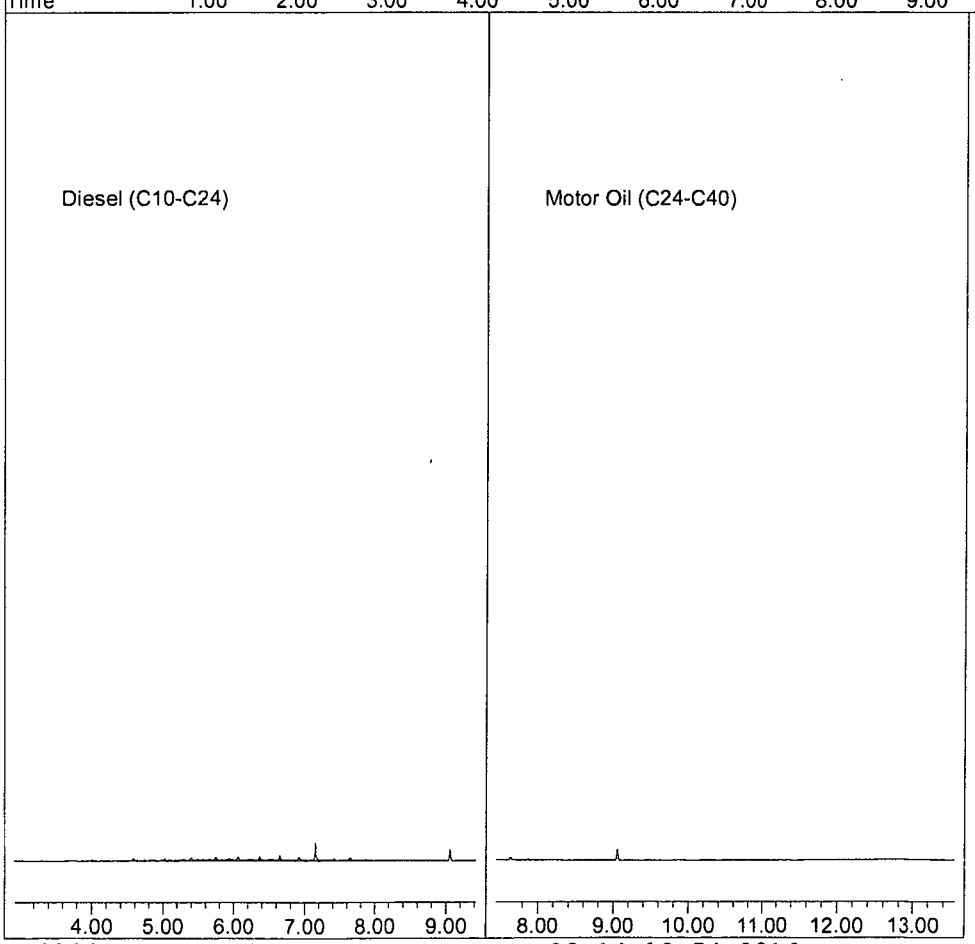
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.15	1320666	0.233 ppb
Surrogate Spike 30.000	Recovery =		0.78%
5) SA Octacosane(S)	9.06	1736016	0.492 ppb
Surrogate Spike 30.000	Recovery =		1.64%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	34279391	10.218 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103004.D
Sample : DIESEL 10ppb 11/3/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161103\1103011.D Vial: 11
Acq On : 11-3-16 12:56:47 Operator: DP
Sample : DIESEL 100ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multip1r: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

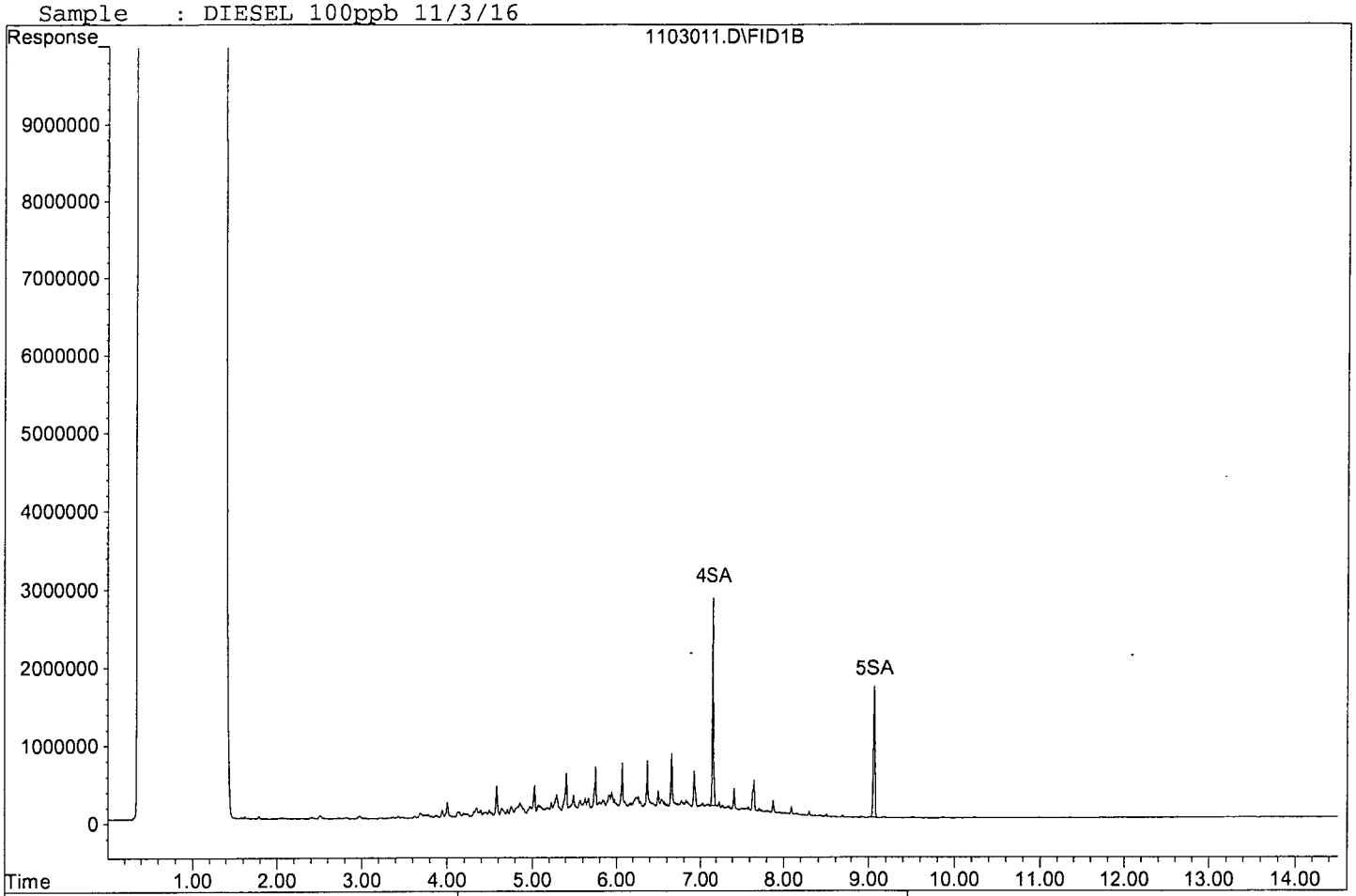
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Tit1e : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

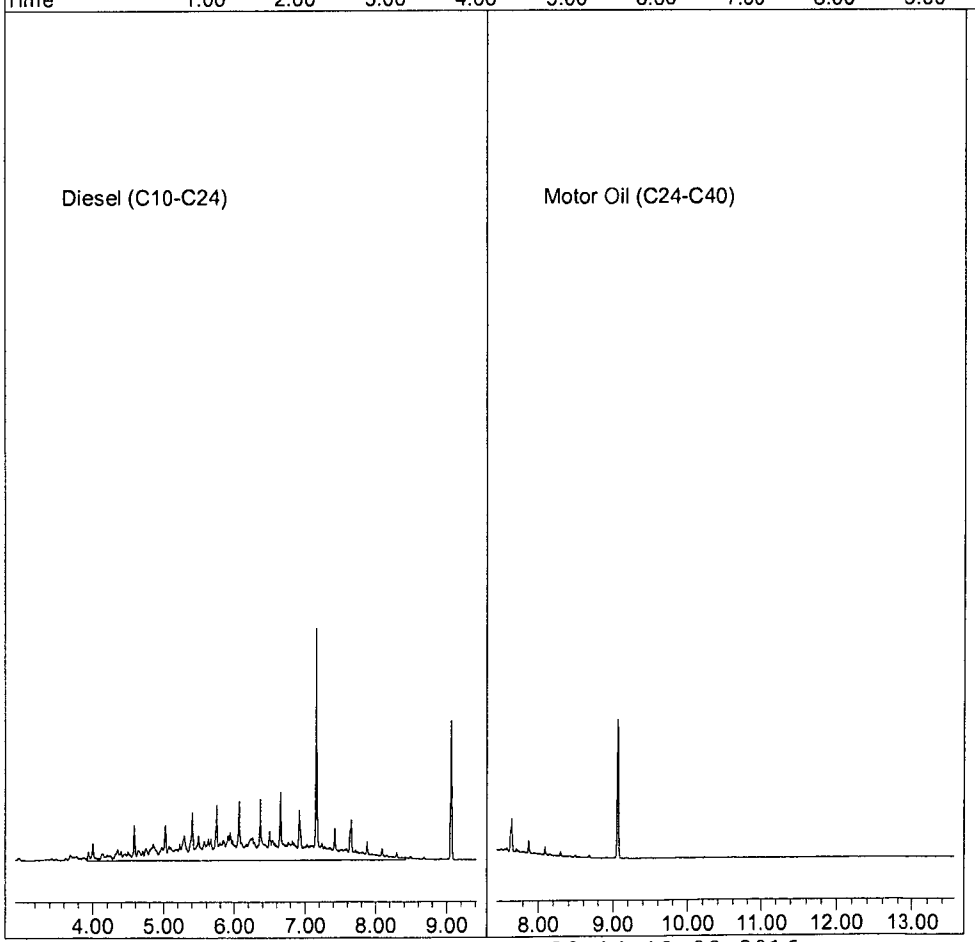
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.16	26876603	4.740	ppb
Surrogate Spike 30.000	Recovery =		15.80%	
5) SA Octacosane(S)	9.06	20676993	5.864	ppb
Surrogate Spike 30.000	Recovery =		19.55%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	411320381	122.610	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103011.D
Sample : DIESEL 100ppb 11/3/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103006.D Vial: 6
Acq On : 11-3-16 10:26:16 Operator: DP
Sample : DIESEL 400ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

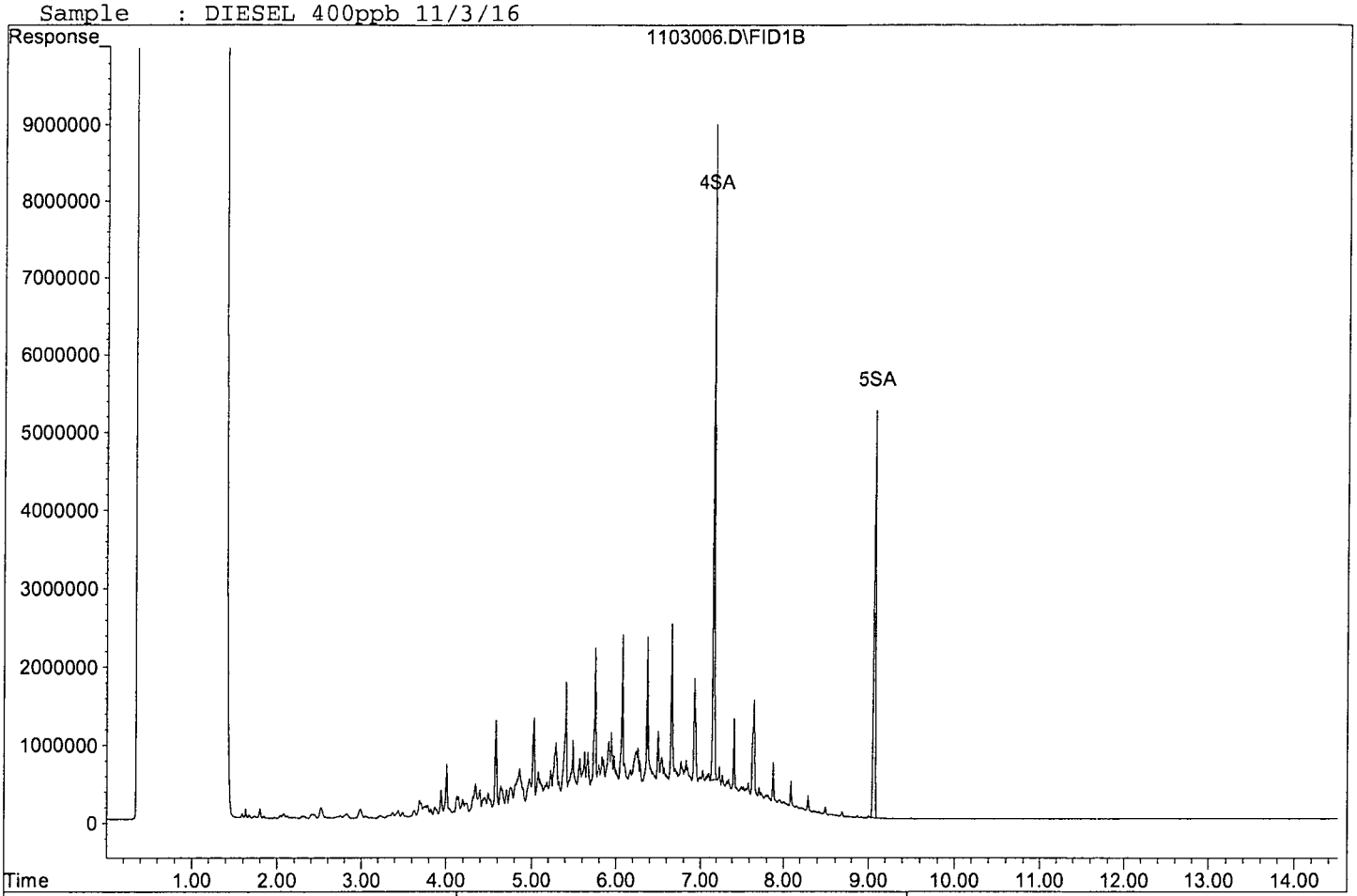
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

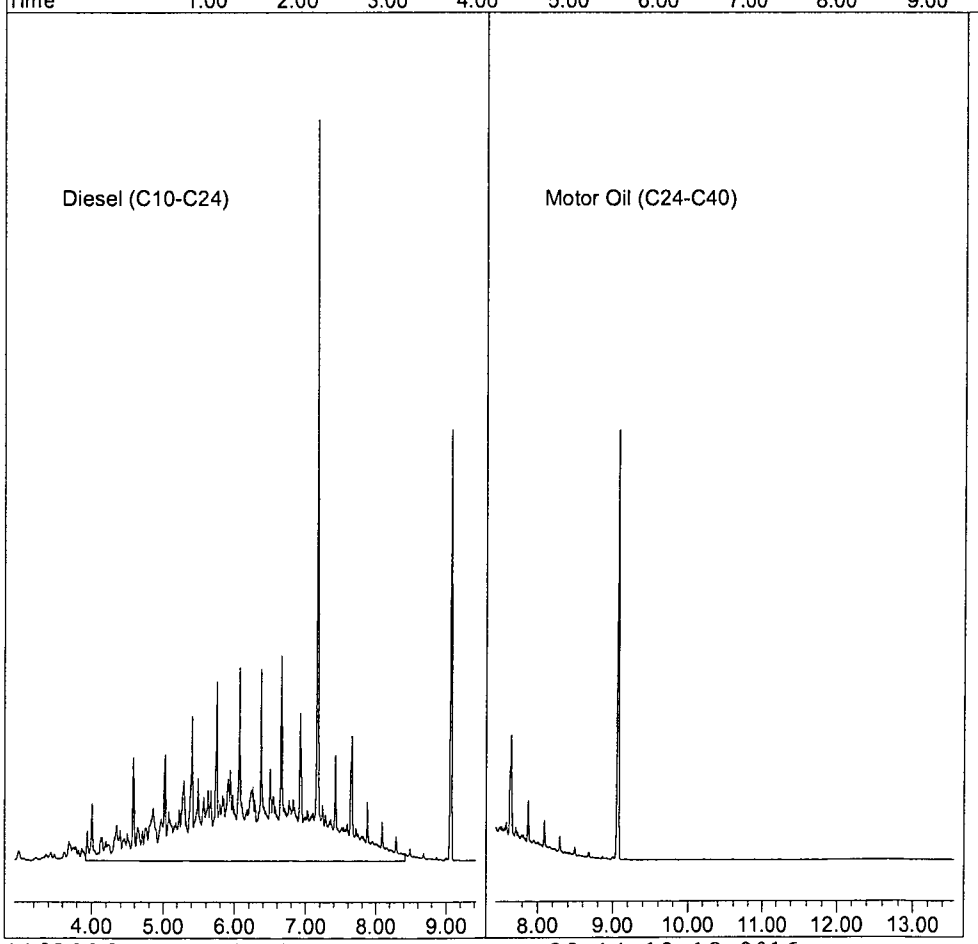
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.16	90205209	15.909 ppb
Surrogate Spike 30.000		Recovery =	53.03%
5) SA Octacosane(S)	9.07	67897660	19.256 ppb
Surrogate Spike 30.000		Recovery =	64.19%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	1300465223	387.653 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103006.D
Sample : DIESEL 400ppb 11/3/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103007.D Vial: 7
Acq On : 11-3-16 10:46:56 Operator: DP
Sample : DIESEL 600ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

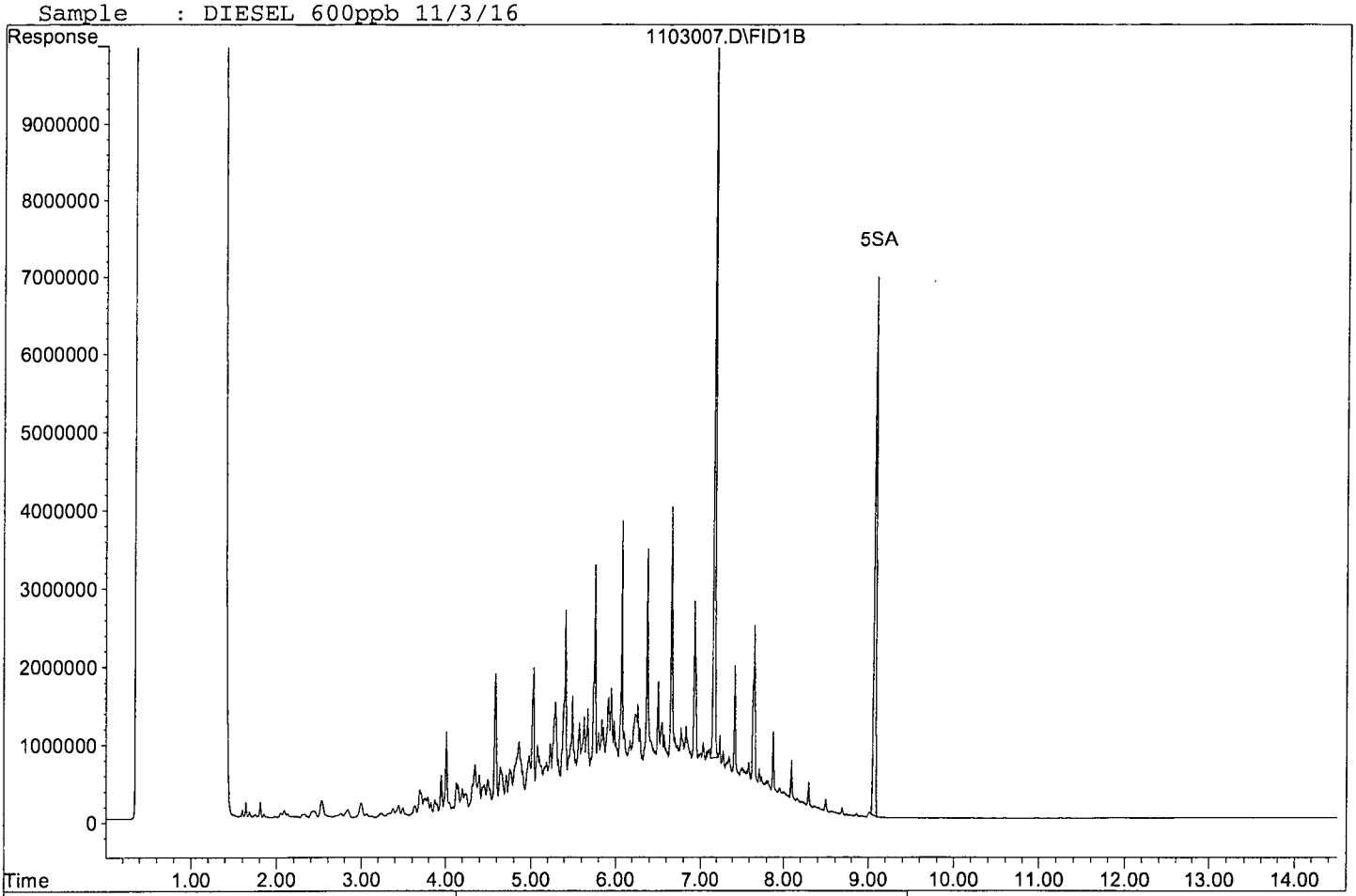
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

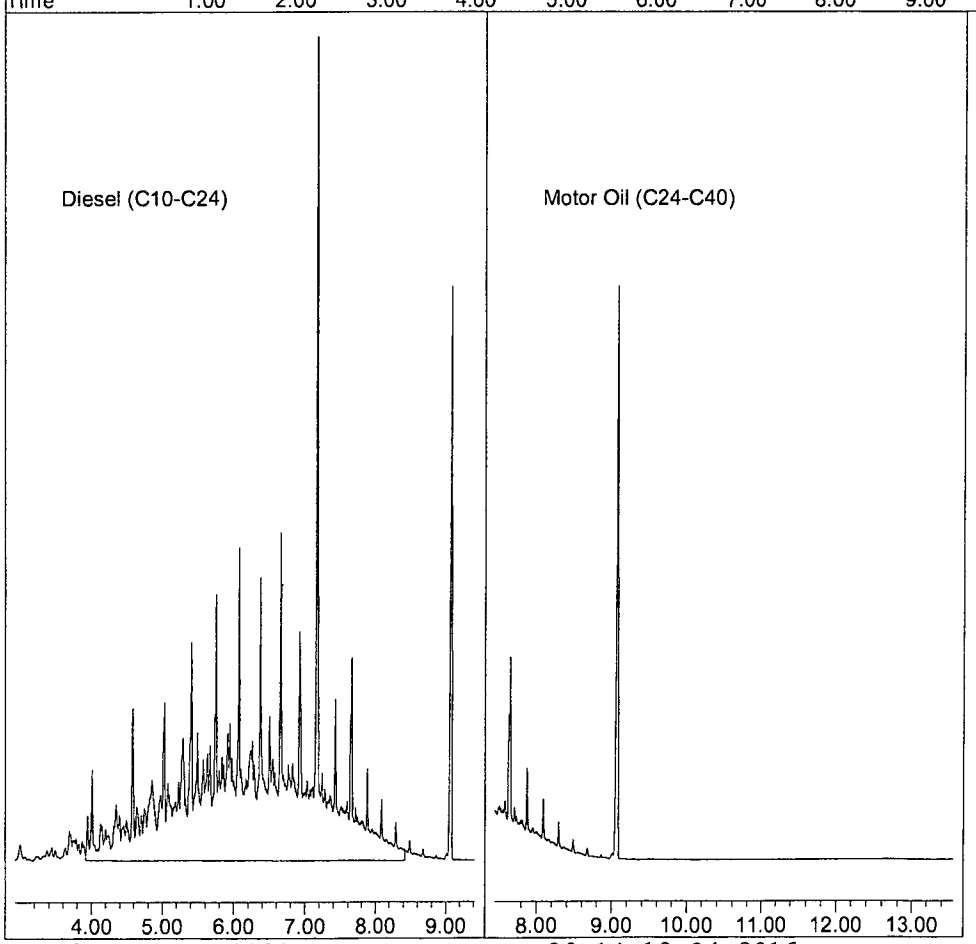
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.17	137805437	24.304 ppb
Surrogate Spike 30.000		Recovery =	81.01%
5) SA Octacosane(S)	9.07	102273844	29.005 ppb
Surrogate Spike 30.000		Recovery =	96.68%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	2037280173	607.288 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103007.D
Sample : DIESEL 600ppb 11/3/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103008.D Vial: 8
Acq On : 11-3-16 11:07:39 Operator: DP
Sample : DIESEL 800ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

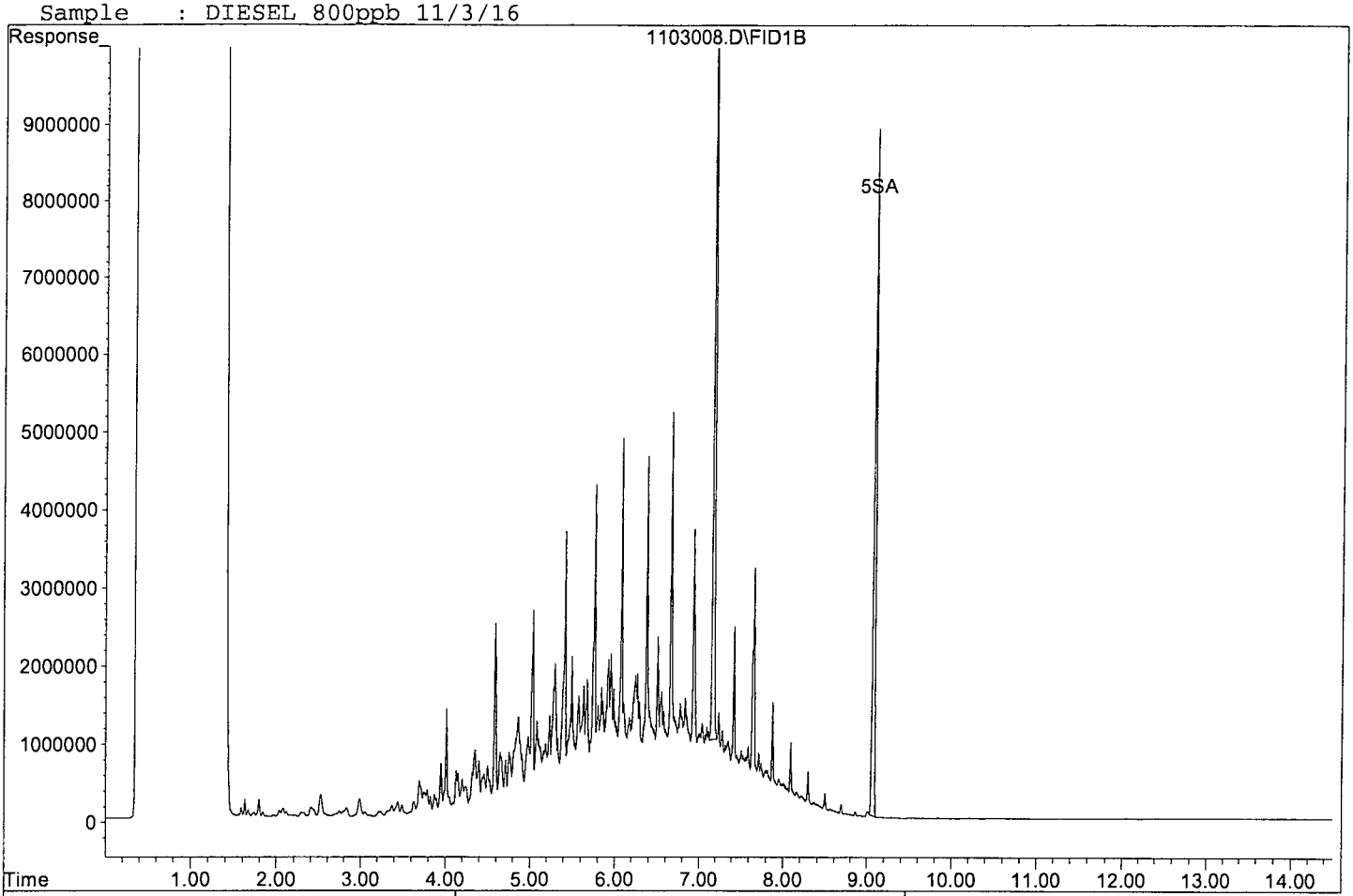
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

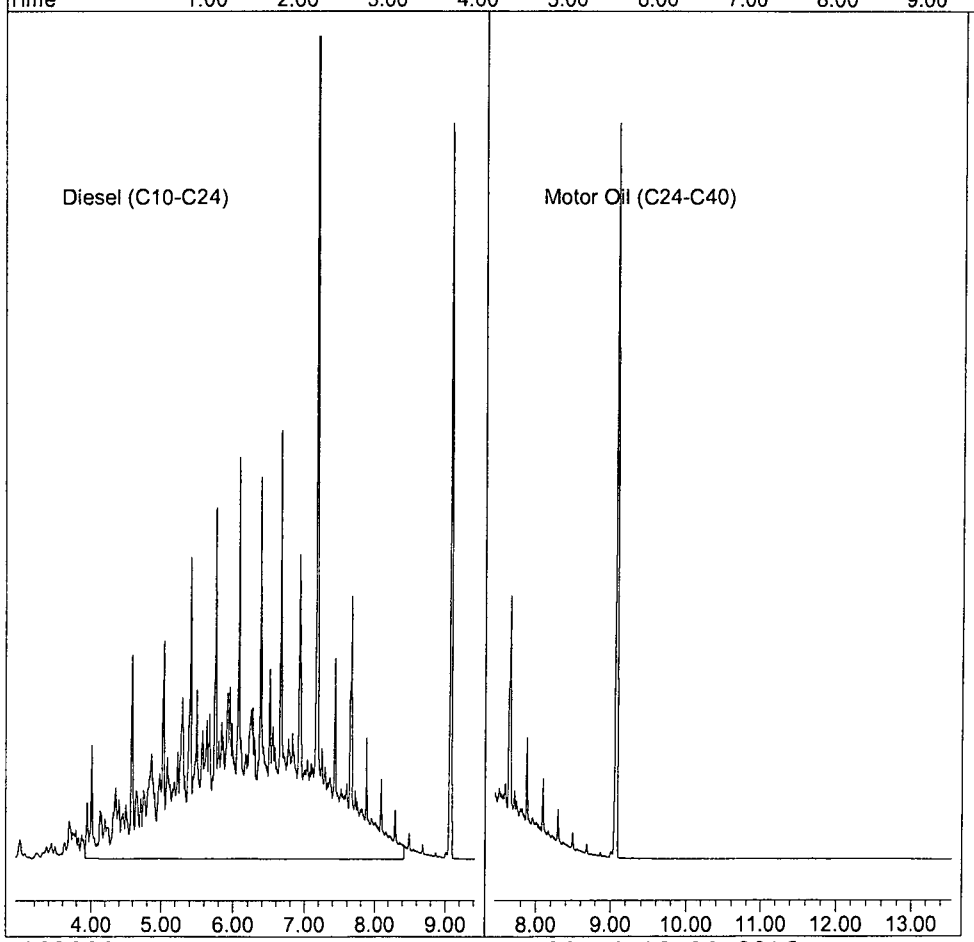
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.17	177261246	31.263 ppb
Surrogate Spike 30.000		Recovery =	104.21%
5) SA Octacosane(S)	9.08	132563050	37.596 ppb
Surrogate Spike 30.000		Recovery =	125.32%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	2629335633	783.773 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103008.D
Sample : DIESEL 800ppb 11/3/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103009.D Vial: 9
Acq On : 11-3-16 11:28:31 Operator: DP
Sample : DIESEL 1000ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

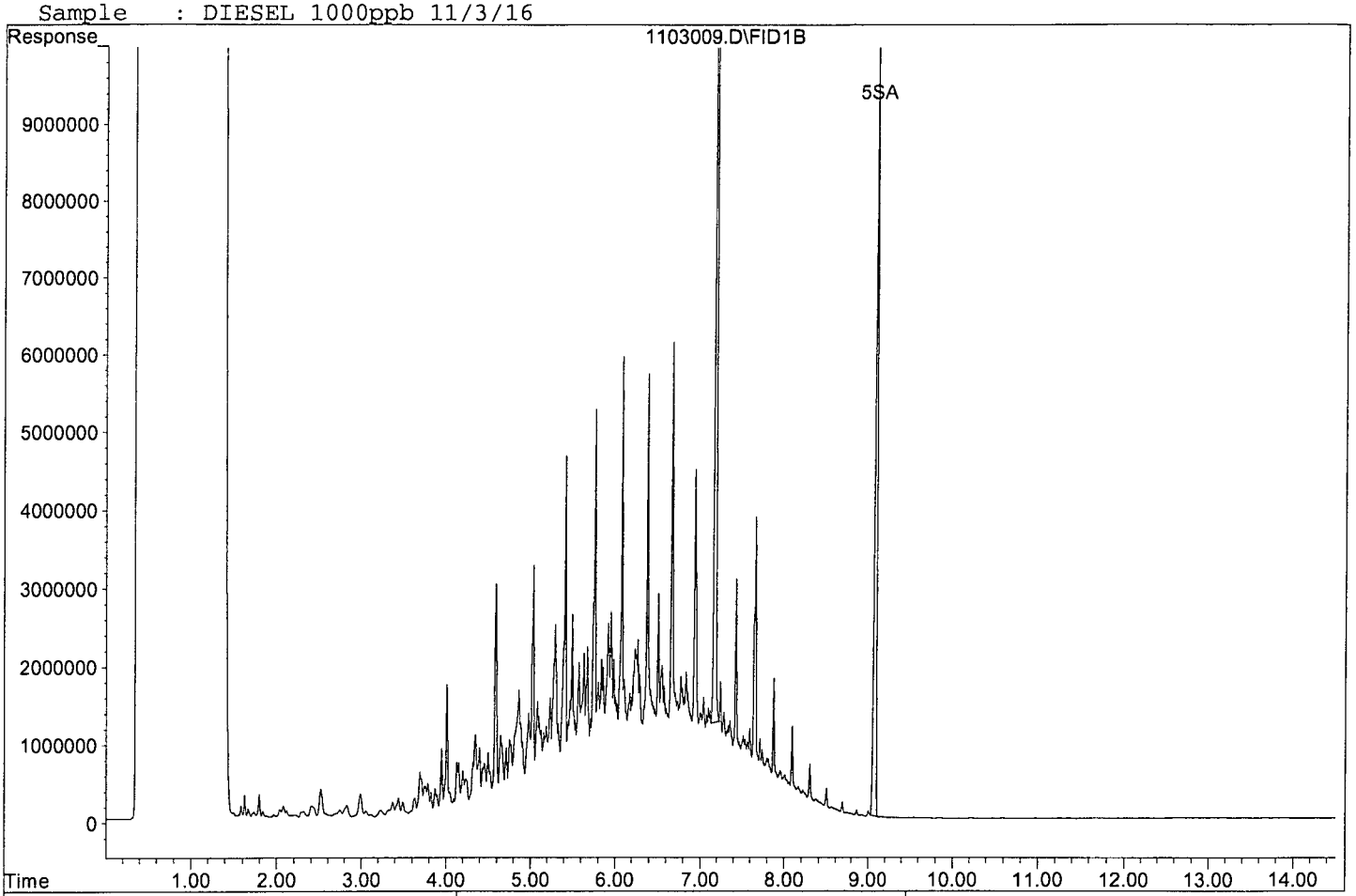
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

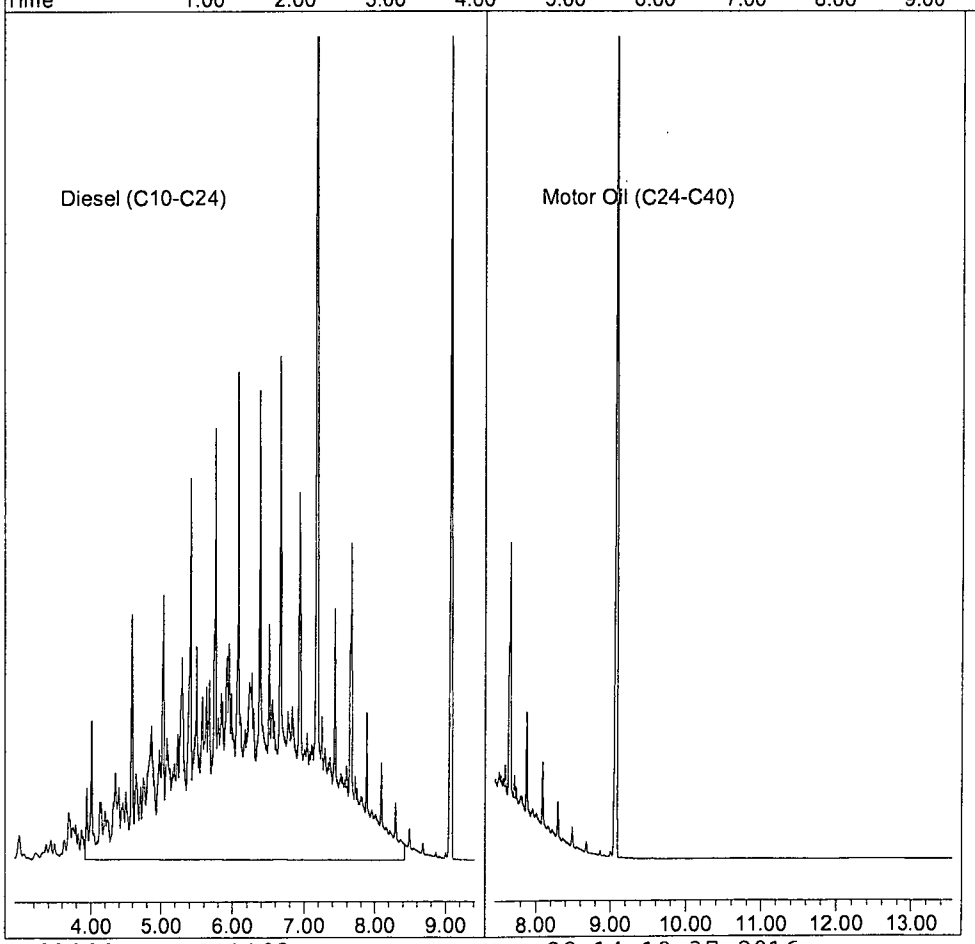
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.18	220584770	38.903 ppb
Surrogate Spike 30.000		Recovery =	129.68%
5) SA Octacosane(S)	9.08	163627822	46.406 ppb
Surrogate Spike 30.000		Recovery =	154.69%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	3251118324	969.119 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103009.D
Sample : DIESEL 1000ppb 11/3/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028002.D Vial: 2
Acq On : 10-28-16 9:07:30 Operator: DP
Sample : MO 20ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:24 2016 Quant Results File: DOC1103.RES

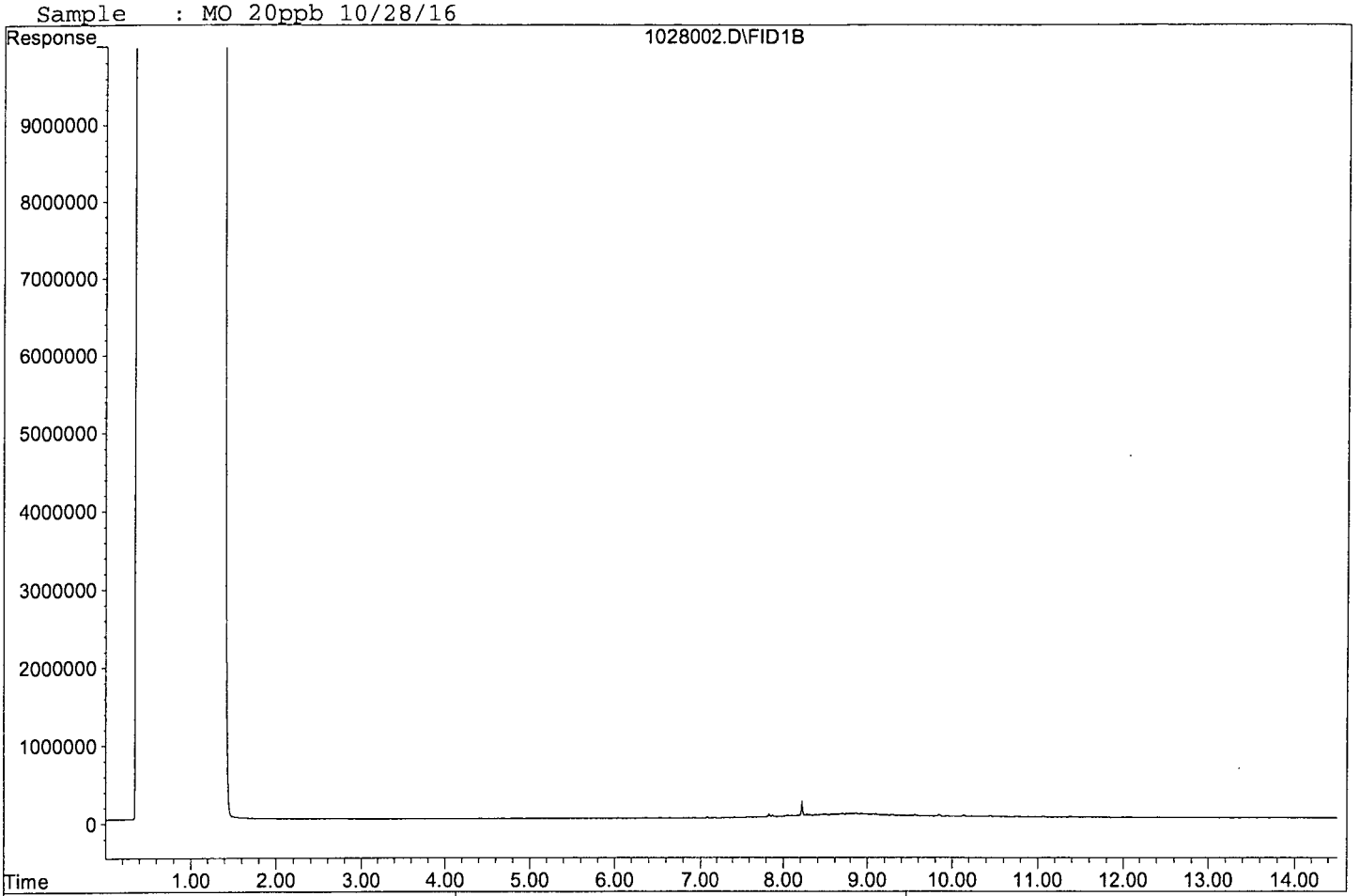
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

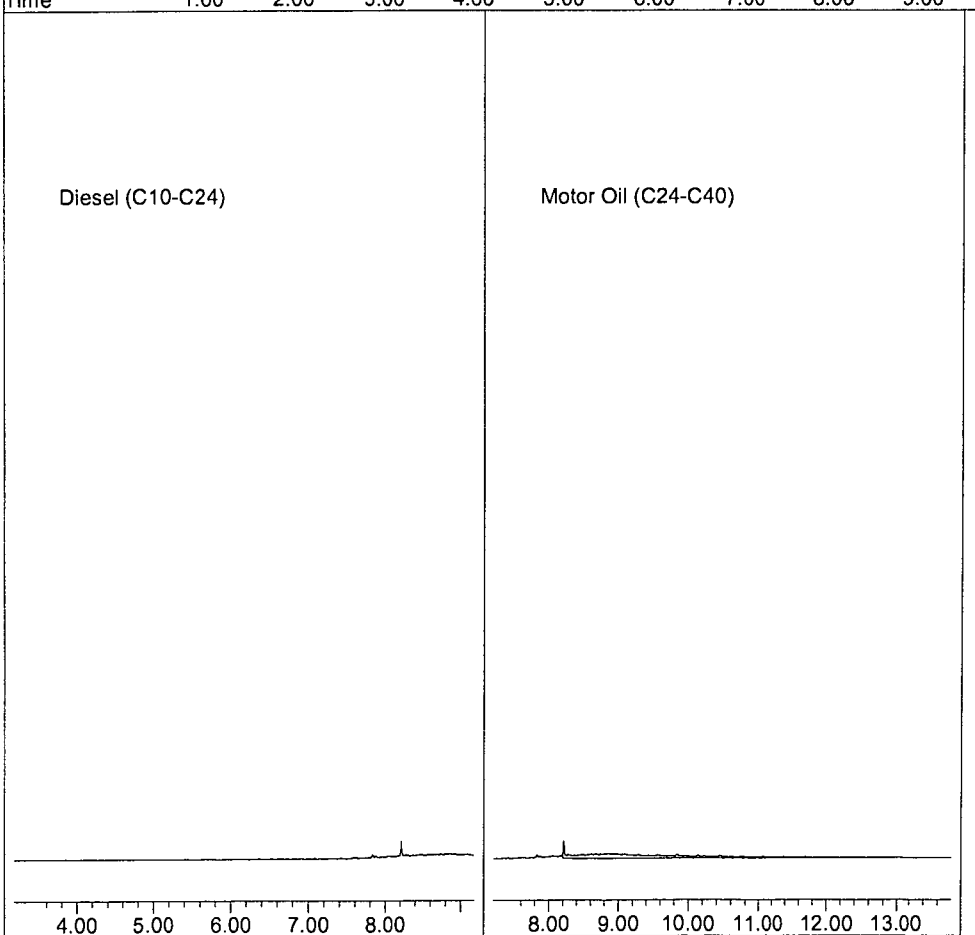
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	62507592	22.438 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028002.D
Sample : MO 20ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028003.D Vial: 3
Acq On : 10-28-16 9:28:13 Operator: DP
Sample : MO 50ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:24 2016 Quant Results File: DOC1103.RES

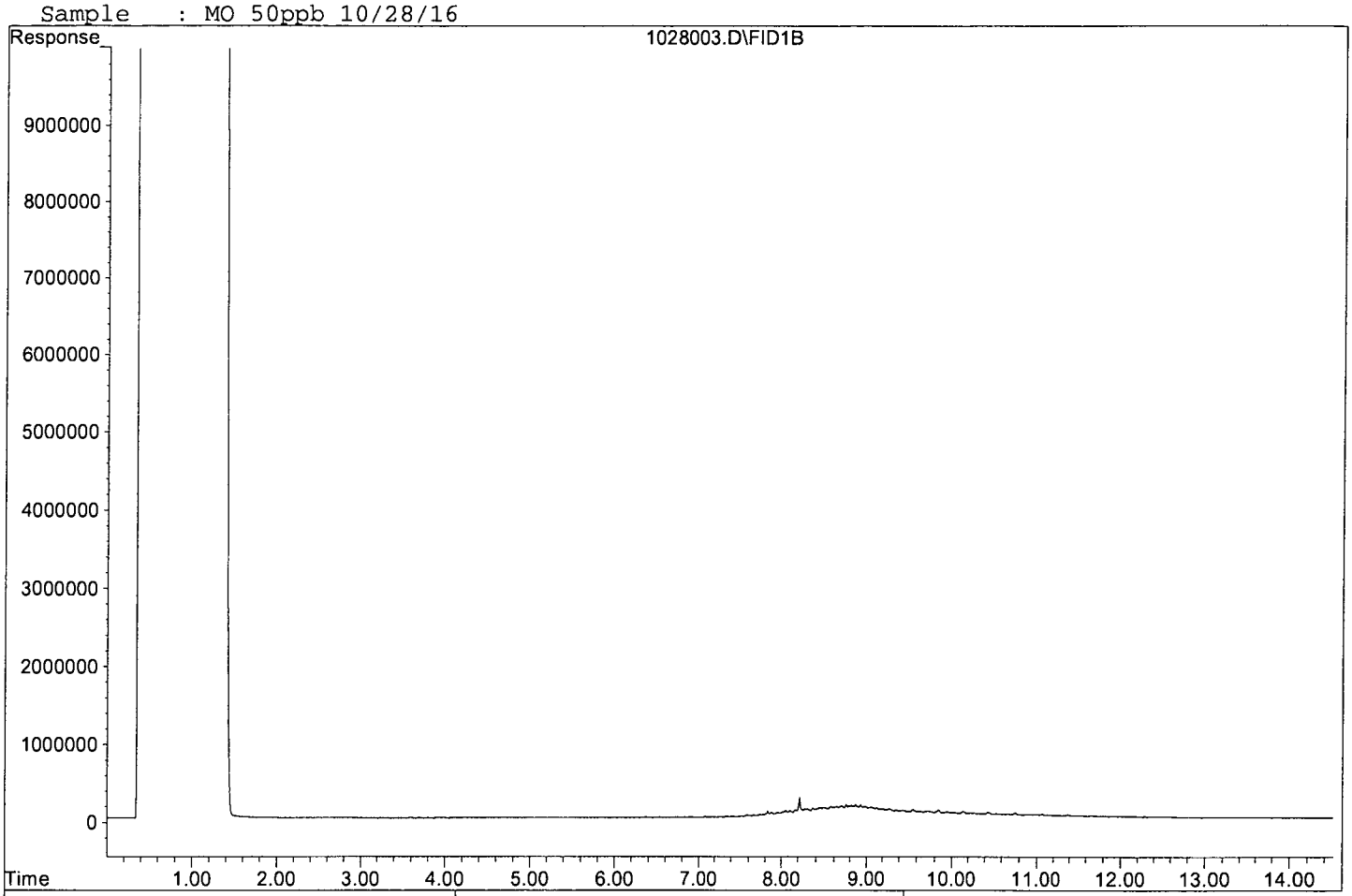
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

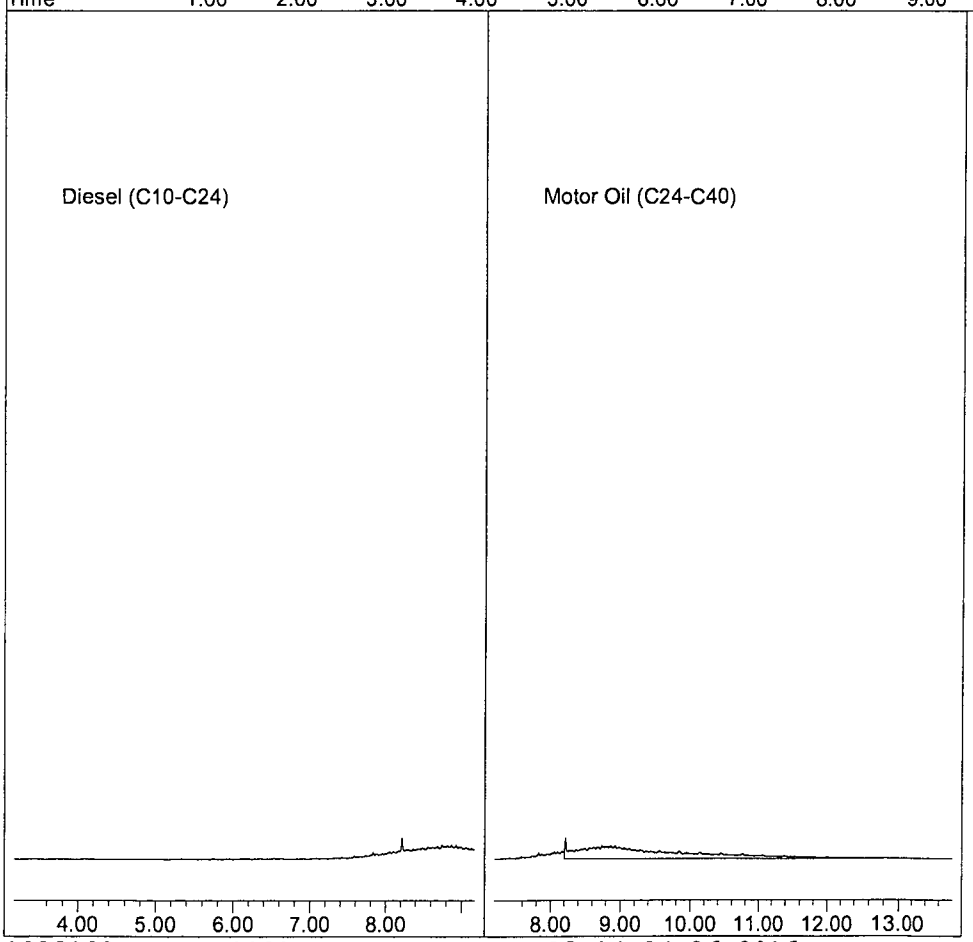
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	160376925	57.571 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028003.D
Sample : MO 50ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028004.D Vial: 4
Acq On : 10-28-16 9:49:06 Operator: DP
Sample : MO 250ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:24 2016 Quant Results File: DOC1103.RES

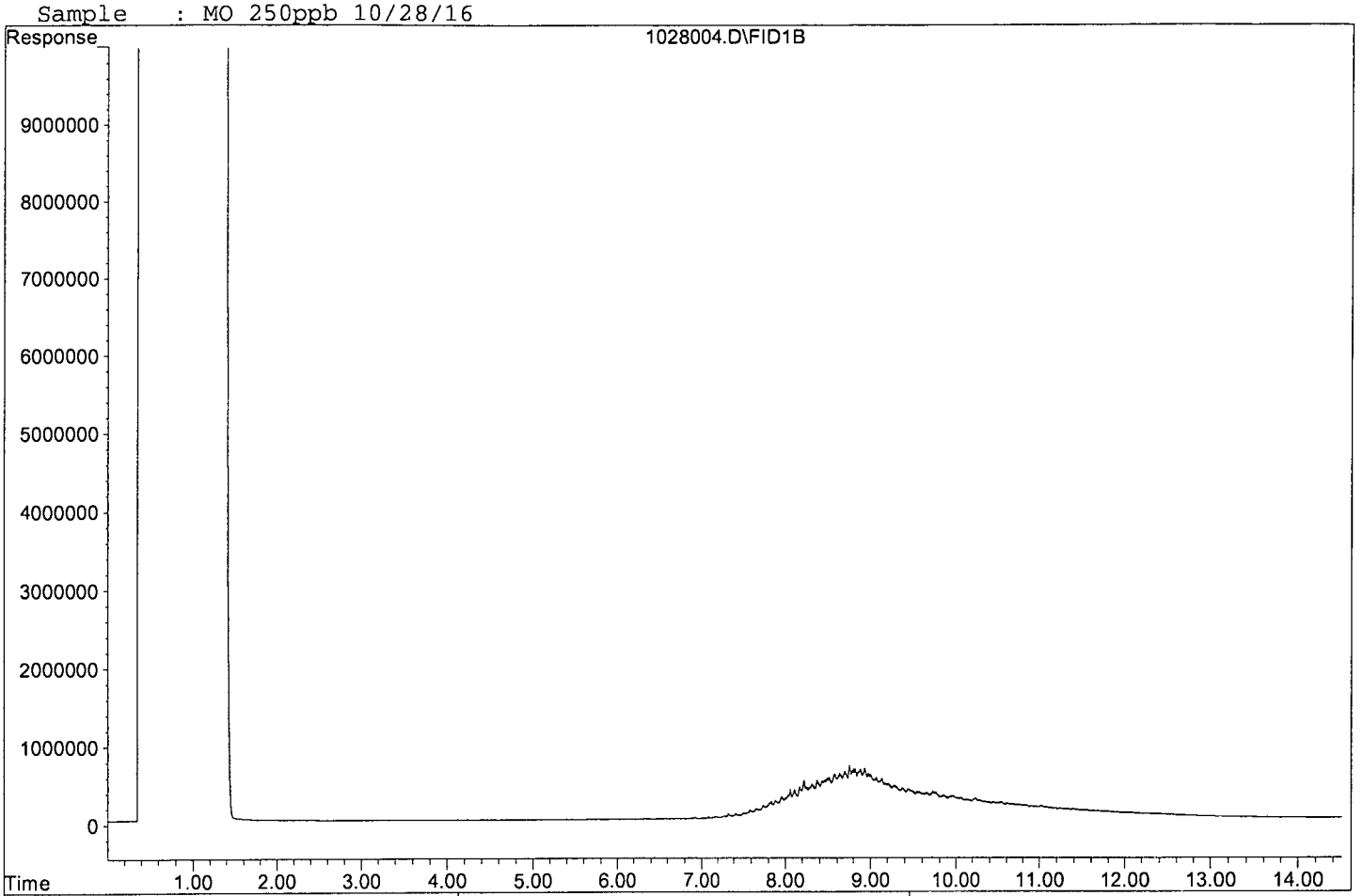
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

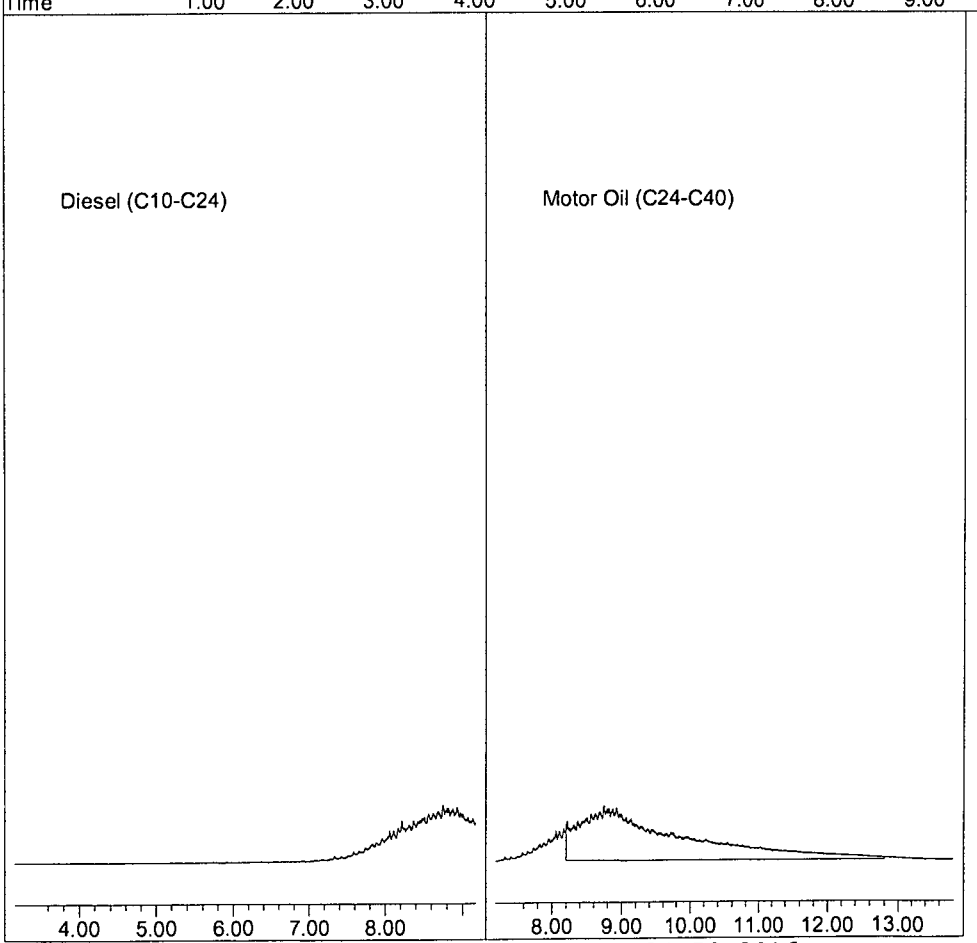
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
Target Compounds				
2) HBTM Motor Oil (C24-C40)	10.50	641488837	230.275	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028004.D
Sample : MO 250ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028005.D Vial: 5
Acq On : 10-28-16 10:09:58 Operator: DP
Sample : MO 1000ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:25 2016 Quant Results File: DOC1103.RES

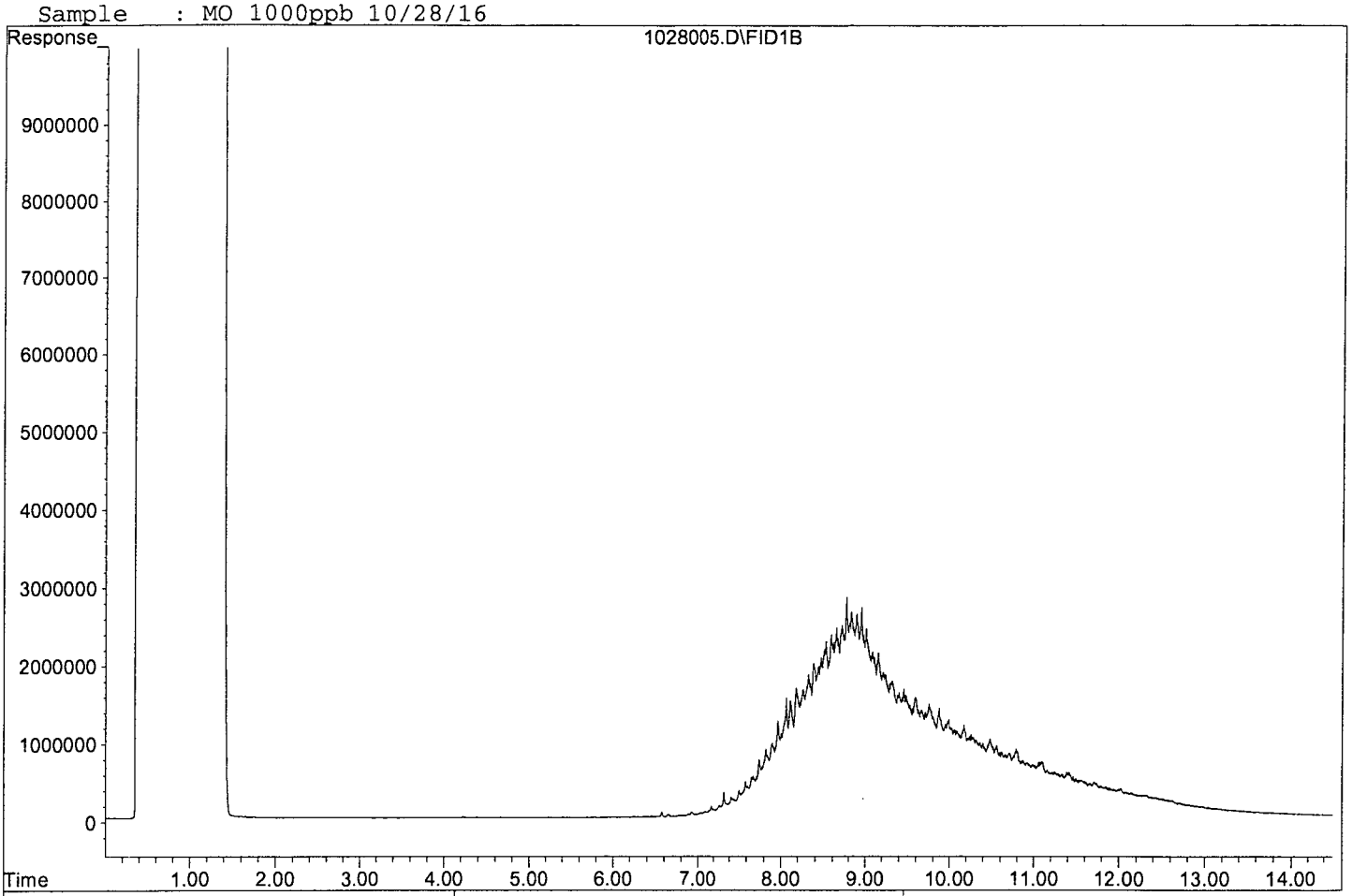
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

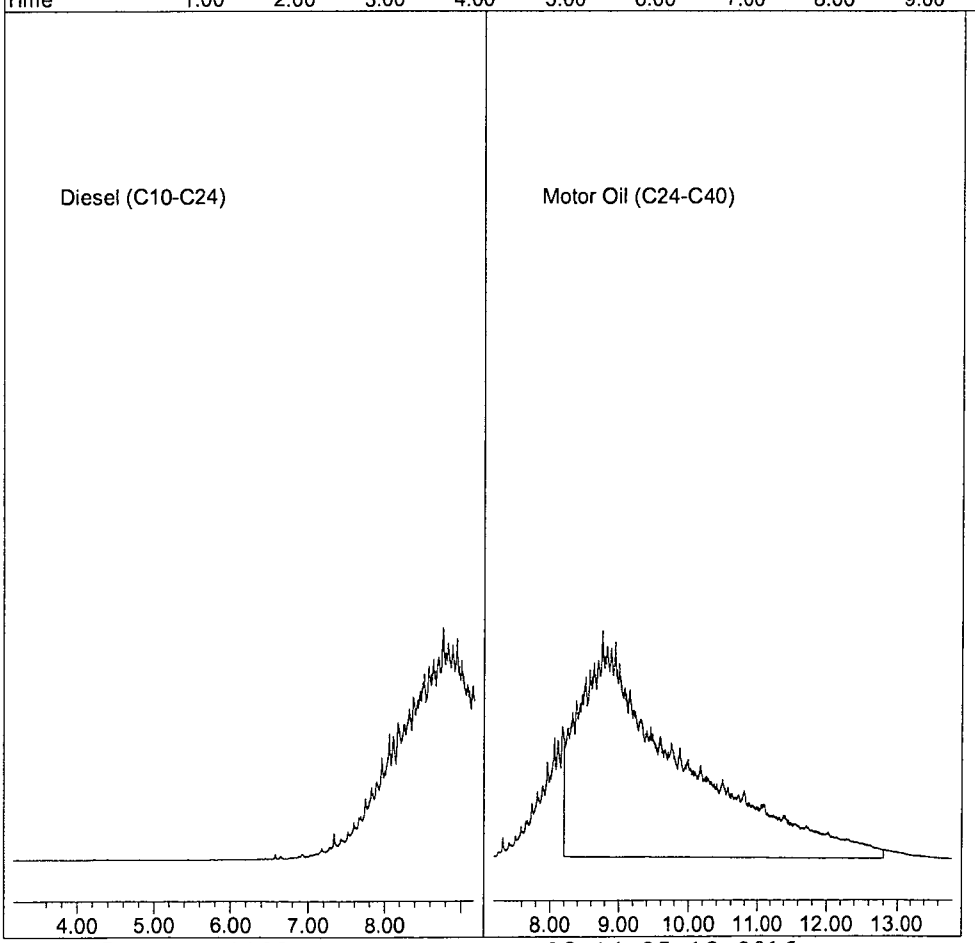
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	2680029704	962.051 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028005.D
Sample : MO 1000ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028006.D Vial: 6
Acq On : 10-28-16 10:30:51 Operator: DP
Sample : MO 1500ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:25 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

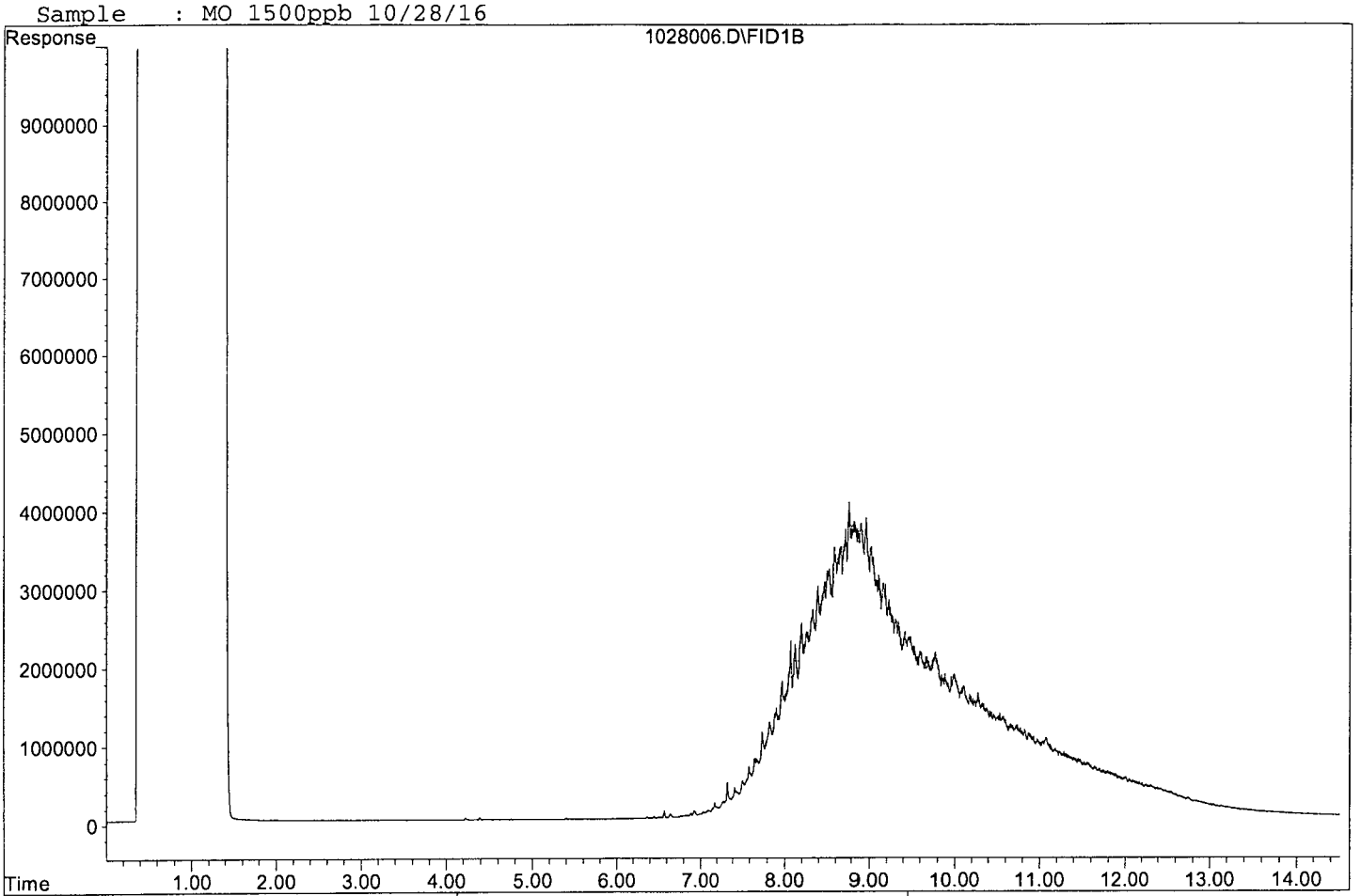
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

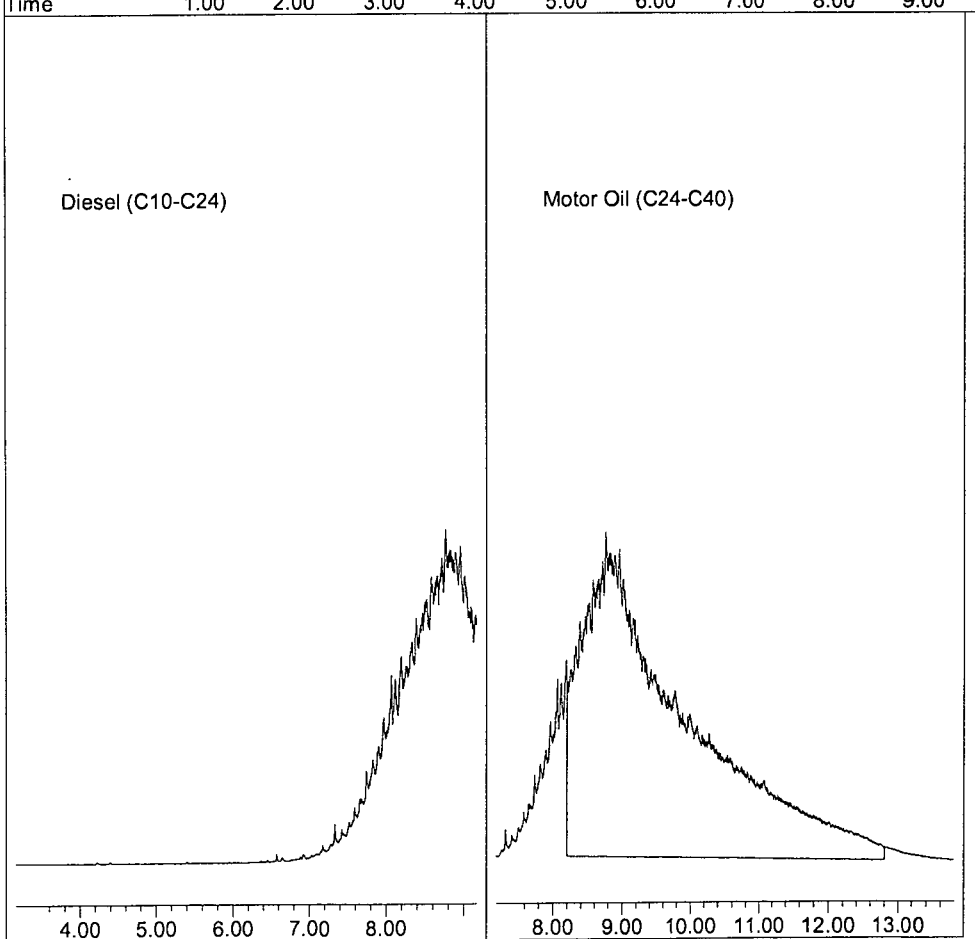
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
Target Compounds				
2) HBTM Motor Oil (C24-C40)	10.50	3965906010	1423.642	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161028\1028006.D
Sample : MO 1500ppb 10/28/16





1028006.D DOC1103.M Mon Nov 28 14:25:34 2016

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028007.D Vial: 7
Acq On : 10-28-16 10:51:50 Operator: DP
Sample : MO 2000ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:25 2016 Quant Results File: DOC1103.RES

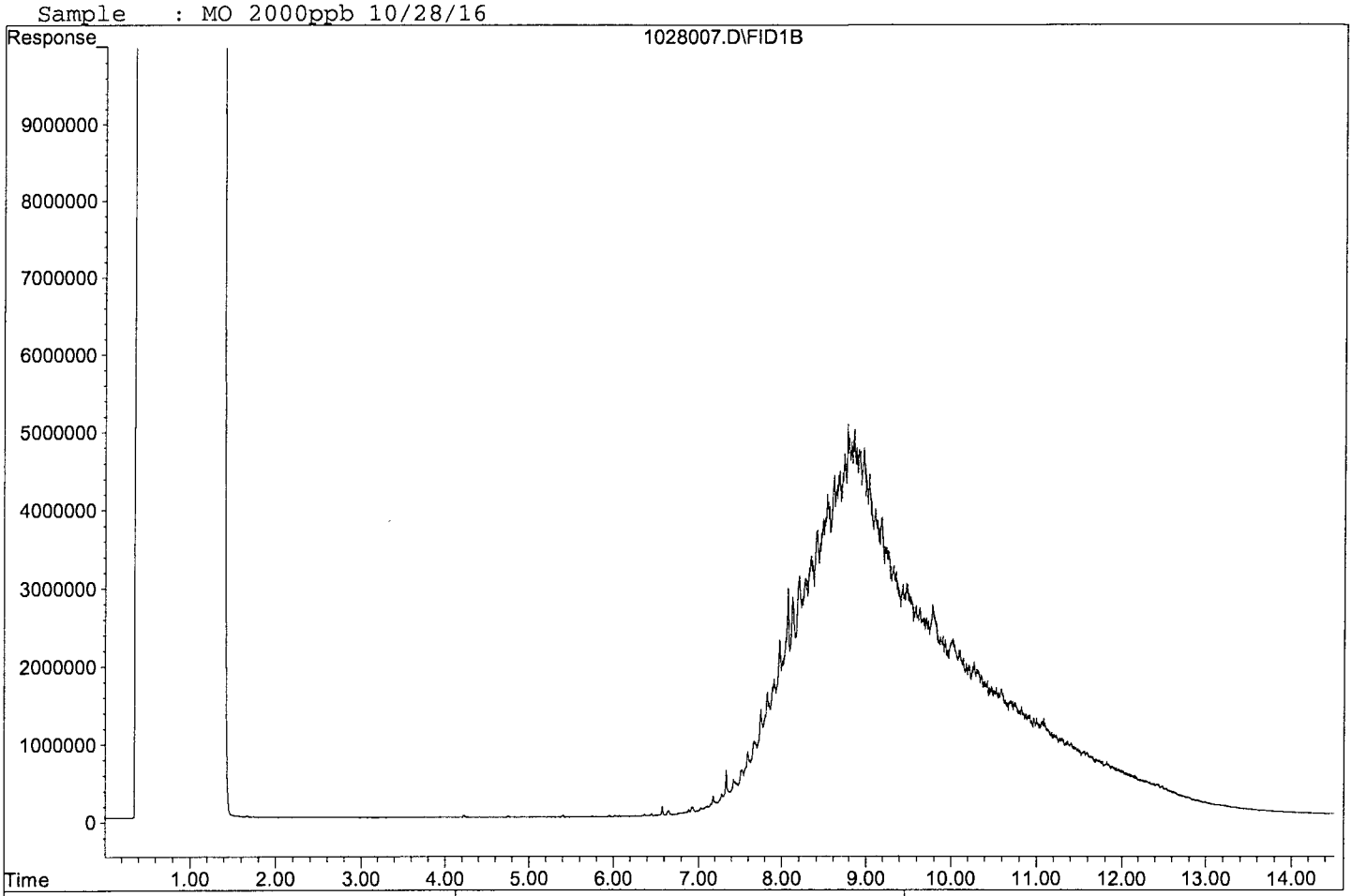
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

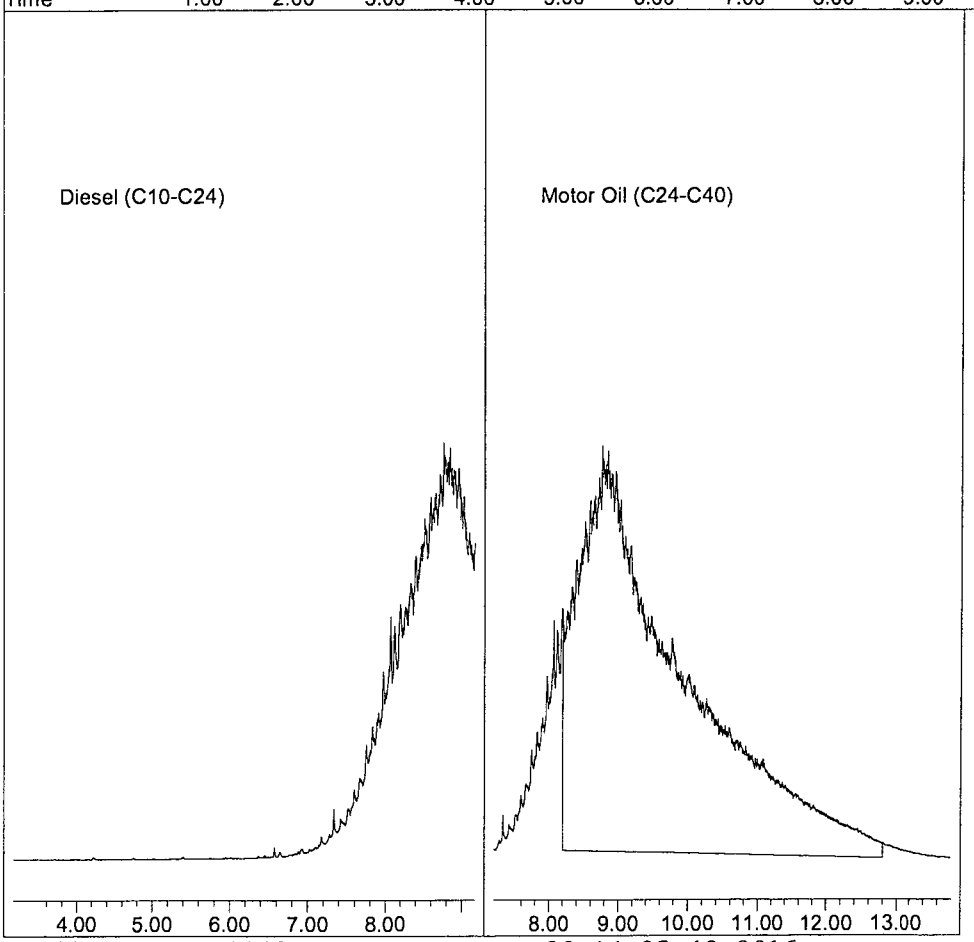
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
Target Compounds				
2) HBTM Motor Oil (C24-C40)	10.50	4983276169	1788.848	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028007.D
Sample : MO 2000ppb 10/28/16





TPH Extractables
DOC1103

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/03/16
Instrument: Apollo
Initial Cal. Date: 11/03/16
Data File: 1103012.D 1028008.D
Diesel Motor Oil

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C24)	1727130	1667670	3.4	HATM	
2	HBTM	Motor Oil (C24-C40)	1392870	1239910	11	HBTM	
3							
4							
5							
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36							
37							
38							
39							
40							
		Average			7.2		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103012.D Vial: 12
Acq On : 11-3-16 13:25:11 Operator: DP
Sample : DIESEL-SS 400ppb 8/1/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 15:21 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SC Decanoic Acid(S)	5.67	4681185	3.827 ppb
Surrogate Spike 48.000	Recovery =		7.97%
4) SA Ortho-Terphenyl(S)	7.18	9886456	2.120 ppb
Surrogate Spike 30.000	Recovery =		7.07%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	1345831567	389.615 ppb
2) HBTM Motor Oil (C24-C40)	10.50	43170153	15.497 ppb

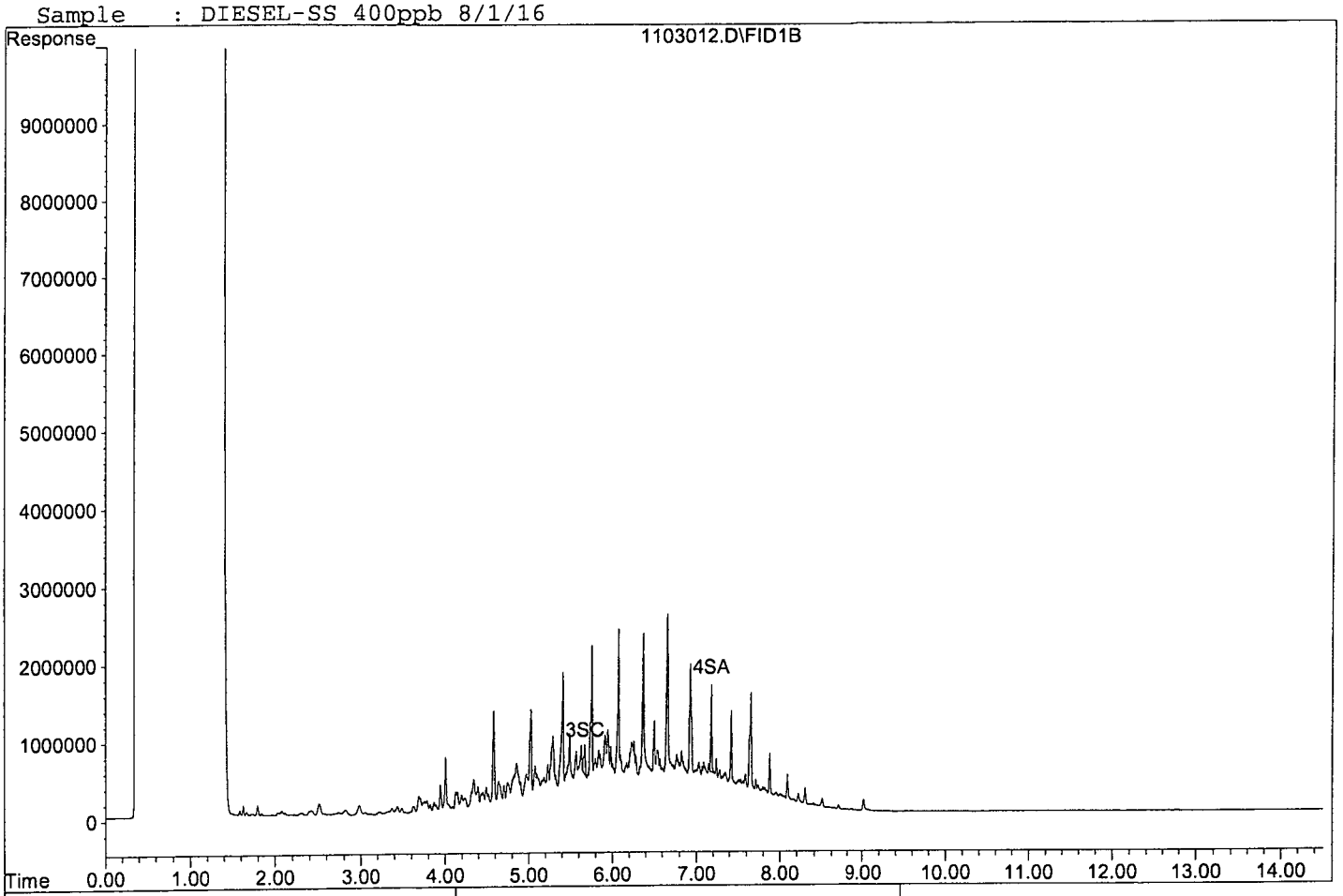
algorithm check: $\frac{1345831567 \times 1}{1727130 \times 2} = 389.6150165$

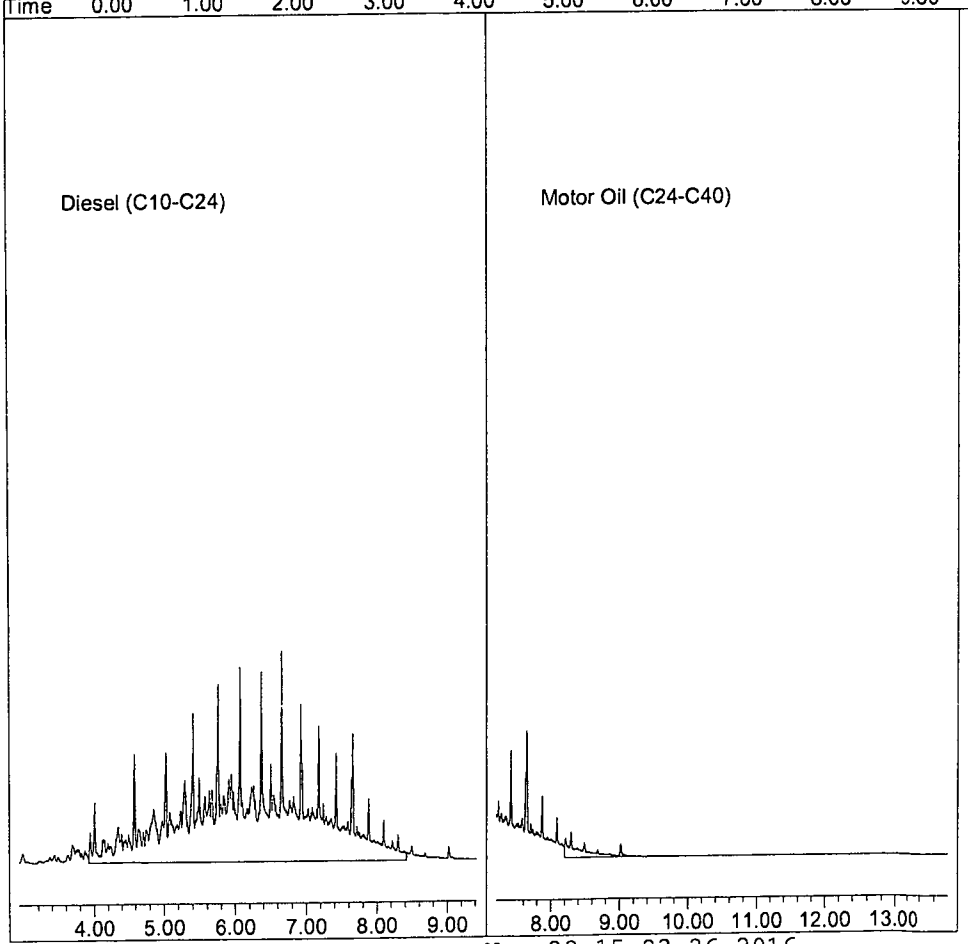
D.P. 11/28/16

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161103\1103012.D
Sample : DIESEL-SS 400ppb 8/1/16





1103012.D DOC1103.M Mon Nov 28 15:22:26 2016

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161028\1028008.D Vial: 8
Acq On : 10-28-16 11:12:44 Operator: DP
Sample : MO SS 1000ppb 7/6/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 15:22 2016 Quant Results File: DOC1103.RES

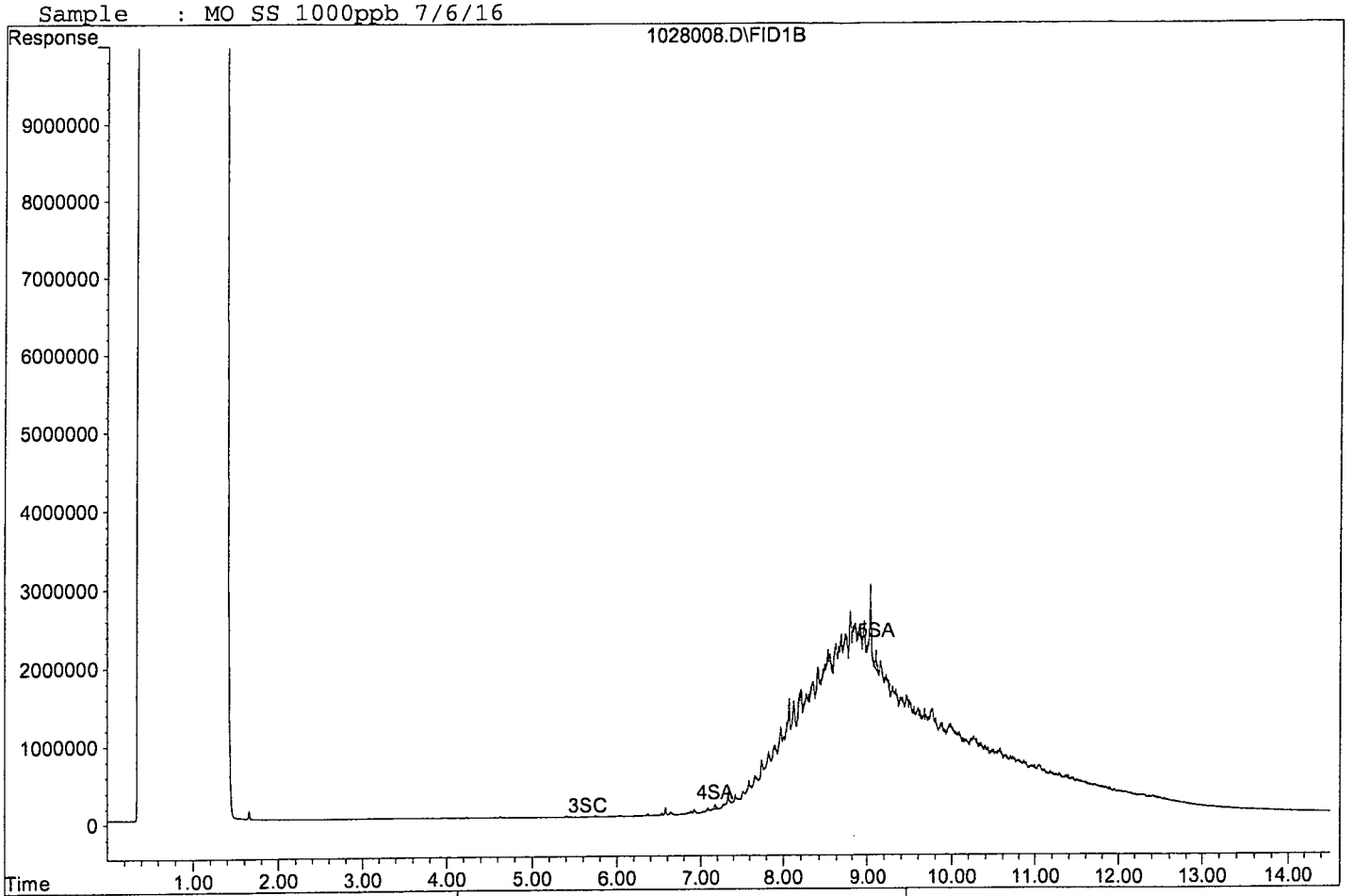
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

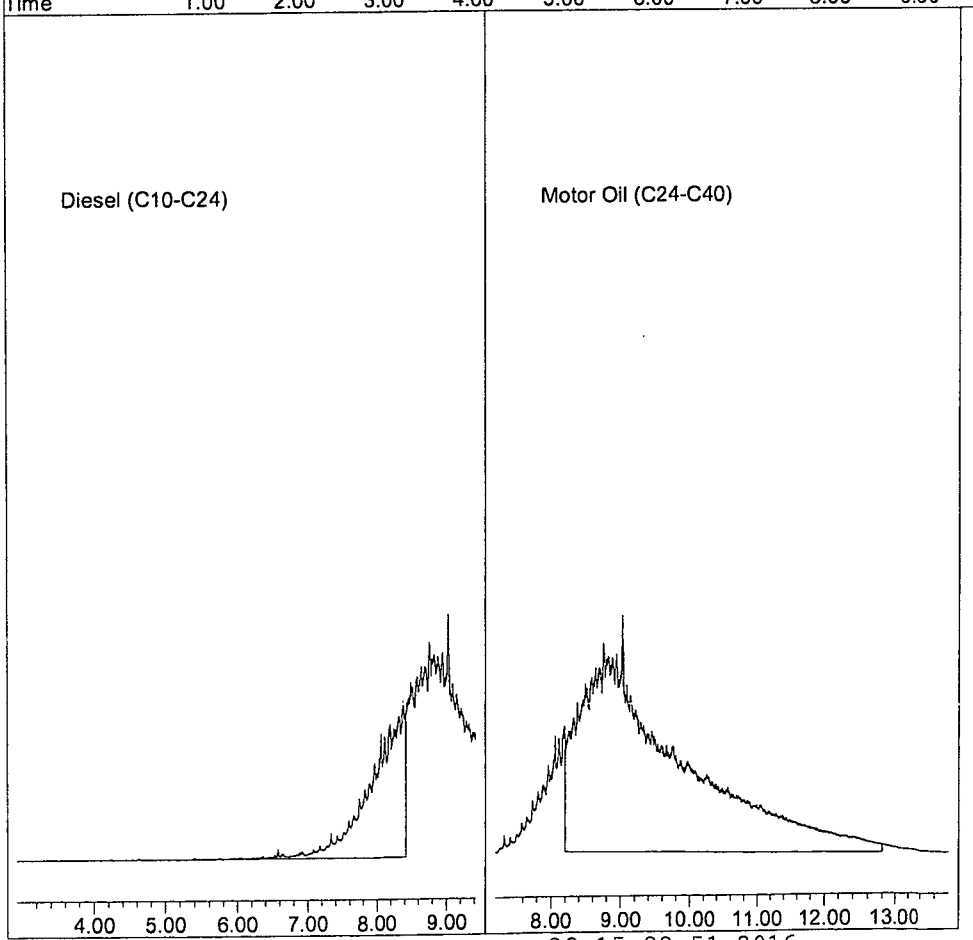
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SC Decanoic Acid(S)	5.65	6816	0.006 ppb
Surrogate Spike 48.000	Recovery	=	0.01%
4) SA Ortho-Terphenyl(S)	7.17	747984	0.160 ppb
Surrogate Spike 30.000	Recovery	=	0.53%
5) SA Octacosane(S)	9.09	2492290	0.712 ppb
Surrogate Spike 30.000	Recovery	=	2.37%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	603419098	174.688 ppb
2) HBTM Motor Oil (C24-C40)	10.50	2511616588	901.596 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028008.D
Sample : MO SS 1000ppb 7/6/16





1028008.D DOC1103.M Mon Nov 28 15:22:51 2016

TPH Extractables
DOC1103

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/20/16
Instrument: Apollo
Initial Cal. Date: 10/19/16
Data File: 1220023-24.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1727130	1756410	1.7	HATM	
2	HBTM	Motor Oil (C24-C40)	1392870	1335780	4.1	HBTM	
3							
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37							
38							
39							
40							
		Average			2.9		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161220\1220023.D Vial: 23
Acq On : 12-20-16 17:45:54 Operator: DP
Sample : CCV: DIESEL 400ppb 12/8/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 15:00 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

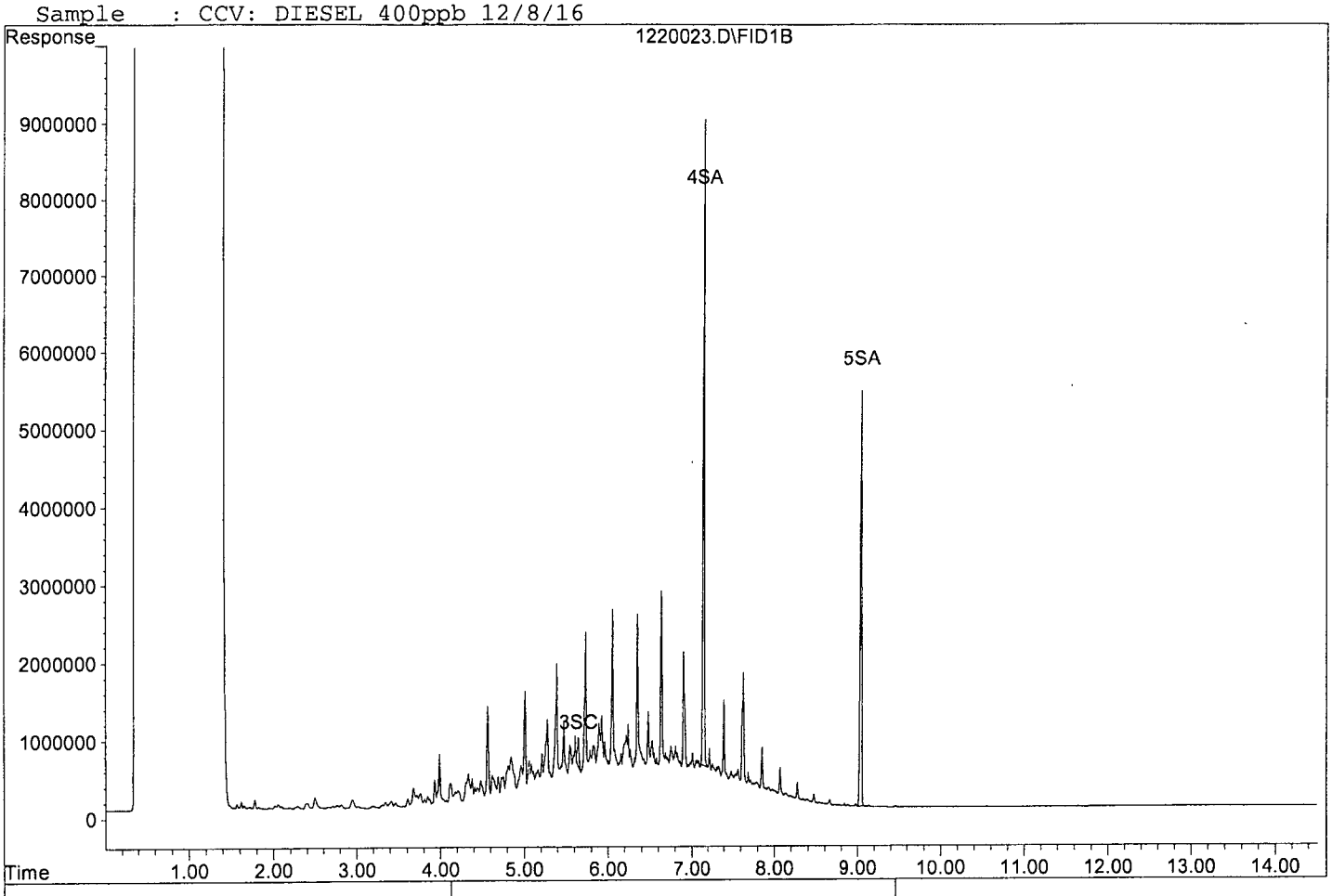
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

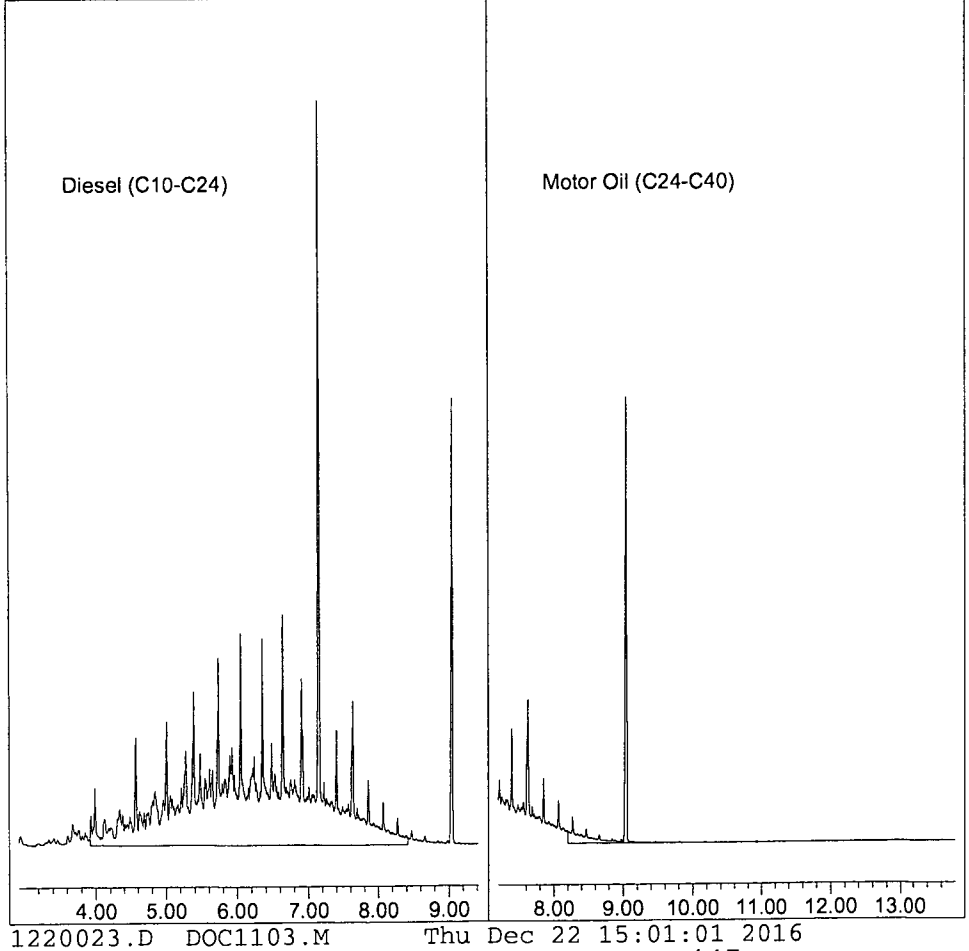
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SC Decanoic Acid(S)	5.65	5007578	4.094	ppb
Surrogate Spike 48.000		Recovery =	8.53%	
4) SA Ortho-Terphenyl(S)	7.15	94324934	20.222	ppb
Surrogate Spike 30.000		Recovery =	67.41%	
5) SA Octacosane(S)	9.05	70266233	20.078	ppb
Surrogate Spike 30.000		Recovery =	66.93%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	1405129898	406.782	ppb
2) HBTM Motor Oil (C24-C40)	10.50	42668318	15.317	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161220\1220023.D
Sample : CCV: DIESEL 400ppb 12/8/16





1220023.D DOC1103.M Thu Dec 22 15:01:01 2016

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161220\1220024.D Vial: 24
Acq On : 12-20-16 18:06:21 Operator: DP
Sample : CCV: MO 1000ppb 12/8/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 15:00 2016 Quant Results File: DOC1103.RES

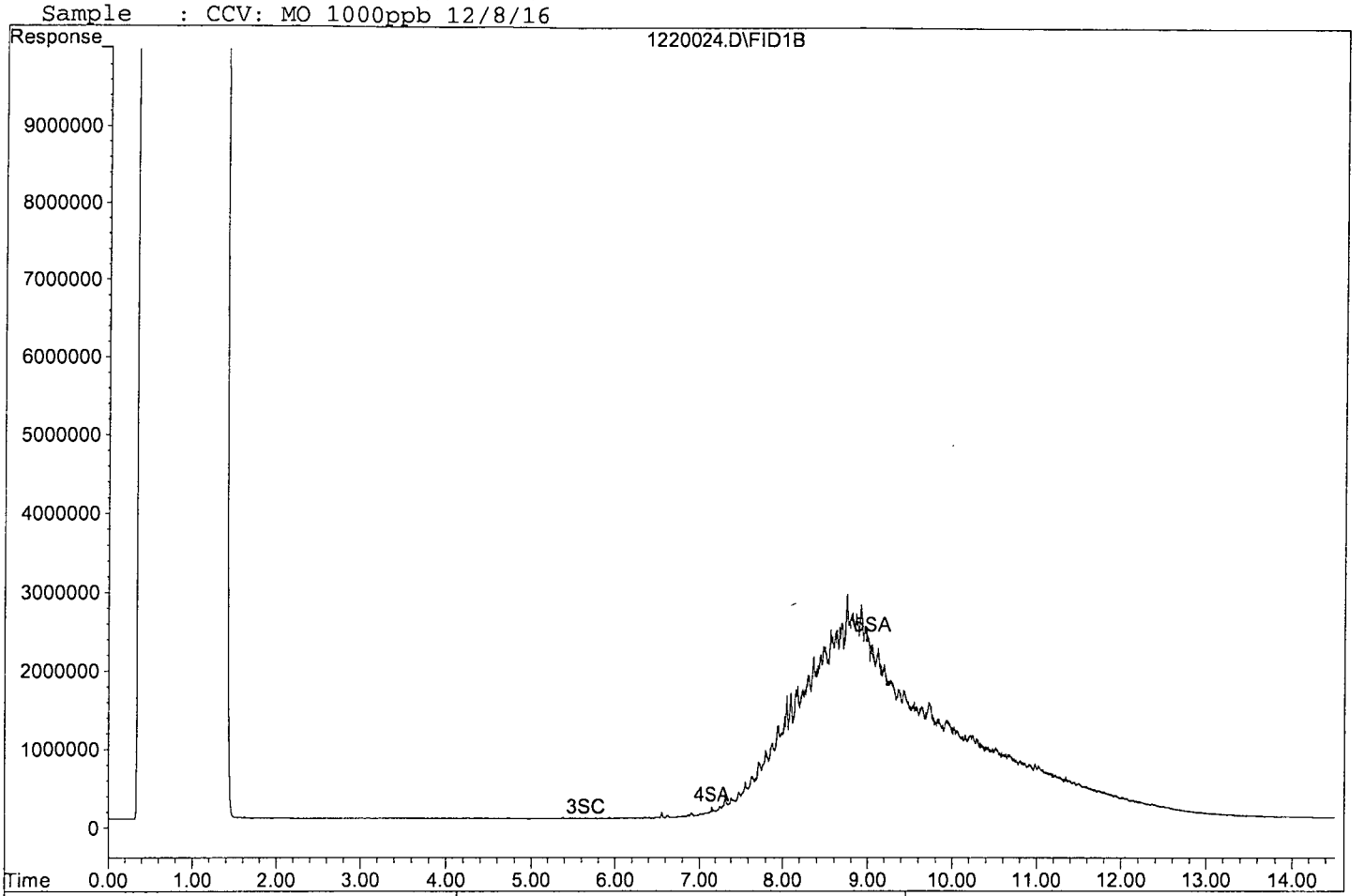
Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

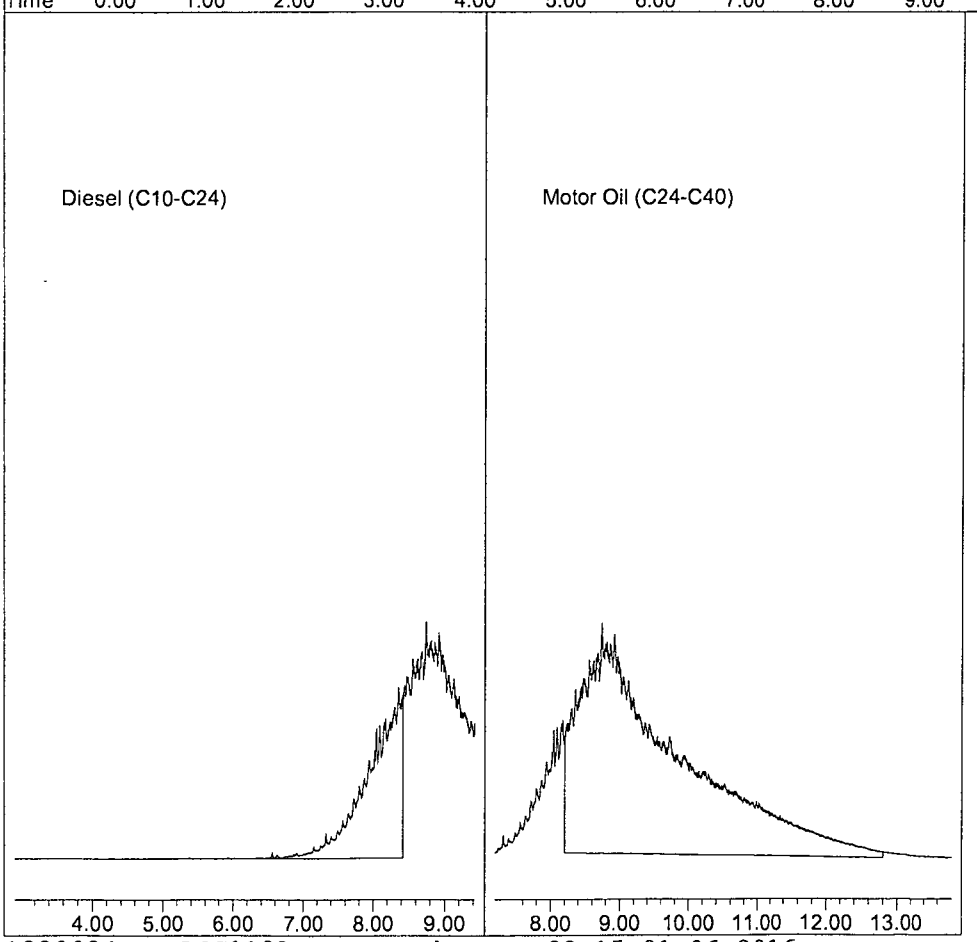
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SC Decanoic Acid(S)	5.65	14468	0.012 ppb
Surrogate Spike 48.000	Recovery	=	0.03%
4) SA Ortho-Terphenyl(S)	7.15	422633	0.091 ppb
Surrogate Spike 30.000	Recovery	=	0.30%
5) SA Octacosane(S)	9.04	986579	0.282 ppb
Surrogate Spike 30.000	Recovery	=	0.94%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	656221679	189.975 ppb
2) HBTM Motor Oil (C24-C40)	10.50	2671564743	959.012 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161220\1220024.D
Sample : CCV: MO 1000ppb 12/8/16





TPH Extractables
DOC1103

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/20/16
Instrument: Apollo
Initial Cal. Date: 10/19/16
Data File: 1220040-41.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1727130	1826090	5.7	HATM	
2	HBTM	Motor Oil (C24-C40)	1392870	1401160	0.60	HBTM	
3							
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37							
38							
39							
40							
		Average			3.2		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161220\1220040.D Vial: 40
Acq On : 12-20-16 23:29:30 Operator: DP
Sample : CCV: DIESEL 400ppb 12/8/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 21 8:50 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

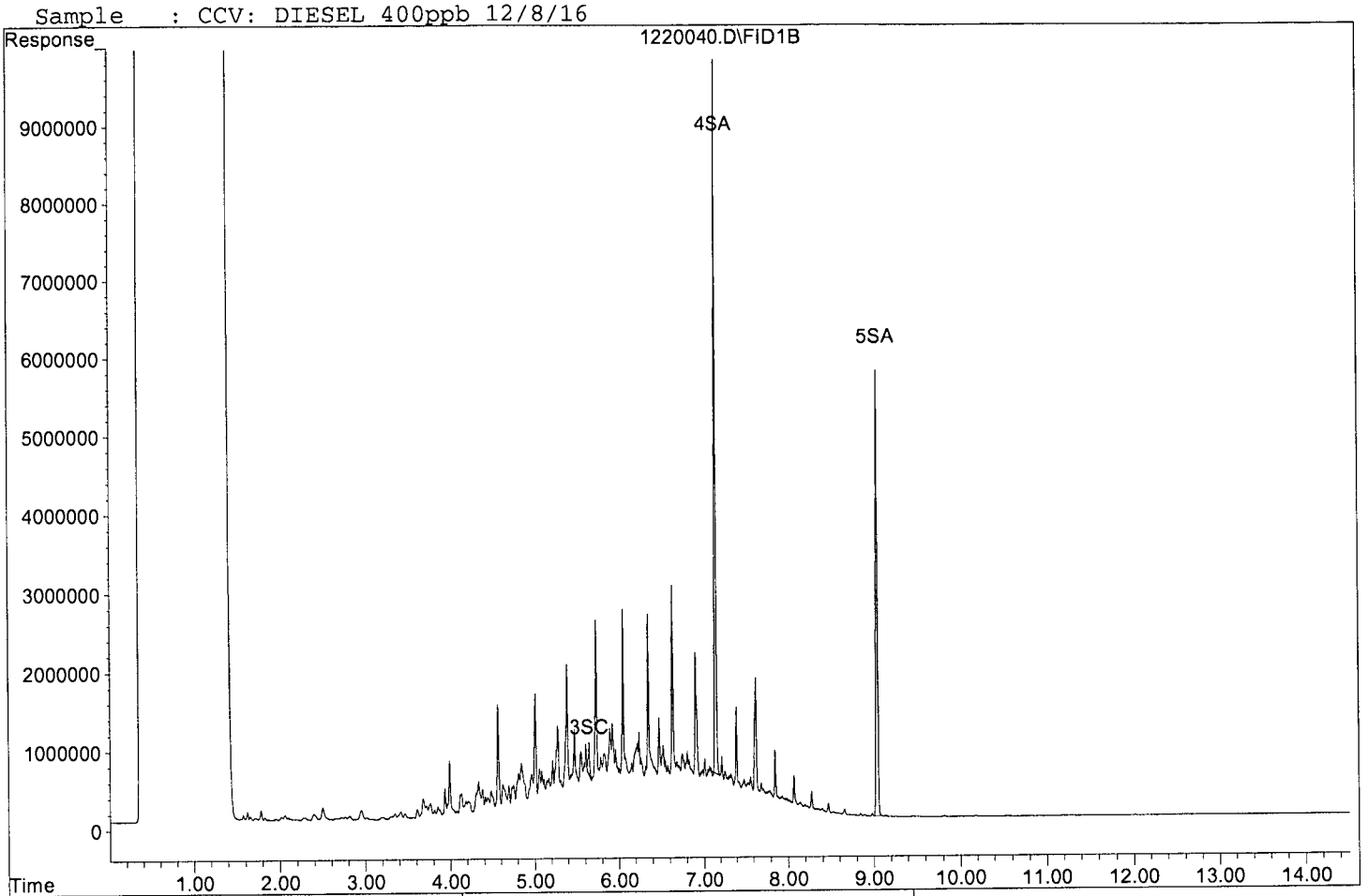
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

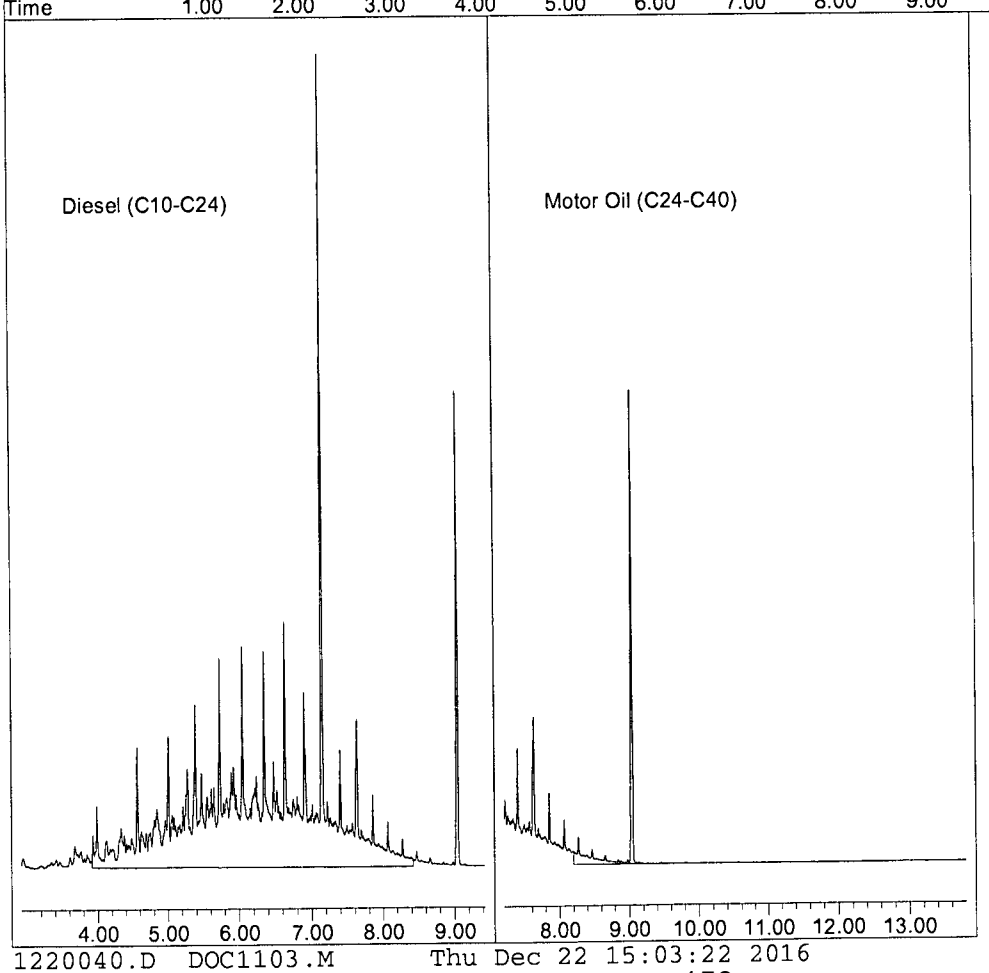
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SC Decanoic Acid(S)	5.65	4957031	4.053	ppb
Surrogate Spike 48.000	Recovery =		8.44%	
4) SA Ortho-Terphenyl(S)	7.15	97564531	20.917	ppb
Surrogate Spike 30.000	Recovery =		69.72%	
5) SA Octacosane(S)	9.04	74259225	21.219	ppb
Surrogate Spike 30.000	Recovery =		70.73%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	1460870773	422.919	ppb
2) HBTM Motor Oil (C24-C40)	10.50	41802540	15.006	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161220\1220040.D
Sample : CCV: DIESEL 400ppb 12/8/16





1220040.D DOC1103.M Thu Dec 22 15:03:22 2016

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161220\1220041.D Vial: 41
Acq On : 12-20-16 23:49:33 Operator: DP
Sample : CCV: MO 1000ppb 12/8/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 21 8:50 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

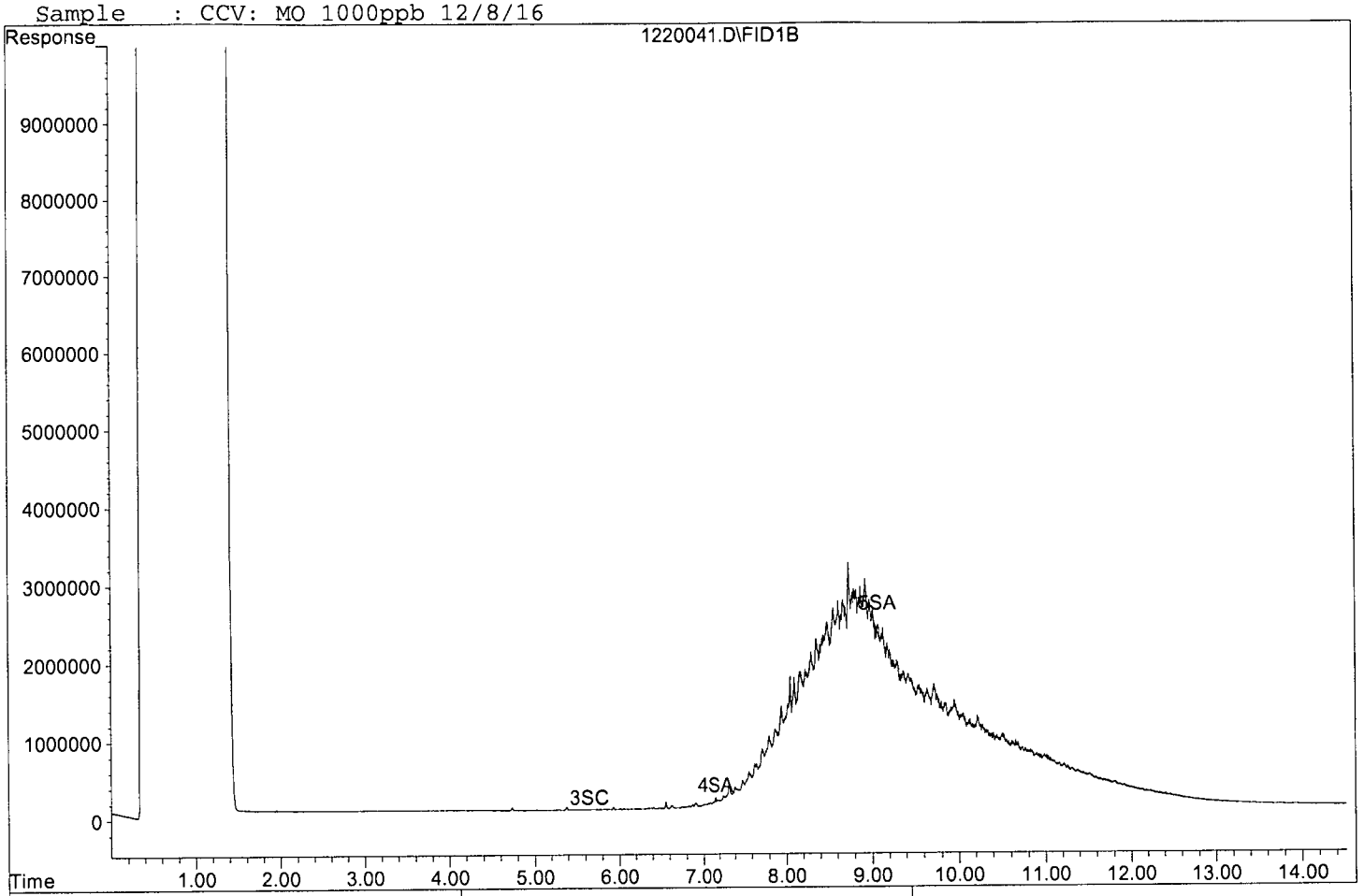
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

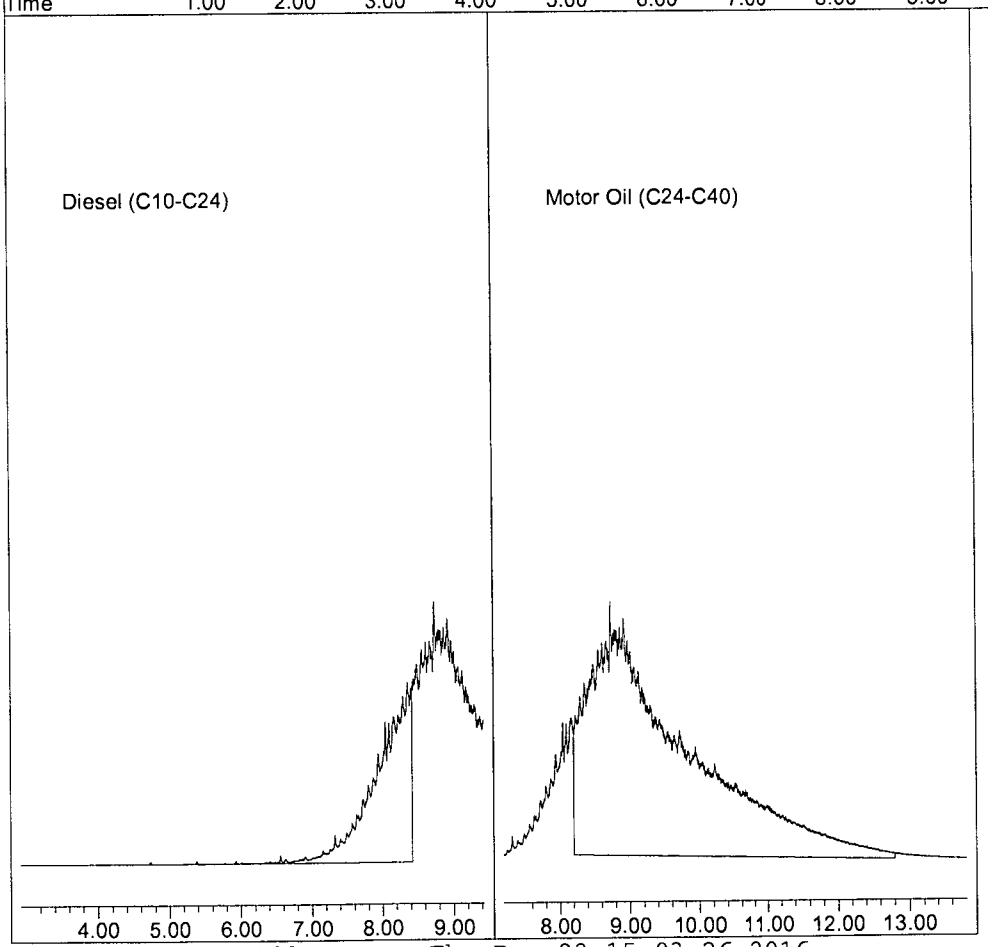
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SC Decanoic Acid(S)	5.65	21358	0.017	ppb
Surrogate Spike 48.000	Recovery	=	0.04%	
4) SA Ortho-Terphenyl(S)	7.15	585556	0.126	ppb
Surrogate Spike 30.000	Recovery	=	0.42%	
5) SA Octacosane(S)	9.07	544275	0.156	ppb
Surrogate Spike 30.000	Recovery	=	0.52%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	704925372	204.074	ppb
2) HBTM Motor Oil (C24-C40)	10.50	2802323786	1005.951	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161220\1220041.D
Sample : CCV: MO 1000ppb 12/8/16





1220041.D DOC1103.M Thu Dec 22 15:03:26 2016

ORGANICS

Raw Data

APPL, INC.

Method Blank

EPA 8015B TPH WATER

Blank Name/QCG: **161219W-47494 - 214843**
Batch ID: #DOC53-161219A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	12/19/16	12/20/16
BLANK	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	12/19/16	12/20/16
BLANK	SURROGATE: OCTACOSANE (S)	88.0	60-142			%	12/19/16	12/20/16
BLANK	SURROGATE: ORTHO-TERPHEN	75.4	56-125			%	12/19/16	12/20/16

Quant Method:DOC1103.M
Run #:1220025
Instrument:Apollo
Sequence:161220
Initials:DPO

GC SC-Blank-REG MDLs-DOD
Printed: 12/21/16 9:11:41 AM

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161220\1220025.D Vial: 25
Acq On : 12-20-16 18:26:45 Operator: DP
Sample : 161219A BLK 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Dec 21 8:56 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

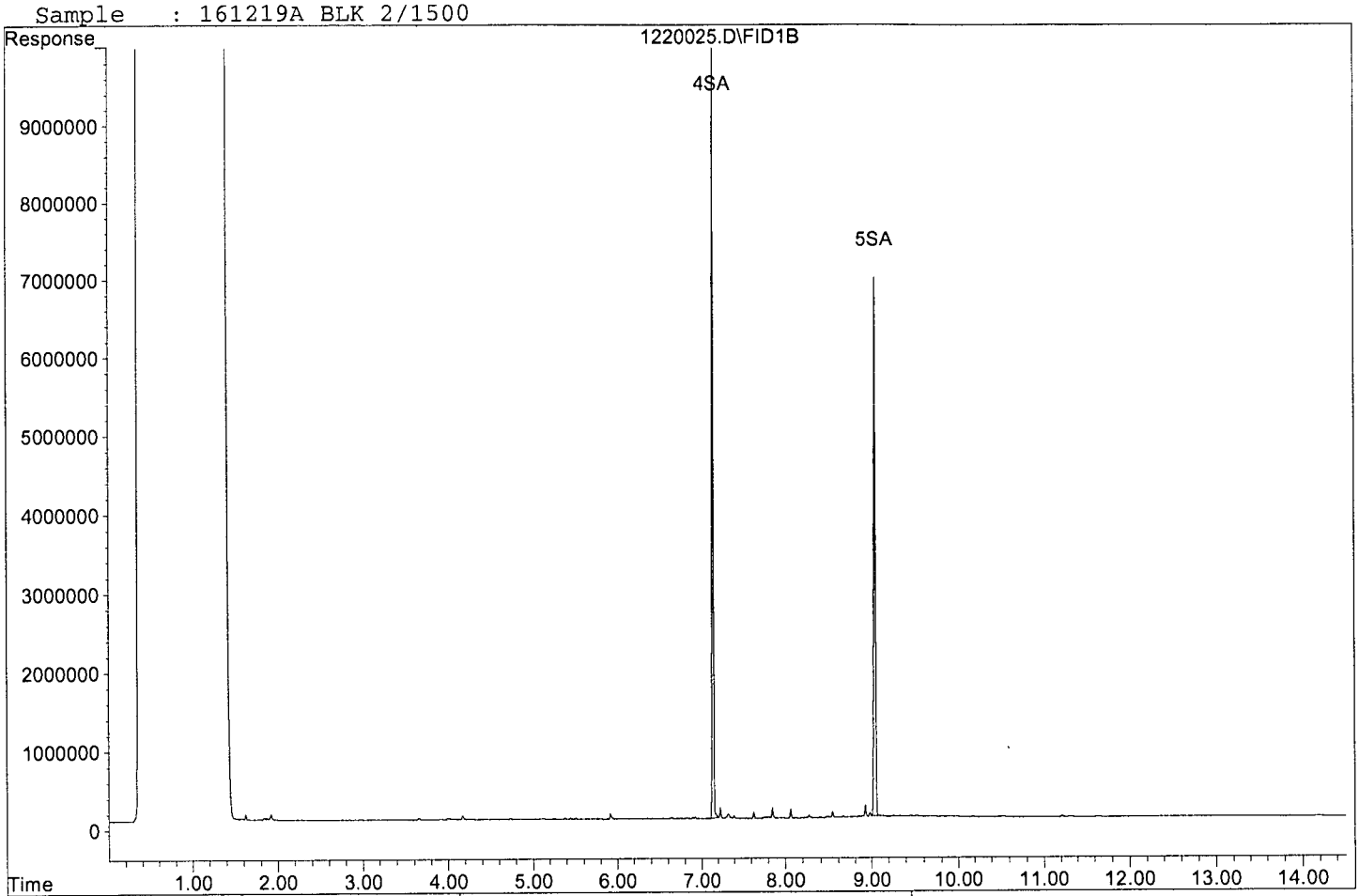
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

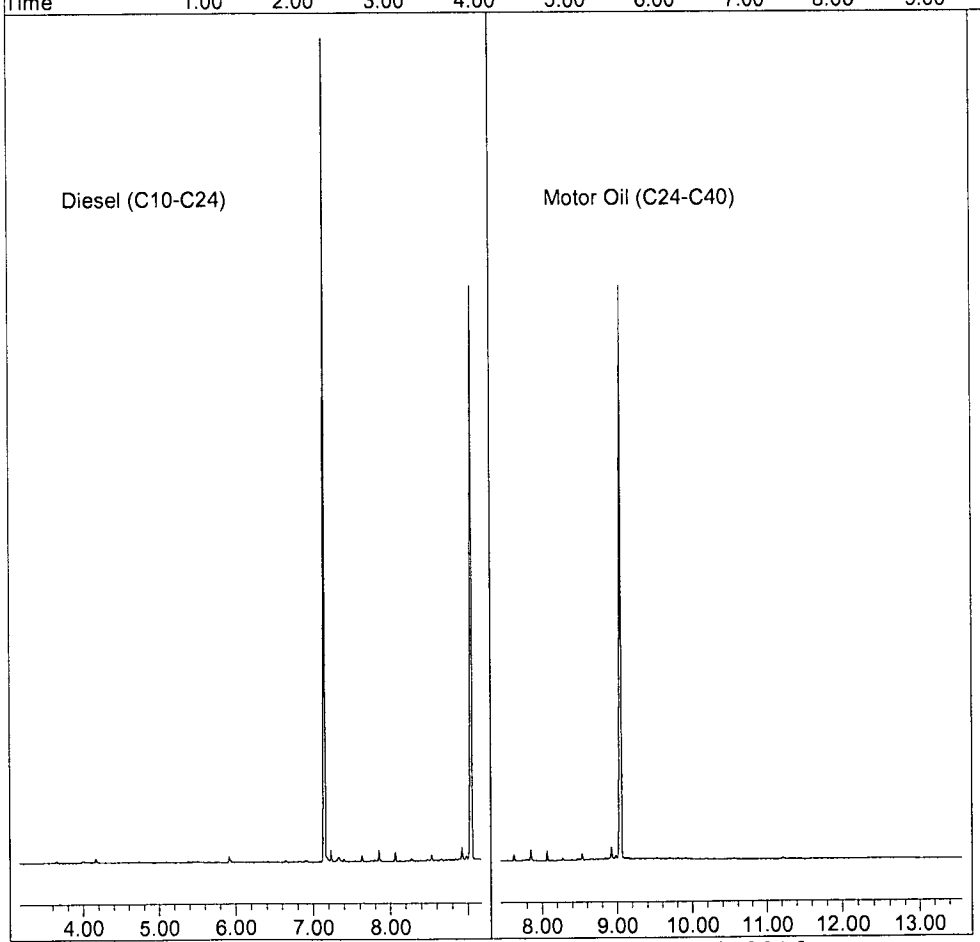
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.15	105437257	30.139	ppb
Surrogate Spike 40.000		Recovery =	75.35%	
5) SA Octacosane(S)	9.05	92362070	35.189	ppb
Surrogate Spike 40.000		Recovery =	87.97%	
Target Compounds				

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161220\1220025.D
Sample : 161219A BLK 2/1500





1220025.D DOC1103.M Thu Dec 22 15:01:38 2016

Laboratory Control Spike Recovery
EPA 8015B TPH WATER

APPL ID: **161219W-47494 LCS - 214843**
Batch ID: #DOC53-161219A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
DIESEL (C10-C24)	1330	1020	76.5	36-132
OIL (C24-C40)	1330	1140	85.5	41-113
SURROGATE: OCTACOSANE (S)	40.0	36.0	90.0	60-142
SURROGATE: ORTHO-TERPHENYL (S)	40.0	36.8	92.0	56-125

Comments: _____

Primary	SPK
Quant Method :	DOC1103.M
Extraction Date :	12/19/16
Analysis Date :	12/20/16
Instrument :	Apollo
Run :	1220026
Initials :	DPO

Printed: 12/21/16 9:11:34 AM
APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161220\1220026.D Vial: 26
Acq On : 12-20-16 18:47:04 Operator: DP
Sample : 161219A LCS-1 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Dec 21 8:56 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

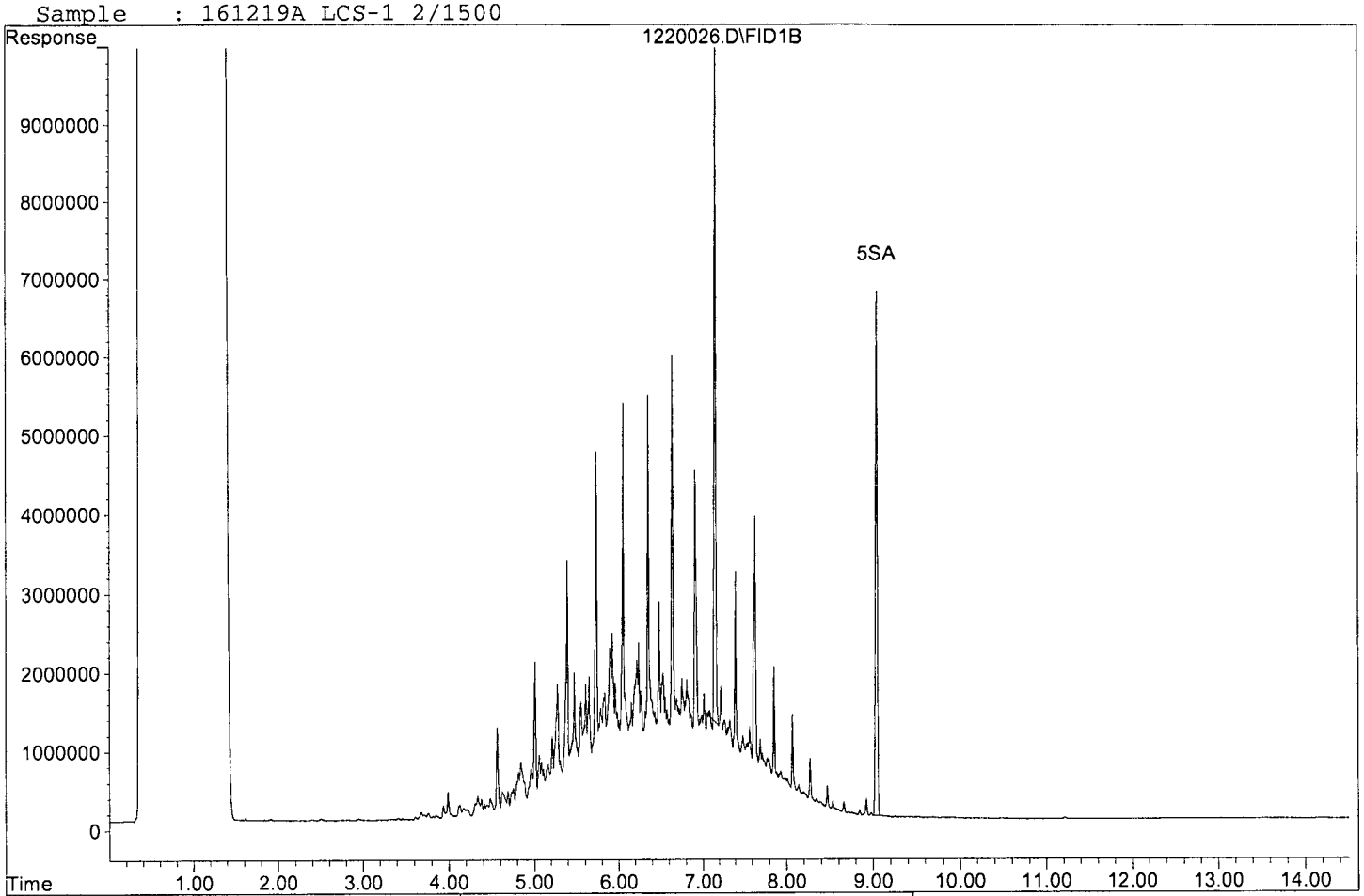
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

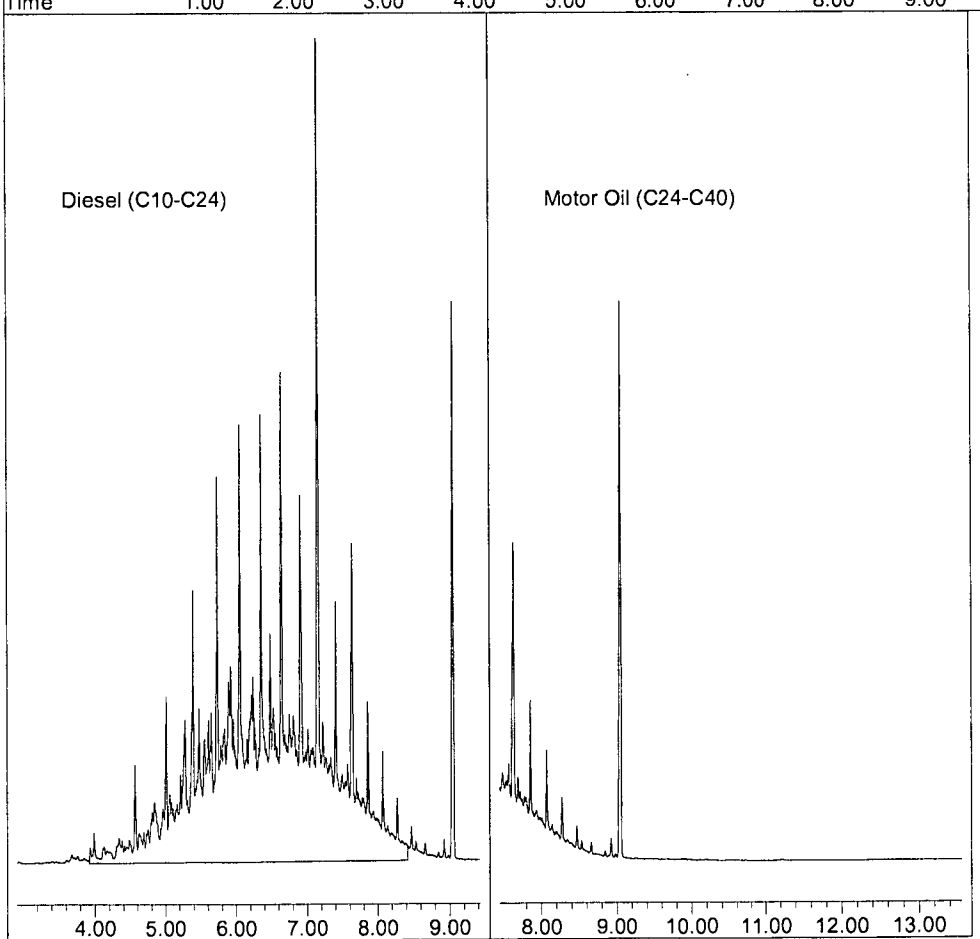
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.15	128792918	36.815 ppb
Surrogate Spike 40.000		Recovery =	92.04%
5) SA Octacosane(S)	9.05	94390205	35.961 ppb
Surrogate Spike 40.000		Recovery =	89.90%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	2639132053	1018.694 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161220\1220026.D
Sample : 161219A LCS-1 2/1500





1220026.D DOC1103.M Thu Dec 22 15:01:43 2016

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161220\1220027.D Vial: 27
Acq On : 12-20-16 19:07:31 Operator: DP
Sample : 161219A LCS-2 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Dec 21 8:57 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

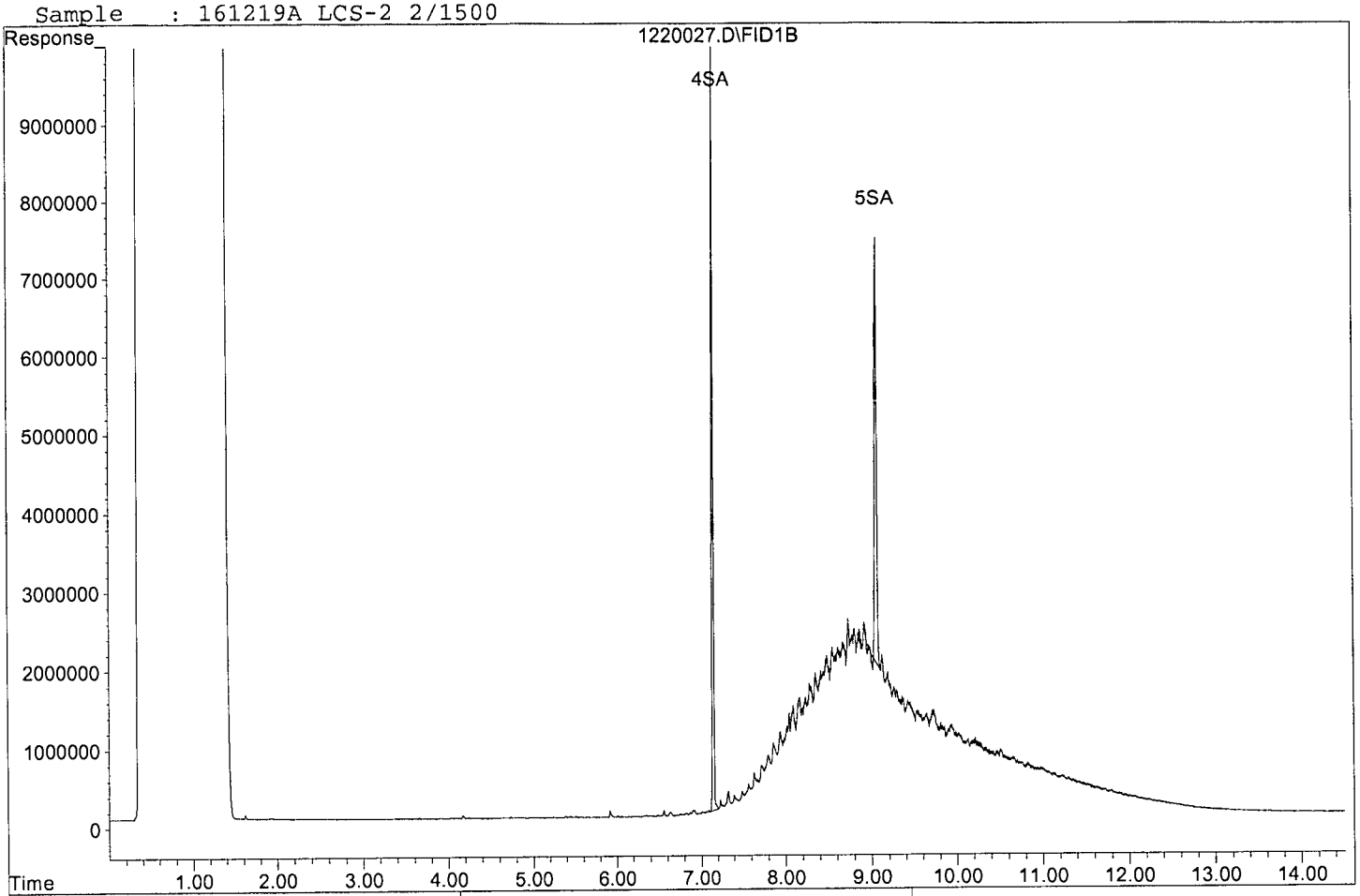
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

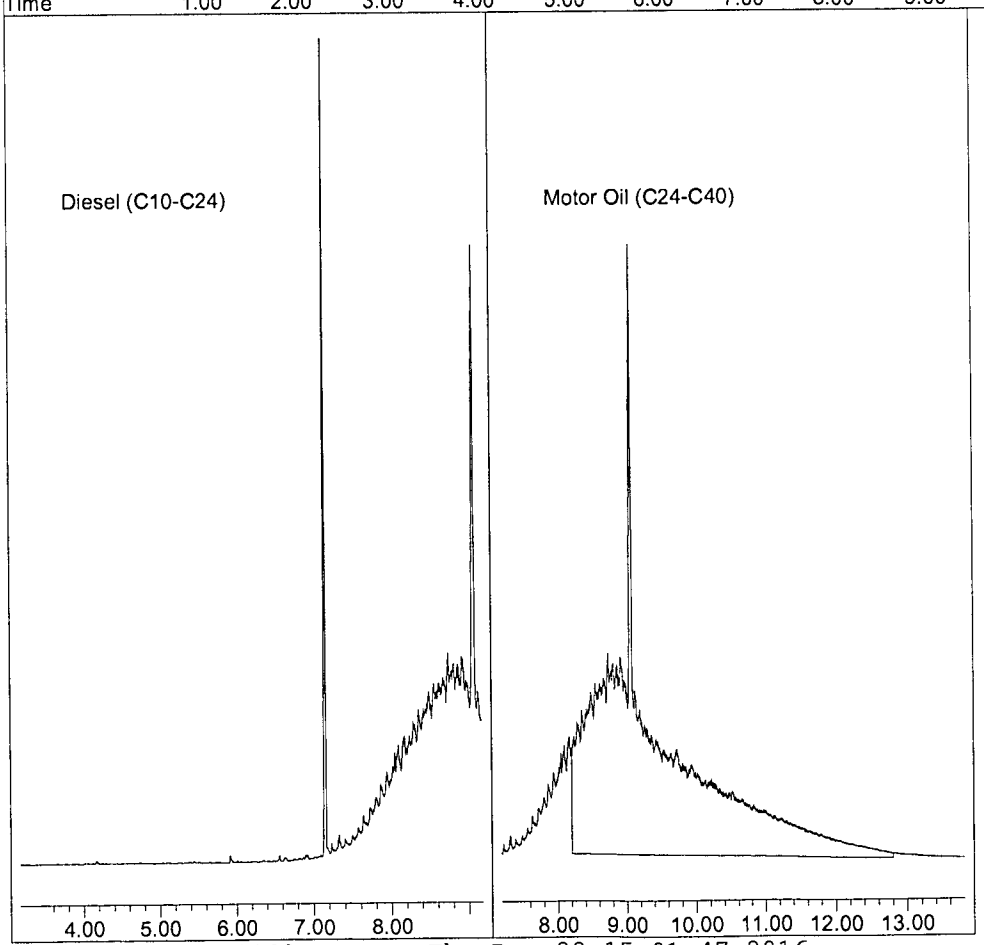
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.15	110017264	31.448	ppb
Surrogate Spike 40.000	Recovery =		78.62%	
5) SA Octacosane(S)	9.07	90017984	34.296	ppb
Surrogate Spike 40.000	Recovery =		85.74%	
Target Compounds				
2) HBTM Motor Oil (C24-C40)	10.50	2389557193	1143.704	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLQ\DATA\161220\1220027.D
Sample : 161219A LCS-2 2/1500





1220027.D DOC1103.M Thu Dec 22 15:01:47 2016

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161220\1220028.D Vial: 28
Acq On : 12-20-16 19:27:45 Operator: DP
Sample : 161219A LCSD-1 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Dec 21 8:57 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

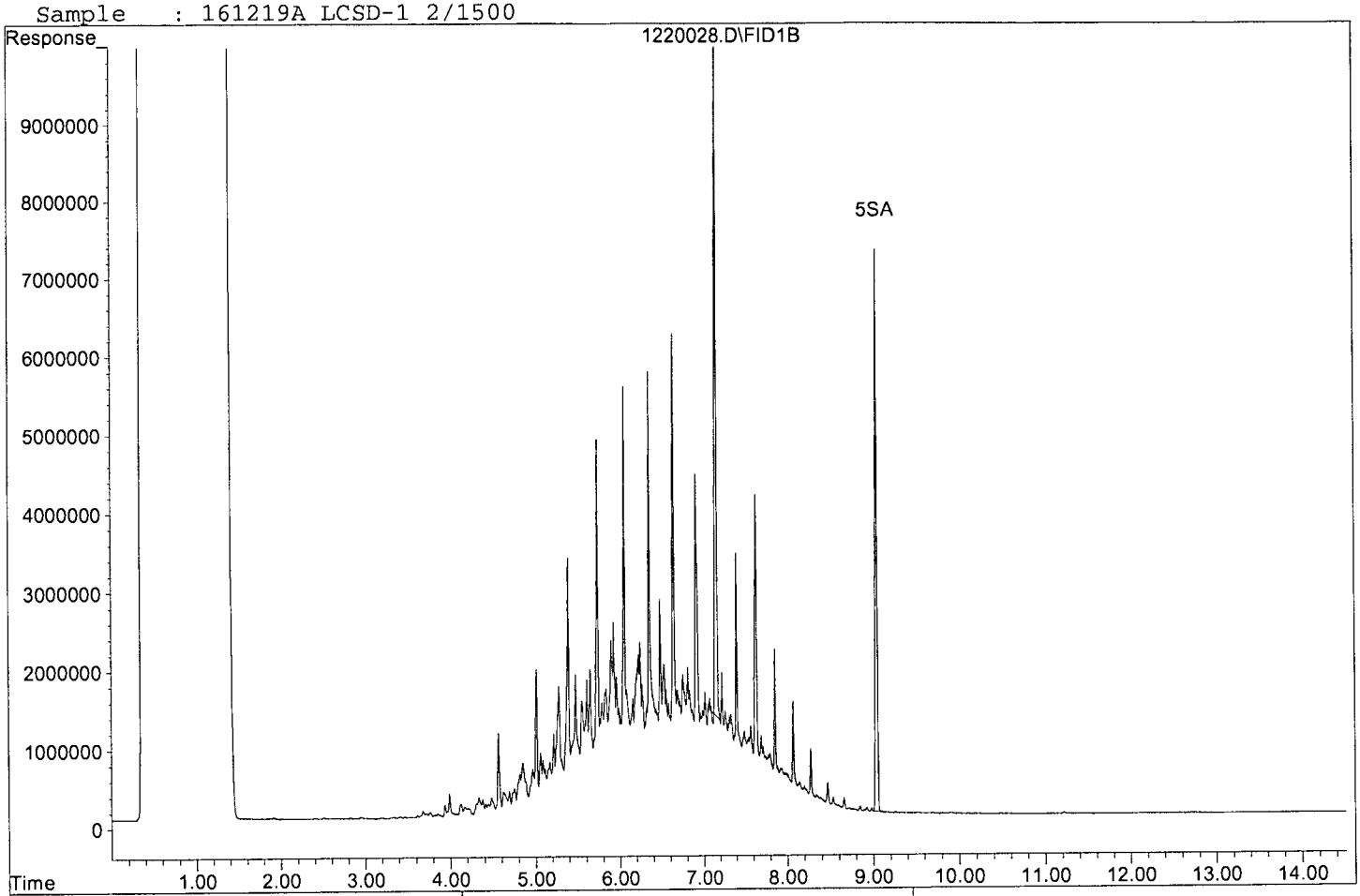
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

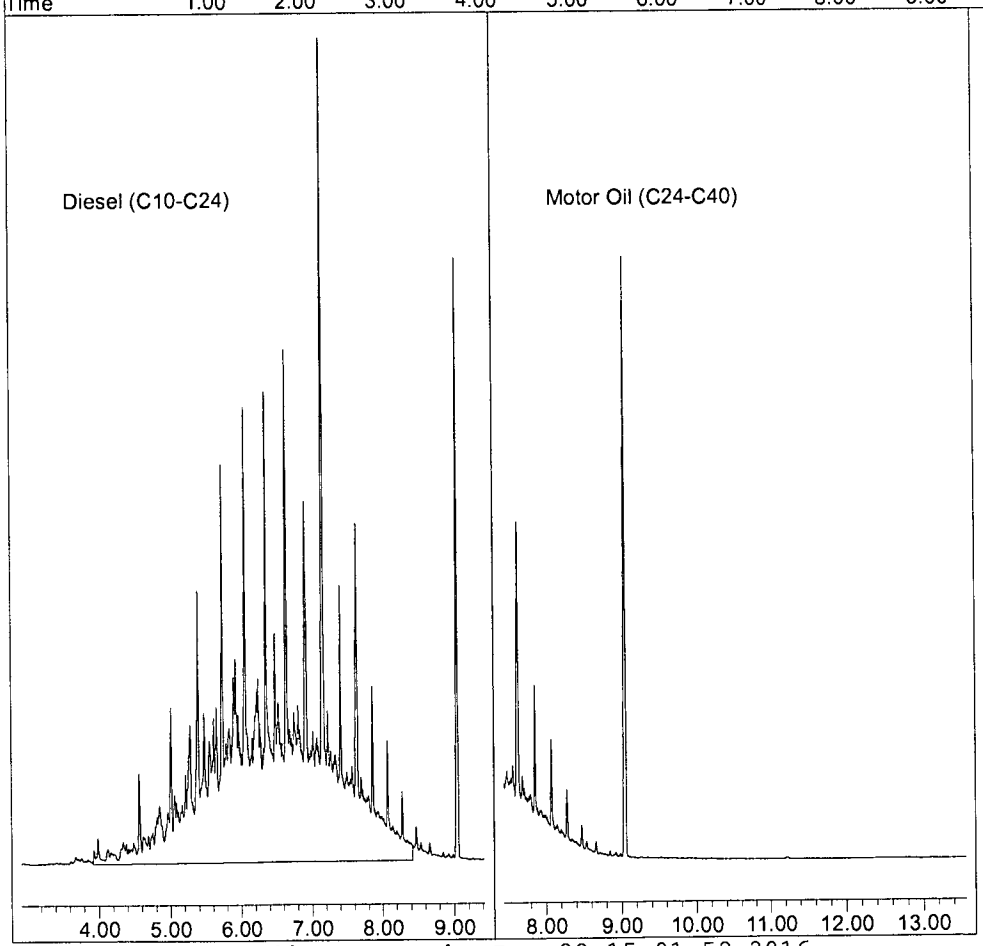
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.15	134384940	38.414 ppb
Surrogate Spike 40.000		Recovery =	96.04%
5) SA Octacosane(S)	9.05	97040654	36.971 ppb
Surrogate Spike 40.000		Recovery =	92.43%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	2681593854	1035.084 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161220\1220028.D
Sample : 161219A LCSD-1 2/1500





1220028.D DOC1103.M Thu Dec 22 15:01:52 2016

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161220\1220029.D Vial: 29
Acq On : 12-20-16 19:47:59 Operator: DP
Sample : 161219A LCSD-2 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Dec 21 8:57 2016 Quant Results File: DOC1103.RES

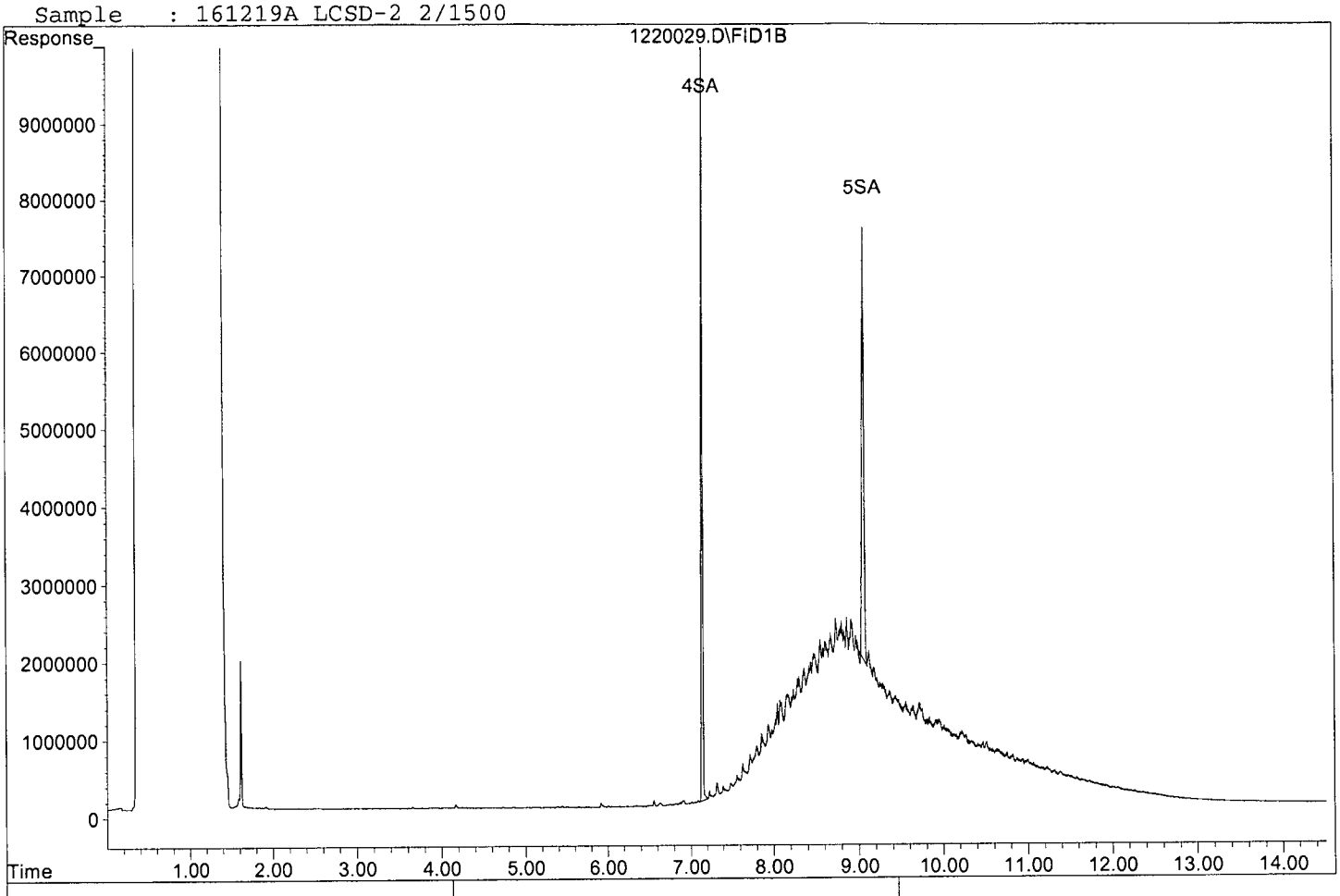
Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

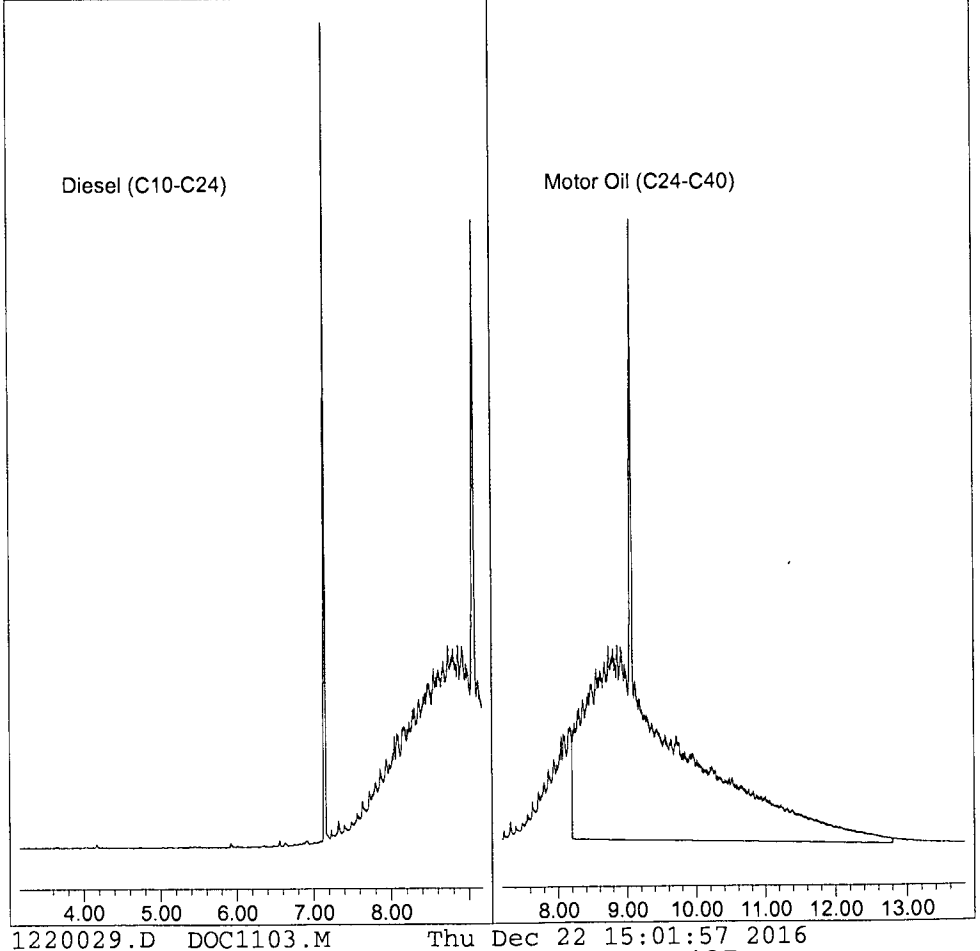
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.15	106625793	30.479	ppb
Surrogate Spike 40.000	Recovery =		76.20%	
5) SA Octacosane(S)	9.07	89983304	34.282	ppb
Surrogate Spike 40.000	Recovery =		85.70%	
Target Compounds				
2) HBTM Motor Oil (C24-C40)	10.50	2328598416	1114.527	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161220\1220029.D
Sample : 161219A LCSD-2 2/1500





DIESEL CURVE		prep:11/03/16-D.P.		ex:6/03/17						
STD	**[µg/mL]**	**LOT #**	**DATE**	**EXP. DATE**	**µL**	**µL**	**µL**	**µL**	**µL**	**µL**
DIESEL	1000	237562-37104	11/03/16	06/03/17	10	10	40	60	80	100
MC	N/A	56098			990	90	60	40	20	NA
				Final VOL.	1000	100	100	100	100	100
				ppm	10	100	400	600	800	1000

MOTOR OIL CURVE		prep: 10/28/16-D.P.		ex:4/26/17						
STD	**[µg/mL]**	**LOT #**	**DATE**	**EXP. DATE**	**µL**	**µL**	**µL**	**µL**	**µL**	**µL**
MOTOR OIL	2000		10/26/16	04/26/17	10	25	125	500	750	200
MC	N/A	56098			990	975	875	500	250	NA
				Final VOL.	1000	1000	1000	1000	1000	200
				ppm	20	50	250	1000	1500	2000

Prep: 11/03/16-D.P. Exp: 6/03/17						
DIESEL CAL STD.						
STD.	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT / LOT#
DIESEL FUEL #2	50,000 ug/mL	O2SI CAT#011598-03 LOT#237562-37104 OP: 11/03/06 EXP: 11/03/17	500 µL	25 mL	1000ug/mL	MC LOT# 56098
O-TERPHENYL OCTACOSANE	600 ug/mL	O2SI CAT#110316-05 LOT#266278-37107 OP: 10/27/16 EXP: 10/27/17	2080 µL		50ug/mL	

Prep: 10/26/16 -D.P. Ex: 4/26/17						
MOTOR OIL CAL STD						
STD.	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT / LOT#
MOTOR OIL	50,000 ug/mL	O2SI CAT#116390-02 LOT#239390-36901 OP:10/26/16 EXP:10/26/17	1mL	25mL	2000ug/mL	MC LOT# 56098

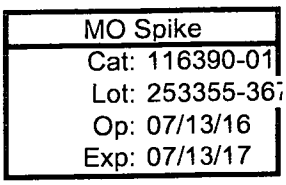
DIESEL SECOND SOURCE prep: 08/01/16-D.P. ex: 07/6/17						
standard	initial conc.	SOURCE DATE	ALIQUOT	FINAL VOL.	FINAL CONC.	SOLVENT LOT
DIESEL SECOND SOURCE	50,000 ug/mL	O2SI CAT#011598-03-SS LOT#244813-34634 OP: 08/28/15 Exp 03/14/19	200uL	10mL	1000ug/mL	MC #56061

MOTOR OIL SECOND SOURCE prep: 07/6/16-L.H. ex: 07/6/17						
standard	initial conc.	SOURCE DATE	ALIQUOT	FINAL VOL.	FINAL CONC.	SOLVENT LOT
MOTOR OIL SECOND SOURCE	50,000 ug/mL	O2SI CAT#116390-02-SS LOT#244814-34637 OP: 07/06/16 Exp 07/06/17	200uL	10mL	1000ug/mL	MC #56061

DIESEL CCV 400ug/ml						
Prep: 11/03/16-D.P. Ex: 02/03/16						
STANDARD	**INITIAL CONC.**	**SOURCE DATE**	**ALIQUOT**	**FINAL VOL**	**FINAL CONC.**	**SOLVENT /LOT#**
DIESEL STD.	1000 µg/mL	Diesel Std.	2000µL	5mL	400 µg/ml	MC
	PREP:	11/03/16				56098
	Exp:	06/03/17				

MOTOR OIL CCV 1000ppm						
Prep: 11/21/16-G.A. Ex: 2/21/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
MO STD.	2000 µg/mL	MO Std.	2500µL	5mL	1000 µg/ml	MC
	PREP:	10/26/16				56098
	Exp:	04/26/17				

Diesel Fuel #2
Conc. 50000 ug/ml
O2SI
CAT #011598-03
LOT# 237562-37102
OP: 10/25/16 RH
EXP: 10/25/17


MO Spike
Cat: 116390-01
Lot: 253355-367
Op: 07/13/16
Exp: 07/13/17

THC Surrogate
Cat: 110316-05
Lot: 266278-37
Op: 10/27/16
Exp: 10/27/17

_SEP011LL

Organic Extraction Worksheet

Method	THC Sep Fun Ext 3510C (LOW LEVEL)	Extraction Set	161219A	Extraction Method	SEP011LL	Units	mL

Spiked ID 1	Diesel Spike 12-13-16 exp 12-13-17		Surrogate ID 1	THC Surrogate 12-14-16 exp 12-14-17	
Spiked ID 2	Motor Oil Spike 12-12-16 exp 12-12-17		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	12/19/16 11:15	
Spiked ID 8			Ext. End Time:	12/20/16 15:20	
			GC Requires Extract By:	**12/21/16 0:00**	

pH1			Water Bath Temp Criteria	35,35,35 °
pH2				
pH3				

Spiked By: KY **Date** 12/19/16 **Witnessed By:** DL **Date** 12/19/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	161219A Blk				0.1	1 equip	1500 E-WB1	2	7	12/19/16 11:15	
2	161219A LCS-1		0.040	1	0.1	1 equip	1500 E-WB2	2	7	12/19/16 11:15	
3	161219A LCS-2		0.040	2	0.1	1 equip	1500 E-WB3	2	7	12/19/16 11:15	
4	161219A LCSD-1		0.040	1	0.1	1 equip	1500 E-WB1	2	7	12/19/16 11:15	
5	161219A LCSD-2		0.040	2	0.1	1 equip	1500 E-WB2	2	7	12/19/16 11:15	
6	AZ47494	AZ47494W10			0.1	1 equip	1500 E-WB3	2	7	12/19/16 11:15	81760 1 WEEK
7	AZ47495	AZ47495W14			0.1	1 equip	1500 E-WB1	2	7	12/19/16 11:15	81760 1 WEEK
8	AZ47496	AZ47496W12			0.1	1 equip	1500 E-WB2	2	7	12/19/16 11:15	81760 1 WEEK
9	AZ47497	AZ47497W13			0.1	1 equip	1500 E-WB3	2	7	12/19/16 11:15	81760 1 WEEK
10	AZ47498	AZ47498W18			0.1	1 equip	1500 E-WB1	2	7	12/19/16 11:15	81760 1 WEEK
11	AZ47658	AZ47658W11			0.1	1 equip	1500 E-WB2	2	7	12/19/16 11:15	81776 1 WEEK
12	AZ47659	AZ47659W06			0.1	1 equip	1500 E-WB3	2	7	12/19/16 11:15	81776 1 WEEK
13	AZ47660	AZ47660W10			0.1	1 equip	1500 E-WB1	2	7	12/19/16 11:15	81776 1 WEEK
14	AZ47661	AZ47661W07			0.1	1 equip	1500 E-WB2	2	7	12/19/16 11:15	81776 1 WEEK
15	AZ47662	AZ47662W06			0.1	1 equip	1500 E-WB3	2	7	12/19/16 11:15	81776 1 WEEK
16	AZ47663	AZ47663W11			0.1	1 equip	1500 E-WB1	2	7	12/19/16 11:15	81776 1 WEEK

Solvent and Lot#	
MC	56153
Na2SO4	16C255214
ph-indicator strips	HC 574756
Filter Paper	400112

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	D.P.
Date	12/20/16
Time	16:30
Refrigerator	Hobart

	Technician's Initials
Scanned By	KY
Sample Preparation	KY,JR
Extraction	KY,JR,DL
Concentration	DL

Modified	12/20/16 3:58:42 PM

Reviewed By: KY **Date** 12/20/16

Organic Extraction Worksheet

Method	THC Sep Fun Ext 3510C (LOW LEVEL)	Extraction Set	161219A	Extraction Method	SEP011LL	Units	mL

Spiked ID 1	Diesel Spike 12-13-16 exp 12-13-17		Surrogate ID 1	THC Surrogate 12-14-16 exp 12-14-17	
Spiked ID 2	Motor Oil Spike 12-12-16 exp 12-12-17		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	12/19/16 11:15	
Spiked ID 8			Ext. End Time:	12/20/16 15:20	
			GC Requires Extract By:	**12/21/16 0:00**	

pH1			Water Bath Temp Criteria	35,35,35 °
pH2				
pH3				

Spiked By: KY **Date** 12/19/16 **Witnessed By:** DL **Date** 12/19/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
17	AZ47664	AZ47664W13			0.1	1	1500	2	7	12/19/16 11:15	81776 1 WEEK
						equip	E-WB2				
18	AZ47665	AZ47665W12			0.1	1	1500	2	7	12/19/16 11:15	81776 1 WEEK
						equip	E-WB3				

KLO 12/20/16

Solvent and Lot#	
MC	56153
Na2SO4	16C255214
ph-indicator strips	HC 574756
Filter Paper	400112

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	D.P.
Date	12/20/16
Time	16:30
Refrigerator	Hobart

	Technician's Initials
Scanned By	KY
Sample Preparation	KY,JR
Extraction	KY,JR,DL
Concentration	DL

Modified	12/20/16 3:58:42 PM

Reviewed By: KY **Date** 12/20/16

Injection Log

Directory: G:\APOLLO\DATA\161028\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	1028002.D	1	MO 20ppb 10/28/16	Mix(B)	10-28-16 9:07:30
2	3	1028003.D	1	MO 50ppb 10/28/16	Mix(B)	10-28-16 9:28:13
3	4	1028004.D	1	MO 250ppb 10/28/16	Mix(B)	10-28-16 9:49:06
4	5	1028005.D	1	MO 1000ppb 10/28/16	Mix(B)	10-28-16 10:09:58
5	6	1028006.D	1	MO 1500ppb 10/28/16	Mix(B)	10-28-16 10:30:51
6	7	1028007.D	1	MO 2000ppb 10/28/16	Mix(B)	10-28-16 10:51:50
7	8	1028008.D	1	MO SS 1000ppb 7/6/16	Mix(B)	10-28-16 11:12:44
8	4	1103004.D	1	DIESEL 10ppb 11/3/16	Mix(A)	11-3-16 9:45:14
9	6	1103006.D	1	DIESEL 400ppb 11/3/16	Mix(A)	11-3-16 10:26:16
10	7	1103007.D	1	DIESEL 600ppb 11/3/16	Mix(A)	11-3-16 10:46:56
11	8	1103008.D	1	DIESEL 800ppb 11/3/16	Mix(A)	11-3-16 11:07:39
12	9	1103009.D	1	DIESEL 1000ppb 11/3/16	Mix(A)	11-3-16 11:28:31
13	11	1103011.D	1	DIESEL 100ppb 11/3/16	Mix(A)	11-3-16 12:56:47
14	12	1103012.D	1	DIESEL-SS 400ppb 8/1/16	Mix(A)	11-3-16 13:25:11
15	23	1220023.D	1	CCV: DIESEL 400ppb 12/8/16	Mix(A)	12-20-16 17:45:54
16	24	1220024.D	1	CCV: MO 1000ppb 12/8/16	Mix(B)	12-20-16 18:06:21
17	25	1220025.D	1.33333	161219A BLK 2/1500	Water	12-20-16 18:26:45
18	26	1220026.D	1.33333	161219A LCS-1 2/1500	Water	12-20-16 18:47:04
19	27	1220027.D	1.33333	161219A LCS-2 2/1500	Water	12-20-16 19:07:31
20	28	1220028.D	1.33333	161219A LCSD-1 2/1500	Water	12-20-16 19:27:45
21	29	1220029.D	1.33333	161219A LCSD-2 2/1500	Water	12-20-16 19:47:59
22	30	1220030.D	1.33333	AZ47494W10 2/1500	Water	12-20-16 20:08:13
23	31	1220031.D	1.33333	AZ47495W14 2/1500	Water	12-20-16 20:28:23
24	32	1220032.D	1.33333	AZ47496W12 2/1500	Water	12-20-16 20:48:40
25	33	1220033.D	1.33333	AZ47497W13 2/1500	Water	12-20-16 21:08:53
26	34	1220034.D	1.33333	AZ47498W18 2/1500	Water	12-20-16 21:29:01
27	40	1220040.D	1	CCV: DIESEL 400ppb 12/8/16	Mix(A)	12-20-16 23:29:30
28	41	1220041.D	1	CCV: MO 1000ppb 12/8/16	Mix(B)	12-20-16 23:49:33

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank

EPA 8270D SIM

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161219W-47494 - 214864**
Batch ID: #SIMDO-161219A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/19/16	12/21/16
BLANK	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/19/16	12/21/16
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	12/19/16	12/21/16
BLANK	SURROGATE: 2-FLUORBIPHENY	65.2	53-106			%	12/19/16	12/21/16
BLANK	SURROGATE: NITROBENZENE-	81.8	55-111			%	12/19/16	12/21/16
BLANK	SURROGATE: TERPHENYL-D14 (	86.6	58-132			%	12/19/16	12/21/16

Quant Method: L1212P.M
Run #: 1212L163
Instrument: Linus
Sequence: L161212
Initials: RHA

GC SC-Blank-REG MDLs-DOD
Printed: 12/21/16 12:55:35 PM

Laboratory Control Spike Recovery

EPA 8270D SIM

APPL ID: **161219W-47494 LCS - 214864**
Batch ID: #SIMDO-161219A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1-METHYLNAPHTHALENE	5.00	3.02	60.4	41-115
2-METHYLNAPHTHALENE	5.00	3.13	62.6	39-114
NAPHTHALENE	5.00	3.12	62.4	43-114
SURROGATE: 2-FLUORBIPHENYL (S)	5.00	3.30	66.0	53-106
SURROGATE: NITROBENZENE-D5 (S)	5.00	3.54	70.8	55-111
SURROGATE: TERPHENYL-D14 (S)	5.00	4.13	82.6	58-132

Comments: _____

Primary	SPK
Quant Method :	L1212P.M
Extraction Date :	12/19/16
Analysis Date :	12/20/16
Instrument :	Linus
Run :	1212L140
Initials :	RHA

Printed: 12/21/16 12:55:28 PM
APPL Standard LCS

8270D-SIM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81760

Case No: 81760 Date Analyzed: 12/20/16

Matrix: WATER Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: 2-FLUORBIPHENYL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161219A-LCS	Lab Control Spike	53-106	66.0		55-111	70.8	
AZ47494	ERH139	53-106	59.7		55-111	72.7	
AZ47496	ERH143	53-106	61.8		55-111	75.8	
AZ47497	ERH145	53-106	57.8		55-111	68.5	
AZ47498	ERH146	53-106	59.1		55-111	70.1	
161219A-BLK	Blank	53-106	65.2		55-111	81.8	
AZ47495	ERH136	53-106	64.1		55-111	76.3	

Comments: Batch: #SIMDO-161219A

8270D-SIM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81760

Case No: 81760 Date Analyzed: 12/20/16

Matrix: WATER Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: TERPHENYL-D14 (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
161219A-LCS	Lab Control Spike	58-132	82.6				
AZ47494	ERH139	58-132	78.6				
AZ47496	ERH143	58-132	74.0				
AZ47497	ERH145	58-132	75.8				
AZ47498	ERH146	58-132	80.2				
161219A-BLK	Blank	58-132	86.6				
AZ47495	ERH136	58-132	80.3				

Comments: Batch: #SIMDO-161219A

Printed: 12/21/16 12:55:32 PM

Form 2 & 8, Surrogate Recovery Summary

8270D-SIM

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81760

Case No: 81760 Date Analyzed: 12/21/16

Matrix: WATER Instrument: Linus

Blank ID: 161219A-BLK Time Analyzed: 1142

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161219A-LCS	Lab Control Spike	1212L140	12/20/16 1758
AZ47494	ERH139	1212L142	12/20/16 1905
AZ47496	ERH143	1212L144	12/20/16 2012
AZ47497	ERH145	1212L145	12/20/16 2045
AZ47498	ERH146	1212L146	12/20/16 2118
161219A-BLK	Blank	1212L163	12/21/16 1142
AZ47495	ERH136	1212L164	12/21/16 1215

Comments: Batch: #SIMDO-161219A

Printed: 12/21/16 12:55:25 PM
Form 4, Blank Summary

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81760
Matrix: Water
ID: SV Tune 11/15/16

SDG No: 81760
Date Analyzed: 12/12/16
Instrument: Linus
Time Analyzed: 10:19

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.1 ug/ml PAH 12/12/	1212L005.D	12/12/16 10:36
2		0.2 ug/ml PAH 12/12/	1212L006.D	12/12/16 11:09
3		5.0 ug/ml PAH 12/12/	1212L009.D	12/12/16 12:49
4		10.0 ug/ml PAH 12/12	1212L010.D	12/12/16 13:22
5		50.0 ug/ml PAH 12/12	1212L011.D	12/12/16 13:54
6		100.0 ug/ml PAH 12/1	1212L012.D	12/12/16 14:28
7		0.5 ug/ml PAH 12/12/	1212L013.D	12/12/16 15:01
8		1.0 ug/ml PAH 12/12/	1212L014.D	12/12/16 15:34
9		SS PAH 12/12/16	1212L015.D	12/12/16 16:07
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	30 - 60% of mass 198	31.0
68	0 - 2% of mass 69	0.0
69	100 - 100% of mass 69	100.0
70	0 - 2% of mass 69	0.6
127	40 - 60% of mass 198	50.3
197	0 - 1% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.9
275	10 - 30% of mass 198	26.2
365	1 - 100% of mass 198	2.6
441	0.01 - 100% of mass 443	76.7
442	40 - 150% of mass 198	65.3
443	17 - 23% of mass 442	21.6

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81760
Matrix: Water
ID: SV Tune 12/15/16

SDG No: 81760
Date Analyzed: 12/20/16
Instrument: Linus
Time Analyzed: 16:35

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		5.0 ug/ml PAH 12/12/	1212L138.D	12/20/16 16:52
2	Lab Control Spike	161219A LCS-1 1/1000	1212L140.D	12/20/16 17:58
3	ERH139	AZ47494W13 1/1070	1212L142.D	12/20/16 19:05
4	ERH143	AZ47496W10 1/1070	1212L144.D	12/20/16 20:12
5	ERH145	AZ47497W11 1/1070	1212L145.D	12/20/16 20:45
6	ERH146	AZ47498W15 1/1070	1212L146.D	12/20/16 21:18
7		5.0 ug/ml PAH 12/12/	1212L156.D	12/21/16 2:33
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	30 - 60% of mass 198	30.4
68	0 - 2% of mass 69	0.0
69	100 - 100% of mass 69	100.0
70	0 - 2% of mass 69	0.2
127	40 - 60% of mass 198	48.4
197	0 - 1% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.9
275	10 - 30% of mass 198	27.0
365	1 - 100% of mass 198	2.7
441	0.01 - 100% of mass 443	76.5
442	40 - 150% of mass 198	75.1
443	17 - 23% of mass 442	21.2

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81760
Matrix: Water
ID: SV Tune 12/15/16

SDG No: 81760
Date Analyzed: 12/21/16
Instrument: Linus
Time Analyzed: 9:07

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		5.0 ug/ml PAH 12/12/	1212L159.D	12/21/16 9:24
2	Blank	161219A BLK 1/1000	1212L163.D	12/21/16 11:42
3	ERH136	AZ47495W13 1/1070	1212L164.D	12/21/16 12:15
4		5.0 ug/ml PAH 12/12/	1212L165.D	12/21/16 12:48
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	30 - 60% of mass 198	30.4
68	0 - 2% of mass 69	0.0
69	100 - 100% of mass 69	100.0
70	0 - 2% of mass 69	0.4
127	40 - 60% of mass 198	48.8
197	0 - 1% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.8
275	10 - 30% of mass 198	26.6
365	1 - 100% of mass 198	2.6
441	0.01 - 100% of mass 443	78.9
442	40 - 150% of mass 198	75.0
443	17 - 23% of mass 442	20.7

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 81760

Lab File ID (Standard): 1212L009.D Date Analyzed: 12/12/16

Instrument ID: Linus Time Analyzed: 12:49

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Napthalene-D8(IS)		Acenaphthene-D10(IS)		Phenanthrene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1900	5.87	1038	7.92	1930	9.84
	UPPER LIMIT	3800	6.37	2076	8.42	3860	10.34
	LOWER LIMIT	950	5.37	519	7.42	965	9.34
	SAMPLE NO.						
01	5.0 ug/ml PAH 12/12/16	2013	5.87	1105	7.92	2053	9.85
02	161219A LCS-1 1/1000	1028	5.88	576	7.92	1047	9.85
03	AZ47494W13 1/1070	2089	5.88	1176	7.92	2081	9.86
04	AZ47496W10 1/1070	1966	5.88	1071	7.92	1969	9.85
05	AZ47497W11 1/1070	2150	5.88	1210	7.92	2222	9.85
06	AZ47498W15 1/1070	1959	5.88	1119	7.92	1928	9.86
07	5.0 ug/ml PAH 12/12/16	1887	5.87	1037	7.92	1900	9.85
08	5.0 ug/ml PAH 12/12/16	1964	5.87	1068	7.92	1953	9.85
09	161219A BLK 1/1000	2265	5.88	1290	7.92	2306	9.86
10	AZ47495W13 1/1070	2323	5.88	1310	7.92	2288	9.86
11	5.0 ug/ml PAH 12/12/16	1898	5.88	1045	7.92	1899	9.85
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81760

Lab File ID (Standard): 1212L009.D Date Analyzed: 12/12/16

Instrument ID: Linus Time Analyzed: 12:49

GC Column: ID: Heated Purge: (Y/N)

		Chrysene-D12(IS)		Perylene-D12(IS)			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	2367	16.79	2172	20.54		
	UPPER LIMIT	4734	17.29	4344	21.04		
	LOWER LIMIT	1184	16.29	1086	20.04		
	SAMPLE NO.						
01	5.0 ug/ml PAH 12/12/16	2606	16.80	2443	20.56		
02	161219A LCS-1 1/1000	1327	16.81	1262	20.58		
03	AZ47494W13 1/1070	2611	16.83	2550	20.59		
04	AZ47496W10 1/1070	2478	16.82	2409	20.59		
05	AZ47497W11 1/1070	2773	16.83	2652	20.59		
06	AZ47498W15 1/1070	2464	16.83	2365	20.59		
07	5.0 ug/ml PAH 12/12/16	2454	16.80	2299	20.56		
08	5.0 ug/ml PAH 12/12/16	2506	16.80	2321	20.56		
09	161219A BLK 1/1000	2860	16.83	2678	20.59		
10	AZ47495W13 1/1070	2859	16.82	2765	20.59		
11	5.0 ug/ml PAH 12/12/16	2432	16.80	2263	20.57		
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

ORGANICS

Sample Data

APPL, INC.

EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH139
Sample Collection Date: 12/12/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81760
APPL ID: AZ47494
QCG: #SIMDO-161219A-214864

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/19/16	12/20/16
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/19/16	12/20/16
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	12/19/16	12/20/16
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	59.7	53-106			%	12/19/16	12/20/16
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	72.7	55-111			%	12/19/16	12/20/16
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	78.6	58-132			%	12/19/16	12/20/16

Quant Method: L1212P.M
Run #: 1212L142
Instrument: Linus
Sequence: L161212
Dilution Factor: 1
Initials: RHA

Printed: 12/21/16 12:55:21 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L142.D Vial: 42
Acq On : 20 Dec 16 19:05 Operator: MA
Sample : AZ47494W13 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Dec 21 8:40 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	2089	2.50000	ppb	0.01
6) Acenaphthene-D10(IS)	7.92	164	1176	2.50000	ppb	0.00
11) Phenanthrene-D10(IS)	9.86	188	2081	2.50000	ppb	0.02
15) Chrysene-D12(IS)	16.83	240	2611	2.50000	ppb	0.04
21) Perylene-D12(IS)	20.59	264	2550	2.50000	ppb	0.05
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.03	82	914	3.39912	ppb	0.00
Spiked Amount 4.673			Recovery = 72.739%			
7) Surrogate Recovery (FBP)	7.13	172	2047	2.79242	ppb	0.00
Spiked Amount 4.673			Recovery = 59.749%			
17) Surrogate Recovery (TPH)	13.82	244	3228	3.67178	ppb	0.00
Spiked Amount 4.673			Recovery = 78.581%			
Target Compounds						Qvalue

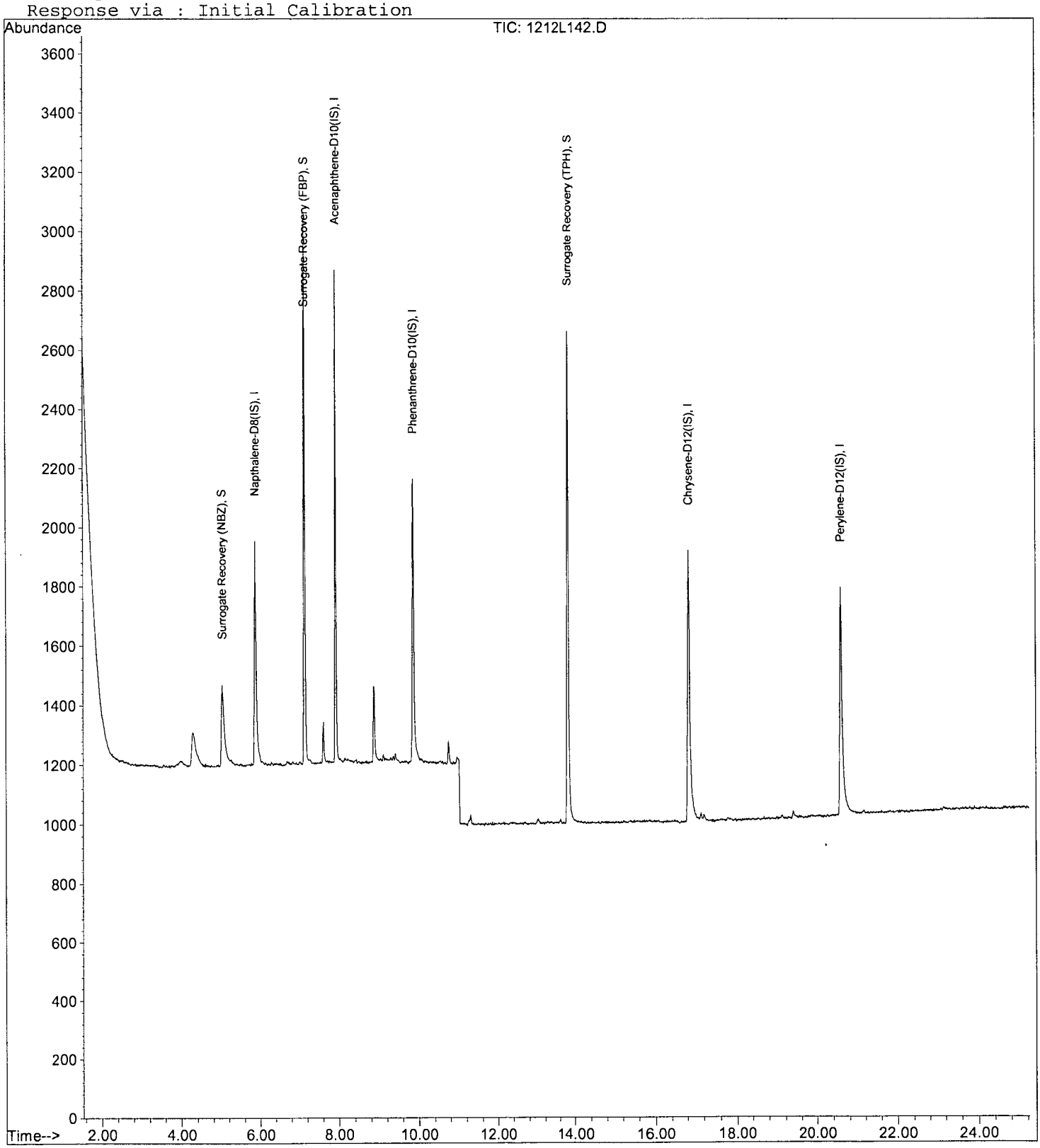
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L142.D Vial: 42
Acq On : 20 Dec 16 19:05 Operator: MA
Sample : AZ47494W13 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Dec 21 8:40 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH136
Sample Collection Date: 12/12/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81760
APPL ID: AZ47495
QCG: #SIMDO-161219A-214864

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/19/16	12/21/16
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/19/16	12/21/16
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	12/19/16	12/21/16
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	64.1	53-106			%	12/19/16	12/21/16
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	76.3	55-111			%	12/19/16	12/21/16
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	80.3	58-132			%	12/19/16	12/21/16

Quant Method: L1212P.M
Run #: 1212L164
Instrument: Linus
Sequence: L161212
Dilution Factor: 1
Initials: RHA

Printed: 12/21/16 12:55:21 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L164.D
Acq On : 21 Dec 16 12:15
Sample : AZ47495W13 1/1070
Misc : water

Vial: 64
Operator: MA
Inst : Linus
Multiplr: 0.93

Quant Time: Dec 21 12:44 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	2323	2.50000 ppb	0.01
6) Acenaphthene-D10(IS)	7.92	164	1310	2.50000 ppb	0.00
11) Phenanthrene-D10(IS)	9.86	188	2288	2.50000 ppb	0.02
15) Chrysene-D12(IS)	16.82	240	2859	2.50000 ppb	0.03
21) Perylene-D12(IS)	20.59	264	2765	2.50000 ppb	0.05
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.03	82	1068	3.56375 ppb	0.00
Spiked Amount 4.673			Recovery = 76.270%		
7) Surrogate Recovery (FBP)	7.13	172	2438	2.99581 ppb	0.00
Spiked Amount 4.673			Recovery = 64.114%		
17) Surrogate Recovery (TPH)	13.82	244	3608	3.75041 ppb	0.00
Spiked Amount 4.673			Recovery = 80.250%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
1212L164.D L1212P.M Wed Dec 21 12:45:55 2016

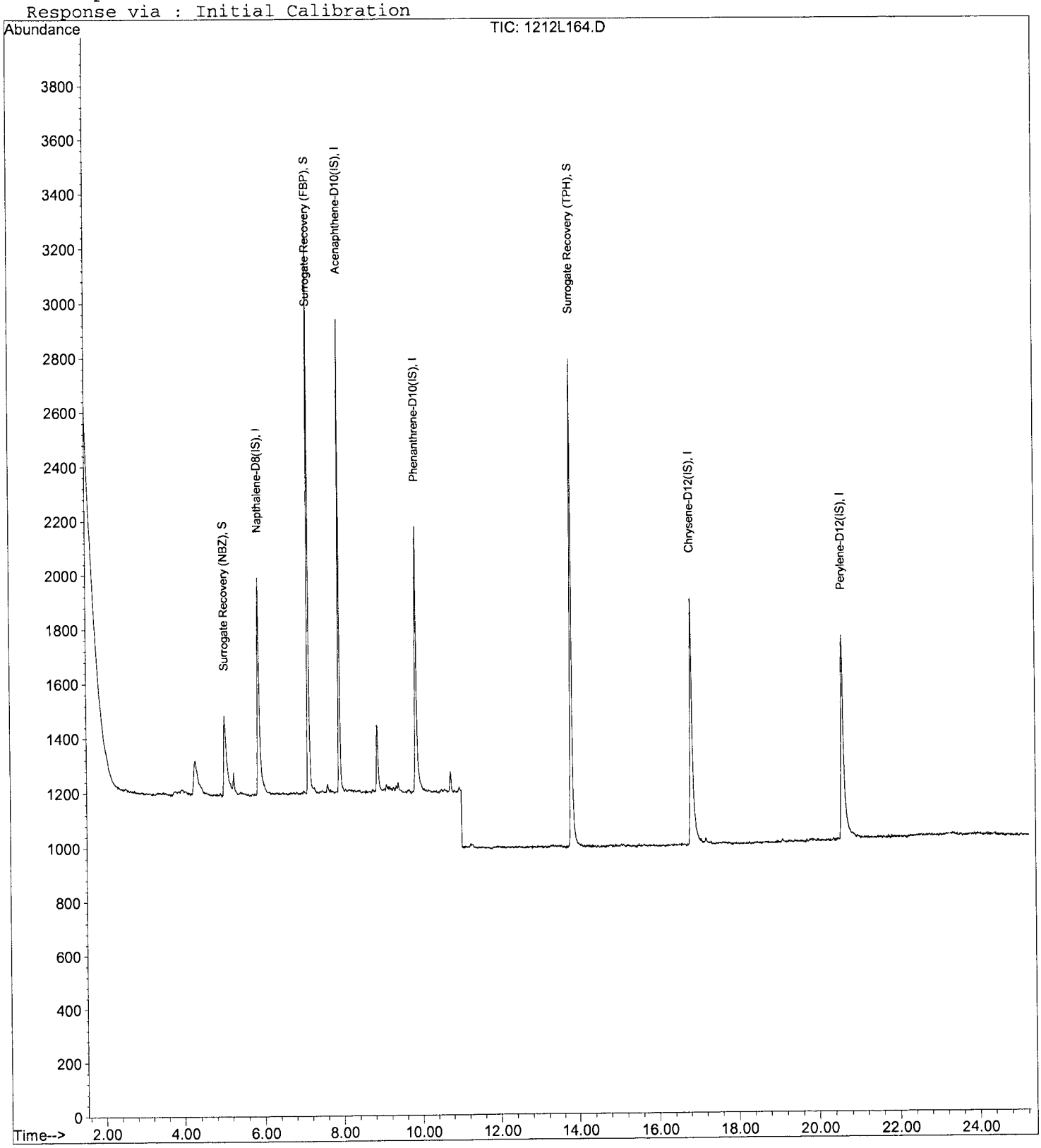
Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L164.D
Acq On : 21 Dec 16 12:15
Sample : AZ47495W13 1/1070
Misc : water

Vial: 64
Operator: MA
Inst : Linus
Multiplr: 0.93

Quant Time: Dec 21 12:44 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH143
Sample Collection Date: 12/13/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81760
APPL ID: AZ47496
QCG: #SIMDO-161219A-214864

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/19/16	12/20/16
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/19/16	12/20/16
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	12/19/16	12/20/16
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	61.8	53-106			%	12/19/16	12/20/16
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	75.8	55-111			%	12/19/16	12/20/16
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	74.0	58-132			%	12/19/16	12/20/16

Quant Method: L1212P.M
Run #: 1212L144
Instrument: Linus
Sequence: L161212
Dilution Factor: 1
Initials: RHA

Printed: 12/21/16 12:55:21 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L144.D Vial: 44
Acq On : 20 Dec 16 20:12 Operator: MA
Sample : AZ47496W10 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Dec 21 12:03 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	1966	2.50000	ppb	0.01
6) Acenaphthene-D10(IS)	7.92	164	1071	2.50000	ppb	0.00
11) Phenanthrene-D10(IS)	9.85	188	1969	2.50000	ppb	0.01
15) Chrysene-D12(IS)	16.82	240	2478	2.50000	ppb	0.03
21) Perylene-D12(IS)	20.59	264	2409	2.50000	ppb	0.05
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.03	82	898	3.54163	ppb	0.00
Spiked Amount 4.673			Recovery = 75.799%			
7) Surrogate Recovery (FBP)	7.13	172	1924	2.88668	ppb	0.00
Spiked Amount 4.673			Recovery = 61.782%			
17) Surrogate Recovery (TPH)	13.81	244	2890	3.45720	ppb	0.00
Spiked Amount 4.673			Recovery = 73.980%			
Target Compounds						Qvalue

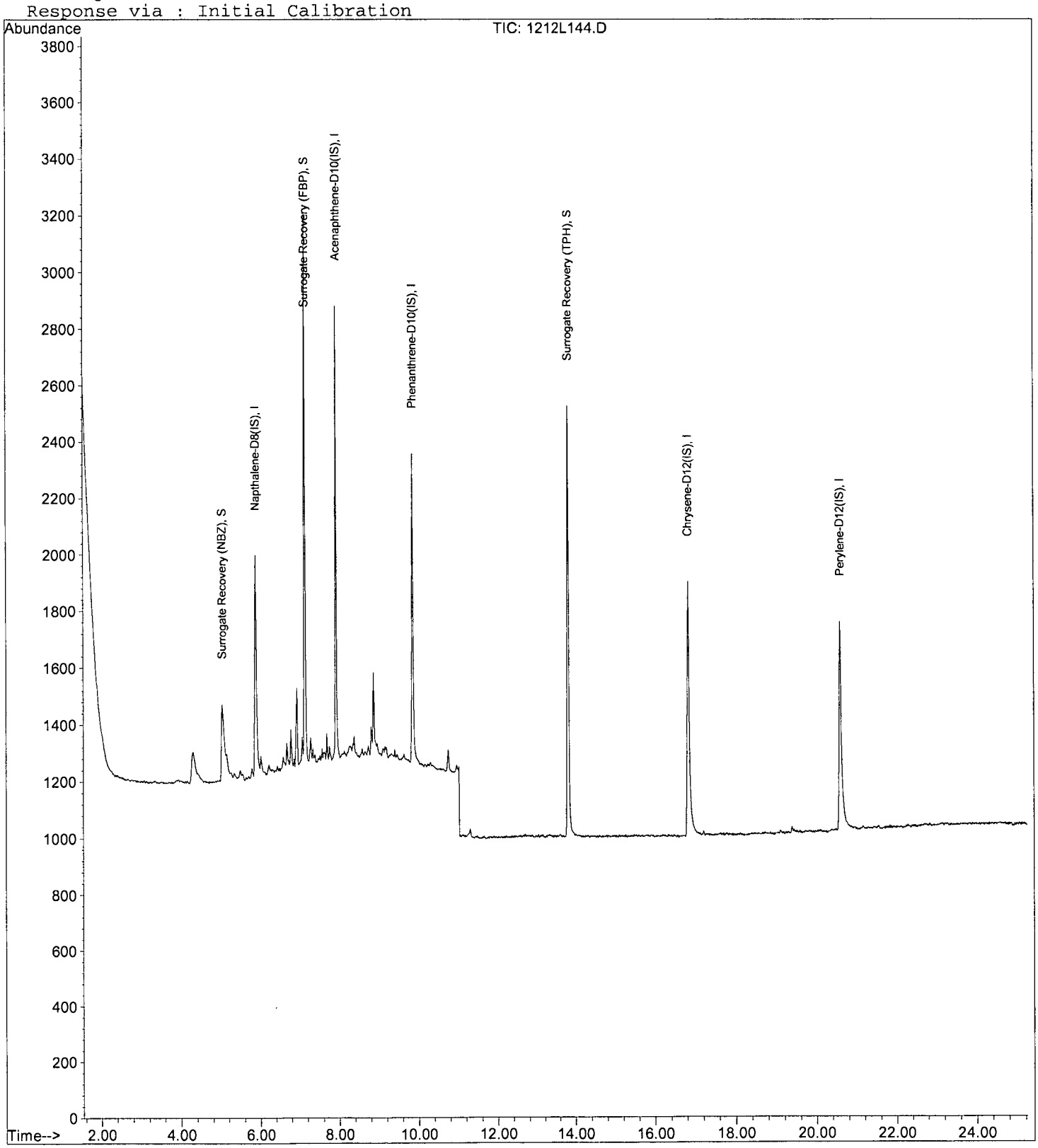
(#) = qualifier out of range (m) = manual integration
1212L144.D L1212P.M Wed Dec 21 12:03:16 2016 Page 1

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L144.D Vial: 44
Acq On : 20 Dec 16 20:12 Operator: MA
Sample : AZ47496W10 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Dec 21 12:03 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH145
Sample Collection Date: 12/13/16

ARF: 81760
APPL ID: AZ47497
QCG: #SIMDO-161219A-214864

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/19/16	12/20/16
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/19/16	12/20/16
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	12/19/16	12/20/16
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	57.8	53-106			%	12/19/16	12/20/16
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	68.5	55-111			%	12/19/16	12/20/16
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	75.8	58-132			%	12/19/16	12/20/16

Quant Method: L1212P.M
Run #: 1212L145
Instrument: Linus
Sequence: L161212
Dilution Factor: 1
Initials: RHA

Printed: 12/21/16 12:55:21 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L145.D Vial: 45
Acq On : 20 Dec 16 20:45 Operator: MA
Sample : AZ47497W11 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Dec 21 8:40 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	2150	2.50000	ppb	0.01
6) Acenaphthene-D10(IS)	7.92	164	1210	2.50000	ppb	0.00
11) Phenanthrene-D10(IS)	9.85	188	2222	2.50000	ppb	0.01
15) Chrysene-D12(IS)	16.83	240	2773	2.50000	ppb	0.04
21) Perylene-D12(IS)	20.59	264	2652	2.50000	ppb	0.05
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.03	82	883	3.20032	ppb	0.00
Spiked Amount 4.673			Recovery = 68.480%			
7) Surrogate Recovery (FBP)	7.13	172	2042	2.70283	ppb	0.00
Spiked Amount 4.673			Recovery = 57.844%			
17) Surrogate Recovery (TPH)	13.82	244	3309	3.54000	ppb	0.00
Spiked Amount 4.673			Recovery = 75.756%			

Target Compounds Qvalue

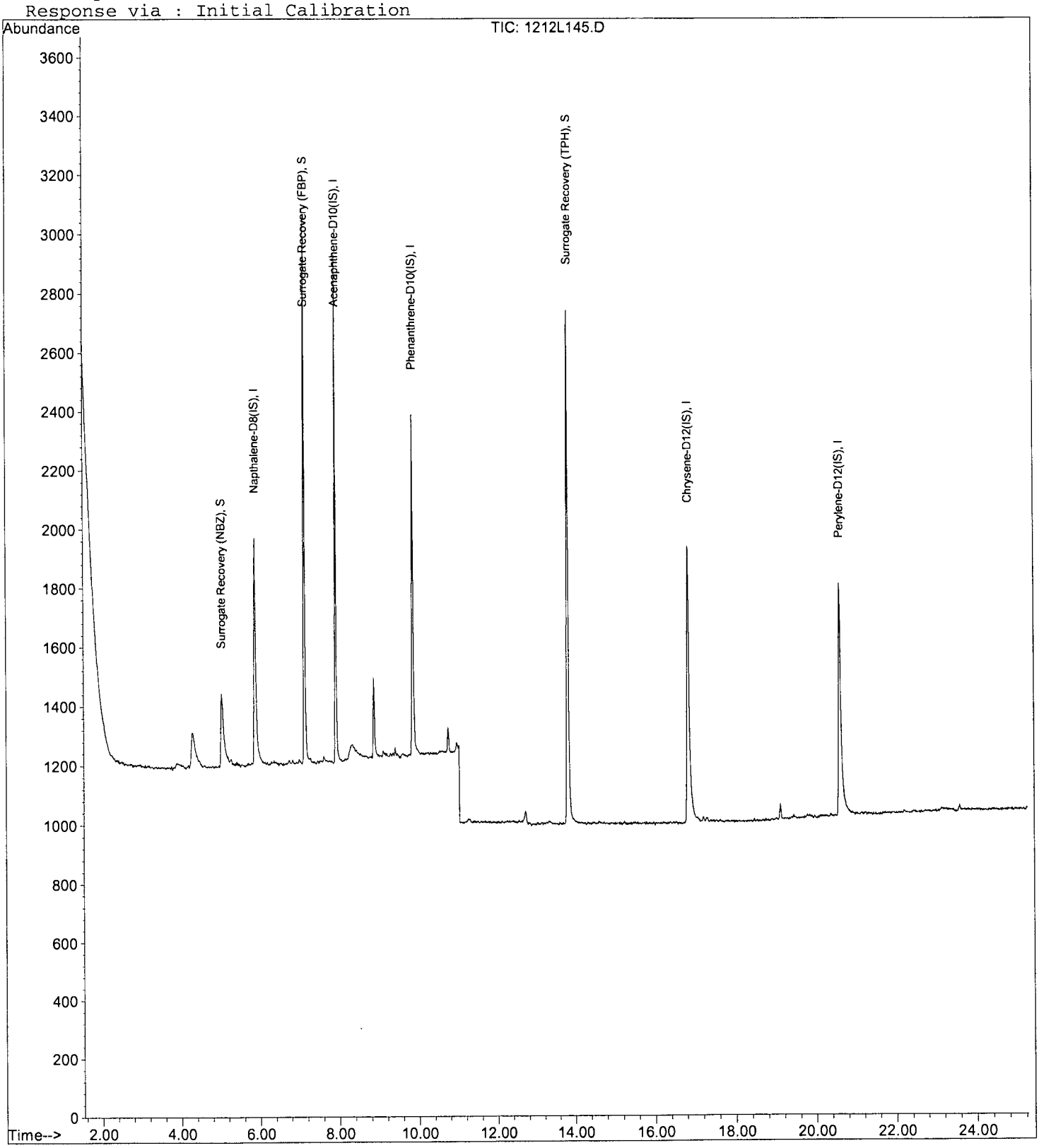
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L145.D Vial: 45
Acq On : 20 Dec 16 20:45 Operator: MA
Sample : AZ47497W11 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Dec 21 8:40 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH146
Sample Collection Date: 12/12/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81760
APPL ID: AZ47498
QCG: #SIMDO-161219A-214864

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/19/16	12/20/16
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/19/16	12/20/16
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	12/19/16	12/20/16
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	59.1	53-106			%	12/19/16	12/20/16
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	70.1	55-111			%	12/19/16	12/20/16
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	80.2	58-132			%	12/19/16	12/20/16

Quant Method: L1212P.M
Run #: 1212L146
Instrument: Linus
Sequence: L161212
Dilution Factor: 1
Initials: RHA

Printed: 12/21/16 12:55:21 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L146.D Vial: 46
Acq On : 20 Dec 16 21:18 Operator: MA
Sample : AZ47498W15 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Dec 21 8:40 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	1959	2.50000	ppb	0.01
6) Acenaphthene-D10(IS)	7.92	164	1119	2.50000	ppb	0.00
11) Phenanthrene-D10(IS)	9.86	188	1928	2.50000	ppb	0.02
15) Chrysene-D12(IS)	16.83	240	2464	2.50000	ppb	0.04
21) Perylene-D12(IS)	20.59	264	2365	2.50000	ppb	0.05
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.03	82	824	3.27385	ppb	0.00
Spiked Amount 4.673			Recovery = 70.064%			
7) Surrogate Recovery (FBP)	7.13	172	1928	2.76256	ppb	0.00
Spiked Amount 4.673			Recovery = 59.128%			
17) Surrogate Recovery (TPH)	13.82	244	3107	3.74729	ppb	0.00
Spiked Amount 4.673			Recovery = 80.186%			
Target Compounds						Qvalue

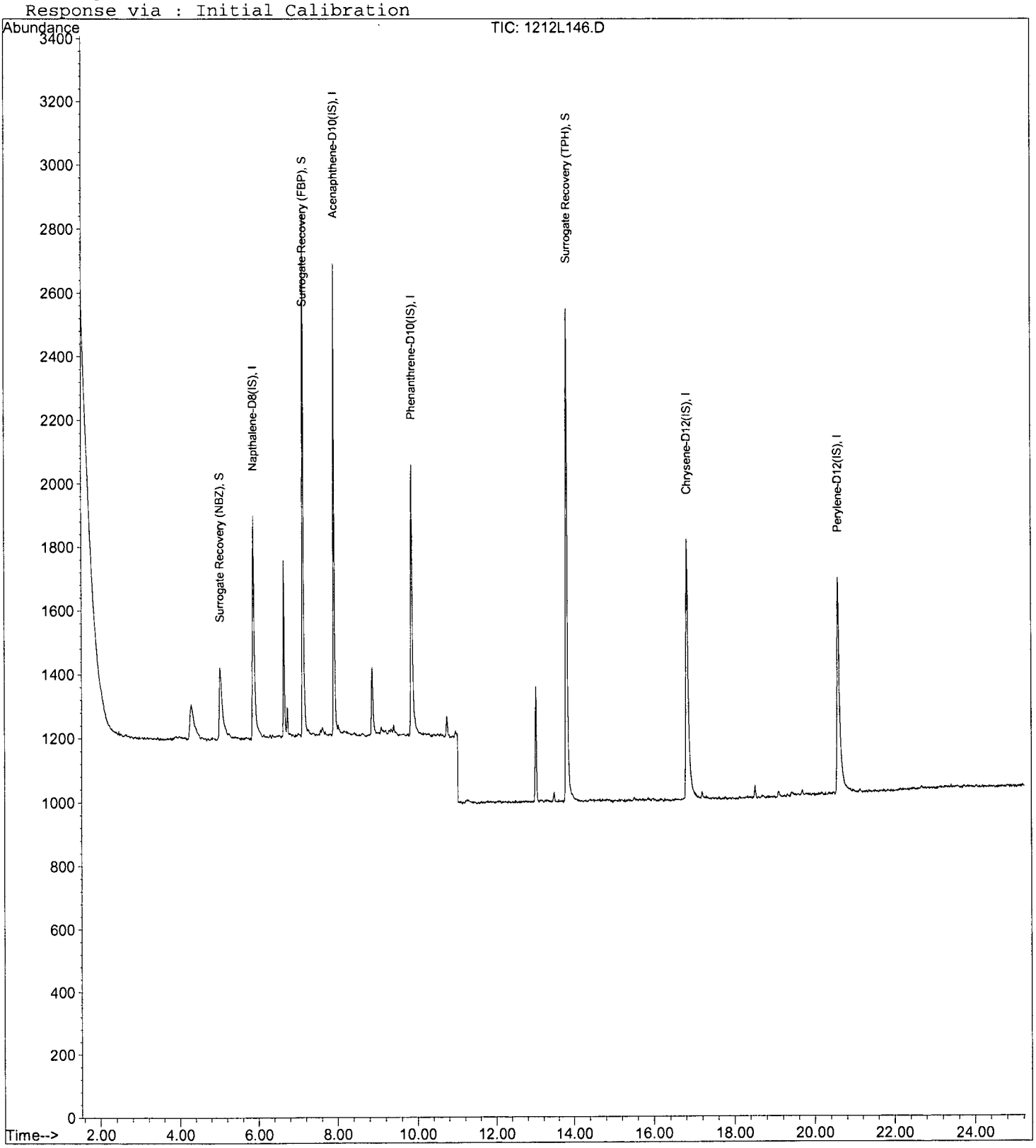
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L146.D Vial: 46
Acq On : 20 Dec 16 21:18 Operator: MA
Sample : AZ47498W15 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Dec 21 8:40 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



ORGANICS

Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:
SDG No:
Initial Cal. Date: 12/12/16
Instrument: Linus
Initials:

		Compound	0.1	0.2	0.5	1	5	10	50	100			Avg	%RSD		
			1212L005.D	1212L006.D	1212L013.D	1212L014.D	1212L009.D	1212L010.D	1212L011.D	1212L012.D						
1	I	Napthalene-D8(IS)														
2	SL	Surrogate Recovery (NBZ)			0.1025	0.1761	0.2637	0.3064	0.3197	0.3127			0.25	36	SL	1.000
3	TM	Naphthalene	1.031	0.9780	0.9862	0.9477	1.118	1.054	1.003	0.9513			1.0	5.7	TM	
4	TM	2-Methylnaphthalene	0.5550	0.5854	0.5149	0.5323	0.7182	0.6983	0.6712	0.6317			0.61	13	TM	
5	TM	1-Methylnaphthalene	0.7135	0.7853	0.6711	0.6467	0.7284	0.6774	0.6350	0.5896			0.68	8.9	TM	
6	I	Acenaphthene-D10(IS)														
7	SL	Surrogate Recovery (FBP)	2.045	1.941	1.395	1.435	1.344	1.504	1.449	1.373			1.6	17	SL	0.999
8	TM	Acenaphthylene	1.826	1.954	1.831	1.759	2.172	2.083	2.017	1.896			1.9	7.3	TM	
9	*TM	Acenaphthene	1.241	1.216	1.124	1.053	1.283	1.224	1.174	1.102			1.2	6.7	*TM	
10	TM	Fluorene	1.363	1.307	1.278	1.221	1.525	1.462	1.419	1.328			1.4	7.4	TM	
11	I	Phenanthrene-D10(IS)														
12	TM	Phenanthrene	1.035	1.103	0.9894	0.9754	1.171	1.129	1.120	1.072			1.1	6.5	TM	
13	TM	Anthracene	0.9809	0.8442	0.8021	0.8311	1.116	1.103	1.105	1.012			0.97	14	TM	
14	*TM	Fluoranthene	1.499	1.511	1.288	1.295	1.594	1.582	1.618	1.561			1.5	8.8	*TM	
15	I	Chrysene-D12(IS)														
16	TM	Pyrene	1.265	1.248	1.144	1.116	1.350	1.290	1.282	1.228			1.2	6.2	TM	
17	SL	Surrogate Recovery (TPH)	1.141	1.125	0.7856	0.7730	0.6907	0.7963	0.8068	0.7547			0.86	20	SL	0.999
18	TM	Benz (a) anthracene	1.153	0.9846	0.9136	0.8374	1.173	1.136	1.200	1.138			1.1	13	TM	
19	TM	Chrysene	1.231	1.235	1.285	1.193	1.266	1.202	1.143	1.075			1.2	5.7	TM	
20	TM	Indeno (1,2,3-cd) pyrene	1.253	1.162	0.9852	1.016	1.310	1.273	1.125	1.175			1.2	10	TM	
21	I	Perylene-D12(IS)														
22	TM	Benzo (b) fluoranthene	0.9076	0.9504	0.9240	0.9294	1.188	1.191	1.264	1.230			1.1	15	TM	
23	TM	Benzo (k) fluoranthene	1.126	1.186	1.191	1.043	1.104	1.110	1.151	1.129			1.1	4.2	TM	
24	*TM	Benzo (a) pyrene	1.011	1.095	1.051	1.010	1.199	1.156	1.179	1.156			1.1	6.9	*TM	
25	TM	Dibenz (a,h) anthracene	1.011	0.8783	0.8525	0.9697	1.189	1.150	1.168	1.100			1.0	13	TM	
26	TM	Benzo (g,h,i) perylene	0.8732	0.9963	0.9608	0.9222	1.163	1.125	1.141	0.9740			1.0	11	TM	
27																
28																
29																
30																
31																
32																
33																
34																
35																

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L005.D
Acq On : 12 Dec 16 10:36
Sample : 0.1 ug/ml PAH 12/12/16
Misc : water

Vial: 3
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Dec 13 14:49 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:03:27 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

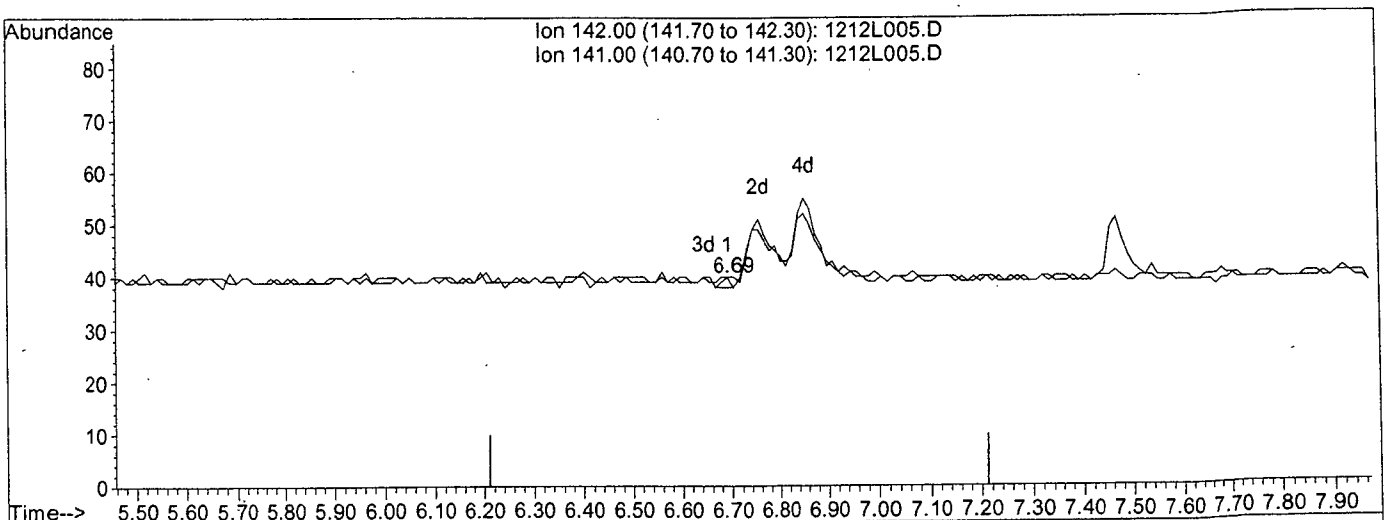
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	1892	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.92	164	1027	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.85	188	1835	2.50000	ppb		0.01
15) Chrysene-D12(IS)	16.80	240	2234	2.50000	ppb		0.01
21) Perylene-D12(IS)	20.55	264	2176	2.50000	ppb		0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.02	82	1	0.13676	ppb		-0.01
Spiked Amount 5.000			Recovery = 2.740%				
7) Surrogate Recovery (FBP)	7.16	172	42	-0.08389	ppb		0.02
Spiked Amount 5.000			Recovery = -1.680%				
17) Surrogate Recovery (TPH)	13.84	244	51	-0.04876	ppb		0.02
Spiked Amount 5.000			Recovery = -0.980%				
Target Compounds							Qvalue
3) Naphthalene	5.89	128	78	0.10219	ppb		97
4) 2-Methylnaphthalene	6.75	142	42m	-0.29925	ppb		62
5) 1-Methylnaphthalene	6.84	142	54	0.10480	ppb		79
8) Acenaphthylene	7.77	152	75	0.09400	ppb		97
9) Acenaphthene	7.95	154	51	0.10546	ppb		92
10) Fluorene	8.59	166	56	0.10002	ppb		95
12) Phenanthrene	9.89	178	76	0.09636	ppb	#	92
13) Anthracene	10.01	178	72	0.10069	ppb	#	89
14) Fluoranthene	12.67	202	110	0.10035	ppb		96
16) Pyrene	13.30	202	113	0.10196	ppb	#	89
18) Benz (a) anthracene	16.78	228	103	0.10803	ppb		95
19) Chrysene	16.87	228	110	0.10226	ppb	#	87
20) Indeno (1,2,3-cd) pyrene	22.93	276	112	0.10781	ppb	#	94
22) Benzo (b) fluoranthene	19.68	252	79	0.08458	ppb		98
23) Benzo (k) fluoranthene	19.75	252	98m	0.24586	ppb		88
24) Benzo (a) pyrene	20.31	252	88	0.09132	ppb		95
25) Dibenz (a,h) anthracene	22.96	278	88	-0.17327	ppb		89
26) Benzo (g,h,i) perylene	23.45	276	76	0.08566	ppb		89

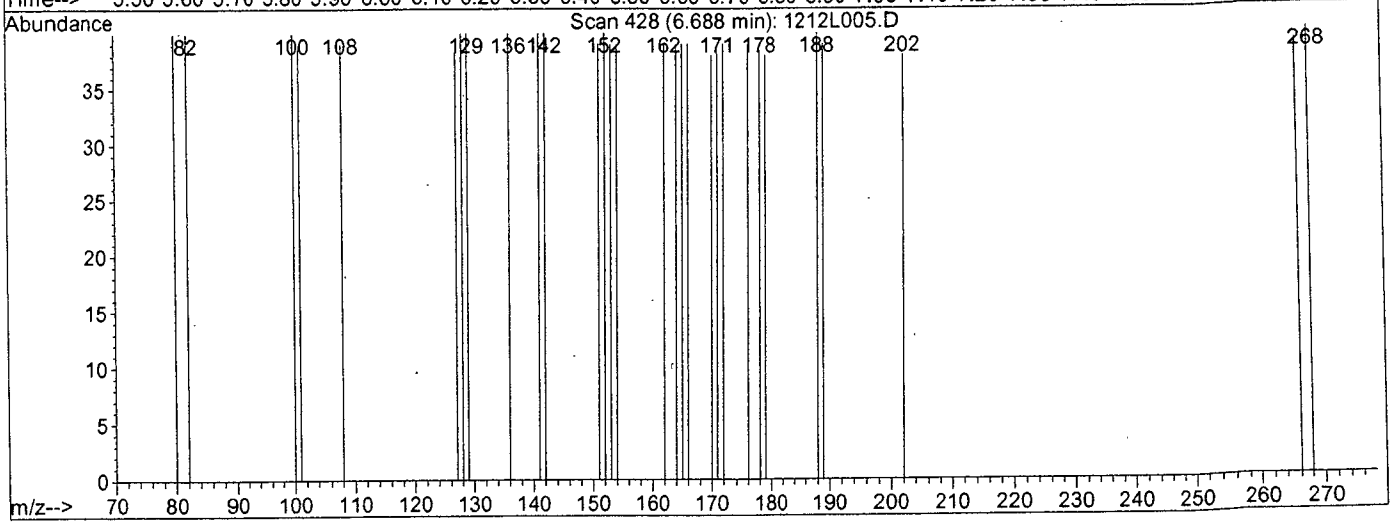
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L005.D Vial: 3
Acq On : 12 Dec 16 10:36 Operator: MA
Sample : 0.1 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 14:10 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:13:16 2016
Response via : Multiple Level Calibration





TIC: 1212L005.D

(4) 2-Methylnaphthalene (TM)

6.69min -0.3822ppb

response 2

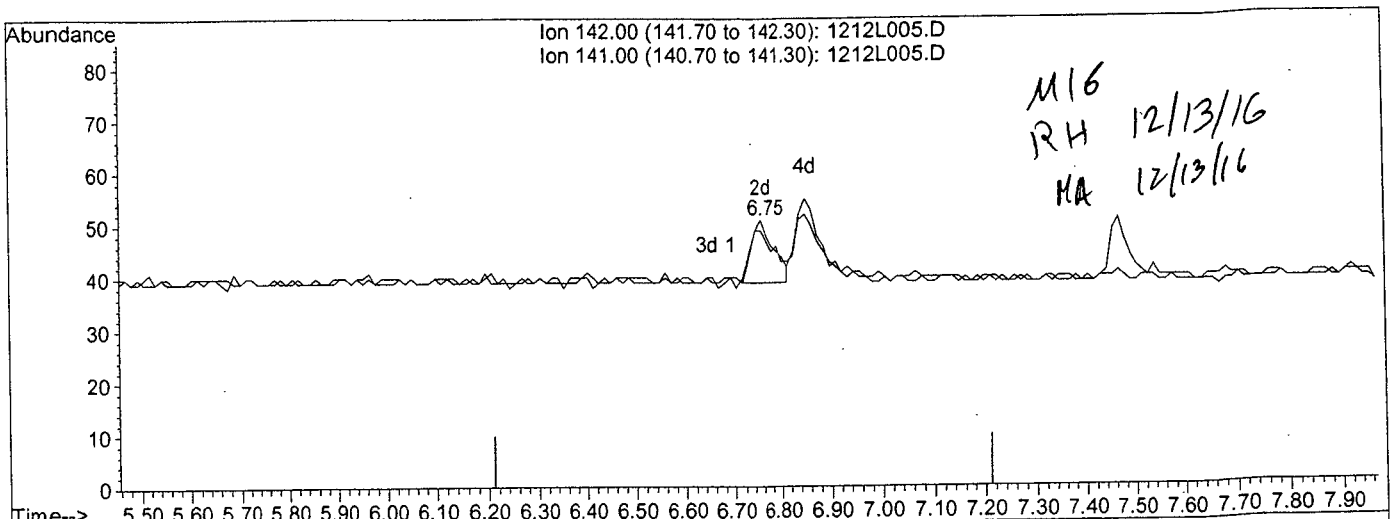
Ion	Exp%	Act%
142.00	100	100
141.00	84.90	50.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

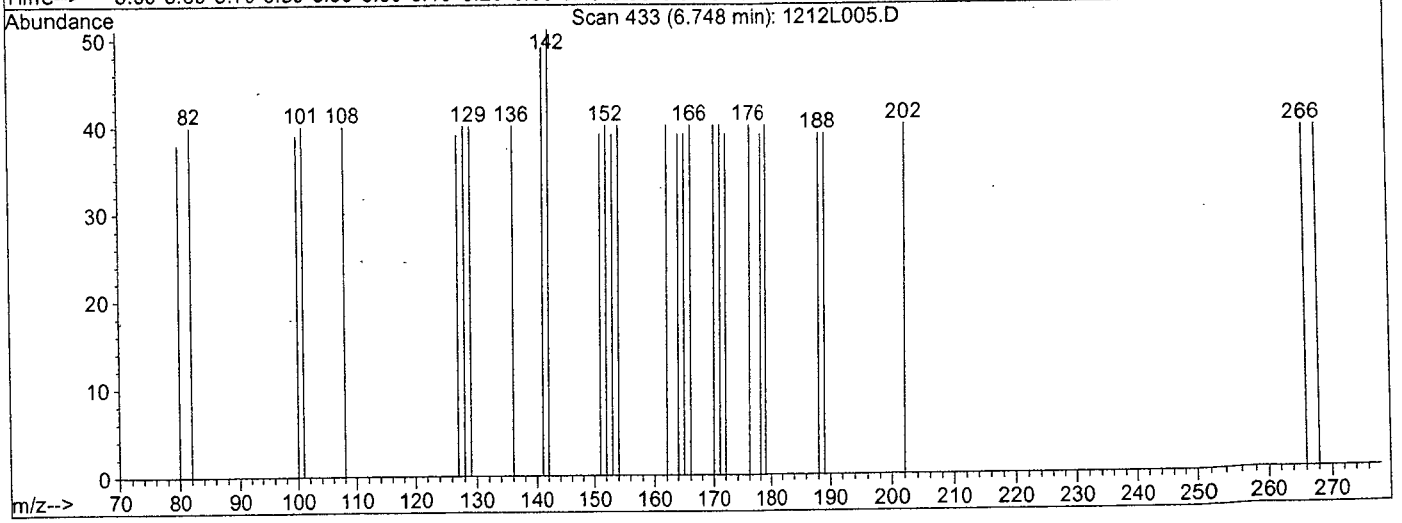
Data File : M:\LINUS\DATA\L161212\1212L005.D
Acq On : 12 Dec 16 10:36
Sample : 0.1 ug/ml PAH 12/12/16
Misc : water
Quant Time: Dec 13 14:49 2016

Vial: 3
Operator: MA
Inst : Linus
Multiplr: 1.00
Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:13:16 2016
Response via : Multiple Level Calibration



M16 RH 12/13/16 MA 12/13/16



TIC: 1212L005.D

(4) 2-Methylnaphthalene (TM)

6.75min -0.2992ppb m

response 42

Ion	Exp%	Act%
142.00	100	100
141.00	84.90	96.08
0.00	0.00	0.00
0.00	0.00	0.00

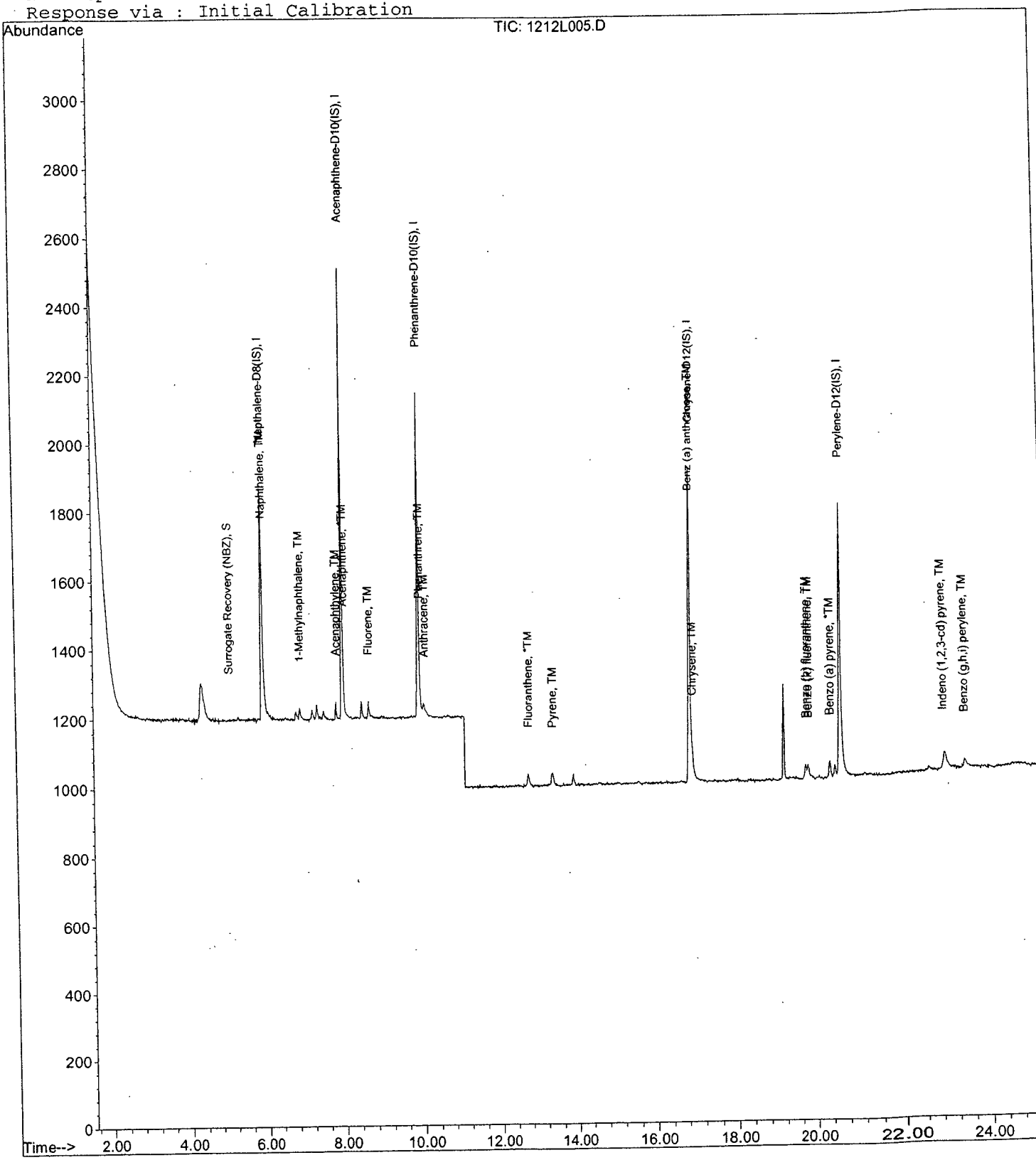
Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L005.D
Acq On : 12 Dec 16 10:36
Sample : 0.1 ug/ml PAH 12/12/16
Misc : water

Vial: 3
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Dec 13 14:49 2016 Quant Results File: L1212P.RES

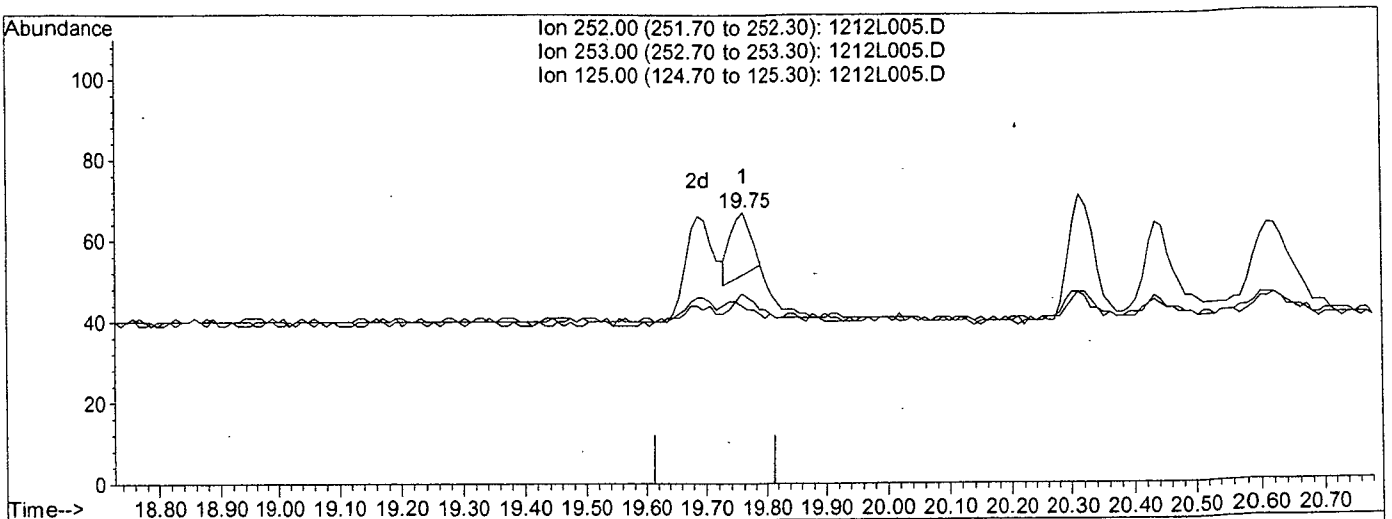
Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration

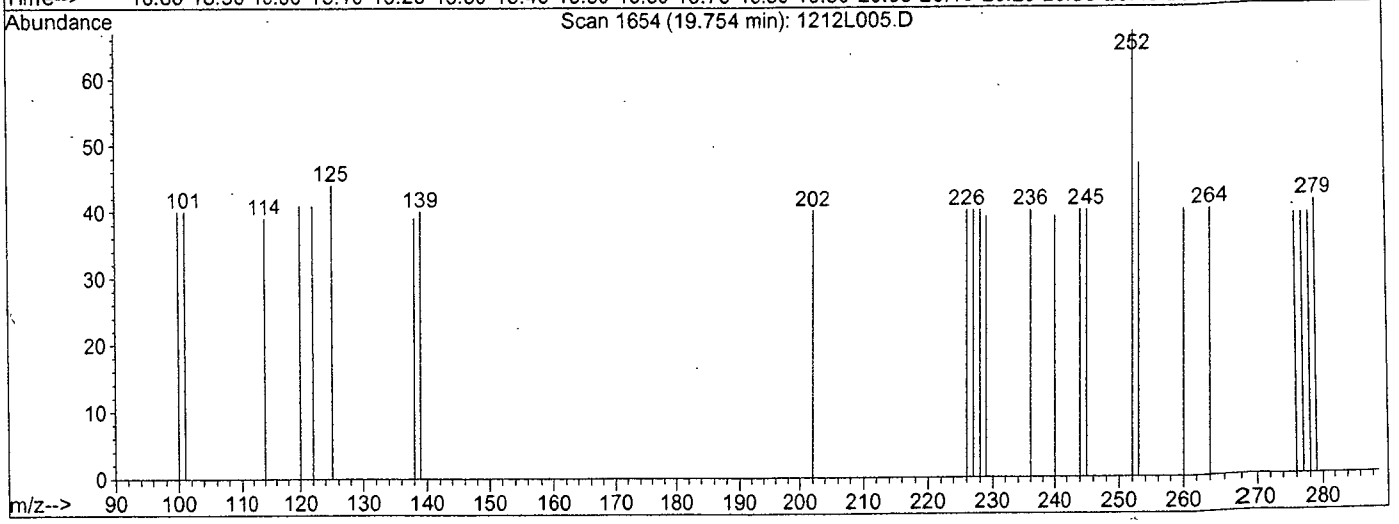


Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L005.D Vial: 3
Acq On : 12 Dec 16 10:36 Operator: MA
Sample : 0.1 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 14:04 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:06:14 2016
Response via : Multiple Level Calibration





TIC: 1212L005.D

(23) Benzo (k) fluoranthene (TM)

19.75min 0.1831ppb

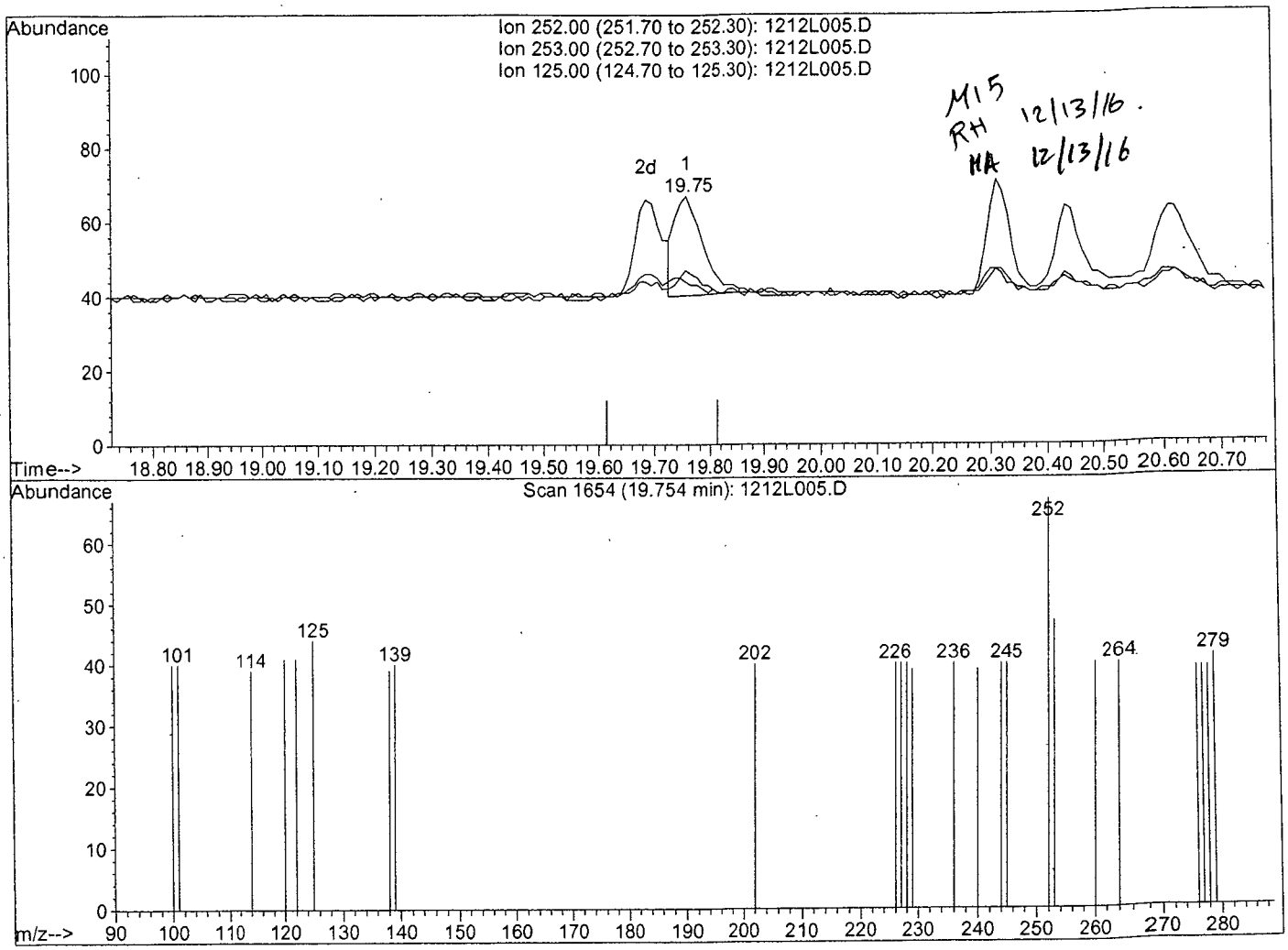
response 36

Ion	Exp%	Act%
252.00	100	100
253.00	23.40	30.77#
125.00	13.10	15.38
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L005.D Vial: 3
Acq On : 12 Dec 16 10:36 Operator: MA
Sample : 0.1 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 14:10 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:06:14 2016
Response via : Multiple Level Calibration



TIC: 1212L005.D

(23) Benzo (k) fluoranthene (TM)

19.75min 0.2459ppb m

response 98

Ion	Exp%	Act%
252.00	100	100
253.00	23.40	70.15#
125.00	13.10	65.67#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L006.D
Acq On : 12 Dec 16 11:09
Sample : 0.2 ug/ml PAH 12/12/16
Misc : water

Vial: 4
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Dec 13 14:11 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:03:42 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.88	136	1751	2.50000 ppb		0.01
6) Acenaphthene-D10(IS)	7.92	164	966	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.85	188	1688	2.50000 ppb		0.01
15) Chrysene-D12(IS)	16.80	240	2044	2.50000 ppb		0.01
21) Perylene-D12(IS)	20.55	264	1907	2.50000 ppb		0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.06	82	4	0.15069 ppb		0.02
Spiked Amount 5.000			Recovery =	3.020%		
7) Surrogate Recovery (FBP)	7.17	172	75	-0.01749 ppb		0.04
Spiked Amount 5.000			Recovery =	-0.340%		
17) Surrogate Recovery (TPH)	13.85	244	92	0.02394 ppb		0.03
Spiked Amount 5.000			Recovery =	0.480%		
Target Compounds						Qvalue
3) Naphthalene	5.90	128	137	0.19395 ppb		95
4) 2-Methylnaphthalene	6.75	142	82	-0.20257 ppb		95
5) 1-Methylnaphthalene	6.84	142	110	0.23066 ppb		96
8) Acenaphthylene	7.77	152	151	0.20121 ppb		98
9) Acenaphthene	7.97	154	94	0.20664 ppb		97
10) Fluorene	8.59	166	101	0.19179 ppb		99
12) Phenanthrene	9.90	178	149	0.20537 ppb		95
13) Anthracene	10.01	178	114	0.17332 ppb	#	92
14) Fluoranthene	12.67	202	204	0.20231 ppb	#	91
16) Pyrene	13.30	202	204	0.20118 ppb		95
18) Benz (a) anthracene	16.79	228	161	0.18456 ppb		93
19) Chrysene	16.88	228	202	0.20524 ppb		96
20) Indeno (1,2,3-cd) pyrene	22.92	276	190	0.19989 ppb	#	93
22) Benzo (b) fluoranthene	19.68	252	145	0.17714 ppb		99
23) Benzo (k) fluoranthene	19.75	252	181m	0.35570 ppb		91
24) Benzo (a) pyrene	20.31	252	167	0.19775 ppb		97
25) Dibenz (a,h) anthracene	22.97	278	134	-0.10610 ppb		95
26) Benzo (g,h,i) perylene	23.45	276	152	0.19548 ppb		95

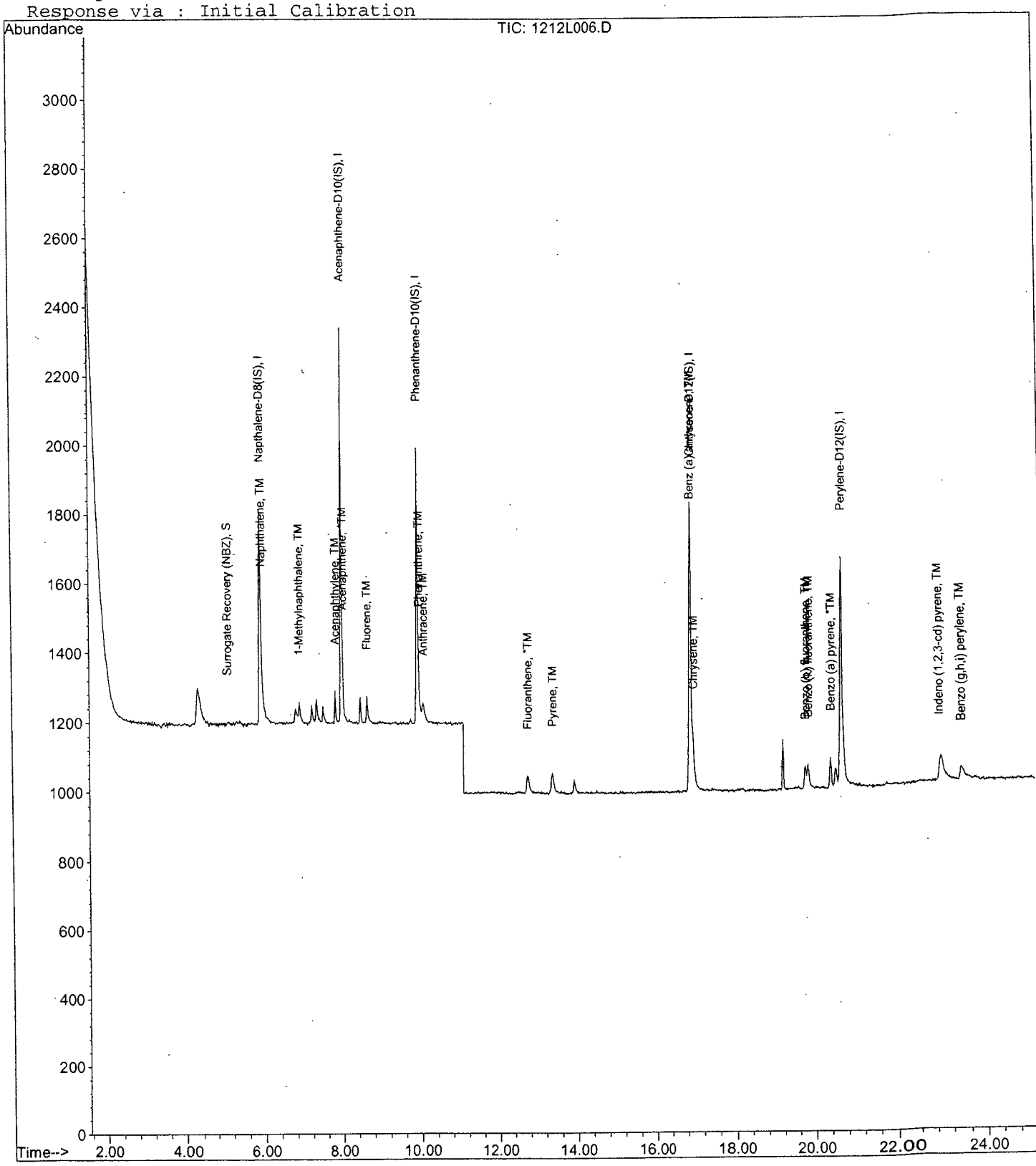
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L006.D Vial: 4
Acq On : 12 Dec 16 11:09 Operator: MA
Sample : 0.2 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 13 14:11 2016 Quant Results File: L1212P.RES

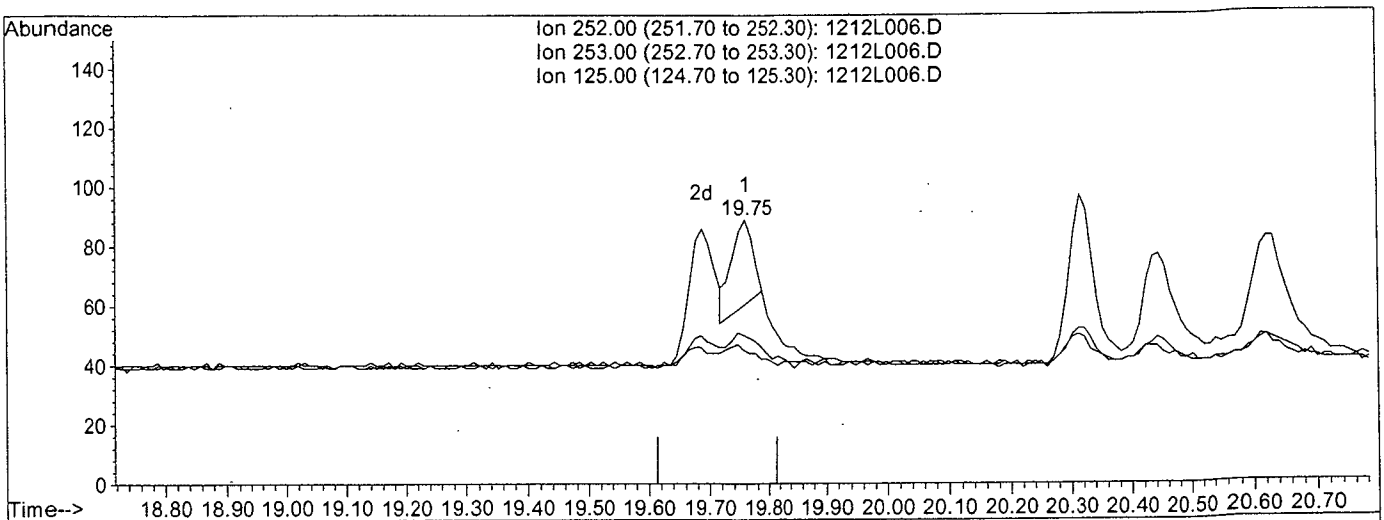
Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration

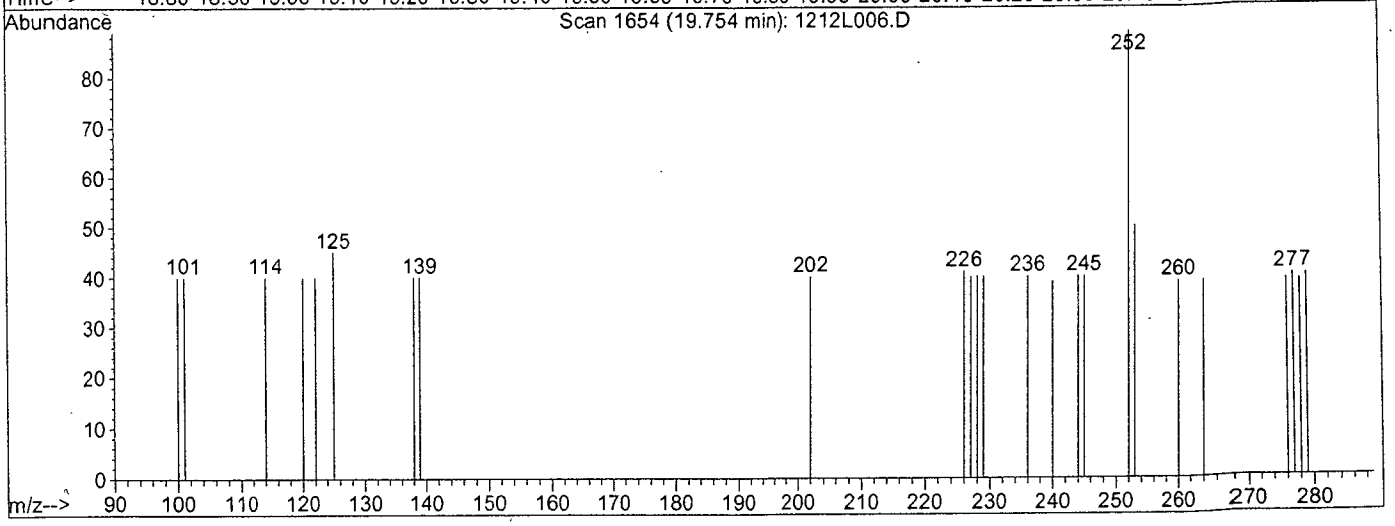


Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L006.D Vial: 4
Acq On : 12 Dec 16 11:09 Operator: MA
Sample : 0.2 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 14:04 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:06:14 2016
Response via : Multiple Level Calibration





TIC: 1212L006.D

(23) Benzo (k) fluoranthene (TM)

19.75min 0.2321ppb

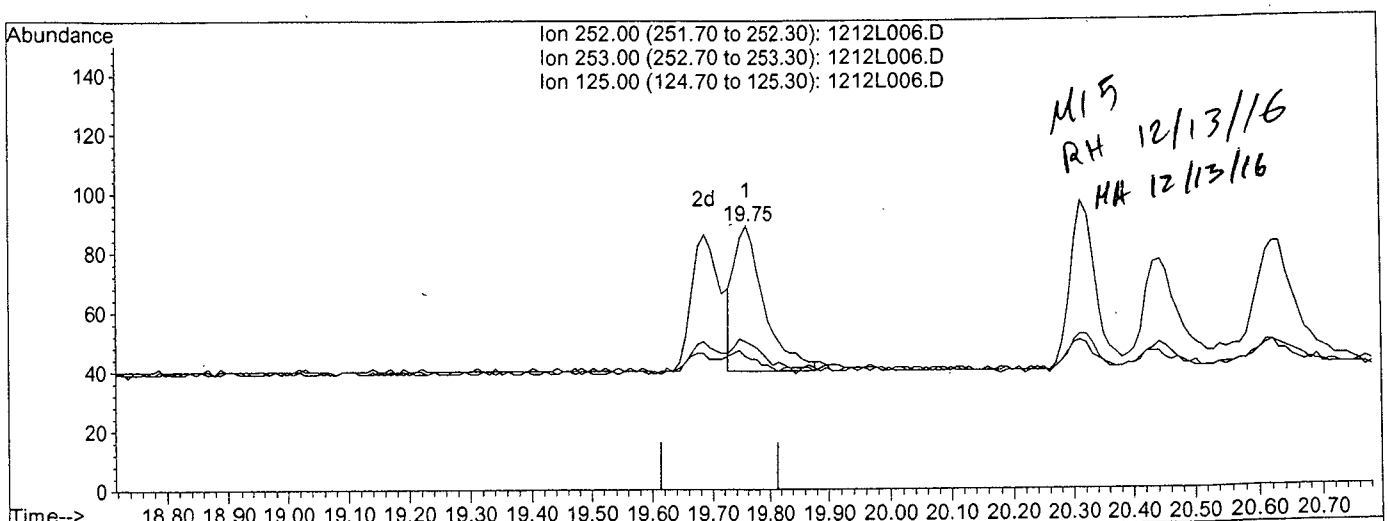
response 74

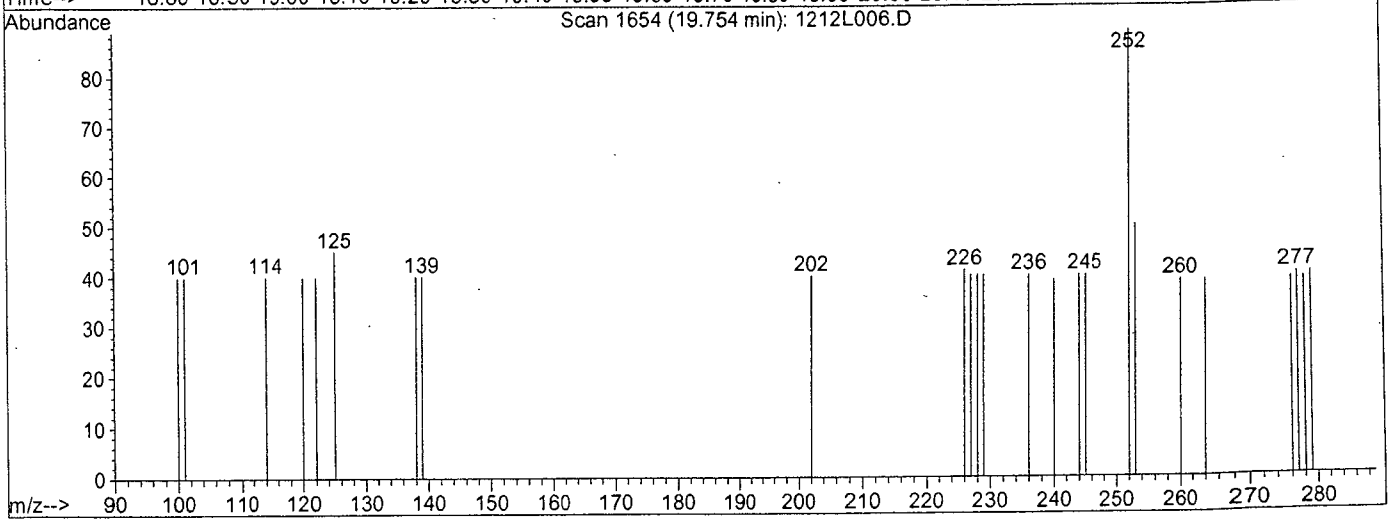
Ion	Exp%	Act%
252.00	100	100
253.00	23.40	16.67
125.00	13.10	12.50
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L006.D Vial: 4
Acq On : 12 Dec 16 11:09 Operator: MA
Sample : 0.2 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 14:11 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:06:14 2016
Response via : Multiple Level Calibration





TIC: 1212L006.D

(23) Benzo (k) fluoranthene (TM)

19.75min 0.3557ppb m

response 181

Ion	Exp%	Act%
252.00	100	100
253.00	23.40	56.18#
125.00	13.10	50.56#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L013.D
Acq On : 12 Dec 16 15:01
Sample : 0.5 ug/ml PAH 12/12/16
Misc : water

Vial: 11
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Dec 13 14:12 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:03:42 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	1952	2.50000 ppb	0.01
6) Acenaphthene-D10(IS)	7.93	164	1068	2.50000 ppb	0.01
11) Phenanthrene-D10(IS)	9.85	188	1895	2.50000 ppb	0.01
15) Chrysene-D12(IS)	16.81	240	2304	2.50000 ppb	0.02
21) Perylene-D12(IS)	20.56	264	2170	2.50000 ppb	0.02
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.08	82	20	0.21387 ppb	0.05
Spiked Amount 5.000			Recovery =	4.280%	
7) Surrogate Recovery (FBP)	7.17	172	149	0.09433 ppb	0.04
Spiked Amount 5.000			Recovery =	1.880%	
17) Surrogate Recovery (TPH)	13.87	244	181	0.13391 ppb	0.05
Spiked Amount 5.000			Recovery =	2.680%	
Target Compounds					Qvalue
3) Naphthalene	5.90	128	385	0.48892 ppb	99
5) 1-Methylnaphthalene	6.84	142	262	0.49282 ppb	97
8) Acenaphthylene	7.77	152	391	0.47126 ppb	98
9) Acenaphthene	7.97	154	240	0.47721 ppb	99
10) Fluorene	8.59	166	273	0.46889 ppb	100
12) Phenanthrene	9.90	178	375	0.46040 ppb	99
13) Anthracene	10.02	178	304	0.41169 ppb	98
14) Fluoranthene	12.67	202	488	0.43109 ppb	92
16) Pyrene	13.30	202	527	0.46106 ppb	98
18) Benz (a) anthracene	16.79	228	421	0.42815 ppb	100
19) Chrysene	16.88	228	592	0.53363 ppb	96
20) Indeno (1,2,3-cd) pyrene	22.91	276	454	0.42373 ppb #	97
22) Benzo (b) fluoranthene	19.68	252	401	0.43051 ppb	96
23) Benzo (k) fluoranthene	19.74	252	517m	0.67137 ppb	95
24) Benzo (a) pyrene	20.31	252	456	0.47453 ppb	96
25) Dibenz (a,h) anthracene	22.96	278	370	0.11963 ppb	95
26) Benzo (g,h,i) perylene	23.43	276	417	0.47130 ppb	96

(#) = qualifier out of range (m) = manual integration

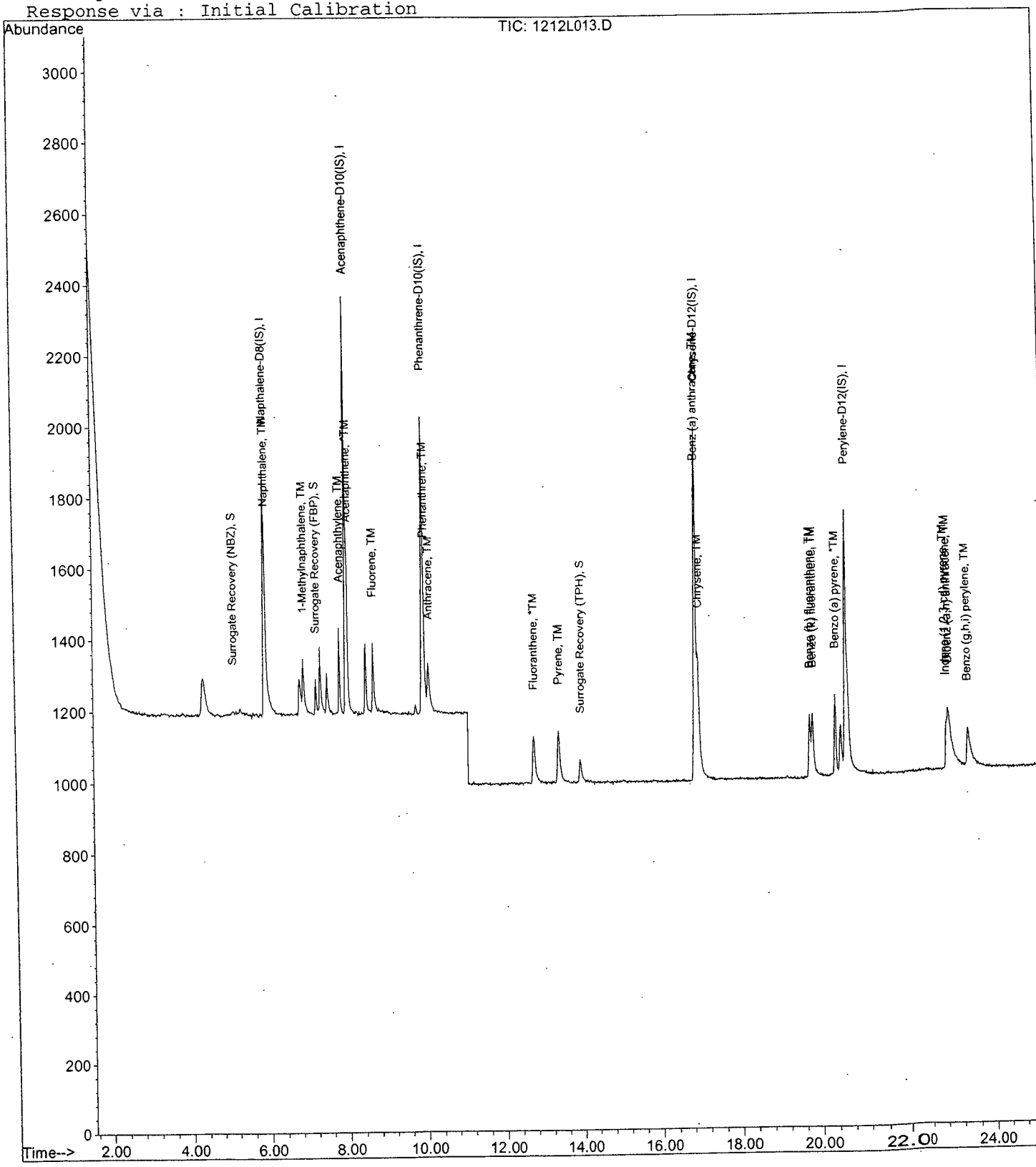
Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L013.D
Acq On : 12 Dec 16 15:01
Sample : 0.5 ug/ml PAH 12/12/16
Misc : water

Vial: 11
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Dec 13 14:12 2016 Quant Results File: L1212P.RES

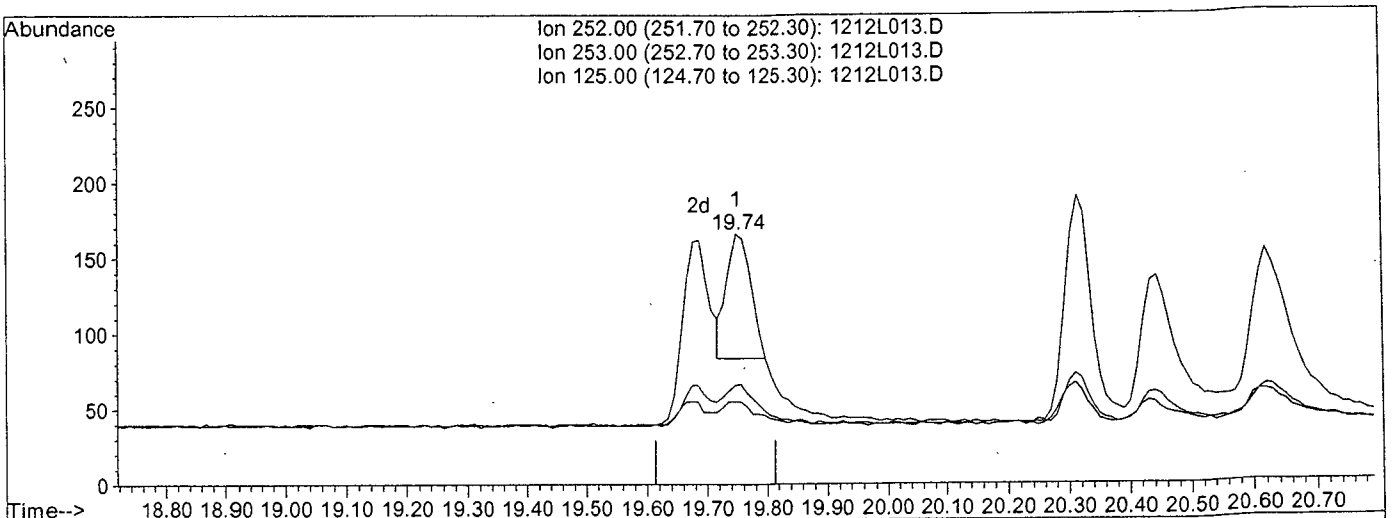
Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration

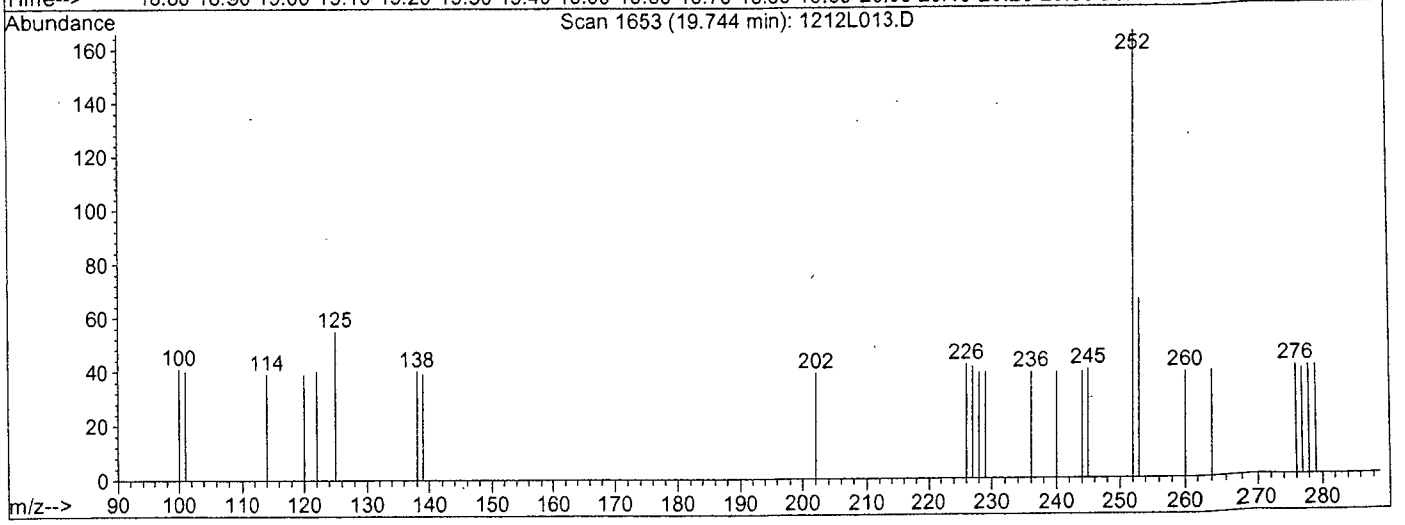


Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L013.D Vial: 11
Acq On : 12 Dec 16 15:01 Operator: MA
Sample : 0.5 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 14:04 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:06:14 2016
Response via : Multiple Level Calibration





TIC: 1212L013.D

(23) Benzo (k) fluoranthene (TM)

19.74min 0.3771ppb

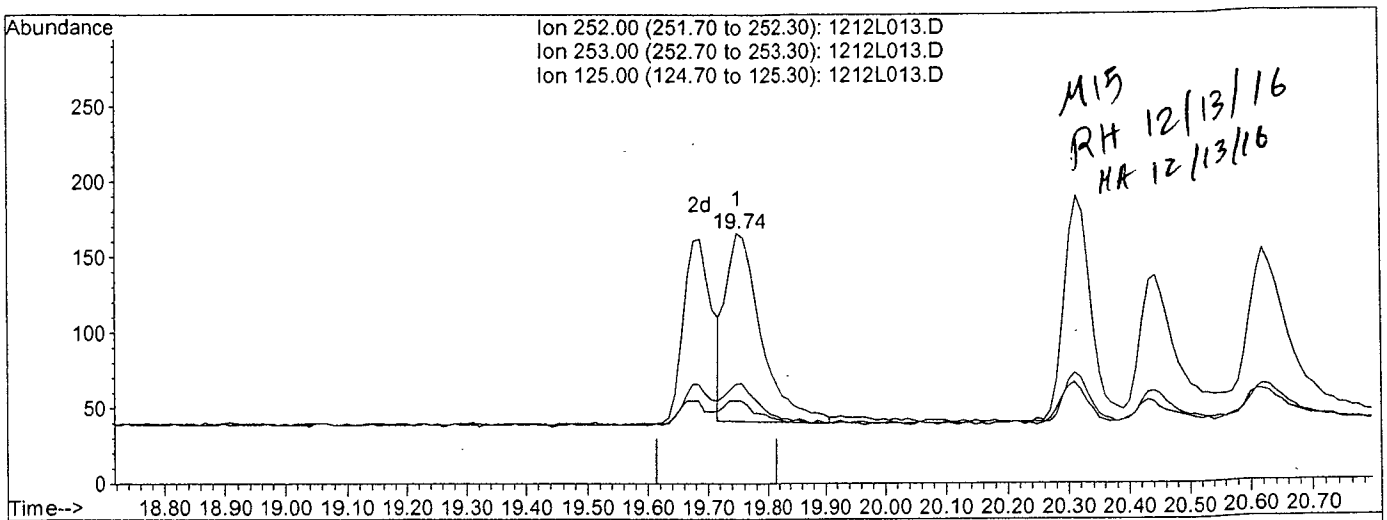
response 227

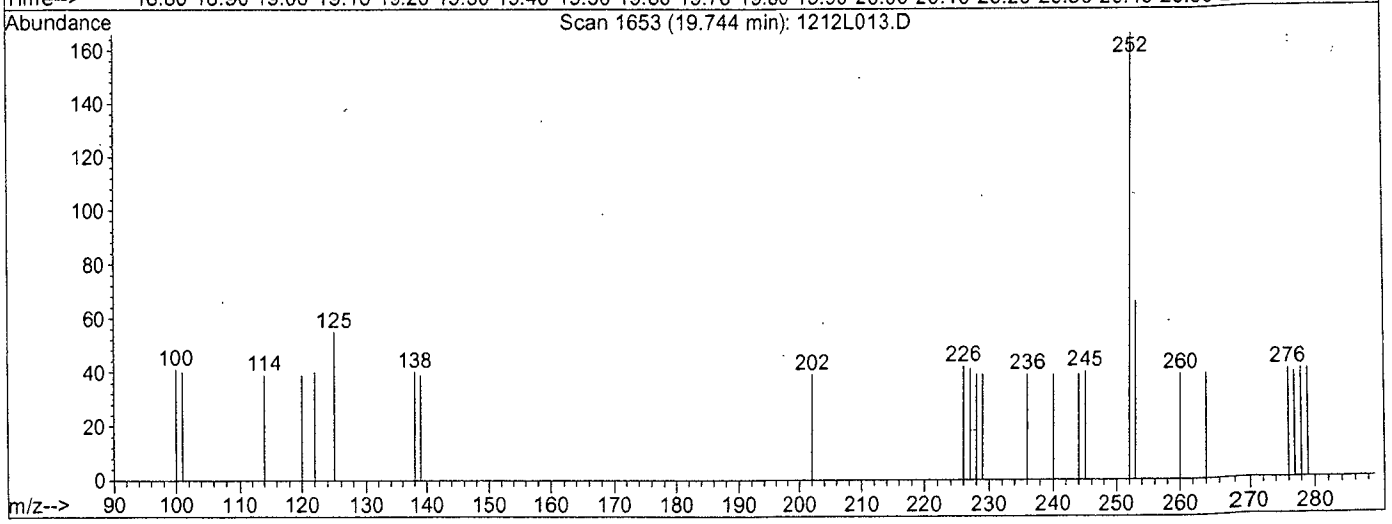
Ion	Exp%	Act%
252.00	100	100
253.00	23.40	20.73
125.00	13.10	10.98
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L013.D Vial: 11
Acq On : 12 Dec 16 15:01 Operator: MA
Sample : 0.5 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 14:12 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:06:14 2016
Response via : Multiple Level Calibration





TIC: 1212L013.D

(23) Benzo (k) fluoranthene (TM)

19.74min 0.6714ppb m

response 517

Ion	Exp%	Act%
252.00	100	100
253.00	23.40	39.76#
125.00	13.10	33.13#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L014.D
Acq On : 12 Dec 16 15:34
Sample : 1.0 ug/ml PAH 12/12/16
Misc : water

Vial: 12
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Dec 13 14:12 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:03:42 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.88	136	1902	2.50000 ppb		0.01
6) Acenaphthene-D10(IS)	7.92	164	1042	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.85	188	1853	2.50000 ppb		0.01
15) Chrysene-D12(IS)	16.80	240	2251	2.50000 ppb		0.01
21) Perylene-D12(IS)	20.55	264	2109	2.50000 ppb		0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.07	82	67	0.41209 ppb		0.04
Spiked Amount 5.000			Recovery	= 8.240%		
7) Surrogate Recovery (FBP)	7.16	172	299	0.36077 ppb		0.02
Spiked Amount 5.000			Recovery	= 7.220%		
17) Surrogate Recovery (TPH)	13.86	244	348	0.38315 ppb		0.04
Spiked Amount 5.000			Recovery	= 7.660%		
Target Compounds						Qvalue
3) Naphthalene	5.90	128	721	0.93968 ppb		98
4) 2-Methylnaphthalene	6.74	142	405	0.44937 ppb		98
5) 1-Methylnaphthalene	6.83	142	492	0.94978 ppb		96
8) Acenaphthylene	7.77	152	733	0.90551 ppb		98
9) Acenaphthene	7.97	154	439	0.89468 ppb		98
10) Fluorene	8.59	166	509	0.89604 ppb		99
12) Phenanthrene	9.90	178	723	0.90778 ppb		100
13) Anthracene	10.01	178	616	0.85312 ppb		99
14) Fluoranthene	12.66	202	960	0.86727 ppb		92
16) Pyrene	13.29	202	1005	0.89996 ppb		99
18) Benz (a) anthracene	16.79	228	754	0.78487 ppb		96
19) Chrysene	16.88	228	1074	0.99090 ppb		97
20) Indeno (1,2,3-cd) pyrene	22.89	276	915	0.87410 ppb	#	95
22) Benzo (b) fluoranthene	19.66	252	784	0.86604 ppb		96
23) Benzo (k) fluoranthene	19.73	252	880m	1.06561 ppb		96
24) Benzo (a) pyrene	20.31	252	852	0.91226 ppb		94
25) Dibenz (a,h) anthracene	22.94	278	818	0.60911 ppb		95
26) Benzo (g,h,i) perylene	23.41	276	778	0.90474 ppb		95

(#) = qualifier out of range (m) = manual integration
1212L014.D L1212P.M Wed Dec 14 09:33:42 2016

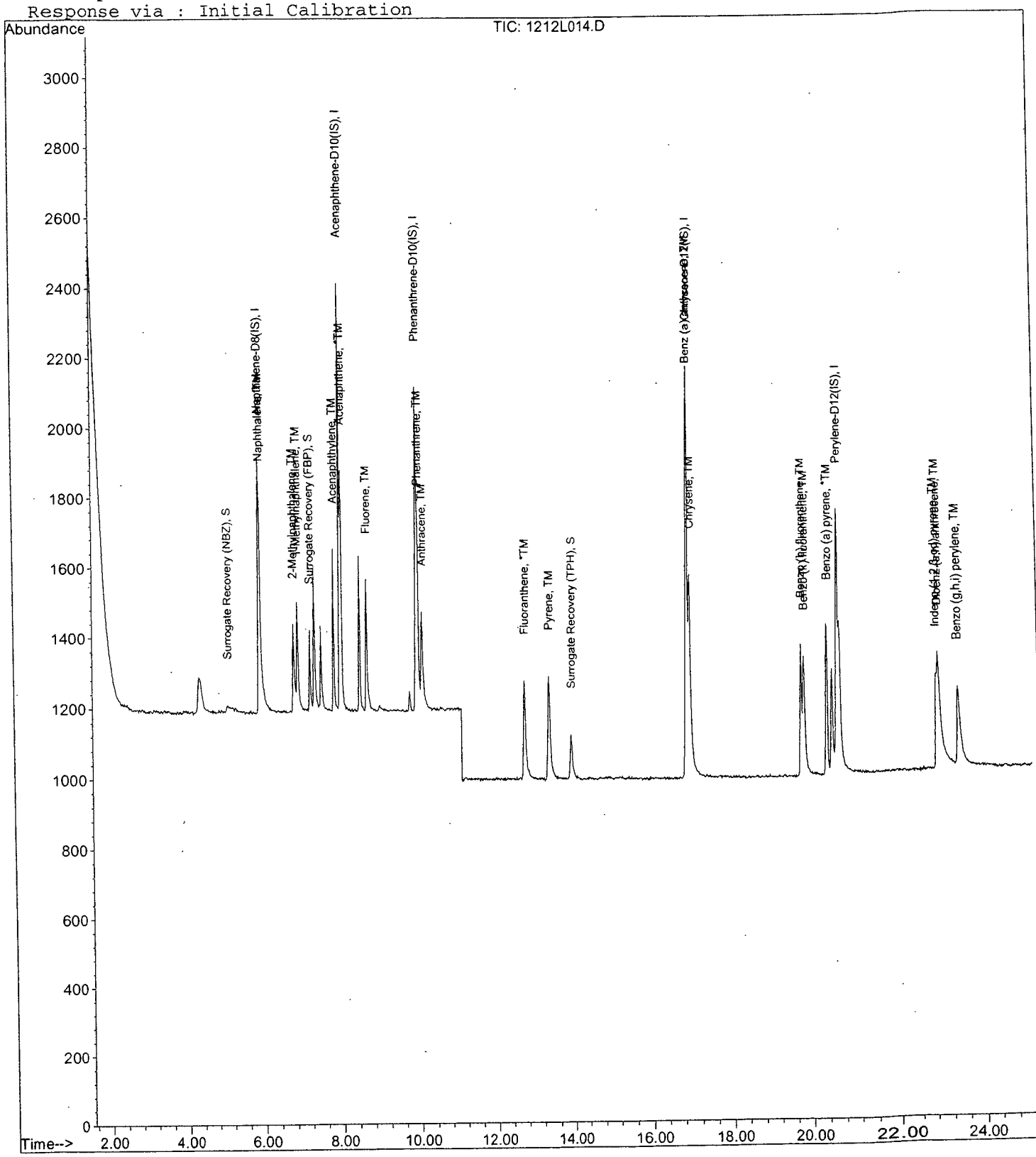
Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L014.D
Acq On : 12 Dec 16 15:34
Sample : 1.0 ug/ml PAH 12/12/16
Misc : water

Vial: 12
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Dec 13 14:12 2016 Quant Results File: L1212P.RES

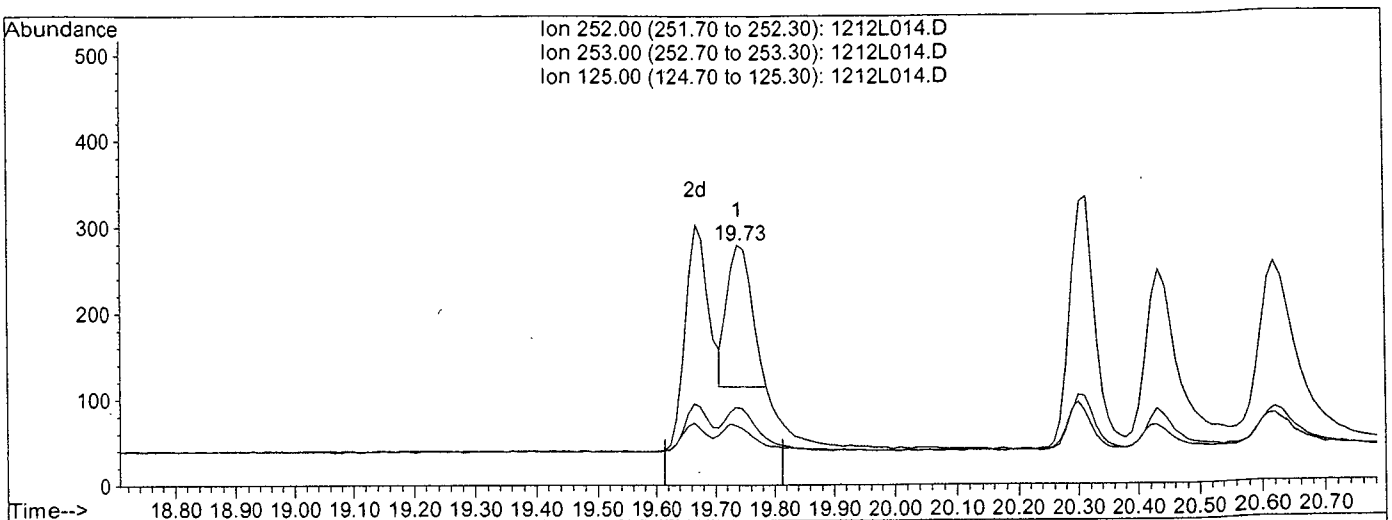
Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration

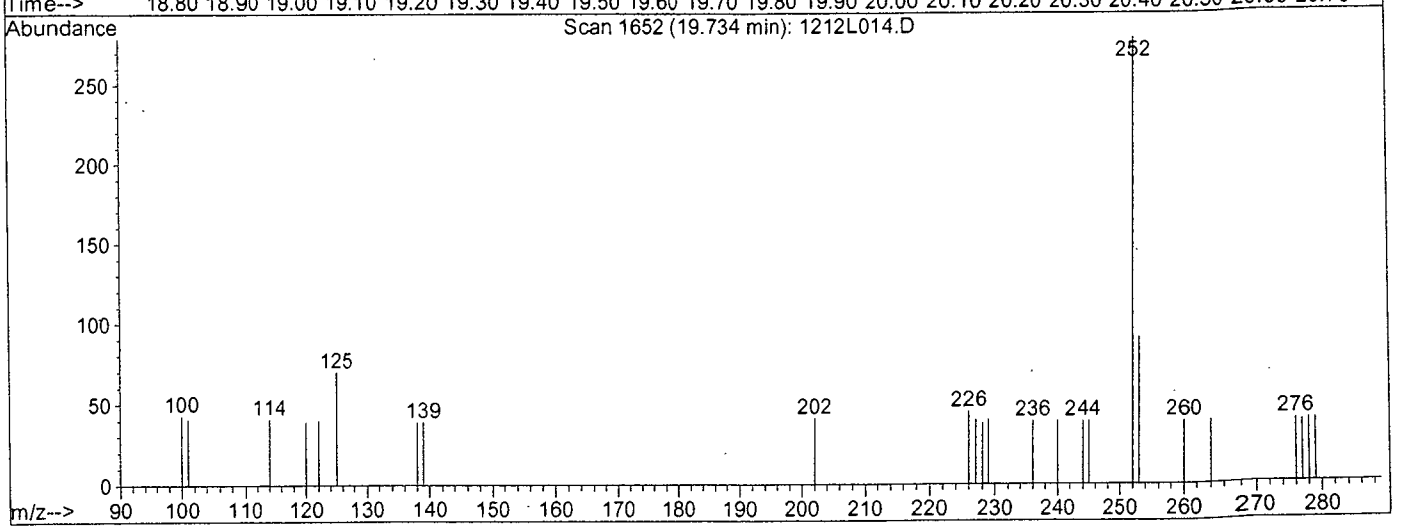


Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L014.D Vial: 12
Acq On : 12 Dec 16 15:34 Operator: MA
Sample : 1.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 14:04 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:06:14 2016
Response via : Multiple Level Calibration





TIC: 1212L014.D

(23) Benzo (k) fluoranthene (TM)

19.73min 0.6322ppb

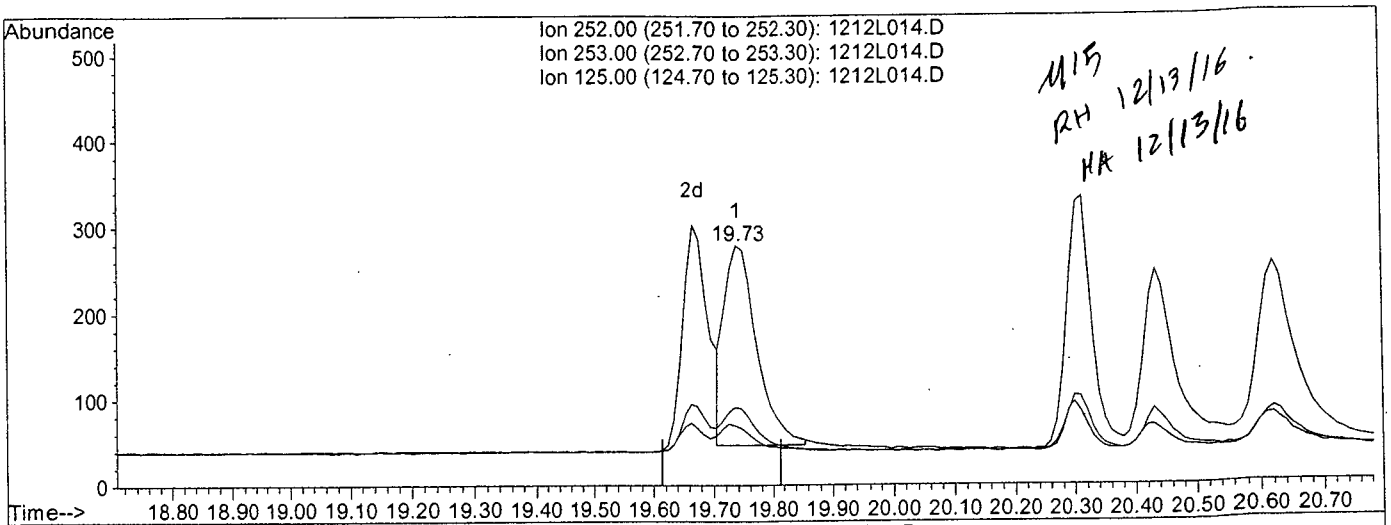
response 465

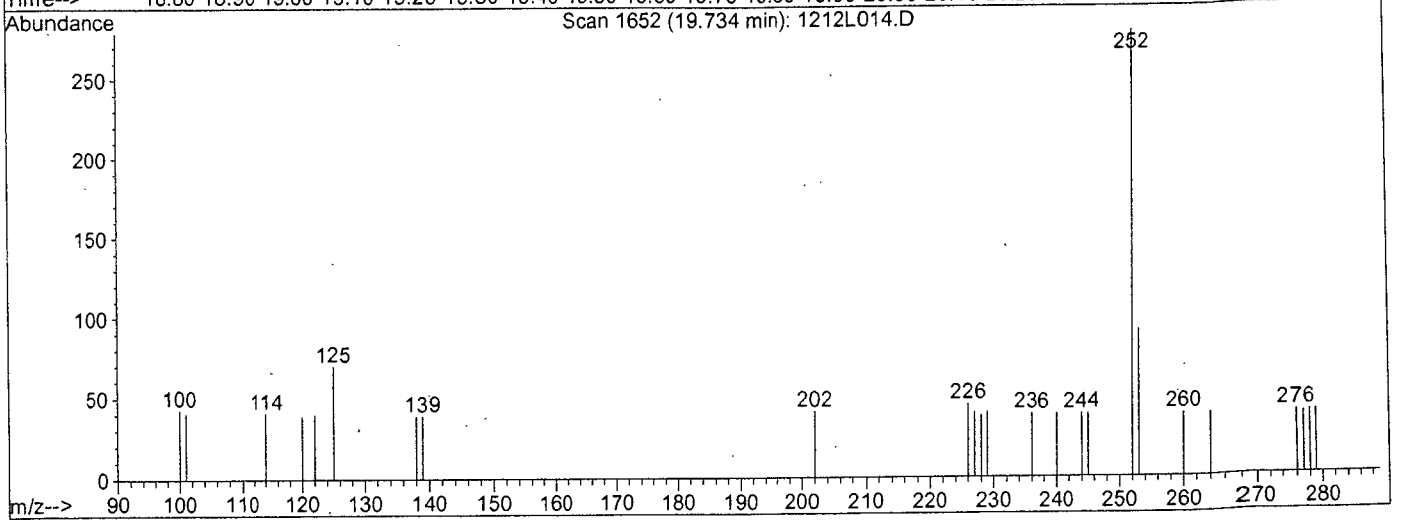
Ion	Exp%	Act%
252.00	100	100
253.00	23.40	21.34
125.00	13.10	14.02
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L014.D Vial: 12
Acq On : 12 Dec 16 15:34 Operator: MA
Sample : 1.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 14:12 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:06:14 2016
Response via : Multiple Level Calibration





TIC: 1212L014.D

(23) Benzo (k) fluoranthene (TM)

19.73min 1.0656ppb m

response 880

Ion	Exp%	Act%
252.00	100	100
253.00	23.40	32.62#
125.00	13.10	25.09#
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L009.D
Acq On : 12 Dec 16 12:49
Sample : 5.0 ug/ml PAH 12/12/16
Misc : water

Vial: 7
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Dec 13 14:04 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:03:42 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	5.87	136	1900	2.50000 ppb	0.00
6) Acenaphthene-D10(IS)	7.92	164	1038	2.50000 ppb	0.00
11) Phenanthrene-D10(IS)	9.84	188	1930	2.50000 ppb	0.00
15) Chrysene-D12(IS)	16.79	240	2367	2.50000 ppb	0.00
21) Perylene-D12(IS)	20.54	264	2172	2.50000 ppb	0.00
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.03	82	501	2.22494 ppb	0.00
Spiked Amount 5.000			Recovery	= 44.500%	
7) Surrogate Recovery (FBP)	7.13	172	1395	2.27095 ppb	0.00
Spiked Amount 5.000			Recovery	= 45.420%	
17) Surrogate Recovery (TPH)	13.82	244	1635	2.14055 ppb	0.00
Spiked Amount 5.000			Recovery	= 42.820%	
Target Compounds					Qvalue
3) Naphthalene	5.89	128	4247	5.54092 ppb	100
4) 2-Methylnaphthalene	6.71	142	2729	5.25106 ppb	99
5) 1-Methylnaphthalene	6.82	142	2768	5.34910 ppb	97
8) Acenaphthylene	7.76	152	4510	5.59288 ppb	97
9) Acenaphthene	7.95	154	2664	5.45016 ppb	99
10) Fluorene	8.57	166	3165	5.59310 ppb	100
12) Phenanthrene	9.89	178	4521	5.44995 ppb	99
13) Anthracene	9.97	178	4306	5.72563 ppb	100
14) Fluoranthene	12.62	202	6154	5.33775 ppb	95
16) Pyrene	13.26	202	6389	5.44084 ppb	98
18) Benz (a) anthracene	16.77	228	5554	5.49804 ppb	97
19) Chrysene	16.86	228	5994	5.25919 ppb	96
20) Indeno (1,2,3-cd) pyrene	22.84	276	6203	5.63530 ppb #	96
22) Benzo (b) fluoranthene	19.64	252	5160	5.53465 ppb	96
23) Benzo (k) fluoranthene	19.71	252	4795	5.00856 ppb	96
24) Benzo (a) pyrene	20.28	252	5209	5.41563 ppb	97
25) Dibenz (a,h) anthracene	22.89	278	5166	5.09186 ppb	95
26) Benzo (g,h,i) perylene	23.36	276	5050	5.70231 ppb	95

(#) = qualifier out of range (m) = manual integration
1212L009.D L1212P.M Wed Dec 14 09:33:03 2016

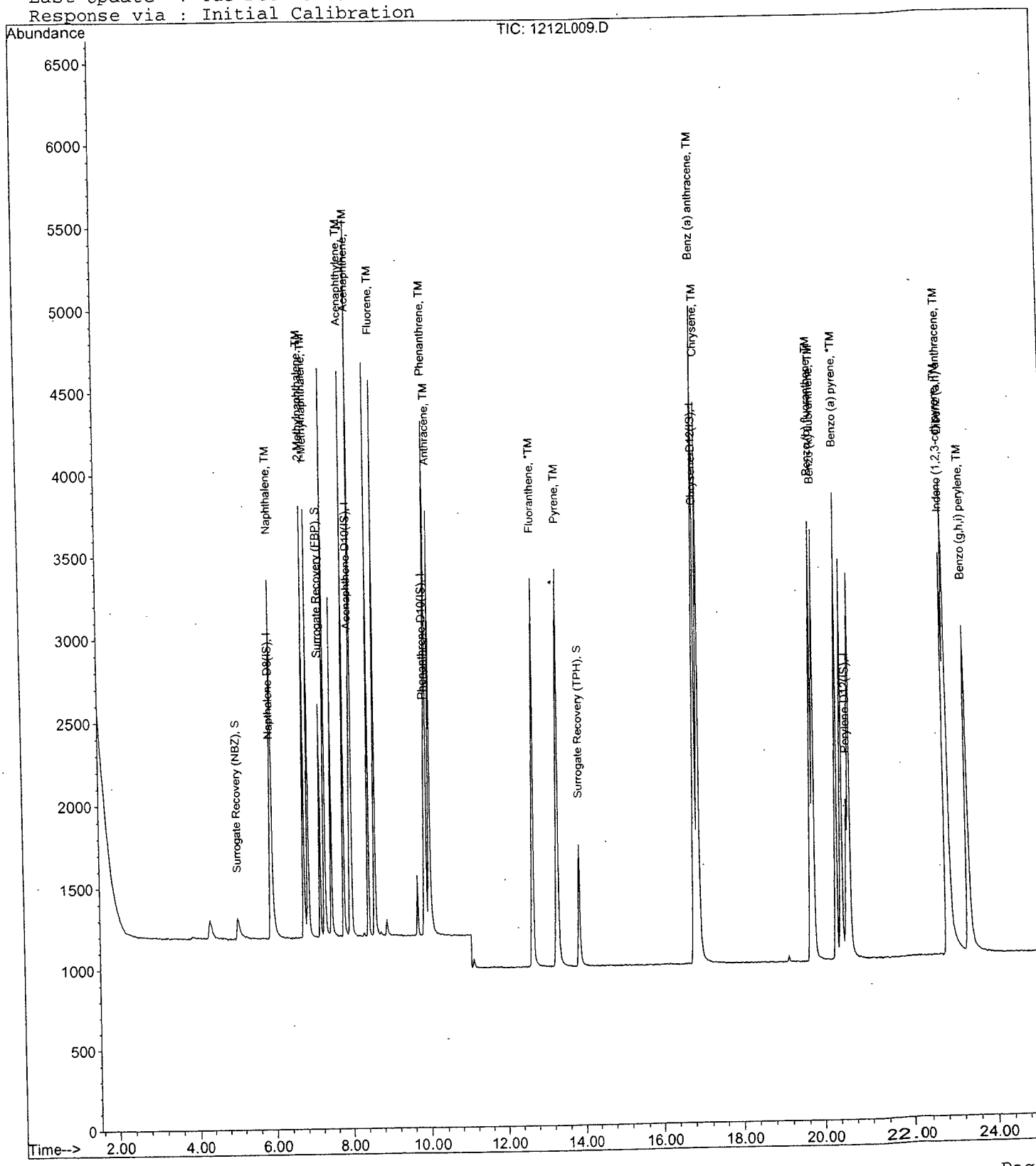
Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L009.D
Acq On : 12 Dec 16 12:49
Sample : 5.0 ug/ml PAH 12/12/16
Misc : water

Vial: 7
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Dec 13 14:04 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L010.D Vial: 8
Acq On : 12 Dec 16 13:22 Operator: MA
Sample : 10.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 13 14:04 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:03:42 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	1924	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	7.92	164	1050	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.84	188	1952	2.50000 ppb		0.00
15) Chrysene-D12(IS)	16.79	240	2464	2.50000 ppb		0.00
21) Perylene-D12(IS)	20.54	264	2236	2.50000 ppb		0.00
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.02	82	1179	4.99512 ppb		-0.01
Spiked Amount 5.000			Recovery = 99.900%			
7) Surrogate Recovery (FBP)	7.13	172	3159	5.27928 ppb		0.00
Spiked Amount 5.000			Recovery = 105.580%			
17) Surrogate Recovery (TPH)	13.82	244	3924	5.09644 ppb		0.00
Spiked Amount 5.000			Recovery = 101.920%			
Target Compounds						Qvalue
3) Naphthalene	5.89	128	8109	10.44758 ppb		100
4) 2-Methylnaphthalene	6.71	142	5374	10.57649 ppb		98
5) 1-Methylnaphthalene	6.82	142	5213	9.94836 ppb		97
8) Acenaphthylene	7.76	152	8747	10.72323 ppb		97
9) Acenaphthene	7.95	154	5139	10.39350 ppb		99
10) Fluorene	8.56	166	6140	10.72642 ppb		98
12) Phenanthrene	9.87	178	8812	10.50292 ppb		100
13) Anthracene	9.97	178	8611	11.32088 ppb		100
14) Fluoranthene	12.62	202	12352	10.59291 ppb		94
16) Pyrene	13.26	202	12712	10.39931 ppb		98
18) Benz (a) anthracene	16.76	228	11201	10.65163 ppb		98
19) Chrysene	16.86	228	11843	9.98209 ppb		97
20) Indeno (1,2,3-cd) pyrene	22.83	276	12547	10.94996 ppb	#	98
22) Benzo (b) fluoranthene	19.64	252	10653	11.09942 ppb		96
23) Benzo (k) fluoranthene	19.70	252	9928	9.92504 ppb		98
24) Benzo (a) pyrene	20.28	252	10342	10.44449 ppb		98
25) Dibenz (a,h) anthracene	22.89	278	10283	10.09209 ppb		93
26) Benzo (g,h,i) perylene	23.36	276	10063	11.03761 ppb		93

(#) = qualifier out of range (m) = manual integration

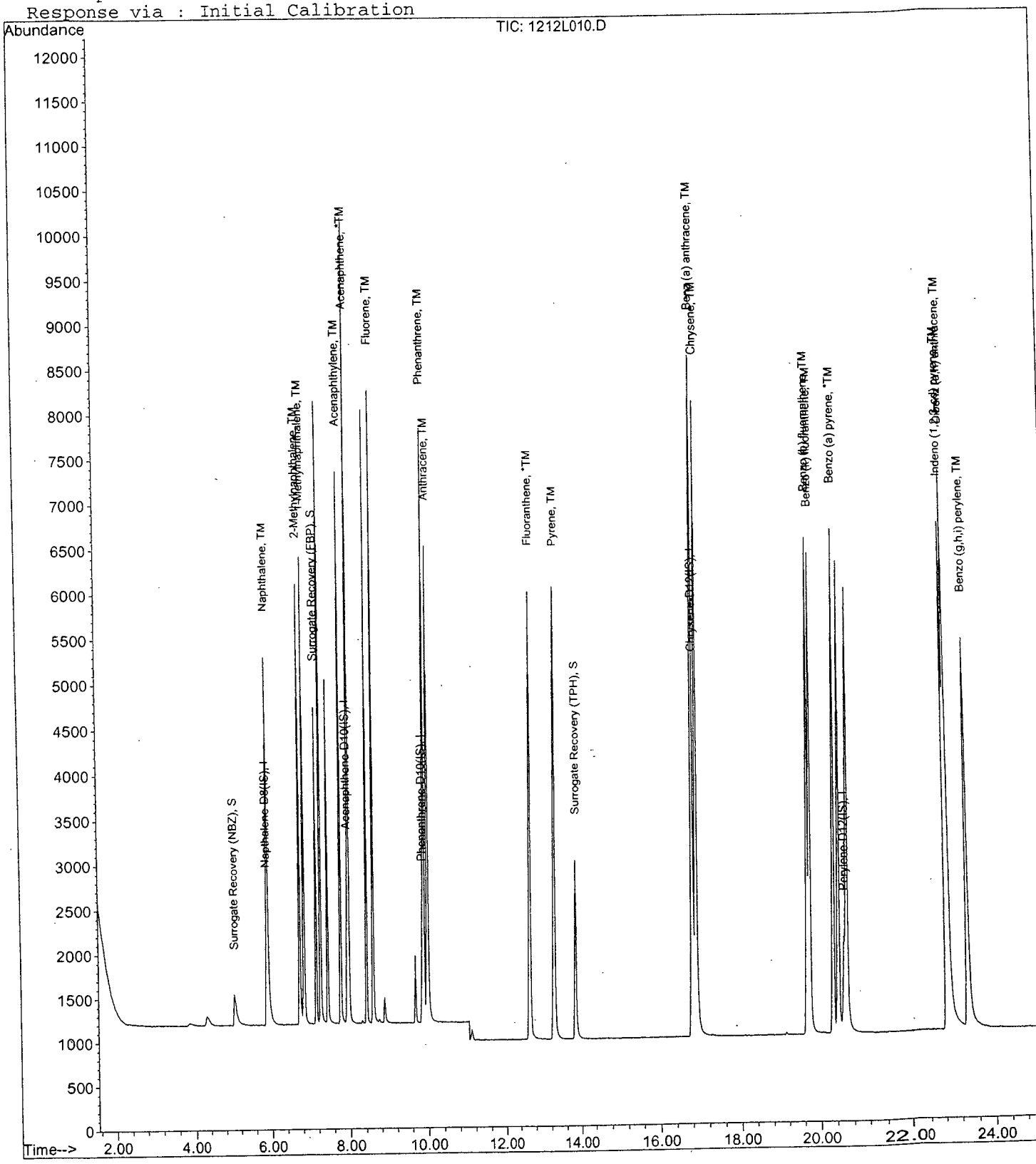
Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L010.D
Acq On : 12 Dec 16 13:22
Sample : 10.0 ug/ml PAH 12/12/16
Misc : water

Vial: 8
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Dec 13 14:04 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L011.D Vial: 9
Acq On : 12 Dec 16 13:54 Operator: MA
Sample : 50.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 13 14:04 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:03:42 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	1851	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.92	164	987	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.84	188	1836	2.50000	ppb		0.00
15) Chrysene-D12(IS)	16.80	240	2363	2.50000	ppb		0.01
21) Perylene-D12(IS)	20.55	264	2104	2.50000	ppb		0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.01	82	5918	25.50280	ppb		-0.02
Spiked Amount 5.000			Recovery = 510.060%				
7) Surrogate Recovery (FBP)	7.13	172	14297	26.02000	ppb		0.00
Spiked Amount 5.000			Recovery = 520.400%				
17) Surrogate Recovery (TPH)	13.82	244	19064	26.32087	ppb		0.00
Spiked Amount 5.000			Recovery = 526.420%				
Target Compounds							Qvalue
3) Naphthalene	5.89	128	37135	49.73138	ppb		100
4) 2-Methylnaphthalene	6.70	142	24848	52.30218	ppb		99
5) 1-Methylnaphthalene	6.82	142	23509	46.63332	ppb		98
8) Acenaphthylene	7.76	152	39815	51.92608	ppb		97
9) Acenaphthene	7.95	154	23180	49.87339	ppb		99
10) Fluorene	8.56	166	28020	52.07471	ppb		97
12) Phenanthrene	9.89	178	41143	52.13612	ppb		99
13) Anthracene	9.97	178	40562	56.69611	ppb		99
14) Fluoranthene	12.63	202	59396	54.15545	ppb		93
16) Pyrene	13.26	202	60604	51.69745	ppb		99
18) Benz (a) anthracene	16.78	228	56712	56.23559	ppb		97
19) Chrysene	16.88	228	54023	47.48052	ppb		97
20) Indeno (1,2,3-cd) pyrene	22.87	276	53175	48.39015	ppb	#	97
22) Benzo (b) fluoranthene	19.66	252	53199	58.90579	ppb		96
23) Benzo (k) fluoranthene	19.73	252	48451	50.86128	ppb		98
24) Benzo (a) pyrene	20.31	252	49594	53.22771	ppb		96
25) Dibenz (a,h) anthracene	22.92	278	49155	52.34757	ppb		93
26) Benzo (g,h,i) perylene	23.39	276	47996	55.94722	ppb		97

(#) = qualifier out of range (m) = manual integration
1212L011.D L1212P.M Wed Dec 14 09:33:18 2016

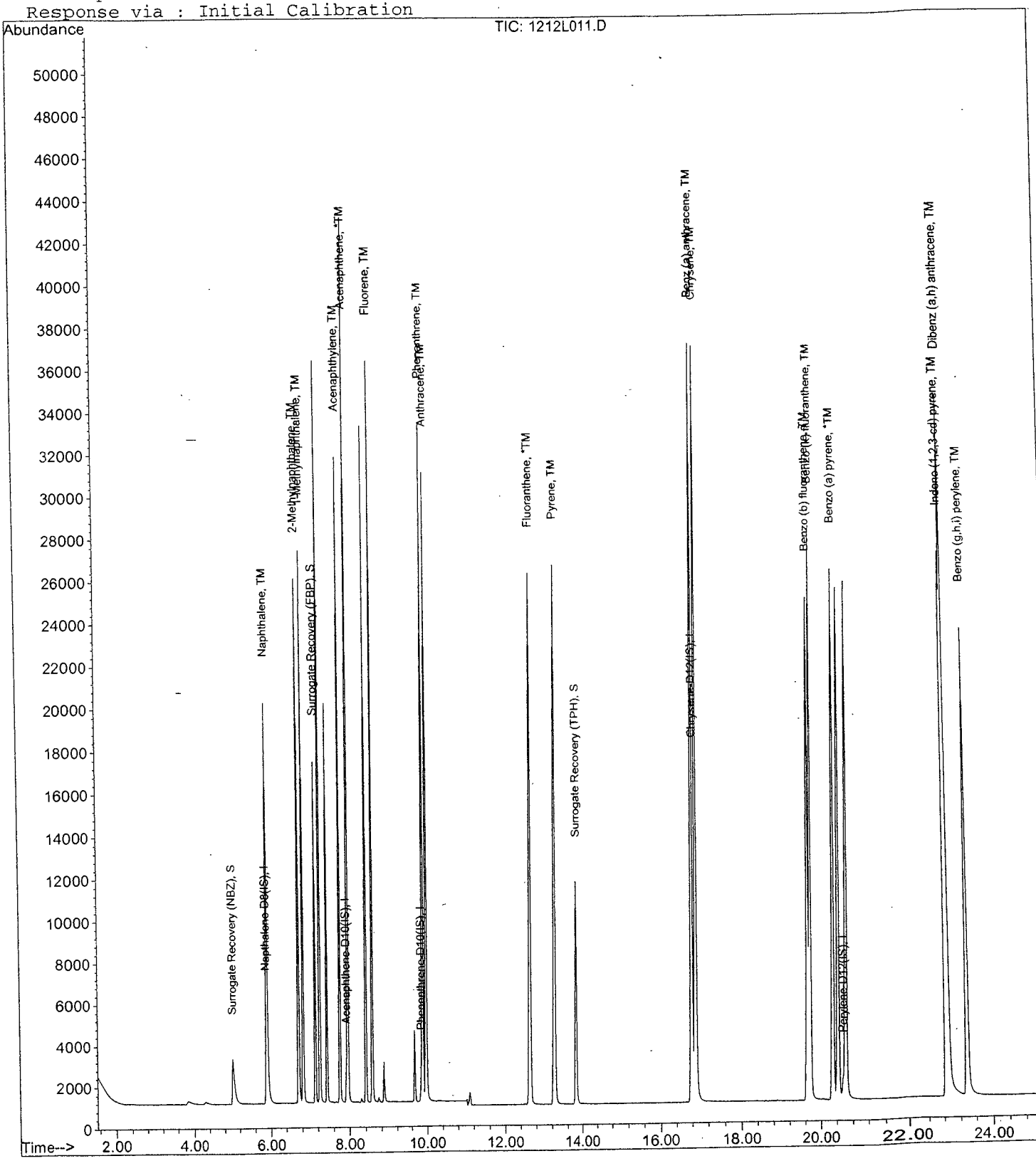
Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L011.D
Acq On : 12 Dec 16 13:54
Sample : 50.0 ug/ml PAH 12/12/16
Misc : water

Vial: 9
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Dec 13 14:04 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L012.D
Acq On : 12 Dec 16 14:28
Sample : 100.0 ug/ml PAH 12/12/16
Misc : water

Vial: 10
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Dec 13 14:04 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:03:42 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	5.87	136	1964	2.50000 ppb	0.00
6) Acenaphthene-D10(IS)	7.92	164	1044	2.50000 ppb	0.00
11) Phenanthrene-D10(IS)	9.85	188	1914	2.50000 ppb	0.01
15) Chrysene-D12(IS)	16.82	240	2483	2.50000 ppb	0.03
21) Perylene-D12(IS)	20.57	264	2159	2.50000 ppb	0.03
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.01	82	12284	49.76371 ppb	-0.02
Spiked Amount 5.000			Recovery	= 995.280%	
7) Surrogate Recovery (FBP)	7.13	172	28673	49.47606 ppb	0.00
Spiked Amount 5.000			Recovery	= 989.520%	
17) Surrogate Recovery (TPH)	13.82	244	37477	49.34989 ppb	0.00
Spiked Amount 5.000			Recovery	= 987.000%	
Target Compounds					Qvalue
3) Naphthalene	5.89	128	74732	94.32321 ppb	100
4) 2-Methylnaphthalene	6.71	142	49626	98.78791 ppb	98
5) 1-Methylnaphthalene	6.82	142	46322	86.59931 ppb	97
8) Acenaphthylene	7.76	152	79194	97.64449 ppb	98
9) Acenaphthene	7.97	154	46028	93.62552 ppb	96
10) Fluorene	8.57	166	55451	97.42823 ppb	99
12) Phenanthrene	9.90	178	82102	99.79924 ppb	99
13) Anthracene	9.98	178	77479	103.88399 ppb	99
14) Fluoranthene	12.65	202	119546	104.55643 ppb	93
16) Pyrene	13.29	202	121997	99.03848 ppb	98
18) Benz (a) anthracene	16.80	228	112984	106.62039 ppb	97
19) Chrysene	16.91	228	106807	89.33538 ppb	97
20) Indeno (1,2,3-cd) pyrene	22.91	276	116748	101.10810 ppb #	91
22) Benzo (b) fluoranthene	19.68	252	106244	114.64418 ppb	97
23) Benzo (k) fluoranthene	19.77	252	97479	99.58057 ppb	97
24) Benzo (a) pyrene	20.34	252	99871	104.45787 ppb	97
25) Dibenz (a,h) anthracene	22.96	278	94993	98.81911 ppb	95
26) Benzo (g,h,i) perylene	23.44	276	84112	95.54865 ppb	93

(#) = qualifier out of range (m) = manual integration
1212L012.D L1212P.M Wed Dec 14 09:33:25 2016

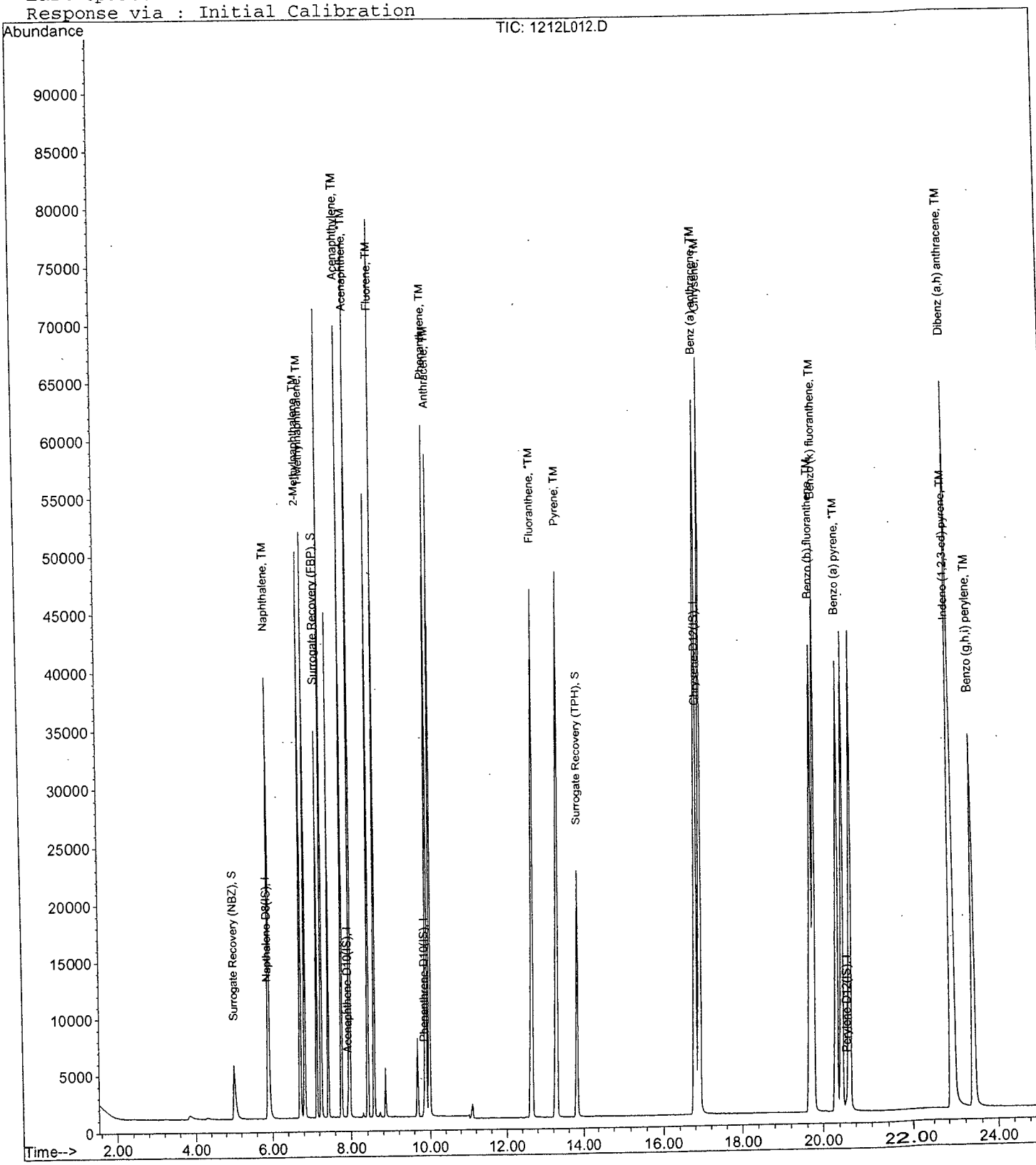
Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L012.D
Acq On : 12 Dec 16 14:28
Sample : 100.0 ug/ml PAH 12/12/16
Misc : water

Vial: 10
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Dec 13 14:04 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/12/16
Instrument: Linus
Initial Cal. Date: 12/12/16
Data File: 1212L015.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	Naphthalene	1.009	0.9374	7.1	TM	
2	TM	2-Methylnaphthalene	0.6134	0.5778	5.8	TM	
3	TM	1-Methylnaphthalene	0.6809	0.6194	9.0	TM	
4	TM	Acenaphthylene	1.942	1.717	12	TM	
5	*TM	Acenaphthene	1.177	1.035	12	*TM	
6	TM	Fluorene	1.363	1.224	10	TM	
7	TM	Phenanthrene	1.075	0.9323	13	TM	
8	TM	Anthracene	0.9742	0.8964	8.0	TM	
9	*TM	Fluoranthene	1.493	1.306	13	*TM	
10	TM	Pyrene	1.240	1.069	14	TM	
11	TM	Benz (a) anthracene	1.067	0.9074	15	TM	
12	TM	Chrysene	1.204	1.018	15	TM	
13	TM	Indeno (1,2,3-cd) pyrene	1.163	1.016	13	TM	
14	TM	Benzo (b) fluoranthene	1.073	0.9137	15	TM	
15	TM	Benzo (k) fluoranthene	1.130	1.060	6.2	TM	
16	*TM	Benzo (a) pyrene	1.107	0.9559	14	*TM	
17	TM	Dibenz (a,h) anthracene	1.040	0.8922	14	TM	
18	TM	Benzo (g,h,i) perylene	1.019	0.8874	13	TM	
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
		Average			11.6		

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L015.D
Acq On : 12 Dec 16 16:07
Sample : SS PAH 12/12/16
Misc : water

Vial: 15
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Dec 13 15:18 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.88	136	1717	2.50000	ppb		0.01
6) Acenaphthene-D10(IS)	7.92	164	946	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.85	188	1728	2.50000	ppb		0.01
15) Chrysene-D12(IS)	16.79	240	2149	2.50000	ppb		0.00
21) Perylene-D12(IS)	20.55	264	1971	2.50000	ppb		0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.08	82	1	0.17309	ppb		0.05
Spiked Amount 5.000			Recovery =	3.460%			
7) Surrogate Recovery (FBP)	7.15	172	9	-0.14061	ppb		0.01
Spiked Amount 5.000			Recovery =	-2.820%			
17) Surrogate Recovery (TPH)	13.50	244	4	-0.11749	ppb		-0.32
Spiked Amount 5.000			Recovery =	-2.340%			
Target Compounds							Qvalue
3) Naphthalene	5.90	128	3219	✓4.64734	ppb		100
4) 2-Methylnaphthalene	6.71	142	1984	4.70973	ppb		100
5) 1-Methylnaphthalene	6.82	142	2127	4.54848	ppb		97
8) Acenaphthylene	7.76	152	3248	4.41958	ppb		98
9) Acenaphthene	7.95	154	1958	4.39536	ppb		99
10) Fluorene	8.57	166	2315	4.48886	ppb		98
12) Phenanthrene	9.89	178	3222	4.33808	ppb		99
13) Anthracene	9.98	178	3098	4.60092	ppb		100
14) Fluoranthene	12.63	202	4512	4.37102	ppb		94
16) Pyrene	13.26	202	4594	4.30910	ppb		99
18) Benz (a) anthracene	16.77	228	3900	4.25234	ppb		97
19) Chrysene	16.86	228	4376	4.22904	ppb		97
20) Indeno (1,2,3-cd) pyrene	22.84	276	4366	4.36878	ppb	#	98
22) Benzo (b) fluoranthene	19.64	252	3602	4.25753	ppb		96
23) Benzo (k) fluoranthene	19.71	252	4177m	4.68818	ppb		97
24) Benzo (a) pyrene	20.29	252	3768	4.31697	ppb		95
25) Dibenz (a,h) anthracene	22.90	278	3517	4.29008	ppb		94
26) Benzo (g,h,i) perylene	23.37	276	3498	4.35264	ppb		94

Algorithum check = $\frac{3219 * 1 * 2.5}{1 * 1717 * 1.009} = \frac{8047.5}{1732.453} = 4.645$

RH 12/14/16

(#) = qualifier out of range (m) = manual integration
1212L015.D L1212P.M Wed Dec 14 09:33:50 2016

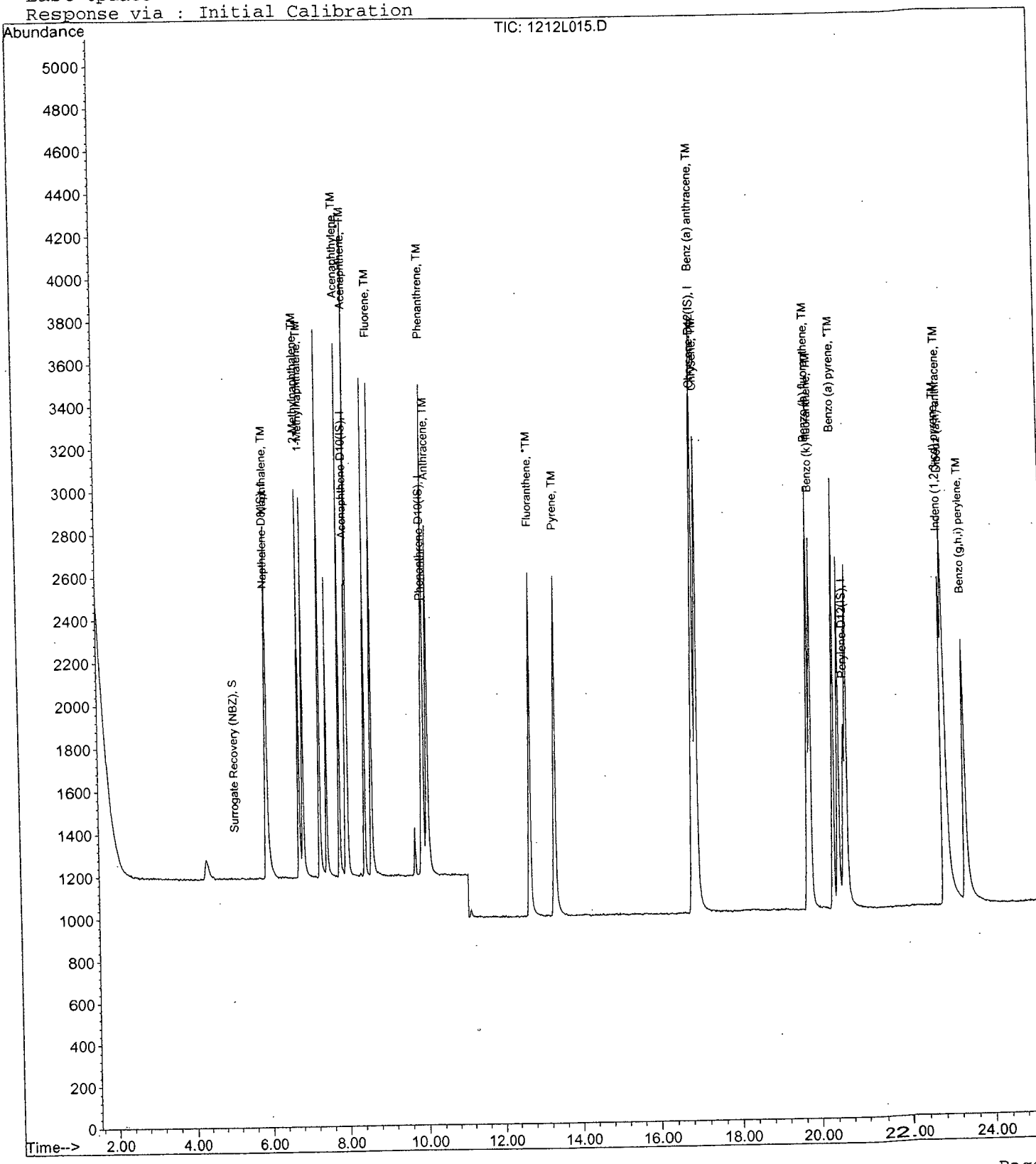
Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L015.D
Acq On : 12 Dec 16 16:07
Sample : SS PAH 12/12/16
Misc : water

Vial: 15
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Dec 13 15:18 2016 Quant Results File: L1212P.RES

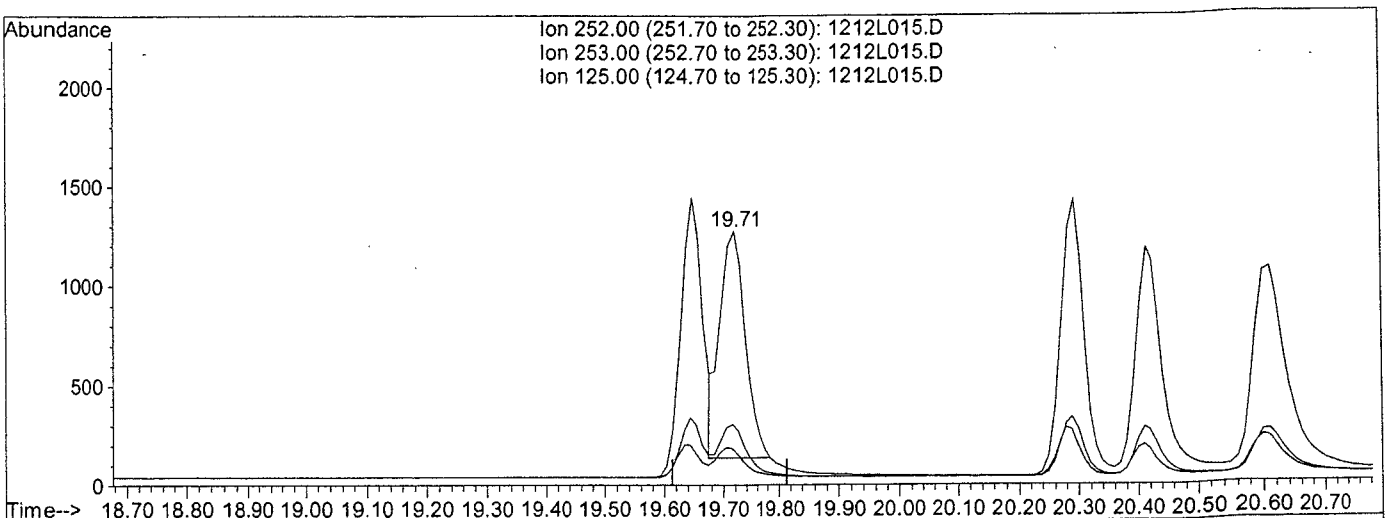
Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration

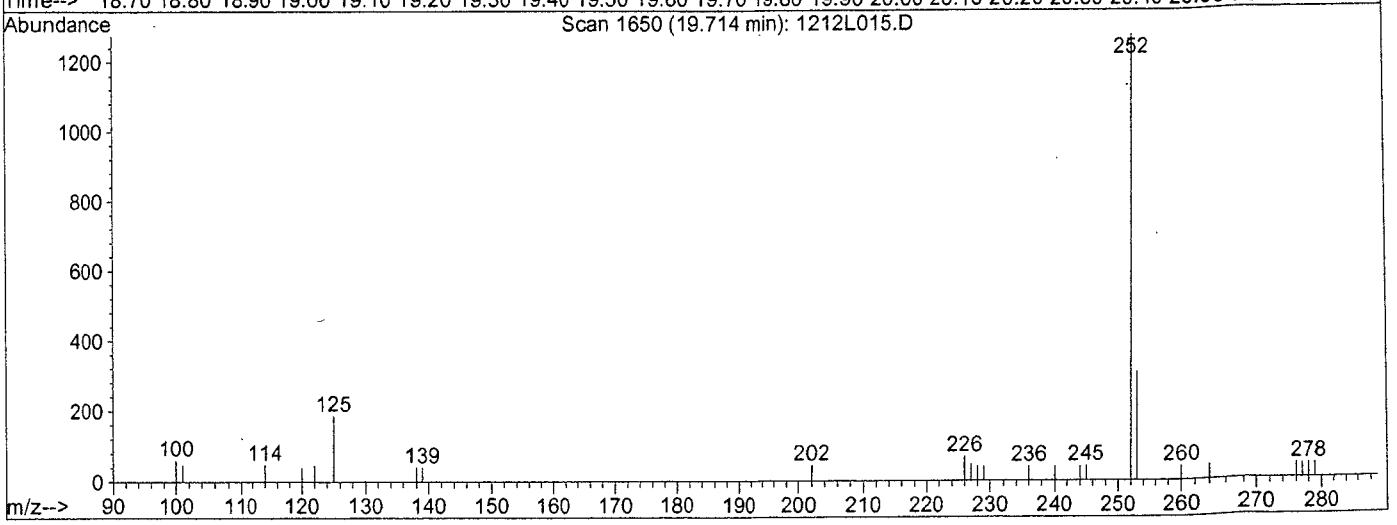


Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L015.D Vial: 15
Acq On : 12 Dec 16 16:07 Operator: MA
Sample : SS PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 15:12 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Multiple Level Calibration





TIC: 1212L015.D

(23) Benzo (k) fluoranthene (TM)

19.71min 3.9238ppb

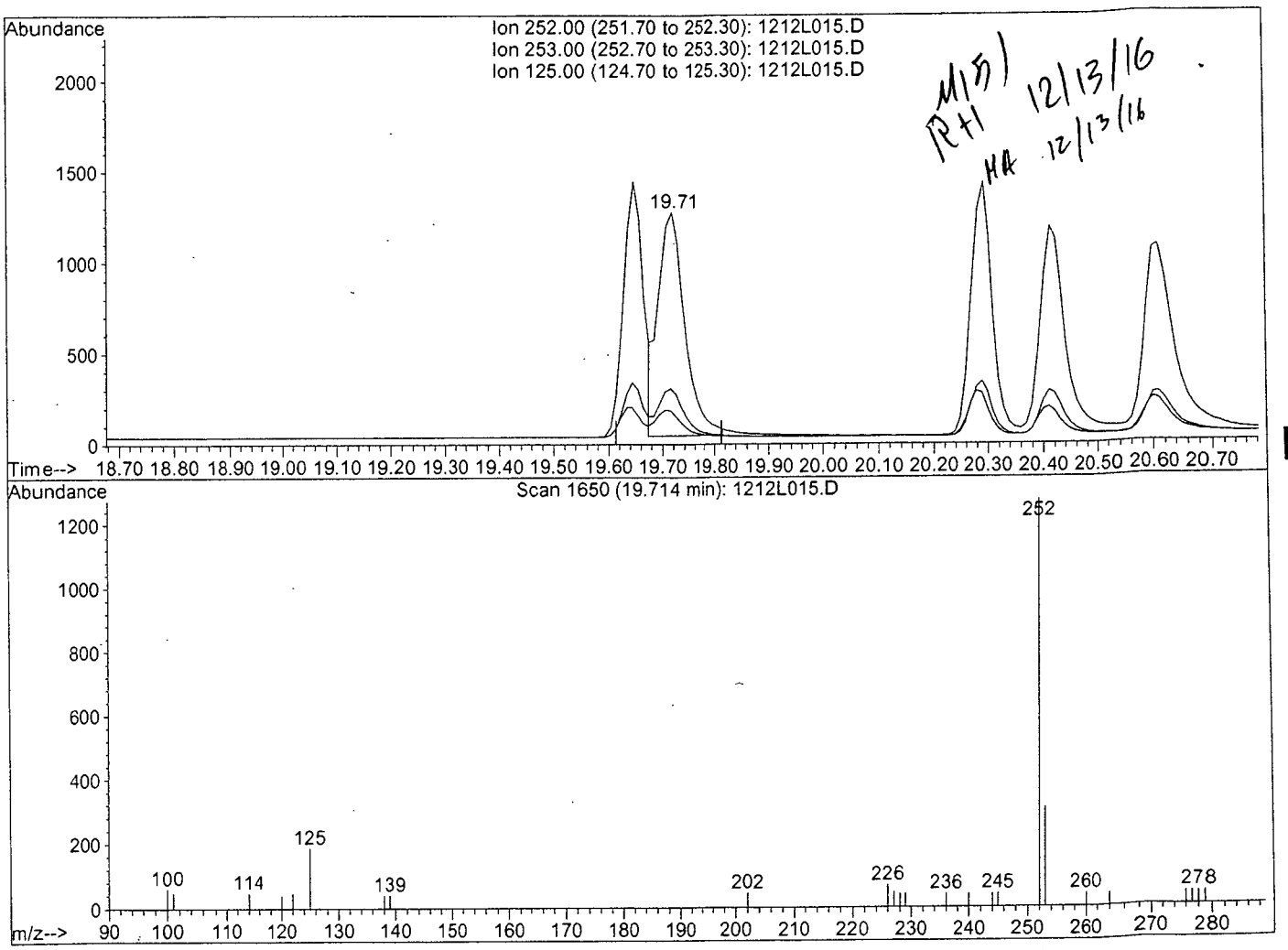
response 3496

Ion	Exp%	Act%
252.00	100	100
253.00	23.40	21.55
125.00	13.10	11.96
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L015.D Vial: 15
Acq On : 12 Dec 16 16:07 Operator: MA
Sample : SS PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 15:18 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Multiple Level Calibration



M15) 12/13/16
RT MA 12/13/16

TIC: 1212L015.D

(23) Benzo (k) fluoranthene (TM)

19.71min 4.6882ppb m

response 4177

Ion	Exp%	Act%
252.00	100	100
253.00	23.40	24.08
125.00	13.10	14.67
0.00	0.00	0.00

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/20/16
Instrument: Linus
Initial Cal. Date: 12/12/16
Data File: 1212L138.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	SL	Surrogate Recovery (NBZ)	0.2469	0.3030	23	SL	2.8
3	TM	Naphthalene	1.009	0.9841	2.4	TM	
4	TM	2-Methylnaphthalene	0.6134	0.6443	5.0	TM	
5	TM	1-Methylnaphthalene	0.6809	0.6431	5.6	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	SL	Surrogate Recovery (FBP)	1.561	1.548	0.79	SL	5.6
8	TM	Acenaphthylene	1.942	1.950	0.42	TM	
9	*TM	Acenaphthene	1.177	1.144	2.8	*TM	
10	TM	Fluorene	1.363	1.357	0.47	TM	
11	I	Phenanthrene-D10(IS)	ISTD			I	
12	TM	Phenanthrene	1.075	1.042	3.0	TM	
13	TM	Anthracene	0.9742	1.025	5.2	TM	
14	*TM	Fluoranthene	1.493	1.479	0.98	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.240	1.203	3.0	TM	
17	SL	Surrogate Recovery (TPH)	0.8592	0.8166	5.0	SL	2.1
18	TM	Benz (a) anthracene	1.067	1.057	0.97	TM	
19	TM	Chrysene	1.204	1.132	5.9	TM	
20	TM	Indeno (1,2,3-cd) pyrene	1.163	1.139	2.1	TM	
21	I	Perylene-D12(IS)	ISTD			I	
22	TM	Benzo (b) fluoranthene	1.073	1.067	0.56	TM	
23	TM	Benzo (k) fluoranthene	1.130	0.9589	15	TM	
24	*TM	Benzo (a) pyrene	1.107	1.054	4.8	*TM	
25	TM	Dibenz (a,h) anthracene	1.040	1.033	0.62	TM	
26	TM	Benzo (g,h,i) perylene	1.019	0.9713	4.7	TM	
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			4.4		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L138.D Vial: 38
Acq On : 20 Dec 16 16:52 Operator: MA
Sample : 5.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 20 17:17 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	2013	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.92	164	1105	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.85	188	2053	2.50000	ppb		0.01
15) Chrysene-D12(IS)	16.80	240	2606	2.50000	ppb		0.01
21) Perylene-D12(IS)	20.56	264	2443	2.50000	ppb		0.02
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.03	82	610	2.57079	ppb		0.00
Spiked Amount 5.000			Recovery = 51.420%				
7) Surrogate Recovery (FBP)	7.13	172	1711	2.64049	ppb		0.00
Spiked Amount 5.000			Recovery = 52.800%				
17) Surrogate Recovery (TPH)	13.82	244	2128	2.55300	ppb		0.00
Spiked Amount 5.000			Recovery = 51.060%				
Target Compounds							Qvalue
3) Naphthalene	5.89	128	3962	4.87893	ppb		100
4) 2-Methylnaphthalene	6.71	142	2594	5.25231	ppb		99
5) 1-Methylnaphthalene	6.82	142	2589	4.72234	ppb		98
8) Acenaphthylene	7.76	152	4310	5.02078	ppb		97
9) Acenaphthene	7.95	154	2529	4.86026	ppb		99
10) Fluorene	8.57	166	2998	4.97674	ppb		100
12) Phenanthrene	9.89	178	4278	4.84805	ppb		99
13) Anthracene	9.97	178	4208	5.26009	ppb		99
14) Fluoranthene	12.63	202	6072	4.95109	ppb		95
16) Pyrene	13.27	202	6269	4.84904	ppb		98
18) Benz (a) anthracene	16.78	228	5507	4.95154	ppb		97
19) Chrysene	16.88	228	5902	4.70354	ppb		97
20) Indeno (1,2,3-cd) pyrene	22.87	276	5934	4.89651	ppb	#	98
22) Benzo (b) fluoranthene	19.66	252	5214	4.97219	ppb		96
23) Benzo (k) fluoranthene	19.72	252	4685	4.24241	ppb		97
24) Benzo (a) pyrene	20.30	252	5148	4.75849	ppb		97
25) Dibenz (a,h) anthracene	22.92	278	5049	4.96892	ppb		95
26) Benzo (g,h,i) perylene	23.40	276	4746	4.76457	ppb		95

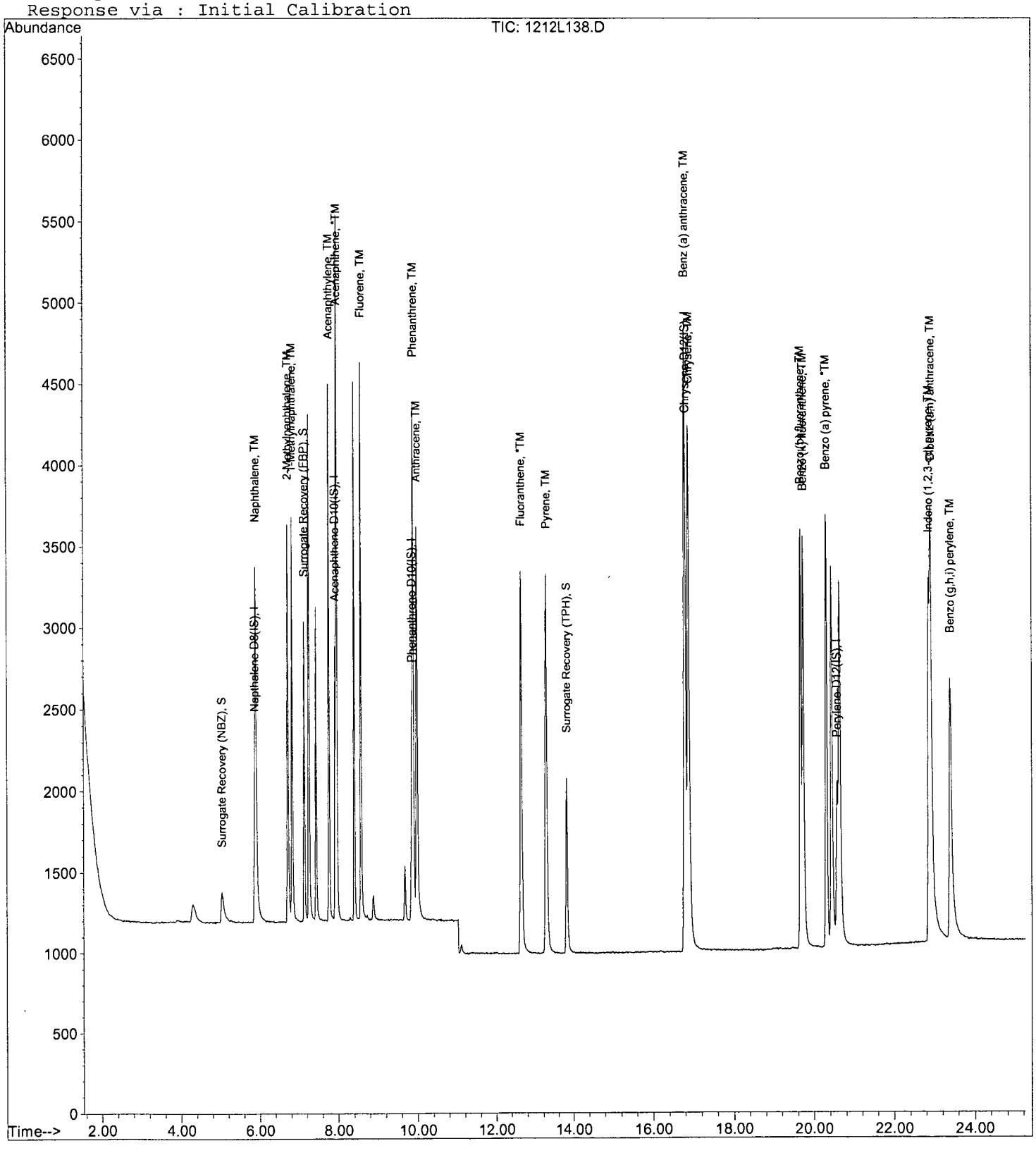
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L138.D Vial: 38
Acq On : 20 Dec 16 16:52 Operator: MA
Sample : 5.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 20 17:17 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/21/16
Instrument: Linus
Initial Cal. Date: 12/12/16
Data File: 1212L156.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	SL	Surrogate Recovery (NBZ)	0.2469	0.3317	34	SL	12
3	TM	Naphthalene	1.009	1.037	2.9	TM	
4	TM	2-Methylnaphthalene	0.6134	0.6616	7.9	TM	
5	TM	1-Methylnaphthalene	0.6809	0.6815	0.09	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	SL	Surrogate Recovery (FBP)	1.561	1.564	0.22	SL	6.8
8	TM	Acenaphthylene	1.942	1.988	2.4	TM	
9	*TM	Acenaphthene	1.177	1.197	1.7	*TM	
10	TM	Fluorene	1.363	1.418	4.0	TM	
11	I	Phenanthrene-D10(IS)	ISTD			I	
12	TM	Phenanthrene	1.075	1.086	1.1	TM	
13	TM	Anthracene	0.9742	1.074	10	TM	
14	*TM	Fluoranthene	1.493	1.545	3.5	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.240	1.244	0.33	TM	
17	SL	Surrogate Recovery (TPH)	0.8592	0.8280	3.6	SL	3.6
18	TM	Benz (a) anthracene	1.067	1.050	1.6	TM	
19	TM	Chrysene	1.204	1.178	2.1	TM	
20	TM	Indeno (1,2,3-cd) pyrene	1.163	1.192	2.5	TM	
21	I	Perylene-D12(IS)	ISTD			I	
22	TM	Benzo (b) fluoranthene	1.073	1.100	2.5	TM	
23	TM	Benzo (k) fluoranthene	1.130	0.9158	19	TM	
24	*TM	Benzo (a) pyrene	1.107	1.084	2.1	*TM	
25	TM	Dibenz (a,h) anthracene	1.040	1.055	1.5	TM	
26	TM	Benzo (g,h,i) perylene	1.019	0.9946	2.4	TM	
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			5.0		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L156.D Vial: 56
Acq On : 21 Dec 16 2:33 Operator: MA
Sample : 5.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 21 8:33 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	1887	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	7.92	164	1037	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.85	188	1900	2.50000 ppb		0.01
15) Chrysene-D12(IS)	16.80	240	2454	2.50000 ppb		0.01
21) Perylene-D12(IS)	20.56	264	2299	2.50000 ppb		0.02
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.03	82	626	2.79842 ppb		0.00
Spiked Amount 5.000			Recovery = 55.960%			
7) Surrogate Recovery (FBP)	7.13	172	1622	2.66888 ppb		0.00
Spiked Amount 5.000			Recovery = 53.380%			
17) Surrogate Recovery (TPH)	13.82	244	2032	2.59056 ppb		0.00
Spiked Amount 5.000			Recovery = 51.820%			
Target Compounds						Qvalue
3) Naphthalene	5.89	128	3915	5.14296 ppb		100
4) 2-Methylnaphthalene	6.71	142	2497	5.39350 ppb		99
5) 1-Methylnaphthalene	6.82	142	2572	5.00458 ppb		98
8) Acenaphthylene	7.76	152	4123	5.11789 ppb		97
9) Acenaphthene	7.95	154	2483	5.08476 ppb		99
10) Fluorene	8.57	166	2941	5.20226 ppb		100
12) Phenanthrene	9.89	178	4128	5.05477 ppb		99
13) Anthracene	9.98	178	4083	5.51483 ppb		100
14) Fluoranthene	12.63	202	5872	5.17357 ppb		96
16) Pyrene	13.26	202	6107	5.01632 ppb		99
18) Benz (a) anthracene	16.78	228	5153	4.92023 ppb		96
19) Chrysene	16.87	228	5783	4.89417 ppb		97
20) Indeno (1,2,3-cd) pyrene	22.87	276	5848	5.12444 ppb	#	99
22) Benzo (b) fluoranthene	19.65	252	5057	5.12453 ppb		97
23) Benzo (k) fluoranthene	19.72	252	4211	4.05203 ppb		98
24) Benzo (a) pyrene	20.30	252	4983	4.89448 ppb		97
25) Dibenz (a,h) anthracene	22.92	278	4851	5.07309 ppb		96
26) Benzo (g,h,i) perylene	23.40	276	4573	4.87845 ppb		96

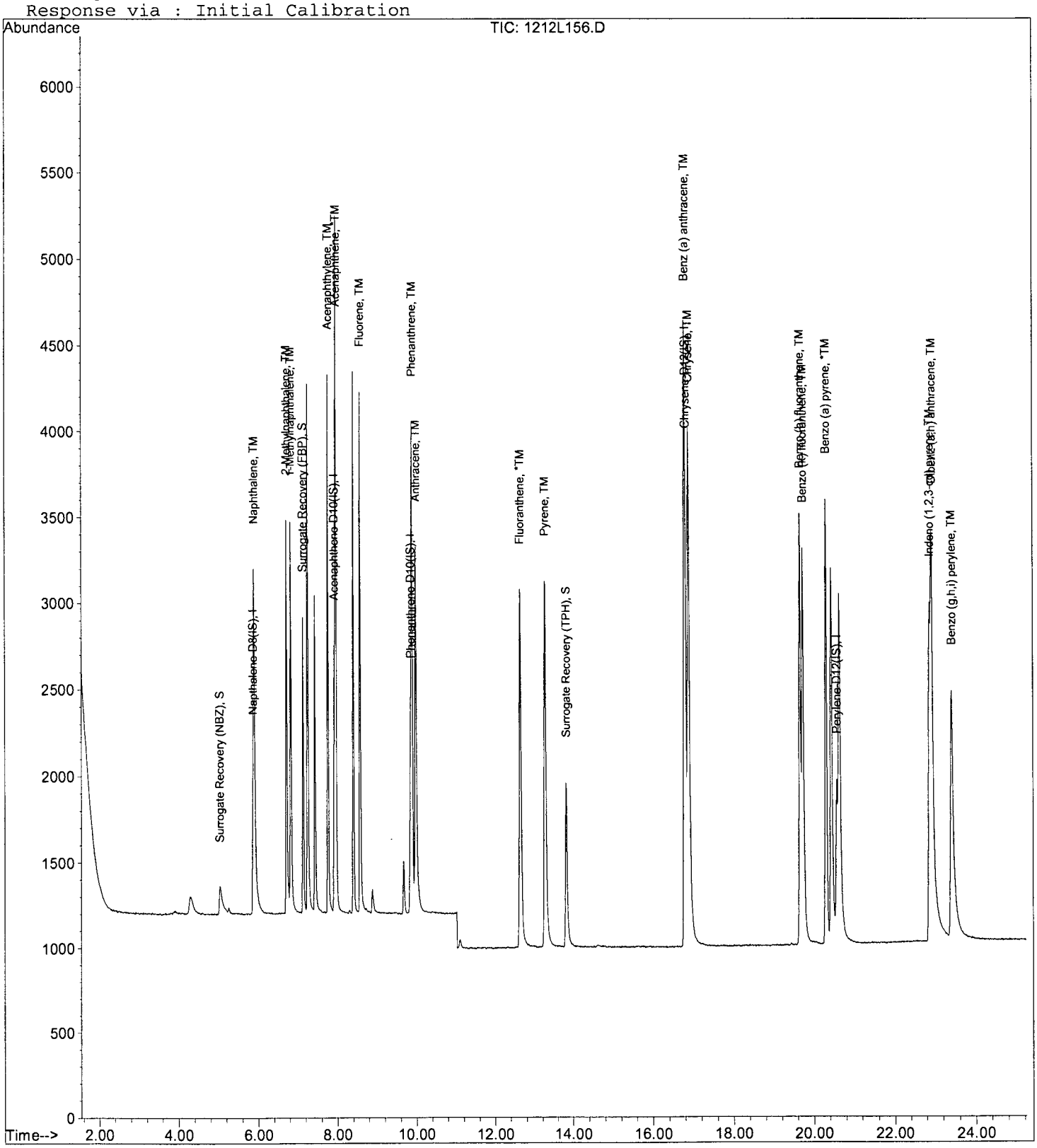
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L156.D Vial: 56
Acq On : 21 Dec 16 2:33 Operator: MA
Sample : 5.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 21 8:33 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/21/16
Instrument: Linus
Initial Cal. Date: 12/12/16
Data File: 1212L159.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	SL	Surrogate Recovery (NBZ)	0.2469	0.3187	29	SL	7.8
3	TM	Naphthalene	1.009	1.000	0.82	TM	
4	TM	2-Methylnaphthalene	0.6134	0.6431	4.8	TM	
5	TM	1-Methylnaphthalene	0.6809	0.6522	4.2	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	SL	Surrogate Recovery (FBP)	1.561	1.556	0.29	SL	6.2
8	TM	Acenaphthylene	1.942	1.968	1.3	TM	
9	*TM	Acenaphthene	1.177	1.165	1.0	*TM	
10	TM	Fluorene	1.363	1.373	0.72	TM	
11	I	Phenanthrene-D10(IS)	ISTD			I	
12	TM	Phenanthrene	1.075	1.058	1.6	TM	
13	TM	Anthracene	0.9742	1.033	6.0	TM	
14	*TM	Fluoranthene	1.493	1.484	0.66	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.240	1.204	2.9	TM	
17	SL	Surrogate Recovery (TPH)	0.8592	0.8097	5.8	SL	1.2
18	TM	Benz (a) anthracene	1.067	1.025	3.9	TM	
19	TM	Chrysene	1.204	1.127	6.4	TM	
20	TM	Indeno (1,2,3-cd) pyrene	1.163	1.133	2.5	TM	
21	I	Perylene-D12(IS)	ISTD			I	
22	TM	Benzo (b) fluoranthene	1.073	0.9961	7.2	TM	
23	TM	Benzo (k) fluoranthene	1.130	0.9582	15	TM	
24	*TM	Benzo (a) pyrene	1.107	1.055	4.7	*TM	
25	TM	Dibenz (a,h) anthracene	1.040	0.9914	4.7	TM	
26	TM	Benzo (g,h,i) perylene	1.019	0.9653	5.3	TM	
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			5.2		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L159.D Vial: 59
Acq On : 21 Dec 16 9:24 Operator: MA
Sample : 5.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 21 9:53 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	1964	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.92	164	1068	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.85	188	1953	2.50000	ppb		0.01
15) Chrysene-D12(IS)	16.80	240	2506	2.50000	ppb		0.01
21) Perylene-D12(IS)	20.56	264	2321	2.50000	ppb		0.02
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.03	82	626	2.69531	ppb		0.00
Spiked Amount 5.000			Recovery = 53.900%				
7) Surrogate Recovery (FBP)	7.13	172	1662	2.65452	ppb		0.00
Spiked Amount 5.000			Recovery = 53.100%				
17) Surrogate Recovery (TPH)	13.82	244	2029	2.53031	ppb		0.00
Spiked Amount 5.000			Recovery = 50.600%				
Target Compounds							Qvalue
3) Naphthalene	5.89	128	3929	4.95900	ppb		100
4) 2-Methylnaphthalene	6.71	142	2526	5.24223	ppb		99
5) 1-Methylnaphthalene	6.82	142	2562	4.78968	ppb		98
8) Acenaphthylene	7.76	152	4203	5.06575	ppb		97
9) Acenaphthene	7.95	154	2489	4.94910	ppb		98
10) Fluorene	8.57	166	2932	5.03580	ppb		100
12) Phenanthrene	9.89	178	4131	4.92117	ppb		99
13) Anthracene	9.97	178	4033	5.29947	ppb		99
14) Fluoranthene	12.63	202	5795	4.96717	ppb		96
16) Pyrene	13.26	202	6034	4.85351	ppb		99
18) Benz (a) anthracene	16.77	228	5137	4.80318	ppb		97
19) Chrysene	16.87	228	5650	4.68239	ppb		97
20) Indeno (1,2,3-cd) pyrene	22.87	276	5680	4.87394	ppb	#	99
22) Benzo (b) fluoranthene	19.65	252	4624	4.64134	ppb		96
23) Benzo (k) fluoranthene	19.72	252	4448	4.23952	ppb		98
24) Benzo (a) pyrene	20.30	252	4898	4.76539	ppb		96
25) Dibenz (a,h) anthracene	22.92	278	4602	4.76707	ppb		95
26) Benzo (g,h,i) perylene	23.40	276	4481	4.73499	ppb		96

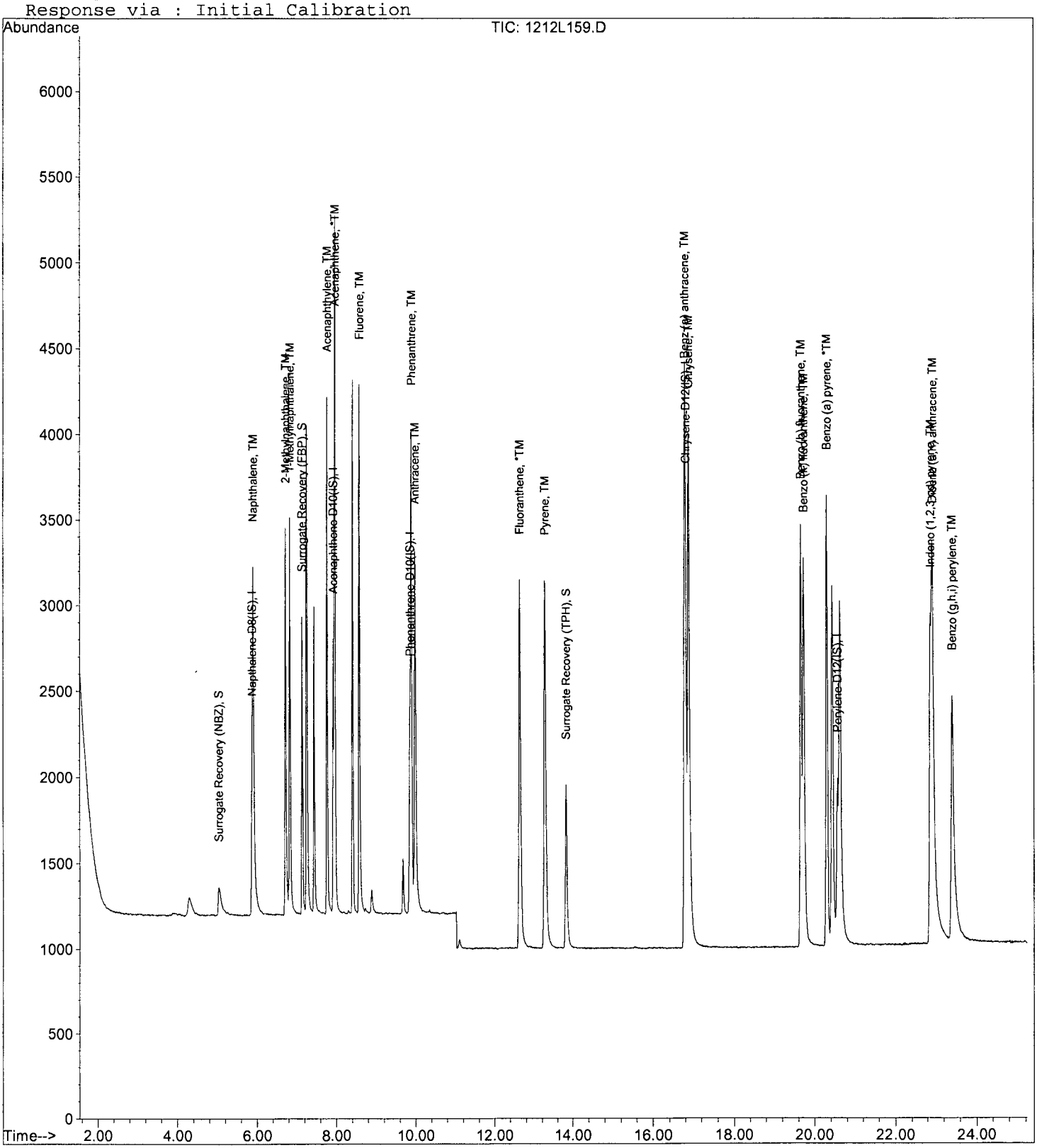
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L159.D Vial: 59
Acq On : 21 Dec 16 9:24 Operator: MA
Sample : 5.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 21 9:53 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/21/16
Instrument: Linus
Initial Cal. Date: 12/12/16
Data File: 1212L165.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	SL	Surrogate Recovery (NBZ)	0.2469	0.3156	28	SL	6.8
3	TM	Naphthalene	1.009	0.9834	2.5	TM	
4	TM	2-Methylnaphthalene	0.6134	0.6275	2.3	TM	
5	TM	1-Methylnaphthalene	0.6809	0.6546	3.9	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	SL	Surrogate Recovery (FBP)	1.561	1.494	4.3	SL	1.7
8	TM	Acenaphthylene	1.942	1.919	1.2	TM	
9	*TM	Acenaphthene	1.177	1.139	3.2	*TM	
10	TM	Fluorene	1.363	1.346	1.2	TM	
11	I	Phenanthrene-D10(IS)	ISTD			I	
12	TM	Phenanthrene	1.075	1.025	4.6	TM	
13	TM	Anthracene	0.9742	1.012	3.9	TM	
14	*TM	Fluoranthene	1.493	1.458	2.3	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.240	1.186	4.3	TM	
17	SL	Surrogate Recovery (TPH)	0.8592	0.8088	5.9	SL	1.1
18	TM	Benz (a) anthracene	1.067	0.9655	9.5	TM	
19	TM	Chrysene	1.204	1.142	5.2	TM	
20	TM	Indeno (1,2,3-cd) pyrene	1.163	1.120	3.6	TM	
21	I	Perylene-D12(IS)	ISTD			I	
22	TM	Benzo (b) fluoranthene	1.073	1.003	6.5	TM	
23	TM	Benzo (k) fluoranthene	1.130	0.9297	18	TM	
24	*TM	Benzo (a) pyrene	1.107	1.040	6.1	*TM	
25	TM	Dibenz (a,h) anthracene	1.040	0.9914	4.7	TM	
26	TM	Benzo (g,h,i) perylene	1.019	0.9366	8.1	TM	
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			6.2		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L165.D Vial: 65
Acq On : 21 Dec 16 12:48 Operator: MA
Sample : 5.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 21 14:02 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.88	136	1898	2.50000	ppb		0.01
6) Acenaphthene-D10(IS)	7.92	164	1045	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.85	188	1899	2.50000	ppb		0.01
15) Chrysene-D12(IS)	16.80	240	2432	2.50000	ppb		0.01
21) Perylene-D12(IS)	20.57	264	2263	2.50000	ppb		0.03
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.05	82	599	2.67040	ppb		0.01
Spiked Amount 5.000			Recovery = 53.400%				
7) Surrogate Recovery (FBP)	7.13	172	1561	2.54175	ppb		0.00
Spiked Amount 5.000			Recovery = 50.840%				
17) Surrogate Recovery (TPH)	13.83	244	1967	2.52750	ppb		0.01
Spiked Amount 5.000			Recovery = 50.560%				
Target Compounds							Qvalue
3) Naphthalene	5.90	128	3733	4.87546	ppb		99
4) 2-Methylnaphthalene	6.71	142	2382	5.11529	ppb		99
5) 1-Methylnaphthalene	6.82	142	2485	4.80727	ppb		96
8) Acenaphthylene	7.76	152	4011	4.94074	ppb		97
9) Acenaphthene	7.95	154	2381	4.83856	ppb		99
10) Fluorene	8.57	166	2813	4.93775	ppb		100
12) Phenanthrene	9.89	178	3893	4.76952	ppb		99
13) Anthracene	9.98	178	3843	5.19340	ppb		100
14) Fluoranthene	12.63	202	5539	4.88275	ppb		96
16) Pyrene	13.27	202	5771	4.78321	ppb		99
18) Benz (a) anthracene	16.78	228	4696	4.52444	ppb		97
19) Chrysene	16.88	228	5553	4.74203	ppb		96
20) Indeno (1,2,3-cd) pyrene	22.88	276	5450	4.81888	ppb	#	99
22) Benzo (b) fluoranthene	19.65	252	4540	4.67382	ppb		97
23) Benzo (k) fluoranthene	19.72	252	4208	4.11356	ppb		98
24) Benzo (a) pyrene	20.30	252	4706	4.69593	ppb		97
25) Dibenz (a,h) anthracene	22.93	278	4487	4.76707	ppb		96
26) Benzo (g,h,i) perylene	23.41	276	4239	4.59408	ppb		95

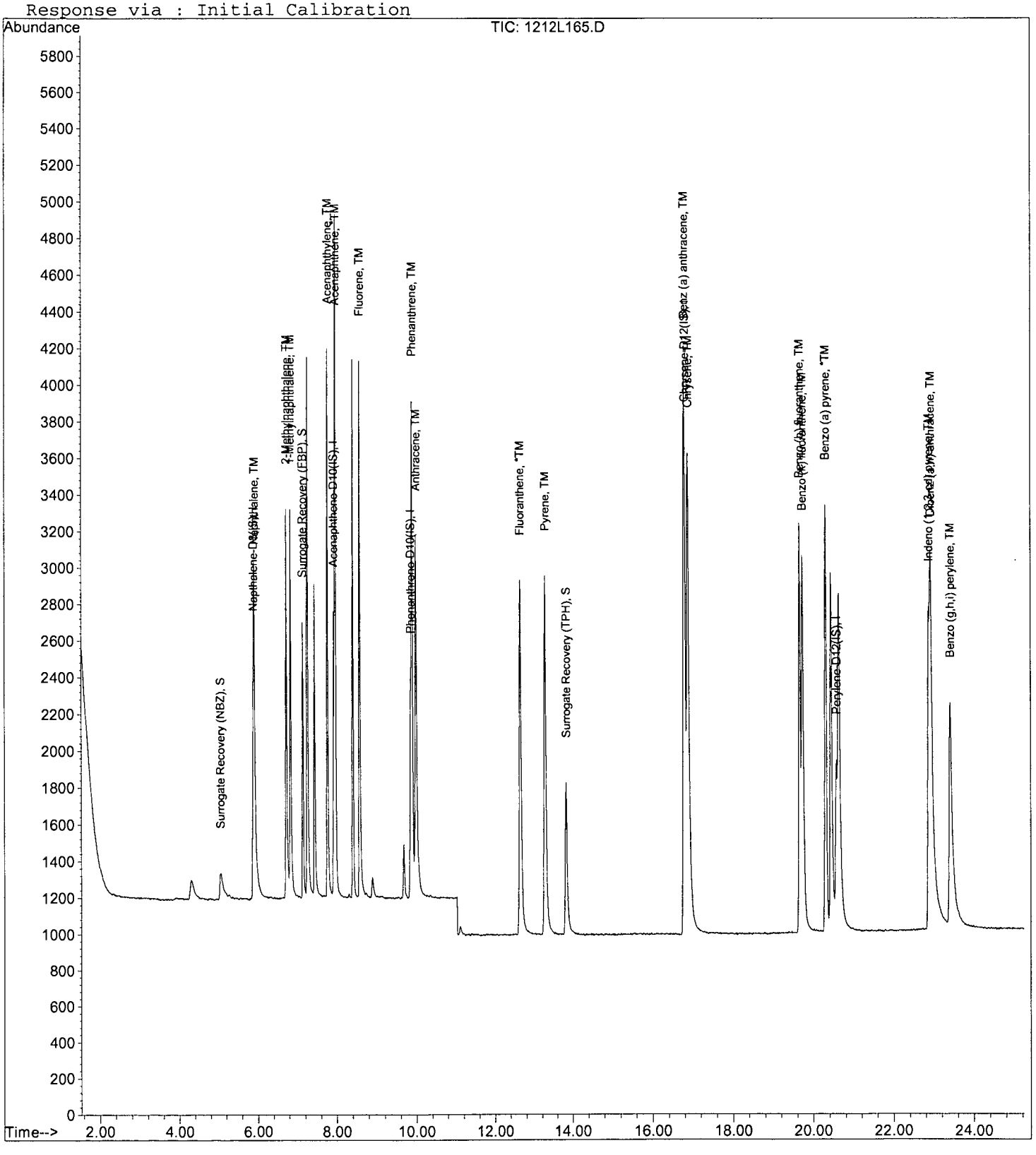
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L165.D Vial: 65
Acq On : 21 Dec 16 12:48 Operator: MA
Sample : 5.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 21 14:02 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



ORGANICS

Raw Data

APPL, INC.

Method Blank
EPA 8270D SIM

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161219W-47494 - 214864**
Batch ID: #SIMDO-161219A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/19/16	12/21/16
BLANK	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/19/16	12/21/16
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	12/19/16	12/21/16
BLANK	SURROGATE: 2-FLUORBIPHENY	65.2	53-106			%	12/19/16	12/21/16
BLANK	SURROGATE: NITROBENZENE-	81.8	55-111			%	12/19/16	12/21/16
BLANK	SURROGATE: TERPHENYL-D14 (	86.6	58-132			%	12/19/16	12/21/16

Quant Method: L1212P.M
Run #: 1212L163
Instrument: Linus
Sequence: L161212
Initials: RHA

GC SC-Blank-REG MDLs-DOD
Printed: 12/21/16 12:55:36 PM

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L163.D
Acq On : 21 Dec 16 11:42
Sample : 161219A BLK 1/1000
Misc : water

Vial: 63
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Dec 21 12:15 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	2265	2.50000 ppb	0.01
6) Acenaphthene-D10(IS)	7.92	164	1290	2.50000 ppb	0.00
11) Phenanthrene-D10(IS)	9.86	188	2306	2.50000 ppb	0.02
15) Chrysene-D12(IS)	16.83	240	2860	2.50000 ppb	0.04
21) Perylene-D12(IS)	20.59	264	2678	2.50000 ppb	0.05
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.03	82	1121	4.09205 ppb	0.00
Spiked Amount 5.000			Recovery = 81.840%		
7) Surrogate Recovery (FBP)	7.13	172	2438	3.25766 ppb	0.00
Spiked Amount 5.000			Recovery = 65.160%		
17) Surrogate Recovery (TPH)	13.82	244	3886	4.33011 ppb	0.00
Spiked Amount 5.000			Recovery = 86.600%		
Target Compounds					Qvalue

(#) = qualifier out of range (m) = manual integration

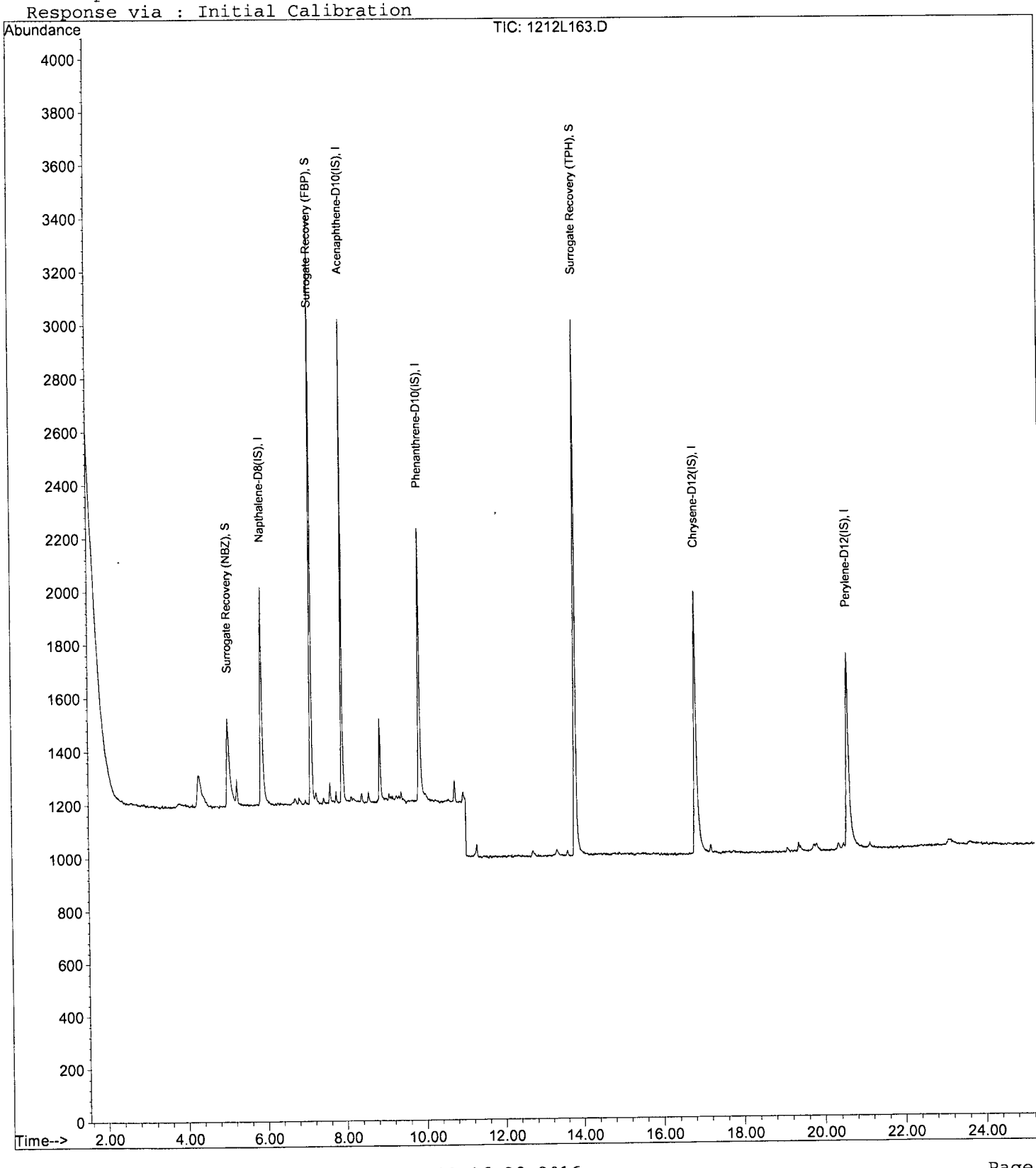
Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L163.D
Acq On : 21 Dec 16 11:42
Sample : 161219A BLK 1/1000
Misc : water

Vial: 63
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Dec 21 12:15 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



Laboratory Control Spike Recovery
EPA 8270D SIM

APPL ID: **161219W-47494 LCS - 214864**
Batch ID: #SIMDO-161219A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1-METHYLNAPHTHALENE	5.00	3.02	60.4	41-115
2-METHYLNAPHTHALENE	5.00	3.13	62.6	39-114
NAPHTHALENE	5.00	3.12	62.4	43-114
SURROGATE: 2-FLUORBIPHENYL (S)	5.00	3.30	66.0	53-106
SURROGATE: NITROBENZENE-D5 (S)	5.00	3.54	70.8	55-111
SURROGATE: TERPHENYL-D14 (S)	5.00	4.13	82.6	58-132

Comments:

Primary	SPK
Quant Method :	L1212P.M
Extraction Date :	12/19/16
Analysis Date :	12/20/16
Instrument :	Linus
Run :	1212L140
Initials :	RHA

Printed: 12/21/16 12:55:29 PM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L140.D Vial: 40
Acq On : 20 Dec 16 17:58 Operator: MA
Sample : 161219A LCS-1 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 21 8:40 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.88	136	1028	2.50000	ppb		0.01
6) Acenaphthene-D10(IS)	7.92	164	576	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.85	188	1047	2.50000	ppb		0.01
15) Chrysene-D12(IS)	16.81	240	1327	2.50000	ppb		0.02
21) Perylene-D12(IS)	20.58	264	1262	2.50000	ppb		0.04
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.03	82	437	3.53849	ppb		0.00
Spiked Amount 5.000			Recovery = 70.760%				
7) Surrogate Recovery (FBP)	7.13	172	1101	3.29658	ppb		0.00
Spiked Amount 5.000			Recovery = 65.940%				
17) Surrogate Recovery (TPH)	13.82	244	1723	4.13238	ppb		0.00
Spiked Amount 5.000			Recovery = 82.640%				
Target Compounds							Qvalue
3) Naphthalene	5.90	128	1293	3.11788	ppb		99
4) 2-Methylnaphthalene	6.71	142	790	3.13226	ppb		97
5) 1-Methylnaphthalene	6.82	142	846	3.02166	ppb		96
8) Acenaphthylene	7.76	152	1718	3.83934	ppb		98
9) Acenaphthene	7.95	154	981	3.61676	ppb		99
10) Fluorene	8.57	166	1277	4.06672	ppb		99
12) Phenanthrene	9.89	178	1925	4.27759	ppb		100
13) Anthracene	9.98	178	1764	4.32373	ppb		100
14) Fluoranthene	12.64	202	2887	4.61591	ppb		95
16) Pyrene	13.28	202	2991	4.54336	ppb		98
18) Benz (a) anthracene	16.79	228	2487	4.39142	ppb		97
19) Chrysene	16.89	228	2892	4.52614	ppb		97
20) Indeno (1,2,3-cd) pyrene	22.89	276	2976	4.82253	ppb	#	99
22) Benzo (b) fluoranthene	19.67	252	2363	4.36219	ppb		96
23) Benzo (k) fluoranthene	19.74	252	2259	3.95990	ppb		96
24) Benzo (a) pyrene	20.32	252	2505	4.48232	ppb		95
25) Dibenz (a,h) anthracene	22.94	278	2431	4.63133	ppb		93
26) Benzo (g,h,i) perylene	23.42	276	2341	4.54948	ppb		95

(#) = qualifier out of range (m) = manual integration

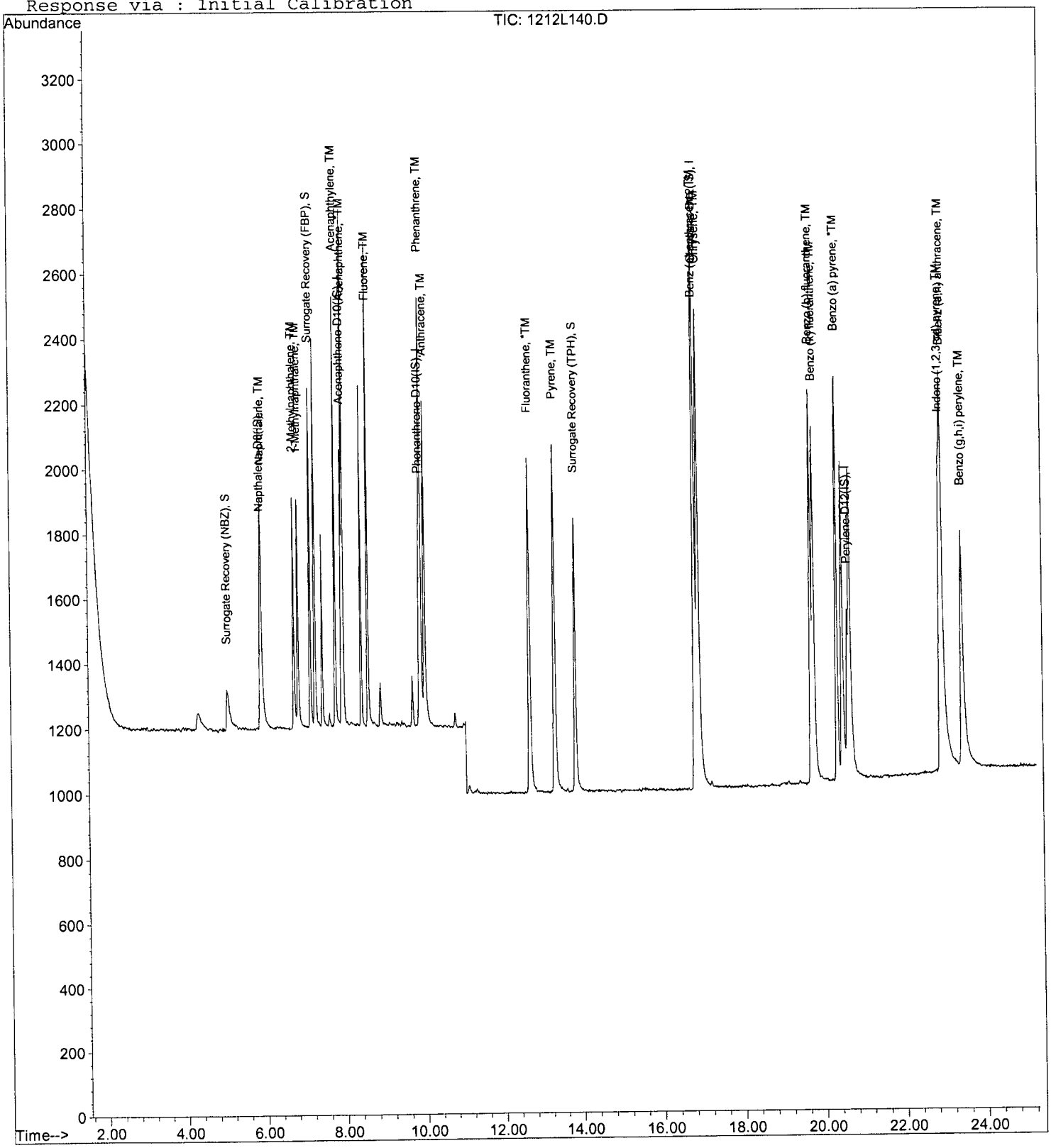
Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L140.D
Acq On : 20 Dec 16 17:58
Sample : 161219A LCS-1 1/1000
Misc : water

Vial: 40
Operator: MA
Inst : Linus
Multiplr: 1.00

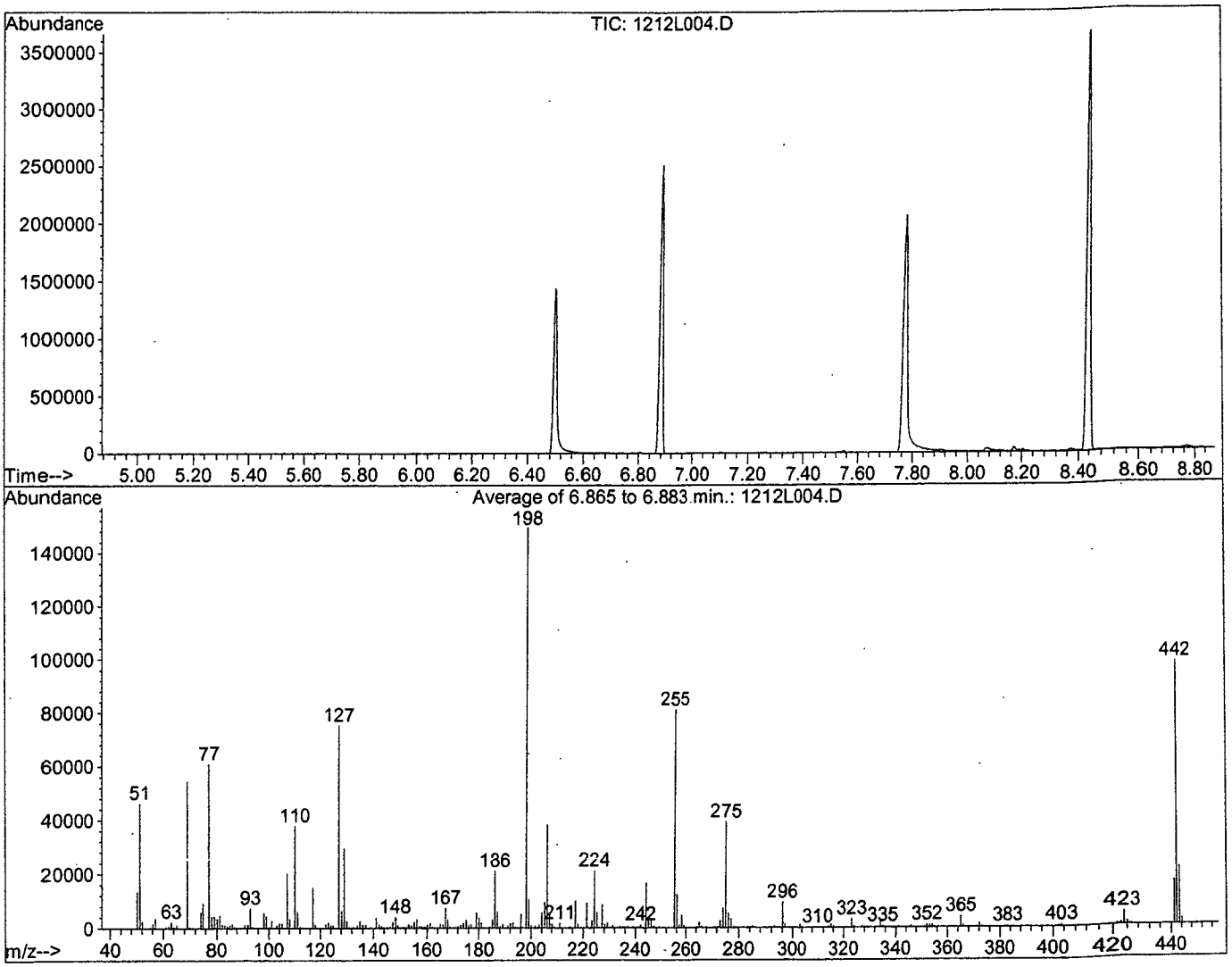
Quant Time: Dec 21 8:40 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



Data File : M:\LINUS\DATA\L161212\1212L004.D Vial: 2
Acq On : 12 Dec 16 10:19 Operator: MA
Sample : SV Tune 11/15/16 Inst : Linus
Misc : water Multiplr: 1.00

Method : M:\LINUS\DATA\L161026\DFTPP2.M (Chemstation Integrator)
Title :



Spectrum Information: Average of 6.865 to 6.883 min.

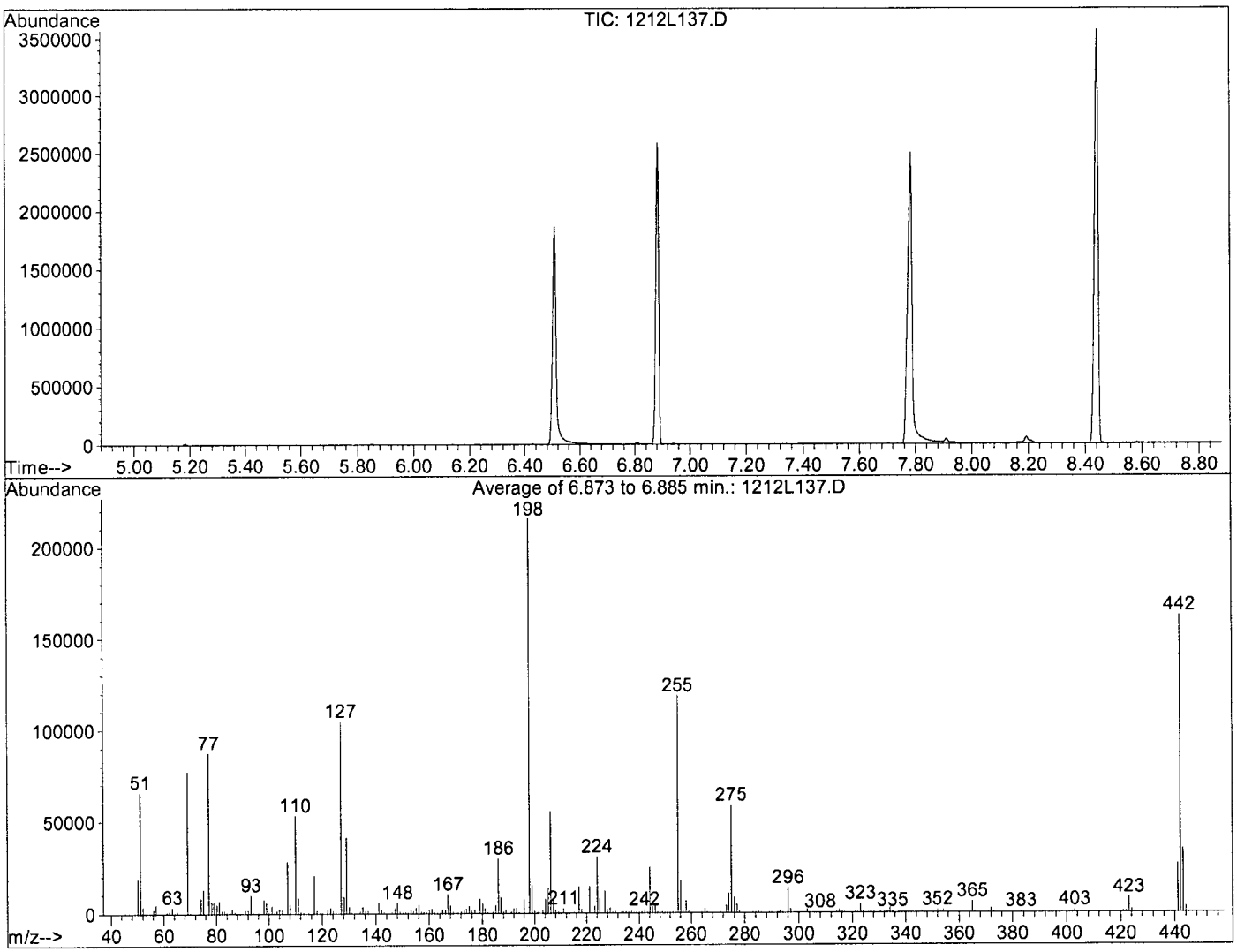
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	31.0	46351	PASS
68	69	0.00	2	0.0	0	PASS
69	69	100	100	100.0	54581	PASS
70	69	0.00	2	0.6	344	PASS
127	198	40	60	50.3	75268	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	149562	PASS
199	198	5	9	6.9	10325	PASS
275	198	10	30	26.2	39172	PASS
365	198	1	100	2.6	3864	PASS
441	443	0.01	100	76.7	16188	PASS
442	198	40	150	65.3	97607	PASS
443	442	17	23	21.6	21119	PASS

1212L004.D DFTPP2.M Mon Dec 12 10:39:40 2016

Data File : M:\LINUS\DATA\L161212\1212L137.D
Acq On : 20 Dec 16 16:35
Sample : SV Tune 12/15/16
Misc : water

Vial: 37
Operator: MA
Inst : Linus
Multiplr: 1.00

Method : M:\LINUS\DATA\L161026\DFTPP2.M (Chemstation Integrator)
Title :



Spectrum Information: Average of 6.873 to 6.885 min.

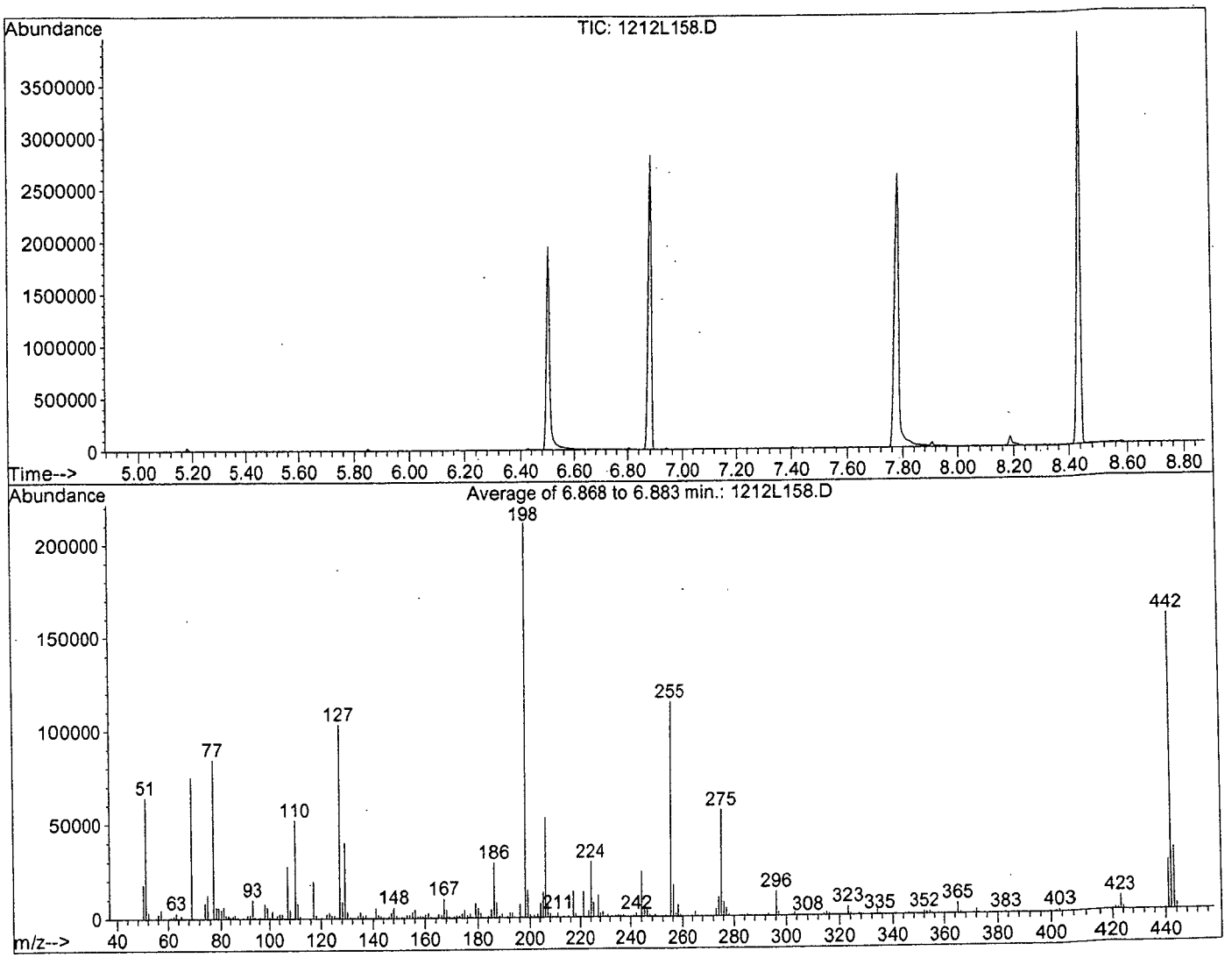
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	30.4	65775	PASS
68	69	0.00	2	0.0	0	PASS
69	69	100	100	100.0	77141	PASS
70	69	0.00	2	0.2	184	PASS
127	198	40	60	48.4	104632	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	216253	PASS
199	198	5	9	6.9	14948	PASS
275	198	10	30	27.0	58475	PASS
365	198	1	100	2.7	5741	PASS
441	443	0.01	100	76.5	26370	PASS
442	198	40	150	75.1	162381	PASS
443	442	17	23	21.2	34471	PASS

1212L137.D DFTPP2.M Wed Dec 21 14:08:36 2016

Data File : M:\LINUS\DATA\L161212\1212L158.D
Acq On : 21 Dec 16 9:07
Sample : SV Tune 12/15/16
Misc : water

Vial: 58
Operator: MA
Inst : Linus
Multiplr: 1.00

Method : M:\LINUS\DATA\L161026\DFTPP2.M (Chemstation Integrator)
Title :



Spectrum Information: Average of 6.868 to 6.883 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	30.4	64201	PASS
68	69	0.00	2	0.0	0	PASS
69	69	100	100	100.0	75066	PASS
70	69	0.00	2	0.4	316	PASS
127	198	40	60	48.8	103146	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	211258	PASS
199	198	5	9	6.8	14389	PASS
275	198	10	30	26.6	56256	PASS
365	198	1	100	2.6	5538	PASS
441	443	0.01	100	78.9	25916	PASS
442	198	40	150	75.0	158395	PASS
443	442	17	23	20.7	32837	PASS

1212L158.D DFTPP2.M Wed Dec 21 12:39:44 2016

8270 PAH SIM Standard Curve

PREP DATE:	12/12/16 RH											
8270 PAH SIM STANDARD CURVE						0.1	0.2	0.5	1	5	10	50
Exp.DATE:	2/15/17											
		Conc.		Date								
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL	µL	µL	µL	µL
O2si	8270 PAH SIM Stock	200	278353-36992	9/12/16	9/12/17	0	0	0	0	5	5	25
	5.0ug/mL	5		9/12/16	7/29/17	0	0	10	20	0	0	0
	1.0ug/mL	1		9/12/16	7/29/17	10	20	0	0	0	0	0
O2SI	BNA SURR.	100/200		11/15/16	2/15/17	0	0	0	0	5	5	25
EM Science	Methylene Chloride		56061			90	80	90	80	190	90	50
Supelco	SV Internal Standar	2000	XA14020V-36768	10/10/16	10/10/17	2	2	2	2	4	2	2
				Final Vol.		102	102	102	102	204	102	102

100
µL
50
0
0
50
0
2
102

8270 PAH SIM 2ND SRC

8270 PAH SIM 2ND SRC			Prep: 09/06/16 Exp 01/12/17 RH		
Supplier	**Standard**	**Conc.**	**Prep**	**Exp**	**µL**
O2SI	8270 2ND SRC	VARIOUS	06/03/16	01/21/17	25
	Methylene Chloride				75
o2si	V Internal Standar	2000	10/10/16	10/10/17	2
LOT#	XA10079V-35507			Final Vol.	102

SIM SPIKE	
CAT:	110780-01
Lot:	278353-369
OP: 11/21/16-R.H.	
EX: 11/21/17	

8270 SIM PAH Internal Standard						
PREP DATE:	10/10/16 RH.					
8270 SIM PAH Internal Standard Mix 125ug/ml						
Exp.DATE:	10/10/17					
		Conc.		Date	Exp.	125
Supplier	ID #	µg/mL	Lot #	Code	Date	µL
Supelco	SV Internal	2000	XA14020V-36768	10/10/16	10/10/17	350
EM Science	Methylene Chloride		56061			5250
				Final Vol.		5600

PAH SIM STD prep: 09/12/16-R.H.						
Exp:	19/12/17					
		Conc.				
Supplier	ID #	mg/L	Lot #	Open Date	Exp.Date	µL
o2si	110780-01	200	278353-36992	6/22/16	6/22/17	1000
				Fin Vol.		1000

Semivolatile (SV) Tuning Solution -G.A.						
PREP DATE:	11/15/16	RH				
Semivolatile (SV) Tune Solution 50ug/ml						
Exp:	8/26/17					
		Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
Ultra Scient	Semivolatile GC	1000	N081628-37012	08/23/16	8/23/17	200
EM Science	Methylene Chloride		55098			3800
				Final Vol.		4000

8270 Surrog Mix 100/200ppm						
Prep: 11/15/16 -RH Ex: 2/15/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
8270 Acid Surrog Mix	10000 ug/ml	Restek Cat# 33029 Lot# A0118884-36875 Op: 11/15/16 EX: 11/15/17	2.0 mL	100 mL	200 ug/mL	MC
8270 B/N surrog Mix	5000 µg/mL	Restek Cat# 31086 Lot# A0119223-36871 Op: 11/15/16 EX: 11/15/17	2.0 mL	100 mL	100 ug/mL	MC

Organic Extraction Worksheet

Method	SIM Separatory Funnel Extra 3510C	Extraction Set	161219A	Extraction Method	SEP004S	Units	mL

Spiked ID 1	PAH SIM Spike 11-21-16 EXP 11-21-17		Surrogate ID 1	8270 Surrogate 12-8-16 EXP 3-8-17	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	12/19/16 15:50	
Spiked ID 8			Ext. End Time:	12/20/16 15:45	
			GC Requires Extract By:	12/21/16 0:00	

pH1	2	12/19/16 4:00:00 PM	Water Bath Temp Criteria	70,70 °C
pH2	14	12/19/16 6:00:00 PM		
pH3				

Spiked By: KY **Date** 12/19/16 **Witnessed By:** DL **Date** 12/19/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	161219A Blk				0.050	1	1000	1	2/1	12/19/16 15:50	
						equip	E-WB7				
2	161219A LCS-1		0.0250	1	0.050	1	1000	1	2/1	12/19/16 15:50	
						equip	E-WB7				
3	161219A LCSD-1		0.0250	1	0.050	1	1000	1	2/1	12/19/16 15:50	
						equip	E-WB7				
4	AZ47494	AZ47494W13			0.050	1	1070	1	2/1	12/19/16 15:50	81760 1 WEEK
						equip	E-WB7				
5	AZ47495	AZ47495W13			0.050	1	1070	1	2/1	12/19/16 15:50	81760 1 WEEK
						equip	E-WB7				
6	AZ47496	AZ47496W10			0.050	1	1070	1	2/1	12/19/16 15:50	81760 1 WEEK
						equip	E-WB7				
7	AZ47497	AZ47497W11			0.050	1	1070	1	2/1	12/19/16 15:50	81760 1 WEEK
						equip	E-WB7				
8	AZ47498	AZ47498W15			0.050	1	1070	1	2/1	12/19/16 15:50	81760 1 WEEK
						equip	E-WB7				
9	AZ47658	AZ47658W13			0.050	1	1070	1	2/1	12/19/16 15:50	81760 1 WEEK
						equip	E-WB7				
10	AZ47659	AZ47659W05			0.050	1	1070	1	2/1	12/19/16 15:50	81776 1 WEEK
						equip	E-WB7				
11	AZ47660	AZ47660W09			0.050	1	1070	1	2/1	12/19/16 15:50	81776 1 WEEK
						equip	E-WB6				
12	AZ47661	AZ47661W10			0.050	1	1070	1	2/1	12/19/16 15:50	81776 1 WEEK
						equip	E-WB6				
13	AZ47662	AZ47662W07			0.050	1	1070	1	2/1	12/19/16 15:50	81776 1 WEEK
						equip	E-WB6				
14	AZ47663	AZ47663W12			0.050	1	1070	1	2/1	12/19/16 15:50	81776 1 WEEK
						equip	E-WB6				
15	AZ47664	AZ47664W09			0.050	1	1050	1	2/1	12/19/16 15:50	81776 1 WEEK
						equip	E-WB6				
16	AZ47665	AZ47665W10			0.050	1	1070	1	2/1	12/19/16 15:50	81776 1 WEEK
						equip	E-WB6				

Solvent and Lot#	
1+1 SULFURIC ACID	12-5-16
PH STRIP	HC 574756
MC	56153
A. Na2SO4	11-3-16
10N NaOH	12-19-16
B. Na2SO4	16C255214
FILTER PAPER	400112

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	RH
Date	12/20/16
Time	4:20
Refrigerator	GC-C

	Technician's Initials
Scanned By	KY
Sample Preparation	KY,JR,DL
Extraction	KY,JR,DL
Concentration	KY

Modified	12/20/16 4:00:33 PM

Reviewed By: KY **Date** 12/20/16

Injection Log

Directory: M:\LINUS\DATA\L161212\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	1212L004.D	1	SV Tune 11/15/16	water	12 Dec 16 10:19
2	3	1212L005.D	1	0.1 ug/ml PAH 12/12/16	water	12 Dec 16 10:36
3	4	1212L006.D	1	0.2 ug/ml PAH 12/12/16	water	12 Dec 16 11:09
4	7	1212L009.D	1	5.0 ug/ml PAH 12/12/16	water	12 Dec 16 12:49
5	8	1212L010.D	1	10.0 ug/ml PAH 12/12/16	water	12 Dec 16 13:22
6	9	1212L011.D	1	50.0 ug/ml PAH 12/12/16	water	12 Dec 16 13:54
7	10	1212L012.D	1	100.0 ug/ml PAH 12/12/16	water	12 Dec 16 14:28
8	11	1212L013.D	1	0.5 ug/ml PAH 12/12/16	water	12 Dec 16 15:01
9	12	1212L014.D	1	1.0 ug/ml PAH 12/12/16	water	12 Dec 16 15:34
10	15	1212L015.D	1	SS PAH 12/12/16	water	12 Dec 16 16:07
11	37	1212L137.D	1	SV Tune 12/15/16	water	20 Dec 16 16:35
12	38	1212L138.D	1	5.0 ug/ml PAH 12/12/16	water	20 Dec 16 16:52
13	40	1212L140.D	1	161219A LCS-1 1/1000	water	20 Dec 16 17:58
14	42	1212L142.D	0.93458	AZ47494W13 1/1070	water	20 Dec 16 19:05
15	44	1212L144.D	0.93458	AZ47496W10 1/1070	water	20 Dec 16 20:12
16	45	1212L145.D	0.93458	AZ47497W11 1/1070	water	20 Dec 16 20:45
17	46	1212L146.D	0.93458	AZ47498W15 1/1070	water	20 Dec 16 21:18
18	56	1212L156.D	1	5.0 ug/ml PAH 12/12/16	water	21 Dec 16 2:33
19	58	1212L158.D	1	SV Tune 12/15/16	water	21 Dec 16 9:07
20	59	1212L159.D	1	5.0 ug/ml PAH 12/12/16	water	21 Dec 16 9:24
21	63	1212L163.D	1	161219A BLK 1/1000	water	21 Dec 16 11:42
22	64	1212L164.D	0.934579	AZ47495W13 1/1070	water	21 Dec 16 12:15
23	65	1212L165.D	1	5.0 ug/ml PAH 12/12/16	water	21 Dec 16 12:48

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank
EPA 8270D WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161219W-47494 - 214871**
Batch ID: #87DC5-161219A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	12/19/16	12/21/16
BLANK	SURROGATE: 2,4,6-TRIBROMOP	51.6	43-140			%	12/19/16	12/21/16
BLANK	SURROGATE: 2-FLUORBIPHENY	47.8	44-119			%	12/19/16	12/21/16
BLANK	SURROGATE: 2-FLUOROPHENO	40.4	19-119			%	12/19/16	12/21/16
BLANK	SURROGATE: NITROBENZENE-	49.3	44-120			%	12/19/16	12/21/16
BLANK	SURROGATE: PHENOL-D6 (S)	29.9	10-115			%	12/19/16	12/21/16
BLANK	SURROGATE: TERPHENYL-D14 (	52.5	50-134			%	12/19/16	12/21/16

Quant Method:Y1207.M
Run #:1207Y183
Instrument:Yoda
Sequence:Y161207
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 12/21/16 5:03:23 PM

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81760

Case No: 81760 Date Analyzed: 12/21/16

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2,4,6-TRIBROMOPHENOL (S)			SURROGATE: 2-FLUORBIPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161219A-LCS	Lab Control Spike	43-140	75.0		44-119	67.1	
AZ47494	ERH139	43-140	65.1		44-119	60.1	
AZ47495	ERH136	43-140	66.9		44-119	61.6	
AZ47496	ERH143	43-140	70.8		44-119	61.8	
AZ47498	ERH146	43-140	75.1		44-119	69.7	
AZ47497	ERH145	43-140	55.0		44-119	50.0	
161219A-BLK	Blank	43-140	51.6		44-119	47.8	

Comments: Batch: #87DC5-161219A

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81760

Case No: 81760 Date Analyzed: 12/21/16

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2-FLUOROPHENOL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161219A-LCS	Lab Control Spike	19-119	47.3		44-120	71.1	
AZ47494	ERH139	19-119	43.2		44-120	62.8	
AZ47495	ERH136	19-119	43.5		44-120	62.4	
AZ47496	ERH143	19-119	50.0		44-120	64.7	
AZ47498	ERH146	19-119	48.5		44-120	69.7	
AZ47497	ERH145	19-119	36.0		44-120	51.4	
161219A-BLK	Blank	19-119	40.4		44-120	49.3	

Comments: Batch: #87DC5-161219A

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81760

Case No: 81760 Date Analyzed: 12/21/16

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: PHENOL-D6 (S)			SURROGATE: TERPHENYL-D14 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161219A-LCS	Lab Control Spike	10-115	30.3		50-134	73.5	
AZ47494	ERH139	10-115	27.6		50-134	65.7	
AZ47495	ERH136	10-115	28.6		50-134	66.3	
AZ47496	ERH143	10-115	35.2		50-134	70.1	
AZ47498	ERH146	10-115	32.6		50-134	72.6	
AZ47497	ERH145	10-115	24.1		50-134	53.6	
161219A-BLK	Blank	10-115	29.9		50-134	52.5	

Comments: Batch: #87DC5-161219A

Laboratory Control Spike Recovery
EPA 8270D WATER

APPL ID: **161219W-47494 LCS - 214871**
Batch ID: #87DC5-161219A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
PHENOL	50.0	19.1	38.2	10-115
SURROGATE: 2,4,6-TRIBROMOPHENOL	200	150	75.0	43-140
SURROGATE: 2-FLUORBIPHENYL (S)	100	67.1	67.1	44-119
SURROGATE: 2-FLUOROPHENOL (S)	200	94.6	47.3	19-119
SURROGATE: NITROBENZENE-D5 (S)	100	71.1	71.1	44-120
SURROGATE: PHENOL-D6 (S)	200	60.6	30.3	10-115
SURROGATE: TERPHENYL-D14 (S)	100	73.5	73.5	50-134

Comments: _____

Primary	SPK
Quant Method :	Y1207.M
Extraction Date :	12/19/16
Analysis Date :	12/21/16
Instrument :	Yoda
Run :	1207Y174
Initials :	MA

Printed: 12/21/16 3:36:45 PM
APPL Standard LCS

EPA 8270D

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81760

Case No: 81760 Date Analyzed: 12/21/16

Matrix: WATER Instrument: Yoda

Blank ID: 161219A-BLK Time Analyzed: 1636

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161219A-LCS	Lab Control Spike	1207Y174	12/21/16 1205
AZ47494	ERH139	1207Y175	12/21/16 1235
AZ47495	ERH136	1207Y176	12/21/16 1305
AZ47496	ERH143	1207Y177	12/21/16 1335
AZ47498	ERH146	1207Y179	12/21/16 1435
AZ47497	ERH145	1207Y180	12/21/16 1505
161219A-BLK	Blank	1207Y183	12/21/16 1636

Comments: Batch: #87DC5-161219A

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: water
ID: SV Tune 10/19/16

SDG No:
Date Analyzed: 12/07/16
Instrument: Yoda
Time Analyzed: 9:00

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		5ug/ml SVOC 12/06/16	1207Y004.D	12/07/16 10:01
2		10ug/ml SVOC 12/06/1	1207Y005.D	12/07/16 10:32
3		20ug/ml SVOC 12/06/1	1207Y006.D	12/07/16 11:02
4		40ug/ml SVOC 12/06/1	1207Y007.D	12/07/16 11:32
5		50ug/ml SVOC 12/06/1	1207Y008.D	12/07/16 12:02
6		60ug/ml SVOC 12/06/1	1207Y009.D	12/07/16 12:32
7		80ug/ml SVOC 12/06/1	1207Y010.D	12/07/16 13:02
8		100ug/ml SVOC 12/06/	1207Y011.D	12/07/16 13:32
9		2ND SRC SVOC 12/06/1	1207Y012.D	12/07/16 14:01
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	46.7
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.7
127	40 - 60% of mass 198	56.0
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 197.95	100.0
199	5 - 9% of mass 198	6.9
275	10 - 30% of mass 198	24.0
365	1 - 100% of mass 198	3.1
441	0.01 - 100% of mass 443	86.4
442	50 - 150% of mass 197.95	90.6
443	17 - 23% of mass 442	20.1

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81760
Matrix: Water
ID: SV Tune 10/19/16

SDG No: 81760
Date Analyzed: 12/21/16
Instrument: Yoda
Time Analyzed: 10:48

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		50ug/ml SVOC 12/06/1	1207Y172.D	12/21/16 11:04
2	Lab Control Spike	161219A LCS-1 1/1000	1207Y174.D	12/21/16 12:05
3	ERH139	AZ47494W12 1/1070	1207Y175.D	12/21/16 12:35
4	ERH136	AZ47495W12 1/1070	1207Y176.D	12/21/16 13:05
5	ERH143	AZ47496W13 1/900	1207Y177.D	12/21/16 13:35
6	ERH146	AZ47498W14 1/1070	1207Y179.D	12/21/16 14:35
7	ERH145	AZ47497W10 1/1070	1207Y180.D	12/21/16 15:05
8	Blank	161219A BLK 1/1000	1207Y183.D	12/21/16 16:36
9		50ug/ml SVOC 12/16/1	1207Y191.D	12/21/16 20:36
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	42.0
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.3
127	40 - 60% of mass 198	54.2
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	7.2
275	10 - 30% of mass 198	24.5
365	1 - 100% of mass 198	3.9
441	0.01 - 100% of mass 443	82.2
442	50 - 150% of mass 198	113.7
443	17 - 23% of mass 442	19.1

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81760

Lab File ID (Standard): 1207Y008.D Date Analyzed: 7 Dec 16 12:02

Instrument ID: Yoda Time Analyzed: 7 Dec 16 12:02

GC Column: ID: Heated Purge: (Y/N)

		1,4-dichlorobenzene-D4(IS)		Napthalene-D8(IS)		Acenaphthene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	195270	4.87	816895	6.30	475200	8.31
	UPPER LIMIT	390540	5.37	1633790	6.80	950400	8.81
	LOWER LIMIT	97635	4.37	408448	5.80	237600	7.81
	SAMPLE NO.						
01	50ug/ml SVOC 12/06/16	205077	4.86	832706	6.29	509421	8.30
02	161219A LCS-1 1/1000	219545	4.86	912040	6.29	545384	8.31
03	AZ47494W12 1/1070	222330	4.86	940414	6.29	537067	8.30
04	AZ47495W12 1/1070	224581	4.86	943662	6.29	543701	8.31
05	AZ47496W13 1/900	212147	4.86	907184	6.29	525473	8.30
06	AZ47498W14 1/1070	209742	4.86	914949	6.29	515619	8.31
07	AZ47497W10 1/1070	274386	4.86	1170800	6.29	671792	8.30
08	161219A BLK 1/1000	210296	4.86	912750	6.29	525703	8.30
09	50ug/ml SVOC 12/16/16	196018	4.86	813286	6.29	489127	8.31
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 81760

Lab File ID (Standard): 1207Y008.D Date Analyzed: 7 Dec 16 12:02

Instrument ID: Yoda Time Analyzed: 7 Dec 16 12:02

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Phenanthrene-D10(IS)		Chrysene-D12(IS)		Perylene-D12(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	975541	10.03	853105	13.10	871056	14.75
	UPPER LIMIT	1951082	10.53	1706210	13.60	1742112	15.25
	LOWER LIMIT	487771	9.53	426553	12.60	435528	14.25
	SAMPLE NO.						
01	50ug/ml SVOC 12/06/16	936226	10.03	924269	13.11	942225	14.74
02	161219A LCS-1 1/1000	1018700	10.03	1003580	13.11	1035620	14.75
03	AZ47494W12 1/1070	994590	10.02	996081	13.10	1003150	14.74
04	AZ47495W12 1/1070	1008890	10.02	1000620	13.10	1020800	14.74
05	AZ47496W13 1/900	973808	10.03	964828	13.10	979733	14.74
06	AZ47498W14 1/1070	973647	10.03	971083	13.10	965148	14.74
07	AZ47497W10 1/1070	1234810	10.03	1266000	13.10	1042900	14.74
08	161219A BLK 1/1000	970707	10.03	955795	13.10	965499	14.75
09	50ug/ml SVOC 12/16/16	909600	10.02	882174	13.11	697962	14.75
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

ORGANICS

Sample Data

APPL, INC.

EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH139

Sample Collection Date: 12/12/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81760

APPL ID: AZ47494

QCG: #87DC5-161219A-214871

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	12/19/16	12/21/16
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	65.1	43-140			%	12/19/16	12/21/16
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	60.1	44-119			%	12/19/16	12/21/16
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	43.2	19-119			%	12/19/16	12/21/16
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	62.8	44-120			%	12/19/16	12/21/16
EPA 8270D	SURROGATE: PHENOL-D6 (S)	27.6	10-115			%	12/19/16	12/21/16
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	65.7	50-134			%	12/19/16	12/21/16

Quant Method: Y1207.M
Run #: 1207Y175
Instrument: Yoda
Sequence: Y161207
Dilution Factor: 1
Initials: MA

Printed: 12/21/16 3:36:49 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y175.D Vial: 75
Acq On : 21 Dec 16 12:35 Operator: MA
Sample : AZ47494W12 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Dec 21 13:31 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	222330	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.29	136	940414	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.30	164	537067	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.02	188	994590	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.10	240	996081	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.74	264	1003154	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.34	112	631894	80.74537 ppb	0.00
Spiked Amount 186.916			Recovery =	43.199%	
5) Phenol-D6 (S)	4.50	99	532033	51.50932 ppb	0.00
Spiked Amount 186.916			Recovery =	27.557%	
21) Nitrobenzene-D5(S)	5.49	82	598996	58.72640 ppb	0.00
Spiked Amount 93.458			Recovery =	62.837%	
45) 2-Fluorobiphenyl(S)	7.54	172	1017775	56.18147 ppb	0.00
Spiked Amount 93.458			Recovery =	60.114%	
63) 2,4,6-Tribromophenol(S)	9.23	330	350686	121.70821 ppb	0.00
Spiked Amount 186.916			Recovery =	65.114%	
81) Terphenyl-D14(S)	11.89	244	1480336	61.42398 ppb	0.00
Spiked Amount 93.458			Recovery =	65.724%	

Target Compounds Qvalue

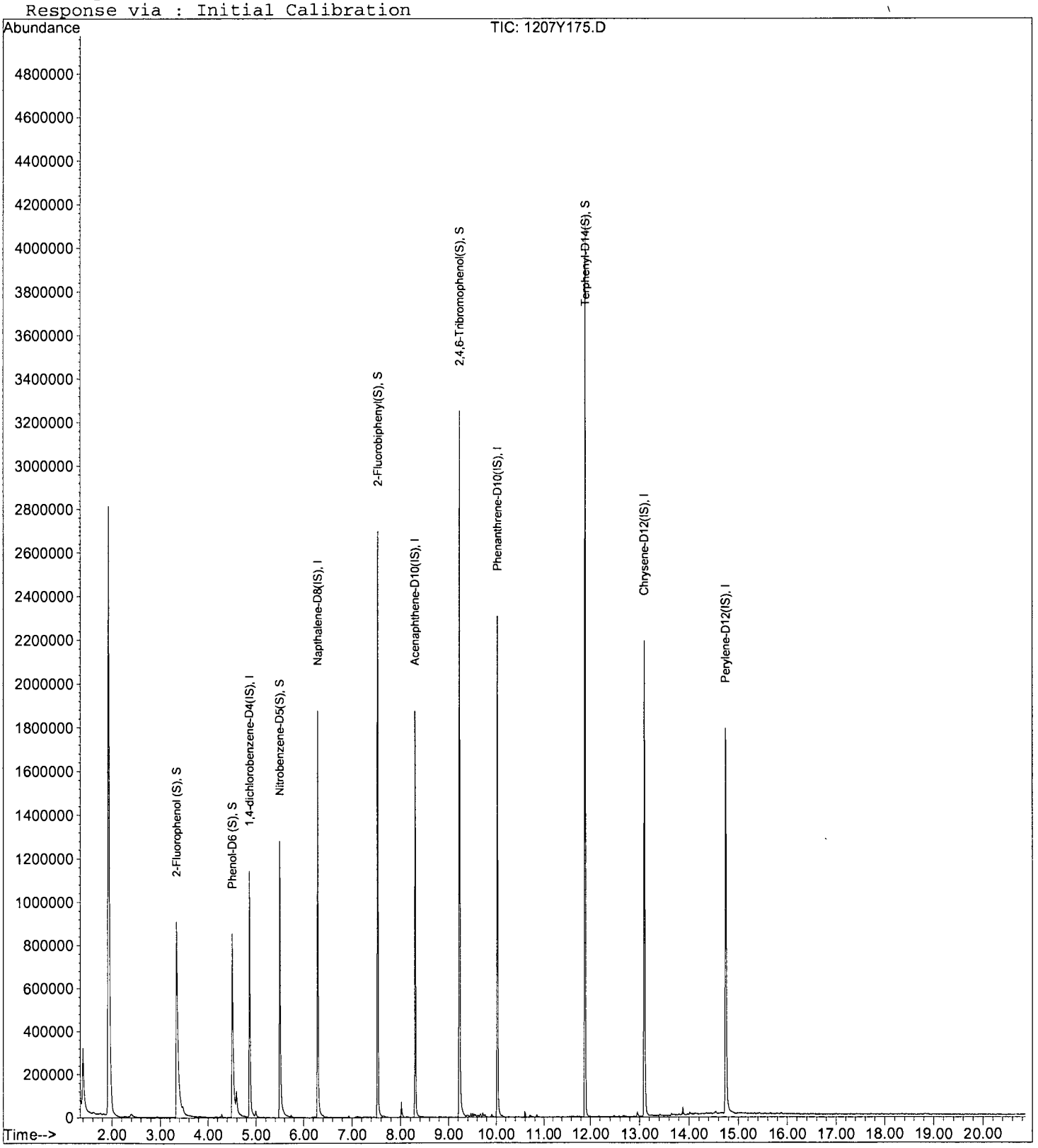
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y175.D Vial: 75
Acq On : 21 Dec 16 12:35 Operator: MA
Sample : AZ47494W12 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Dec 21 13:31 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81760

Sample ID: ERH136

APPL ID: AZ47495

Sample Collection Date: 12/12/16

QCG: #87DC5-161219A-214871

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	12/19/16	12/21/16
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	66.9	43-140			%	12/19/16	12/21/16
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	61.6	44-119			%	12/19/16	12/21/16
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	43.5	19-119			%	12/19/16	12/21/16
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	62.4	44-120			%	12/19/16	12/21/16
EPA 8270D	SURROGATE: PHENOL-D6 (S)	28.6	10-115			%	12/19/16	12/21/16
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	66.3	50-134			%	12/19/16	12/21/16

Quant Method: Y1207.M
Run #: 1207Y176
Instrument: Yoda
Sequence: Y161207
Dilution Factor: 1
Initials: MA

Printed: 12/21/16 3:36:49 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y176.D Vial: 76
Acq On : 21 Dec 16 13:05 Operator: MA
Sample : AZ47495W12 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Dec 21 13:32 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	224581	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.29	136	943662	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	543701	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.02	188	1008888	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.10	240	1000619	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.74	264	1020799	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.34	112	642409	81.26622 ppb	0.00
Spiked Amount 186.916			Recovery =	43.477%	
5) Phenol-D6 (S)	4.50	99	557695	53.45263 ppb	0.00
Spiked Amount 186.916			Recovery =	28.597%	
21) Nitrobenzene-D5(S)	5.49	82	596613	58.29144 ppb	0.00
Spiked Amount 93.458			Recovery =	62.371%	
45) 2-Fluorobiphenyl(S)	7.54	172	1055200	57.53664 ppb	0.00
Spiked Amount 93.458			Recovery =	61.565%	
63) 2,4,6-Tribromophenol(S)	9.23	330	364520	124.96579 ppb	0.00
Spiked Amount 186.916			Recovery =	66.857%	
81) Terphenyl-D14(S)	11.89	244	1500786	61.99010 ppb	0.00
Spiked Amount 93.458			Recovery =	66.329%	

Target Compounds Qvalue

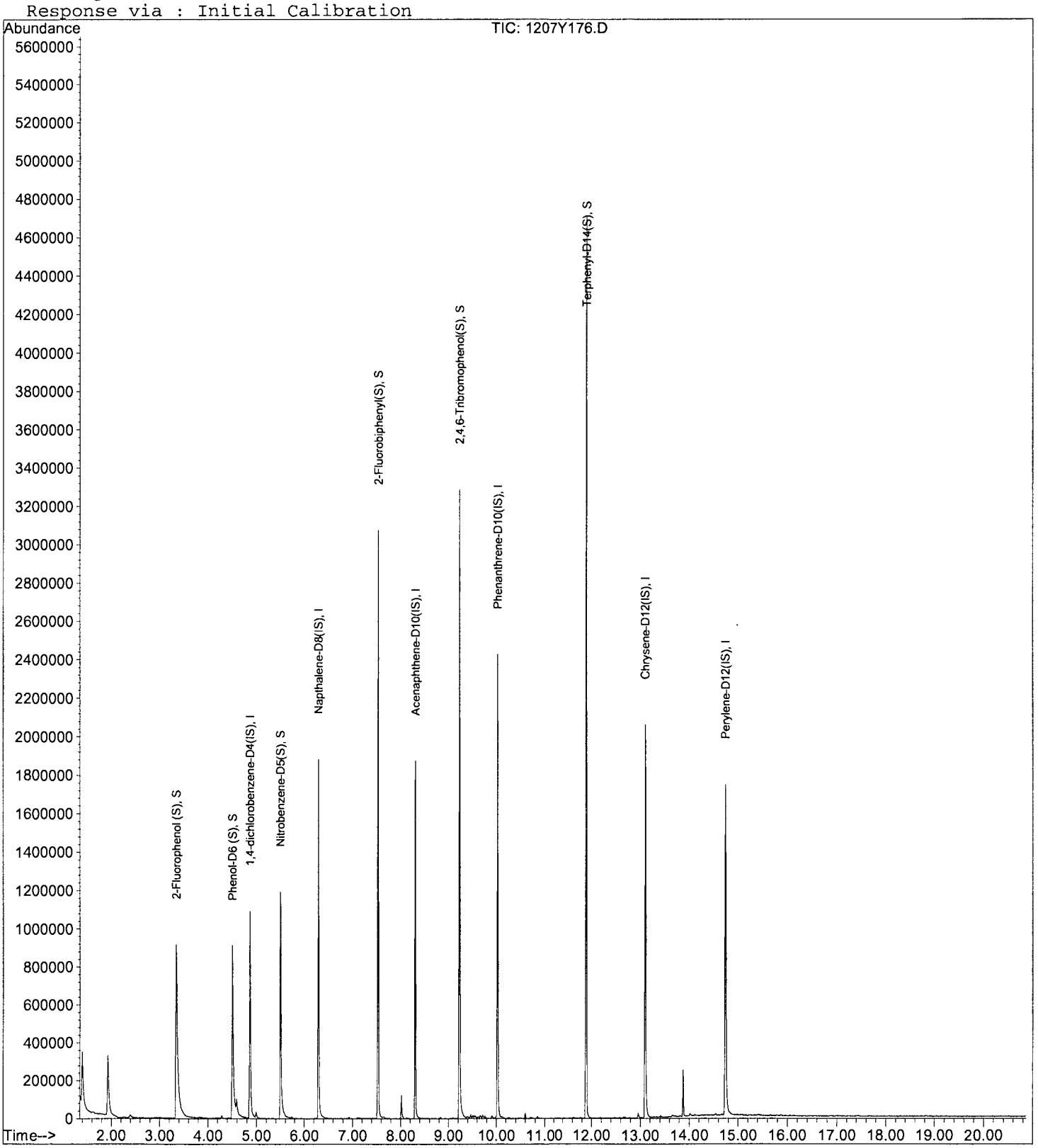
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y176.D Vial: 76
Acq On : 21 Dec 16 13:05 Operator: MA
Sample : AZ47495W12 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Dec 21 13:32 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH143

Sample Collection Date: 12/13/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81760

APPL ID: AZ47496

QCG: #87DC5-161219A-214871

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	12/19/16	12/21/16
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	70.8	43-140			%	12/19/16	12/21/16
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	61.8	44-119			%	12/19/16	12/21/16
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	50.0	19-119			%	12/19/16	12/21/16
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	64.7	44-120			%	12/19/16	12/21/16
EPA 8270D	SURROGATE: PHENOL-D6 (S)	35.2	10-115			%	12/19/16	12/21/16
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	70.1	50-134			%	12/19/16	12/21/16

Quant Method: Y1207.M
Run #: 1207Y177
Instrument: Yoda
Sequence: Y161207
Dilution Factor: 1
Initials: MA

Printed: 12/21/16 3:36:49 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y177.D Vial: 77
Acq On : 21 Dec 16 13:35 Operator: MA
Sample : AZ47496W13 1/900 Inst : Yoda
Misc : water Multiplr: 1.11

Quant Time: Dec 21 13:51 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	212147	40.00000	ppb	0.00
20) Napthalene-D8(IS)	6.29	136	907184	40.00000	ppb	0.00
40) Acenaphthene-D10(IS)	8.30	164	525473	40.00000	ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	973808	40.00000	ppb	0.00
78) Chrysene-D12(IS)	13.10	240	964828	40.00000	ppb	0.00
88) Perylene-D12(IS)	14.74	264	979733	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.34	112	697560	111.05987	ppb	0.00
Spiked Amount 222.222			Recovery = 49.977%			
5) Phenol-D6 (S)	4.50	99	648862	78.27116	ppb	0.00
Spiked Amount 222.222			Recovery = 35.222%			
21) Nitrobenzene-D5(S)	5.50	82	594690	71.85630	ppb	0.00
Spiked Amount 111.111			Recovery = 64.670%			
45) 2-Fluorobiphenyl(S)	7.54	172	1023184	68.63003	ppb	0.00
Spiked Amount 111.111			Recovery = 61.767%			
63) 2,4,6-Tribromophenol(S)	9.23	330	373016	157.30698	ppb	0.00
Spiked Amount 222.222			Recovery = 70.788%			
81) Terphenyl-D14(S)	11.88	244	1528543	77.84686	ppb	0.00
Spiked Amount 111.111			Recovery = 70.062%			

Target Compounds	Qvalue

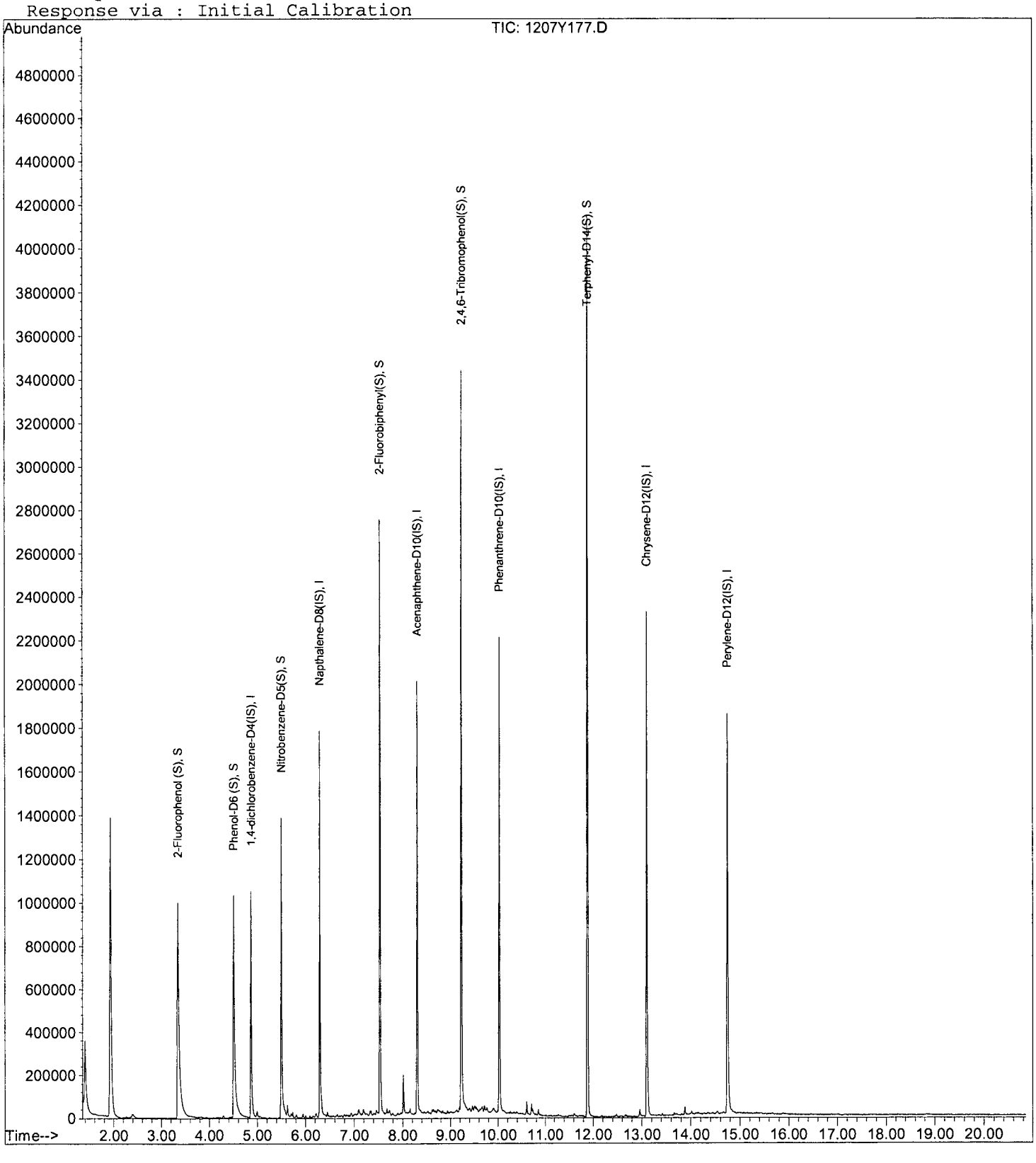
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y177.D Vial: 77
Acq On : 21 Dec 16 13:35 Operator: MA
Sample : AZ47496W13 1/900 Inst : Yoda
Misc : water Multiplr: 1.11

Quant Time: Dec 21 13:51 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81760

Sample ID: ERH145

APPL ID: AZ47497

Sample Collection Date: 12/13/16

QCG: #87DC5-161219A-214871

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	12/19/16	12/21/16
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	55.0	43-140			%	12/19/16	12/21/16
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	50.0	44-119			%	12/19/16	12/21/16
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	36.0	19-119			%	12/19/16	12/21/16
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	51.4	44-120			%	12/19/16	12/21/16
EPA 8270D	SURROGATE: PHENOL-D6 (S)	24.1	10-115			%	12/19/16	12/21/16
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	53.6	50-134			%	12/19/16	12/21/16

Quant Method: Y1207.M
Run #: 1207Y180
Instrument: Yoda
Sequence: Y161207
Dilution Factor: 1
Initials: MA

Printed: 12/21/16 3:36:49 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y180.D Vial: 80
Acq On : 21 Dec 16 15:05 Operator: MA
Sample : AZ47497W10 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Dec 21 15:24 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	274386	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.29	136	1170800	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.30	164	671792	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	1234807	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.10	240	1265999	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.74	264	1042904	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.34	112	650155	67.31726 ppb	0.00
Spiked Amount 186.916			Recovery =	36.015%	
5) Phenol-D6 (S)	4.50	99	573943	45.02483 ppb	0.00
Spiked Amount 186.916			Recovery =	24.088%	
21) Nitrobenzene-D5(S)	5.50	82	609948	48.03288 ppb	0.00
Spiked Amount 93.458			Recovery =	51.395%	
45) 2-Fluorobiphenyl(S)	7.54	172	1057840	46.68259 ppb	0.00
Spiked Amount 93.458			Recovery =	49.951%	
63) 2,4,6-Tribromophenol(S)	9.23	330	370186	102.71055 ppb	0.00
Spiked Amount 186.916			Recovery =	54.950%	
81) Terphenyl-D14(S)	11.89	244	1533014	50.04781 ppb	0.00
Spiked Amount 93.458			Recovery =	53.551%	

Target Compounds Qvalue

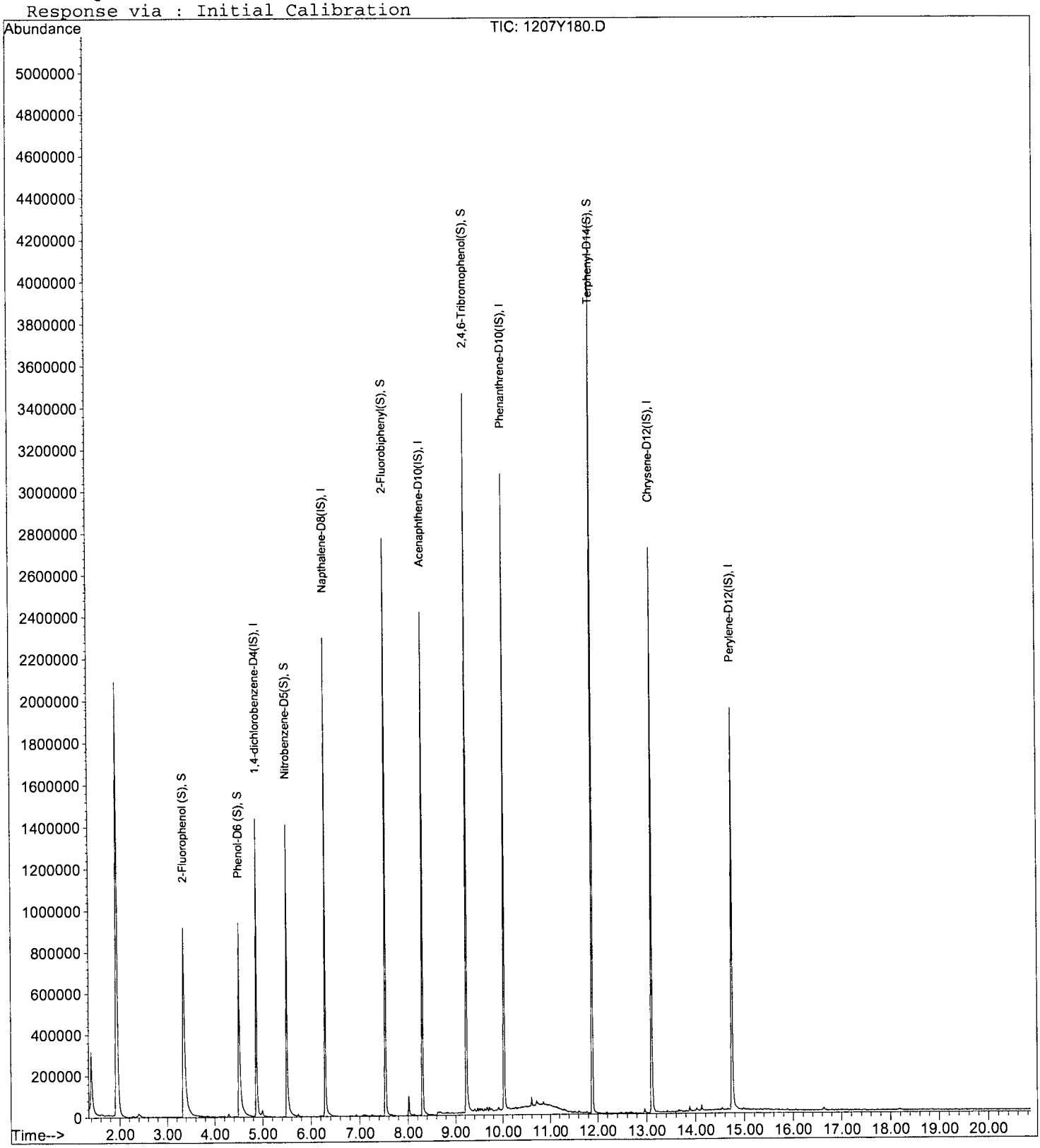
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y180.D Vial: 80
Acq On : 21 Dec 16 15:05 Operator: MA
Sample : AZ47497W10 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Dec 21 15:24 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81760

Sample ID: ERH146

APPL ID: AZ47498

Sample Collection Date: 12/12/16

QCG: #87DC5-161219A-214871

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	1.1 J	5.0	4.00	1.00	ug/L	12/19/16	12/21/16
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	75.1	43-140			%	12/19/16	12/21/16
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	69.7	44-119			%	12/19/16	12/21/16
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	48.5	19-119			%	12/19/16	12/21/16
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	69.7	44-120			%	12/19/16	12/21/16
EPA 8270D	SURROGATE: PHENOL-D6 (S)	32.6	10-115			%	12/19/16	12/21/16
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	72.6	50-134			%	12/19/16	12/21/16

J = Estimated value.

Quant Method: Y1207.M
Run #: 1207Y179
Instrument: Yoda
Sequence: Y161207
Dilution Factor: 1
Initials: MA

Printed: 12/21/16 3:36:49 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y179.D Vial: 79
Acq On : 21 Dec 16 14:35 Operator: MA
Sample : AZ47498W14 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Dec 21 15:03 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	209742	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.29	136	914949	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	515619	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	973647	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.10	240	971083	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.74	264	965148	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.34	112	669098	90.63079 ppb	0.00
Spiked Amount 186.916			Recovery = 48.488%		
5) Phenol-D6 (S)	4.50	99	593372	60.89574 ppb	0.00
Spiked Amount 186.916			Recovery = 32.579%		
21) Nitrobenzene-D5(S)	5.49	82	646073	65.10484 ppb	0.00
Spiked Amount 93.458			Recovery = 69.662%		
45) 2-Fluorobiphenyl(S)	7.54	172	1132320	65.10436 ppb	0.00
Spiked Amount 93.458			Recovery = 69.661%		
63) 2,4,6-Tribromophenol(S)	9.23	330	388200	140.33194 ppb	0.00
Spiked Amount 186.916			Recovery = 75.078%		
81) Terphenyl-D14(S)	11.89	244	1593639	67.82751 ppb	0.00
Spiked Amount 93.458			Recovery = 72.576%		
Target Compounds					Qvalue
6) Phenol	4.52	94	11725	1.05871 ppb #	18
7) Aniline	4.50	66	39929	3.80949 ppb #	20
49) Dimethyl phthalate	8.02	163	32724	1.70511 ppb	98
50) 2,6-DNT	8.30	165	65520	15.12197 ppb #	22
66) Diphenyl amine	9.23	169	17246	1.16042 ppb #	49
67) n-Nitrosodiphenylamine	9.23	169	17246	1.16042 ppb #	49

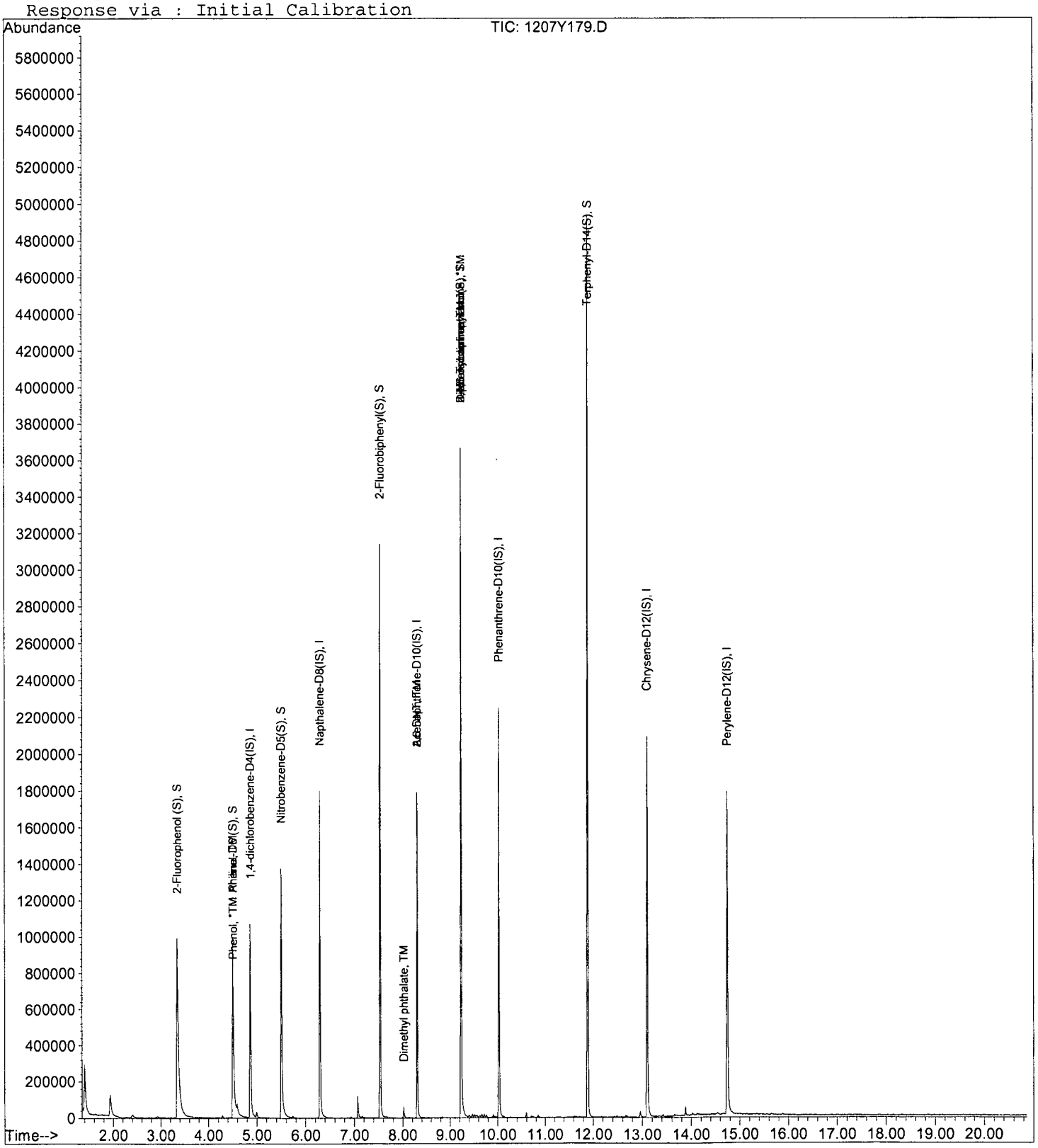
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y179.D Vial: 79
Acq On : 21 Dec 16 14:35 Operator: MA
Sample : AZ47498W14 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Dec 21 15:03 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



ORGANICS

Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/07/16
Matrix: Instrument: Yoda
Initials:

		Compound	1207Y004.D 5	1207Y005.D 10	1207Y006.D 20	1207Y007 D 40	1207Y008.D 50	1207Y009.D 60	1207Y010.D 80	1207Y011.D 100			Avg	%RSD		
1	I	1,4-dichlorobenzene-D4(IS)														
2	TM	n-Nitrosodimethylamine	0.7148	0.8188	0.8173	0.8076	0.8521	0.7243	0.8231	0.7956			0.79	6.2	TM	
3	TM	Pyridine	1.581	1.725	1.660	1.936	2.046	1.751	1.878	1.777			1.8	8.5	TM	
4	S	2-Fluorophenol (S)	1.066	1.299	1.267	1.425	1.424	1.318	1.385	1.343			1.3	8.8	S	
5	S	Phenol-D6 (S)	1.822	1.785	1.823	1.762	1.706	1.655	1.706	1.635			1.7	4.2	S	
6	*TM	Phenol	1.948	1.915	2.075	2.002	1.967	1.942	2.023	1.918			2.0	2.8	*TM	
7	TM	Aniline	1.776	1.833	1.896	1.887	1.869	1.829	1.983	1.872			1.9	3.2	TM	
8	TM	Bis (2-chloroethyl) ether	0.8418	0.7909	0.9135	0.8982	0.8478	0.8563	0.9089	0.8610			0.86	4.7	TM	
9	TM	2-Chlorophenol	1.635	1.632	1.616	1.577	1.518	1.543	1.572	1.517			1.6	3.1	TM	
10	TM	1,3-DCB	1.660	1.666	1.674	1.664	1.624	1.596	1.569	1.586			1.6	2.6	TM	
11	*TM	1,4-DCB	1.785	1.781	1.664	1.660	1.668	1.607	1.666	1.605			1.7	4.1	*TM	
12	TM	Benzyl alcohol	0.7838	0.8402	0.9167	0.8614	0.9167	0.8803	0.8909	0.8835			0.87	5.0	TM	
13	TM	1,2-DCB	1.611	1.557	1.581	1.484	1.593	1.492	1.515	1.463			1.5	3.6	TM	
14	TM	2-Methylphenol	1.082	1.139	1.181	1.118	1.137	1.110	1.083	1.109			1.1	2.9	TM	
15	TM	Bis (2-chloroisopropyl) ether	1.873	1.751	1.831	1.685	1.738	1.688	1.621	1.595			1.7	5.6	TM	
16	TM	Acetophenone	2.043	2.072	2.030	2.015	2.091	2.047	2.025	2.028			2.0	1.3	TM	
17	TM	3&4-Methylphenol	1.558	1.530	1.459	1.440	1.525	1.448	1.459	1.455			1.5	3.1	TM	
18	**TM	n-Nitrosodi-n-propylamine	1.068	1.045	1.056	1.027	1.076	1.038	1.050	1.060			1.1	1.5	**TM	
19	TM	Hexachloroethane	0.6682	0.7054	0.6470	0.6617	0.6824	0.6779	0.6684	0.6594			0.67	2.6	TM	
20	I	Napthalene-D8(IS)														
21	S	Nitrobenzene-D5(S)	0.4047	0.4332	0.3921	0.4003	0.4125	0.3872	0.3742	0.4394			0.41	5.5	S	
22	TM	Nitrobenzene	0.4054	0.4067	0.3889	0.4048	0.4175	0.3984	0.3936	0.4509			0.41	4.7	TM	
23	TM	Isophorone	0.6691	0.6862	0.6315	0.6698	0.6921	0.6667	0.6337	0.7606			0.68	6.0	TM	
24	*TM	2-Nitrophenol	0.1845	0.1935	0.1942	0.2063	0.2096	0.2079	0.2003	0.2337			0.20	7.3	*TM	
25	TM	2,4-Dimethylphenol	0.3139	0.3382	0.3012	0.3156	0.3171	0.3192	0.3290	0.3503			0.32	4.8	TM	
26	TML	Benzoic acid	0.0808	0.1551	0.2077	0.2553	0.2737	0.2314	0.2577	0.2655			0.22	31	TML	0.997
27	TM	Bis (2-chloroethoxy) methane	0.3810	0.3848	0.3681	0.3830	0.3880	0.3802	0.3949	0.4047			0.39	2.8	TM	
28	*TM	2,4-Dichlorophenol	0.2878	0.3066	0.3011	0.3098	0.3185	0.3087	0.3182	0.3126			0.31	3.2	*TM	
29	TM	1,2,4-Trichlorobenzene	0.3408	0.3409	0.3112	0.3403	0.3441	0.3301	0.3350	0.3367			0.33	3.1	TM	
30	TM	3,4-Dimethylphenol	0.5455	0.4964	0.4910	0.4802	0.5023	0.4740	0.4772	0.4907			0.49	4.6	TM	
31	TM	Naphthalene	1.044	1.055	1.078	1.053	1.069	1.024	1.025	1.045			1.0	1.8	TM	
32	TM	4-Chloroaniline	0.3632	0.4265	0.4327	0.4002	0.3874	0.3691	0.3641	0.3626			0.39	7.4	TM	
33	TM	2,6-Dichlorophenol	0.3045	0.3311	0.3196	0.2860	0.2901	0.2795	0.2735	0.2922			0.30	6.7	TM	
34	TM	Hexachloropropene	0.2445	0.2667	0.2704	0.2771	0.2732	0.2621	0.2668	0.2819			0.27	4.2	TM	
35	*TM	Hexachlorobutadiene	0.2289	0.2214	0.2210	0.2112	0.2149	0.2010	0.1986	0.2098			0.21	4.9	*TM	

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Initial Cal. Date: 12/07/16
Instrument: Yoda

Initials:

		Compound	5	10	20	40	50	60	80	100			Avg	%RSD		
36	TM	Caprolactum	0.1439	0.1548	0.1512	0.1546	0.1563	0.1592	0.1531	0.1616			0.15	3.5	TM	
37	*TM	4-Chloro-3-methylphenol	0.3364	0.3339	0.3371	0.3445	0.3342	0.3451	0.3311	0.3589			0.34	2.7	*TM	
38	TM	2-Methylnaphthalene	0.7065	0.6994	0.6918	0.6907	0.6745	0.6786	0.6440	0.6992			0.69	2.9	TM	
39	TM	1-Methylnaphthalene	0.7218	0.7325	0.6455	0.6679	0.6461	0.6599	0.6404	0.6966			0.68	5.3	TM	
40	I	Acenaphthene-D10(IS)														
41	**TMQ	Hexachlorocyclopentadiene	0.0352	0.0821	0.1454	0.1986	0.2357	0.2346	0.2693	0.2817			0.19	48	**TMQ	0.999
42	TM	1,2,4,5-Tetrachlorobenzene	0.5396	0.5929	0.5621	0.5192	0.5592	0.5294	0.5151	0.5315			0.54	4.8	TM	
43	*TM	2,4,6-Trichlorophenol	0.3344	0.3592	0.3491	0.3486	0.3682	0.3537	0.3343	0.3590			0.35	3.4	*TM	
44	TM	2,4,5-Trichlorophenol	0.3919	0.4003	0.4163	0.3688	0.3812	0.3816	0.3456	0.3771			0.38	5.5	TM	
45	S	2-Fluorobiphenyl(S)	1.278	1.499	1.336	1.200	1.255	1.168	1.148	1.204			1.3	9.0	S	
46	TM	1,1'-Biphenyl	1.579	1.616	1.598	1.463	1.490	1.434	1.358	1.453			1.5	6.1	TM	
47	TM	2-Chloronaphthalene	1.172	1.197	1.217	1.145	1.225	1.131	1.043	1.138			1.2	5.1	TM	
48	TM	2-Nitroaniline	0.3683	0.3867	0.3740	0.4057	0.4480	0.3960	0.3888	0.4178			0.40	6.5	TM	
49	TM	Dimethyl phthalate	1.403	1.430	1.345	1.384	1.539	1.344	1.277	1.410			1.4	5.5	TM	
50	TM	2,6-DNT	0.2902	0.3118	0.2967	0.3089	0.3396	0.3115	0.2967	0.3576			0.31	7.4	TM	
51	TM	Acenaphthylene	1.893	2.056	1.776	1.750	1.868	1.798	1.649	1.814			1.8	6.5	TM	
52	TM	3-Nitroaniline	0.3015	0.3535	0.3595	0.3549	0.3535	0.3405	0.3322	0.3482			0.34	5.5	TM	
53	*TM	Acenaphthene	1.206	1.354	1.171	1.111	1.135	1.077	1.054	1.138			1.2	8.1	*TM	
54	**TMQ	2,4-Dinitrophenol		0.0853	0.1314	0.1627	0.1649	0.1601	0.2070	0.2035			0.16	26	**TMQ	0.996
55	**TML	4-Nitrophenol	0.0179	0.2323	0.2452	0.2706	0.3006	0.2760	0.2907	0.3183			0.24	39	**TML	0.997
56	TM	Dibenzofuran	1.728	1.704	1.645	1.541	1.704	1.568	1.548	1.676			1.6	4.6	TM	
57	TM	2,4-DNT	0.3927	0.4369	0.4320	0.4428	0.4994	0.4500	0.4285	0.4667			0.44	7.0	TM	
58	TM	2,3,4,6-Tetrachlorophenol	0.2780	0.2939	0.2952	0.3210	0.3494	0.3145	0.2996	0.3397			0.31	7.8	TM	
59	TM	Diethyl phthalate	1.443	1.475	1.388	1.441	1.458	1.389	1.333	1.529			1.4	4.2	TM	
60	TM	4-Chlorophenyl phenyl ether	0.6635	0.6948	0.6104	0.6191	0.6447	0.5999	0.5965	0.6860			0.64	6.1	TM	
61	TM	Fluorene	1.411	1.429	1.285	1.274	1.358	1.224	1.221	1.393			1.3	6.3	TM	
62	TM	4-Nitroaniline	0.3060	0.3370	0.3011	0.3170	0.3477	0.3210	0.3358	0.3338			0.32	5.0	TM	
63	S	2,4,6-Tribromophenol(S)	0.1946	0.2125	0.1908	0.1921	0.2053	0.1876	0.1977	0.2239			0.20	6.2	S	
64	I	Phenanthrene-D10(IS)														
65	TM	4,6-Dinitro-2-methylphenol		0.1149	0.1515	0.1421	0.1500	0.1692	0.1636	0.1489			0.15	12	TM	
66	TM	Diphenyl amine	0.6122	0.5551	0.6348	0.5246	0.5612	0.5921	0.5417	0.5432			0.57	6.7	TM	
67	*TM	n-Nitrosodiphenylamine	0.6122	0.5551	0.6348	0.5246	0.5612	0.5921	0.5417	0.5432			0.57	6.7	*TM	
68	TM	1,2-Diphenylhydrazine	0.7947	0.7385	0.8154	0.7273	0.7623	0.9632	0.8905	0.8768			0.82	10	TM	
69	TM	4-Bromophenyl phenyl ether	0.2256	0.2010	0.2098	0.2179	0.1993	0.2279	0.1871	0.1888			0.21	7.6	TM	
70	TM	Hexachlorobenzene	0.2229	0.2118	0.2232	0.2136	0.2018	0.2342	0.2007	0.1953			0.21	6.3	TM	

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Initial Cal. Date: 12/07/16
Instrument: Yoda

Initials:

		Compound	5	10	20	40	50	60	80	100			Avg	%RSD		
71	TM	Atrazine	0.2136	0.1976	0.2108	0.2007	0.2168	0.2165	0.1968	0.1967			0.21	4.4	TM	
72	*TML	Pentachlorophenol		0.0652	0.0888	0.0985	0.0970	0.0990	0.1107	0.1114			0.10	16	*TML	0.998
73	TM	Phenanthrene	1.144	1.128	1.146	1.069	1.069	1.062	1.009	1.014			1.1	5.0	TM	
74	TM	Anthracene	1.227	1.144	1.172	1.109	1.085	1.077	1.032	1.040			1.1	6.0	TM	
75	TM	Carbazol	1.068	1.073	1.153	0.9493	1.043	0.9621	0.9114	0.8832			1.0	9.2	TM	
76	TM	Di-n-butylphthalate	1.394	1.275	1.537	1.286	1.230	1.259	1.180	1.174			1.3	9.3	TM	
77	*TM	Fluoranthene	1.281	1.183	1.301	1.152	1.091	1.169	1.169	1.164			1.2	5.8	*TM	
78	I	Chrysene-D12(IS)														
79	TM	Benzidine	0.3957	0.4105	0.4699	0.4668	0.4739	0.4589	0.4621	0.4870			0.45	7.1	TM	
80	TM	Pyrene	1.421	1.287	1.412	1.333	1.431	1.352	1.245	1.372			1.4	4.9	TM	
81	S	Terphenyl-D14(S)	0.9641	0.9527	1.005	0.8842	0.8995	0.8347	0.8470	0.8492			0.90	6.9	S	
82	TM	Butyl benzylphthalate	0.6615	0.6073	0.6728	0.6922	0.6888	0.6250	0.6287	0.6373			0.65	4.8	TM	
83	TM	3,3'-Dichlorobenzidine	0.3845	0.4505	0.4988	0.4470	0.4416	0.4002	0.3899	0.4057			0.43	9.1	TM	
84	TM	Benz (a) anthracene	1.241	1.281	1.288	1.263	1.262	1.195	1.209	1.251			1.2	2.6	TM	
85	TM	Bis (2-ethylhexyl) phthalate	0.9437	0.8855	0.9320	0.8960	0.9347	0.9382	0.8781	0.9008			0.91	2.9	TM	
86	TM	Chrysene	1.291	1.177	1.223	1.163	1.206	1.256	1.142	1.247			1.2	4.2	TM	
87	*TM	Di-n-octylphthalate	1.601	1.536	1.745	1.580	1.838	1.525	1.513	1.572			1.6	7.2	*TM	
88	I	Perylene-D12(IS)														
89	TM	Benzo (b) fluoranthene	1.137	1.363	1.356	1.287	1.201	1.033	1.428	1.200			1.3	11	TM	
90	TM	Benzo (k) fluoranthene	1.302	1.071	1.186	1.172	1.214	1.184	1.211	1.174			1.2	5.4	TM	
91	*TM	Benzo (a) pyrene	1.164	1.037	1.248	1.228	1.224	1.129	1.192	1.122			1.2	6.0	*TM	
92	TM	Indeno (1,2,3-cd) pyrene	1.367	1.331	1.391	1.324	1.346	1.095	1.395	1.099			1.3	9.6	TM	
93	TM	Dibenz (a,h) anthracene	1.172	1.113	1.158	1.132	1.148	0.9093	1.186	0.9080			1.1	11	TM	
94	TM	Benzo (g,h,i) perylene	1.161	1.064	1.406	1.271	1.253	0.8838	1.091				1.2	15	TM	
95																
96																
97																
98																
99																
100																
101																
102																
103																
104																
105																

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y004.D Vial: 4
Acq On : 7 Dec 16 10:01 Operator: MA
Sample : 5ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	195458	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.29	136	827060	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.30	164	490768	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.03	188	877101	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.10	240	839105	40.00000 ppb		0.00
88) Perylene-D12(IS)	14.74	264	900919	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.38	112	52072	8.41676 ppb		0.03
Spiked Amount 200.000			Recovery	= 4.209%		
5) Phenol-D6 (S)	4.51	99	89036	10.40389 ppb		0.00
Spiked Amount 200.000			Recovery	= 5.202%		
21) Nitrobenzene-D5(S)	5.51	82	41840	4.84860 ppb		0.00
Spiked Amount 100.000			Recovery	= 4.849%		
45) 2-Fluorobiphenyl(S)	7.54	172	78403	5.03098 ppb		0.00
Spiked Amount 100.000			Recovery	= 5.031%		
63) 2,4,6-Tribromophenol(S)	9.23	330	23872	9.90525 ppb		0.00
Spiked Amount 200.000			Recovery	= 4.953%		
81) Terphenyl-D14(S)	11.88	244	101120	5.31648 ppb		0.00
Spiked Amount 100.000			Recovery	= 5.316%		
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.77	42	17464	3.81097 ppb		99
3) Pyridine	1.79	79	38617	3.94469 ppb		99
6) Phenol	4.53	94	47601	4.90399 ppb		95
7) Aniline	4.53	66	43393	4.54015 ppb		90
8) Bis (2-chloroethyl) ether	4.60	63	20566	4.71391 ppb		92
9) 2-Chlorophenol	4.65	128	39939	5.30721 ppb		95
10) 1,3-DCB	4.80	146	40566	4.97403 ppb		98
11) 1,4-DCB	4.88	146	43609	5.21809 ppb		96
12) Benzyl alcohol	5.07	108	19149	4.54883 ppb		90
13) 1,2-DCB	5.06	146	39360	5.05389 ppb		97
14) 2-Methylphenol	5.20	107	26445	4.63400 ppb		97
15) Bis (2-chloroisopropyl) et	5.18	45	45768	5.23802 ppb	#	53
16) Acetophenone	5.34	105	49921	4.69337 ppb		98
17) 3&4-Methylphenol	5.38	107	76111	10.08177 ppb		91
18) n-Nitrosodi-n-propylamine	5.33	70	26103	4.73122 ppb		90
19) Hexachloroethane	5.42	117	16326	4.71012 ppb	#	68
22) Nitrobenzene	5.53	77	41914	4.74777 ppb		98
23) Isophorone	5.78	82	69169	4.75245 ppb		93
24) 2-Nitrophenol	5.90	139	19072	4.53756 ppb		95
25) 2,4-Dimethylphenol	5.95	122	32456	4.95367 ppb		91
26) Benzoic acid	6.13	105	8358	6.59749 ppb		89
27) Bis (2-chloroethoxy) metha	6.04	93	39384	5.06082 ppb		97
28) 2,4-Dichlorophenol	6.19	162	29754	4.71459 ppb		94
29) 1,2,4-Trichlorobenzene	6.24	180	35230	5.05372 ppb		98
30) 3,4-Dimethylphenol	6.29	107	56394	5.39745 ppb		81
31) Naphthalene	6.31	128	107955	4.95797 ppb		100
32) 4-Chloroaniline	6.42	127	37545	4.85948 ppb		96
33) 2,6-Dichlorophenol	6.42	162	31478	5.16618 ppb		97
34) Hexachloropropene	6.42	213	25276	4.55752 ppb		98
35) Hexachlorobutadiene	6.46	225	23664	5.32227 ppb		92
36) Caprolactum	6.79	55	14872	4.52289 ppb		92
37) 4-Chloro-3-methylphenol	6.99	107	34775	4.82802 ppb		87

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y004.D
Acq On : 7 Dec 16 10:01
Sample : 5ug/ml SVOC 12/06/16
Misc :

Vial: 4
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38) 2-Methylnaphthalene	7.11	142	73035	5.02428	ppb		98
39) 1-Methylnaphthalene	7.22	142	74622	5.35196	ppb		98
41) Hexachlorocyclopentadiene	7.29	237	2162	7.14608	ppb	#	91
42) 1,2,4,5-Tetrachlorobenzene	7.31	216	33104	4.95861	ppb		93
43) 2,4,6-Trichlorophenol	7.46	196	20513	4.63043	ppb		92
44) 2,4,5-Trichlorophenol	7.53	196	24042	5.12505	ppb		88
46) 1,1'-Biphenyl	7.65	154	96876	5.20831	ppb		97
47) 2-Chloronaphthalene	7.67	162	71906	4.90703	ppb		97
48) 2-Nitroaniline	7.82	65	22595	4.34279	ppb		78
49) Dimethyl phthalate	8.01	163	86082	4.79845	ppb		99
50) 2,6-DNT	8.10	165	17800	4.45834	ppb		80
51) Acenaphthylene	8.14	152	116157	5.09910	ppb		99
52) 3-Nitroaniline	8.31	138	18493	4.47392	ppb	#	34
53) Acenaphthene	8.34	154	74001	5.30414	ppb		97
54) 2,4-Dinitrophenol	8.51	184	1898	8.26475	ppb	#	71
55) 4-Nitrophenol	8.54	65	1096	7.02827	ppb	#	38
56) Dibenzofuran	8.54	168	105976	5.20957	ppb		89
57) 2,4-DNT	8.58	165	24091	4.26865	ppb		83
58) 2,3,4,6-Tetrachlorophenol	8.72	232	17055	4.67205	ppb		95
59) Diethyl phthalate	8.83	149	88512	4.85963	ppb		98
60) 4-Chlorophenyl phenyl ethe	8.95	204	40703	4.91663	ppb	#	76
61) Fluorene	8.94	166	86563	5.16554	ppb		96
62) 4-Nitroaniline	9.01	138	18769	4.76703	ppb		93
65) 4,6-Dinitro-2-methylphenol	9.05	198	8901	2.88665	ppb	#	85
66) Diphenyl amine	9.09	169	134244	11.16496	ppb		99
67) n-Nitrosodiphenylamine	9.09	169	134244	11.16496	ppb		99
68) 1,2-Diphenylhydrazine	9.13	77	87129	4.57707	ppb		99
69) 4-Bromophenyl phenyl ether	9.52	248	24730	5.36824	ppb	#	83
70) Hexachlorobenzene	9.59	284	24441	4.98065	ppb	#	74
71) Atrazine	9.72	200	11708	2.43094	ppb		95
72) Pentachlorophenol	9.84	266	6437	7.80595	ppb		92
73) Phenanthrene	10.05	178	125410	5.18209	ppb		98
74) Anthracene	10.12	178	134548	5.34573	ppb		98
75) Carbazol	10.32	167	117070	5.23894	ppb		99
76) Di-n-butylphthalate	10.72	149	152801	5.10773	ppb		100
77) Fluoranthene	11.44	202	140468	5.31106	ppb	#	97
79) Benzidine	11.62	184	41503	4.47439	ppb	#	89
80) Pyrene	11.70	202	149080	5.33068	ppb		99
82) Butyl benzylphthalate	12.46	149	69384	4.95412	ppb		100
83) 3,3'-Dichlorobenzidine	13.07	252	40328	4.68957	ppb	#	98
84) Benz (a) anthracene	13.09	228	130185	4.90624	ppb		99
85) Bis (2-ethylhexyl) phthala	13.13	149	98983	5.00821	ppb		99
86) Chrysene	13.14	228	135366	5.30692	ppb		94
87) Di-n-octylphthalate	13.84	149	167938	4.79507	ppb		99
89) Benzo (b) fluoranthene	14.29	252	127992	4.23678	ppb		95
90) Benzo (k) fluoranthene	14.32	252	146637	5.07643	ppb		97
91) Benzo (a) pyrene	14.68	252	131139	4.60945	ppb		94
92) Indeno (1,2,3-cd) pyrene	16.29	276	153935	4.75506	ppb	#	88
93) Dibenz (a,h) anthracene	16.31	278	131937	4.79035	ppb		96
94) Benzo (g,h,i) perylene	16.76	276	130754	4.77536	ppb		95

(#) = qualifier out of range (m) = manual integration

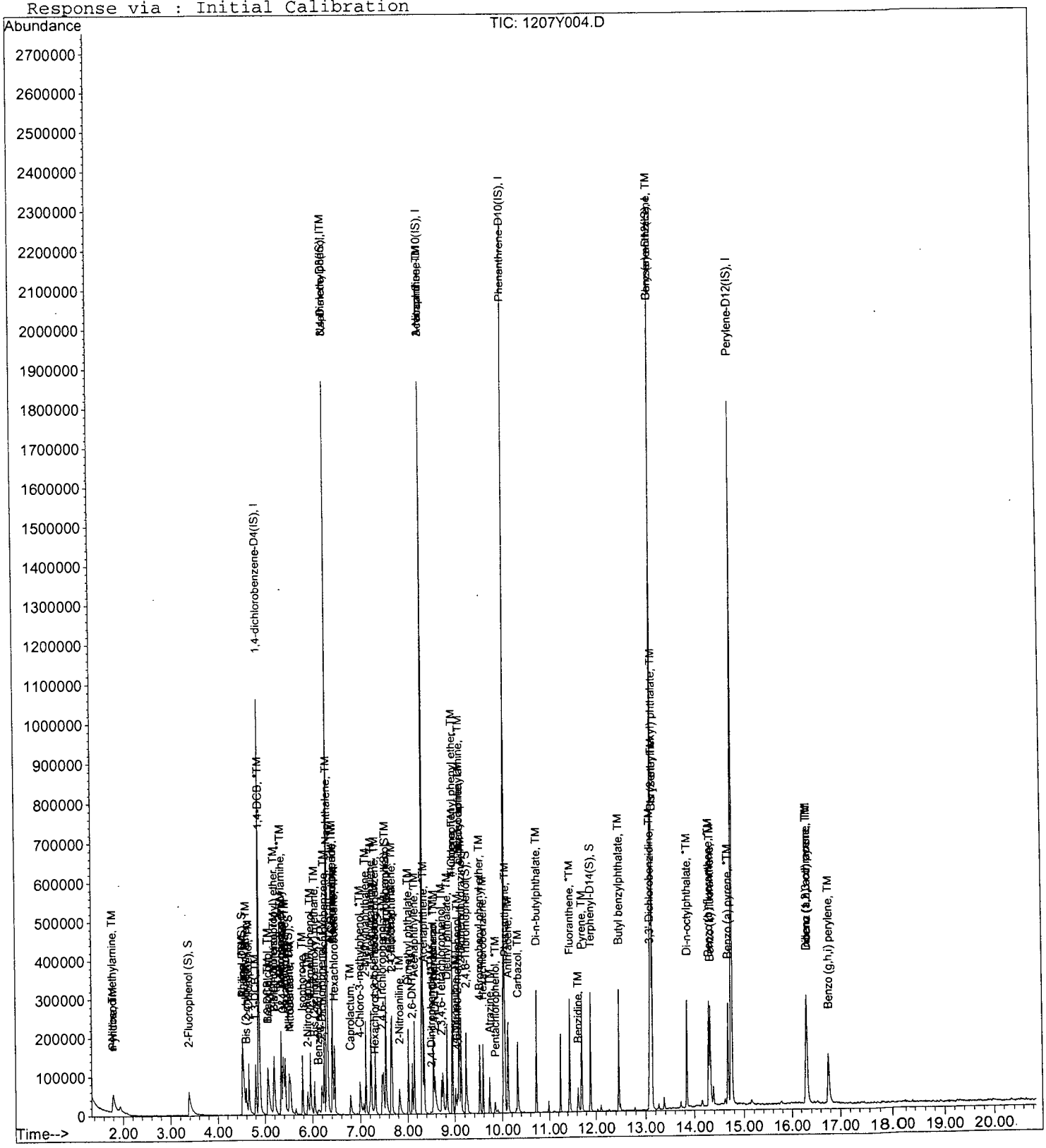
Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y004.D
Acq On : 7 Dec 16 10:01
Sample : 5ug/ml SVOC 12/06/16
Misc :

Vial: 4
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y005.D Vial: 5
Acq On : 7 Dec 16 10:32 Operator: MA
Sample : 10ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	199996	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.29	136	835678	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.31	164	491315	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.02	188	976841	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.11	240	927503	40.00000 ppb		0.00
88) Perylene-D12(IS)	14.75	264	990341	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.37	112	129921	20.52354 ppb		0.02
Spiked Amount 200.000			Recovery =	10.262%		
5) Phenol-D6 (S)	4.51	99	178462	20.38018 ppb		0.00
Spiked Amount 200.000			Recovery =	10.190%		
21) Nitrobenzene-D5(S)	5.50	82	90507	10.38019 ppb		0.00
Spiked Amount 100.000			Recovery =	10.380%		
45) 2-Fluorobiphenyl(S)	7.54	172	184156	11.80380 ppb		0.00
Spiked Amount 100.000			Recovery =	11.804%		
63) 2,4,6-Tribromophenol(S)	9.23	330	52209	21.63904 ppb		0.00
Spiked Amount 200.000			Recovery =	10.820%		
81) Terphenyl-D14(S)	11.89	244	220919	10.50802 ppb		0.00
Spiked Amount 100.000			Recovery =	10.508%		
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.76	42	40937	8.73052 ppb		87
3) Pyridine	1.78	79	86226	8.60805 ppb		94
6) Phenol	4.53	94	95766	9.64222 ppb		94
7) Aniline	4.52	66	91627	9.36928 ppb	#	79
8) Bis (2-chloroethyl) ether	4.59	63	39545	8.85840 ppb		97
9) 2-Chlorophenol	4.65	128	81615	10.59915 ppb		96
10) 1,3-DCB	4.80	146	83321	9.98465 ppb		99
11) 1,4-DCB	4.89	146	89069	10.41583 ppb		97
12) Benzyl alcohol	5.06	108	42008	9.75255 ppb		93
13) 1,2-DCB	5.06	146	77858	9.77026 ppb		96
14) 2-Methylphenol	5.20	107	56924	9.74855 ppb		92
15) Bis (2-chloroisopropyl) et	5.19	45	87550	9.79249 ppb		84
16) Acetophenone	5.33	105	103596	9.51867 ppb		98
17) 3&4-Methylphenol	5.36	107	152989	19.80531 ppb		96
18) n-Nitrosodi-n-propylamine	5.33	70	52236	9.25304 ppb		95
19) Hexachloroethane	5.42	117	35267	9.94382 ppb		92
22) Nitrobenzene	5.53	77	84968	9.52541 ppb		90
23) Isophorone	5.79	82	143360	9.74837 ppb		96
24) 2-Nitrophenol	5.89	139	40432	9.52028 ppb		93
25) 2,4-Dimethylphenol	5.95	122	70653	10.67236 ppb		94
26) Benzoic acid	6.11	105	32406	10.34814 ppb		90
27) Bis (2-chloroethoxy) metha	6.04	93	80395	10.22417 ppb		98
28) 2,4-Dichlorophenol	6.18	162	64057	10.04530 ppb		97
29) 1,2,4-Trichlorobenzene	6.24	180	71216	10.11054 ppb		95
30) 3,4-Dimethylphenol	6.29	107	103715	9.82416 ppb		98
31) Naphthalene	6.32	128	220486	10.02167 ppb		99
32) 4-Chloroaniline	6.40	127	89109	11.41451 ppb		99
33) 2,6-Dichlorophenol	6.41	162	69177	11.23627 ppb		98
34) Hexachloropropene	6.41	213	55717	9.94274 ppb		97
35) Hexachlorobutadiene	6.46	225	46253	10.29548 ppb		97
36) Caprolactum	6.79	55	32338	9.73326 ppb		96
37) 4-Chloro-3-methylphenol	6.99	107	69749	9.58380 ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y005.D Vial: 5
Acq On : 7 Dec 16 10:32 Operator: MA
Sample : 10ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.11	142	146114	9.94793	ppb		99
39)	1-Methylnaphthalene	7.22	142	153034	10.86256	ppb		99
41)	Hexachlorocyclopentadiene	7.28	237	10085	10.30509	ppb		83
42)	1,2,4,5-Tetrachlorobenzene	7.31	216	72826	10.89639	ppb		96
43)	2,4,6-Trichlorophenol	7.46	196	44123	9.94887	ppb		99
44)	2,4,5-Trichlorophenol	7.53	196	49164	10.46865	ppb		96
46)	1,1'-Biphenyl	7.65	154	198489	10.65941	ppb	#	96
47)	2-Chloronaphthalene	7.66	162	146978	10.01894	ppb		94
48)	2-Nitroaniline	7.81	65	47494	9.11824	ppb		90
49)	Dimethyl phthalate	8.02	163	175672	9.78154	ppb	#	97
50)	2,6-DNT	8.09	165	38304	9.58326	ppb	#	73
51)	Acenaphthylene	8.14	152	252596	11.07621	ppb		99
52)	3-Nitroaniline	8.30	138	43416	10.49172	ppb	#	91
53)	Acenaphthene	8.34	154	166258	11.90354	ppb		96
54)	2,4-Dinitrophenol	8.46	184	10475	11.87415	ppb	#	60
55)	4-Nitrophenol	8.57	65	28528	13.90485	ppb		75
56)	Dibenzofuran	8.55	168	209346	10.27958	ppb		88
57)	2,4-DNT	8.57	165	53666	9.49842	ppb		97
58)	2,3,4,6-Tetrachlorophenol	8.71	232	36099	9.87795	ppb		95
59)	Diethyl phthalate	8.83	149	181223	9.93873	ppb		99
60)	4-Chlorophenyl phenyl ethe	8.95	204	85344	10.29746	ppb		87
61)	Fluorene	8.95	166	175510	10.46168	ppb		97
62)	4-Nitroaniline	9.00	138	41396	10.50223	ppb		90
65)	4,6-Dinitro-2-methylphenol	9.05	198	28069	8.17351	ppb	#	74
66)	Diphenyl amine	9.09	169	271128	20.24708	ppb		99
67)	n-Nitrosodiphenylamine	9.09	169	271128	20.24708	ppb		99
68)	1,2-Diphenylhydrazine	9.13	77	180355	8.50705	ppb	#	91
69)	4-Bromophenyl phenyl ether	9.51	248	49097	9.56948	ppb		92
70)	Hexachlorobenzene	9.59	284	51734	9.46606	ppb		86
71)	Atrazine	9.73	200	24123	4.49726	ppb		94
72)	Pentachlorophenol	9.84	266	15917	12.48338	ppb		97
73)	Phenanthrene	10.05	178	275480	10.22088	ppb		98
74)	Anthracene	10.12	178	279374	9.96647	ppb		100
75)	Carbazol	10.32	167	261994	10.52724	ppb		98
76)	Di-n-butylphthalate	10.72	149	311416	9.34691	ppb		97
77)	Fluoranthene	11.43	202	289008	9.81159	ppb	#	97
79)	Benzidine	11.62	184	95179	9.28318	ppb		97
80)	Pyrene	11.69	202	298339	9.65105	ppb		98
82)	Butyl benzylphthalate	12.46	149	140818	9.09633	ppb		87
83)	3,3'-Dichlorobenzidine	13.07	252	104450	10.98842	ppb	#	93
84)	Benz (a) anthracene	13.09	228	297055	10.12805	ppb		97
85)	Bis (2-ethylhexyl) phthala	13.12	149	205324	9.39859	ppb	#	98
86)	Chrysene	13.13	228	272893	9.67890	ppb		99
87)	Di-n-octylphthalate	13.84	149	356276	9.20309	ppb	#	91
89)	Benzo (b) fluoranthene	14.28	252	337345	10.15848	ppb	#	97
90)	Benzo (k) fluoranthene	14.31	252	265091	8.34854	ppb		98
91)	Benzo (a) pyrene	14.67	252	256785	8.21085	ppb	#	97
92)	Indeno (1,2,3-cd) pyrene	16.30	276	329541	9.26038	ppb		96
93)	Dibenz (a,h) anthracene	16.31	278	275683	9.10566	ppb		98
94)	Benzo (g,h,i) perylene	16.74	276	263509	8.75484	ppb		98

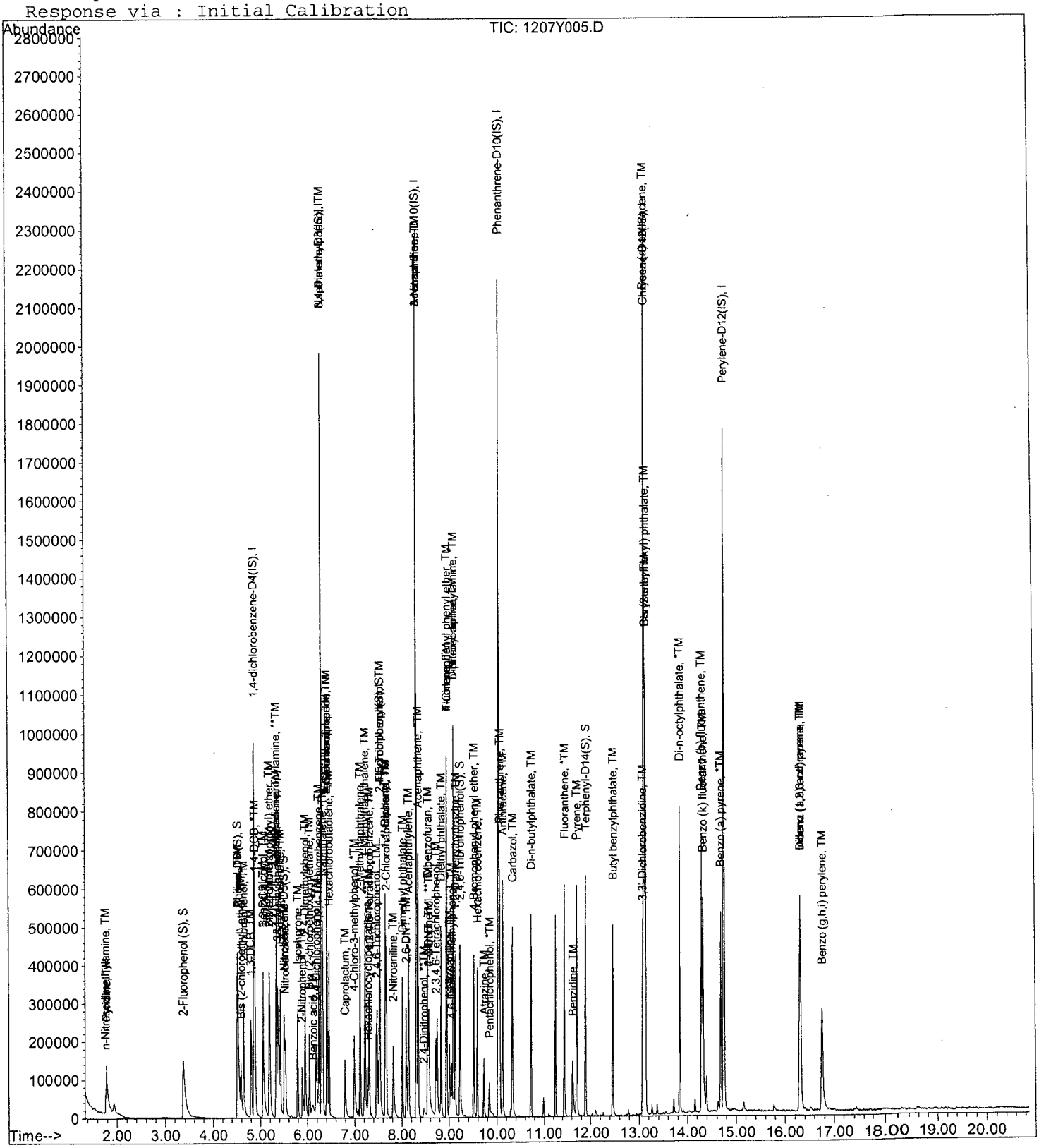
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y005.D Vial: 5
Acq On : 7 Dec 16 10:32 Operator: MA
Sample : 10ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y006.D Vial: 6
Acq On : 7 Dec 16 11:02 Operator: MA
Sample : 20ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	213922	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.30	136	877521	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	527221	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	919632	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.10	240	874733	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.75	264	909225	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.36	112	271002	40.02316 ppb	0.00
Spiked Amount 200.000			Recovery =	20.012%	
5) Phenol-D6 (S)	4.50	99	390048	41.64340 ppb	0.00
Spiked Amount 200.000			Recovery =	20.822%	
21) Nitrobenzene-D5(S)	5.50	82	172033	18.78955 ppb	0.00
Spiked Amount 100.000			Recovery =	18.790%	
45) 2-Fluorobiphenyl(S)	7.53	172	352090	21.03087 ppb	0.00
Spiked Amount 100.000			Recovery =	21.031%	
63) 2,4,6-Tribromophenol(S)	9.23	330	100581	38.84865 ppb	0.00
Spiked Amount 200.000			Recovery =	19.425%	
81) Terphenyl-D14(S)	11.89	244	439341	22.15795 ppb	0.00
Spiked Amount 100.000			Recovery =	22.158%	
Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.76	42	87421	17.43034 ppb	92
3) Pyridine	1.77	79	177528	16.56912 ppb	97
6) Phenol	4.52	94	221931	20.89054 ppb	96
7) Aniline	4.52	66	202813	19.38850 ppb	86
8) Bis (2-chloroethyl) ether	4.58	63	97711	20.46317 ppb	93
9) 2-Chlorophenol	4.65	128	172852	20.98656 ppb	99
10) 1,3-DCB	4.80	146	179050	20.05944 ppb	100
11) 1,4-DCB	4.89	146	178026	19.46331 ppb	97
12) Benzyl alcohol	5.06	108	98047	21.28071 ppb	97
13) 1,2-DCB	5.06	146	169067	19.83480 ppb	97
14) 2-Methylphenol	5.19	107	126350	20.22952 ppb	97
15) Bis (2-chloroisopropyl) et	5.19	45	195850	20.47984 ppb	93
16) Acetophenone	5.33	105	217146	18.65310 ppb	96
17) 3&4-Methylphenol	5.36	107	312061	37.76824 ppb	99
18) n-Nitrosodi-n-propylamine	5.33	70	112913	18.69926 ppb	99
19) Hexachloroethane	5.42	117	69201	18.24159 ppb	91
22) Nitrobenzene	5.52	77	170617	18.21513 ppb	98
23) Isophorone	5.79	82	277084	17.94308 ppb	99
24) 2-Nitrophenol	5.88	139	85225	19.11054 ppb	95
25) 2,4-Dimethylphenol	5.95	122	132147	19.00942 ppb	99
26) Benzoic acid	6.09	105	91123	19.04059 ppb	95
27) Bis (2-chloroethoxy) metha	6.04	93	161526	19.56243 ppb	97
28) 2,4-Dichlorophenol	6.17	162	132126	19.73177 ppb	98
29) 1,2,4-Trichlorobenzene	6.24	180	136552	18.46189 ppb	97
30) 3,4-Dimethylphenol	6.29	107	215414	19.43164 ppb	99
31) Naphthalene	6.32	128	472793	20.46500 ppb	100
32) 4-Chloroaniline	6.40	127	189841	23.15833 ppb	96
33) 2,6-Dichlorophenol	6.40	162	140216	21.68899 ppb	97
34) Hexachloropropene	6.41	213	118650	20.16357 ppb	99
35) Hexachlorobutadiene	6.46	225	96965	20.55433 ppb	96
36) Caprolactum	6.80	55	66358	19.02041 ppb	94
37) 4-Chloro-3-methylphenol	6.99	107	147903	19.35345 ppb	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y006.D Vial: 6
Acq On : 7 Dec 16 11:02 Operator: MA
Sample : 20ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	2-Methylnaphthalene	7.11	142	303522	19.67943 ppb		99
39)	1-Methylnaphthalene	7.22	142	283238	19.14597 ppb		99
41)	Hexachlorocyclopentadiene	7.29	237	38317	19.84270 ppb		95
42)	1,2,4,5-Tetrachlorobenzene	7.31	216	148167	20.65927 ppb		98
43)	2,4,6-Trichlorophenol	7.46	196	92029	19.33751 ppb		97
44)	2,4,5-Trichlorophenol	7.52	196	109748	21.77747 ppb		97
46)	1,1'-Biphenyl	7.65	154	421333	21.08577 ppb	#	98
47)	2-Chloronaphthalene	7.66	162	320827	20.38017 ppb		97
48)	2-Nitroaniline	7.81	65	98585	17.63805 ppb		95
49)	Dimethyl phthalate	8.02	163	354455	18.39218 ppb		99
50)	2,6-DNT	8.09	165	78220	18.23703 ppb	#	70
51)	Acenaphthylene	8.15	152	468200	19.13214 ppb		100
52)	3-Nitroaniline	8.29	138	94776	21.34336 ppb		82
53)	Acenaphthene	8.34	154	308667	20.59449 ppb		98
54)	2,4-Dinitrophenol	8.44	184	34650	21.05674 ppb		92
55)	4-Nitrophenol	8.55	65	64643	21.85482 ppb		87
56)	Dibenzofuran	8.55	168	433602	19.84127 ppb		95
57)	2,4-DNT	8.57	165	113885	18.78390 ppb	#	69
58)	2,3,4,6-Tetrachlorophenol	8.71	232	77826	19.84558 ppb		96
59)	Diethyl phthalate	8.83	149	365822	18.69626 ppb		94
60)	4-Chlorophenyl phenyl ethe	8.95	204	160915	18.09343 ppb		95
61)	Fluorene	8.95	166	338778	18.81837 ppb		100
62)	4-Nitroaniline	9.00	138	79383	18.76799 ppb		95
65)	4,6-Dinitro-2-methylphenol	9.05	198	69659	21.54609 ppb	#	85
66)	Diphenyl amine	9.09	169	583796	46.30830 ppb		100
67)	n-Nitrosodiphenylamine	9.09	169	583796	46.30830 ppb		100
68)	1,2-Diphenylhydrazine	9.13	77	374925	18.78473 ppb	#	91
69)	4-Bromophenyl phenyl ether	9.51	248	96477	19.97408 ppb		93
70)	Hexachlorobenzene	9.59	284	102637	19.94834 ppb		87
71)	Atrazine	9.73	200	48458	9.59604 ppb		94
72)	Pentachlorophenol	9.84	266	40851	26.44051 ppb		95
73)	Phenanthrene	10.05	178	526900	20.76520 ppb		98
74)	Anthracene	10.12	178	538899	20.42079 ppb		99
75)	Carbazol	10.32	167	530270	22.63237 ppb		97
76)	Di-n-butylphthalate	10.73	149	706599	22.52735 ppb		99
77)	Fluoranthene	11.43	202	598343	21.57691 ppb	#	97
79)	Benzidine	11.61	184	205525	21.25496 ppb		99
80)	Pyrene	11.69	202	617378	21.17657 ppb		99
82)	Butyl benzylphthalate	12.46	149	294257	20.15461 ppb		91
83)	3,3'-Dichlorobenzidine	13.07	252	218137	24.33302 ppb	#	95
84)	Benz (a) anthracene	13.09	228	563481	20.37081 ppb		100
85)	Bis (2-ethylhexyl) phthala	13.12	149	407629	19.78463 ppb	#	96
86)	Chrysene	13.13	228	535016	20.12056 ppb		99
87)	Di-n-octylphthalate	13.84	149	763144	20.90228 ppb	#	92
89)	Benzo (b) fluoranthene	14.28	252	616293	20.21412 ppb	#	98
90)	Benzo (k) fluoranthene	14.31	252	538976	18.48836 ppb		98
91)	Benzo (a) pyrene	14.67	252	567407	19.76179 ppb		98
92)	Indeno (1,2,3-cd) pyrene	16.29	276	632150	19.34875 ppb		97
93)	Dibenz (a,h) anthracene	16.31	278	526382	18.93720 ppb		98
94)	Benzo (g,h,i) perylene	16.74	276	639018	23.12486 ppb		97

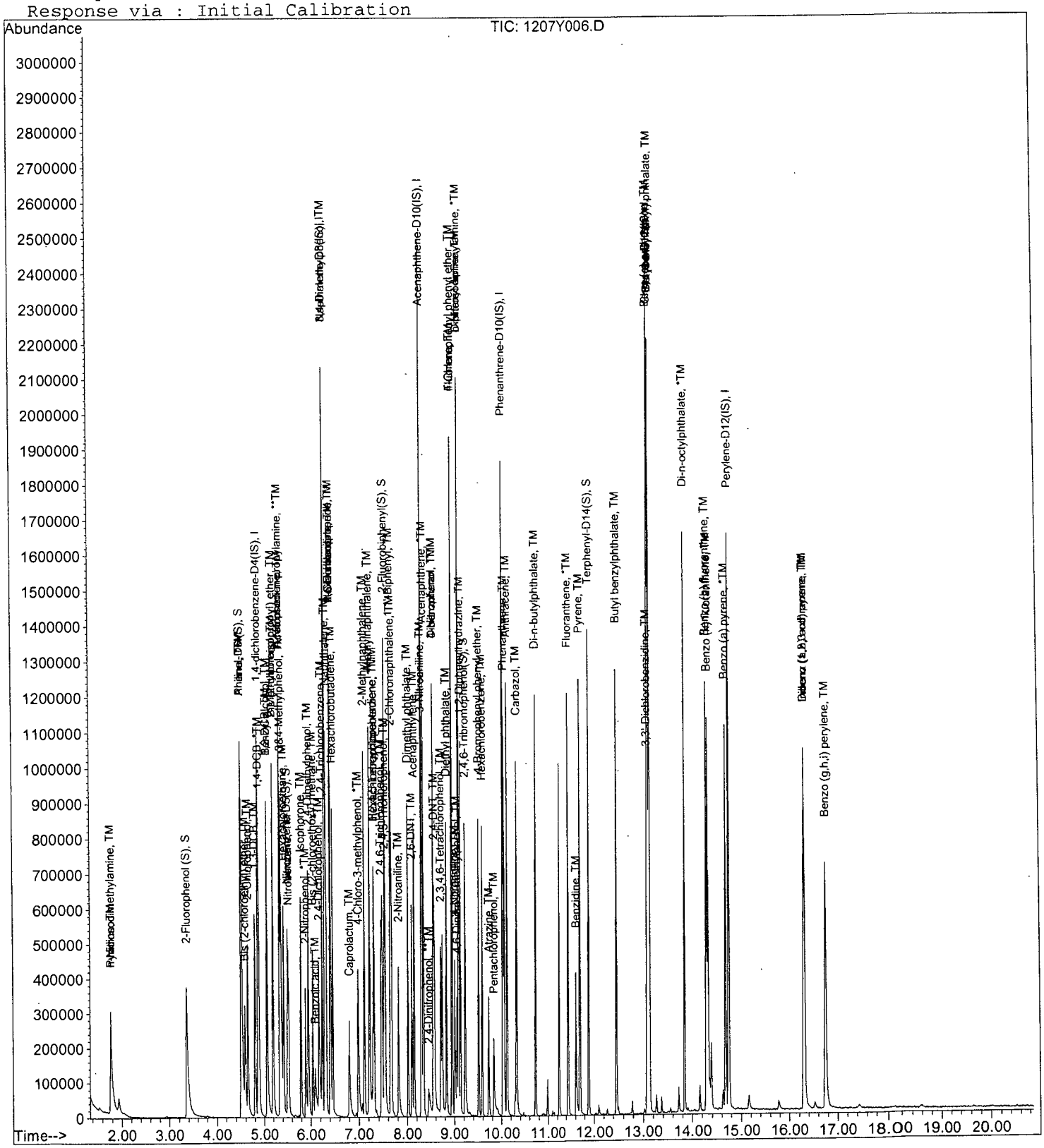
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y006.D Vial: 6
Acq On : 7 Dec 16 11:02 Operator: MA
Sample : 20ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y007.D Vial: 7
Acq On : 7 Dec 16 11:32 Operator: MA
Sample : 40ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	200058	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.30	136	812959	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.31	164	497677	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.03	188	928405	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.11	240	850533	40.00000 ppb		0.00
88) Perylene-D12(IS)	14.75	264	888701	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.35	112	570340	90.06835 ppb		0.00
Spiked Amount 200.000			Recovery = 45.034%			
5) Phenol-D6 (S)	4.50	99	704877	80.47129 ppb		0.00
Spiked Amount 200.000			Recovery = 40.236%			
21) Nitrobenzene-D5(S)	5.50	82	325441	38.36770 ppb		0.00
Spiked Amount 100.000			Recovery = 38.368%			
45) 2-Fluorobiphenyl(S)	7.54	172	597194	37.78888 ppb		0.00
Spiked Amount 100.000			Recovery = 37.789%			
63) 2,4,6-Tribromophenol(S)	9.23	330	191228	78.24500 ppb		0.00
Spiked Amount 200.000			Recovery = 39.123%			
81) Terphenyl-D14(S)	11.89	244	752070	39.00950 ppb		0.00
Spiked Amount 100.000			Recovery = 39.009%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.75	42	161566	34.44606 ppb		97
3) Pyridine	1.76	79	387358	38.65847 ppb		98
6) Phenol	4.52	94	400577	40.31969 ppb		93
7) Aniline	4.51	66	377482	38.58729 ppb	#	75
8) Bis (2-chloroethyl) ether	4.59	63	179689	40.23931 ppb		98
9) 2-Chlorophenol	4.64	128	315428	40.95120 ppb		91
10) 1,3-DCB	4.80	146	332809	39.86933 ppb		99
11) 1,4-DCB	4.89	146	332016	38.81430 ppb		99
12) Benzyl alcohol	5.05	108	172333	39.99630 ppb		92
13) 1,2-DCB	5.06	146	296826	37.23663 ppb		100
14) 2-Methylphenol	5.19	107	223633	38.28652 ppb		95
15) Bis (2-chloroisopropyl) et	5.19	45	337003	37.68221 ppb		98
16) Acetophenone	5.34	105	403185	37.03421 ppb		99
17) 3&4-Methylphenol	5.36	107	576124	74.55945 ppb		97
18) n-Nitrosodi-n-propylamine	5.34	70	205499	36.39064 ppb		92
19) Hexachloroethane	5.42	117	132371	37.31150 ppb		93
22) Nitrobenzene	5.52	77	329118	37.92717 ppb		95
23) Isophorone	5.79	82	544538	38.06296 ppb		95
24) 2-Nitrophenol	5.88	139	167729	40.59784 ppb		97
25) 2,4-Dimethylphenol	5.95	122	256596	39.84284 ppb		99
26) Benzoic acid	6.12	105	207583	40.37949 ppb		96
27) Bis (2-chloroethoxy) metha	6.04	93	311390	40.70745 ppb		99
28) 2,4-Dichlorophenol	6.16	162	251852	40.59868 ppb		93
29) 1,2,4-Trichlorobenzene	6.24	180	276620	40.36924 ppb		98
30) 3,4-Dimethylphenol	6.28	107	390385	38.01171 ppb		99
31) Naphthalene	6.32	128	855871	39.98876 ppb		99
32) 4-Chloroaniline	6.40	127	325340	42.83942 ppb		96
33) 2,6-Dichlorophenol	6.40	162	232500	38.81983 ppb		95
34) Hexachloropropene	6.42	213	225297	41.32796 ppb		97
35) Hexachlorobutadiene	6.46	225	171693	39.28527 ppb		94
36) Caprolactum	6.82	55	125688	38.88743 ppb		97
37) 4-Chloro-3-methylphenol	6.98	107	280036	39.55342 ppb		87

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y007.D Vial: 7
Acq On : 7 Dec 16 11:32 Operator: MA
Sample : 40ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.11	142	561485	39.29610	ppb		100
39)	1-Methylnaphthalene	7.22	142	542998	39.61986	ppb		98
41)	Hexachlorocyclopentadiene	7.29	237	98846	39.78650	ppb		94
42)	1,2,4,5-Tetrachlorobenzene	7.31	216	258378	38.16490	ppb		97
43)	2,4,6-Trichlorophenol	7.45	196	173513	38.62362	ppb		100
44)	2,4,5-Trichlorophenol	7.51	196	183541	38.58238	ppb	#	88
46)	1,1'-Biphenyl	7.65	154	728113	38.60182	ppb	#	97
47)	2-Chloronaphthalene	7.67	162	569966	38.35579	ppb		98
48)	2-Nitroaniline	7.81	65	201923	38.27108	ppb		97
49)	Dimethyl phthalate	8.02	163	688771	37.86099	ppb		99
50)	2,6-DNT	8.10	165	153741	37.97267	ppb		91
51)	Acenaphthylene	8.15	152	870855	37.69841	ppb		100
52)	3-Nitroaniline	8.29	138	176613	42.13394	ppb		87
53)	Acenaphthene	8.34	154	553092	39.09340	ppb		100
54)	2,4-Dinitrophenol	8.45	184	80953	41.10463	ppb		83
55)	4-Nitrophenol	8.54	65	134675	40.08311	ppb		98
56)	Dibenzofuran	8.55	168	766792	37.17071	ppb		98
57)	2,4-DNT	8.58	165	220382	38.50708	ppb		97
58)	2,3,4,6-Tetrachlorophenol	8.71	232	159761	43.15738	ppb		96
59)	Diethyl phthalate	8.84	149	717251	38.83302	ppb		98
60)	4-Chlorophenyl phenyl ethe	8.95	204	308111	36.70089	ppb		96
61)	Fluorene	8.95	166	633972	37.30629	ppb		100
62)	4-Nitroaniline	9.01	138	157741	39.50755	ppb		89
65)	4,6-Dinitro-2-methylphenol	9.05	198	131972	40.43428	ppb	#	84
66)	Diphenyl amine	9.10	169	974102	76.53830	ppb		99
67)	n-Nitrosodiphenylamine	9.10	169	974102	76.53830	ppb		99
68)	1,2-Diphenylhydrazine	9.13	77	675207	33.50998	ppb		95
69)	4-Bromophenyl phenyl ether	9.51	248	202318	41.49103	ppb		94
70)	Hexachlorobenzene	9.59	284	198345	38.18569	ppb		91
71)	Atrazine	9.73	200	93179	18.27769	ppb		100
72)	Pentachlorophenol	9.83	266	91407	50.75984	ppb		95
73)	Phenanthrene	10.06	178	992611	38.74928	ppb		99
74)	Anthracene	10.12	178	1029607	38.64677	ppb		99
75)	Carbazol	10.32	167	881300	37.25919	ppb		99
76)	Di-n-butylphthalate	10.73	149	1193622	37.69472	ppb		99
77)	Fluoranthene	11.43	202	1069844	38.21520	ppb	#	96
79)	Benzidine	11.61	184	397025	42.22773	ppb		99
80)	Pyrene	11.70	202	1133899	40.00029	ppb		99
82)	Butyl benzylphthalate	12.47	149	588724	41.47093	ppb		93
83)	3,3'-Dichlorobenzidine	13.08	252	380229	43.62107	ppb		97
84)	Benz (a) anthracene	13.10	228	1074534	39.95154	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.13	149	762045	38.03889	ppb		98
86)	Chrysene	13.13	228	989386	38.26692	ppb		100
87)	Di-n-octylphthalate	13.84	149	1343797	37.85342	ppb	#	87
89)	Benzo (b) fluoranthene	14.28	252	1144127	38.39349	ppb	#	98
90)	Benzo (k) fluoranthene	14.32	252	1041436	36.54915	ppb		99
91)	Benzo (a) pyrene	14.68	252	1090904	38.87173	ppb		98
92)	Indeno (1,2,3-cd) pyrene	16.30	276	1176312	36.83588	ppb		98
93)	Dibenz (a,h) anthracene	16.32	278	1006185	37.03465	ppb		99
94)	Benzo (g,h,i) perylene	16.75	276	1129852	41.83148	ppb		97

(#) = qualifier out of range (m) = manual integration

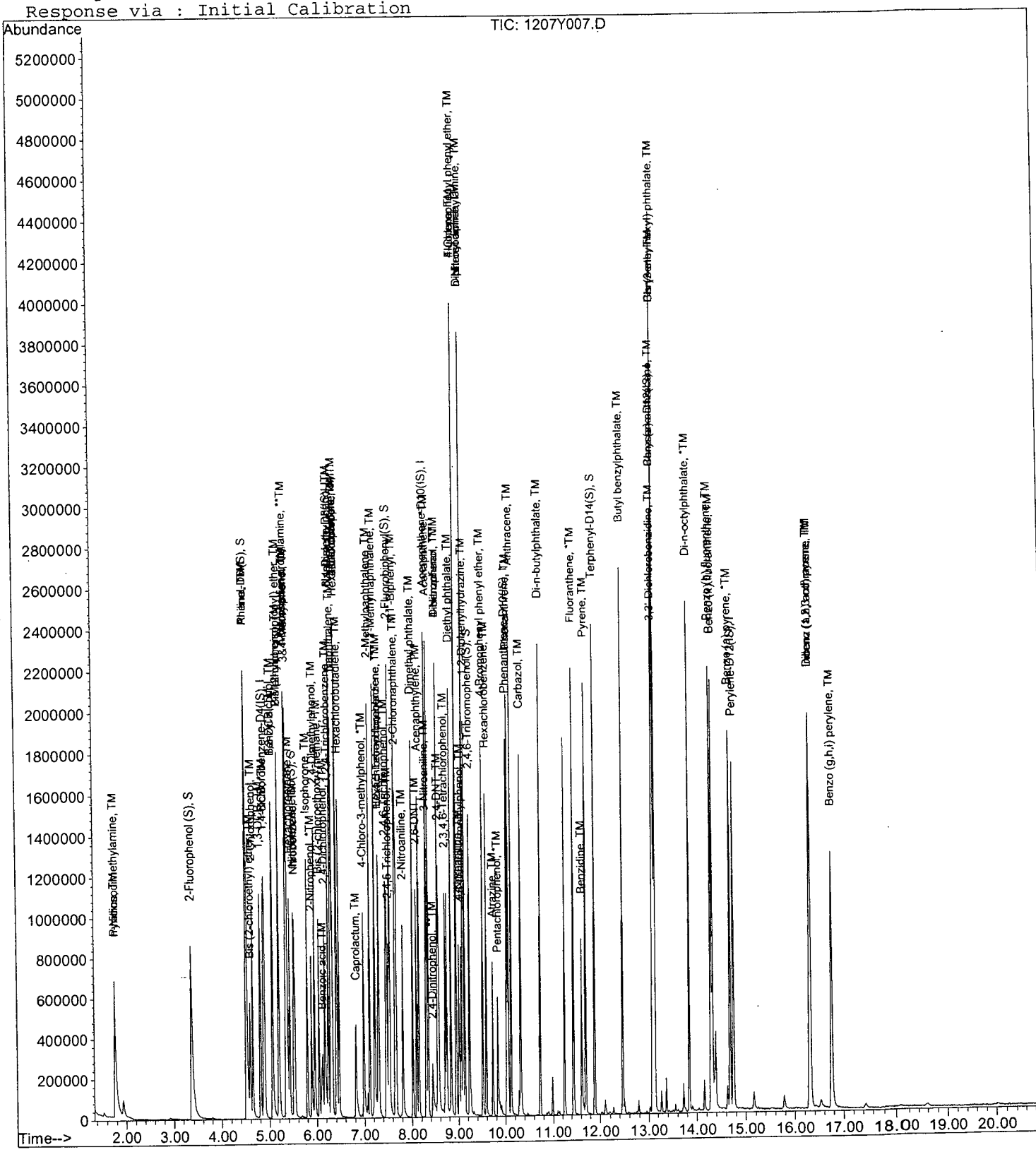
Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y007.D
Acq On : 7 Dec 16 11:32
Sample : 40ug/ml SVOC 12/06/16
Misc :

Vial: 7
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y008.D Vial: 8
Acq On : 7 Dec 16 12:02 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	195270	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.30	136	816895	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	475200	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	975541	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.10	240	853105	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.75	264	871056	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.35	112	695029	112.45058 ppb	0.00
Spiked Amount 200.000			Recovery =	56.226%	
5) Phenol-D6 (S)	4.51	99	832830	97.41019 ppb	0.00
Spiked Amount 200.000			Recovery =	48.705%	
21) Nitrobenzene-D5(S)	5.50	82	421258	49.42470 ppb	0.00
Spiked Amount 100.000			Recovery =	49.425%	
45) 2-Fluorobiphenyl(S)	7.53	172	745324	49.39294 ppb	0.00
Spiked Amount 100.000			Recovery =	49.393%	
63) 2,4,6-Tribromophenol(S)	9.23	330	243923	104.52712 ppb	0.00
Spiked Amount 200.000			Recovery =	52.263%	
81) Terphenyl-D14(S)	11.89	244	959232	49.60488 ppb	0.00
Spiked Amount 100.000			Recovery =	49.605%	
Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.75	42	207992	45.43145 ppb	100
3) Pyridine	1.76	79	499289	51.05103 ppb	100
6) Phenol	4.52	94	480106	49.50952 ppb	100
7) Aniline	4.52	66	456200	47.77753 ppb	100
8) Bis (2-chloroethyl) ether	4.59	63	206942	47.47862 ppb	100
9) 2-Chlorophenol	4.65	128	370436	49.27197 ppb	100
10) 1,3-DCB	4.80	146	396306	48.64015 ppb	100
11) 1,4-DCB	4.89	146	407144	48.76421 ppb	100
12) Benzyl alcohol	5.06	108	223746	53.20189 ppb	100
13) 1,2-DCB	5.06	146	388817	49.97284 ppb	100
14) 2-Methylphenol	5.19	107	277560	48.68411 ppb	100
15) Bis (2-chloroisopropyl) et	5.19	45	424279	48.60428 ppb	100
16) Acetophenone	5.33	105	510342	48.02645 ppb	100
17) 3&4-Methylphenol	5.36	107	744509	98.71362 ppb	100
18) n-Nitrosodi-n-propylamine	5.34	70	262564	47.63603 ppb	100
19) Hexachloroethane	5.42	117	166560	48.09955 ppb	100
22) Nitrobenzene	5.52	77	426332	48.89327 ppb	100
23) Isophorone	5.80	82	706760	49.16418 ppb	100
24) 2-Nitrophenol	5.88	139	213979	51.54284 ppb	100
25) 2,4-Dimethylphenol	5.95	122	323836	50.04122 ppb	100
26) Benzoic acid	6.13	105	279445	53.40557 ppb	100
27) Bis (2-chloroethoxy) metha	6.04	93	396181	51.54248 ppb	100
28) 2,4-Dichlorophenol	6.17	162	325223	52.17353 ppb	100
29) 1,2,4-Trichlorobenzene	6.24	180	351337	51.02621 ppb	100
30) 3,4-Dimethylphenol	6.29	107	512874	49.69783 ppb	100
31) Naphthalene	6.32	128	1091949	50.77318 ppb	100
32) 4-Chloroaniline	6.40	127	395557	51.83434 ppb	100
33) 2,6-Dichlorophenol	6.41	162	296250	49.22564 ppb	100
34) Hexachloropropene	6.42	213	279000	50.93252 ppb	100
35) Hexachlorobutadiene	6.46	225	219413	49.96224 ppb	100
36) Caprolactum	6.83	55	159640	49.15407 ppb	100
37) 4-Chloro-3-methylphenol	6.99	107	341306	47.97517 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y008.D Vial: 8
Acq On : 7 Dec 16 12:02 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) 2-Methylnaphthalene	7.11	142	688780	47.97270	ppb	100
39) 1-Methylnaphthalene	7.22	142	659731	47.90535	ppb	100
41) Hexachlorocyclopentadiene	7.29	237	140004	52.99808	ppb	100
42) 1,2,4,5-Tetrachlorobenzene	7.31	216	332171	51.38560	ppb	100
43) 2,4,6-Trichlorophenol	7.46	196	218731	50.99205	ppb	100
44) 2,4,5-Trichlorophenol	7.52	196	226443	49.85239	ppb	100
46) 1,1'-Biphenyl	7.66	154	885084	49.14334	ppb	100
47) 2-Chloronaphthalene	7.67	162	727438	51.26833	ppb	100
48) 2-Nitroaniline	7.81	65	266093	52.81891	ppb	100
49) Dimethyl phthalate	8.02	163	914001	52.61807	ppb	100
50) 2,6-DNT	8.10	165	201713	52.17789	ppb	100
51) Acenaphthylene	8.15	152	1109739	50.31172	ppb	100
52) 3-Nitroaniline	8.30	138	209961	52.45890	ppb	100
53) Acenaphthene	8.34	154	674472	49.92765	ppb	100
54) 2,4-Dinitrophenol	8.44	184	97936	50.08681	ppb	100
55) 4-Nitrophenol	8.54	65	178570	53.03676	ppb	100
56) Dibenzofuran	8.55	168	1012092	51.38241	ppb	100
57) 2,4-DNT	8.57	165	296625	54.28044	ppb	100
58) 2,3,4,6-Tetrachlorophenol	8.71	232	207535	58.71469	ppb	100
59) Diethyl phthalate	8.83	149	866198	49.11547	ppb	100
60) 4-Chlorophenyl phenyl ethe	8.95	204	382969	47.77538	ppb	100
61) Fluorene	8.95	166	806446	49.70024	ppb	100
62) 4-Nitroaniline	9.01	138	206542	54.17700	ppb	100
65) 4,6-Dinitro-2-methylphenol	9.06	198	182950	53.34482	ppb	100
66) Diphenyl amine	9.10	169	1368741	102.34994	ppb	100
67) n-Nitrosodiphenylamine	9.10	169	1368741	102.34994	ppb	100
68) 1,2-Diphenylhydrazine	9.13	77	929548	43.90369	ppb	100
69) 4-Bromophenyl phenyl ether	9.51	248	243072	47.44020	ppb	100
70) Hexachlorobenzene	9.59	284	246139	45.09743	ppb	100
71) Atrazine	9.73	200	132213	24.68138	ppb	100
72) Pentachlorophenol	9.84	266	118335	60.26116	ppb	100
73) Phenanthrene	10.06	178	1304097	48.44918	ppb	100
74) Anthracene	10.12	178	1323292	47.27041	ppb	100
75) Carbazol	10.32	167	1272051	51.18068	ppb	100
76) Di-n-butylphthalate	10.73	149	1500155	45.08600	ppb	100
77) Fluoranthene	11.44	202	1330020	45.21326	ppb	100
79) Benzidine	11.61	184	505375	53.58983	ppb	100
80) Pyrene	11.70	202	1525772	53.66203	ppb	100
82) Butyl benzylphthalate	12.46	149	734576	51.58904	ppb	100
83) 3,3'-Dichlorobenzidine	13.08	252	470879	53.85786	ppb	100
84) Benz (a) anthracene	13.10	228	1345568	49.87784	ppb	100
85) Bis (2-ethylhexyl) phthala	13.13	149	996708	49.60253	ppb	100
86) Chrysene	13.14	228	1285778	49.58067	ppb	100
87) Di-n-octylphthalate	13.85	149	1959719	55.03689	ppb	100
89) Benzo (b) fluoranthene	14.29	252	1307332	44.75884	ppb	100
90) Benzo (k) fluoranthene	14.32	252	1321701	47.32466	ppb	100
91) Benzo (a) pyrene	14.68	252	1333161	48.46626	ppb	100
92) Indeno (1,2,3-cd) pyrene	16.30	276	1465032	46.80640	ppb	100
93) Dibenz (a,h) anthracene	16.32	278	1249734	46.93076	ppb	100
94) Benzo (g,h,i) perylene	16.76	276	1364184	51.53048	ppb	100

(#) = qualifier out of range (m) = manual integration

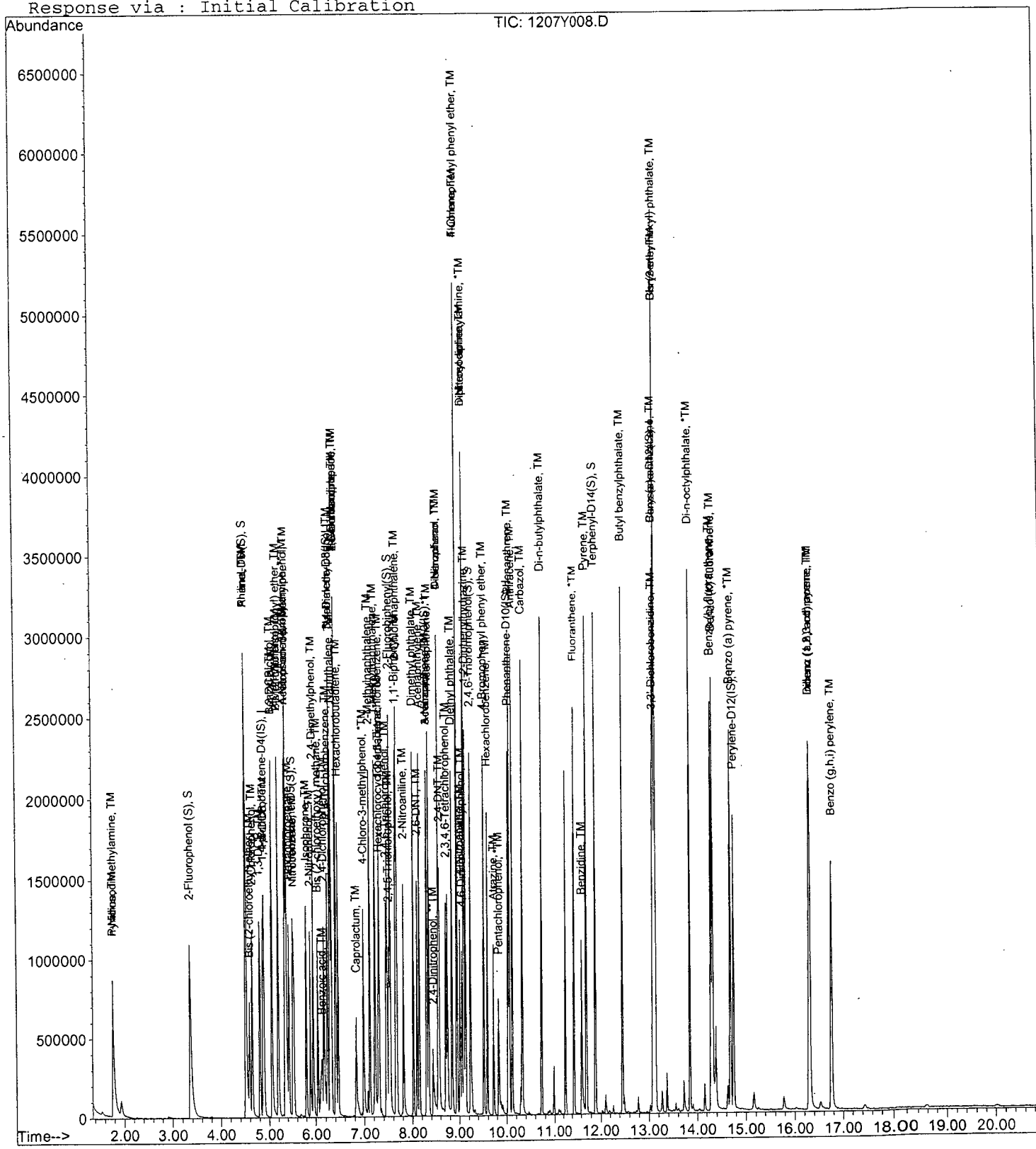
Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y008.D
Acq On : 7 Dec 16 12:02
Sample : 50ug/ml SVOC 12/06/16
Misc :

Vial: 8
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y009.D Vial: 9
Acq On : 7 Dec 16 12:32 Operator: MA
Sample : 60ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	218783	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.30	136	928479	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	561569	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	933722	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.11	240	884630	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.75	264	1042796	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.35	112	865007	124.91090 ppb	0.00
Spiked Amount 200.000			Recovery	= 62.456%	
5) Phenol-D6 (S)	4.51	99	1086222	113.39361 ppb	0.00
Spiked Amount 200.000			Recovery	= 56.697%	
21) Nitrobenzene-D5(S)	5.50	82	539284	55.66825 ppb	0.00
Spiked Amount 100.000			Recovery	= 55.668%	
45) 2-Fluorobiphenyl(S)	7.54	172	984076	55.18508 ppb	0.00
Spiked Amount 100.000			Recovery	= 55.185%	
63) 2,4,6-Tribromophenol(S)	9.23	330	315998	114.58661 ppb	0.00
Spiked Amount 200.000			Recovery	= 57.293%	
81) Terphenyl-D14(S)	11.89	244	1107571	55.23485 ppb	0.00
Spiked Amount 100.000			Recovery	= 55.235%	
Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.75	42	237687	46.33801 ppb	95
3) Pyridine	1.76	79	574794	52.45498 ppb	95
6) Phenol	4.52	94	637429	58.66854 ppb	94
7) Aniline	4.52	66	600249	56.10761 ppb	94
8) Bis (2-chloroethyl) ether	4.59	63	281001	57.54124 ppb	99
9) 2-Chlorophenol	4.65	128	506460	60.12483 ppb	98
10) 1,3-DCB	4.80	146	523668	57.36438 ppb	99
11) 1,4-DCB	4.89	146	527245	56.36215 ppb	97
12) Benzyl alcohol	5.06	108	288893	61.30992 ppb	96
13) 1,2-DCB	5.06	146	489566	56.15934 ppb	98
14) 2-Methylphenol	5.19	107	364148	57.00727 ppb	99
15) Bis (2-chloroisopropyl) et	5.19	45	554052	56.64941 ppb	96
16) Acetophenone	5.34	105	671773	56.42397 ppb	98
17) 3&4-Methylphenol	5.36	107	950588	112.49194 ppb	98
18) n-Nitrosodi-n-propylamine	5.35	70	340579	55.14933 ppb	98
19) Hexachloroethane	5.42	117	222476	57.34234 ppb	96
22) Nitrobenzene	5.52	77	554825	55.98238 ppb	98
23) Isophorone	5.80	82	928565	56.83073 ppb	99
24) 2-Nitrophenol	5.88	139	289592	61.37308 ppb	94
25) 2,4-Dimethylphenol	5.95	122	444516	60.43441 ppb	98
26) Benzoic acid	6.13	105	322257	54.17674 ppb	95
27) Bis (2-chloroethoxy) metha	6.04	93	529470	60.60482 ppb	99
28) 2,4-Dichlorophenol	6.16	162	429913	60.67973 ppb	96
29) 1,2,4-Trichlorobenzene	6.24	180	459705	58.74120 ppb	95
30) 3,4-Dimethylphenol	6.29	107	660163	56.28233 ppb	98
31) Naphthalene	6.32	128	1425995	58.33701 ppb	99
32) 4-Chloroaniline	6.40	127	513997	59.26021 ppb	98
33) 2,6-Dichlorophenol	6.41	162	389211	56.90000 ppb	98
34) Hexachloropropene	6.42	213	365095	58.63961 ppb	98
35) Hexachlorobutadiene	6.46	225	279947	56.08536 ppb	99
36) Caprolactum	6.84	55	221717	60.06354 ppb	98
37) 4-Chloro-3-methylphenol	6.99	107	480600	59.43613 ppb	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y009.D
Acq On : 7 Dec 16 12:32
Sample : 60ug/ml SVOC 12/06/16
Misc :

Vial: 9
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
38) 2-Methylnaphthalene	7.11	142	945068	57.91231 ppb	98
39) 1-Methylnaphthalene	7.22	142	919036	58.71429 ppb	98
41) Hexachlorocyclopentadiene	7.29	237	197642	60.29517 ppb	98
42) 1,2,4,5-Tetrachlorobenzene	7.31	216	445973	58.37966 ppb	99
43) 2,4,6-Trichlorophenol	7.46	196	297908	58.76890 ppb	98
44) 2,4,5-Trichlorophenol	7.52	196	321422	59.87920 ppb	94
46) 1,1'-Biphenyl	7.66	154	1207599	56.73829 ppb	98
47) 2-Chloronaphthalene	7.68	162	953118	56.84250 ppb	99
48) 2-Nitroaniline	7.81	65	333570	56.02944 ppb	97
49) Dimethyl phthalate	8.02	163	1131837	55.13729 ppb	99
50) 2,6-DNT	8.10	165	262428	57.44286 ppb	99
51) Acenaphthylene	8.15	152	1514599	58.10577 ppb	100
52) 3-Nitroaniline	8.30	138	286828	60.64227 ppb	100
53) Acenaphthene	8.34	154	907464	56.84338 ppb	99
54) 2,4-Dinitrophenol	8.44	184	134887	57.13945 ppb	90
55) 4-Nitrophenol	8.54	65	232448	57.73526 ppb	99
56) Dibenzofuran	8.55	168	1321081	56.75410 ppb	99
57) 2,4-DNT	8.58	165	379083	58.70069 ppb	99
58) 2,3,4,6-Tetrachlorophenol	8.71	232	264908	63.41964 ppb	97
59) Diethyl phthalate	8.84	149	1169813	56.12946 ppb	95
60) 4-Chlorophenyl phenyl ethe	8.95	204	505362	53.34779 ppb	99
61) Fluorene	8.95	166	1031075	53.77083 ppb	100
62) 4-Nitroaniline	9.01	138	270386	60.01559 ppb	96
65) 4,6-Dinitro-2-methylphenol	9.06	198	237031	72.20927 ppb	96
66) Diphenyl amine	9.10	169	1658613	129.58040 ppb	99
67) n-Nitrosodiphenylamine	9.10	169	1658613	129.58040 ppb	99
68) 1,2-Diphenylhydrazine	9.13	77	1349001	66.56860 ppb	99
69) 4-Bromophenyl phenyl ether	9.51	248	319227	65.09373 ppb	95
70) Hexachlorobenzene	9.59	284	327981	62.78386 ppb	97
71) Atrazine	9.73	200	151588	29.56569 ppb	96
72) Pentachlorophenol	9.84	266	138587	71.04943 ppb	96
73) Phenanthrene	10.06	178	1487228	57.72740 ppb	99
74) Anthracene	10.12	178	1508389	56.29567 ppb	98
75) Carbazol	10.32	167	1347464	56.64305 ppb	100
76) Di-n-butylphthalate	10.73	149	1763308	55.36837 ppb	100
77) Fluoranthene	11.44	202	1636819	58.13481 ppb	100
79) Benzidine	11.61	184	608980	62.27482 ppb	98
80) Pyrene	11.70	202	1793793	60.84019 ppb	99
82) Butyl benzylphthalate	12.47	149	829390	56.17205 ppb	99
83) 3,3'-Dichlorobenzidine	13.08	252	531065	58.57715 ppb	98
84) Benz (a) anthracene	13.10	228	1585364	56.67243 ppb	100
85) Bis (2-ethylhexyl) phthala	13.13	149	1244971	59.74973 ppb	99
86) Chrysene	13.14	228	1666038	61.95439 ppb	99
87) Di-n-octylphthalate	13.85	149	2024092	54.81901 ppb	99
89) Benzo (b) fluoranthene	14.29	252	1616583	46.23147 ppb	100
90) Benzo (k) fluoranthene	14.32	252	1852486	55.40589 ppb	99
91) Benzo (a) pyrene	14.68	252	1766595	53.64641 ppb	99
92) Indeno (1,2,3-cd) pyrene	16.31	276	1712128	45.69210 ppb	98
93) Dibenz (a,h) anthracene	16.32	278	1422360	44.61658 ppb	99
94) Benzo (g,h,i) perylene	16.76	276	1382485	43.62128 ppb	99

(#) = qualifier out of range (m) = manual integration

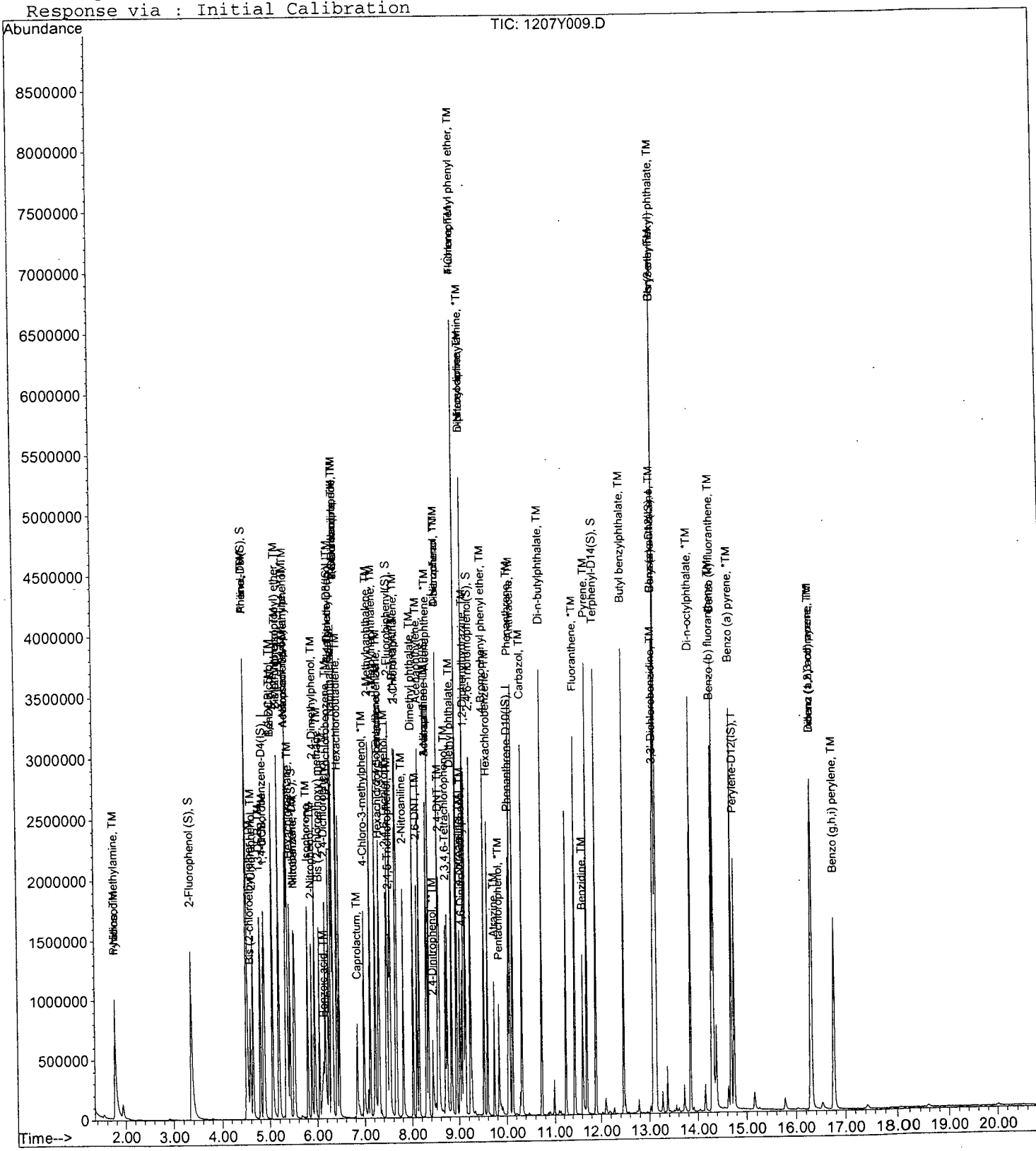
Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y009.D
Acq On : 7 Dec 16 12:32
Sample : 60ug/ml SVOC 12/06/16
Misc :

Vial: 9
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y010.D Vial: 10
Acq On : 7 Dec 16 13:02 Operator: MA
Sample : 80ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	195710	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.30	136	859926	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	527101	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	1005123	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.11	240	912863	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.75	264	909856	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.35	112	1083940	174.97924 ppb	0.00
Spiked Amount 200.000			Recovery =	87.490%	
5) Phenol-D6 (S)	4.51	99	1335540	155.85741 ppb	0.00
Spiked Amount 200.000			Recovery =	77.929%	
21) Nitrobenzene-D5(S)	5.51	82	643499	71.72142 ppb	0.00
Spiked Amount 100.000			Recovery =	71.721%	
45) 2-Fluorobiphenyl(S)	7.54	172	1210171	72.30179 ppb	0.00
Spiked Amount 100.000			Recovery =	72.302%	
63) 2,4,6-Tribromophenol(S)	9.24	330	416825	161.03215 ppb	0.00
Spiked Amount 200.000			Recovery =	80.516%	
81) Terphenyl-D14(S)	11.89	244	1546385	74.73349 ppb	0.00
Spiked Amount 100.000			Recovery =	74.733%	
Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.75	42	322164	70.21171 ppb	97
3) Pyridine	1.76	79	734964	74.97926 ppb	96
6) Phenol	4.53	94	791696	81.45777 ppb	83
7) Aniline	4.52	66	776371	81.12603 ppb	97
8) Bis (2-chloroethyl) ether	4.59	63	355760	81.43836 ppb	95
9) 2-Chlorophenol	4.65	128	615384	81.66867 ppb	98
10) 1,3-DCB	4.81	146	614066	75.19723 ppb	98
11) 1,4-DCB	4.89	146	652039	77.92005 ppb	98
12) Benzyl alcohol	5.06	108	348718	82.73108 ppb	90
13) 1,2-DCB	5.06	146	592989	76.04278 ppb	98
14) 2-Methylphenol	5.20	107	423761	74.16070 ppb	97
15) Bis (2-chloroisopropyl) et	5.19	45	634640	72.53922 ppb	96
16) Acetophenone	5.34	105	792534	74.41484 ppb	97
17) 3&4-Methylphenol	5.37	107	1142368	151.12477 ppb	98
18) n-Nitrosodi-n-propylamine	5.35	70	410995	74.39769 ppb	97
19) Hexachloroethane	5.42	117	261628	75.38363 ppb	97
22) Nitrobenzene	5.53	77	676884	73.74296 ppb	93
23) Isophorone	5.80	82	1089807	72.01642 ppb	95
24) 2-Nitrophenol	5.88	139	344463	78.82155 ppb	97
25) 2,4-Dimethylphenol	5.95	122	565844	83.06243 ppb	98
26) Benzoic acid	6.15	105	443247	81.69217 ppb	95
27) Bis (2-chloroethoxy) metha	6.05	93	679127	83.93205 ppb	98
28) 2,4-Dichlorophenol	6.17	162	547229	83.39561 ppb	100
29) 1,2,4-Trichlorobenzene	6.24	180	576211	79.49798 ppb	99
30) 3,4-Dimethylphenol	6.29	107	820634	75.54077 ppb	99
31) Naphthalene	6.33	128	1762100	77.83370 ppb	99
32) 4-Chloroaniline	6.41	127	626144	77.94493 ppb	93
33) 2,6-Dichlorophenol	6.41	162	470298	74.23545 ppb	98
34) Hexachloropropene	6.42	213	458828	79.56940 ppb	98
35) Hexachlorobutadiene	6.47	225	341554	73.88292 ppb	97
36) Caprolactum	6.85	55	263295	77.01327 ppb	97
37) 4-Chloro-3-methylphenol	6.99	107	569393	76.03086 ppb	86

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y010.D Vial: 10
Acq On : 7 Dec 16 13:02 Operator: MA
Sample : 80ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.12	142	1107600	73.28275	ppb		99
39)	1-Methylnaphthalene	7.23	142	1101455	75.97821	ppb		100
41)	Hexachlorocyclopentadiene	7.29	237	283877	81.78811	ppb		98
42)	1,2,4,5-Tetrachlorobenzene	7.31	216	543057	75.73693	ppb		97
43)	2,4,6-Trichlorophenol	7.46	196	352380	74.06038	ppb		96
44)	2,4,5-Trichlorophenol	7.52	196	364305	72.30607	ppb		98
46)	1,1'-Biphenyl	7.66	154	1431535	71.65801	ppb		99
47)	2-Chloronaphthalene	7.67	162	1099952	69.88911	ppb		96
48)	2-Nitroaniline	7.81	65	409925	73.35725	ppb		87
49)	Dimethyl phthalate	8.03	163	1345976	69.85672	ppb		98
50)	2,6-DNT	8.10	165	312732	72.93022	ppb	#	73
51)	Acenaphthylene	8.15	152	1738197	71.04441	ppb		100
52)	3-Nitroaniline	8.30	138	350245	78.89239	ppb		86
53)	Acenaphthene	8.35	154	1111537	74.17946	ppb		99
54)	2,4-Dinitrophenol	8.44	184	218209	93.07907	ppb		96
55)	4-Nitrophenol	8.54	65	306442	78.35915	ppb		97
56)	Dibenzofuran	8.55	168	1632194	74.70485	ppb		94
57)	2,4-DNT	8.57	165	451681	74.51608	ppb	#	80
58)	2,3,4,6-Tetrachlorophenol	8.71	232	315865	80.56372	ppb		96
59)	Diethyl phthalate	8.84	149	1405142	71.82968	ppb		99
60)	4-Chlorophenyl phenyl ethe	8.96	204	628797	70.71859	ppb		81
61)	Fluorene	8.95	166	1287251	71.52024	ppb		98
62)	4-Nitroaniline	9.02	138	354043	83.72308	ppb		96
65)	4,6-Dinitro-2-methylphenol	9.06	198	328902	93.07921	ppb	#	68
66)	Diphenyl amine	9.10	169	2177827	158.05783	ppb		99
67)	n-Nitrosodiphenylamine	9.10	169	2177827	158.05783	ppb		99
68)	1,2-Diphenylhydrazine	9.14	77	1790205	82.06506	ppb	#	89
69)	4-Bromophenyl phenyl ether	9.52	248	376085	71.24001	ppb	#	81
70)	Hexachlorobenzene	9.60	284	403389	71.73345	ppb	#	79
71)	Atrazine	9.73	200	197787	35.83598	ppb		99
72)	Pentachlorophenol	9.84	266	222525	97.90203	ppb		97
73)	Phenanthrene	10.06	178	2029194	73.16888	ppb		99
74)	Anthracene	10.12	178	2073870	71.90210	ppb		99
75)	Carbazol	10.32	167	1832065	71.54326	ppb		97
76)	Di-n-butylphthalate	10.73	149	2372548	69.20651	ppb		99
77)	Fluoranthene	11.44	202	2349024	77.50352	ppb		99
79)	Benzidine	11.61	184	843755	83.61455	ppb		99
80)	Pyrene	11.70	202	2273483	74.72502	ppb		99
82)	Butyl benzylphthalate	12.46	149	1147875	75.33766	ppb		93
83)	3,3'-Dichlorobenzidine	13.08	252	711820	76.08636	ppb		99
84)	Benz (a) anthracene	13.10	228	2207148	76.45930	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.13	149	1603119	74.55873	ppb		98
86)	Chrysene	13.14	228	2085134	75.14105	ppb		99
87)	Di-n-octylphthalate	13.85	149	2762190	72.49541	ppb		96
89)	Benzo (b) fluoranthene	14.29	252	2598169	85.15963	ppb		98
90)	Benzo (k) fluoranthene	14.33	252	2204360	75.56317	ppb		98
91)	Benzo (a) pyrene	14.69	252	2169513	75.50794	ppb		99
92)	Indeno (1,2,3-cd) pyrene	16.31	276	2538105	77.63207	ppb		98
93)	Dibenz (a,h) anthracene	16.34	278	2157371	77.56008	ppb		98
94)	Benzo (g,h,i) perylene	16.77	276	1984638	71.77049	ppb		100

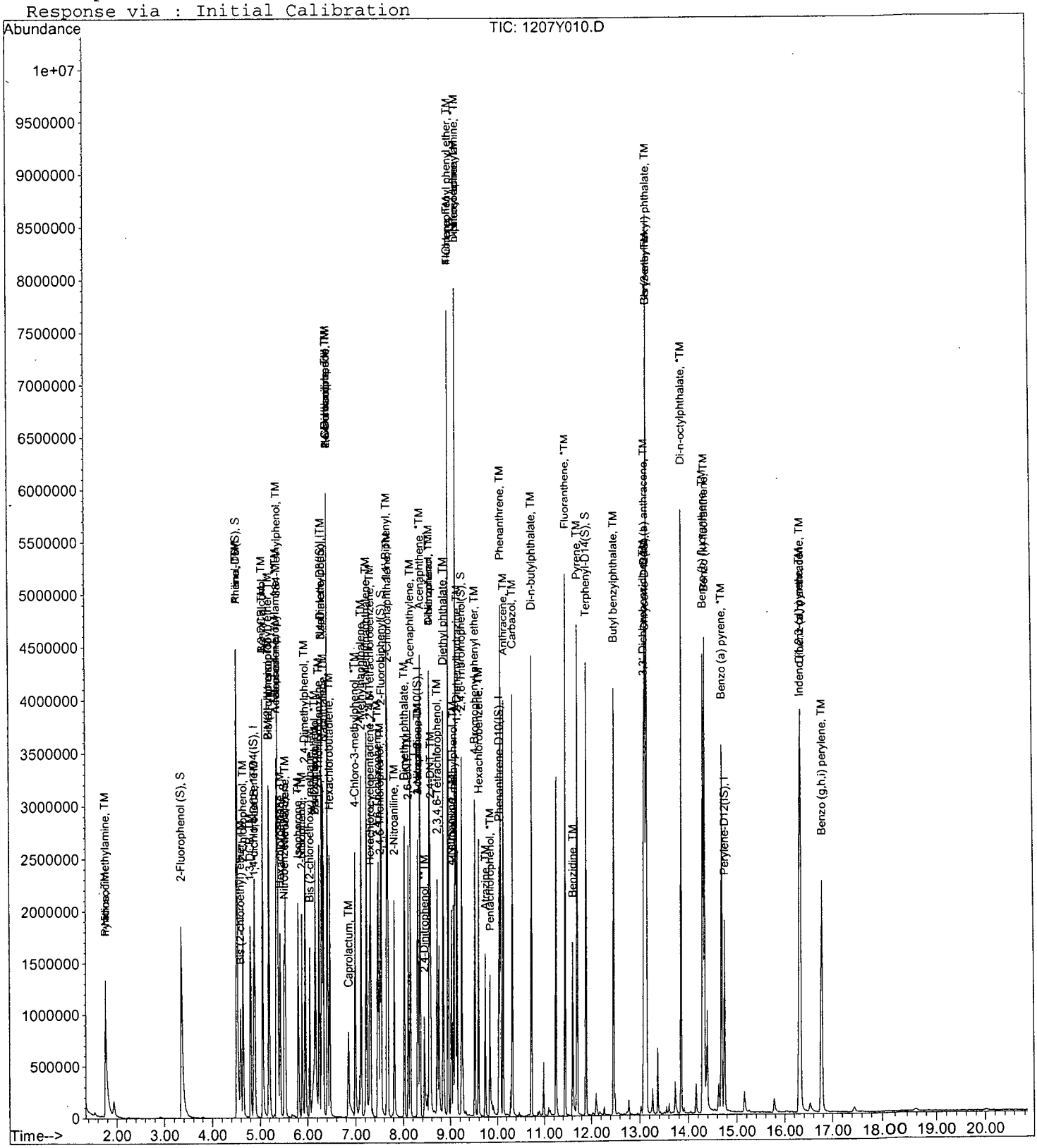
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y010.D Vial: 10
Acq On : 7 Dec 16 13:02 Operator: MA
Sample : 80ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y011.D Vial: 11
Acq On : 7 Dec 16 13:32 Operator: MA
Sample : 100ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	214746	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.30	136	801273	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.31	164	479807	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.03	188	1038349	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.11	240	897961	40.00000 ppb		0.00
88) Perylene-D12(IS)	14.76	264	1012967	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.36	112	1442400	212.20467 ppb		0.00
Spiked Amount 200.000				Recovery = 106.103%		
5) Phenol-D6 (S)	4.52	99	1755614	186.71857 ppb		0.00
Spiked Amount 200.000				Recovery = 93.360%		
21) Nitrobenzene-D5(S)	5.51	82	880245	105.28952 ppb		0.00
Spiked Amount 100.000				Recovery = 105.290%		
45) 2-Fluorobiphenyl(S)	7.54	172	1444098	94.78208 ppb		0.00
Spiked Amount 100.000				Recovery = 94.782%		
63) 2,4,6-Tribromophenol(S)	9.24	330	537159	227.97590 ppb		0.00
Spiked Amount 200.000				Recovery = 113.988%		
81) Terphenyl-D14(S)	11.90	244	1906266	93.65464 ppb		0.00
Spiked Amount 100.000				Recovery = 93.655%		
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.75	42	427152	84.84044 ppb		98
3) Pyridine	1.76	79	954145	88.71098 ppb		96
6) Phenol	4.53	94	1029962	96.57911 ppb		91
7) Aniline	4.53	66	1005037	95.71079 ppb	#	76
8) Bis (2-chloroethyl) ether	4.59	63	462246	96.43463 ppb		99
9) 2-Chlorophenol	4.65	128	814431	98.50346 ppb		96
10) 1,3-DCB	4.81	146	851310	95.00850 ppb		98
11) 1,4-DCB	4.89	146	861705	93.84739 ppb		99
12) Benzyl alcohol	5.06	108	474310	102.55209 ppb		89
13) 1,2-DCB	5.06	146	785684	91.82209 ppb		98
14) 2-Methylphenol	5.20	107	595539	94.98412 ppb		96
15) Bis (2-chloroisopropyl) et	5.19	45	856467	89.21626 ppb		85
16) Acetophenone	5.34	105	1088689	93.16085 ppb		99
17) 3&4-Methylphenol	5.38	107	1562005	188.32154 ppb		92
18) n-Nitrosodi-n-propylamine	5.35	70	569115	93.88817 ppb		99
19) Hexachloroethane	5.43	117	354007	92.95925 ppb	#	76
22) Nitrobenzene	5.53	77	903147	105.59548 ppb		97
23) Isophorone	5.81	82	1523574	108.05033 ppb		96
24) 2-Nitrophenol	5.88	139	468219	114.98256 ppb		95
25) 2,4-Dimethylphenol	5.96	122	701715	110.54758 ppb		99
26) Benzoic acid	6.17	105	531913	109.09798 ppb		91
27) Bis (2-chloroethoxy) metha	6.05	93	810611	107.51520 ppb		99
28) 2,4-Dichlorophenol	6.17	162	626111	102.40142 ppb		99
29) 1,2,4-Trichlorobenzene	6.24	180	674426	99.85951 ppb		99
30) 3,4-Dimethylphenol	6.29	107	982967	97.10719 ppb		97
31) Naphthalene	6.33	128	2092381	99.18785 ppb		100
32) 4-Chloroaniline	6.41	127	726261	97.02573 ppb		97
33) 2,6-Dichlorophenol	6.41	162	585319	99.15426 ppb		97
34) Hexachloropropene	6.42	213	564663	105.09113 ppb		99
35) Hexachlorobutadiene	6.47	225	420352	97.58395 ppb		96
36) Caprolactum	6.87	55	323697	101.61135 ppb		95
37) 4-Chloro-3-methylphenol	6.99	107	718886	103.01925 ppb		84

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y011.D Vial: 11
Acq On : 7 Dec 16 13:32 Operator: MA
Sample : 100ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.12	142	1400630	99.45413	ppb		98
39)	1-Methylnaphthalene	7.23	142	1395356	103.29704	ppb		99
41)	Hexachlorocyclopentadiene	7.29	237	337941	98.72624	ppb		99
42)	1,2,4,5-Tetrachlorobenzene	7.31	216	637512	97.67376	ppb		98
43)	2,4,6-Trichlorophenol	7.46	196	430600	99.42051	ppb		98
44)	2,4,5-Trichlorophenol	7.52	196	452384	98.63798	ppb		89
46)	1,1'-Biphenyl	7.66	154	1743421	95.87212	ppb		98
47)	2-Chloronaphthalene	7.67	162	1364913	95.27260	ppb		95
48)	2-Nitroaniline	7.82	65	501195	98.53093	ppb		96
49)	Dimethyl phthalate	8.03	163	1691646	96.45119	ppb		99
50)	2,6-DNT	8.11	165	428985	109.90174	ppb		96
51)	Acenaphthylene	8.15	152	2176158	97.71215	ppb		100
52)	3-Nitroaniline	8.31	138	417728	103.36750	ppb	#	99
53)	Acenaphthene	8.35	154	1365612	100.11850	ppb		99
54)	2,4-Dinitrophenol	8.44	184	244053	112.65730	ppb		86
55)	4-Nitrophenol	8.54	65	381862	104.77768	ppb		94
56)	Dibenzofuran	8.56	168	2009957	101.06274	ppb		97
57)	2,4-DNT	8.58	165	559804	101.45686	ppb		98
58)	2,3,4,6-Tetrachlorophenol	8.71	232	407530	114.18916	ppb		93
59)	Diethyl phthalate	8.85	149	1833935	102.98996	ppb		97
60)	4-Chlorophenyl phenyl ethe	8.96	204	822846	101.66441	ppb		81
61)	Fluorene	8.96	166	1670986	101.99193	ppb		98
62)	4-Nitroaniline	9.03	138	400399	104.01822	ppb		94
65)	4,6-Dinitro-2-methylphenol	9.07	198	386581	105.90161	ppb	#	83
66)	Diphenyl amine	9.11	169	2820080	198.12073	ppb		100
67)	n-Nitrosodiphenylamine	9.11	169	2820080	198.12073	ppb		100
68)	1,2-Diphenylhydrazine	9.14	77	2276128	101.00156	ppb		96
69)	4-Bromophenyl phenyl ether	9.52	248	489978	89.84427	ppb		91
70)	Hexachlorobenzene	9.60	284	507014	87.27573	ppb		86
71)	Atrazine	9.73	200	255247	44.76701	ppb		97
72)	Pentachlorophenol	9.84	266	289057	117.11640	ppb		96
73)	Phenanthrene	10.06	178	2631951	91.86635	ppb		99
74)	Anthracene	10.12	178	2699734	90.60598	ppb		100
75)	Carbazol	10.33	167	2292694	86.66621	ppb		99
76)	Di-n-butylphthalate	10.74	149	3048385	86.07511	ppb		99
77)	Fluoranthene	11.44	202	3022326	96.52752	ppb	#	98
79)	Benzidine	11.62	184	1093324	110.14442	ppb		98
80)	Pyrene	11.71	202	3079365	102.89248	ppb		99
82)	Butyl benzylphthalate	12.47	149	1430703	95.45863	ppb		88
83)	3,3'-Dichlorobenzidine	13.08	252	910729	98.96324	ppb	#	97
84)	Benz (a) anthracene	13.10	228	2808833	98.91745	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.13	149	2022285	95.61439	ppb		96
86)	Chrysene	13.14	228	2799507	102.55881	ppb		98
87)	Di-n-octylphthalate	13.85	149	3529346	94.16713	ppb	#	93
89)	Benzo (b) fluoranthene	14.30	252	3038345	89.45009	ppb		99
90)	Benzo (k) fluoranthene	14.33	252	2973702	91.55930	ppb		100
91)	Benzo (a) pyrene	14.69	252	2841755	88.83710	ppb		97
92)	Indeno (1,2,3-cd) pyrene	16.31	276	2782713	76.44997	ppb		95
93)	Dibenz (a,h) anthracene	16.34	278	2299501	74.25478	ppb		97
94)	Benzo (g,h,i) perylene	16.78	276	2235653	72.61835	ppb		99

(#) = qualifier out of range (m) = manual integration

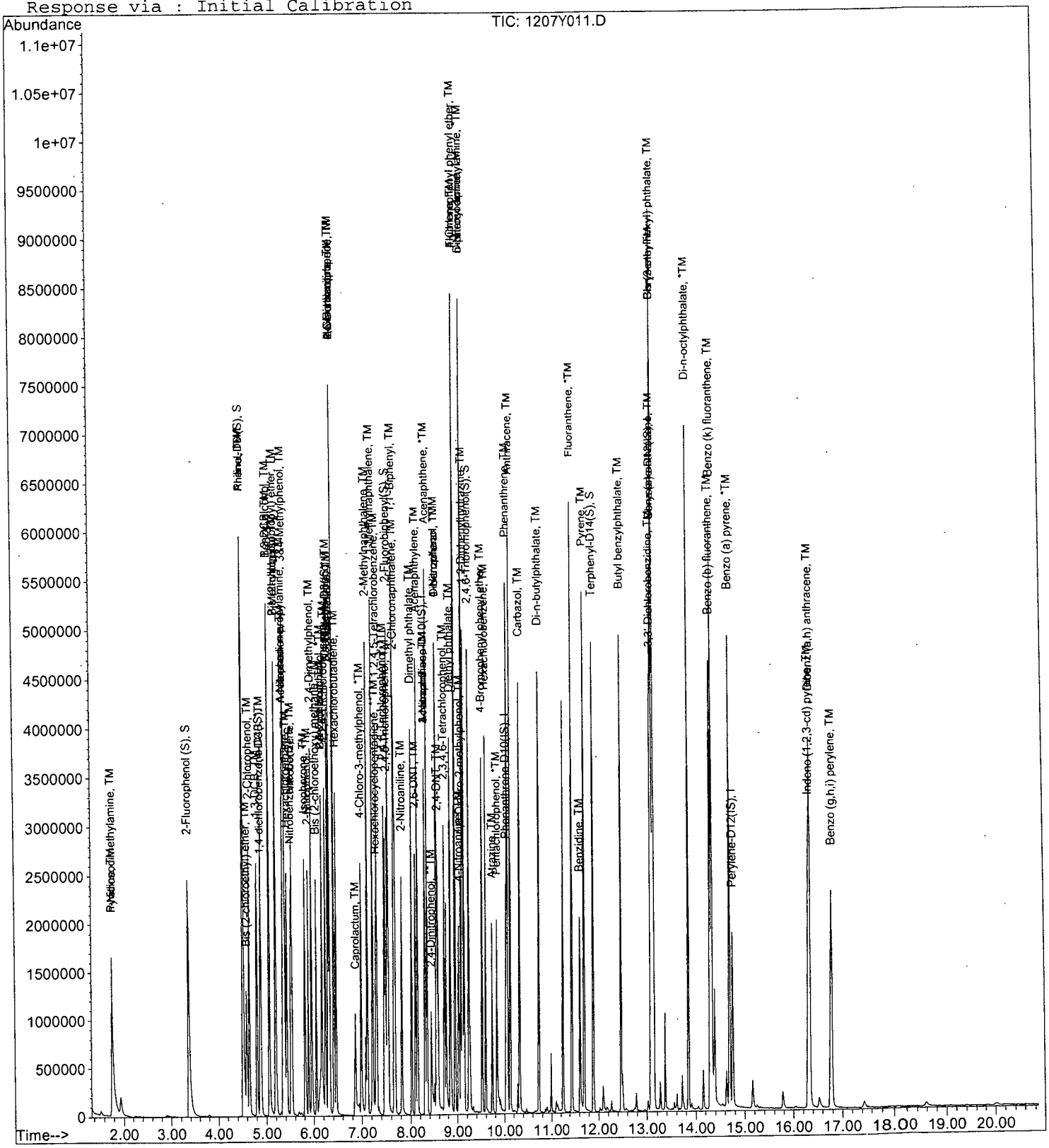
Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y011.D
Acq On : 7 Dec 16 13:32
Sample : 100ug/ml SVOC 12/06/16
Misc :

Vial: 11
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 7 Dec 16 14:01
Instrument: Yoda
Initial Cal. Date: 12/07/16
Data File: 1207Y012.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	n-Nitrosodimethylamine	0.7942	0.8605	8.3	TM	
2	TM	Pyridine	1.794	2.065	15	TM	
3	*TM	Phenol	1.974	1.961	0.64	*TM	
4	TM	Aniline	1.868	1.717	8.1	TM	
5	TM	Bis (2-chloroethyl) ether	0.8648	0.9372	8.4	TM	
6	TM	2-Chlorophenol	1.576	1.492	5.4	TM	
7	TM	1,3-DCB	1.630	1.713	5.1	TM	
8	*TM	1,4-DCB	1.679	1.836	9.3	*TM	
9	TM	Benzyl alcohol	0.8717	0.9544	9.5	TM	
10	TM	1,2-DCB	1.537	1.648	7.2	TM	
11	TM	2-Methylphenol	1.120	1.183	5.6	TM	
12	TM	Bis (2-chloroisopropyl) ether	1.723	1.964	14	TM	
13	TM	Acetophenone	2.044	2.282	12	TM	
14	TM	3&4-Methylphenol	1.484	1.588	7.0	TM	
15	**TM	n-Nitrosodi-n-propylamine	1.052	1.111	5.6	**TM	
16	TM	Hexachloroethane	0.6713	0.7583	13	TM	
17	TM	Nitrobenzene	0.4083	0.4146	1.5	TM	
18	TM	Isophorone	0.6762	0.7401	9.5	TM	
19	*TM	2-Nitrophenol	0.2038	0.1897	6.9	*TM	
20	TM	2,4-Dimethylphenol	0.3231	0.2928	9.4	TM	
21	TML	Benzoic acid	0.2159	0.3029	40	TML	19
22	TM	Bis (2-chloroethoxy) methane	0.3856	0.3755	2.6	TM	
23	*TM	2,4-Dichlorophenol	0.3079	0.3092	0.41	*TM	
24	TM	1,2,4-Trichlorobenzene	0.3349	0.3788	13	TM	
25	TM	3,4-Dimethylphenol	0.4947	0.4722	4.5	TM	
26	TM	Naphthalene	1.049	1.030	1.9	TM	
27	TM	4-Chloroaniline	0.3882	0.3699	4.7	TM	
28	TM	2,6-Dichlorophenol	0.2970	0.2844	4.3	TM	
29	TM	Hexachloropropene	0.2678	0.2625	2.0	TM	
30	*TM	Hexachlorobutadiene	0.2134	0.2282	7.0	*TM	
31	TM	Caprolactum	0.1543	0.1430	7.3	TM	
32	*TM	4-Chloro-3-methylphenol	0.3401	0.3273	3.8	*TM	
33	TM	2-Methylnaphthalene	0.6856	0.6921	0.95	TM	
34	TM	1-Methylnaphthalene	0.6763	0.6628	2.0	TM	
35	**TMQ	Hexachlorocyclopentadiene	0.1853	0.2606	41	**TMQ	12
36	TM	1,2,4,5-Tetrachlorobenzene	0.5436	0.5813	6.9	TM	
37	*TM	2,4,6-Trichlorophenol	0.3508	0.3628	3.4	*TM	
38	TM	2,4,5-Trichlorophenol	0.3829	0.4030	5.3	TM	
39	TM	1,1'-Biphenyl	1.499	1.521	1.5	TM	
40	TM	2-Chloronaphthalene	1.159	1.302	12	TM	
		Average			8.2		

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 7 Dec 16 14:01
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y012.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	2-Nitroaniline	0.3982	0.4094	2.8	TM	
42	TM	Dimethyl phthalate	1.391	1.370	1.6	TM	
43	TM	2,6-DNT	0.3141	0.3323	5.8	TM	
44	TM	Acenaphthylene	1.826	1.754	3.9	TM	
45	TM	3-Nitroaniline	0.3430	0.3329	2.9	TM	
46	*TM	Acenaphthene	1.156	1.094	5.3	*TM	
47	**TMQ	2,4-Dinitrophenol	0.1593	0.1353	15	**TMQ	15
48	**TML	4-Nitrophenol	0.2439	0.2731	12	**TML	5.3
49	TM	Dibenzofuran	1.639	1.588	3.1	TM	
50	TM	2,4-DNT	0.4436	0.4519	1.9	TM	
51	TM	2,3,4,6-Tetrachlorophenol	0.3114	0.3085	0.94	TM	
52	TM	Diethyl phthalate	1.432	1.360	5.0	TM	
53	TM	4-Chlorophenyl phenyl ether	0.6394	0.6265	2.0	TM	
54	TM	Fluorene	1.324	1.241	6.3	TM	
55	TM	4-Nitroaniline	0.3249	0.3379	4.0	TM	
56	TM	4,6-Dinitro-2-methylphenol	0.1486	0.1339	9.9	TM	
57	TM	Diphenyl amine	0.5706	0.5203	8.8	TM	
58	*TM	n-Nitrosodiphenylamine	0.5706	0.5203	8.8	*TM	
59	TM	1,2-Diphenylhydrazine	0.8211	0.7495	8.7	TM	
60	TM	4-Bromophenyl phenyl ether	0.2072	0.2226	7.4	TM	
61	TM	Hexachlorobenzene	0.2130	0.2500	17	TM	
62	TM	Atrazine	0.2062	0.2070	0.41	TM	
63	*TML	Pentachlorophenol	0.0958	0.0912	4.8	*TML	9.9
64	TM	Phenanthrene	1.080	1.064	1.5	TM	
65	TM	Anthracene	1.111	1.042	6.2	TM	
66	TM	Carbazol	1.005	0.8998	11	TM	
67	TM	Di-n-butylphthalate	1.292	1.202	6.9	TM	
68	*TM	Fluoranthene	1.189	1.119	5.8	*TM	
69	TM	Benzidine	0.4531	0.5340	18	TM	
70	TM	Pyrene	1.357	1.408	3.8	TM	
71	TM	Butyl benzylphthalate	0.6517	0.6327	2.9	TM	
72	TM	3,3'-Dichlorobenzidine	0.4273	0.4953	16	TM	
73	TM	Benz (a) anthracene	1.249	1.200	3.9	TM	
74	TM	Bis (2-ethylhexyl) phthalate	0.9136	0.9271	1.5	TM	
75	TM	Chrysene	1.213	1.146	5.5	TM	
76	*TM	Di-n-octylphthalate	1.614	1.629	0.92	*TM	
77	TM	Benzo (b) fluoranthene	1.250	1.211	3.2	TM	
78	TM	Benzo (k) fluoranthene	1.189	1.125	5.4	TM	
79	*TM	Benzo (a) pyrene	1.168	1.100	5.9	*TM	
80	TM	Indeno (1,2,3-cd) pyrene	1.293	1.302	0.66	TM	
		Average			5.9		

0
0

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 7 Dec 16 14:01
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y012.D

		Compound	MEAN	CCRF	%D	%Drift	
81	TM	Dibenz (a,h) anthracene	1.091	1.084	0.59	TM	
82	TM	Benzo (g,h,i) perylene	1.161	1.030	11	TM	
83							
84							
85							
86							
87							
88							
89							
90							
91							
92							
93							
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113							
114							
115							
116							
117							
118							
119							
120							
		Average			5.8		

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y012.D Vial: 12
Acq On : 7 Dec 16 14:01 Operator: MA
Sample : 2ND SRC SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 14:56 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	191057	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.30	136	871568	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	523606	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	1016944	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.11	240	899173	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.75	264	937926	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	0.00	112	0	0.00000 ppb	
Spiked Amount 200.000			Recovery	= 0.000%	
5) Phenol-D6 (S)	0.00	99	0	0.00000 ppb	
Spiked Amount 200.000			Recovery	= 0.000%	
21) Nitrobenzene-D5(S)	5.42	82	51167	5.79164 ppb	-0.08
Spiked Amount 100.000			Recovery	= 5.792%	
45) 2-Fluorobiphenyl(S)	7.54	172	1678	0.10166 ppb	0.00
Spiked Amount 100.000			Recovery	= 0.102%	
63) 2,4,6-Tribromophenol(S)	0.00	330	0	0.00000 ppb	
Spiked Amount 200.000			Recovery	= 0.000%	
81) Terphenyl-D14(S)	11.90	244	2267	0.11150 ppb	0.01
Spiked Amount 100.000			Recovery	= 0.111%	

Algorithm = $\frac{1121605 \times 1 \times 40}{871568 \times 1.049} = 49.07$ MA 12/8/16

Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.75	42	205505	54.17418 ppb	99
3) Pyridine	1.76	79	493077	57.53832 ppb	100
6) Phenol	4.52	94	468384	49.67907 ppb	97
7) Aniline	4.52	66	410130	45.96281 ppb	94
8) Bis (2-chloroethyl) ether	4.58	63	223817	54.18477 ppb	97
9) 2-Chlorophenol	4.65	128	356278	47.32243 ppb	98
10) 1,3-DCB	4.80	146	409122	52.55606 ppb	98
11) 1,4-DCB	4.89	146	438492	54.66182 ppb	100
12) Benzyl alcohol	5.05	108	227935	54.74642 ppb	89
13) 1,2-DCB	5.06	146	393642	53.62112 ppb	98
14) 2-Methylphenol	5.19	107	282490	52.81375 ppb	99
15) Bis (2-chloroisopropyl) et	5.19	45	468942	56.98498 ppb	99
16) Acetophenone	5.34	105	544879	55.81351 ppb	99
17) 3&4-Methylphenol	5.36	107	758574	107.00501 ppb	99
18) n-Nitrosodi-n-propylamine	5.35	70	265350	52.78586 ppb	98
19) Hexachloroethane	5.42	117	181096	56.48025 ppb	95
22) Nitrobenzene	5.52	77	451653	50.77125 ppb	99
23) Isophorone	5.79	82	806347	54.72642 ppb	92
24) 2-Nitrophenol	5.88	139	206638	46.54256 ppb	97
25) 2,4-Dimethylphenol	5.95	122	319047	45.32287 ppb	99
26) Benzoic acid	6.13	105	329992	59.40511 ppb	98
27) Bis (2-chloroethoxy) metha	6.04	93	409113	48.69541 ppb	99
28) 2,4-Dichlorophenol	6.16	162	336842	50.20680 ppb	95
29) 1,2,4-Trichlorobenzene	6.24	180	412682	56.55773 ppb	97
30) 3,4-Dimethylphenol	6.29	107	514459	47.73195 ppb	99
31) Naphthalene	6.32	128	1121605	49.06908 ppb	99
32) 4-Chloroaniline	6.40	127	402969	47.64010 ppb	98
33) 2,6-Dichlorophenol	6.41	162	309823	47.86782 ppb	99
34) Hexachloropropene	6.42	213	285981	49.00147 ppb	99
35) Hexachlorobutadiene	6.46	225	248647	53.48708 ppb	98
36) Caprolactum	6.83	55	155831	46.33822 ppb	95
37) 4-Chloro-3-methylphenol	6.98	107	356630	48.12038 ppb	86

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y012.D
Acq On : 7 Dec 16 14:01
Sample : 2ND SRC SVOC 12/06/16
Misc :

Vial: 12
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 7 14:56 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38) 2-Methylnaphthalene	7.11	142	754038	50.47743	ppb		99
39) 1-Methylnaphthalene	7.22	142	722080	48.99775	ppb		100
41) Hexachlorocyclopentadiene	7.29	237	170588	55.81613	ppb		99
42) 1,2,4,5-Tetrachlorobenzene	7.31	216	380472	53.46579	ppb		99
43) 2,4,6-Trichlorophenol	7.45	196	237475	51.71288	ppb		98
44) 2,4,5-Trichlorophenol	7.51	196	263784	52.63506	ppb		91
46) 1,1'-Biphenyl	7.65	154	995419	50.73149	ppb	#	98
47) 2-Chloronaphthalene	7.68	162	852397	56.20556	ppb		98
48) 2-Nitroaniline	7.81	65	267928	51.40520	ppb		97
49) Dimethyl phthalate	8.02	163	896431	49.21645	ppb		100
50) 2,6-DNT	8.10	165	217507	52.89516	ppb		97
51) Acenaphthylene	8.15	152	1148034	48.03874	ppb		99
52) 3-Nitroaniline	8.30	138	217900	48.53466	ppb		96
53) Acenaphthene	8.34	154	716245	47.33371	ppb		98
54) 2,4-Dinitrophenol	8.44	184	88575	42.42116	ppb		93
55) 4-Nitrophenol	8.54	65	178738	47.34341	ppb		99
56) Dibenzofuran	8.55	168	1039530	48.44636	ppb		100
57) 2,4-DNT	8.58	165	295792	50.93595	ppb		96
58) 2,3,4,6-Tetrachlorophenol	8.71	232	201912	49.52960	ppb		97
59) Diethyl phthalate	8.84	149	890442	47.50284	ppb		99
60) 4-Chlorophenyl phenyl ethe	8.95	204	410071	48.99615	ppb		97
61) Fluorene	8.95	166	811998	46.83909	ppb		99
62) 4-Nitroaniline	9.01	138	221182	52.00204	ppb		99
65) 4,6-Dinitro-2-methylphenol	9.05	198	170147	45.02904	ppb	#	63
66) Diphenyl amine	9.10	169	1322713	91.17623	ppb		99
67) n-Nitrosodiphenylamine	9.10	169	1322713	91.17623	ppb		99
68) 1,2-Diphenylhydrazine	9.13	77	952702	45.63842	ppb		98
69) 4-Bromophenyl phenyl ether	9.51	248	282914	53.71191	ppb		98
70) Hexachlorobenzene	9.59	284	317774	58.69445	ppb		95
71) Atrazine	9.73	200	131578	25.10242	ppb		95
72) Pentachlorophenol	9.84	266	115962	45.03845	ppb		95
73) Phenanthrene	10.06	178	1351927	49.22811	ppb		100
74) Anthracene	10.12	178	1325118	46.92467	ppb		99
75) Carbazol	10.32	167	1143768	44.74849	ppb		100
76) Di-n-butylphthalate	10.73	149	1528545	46.53939	ppb		100
77) Fluoranthene	11.44	202	1422850	47.07737	ppb		100
79) Benzidine	11.61	184	600230m	58.92898	ppb		99
80) Pyrene	11.70	202	1583034	51.91299	ppb		98
82) Butyl benzylphthalate	12.47	149	711172	48.54397	ppb		99
83) 3,3'-Dichlorobenzidine	13.08	252	556753	57.96756	ppb		98
84) Benz (a) anthracene	13.10	228	1348312	48.02891	ppb		100
85) Bis (2-ethylhexyl) phthala	13.13	149	1042054	50.73897	ppb		97
86) Chrysene	13.13	228	1288110	47.23790	ppb		98
87) Di-n-octylphthalate	13.85	149	1830661	50.46239	ppb		99
89) Benzo (b) fluoranthene	14.29	252	1419865	48.42384	ppb		99
90) Benzo (k) fluoranthene	14.32	252	1318653	47.28739	ppb		99
91) Benzo (a) pyrene	14.68	252	1289082	47.06095	ppb		99
92) Indeno (1,2,3-cd) pyrene	16.30	276	1526262	50.33221	ppb		99
93) Dibenz (a,h) anthracene	16.32	278	1271230	49.70488	ppb		99
94) Benzo (g,h,i) perylene	16.76	276	1208044	44.36041	ppb		99

(#) = qualifier out of range (m) = manual integration

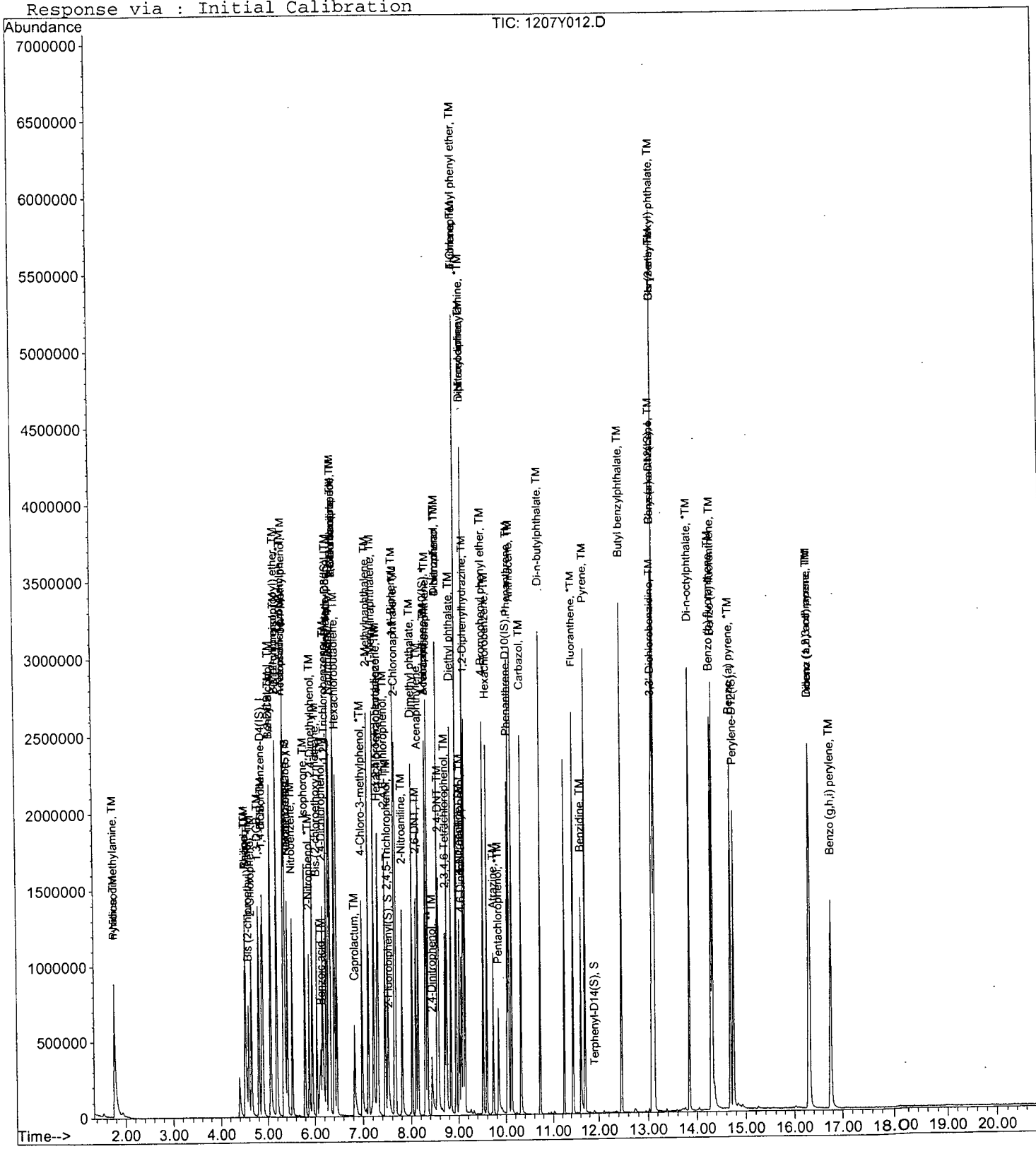
Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y012.D
Acq On : 7 Dec 16 14:01
Sample : 2ND SRC SVOC 12/06/16
Misc :

Vial: 12
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 7 14:56 2016 Quant Results File: Y1207.RES

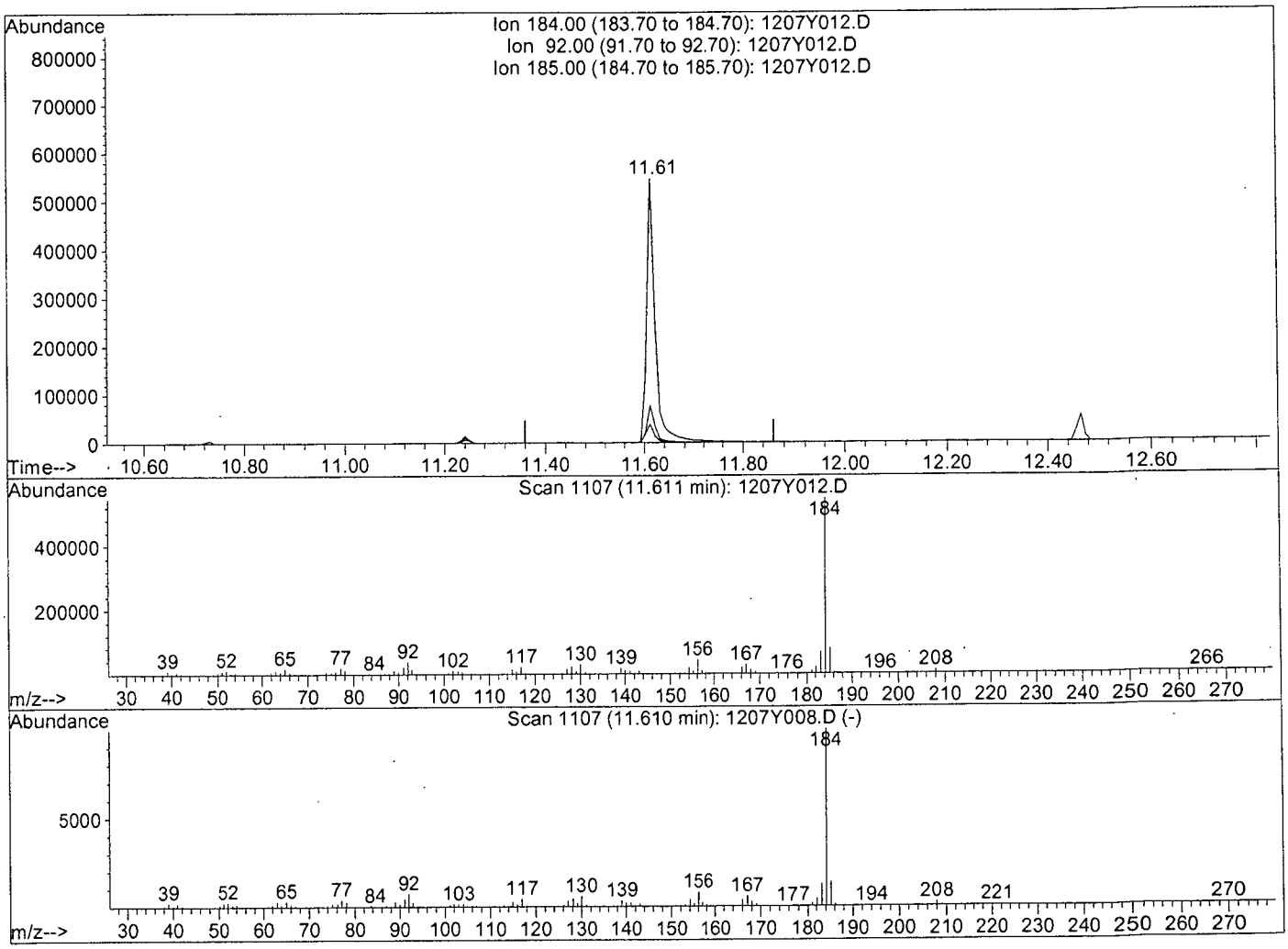
Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y012.D Vial: 12
Acq On : 7 Dec 16 14:01 Operator: MA
Sample : 2ND SRC SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Dec 7 14:46 2016 Quant Results File: temp.res

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Multiple Level Calibration



TIC: 1207Y012.D

(79) Benzidine (TM)

11.61min 62.5480ppb

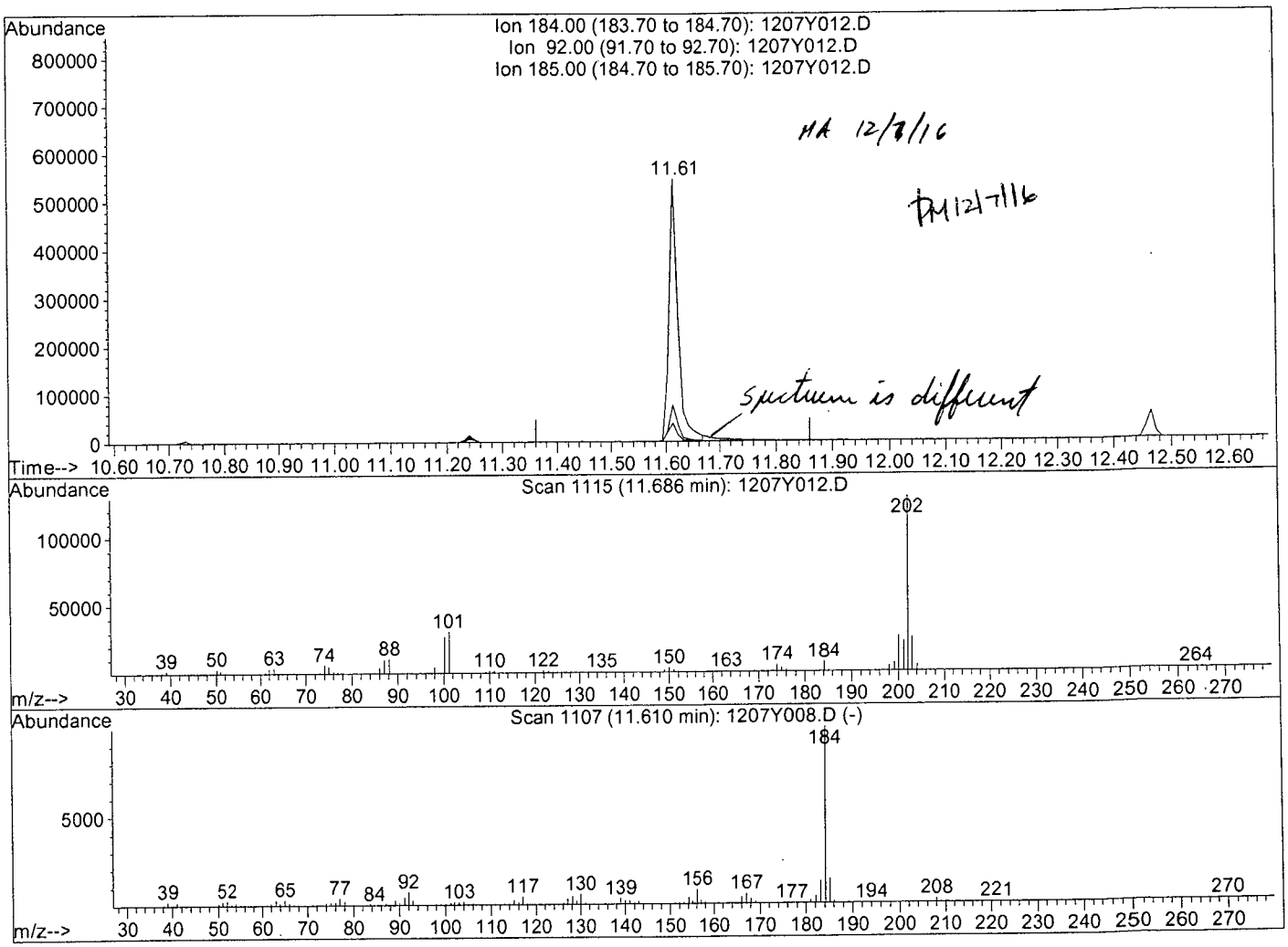
response 637092

Ion	Exp%	Act%
184.00	100	100
92.00	7.20	7.03
185.00	13.80	14.19
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y012.D Vial: 12
Acq On : 7 Dec 16 14:01 Operator: MA
Sample : 2ND SRC SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Dec 7 14:56 2016 Quant Results File: temp.res

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Multiple Level Calibration



TIC: 1207Y012.D

(79) Benzidine (TM)

11.61min 58.9290ppb m

response 600230

Ion	Exp%	Act%
184.00	100	100
92.00	7.20	7.03
185.00	13.80	14.19
0.00	0.00	0.00

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/21/16
Instrument: Yoda
Initial Cal. Date: 12/07/16
Data File: 1207Y172.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	n-Nitrosodimethylamine	0.7942	0.8748	10	TM	
3	TM	Pyridine	1.794	1.691	5.8	TM	
4	S	2-Fluorophenol (S)	1.316	1.325	0.70	S	
5	S	Phenol-D6 (S)	1.737	1.639	5.6	S	
6	*TM	Phenol	1.974	1.974	0.01	*TM	
7	TM	Aniline	1.868	1.802	3.5	TM	
8	TM	Bis (2-chloroethyl) ether	0.8648	0.9093	5.2	TM	
9	TM	2-Chlorophenol	1.576	1.508	4.3	TM	
10	TM	1,3-DCB	1.630	1.586	2.7	TM	
11	*TM	1,4-DCB	1.679	1.594	5.1	*TM	
12	TM	Benzyl alcohol	0.8717	0.8766	0.56	TM	
13	TM	1,2-DCB	1.537	1.439	6.4	TM	
14	TM	2-Methylphenol	1.120	1.102	1.6	TM	
15	TM	Bis (2-chloroisopropyl) ether	1.723	1.887	9.5	TM	
16	TM	Acetophenone	2.044	1.983	3.0	TM	
17	TM	3&4-Methylphenol	1.484	1.462	1.5	TM	
18	**TM	n-Nitrosodi-n-propylamine	1.052	1.060	0.71	**TM	
19	TM	Hexachloroethane	0.6713	0.6551	2.4	TM	
20	I	Napthalene-D8(IS)	ISTD			I	
21	S	Nitrobenzene-D5(S)	0.4055	0.3989	1.6	S	
22	TM	Nitrobenzene	0.4083	0.4123	0.98	TM	
23	TM	Isophorone	0.6762	0.6823	0.89	TM	
24	*TM	2-Nitrophenol	0.2038	0.2119	4.0	*TM	
25	TM	2,4-Dimethylphenol	0.3231	0.3193	1.2	TM	
26	TML	Benzoic acid	0.2159	0.2669	24	TML	5.6
27	TM	Bis (2-chloroethoxy) methane	0.3856	0.4035	4.6	TM	
28	*TM	2,4-Dichlorophenol	0.3079	0.3128	1.6	*TM	
29	TM	1,2,4-Trichlorobenzene	0.3349	0.3308	1.2	TM	
30	TM	3,4-Dimethylphenol	0.4947	0.4663	5.7	TM	
31	TM	Naphthalene	1.049	1.053	0.34	TM	
32	TM	4-Chloroaniline	0.3882	0.3839	1.1	TM	
33	TM	2,6-Dichlorophenol	0.2970	0.2757	7.2	TM	
34	TM	Hexachloropropene	0.2678	0.2479	7.4	TM	
35	*TM	Hexachlorobutadiene	0.2134	0.2011	5.8	*TM	
36	TM	Caprolactum	0.1543	0.1724	12	TM	
37	*TM	4-Chloro-3-methylphenol	0.3401	0.3450	1.4	*TM	
38	TM	2-Methylnaphthalene	0.6856	0.6958	1.5	TM	
39	TM	1-Methylnaphthalene	0.6763	0.6789	0.37	TM	
40	I	Acenaphthene-D10(IS)	ISTD			I	
		Average			4.1		

0
0

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/21/16
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y172.D

		Compound	MEAN	CCRF	%D		%Drift
41	**TMQ	Hexachlorocyclopentadiene	0.1853	0.1879	1.4	**TMQ	13
42	TM	1,2,4,5-Tetrachlorobenzene	0.5436	0.5298	2.5	TM	
43	*TM	2,4,6-Trichlorophenol	0.3508	0.3604	2.7	*TM	
44	TM	2,4,5-Trichlorophenol	0.3829	0.3736	2.4	TM	
45	S	2-Fluorobiphenyl(S)	1.261	1.193	5.4	S	
46	TM	1,1'-Biphenyl	1.499	1.469	2.0	TM	
47	TM	2-Chloronaphthalene	1.159	1.138	1.8	TM	
48	TM	2-Nitroaniline	0.3982	0.3969	0.33	TM	
49	TM	Dimethyl phthalate	1.391	1.348	3.1	TM	
50	TM	2,6-DNT	0.3141	0.3095	1.5	TM	
51	TM	Acenaphthylene	1.826	1.820	0.30	TM	
52	TM	3-Nitroaniline	0.3430	0.3420	0.27	TM	
53	*TM	Acenaphthene	1.156	1.103	4.6	*TM	
54	**TMQ	2,4-Dinitrophenol	0.1593	0.1780	12	**TMQ	5.1
55	**TML	4-Nitrophenol	0.2439	0.2577	5.6	**TML	10
56	TM	Dibenzofuran	1.639	1.579	3.7	TM	
57	TM	2,4-DNT	0.4436	0.4472	0.82	TM	
58	TM	2,3,4,6-Tetrachlorophenol	0.3114	0.3193	2.5	TM	
59	TM	Diethyl phthalate	1.432	1.366	4.6	TM	
60	TM	4-Chlorophenyl phenyl ether	0.6394	0.6020	5.8	TM	
61	TM	Fluorene	1.324	1.235	6.7	TM	
62	TM	4-Nitroaniline	0.3249	0.3350	3.1	TM	
63	S	2,4,6-Tribromophenol(S)	0.2006	0.1819	9.3	S	
64	I	Phenanthrene-D10(IS)	ISTD			I	
65	TM	4,6-Dinitro-2-methylphenol	0.1486	0.1527	2.8	TM	
66	TM	Diphenyl amine	0.5706	0.5348	6.3	TM	
67	*TM	n-Nitrosodiphenylamine	0.5706	0.5348	6.3	*TM	
68	TM	1,2-Diphenylhydrazine	0.8211	0.7697	6.3	TM	
69	TM	4-Bromophenyl phenyl ether	0.2072	0.2099	1.3	TM	
70	TM	Hexachlorobenzene	0.2130	0.2126	0.14	TM	
71	TM	Atrazine	0.2062	0.2075	0.65	TM	
72	*TML	Pentachlorophenol	0.0958	0.1026	7.1	*TML	0.17
73	TM	Phenanthrene	1.080	1.088	0.73	TM	
74	TM	Anthracene	1.111	1.115	0.35	TM	
75	TM	Carbazol	1.005	1.008	0.27	TM	
76	TM	Di-n-butylphthalate	1.292	1.270	1.7	TM	
77	*TM	Fluoranthene	1.189	1.199	0.83	*TM	
78	I	Chrysene-D12(IS)	ISTD			I	
79	TM	Benzidine	0.4531	0.4688	3.5	TM	
80	TM	Pyrene	1.357	1.260	7.2	TM	
		Average			3.4		

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/21/16
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y172.D

		Compound	MEAN	CCRF	%D		%Drift
81	S	Terphenyl-D14(S)	0.9045	0.8212	9.2	S	
82	TM	Butyl benzylphthalate	0.6517	0.5829	11	TM	
83	TM	3,3'-Dichlorobenzidine	0.4273	0.4273	0.00	TM	
84	TM	Benz (a) anthracene	1.249	1.184	5.2	TM	
85	TM	Bis (2-ethylhexyl) phthalate	0.9136	0.8344	8.7	TM	
86	TM	Chrysene	1.213	1.136	6.4	TM	
87	*TM	Di-n-octylphthalate	1.614	1.484	8.1	*TM	
88	I	Perylene-D12(IS)	ISTD			I	
89	TM	Benzo (b) fluoranthene	1.250	1.300	4.0	TM	
90	TM	Benzo (k) fluoranthene	1.189	1.094	8.0	TM	
91	*TM	Benzo (a) pyrene	1.168	1.146	1.9	*TM	
92	TM	Indeno (1,2,3-cd) pyrene	1.293	1.280	1.0	TM	
93	TM	Dibenz (a,h) anthracene	1.091	1.097	0.57	TM	
94	TM	Benzo (g,h,i) perylene	1.161	1.120	3.6	TM	
95							
96							
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			5.2		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y172.D
Acq On : 21 Dec 16 11:04
Sample : 50ug/ml SVOC 12/06/16
Misc : water

Vial: 72
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 21 11:19 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	205077	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.29	136	832706	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.30	164	509421	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	936226	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.11	240	924269	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.74	264	942225	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.35	112	679364	100.70268 ppb	0.00
Spiked Amount 200.000			Recovery =	50.352%	
5) Phenol-D6 (S)	4.50	99	840152	94.35615 ppb	0.00
Spiked Amount 200.000			Recovery =	47.178%	
21) Nitrobenzene-D5(S)	5.50	82	415237	49.19454 ppb	0.00
Spiked Amount 100.000			Recovery =	49.195%	
45) 2-Fluorobiphenyl(S)	7.53	172	759388	47.28688 ppb	0.00
Spiked Amount 100.000			Recovery =	47.287%	
63) 2,4,6-Tribromophenol(S)	9.23	330	231607	90.67524 ppb	0.00
Spiked Amount 200.000			Recovery =	45.338%	
81) Terphenyl-D14(S)	11.88	244	948718	45.39364 ppb	0.00
Spiked Amount 100.000			Recovery =	45.394%	
Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.75	42	224256	55.07570 ppb	97
3) Pyridine	1.76	79	433378	47.11457 ppb	94
6) Phenol	4.51	94	505932	49.99305 ppb	91
7) Aniline	4.51	66	462032	48.23953 ppb	96
8) Bis (2-chloroethyl) ether	4.59	63	233108	52.57597 ppb	98
9) 2-Chlorophenol	4.64	128	386516	47.82902 ppb	96
10) 1,3-DCB	4.79	146	406663	48.66880 ppb	99
11) 1,4-DCB	4.88	146	408723	47.46763 ppb	98
12) Benzyl alcohol	5.05	108	224709	50.28184 ppb	98
13) 1,2-DCB	5.05	146	368951	46.82191 ppb	99
14) 2-Methylphenol	5.19	107	282554	49.21431 ppb	94
15) Bis (2-chloroisopropyl) et	5.18	45	483769	54.76780 ppb	82
16) Acetophenone	5.33	105	508252	48.50252 ppb	99
17) 3&4-Methylphenol	5.36	107	749411	98.48549 ppb	95
18) n-Nitrosodi-n-propylamine	5.34	70	271702	50.35439 ppb	100
19) Hexachloroethane	5.41	117	167925	48.79206 ppb	92
22) Nitrobenzene	5.52	77	429118	50.48930 ppb	88
23) Isophorone	5.79	82	710143	50.44644 ppb	99
24) 2-Nitrophenol	5.88	139	220529	51.98947 ppb	95
25) 2,4-Dimethylphenol	5.94	122	332308	49.40981 ppb	99
26) Benzoic acid	6.13	105	277765	52.80481 ppb	93
27) Bis (2-chloroethoxy) metha	6.03	93	419964	52.31984 ppb	99
28) 2,4-Dichlorophenol	6.16	162	325608	50.79734 ppb	98
29) 1,2,4-Trichlorobenzene	6.24	180	344359	49.39665 ppb	97
30) 3,4-Dimethylphenol	6.29	107	485351	47.13288 ppb	99
31) Naphthalene	6.31	128	1095591	50.16791 ppb	100
32) 4-Chloroaniline	6.40	127	399636	49.45101 ppb	99
33) 2,6-Dichlorophenol	6.41	162	286963	46.40507 ppb	100
34) Hexachloropropene	6.42	213	258084	46.28525 ppb	98
35) Hexachlorobutadiene	6.45	225	209289	47.12178 ppb	99
36) Caprolactum	6.83	55	179488	55.86381 ppb	97
37) 4-Chloro-3-methylphenol	6.98	107	359150	50.72203 ppb	91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y172.D Vial: 72
Acq On : 21 Dec 16 11:04 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 21 11:19 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.10	142	724248	50.74589	ppb		97
39)	1-Methylnaphthalene	7.21	142	706633	50.18736	ppb		99
41)	Hexachlorocyclopentadiene	7.29	237	119670	43.54121	ppb		99
42)	1,2,4,5-Tetrachlorobenzene	7.31	216	337373	48.72943	ppb		98
43)	2,4,6-Trichlorophenol	7.45	196	229464	51.35978	ppb		98
44)	2,4,5-Trichlorophenol	7.51	196	237898	48.79162	ppb		93
46)	1,1'-Biphenyl	7.65	154	935658	49.01360	ppb		99
47)	2-Chloronaphthalene	7.67	162	724450	49.09910	ppb		99
48)	2-Nitroaniline	7.81	65	252706	49.83475	ppb		94
49)	Dimethyl phthalate	8.01	163	858469	48.44465	ppb		100
50)	2,6-DNT	8.10	165	197109	49.26936	ppb		91
51)	Acenaphthylene	8.14	152	1159096	49.85217	ppb		99
52)	3-Nitroaniline	8.29	138	217802	49.86369	ppb		98
53)	Acenaphthene	8.34	154	702539	47.72073	ppb		99
54)	2,4-Dinitrophenol	8.44	184	113316	52.52764	ppb		89
55)	4-Nitrophenol	8.54	65	164078	44.94397	ppb		93
56)	Dibenzofuran	8.54	168	1005243	48.15296	ppb		99
57)	2,4-DNT	8.57	165	284798	50.40837	ppb		92
58)	2,3,4,6-Tetrachlorophenol	8.71	232	203301	51.25898	ppb		96
59)	Diethyl phthalate	8.83	149	869539	47.67940	ppb		99
60)	4-Chlorophenyl phenyl ethe	8.94	204	383325	47.07581	ppb		99
61)	Fluorene	8.94	166	786666	46.64140	ppb		99
62)	4-Nitroaniline	9.01	138	213342	51.55547	ppb		89
65)	4,6-Dinitro-2-methylphenol	9.05	198	178737	51.38061	ppb		95
66)	Diphenyl amine	9.10	169	1251830	93.72980	ppb		98
67)	n-Nitrosodiphenylamine	9.10	169	1251830	93.72980	ppb		98
68)	1,2-Diphenylhydrazine	9.13	77	900761	46.87048	ppb		99
69)	4-Bromophenyl phenyl ether	9.51	248	245699	50.66825	ppb		99
70)	Hexachlorobenzene	9.59	284	248857	49.92808	ppb	#	73
71)	Atrazine	9.73	200	121419	25.16143	ppb		98
72)	Pentachlorophenol	9.83	266	120068	49.91299	ppb		99
73)	Phenanthrene	10.05	178	1273329	50.36362	ppb		99
74)	Anthracene	10.11	178	1304461	50.17578	ppb		99
75)	Carbazol	10.31	167	1179681	50.13273	ppb		99
76)	Di-n-butylphthalate	10.72	149	1486752	49.16968	ppb		99
77)	Fluoranthene	11.44	202	1402798	50.41555	ppb		98
79)	Benzidine	11.61	184	541623	51.73128	ppb		99
80)	Pyrene	11.70	202	1455181	46.42454	ppb		100
82)	Butyl benzylphthalate	12.46	149	673485	44.72326	ppb		92
83)	3,3'-Dichlorobenzidine	13.07	252	493619	49.99876	ppb		99
84)	Benz (a) anthracene	13.09	228	1368066	47.40937	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.13	149	963989	45.66341	ppb		98
86)	Chrysene	13.14	228	1312066	46.80995	ppb		99
87)	Di-n-octylphthalate	13.84	149	1714351	45.97318	ppb		97
89)	Benzo (b) fluoranthene	14.29	252	1531009	51.97612	ppb		99
90)	Benzo (k) fluoranthene	14.32	252	1288329	45.98917	ppb		97
91)	Benzo (a) pyrene	14.68	252	1350084	49.06309	ppb	#	97
92)	Indeno (1,2,3-cd) pyrene	16.30	276	1507431	49.48440	ppb		98
93)	Dibenz (a,h) anthracene	16.31	278	1292024	50.28743	ppb		98
94)	Benzo (g,h,i) perylene	16.76	276	1319302	48.22486	ppb		98

(#) = qualifier out of range (m) = manual integration

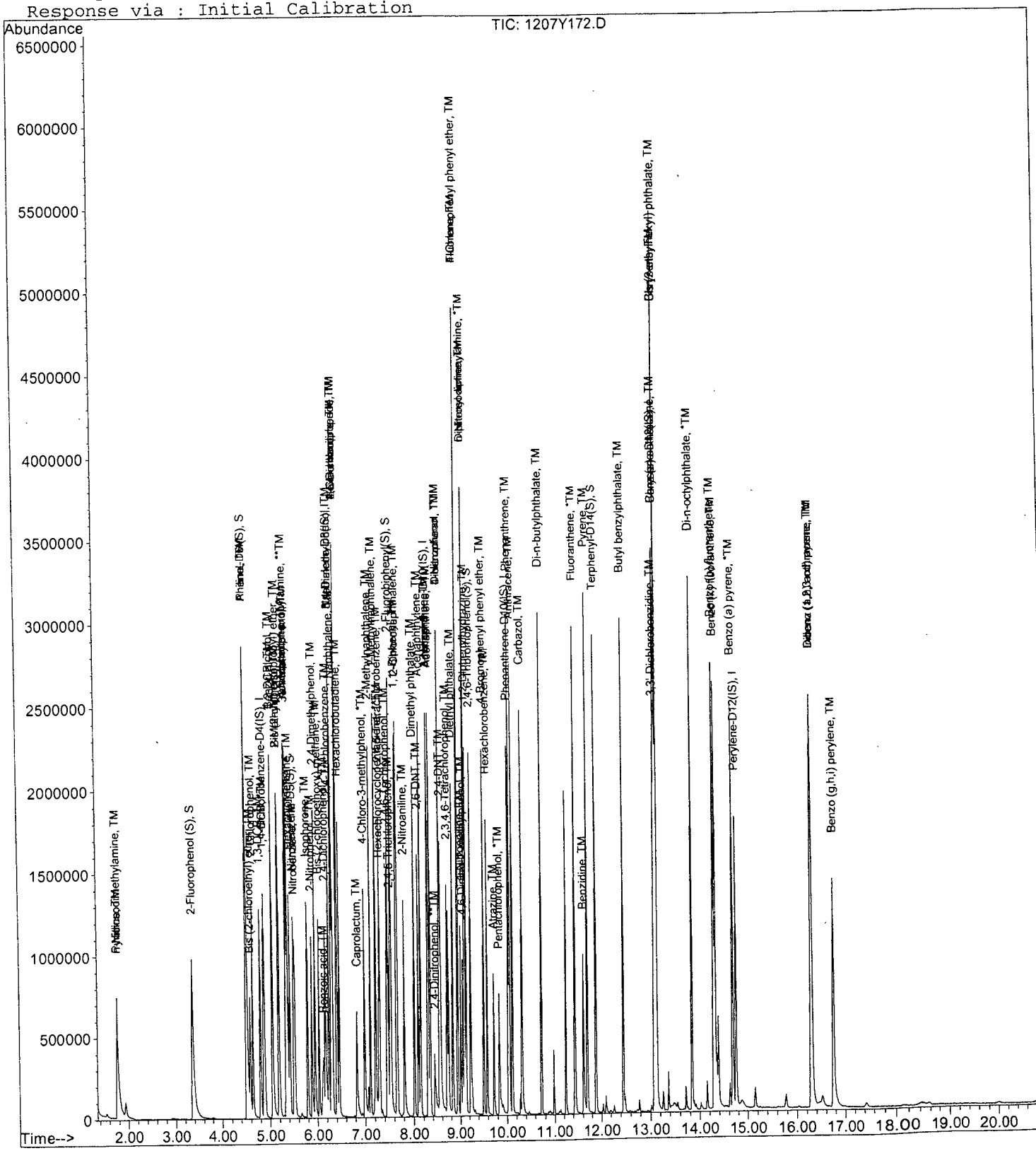
Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y172.D
Acq On : 21 Dec 16 11:04
Sample : 50ug/ml SVOC 12/06/16
Misc : water

Vial: 72
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 21 11:19 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



341

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Date Analyzed: 12/21/16

Matrix: Instrument: Yoda

Initial Cal. Date: 12/07/16

Data File: 1207Y191.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	n-Nitrosodimethylamine	0.7942	0.7971	0.37	TM	
3	TM	Pyridine	1.794	1.867	4.0	TM	
4	S	2-Fluorophenol (S)	1.316	1.434	9.0	S	
5	S	Phenol-D6 (S)	1.737	1.784	2.7	S	
6	*TM	Phenol	1.974	2.035	3.1	*TM	
7	TM	Aniline	1.868	1.862	0.32	TM	
8	TM	Bis (2-chloroethyl) ether	0.8648	0.9963	15	TM	
9	TM	2-Chlorophenol	1.576	1.579	0.17	TM	
10	TM	1,3-DCB	1.630	1.622	0.49	TM	
11	*TM	1,4-DCB	1.679	1.656	1.4	*TM	
12	TM	Benzyl alcohol	0.8717	0.8930	2.4	TM	
13	TM	1,2-DCB	1.537	1.546	0.59	TM	
14	TM	2-Methylphenol	1.120	1.137	1.5	TM	
15	TM	Bis (2-chloroisopropyl) ether	1.723	2.106	22	TM	
16	TM	Acetophenone	2.044	2.050	0.29	TM	
17	TM	3&4-Methylphenol	1.484	1.520	2.4	TM	
18	**TM	n-Nitrosodi-n-propylamine	1.052	1.101	4.6	**TM	
19	TM	Hexachloroethane	0.6713	0.6883	2.5	TM	
20	I	Napthalene-D8(IS)	ISTD			I	
21	S	Nitrobenzene-D5(S)	0.4055	0.4332	6.8	S	
22	TM	Nitrobenzene	0.4083	0.4276	4.7	TM	
23	TM	Isophorone	0.6762	0.7054	4.3	TM	
24	*TM	2-Nitrophenol	0.2038	0.2165	6.2	*TM	
25	TM	2,4-Dimethylphenol	0.3231	0.3286	1.7	TM	
26	TML	Benzoic acid	0.2159	0.2651	23	TML	5.0
27	TM	Bis (2-chloroethoxy) methane	0.3856	0.4093	6.2	TM	
28	*TM	2,4-Dichlorophenol	0.3079	0.3171	3.0	*TM	
29	TM	1,2,4-Trichlorobenzene	0.3349	0.3408	1.8	TM	
30	TM	3,4-Dimethylphenol	0.4947	0.4755	3.9	TM	
31	TM	Naphthalene	1.049	1.071	2.0	TM	
32	TM	4-Chloroaniline	0.3882	0.3764	3.0	TM	
33	TM	2,6-Dichlorophenol	0.2970	0.2759	7.1	TM	
34	TM	Hexachloropropene	0.2678	0.2446	8.7	TM	
35	*TM	Hexachlorobutadiene	0.2134	0.2051	3.9	*TM	
36	TM	Caprolactum	0.1543	0.1781	15	TM	
37	*TM	4-Chloro-3-methylphenol	0.3401	0.3435	0.99	*TM	
38	TM	2-Methylnaphthalene	0.6856	0.6980	1.8	TM	
39	TM	1-Methylnaphthalene	0.6763	0.6854	1.3	TM	
40	I	Acenaphthene-D10(IS)	ISTD			I	
		Average			4.8		

0
0

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 12/21/16
Matrix: 0 Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y191.D

		Compound	MEAN	CCRF	%D		%Drift
41	**TMQ	Hexachlorocyclopentadiene	0.1853	0.1860	0.38	**TMQ	14
42	TM	1,2,4,5-Tetrachlorobenzene	0.5436	0.5440	0.06	TM	
43	*TM	2,4,6-Trichlorophenol	0.3508	0.3586	2.2	*TM	
44	TM	2,4,5-Trichlorophenol	0.3829	0.3901	1.9	TM	
45	S	2-Fluorobiphenyl(S)	1.261	1.278	1.3	S	
46	TM	1,1'-Biphenyl	1.499	1.478	1.4	TM	
47	TM	2-Chloronaphthalene	1.159	1.180	1.8	TM	
48	TM	2-Nitroaniline	0.3982	0.4182	5.0	TM	
49	TM	Dimethyl phthalate	1.391	1.380	0.85	TM	
50	TM	2,6-DNT	0.3141	0.3221	2.5	TM	
51	TM	Acenaphthylene	1.826	1.843	0.93	TM	
52	TM	3-Nitroaniline	0.3430	0.3536	3.1	TM	
53	*TM	Acenaphthene	1.156	1.121	3.0	*TM	
54	**TMQ	2,4-Dinitrophenol	0.1593	0.1801	13	**TMQ	6.0
55	**TML	4-Nitrophenol	0.2439	0.2581	5.8	**TML	10.0
56	TM	Dibenzofuran	1.639	1.591	2.9	TM	
57	TM	2,4-DNT	0.4436	0.4525	2.0	TM	
58	TM	2,3,4,6-Tetrachlorophenol	0.3114	0.2995	3.8	TM	
59	TM	Diethyl phthalate	1.432	1.370	4.3	TM	
60	TM	4-Chlorophenyl phenyl ether	0.6394	0.6040	5.5	TM	
61	TM	Fluorene	1.324	1.218	8.0	TM	
62	TM	4-Nitroaniline	0.3249	0.3410	5.0	TM	
63	S	2,4,6-Tribromophenol(S)	0.2006	0.1888	5.9	S	
64	I	Phenanthrene-D10(IS)	ISTD			I	
65	TM	4,6-Dinitro-2-methylphenol	0.1486	0.1532	3.1	TM	
66	TM	Diphenyl amine	0.5706	0.5297	7.2	TM	
67	*TM	n-Nitrosodiphenylamine	0.5706	0.5297	7.2	*TM	
68	TM	1,2-Diphenylhydrazine	0.8211	0.9327	14	TM	
69	TM	4-Bromophenyl phenyl ether	0.2072	0.2070	0.09	TM	
70	TM	Hexachlorobenzene	0.2130	0.2123	0.31	TM	
71	TM	Atrazine	0.2062	0.2017	2.2	TM	
72	*TML	Pentachlorophenol	0.0958	0.0918	4.2	*TML	9.5
73	TM	Phenanthrene	1.080	1.079	0.09	TM	
74	TM	Anthracene	1.111	1.122	1.0	TM	
75	TM	Carbazol	1.005	1.020	1.4	TM	
76	TM	Di-n-butylphthalate	1.292	1.283	0.69	TM	
77	*TM	Fluoranthene	1.189	1.207	1.5	*TM	
78	I	Chrysene-D12(IS)	ISTD			I	
79	TM	Benzidine	0.4531	0.4796	5.8	TM	
80	TM	Pyrene	1.357	1.291	4.9	TM	
		Average			3.5		

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/21/16
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y191.D

		Compound	MEAN	CCRF	%D	%Drift	
81	S	Terphenyl-D14(S)	0.9045	0.8854	2.1	S	
82	TM	Butyl benzylphthalate	0.6517	0.6046	7.2	TM	
83	TM	3,3'-Dichlorobenzidine	0.4273	0.4464	4.5	TM	
84	TM	Benz (a) anthracene	1.249	1.194	4.4	TM	
85	TM	Bis (2-ethylhexyl) phthalate	0.9136	0.8143	11	TM	
86	TM	Chrysene	1.213	1.153	5.0	TM	
87	*TM	Di-n-octylphthalate	1.614	1.470	8.9	*TM	
88	I	Perylene-D12(IS)	ISTD			I	
89	TM	Benzo (b) fluoranthene	1.250	1.514	21	TM	
90	TM	Benzo (k) fluoranthene	1.189	1.552	30	TM	
91	*TM	Benzo (a) pyrene	1.168	1.470	26	*TM	
92	TM	Indeno (1,2,3-cd) pyrene	1.293	1.622	25	TM	
93	TM	Dibenz (a,h) anthracene	1.091	1.383	27	TM	
94	TM	Benzo (g,h,i) perylene	1.161	1.401	21	TM	
95							
96							
97							
98							
99							
100							
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109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			14.9		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y191.D Vial: 91
Acq On : 21 Dec 16 20:36 Operator: MA
Sample : 50ug/ml SVOC 12/16/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 22 8:41 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	196018	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.29	136	813286	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	489127	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.02	188	909600	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.11	240	882174	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.75	264	697962	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.35	112	702891	109.00526 ppb	0.00
Spiked Amount 200.000			Recovery	= 54.503%	
5) Phenol-D6 (S)	4.50	99	874370	102.73740 ppb	0.00
Spiked Amount 200.000			Recovery	= 51.369%	
21) Nitrobenzene-D5(S)	5.50	82	440377	53.41877 ppb	0.00
Spiked Amount 100.000			Recovery	= 53.419%	
45) 2-Fluorobiphenyl(S)	7.54	172	781295	50.66957 ppb	0.00
Spiked Amount 100.000			Recovery	= 50.670%	
63) 2,4,6-Tribromophenol(S)	9.23	330	230807	94.11118 ppb	0.00
Spiked Amount 200.000			Recovery	= 47.056%	
81) Terphenyl-D14(S)	11.89	244	976293	48.94206 ppb	0.00
Spiked Amount 100.000			Recovery	= 48.942%	
Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.75	42	195316	50.18510 ppb	98
3) Pyridine	1.76	79	457359	52.01955 ppb	95
6) Phenol	4.52	94	498654	51.55108 ppb	91
7) Aniline	4.52	66	456289	49.84160 ppb	94
8) Bis (2-chloroethyl) ether	4.58	63	244128	57.60613 ppb	93
9) 2-Chlorophenol	4.64	128	386855	50.08333 ppb	90
10) 1,3-DCB	4.80	146	397358	49.75296 ppb	99
11) 1,4-DCB	4.88	146	405666	49.28991 ppb	97
12) Benzyl alcohol	5.05	108	218800	51.22229 ppb	93
13) 1,2-DCB	5.06	146	378815	50.29544 ppb	98
14) 2-Methylphenol	5.19	107	278544	50.75803 ppb	96
15) Bis (2-chloroisopropyl) et	5.19	45	515970	61.11287 ppb	83
16) Acetophenone	5.33	105	502229	50.14273 ppb	99
17) 3&4-Methylphenol	5.36	107	744800	102.40304 ppb	100
18) n-Nitrosodi-n-propylamine	5.34	70	269830	52.31855 ppb	97
19) Hexachloroethane	5.42	117	168644	51.26556 ppb	87
22) Nitrobenzene	5.52	77	434734	52.37145 ppb	97
23) Isophorone	5.79	82	717088	52.15615 ppb	95
24) 2-Nitrophenol	5.88	139	220068	53.11962 ppb	90
25) 2,4-Dimethylphenol	5.95	122	334074	50.85849 ppb	93
26) Benzoic acid	6.13	105	269536	52.48935 ppb	96
27) Bis (2-chloroethoxy) metha	6.04	93	416110	53.07755 ppb	99
28) 2,4-Dichlorophenol	6.16	162	322349	51.48973 ppb	96
29) 1,2,4-Trichlorobenzene	6.24	180	346447	50.88283 ppb	98
30) 3,4-Dimethylphenol	6.29	107	483379	48.06226 ppb	98
31) Naphthalene	6.32	128	1088293	51.02368 ppb	100
32) 4-Chloroaniline	6.40	127	382634	48.47776 ppb	97
33) 2,6-Dichlorophenol	6.40	162	280485	46.44057 ppb	97
34) Hexachloropropene	6.41	213	248617	45.65210 ppb	99
35) Hexachlorobutadiene	6.46	225	208519	48.06947 ppb	98
36) Caprolactum	6.83	55	181066	57.70061 ppb	97
37) 4-Chloro-3-methylphenol	6.99	107	349219	50.49716 ppb	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y191.D Vial: 91
Acq On : 21 Dec 16 20:36 Operator: MA
Sample : 50ug/ml SVOC 12/16/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 22 8:41 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38) 2-Methylnaphthalene	7.11	142	709588	50.90591	ppb		99
39) 1-Methylnaphthalene	7.22	142	696733	50.66584	ppb		98
41) Hexachlorocyclopentadiene	7.28	237	113741	43.20709	ppb		99
42) 1,2,4,5-Tetrachlorobenzene	7.30	216	332593	50.03217	ppb		98
43) 2,4,6-Trichlorophenol	7.45	196	219224	51.10365	ppb		99
44) 2,4,5-Trichlorophenol	7.52	196	238503	50.94523	ppb		93
46) 1,1'-Biphenyl	7.65	154	903679	49.30249	ppb	#	97
47) 2-Chloronaphthalene	7.67	162	721348	50.91727	ppb		99
48) 2-Nitroaniline	7.81	65	255666	52.51035	ppb		98
49) Dimethyl phthalate	8.02	163	843467	49.57292	ppb		99
50) 2,6-DNT	8.10	165	196944	51.27060	ppb		85
51) Acenaphthylene	8.14	152	1126582	50.46412	ppb		99
52) 3-Nitroaniline	8.30	138	216207	51.55223	ppb		95
53) Acenaphthene	8.34	154	685358	48.48522	ppb		99
54) 2,4-Dinitrophenol	8.44	184	110123	53.02313	ppb		89
55) 4-Nitrophenol	8.55	65	157776	45.00364	ppb		98
56) Dibenzofuran	8.55	168	972817	48.53313	ppb		94
57) 2,4-DNT	8.57	165	276680	51.00335	ppb		94
58) 2,3,4,6-Tetrachlorophenol	8.71	232	183101	48.08132	ppb		97
59) Diethyl phthalate	8.83	149	837783	47.84411	ppb		98
60) 4-Chlorophenyl phenyl ethe	8.95	204	369276	47.23207	ppb		87
61) Fluorene	8.95	166	744757	45.98869	ppb		98
62) 4-Nitroaniline	9.01	138	208520	52.48091	ppb		92
65) 4,6-Dinitro-2-methylphenol	9.05	198	174192	51.53986	ppb	#	68
66) Diphenyl amine	9.09	169	1204486	92.82487	ppb		98
67) n-Nitrosodiphenylamine	9.09	169	1204486	92.82487	ppb		98
68) 1,2-Diphenylhydrazine	9.13	77	1060476	56.79641	ppb		94
69) 4-Bromophenyl phenyl ether	9.51	248	235348	49.95435	ppb		86
70) Hexachlorobenzene	9.59	284	241371	49.84371	ppb		85
71) Atrazine	9.73	200	114652	24.45460	ppb		99
72) Pentachlorophenol	9.84	266	104323	45.26515	ppb		93
73) Phenanthrene	10.05	178	1227048	49.95375	ppb		99
74) Anthracene	10.12	178	1275610	50.50230	ppb		100
75) Carbazol	10.32	167	1159241	50.70617	ppb		96
76) Di-n-butylphthalate	10.73	149	1458769	49.65644	ppb		99
77) Fluoranthene	11.43	202	1372412	50.76731	ppb	#	97
79) Benzidine	11.61	184	528843	52.92087	ppb		99
80) Pyrene	11.70	202	1423148	47.56909	ppb		99
82) Butyl benzylphthalate	12.46	149	666695	46.38493	ppb		94
83) 3,3'-Dichlorobenzidine	13.08	252	492257	52.24003	ppb		99
84) Benz (a) anthracene	13.10	228	1316182	47.78782	ppb		100
85) Bis (2-ethylhexyl) phthala	13.12	149	897921	44.56342	ppb	#	96
86) Chrysene	13.13	228	1270985	47.50804	ppb		99
87) Di-n-octylphthalate	13.84	149	1621015	45.54450	ppb	#	89
89) Benzo (b) fluoranthene	14.29	252	1320719	60.52842	ppb		99
90) Benzo (k) fluoranthene	14.32	252	1353845	65.24099	ppb		99
91) Benzo (a) pyrene	14.68	252	1282544	62.92008	ppb		98
92) Indeno (1,2,3-cd) pyrene	16.30	276	1415208	62.71537	ppb		96
93) Dibenz (a,h) anthracene	16.32	278	1206910	63.41421	ppb		97
94) Benzo (g,h,i) perylene	16.76	276	1222608	60.33049	ppb		97

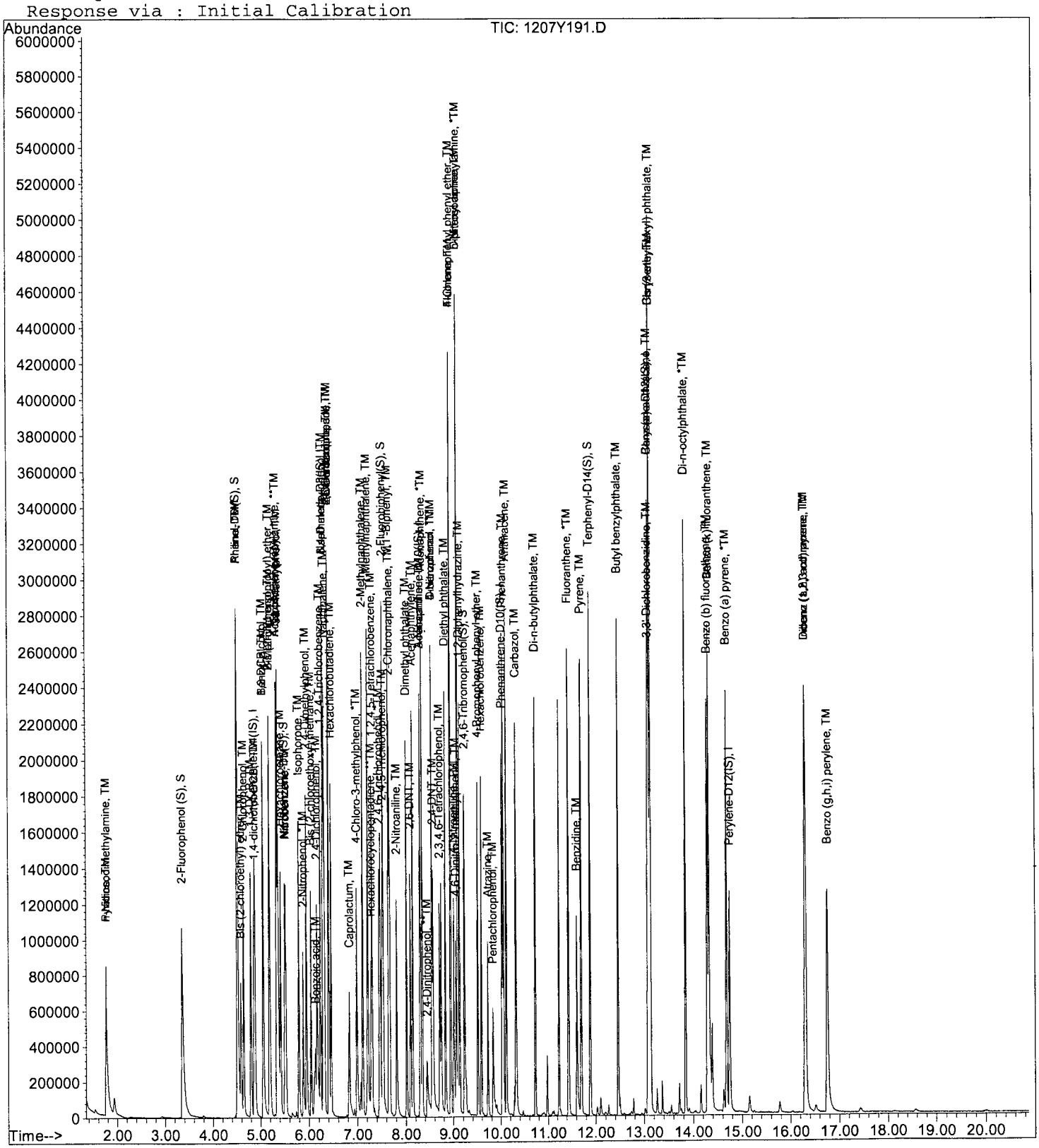
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y191.D Vial: 91
Acq On : 21 Dec 16 20:36 Operator: MA
Sample : 50ug/ml SVOC 12/16/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 22 8:41 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



ORGANICS

Raw Data

APPL, INC.

Method Blank
EPA 8270D WATER

Blank Name/QCG: **161219W-47494 - 214871**
Batch ID: #87DC5-161219A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	12/19/16	12/21/16
BLANK	SURROGATE: 2,4,6-TRIBROMOP	51.6	43-140			%	12/19/16	12/21/16
BLANK	SURROGATE: 2-FLUORBIPHENY	47.8	44-119			%	12/19/16	12/21/16
BLANK	SURROGATE: 2-FLUOROPHENO	40.4	19-119			%	12/19/16	12/21/16
BLANK	SURROGATE: NITROBENZENE-	49.3	44-120			%	12/19/16	12/21/16
BLANK	SURROGATE: PHENOL-D6 (S)	29.9	10-115			%	12/19/16	12/21/16
BLANK	SURROGATE: TERPHENYL-D14 (	52.5	50-134			%	12/19/16	12/21/16

Quant Method:Y1207.M
Run #:1207Y183
Instrument:Yoda
Sequence:Y161207
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 12/21/16 5:03:56 PM

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y183.D Vial: 83
Acq On : 21 Dec 16 16:36 Operator: MA
Sample : 161219A BLK 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 21 16:57 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	210296	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.29	136	912750	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.30	164	525703	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	970707	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.10	240	955795	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.75	264	965499	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.34	112	558808	80.77687 ppb	0.00
Spiked Amount 200.000			Recovery =	40.389%	
5) Phenol-D6 (S)	4.50	99	545375	59.73014 ppb	0.00
Spiked Amount 200.000			Recovery =	29.865%	
21) Nitrobenzene-D5(S)	5.50	82	456385	49.32784 ppb	0.00
Spiked Amount 100.000			Recovery =	49.328%	
45) 2-Fluorobiphenyl(S)	7.54	172	792004	47.79041 ppb	0.00
Spiked Amount 100.000			Recovery =	47.790%	
63) 2,4,6-Tribromophenol(S)	9.23	330	272263	103.29090 ppb	0.00
Spiked Amount 200.000			Recovery =	51.646%	
81) Terphenyl-D14(S)	11.88	244	1135613	52.54385 ppb	0.00
Spiked Amount 100.000			Recovery =	52.544%	

Target Compounds Qvalue

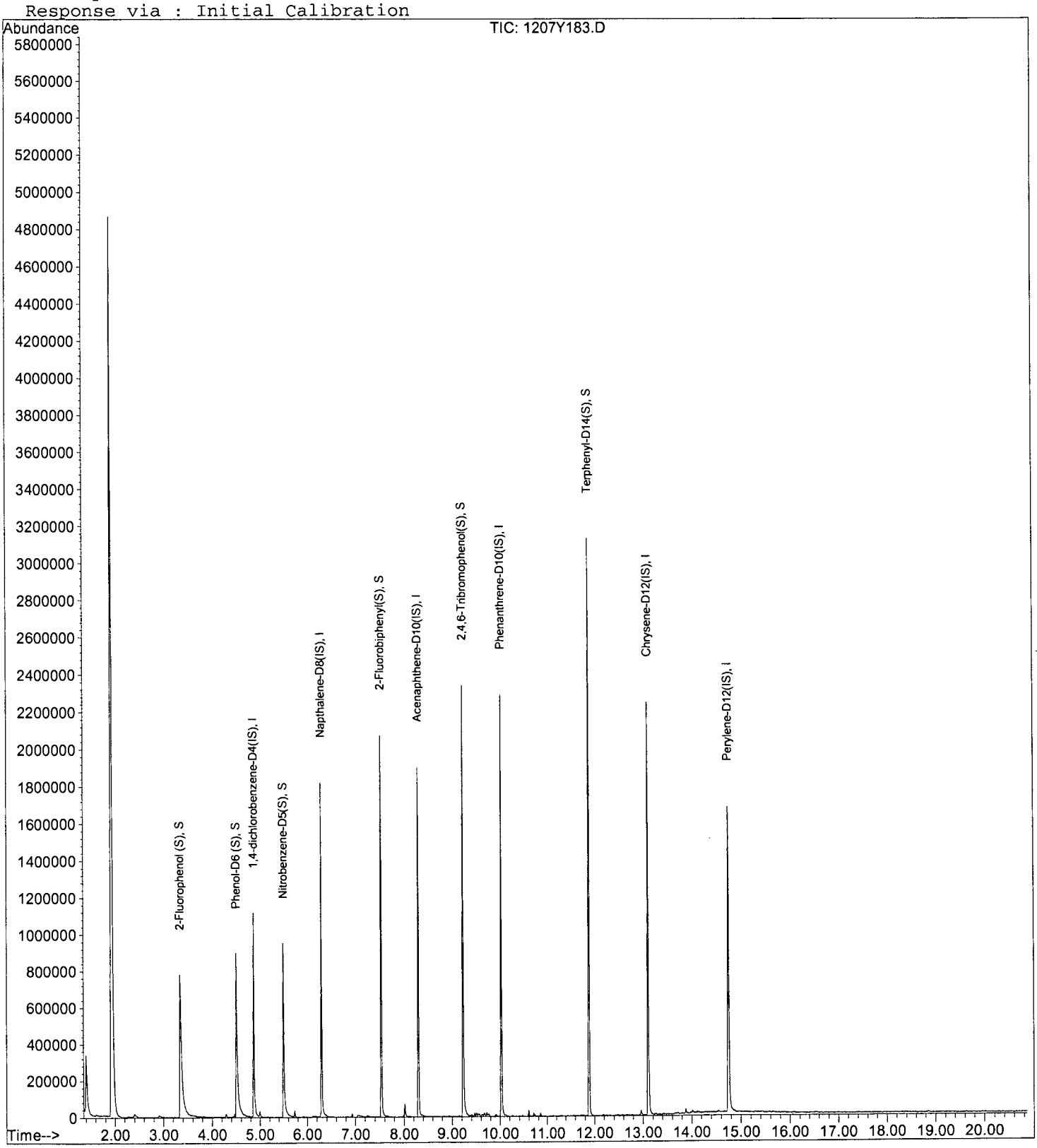
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y183.D Vial: 83
Acq On : 21 Dec 16 16:36 Operator: MA
Sample : 161219A BLK 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 21 16:57 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Laboratory Control Spike Recovery
EPA 8270D WATER

APPL ID: **161219W-47494 LCS - 214871**
Batch ID: #87DC5-161219A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
PHENOL	50.0	19.1	38.2	10-115
SURROGATE: 2,4,6-TRIBROMOPHENOL	200	150	75.0	43-140
SURROGATE: 2-FLUORBIPHENYL (S)	100	67.1	67.1	44-119
SURROGATE: 2-FLUOROPHENOL (S)	200	94.6	47.3	19-119
SURROGATE: NITROBENZENE-D5 (S)	100	71.1	71.1	44-120
SURROGATE: PHENOL-D6 (S)	200	60.6	30.3	10-115
SURROGATE: TERPHENYL-D14 (S)	100	73.5	73.5	50-134

Comments: _____

Primary	SPK
Quant Method :	Y1207.M
Extraction Date :	12/19/16
Analysis Date :	12/21/16
Instrument :	Yoda
Run :	1207Y174
Initials :	MA

Printed: 12/21/16 3:36:51 PM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y174.D Vial: 74
Acq On : 21 Dec 16 12:05 Operator: MA
Sample : 161219A LCS-1 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 21 12:23 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	219545	40.00000	ppb		0.00
20) Napthalene-D8(IS)	6.29	136	912040	40.00000	ppb		0.00
40) Acenaphthene-D10(IS)	8.31	164	545384	40.00000	ppb		0.00
64) Phenanthrene-D10(IS)	10.03	188	1018697	40.00000	ppb		0.00
78) Chrysene-D12(IS)	13.11	240	1003579	40.00000	ppb		0.00
88) Perylene-D12(IS)	14.75	264	1035620	40.00000	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol (S)	3.34	112	683032	94.57426	ppb		0.00
Spiked Amount 200.000			Recovery = 47.287%				
5) Phenol-D6 (S)	4.50	99	577647	60.59939	ppb		0.00
Spiked Amount 200.000			Recovery = 30.299%				
21) Nitrobenzene-D5(S)	5.50	82	657464	71.11654	ppb		0.00
Spiked Amount 100.000			Recovery = 71.117%				
45) 2-Fluorobiphenyl(S)	7.54	172	1154261	67.13600	ppb		0.00
Spiked Amount 100.000			Recovery = 67.136%				
63) 2,4,6-Tribromophenol(S)	9.24	330	410261	150.02779	ppb		0.00
Spiked Amount 200.000			Recovery = 75.014%				
81) Terphenyl-D14(S)	11.89	244	1667223	73.46803	ppb		0.00
Spiked Amount 100.000			Recovery = 73.468%				
Target Compounds							Qvalue
2) n-Nitrosodimethylamine	1.75	42	108118	24.80318	ppb		84
3) Pyridine	1.78	79	46333	4.70514	ppb		95
6) Phenol	4.52	94	207096	19.11536	ppb		98
7) Aniline	4.51	66	210512	20.53058	ppb	#	70
8) Bis (2-chloroethyl) ether	4.59	63	186256	39.24043	ppb		95
9) 2-Chlorophenol	4.64	128	291584	33.70397	ppb		96
10) 1,3-DCB	4.80	146	200904	22.45939	ppb		98
11) 1,4-DCB	4.88	146	213971	23.21222	ppb		97
12) Benzyl alcohol	5.05	108	163680	34.21210	ppb		100
13) 1,2-DCB	5.05	146	209322	24.81354	ppb		97
14) 2-Methylphenol	5.19	107	204000	33.19048	ppb		99
15) Bis (2-chloroisopropyl) et	5.18	45	391451	41.39597	ppb	#	68
16) Acetophenone	5.33	105	398398	35.51369	ppb		93
17) 3&4-Methylphenol	5.37	107	519073	63.71974	ppb		95
18) n-Nitrosodi-n-propylamine	5.34	70	223856	38.75312	ppb		99
19) Hexachloroethane	5.42	117	63387	17.20392	ppb		80
22) Nitrobenzene	5.52	77	340969	36.62818	ppb		92
23) Isophorone	5.79	82	600210	38.92833	ppb		99
24) 2-Nitrophenol	5.88	139	177082	38.11552	ppb		97
25) 2,4-Dimethylphenol	5.94	122	229321	31.13107	ppb		97
26) Benzoic acid	6.11	105	84379	17.48782	ppb		99
27) Bis (2-chloroethoxy) metha	6.04	93	348121	39.59701	ppb		98
28) 2,4-Dichlorophenol	6.16	162	262654	37.41172	ppb		97
29) 1,2,4-Trichlorobenzene	6.24	180	212638	27.84869	ppb		97
30) 3,4-Dimethylphenol	6.28	107	391132	34.67921	ppb		98
31) Naphthalene	6.32	128	808783	33.81329	ppb		99
32) 4-Chloroaniline	6.40	127	338642	38.25861	ppb		94
33) 2,6-Dichlorophenol	6.40	162	243376	35.93313	ppb		99
34) Hexachloropropene	6.41	213	99474	16.28804	ppb		97
35) Hexachlorobutadiene	6.46	225	84629	17.39692	ppb		95
36) Caprolactum	6.81	55	46180	13.12281	ppb		95
37) 4-Chloro-3-methylphenol	6.98	107	296635	38.24907	ppb		100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y174.D Vial: 74
Acq On : 21 Dec 16 12:05 Operator: MA
Sample : 161219A LCS-1 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 21 12:23 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.11	142	543355	34.75962	ppb		98
39)	1-Methylnaphthalene	7.22	142	541519	35.11494	ppb		99
41)	Hexachlorocyclopentadiene	7.29	237	26219	14.50691	ppb		98
42)	1,2,4,5-Tetrachlorobenzene	7.31	216	246982	33.32121	ppb		99
43)	2,4,6-Trichlorophenol	7.45	196	190428	39.81199	ppb		100
44)	2,4,5-Trichlorophenol	7.51	196	209311	40.09784	ppb		95
46)	1,1'-Biphenyl	7.65	154	746696	36.53573	ppb		98
47)	2-Chloronaphthalene	7.67	162	574696	36.38126	ppb		99
48)	2-Nitroaniline	7.81	65	219700	40.46888	ppb		84
49)	Dimethyl phthalate	8.02	163	801999	42.27362	ppb		99
50)	2,6-DNT	8.09	165	171041	39.93421	ppb		83
51)	Acenaphthylene	8.14	152	943818	37.91642	ppb		99
52)	3-Nitroaniline	8.29	138	181368	38.78445	ppb		92
53)	Acenaphthene	8.35	154	592460	37.58981	ppb		99
54)	2,4-Dinitrophenol	8.44	184	82575	38.89830	ppb		91
55)	4-Nitrophenol	8.57	65	67259	20.19782	ppb	#	49
56)	Dibenzofuran	8.54	168	865383	38.71994	ppb		91
57)	2,4-DNT	8.57	165	251289	41.54451	ppb	#	78
58)	2,3,4,6-Tetrachlorophenol	8.71	232	172298	40.57749	ppb		95
59)	Diethyl phthalate	8.84	149	807198	41.34245	ppb		96
60)	4-Chlorophenyl phenyl ethe	8.95	204	333888	38.30063	ppb	#	78
61)	Fluorene	8.94	166	675256	37.39591	ppb		99
62)	4-Nitroaniline	9.00	138	188372	42.51960	ppb		89
65)	4,6-Dinitro-2-methylphenol	9.05	198	156400	41.31970	ppb		88
66)	Diphenyl amine	9.10	169	1030496	70.91112	ppb		99
67)	n-Nitrosodiphenylamine	9.10	169	1030496	70.91112	ppb		99
68)	1,2-Diphenylhydrazine	9.13	77	947597	45.31575	ppb		97
69)	4-Bromophenyl phenyl ether	9.51	248	220243	41.74172	ppb	#	80
70)	Hexachlorobenzene	9.59	284	224761	41.44305	ppb	#	76
71)	Atrazine	9.73	200	118252	22.52127	ppb		97
72)	Pentachlorophenol	9.83	266	105330	41.39270	ppb		97
73)	Phenanthrene	10.05	178	1154729	41.97513	ppb		99
74)	Anthracene	10.12	178	1199766	42.41263	ppb		100
75)	Carbazol	10.31	167	1106469	43.21472	ppb		99
76)	Di-n-butylphthalate	10.72	149	1388548	42.20417	ppb		99
77)	Fluoranthene	11.44	202	1304314	43.08114	ppb	#	98
79)	Benzidine	11.63	184	32611	2.86858	ppb	#	91
80)	Pyrene	11.70	202	1346957	39.57594	ppb		99
82)	Butyl benzylphthalate	12.46	149	644983	39.44579	ppb		90
83)	3,3'-Dichlorobenzidine	13.07	252	396743	37.01037	ppb	#	99
84)	Benz (a) anthracene	13.09	228	1266705	40.42774	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.13	149	864006	37.69293	ppb		97
86)	Chrysene	13.14	228	1232264	40.48863	ppb		99
87)	Di-n-octylphthalate	13.84	149	1577149	38.95151	ppb	#	94
89)	Benzo (b) fluoranthene	14.29	252	1371985	42.37695	ppb	#	98
90)	Benzo (k) fluoranthene	14.32	252	1216973	39.52427	ppb		99
91)	Benzo (a) pyrene	14.68	252	1237137	40.90403	ppb	#	97
92)	Indeno (1,2,3-cd) pyrene	16.30	276	1392501	41.58920	ppb		96
93)	Dibenz (a,h) anthracene	16.31	278	1187442	42.04898	ppb		97
94)	Benzo (g,h,i) perylene	16.76	276	1199352	39.88666	ppb		98

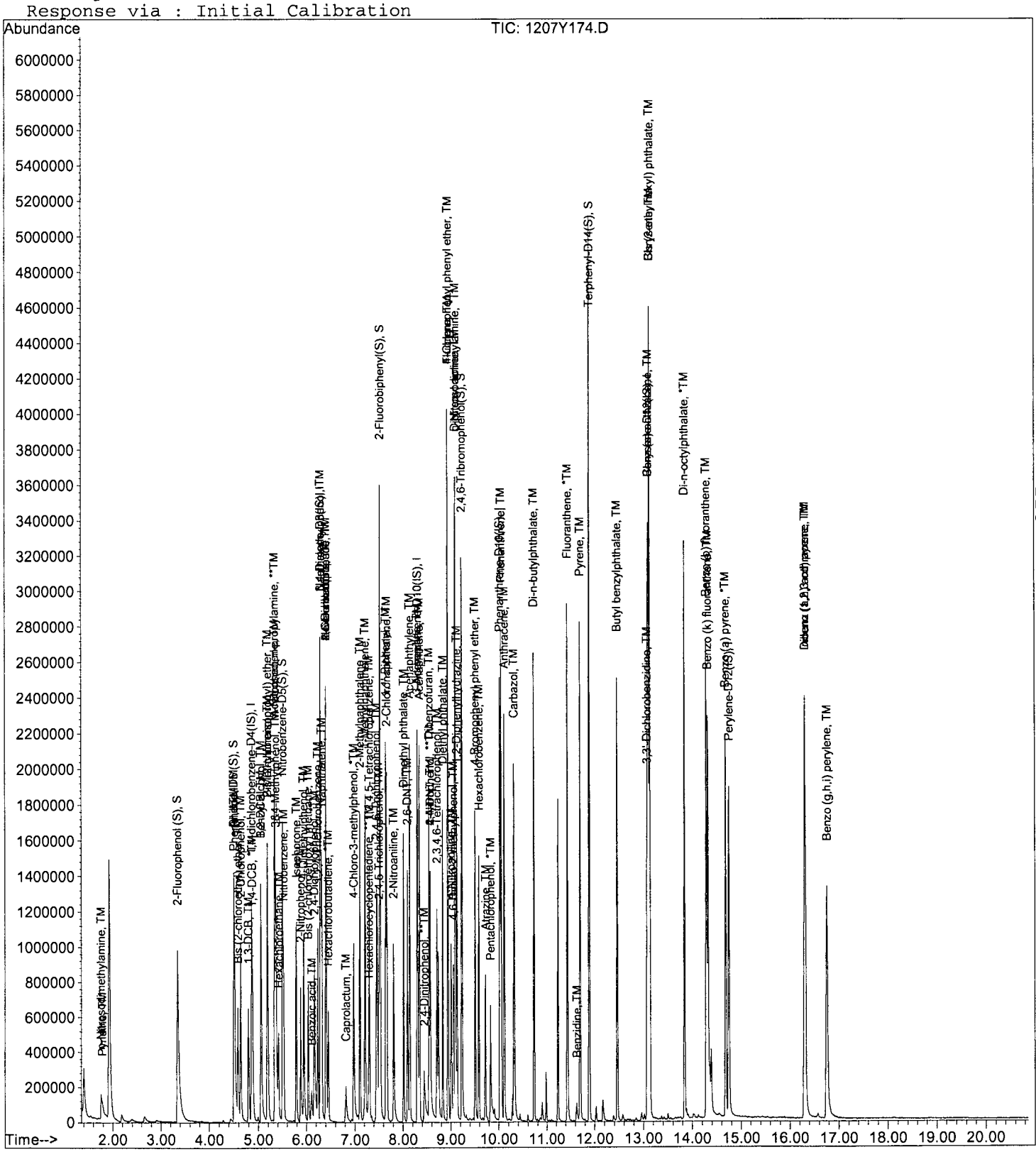
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y174.D Vial: 74
Acq On : 21 Dec 16 12:05 Operator: MA
Sample : 161219A LCS-1 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 21 12:23 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



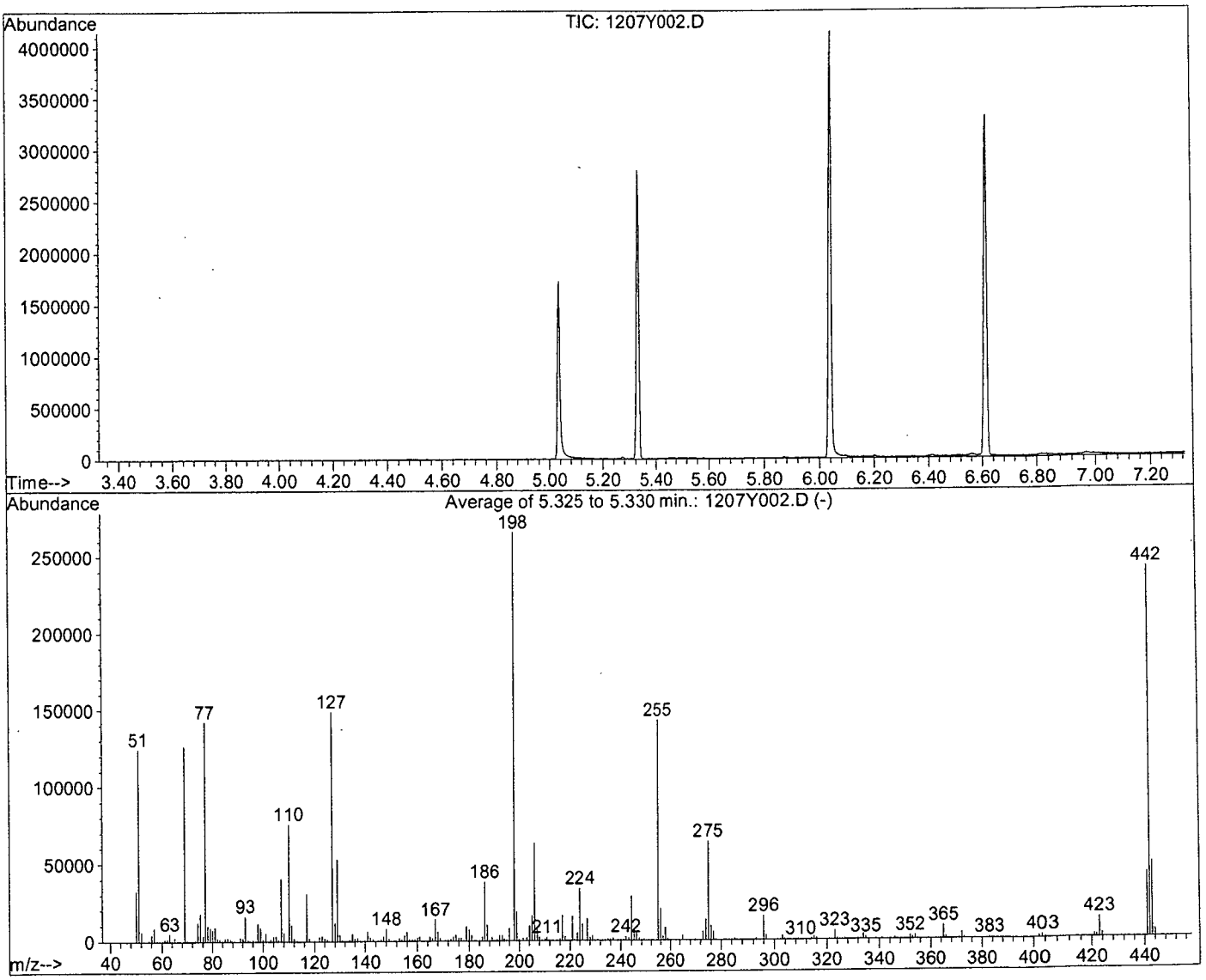
355

DFTPP

Data File : M:\YODA\DATA\Y161207\1207Y002.D
Acq On : 7 Dec 16 9:00
Sample : SV Tune 10/19/16
Misc :

Vial: 2
Operator: MA
Inst : Yoda
Multiplr: 1.00

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 696, 697, 698; Background Corrected with Scan 689

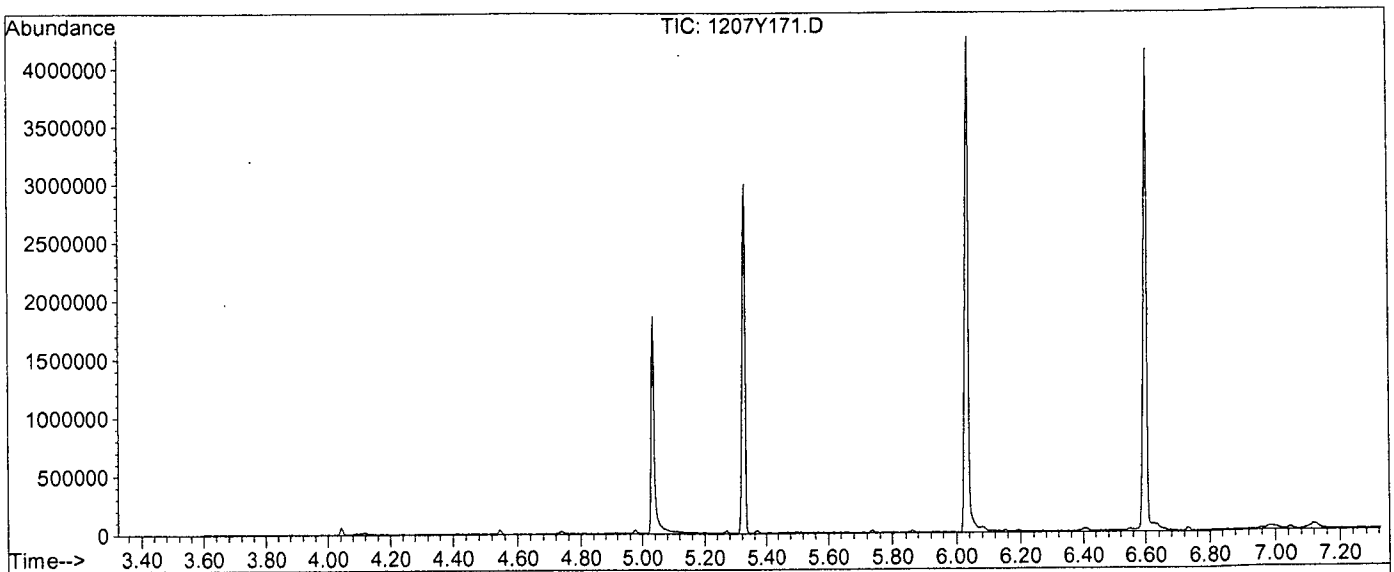
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	46.7	124269	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.7	911	PASS
127	198	40	60	56.0	148757	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	265856	PASS
199	198	5	9	6.9	18432	PASS
275	198	10	30	24.0	63789	PASS
365	198	1	100	3.1	8331	PASS
441	443	0.01	100	86.4	41829	PASS
442	198	50	150	90.6	240747	PASS
443	442	17	23	20.1	48427	PASS

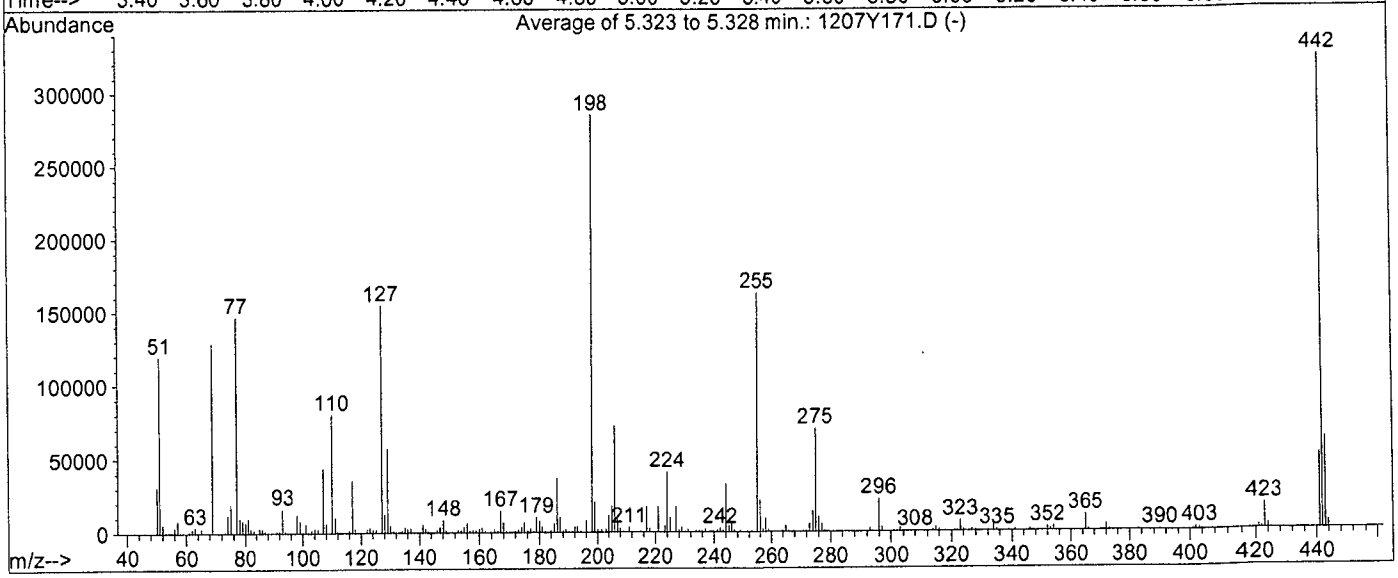
DFTPP

Data File : M:\YODA\DATA\Y161207\1207Y171.D
Acq On : 21 Dec 16 10:48
Sample : SV Tune 10/19/16
Misc : water

Vial: 71
Operator: MA
Inst : Yoda
Multiplr: 1.00

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C





AutoFind: Scans 694, 695, 696; Background Corrected with Scan 685

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	42.0	119629	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.3	385	PASS
127	198	40	60	54.2	154576	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	285141	PASS
199	198	5	9	7.2	20459	PASS
275	198	10	30	24.5	69829	PASS
365	198	1	100	3.9	11074	PASS
441	443	0.01	100	82.2	51024	PASS
442	198	50	150	113.7	324267	PASS
443	442	17	23	19.1	62093	PASS

1207Y171.D Y1207.M Wed Dec 21 10:52:03 2016

SV Internal Stanard Stock Prep: 10/19/16 RH EXP: 10/19/17						
		Conc.				
Supplier	ID #	µg/mL	Lot #	Open Date	Exp.Date	µL
Supleco	CRM48902	2000	XA14020V-36611	10/19/16	10/19/17	1000
					fin vol.	1000

8270 Full Scan Standard Curve

PREP DATE:	12/06/16 RH							
8270 Standard Curve								
Exp:	2/11/17					5	10	20
		Conc.		Date				
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL
Absolute	8270 Stock	200	VAR	11/15/16	11/15/16	5	5	10
o2si	8270 BN:A	200/400	277272-36400	6/20/16	12/20/16	5	5	10
EM Science	Methylene Chloride		56098			190	90	80
Supelco	SV Internal	2000	A14020V-3661	12/06/16	12/16/16	4	2	2
				Final Vol.		204	102	102

8270 Full Scan Second Source (SS)

PREP DATE:	12/06/16 RH					
Exp:	1/18/17	Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
o2si	8270 Stock S	200	VAR	07/08/16	07/08/17	25
EM Science	Methylene Chloride		56098			75
Supelco	SV Internal	2000	A14020V-3661	12/06/16	12/06/16	2
				Final Vol.		102

40	**50**	**60**	**80**	**100**
µL	µL	µL	µL	µL
20	50	30	40	50
20	50	30	40	50
60	100	40	20	0
2	4	2	2	2
102	204	102	102	102

8270 SVOC Stock 10mL						
8270 Stock/Spike Standard						
prep:	11/15/2016 RH					
Exp:	11/15/17					
		Conc.				
Supplier	ID #	µg/mL	Lot #	Open Date	Exp.Date	µL
Absolute	10001	2000	053014-37136	11/15/16	11/15/17	1000
Absolute	10002	2000	062216-37144	11/15/16	11/15/17	1000
Absolute	10004	2000	012516-37147	11/15/16	11/15/17	1000
Absolute	10005	2000	110314-36848	11/15/16	11/15/17	1000
Absolute	10006	2000	022416-36850	11/15/16	11/15/17	1000
Absolute	10007	2000	020515-36853	11/15/16	11/15/17	1000
Absolute	10018	2000	030216-37081	11/15/16	11/15/17	1000
Absolute	70023	1000	042716-36858	11/15/16	11/15/17	1000
Absolute	82705	2000	012516-36862	11/15/16	11/15/17	1000
Absolute	94552	2000	042016-36488	11/15/16	11/15/17	1000
				Final Vol.		10000

8270 Surrog Mix 100/200ppm						
Prep: 11/15/16 -RH Ex: 2/15/17						
STANDARD	**INITIAL CONC.**	**SOURCE DATE**	**ALIQUOT**	**FINAL VOL**	**FINAL CONC.**	**SOLVENT /LOT#**
8270 Acid Surrog Mix	10000 ug/ml	Restek Cat# 33029 Lot# A0118884-36875 Op: 11/15/16 EX: 11/15/17	2.0 mL	100 mL	200 ug/mL	MC
8270 B/N surrog Mix	5000 µg/mL	Restek Cat# 31086 Lot# A0119223-36871 Op: 11/15/16 EX: 11/15/17	2.0 mL	100 mL	100 ug/mL	MC

8270 Acid Surrog Stock 5000ppm						
Prep: 06/20/16 -LH Ex: 06/20/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
8270 Acid Surrog Mix	10,000 µg/mL	Restek Cat# 33029 Lot# A0115509-36718	10mL	20mL	5000 µg/ml	Acetone
	PREP:	06/20/16				
	Exp:	06/20/17				

8270 Surrog Mix 200/400ppm						
Prep: 06/20/16 -LH Ex: 12/20/16						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
8270 Acid Surrog Mix	5000 µg/mL	06/20/16	8.0mL	100 mL	400 µg/mL	MC
8270 B/N surrog Mix	5000 µg/mL	Restek Cat# 31086 Lot# A0119223-36720	4.0 mL	100 mL	200 ug/mL	MC
	PREP:	06/20/16				
	Exp:	12/20/16				

8270 Full Scan Second Source Stock						
	7/8/16 GA					
8270 Second Source Stock						
Exp:	07/08/17					
		Conc.		Date	Exp.	
Supplier	ID #	µg/mL	Lot #	Code	Date	µL
o2si	116070-02	2000	234696-35233	07/08/16	07/08/17	1000
o2si	110391-01	2000	252133-35880	07/08/16	07/08/17	1000
o2si	010337-01	1000	259144-35881	07/08/16	07/08/17	1000
o2si	110396-01	2000	252136-35882	07/08/16	07/08/17	1000
o2si	110397-01	2000	263077-35835	07/08/16	01/08/17	1000
o2si	110393-01	2000	252141-35248	07/08/16	07/08/17	1000
o2si	110394-01	2000	252143-35884	07/08/16	07/08/17	1000
o2si	**110395-01**	2000	252146-35885	07/08/16	07/08/17	1000
o2si	110392-01	2000	243259-35886	07/08/16	07/08/17	1000
Absolute	10006	2000	091115-35856	07/08/16	07/08/17	1000
				Final Vol.		10000

_SEP004

Organic Extraction Worksheet

Method	625/8270 Separatory Funnel Extra 3510C	Extraction Set	161219A	Extraction Method	SEP004	Units	mL

Spiked ID 1	8270T Spike 12-8-16 exp 12-8-17		Surrogate ID 1	8270 Surrogate 12-8-16 exp 3-8-17	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	12/19/16 15:50	
Spiked ID 8			Ext. End Time:	12/20/16 15:30	
			GC Requires Extract By:	12/21/16 0:00	

pH1	2	12/19/16 4:00:00 PM	Water Bath Temp Criteria	70,70 °C
pH2	14	12/19/16 6:00:00 PM		
pH3				

Spiked By: KY **Date** 12/19/16 **Witnessed By:** DL **Date** 12/19/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	161219A Blk				1	1	1000	1	2/1	12/19/16 15:50	
						equip	E-WB6				
2	161219A LCS-1		0.250	1	1	1	1000	1	2/1	12/19/16 15:50	
						equip	E-WB6				
3	161219A LCSD-1		0.250	1	1	1	1000	1	2/1	12/19/16 15:50	
						equip	E-WB6				
4	AZ47494	AZ47494W12			1	1	1070	1	2/1	12/19/16 15:50	81760 1 WEEK
						equip	E-WB6				
5	AZ47495	AZ47495W12			1	1	1070	1	2/1	12/19/16 15:50	81760 1 WEEK
						equip	E-WB5				
6	AZ47496	AZ47496W13			1	1	900	1	2/1	12/19/16 15:50	81760 1 WEEK
						equip	E-WB5				
7	AZ47497	AZ47497W10			1	1	1070	1	2/1	12/19/16 15:50	81760 1 WEEK
						equip	E-WB5				
8	AZ47498	AZ47498W14			1	1	1070	1	2/1	12/19/16 15:50	81760 1 WEEK
						equip	E-WB5				
9	AZ47658	AZ47658W12			1	1	1070	1	2/1	12/19/16 15:50	81776 1 WEEK
						equip	E-WB5				
10	AZ47659	AZ47659W08			1	1	1070	1	2/1	12/19/16 15:50	81776 1 WEEK
						equip	E-WB5				
11	AZ47660	AZ47660W12			1	1	1070	1	2/1	12/19/16 15:50	81776 1 WEEK
						equip	E-WB5				
12	AZ47661	AZ47661W08			1	1	1070	1	2/1	12/19/16 15:50	81776 1 WEEK
						equip	E-WB5				
13	AZ47662	AZ47662W08			1	1	1070	1	2/1	12/19/16 15:50	81776 1 WEEK
						equip	E-WB6				
14	AZ47663	AZ47663W10			1	1	1070	1	2/1	12/19/16 15:50	81776 1 WEEK
						equip	E-WB6				
15	AZ47664	AZ47664W10			1	1	1070	1	2/1	12/19/16 15:50	81776 1 WEEK
						equip	E-WB6				
16	AZ47665	AZ47665W14			1	1	1070	1	2/1	12/19/16 15:50	81776 1 WEEK
						equip	E-WB6				

Solvent and Lot#	
MC	56153
1+1 Sulfuric Acid	12-5-16
Acidified Na2SO4	11-3-16
B.Na2SO4	16C255214
10N NaOH	12-19-16
ph strips	HC 574756
Filter Paper	400112

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	RH
Date	12/20/16
Time	4:30
Refrigerator	GC-C

	Technician's Initials
Scanned By	KY
Sample Preparation	KY,JR,DL
Extraction	KY,JR,DL
Concentration	KY

Modified	12/20/16 4:03:00 PM

Reviewed By: **Date**

Injection Log

Directory: M:\YODA\DATA\Y161207\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	1207Y002.D	1	SV Tune 10/19/16		7 Dec 16 9:00
2	4	1207Y004.D	1	5ug/ml SVOC 12/06/16		7 Dec 16 10:01
3	5	1207Y005.D	1	10ug/ml SVOC 12/06/16		7 Dec 16 10:32
4	6	1207Y006.D	1	20ug/ml SVOC 12/06/16		7 Dec 16 11:02
5	7	1207Y007.D	1	40ug/ml SVOC 12/06/16		7 Dec 16 11:32
6	8	1207Y008.D	1	50ug/ml SVOC 12/06/16		7 Dec 16 12:02
7	9	1207Y009.D	1	60ug/ml SVOC 12/06/16		7 Dec 16 12:32
8	10	1207Y010.D	1	80ug/ml SVOC 12/06/16		7 Dec 16 13:02
9	11	1207Y011.D	1	100ug/ml SVOC 12/06/16		7 Dec 16 13:32
10	12	1207Y012.D	1	2ND SRC SVOC 12/06/16		7 Dec 16 14:01
11	71	1207Y171.D	1	SV Tune 10/19/16	water	21 Dec 16 10:48
12	72	1207Y172.D	1	50ug/ml SVOC 12/06/16	water	21 Dec 16 11:04
13	74	1207Y174.D	1	161219A LCS-1 1/1000	water	21 Dec 16 12:05
14	75	1207Y175.D	0.934579	AZ47494W12 1/1070	water	21 Dec 16 12:35
15	76	1207Y176.D	0.934579	AZ47495W12 1/1070	water	21 Dec 16 13:05
16	77	1207Y177.D	1.11111	AZ47496W13 1/900	water	21 Dec 16 13:35
17	79	1207Y179.D	0.934579	AZ47498W14 1/1070	water	21 Dec 16 14:35
18	80	1207Y180.D	0.934579	AZ47497W10 1/1070	water	21 Dec 16 15:05
19	83	1207Y183.D	1	161219A BLK 1/1000	water	21 Dec 16 16:36
20	91	1207Y191.D	1	50ug/ml SVOC 12/16/16	water	21 Dec 16 20:36

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank

EPA 8270D MODIFIED WATER

Blank Name/QCG: **161219W-47345 - 214859**
Batch ID: #87DME-161219A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2-(2-METHOXYETHOXY)-ETHAN	80.0 U	100	80.0	40.0	ug/L	12/19/16	12/20/16

Quant Method: Y0GLYCOL.
Run #: 1220Y013
Instrument: Yoda
Sequence: Y161220G
Initials: MA

GC SC-Blank-REG MDLs-DOD
Printed: 12/21/16 12:05:41 PM

Laboratory Control Spike Recovery
EPA 8270D MODIFIED WATER

APPL ID: **161219W-47345 LCS - 214859**
Batch ID: #87DME-161219A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
2-(2-METHOXYETHOXY)-ETHANOL	80.0	43.5	54.4	30-130

Comments: _____

Primary	SPK
Quant Method :	Y0GLYCOL.M
Extraction Date :	12/19/16
Analysis Date :	12/20/16
Instrument :	Yoda
Run :	1220Y017
Initials :	MA

Printed: 12/21/16 12:05:46 PM
APPL Standard LCS

EPA 8270D

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81760

Case No: 81760 Date Analyzed: 12/20/16

Matrix: WATER Instrument: Yoda

Blank ID: 161219A-BLK Time Analyzed: 1544

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161219A-BLK	Blank	1220Y013	12/20/16 1544
161219A-LCS	Lab Control Spike	1220Y017	12/20/16 1745
AZ47494	ERH139	1220Y020	12/20/16 1915
AZ47495	ERH136	1220Y021	12/20/16 1945
AZ47496	ERH143	1220Y022	12/20/16 2015
AZ47497	ERH145	1220Y023	12/20/16 2045
AZ47498	ERH146	1220Y024	12/20/16 2115

Comments: Batch: #87DME-161219A

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: ~~1220Y002.D~~ 81760
Matrix: Water mp 1-4-17
ID: SV Tune 11/15/16

SDG No: mp 1-4-17 ~~Yoda~~ 81760
Date Analyzed: 12/20/16
Instrument: Yoda
Time Analyzed: 9:12

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		50ug/ml DEG 11/22/16	1220Y003.D	12/20/16 9:32
2		100ug/ml DEG 11/22/1	1220Y004.D	12/20/16 10:02
3		200ug/ml DEG 11/22/1	1220Y005.D	12/20/16 11:27
4		400ug/ml DEG 11/22/1	1220Y006.D	12/20/16 11:57
5		500ug/ml DEG 11/22/1	1220Y007.D	12/20/16 12:27
6		600ug/ml DEG 11/22/1	1220Y008.D	12/20/16 12:57
7		800ug/ml DEG 11/22/1	1220Y009.D	12/20/16 13:28
8		1000ug/ml DEG 11/22/	1220Y010.D	12/20/16 13:58
9		SS2 DEG 11/22/16	1220Y011.D	12/20/16 15:01
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	44.4
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.0
127	40 - 60% of mass 198	53.6
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 197.95	100.0
199	5 - 9% of mass 198	6.3
275	10 - 30% of mass 198	21.8
365	1 - 100% of mass 198	3.0
441	0.01 - 100% of mass 443	85.0
442	50 - 150% of mass 197.95	98.0
443	17 - 23% of mass 442	19.1

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81760
Matrix: Water
ID: SV Tune 11/15/16

SDG No: 81760
Date Analyzed: 12/20/16
Instrument: Yoda
Time Analyzed: 15:27

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1	Blank	161219A BLK 2/500	1220Y013.D	12/20/16 15:44
2	Lab Control Spike	161219A LCS-1 2/500	1220Y017.D	12/20/16 17:45
3	ERH139	AZ47494W14 2/500	1220Y020.D	12/20/16 19:15
4	ERH136	AZ47495W10 2/500	1220Y021.D	12/20/16 19:45
5	ERH143	AZ47496W11 2/500	1220Y022.D	12/20/16 20:15
6	ERH145	AZ47497W14 2/500	1220Y023.D	12/20/16 20:45
7	ERH146	AZ47498W17 2/500	1220Y024.D	12/20/16 21:15
8		500ug/ml DEG 11/22/1	1220Y036.D	12/21/16 2:58
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	42.2
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.6
127	40 - 60% of mass 198	55.1
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 197.95	100.0
199	5 - 9% of mass 198	6.9
275	10 - 30% of mass 198	23.4
365	1 - 100% of mass 198	3.8
441	0.01 - 100% of mass 443	89.8
442	50 - 150% of mass 197.95	95.3
443	17 - 23% of mass 442	18.4

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81760

Lab File ID (Standard): 1220Y007.D Date Analyzed: 12/20/16

Instrument ID: Yoda Time Analyzed: 12:27

GC Column: ID: Heated Purge: (Y/N)

	1,4-dichlorobenzene-D4(IS)		Napthalene-D8(IS)		Acenaphthene-D10(IS)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	220710	4.87	916121	6.29	479952	8.31
UPPER LIMIT	441420	5.37	1832242	6.79	959904	8.81
LOWER LIMIT	110355	4.37	458061	5.79	239976	7.81
SAMPLE NO.						
01 SS2 DEG 11/22/16	226449	4.88	946039	6.29	498527	8.31
02 161219A BLK 2/500	207897	4.89	889234	6.30	498710	8.31
03 161219A LCS-1 2/500	189835	4.89	856510	6.30	471037	8.31
04 AZ47494W14 2/500	215563	4.87	940919	6.29	526684	8.31
05 AZ47495W10 2/500	208579	4.89	921217	6.30	531618	8.30
06 AZ47496W11 2/500	211086	4.88	941769	6.30	538491	8.31
07 AZ47497W14 2/500	209653	4.89	934097	6.29	533333	8.30
08 AZ47498W17 2/500	215615	4.88	940539	6.29	550064	8.31
09 500ug/ml DEG 11/22/16	193156	4.87	829027	6.29	475011	8.30
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81760

Lab File ID (Standard): 1220Y007.D Date Analyzed: 12/20/16

Instrument ID: Yoda Time Analyzed: 12:27

GC Column: ID: Heated Purge: (Y/N)

		Phenanthrene-D10(IS)		Chrysene-D12(IS)		Perylene-D12(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	893005	10.02	850646	13.11	931322	14.75
	UPPER LIMIT	1786010	10.52	1701292	13.61	1862644	15.25
	LOWER LIMIT	446503	9.52	425323	12.61	465661	14.25
	SAMPLE NO.						
01	SS2 DEG 11/22/16	939012	10.02	865583	13.11	853444	14.75
02	161219A BLK 2/500	922012	10.02	877245	13.10	1466320	14.75
03	161219A LCS-1 2/500	880654	10.02	842606	13.11	1097660	14.75
04	AZ47494W14 2/500	988944	10.02	946834	13.11	1095970	14.75
05	AZ47495W10 2/500	984949	10.02	957299	13.10	870203	14.75
06	AZ47496W11 2/500	1000410	10.02	948343	13.10	1344600	14.75
07	AZ47497W14 2/500	985868	10.03	968781	13.10	1072540	14.74
08	AZ47498W17 2/500	1014220	10.02	971384	13.10	993128	14.75
09	500ug/ml DEG 11/22/16	879851	10.03	837836	13.10	717154	14.74
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

ORGANICS

Sample Data

APPL, INC.

EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH139
Sample Collection Date: 12/12/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81760
APPL ID: AZ47494
QCG: #87DME-161219A-214859

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	12/19/16	12/20/16

Quant Method: Y0GLYCOL.M
Run #: 1220Y020
Instrument: Yoda
Sequence: Y161220G
Dilution Factor: 1
Initials: MA

Printed: 12/21/16 12:05:48 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y020.D Vial: 20
Acq On : 20 Dec 16 19:15 Operator: MA
Sample : AZ47494W14 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 21 10:46 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Dec 20 14:47:54 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	215563	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	940919	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	526684	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	988944	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.11	240	946834	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.75	264	1095971	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

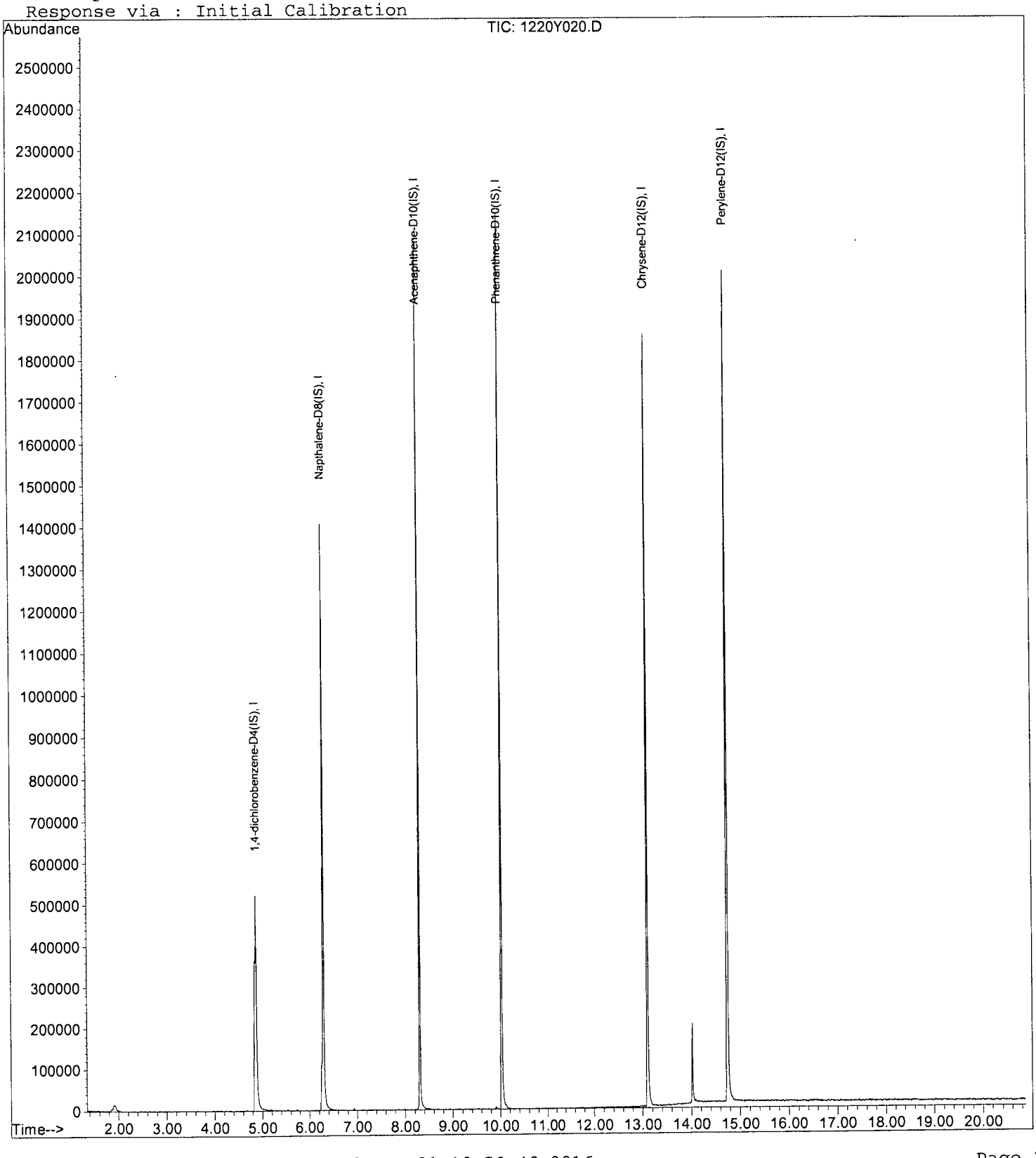
Data File : M:\YODA\DATA\Y161220G\1220Y020.D
Acq On : 20 Dec 16 19:15
Sample : AZ47494W14 2/500
Misc :

Vial: 20
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 21 10:46 2016

Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 21 10:44:23 2016
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH136
Sample Collection Date: 12/12/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81760
APPL ID: AZ47495
QCG: #87DME-161219A-214859

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	12/19/16	12/20/16

Quant Method: Y0GLYCOL.M
Run #: 1220Y021
Instrument: Yoda
Sequence: Y161220G
Dilution Factor: 1
Initials: MA

Printed: 12/21/16 12:05:48 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y021.D Vial: 21
Acq On : 20 Dec 16 19:45 Operator: MA
Sample : AZ47495W10 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 21 10:16 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Dec 20 14:47:54 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.89	152	208579	40.00000	ppb	0.02
3) Napthalene-D8(IS)	6.30	136	921217	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	531618	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	984949	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	957299	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.75	264	870203	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

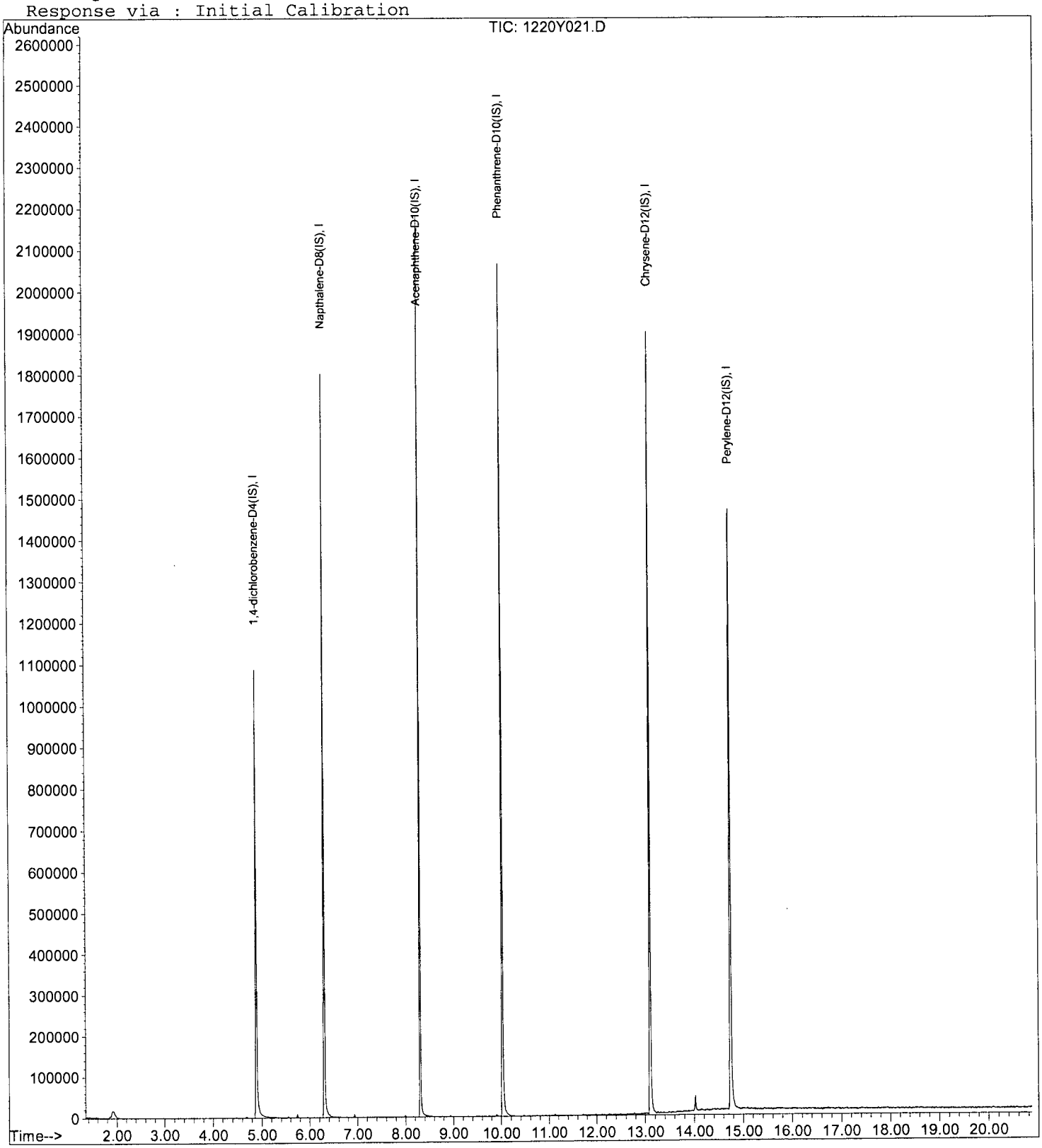
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y021.D Vial: 21
Acq On : 20 Dec 16 19:45 Operator: MA
Sample : AZ47495W10 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 21 10:16 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 21 10:44:23 2016
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH143
Sample Collection Date: 12/13/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81760
APPL ID: AZ47496
QCG: #87DME-161219A-214859

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	12/19/16	12/20/16

Quant Method: Y0GLYCOL.M
Run #: 1220Y022
Instrument: Yoda
Sequence: Y161220G
Dilution Factor: 1
Initials: MA

Printed: 12/21/16 12:05:48 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y022.D Vial: 22
Acq On : 20 Dec 16 20:15 Operator: MA
Sample : AZ47496W11 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 21 10:16 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Dec 20 14:47:54 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.88	152	211086	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.30	136	941769	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	538491	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	1000414	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	948343	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.75	264	1344595	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

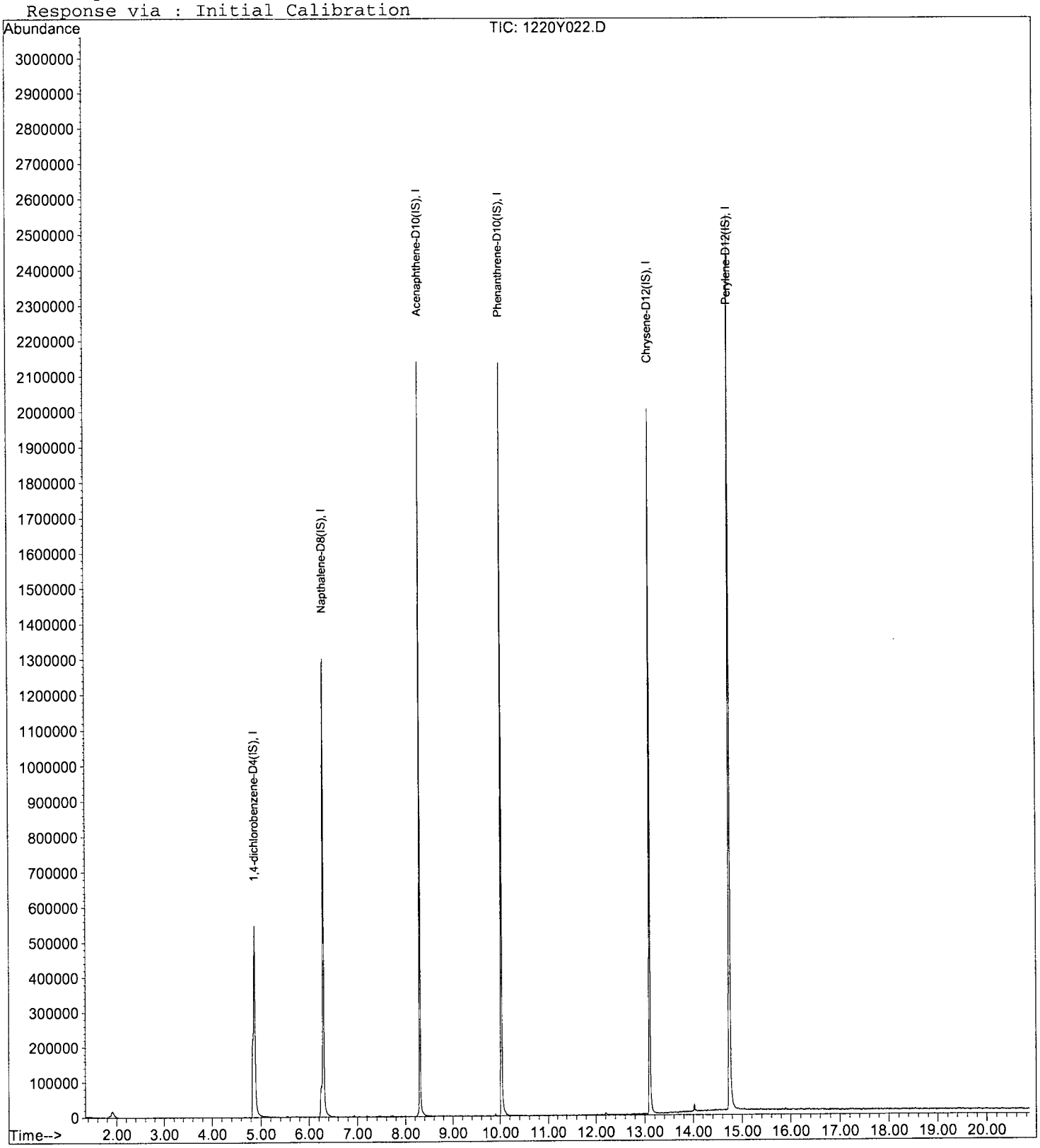
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y022.D Vial: 22
Acq On : 20 Dec 16 20:15 Operator: MA
Sample : AZ47496W11 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 21 10:16 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 21 10:44:23 2016
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH145
Sample Collection Date: 12/13/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81760
APPL ID: AZ47497
QCG: #87DME-161219A-214859

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	12/19/16	12/20/16

Quant Method: Y0GLYCOL.M
Run #: 1220Y023
Instrument: Yoda
Sequence: Y161220G
Dilution Factor: 1
Initials: MA

Printed: 12/21/16 12:05:48 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y023.D Vial: 23
Acq On : 20 Dec 16 20:45 Operator: MA
Sample : AZ47497W14 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 21 10:47 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Dec 20 14:47:54 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.89	152	209653	40.00000	ppb	0.02
3) Napthalene-D8(IS)	6.29	136	934097	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	533333	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	985868	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	968781	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.74	264	1072540	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

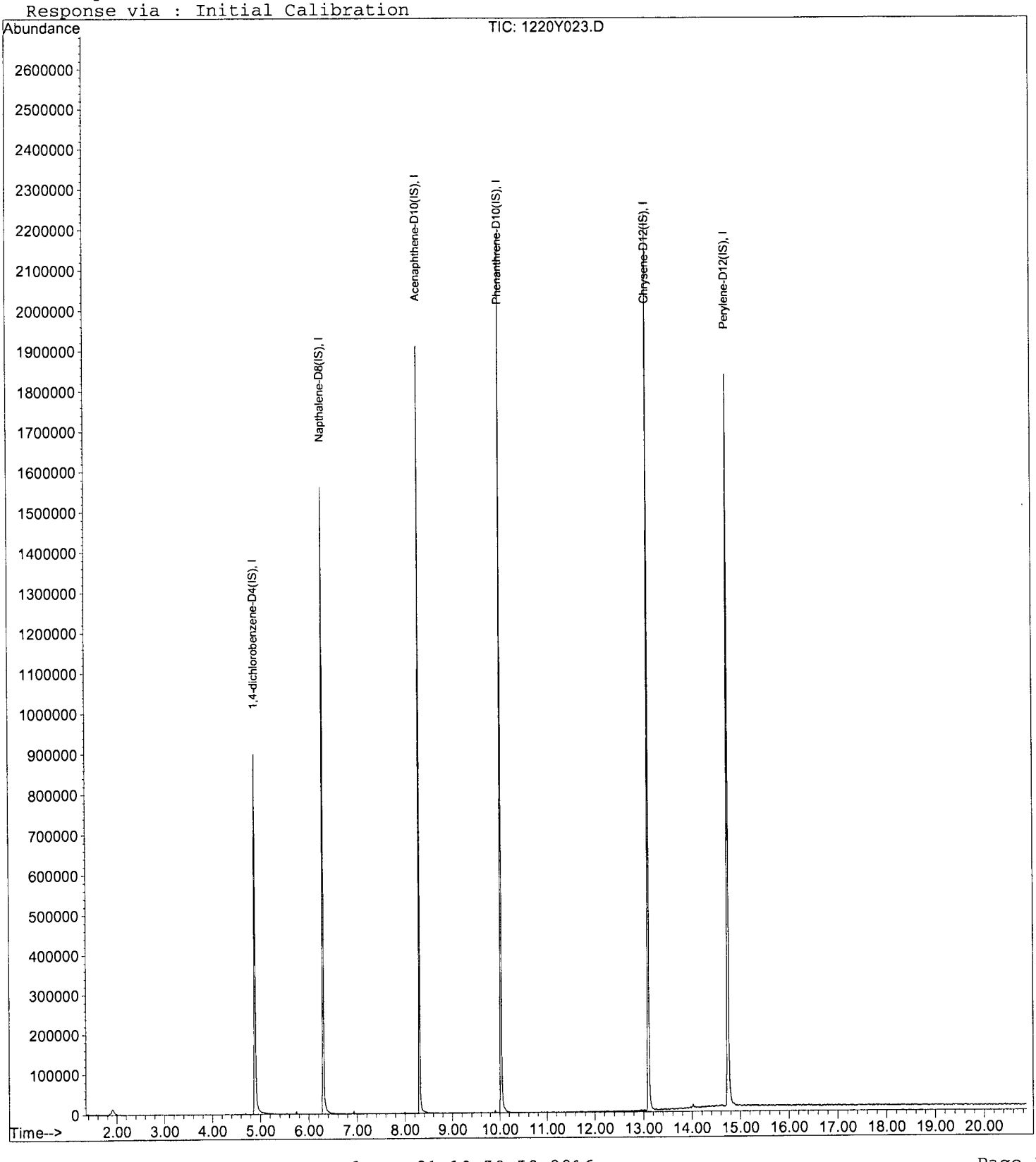
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y023.D Vial: 23
Acq On : 20 Dec 16 20:45 Operator: MA
Sample : AZ47497W14 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 21 10:47 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 21 10:44:23 2016
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH146
Sample Collection Date: 12/12/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81760
APPL ID: AZ47498
QCG: #87DME-161219A-214859

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	12/19/16	12/20/16

Quant Method: Y0GLYCOL.M
Run #: 1220Y024
Instrument: Yoda
Sequence: Y161220G
Dilution Factor: 1
Initials: MA

Printed: 12/21/16 12:05:48 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y024.D Vial: 24
Acq On : 20 Dec 16 21:15 Operator: MA
Sample : AZ47498W17 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 21 10:16 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Dec 20 14:47:54 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.88	152	215615	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	940539	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	550064	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	1014220	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	971384	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.75	264	993128	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

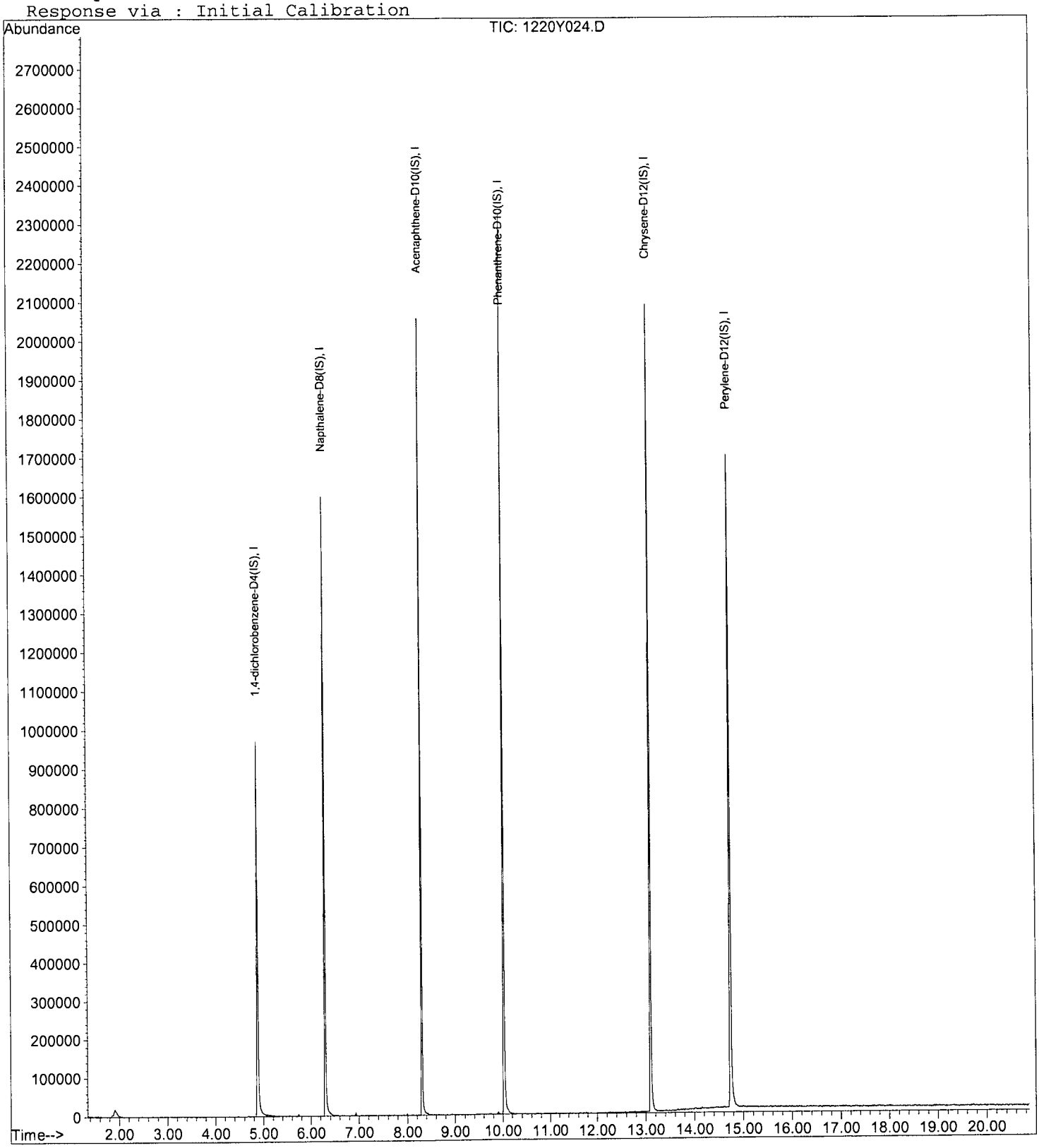
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y024.D
Acq On : 20 Dec 16 21:15
Sample : AZ47498W17 2/500
Misc :

Vial: 24
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 21 10:16 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 21 10:44:23 2016
Response via : Initial Calibration



ORGANICS

Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:
SDG No:
Initial Cal. Date: 12/20/16
Instrument: Yoda
Initials:

		Compound	1220Y003.D	1220Y004.D	1220Y005 D	1220Y006.D	1220Y007.D	1220Y008.D	1220Y009.D	1220Y010.D			Avg	%RSD		
1	I	1,4-dichlorobenzene-D4(IS)														
2	TM	2-(2-Methoxyethoxy)ethanol	0.1800	0.1823	0.2140	0.2253	0.2267	0.2342	0.2268	0.2261			0.21	9.9	TM	
3	I	Napthalene-D8(IS)														
4	I	Acenaphthene-D10(IS)														
5	I	Phenanthrene-D10(IS)														
6	I	Chrysene-D12(IS)														
7	I	Perylene-D12(IS)														
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Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y003.D Vial: 3
Acq On : 20 Dec 16 9:32 Operator: MA
Sample : 50ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:24 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:24:33 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	235296	40.00	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	1020104	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	566383	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	1039128	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	951820	40.00	ppb	0.00
7) Perylene-D12(IS)	14.74	264	863918	40.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.12	45	52929	41.96	ppb	95

(#) = qualifier out of range (m) = manual integration
1220Y003.D Y0GLYCOL.M Thu Jan 19 15:24:57 2017 Page 1

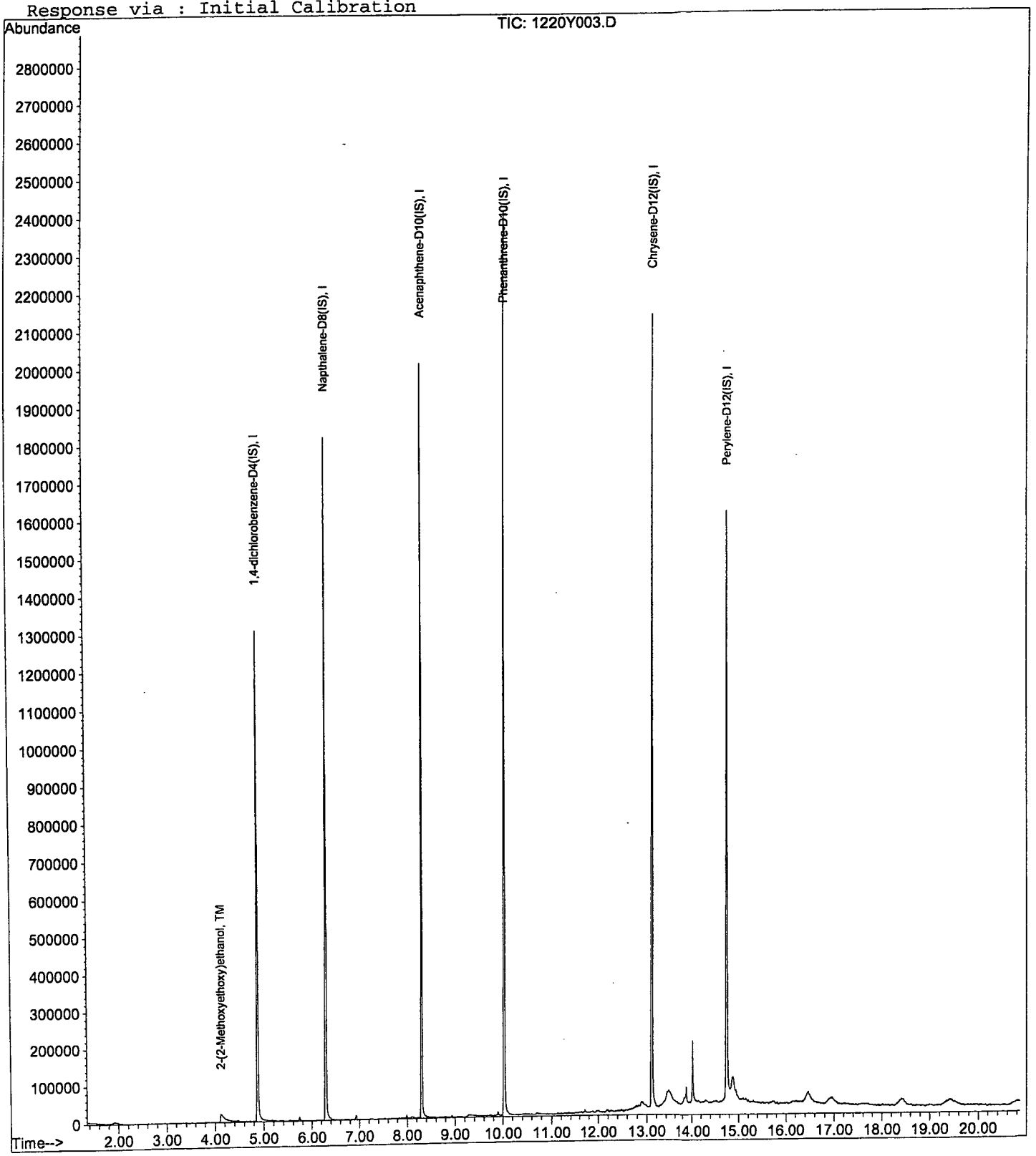
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y003.D
Acq On : 20 Dec 16 9:32
Sample : 50ug/ml DEG 12/20/16
Misc :

Vial: 3
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:24 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:24:33 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y004.D Vial: 4
Acq On : 20 Dec 16 10:02 Operator: MA
Sample : 100ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:28 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:27:52 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	236538	40.00	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	1021117	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	569209	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	1067696	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	1009921	40.00	ppb	0.00
7) Perylene-D12(IS)	14.74	264	992895	40.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.09	45	107826	85.04	ppb	92

(#) = qualifier out of range (m) = manual integration
1220Y004.D Y0GLYCOL.M Thu Jan 19 15:28:11 2017 Page 1

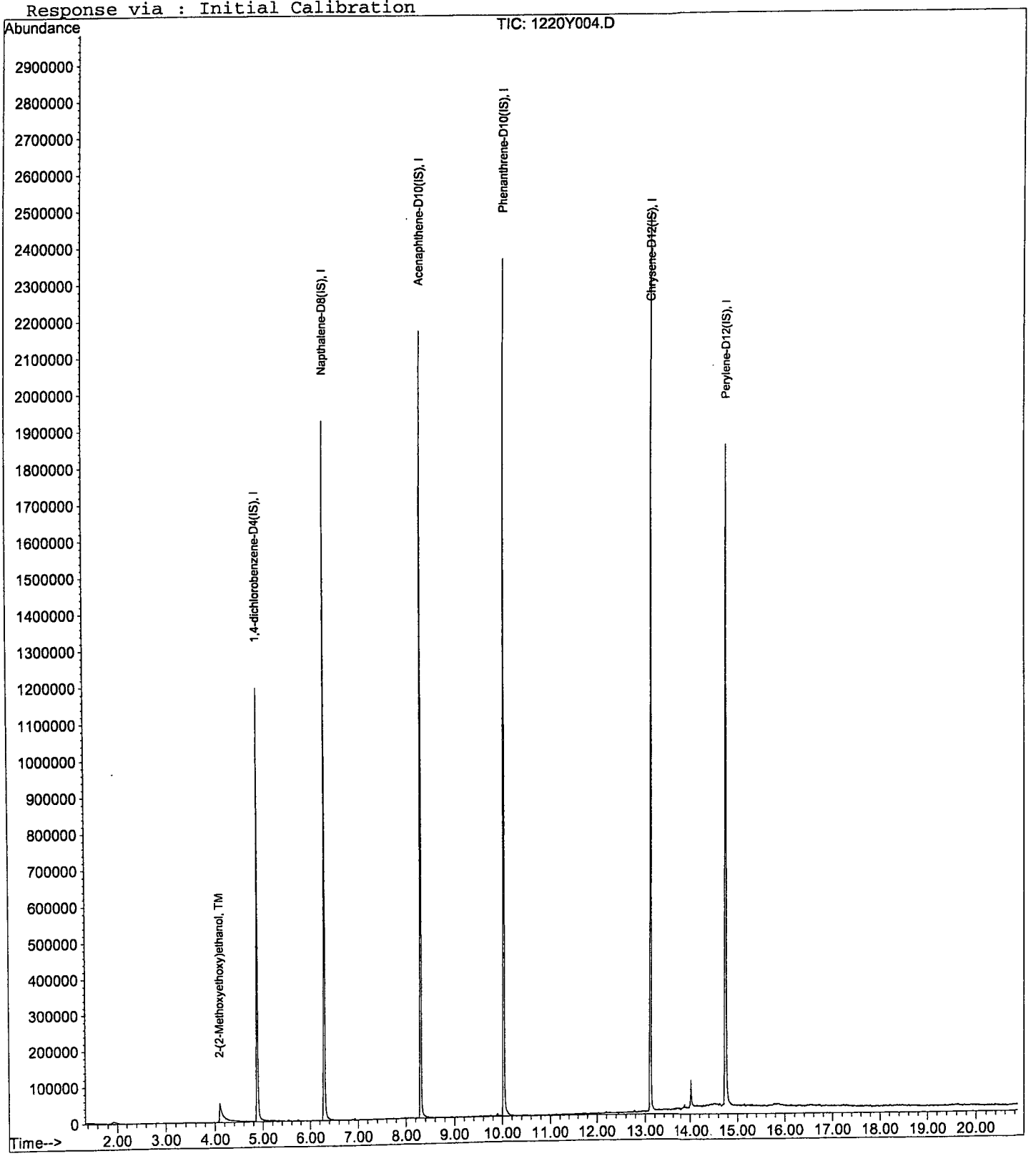
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y004.D
Acq On : 20 Dec 16 10:02
Sample : 100ug/ml DEG 12/20/16
Misc :

Vial: 4
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:28 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:27:52 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y005.D Vial: 5
Acq On : 20 Dec 16 11:27 Operator: MA
Sample : 200ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:31 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:27:52 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	219199	40.00	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	935952	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	541303	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	969145	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.11	240	850962	40.00	ppb	0.00
7) Perylene-D12(IS)	14.75	264	955898	40.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.06	45	234542	199.60	ppb	99

(#) = qualifier out of range (m) = manual integration
1220Y005.D Y0GLYCOL.M Thu Jan 19 15:31:38 2017 Page 1

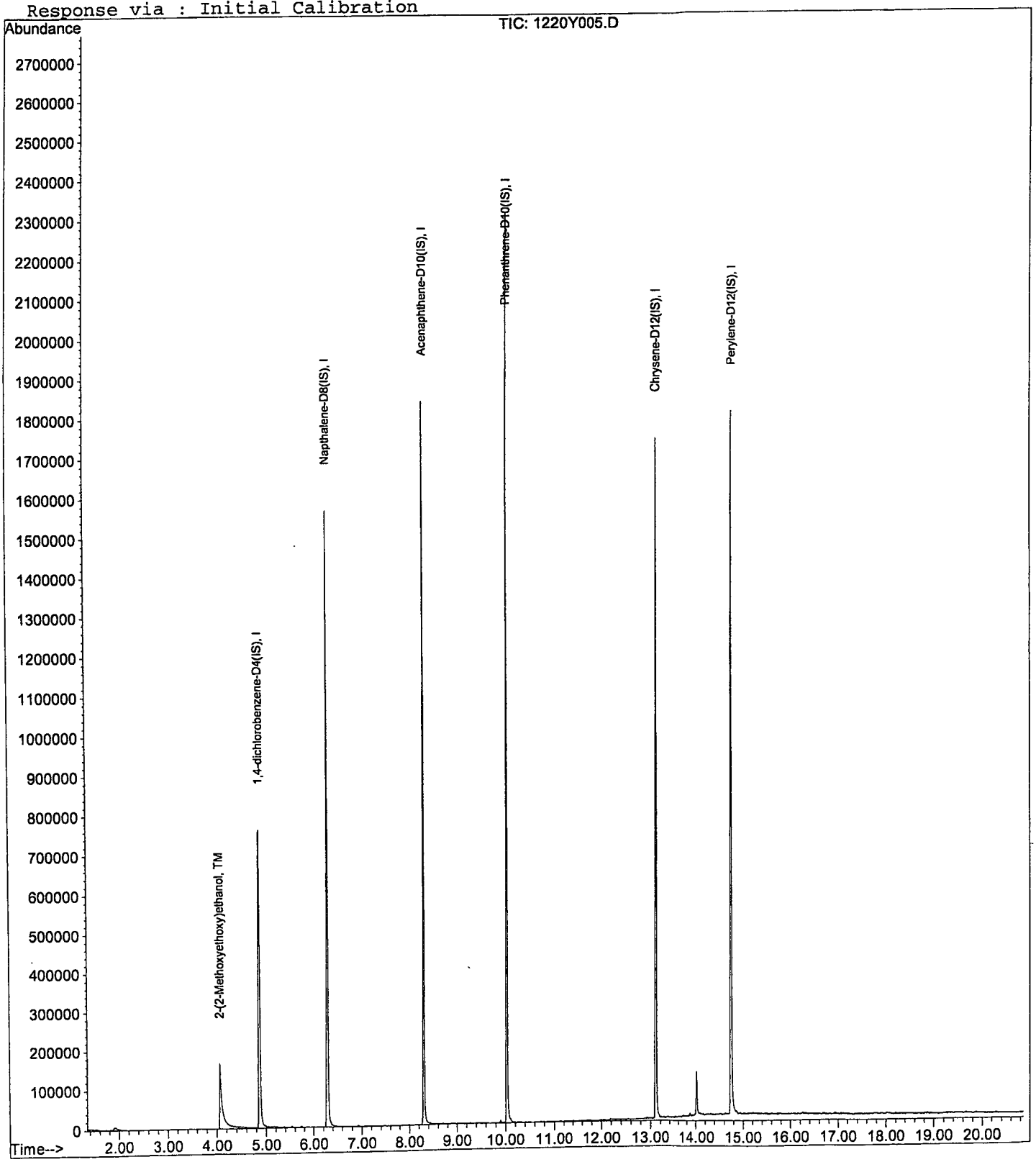
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y005.D
Acq On : 20 Dec 16 11:27
Sample : 200ug/ml DEG 12/20/16
Misc :

Vial: 5
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:31 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:27:52 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y006.D Vial: 6
Acq On : 20 Dec 16 11:57 Operator: MA
Sample : 400ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:31 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:27:52 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	219938	40.00	ppb	-0.02
3) Napthalene-D8(IS)	6.29	136	934708	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	524564	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	930250	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	927639	40.00	ppb	0.00
7) Perylene-D12(IS)	14.74	264	801484	40.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.07	45	495610	420.36	ppb	98

(#) = qualifier out of range (m) = manual integration
1220Y006.D Y0GLYCOL.M Thu Jan 19 15:32:08 2017 Page 1

Quantitation Report

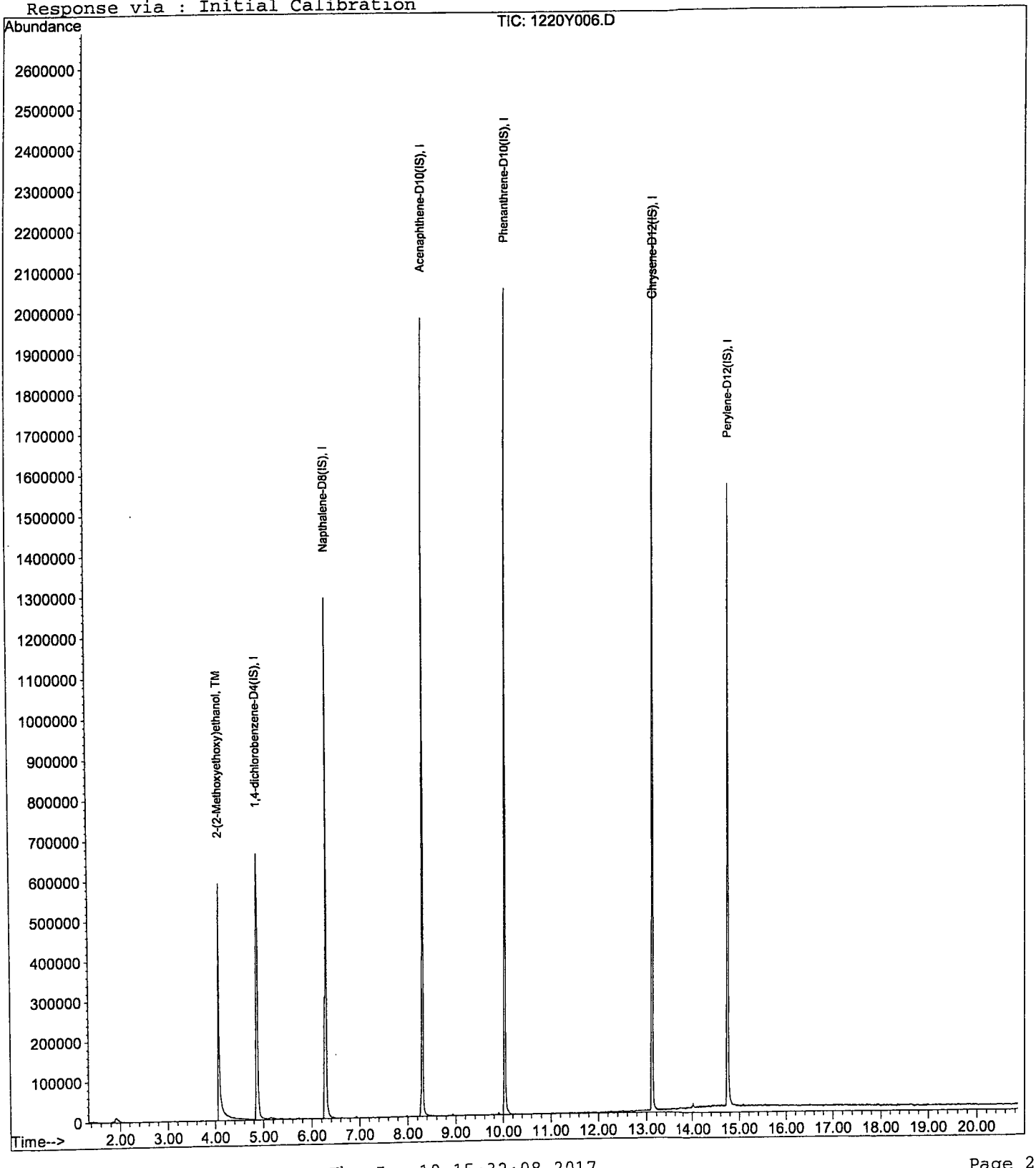
Data File : M:\YODA\DATA\Y161220G\1220Y006.D
Acq On : 20 Dec 16 11:57
Sample : 400ug/ml DEG 12/20/16
Misc :

Vial: 6
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:31 2017

Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:27:52 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y007.D
Acq On : 20 Dec 16 12:27
Sample : 500ug/ml DEG 12/20/16
Misc :

Vial: 7
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:34 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:34:38 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	220710	40.00	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	916121	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	479952	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	893005	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.11	240	850646	40.00	ppb	0.00
7) Perylene-D12(IS)	14.75	264	931322	40.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.07	45	625337	528.53	ppb	100

(#) = qualifier out of range (m) = manual integration
1220Y007.D Y0GLYCOL.M Thu Jan 19 15:34:55 2017 Page 1

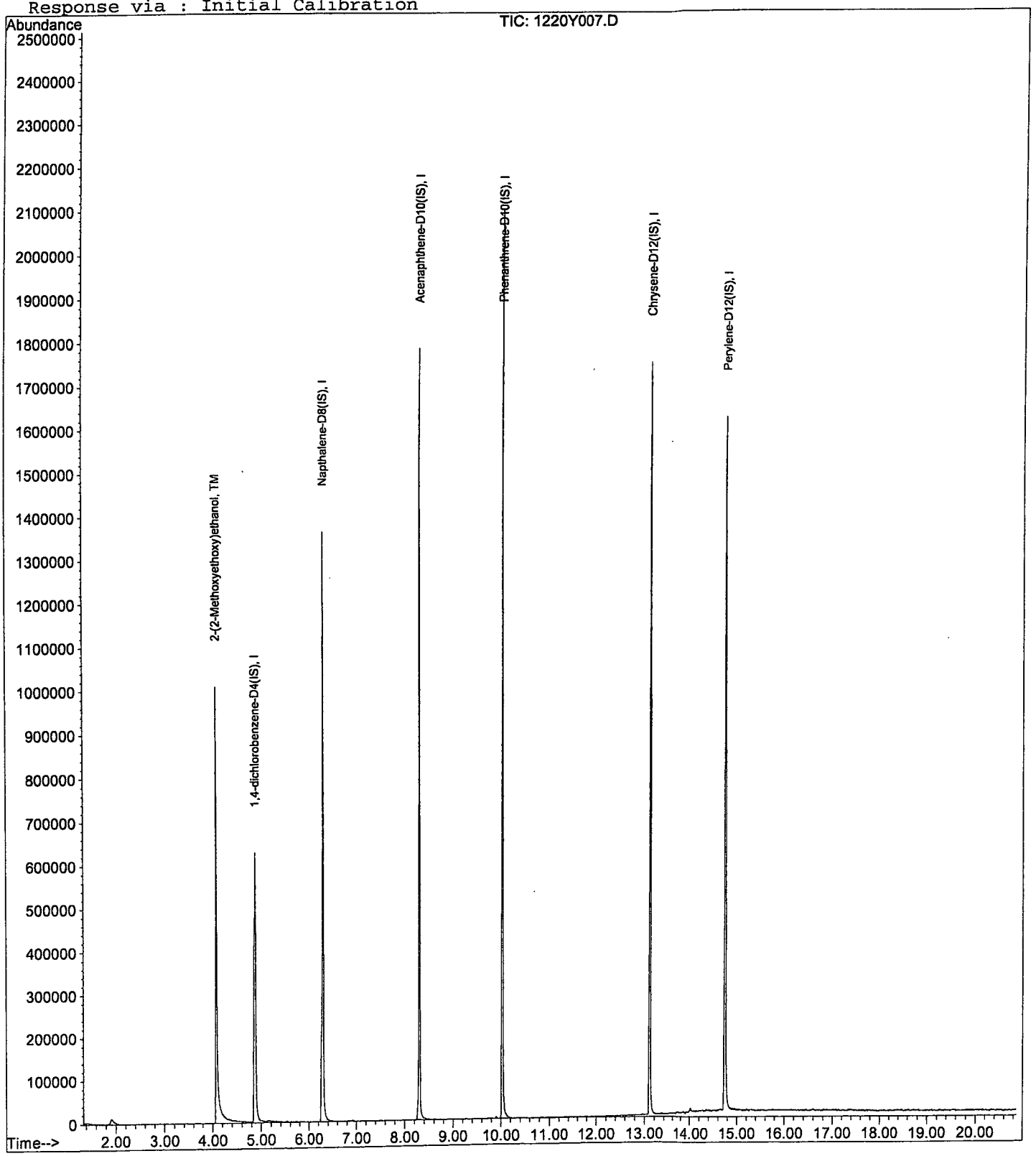
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y007.D
Acq On : 20 Dec 16 12:27
Sample : 500ug/ml DEG 12/20/16
Misc :

Vial: 7
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:34 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:34:38 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y008.D
Acq On : 20 Dec 16 12:57
Sample : 600ug/ml DEG 12/20/16
Misc :

Vial: 8
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:35 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:35:45 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.88	152	218598	40.00	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	918286	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	502491	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	904865	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.11	240	875224	40.00	ppb	0.00
7) Perylene-D12(IS)	14.75	264	907883	40.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.08	45	767935	655.33	ppb	99

(#) = qualifier out of range (m) = manual integration
1220Y008.D Y0GLYCOL.M Thu Jan 19 15:36:02 2017

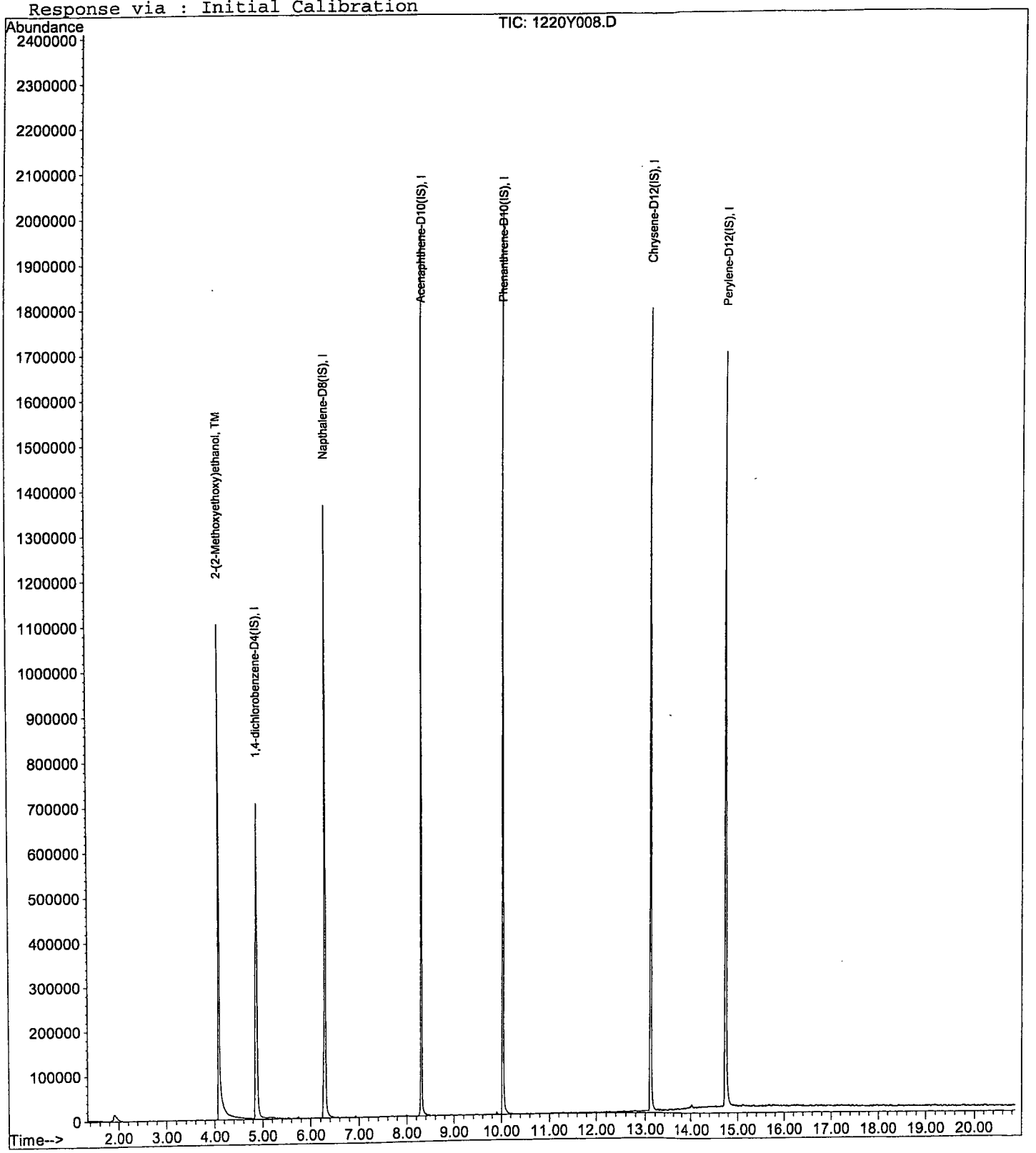
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y008.D
Acq On : 20 Dec 16 12:57
Sample : 600ug/ml DEG 12/20/16
Misc :

Vial: 8
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:35 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:35:45 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y009.D Vial: 9
Acq On : 20 Dec 16 13:28 Operator: MA
Sample : 800ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:36 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:35:45 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.88	152	224351	40.00	ppb	0.01
3) Napthalene-D8(IS)	6.29	136	955028	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	537186	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	1003381	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	910308	40.00	ppb	0.00
7) Perylene-D12(IS)	14.75	264	853883	40.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.09	45	1017711	846.21	ppb	98

(#) = qualifier out of range (m) = manual integration
1220Y009.D Y0GLYCOL.M Thu Jan 19 15:36:33 2017 Page 1

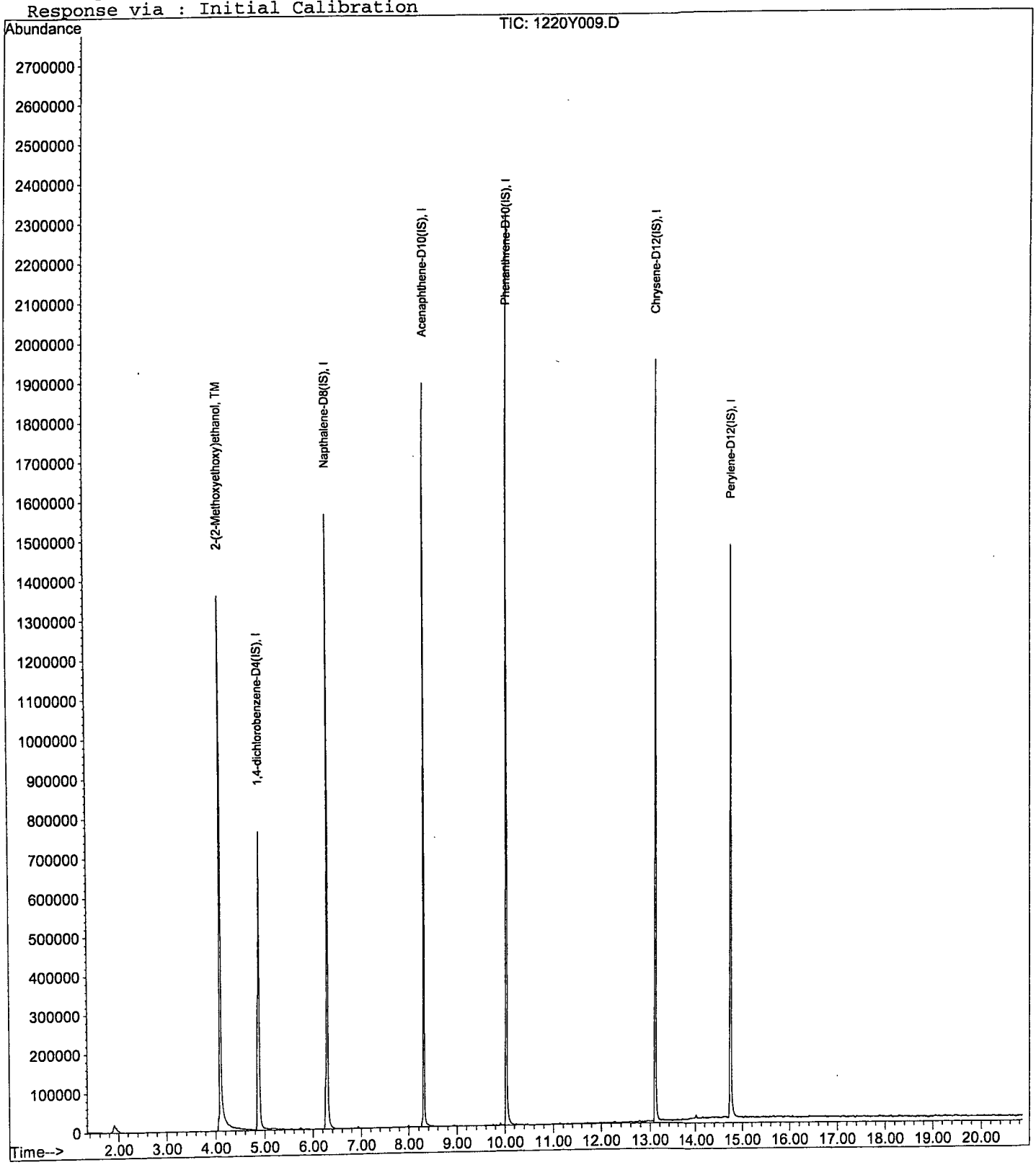
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y009.D
Acq On : 20 Dec 16 13:28
Sample : 800ug/ml DEG 12/20/16
Misc :

Vial: 9
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:36 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:35:45 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y010.D
Acq On : 20 Dec 16 13:58
Sample : 1000ug/ml DEG 12/20/16
Misc :

Vial: 10
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:37 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:35:45 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	283148	40.00	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	1210963	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	689185	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	1234610	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.11	240	1201158	40.00	ppb	0.00
7) Perylene-D12(IS)	14.75	264	1162204	40.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.12	45	1600487	1054.44	ppb	99

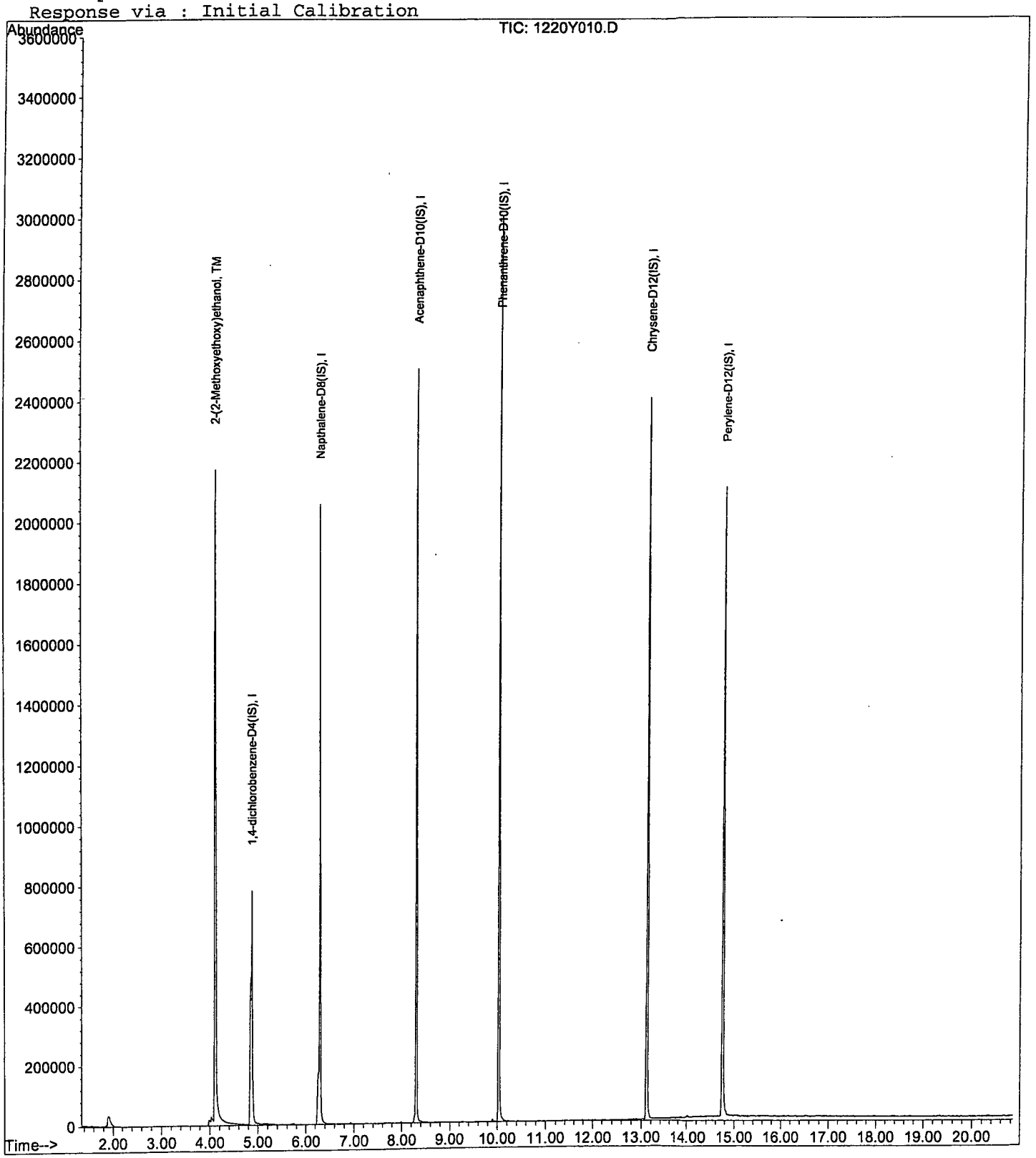
(#) = qualifier out of range (m) = manual integration
1220Y010.D Y0GLYCOL.M Thu Jan 19 15:37:34 2017

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y010.D Vial: 10
Acq On : 20 Dec 16 13:58 Operator: MA
Sample : 1000ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:37 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:35:45 2017
Response via : Initial Calibration



Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/20/16
Instrument: Yoda
Initial Cal. Date: 12/20/16
Data File: 1220Y011.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TM	2-(2-Methoxyethoxy)ethanol	0.2144	0.2388	11	TM	
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			11.0		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y011.D Vial: 11
Acq On : 20 Dec 16 15:01 Operator: MA
Sample : SS2 DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 15:16 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Dec 20 14:47:54 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.88	152	226449	40.00000 ppb	0.00
3) Napthalene-D8(IS)	6.29	136	946039	40.00000 ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	498527	40.00000 ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	939012	40.00000 ppb	0.00
6) Chrysene-D12(IS)	13.11	240	865583	40.00000 ppb	0.00
7) Perylene-D12(IS)	14.75	264	853444	40.00000 ppb	0.00

System Monitoring Compounds

Target Compounds					Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.08	45	676019	556.89065 ppb	99

(#) = qualifier out of range (m) = manual integration
1220Y011.D Y0GLYCOL.M Wed Dec 21 12:44:47 2016 Page 1

Quantitation Report

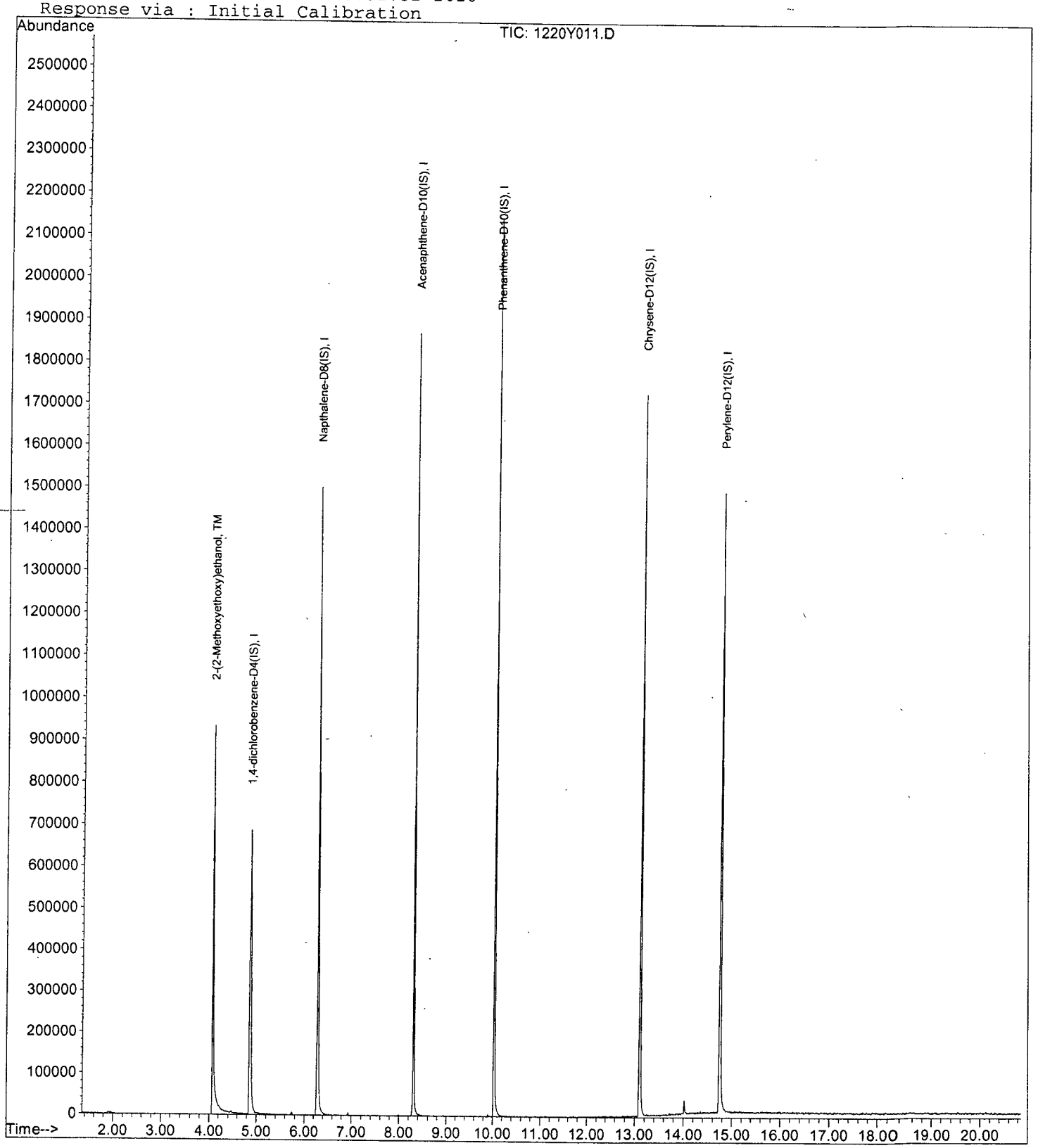
Data File : M:\YODA\DATA\Y161220G\1220Y011.D
Acq On : 20 Dec 16 15:01
Sample : SS2 DEG 12/20/16
Misc :

Vial: 11
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 20 15:16 2016

Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 21 10:52:52 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/21/16
Instrument: Yoda
Initial Cal. Date: 12/20/16
Data File: 1220Y036.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	2-(2-Methoxyethoxy)ethanol	0.2144	0.2292	6.9	TM	
3	I	Napthalene-D8(IS)	ISTD			I	
4	I	Acenaphthene-D10(IS)	ISTD			I	
5	I	Phenanthrene-D10(IS)	ISTD			I	
6	I	Chrysene-D12(IS)	ISTD			I	
7	I	Perylene-D12(IS)	ISTD			I	
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
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23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			6.9		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y036.D Vial: 36
Acq On : 21 Dec 16 2:58 Operator: MA
Sample : 500ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 21 10:11 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Dec 20 14:47:54 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	193156	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	829027	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	475011	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	879851	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	837836	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.74	264	717154	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.08	45	553398	534.45459	ppb	98

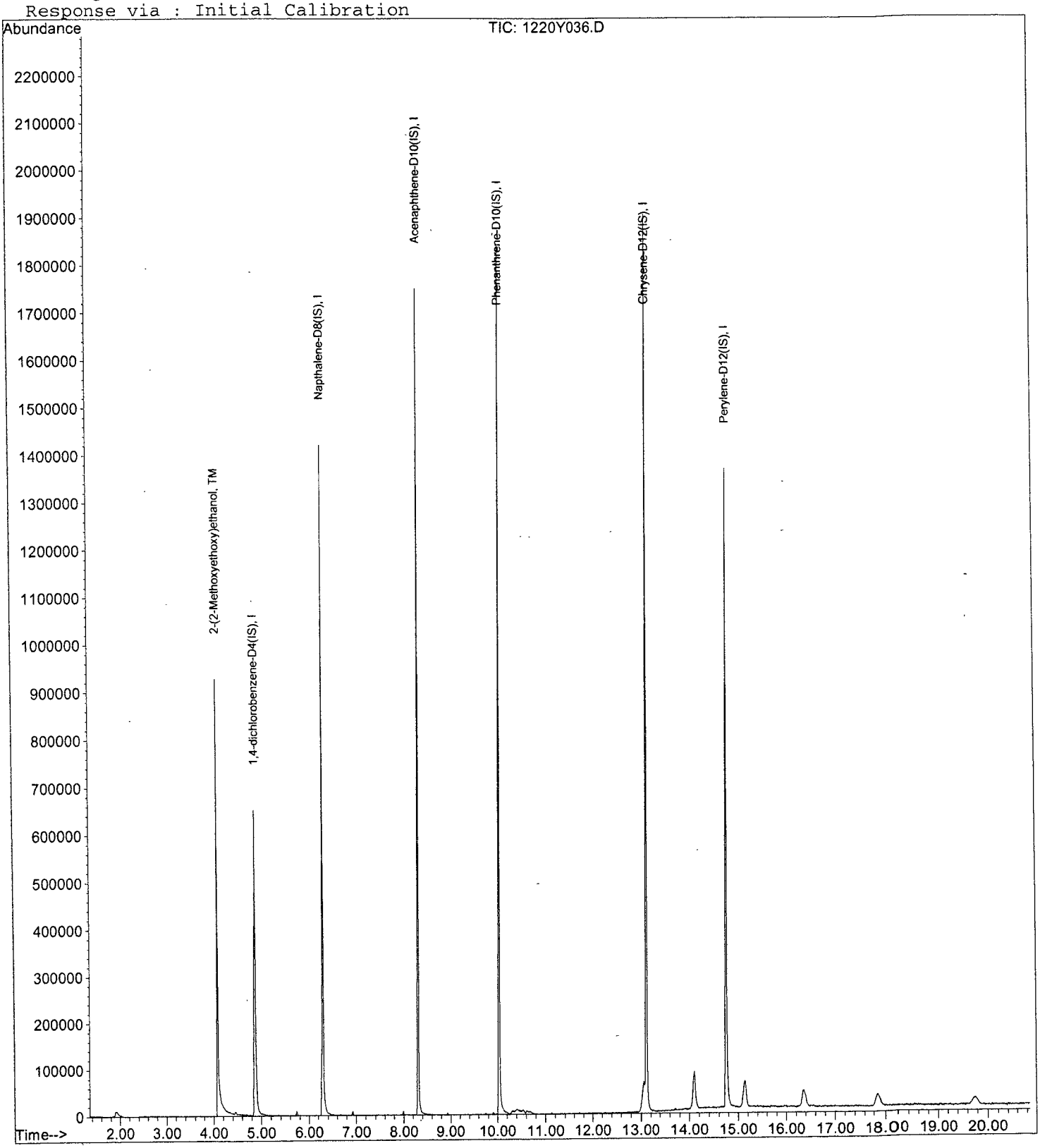
(#) = qualifier out of range (m) = manual integration
1220Y036.D Y0GLYCOL.M Wed Dec 21 12:45:16 2016

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y036.D Vial: 36
Acq On : 21 Dec 16 2:58 Operator: MA
Sample : 500ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 21 10:11 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 21 10:52:52 2016
Response via : Initial Calibration



ORGANICS

Raw Data

APPL, INC.

Method Blank

EPA 8270D MODIFIED WATER

Blank Name/QCG: **161219W-47345 - 214859**

Batch ID: #87DME-161219A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2-(2-METHOXYETHOXY)-ETHAN	80.0 U	100	80.0	40.0	ug/L	12/19/16	12/20/16

Quant Method:Y0GLYCOL.
Run #:1220Y013
Instrument:Yoda
Sequence:Y161220G
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 12/21/16 12:05:49 PM

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y013.D Vial: 13
Acq On : 20 Dec 16 15:44 Operator: MA
Sample : 161219A BLK 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 16:14 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Dec 20 14:47:54 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.89	152	207897	40.00000 ppb	0.02
3) Napthalene-D8(IS)	6.30	136	889234	40.00000 ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	498710	40.00000 ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	922012	40.00000 ppb	0.00
6) Chrysene-D12(IS)	13.10	240	877245	40.00000 ppb	0.00
7) Perylene-D12(IS)	14.75	264	1466318	40.00000 ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

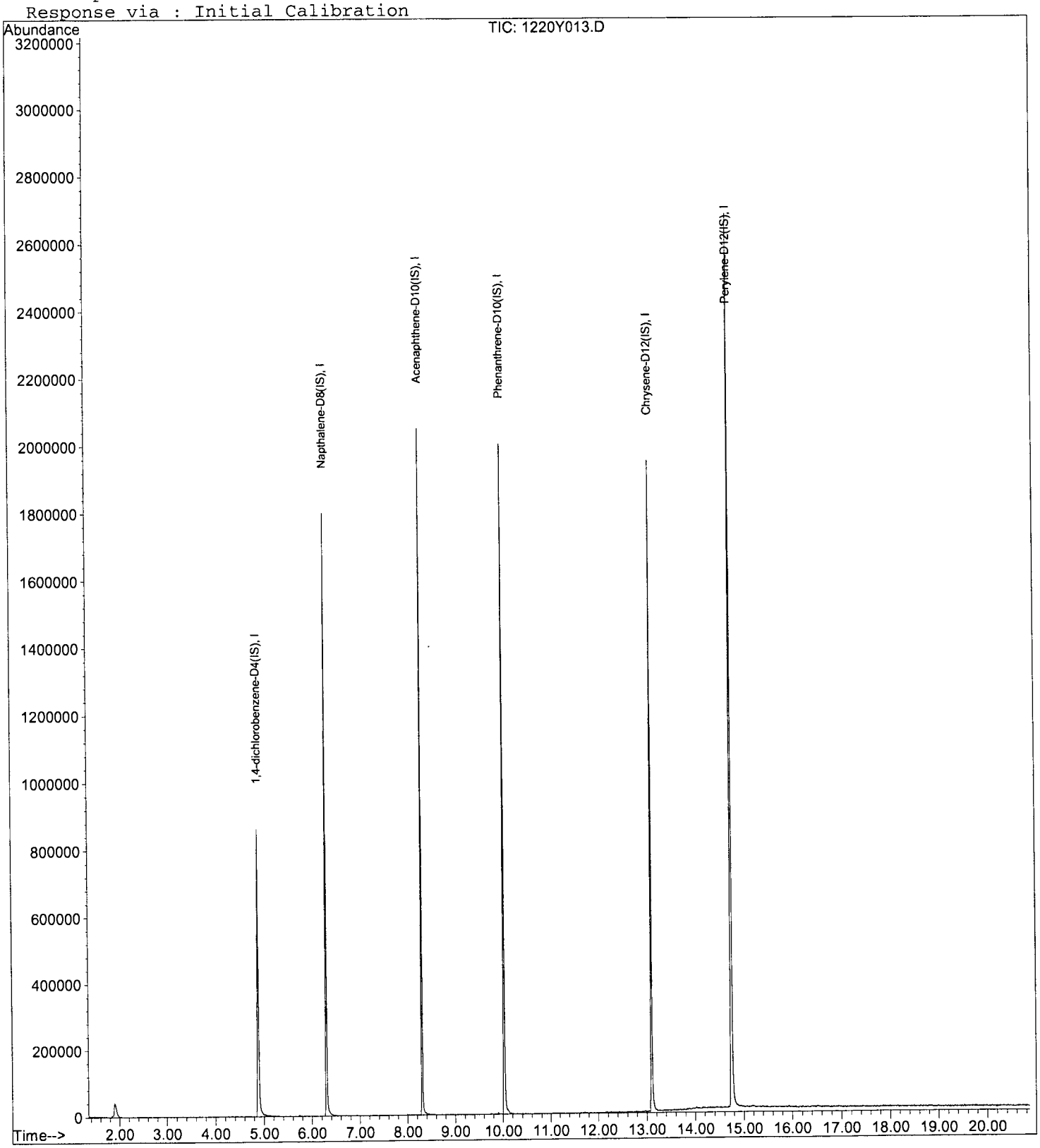
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y013.D
Acq On : 20 Dec 16 15:44
Sample : 161219A BLK 2/500
Misc :

Vial: 13
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 20 16:14 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 21 10:52:52 2016
Response via : Initial Calibration



Laboratory Control Spike Recovery
EPA 8270D MODIFIED WATER

APPL ID: **161219W-47345 LCS - 214859**
Batch ID: #87DME-161219A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
2-(2-METHOXYETHOXY)-ETHANOL	80.0	43.5	54.4	30-130

Comments: _____

Primary	SPK
Quant Method :	Y0GLYCOL.M
Extraction Date :	12/19/16
Analysis Date :	12/20/16
Instrument :	Yoda
Run :	1220Y017
Initials :	MA

Printed: 12/21/16 12:05:50 PM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y017.D Vial: 17
Acq On : 20 Dec 16 17:45 Operator: MA
Sample : 161219A LCS-1 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 21 10:44 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 21 10:44:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.89	152	189835	40.00000	ppb	0.02
3) Napthalene-D8(IS)	6.30	136	856510	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	471037	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	880654	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	842606	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.75	264	1097663	40.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.19	45	44294	43.52613	ppb	97

Algorithm = $\frac{44294 \times 1 \times 40}{189835 \times 0.2144} = 43.5$ MA 12/21/16

(#) = qualifier out of range (m) = manual integration
1220Y017.D Y0GLYCOL.M Wed Dec 21 12:10:02 2016 Page 1

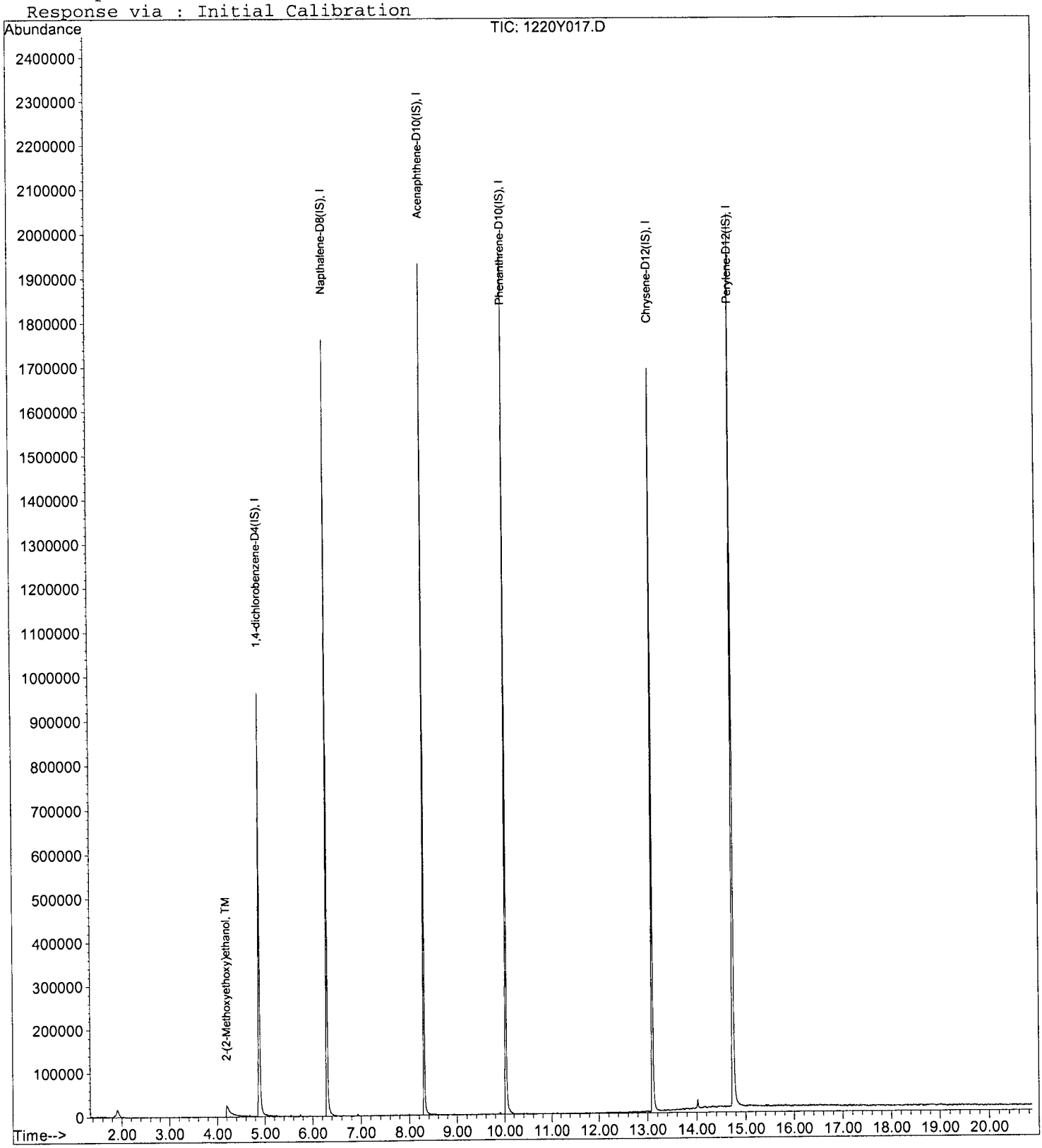
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y017.D
Acq On : 20 Dec 16 17:45
Sample : 161219A LCS-1 2/500
Misc :

Vial: 17
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 21 10:44 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 21 10:52:52 2016
Response via : Initial Calibration

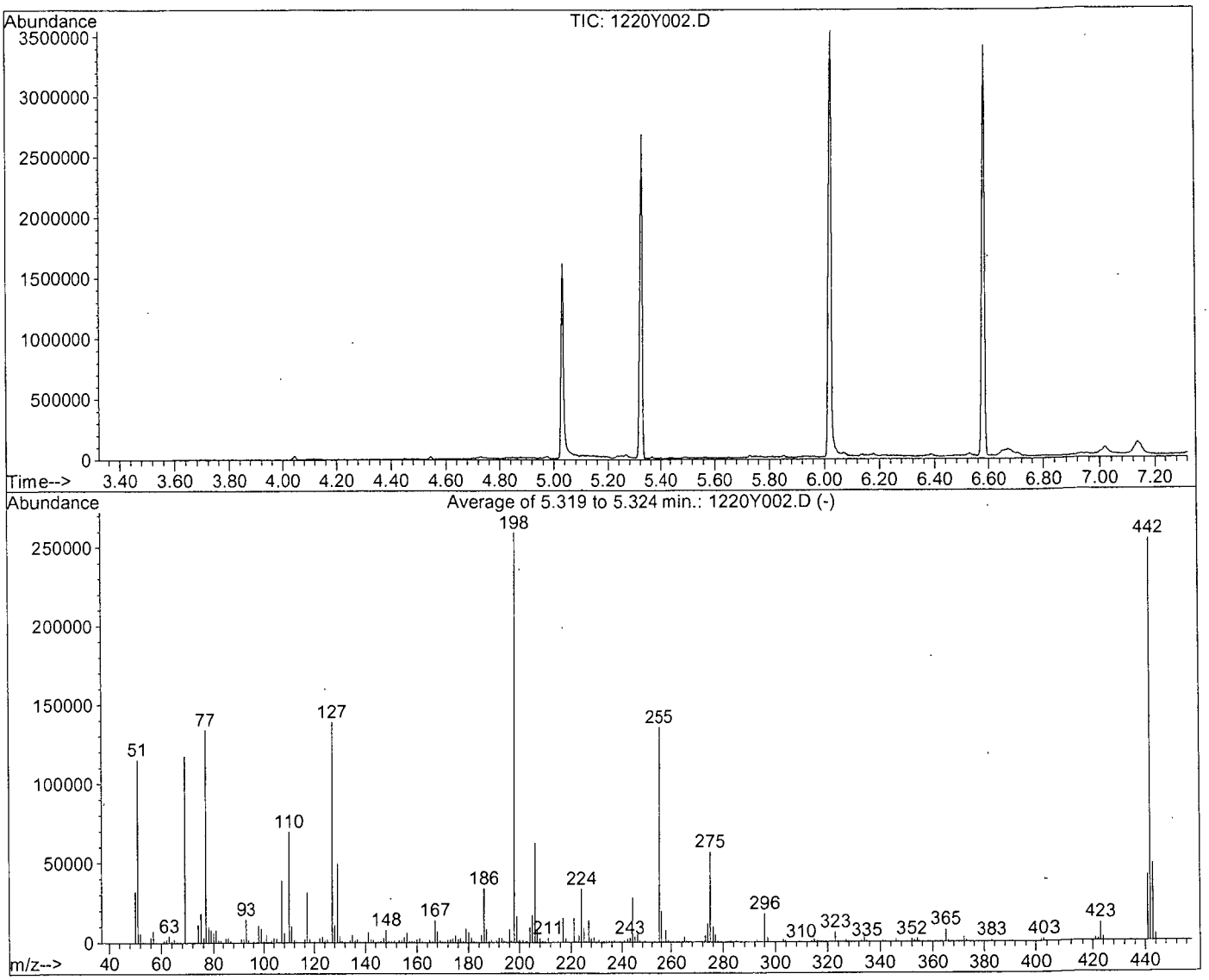


DFTPP

Data File : M:\YODA\DATA\Y161220G\1220Y002.D
Acq On : 20 Dec 16 9:12
Sample : SV Tune 11/15/16
Misc :

Vial: 2
Operator: MA
Inst : Yoda
Multiplr: 1.00

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C



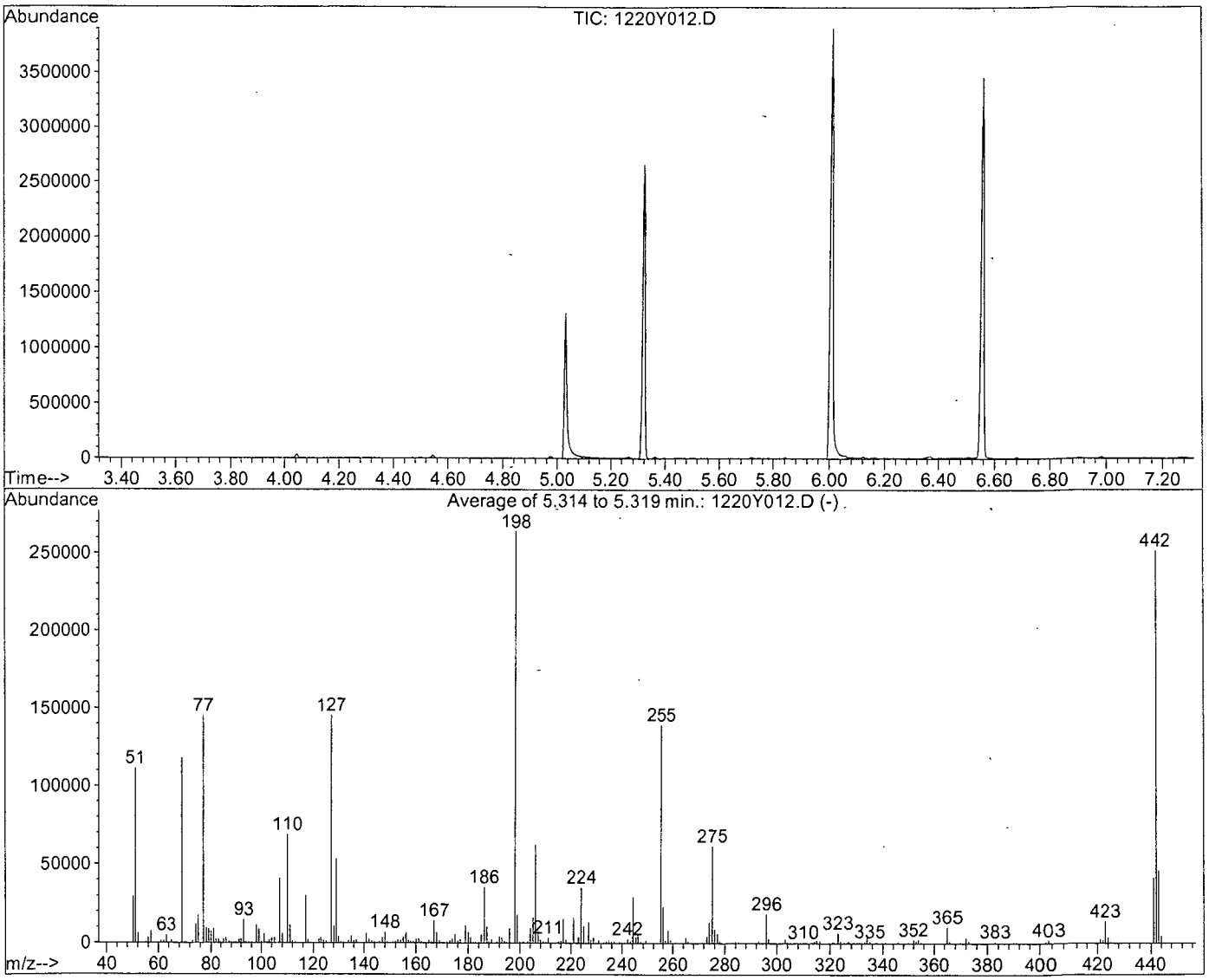
AutoFind: Scans 694, 695, 696; Background Corrected with Scan 686

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	44.4	115264	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.0	0	PASS
127	198	40	60	53.6	139077	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	259413	PASS
199	198	5	9	6.3	16297	PASS
275	198	10	30	21.8	56493	PASS
365	198	1	100	3.0	7796	PASS
441	443	0.01	100	85.0	41237	PASS
442	198	50	150	98.0	254272	PASS
443	442	17	23	19.1	48539	PASS

1220Y002.D Y0GLYCOL.M Tue Dec 20 09:18:08 2016

Data File : M:\YODA\DATA\Y161220G\1220Y012.D Vial: 12
Acq On : 20 Dec 16 15:27 Operator: MA
Sample : SV Tune 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 692, 693, 694; Background Corrected with Scan 685

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	42.2	111504	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.6	671	PASS
127	198	40	60	55.1	145493	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	264085	PASS
199	198	5	9	6.9	18147	PASS
275	198	10	30	23.4	61840	PASS
365	198	1	100	3.8	10103	PASS
441	443	0.01	100	89.8	41592	PASS
442	198	50	150	95.3	251797	PASS
443	442	17	23	18.4	46293	PASS

Semivolatile (SV) Tuning Solution -G.A.						
PREP DATE:	11/15/16	RH				
Semivolatile (SV) Tune Solution 50ug/ml						
Exp:	8/26/17					
		Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
Ultra Scient	Semivolatile GC	1000	N081628-37012	08/23/16	8/23/17	200
EM Science	Methylene Chloride		55098			3800
				Final Vol.		4000

GED Curve

PREP DATE:	12/20/16 RH											
8270 Standard Curve												
Exp:	2/11/17					**50**	**100**	**200**	**400**	**500**	**600**	**800**
		Conc.		Date								
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL	µL	µL	µL	µL
	GED MSTD Stc	2000	VAR	12/19/16	11/18/17	5	5	10	20	50	30	40
EM Science	Methanol		010616			195	95	90	80	150	70	60
Supelco	SV Internal	2000	A14020V-3660	11/09/16	11/09/17	4	2	2	2	4	2	2
				Final Vol.		204	102	102	102	204	102	102

GED Second Source (SS)

PREP DATE:	12/20/16 RH					**500**
Exp:	1/18/17	Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
	GED MSS Stoc	2000	VAR	12/19/16	10/27/17	50
EM Science	Methanol		010616			150
Supelco	SV Internal	2000	A14020V-3660	11/09/16	11/09/17	4
				Final Vol.		204

102
2
50
50
μL
1000

Diethylene Glycol						
Prep: 12/15/16 -RH Ex: 12/15/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
Diethylene glycol monomethyl ether	2000 ug/ml	AcuuStandard Cat# S-72273 Lot# 216101007-37093 Op: 12/15/16 EX: 12/15/17	1.0 mL	2 ml	1000 ug/ml	Methanol Lot# 010616A

Methoxyethoxyethanol-Neat (MEE) Stock: 9/27/16-R.H. ex: 09/27/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
MEE	Neat 99.5%	HEM SERVIC	0.1154g	10 mL	11540 ug/ml	MC
		Cat: N-12404-1G				
		Lot: 5259000-37082				
		OP: 09/27/16				
		EXP: 09/27/17				

_MWE2MEE

Organic Extraction Worksheet

Method	Solid Phase Extraction of 2MEE in Water	Extraction Set	161219A	Extraction Method	MWE2MEE	Units	mL

Spiked ID 1	Diethylene Glycol 12-15-16 EXP 12-15-17		Surrogate ID 1		
Spiked ID 2	MEE 11540ug/mL 9-27-16 EXP 9-27-17		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	12/19/16 9:45	
Spiked ID 8			Ext. End Time:	12/19/16 17:00	
			GC Requires Extract By:	12/20/16 0:00	

pH1			Water Bath Temp Criteria	
pH2				
pH3				

Spiked By: KY **Date** 12/19/16 **Witnessed By:** CFM **Date** 12/19/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	161219A Blk				NA	NA equip	500	2	7	12/19/16 9:45	
2	161219A LCS-1		0.040	1	NA	NA equip	500	2	7	12/19/16 9:45	
3	161219A LCS-2		0.250	1	NA	NA equip	500	2	7	12/19/16 9:45	
4	AZ47343	AZ47343W14			NA	NA equip	500	2	7	12/19/16 9:45	81734 RUSH 1 WEEK
5	AZ47344	AZ47344W13			NA	NA equip	500	2	7	12/19/16 9:45	81734 RUSH 1 WEEK
6	AZ47345 MS-1	AZ47345W32	0.040	1	NA	NA equip	500	2	7	12/19/16 9:45	81734 RUSH 1 WEEK
7	AZ47345 MSD-1	AZ47345W32	0.040	1	NA	NA equip	500	2	7	12/19/16 9:45	81734 RUSH 1 WEEK
8	AZ47345	AZ47345W31			NA	NA equip	500	2	7	12/19/16 9:45	81734 RUSH 1 WEEK
9	AZ47494	AZ47494W14			NA	NA equip	500	2	7	12/19/16 9:45	81760 1 WEEK
10	AZ47495	AZ47495W10			NA	NA equip	500	2	7	12/19/16 9:45	81760 1 WEEK
11	AZ47496	AZ47496W11			NA	NA equip	500	2	7	12/19/16 9:45	81760 1 WEEK
12	AZ47497	AZ47497W14			NA	NA equip	500	2	7	12/19/16 9:45	81760 1 WEEK
13	AZ47498	AZ47498W17			NA	NA equip	500	2	7	12/19/16 9:45	81760 1 WEEK
14	AZ47658	AZ47658W14			NA	NA equip	500	2	7	12/19/16 9:45	81776 1 WEEK
15	AZ47659	AZ47659W09			NA	NA equip	500	2	7	12/19/16 9:45	81776 1 WEEK
16	AZ47660	AZ47660W14			NA	NA equip	500	2	7	12/19/16 9:45	81776 1 WEEK

Solvent and Lot#	
ENVI-Carb Plus 400MG/1ML	
Reverible Tube Lot:	8088704
PH Strip	HC 574756
Di Water	12-19-16
Dichloromethane	56153
Methanol	060316C

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	RH
Date	12/19/16
Time	5:00
Refrigerator	GC-C

	Technician's Initials
Scanned By	KY
Sample Preparation	CFM
Extraction	CFM,KY
Concentration	KY

Modified	12/19/16 11:23:17 AM

Reviewed By: RH **Date** 12/19/16

_MWE2MEE

Organic Extraction Worksheet

Method	Solid Phase Extraction of 2MEE in Water	Extraction Set	161219A	Extraction Method	MWE2MEE	Units	mL

Spiked ID 1	Diethylene Glycol 12-15-16 EXP 12-15-17		Surrogate ID 1		
Spiked ID 2	MEE 11540ug/mL 9-27-16 EXP 9-27-17		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	12/19/16 9:45	
Spiked ID 8			Ext. End Time:	12/19/16 17:00	
			GC Requires Extract By:	12/20/16 0:00	

pH1			Water Bath Temp Criteria	
pH2				
pH3				

Spiked By: KY **Date** 12/19/16 **Witnessed By:** CFM **Date** 12/19/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
17	AZ47661	AZ47661W06			NA	NA equip	500	2	7	12/19/16 9:45	81776 1 WEEK
18	AZ47662	AZ47662W09			NA	NA equip	500	2	7	12/19/16 9:45	81776 1 WEEK
19	AZ47663	AZ47663W09			NA	NA equip	500	2	7	12/19/16 9:45	81776 1 WEEK
20	AZ47664	AZ47664W12			NA	NA equip	500	2	7	12/19/16 9:45	81776 1 WEEK
21	AZ47665	AZ47665W11			NA	NA equip	500	2	7	12/19/16 9:45	81776 1 WEEK
22	M STD		1	1	NA	NA equip	500	5	7	12/19/16 9:45	
23	SS		0.0870	2	NA	NA equip	500	2	7	12/19/16 9:45	

KY 12/19/16

Solvent and Lot#	
ENVI-Carb Plus 400MG/1ML	
Reverible Tube Lot:	8088704
PH Strip	HC 574756
Di Water	12-19-16
Dichloromethane	56153
Methanol	060316C

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	
Date	
Time	
Refrigerator	

	Technician's Initials
Scanned By	KY
Sample Preparation	CFM
Extraction	CFM,KY
Concentration	KY

Modified	12/19/16 11:23:17 AM

Reviewed By: KY **Date** 12/19/16

Injection Log

Directory: M:\YODA\DATA\Y161220G\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	1220Y002.D	1	SV Tune 11/15/16		20 Dec 16 9:12
2	3	1220Y003.D	1	50ug/ml DEG 12/20/16		20 Dec 16 9:32
3	4	1220Y004.D	1	100ug/ml DEG 12/20/16		20 Dec 16 10:02
4	5	1220Y005.D	1	200ug/ml DEG 12/20/16		20 Dec 16 11:27
5	6	1220Y006.D	1	400ug/ml DEG 12/20/16		20 Dec 16 11:57
6	7	1220Y007.D	1	500ug/ml DEG 12/20/16		20 Dec 16 12:27
7	8	1220Y008.D	1	600ug/ml DEG 12/20/16		20 Dec 16 12:57
8	9	1220Y009.D	1	800ug/ml DEG 12/20/16		20 Dec 16 13:28
9	10	1220Y010.D	1	1000ug/ml DEG 12/20/16		20 Dec 16 13:58
10	11	1220Y011.D	1	SS2 DEG 12/20/16		20 Dec 16 15:01
11	12	1220Y012.D	1	SV Tune 11/15/16		20 Dec 16 15:27
12	13	1220Y013.D	1	161219A BLK 2/500		20 Dec 16 15:44
13	17	1220Y017.D	1	161219A LCS-1 2/500		20 Dec 16 17:45
14	20	1220Y020.D	1	AZ47494W14 2/500		20 Dec 16 19:15
15	21	1220Y021.D	1	AZ47495W10 2/500		20 Dec 16 19:45
16	22	1220Y022.D	1	AZ47496W11 2/500		20 Dec 16 20:15
17	23	1220Y023.D	1	AZ47497W14 2/500		20 Dec 16 20:45
18	24	1220Y024.D	1	AZ47498W17 2/500		20 Dec 16 21:15
19	36	1220Y036.D	1	500ug/ml DEG 12/20/16		21 Dec 16 2:58

ORGANICS

APPL, INC.

ORGANICS
QC Summary

APPL, INC.

Method Blank

EPA 8260B BTEX WATER

Blank Name/QCG: **161218W-47493 - 214886**

Batch ID: #86BTO-161218AL

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	12/18/16	12/18/16
BLANK	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	12/18/16	12/18/16
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	12/18/16	12/18/16
BLANK	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	12/18/16	12/18/16
BLANK	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	12/18/16	12/18/16
BLANK	SURROGATE: 1,2-DICHLOROET	96.8	81-118			%	12/18/16	12/18/16
BLANK	SURROGATE: 4-BROMOFLUORO	95.6	85-114			%	12/18/16	12/18/16
BLANK	SURROGATE: DIBROMOFLUOR	99.0	80-119			%	12/18/16	12/18/16
BLANK	SURROGATE: TOLUENE-D8 (S)	96.7	89-112			%	12/18/16	12/18/16.

Quant Method: LALLW.M
Run #: 1218L08
Instrument: Loki
Sequence: 161216
Initials: DG

GC SC-Blank-REG MDLs-DOD
Printed: 01/04/17 1:46:32 PM

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81760

Case No: 81760 Date Analyzed: 12/18/16

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: 1,2-DICHLOROETHANE-D4 (S)			SURROGATE: 4-BROMOFLUOROBENZENE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161218AL-LCS	Lab Control Spike	81-118	94.4		85-114	99.6	
161218AL-BLK	Blank	81-118	96.8		85-114	95.6	
AZ47493	ERH134	81-118	97.6		85-114	93.9	
AZ47494	ERH139	81-118	97.2		85-114	94.6	
AZ47495	ERH136	81-118	94.5		85-114	95.1	
AZ47496	ERH143	81-118	95.0		85-114	92.2	
AZ47497	ERH145	81-118	96.0		85-114	92.8	
AZ47498	ERH146	81-118	96.1		85-114	95.7	

Comments: Batch: #86BTO-161218AL

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81760

Case No: 81760 Date Analyzed: 12/18/16

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: DIBROMOFLUOROMETHANE (S)			SURROGATE: TOLUENE-D8 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161218AL-LCS	Lab Control Spike	80-119	96.4		89-112	95.2	
161218AL-BLK	Blank	80-119	99.0		89-112	96.7	
AZ47493	ERH134	80-119	99.4		89-112	95.6	
AZ47494	ERH139	80-119	98.5		89-112	95.7	
AZ47495	ERH136	80-119	98.6		89-112	96.1	
AZ47496	ERH143	80-119	98.2		89-112	93.7	
AZ47497	ERH145	80-119	101		89-112	93.0	
AZ47498	ERH146	80-119	102		89-112	96.5	

Comments: Batch: #86BTO-161218AL

Laboratory Control Spike Recovery
EPA 8260B BTEX WATER

APPL ID: **161218W-47493 LCS - 214886**
Batch ID: #86BTO-161218AL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1,2-DICHLOROETHANE	10.00	9.51	95.1	73-128
BENZENE	10.00	10.1	101	79-120
ETHYLBENZENE	10.00	10.6	106	79-121
TOLUENE	10.00	10.6	106	80-121
XYLENES (TOTAL)	30.0	32.4	108	79-121
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	23.6	94.4	81-118
SURROGATE: 4-BROMOFLUOROBENZE	25.0	24.9	99.6	85-114
SURROGATE: DIBROMOFLUOROMETH	25.0	24.1	96.4	80-119
SURROGATE: TOLUENE-D8 (S)	25.0	23.8	95.2	89-112

Comments: _____

Primary	SPK
Quant Method :	LALLW.M
Extraction Date :	12/18/16
Analysis Date :	12/18/16
Instrument :	Loki
Run :	1218L02
Initials :	DG

Printed: 01/03/17 2:51:16 PM
APPL Standard LCS

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81760

Case No: 81760 Date Analyzed: 12/18/16

Matrix: WATER Instrument: Loki

Blank ID: 161218AL-BLK Time Analyzed: 1957

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161218AL-LCS	Lab Control Spike	1218L02	12/18/16 1709
161218AL-BLK	Blank	1218L08	12/18/16 1957
AZ47493	ERH134	1218L09	12/18/16 2025
AZ47494	ERH139	1218L14	12/18/16 2244
AZ47495	ERH136	1218L15	12/18/16 2312
AZ47496	ERH143	1218L16	12/18/16 2340
AZ47497	ERH145	1218L17	12/19/16 0008
AZ47498	ERH146	1218L18	12/19/16 0036

Comments: Batch: #86BTO-161218AL

Printed: 12/27/16 10:19:23 AM

Form 4, Blank Summary

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: ~~1216L00.D~~ 81760
Matrix: Water MP 1-4-17
ID: 5ng- BFB STD 12-15-16

SDG No: MP 1-4-17 ~~Loki~~ 81760
Date Analyzed: 12/16/16
Instrument: Loki
Time Analyzed: 11:37

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.3ug/L VOC STD 12/1	1216L04.D	12/16/16 13:18
2		0.5ug/L VOC STD 12/1	1216L05.D	12/16/16 13:46
3		1.0ug/L VOC STD 12/1	1216L06.D	12/16/16 14:14
4		2.0ug/L VOC STD 12/1	1216L07.D	12/16/16 14:42
5		5.0ug/L VOC STD 12/1	1216L08.D	12/16/16 15:10
6		10ug/L VOC STD 12/16	1216L09.D	12/16/16 15:38
7		20ug/L VOC STD 12/16	1216L10.D	12/16/16 16:06
8		40ug/L VOC STD 12/16	1216L11.D	12/16/16 16:35
9		100ug/L VOC STD 12/1	1216L12.D	12/16/16 17:03
10		(SS)10ug/L VOC STD 1	1216L17.D	12/16/16 19:23
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	17.0
75	30 - 60% of mass 95	48.6
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	6.7
173	0 - 2% of mass 174	0.0
174	50 - 100% of mass 95	91.2
175	5 - 9% of mass 174	7.5
176	95 - 101% of mass 174	98.0
177	5 - 9% of mass 176	6.3

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81760
Matrix: Water
ID: 5ng- BFB STD 12-15-16

SDG No: 81760
Date Analyzed: 12/18/16
Instrument: Loki
Time Analyzed: 16:23

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1	Lab Control Spike	161218A CCV/LCS 10ug	1218L02.D	12/18/16 17:09
2	Lab Control Spike	161218A CCV/LCS 300u	1218L04.D	12/18/16 18:05
3	Blank	161218A BLK-1WL	1218L08.D	12/18/16 19:57
4	ERH134	AZ47493W01	1218L09.D	12/18/16 20:25
5	ERH139	AZ47494W01	1218L14.D	12/18/16 22:44
6	ERH136	AZ47495W01	1218L15.D	12/18/16 23:12
7	ERH143	AZ47496W01	1218L16.D	12/18/16 23:40
8	ERH145	AZ47497W01	1218L17.D	12/19/16 0:08
9	ERH146	AZ47498W01	1218L18.D	12/19/16 0:36
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	16.8
75	30 - 60% of mass 95	50.2
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	6.9
173	0 - 2% of mass 174	0.0
174	50 - 100% of mass 95	94.8
175	5 - 9% of mass 174	7.9
176	95 - 101% of mass 174	100.4
177	5 - 9% of mass 176	6.7

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81760

Lab File ID (Standard): 1216L09.D Date Analyzed: 12/16/16

Instrument ID: Loki Time Analyzed: 15:38

GC Column: ID: Heated Purge: (Y/N)

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	594432	5.38	542208	8.70	308288	11.03
	UPPER LIMIT	1188864	5.88	1084416	9.20	616576	11.53
	LOWER LIMIT	297216	4.88	271104	8.20	154144	10.53
	SAMPLE NO.						
01	(SS)10ug/L VOC STD 1	601856	5.38	542656	8.70	297856	11.03
02	161218A CCV/LCS 10u	574080	5.38	540800	8.70	303616	11.03
03	161218A BLK-1WL	543168	5.38	507456	8.70	262208	11.03
04	AZ47493W01	537792	5.38	512192	8.70	262464	11.03
05	AZ47494W01	523200	5.38	492416	8.70	257088	11.03
06	AZ47495W01	535552	5.38	493888	8.70	263808	11.03
07	AZ47496W01	528512	5.38	510464	8.70	263616	11.03
08	AZ47497W01	525696	5.38	513664	8.70	254976	11.03
09	AZ47498W01	503296	5.38	474432	8.70	245888	11.03
10	Ending CCV 8260 10ug/	535040	5.38	507840	8.70	279040	11.03
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

ORGANICS
Sample Data

APPL, INC.

EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81760

Sample ID: ERH134

APPL ID: AZ47493

Sample Collection Date: 12/12/16

QCG: #86BTO-161218AL-214886

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	12/18/16	12/18/16
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	12/18/16	12/18/16
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	12/18/16	12/18/16
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	12/18/16	12/18/16
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	12/18/16	12/18/16
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	97.6	81-118			%	12/18/16	12/18/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	93.9	85-114			%	12/18/16	12/18/16
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	99.4	80-119			%	12/18/16	12/18/16
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	95.6	89-112			%	12/18/16	12/18/16

Quant Method: LALLW.M
Run #: 1218L09
Instrument: Loki
Sequence: 161216
Dilution Factor: 1
Initials: DG

Printed: 12/27/16 10:19:20 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L09.D Vial: 9
Acq On : 18 Dec 16 20:25 Operator: PM,DG,SV,CMM
Sample : AZ47493W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 12:36 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	537792	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	512192	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	262464	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.48	111	271949	24.85	ppb		0.00
Spiked Amount 25.000			Recovery =	99.392%			
37) 1,2-DCA-D4(S)	4.93	65	287225	24.41	ppb		0.00
Spiked Amount 25.000			Recovery =	97.624%			
57) Toluene-D8(S)	7.22	98	951263	23.91	ppb		0.00
Spiked Amount 25.000			Recovery =	95.648%			
65) 4-Bromofluorobenzene(S)	9.89	95	319604	23.47	ppb		0.00
Spiked Amount 25.000			Recovery =	93.892%			
Target Compounds							Qvalue
19) Methylene chloride	2.23	84	1752	-2.13	ppb		97
27) MEK (2-Butanone)	3.81	43	81	-0.14	ppb	#	52
40) 1,2-DCA	5.03	62	1286	0.09	ppb	#	74
48) 2-Chloroethyl vinyl ether	6.54	43	45	-0.70	ppb		100
49) MIBK (methyl isobutyl ket	7.15	43	214	-0.89	ppb	#	67

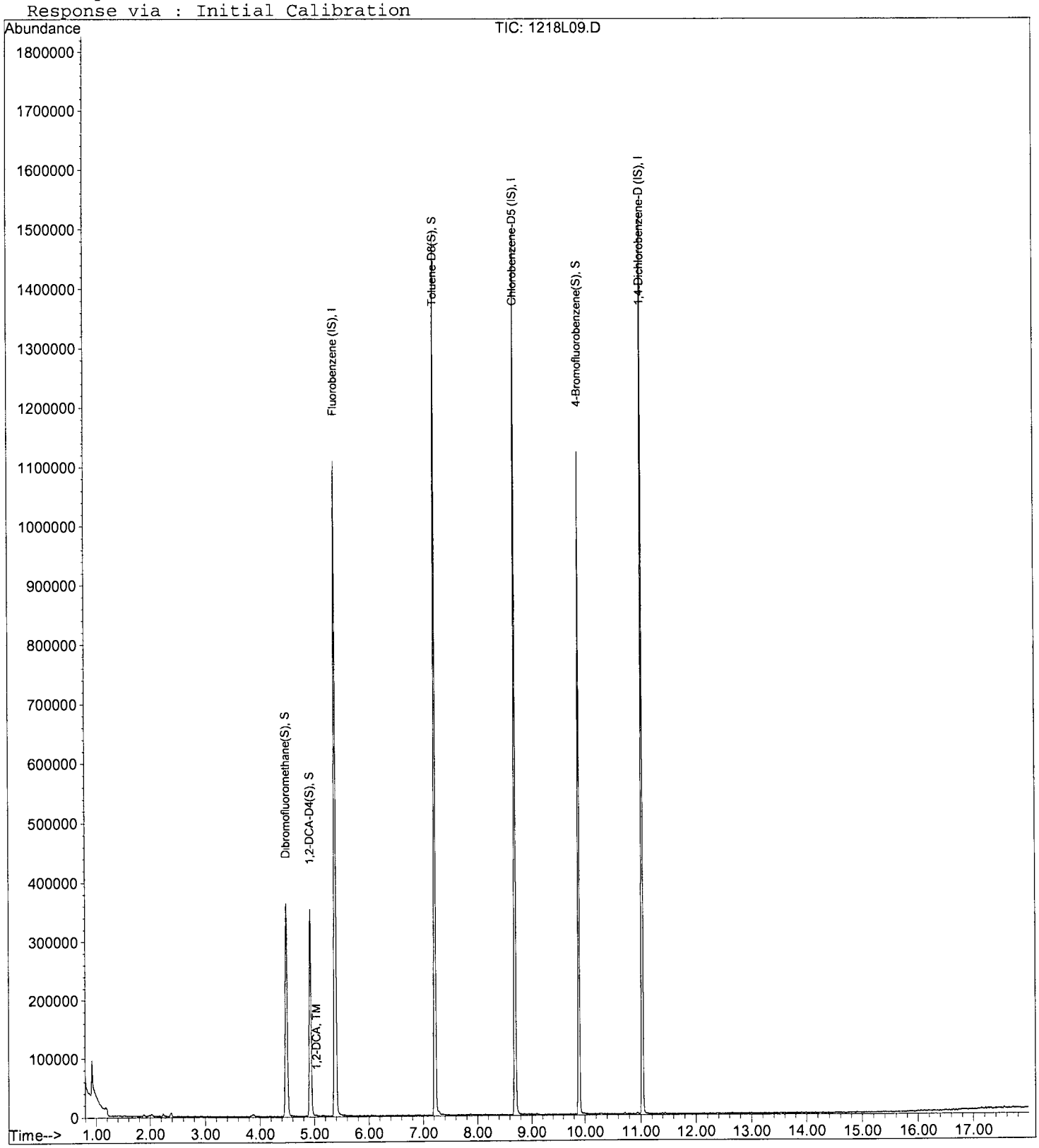
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L09.D Vial: 9
Acq On : 18 Dec 16 20:25 Operator: PM,DG,SV,CMM
Sample : AZ47493W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 12:36 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81760

Sample ID: ERH139

APPL ID: AZ47494

Sample Collection Date: 12/12/16

QCG: #86BTO-161218AL-214886

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	12/18/16	12/18/16
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	12/18/16	12/18/16
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	12/18/16	12/18/16
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	12/18/16	12/18/16
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	97.2	81-118			%	12/18/16	12/18/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	94.6	85-114			%	12/18/16	12/18/16
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	98.5	80-119			%	12/18/16	12/18/16
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	95.7	89-112			%	12/18/16	12/18/16

Quant Method: LALLW.M
Run #: 1218L14
Instrument: Loki
Sequence: 161216
Dilution Factor: 1
Initials: DG

Printed: 12/27/16 10:19:20 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L14.D
Acq On : 18 Dec 16 22:44
Sample : AZ47494W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 14
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 8:40 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	523200	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	492416	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	257088	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.48	111	262144	24.62	ppb		0.00
Spiked Amount 25.000			Recovery =	98.480%			
37) 1,2-DCA-D4(S)	4.93	65	278349	24.31	ppb		0.00
Spiked Amount 25.000			Recovery =	97.244%			
57) Toluene-D8(S)	7.22	98	915243	23.93	ppb		0.00
Spiked Amount 25.000			Recovery =	95.720%			
65) 4-Bromofluorobenzene(S)	9.89	95	309594	23.65	ppb		0.00
Spiked Amount 25.000			Recovery =	94.604%			
Target Compounds							Qvalue
19) Methylene chloride	2.24	84	603	-2.24	ppb		81
27) MEK (2-Butanone)	3.78	43	154	-0.12	ppb	#	52
48) 2-Chloroethyl vinyl ether	6.55	43	157	-0.53	ppb		100
49) MIBK (methyl isobutyl ket	7.13	43	120	-0.91	ppb	#	42

(#) = qualifier out of range (m) = manual integration

Quantitation Report

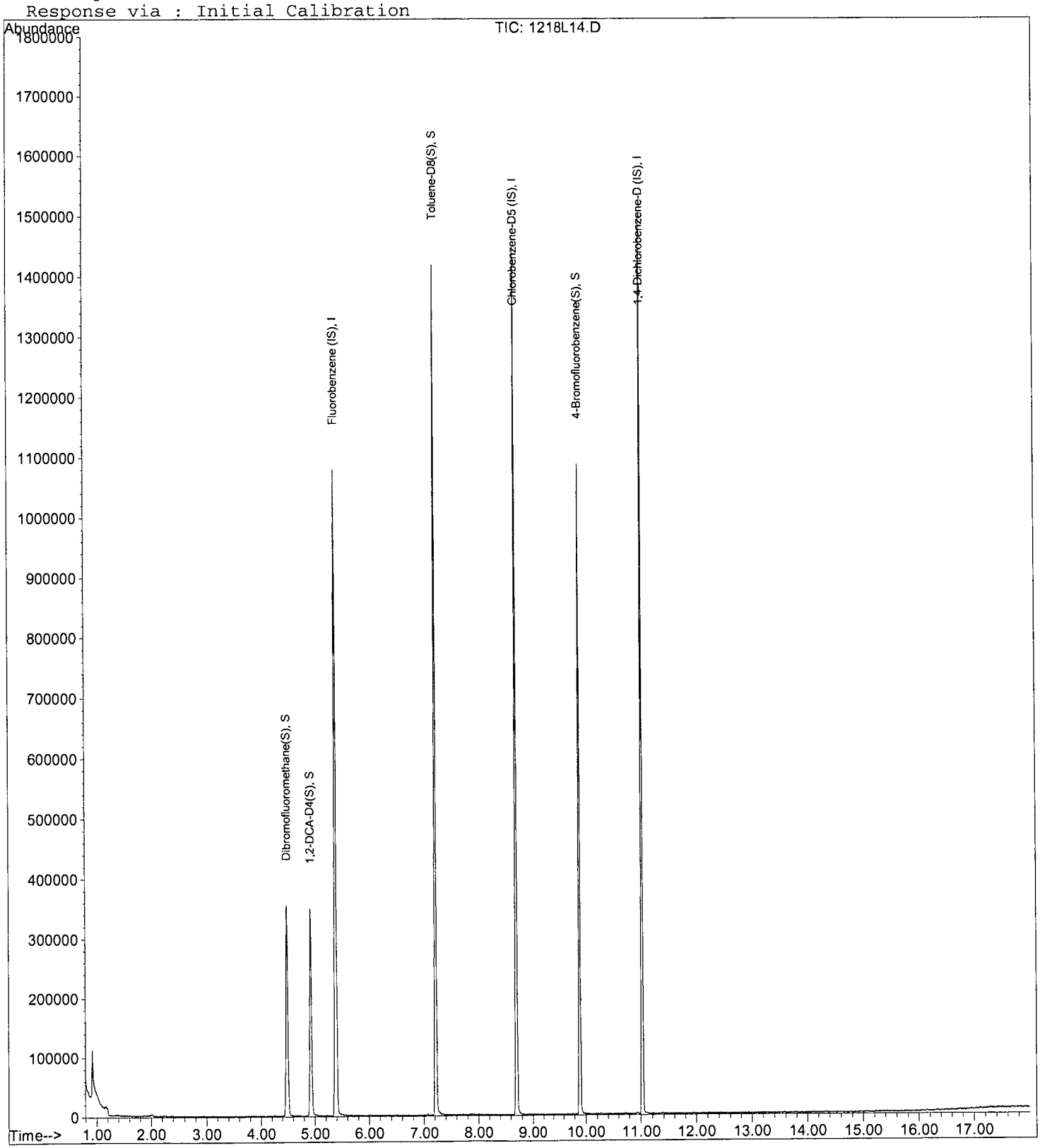
Data File : M:\LOKI\DATA\161216\1218L14.D
Acq On : 18 Dec 16 22:44
Sample : AZ47494W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 14
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 8:40 2016

Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH136
Sample Collection Date: 12/12/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81760
APPL ID: AZ47495
QCG: #86BTO-161218AL-214886

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	12/18/16	12/18/16
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	12/18/16	12/18/16
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	12/18/16	12/18/16
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	12/18/16	12/18/16
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	94.5	81-118			%	12/18/16	12/18/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	95.1	85-114			%	12/18/16	12/18/16
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	98.6	80-119			%	12/18/16	12/18/16
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	96.1	89-112			%	12/18/16	12/18/16

Quant Method: LALLW.M
Run #: 1218L15
Instrument: Loki
Sequence: 161216
Dilution Factor: 1
Initials: DG

Printed: 12/27/16 10:19:20 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L15.D Vial: 15
Acq On : 18 Dec 16 23:12 Operator: PM,DG,SV,CMM
Sample : AZ47495W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 8:41 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	535552	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	493888	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	263808	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.48	111	268609	24.65	ppb		0.00
Spiked Amount 25.000			Recovery = 98.584%				
37) 1,2-DCA-D4(S)	4.93	65	276780	23.62	ppb		0.00
Spiked Amount 25.000			Recovery = 94.464%				
57) Toluene-D8(S)	7.22	98	921228	24.01	ppb		0.00
Spiked Amount 25.000			Recovery = 96.060%				
65) 4-Bromofluorobenzene(S)	9.89	95	312206	23.78	ppb		0.00
Spiked Amount 25.000			Recovery = 95.120%				
Target Compounds							Qvalue
19) Methylene chloride	2.23	84	377	-2.26	ppb	#	75
27) MEK (2-Butanone)	3.74	43	159	-0.12	ppb	#	52
48) 2-Chloroethyl vinyl ether	6.55	43	21	-0.73	ppb		100
49) MIBK (methyl isobutyl ket	7.16	43	76	-0.91	ppb	#	42

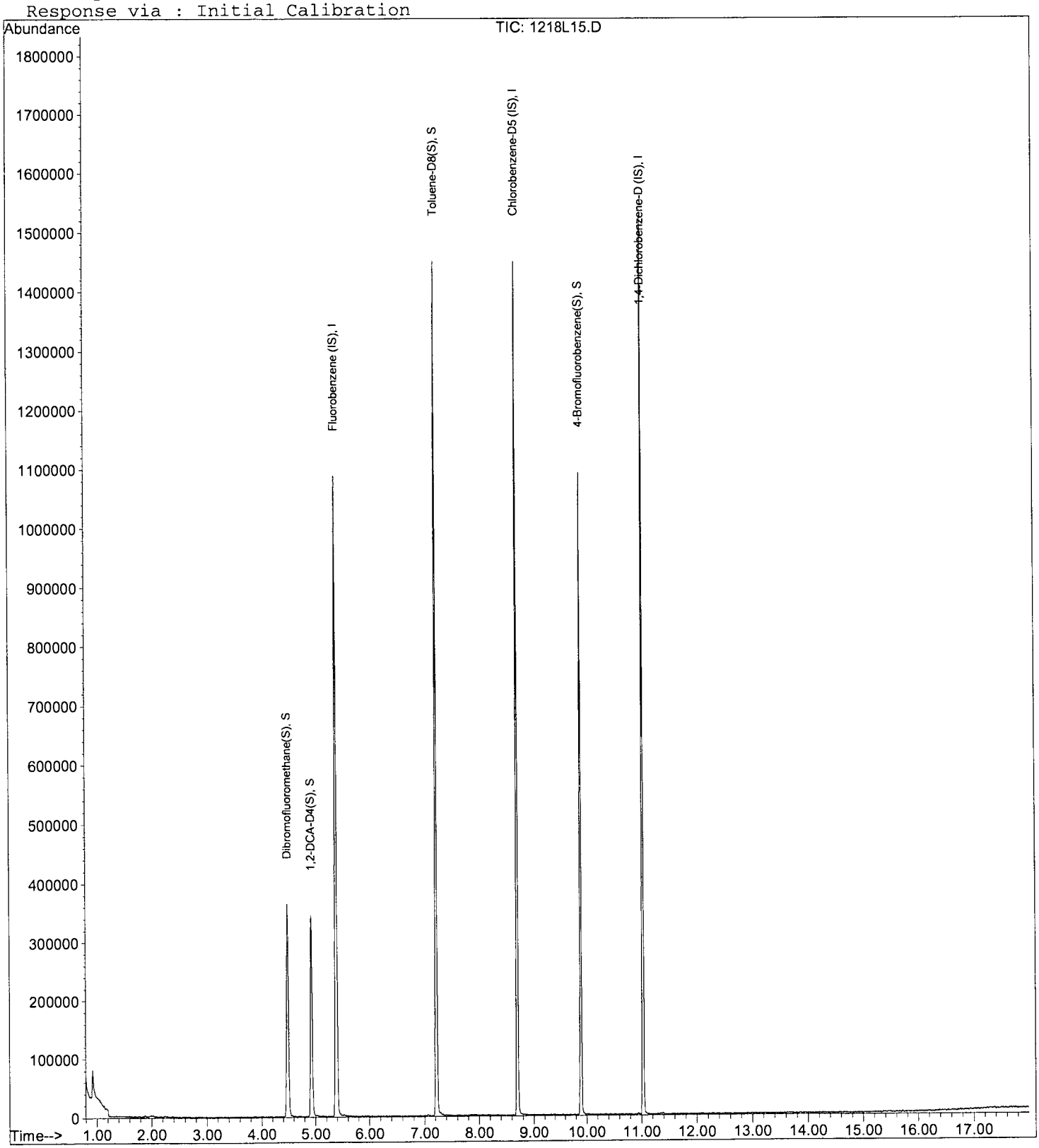
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L15.D Vial: 15
Acq On : 18 Dec 16 23:12 Operator: PM,DG,SV,CMM
Sample : AZ47495W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 8:41 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH143
Sample Collection Date: 12/13/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81760
APPL ID: AZ47496
QCG: #86BTO-161218AL-214886

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	12/18/16	12/18/16
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	12/18/16	12/18/16
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	12/18/16	12/18/16
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	12/18/16	12/18/16
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	95.0	81-118			%	12/18/16	12/18/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	92.2	85-114			%	12/18/16	12/18/16
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	98.2	80-119			%	12/18/16	12/18/16
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	93.7	89-112			%	12/18/16	12/18/16

Quant Method: LALLW.M
Run #: 1218L16
Instrument: Loki
Sequence: 161216
Dilution Factor: 1
Initials: DG

Printed: 12/27/16 10:19:20 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L16.D Vial: 16
Acq On : 18 Dec 16 23:40 Operator: PM,DG,SV,CMM
Sample : AZ47496W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 8:42 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	528512	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	510464	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	263616	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.48	111	263938	24.54	ppb		0.00
Spiked Amount 25.000			Recovery = 98.160%				
37) 1,2-DCA-D4(S)	4.92	65	274775	23.76	ppb		0.00
Spiked Amount 25.000			Recovery = 95.032%				
57) Toluene-D8(S)	7.22	98	928466	23.42	ppb		0.00
Spiked Amount 25.000			Recovery = 93.672%				
65) 4-Bromofluorobenzene(S)	9.89	95	312691	23.04	ppb		0.00
Spiked Amount 25.000			Recovery = 92.172%				
Target Compounds							Qvalue
19) Methylene chloride	2.23	84	623	-2.23	ppb	#	58
27) MEK (2-Butanone)	3.81	43	116	-0.13	ppb	#	52
48) 2-Chloroethyl vinyl ether	6.53	43	238	-0.41	ppb		100
49) MIBK (methyl isobutyl ket	7.15	43	110	-0.91	ppb	#	42

(#) = qualifier out of range (m) = manual integration

Quantitation Report

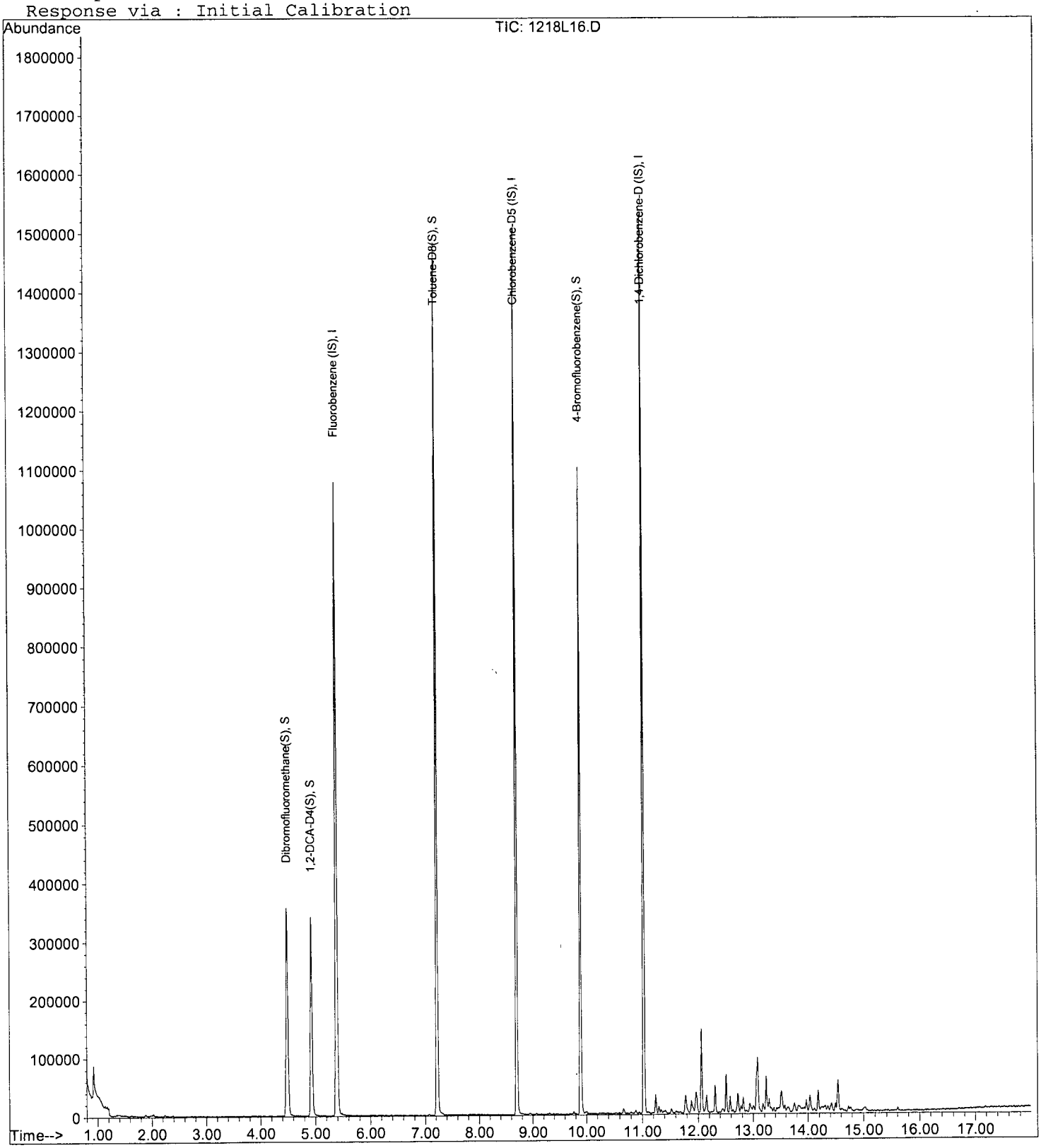
Data File : M:\LOKI\DATA\161216\1218L16.D
Acq On : 18 Dec 16 23:40
Sample : AZ47496W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 16
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 8:42 2016

Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH145

Sample Collection Date: 12/13/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81760

APPL ID: AZ47497

QCG: #86BTO-161218AL-214886

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	12/19/16	12/19/16
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	12/19/16	12/19/16
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	12/19/16	12/19/16
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	12/19/16	12/19/16
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	96.0	81-118			%	12/19/16	12/19/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	92.8	85-114			%	12/19/16	12/19/16
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	101	80-119			%	12/19/16	12/19/16
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	93.0	89-112			%	12/19/16	12/19/16

Quant Method: LALLW.M
Run #: 1218L17
Instrument: Loki
Sequence: 161216
Dilution Factor: 1
Initials: DG

Printed: 12/27/16 10:19:20 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L17.D Vial: 17
Acq On : 19 Dec 16 00:08 Operator: PM,DG,SV,CMM
Sample : AZ47497W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 8:42 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	525696	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	513664	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	254976	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.48	111	271078	25.34	ppb		0.00
Spiked Amount 25.000			Recovery = 101.356%				
37) 1,2-DCA-D4(S)	4.92	65	276217	24.01	ppb		0.00
Spiked Amount 25.000			Recovery = 96.040%				
57) Toluene-D8(S)	7.22	98	927630	23.25	ppb		0.00
Spiked Amount 25.000			Recovery = 93.004%				
65) 4-Bromofluorobenzene(S)	9.89	95	316933	23.21	ppb		0.00
Spiked Amount 25.000			Recovery = 92.844%				
Target Compounds							Qvalue
19) Methylene chloride	2.24	84	1098	-2.19	ppb		78
27) MEK (2-Butanone)	3.81	43	43	-0.15	ppb	#	52
49) MIBK (methyl isobutyl ket	7.13	43	87	-0.91	ppb	#	42

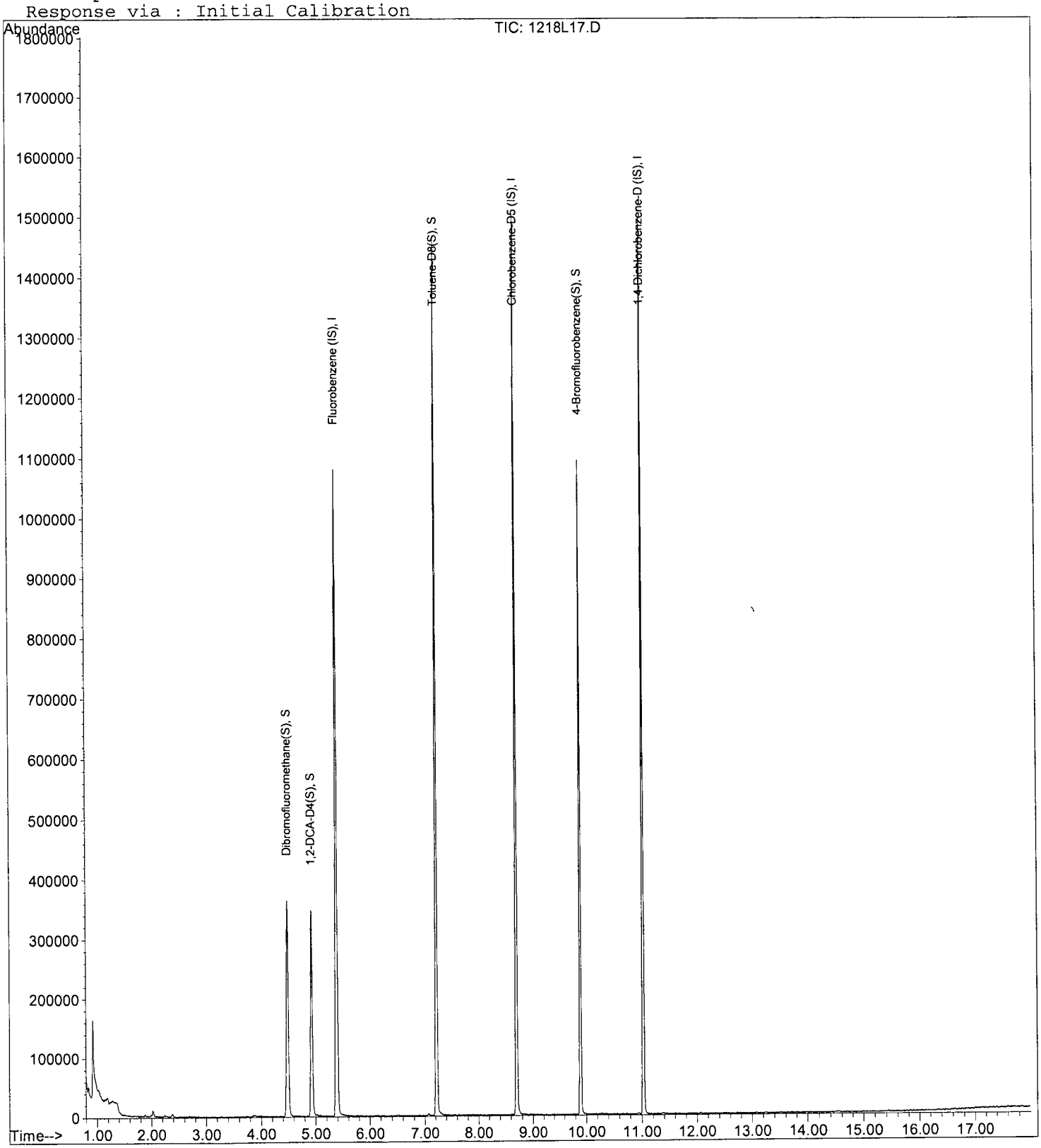
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L17.D Vial: 17
Acq On : 19 Dec 16 00:08 Operator: PM,DG,SV,CMM
Sample : AZ47497W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 8:42 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH146
Sample Collection Date: 12/12/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81760
APPL ID: AZ47498
QCG: #86BTO-161218AL-214886

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	12/19/16	12/19/16
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	12/19/16	12/19/16
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	12/19/16	12/19/16
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	12/19/16	12/19/16
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	12/19/16	12/19/16
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	96.1	81-118			%	12/19/16	12/19/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	95.7	85-114			%	12/19/16	12/19/16
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	102	80-119			%	12/19/16	12/19/16
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	96.5	89-112			%	12/19/16	12/19/16

Quant Method: LALLW.M
Run #: 1218L18
Instrument: Loki
Sequence: 161216
Dilution Factor: 1
Initials: DG

Printed: 12/27/16 10:19:20 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L18.D Vial: 18
Acq On : 19 Dec 16 00:36 Operator: PM,DG,SV,CMM
Sample : AZ47498W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 11:04 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	503296	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	474432	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	245888	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.48	111	261527	25.53	ppb		0.00
Spiked Amount 25.000			Recovery = 102.136%				
37) 1,2-DCA-D4(S)	4.92	65	264728	24.04	ppb		0.00
Spiked Amount 25.000			Recovery = 96.144%				
57) Toluene-D8(S)	7.22	98	888842	24.12	ppb		0.00
Spiked Amount 25.000			Recovery = 96.484%				
65) 4-Bromofluorobenzene(S)	9.89	95	301683	23.92	ppb		0.00
Spiked Amount 25.000			Recovery = 95.684%				
Target Compounds							Qvalue
11) Acetone	1.88	43	1500	-1.50	ppb	#	64
19) Methylene chloride	2.24	84	876	-2.21	ppb	#	66
27) MEK (2-Butanone)	3.79	43	44	-0.15	ppb	#	52
48) 2-Chloroethyl vinyl ether	6.52	43	177	-0.49	ppb		100
49) MIBK (methyl isobutyl ket	7.16	43	48	-0.92	ppb	#	42

(#) = qualifier out of range (m) = manual integration

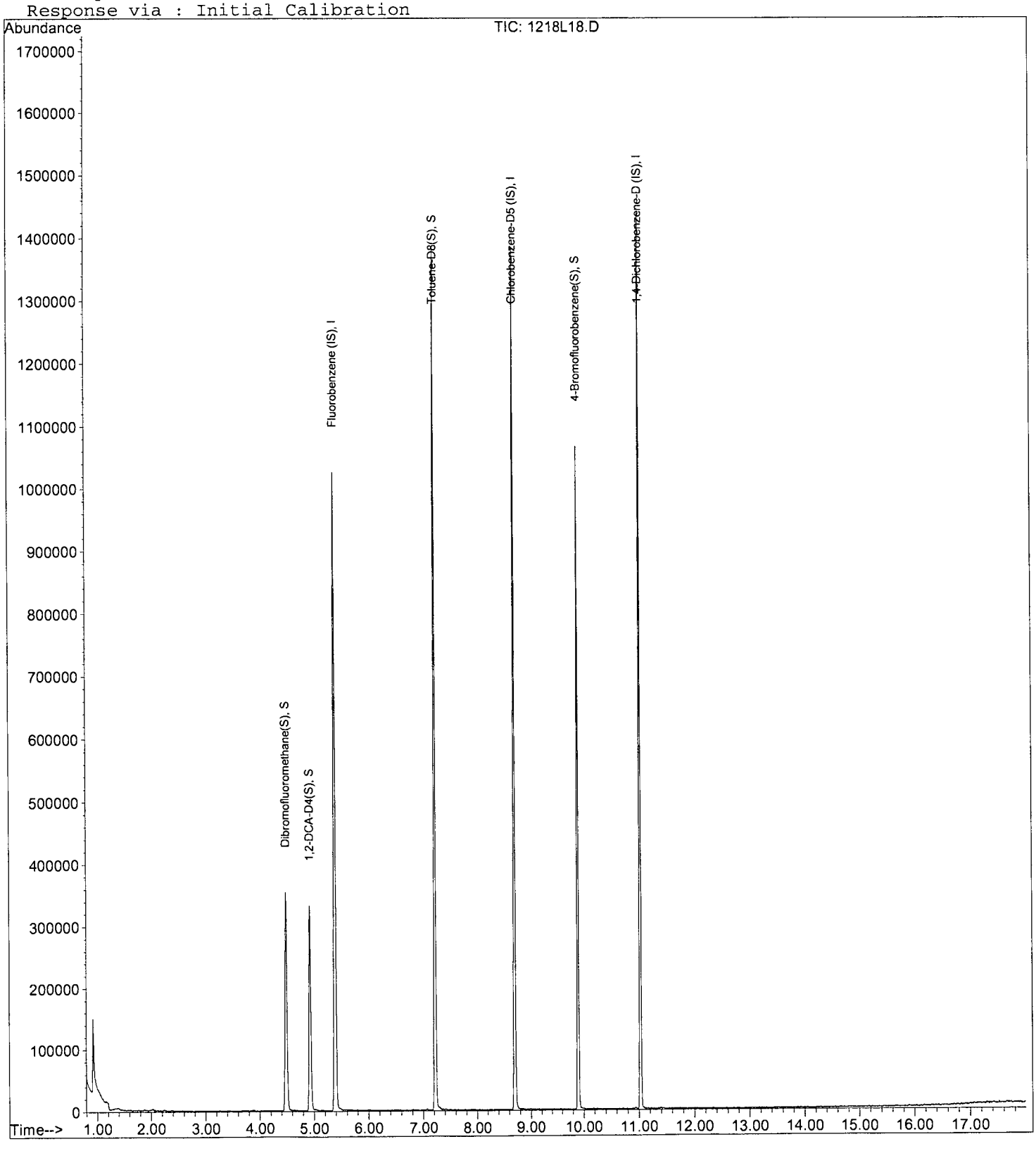
Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L18.D
Acq On : 19 Dec 16 00:36
Sample : AZ47498W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 18
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 29 11:04 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



ORGANICS
Calibration Data

APPL, INC.

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/16/16
Matrix: Instrument: Loki
Initials:

		Compound	1216L04.D	1216L05.D	1216L06 D	1216L07.D	1216L08.D	1216L09.D	1216L10.D	1216L11.D	1216L12.D		Avg	%RSD		
1	I	Fluorobenzene (IS)														
2	TM	Dichlorodifluoromethane	0.5157	0.4523	0.4576	0.4461	0.4508	0.4802	0.4346	0.4312	0.4230		0.45	6.2	TM	
3	TM	Freon 114	0.2720	0.2990	0.2665	0.3221	0.2668	0.3206	0.2738	0.2937	0.2911		0.29	7.5	TM	
4	TM**	Chloromethane		0.8936	0.8262	0.7876	0.7994	0.7607	0.7145	0.7157	0.7129		0.78	8.2	TM**	
5	TM*	Vinyl chloride		0.5545	0.5501	0.5309	0.5751	0.5683	0.5366	0.5503	0.5561		0.55	2.7	TM*	
6	TM	Bromomethane		0.4034	0.3905	0.3592	0.3635	0.3547	0.3593	0.3875	0.3778		0.37	4.8	TM	
7	TM	Chloroethane		0.3100	0.2883	0.3236	0.3057	0.3045	0.2872	0.2909	0.2064		0.29	12	TM	
8	TM	Dichlorofluoromethane	0.9944	1.017	0.9833	0.9409	0.9171	0.9110	0.8660	0.8879	0.8868		0.93	5.7	TM	
9	TM	Trichlorofluoromethane	0.5490	0.5269	0.5959	0.5356	0.5562	0.5877	0.5346	0.5493	0.5756		0.56	4.4	TM	
10	TM	Acrolein	0.0552	0.0535	0.0523	0.0509	0.0509	0.0502	0.0502	0.0493	0.0511		0.05	3.6	TM	
11	TML	Acetone			0.3210	0.1777	0.1292	0.1066	0.0932	0.0855	0.0860		0.14	60	TML	1.000
12	TM	Freon-113		0.3114	0.3021	0.3038	0.2697	0.3011	0.2626	0.2764	0.2807		0.29	6.3	TM	
13	TM*	1,1-DCE	0.2887	0.3175	0.2511	0.2704	0.2637	0.2612	0.2377	0.2544	0.2374		0.26	9.6	TM*	
14	TM	t-Butanol	0.0138	0.0131	0.0132	0.0133	0.0132	0.0133	0.0115	0.0119	0.0107		0.01	8.3	TM	
15	TM	Acetonitrile	0.0574	0.0470	0.0474	0.0471	0.0452	0.0459	0.0403	0.0551	0.1184		0.06	43	TM	
16	TM	Methyl Acetate		0.3243	0.4270	0.3608	0.3124	0.3027	0.2866	0.2886	0.2872		0.32	15	TM	
17	TM	Iodomethane		0.2098	0.2491	0.2472	0.2686	0.2649	0.2764	0.2858	0.2687		0.26	9.1	TM	
18	TM	Acrylonitrile			0.1445	0.1284	0.1160	0.1067	0.1053	0.1044	0.1075		0.12	13	TM	
19	TML	Methylene chloride		2.636	1.486	1.085	0.8552	0.6674	0.5091	0.5170	0.5110		1.0	71	TML	0.999
20	TM	Carbon disulfide	0.9254	0.8238	1.187	1.153	1.158	1.115	1.100	1.121			1.1	12	TM	
21	TM	Methyl t-butyl ether (MtBE)	1.320	1.223	1.083	1.143	1.166	1.115	1.078	1.098	1.132		1.2	6.8	TM	
22	TM	Trans-1,2-DCE	0.5022	0.5054	0.4593	0.4438	0.4691	0.4423	0.4320	0.4439	0.4385		0.46	6.0	TM	
23	TM	Diisopropyl Ether	1.678	1.483	1.507	1.406	1.507	1.457	1.469	1.505	1.519		1.5	4.9	TM	
24	TM**	1,1-DCA	0.9019	0.9396	0.9270	0.9047	0.9141	0.8545	0.8314	0.8394	0.8323		0.88	4.9	TM**	
25	TM	Vinyl Acetate	0.3927	0.4222	0.3641	0.3573	0.3431	0.3182	0.3155	0.3232	0.3297		0.35	10	TM	
26	TM	Ethyl tert Butyl Ether	1.271	1.196	1.188	1.127	1.198	1.183	1.162	1.199	1.236		1.2	3.4	TM	
27	TML	MEK (2-Butanone)	0.2519	0.2502	0.1885	0.1431	0.1585	0.1413	0.1339	0.1378	0.1393		0.17	28	TML	1.000
28	TM	Cis-1,2-DCE	0.5390	0.6240	0.5261	0.5281	0.5465	0.5066	0.5063	0.5187	0.5199		0.54	6.7	TM	
29	TM	2,2-Dichloropropane	0.2359	0.2203	0.1975	0.1947	0.2099	0.2005	0.1927	0.1966	0.1948		0.20	7.2	TM	
30	TM*	Chloroform	0.8877	0.9593	0.9641	0.9024	0.9243	0.8843	0.8398	0.8548	0.8437		0.90	5.2	TM*	
31	TM	Bromochloromethane	0.2715	0.2885	0.2494	0.2501	0.2609	0.2493	0.2295	0.2331	0.2292		0.25	8.0	TM	
32	S	Dibromofluoromethane(S)	0.6038	0.5753	0.4807	0.4859	0.5082	0.5039	0.4767	0.4835	0.4607		0.51	9.5	S	
33	TM	1,1,1-TCA	0.6964	0.6392	0.7381	0.6660	0.6700	0.6362	0.6087	0.6416	0.6348		0.66	5.9	TM	
34	TM	Cyclohexane	0.3409	0.2934	0.2974	0.2817	0.2476	0.2811	0.2527	0.2738	0.2765		0.28	9.7	TM	
35	TM	1,1-Dichloropropene	0.5520	0.5372	0.5296	0.5378	0.5391	0.5384	0.5117	0.5336	0.5406		0.54	2.0	TM	

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/16/16
Matrix: Instrument: Loki

Initials:

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD		
36	TM	2,2,4-Trimethylpentane	0.8313	0.7213	0.8838	0.7872	0.7239	0.8713	0.7807	0.8401	0.8804		0.81	7.8	TM	
37	S	1,2-DCA-D4(S)	0.6316	0.6392	0.5243	0.5341	0.5492	0.5372	0.5189	0.5081	0.4813		0.55	9.8	S	
38	TM	Carbon Tetrachloride	0.5074	0.5050	0.4952	0.4920	0.5068	0.5018	0.4547	0.4843	0.4832		0.49	3.4	TM	
39	TM	Tert Amyl Methyl Ether	1.148	1.019	0.9699	0.9755	1.045	1.048	1.015	1.062	1.092		1.0	5.4	TM	
40	TM	1,2-DCA	0.7209	0.6832	0.6883	0.6725	0.6688	0.6410	0.6143	0.6074	0.5985		0.65	6.4	TM	
41	TM	Benzene	2.051	2.035	1.902	1.833	1.973	1.866	1.817	1.858	1.834		1.9	4.7	TM	
42	TM	TCE	0.2274	0.2332	0.2586	0.2444	0.2386	0.2319	0.2265	0.2324	0.2344		0.24	4.2	TM	
43	TM	2-Pentanone	0.2245	0.2257	0.2237	0.2320	0.2378	0.2365	0.2335	0.2356	0.2379		0.23	2.5	TM	
44	TM*	1,2-Dichloropropane	0.6614	0.6594	0.5295	0.5142	0.5638	0.5098	0.4981	0.5029	0.5035		0.55	12	TM*	
45	TM	Bromodichloromethane	0.6597	0.7561	0.6880	0.6447	0.6717	0.6247	0.6140	0.6264	0.6353		0.66	6.7	TM	
46	TM	Methyl Cyclohexane	0.4597	0.5020	0.4668	0.4579	0.4204	0.4807	0.4284	0.4720	0.4976		0.47	6.0	TM	
47	TM	Dibromomethane	0.2848	0.3530	0.2934	0.2821	0.2840	0.2721	0.2694	0.2740	0.2657		0.29	9.2	TM	
48	TML	2-Chloroethyl vinyl ether				0.0600	0.0488	0.0317	0.0320	0.0310	0.0326		0.04	31	TML	0.998
49	TML	MIBK (methyl isobutyl ketone)			0.5253	0.4191	0.4232	0.3522	0.3219	0.3049	0.3129		0.38	21	TML	1.000
50	TM	1-Bromo-2-chloroethane	0.3599	0.4357	0.3455	0.3542	0.3682	0.3607	0.3462	0.3431	0.3387		0.36	8.2	TM	
51	TM	Cis-1,3-Dichloropropene	0.8328	0.7040	0.6952	0.6907	0.7429	0.6889	0.6943	0.7223	0.7491		0.72	6.4	TM	
52	TM*	Toluene	2.039	2.095	1.933	1.926	2.107	2.006	1.937	1.997	1.981		2.0	3.4	TM*	
53	TM	Trans-1,3-Dichloropropene	0.6110	0.6192	0.5622	0.5905	0.6165	0.6049	0.5875	0.6115	0.6362		0.60	3.6	TM	
54	TM	1,1,2-TCA	0.3059	0.3546	0.3235	0.3371	0.3560	0.3431	0.3317	0.3249	0.3283		0.33	4.8	TM	
55	TML	2-Hexanone			0.0617	0.0782	0.1054	0.1017	0.1034	0.1051	0.1180		0.10	20	TML	0.998
56	I	Chlorobenzene-D5 (IS)														
57	S	Toluene-D8(S)	2.140	2.113	1.779	1.826	1.908	1.970	1.913	1.987	1.840		1.9	6.4	S	
58	TM	1,2-EDB	0.4065	0.4227	0.3896	0.4213	0.4068	0.3870	0.3836	0.3910	0.3894		0.40	3.7	TM	
59	TM	Tetrachloroethene	0.5196	0.5414	0.4944	0.4650	0.4784	0.4866	0.4696	0.4741	0.4572		0.49	5.6	TM	
60	TM	1-Chlorohexane	0.5211	0.5008	0.5064	0.5030	0.4890	0.4785	0.4934	0.5298	0.5342		0.51	3.7	TM	
61	TM	1,1,1,2-Tetrachloroethane	0.5115	0.4925	0.5254	0.5252	0.4936	0.4981	0.4883	0.5038	0.4905		0.50	2.9	TM	
62	TM	m&p-Xylene	0.8684	0.8307	0.7502	0.8141	0.8592	0.8734	0.8720	0.9122	0.8874		0.85	5.6	TM	
63	TM	o-Xylene	0.7650	0.8014	0.7493	0.8274	0.8451	0.8564	0.8455	0.8910	0.8875		0.83	6.0	TM	
64	TM	Styrene	0.8327	0.7789	0.8453	0.8288	0.9458	0.9461	1.008	1.047	1.061		0.92	11	TM	
65	S	4-Bromofluorobenzene(S)	0.7277	0.6367	0.6079	0.6383	0.6540	0.6894	0.6701	0.7025	0.6545		0.66	5.6	S	
66	TM	1,3-Dichloropropane	0.7918	0.7913	0.7689	0.7743	0.7734	0.7352	0.7055	0.7184	0.6958		0.75	5.0	TM	
67	TM	Dibromochloromethane		0.4304	0.4664	0.4618	0.4898	0.4879	0.4751	0.4964	0.4892		0.47	4.6	TM	
68	TM**	Chlorobenzene	1.530	1.460	1.526	1.469	1.467	1.394	1.353	1.407	1.357		1.4	4.6	TM**	
69	TM*	Ethylbenzene	2.215	2.148	2.134	2.251	2.284	2.268	2.293	2.419	2.338		2.3	3.9	TM*	
70	TM**	Bromoform	0.2851	0.3075	0.2944	0.2878	0.2820	0.2838	0.2869	0.2919	0.2939		0.29	2.7	TM**	

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No: _____
Case No: _____ Initial Cal. Date: 12/16/16
Matrix: _____ Instrument: Loki
Initials: _____

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD		
71	I	1,4-Dichlorobenzene-D (IS)														
72	TM	Isopropylbenzene	3.608	3.567	3.582	3.550	3.684	3.575	3.766	3.816	3.520		3.6	2.8	TM	
73	TM**	1,1,2,2-Tetrachloroethane	1.068	0.9294	1.064	0.9815	0.9674	0.9038	0.9092	0.8806	0.8330		0.95	8.4	TM**	
74	TM	1,2,3-Trichloropropane		0.1537	0.2034	0.1850	0.1974	0.1685	0.1669	0.1642	0.1528		0.17	11	TM	
75	TM	t-1,4-Dichloro-2-Butene		0.2306	0.1936	0.2093	0.2315	0.1982	0.2116	0.2113	0.2077		0.21	6.4	TM	
76	TM	Bromobenzene	1.038	1.039	1.131	1.078	1.101	1.011	1.050	1.042	0.9504		1.0	5.0	TM	
77	TM	n-Propylbenzene	4.761	4.067	4.350	4.309	4.442	4.267	4.498	4.562	4.139		4.4	4.9	TM	
78	TM	4-Ethyltoluene	3.642	3.099	3.517	3.561	3.787	3.673	3.826	3.895	3.567		3.6	6.5	TM	
79	TM	2-Chlorotoluene	3.400	2.932	3.011	2.765	2.980	2.807	2.901	2.908	2.620		2.9	7.3	TM	
80	TM	1,3,5-Trimethylbenzene	3.198	2.613	3.109	3.025	3.351	3.217	3.341	3.357	3.038		3.1	7.5	TM	
81	TM	4-Chlorotoluene	3.236	2.982	3.385	3.145	3.427	3.285	3.380	3.353	3.060		3.3	4.8	TM	
82	TM	Tert-Butylbenzene	2.393	2.249	2.504	2.431	2.581	2.419	2.545	2.658	2.459		2.5	4.8	TM	
83	TM	1,2,4-Trimethylbenzene	2.944	2.856	3.062	3.023	3.325	3.155	3.394	3.447	3.182		3.2	6.5	TM	
84	TM	Sec-Butylbenzene	3.437	3.301	3.492	3.363	3.633	3.508	3.689	3.788	3.536		3.5	4.4	TM	
85	TM	p-Isopropyltoluene	3.046	2.903	3.064	2.980	3.109	3.035	3.171	3.257	3.079		3.1	3.3	TM	
86	TM	Benzyl Chloride	0.8927	0.9036	0.8369	0.8469	0.8954	0.8864	0.9637	1.020	1.114		0.93	9.6	TM	
87	TM	1,3-DCB	2.185	2.083	2.147	2.069	2.050	1.960	1.973	1.991	1.853		2.0	5.0	TM	
88	TM	1,4-DCB	2.412	2.139	2.372	2.065	2.105	1.962	2.017	2.000	1.898		2.1	8.4	TM	
89	TM	n-Butylbenzene	2.816	2.466	2.690	2.621	2.685	2.633	2.763	2.900	2.789		2.7	4.7	TM	
90	TM	1,2-DCB	2.085	1.916	2.016	1.985	1.994	1.800	1.842	1.864	1.798		1.9	5.3	TM	
91	TM	Hexachloroethane	0.7881	0.6971	0.6960	0.6373	0.6789	0.6365	0.6687	0.6836	0.6593		0.68	6.6	TM	
92	TM	1,2-Dibromo-3-chloropropane	0.1366	0.1657	0.1407	0.1502	0.1464	0.1386	0.1393	0.1428	0.1408		0.14	6.2	TM	
93	TM	1,2,4-Trichlorobenzene	1.424	1.146	1.165	1.094	1.150	1.088	1.115	1.183	1.144		1.2	8.7	TM	
94	TM	Hexachlorobutadiene	0.6077	0.5202	0.4880	0.4559	0.4521	0.4227	0.4153	0.4421	0.4200		0.47	13	TM	
95	TM	Naphthalene	1.172	1.248	1.254	1.185	1.290	1.231	1.355	1.572	1.442		1.3	10.0	TM	
96	TM	1,2,3-Trichlorobenzene	0.8760	0.7825	0.7878	0.6841	0.7081	0.6524	0.6797	0.7387	0.6671		0.73	10.0	TM	
97																
98																
99																
100																
101																
102																
103																
104																
105																

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L04.D
Acq On : 16 Dec 16 13:18
Sample : 0.3ug/L VOC STD 12/16/16AI
Misc : W IS&S 11/21/16, 11/14/16

Vial: 4
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:00 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	557056	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	504256	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	258752	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	67272	5.93416 ppb		0.00
Spiked Amount 25.000			Recovery = 23.736%			
37) 1,2-DCA-D4(S)	4.92	65	70363	5.77202 ppb		0.00
Spiked Amount 25.000			Recovery = 23.088%			
57) Toluene-D8(S)	7.22	98	215839	5.51085 ppb		0.00
Spiked Amount 25.000			Recovery = 22.044%			
65) 4-Bromofluorobenzene(S)	9.89	95	73391	5.47506 ppb		0.00
Spiked Amount 25.000			Recovery = 21.900%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	3447	0.34028 ppb	#	84
3) Freon 114	0.93	85	1818	0.28183 ppb		94
4) Chloromethane	0.96	50	7548	0.43635 ppb		95
6) Bromomethane	1.22	96	3123	0.37427 ppb		95
7) Chloroethane	1.29	64	2750	0.42619 ppb		89
8) Dichlorofluoromethane	1.43	67	6647	0.31945 ppb		96
9) Trichlorofluoromethane	1.46	101	3670	0.29583 ppb		83
10) Acrolein	1.76	56	12307	10.72221 ppb	#	99
11) Acetone	1.88	43	4855	0.21392 ppb	#	79
12) Freon-113	1.84	101	2035	0.31658 ppb		86
13) 1,1-DCE	1.83	96	1930	0.32726 ppb		93
14) t-Butanol	2.39	59	3084	10.94233 ppb	#	92
15) Acetonitrile	2.10	41	12799	10.26091 ppb		97
16) Methyl Acetate	2.17	43	2849	0.39501 ppb		94
17) Iodomethane	1.93	142	1479	0.25645 ppb	#	89
18) Acrylonitrile	2.48	52	1112	0.42976 ppb		92
19) Methylene chloride	2.24	84	21934	-0.31436 ppb		99
20) Carbon disulfide	1.98	76	8730	0.36519 ppb		94
21) Methyl t-butyl ether (MtBE	2.52	73	8827	0.34419 ppb		95
22) Trans-1,2-DCE	2.50	96	3357	0.32779 ppb		92
23) Diisopropyl Ether	3.11	45	11217	0.33485 ppb		97
24) 1,1-DCA	2.95	63	6029	0.30650 ppb	#	94
25) Vinyl Acetate	3.08	43	2625	0.33491 ppb		93
26) Ethyl tert Butyl Ether	3.59	59	8498	0.31892 ppb	#	85
27) MEK (2-Butanone)	3.81	43	1684	0.37582 ppb		90
28) Cis-1,2-DCE	3.72	96	3603	0.30223 ppb		84
29) 2,2-Dichloropropane	3.72	77	1577	0.34562 ppb	#	83
30) Chloroform	4.26	83	5934	0.29735 ppb		99
31) Bromochloromethane	4.08	128	1815	0.32416 ppb		98
33) 1,1,1-TCA	4.48	97	4655	0.31701 ppb		92
34) Cyclohexane	4.54	41	2279	0.36166 ppb		83
35) 1,1-Dichloropropene	4.72	75	3690	0.30922 ppb	#	78
36) 2,2,4-Trimethylpentane	5.15	57	5557	0.30662 ppb	#	84
38) Carbon Tetrachloride	4.71	119	3392	0.30923 ppb		91
39) Tert Amyl Methyl Ether	5.23	73	7673	0.33059 ppb	#	92
40) 1,2-DCA	5.03	62	4819	0.33019 ppb		99
41) Benzene	4.99	78	13707	0.32248 ppb		93
42) TCE	5.84	95	1520	0.28861 ppb		92
43) 2-Pentanone	6.13	43	50029	9.68155 ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L04.D Vial: 4
Acq On : 16 Dec 16 13:18 Operator: PM,DG,SV,CMM
Sample : 0.3ug/L VOC STD 12/16/16AI Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 17 15:00 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
44)	1,2-Dichloropropane	6.09	63	4421	0.36129	ppb	#	85
45)	Bromodichloromethane	6.44	83	4410	0.30085	ppb	#	95
46)	Methyl Cyclohexane	6.03	83	3073	0.29655	ppb		78
47)	Dibromomethane	6.22	93	1904	0.29825	ppb		94
48)	2-Chloroethyl vinyl ether	6.53	43	290	-0.35483	ppb		100
49)	MIBK (methyl isobutyl ket	7.16	43	4691	-0.24390	ppb	#	89
50)	1-Bromo-2-chloroethane	6.75	63	2406	0.29880	ppb		96
51)	Cis-1,3-Dichloropropene	6.95	75	5567	0.34486	ppb		96
52)	Toluene	7.29	91	13629	0.30548	ppb		86
53)	Trans-1,3-Dichloropropene	7.57	75	4084	0.30325	ppb		93
54)	1,1,2-TCA	7.74	83	2045	0.27487	ppb	#	53
55)	2-Hexanone	8.05	43	629	1.68306	ppb	#	84
58)	1,2-EDB	8.21	107	2460	0.30507	ppb	#	71
59)	Tetrachloroethene	7.86	166	3144	0.31982	ppb	#	84
60)	1-Chlorohexane	8.76	91	3153	0.30878	ppb	#	73
61)	1,1,1,2-Tetrachloroethane	8.83	131	3095	0.30493	ppb		98
62)	m&p-Xylene	8.99	106	10509	0.61155	ppb		85
63)	o-Xylene	9.38	106	4629	0.27656	ppb		66
64)	Styrene	9.40	104	5039	0.27112	ppb		100
66)	1,3-Dichloropropane	7.90	76	4791	0.31649	ppb	#	82
67)	Dibromochloromethane	8.12	129	3492	0.36477	ppb		99
68)	Chlorobenzene	8.73	112	9259	0.31866	ppb		97
69)	Ethylbenzene	8.87	91	13404	0.29389	ppb		98
70)	Bromoform	9.55	173	1725	0.29454	ppb		89
72)	Isopropylbenzene	9.76	105	11204	0.29821	ppb		97
73)	1,1,2,2-Tetrachloroethane	10.07	83	3316	0.33777	ppb	#	98
74)	1,2,3-Trichloropropane	10.09	110	626	0.34761	ppb		86
75)	t-1,4-Dichloro-2-Butene	10.13	53	961	0.43853	ppb		84
76)	Bromobenzene	10.01	156	3224	0.29701	ppb		92
77)	n-Propylbenzene	10.17	91	14782	0.32629	ppb		98
78)	4-Ethyltoluene	10.29	105	11308	0.30193	ppb		99
79)	2-Chlorotoluene	10.23	91	10556	0.34870	ppb		99
80)	1,3,5-Trimethylbenzene	10.35	105	9930	0.30567	ppb		96
81)	4-Chlorotoluene	10.34	91	10047	0.29865	ppb		91
82)	Tert-Butylbenzene	10.66	119	7430	0.29051	ppb		96
83)	1,2,4-Trimethylbenzene	10.72	105	9141	0.28000	ppb		85
84)	Sec-Butylbenzene	10.89	105	10673	0.29233	ppb		98
85)	p-Isopropyltoluene	11.04	119	9459	0.29754	ppb	#	90
86)	Benzyl Chloride	11.20	91	2772	0.28833	ppb	#	92
87)	1,3-DCB	10.96	146	6785	0.32223	ppb		96
88)	1,4-DCB	11.05	146	7488	0.34325	ppb		97
89)	n-Butylbenzene	11.44	91	8745	0.31211	ppb		96
90)	1,2-DCB	11.41	146	6474	0.32541	ppb		92
91)	Hexachloroethane	11.65	117	2447	0.34623	ppb		78
92)	1,2-Dibromo-3-chloropropan	12.19	157	424	0.28338	ppb	#	73
93)	1,2,4-Trichlorobenzene	13.00	180	4422	0.36590	ppb		83
94)	Hexachlorobutadiene	13.19	225	1887	0.38846	ppb	#	74
95)	Naphthalene	13.23	128	3638	0.26927	ppb		93
96)	1,2,3-Trichlorobenzene	13.47	180	2720	0.35965	ppb		93

(#) = qualifier out of range (m) = manual integration

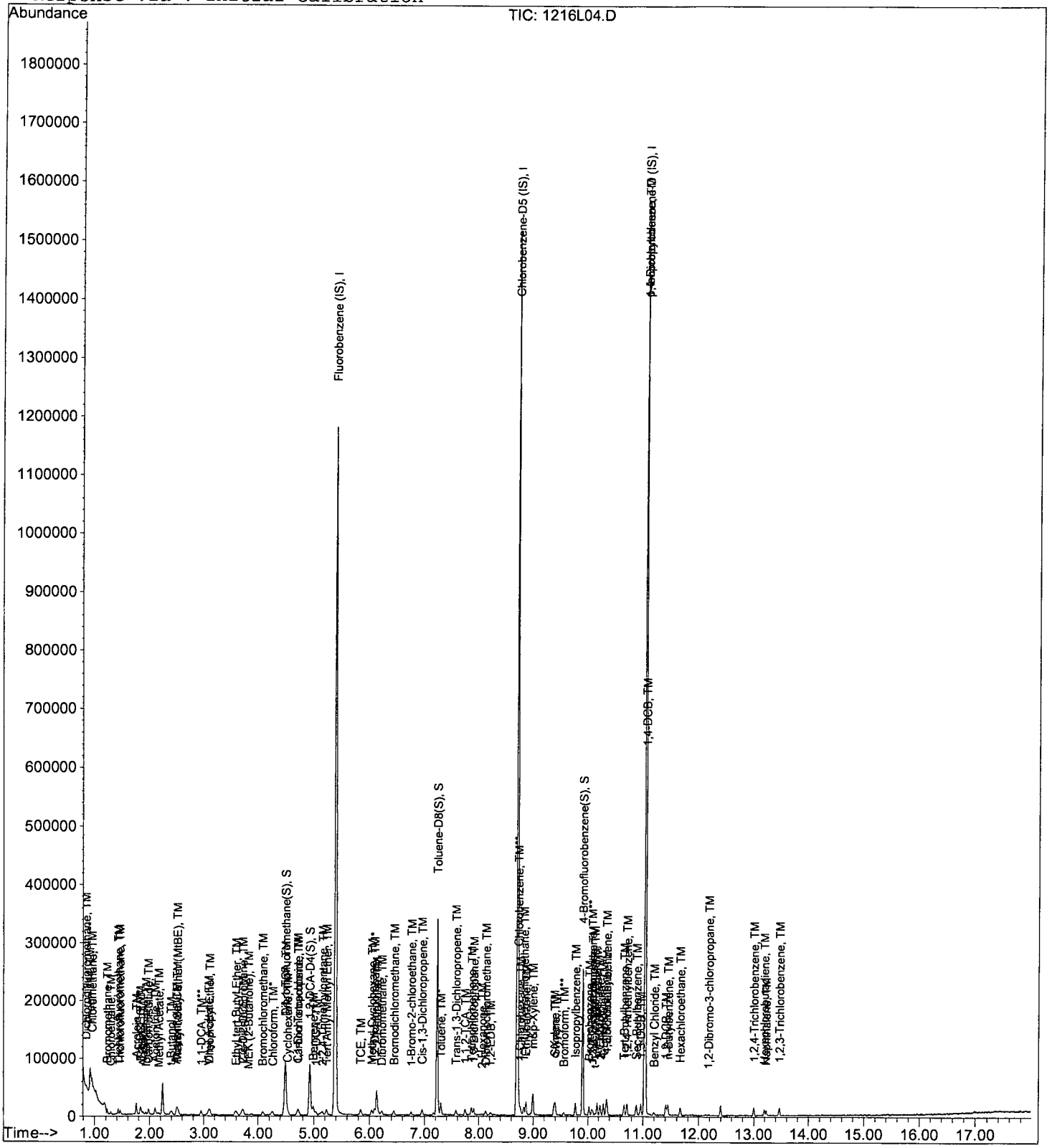
Quantitation Report

Data File : M:\LOKI\DATA\161216\1216L04.D
Acq On : 16 Dec 16 13:18
Sample : 0.3ug/L VOC STD 12/16/16AI
Misc : W IS&S 11/21/16, 11/14/16

Vial: 4
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:00 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L05.D Vial: 5
Acq On : 16 Dec 16 13:46 Operator: PM,DG,SV,CMM
Sample : 0.5ug/L VOC STD 12/16/16AJ Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 17 15:00 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	563520	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	523328	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	275776	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	64843	5.65428 ppb		0.00
Spiked Amount 25.000			Recovery = 22.616%			
37) 1,2-DCA-D4(S)	4.93	65	72037	5.84155 ppb		0.00
Spiked Amount 25.000			Recovery = 23.368%			
57) Toluene-D8(S)	7.22	98	221201	5.44193 ppb		0.00
Spiked Amount 25.000			Recovery = 21.768%			
65) 4-Bromofluorobenzene(S)	9.89	95	73304	5.26927 ppb		0.00
Spiked Amount 25.000			Recovery = 21.076%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	5098	0.49749 ppb	#	88
3) Freon 114	0.93	85	3370	0.51642 ppb		88
4) Chloromethane	0.96	50	10071	0.57553 ppb		98
5) Vinyl chloride	1.03	62	6249	0.50156 ppb	#	74
6) Bromomethane	1.22	96	4546	0.53855 ppb		100
7) Chloroethane	1.29	64	3494	0.53528 ppb		99
8) Dichlorofluoromethane	1.43	67	11463	0.54458 ppb	#	83
9) Trichlorofluoromethane	1.46	101	5938	0.47316 ppb		86
10) Acrolein	1.76	56	30171	25.98432 ppb		90
11) Acetone	1.88	43	5102	0.31512 ppb		96
12) Freon-113	1.84	101	3510	0.53978 ppb		97
13) 1,1-DCE	1.83	96	3578	0.59974 ppb		94
14) t-Butanol	2.40	59	7354	25.79341 ppb		96
15) Acetonitrile	2.10	41	26459	20.96877 ppb		92
16) Methyl Acetate	2.17	43	3655	0.50094 ppb		91
17) Iodomethane	1.93	142	2365	0.40538 ppb		95
18) Acrylonitrile	2.48	52	1501	0.57344 ppb	#	59
19) Methylene chloride	2.24	84	29708	0.35647 ppb		99
20) Carbon disulfide	1.98	76	13468	0.55692 ppb	#	91
21) Methyl t-butyl ether (MtBE	2.52	73	13783	0.53127 ppb		97
22) Trans-1,2-DCE	2.50	96	5696	0.54980 ppb		87
23) Diisopropyl Ether	3.10	45	16710	0.49310 ppb		95
24) 1,1-DCA	2.94	63	10590	0.53220 ppb		98
25) Vinyl Acetate	3.10	43	4758	0.60008 ppb	#	83
26) Ethyl tert Butyl Ether	3.60	59	13483	0.50020 ppb		95
27) MEK (2-Butanone)	3.83	43	2820	0.73303 ppb		96
28) Cis-1,2-DCE	3.73	96	7033	0.58318 ppb		83
29) 2,2-Dichloropropane	3.70	77	2483	0.53794 ppb		94
30) Chloroform	4.26	83	10812	0.53557 ppb		91
31) Bromochloromethane	4.08	128	3252	0.57415 ppb		76
33) 1,1,1-TCA	4.47	97	7204	0.48498 ppb		99
34) Cyclohexane	4.53	41	3307	0.51878 ppb		84
35) 1,1-Dichloropropene	4.72	75	6054	0.50150 ppb	#	87
36) 2,2,4-Trimethylpentane	5.15	57	8129	0.44339 ppb	#	47
38) Carbon Tetrachloride	4.70	119	5692	0.51296 ppb	#	95
39) Tert Amyl Methyl Ether	5.23	73	11484	0.48911 ppb	#	84
40) 1,2-DCA	5.04	62	7700	0.52155 ppb	#	90
41) Benzene	4.99	78	22938	0.53346 ppb		94
42) TCE	5.84	95	2628	0.49327 ppb	#	83

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L05.D
Acq On : 16 Dec 16 13:46
Sample : 0.5ug/L VOC STD 12/16/16AJ
Misc : W IS&S 11/21/16, 11/14/16

Vial: 5
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:00 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43) 2-Pentanone	6.12	43	127170	24.32749 ppb		98
44) 1,2-Dichloropropane	6.09	63	7432	0.60039 ppb	#	85
45) Bromodichloromethane	6.44	83	8522	0.57470 ppb	#	96
46) Methyl Cyclohexane	6.05	83	5658	0.53974 ppb		86
47) Dibromomethane	6.21	93	3978	0.61598 ppb	#	67
48) 2-Chloroethyl vinyl ether	6.51	43	474	-0.10508 ppb		100
49) MIBK (methyl isobutyl ket	7.16	43	5270	-0.16848 ppb	#	92
50) 1-Bromo-2-chloroethane	6.75	63	4911	0.60290 ppb		92
51) Cis-1,3-Dichloropropene	6.96	75	7934	0.48584 ppb		92
52) Toluene	7.29	91	23613	0.52319 ppb		96
53) Trans-1,3-Dichloropropene	7.56	75	6979	0.51228 ppb		98
54) 1,1,2-TCA	7.74	83	3996	0.53094 ppb		81
55) 2-Hexanone	8.06	43	1077	1.84862 ppb		99
58) 1,2-EDB	8.21	107	4424	0.52864 ppb		96
59) Tetrachloroethene	7.86	166	5667	0.55546 ppb		91
60) 1-Chlorohexane	8.76	91	5242	0.49466 ppb		92
61) 1,1,1,2-Tetrachloroethane	8.83	131	5155	0.48938 ppb		76
62) m&p-Xylene	9.00	106	17390	0.97510 ppb		83
63) o-Xylene	9.38	106	8388	0.48287 ppb		100
64) Styrene	9.40	104	8152	0.42263 ppb		95
66) 1,3-Dichloropropane	7.90	76	8282	0.52717 ppb		87
67) Dibromochloromethane	8.12	129	4505	0.45344 ppb	#	69
68) Chlorobenzene	8.73	112	15281	0.50675 ppb		97
69) Ethylbenzene	8.87	91	22483	0.47499 ppb		98
70) Bromoform	9.55	173	3218	0.52944 ppb		85
72) Isopropylbenzene	9.76	105	19675	0.49136 ppb		92
73) 1,1,2,2-Tetrachloroethane	10.07	83	5126	0.48991 ppb	#	80
74) 1,2,3-Trichloropropane	10.08	110	848	0.44181 ppb		79
75) t-1,4-Dichloro-2-Butene	10.13	53	1272	0.54461 ppb	#	69
76) Bromobenzene	10.01	156	5731	0.49537 ppb		86
77) n-Propylbenzene	10.17	91	22433	0.46461 ppb		99
78) 4-Ethyltoluene	10.29	105	17090	0.42815 ppb		96
79) 2-Chlorotoluene	10.23	91	16171	0.50120 ppb		97
80) 1,3,5-Trimethylbenzene	10.36	105	14414	0.41631 ppb		90
81) 4-Chlorotoluene	10.34	91	16448	0.45874 ppb		94
82) Tert-Butylbenzene	10.66	119	12407	0.45516 ppb		84
83) 1,2,4-Trimethylbenzene	10.72	105	15752	0.45272 ppb		85
84) Sec-Butylbenzene	10.89	105	18208	0.46792 ppb		95
85) p-Isopropyltoluene	11.04	119	16009	0.47249 ppb	#	87
86) Benzyl Chloride	11.20	91	4984	0.48642 ppb		98
87) 1,3-DCB	10.96	146	11489	0.51194 ppb		93
88) 1,4-DCB	11.05	146	11796	0.50736 ppb		92
89) n-Butylbenzene	11.44	91	13603	0.45552 ppb		96
90) 1,2-DCB	11.41	146	10568	0.49840 ppb		93
91) Hexachloroethane	11.65	117	3845	0.51045 ppb		76
92) 1,2-Dibromo-3-chloropropan	12.18	157	914	0.57317 ppb	#	83
93) 1,2,4-Trichlorobenzene	13.00	180	6319	0.49060 ppb	#	90
94) Hexachlorobutadiene	13.19	225	2869	0.55416 ppb		93
95) Naphthalene	13.22	128	6881	0.47786 ppb	#	90
96) 1,2,3-Trichlorobenzene	13.47	180	4316	0.53545 ppb		89

(#) = qualifier out of range (m) = manual integration

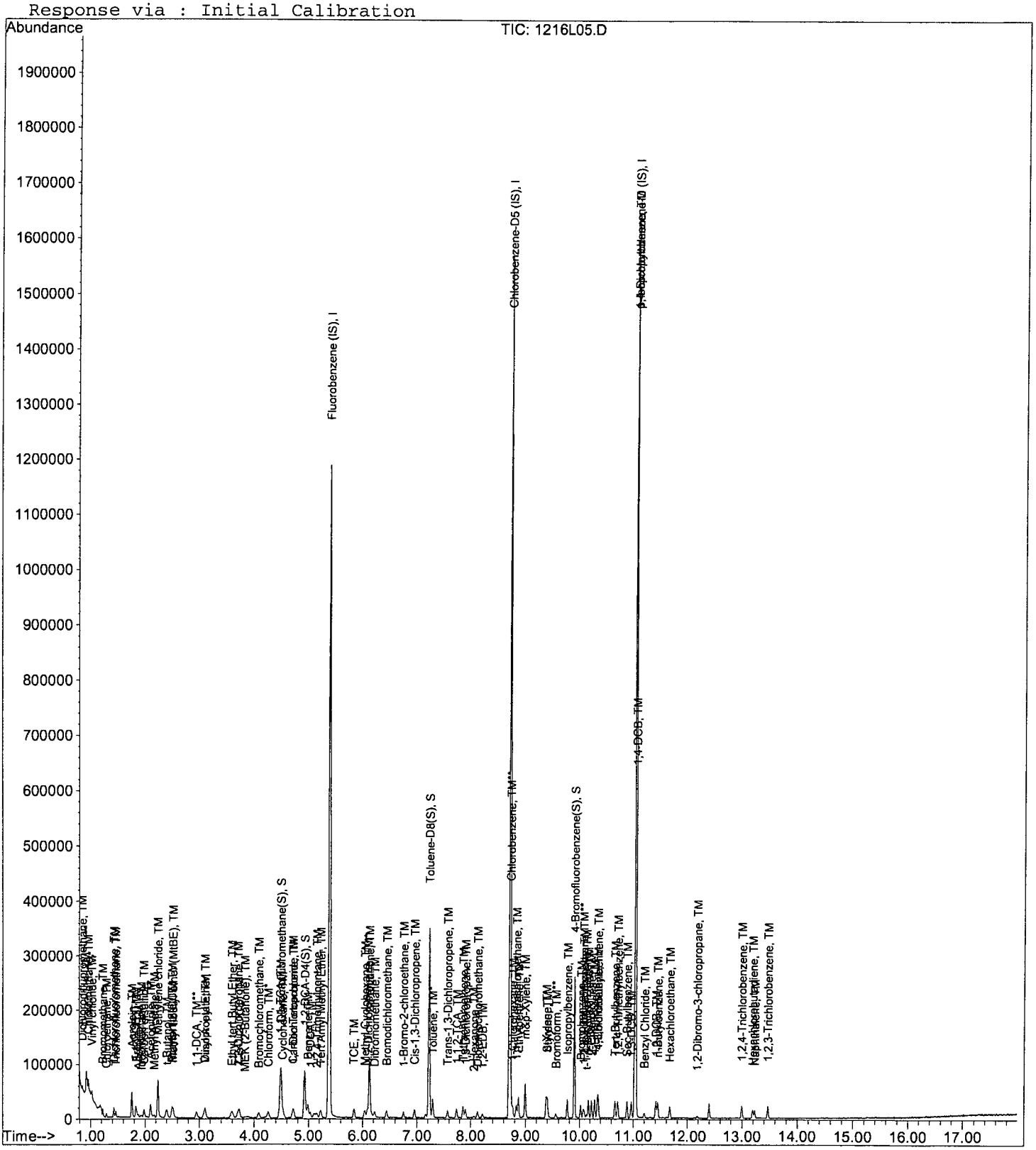
Quantitation Report

Data File : M:\LOKI\DATA\161216\1216L05.D
Acq On : 16 Dec 16 13:46
Sample : 0.5ug/L VOC STD 12/16/16AJ
Misc : W IS&S 11/21/16, 11/14/16

Vial: 5
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:00 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L06.D
Acq On : 16 Dec 16 14:14
Sample : 1.0ug/L VOC STD 12/16/16AK
Misc : W IS&S 11/21/16, 11/14/16

Vial: 6
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:01 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	571200	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	513664	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	262848	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	109827	9.44810 ppb		0.00
Spiked Amount 25.000			Recovery	= 37.792%		
37) 1,2-DCA-D4(S)	4.93	65	119788	9.58312 ppb		0.00
Spiked Amount 25.000			Recovery	= 38.332%		
57) Toluene-D8(S)	7.22	98	365462	9.16016 ppb		0.00
Spiked Amount 25.000			Recovery	= 36.640%		
65) 4-Bromofluorobenzene(S)	9.89	95	124907	9.14755 ppb		0.00
Spiked Amount 25.000			Recovery	= 36.592%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	10455	1.00654 ppb		93
3) Freon 114	0.93	85	6089	0.92054 ppb		90
4) Chloromethane	0.96	50	18876	1.06420 ppb		98
5) Vinyl chloride	1.02	62	12569	0.99526 ppb		89
6) Bromomethane	1.22	96	8921	1.04264 ppb		93
7) Chloroethane	1.29	64	6588	0.99571 ppb		86
8) Dichlorofluoromethane	1.43	67	22466	1.05295 ppb		90
9) Trichlorofluoromethane	1.46	101	13614	1.07023 ppb		95
10) Acrolein	1.75	56	59764	50.77880 ppb	#	95
11) Acetone	1.88	43	7334	1.44745 ppb		95
12) Freon-113	1.84	101	6902	1.04714 ppb		87
13) 1,1-DCE	1.83	96	5736	0.94854 ppb		96
14) t-Butanol	2.40	59	15037	52.03163 ppb		99
15) Acetonitrile	2.10	41	54099	42.29704 ppb		94
16) Methyl Acetate	2.17	43	9756	1.31915 ppb		94
17) Iodomethane	1.93	142	5692	0.96253 ppb		97
18) Acrylonitrile	2.47	52	3302	1.24454 ppb		80
19) Methylene chloride	2.24	84	33949	0.69410 ppb		96
20) Carbon disulfide	1.98	76	27111	1.10601 ppb		98
21) Methyl t-butyl ether (MtBE	2.52	73	24752	0.94125 ppb	#	89
22) Trans-1,2-DCE	2.50	96	10494	0.99930 ppb		90
23) Diisopropyl Ether	3.10	45	34433	1.00244 ppb		97
24) 1,1-DCA	2.95	63	21180	1.05010 ppb		99
25) Vinyl Acetate	3.10	43	8318	1.03496 ppb	#	80
26) Ethyl tert Butyl Ether	3.59	59	27145	0.99350 ppb		89
27) MEK (2-Butanone)	3.83	43	4306	1.18996 ppb	#	75
28) Cis-1,2-DCE	3.73	96	12020	0.98331 ppb		94
29) 2,2-Dichloropropane	3.71	77	4513	0.96459 ppb		91
30) Chloroform	4.26	83	22027	1.07644 ppb		93
31) Bromochloromethane	4.09	128	5698	0.99247 ppb		76
33) 1,1,1-TCA	4.47	97	16865	1.12009 ppb		92
34) Cyclohexane	4.53	41	6796	1.05178 ppb		85
35) 1,1-Dichloropropene	4.72	75	12100	0.98885 ppb		94
36) 2,2,4-Trimethylpentane	5.15	57	20192	1.08656 ppb	#	54
38) Carbon Tetrachloride	4.70	119	11315	1.00600 ppb		98
39) Tert Amyl Methyl Ether	5.23	73	22161	0.93116 ppb		98
40) 1,2-DCA	5.03	62	15726	1.05085 ppb		97
41) Benzene	4.99	78	43452	0.99697 ppb		97
42) TCE	5.84	95	5908	1.09401 ppb		92

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L06.D
Acq On : 16 Dec 16 14:14
Sample : 1.0ug/L VOC STD 12/16/16AK
Misc : W IS&S 11/21/16, 11/14/16

Vial: 6
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:01 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43)	2-Pentanone	6.12	43	255579	48.23463 ppb		98
44)	1,2-Dichloropropane	6.09	63	12098	0.96419 ppb	#	94
45)	Bromodichloromethane	6.44	83	15719	1.04580 ppb		88
46)	Methyl Cyclohexane	6.04	83	10665	1.00369 ppb		95
47)	Dibromomethane	6.22	93	6703	1.02398 ppb		94
48)	2-Chloroethyl vinyl ether	6.51	43	950	0.53541 ppb		100
49)	MIBK (methyl isobutyl ket	7.16	43	12003	0.77630 ppb		96
50)	1-Bromo-2-chloroethane	6.75	63	7895	0.95620 ppb		93
51)	Cis-1,3-Dichloropropene	6.95	75	15885	0.95965 ppb		96
52)	Toluene	7.29	91	44166	0.96543 ppb		99
53)	Trans-1,3-Dichloropropene	7.57	75	12844	0.93011 ppb		90
54)	1,1,2-TCA	7.74	83	7392	0.96895 ppb		92
55)	2-Hexanone	8.05	43	1409	1.96622 ppb	#	83
58)	1,2-EDB	8.21	107	8004	0.97442 ppb		99
59)	Tetrachloroethene	7.86	166	10158	1.01439 ppb		97
60)	1-Chlorohexane	8.76	91	10404	1.00023 ppb		92
61)	1,1,1,2-Tetrachloroethane	8.83	131	10795	1.04408 ppb		99
62)	m&p-Xylene	8.99	106	30829	1.76117 ppb		87
63)	o-Xylene	9.38	106	15395	0.90292 ppb		90
64)	Styrene	9.40	104	17368	0.91736 ppb		97
66)	1,3-Dichloropropane	7.90	76	15798	1.02450 ppb		98
67)	Dibromochloromethane	8.12	129	9582	0.98260 ppb		100
68)	Chlorobenzene	8.73	112	31353	1.05930 ppb		94
69)	Ethylbenzene	8.87	91	43852	0.94388 ppb		91
70)	Bromoform	9.55	173	6049	1.01393 ppb		86
72)	Isopropylbenzene	9.76	105	37664	0.98687 ppb		94
73)	1,1,2,2-Tetrachloroethane	10.07	83	11186	1.12166 ppb		98
74)	1,2,3-Trichloropropane	10.09	110	2139	1.16924 ppb		85
75)	t-1,4-Dichloro-2-Butene	10.13	53	2035	0.91415 ppb		92
76)	Bromobenzene	10.01	156	11886	1.07792 ppb		98
77)	n-Propylbenzene	10.17	91	45734	0.99378 ppb		99
78)	4-Ethyltoluene	10.29	105	36978	0.97196 ppb		96
79)	2-Chlorotoluene	10.23	91	31662	1.02959 ppb		95
80)	1,3,5-Trimethylbenzene	10.36	105	32687	0.99051 ppb		93
81)	4-Chlorotoluene	10.34	91	35589	1.04142 ppb		99
82)	Tert-Butylbenzene	10.66	119	26330	1.01345 ppb		94
83)	1,2,4-Trimethylbenzene	10.72	105	32194	0.97079 ppb		99
84)	Sec-Butylbenzene	10.88	105	36712	0.98986 ppb		96
85)	p-Isopropyltoluene	11.04	119	32216	0.99760 ppb		94
86)	Benzyl Chloride	11.20	91	8799	0.90098 ppb		95
87)	1,3-DCB	10.96	146	22576	1.05544 ppb		93
88)	1,4-DCB	11.05	146	24935	1.12522 ppb		97
89)	n-Butylbenzene	11.44	91	28285	0.99377 ppb		88
90)	1,2-DCB	11.41	146	21193	1.04865 ppb		97
91)	Hexachloroethane	11.66	117	7318	1.01930 ppb		82
92)	1,2-Dibromo-3-chloropropan	12.17	157	1479	0.97309 ppb	#	76
93)	1,2,4-Trichlorobenzene	13.00	180	12246	0.99752 ppb		95
94)	Hexachlorobutadiene	13.19	225	5131	1.03982 ppb		91
95)	Naphthalene	13.23	128	13189	0.96097 ppb		98
96)	1,2,3-Trichlorobenzene	13.46	180	8283	1.07815 ppb		92

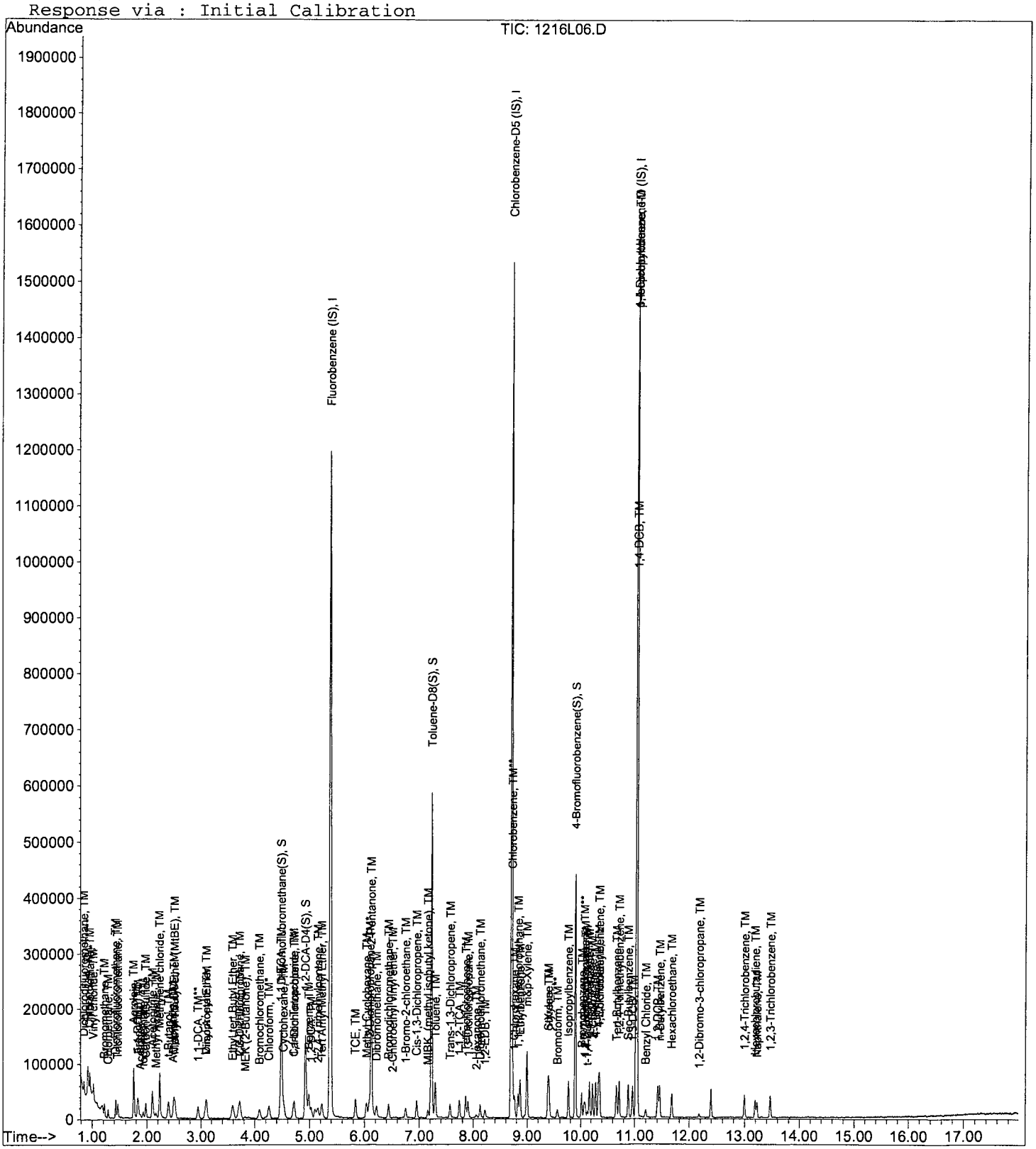
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161216\1216L06.D Vial: 6
Acq On : 16 Dec 16 14:14 Operator: PM,DG,SV,CMM
Sample : 1.0ug/L VOC STD 12/16/16AK Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 17 15:01 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L07.D
Acq On : 16 Dec 16 14:42
Sample : 2.0ug/L VOC STD 12/16/16AL
Misc : W IS&S 11/21/16, 11/14/16

Vial: 7
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:01 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	581312	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	521728	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	276544	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	112993	9.55137 ppb		0.00
Spiked Amount 25.000			Recovery = 38.204%			
37) 1,2-DCA-D4(S)	4.93	65	124184	9.76199 ppb		0.00
Spiked Amount 25.000			Recovery = 39.048%			
57) Toluene-D8(S)	7.22	98	381162	9.40601 ppb		0.00
Spiked Amount 25.000			Recovery = 37.624%			
65) 4-Bromofluorobenzene(S)	9.89	95	133201	9.60418 ppb		0.00
Spiked Amount 25.000			Recovery = 38.416%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	20744	1.96236 ppb		97
3) Freon 114	0.93	85	14981	2.22545 ppb		95
4) Chloromethane	0.96	50	36629	2.02917 ppb		96
5) Vinyl chloride	1.02	62	24690	1.92103 ppb		94
6) Bromomethane	1.22	96	16704	1.91832 ppb		100
7) Chloroethane	1.29	64	15047	2.23464 ppb		97
8) Dichlorofluoromethane	1.43	67	43758	2.01520 ppb		98
9) Trichlorofluoromethane	1.46	101	24907	1.92395 ppb		96
10) Acrolein	1.75	56	88716	74.06681 ppb	#	99
11) Acetone	1.88	43	8263	1.85864 ppb	#	80
12) Freon-113	1.85	101	14128	2.10616 ppb		92
13) 1,1-DCE	1.83	96	12576	2.04347 ppb		96
14) t-Butanol	2.40	59	23200	78.88114 ppb		98
15) Acetonitrile	2.10	41	82151	63.11207 ppb		94
16) Methyl Acetate	2.17	43	16777	2.22902 ppb		92
17) Iodomethane	1.93	142	11497	1.91035 ppb		98
18) Acrylonitrile	2.48	52	5972	2.21171 ppb		98
19) Methylene chloride	2.24	84	50475	2.07132 ppb		98
20) Carbon disulfide	1.98	76	53630	2.14980 ppb		95
21) Methyl t-butyl ether (MtBE	2.52	73	53147	1.98588 ppb		97
22) Trans-1,2-DCE	2.49	96	20639	1.93118 ppb		97
23) Diisopropyl Ether	3.10	45	65366	1.86988 ppb		100
24) 1,1-DCA	2.95	63	42072	2.04963 ppb		93
25) Vinyl Acetate	3.09	43	16616	2.03147 ppb	#	85
26) Ethyl tert Butyl Ether	3.59	59	52419	1.88514 ppb		97
27) MEK (2-Butanone)	3.81	43	6656	1.89520 ppb	#	84
28) Cis-1,2-DCE	3.73	96	24558	1.97404 ppb		93
29) 2,2-Dichloropropane	3.70	77	9056	1.90191 ppb		100
30) Chloroform	4.25	83	41966	2.01517 ppb		95
31) Bromochloromethane	4.08	128	11632	1.99080 ppb		98
33) 1,1,1-TCA	4.47	97	30971	2.02116 ppb		97
34) Cyclohexane	4.53	41	13102	1.99245 ppb		97
35) 1,1-Dichloropropene	4.72	75	25012	2.00851 ppb		89
36) 2,2,4-Trimethylpentane	5.15	57	36611	1.93582 ppb	#	54
38) Carbon Tetrachloride	4.70	119	22880	1.99883 ppb		97
39) Tert Amyl Methyl Ether	5.23	73	45367	1.87307 ppb		98
40) 1,2-DCA	5.03	62	31275	2.05352 ppb		99
41) Benzene	4.99	78	85239	1.92171 ppb		97
42) TCE	5.84	95	11365	2.06790 ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L07.D
Acq On : 16 Dec 16 14:42
Sample : 2.0ug/L VOC STD 12/16/16AL
Misc : W IS&S 11/21/16, 11/14/16

Vial: 7
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:01 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43)	2-Pentanone	6.12	43	404512	75.01430 ppb		99
44)	1,2-Dichloropropane	6.09	63	23912	1.87259 ppb	#	94
45)	Bromodichloromethane	6.44	83	29984	1.96016 ppb		94
46)	Methyl Cyclohexane	6.04	83	21295	1.96923 ppb		81
47)	Dibromomethane	6.22	93	13117	1.96896 ppb		91
48)	2-Chloroethyl vinyl ether	6.52	43	2791	2.98046 ppb		100
49)	MIBK (methyl isobutyl ket	7.16	43	19491	1.79026 ppb		94
50)	1-Bromo-2-chloroethane	6.75	63	16472	1.96029 ppb		98
51)	Cis-1,3-Dichloropropene	6.95	75	32123	1.90687 ppb		94
52)	Toluene	7.29	91	89547	1.92337 ppb		97
53)	Trans-1,3-Dichloropropene	7.56	75	27463	1.95415 ppb		98
54)	1,1,2-TCA	7.74	83	15678	2.01933 ppb		98
55)	2-Hexanone	8.04	43	3635	2.76777 ppb		97
58)	1,2-EDB	8.21	107	17586	2.10785 ppb		93
59)	Tetrachloroethene	7.86	166	19410	1.90834 ppb		90
60)	1-Chlorohexane	8.76	91	20995	1.98725 ppb		91
61)	1,1,1,2-Tetrachloroethane	8.83	131	21919	2.08721 ppb		97
62)	m&p-Xylene	8.99	106	67962	3.82246 ppb		96
63)	o-Xylene	9.38	106	34535	1.99418 ppb		97
64)	Styrene	9.40	104	34592	1.79887 ppb		97
66)	1,3-Dichloropropane	7.90	76	32318	2.06343 ppb		98
67)	Dibromochloromethane	8.12	129	19274	1.94594 ppb		98
68)	Chlorobenzene	8.73	112	61332	2.04015 ppb		96
69)	Ethylbenzene	8.87	91	93968	1.99132 ppb		98
70)	Bromoform	9.55	173	12014	1.98265 ppb		94
72)	Isopropylbenzene	9.76	105	78536	1.95588 ppb		95
73)	1,1,2,2-Tetrachloroethane	10.07	83	21715	2.06960 ppb		98
74)	1,2,3-Trichloropropane	10.09	110	4092	2.12603 ppb		76
75)	t-1,4-Dichloro-2-Butene	10.13	53	4631	1.97727 ppb	#	51
76)	Bromobenzene	10.02	156	23840	2.05493 ppb		95
77)	n-Propylbenzene	10.17	91	95323	1.96874 ppb		98
78)	4-Ethyltoluene	10.29	105	78789	1.96839 ppb		96
79)	2-Chlorotoluene	10.23	91	61175	1.89078 ppb		97
80)	1,3,5-Trimethylbenzene	10.36	105	66920	1.92744 ppb		94
81)	4-Chlorotoluene	10.34	91	69583	1.93532 ppb		99
82)	Tert-Butylbenzene	10.66	119	53792	1.96793 ppb		98
83)	1,2,4-Trimethylbenzene	10.72	105	66875	1.91669 ppb		94
84)	Sec-Butylbenzene	10.88	105	74402	1.90673 ppb		94
85)	p-Isopropyltoluene	11.04	119	65925	1.94033 ppb		92
86)	Benzyl Chloride	11.20	91	18737	1.82357 ppb		97
87)	1,3-DCB	10.96	146	45771	2.03385 ppb		98
88)	1,4-DCB	11.05	146	45679	1.95924 ppb		95
89)	n-Butylbenzene	11.44	91	57979	1.93615 ppb		96
90)	1,2-DCB	11.41	146	43909	2.06505 ppb		97
91)	Hexachloroethane	11.66	117	14100	1.86668 ppb		96
92)	1,2-Dibromo-3-chloropropan	12.18	157	3322	2.07743 ppb		88
93)	1,2,4-Trichlorobenzene	13.00	180	24199	1.87355 ppb		93
94)	Hexachlorobutadiene	13.19	225	10086	1.94275 ppb		97
95)	Naphthalene	13.22	128	26216	1.81553 ppb		96
96)	1,2,3-Trichlorobenzene	13.46	180	15134	1.87234 ppb		99

(#) = qualifier out of range (m) = manual integration

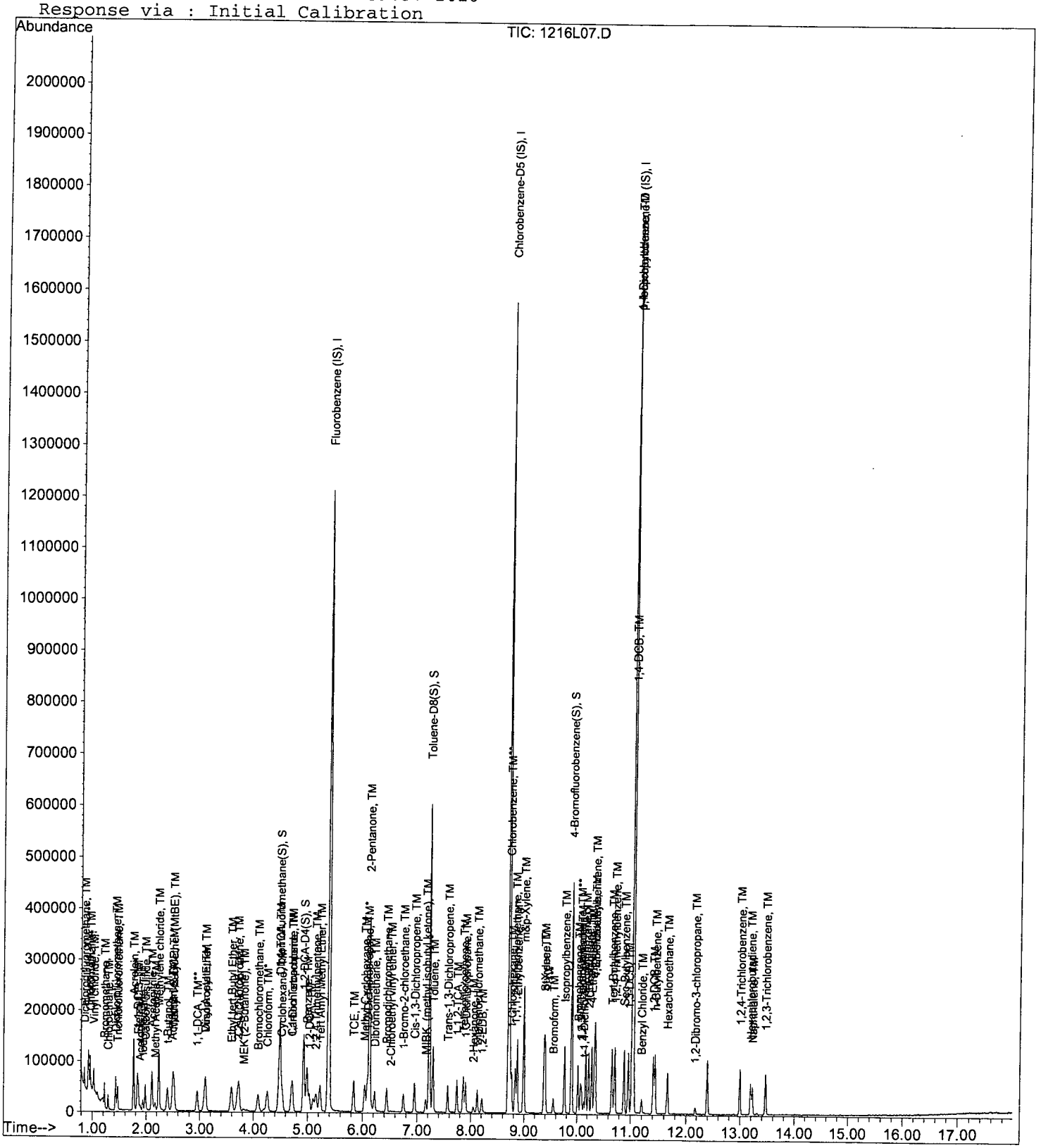
Quantitation Report

Data File : M:\LOKI\DATA\161216\1216L07.D
Acq On : 16 Dec 16 14:42
Sample : 2.0ug/L VOC STD 12/16/16AL
Misc : W IS&S 11/21/16, 11/14/16

Vial: 7
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:01 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L08.D
Acq On : 16 Dec 16 15:10
Sample : 5.0ug/L VOC STD 12/16/16AM
Misc : W IS&S 11/21/16, 11/14/16

Vial: 8
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:31 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	588544	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	546880	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	293056	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	299117	24.97386 ppb		0.00
Spiked Amount 25.000			Recovery = 99.896%			
37) 1,2-DCA-D4(S)	4.92	65	323239	25.09729 ppb		0.00
Spiked Amount 25.000			Recovery = 100.388%			
57) Toluene-D8(S)	7.22	98	1043176	24.55870 ppb		0.00
Spiked Amount 25.000			Recovery = 98.236%			
65) 4-Bromofluorobenzene(S)	9.89	95	357675	24.60331 ppb		0.00
Spiked Amount 25.000			Recovery = 98.412%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	53064	4.95812 ppb		98
3) Freon 114	0.93	85	31400	4.60719 ppb		99
4) Chloromethane	0.96	50	94094	5.14855 ppb		99
5) Vinyl chloride	1.02	62	67694	5.20228 ppb		100
6) Bromomethane	1.22	96	42792	4.85393 ppb		97
7) Chloroethane	1.29	64	35985	5.27849 ppb		95
8) Dichlorofluoromethane	1.43	67	107955	4.91060 ppb		99
9) Trichlorofluoromethane	1.46	101	65466	4.99480 ppb		98
10) Acrolein	1.75	56	119842	98.82369 ppb	#	97
11) Acetone	1.88	43	15210	5.33687 ppb		100
12) Freon-113	1.84	101	31750	4.67503 ppb		97
13) 1,1-DCE	1.83	96	31040	4.98169 ppb		97
14) t-Butanol	2.40	59	30992	104.07948 ppb		99
15) Acetonitrile	2.10	41	106452	80.77627 ppb		99
16) Methyl Acetate	2.17	43	36771	4.82543 ppb		97
17) Iodomethane	1.93	142	31616	5.18879 ppb		96
18) Acrylonitrile	2.47	52	13660	4.99678 ppb		97
19) Methylene chloride	2.23	84	100660	6.30444 ppb		99
20) Carbon disulfide	1.98	76	136273	5.39549 ppb		98
21) Methyl t-butyl ether (MtBE	2.52	73	137302	5.06736 ppb		98
22) Trans-1,2-DCE	2.50	96	55214	5.10286 ppb		97
23) Diisopropyl Ether	3.10	45	177381	5.01186 ppb		99
24) 1,1-DCA	2.95	63	107592	5.17717 ppb		97
25) Vinyl Acetate	3.09	43	40384	4.87668 ppb	#	84
26) Ethyl tert Butyl Ether	3.59	59	141048	5.01017 ppb		98
27) MEK (2-Butanone)	3.81	43	18658	5.54667 ppb		88
28) Cis-1,2-DCE	3.72	96	64325	5.10708 ppb		99
29) 2,2-Dichloropropane	3.70	77	24712	5.12617 ppb		96
30) Chloroform	4.25	83	108800	5.16028 ppb		96
31) Bromochloromethane	4.08	128	30711	5.19155 ppb		87
33) 1,1,1-TCA	4.47	97	78861	5.08322 ppb		96
34) Cyclohexane	4.53	41	29142	4.37723 ppb		89
35) 1,1-Dichloropropene	4.72	75	63462	5.03350 ppb		100
36) 2,2,4-Trimethylpentane	5.15	57	85215	4.45040 ppb		94
38) Carbon Tetrachloride	4.70	119	59652	5.14726 ppb		94
39) Tert Amyl Methyl Ether	5.22	73	123058	5.01826 ppb		97
40) 1,2-DCA	5.03	62	78719	5.10519 ppb		99
41) Benzene	4.99	78	232265	5.17206 ppb		98
42) TCE	5.84	95	28080	5.04647 ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L08.D Vial: 8
Acq On : 16 Dec 16 15:10 Operator: PM,DG,SV,CMM
Sample : 5.0ug/L VOC STD 12/16/16AM Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 17 15:31 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
43)	2-Pentanone	6.12	43	559773	102.53095 ppb	96
44)	1,2-Dichloropropane	6.09	63	66369	5.13362 ppb	100
45)	Bromodichloromethane	6.44	83	79068	5.10543 ppb	94
46)	Methyl Cyclohexane	6.04	83	49483	4.51965 ppb	96
47)	Dibromomethane	6.22	93	33435	4.95717 ppb	91
48)	2-Chloroethyl vinyl ether	6.55	43	5740	6.83861 ppb	100
49)	MIBK (methyl isobutyl ket	7.16	43	49820	5.93180 ppb	98
50)	1-Bromo-2-chloroethane	6.75	63	43336	5.09393 ppb	98
51)	Cis-1,3-Dichloropropene	6.95	75	87443	5.12697 ppb	98
52)	Toluene	7.29	91	248036	5.26207 ppb	99
53)	Trans-1,3-Dichloropropene	7.56	75	72573	5.10054 ppb	99
54)	1,1,2-TCA	7.74	83	41902	5.33068 ppb	96
55)	2-Hexanone	8.05	43	12403	5.90527 ppb	94
58)	1,2-EDB	8.21	107	44499	5.08833 ppb	93
59)	Tetrachloroethene	7.86	166	52324	4.90775 ppb	96
60)	1-Chlorohexane	8.76	91	53489	4.83006 ppb	95
61)	1,1,1,2-Tetrachloroethane	8.83	131	53991	4.90477 ppb	95
62)	m&p-Xylene	8.99	106	187954	10.08512 ppb	97
63)	o-Xylene	9.38	106	92431	5.09183 ppb	97
64)	Styrene	9.40	104	103448	5.13213 ppb	97
66)	1,3-Dichloropropane	7.90	76	84590	5.15248 ppb	98
67)	Dibromochloromethane	8.12	129	53569	5.15968 ppb	98
68)	Chlorobenzene	8.73	112	160507	5.09357 ppb	97
69)	Ethylbenzene	8.87	91	249841	5.05100 ppb	98
70)	Bromoform	9.55	173	30844	4.85602 ppb	98
72)	Isopropylbenzene	9.76	105	215926	5.07449 ppb	99
73)	1,1,2,2-Tetrachloroethane	10.07	83	56698	5.09927 ppb	99
74)	1,2,3-Trichloropropane	10.09	110	11572	5.67357 ppb	98
75)	t-1,4-Dichloro-2-Butene	10.13	53	13571	5.46785 ppb	95
76)	Bromobenzene	10.02	156	64535	5.24927 ppb	97
77)	n-Propylbenzene	10.17	91	260326	5.07366 ppb	99
78)	4-Ethyltoluene	10.29	105	221956	5.23271 ppb	95
79)	2-Chlorotoluene	10.23	91	174651	5.09391 ppb	99
80)	1,3,5-Trimethylbenzene	10.36	105	196404	5.33813 ppb	98
81)	4-Chlorotoluene	10.34	91	200854	5.27161 ppb	94
82)	Tert-Butylbenzene	10.67	119	151261	5.22194 ppb	96
83)	1,2,4-Trimethylbenzene	10.72	105	194884	5.27082 ppb	99
84)	Sec-Butylbenzene	10.89	105	212930	5.14939 ppb	97
85)	p-Isopropyltoluene	11.04	119	182223	5.06106 ppb	97
86)	Benzyl Chloride	11.20	91	52481	4.81989 ppb	98
87)	1,3-DCB	10.96	146	120124	5.03701 ppb	98
88)	1,4-DCB	11.05	146	123384	4.99393 ppb	99
89)	n-Butylbenzene	11.44	91	157356	4.95868 ppb	99
90)	1,2-DCB	11.41	146	116860	5.18629 ppb	95
91)	Hexachloroethane	11.66	117	39791	4.97106 ppb	99
92)	1,2-Dibromo-3-chloropropan	12.18	157	8578	5.06206 ppb	91
93)	1,2,4-Trichlorobenzene	13.00	180	67420	4.92573 ppb	97
94)	Hexachlorobutadiene	13.19	225	26496	4.81605 ppb	96
95)	Naphthalene	13.23	128	75632	4.94262 ppb	99
96)	1,2,3-Trichlorobenzene	13.47	180	41504	4.84544 ppb	98

(#) = qualifier out of range (m) = manual integration

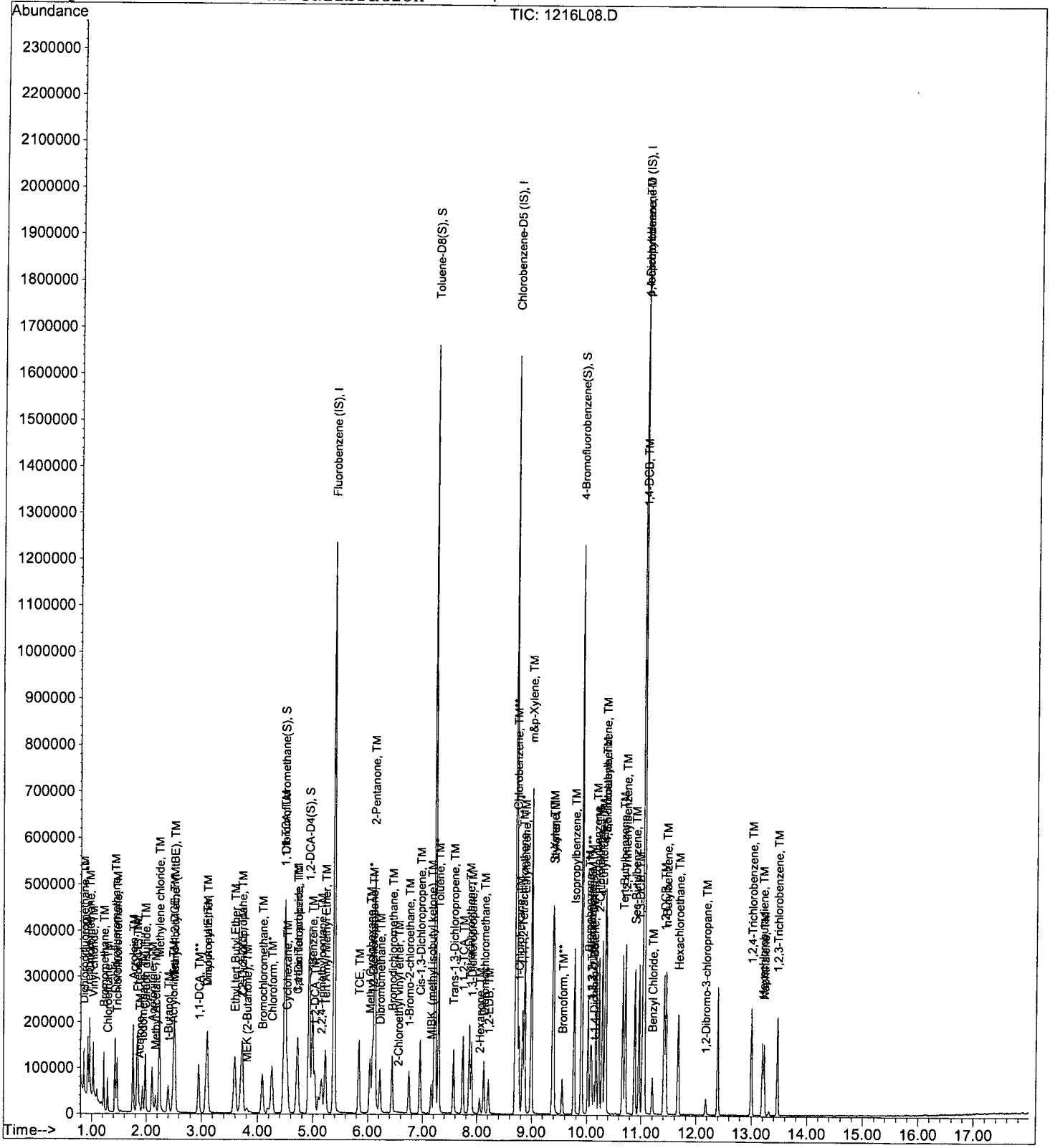
Quantitation Report

Data File : M:\LOKI\DATA\161216\1216L08.D
Acq On : 16 Dec 16 15:10
Sample : 5.0ug/L VOC STD 12/16/16AM
Misc : W IS&S 11/21/16, 11/14/16

Vial: 8
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:31 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L09.D
Acq On : 16 Dec 16 15:38
Sample : 10ug/L VOC STD 12/16/16AN
Misc : W IS&S 11/21/16, 11/14/16

Vial: 9
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:01 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	594432	25.00000 ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	542208	25.00000 ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	308288	25.00000 ppb	0.00
System Monitoring Compounds					
32) Dibromofluoromethane(S)	4.48	111	299563	24.76335 ppb	0.00
Spiked Amount 25.000			Recovery =	99.052%	
37) 1,2-DCA-D4(S)	4.92	65	319303	24.54612 ppb	0.00
Spiked Amount 25.000			Recovery =	98.184%	
57) Toluene-D8(S)	7.22	98	1068145	25.36321 ppb	0.00
Spiked Amount 25.000			Recovery =	101.452%	
65) 4-Bromofluorobenzene(S)	9.89	95	373824	25.93572 ppb	0.00
Spiked Amount 25.000			Recovery =	103.744%	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.85	85	114184	10.56328 ppb	100
3) Freon 114	0.93	85	76225	11.07340 ppb	100
4) Chloromethane	0.96	50	180867	9.79849 ppb	100
5) Vinyl chloride	1.02	62	135131	10.28195 ppb	100
6) Bromomethane	1.22	96	84342	9.47221 ppb	100
7) Chloroethane	1.29	64	72411	10.51646 ppb	100
8) Dichlorofluoromethane	1.43	67	216618	9.75581 ppb	100
9) Trichlorofluoromethane	1.46	101	139745	10.55639 ppb	100
10) Acrolein	1.75	56	149068	121.70634 ppb	100
11) Acetone	1.88	43	25342	10.35839 ppb	100
12) Freon-113	1.84	101	71593	10.43731 ppb	100
13) 1,1-DCE	1.83	96	62096	9.86724 ppb	100
14) t-Butanol	2.40	59	39552	131.51059 ppb	100
15) Acetonitrile	2.10	41	136527	102.57116 ppb	100
16) Methyl Acetate	2.17	43	71982	9.35257 ppb	100
17) Iodomethane	1.93	142	62976	10.23320 ppb	100
18) Acrylonitrile	2.47	52	25361	9.18508 ppb	100
19) Methylene chloride	2.23	84	158701	11.12797 ppb	100
20) Carbon disulfide	1.98	76	265110	10.39260 ppb	100
21) Methyl t-butyl ether (MtBE	2.52	73	265082	9.68639 ppb	100
22) Trans-1,2-DCE	2.50	96	105175	9.62395 ppb	100
23) Diisopropyl Ether	3.10	45	346480	9.69273 ppb	100
24) 1,1-DCA	2.95	63	203173	9.67954 ppb	100
25) Vinyl Acetate	3.07	43	75662	9.04627 ppb	100
26) Ethyl tert Butyl Ether	3.59	59	281396	9.89647 ppb	100
27) MEK (2-Butanone)	3.80	43	33602	10.02282 ppb	100
28) Cis-1,2-DCE	3.73	96	120461	9.46927 ppb	100
29) 2,2-Dichloropropane	3.70	77	47672	9.79095 ppb	100
30) Chloroform	4.25	83	210266	9.87393 ppb	100
31) Bromochloromethane	4.08	128	59277	9.92123 ppb	100
33) 1,1,1-TCA	4.47	97	151260	9.65333 ppb	100
34) Cyclohexane	4.53	41	66848	9.94135 ppb	100
35) 1,1-Dichloropropene	4.72	75	128013	10.05280 ppb	100
36) 2,2,4-Trimethylpentane	5.15	57	207175	10.71265 ppb	100
38) Carbon Tetrachloride	4.70	119	119318	10.19375 ppb	100
39) Tert Amyl Methyl Ether	5.22	73	249279	10.06481 ppb	100
40) 1,2-DCA	5.03	62	152404	9.78601 ppb	100
41) Benzene	4.99	78	443700	9.78241 ppb	100
42) TCE	5.84	95	55144	9.81217 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L09.D
Acq On : 16 Dec 16 15:38
Sample : 10ug/L VOC STD 12/16/16AN
Misc : W IS&S 11/21/16, 11/14/16

Vial: 9
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:01 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
43) 2-Pentanone	6.12	43	702980	127.48607 ppb	100
44) 1,2-Dichloropropane	6.09	63	121212	9.28283 ppb	100
45) Bromodichloromethane	6.44	83	148538	9.49612 ppb	100
46) Methyl Cyclohexane	6.04	83	114309	10.33728 ppb	100
47) Dibromomethane	6.22	93	64708	9.49876 ppb	100
48) 2-Chloroethyl vinyl ether	6.54	43	7545	9.12927 ppb	100
49) MIBK (methyl isobutyl ket	7.15	43	83735	10.48618 ppb	100
50) 1-Bromo-2-chloroethane	6.75	63	85776	9.98266 ppb	100
51) Cis-1,3-Dichloropropene	6.95	75	163811	9.50945 ppb	100
52) Toluene	7.29	91	476888	10.01695 ppb	100
53) Trans-1,3-Dichloropropene	7.56	75	143826	10.00818 ppb	100
54) 1,1,2-TCA	7.74	83	81579	10.27549 ppb	100
55) 2-Hexanone	8.04	43	24184	10.05662 ppb	100
58) 1,2-EDB	8.21	107	83943	9.68134 ppb	100
59) Tetrachloroethene	7.86	166	105543	9.98475 ppb	100
60) 1-Chlorohexane	8.76	91	103781	9.45218 ppb	100
61) 1,1,1,2-Tetrachloroethane	8.83	131	108025	9.89800 ppb	100
62) m&p-Xylene	8.99	106	378835	20.50244 ppb	100
63) o-Xylene	9.38	106	185740	10.32020 ppb	100
64) Styrene	9.40	104	205184	10.26704 ppb	100
66) 1,3-Dichloropropane	7.90	76	159453	9.79616 ppb	100
67) Dibromochloromethane	8.12	129	105826	10.28081 ppb	100
68) Chlorobenzene	8.73	112	302433	9.68018 ppb	100
69) Ethylbenzene	8.87	91	491905	10.03046 ppb	100
70) Bromoform	9.55	173	61557	9.77492 ppb	100
72) Isopropylbenzene	9.76	105	440870	9.84900 ppb	100
73) 1,1,2,2-Tetrachloroethane	10.07	83	111448	9.52810 ppb	100
74) 1,2,3-Trichloropropane	10.09	110	20776	9.68286 ppb	100
75) t-1,4-Dichloro-2-Butene	10.12	53	24441	9.36091 ppb	100
76) Bromobenzene	10.02	156	124663	9.63907 ppb	100
77) n-Propylbenzene	10.17	91	526171	9.74820 ppb	100
78) 4-Ethyltoluene	10.29	105	452948	10.15085 ppb	100
79) 2-Chlorotoluene	10.23	91	346157	9.59726 ppb	100
80) 1,3,5-Trimethylbenzene	10.36	105	396645	10.24790 ppb	100
81) 4-Chlorotoluene	10.34	91	405060	10.10592 ppb	100
82) Tert-Butylbenzene	10.67	119	298287	9.78888 ppb	100
83) 1,2,4-Trimethylbenzene	10.72	105	389070	10.00286 ppb	100
84) Sec-Butylbenzene	10.88	105	432618	9.94530 ppb	100
85) p-Isopropyltoluene	11.04	119	374309	9.88241 ppb	100
86) Benzyl Chloride	11.19	91	109301	9.54230 ppb	100
87) 1,3-DCB	10.96	146	241711	9.63459 ppb	100
88) 1,4-DCB	11.05	146	241959	9.30936 ppb	100
89) n-Butylbenzene	11.44	91	324744	9.72787 ppb	100
90) 1,2-DCB	11.41	146	222013	9.36619 ppb	100
91) Hexachloroethane	11.66	117	78492	9.32144 ppb	100
92) 1,2-Dibromo-3-chloropropan	12.18	157	17095	9.58968 ppb	100
93) 1,2,4-Trichlorobenzene	13.00	180	134204	9.32055 ppb	100
94) Hexachlorobutadiene	13.19	225	52127	9.00674 ppb	100
95) Naphthalene	13.22	128	151744	9.42664 ppb	100
96) 1,2,3-Trichlorobenzene	13.46	180	80448	8.92797 ppb	100

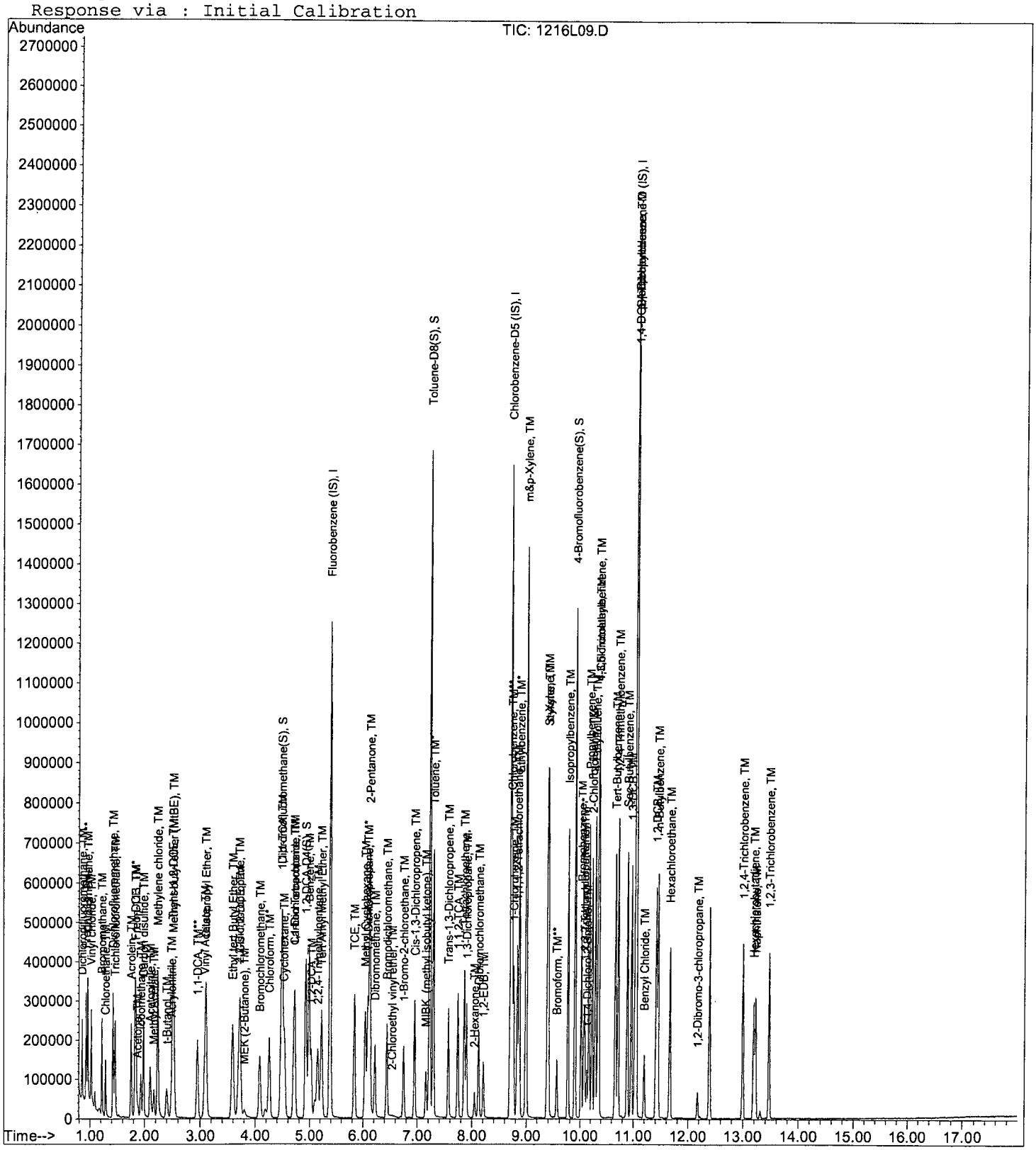
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161216\1216L09.D Vial: 9
Acq On : 16 Dec 16 15:38 Operator: PM,DG,SV,CMM
Sample : 10ug/L VOC STD 12/16/16AN Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 17 15:01 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L10.D
Acq On : 16 Dec 16 16:06
Sample : 20ug/L VOC STD 12/16/16AO
Misc : W IS&S 11/21/16, 11/14/16

Vial: 10
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:01 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	632128	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	573568	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	311424	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	602676	46.84922 ppb		0.00
Spiked Amount 25.000			Recovery = 187.396%			
37) 1,2-DCA-D4(S)	4.93	65	656081	47.42796 ppb		0.00
Spiked Amount 25.000			Recovery = 189.712%			
57) Toluene-D8(S)	7.22	98	2193961	49.24746 ppb		0.00
Spiked Amount 25.000			Recovery = 196.988%			
65) 4-Bromofluorobenzene(S)	9.89	95	768729	50.41798 ppb		0.00
Spiked Amount 25.000			Recovery = 201.672%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	219776	19.11925 ppb		98
3) Freon 114	0.93	85	138468	18.91604 ppb		95
4) Chloromethane	0.96	50	361321	18.40731 ppb		100
5) Vinyl chloride	1.02	62	271347	19.41523 ppb		99
6) Bromomethane	1.22	96	181696	19.18889 ppb		98
7) Chloroethane	1.29	64	145255	19.83778 ppb		98
8) Dichlorofluoromethane	1.42	67	437944	18.54746 ppb		99
9) Trichlorofluoromethane	1.46	101	270362	19.20534 ppb		98
10) Acrolein	1.75	56	190291	146.09797 ppb		98
11) Acetone	1.88	43	47138	19.91101 ppb		95
12) Freon-113	1.84	101	132811	18.20745 ppb		98
13) 1,1-DCE	1.83	96	120224	17.96472 ppb		96
14) t-Butanol	2.40	59	43552	136.17505 ppb		99
15) Acetonitrile	2.10	41	152665	107.85576 ppb		98
16) Methyl Acetate	2.17	43	144947	17.70979 ppb		98
17) Iodomethane	1.93	142	139776	21.35827 ppb		99
18) Acrylonitrile	2.48	52	53269	18.14212 ppb		95
19) Methylene chloride	2.23	84	257456	18.18152 ppb		98
20) Carbon disulfide	1.98	76	556265	20.50581 ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	545073	18.72981 ppb		99
22) Trans-1,2-DCE	2.49	96	218486	18.80017 ppb		97
23) Diisopropyl Ether	3.10	45	742923	19.54380 ppb		97
24) 1,1-DCA	2.94	63	420455	18.83673 ppb		99
25) Vinyl Acetate	3.09	43	159557	17.93926 ppb	#	85
26) Ethyl tert Butyl Ether	3.59	59	587811	19.44004 ppb		99
27) MEK (2-Butanone)	3.80	43	67721	19.14677 ppb		95
28) Cis-1,2-DCE	3.72	96	256014	18.92477 ppb		98
29) 2,2-Dichloropropane	3.70	77	97424	18.81588 ppb		99
30) Chloroform	4.25	83	424710	18.75472 ppb		98
31) Bromochloromethane	4.08	128	116037	18.26304 ppb		98
33) 1,1,1-TCA	4.47	97	307837	18.47443 ppb		100
34) Cyclohexane	4.53	41	127786	17.87053 ppb		96
35) 1,1-Dichloropropene	4.72	75	258773	19.10949 ppb		98
36) 2,2,4-Trimethylpentane	5.15	57	394823	19.19815 ppb		96
38) Carbon Tetrachloride	4.70	119	229959	18.47462 ppb		99
39) Tert Amyl Methyl Ether	5.22	73	513309	19.48929 ppb		99
40) 1,2-DCA	5.03	62	310648	18.75750 ppb		99
41) Benzene	4.99	78	918798	19.04906 ppb		98
42) TCE	5.84	95	114544	19.16622 ppb		95

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161216\1216L10.D
Acq On : 16 Dec 16 16:06
Sample : 20ug/L VOC STD 12/16/16AO
Misc : W IS&S 11/21/16, 11/14/16

Vial: 10
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:01 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
43)	2-Pentanone	6.12	43	885562	151.02050	ppb	99
44)	1,2-Dichloropropane	6.09	63	251866	18.13851	ppb	99
45)	Bromodichloromethane	6.44	83	310479	18.66543	ppb	96
46)	Methyl Cyclohexane	6.04	83	216626	18.42187	ppb	99
47)	Dibromomethane	6.22	93	136235	18.80593	ppb	96
48)	2-Chloroethyl vinyl ether	6.50	43	16189	19.19412	ppb	100
49)	MIBK (methyl isobutyl ket	7.15	43	162763	19.93411	ppb	99
50)	1-Bromo-2-chloroethane	6.75	63	175082	19.16105	ppb	99
51)	Cis-1,3-Dichloropropene	6.95	75	351118	19.16738	ppb	98
52)	Toluene	7.29	91	979743	19.35211	ppb	98
53)	Trans-1,3-Dichloropropene	7.56	75	297093	19.44050	ppb	100
54)	1,1,2-TCA	7.74	83	167741	19.86829	ppb	99
55)	2-Hexanone	8.04	43	52291	18.95579	ppb	96
58)	1,2-EDB	8.20	107	176032	19.19216	ppb	98
59)	Tetrachloroethene	7.86	166	215488	19.27134	ppb	97
60)	1-Chlorohexane	8.76	91	226407	19.49329	ppb	95
61)	1,1,1,2-Tetrachloroethane	8.83	131	224075	19.40876	ppb	99
62)	m&p-Xylene	8.99	106	800245	40.94109	ppb	100
63)	o-Xylene	9.38	106	387961	20.37754	ppb	91
64)	Styrene	9.40	104	462528	21.87866	ppb	100
66)	1,3-Dichloropropane	7.90	76	323720	18.80068	ppb	99
67)	Dibromochloromethane	8.12	129	217979	20.01846	ppb	100
68)	Chlorobenzene	8.73	112	620938	18.78812	ppb	98
69)	Ethylbenzene	8.87	91	1052107	20.28059	ppb	99
70)	Bromoform	9.55	173	131632	19.75960	ppb	91
72)	Isopropylbenzene	9.76	105	938355	20.75167	ppb	98
73)	1,1,2,2-Tetrachloroethane	10.07	83	226507	19.16993	ppb	98
74)	1,2,3-Trichloropropane	10.09	110	41576	19.18179	ppb	99
75)	t-1,4-Dichloro-2-Butene	10.13	53	52716	19.98693	ppb	97
76)	Bromobenzene	10.02	156	261501	20.01592	ppb	98
77)	n-Propylbenzene	10.17	91	1120551	20.55104	ppb	98
78)	4-Ethyltoluene	10.29	105	953179	21.14623	ppb	99
79)	2-Chlorotoluene	10.23	91	722723	19.83583	ppb	100
80)	1,3,5-Trimethylbenzene	10.36	105	832318	21.28759	ppb	98
81)	4-Chlorotoluene	10.34	91	842002	20.79573	ppb	100
82)	Tert-Butylbenzene	10.66	119	634018	20.59703	ppb	99
83)	1,2,4-Trimethylbenzene	10.72	105	845680	21.52320	ppb	100
84)	Sec-Butylbenzene	10.88	105	919168	20.91764	ppb	97
85)	p-Isopropyltoluene	11.04	119	790066	20.64906	ppb	98
86)	Benzyl Chloride	11.20	91	240087	20.74924	ppb	98
87)	1,3-DCB	10.96	146	491453	19.39203	ppb	100
88)	1,4-DCB	11.05	146	502512	19.13943	ppb	98
89)	n-Butylbenzene	11.44	91	688494	20.41650	ppb	99
90)	1,2-DCB	11.41	146	458825	19.16180	ppb	99
91)	Hexachloroethane	11.66	117	166599	19.58550	ppb	98
92)	1,2-Dibromo-3-chloropropan	12.18	157	34716	19.27831	ppb	91
93)	1,2,4-Trichlorobenzene	13.00	180	277681	19.09091	ppb	98
94)	Hexachlorobutadiene	13.19	225	103475	17.69885	ppb	97
95)	Naphthalene	13.22	128	337600	20.76121	ppb	100
96)	1,2,3-Trichlorobenzene	13.47	180	169344	18.60424	ppb	95

(#) = qualifier out of range (m) = manual integration

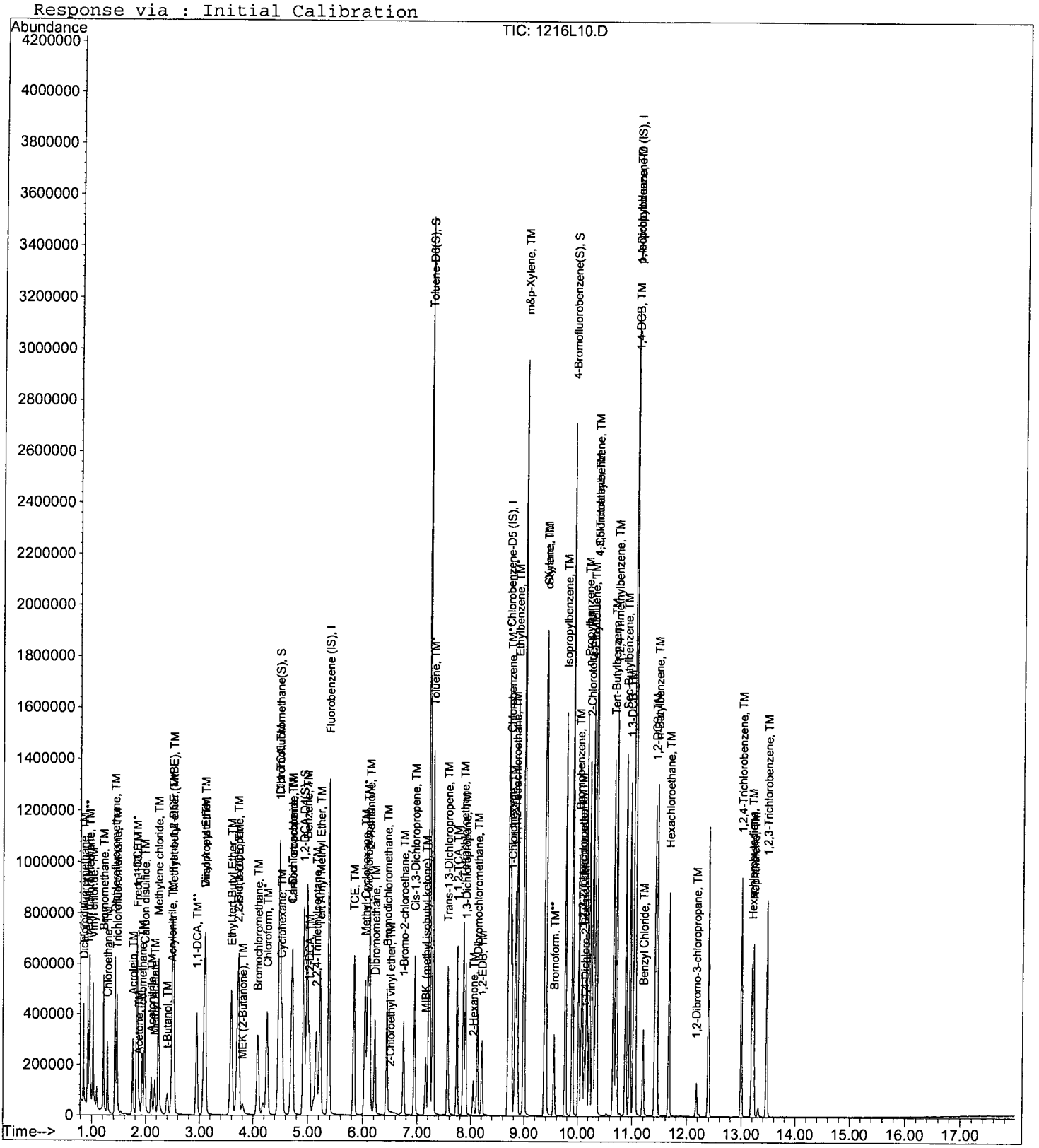
Quantitation Report

Data File : M:\LOKI\DATA\161216\1216L10.D
Acq On : 16 Dec 16 16:06
Sample : 20ug/L VOC STD 12/16/16AO
Misc : W IS&S 11/21/16, 11/14/16

Vial: 10
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:01 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L11.D
Acq On : 16 Dec 16 16:35
Sample : 40ug/L VOC STD 12/16/16AP
Misc : W IS&S 11/21/16, 11/14/16

Vial: 11
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:01 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	621760	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	556544	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	314176	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	601217	47.51513 ppb		0.00
Spiked Amount 25.000			Recovery = 190.060%			
37) 1,2-DCA-D4(S)	4.92	65	631892	46.44105 ppb		0.00
Spiked Amount 25.000			Recovery = 185.764%			
57) Toluene-D8(S)	7.22	98	2211650	51.16309 ppb		0.00
Spiked Amount 25.000			Recovery = 204.652%			
65) 4-Bromofluorobenzene(S)	9.89	95	781916	52.85154 ppb		0.00
Spiked Amount 25.000			Recovery = 211.408%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	428992	37.94216 ppb		100
3) Freon 114	0.93	85	292147	40.57556 ppb		96
4) Chloromethane	0.96	50	711951	36.87478 ppb		99
5) Vinyl chloride	1.02	62	547487	39.82664 ppb		98
6) Bromomethane	1.21	96	385472	41.38849 ppb		99
7) Chloroethane	1.28	64	289357	40.17708 ppb		98
8) Dichlorofluoromethane	1.42	67	883275	38.03155 ppb		99
9) Trichlorofluoromethane	1.46	101	546454	39.46500 ppb		98
10) Acrolein	1.75	56	214595	167.50501 ppb		97
11) Acetone	1.88	43	85091	38.54028 ppb		99
12) Freon-113	1.84	101	275004	38.32978 ppb		97
13) 1,1-DCE	1.83	96	253056	38.44397 ppb		98
14) t-Butanol	2.40	59	51656	164.20730 ppb		99
15) Acetonitrile	2.52	41	239937	172.33891 ppb	#	41
16) Methyl Acetate	2.17	43	287076	35.66016 ppb		99
17) Iodomethane	1.93	142	284352	44.17453 ppb		99
18) Acrylonitrile	2.47	52	103810	35.94471 ppb		96
19) Methylene chloride	2.23	84	514341	39.29358 ppb		100
20) Carbon disulfide	1.98	76	1115301	41.79936 ppb		100
21) Methyl t-butyl ether (MtBE	2.52	73	1092070	38.15149 ppb		99
22) Trans-1,2-DCE	2.49	96	441589	38.63123 ppb		97
23) Diisopropyl Ether	3.10	45	1497072	40.03965 ppb		99
24) 1,1-DCA	2.94	63	835092	38.03668 ppb		99
25) Vinyl Acetate	3.07	43	321490	36.74840 ppb		100
26) Ethyl tert Butyl Ether	3.59	59	1193039	40.11402 ppb		99
27) MEK (2-Butanone)	3.80	43	137084	39.58315 ppb		94
28) Cis-1,2-DCE	3.72	96	516030	38.78146 ppb		99
29) 2,2-Dichloropropane	3.70	77	195584	38.40380 ppb		98
30) Chloroform	4.25	83	850322	38.17541 ppb		100
31) Bromochloromethane	4.08	128	231906	37.10829 ppb		97
33) 1,1,1-TCA	4.47	97	638314	38.94636 ppb		96
34) Cyclohexane	4.53	41	272379	38.72666 ppb		95
35) 1,1-Dichloropropene	4.72	75	530851	39.85520 ppb		99
36) 2,2,4-Trimethylpentane	5.15	57	835778	41.31712 ppb	#	79
38) Carbon Tetrachloride	4.70	119	481789	39.35176 ppb		99
39) Tert Amyl Methyl Ether	5.22	73	1056338	40.77578 ppb		100
40) 1,2-DCA	5.03	62	604224	37.09254 ppb		99
41) Benzene	4.99	78	1848184	38.95660 ppb		98
42) TCE	5.84	95	231168	39.32549 ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L11.D
Acq On : 16 Dec 16 16:35
Sample : 40ug/L VOC STD 12/16/16AP
Misc : W IS&S 11/21/16, 11/14/16

Vial: 11
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:01 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	2-Pentanone	6.12	43	1025597	177.81808	ppb		100
44)	1,2-Dichloropropane	6.09	63	500265	36.62810	ppb		98
45)	Bromodichloromethane	6.44	83	623201	38.09046	ppb		98
46)	Methyl Cyclohexane	6.04	83	469561	40.59732	ppb		100
47)	Dibromomethane	6.22	93	272618	38.25982	ppb		93
48)	2-Chloroethyl vinyl ether	6.51	43	30825	37.86805	ppb		100
49)	MIBK (methyl isobutyl ket	7.16	43	303307	38.59491	ppb		99
50)	1-Bromo-2-chloroethane	6.75	63	341312	37.97621	ppb		98
51)	Cis-1,3-Dichloropropene	6.95	75	718539	39.87881	ppb		99
52)	Toluene	7.29	91	1986309	39.88826	ppb		99
53)	Trans-1,3-Dichloropropene	7.56	75	608333	40.47051	ppb		99
54)	1,1,2-TCA	7.74	83	323196	38.91971	ppb		99
55)	2-Hexanone	8.04	43	104506	37.02571	ppb		98
58)	1,2-EDB	8.20	107	348135	39.11697	ppb		98
59)	Tetrachloroethene	7.86	166	422169	38.90995	ppb		98
60)	1-Chlorohexane	8.76	91	471735	41.85803	ppb		95
61)	1,1,1,2-Tetrachloroethane	8.83	131	448595	40.04462	ppb		97
62)	m&p-Xylene	8.99	106	1624602	85.65817	ppb		99
63)	o-Xylene	9.38	106	793378	42.94664	ppb		93
64)	Styrene	9.40	104	931968	45.43275	ppb		100
66)	1,3-Dichloropropane	7.90	76	639736	38.29043	ppb		100
67)	Dibromochloromethane	8.12	129	442045	41.83770	ppb		100
68)	Chlorobenzene	8.73	112	1253019	39.07313	ppb		98
69)	Ethylbenzene	8.87	91	2153787	42.78670	ppb		100
70)	Bromoform	9.55	173	259901	40.20778	ppb		95
72)	Isopropylbenzene	9.76	105	1918182	42.04892	ppb		100
73)	1,1,2,2-Tetrachloroethane	10.07	83	442684	37.13742	ppb		99
74)	1,2,3-Trichloropropane	10.09	110	82560	37.75680	ppb		94
75)	t-1,4-Dichloro-2-Butene	10.13	53	106214	39.91760	ppb		95
76)	Bromobenzene	10.02	156	523573	39.72452	ppb		97
77)	n-Propylbenzene	10.17	91	2293174	41.68869	ppb		99
78)	4-Ethyltoluene	10.29	105	1958097	43.05977	ppb		99
79)	2-Chlorotoluene	10.23	91	1462049	39.77586	ppb		100
80)	1,3,5-Trimethylbenzene	10.36	105	1687434	42.78023	ppb		97
81)	4-Chlorotoluene	10.34	91	1685620	41.26671	ppb		99
82)	Tert-Butylbenzene	10.67	119	1336288	43.03108	ppb		98
83)	1,2,4-Trimethylbenzene	10.72	105	1732590	43.70948	ppb		100
84)	Sec-Butylbenzene	10.88	105	1904277	42.95630	ppb		98
85)	p-Isopropyltoluene	11.04	119	1636986	42.40930	ppb		100
86)	Benzyl Chloride	11.19	91	512684	43.92001	ppb		99
87)	1,3-DCB	10.96	146	1000807	39.14449	ppb		99
88)	1,4-DCB	11.05	146	1005268	37.95277	ppb		100
89)	n-Butylbenzene	11.44	91	1457842	42.85195	ppb		99
90)	1,2-DCB	11.41	146	937052	38.79109	ppb		98
91)	Hexachloroethane	11.66	117	343656	40.04657	ppb		95
92)	1,2-Dibromo-3-chloropropan	12.18	157	71807	39.52622	ppb	#	89
93)	1,2,4-Trichlorobenzene	13.00	180	594921	40.54327	ppb		98
94)	Hexachlorobutadiene	13.19	225	222228	37.67796	ppb		99
95)	Naphthalene	13.22	128	790080	48.16153	ppb		99
96)	1,2,3-Trichlorobenzene	13.46	180	371328	40.43700	ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

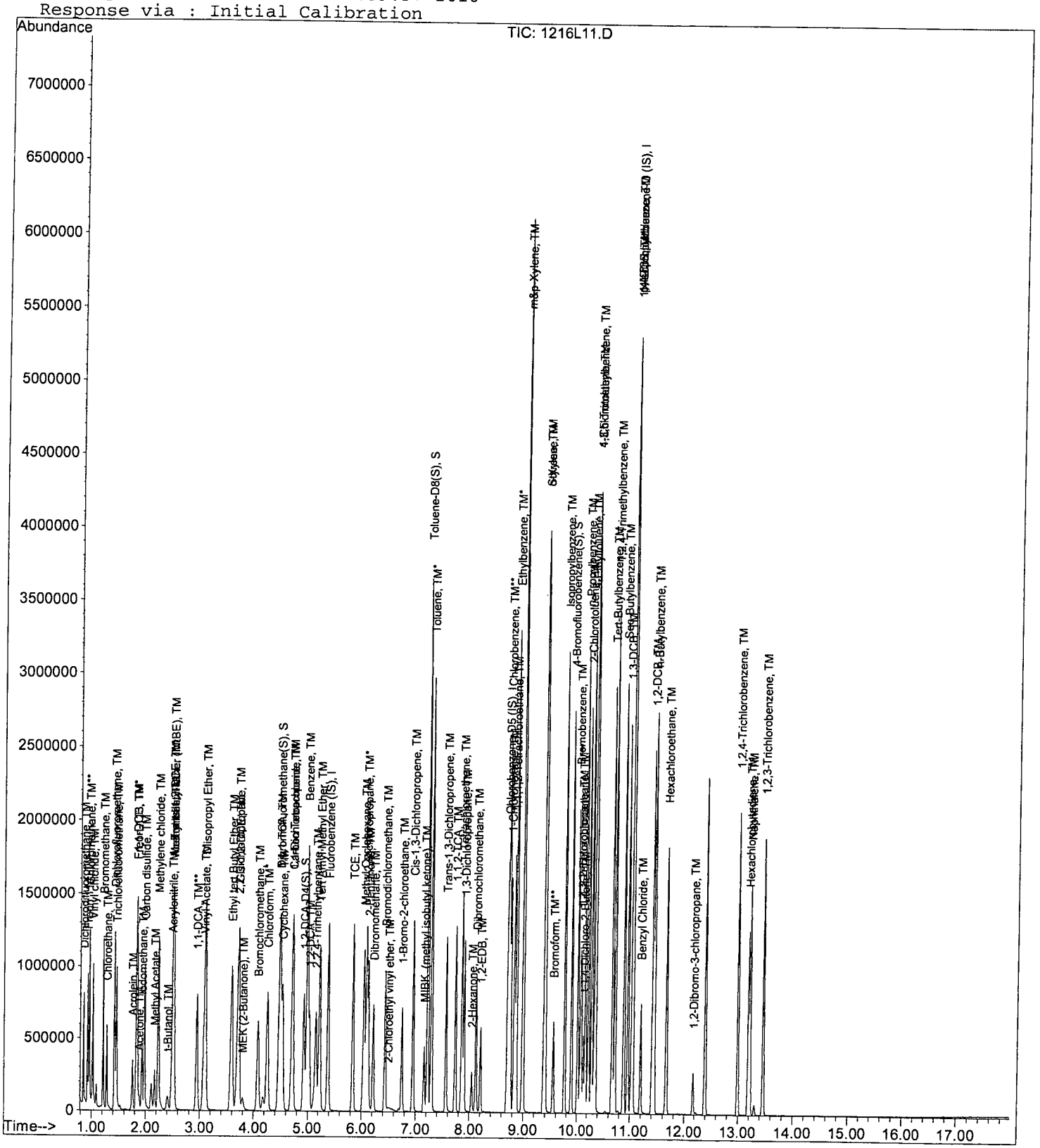
Data File : M:\LOKI\DATA\161216\1216L11.D
Acq On : 16 Dec 16 16:35
Sample : 40ug/L VOC STD 12/16/16AP
Misc : W IS&S 11/21/16, 11/14/16

Vial: 11
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:01 2016

Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L12.D
Acq On : 16 Dec 16 17:03
Sample : 100ug/L VOC STD 12/16/16AQ
Misc : W IS&S 11/21/16, 11/14/16

Vial: 12
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:01 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	628736	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	582144	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	353536	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	1158715	90.55904 ppb		0.00
Spiked Amount 25.000			Recovery = 362.236%			
37) 1,2-DCA-D4(S)	4.92	65	1210321	87.96587 ppb		0.00
Spiked Amount 25.000			Recovery = 351.864%			
57) Toluene-D8(S)	7.22	98	4285282	94.77393 ppb		0.00
Spiked Amount 25.000			Recovery = 379.096%			
65) 4-Bromofluorobenzene(S)	9.89	95	1524009	98.48139 ppb		0.00
Spiked Amount 25.000			Recovery = 393.924%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	1063936	93.05566 ppb		99
3) Freon 114	0.93	85	732087	100.54958 ppb		96
4) Chloromethane	0.96	50	1793009	91.83670 ppb		99
5) Vinyl chloride	1.02	62	1398477	100.60269 ppb		100
6) Bromomethane	1.21	96	950208	100.89274 ppb		99
7) Chloroethane	1.28	64	519086	71.27514 ppb		96
8) Dichlorofluoromethane	1.42	67	2230190	94.96080 ppb		99
9) Trichlorofluoromethane	1.45	101	1447596	103.38568 ppb		98
10) Acrolein	1.76	56	257086	198.44542 ppb	#	99
11) Acetone	1.88	43	216391	100.54736 ppb		99
12) Freon-113	1.84	101	705826	97.28578 ppb		97
13) 1,1-DCE	1.83	96	597056	89.69765 ppb		96
14) t-Butanol	2.44	59	53608	168.52167 ppb		95
15) Acetonitrile	2.52	41	595682	423.11171 ppb	#	41
16) Methyl Acetate	2.17	43	722177	88.71244 ppb		100
17) Iodomethane	1.93	142	675776	103.81805 ppb		99
18) Acrylonitrile	2.47	52	270439	92.60184 ppb		98
19) Methylene chloride	2.23	84	1285220	100.47059 ppb		99
20) Carbon disulfide	1.98	76	2837021	105.14643 ppb		100
21) Methyl t-butyl ether (MtBE	2.52	73	2847021	98.35720 ppb		97
22) Trans-1,2-DCE	2.49	96	1102885	95.41244 ppb		99
23) Diisopropyl Ether	3.10	45	3820367	101.04320 ppb		100
24) 1,1-DCA	2.94	63	2093265	94.28594 ppb		99
25) Vinyl Acetate	3.07	43	829056	93.71504 ppb		97
26) Ethyl tert Butyl Ether	3.59	59	3109557	103.39382 ppb		97
27) MEK (2-Butanone)	3.80	43	350373	100.30657 ppb		92
28) Cis-1,2-DCE	3.72	96	1307544	97.17622 ppb		97
29) 2,2-Dichloropropane	3.70	77	489920	95.13066 ppb		100
30) Chloroform	4.25	83	2121942	94.20811 ppb		100
31) Bromochloromethane	4.08	128	576354	91.20164 ppb		95
33) 1,1,1-TCA	4.47	97	1596541	96.33121 ppb		98
34) Cyclohexane	4.53	41	695308	97.76154 ppb		93
35) 1,1-Dichloropropene	4.72	75	1359475	100.93412 ppb		100
36) 2,2,4-Trimethylpentane	5.15	57	2214271	108.24911 ppb		89
38) Carbon Tetrachloride	4.70	119	1215184	98.15304 ppb		98
39) Tert Amyl Methyl Ether	5.22	73	2745768	104.81360 ppb		97
40) 1,2-DCA	5.03	62	1505281	91.38199 ppb		100
41) Benzene	4.99	78	4611781	96.13000 ppb		98
42) TCE	5.84	95	589376	99.15013 ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L12.D
Acq On : 16 Dec 16 17:03
Sample : 100ug/L VOC STD 12/16/16AQ
Misc : W IS&S 11/21/16, 11/14/16

Vial: 12
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:01 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
43) 2-Pentanone	6.12	43	1196523	205.15149 ppb	99
44) 1,2-Dichloropropane	6.09	63	1266197	91.67904 ppb	98
45) Bromodichloromethane	6.44	83	1597635	96.56509 ppb	98
46) Methyl Cyclohexane	6.04	83	1251537	107.00485 ppb	100
47) Dibromomethane	6.22	93	668166	92.73148 ppb	96
48) 2-Chloroethyl vinyl ether	6.50	43	82106	100.98949 ppb	100
49) MIBK (methyl isobutyl ket	7.16	43	787030	100.48644 ppb	99
50) 1-Bromo-2-chloroethane	6.75	63	851904	93.73574 ppb	98
51) Cis-1,3-Dichloropropene	6.95	75	1884021	103.40273 ppb	97
52) Toluene	7.29	91	4981677	98.93007 ppb	98
53) Trans-1,3-Dichloropropene	7.56	75	1600127	105.27038 ppb	99
54) 1,1,2-TCA	7.74	83	825629	98.32026 ppb	99
55) 2-Hexanone	8.04	43	296642	101.32261 ppb	100
58) 1,2-EDB	8.20	107	906853	97.41449 ppb	98
59) Tetrachloroethene	7.86	166	1064668	93.81182 ppb	96
60) 1-Chlorohexane	8.76	91	1243909	105.52088 ppb	93
61) 1,1,1,2-Tetrachloroethane	8.83	131	1142269	97.48262 ppb	98
62) m&p-Xylene	8.99	106	4132625	208.31326 ppb	100
63) o-Xylene	9.38	106	2066550	106.94588 ppb	92
64) Styrene	9.40	104	2470400	115.13421 ppb	99
66) 1,3-Dichloropropane	7.90	76	1620136	92.70647 ppb	100
67) Dibromochloromethane	8.12	129	1139060	103.06639 ppb	98
68) Chlorobenzene	8.73	112	3159584	94.19319 ppb	98
69) Ethylbenzene	8.87	91	5443784	103.38939 ppb	100
70) Bromoform	9.55	173	684390	101.22198 ppb	97
72) Isopropylbenzene	9.76	105	4978407	96.98281 ppb	99
73) 1,1,2,2-Tetrachloroethane	10.07	83	1178016	87.82303 ppb	97
74) 1,2,3-Trichloropropane	10.09	110	216064	87.81067 ppb	100
75) t-1,4-Dichloro-2-Butene	10.13	53	293744	98.10497 ppb	89
76) Bromobenzene	10.02	156	1343998	90.61902 ppb	98
77) n-Propylbenzene	10.17	91	5853659	94.56883 ppb	99
78) 4-Ethyltoluene	10.29	105	5043710	98.56598 ppb	99
79) 2-Chlorotoluene	10.23	91	3704427	89.56081 ppb	99
80) 1,3,5-Trimethylbenzene	10.36	105	4296287	96.79412 ppb	97
81) 4-Chlorotoluene	10.34	91	4327831	94.15639 ppb	100
82) Tert-Butylbenzene	10.66	119	3476968	99.49981 ppb	99
83) 1,2,4-Trimethylbenzene	10.72	105	4499424	100.87328 ppb	99
84) Sec-Butylbenzene	10.89	105	4999886	100.22966 ppb	98
85) p-Isopropyltoluene	11.04	119	4353526	100.22974 ppb	99
86) Benzyl Chloride	11.20	91	1575773	119.96255 ppb	99
87) 1,3-DCB	10.96	146	2619776	91.05919 ppb	99
88) 1,4-DCB	11.05	146	2684739	90.07475 ppb	99
89) n-Butylbenzene	11.44	91	3943454	103.00926 ppb	99
90) 1,2-DCB	11.41	146	2543180	93.55881 ppb	99
91) Hexachloroethane	11.66	117	932395	96.55632 ppb	97
92) 1,2-Dibromo-3-chloropropan	12.18	157	199072	97.37960 ppb	92
93) 1,2,4-Trichlorobenzene	13.00	180	1617357	97.95008 ppb	99
94) Hexachlorobutadiene	13.19	225	593899	89.48300 ppb	98
95) Naphthalene	13.22	128	2039296	110.47115 ppb	100
96) 1,2,3-Trichlorobenzene	13.46	180	943360	91.29312 ppb	97

(#) = qualifier out of range (m) = manual integration

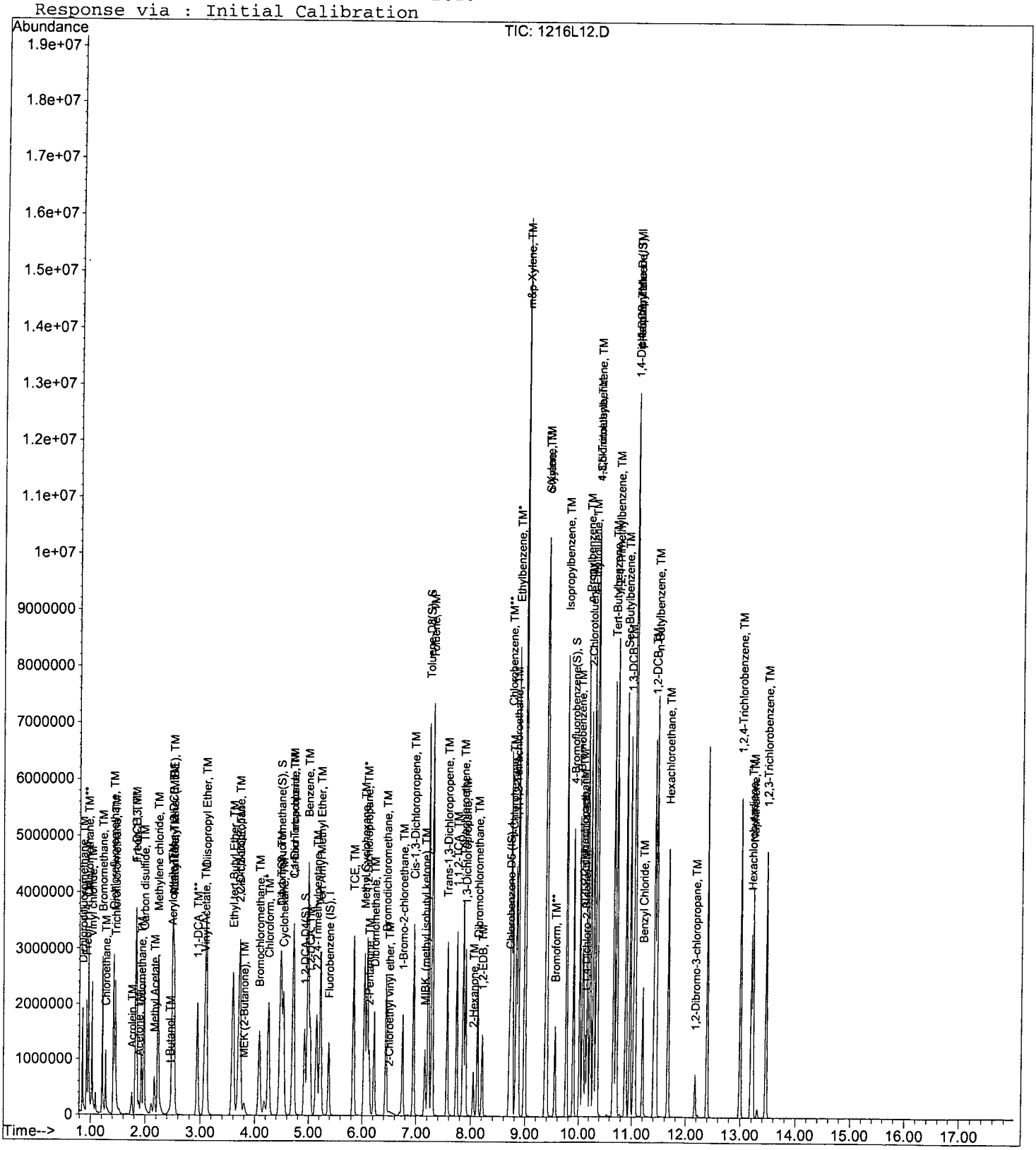
Quantitation Report

Data File : M:\LOKI\DATA\161216\1216L12.D
Acq On : 16 Dec 16 17:03
Sample : 100ug/L VOC STD 12/16/16AQ
Misc : W IS&S 11/21/16, 11/14/16

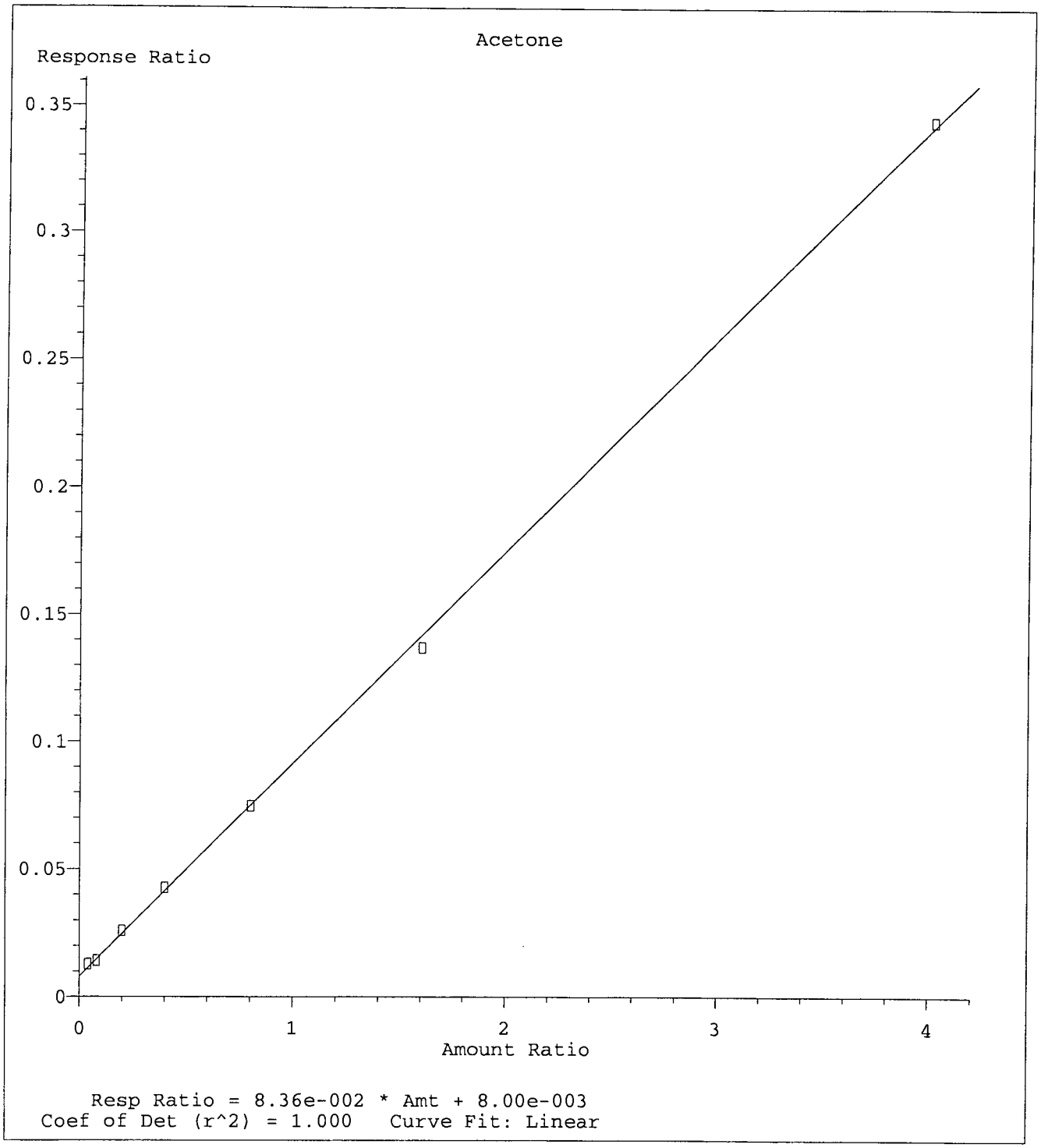
Vial: 12
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:01 2016 Quant Results File: LALLW.RES

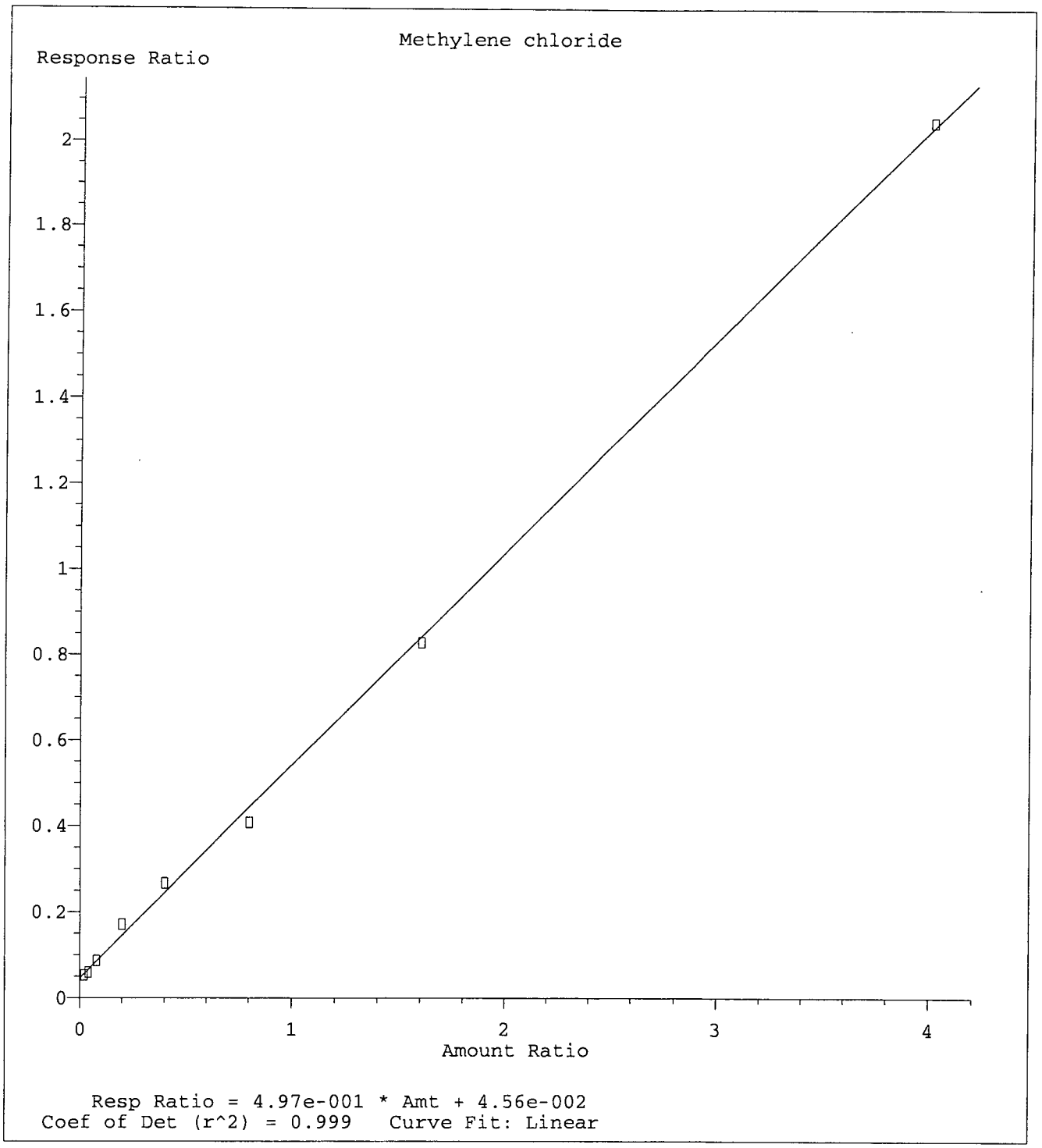
Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



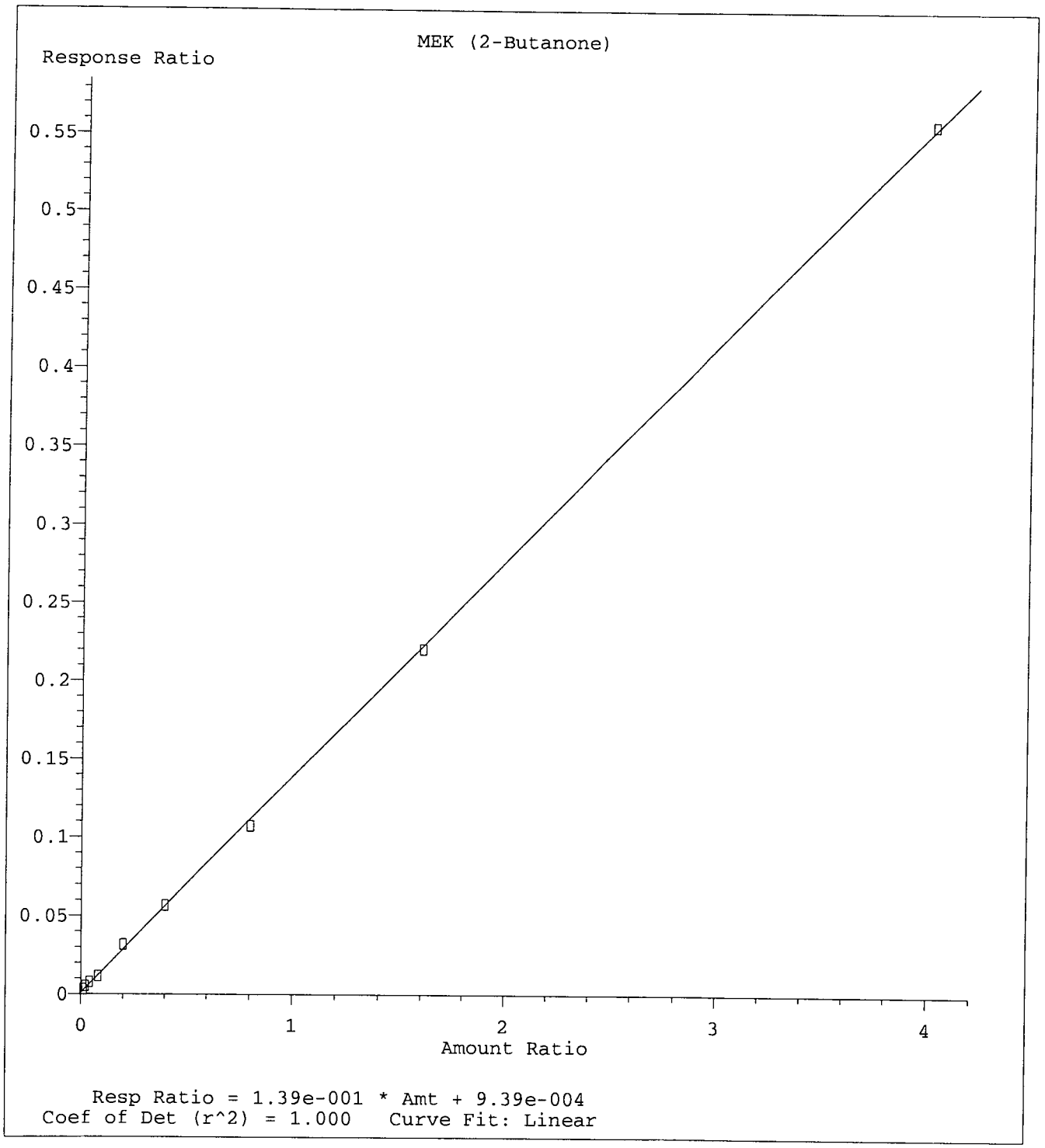
491



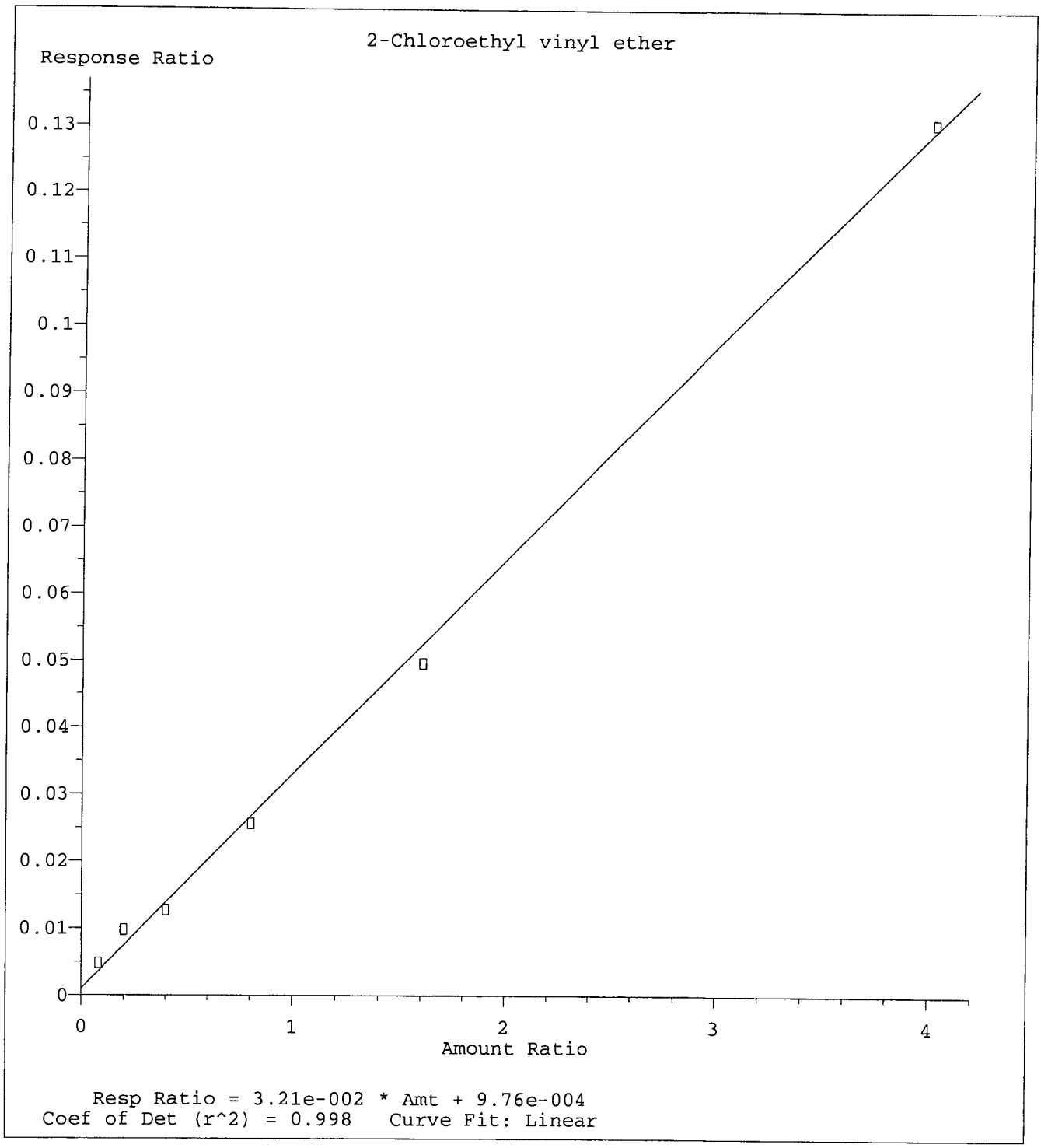
Method Name: M:\LOKI\DATA\161216\LALLW.M
Calibration Table Last Updated: Sat Dec 17 14:59:37 2016



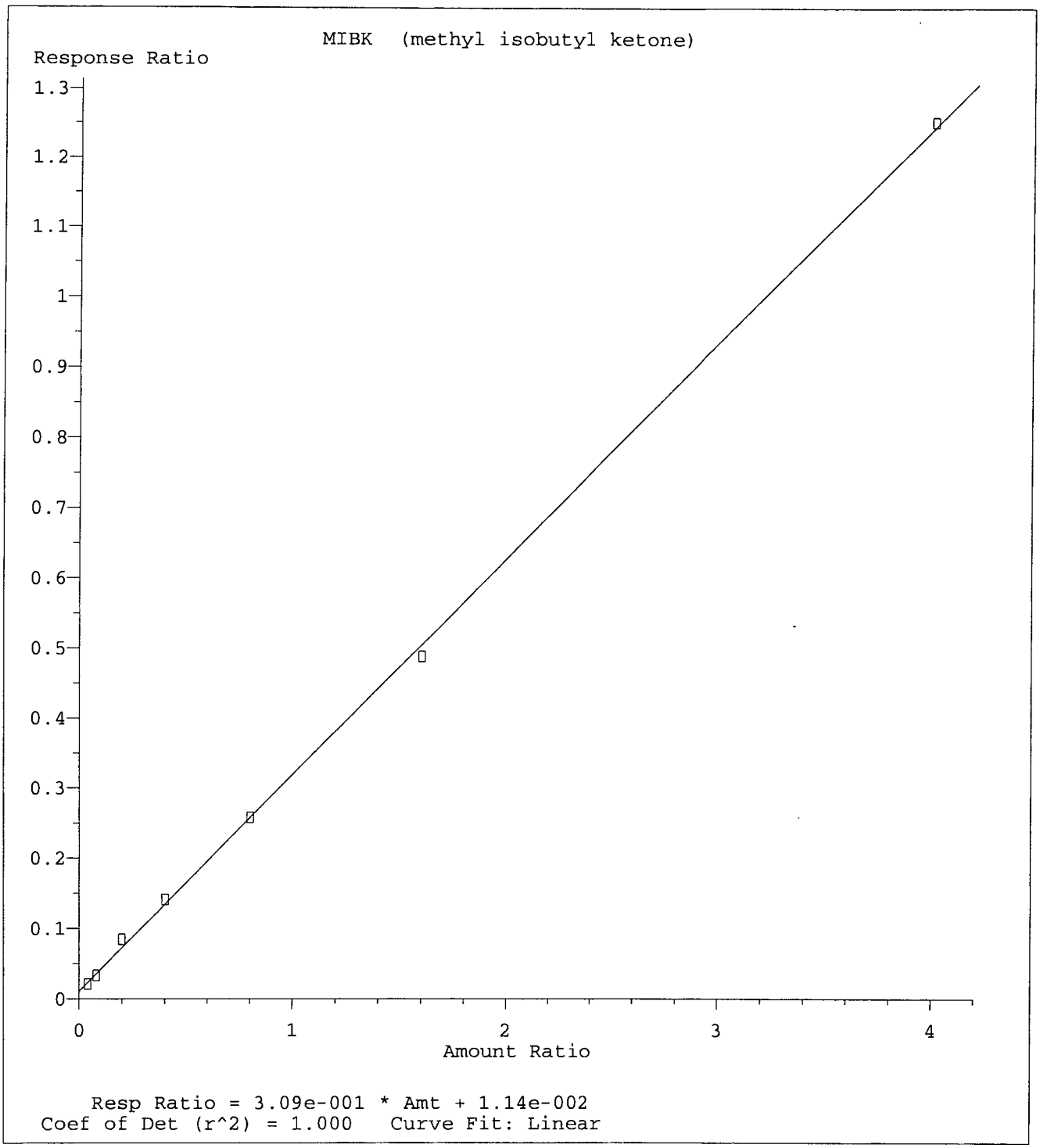
Method Name: M:\LOKI\DATA\161216\LALLW.M
Calibration Table Last Updated: Sat Dec 17 14:59:37 2016



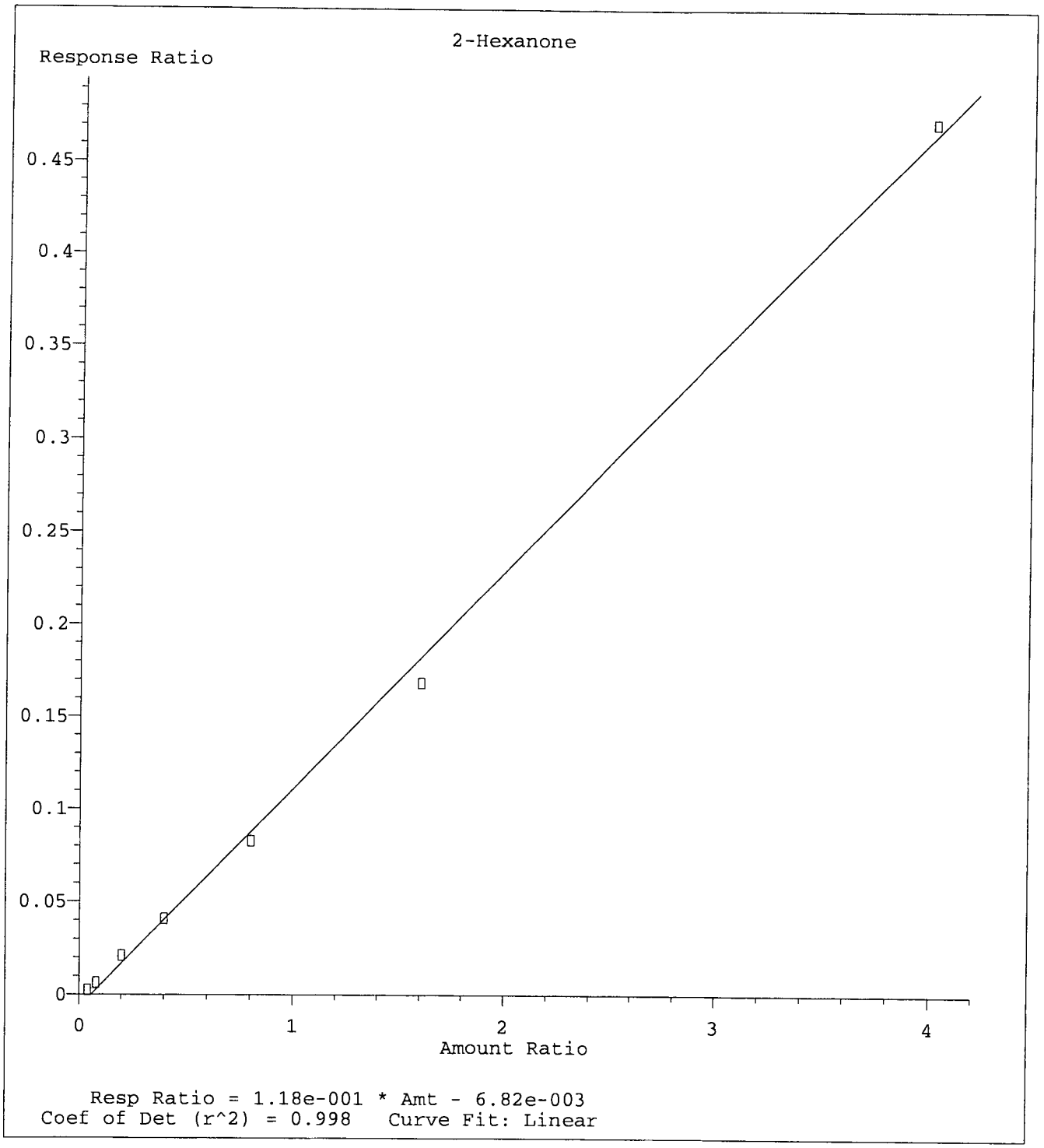
Method Name: M:\LOKI\DATA\161216\LALLW.M
Calibration Table Last Updated: Sat Dec 17 14:59:37 2016



Method Name: M:\LOKI\DATA\161216\LALLW.M
Calibration Table Last Updated: Sat Dec 17 14:59:37 2016



Method Name: M:\LOKI\DATA\161216\LALLW.M
Calibration Table Last Updated: Sat Dec 17 14:59:37 2016



Method Name: M:\LOKI\DATA\161216\LALLW.M
Calibration Table Last Updated: Sat Dec 17 14:59:37 2016

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/16/16
Instrument: Loki
Initial Cal. Date: 12/16/16
Data File: 1216L17.D

		Compound	MEAN	CCRF	%D	%Drift		
1	TM	Dichlorodifluoromethane	0.4546	0.4174	8.2	TM		
2	TM	Freon 114	0.2895	0.2715	6.2	TM		
3	TM**	Chloromethane	0.7763	0.6579	15	TM**		
4	TM*	Vinyl chloride	0.5527	0.4975	10.0	TM*		
5	TM	Bromomethane	0.3745	0.3175	15	TM		
6	TM	Chloroethane	0.2896	0.2718	6.2	TM		
7	TM	Dichlorofluoromethane	0.9338	0.8116	13	TM		
8	TM	Trichlorofluoromethane	0.5567	0.5749	3.3	TM		
9	TM	Acrolein	0.0515	0.0155	70	TM		nt
10	TML	Acetone	0.1428	0.0879	38	TML	19	
11	TM	Freon-113	0.2885	0.2626	9.0	TM		
12	TM*	1,1-DCE	0.2647	0.2719	2.7	TM*		
13	TM	t-Butanol	0.0126	0.0114	9.9	TM		
14	TM	Acetonitrile	0.0560	0.0396	29	TM		nt
15	TM	Methyl Acetate	0.3237	0.2601	20	TM		
16	TM	Iodomethane	0.2588	0.1701	34	TM		nt
17	TM	Acrylonitrile	0.1161	0.0906	22	TM		nt
18	TML	Methylene chloride	1.033	0.5421	48	TML	14	
19	TM	Carbon disulfide	1.073	0.9025	16	TM		
20	TM	Methyl t-butyl ether (MtBE)	1.151	1.004	13	TM		
21	TM	Trans-1,2-DCE	0.4596	0.4655	1.3	TM		
22	TM	Diisopropyl Ether	1.503	1.305	13	TM		
23	TM**	1,1-DCA	0.8828	0.8545	3.2	TM**		
24	TM	Vinyl Acetate	0.3518	0.3300	6.2	TM		
25	TM	Ethyl tert Butyl Ether	1.196	1.074	10	TM		
26	TML	MEK (2-Butanone)	0.1716	0.1178	31	TML	17	
27	TM	Cis-1,2-DCE	0.5350	0.5475	2.3	TM		
28	TM	2,2-Dichloropropane	0.2048	0.1988	2.9	TM		
29	TM*	Chloroform	0.8956	0.8451	5.6	TM*		
30	TM	Bromochloromethane	0.2513	0.2436	3.1	TM		
31	TM	1,1,1-TCA	0.6590	0.6278	4.7	TM		
32	TM	Cyclohexane	0.2828	0.2459	13	TM		
33	TM	1,1-Dichloropropene	0.5356	0.5359	0.06	TM		
34	TM	2,2,4-Trimethylpentane	0.8134	0.7420	8.8	TM		
35	TM	Carbon Tetrachloride	0.4923	0.4879	0.89	TM		
36	TM	Tert Amyl Methyl Ether	1.042	0.9339	10	TM		
37	TM	1,2-DCA	0.6550	0.6164	5.9	TM		
38	TM	Benzene	1.908	1.877	1.6	TM		
39	TM	TCE	0.2364	0.2385	0.89	TM		
40	TM	2-Pentanone	0.2319	0.2188	5.7	TM		
		Average			13.0			

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/16/16
Instrument: Loki
Cal. Date: 12/16/16
Data File: 1216L17.D

		Compound	MEAN	CCRF	%D		%Drift	
41	TM*	1,2-Dichloropropane	0.5492	0.5068	7.7	TM*		
42	TM	Bromodichloromethane	0.6579	0.6142	6.6	TM		
43	TM	Methyl Cyclohexane	0.4651	0.4098	12	TM		
44	TM	Dibromomethane	0.2865	0.2799	2.3	TM		
45	TML	2-Chloroethyl vinyl ether	0.0394	0.0235	40	TML	34	nt
46	TML	MIBK (methyl isobutyl ketone)	0.3799	0.2834	25	TML	17	
47	TM	1-Bromo-2-chloroethane	0.3614	0.3018	16	TM		
48	TM	Cis-1,3-Dichloropropene	0.7245	0.7079	2.3	TM		
49	TM*	Toluene	2.002	2.019	0.86	TM*		
50	TM	Trans-1,3-Dichloropropene	0.6044	0.5759	4.7	TM		
51	TM	1,1,2-TCA	0.3339	0.3259	2.4	TM		
52	TML	2-Hexanone	0.0962	0.0814	15	TML	17	
53	TM	1,2-EDB	0.3998	0.3947	1.3	TM		
54	TM	Tetrachloroethene	0.4874	0.4826	0.99	TM		
55	TM	1-Chlorohexane	0.5062	0.4455	12	TM		
56	TM	1,1,1,2-Tetrachloroethane	0.5032	0.4979	1.1	TM		
57	TM	m&p-Xylene	0.8520	0.8867	4.1	TM		
58	TM	o-Xylene	0.8298	0.8500	2.4	TM		
59	TM	Styrene	0.9215	0.9689	5.1	TM		
60	TM	1,3-Dichloropropane	0.7505	0.7410	1.3	TM		
61	TM	Dibromochloromethane	0.4746	0.4577	3.6	TM		
62	TM**	Chlorobenzene	1.441	1.408	2.3	TM**		
63	TM*	Ethylbenzene	2.261	2.296	1.6	TM*		
64	TM**	Bromoform	0.2904	0.2568	12	TM**		
65	TM	Isopropylbenzene	3.630	3.724	2.6	TM		
66	TM**	1,1,2,2-Tetrachloroethane	0.9485	0.9299	2.0	TM**		
67	TM	1,2,3-Trichloropropane	0.1740	0.1666	4.3	TM		
68	TM	t-1,4-Dichloro-2-Butene	0.2117	0.1514	28	TM		nt
69	TM	Bromobenzene	1.049	1.093	4.2	TM		
70	TM	n-Propylbenzene	4.377	4.537	3.6	TM		
71	TM	4-Ethyltoluene	3.619	3.503	3.2	TM		
72	TM	2-Chlorotoluene	2.925	2.932	0.25	TM		
73	TM	1,3,5-Trimethylbenzene	3.139	3.373	7.5	TM		
74	TM	4-Chlorotoluene	3.250	3.340	2.8	TM		
75	TM	Tert-Butylbenzene	2.471	2.555	3.4	TM		
76	TM	1,2,4-Trimethylbenzene	3.154	3.396	7.7	TM		
77	TM	Sec-Butylbenzene	3.528	3.736	5.9	TM		
78	TM	p-Isopropyltoluene	3.071	3.140	2.2	TM		
79	TM	Benzyl Chloride	0.9289	0.7047	24	TM		nt
80	TM	1,3-DCB	2.034	2.009	1.3	TM		
		Average			7.1			

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/16/16
Instrument: Loki
Cal. Date: 12/16/16
Data File: 1216L17.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	1,4-DCB	2.108	2.050	2.8	TM	
82	TM	n-Butylbenzene	2.707	2.728	0.76	TM	
83	TM	1,2-DCB	1.922	1.840	4.3	TM	
84	TM	Hexachloroethane	0.6828	0.6049	11	TM	
85	TM	1,2-Dibromo-3-chloropropane	0.1446	0.1370	5.3	TM	
86	TM	1,2,4-Trichlorobenzene	1.168	1.126	3.6	TM	
87	TM	Hexachlorobutadiene	0.4693	0.4492	4.3	TM	
88	TM	Naphthalene	1.305	1.253	4.0	TM	
89	TM	1,2,3-Trichlorobenzene	0.7307	0.6504	11	TM	
90							
91							
92							
93							
94							
95							
96							
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			5.2		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L17.D
Acq On : 16 Dec 16 19:23
Sample : (SS)10ug/L VOC STD 12/16/16
Misc : W IS&S 11/21/16, 11/14/16

Vial: 17
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:01 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	601856	25.00000 ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	542656	25.00000 ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	297856	25.00000 ppb	0.00
System Monitoring Compounds					
32) Dibromofluoromethane(S)	4.48	111	302342	24.68479 ppb	0.00
Spiked Amount 25.000			Recovery = 98.740%		
37) 1,2-DCA-D4(S)	4.92	65	330222	25.07237 ppb	0.00
Spiked Amount 25.000			Recovery = 100.288%		
57) Toluene-D8(S)	7.22	98	1062661	25.21216 ppb	0.00
Spiked Amount 25.000			Recovery = 100.848%		
65) 4-Bromofluorobenzene(S)	9.89	95	376737	26.11624 ppb	0.00
Spiked Amount 25.000			Recovery = 104.464%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.85	85	100480	9.18084 ppb	96
3) Freon 114	0.93	85	65368	9.37904 ppb	99
4) Chloromethane	0.96	50	158383	8.47458 ppb	98
5) Vinyl chloride	1.02	62	119767	9.00051 ppb	98
6) Bromomethane	1.22	96	76440	8.47886 ppb	98
7) Chloroethane	1.29	64	65426	9.38480 ppb	99
8) Dichlorofluoromethane	1.43	67	195389	8.69117 ppb	99
9) Trichlorofluoromethane	1.46	101	138395	10.32545 ppb	97
10) Acrolein	1.75	56	46755	37.70218 ppb	99
11) Acetone	1.88	43	21155	8.12033 ppb	99
12) Freon-113	1.84	101	63207	9.10107 ppb	96
13) 1,1-DCE	1.83	96	65448	10.27160 ppb	96
14) t-Butanol	2.39	59	34288	112.60146 ppb	93
15) Acetonitrile	2.10	41	119044	88.33317 ppb	99
16) Methyl Acetate	2.17	43	62605	8.03389 ppb	99
17) Iodomethane	1.93	142	40952	6.57235 ppb	99
18) Acrylonitrile	2.47	52	21820	7.80514 ppb	92
19) Methylene chloride	2.23	84	130505	8.60720 ppb	96
20) Carbon disulfide	1.98	76	217261	8.41181 ppb	99
21) Methyl t-butyl ether (MtBE	2.52	73	241755	8.72502 ppb	99
22) Trans-1,2-DCE	2.50	96	112072	10.12856 ppb	95
23) Diisopropyl Ether	3.10	45	314183	8.68081 ppb	97
24) 1,1-DCA	2.95	63	205720	9.67999 ppb	99
25) Vinyl Acetate	3.07	43	79448	9.38176 ppb	100
26) Ethyl tert Butyl Ether	3.59	59	258468	8.97798 ppb	98
27) MEK (2-Butanone)	3.81	43	28349	8.32343 ppb	93
28) Cis-1,2-DCE	3.72	96	131797	10.23258 ppb	99
29) 2,2-Dichloropropane	3.70	77	47848	9.70588 ppb	97
30) Chloroform	4.25	83	203440	9.43554 ppb	100
31) Bromochloromethane	4.08	128	58634	9.69256 ppb	87
33) 1,1,1-TCA	4.47	97	151139	9.52663 ppb	97
34) Cyclohexane	4.53	41	59187	8.69346 ppb	99
35) 1,1-Dichloropropene	4.72	75	129013	10.00636 ppb	98
36) 2,2,4-Trimethylpentane	5.15	57	178619	9.12214 ppb	97
38) Carbon Tetrachloride	4.70	119	117456	9.91089 ppb	98
39) Tert Amyl Methyl Ether	5.22	73	224832	8.96577 ppb	95
40) 1,2-DCA	5.03	62	148399	9.41130 ppb	95
41) Benzene	4.99	78	451992	9.84230 ppb	98
42) TCE	5.84	95	57408	10.08902 ppb	93

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L17.D
Acq On : 16 Dec 16 19:23
Sample : (SS)10ug/L VOC STD 12/16/16
Misc : W IS&S 11/21/16, 11/14/16

Vial: 17
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:01 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
43) 2-Pentanone	6.12	43	658329	117.91589 ppb	100
44) 1,2-Dichloropropane	6.09	63	122016	9.22914 ppb	99
45) Bromodichloromethane	6.44	83	147853	9.33573 ppb	99
46) Methyl Cyclohexane	6.04	83	98653	8.81142 ppb	100
47) Dibromomethane	6.22	93	67382	9.76928 ppb	97
48) 2-Chloroethyl vinyl ether	6.49	43	5654	6.55920 ppb	100
49) MIBK (methyl isobutyl ket	7.16	43	68216	8.25640 ppb	97
50) 1-Bromo-2-chloroethane	6.75	63	72656	8.35145 ppb	95
51) Cis-1,3-Dichloropropene	6.95	75	170424	9.77131 ppb	97
52) Toluene	7.29	91	486173	10.08601 ppb	100
53) Trans-1,3-Dichloropropene	7.56	75	138643	9.52852 ppb	98
54) 1,1,2-TCA	7.74	83	78460	9.76073 ppb	99
55) 2-Hexanone	8.04	43	19600	8.33803 ppb	94
58) 1,2-EDB	8.20	107	85684	9.87398 ppb	94
59) Tetrachloroethene	7.86	166	104748	9.90136 ppb	95
60) 1-Chlorohexane	8.76	91	96710	8.80090 ppb	99
61) 1,1,1,2-Tetrachloroethane	8.83	131	108076	9.89450 ppb	96
62) m&p-Xylene	8.99	106	384953	20.81634 ppb	99
63) o-Xylene	9.38	106	184495	10.24256 ppb	97
64) Styrene	9.40	104	210304	10.51454 ppb	100
66) 1,3-Dichloropropane	7.90	76	160843	9.87340 ppb	99
67) Dibromochloromethane	8.12	129	99347	9.64342 ppb	93
68) Chlorobenzene	8.73	112	305615	9.77395 ppb	98
69) Ethylbenzene	8.87	91	498455	10.15563 ppb	99
70) Bromoform	9.55	173	55750	8.84549 ppb	97
72) Isopropylbenzene	9.76	105	443714	10.25970 ppb	100
73) 1,1,2,2-Tetrachloroethane	10.07	83	110792	9.80377 ppb	99
74) 1,2,3-Trichloropropane	10.09	110	19848	9.57434 ppb	92
75) t-1,4-Dichloro-2-Butene	10.12	53	18038	7.15052 ppb	93
76) Bromobenzene	10.01	156	130235	10.42259 ppb	99
77) n-Propylbenzene	10.17	91	540496	10.36431 ppb	98
78) 4-Ethyltoluene	10.29	105	417366	9.68102 ppb	100
79) 2-Chlorotoluene	10.23	91	349349	10.02499 ppb	100
80) 1,3,5-Trimethylbenzene	10.36	105	401837	10.74566 ppb	100
81) 4-Chlorotoluene	10.34	91	397973	10.27686 ppb	98
82) Tert-Butylbenzene	10.66	119	304406	10.33956 ppb	99
83) 1,2,4-Trimethylbenzene	10.72	105	404567	10.76557 ppb	99
84) Sec-Butylbenzene	10.88	105	445096	10.59052 ppb	97
85) p-Isopropyltoluene	11.04	119	374051	10.22147 ppb	100
86) Benzyl Chloride	11.19	91	83960	7.58668 ppb	99
87) 1,3-DCB	10.96	146	239333	9.87392 ppb	98
88) 1,4-DCB	11.05	146	244189	9.72421 ppb	99
89) n-Butylbenzene	11.44	91	324980	10.07589 ppb	97
90) 1,2-DCB	11.41	146	219240	9.57315 ppb	98
91) Hexachloroethane	11.66	117	72064	8.85781 ppb	96
92) 1,2-Dibromo-3-chloropropan	12.18	157	16319	9.47499 ppb	93
93) 1,2,4-Trichlorobenzene	13.00	180	134110	9.64023 ppb	98
94) Hexachlorobutadiene	13.19	225	53518	9.57095 ppb	100
95) Naphthalene	13.22	128	149248	9.59631 ppb	100
96) 1,2,3-Trichlorobenzene	13.46	180	77496	8.90158 ppb	97

(#) = qualifier out of range (m) = manual integration
1216L17.D LALLW.M Wed Dec 28 12:14:04 2016

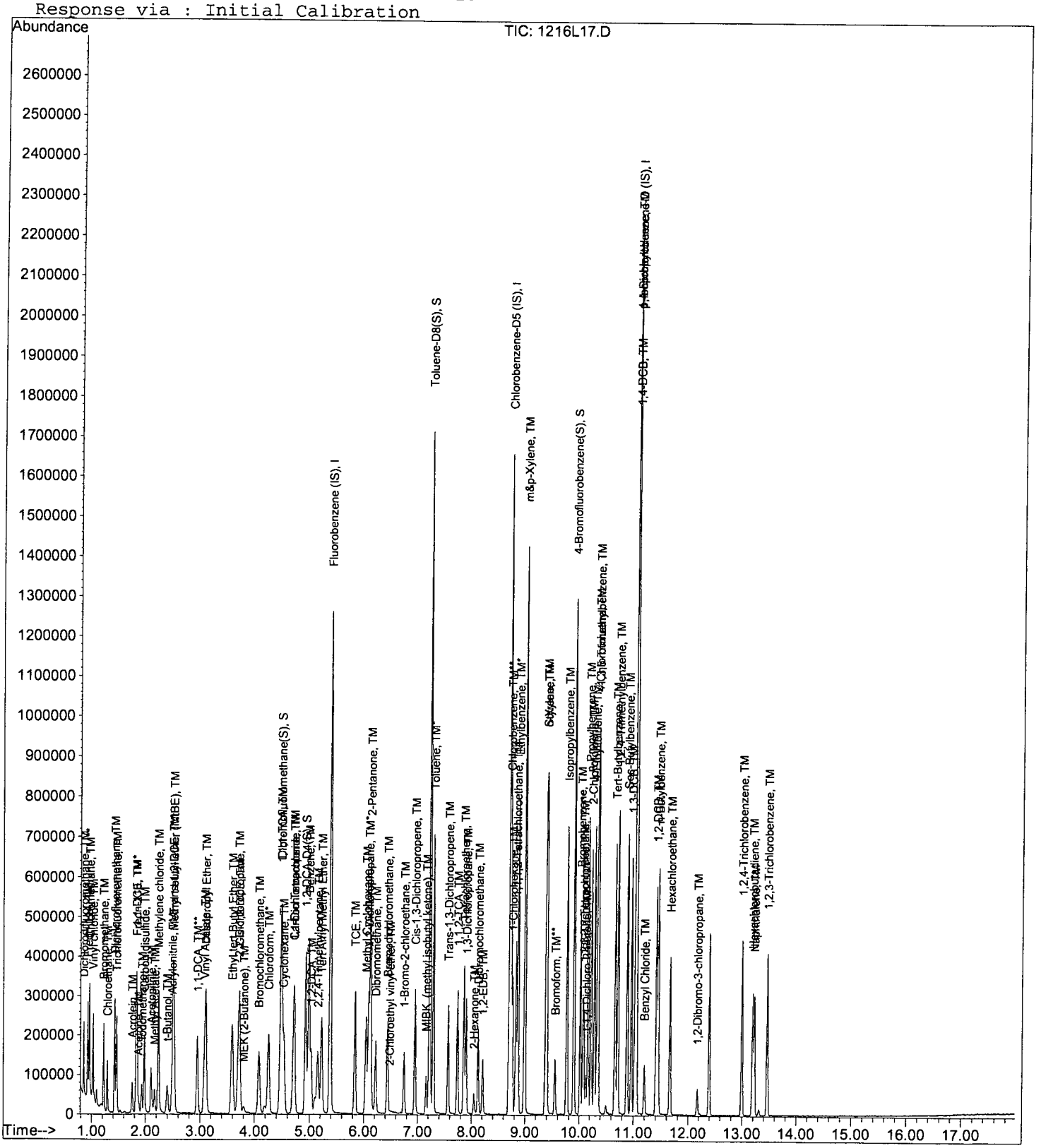
Quantitation Report

Data File : M:\LOKI\DATA\161216\1216L17.D
Acq On : 16 Dec 16 19:23
Sample : (SS)10ug/L VOC STD 12/16/16
Misc : W IS&S 11/21/16, 11/14/16

Vial: 17
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:01 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



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VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/18/16
Instrument: Loki
Initial Cal. Date: 12/16/16
Data File: 1218L02.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TM	Dichlorodifluoromethane	0.4546	0.4770	4.9	TM	
3	TM	Freon 114	0.2895	0.3109	7.4	TM	
4	TM**	Chloromethane	0.7763	0.6680	14	TM**	
5	TM*	Vinyl chloride	0.5527	0.5451	1.4	TM*	
6	TM	Bromomethane	0.3745	0.4168	11	TM	
7	TM	Chloroethane	0.2896	0.3007	3.8	TM	
8	TM	Dichlorofluoromethane	0.9338	0.8792	5.9	TM	
9	TM	Trichlorofluoromethane	0.5567	0.5878	5.6	TM	
10	TM	Acrolein	0.0515	0.0434	16	TM	
11	TML	Acetone	0.1428	0.0771	46	TML	32 nt
12	TM	Freon-113	0.2885	0.2865	0.70	TM	
13	TM*	1,1-DCE	0.2647	0.2600	1.8	TM*	
14	TM	t-Butanol	0.0126	0.0114	10.0	TM	
15	TM	Acetonitrile	0.0560	0.0376	33	TM	nt
16	TM	Methyl Acetate	0.3237	0.2731	16	TM	
17	TM	Iodomethane	0.2588	0.2390	7.7	TM	
18	TM	Acrylonitrile	0.1161	0.0972	16	TM	
19	TML	Methylene chloride	1.033	0.5293	49	TML	17
20	TM	Carbon disulfide	1.073	1.092	1.8	TM	
21	TM	Methyl t-butyl ether (MtBE)	1.151	1.070	7.1	TM	
22	TM	Trans-1,2-DCE	0.4596	0.4583	0.30	TM	
23	TM	Diisopropyl Ether	1.503	1.353	10	TM	
24	TM**	1,1-DCA	0.8828	0.8544	3.2	TM**	
25	TM	Vinyl Acetate	0.3518	0.3131	11	TM	
26	TM	Ethyl tert Butyl Ether	1.196	1.114	6.8	TM	
27	TML	MEK (2-Butanone)	0.1716	0.1267	26	TML	10
28	TM	Cis-1,2-DCE	0.5350	0.5353	0.05	TM	
29	TM	2,2-Dichloropropane	0.2048	0.2237	9.2	TM	
30	TM*	Chloroform	0.8956	0.8929	0.31	TM*	
31	TM	Bromochloromethane	0.2513	0.2461	2.1	TM	
32	S	Dibromofluoromethane(S)	0.5088	0.4910	3.5	S	
33	TM	1,1,1-TCA	0.6590	0.6893	4.6	TM	
34	TM	Cyclohexane	0.2828	0.2582	8.7	TM	
35	TM	1,1-Dichloropropene	0.5356	0.5455	1.9	TM	
36	TM	2,2,4-Trimethylpentane	0.8134	0.8690	6.8	TM	
37	S	1,2-DCA-D4(S)	0.5471	0.5160	5.7	S	
38	TM	Carbon Tetrachloride	0.4923	0.5328	8.2	TM	
39	TM	Tert Amyl Methyl Ether	1.042	1.023	1.8	TM	
40	TM	1,2-DCA	0.6550	0.6229	4.9	TM	
		Average			9.6		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 12/18/16
Matrix: 0 Instrument: Loki
Cal. Date: 12/16/16
Data File: 1218L02.D

		Compound	MEAN	CCRF	%D		%Drift	
41	TM	Benzene	1.908	1.927	1.0	TM		
42	TM	TCE	0.2364	0.2487	5.2	TM		
43	TM	2-Pentanone	0.2319	0.2141	7.7	TM		
44	TM*	1,2-Dichloropropane	0.5492	0.5047	8.1	TM*		
45	TM	Bromodichloromethane	0.6579	0.6331	3.8	TM		
46	TM	Methyl Cyclohexane	0.4651	0.4776	2.7	TM		
47	TM	Dibromomethane	0.2865	0.2758	3.7	TM		
48	TML	2-Chloroethyl vinyl ether	0.0394	0.0008	98	TML	105	nt
49	TML	MIBK (methyl isobutyl ketone)	0.3799	0.3054	20	TML	10	
50	TM	1-Bromo-2-chloroethane	0.3614	0.3278	9.3	TM		
51	TM	Cis-1,3-Dichloropropene	0.7245	0.7204	0.56	TM		
52	TM*	Toluene	2.002	2.119	5.8	TM*		
53	TM	Trans-1,3-Dichloropropene	0.6044	0.5920	2.0	TM		
54	TM	1,1,2-TCA	0.3339	0.3279	1.8	TM		
55	TML	2-Hexanone	0.0962	0.0838	13	TML	15	
56	I	Chlorobenzene-D5 (IS)	ISTD			I		
57	S	Toluene-D8(S)	1.942	1.852	4.6	S		
58	TM	1,2-EDB	0.3998	0.3744	6.3	TM		
59	TM	Tetrachloroethene	0.4874	0.5161	5.9	TM		
60	TM	1-Chlorohexane	0.5062	0.5073	0.21	TM		
61	TM	1,1,1,2-Tetrachloroethane	0.5032	0.5004	0.55	TM		
62	TM	m&p-Xylene	0.8520	0.9270	8.8	TM		
63	TM	o-Xylene	0.8298	0.8811	6.2	TM		
64	TM	Styrene	0.9215	0.9814	6.5	TM		
65	S	4-Bromofluorobenzene(S)	0.6646	0.6623	0.35	S		
66	TM	1,3-Dichloropropane	0.7505	0.6870	8.5	TM		
67	TM	Dibromochloromethane	0.4746	0.4766	0.42	TM		
68	TM**	Chlorobenzene	1.441	1.414	1.9	TM**		
69	TM*	Ethylbenzene	2.261	2.389	5.7	TM*		
70	TM**	Bromoform	0.2904	0.2773	4.5	TM**		
71	I	1,4-Dichlorobenzene-D (IS)	ISTD			I		
72	TM	Isopropylbenzene	3.630	3.866	6.5	TM		
73	TM**	1,1,2,2-Tetrachloroethane	0.9485	0.8768	7.6	TM**		
74	TM	1,2,3-Trichloropropane	0.1740	0.1605	7.7	TM		
75	TM	t-1,4-Dichloro-2-Butene	0.2117	0.1697	20	TM		
76	TM	Bromobenzene	1.049	1.080	2.9	TM		
77	TM	n-Propylbenzene	4.377	4.668	6.6	TM		
78	TM	4-Ethyltoluene	3.619	3.936	8.8	TM		
79	TM	2-Chlorotoluene	2.925	2.958	1.1	TM		
80	TM	1,3,5-Trimethylbenzene	3.139	3.478	11	TM		
		Average			8.3			

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/18/16
Instrument: Loki
Cal. Date: 12/16/16
Data File: 1218L02.D

		Compound	MEAN	CCRF	%D	%Drift	
81	TM	4-Chlorotoluene	3.250	3.431	5.6	TM	
82	TM	Tert-Butylbenzene	2.471	2.677	8.3	TM	
83	TM	1,2,4-Trimethylbenzene	3.154	3.564	13	TM	
84	TM	Sec-Butylbenzene	3.528	3.819	8.3	TM	
85	TM	p-Isopropyltoluene	3.071	3.322	8.1	TM	
86	TM	Benzyl Chloride	0.9289	1.060	14	TM	
87	TM	1,3-DCB	2.034	2.062	1.4	TM	
88	TM	1,4-DCB	2.108	2.091	0.80	TM	
89	TM	n-Butylbenzene	2.707	2.842	5.0	TM	
90	TM	1,2-DCB	1.922	1.884	2.0	TM	
91	TM	Hexachloroethane	0.6828	0.6918	1.3	TM	
92	TM	1,2-Dibromo-3-chloropropane	0.1446	0.1316	9.0	TM	
93	TM	1,2,4-Trichlorobenzene	1.168	1.155	1.1	TM	
94	TM	Hexachlorobutadiene	0.4693	0.4855	3.4	TM	
95	TM	Naphthalene	1.305	1.236	5.3	TM	
96	TM	1,2,3-Trichlorobenzene	0.7307	0.6479	11	TM	
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			6.1		

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L02.D Vial: 2
Acq On : 18 Dec 16 17:09 Operator: PM,DG,SV,CMM
Sample : 161218A CCV/LCS 10ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 18 17:51 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	574080	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	540800	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	303616	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.48	111	281883	24.13	ppb		0.00
Spiked Amount 25.000			Recovery = 96.512%				
37) 1,2-DCA-D4(S)	4.93	65	296244	23.58	ppb		0.00
Spiked Amount 25.000			Recovery = 94.324%				
57) Toluene-D8(S)	7.22	98	1001304	23.84	ppb		0.00
Spiked Amount 25.000			Recovery = 95.352%				
65) 4-Bromofluorobenzene(S)	9.89	95	358151	24.91	ppb		0.00
Spiked Amount 25.000			Recovery = 99.652%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.85	85	109544	10.49	ppb		99
3) Freon 114	0.93	85	71386	10.74	ppb		97
4) Chloromethane	0.96	50	153399	8.61	ppb		99
5) Vinyl chloride	1.02	62	125167	9.86	ppb		97
6) Bromomethane	1.22	96	95720	11.13	ppb		98
7) Chloroethane	1.29	64	69044	10.38	ppb		100
8) Dichlorofluoromethane	1.43	67	201883	9.41	ppb		99
9) Trichlorofluoromethane	1.46	101	134981	10.56	ppb		98
10) Acrolein	1.75	56	124587	105.32	ppb		99
11) Acetone	1.88	43	17695	6.83	ppb		98
12) Freon-113	1.84	101	65782	9.93	ppb		94
13) 1,1-DCE	1.83	96	59712	9.82	ppb		95
14) t-Butanol	2.40	59	32680	112.51	ppb		100
15) Acetonitrile	2.10	41	107914	83.95	ppb		98
16) Methyl Acetate	2.17	43	62715	8.44	ppb		98
17) Iodomethane	1.93	142	54872	9.23	ppb		96
18) Acrylonitrile	2.48	52	22314	8.37	ppb		94
19) Methylene chloride	2.24	84	121543	8.35	ppb		100
20) Carbon disulfide	1.98	76	250837	10.18	ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	245596	9.29	ppb		96
22) Trans-1,2-DCE	2.50	96	105230	9.97	ppb		98
23) Diisopropyl Ether	3.10	45	310697	9.00	ppb		96
24) 1,1-DCA	2.95	63	196200	9.68	ppb		99
25) Vinyl Acetate	3.09	43	71903	8.90	ppb	#	82
26) Ethyl tert Butyl Ether	3.59	59	255808	9.32	ppb		95
27) MEK (2-Butanone)	3.80	43	29091	8.97	ppb		92
28) Cis-1,2-DCE	3.73	96	122918	10.00	ppb		96
29) 2,2-Dichloropropane	3.70	77	51360	10.92	ppb		98
30) Chloroform	4.25	83	205030	9.97	ppb		99
31) Bromochloromethane	4.08	128	56507	9.79	ppb		95
33) 1,1,1-TCA	4.47	97	158277	10.46	ppb		93
34) Cyclohexane	4.53	41	59288	9.13	ppb		92
35) 1,1-Dichloropropene	4.72	75	125274	10.19	ppb		96
36) 2,2,4-Trimethylpentane	5.15	57	199557	10.68	ppb		96
38) Carbon Tetrachloride	4.71	119	122353	10.82	ppb		95
39) Tert Amyl Methyl Ether	5.22	73	234808	9.82	ppb		97
40) 1,2-DCA	5.03	62	143039	9.51	ppb		99
41) Benzene	4.99	78	442470	10.10	ppb		97
42) TCE	5.84	95	57112	10.52	ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L02.D Vial: 2
Acq On : 18 Dec 16 17:09 Operator: PM,DG,SV,CMM
Sample : 161218A CCV/LCS 10ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 18 17:51 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	2-Pentanone	6.12	43	614641	115.42	ppb		97
44)	1,2-Dichloropropane	6.09	63	115885	9.19	ppb		98
45)	Bromodichloromethane	6.44	83	145369	9.62	ppb		98
46)	Methyl Cyclohexane	6.04	83	109674	10.27	ppb		98
47)	Dibromomethane	6.22	93	63325	9.63	ppb		97
48)	2-Chloroethyl vinyl ether	6.55	43	183	-0.51	ppb		100
49)	MIBK (methyl isobutyl ket	7.16	43	70128	8.97	ppb		97
50)	1-Bromo-2-chloroethane	6.75	63	75280	9.07	ppb		95
51)	Cis-1,3-Dichloropropene	6.95	75	165436	9.94	ppb		96
52)	Toluene	7.29	91	486567	10.58	ppb		99
53)	Trans-1,3-Dichloropropene	7.56	75	135946	9.80	ppb		95
54)	1,1,2-TCA	7.74	83	75298	9.82	ppb		93
55)	2-Hexanone	8.04	43	19250	8.54	ppb	#	93
58)	1,2-EDB	8.20	107	80994	9.37	ppb		97
59)	Tetrachloroethene	7.86	166	111635	10.59	ppb		98
60)	1-Chlorohexane	8.76	91	109742	10.02	ppb		93
61)	1,1,1,2-Tetrachloroethane	8.83	131	108255	9.94	ppb		97
62)	m&p-Xylene	8.99	106	401071	21.76	ppb		99
63)	o-Xylene	9.38	106	190598	10.62	ppb		94
64)	Styrene	9.39	104	212288	10.65	ppb		99
66)	1,3-Dichloropropane	7.90	76	148621	9.15	ppb		99
67)	Dibromochloromethane	8.12	129	103097	10.04	ppb		98
68)	Chlorobenzene	8.73	112	305818	9.81	ppb		97
69)	Ethylbenzene	8.87	91	516801	10.57	ppb		98
70)	Bromoform	9.55	173	59995	9.55	ppb		93
72)	Isopropylbenzene	9.76	105	469568	10.65	ppb		100
73)	1,1,2,2-Tetrachloroethane	10.07	83	106487	9.24	ppb		99
74)	1,2,3-Trichloropropane	10.09	110	19496	9.23	ppb		100
75)	t-1,4-Dichloro-2-Butene	10.12	53	20614	8.02	ppb		100
76)	Bromobenzene	10.01	156	131121	10.29	ppb		98
77)	n-Propylbenzene	10.17	91	566919	10.66	ppb		99
78)	4-Ethyltoluene	10.28	105	478017	10.88	ppb		98
79)	2-Chlorotoluene	10.22	91	359211	10.11	ppb		97
80)	1,3,5-Trimethylbenzene	10.36	105	422436	11.08	ppb		96
81)	4-Chlorotoluene	10.34	91	416734	10.56	ppb		98
82)	Tert-Butylbenzene	10.66	119	325142	10.83	ppb		97
83)	1,2,4-Trimethylbenzene	10.71	105	432890	11.30	ppb		100
84)	Sec-Butylbenzene	10.88	105	463771	10.83	ppb		99
85)	p-Isopropyltoluene	11.04	119	403416	10.81	ppb		99
86)	Benzyl Chloride	11.19	91	128686	11.41	ppb		99
87)	1,3-DCB	10.96	146	250428	10.14	ppb		99
88)	1,4-DCB	11.05	146	253914	9.92	ppb		99
89)	n-Butylbenzene	11.44	91	345102	10.50	ppb		99
90)	1,2-DCB	11.41	146	228813	9.80	ppb		97
91)	Hexachloroethane	11.66	117	84011	10.13	ppb		88
92)	1,2-Dibromo-3-chloropropan	12.18	157	15982	9.10	ppb	#	86
93)	1,2,4-Trichlorobenzene	13.00	180	140277	9.89	ppb		99
94)	Hexachlorobutadiene	13.19	225	58960	10.34	ppb		96
95)	Naphthalene	13.22	128	150080	9.47	ppb		100
96)	1,2,3-Trichlorobenzene	13.46	180	78680	8.87	ppb		98

(#) = qualifier out of range (m) = manual integration

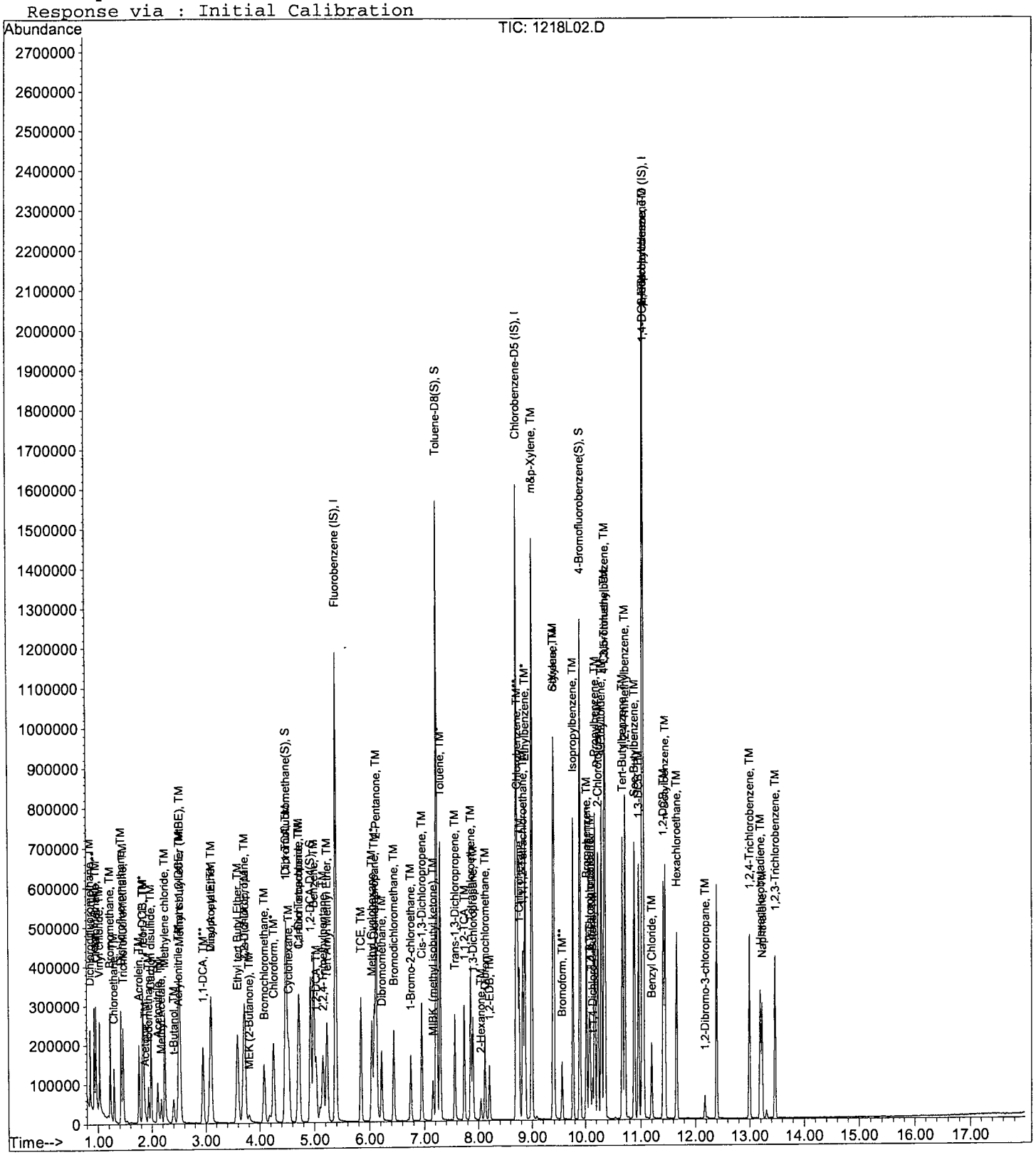
Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L02.D
Acq On : 18 Dec 16 17:09
Sample : 161218A CCV/LCS 10ug/L
Misc : W IS&S 11/21/16, 11/14/16

Vial: 2
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 18 17:51 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



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VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/19/16
Instrument: Loki
Initial Cal. Date: 12/16/16
Data File: 1218L27.D

		Compound	MEAN	CCRF	%D	%Drift		
1	I	Fluorobenzene (IS)	ISTD			I		
2	TM	Dichlorodifluoromethane	0.4546	0.4649	2.3	TM		
3	TM	Freon 114	0.2895	0.3062	5.8	TM		
4	TM**	Chloromethane	0.7763	0.6250	19	TM**		
5	TM*	Vinyl chloride	0.5527	0.4978	9.9	TM*		
6	TM	Bromomethane	0.3745	0.3426	8.5	TM		
7	TM	Chloroethane	0.2896	0.2781	4.0	TM		
8	TM	Dichlorofluoromethane	0.9338	0.8080	13	TM		
9	TM	Trichlorofluoromethane	0.5567	0.5719	2.7	TM		
10	TM	Acrolein	0.0515	0.0383	26	TM		nt
11	TML	Acetone	0.1428	0.0796	44	TML	29	nt
12	TM	Freon-113	0.2885	0.2794	3.1	TM		
13	TM*	1,1-DCE	0.2647	0.2410	9.0	TM*		
14	TM	t-Butanol	0.0126	0.0106	16	TM		
15	TM	Acetonitrile	0.0560	0.0380	32	TM		nt
16	TM	Methyl Acetate	0.3237	0.2416	25	TM		nt
17	TM	Iodomethane	0.2588	0.2628	1.5	TM		
18	TM	Acrylonitrile	0.1161	0.0954	18	TM		
19	TML	Methylene chloride	1.033	0.5174	50	TML	19	
20	TM	Carbon disulfide	1.073	1.023	4.6	TM		
21	TM	Methyl t-butyl ether (MtBE)	1.151	1.036	10.0	TM		
22	TM	Trans-1,2-DCE	0.4596	0.4508	1.9	TM		
23	TM	Diisopropyl Ether	1.503	1.297	14	TM		
24	TM**	1,1-DCA	0.8828	0.8207	7.0	TM**		
25	TM	Vinyl Acetate	0.3518	0.2856	19	TM		
26	TM	Ethyl tert Butyl Ether	1.196	1.077	10.0	TM		
27	TML	MEK (2-Butanone)	0.1716	0.1254	27	TML	11	
28	TM	Cis-1,2-DCE	0.5350	0.5247	1.9	TM		
29	TM	2,2-Dichloropropane	0.2048	0.1872	8.6	TM		
30	TM*	Chloroform	0.8956	0.8898	0.65	TM*		
31	TM	Bromochloromethane	0.2513	0.2448	2.6	TM		
32	S	Dibromofluoromethane(S)	0.5088	0.4958	2.6	S		
33	TM	1,1,1-TCA	0.6590	0.6711	1.8	TM		
34	TM	Cyclohexane	0.2828	0.2370	16	TM		
35	TM	1,1-Dichloropropene	0.5356	0.5275	1.5	TM		
36	TM	2,2,4-Trimethylpentane	0.8134	0.7692	5.4	TM		
37	S	1,2-DCA-D4(S)	0.5471	0.5119	6.4	S		
38	TM	Carbon Tetrachloride	0.4923	0.5348	8.6	TM		
39	TM	Tert Amyl Methyl Ether	1.042	0.9732	6.6	TM		
40	TM	1,2-DCA	0.6550	0.5956	9.1	TM		
		Average			11.7			

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 12/19/16
Matrix: 0 Instrument: Loki
Cal. Date: 12/16/16
Data File: 1218L27.D

		Compound	MEAN	CCRF	%D	%Drift		
41	TM	Benzene	1.908	1.860	2.5	TM		
42	TM	TCE	0.2364	0.2584	9.3	TM		
43	TM	2-Pentanone	0.2319	0.1988	14	TM		
44	TM*	1,2-Dichloropropane	0.5492	0.4965	9.6	TM*		
45	TM	Bromodichloromethane	0.6579	0.6327	3.8	TM		
46	TM	Methyl Cyclohexane	0.4651	0.4579	1.5	TM		
47	TM	Dibromomethane	0.2865	0.2739	4.4	TM		
48	TML	2-Chloroethyl vinyl ether	0.0394	0.0022	94	TML	101	nt
49	TML	MIBK (methyl isobutyl ketone)	0.3799	0.2744	28	TML	20	
50	TM	1-Bromo-2-chloroethane	0.3614	0.3132	13	TM		
51	TM	Cis-1,3-Dichloropropene	0.7245	0.6626	8.5	TM		
52	TM*	Toluene	2.002	2.025	1.1	TM*		
53	TM	Trans-1,3-Dichloropropene	0.6044	0.5567	7.9	TM		
54	TM	1,1,2-TCA	0.3339	0.3190	4.5	TM		
55	TML	2-Hexanone	0.0962	0.0743	23	TML	23	nt
56	I	Chlorobenzene-D5 (IS)	ISTD			I		
57	S	Toluene-D8(S)	1.942	1.872	3.6	S		
58	TM	1,2-EDB	0.3998	0.3705	7.3	TM		
59	TM	Tetrachloroethene	0.4874	0.5089	4.4	TM		
60	TM	1-Chlorohexane	0.5062	0.5065	0.04	TM		
61	TM	1,1,1,2-Tetrachloroethane	0.5032	0.4949	1.7	TM		
62	TM	m&p-Xylene	0.8520	0.8932	4.8	TM		
63	TM	o-Xylene	0.8298	0.8433	1.6	TM		
64	TM	Styrene	0.9215	1.004	9.0	TM		
65	S	4-Bromofluorobenzene(S)	0.6646	0.6582	0.96	S		
66	TM	1,3-Dichloropropane	0.7505	0.6599	12	TM		
67	TM	Dibromochloromethane	0.4746	0.4663	1.8	TM		
68	TM**	Chlorobenzene	1.441	1.379	4.3	TM**		
69	TM*	Ethylbenzene	2.261	2.295	1.5	TM*		
70	TM**	Bromoform	0.2904	0.2816	3.0	TM**		
71	I	1,4-Dichlorobenzene-D (IS)	ISTD			I		
72	TM	Isopropylbenzene	3.630	3.710	2.2	TM		
73	TM**	1,1,2,2-Tetrachloroethane	0.9485	0.8055	15	TM**		
74	TM	1,2,3-Trichloropropane	0.1740	0.1630	6.3	TM		
75	TM	t-1,4-Dichloro-2-Butene	0.2117	0.1751	17	TM		
76	TM	Bromobenzene	1.049	1.092	4.1	TM		
77	TM	n-Propylbenzene	4.377	4.383	0.13	TM		
78	TM	4-Ethyltoluene	3.619	3.860	6.7	TM		
79	TM	2-Chlorotoluene	2.925	2.791	4.6	TM		
80	TM	1,3,5-Trimethylbenzene	3.139	3.370	7.4	TM		
		Average			9.1			

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 12/19/16
Matrix: 0 Instrument: Loki
Cal. Date: 12/16/16
Data File: 1218L27.D

		Compound	MEAN	CCRF	%D	%Drift	
81	TM	4-Chlorotoluene	3.250	3.380	4.0	TM	
82	TM	Tert-Butylbenzene	2.471	2.618	6.0	TM	
83	TM	1,2,4-Trimethylbenzene	3.154	3.368	6.8	TM	
84	TM	Sec-Butylbenzene	3.528	3.704	5.0	TM	
85	TM	p-Isopropyltoluene	3.071	3.248	5.8	TM	
86	TM	Benzyl Chloride	0.9289	0.7226	22	TM	nt
87	TM	1,3-DCB	2.034	2.032	0.14	TM	
88	TM	1,4-DCB	2.108	2.035	3.5	TM	
89	TM	n-Butylbenzene	2.707	2.692	0.56	TM	
90	TM	1,2-DCB	1.922	1.906	0.82	TM	
91	TM	Hexachloroethane	0.6828	0.6627	3.0	TM	
92	TM	1,2-Dibromo-3-chloropropane	0.1446	0.1265	13	TM	
93	TM	1,2,4-Trichlorobenzene	1.168	1.118	4.2	TM	
94	TM	Hexachlorobutadiene	0.4693	0.4509	3.9	TM	
95	TM	Naphthalene	1.305	1.372	5.1	TM	
96	TM	1,2,3-Trichlorobenzene	0.7307	0.6891	5.7	TM	
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			5.6		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1218L27.D Vial: 27
Acq On : 19 Dec 16 4:48 Operator: PM,DG,SV,CMM
Sample : Ending CCV 8260 10ug/L 12/18/16 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 19 7:12 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	535040	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	507840	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	279040	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.48	111	265265	24.36	ppb		0.00
Spiked Amount 25.000			Recovery =	97.448%			
37) 1,2-DCA-D4(S)	4.92	65	273871	23.39	ppb		0.00
Spiked Amount 25.000			Recovery =	93.564%			
57) Toluene-D8(S)	7.22	98	950523	24.10	ppb		0.00
Spiked Amount 25.000			Recovery =	96.392%			
65) 4-Bromofluorobenzene(S)	9.89	95	334252	24.76	ppb		0.00
Spiked Amount 25.000			Recovery =	99.040%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.85	85	99504	10.23	ppb		100
3) Freon 114	0.93	85	65528	10.58	ppb		94
4) Chloromethane	0.96	50	133757	8.05	ppb		99
5) Vinyl chloride	1.03	62	106536	9.01	ppb		98
6) Bromomethane	1.22	96	73320	9.15	ppb		98
7) Chloroethane	1.29	64	59516	9.60	ppb		97
8) Dichlorofluoromethane	1.43	67	172931	8.65	ppb		98
9) Trichlorofluoromethane	1.46	101	122391	10.27	ppb		100
10) Acrolein	1.75	56	102467	92.95	ppb	#	98
11) Acetone	1.88	43	17036	7.13	ppb		98
12) Freon-113	1.84	101	59805	9.69	ppb		95
13) 1,1-DCE	1.83	96	51568	9.10	ppb		95
14) t-Butanol	2.39	59	28432	105.03	ppb		99
15) Acetonitrile	2.10	41	101706	84.89	ppb		97
16) Methyl Acetate	2.17	43	51711	7.46	ppb		92
17) Iodomethane	1.93	142	56240	10.15	ppb		99
18) Acrylonitrile	2.47	52	20418	8.22	ppb		100
19) Methylene chloride	2.23	84	110728	8.11	ppb		99
20) Carbon disulfide	1.98	76	219002	9.54	ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	221810	9.00	ppb		95
22) Trans-1,2-DCE	2.50	96	96474	9.81	ppb		91
23) Diisopropyl Ether	3.10	45	277477	8.62	ppb		95
24) 1,1-DCA	2.95	63	175640	9.30	ppb		98
25) Vinyl Acetate	3.09	43	61120	8.12	ppb	#	82
26) Ethyl tert Butyl Ether	3.59	59	230456	9.00	ppb		99
27) MEK (2-Butanone)	3.81	43	26846	8.88	ppb		99
28) Cis-1,2-DCE	3.73	96	112290	9.81	ppb		92
29) 2,2-Dichloropropane	3.70	77	40072	9.14	ppb		97
30) Chloroform	4.25	83	190437	9.94	ppb		97
31) Bromochloromethane	4.08	128	52388	9.74	ppb		95
33) 1,1,1-TCA	4.47	97	143623	10.18	ppb		98
34) Cyclohexane	4.53	41	50726	8.38	ppb		87
35) 1,1-Dichloropropene	4.72	75	112903	9.85	ppb		94
36) 2,2,4-Trimethylpentane	5.15	57	164624	9.46	ppb		98
38) Carbon Tetrachloride	4.70	119	114458	10.86	ppb		99
39) Tert Amyl Methyl Ether	5.22	73	208277	9.34	ppb		100
40) 1,2-DCA	5.03	62	127470	9.09	ppb		98
41) Benzene	4.98	78	398003	9.75	ppb		99
42) TCE	5.84	95	55304	10.93	ppb		94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1218L27.D Vial: 27
Acq On : 19 Dec 16 4:48 Operator: PM,DG,SV,CMM
Sample : Ending CCV 8260 10ug/L 12/18/16 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 19 7:12 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	2-Pentanone	6.12	43	531811	107.15	ppb		97
44)	1,2-Dichloropropane	6.09	63	106255	9.04	ppb		99
45)	Bromodichloromethane	6.44	83	135401	9.62	ppb		98
46)	Methyl Cyclohexane	6.04	83	98001	9.85	ppb		98
47)	Dibromomethane	6.22	93	58629	9.56	ppb		99
48)	2-Chloroethyl vinyl ether	6.53	43	467	-0.08	ppb		100
49)	MIBK (methyl isobutyl ket	7.16	43	58725	7.97	ppb		94
50)	1-Bromo-2-chloroethane	6.75	63	67040	8.67	ppb		97
51)	Cis-1,3-Dichloropropene	6.95	75	141811	9.15	ppb		94
52)	Toluene	7.29	91	433293	10.11	ppb		97
53)	Trans-1,3-Dichloropropene	7.56	75	119149	9.21	ppb		99
54)	1,1,2-TCA	7.74	83	68267	9.55	ppb		99
55)	2-Hexanone	8.05	43	15911	7.74	ppb		95
58)	1,2-EDB	8.21	107	75257	9.27	ppb		95
59)	Tetrachloroethene	7.86	166	103369	10.44	ppb		98
60)	1-Chlorohexane	8.76	91	102879	10.00	ppb		86
61)	1,1,1,2-Tetrachloroethane	8.83	131	100522	9.83	ppb		99
62)	m&p-Xylene	8.99	106	362869	20.97	ppb		97
63)	o-Xylene	9.38	106	171310	10.16	ppb		95
64)	Styrene	9.40	104	204032	10.90	ppb		98
66)	1,3-Dichloropropane	7.90	76	134046	8.79	ppb		99
67)	Dibromochloromethane	8.12	129	94722	9.82	ppb		97
68)	Chlorobenzene	8.73	112	280109	9.57	ppb		97
69)	Ethylbenzene	8.87	91	466297	10.15	ppb		99
70)	Bromoform	9.55	173	57207	9.70	ppb		93
72)	Isopropylbenzene	9.76	105	414142	10.22	ppb		98
73)	1,1,2,2-Tetrachloroethane	10.07	83	89905	8.49	ppb		99
74)	1,2,3-Trichloropropane	10.09	110	18192	9.37	ppb		93
75)	t-1,4-Dichloro-2-Butene	10.13	53	19539	8.27	ppb		94
76)	Bromobenzene	10.02	156	121907	10.41	ppb		98
77)	n-Propylbenzene	10.17	91	489198	10.01	ppb		98
78)	4-Ethyltoluene	10.29	105	430796	10.67	ppb		100
79)	2-Chlorotoluene	10.23	91	311515	9.54	ppb		98
80)	1,3,5-Trimethylbenzene	10.36	105	376196	10.74	ppb		97
81)	4-Chlorotoluene	10.34	91	377229	10.40	ppb		98
82)	Tert-Butylbenzene	10.67	119	292246	10.60	ppb		97
83)	1,2,4-Trimethylbenzene	10.72	105	375957	10.68	ppb		98
84)	Sec-Butylbenzene	10.88	105	413429	10.50	ppb		100
85)	p-Isopropyltoluene	11.04	119	362542	10.58	ppb		99
86)	Benzyl Chloride	11.20	91	80657	7.78	ppb		98
87)	1,3-DCB	10.96	146	226769	9.99	ppb		98
88)	1,4-DCB	11.05	146	227133	9.65	ppb		99
89)	n-Butylbenzene	11.44	91	300470	9.94	ppb		96
90)	1,2-DCB	11.41	146	212782	9.92	ppb		97
91)	Hexachloroethane	11.66	117	73967	9.70	ppb		93
92)	1,2-Dibromo-3-chloropropan	12.18	157	14117	8.75	ppb	#	90
93)	1,2,4-Trichlorobenzene	13.00	180	124835	9.58	ppb		95
94)	Hexachlorobutadiene	13.19	225	50327	9.61	ppb		96
95)	Naphthalene	13.22	128	153088	10.51	ppb		100
96)	1,2,3-Trichlorobenzene	13.46	180	76912	9.43	ppb		97

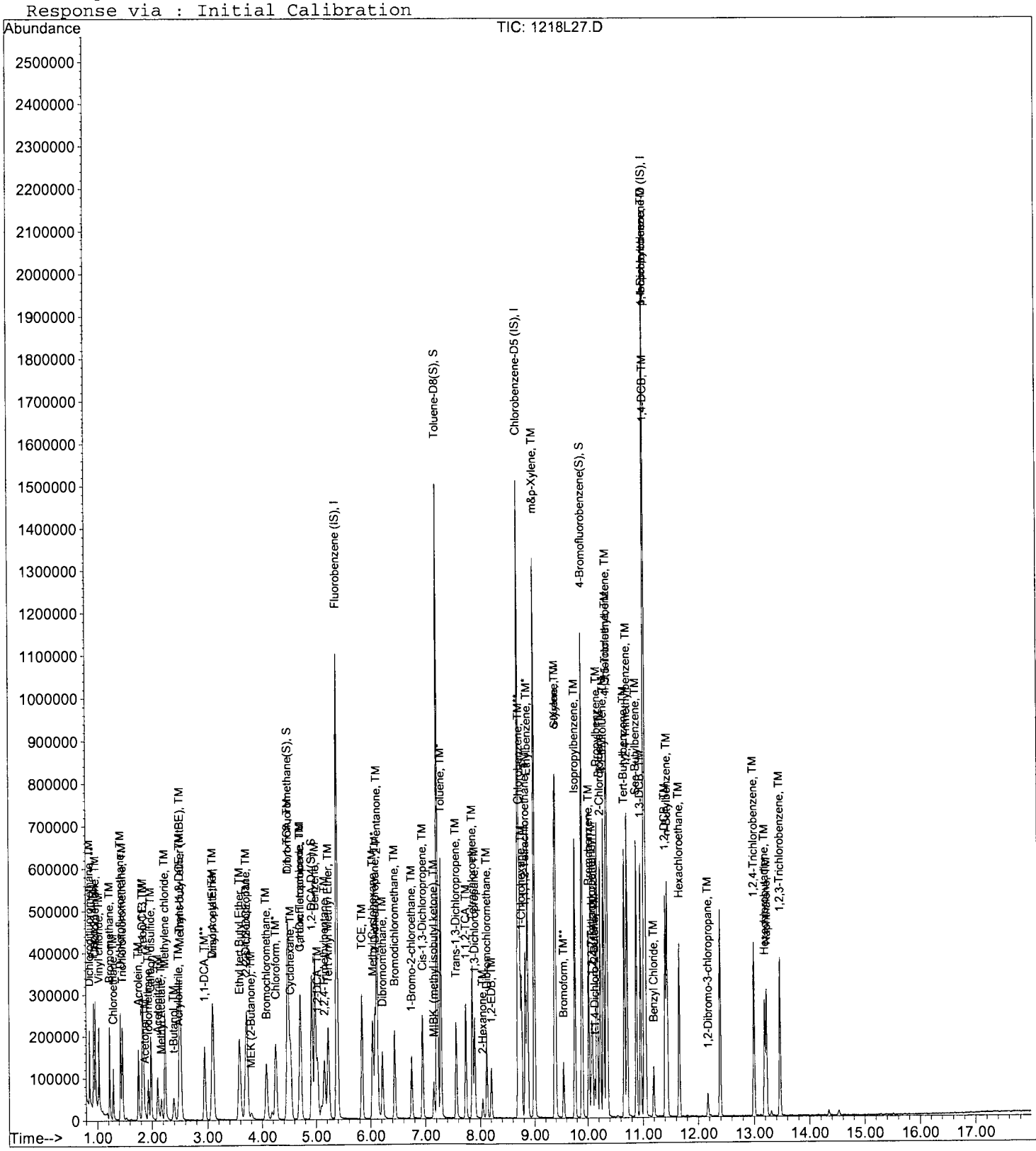
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L27.D Vial: 27
Acq On : 19 Dec 16 4:48 Operator: PM,DG,SV,CMM
Sample : Ending CCV 8260 10ug/L 12/18/16 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 19 7:12 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



515

ORGANICS
Raw Data

APPL, INC.

Method Blank

EPA 8260B BTEX WATER

Blank Name/QCG: **161218W-47493 - 214886**
Batch ID: #86BTO-161218AL

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	12/18/16	12/18/16
BLANK	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	12/18/16	12/18/16
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	12/18/16	12/18/16
BLANK	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	12/18/16	12/18/16
BLANK	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	12/18/16	12/18/16
BLANK	SURROGATE: 1,2-DICHLOROET	96.8	81-118			%	12/18/16	12/18/16
BLANK	SURROGATE: 4-BROMOFLUORO	95.6	85-114			%	12/18/16	12/18/16
BLANK	SURROGATE: DIBROMOFLUOR	99.0	80-119			%	12/18/16	12/18/16
BLANK	SURROGATE: TOLUENE-D8 (S)	96.7	89-112			%	12/18/16	12/18/16

Quant Method: LALLW.M
Run #: 1218L08
Instrument: Loki
Sequence: 161216
Initials: DG

GC SC-Blank-REG MDLs-DOD
Printed: 01/04/17 1:46:32 PM

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1218L08.D Vial: 8
Acq On : 18 Dec 16 19:57 Operator: PM,DG,SV,CMM
Sample : 161218A BLK-1WL Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 19 7:12 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	543168	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	507456	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	262208	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.48	111	273480	24.74	ppb		0.00
Spiked Amount 25.000			Recovery = 98.964%				
37) 1,2-DCA-D4(S)	4.92	65	287538	24.19	ppb		0.00
Spiked Amount 25.000			Recovery = 96.760%				
57) Toluene-D8(S)	7.22	98	953279	24.19	ppb		0.00
Spiked Amount 25.000			Recovery = 96.744%				
65) 4-Bromofluorobenzene(S)	9.89	95	322458	23.90	ppb		0.00
Spiked Amount 25.000			Recovery = 95.616%				
Target Compounds							Qvalue
4) Chloromethane	0.96	50	2067	0.12	ppb		95
10) Acrolein	1.77	56	169	0.15	ppb	#	13
11) Acetone	1.89	43	1435	-1.60	ppb	#	39
14) t-Butanol	2.39	59	394	1.43	ppb	#	74
15) Acetonitrile	2.26	41	267	0.22	ppb	#	1
16) Methyl Acetate	2.17	43	539	0.08	ppb	#	51
19) Methylene chloride	2.23	84	684	-2.23	ppb	#	67
27) MEK (2-Butanone)	3.84	43	123	-0.13	ppb	#	52
39) Tert Amyl Methyl Ether	5.38	73	14074	0.62	ppb	#	34
48) 2-Chloroethyl vinyl ether	6.54	43	48	-0.69	ppb		100
49) MIBK (methyl isobutyl ket	7.18	43	93	-0.91	ppb	#	42
55) 2-Hexanone	8.10	43	149	1.50	ppb	#	55

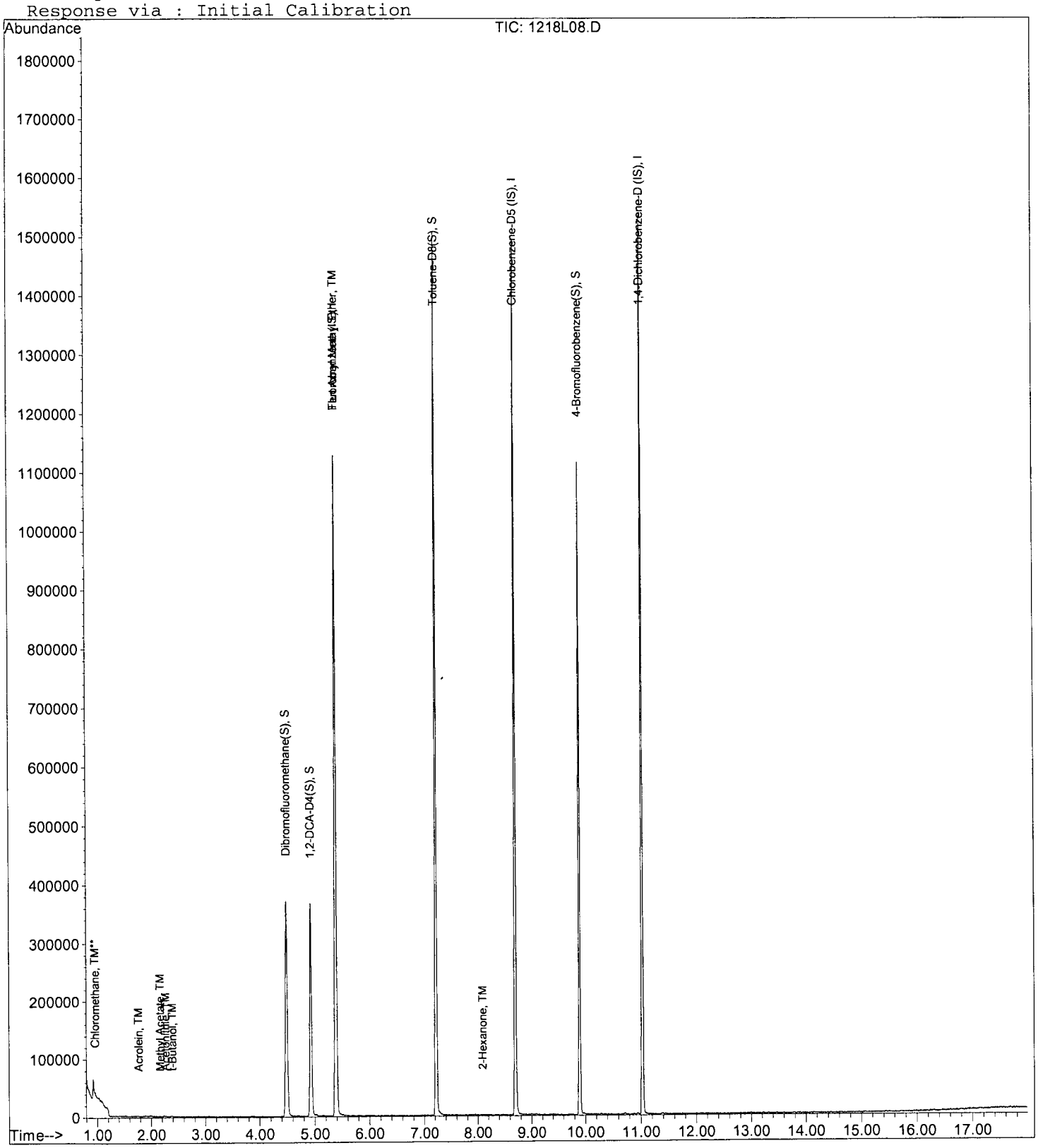
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L08.D Vial: 8
Acq On : 18 Dec 16 19:57 Operator: PM,DG,SV,CMM
Sample : 161218A BLK-1WL Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 19 7:12 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



Laboratory Control Spike Recovery

EPA 8260B BTEX WATER

APPL ID: **161218W-47493 LCS - 214886**
Batch ID: #86BTO-161218AL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1,2-DICHLOROETHANE	10.00	9.51	95.1	73-128
BENZENE	10.00	10.1	101	79-120
ETHYLBENZENE	10.00	10.6	106	79-121
TOLUENE	10.00	10.6	106	80-121
XYLENES (TOTAL)	30.0	32.4	108	79-121
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	23.6	94.4	81-118
SURROGATE: 4-BROMOFLUOROBENZE	25.0	24.9	99.6	85-114
SURROGATE: DIBROMOFLUOROMETH	25.0	24.1	96.4	80-119
SURROGATE: TOLUENE-D8 (S)	25.0	23.8	95.2	89-112

Comments: _____

Primary	SPK
Quant Method :	LALLW.M
Extraction Date :	12/18/16
Analysis Date :	12/18/16
Instrument :	Loki
Run :	1218L02
Initials :	DG

Printed: 01/03/17 2:53:23 PM
APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L02.D Vial: 2
Acq On : 18 Dec 16 17:09 Operator: PM,DG,SV,CMM
Sample : 161218A CCV/LCS 10ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 18 17:51 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	574080	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	540800	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	303616	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.48	111	281883	24.13	ppb		0.00
Spiked Amount 25.000			Recovery = 96.512%				
37) 1,2-DCA-D4(S)	4.93	65	296244	23.58	ppb		0.00
Spiked Amount 25.000			Recovery = 94.324%				
57) Toluene-D8(S)	7.22	98	1001304	23.84	ppb		0.00
Spiked Amount 25.000			Recovery = 95.352%				
65) 4-Bromofluorobenzene(S)	9.89	95	358151	24.91	ppb		0.00
Spiked Amount 25.000			Recovery = 99.652%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.85	85	109544	10.49	ppb		99
3) Freon 114	0.93	85	71386	10.74	ppb		97
4) Chloromethane	0.96	50	153399	8.61	ppb		99
5) Vinyl chloride	1.02	62	125167	9.86	ppb		97
6) Bromomethane	1.22	96	95720	11.13	ppb		98
7) Chloroethane	1.29	64	69044	10.38	ppb		100
8) Dichlorofluoromethane	1.43	67	201883	9.41	ppb		99
9) Trichlorofluoromethane	1.46	101	134981	10.56	ppb		98
10) Acrolein	1.75	56	124587	105.32	ppb		99
11) Acetone	1.88	43	17695	6.83	ppb		98
12) Freon-113	1.84	101	65782	9.93	ppb		94
13) 1,1-DCE	1.83	96	59712	9.82	ppb		95
14) t-Butanol	2.40	59	32680	112.51	ppb		100
15) Acetonitrile	2.10	41	107914	83.95	ppb		98
16) Methyl Acetate	2.17	43	62715	8.44	ppb		98
17) Iodomethane	1.93	142	54872	9.23	ppb		96
18) Acrylonitrile	2.48	52	22314	8.37	ppb		94
19) Methylene chloride	2.24	84	121543	8.35	ppb		100
20) Carbon disulfide	1.98	76	250837	10.18	ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	245596	9.29	ppb		96
22) Trans-1,2-DCE	2.50	96	105230	9.97	ppb		98
23) Diisopropyl Ether	3.10	45	310697	9.00	ppb		96
24) 1,1-DCA	2.95	63	196200	9.68	ppb		99
25) Vinyl Acetate	3.09	43	71903	8.90	ppb	#	82
26) Ethyl tert Butyl Ether	3.59	59	255808	9.32	ppb		95
27) MEK (2-Butanone)	3.80	43	29091	8.97	ppb		92
28) Cis-1,2-DCE	3.73	96	122918	10.00	ppb		96
29) 2,2-Dichloropropane	3.70	77	51360	10.92	ppb		98
30) Chloroform	4.25	83	205030	9.97	ppb		99
31) Bromochloromethane	4.08	128	56507	9.79	ppb		95
33) 1,1,1-TCA	4.47	97	158277	10.46	ppb		93
34) Cyclohexane	4.53	41	59288	9.13	ppb		92
35) 1,1-Dichloropropene	4.72	75	125274	10.19	ppb		96
36) 2,2,4-Trimethylpentane	5.15	57	199557	10.68	ppb		96
38) Carbon Tetrachloride	4.71	119	122353	10.82	ppb		95
39) Tert Amyl Methyl Ether	5.22	73	234808	9.82	ppb		97
40) 1,2-DCA	5.03	62	143039	9.51	ppb		99
41) Benzene	4.99	78	442470	10.10	ppb		97
42) TCE	5.84	95	57112	10.52	ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L02.D
Acq On : 18 Dec 16 17:09
Sample : 161218A CCV/LCS 10ug/L
Misc : W IS&S 11/21/16, 11/14/16

Vial: 2
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 18 17:51 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

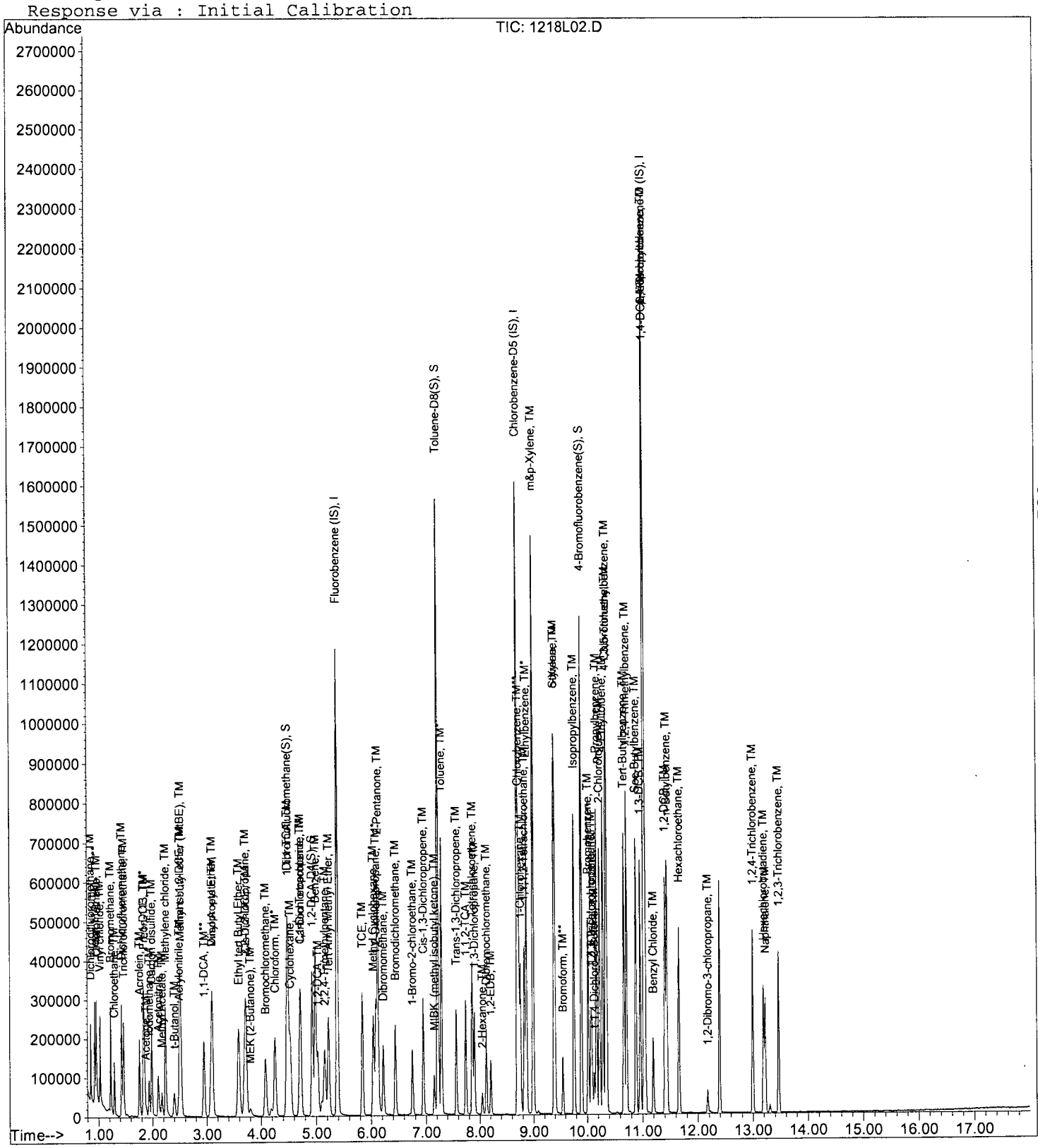
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	2-Pentanone	6.12	43	614641	115.42	ppb		97
44)	1,2-Dichloropropane	6.09	63	115885	9.19	ppb		98
45)	Bromodichloromethane	6.44	83	145369	9.62	ppb		98
46)	Methyl Cyclohexane	6.04	83	109674	10.27	ppb		98
47)	Dibromomethane	6.22	93	63325	9.63	ppb		97
48)	2-Chloroethyl vinyl ether	6.55	43	183	-0.51	ppb		100
49)	MIBK (methyl isobutyl ket	7.16	43	70128	8.97	ppb		97
50)	1-Bromo-2-chloroethane	6.75	63	75280	9.07	ppb		95
51)	Cis-1,3-Dichloropropene	6.95	75	165436	9.94	ppb		96
52)	Toluene	7.29	91	486567	10.58	ppb		99
53)	Trans-1,3-Dichloropropene	7.56	75	135946	9.80	ppb		95
54)	1,1,2-TCA	7.74	83	75298	9.82	ppb		93
55)	2-Hexanone	8.04	43	19250	8.54	ppb	#	93
58)	1,2-EDB	8.20	107	80994	9.37	ppb		97
59)	Tetrachloroethene	7.86	166	111635	10.59	ppb		98
60)	1-Chlorohexane	8.76	91	109742	10.02	ppb		93
61)	1,1,1,2-Tetrachloroethane	8.83	131	108255	9.94	ppb		97
62)	m&p-Xylene	8.99	106	401071	21.76	ppb		99
63)	o-Xylene	9.38	106	190598	10.62	ppb		94
64)	Styrene	9.39	104	212288	10.65	ppb		99
66)	1,3-Dichloropropane	7.90	76	148621	9.15	ppb		99
67)	Dibromochloromethane	8.12	129	103097	10.04	ppb		98
68)	Chlorobenzene	8.73	112	305818	9.81	ppb		97
69)	Ethylbenzene	8.87	91	516801	10.57	ppb		98
70)	Bromoform	9.55	173	59995	9.55	ppb		93
72)	Isopropylbenzene	9.76	105	469568	10.65	ppb		100
73)	1,1,2,2-Tetrachloroethane	10.07	83	106487	9.24	ppb		99
74)	1,2,3-Trichloropropane	10.09	110	19496	9.23	ppb		100
75)	t-1,4-Dichloro-2-Butene	10.12	53	20614	8.02	ppb		100
76)	Bromobenzene	10.01	156	131121	10.29	ppb		98
77)	n-Propylbenzene	10.17	91	566919	10.66	ppb		99
78)	4-Ethyltoluene	10.28	105	478017	10.88	ppb		98
79)	2-Chlorotoluene	10.22	91	359211	10.11	ppb		97
80)	1,3,5-Trimethylbenzene	10.36	105	422436	11.08	ppb		96
81)	4-Chlorotoluene	10.34	91	416734	10.56	ppb		98
82)	Tert-Butylbenzene	10.66	119	325142	10.83	ppb		97
83)	1,2,4-Trimethylbenzene	10.71	105	432890	11.30	ppb		100
84)	Sec-Butylbenzene	10.88	105	463771	10.83	ppb		99
85)	p-Isopropyltoluene	11.04	119	403416	10.81	ppb		99
86)	Benzyl Chloride	11.19	91	128686	11.41	ppb		99
87)	1,3-DCB	10.96	146	250428	10.14	ppb		99
88)	1,4-DCB	11.05	146	253914	9.92	ppb		99
89)	n-Butylbenzene	11.44	91	345102	10.50	ppb		99
90)	1,2-DCB	11.41	146	228813	9.80	ppb		97
91)	Hexachloroethane	11.66	117	84011	10.13	ppb		88
92)	1,2-Dibromo-3-chloropropan	12.18	157	15982	9.10	ppb	#	86
93)	1,2,4-Trichlorobenzene	13.00	180	140277	9.89	ppb		99
94)	Hexachlorobutadiene	13.19	225	58960	10.34	ppb		96
95)	Naphthalene	13.22	128	150080	9.47	ppb		100
96)	1,2,3-Trichlorobenzene	13.46	180	78680	8.87	ppb		98

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161216\1218L02.D Vial: 2
Acq On : 18 Dec 16 17:09 Operator: PM,DG,SV,CMM
Sample : 161218A CCV/LCS 10ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 18 17:51 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration

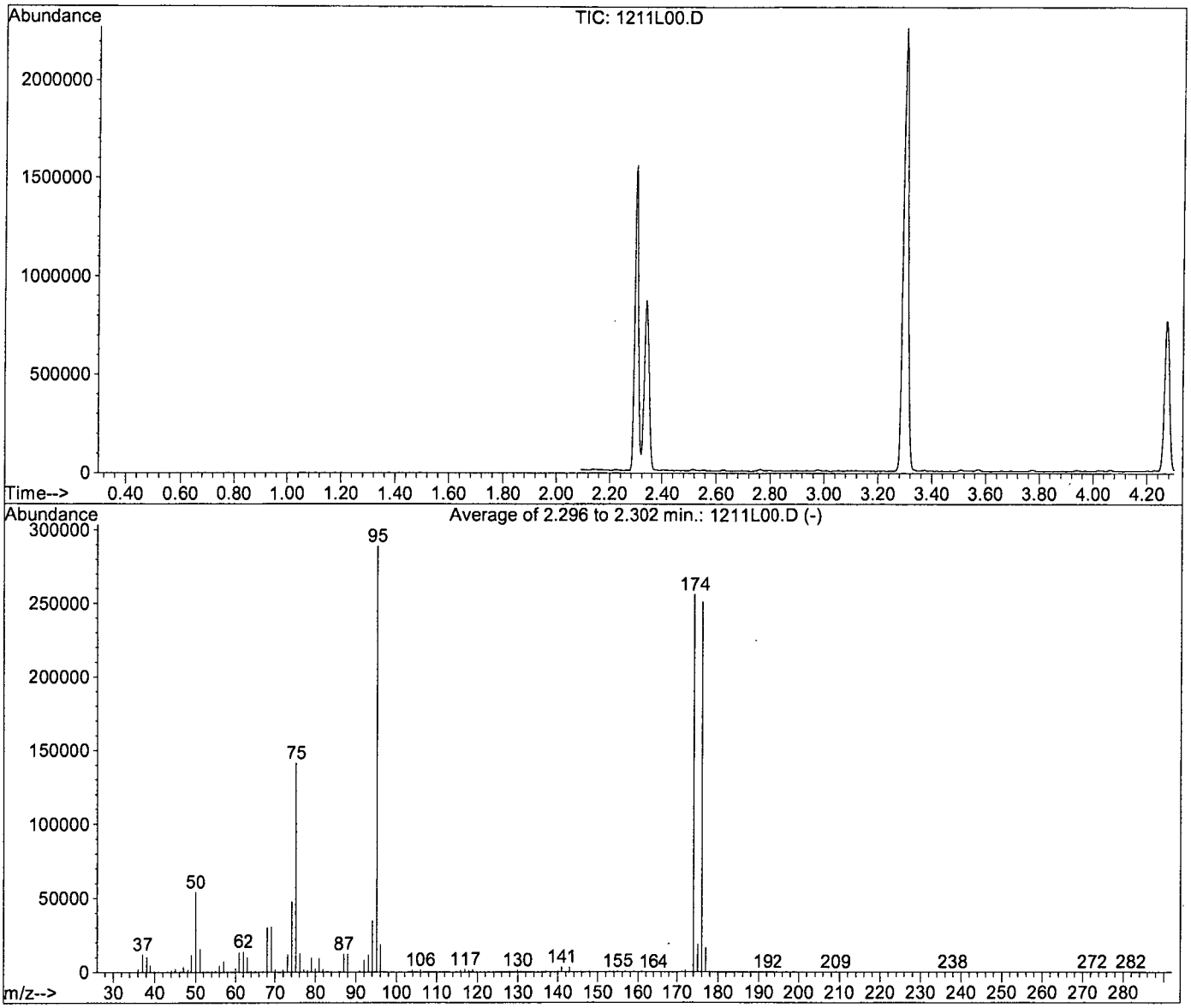


523

Data File : M:\LOKI\DATA\161210\1211L00.D
Acq On : 11 Dec 16 9:57
Sample : 5ng- BFB STD 11-06-16
Misc : 2ul

Vial: 1
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Method : M:\MAX\DATA\M161210\MALLW.M (RTE Integrator)
Title : METHOD 8260B



Spectrum Information: Average of 2.296 to 2.302 min.

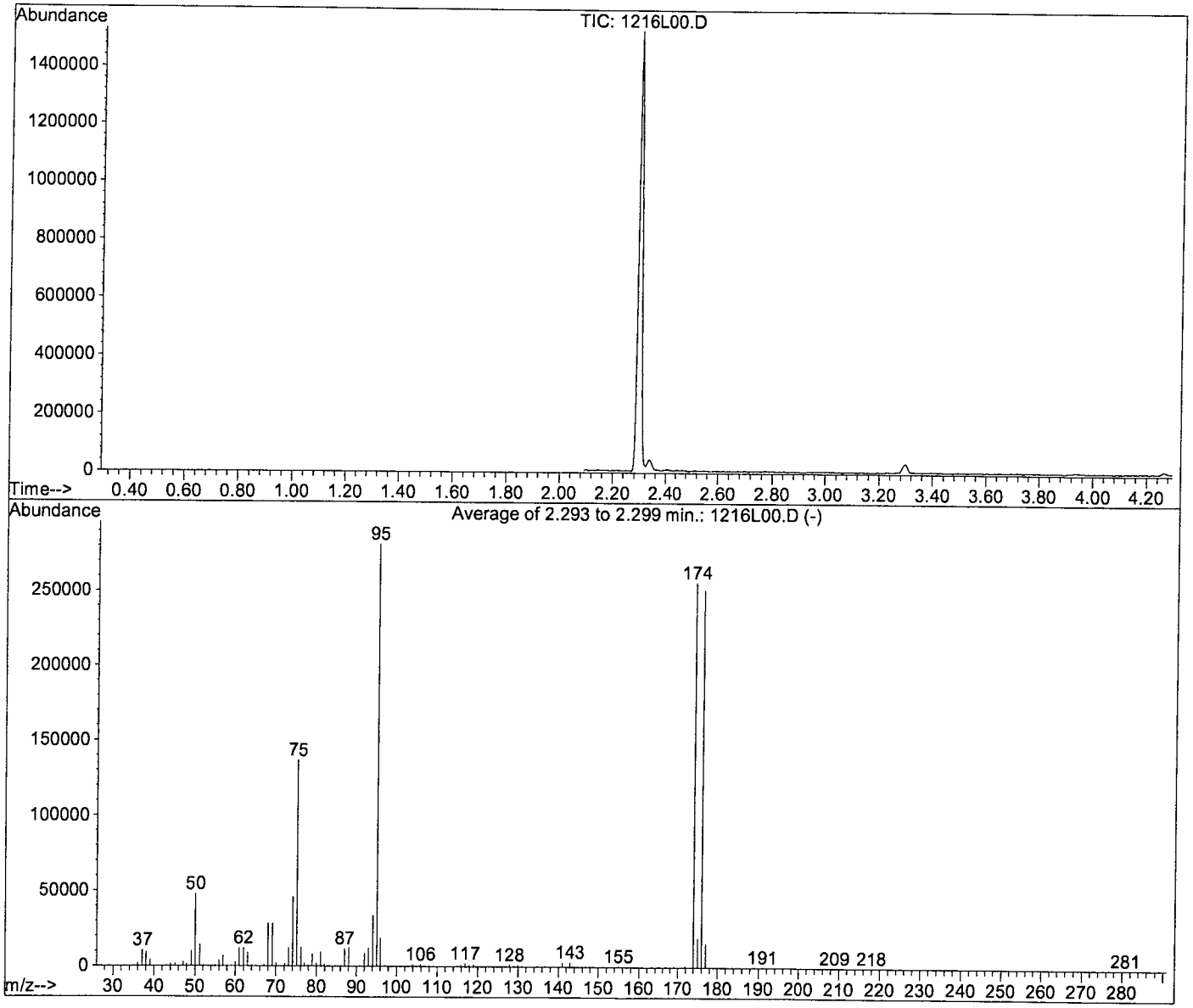
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.7	54010	PASS
75	95	30	60	49.0	141438	PASS
95	95	100	100	100.0	288917	PASS
96	95	5	9	6.3	18227	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	88.7	256235	PASS
175	174	5	9	7.4	18872	PASS
176	174	95	101	98.1	251349	PASS
177	176	5	9	6.5	16357	PASS

1211L00.D MALLW.M Thu Dec 29 10:31:42 2016

Data File : M:\LOKI\DATA\161216\1216L00.D
Acq On : 16 Dec 16 11:37
Sample : 5ng- BFB STD 12-15-16
Misc : 2ul

Vial: 1
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B



AutoFind: Scans 63, 64, 65; Background Corrected with Scan 54

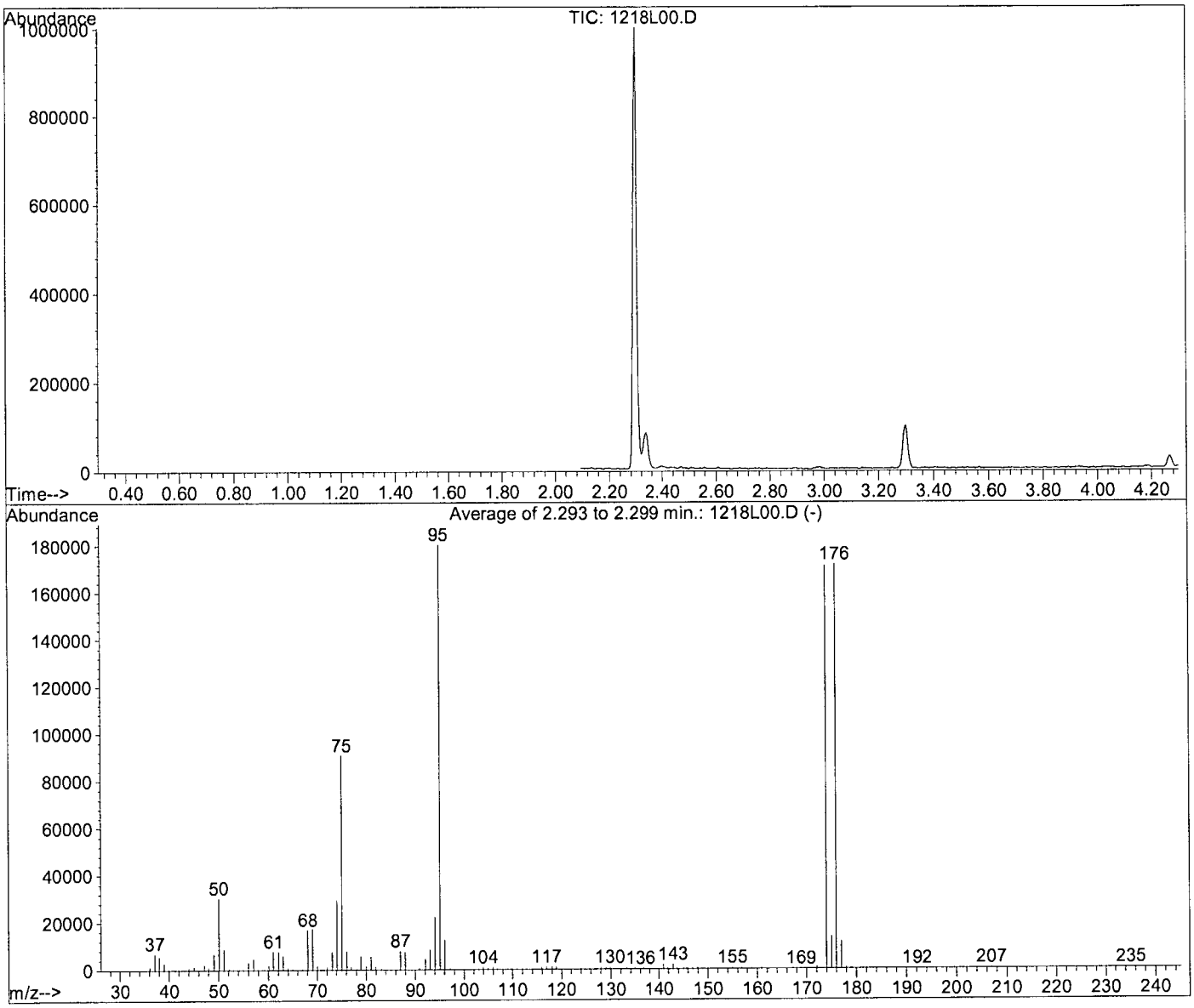
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.0	47940	PASS
75	95	30	60	48.6	136755	PASS
95	95	100	100	100.0	281493	PASS
96	95	5	9	6.7	18792	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	91.2	256619	PASS
175	174	5	9	7.5	19277	PASS
176	174	95	101	98.0	251563	PASS
177	176	5	9	6.3	15766	PASS

1216L00.D LALLW.M Wed Dec 28 11:58:01 2016

Data File : M:\LOKI\DATA\161216\1218L00.D
Acq On : 18 Dec 16 16:23
Sample : 5ng- BFB STD 12-15-16
Misc : 2ul

Vial: 1
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Method : M:\MAX\DATA\M161210\MALLW.M (RTE Integrator)
Title : METHOD 8260B



Spectrum Information: Average of 2.293 to 2.299 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.8	30251	PASS
75	95	30	60	50.2	90595	PASS
95	95	100	100	100.0	180352	PASS
96	95	5	9	6.9	12455	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	94.8	171051	PASS
175	174	5	9	7.9	13477	PASS
176	174	95	101	100.4	171712	PASS
177	176	5	9	6.7	11581	PASS

1218L00.D MALLW.M Thu Dec 29 10:52:52 2016

PRIMARY STANDARD

12/06/16H							
50ug/ml Vol Work Std #7							
Exp:01/06/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120016-03	Gas Mix	2000	279822-36645	12/06/16A-CMM	02/19/19	100
02SI	020049-02	HEXACHLOROETHANE	1000	254167-36562	12/06/16B-CMM	12/28/17	200
02SI	020228-02	Benzyl Chloride	1000	279824-36573	12/06/16C-CMM	05/24/18	200
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	3500
12/06/16I							
50ug/ml Vol Work Std #1							
Exp:01/06/17					Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	020145-02-02	2-CEVE	2000	288264-37217	11/22/16C-CMM	09/19/19	50
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	1950
12/06/16J							
50ug/ml Vol Work Std #8							
Exp:01/06/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	122039-02	Volatile Mix, 20-29	2000	258033-37168	11/12/16B-CMM	08/17/17	100
02SI	120023-03	VOC'S-54 COMP	2000	271929-36580	11/12/16C-CMM	02/15/18	100
02SI	020232-02	Vinyl Acetate	2000	292241-37193	11/22/16D-CMM	08/01/17	100
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	3700
12/06/16K							
50ug/ml Vol Work Std #2							
Exp:01/06/17							
Supplier	ID #	ID	ug/ml				
02SI	121020-05	HSL'S-Ketone Solution	2000	292248-37204	11/22/16B-CMM	11/08/18	100
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	3900
		12/06/16L					
		5ug/ml Vol Work Std #9					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #7		**12/06/16H**	Exp:01/06/17	200	
		50ug/ml Vol Work Std #8		**12/06/16J**	Exp:01/06/17	200	
		J&T Brand		11/15/16	11/15/17	1600	
		12/06/16M					
		5ug/ml Vol Work Std #10					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #1		**12/06/16I**	Exp:01/06/17	200	
		J&T Brand		11/15/16	11/15/17	1800	
		12/06/16N					
		5ug/ml Vol Work Std #12					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #2		**12/06/16K**	Exp:01/06/17	200	
		J&T Brand		11/15/16	11/15/17	1800	
12/06/16O							
250ug/ml TBA/IBA/Acetonitrile/Cyclohexanone/Acrolein/2-P							
Exp:01/06/17			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
02SI	120166-01	Volatile Mix 4-3	2000	275544-36407	12/06/16D-CMM	03/28/18	500
02SI	020229-09-02	Acrolein	10000	291928-37174	11/22/16E-CMM	12/12/16	100
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	3400

SECONDARY SOURCE

12/06/16P							
50ug/ml VOC Std#4							
Exp:01/06/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120296-01-SS	Custom 8260 Solution	2000	258037-36087	11/03/16D-CMM	08/18/17	50
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	1950
12/06/16Q							
50ug/ml VOC Std#5							
Exp:01/06/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120016-03-SS	8260 Gases(SS)	2000	279826-36674	12/06/16E-CMM	06/01/19	50
02SI	020145-02-02-SS	2-CEVE (SS)	2000	254171-35384	11/22/16G-CMM	06/21/17	50
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	1900
12/06/16R							

50ug/ml VOC Std#6							
Exp:01/06/17							
	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120023-03-SS	VOC'S 54 COMP.	2000	265897-35926	11/12/16H-CMM	11/29/17	50
02SI	020232-02-SS	Vinyl Acetate(SS)	2000	287420-37046	11/22/16H-CMM	11/27/16	50
02SI	020049-02-SS	HEXACHLOROETHANE (SS)	1000	265899-35938	12/06/16F-CMM	11/30/17	100
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	1800
12/06/16S							
250ug/ml TBA/IBA/Acetonitrile/Acrolein/2-P							
Exp:01/06/17			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
02SI	120166-01-SS	VOC Mix 4-3 (SS)	2000	258040-37229	12/06/16G-CMM	08/22/18	250
02SI	020229-09-SS	Acrolein SOLUTION (SS)	10000	291929-37176	11/22/16I-CMM	12/12/16	50
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	1700
8260 water		spiked with		Total Vol			
CCV/LCS	10ug/L Vol Std	10uL of 50ug/ml Std #7		50mL P&T H2O			
Ending CCV		10uL of 50ug/ml Std #8					
		10uL of 50ug/ml Std #1					
		10uL of 50ug/ml Std #2					
		25uL of 250ug/ml Std TBA					
X4 ketones							
LCS	10ug/L Vol Std	10uL of 50ug/ml Std #7		50mL P&T H2O			
		10uL of 50ug/ml Std #8					
		10uL of 50ug/ml Std #1					
		40uL of 50ug/ml Std #2					
		25uL of 250ug/ml Std TBA					
8260 soil		spiked with		Total Vol			
CCV/LCS	50ug/Kg Vol Std	5uL of 50ug/ml Std #7		5mL P&T H2O			
Ending CCV		5uL of 50ug/ml Std #8					
		5uL of 50ug/ml Std #1					
		5uL of 50ug/ml Std #2					
		5uL of 250ug/ml Std TBA					
Matrix spikes are prepared with same standards as ccv (see above) into the sample.							
8260water		spiked with		Total Vol			
SS	10ug/L STD	10uL of 50ug/ml Std #4		50mL P&T H2O			
		10uL of 50ug/ml Std #5					
		10uL of 50ug/ml Std #6					
		25uL of 250ug/ml Std TBA					
8260 SOIL	50ug/Kg STD	5uL of 50ug/ml Std #4		Total Vol			
SS		5uL of 50ug/ml Std #5		5mL P&T H2O			
		5uL of 50ug/ml Std #6					
		5uL of 250ug/ml Std TBA					

GASOLINE							
12/04/16A							
Gasoline 2000ug/ml PRIMARY SOURCE					Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
Restek		Unleaded Gasoline	50,000	A0101233-35581	07/09/16ADG	03/31/21	80
OMNISOLV		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	1920
12/05/16B							
Gasoline 2000ug/ml SECONDARY SOURCE			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
O2SI	020246-06	Unleaded Gasoline	5,000	250389-36597	12/5/16ADG	05/04/18	800
OMNISOLV		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	1200

Injection Log

Directory: M:\LOKI\DATA\161216\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1216L00.D	1	5ng- BFB STD 12-15-16	2ul	16 Dec 16 11:37
2	4	1216L04.D	1	0.3ug/L VOC STD 12/16/16AI	W IS&S 11/21/16, 11/14/16	16 Dec 16 13:18
3	5	1216L05.D	1	0.5ug/L VOC STD 12/16/16AJ	W IS&S 11/21/16, 11/14/16	16 Dec 16 13:46
4	6	1216L06.D	1	1.0ug/L VOC STD 12/16/16AK	W IS&S 11/21/16, 11/14/16	16 Dec 16 14:14
5	7	1216L07.D	1	2.0ug/L VOC STD 12/16/16AL	W IS&S 11/21/16, 11/14/16	16 Dec 16 14:42
6	8	1216L08.D	1	5.0ug/L VOC STD 12/16/16AM	W IS&S 11/21/16, 11/14/16	16 Dec 16 15:10
7	9	1216L09.D	1	10ug/L VOC STD 12/16/16AN	W IS&S 11/21/16, 11/14/16	16 Dec 16 15:38
8	10	1216L10.D	1	20ug/L VOC STD 12/16/16AO	W IS&S 11/21/16, 11/14/16	16 Dec 16 16:06
9	11	1216L11.D	1	40ug/L VOC STD 12/16/16AP	W IS&S 11/21/16, 11/14/16	16 Dec 16 16:35
10	12	1216L12.D	1	100ug/L VOC STD 12/16/16AQ	W IS&S 11/21/16, 11/14/16	16 Dec 16 17:03
11	17	1216L17.D	1	(SS)10ug/L VOC STD 12/16/16	W IS&S 11/21/16, 11/14/16	16 Dec 16 19:23
12	1	1218L00.D	1	5ng- BFB STD 12-15-16	2ul	18 Dec 16 16:23
13	2	1218L02.D	1	161218A CCV/LCS 10ug/L	W IS&S 11/21/16, 11/14/16	18 Dec 16 17:09
14	8	1218L08.D	1	161218A BLK-1WL	W IS&S 11/21/16, 11/14/16	18 Dec 16 19:57
15	9	1218L09.D	1	AZ47493W01	W IS&S 11/21/16, 11/14/16	18 Dec 16 20:25
16	14	1218L14.D	1	AZ47494W01	W IS&S 11/21/16, 11/14/16	18 Dec 16 22:44
17	15	1218L15.D	1	AZ47495W01	W IS&S 11/21/16, 11/14/16	18 Dec 16 23:12
18	16	1218L16.D	1	AZ47496W01	W IS&S 11/21/16, 11/14/16	18 Dec 16 23:40
19	17	1218L17.D	1	AZ47497W01	W IS&S 11/21/16, 11/14/16	19 Dec 16 00:08
20	18	1218L18.D	1	AZ47498W01	W IS&S 11/21/16, 11/14/16	19 Dec 16 00:36
21	27	1218L27.D	1	Ending CCV 8260 10ug/L 12/18/16	W IS&S 11/21/16, 11/14/16	19 Dec 16 4:48

ORGANICS

APPL, INC.

ORGANICS
QC Summary

APPL, INC.

Method Blank

EPA 8260B GRO WATER

Blank Name/QCG: **161218W-47493 - 214887**

Batch ID: #GRO86-161218AL

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	12/18/16	12/18/16
BLANK	SURROGATE: 4-BROMOFLUORO	95.6	85-114			%	12/18/16	12/18/16

Quant Method: LSUR1216.M
Run #: 1218L08
Instrument: Loki
Sequence: 161216
Initials: DG

GC SC-Blank-REG MDLs-DOD
Printed: 12/27/16 10:22:05 AM

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81760

Case No: 81760 Date Analyzed: 12/18/16

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: 4-BROMOFLUOROBENZENE (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
161218AL-LCS	Lab Control Spike	85-114	98.0				
161218AL-BLK	Blank	85-114	95.6				
AZ47493	ERH134	85-114	93.892				
AZ47494	ERH139	85-114	94.604				
AZ47495	ERH136	85-114	95.120				
AZ47496	ERH143	85-114	92.172				
AZ47497	ERH145	85-114	92.844				
AZ47498	ERH146	85-114	95.684				

Comments: Batch: #GRO86-161218AL

Laboratory Control Spike Recovery
EPA 8260B GRO WATER

APPL ID: **161218W-47493 LCS - 214887**
Batch ID: #GRO86-161218AL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
GASOLINE RANGE ORGANICS	300	277	92.3	78-122
SURROGATE: 4-BROMOFLUOROBENZE	25.0	24.5	98.0	85-114

Comments: _____

Primary	SPK
Quant Method :	LSUR1216.M
Extraction Date :	12/18/16
Analysis Date :	12/18/16
Instrument :	Loki
Run :	1218L04
Initials :	DG

Printed: 12/27/16 10:21:59 AM
APPL Standard LCS

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81760

Case No: 81760 Date Analyzed: 12/18/16

Matrix: WATER Instrument: Loki

Blank ID: 161218AL-BLK Time Analyzed: 1957

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161218AL-LCS	Lab Control Spike	1218L04	12/18/16 1805
161218AL-BLK	Blank	1218L08	12/18/16 1957
AZ47493	ERH134	1218L09	12/18/16 2025
AZ47494	ERH139	1218L14	12/18/16 2244
AZ47495	ERH136	1218L15	12/18/16 2312
AZ47496	ERH143	1218L16	12/18/16 2340
AZ47497	ERH145	1218L17	12/19/16 0008
AZ47498	ERH146	1218L18	12/19/16 0036

Comments: Batch: #GRO86-161218AL

Printed: 12/27/16 10:21:56 AM

Form 4, Blank Summary

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81760

Lab File ID (Standard): 1216L09.D Date Analyzed: 12/16/16

Instrument ID: Loki Time Analyzed: 15:38

GC Column: ID: Heated Purge: (Y/N)

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	594432	5.38	542208	8.70	308288	11.03
	UPPER LIMIT	1188864	5.88	1084416	9.20	616576	11.53
	LOWER LIMIT	297216	4.88	271104	8.20	154144	10.53
	SAMPLE NO.						
01	161218A CCV/LCS 300	555648	5.38	518912	8.70	284928	11.03
02	161218A BLK-1WL	543168	5.38	507456	8.70	262208	11.03
03	AZ47493W01	537792	5.38	512192	8.70	262464	11.03
04	AZ47494W01	523200	5.38	492416	8.70	257088	11.03
05	AZ47495W01	535552	5.38	493888	8.70	263808	11.03
06	AZ47496W01	528512	5.38	510464	8.70	263616	11.03
07	AZ47497W01	525696	5.38	513664	8.70	254976	11.03
08	AZ47498W01	503296	5.38	474432	8.70	245888	11.03
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

ORGANICS
Sample Data

APPL, INC.

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH134
Sample Collection Date: 12/12/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81760
APPL ID: AZ47493
QCG: #GRO86-161218AL-214887

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	12/18/16	12/18/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	93.892	85-114			%	12/18/16	12/18/16

Quant Method:	LSUR1216.M
Run #:	1218L09
Instrument:	Loki
Sequence:	161216
Dilution Factor:	1
Initials:	DG

Printed: 12/27/16 10:21:53 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L09.D
Acq On : 18 Dec 16 20:25
Sample : AZ47493W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 9
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 8:13 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161216\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1108693	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1495618	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1521103	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	7680135m	-73.96	ppb	100

(#) = qualifier out of range (m) = manual integration
1218L09.D LGAS6Z11.M Wed Dec 28 17:01:27 2016

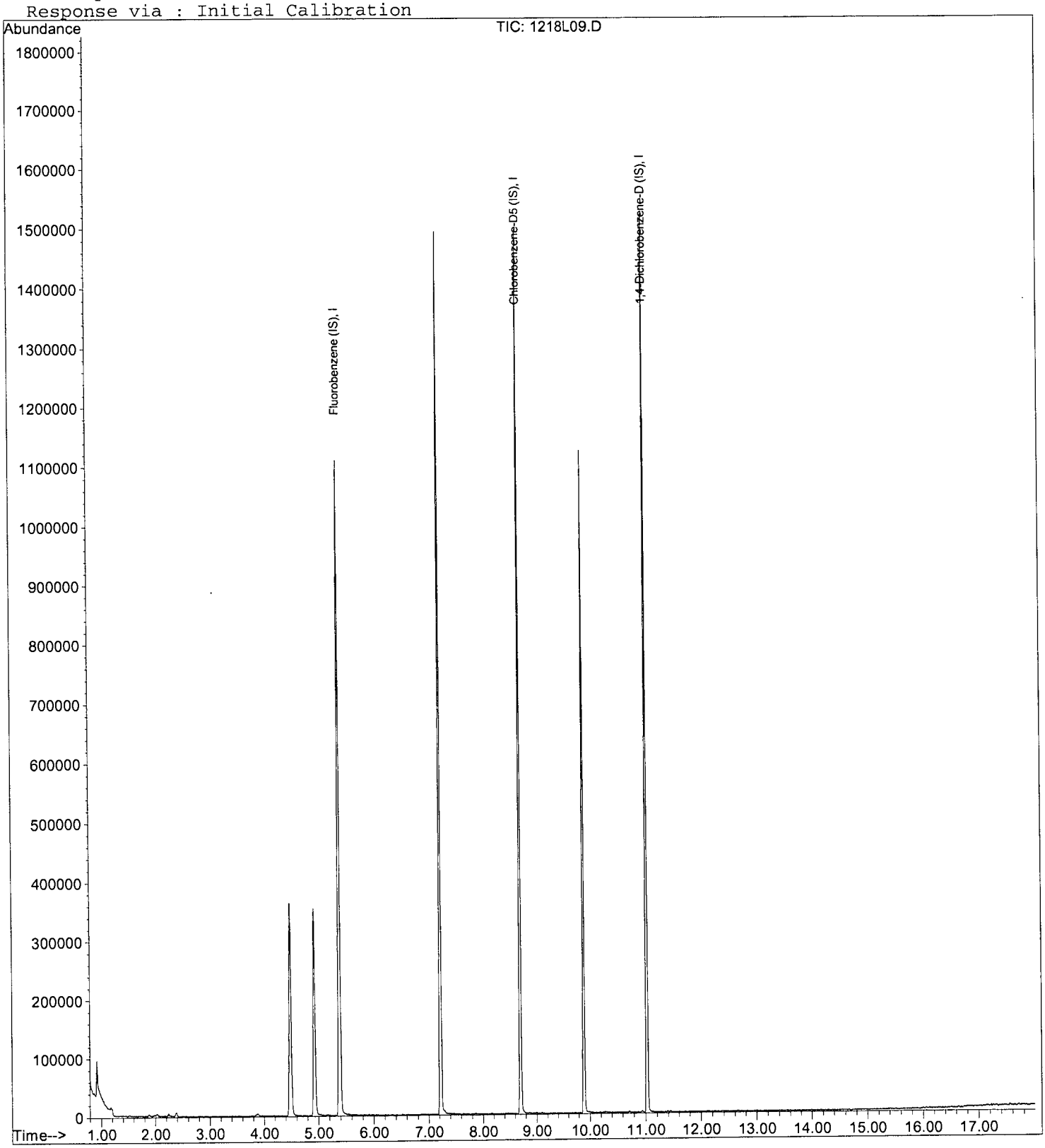
Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L09.D
Acq On : 18 Dec 16 20:25
Sample : AZ47493W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 9
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 8:13 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L09.D Vial: 9
Acq On : 18 Dec 16 20:25 Operator: PM,DG,SV,CMM
Sample : AZ47493W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 12:34 2016 Quant Results File: LSUR1216.RES

Quant Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	537792	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	512192	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	262464	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	271949	24.85	ppb	0.00
Spiked Amount 25.000			Recovery =	99.392%		
3) 1,2-DCA-D4(S)	4.93	65	287225	24.41	ppb	0.00
Spiked Amount 25.000			Recovery =	97.624%		
5) Toluene-D8(S)	7.22	98	951263	23.91	ppb	0.00
Spiked Amount 25.000			Recovery =	95.648%		
6) 4-Bromofluorobenzene(S)	9.89	95	319604	23.47	ppb	0.00
Spiked Amount 25.000			Recovery =	93.892%		

Target Compounds Qvalue

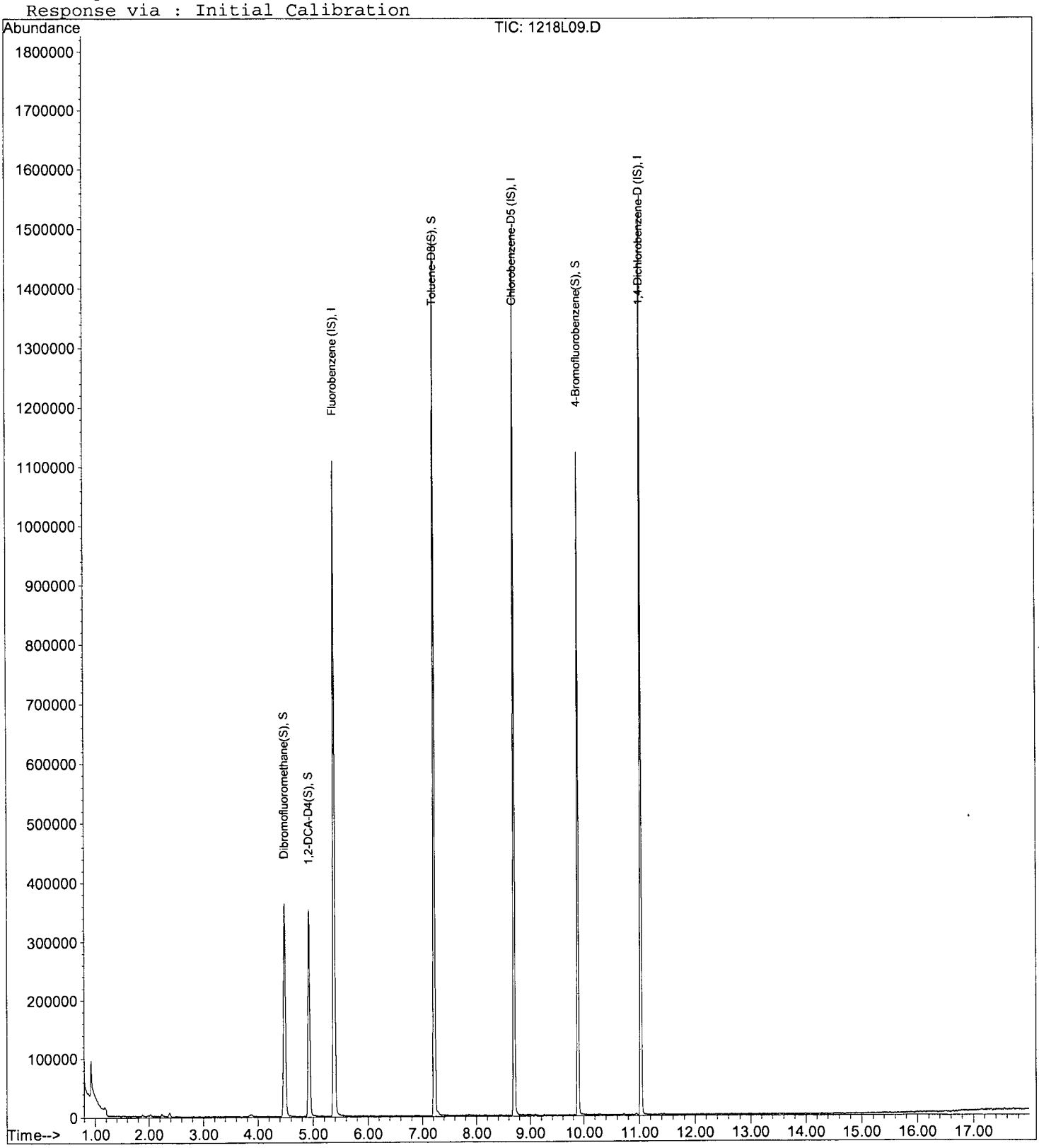
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L09.D Vial: 9
Acq On : 18 Dec 16 20:25 Operator: PM,DG,SV,CMM
Sample : AZ47493W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 12:34 2016 Quant Results File: LSUR1216.RES

Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH139

Sample Collection Date: 12/12/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81760

APPL ID: AZ47494

QCG: #GRO86-161218AL-214887

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	12/18/16	12/18/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	94.604	85-114			%	12/18/16	12/18/16

Quant Method: LSUR1216.M
Run #: 1218L14
Instrument: Loki
Sequence: 161216
Dilution Factor: 1
Initials: DG

Printed: 12/27/16 10:21:53 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L14.D
Acq On : 18 Dec 16 22:44
Sample : AZ47494W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 14
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 8:15 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161216\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1077773	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1446669	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1499482	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	7487350m	-73.39	ppb	100

(#) = qualifier out of range (m) = manual integration
1218L14.D LGAS6Z11.M Wed Dec 28 17:01:29 2016

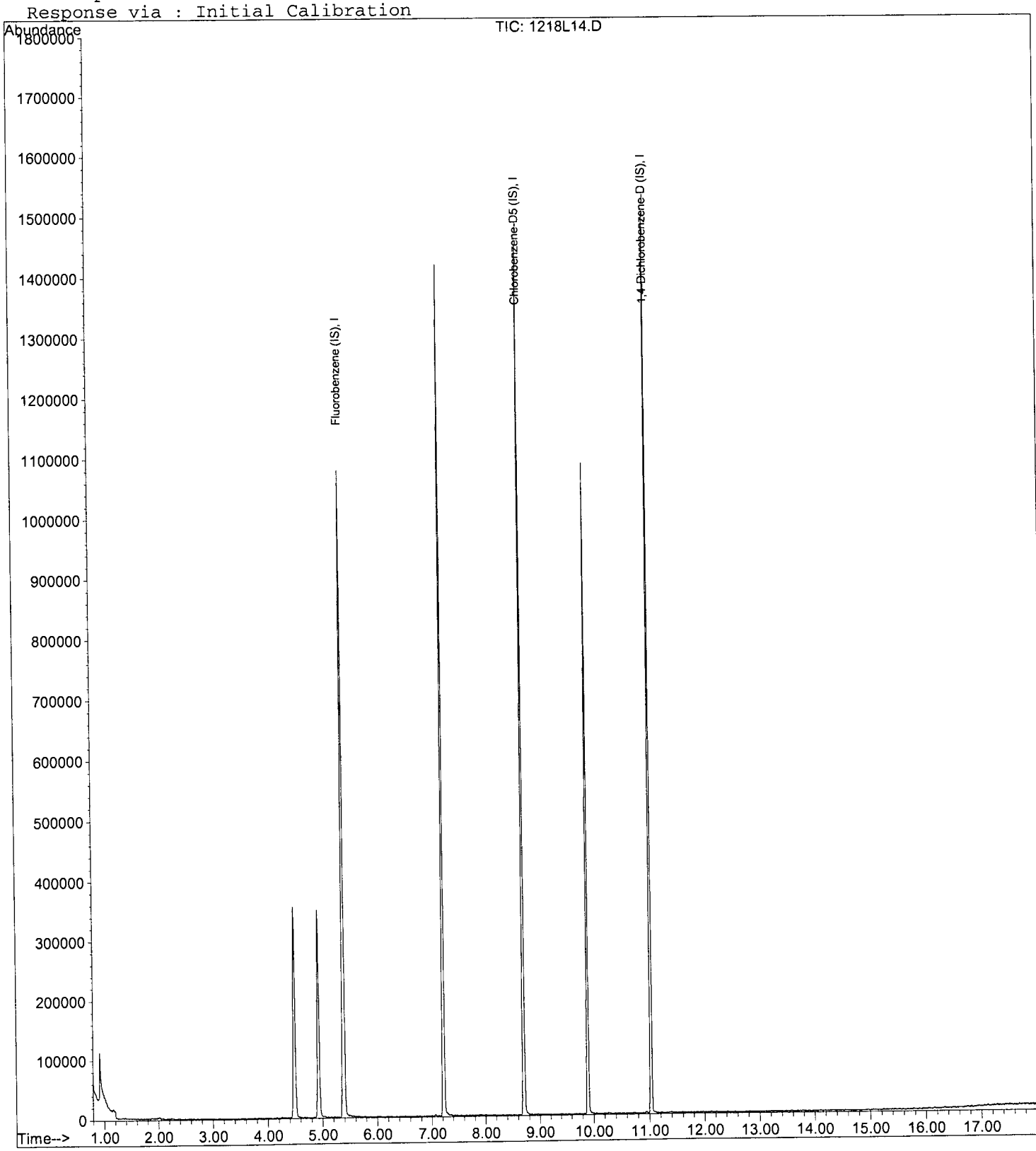
Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L14.D
Acq On : 18 Dec 16 22:44
Sample : AZ47494W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 14
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 8:15 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L14.D Vial: 14
Acq On : 18 Dec 16 22:44 Operator: PM,DG,SV,CMM
Sample : AZ47494W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 8:15 2016 Quant Results File: LSUR1216.RES

Quant Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	523200	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	492416	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	257088	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	262144	24.62	ppb	0.00
Spiked Amount 25.000			Recovery =	98.480%		
3) 1,2-DCA-D4(S)	4.93	65	278349	24.31	ppb	0.00
Spiked Amount 25.000			Recovery =	97.244%		
5) Toluene-D8(S)	7.22	98	915243	23.93	ppb	0.00
Spiked Amount 25.000			Recovery =	95.720%		
6) 4-Bromofluorobenzene(S)	9.89	95	309594	23.65	ppb	0.00
Spiked Amount 25.000			Recovery =	94.604%		

Target Compounds Qvalue

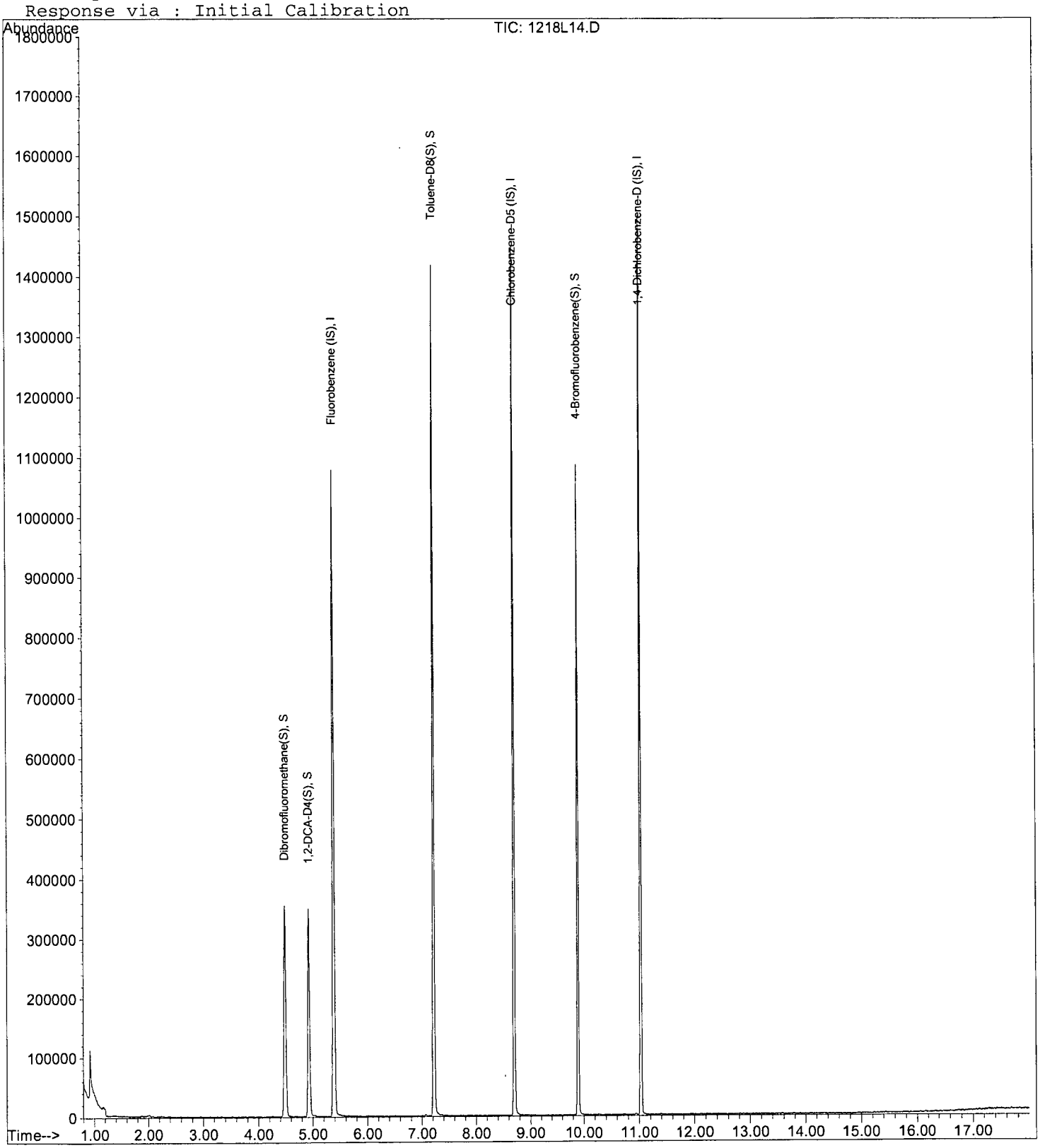
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L14.D Vial: 14
Acq On : 18 Dec 16 22:44 Operator: PM,DG,SV,CMM
Sample : AZ47494W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 8:15 2016 Quant Results File: LSUR1216.RES

Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH136
Sample Collection Date: 12/12/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81760
APPL ID: AZ47495
QCG: #GRO86-161218AL-214887

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	12/18/16	12/18/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	95.120	85-114			%	12/18/16	12/18/16

Quant Method: LSUR1216.M
Run #: 1218L15
Instrument: Loki
Sequence: 161216
Dilution Factor: 1
Initials: DG

Printed: 12/27/16 10:21:53 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L15.D Vial: 15
Acq On : 18 Dec 16 23:12 Operator: PM,DG,SV,CMM
Sample : AZ47495W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 8:15 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161216\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1086996	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1449231	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1526801	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	7568153m	-72.95	ppb	100

(#) = qualifier out of range (m) = manual integration
1218L15.D LGAS6Z11.M Wed Dec 28 17:01:31 2016 Page 1

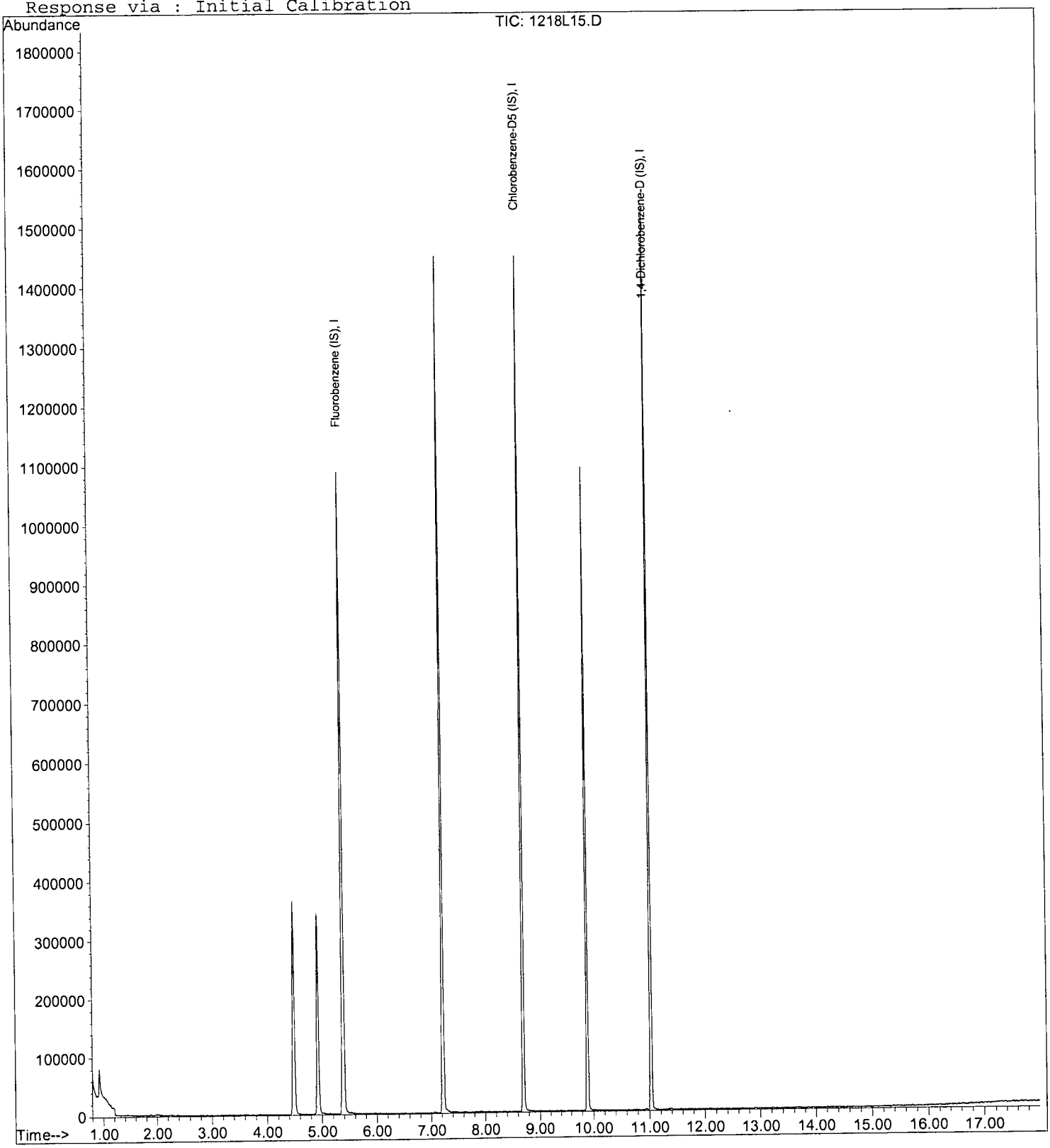
Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L15.D
Acq On : 18 Dec 16 23:12
Sample : AZ47495W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 15
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 8:15 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L15.D Vial: 15
Acq On : 18 Dec 16 23:12 Operator: PM,DG,SV,CMM
Sample : AZ47495W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 8:15 2016 Quant Results File: LSUR1216.RES

Quant Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	535552	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	493888	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	263808	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	268609	24.65	ppb	0.00
Spiked Amount 25.000			Recovery =	98.584%		
3) 1,2-DCA-D4(S)	4.93	65	276780	23.62	ppb	0.00
Spiked Amount 25.000			Recovery =	94.464%		
5) Toluene-D8(S)	7.22	98	921228	24.01	ppb	0.00
Spiked Amount 25.000			Recovery =	96.060%		
6) 4-Bromofluorobenzene(S)	9.89	95	312206	23.78	ppb	0.00
Spiked Amount 25.000			Recovery =	95.120%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

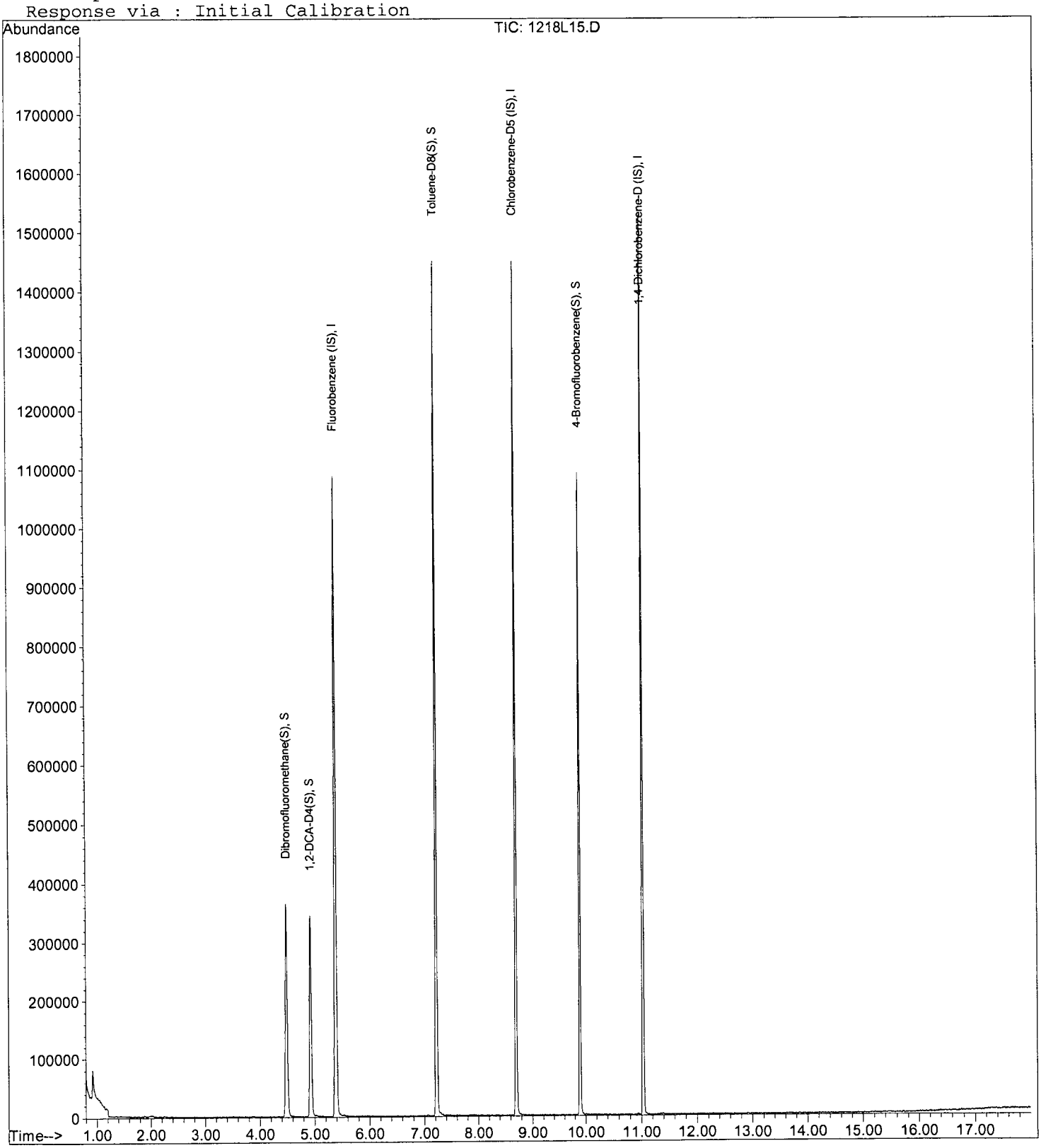
Data File : M:\LOKI\DATA\161216\1218L15.D
Acq On : 18 Dec 16 23:12
Sample : AZ47495W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 15
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 29 8:15 2016

Quant Results File: LSUR1216.RES

Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH143
Sample Collection Date: 12/13/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81760
APPL ID: AZ47496
QCG: #GRO86-161218AL-214887

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	12/18/16	12/18/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	92.172	85-114			%	12/18/16	12/18/16

Quant Method: LSUR1216.M
Run #: 1218L16
Instrument: Loki
Sequence: 161216
Dilution Factor: 1
Initials: DG

Printed: 12/27/16 10:21:53 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L16.D
Acq On : 18 Dec 16 23:40
Sample : AZ47496W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 16
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 8:15 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161216\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1078067	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1505360	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1529400	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	7487969m	-73.43	ppb	100

(#) = qualifier out of range (m) = manual integration

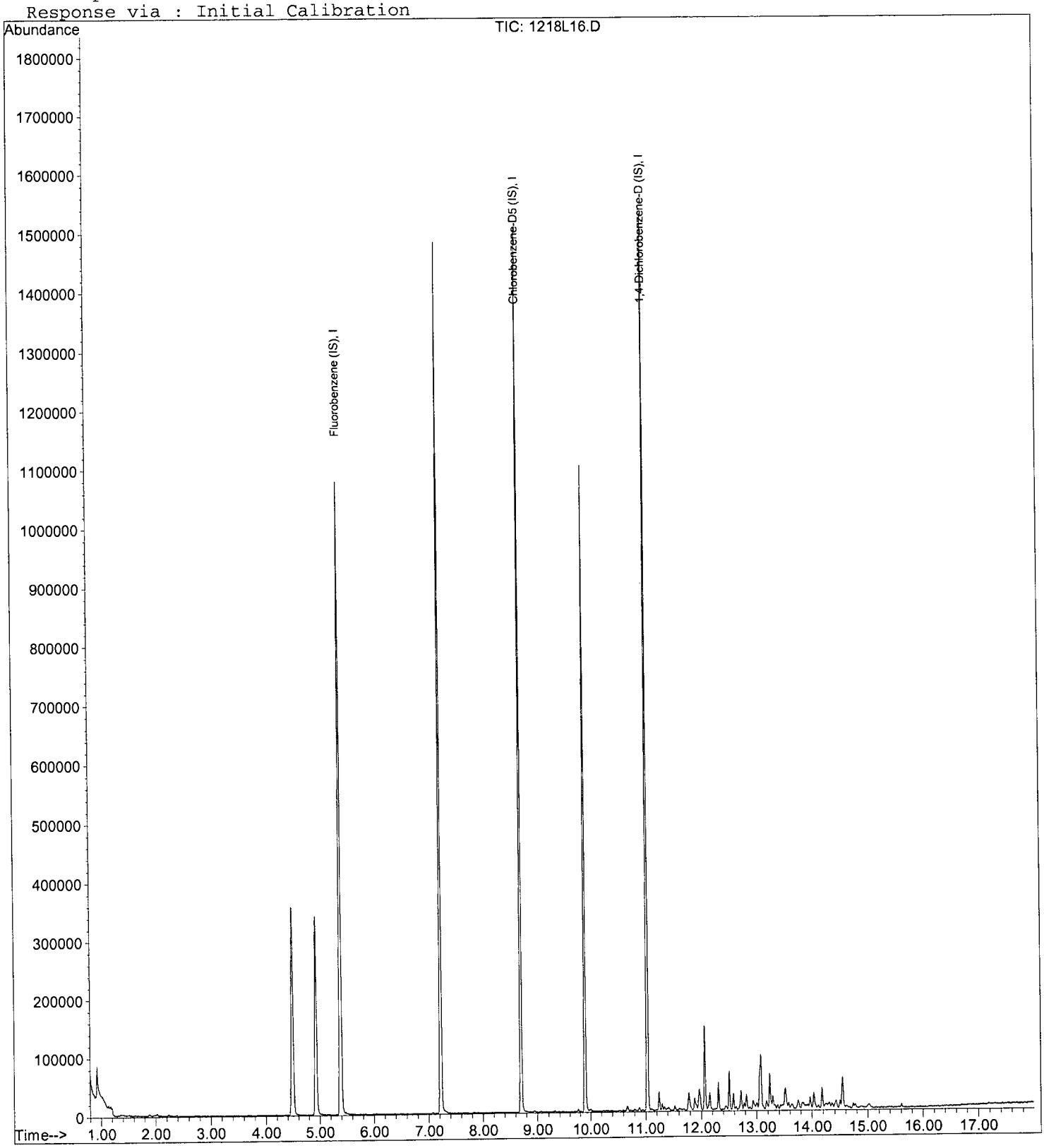
Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L16.D
Acq On : 18 Dec 16 23:40
Sample : AZ47496W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 16
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 8:15 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L16.D
Acq On : 18 Dec 16 23:40
Sample : AZ47496W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 16
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 29 8:15 2016 Quant Results File: LSUR1216.RES

Quant Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	528512	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	510464	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	263616	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	263938	24.54	ppb	0.00
Spiked Amount 25.000			Recovery =	98.160%		
3) 1,2-DCA-D4(S)	4.92	65	274775	23.76	ppb	0.00
Spiked Amount 25.000			Recovery =	95.032%		
5) Toluene-D8(S)	7.22	98	928466	23.42	ppb	0.00
Spiked Amount 25.000			Recovery =	93.672%		
6) 4-Bromofluorobenzene(S)	9.89	95	312691	23.04	ppb	0.00
Spiked Amount 25.000			Recovery =	92.172%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

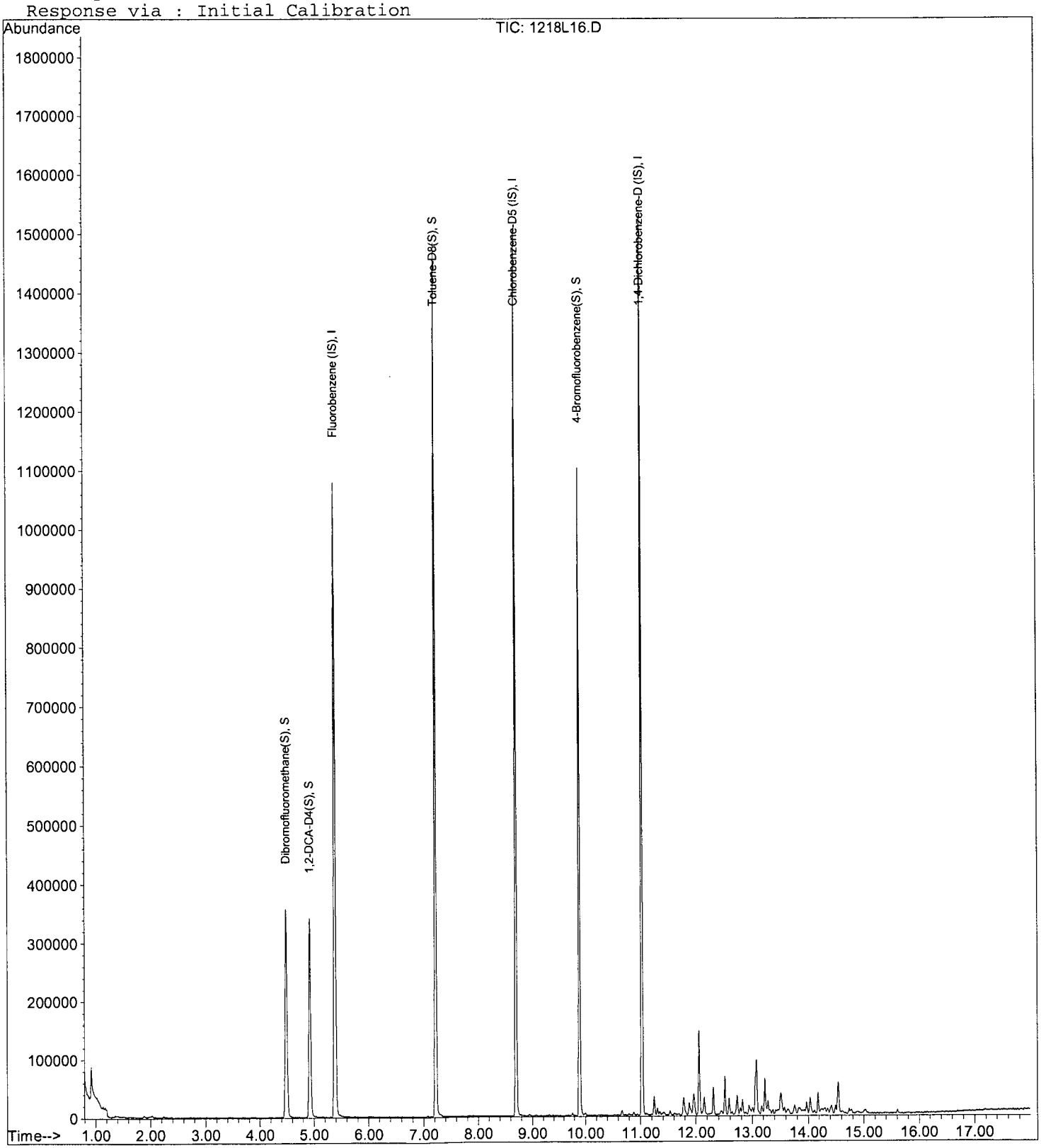
Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L16.D
Acq On : 18 Dec 16 23:40
Sample : AZ47496W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 16
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 29 8:15 2016 Quant Results File: LSUR1216.RES

Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH145
Sample Collection Date: 12/13/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81760
APPL ID: AZ47497
QCG: #GRO86-161218AL-214887

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	12/19/16	12/19/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	92.844	85-114			%	12/19/16	12/19/16

Quant Method: LSUR1216.M
Run #: 1218L17
Instrument: Loki
Sequence: 161216
Dilution Factor: 1
Initials: DG

Printed: 12/27/16 10:21:53 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L17.D
Acq On : 19 Dec 16 00:08
Sample : AZ47497W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 17
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 8:15 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161216\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1079628	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1500018	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1495758	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	7549936m	-72.07	ppb	100

(#) = qualifier out of range (m) = manual integration
1218L17.D LGAS6Z11.M Wed Dec 28 17:01:35 2016

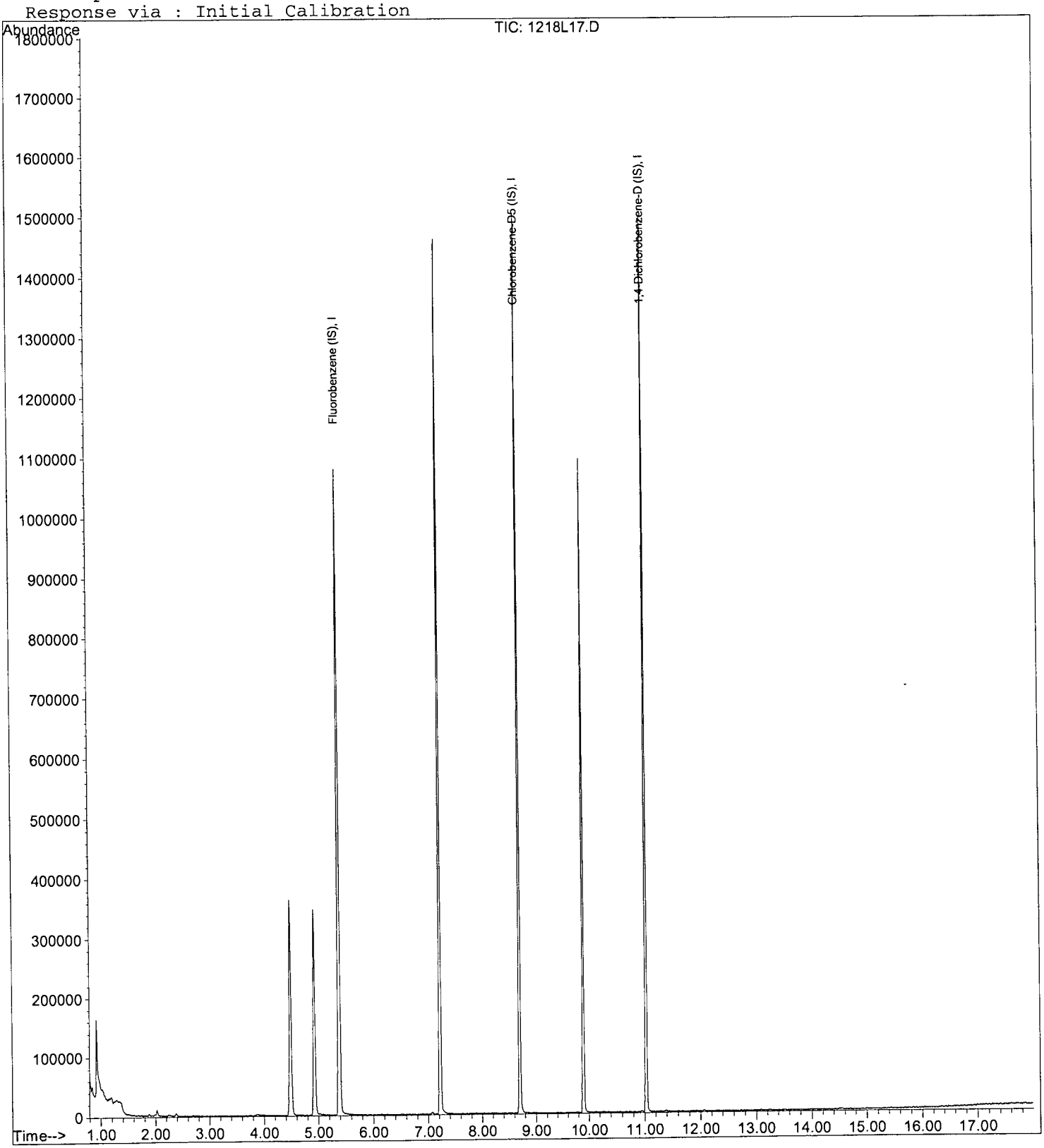
Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L17.D
Acq On : 19 Dec 16 00:08
Sample : AZ47497W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 17
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 8:15 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L17.D Vial: 17
Acq On : 19 Dec 16 00:08 Operator: PM,DG,SV,CMM
Sample : AZ47497W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 8:15 2016 Quant Results File: LSUR1216.RES

Quant Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	525696	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	513664	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	254976	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	271078	25.34	ppb	0.00
Spiked Amount 25.000			Recovery = 101.356%			
3) 1,2-DCA-D4(S)	4.92	65	276217	24.01	ppb	0.00
Spiked Amount 25.000			Recovery = 96.040%			
5) Toluene-D8(S)	7.22	98	927630	23.25	ppb	0.00
Spiked Amount 25.000			Recovery = 93.004%			
6) 4-Bromofluorobenzene(S)	9.89	95	316933	23.21	ppb	0.00
Spiked Amount 25.000			Recovery = 92.844%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

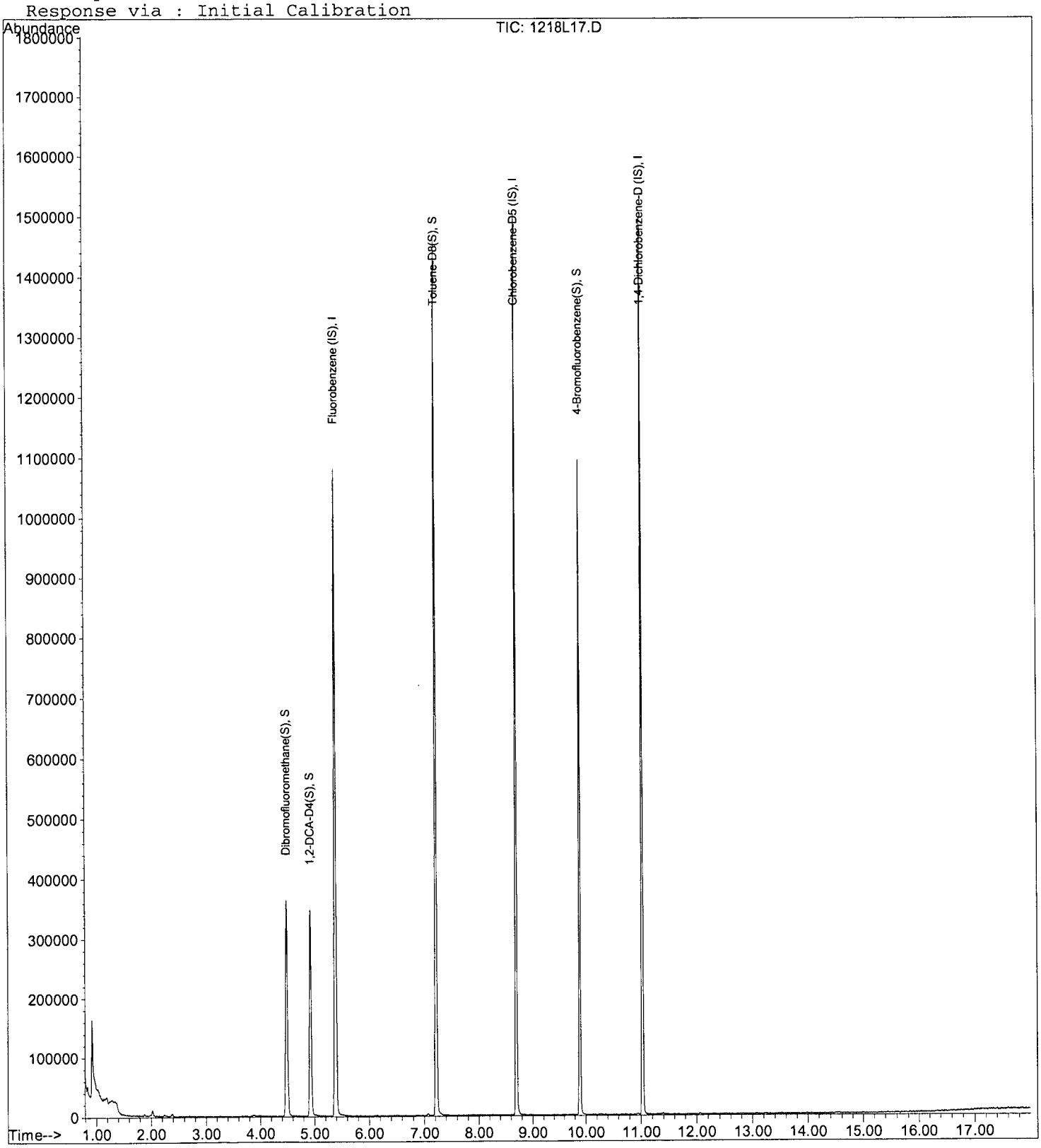
Data File : M:\LOKI\DATA\161216\1218L17.D
Acq On : 19 Dec 16 00:08
Sample : AZ47497W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 17
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 29 8:15 2016

Quant Results File: LSUR1216.RES

Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH146
Sample Collection Date: 12/12/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81760
APPL ID: AZ47498
QCG: #GRO86-161218AL-214887

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	12/19/16	12/19/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	95.684	85-114			%	12/19/16	12/19/16

Quant Method: LSUR1216.M
Run #: 1218L18
Instrument: Loki
Sequence: 161216
Dilution Factor: 1
Initials: DG

Printed: 12/27/16 10:21:53 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L18.D
Acq On : 19 Dec 16 00:36
Sample : AZ47498W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 18
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 8:15 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161216\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1025386	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1383332	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1435885	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	7279523m	-69.03	ppb	100

(#) = qualifier out of range (m) = manual integration
1218L18.D LGAS6Z11.M Wed Dec 28 17:01:37 2016

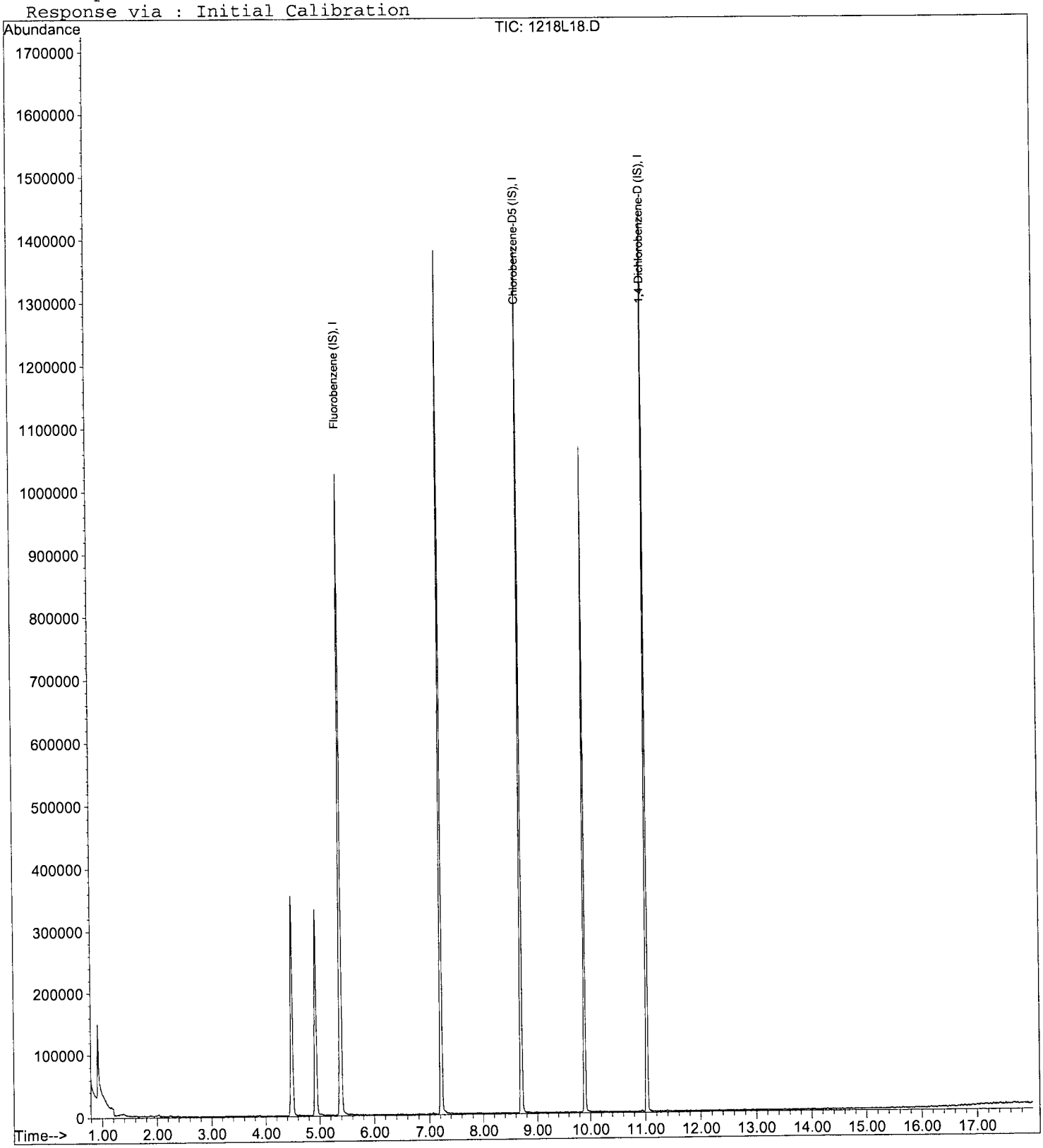
Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L18.D
Acq On : 19 Dec 16 00:36
Sample : AZ47498W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 18
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 8:15 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L18.D Vial: 18
Acq On : 19 Dec 16 00:36 Operator: PM,DG,SV,CMM
Sample : AZ47498W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 8:15 2016 Quant Results File: LSUR1216.RES

Quant Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	503296	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	474432	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	245888	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	261527	25.53	ppb	0.00
Spiked Amount 25.000			Recovery = 102.136%			
3) 1,2-DCA-D4(S)	4.92	65	264728	24.04	ppb	0.00
Spiked Amount 25.000			Recovery = 96.144%			
5) Toluene-D8(S)	7.22	98	888842	24.12	ppb	0.00
Spiked Amount 25.000			Recovery = 96.484%			
6) 4-Bromofluorobenzene(S)	9.89	95	301683	23.92	ppb	0.00
Spiked Amount 25.000			Recovery = 95.684%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

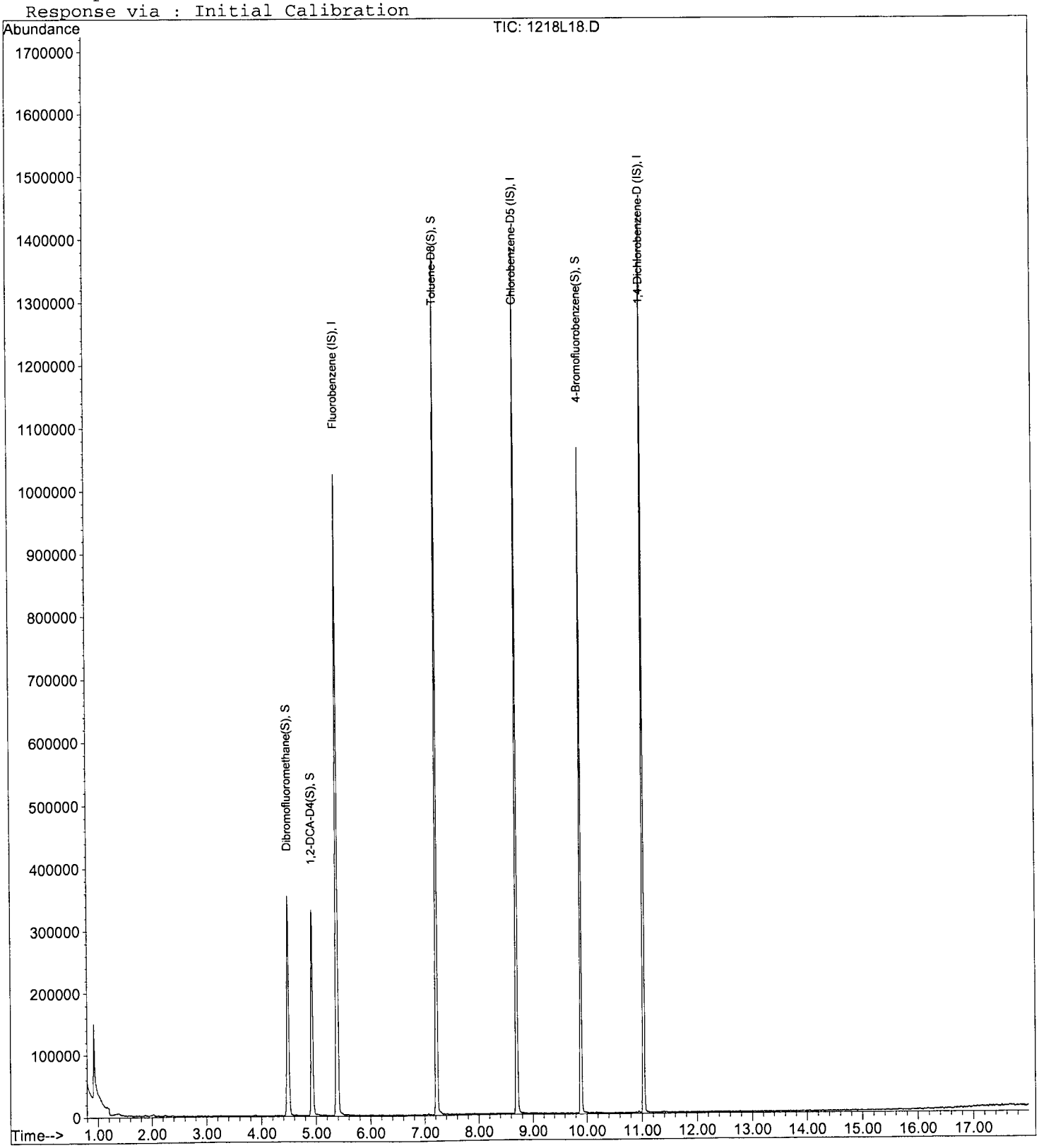
Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L18.D
Acq On : 19 Dec 16 00:36
Sample : AZ47498W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 18
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 29 8:15 2016 Quant Results File: LSUR1216.RES

Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



ORGANICS
Calibration Data

APPL, INC.

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/11/16
Matrix: Instrument: Loki
Initials:

		Compound	1211L06.D	1211L07.D	1211L08.D	1211L09.D	1211L10.D	1211L11.D	1211L12.D				Avg	%RSD		
1	I	Fluorobenzene (IS)														
2	TMHBL	Gasoline C6-C10	12.7	5.590	3.275	1.662	1.266	1.171	1.108				3.8	111	TMHBL	1.00
3	I	Chlorobenzene-D5 (IS)														
4	I	1,4-Dichlorobenzene-D (IS)														
5																
6																
7																
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35																

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1211L06.D Vial: 6
Acq On : 11 Dec 16 12:39 Operator: PM,DG,SV,CMM
Sample : 20ug/L GAS STD 12/11/16A Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:46 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:37:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1192046	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1555815	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1640058	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	12140223m	22.40865	ppb	100

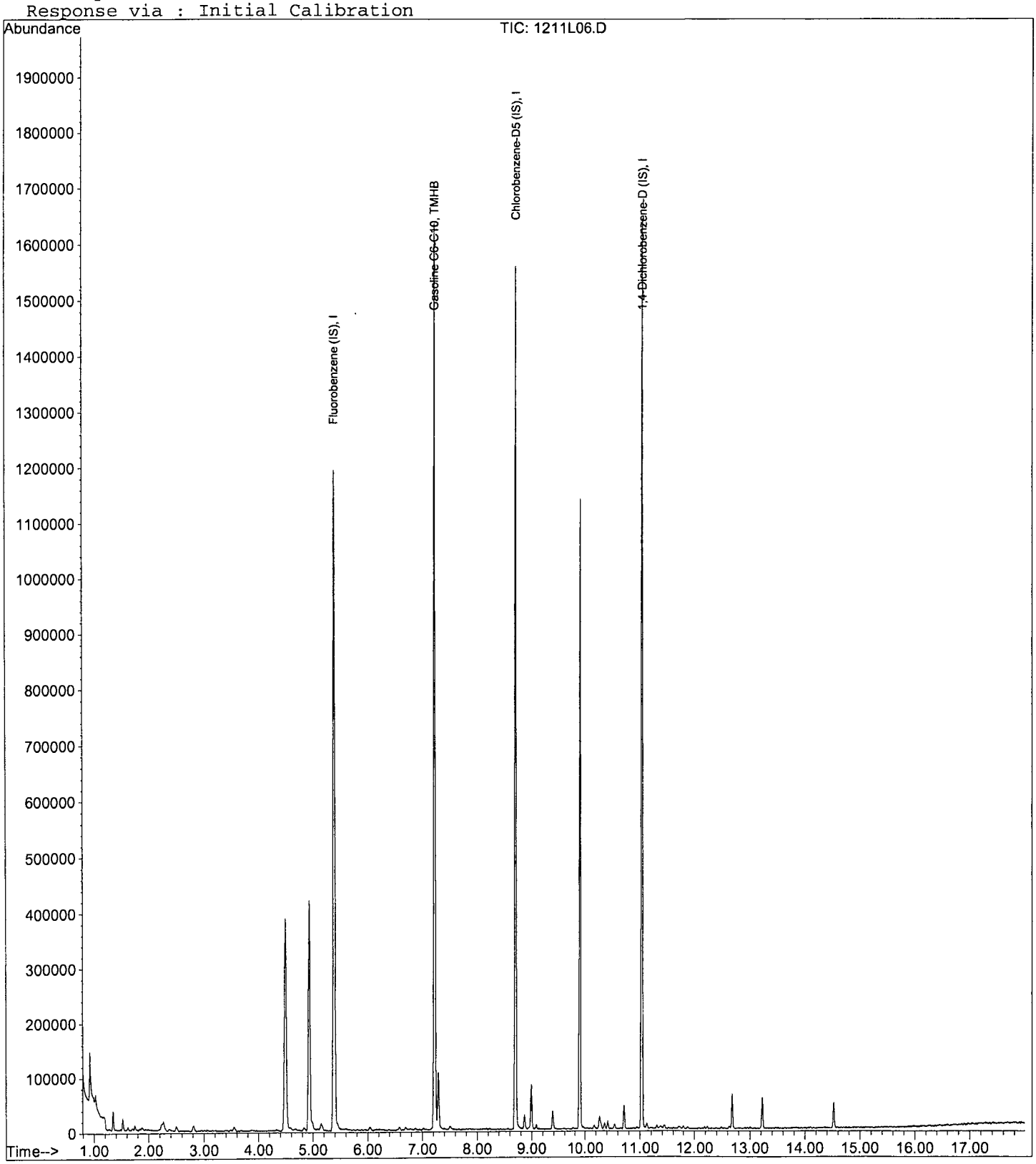
(#) = qualifier out of range (m) = manual integration
1211L06.D LGAS6Z11.M Wed Dec 14 11:25:09 2016 Page 1

Quantitation Report

Data File : M:\LOKI\DATA\161210\1211L06.D Vial: 6
Acq On : 11 Dec 16 12:39 Operator: PM,DG,SV,CMM
Sample : 20ug/L GAS STD 12/11/16A Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:46 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1211L07.D Vial: 7
Acq On : 11 Dec 16 13:07 Operator: PM,DG,SV,CMM
Sample : 50ug/L GAS STD 12/11/16B Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:45 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:37:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1164223	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1556548	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1560800	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	13016126m	51.10504	ppb	100

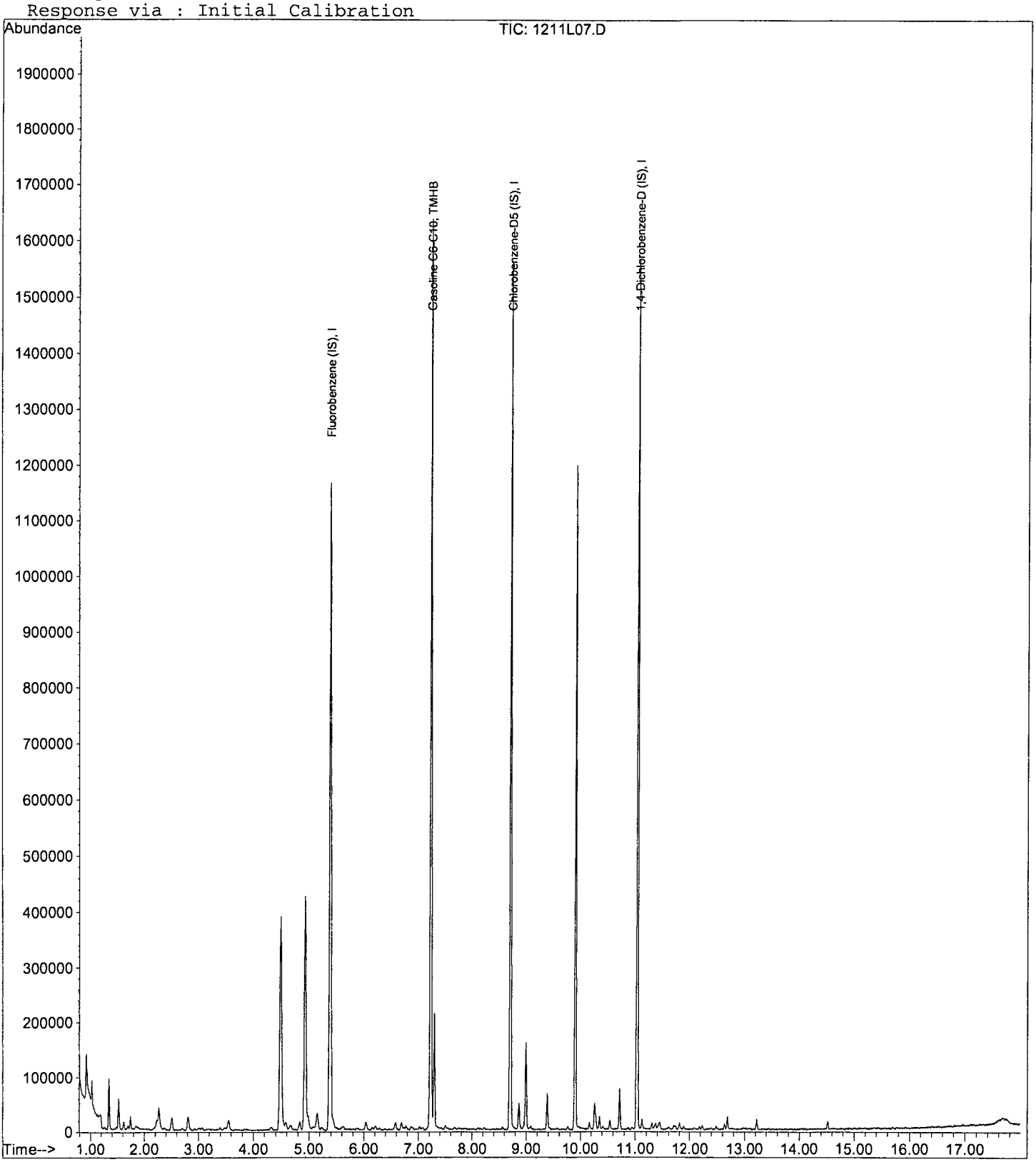
(#) = qualifier out of range (m) = manual integration
1211L07.D LGAS6Z11.M Wed Dec 14 11:25:13 2016 Page 1

Quantitation Report

Data File : M:\LOKI\DATA\161210\1211L07.D Vial: 7
Acq On : 11 Dec 16 13:07 Operator: PM,DG,SV,CMM
Sample : 50ug/L GAS STD 12/11/16B Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:45 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1211L08.D Vial: 8
Acq On : 11 Dec 16 13:35 Operator: PM,DG,SV,CMM
Sample : 100ug/L GAS STD 12/11/16C Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:44 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:37:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1150108	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1536391	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1573350	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	15065779m	106.41914	ppb	100

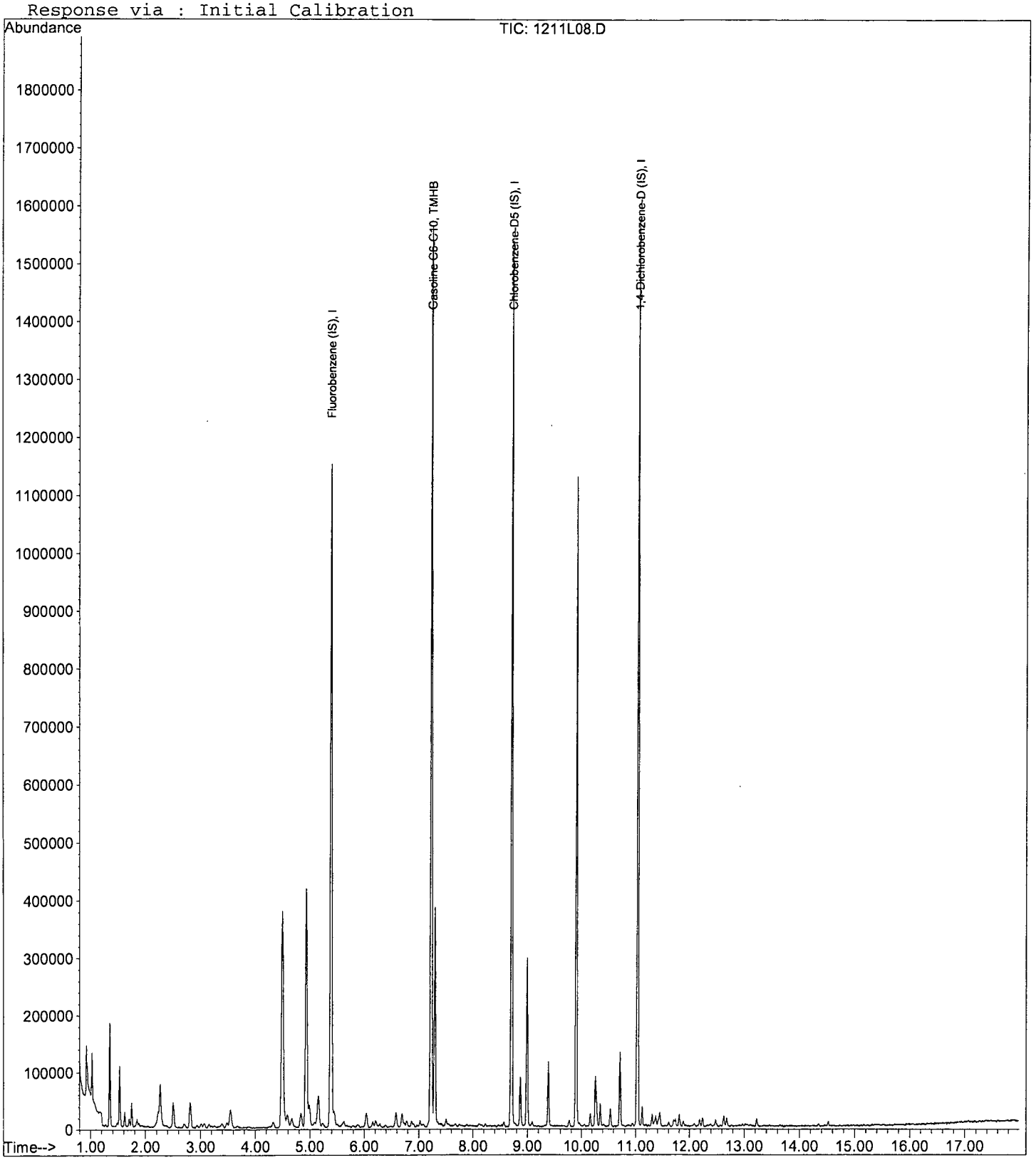
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161210\1211L08.D Vial: 8
Acq On : 11 Dec 16 13:35 Operator: PM,DG,SV,CMM
Sample : 100ug/L GAS STD 12/11/16C Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:44 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1211L09.D Vial: 9
Acq On : 11 Dec 16 14:03 Operator: PM,DG,SV,CMM
Sample : 300ug/L GAS STD 12/11/16D Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:42 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:37:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1169273	25.00000 ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1551836	25.00000 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1654152	25.00000 ppb	0.00

System Monitoring Compounds

Target Compounds					Qvalue
2) Gasoline C6-C10	7.22	TIC	23321195m	303.70347 ppb	100

(#) = qualifier out of range (m) = manual integration

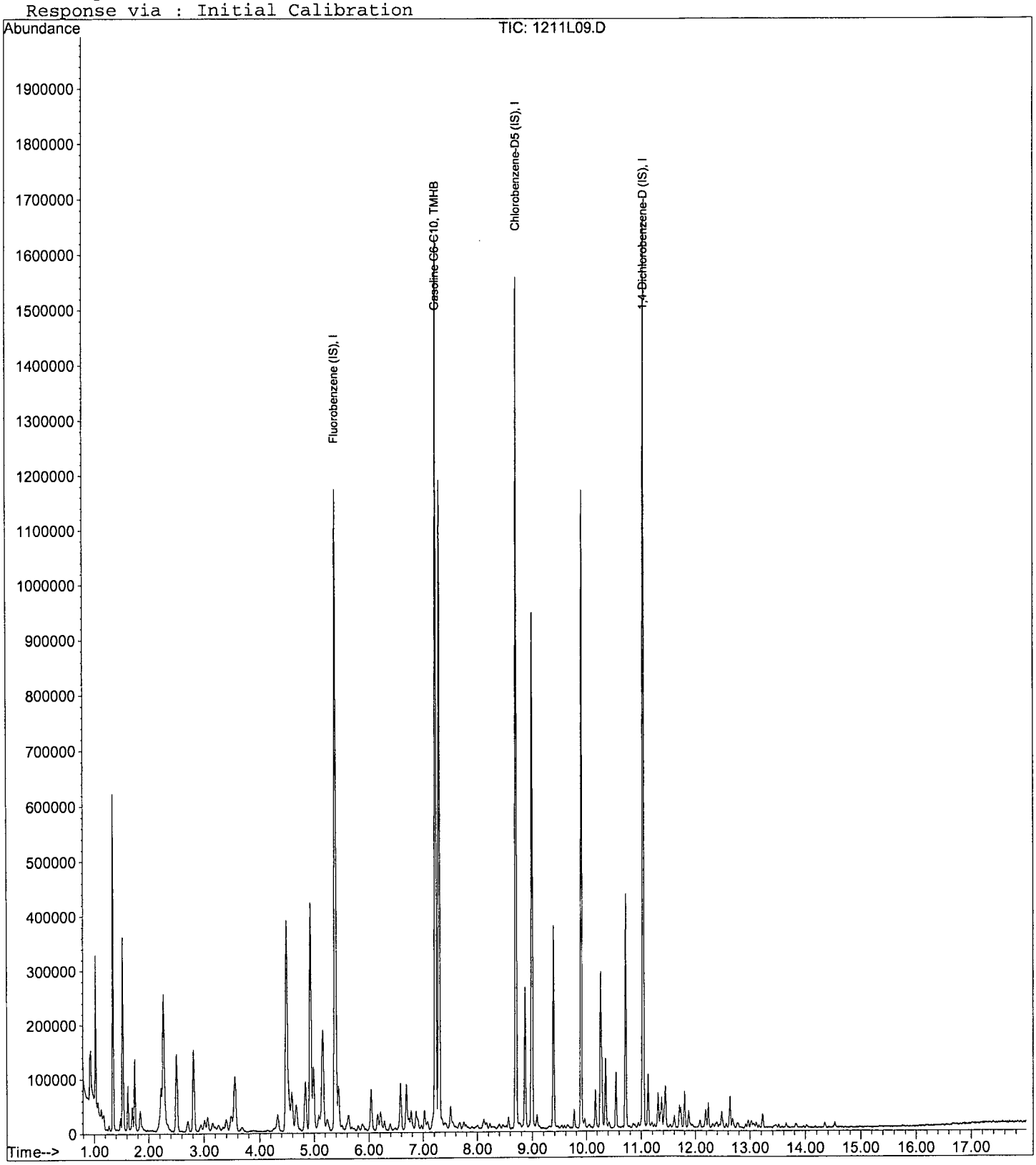
Quantitation Report

Data File : M:\LOKI\DATA\161210\1211L09.D
Acq On : 11 Dec 16 14:03
Sample : 300ug/L GAS STD 12/11/16D
Misc : W IS&S 11/21/16, 11/14/16

Vial: 9
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 13 8:42 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1211L10.D Vial: 10
Acq On : 11 Dec 16 14:32 Operator: PM,DG,SV,CMM
Sample : 600ug/L GAS STD 12/11/16E Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:41 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:37:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1208734	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1596204	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1715661	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.29	TIC	36730733m	604.65448	ppb	100

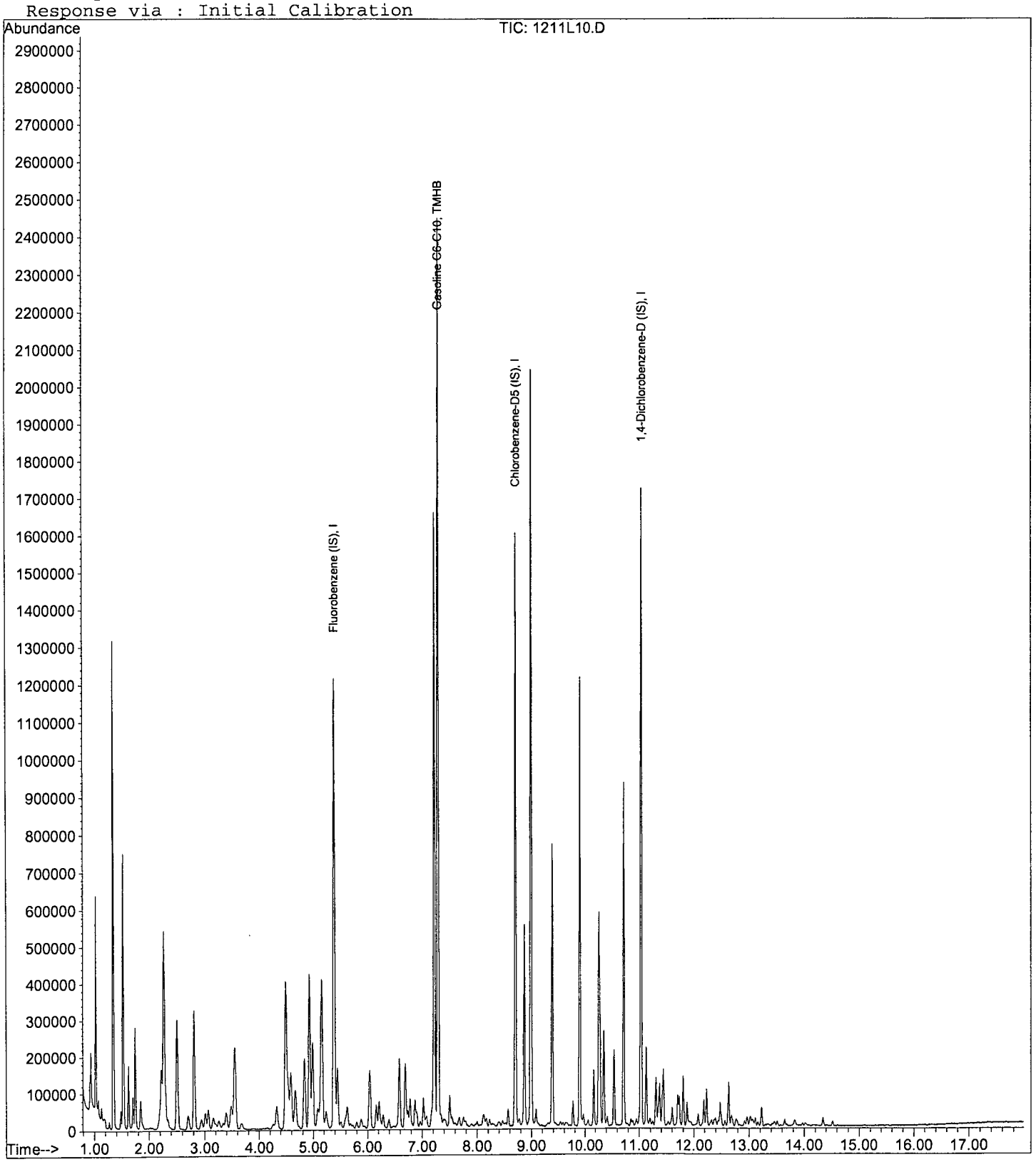
(#) = qualifier out of range (m) = manual integration
1211L10.D LGAS6Z11.M Wed Dec 14 11:25:25 2016 Page 1

Quantitation Report

Data File : M:\LOKI\DATA\161210\1211L10.D Vial: 10
Acq On : 11 Dec 16 14:32 Operator: PM,DG,SV,CMM
Sample : 600ug/L GAS STD 12/11/16E Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:41 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1211L11.D Vial: 11
Acq On : 11 Dec 16 15:00 Operator: PM,DG,SV,CMM
Sample : 800ug/L GAS STD 12/11/16F Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:40 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:37:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1210565	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1627461	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1718776	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.29	TIC	45367431m	808.93848	ppb	100

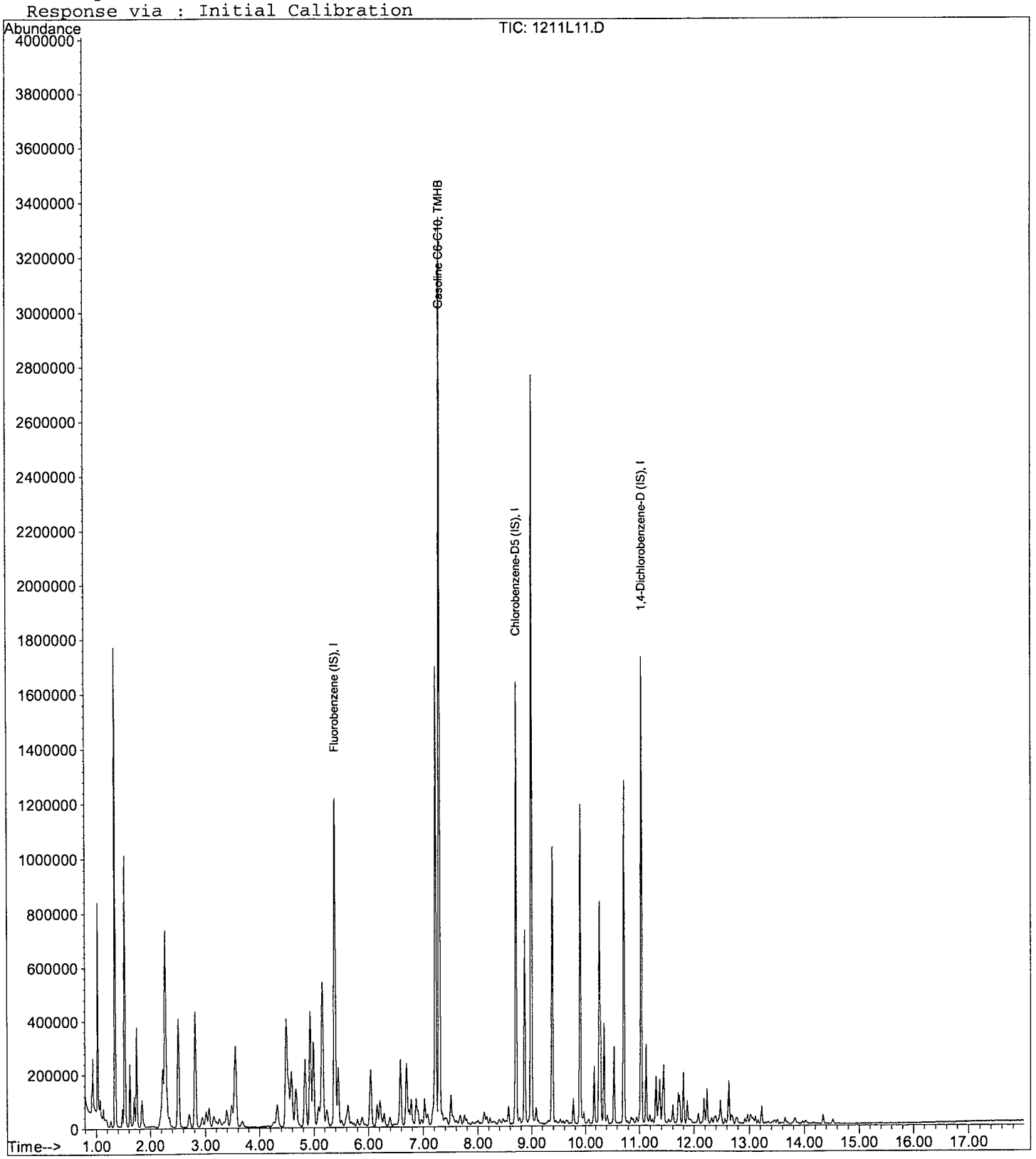
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161210\1211L11.D Vial: 11
Acq On : 11 Dec 16 15:00 Operator: PM,DG,SV,CMM
Sample : 800ug/L GAS STD 12/11/16F Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:40 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1211L12.D Vial: 12
Acq On : 11 Dec 16 15:28 Operator: PM,DG,SV,CMM
Sample : 1000ug/L GAS STD 12/11/16G Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:39 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:37:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1244641	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1644090	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1763195	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.29	TIC	55171361m	1006.37530	ppb	100

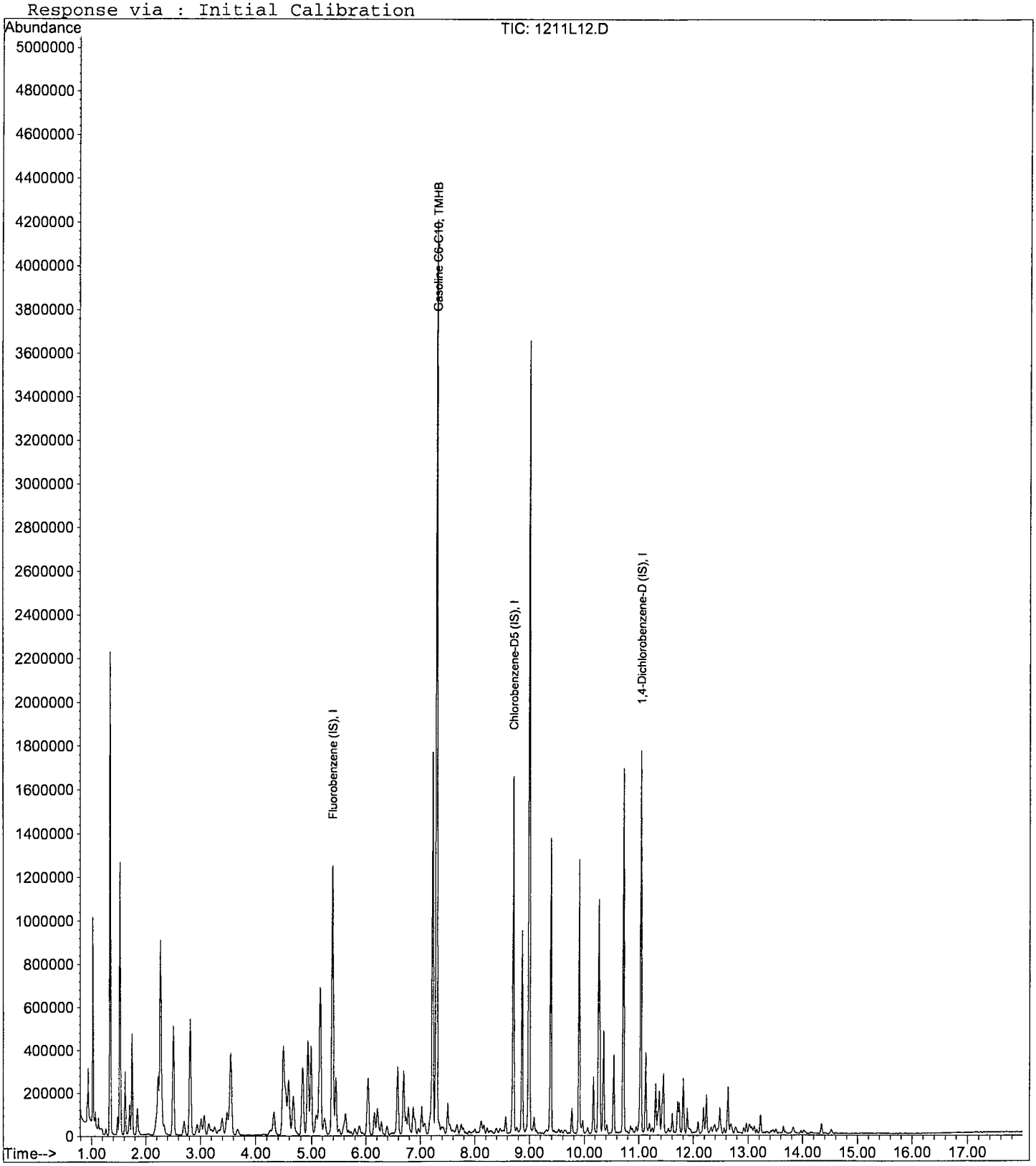
(#) = qualifier out of range (m) = manual integration
1211L12.D LGAS6Z11.M Wed Dec 14 11:25:32 2016 Page 1

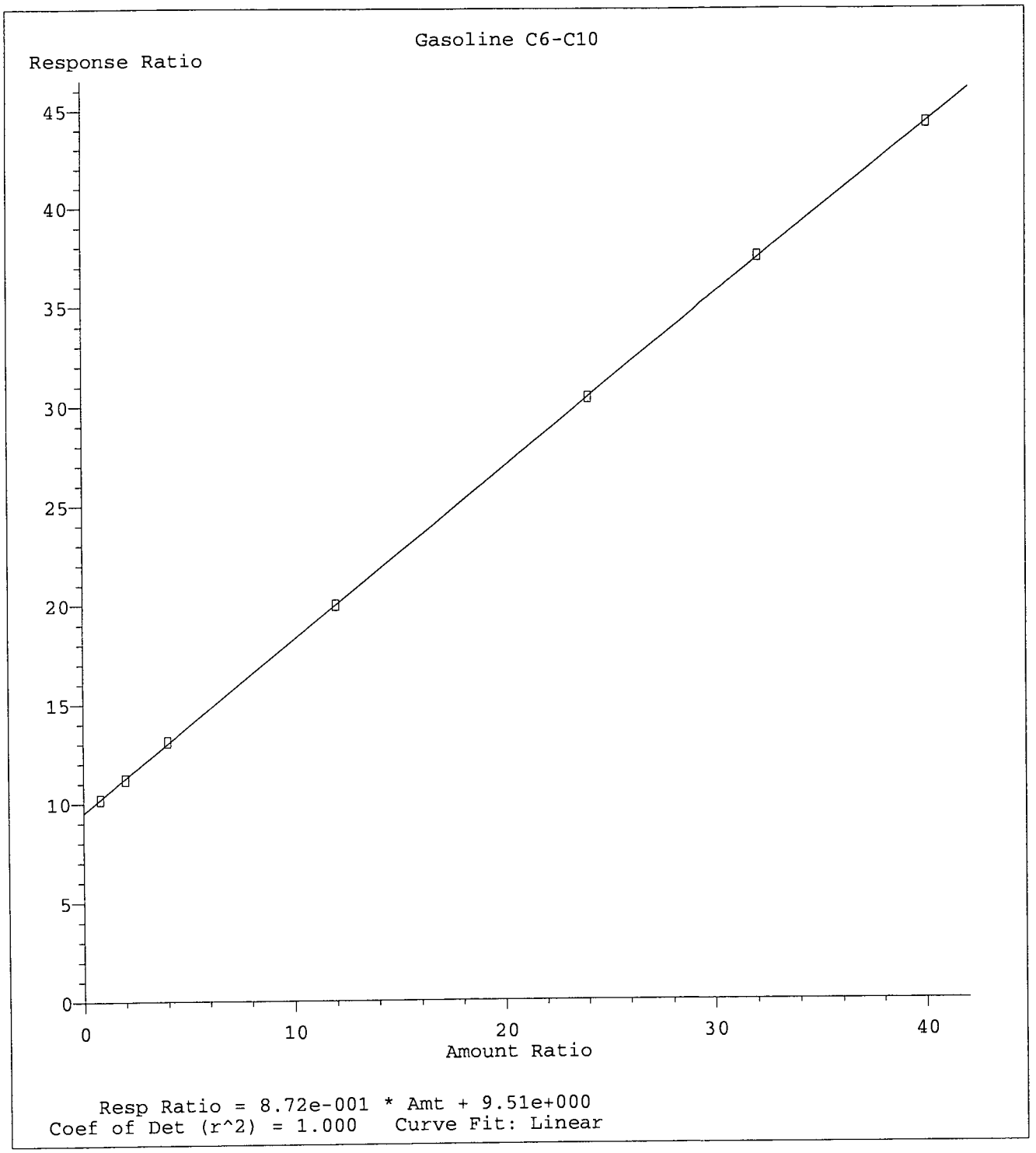
Quantitation Report

Data File : M:\LOKI\DATA\161210\1211L12.D Vial: 12
Acq On : 11 Dec 16 15:28 Operator: PM,DG,SV,CMM
Sample : 1000ug/L GAS STD 12/11/16G Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:39 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration





Method Name: M:\LOKI\DATA\161210\LGAS6Z11.M
Calibration Table Last Updated: Tue Dec 13 08:47:40 2016

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/11/16
Instrument: Loki
Initial Cal. Date: 12/11/16
Data File: 1211L16.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TMHB	Gasoline C6-C10	3.829	1.674	56	TMHBL	1.2
2							
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		Average			56.0		

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1211L16.D Vial: 16
Acq On : 11 Dec 16 17:21 Operator: PM,DG,SV,CMM
Sample : (SS) 300ug/L GAS STD 12/11/16 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:50 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1221661	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1610523	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1685182	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	24545495m	303.64031	ppb	100

(#) = qualifier out of range (m) = manual integration
1211L16.D LGAS6Z11.M Wed Dec 14 11:25:36 2016 Page 1

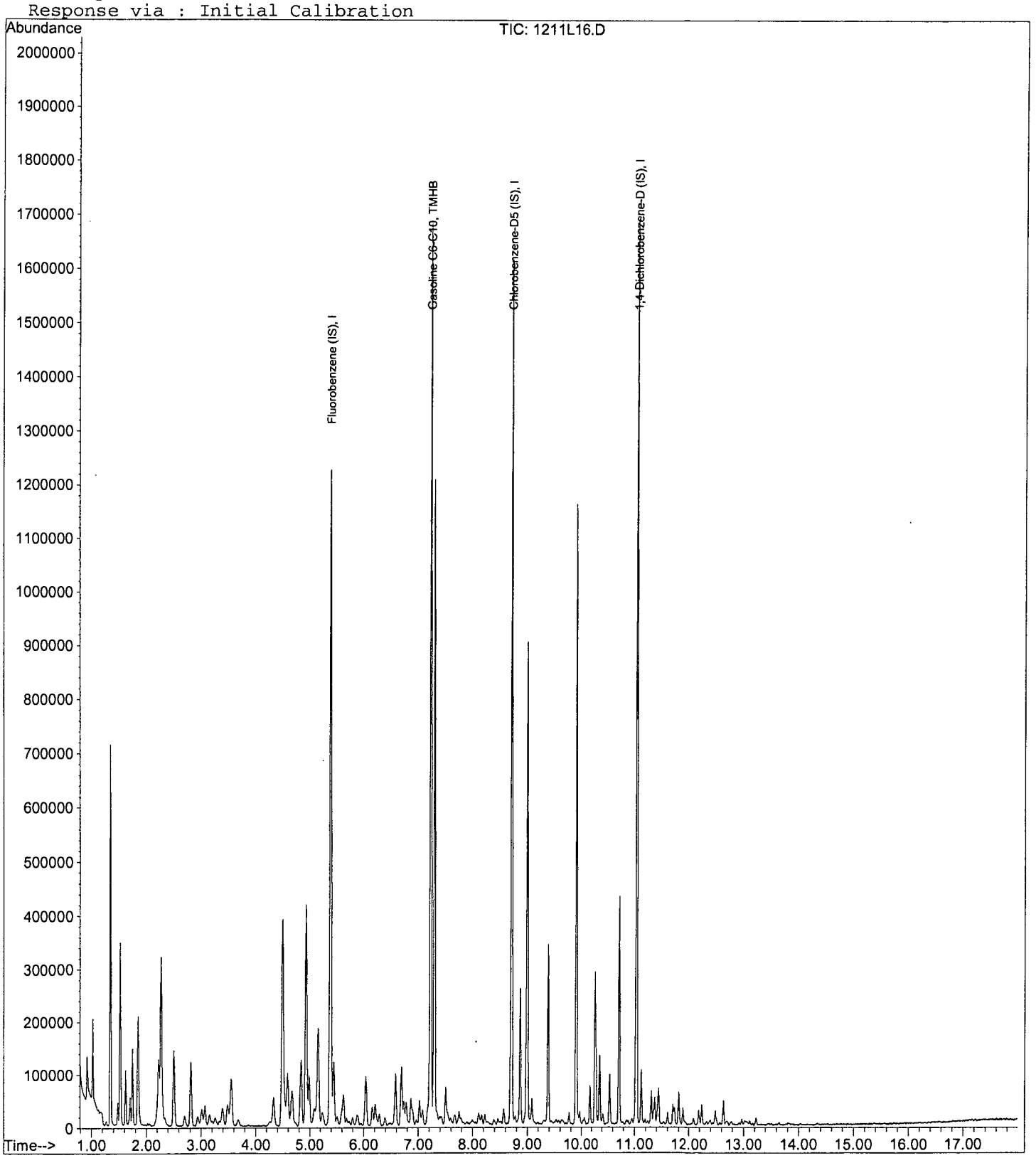
Quantitation Report

Data File : M:\LOKI\DATA\161210\1211L16.D
Acq On : 11 Dec 16 17:21
Sample : (SS) 300ug/L GAS STD 12/11/16
Misc : W IS&S 11/21/16, 11/14/16

Vial: 16
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 13 8:50 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/16/16
Matrix: water Instrument: Loki
Initials: DG

		Compound	1216L04 D	1216L05.D	1216L06.D	1216L07 D	1216L08.D	1216L09 D	1216L10.D	1216L11.D	1216L12.D		Avg	%RSD		
1	I	Fluorobenzene (IS)														
2	S	Dibromofluoromethane(S)	0.6038	0.5753	0.4807	0.4859	0.5082	0.5039	0.4767	0.4835	0.4607		0.51	9.5	S	
3	S	1,2-DCA-D4(S)	0.6316	0.6392	0.5243	0.5341	0.5492	0.5372	0.5189	0.5081	0.4813		0.55	9.8	S	
4	I	Chlorobenzene-D5 (IS)														
5	S	Toluene-D8(S)	2.140	2.113	1.779	1.826	1.908	1.970	1.913	1.987	1.840		1.9	6.4	S	
6	S	4-Bromofluorobenzene(S)	0.7277	0.6367	0.6079	0.6383	0.6540	0.6894	0.6701	0.7025	0.6545		0.66	5.6	S	
7	I	1,4-Dichlorobenzene-D (IS)														
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Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L04.D Vial: 4
Acq On : 16 Dec 16 13:18 Operator: PM,DG,SV,CMM
Sample : 0.3ug/L VOC STD 12/16/16AI Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 8:35 2016 Quant Results File: LSUR1216.RES

Quant Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	557056	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	504256	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	258752	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.49	111	67272	5.93	ppb	0.00
Spiked Amount 25.000			Recovery = 23.736%			
3) 1,2-DCA-D4(S)	4.92	65	70363	5.77	ppb	0.00
Spiked Amount 25.000			Recovery = 23.088%			
5) Toluene-D8(S)	7.22	98	215839	5.51	ppb	0.00
Spiked Amount 25.000			Recovery = 22.044%			
6) 4-Bromofluorobenzene(S)	9.89	95	73391	5.48	ppb	0.00
Spiked Amount 25.000			Recovery = 21.900%			

Target Compounds Qvalue

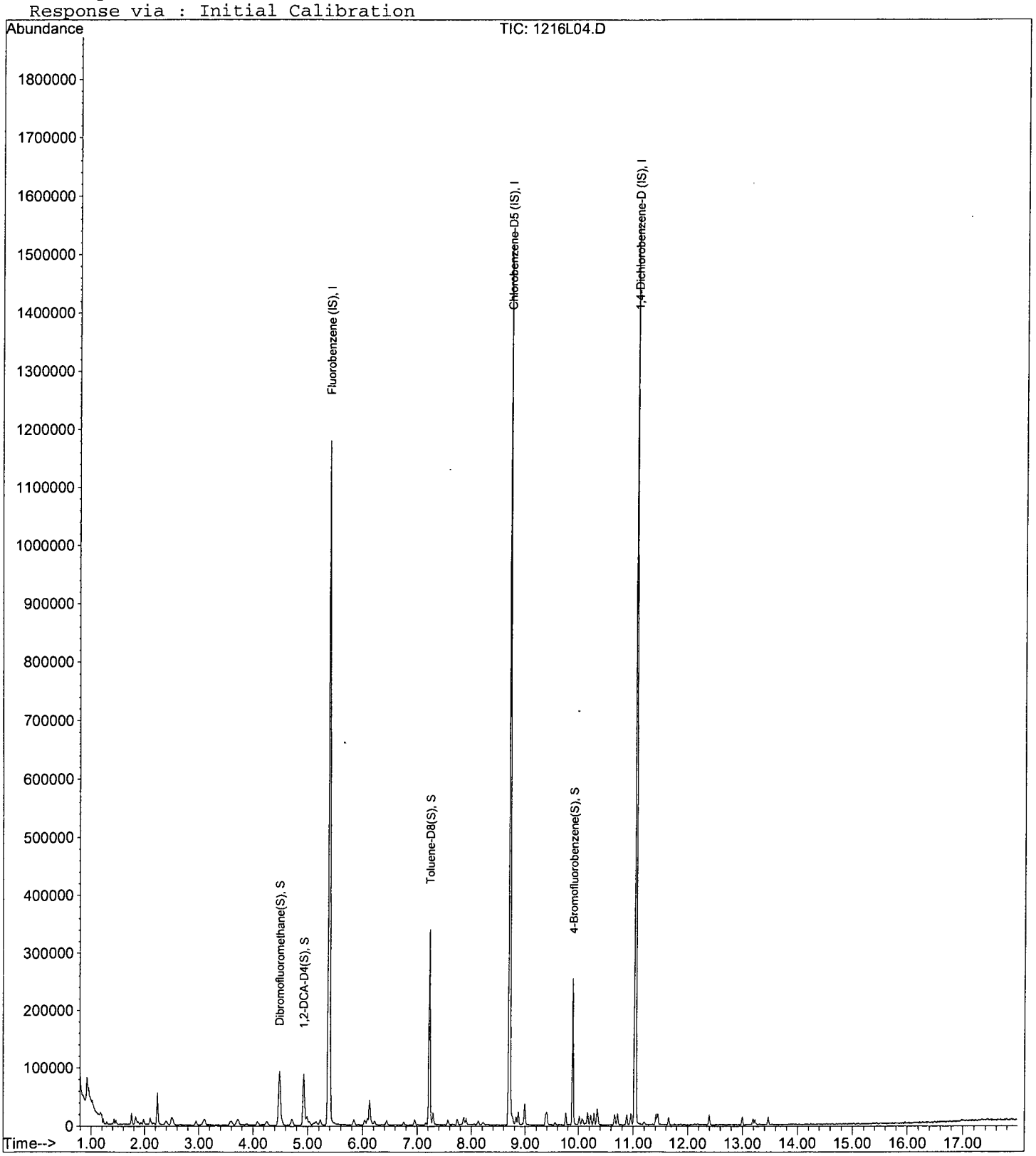
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161216\1216L04.D Vial: 4
Acq On : 16 Dec 16 13:18 Operator: PM,DG,SV,CMM
Sample : 0.3ug/L VOC STD 12/16/16AI Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 8:35 2016 Quant Results File: LSUR1216.RES

Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L05.D Vial: 5
Acq On : 16 Dec 16 13:46 Operator: PM,DG,SV,CMM
Sample : 0.5ug/L VOC STD 12/16/16AJ Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 8:35 2016 Quant Results File: LSUR1216.RES

Quant Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	563520	25.00 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	523328	25.00 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	275776	25.00 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.49	111	64843	5.65 ppb	0.00
Spiked Amount 25.000			Recovery	= 22.616%	
3) 1,2-DCA-D4(S)	4.93	65	72037	5.84 ppb	0.00
Spiked Amount 25.000			Recovery	= 23.368%	
5) Toluene-D8(S)	7.22	98	221201	5.44 ppb	0.00
Spiked Amount 25.000			Recovery	= 21.768%	
6) 4-Bromofluorobenzene(S)	9.89	95	73304	5.27 ppb	0.00
Spiked Amount 25.000			Recovery	= 21.076%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

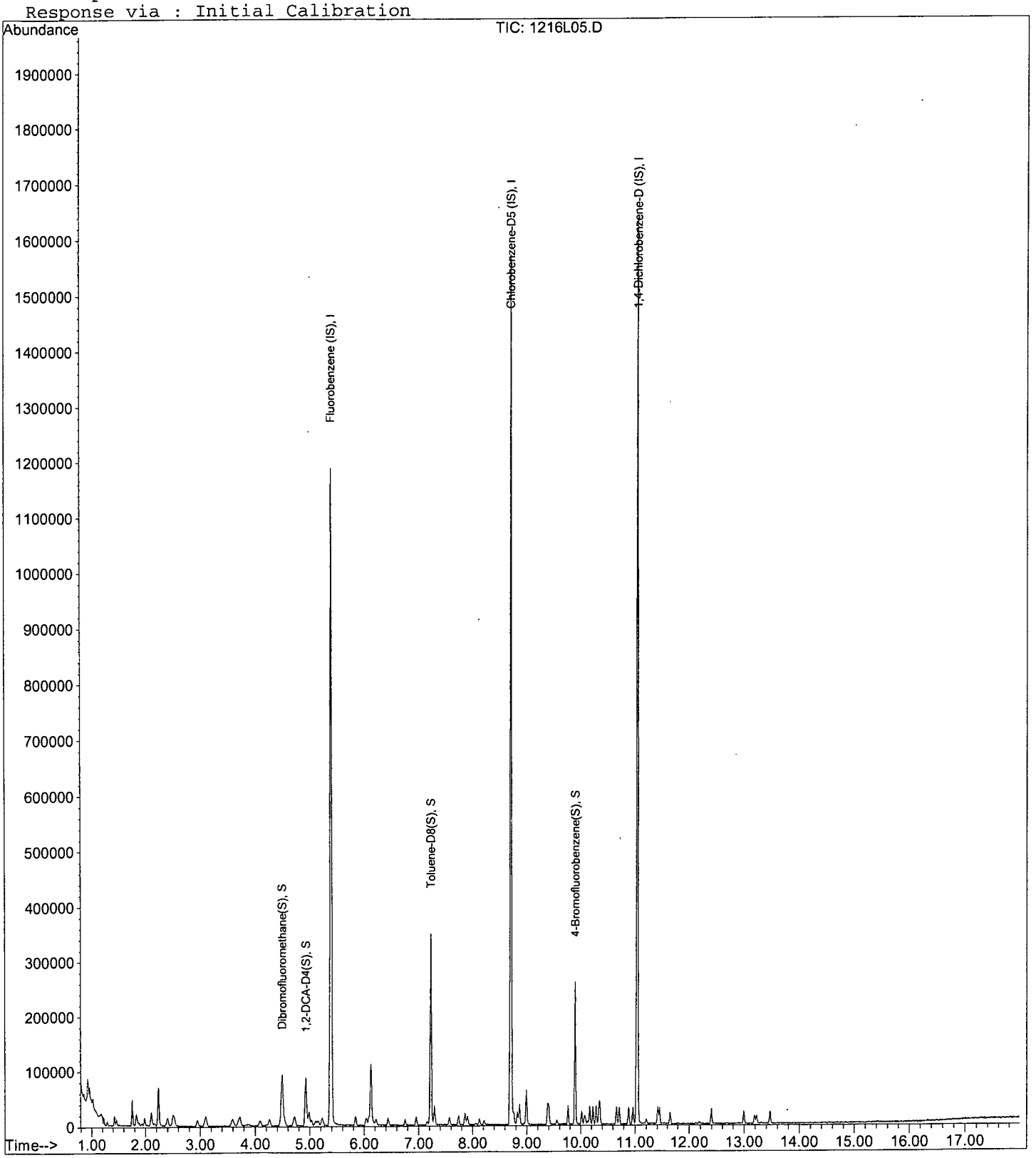
Quantitation Report

Data File : M:\LOKI\DATA\161216\1216L05.D
Acq On : 16 Dec 16 13:46
Sample : 0.5ug/L VOC STD 12/16/16AJ
Misc : W IS&S 11/21/16, 11/14/16

Vial: 5
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 8:35 2016 Quant Results File: LSUR1216.RES

Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L06.D Vial: 6
Acq On : 16 Dec 16 14:14 Operator: PM,DG,SV,CMM
Sample : 1.0ug/L VOC STD 12/16/16AK Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 8:35 2016 Quant Results File: LSUR1216.RES

Quant Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	571200	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	513664	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	262848	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	109827	9.45	ppb	0.00
Spiked Amount 25.000			Recovery =	37.792%		
3) 1,2-DCA-D4(S)	4.93	65	119788	9.58	ppb	0.00
Spiked Amount 25.000			Recovery =	38.332%		
5) Toluene-D8(S)	7.22	98	365462	9.16	ppb	0.00
Spiked Amount 25.000			Recovery =	36.640%		
6) 4-Bromofluorobenzene(S)	9.89	95	124907	9.15	ppb	0.00
Spiked Amount 25.000			Recovery =	36.592%		

Target Compounds Qvalue

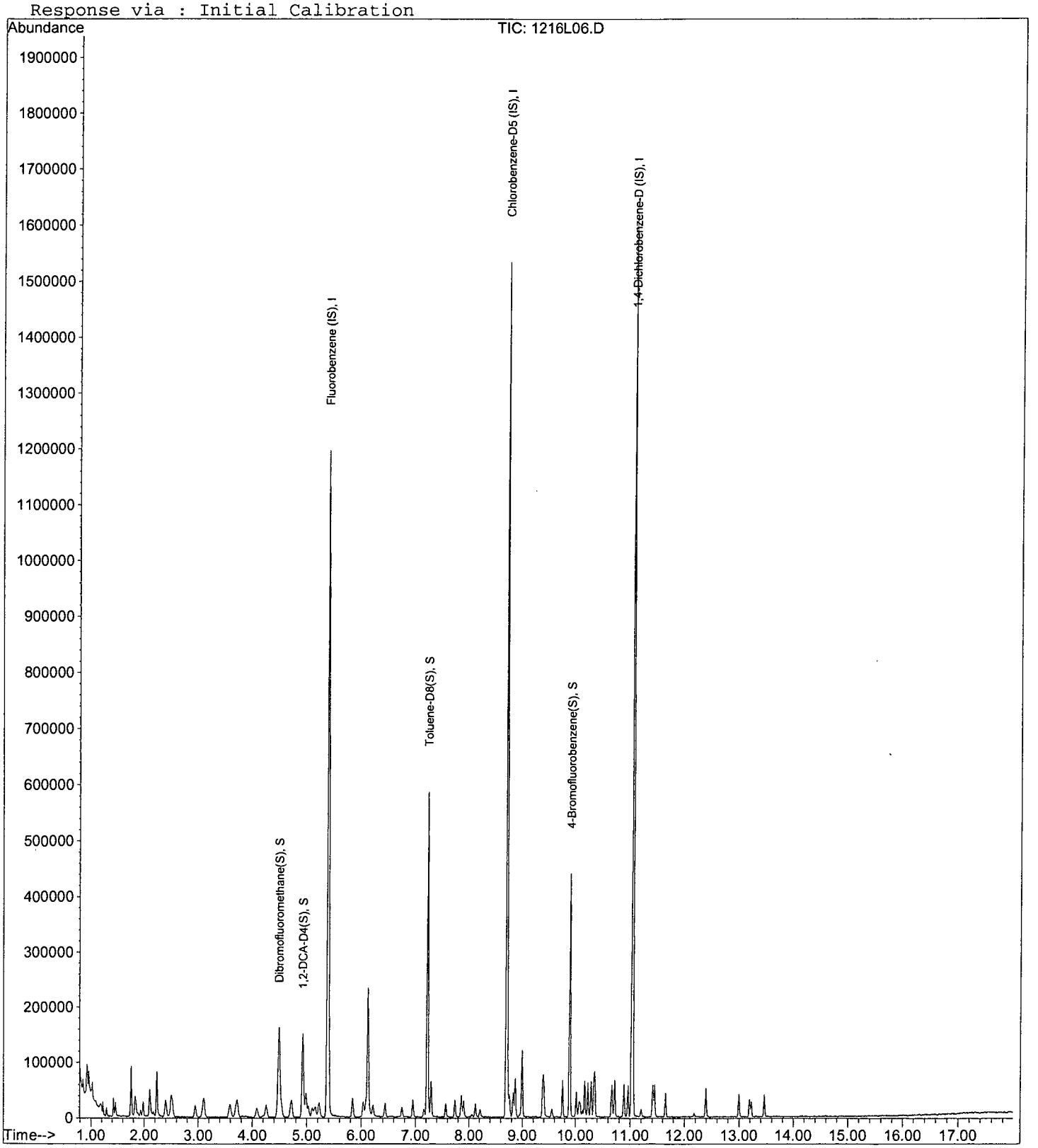
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161216\1216L06.D Vial: 6
Acq On : 16 Dec 16 14:14 Operator: PM,DG,SV,CMM
Sample : 1.0ug/L VOC STD 12/16/16AK Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 8:35 2016 Quant Results File: LSUR1216.RES

Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L07.D Vial: 7
Acq On : 16 Dec 16 14:42 Operator: PM,DG,SV,CMM
Sample : 2.0ug/L VOC STD 12/16/16AL Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 8:35 2016 Quant Results File: LSUR1216.RES

Quant Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	581312	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	521728	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	276544	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	112993	9.55	ppb	0.00
Spiked Amount 25.000			Recovery = 38.204%			
3) 1,2-DCA-D4(S)	4.93	65	124184	9.76	ppb	0.00
Spiked Amount 25.000			Recovery = 39.048%			
5) Toluene-D8(S)	7.22	98	381162	9.41	ppb	0.00
Spiked Amount 25.000			Recovery = 37.624%			
6) 4-Bromofluorobenzene(S)	9.89	95	133201	9.60	ppb	0.00
Spiked Amount 25.000			Recovery = 38.416%			

Target Compounds Qvalue

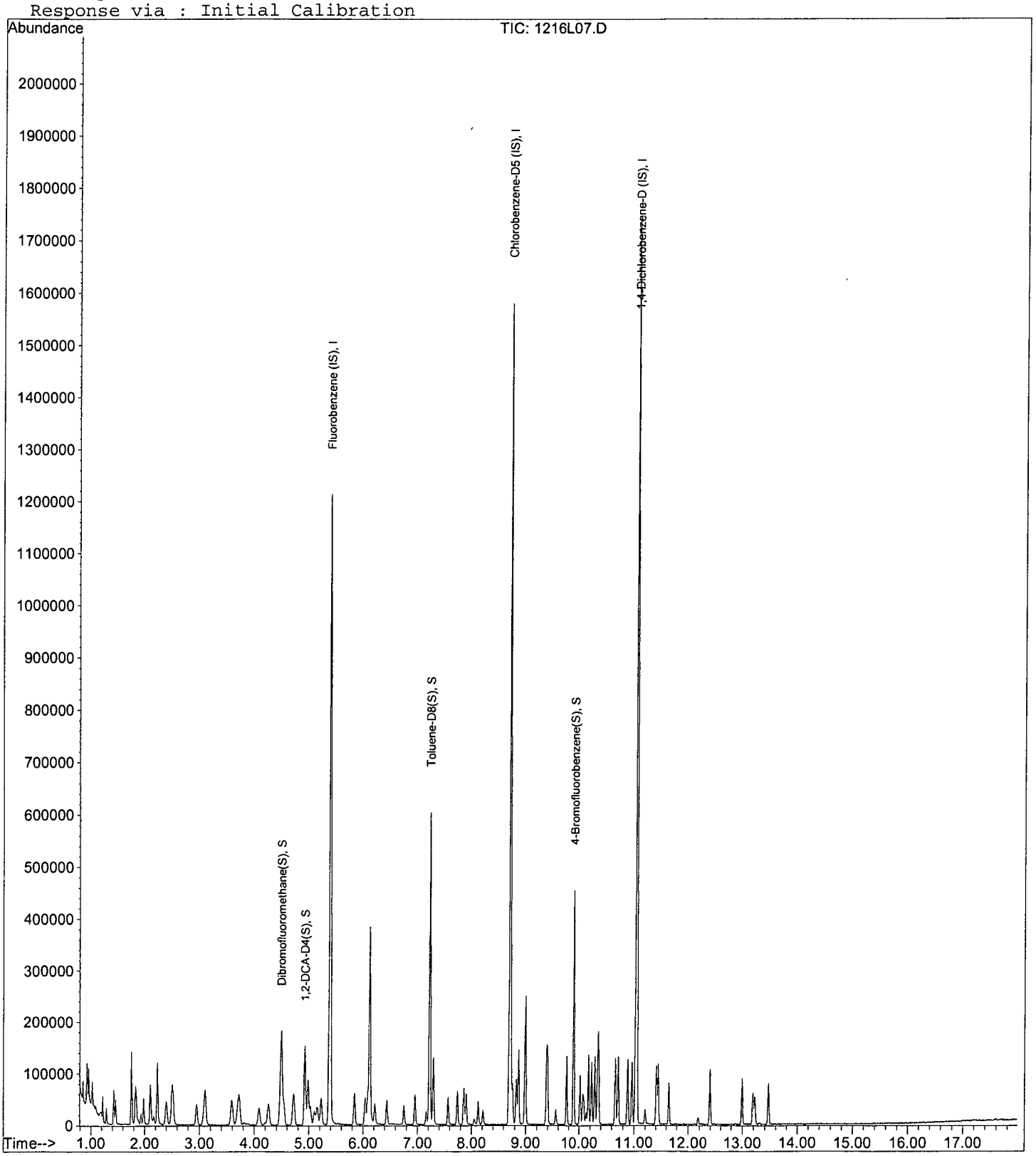
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161216\1216L07.D Vial: 7
Acq On : 16 Dec 16 14:42 Operator: PM,DG,SV,CMM
Sample : 2.0ug/L VOC STD 12/16/16AL Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 8:35 2016 Quant Results File: LSUR1216.RES

Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L08.D Vial: 8
Acq On : 16 Dec 16 15:10 Operator: PM,DG,SV,CMM
Sample : 5.0ug/L VOC STD 12/16/16AM Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 8:35 2016 Quant Results File: LSUR1216.RES

Quant Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	588544	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	546880	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	293056	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	299117	24.97	ppb	0.00
Spiked Amount 25.000			Recovery =	99.896%		
3) 1,2-DCA-D4(S)	4.92	65	323239	25.10	ppb	0.00
Spiked Amount 25.000			Recovery =	100.388%		
5) Toluene-D8(S)	7.22	98	1043176	24.56	ppb	0.00
Spiked Amount 25.000			Recovery =	98.236%		
6) 4-Bromofluorobenzene(S)	9.89	95	357675	24.60	ppb	0.00
Spiked Amount 25.000			Recovery =	98.412%		

Target Compounds Qvalue

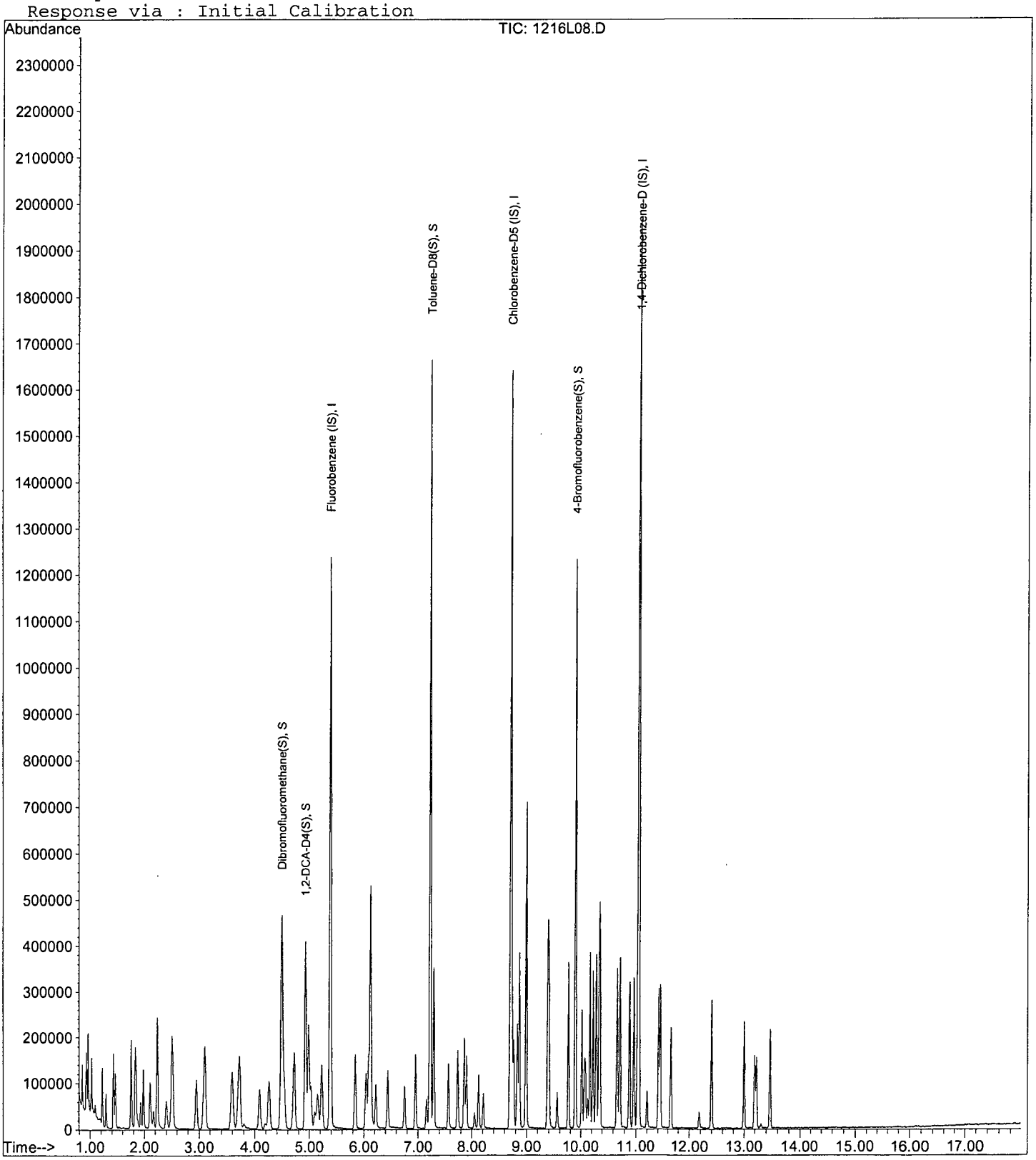
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161216\1216L08.D Vial: 8
Acq On : 16 Dec 16 15:10 Operator: PM,DG,SV,CMM
Sample : 5.0ug/L VOC STD 12/16/16AM Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 8:35 2016 Quant Results File: LSUR1216.RES

Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L09.D Vial: 9
Acq On : 16 Dec 16 15:38 Operator: PM,DG,SV,CMM
Sample : 10ug/L VOC STD 12/16/16AN Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 8:35 2016 Quant Results File: LSUR1216.RES

Quant Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	594432	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	542208	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	308288	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	299563	24.76	ppb	0.00
Spiked Amount 25.000			Recovery = 99.052%			
3) 1,2-DCA-D4(S)	4.92	65	319303	24.55	ppb	0.00
Spiked Amount 25.000			Recovery = 98.184%			
5) Toluene-D8(S)	7.22	98	1068145	25.36	ppb	0.00
Spiked Amount 25.000			Recovery = 101.452%			
6) 4-Bromofluorobenzene(S)	9.89	95	373824	25.94	ppb	0.00
Spiked Amount 25.000			Recovery = 103.744%			

Target Compounds Qvalue

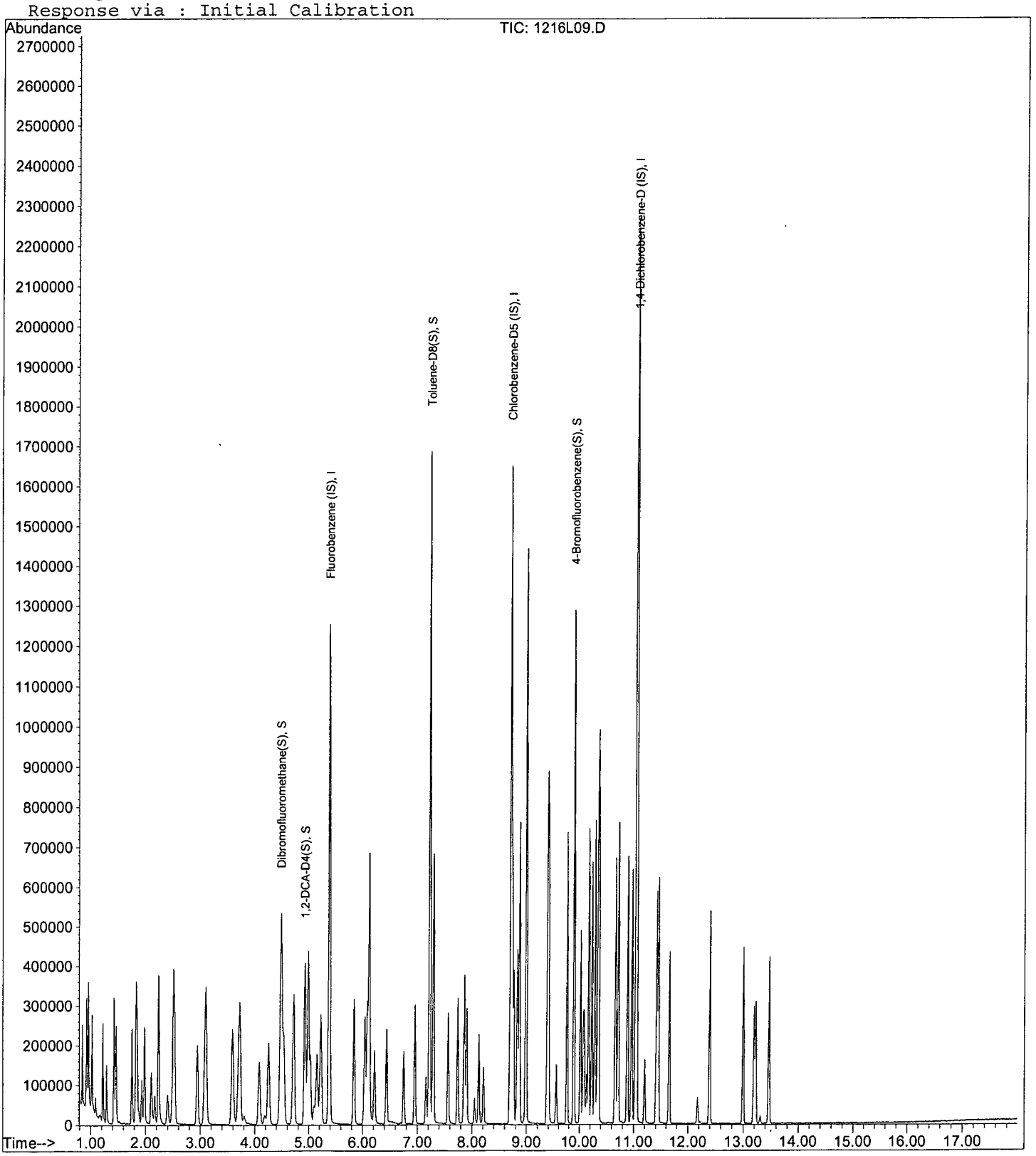
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161216\1216L09.D Vial: 9
Acq On : 16 Dec 16 15:38 Operator: PM,DG,SV,CMM
Sample : 10ug/L VOC STD 12/16/16AN Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 8:35 2016 Quant Results File: LSUR1216.RES

Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L10.D Vial: 10
Acq On : 16 Dec 16 16:06 Operator: PM,DG,SV,CMM
Sample : 20ug/L VOC STD 12/16/16AO Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 8:35 2016 Quant Results File: LSUR1216.RES

Quant Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	632128	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	573568	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	311424	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	602676	46.85	ppb	0.00
Spiked Amount 25.000			Recovery =	187.396%		
3) 1,2-DCA-D4(S)	4.93	65	656081	47.43	ppb	0.00
Spiked Amount 25.000			Recovery =	189.712%		
5) Toluene-D8(S)	7.22	98	2193961	49.25	ppb	0.00
Spiked Amount 25.000			Recovery =	196.988%		
6) 4-Bromofluorobenzene(S)	9.89	95	768729	50.42	ppb	0.00
Spiked Amount 25.000			Recovery =	201.672%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

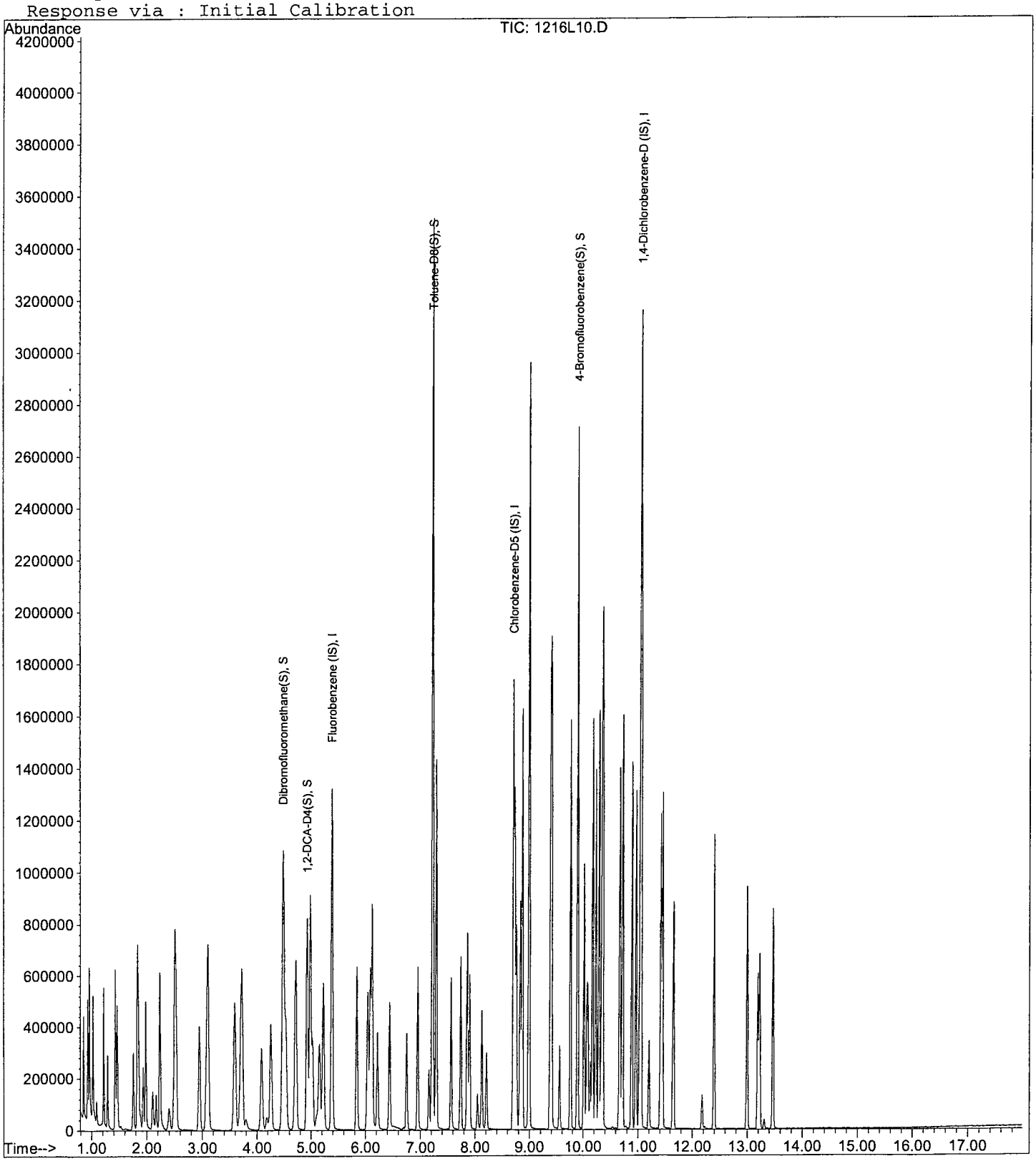
Quantitation Report

Data File : M:\LOKI\DATA\161216\1216L10.D
Acq On : 16 Dec 16 16:06
Sample : 20ug/L VOC STD 12/16/16AO
Misc : W IS&S 11/21/16, 11/14/16

Vial: 10
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 8:35 2016 Quant Results File: LSUR1216.RES

Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L11.D Vial: 11
Acq On : 16 Dec 16 16:35 Operator: PM,DG,SV,CMM
Sample : 40ug/L VOC STD 12/16/16AP Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 8:35 2016 Quant Results File: LSUR1216.RES

Quant Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	621760	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	556544	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	314176	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	601217	47.52	ppb	0.00
Spiked Amount 25.000			Recovery =	190.060%		
3) 1,2-DCA-D4(S)	4.92	65	631892	46.44	ppb	0.00
Spiked Amount 25.000			Recovery =	185.764%		
5) Toluene-D8(S)	7.22	98	2211650	51.16	ppb	0.00
Spiked Amount 25.000			Recovery =	204.652%		
6) 4-Bromofluorobenzene(S)	9.89	95	781916	52.85	ppb	0.00
Spiked Amount 25.000			Recovery =	211.408%		

Target Compounds Qvalue

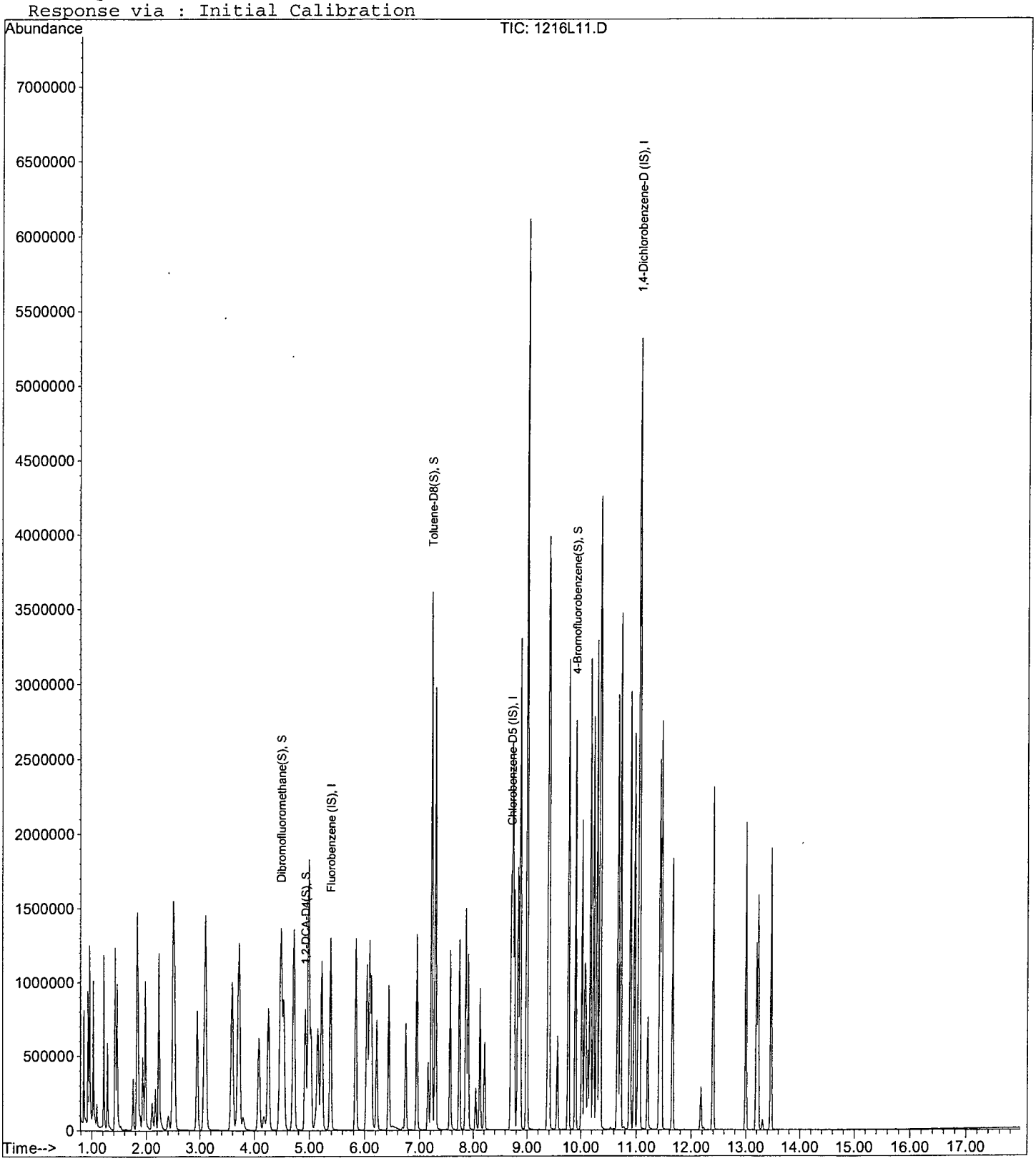
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161216\1216L11.D Vial: 11
Acq On : 16 Dec 16 16:35 Operator: PM,DG,SV,CMM
Sample : 40ug/L VOC STD 12/16/16AP Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 8:35 2016 Quant Results File: LSUR1216.RES

Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L12.D Vial: 12
Acq On : 16 Dec 16 17:03 Operator: PM,DG,SV,CMM
Sample : 100ug/L VOC STD 12/16/16AQ Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 8:36 2016 Quant Results File: LSUR1216.RES

Quant Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	628736	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	582144	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	353536	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	1158715	90.56	ppb	0.00
Spiked Amount 25.000			Recovery = 362.236%			
3) 1,2-DCA-D4(S)	4.92	65	1210321	87.97	ppb	0.00
Spiked Amount 25.000			Recovery = 351.864%			
5) Toluene-D8(S)	7.22	98	4285282	94.77	ppb	0.00
Spiked Amount 25.000			Recovery = 379.096%			
6) 4-Bromofluorobenzene(S)	9.89	95	1524009	98.48	ppb	0.00
Spiked Amount 25.000			Recovery = 393.924%			

Target Compounds Qvalue

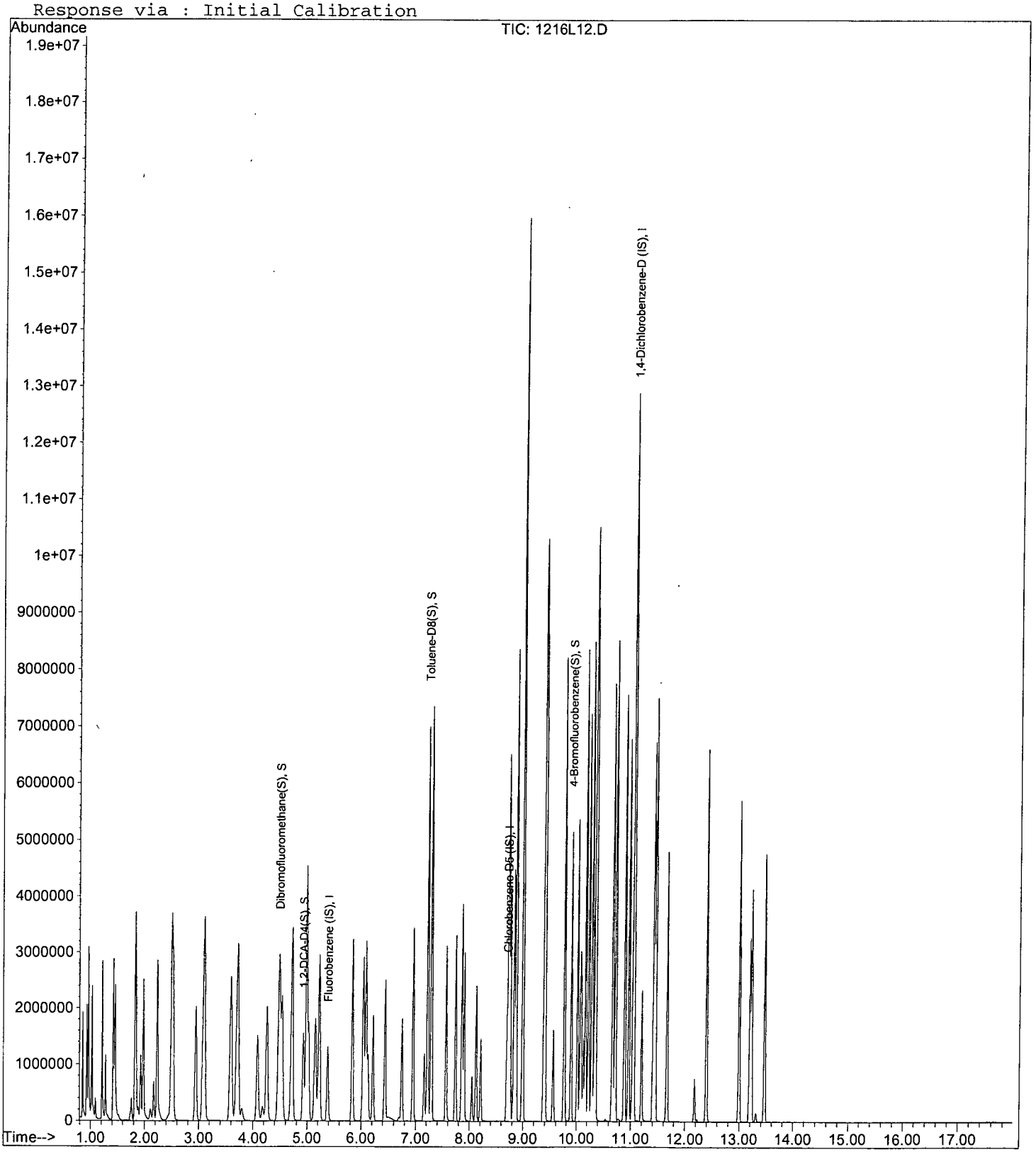
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161216\1216L12.D Vial: 12
Acq On : 16 Dec 16 17:03 Operator: PM,DG,SV,CMM
Sample : 100ug/L VOC STD 12/16/16AQ Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 8:36 2016 Quant Results File: LSUR1216.RES

Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/18/16
Instrument: Loki
Initial Cal. Date: 12/16/16
Data File: 1218L04.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	3.829	1.598	58	TMHBL	7.5
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
5							
6							
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37							
38							
39							
40							
		Average			58.0		

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L04.D Vial: 4
Acq On : 18 Dec 16 18:05 Operator: PM,DG,SV,CMM
Sample : 161218A CCV/LCS 300ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 8:54 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161216\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1132652	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1521502	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1678133	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	21722884m	277.45	ppb	100

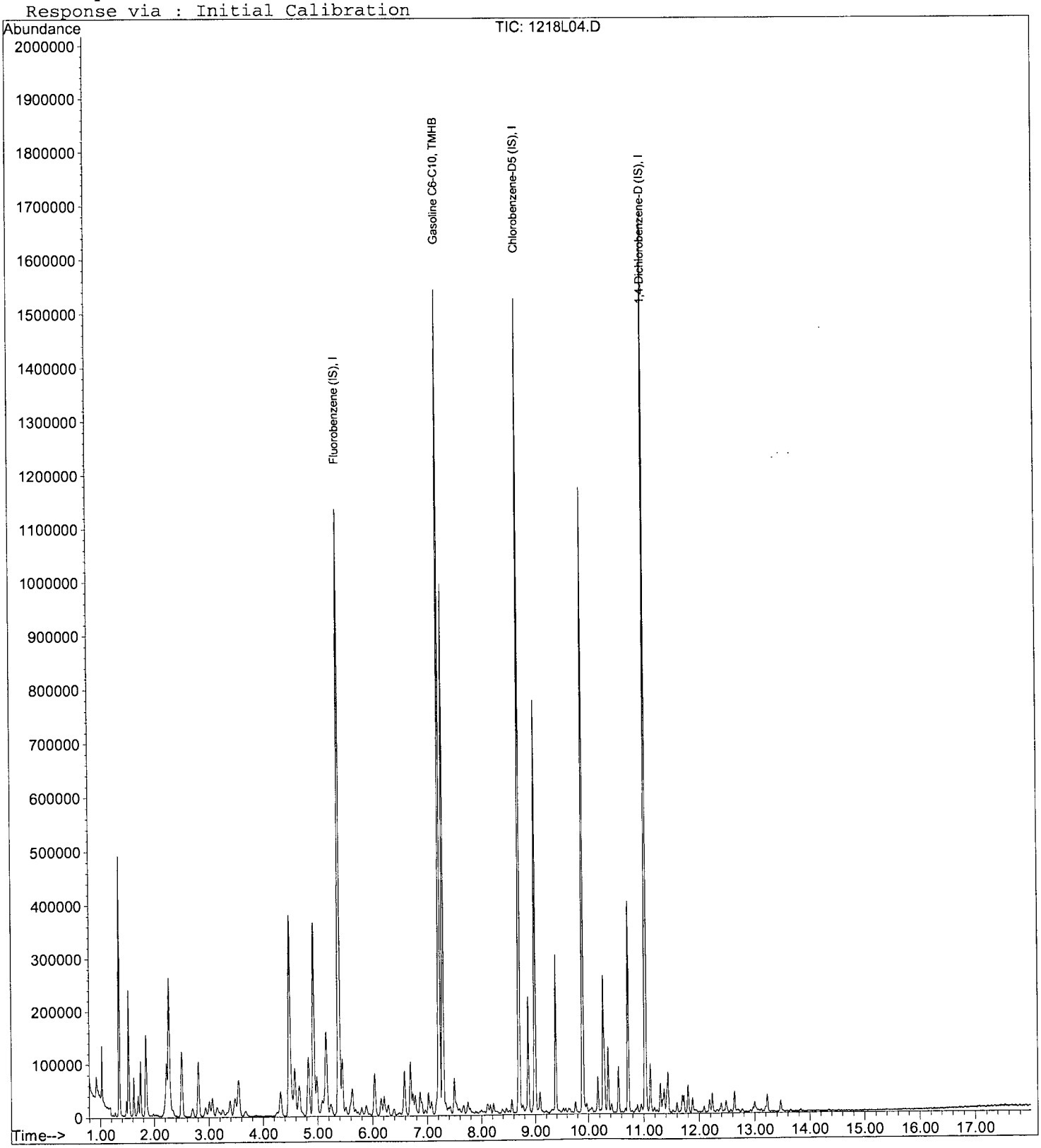
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L04.D Vial: 4
Acq On : 18 Dec 16 18:05 Operator: PM,DG,SV,CMM
Sample : 161218A CCV/LCS 300ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 8:54 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/18/16
Instrument: Loki
Initial Cal. Date: 12/16/16
Data File: 1218L04.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	S	Dibromofluoromethane(S)	0.5082	0.4935	2.9	S	
3	S	1,2-DCA-D4(S)	0.5798	0.5278	9.0	S	
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	S	Toluene-D8(S)	1.960	1.920	2.0	S	
6	S	4-Bromofluorobenzene(S)	0.6593	0.6504	1.3	S	
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
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32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			3.8		

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L04.D Vial: 4
Acq On : 18 Dec 16 18:05 Operator: PM,DG,SV,CMM
Sample : 161218A CCV/LCS 300ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 8:15 2016 Quant Results File: LSUR1216.RES

Quant Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	555648	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	518912	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	284928	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	274215	24.25	ppb	0.00
Spiked Amount 25.000			Recovery =	97.000%		
3) 1,2-DCA-D4(S)	4.92	65	293279	24.12	ppb	0.00
Spiked Amount 25.000			Recovery =	96.476%		
5) Toluene-D8(S)	7.22	98	996106	24.71	ppb	0.00
Spiked Amount 25.000			Recovery =	98.856%		
6) 4-Bromofluorobenzene(S)	9.89	95	337508	24.47	ppb	0.00
Spiked Amount 25.000			Recovery =	97.868%		

Target Compounds Qvalue

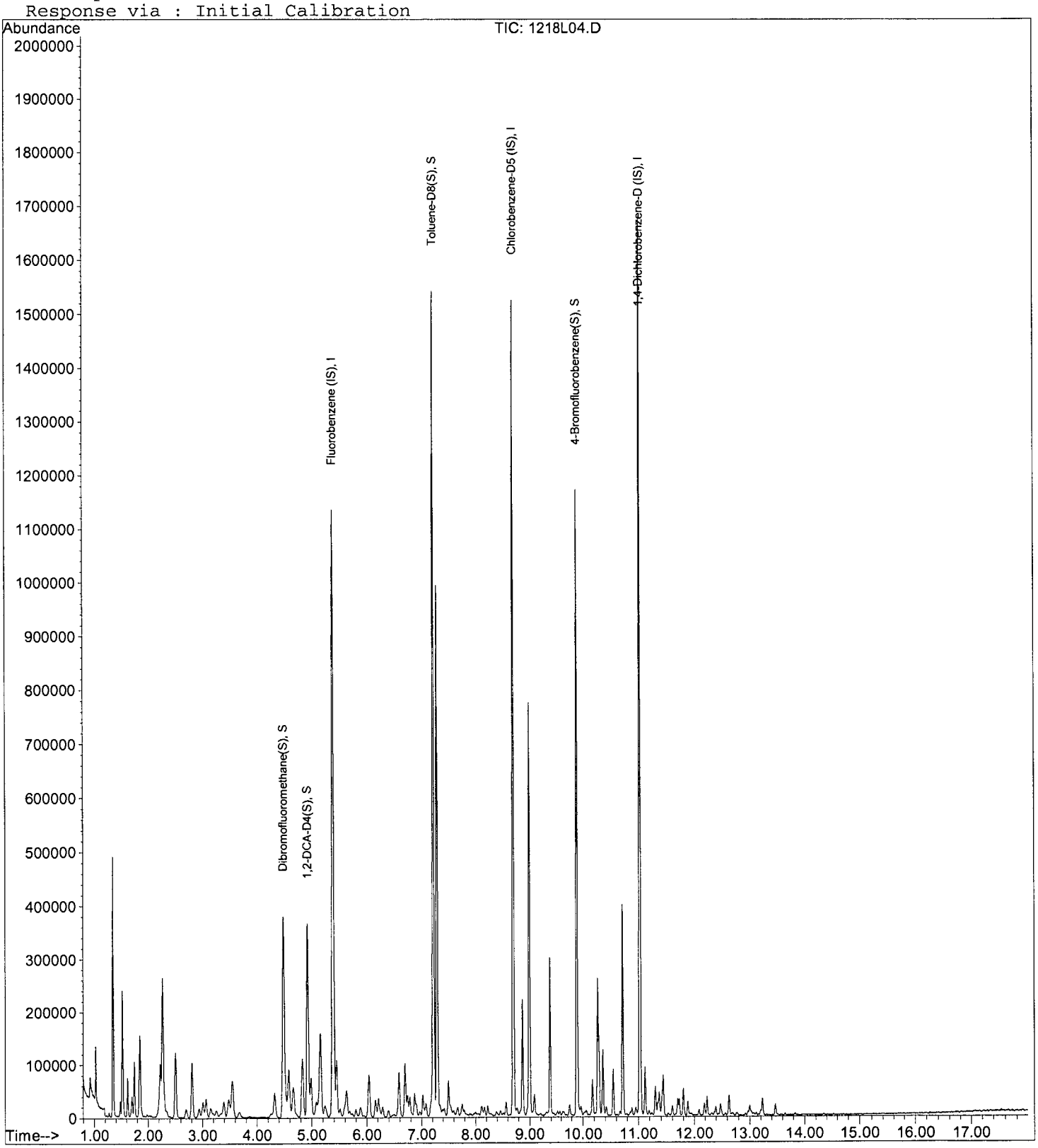
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L04.D Vial: 4
Acq On : 18 Dec 16 18:05 Operator: PM,DG,SV,CMM
Sample : 161218A CCV/LCS 300ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 8:15 2016 Quant Results File: LSUR1216.RES

Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/19/16
Instrument: Loki
Initial Cal. Date: 12/16/16
Data File: 1218L28.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	S	Dibromofluoromethane(S)	0.5088	0.5035	1.0	S	
3	S	1,2-DCA-D4(S)	0.5471	0.5185	5.2	S	
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	S	Toluene-D8(S)	1.942	1.937	0.24	S	
6	S	4-Bromofluorobenzene(S)	0.6646	0.6621	0.38	S	
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
8							
9							
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38							
39							
40							
		Average			1.7		

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L28.D Vial: 28
Acq On : 19 Dec 16 5:16 Operator: PM,DG,SV,CMM
Sample : Ending CCV 8260 300ug/L 12/18/16 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 8:15 2016 Quant Results File: LSUR1216.RES

Quant Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	530368	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	499392	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	271488	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	267041	24.74	ppb	0.00
Spiked Amount 25.000			Recovery =	98.964%		
3) 1,2-DCA-D4(S)	4.93	65	275014	23.70	ppb	0.00
Spiked Amount 25.000			Recovery =	94.780%		
5) Toluene-D8(S)	7.22	98	967357	24.94	ppb	0.00
Spiked Amount 25.000			Recovery =	99.756%		
6) 4-Bromofluorobenzene(S)	9.89	95	330632	24.91	ppb	0.00
Spiked Amount 25.000			Recovery =	99.624%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

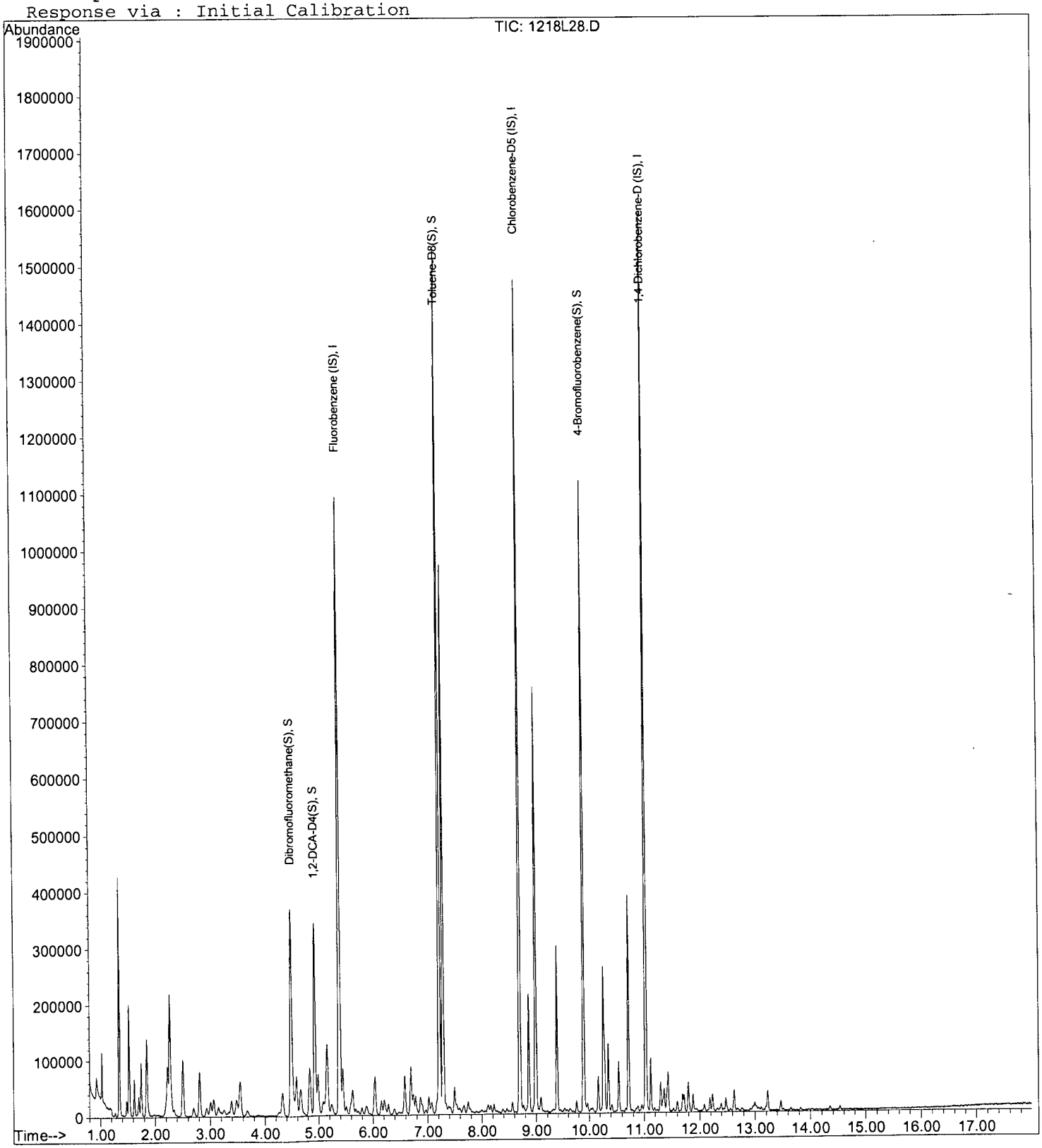
Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L28.D
Acq On : 19 Dec 16 5:16
Sample : Ending CCV 8260 300ug/L 12/18/16
Misc : W IS&S 11/21/16, 11/14/16

Vial: 28
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 29 8:15 2016 Quant Results File: LSUR1216.RES

Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/19/16
Instrument: Loki
Initial Cal. Date: 12/11/16
Data File: 1218L28.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	3.829	1.270	67	TMHBL	45
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
5							
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40							
		Average			67.0		

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L28.D Vial: 28
Acq On : 19 Dec 16 5:16 Operator: PM,DG,SV,CMM
Sample : Ending CCV 8260 300ug/L 12/18/16 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 28 17:03 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1090235	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1472179	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1586241	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	16609784m	164.33	ppb	100

(#) = qualifier out of range (m) = manual integration
1218L28.D LGAS6Z11.M Thu Dec 29 08:25:17 2016 Page 1

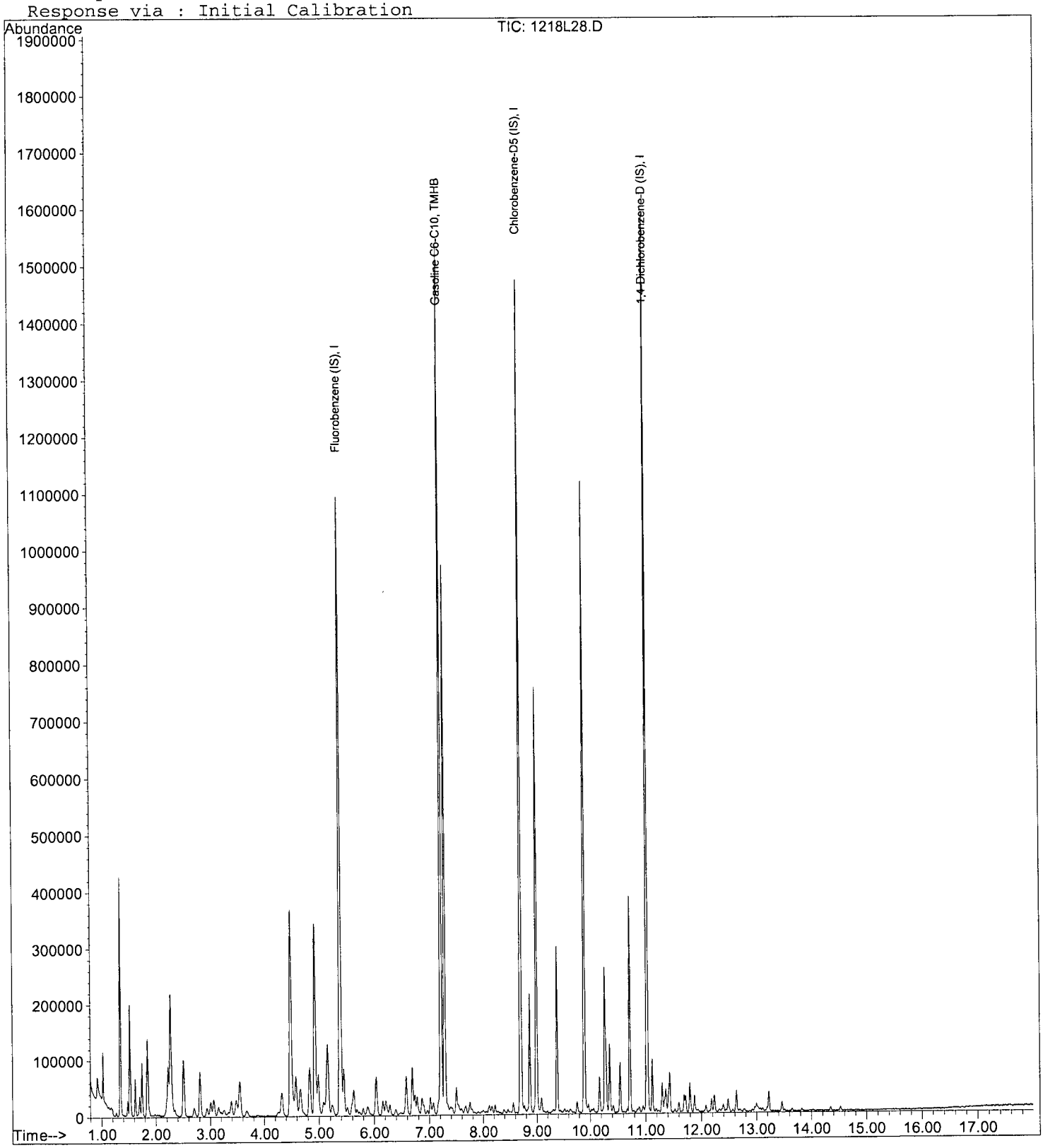
Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L28.D
Acq On : 19 Dec 16 5:16
Sample : Ending CCV 8260 300ug/L 12/18/16
Misc : W IS&S 11/21/16, 11/14/16

Vial: 28
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 28 17:03 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161216\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



ORGANICS
Raw Data

APPL, INC.

Method Blank

EPA 8260B GRO WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161218W-47493 - 214887**
Batch ID: #GRO86-161218AL

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	12/18/16	12/18/16
BLANK	SURROGATE: 4-BROMOFLUORO	95.6	85-114			%	12/18/16	12/18/16

Quant Method: LSUR1216.M
Run #: 1218L08
Instrument: Loki
Sequence: 161216
Initials: DG

GC SC-Blank-REG MDLs-DOD
Printed: 12/27/16 10:22:05 AM

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L08.D
Acq On : 18 Dec 16 19:57
Sample : 161218A BLK-1WL
Misc : W IS&S 11/21/16, 11/14/16

Vial: 8
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 10:27 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161216\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1127092	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1494012	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1533633	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	11221698m	12.92	ppb	100

(#) = qualifier out of range (m) = manual integration
1218L08.D LGAS6Z11.M Wed Dec 28 17:01:25 2016

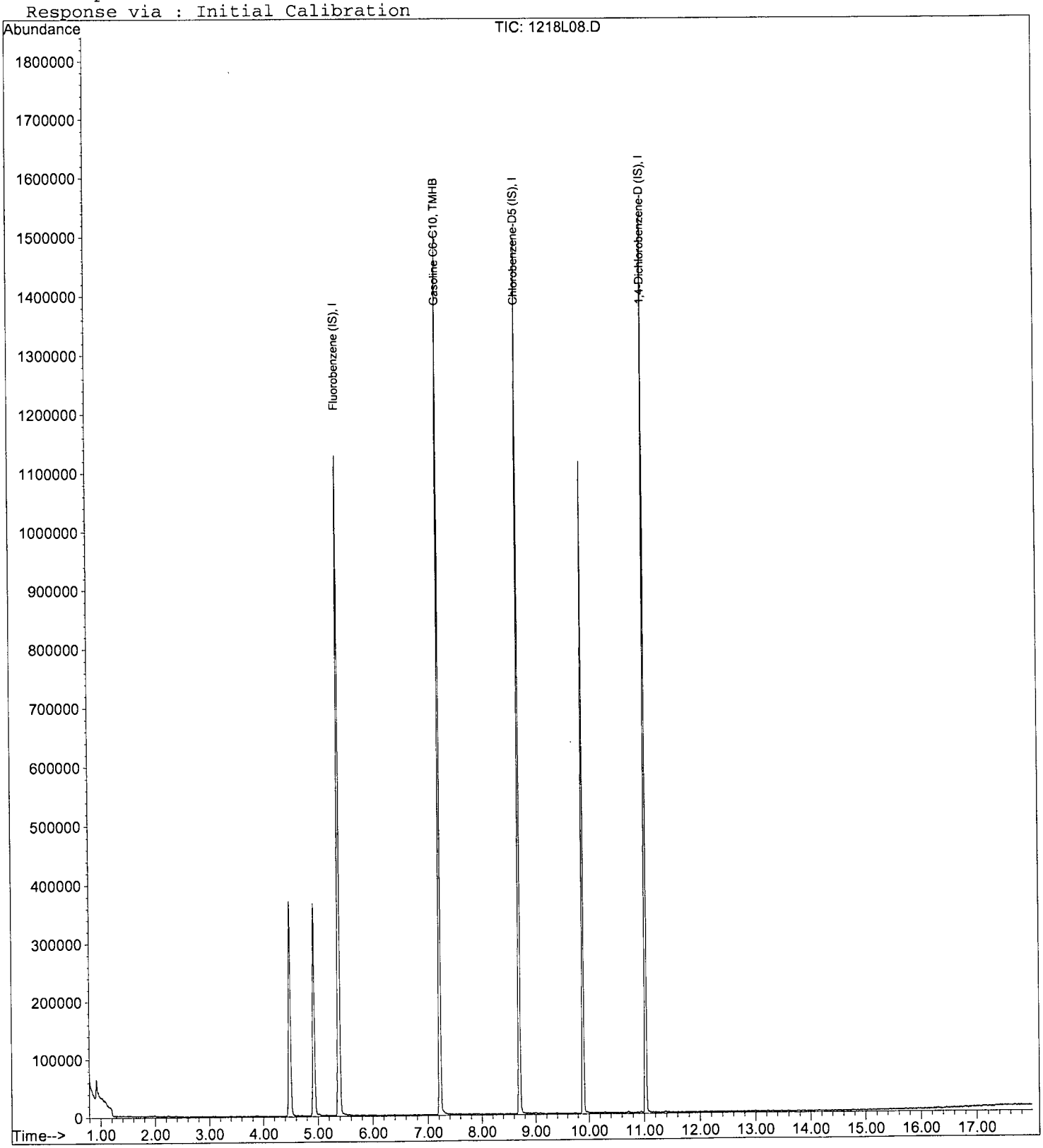
Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L08.D
Acq On : 18 Dec 16 19:57
Sample : 161218A BLK-1WL
Misc : W IS&S 11/21/16, 11/14/16

Vial: 8
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 10:27 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L08.D Vial: 8
Acq On : 18 Dec 16 19:57 Operator: PM,DG,SV,CMM
Sample : 161218A BLK-1WL Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 8:15 2016 Quant Results File: LSUR1216.RES

Quant Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	543168	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	507456	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	262208	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	273480	24.74	ppb	0.00
Spiked Amount 25.000			Recovery =	98.964%		
3) 1,2-DCA-D4(S)	4.92	65	287538	24.19	ppb	0.00
Spiked Amount 25.000			Recovery =	96.760%		
5) Toluene-D8(S)	7.22	98	953279	24.19	ppb	0.00
Spiked Amount 25.000			Recovery =	96.744%		
6) 4-Bromofluorobenzene(S)	9.89	95	322458	23.90	ppb	0.00
Spiked Amount 25.000			Recovery =	95.616%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

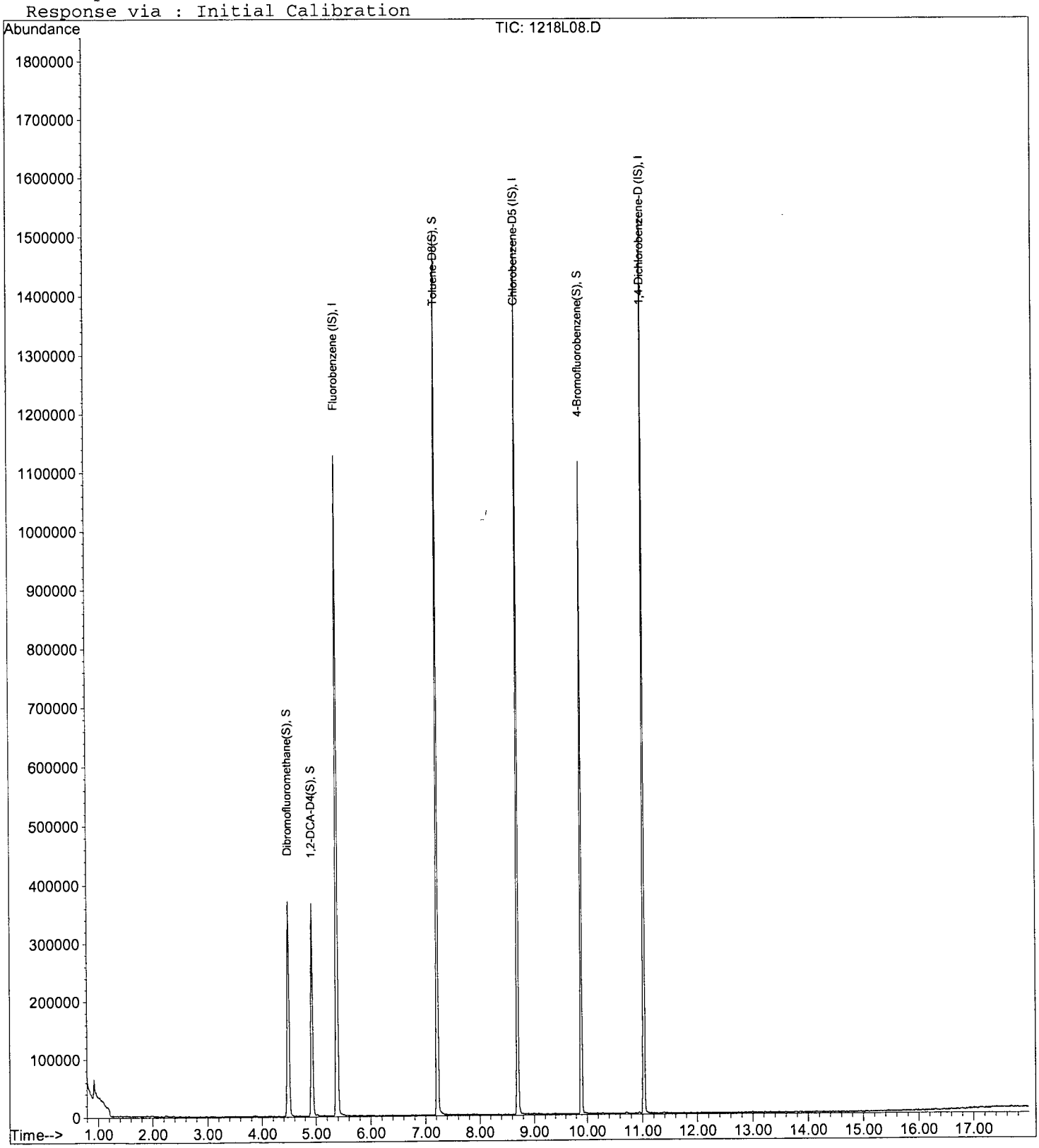
Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L08.D
Acq On : 18 Dec 16 19:57
Sample : 161218A BLK-1WL
Misc : W IS&S 11/21/16, 11/14/16

Vial: 8
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 29 8:15 2016 Quant Results File: LSUR1216.RES

Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



Laboratory Control Spike Recovery
EPA 8260B GRO WATER

APPL ID: **161218W-47493 LCS - 214887**
Batch ID: #GRO86-161218AL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
GASOLINE RANGE ORGANICS	300	277	92.3	78-122
SURROGATE: 4-BROMOFLUOROBENZE	25.0	24.5	98.0	85-114

Comments: _____

Primary	SPK
Quant Method :	LSUR1216.M
Extraction Date :	12/18/16
Analysis Date :	12/18/16
Instrument :	Loki
Run :	1218L04
Initials :	DG

Printed: 12/27/16 10:21:59 AM
APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L04.D Vial: 4
Acq On : 18 Dec 16 18:05 Operator: PM,DG,SV,CMM
Sample : 161218A CCV/LCS 300ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 8:54 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161216\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1132652	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1521502	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1678133	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	21722884m	277.45	ppb	100

(#) = qualifier out of range (m) = manual integration

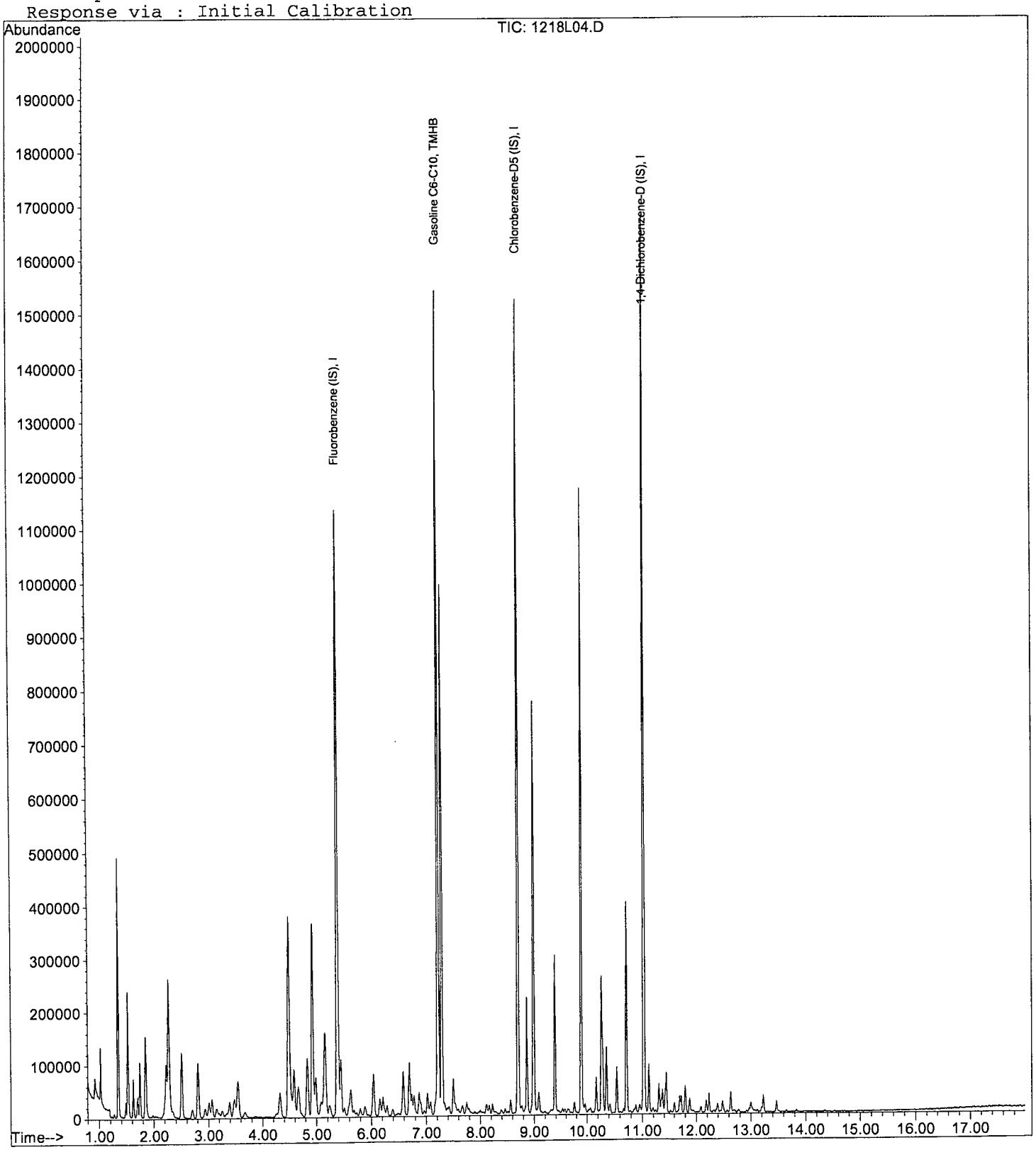
Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L04.D
Acq On : 18 Dec 16 18:05
Sample : 161218A CCV/LCS 300ug/L
Misc : W IS&S 11/21/16, 11/14/16

Vial: 4
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 8:54 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L04.D Vial: 4
Acq On : 18 Dec 16 18:05 Operator: PM,DG,SV,CMM
Sample : 161218A CCV/LCS 300ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 8:15 2016 Quant Results File: LSUR1216.RES

Quant Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	555648	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	518912	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	284928	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	274215	24.25	ppb	0.00
Spiked Amount 25.000			Recovery = 97.000%			
3) 1,2-DCA-D4(S)	4.92	65	293279	24.12	ppb	0.00
Spiked Amount 25.000			Recovery = 96.476%			
5) Toluene-D8(S)	7.22	98	996106	24.71	ppb	0.00
Spiked Amount 25.000			Recovery = 98.856%			
6) 4-Bromofluorobenzene(S)	9.89	95	337508	24.47	ppb	0.00
Spiked Amount 25.000			Recovery = 97.868%			

Target Compounds Qvalue

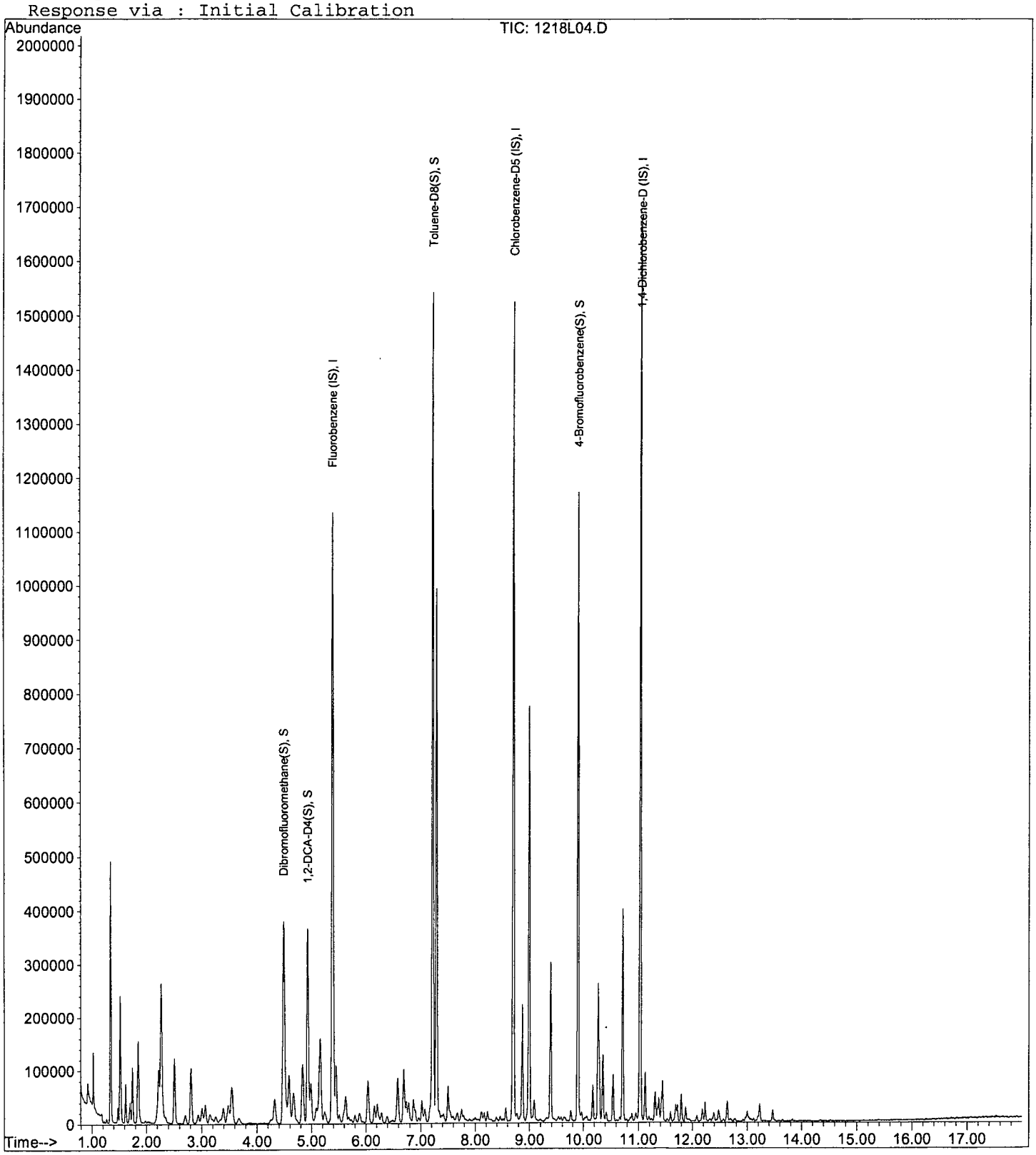
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L04.D Vial: 4
Acq On : 18 Dec 16 18:05 Operator: PM,DG,SV,CMM
Sample : 161218A CCV/LCS 300ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 8:15 2016 Quant Results File: LSUR1216.RES

Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



Volatile Standard Curve Preparation for 10mL Purge (8260 water)-LOKI										
Exp Date:	11/24/16	5µg/mL	5µg/mL	5µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	250µg/mL	
		Vol Std #9	Vol Std #10	Vol Std #12	Vol Std #7	Vol Std #8	Vol Std #1	Vol Std #2	TBA	
		11/22/16N	11/22/16O	11/22/16P	11/22/16J	11/22/16L	11/22/16K	11/22/16M	11/22/16Q	Final Vol
	Conc.	12/22/16	12/22/16	12/22/16	12/22/16	12/22/16	12/22/16	12/22/16	12/22/16	w/P&T H2O
Date/code	µg/L	ul	ul	ul	ul	ul	ul	ul	ul	mL
11/23/16A-CMM	0.3	3	3	3	n/a	n/a	n/a	n/a	2	50
11/23/16B-CMM	0.5	5	5	5	n/a	n/a	n/a	n/a	5	50
11/23/16C-CMM	1	10	10	10	n/a	n/a	n/a	n/a	10	50
11/23/16D-CMM	2	20	20	20	n/a	n/a	n/a	n/a	15	50
11/23/16E-CMM	5	n/a	n/a	n/a	5	5	5	5	20	50
11/23/16F-CMM	10	n/a	n/a	n/a	10	10	10	10	25	50
11/23/16G-CMM	20	n/a	n/a	n/a	20	20	20	20	30	50
11/23/16H-CMM	40	n/a	n/a	n/a	40	40	40	40	35	50
11/23/16I-CMM	100	n/a	n/a	n/a	100	100	100	100	40	50

PRIMARY STANDARD

12/06/16H							
50ug/ml Vol Work Std #7							
Exp:01/06/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120016-03	Gas Mix	2000	279822-36645	12/06/16A-CMM	02/19/19	100
02SI	020049-02	HEXACHLOROETHANE	1000	254167-36562	12/06/16B-CMM	12/28/17	200
02SI	020228-02	Benzyl Chloride	1000	279824-36573	12/06/16C-CMM	05/24/18	200
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	3500
12/06/16I							
50ug/ml Vol Work Std #1							
Exp:01/06/17					Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	020145-02-02	2-CEVE	2000	288264-37217	11/22/16C-CMM	09/19/19	50
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	1950
12/06/16J							
50ug/ml Vol Work Std #8							
Exp:01/06/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	122039-02	Volatile Mix, 20-29	2000	258033-37168	11/12/16B-CMM	08/17/17	100
02SI	120023-03	VOC'S-54 COMP	2000	271929-36580	11/12/16C-CMM	02/15/18	100
02SI	020232-02	Vinyl Acetate	2000	292241-37193	11/22/16D-CMM	08/01/17	100
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	3700
12/06/16K							
50ug/ml Vol Work Std #2							
Exp:01/06/17							
Supplier	ID #	ID	ug/ml				
02SI	121020-05	HSL'S-Ketone Solution	2000	292248-37204	11/22/16B-CMM	11/08/18	100
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	3900
		12/06/16L					
		5ug/ml Vol Work Std #9					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #7		**12/06/16H**	Exp:01/06/17	200	
		50ug/ml Vol Work Std #8		**12/06/16J**	Exp:01/06/17	200	
		J&T Brand		11/15/16	11/15/17	1600	
		12/06/16M					
		5ug/ml Vol Work Std #10					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #1		**12/06/16I**	Exp:01/06/17	200	
		J&T Brand		11/15/16	11/15/17	1800	
		12/06/16N					
		5ug/ml Vol Work Std #12					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #2		**12/06/16K**	Exp:01/06/17	200	
		J&T Brand		11/15/16	11/15/17	1800	
12/06/16O							
250ug/ml TBA/IBA/Acetonitrile/Cyclohexanone/Acrolein/2-P							
Exp:01/06/17			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
02SI	120166-01	Volatile Mix 4-3	2000	275544-36407	12/06/16D-CMM	03/28/18	500
02SI	020229-09-02	Acrolein	10000	291928-37174	11/22/16E-CMM	12/12/16	100
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	3400

SECONDARY SOURCE

12/06/16P							
50ug/ml VOC Std#4							
Exp:01/06/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120296-01-SS	Custom 8260 Solution	2000	258037-36087	11/03/16D-CMM	08/18/17	50
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	1950
12/06/16Q							
50ug/ml VOC Std#5							
Exp:01/06/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120016-03-SS	8260 Gases(SS)	2000	279826-36674	12/06/16E-CMM	06/01/19	50
02SI	020145-02-02-SS	2-CEVE (SS)	2000	254171-35384	11/22/16G-CMM	06/21/17	50
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	1900
12/06/16R							

50ug/ml VOC Std#6							
Exp:01/06/17							
	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120023-03-SS	VOC'S 54 COMP.	2000	265897-35926	11/12/16H-CMM	11/29/17	50
02SI	020232-02-SS	Vinyl Acetate(SS)	2000	287420-37046	11/22/16H-CMM	11/27/16	50
02SI	020049-02-SS	HEXACHLOROETHANE (SS)	1000	265899-35938	12/06/16F-CMM	11/30/17	100
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	1800
12/06/16S							
250ug/ml TBA/IBA/Acetonitrile/Acrolein/2-P							
Exp:01/06/17			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
02SI	120166-01-SS	VOC Mix 4-3 (SS)	2000	258040-37229	12/06/16G-CMM	08/22/18	250
02SI	020229-09-SS	Acrolein SOLUTION (SS)	10000	291929-37176	11/22/16I-CMM	12/12/16	50
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	1700
8260 water		spiked with		Total Vol			
CCV/LCS	10ug/L Vol Std	10uL of 50ug/ml Std #7		50mL P&T H2O			
Ending CCV		10uL of 50ug/ml Std #8					
		10uL of 50ug/ml Std #1					
		10uL of 50ug/ml Std #2					
		25uL of 250ug/ml Std TBA					
X4 ketones							
LCS	10ug/L Vol Std	10uL of 50ug/ml Std #7		50mL P&T H2O			
		10uL of 50ug/ml Std #8					
		10uL of 50ug/ml Std #1					
		40uL of 50ug/ml Std #2					
		25uL of 250ug/ml Std TBA					
8260 soil		spiked with		Total Vol			
CCV/LCS	50ug/Kg Vol Std	5uL of 50ug/ml Std #7		5mL P&T H2O			
Ending CCV		5uL of 50ug/ml Std #8					
		5uL of 50ug/ml Std #1					
		5uL of 50ug/ml Std #2					
		5uL of 250ug/ml Std TBA					
Matrix spikes are prepared with same standards as ccv (see above) into the sample.							
8260water		spiked with		Total Vol			
SS	10ug/L STD	10uL of 50ug/ml Std #4		50mL P&T H2O			
		10uL of 50ug/ml Std #5					
		10uL of 50ug/ml Std #6					
		25uL of 250ug/ml Std TBA					
8260 SOIL	50ug/Kg STD	5uL of 50ug/ml Std #4		Total Vol			
SS		5uL of 50ug/ml Std #5		5mL P&T H2O			
		5uL of 50ug/ml Std #6					
		5uL of 250ug/ml Std TBA					

Injection Log

Directory: M:\LOKI\DATA\161210\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	6	1211L06.D	1	20ug/L GAS STD 12/11/16A	W IS&S 11/21/16, 11/14/16	11 Dec 16 12:39
2	7	1211L07.D	1	50ug/L GAS STD 12/11/16B	W IS&S 11/21/16, 11/14/16	11 Dec 16 13:07
3	8	1211L08.D	1	100ug/L GAS STD 12/11/16C	W IS&S 11/21/16, 11/14/16	11 Dec 16 13:35
4	9	1211L09.D	1	300ug/L GAS STD 12/11/16D	W IS&S 11/21/16, 11/14/16	11 Dec 16 14:03
5	10	1211L10.D	1	600ug/L GAS STD 12/11/16E	W IS&S 11/21/16, 11/14/16	11 Dec 16 14:32
6	11	1211L11.D	1	800ug/L GAS STD 12/11/16F	W IS&S 11/21/16, 11/14/16	11 Dec 16 15:00
7	12	1211L12.D	1	1000ug/L GAS STD 12/11/16G	W IS&S 11/21/16, 11/14/16	11 Dec 16 15:28
8	16	1211L16.D	1	(SS) 300ug/L GAS STD 12/11/16	W IS&S 11/21/16, 11/14/16	11 Dec 16 17:21
9	4	1216L04.D	1	0.3ug/L VOC STD 12/16/16AI	W IS&S 11/21/16, 11/14/16	16 Dec 16 13:18
10	5	1216L05.D	1	0.5ug/L VOC STD 12/16/16AJ	W IS&S 11/21/16, 11/14/16	16 Dec 16 13:46
11	6	1216L06.D	1	1.0ug/L VOC STD 12/16/16AK	W IS&S 11/21/16, 11/14/16	16 Dec 16 14:14
12	7	1216L07.D	1	2.0ug/L VOC STD 12/16/16AL	W IS&S 11/21/16, 11/14/16	16 Dec 16 14:42
13	8	1216L08.D	1	5.0ug/L VOC STD 12/16/16AM	W IS&S 11/21/16, 11/14/16	16 Dec 16 15:10
14	9	1216L09.D	1	10ug/L VOC STD 12/16/16AN	W IS&S 11/21/16, 11/14/16	16 Dec 16 15:38
15	10	1216L10.D	1	20ug/L VOC STD 12/16/16AO	W IS&S 11/21/16, 11/14/16	16 Dec 16 16:06
16	11	1216L11.D	1	40ug/L VOC STD 12/16/16AP	W IS&S 11/21/16, 11/14/16	16 Dec 16 16:35
17	12	1216L12.D	1	100ug/L VOC STD 12/16/16AQ	W IS&S 11/21/16, 11/14/16	16 Dec 16 17:03
18	4	1218L04.D	1	161218A CCV/LCS 300ug/L	W IS&S 11/21/16, 11/14/16	18 Dec 16 18:05
19	8	1218L08.D	1	161218A BLK-1WL	W IS&S 11/21/16, 11/14/16	18 Dec 16 19:57
20	9	1218L09.D	1	AZ47493W01	W IS&S 11/21/16, 11/14/16	18 Dec 16 20:25
21	14	1218L14.D	1	AZ47494W01	W IS&S 11/21/16, 11/14/16	18 Dec 16 22:44
22	15	1218L15.D	1	AZ47495W01	W IS&S 11/21/16, 11/14/16	18 Dec 16 23:12
23	16	1218L16.D	1	AZ47496W01	W IS&S 11/21/16, 11/14/16	18 Dec 16 23:40
24	17	1218L17.D	1	AZ47497W01	W IS&S 11/21/16, 11/14/16	19 Dec 16 00:08
25	18	1218L18.D	1	AZ47498W01	W IS&S 11/21/16, 11/14/16	19 Dec 16 00:36
26	28	1218L28.D	1	Ending CCV 8260 300ug/L 12/18/16	W IS&S 11/21/16, 11/14/16	19 Dec 16 5:16

ORGANICS

APPL, INC.

ORGANICS
QC Summary

APPL, INC.

Method Blank
METHANE

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161219W-47493 - 214811**
Batch ID: #RSKME-161219A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	METHANE	1.00 U	5.0	1.00	0.25	ug/L	12/19/16	12/19/16

Quant Method: RSK0901.M
Run #: 1219002
Instrument: Rocky
Sequence: 160901
Initials: CMO

GC SC-Blank-REG MDLs-DOD
Printed: 12/21/16 12:40:27 PM

Laboratory Control Spike Recovery
METHANE

APPL ID: **161219W-47493 LCS - 214811**
Batch ID: #RSKME-161219A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
METHANE	1340	1250	93.6	72-125

Comments: _____

Primary	SPK
Quant Method :	RSK0901.M
Extraction Date :	12/19/16
Analysis Date :	12/19/16
Instrument :	Rocky
Run :	1219001
Initials :	CMO

Printed: 12/21/16 12:40:16 PM
APPL Standard LCS

RSK 175

Form 4

Blank Summary

Lab Name: APPL, Inc.
Case No: 81760
Matrix: WATER
Blank ID: 161219A-BLK

SDG No: 81760
Date Analyzed: 12/19/16
Instrument: Rocky
Time Analyzed: 0840

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161219A-LCS	Lab Control Spike	1219001	12/19/16 0707
161219A-BLK	Blank	1219002	12/19/16 0840
AZ47493	ERH134	1219004	12/19/16 0923
AZ47494	ERH139	1219005	12/19/16 0930
AZ47495	ERH136	1219006	12/19/16 0937
AZ47496	ERH143	1219007	12/19/16 0943
AZ47497	ERH145	1219008	12/19/16 0955
AZ47498	ERH146	1219009	12/19/16 1001

Comments: Batch: #RSKME-161219A

Printed: 12/21/16 12:40:12 PM
Form 4, Blank Summary

ORGANICS
Sample Data

APPL, INC.

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH134
Sample Collection Date: 12/12/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81760
APPL ID: AZ47493
QCG: #RSKME-161219A-214811

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	12/19/16	12/19/16

Quant Method:	RSK0901.M
Run #:	1219004
Instrument:	Rocky
Sequence:	160901
Dilution Factor:	1
Initials:	CMO

Printed: 12/21/16 12:40:23 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1219004.D Vial: 2
Acq On : 19 Dec 16 9:23 Operator: lac
Sample : AZ47493W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 21 12:53 2016 Quant Results File: RSK0901.RES

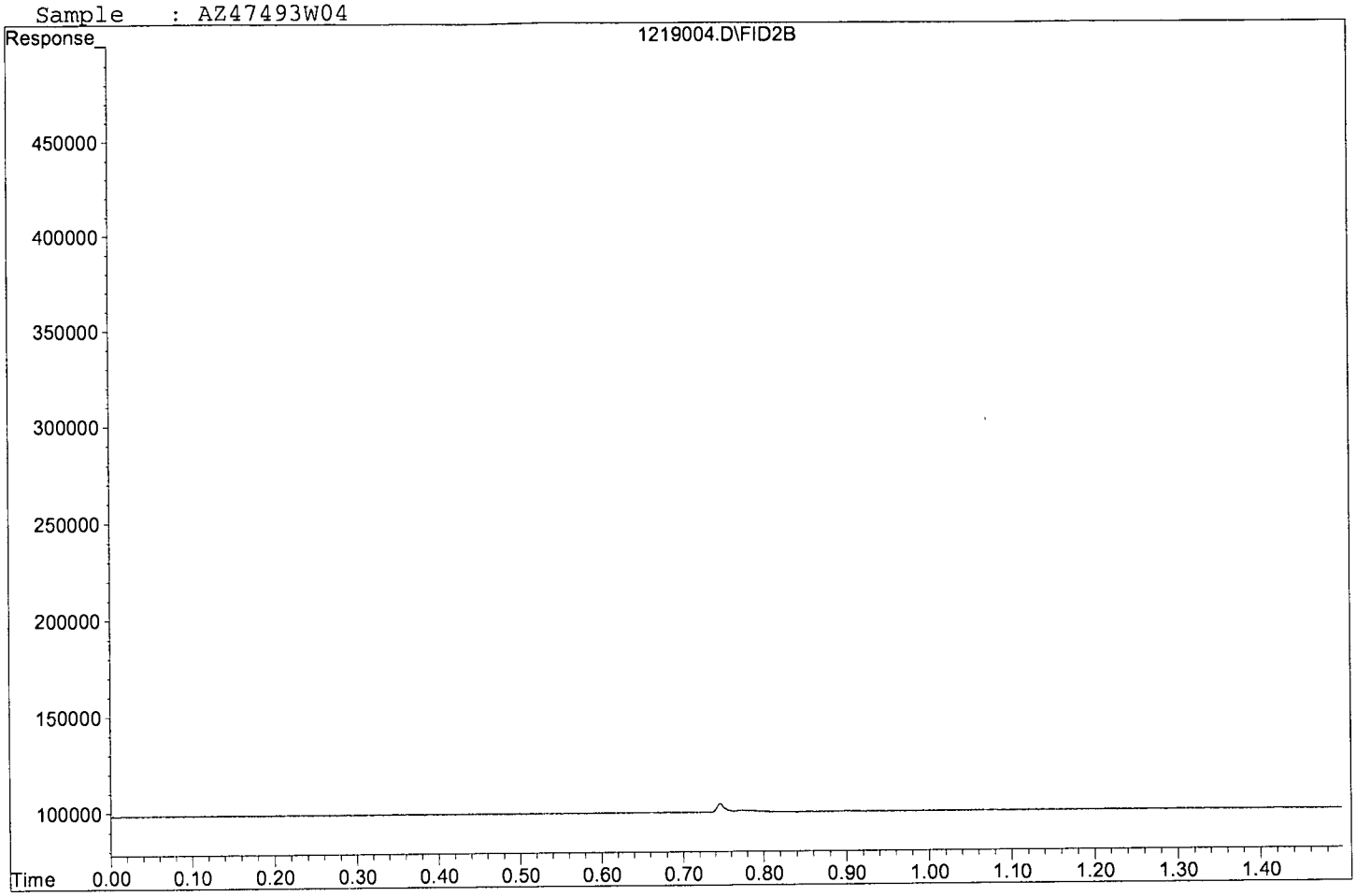
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Dec 21 11:57:46 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.75	4715	N.D.	ppb
2) ATM Ethane	0.90	517	N.D.	ppb
3) ATM Ethene	0.99	364	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1219004.D
Sample : AZ47493W04



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH139
Sample Collection Date: 12/12/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81760
APPL ID: AZ47494
QCG: #RSKME-161219A-214811

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	12/19/16	12/19/16

Quant Method:	RSK0901.M
Run #:	1219005
Instrument:	Rocky
Sequence:	160901
Dilution Factor:	1
Initials:	CMO

Printed: 12/21/16 12:40:23 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1219005.D Vial: 3
Acq On : 19 Dec 16 9:30 Operator: lac
Sample : AZ47494W06 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 21 12:53 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Dec 21 11:57:46 2016
Response via : Multiple Level Calibration

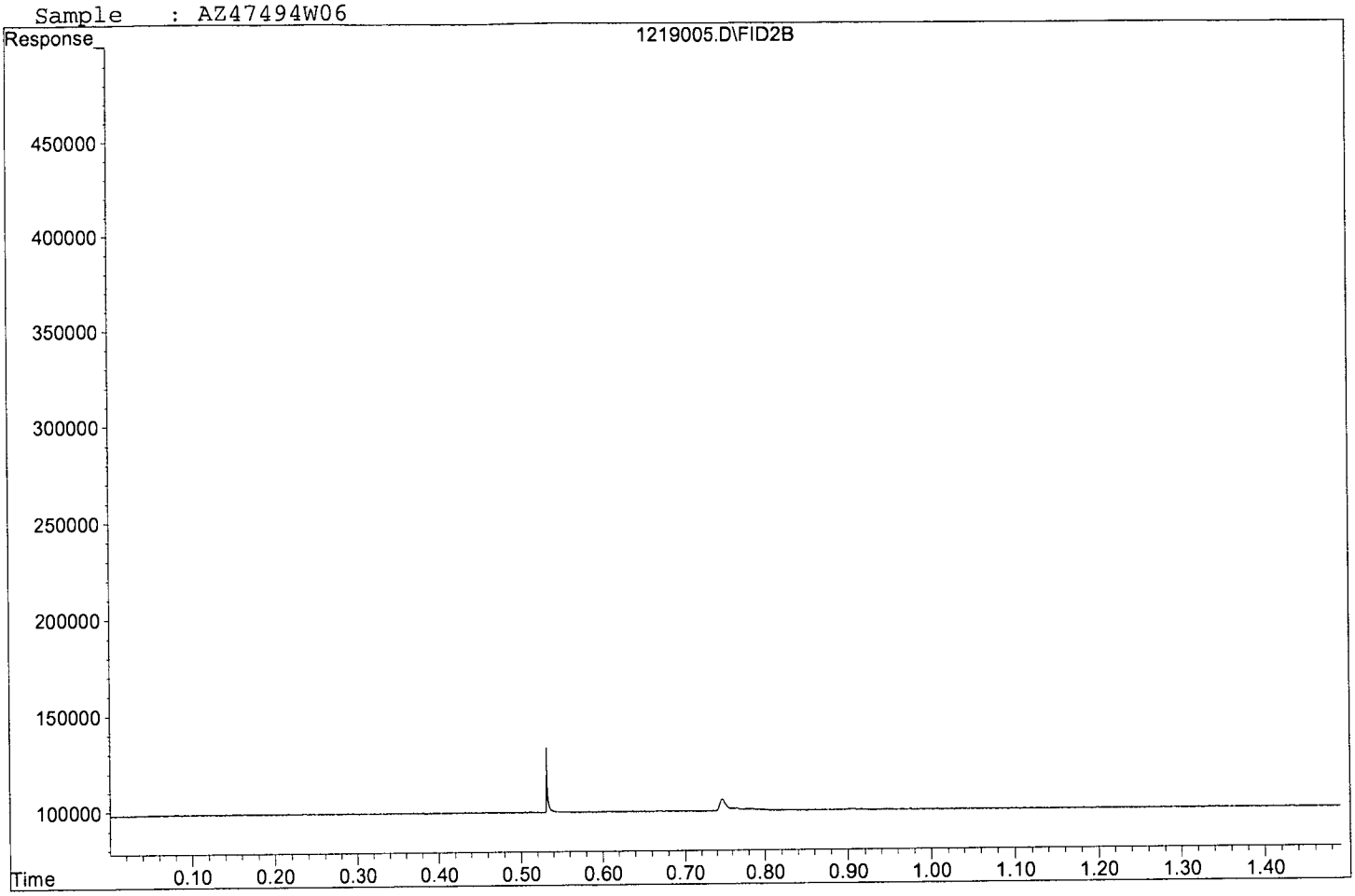
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.76	1885	N.D.	ppb
2) ATM Ethane	0.92	672	N.D.	ppb
3) ATM Ethene	1.00	513	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\ROCKY\DATA\160901R\1219005.D
Sample : AZ47494W06



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH136
Sample Collection Date: 12/12/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81760
APPL ID: AZ47495
QCG: #RSKME-161219A-214811

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	12/19/16	12/19/16

Quant Method:	RSK0901.M
Run #:	1219006
Instrument:	Rocky
Sequence:	160901
Dilution Factor:	1
Initials:	CMO

Printed: 12/21/16 12:40:23 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1219006.D Vial: 4
Acq On : 19 Dec 16 9:37 Operator: lac
Sample : AZ47495W05 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 21 12:53 2016 Quant Results File: RSK0901.RES

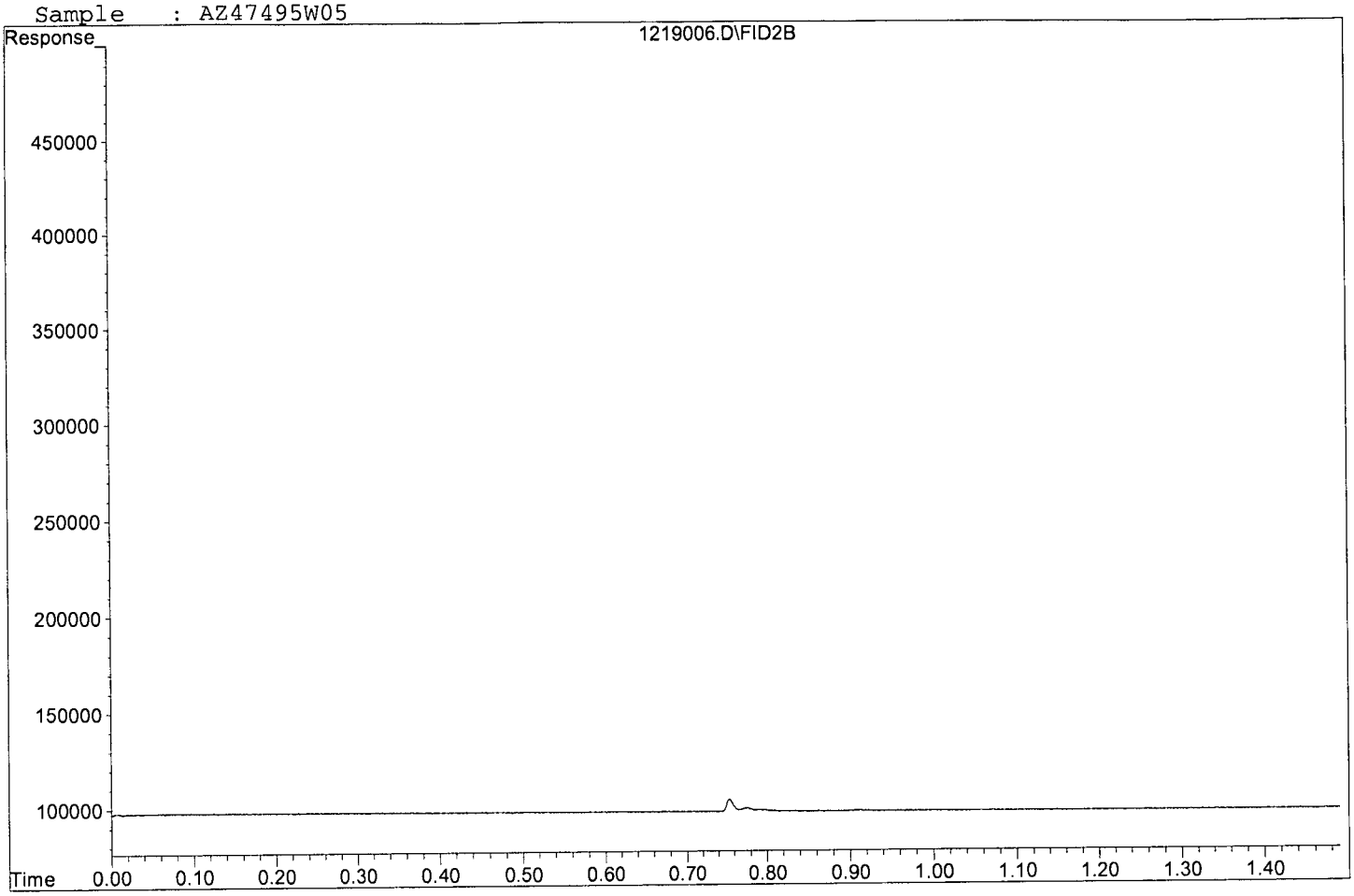
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Dec 21 11:57:46 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.75	6785	N.D.	ppb
2) ATM Ethane	0.91	942	N.D.	ppb
3) ATM Ethene	1.00	526	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1219006.D
Sample : AZ47495W05



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH143
Sample Collection Date: 12/13/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81760
APPL ID: AZ47496
QCG: #RSKME-161219A-214811

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	860	5.0	1.00	0.25	ug/L	12/19/16	12/19/16

Quant Method: RSK0901.M
Run #: 1219007
Instrument: Rocky
Sequence: 160901
Dilution Factor: 1
Initials: CMO

Printed: 12/21/16 12:40:23 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1219007.D Vial: 5
Acq On : 19 Dec 16 9:43 Operator: lac
Sample : AZ47496W06 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 21 12:53 2016 Quant Results File: RSK0901.RES

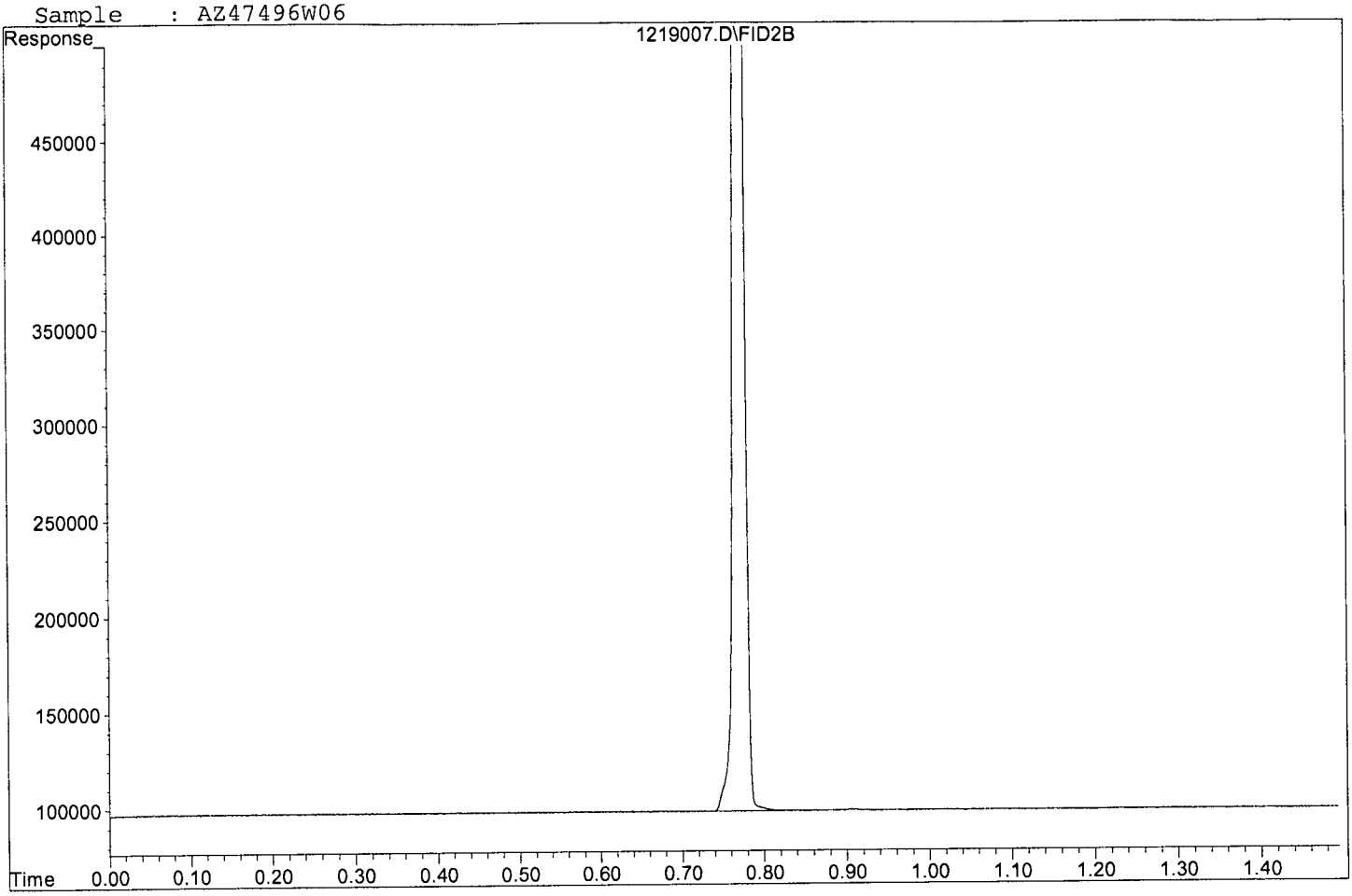
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Dec 21 11:57:46 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.77	948342	862.261	ppb
Target Compounds				
2) ATM Ethane	0.91	676	N.D.	ppb
3) ATM Ethene	1.00	363	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1219007.D
Sample : AZ47496W06



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH145
Sample Collection Date: 12/13/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81760
APPL ID: AZ47497
QCG: #RSKME-161219A-214811

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	12/19/16	12/19/16

Quant Method: RSK0901.M
Run #: 1219008
Instrument: Rocky
Sequence: 160901
Dilution Factor: 1
Initials: CMO

Printed: 12/21/16 12:40:23 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1219008.D Vial: 6
Acq On : 19 Dec 16 9:55 Operator: lac
Sample : AZ47497W06 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 21 12:53 2016 Quant Results File: RSK0901.RES

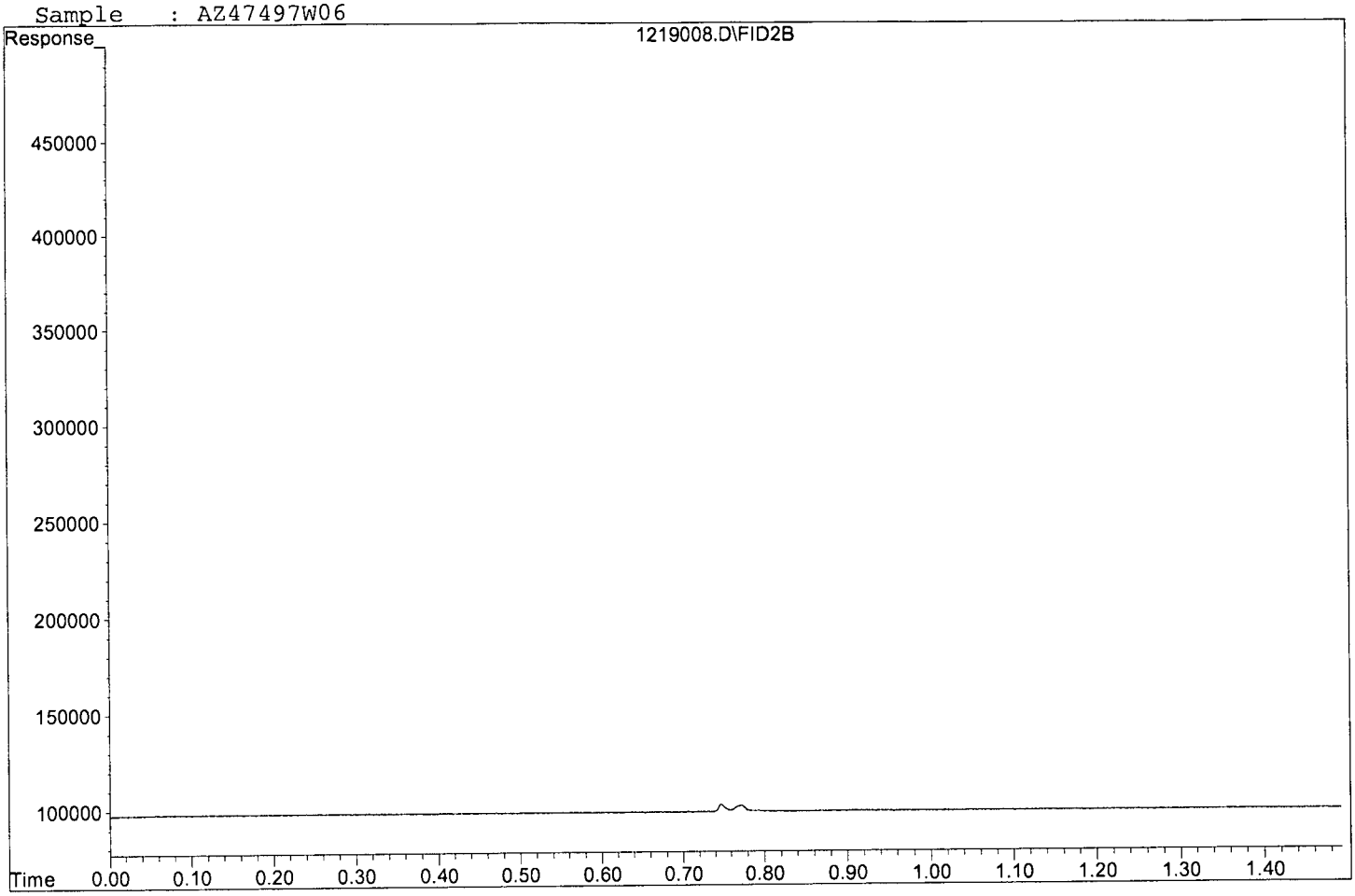
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Dec 21 11:57:46 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.75	4029	N.D.	ppb
2) ATM Ethane	0.91	507	N.D.	ppb
3) ATM Ethene	0.99	373	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1219008.D
Sample : AZ47497W06



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH146
Sample Collection Date: 12/12/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81760
APPL ID: AZ47498
QCG: #RSKME-161219A-214811

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	12/19/16	12/19/16

Quant Method: RSK0901.M
Run #: 1219009
Instrument: Rocky
Sequence: 160901
Dilution Factor: 1
Initials: CMO

Printed: 12/21/16 12:40:23 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1219009.D Vial: 7
Acq On : 19 Dec 16 10:01 Operator: lac
Sample : AZ47498W06 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 21 12:53 2016 Quant Results File: RSK0901.RES

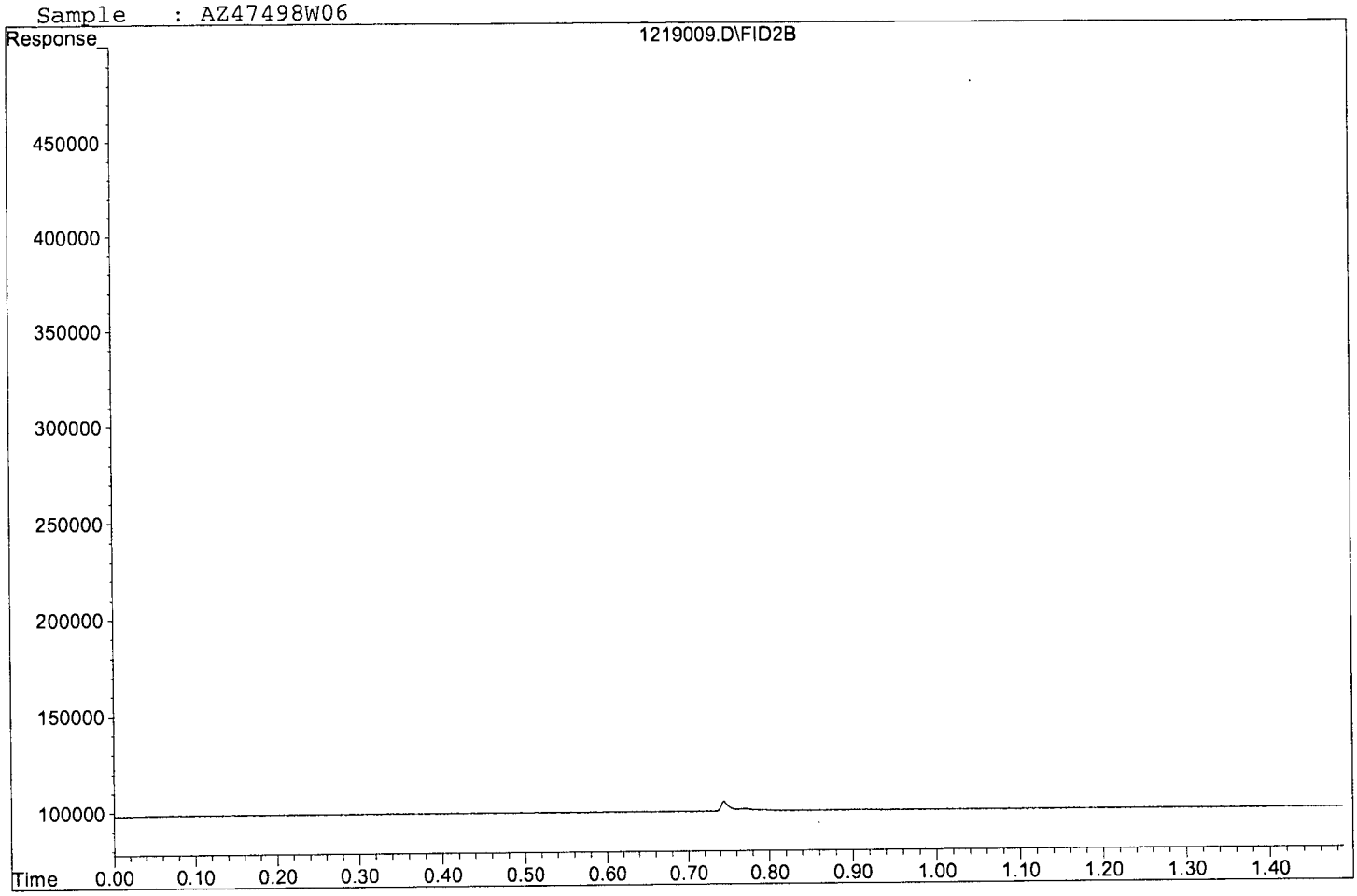
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Dec 21 11:57:46 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.76	1118	N.D.	ppb
2) ATM Ethane	0.91	438	N.D.	ppb
3) ATM Ethene	1.00	223	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1219009.D
Sample : AZ47498W06



ORGANICS
Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:
SDG No:
Initial Cal. Date: 09/01/16
Instrument: 7890
Initials:

		Compound	1	2	3	4	5	6	7	8	9	10	Avg	%RSD		
			0901000.D	0901001.D	0901002.D	0901003.D	0901004.D	0901005.D	0901006.D	0901007.D	0901008.D	0901009.D				
1	ATM	Methane	7448	5672	3042	3435	1074	1006	1184	1314	1084	1089	2635	87	ATM	
2	ATM	Ethane	1509	1521	1416	2554	478	657	816	933	791	798	1147	54	ATM	
3	ATM	Ethene	1826	1525	1280	2301	444	570	693	733	628	626	1063	60	ATM	
4																
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8																
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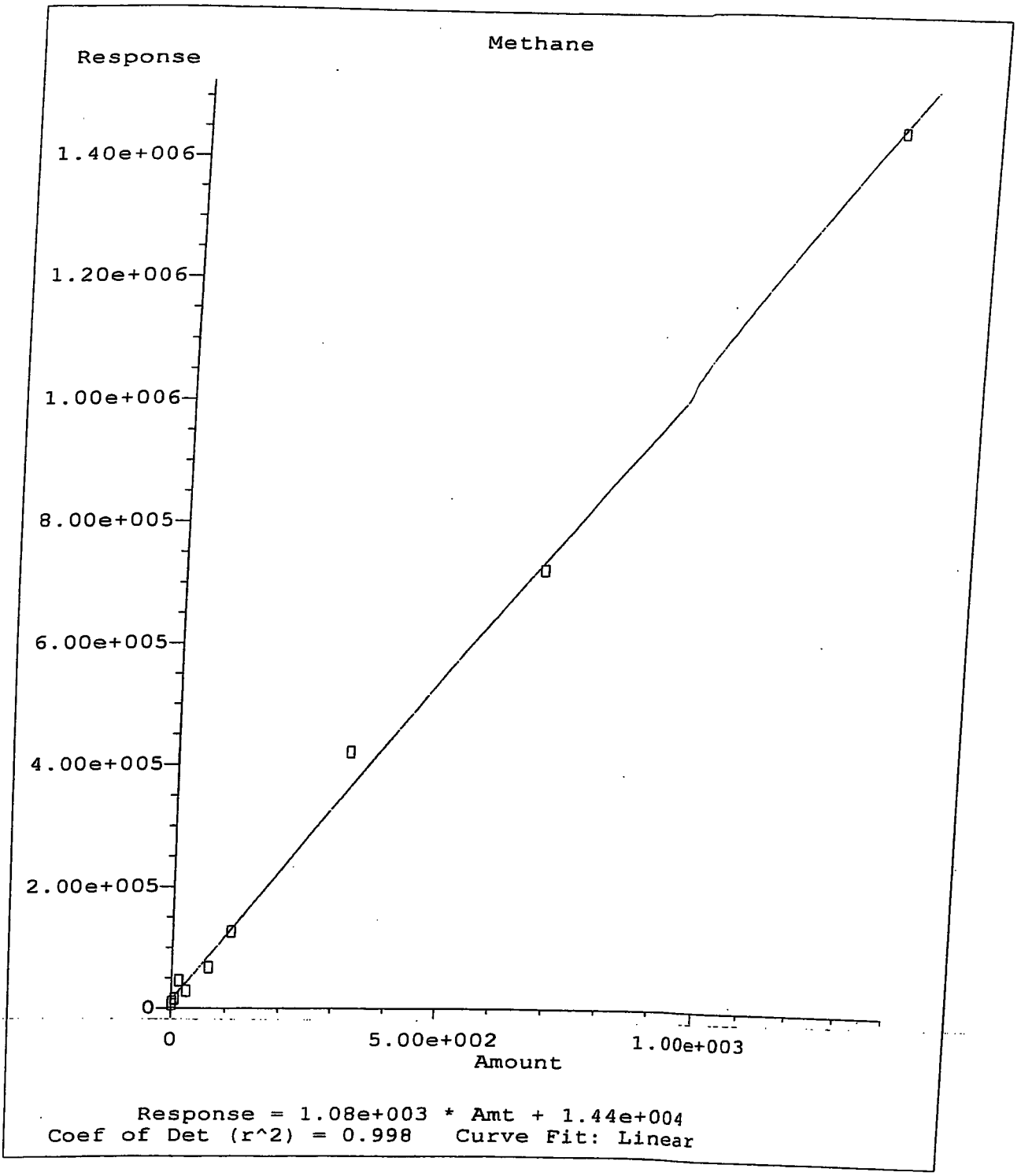
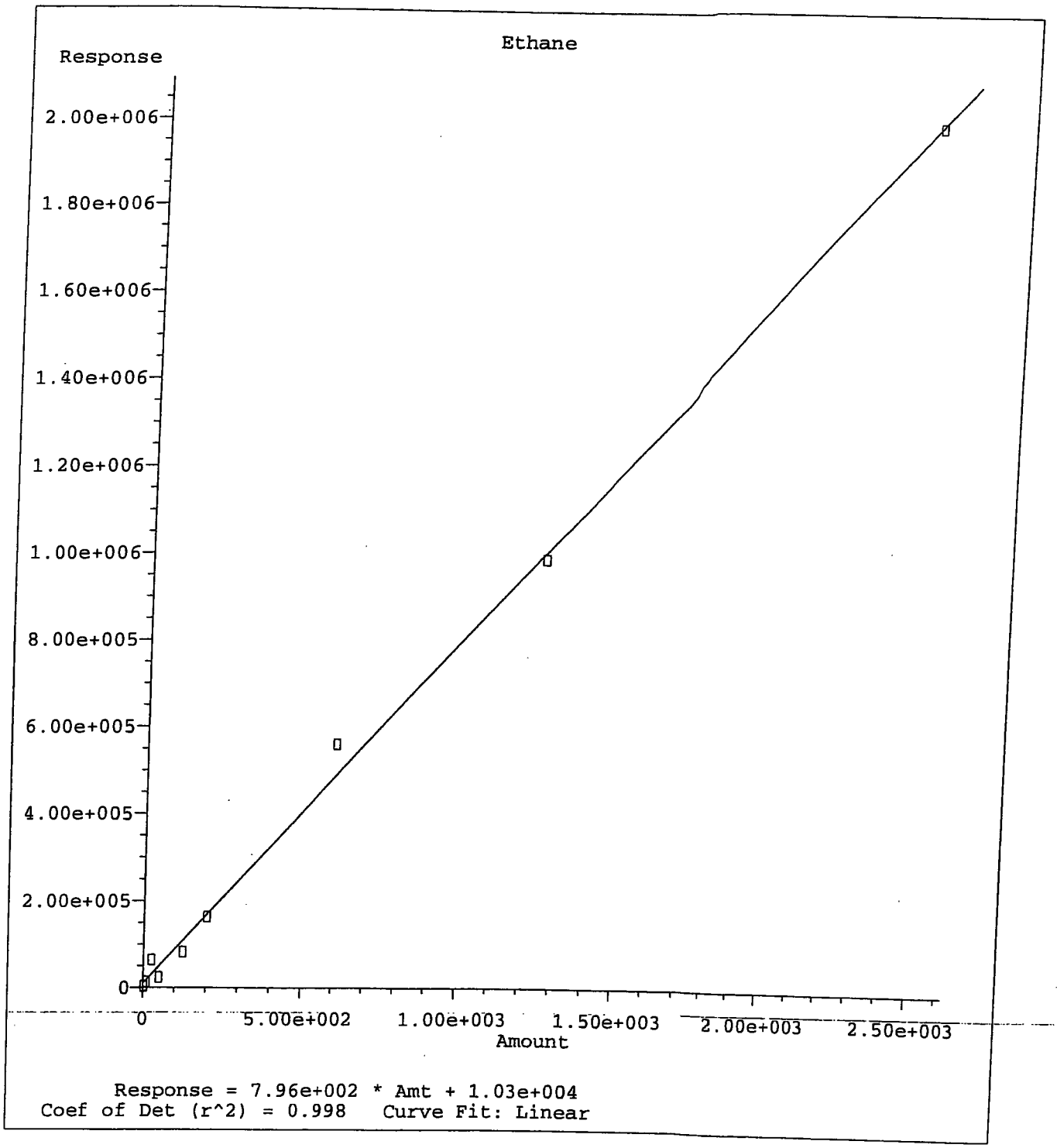
5.7170224

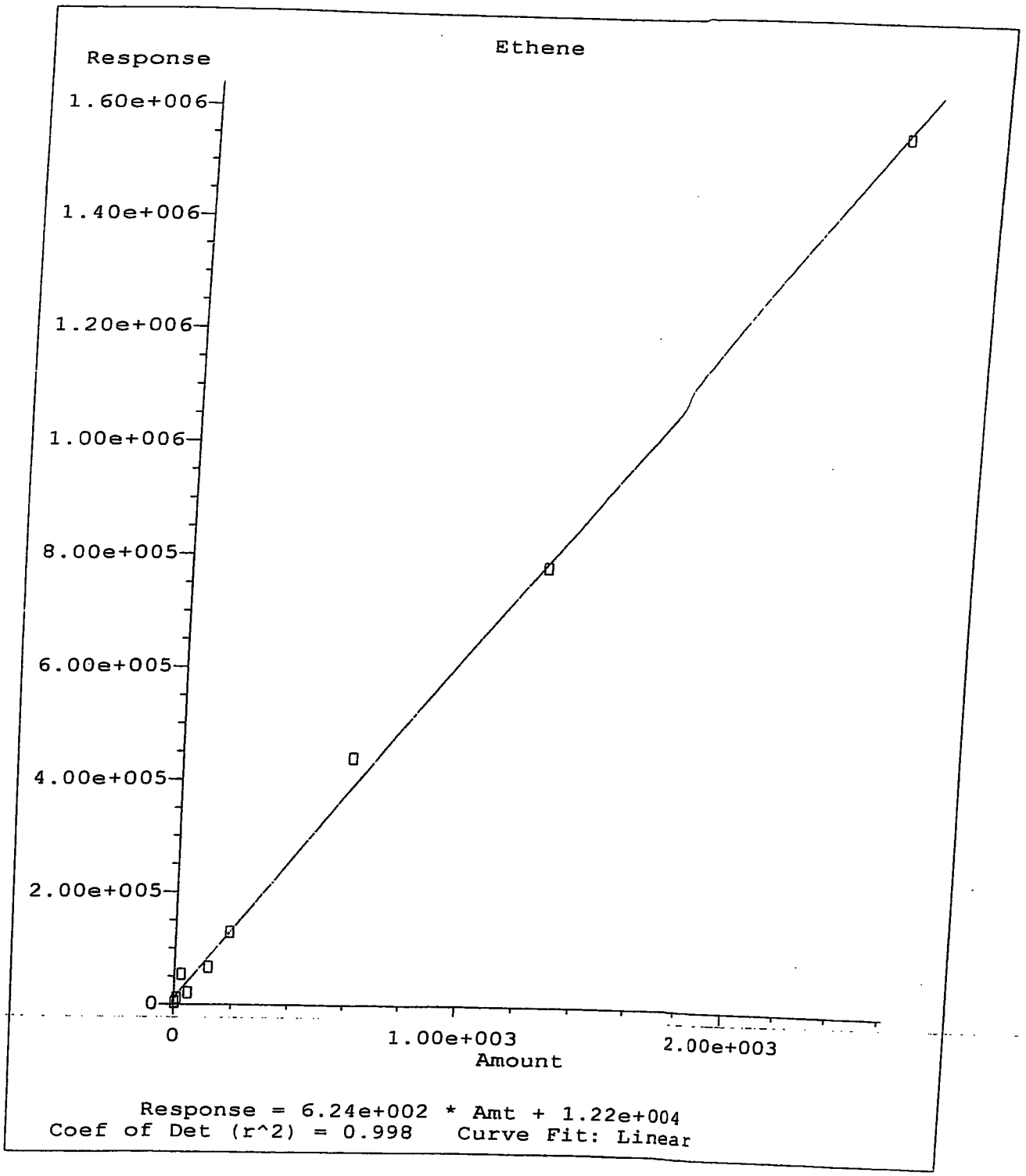
FORM61



Method Name: G:\ROCKY\DATA\160901R\RSK0901.M
Calibration Table Last Updated: Fri Sep 02 15:25:38 2016



Method Name: G:\ROCKY\DATA\160901R\RSK0901.M
Calibration Table Last Updated: Thu Nov 10 08:49:51 2016



Method Name: G:\ROCKY\DATA\160901R\RSK0901.M
Calibration Table Last Updated: Fri Sep 02 15:25:38 2016

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901000.D
Acq On : 1 Sep 16 11:38
Sample : RSK Level 1 08/15/16
Misc :
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Vial: 1
Operator: lac
Inst : 7890
Multiplr: 1.00

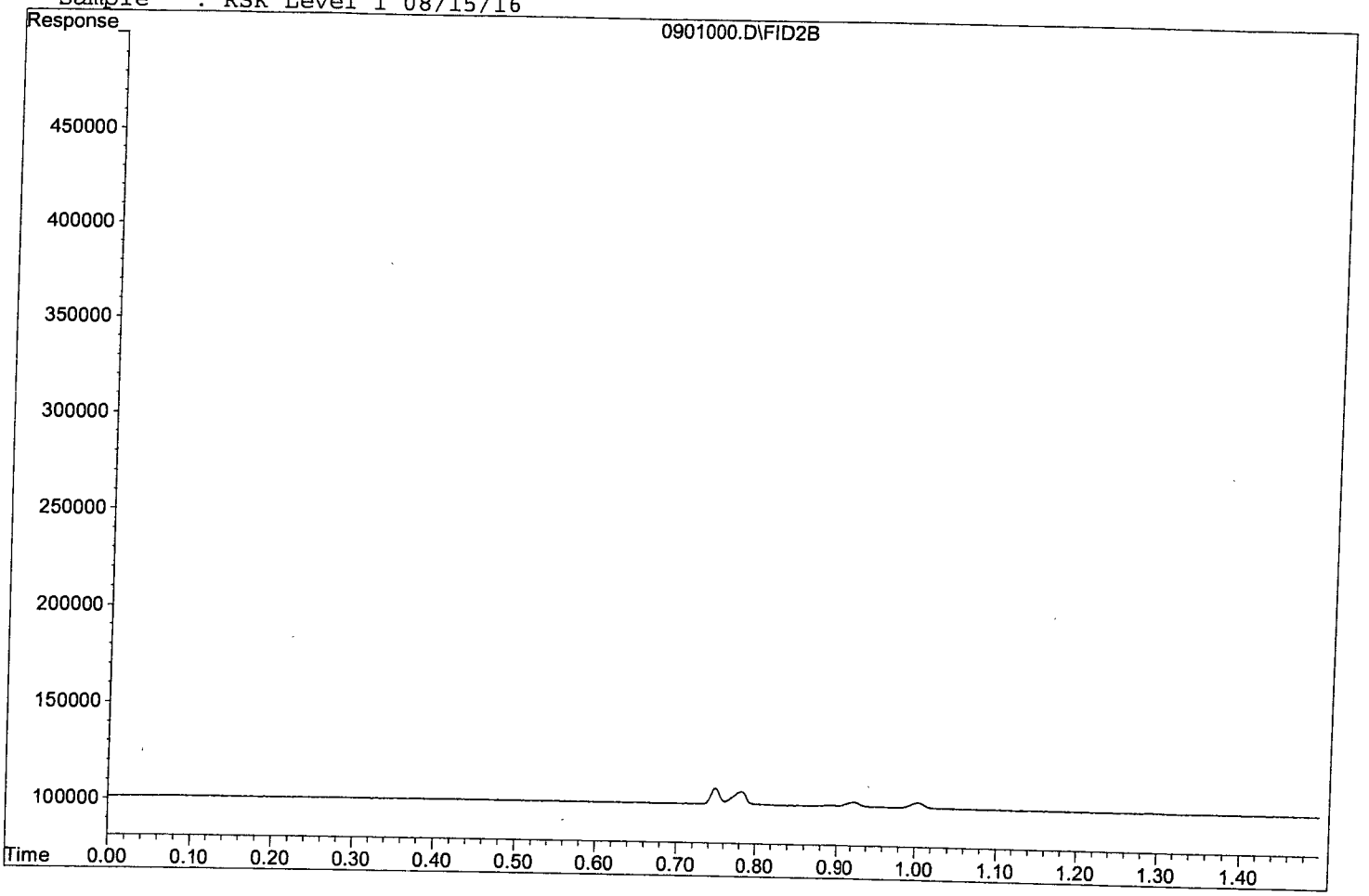
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.78	6703	N.D.	ppb
2) ATM Ethane	0.92	2566	N.D.	ppb
3) ATM Ethene	1.00	2922	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901000.D
Sample : RSK Level 1 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901001.D Vial: 2
Acq On : 1 Sep 16 11:41 Operator: lac
Sample : RSK Level 2 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

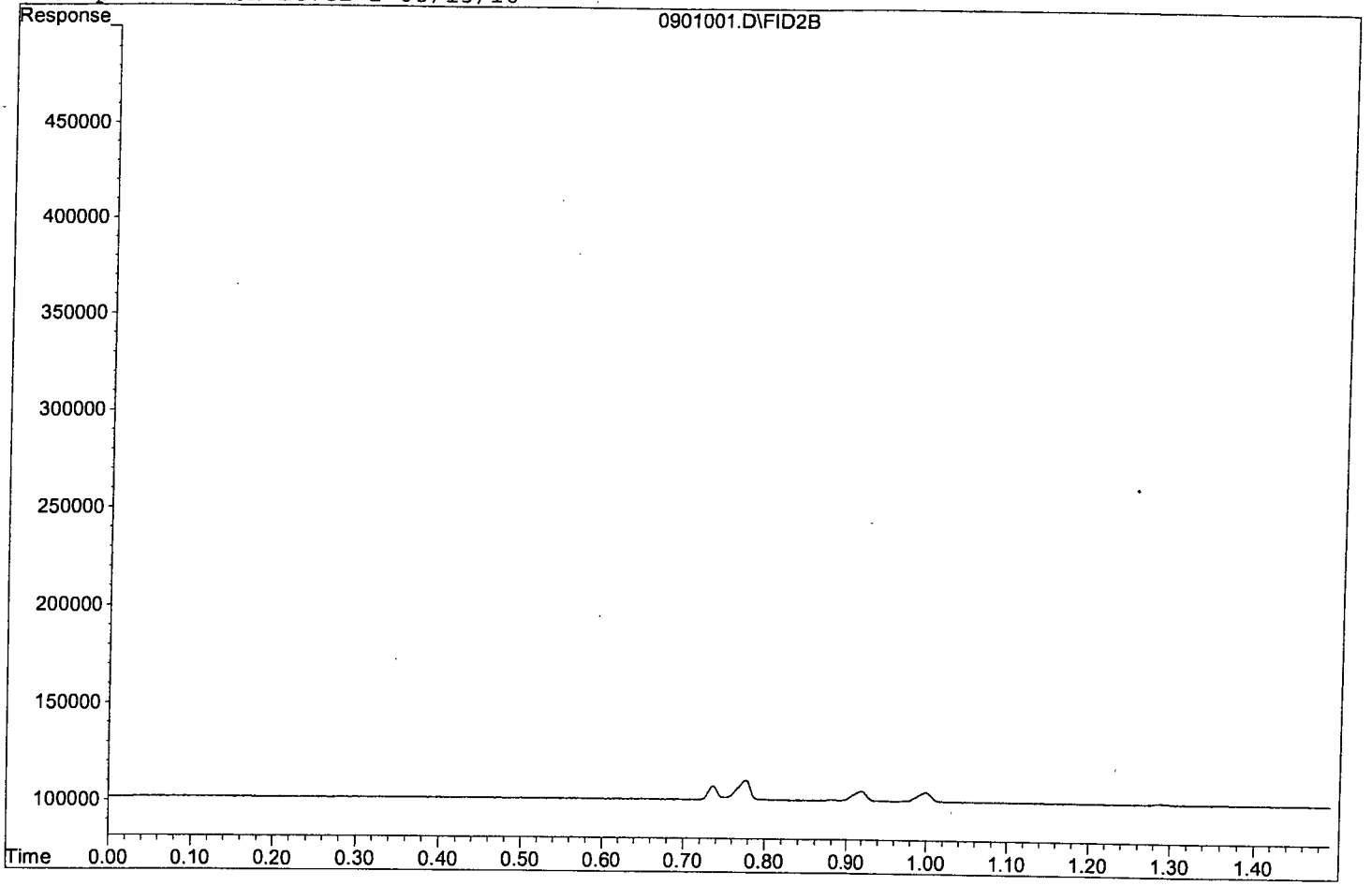
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.79	569	N.D.	ppb
2) ATM Ethane	0.94	352	N.D.	ppb
3) ATM Ethene	1.02	250	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\ROCKY\DATA\160901R\0901001.D
Sample : RSK Level 2 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901002.D Vial: 3
Acq On : 1 Sep 16 11:44 Operator: lac
Sample : RSK Level 3 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 14 13:31 2016 Quant Results File: RSK0901.RES

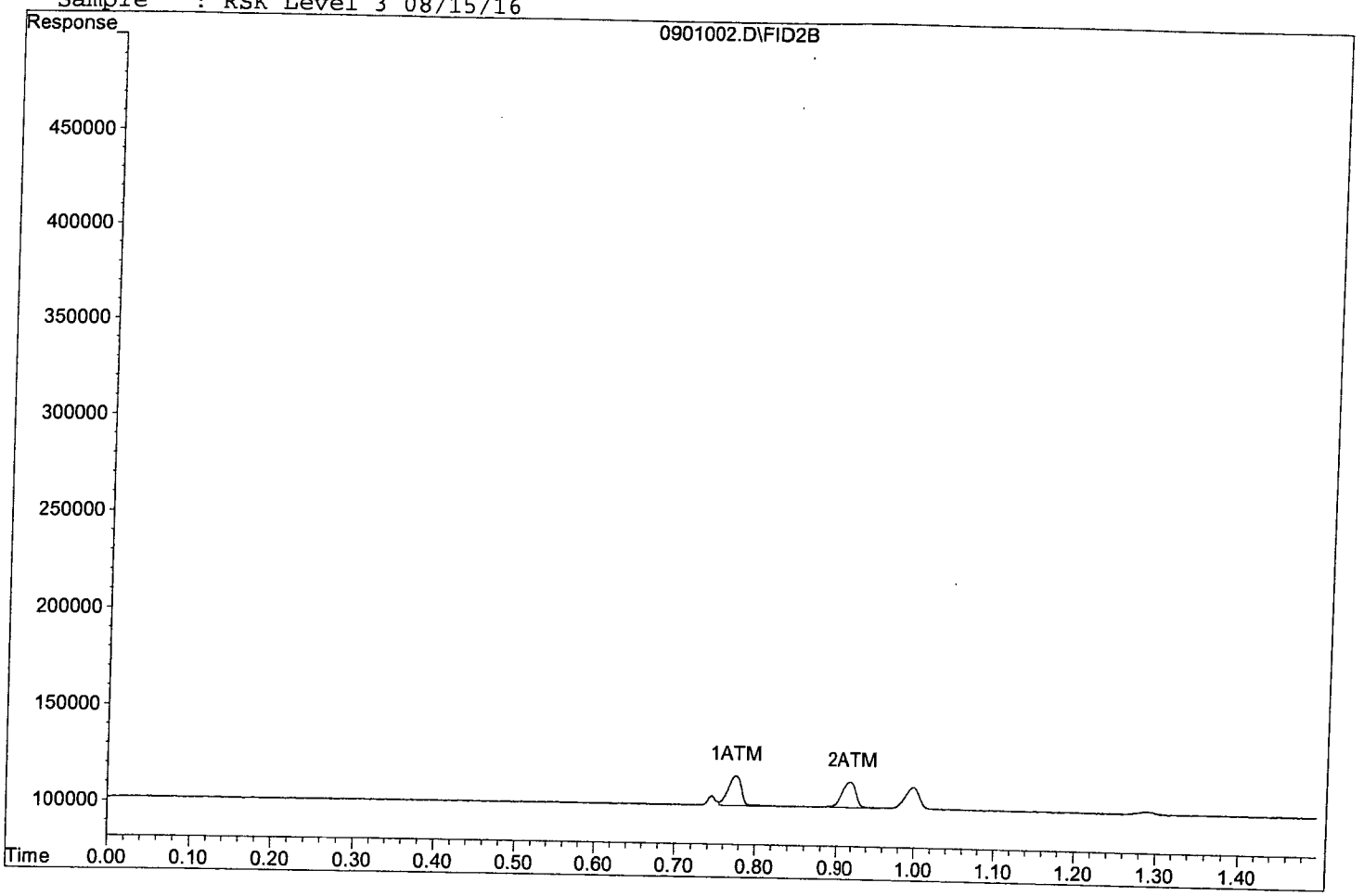
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.77	15515	1.054	ppb
2) ATM Ethane	0.92	13452	3.912	ppb
Target Compounds				
3) ATM Ethene	1.00	11390	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901002.D
Sample : RSK Level 3 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901003.D Vial: 4
Acq On : 1 Sep 16 11:46 Operator: lac
Sample : RSK Level 4 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

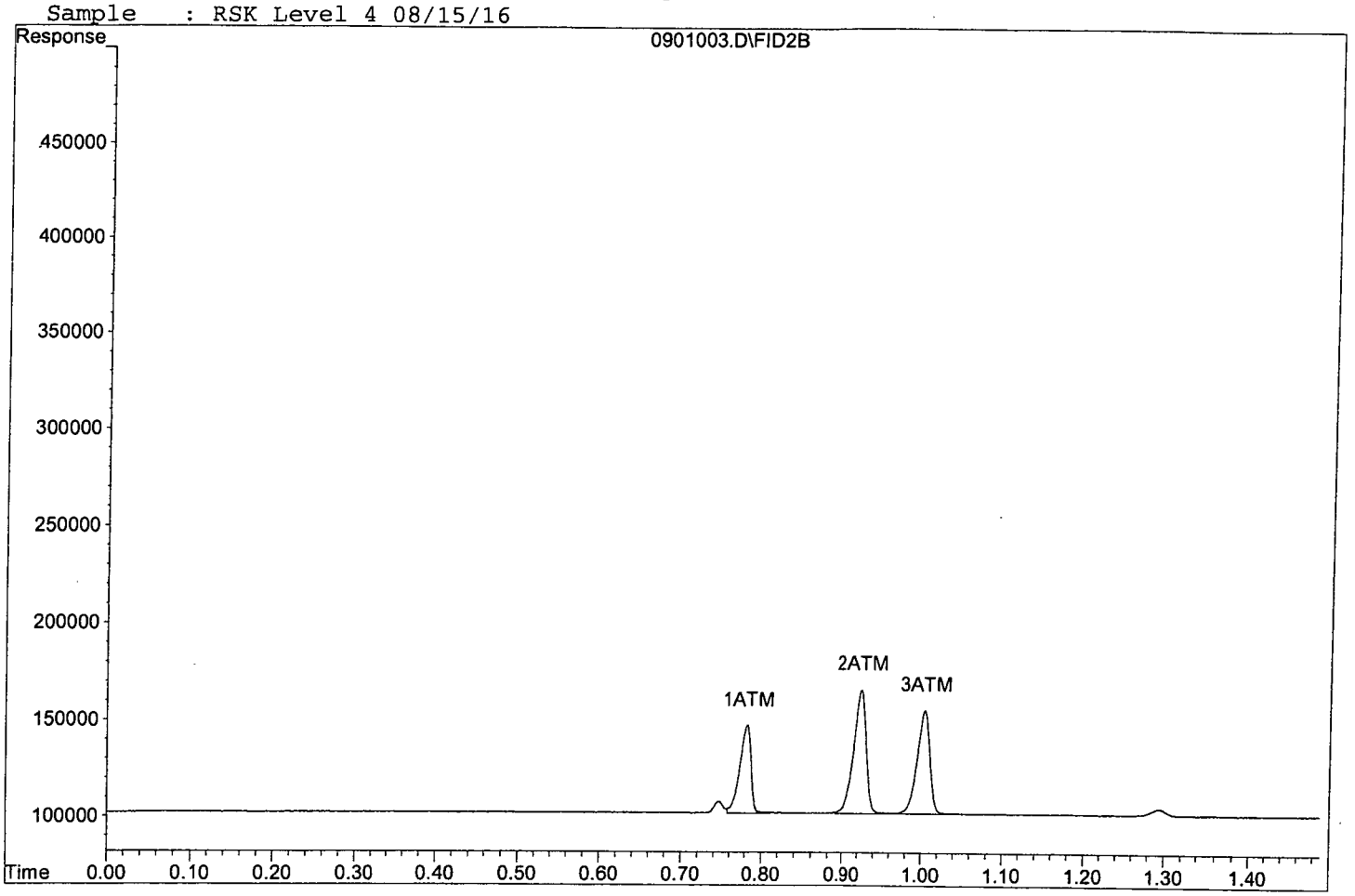
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.78	45792	29.006 ppb
2) ATM Ethane	0.92	63853	67.197 ppb
3) ATM Ethene	1.00	53608	66.354 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901003.D
Sample : RSK Level 4 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901004.D Vial: 5
Acq On : 1 Sep 16 11:48 Operator: lac
Sample : RSK Level 5 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

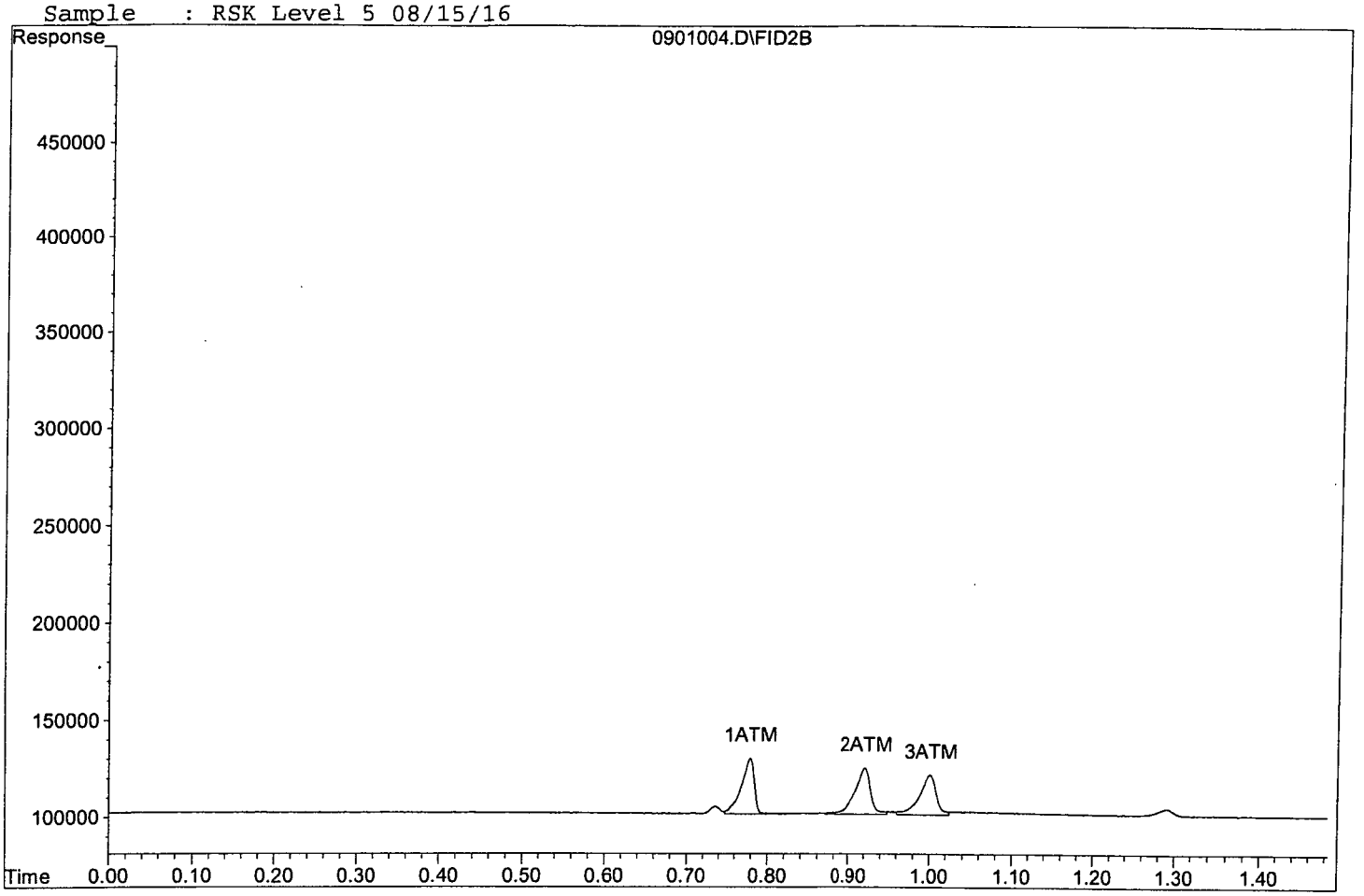
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.78	28664	13.193 ppb
2) ATM Ethane	0.92	23891	17.020 ppb
3) ATM Ethene	1.00	20700	13.631 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901004.D
Sample : RSK Level 5 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901005.D Vial: 6
Acq On : 1 Sep 16 11:50 Operator: lac
Sample : RSK Level 6 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

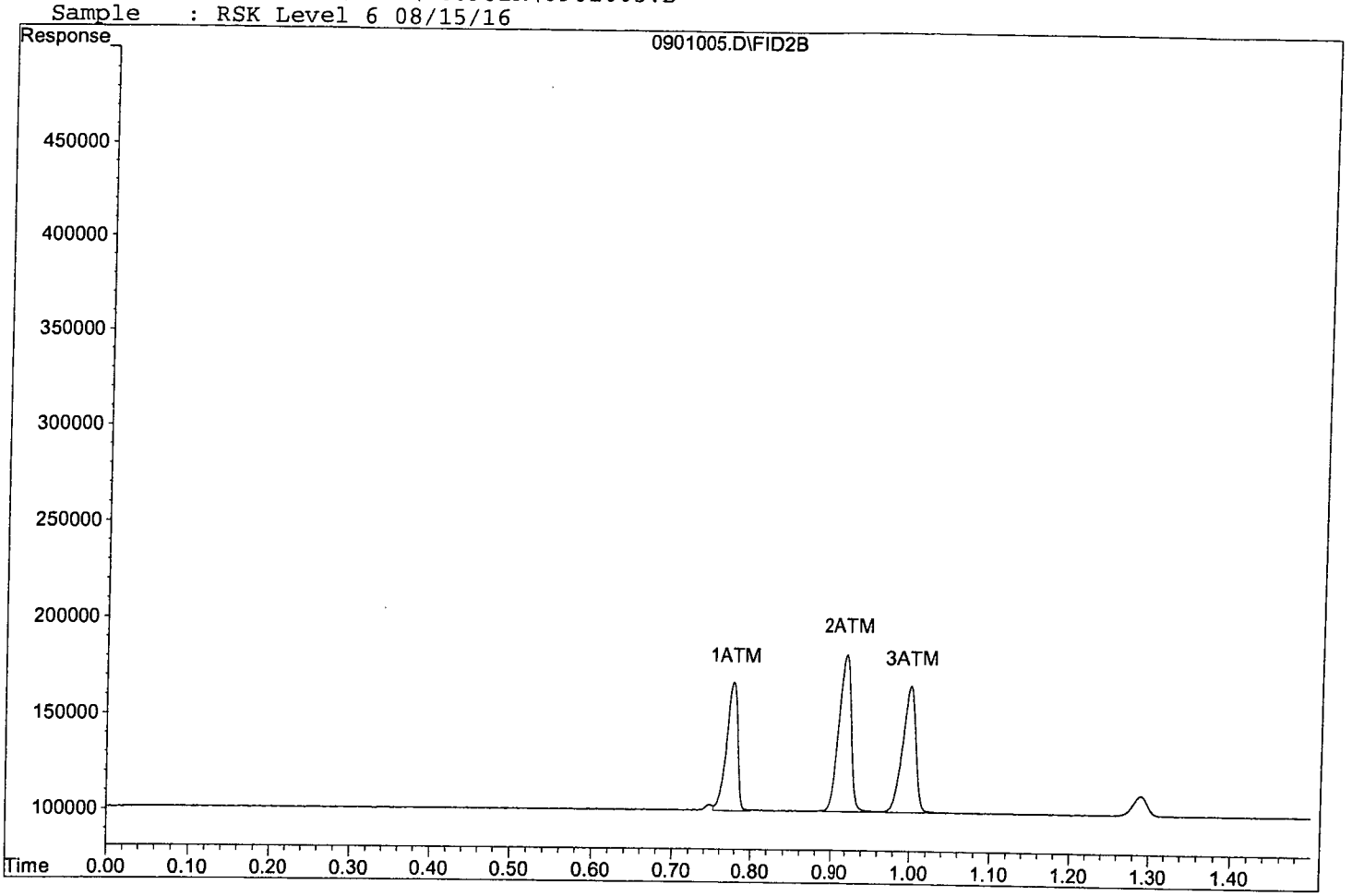
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.78	67137	48.712 ppb
2) ATM Ethane	0.92	82167	90.193 ppb
3) ATM Ethene	1.00	66348	86.764 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901005.D
Sample : RSK Level 6 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901006.D Vial: 7
Acq On : 1 Sep 16 11:52 Operator: lac
Sample : RSK Level 7 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

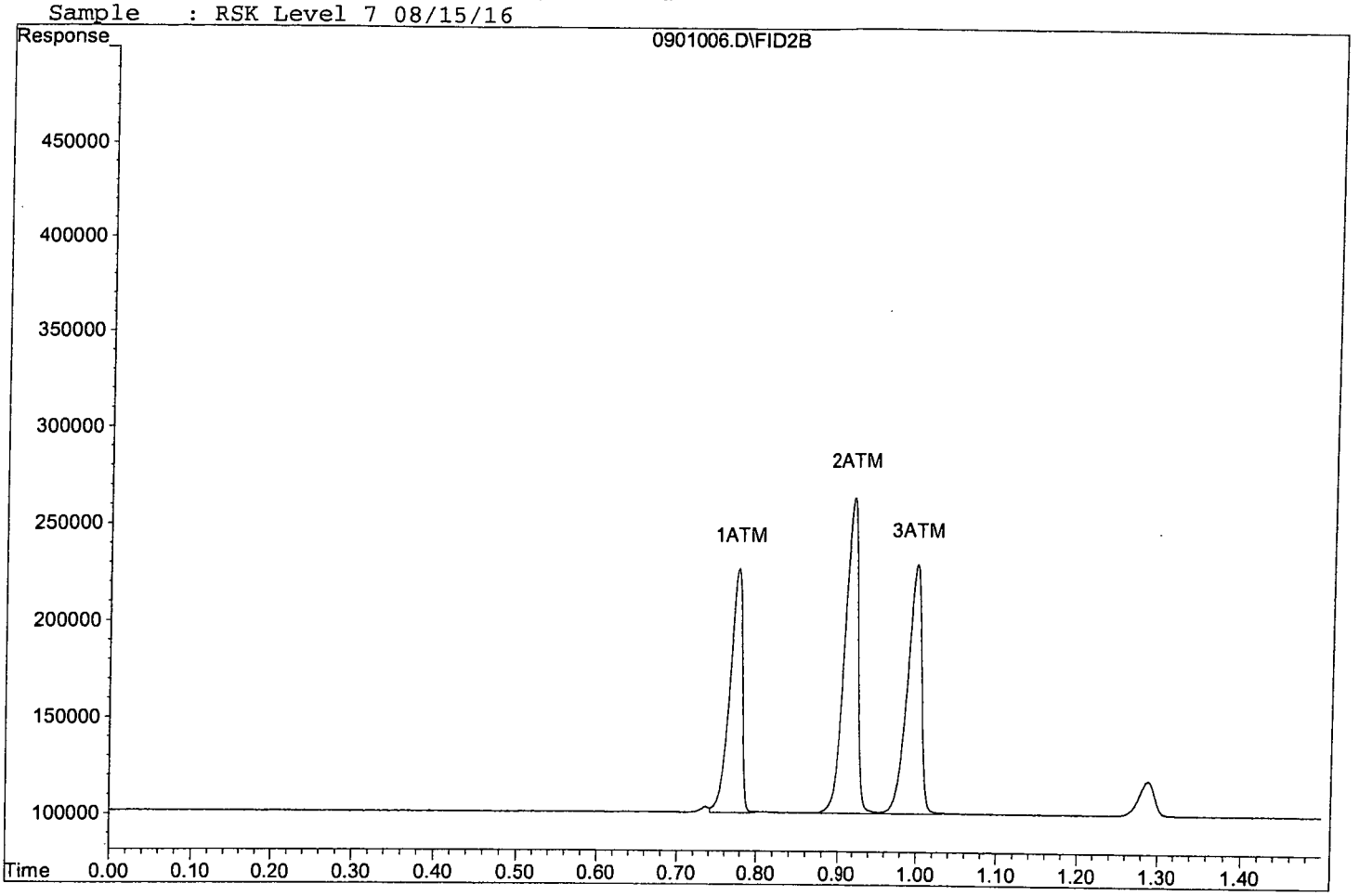
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.78	126422	103.446 ppb
2) ATM Ethane	0.92	163281	192.041 ppb
3) ATM Ethene	1.00	129200	187.460 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901006.D
Sample : RSK Level 7 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901007.D Vial: 8
Acq On : 1 Sep 16 11:55 Operator: lac
Sample : RSK Level 8 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

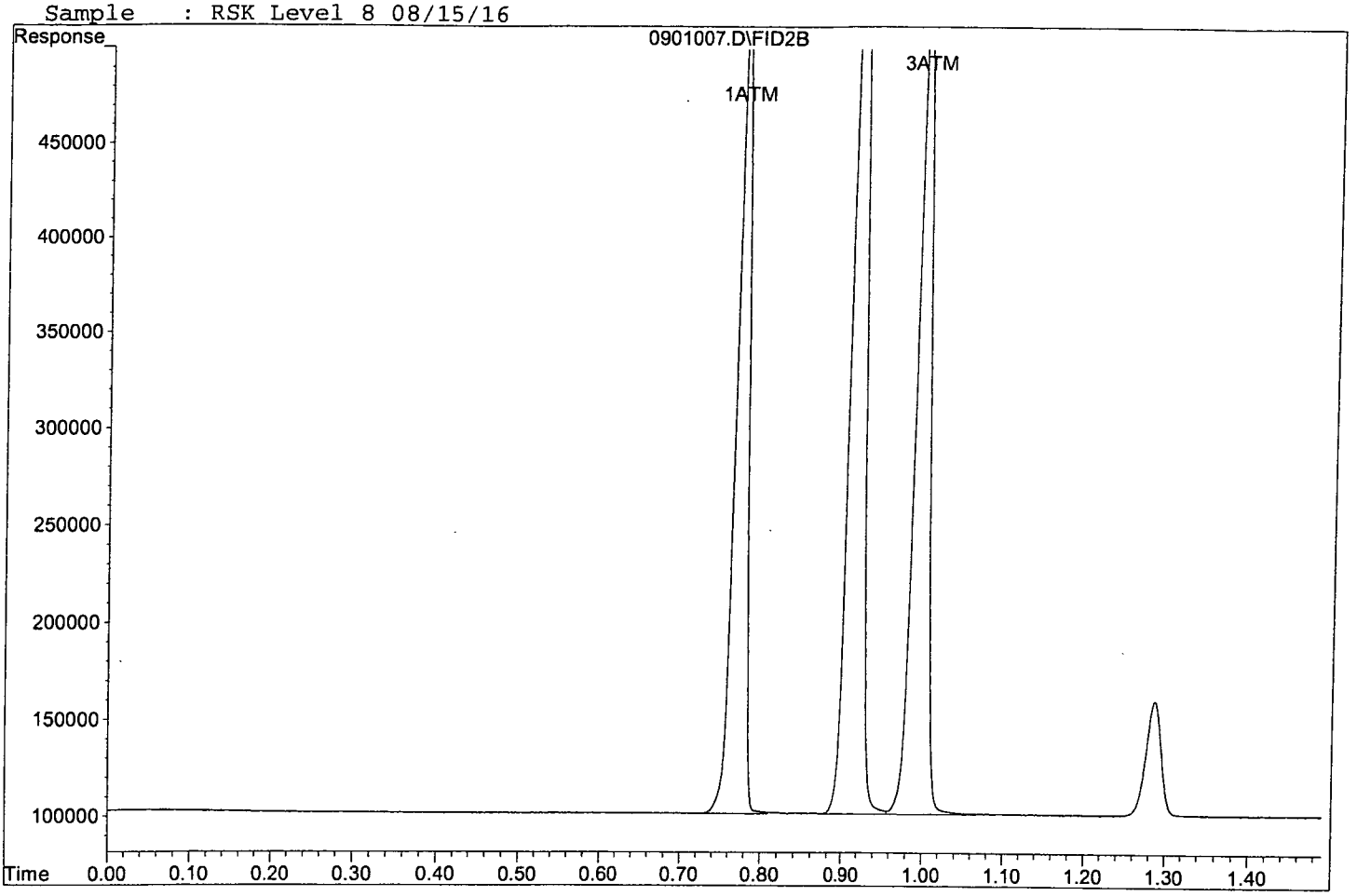
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.77	421052	375.455 ppb
2) ATM Ethane	0.92	559640	689.720 ppb
3) ATM Ethene	1.00	439383	684.403 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901007.D
Sample : RSK Level 8 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901008.D Vial: 9
Acq On : 1 Sep 16 11:57 Operator: lac
Sample : RSK Level 9 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

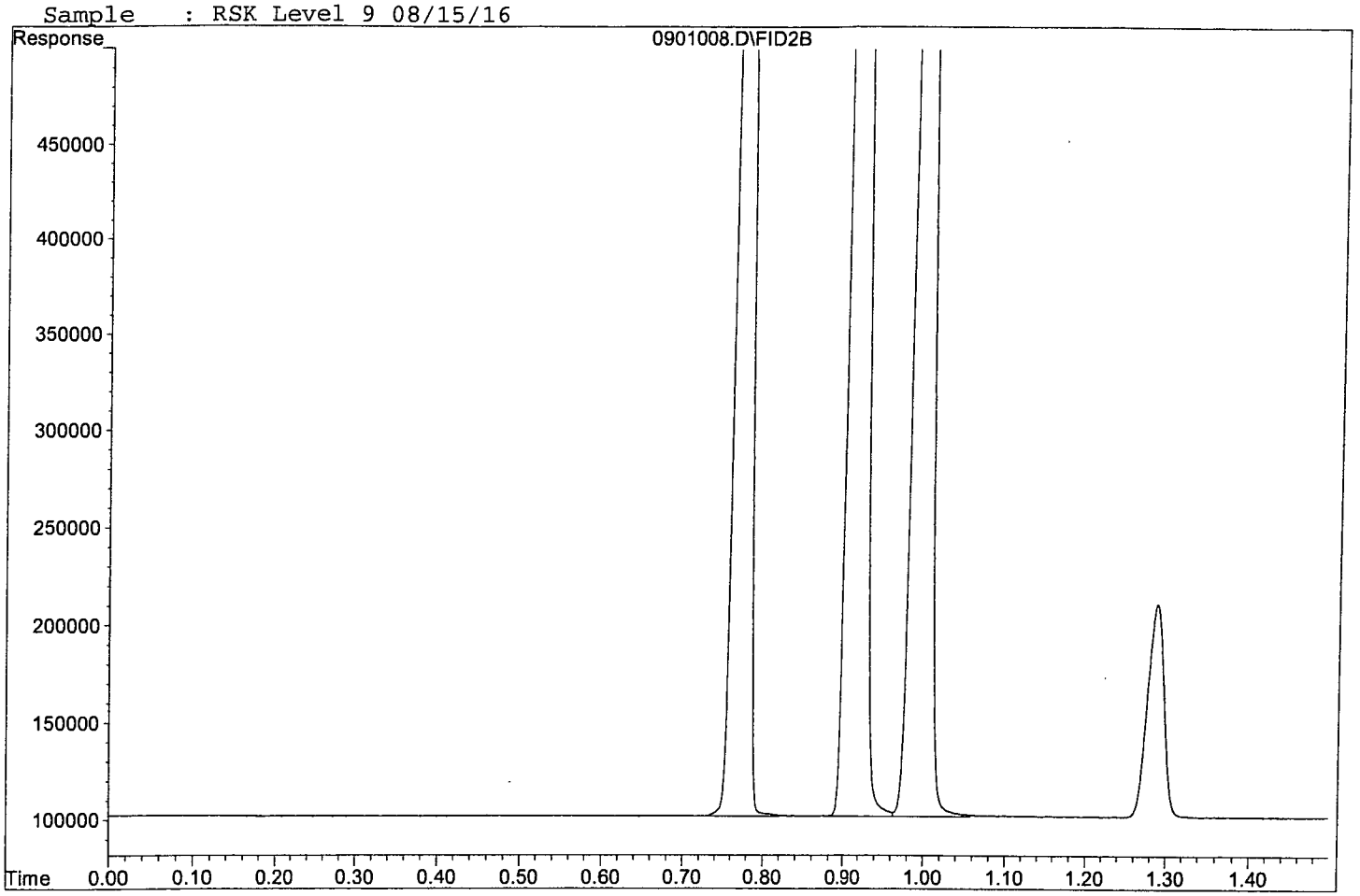
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.78	723824	654.982	ppb
2) ATM Ethane	0.92	989344	1229.268	ppb
3) ATM Ethene	1.00	783615	1235.897	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901008.D
Sample : RSK Level 9 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901009.D Vial: 10
Acq On : 1 Sep 16 11:59 Operator: lac
Sample : RSK Level 10 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

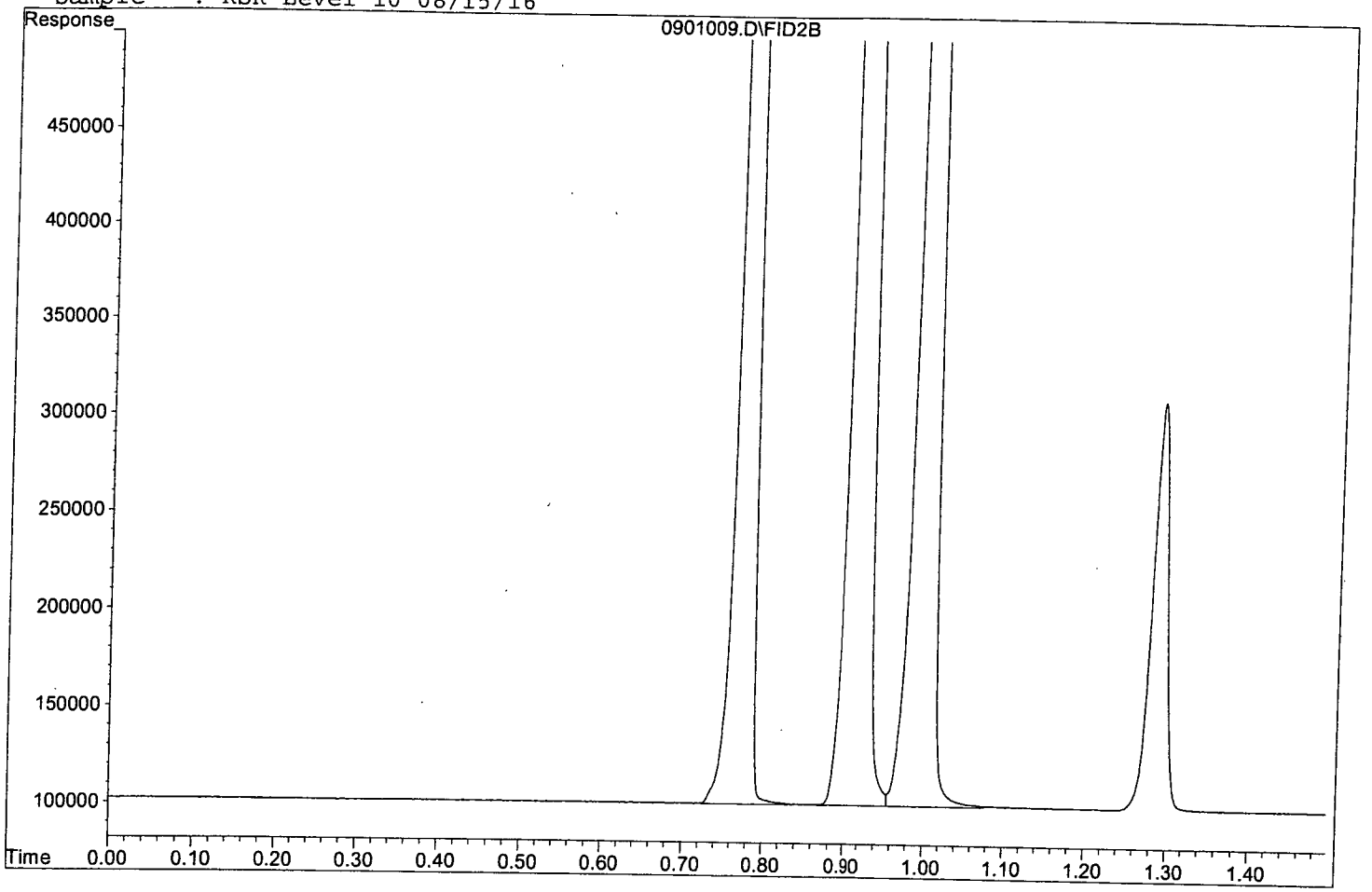
Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.78	1454283	1329.358	ppb
2) ATM Ethane	0.92	1994598	2491.490	ppb
3) ATM Ethene	1.00	1562244	2483.337	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\ROCKY\DATA\160901R\0901009.D
Sample : RSK Level 10 08/15/16



Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 1 Sep 16 13:11
Instrument: 7890
Initial Cal. Date: 09/01/16
Data File: 0901018.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	2635	1090	59	ATML	19
2	ATML	Ethane	1147	964	16	ATML	11
3	ATML	Ethene	1063	853	20	ATML	20
4							
5							
6							
7							
8							
9							
10							
11							
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31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			31.7		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901018.D
Acq On : 1 Sep 16 13:11
Sample : (SS/LCS) RSK Level 6 09/01/16
Misc :
IntFile : autoint1.e
Quant Time: Sep 1 13:16 2016 Quant Results File: RSK0901.RES

Vial: 19
Operator: lac
Inst : 7890
Multiplr: 1.00

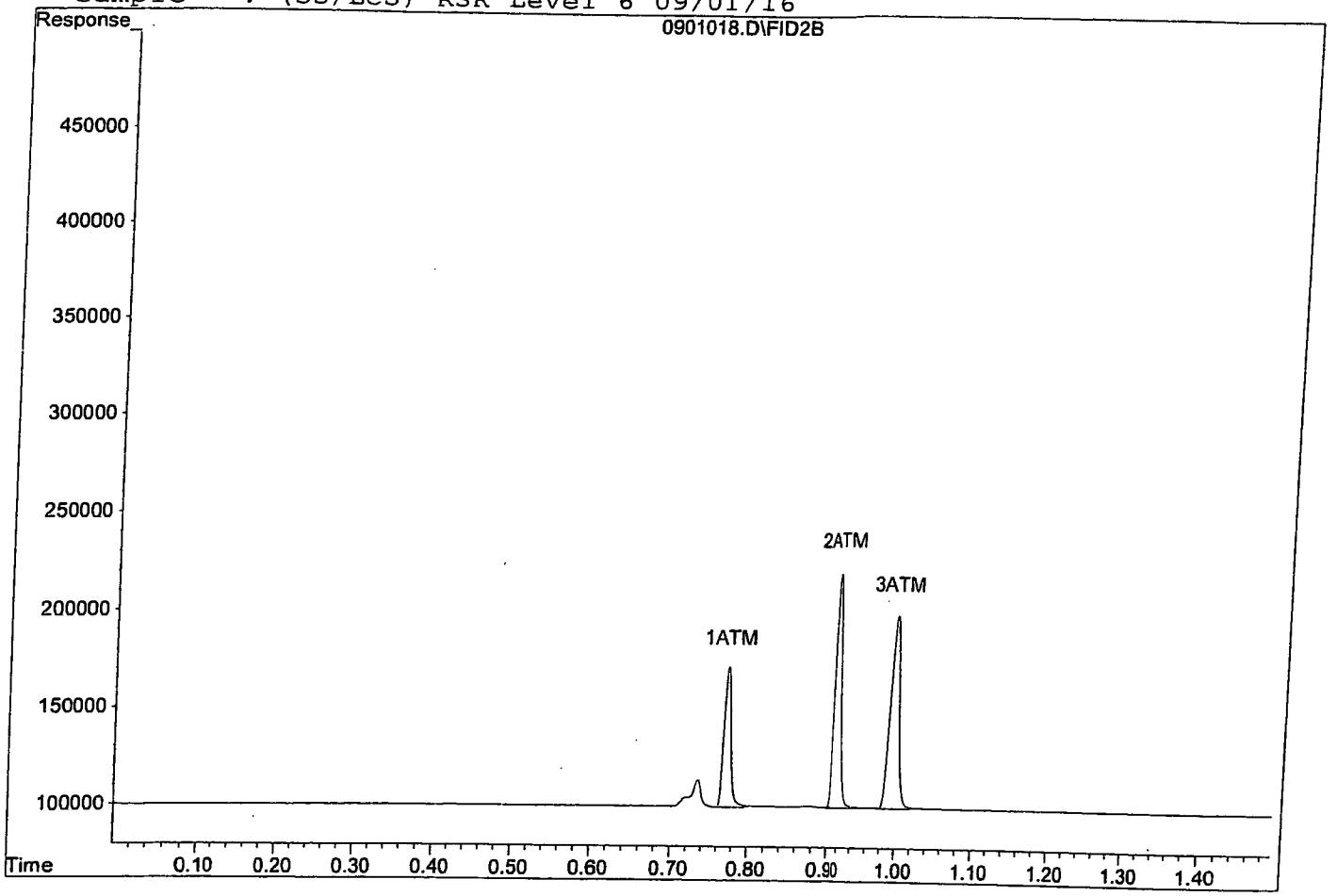
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Thu Sep 01 14:40:19 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.77	72750	53.894 ppb
2) ATM Ethane	0.91	120545	138.382 ppb
3) ATM Ethene	0.99	99349	139.636 ppb

Quantitation Report

Data File: G:\ROCKY\DATA\160901R\0901018.D
Sample : (SS/LCS) RSK Level 6 09/01/16



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/19/16
Instrument: 7890
Initial Cal. Date: 09/01/16
Data File: 1219001.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	2635	1022	61	ATML	6.6
2	ATML	Ethane	1147	726	37	ATML	9.3
3	ATML	Ethene	1063	545	49	ATML	13
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			49.0		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1219001.D Vial: 2
Acq On : 19 Dec 16 7:07 Operator: lac
Sample : 161219A LCS/CCV RSK Level 10 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 21 12:53 2016 Quant Results File: RSK0901.RES

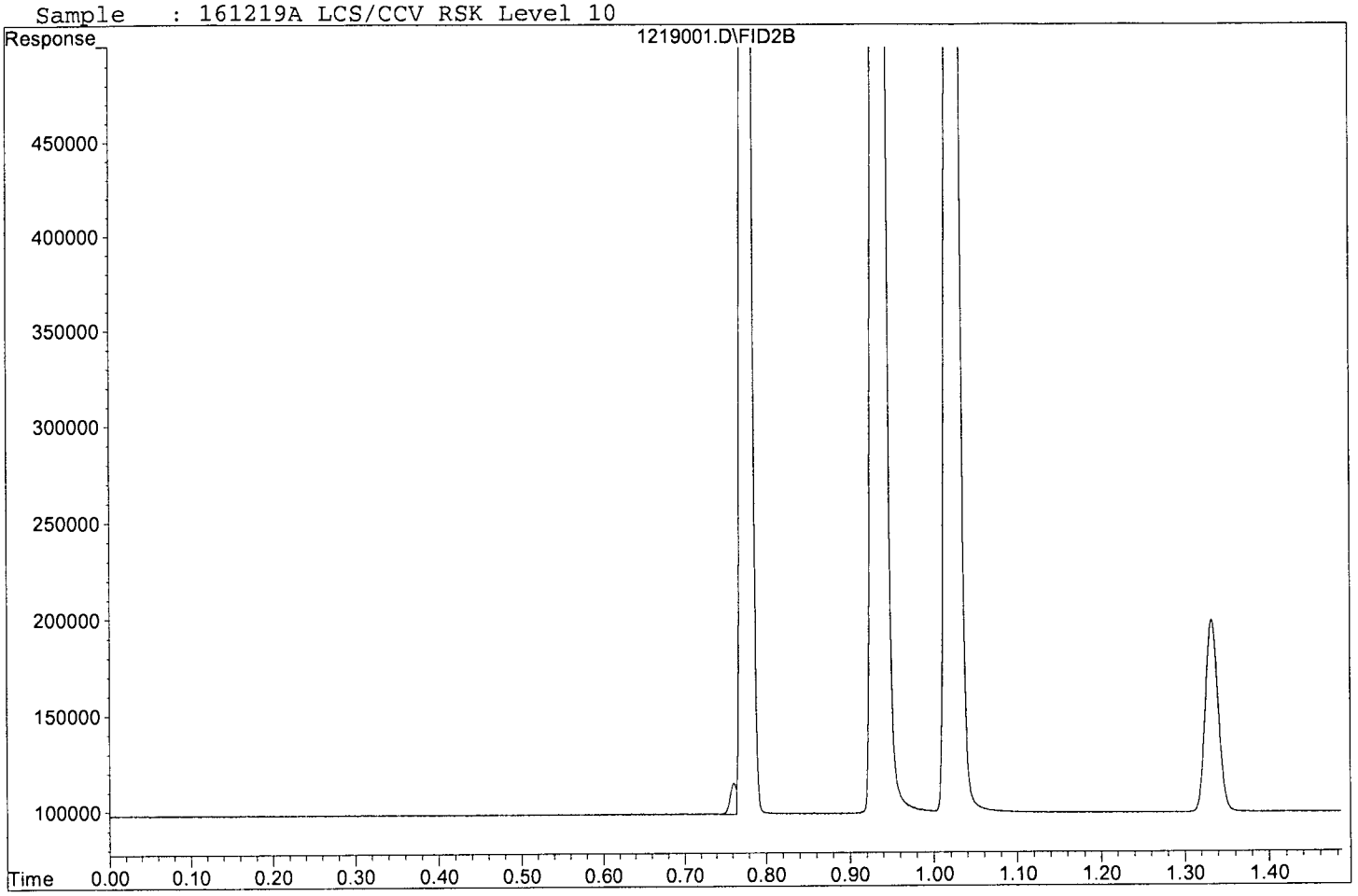
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Dec 21 11:57:46 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.76	16201	1.687	ppb
Target Compounds				
2) ATM Ethane	0.91	376	N.D.	ppb
3) ATM Ethene	0.99	1971	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1219001.D
Sample : 161219A LCS/CCV RSK Level 10



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/19/16
Instrument: 7890
Initial Cal. Date: 09/01/16
Data File: 1219059.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	2635	1034	61	ATML	5.6
2	ATML	Ethane	1147	713	38	ATML	11
3	ATML	Ethene	1063	537	49	ATML	15
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
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30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			49.3		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1219059.D Vial: 57
Acq On : 19 Dec 16 15:24 Operator: lac
Sample : Ending CCV RSK Level 10 12/19/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 21 12:53 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Dec 21 11:57:46 2016
Response via : Multiple Level Calibration

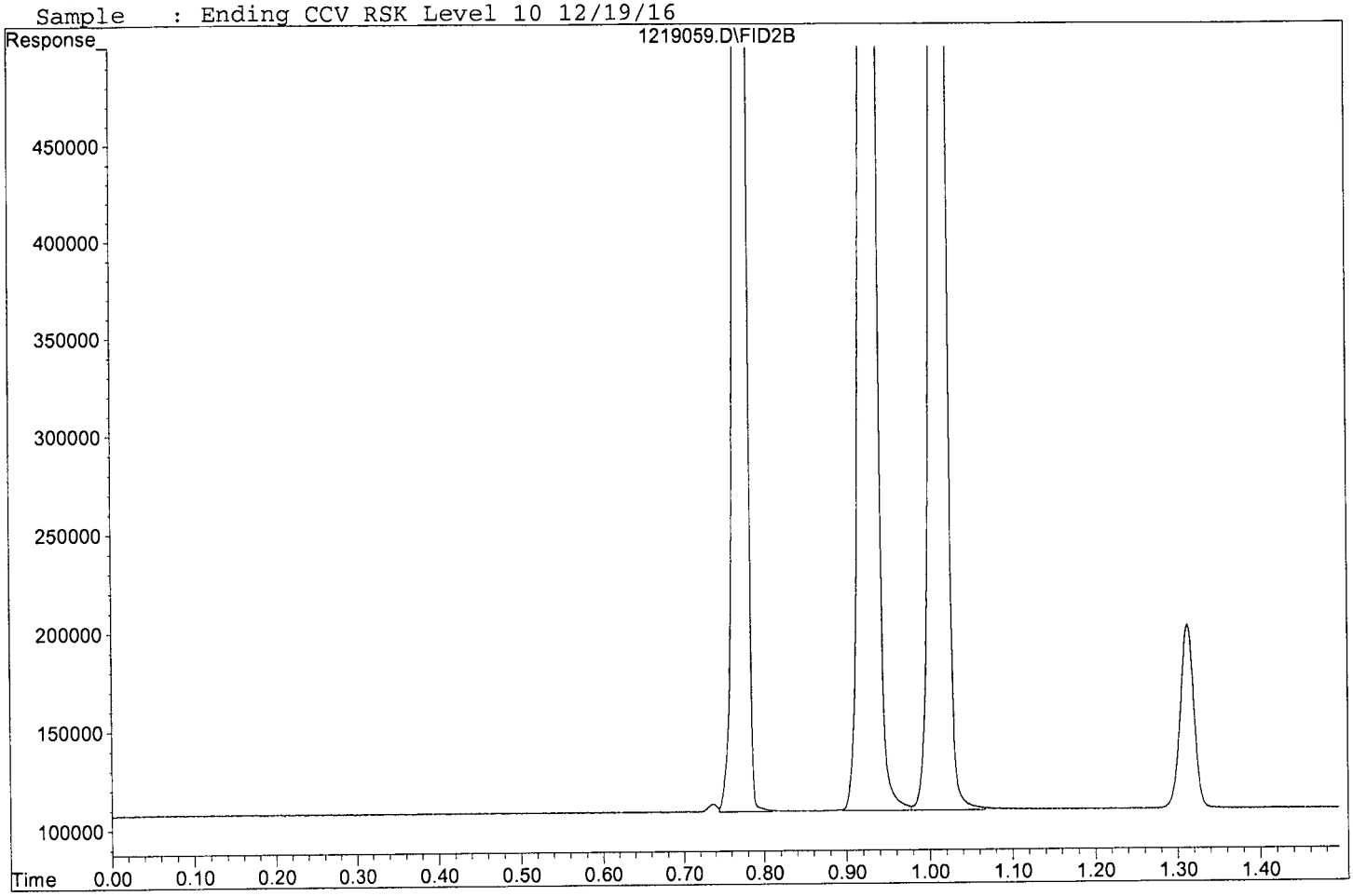
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.78	1380056	1260.830	ppb
2) ATM Ethane	0.93	1782753	2225.492	ppb
3) ATM Ethene	1.01	1340007	2127.291	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1219059.D
Sample : Ending CCV RSK Level 10 12/19/16



ORGANICS
Raw Data

APPL, INC.

Method Blank
METHANE

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161219W-47493 - 214811**
Batch ID: #RSKME-161219A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	METHANE	1.00 U	5.0	1.00	0.25	ug/L	12/19/16	12/19/16

Quant Method: RSK0901.M
Run #: 1219002
Instrument: Rocky
Sequence: 160901
Initials: CMO

GC SC-Blank-REG MDLs-DOD
Printed: 12/21/16 12:44:11 PM

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1219002.D Vial: 3
Acq On : 19 Dec 16 8:40 Operator: lac
Sample : 161219A BLK RSK Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 21 12:53 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Dec 21 11:57:46 2016
Response via : Multiple Level Calibration

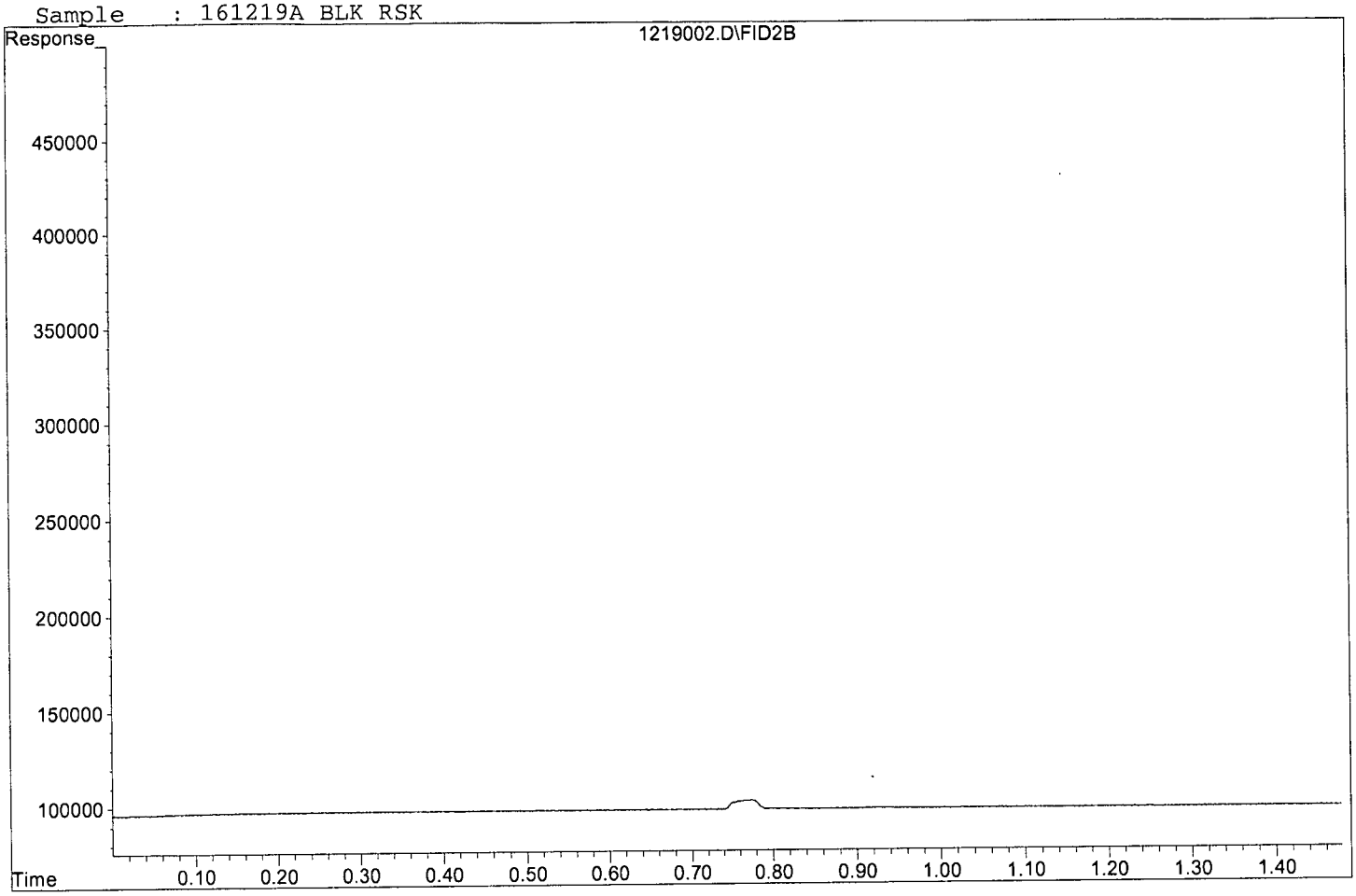
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.77	4921	N.D.	ppb
2) ATM Ethane	0.91	622	N.D.	ppb
3) ATM Ethene	0.99	503	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\ROCKY\DATA\160901R\1219002.D
Sample : 161219A BLK RSK



Laboratory Control Spike Recovery
METHANE

APPL ID: **161219W-47493 LCS - 214811**
Batch ID: #RSKME-161219A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
METHANE	1340	1250	93.6	72-125

Primary	SPK
Quant Method :	RSK0901.M
Extraction Date :	12/19/16
Analysis Date :	12/19/16
Instrument :	Rocky
Run :	1219001
Initials :	CMO

Comments: _____

Printed: 12/21/16 1:10:57 PM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1219001.D Vial: 2
Acq On : 19 Dec 16 7:07 Operator: lac
Sample : 161219A LCS/CCV RSK Level 10 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 21 12:53 2016 Quant Results File: RSK0901.RES

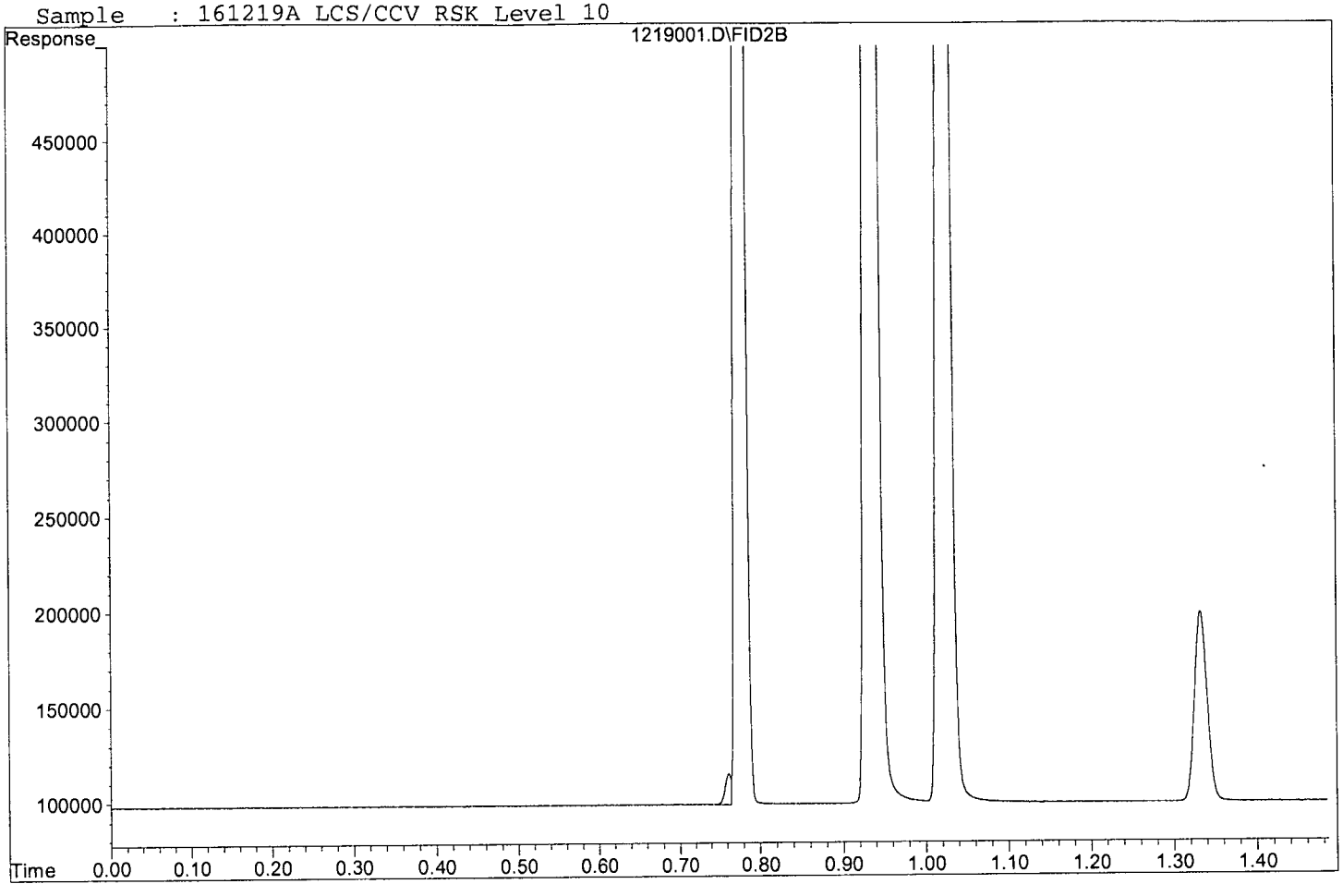
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Dec 21 11:57:46 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.76	16201	1.687	ppb
Target Compounds				
2) ATM Ethane	0.91	376	N.D.	ppb
3) ATM Ethene	0.99	1971	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1219001.D
Sample : 161219A LCS/CCV RSK Level 10



Primary Source Stock Standard 10,000ppmV **Manufacturer Exp date 7-8-2017** CM 8/15/16

RSK Gas Mix (Scott Specialty Gas) Cat.# 23452, Lot # 164PLU4SPC05L-34436

1% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

Intermediate Calibration Stock Standard 100ppmV **Expires 8/15/17** CM 8/15/16

Prepared in a 1 L Tedlar bag. Add 990mL Nitrogen and 10mL of 164PLU4SPC05L-34436 standard.

RSK Calibration Curve **Vial expiration date 9/28/16** CM 9/1/16

Analye	Conc Std 1 (ug/L)	Conc Std 2 (ug/L)	Conc Std 3 (ug/L)	Conc Std 4 (ug/L)	Conc Std 5 (ug/L)	Conc Std 6 (ug/L)	Conc Std 7 (ug/L)	Conc Std 8 (ug/L)	Conc Std 9 (ug/L)	Conc Std 10 (ug/L)
Methane (MW 16.	0.90	1.80	5.10	13.33	26.70	66.75	106.80	320.4	667.5	1335.0
Ethane (MW 30.0	1.70	3.40	9.50	25.00	50.00	125.00	200.00	600.0	1250.0	2500.0
Ethene (MW 28.0	1.60	3.20	8.90	23.30	46.60	116.50	186.40	599.2	1248.0	2496.0
Stock Source	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Primary Source Std #164PLU4S PC05L-34436	Primary Source Std #164PLU4S PC05L-34436	Primary Source Std #164PLU4SP C05L-34436	Primary Source Std #164PLU4S PC05L-34436
Stock Conc (ppr	100 ppmV	100 ppmV	100 ppmV	100 ppmV	100 ppmV	100 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV
Stock Aliquot (m	0.135 mL	0.270 mL	0.760 mL	2.0 mL	4.0 mL	10.0 mL	0.160 mL	0.480 mL	1.00 mL	2.00 mL
Final Volume P&T W	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL

Second Source Stock Standard 10,000ppmV **Manufacturer Exp Date 6-19-18** CM 8/15/16

RSK Gas Mix (Scott Specialty Gas) Cat.# 0104E40028`4, Lot # 170PLU5SPC06L-35410

1% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

Intermediate Second Source Standard 100ppmV **Expires 8/15/17** CM 8/15/16

Prepared in a 1 L Tedlar bag. Add 990mL Nitrogen and 10mL of lot# 170PLU5SPC06L-35410 standard.

Second Source / LCS - Level 6 **Expires 10/1/16** CM 9/1/16

10.0mL of Intermediate SS stock 8/15/16 into 10mL P&T water

final conc:66.7ppb Methane, 125.0ppb Ethane, and 116.5 ppb Ethene

CCV/LCS - Level 10 **Expires 01/19/16** CM 12/19/16

2.0mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water

final conc:1335.0ppb Methane,2500.0 ppb Ethane, and 2496.0 ppb Ethene

Injection Log

Directory: G:\ROCKY\DATA\160901R\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0901000.D	1	RSK Level 1 08/15/16	Methane 0.9, Ethane, 1.7 Etl	1 Sep 16 11:38
2	2	0901001.D	1	RSK Level 2 08/15/16		1 Sep 16 11:41
3	3	0901002.D	1	RSK Level 3 08/15/16	Methane 5.1, Ethane, 9.5 Etl	1 Sep 16 11:44
4	4	0901003.D	1	RSK Level 4 08/15/16		1 Sep 16 11:46
5	5	0901004.D	1	RSK Level 5 08/15/16		1 Sep 16 11:48
6	6	0901005.D	1	RSK Level 6 08/15/16		1 Sep 16 11:50
7	7	0901006.D	1	RSK Level 7 08/15/16		1 Sep 16 11:52
8	8	0901007.D	1	RSK Level 8 08/15/16		1 Sep 16 11:55
9	9	0901008.D	1	RSK Level 9 08/15/16		1 Sep 16 11:57
10	10	0901009.D	1	RSK Level 10 08/15/16		1 Sep 16 11:59
11	19	0901018.D	1	(SS/LCS) RSK Level 6 09/01/16		1 Sep 16 13:11
12	2	1219001.D	1	161219A LCS/CCV RSK Level 10		19 Dec 16 7:07
13	3	1219002.D	1	161219A BLK RSK		19 Dec 16 8:40
14	2	1219004.D	1	AZ47493W04		19 Dec 16 9:23
15	3	1219005.D	1	AZ47494W06		19 Dec 16 9:30
16	4	1219006.D	1	AZ47495W05		19 Dec 16 9:37
17	5	1219007.D	1	AZ47496W06		19 Dec 16 9:43
18	6	1219008.D	1	AZ47497W06		19 Dec 16 9:55
19	7	1219009.D	1	AZ47498W06		19 Dec 16 10:01
20	57	1219059.D	1	Ending CCV RSK Level 10 12/19/16		19 Dec 16 15:24

INORGANIC ANALYSIS

APPL, INC.

INORGANIC ANALYSIS
QC Summary

APPL, INC.

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	12/20/16	12/20/16	#300WD-161220A-AZ47494
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	12/14/16	12/14/16	#300W-161214A3-AZ47496
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	12/14/16	12/14/16	#300W-161214A3-AZ47496
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	12/14/16	12/14/16	#300W-161214A3-AZ47496
SM 2320B	BICARBONATE AS	1.6 J	2.0	1.70	0.85	mg/L	12/20/16	12/20/16	#232W-161220A2-AZ47498
SM 2320B	CARBONATE AS CA	1.70 U	2.0	1.70	0.85	mg/L	12/20/16	12/20/16	#232W-161220A2-AZ47498
SM 2320B	TOTAL ALKALINITY	1.6 J	2.0	1.70	0.85	mg/L	12/20/16	12/20/16	#232W-161220A2-AZ47498
SM3500Fe	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	12/14/16	12/14/16	#35FE-161214A-AZ47498

Wetlab SC-Blank-REG MDLs
Printed: 12/21/16 5:23:45 PM

Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	20.0	18.3	91.5	90-110	12/14/16	12/14/16	#300W-161214A3-AZ47496
EPA 300.0	NITRATE	22.1	20.4	92.3	90-110	12/14/16	12/14/16	#300W-161214A3-AZ47496
EPA 300.0	SULFATE	20.0	18.9	94.5	90-110	12/14/16	12/14/16	#300W-161214A3-AZ47496

Comments: _____

Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	20.0	18.7	93.5	90-110	12/20/16	12/20/16	#300WD-161220A-AZ47494

Comments: _____

Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
SM 2320B	BICARBONATE AS CACO3	250	244	97.6	90-110	12/20/16	12/20/16	#232W-161220A2-AZ47498
SM 2320B	TOTAL ALKALINITY AS CACO3	250	244	97.6	90-110	12/20/16	12/20/16	#232W-161220A2-AZ47498
SM3500Fe	FERROUS IRON	3.00	3.20	107	80-120	12/14/16	12/14/16	#35FE-161214A-AZ47498

Comments: _____

Matrix Spike Recoveries

WETLAB

APPL ID: **161220W-47498 MS - 214874**

Sample ID: AZ47498

Client ID: ERH146

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	Matrix Res mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
SM 2320B	BICARBONATE AS CA	250	67.4	307	301	95.8	93.4	2.0	20	90-110	12/20/16	12/20/16	12/20/16	12/20/16	214874	AZ47498
SM 2320B	TOTAL ALKALINITY AS	250	67.4	307	301	95.8	93.4	2.0	20	90-110	12/20/16	12/20/16	12/20/16	12/20/16	214874	AZ47498

Comments: _____

INORGANIC ANALYSIS
Sample Data

APPL, INC.

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH139

Sample Collection Date: 12/12/16

APPL ID: AZ47494

ARF: 81760

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	CHLORIDE	390	10.0	2.00	0.80	mg/L	10	12/20/16	12/20/16
EPA 300.0	NITRATE	2.8	1.0	0.36	0.08	mg/L	2	12/14/16	12/14/16
EPA 300.0	SULFATE	85.4	2.0	0.40	0.18	mg/L	2	12/14/16	12/14/16
SM 2320B	BICARBONATE AS CACO3	114	2.0	1.70	0.85	mg/L	1	12/20/16	12/20/16
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	12/20/16	12/20/16
SM 2320B	TOTAL ALKALINITY AS CACO3	114	2.0	1.70	0.85	mg/L	1	12/20/16	12/20/16
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	12/14/16	12/14/16

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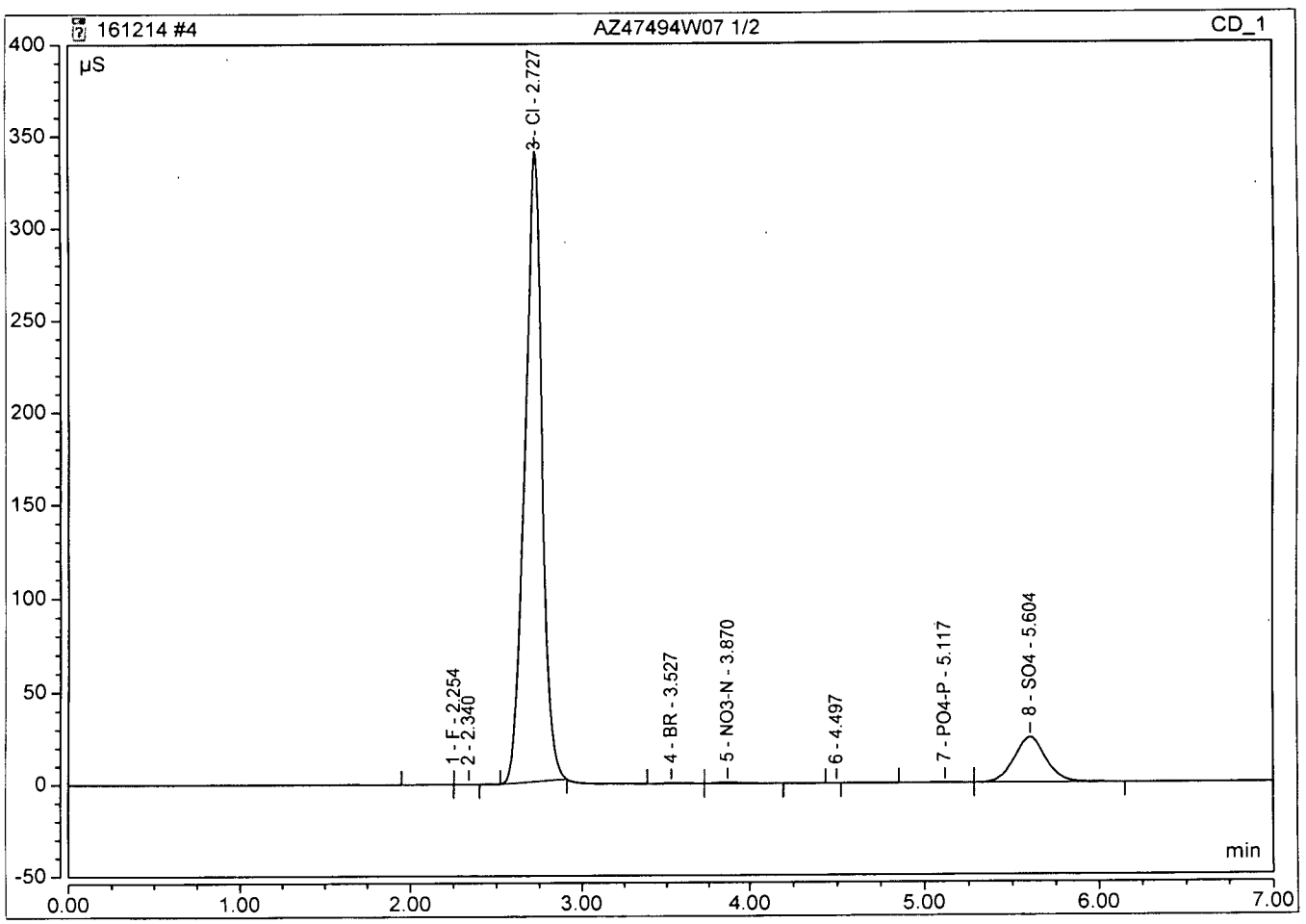
APPL-F1-SC-NoMC-REG MDLs

Peak Integration Report

Sample Name:	**AZ47494W07 1/2**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**2.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**14-Dec-2016 / 15:08**	*Run Time:*	**7.00**

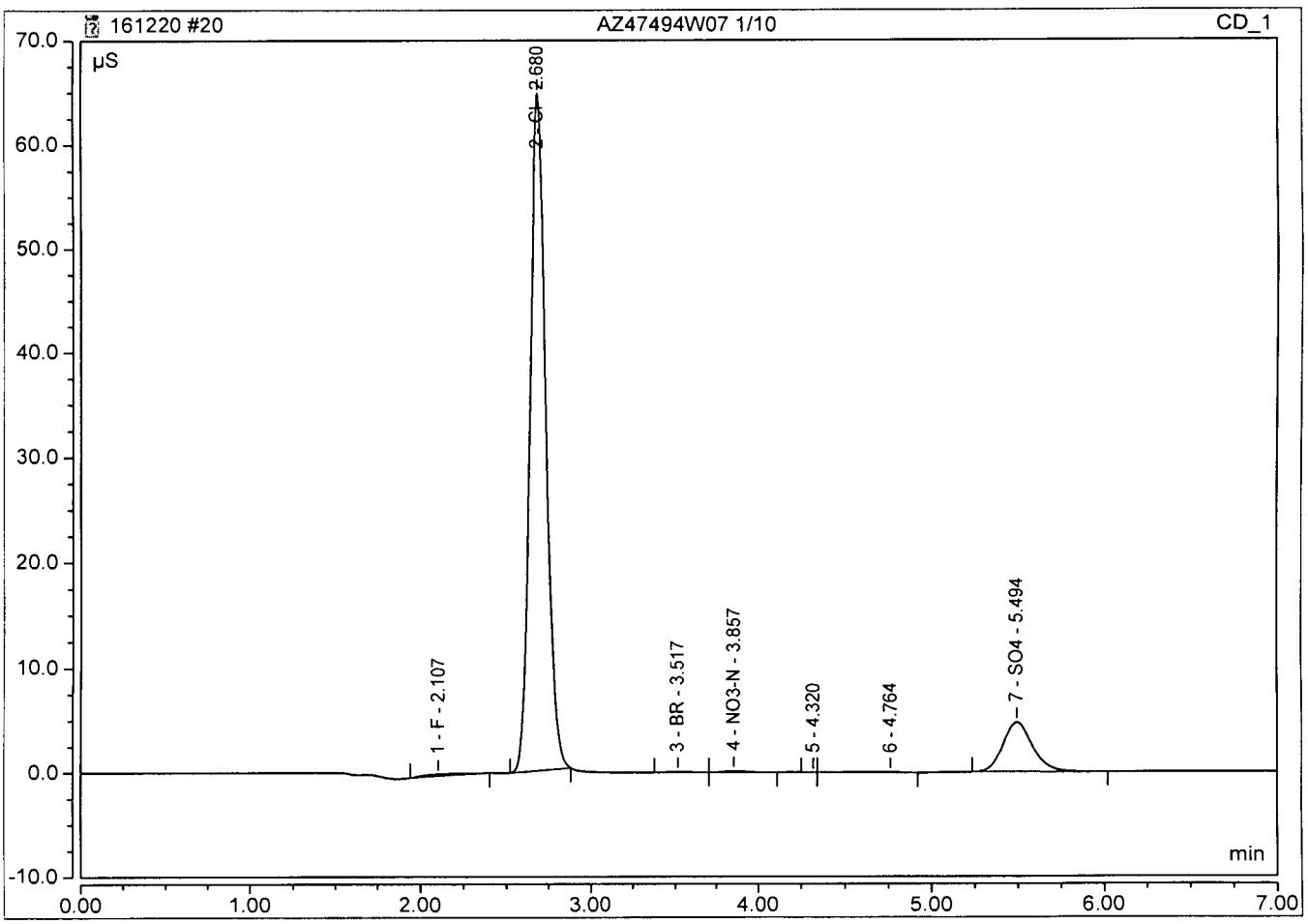
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.25	F	BMB	0.012	0.000	0.1852
3	2.73	Cl	BMB	39.296	339.671	433.8035
4	3.53	BR	BMB	0.033	0.265	1.3056
5	3.87	NO3-N	BMB	0.093	0.644	0.6425
7	5.12	PO4-P	BMB	0.015	0.061	0.3699
8	5.60	SO4	BMB	5.154	24.698	85.4047
TOTAL:				44.60	365.34	521.71



Peak Integration Report

Sample Name:	**AZ47494W07 1/10**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**10.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Dec-2016 / 12:59**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.11	F	BMB	0.050	0.174	2.5843
2	2.68	CI	BMB	6.993	64.699	390.2825
3	3.52	BR	BMB	0.007	0.056	2.4081
4	3.86	NO3-N	BMB	0.020	0.137	1.4343
7	5.49	SO4	BMB	0.949	4.790	82.6455
TOTAL:				8.02	69.86	479.35



Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH136

APPL ID: AZ47495

Sample Collection Date: 12/12/16

ARF: 81760

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	CHLORIDE	149	5.0	1.00	0.40	mg/L	5	12/20/16	12/20/16
EPA 300.0	NITRATE	4.3	0.5	0.18	0.04	mg/L	1	12/14/16	12/14/16
EPA 300.0	SULFATE	48.4	1.0	0.20	0.09	mg/L	1	12/14/16	12/14/16
SM 2320B	BICARBONATE AS CACO3	102	2.0	1.70	0.85	mg/L	1	12/20/16	12/20/16
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	12/20/16	12/20/16
SM 2320B	TOTAL ALKALINITY AS CACO3	102	2.0	1.70	0.85	mg/L	1	12/20/16	12/20/16
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	12/14/16	12/14/16

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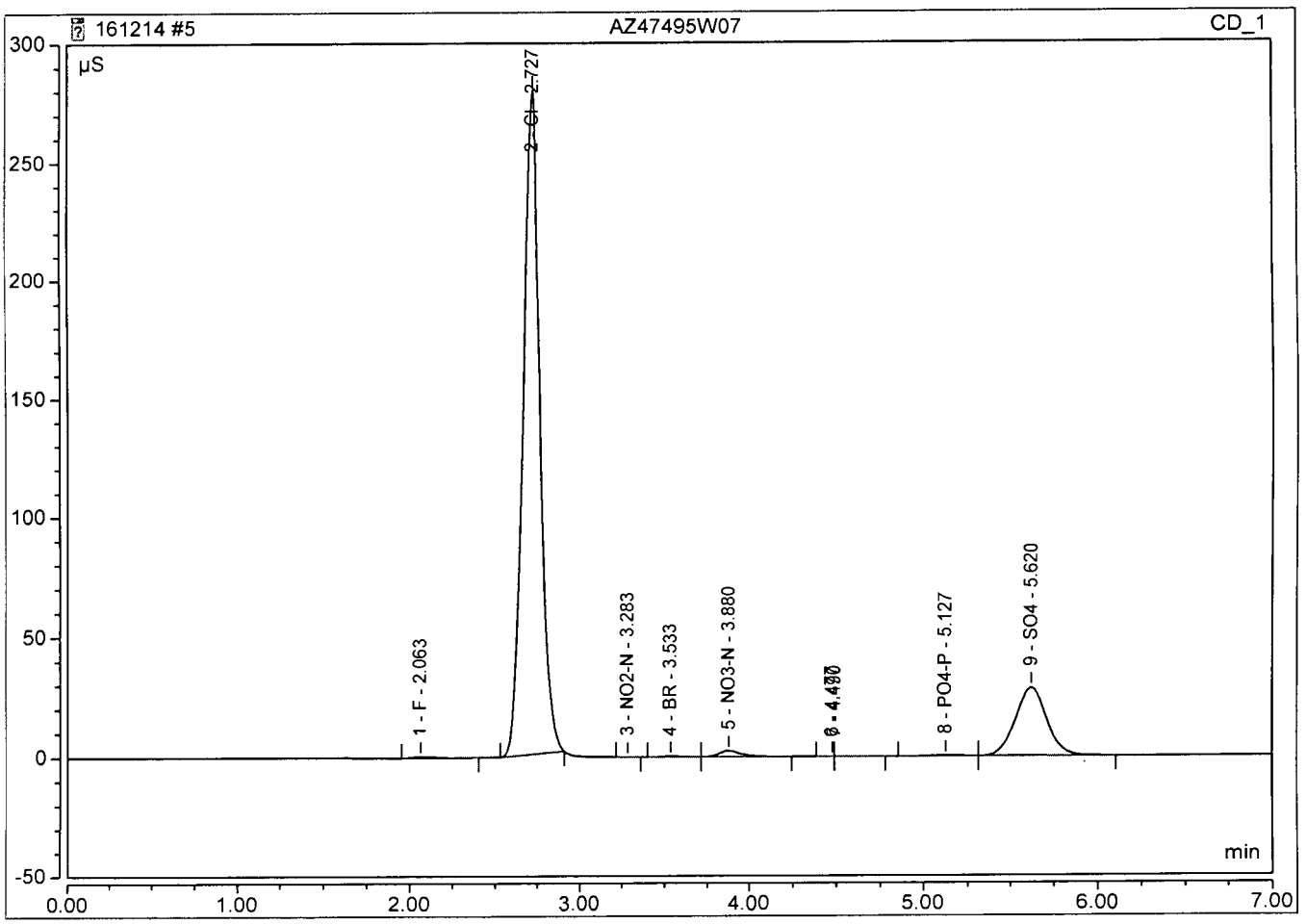
APPL-F1-SC-NoMC-REG MDLs

Peak Integration Report

Sample Name:	**AZ47495W07**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**14-Dec-2016 / 15:21**	*Run Time:*	**7.00**

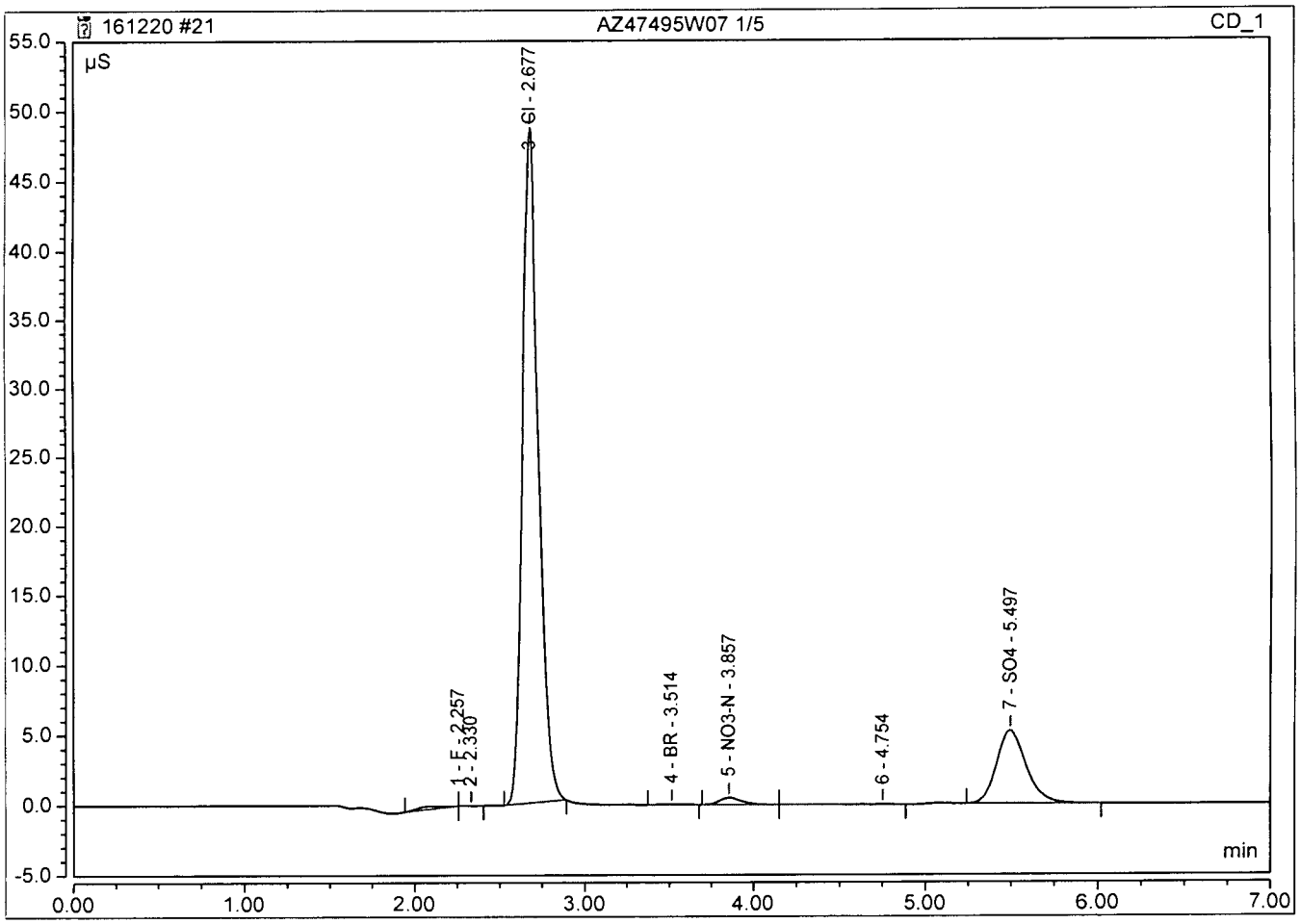
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.06	F	BMB	0.078	0.616	0.3833
2	2.73	Cl	BMB	31.418	278.971	173.5210
3	3.28	NO2-N	BMB	0.001	0.008	0.0237
4	3.53	BR	BMB	0.029	0.235	0.5854
5	3.88	NO3-N	BMB	0.360	2.468	0.9687
8	5.13	PO4-P	BMB	0.058	0.289	0.5320
9	5.62	SO4	BMB	5.848	28.152	48.3787
TOTAL:				37.79	310.74	224.39



Peak Integration Report

Sample Name:	**AZ47495W07 1/5**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**5.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Dec-2016 / 13:12**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.26	F	BMB	0.035	0.000	0.9713
3	2.68	Cl	BMB	5.299	48.640	148.5017
4	3.51	BR	BMB	0.006	0.047	1.0983
5	3.86	NO3-N	BMB	0.072	0.490	1.3465
7	5.50	SO4	BMB	1.033	5.195	44.7567
TOTAL:				6.44	54.37	196.67



Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH143

APPL ID: AZ47496

Sample Collection Date: 12/13/16

ARF: 81760

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	CHLORIDE	38.3	1.0	0.20	0.08	mg/L	1	12/14/16	12/14/16
EPA 300.0	NITRATE	0.44 J	0.5	0.18	0.04	mg/L	1	12/14/16	12/14/16
EPA 300.0	SULFATE	4.4	1.0	0.20	0.09	mg/L	1	12/14/16	12/14/16
SM 2320B	BICARBONATE AS CACO3	96.5	2.0	1.70	0.85	mg/L	1	12/20/16	12/20/16
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	12/20/16	12/20/16
SM 2320B	TOTAL ALKALINITY AS CACO3	96.5	2.0	1.70	0.85	mg/L	1	12/20/16	12/20/16
SM3500FeB	FERROUS IRON	0.55 J	1.0	0.32	0.16	mg/L	1	12/14/16	12/14/16

J = Estimated value.

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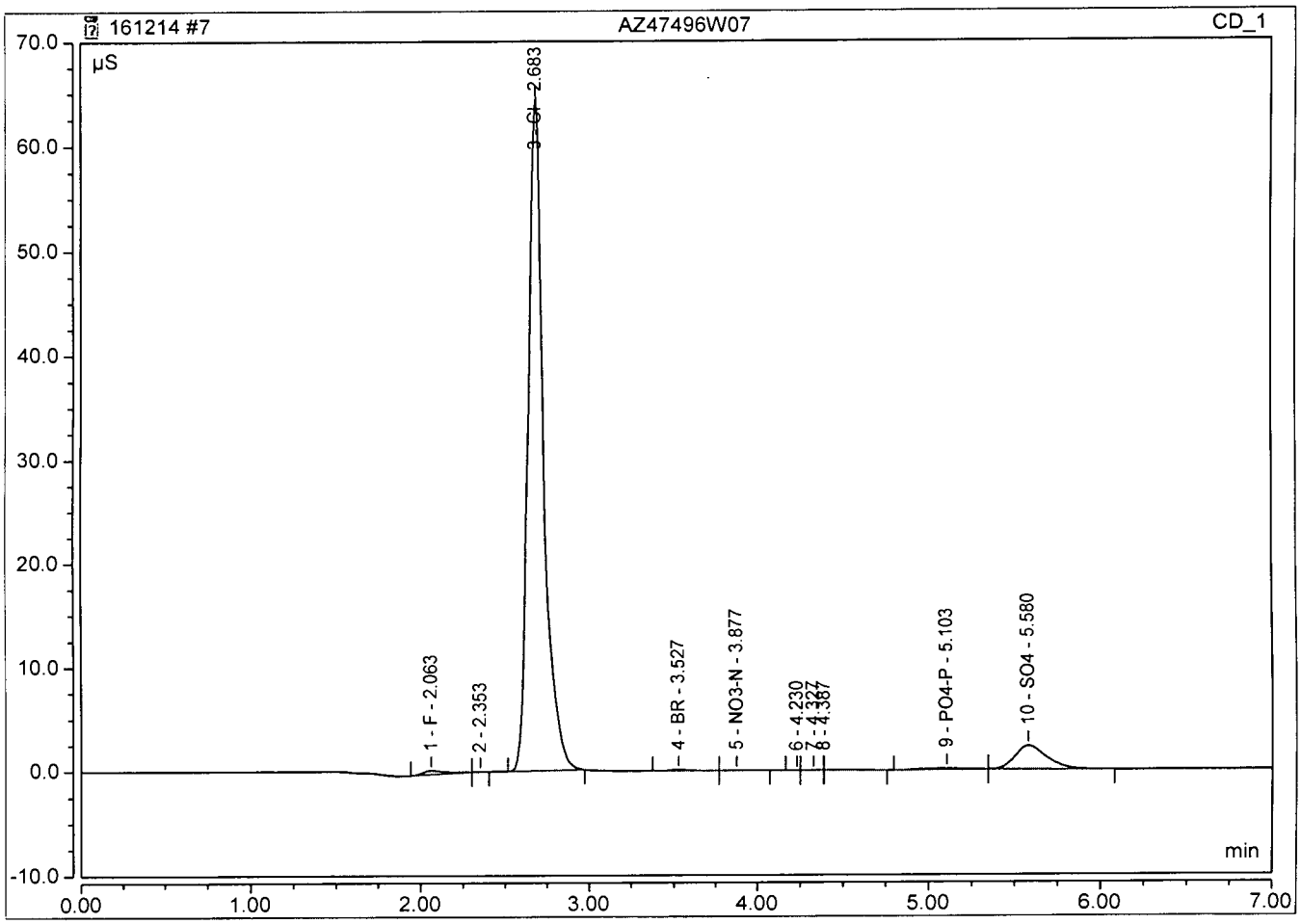
APPL-F1-SC-NoMC-REG MDLs

Peak Integration Report

Sample Name:	**AZ47496W07**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**14-Dec-2016 / 15:47**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.06	F	BMB	0.053	0.378	0.2744
3	2.68	Cl	BMB	6.858	64.320	38.2833
4	3.53	BR	BMB	0.009	0.065	0.2611
5	3.88	NO3-N	BMB	0.001	0.009	0.0985
9	5.10	PO4-P	BMB	0.032	0.108	0.3263
10	5.58	SO4	BMB	0.479	2.256	4.4127
TOTAL:				7.43	67.14	43.66



Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH145

APPL ID: AZ47497

Sample Collection Date: 12/13/16

ARF: 81760

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	CHLORIDE	90.4	2.0	0.40	0.16	mg/L	2	12/20/16	12/20/16
EPA 300.0	NITRATE	0.81	0.5	0.18	0.04	mg/L	1	12/14/16	12/14/16
EPA 300.0	SULFATE	24.9	1.0	0.20	0.09	mg/L	1	12/14/16	12/14/16
SM 2320B	BICARBONATE AS CACO3	53.2	2.0	1.70	0.85	mg/L	1	12/20/16	12/20/16
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	12/20/16	12/20/16
SM 2320B	TOTAL ALKALINITY AS CACO3	53.2	2.0	1.70	0.85	mg/L	1	12/20/16	12/20/16
SM3500FeB	FERROUS IRON	4.7	1.0	0.32	0.16	mg/L	1	12/14/16	12/14/16

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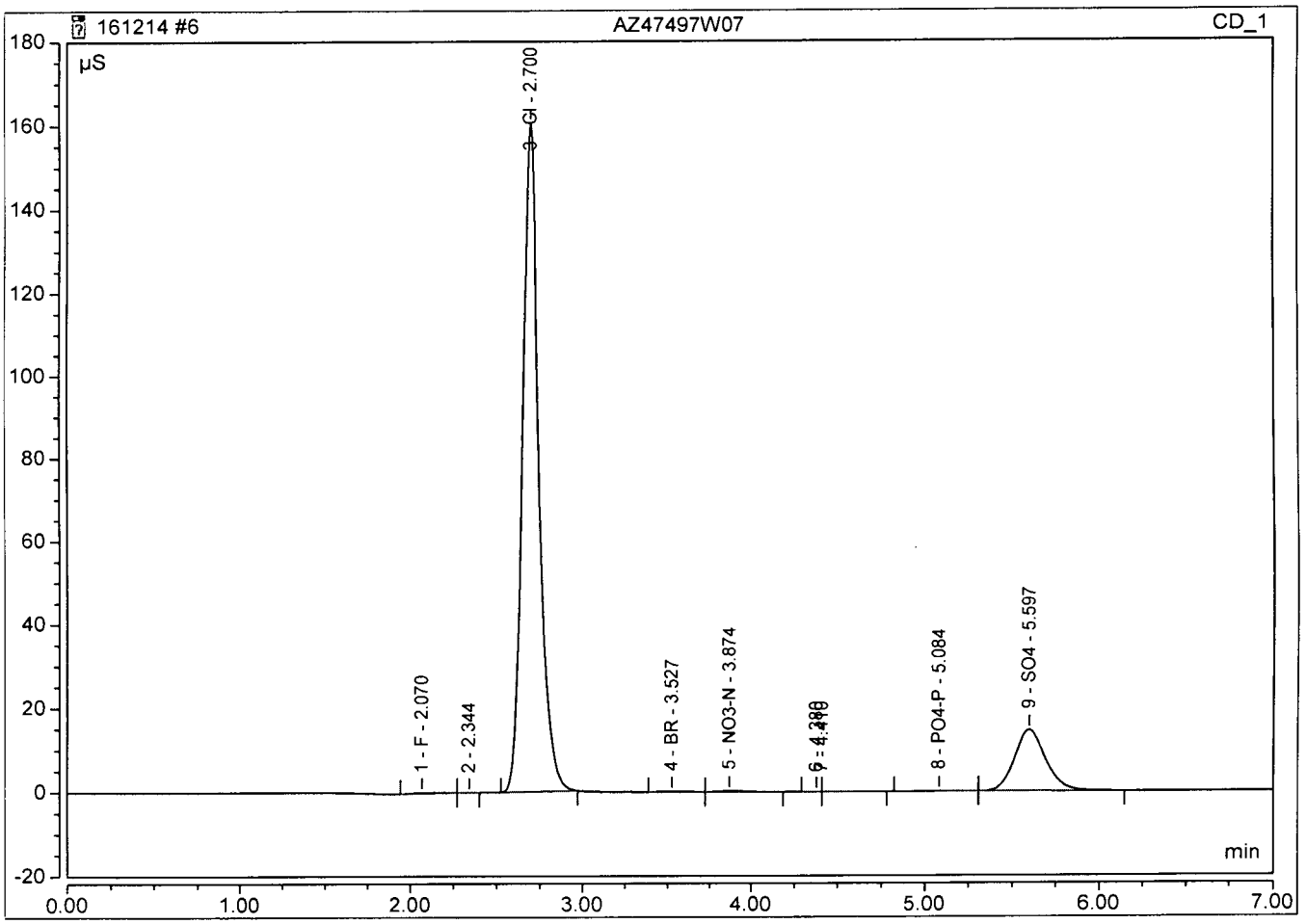
APPL-F1-SC-NoMC-REG MDLs

Peak Integration Report

Sample Name:	**AZ47497W07**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**14-Dec-2016 / 15:34**	*Run Time:*	**7.00**

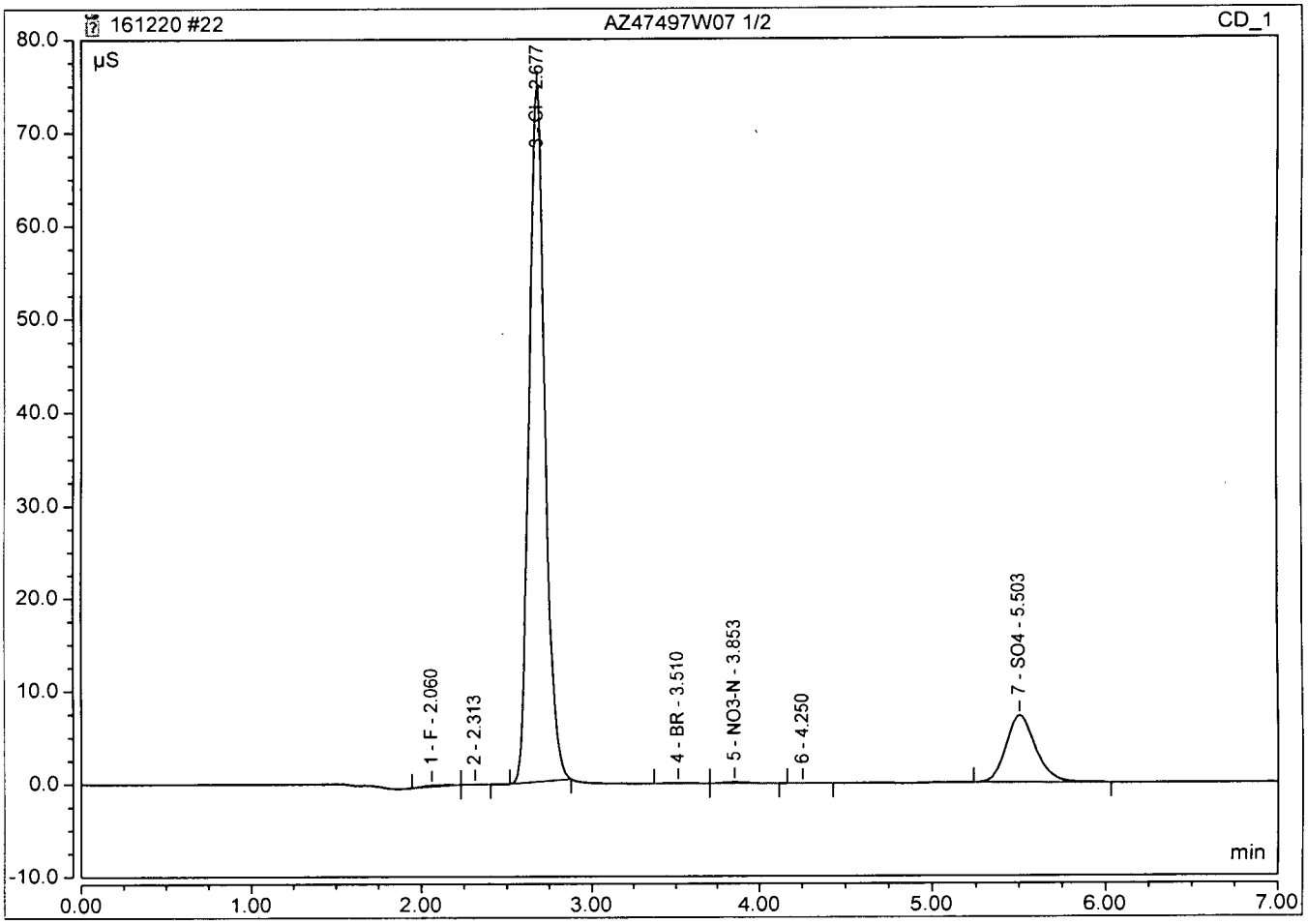
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.07	F	BMB	0.027	0.188	0.1600
3	2.70	Cl	BMB	17.484	160.409	96.7925
4	3.53	BR	BMB	0.015	0.117	0.3578
5	3.87	NO3-N	BMB	0.036	0.247	0.1822
8	5.08	PO4-P	BMB	0.020	0.075	0.2264
9	5.60	SO4	BMB	2.981	14.427	24.9005
TOTAL:				20.56	175.46	122.62



Peak Integration Report

Sample Name:	**AZ47497W07 1/2**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**2.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Dec-2016 / 13:25**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.06	F	BMB	0.023	0.148	0.2797
3	2.68	Cl	BMB	8.110	74.792	90.3550
4	3.51	BR	BMB	0.008	0.060	0.5000
5	3.85	NO3-N	BMB	0.018	0.124	0.2789
7	5.50	SO4	BMB	1.428	7.170	24.3773
TOTAL:				9.59	82.29	115.79



Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH146

APPL ID: AZ47498

Sample Collection Date: 12/12/16

ARF: 81760

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	CHLORIDE	49.2	2.0	0.40	0.16	mg/L	2	12/20/16	12/20/16
EPA 300.0	NITRATE	2.2	0.5	0.18	0.04	mg/L	1	12/14/16	12/14/16
EPA 300.0	SULFATE	9.1	1.0	0.20	0.09	mg/L	1	12/14/16	12/14/16
SM 2320B	BICARBONATE AS CACO3	67.4	2.0	1.70	0.85	mg/L	1	12/20/16	12/20/16
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	12/20/16	12/20/16
SM 2320B	TOTAL ALKALINITY AS CACO3	67.4	2.0	1.70	0.85	mg/L	1	12/20/16	12/20/16
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	12/14/16	12/14/16

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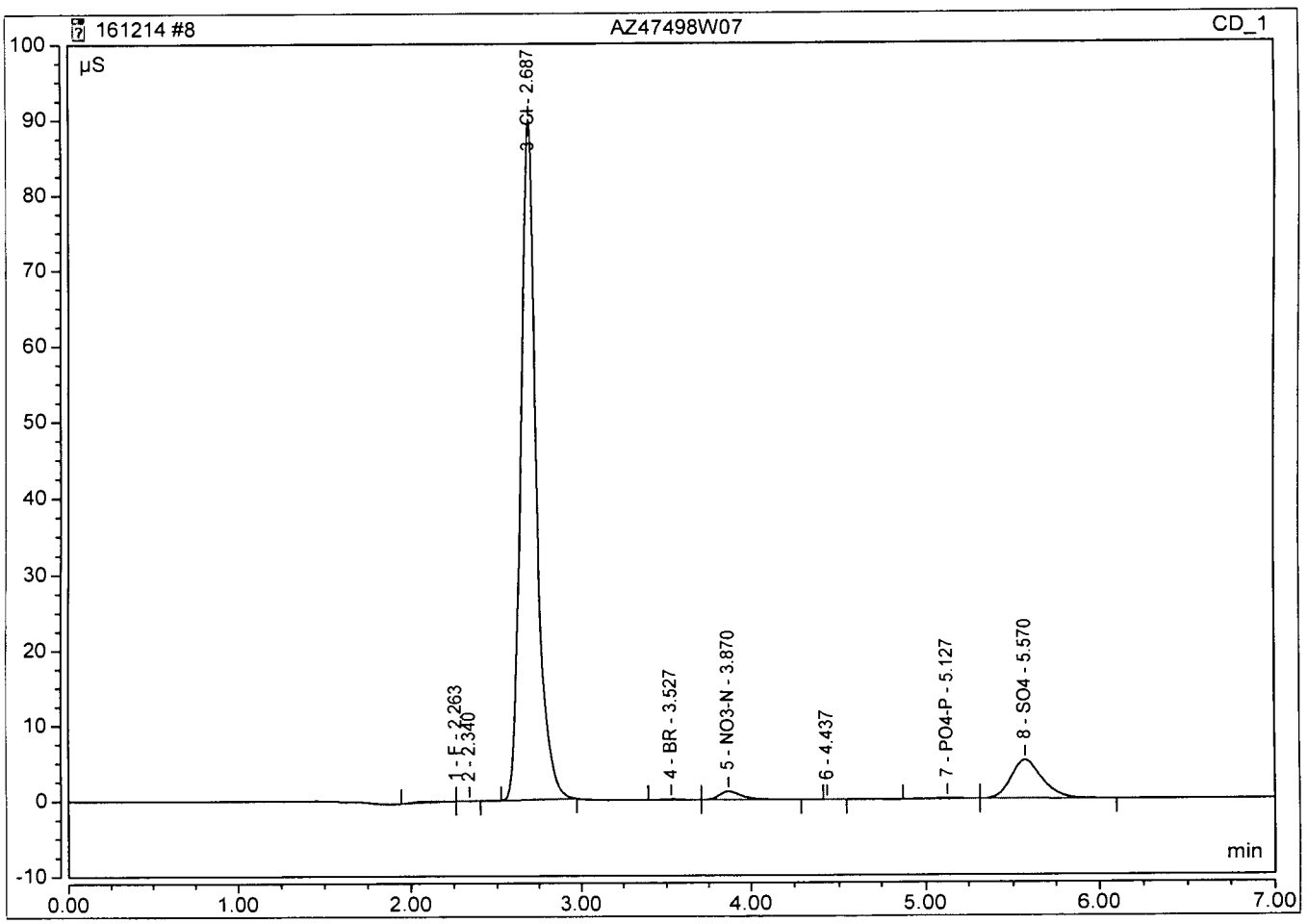
APPL-F1-SC-NoMC-REG MDLs

Peak Integration Report

Sample Name:	**AZ47498W07**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**14-Dec-2016 / 16:00**	*Run Time:*	**7.00**

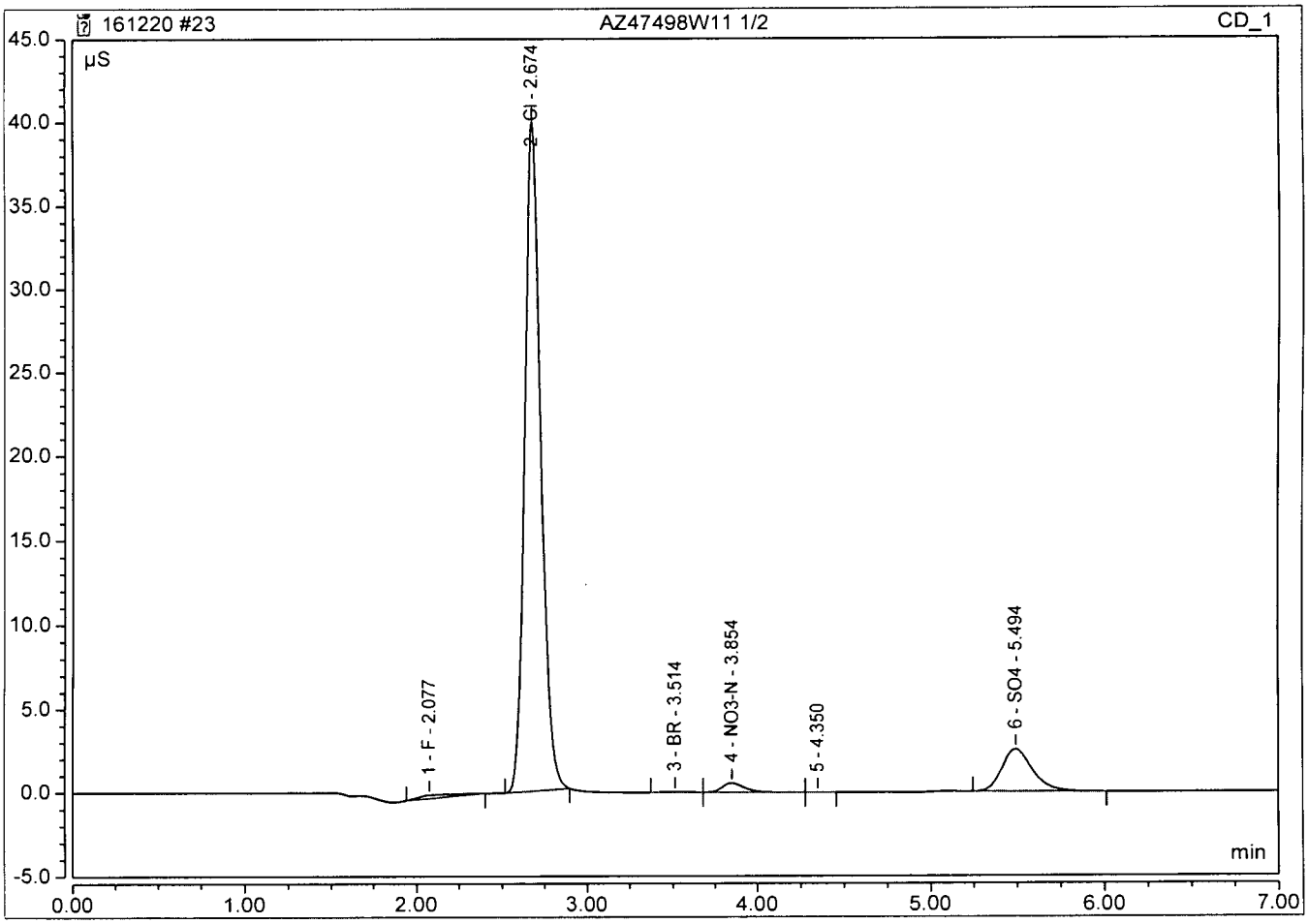
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.26	F	BMB	0.028	0.000	0.1614
3	2.69	Cl	BMB	9.585	89.822	53.2967
4	3.53	BR	BMB	0.010	0.078	0.2793
5	3.87	NO3-N	BMB	0.163	1.112	0.4923
7	5.13	PO4-P	BMB	0.017	0.076	0.2063
8	5.57	SO4	BMB	1.051	5.063	9.0995
TOTAL:				10.85	96.15	63.54



Peak Integration Report

Sample Name:	**AZ47498W11 1/2**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**2.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Dec-2016 / 13:38**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.08	F	BMB	0.050	0.194	0.5211
2	2.67	Cl	BMB	4.374	39.902	49.2061
3	3.51	BR	BMB	0.005	0.040	0.4143
4	3.85	NO3-N	BMB	0.082	0.559	0.5911
6	5.49	SO4	BMB	0.514	2.552	9.4049
TOTAL:				5.03	43.25	60.14



INORGANIC ANALYSIS
Calibration Data

APPL, INC.

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No: 81760 SDG: 81760

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 10/20/16

Analyte	Calibration Verification									M
	True ICV	Found 12:37	%R(1)	True	Found	%R(1)	True	Found	%R(1)	
chloride	20	18.2183	91.1							
Nitrate(NO3)	22.1	20.0573	90.8							
sulfate	20	18.4058	92.0							

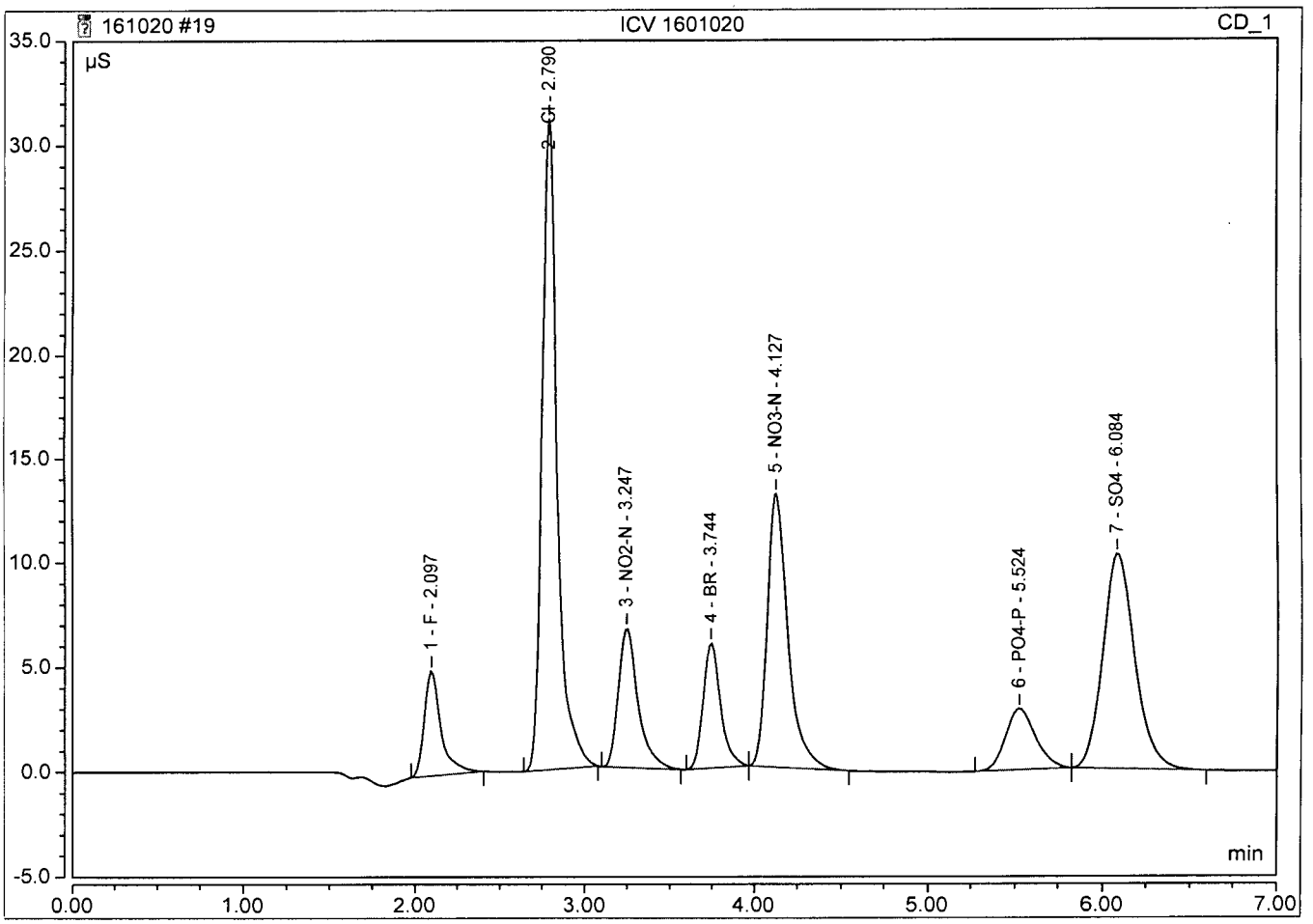
(1) Control Limits: 90-110

ILM02.0

Peak Integration Report

Sample Name:	**ICV 1601020**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:37**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB	0.568	5.018	2.5594
2	2.79	Cl	BMB	3.214	31.139	18.2184
3	3.25	NO2-N	BMB	0.894	6.653	2.9873
4	3.74	BR	BMB	0.739	5.970	11.8423
5	4.13	NO3-N	BMB	1.827	13.075	4.5291
6	5.52	PO4-P	BMB	0.590	2.913	4.8011
7	6.08	SO4	BMB	2.187	10.255	18.4058
TOTAL:				10.02	75.02	63.34



Algorithm Check

$y = .1816x - .0913$ y=Peak Area x=Amnt

$x = 18.22$ ✓ mm 12/28/16

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 81760 SDG: 81760

Preparation Blank Matrix (soil/water): water

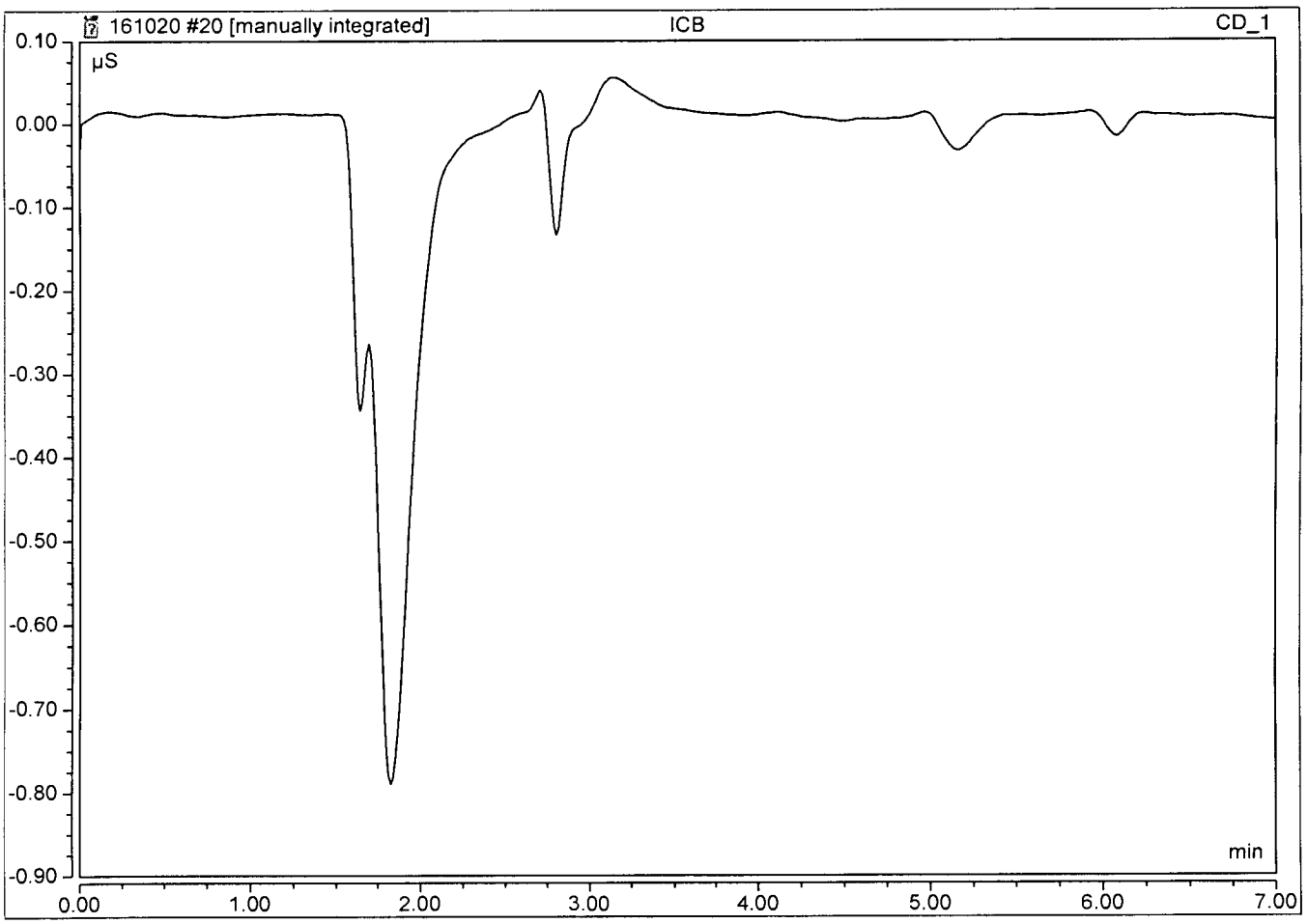
Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	ICB 10/20/16 12:50	C		C		C		C		C	
chloride	1.000	U									
Nitrate(NO3)	.500	U									
sulfate	1.000	U									

Peak Integration Report

Sample Name:	**ICB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:50**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
		TOTAL:		0.00	0.00	0.00



A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No: 81760 SDG: 81760

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 12/14/16

Analyte	Calibration Verification									M
	True CCV1	Found 14:42	%R(1)	True CCV1	Found 18:10	%R(1)	True	Found	%R(1)	
chloride	25	23.4242	93.7	25	23.4597	93.8				
Nitrate(NO3)	22.1	21.0216	95.1	22.1	21.0956	95.5				
sulfate	25	22.7606	91.0	25	22.8348	91.3				

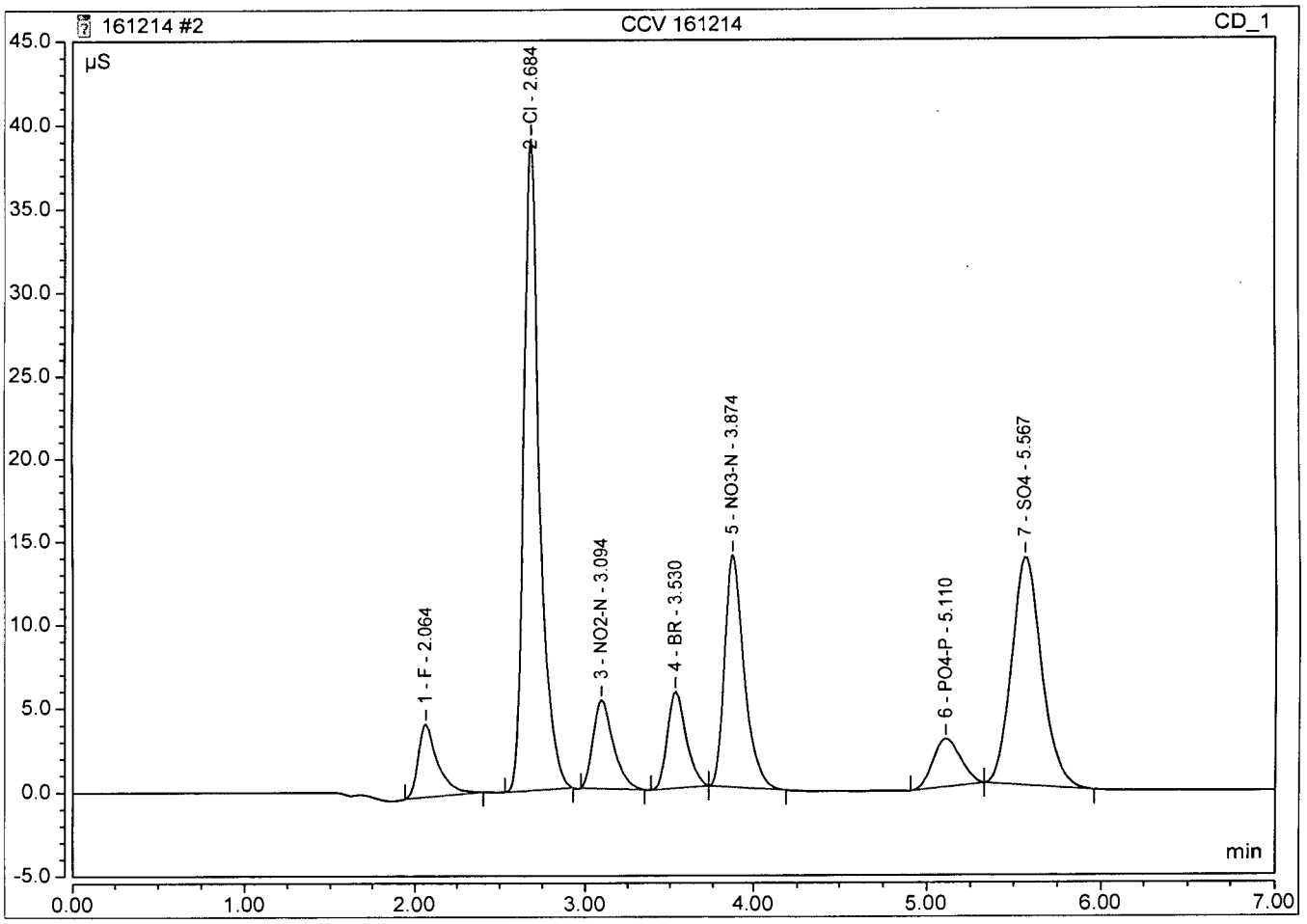
(1) Control Limits: 90-110

ILM02.0

Peak Integration Report

Sample Name:	**CCV 161214**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**14-Dec-2016 / 14:42**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.06	F	BMB	0.576	4.358	2.5962
2	2.68	Cl	BMB	4.160	39.022	23.4242
3	3.09	NO2-N	BMB	0.718	5.253	2.4034
4	3.53	BR	BMB	0.715	5.742	11.4627
5	3.87	NO3-N	BMB	1.916	13.846	4.7468
6	5.11	PO4-P	BMB	0.518	2.856	4.2203
7	5.57	SO4	BMB	2.719	13.621	22.7606
TOTAL:				11.32	84.70	71.61



Algorithm Check

$y = .1816x - .0943$ y = Peak Area

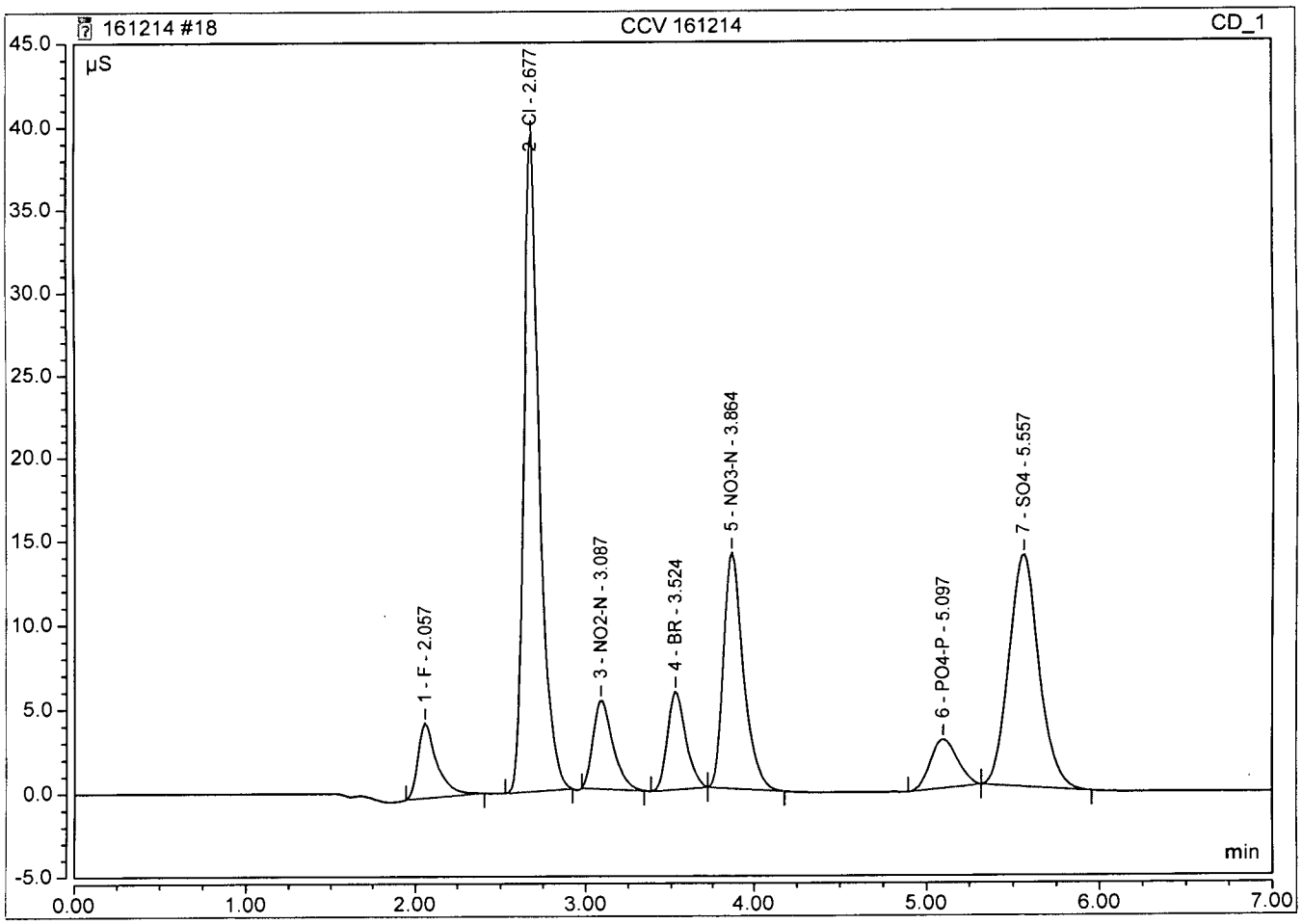
$x = 23.42$ ✓ x = Amount

mm 12/28/16

Peak Integration Report

Sample Name:	**CCV 161214**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**14-Dec-2016 / 18:10**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.06	F	BMB	0.576	4.435	2.5962
2	2.68	Cl	BMB	4.166	39.424	23.4597
3	3.09	NO2-N	BMB	0.711	5.265	2.3808
4	3.52	BR	BMB	0.720	5.791	11.5410
5	3.86	NO3-N	BMB	1.923	13.947	4.7635
6	5.10	PO4-P	BMB	0.526	2.892	4.2836
7	5.56	SO4	BMB	2.728	13.709	22.8348
TOTAL:				11.35	85.46	71.86



A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 81760 SDG: 81760

Preparation Blank Matrix (soil/water): water

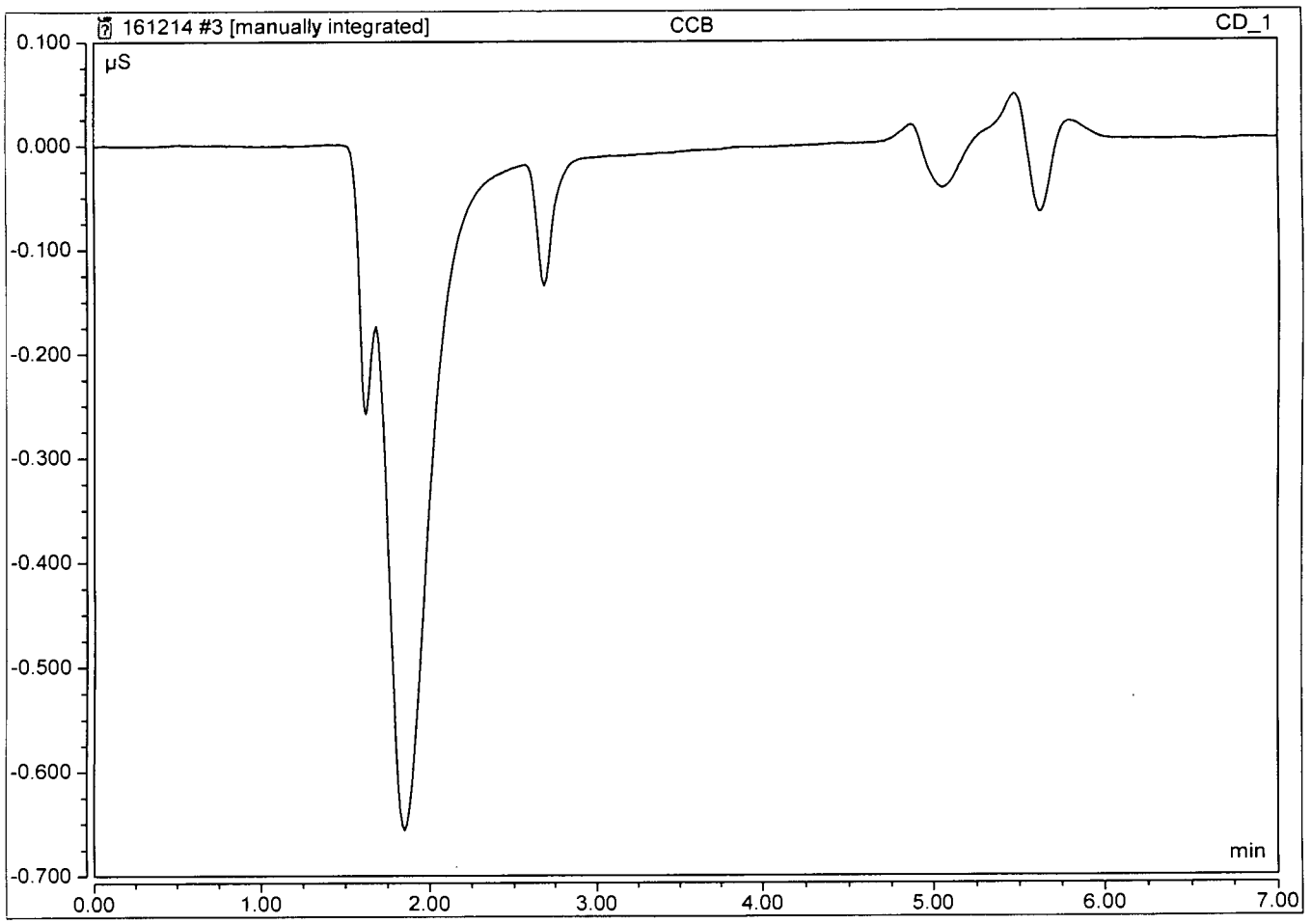
Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	CCB 12/14/16 14:55	C	CCB 12/14/16 18:24	C		C		C		C	
chloride	1.000	U	1.000	U							
Nitrate(NO3)	.500	U	.500	U							
sulfate	1.000	U	1.000	U							

Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**14-Dec-2016 / 14:55**	*Run Time:*	**7.00**

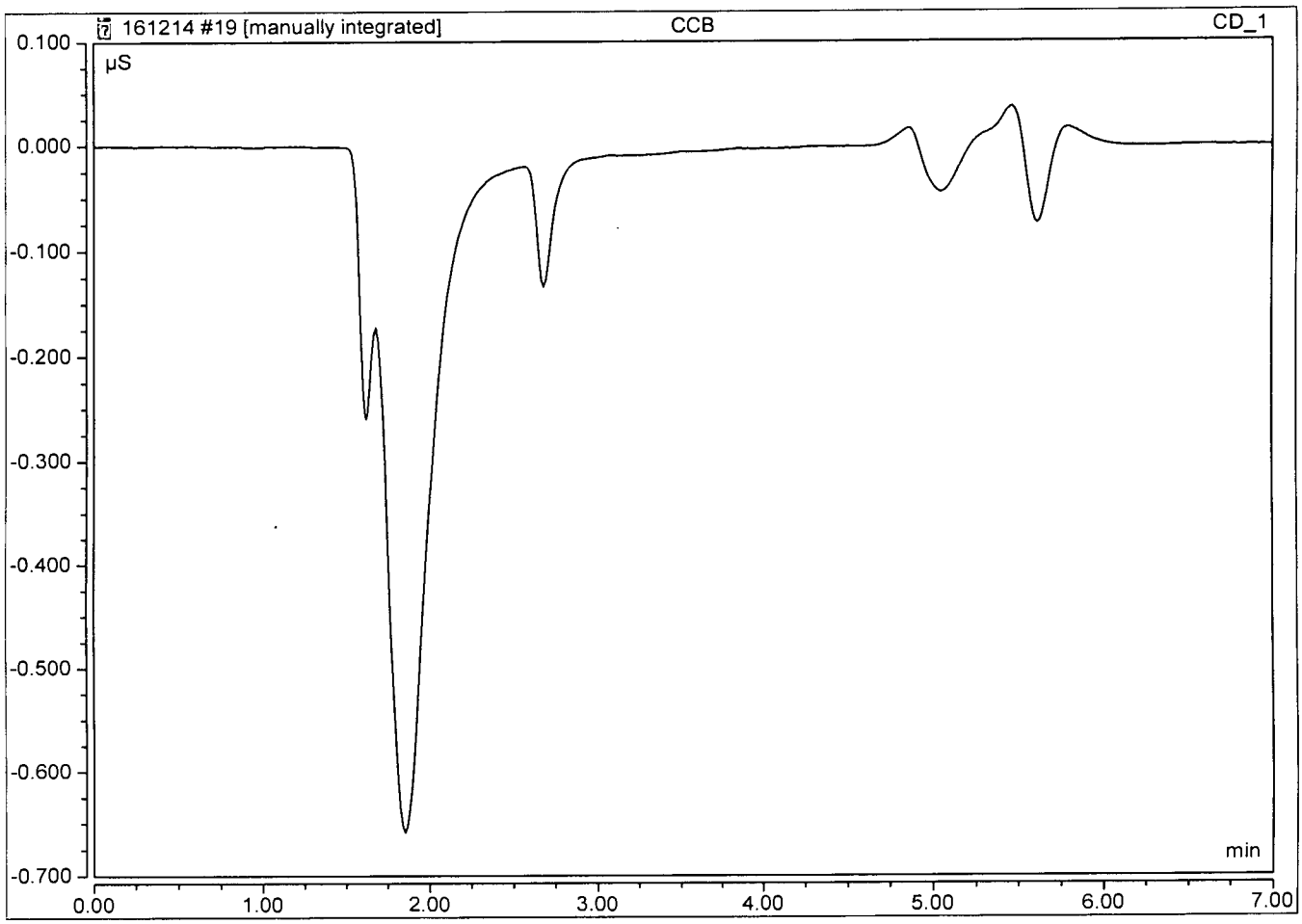
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
		TOTAL:		0.00	0.00	0.00



Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**14-Dec-2016 / 18:24**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
		TOTAL:		0.00	0.00	0.00



A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No: 81760 SDG: 81760

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 12/20/16

Analyte	Calibration Verification									M
	True CCV1	Found 9:29	%R(1)	True CCV1	Found 12:05	%R(1)	True CCV1	Found 15:21	%R(1)	
chloride	25	23.6931	94.8	25	23.7338	94.9	25	23.3354	93.3	

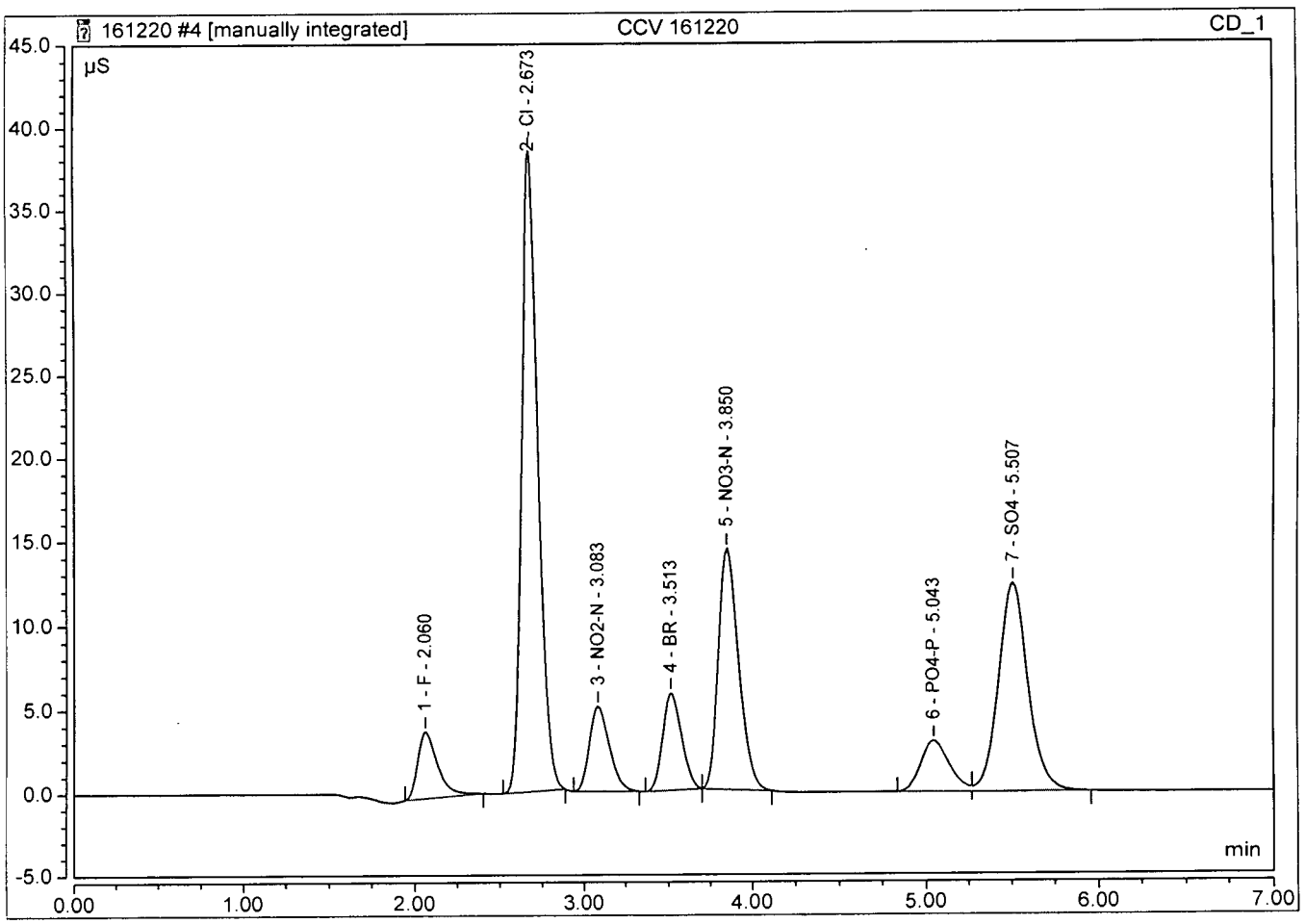
(1) Control Limits: 90-110

ILM02.0

Peak Integration Report

Sample Name:	**CCV 161220**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Dec-2016 / 09:29**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.06	F	BMB	0.546	4.004	2.4631
2	2.67	Cl	BMB	4.208	38.420	23.6931
3	3.08	NO2-N	BMB	0.703	5.042	2.3532
4	3.51	BR	BMB	0.740	5.777	11.8529
5	3.85	NO3-N	BMB	1.983	14.287	4.9091
6	5.04	PO4-P	BM *	0.591	3.035	4.8077
7	5.51	SO4	MB*	2.453	12.325	20.5813
TOTAL:				11.22	82.89	70.66



Algorithm Check

$y = .1916x - .0413$ y = Peak Area

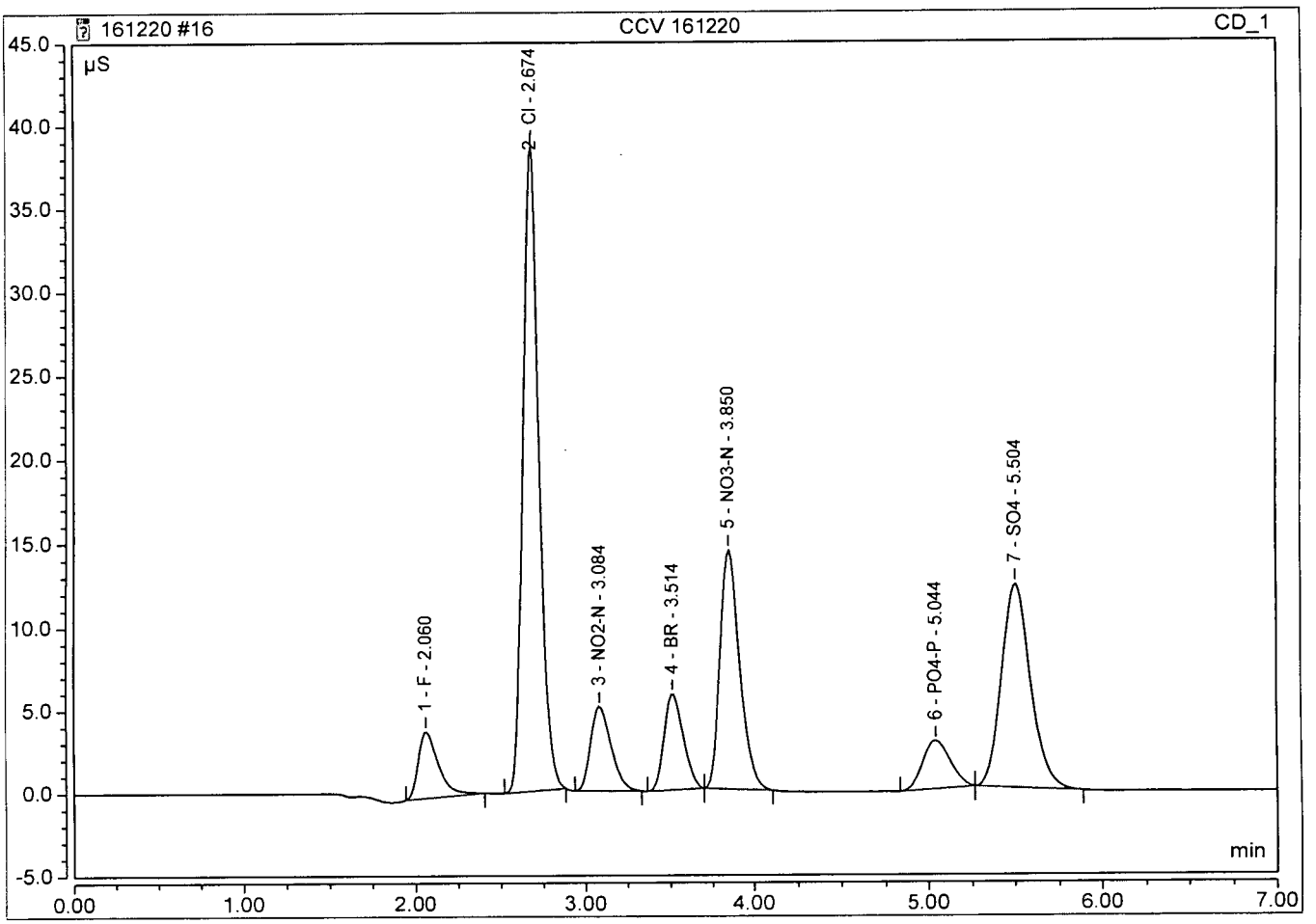
$x = 23.69$ ✓ x = Amount

MM 12/28/16

Peak Integration Report

Sample Name:	**CCV 161220**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Dec-2016 / 12:05**	*Run Time:*	**7.00**

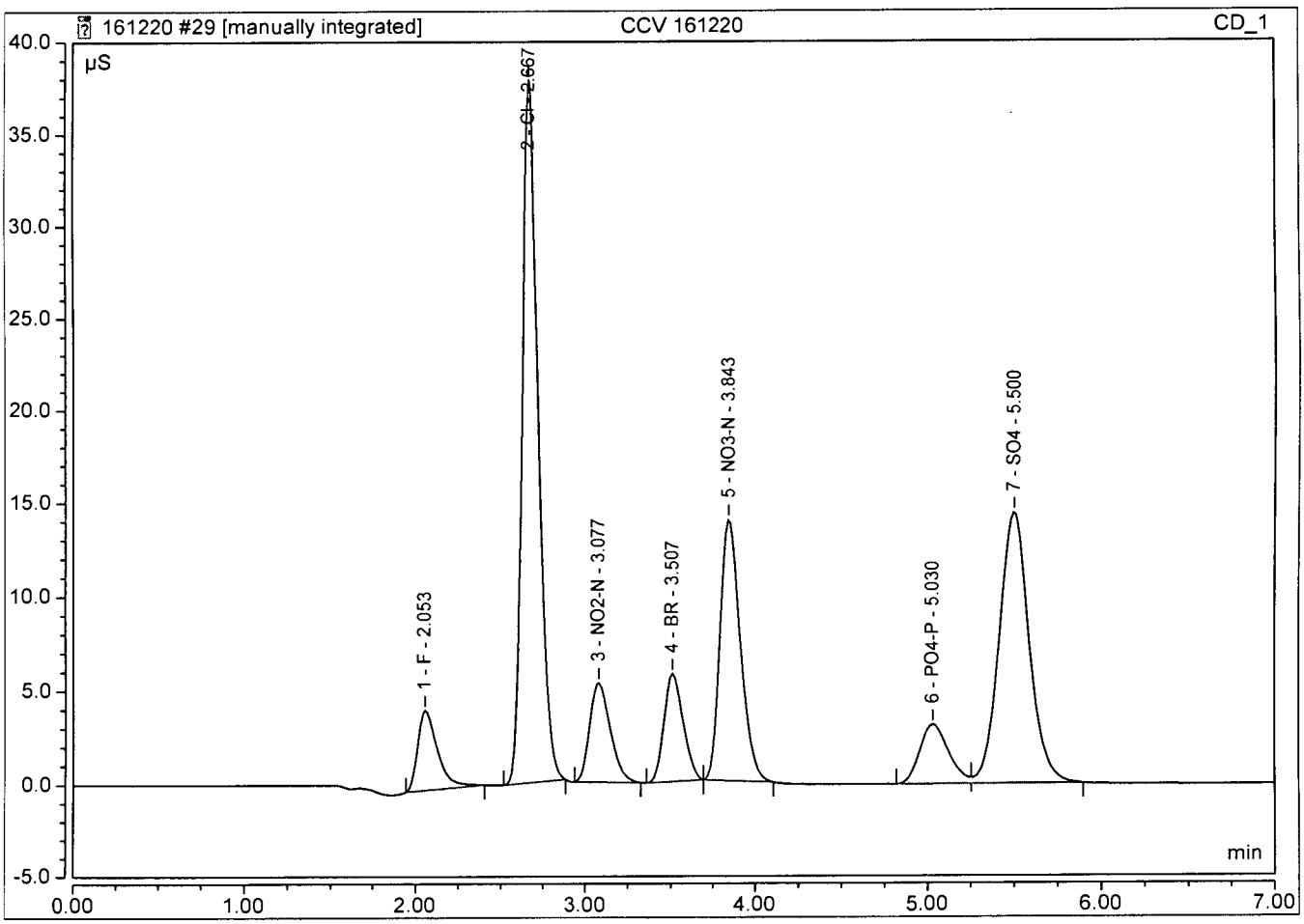
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.06	F	BMB	0.548	4.031	2.4697
2	2.67	Cl	BMB	4.216	38.534	23.7338
3	3.08	NO2-N	BMB	0.707	5.078	2.3666
4	3.51	BR	BMB	0.742	5.799	11.8834
5	3.85	NO3-N	BMB	1.987	14.364	4.9188
6	5.04	PO4-P	BMB	0.528	2.907	4.3032
7	5.50	SO4	BMB	2.371	12.280	19.9056
TOTAL:				11.10	82.99	69.58



Peak Integration Report

Sample Name:	**CCV 161220**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Dec-2016 / 15:21**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.05	F	BMB	0.571	4.263	2.5745
2	2.67	Cl	BMB	4.144	37.832	23.3354
3	3.08	NO2-N	BMB	0.735	5.280	2.4614
4	3.51	BR	BMB	0.732	5.725	11.7323
5	3.84	NO3-N	BMB	1.926	13.871	4.7709
6	5.03	PO4-P	BM *	0.612	3.147	4.9810
7	5.50	SO4	MB*	2.852	14.371	23.8518
TOTAL:				11.57	84.49	73.71



A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 81760 SDG: 81760

Preparation Blank Matrix (soil/water): water

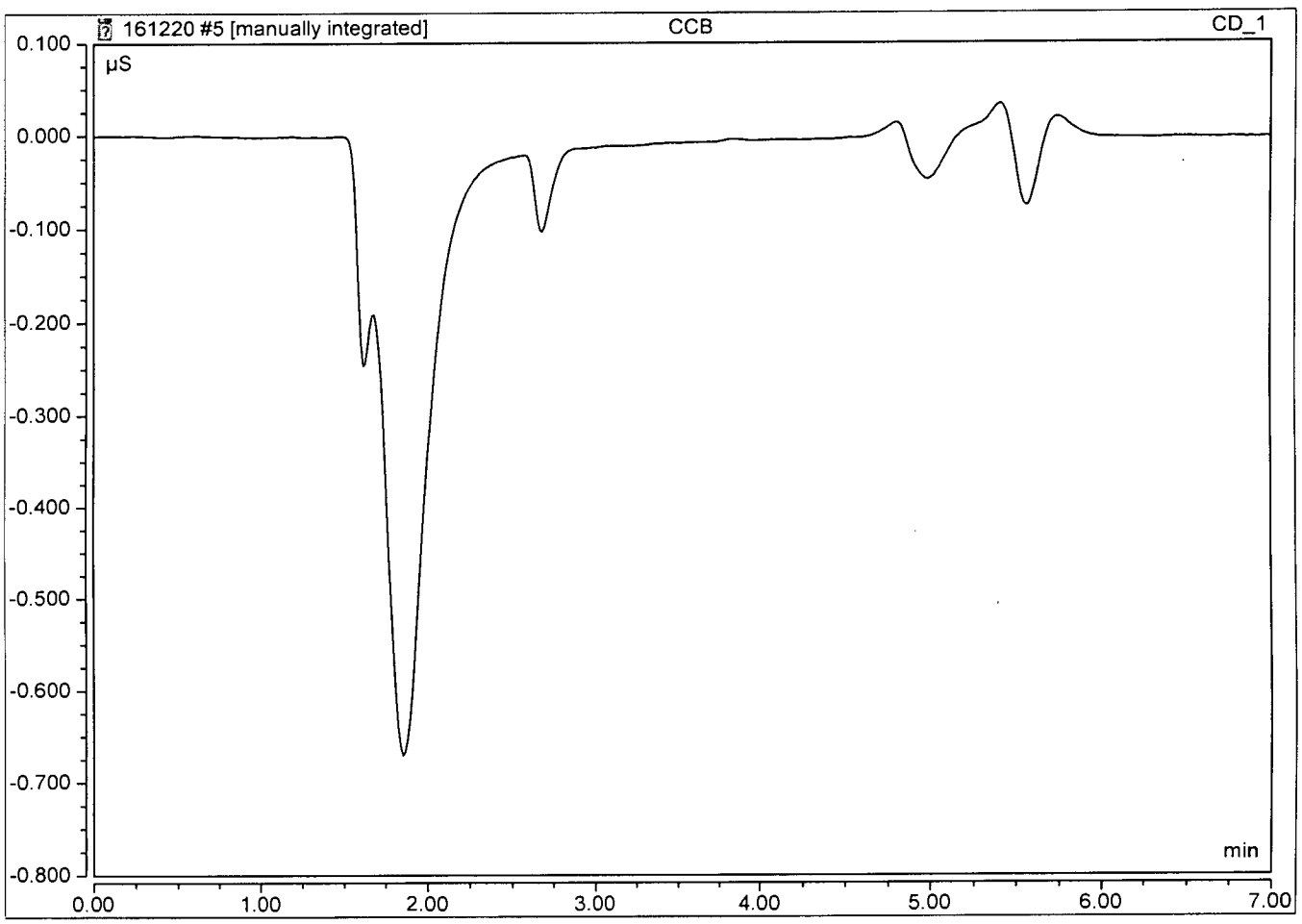
Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	CCB 12/20/16 09:42	C	CCB 12/20/16 12:18	C	CCB 12/20/16 15:34	C		C		C	
chloride	1.000	U	1.000	U	1.000	U					

Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Dec-2016 / 09:42**	*Run Time:*	**7.00**

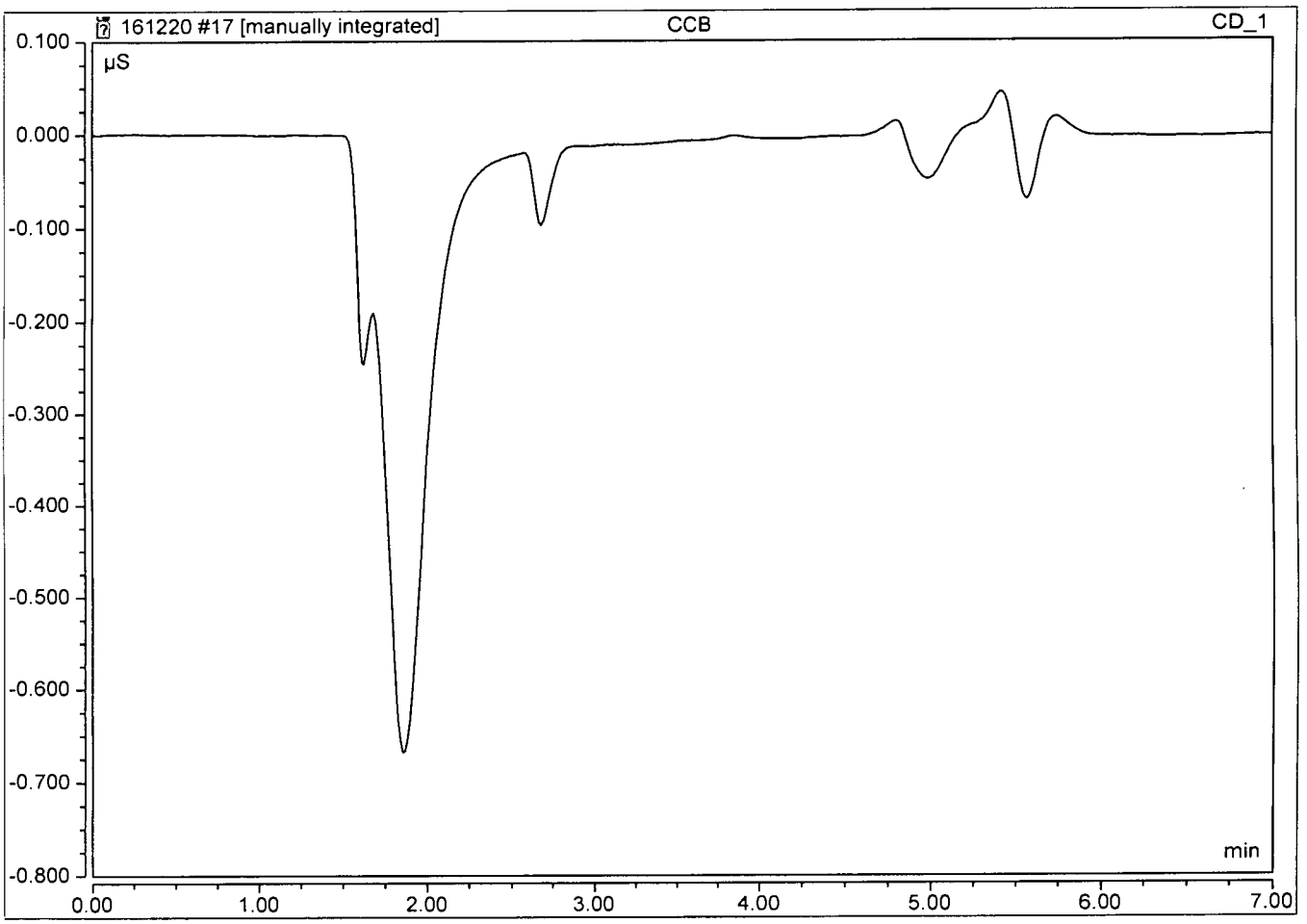
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
		TOTAL:		0.00	0.00	0.00



Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Dec-2016 / 12:18**	*Run Time:*	**7.00**

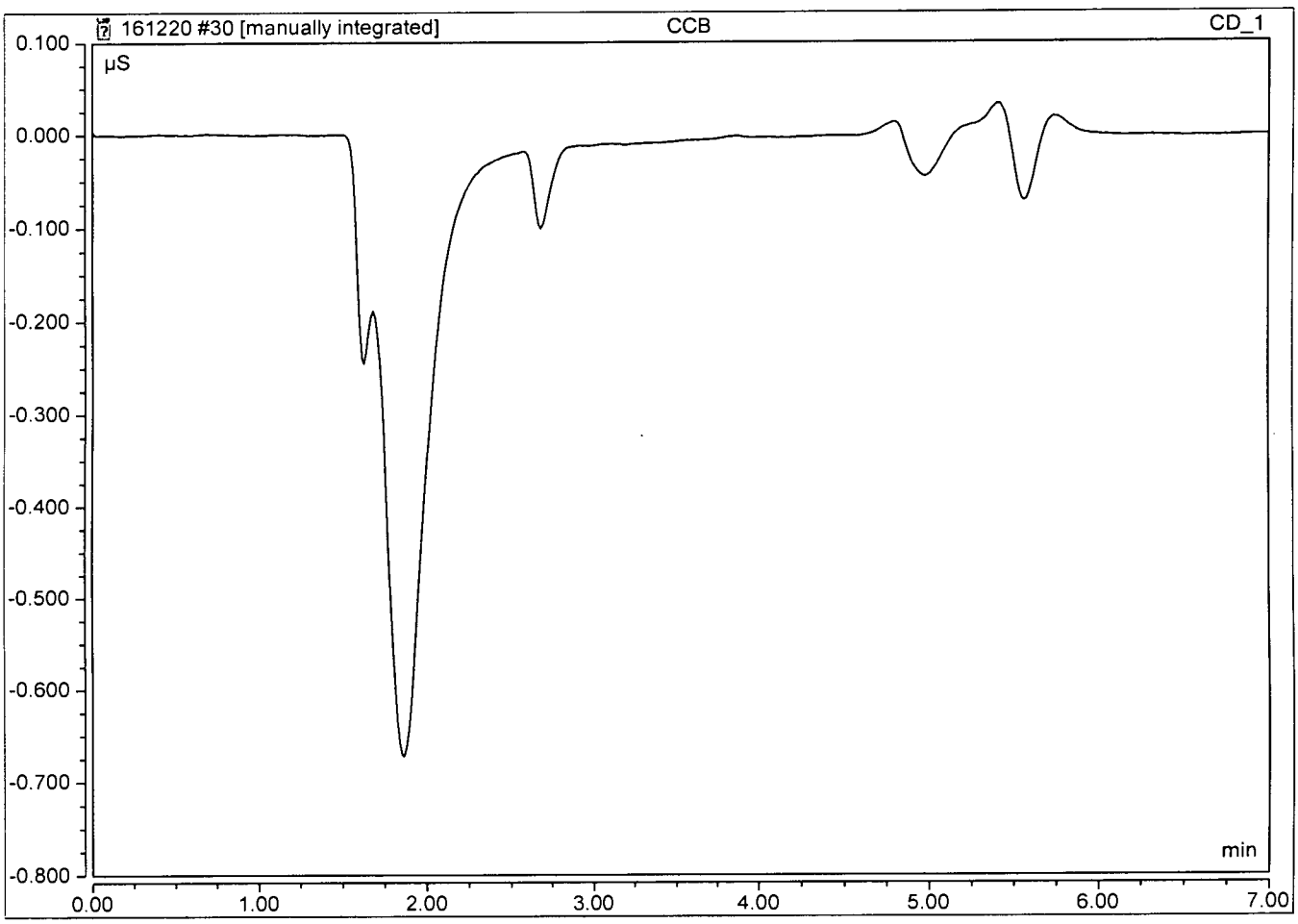
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
TOTAL:				0.00	0.00	0.00



Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Dec-2016 / 15:34**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
		TOTAL:		0.00	0.00	0.00



A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No: 81760 SDG: 81760

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 05/20/16

Analyte	Calibration Verification									M
	True ICV	Found 12:41	%R(1)	True CCV1	Found 16:06	%R(1)	True CCV1	Found 16:16	%R(1)	
Ferrous Iron	3	3.01396	100	4	4.06294	102	4	4.03297	101	

(1) Control Limits: 90-110

ILM02.0

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

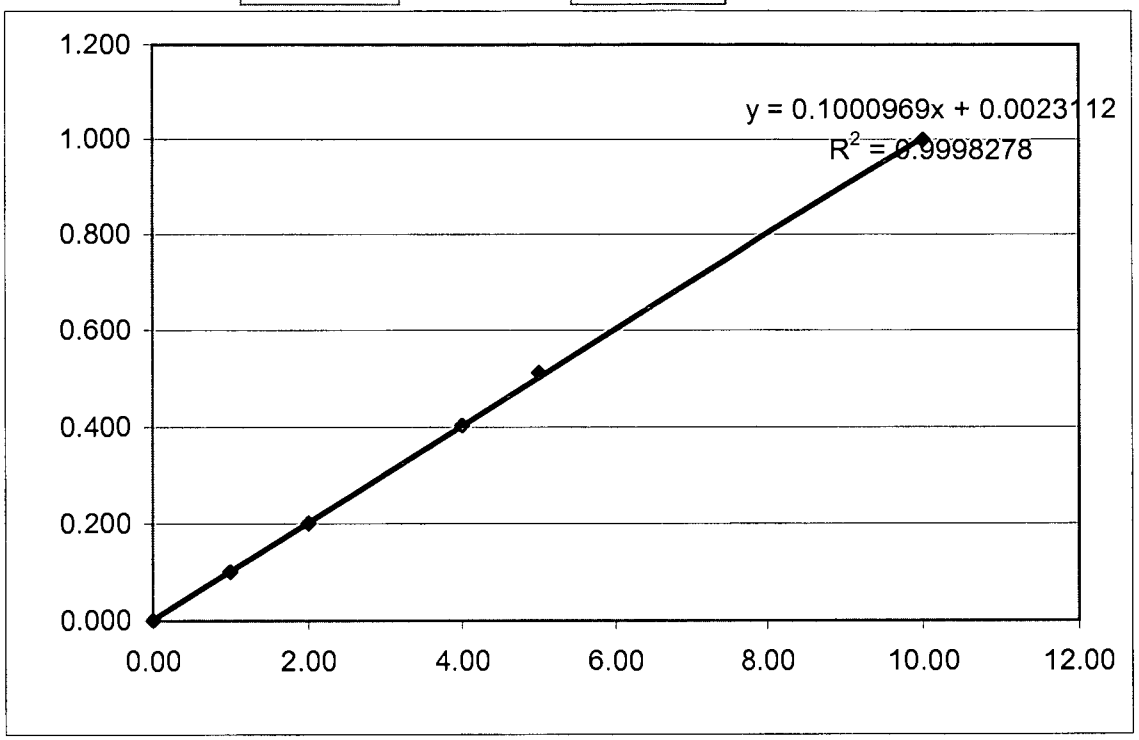
ARF No.: 81760 SDG: 81760

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	ICB 05/20/16 12:42	C	CCB 12/14/16 16:07	C	CCB 12/14/16 16:17	C		C		C	
Ferrous Iron	1.000	U	1.000	U	1.000	U					

Ferrous Iron **161214A**



X	Y
0.00	0.000
1.00	0.101
2.00	0.201
4.00	0.403
5.00	0.512
10.00	0.999

Algorithm Check

reading (y)=	0.323	12/14/16	16:08
dilution=	1		
result (x)=	3.20 ✓		

MM 12/28/16

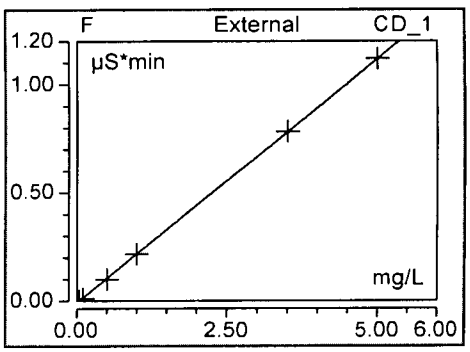
Calibration Batch Report

Sequence:	**161020**	*Injection Volume:*	**25.00**
Instrument Method:	**Program 1**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:24**	*Run Time:*	**7**

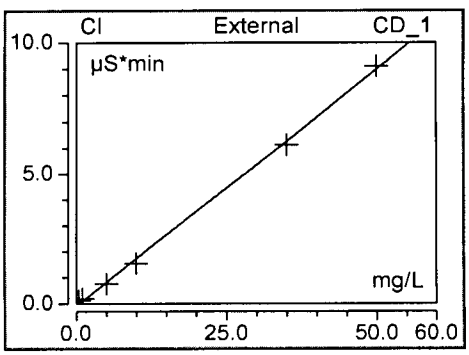
Calibration Summary

Peak Name	Eval.Type	Cal.Type	Points	Offset (C0)	Slope (C1)	Curve (C2)	Coeff.Det. %
F	Area	WithOffset,	6.000	-0.009	0.225	0.000	99.9840
Cl	Area	in, WithOffse	6.000	-0.094	0.182	0.000	99.8613
NO2-N	Area	in, WithOffse	6.000	-0.007	0.301	0.000	99.9917
BR	Area	in, WithOffse	6.000	-0.008	0.063	0.000	99.9802
NO3-N	Area	in, WithOffse	6.000	-0.039	0.412	0.000	99.9329
PO4-P	Area	in, WithOffse	6.000	-0.008	0.125	0.000	99.9563
SO4	Area	in, WithOffse	6.000	-0.060	0.122	0.000	99.9400
		AVERAGE:		-0.0322	0.2043	0.0000	99.9495

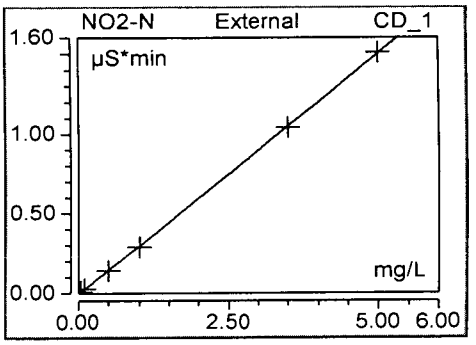
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	F	F	F	F
ICAL 1 10/20/16	2.123	0.0012	0.022	0.044
ICAL 2 10/20/16	2.107	0.0123	0.139	0.093
ICAL 3 10/20/16	2.100	0.1000	0.922	0.483
ICAL 4 10/20/16	2.104	0.2174	1.958	1.004
ICAL 5 10/20/16	2.097	0.7826	6.953	3.513
ICAL 6 10/20/16	2.103	1.1183	9.996	5.004
Average	2.106			
Rel. Std. Dev.	0.443 %			



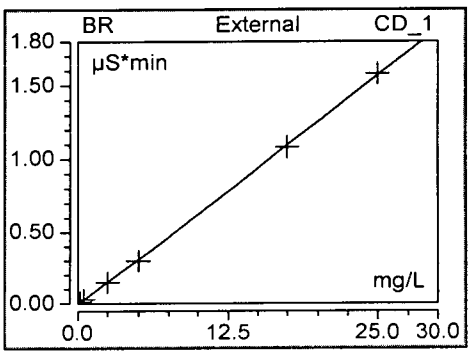
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	Cl	Cl	Cl	Cl
ICAL 1 10/20/16	2.793	0.1132	1.052	1.143
ICAL 2 10/20/16	2.790	0.1861	1.743	1.544
ICAL 3 10/20/16	2.790	0.7617	7.117	4.714
ICAL 4 10/20/16	2.797	1.5419	14.708	9.010
ICAL 5 10/20/16	2.793	6.1288	59.398	34.268
ICAL 6 10/20/16	2.803	9.1171	87.978	50.723
Average	2.795			
Rel. Std. Dev.	0.179 %			



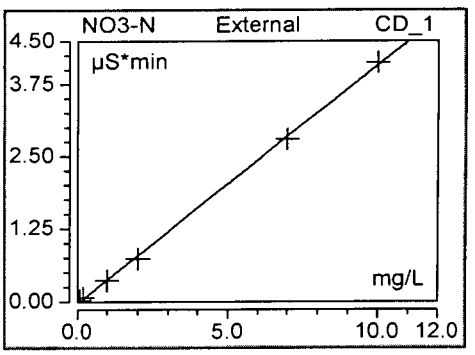
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	NO2-N	NO2-N	NO2-N	NO2-N
ICAL 1 10/20/16	3.250	0.0095	0.073	0.053
ICAL 2 10/20/16	3.247	0.0276	0.209	0.113
ICAL 3 10/20/16	3.250	0.1420	1.072	0.493
ICAL 4 10/20/16	3.254	0.2907	2.188	0.986
ICAL 5 10/20/16	3.250	1.0405	7.775	3.473
ICAL 6 10/20/16	3.257	1.5072	11.205	5.022
Average	3.251			
Rel. Std. Dev.	0.106 %			



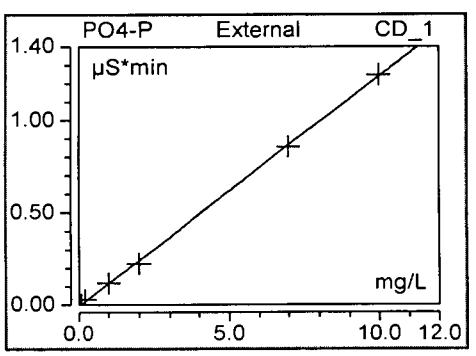
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	BR	BR	BR	BR
ICAL 1 10/20/16	3.757	0.0109	0.087	0.299
ICAL 2 10/20/16	3.753	0.0293	0.232	0.589
ICAL 3 10/20/16	3.750	0.1485	1.179	2.478
ICAL 4 10/20/16	3.754	0.2993	2.389	4.870
ICAL 5 10/20/16	3.743	1.0832	8.801	17.295
ICAL 6 10/20/16	3.747	1.5800	13.023	25.169
Average	3.751			
Rel. Std. Dev.	0.131 %			



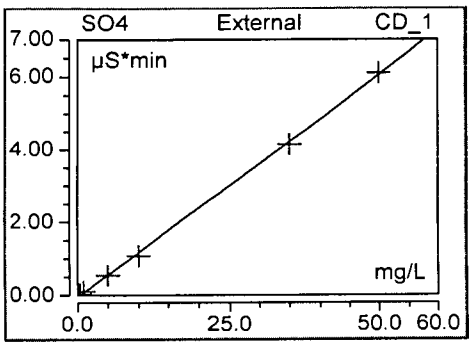
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	NO3-N	NO3-N	NO3-N	NO3-N
ICAL 1 10/20/16	4.143	0.0290	0.196	0.166
ICAL 2 10/20/16	4.140	0.0717	0.496	0.270
ICAL 3 10/20/16	4.137	0.3656	2.533	0.983
ICAL 4 10/20/16	4.140	0.7330	5.168	1.875
ICAL 5 10/20/16	4.123	2.7923	20.144	6.873
ICAL 6 10/20/16	4.123	4.1278	30.098	10.114
Average	4.135			
Rel. Std. Dev.	0.215 %			



Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	PO4-P	PO4-P	PO4-P	PO4-P
ICAL 1 10/20/16	5.540	0.0032	0.021	0.092
ICAL 2 10/20/16	5.540	0.0284	0.107	0.295
ICAL 3 10/20/16	5.537	0.1191	0.557	1.022
ICAL 4 10/20/16	5.537	0.2251	1.103	1.873
ICAL 5 10/20/16	5.520	0.8544	4.243	6.922
ICAL 6 10/20/16	5.523	1.2473	6.244	10.075
Average	5.533			
Rel. Std. Dev.	0.160 %			



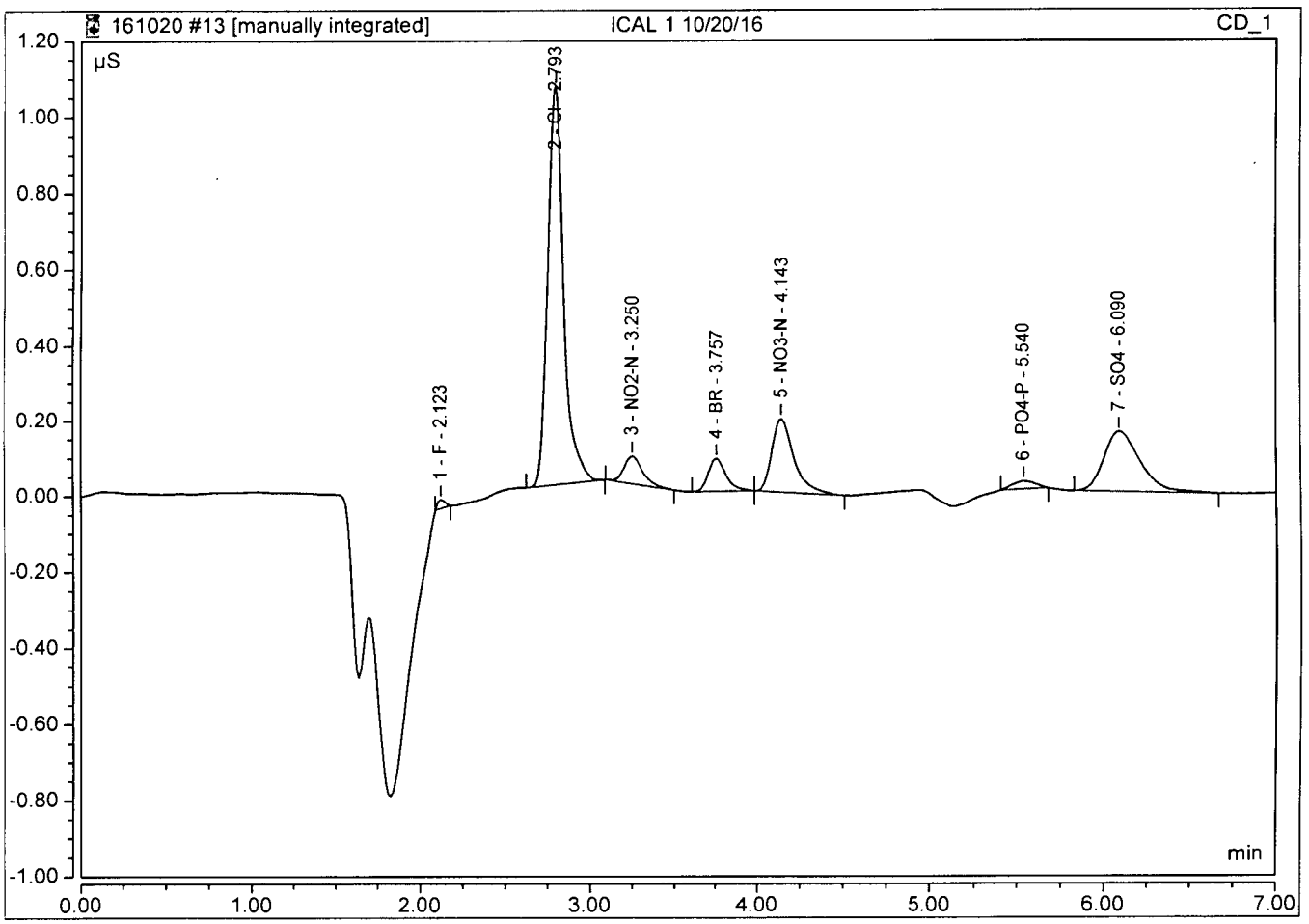
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	SO4	SO4	SO4	SO4
ICAL 1 10/20/16	6.090	0.0385	0.159	0.808
ICAL 2 10/20/16	6.093	0.1046	0.455	1.350
ICAL 3 10/20/16	6.097	0.5456	2.464	4.961
ICAL 4 10/20/16	6.100	1.0756	4.975	9.302
ICAL 5 10/20/16	6.097	4.1512	19.714	34.487
ICAL 6 10/20/16	6.110	6.1057	29.270	50.492
Average	6.098			
Rel. Std. Dev.	0.113 %			



Peak Integration Report

Sample Name:	**ICAL 1 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:19**	*Run Time:*	**7.00**

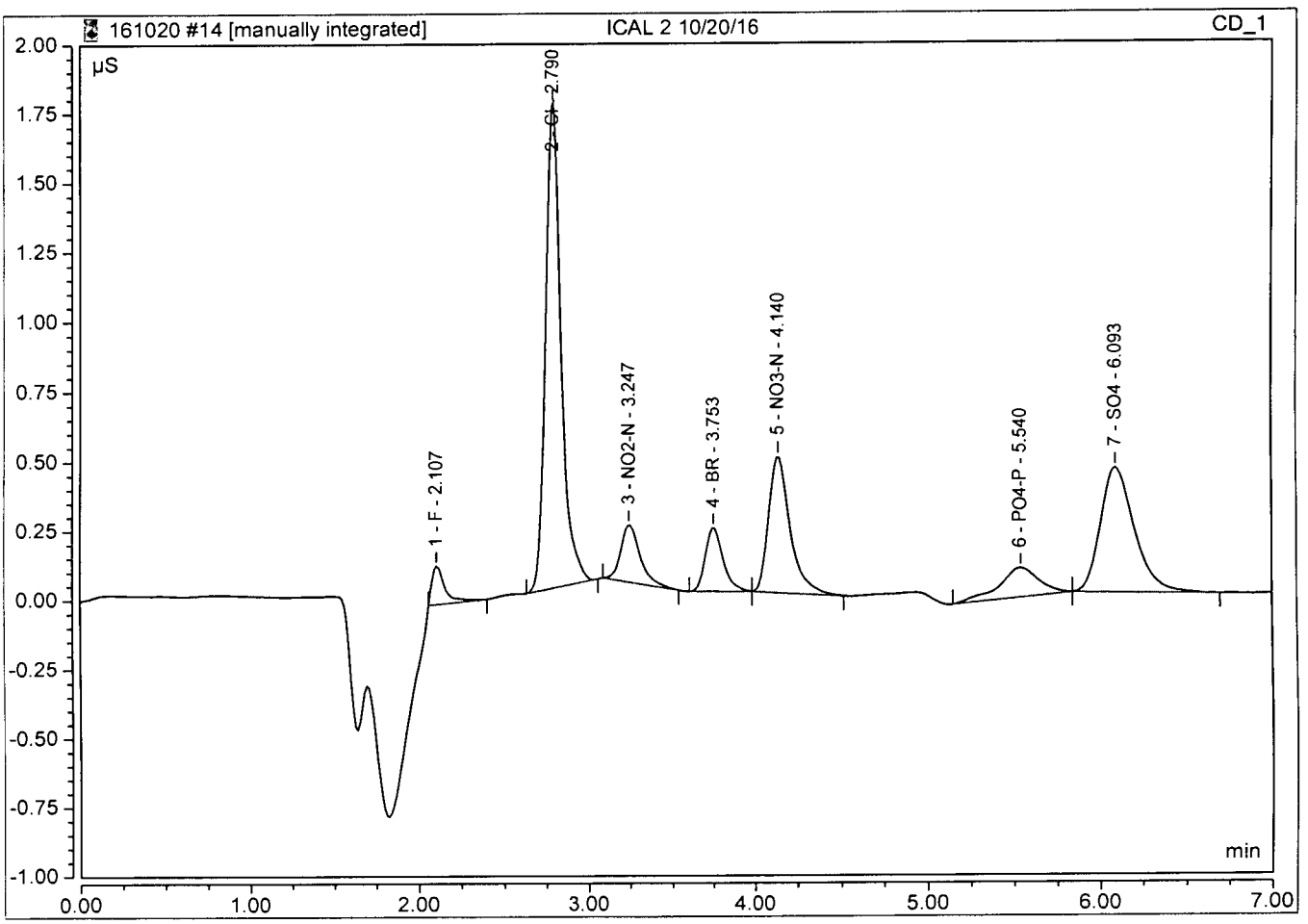
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.12	F	BMB*	0.001	0.022	0.0438
2	2.79	Cl	BMB	0.113	1.052	1.1427
3	3.25	NO2-N	BMB	0.009	0.073	0.0531
4	3.76	BR	BMB	0.011	0.087	0.2985
5	4.14	NO3-N	BMB	0.029	0.196	0.1660
6	5.54	PO4-P	BMB*	0.003	0.021	0.0923
7	6.09	SO4	BMB	0.038	0.159	0.8084
TOTAL:				0.21	1.61	2.60



Peak Integration Report

Sample Name:	**ICAL 2 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:32**	*Run Time:*	**7.00**

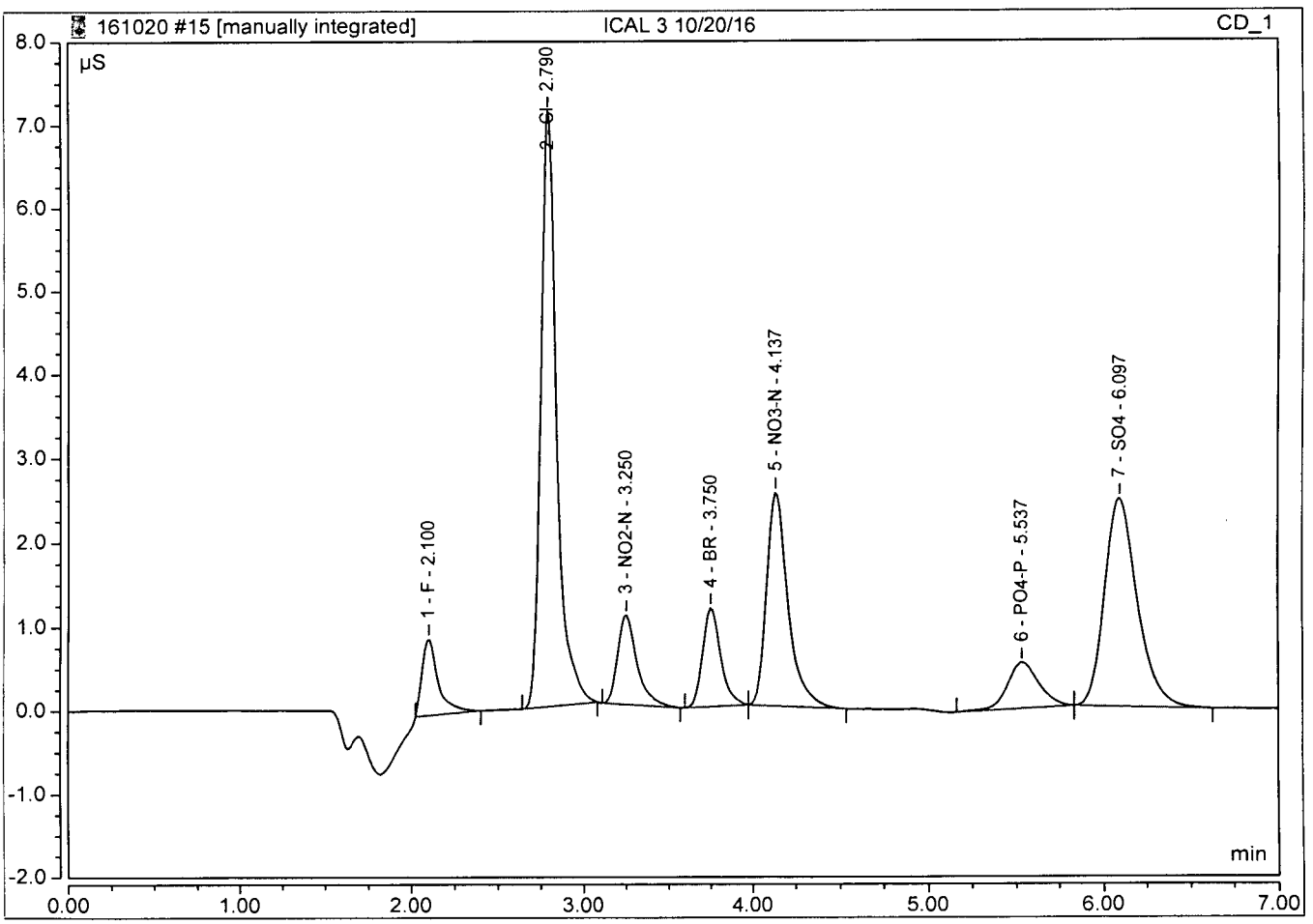
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.11	F	BMB*	0.012	0.139	0.0933
2	2.79	Cl	BMB	0.186	1.743	1.5439
3	3.25	NO2-N	BMB	0.028	0.209	0.1132
4	3.75	BR	BMB	0.029	0.232	0.5894
5	4.14	NO3-N	BMB	0.072	0.496	0.2699
6	5.54	PO4-P	BMB	0.028	0.107	0.2946
7	6.09	SO4	BMB	0.105	0.455	1.3496
TOTAL:				0.46	3.38	4.25



Peak Integration Report

Sample Name:	**ICAL 3 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:45**	*Run Time:*	**7.00**

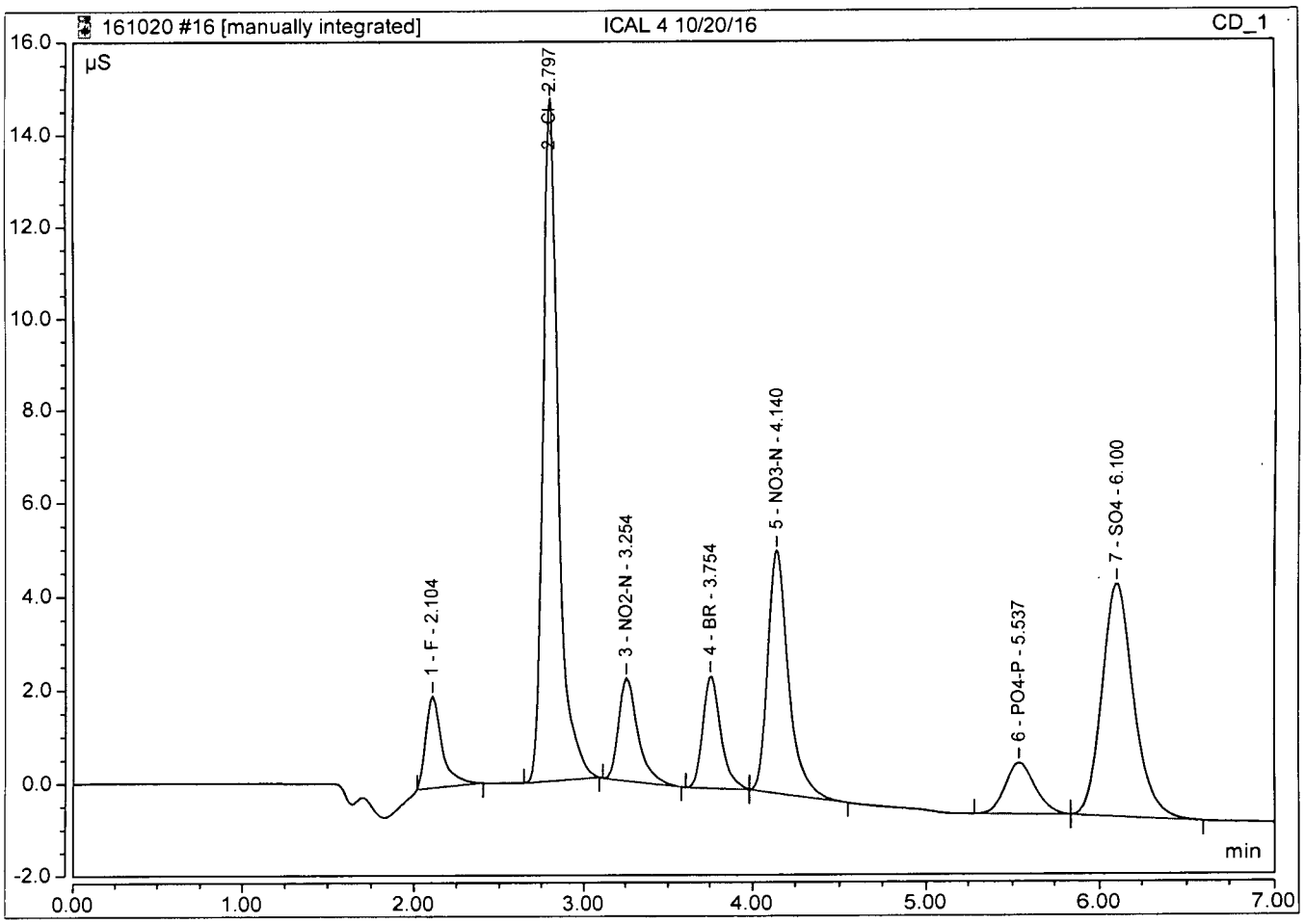
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB*	0.100	0.922	0.4827
2	2.79	Cl	BMB	0.762	7.117	4.7137
3	3.25	NO2-N	BMB	0.142	1.072	0.4926
4	3.75	BR	BMB	0.148	1.179	2.4784
5	4.14	NO3-N	BMB	0.366	2.533	0.9830
6	5.54	PO4-P	BMB	0.119	0.557	1.0221
7	6.10	SO4	BMB	0.546	2.464	4.9609
TOTAL:				2.18	15.84	15.13



Peak Integration Report

Sample Name:	**ICAL 4 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:58**	*Run Time:*	**7.00**

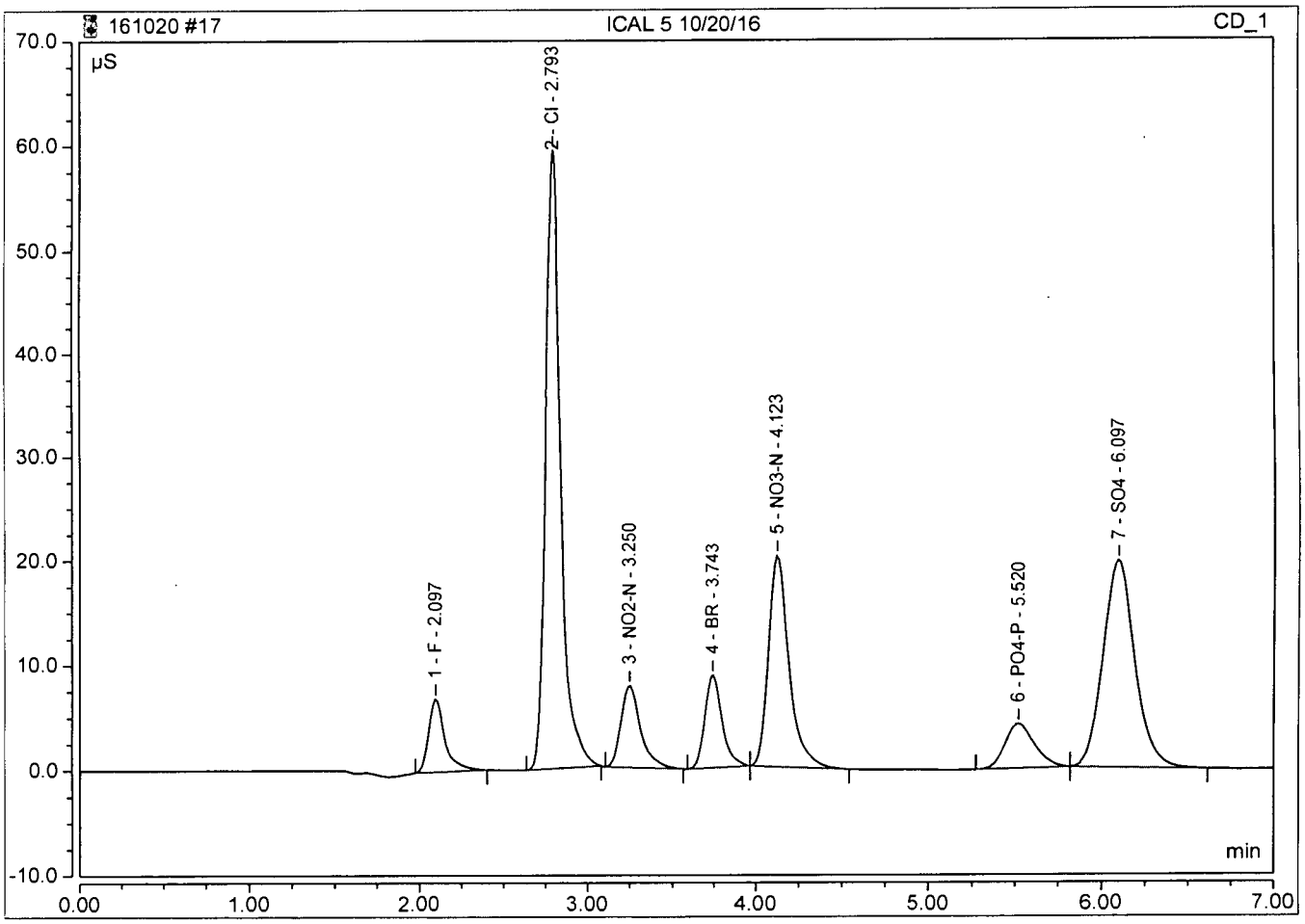
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB*	0.217	1.958	1.0036
2	2.80	Cl	BMB	1.542	14.708	9.0096
3	3.25	NO2-N	BMB	0.291	2.188	0.9859
4	3.75	BR	BMB	0.299	2.389	4.8695
5	4.14	NO3-N	BMB	0.733	5.168	1.8746
6	5.54	PO4-P	BMB	0.225	1.103	1.8731
7	6.10	SO4	BMB	1.076	4.975	9.3015
TOTAL:				4.38	32.49	28.92



Peak Integration Report

Sample Name:	**ICAL 5 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:11**	*Run Time:*	**7.00**

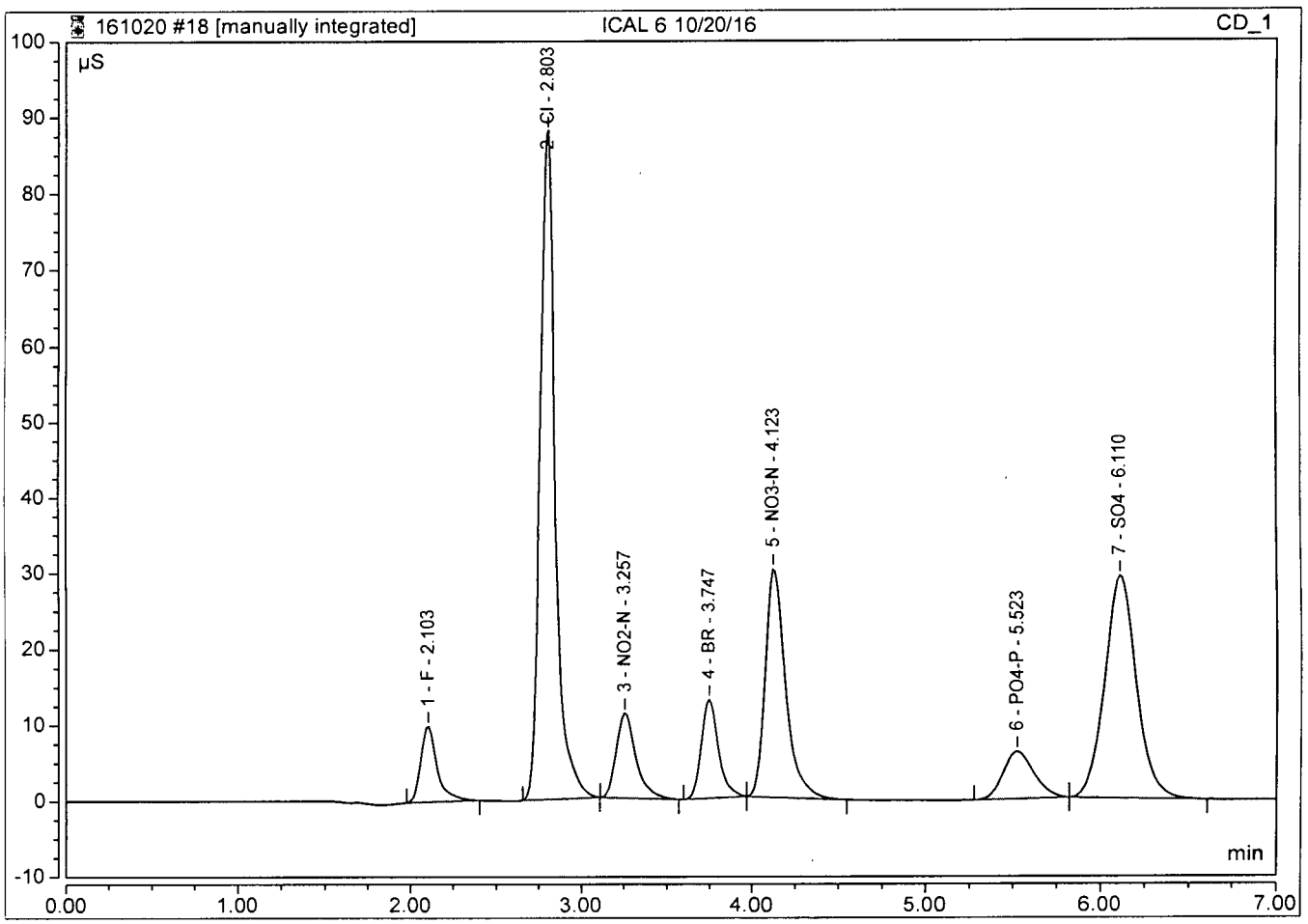
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB	0.783	6.953	3.5131
2	2.79	Cl	BMB	6.129	59.398	34.2675
3	3.25	NO2-N	BMB	1.040	7.775	3.4734
4	3.74	BR	BMB	1.083	8.801	17.2948
5	4.12	NO3-N	BMB	2.792	20.144	6.8727
6	5.52	PO4-P	BMB	0.854	4.243	6.9225
7	6.10	SO4	BMB	4.151	19.714	34.4871
TOTAL:				16.83	127.03	106.83



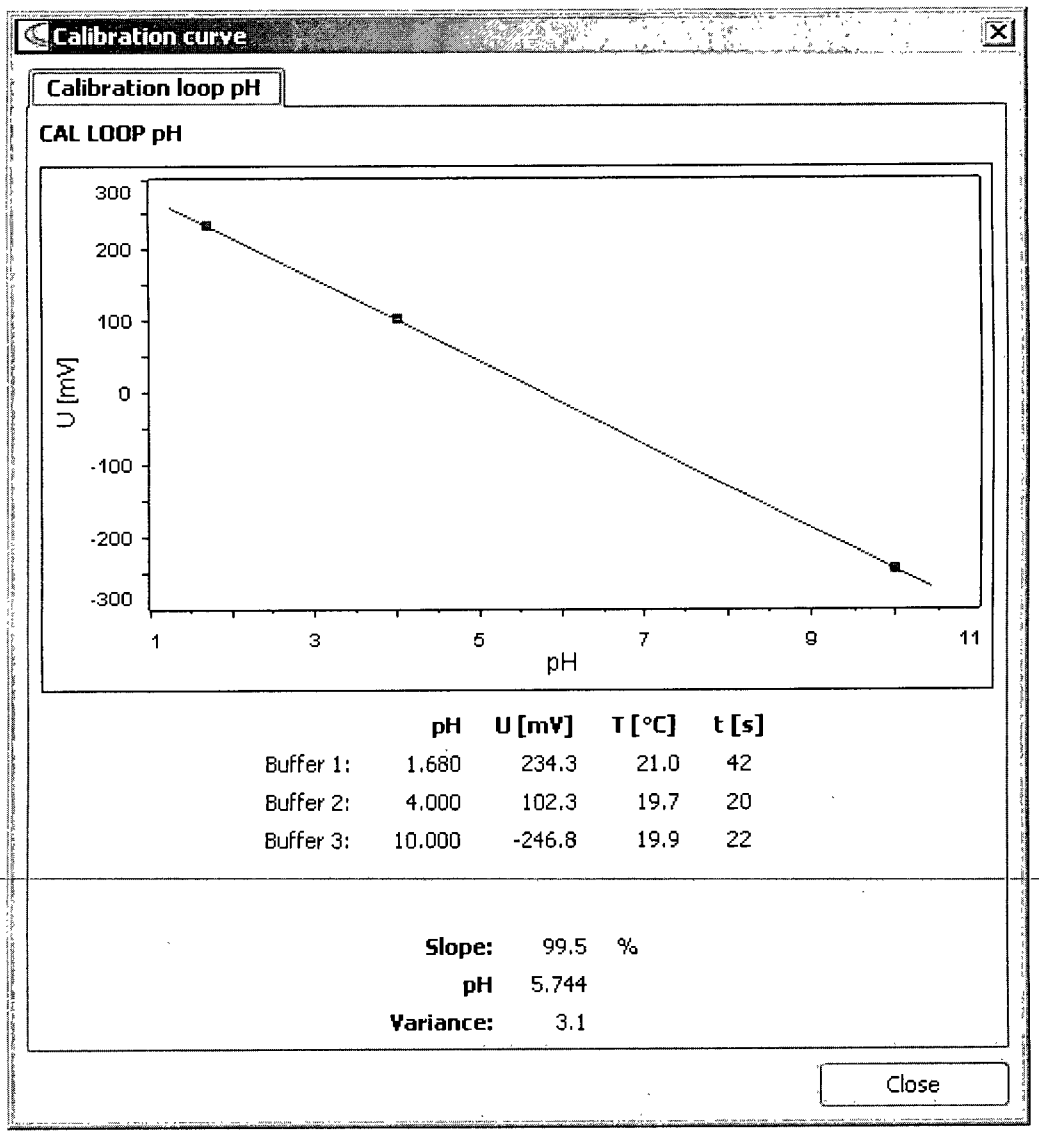
Peak Integration Report

Sample Name:	**ICAL 6 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:24**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB	1.118	9.996	5.0036
2	2.80	Cl	BMB*	9.117	87.978	50.7226
3	3.26	NO2-N	BMB	1.507	11.205	5.0218
4	3.75	BR	BMB	1.580	13.023	25.1693
5	4.12	NO3-N	BMB	4.128	30.098	10.1138
6	5.52	PO4-P	BMB	1.247	6.244	10.0755
7	6.11	SO4	BMB	6.106	29.270	50.4924
TOTAL:				24.80	187.81	156.60



Tiamo Calibration Curve
12/20/16



INORGANIC ANALYSIS
Raw Data

APPL, INC.

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	12/20/16	12/20/16	#300WD-161220A-AZ47494
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	12/14/16	12/14/16	#300W-161214A3-AZ47496
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	12/14/16	12/14/16	#300W-161214A3-AZ47496
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	12/14/16	12/14/16	#300W-161214A3-AZ47496
SM 2320B	BICARBONATE AS	1.6 J	2.0	1.70	0.85	mg/L	12/20/16	12/20/16	#232W-161220A2-AZ47498
SM 2320B	CARBONATE AS CA	1.70 U	2.0	1.70	0.85	mg/L	12/20/16	12/20/16	#232W-161220A2-AZ47498
SM 2320B	TOTAL ALKALINITY	1.6 J	2.0	1.70	0.85	mg/L	12/20/16	12/20/16	#232W-161220A2-AZ47498
SM3500Fe	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	12/14/16	12/14/16	#35FE-161214A-AZ47498

Wetlab SC-Blank-REG MDLs
Printed: 12/21/16 5:23:45 PM

Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

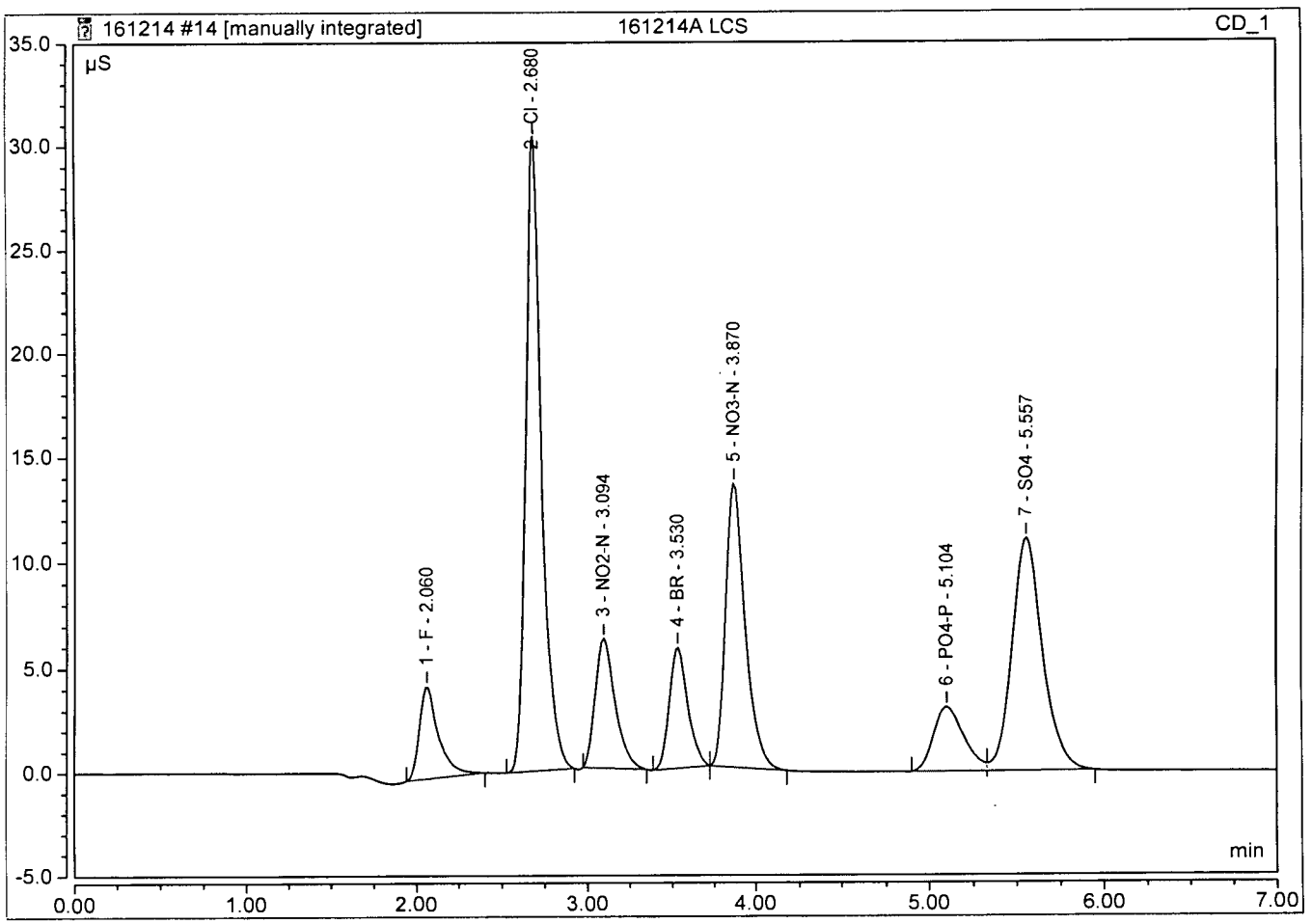
Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	20.0	18.3	91.5	90-110	12/14/16	12/14/16	#300W-161214A3-AZ47496
EPA 300.0	NITRATE	22.1	20.4	92.3	90-110	12/14/16	12/14/16	#300W-161214A3-AZ47496
EPA 300.0	SULFATE	20.0	18.9	94.5	90-110	12/14/16	12/14/16	#300W-161214A3-AZ47496

Comments: _____

Peak Integration Report

Sample Name:	**161214A LCS**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**14-Dec-2016 / 17:18**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.06	F	BMB	0.582	4.473	2.6226
2	2.68	Cl	BMB	3.226	30.351	18.2852
3	3.09	NO2-N	BMB	0.846	6.191	2.8266
4	3.53	BR	BMB	0.718	5.763	11.4997
5	3.87	NO3-N	BMB	1.857	13.454	4.6031
6	5.10	PO4-P	BM *	0.619	3.111	5.0323
7	5.56	SO4	MB*	2.245	10.997	18.8788
TOTAL:				10.09	74.34	63.75



Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

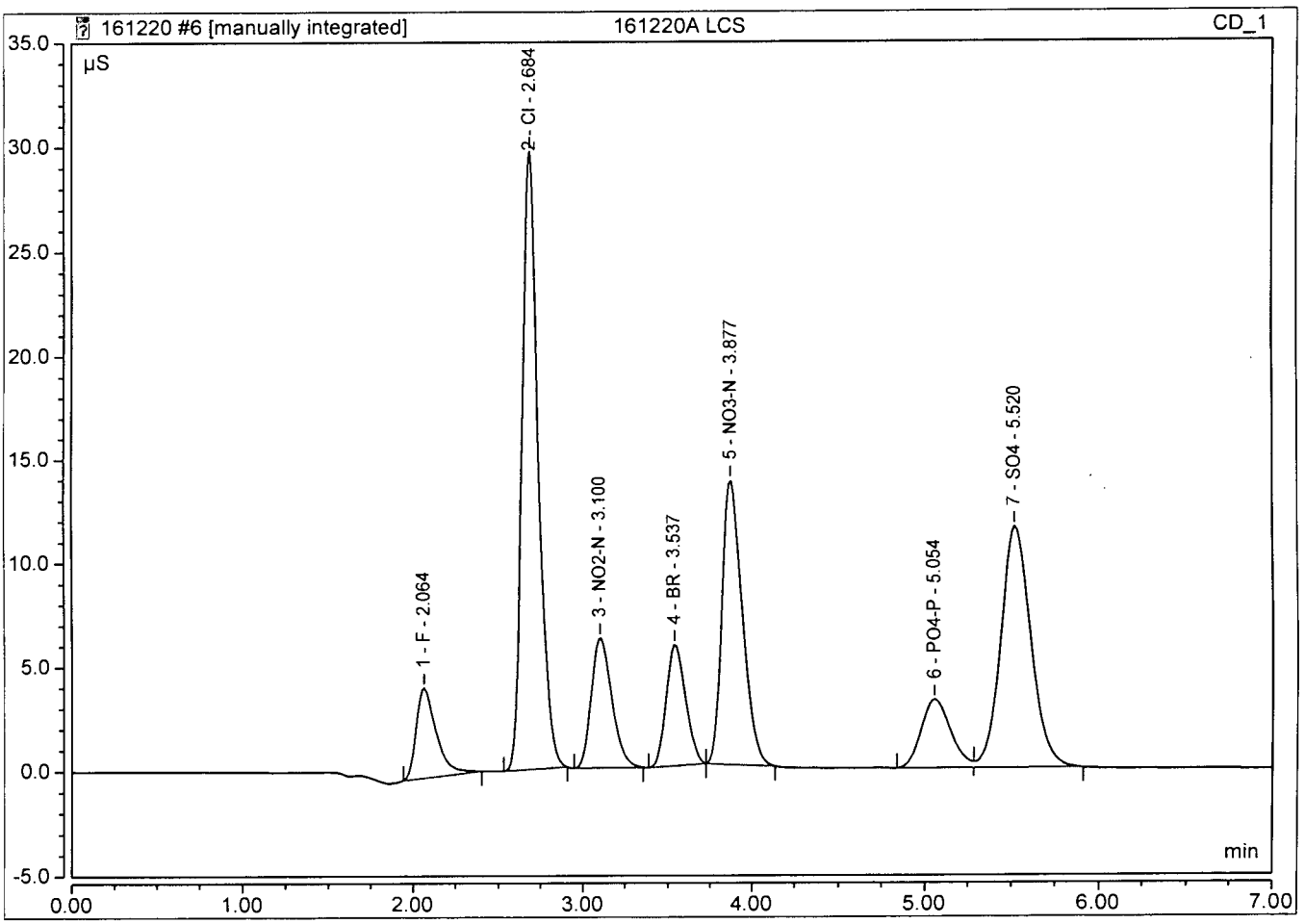
Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	20.0	18.7	93.5	90-110	12/20/16	12/20/16	#300WD-161220A-AZ47494

Comments: _____

Peak Integration Report

Sample Name:	**161220A LCS**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Dec-2016 / 09:55**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.06	F	BMB	0.588	4.324	2.6502
2	2.68	Cl	BMB	3.296	29.673	18.6688
3	3.10	NO2-N	BMB	0.883	6.241	2.9526
4	3.54	BR	BMB	0.749	5.816	11.9899
5	3.88	NO3-N	BMB	1.905	13.663	4.7198
6	5.05	PO4-P	BM *	0.639	3.269	5.1919
7	5.52	SO4	MB*	2.287	11.566	19.2214
TOTAL:				10.35	74.55	65.39



Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
SM 2320B	BICARBONATE AS CACO3	250	244	97.6	90-110	12/20/16	12/20/16	#232W-161220A2-AZ47498
SM 2320B	TOTAL ALKALINITY AS CACO3	250	244	97.6	90-110	12/20/16	12/20/16	#232W-161220A2-AZ47498
SM3500Fe	FERROUS IRON	3.00	3.20	107	80-120	12/14/16	12/14/16	#35FE-161214A-AZ47498

Comments: _____

Matrix Spike Recoveries

WETLAB

APPL ID: **161220W-47498 MS - 214874**

Sample ID: AZ47498

Client ID: ERH146

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	Matrix Res mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
SM 2320B	BICARBONATE AS CA	250	67.4	307	301	95.8	93.4	2.0	20	90-110	12/20/16	12/20/16	12/20/16	12/20/16	214874	AZ47498
SM 2320B	TOTAL ALKALINITY AS	250	67.4	307	301	95.8	93.4	2.0	20	90-110	12/20/16	12/20/16	12/20/16	12/20/16	214874	AZ47498

Comments: _____

SPECTROPHOTOMETRIC ANALYSIS (Ferrous Iron)

Method: SM3500Fe
Analyte: Ferrous Iron
Analyst: MM
Units: mg/L
QCG: 161214A
Notes:
Final Volume: 50mL

Instrument: GENESYS 10UV
Raw Spec: abs. @ 510nm
R-Squared: 0.99983
Reagent (lot#): COLORIZING REAGENT (12/09/16)
BUFFER (12/09/16)

Date	Time	APPL ID	25mL	Raw Result	SubSample Amt	Raw BLK	Calc Conc	Result	QC True	QC%
05/20/16	12:37	0 BB 5/20/16	1	0.000						
05/20/16	12:38	1	1	0.101						
05/20/16	12:39	2	1	0.201						
05/20/16	12:39	4	1	0.403						
05/20/16	12:40	5	1	0.512						
05/20/16	12:40	10	1	0.999						
05/20/16	12:41	160520A ICV 3.0	1	0.304	25mL		3.01	3.01	3.000	100.5%
05/20/16	12:42	160520A ICB	1	0.000	25mL		-0.02	-0.02		
12/14/16	16:06	CCV 4.0 161214	1	0.409	25mL		4.06	4.063	4.000	*101.57*
12/14/16	16:07	CCB 161214	1	0.000	25mL		-0.02	-0.023		
12/14/16	16:08	161214A LCS 3.0	1	0.323	25mL		3.20	3.204	3.000	*106.79*
12/14/16	16:09	161214A LCSD 3.0	1	0.303	25mL		3.00	3.004	3.000	*100.13*
12/14/16	16:10	AZ47494W08	1	0.011	25mL		0.09	0.087		
12/14/16	16:11	AZ47495W08	1	0.011	25mL		0.09	0.087		
12/14/16	16:12	AZ47496W08	1	0.057	25mL		0.55	0.546		
12/14/16	16:13	AZ47497W08	1	0.473	25mL		4.70	4.702		
12/14/16	16:14	AZ47498W12	1	0.008	25mL		0.06	0.057		
12/14/16	16:15	AZ47498W12 MS	1	0.294	25mL		2.91	2.914	3.00	*97.14*
12/14/16	16:16	CCV 4.0 161214	1	0.406	25mL		4.03	4.033	4.00	*100.82*
12/14/16	16:17	CCB 161214	1	-0.001	25mL		-0.03	-0.033		

Metrohm 814/809 Titrando Data

Sample ID	Analysis Date/Time	Method	Titration Volume (to 8.3)	Titration Volume (total)	OH	CO3	HCO3	Total Alk	Unit	Sample Vol	N	Batch	Initials
AZ47498W11 MSD	2016-12-20 16:40:56 UTC-8	Alkalinity	0.000	7.280	0.00	0.00	301.39	301.39	mg/L	25 mL	0.0207	161220A	AH
AZ47498W11 MS	2016-12-20 16:26:05 UTC-8	Alkalinity	0.000	7.424	0.00	0.00	307.35	307.35	mg/L	25 mL	0.0207	161220A	AH
AZ47498W11	2016-12-20 16:21:11 UTC-8	Alkalinity	0.000	1.628	0.00	0.00	67.40	67.40	mg/L	25 mL	0.0207	161220A	AH
AZ47497W07	2016-12-20 16:16:03 UTC-8	Alkalinity	0.000	1.286	0.00	0.00	53.24	53.24	mg/L	25 mL	0.0207	161220A	AH
AZ47496W07	2016-12-20 16:09:56 UTC-8	Alkalinity	0.000	2.330	0.00	0.00	96.46	96.46	mg/L	25 mL	0.0207	161220A	AH
AZ47495W07	2016-12-20 16:03:59 UTC-8	Alkalinity	0.000	2.454	0.00	0.00	101.60	101.60	mg/L	25 mL	0.0207	161220A	AH
AZ47494W07	2016-12-20 15:56:20 UTC-8	Alkalinity	0.000	2.750	0.00	0.00	113.85	113.85	mg/L	25 mL	0.0207	161220A	AH
161220A LCS	2016-12-20 14:14:06 UTC-8	Alkalinity	0.000	5.892	0.00	0.00	243.93	243.93	mg/L	25 mL	0.0207	161220A	AH
161220A Blk	2016-12-20 14:10:44 UTC-8	Alkalinity	0.000	0.038	0.00	0.00	1.57	1.57	mg/L	25 mL	0.0207	161220A	AH

Ferrous Iron Standard Prep

Stock Standard Prep:

Prep Date: 5/20/16
Exp Date: 5/20/17
Prep'd By: BB

CCV Stock (200 mg/L): 0.3502 g $Fe(NH_4)2(SO_4)_2*6H_2O$ EMD Lot #2013050298 up to 250 mL with DI

ICV Stock (200 mg/L): 0.3500 g $Fe(NH_4)2(SO_4)_2*6H_2O$ JT Baker Lot #0000068681 up to 250 mL with DI

QC Prep

Prep Date: 12/14/16
Exp Date: 12/15/16
Prep'd By: MM

CCV (4.0 mg/L): 0.5 mL of CCV Stock (prep: 5/20/16) into 25 mL DI then carried through sample prep procedure

LCS (3.0 mg/L): 0.375 mL of ICV Stock (prep: 5/20/16) into 25 mL DI then carried through sample prep procedure

MS/MSD (3.0 mg/L): 0.375 mL of ICV Stock (prep: 5/20/16) into 25 mL sample then carried through sample prep procedure

METHOD 300 / 9056		ANION STOCK					PW 10/20/16
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)	
O2SI	F-	1,000	1085520-36282	07/24/17	0.25	5	
O2SI*	Cl-	5,000	1069557-34558	01/08/17	0.5	50	
O2SI	NO2-N	1,000	1088548-36281	09/26/17	0.25	5	
Ultra Scientific	Br-	1,000	CL-3274-36926	08/31/20	1.25	25	
O2SI	NO3-N	1,000	1078397-35587	01/30/17	0.5	10	
O2SI	PO4-P	1,000	1072004-34911	09/03/16	0.5	10	
Ultra Scientific	SO4	5,000	CP-1469-36296	04/30/18	0.5	50	
Brought up with milipore water to Final Volume of:						50	

METHOD 300 / 9056		ANION ICV / LCS/MS/MSD				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
CPI	F-	1,000	16B115-36204	09/03/17	0.125	2.50
CPI	Cl-	1,000	16E065-36694	12/06/17	1.00	20.00
CPI	NO2-N	304	15J001-36257	09/24/17	0.50	3.04
CPI	Br-	1,000	15L093-36101	07/21/17	0.625	12.50
CPI	NO3-N	1,000	16E022-36783	12/30/17	0.25	5.00
CPI	PO4-P	1,000	15B116-36258	09/24/17	0.25	5.00
CPI	SO4	1,000	16E104-36693	12/06/17	1.00	20.00
Brought up with milipore water to Final Volume of:					50	

METHOD 300 / 9056			ANION CAL CURVE						
				ICAL #1	ICAL#2	ICAL #3	ICAL #4	ICAL #5	ICAL #6
ID#	mg/L	Prep Date	EXP. DATE	mL	mL	mL	mL	mL	mL
ANION STOCK	100	08/19/16	08/21/16	0.4	2	10	2	7	10
Brought up w/ Milipore Water to final volume of (mL):				50	100	100	10	10	na
Final Conc F (mg/L):				0.04	0.1	0.5	1	3.5	5
Final Conc Cl (mg/L):				0.4	1	5	10	35	50
Final Conc NO2-N (mg/L):				0.04	0.1	0.5	1	3.5	5
Final Conc Br (mg/L):				0.2	0.5	2.5	5	17.5	25
Final Conc NO3-N (mg/L):				0.08	0.2	1	2	7	10
Final Conc PO4-P (mg/L):				0.08	0.2	1	2	7	10
Final Conc SO4 (mg/L):				0.4	1	5	10	35	50

161214 PW

		CCV				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
O2SI	F-	1,000	1085520-36282	07/24/17	0.125	2.50
O2SI	Cl-	5,000	1069557-34558	01/08/17	0.25	25.0
O2SI	NO2-N	1,000	1088548-36281	09/26/17	0.125	2.5
Ultra Scientific	Br-	1,000	CL-3274-36926	08/31/20	0.625	12.50
O2SI	NO3-N	1,000	1078397-35587	01/30/17	0.25	5.0
O2SI	PO4-P	1,000	1072004-34911	09/03/16	0.25	5.0
Ultra Scientific	SO4	5,000	CP-1469-36296	04/30/18	0.25	25.0
Brought up with milipore water to Final Volume of:					50	

METHOD 300 / 9056		ICV LCS MS				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
CPI	F-	1,000	16B115-36204	09/03/17	0.125	2.50
CPI	Cl-	1,000	16E065-36694	12/06/17	1.00	20.00
CPI	NO2-N	304	15C058-35411	09/24/17	0.50	3.04
CPI	Br-	1,000	15L093-36101	07/21/17	0.63	12.50
CPI	NO3-N	1,000	16E022-36783	12/30/17	0.250	5.00
CPI	PO4-P	1,000	15B116-36258	09/24/17	0.25	5.00
CPI	SO4	1,000	16E104-36693	12/06/17	1.00	20.00
Final Volume of Sample: (mL)					50	

161220 PW

		CCV				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
O2SI	F-	1,000	1085520-36282	07/24/17	0.125	2.50
O2SI	Cl-	5,000	1069557-34558	01/08/17	0.25	25.0
O2SI	NO2-N	1,000	1088548-36281	09/26/17	0.125	2.5
Ultra Scientific	Br-	1,000	CL-3274-36926	08/31/20	0.625	12.50
O2SI	NO3-N	1,000	1078397-35587	01/30/17	0.25	5.0
O2SI	PO4-P	1,000	1072004-34911	09/03/16	0.25	5.0
Ultra Scientific	SO4	5,000	CP-1469-36296	04/30/18	0.25	25.0
Brought up with milipore water to Final Volume of:					50	

METHOD 300 / 9056		ICV LCS MS				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
CPI	F-	1,000	16B115-36204	09/03/17	0.125	2.50
CPI	Cl-	1,000	16E065-36694	12/06/17	1.00	20.00
CPI	NO2-N	304	15C058-35411	09/24/17	0.50	3.04
CPI	Br-	1,000	15L093-36101	07/21/17	0.63	12.50
CPI	NO3-N	1,000	16E022-36783	12/30/17	0.250	5.00
CPI	PO4-P	1,000	15B116-36258	09/24/17	0.25	5.00
CPI	SO4	1,000	16E104-36693	12/06/17	1.00	20.00
Final Volume of Sample: (mL)					50	

0.02N H2SO4 Titrant for Alkalinity

400 mL 0.1N H2SO4 (prep 11/16/16)
Final vol 2L w/ DI water
Prep 11/21/16
Exp 11/21/17
AH 11/21/16

Inorganic Spiking Solution

3.4999g NaHCO3 BDH lot#1575C510
Final vol 500 mL w/DI water
Prep: 11/01/16
Exp: 10/10/17
AH

SM3500 Injection Log

Directory: I:\Spec Sheets\Ferrous Iron (Fe2)\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	20 May 2016	12:37	0 BB 5/20/16		161214a	1.
2	20 May 2016	12:38	1		161214a	1.
3	20 May 2016	12:39	4		161214a	1.
4	20 May 2016	12:39	2		161214a	1.
5	20 May 2016	12:40	10		161214a	1.
6	20 May 2016	12:40	5		161214a	1.
7	20 May 2016	12:41	160520A ICV 3.0		161214a	1.
8	20 May 2016	12:42	160520A ICB		161214a	1.
9	14 Dec 2016	16:06	CCV 4.0 161214		161214a	1.
10	14 Dec 2016	16:07	CCB 161214		161214a	1.
11	14 Dec 2016	16:08	161214A LCS 3.0		161214a	1.
13	14 Dec 2016	16:10	AZ47494W08		161214a	1.
14	14 Dec 2016	16:11	AZ47495W08		161214a	1.
15	14 Dec 2016	16:12	AZ47496W08		161214a	1.
16	14 Dec 2016	16:13	AZ47497W08		161214a	1.
17	14 Dec 2016	16:14	AZ47498W12		161214a	1.
19	14 Dec 2016	16:16	CCV 4.0 161214		161214a	1.
20	14 Dec 2016	16:17	CCB 161214		161214a	1.

300/9056A Injection Log

Directory: I:\Dionex\Charlie\Anions\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
14	20 Oct 2016	11:19	ICAL 1 10/20/16		161020	1.
15	20 Oct 2016	11:32	ICAL 2 10/20/16		161020	1.
16	20 Oct 2016	11:45	ICAL 3 10/20/16		161020	1.
17	20 Oct 2016	11:58	ICAL 4 10/20/16		161020	1.
18	20 Oct 2016	12:11	ICAL 5 10/20/16		161020	1.
19	20 Oct 2016	12:24	ICAL 6 10/20/16		161020	1.
20	20 Oct 2016	12:37	ICV 1601020		161020	1.
21	20 Oct 2016	12:50	ICB		161020	1.

300/9056A Injection Log

Directory: I:\Dionex\Charlie\Anions\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
2	14 Dec 2016	14:42	CCV 161214		161214	1.
3	14 Dec 2016	14:55	CCB		161214	1.
4	14 Dec 2016	15:08	AZ47494W07 1/2		161214	2.
5	14 Dec 2016	15:21	AZ47495W07		161214	1.
6	14 Dec 2016	15:34	AZ47497W07		161214	1.
7	14 Dec 2016	15:47	AZ47496W07		161214	1.
8	14 Dec 2016	16:00	AZ47498W07		161214	1.
14	14 Dec 2016	17:18	161214A LCS		161214	1.
18	14 Dec 2016	18:10	CCV 161214		161214	1.
19	14 Dec 2016	18:24	CCB		161214	1.

300/9056A Injection Log

Directory: I:\Dionex\Charlie\Anions\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
7	20 Dec 2016	09:29	CCV 161220		161220	1.
8	20 Dec 2016	09:42	CCB		161220	1.
9	20 Dec 2016	09:55	161220A LCS		161220	1.
19	20 Dec 2016	12:05	CCV 161220		161220	1.
20	20 Dec 2016	12:18	CCB		161220	1.
23	20 Dec 2016	12:59	AZ47494W07 1/10		161220	10.
24	20 Dec 2016	13:12	AZ47495W07 1/5		161220	5.
25	20 Dec 2016	13:25	AZ47497W07 1/2		161220	2.
26	20 Dec 2016	13:38	AZ47498W11 1/2		161220	2.
32	20 Dec 2016	15:21	CCV 161220		161220	1.
33	20 Dec 2016	15:34	CCB		161220	1.

310/SM2320B Injection Log

Directory: I:\Tiamo\EXPORT\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	20 Dec 2016	14:10	161220A Blk		161220A_AL	1.
2	20 Dec 2016	14:14	161220A LCS		161220A_AL	1.
6	20 Dec 2016	15:56	AZ47494W07		161220A_AL	1.
7	20 Dec 2016	16:03	AZ47495W07		161220A_AL	1.
8	20 Dec 2016	16:09	AZ47496W07		161220A_AL	1.
9	20 Dec 2016	16:16	AZ47497W07		161220A_AL	1.
10	20 Dec 2016	16:21	AZ47498W11		161220A_AL	1.
11	20 Dec 2016	16:26	AZ47498W11 MS		161220A_AL	1.
12	20 Dec 2016	16:40	AZ47498W11 MSD		161220A_AL	1.

908 North Temperance Ave. ∇ Clovis, CA 93611 ∇ Phone 559-275-2175 ∇ Fax 559-275-4422

Certification Number: CA1312
NELAP Certification number: CA00046
DoD-ELAP Certificate number: 4064.01

Data Validatable Report

January 4, 2017

AECOM
1001 Bishop Street, Suite 1600
Honolulu, Hawaii 96813

Attn: Margie Thach

Title: Report of Data: Case 81776

Project: 60481245 CIV0053 Red Hill Fuel Storage. HI

Contract #: Prime contract # for DoD: NAVY CLEAN N62742-12-D-1829, CTO 0053
Subcontract: 14S-16234-HI16

Dear Ms. Thach:

Ten water samples were received December 15, 2016. Written results for the requested analyses are being provided on this January 4, 2017.

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

If you have any questions or require further information, please contact your APPL Project Manager, Libby Cheeseborough, libby@applinc.com, at your convenience. Thank you for choosing APPL, Inc.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. These test results meet all requirements of NELAC and DoD QSM. Release of the hard copy has been authorized by the Laboratory Manager or her designee, as verified by the following signature.

Paula McCartney

Paula McCartney, Laboratory Director
APPL, Inc.

PM/rp
Enclosure
cc: File

Number of pages in this report: 812

Data Validation Package
for
60481245 CIV 0053 Red Hill Fuel Storage
APPL SDG 81776
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QC Summary 468
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Calibration Data 694
Raw Data 728
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Sample Data 743
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Raw Data 791

SAMPLE RECEIPT INFORMATION

Sample Receipt Information

ARF: 81776

Project: 60481245 CIV0053 Red Hill Fuel Storage. HI

Sample Receipt Information:

Ten water samples were received December 15, 2016, at 3.5°C, 2.5°C, 3.0°C, 3.0°C, 3.0°C, 3.0°C, 3.0°C, and 3.0°C. The sample group was assigned Analytical Request Form (ARF) number 81776. The sample numbers and requested analyses were compared to the chains of custody. No exception was encountered.

Sample Table

CLIENT ID	APPL ID	Matrix	Date Sampled	Date Received
ERH151	AZ47656	WATER	12/14/16	12/15/16
ERH142	AZ47657	WATER	12/13/16	12/15/16
ERH147	AZ47658	WATER	12/14/16	12/15/16
ERH148	AZ47659	WATER	12/14/16	12/15/16
ERH152	AZ47660	WATER	12/14/16	12/15/16
ERH149	AZ47661	WATER	12/14/16	12/15/16
ERH150	AZ47662	WATER	12/14/16	12/15/16
ERH138	AZ47663	WATER	12/13/16	12/15/16
ERH144	AZ47664	WATER	12/13/16	12/15/16
ERH140	AZ47665	WATER	12/13/16	12/15/16

The samples and blanks were screened for J-value responses between the detection limit (DL) and limit of quantitation (LOQ).

APPL's Laboratory control limits generated in house statistically do not meet the control limits listed in DoD QSM 5.0 for all analytes. Laboratory control spike recoveries for this project meet all control limits listed in the DoD QSM 5.0 except where noted. A copy of our in house generated control limits is available upon request. In addition, a copy of our LOQ control limits, established using 7 data points, are also available upon request.

Only the portion of the injection log relative to these samples is included. A full sequence log is available upon request.

Measurement uncertainty can be reported upon request.

CASE NARRATIVE

EPA Method 8011

EDB

Sample Preparation:

The water sample was extracted according to EPA method 8011. All holding times were met.

Sample Analysis Information:

The sample was analyzed according to the method using an Agilent Gas Chromatograph with an ECD.

Quality Control/Assurance

Calibrations:

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Blanks:

No target analyte was detected above one-half the limit of quantitation (LOQ) in the method blank.

Spikes:

A Laboratory Control Spike (LCS) was used for quality assurance. All acceptance criteria were met.

No sample was designated by the client for MS/MSD analysis.

Surrogates

The surrogate recoveries are summarized in the Form 2 & 8. All surrogate recoveries were within the control limits.

Summary:

No analytical problem was encountered. The data generated are acceptable.

EPA Method 8015B

Total Petroleum Hydrocarbons - Diesel & Oil

Sample Preparation:

The water samples were extracted according to EPA method 3510C. All holding times were met.

Sample Analysis Information:

The samples were analyzed according to the method using an Agilent Gas Chromatograph with a flame ionization detector.

Quality Control/Assurance

Calibrations:

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Blanks:

No target analyte was detected above one-half the LOQ in the method blank.

Spikes:

A Laboratory Control Spike (LCS) was used for quality assurance. All acceptance criteria were met.

No sample was designated by the client for MS/MSD analysis.

Surrogates:

Surrogate recoveries are summarized on the Form 2 & 8. All surrogate recoveries were acceptable.

Summary:

No analytical problem was encountered. The data generated are acceptable.

EPA Method 8270D-SIM
Polynuclear Aromatic Hydrocarbons

Sample Preparation:

The water samples were extracted according to EPA method 3510C. All holding times were met.

Analysis Information:

The samples were analyzed according to EPA Method 8270D using an Agilent Gas Chromatograph with a mass spectrometer detector, in selective ion monitoring mode (SIM).

Manual integrations were performed in accordance with APPL's SOP. 2-Methyl-naphthalene was manually integrated in a calibration standard. Before and after chromatograms are included in the package.

Quality Control/Assurance

Spike Recovery

A Laboratory Control Spike (LCS) was used for quality assurance. All LCS recoveries met acceptance criteria.

No sample was designated by the client for MS/MSD analysis.

Method blanks

No target compound was detected at or above one-half the LOQ in the method blank.

Surrogates

Surrogate recoveries are summarized on the Form 2 & 8. All surrogate recoveries met acceptance criteria.

Calibration

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Tuning:

The instrument was tuned using DFTPP. All method criteria were met.

Internal Standards

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8270. All acceptance criteria were met.

Summary:

No other analytical exception was encountered. The data generated are acceptable.

EPA Method 8270D
Semi-Volatile Organic Compounds

Sample Preparation:

The water samples were extracted according to EPA method 3510C. All holding times were met.

Analysis Information:

The samples were analyzed for Phenol according to EPA Method 8270D using an Agilent Gas Chromatograph with a mass spectrometer detector.

Quality Control/Assurance

Spike Recovery

A Laboratory Control Spike (LCS) was used for quality assurance. All LCS recoveries met acceptance criteria.

No sample was designated by the client for MS/MSD analysis.

Method blanks

No target compound was detected at or above one-half the LOQ in the method blank.

Surrogates

Surrogate recoveries are summarized on the Form 2 & 8. The surrogate Terphenyl-d14 recovered below the 50% lower control limit in sample EHR144. The low recovery may be due to matrix interference because the chromatography is very noisy. All other surrogate recoveries met acceptance criteria.

Calibration

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Tuning:

The instrument was tuned using DFTPP. All method criteria were met.

Internal Standards

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8270. All acceptance criteria were met.

Summary:

No other analytical exception was encountered. The data generated are acceptable.

APPL SOP ANA2MEE

2-(2-Methoxyethoxy) ethanol by SPE, GC/MS

Sample Preparation:

The water samples were extracted according to EPA method 3535. All holding times were met.

Analysis Information:

The samples were analyzed according to an internal method APPL SOP ANA2MEE using an Agilent Gas Chromatograph with a mass spectrometer detector.

Quality Control/Assurance

Spike Recovery

A Laboratory Control Spike (LCS) was used for quality assurance. All LCS recoveries met acceptance criteria.

No sample was designated by the client for MS/MSD analysis.

Method blanks

No target compound was detected at or above one-half the LOQ in the method blank.

Surrogates

No surrogate was used for this method.

Calibration

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Tuning:

The instrument was tuned using DFTPP. All method criteria were met.

Internal Standards

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8270. All acceptance criteria were met.

Summary:

No analytical exception was encountered. The data generated are acceptable.

EPA Method 8260B

Volatile Organic Analysis including Gasoline Range Organics

Sample Preparation:

The water samples were purged according to EPA method 5030B. All holding times were met.

Sample Analysis Information:

The samples were analyzed according to EPA method 8260B using an Agilent Gas Chromatograph with a mass spectrometer detector.

Quality Control/Assurance:

Calibrations:

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Blanks:

No analyte was detected above one-half the limit of quantitation (LOQ) in the method blanks.

Spikes:

Laboratory Control Spikes (LCS) were used for quality assurance. All LCS recovery acceptance criteria were met.

No sample was designated by the client for MS/MSD analysis.

Surrogates:

Surrogate recoveries are summarized on the Form 2 & 8. All surrogate recoveries were acceptable.

Tuning:

The instrument was tuned using BFB. All method criteria were met.

Internal Standards:

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8260. All method acceptance criteria were met.

Summary:

No problem was encountered. The data generated are acceptable.

Methane
RSK-175

Sample Preparation and Analysis

The water samples were analyzed with guidance from RSK-175. The samples were allowed to equilibrate for 10 minutes at 40°C and a portion of the headspace was analyzed using a Hewlett Packard Gas Chromatograph with a flame ionization detector. All holding times were met.

Quality Control/Assurance

Spike Recovery

Laboratory Control Spikes (LCS) were used for quality assurance. All acceptance criteria were met.

No sample was designated by the client for MS/MSD analysis.

Method blanks

The blanks contained no target analyte above one-half the limit of quantitation (LOQ).

Calibration

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Summary:

No analytical exception is noted.

EPA Method 300.0 and SM 2320B, and SM 3500 FeB

Inorganic Analyses

Sample Preparation Information:

The water samples were prepared according to the methods.

Analysis Information:

Samples:

The samples were analyzed according to the methods. A Dionex DX500 ion chromatograph was used for the EPA 300.0 analysis. Three samples were received more than 24 hours after collection. The samples were analyzed as soon as possible upon arrival for ferrous iron. All other holding times were met.

Calibrations:

Initial and continuing calibrations were performed according to the methods and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Blanks:

Alkalinity and Bicarbonate were detected above one-half the LOQ in the method blank. The samples contained over ten times the concentration detected in the method blank. No other target analyte was detected at or above one-half the LOQ.

Spikes:

Laboratory Control Spikes (LCS) were used for quality assurance. All recoveries were within acceptance limits in the LCS.

No sample was designated by the client for MS/MSD analysis.

Summary:

No other analytical exception is noted. All data are acceptable.

APPL Inc.
Abbreviations and Flags

FLAG	DESCRIPTION
#	Recovery or RPD outside control limits
*	Recovery or RPD outside control limits
B	Analyte detected in associated method blank
C1	Reason for correction: wrote incorrect response
C2	Reason for correction: calculated incorrectly
C3	Reason for correction: needs to be rechecked
C4	Reason for correction: data not usable
DO	Diluted out
E	Exceeds linear range
F	Estimated value
G1	Includes a wide range of hydrocarbons which does not match our gasoline standard
G10	Includes a match to hydrocarbon profiles within the range of mineral spirits
G11	Includes a match to hydrocarbon profiles within the range of JP-4
G12	Pattern does not match the gasoline standard; the carbon range for this sample is consistent with JP8
G13	Closely resembles the hydrocarbon profile of aviation gasoline
G14	Analyte concentration may be biased due to carry over
G2	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G3	Includes higher boiling hydrocarbons
G4	Includes dominant peak(s) not indicative of petroleum hydrocarbons
G5	Is mainly dominant peak(s) not indicative of petroleum hydrocarbons
G6	Contains recognizable contaminant peak(s) which has been removed from quantitation
G7	Is mainly a match to hydrocarbons within the range of gasoline
G8	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G9	Includes hydrocarbons within the range of kerosene
J	Estimated value
M	Matrix effect
MI1	Manual integration: integration does not follow baseline
MI2	Manual integration: non-target peak interference
MI3	Manual integration: to split a peak that was integrated as one peak by the computer.
MI4	Manual integration: to integrate a split peak
MI5	Manual integration: the whole peak or part of the peak was not integrated
MI6	Manual integration: computer integrated wrong peak
MI7	Manual integration: other – (See case narrative)
MDL	Method detection limit
ND	Not detected
NT	Non-target
Q	Acceptance criteria not met
T1 I	Includes wide range of hydrocarbons not indicative of diesel
T1 M	Is mainly wide range of hydrocarbons not necessarily indicative of diesel
T2 I	Includes lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T2 M	Is mainly lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T3 I	Includes higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T3 M	Is mainly higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T4 I	Includes dominant peak(s) not indicative of hydrocarbons
T4 M	Is mainly dominant peak(s) not indicative of hydrocarbons
T5	Contains recognizable contaminant peak(s) which has been removed from quantitation
T6	Is mainly a match to hydrocarbons within range of diesel fuel
T7	Closely resembles the boiling point hydrocarbon profile consistent with diesel fuel
T8	Includes a match to hydrocarbon profiles within range of diesel and kerosene fuel
T9 I	Includes non-diesel hydrocarbons within boiling point range of diesel fuel
T9 M	Is mainly non-diesel hydrocarbons within boiling point range of diesel fuel
U	Not detected
Y	Percent difference between primary and confirmation column > 40%

CHAIN OF CUSTODY,

ARF, CRF, AND

CLIENT COMMUNICATION

APPL - Analysis Request Form 81776

Client: **AECOM**
Address: **1001 Bishop Street, Suite 1600**
Honolulu, HI 96813
Attn: **Margie Thach**
Phone: **808-356-5373** Fax: **808-523-8950**
Job: **60481245 CIV0053 Red Hill Fuel Storage**
PO #: **14S-16234-HI16, PO# 77265**
Chain of Custody (Y/N): **Y** # **121416A-J**
RAD Screen (Y/N): **Y** pH (Y/N): **Y**
Turn Around Type: **ONE WEEK**

Received by: **SMA**
Date Received: **12/15/16** Time: **09:40**
Delivered by: **FED EX**
Shuttle Custody Seals (Y/N): **Y** Time Zone: **-10**
Chest Temp(s): **6X3.0,2.5,3.5°C**
Color: **VOA/M-PURPLEPINK**
Samples Chilled until Placed in Refrig/Freezer: **Y**
Project Manager: **Libby Cheesebor**
QC Report Type: **DVP4DOD/EQUIS/HI**
Due Date: **12/22/16**

Comments:
7 day TAT for Form 1s; 21 day TAT for DVP; F1s, login to Margie.Thach@aecom.com
A: DOD QSM ver 5.0; DOD Forms (LOQ/LOD database/DL) Print ND as LOD w/U Qual.
8260: BTEX & TPH-G only; 8270 SIM: 1-methylnaphthalene, 2-methylnaphthalene & naphthalene only.
TPH D & O; RSK: Methane only; 8011: EDB only;
$87DC53W5: report phenol only; $87DMEEW5: 2-MEE (LCS Spk 80ppb).

FR: HC to LDC, 2 labeled CDs to Margie Thach. Before FR is sent, the PM needs to revlew after Admin Re
EDD: AECOM EQuIS EDD 2.5.3 to Margie.Thach@aecom.com & jecklund@lab-data.com

Sample Distribution:
GC: 1-$8011, 8-$87DC53W5, 8-$87DMEEW5, 8-$DOC53W5, 8-$SIMDOD5W
Extractions: 1-_MWE012, 8-_MWE2MEE, 8-_SEP004, 8-_SEP004S, 8-_SEP011LL
VOA: 10-$86BTOTXDOD5W, 10-$GASBL, 10-$GRO86BW, 7-$RSKMETH
Wetlab: 5-$232W(HCO3,CO3,ALK), 5-$300W(NO3,CL,SO4),5-$35FE

Charges:

Invoice To:
ACCOUNTS PAYABLE
1001 Bishop Street, Ste 1600
USAPImaging@aecom.com
mary.basano@aecom.com

	Client ID	APPL ID	Sampled	Analyses Requested
1.	ERH151	AZ47656W	12/14/16 06:20	$86BTOTXDOD5W, $GASBL, $GRO86BW, $RSKMETH
2.	ERH142	AZ47657W	12/13/16 07:00	$8011, $86BTOTXDOD5W, $GASBL, $GRO86BW, $RSKMETH -- 8260 BTEX + 1,2-DCA
3.	ERH147	AZ47658W	12/14/16 09:30	$232W(HCO3,CO3,ALK), $300W(NO3,CL,SO4), $35FE, $86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $RSKMETH, $SIMDOD5W -- 2-MEE-LCS 80ppb spike

Note: All times, excluding sample collection times, are Pacific Time Zone unless noted otherwise. Collection times are in: -10 UTC

4.	ERH148	AZ47659W	12/14/16 09:30	$86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $SIMDOD5W -- 2-MEE-LCS 80ppb spike
5.	ERH152	AZ47660W	12/14/16 10:35	$232W(HCO3,CO3,ALK), $300W(NO3,CL,SO4), $35FE, $86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $RSKMETH, $SIMDOD5W -- 2-MEE-LCS 80ppb spike
6.	ERH149	AZ47661W	12/14/16 11:50	$86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $SIMDOD5W -- 2-MEE-LCS 80ppb spike
7.	ERH150	AZ47662W	12/14/16 12:10	$86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $SIMDOD5W -- 2-MEE-LCS 80ppb spike
8.	ERH138	AZ47663W	12/13/16 14:30	$232W(HCO3,CO3,ALK), $300W(NO3,CL,SO4), $35FE, $86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $RSKMETH, $SIMDOD5W -- 2-MEE-LCS 80ppb spike
9.	ERH144	AZ47664W	12/13/16 14:35	$232W(HCO3,CO3,ALK), $300W(NO3,CL,SO4), $35FE, $86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $RSKMETH, $SIMDOD5W -- 2-MEE-LCS 80ppb spike
10.	ERH140	AZ47665W	12/13/16 17:00	$232W(HCO3,CO3,ALK), $300W(NO3,CL,SO4), $35FE, $86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $RSKMETH, $SIMDOD5W -- 2-MEE-LCS 80ppb spike

APPL Sample Receipt Form

ARF# **81776**

Sample	Container Type	Count	pH
AZ47656	13 VOAs - HCL	4	NA
	15 VOAs - NP	2	NA
AZ47657	13 VOAs - HCL	4	NA
	15 VOAs - NP	2	NA
AZ47658	3 PL 250mL	1	NA
	13 VOAs - HCL	6	NA
	17 Amber Liter	6	NA
	38 250mL brn poly, HCl prsvd	1	1.7
AZ47659	13 VOAs - HCL	4	NA
	17 Amber Liter	6	NA
AZ47660	2 PL 500mL	1	NA
	13 VOAs - HCL	6	NA
	17 Amber Liter	6	NA
	38 250mL brn poly, HCl prsvd	1	1.7
AZ47661	13 VOAs - HCL	5	NA
	17 Amber Liter	6	NA
AZ47662	13 VOAs - HCL	5	NA
	17 Amber Liter	6	NA
AZ47663	3 PL 250mL	1	NA
	13 VOAs - HCL	6	NA
	17 Amber Liter	6	NA
	38 250mL brn poly, HCl prsvd	1	1.7
AZ47664	3 PL 250mL	1	NA
	13 VOAs - HCL	6	NA
	17 Amber Liter	6	NA
	38 250mL brn poly, HCl prsvd	1	1.7
AZ47665	3 PL 250mL	1	NA
	13 VOAs - HCL	6	NA
	17 Amber Liter	6	NA
	38 250mL brn poly, HCl prsvd	1	1.7

Sample	Container Type	Count	pH

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422

C.O.C. 121416 e

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number	Sampler (Print)	Purchase Order Number	Sampler (Signature)
CIV 53 / 60481245	Margie Thach	77265	

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil		8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-O/O W/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate,Sulfate,Chloride	RSK175M Methane
ERH151	Trip Blank	12/14/16	0620	HST	6	X				X	X										X

MT 12/14/16

Date Shipped: 12/14/16
Carrier: FedEx
Tracking No.:
Comments:

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	12/14/16	1500					
Relinquished by:	**Date**	**Time**	**Received by:**	**Relinquished by:**	**Date**	**Time**	**Received at lab by:**
					12/15/16	09:40	Yang Zou

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

81776 6 x 3.0 2.5 3.5

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C. 121416a

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number	Sampler (Print)	Purchase Order Number	Sampler (Signature)
CIV 53 / 60481245	Margie Thach	77265	

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil	Matrix:	8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O w/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)ethanol	SM3500 Ferrous Iron	300.0 Nitrate,Sulfate,Chloride	RSK175M Methane
ERH142	Trip Blank	12/13/16	0700	HST	6	X				X	X	X	X								X

MT 12/14/16

Analysis Requested/Method Number

Date Shipped: 12/14/16
Carrier: FedEX
Tracking No.:
Comments:

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	12/14/16	1500					
Relinquished by:	**Date**	**Time**	**Received by:**	**Relinquished by:**	**Date**	**Time**	**Received at lab by:**
					12/15/16	09:40	Yang Zu

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

APPL, Inc.
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Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422

C.O.C. 121416f

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number	Sampler (Print)	Purchase Order Number	Sampler (Signature)
CIV 53 / 60481245	Margie Thach	77265	MT

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil	Matrix:	8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O W/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate,Sulfate,Chloride	RSK175M Methane	SM2320B Alk
ERH147	DWDFMW01	12/14/16	0930	HST	14	X				X	X			X	X		X	X	X	X	X	X

Analysis Requested/Method Number

Date Shipped: 12/14/16
Carrier: FedEx
Tracking No.:
Comments:

MT 12/14/16

Shuttle Temperature:	Turnaround Requested: Check one: ☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other	Sample Disposal: ☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	12/14/16	1500					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					12/15/16	09:40	

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422

C.O.C. 121416 G

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number	Sampler (Print)	Purchase Order Number	Sampler (Signature)
CIV 53 / 60481245	Margie Thach	77265	

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil		8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O w/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate,Sulfate,Chloride	RSK175M Methane	SM3720C MIC
ERH148	OWDFMW01	12/14/16	0930	HST	10	X				X	X			X	X		X	X				

Date Shipped: 12/14/16
Carrier: FedEx
Tracking No.:
Comments:

MT 12/14/16

Shuttle Temperature:	Turnaround Requested: Check one: ☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other	Sample Disposal: ☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	12/14/16	1600					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					12/15/16	09:40	Yang Zhao

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

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ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C. 121416 h

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number	Sampler (Print)	Date Shipped: 12/14/16
CIV 53 / 60481245	Margie Thach	Carrier: FEDEX
Purchase Order Number 77265	Sampler (Signature)	Tracking No.:
		Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil		8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-O/O w/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate,Sulfate,Chloride	RSK175M Methane	SM2320B Alk
ERH152	RHMW03	12/14/16	1035	HST	14	X				X	X			X	X		X	X	X	X	X	X

MT 12/14/16

Shuttle Temperature:	Turnaround Requested: Check one ☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other	Sample Disposal: ☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	12/14/16	1500					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					12/15/16	09:40	Yang

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

APPL, Inc.
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Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C. 121416-2

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number	Sampler (Print)	Purchase Order Number	Sampler (Signature)
CIV 53 / 60481245	Margie Thach	77265	

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil		8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	8330C/8015C TPH-D/O w/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate, Sulfate, Chloride	RSK175M Methane
ERH149	Equip Blank	12/14/16	1150	HST	11	X				X	X			X	X		X	X			

MT 12/14/16

Date Shipped: 12/14/16
Carrier: FedEx
Tracking No.:
Comments:

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	12/14/16	1500					
Relinquished by:	**Date**	**Time**	**Received by:**	**Relinquished by:**	**Date**	**Time**	**Received at lab by:**
					12/15/16	09:40	Yang Zu

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422

C.O.C. 121416j

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number	Sampler (Print)	Purchase Order Number	Sampler (Signature)
CIV 53 / 60481245	Margie Thach	77265	

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil		8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O W SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate,Sulfate,Chloride	RSK175M Methane
ERH ISD	Field Blank	12/14/16	~~1310~~ 1210 RM	HST	11	X				X	X			X	X		X	X			

MT 12/14/16

Date Shipped: 12/14/16
Carrier: FedEx
Tracking No.:
Comments:

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	12/14/16	1500					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					12/15/16	09:40	

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

APPL LABS

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C. 121416 b

Report to: PLEASE PRINT

Company Name: AECOM
Phone: 808-356-5373
Address: 1001 Bishop St. Suite 1600
Honolulu, Hawaii 96813
Fax:
Attn: Margie Thach
Email: margie.thach@aecom.com

Invoice to: PLEASE PRINT

Company Name: AECOM
Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600
Honolulu, Hawaii 96813
Fax:
Attn: Mary Basano
Email: mary.basano@aecom.com

Project Name/Number: CIV 53 / 60481245
Sampler (Print): Margie Thach
Purchase Order Number: 77265
Sampler (Signature): [signature]

Date Shipped: 12/14/16
Carrier: Fedex
Tracking No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil		8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O W SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate,Sulfate,Chloride	RSK175M Methane	SM2320B AIL
ERH138	RHMW04	12/13/16	1430	HST	14	X				X	X			X	X		X	X	X	X	X	X

MT 12/14/16

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	12/14/16	1500					
Relinquished by:	**Date**	**Time**	**Received by:**	**Relinquished by:**	**Date**	**Time**	**Received at lab by:**
					12/15/16	09:40	Yang Z

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ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
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C.O.C. 121416 c

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
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Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number	Sampler (Print)	Purchase Order Number	Sampler (Signature)
CIV 53 / 60481245	Margie Thach	77265	

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil		8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O w/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate,Sulfate,Chloride	RSK175M Methane	8260C MTBE
ERH144	RHMW02	12/13/16	1435	HST	14	X				X	X			X	X		X	X	X	X	X	X

Analysis Requested/Method Number

Date Shipped: 12/14/16
Carrier: FedEx
Tracking No.:
Comments:

MT 12/14/16

Shuttle Temperature:	Turnaround Requested: Check one: ☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other	Sample Disposal: ☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	12/14/16	1500					
Relinquished by:	**Date**	**Time**	**Received by:**	**Relinquished by:**	**Date**	**Time**	**Received at lab by:**
					12/15/16	09:45	Yang Z

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C. 121416c1

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number	Sampler (Print)
CIV 53 / 60481245	Margie Thach
Purchase Order Number	Sampler (Signature)
77265	

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil	8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O w/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate,Sulfate,Chloride	RSK175M Methane	TMV
ERH140	RHMW07	12/13/16	1100	HST	14	X			X	X			X	X		X	X	X	X	X	X

Analysis Requested/Method Number

Date Shipped: 12/14/16
Carrier: FedEX
Tracking No.:
Comments:

MT 12/14/16

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	12/14/16	1500					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					12/15/16	09:40	Yang Zu

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

COOLER RECEIPT FORM

ARF: 81776

1) Project: 60481245 CIV0053 Red Hill Fuel Storage Date Received: 12/15/16

2) Coolers: Number of Coolers: 8

3) YES Were custody seals present and intact?
How many? 0 Name/Date on seal? NA

4) YES Was there a shipping slip? Carrier name: FED EX

5) Type of packing in cooler: X bubble wrap __ popcorn __ foam X plastic bags
X wet ice __ dry ice __ no ice __ other

6) YES Were cooler temperatures acceptable?

7) Serial number of certified NIST thermometer use J5297

8) Cooler temp(s): In °C

1: 3.0	2: 3.0	3: 3.0	4: 3.0	5: 3.0	6: 2.5
7: 3.5	8: 3.0	9:	10:	11:	12:

Chain of custody:

9) YES Was a chain of custody received?

10) YES Were the custody papers complete/signed in the appropriate places?

Sample Labels:

11) YES Were all sample labels complete (sample ID, date/time of sampling, etc.)?

12) YES Did all container labels agree with custody papers?

Sample Containers:

13) YES Were all containers sealed in separate bags?

14) YES Did all containers arrive in good condition:(unbroken, no leakage, no cracked/broken lids)?

15) YES Were correct containers and preservatives used for the tests indicated?

16) YES Was a sufficient amount of sample sent for tests indicated?

17) NA Were bubbles present in volatile samples?
If yes, the following were received with air bubbles:
Larger than a pea:
Smaller than a pea:

Preservation Hold time:

18) Yes Was a sufficient amount of holding time remaining to analyze the samples?

19) Yes Was the pH taken of all non-VOA preserved samples and written on the sample container?

20) Yes Was the pH of acid preserved non-VOA samples < 2?

21) NA Was the pH of sodium hydroxide preserved samples for Cyanide > 12 and Sulfide >9?

22) NO Were unpreserved VOA Vials received?

23) NA Are unpreserved VOA vials noted in the ADD TEST FIELD on the ARF?
pH strip lot number: 90B2031
Lab notified if pH was not adequate:

Notes/Deficiencies:

Personnel receiving samples: sm Second reviewer: YC
Personnel labeling samples: sm
Project manager notified: Date/Time of notification
Name of client notified: Date/Time of notification

Revision: 22, November 5, 2013

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank
EPA 8011

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161219W-47344 - 214793**
Batch ID: #8011-161219A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	EDB	0.020 U	0.02	0.020	0.010	ug/L	12/19/16	12/19/16
BLANK	SURROGATE: 1,3-DIBROMOPRO	79.4	70-132			%	12/19/16	12/19/16

Quant Method: 80111219.M
Run #: 1214059
Instrument: Herbie
Sequence: 161214
Initials: RHA

GC SC-Blank-REG MDLs-DOD
Printed: 12/20/16 2:27:30 PM

Laboratory Control Spike Recovery

EPA 8011

APPL ID: **161219W-47344 LCS - 214793**
Batch ID: #8011-161219A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
EDB	0.250	0.164	65.6	60-140
SURROGATE: 1,3-DIBROMOPROPANE (	0.350	0.382	109	70-132

Comments: _____

Primary	SPK
Quant Method :	80111219.M
Extraction Date :	12/19/16
Analysis Date :	12/20/16
Instrument :	Herbie
Run :	1214071
Initials :	RHA

Printed: 12/20/16 4:03:42 PM
APPL Standard LCS

8011

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81776

Case No: 81776 Date Analyzed: 12/19/16

Matrix: WATER Instrument: Herbie

APPL ID.	Client Sample No.	SURROGATE: 1,3-DIBROMOPROPANE (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
161219A-BLK	Blank	70-132	79.4				
AZ47657	ERH142	70-132	71.7				
161219A-LCS	Lab Control Spike	70-132	109				

Comments: Batch: #8011-161219A

8011

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81776

Case No: 81776 Date Analyzed: 12/19/16

Matrix: WATER Instrument: Herbie

Blank ID: 161219A-BLK Time Analyzed: 1718

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161219A-BLK	Blank	1214059	12/19/16 1718
AZ47657	ERH142	1214065	12/19/16 1922
161219A-LCS	Lab Control Spike	1214071	12/20/16 1448

Comments: Batch: #8011-161219A

Printed: 12/21/16 8:54:05 AM

Form 4, Blank Summary

ORGANICS

Sample Data

APPL, INC.

EPA 8011

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH142
Sample Collection Date: 12/13/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776
APPL ID: AZ47657
QCG: #8011-161219A-214793

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8011	EDB	0.020 U	0.02	0.020	0.010	ug/L	12/19/16	12/19/16
8011	SURROGATE: 1,3-DIBROMOPROPANE	71.7	70-132			%	12/19/16	12/19/16

Quant Method: 80111219.M
Run #: 1214065
Instrument: Herbie
Sequence: 161214
Dilution Factor: 1
Initials: RHA

Printed: 12/20/16 2:27:13 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214065.D\ECD1A.CH Vial: 63
Signal #2 : G:\HERBIE\DATA\161214\1214065.D\ECD2B.CH
Acq On : 12-19-16 19:22:24 Operator: RH
Sample : AZ47657W05 2/35.72G Inst : Herbie
Misc : water Multiplr: 0.98
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 20 13:45 2016 Quant Results File: 80111219.RES

Quant Method : G:\HERBIE\DATA\161214\80111219.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Mon Dec 19 17:47:48 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

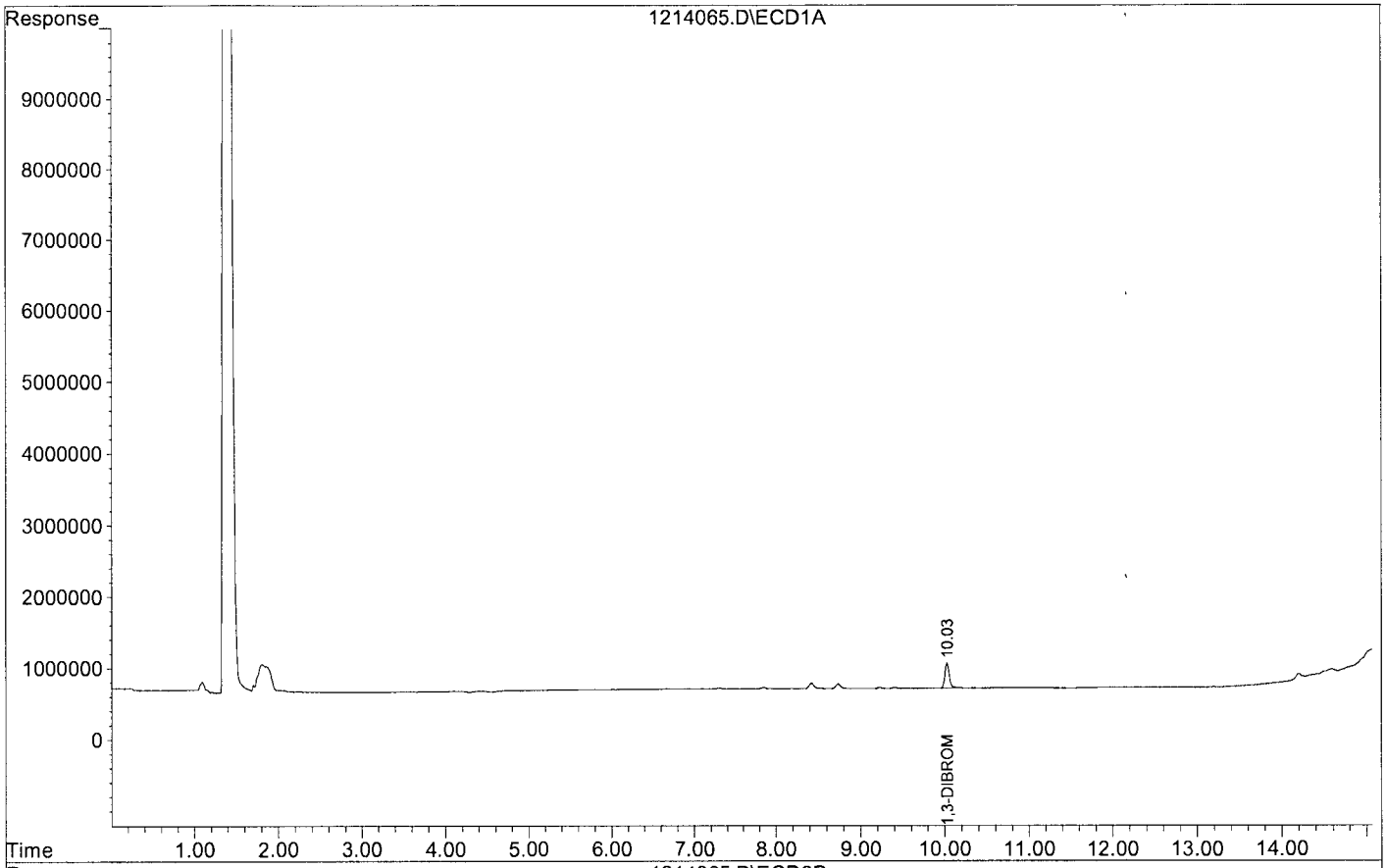
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	352112	594277	0.246	0.272
Spiked Amount	0.343			Recovery	=	71.73%	79.31%
	Target Compounds						
	Target Compounds						
1) TM	EDB	0.00	0.00	0	0	N.D. d	N.D. d
2) TM	1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4) TM	DBCP	0.00	0.00	0	0	N.D. d	N.D. d

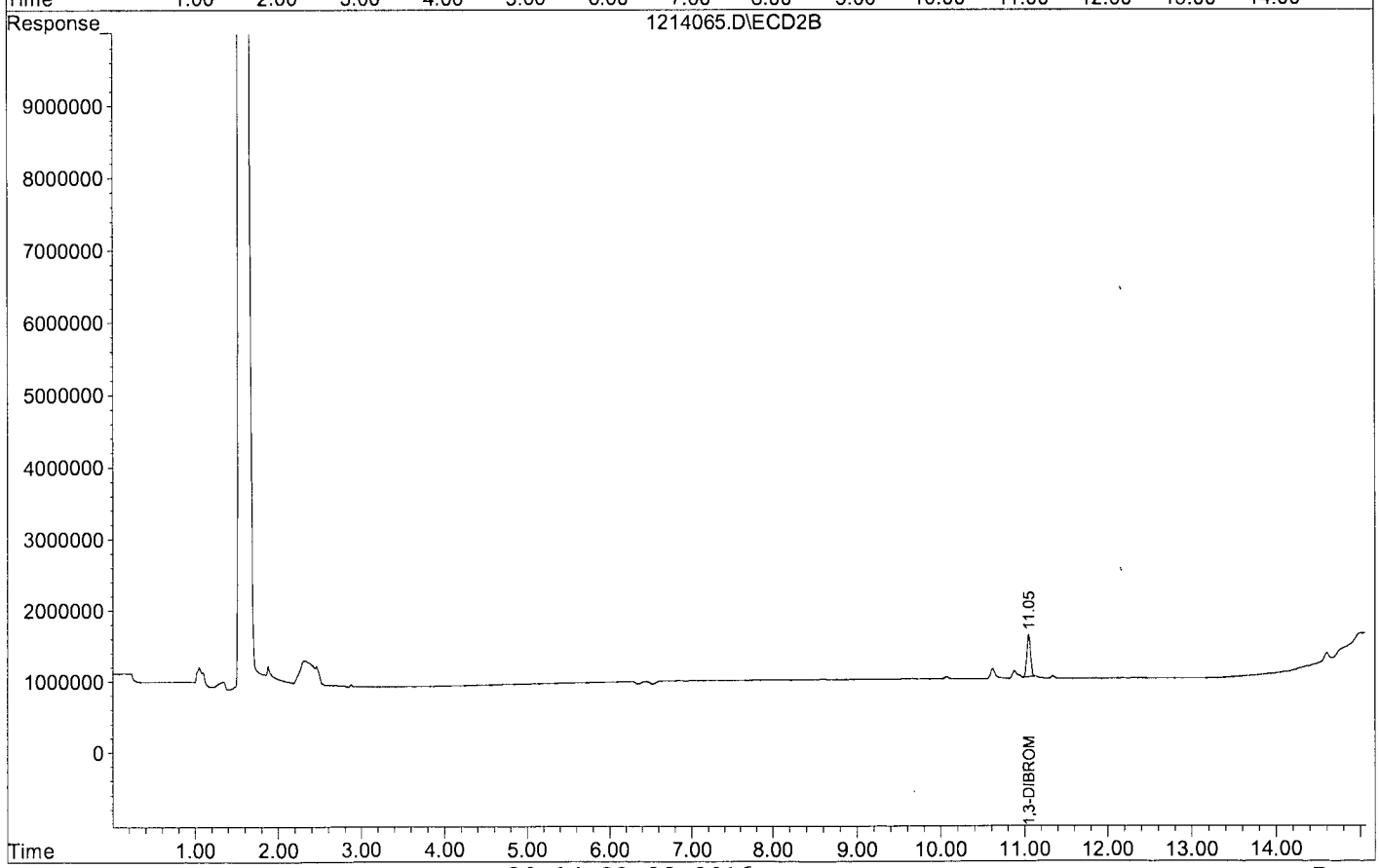
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\161214\1214065.D
Acq On : 12-19-16 19:22:24
Sample : AZ47657W05 2/35.72G
Misc : water
Quant Method : G:\HERBIE\DATA\161214\80111219.M

Vial: 63
Operator: RH
Inst : Herbie
Multiplr: 0.98





ORGANICS

Calibration Data

APPL, INC.

DBCP/EDB/1,2,3-TCP Analysis by
504 8011 1215

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/19/16
Matrix: Instrument: Herbie
Initials:

			1214052.D	1214053.D	1214054.D	1214055.D	1214056.D	1214057.D								
		Compound	1	2	3	4	5	6					Avg	%RSD		
1	TM	EDB	873625	967260	828524	859828	770339	723408					837164	10	TM	
2	TML	1,2,3-TCP	160700	211255	258720	223482	171353	160078					197598	20	TML	0.954
3	S	1,3-DIBROMOPROPANE(S)	655750	771165	896448	741845	583189	561360					701626	18	S	
4	TM	DBCP	2197150	2404550	2968840	2612366	2029578	1973502					2364331	16	TM	
5		Signal #2											0	0		
6																
7																
8																
9																
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1.8455668

DBCP/EDB/1,2,3-TCP Analysis by
504 8011 1215

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/19/16
Matrix: Instrument: Herbie Initials:

			1214052.D	1214053.D	1214054 D	1214055 D	1214056 D	1214057 D								
		Compound	1	2	3	4	5	6					Avg	%RSD		
36	TM	EDB #2	1880775	1948345	2064282	1821074	1898779	1739248					1892084	5.9	TM	
37	TM	1,2,3-TCP #2	355225	345420	344306	304029	326521	296394					328649	7.3	TM	
38	S	1,3-DIBROMOPROPANE(S) #2	966525	1131525	1144918	1056264	1116207	1004216					1069942	6.8	S	
39	TM	DBCP #2	4474700	5111245	5183136	4796967	5564877	5211727					5057109	7.4	TM	
40																
41																
42																
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0.7839632

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214052.D\ECD1A.CH Vial: 50
Signal #2 : G:\HERBIE\DATA\161214\1214052.D\ECD2B.CH
Acq On : 12-19-16 14:53:31 Operator: RH
Sample : 8011 1 12/19/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 19 17:47 2016 Quant Results File: 80111219.RES

Quant Method : G:\HERBIE\DATA\161214\80111219.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Mon Dec 19 17:47:12 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

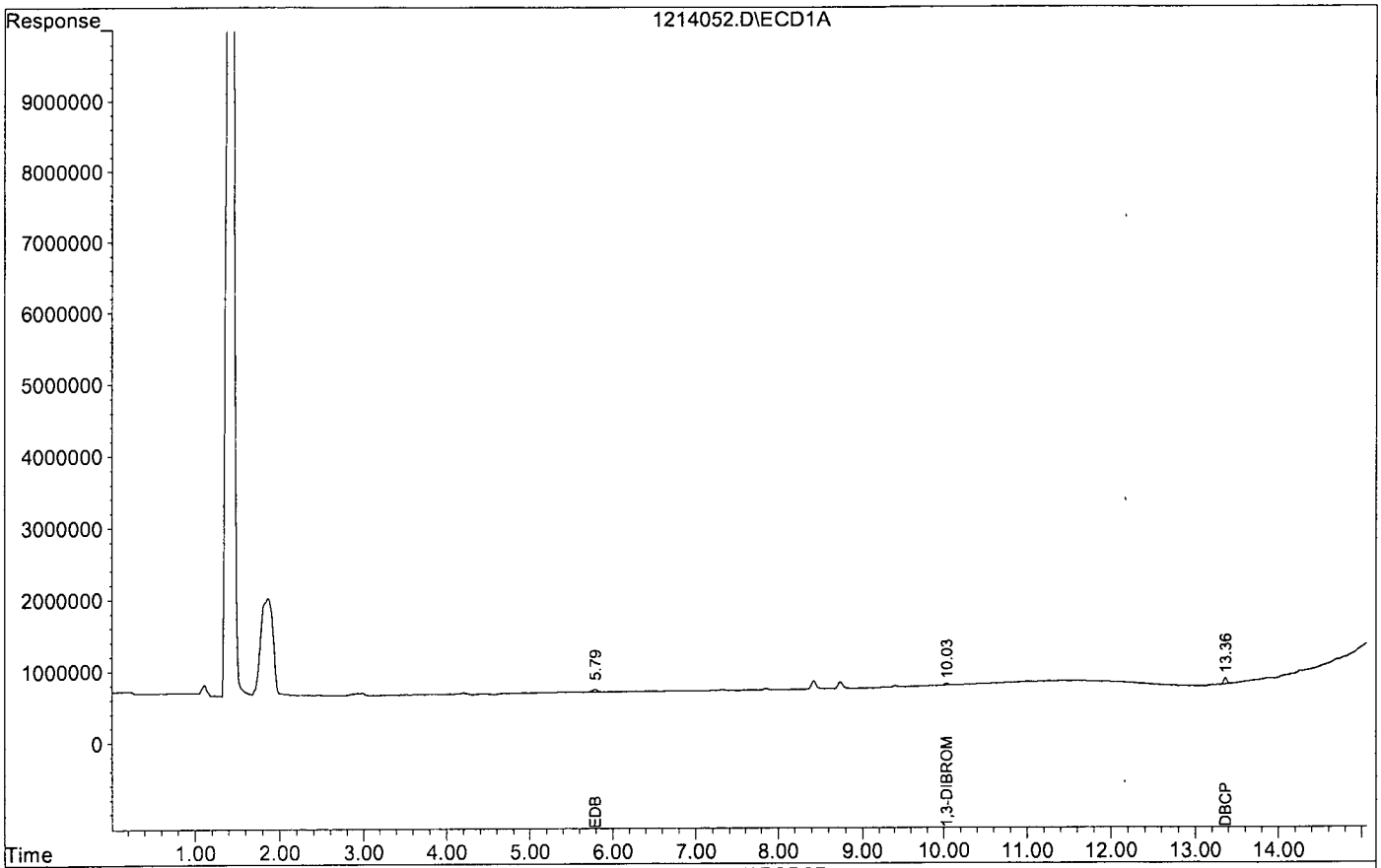
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	26230	38661	0.019	0.018
Spiked Amount	0.350			Recovery	=	5.43%	5.14%
	Target Compounds						
1) TM	EDB	5.79	7.22	34945	75231	0.020	0.020
4) TM	DBCP	13.36	14.09	87886	178988	0.018	0.018
	Target Compounds						
2) TM	1,2,3-TCP	9.25	10.46	6428	14209	N.D.	0.023

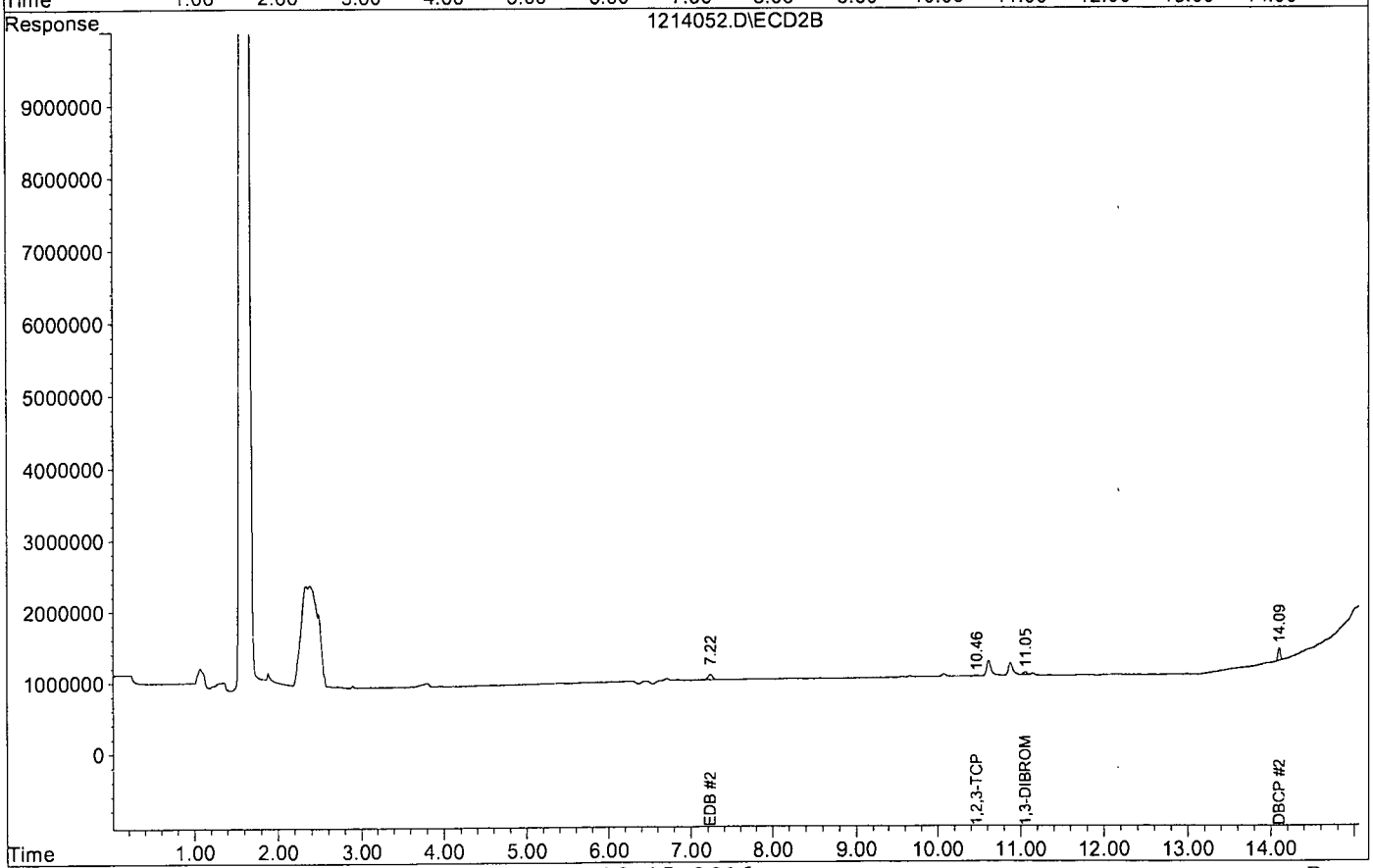
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214052.D
Acq On : 12-19-16 14:53:31
Sample : 8011 1 12/19/16
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111219.M

Vial: 50
Operator: RH
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214053.D\ECD1A.CH Vial: 51
Acq On : 12-19-16 15:14:07 Operator: RH
Sample : 8011 2 12/19/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile : rteint.p

Data File : G:\HERBIE\DATA\161214\1214053.D\ECD2B.CH Vial: 51
Acq On : 12-19-16 15:14:08 Operator: RH
Sample : 8011 2 12/19/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile : rteint2.p
Quant Time: Dec 19 17:47 2016 Quant Results File: 80111219.RES

Quant Method : G:\HERBIE\DATA\161214\80111219.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Mon Dec 19 17:47:12 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	System Monitoring Compounds							
3) S	1,3-DIBROMOPROPA	10.03	11.05	154233	226305	0.110	0.107	
Spiked Amount	0.350			Recovery	=	31.43%	30.57%	
	Target Compounds							
1) TM	EDB	5.79	7.23	193452	389669	0.113	0.104	
2) TM	1,2,3-TCP	9.26	10.46	42251	69084	0.065	0.112	#
4) TM	DBCP	13.36	14.10	480910	1022249	0.100	0.105	

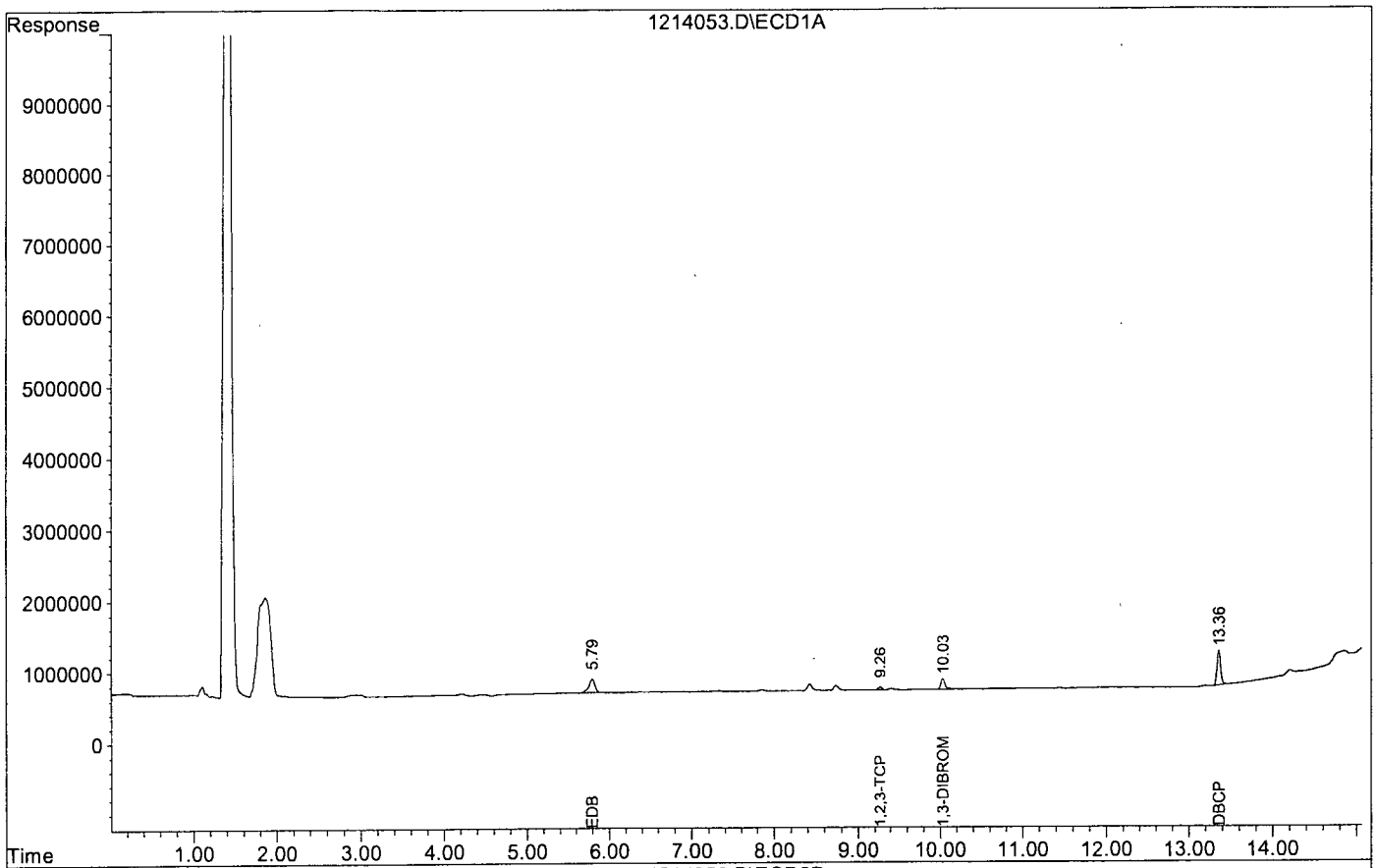
Target Compounds

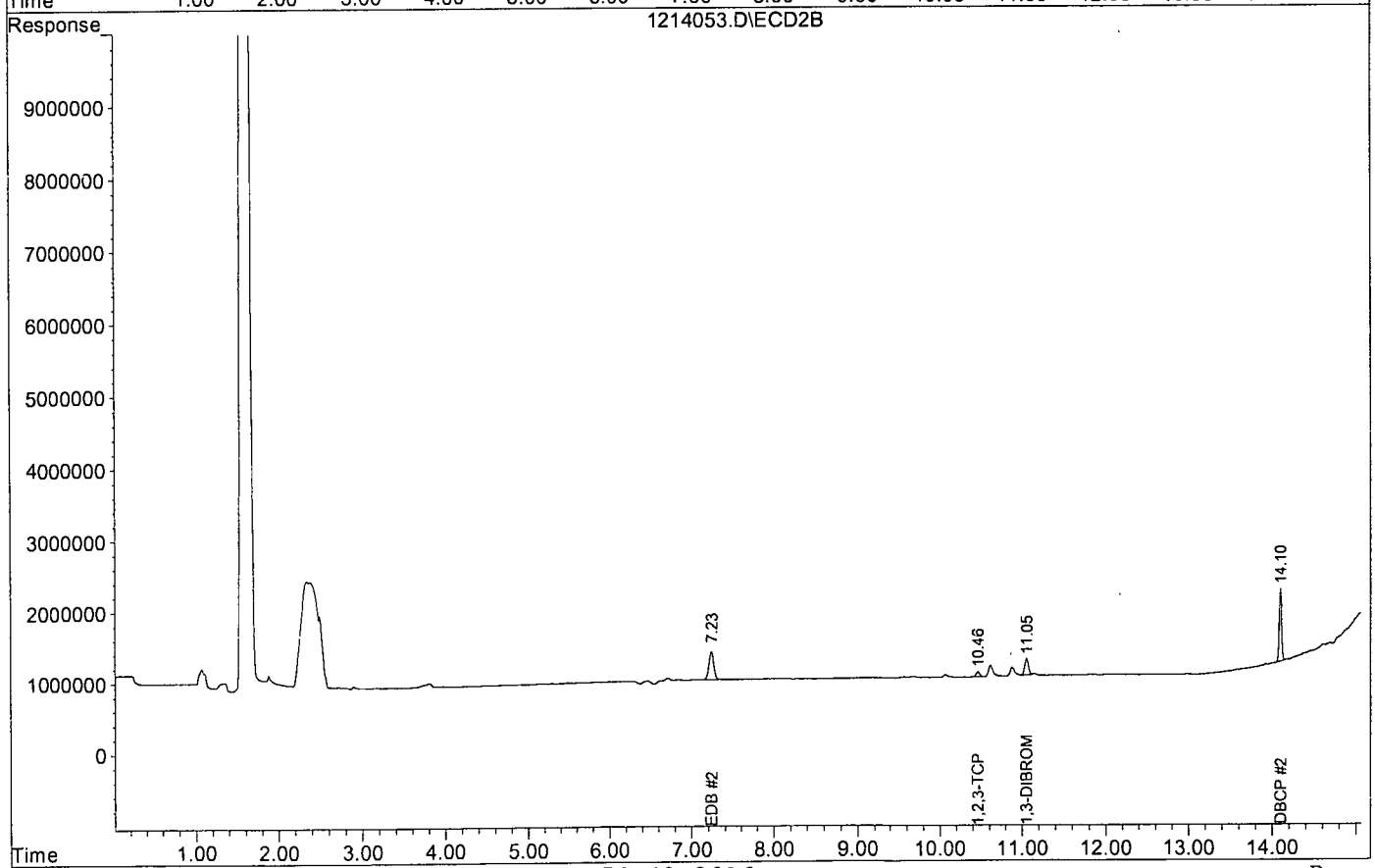
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214053.D
Acq On : 12-19-16 15:14:07
Sample : 8011 2 12/19/16
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111219.M

Vial: 51
Operator: RH
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214054.D\ECD1A.CH Vial: 52
Signal #2 : G:\HERBIE\DATA\161214\1214054.D\ECD2B.CH
Acq On : 12-19-16 15:34:48 Operator: RH
Sample : 8011 3 12/19/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 19 17:47 2016 Quant Results File: 80111219.RES

Quant Method : G:\HERBIE\DATA\161214\80111219.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Mon Dec 19 17:47:12 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	448224	572459	0.321	0.270
Spiked Amount	0.350			Recovery	=	91.71%	77.14%
	Target Compounds						
1) TM	EDB	5.81	7.23	414262	1032141	0.242	0.277
2) TM	1,2,3-TCP	9.26	10.46	129360	172153	0.310	0.278
4) TM	DBCP	13.36	14.10	1484420	2591568	0.310	0.267

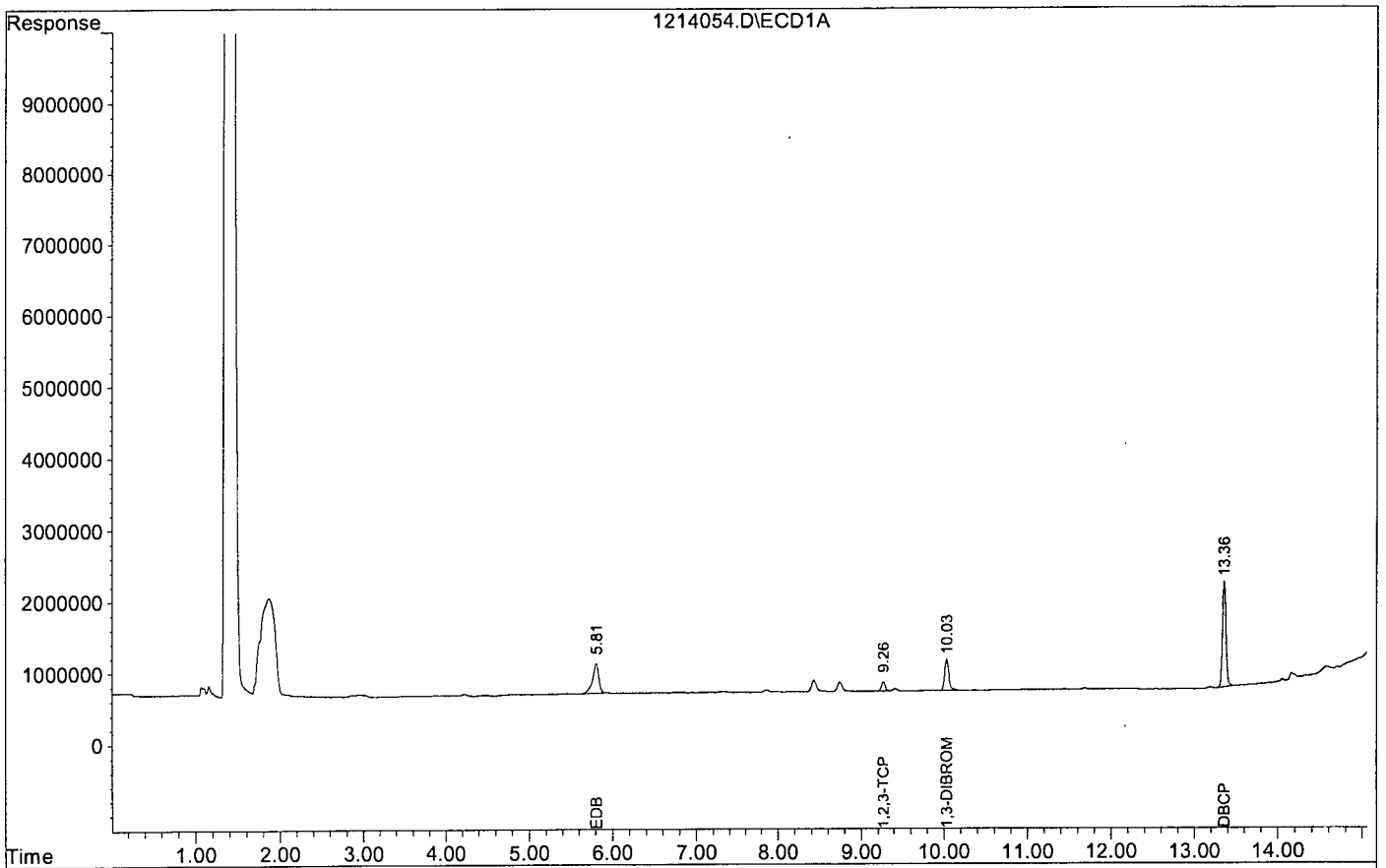
Target Compounds

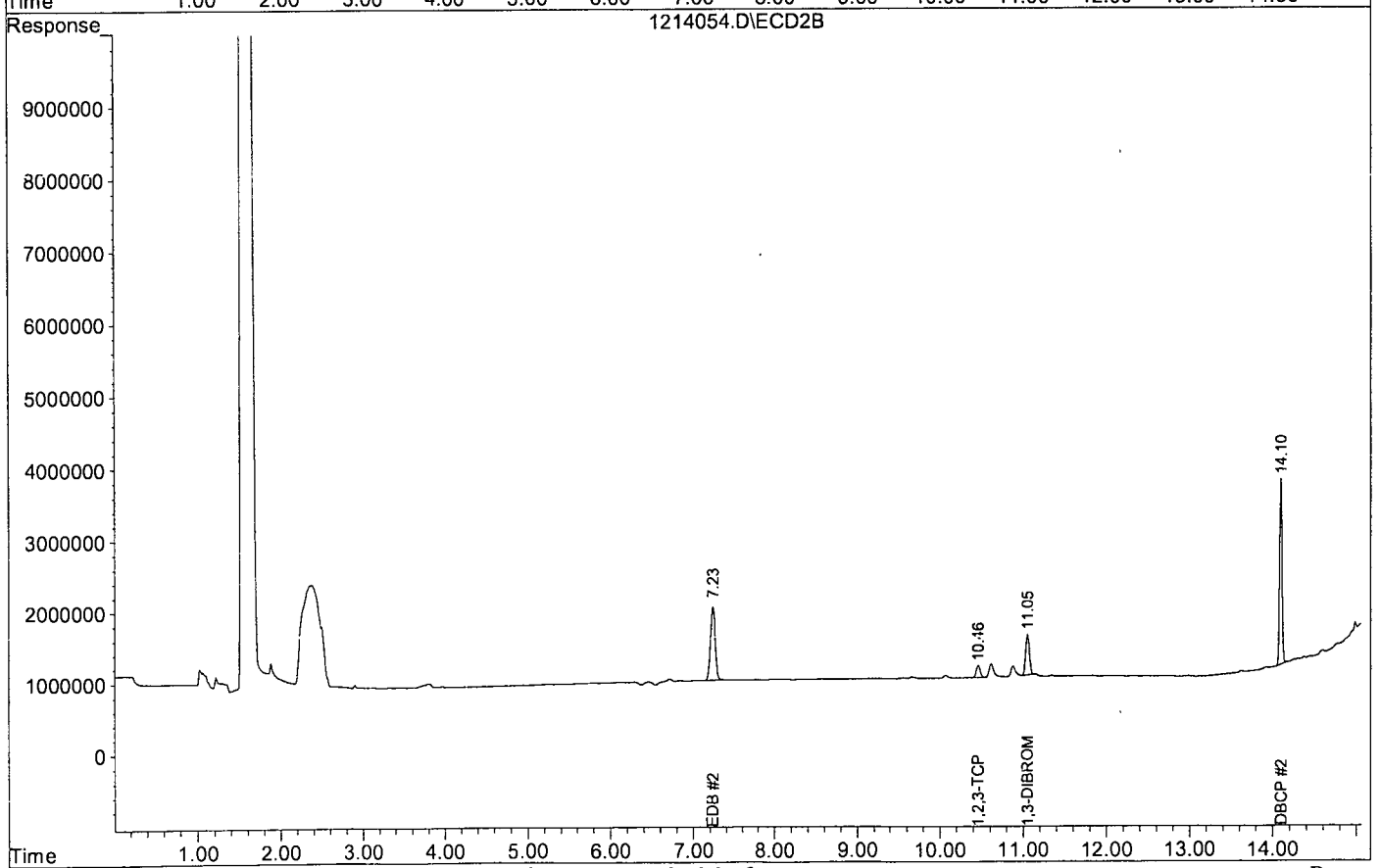
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214054.D
Acq On : 12-19-16 15:34:48
Sample : 8011 3 12/19/16
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111219.M

Vial: 52
Operator: RH
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214055.D\ECD1A.CH Vial: 53
Signal #2 : G:\HERBIE\DATA\161214\1214055.D\ECD2B.CH
Acq On : 12-19-16 15:55:37 Operator: RH
Sample : 8011 4 12/19/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 19 17:47 2016 Quant Results File: 80111219.RES

Quant Method : G:\HERBIE\DATA\161214\80111219.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Mon Dec 19 17:47:12 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	741845	1056264	0.531	0.498
Spiked Amount	0.350			Recovery	=	151.71%	142.29%
	Target Compounds						
1) TM	EDB	5.80	7.23	859828	1821074	0.502	0.488
2) TM	1,2,3-TCP	9.26	10.46	223482	304029	0.575	0.491
4) TM	DBCP	13.36	14.09	2612366	4796967	0.545	0.494

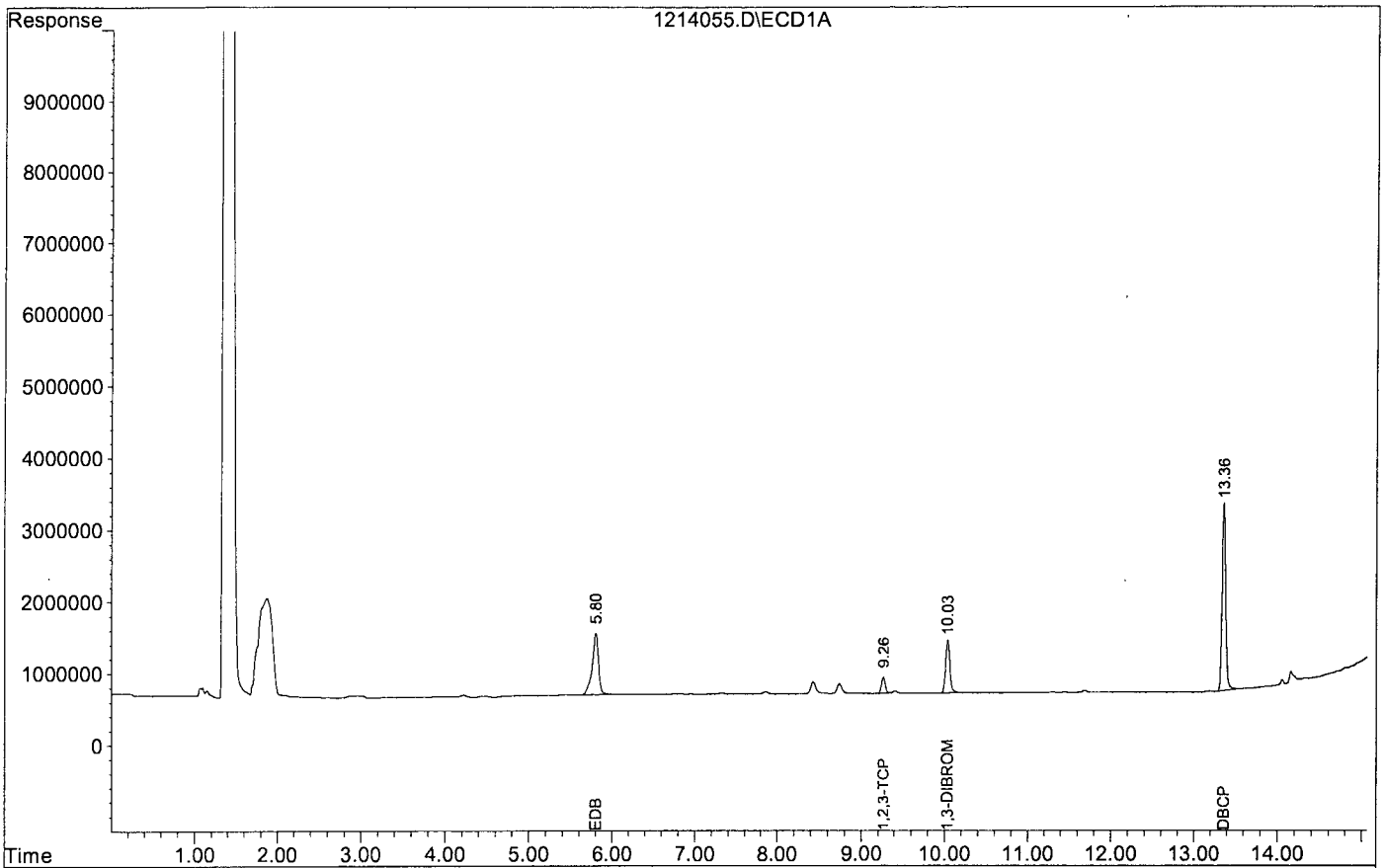
Target Compounds

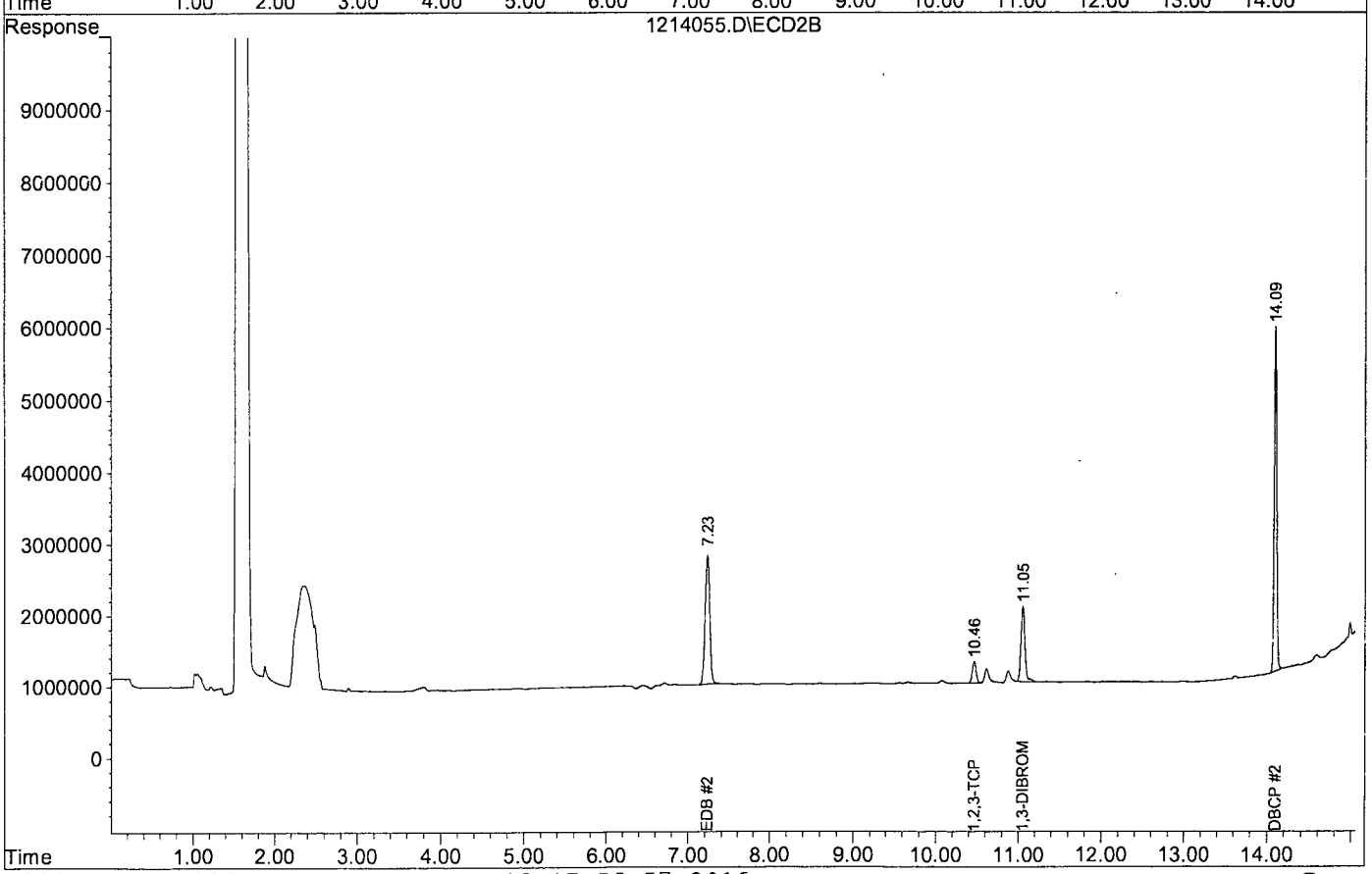
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214055.D
Acq On : 12-19-16 15:55:37
Sample : 8011 4 12/19/16
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111219.M

Vial: 53
Operator: RH
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214056.D\ECD1A.CH Vial: 54
Signal #2 : G:\HERBIE\DATA\161214\1214056.D\ECD2B.CH
Acq On : 12-19-16 16:16:20 Operator: RH
Sample : 8011 5 12/19/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 19 17:47 2016 Quant Results File: 80111219.RES

Quant Method : G:\HERBIE\DATA\161214\80111219.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Mon Dec 19 17:47:12 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	System Monitoring Compounds							
3) S	1,3-DIBROMOPROPA	10.03	11.05	874783	1674310	0.627	0.790	#
Spiked Amount	0.350			Recovery	=	179.14%	225.71%	
	Target Compounds							
1) TM	EDB	5.78	7.23	1155509	2848168	0.674	0.763	
2) TM	1,2,3-TCP	9.26	10.46	257029	489782	0.669	0.791	
4) TM	DBCP	13.36	14.10	3044367	8347316	0.636	0.860	#

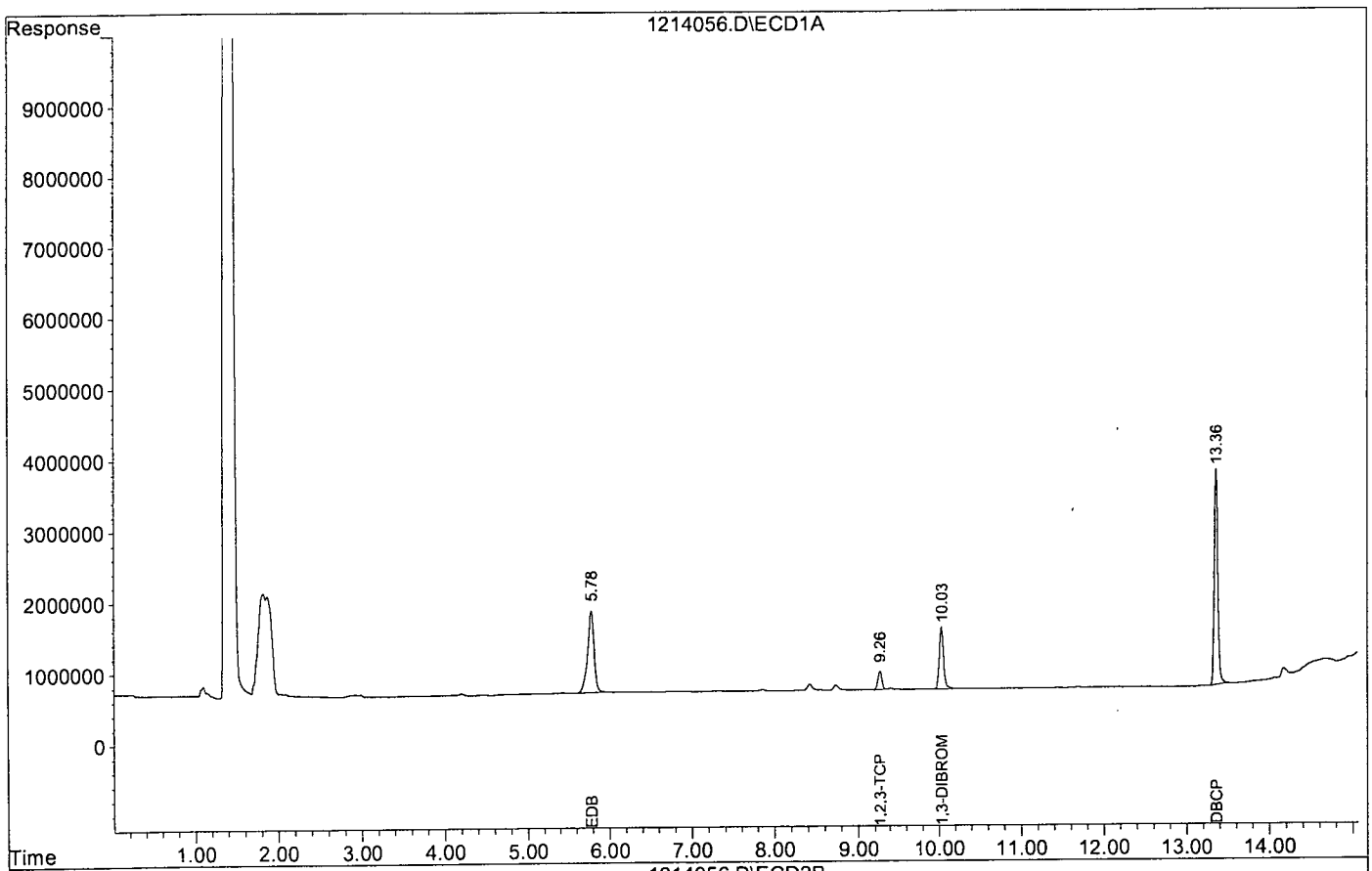
Target Compounds

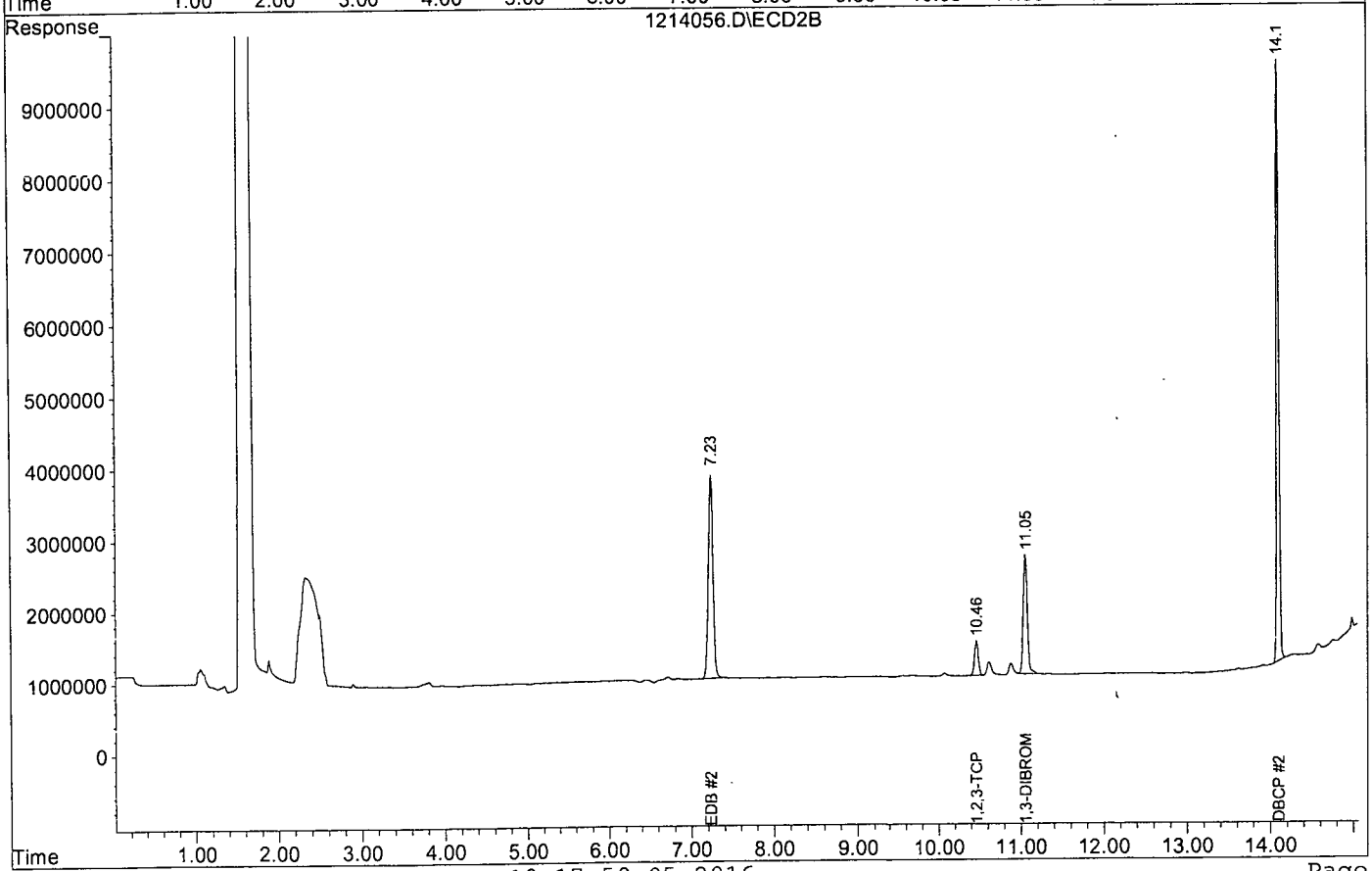
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214056.D
Acq On : 12-19-16 16:16:20
Sample : 8011 5 12/19/16
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111219.M

Vial: 54
Operator: RH
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214057.D\ECD1A.CH Vial: 55
Signal #2 : G:\HERBIE\DATA\161214\1214057.D\ECD2B.CH
Acq On : 12-19-16 16:37:03 Operator: RH
Sample : 8011 6 12/19/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 19 17:47 2016 Quant Results File: 80111219.RES

Quant Method : G:\HERBIE\DATA\161214\80111219.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Mon Dec 19 17:47:12 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	System Monitoring Compounds							
3)	S 1,3-DIBROMOPROPA	10.03	11.05	1122719	2008432	0.804	0.948	
	Spiked Amount 0.350			Recovery	=	229.71%	270.86%	
	Target Compounds							
1)	TM EDB	5.78	7.23	1446815	3478496	0.844	0.932	
2)	TM 1,2,3-TCP	9.26	10.46	320155	592788	0.846	0.958	
4)	TM DBCP	13.36	14.10	3947003	10423454	0.824	1.073	#

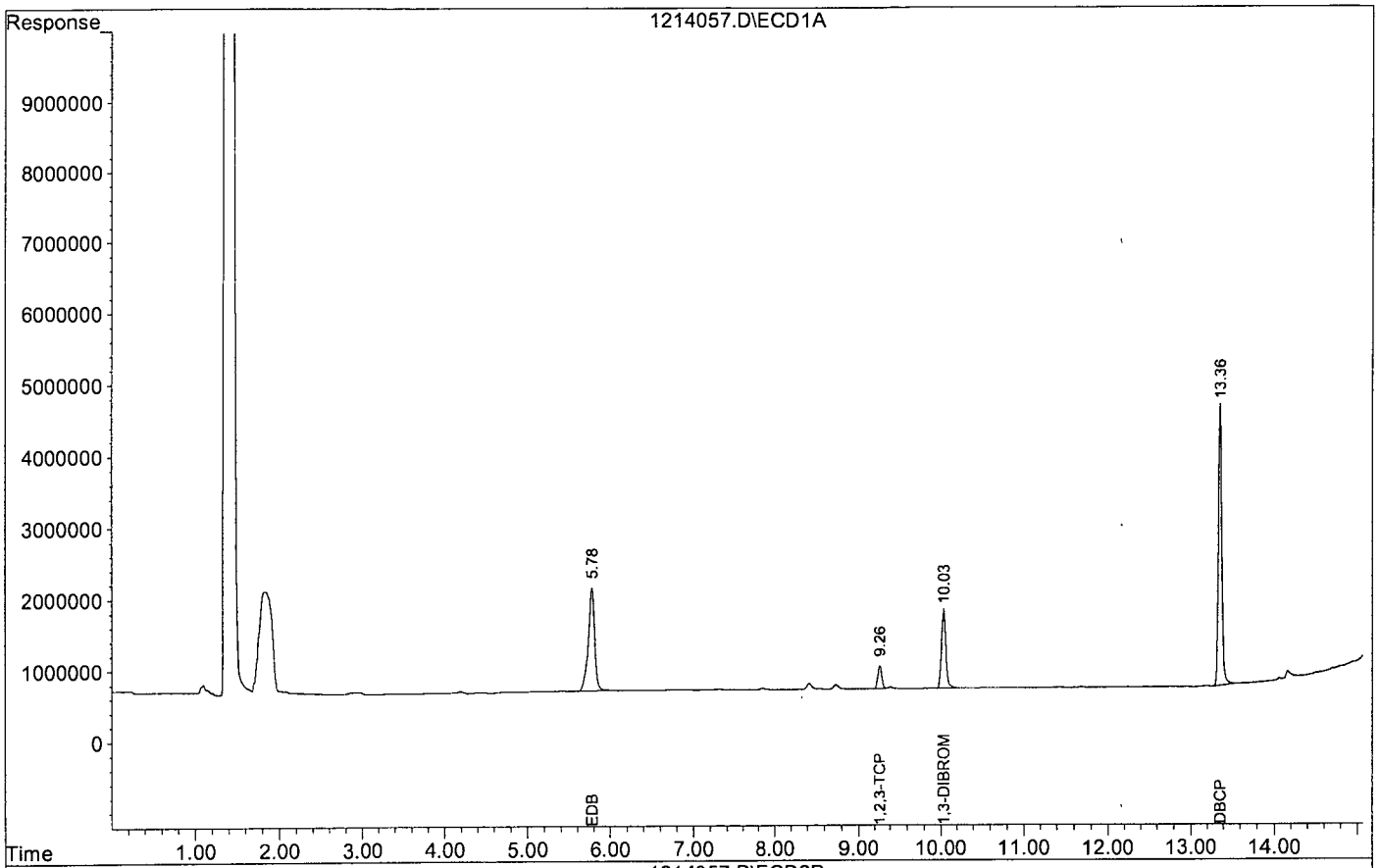
Target Compounds

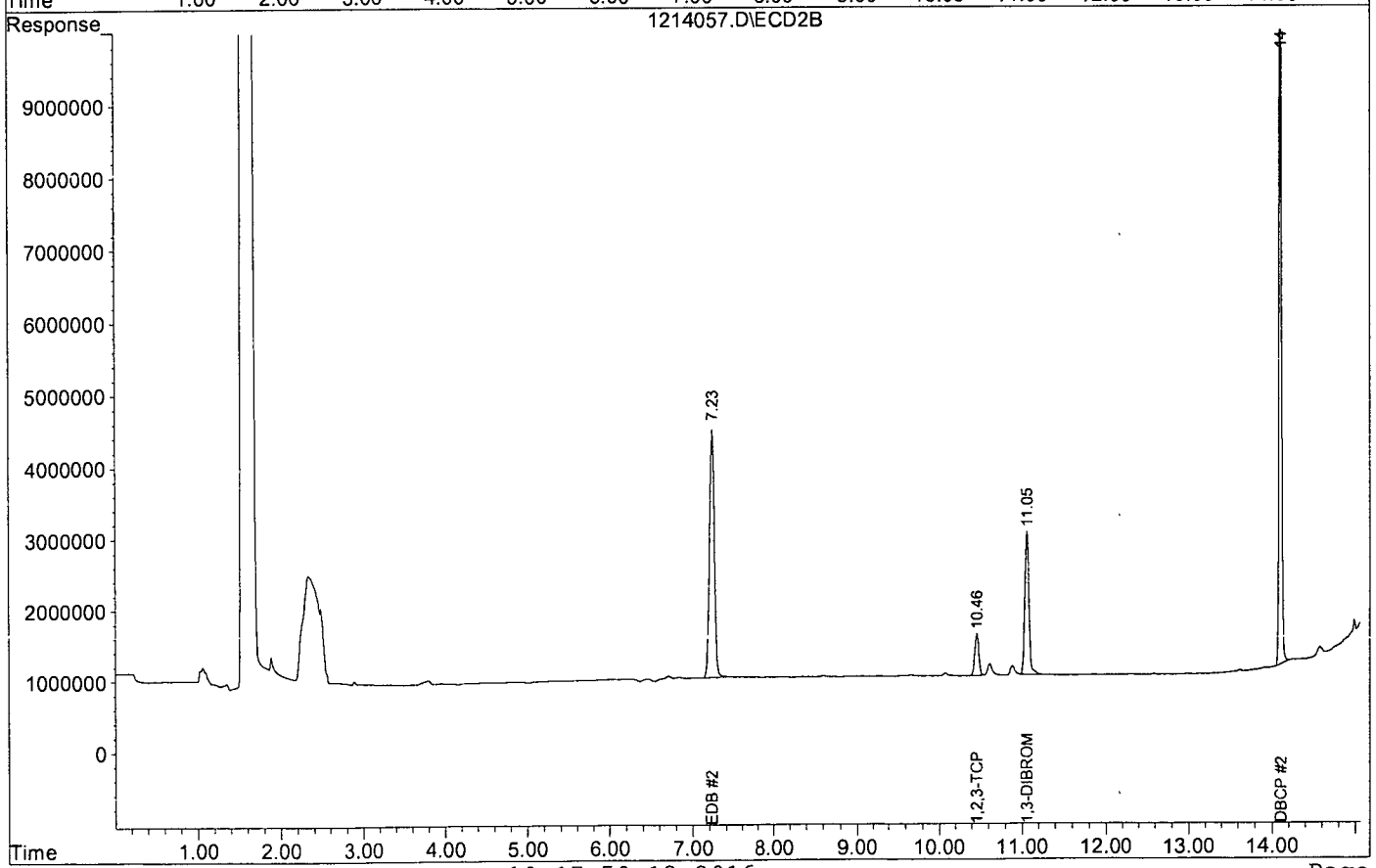
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214057.D
Acq On : 12-19-16 16:37:03
Sample : 8011 6 12/19/16
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111219.M

Vial: 55
Operator: RH
Inst : Herbie
Multiplr: 1.00





DBCP/EDB/1,2,3-TCP Analysis by
504 8011 1215

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 12/19/16
Instrument: Herbie
Initial Cal. Date: 12/19/16
Data File: 1214060.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TM	EDB	837164	937210	12	TM	
2	TML	1,2,3-TCP	197598	249185	26	TML	22
3	TM	DBCP	2364330	2477520	4.8	TM	
4							
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40							
		Average			14.3		

* NT RH 12/21/16

DBCP/EDB/1,2,3-TCP Analysis by
504 8011 1215

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 12/19/16
Instrument: Herbie
Cal. Date: 12/19/16
Data File: 1214060.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	EDB	1892080	1909140	0.90	TM	
42	TM	1,2,3-TCP	328649	367655	12	TM	
43	TM	DBCP	5057110	5561150	10	TM	
44							
45							
46							
47							
48							
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80							
		Average			7.6		

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214060.D\ECD1A.CH Vial: 58
Signal #2 : G:\HERBIE\DATA\161214\1214060.D\ECD2B.CH
Acq On : 12-19-16 17:39:13 Operator: RH
Sample : 161219A LCS-1 2/30.96G Inst : Herbie
Misc : water Multiplr: 1.13
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 20 13:39 2016 Quant Results File: 80111219.RES

Quant Method : G:\HERBIE\DATA\161214\80111219.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Mon Dec 19 17:47:48 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
System Monitoring Compounds							
3) S 1,3-DIBROMOPROPA	10.03	11.05	444419	716359	0.358	0.378	
Spiked Amount 0.396			Recovery =		90.48%	95.53%	
Target Compounds							
1) TM EDB	5.79	7.23	187442	381827	0.127	0.114	
2) TM 1,2,3-TCP	9.25	10.46	49837	73531	0.088	0.126	#
4) TM DBCP	13.36	14.10	495503	1112229	0.118	0.124	

Target Compounds

$$\text{Algorithum} = \frac{187442 * 1.13}{837164 * 2} = \frac{211809.46}{1674328} = 0.1265$$

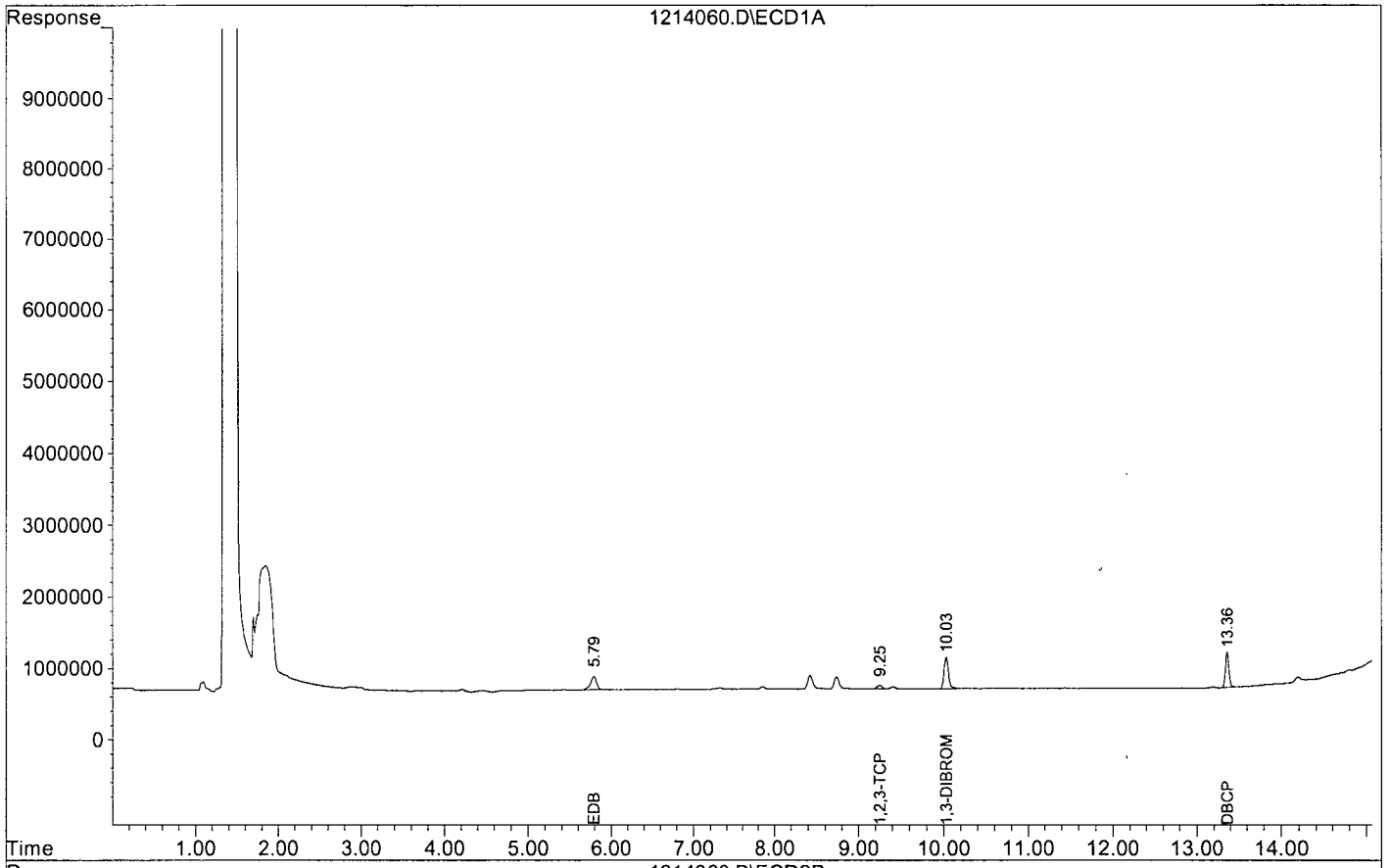
RH 12/20/16.

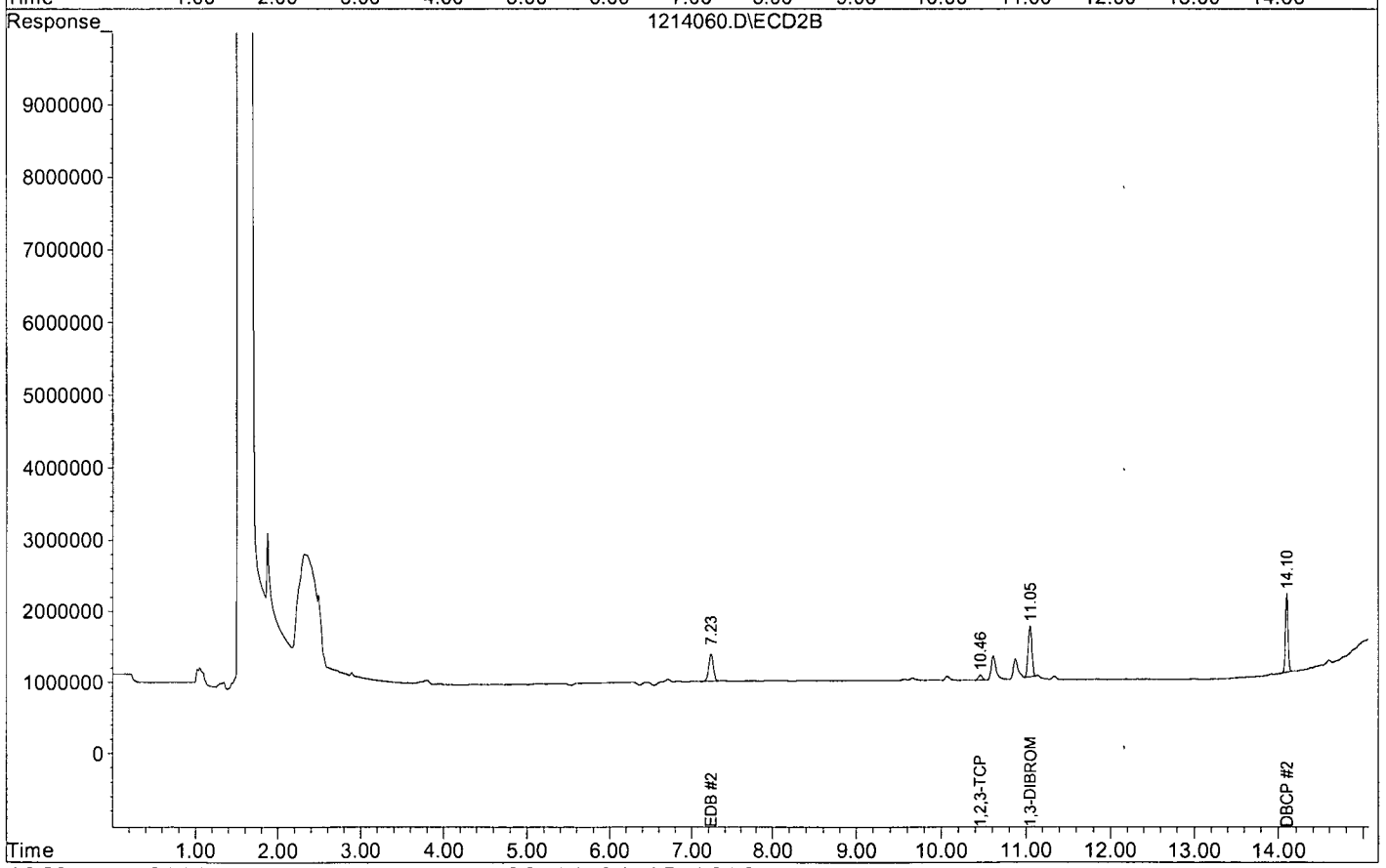
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
1214060.D 80111219.M Tue Dec 20 14:34:1458016

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214060.D
Acq On : 12-19-16 17:39:13
Sample : 161219A LCS-1 2/30.96G
Misc : water
Quant Method : G:\HERBIE\DATA\161214\80111219.M

Vial: 58
Operator: RH
Inst : Herbie
Multiplr: 1.13





DBCP/EDB/1,2,3-TCP Analysis by
504 8011 1215

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/19/16
Instrument: Herbie
Initial Cal. Date: 12/19/16
Data File: 1214068.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	EDB	837164	800084	4.4	TM	
2	TML	1,2,3-TCP	197598	180240	8.8	TML	18
3	S	1,3-DIBROMOPROPANE(S)	701626	642426	8.4	S	
4	TM	DBCP	2364330	2057850	13	TM	
5							
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39							
40							
		Average			8.7		

DBCP/EDB/1,2,3-TCP Analysis by
504 8011 1215

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/19/16
Instrument: Herbie
Cal. Date: 12/19/16
Data File: 1214068.D

		Compound	MEAN	CCRF	%D	%Drift	
41	TM	EDB	1892080	1842350	2.6	TM	
42	TM	1,2,3-TCP	328649	320826	2.4	TM	
43	S	1,3-DIBROMOPROPANE(S)	1069940	1056430	1.3	S	
44	TM	DBCP	5057110	4951280	2.1	TM	
45							
46							
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		Average			2.1		

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214068.D\ECD1A.CH Vial: 66
Signal #2 : G:\HERBIE\DATA\161214\1214068.D\ECD2B.CH
Acq On : 12-19-16 20:23:57 Operator: RH
Sample : 8011 3 12/19/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 20 13:46 2016 Quant Results File: 80111219.RES

Quant Method : G:\HERBIE\DATA\161214\80111219.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Mon Dec 19 17:47:48 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	321213	528217	0.229	0.247
Spiked Amount	0.350			Recovery	=	65.43%	70.57%
	Target Compounds						
1) TM	EDB	5.78	7.22	400042	921174	0.239	0.243
2) TM	1,2,3-TCP	9.26	10.46	90120	160413	0.205	0.244
4) TM	DBCP	13.36	14.10	1028925	2475640	0.218	0.245

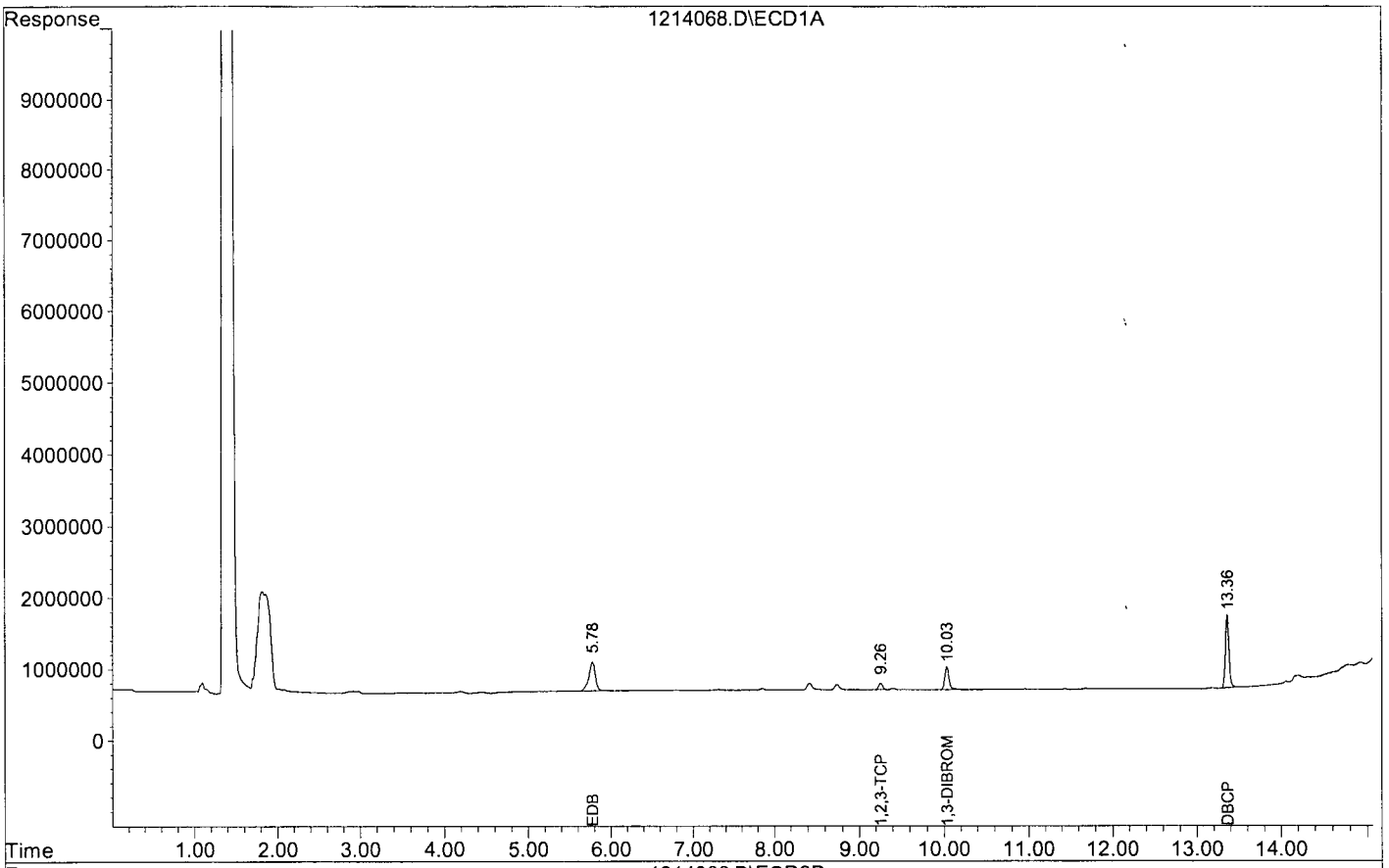
Target Compounds

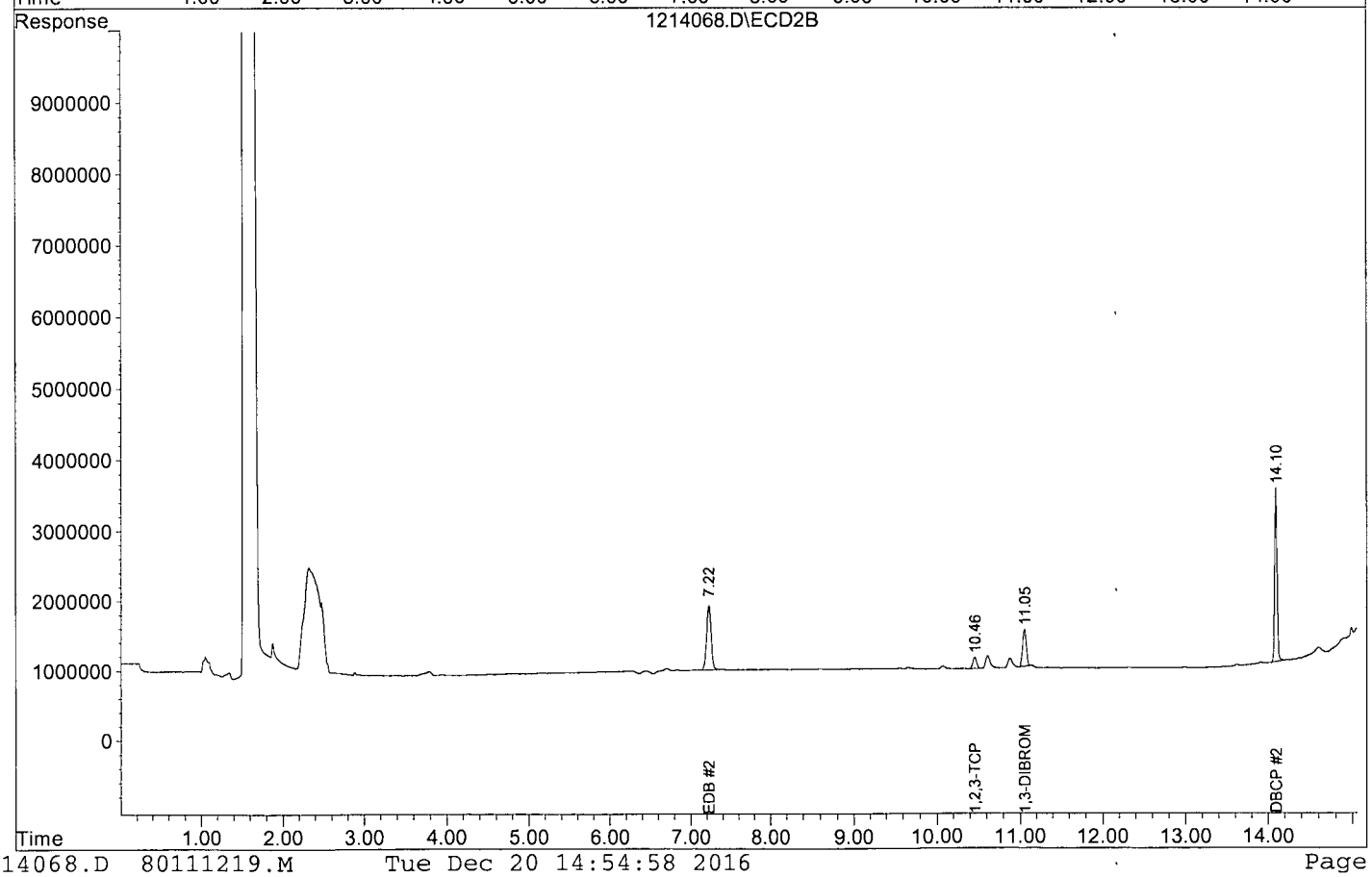
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214068.D
Acq On : 12-19-16 20:23:57
Sample : 8011 3 12/19/16
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111219.M

Vial: 66
Operator: RH
Inst : Herbie
Multiplr: 1.00





DBCP/EDB/1,2,3-TCP Analysis by
504 8011 1215

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/20/16
Instrument: Herbie
Initial Cal. Date: 12/19/16
Data File: 1214070.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TM	EDB	837164	895160	6.9	TM	
2	TML	1,2,3-TCP	197598	194732	1.5	TML	8.7
3	S	1,3-DIBROMOPROPANE(S)	701626	692740	1.3	S	
4	TM	DBCP	2364330	2134300	9.7	TM	
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		Average			4.9		

DBCP/EDB/1,2,3-TCP Analysis by
504 8011 1215

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/20/16
Instrument: Herbie
Cal. Date: 12/19/16
Data File: 1214070.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	EDB	1892080	2139080	13	TM	
42	TM	1,2,3-TCP	328649	360504	9.7	TM	
43	S	1,3-DIBROMOPROPANE(S)	1069940	1177590	10	S	
44	TM	DBCP	5057110	5296540	4.7	TM	
45							
46							
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		Average			9.4		

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214070.D\ECD1A.CH Vial: 68
Signal #2 : G:\HERBIE\DATA\161214\1214070.D\ECD2B.CH
Acq On : 12-20-16 14:28:00 Operator: RH
Sample : 8011 3 12/19/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 20 14:43 2016 Quant Results File: 80111219.RES

Quant Method : G:\HERBIE\DATA\161214\80111219.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Mon Dec 19 17:47:48 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	346370	588793	0.247	0.275
Spiked Amount	0.350			Recovery	=	70.57%	78.57%
	Target Compounds						
1) TM	EDB	5.79	7.23	447580	1069541	0.267	0.283
2) TM	1,2,3-TCP	9.26	10.46	97366	180252	0.228	0.274
4) TM	DBCP	13.36	14.09	1067149	2648269	0.226	0.262

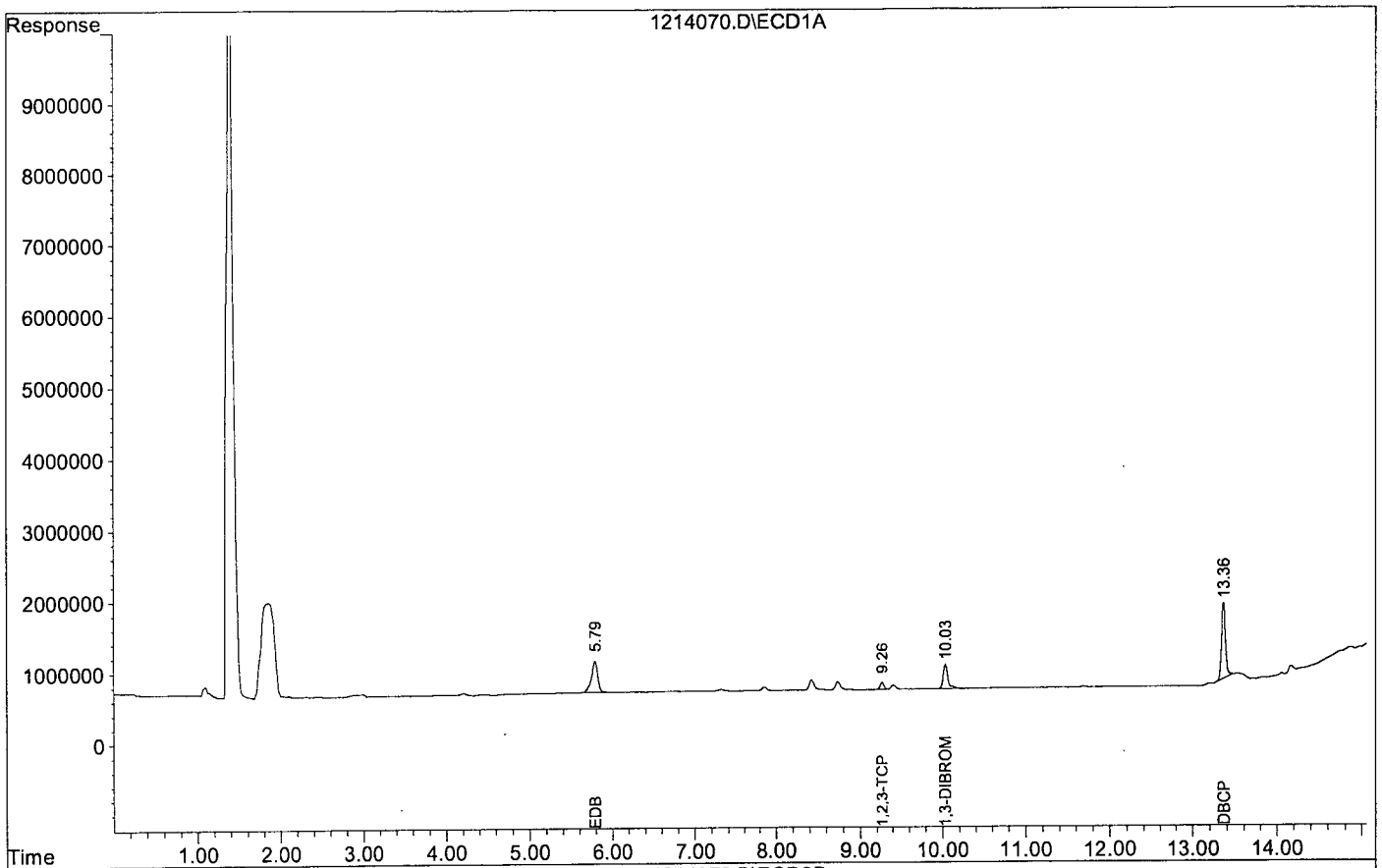
Target Compounds

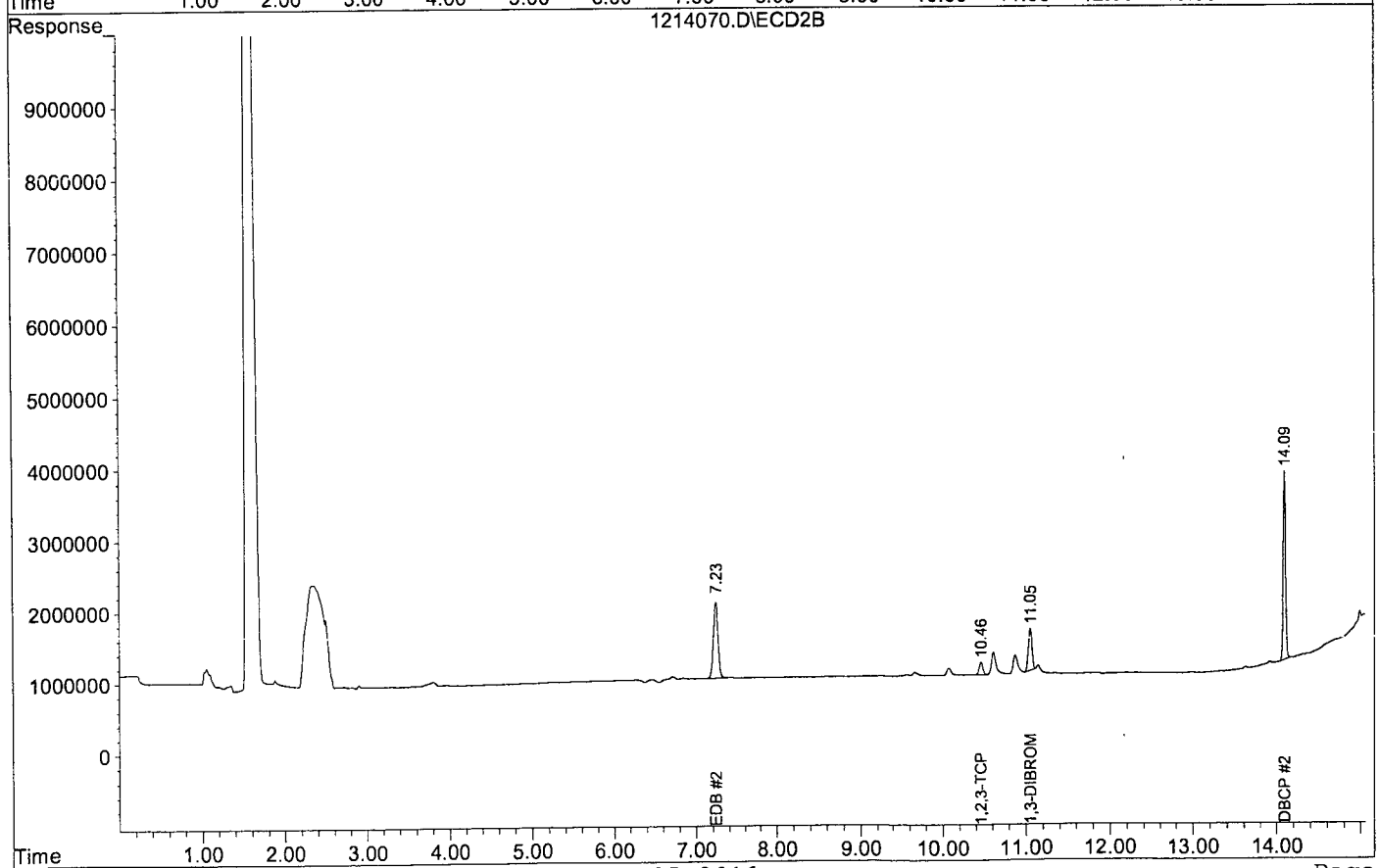
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214070.D
Acq On : 12-20-16 14:28:00
Sample : 8011 3 12/19/16
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111219.M

Vial: 68
Operator: RH
Inst : Herbie
Multiplr: 1.00





DBCP/EDB/1,2,3-TCP Analysis by
504 8011 1215

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/20/16
Instrument: Herbie
Initial Cal. Date: 12/19/16
Data File: 1214073.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	EDB	837164	838110	0.11	TM	
2	TML	1,2,3-TCP	197598	184598	6.6	TML	15
3	S	1,3-DIBROMOPROPANE(S)	701626	668892	4.7	S	
4	TM	DBCP	2364330	2130320	9.9	TM	
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		Average			5.3		

DBCP/EDB/1,2,3-TCP Analysis by
504 8011 1215

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/20/16
Instrument: Herbie
Cal. Date: 12/19/16
Data File: 1214073.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	EDB	1892080	1861000	1.6	TM	
42	TM	1,2,3-TCP	328649	307828	6.3	TM	
43	S	1,3-DIBROMOPROPANE(S)	1069940	975182	8.9	S	
44	TM	DBCP	5057110	4846810	4.2	TM	
45							
46							
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80							
		Average			5.3		

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214073.D\ECD1A.CH Vial: 71
Signal #2 : G:\HERBIE\DATA\161214\1214073.D\ECD2B.CH
Acq On : 12-20-16 15:30:55 Operator: RH
Sample : 8011 3 12/19/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 20 15:54 2016 Quant Results File: 80111219.RES

Quant Method : G:\HERBIE\DATA\161214\80111219.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Mon Dec 19 17:47:48 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
3) S 1,3-DIBROMOPROPA	10.03	11.05	334446	487591	0.238	0.228
Spiked Amount 0.350			Recovery =		68.00%	65.14%
Target Compounds						
1) TM EDB	5.79	7.23	419055	930501	0.250	0.246
2) TM 1,2,3-TCP	9.26	10.46	92299	153914	0.212	0.234
4) TM DBCP	13.36	14.10	1065161	2423406	0.225	0.240

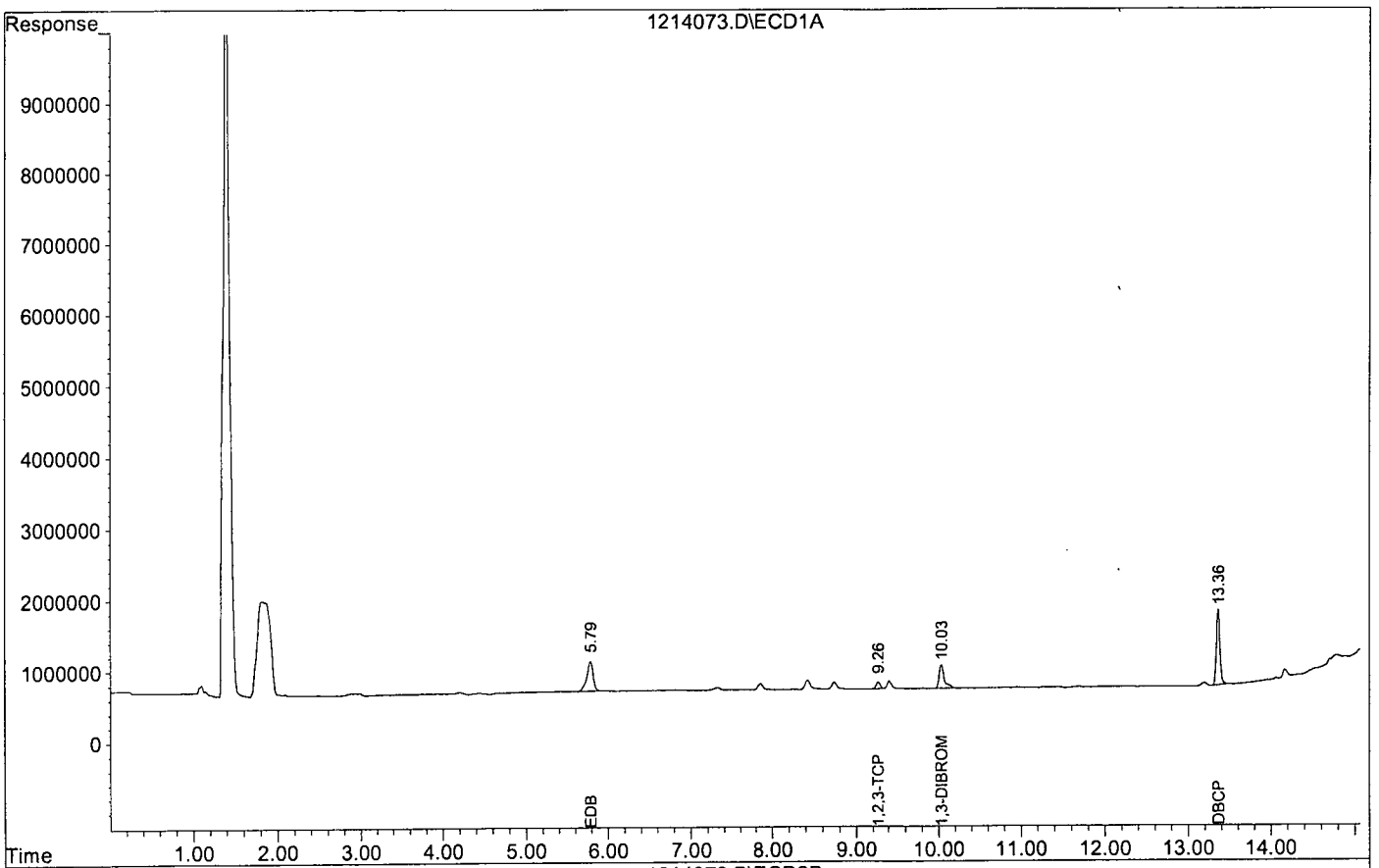
Target Compounds

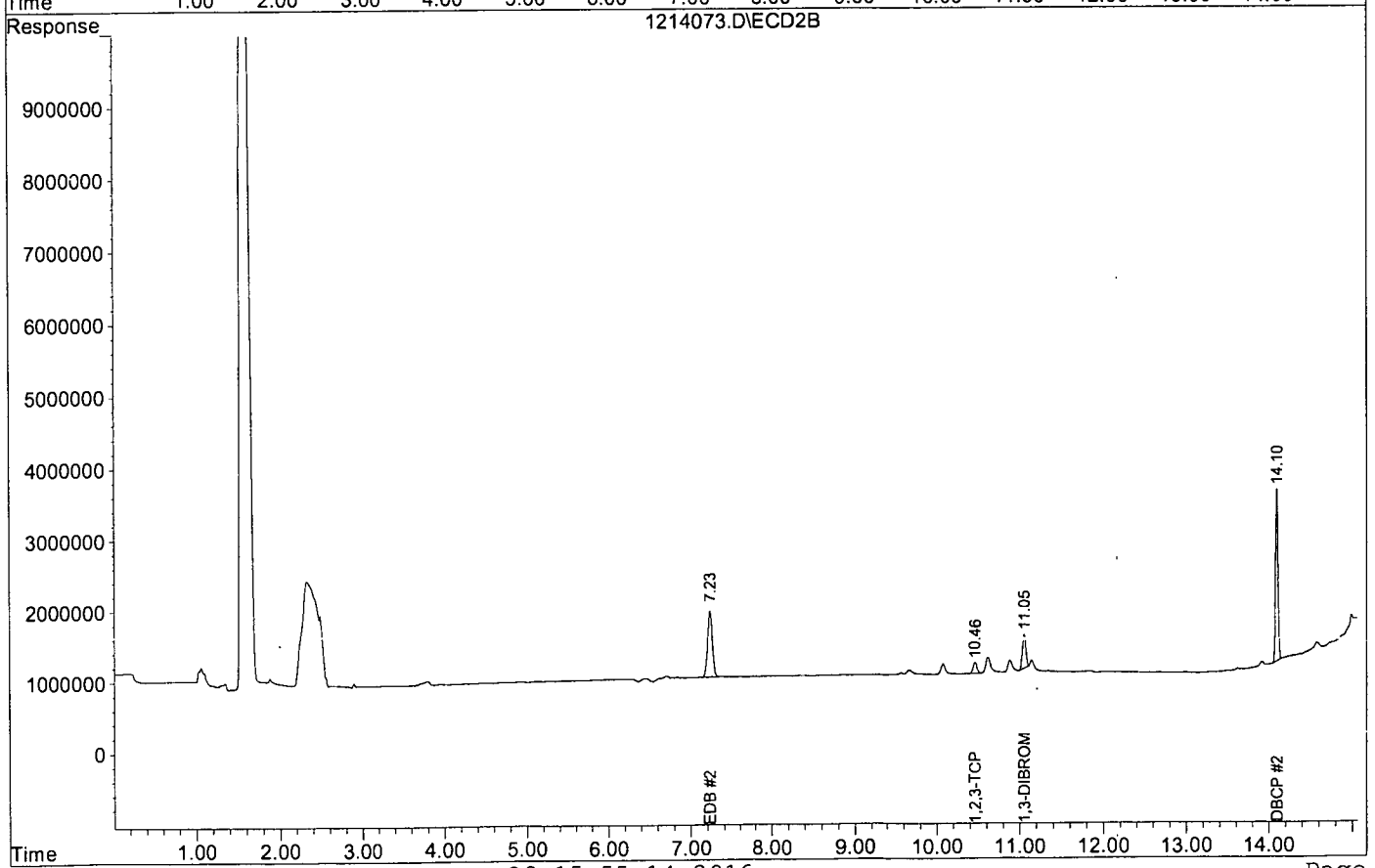
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214073.D
Acq On : 12-20-16 15:30:55
Sample : 8011 3 12/19/16
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111219.M

Vial: 71
Operator: RH
Inst : Herbie
Multiplr: 1.00





ORGANICS

Raw Data

APPL, INC.

Method Blank
EPA 8011

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161219W-47344 - 214793**
Batch ID: #8011-161219A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	EDB	0.020 U	0.02	0.020	0.010	ug/L	12/19/16	12/19/16
BLANK	SURROGATE: 1,3-DIBROMOPRO	79.4	70-132			%	12/19/16	12/19/16

Quant Method: 80111219.M
Run #: 1214059
Instrument: Herbie
Sequence: 161214
Initials: RHA

GC SC-Blank-REG MDLs-DOD
Printed: 12/20/16 1:54:32 PM

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214059.D\ECD1A.CH Vial: 57
Signal #2 : G:\HERBIE\DATA\161214\1214059.D\ECD2B.CH
Acq On : 12-19-16 17:18:34 Operator: RH
Sample : 161219A BLK 2/30.98G Inst : Herbie
Misc : water Multiplr: 1.13
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 20 13:41 2016 Quant Results File: 80111219.RES

Quant Method : G:\HERBIE\DATA\161214\80111219.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Mon Dec 19 17:47:48 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

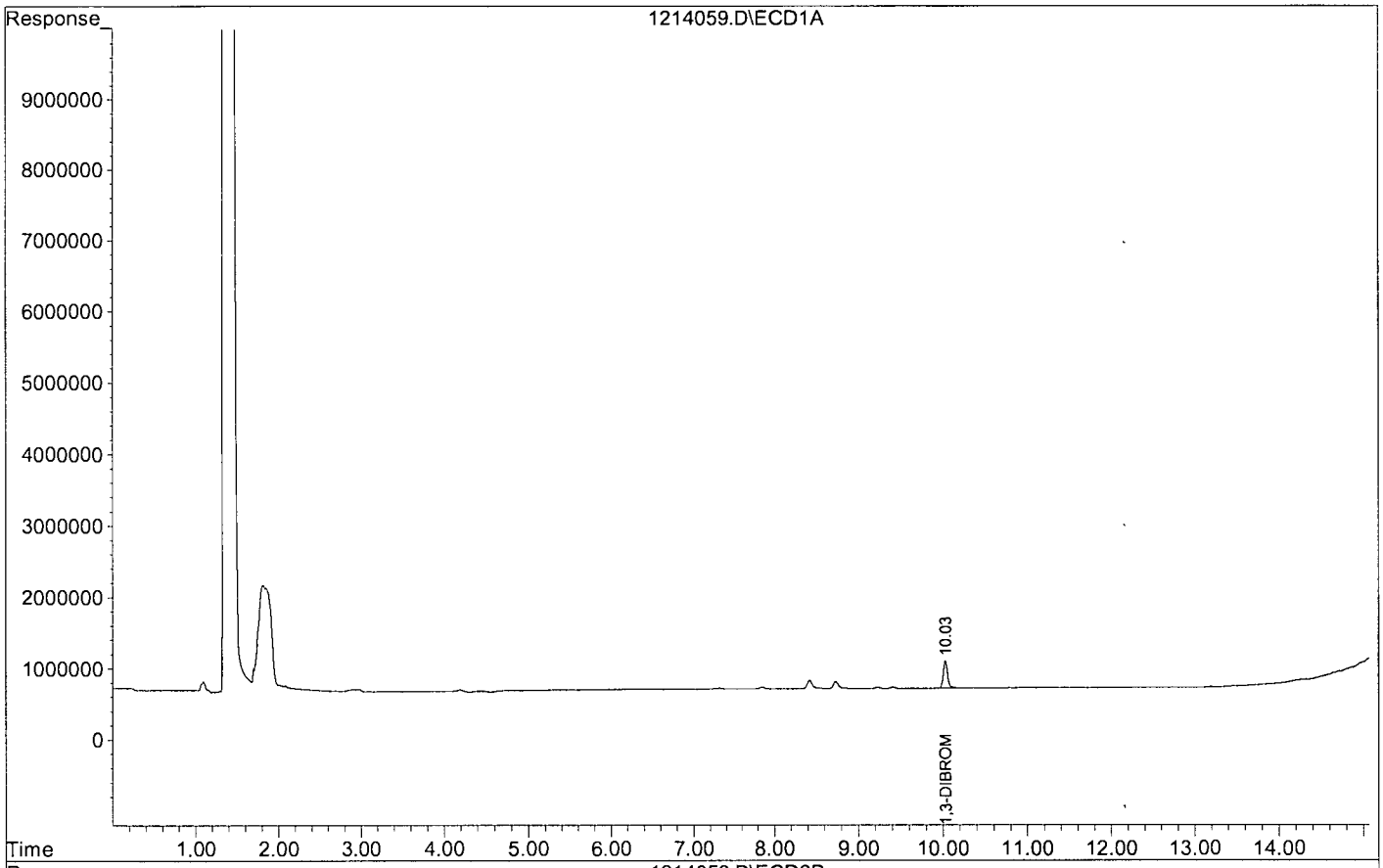
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	389817	616964	0.314	0.326
Spiked Amount	0.395			Recovery	=	79.41%	82.44%
	Target Compounds						
	Target Compounds						
1) TM	EDB	0.00	0.00	0	0	N.D. d	N.D. d
2) TM	1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4) TM	DBCP	0.00	0.00	0	0	N.D. d	N.D. d

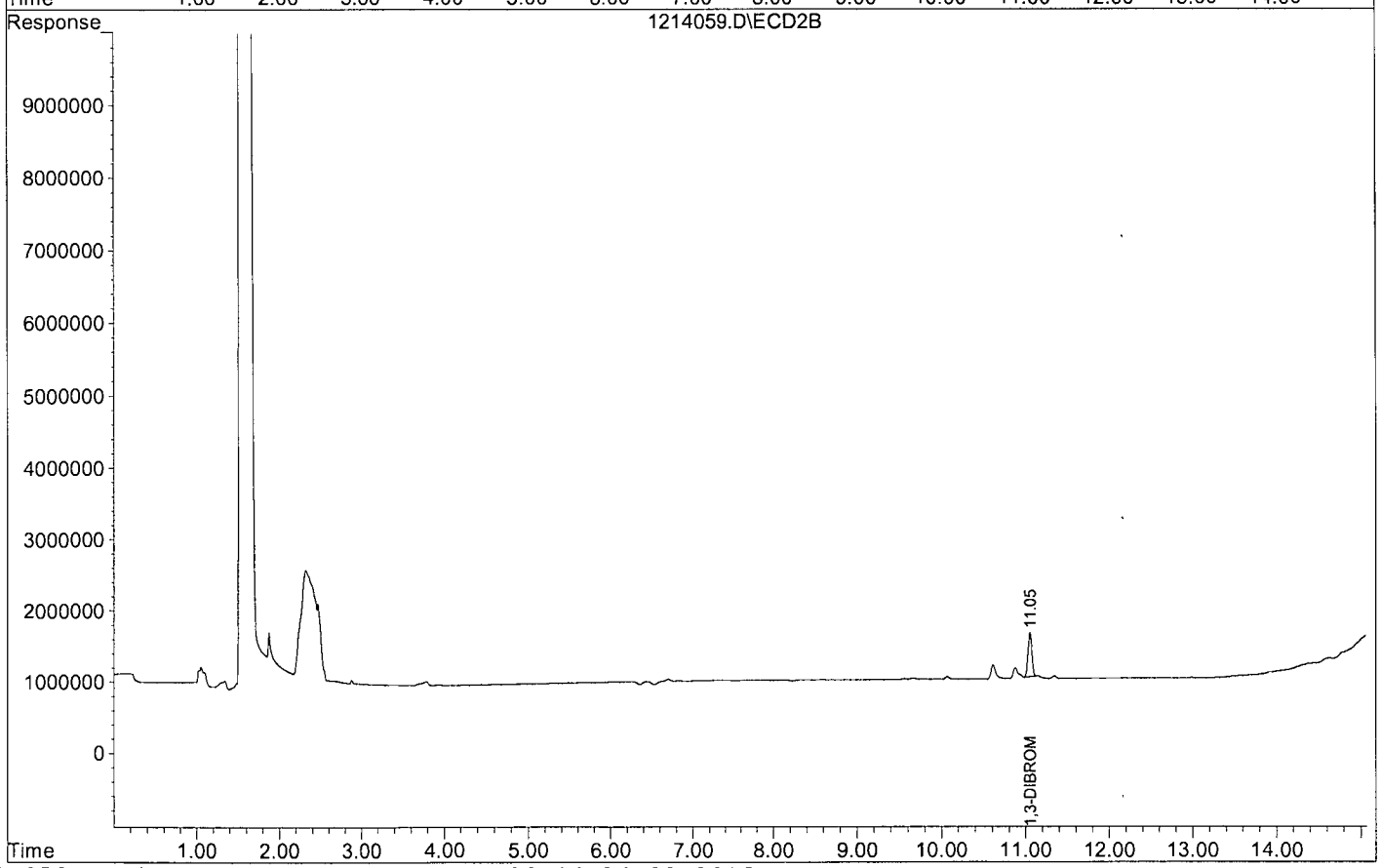
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\161214\1214059.D
Acq On : 12-19-16 17:18:34
Sample : 161219A BLK 2/30.98G
Misc : water
Quant Method : G:\HERBIE\DATA\161214\80111219.M

Vial: 57
Operator: RH
Inst : Herbie
Multiplr: 1.13





Laboratory Control Spike Recovery

EPA 8011

APPL ID: **161219W-47344 LCS - 214793**
Batch ID: #8011-161219A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
EDB	0.250	0.164	65.6	60-140
SURROGATE: 1,3-DIBROMOPROPANE (	0.350	0.382	109	70-132

Comments: _____

Primary	SPK
Quant Method :	80111219.M
Extraction Date :	12/19/16
Analysis Date :	12/20/16
Instrument :	Herbie
Run :	1214071
Initials :	RHA

Printed: 12/20/16 4:03:42 PM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214071.D\ECD1A.CH Vial: 69
Signal #2 : G:\HERBIE\DATA\161214\1214071.D\ECD2B.CH
Acq On : 12-20-16 14:48:53 Operator: RH
Sample : 161219A LCS-2 2/35.92G Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 20 15:17 2016 Quant Results File: 80111219.RES

Quant Method : G:\HERBIE\DATA\161214\80111219.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Mon Dec 19 17:47:48 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	System Monitoring Compounds							
3) S	1,3-DIBROMOPROPA	10.04	11.05	536613	617492	0.382	0.289	
Spiked Amount	0.350			Recovery	=	109.14%	82.57%	
	Target Compounds							
1) TM	EDB	5.81	7.23	275414	1015382	0.164	0.268	#
2) TM	1,2,3-TCP	9.27	10.46	138151	187585	0.358	0.285	
4) TM	DBCP	13.36	14.10	1791182	2879222	0.379	0.285	

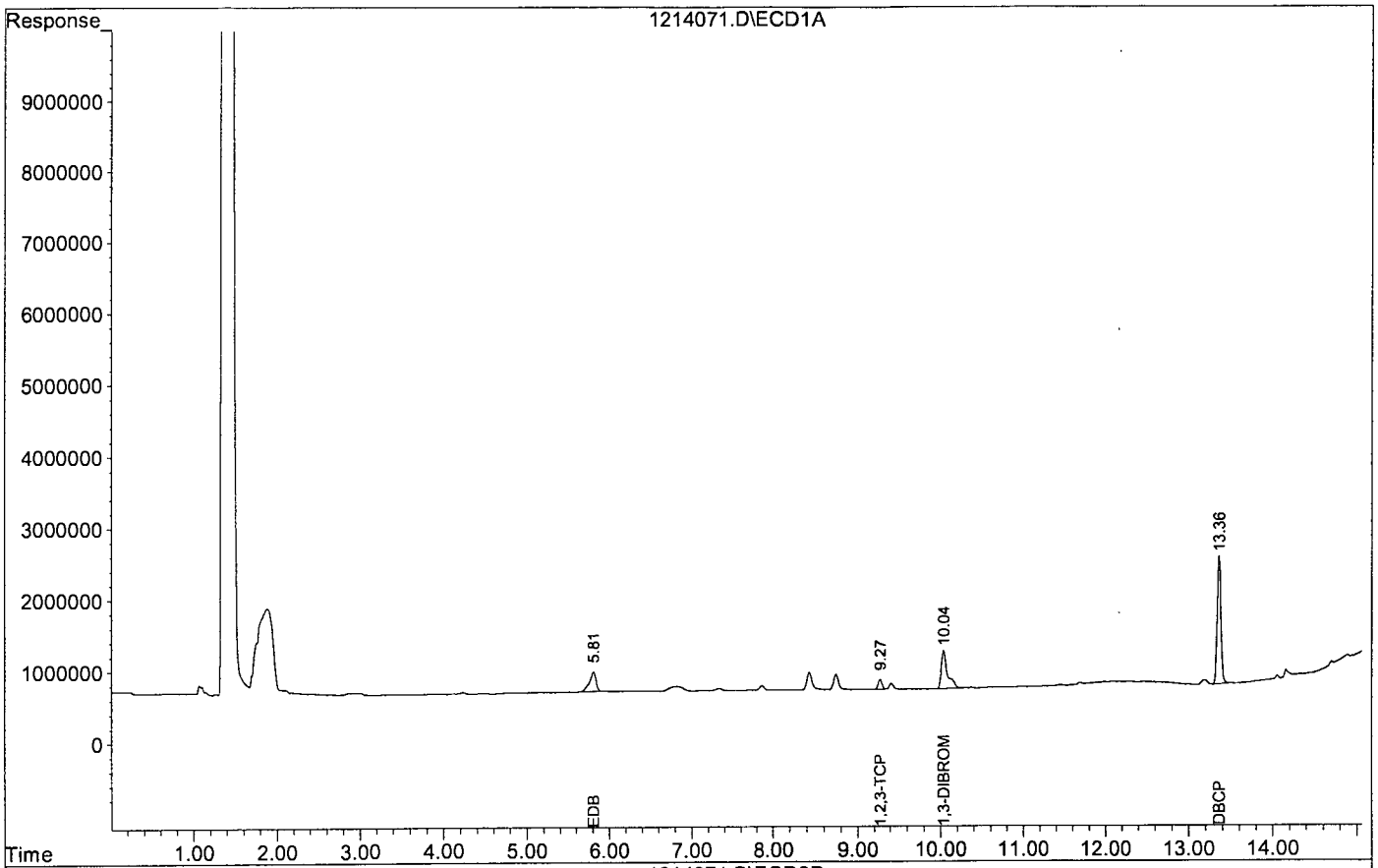
Target Compounds

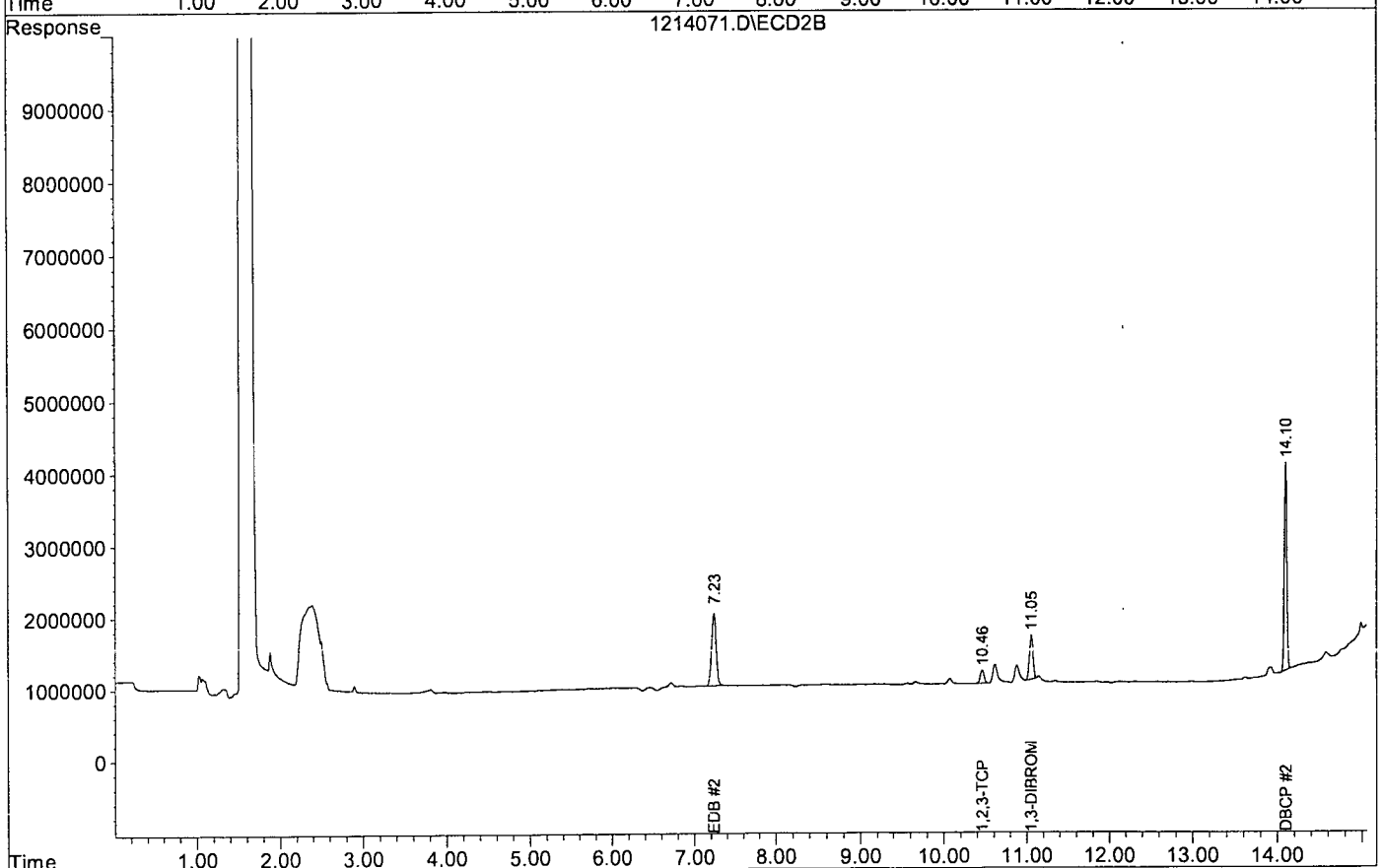
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214071.D
Acq On : 12-20-16 14:48:53
Sample : 161219A LCS-2 2/35.92G
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111219.M

Vial: 69
Operator: RH
Inst : Herbie
Multiplr: 1.00





		504/8011 M STD					
Prep: 12/19/16 Exp: 04/19/17 RH							
Compound	**Initial Conc.**	**Source**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**	
EDB	0.35ug/mL	504/8011 M STD STK	1000uL	10mL	0.035ug/mL	Methanol	
TCP		prep.12/08/16				021915C	
DBCP		exp: 04/08/17					
1,3 DBP							

504/8011 M STD STOCK						
Prep: 12/08/16-R.H.		Ex: 04/08/17				
Compound	**Initial Conc.**	**Source**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
EDB	20ug/mL	504/DOHS STOCK	438uL	25mL	0.35ug/mL	Methanol
TCP		prep. 06/07/16				021915C
DBCP		exp: 06/07/17				
1,3 DBP	100ug/mL	1,3 DBP STOCK	88uL			
		prep.06/07/16				
		exp. 06/07/17				

1,3-DBP STOCK						
Compounds	**Init. Conc.**	**Stock SRC**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
1,3 DBP	1000ug/mL	Absolute	1000uL	10mL	100ug/mL	Methanol
	Cat:	71326				Lot # 021915C
	Lot:	031413-33900				
	Op:	06/07/16				
	Exp:	06/07/17		Prep: 6/7/16 Exp: 6/7/17 LH		

504 DOHS STOCK prep: 6/7/16 Exp: 6/7/17 LH						
Compounds	**Init. Conc.**	**Stock SRC**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
EDB	1000ug/mL	O2SI	500uL	25mL	20ug/mL	Methanol
TCP	Cat:	130271-08				Lot # 021915C
DBCP	Lot:	270815-36134				
	Op:	06/07/16				
	Exp:	06/07/17				

		504/8011 SS				
Prep:03/11/16-L.H. Ex: 12/30/16						
Compound	**Initial Conc.**	**Source**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
EDB	0.35ug/mL	504/8011 SPIKE STOCK	1000uL	10mL	0.035ug/mL	Methanol
TCP		prep. 12/30/15				021915C
DBCP		Exp: 12/30/16				

		504/8011 SS STOCK			
Prep: 12/30/15-L.H. Ex: 12/30/16					
Compound	**Initial Conc.**	**Source**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
EDB	200ug/mL	Absolute	44uL	25mL	0.35ug/mL	Methanol
TCP		CAT 30096				070913A
DBCP		Lot 010615-34593				
		open 12/30/15				
		exp 12/30/16				

	504/8011 SURROGATE					
Prep: 11/22/16-R.H. Ex: 12/30/16						
Compound	**Initial Conc.**	**Source**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
1,3 DBP	100	1,3 DBP STOCK	35ul	10mL	0.35ug/mL	Methanol
		prep.12/30/15				070913A
		exp. 12/30/16				

MWE012

Organic Extraction Worksheet

Method	EPA Method 8011 DBCP/EDB	Extraction Set	161219A	Extraction Method	MWE012	Units	mL

Spiked ID 1	504.1 SS 3-11-16 exp 12-30-16		Surrogate ID 1	504.1 Surrogate 11-22-16 exp 12-30-16	
Spiked ID 2	504.1 M. STD 12-19-16 exp 4-8-17		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	12/19/16 13:25	
Spiked ID 8			Ext. End Time:	12/19/16 14:00	
			GC Requires Extract By:	12/20/16 0:00	

pH1			Water Bath Temp Criteria	
pH2				
pH3				

Spiked By: KY **Date** 12/19/16 **Witnessed By:** JR **Date** 12/19/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	161219A Blk				0.035	1 equip	30.98g	2	7	12/19/16 13:25	
2	161219A LCS-1		0.1	1	0.035	1 equip	30.96g	2	7	12/19/16 13:25	
3	161219A LCS-2		0.250	2	NA	NA equip	35.92g	2	7	12/19/16 13:25	
4	AZ47344	AZ47344W11			0.035	1 equip	36.04g	2	7	12/19/16 13:25	81734 RUSH 1 WEEK
5	AZ47493	AZ47493W07			0.035	1 equip	35.57g	2	7	12/19/16 13:25	81760 1 WEEK
6	AZ47498	AZ47498W10			0.035	1 equip	35.79g	2	7	12/19/16 13:25	81760 1 WEEK
7	AZ47657	AZ47657W05			0.035	1 equip	35.72g	2	7	12/19/16 13:25	81776 1 WEEK
8	M STD 1		0.020	2	NA	NA equip	36.01g	2	7	12/19/16 13:25	
9	M STD 2		0.1	2	NA	NA equip	60.06g	2	7	12/19/16 13:25	
10	M STD 3		0.250	2	NA	NA equip	35.95g	2	7	12/19/16 13:25	
11	M STD 4		0.5	2	NA	NA equip	36.08g	2	7	12/19/16 13:25	
12	M STD 5		0.750	2	NA	NA equip	36.11g	2	7	12/19/16 13:25	
13	M STD 6		1	2	NA	NA equip	35.93g	2	7	12/19/16 13:25	

DL 12/19/16

Solvent and Lot#	
NaCL	16B10001i
Sod. Thiosulfate	24050
GC2 Hexane	DN636

Extraction COC Transfer	
Extraction lab employee Initials	DL
GC analyst's initials	RH
Date	12/19/16
Time	2:30
Refrigerator	Solvent

	Technician's Initials
Scanned By	KY
Sample Preparation	KY
Extraction	KY
Concentration	---

Modified	12/19/16 2:03:42 PM

Reviewed By: DL **Date** 12/19/16

12/19/16 2:08:13 PM

86

Ext_ID 53565

Injection Log

Directory: G:\HERBIE\DATA\161214\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	50	1214052.D	1	8011 1 12/19/16		12-19-16 14:53:31
2	51	1214053.D	1	8011 2 12/19/16		12-19-16 15:14:07
3	52	1214054.D	1	8011 3 12/19/16		12-19-16 15:34:48
4	53	1214055.D	1	8011 4 12/19/16		12-19-16 15:55:37
5	54	1214056.D	1	8011 5 12/19/16		12-19-16 16:16:20
6	55	1214057.D	1	8011 6 12/19/16		12-19-16 16:37:03
7	57	1214059.D	1.12976	161219A BLK 2/30.98G	water	12-19-16 17:18:34
8	58	1214060.D	1.13049	161219A LCS-1 2/30.96G	water	12-19-16 17:39:13
9	63	1214065.D	0.979843	AZ47657W05 2/35.72G	water	12-19-16 19:22:24
10	66	1214068.D	1	8011 3 12/19/16		12-19-16 20:23:57
11	68	1214070.D	1	8011 3 12/19/16		12-20-16 14:28:00
12	69	1214071.D	1	161219A LCS-2 2/35.92G		12-20-16 14:48:53
13	71	1214073.D	1	8011 3 12/19/16		12-20-16 15:30:55

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank
EPA 8015B TPH WATER

Blank Name/QCG: **161219W-47494 - 214843**
Batch ID: #DOC53-161219A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	12/19/16	12/20/16
BLANK	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	12/19/16	12/20/16
BLANK	SURROGATE: OCTACOSANE (S)	88.0	60-142			%	12/19/16	12/20/16
BLANK	SURROGATE: ORTHO-TERPHEN	75.4	56-125			%	12/19/16	12/20/16

Quant Method: DOC1103.M
Run #: 1220025
Instrument: Apollo
Sequence: 161220
Initials: DPO

GC SC-Blank-REG MDLs-DOD
Printed: 12/21/16 9:11:41 AM

Laboratory Control Spike Recovery
EPA 8015B TPH WATER

APPL ID: **161219W-47494 LCS - 214843**
Batch ID: #DOC53-161219A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
DIESEL (C10-C24)	1330	1020	76.5	36-132
OIL (C24-C40)	1330	1140	85.5	41-113
SURROGATE: OCTACOSANE (S)	40.0	36.0	90.0	60-142
SURROGATE: ORTHO-TERPHENYL (S)	40.0	36.8	92.0	56-125

Comments: _____

Primary	SPK
Quant Method :	DOC1103.M
Extraction Date :	12/19/16
Analysis Date :	12/20/16
Instrument :	Apollo
Run :	1220026
Initials :	DPO

Printed: 12/21/16 9:11:34 AM
APPL Standard LCS

EPA 8015B-eLL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81776

Case No: 81776 Date Analyzed: 12/20/16

Matrix: WATER Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: OCTACOSANE (S)			SURROGATE: ORTHO-TERPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161219A-BLK	Blank	60-142	88.0		56-125	75.4	
161219A-LCS	Lab Control Spike	60-142	90.0		56-125	92.0	
161219A-LCSD	Lab Control SpikeD	60-142	92.5		56-125	96.0	
AZ47658	ERH147	60-142	97.7		56-125	77.7	
AZ47659	ERH148	60-142	97.1		56-125	79.0	
AZ47660	ERH152	60-142	91.8		56-125	74.3	
AZ47661	ERH149	60-142	97.8		56-125	79.8	
AZ47662	ERH150	60-142	89.8		56-125	73.7	
AZ47663	ERH138	60-142	94.9		56-125	74.7	
AZ47664	ERH144	60-142	95.8		56-125	86.1	
AZ47665	ERH140	60-142	93.2		56-125	74.3	

Comments: Batch: #DOC53-161219A

EPA 8015B-eL

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81776

Case No: 81776 Date Analyzed: 12/20/16

Matrix: WATER Instrument: Apollo

Blank ID: 161219A-BLK Time Analyzed: 1826

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161219A-BLK	Blank	1220025	12/20/16 1826
161219A-LCS	Lab Control Spike	1220026	12/20/16 1847
161219A-LCSD	Lab Control SpikeD	1220028	12/20/16 1927
AZ47658	ERH147	1220035	12/20/16 2149
AZ47659	ERH148	1220036	12/20/16 2209
AZ47660	ERH152	1220037	12/20/16 2229
AZ47661	ERH149	1220038	12/20/16 2249
AZ47662	ERH150	1220039	12/20/16 2309
AZ47663	ERH138	1220042	12/21/16 0009
AZ47664	ERH144	1220043	12/21/16 0029
AZ47665	ERH140	1220044	12/21/16 0049

Comments: Batch: #DOC53-161219A

ORGANICS

Sample Data

APPL, INC.

EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81776

Sample ID: ERH147

APPL ID: AZ47658

Sample Collection Date: 12/14/16

QCG: #DOC53-161219A-214843

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	58 ++	40.0	25.00	13.07	ug/L	12/19/16	12/20/16
EPA 8015B-eL	OIL (C24-C40)	39 J	40.0	40.00	5.54	ug/L	12/19/16	12/20/16
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	97.7	60-142			%	12/19/16	12/20/16
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	77.7	56-125			%	12/19/16	12/20/16

J = Estimated value.
++(T4I) The analyst has noted that the chromatogram of this sample includes a dominant peak(s) which is not indicative of petroleum hydrocarbons.

Quant Method:	DOC1103.M
Run #:	1220035
Instrument:	Apollo
Sequence:	161220
Dilution Factor:	1
Initials:	DPO

Printed: 12/21/16 9:11:26 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161220\1220035.D Vial: 35
Acq On : 12-20-16 21:49:06 Operator: DP
Sample : AZ47658W11 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Dec 21 9:00 2016 Quant Results File: DOC1103.RES

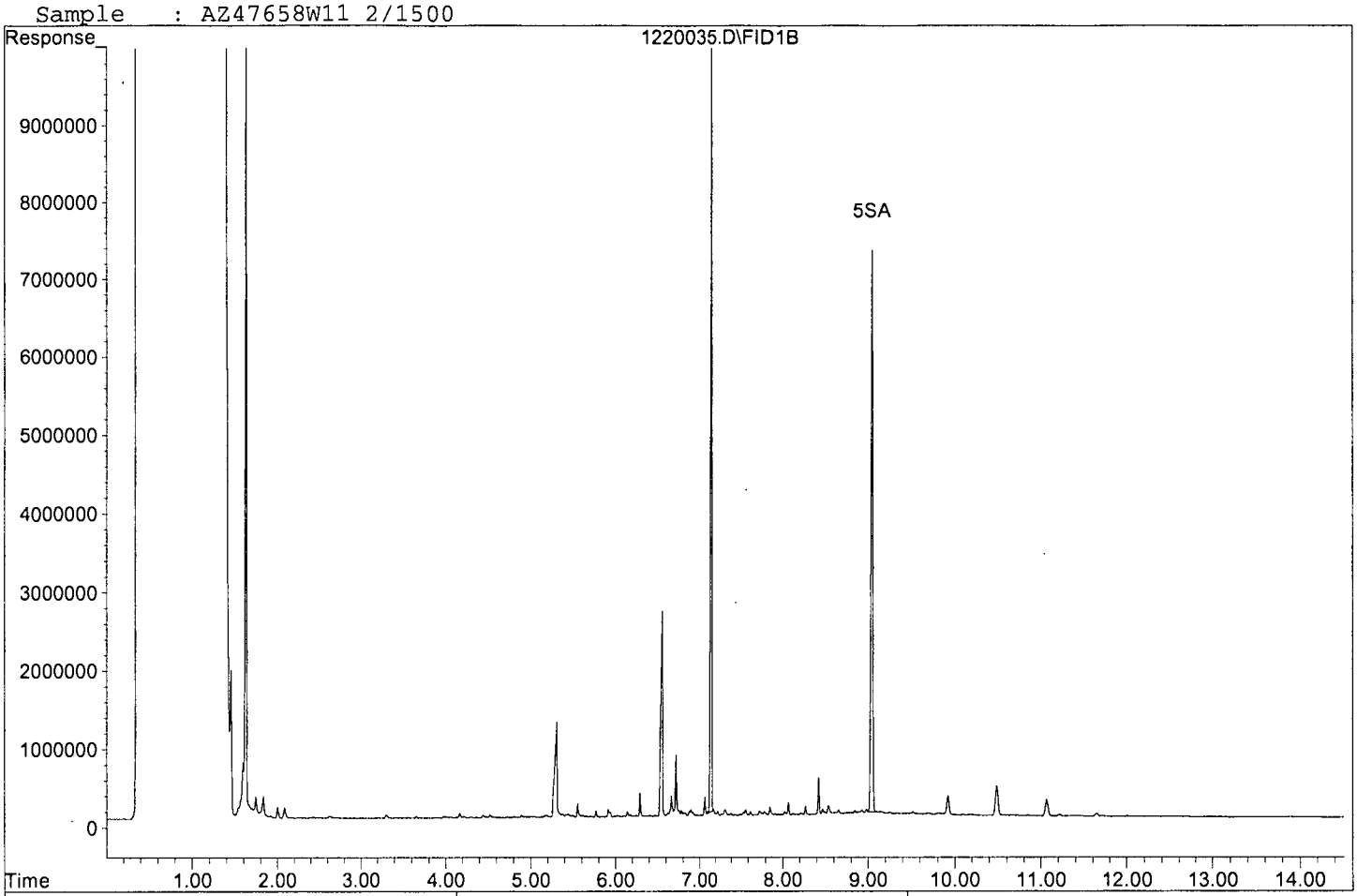
Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

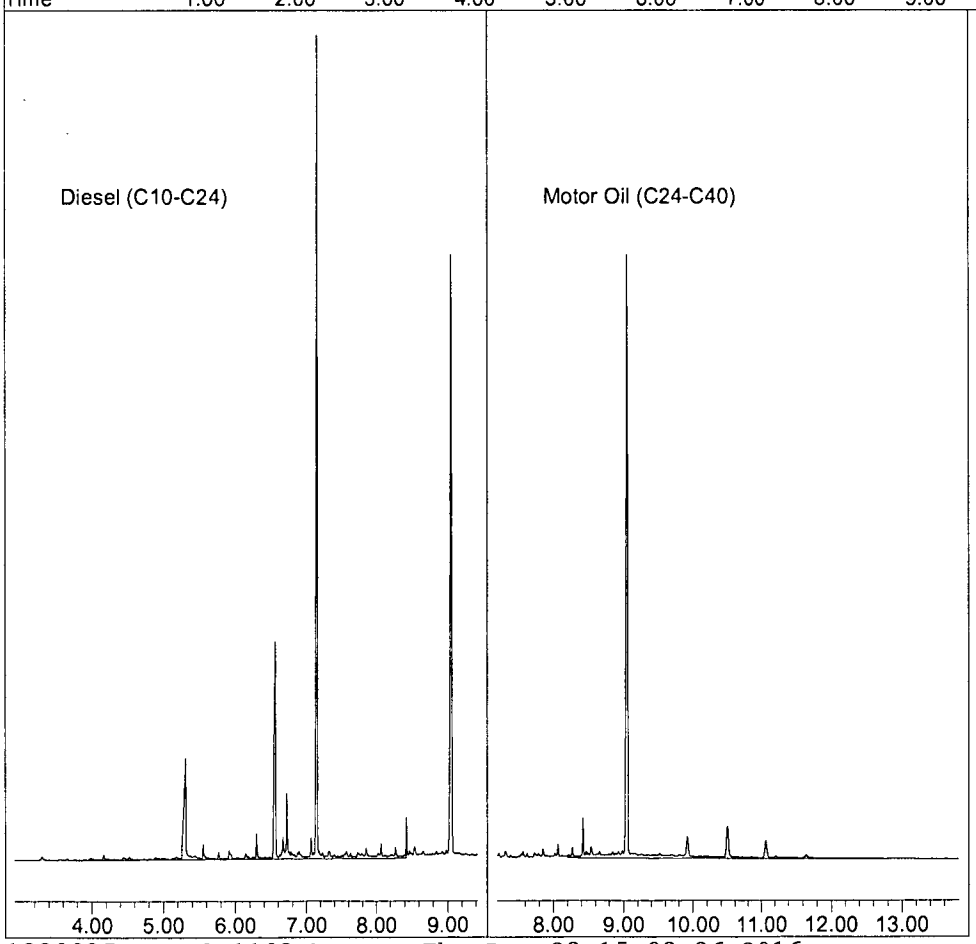
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.15	108689299	31.069 ppb
Surrogate Spike 40.000		Recovery =	77.67%
5) SA Octacosane(S)	9.05	102518528	39.058 ppb
Surrogate Spike 40.000		Recovery =	97.65%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	149017236	57.520 ppb
2) HBTM Motor Oil (C24-C40)	10.50	81300340	38.912 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161220\1220035.D
Sample : AZ47658W11 2/1500





EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81776

Sample ID: ERH148

APPL ID: AZ47659

Sample Collection Date: 12/14/16

QCG: #DOC53-161219A-214843

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	57 ++	40.0	25.00	13.07	ug/L	12/19/16	12/20/16
EPA 8015B-eL	OIL (C24-C40)	46	40.0	40.00	5.54	ug/L	12/19/16	12/20/16
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	97.1	60-142			%	12/19/16	12/20/16
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	79.0	56-125			%	12/19/16	12/20/16

++(T4I) The analyst has noted that the chromatogram of this sample includes a dominant peak(s) which is not indicative of petroleum hydrocarbons.

Quant Method: DOC1103.M
Run #: 1220036
Instrument: Apollo
Sequence: 161220
Dilution Factor: 1
Initials: DPO

Printed: 12/21/16 9:11:26 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161220\1220036.D Vial: 36
Acq On : 12-20-16 22:09:10 Operator: DP
Sample : AZ47659W06 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Dec 21 9:00 2016 Quant Results File: DOC1103.RES

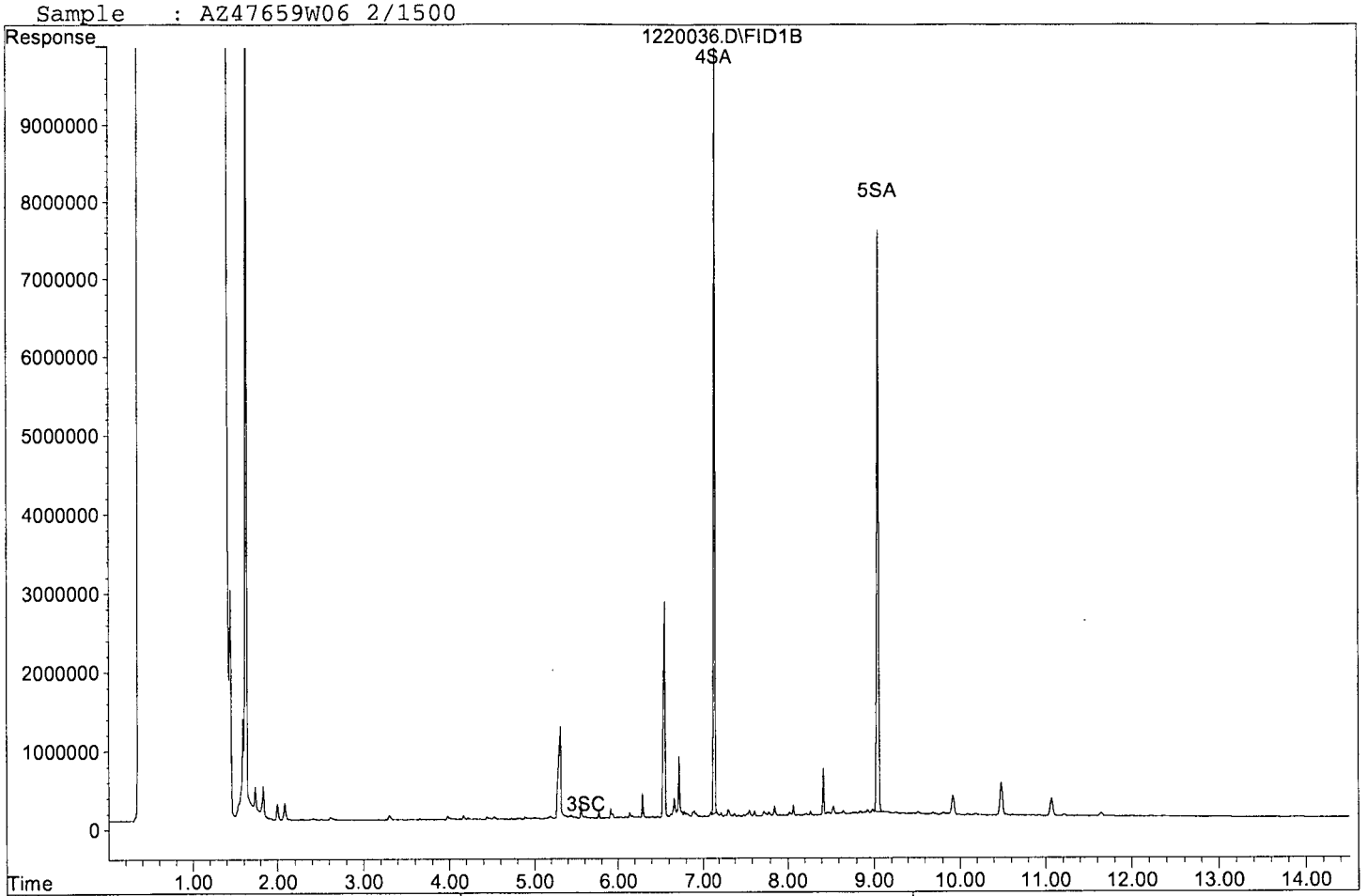
Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

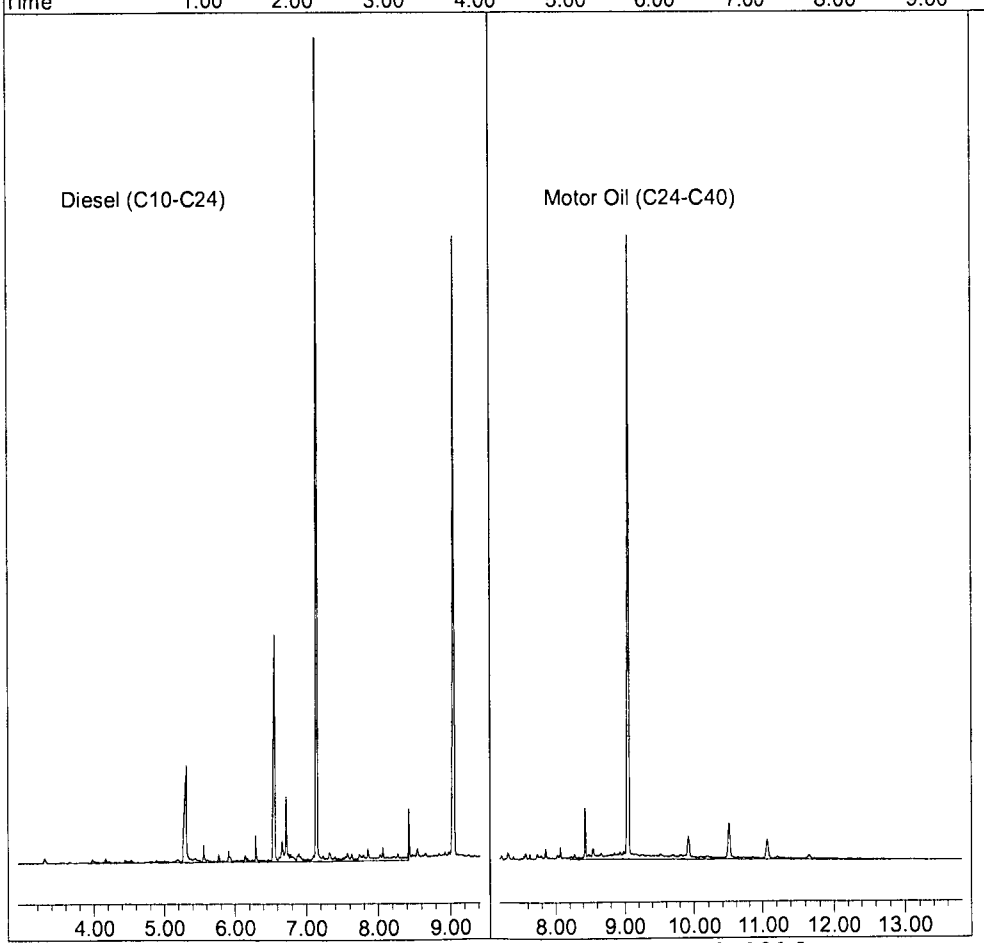
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SC Decanoic Acid(S)	5.61	115874	0.126	ppb
Surrogate Spike 64.000	Recovery =		0.20%	
4) SA Ortho-Terphenyl(S)	7.15	110503102	31.587	ppb
Surrogate Spike 40.000	Recovery =		78.97%	
5) SA Octacosane(S)	9.05	101933272	38.835	ppb
Surrogate Spike 40.000	Recovery =		97.09%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	147264171	56.843	ppb
2) HBTM Motor Oil (C24-C40)	10.50	97024798	46.439	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161220\1220036.D
Sample : AZ47659W06 2/1500





EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81776

Sample ID: ERH152

APPL ID: AZ47660

Sample Collection Date: 12/14/16

QCG: #DOC53-161219A-214843

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	56 ++	40.0	25.00	13.07	ug/L	12/19/16	12/20/16
EPA 8015B-eL	OIL (C24-C40)	49	40.0	40.00	5.54	ug/L	12/19/16	12/20/16
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	91.8	60-142			%	12/19/16	12/20/16
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	74.3	56-125			%	12/19/16	12/20/16

++(T3M) The analyst has noted that the chromatogram of this sample is mainly higher boiling hydrocarbons.

Quant Method: DOC1103.M
Run #: 1220037
Instrument: Apollo
Sequence: 161220
Dilution Factor: 1
Initials: DPO

Printed: 12/21/16 9:11:26 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161220\1220037.D Vial: 37
Acq On : 12-20-16 22:29:20 Operator: DP
Sample : AZ47660W10 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Dec 21 9:01 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

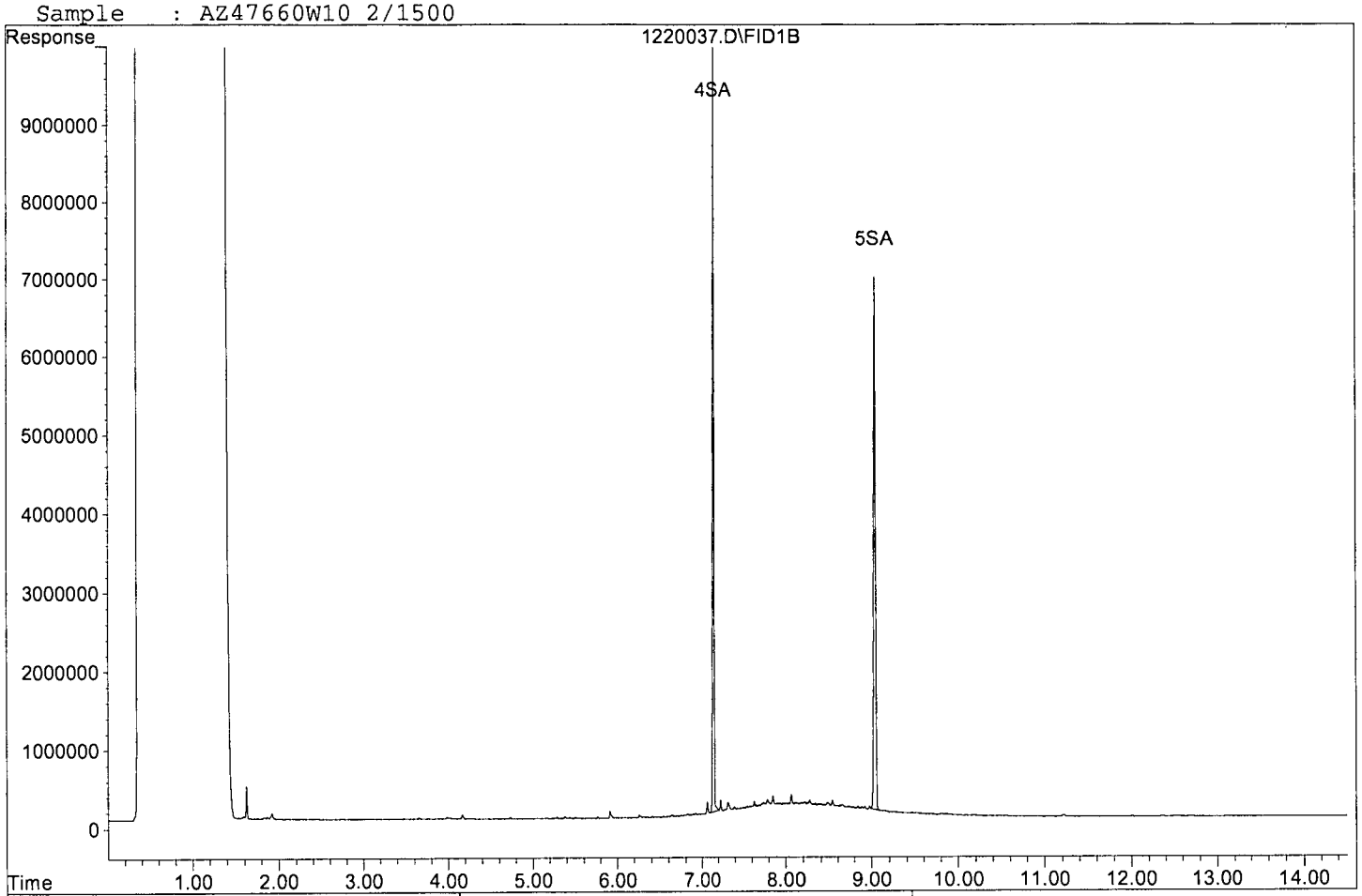
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

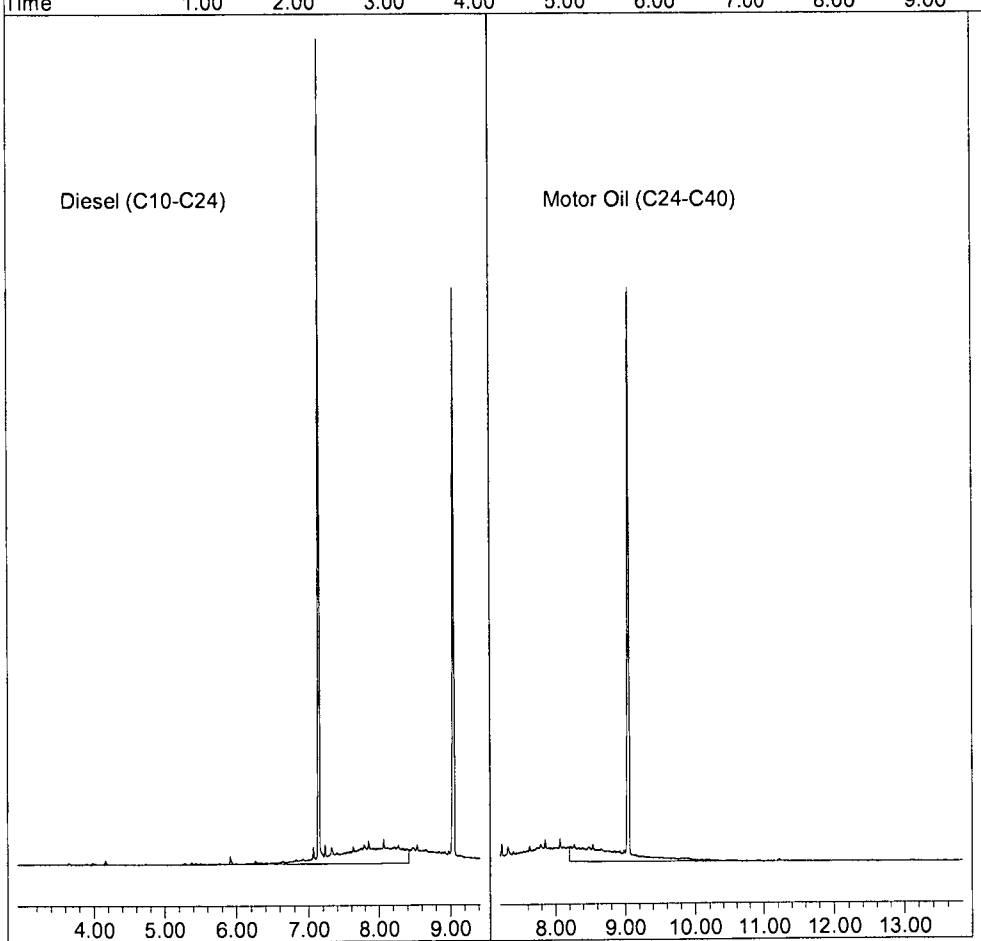
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.15	103945016	29.713 ppb
Surrogate Spike 40.000		Recovery =	74.28%
5) SA Octacosane(S)	9.05	96342237	36.705 ppb
Surrogate Spike 40.000		Recovery =	91.76%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	145500547	56.163 ppb
2) HBTM Motor Oil (C24-C40)	10.50	101822610	48.735 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161220\1220037.D
Sample : AZ47660W10 2/1500





1220037.D DOC1103.M Thu Dec 22 15:02:38 2016

EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81776

Sample ID: ERH149

APPL ID: AZ47661

Sample Collection Date: 12/14/16

QCG: #DOC53-161219A-214843

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	25 ++J	40.0	25.00	13.07	ug/L	12/19/16	12/20/16
EPA 8015B-eL	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	12/19/16	12/20/16
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	97.8	60-142			%	12/19/16	12/20/16
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	79.8	56-125			%	12/19/16	12/20/16

J = Estimated value.
++(T4I) The analyst has noted that the chromatogram of this sample includes a dominant peak(s) which is not indicative of petroleum hydrocarbons.

Quant Method: DOC1103.M
Run #: 1220038
Instrument: Apollo
Sequence: 161220
Dilution Factor: 1
Initials: DPO

Printed: 12/21/16 9:11:26 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161220\1220038.D Vial: 38
Acq On : 12-20-16 22:49:24 Operator: DP
Sample : AZ47661W07 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Dec 21 9:02 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

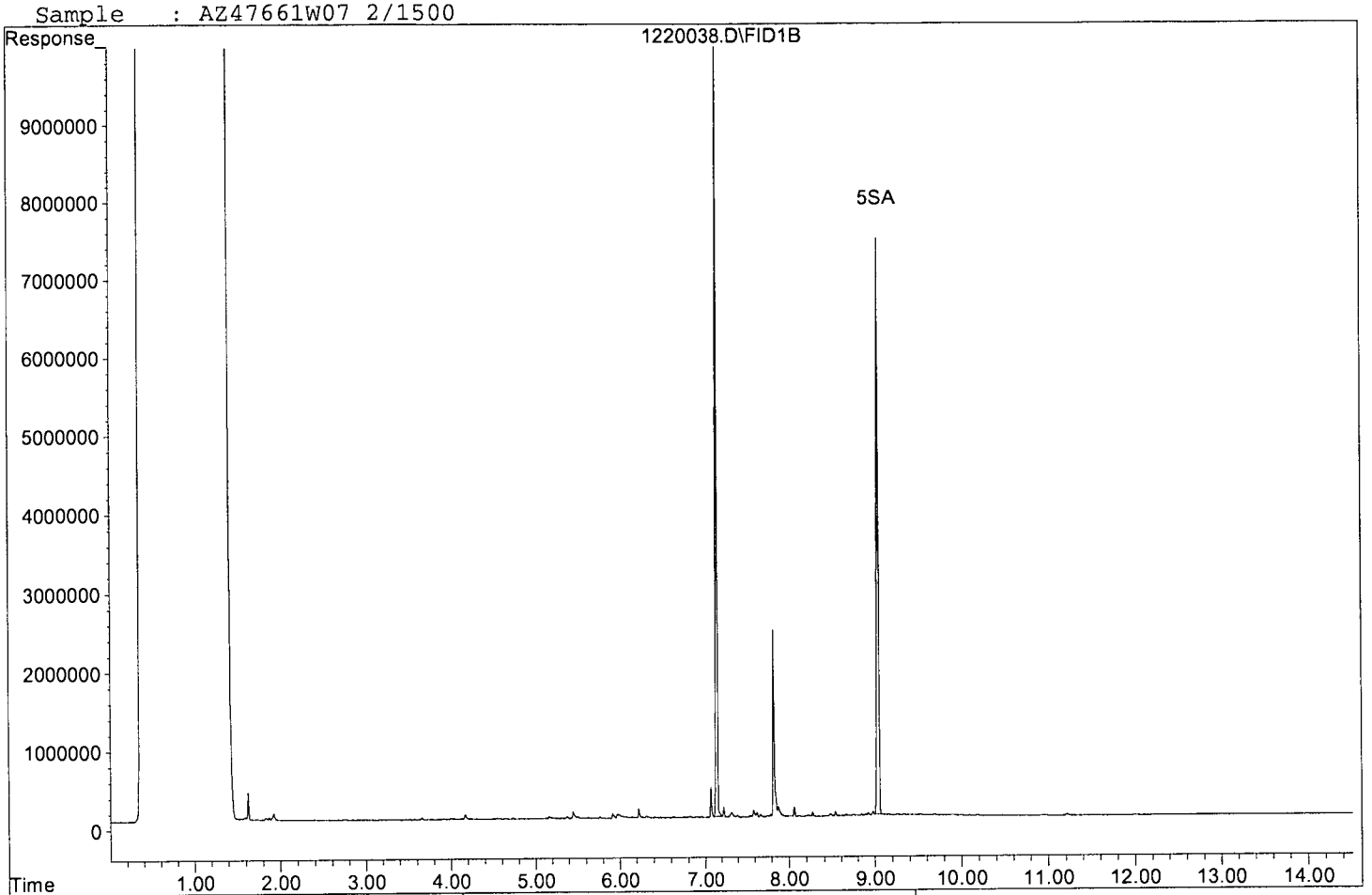
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

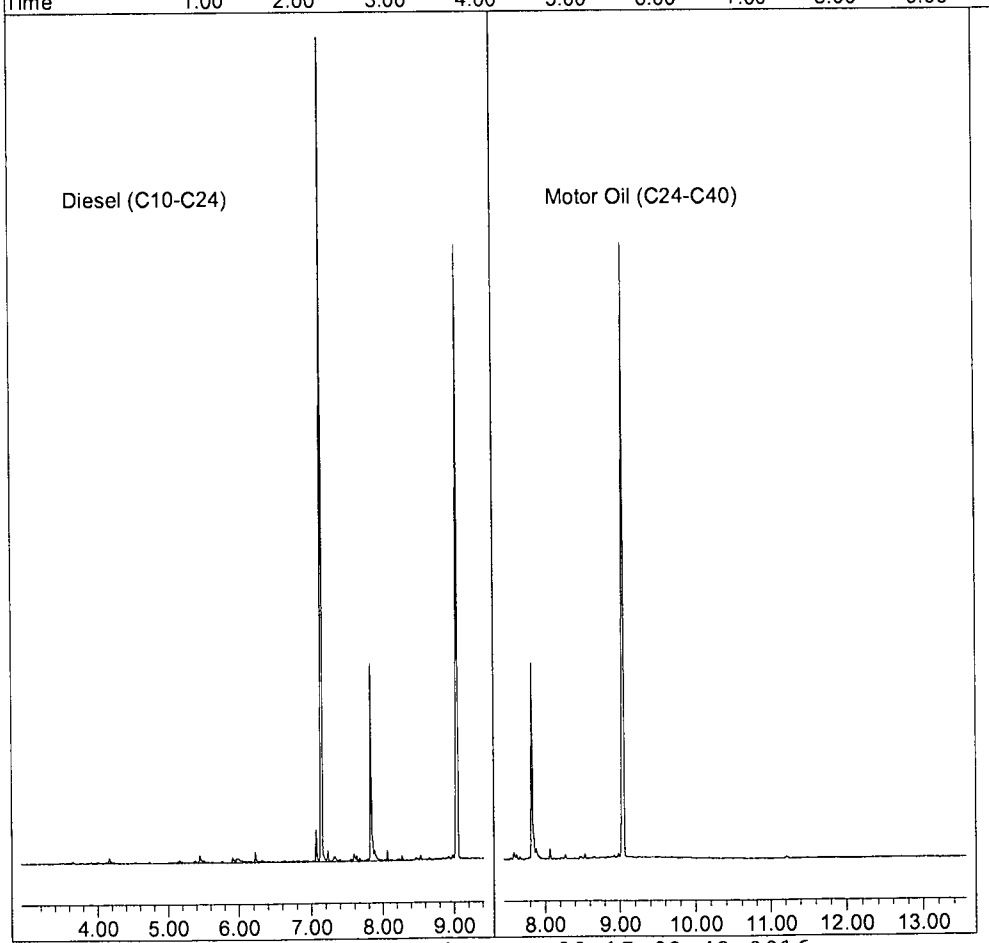
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.15	111714506	31.933 ppb
Surrogate Spike 40.000		Recovery =	79.83%
5) SA Octacosane(S)	9.05	102648011	39.107 ppb
Surrogate Spike 40.000		Recovery =	97.77%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	65032892	25.102 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161220\1220038.D
Sample : AZ47661W07 2/1500





1220038.D DOC1103.M Thu Dec 22 15:02:43 2016

EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81776

Sample ID: ERH150

APPL ID: AZ47662

Sample Collection Date: 12/14/16

QCG: #DOC53-161219A-214843

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	26 ++J	40.0	25.00	13.07	ug/L	12/19/16	12/20/16
EPA 8015B-eL	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	12/19/16	12/20/16
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	89.8	60-142			%	12/19/16	12/20/16
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	73.7	56-125			%	12/19/16	12/20/16

J = Estimated value.
++(T4I) The analyst has noted that the chromatogram of this sample includes a dominant peak(s) which is not indicative of petroleum hydrocarbons.

Quant Method: DOC1103.M
Run #: 1220039
Instrument: Apollo
Sequence: 161220
Dilution Factor: 1
Initials: DPO

Printed: 12/21/16 9:16:28 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161220\1220039.D Vial: 39
Acq On : 12-20-16 23:09:29 Operator: DP
Sample : AZ47662W06 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Dec 21 9:14 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

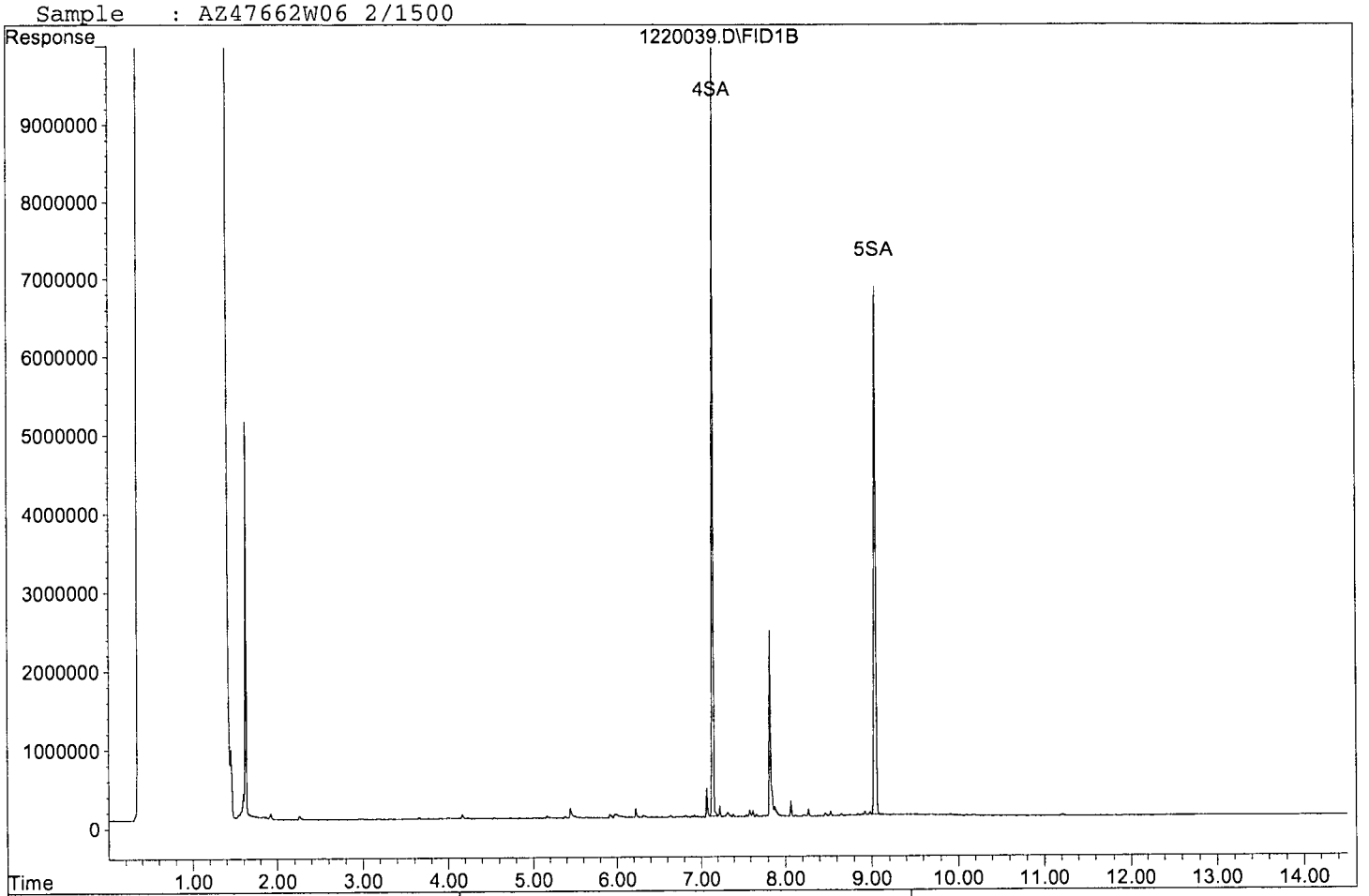
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

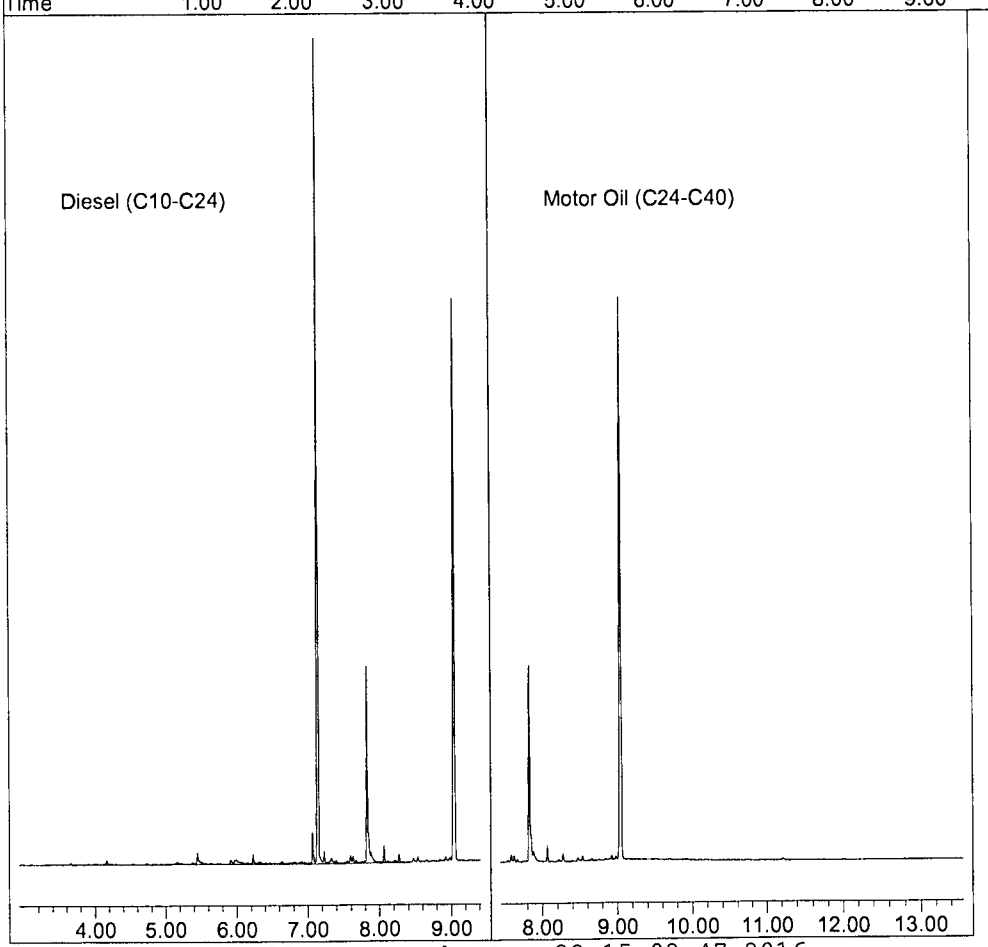
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.15	103136417	29.481 ppb
Surrogate Spike 40.000	Recovery =		73.70%
5) SA Octacosane(S)	9.05	94234632	35.902 ppb
Surrogate Spike 40.000	Recovery =		89.76%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	68081234	26.279 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161220\1220039.D
Sample : AZ47662W06 2/1500





1220039.D DOC1103.M Thu Dec 22 15:02:47 2016

EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81776

Sample ID: ERH138

APPL ID: AZ47663

Sample Collection Date: 12/13/16

QCG: #DOC53-161219A-214843

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	12/19/16	12/21/16
EPA 8015B-eL	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	12/19/16	12/21/16
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	94.9	60-142			%	12/19/16	12/21/16
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	74.7	56-125			%	12/19/16	12/21/16

Quant Method: DOC1103.M
Run #: 1220042
Instrument: Apollo
Sequence: 161220
Dilution Factor: 1
Initials: DPO

Printed: 12/21/16 9:11:26 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161220\1220042.D Vial: 42
Acq On : 12-21-16 0:09:34 Operator: DP
Sample : AZ47663W11 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Dec 21 9:03 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

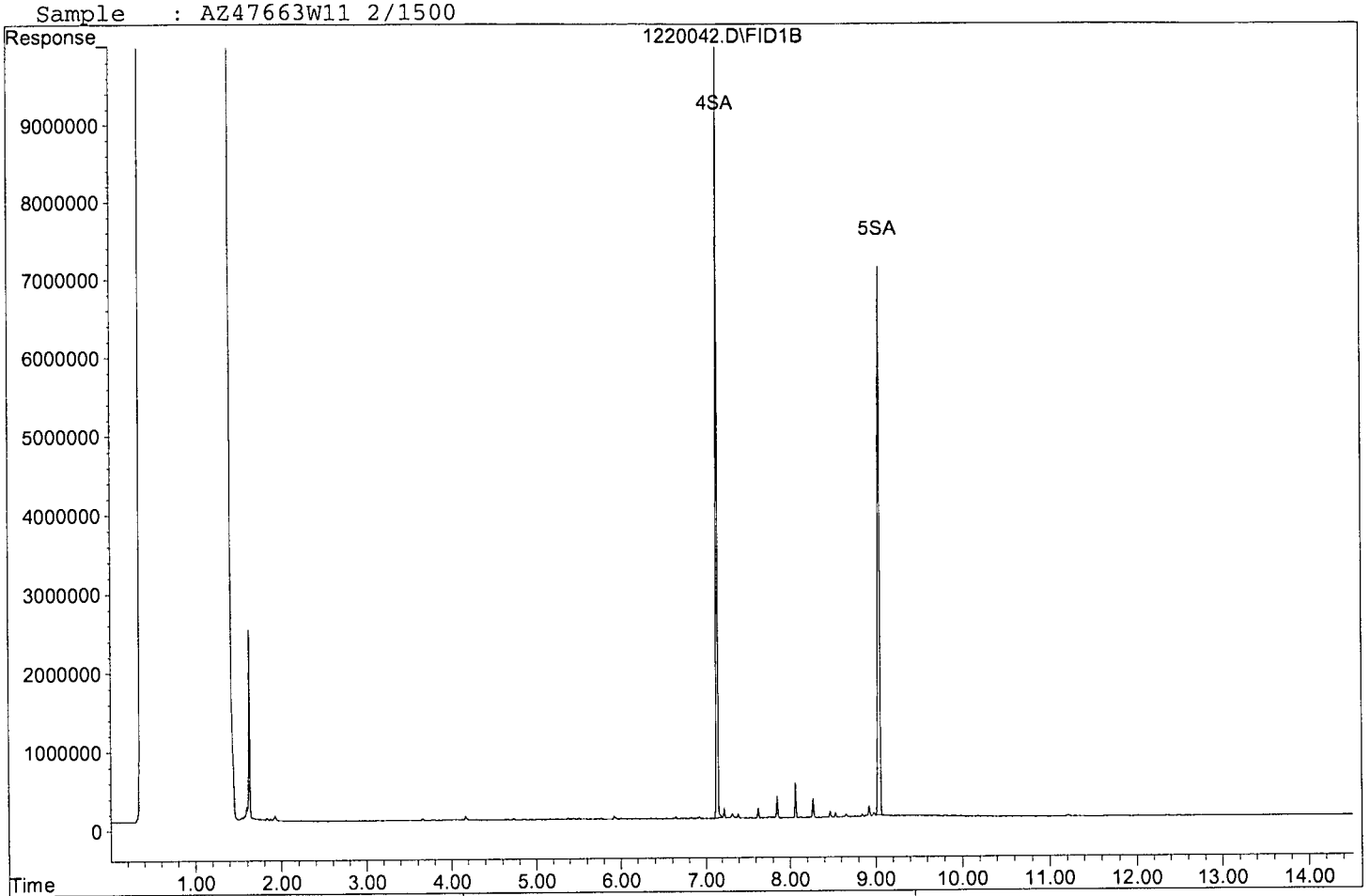
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

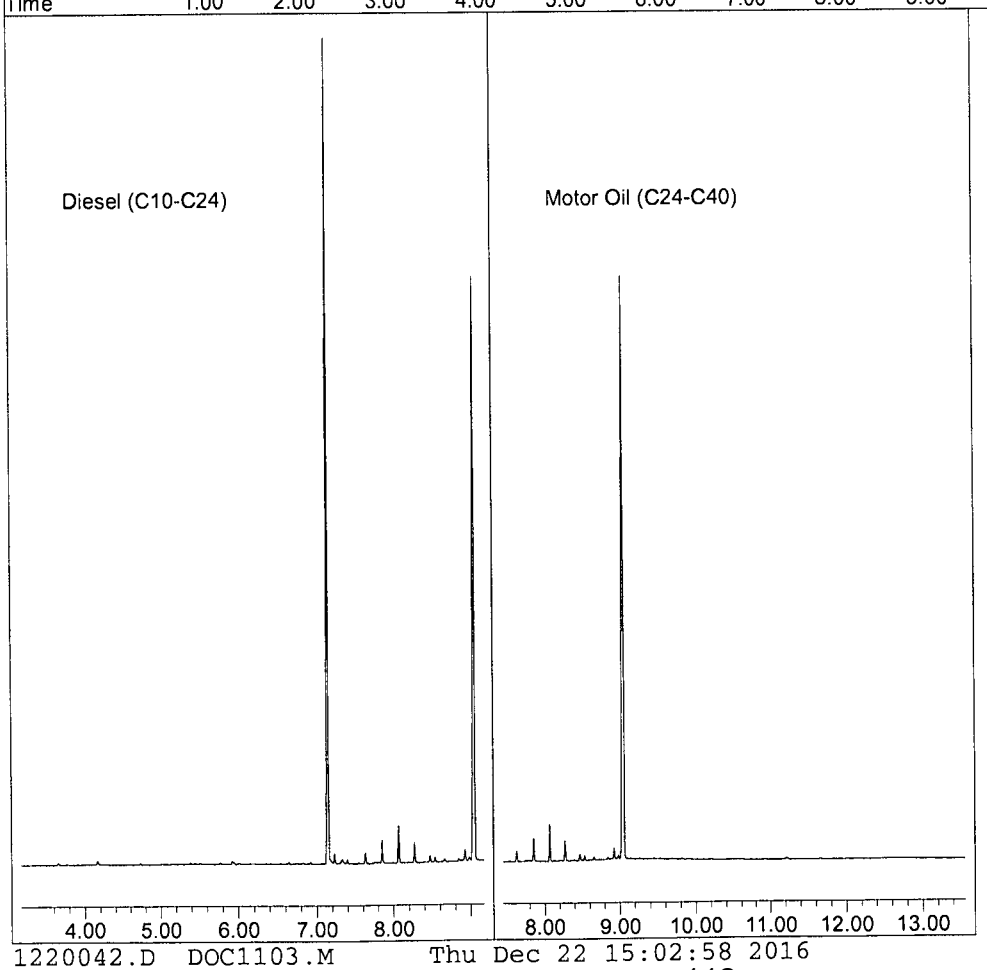
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.15	104556031	29.887 ppb
Surrogate Spike 40.000		Recovery =	74.72%
5) SA Octacosane(S)	9.05	99624130	37.955 ppb
Surrogate Spike 40.000		Recovery =	94.89%
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161220\1220042.D
Sample : AZ47663W11 2/1500





1220042.D DOC1103.M Thu Dec 22 15:02:58 2016

EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH144
Sample Collection Date: 12/13/16

ARF: 81776
APPL ID: AZ47664
QCG: #DOC53-161219A-214843

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	1300 ++	40.0	25.00	13.07	ug/L	12/19/16	12/21/16
EPA 8015B-eL	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	12/19/16	12/21/16
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	95.8	60-142			%	12/19/16	12/21/16
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	86.1	56-125			%	12/19/16	12/21/16

++(T6) The analyst has noted that the chromatogram of this sample is mainly a match to hydrocarbons within the range of diesel fuel.

Quant Method: DOC1103.M
Run #: 1220043
Instrument: Apollo
Sequence: 161220
Dilution Factor: 1
Initials: DPO

Printed: 12/21/16 9:11:26 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161220\1220043.D Vial: 43
Acq On : 12-21-16 0:29:35 Operator: DP
Sample : AZ47664W13 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Dec 21 9:04 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

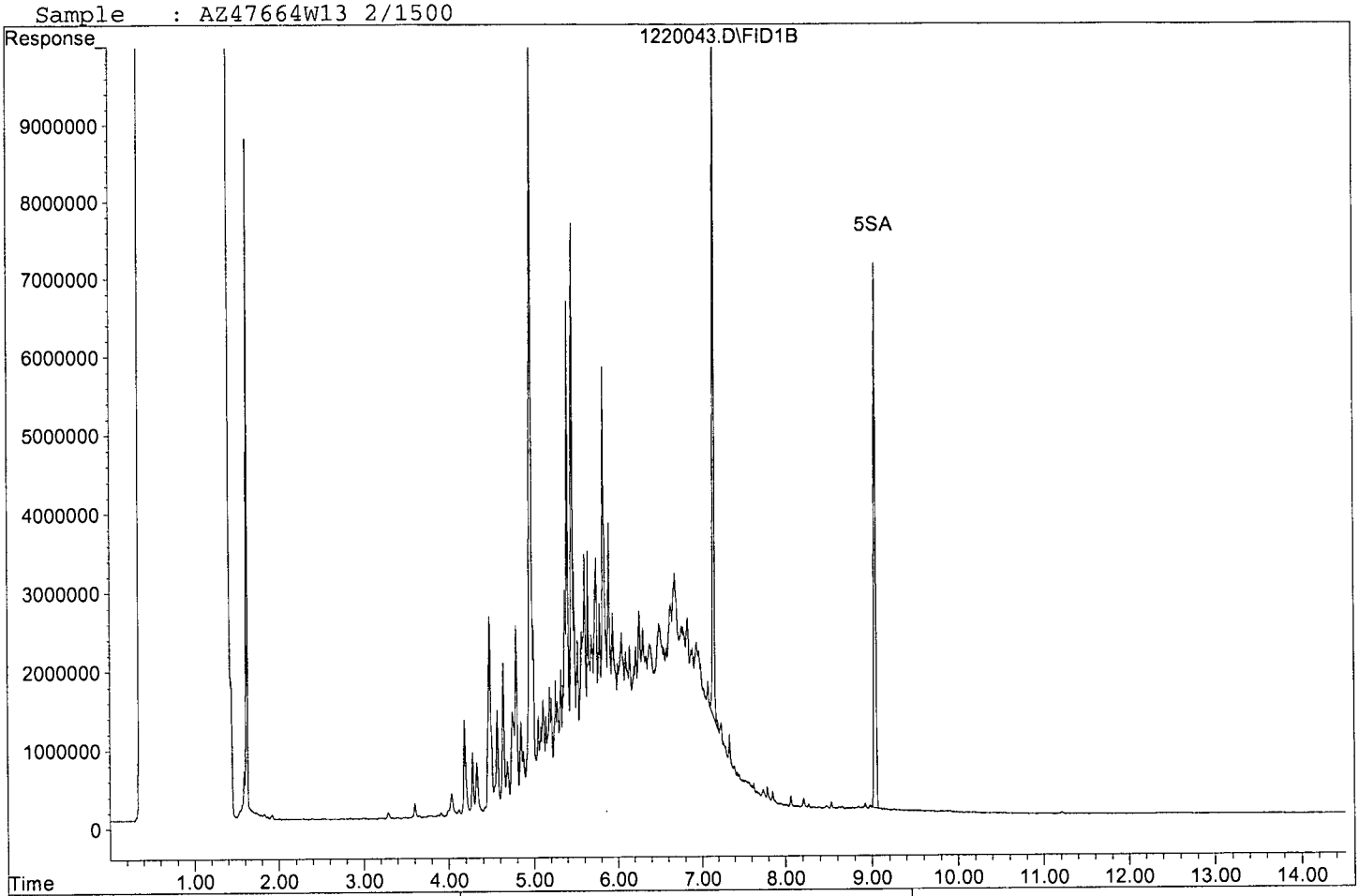
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

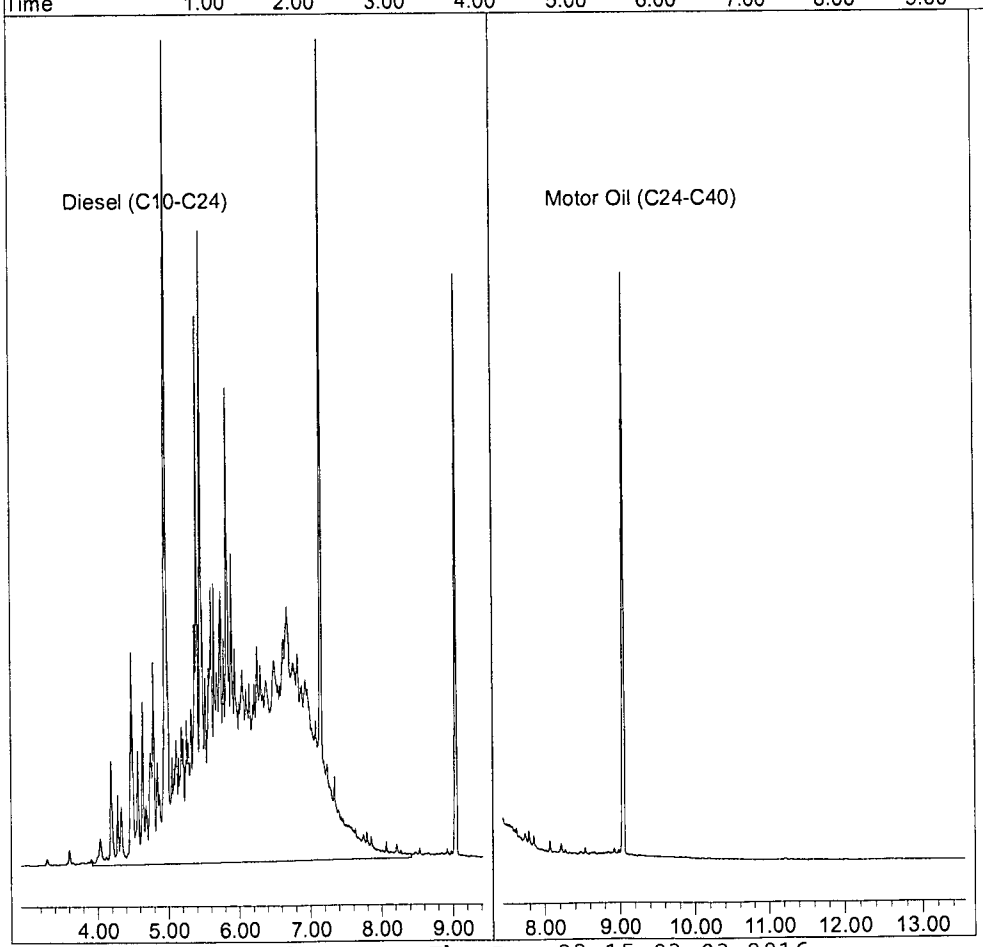
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.16	120444402	34.429	ppb
Surrogate Spike 40.000		Recovery =	86.07%	
5) SA Octacosane(S)	9.05	100525086	38.299	ppb
Surrogate Spike 40.000		Recovery =	95.75%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	3386148967	1307.039	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161220\1220043.D
Sample : AZ47664W13 2/1500





EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81776

Sample ID: ERH140

APPL ID: AZ47665

Sample Collection Date: 12/13/16

QCG: #DOC53-161219A-214843

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	12/19/16	12/21/16
EPA 8015B-eL	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	12/19/16	12/21/16
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	93.2	60-142			%	12/19/16	12/21/16
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	74.3	56-125			%	12/19/16	12/21/16

Quant Method: DOC1103.M
Run #: 1220044
Instrument: Apollo
Sequence: 161220
Dilution Factor: 1
Initials: DPO

Printed: 12/21/16 9:11:27 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161220\1220044.D Vial: 44
Acq On : 12-21-16 0:49:35 Operator: DP
Sample : AZ47665W12 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Dec 21 9:05 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

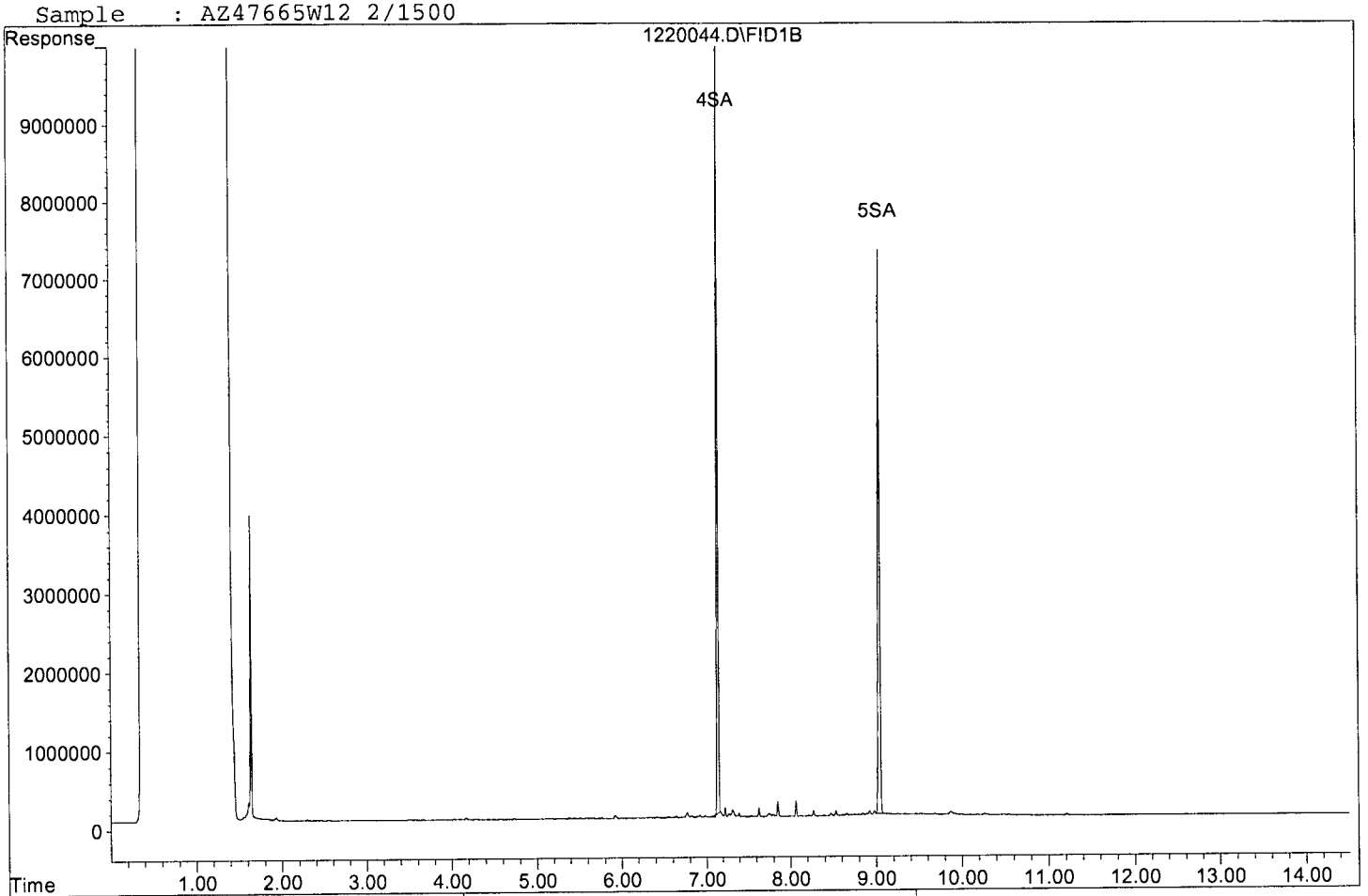
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

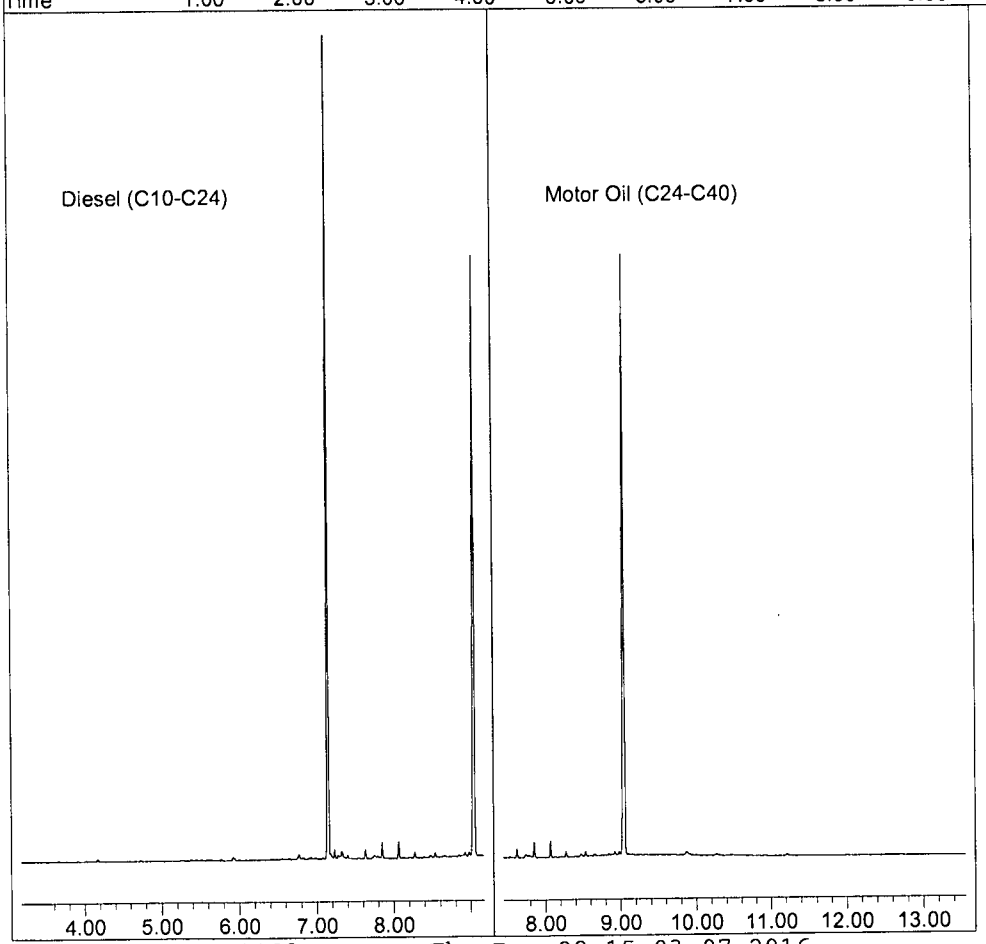
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.15	104009069	29.731 ppb
Surrogate Spike 40.000	Recovery =		74.33%
5) SA Octacosane(S)	9.05	97860346	37.283 ppb
Surrogate Spike 40.000	Recovery =		93.21%
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161220\1220044.D
Sample : AZ47665W12 2/1500





1220044.D DOC1103.M Thu Dec 22 15:03:07 2016

ORGANICS

Calibration Data

APPL, INC.

TPH Extractables
DOC1103

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 11/03/16
Matrix: Instrument: Apollo
Initials:

Diesel:	1103004.D	1103011.D	1103006.D	1103007.D	1103008.D	1103009.D										
Motor Oil:	1028002.D	1028003.D	1028004.D	1028005.D	1028008.D	1028007.D										

		Compound	1	2	3	4	5	6					Avg	%RSD		
1	HATM	Diesel (C10-C24)	1713970	2056602	1625582	1697733	1643335	1625559					1727130	9.6	HATM	
2	HBTM	Motor Oil (C24-C40)	1562690	1603769	1282978	1340015	1321969	1245819					1392873	11	HBTM	
3	SC	Decanoic Acid(S)	436509	643644	711658	659596	590571	627574					611592	15	SC	
4	SA	Ortho-Terphenyl(S)		2687660	2255130	2296757	2215766	2205848					2332232	8.7	SA	
5	SA	Octacosane(S)	1736016	2067699	1697441	1704564	1657038	1636278					1749839	9.1	SA	
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1.5347542

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161103\1103004.D Vial: 4
Acq On : 11-3-16 9:45:14 Operator: DP
Sample : DIESEL 10ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

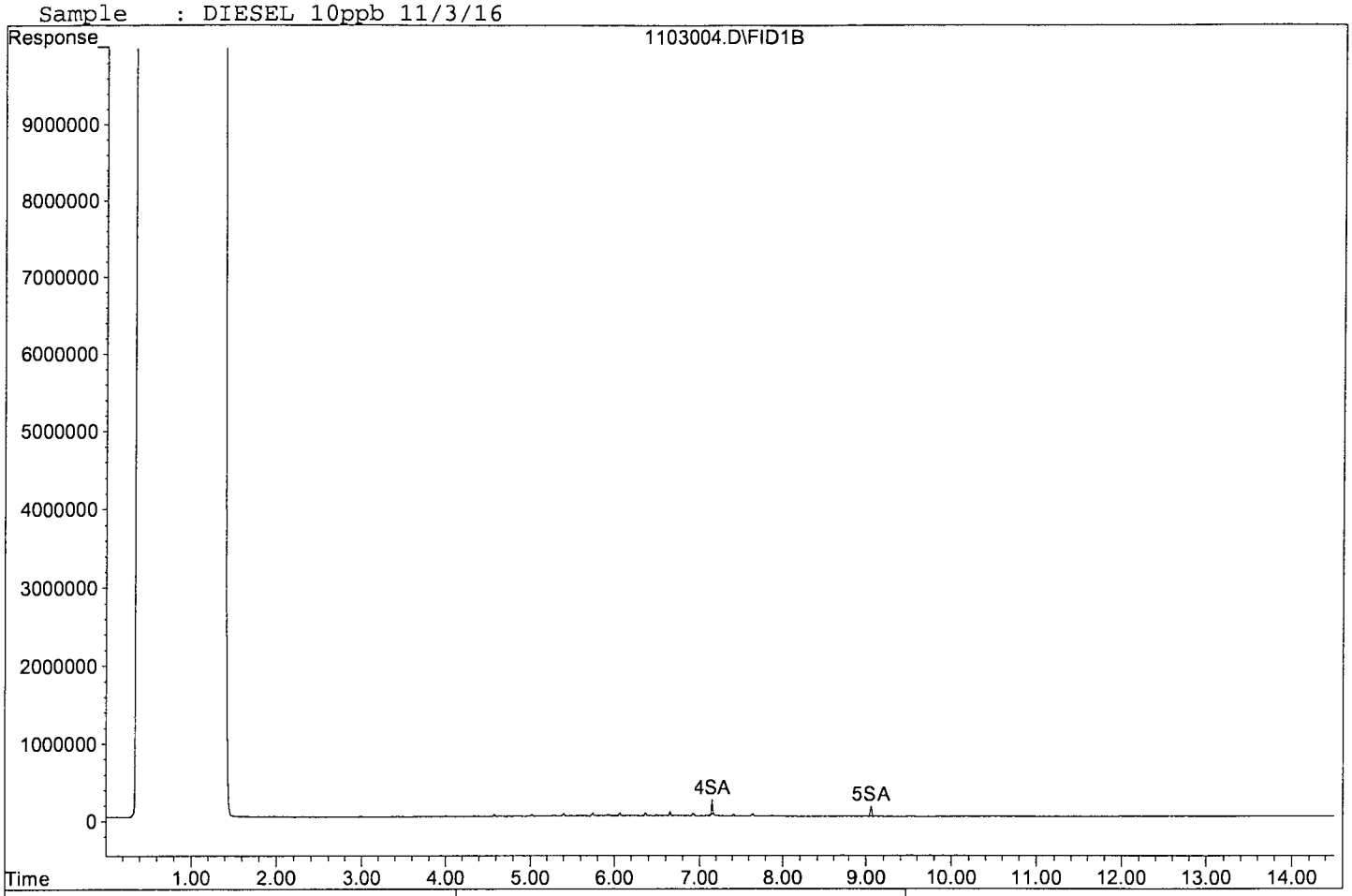
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

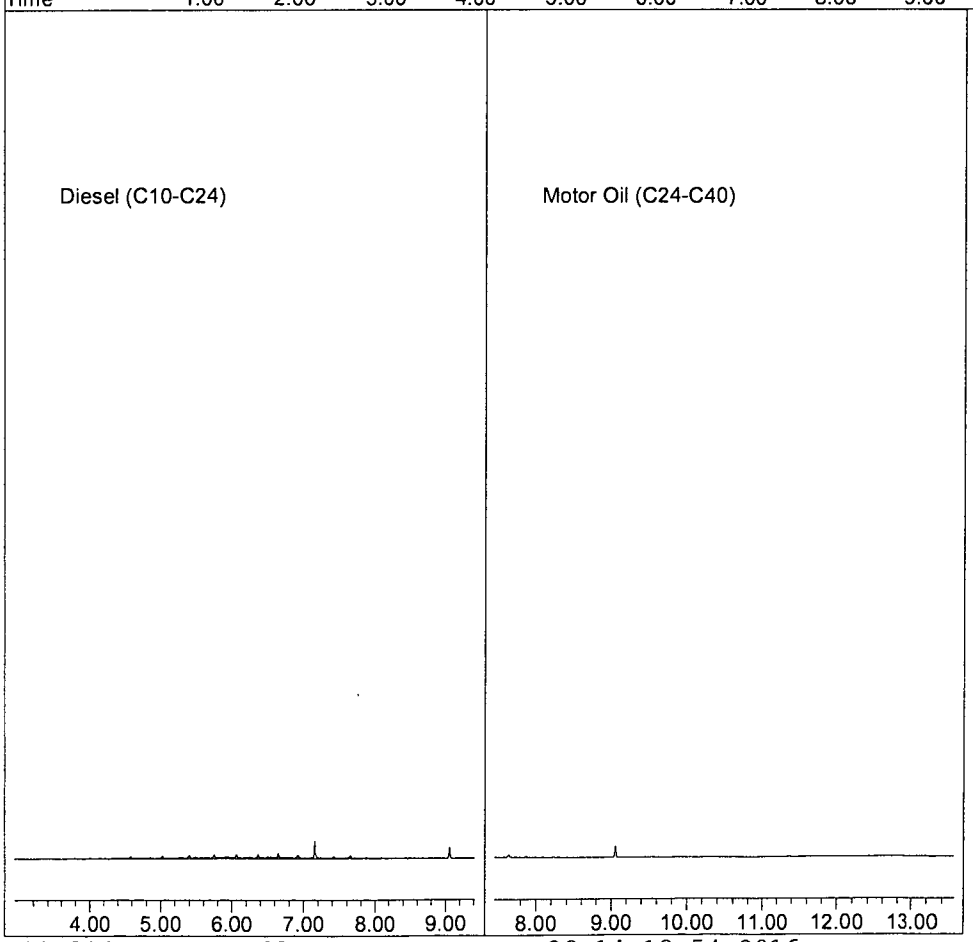
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.15	1320666	0.233 ppb
Surrogate Spike 30.000	Recovery	=	0.78%
5) SA Octacosane(S)	9.06	1736016	0.492 ppb
Surrogate Spike 30.000	Recovery	=	1.64%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	34279391	10.218 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103004.D
Sample : DIESEL 10ppb 11/3/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161103\1103011.D Vial: 11
Acq On : 11-3-16 12:56:47 Operator: DP
Sample : DIESEL 100ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

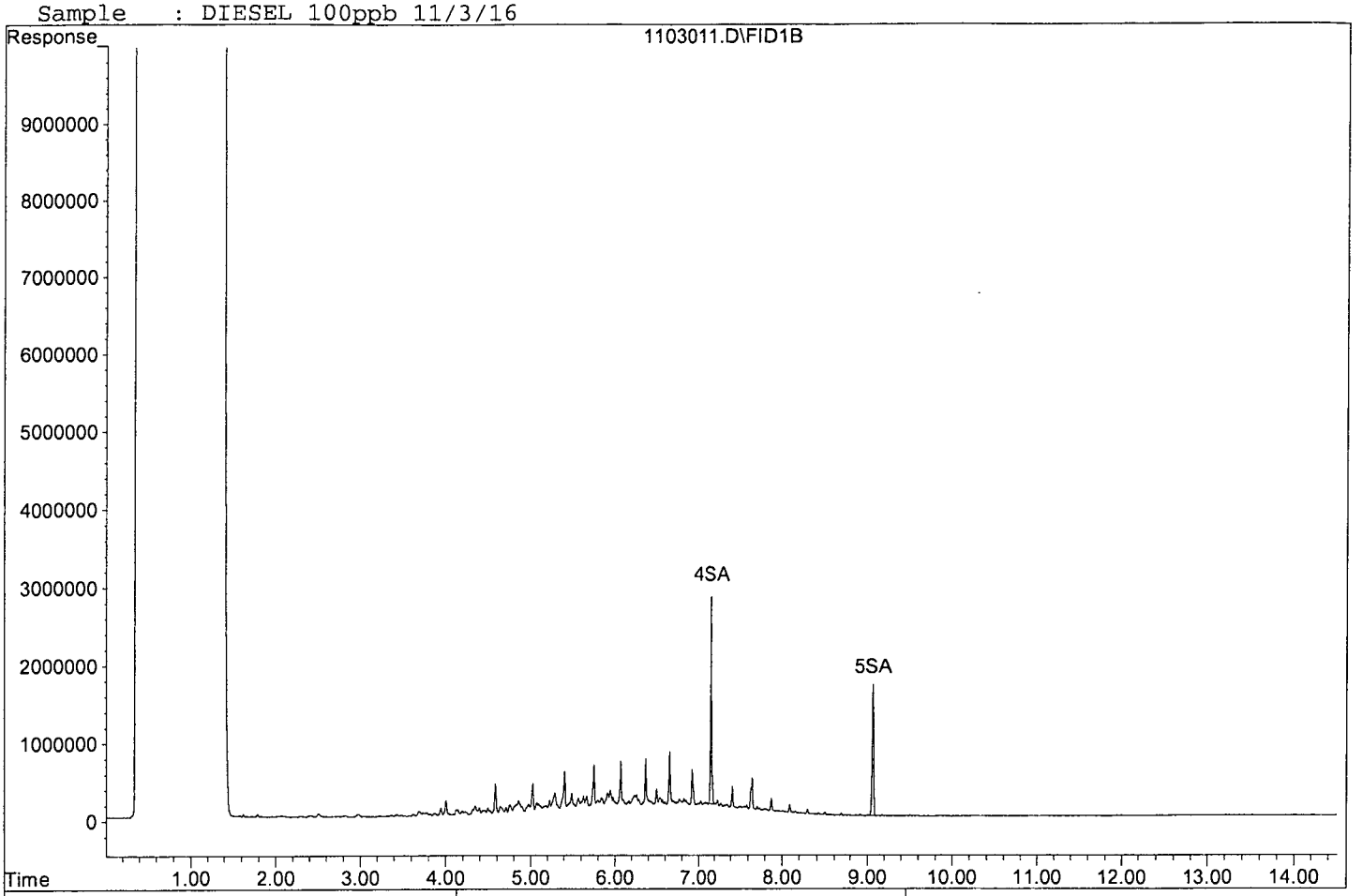
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

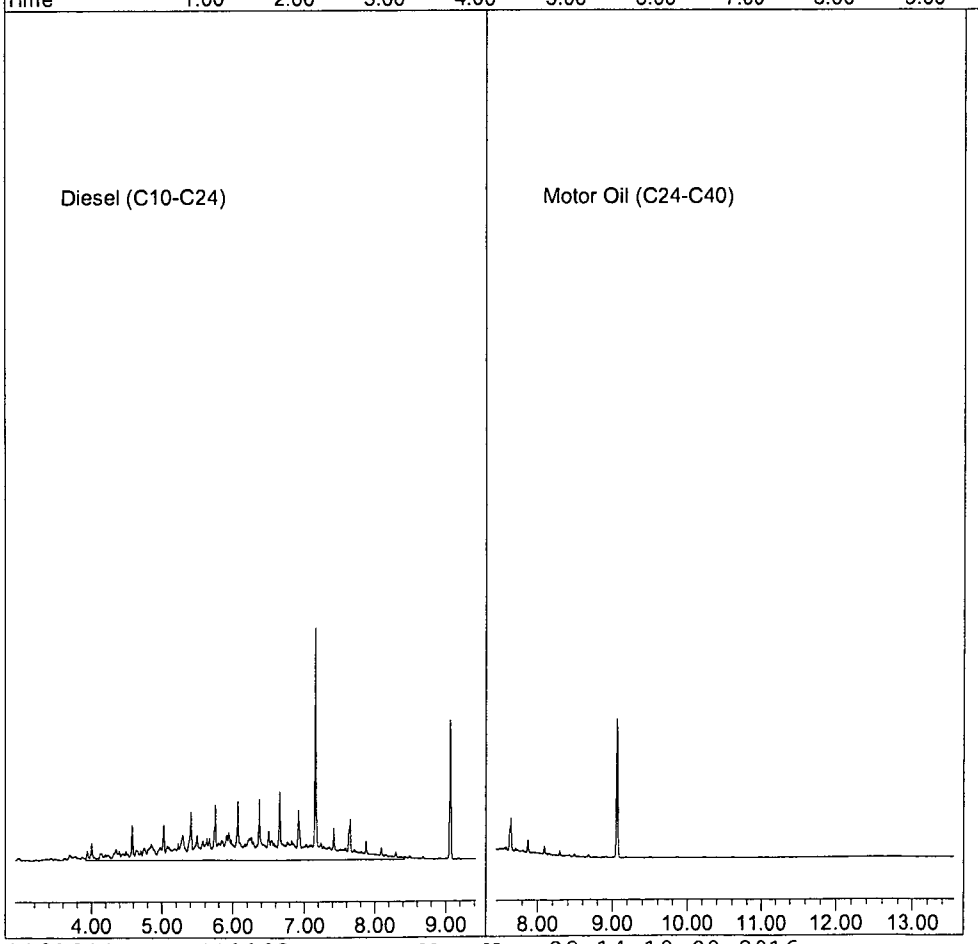
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.16	26876603	4.740 ppb
Surrogate Spike 30.000	Recovery =		15.80%
5) SA Octacosane(S)	9.06	20676993	5.864 ppb
Surrogate Spike 30.000	Recovery =		19.55%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	411320381	122.610 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103011.D
Sample : DIESEL 100ppb 11/3/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103006.D Vial: 6
Acq On : 11-3-16 10:26:16 Operator: DP
Sample : DIESEL 400ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

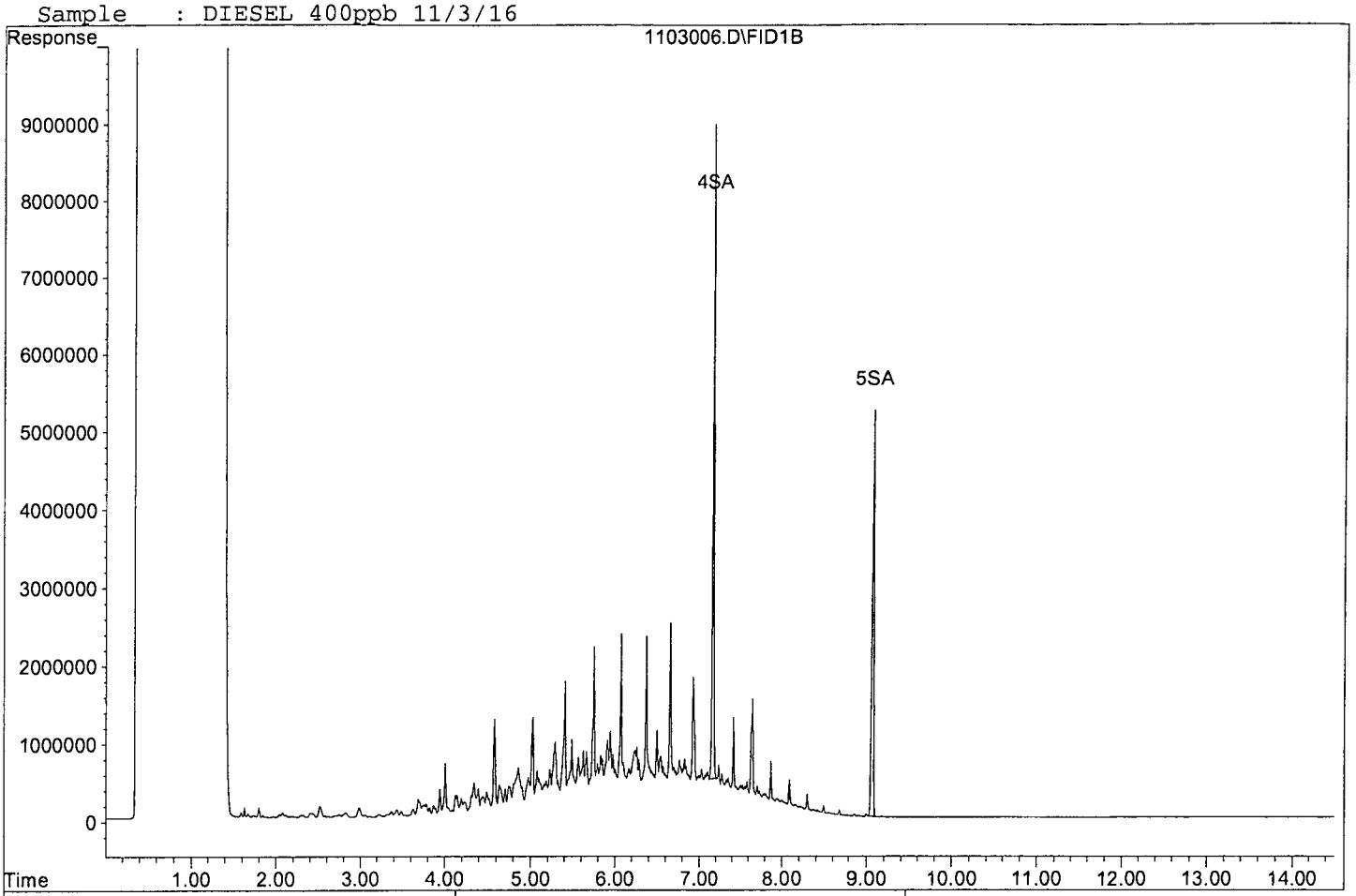
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

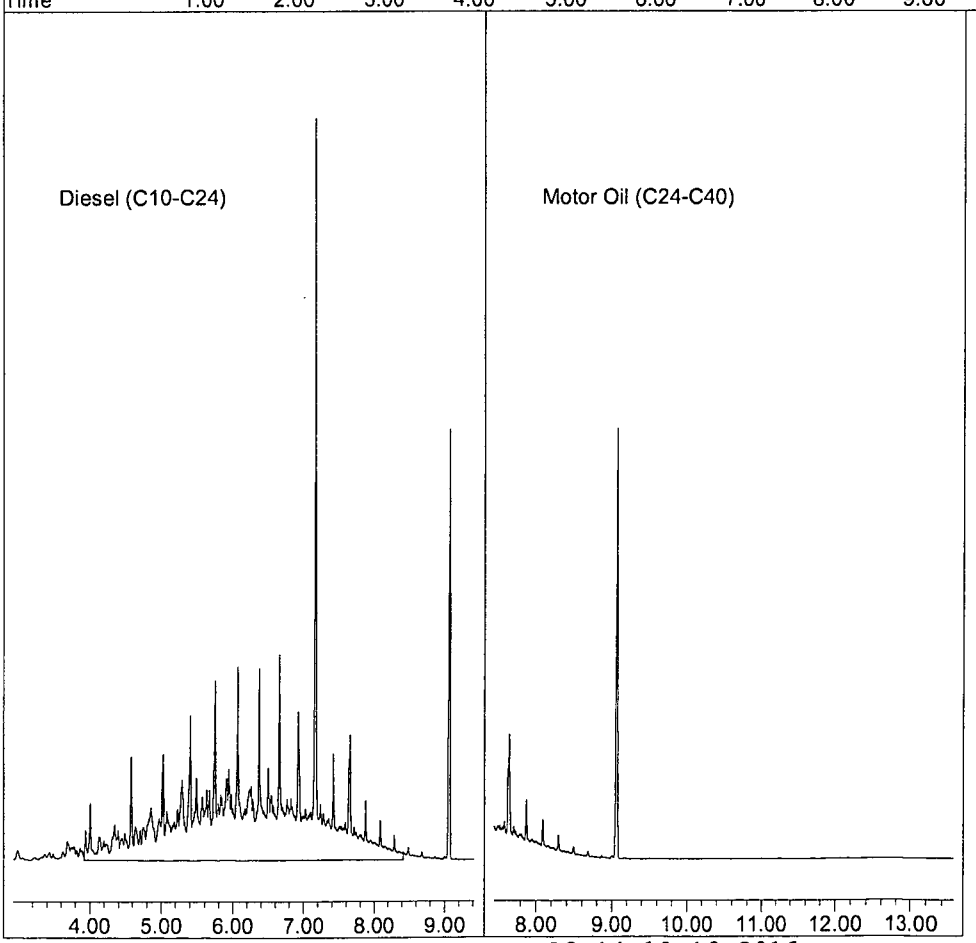
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.16	90205209	15.909 ppb
Surrogate Spike 30.000		Recovery =	53.03%
5) SA Octacosane(S)	9.07	67897660	19.256 ppb
Surrogate Spike 30.000		Recovery =	64.19%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	1300465223	387.653 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103006.D
Sample : DIESEL 400ppb 11/3/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103007.D Vial: 7
Acq On : 11-3-16 10:46:56 Operator: DP
Sample : DIESEL 600ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

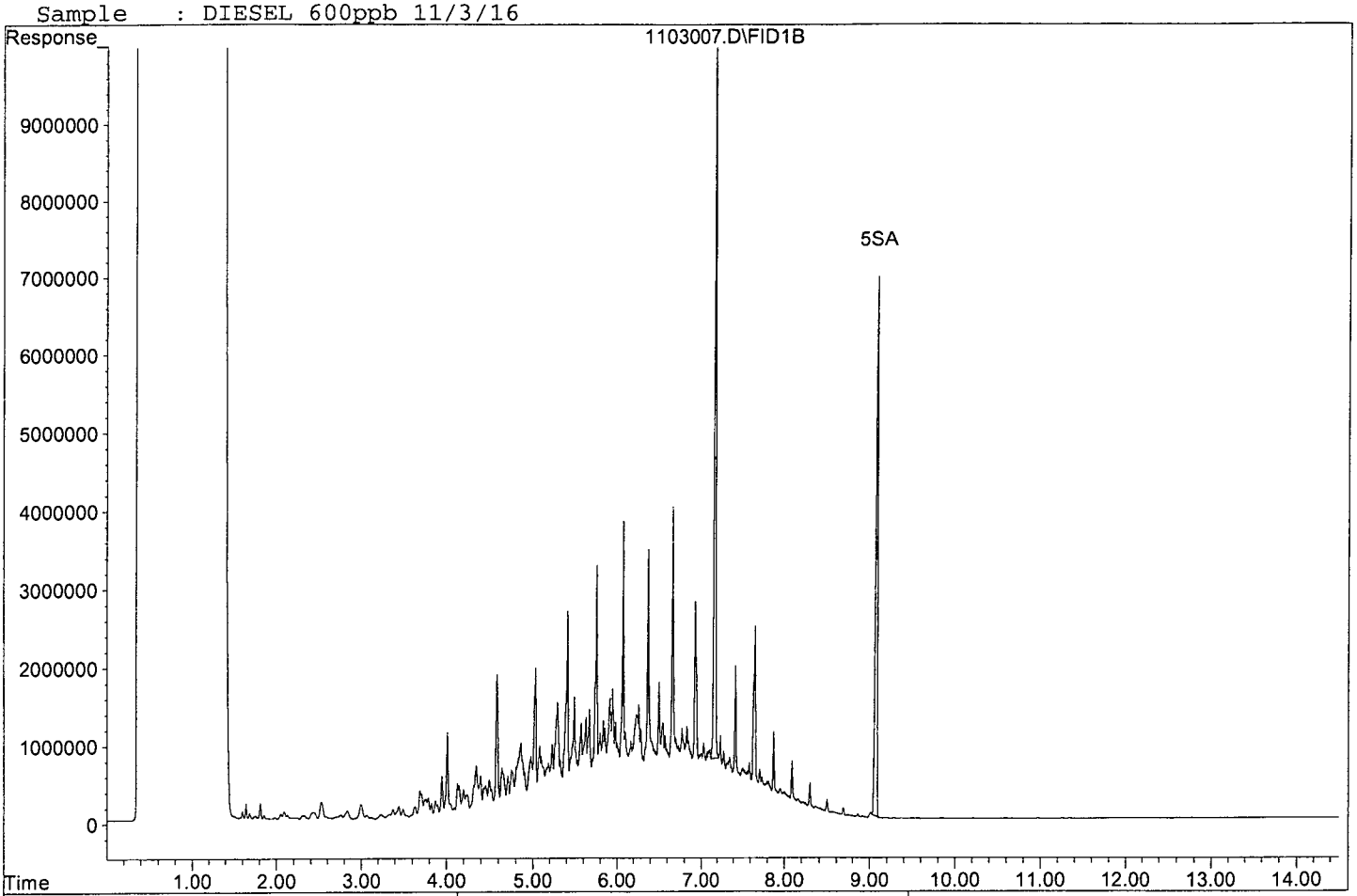
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

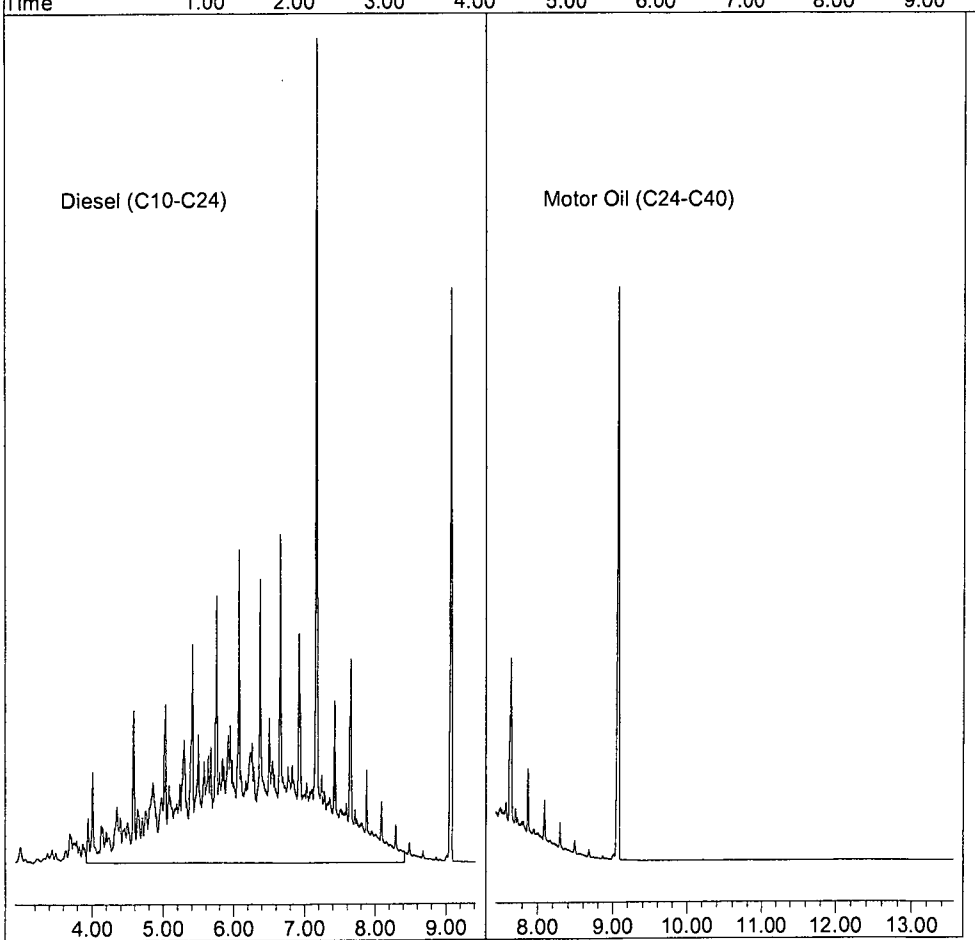
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.17	137805437	24.304 ppb
Surrogate Spike 30.000		Recovery =	81.01%
5) SA Octacosane(S)	9.07	102273844	29.005 ppb
Surrogate Spike 30.000		Recovery =	96.68%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	2037280173	607.288 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103007.D
Sample : DIESEL 600ppb 11/3/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103008.D Vial: 8
Acq On : 11-3-16 11:07:39 Operator: DP
Sample : DIESEL 800ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

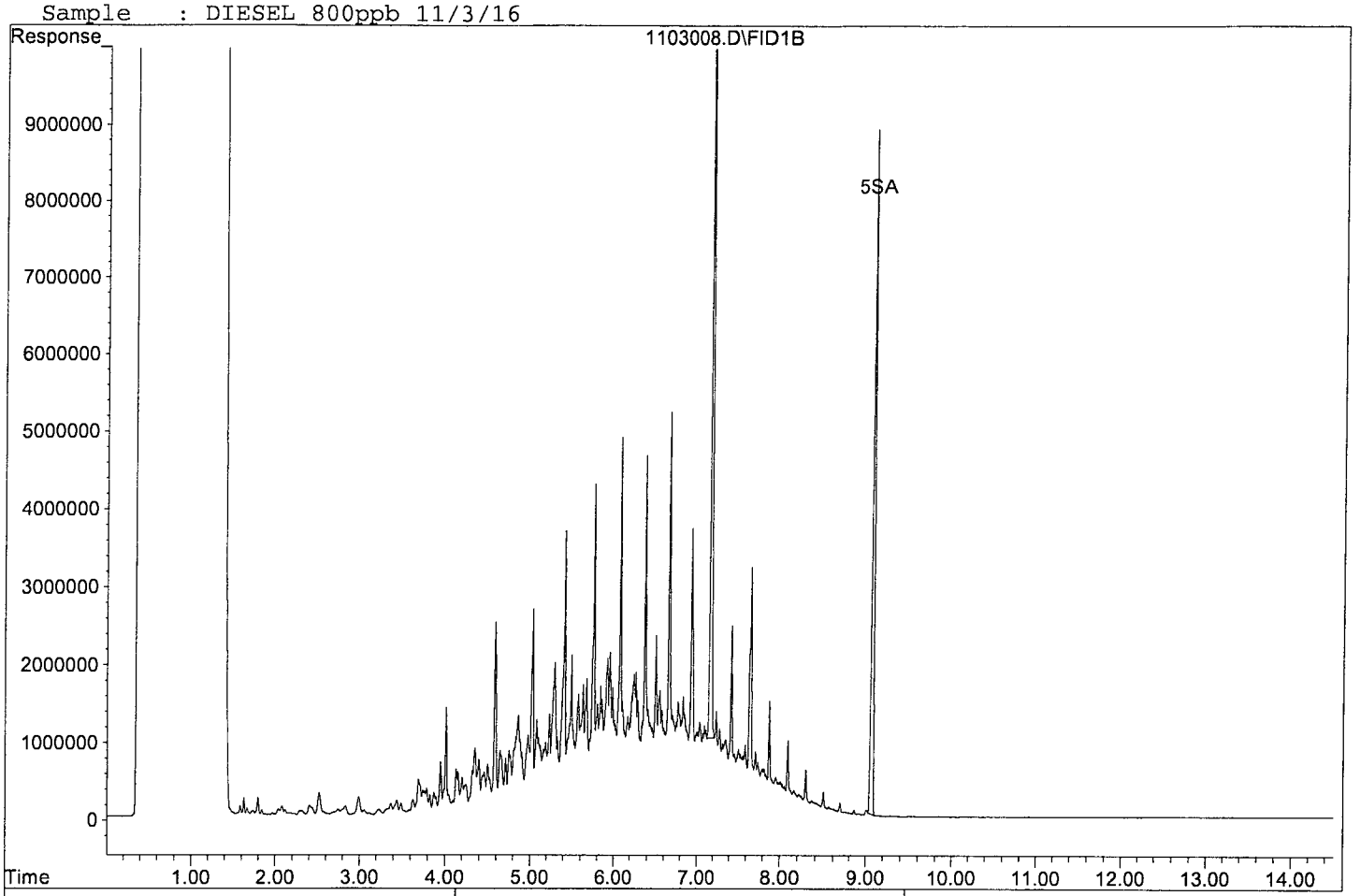
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

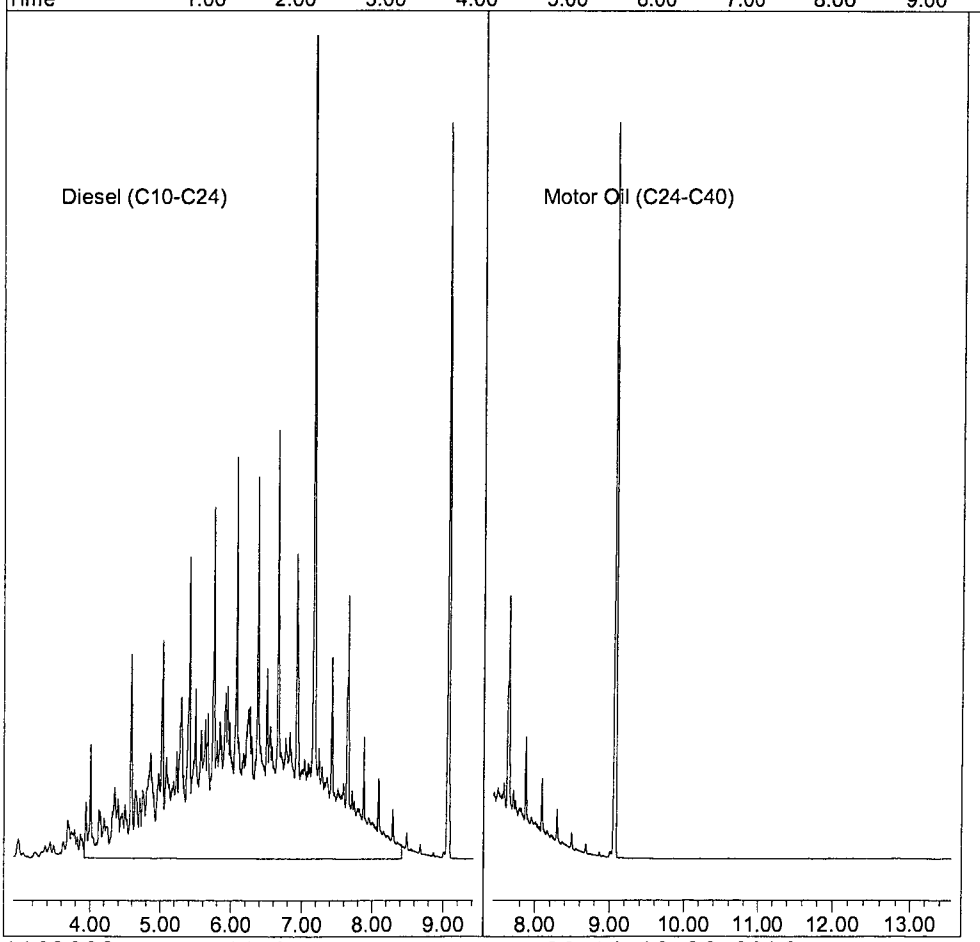
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.17	177261246	31.263 ppb
Surrogate Spike 30.000		Recovery =	104.21%
5) SA Octacosane(S)	9.08	132563050	37.596 ppb
Surrogate Spike 30.000		Recovery =	125.32%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	2629335633	783.773 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103008.D
Sample : DIESEL 800ppb 11/3/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103009.D Vial: 9
Acq On : 11-3-16 11:28:31 Operator: DP
Sample : DIESEL 1000ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

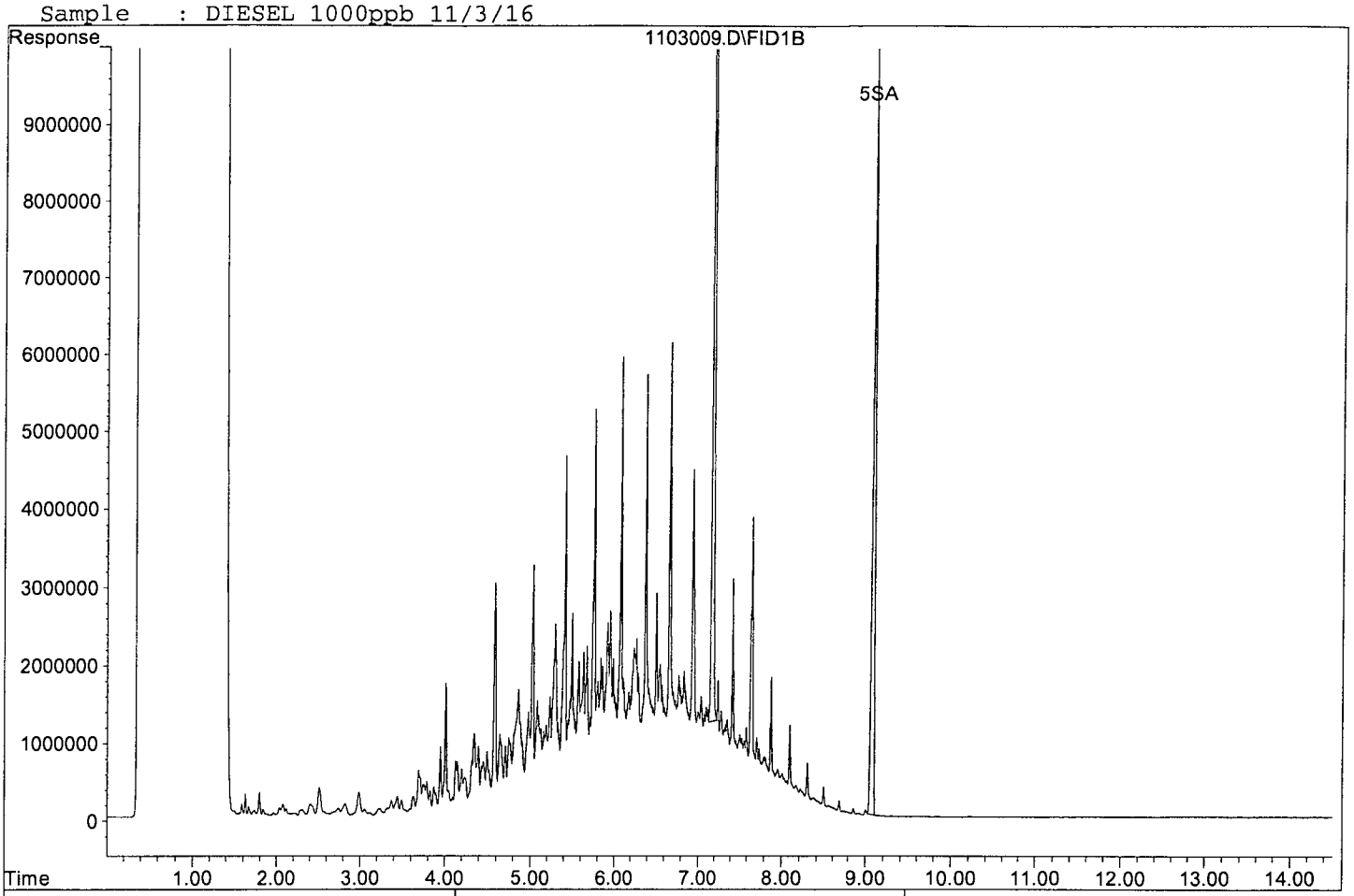
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

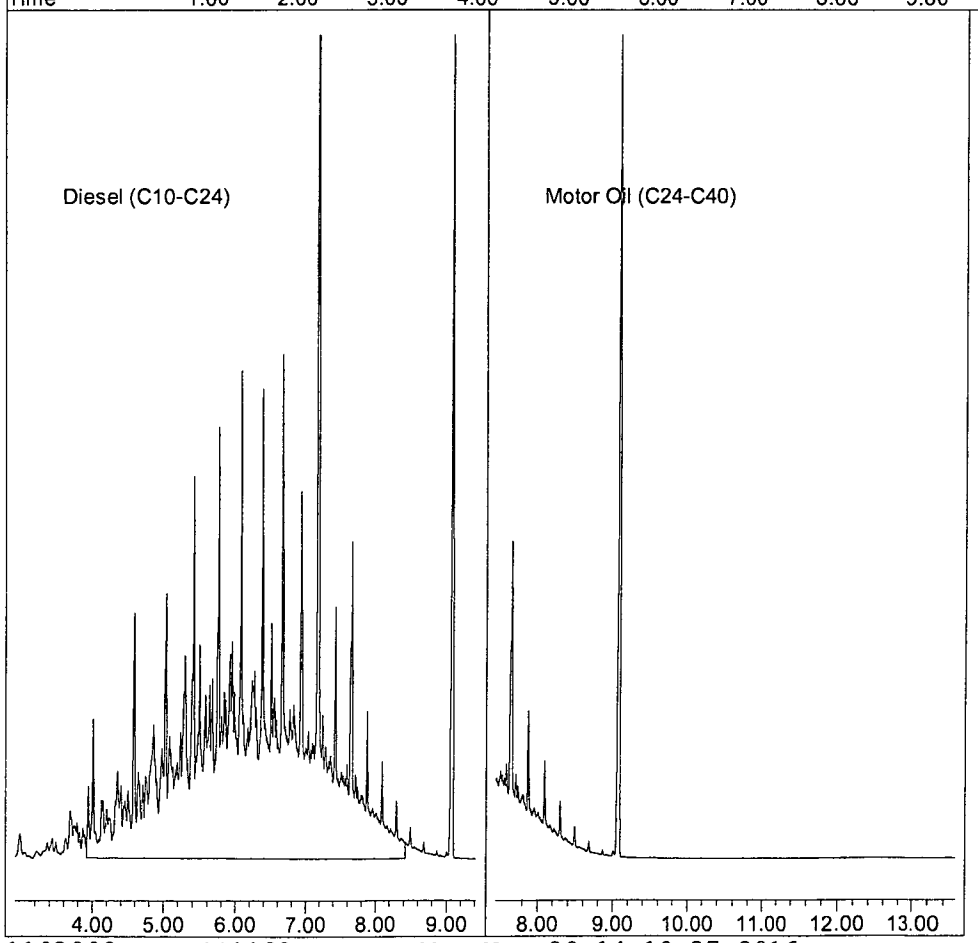
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.18	220584770	38.903 ppb
Surrogate Spike 30.000		Recovery =	129.68%
5) SA Octacosane(S)	9.08	163627822	46.406 ppb
Surrogate Spike 30.000		Recovery =	154.69%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	3251118324	969.119 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103009.D
Sample : DIESEL 1000ppb 11/3/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028002.D Vial: 2
Acq On : 10-28-16 9:07:30 Operator: DP
Sample : MO 20ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:24 2016 Quant Results File: DOC1103.RES

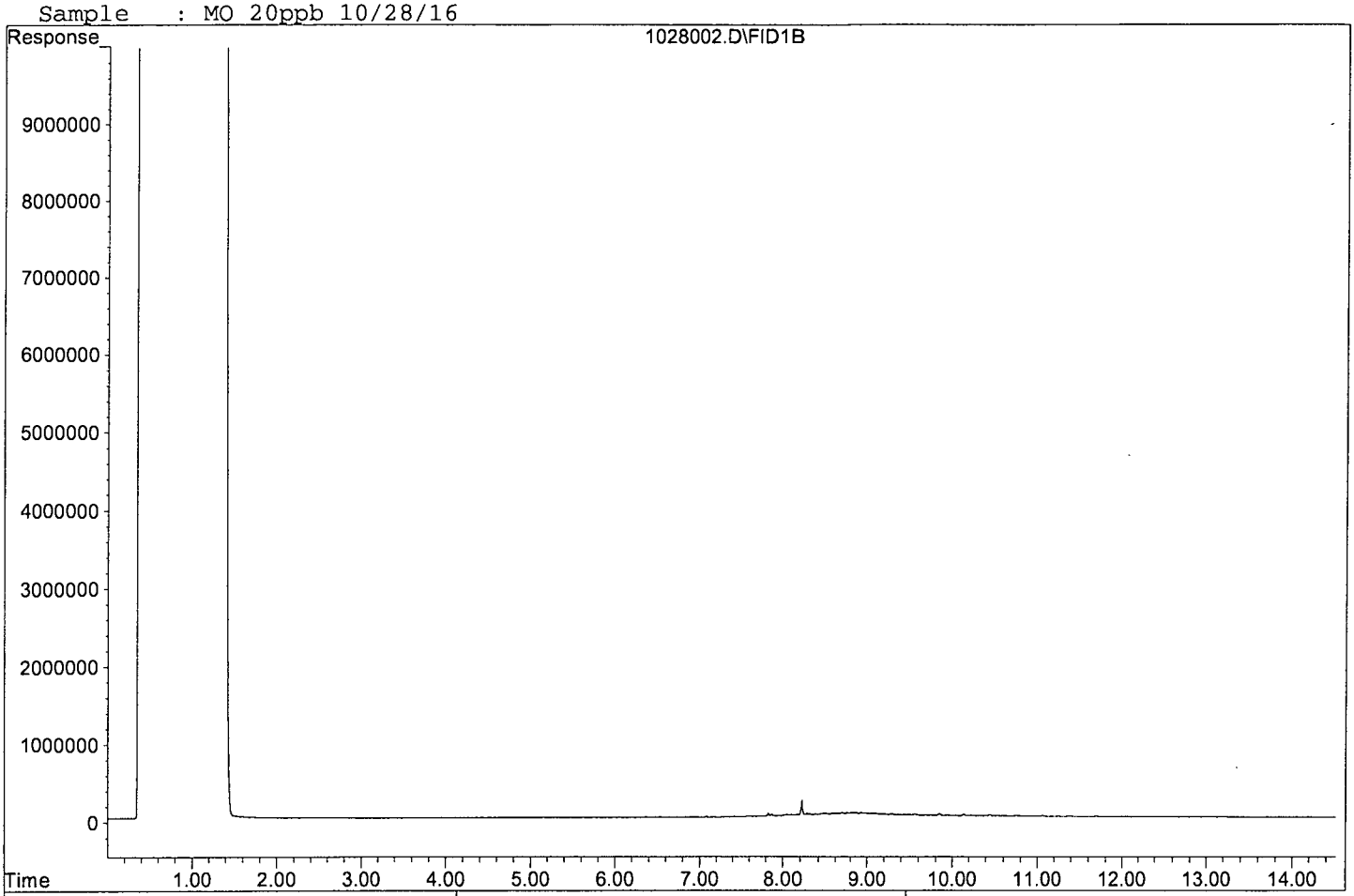
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

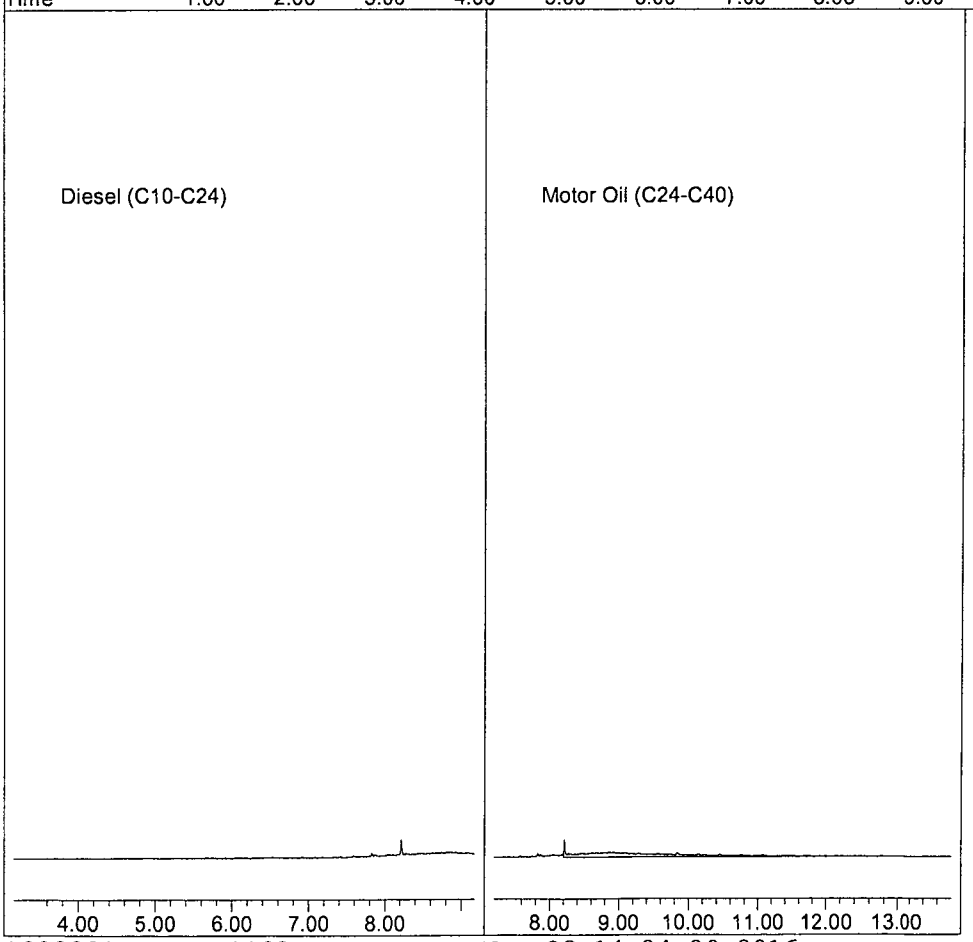
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	62507592	22.438 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028002.D
Sample : MO 20ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028003.D Vial: 3
Acq On : 10-28-16 9:28:13 Operator: DP
Sample : MO 50ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:24 2016 Quant Results File: DOC1103.RES

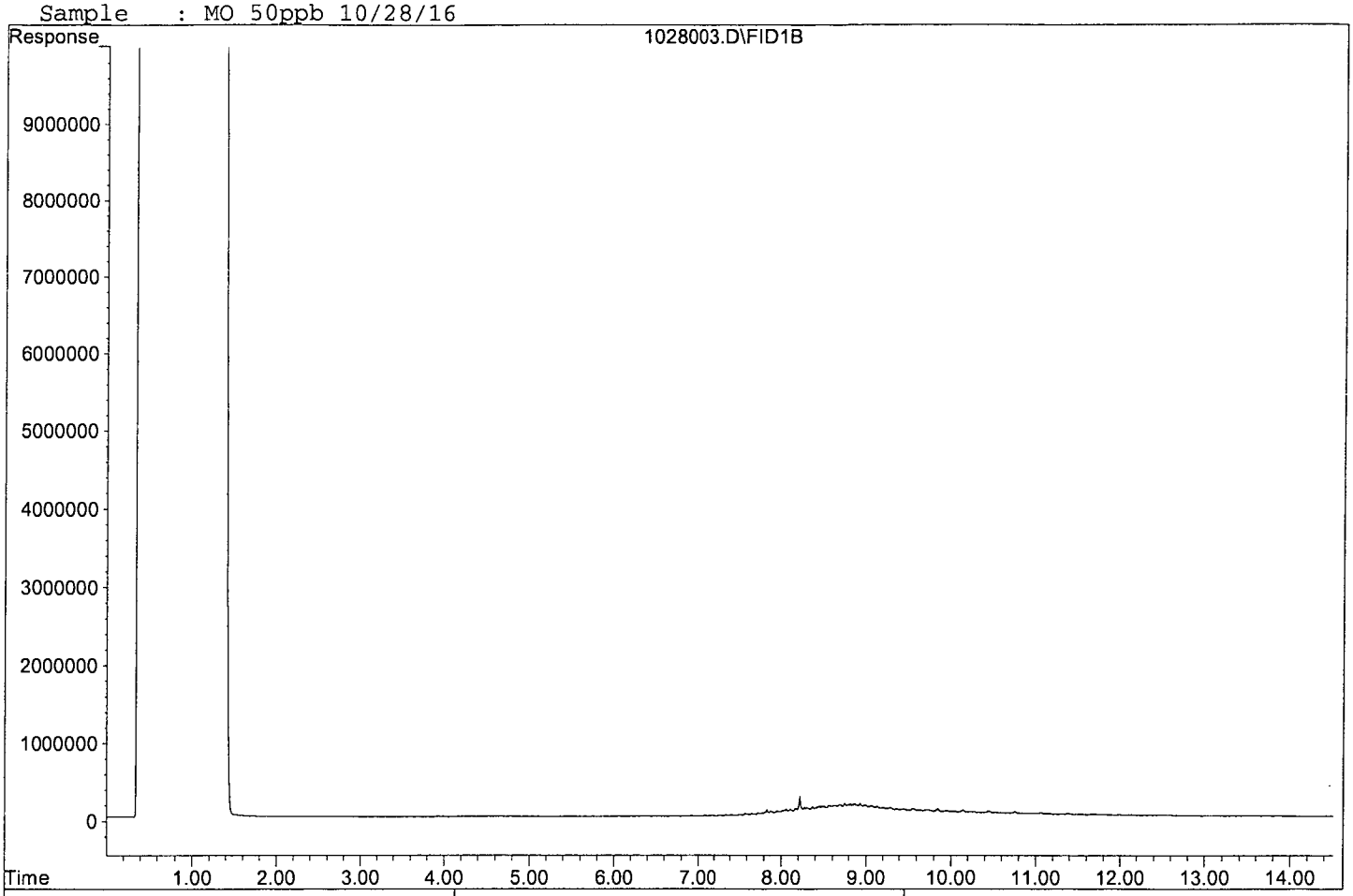
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

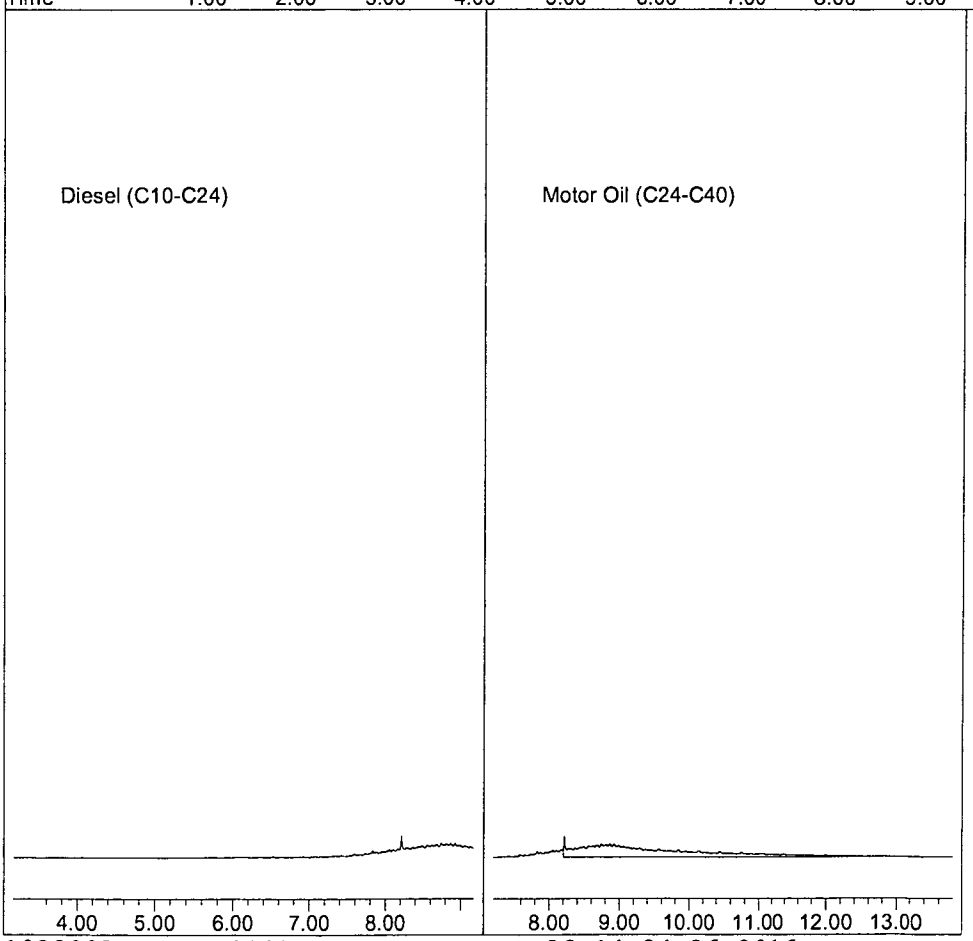
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	160376925	57.571 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028003.D
Sample : MO 50ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028004.D Vial: 4
Acq On : 10-28-16 9:49:06 Operator: DP
Sample : MO 250ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:24 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

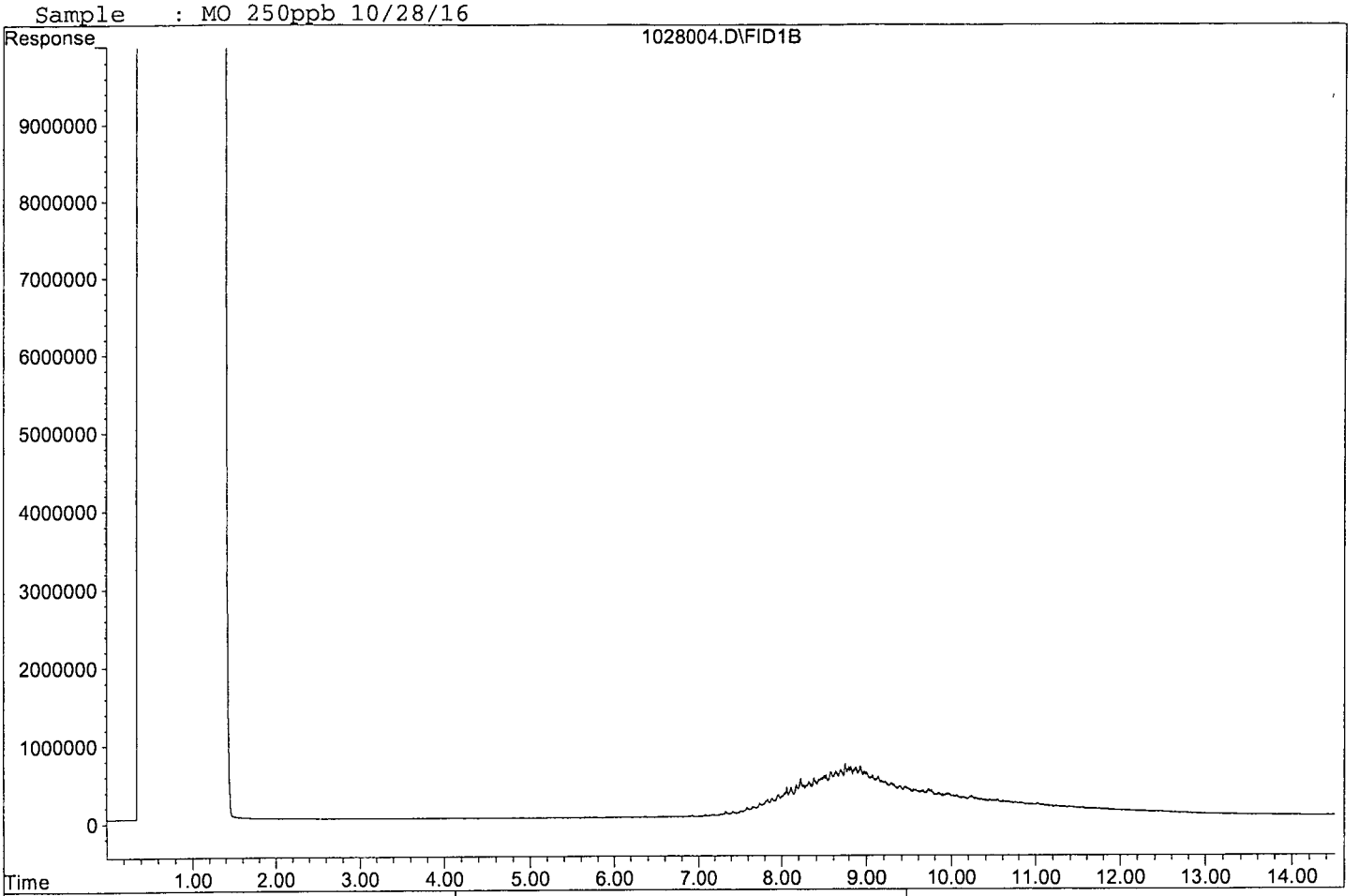
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

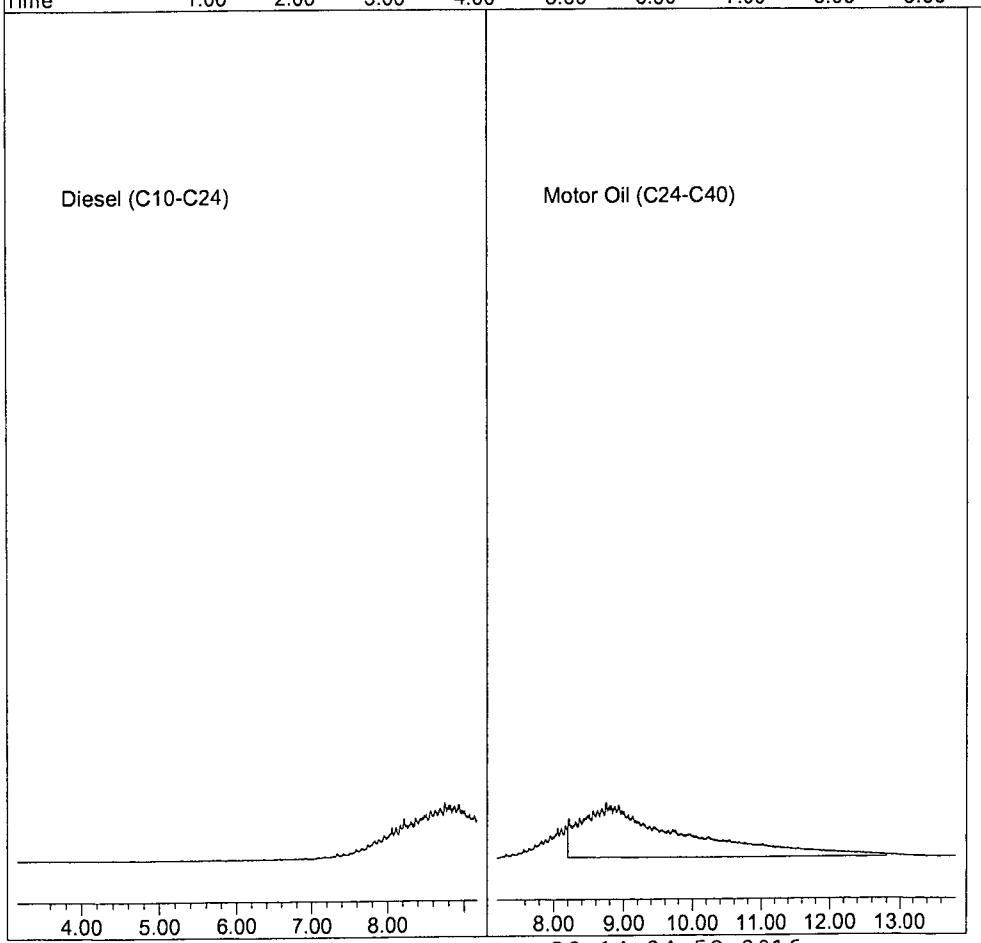
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
Target Compounds				
2) HBTM Motor Oil (C24-C40)	10.50	641488837	230.275	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161028\1028004.D
Sample : MO 250ppb 10/28/16





1028004.D DOC1103.M Mon Nov 28 14:24:58 2016

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028005.D Vial: 5
Acq On : 10-28-16 10:09:58 Operator: DP
Sample : MO 1000ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:25 2016 Quant Results File: DOC1103.RES

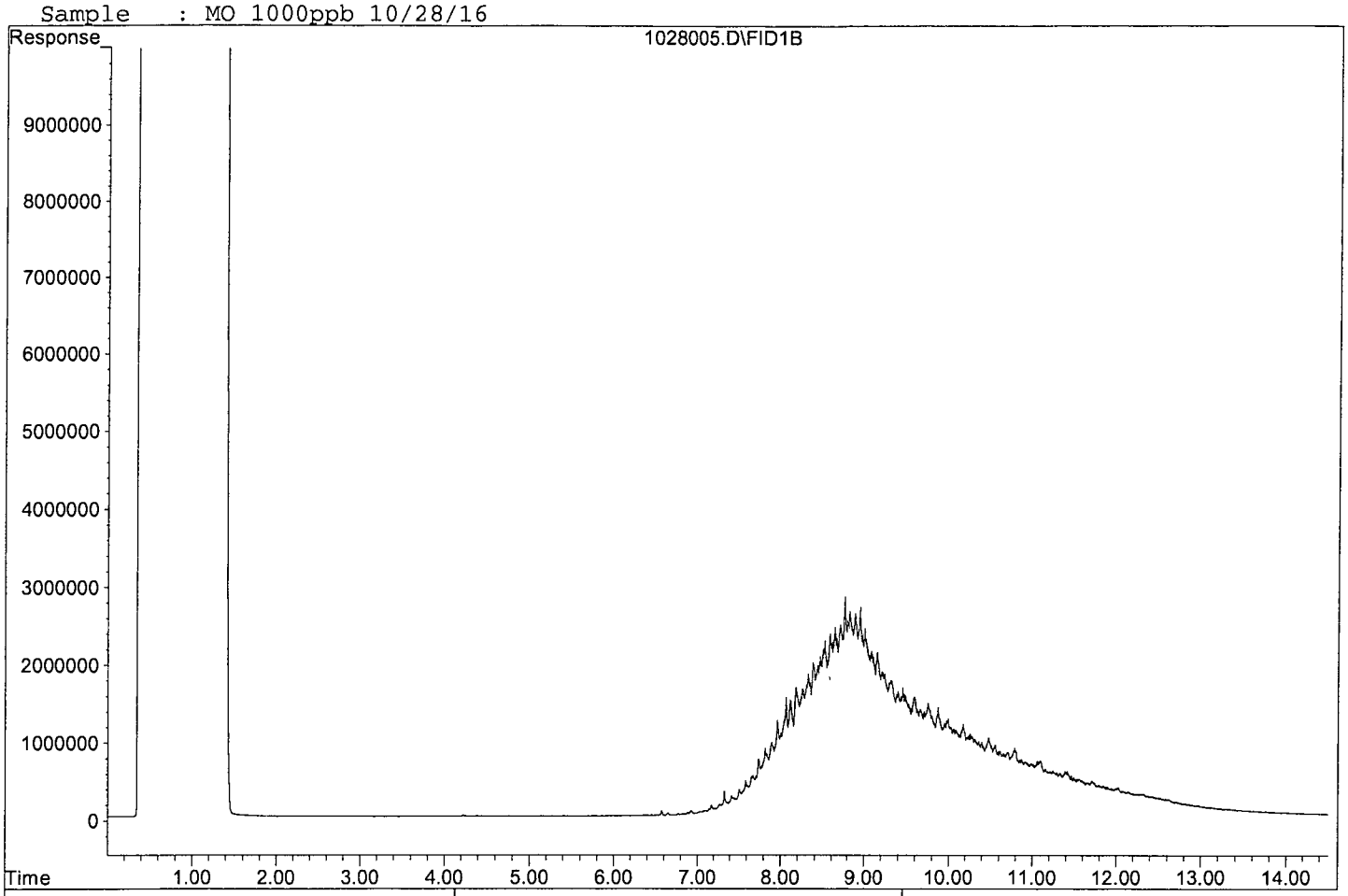
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

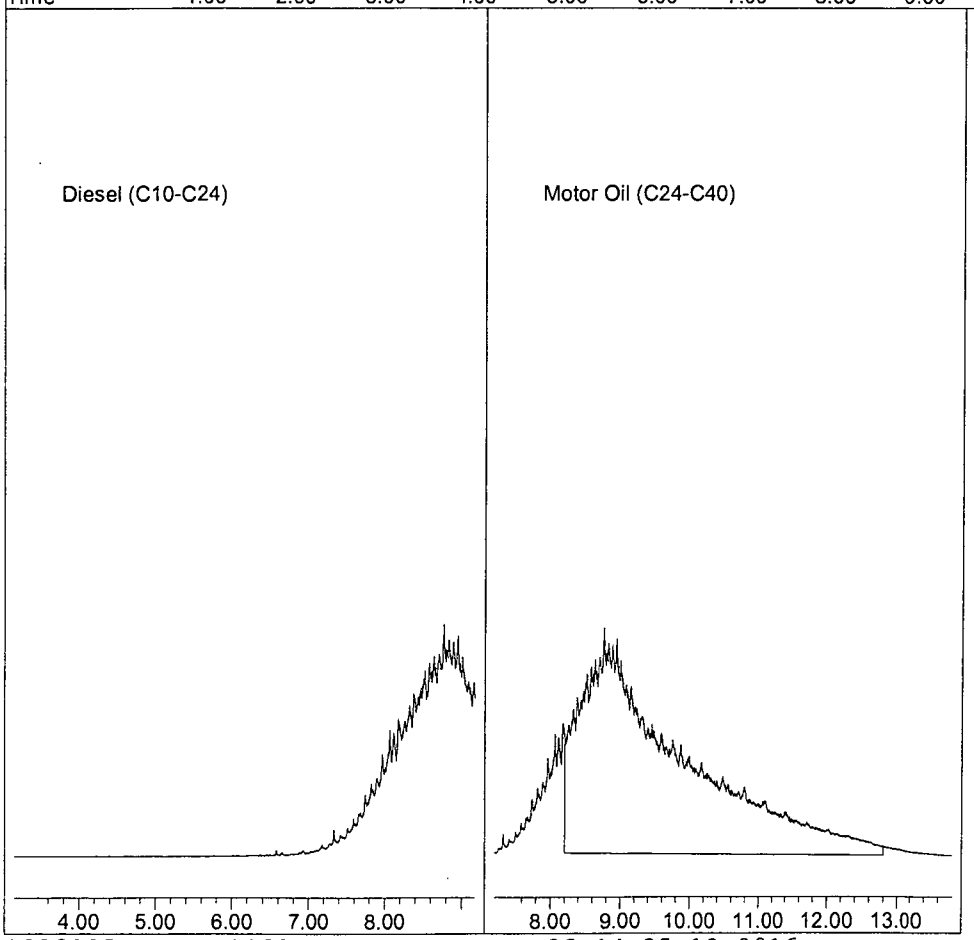
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	2680029704	962.051 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028005.D
Sample : MO 1000ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028006.D Vial: 6
Acq On : 10-28-16 10:30:51 Operator: DP
Sample : MO 1500ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:25 2016 Quant Results File: DOC1103.RES

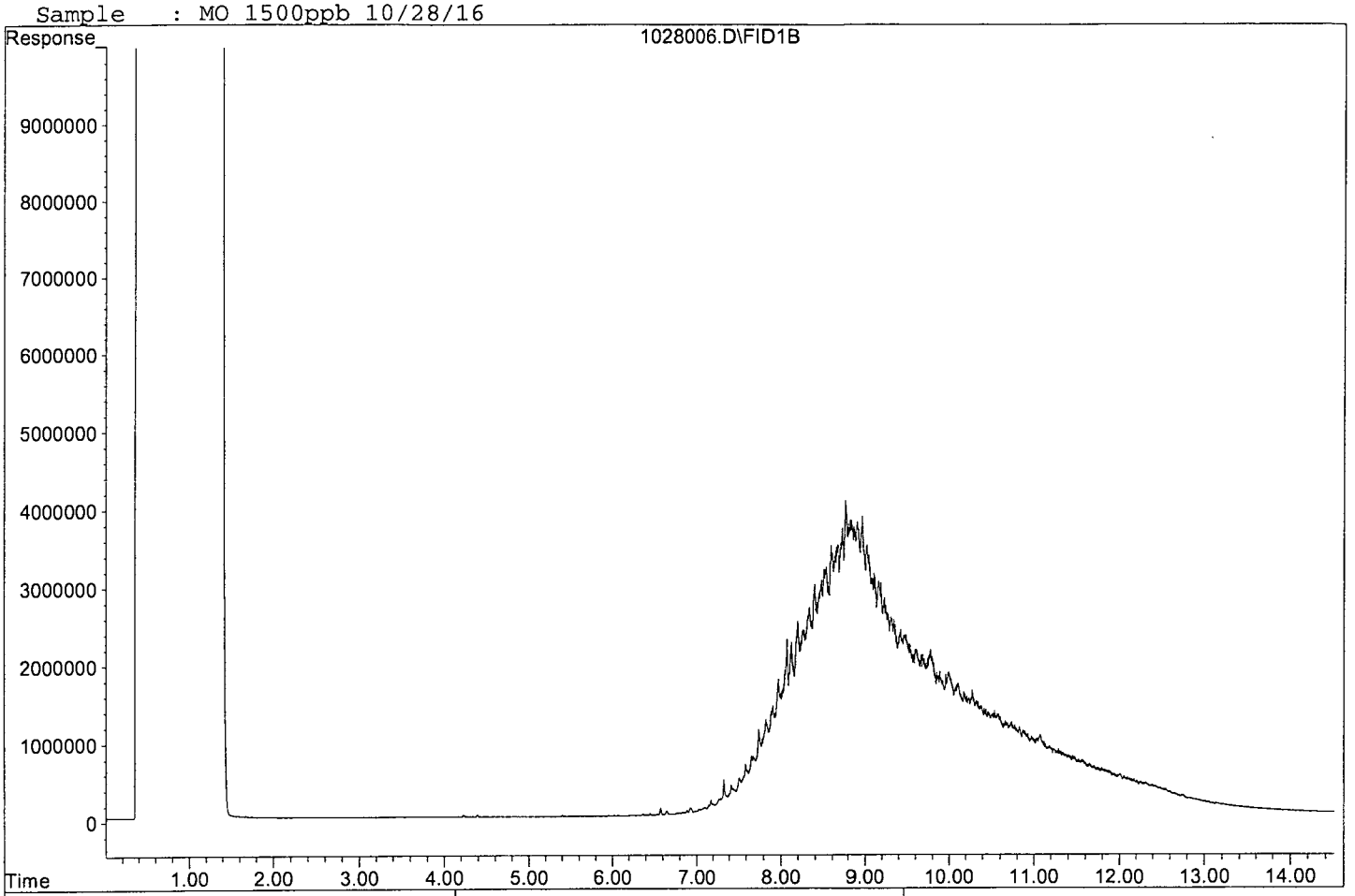
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

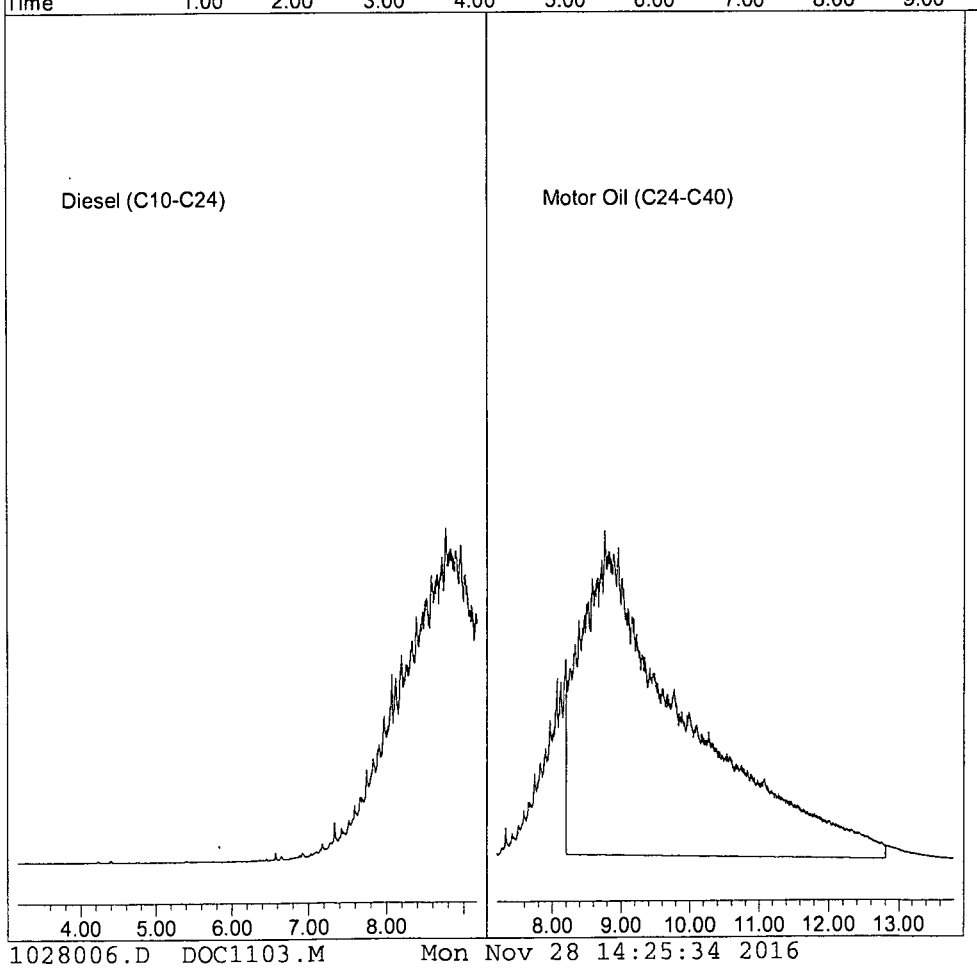
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
Target Compounds				
2) HBTM Motor Oil (C24-C40)	10.50	3965906010	1423.642	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028006.D
Sample : MO 1500ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028007.D Vial: 7
Acq On : 10-28-16 10:51:50 Operator: DP
Sample : MO 2000ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:25 2016 Quant Results File: DOC1103.RES

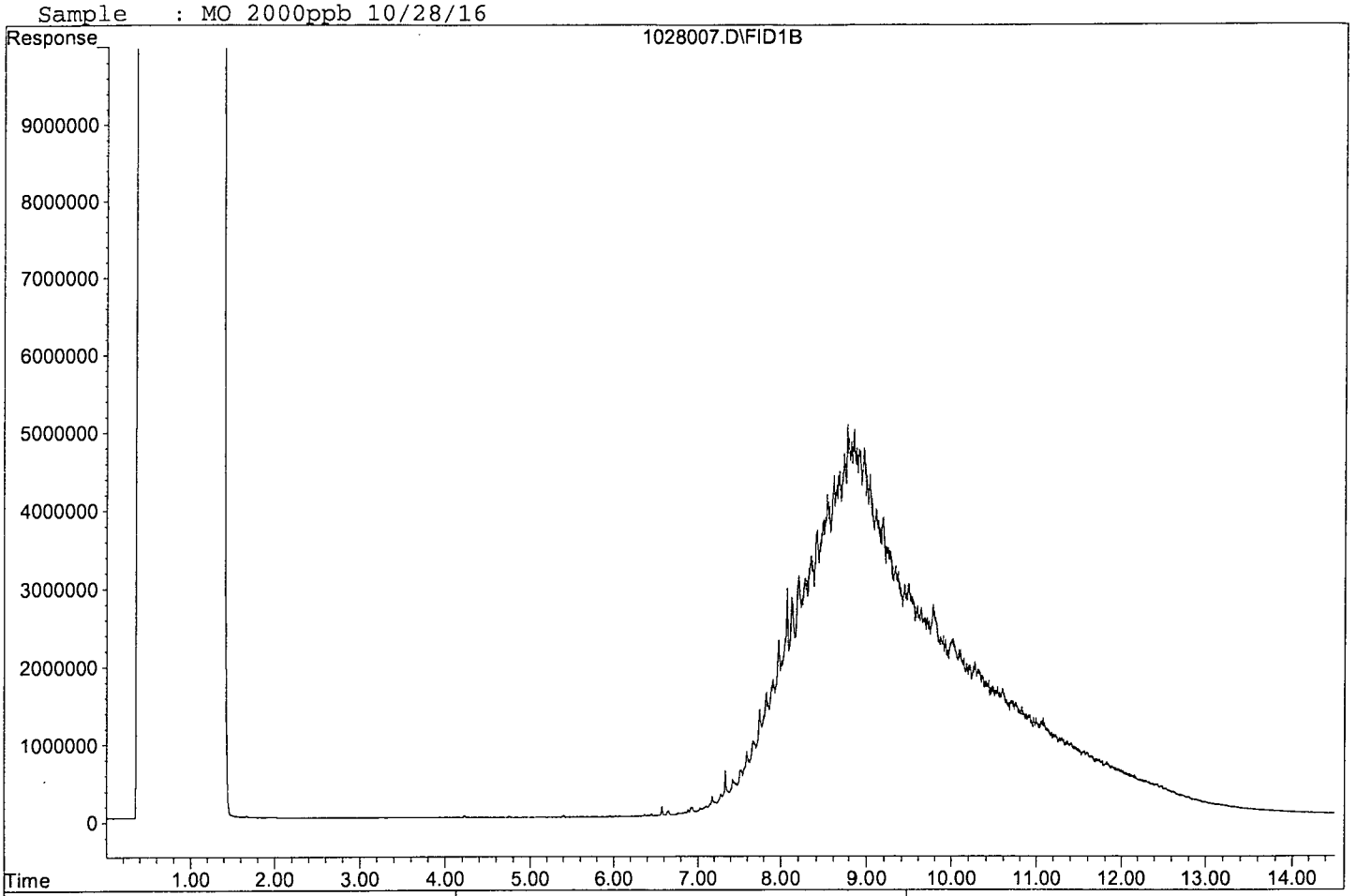
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

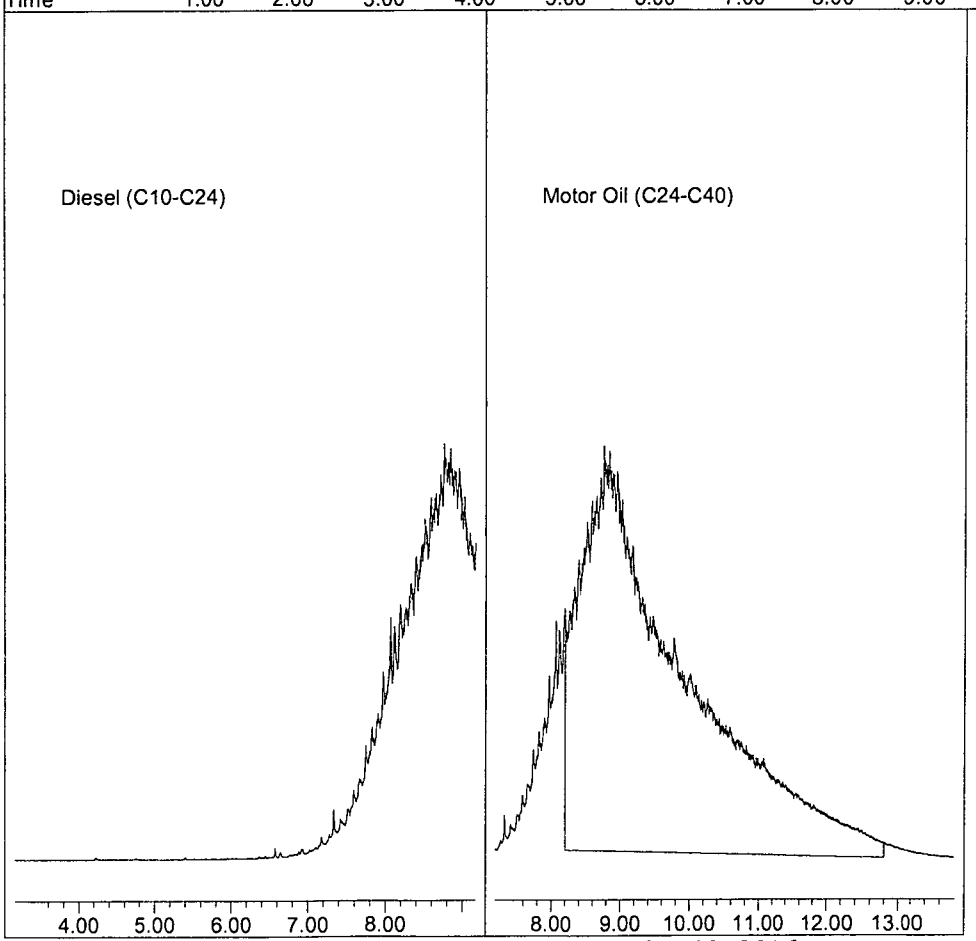
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
Target Compounds				
2) HBTM Motor Oil (C24-C40)	10.50	4983276169	1788.848	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028007.D
Sample : MO 2000ppb 10/28/16





TPH Extractables
DOC1103

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/03/16
Instrument: Apollo
Initial Cal. Date: 11/03/16
Data File: 1103012.D 1028008.D
Diesel Motor Oil

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C24)	1727130	1667670	3.4	HATM	
2	HBTM	Motor Oil (C24-C40)	1392870	1239910	11	HBTM	
3							
4							
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38							
39							
40							
		Average			7.2		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103012.D Vial: 12
Acq On : 11-3-16 13:25:11 Operator: DP
Sample : DIESEL-SS 400ppb 8/1/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 15:21 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SC Decanoic Acid(S)	5.67	4681185	3.827 ppb
Surrogate Spike 48.000	Recovery =		7.97%
4) SA Ortho-Terphenyl(S)	7.18	9886456	2.120 ppb
Surrogate Spike 30.000	Recovery =		7.07%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	1345831567	389.615 ppb
2) HBTM Motor Oil (C24-C40)	10.50	43170153	15.497 ppb

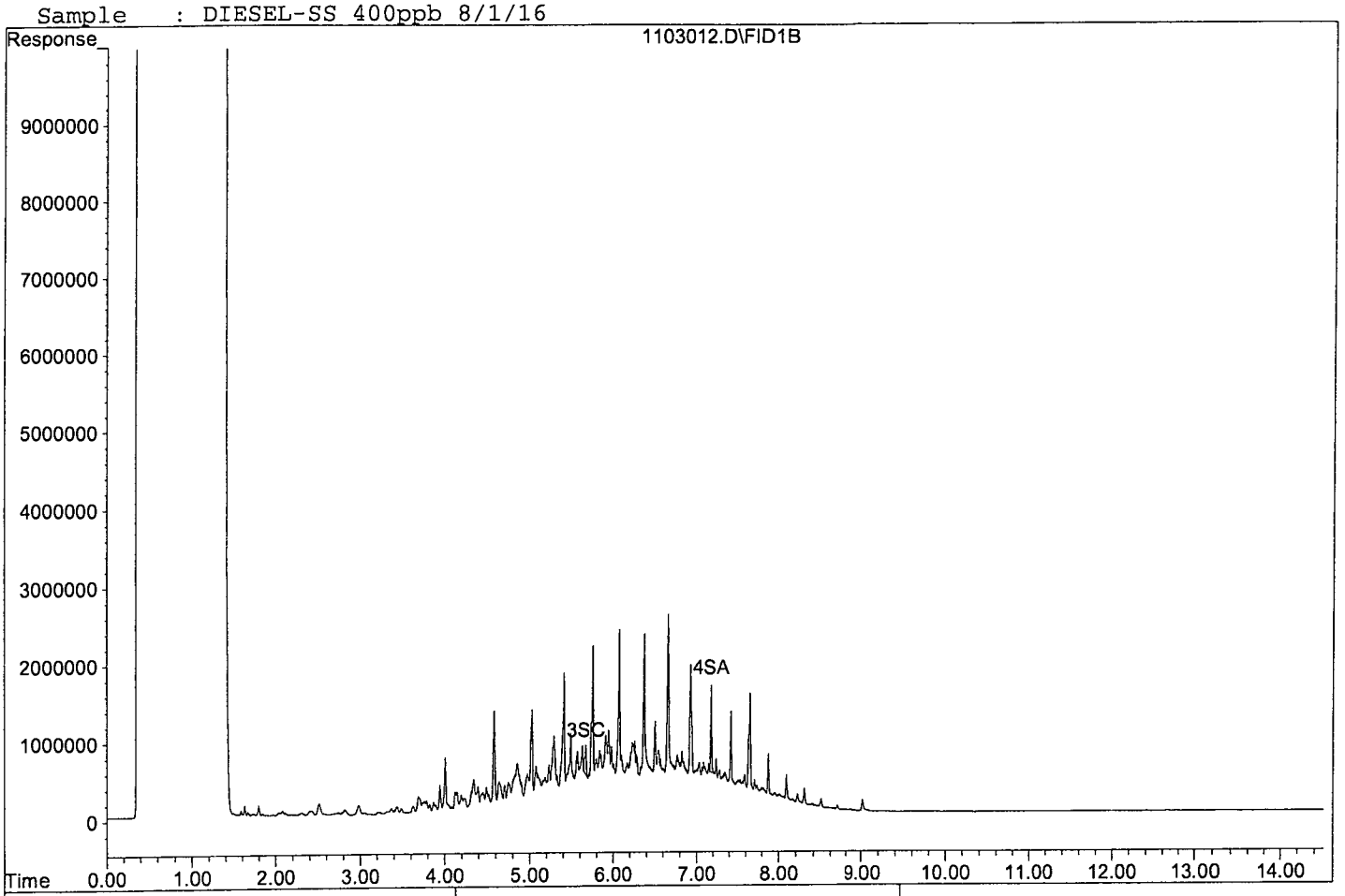
algorithm check: $\frac{1345831567 \times 1}{1727130 \times 2} = 389.6150165$

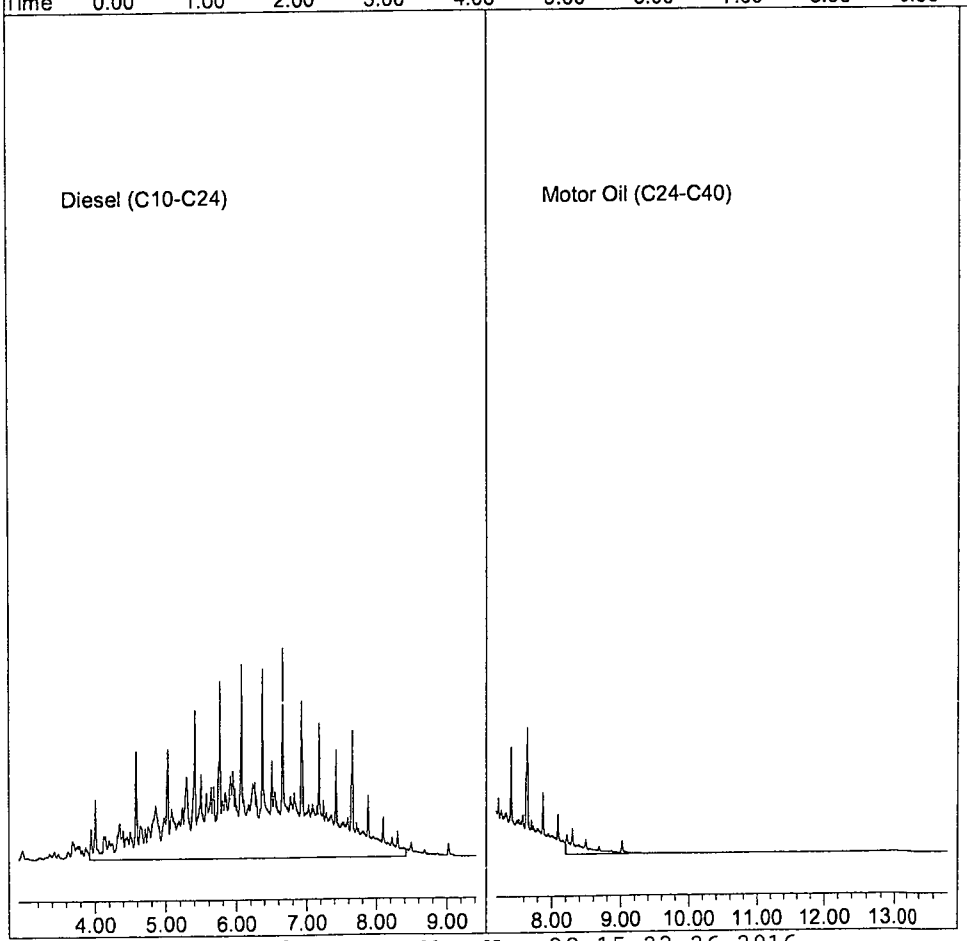
D.P. 11/28/16

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161103\1103012.D
Sample : DIESEL-SS 400ppb 8/1/16





1103012.D DOC1103.M Mon Nov 28 15:22:26 2016

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161028\1028008.D Vial: 8
Acq On : 10-28-16 11:12:44 Operator: DP
Sample : MO SS 1000ppb 7/6/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 15:22 2016 Quant Results File: DOC1103.RES

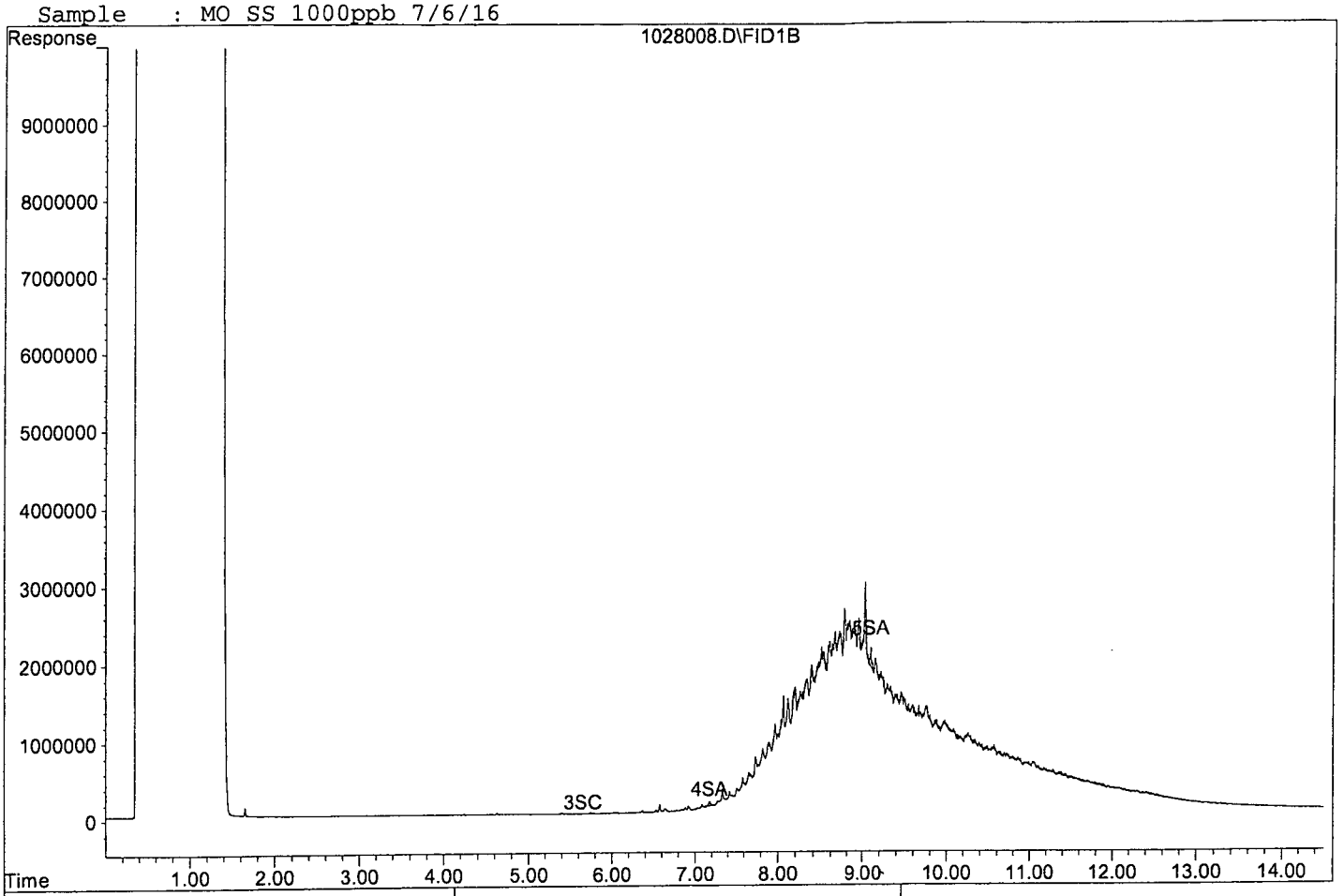
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

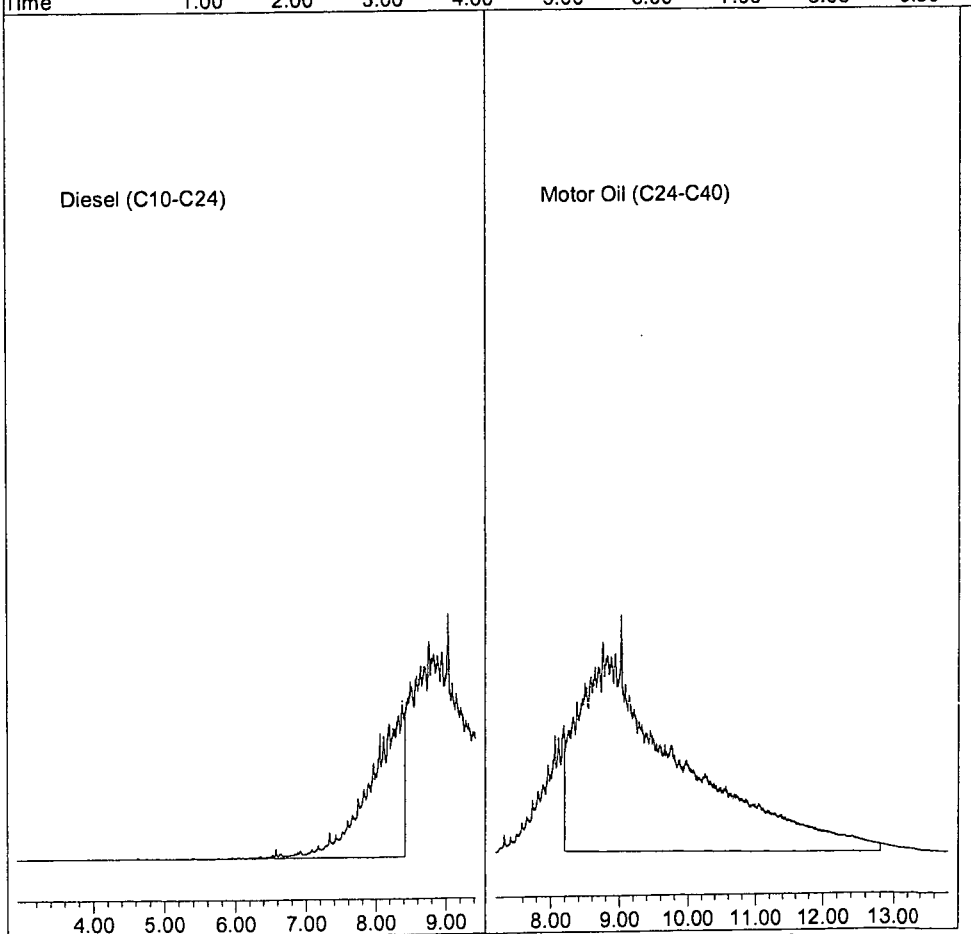
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SC Decanoic Acid(S)	5.65	6816	0.006 ppb
Surrogate Spike 48.000	Recovery	=	0.01%
4) SA Ortho-Terphenyl(S)	7.17	747984	0.160 ppb
Surrogate Spike 30.000	Recovery	=	0.53%
5) SA Octacosane(S)	9.09	2492290	0.712 ppb
Surrogate Spike 30.000	Recovery	=	2.37%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	603419098	174.688 ppb
2) HBTM Motor Oil (C24-C40)	10.50	2511616588	901.596 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028008.D
Sample : MO SS 1000ppb 7/6/16





TPH Extractables
DOC1103

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/20/16
Instrument: Apollo
Initial Cal. Date: 10/19/16
Data File: 1220023-24.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1727130	1756410	1.7	HATM	
2	HBTM	Motor Oil (C24-C40)	1392870	1335780	4.1	HBTM	
3							
4							
5							
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29							
30							
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32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			2.9		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161220\1220023.D Vial: 23
Acq On : 12-20-16 17:45:54 Operator: DP
Sample : CCV: DIESEL 400ppb 12/8/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 15:00 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

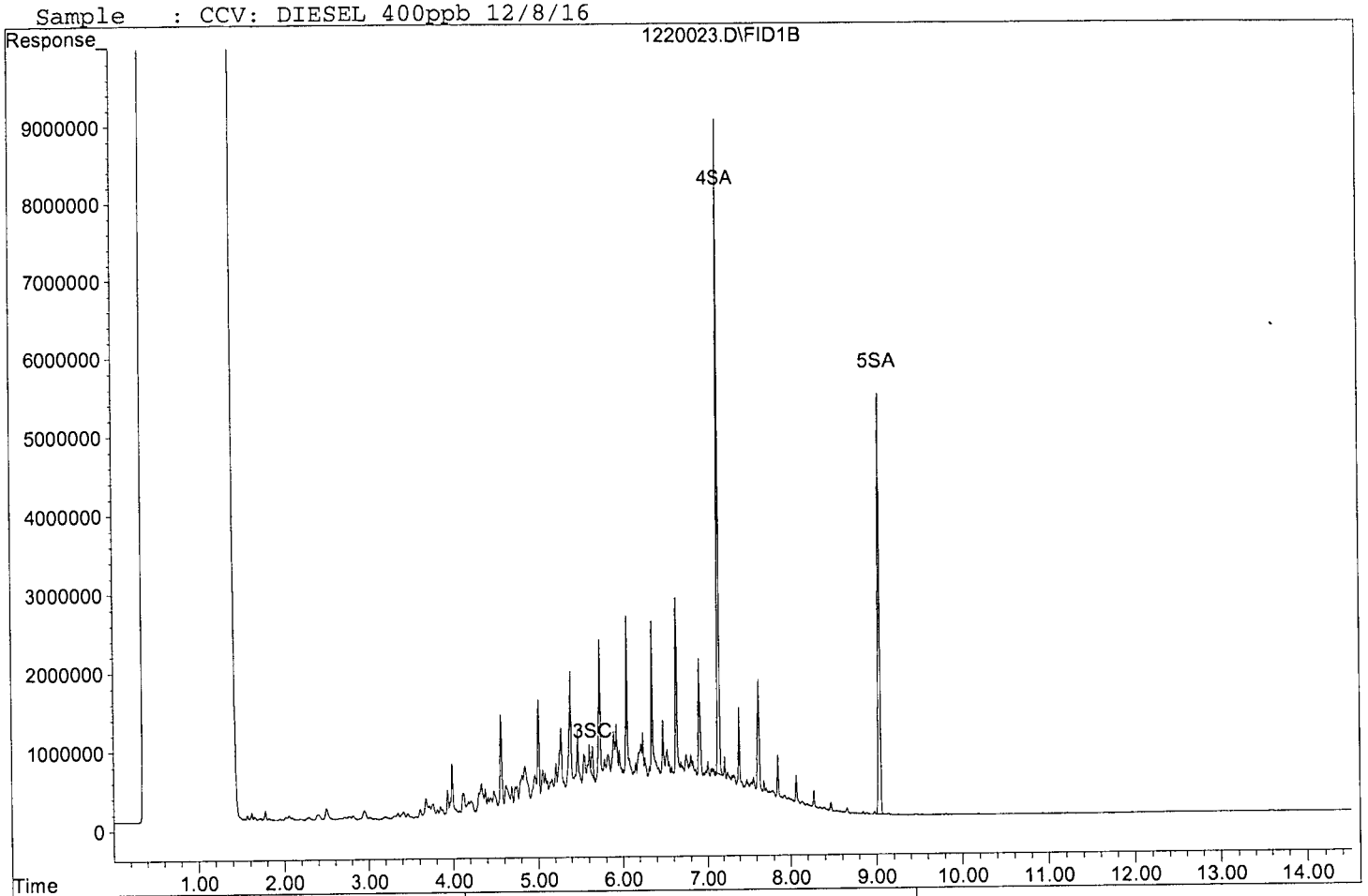
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

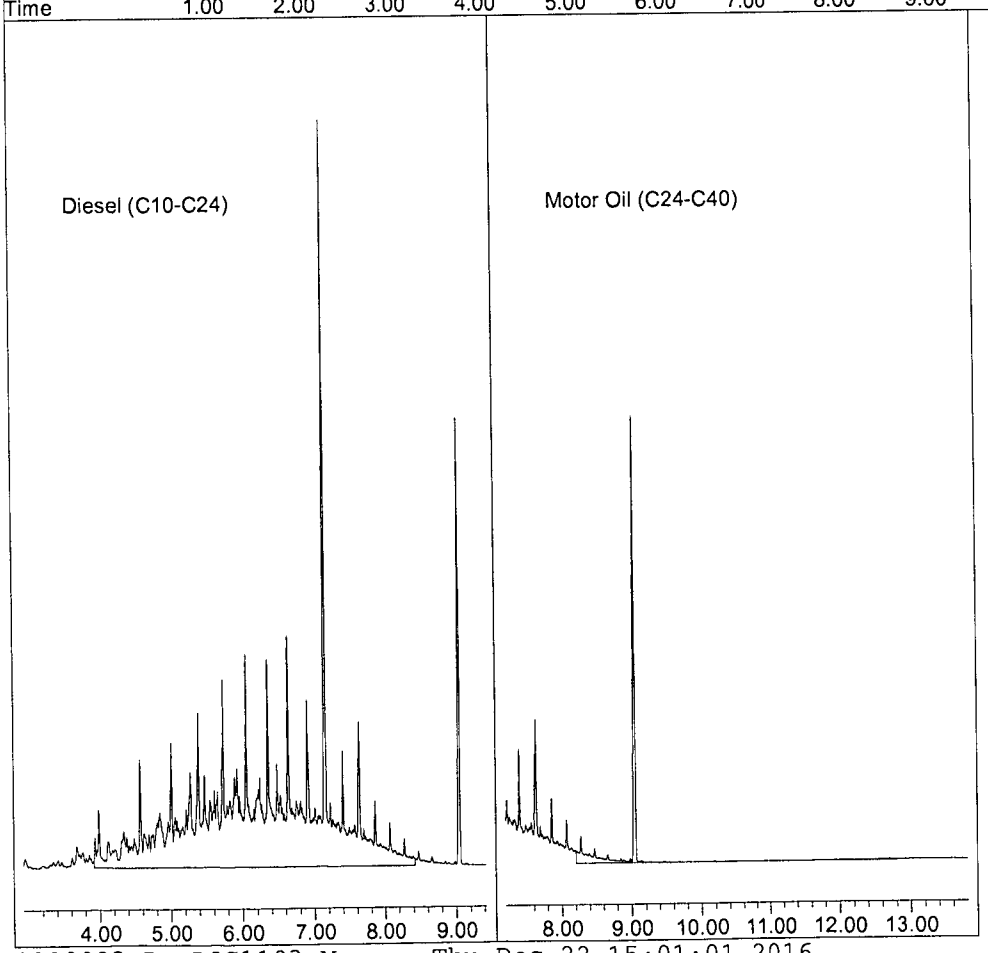
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SC Decanoic Acid(S)	5.65	5007578	4.094	ppb
Surrogate Spike 48.000		Recovery =	8.53%	
4) SA Ortho-Terphenyl(S)	7.15	94324934	20.222	ppb
Surrogate Spike 30.000		Recovery =	67.41%	
5) SA Octacosane(S)	9.05	70266233	20.078	ppb
Surrogate Spike 30.000		Recovery =	66.93%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	1405129898	406.782	ppb
2) HBTM Motor Oil (C24-C40)	10.50	42668318	15.317	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161220\1220023.D
Sample : CCV: DIESEL 400ppb 12/8/16





1220023.D DOC1103.M Thu Dec 22 15:01:01 2016

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161220\1220024.D Vial: 24
Acq On : 12-20-16 18:06:21 Operator: DP
Sample : CCV: MO 1000ppb 12/8/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 15:00 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

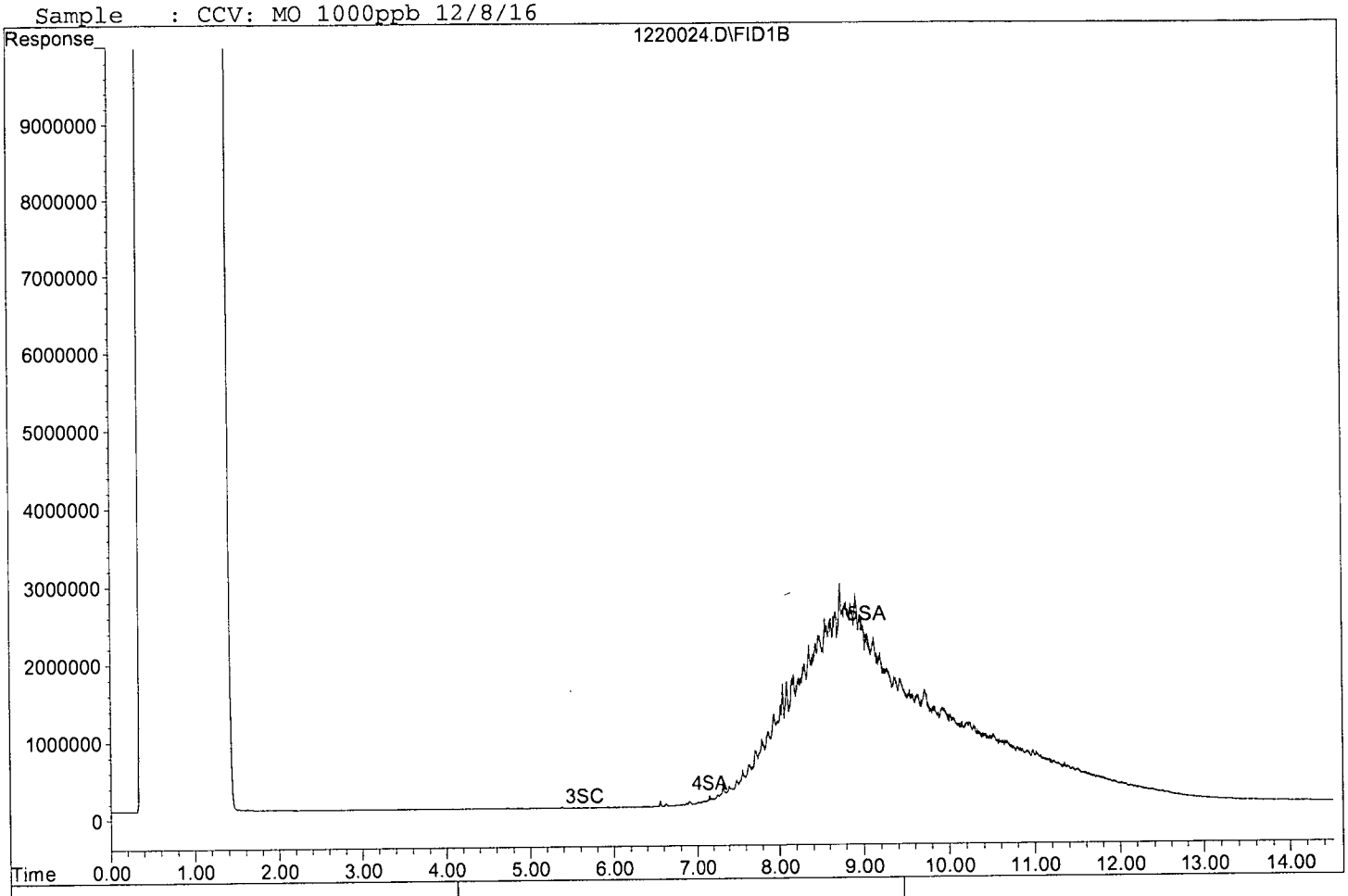
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

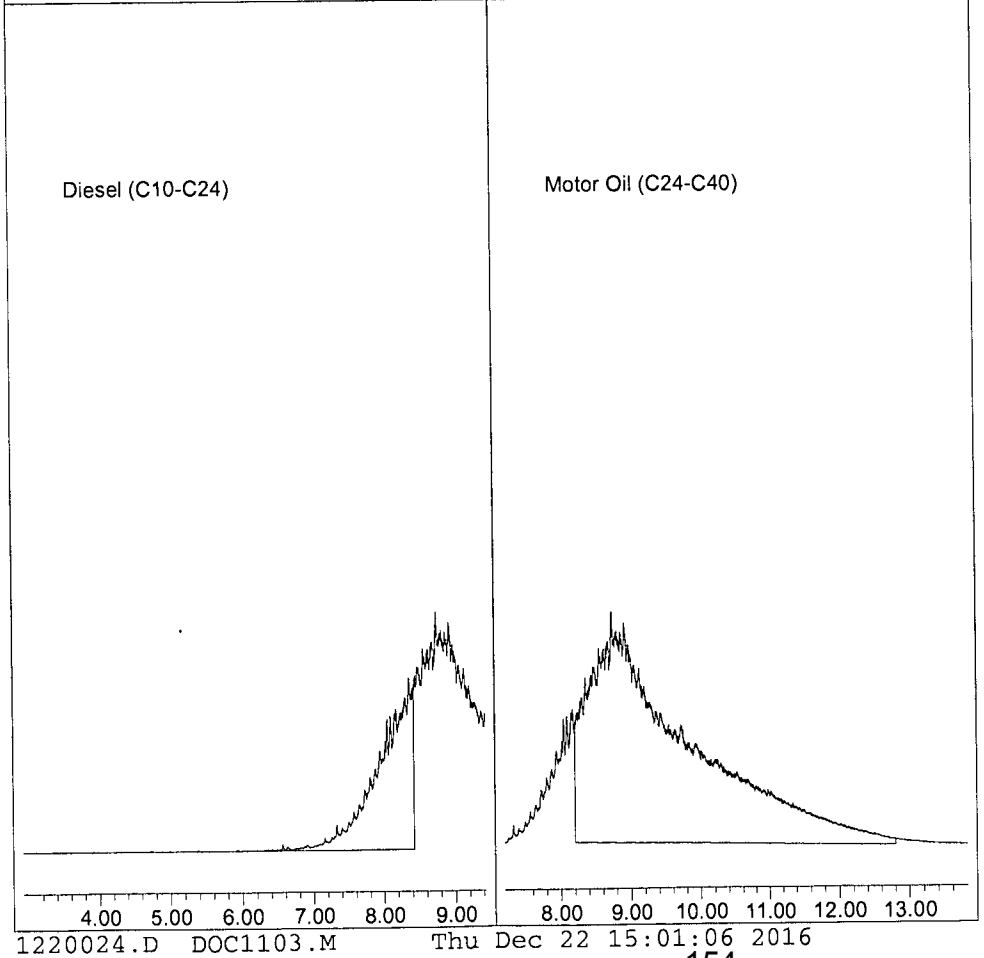
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SC Decanoic Acid(S)	5.65	14468	0.012 ppb
Surrogate Spike 48.000	Recovery	=	0.03%
4) SA Ortho-Terphenyl(S)	7.15	422633	0.091 ppb
Surrogate Spike 30.000	Recovery	=	0.30%
5) SA Octacosane(S)	9.04	986579	0.282 ppb
Surrogate Spike 30.000	Recovery	=	0.94%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	656221679	189.975 ppb
2) HBTM Motor Oil (C24-C40)	10.50	2671564743	959.012 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161220\1220024.D
Sample : CCV: MO 1000ppb 12/8/16





1220024.D DOC1103.M Thu Dec 22 15:01:06 2016

TPH Extractables
DOC1103

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/21/16
Instrument: Apollo
Initial Cal. Date: 10/19/16
Data File: 1220045-46.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1727130	1725250	0.11	HATM	
2	HBTM	Motor Oil (C24-C40)	1392870	1361540	2.2	HBTM	
3							
4							
5							
6							
7							
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12							
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34							
35							
36							
37							
38							
39							
40							
		Average			1.2		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161220\1220045.D Vial: 45
Acq On : 12-21-16 1:09:38 Operator: DP
Sample : CCV: DIESEL 400ppb 12/8/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 21 8:51 2016 Quant Results File: DOC1103.RES

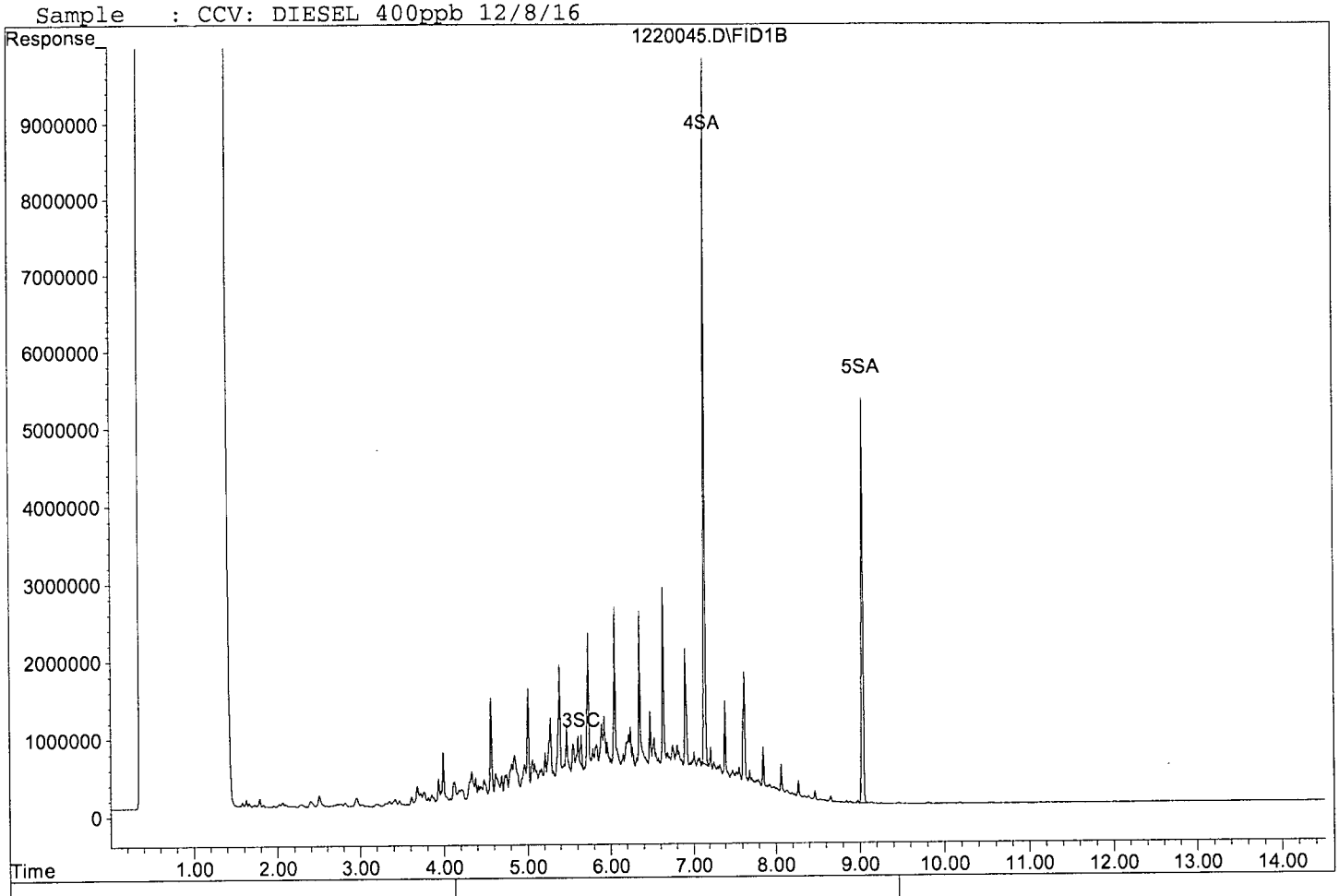
Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

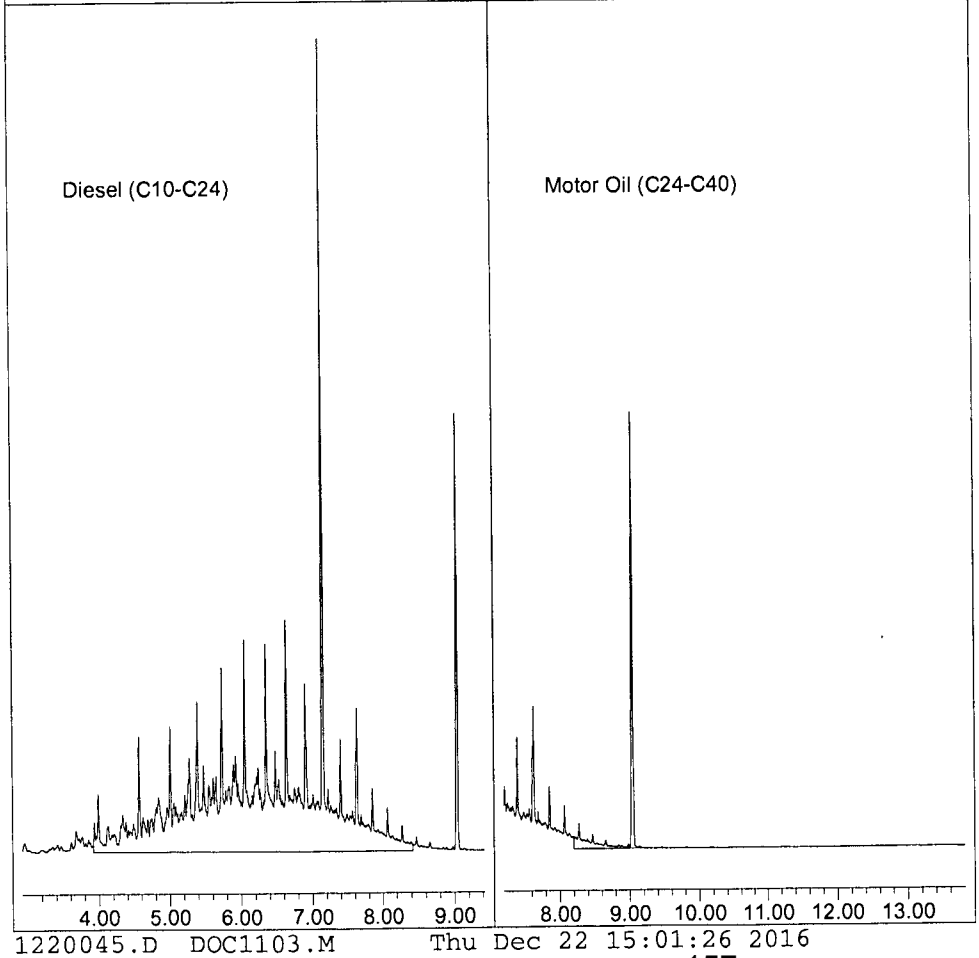
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SC Decanoic Acid(S)	5.65	4395772	3.594	ppb
Surrogate Spike 48.000	Recovery =		7.49%	
4) SA Ortho-Terphenyl(S)	7.15	92375573	19.804	ppb
Surrogate Spike 30.000	Recovery =		66.01%	
5) SA Octacosane(S)	9.04	69926049	19.981	ppb
Surrogate Spike 30.000	Recovery =		66.60%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	1380203714	399.566	ppb
2) HBTM Motor Oil (C24-C40)	10.50	39732189	14.263	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161220\1220045.D
Sample : CCV: DIESEL 400ppb 12/8/16





1220045.D DOC1103.M Thu Dec 22 15:01:26 2016

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161220\1220046.D Vial: 46
Acq On : 12-21-16 1:29:37 Operator: DP
Sample : CCV: MO 1000ppb 12/8/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 21 8:51 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

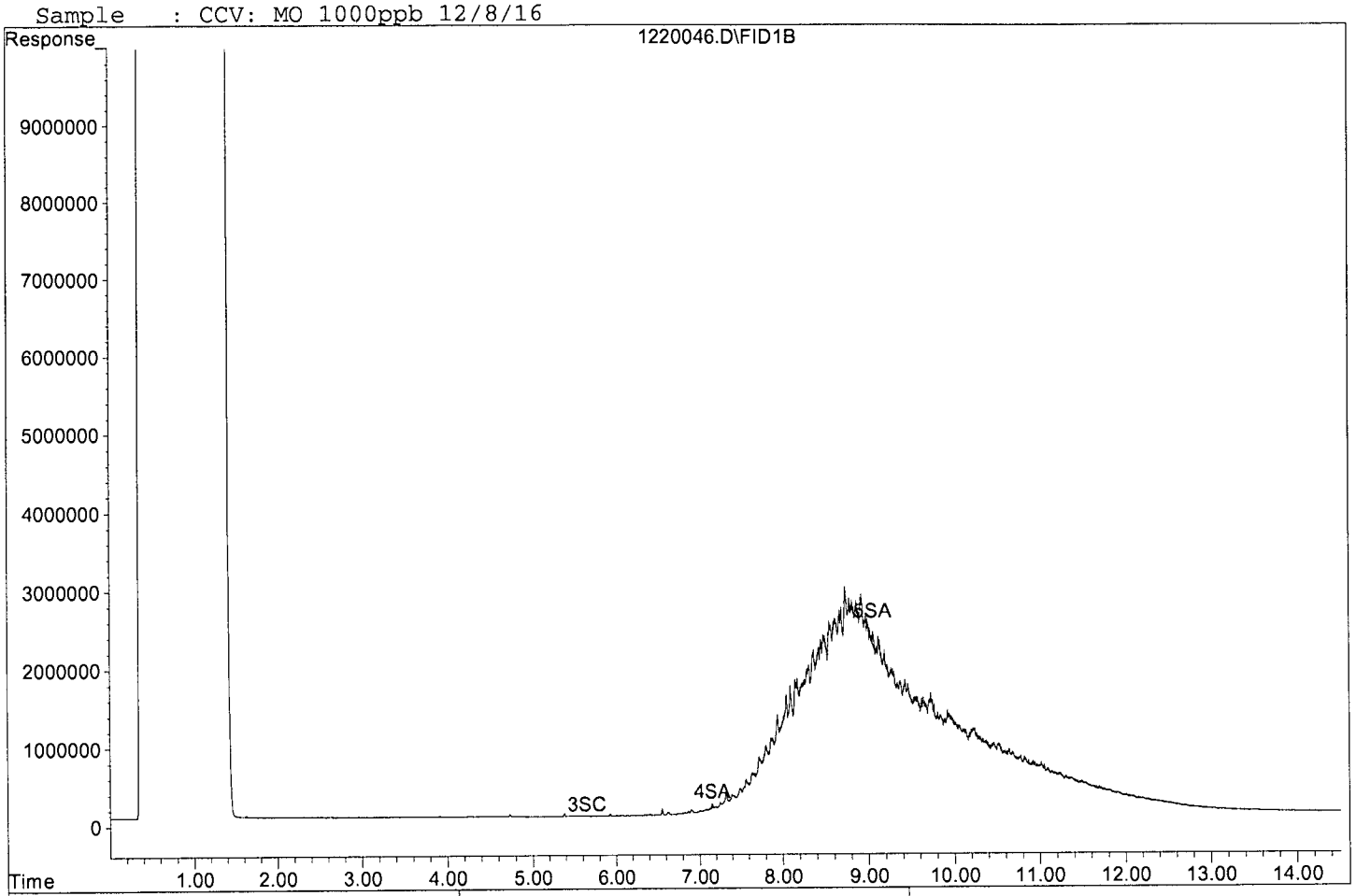
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

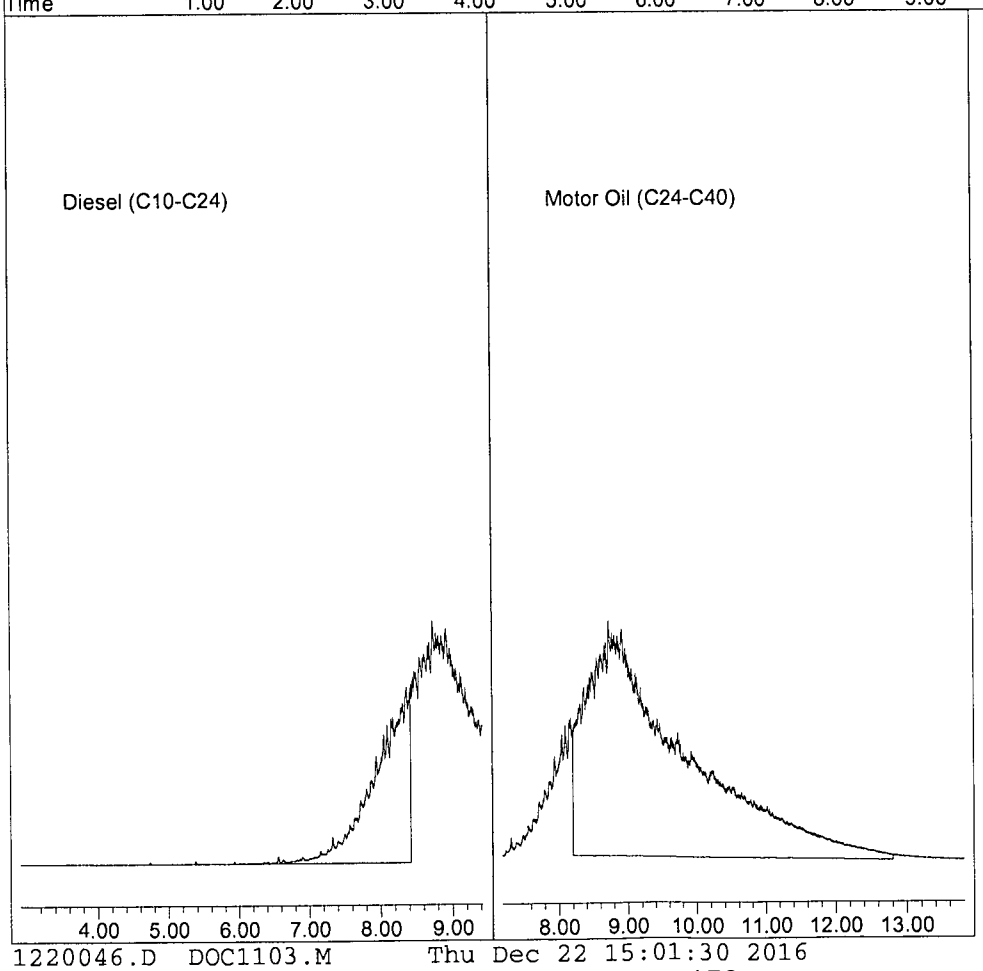
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SC Decanoic Acid(S)	5.65	18707	0.015	ppb
Surrogate Spike 48.000	Recovery	=	0.03%	
4) SA Ortho-Terphenyl(S)	7.15	515593	0.111	ppb
Surrogate Spike 30.000	Recovery	=	0.37%	
5) SA Octacosane(S)	9.05	2704206	0.773	ppb
Surrogate Spike 30.000	Recovery	=	2.58%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	687943611	199.158	ppb
2) HBTM Motor Oil (C24-C40)	10.50	2723088357	977.508	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161220\1220046.D
Sample : CCV: MO 1000ppb 12/8/16





1220046.D DOC1103.M Thu Dec 22 15:01:30 2016

ORGANICS

Raw Data

APPL, INC.

Method Blank
EPA 8015B TPH WATER

Blank Name/QCG: **161219W-47494 - 214843**
Batch ID: #DOC53-161219A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	12/19/16	12/20/16
BLANK	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	12/19/16	12/20/16
BLANK	SURROGATE: OCTACOSANE (S)	88.0	60-142			%	12/19/16	12/20/16
BLANK	SURROGATE: ORTHO-TERPHEN	75.4	56-125			%	12/19/16	12/20/16

Quant Method:DOC1103.M
Run #:1220025
Instrument:Apollo
Sequence:161220
Initials:DPO

GC SC-Blank-REG MDLs-DOD
Printed: 12/21/16 9:11:41 AM

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161220\1220025.D Vial: 25
Acq On : 12-20-16 18:26:45 Operator: DP
Sample : 161219A BLK 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Dec 21 8:56 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

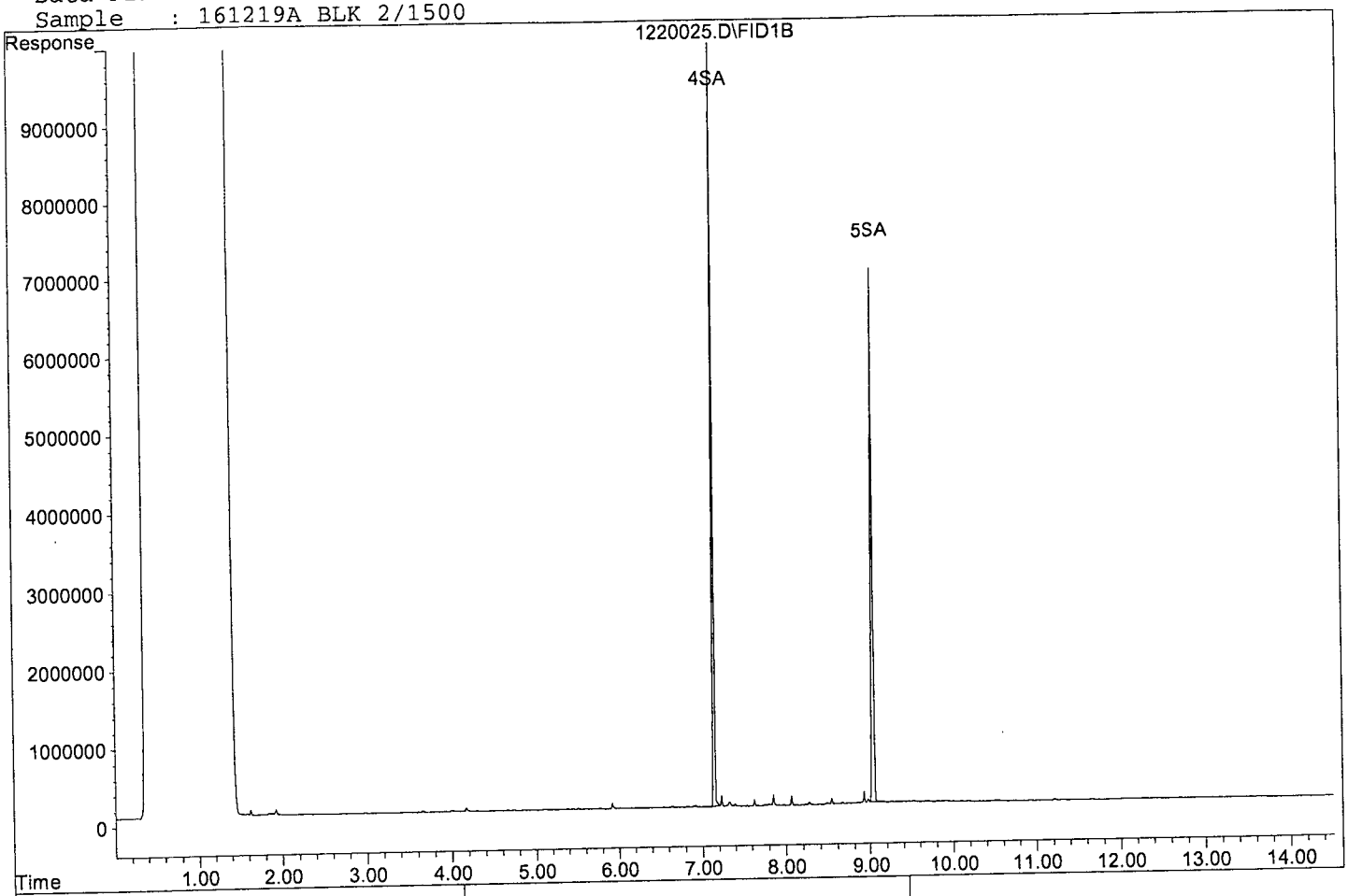
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

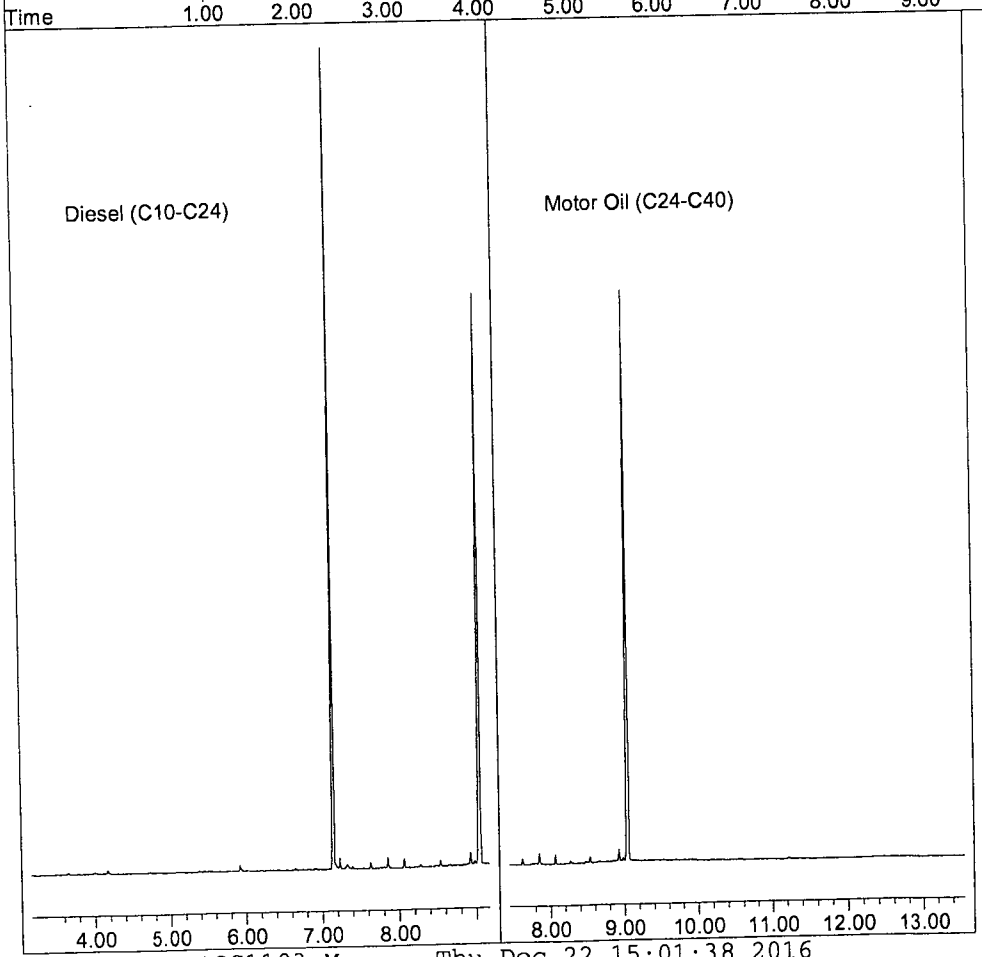
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.15	105437257	30.139 ppb
Surrogate Spike 40.000	Recovery	=	75.35%
5) SA Octacosane(S)	9.05	92362070	35.189 ppb
Surrogate Spike 40.000	Recovery	=	87.97%
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161220\1220025.D
Sample : 161219A BLK 2/1500





1220025.D DOC1103.M Thu Dec 22 15:01:38 2016

Laboratory Control Spike Recovery

EPA 8015B TPH WATER

APPL ID: **161219W-47494 LCS - 214843**
Batch ID: #DOC53-161219A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
DIESEL (C10-C24)	1330	1020	76.5	36-132
OIL (C24-C40)	1330	1140	85.5	41-113
SURROGATE: OCTACOSANE (S)	40.0	36.0	90.0	60-142
SURROGATE: ORTHO-TERPHENYL (S)	40.0	36.8	92.0	56-125

Comments: _____

Primary	SPK
Quant Method :	DOC1103.M
Extraction Date :	12/19/16
Analysis Date :	12/20/16
Instrument :	Apollo
Run :	1220026
Initials :	DPO

Printed: 12/21/16 9:11:34 AM
APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161220\1220026.D
Acq On : 12-20-16 18:47:04
Sample : 161219A LCS-1 2/1500
Misc : Water
IntFile : events.e
Quant Time: Dec 21 8:56 2016 Quant Results File: DOC1103.RES

Vial: 26
Operator: DP
Inst : Apollo
Multiplr: 1.33

Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

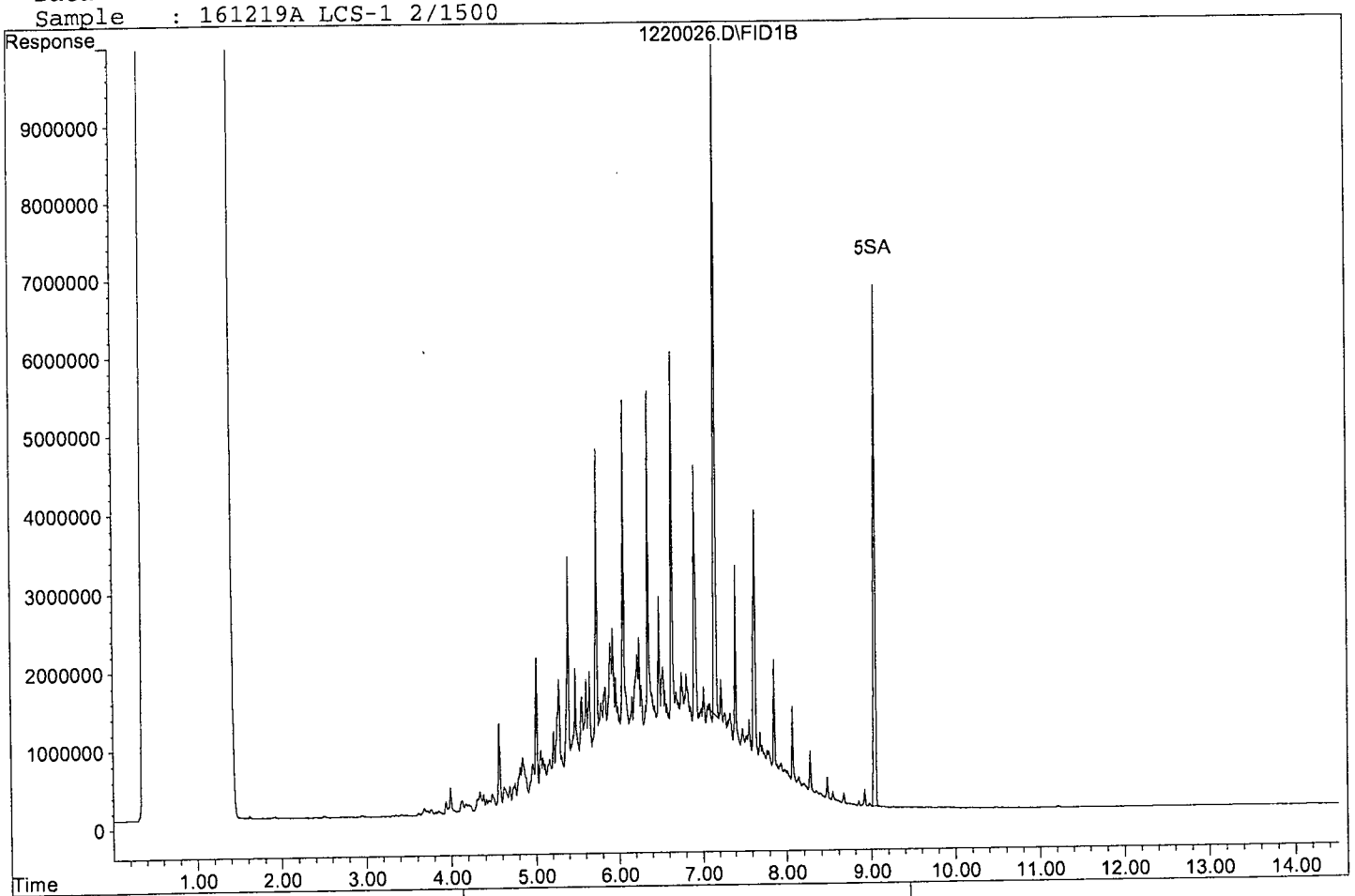
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

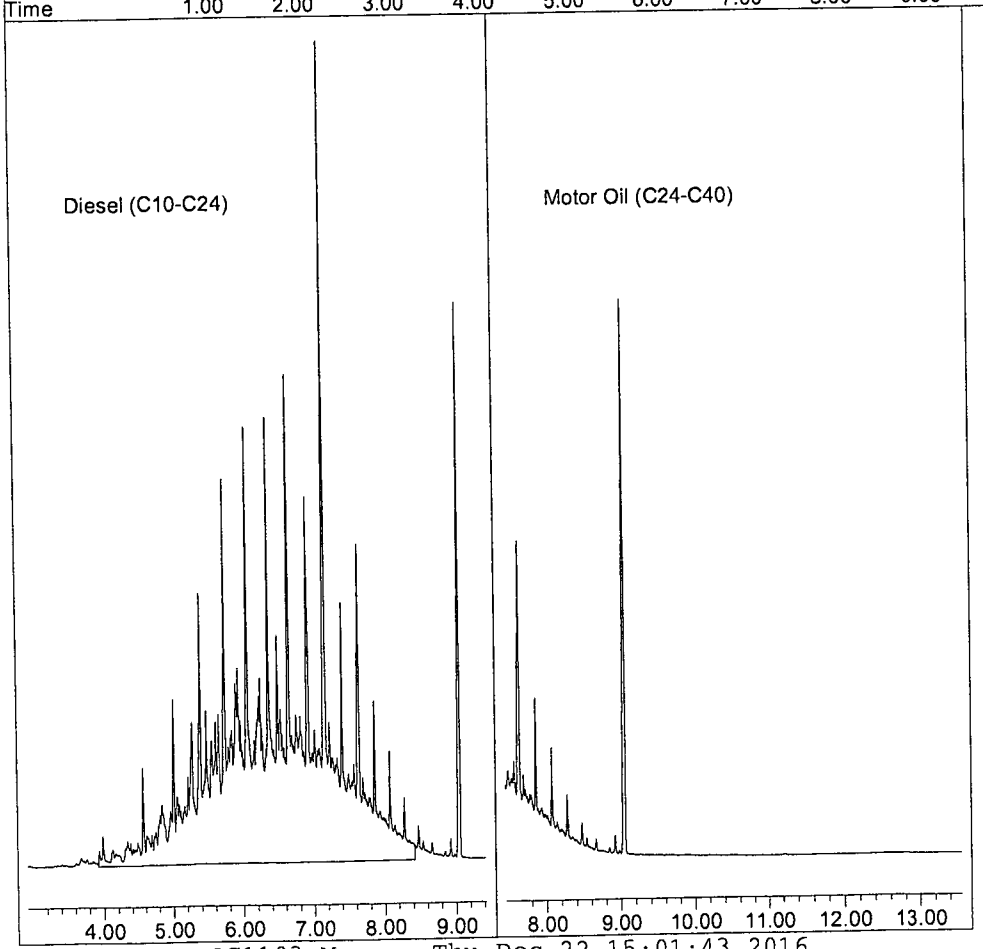
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.15	128792918	36.815 ppb
Surrogate Spike 40.000	Recovery	=	92.04%
5) SA Octacosane(S)	9.05	94390205	35.961 ppb
Surrogate Spike 40.000	Recovery	=	89.90%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	2639132053	1018.694 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161220\1220026.D
Sample : 161219A LCS-1 2/1500





1220026.D DOC1103.M Thu Dec 22 15:01:43 2016

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161220\1220027.D
Acq On : 12-20-16 19:07:31
Sample : 161219A LCS-2 2/1500
Misc : Water
IntFile : events.e
Quant Time: Dec 21 8:57 2016 Quant Results File: DOC1103.RES

Vial: 27
Operator: DP
Inst : Apollo
Multiplr: 1.33

Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

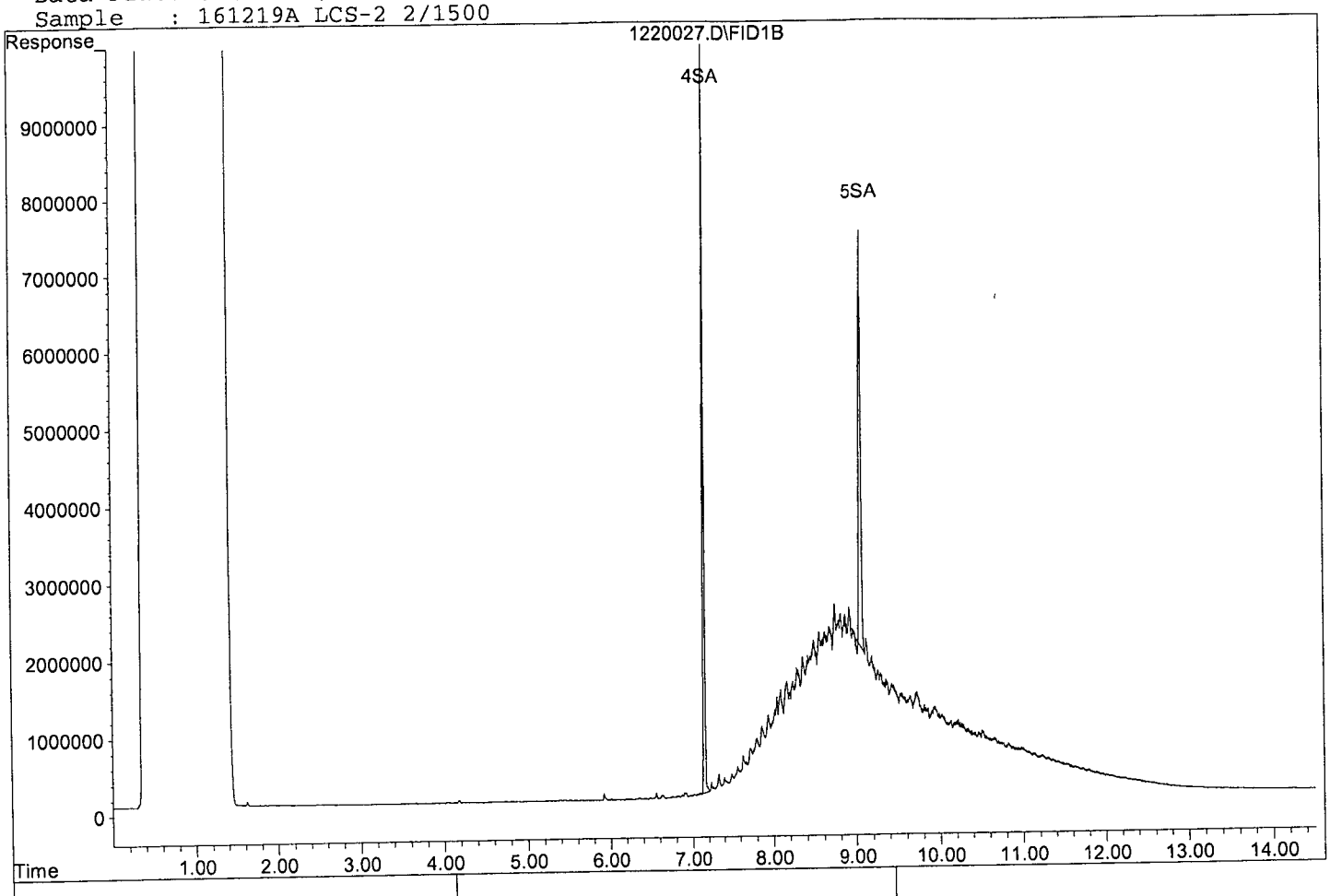
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

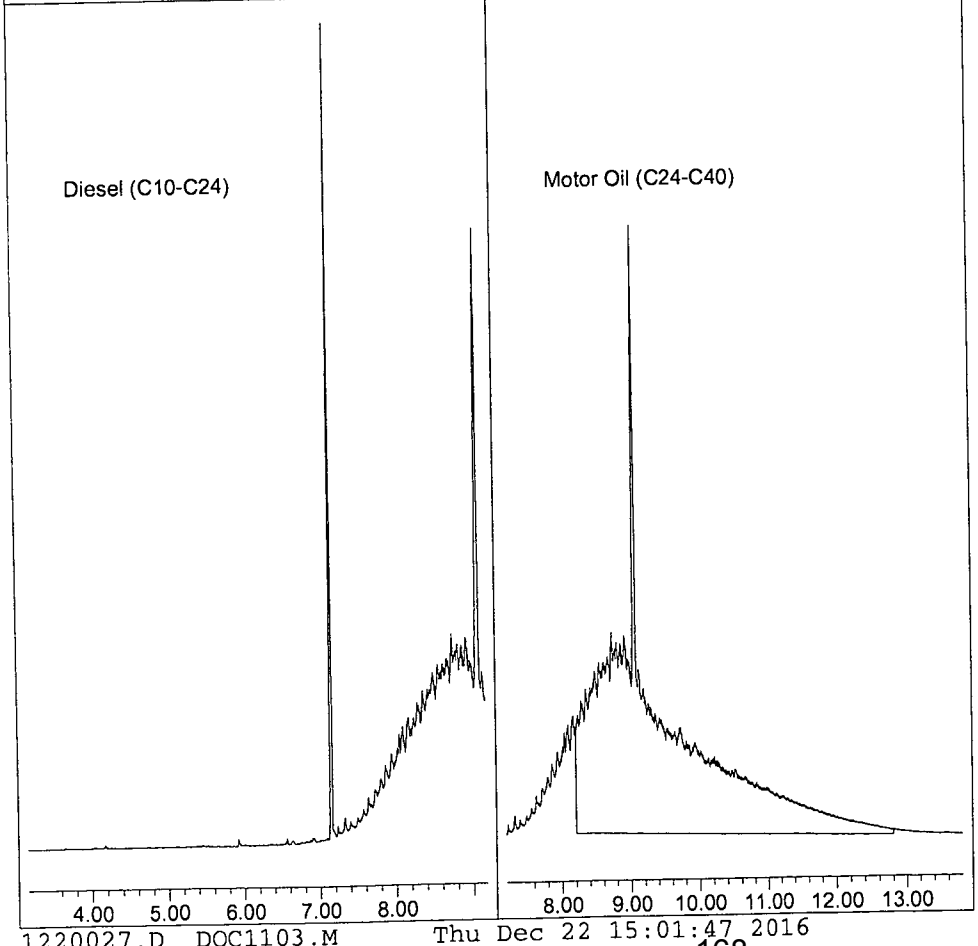
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.15	110017264	31.448 ppb
Surrogate Spike 40.000	Recovery =		78.62%
5) SA Octacosane(S)	9.07	90017984	34.296 ppb
Surrogate Spike 40.000	Recovery =		85.74%
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	2389557193	1143.704 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161220\1220027.D
Sample : 161219A LCS-2 2/1500





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161220\1220028.D
Acq On : 12-20-16 19:27:45
Sample : 161219A LCSD-1 2/1500
Misc : Water
IntFile : events.e
Quant Time: Dec 21 8:57 2016 Quant Results File: DOC1103.RES

Vial: 28
Operator: DP
Inst : Apollo
Multiplr: 1.33

Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

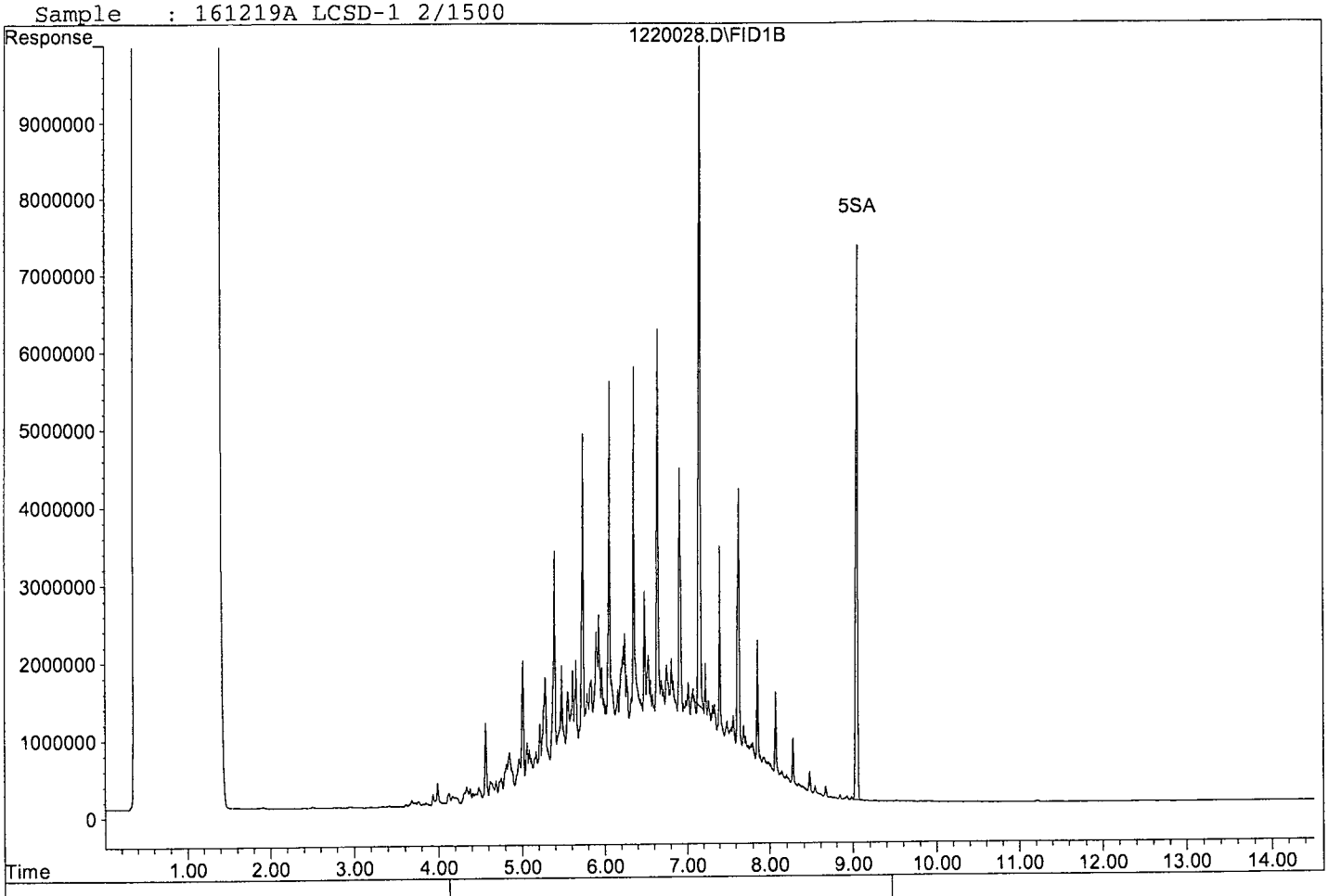
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

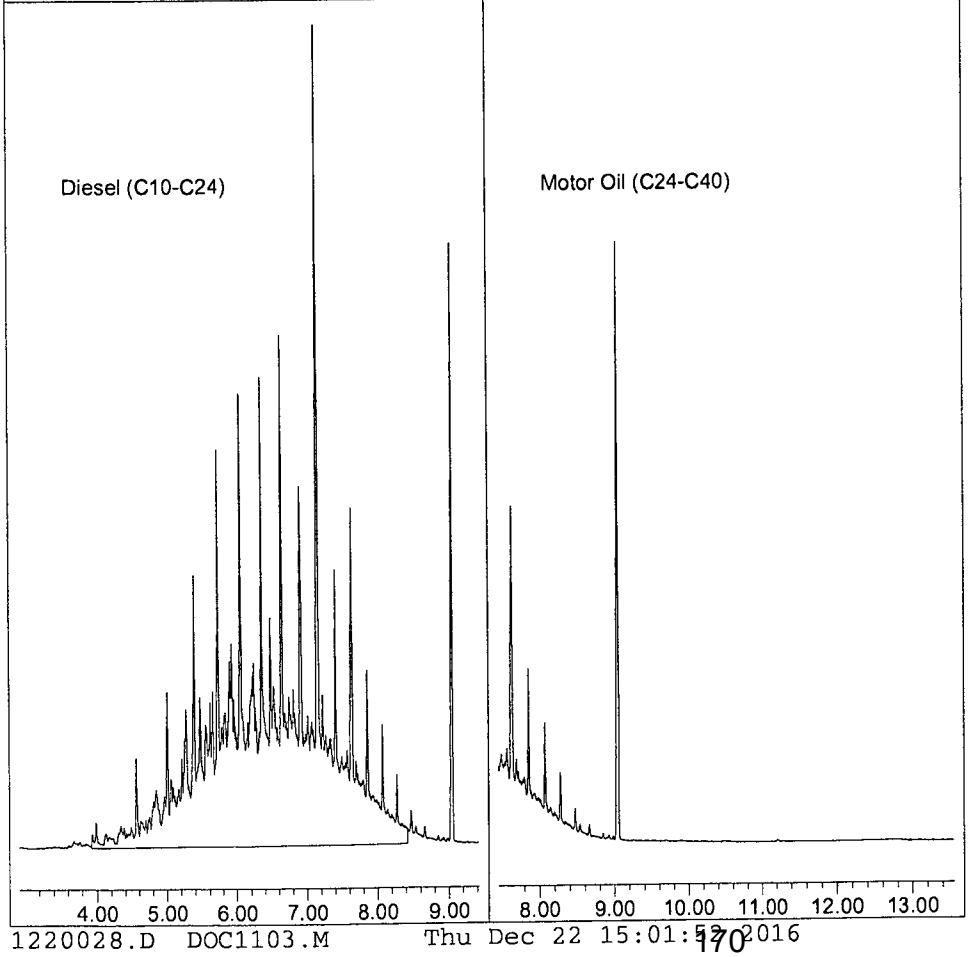
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.15	134384940	38.414 ppb
Surrogate Spike 40.000	Recovery =		96.04%
5) SA Octacosane(S)	9.05	97040654	36.971 ppb
Surrogate Spike 40.000	Recovery =		92.43%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	2681593854	1035.084 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161220\1220028.D
Sample : 161219A LCSD-1 2/1500





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161220\1220029.D Vial: 29
Acq On : 12-20-16 19:47:59 Operator: DP
Sample : 161219A LCSD-2 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Dec 21 8:57 2016 Quant Results File: DOC1103.RES

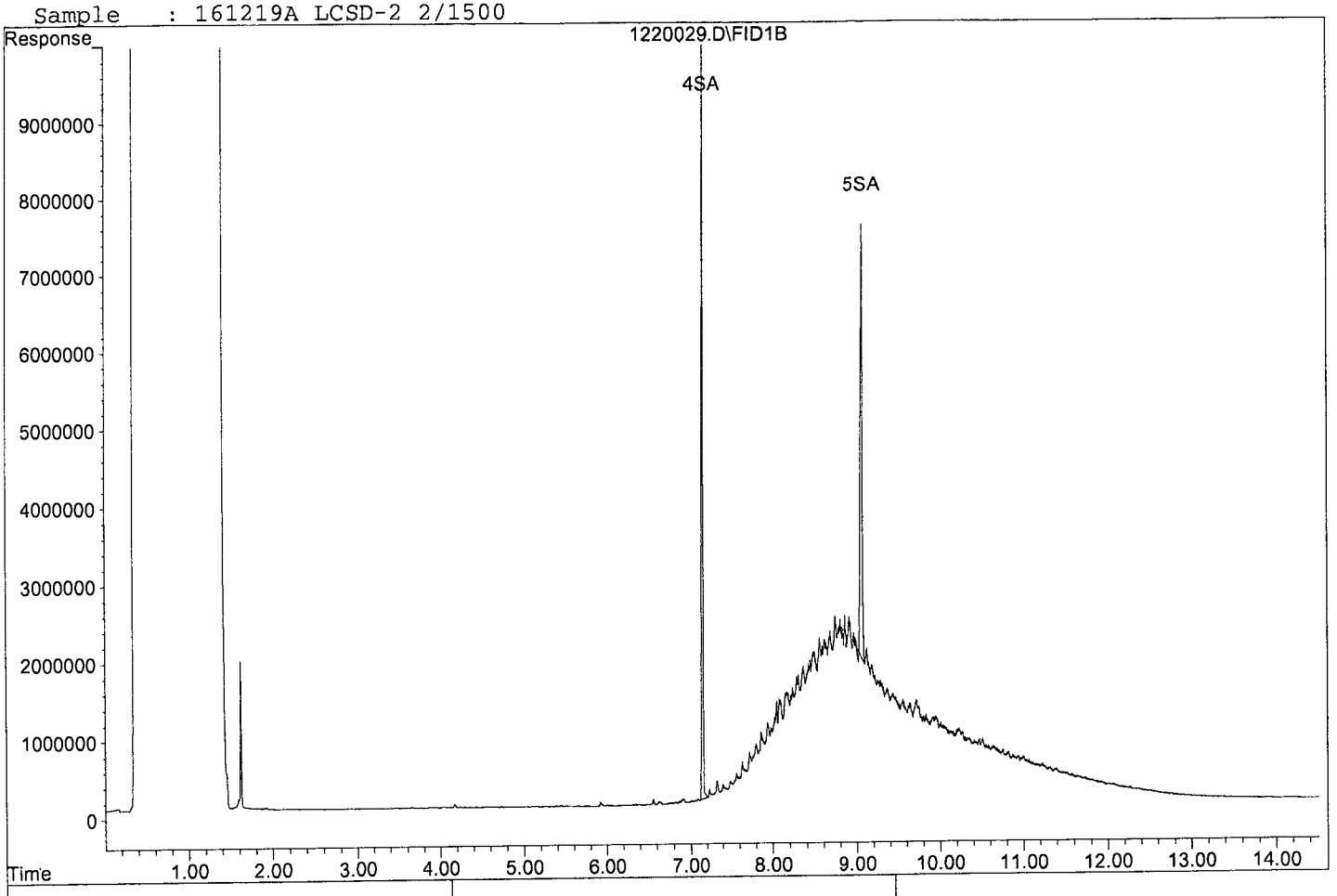
Method : G:\APOLLO\DATA\161219\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

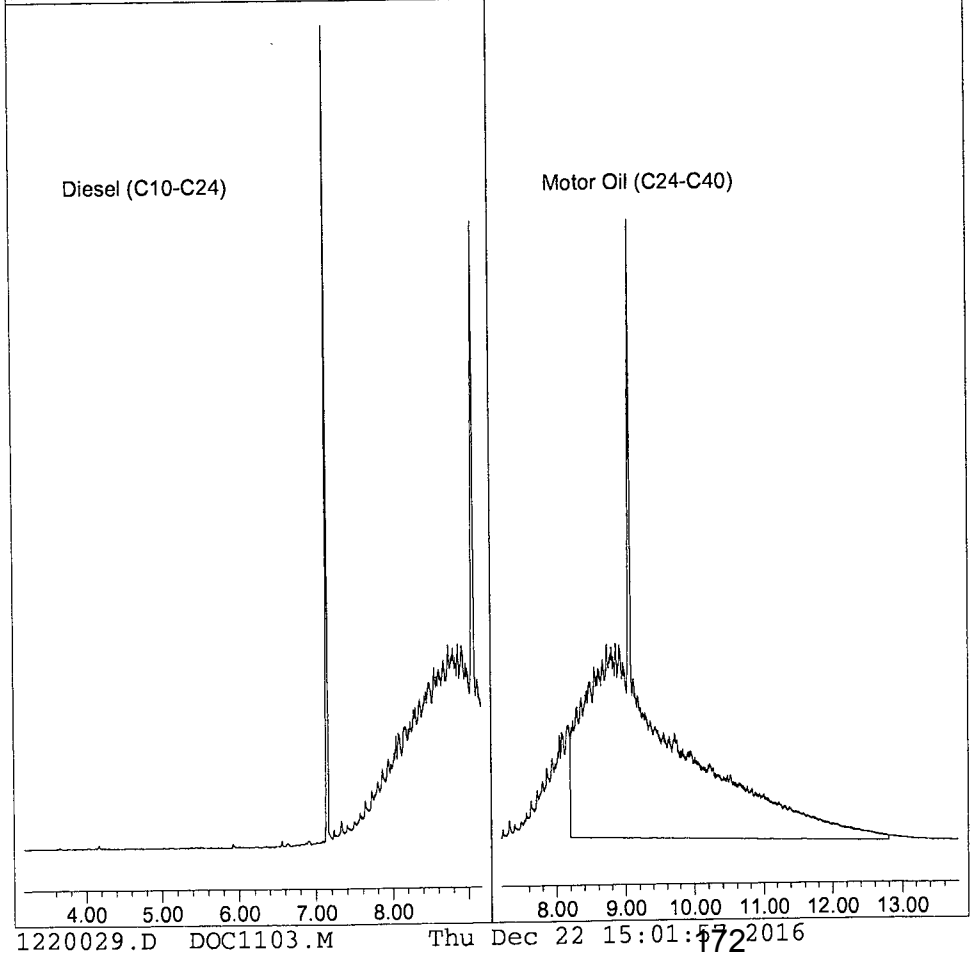
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.15	106625793	30.479	ppb
Surrogate Spike 40.000	Recovery =		76.20%	
5) SA Octacosane(S)	9.07	89983304	34.282	ppb
Surrogate Spike 40.000	Recovery =		85.70%	
Target Compounds				
2) HBTM Motor Oil (C24-C40)	10.50	2328598416	1114.527	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161220\1220029.D
Sample : 161219A LCSD-2 2/1500





DIESEL CURVE		prep:11/03/16-D.P.		ex:6/03/17						
STD	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL
DIESEL	1000	237562-37104	11/03/16	06/03/17	10	10	40	60	80	100
MC	N/A	56098			990	90	60	40	20	NA
				Final VOL.	1000	100	100	100	100	100
				ppm	10	100	400	600	800	1000

MOTOR OIL CURVE		prep: 10/28/16-D.P.		ex:4/26/17						
STD	**[µg/mL]**	**LOT #**	**DATE**	**EXP. DATE**	**µL**	**µL**	**µL**	**µL**	**µL**	**µL**
MOTOR OIL	2000		10/26/16	04/26/17	10	25	125	500	750	200
MC	N/A	56098			990	975	875	500	250	NA
				Final VOL.	1000	1000	1000	1000	1000	200
				ppm	20	50	250	1000	1500	2000

Prep: 11/03/16-D.P. Exp: 6/03/17						
DIESEL CAL STD.						
STD.	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT / LOT#
DIESEL FUEL #2	50,000 ug/mL	O2SI CAT#011598-03 LOT#237562-37104 OP: 11/03/06 EXP: 11/03/17	500 µL	25 mL	1000ug/mL	MC LOT# 56098
O-TERPHENYL OCTACOSANE	600 ug/mL	O2SI CAT#110316-05 LOT#266278-37107 OP: 10/27/16 EXP: 10/27/17	2080 µL		50ug/mL	

Prep: 10/26/16 -D.P. Ex: 4/26/17						
MOTOR OIL CAL STD						
STD.	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT / LOT#
MOTOR OIL	50,000 ug/mL	O2SI CAT#116390-02 LOT#239390-36901 OP:10/26/16 EXP:10/26/17	1mL	25mL	2000ug/mL	MC LOT# 56098

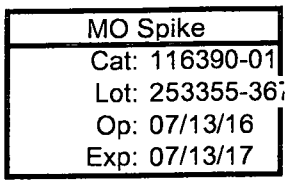
DIESEL SECOND SOURCE prep: 08/01/16-D.P. ex: 07/6/17						
standard	**initial conc.**	**SOURCE DATE**	**ALIQUOT**	**FINAL VOL.**	**FINAL CONC.**	**SOLVENT LOT**
DIESEL SECOND SOURCE	50,000 ug/mL	O2SI CAT#011598-03-SS LOT#244813-34634 OP: 08/28/15 Exp 03/14/19	200uL	10mL	1000ug/mL	MC #56061

MOTOR OIL SECOND SOURCE prep: 07/6/16-L.H. ex: 07/6/17						
standard	initial conc.	SOURCE DATE	ALIQUOT	FINAL VOL.	FINAL CONC.	SOLVENT LOT
MOTOR OIL SECOND SOURCE	50,000 ug/mL	O2SI CAT#116390-02-SS LOT#244814-34637 OP: 07/06/16 Exp 07/06/17	200uL	10mL	1000ug/mL	MC #56061

DIESEL CCV 400ug/ml						
Prep: 11/03/16-D.P. Ex: 02/03/16						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
DIESEL STD.	1000 µg/mL	Diesel Std.	2000µL	5mL	400 µg/ml	MC
	PREP:	11/03/16				56098
	Exp:	06/03/17				

MOTOR OIL CCV 1000ppm						
Prep: 11/21/16-G.A. Ex: 2/21/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
MO STD.	2000 µg/mL	MO Std.	2500µL	5mL	1000 µg/ml	MC
	PREP:	10/26/16				56098
	Exp:	04/26/17				

Diesel Fuel #2
Conc. 50000 ug/ml
O2SI
CAT #011598-03
LOT# 237562-37102
OP: 10/25/16 RH
EXP: 10/25/17


MO Spike
Cat: 116390-01
Lot: 253355-36
Op: 07/13/16
Exp: 07/13/17

THC Surrogate
Cat: 110316-05
Lot: 266278-37
Op: 10/27/16
Exp: 10/27/17

_SEP011LL

Organic Extraction Worksheet

Method	THC Sep Fun Ext 3510C (LOW LEVEL)	Extraction Set	161219A	Extraction Method	SEP011LL	Units	mL

Spiked ID 1	Diesel Spike 12-13-16 exp 12-13-17		Surrogate ID 1	THC Surrogate 12-14-16 exp 12-14-17	
Spiked ID 2	Motor Oil Spike 12-12-16 exp 12-12-17		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	12/19/16 11:15	
Spiked ID 8			Ext. End Time:	12/20/16 15:20	
			GC Requires Extract By:	12/21/16 0:00	

pH1			Water Bath Temp Criteria	35,35,35 °
pH2				
pH3				

Spiked By: KY **Date** 12/19/16 **Witnessed By:** DL **Date** 12/19/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	161219A Blk				0.1	1	1500	2	7	12/19/16 11:15	
						equip	E-WB1				
2	161219A LCS-1		0.040	1	0.1	1	1500	2	7	12/19/16 11:15	
						equip	E-WB2				
3	161219A LCS-2		0.040	2	0.1	1	1500	2	7	12/19/16 11:15	
						equip	E-WB3				
4	161219A LCSD-1		0.040	1	0.1	1	1500	2	7	12/19/16 11:15	
						equip	E-WB1				
5	161219A LCSD-2		0.040	2	0.1	1	1500	2	7	12/19/16 11:15	
						equip	E-WB2				
6	AZ47494	AZ47494W10			0.1	1	1500	2	7	12/19/16 11:15	81760 1 WEEK
						equip	E-WB3				
7	AZ47495	AZ47495W14			0.1	1	1500	2	7	12/19/16 11:15	81760 1 WEEK
						equip	E-WB1				
8	AZ47496	AZ47496W12			0.1	1	1500	2	7	12/19/16 11:15	81760 1 WEEK
						equip	E-WB2				
9	AZ47497	AZ47497W13			0.1	1	1500	2	7	12/19/16 11:15	81760 1 WEEK
						equip	E-WB3				
10	AZ47498	AZ47498W18			0.1	1	1500	2	7	12/19/16 11:15	81760 1 WEEK
						equip	E-WB1				
11	AZ47658	AZ47658W11			0.1	1	1500	2	7	12/19/16 11:15	81776 1 WEEK
						equip	E-WB2				
12	AZ47659	AZ47659W06			0.1	1	1500	2	7	12/19/16 11:15	81776 1 WEEK
						equip	E-WB3				
13	AZ47660	AZ47660W10			0.1	1	1500	2	7	12/19/16 11:15	81776 1 WEEK
						equip	E-WB1				
14	AZ47661	AZ47661W07			0.1	1	1500	2	7	12/19/16 11:15	81776 1 WEEK
						equip	E-WB2				
15	AZ47662	AZ47662W06			0.1	1	1500	2	7	12/19/16 11:15	81776 1 WEEK
						equip	E-WB3				
16	AZ47663	AZ47663W11			0.1	1	1500	2	7	12/19/16 11:15	81776 1 WEEK
						equip	E-WB1				

Solvent and Lot#	
MC	56153
Na2SO4	16C255214
ph-indicator strips	HC 574756
Filter Paper	400112

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	DP.
Date	12/20/16
Time	16:30
Refrigerator	Hobart

	Technician's Initials
Scanned By	KY
Sample Preparation	KY,JR
Extraction	KY,JR,DL
Concentration	DL

Modified	12/20/16 3:58:42 PM

Reviewed By: [signature] **Date** 12/20/16

_SEP011LL

Organic Extraction Worksheet

Method	THC Sep Fun Ext 3510C (LOW LEVEL)	Extraction Set	161219A	Extraction Method	SEP011LL	Units	mL

Spiked ID 1	Diesel Spike 12-13-16 exp 12-13-17		Surrogate ID 1	THC Surrogate 12-14-16 exp 12-14-17	
Spiked ID 2	Motor Oil Spike 12-12-16 exp 12-12-17		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	12/19/16 11:15	
Spiked ID 8			Ext. End Time:	12/20/16 15:20	
			GC Requires Extract By:	12/21/16 0:00	

pH1			Water Bath Temp Criteria	35,35,35 °
pH2				
pH3				

Spiked By: KY **Date** 12/19/16 **Witnessed By:** DL **Date** 12/19/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
17	AZ47664	AZ47664W13			0.1	1	1500	2	7	12/19/16 11:15	81776 1 WEEK
						equip	E-WB2				
18	AZ47665	AZ47665W12			0.1	1	1500	2	7	12/19/16 11:15	81776 1 WEEK
						equip	E-WB3				

KLo 12/20/16

Solvent and Lot#	
MC	56153
Na2SO4	16C255214
ph-indicator strips	HC 574756
Filter Paper	400112

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	D.P.
Date	12/20/16
Time	16:30
Refrigerator	Hobart

	Technician's Initials
Scanned By	KY
Sample Preparation	KY,JR
Extraction	KY,JR,DL
Concentration	DL

Modified	12/20/16 3:58:42 PM

Reviewed By: KLo **Date** 12/20/16

Injection Log

Directory: G:\APOLLO\DATA\161028\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	1028002.D	1	MO 20ppb 10/28/16	Mix(B)	10-28-16 9:07:30
2	3	1028003.D	1	MO 50ppb 10/28/16	Mix(B)	10-28-16 9:28:13
3	4	1028004.D	1	MO 250ppb 10/28/16	Mix(B)	10-28-16 9:49:06
4	5	1028005.D	1	MO 1000ppb 10/28/16	Mix(B)	10-28-16 10:09:58
5	6	1028006.D	1	MO 1500ppb 10/28/16	Mix(B)	10-28-16 10:30:51
6	7	1028007.D	1	MO 2000ppb 10/28/16	Mix(B)	10-28-16 10:51:50
7	8	1028008.D	1	MO SS 1000ppb 7/6/16	Mix(B)	10-28-16 11:12:44
8	4	1103004.D	1	DIESEL 10ppb 11/3/16	Mix(A)	11-3-16 9:45:14
9	6	1103006.D	1	DIESEL 400ppb 11/3/16	Mix(A)	11-3-16 10:26:16
10	7	1103007.D	1	DIESEL 600ppb 11/3/16	Mix(A)	11-3-16 10:46:56
11	8	1103008.D	1	DIESEL 800ppb 11/3/16	Mix(A)	11-3-16 11:07:39
12	9	1103009.D	1	DIESEL 1000ppb 11/3/16	Mix(A)	11-3-16 11:28:31
13	11	1103011.D	1	DIESEL 100ppb 11/3/16	Mix(A)	11-3-16 12:56:47
14	12	1103012.D	1	DIESEL-SS 400ppb 8/1/16	Mix(A)	11-3-16 13:25:11
15	23	1220023.D	1	CCV: DIESEL 400ppb 12/8/16	Mix(A)	12-20-16 17:45:54
16	24	1220024.D	1	CCV: MO 1000ppb 12/8/16	Mix(B)	12-20-16 18:06:21
17	25	1220025.D	1.33333	161219A BLK 2/1500	Water	12-20-16 18:26:45
18	26	1220026.D	1.33333	161219A LCS-1 2/1500	Water	12-20-16 18:47:04
19	27	1220027.D	1.33333	161219A LCS-2 2/1500	Water	12-20-16 19:07:31
20	28	1220028.D	1.33333	161219A LCSD-1 2/1500	Water	12-20-16 19:27:45
21	29	1220029.D	1.33333	161219A LCSD-2 2/1500	Water	12-20-16 19:47:59
22	35	1220035.D	1.33333	AZ47658W11 2/1500	Water	12-20-16 21:49:06
23	36	1220036.D	1.33333	AZ47659W06 2/1500	Water	12-20-16 22:09:10
24	37	1220037.D	1.33333	AZ47660W10 2/1500	Water	12-20-16 22:29:20
25	38	1220038.D	1.33333	AZ47661W07 2/1500	Water	12-20-16 22:49:24
26	39	1220039.D	1.33333	AZ47662W06 2/1500	Water	12-20-16 23:09:29
27	42	1220042.D	1.33333	AZ47663W11 2/1500	Water	12-21-16 0:09:34
28	43	1220043.D	1.33333	AZ47664W13 2/1500	Water	12-21-16 0:29:35
29	44	1220044.D	1.33333	AZ47665W12 2/1500	Water	12-21-16 0:49:35
30	45	1220045.D	1	CCV: DIESEL 400ppb 12/8/16	Mix(A)	12-21-16 1:09:38
31	46	1220046.D	1	CCV: MO 1000ppb 12/8/16	Mix(B)	12-21-16 1:29:37

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank
EPA 8270D SIM

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161219W-47494 - 214864**
Batch ID: #SIMDO-161219A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/19/16	12/21/16
BLANK	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/19/16	12/21/16
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	12/19/16	12/21/16
BLANK	SURROGATE: 2-FLUORBIPHENY	65.2	53-106			%	12/19/16	12/21/16
BLANK	SURROGATE: NITROBENZENE-	81.8	55-111			%	12/19/16	12/21/16
BLANK	SURROGATE: TERPHENYL-D14 (	86.6	58-132			%	12/19/16	12/21/16

Quant Method: L1212P.M
Run #: 1212L163
Instrument: Linus
Sequence: L161212
Initials: RHA

GC SC-Blank-REG MDLs-DOD
Printed: 12/21/16 12:56:48 PM

Laboratory Control Spike Recovery
EPA 8270D SIM

APPL ID: **161219W-47494 LCS - 214864**
Batch ID: #SIMDO-161219A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1-METHYLNAPHTHALENE	5.00	3.02	60.4	41-115
2-METHYLNAPHTHALENE	5.00	3.13	62.6	39-114
NAPHTHALENE	5.00	3.12	62.4	43-114
SURROGATE: 2-FLUORBIPHENYL (S)	5.00	3.30	66.0	53-106
SURROGATE: NITROBENZENE-D5 (S)	5.00	3.54	70.8	55-111
SURROGATE: TERPHENYL-D14 (S)	5.00	4.13	82.6	58-132

Comments: _____

Primary	SPK
Quant Method :	L1212P.M
Extraction Date :	12/19/16
Analysis Date :	12/20/16
Instrument :	Linus
Run :	1212L140
Initials :	RHA

Printed: 12/21/16 12:56:41 PM
APPL Standard LCS

8270D-SIM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81776

Case No: 81776 Date Analyzed: 12/20/16

Matrix: WATER Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: 2-FLUORBIPHENYL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161219A-LCS	Lab Control Spike	53-106	66.0		55-111	70.8	
AZ47658	ERH147	53-106	55.1		55-111	66.0	
AZ47659	ERH148	53-106	56.7		55-111	68.1	
AZ47660	ERH152	53-106	63.7		55-111	74.6	
AZ47661	ERH149	53-106	57.4		55-111	68.6	
AZ47662	ERH150	53-106	55.7		55-111	65.0	
AZ47663	ERH138	53-106	62.6		55-111	70.4	
AZ47664	ERH144	53-106	57.5		55-111	75.0	
AZ47665	ERH140	53-106	65.7		55-111	76.8	
161219A-BLK	Blank	53-106	65.2		55-111	81.8	

Comments: Batch: #SIMDO-161219A

8270D-SIM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81776

Case No: 81776 Date Analyzed: 12/20/16

Matrix: WATER Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: TERPHENYL-D14 (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
161219A-LCS	Lab Control Spike	58-132	82.6				
AZ47658	ERH147	58-132	77.3				
AZ47659	ERH148	58-132	80.2				
AZ47660	ERH152	58-132	86.0				
AZ47661	ERH149	58-132	80.1				
AZ47662	ERH150	58-132	73.6				
AZ47663	ERH138	58-132	77.1				
AZ47664	ERH144	58-132	78.2				
AZ47665	ERH140	58-132	84.6				
161219A-BLK	Blank	58-132	86.6				

Comments: Batch: #SIMDO-161219A

8270D-SIM

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81776

Case No: 81776 Date Analyzed: 12/21/16

Matrix: WATER Instrument: Linus

Blank ID: 161219A-BLK Time Analyzed: 1142

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161219A-LCS	Lab Control Spike	1212L140	12/20/16 1758
AZ47658	ERH147	1212L147	12/20/16 2151
AZ47659	ERH148	1212L148	12/20/16 2224
AZ47660	ERH152	1212L149	12/20/16 2258
AZ47661	ERH149	1212L150	12/20/16 2331
AZ47662	ERH150	1212L151	12/21/16 0004
AZ47663	ERH138	1212L152	12/21/16 0037
AZ47664	ERH144	1212L153	12/21/16 0110
AZ47665	ERH140	1212L154	12/21/16 0144
161219A-BLK	Blank	1212L163	12/21/16 1142

Comments: Batch: #SIMDO-161219A

Printed: 12/21/16 12:56:38 PM
Form 4, Blank Summary

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81776
Matrix: Water
ID: SV Tune 11/15/16

SDG No: 81776
Date Analyzed: 12/12/16
Instrument: Linus
Time Analyzed: 10:19

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.1 ug/ml PAH 12/12/	1212L005.D	12/12/16 10:36
2		0.2 ug/ml PAH 12/12/	1212L006.D	12/12/16 11:09
3		5.0 ug/ml PAH 12/12/	1212L009.D	12/12/16 12:49
4		10.0 ug/ml PAH 12/12	1212L010.D	12/12/16 13:22
5		50.0 ug/ml PAH 12/12	1212L011.D	12/12/16 13:54
6		100.0 ug/ml PAH 12/1	1212L012.D	12/12/16 14:28
7		0.5 ug/ml PAH 12/12/	1212L013.D	12/12/16 15:01
8		1.0 ug/ml PAH 12/12/	1212L014.D	12/12/16 15:34
9		SS PAH 12/12/16	1212L015.D	12/12/16 16:07
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	30 - 60% of mass 198	31.0
68	0 - 2% of mass 69	0.0
69	100 - 100% of mass 69	100.0
70	0 - 2% of mass 69	0.6
127	40 - 60% of mass 198	50.3
197	0 - 1% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.9
275	10 - 30% of mass 198	26.2
365	1 - 100% of mass 198	2.6
441	0.01 - 100% of mass 443	76.7
442	40 - 150% of mass 198	65.3
443	17 - 23% of mass 442	21.6

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81776
Matrix: Water
ID: SV Tune 12/15/16

SDG No: 81776
Date Analyzed: 12/20/16
Instrument: Linus
Time Analyzed: 16:35

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		5.0 ug/ml PAH 12/12/	1212L138.D	12/20/16 16:52
2	Lab Control Spike	161219A LCS-1 1/1000	1212L140.D	12/20/16 17:58
3	ERH147	AZ47658W13 1/1070	1212L147.D	12/20/16 21:51
4	ERH148	AZ47659W05 1/1070	1212L148.D	12/20/16 22:24
5	ERH152	AZ47660W09 1/1070	1212L149.D	12/20/16 22:58
6	ERH149	AZ47661W10 1/1070	1212L150.D	12/20/16 23:31
7	ERH150	AZ47662W07 1/1070	1212L151.D	12/21/16 0:04
8	ERH138	AZ47663W12 1/1070	1212L152.D	12/21/16 0:37
9	ERH144	AZ47664W09 1/1050	1212L153.D	12/21/16 1:10
10	ERH140	AZ47665W10 1/1070	1212L154.D	12/21/16 1:44
11		5.0 ug/ml PAH 12/12/	1212L156.D	12/21/16 2:33
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	30 - 60% of mass 198	30.4
68	0 - 2% of mass 69	0.0
69	100 - 100% of mass 69	100.0
70	0 - 2% of mass 69	0.2
127	40 - 60% of mass 198	48.4
197	0 - 1% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.9
275	10 - 30% of mass 198	27.0
365	1 - 100% of mass 198	2.7
441	0.01 - 100% of mass 443	76.5
442	40 - 150% of mass 198	75.1
443	17 - 23% of mass 442	21.2

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81776
Matrix: Water
ID: SV Tune 12/15/16

SDG No: 81776
Date Analyzed: 12/21/16
Instrument: Linus
Time Analyzed: 9:07

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		5.0 ug/ml PAH 12/12/	1212L159.D	12/21/16 9:24
2	Blank	161219A BLK 1/1000	1212L163.D	12/21/16 11:42
3		5.0 ug/ml PAH 12/12/	1212L165.D	12/21/16 12:48
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	30 - 60% of mass 198	30.4
68	0 - 2% of mass 69	0.0
69	100 - 100% of mass 69	100.0
70	0 - 2% of mass 69	0.4
127	40 - 60% of mass 198	48.8
197	0 - 1% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.8
275	10 - 30% of mass 198	26.6
365	1 - 100% of mass 198	2.6
441	0.01 - 100% of mass 443	78.9
442	40 - 150% of mass 198	75.0
443	17 - 23% of mass 442	20.7

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81776

Lab File ID (Standard): 1212L009.D Date Analyzed: 12/12/16

Instrument ID: Linus Time Analyzed: 12:49

GC Column: ID: Heated Purge: (Y/N)

		Napthalene-D8(IS)		Acenaphthene-D10(IS)		Phenanthrene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1900	5.87	1038	7.92	1930	9.84
	UPPER LIMIT	3800	6.37	2076	8.42	3860	10.34
	LOWER LIMIT	950	5.37	519	7.42	965	9.34
	SAMPLE NO.						
01	5.0 ug/ml PAH 12/12/16	2013	5.87	1105	7.92	2053	9.85
02	161219A LCS-1 1/1000	1028	5.88	576	7.92	1047	9.85
03	AZ47658W13 1/1070	2228	5.88	1225	7.92	2234	9.85
04	AZ47659W05 1/1070	2097	5.88	1165	7.92	2128	9.85
05	AZ47660W09 1/1070	1405	5.88	779	7.92	1385	9.86
06	AZ47661W10 1/1070	2327	5.88	1301	7.92	2322	9.85
07	AZ47662W07 1/1070	2231	5.88	1253	7.92	2218	9.85
08	AZ47663W12 1/1070	2071	5.88	1150	7.92	2004	9.86
09	AZ47664W09 1/1050	2106	5.87	1209	7.92	2102	9.85
10	AZ47665W10 1/1070	2021	5.88	1142	7.92	2022	9.85
11	5.0 ug/ml PAH 12/12/16	1887	5.87	1037	7.92	1900	9.85
12	5.0 ug/ml PAH 12/12/16	1964	5.87	1068	7.92	1953	9.85
13	161219A BLK 1/1000	2265	5.88	1290	7.92	2306	9.86
14	5.0 ug/ml PAH 12/12/16	1898	5.88	1045	7.92	1899	9.85
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 81776

Lab File ID (Standard): 1212L009.D Date Analyzed: 12/12/16

Instrument ID: Linus Time Analyzed: 12:49

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Chrysene-D12(IS)		Perylene-D12(IS)			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	2367	16.79	2172	20.54		
	UPPER LIMIT	4734	17.29	4344	21.04		
	LOWER LIMIT	1184	16.29	1086	20.04		
	SAMPLE NO.						
01	5.0 ug/ml PAH 12/12/16	2606	16.80	2443	20.56		
02	161219A LCS-1 1/1000	1327	16.81	1262	20.58		
03	AZ47658W13 1/1070	2826	16.81	2728	20.58		
04	AZ47659W05 1/1070	2735	16.81	2617	20.58		
05	AZ47660W09 1/1070	1783	16.82	1699	20.59		
06	AZ47661W10 1/1070	2923	16.81	2832	20.58		
07	AZ47662W07 1/1070	2771	16.82	2652	20.59		
08	AZ47663W12 1/1070	2553	16.83	2414	20.59		
09	AZ47664W09 1/1050	2783	16.80	2662	20.57		
10	AZ47665W10 1/1070	2605	16.82	2399	20.59		
11	5.0 ug/ml PAH 12/12/16	2454	16.80	2299	20.56		
12	5.0 ug/ml PAH 12/12/16	2506	16.80	2321	20.56		
13	161219A BLK 1/1000	2860	16.83	2678	20.59		
14	5.0 ug/ml PAH 12/12/16	2432	16.80	2263	20.57		
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

ORGANICS

Sample Data

APPL, INC.

EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH147
Sample Collection Date: 12/14/16

ARF: 81776
APPL ID: AZ47658
QCG: #SIMDO-161219A-214864

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/19/16	12/20/16
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/19/16	12/20/16
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	12/19/16	12/20/16
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	55.1	53-106			%	12/19/16	12/20/16
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	66.0	55-111			%	12/19/16	12/20/16
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	77.3	58-132			%	12/19/16	12/20/16

Quant Method: L1212P.M
Run #: 1212L147
Instrument: Linus
Sequence: L161212
Dilution Factor: 1
Initials: RHA

Printed: 12/21/16 12:56:36 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L147.D
Acq On : 20 Dec 16 21:51
Sample : AZ47658W13 1/1070
Misc : water

Vial: 47
Operator: MA
Inst : Linus
Multiplr: 0.93

Quant Time: Dec 21 8:40 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	2228	2.50000 ppb	0.01
6) Acenaphthene-D10(IS)	7.92	164	1225	2.50000 ppb	0.00
11) Phenanthrene-D10(IS)	9.85	188	2234	2.50000 ppb	0.01
15) Chrysene-D12(IS)	16.81	240	2826	2.50000 ppb	0.02
21) Perylene-D12(IS)	20.58	264	2728	2.50000 ppb	0.04
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.03	82	880	3.08382 ppb	0.00
Spiked Amount 4.673			Recovery = 65.998%		
7) Surrogate Recovery (FBP)	7.13	172	1975	2.57555 ppb	0.00
Spiked Amount 4.673			Recovery = 55.126%		
17) Surrogate Recovery (TPH)	13.81	244	3440	3.61345 ppb	-0.01
Spiked Amount 4.673			Recovery = 77.318%		
Target Compounds					Qvalue

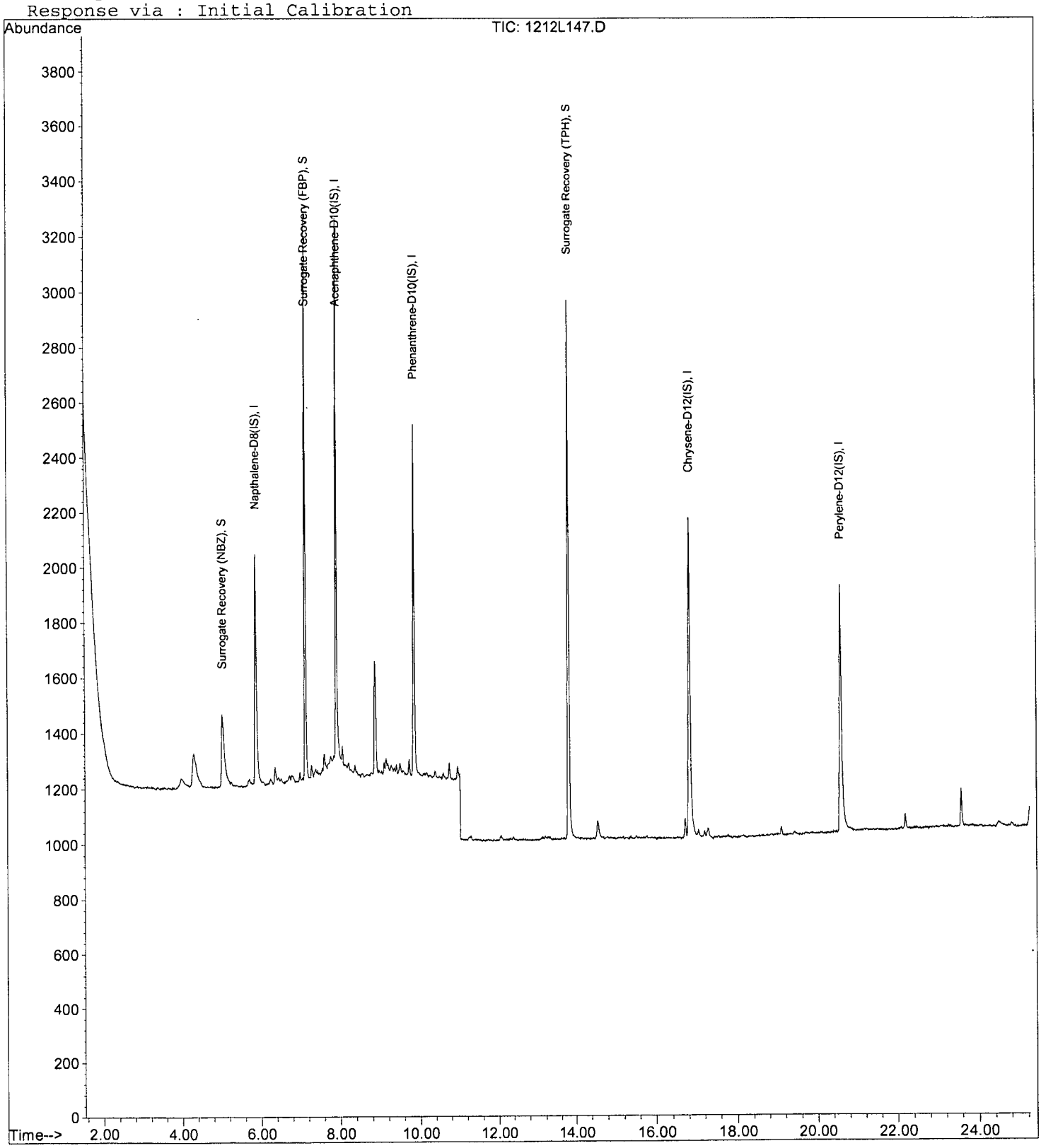
(#) = qualifier out of range (m) = manual integration
1212L147.D L1212P.M Wed Dec 21 12:03:58 2016

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L147.D Vial: 47
Acq On : 20 Dec 16 21:51 Operator: MA
Sample : AZ47658W13 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Dec 21 8:40 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH148
Sample Collection Date: 12/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776
APPL ID: AZ47659
QCG: #SIMDO-161219A-214864

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/19/16	12/20/16
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/19/16	12/20/16
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	12/19/16	12/20/16
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	56.7	53-106			%	12/19/16	12/20/16
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	68.1	55-111			%	12/19/16	12/20/16
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	80.2	58-132			%	12/19/16	12/20/16

Quant Method: L1212P.M
Run #: 1212L148
Instrument: Linus
Sequence: L161212
Dilution Factor: 1
Initials: RHA

Printed: 12/21/16 12:56:36 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L148.D Vial: 48
Acq On : 20 Dec 16 22:24 Operator: MA
Sample : AZ47659W05 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Dec 21 12:04 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	2097	2.50000	ppb	0.01
6) Acenaphthene-D10(IS)	7.92	164	1165	2.50000	ppb	0.00
11) Phenanthrene-D10(IS)	9.85	188	2128	2.50000	ppb	0.01
15) Chrysene-D12(IS)	16.81	240	2735	2.50000	ppb	0.02
21) Perylene-D12(IS)	20.58	264	2617	2.50000	ppb	0.04
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.03	82	856	3.18183	ppb	0.00
Spiked Amount 4.673			Recovery = 68.095%			
7) Surrogate Recovery (FBP)	7.13	172	1929	2.64911	ppb	0.00
Spiked Amount 4.673			Recovery = 56.689%			
17) Surrogate Recovery (TPH)	13.81	244	3448	3.74648	ppb	0.00
Spiked Amount 4.673			Recovery = 80.164%			
Target Compounds						Qvalue

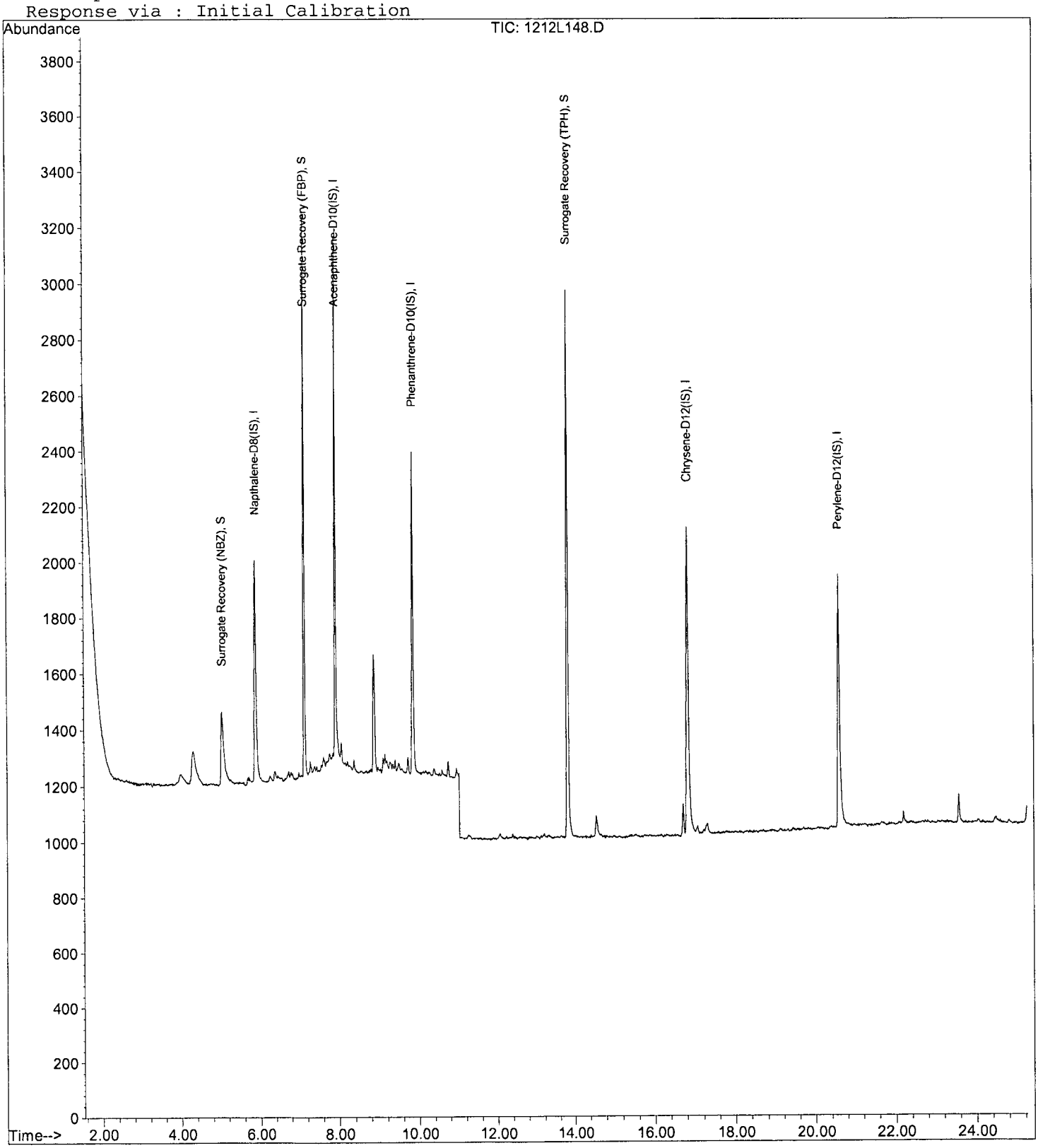
(#) = qualifier out of range (m) = manual integration
1212L148.D L1212P.M Wed Dec 21 12:04:38 2016

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L148.D Vial: 48
Acq On : 20 Dec 16 22:24 Operator: MA
Sample : AZ47659W05 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Dec 21 12:04 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH152
Sample Collection Date: 12/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776
APPL ID: AZ47660
QCG: #SIMDO-161219A-214864

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/19/16	12/20/16
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/19/16	12/20/16
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	12/19/16	12/20/16
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	63.7	53-106			%	12/19/16	12/20/16
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	74.6	55-111			%	12/19/16	12/20/16
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	86.0	58-132			%	12/19/16	12/20/16

Quant Method: L1212P.M
Run #: 1212L149
Instrument: Linus
Sequence: L161212
Dilution Factor: 1
Initials: RHA

Printed: 12/21/16 12:56:36 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L149.D Vial: 49
Acq On : 20 Dec 16 22:58 Operator: MA
Sample : AZ47660W09 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Dec 21 8:40 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	1405	2.50000 ppb	0.01
6) Acenaphthene-D10(IS)	7.92	164	779	2.50000 ppb	0.00
11) Phenanthrene-D10(IS)	9.86	188	1385	2.50000 ppb	0.02
15) Chrysene-D12(IS)	16.82	240	1783	2.50000 ppb	0.03
21) Perylene-D12(IS)	20.59	264	1699	2.50000 ppb	0.05
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.03	82	631	3.48492 ppb	0.00
Spiked Amount 4.673			Recovery = 74.579%		
7) Surrogate Recovery (FBP)	7.13	172	1441	2.97679 ppb	0.00
Spiked Amount 4.673			Recovery = 63.708%		
17) Surrogate Recovery (TPH)	13.81	244	2407	4.01997 ppb	0.00
Spiked Amount 4.673			Recovery = 86.028%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

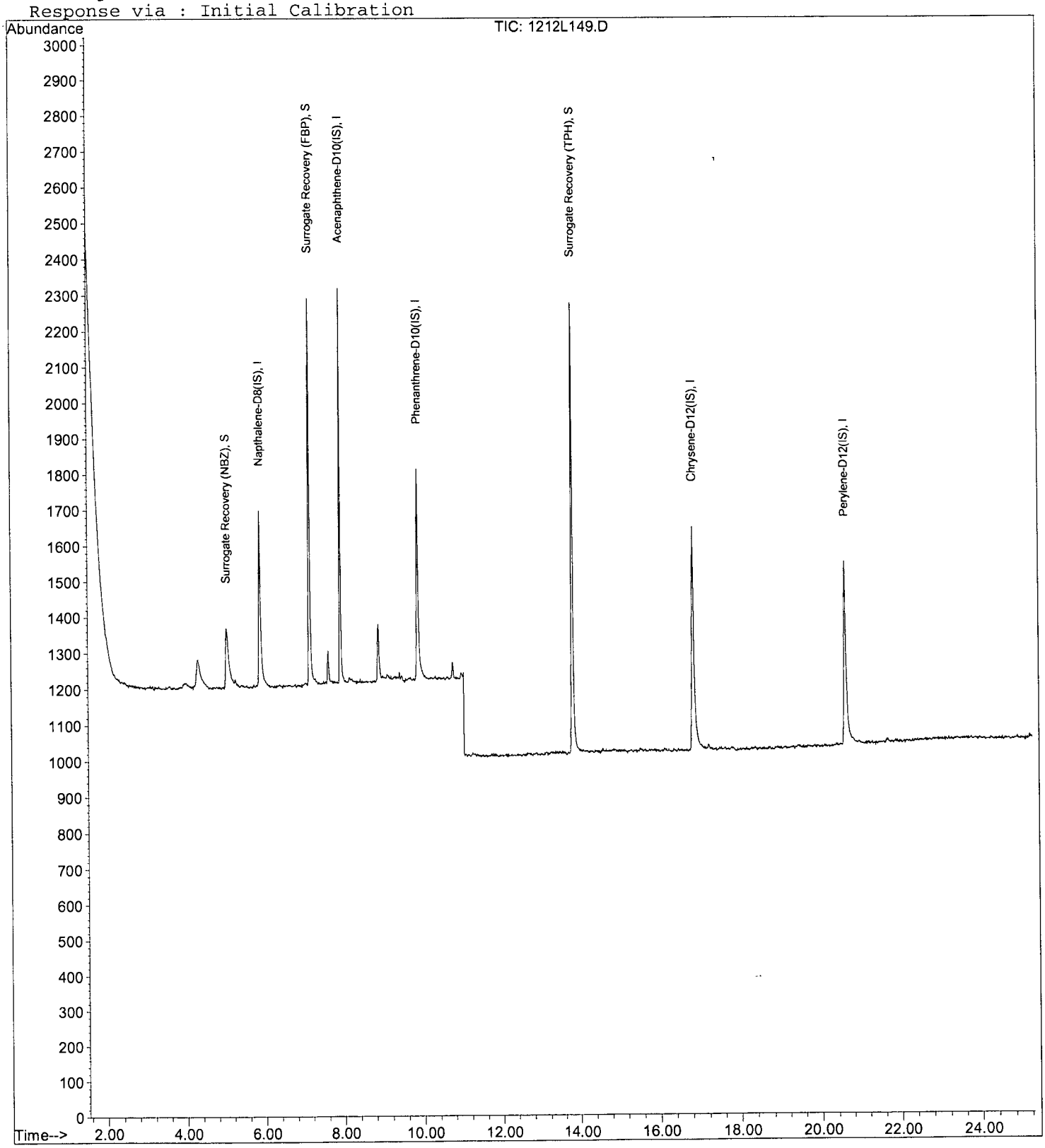
Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L149.D
Acq On : 20 Dec 16 22:58
Sample : AZ47660W09 1/1070
Misc : water

Vial: 49
Operator: MA
Inst : Linus
Multiplr: 0.93

Quant Time: Dec 21 8:40 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH149

Sample Collection Date: 12/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776

APPL ID: AZ47661

QCG: #SIMDO-161219A-214864

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/19/16	12/20/16
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/19/16	12/20/16
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	12/19/16	12/20/16
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	57.4	53-106			%	12/19/16	12/20/16
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	68.6	55-111			%	12/19/16	12/20/16
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	80.1	58-132			%	12/19/16	12/20/16

Quant Method: L1212P.M
Run #: 1212L150
Instrument: Linus
Sequence: L161212
Dilution Factor: 1
Initials: RHA

Printed: 12/21/16 12:56:36 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L150.D Vial: 50
Acq On : 20 Dec 16 23:31 Operator: MA
Sample : AZ47661W10 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Dec 21 8:40 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	2327	2.50000	ppb	0.01
6) Acenaphthene-D10(IS)	7.92	164	1301	2.50000	ppb	0.00
11) Phenanthrene-D10(IS)	9.85	188	2322	2.50000	ppb	0.01
15) Chrysene-D12(IS)	16.81	240	2923	2.50000	ppb	0.02
21) Perylene-D12(IS)	20.58	264	2832	2.50000	ppb	0.04
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.03	82	957	3.20448	ppb	0.00
Spiked Amount 4.673			Recovery = 68.566%			
7) Surrogate Recovery (FBP)	7.13	172	2181	2.68392	ppb	0.00
Spiked Amount 4.673			Recovery = 57.438%			
17) Surrogate Recovery (TPH)	13.81	244	3682	3.74333	ppb	0.00
Spiked Amount 4.673			Recovery = 80.100%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

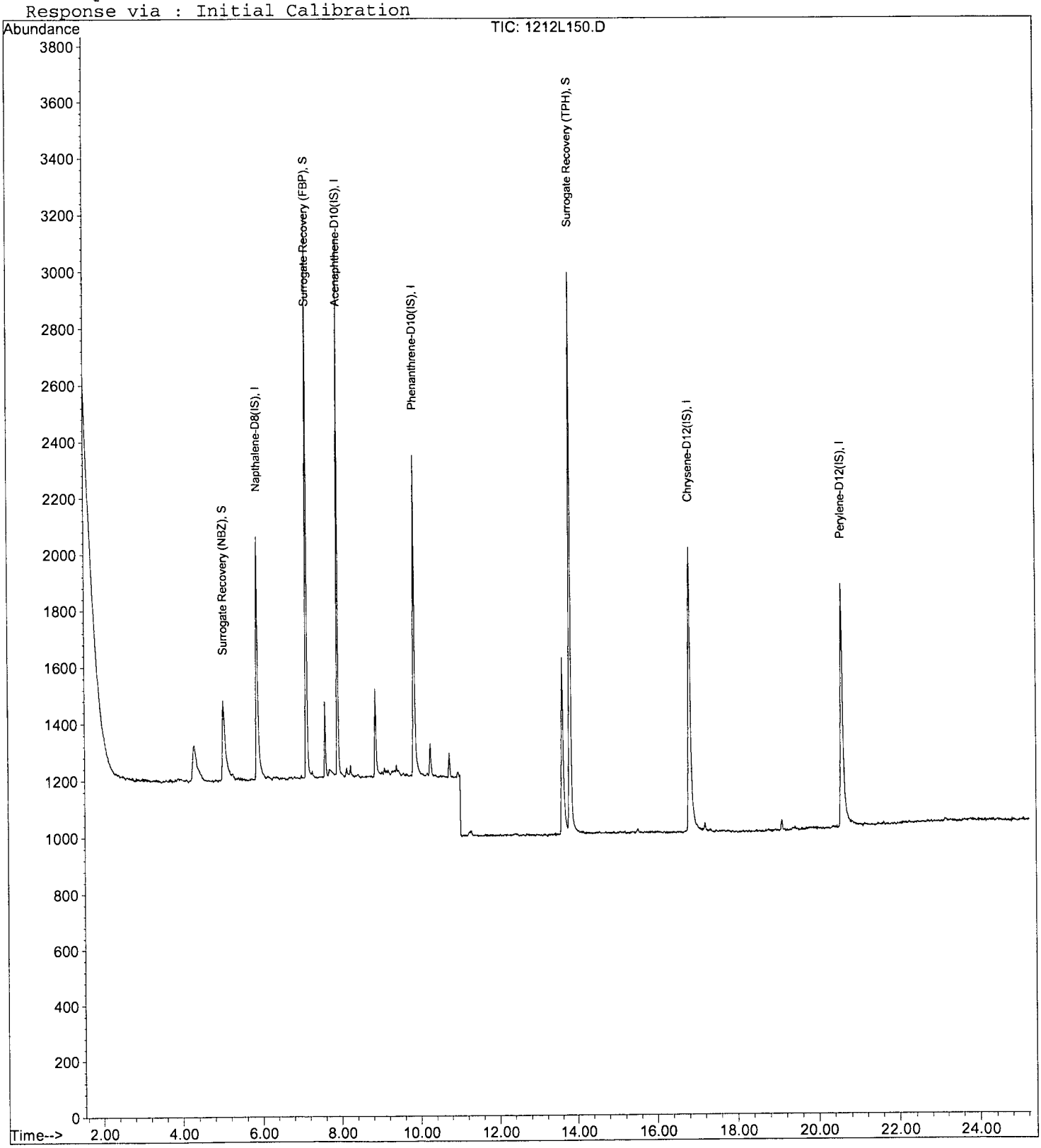
Data File : M:\LINUS\DATA\L161212\1212L150.D
Acq On : 20 Dec 16 23:31
Sample : AZ47661W10 1/1070
Misc : water

Vial: 50
Operator: MA
Inst : Linus
Multiplr: 0.93

Quant Time: Dec 21 8:40 2016

Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH150
Sample Collection Date: 12/14/16

ARF: 81776
APPL ID: AZ47662
QCG: #SIMDO-161219A-214864

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/19/16	12/21/16
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/19/16	12/21/16
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	12/19/16	12/21/16
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	55.7	53-106			%	12/19/16	12/21/16
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	65.0	55-111			%	12/19/16	12/21/16
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	73.6	58-132			%	12/19/16	12/21/16

Quant Method: L1212P.M
Run #: 1212L151
Instrument: Linus
Sequence: L161212
Dilution Factor: 1
Initials: RHA

Printed: 12/21/16 12:56:36 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L151.D Vial: 51
Acq On : 21 Dec 16 00:04 Operator: MA
Sample : AZ47662W07 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Dec 21 8:40 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	2231	2.50000 ppb	0.01
6) Acenaphthene-D10(IS)	7.92	164	1253	2.50000 ppb	0.00
11) Phenanthrene-D10(IS)	9.85	188	2218	2.50000 ppb	0.01
15) Chrysene-D12(IS)	16.82	240	2771	2.50000 ppb	0.03
21) Perylene-D12(IS)	20.59	264	2652	2.50000 ppb	0.05
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.03	82	867	3.03671 ppb	0.00
Spiked Amount 4.673			Recovery = 64.992%		
7) Surrogate Recovery (FBP)	7.13	172	2041	2.60367 ppb	0.00
Spiked Amount 4.673			Recovery = 55.726%		
17) Surrogate Recovery (TPH)	13.81	244	3217	3.44093 ppb	0.00
Spiked Amount 4.673			Recovery = 73.637%		
Target Compounds					Qvalue

(#) = qualifier out of range (m) = manual integration
1212L151.D L1212P.M Wed Dec 21 12:05:35 2016

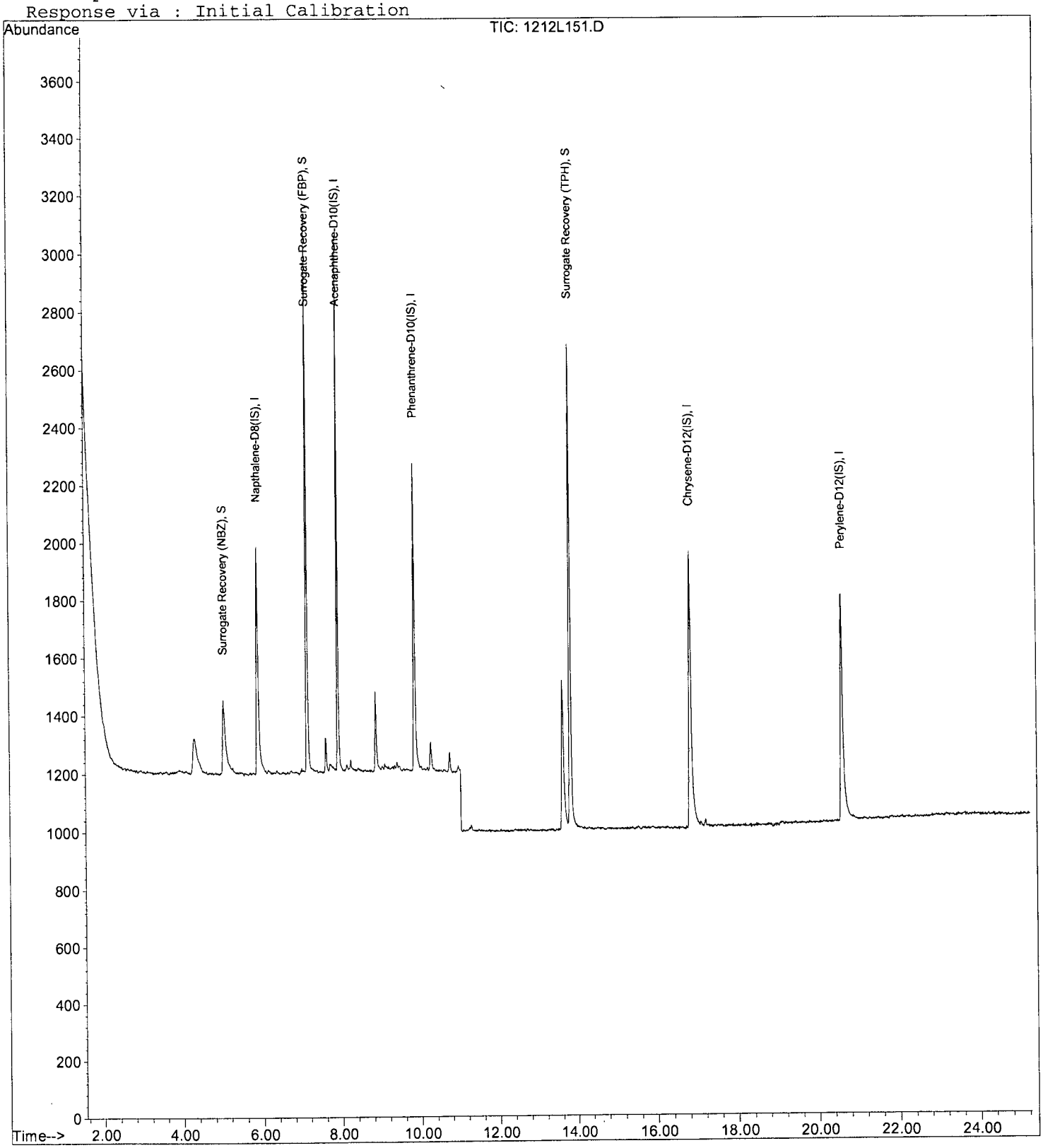
Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L151.D
Acq On : 21 Dec 16 00:04
Sample : AZ47662W07 1/1070
Misc : water

Vial: 51
Operator: MA
Inst : Linus
Multiplr: 0.93

Quant Time: Dec 21 8:40 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81776

Sample ID: ERH138

APPL ID: AZ47663

Sample Collection Date: 12/13/16

QCG: #SIMDO-161219A-214864

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/19/16	12/21/16
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/19/16	12/21/16
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	12/19/16	12/21/16
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	62.6	53-106			%	12/19/16	12/21/16
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	70.4	55-111			%	12/19/16	12/21/16
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	77.1	58-132			%	12/19/16	12/21/16

Quant Method: L1212P.M
Run #: 1212L152
Instrument: Linus
Sequence: L161212
Dilution Factor: 1
Initials: RHA

Printed: 12/21/16 12:56:36 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L152.D Vial: 52
Acq On : 21 Dec 16 00:37 Operator: MA
Sample : AZ47663W12 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Dec 21 8:40 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	2071	2.50000 ppb	0.01
6) Acenaphthene-D10(IS)	7.92	164	1150	2.50000 ppb	0.00
11) Phenanthrene-D10(IS)	9.86	188	2004	2.50000 ppb	0.02
15) Chrysene-D12(IS)	16.83	240	2553	2.50000 ppb	0.04
21) Perylene-D12(IS)	20.59	264	2414	2.50000 ppb	0.05
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.03	82	876	3.29135 ppb	0.00
Spiked Amount 4.673			Recovery = 70.427%		
7) Surrogate Recovery (FBP)	7.13	172	2093	2.92645 ppb	0.00
Spiked Amount 4.673			Recovery = 62.616%		
17) Surrogate Recovery (TPH)	13.82	244	3099	3.60303 ppb	0.00
Spiked Amount 4.673			Recovery = 77.104%		
Target Compounds					Qvalue

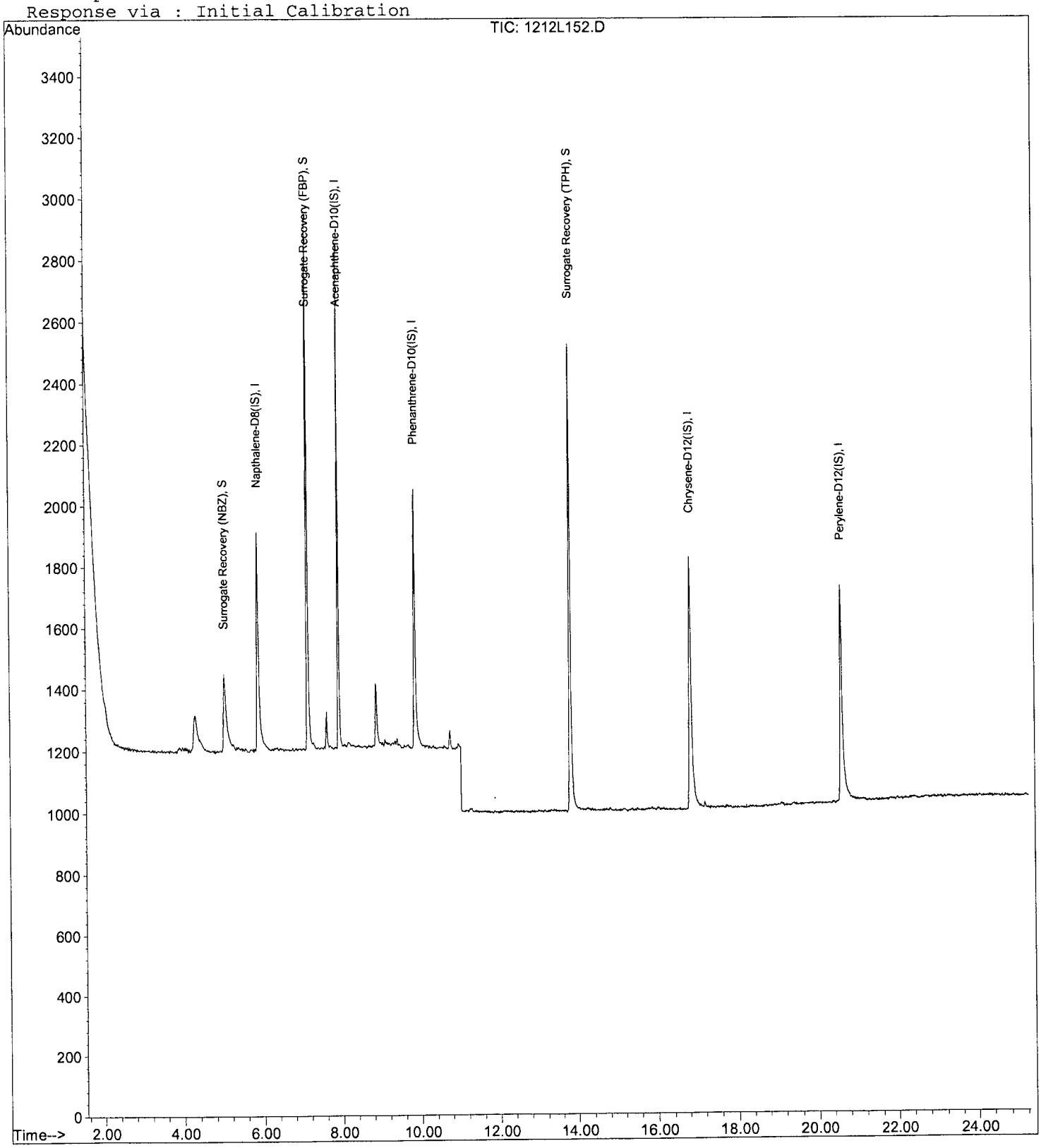
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L152.D Vial: 52
Acq On : 21 Dec 16 00:37 Operator: MA
Sample : AZ47663W12 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Dec 21 8:40 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH144

Sample Collection Date: 12/13/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776

APPL ID: AZ47664

QCG: #SIMDO-161219A-214864

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	17	0.2	0.10	0.06	ug/L	12/19/16	12/21/16
8270D-SIM	2-METHYLNAPHTHALENE	11	0.2	0.10	0.06	ug/L	12/19/16	12/21/16
8270D-SIM	NAPHTHALENE	40	0.2	0.10	0.05	ug/L	12/19/16	12/21/16
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	57.5	53-106			%	12/19/16	12/21/16
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	75.0	55-111			%	12/19/16	12/21/16
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	78.2	58-132			%	12/19/16	12/21/16

Quant Method: L1212P.M
Run #: 1212L153
Instrument: Linus
Sequence: L161212
Dilution Factor: 1
Initials: RHA

Printed: 12/21/16 12:56:36 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L153.D Vial: 53
Acq On : 21 Dec 16 1:10 Operator: MA
Sample : AZ47664W09 1/1050 Inst : Linus
Misc : water Multiplr: 0.95

Quant Time: Dec 21 12:47 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.87	136	2106	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	7.92	164	1209	2.50000	ppb	0.00
11) Phenanthrene-D10(IS)	9.85	188	2102	2.50000	ppb	0.01
15) Chrysene-D12(IS)	16.80	240	2783	2.50000	ppb	0.01
21) Perylene-D12(IS)	20.57	264	2662	2.50000	ppb	0.03
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.03	82	951	3.56984	ppb	0.00
Spiked Amount 4.762			Recovery = 74.970%			
7) Surrogate Recovery (FBP)	7.13	172	2029	2.73821	ppb	0.00
Spiked Amount 4.762			Recovery = 57.498%			
17) Surrogate Recovery (TPH)	13.81	244	3425	3.72416	ppb	0.00
Spiked Amount 4.762			Recovery = 78.204%			
Target Compounds						Qvalue
3) Naphthalene	5.89	128	35288	39.55782	ppb	98
4) 2-Methylnaphthalene	6.70	142	6068	11.18464	ppb	99
5) 1-Methylnaphthalene	6.82	142	10450	17.35149	ppb	99

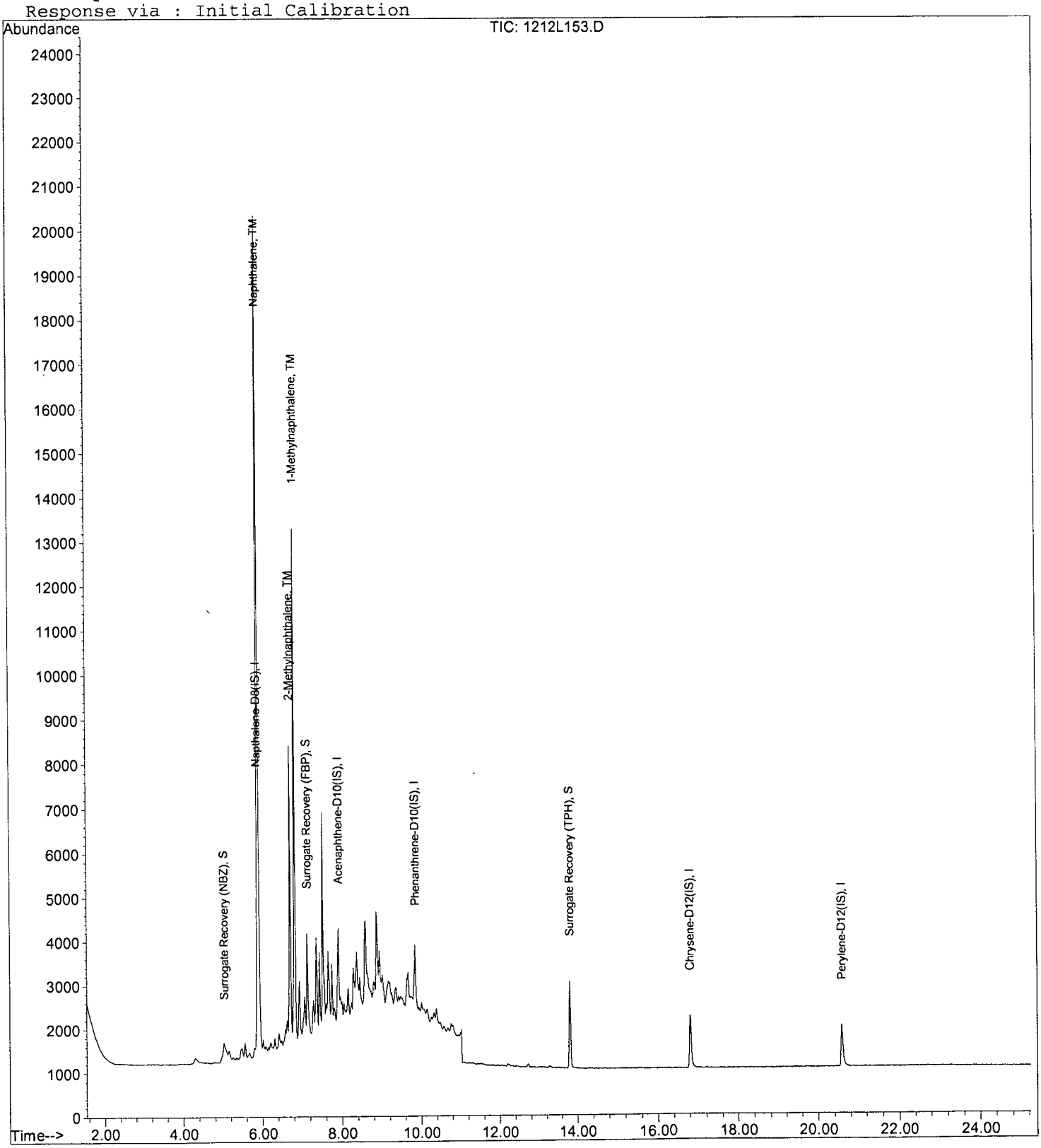
(#) = qualifier out of range (m) = manual integration

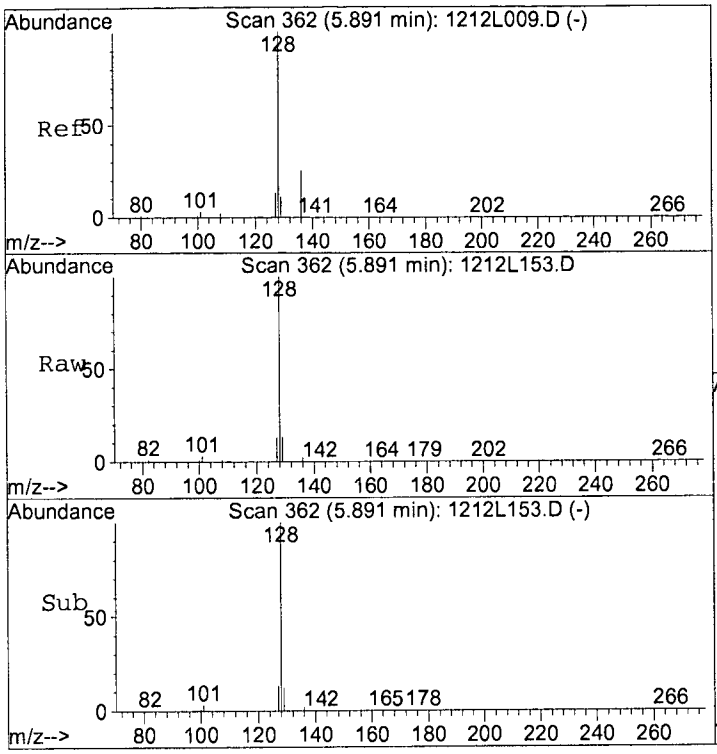
Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L153.D Vial: 53
Acq On : 21 Dec 16 1:10 Operator: MA
Sample : AZ47664W09 1/1050 Inst : Linus
Misc : water Multiplr: 0.95

Quant Time: Dec 21 12:47 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration

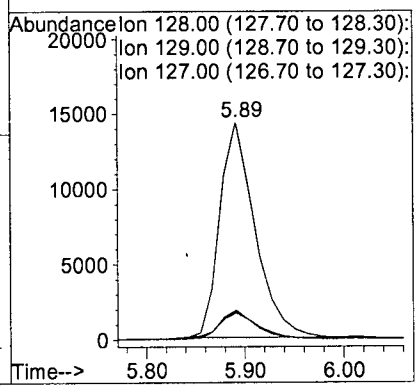


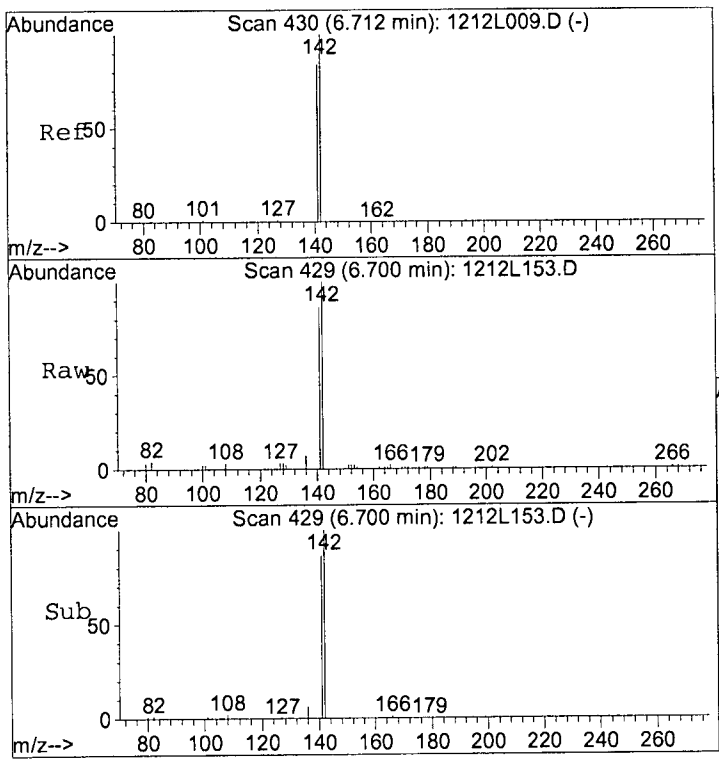


#3
Naphthalene
Concen: 39.55782 ppb
RT: 5.89 min Scan# 362
Delta R.T. 0.00 min
Lab File: 1212L153.D
Acq: 21 Dec 16 1:10

Tgt Ion:128 Resp: 35288

Ion	Ratio	Lower	Upper
128	100		
129	12.2	7.6	14.2
127	13.2	8.8	16.4

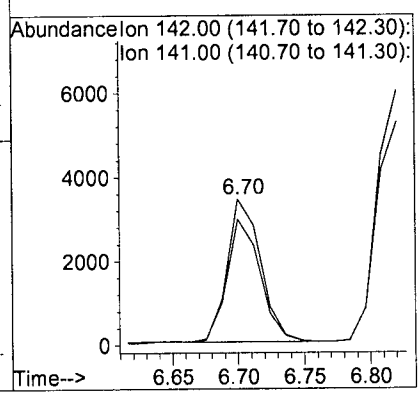


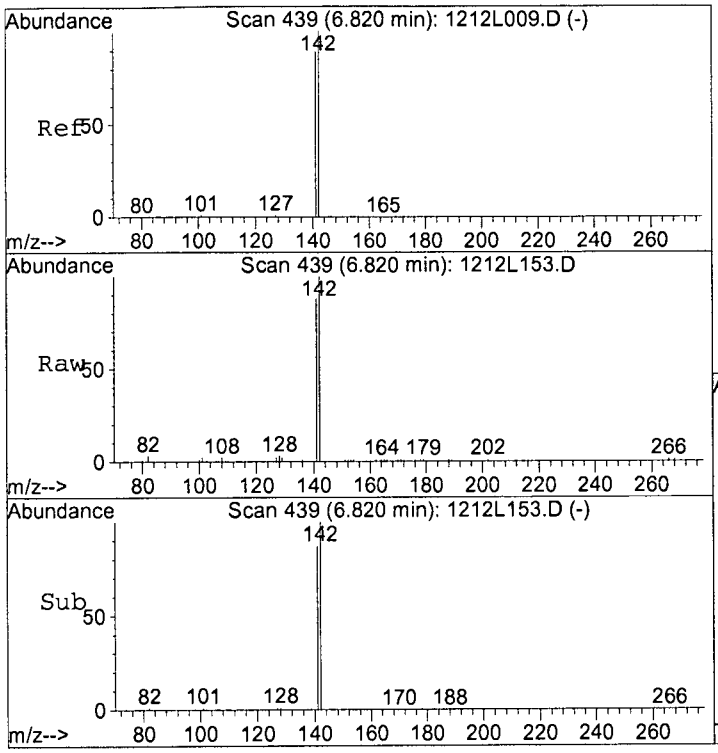


#4
2-Methylnaphthalene
Concen: 11.18464 ppb
RT: 6.70 min Scan# 429
Delta R.T. -0.01 min
Lab File: 1212L153.D
Acq: 21 Dec 16 1:10

Tgt Ion:142 Resp: 6068

Ion	Ratio	Lower	Upper
142	100		
141	85.7	59.4	110.4

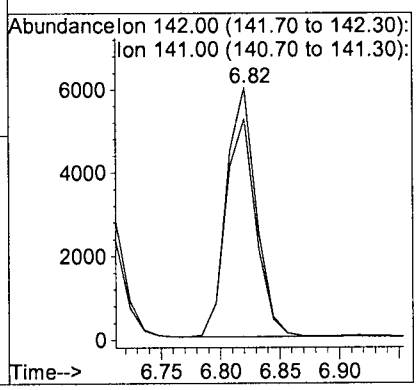




#5
1-Methylnaphthalene
Concen: 17.35149 ppb
RT: 6.82 min Scan# 439
Delta R.T. 0.00 min
Lab File: 1212L153.D
Acq: 21 Dec 16 1:10

Tgt Ion:142 Resp: 10450

Ion	Ratio	Lower	Upper
142	100		
141	87.3	60.2	111.8



EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH140
Sample Collection Date: 12/13/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776
APPL ID: AZ47665
QCG: #SIMDO-161219A-214864

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/19/16	12/21/16
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/19/16	12/21/16
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	12/19/16	12/21/16
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	65.7	53-106			%	12/19/16	12/21/16
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	76.8	55-111			%	12/19/16	12/21/16
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	84.6	58-132			%	12/19/16	12/21/16

Quant Method: L1212P.M
Run #: 1212L154
Instrument: Linus
Sequence: L161212
Dilution Factor: 1
Initials: RHA

Printed: 12/21/16 12:56:36 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L154.D Vial: 54
Acq On : 21 Dec 16 1:44 Operator: MA
Sample : AZ47665W10 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Dec 21 8:40 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	2021	2.50000 ppb	0.01
6) Acenaphthene-D10(IS)	7.92	164	1142	2.50000 ppb	0.00
11) Phenanthrene-D10(IS)	9.85	188	2022	2.50000 ppb	0.01
15) Chrysene-D12(IS)	16.82	240	2605	2.50000 ppb	0.03
21) Perylene-D12(IS)	20.59	264	2399	2.50000 ppb	0.05
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.03	82	936	3.58884 ppb	0.00
Spiked Amount 4.673			Recovery	= 76.805%	
7) Surrogate Recovery (FBP)	7.13	172	2177	3.07221 ppb	0.00
Spiked Amount 4.673			Recovery	= 65.741%	
17) Surrogate Recovery (TPH)	13.81	244	3460	3.95332 ppb	0.00
Spiked Amount 4.673			Recovery	= 84.594%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

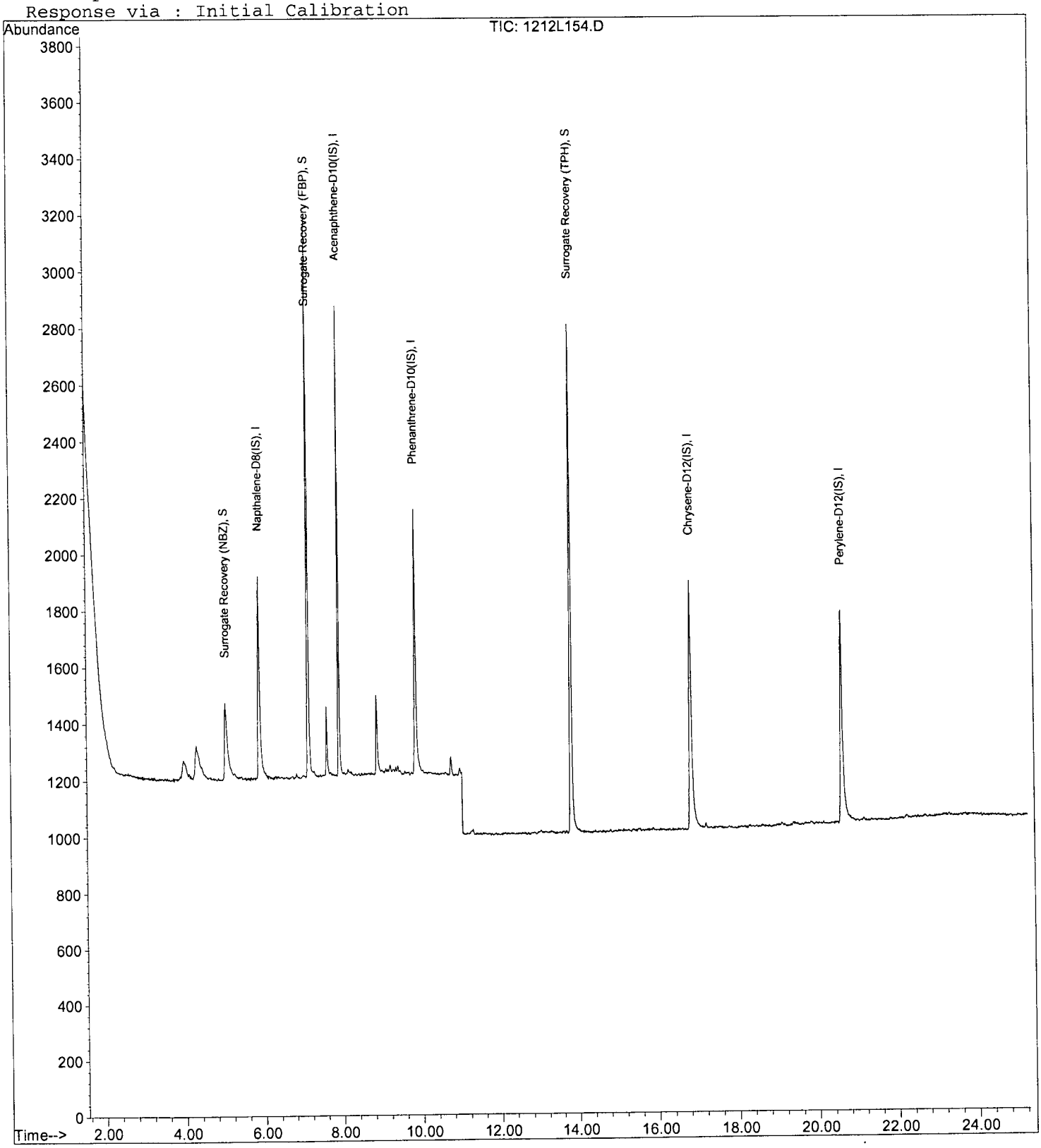
Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L154.D
Acq On : 21 Dec 16 1:44
Sample : AZ47665W10 1/1070
Misc : water

Vial: 54
Operator: MA
Inst : Linus
Multiplr: 0.93

Quant Time: Dec 21 8:40 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



ORGANICS

Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/12/16
Matrix: Instrument: Linus
Initials:

			1212L005.D	1212L006.D	1212L013.D	1212L014.D	1212L009.D	1212L010.D	1212L011.D	1212L012.D						
		Compound	0.1	0.2	0.5	1	5	10	50	100			Avg	%RSD		
1	I	Napthalene-D8(IS)														
2	SL	Surrogate Recovery (NBZ)			0.1025	0.1761	0.2637	0.3064	0.3197	0.3127			0.25	36	SL	1.000
3	TM	Naphthalene	1.031	0.9780	0.9862	0.9477	1.118	1.054	1.003	0.9513			1.0	5.7	TM	
4	TM	2-Methylnaphthalene	0.5550	0.5854	0.5149	0.5323	0.7182	0.6983	0.6712	0.6317			0.61	13	TM	
5	TM	1-Methylnaphthalene	0.7135	0.7853	0.6711	0.6467	0.7284	0.6774	0.6350	0.5896			0.68	8.9	TM	
6	I	Acenaphthene-D10(IS)														
7	SL	Surrogate Recovery (FBP)	2.045	1.941	1.395	1.435	1.344	1.504	1.449	1.373			1.6	17	SL	0.999
8	TM	Acenaphthylene	1.826	1.954	1.831	1.759	2.172	2.083	2.017	1.896			1.9	7.3	TM	
9	*TM	Acenaphthene	1.241	1.216	1.124	1.053	1.283	1.224	1.174	1.102			1.2	6.7	*TM	
10	TM	Fluorene	1.363	1.307	1.278	1.221	1.525	1.462	1.419	1.328			1.4	7.4	TM	
11	I	Phenanthrene-D10(IS)														
12	TM	Phenanthrene	1.035	1.103	0.9894	0.9754	1.171	1.129	1.120	1.072			1.1	6.5	TM	
13	TM	Anthracene	0.9809	0.8442	0.8021	0.8311	1.116	1.103	1.105	1.012			0.97	14	TM	
14	*TM	Fluoranthene	1.499	1.511	1.288	1.295	1.594	1.582	1.618	1.561			1.5	8.8	*TM	
15	I	Chrysene-D12(IS)														
16	TM	Pyrene	1.265	1.248	1.144	1.116	1.350	1.290	1.282	1.228			1.2	6.2	TM	
17	SL	Surrogate Recovery (TPH)	1.141	1.125	0.7856	0.7730	0.6907	0.7963	0.8068	0.7547			0.86	20	SL	0.999
18	TM	Benz (a) anthracene	1.153	0.9846	0.9136	0.8374	1.173	1.136	1.200	1.138			1.1	13	TM	
19	TM	Chrysene	1.231	1.235	1.285	1.193	1.266	1.202	1.143	1.075			1.2	5.7	TM	
20	TM	Indeno (1,2,3-cd) pyrene	1.253	1.162	0.9852	1.016	1.310	1.273	1.125	1.175			1.2	10	TM	
21	I	Perylene-D12(IS)														
22	TM	Benzo (b) fluoranthene	0.9076	0.9504	0.9240	0.9294	1.188	1.191	1.264	1.230			1.1	15	TM	
23	TM	Benzo (k) fluoranthene	1.126	1.186	1.191	1.043	1.104	1.110	1.151	1.129			1.1	4.2	TM	
24	*TM	Benzo (a) pyrene	1.011	1.095	1.051	1.010	1.199	1.156	1.179	1.156			1.1	6.9	*TM	
25	TM	Dibenz (a,h) anthracene	1.011	0.8783	0.8525	0.9697	1.189	1.150	1.168	1.100			1.0	13	TM	
26	TM	Benzo (g,h,i) perylene	0.8732	0.9963	0.9608	0.9222	1.163	1.125	1.141	0.9740			1.0	11	TM	
27																
28																
29																
30																
31																
32																
33																
34																
35																

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L005.D Vial: 3
Acq On : 12 Dec 16 10:36 Operator: MA
Sample : 0.1 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 13 14:49 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:03:27 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	1892	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	7.92	164	1027	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.85	188	1835	2.50000 ppb		0.01
15) Chrysene-D12(IS)	16.80	240	2234	2.50000 ppb		0.01
21) Perylene-D12(IS)	20.55	264	2176	2.50000 ppb		0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.02	82	1	0.13676 ppb		-0.01
Spiked Amount 5.000			Recovery = 2.740%			
7) Surrogate Recovery (FBP)	7.16	172	42	-0.08389 ppb		0.02
Spiked Amount 5.000			Recovery = -1.680%			
17) Surrogate Recovery (TPH)	13.84	244	51	-0.04876 ppb		0.02
Spiked Amount 5.000			Recovery = -0.980%			
Target Compounds						Qvalue
3) Naphthalene	5.89	128	78	0.10219 ppb		97
4) 2-Methylnaphthalene	6.75	142	42m	-0.29925 ppb		62
5) 1-Methylnaphthalene	6.84	142	54	0.10480 ppb		79
8) Acenaphthylene	7.77	152	75	0.09400 ppb		97
9) Acenaphthene	7.95	154	51	0.10546 ppb		92
10) Fluorene	8.59	166	56	0.10002 ppb		95
12) Phenanthrene	9.89	178	76	0.09636 ppb	#	92
13) Anthracene	10.01	178	72	0.10069 ppb	#	89
14) Fluoranthene	12.67	202	110	0.10035 ppb		96
16) Pyrene	13.30	202	113	0.10196 ppb	#	89
18) Benz (a) anthracene	16.78	228	103	0.10803 ppb		95
19) Chrysene	16.87	228	110	0.10226 ppb	#	87
20) Indeno (1,2,3-cd) pyrene	22.93	276	112	0.10781 ppb	#	94
22) Benzo (b) fluoranthene	19.68	252	79	0.08458 ppb		98
23) Benzo (k) fluoranthene	19.75	252	98m	0.24586 ppb		88
24) Benzo (a) pyrene	20.31	252	88	0.09132 ppb		95
25) Dibenz (a,h) anthracene	22.96	278	88	-0.17327 ppb		89
26) Benzo (g,h,i) perylene	23.45	276	76	0.08566 ppb		89

(#) = qualifier out of range (m) = manual integration

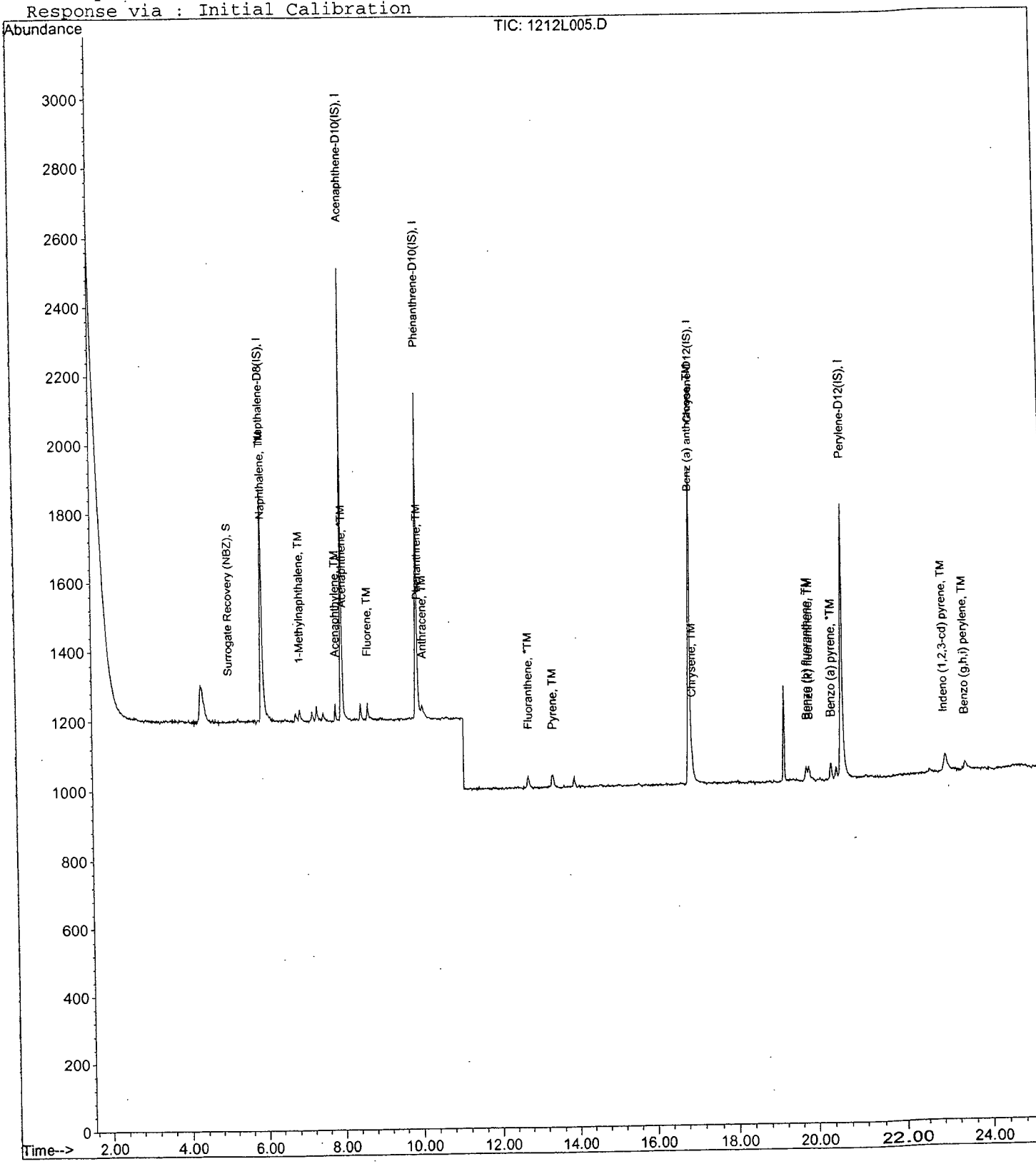
Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L005.D
Acq On : 12 Dec 16 10:36
Sample : 0.1 ug/ml PAH 12/12/16
Misc : water

Vial: 3
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Dec 13 14:49 2016 Quant Results File: L1212P.RES

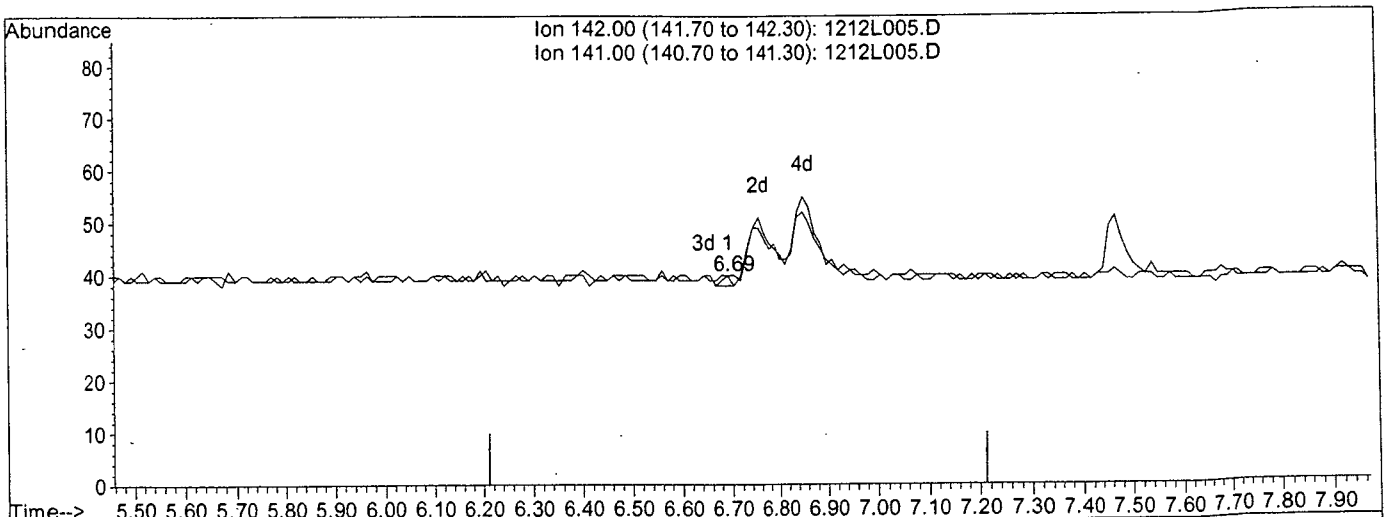
Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration

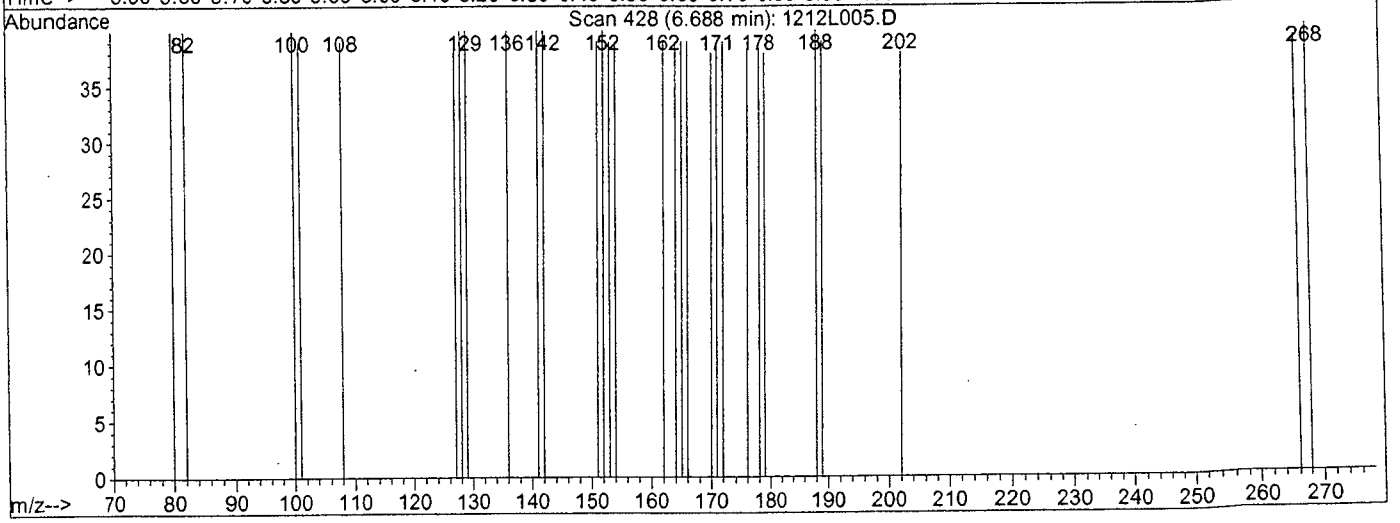


Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L005.D Vial: 3
Acq On : 12 Dec 16 10:36 Operator: MA
Sample : 0.1 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 14:10 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:13:16 2016
Response via : Multiple Level Calibration





TIC: 1212L005.D

(4) 2-Methylnaphthalene (TM)

6.69min -0.3822ppb

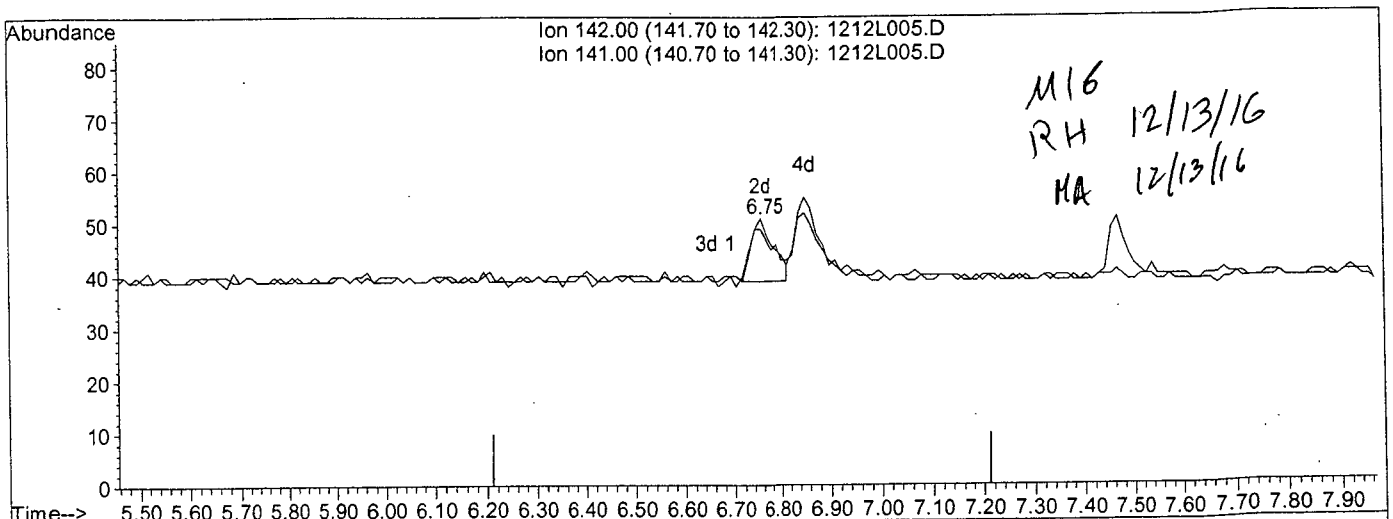
response 2

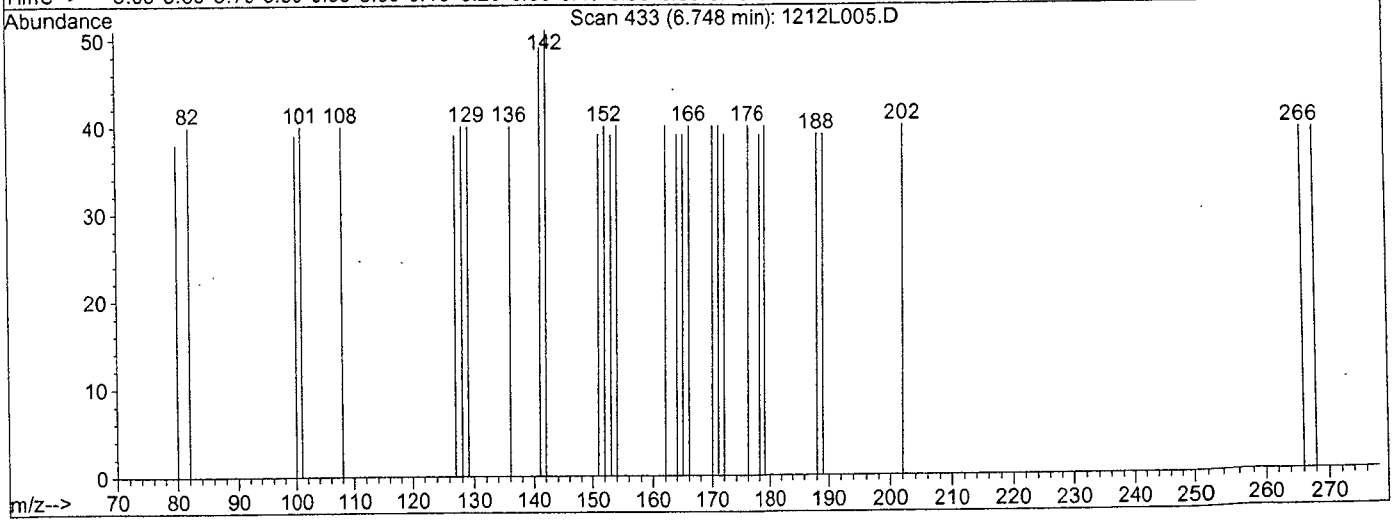
Ion	Exp%	Act%
142.00	100	100
141.00	84.90	50.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L005.D Vial: 3
Acq On : 12 Dec 16 10:36 Operator: MA
Sample : 0.1 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 14:49 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:13:16 2016
Response via : Multiple Level Calibration





TIC: 1212L005.D

(4) 2-Methylnaphthalene (TM)

6.75min -0.2992ppb m

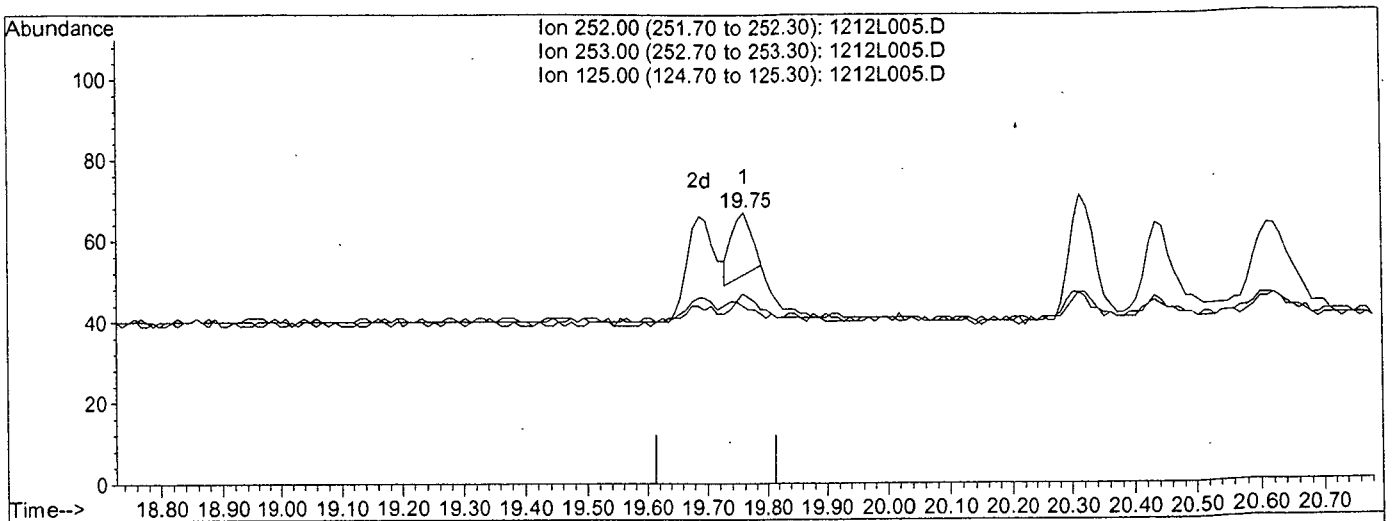
response 42

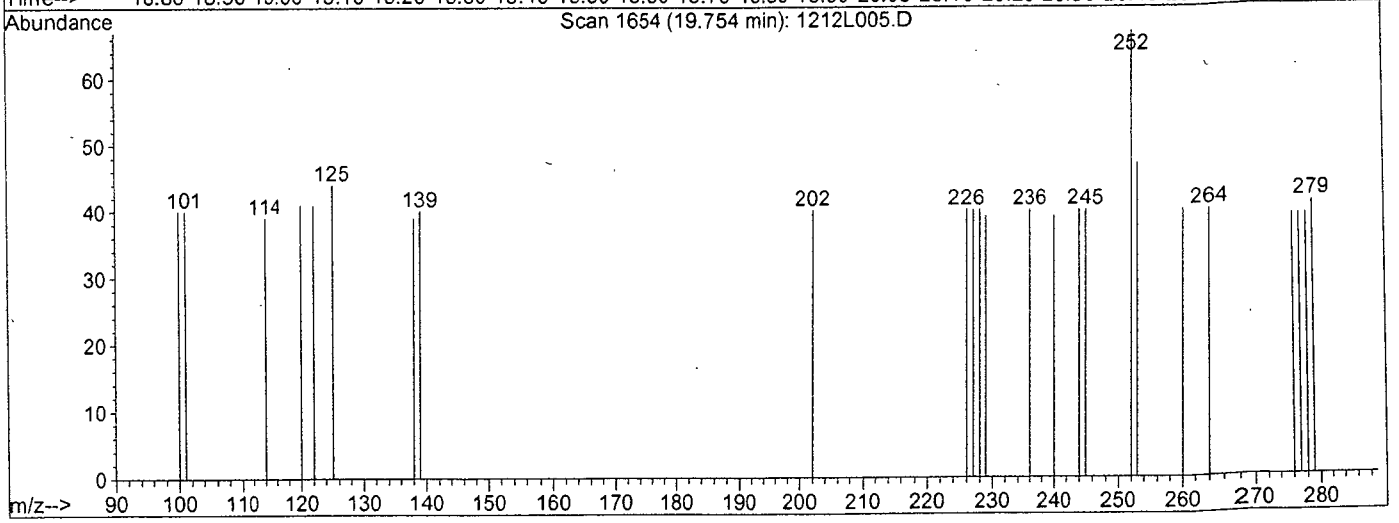
Ion	Exp%	Act%
142.00	100	100
141.00	84.90	96.08
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L005.D Vial: 3
Acq On : 12 Dec 16 10:36 Operator: MA
Sample : 0.1 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 14:04 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:06:14 2016
Response via : Multiple Level Calibration





TIC: 1212L005.D

(23) Benzo (k) fluoranthene (TM)

19.75min 0.1831ppb

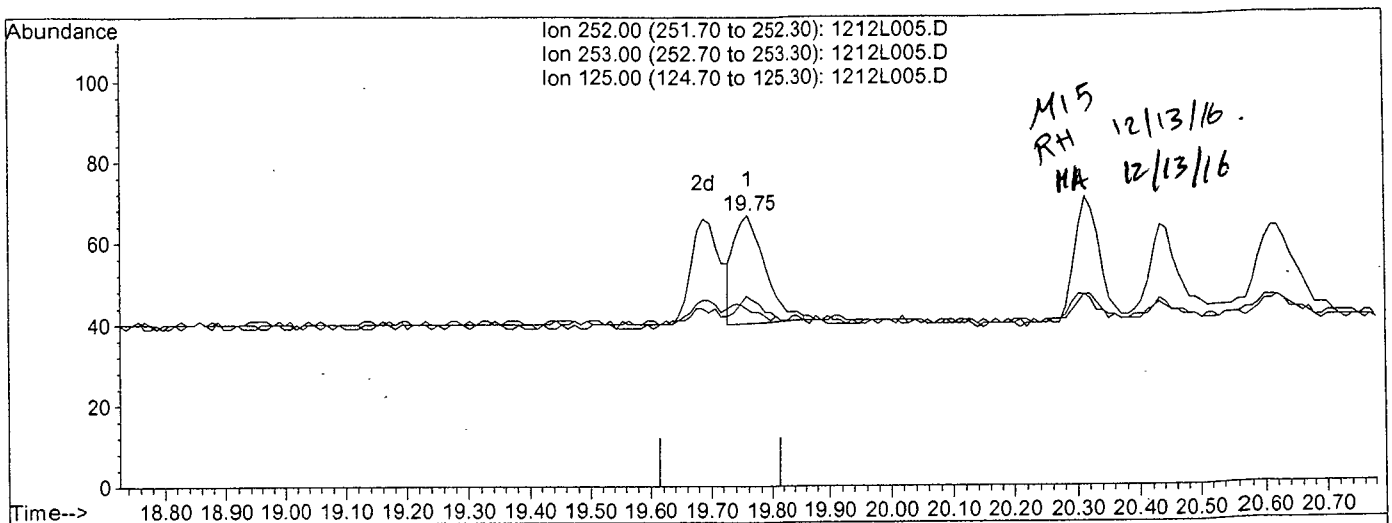
response 36

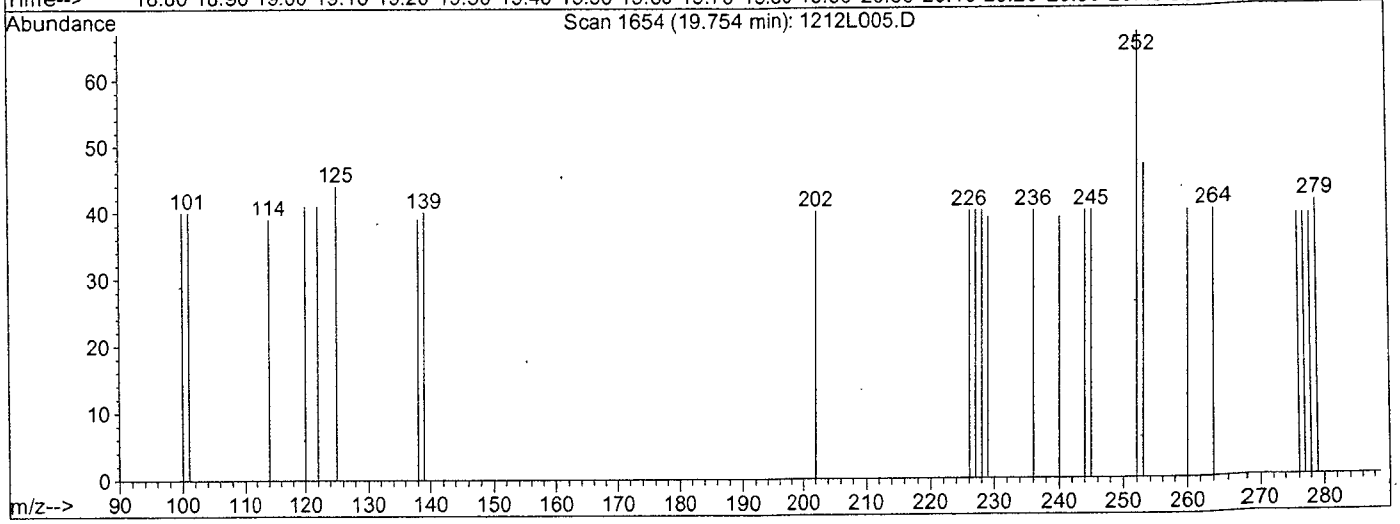
Ion	Exp%	Act%
252.00	100	100
253.00	23.40	30.77#
125.00	13.10	15.38
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L005.D Vial: 3
Acq On : 12 Dec 16 10:36 Operator: MA
Sample : 0.1 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 14:10 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:06:14 2016
Response via : Multiple Level Calibration





TIC: 1212L005.D

(23) Benzo (k) fluoranthene (TM)

19.75min 0.2459ppb m

response 98

Ion	Exp%	Act%
252.00	100	100
253.00	23.40	70.15#
125.00	13.10	65.67#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L006.D
Acq On : 12 Dec 16 11:09
Sample : 0.2 ug/ml PAH 12/12/16
Misc : water

Vial: 4
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Dec 13 14:11 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:03:42 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.88	136	1751	2.50000 ppb		0.01
6) Acenaphthene-D10(IS)	7.92	164	966	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.85	188	1688	2.50000 ppb		0.01
15) Chrysene-D12(IS)	16.80	240	2044	2.50000 ppb		0.01
21) Perylene-D12(IS)	20.55	264	1907	2.50000 ppb		0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.06	82	4	0.15069 ppb		0.02
Spiked Amount 5.000			Recovery =	3.020%		
7) Surrogate Recovery (FBP)	7.17	172	75	-0.01749 ppb		0.04
Spiked Amount 5.000			Recovery =	-0.340%		
17) Surrogate Recovery (TPH)	13.85	244	92	0.02394 ppb		0.03
Spiked Amount 5.000			Recovery =	0.480%		
Target Compounds						Qvalue
3) Naphthalene	5.90	128	137	0.19395 ppb		95
4) 2-Methylnaphthalene	6.75	142	82	-0.20257 ppb		95
5) 1-Methylnaphthalene	6.84	142	110	0.23066 ppb		96
8) Acenaphthylene	7.77	152	151	0.20121 ppb		98
9) Acenaphthene	7.97	154	94	0.20664 ppb		97
10) Fluorene	8.59	166	101	0.19179 ppb		99
12) Phenanthrene	9.90	178	149	0.20537 ppb		95
13) Anthracene	10.01	178	114	0.17332 ppb	#	92
14) Fluoranthene	12.67	202	204	0.20231 ppb	#	91
16) Pyrene	13.30	202	204	0.20118 ppb		95
18) Benz (a) anthracene	16.79	228	161	0.18456 ppb		93
19) Chrysene	16.88	228	202	0.20524 ppb		96
20) Indeno (1,2,3-cd) pyrene	22.92	276	190	0.19989 ppb	#	93
22) Benzo (b) fluoranthene	19.68	252	145	0.17714 ppb		99
23) Benzo (k) fluoranthene	19.75	252	181m	0.35570 ppb		91
24) Benzo (a) pyrene	20.31	252	167	0.19775 ppb		97
25) Dibenz (a,h) anthracene	22.97	278	134	-0.10610 ppb		95
26) Benzo (g,h,i) perylene	23.45	276	152	0.19548 ppb		95

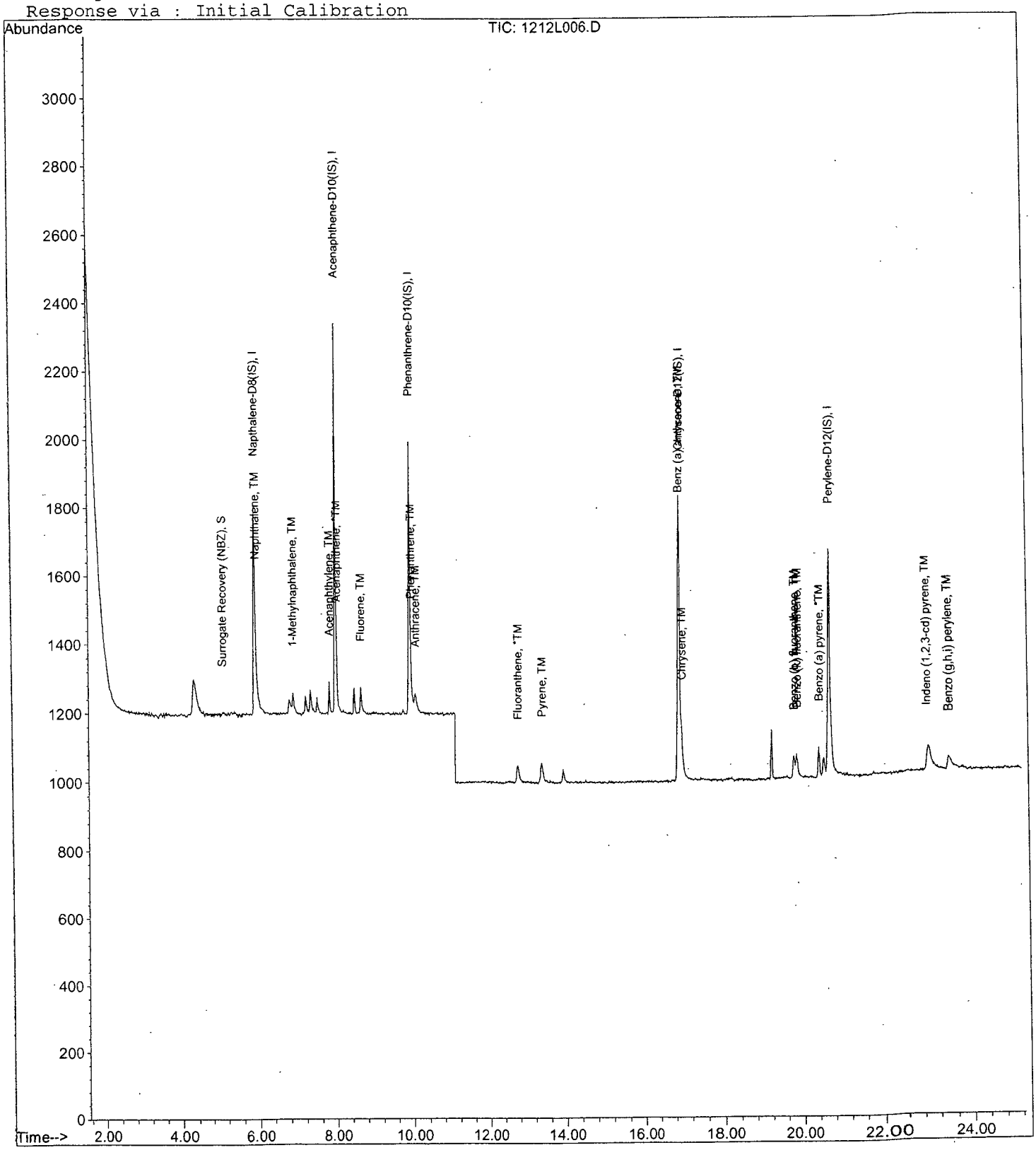
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L006.D Vial: 4
Acq On : 12 Dec 16 11:09 Operator: MA
Sample : 0.2 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 13 14:11 2016 Quant Results File: L1212P.RES

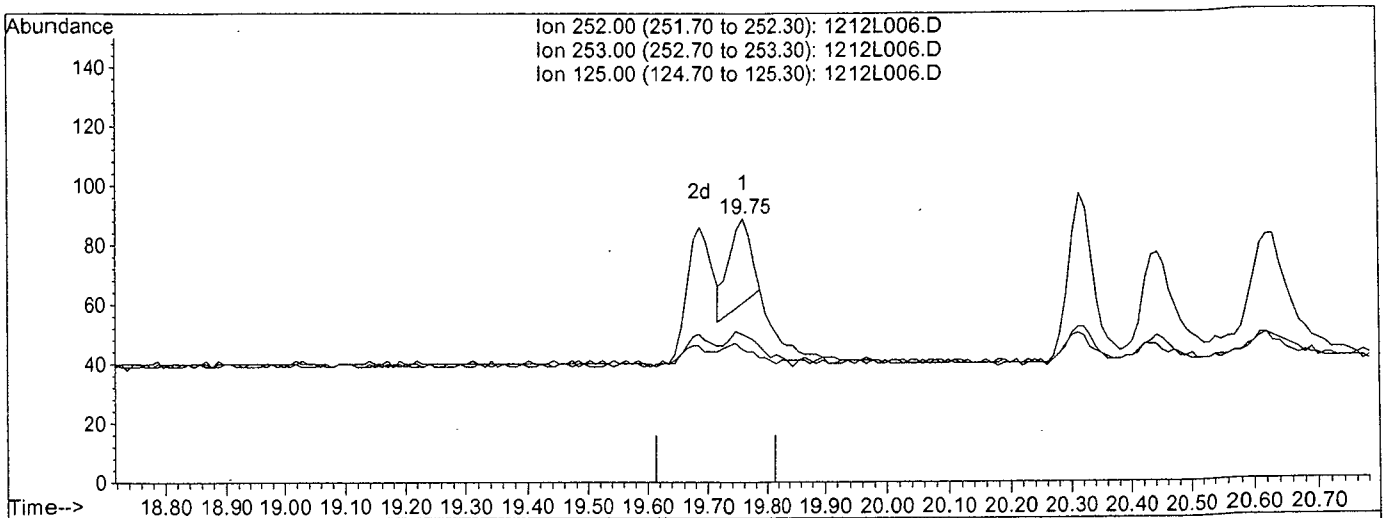
Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration

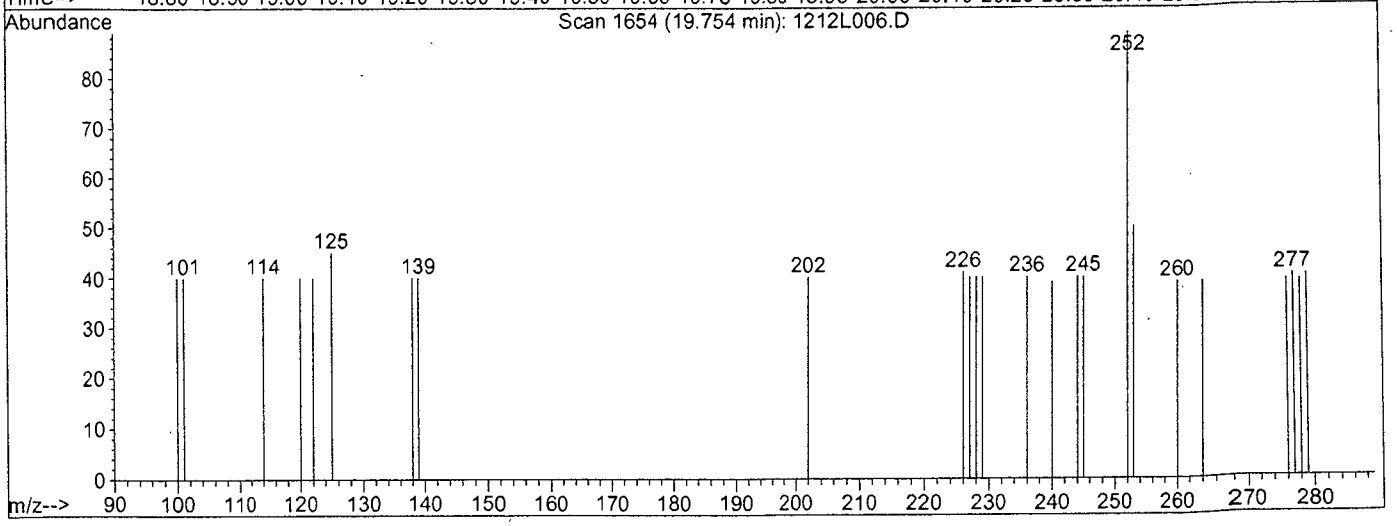


Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L006.D Vial: 4
Acq On : 12 Dec 16 11:09 Operator: MA
Sample : 0.2 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 14:04 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:06:14 2016
Response via : Multiple Level Calibration





TIC: 1212L006.D

(23) Benzo (k) fluoranthene (TM)

19.75min 0.2321ppb

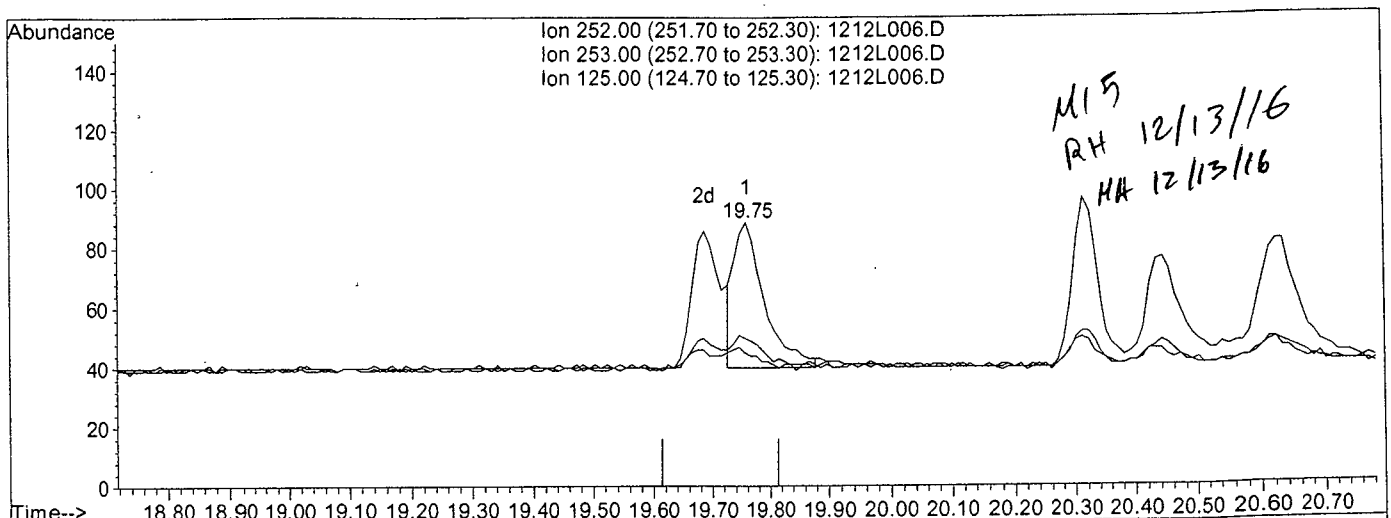
response 74

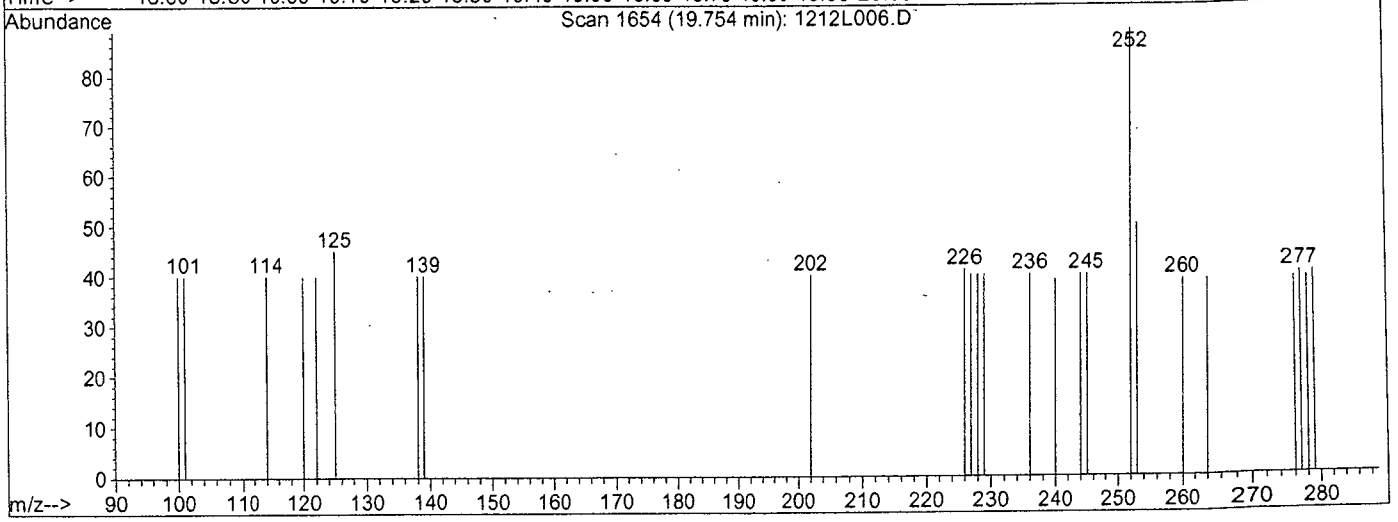
Ion	Exp%	Act%
252.00	100	100
253.00	23.40	16.67
125.00	13.10	12.50
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L006.D Vial: 4
Acq On : 12 Dec 16 11:09 Operator: MA
Sample : 0.2 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 14:11 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:06:14 2016
Response via : Multiple Level Calibration





TIC: 1212L006.D

(23) Benzo (k) fluoranthene (TM)

19.75min 0.3557ppb m

response 181

Ion	Exp%	Act%
252.00	100	100
253.00	23.40	56.18#
125.00	13.10	50.56#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L013.D
Acq On : 12 Dec 16 15:01
Sample : 0.5 ug/ml PAH 12/12/16
Misc : water

Vial: 11
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Dec 13 14:12 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:03:42 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	1952	2.50000 ppb	0.01
6) Acenaphthene-D10(IS)	7.93	164	1068	2.50000 ppb	0.01
11) Phenanthrene-D10(IS)	9.85	188	1895	2.50000 ppb	0.01
15) Chrysene-D12(IS)	16.81	240	2304	2.50000 ppb	0.02
21) Perylene-D12(IS)	20.56	264	2170	2.50000 ppb	0.02
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.08	82	20	0.21387 ppb	0.05
Spiked Amount 5.000			Recovery =	4.280%	
7) Surrogate Recovery (FBP)	7.17	172	149	0.09433 ppb	0.04
Spiked Amount 5.000			Recovery =	1.880%	
17) Surrogate Recovery (TPH)	13.87	244	181	0.13391 ppb	0.05
Spiked Amount 5.000			Recovery =	2.680%	
Target Compounds					Qvalue
3) Naphthalene	5.90	128	385	0.48892 ppb	99
5) 1-Methylnaphthalene	6.84	142	262	0.49282 ppb	97
8) Acenaphthylene	7.77	152	391	0.47126 ppb	98
9) Acenaphthene	7.97	154	240	0.47721 ppb	99
10) Fluorene	8.59	166	273	0.46889 ppb	100
12) Phenanthrene	9.90	178	375	0.46040 ppb	99
13) Anthracene	10.02	178	304	0.41169 ppb	98
14) Fluoranthene	12.67	202	488	0.43109 ppb	92
16) Pyrene	13.30	202	527	0.46106 ppb	98
18) Benz (a) anthracene	16.79	228	421	0.42815 ppb	100
19) Chrysene	16.88	228	592	0.53363 ppb	96
20) Indeno (1,2,3-cd) pyrene	22.91	276	454	0.42373 ppb #	97
22) Benzo (b) fluoranthene	19.68	252	401	0.43051 ppb	96
23) Benzo (k) fluoranthene	19.74	252	517m	0.67137 ppb	95
24) Benzo (a) pyrene	20.31	252	456	0.47453 ppb	96
25) Dibenz (a,h) anthracene	22.96	278	370	0.11963 ppb	95
26) Benzo (g,h,i) perylene	23.43	276	417	0.47130 ppb	96

(#) = qualifier out of range (m) = manual integration

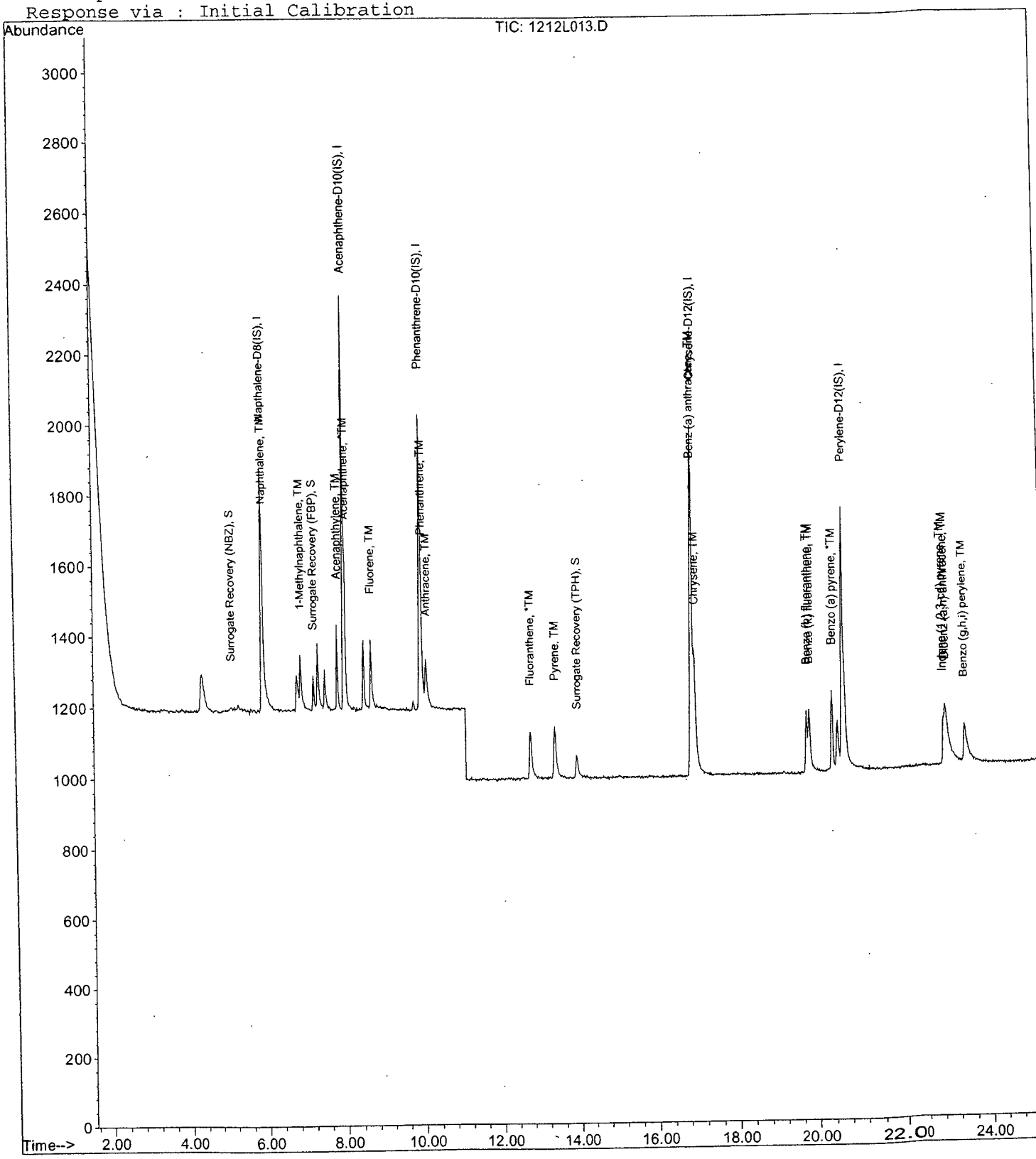
Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L013.D
Acq On : 12 Dec 16 15:01
Sample : 0.5 ug/ml PAH 12/12/16
Misc : water

Vial: 11
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Dec 13 14:12 2016 Quant Results File: L1212P.RES

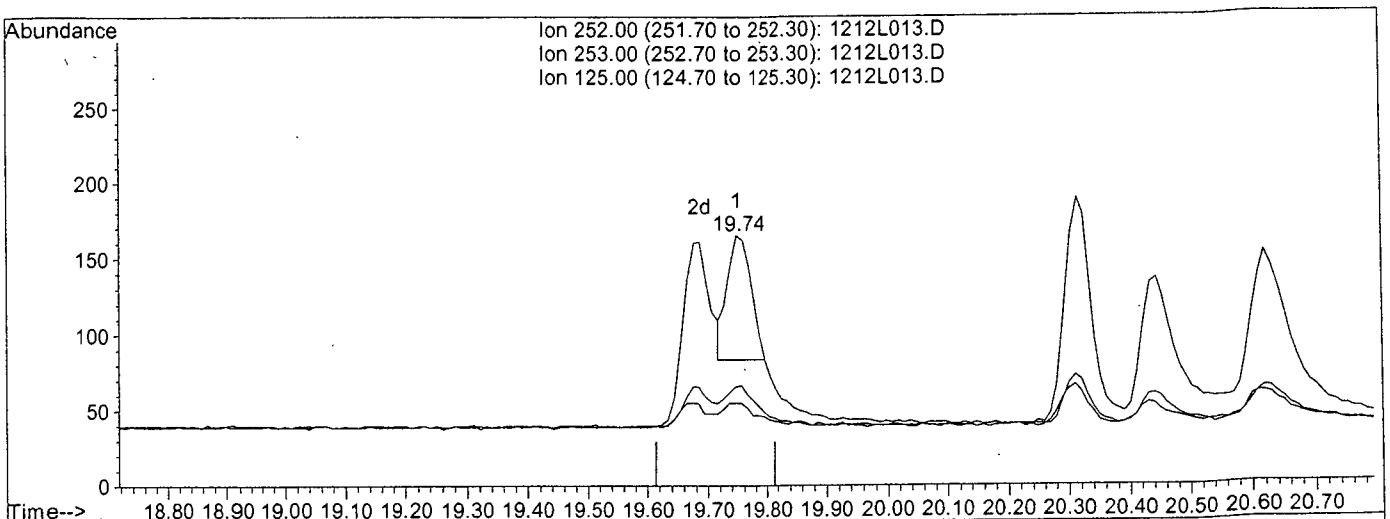
Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration

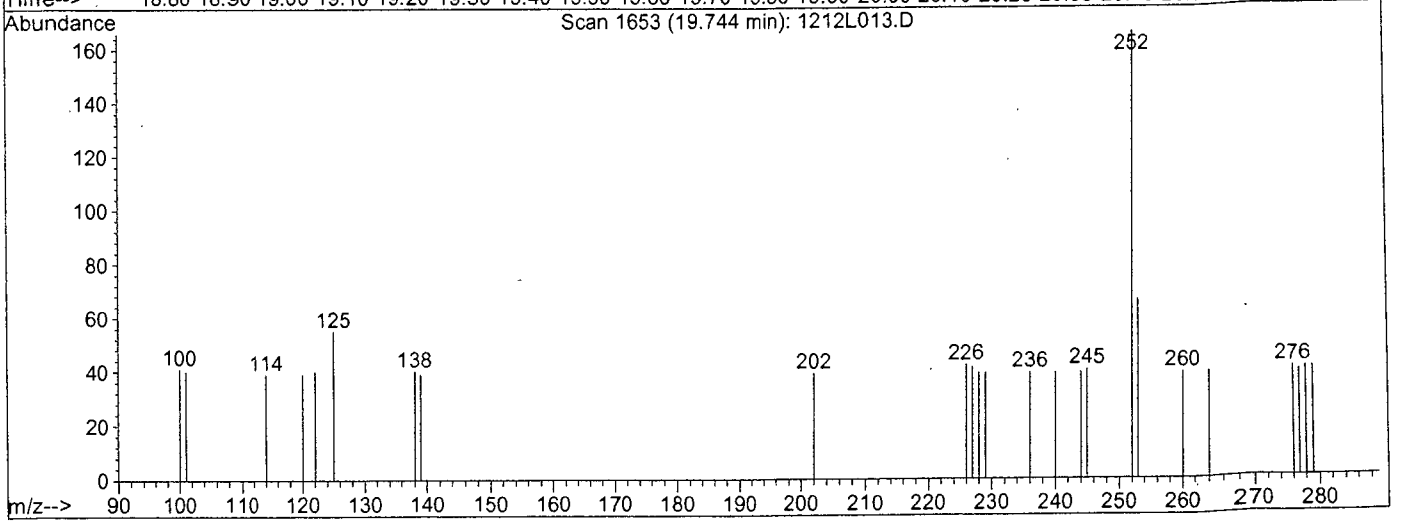


Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L013.D Vial: 11
Acq On : 12 Dec 16 15:01 Operator: MA
Sample : 0.5 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 14:04 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:06:14 2016
Response via : Multiple Level Calibration





TIC: 1212L013.D

(23) Benzo (k) fluoranthene (TM)

19.74min 0.3771ppb

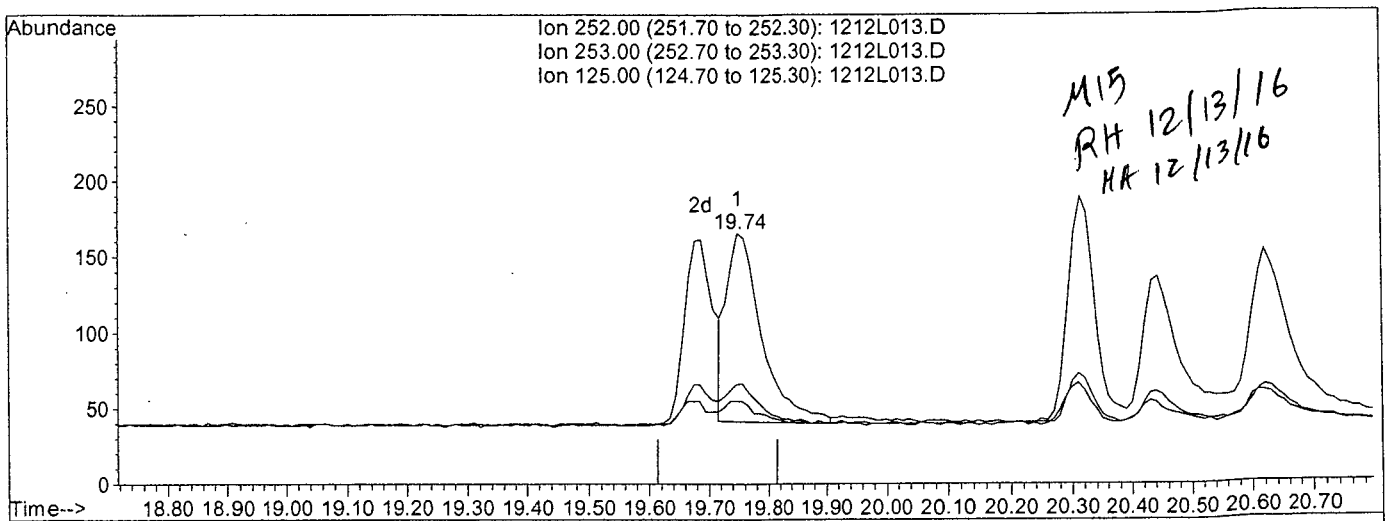
response 227

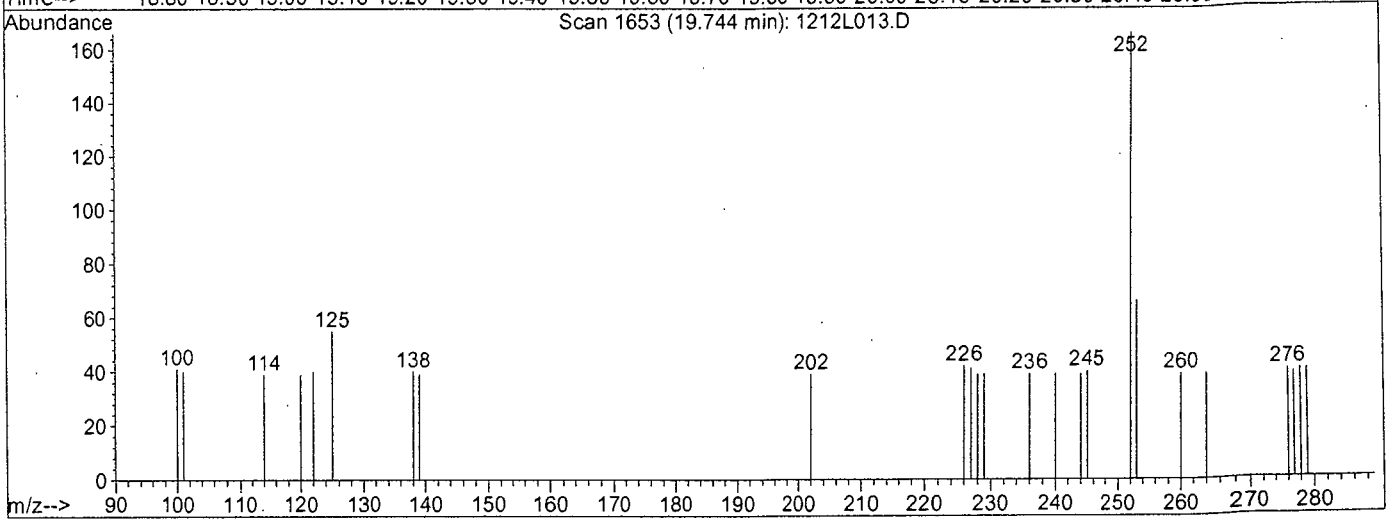
Ion	Exp%	Act%
252.00	100	100
253.00	23.40	20.73
125.00	13.10	10.98
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L013.D Vial: 11
Acq On : 12 Dec 16 15:01 Operator: MA
Sample : 0.5 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 14:12 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:06:14 2016
Response via : Multiple Level Calibration





TIC: 1212L013.D

(23) Benzo (k) fluoranthene (TM)

19.74min 0.6714ppb m

response 517

Ion	Exp%	Act%
252.00	100	100
253.00	23.40	39.76#
125.00	13.10	33.13#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L014.D
Acq On : 12 Dec 16 15:34
Sample : 1.0 ug/ml PAH 12/12/16
Misc : water

Vial: 12
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Dec 13 14:12 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:03:42 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.88	136	1902	2.50000 ppb		0.01
6) Acenaphthene-D10(IS)	7.92	164	1042	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.85	188	1853	2.50000 ppb		0.01
15) Chrysene-D12(IS)	16.80	240	2251	2.50000 ppb		0.01
21) Perylene-D12(IS)	20.55	264	2109	2.50000 ppb		0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.07	82	67	0.41209 ppb		0.04
Spiked Amount 5.000			Recovery	= 8.240%		
7) Surrogate Recovery (FBP)	7.16	172	299	0.36077 ppb		0.02
Spiked Amount 5.000			Recovery	= 7.220%		
17) Surrogate Recovery (TPH)	13.86	244	348	0.38315 ppb		0.04
Spiked Amount 5.000			Recovery	= 7.660%		
Target Compounds						Qvalue
3) Naphthalene	5.90	128	721	0.93968 ppb		98
4) 2-Methylnaphthalene	6.74	142	405	0.44937 ppb		98
5) 1-Methylnaphthalene	6.83	142	492	0.94978 ppb		96
8) Acenaphthylene	7.77	152	733	0.90551 ppb		98
9) Acenaphthene	7.97	154	439	0.89468 ppb		98
10) Fluorene	8.59	166	509	0.89604 ppb		99
12) Phenanthrene	9.90	178	723	0.90778 ppb		100
13) Anthracene	10.01	178	616	0.85312 ppb		99
14) Fluoranthene	12.66	202	960	0.86727 ppb		92
16) Pyrene	13.29	202	1005	0.89996 ppb		99
18) Benz (a) anthracene	16.79	228	754	0.78487 ppb		96
19) Chrysene	16.88	228	1074	0.99090 ppb		97
20) Indeno (1,2,3-cd) pyrene	22.89	276	915	0.87410 ppb	#	95
22) Benzo (b) fluoranthene	19.66	252	784	0.86604 ppb		96
23) Benzo (k) fluoranthene	19.73	252	880m	1.06561 ppb		96
24) Benzo (a) pyrene	20.31	252	852	0.91226 ppb		94
25) Dibenz (a,h) anthracene	22.94	278	818	0.60911 ppb		95
26) Benzo (g,h,i) perylene	23.41	276	778	0.90474 ppb		95

(#) = qualifier out of range (m) = manual integration

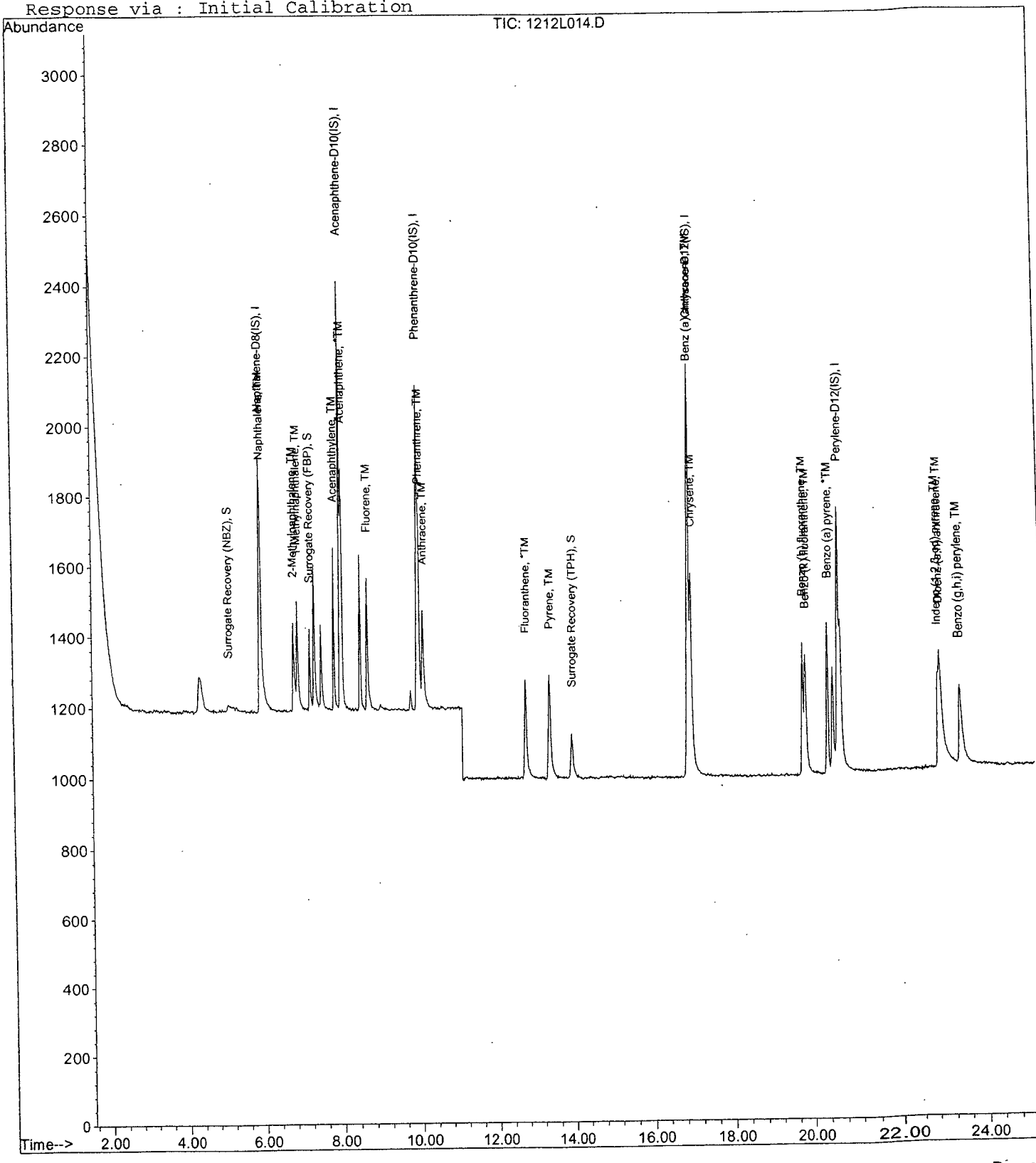
Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L014.D
Acq On : 12 Dec 16 15:34
Sample : 1.0 ug/ml PAH 12/12/16
Misc : water

Vial: 12
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Dec 13 14:12 2016 Quant Results File: L1212P.RES

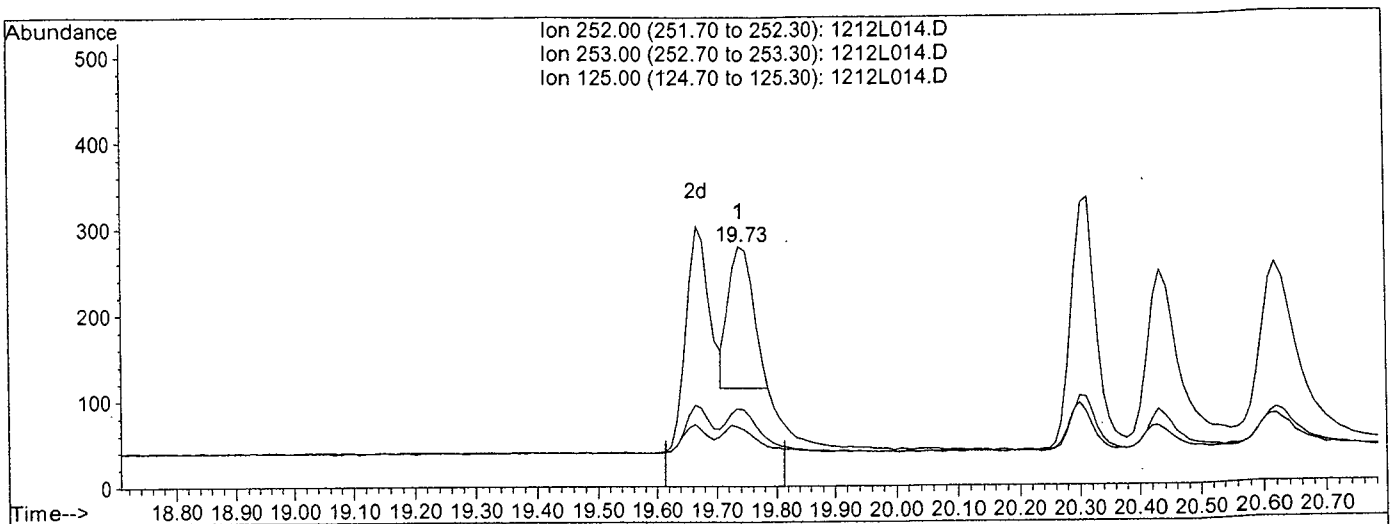
Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration

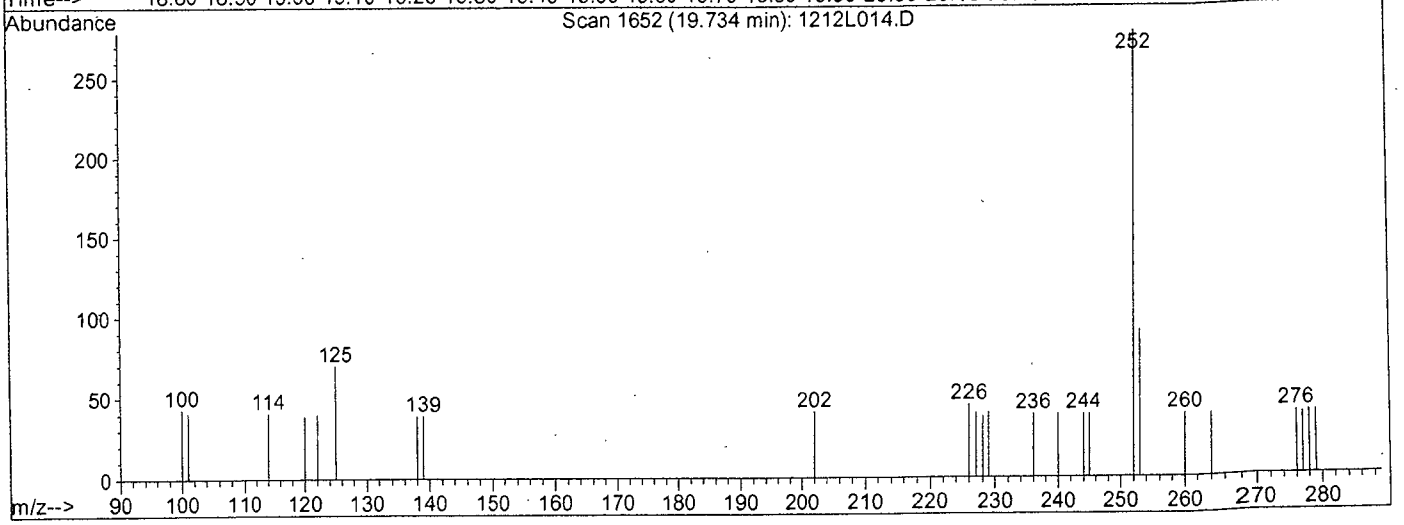


Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L014.D Vial: 12
Acq On : 12 Dec 16 15:34 Operator: MA
Sample : 1.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 14:04 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:06:14 2016
Response via : Multiple Level Calibration





TIC: 1212L014.D

(23) Benzo (k) fluoranthene (TM)

19.73min 0.6322ppb

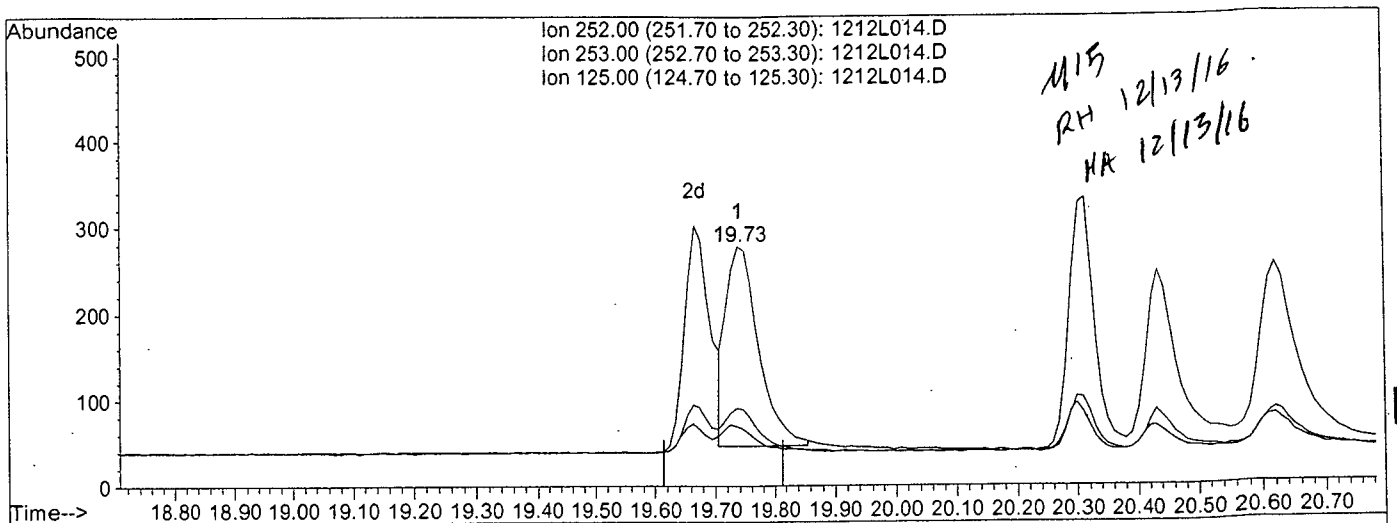
response 465

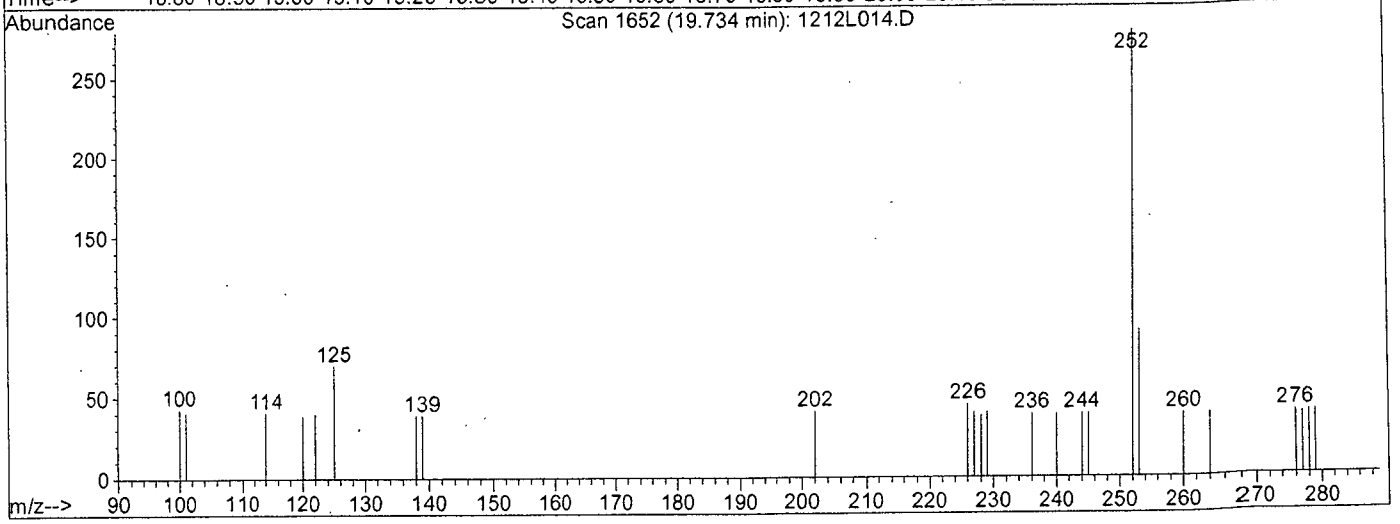
Ion	Exp%	Act%
252.00	100	100
253.00	23.40	21.34
125.00	13.10	14.02
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L014.D Vial: 12
Acq On : 12 Dec 16 15:34 Operator: MA
Sample : 1.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 14:12 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:06:14 2016
Response via : Multiple Level Calibration





TIC: 1212L014.D

(23) Benzo (k) fluoranthene (TM)

19.73min 1.0656ppb m

response 880

Ion	Exp%	Act%
252.00	100	100
253.00	23.40	32.62#
125.00	13.10	25.09#
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L009.D Vial: 7
Acq On : 12 Dec 16 12:49 Operator: MA
Sample : 5.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 13 14:04 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:03:42 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	1900	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	7.92	164	1038	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.84	188	1930	2.50000 ppb		0.00
15) Chrysene-D12(IS)	16.79	240	2367	2.50000 ppb		0.00
21) Perylene-D12(IS)	20.54	264	2172	2.50000 ppb		0.00
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.03	82	501	2.22494 ppb		0.00
Spiked Amount 5.000			Recovery	= 44.500%		
7) Surrogate Recovery (FBP)	7.13	172	1395	2.27095 ppb		0.00
Spiked Amount 5.000			Recovery	= 45.420%		
17) Surrogate Recovery (TPH)	13.82	244	1635	2.14055 ppb		0.00
Spiked Amount 5.000			Recovery	= 42.820%		
Target Compounds						Qvalue
3) Naphthalene	5.89	128	4247	5.54092 ppb		100
4) 2-Methylnaphthalene	6.71	142	2729	5.25106 ppb		99
5) 1-Methylnaphthalene	6.82	142	2768	5.34910 ppb		97
8) Acenaphthylene	7.76	152	4510	5.59288 ppb		97
9) Acenaphthene	7.95	154	2664	5.45016 ppb		99
10) Fluorene	8.57	166	3165	5.59310 ppb		100
12) Phenanthrene	9.89	178	4521	5.44995 ppb		99
13) Anthracene	9.97	178	4306	5.72563 ppb		100
14) Fluoranthene	12.62	202	6154	5.33775 ppb		95
16) Pyrene	13.26	202	6389	5.44084 ppb		98
18) Benz (a) anthracene	16.77	228	5554	5.49804 ppb		97
19) Chrysene	16.86	228	5994	5.25919 ppb		96
20) Indeno (1,2,3-cd) pyrene	22.84	276	6203	5.63530 ppb	#	96
22) Benzo (b) fluoranthene	19.64	252	5160	5.53465 ppb		96
23) Benzo (k) fluoranthene	19.71	252	4795	5.00856 ppb		96
24) Benzo (a) pyrene	20.28	252	5209	5.41563 ppb		97
25) Dibenz (a,h) anthracene	22.89	278	5166	5.09186 ppb		95
26) Benzo (g,h,i) perylene	23.36	276	5050	5.70231 ppb		95

(#) = qualifier out of range (m) = manual integration
1212L009.D L1212P.M Wed Dec 14 09:33:03 2016

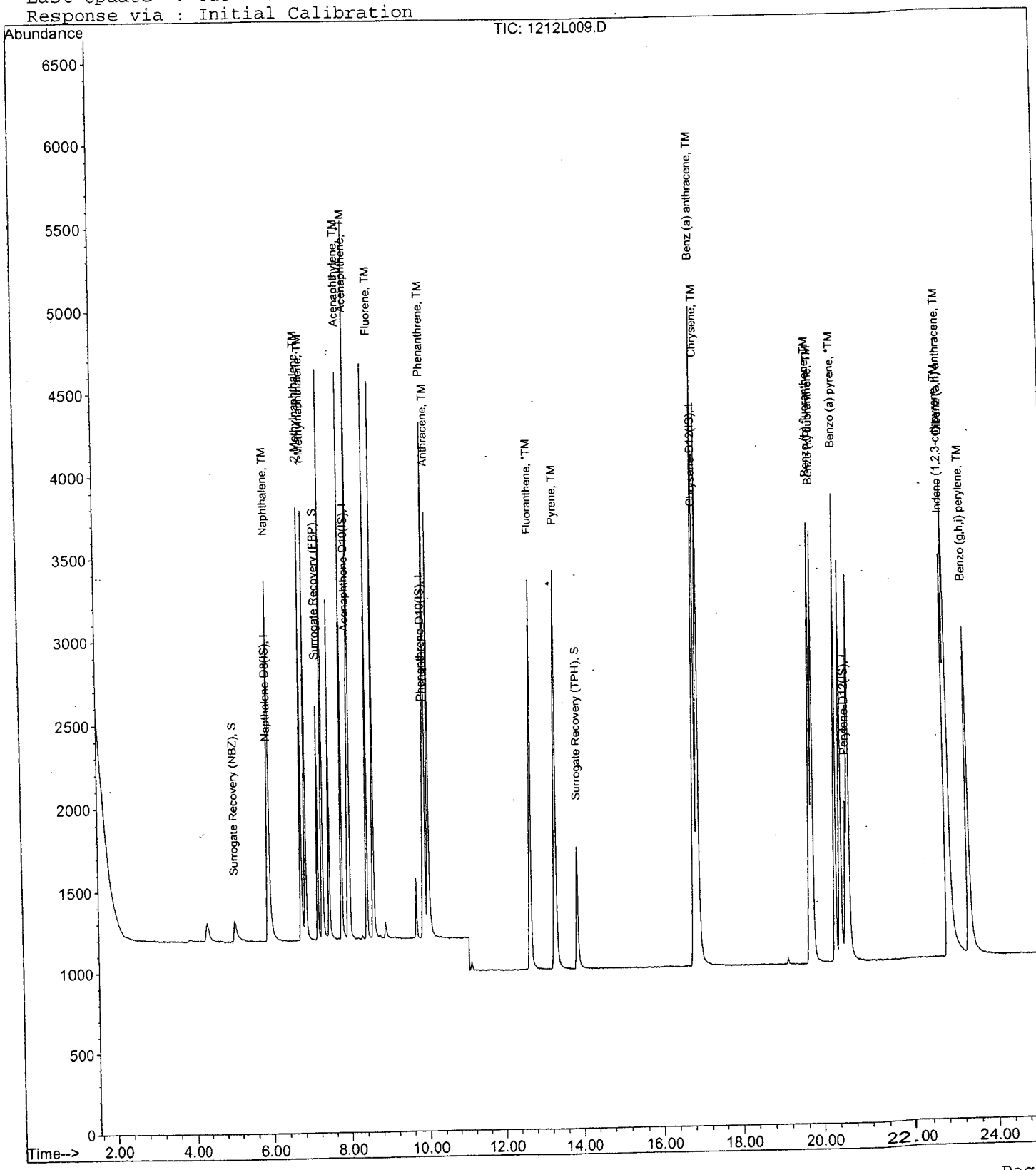
Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L009.D
Acq On : 12 Dec 16 12:49
Sample : 5.0 ug/ml PAH 12/12/16
Misc : water

Vial: 7
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Dec 13 14:04 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L010.D Vial: 8
Acq On : 12 Dec 16 13:22 Operator: MA
Sample : 10.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 13 14:04 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:03:42 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	1924	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	7.92	164	1050	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.84	188	1952	2.50000 ppb		0.00
15) Chrysene-D12(IS)	16.79	240	2464	2.50000 ppb		0.00
21) Perylene-D12(IS)	20.54	264	2236	2.50000 ppb		0.00
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.02	82	1179	4.99512 ppb		-0.01
Spiked Amount 5.000			Recovery = 99.900%			
7) Surrogate Recovery (FBP)	7.13	172	3159	5.27928 ppb		0.00
Spiked Amount 5.000			Recovery = 105.580%			
17) Surrogate Recovery (TPH)	13.82	244	3924	5.09644 ppb		0.00
Spiked Amount 5.000			Recovery = 101.920%			
Target Compounds						Qvalue
3) Naphthalene	5.89	128	8109	10.44758 ppb		100
4) 2-Methylnaphthalene	6.71	142	5374	10.57649 ppb		98
5) 1-Methylnaphthalene	6.82	142	5213	9.94836 ppb		97
8) Acenaphthylene	7.76	152	8747	10.72323 ppb		97
9) Acenaphthene	7.95	154	5139	10.39350 ppb		99
10) Fluorene	8.56	166	6140	10.72642 ppb		98
12) Phenanthrene	9.87	178	8812	10.50292 ppb		100
13) Anthracene	9.97	178	8611	11.32088 ppb		100
14) Fluoranthene	12.62	202	12352	10.59291 ppb		94
16) Pyrene	13.26	202	12712	10.39931 ppb		98
18) Benz (a) anthracene	16.76	228	11201	10.65163 ppb		98
19) Chrysene	16.86	228	11843	9.98209 ppb		97
20) Indeno (1,2,3-cd) pyrene	22.83	276	12547	10.94996 ppb	#	98
22) Benzo (b) fluoranthene	19.64	252	10653	11.09942 ppb		96
23) Benzo (k) fluoranthene	19.70	252	9928	9.92504 ppb		98
24) Benzo (a) pyrene	20.28	252	10342	10.44449 ppb		98
25) Dibenz (a,h) anthracene	22.89	278	10283	10.09209 ppb		93
26) Benzo (g,h,i) perylene	23.36	276	10063	11.03761 ppb		93

(#) = qualifier out of range (m) = manual integration

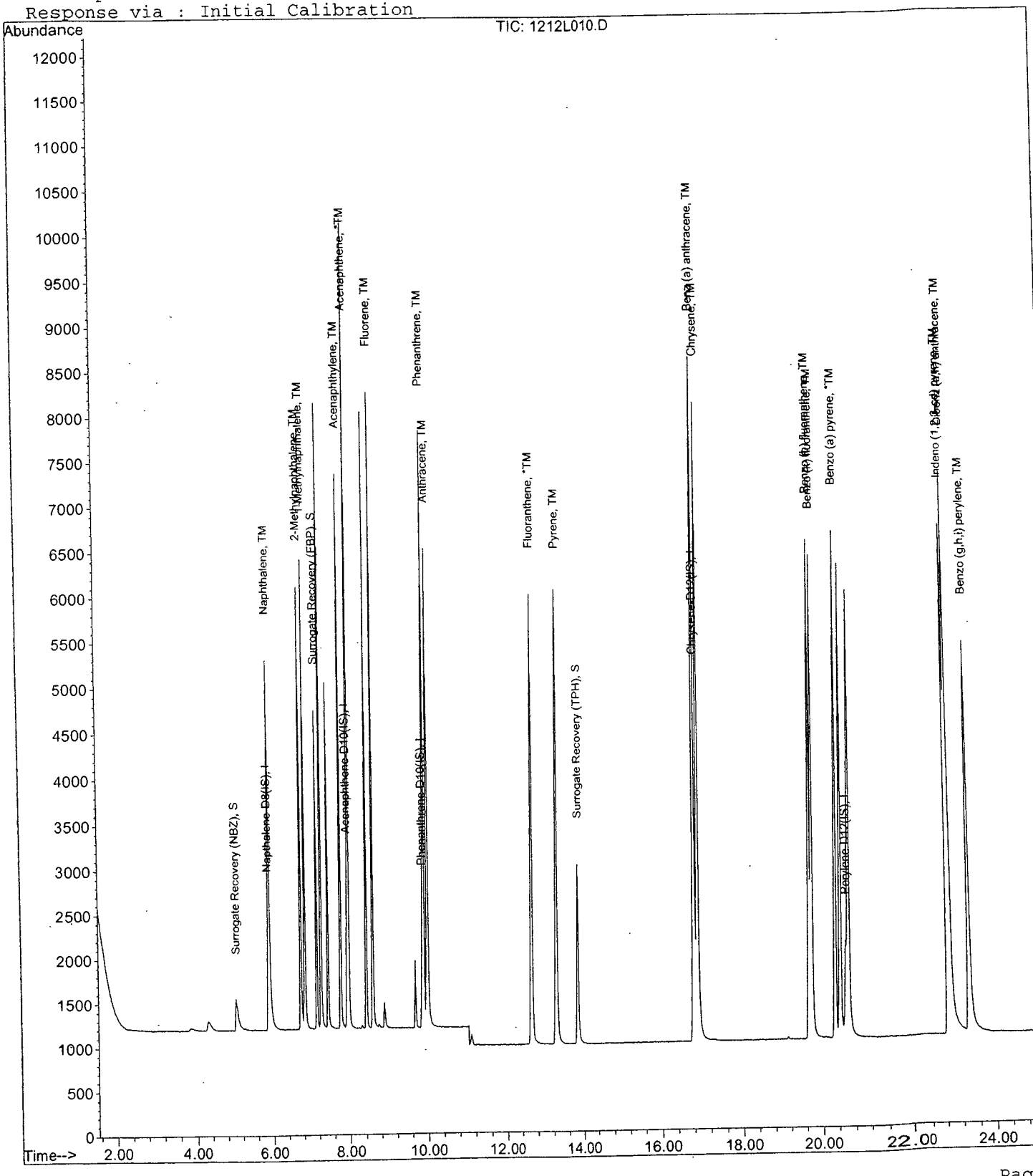
Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L010.D
Acq On : 12 Dec 16 13:22
Sample : 10.0 ug/ml PAH 12/12/16
Misc : water

Vial: 8
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Dec 13 14:04 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L011.D Vial: 9
Acq On : 12 Dec 16 13:54 Operator: MA
Sample : 50.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 13 14:04 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:03:42 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	1851	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.92	164	987	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.84	188	1836	2.50000	ppb		0.00
15) Chrysene-D12(IS)	16.80	240	2363	2.50000	ppb		0.01
21) Perylene-D12(IS)	20.55	264	2104	2.50000	ppb		0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.01	82	5918	25.50280	ppb		-0.02
Spiked Amount 5.000			Recovery = 510.060%				
7) Surrogate Recovery (FBP)	7.13	172	14297	26.02000	ppb		0.00
Spiked Amount 5.000			Recovery = 520.400%				
17) Surrogate Recovery (TPH)	13.82	244	19064	26.32087	ppb		0.00
Spiked Amount 5.000			Recovery = 526.420%				
Target Compounds							Qvalue
3) Naphthalene	5.89	128	37135	49.73138	ppb		100
4) 2-Methylnaphthalene	6.70	142	24848	52.30218	ppb		99
5) 1-Methylnaphthalene	6.82	142	23509	46.63332	ppb		98
8) Acenaphthylene	7.76	152	39815	51.92608	ppb		97
9) Acenaphthene	7.95	154	23180	49.87339	ppb		99
10) Fluorene	8.56	166	28020	52.07471	ppb		97
12) Phenanthrene	9.89	178	41143	52.13612	ppb		99
13) Anthracene	9.97	178	40562	56.69611	ppb		99
14) Fluoranthene	12.63	202	59396	54.15545	ppb		93
16) Pyrene	13.26	202	60604	51.69745	ppb		99
18) Benz (a) anthracene	16.78	228	56712	56.23559	ppb		97
19) Chrysene	16.88	228	54023	47.48052	ppb		97
20) Indeno (1,2,3-cd) pyrene	22.87	276	53175	48.39015	ppb	#	97
22) Benzo (b) fluoranthene	19.66	252	53199	58.90579	ppb		96
23) Benzo (k) fluoranthene	19.73	252	48451	50.86128	ppb		98
24) Benzo (a) pyrene	20.31	252	49594	53.22771	ppb		96
25) Dibenz (a,h) anthracene	22.92	278	49155	52.34757	ppb		93
26) Benzo (g,h,i) perylene	23.39	276	47996	55.94722	ppb		97

(#) = qualifier out of range (m) = manual integration
1212L011.D L1212P.M Wed Dec 14 09:33:18 2016

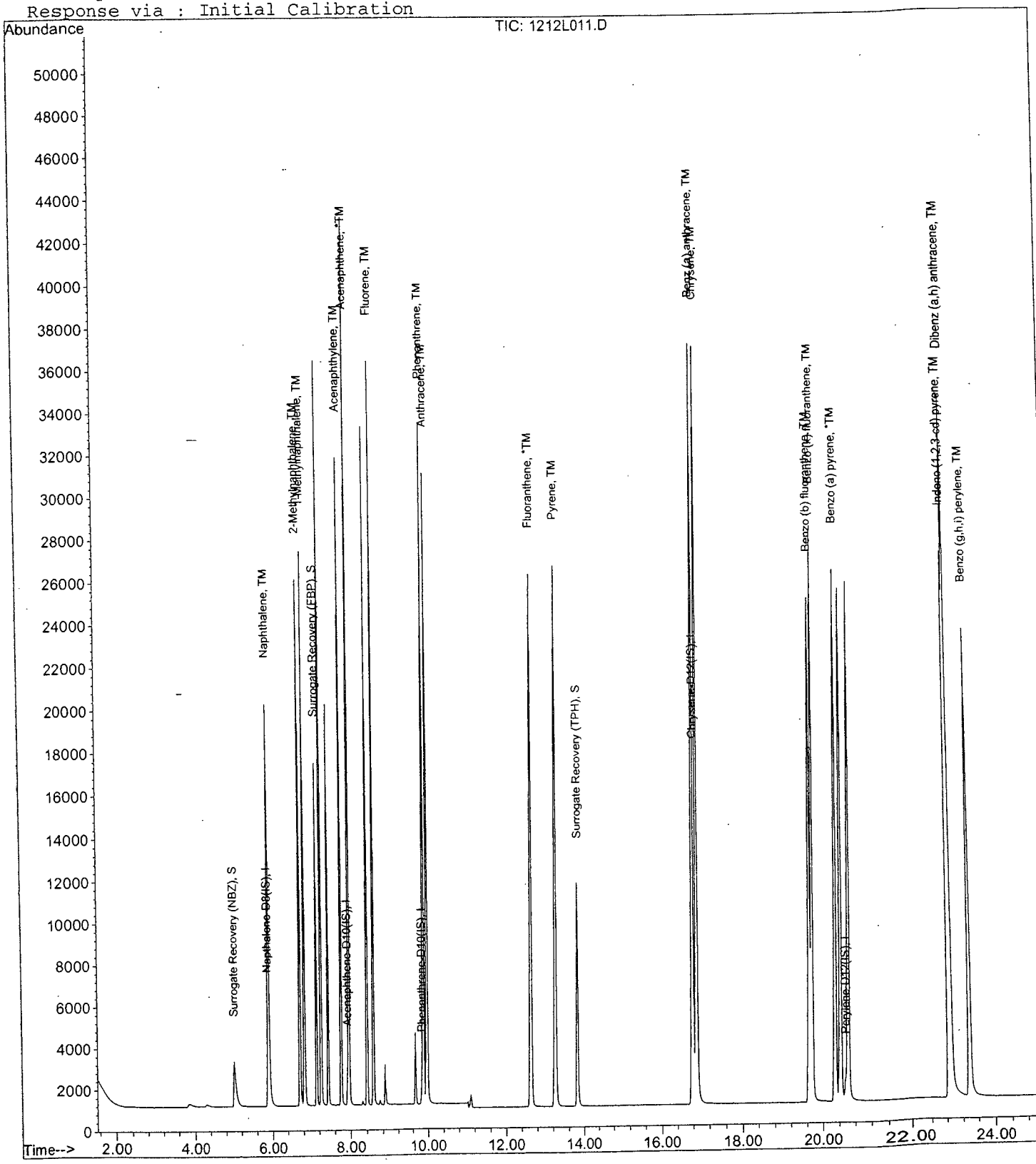
Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L011.D
Acq On : 12 Dec 16 13:54
Sample : 50.0 ug/ml PAH 12/12/16
Misc : water

Vial: 9
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Dec 13 14:04 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L012.D Vial: 10
Acq On : 12 Dec 16 14:28 Operator: MA
Sample : 100.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 13 14:04 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:03:42 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	1964	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	7.92	164	1044	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.85	188	1914	2.50000 ppb		0.01
15) Chrysene-D12(IS)	16.82	240	2483	2.50000 ppb		0.03
21) Perylene-D12(IS)	20.57	264	2159	2.50000 ppb		0.03
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.01	82	12284	49.76371 ppb		-0.02
Spiked Amount 5.000			Recovery = 995.280%			
7) Surrogate Recovery (FBP)	7.13	172	28673	49.47606 ppb		0.00
Spiked Amount 5.000			Recovery = 989.520%			
17) Surrogate Recovery (TPH)	13.82	244	37477	49.34989 ppb		0.00
Spiked Amount 5.000			Recovery = 987.000%			
Target Compounds						Qvalue
3) Naphthalene	5.89	128	74732	94.32321 ppb		100
4) 2-Methylnaphthalene	6.71	142	49626	98.78791 ppb		98
5) 1-Methylnaphthalene	6.82	142	46322	86.59931 ppb		97
8) Acenaphthylene	7.76	152	79194	97.64449 ppb		98
9) Acenaphthene	7.97	154	46028	93.62552 ppb		96
10) Fluorene	8.57	166	55451	97.42823 ppb		99
12) Phenanthrene	9.90	178	82102	99.79924 ppb		99
13) Anthracene	9.98	178	77479	103.88399 ppb		99
14) Fluoranthene	12.65	202	119546	104.55643 ppb		93
16) Pyrene	13.29	202	121997	99.03848 ppb		98
18) Benz (a) anthracene	16.80	228	112984	106.62039 ppb		97
19) Chrysene	16.91	228	106807	89.33538 ppb		97
20) Indeno (1,2,3-cd) pyrene	22.91	276	116748	101.10810 ppb	#	91
22) Benzo (b) fluoranthene	19.68	252	106244	114.64418 ppb		97
23) Benzo (k) fluoranthene	19.77	252	97479	99.58057 ppb		97
24) Benzo (a) pyrene	20.34	252	99871	104.45787 ppb		97
25) Dibenz (a,h) anthracene	22.96	278	94993	98.81911 ppb		95
26) Benzo (g,h,i) perylene	23.44	276	84112	95.54865 ppb		93

(#) = qualifier out of range (m) = manual integration
1212L012.D L1212P.M Wed Dec 14 09:33:25 2016

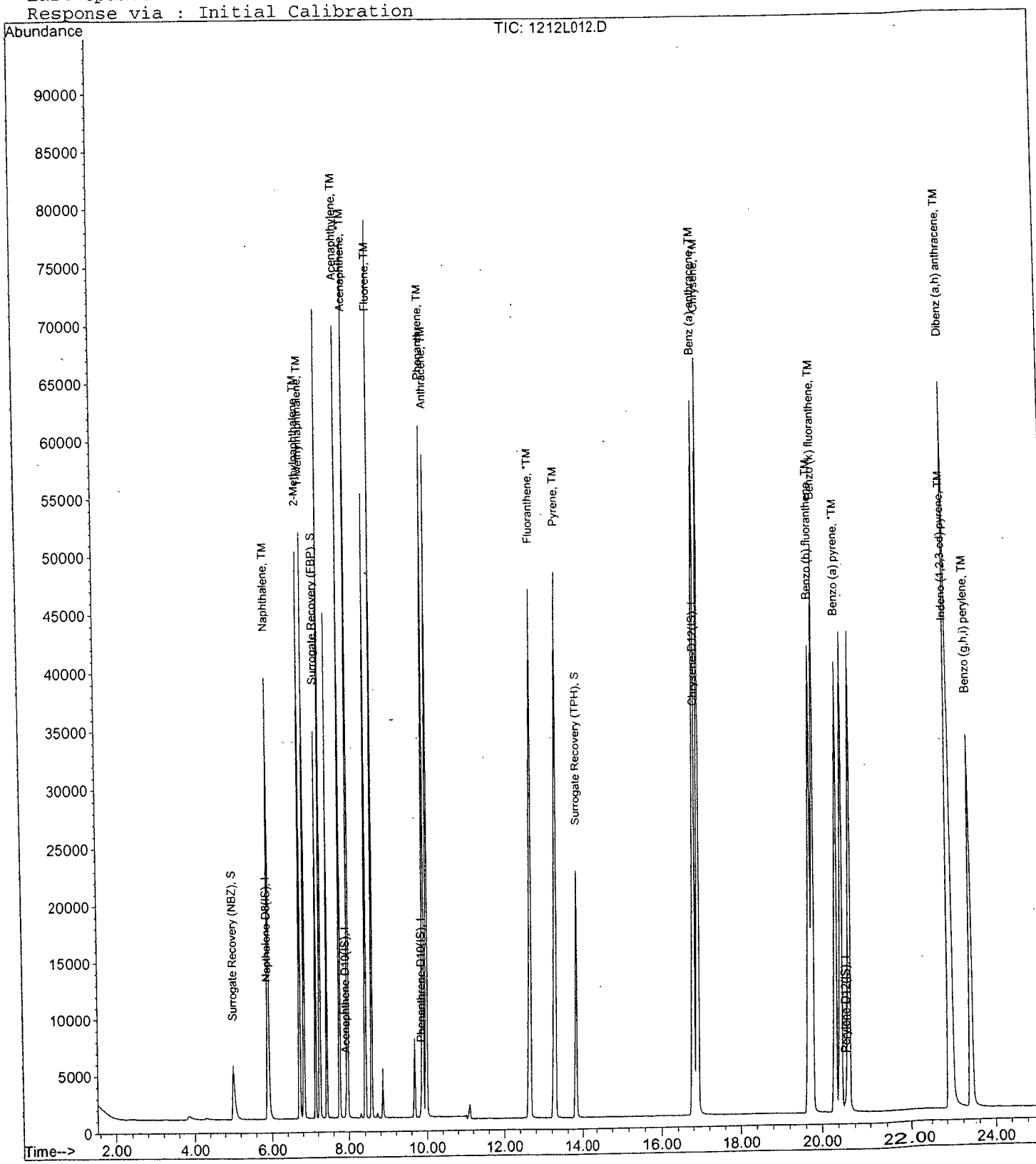
Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L012.D
Acq On : 12 Dec 16 14:28
Sample : 100.0 ug/ml PAH 12/12/16
Misc : water

Vial: 10
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Dec 13 14:04 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/12/16
Instrument: Linus
Initial Cal. Date: 12/12/16
Data File: 1212L015.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TM	Naphthalene	1.009	0.9374	7.1	TM	
2	TM	2-Methylnaphthalene	0.6134	0.5778	5.8	TM	
3	TM	1-Methylnaphthalene	0.6809	0.6194	9.0	TM	
4	TM	Acenaphthylene	1.942	1.717	12	TM	
5	*TM	Acenaphthene	1.177	1.035	12	*TM	
6	TM	Fluorene	1.363	1.224	10	TM	
7	TM	Phenanthrene	1.075	0.9323	13	TM	
8	TM	Anthracene	0.9742	0.8964	8.0	TM	
9	*TM	Fluoranthene	1.493	1.306	13	*TM	
10	TM	Pyrene	1.240	1.069	14	TM	
11	TM	Benz (a) anthracene	1.067	0.9074	15	TM	
12	TM	Chrysene	1.204	1.018	15	TM	
13	TM	Indeno (1,2,3-cd) pyrene	1.163	1.016	13	TM	
14	TM	Benzo (b) fluoranthene	1.073	0.9137	15	TM	
15	TM	Benzo (k) fluoranthene	1.130	1.060	6.2	TM	
16	*TM	Benzo (a) pyrene	1.107	0.9559	14	*TM	
17	TM	Dibenz (a,h) anthracene	1.040	0.8922	14	TM	
18	TM	Benzo (g,h,i) perylene	1.019	0.8874	13	TM	
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
		Average			11.6		

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L015.D
Acq On : 12 Dec 16 16:07
Sample : SS PAH 12/12/16
Misc : water

Vial: 15
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Dec 13 15:18 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.88	136	1717	2.50000	ppb		0.01
6) Acenaphthene-D10(IS)	7.92	164	946	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.85	188	1728	2.50000	ppb		0.01
15) Chrysene-D12(IS)	16.79	240	2149	2.50000	ppb		0.00
21) Perylene-D12(IS)	20.55	264	1971	2.50000	ppb		0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.08	82	1	0.17309	ppb		0.05
Spiked Amount 5.000			Recovery =	3.460%			
7) Surrogate Recovery (FBP)	7.15	172	9	-0.14061	ppb		0.01
Spiked Amount 5.000			Recovery =	-2.820%			
17) Surrogate Recovery (TPH)	13.50	244	4	-0.11749	ppb		-0.32
Spiked Amount 5.000			Recovery =	-2.340%			
Target Compounds							Qvalue
3) Naphthalene	5.90	128	3219	✓4.64734	ppb		100
4) 2-Methylnaphthalene	6.71	142	1984	4.70973	ppb		100
5) 1-Methylnaphthalene	6.82	142	2127	4.54848	ppb		97
8) Acenaphthylene	7.76	152	3248	4.41958	ppb		98
9) Acenaphthene	7.95	154	1958	4.39536	ppb		99
10) Fluorene	8.57	166	2315	4.48886	ppb		98
12) Phenanthrene	9.89	178	3222	4.33808	ppb		99
13) Anthracene	9.98	178	3098	4.60092	ppb		100
14) Fluoranthene	12.63	202	4512	4.37102	ppb		94
16) Pyrene	13.26	202	4594	4.30910	ppb		99
18) Benz (a) anthracene	16.77	228	3900	4.25234	ppb		97
19) Chrysene	16.86	228	4376	4.22904	ppb		97
20) Indeno (1,2,3-cd) pyrene	22.84	276	4366	4.36878	ppb	#	98
22) Benzo (b) fluoranthene	19.64	252	3602	4.25753	ppb		96
23) Benzo (k) fluoranthene	19.71	252	4177m	4.68818	ppb		97
24) Benzo (a) pyrene	20.29	252	3768	4.31697	ppb		95
25) Dibenz (a,h) anthracene	22.90	278	3517	4.29008	ppb		94
26) Benzo (g,h,i) perylene	23.37	276	3498	4.35264	ppb		94

Algorithum check = $\frac{3219 * 1 * 2.5}{1 * 1717 * 1.009} = \frac{8047.5}{1732.453} = 4.645$

RH 12/14/16

(#) = qualifier out of range (m) = manual integration
1212L015.D L1212P.M Wed Dec 14 09:33:50 2016

Quantitation Report

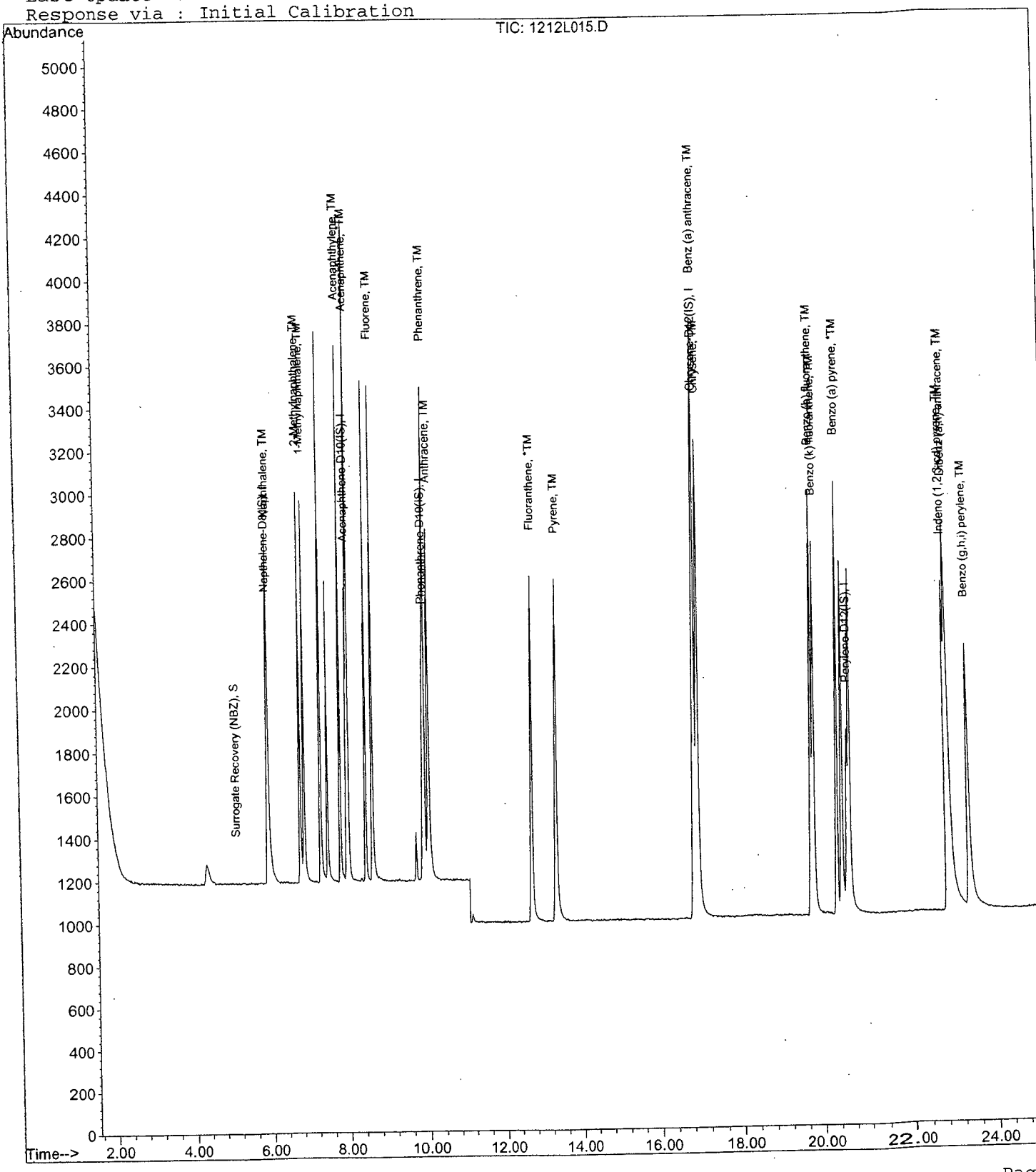
Data File : M:\LINUS\DATA\L161212\1212L015.D
Acq On : 12 Dec 16 16:07
Sample : SS PAH 12/12/16
Misc : water

Vial: 15
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Dec 13 15:18 2016

Quant Results File: L1212P.RES

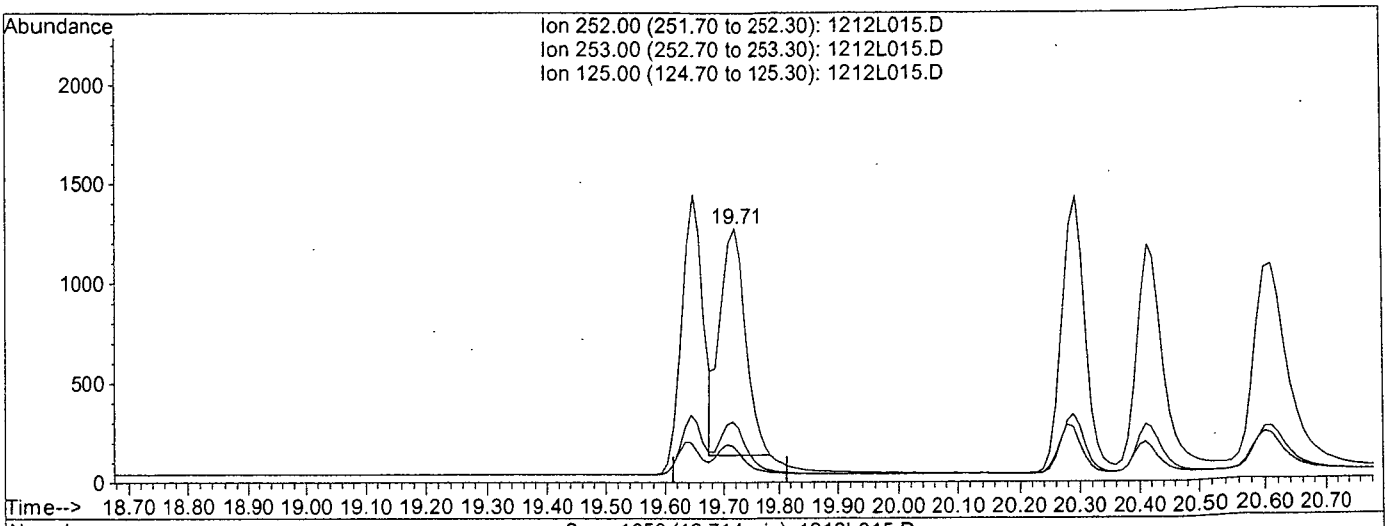
Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration

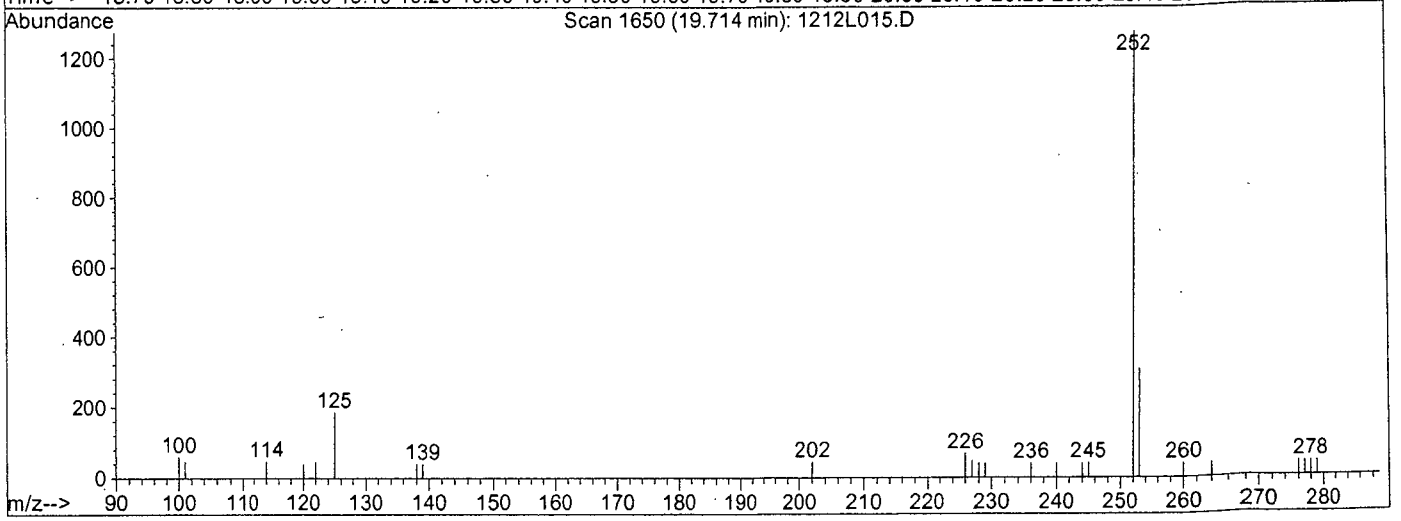


Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L015.D Vial: 15
Acq On : 12 Dec 16 16:07 Operator: MA
Sample : SS PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 15:12 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Multiple Level Calibration





TIC: 1212L015.D

(23) Benzo (k) fluoranthene (TM)

19.71min 3.9238ppb

response 3496

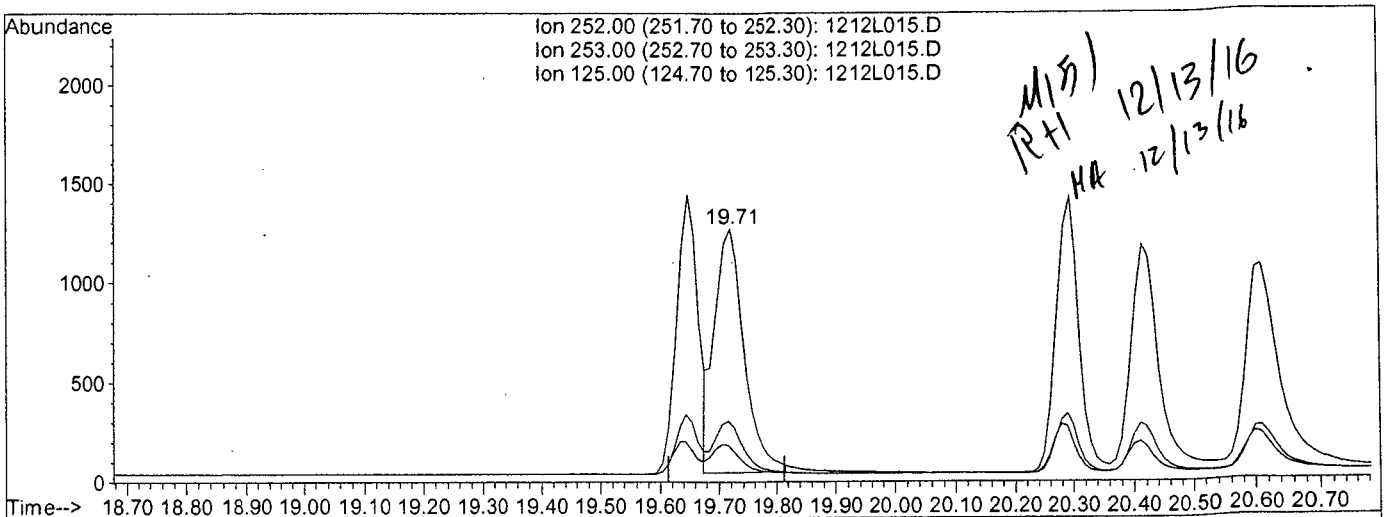
Ion	Exp%	Act%
252.00	100	100
253.00	23.40	21.55
125.00	13.10	11.96
0.00	0.00	0.00

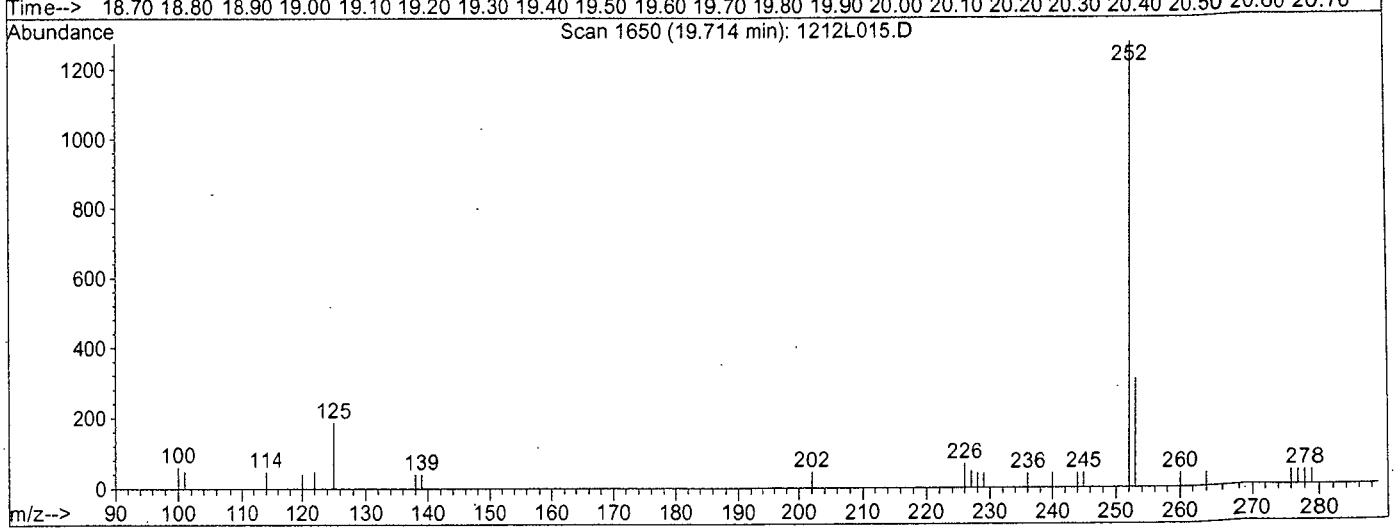
Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L015.D
Acq On : 12 Dec 16 16:07
Sample : SS PAH 12/12/16
Misc : water
Quant Time: Dec 13 15:18 2016

Vial: 15
Operator: MA
Inst : Linus
Multiplr: 1.00
Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Multiple Level Calibration





TIC: 1212L015.D

(23) Benzo (k) fluoranthene (TM)

19.71min 4.6882ppb m

response 4177

Ion	Exp%	Act%
252.00	100	100
253.00	23.40	24.08
125.00	13.10	14.67
0.00	0.00	0.00

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/20/16
Instrument: Linus
Initial Cal. Date: 12/12/16
Data File: 1212L138.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	SL	Surrogate Recovery (NBZ)	0.2469	0.3030	23	SL	2.8
3	TM	Naphthalene	1.009	0.9841	2.4	TM	
4	TM	2-Methylnaphthalene	0.6134	0.6443	5.0	TM	
5	TM	1-Methylnaphthalene	0.6809	0.6431	5.6	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	SL	Surrogate Recovery (FBP)	1.561	1.548	0.79	SL	5.6
8	TM	Acenaphthylene	1.942	1.950	0.42	TM	
9	*TM	Acenaphthene	1.177	1.144	2.8	*TM	
10	TM	Fluorene	1.363	1.357	0.47	TM	
11	I	Phenanthrene-D10(IS)	ISTD			I	
12	TM	Phenanthrene	1.075	1.042	3.0	TM	
13	TM	Anthracene	0.9742	1.025	5.2	TM	
14	*TM	Fluoranthene	1.493	1.479	0.98	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.240	1.203	3.0	TM	
17	SL	Surrogate Recovery (TPH)	0.8592	0.8166	5.0	SL	2.1
18	TM	Benz (a) anthracene	1.067	1.057	0.97	TM	
19	TM	Chrysene	1.204	1.132	5.9	TM	
20	TM	Indeno (1,2,3-cd) pyrene	1.163	1.139	2.1	TM	
21	I	Perylene-D12(IS)	ISTD			I	
22	TM	Benzo (b) fluoranthene	1.073	1.067	0.56	TM	
23	TM	Benzo (k) fluoranthene	1.130	0.9589	15	TM	
24	*TM	Benzo (a) pyrene	1.107	1.054	4.8	*TM	
25	TM	Dibenz (a,h) anthracene	1.040	1.033	0.62	TM	
26	TM	Benzo (g,h,i) perylene	1.019	0.9713	4.7	TM	
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			4.4		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L138.D Vial: 38
Acq On : 20 Dec 16 16:52 Operator: MA
Sample : 5.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 20 17:17 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	2013	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.92	164	1105	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.85	188	2053	2.50000	ppb		0.01
15) Chrysene-D12(IS)	16.80	240	2606	2.50000	ppb		0.01
21) Perylene-D12(IS)	20.56	264	2443	2.50000	ppb		0.02
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.03	82	610	2.57079	ppb		0.00
Spiked Amount 5.000			Recovery = 51.420%				
7) Surrogate Recovery (FBP)	7.13	172	1711	2.64049	ppb		0.00
Spiked Amount 5.000			Recovery = 52.800%				
17) Surrogate Recovery (TPH)	13.82	244	2128	2.55300	ppb		0.00
Spiked Amount 5.000			Recovery = 51.060%				
Target Compounds							Qvalue
3) Naphthalene	5.89	128	3962	4.87893	ppb		100
4) 2-Methylnaphthalene	6.71	142	2594	5.25231	ppb		99
5) 1-Methylnaphthalene	6.82	142	2589	4.72234	ppb		98
8) Acenaphthylene	7.76	152	4310	5.02078	ppb		97
9) Acenaphthene	7.95	154	2529	4.86026	ppb		99
10) Fluorene	8.57	166	2998	4.97674	ppb		100
12) Phenanthrene	9.89	178	4278	4.84805	ppb		99
13) Anthracene	9.97	178	4208	5.26009	ppb		99
14) Fluoranthene	12.63	202	6072	4.95109	ppb		95
16) Pyrene	13.27	202	6269	4.84904	ppb		98
18) Benz (a) anthracene	16.78	228	5507	4.95154	ppb		97
19) Chrysene	16.88	228	5902	4.70354	ppb		97
20) Indeno (1,2,3-cd) pyrene	22.87	276	5934	4.89651	ppb	#	98
22) Benzo (b) fluoranthene	19.66	252	5214	4.97219	ppb		96
23) Benzo (k) fluoranthene	19.72	252	4685	4.24241	ppb		97
24) Benzo (a) pyrene	20.30	252	5148	4.75849	ppb		97
25) Dibenz (a,h) anthracene	22.92	278	5049	4.96892	ppb		95
26) Benzo (g,h,i) perylene	23.40	276	4746	4.76457	ppb		95

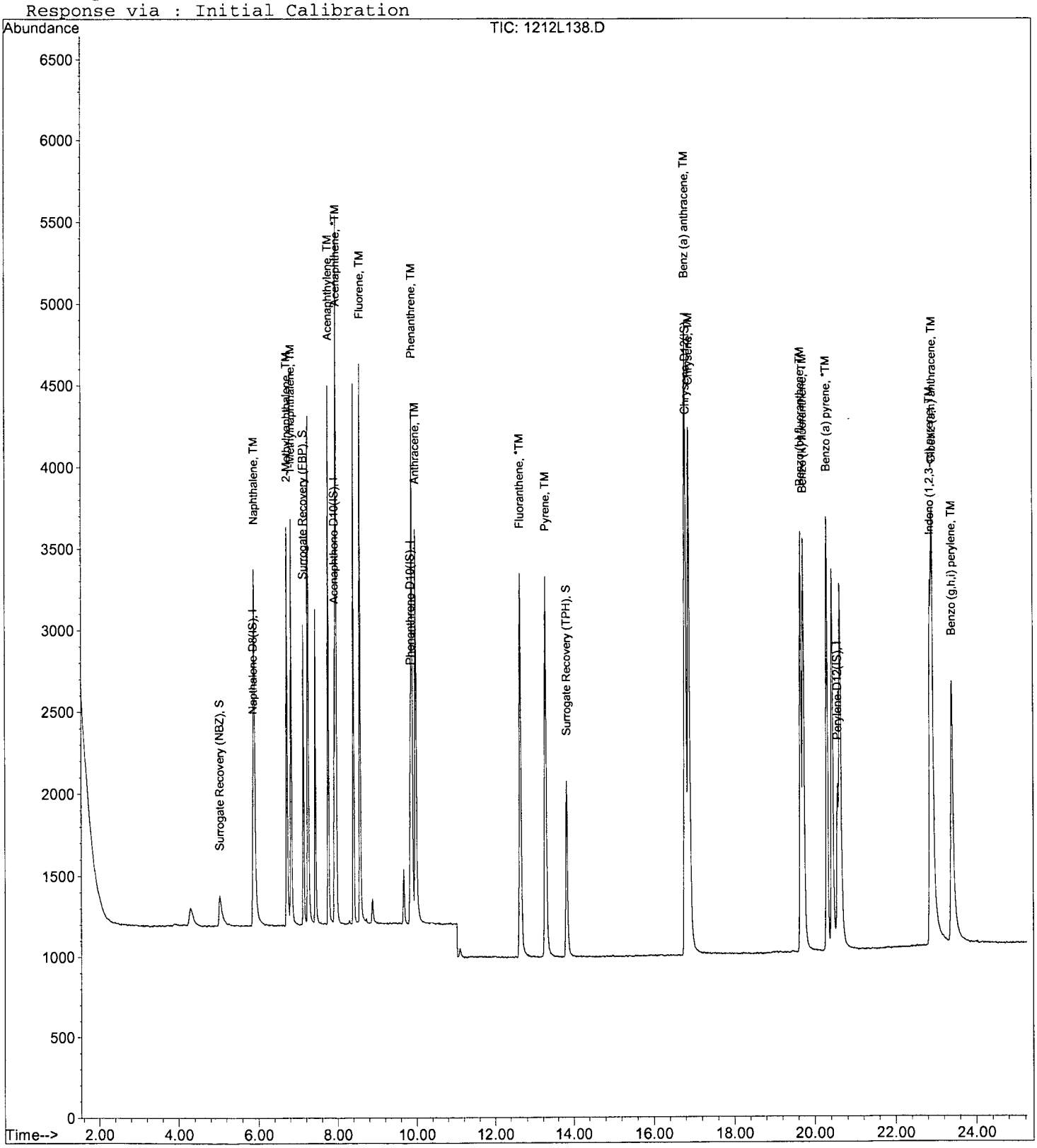
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L138.D Vial: 38
Acq On : 20 Dec 16 16:52 Operator: MA
Sample : 5.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 20 17:17 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Date Analyzed: 12/21/16

Matrix: Instrument: Linus

Initial Cal. Date: 12/12/16

Data File: 1212L156.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	SL	Surrogate Recovery (NBZ)	0.2469	0.3317	34	SL	12
3	TM	Naphthalene	1.009	1.037	2.9	TM	
4	TM	2-Methylnaphthalene	0.6134	0.6616	7.9	TM	
5	TM	1-Methylnaphthalene	0.6809	0.6815	0.09	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	SL	Surrogate Recovery (FBP)	1.561	1.564	0.22	SL	6.8
8	TM	Acenaphthylene	1.942	1.988	2.4	TM	
9	*TM	Acenaphthene	1.177	1.197	1.7	*TM	
10	TM	Fluorene	1.363	1.418	4.0	TM	
11	I	Phenanthrene-D10(IS)	ISTD			I	
12	TM	Phenanthrene	1.075	1.086	1.1	TM	
13	TM	Anthracene	0.9742	1.074	10	TM	
14	*TM	Fluoranthene	1.493	1.545	3.5	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.240	1.244	0.33	TM	
17	SL	Surrogate Recovery (TPH)	0.8592	0.8280	3.6	SL	3.6
18	TM	Benz (a) anthracene	1.067	1.050	1.6	TM	
19	TM	Chrysene	1.204	1.178	2.1	TM	
20	TM	Indeno (1,2,3-cd) pyrene	1.163	1.192	2.5	TM	
21	I	Perylene-D12(IS)	ISTD			I	
22	TM	Benzo (b) fluoranthene	1.073	1.100	2.5	TM	
23	TM	Benzo (k) fluoranthene	1.130	0.9158	19	TM	
24	*TM	Benzo (a) pyrene	1.107	1.084	2.1	*TM	
25	TM	Dibenz (a,h) anthracene	1.040	1.055	1.5	TM	
26	TM	Benzo (g,h,i) perylene	1.019	0.9946	2.4	TM	
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			5.0		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L156.D Vial: 56
Acq On : 21 Dec 16 2:33 Operator: MA
Sample : 5.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 21 8:33 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	1887	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.92	164	1037	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.85	188	1900	2.50000	ppb		0.01
15) Chrysene-D12(IS)	16.80	240	2454	2.50000	ppb		0.01
21) Perylene-D12(IS)	20.56	264	2299	2.50000	ppb		0.02
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.03	82	626	2.79842	ppb		0.00
Spiked Amount 5.000			Recovery = 55.960%				
7) Surrogate Recovery (FBP)	7.13	172	1622	2.66888	ppb		0.00
Spiked Amount 5.000			Recovery = 53.380%				
17) Surrogate Recovery (TPH)	13.82	244	2032	2.59056	ppb		0.00
Spiked Amount 5.000			Recovery = 51.820%				
Target Compounds							Qvalue
3) Naphthalene	5.89	128	3915	5.14296	ppb		100
4) 2-Methylnaphthalene	6.71	142	2497	5.39350	ppb		99
5) 1-Methylnaphthalene	6.82	142	2572	5.00458	ppb		98
8) Acenaphthylene	7.76	152	4123	5.11789	ppb		97
9) Acenaphthene	7.95	154	2483	5.08476	ppb		99
10) Fluorene	8.57	166	2941	5.20226	ppb		100
12) Phenanthrene	9.89	178	4128	5.05477	ppb		99
13) Anthracene	9.98	178	4083	5.51483	ppb		100
14) Fluoranthene	12.63	202	5872	5.17357	ppb		96
16) Pyrene	13.26	202	6107	5.01632	ppb		99
18) Benz (a) anthracene	16.78	228	5153	4.92023	ppb		96
19) Chrysene	16.87	228	5783	4.89417	ppb		97
20) Indeno (1,2,3-cd) pyrene	22.87	276	5848	5.12444	ppb	#	99
22) Benzo (b) fluoranthene	19.65	252	5057	5.12453	ppb		97
23) Benzo (k) fluoranthene	19.72	252	4211	4.05203	ppb		98
24) Benzo (a) pyrene	20.30	252	4983	4.89448	ppb		97
25) Dibenz (a,h) anthracene	22.92	278	4851	5.07309	ppb		96
26) Benzo (g,h,i) perylene	23.40	276	4573	4.87845	ppb		96

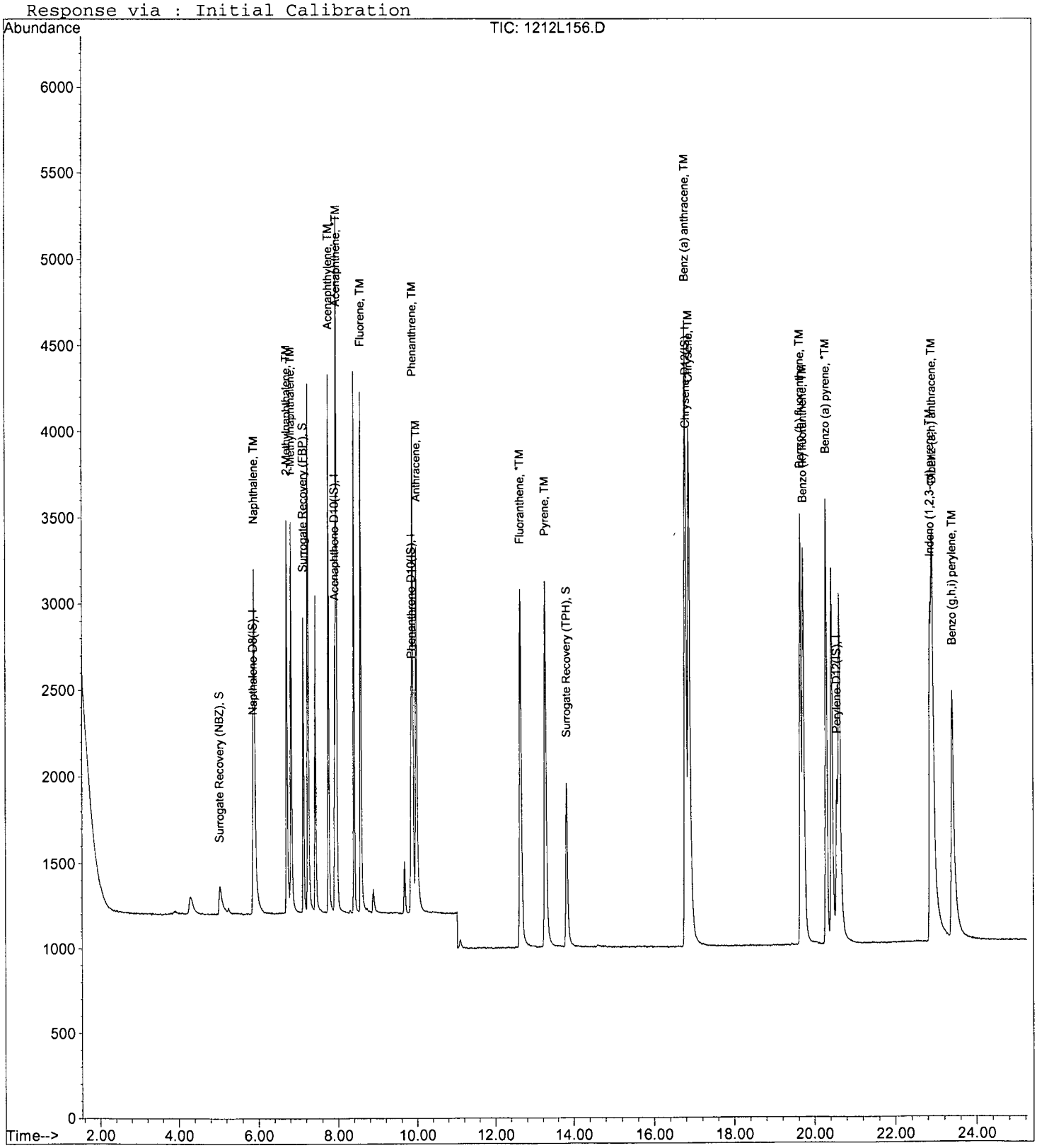
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L156.D Vial: 56
Acq On : 21 Dec 16 2:33 Operator: MA
Sample : 5.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 21 8:33 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/21/16
Instrument: Linus
Initial Cal. Date: 12/12/16
Data File: 1212L159.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	SL	Surrogate Recovery (NBZ)	0.2469	0.3187	29	SL	7.8
3	TM	Naphthalene	1.009	1.000	0.82	TM	
4	TM	2-Methylnaphthalene	0.6134	0.6431	4.8	TM	
5	TM	1-Methylnaphthalene	0.6809	0.6522	4.2	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	SL	Surrogate Recovery (FBP)	1.561	1.556	0.29	SL	6.2
8	TM	Acenaphthylene	1.942	1.968	1.3	TM	
9	*TM	Acenaphthene	1.177	1.165	1.0	*TM	
10	TM	Fluorene	1.363	1.373	0.72	TM	
11	I	Phenanthrene-D10(IS)	ISTD			I	
12	TM	Phenanthrene	1.075	1.058	1.6	TM	
13	TM	Anthracene	0.9742	1.033	6.0	TM	
14	*TM	Fluoranthene	1.493	1.484	0.66	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.240	1.204	2.9	TM	
17	SL	Surrogate Recovery (TPH)	0.8592	0.8097	5.8	SL	1.2
18	TM	Benz (a) anthracene	1.067	1.025	3.9	TM	
19	TM	Chrysene	1.204	1.127	6.4	TM	
20	TM	Indeno (1,2,3-cd) pyrene	1.163	1.133	2.5	TM	
21	I	Perylene-D12(IS)	ISTD			I	
22	TM	Benzo (b) fluoranthene	1.073	0.9961	7.2	TM	
23	TM	Benzo (k) fluoranthene	1.130	0.9582	15	TM	
24	*TM	Benzo (a) pyrene	1.107	1.055	4.7	*TM	
25	TM	Dibenz (a,h) anthracene	1.040	0.9914	4.7	TM	
26	TM	Benzo (g,h,i) perylene	1.019	0.9653	5.3	TM	
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			5.2		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L159.D Vial: 59
Acq On : 21 Dec 16 9:24 Operator: MA
Sample : 5.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 21 9:53 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	1964	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.92	164	1068	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.85	188	1953	2.50000	ppb		0.01
15) Chrysene-D12(IS)	16.80	240	2506	2.50000	ppb		0.01
21) Perylene-D12(IS)	20.56	264	2321	2.50000	ppb		0.02
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.03	82	626	2.69531	ppb		0.00
Spiked Amount 5.000			Recovery = 53.900%				
7) Surrogate Recovery (FBP)	7.13	172	1662	2.65452	ppb		0.00
Spiked Amount 5.000			Recovery = 53.100%				
17) Surrogate Recovery (TPH)	13.82	244	2029	2.53031	ppb		0.00
Spiked Amount 5.000			Recovery = 50.600%				
Target Compounds							Qvalue
3) Naphthalene	5.89	128	3929	4.95900	ppb		100
4) 2-Methylnaphthalene	6.71	142	2526	5.24223	ppb		99
5) 1-Methylnaphthalene	6.82	142	2562	4.78968	ppb		98
8) Acenaphthylene	7.76	152	4203	5.06575	ppb		97
9) Acenaphthene	7.95	154	2489	4.94910	ppb		98
10) Fluorene	8.57	166	2932	5.03580	ppb		100
12) Phenanthrene	9.89	178	4131	4.92117	ppb		99
13) Anthracene	9.97	178	4033	5.29947	ppb		99
14) Fluoranthene	12.63	202	5795	4.96717	ppb		96
16) Pyrene	13.26	202	6034	4.85351	ppb		99
18) Benz (a) anthracene	16.77	228	5137	4.80318	ppb		97
19) Chrysene	16.87	228	5650	4.68239	ppb		97
20) Indeno (1,2,3-cd) pyrene	22.87	276	5680	4.87394	ppb	#	99
22) Benzo (b) fluoranthene	19.65	252	4624	4.64134	ppb		96
23) Benzo (k) fluoranthene	19.72	252	4448	4.23952	ppb		98
24) Benzo (a) pyrene	20.30	252	4898	4.76539	ppb		96
25) Dibenz (a,h) anthracene	22.92	278	4602	4.76707	ppb		95
26) Benzo (g,h,i) perylene	23.40	276	4481	4.73499	ppb		96

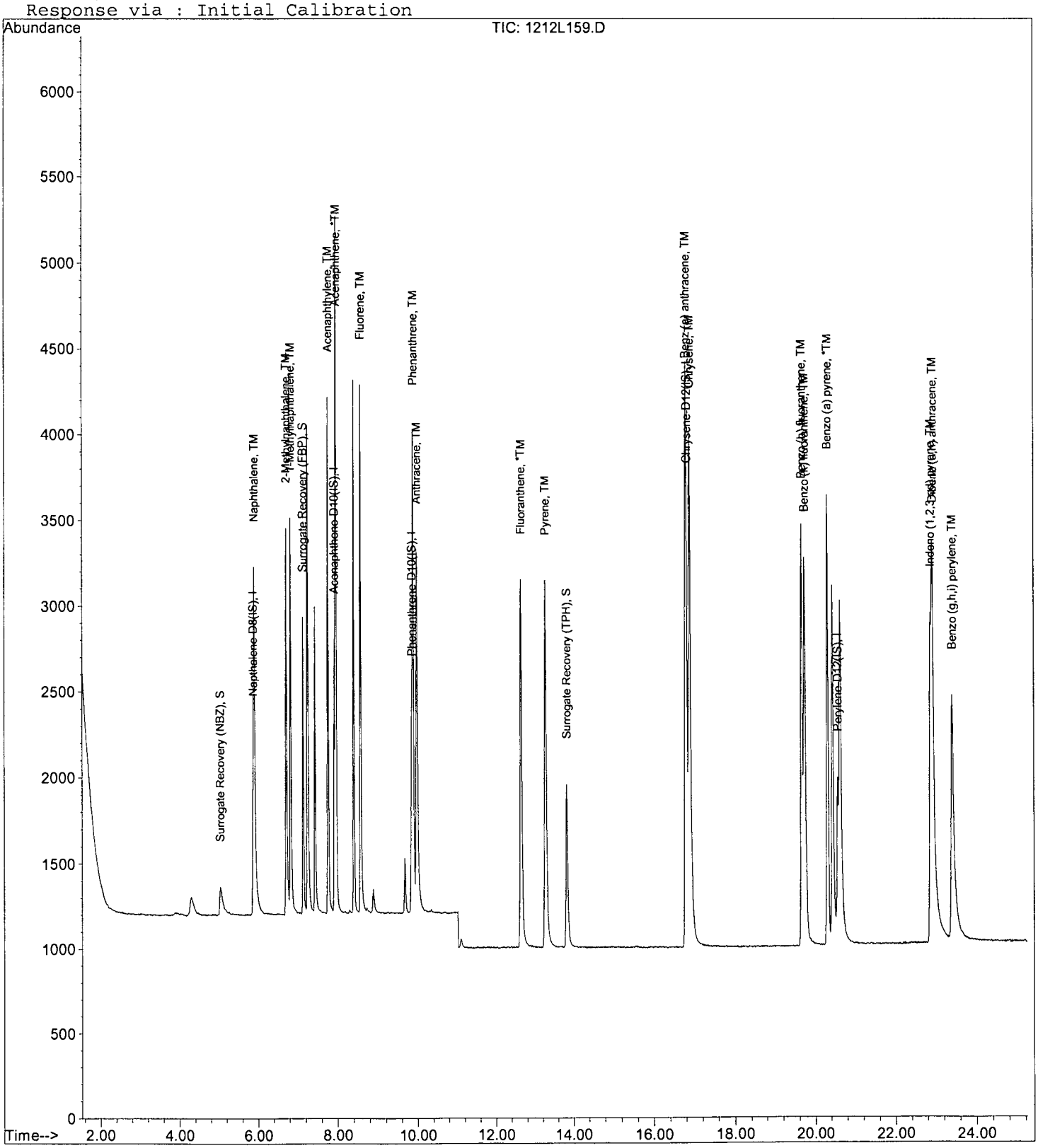
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L159.D Vial: 59
Acq On : 21 Dec 16 9:24 Operator: MA
Sample : 5.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 21 9:53 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 12/21/16
Matrix: Instrument: Linus
Initial Cal. Date: 12/12/16
Data File: 1212L165.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	SL	Surrogate Recovery (NBZ)	0.2469	0.3156	28	SL	6.8
3	TM	Naphthalene	1.009	0.9834	2.5	TM	
4	TM	2-Methylnaphthalene	0.6134	0.6275	2.3	TM	
5	TM	1-Methylnaphthalene	0.6809	0.6546	3.9	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	SL	Surrogate Recovery (FBP)	1.561	1.494	4.3	SL	1.7
8	TM	Acenaphthylene	1.942	1.919	1.2	TM	
9	*TM	Acenaphthene	1.177	1.139	3.2	*TM	
10	TM	Fluorene	1.363	1.346	1.2	TM	
11	I	Phenanthrene-D10(IS)	ISTD			I	
12	TM	Phenanthrene	1.075	1.025	4.6	TM	
13	TM	Anthracene	0.9742	1.012	3.9	TM	
14	*TM	Fluoranthene	1.493	1.458	2.3	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.240	1.186	4.3	TM	
17	SL	Surrogate Recovery (TPH)	0.8592	0.8088	5.9	SL	1.1
18	TM	Benz (a) anthracene	1.067	0.9655	9.5	TM	
19	TM	Chrysene	1.204	1.142	5.2	TM	
20	TM	Indeno (1,2,3-cd) pyrene	1.163	1.120	3.6	TM	
21	I	Perylene-D12(IS)	ISTD			I	
22	TM	Benzo (b) fluoranthene	1.073	1.003	6.5	TM	
23	TM	Benzo (k) fluoranthene	1.130	0.9297	18	TM	
24	*TM	Benzo (a) pyrene	1.107	1.040	6.1	*TM	
25	TM	Dibenz (a,h) anthracene	1.040	0.9914	4.7	TM	
26	TM	Benzo (g,h,i) perylene	1.019	0.9366	8.1	TM	
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			6.2		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L165.D Vial: 65
Acq On : 21 Dec 16 12:48 Operator: MA
Sample : 5.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 21 14:02 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.88	136	1898	2.50000	ppb		0.01
6) Acenaphthene-D10(IS)	7.92	164	1045	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.85	188	1899	2.50000	ppb		0.01
15) Chrysene-D12(IS)	16.80	240	2432	2.50000	ppb		0.01
21) Perylene-D12(IS)	20.57	264	2263	2.50000	ppb		0.03
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.05	82	599	2.67040	ppb		0.01
Spiked Amount 5.000			Recovery = 53.400%				
7) Surrogate Recovery (FBP)	7.13	172	1561	2.54175	ppb		0.00
Spiked Amount 5.000			Recovery = 50.840%				
17) Surrogate Recovery (TPH)	13.83	244	1967	2.52750	ppb		0.01
Spiked Amount 5.000			Recovery = 50.560%				
Target Compounds							Qvalue
3) Naphthalene	5.90	128	3733	4.87546	ppb		99
4) 2-Methylnaphthalene	6.71	142	2382	5.11529	ppb		99
5) 1-Methylnaphthalene	6.82	142	2485	4.80727	ppb		96
8) Acenaphthylene	7.76	152	4011	4.94074	ppb		97
9) Acenaphthene	7.95	154	2381	4.83856	ppb		99
10) Fluorene	8.57	166	2813	4.93775	ppb		100
12) Phenanthrene	9.89	178	3893	4.76952	ppb		99
13) Anthracene	9.98	178	3843	5.19340	ppb		100
14) Fluoranthene	12.63	202	5539	4.88275	ppb		96
16) Pyrene	13.27	202	5771	4.78321	ppb		99
18) Benz (a) anthracene	16.78	228	4696	4.52444	ppb		97
19) Chrysene	16.88	228	5553	4.74203	ppb		96
20) Indeno (1,2,3-cd) pyrene	22.88	276	5450	4.81888	ppb	#	99
22) Benzo (b) fluoranthene	19.65	252	4540	4.67382	ppb		97
23) Benzo (k) fluoranthene	19.72	252	4208	4.11356	ppb		98
24) Benzo (a) pyrene	20.30	252	4706	4.69593	ppb		97
25) Dibenz (a,h) anthracene	22.93	278	4487	4.76707	ppb		96
26) Benzo (g,h,i) perylene	23.41	276	4239	4.59408	ppb		95

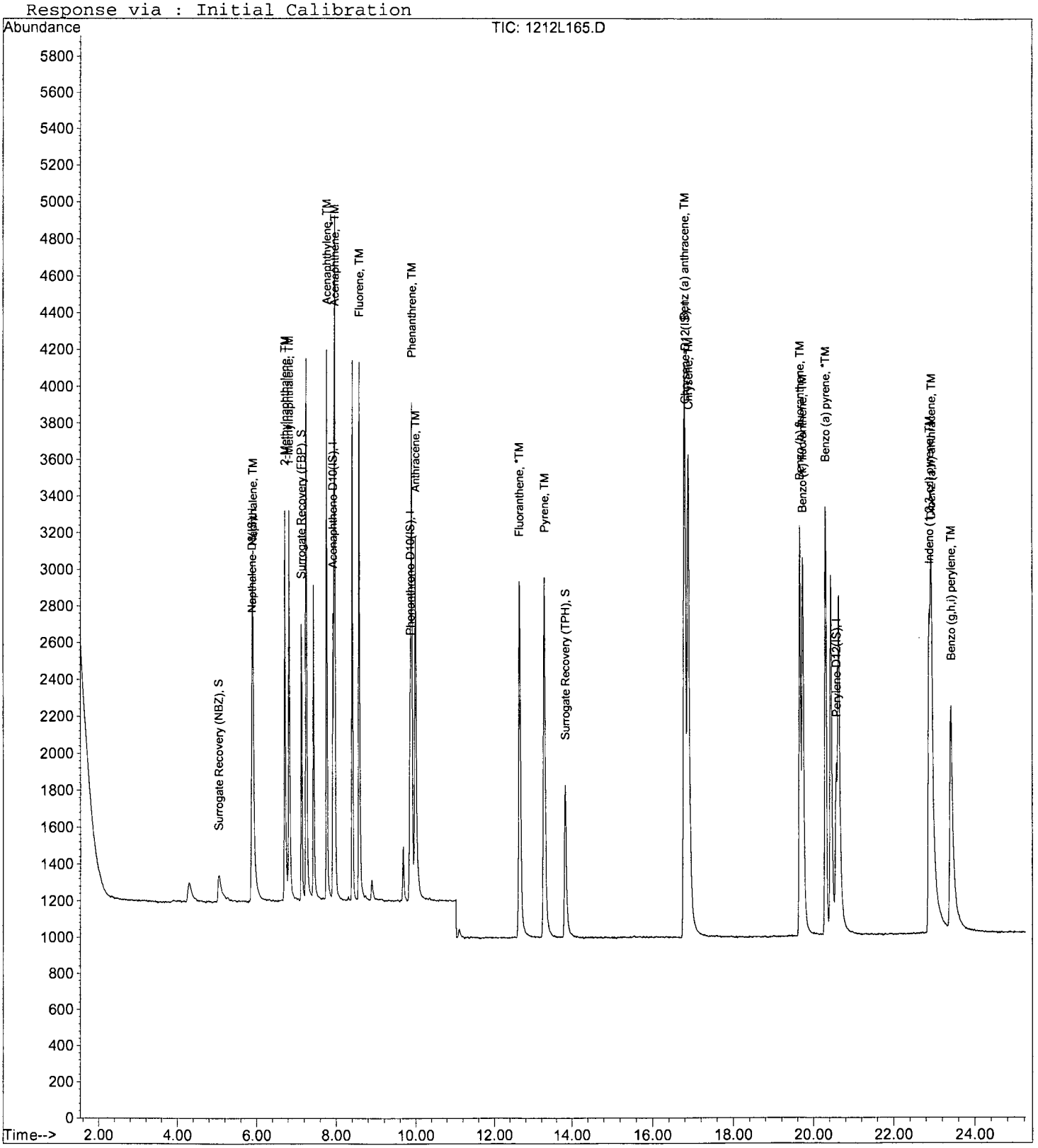
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L165.D Vial: 65
Acq On : 21 Dec 16 12:48 Operator: MA
Sample : 5.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 21 14:02 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



ORGANICS

Raw Data

APPL, INC.

Method Blank
EPA 8270D SIM

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161219W-47494 - 214864**
Batch ID: #SIMDO-161219A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/19/16	12/21/16
BLANK	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/19/16	12/21/16
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	12/19/16	12/21/16
BLANK	SURROGATE: 2-FLUORBIPHENY	65.2	53-106			%	12/19/16	12/21/16
BLANK	SURROGATE: NITROBENZENE-	81.8	55-111			%	12/19/16	12/21/16
BLANK	SURROGATE: TERPHENYL-D14 (	86.6	58-132			%	12/19/16	12/21/16

Quant Method: L1212P.M
Run #: 1212L163
Instrument: Linus
Sequence: L161212
Initials: RHA

GC SC-Blank-REG MDLs-DOD
Printed: 12/21/16 12:56:49 PM

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L163.D Vial: 63
Acq On : 21 Dec 16 11:42 Operator: MA
Sample : 161219A BLK 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 21 12:15 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	2265	2.50000	ppb	0.01
6) Acenaphthene-D10(IS)	7.92	164	1290	2.50000	ppb	0.00
11) Phenanthrene-D10(IS)	9.86	188	2306	2.50000	ppb	0.02
15) Chrysene-D12(IS)	16.83	240	2860	2.50000	ppb	0.04
21) Perylene-D12(IS)	20.59	264	2678	2.50000	ppb	0.05
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.03	82	1121	4.09205	ppb	0.00
Spiked Amount 5.000			Recovery = 81.840%			
7) Surrogate Recovery (FBP)	7.13	172	2438	3.25766	ppb	0.00
Spiked Amount 5.000			Recovery = 65.160%			
17) Surrogate Recovery (TPH)	13.82	244	3886	4.33011	ppb	0.00
Spiked Amount 5.000			Recovery = 86.600%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

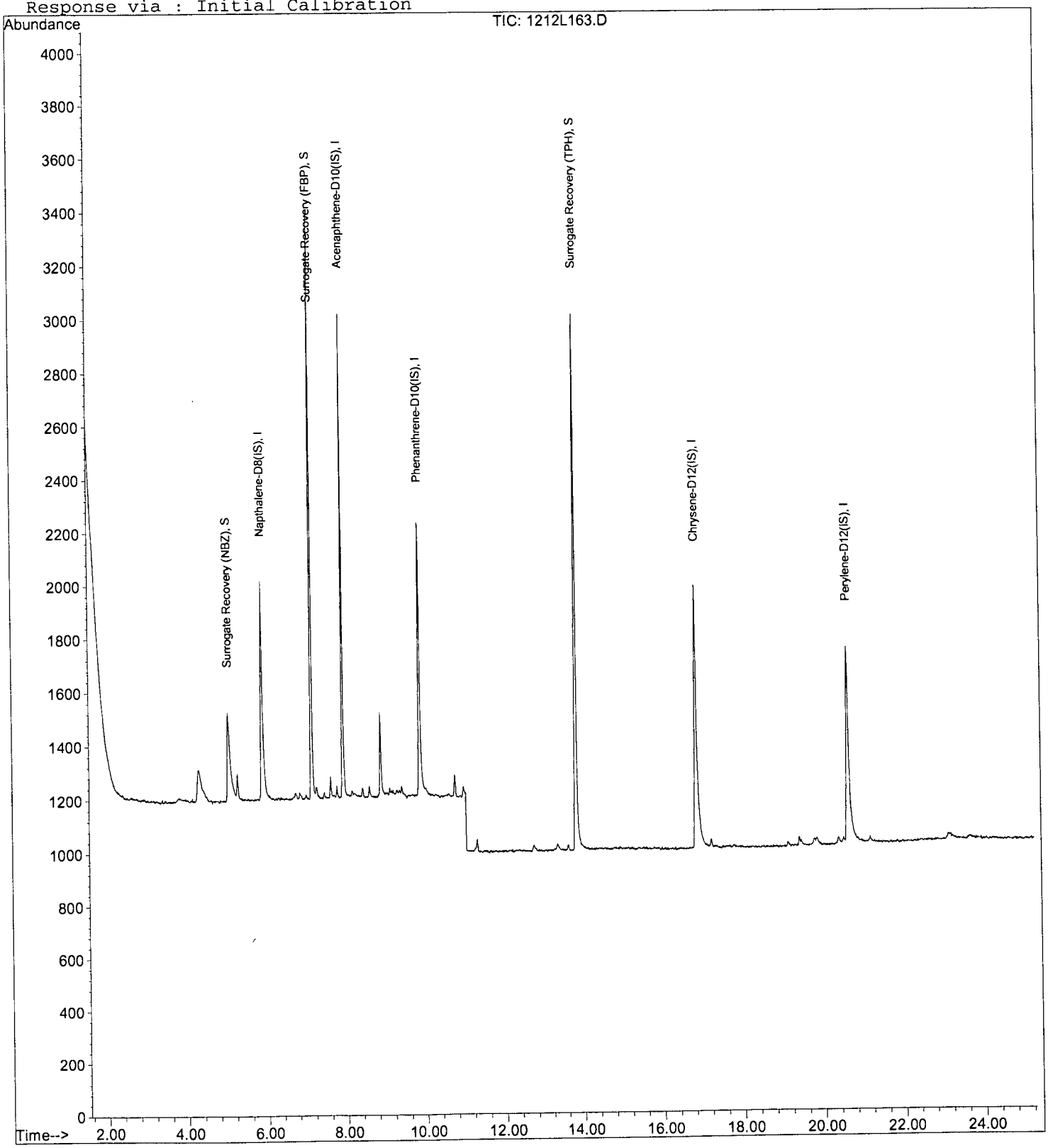
Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L163.D
Acq On : 21 Dec 16 11:42
Sample : 161219A BLK 1/1000
Misc : water

Vial: 63
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Dec 21 12:15 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



Laboratory Control Spike Recovery
EPA 8270D SIM

APPL ID: **161219W-47494 LCS - 214864**
Batch ID: #SIMDO-161219A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1-METHYLNAPHTHALENE	5.00	3.02	60.4	41-115
2-METHYLNAPHTHALENE	5.00	3.13	62.6	39-114
NAPHTHALENE	5.00	3.12	62.4	43-114
SURROGATE: 2-FLUORBIPHENYL (S)	5.00	3.30	66.0	53-106
SURROGATE: NITROBENZENE-D5 (S)	5.00	3.54	70.8	55-111
SURROGATE: TERPHENYL-D14 (S)	5.00	4.13	82.6	58-132

Comments:

Primary	SPK
Quant Method :	L1212P.M
Extraction Date :	12/19/16
Analysis Date :	12/20/16
Instrument :	Linus
Run :	1212L140
Initials :	RHA

Printed: 12/21/16 12:56:42 PM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L140.D Vial: 40
Acq On : 20 Dec 16 17:58 Operator: MA
Sample : 161219A LCS-1 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 21 8:40 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.88	136	1028	2.50000	ppb		0.01
6) Acenaphthene-D10(IS)	7.92	164	576	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.85	188	1047	2.50000	ppb		0.01
15) Chrysene-D12(IS)	16.81	240	1327	2.50000	ppb		0.02
21) Perylene-D12(IS)	20.58	264	1262	2.50000	ppb		0.04
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.03	82	437	3.53849	ppb		0.00
Spiked Amount 5.000			Recovery = 70.760%				
7) Surrogate Recovery (FBP)	7.13	172	1101	3.29658	ppb		0.00
Spiked Amount 5.000			Recovery = 65.940%				
17) Surrogate Recovery (TPH)	13.82	244	1723	4.13238	ppb		0.00
Spiked Amount 5.000			Recovery = 82.640%				
Target Compounds							Qvalue
3) Naphthalene	5.90	128	1293	3.11788	ppb		99
4) 2-Methylnaphthalene	6.71	142	790	3.13226	ppb		97
5) 1-Methylnaphthalene	6.82	142	846	3.02166	ppb		96
8) Acenaphthylene	7.76	152	1718	3.83934	ppb		98
9) Acenaphthene	7.95	154	981	3.61676	ppb		99
10) Fluorene	8.57	166	1277	4.06672	ppb		99
12) Phenanthrene	9.89	178	1925	4.27759	ppb		100
13) Anthracene	9.98	178	1764	4.32373	ppb		100
14) Fluoranthene	12.64	202	2887	4.61591	ppb		95
16) Pyrene	13.28	202	2991	4.54336	ppb		98
18) Benz (a) anthracene	16.79	228	2487	4.39142	ppb		97
19) Chrysene	16.89	228	2892	4.52614	ppb		97
20) Indeno (1,2,3-cd) pyrene	22.89	276	2976	4.82253	ppb	#	99
22) Benzo (b) fluoranthene	19.67	252	2363	4.36219	ppb		96
23) Benzo (k) fluoranthene	19.74	252	2259	3.95990	ppb		96
24) Benzo (a) pyrene	20.32	252	2505	4.48232	ppb		95
25) Dibenz (a,h) anthracene	22.94	278	2431	4.63133	ppb		93
26) Benzo (g,h,i) perylene	23.42	276	2341	4.54948	ppb		95

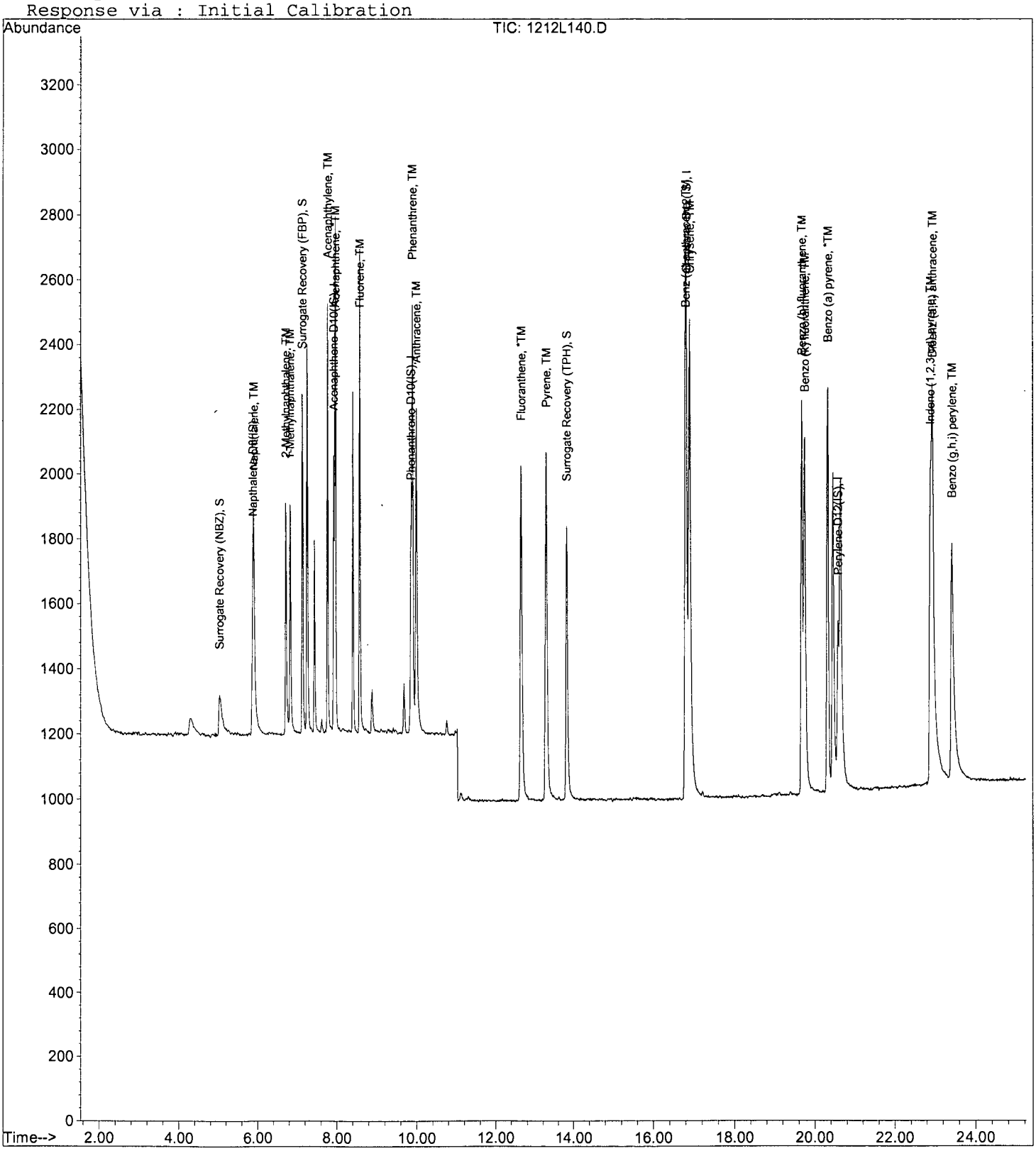
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L140.D Vial: 40
Acq On : 20 Dec 16 17:58 Operator: MA
Sample : 161219A LCS-1 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 21 8:40 2016 Quant Results File: L1212P.RES

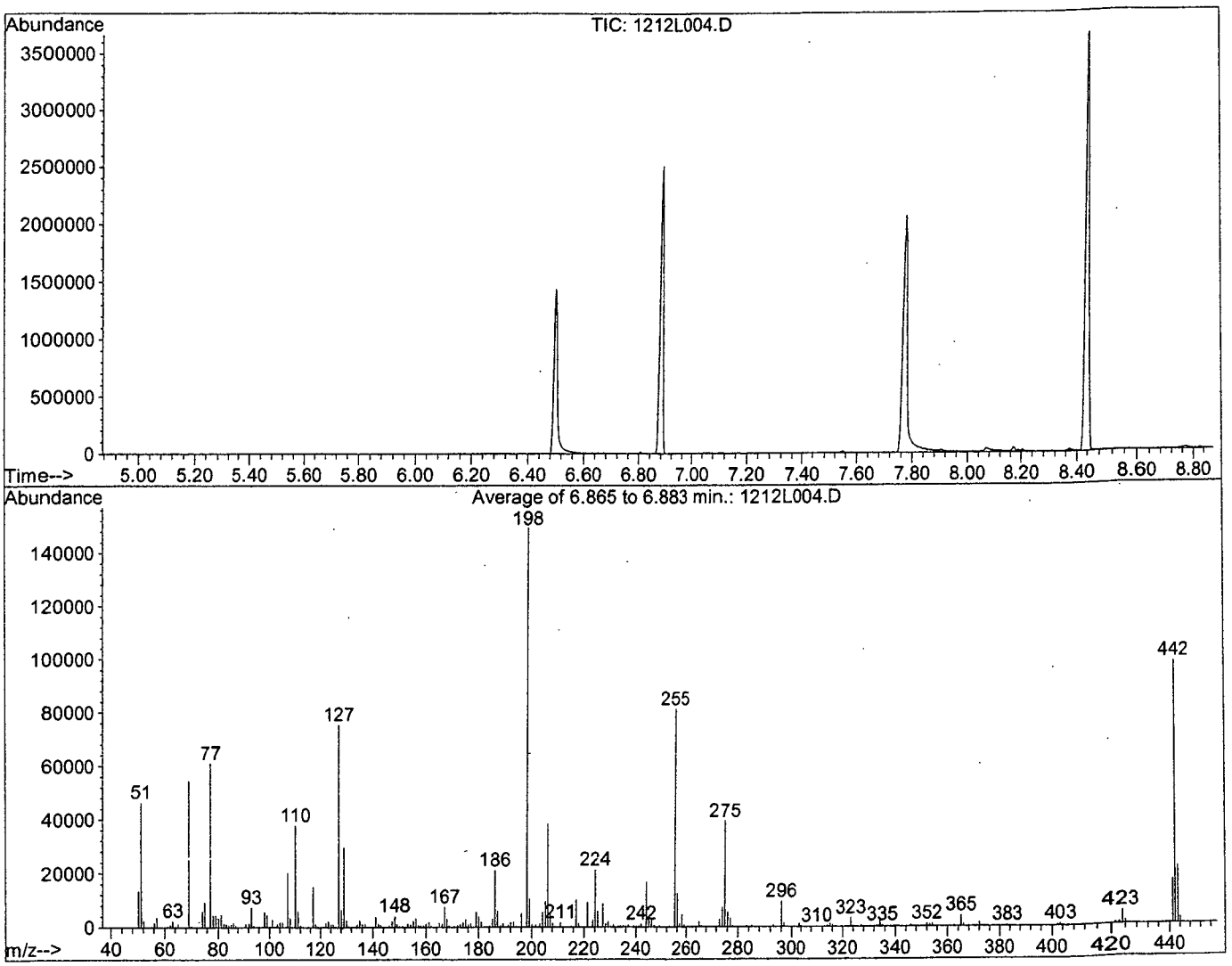
Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



Data File : M:\LINUS\DATA\L161212\1212L004.D
Acq On : 12 Dec 16 10:19
Sample : SV Tune 11/15/16
Misc : water

Vial: 2
Operator: MA
Inst : Linus
Multiplr: 1.00

Method : M:\LINUS\DATA\L161026\DFTPP2.M (Chemstation Integrator)
Title :



Spectrum Information: Average of 6.865 to 6.883 min.

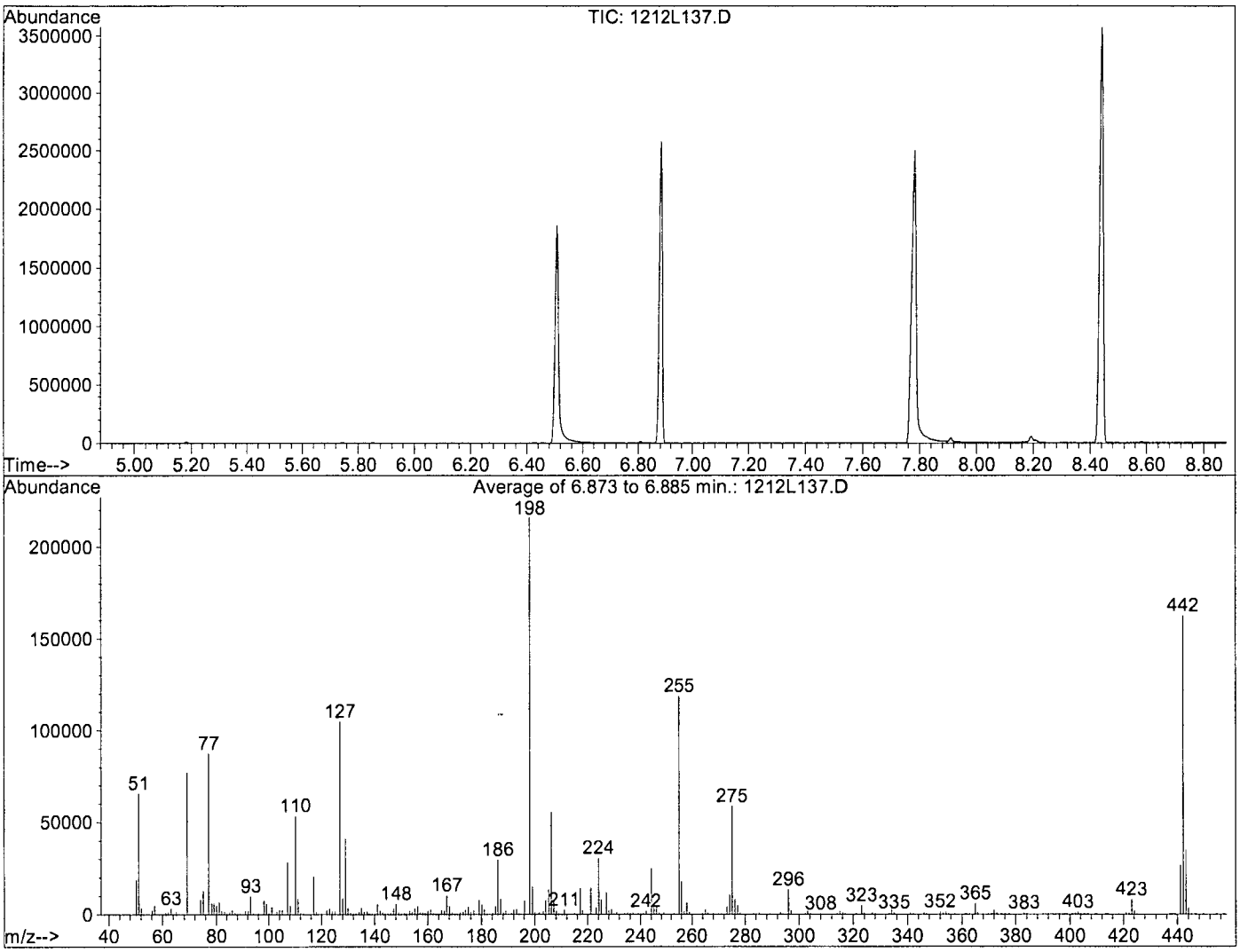
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	31.0	46351	PASS
68	69	0.00	2	0.0	0	PASS
69	69	100	100	100.0	54581	PASS
70	69	0.00	2	0.6	344	PASS
127	198	40	60	50.3	75268	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	149562	PASS
199	198	5	9	6.9	10325	PASS
275	198	10	30	26.2	39172	PASS
365	198	1	100	2.6	3864	PASS
441	443	0.01	100	76.7	16188	PASS
442	198	40	150	65.3	97607	PASS
443	442	17	23	21.6	21119	PASS

1212L004.D DFTPP2.M Mon Dec 12 10:39:40 2016

Data File : M:\LINUS\DATA\L161212\1212L137.D
Acq On : 20 Dec 16 16:35
Sample : SV Tune 12/15/16
Misc : water

Vial: 37
Operator: MA
Inst : Linus
Multiplr: 1.00

Method : M:\LINUS\DATA\L161026\DFTPP2.M (Chemstation Integrator)
Title :



Spectrum Information: Average of 6.873 to 6.885 min.

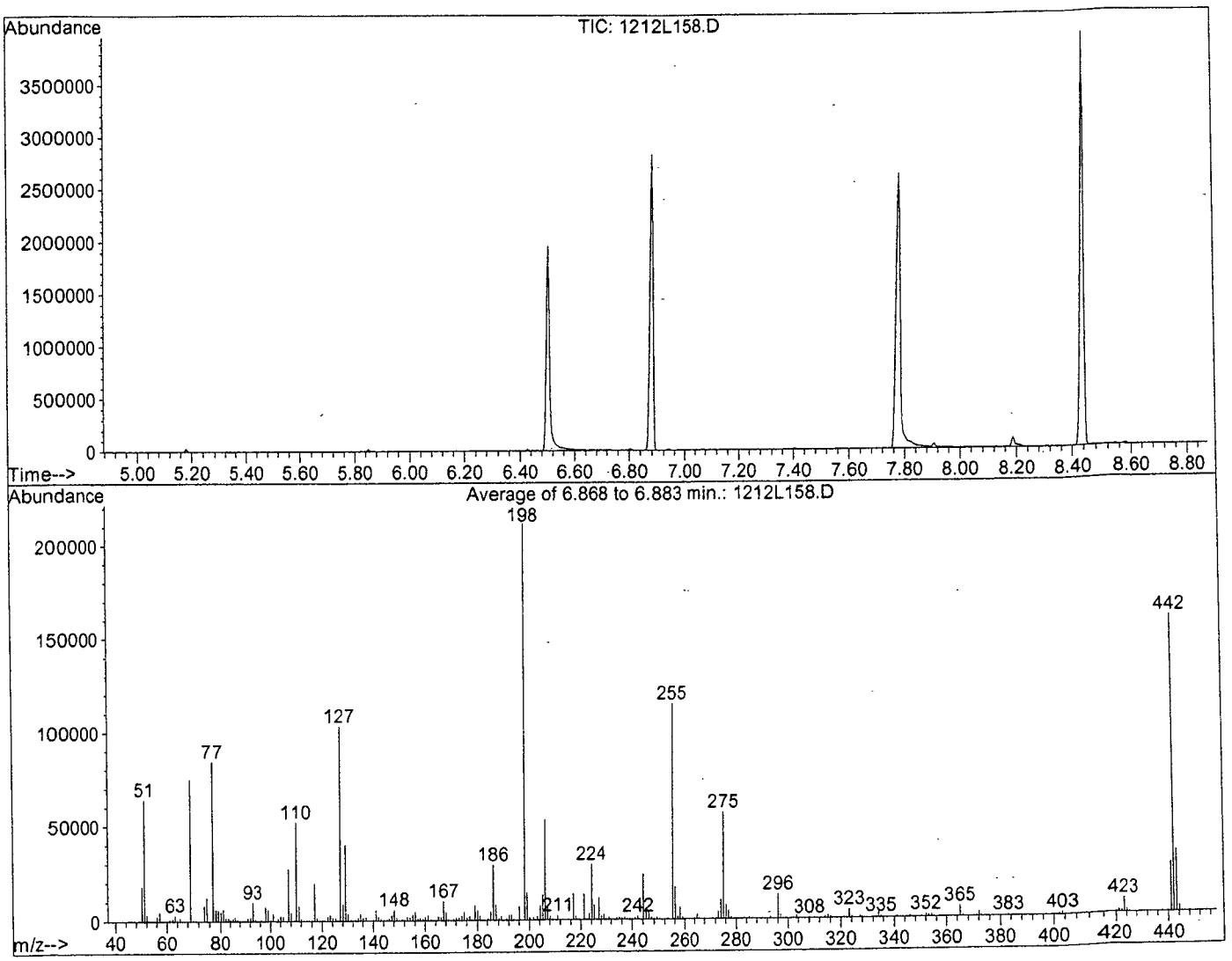
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	30.4	65775	PASS
68	69	0.00	2	0.0	0	PASS
69	69	100	100	100.0	77141	PASS
70	69	0.00	2	0.2	184	PASS
127	198	40	60	48.4	104632	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	216253	PASS
199	198	5	9	6.9	14948	PASS
275	198	10	30	27.0	58475	PASS
365	198	1	100	2.7	5741	PASS
441	443	0.01	100	76.5	26370	PASS
442	198	40	150	75.1	162381	PASS
443	442	17	23	21.2	34471	PASS

DFTPP

Data File : M:\LINUS\DATA\L161212\1212L158.D
Acq On : 21 Dec 16 9:07
Sample : SV Tune 12/15/16
Misc : water

Vial: 58
Operator: MA
Inst : Linus
Multiplr: 1.00

Method : M:\LINUS\DATA\L161026\DFTPP2.M (Chemstation Integrator)
Title :



Spectrum Information: Average of 6.868 to 6.883 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	30.4	64201	PASS
68	69	0.00	2	0.0	0	PASS
69	69	100	100	100.0	75066	PASS
70	69	0.00	2	0.4	316	PASS
127	198	40	60	48.8	103146	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	211258	PASS
199	198	5	9	6.8	14389	PASS
275	198	10	30	26.6	56256	PASS
365	198	1	100	2.6	5538	PASS
441	443	0.01	100	78.9	25916	PASS
442	198	40	150	75.0	158395	PASS
443	442	17	23	20.7	32837	PASS

1212L158.D DFTPP2.M Wed Dec 21 12:39:44 2016

8270 PAH SIM Standard Curve

PREP DATE:	12/12/16 RH											
8270 PAH SIM STANDARD CURVE												
Exp.DATE:	2/15/17					0.1	0.2	0.5	1	5	10	50
		Conc.		Date								
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL	µL	µL	µL	µL
O2si	8270 PAH SIM Stock	200	278353-36992	9/12/16	9/12/17	0	0	0	0	5	5	25
	5.0ug/mL	5		9/12/16	7/29/17	0	0	10	20	0	0	0
	1.0ug/mL	1		9/12/16	7/29/17	10	20	0	0	0	0	0
O2SI	BNA SURR.	100/200		11/15/16	2/15/17	0	0	0	0	5	5	25
EM Science	Methylene Chloride		56061			90	80	90	80	190	90	50
Supelco	SV Internal Standar	2000	XA14020V-36768	10/10/16	10/10/17	2	2	2	2	4	2	2
				Final Vol.		102	102	102	102	204	102	102

100
µL
50
0
0
50
0
2
102

8270 PAH SIM 2ND SRC

8270 PAH SIM 2ND SRC			Prep: 09/06/16 Exp 01/12/17 RH		
Supplier	**Standard**	**Conc.**	**Prep**	**Exp**	**µL**
O2SI	8270 2ND SRC	VARIOUS	06/03/16	01/21/17	25
	Methylene Chloride				75
o2si	CV Internal Standar	2000	10/10/16	10/10/17	2
LOT#	XA10079V-35507			Final Vol.	102

SIM SPIKE	
CAT:	110780-01
Lot:	278353-369
OP: 11/21/16-R.H.	
EX: 11/21/17	

8270 SIM PAH Internal Standard						
PREP DATE:	10/10/16 RH.					
8270 SIM PAH Internal Standard Mix 125ug/ml						
Exp.DATE:	10/10/17					
		Conc.		Date	Exp.	125
Supplier	ID #	µg/mL	Lot #	Code	Date	µL
Supelco	SV Internal	2000	XA14020V-36768	10/10/16	10/10/17	350
EM Science	Methylene Chloride		56061			5250
				Final Vol.		5600

PAH SIM STD prep: 09/12/16-R.H.						
Exp:	19/12/17					
		Conc.				
Supplier	ID #	mg/L	Lot #	Open Date	Exp.Date	µL
o2si	110780-01	200	278353-36992	6/22/16	6/22/17	1000
				Fin Vol.		1000

Semivolatile (SV) Tuning Solution -G.A.						
PREP DATE:	11/15/16	RH				
Semivolatile (SV) Tune Solution 50ug/ml						
Exp:	8/26/17					
		Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
Ultra Scient	Semivolatile GC	1000	N081628-37012	08/23/16	8/23/17	200
EM Science	Methylene Chloride		55098			3800
				Final Vol.		4000

8270 Surrog Mix 100/200ppm						
Prep: 11/15/16 -RH Ex: 2/15/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
8270 Acid Surrog Mix	10000 ug/ml	Restek Cat# 33029 Lot# A0118884-36875 Op: 11/15/16 EX: 11/15/17	2.0 mL	100 mL	200 ug/mL	MC
8270 B/N surrog Mix	5000 µg/mL	Restek Cat# 31086 Lot# A0119223-36871 Op: 11/15/16 EX: 11/15/17	2.0 mL	100 mL	100 ug/mL	MC

_SEP004S

Organic Extraction Worksheet

Method	SIM Separatory Funnel Extra 3510C	Extraction Set	161219A	Extraction Method	SEP004S	Units	mL

Spiked ID 1	PAH SIM Spike 11-21-16 EXP 11-21-17		Surrogate ID 1	8270 Surrogate 12-8-16 EXP 3-8-17	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	12/19/16 15:50	
Spiked ID 8			Ext. End Time:	12/20/16 15:45	
			GC Requires Extract By:	12/21/16 0:00	

pH1	2	12/19/16 4:00:00 PM	Water Bath Temp Criteria	70,70 °C
pH2	14	12/19/16 6:00:00 PM		
pH3				

Spiked By: KY **Date** 12/19/16 **Witnessed By:** DL **Date** 12/19/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	161219A Blk				0.050	1 equip	1000 E-WB7	1	2/1	12/19/16 15:50	
2	161219A LCS-1		0.0250	1	0.050	1 equip	1000 E-WB7	1	2/1	12/19/16 15:50	
3	161219A LCSD-1		0.0250	1	0.050	1 equip	1000 E-WB7	1	2/1	12/19/16 15:50	
4	AZ47494	AZ47494W13			0.050	1 equip	1070 E-WB7	1	2/1	12/19/16 15:50	81760 1 WEEK
5	AZ47495	AZ47495W13			0.050	1 equip	1070 E-WB7	1	2/1	12/19/16 15:50	81760 1 WEEK
6	AZ47496	AZ47496W10			0.050	1 equip	1070 E-WB7	1	2/1	12/19/16 15:50	81760 1 WEEK
7	AZ47497	AZ47497W11			0.050	1 equip	1070 E-WB7	1	2/1	12/19/16 15:50	81760 1 WEEK
8	AZ47498	AZ47498W15			0.050	1 equip	1070 E-WB7	1	2/1	12/19/16 15:50	81760 1 WEEK
9	AZ47658	AZ47658W13			0.050	1 equip	1070 E-WB7	1	2/1	12/19/16 15:50	81760 1 WEEK
10	AZ47659	AZ47659W05			0.050	1 equip	1070 E-WB7	1	2/1	12/19/16 15:50	81776 1 WEEK
11	AZ47660	AZ47660W09			0.050	1 equip	1070 E-WB6	1	2/1	12/19/16 15:50	81776 1 WEEK
12	AZ47661	AZ47661W10			0.050	1 equip	1070 E-WB6	1	2/1	12/19/16 15:50	81776 1 WEEK
13	AZ47662	AZ47662W07			0.050	1 equip	1070 E-WB6	1	2/1	12/19/16 15:50	81776 1 WEEK
14	AZ47663	AZ47663W12			0.050	1 equip	1070 E-WB6	1	2/1	12/19/16 15:50	81776 1 WEEK
15	AZ47664	AZ47664W09			0.050	1 equip	1050 E-WB6	1	2/1	12/19/16 15:50	81776 1 WEEK
16	AZ47665	AZ47665W10			0.050	1 equip	1070 E-WB6	1	2/1	12/19/16 15:50	81776 1 WEEK

Solvent and Lot#	
1+1 SULFURIC ACID	12-5-16
PH STRIP	HC 574756
MC	56153
A. Na2SO4	11-3-16
10N NaOH	12-19-16
B. Na2SO4	16C255214
FILTER PAPER	400112

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	RH
Date	12/20/16
Time	4:20
Refrigerator	GC-C

	Technician's Initials
Scanned By	KY
Sample Preparation	KY,JR,DL
Extraction	KY,JR,DL
Concentration	KY

Modified	12/20/16 4:00:33 PM

Reviewed By: KY288 **Date** 12/20/16

12/20/16 4:00:40 PM Ext_ID 53590

Injection Log

Directory: M:\LINUS\DATA\L161212\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	1212L004.D	1	SV Tune 11/15/16	water	12 Dec 16 10:19
2	3	1212L005.D	1	0.1 ug/ml PAH 12/12/16	water	12 Dec 16 10:36
3	4	1212L006.D	1	0.2 ug/ml PAH 12/12/16	water	12 Dec 16 11:09
4	7	1212L009.D	1	5.0 ug/ml PAH 12/12/16	water	12 Dec 16 12:49
5	8	1212L010.D	1	10.0 ug/ml PAH 12/12/16	water	12 Dec 16 13:22
6	9	1212L011.D	1	50.0 ug/ml PAH 12/12/16	water	12 Dec 16 13:54
7	10	1212L012.D	1	100.0 ug/ml PAH 12/12/16	water	12 Dec 16 14:28
8	11	1212L013.D	1	0.5 ug/ml PAH 12/12/16	water	12 Dec 16 15:01
9	12	1212L014.D	1	1.0 ug/ml PAH 12/12/16	water	12 Dec 16 15:34
10	15	1212L015.D	1	SS PAH 12/12/16	water	12 Dec 16 16:07
11	37	1212L137.D	1	SV Tune 12/15/16	water	20 Dec 16 16:35
12	38	1212L138.D	1	5.0 ug/ml PAH 12/12/16	water	20 Dec 16 16:52
13	40	1212L140.D	1	161219A LCS-1 1/1000	water	20 Dec 16 17:58
14	47	1212L147.D	0.93458	AZ47658W13 1/1070	water	20 Dec 16 21:51
15	48	1212L148.D	0.93458	AZ47659W05 1/1070	water	20 Dec 16 22:24
16	49	1212L149.D	0.93458	AZ47660W09 1/1070	water	20 Dec 16 22:58
17	50	1212L150.D	0.93458	AZ47661W10 1/1070	water	20 Dec 16 23:31
18	51	1212L151.D	0.93458	AZ47662W07 1/1070	water	21 Dec 16 00:04
19	52	1212L152.D	0.93458	AZ47663W12 1/1070	water	21 Dec 16 00:37
20	53	1212L153.D	0.95238	AZ47664W09 1/1050	water	21 Dec 16 1:10
21	54	1212L154.D	0.93458	AZ47665W10 1/1070	water	21 Dec 16 1:44
22	56	1212L156.D	1	5.0 ug/ml PAH 12/12/16	water	21 Dec 16 2:33
23	58	1212L158.D	1	SV Tune 12/15/16	water	21 Dec 16 9:07
24	59	1212L159.D	1	5.0 ug/ml PAH 12/12/16	water	21 Dec 16 9:24
25	63	1212L163.D	1	161219A BLK 1/1000	water	21 Dec 16 11:42
26	65	1212L165.D	1	5.0 ug/ml PAH 12/12/16	water	21 Dec 16 12:48

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank
EPA 8270D WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161219W-47494 - 214871**
Batch ID: #87DC5-161219A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	12/19/16	12/21/16
BLANK	SURROGATE: 2,4,6-TRIBROMOP	51.6	43-140			%	12/19/16	12/21/16
BLANK	SURROGATE: 2-FLUORBIPHENY	47.8	44-119			%	12/19/16	12/21/16
BLANK	SURROGATE: 2-FLUOROPHENO	40.4	19-119			%	12/19/16	12/21/16
BLANK	SURROGATE: NITROBENZENE-	49.3	44-120			%	12/19/16	12/21/16
BLANK	SURROGATE: PHENOL-D6 (S)	29.9	10-115			%	12/19/16	12/21/16
BLANK	SURROGATE: TERPHENYL-D14 (	52.5	50-134			%	12/19/16	12/21/16

Quant Method:Y1207.M
Run #:1207Y183
Instrument:Yoda
Sequence:Y161207
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 12/22/16 8:59:13 AM

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81776

Case No: 81776 Date Analyzed: 12/21/16

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2,4,6-TRIBROMOPHENOL (S)			SURROGATE: 2-FLUORBIPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161219A-LCS	Lab Control Spike	43-140	75.0		44-119	67.1	
AZ47658	ERH147	43-140	69.4		44-119	63.4	
AZ47659	ERH148	43-140	69.5		44-119	66.3	
161219A-BLK	Blank	43-140	51.6		44-119	47.8	
AZ47660	ERH152	43-140	64.8		44-119	61.7	
AZ47661	ERH149	43-140	59.2		44-119	55.5	
AZ47662	ERH150	43-140	64.6		44-119	61.5	
AZ47663	ERH138	43-140	63.1		44-119	60.9	
AZ47664	ERH144	43-140	49.5		44-119	45.2	
AZ47665	ERH140	43-140	65.3		44-119	60.7	

Comments: Batch: #87DC5-161219A

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81776

Case No: 81776 Date Analyzed: 12/21/16

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2-FLUOROPHENOL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161219A-LCS	Lab Control Spike	19-119	47.3		44-120	71.1	
AZ47658	ERH147	19-119	48.1		44-120	69.8	
AZ47659	ERH148	19-119	48.0		44-120	68.9	
161219A-BLK	Blank	19-119	40.4		44-120	49.3	
AZ47660	ERH152	19-119	40.6		44-120	59.8	
AZ47661	ERH149	19-119	38.4		44-120	57.5	
AZ47662	ERH150	19-119	43.4		44-120	63.4	
AZ47663	ERH138	19-119	42.6		44-120	62.2	
AZ47664	ERH144	19-119	29.2		44-120	44.1	
AZ47665	ERH140	19-119	38.1		44-120	57.3	

Comments: Batch: #87DC5-161219A

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81776

Case No: 81776 Date Analyzed: 12/21/16

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: PHENOL-D6 (S)			SURROGATE: TERPHENYL-D14 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161219A-LCS	Lab Control Spike	10-115	30.3		50-134	73.5	
AZ47658	ERH147	10-115	32.2		50-134	66.7	
AZ47659	ERH148	10-115	32.7		50-134	67.7	
161219A-BLK	Blank	10-115	29.9		50-134	52.5	
AZ47660	ERH152	10-115	28.2		50-134	63.8	
AZ47661	ERH149	10-115	26.0		50-134	58.1	
AZ47662	ERH150	10-115	29.2		50-134	64.4	
AZ47663	ERH138	10-115	28.7		50-134	64.9	
AZ47664	ERH144	10-115	20.2		50-134	46.6	#
AZ47665	ERH140	10-115	27.3		50-134	67.9	

Comments: Batch: #87DC5-161219A

= Recovery outside of Control Limits on Sample.

Laboratory Control Spike Recovery
EPA 8270D WATER

APPL ID: **161219W-47494 LCS - 214871**
Batch ID: #87DC5-161219A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
PHENOL	50.0	19.1	38.2	10-115
SURROGATE: 2,4,6-TRIBROMOPHENOL	200	150	75.0	43-140
SURROGATE: 2-FLUORBIPHENYL (S)	100	67.1	67.1	44-119
SURROGATE: 2-FLUOROPHENOL (S)	200	94.6	47.3	19-119
SURROGATE: NITROBENZENE-D5 (S)	100	71.1	71.1	44-120
SURROGATE: PHENOL-D6 (S)	200	60.6	30.3	10-115
SURROGATE: TERPHENYL-D14 (S)	100	73.5	73.5	50-134

Comments: _____

Primary	SPK
Quant Method :	Y1207.M
Extraction Date :	12/19/16
Analysis Date :	12/21/16
Instrument :	Yoda
Run :	1207Y174
Initials :	MA

Printed: 12/22/16 8:59:16 AM
APPL Standard LCS

EPA 8270D

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81776

Case No: 81776 Date Analyzed: 12/21/16

Matrix: WATER Instrument: Yoda

Blank ID: 161219A-BLK Time Analyzed: 1636

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161219A-LCS	Lab Control Spike	1207Y174	12/21/16 1205
AZ47658	ERH147	1207Y181	12/21/16 1535
AZ47659	ERH148	1207Y182	12/21/16 1605
161219A-BLK	Blank	1207Y183	12/21/16 1636
AZ47660	ERH152	1207Y184	12/21/16 1706
AZ47661	ERH149	1207Y185	12/21/16 1736
AZ47662	ERH150	1207Y186	12/21/16 1806
AZ47663	ERH138	1207Y187	12/21/16 1835
AZ47664	ERH144	1207Y188	12/21/16 1906
AZ47665	ERH140	1207Y189	12/21/16 1936

Comments: Batch: #87DC5-161219A

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: water
ID: SV Tune 10/19/16

SDG No:
Date Analyzed: 12/07/16
Instrument: Yoda
Time Analyzed: 9:00

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		5ug/ml SVOC 12/06/16	1207Y004.D	12/07/16 10:01
2		10ug/ml SVOC 12/06/1	1207Y005.D	12/07/16 10:32
3		20ug/ml SVOC 12/06/1	1207Y006.D	12/07/16 11:02
4		40ug/ml SVOC 12/06/1	1207Y007.D	12/07/16 11:32
5		50ug/ml SVOC 12/06/1	1207Y008.D	12/07/16 12:02
6		60ug/ml SVOC 12/06/1	1207Y009.D	12/07/16 12:32
7		80ug/ml SVOC 12/06/1	1207Y010.D	12/07/16 13:02
8		100ug/ml SVOC 12/06/	1207Y011.D	12/07/16 13:32
9		2ND SRC SVOC 12/06/1	1207Y012.D	12/07/16 14:01
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	46.7
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.7
127	40 - 60% of mass 198	56.0
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 197.95	100.0
199	5 - 9% of mass 198	6.9
275	10 - 30% of mass 198	24.0
365	1 - 100% of mass 198	3.1
441	0.01 - 100% of mass 443	86.4
442	50 - 150% of mass 197.95	90.6
443	17 - 23% of mass 442	20.1

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81776
Matrix: Water
ID: SV Tune 10/19/16

SDG No: 81776
Date Analyzed: 12/21/16
Instrument: Yoda
Time Analyzed: 10:48

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		50ug/ml SVOC 12/06/1	1207Y172.D	12/21/16 11:04
2	Lab Control Spike	161219A LCS-1 1/1000	1207Y174.D	12/21/16 12:05
3	ERH147	AZ47658W12 1/1070	1207Y181.D	12/21/16 15:35
4	ERH148	AZ47659W08 1/1070	1207Y182.D	12/21/16 16:05
5	Blank	161219A BLK 1/1000	1207Y183.D	12/21/16 16:36
6	ERH152	AZ47660W12 1/1070	1207Y184.D	12/21/16 17:06
7	ERH149	AZ47661W08 1/1070	1207Y185.D	12/21/16 17:36
8	ERH150	AZ47662W08 1/1070	1207Y186.D	12/21/16 18:06
9	ERH138	AZ47663W10 1/1070	1207Y187.D	12/21/16 18:35
10	ERH144	AZ47664W10 1/1070	1207Y188.D	12/21/16 19:06
11	ERH140	AZ47665W14 1/1070	1207Y189.D	12/21/16 19:36
12		50ug/ml SVOC 12/16/1	1207Y191.D	12/21/16 20:36
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	42.0
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.3
127	40 - 60% of mass 198	54.2
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	7.2
275	10 - 30% of mass 198	24.5
365	1 - 100% of mass 198	3.9
441	0.01 - 100% of mass 443	82.2
442	50 - 150% of mass 198	113.7
443	17 - 23% of mass 442	19.1

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 81776

Lab File ID (Standard): 1207Y008.D Date Analyzed: 7 Dec 16 12:02

Instrument ID: Yoda Time Analyzed: 7 Dec 16 12:02

GC Column: _____ ID: Heated Purge: (Y/N) _____

		1,4-dichlorobenzene-D4(IS)		Napthalene-D8(IS)		Acenaphthene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	195270	4.87	816895	6.30	475200	8.31
	UPPER LIMIT	390540	5.37	1633790	6.80	950400	8.81
	LOWER LIMIT	97635	4.37	408448	5.80	237600	7.81
	SAMPLE NO.						
01	50ug/ml SVOC 12/06/16	205077	4.86	832706	6.29	509421	8.30
02	161219A LCS-1 1/1000	219545	4.86	912040	6.29	545384	8.31
03	AZ47658W12 1/1070	220328	4.87	955012	6.29	551317	8.30
04	AZ47659W08 1/1070	226118	4.86	968804	6.29	553347	8.30
05	161219A BLK 1/1000	210296	4.86	912750	6.29	525703	8.30
06	AZ47660W12 1/1070	224736	4.86	963953	6.29	538875	8.30
07	AZ47661W08 1/1070	242296	4.86	1012020	6.29	589276	8.31
08	AZ47662W08 1/1070	227650	4.87	958087	6.29	560150	8.30
09	AZ47663W10 1/1070	221749	4.86	939221	6.29	543799	8.30
10	AZ47664W10 1/1070	214762	4.86	914605	6.29	518912	8.31
11	AZ47665W14 1/1070	216506	4.86	949989	6.29	547124	8.31
12	50ug/ml SVOC 12/16/16	196018	4.86	813286	6.29	489127	8.31
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81776

Lab File ID (Standard): 1207Y008.D Date Analyzed: 7 Dec 16 12:02

Instrument ID: Yoda Time Analyzed: 7 Dec 16 12:02

GC Column: ID: Heated Purge: (Y/N)

		Phenanthrene-D10(IS)		Chrysene-D12(IS)		Perylene-D12(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	975541	10.03	853105	13.10	871056	14.75
	UPPER LIMIT	1951082	10.53	1706210	13.60	1742112	15.25
	LOWER LIMIT	487771	9.53	426553	12.60	435528	14.25
	SAMPLE NO.						
01	50ug/ml SVOC 12/06/16	936226	10.03	924269	13.11	942225	14.74
02	161219A LCS-1 1/1000	1018700	10.03	1003580	13.11	1035620	14.75
03	AZ47658W12 1/1070	1026610	10.03	1020160	13.10	1029090	14.74
04	AZ47659W08 1/1070	1028420	10.03	1018920	13.10	1030450	14.74
05	161219A BLK 1/1000	970707	10.03	955795	13.10	965499	14.75
06	AZ47660W12 1/1070	1014800	10.03	985000	13.10	990299	14.74
07	AZ47661W08 1/1070	1087570	10.02	1091120	13.11	1075990	14.75
08	AZ47662W08 1/1070	1023720	10.03	1020190	13.10	1029180	14.74
09	AZ47663W10 1/1070	999897	10.03	988492	13.10	1019640	14.74
10	AZ47664W10 1/1070	978504	10.02	1000250	13.11	1004800	14.75
11	AZ47665W14 1/1070	999955	10.02	991658	13.11	1001060	14.74
12	50ug/ml SVOC 12/16/16	909600	10.02	882174	13.11	697962	14.75
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

ORGANICS

Sample Data

APPL, INC.

EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH147
Sample Collection Date: 12/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776
APPL ID: AZ47658
QCG: #87DC5-161219A-214871

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	12/16/16	12/21/16
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	69.4	43-140			%	12/16/16	12/21/16
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	63.4	44-119			%	12/16/16	12/21/16
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	48.1	19-119			%	12/16/16	12/21/16
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	69.8	44-120			%	12/16/16	12/21/16
EPA 8270D	SURROGATE: PHENOL-D6 (S)	32.2	10-115			%	12/16/16	12/21/16
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	66.7	50-134			%	12/16/16	12/21/16

Quant Method: Y1207.M
Run #: 1207Y181
Instrument: Yoda
Sequence: Y161207
Dilution Factor: 1
Initials: MA

Printed: 12/22/16 8:59:20 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y181.D Vial: 81
Acq On : 21 Dec 16 15:35 Operator: MA
Sample : AZ47658W12 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Dec 21 16:55 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	220328	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.29	136	955012	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.30	164	551317	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	1026612	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.10	240	1020161	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.74	264	1029089	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.34	112	696590	89.82123 ppb	0.00
Spiked Amount 186.916			Recovery = 48.054%		
5) Phenol-D6 (S)	4.50	99	615988	60.17940 ppb	0.00
Spiked Amount 186.916			Recovery = 32.196%		
21) Nitrobenzene-D5(S)	5.50	82	675454	65.21020 ppb	0.00
Spiked Amount 93.458			Recovery = 69.775%		
45) 2-Fluorobiphenyl(S)	7.53	172	1102088	59.26315 ppb	0.00
Spiked Amount 93.458			Recovery = 63.411%		
63) 2,4,6-Tribromophenol(S)	9.23	330	383775	129.74935 ppb	0.00
Spiked Amount 186.916			Recovery = 69.416%		
81) Terphenyl-D14(S)	11.89	244	1538403	62.32664 ppb	0.00
Spiked Amount 93.458			Recovery = 66.690%		

Target Compounds	Qvalue

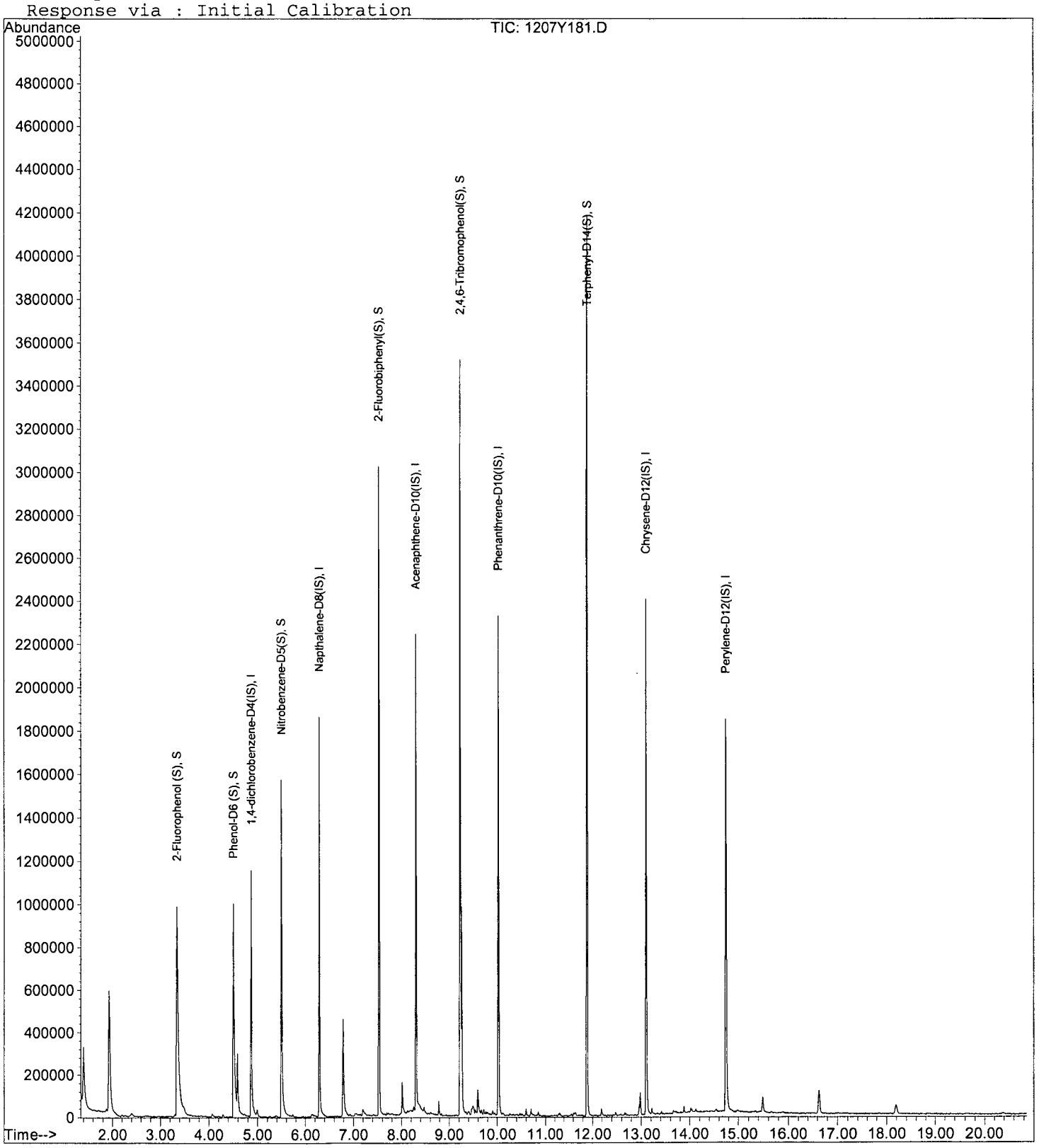
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y181.D Vial: 81
Acq On : 21 Dec 16 15:35 Operator: MA
Sample : AZ47658W12 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Dec 21 16:55 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81776

Sample ID: ERH148

APPL ID: AZ47659

Sample Collection Date: 12/14/16

QCG: #87DC5-161219A-214871

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	12/16/16	12/21/16
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	69.5	43-140			%	12/16/16	12/21/16
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	66.3	44-119			%	12/16/16	12/21/16
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	48.0	19-119			%	12/16/16	12/21/16
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	68.9	44-120			%	12/16/16	12/21/16
EPA 8270D	SURROGATE: PHENOL-D6 (S)	32.7	10-115			%	12/16/16	12/21/16
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	67.7	50-134			%	12/16/16	12/21/16

Quant Method: Y1207.M
Run #: 1207Y182
Instrument: Yoda
Sequence: Y161207
Dilution Factor: 1
Initials: MA

Printed: 12/22/16 8:59:20 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y182.D Vial: 82
Acq On : 21 Dec 16 16:05 Operator: MA
Sample : AZ47659W08 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Dec 21 16:56 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	226118	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.29	136	968804	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.30	164	553347	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	1028421	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.10	240	1018918	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.74	264	1030447	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.34	112	713546	89.65165 ppb	0.00
Spiked Amount 186.916			Recovery = 47.964%		
5) Phenol-D6 (S)	4.50	99	642293	61.14252 ppb	0.00
Spiked Amount 186.916			Recovery = 32.712%		
21) Nitrobenzene-D5(S)	5.50	82	676374	64.36941 ppb	0.00
Spiked Amount 93.458			Recovery = 68.875%		
45) 2-Fluorobiphenyl(S)	7.54	172	1156500	61.96093 ppb	0.00
Spiked Amount 93.458			Recovery = 66.298%		
63) 2,4,6-Tribromophenol(S)	9.23	330	385506	129.85644 ppb	0.00
Spiked Amount 186.916			Recovery = 69.473%		
81) Terphenyl-D14(S)	11.89	244	1558673	63.22489 ppb	0.00
Spiked Amount 93.458			Recovery = 67.651%		

Target Compounds	Qvalue

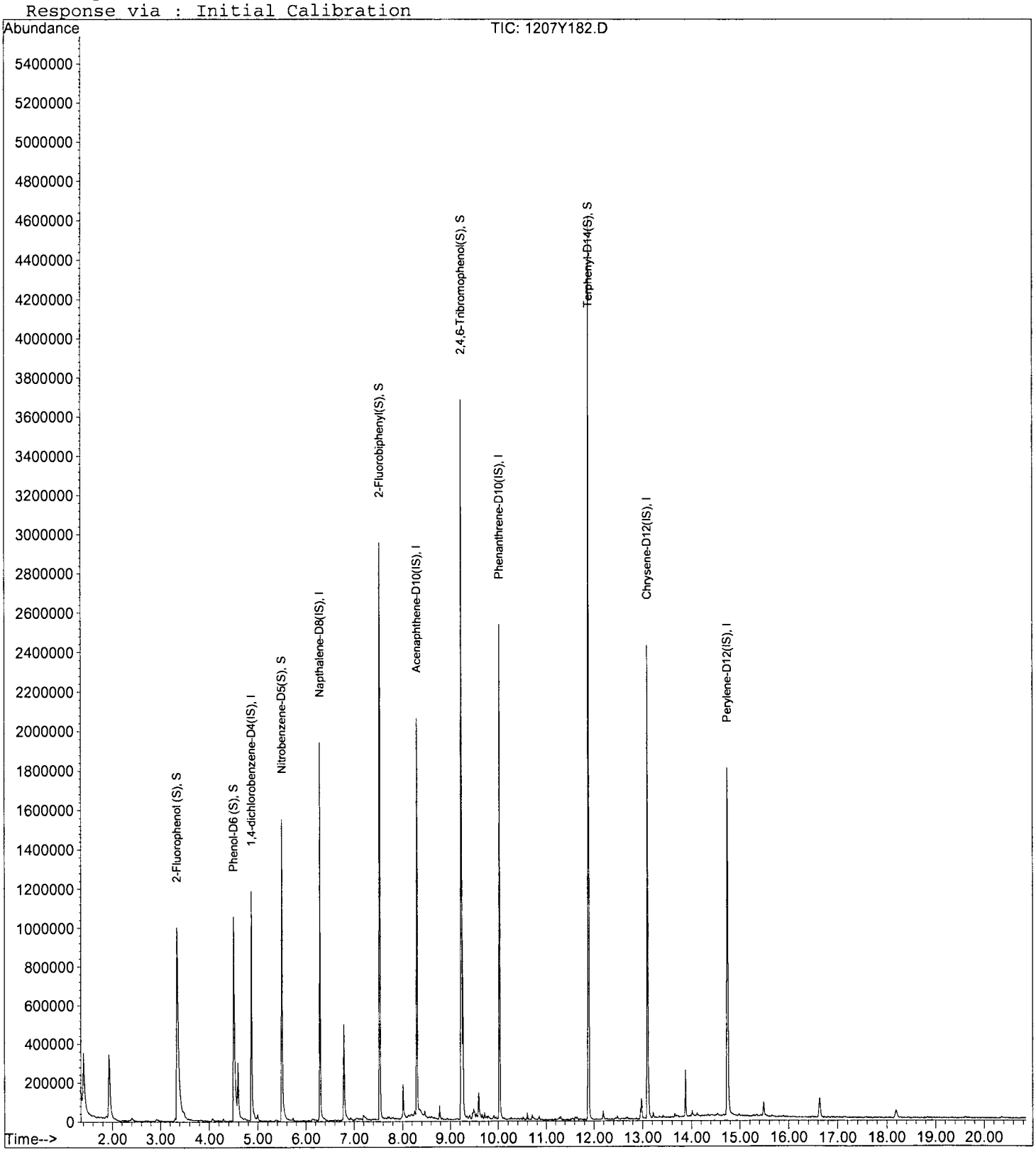
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y182.D Vial: 82
Acq On : 21 Dec 16 16:05 Operator: MA
Sample : AZ47659W08 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Dec 21 16:56 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81776

Sample ID: ERH152

APPL ID: AZ47660

Sample Collection Date: 12/14/16

QCG: #87DC5-161219A-214871

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	12/16/16	12/21/16
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	64.8	43-140			%	12/16/16	12/21/16
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	61.7	44-119			%	12/16/16	12/21/16
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	40.6	19-119			%	12/16/16	12/21/16
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	59.8	44-120			%	12/16/16	12/21/16
EPA 8270D	SURROGATE: PHENOL-D6 (S)	28.2	10-115			%	12/16/16	12/21/16
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	63.8	50-134			%	12/16/16	12/21/16

Quant Method: Y1207.M
Run #: 1207Y184
Instrument: Yoda
Sequence: Y161207
Dilution Factor: 1
Initials: MA

Printed: 12/22/16 8:59:20 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y184.D Vial: 84
Acq On : 21 Dec 16 17:06 Operator: MA
Sample : AZ47660W12 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Dec 21 17:31 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	224736	40.00000	ppb	0.00
20) Napthalene-D8(IS)	6.29	136	963953	40.00000	ppb	0.00
40) Acenaphthene-D10(IS)	8.30	164	538875	40.00000	ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	1014801	40.00000	ppb	0.00
78) Chrysene-D12(IS)	13.10	240	985000	40.00000	ppb	0.00
88) Perylene-D12(IS)	14.74	264	990299	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.34	112	600560	75.91983	ppb	0.00
Spiked Amount 186.916			Recovery = 40.617%			
5) Phenol-D6 (S)	4.50	99	550021	52.68075	ppb	0.00
Spiked Amount 186.916			Recovery = 28.184%			
21) Nitrobenzene-D5(S)	5.50	82	584773	55.93196	ppb	0.00
Spiked Amount 93.458			Recovery = 59.847%			
45) 2-Fluorobiphenyl(S)	7.54	172	1048915	57.70615	ppb	0.00
Spiked Amount 93.458			Recovery = 61.745%			
63) 2,4,6-Tribromophenol(S)	9.23	330	350274	121.15735	ppb	0.00
Spiked Amount 186.916			Recovery = 64.819%			
81) Terphenyl-D14(S)	11.89	244	1420678	59.61173	ppb	0.00
Spiked Amount 93.458			Recovery = 63.785%			

Target Compounds Qvalue

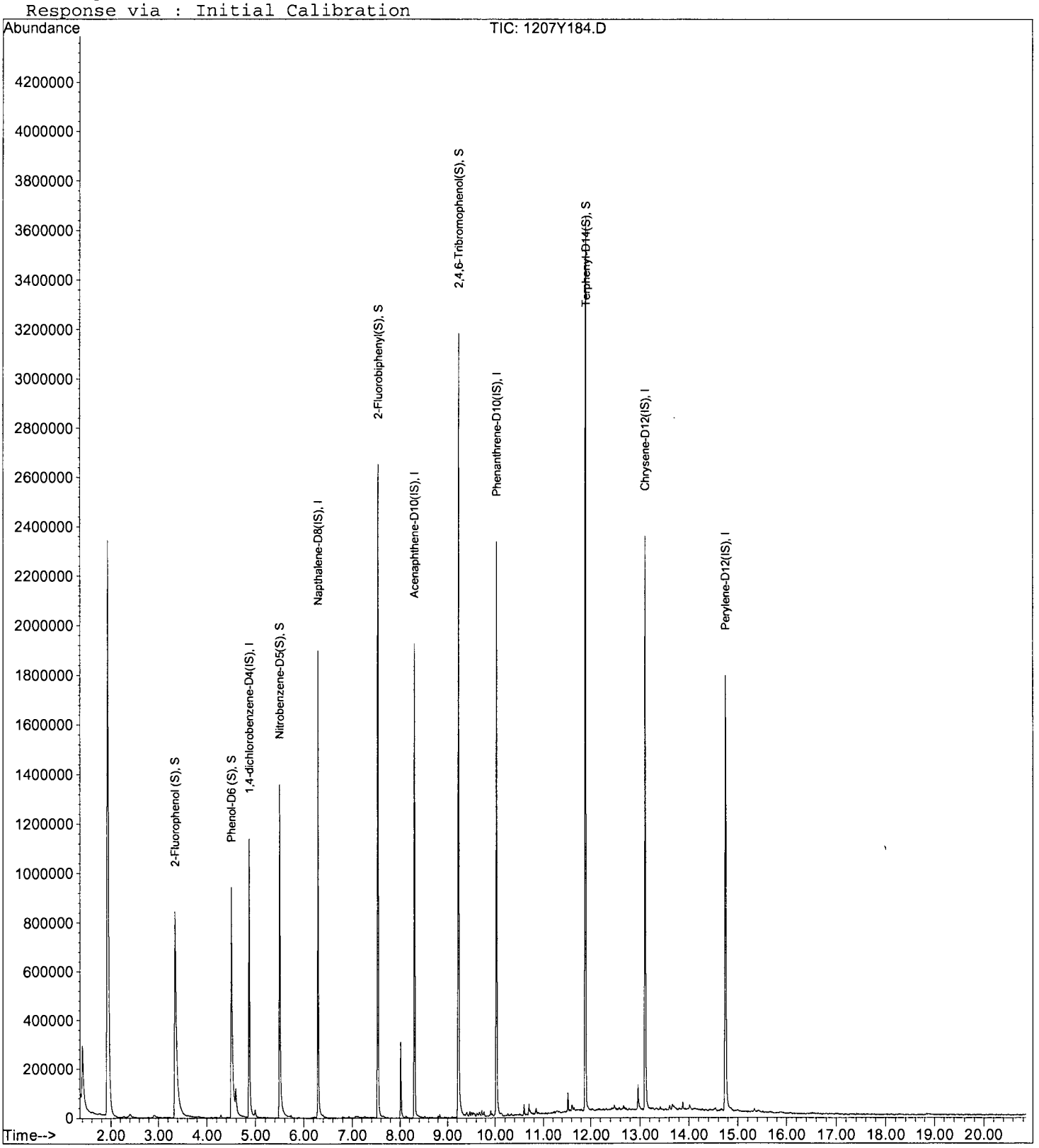
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y184.D Vial: 84
Acq On : 21 Dec 16 17:06 Operator: MA
Sample : AZ47660W12 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Dec 21 17:31 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81776

Sample ID: ERH149

APPL ID: AZ47661

Sample Collection Date: 12/14/16

QCG: #87DC5-161219A-214871

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	12/16/16	12/21/16
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	59.2	43-140			%	12/16/16	12/21/16
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	55.5	44-119			%	12/16/16	12/21/16
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	38.4	19-119			%	12/16/16	12/21/16
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	57.5	44-120			%	12/16/16	12/21/16
EPA 8270D	SURROGATE: PHENOL-D6 (S)	26.0	10-115			%	12/16/16	12/21/16
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	58.1	50-134			%	12/16/16	12/21/16

Quant Method: Y1207.M
Run #: 1207Y185
Instrument: Yoda
Sequence: Y161207
Dilution Factor: 1
Initials: MA

Printed: 12/22/16 8:59:20 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y185.D Vial: 85
Acq On : 21 Dec 16 17:36 Operator: MA
Sample : AZ47661W08 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Dec 22 8:48 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	242296	40.00000	ppb	0.00
20) Napthalene-D8(IS)	6.29	136	1012023	40.00000	ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	589276	40.00000	ppb	0.00
64) Phenanthrene-D10(IS)	10.02	188	1087573	40.00000	ppb	0.00
78) Chrysene-D12(IS)	13.11	240	1091117	40.00000	ppb	0.00
88) Perylene-D12(IS)	14.75	264	1075985	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.35	112	612033	71.76299	ppb	0.00
Spiked Amount 186.916			Recovery = 38.393%			
5) Phenol-D6 (S)	4.50	99	546794	48.57617	ppb	0.00
Spiked Amount 186.916			Recovery = 25.988%			
21) Nitrobenzene-D5(S)	5.50	82	590109	53.76144	ppb	0.00
Spiked Amount 93.458			Recovery = 57.524%			
45) 2-Fluorobiphenyl(S)	7.54	172	1030502	51.84422	ppb	0.00
Spiked Amount 93.458			Recovery = 55.473%			
63) 2,4,6-Tribromophenol(S)	9.23	330	349727	110.62181	ppb	0.00
Spiked Amount 186.916			Recovery = 59.183%			
81) Terphenyl-D14(S)	11.89	244	1433164	54.28719	ppb	0.00
Spiked Amount 93.458			Recovery = 58.087%			
Target Compounds						Qvalue

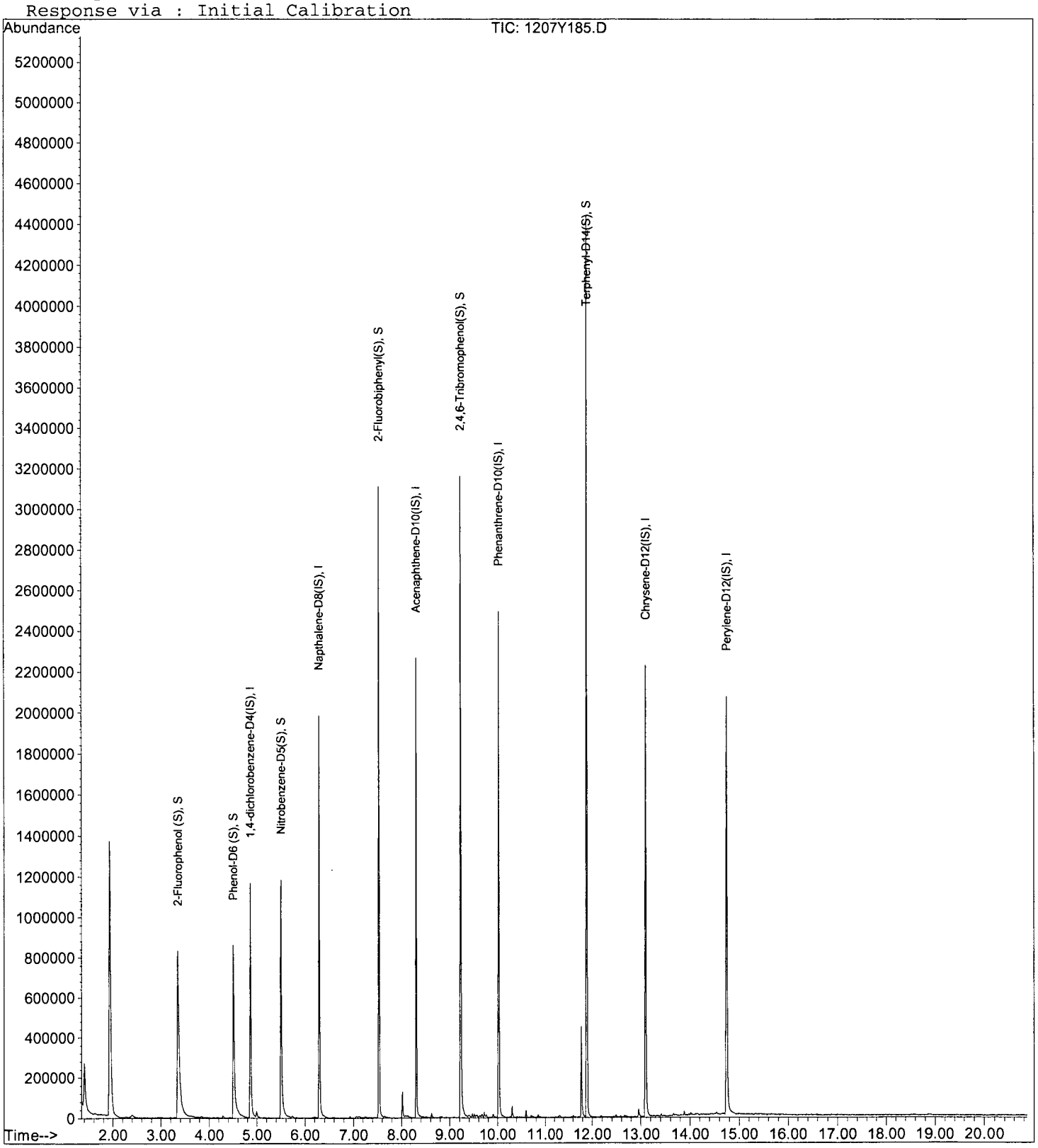
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y185.D Vial: 85
Acq On : 21 Dec 16 17:36 Operator: MA
Sample : AZ47661W08 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Dec 22 8:48 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH150

Sample Collection Date: 12/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776

APPL ID: AZ47662

QCG: #87DC5-161219A-214871

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	12/16/16	12/21/16
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	64.6	43-140			%	12/16/16	12/21/16
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	61.5	44-119			%	12/16/16	12/21/16
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	43.4	19-119			%	12/16/16	12/21/16
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	63.4	44-120			%	12/16/16	12/21/16
EPA 8270D	SURROGATE: PHENOL-D6 (S)	29.2	10-115			%	12/16/16	12/21/16
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	64.4	50-134			%	12/16/16	12/21/16

Quant Method: Y1207.M
Run #: 1207Y186
Instrument: Yoda
Sequence: Y161207
Dilution Factor: 1
Initials: MA

Printed: 12/22/16 8:59:20 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y186.D Vial: 86
Acq On : 21 Dec 16 18:06 Operator: MA
Sample : AZ47662W08 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Dec 22 8:49 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	227650	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.29	136	958087	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.30	164	560150	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	1023720	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.10	240	1020191	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.74	264	1029177	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.34	112	649967	81.11396 ppb	0.00
Spiked Amount 186.916			Recovery =	43.396%	
5) Phenol-D6 (S)	4.50	99	577387	54.59402 ppb	0.00
Spiked Amount 186.916			Recovery =	29.208%	
21) Nitrobenzene-D5(S)	5.50	82	615898	59.26972 ppb	0.00
Spiked Amount 93.458			Recovery =	63.419%	
45) 2-Fluorobiphenyl(S)	7.54	172	1086522	57.50485 ppb	0.00
Spiked Amount 93.458			Recovery =	61.530%	
63) 2,4,6-Tribromophenol(S)	9.23	330	362690	120.68731 ppb	0.00
Spiked Amount 186.916			Recovery =	64.568%	
81) Terphenyl-D14(S)	11.89	244	1485716	60.19038 ppb	0.00
Spiked Amount 93.458			Recovery =	64.403%	

Target Compounds Qvalue

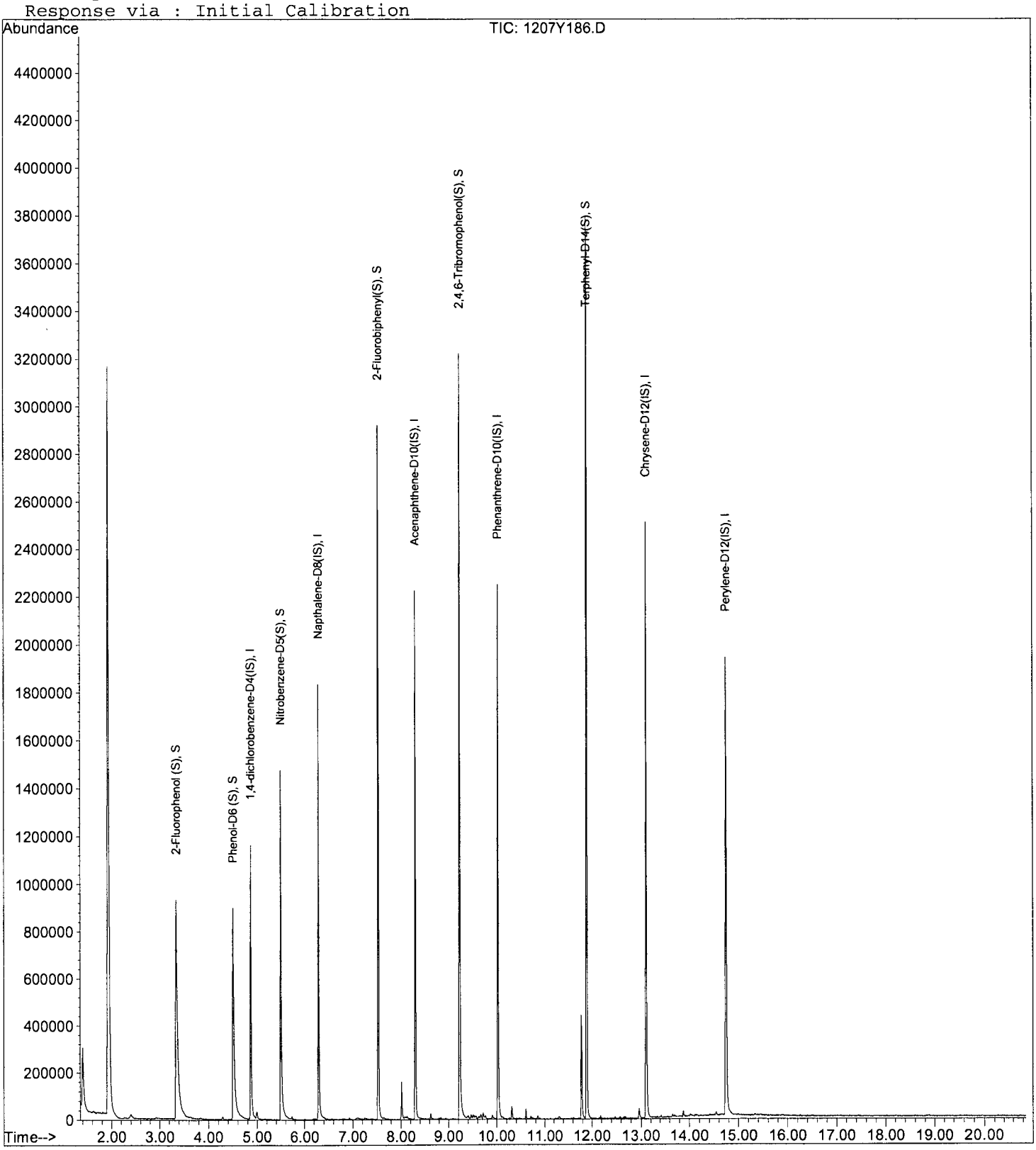
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y186.D Vial: 86
Acq On : 21 Dec 16 18:06 Operator: MA
Sample : AZ47662W08 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Dec 22 8:49 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH138

Sample Collection Date: 12/13/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776

APPL ID: AZ47663

QCG: #87DC5-161219A-214871

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	12/16/16	12/21/16
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	63.1	43-140			%	12/16/16	12/21/16
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	60.9	44-119			%	12/16/16	12/21/16
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	42.6	19-119			%	12/16/16	12/21/16
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	62.2	44-120			%	12/16/16	12/21/16
EPA 8270D	SURROGATE: PHENOL-D6 (S)	28.7	10-115			%	12/16/16	12/21/16
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	64.9	50-134			%	12/16/16	12/21/16

Quant Method: Y1207.M
Run #: 1207Y187
Instrument: Yoda
Sequence: Y161207
Dilution Factor: 1
Initials: MA

Printed: 12/22/16 8:59:20 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y187.D Vial: 87
Acq On : 21 Dec 16 18:35 Operator: MA
Sample : AZ47663W10 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Dec 22 8:50 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	221749	40.00000	ppb	0.00
20) Napthalene-D8(IS)	6.29	136	939221	40.00000	ppb	0.00
40) Acenaphthene-D10(IS)	8.30	164	543799	40.00000	ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	999897	40.00000	ppb	0.00
78) Chrysene-D12(IS)	13.10	240	988492	40.00000	ppb	0.00
88) Perylene-D12(IS)	14.74	264	1019644	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.34	112	621322	79.60255	ppb	0.00
Spiked Amount 186.916			Recovery = 42.588%			
5) Phenol-D6 (S)	4.50	99	552415	53.62281	ppb	0.00
Spiked Amount 186.916			Recovery = 28.688%			
21) Nitrobenzene-D5(S)	5.50	82	591706	58.08543	ppb	0.00
Spiked Amount 93.458			Recovery = 62.151%			
45) 2-Fluorobiphenyl(S)	7.54	172	1044481	56.94196	ppb	0.00
Spiked Amount 93.458			Recovery = 60.928%			
63) 2,4,6-Tribromophenol(S)	9.23	330	344082	117.93804	ppb	0.00
Spiked Amount 186.916			Recovery = 63.097%			
81) Terphenyl-D14(S)	11.89	244	1449906	60.62328	ppb	0.00
Spiked Amount 93.458			Recovery = 64.867%			

Target Compounds Qvalue

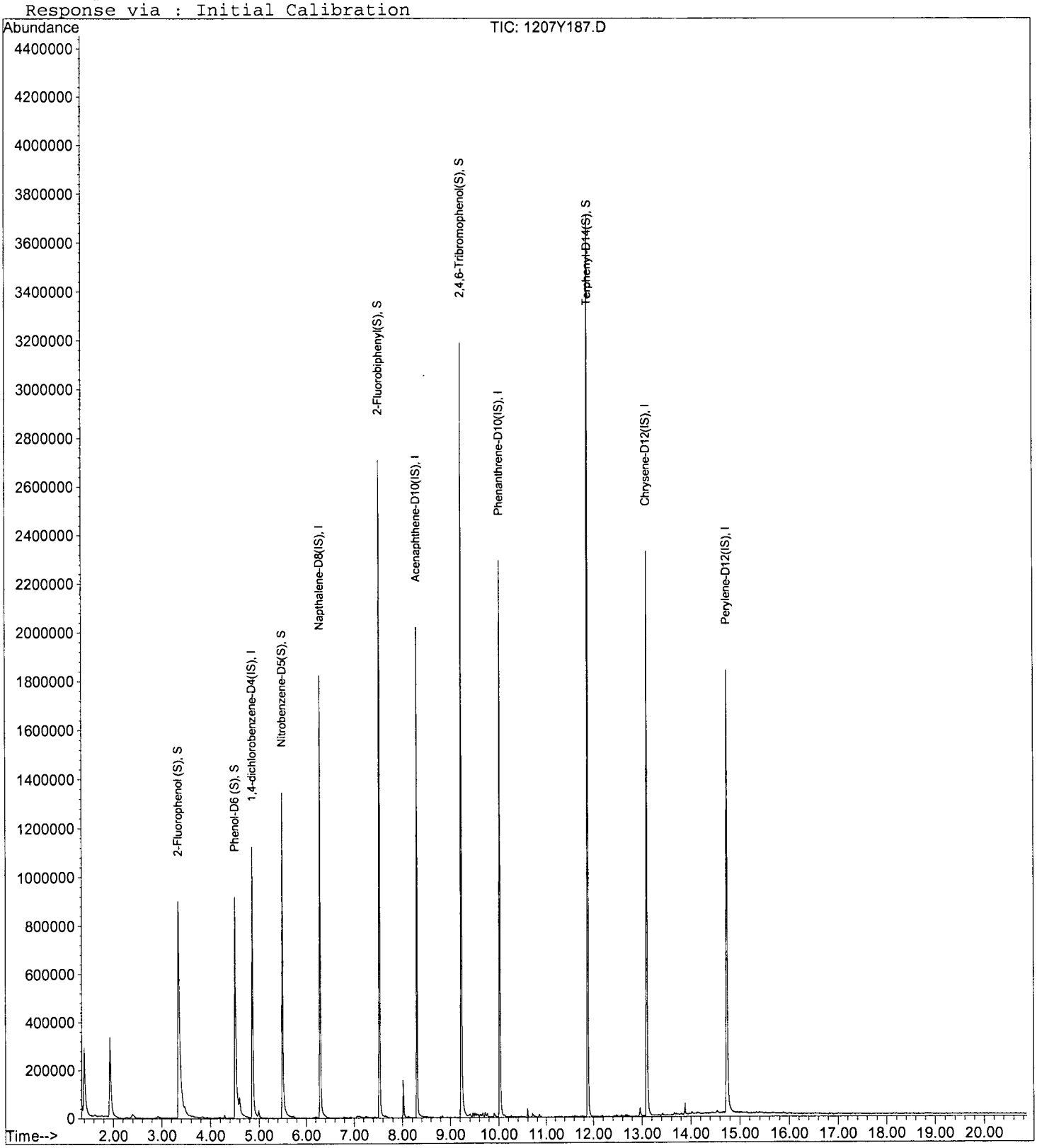
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y187.D Vial: 87
Acq On : 21 Dec 16 18:35 Operator: MA
Sample : AZ47663W10 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Dec 22 8:50 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81776

Sample ID: ERH144

APPL ID: AZ47664

Sample Collection Date: 12/13/16

QCG: #87DC5-161219A-214871

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	12/16/16	12/21/16
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	49.5	43-140			%	12/16/16	12/21/16
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	45.2	44-119			%	12/16/16	12/21/16
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	29.2	19-119			%	12/16/16	12/21/16
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	44.1	44-120			%	12/16/16	12/21/16
EPA 8270D	SURROGATE: PHENOL-D6 (S)	20.2	10-115			%	12/16/16	12/21/16
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	46.6 #	50-134			%	12/16/16	12/21/16

= Recovery (or RPD) is outside QC limits.

Quant Method: Y1207.M
Run #: 1207Y188
Instrument: Yoda
Sequence: Y161207
Dilution Factor: 1
Initials: MA

Printed: 12/22/16 8:59:20 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y188.D Vial: 88
Acq On : 21 Dec 16 19:06 Operator: MA
Sample : AZ47664W10 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Dec 22 8:51 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	214762	40.00000	ppb	0.00
20) Napthalene-D8(IS)	6.29	136	914605	40.00000	ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	518912	40.00000	ppb	0.00
64) Phenanthrene-D10(IS)	10.02	188	978504	40.00000	ppb	0.00
78) Chrysene-D12(IS)	13.11	240	1000247	40.00000	ppb	0.00
88) Perylene-D12(IS)	14.75	264	1004800	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.35	112	413134	54.65186	ppb	0.00
Spiked Amount 186.916			Recovery = 29.239%			
5) Phenol-D6 (S)	4.51	99	376999	37.78575	ppb	0.00
Spiked Amount 186.916			Recovery = 20.216%			
21) Nitrobenzene-D5(S)	5.50	82	408764	41.20668	ppb	0.00
Spiked Amount 93.458			Recovery = 44.091%			
45) 2-Fluorobiphenyl(S)	7.54	172	739438	42.24525	ppb	0.00
Spiked Amount 93.458			Recovery = 45.202%			
63) 2,4,6-Tribromophenol(S)	9.23	330	257745	92.58197	ppb	0.00
Spiked Amount 186.916			Recovery = 49.531%			
81) Terphenyl-D14(S)	11.89	244	1054943	43.59072	ppb	0.00
Spiked Amount 93.458			Recovery = 46.642%			
Target Compounds						Qvalue
31) Naphthalene	6.32	128	646947	25.20696	ppb	98
38) 2-Methylnaphthalene	7.11	142	124155	7.40205	ppb	99
39) 1-Methylnaphthalene	7.22	142	179586	10.85293	ppb	98
49) Dimethyl phthalate	8.02	163	51040	2.64260	ppb	97

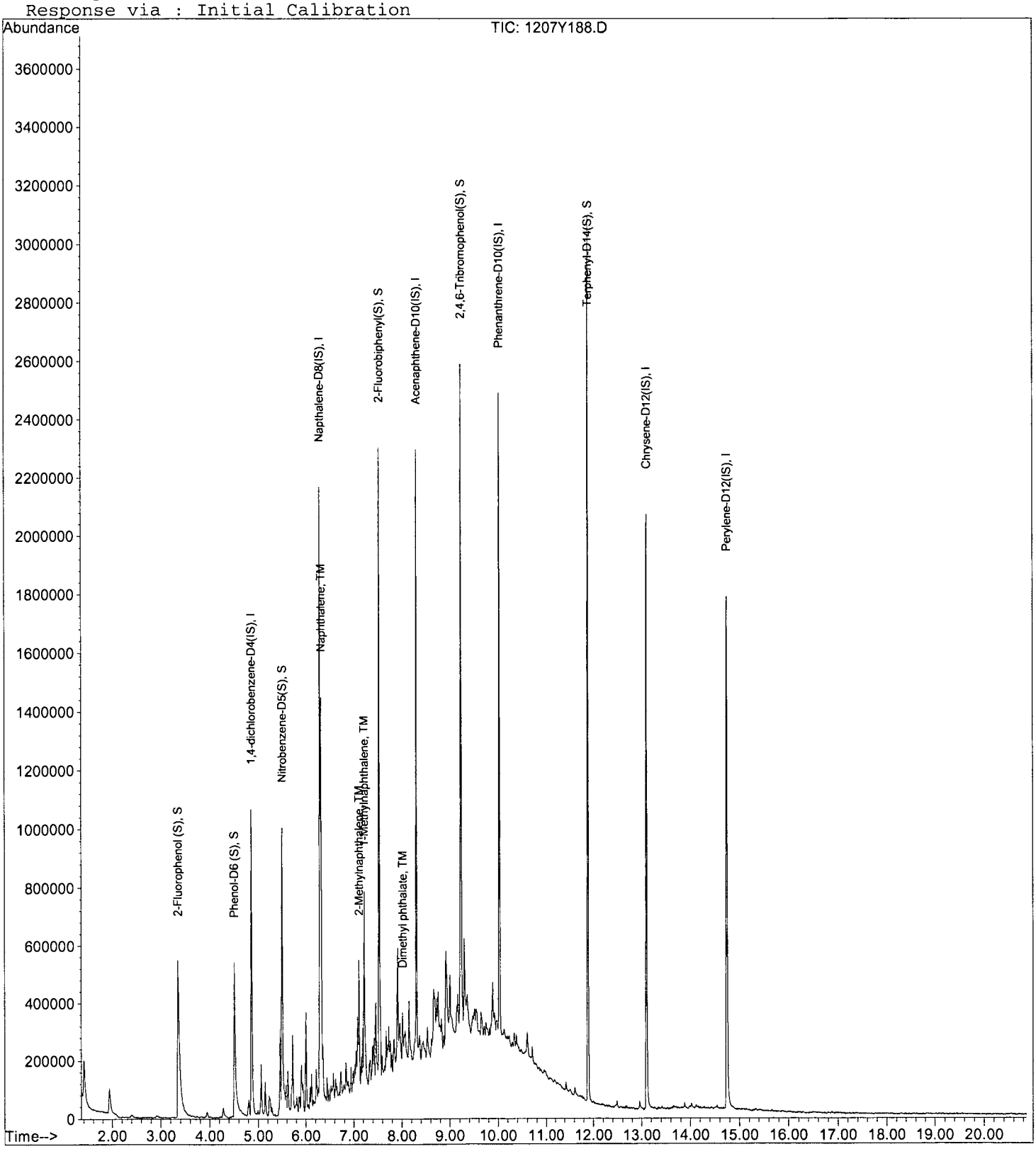
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y188.D Vial: 88
Acq On : 21 Dec 16 19:06 Operator: MA
Sample : AZ47664W10 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Dec 22 8:51 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81776

Sample ID: ERH140

APPL ID: AZ47665

Sample Collection Date: 12/13/16

QCG: #87DC5-161219A-214871

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	12/16/16	12/21/16
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	65.3	43-140			%	12/16/16	12/21/16
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	60.7	44-119			%	12/16/16	12/21/16
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	38.1	19-119			%	12/16/16	12/21/16
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	57.3	44-120			%	12/16/16	12/21/16
EPA 8270D	SURROGATE: PHENOL-D6 (S)	27.3	10-115			%	12/16/16	12/21/16
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	67.9	50-134			%	12/16/16	12/21/16

Quant Method: Y1207.M
Run #: 1207Y189
Instrument: Yoda
Sequence: Y161207
Dilution Factor: 1
Initials: MA

Printed: 12/22/16 8:59:20 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y189.D Vial: 89
Acq On : 21 Dec 16 19:36 Operator: MA
Sample : AZ47665W14 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Dec 22 8:54 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	216506	40.00000	ppb	0.00
20) Napthalene-D8(IS)	6.29	136	949989	40.00000	ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	547124	40.00000	ppb	0.00
64) Phenanthrene-D10(IS)	10.02	188	999955	40.00000	ppb	0.00
78) Chrysene-D12(IS)	13.11	240	991658	40.00000	ppb	0.00
88) Perylene-D12(IS)	14.74	264	1001062	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.34	112	543068	71.26170	ppb	0.00
Spiked Amount 186.916			Recovery = 38.125%			
5) Phenol-D6 (S)	4.50	99	513797	51.08194	ppb	0.00
Spiked Amount 186.916			Recovery = 27.329%			
21) Nitrobenzene-D5(S)	5.50	82	551482	53.52317	ppb	0.00
Spiked Amount 93.458			Recovery = 57.270%			
45) 2-Fluorobiphenyl(S)	7.54	172	1046318	56.69545	ppb	0.00
Spiked Amount 93.458			Recovery = 60.664%			
63) 2,4,6-Tribromophenol(S)	9.23	330	358233	122.04224	ppb	0.00
Spiked Amount 186.916			Recovery = 65.292%			
81) Terphenyl-D14(S)	11.89	244	1522299	63.44696	ppb	0.00
Spiked Amount 93.458			Recovery = 67.888%			

Target Compounds Qvalue

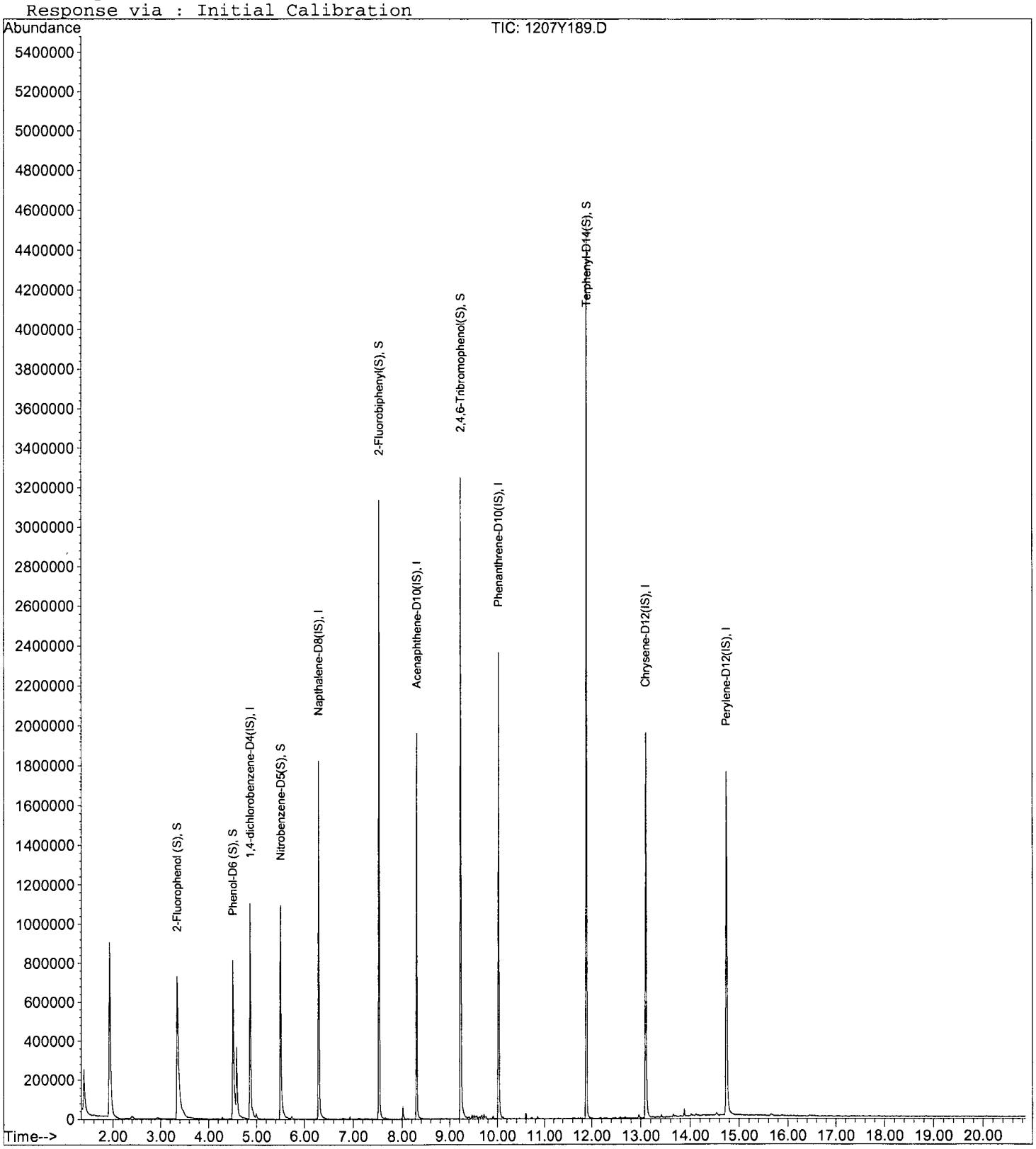
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y189.D Vial: 89
Acq On : 21 Dec 16 19:36 Operator: MA
Sample : AZ47665W14 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Dec 22 8:54 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



ORGANICS

Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/07/16
Matrix: Instrument: Yoda
Initials:

			1207Y004.D	1207Y005.D	1207Y006.D	1207Y007.D	1207Y008.D	1207Y009.D	1207Y010.D	1207Y011 D						
		Compound	5	10	20	40	50	60	80	100			Avg	%RSD		
1	I	1,4-dichlorobenzene-D4(IS)														
2	TM	n-Nitrosodimethylamine	0.7148	0.8188	0.8173	0.8076	0.8521	0.7243	0.8231	0.7956			0.79	6.2	TM	
3	TM	Pyridine	1.581	1.725	1.660	1.936	2.046	1.751	1.878	1.777			1.8	8.5	TM	
4	S	2-Fluorophenol (S)	1.066	1.299	1.267	1.425	1.424	1.318	1.385	1.343			1.3	8.8	S	
5	S	Phenol-D6 (S)	1.822	1.785	1.823	1.762	1.706	1.655	1.706	1.635			1.7	4.2	S	
6	*TM	Phenol	1.948	1.915	2.075	2.002	1.967	1.942	2.023	1.918			2.0	2.8	*TM	
7	TM	Aniline	1.776	1.833	1.896	1.887	1.869	1.829	1.983	1.872			1.9	3.2	TM	
8	TM	Bis (2-chloroethyl) ether	0.8418	0.7909	0.9135	0.8982	0.8478	0.8563	0.9089	0.8610			0.86	4.7	TM	
9	TM	2-Chlorophenol	1.635	1.632	1.616	1.577	1.518	1.543	1.572	1.517			1.6	3.1	TM	
10	TM	1,3-DCB	1.660	1.666	1.674	1.664	1.624	1.596	1.569	1.586			1.6	2.6	TM	
11	*TM	1,4-DCB	1.785	1.781	1.664	1.660	1.668	1.607	1.666	1.605			1.7	4.1	*TM	
12	TM	Benzyl alcohol	0.7838	0.8402	0.9167	0.8614	0.9167	0.8803	0.8909	0.8835			0.87	5.0	TM	
13	TM	1,2-DCB	1.611	1.557	1.581	1.484	1.593	1.492	1.515	1.463			1.5	3.6	TM	
14	TM	2-Methylphenol	1.082	1.139	1.181	1.118	1.137	1.110	1.083	1.109			1.1	2.9	TM	
15	TM	Bis (2-chloroisopropyl) ether	1.873	1.751	1.831	1.685	1.738	1.688	1.621	1.595			1.7	5.6	TM	
16	TM	Acetophenone	2.043	2.072	2.030	2.015	2.091	2.047	2.025	2.028			2.0	1.3	TM	
17	TM	3&4-Methylphenol	1.558	1.530	1.459	1.440	1.525	1.448	1.459	1.455			1.5	3.1	TM	
18	**TM	n-Nitrosodi-n-propylamine	1.068	1.045	1.056	1.027	1.076	1.038	1.050	1.060			1.1	1.5	**TM	
19	TM	Hexachloroethane	0.6682	0.7054	0.6470	0.6617	0.6824	0.6779	0.6684	0.6594			0.67	2.6	TM	
20	I	Napthalene-D8(IS)														
21	S	Nitrobenzene-D5(S)	0.4047	0.4332	0.3921	0.4003	0.4125	0.3872	0.3742	0.4394			0.41	5.5	S	
22	TM	Nitrobenzene	0.4054	0.4067	0.3889	0.4048	0.4175	0.3984	0.3936	0.4509			0.41	4.7	TM	
23	TM	Isophorone	0.6691	0.6862	0.6315	0.6698	0.6921	0.6667	0.6337	0.7606			0.68	6.0	TM	
24	*TM	2-Nitrophenol	0.1845	0.1935	0.1942	0.2063	0.2096	0.2079	0.2003	0.2337			0.20	7.3	*TM	
25	TM	2,4-Dimethylphenol	0.3139	0.3382	0.3012	0.3156	0.3171	0.3192	0.3290	0.3503			0.32	4.8	TM	
26	TML	Benzoic acid	0.0808	0.1551	0.2077	0.2553	0.2737	0.2314	0.2577	0.2655			0.22	31	TML	0.997
27	TM	Bis (2-chloroethoxy) methane	0.3810	0.3848	0.3681	0.3830	0.3880	0.3802	0.3949	0.4047			0.39	2.8	TM	
28	*TM	2,4-Dichlorophenol	0.2878	0.3066	0.3011	0.3098	0.3185	0.3087	0.3182	0.3126			0.31	3.2	*TM	
29	TM	1,2,4-Trichlorobenzene	0.3408	0.3409	0.3112	0.3403	0.3441	0.3301	0.3350	0.3367			0.33	3.1	TM	
30	TM	3,4-Dimethylphenol	0.5455	0.4964	0.4910	0.4802	0.5023	0.4740	0.4772	0.4907			0.49	4.6	TM	
31	TM	Naphthalene	1.044	1.055	1.078	1.053	1.069	1.024	1.025	1.045			1.0	1.8	TM	
32	TM	4-Chloroaniline	0.3632	0.4265	0.4327	0.4002	0.3874	0.3691	0.3641	0.3626			0.39	7.4	TM	
33	TM	2,6-Dichlorophenol	0.3045	0.3311	0.3196	0.2860	0.2901	0.2795	0.2735	0.2922			0.30	6.7	TM	
34	TM	Hexachloropropene	0.2445	0.2667	0.2704	0.2771	0.2732	0.2621	0.2668	0.2819			0.27	4.2	TM	
35	*TM	Hexachlorobutadiene	0.2289	0.2214	0.2210	0.2112	0.2149	0.2010	0.1986	0.2098			0.21	4.9	*TM	

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Initial Cal. Date: 12/07/16
Instrument: Yoda

Initials:

		Compound	5	10	20	40	50	60	80	100			Avg	%RSD		
36	TM	Caprolactum	0.1439	0.1548	0.1512	0.1546	0.1563	0.1592	0.1531	0.1616			0.15	3.5	TM	
37	*TM	4-Chloro-3-methylphenol	0.3364	0.3339	0.3371	0.3445	0.3342	0.3451	0.3311	0.3589			0.34	2.7	*TM	
38	TM	2-Methylnaphthalene	0.7065	0.6994	0.6918	0.6907	0.6745	0.6786	0.6440	0.6992			0.69	2.9	TM	
39	TM	1-Methylnaphthalene	0.7218	0.7325	0.6455	0.6679	0.6461	0.6599	0.6404	0.6966			0.68	5.3	TM	
40	I	Acenaphthene-D10(IS)														
41	**TMQ	Hexachlorocyclopentadiene	0.0352	0.0821	0.1454	0.1986	0.2357	0.2346	0.2693	0.2817			0.19	48	**TMQ	0.999
42	TM	1,2,4,5-Tetrachlorobenzene	0.5396	0.5929	0.5621	0.5192	0.5592	0.5294	0.5151	0.5315			0.54	4.8	TM	
43	*TM	2,4,6-Trichlorophenol	0.3344	0.3592	0.3491	0.3486	0.3682	0.3537	0.3343	0.3590			0.35	3.4	*TM	
44	TM	2,4,5-Trichlorophenol	0.3919	0.4003	0.4163	0.3688	0.3812	0.3816	0.3456	0.3771			0.38	5.5	TM	
45	S	2-Fluorobiphenyl(S)	1.278	1.499	1.336	1.200	1.255	1.168	1.148	1.204			1.3	9.0	S	
46	TM	1,1'-Biphenyl	1.579	1.616	1.598	1.463	1.490	1.434	1.358	1.453			1.5	6.1	TM	
47	TM	2-Chloronaphthalene	1.172	1.197	1.217	1.145	1.225	1.131	1.043	1.138			1.2	5.1	TM	
48	TM	2-Nitroaniline	0.3683	0.3867	0.3740	0.4057	0.4480	0.3960	0.3888	0.4178			0.40	6.5	TM	
49	TM	Dimethyl phthalate	1.403	1.430	1.345	1.384	1.539	1.344	1.277	1.410			1.4	5.5	TM	
50	TM	2,6-DNT	0.2902	0.3118	0.2967	0.3089	0.3396	0.3115	0.2967	0.3576			0.31	7.4	TM	
51	TM	Acenaphthylene	1.893	2.056	1.776	1.750	1.868	1.798	1.649	1.814			1.8	6.5	TM	
52	TM	3-Nitroaniline	0.3015	0.3535	0.3595	0.3549	0.3535	0.3405	0.3322	0.3482			0.34	5.5	TM	
53	*TM	Acenaphthene	1.206	1.354	1.171	1.111	1.135	1.077	1.054	1.138			1.2	8.1	*TM	
54	**TMQ	2,4-Dinitrophenol		0.0853	0.1314	0.1627	0.1649	0.1601	0.2070	0.2035			0.16	26	**TMQ	0.996
55	**TML	4-Nitrophenol	0.0179	0.2323	0.2452	0.2706	0.3006	0.2760	0.2907	0.3183			0.24	39	**TML	0.997
56	TM	Dibenzofuran	1.728	1.704	1.645	1.541	1.704	1.568	1.548	1.676			1.6	4.6	TM	
57	TM	2,4-DNT	0.3927	0.4369	0.4320	0.4428	0.4994	0.4500	0.4285	0.4667			0.44	7.0	TM	
58	TM	2,3,4,6-Tetrachlorophenol	0.2780	0.2939	0.2952	0.3210	0.3494	0.3145	0.2996	0.3397			0.31	7.8	TM	
59	TM	Diethyl phthalate	1.443	1.475	1.388	1.441	1.458	1.389	1.333	1.529			1.4	4.2	TM	
60	TM	4-Chlorophenyl phenyl ether	0.6635	0.6948	0.6104	0.6191	0.6447	0.5999	0.5965	0.6860			0.64	6.1	TM	
61	TM	Fluorene	1.411	1.429	1.285	1.274	1.358	1.224	1.221	1.393			1.3	6.3	TM	
62	TM	4-Nitroaniline	0.3060	0.3370	0.3011	0.3170	0.3477	0.3210	0.3358	0.3338			0.32	5.0	TM	
63	S	2,4,6-Tribromophenol(S)	0.1946	0.2125	0.1908	0.1921	0.2053	0.1876	0.1977	0.2239			0.20	6.2	S	
64	I	Phenanthrene-D10(IS)														
65	TM	4,6-Dinitro-2-methylphenol		0.1149	0.1515	0.1421	0.1500	0.1692	0.1636	0.1489			0.15	12	TM	
66	TM	Diphenyl amine	0.6122	0.5551	0.6348	0.5246	0.5612	0.5921	0.5417	0.5432			0.57	6.7	TM	
67	*TM	n-Nitrosodiphenylamine	0.6122	0.5551	0.6348	0.5246	0.5612	0.5921	0.5417	0.5432			0.57	6.7	*TM	
68	TM	1,2-Diphenylhydrazine	0.7947	0.7385	0.8154	0.7273	0.7623	0.9632	0.8905	0.8768			0.82	10	TM	
69	TM	4-Bromophenyl phenyl ether	0.2256	0.2010	0.2098	0.2179	0.1993	0.2279	0.1871	0.1888			0.21	7.6	TM	
70	TM	Hexachlorobenzene	0.2229	0.2118	0.2232	0.2136	0.2018	0.2342	0.2007	0.1953			0.21	6.3	TM	

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Initial Cal. Date: 12/07/16
Instrument: Yoda

Initials:

		Compound	5	10	20	40	50	60	80	100			Avg	%RSD		
71	TM	Atrazine	0.2136	0.1976	0.2108	0.2007	0.2168	0.2165	0.1968	0.1967			0.21	4.4	TM	
72	*TML	Pentachlorophenol		0.0652	0.0888	0.0985	0.0970	0.0990	0.1107	0.1114			0.10	16	*TML	0.998
73	TM	Phenanthrene	1.144	1.128	1.146	1.069	1.069	1.062	1.009	1.014			1.1	5.0	TM	
74	TM	Anthracene	1.227	1.144	1.172	1.109	1.085	1.077	1.032	1.040			1.1	6.0	TM	
75	TM	Carbazol	1.068	1.073	1.153	0.9493	1.043	0.9621	0.9114	0.8832			1.0	9.2	TM	
76	TM	Di-n-butylphthalate	1.394	1.275	1.537	1.286	1.230	1.259	1.180	1.174			1.3	9.3	TM	
77	*TM	Fluoranthene	1.281	1.183	1.301	1.152	1.091	1.169	1.169	1.164			1.2	5.8	*TM	
78	I	Chrysene-D12(IS)														
79	TM	Benzidine	0.3957	0.4105	0.4699	0.4668	0.4739	0.4589	0.4621	0.4870			0.45	7.1	TM	
80	TM	Pyrene	1.421	1.287	1.412	1.333	1.431	1.352	1.245	1.372			1.4	4.9	TM	
81	S	Terphenyl-D14(S)	0.9641	0.9527	1.005	0.8842	0.8995	0.8347	0.8470	0.8492			0.90	6.9	S	
82	TM	Butyl benzylphthalate	0.6615	0.6073	0.6728	0.6922	0.6888	0.6250	0.6287	0.6373			0.65	4.8	TM	
83	TM	3,3'-Dichlorobenzidine	0.3845	0.4505	0.4988	0.4470	0.4416	0.4002	0.3899	0.4057			0.43	9.1	TM	
84	TM	Benz (a) anthracene	1.241	1.281	1.288	1.263	1.262	1.195	1.209	1.251			1.2	2.6	TM	
85	TM	Bis (2-ethylhexyl) phthalate	0.9437	0.8855	0.9320	0.8960	0.9347	0.9382	0.8781	0.9008			0.91	2.9	TM	
86	TM	Chrysene	1.291	1.177	1.223	1.163	1.206	1.256	1.142	1.247			1.2	4.2	TM	
87	*TM	Di-n-octylphthalate	1.601	1.536	1.745	1.580	1.838	1.525	1.513	1.572			1.6	7.2	*TM	
88	I	Perylene-D12(IS)														
89	TM	Benzo (b) fluoranthene	1.137	1.363	1.356	1.287	1.201	1.033	1.428	1.200			1.3	11	TM	
90	TM	Benzo (k) fluoranthene	1.302	1.071	1.186	1.172	1.214	1.184	1.211	1.174			1.2	5.4	TM	
91	*TM	Benzo (a) pyrene	1.164	1.037	1.248	1.228	1.224	1.129	1.192	1.122			1.2	6.0	*TM	
92	TM	Indeno (1,2,3-cd) pyrene	1.367	1.331	1.391	1.324	1.346	1.095	1.395	1.099			1.3	9.6	TM	
93	TM	Dibenz (a,h) anthracene	1.172	1.113	1.158	1.132	1.148	0.9093	1.186	0.9080			1.1	11	TM	
94	TM	Benzo (g,h,i) perylene	1.161	1.064	1.406	1.271	1.253	0.8838	1.091				1.2	15	TM	
95																
96																
97																
98																
99																
100																
101																
102																
103																
104																
105																

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y004.D Vial: 4
Acq On : 7 Dec 16 10:01 Operator: MA
Sample : 5ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	195458	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.29	136	827060	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.30	164	490768	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.03	188	877101	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.10	240	839105	40.00000 ppb		0.00
88) Perylene-D12(IS)	14.74	264	900919	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.38	112	52072	8.41676 ppb		0.03
Spiked Amount 200.000			Recovery =	4.209%		
5) Phenol-D6 (S)	4.51	99	89036	10.40389 ppb		0.00
Spiked Amount 200.000			Recovery =	5.202%		
21) Nitrobenzene-D5(S)	5.51	82	41840	4.84860 ppb		0.00
Spiked Amount 100.000			Recovery =	4.849%		
45) 2-Fluorobiphenyl(S)	7.54	172	78403	5.03098 ppb		0.00
Spiked Amount 100.000			Recovery =	5.031%		
63) 2,4,6-Tribromophenol(S)	9.23	330	23872	9.90525 ppb		0.00
Spiked Amount 200.000			Recovery =	4.953%		
81) Terphenyl-D14(S)	11.88	244	101120	5.31648 ppb		0.00
Spiked Amount 100.000			Recovery =	5.316%		
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.77	42	17464	3.81097 ppb		99
3) Pyridine	1.79	79	38617	3.94469 ppb		99
6) Phenol	4.53	94	47601	4.90399 ppb		95
7) Aniline	4.53	66	43393	4.54015 ppb		90
8) Bis (2-chloroethyl) ether	4.60	63	20566	4.71391 ppb		92
9) 2-Chlorophenol	4.65	128	39939	5.30721 ppb		95
10) 1,3-DCB	4.80	146	40566	4.97403 ppb		98
11) 1,4-DCB	4.88	146	43609	5.21809 ppb		96
12) Benzyl alcohol	5.07	108	19149	4.54883 ppb		90
13) 1,2-DCB	5.06	146	39360	5.05389 ppb		97
14) 2-Methylphenol	5.20	107	26445	4.63400 ppb		97
15) Bis (2-chloroisopropyl) et	5.18	45	45768	5.23802 ppb	#	53
16) Acetophenone	5.34	105	49921	4.69337 ppb		98
17) 3&4-Methylphenol	5.38	107	76111	10.08177 ppb		91
18) n-Nitrosodi-n-propylamine	5.33	70	26103	4.73122 ppb		90
19) Hexachloroethane	5.42	117	16326	4.71012 ppb	#	68
22) Nitrobenzene	5.53	77	41914	4.74777 ppb		98
23) Isophorone	5.78	82	69169	4.75245 ppb		93
24) 2-Nitrophenol	5.90	139	19072	4.53756 ppb		95
25) 2,4-Dimethylphenol	5.95	122	32456	4.95367 ppb		91
26) Benzoic acid	6.13	105	8358	6.59749 ppb		89
27) Bis (2-chloroethoxy) metha	6.04	93	39384	5.06082 ppb		97
28) 2,4-Dichlorophenol	6.19	162	29754	4.71459 ppb		94
29) 1,2,4-Trichlorobenzene	6.24	180	35230	5.05372 ppb		98
30) 3,4-Dimethylphenol	6.29	107	56394	5.39745 ppb		81
31) Naphthalene	6.31	128	107955	4.95797 ppb		100
32) 4-Chloroaniline	6.42	127	37545	4.85948 ppb		96
33) 2,6-Dichlorophenol	6.42	162	31478	5.16618 ppb		97
34) Hexachloropropene	6.42	213	25276	4.55752 ppb		98
35) Hexachlorobutadiene	6.46	225	23664	5.32227 ppb		92
36) Caprolactum	6.79	55	14872	4.52289 ppb		92
37) 4-Chloro-3-methylphenol	6.99	107	34775	4.82802 ppb		87

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y004.D Vial: 4
Acq On : 7 Dec 16 10:01 Operator: MA
Sample : 5ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38) 2-Methylnaphthalene	7.11	142	73035	5.02428	ppb		98
39) 1-Methylnaphthalene	7.22	142	74622	5.35196	ppb		98
41) Hexachlorocyclopentadiene	7.29	237	2162	7.14608	ppb	#	91
42) 1,2,4,5-Tetrachlorobenzene	7.31	216	33104	4.95861	ppb		93
43) 2,4,6-Trichlorophenol	7.46	196	20513	4.63043	ppb		92
44) 2,4,5-Trichlorophenol	7.53	196	24042	5.12505	ppb		88
46) 1,1'-Biphenyl	7.65	154	96876	5.20831	ppb		97
47) 2-Chloronaphthalene	7.67	162	71906	4.90703	ppb		97
48) 2-Nitroaniline	7.82	65	22595	4.34279	ppb		78
49) Dimethyl phthalate	8.01	163	86082	4.79845	ppb		99
50) 2,6-DNT	8.10	165	17800	4.45834	ppb		80
51) Acenaphthylene	8.14	152	116157	5.09910	ppb		99
52) 3-Nitroaniline	8.31	138	18493	4.47392	ppb	#	34
53) Acenaphthene	8.34	154	74001	5.30414	ppb		97
54) 2,4-Dinitrophenol	8.51	184	1898	8.26475	ppb	#	71
55) 4-Nitrophenol	8.54	65	1096	7.02827	ppb	#	38
56) Dibenzofuran	8.54	168	105976	5.20957	ppb		89
57) 2,4-DNT	8.58	165	24091	4.26865	ppb		83
58) 2,3,4,6-Tetrachlorophenol	8.72	232	17055	4.67205	ppb		95
59) Diethyl phthalate	8.83	149	88512	4.85963	ppb		98
60) 4-Chlorophenyl phenyl ethe	8.95	204	40703	4.91663	ppb	#	76
61) Fluorene	8.94	166	86563	5.16554	ppb		96
62) 4-Nitroaniline	9.01	138	18769	4.76703	ppb		93
65) 4,6-Dinitro-2-methylphenol	9.05	198	8901	2.88665	ppb	#	85
66) Diphenyl amine	9.09	169	134244	11.16496	ppb		99
67) n-Nitrosodiphenylamine	9.09	169	134244	11.16496	ppb		99
68) 1,2-Diphenylhydrazine	9.13	77	87129	4.57707	ppb		99
69) 4-Bromophenyl phenyl ether	9.52	248	24730	5.36824	ppb	#	83
70) Hexachlorobenzene	9.59	284	24441	4.98065	ppb	#	74
71) Atrazine	9.72	200	11708	2.43094	ppb		95
72) Pentachlorophenol	9.84	266	6437	7.80595	ppb		92
73) Phenanthrene	10.05	178	125410	5.18209	ppb		98
74) Anthracene	10.12	178	134548	5.34573	ppb		98
75) Carbazol	10.32	167	117070	5.23894	ppb		99
76) Di-n-butylphthalate	10.72	149	152801	5.10773	ppb		100
77) Fluoranthene	11.44	202	140468	5.31106	ppb	#	97
79) Benzidine	11.62	184	41503	4.47439	ppb	#	89
80) Pyrene	11.70	202	149080	5.33068	ppb		99
82) Butyl benzylphthalate	12.46	149	69384	4.95412	ppb		100
83) 3,3'-Dichlorobenzidine	13.07	252	40328	4.68957	ppb	#	98
84) Benz (a) anthracene	13.09	228	130185	4.90624	ppb		99
85) Bis (2-ethylhexyl) phthala	13.13	149	98983	5.00821	ppb		99
86) Chrysene	13.14	228	135366	5.30692	ppb		94
87) Di-n-octylphthalate	13.84	149	167938	4.79507	ppb		99
89) Benzo (b) fluoranthene	14.29	252	127992	4.23678	ppb		95
90) Benzo (k) fluoranthene	14.32	252	146637	5.07643	ppb		97
91) Benzo (a) pyrene	14.68	252	131139	4.60945	ppb		94
92) Indeno (1,2,3-cd) pyrene	16.29	276	153935	4.75506	ppb	#	88
93) Dibenz (a,h) anthracene	16.31	278	131937	4.79035	ppb		96
94) Benzo (g,h,i) perylene	16.76	276	130754	4.77536	ppb		95

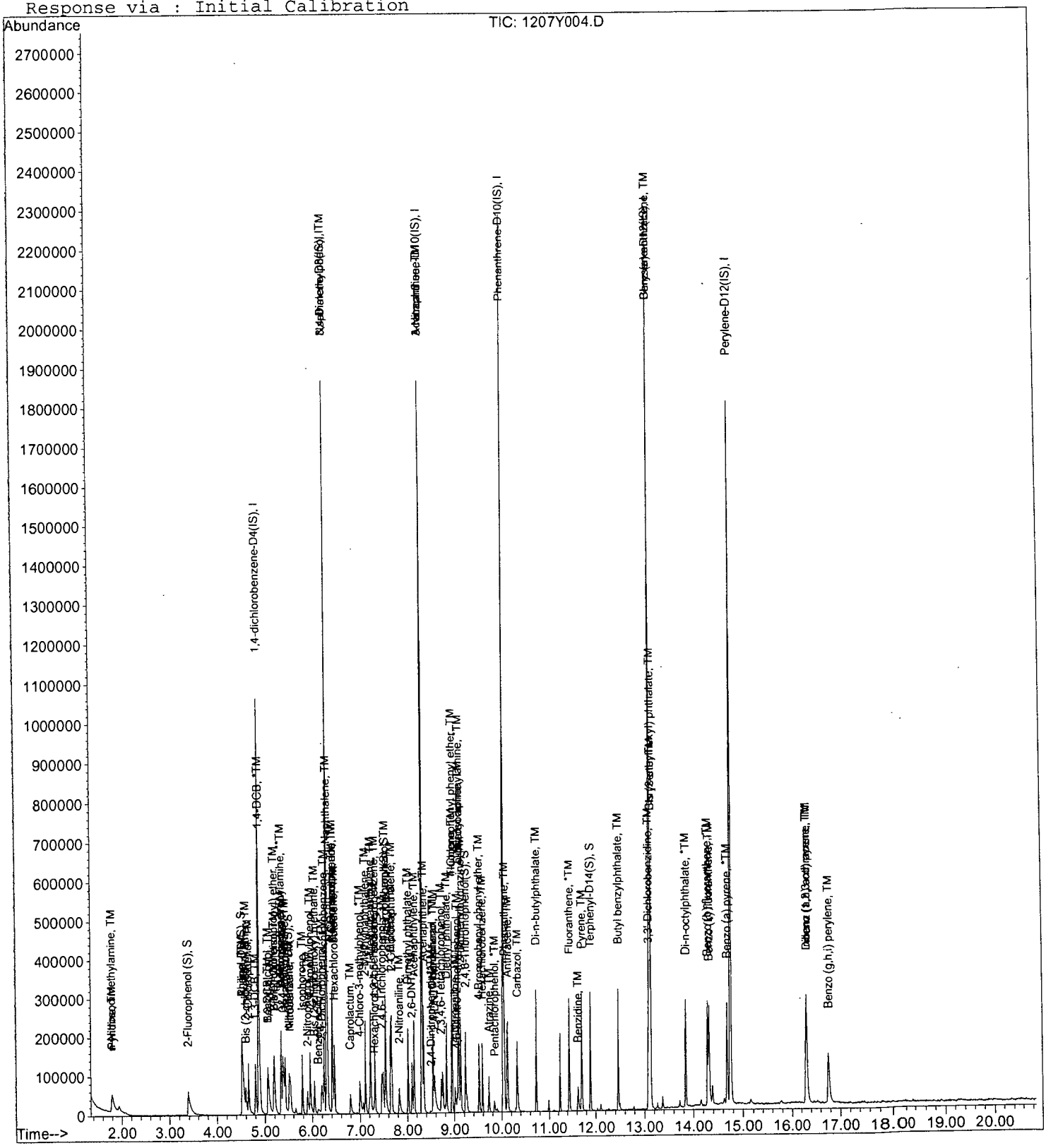
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y004.D Vial: 4
Acq On : 7 Dec 16 10:01 Operator: MA
Sample : 5ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y005.D Vial: 5
Acq On : 7 Dec 16 10:32 Operator: MA
Sample : 10ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	199996	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.29	136	835678	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	491315	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.02	188	976841	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.11	240	927503	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.75	264	990341	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.37	112	129921	20.52354 ppb	0.02
Spiked Amount 200.000			Recovery =	10.262%	
5) Phenol-D6 (S)	4.51	99	178462	20.38018 ppb	0.00
Spiked Amount 200.000			Recovery =	10.190%	
21) Nitrobenzene-D5(S)	5.50	82	90507	10.38019 ppb	0.00
Spiked Amount 100.000			Recovery =	10.380%	
45) 2-Fluorobiphenyl(S)	7.54	172	184156	11.80380 ppb	0.00
Spiked Amount 100.000			Recovery =	11.804%	
63) 2,4,6-Tribromophenol(S)	9.23	330	52209	21.63904 ppb	0.00
Spiked Amount 200.000			Recovery =	10.820%	
81) Terphenyl-D14(S)	11.89	244	220919	10.50802 ppb	0.00
Spiked Amount 100.000			Recovery =	10.508%	
Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.76	42	40937	8.73052 ppb	87
3) Pyridine	1.78	79	86226	8.60805 ppb	94
6) Phenol	4.53	94	95766	9.64222 ppb	94
7) Aniline	4.52	66	91627	9.36928 ppb #	79
8) Bis (2-chloroethyl) ether	4.59	63	39545	8.85840 ppb	97
9) 2-Chlorophenol	4.65	128	81615	10.59915 ppb	96
10) 1,3-DCB	4.80	146	83321	9.98465 ppb	99
11) 1,4-DCB	4.89	146	89069	10.41583 ppb	97
12) Benzyl alcohol	5.06	108	42008	9.75255 ppb	93
13) 1,2-DCB	5.06	146	77858	9.77026 ppb	96
14) 2-Methylphenol	5.20	107	56924	9.74855 ppb	92
15) Bis (2-chloroisopropyl) et	5.19	45	87550	9.79249 ppb	84
16) Acetophenone	5.33	105	103596	9.51867 ppb	98
17) 3&4-Methylphenol	5.36	107	152989	19.80531 ppb	96
18) n-Nitrosodi-n-propylamine	5.33	70	52236	9.25304 ppb	95
19) Hexachloroethane	5.42	117	35267	9.94382 ppb	92
22) Nitrobenzene	5.53	77	84968	9.52541 ppb	90
23) Isophorone	5.79	82	143360	9.74837 ppb	96
24) 2-Nitrophenol	5.89	139	40432	9.52028 ppb	93
25) 2,4-Dimethylphenol	5.95	122	70653	10.67236 ppb	94
26) Benzoic acid	6.11	105	32406	10.34814 ppb	90
27) Bis (2-chloroethoxy) metha	6.04	93	80395	10.22417 ppb	98
28) 2,4-Dichlorophenol	6.18	162	64057	10.04530 ppb	97
29) 1,2,4-Trichlorobenzene	6.24	180	71216	10.11054 ppb	95
30) 3,4-Dimethylphenol	6.29	107	103715	9.82416 ppb	98
31) Naphthalene	6.32	128	220486	10.02167 ppb	99
32) 4-Chloroaniline	6.40	127	89109	11.41451 ppb	99
33) 2,6-Dichlorophenol	6.41	162	69177	11.23627 ppb	98
34) Hexachloropropene	6.41	213	55717	9.94274 ppb	97
35) Hexachlorobutadiene	6.46	225	46253	10.29548 ppb	97
36) Caprolactum	6.79	55	32338	9.73326 ppb	96
37) 4-Chloro-3-methylphenol	6.99	107	69749	9.58380 ppb	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y005.D
Acq On : 7 Dec 16 10:32
Sample : 10ug/ml SVOC 12/06/16
Misc :

Vial: 5
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.11	142	146114	9.94793	ppb		99
39)	1-Methylnaphthalene	7.22	142	153034	10.86256	ppb		99
41)	Hexachlorocyclopentadiene	7.28	237	10085	10.30509	ppb		83
42)	1,2,4,5-Tetrachlorobenzene	7.31	216	72826	10.89639	ppb		96
43)	2,4,6-Trichlorophenol	7.46	196	44123	9.94887	ppb		99
44)	2,4,5-Trichlorophenol	7.53	196	49164	10.46865	ppb		96
46)	1,1'-Biphenyl	7.65	154	198489	10.65941	ppb	#	96
47)	2-Chloronaphthalene	7.66	162	146978	10.01894	ppb		94
48)	2-Nitroaniline	7.81	65	47494	9.11824	ppb		90
49)	Dimethyl phthalate	8.02	163	175672	9.78154	ppb	#	97
50)	2,6-DNT	8.09	165	38304	9.58326	ppb	#	73
51)	Acenaphthylene	8.14	152	252596	11.07621	ppb		99
52)	3-Nitroaniline	8.30	138	43416	10.49172	ppb	#	91
53)	Acenaphthene	8.34	154	166258	11.90354	ppb		96
54)	2,4-Dinitrophenol	8.46	184	10475	11.87415	ppb	#	60
55)	4-Nitrophenol	8.57	65	28528	13.90485	ppb		75
56)	Dibenzofuran	8.55	168	209346	10.27958	ppb		88
57)	2,4-DNT	8.57	165	53666	9.49842	ppb		97
58)	2,3,4,6-Tetrachlorophenol	8.71	232	36099	9.87795	ppb		95
59)	Diethyl phthalate	8.83	149	181223	9.93873	ppb		99
60)	4-Chlorophenyl phenyl ethe	8.95	204	85344	10.29746	ppb		87
61)	Fluorene	8.95	166	175510	10.46168	ppb		97
62)	4-Nitroaniline	9.00	138	41396	10.50223	ppb		90
65)	4,6-Dinitro-2-methylphenol	9.05	198	28069	8.17351	ppb	#	74
66)	Diphenyl amine	9.09	169	271128	20.24708	ppb		99
67)	n-Nitrosodiphenylamine	9.09	169	271128	20.24708	ppb		99
68)	1,2-Diphenylhydrazine	9.13	77	180355	8.50705	ppb	#	91
69)	4-Bromophenyl phenyl ether	9.51	248	49097	9.56948	ppb		92
70)	Hexachlorobenzene	9.59	284	51734	9.46606	ppb		86
71)	Atrazine	9.73	200	24123	4.49726	ppb		94
72)	Pentachlorophenol	9.84	266	15917	12.48338	ppb		97
73)	Phenanthrene	10.05	178	275480	10.22088	ppb		98
74)	Anthracene	10.12	178	279374	9.96647	ppb		100
75)	Carbazol	10.32	167	261994	10.52724	ppb		98
76)	Di-n-butylphthalate	10.72	149	311416	9.34691	ppb		97
77)	Fluoranthene	11.43	202	289008	9.81159	ppb	#	97
79)	Benzidine	11.62	184	95179	9.28318	ppb		97
80)	Pyrene	11.69	202	298339	9.65105	ppb		98
82)	Butyl benzylphthalate	12.46	149	140818	9.09633	ppb		87
83)	3,3'-Dichlorobenzidine	13.07	252	104450	10.98842	ppb	#	93
84)	Benz (a) anthracene	13.09	228	297055	10.12805	ppb		97
85)	Bis (2-ethylhexyl) phthala	13.12	149	205324	9.39859	ppb	#	98
86)	Chrysene	13.13	228	272893	9.67890	ppb		99
87)	Di-n-octylphthalate	13.84	149	356276	9.20309	ppb	#	91
89)	Benzo (b) fluoranthene	14.28	252	337345	10.15848	ppb	#	97
90)	Benzo (k) fluoranthene	14.31	252	265091	8.34854	ppb		98
91)	Benzo (a) pyrene	14.67	252	256785	8.21085	ppb	#	97
92)	Indeno (1,2,3-cd) pyrene	16.30	276	329541	9.26038	ppb		96
93)	Dibenz (a,h) anthracene	16.31	278	275683	9.10566	ppb		98
94)	Benzo (g,h,i) perylene	16.74	276	263509	8.75484	ppb		98

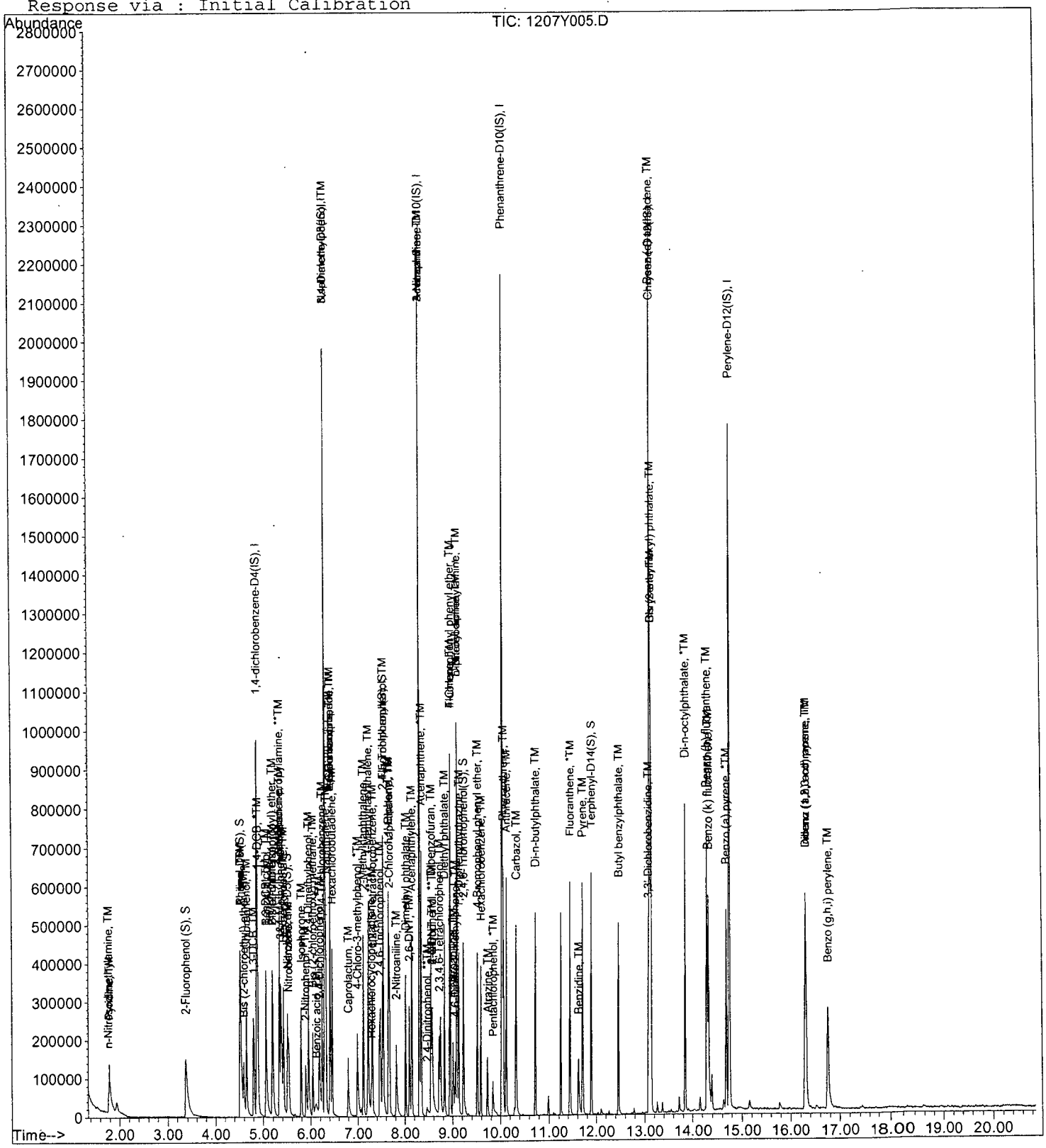
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y005.D Vial: 5
Acq On : 7 Dec 16 10:32 Operator: MA
Sample : 10ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y006.D Vial: 6
Acq On : 7 Dec 16 11:02 Operator: MA
Sample : 20ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	213922	40.00000	ppb	0.00
20) Napthalene-D8(IS)	6.30	136	877521	40.00000	ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	527221	40.00000	ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	919632	40.00000	ppb	0.00
78) Chrysene-D12(IS)	13.10	240	874733	40.00000	ppb	0.00
88) Perylene-D12(IS)	14.75	264	909225	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.36	112	271002	40.02316	ppb	0.00
Spiked Amount 200.000			Recovery =	20.012%		
5) Phenol-D6 (S)	4.50	99	390048	41.64340	ppb	0.00
Spiked Amount 200.000			Recovery =	20.822%		
21) Nitrobenzene-D5(S)	5.50	82	172033	18.78955	ppb	0.00
Spiked Amount 100.000			Recovery =	18.790%		
45) 2-Fluorobiphenyl(S)	7.53	172	352090	21.03087	ppb	0.00
Spiked Amount 100.000			Recovery =	21.031%		
63) 2,4,6-Tribromophenol(S)	9.23	330	100581	38.84865	ppb	0.00
Spiked Amount 200.000			Recovery =	19.425%		
81) Terphenyl-D14(S)	11.89	244	439341	22.15795	ppb	0.00
Spiked Amount 100.000			Recovery =	22.158%		
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.76	42	87421	17.43034	ppb	92
3) Pyridine	1.77	79	177528	16.56912	ppb	97
6) Phenol	4.52	94	221931	20.89054	ppb	96
7) Aniline	4.52	66	202813	19.38850	ppb	86
8) Bis (2-chloroethyl) ether	4.58	63	97711	20.46317	ppb	93
9) 2-Chlorophenol	4.65	128	172852	20.98656	ppb	99
10) 1,3-DCB	4.80	146	179050	20.05944	ppb	100
11) 1,4-DCB	4.89	146	178026	19.46331	ppb	97
12) Benzyl alcohol	5.06	108	98047	21.28071	ppb	97
13) 1,2-DCB	5.06	146	169067	19.83480	ppb	97
14) 2-Methylphenol	5.19	107	126350	20.22952	ppb	97
15) Bis (2-chloroisopropyl) et	5.19	45	195850	20.47984	ppb	93
16) Acetophenone	5.33	105	217146	18.65310	ppb	96
17) 3&4-Methylphenol	5.36	107	312061	37.76824	ppb	99
18) n-Nitrosodi-n-propylamine	5.33	70	112913	18.69926	ppb	99
19) Hexachloroethane	5.42	117	69201	18.24159	ppb	91
22) Nitrobenzene	5.52	77	170617	18.21513	ppb	98
23) Isophorone	5.79	82	277084	17.94308	ppb	99
24) 2-Nitrophenol	5.88	139	85225	19.11054	ppb	95
25) 2,4-Dimethylphenol	5.95	122	132147	19.00942	ppb	99
26) Benzoic acid	6.09	105	91123	19.04059	ppb	95
27) Bis (2-chloroethoxy) metha	6.04	93	161526	19.56243	ppb	97
28) 2,4-Dichlorophenol	6.17	162	132126	19.73177	ppb	98
29) 1,2,4-Trichlorobenzene	6.24	180	136552	18.46189	ppb	97
30) 3,4-Dimethylphenol	6.29	107	215414	19.43164	ppb	99
31) Naphthalene	6.32	128	472793	20.46500	ppb	100
32) 4-Chloroaniline	6.40	127	189841	23.15833	ppb	96
33) 2,6-Dichlorophenol	6.40	162	140216	21.68899	ppb	97
34) Hexachloropropene	6.41	213	118650	20.16357	ppb	99
35) Hexachlorobutadiene	6.46	225	96965	20.55433	ppb	96
36) Caprolactum	6.80	55	66358	19.02041	ppb	94
37) 4-Chloro-3-methylphenol	6.99	107	147903	19.35345	ppb	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y006.D
Acq On : 7 Dec 16 11:02
Sample : 20ug/ml SVOC 12/06/16
Misc :

Vial: 6
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38) 2-Methylnaphthalene	7.11	142	303522	19.67943	ppb		99
39) 1-Methylnaphthalene	7.22	142	283238	19.14597	ppb		99
41) Hexachlorocyclopentadiene	7.29	237	38317	19.84270	ppb		95
42) 1,2,4,5-Tetrachlorobenzene	7.31	216	148167	20.65927	ppb		98
43) 2,4,6-Trichlorophenol	7.46	196	92029	19.33751	ppb		97
44) 2,4,5-Trichlorophenol	7.52	196	109748	21.77747	ppb		97
46) 1,1'-Biphenyl	7.65	154	421333	21.08577	ppb	#	98
47) 2-Chloronaphthalene	7.66	162	320827	20.38017	ppb		97
48) 2-Nitroaniline	7.81	65	98585	17.63805	ppb		95
49) Dimethyl phthalate	8.02	163	354455	18.39218	ppb		99
50) 2,6-DNT	8.09	165	78220	18.23703	ppb	#	70
51) Acenaphthylene	8.15	152	468200	19.13214	ppb		100
52) 3-Nitroaniline	8.29	138	94776	21.34336	ppb		82
53) Acenaphthene	8.34	154	308667	20.59449	ppb		98
54) 2,4-Dinitrophenol	8.44	184	34650	21.05674	ppb		92
55) 4-Nitrophenol	8.55	65	64643	21.85482	ppb		87
56) Dibenzofuran	8.55	168	433602	19.84127	ppb		95
57) 2,4-DNT	8.57	165	113885	18.78390	ppb	#	69
58) 2,3,4,6-Tetrachlorophenol	8.71	232	77826	19.84558	ppb		96
59) Diethyl phthalate	8.83	149	365822	18.69626	ppb		94
60) 4-Chlorophenyl phenyl ethe	8.95	204	160915	18.09343	ppb		95
61) Fluorene	8.95	166	338778	18.81837	ppb		100
62) 4-Nitroaniline	9.00	138	79383	18.76799	ppb		95
65) 4,6-Dinitro-2-methylphenol	9.05	198	69659	21.54609	ppb	#	85
66) Diphenyl amine	9.09	169	583796	46.30830	ppb		100
67) n-Nitrosodiphenylamine	9.09	169	583796	46.30830	ppb		100
68) 1,2-Diphenylhydrazine	9.13	77	374925	18.78473	ppb	#	91
69) 4-Bromophenyl phenyl ether	9.51	248	96477	19.97408	ppb		93
70) Hexachlorobenzene	9.59	284	102637	19.94834	ppb		87
71) Atrazine	9.73	200	48458	9.59604	ppb		94
72) Pentachlorophenol	9.84	266	40851	26.44051	ppb		95
73) Phenanthrene	10.05	178	526900	20.76520	ppb		98
74) Anthracene	10.12	178	538899	20.42079	ppb		99
75) Carbazol	10.32	167	530270	22.63237	ppb		97
76) Di-n-butylphthalate	10.73	149	706599	22.52735	ppb		99
77) Fluoranthene	11.43	202	598343	21.57691	ppb	#	97
79) Benzidine	11.61	184	205525	21.25496	ppb		99
80) Pyrene	11.69	202	617378	21.17657	ppb		99
82) Butyl benzylphthalate	12.46	149	294257	20.15461	ppb		91
83) 3,3'-Dichlorobenzidine	13.07	252	218137	24.33302	ppb	#	95
84) Benz (a) anthracene	13.09	228	563481	20.37081	ppb		100
85) Bis (2-ethylhexyl) phthala	13.12	149	407629	19.78463	ppb	#	96
86) Chrysene	13.13	228	535016	20.12056	ppb		99
87) Di-n-octylphthalate	13.84	149	763144	20.90228	ppb	#	92
89) Benzo (b) fluoranthene	14.28	252	616293	20.21412	ppb	#	98
90) Benzo (k) fluoranthene	14.31	252	538976	18.48836	ppb		98
91) Benzo (a) pyrene	14.67	252	567407	19.76179	ppb		98
92) Indeno (1,2,3-cd) pyrene	16.29	276	632150	19.34875	ppb		97
93) Dibenz (a,h) anthracene	16.31	278	526382	18.93720	ppb		98
94) Benzo (g,h,i) perylene	16.74	276	639018	23.12486	ppb		97

(#) = qualifier out of range (m) = manual integration

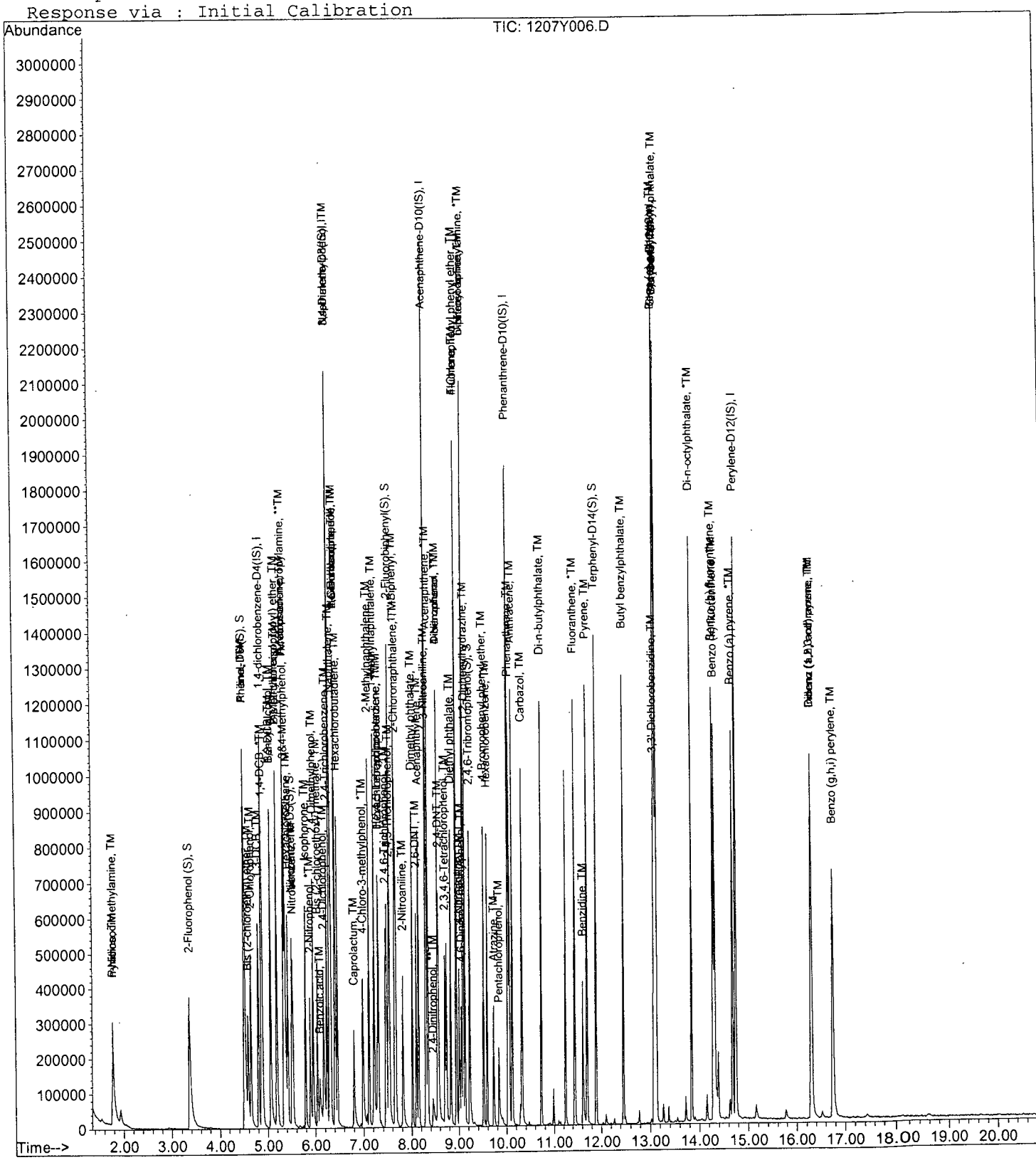
Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y006.D
Acq On : 7 Dec 16 11:02
Sample : 20ug/ml SVOC 12/06/16
Misc :

Vial: 6
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y007.D Vial: 7
Acq On : 7 Dec 16 11:32 Operator: MA
Sample : 40ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	200058	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.30	136	812959	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.31	164	497677	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.03	188	928405	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.11	240	850533	40.00000 ppb		0.00
88) Perylene-D12(IS)	14.75	264	888701	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.35	112	570340	90.06835 ppb		0.00
Spiked Amount 200.000			Recovery =	45.034%		
5) Phenol-D6 (S)	4.50	99	704877	80.47129 ppb		0.00
Spiked Amount 200.000			Recovery =	40.236%		
21) Nitrobenzene-D5(S)	5.50	82	325441	38.36770 ppb		0.00
Spiked Amount 100.000			Recovery =	38.368%		
45) 2-Fluorobiphenyl(S)	7.54	172	597194	37.78888 ppb		0.00
Spiked Amount 100.000			Recovery =	37.789%		
63) 2,4,6-Tribromophenol(S)	9.23	330	191228	78.24500 ppb		0.00
Spiked Amount 200.000			Recovery =	39.123%		
81) Terphenyl-D14(S)	11.89	244	752070	39.00950 ppb		0.00
Spiked Amount 100.000			Recovery =	39.009%		
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.75	42	161566	34.44606 ppb		97
3) Pyridine	1.76	79	387358	38.65847 ppb		98
6) Phenol	4.52	94	400577	40.31969 ppb		93
7) Aniline	4.51	66	377482	38.58729 ppb	#	75
8) Bis (2-chloroethyl) ether	4.59	63	179689	40.23931 ppb		98
9) 2-Chlorophenol	4.64	128	315428	40.95120 ppb		91
10) 1,3-DCB	4.80	146	332809	39.86933 ppb		99
11) 1,4-DCB	4.89	146	332016	38.81430 ppb		99
12) Benzyl alcohol	5.05	108	172333	39.99630 ppb		92
13) 1,2-DCB	5.06	146	296826	37.23663 ppb		100
14) 2-Methylphenol	5.19	107	223633	38.28652 ppb		95
15) Bis (2-chloroisopropyl) et	5.19	45	337003	37.68221 ppb		98
16) Acetophenone	5.34	105	403185	37.03421 ppb		99
17) 3&4-Methylphenol	5.36	107	576124	74.55945 ppb		97
18) n-Nitrosodi-n-propylamine	5.34	70	205499	36.39064 ppb		92
19) Hexachloroethane	5.42	117	132371	37.31150 ppb		93
22) Nitrobenzene	5.52	77	329118	37.92717 ppb		95
23) Isophorone	5.79	82	544538	38.06296 ppb		95
24) 2-Nitrophenol	5.88	139	167729	40.59784 ppb		97
25) 2,4-Dimethylphenol	5.95	122	256596	39.84284 ppb		99
26) Benzoic acid	6.12	105	207583	40.37949 ppb		96
27) Bis (2-chloroethoxy) metha	6.04	93	311390	40.70745 ppb		99
28) 2,4-Dichlorophenol	6.16	162	251852	40.59868 ppb		93
29) 1,2,4-Trichlorobenzene	6.24	180	276620	40.36924 ppb		98
30) 3,4-Dimethylphenol	6.28	107	390385	38.01171 ppb		99
31) Naphthalene	6.32	128	855871	39.98876 ppb		99
32) 4-Chloroaniline	6.40	127	325340	42.83942 ppb		96
33) 2,6-Dichlorophenol	6.40	162	232500	38.81983 ppb		95
34) Hexachloropropene	6.42	213	225297	41.32796 ppb		97
35) Hexachlorobutadiene	6.46	225	171693	39.28527 ppb		94
36) Caprolactum	6.82	55	125688	38.88743 ppb		97
37) 4-Chloro-3-methylphenol	6.98	107	280036	39.55342 ppb		87

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y007.D
Acq On : 7 Dec 16 11:32
Sample : 40ug/ml SVOC 12/06/16
Misc :

Vial: 7
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38) 2-Methylnaphthalene	7.11	142	561485	39.29610	ppb		100
39) 1-Methylnaphthalene	7.22	142	542998	39.61986	ppb		98
41) Hexachlorocyclopentadiene	7.29	237	98846	39.78650	ppb		94
42) 1,2,4,5-Tetrachlorobenzene	7.31	216	258378	38.16490	ppb		97
43) 2,4,6-Trichlorophenol	7.45	196	173513	38.62362	ppb		100
44) 2,4,5-Trichlorophenol	7.51	196	183541	38.58238	ppb	#	88
46) 1,1'-Biphenyl	7.65	154	728113	38.60182	ppb	#	97
47) 2-Chloronaphthalene	7.67	162	569966	38.35579	ppb		98
48) 2-Nitroaniline	7.81	65	201923	38.27108	ppb		97
49) Dimethyl phthalate	8.02	163	688771	37.86099	ppb		99
50) 2,6-DNT	8.10	165	153741	37.97267	ppb		91
51) Acenaphthylene	8.15	152	870855	37.69841	ppb		100
52) 3-Nitroaniline	8.29	138	176613	42.13394	ppb		87
53) Acenaphthene	8.34	154	553092	39.09340	ppb		100
54) 2,4-Dinitrophenol	8.45	184	80953	41.10463	ppb		83
55) 4-Nitrophenol	8.54	65	134675	40.08311	ppb		98
56) Dibenzofuran	8.55	168	766792	37.17071	ppb		98
57) 2,4-DNT	8.58	165	220382	38.50708	ppb		97
58) 2,3,4,6-Tetrachlorophenol	8.71	232	159761	43.15738	ppb		96
59) Diethyl phthalate	8.84	149	717251	38.83302	ppb		98
60) 4-Chlorophenyl phenyl ethe	8.95	204	308111	36.70089	ppb		96
61) Fluorene	8.95	166	633972	37.30629	ppb		100
62) 4-Nitroaniline	9.01	138	157741	39.50755	ppb		89
65) 4,6-Dinitro-2-methylphenol	9.05	198	131972	40.43428	ppb	#	84
66) Diphenyl amine	9.10	169	974102	76.53830	ppb		99
67) n-Nitrosodiphenylamine	9.10	169	974102	76.53830	ppb		99
68) 1,2-Diphenylhydrazine	9.13	77	675207	33.50998	ppb		95
69) 4-Bromophenyl phenyl ether	9.51	248	202318	41.49103	ppb		94
70) Hexachlorobenzene	9.59	284	198345	38.18569	ppb		91
71) Atrazine	9.73	200	93179	18.27769	ppb		100
72) Pentachlorophenol	9.83	266	91407	50.75984	ppb		95
73) Phenanthrene	10.06	178	992611	38.74928	ppb		99
74) Anthracene	10.12	178	1029607	38.64677	ppb		99
75) Carbazol	10.32	167	881300	37.25919	ppb		99
76) Di-n-butylphthalate	10.73	149	1193622	37.69472	ppb		99
77) Fluoranthene	11.43	202	1069844	38.21520	ppb	#	96
79) Benzidine	11.61	184	397025	42.22773	ppb		99
80) Pyrene	11.70	202	1133899	40.00029	ppb		99
82) Butyl benzylphthalate	12.47	149	588724	41.47093	ppb		93
83) 3,3'-Dichlorobenzidine	13.08	252	380229	43.62107	ppb		97
84) Benz (a) anthracene	13.10	228	1074534	39.95154	ppb		99
85) Bis (2-ethylhexyl) phthala	13.13	149	762045	38.03889	ppb		98
86) Chrysene	13.13	228	989386	38.26692	ppb		100
87) Di-n-octylphthalate	13.84	149	1343797	37.85342	ppb	#	87
89) Benzo (b) fluoranthene	14.28	252	1144127	38.39349	ppb	#	98
90) Benzo (k) fluoranthene	14.32	252	1041436	36.54915	ppb		99
91) Benzo (a) pyrene	14.68	252	1090904	38.87173	ppb		98
92) Indeno (1,2,3-cd) pyrene	16.30	276	1176312	36.83588	ppb		98
93) Dibenz (a,h) anthracene	16.32	278	1006185	37.03465	ppb		99
94) Benzo (g,h,i) perylene	16.75	276	1129852	41.83148	ppb		97

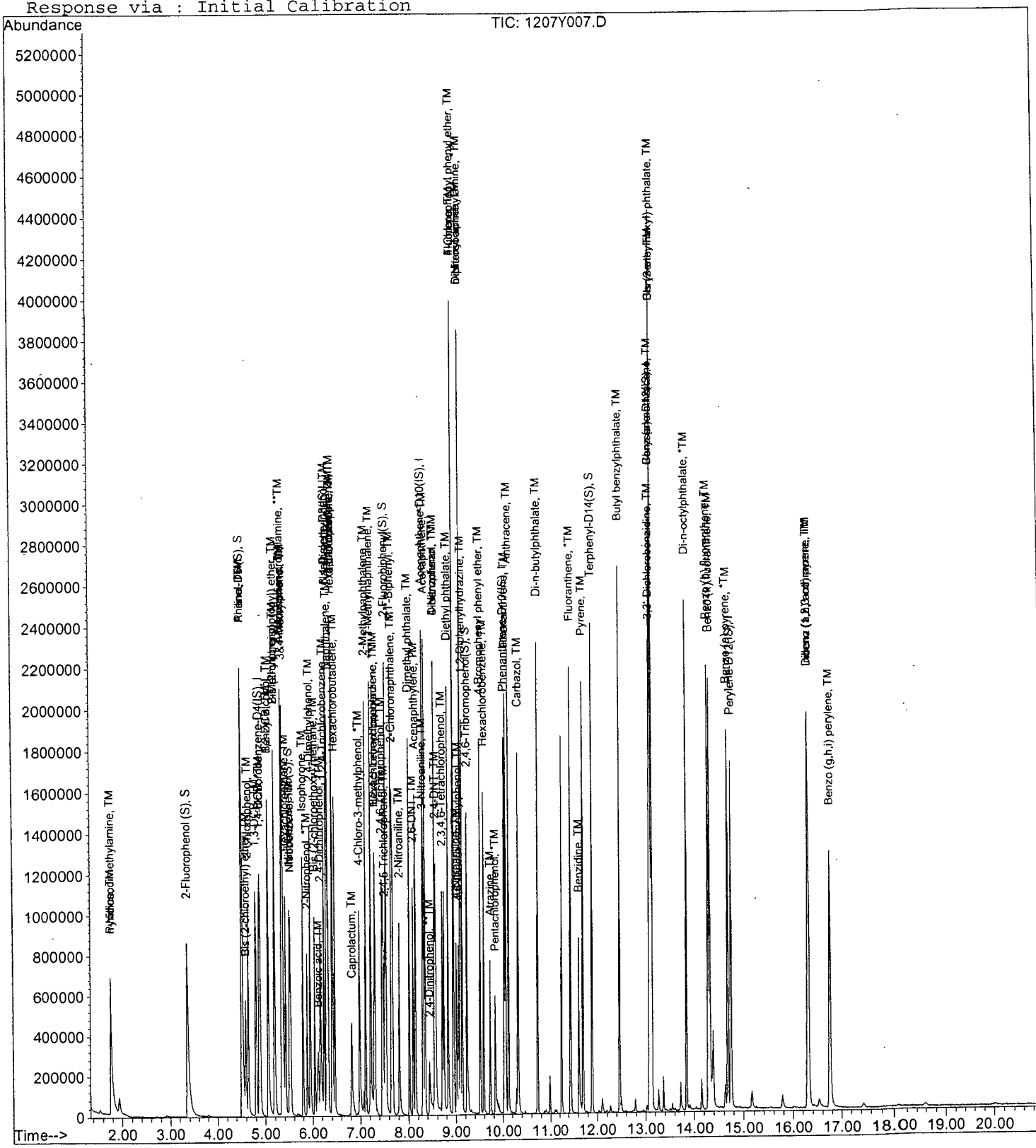
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y007.D Vial: 7
Acq On : 7 Dec 16 11:32 Operator: MA
Sample : 40ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y008.D
Acq On : 7 Dec 16 12:02
Sample : 50ug/ml SVOC 12/06/16
Misc :

Vial: 8
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	195270	40.00000	ppb	0.00
20) Napthalene-D8(IS)	6.30	136	816895	40.00000	ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	475200	40.00000	ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	975541	40.00000	ppb	0.00
78) Chrysene-D12(IS)	13.10	240	853105	40.00000	ppb	0.00
88) Perylene-D12(IS)	14.75	264	871056	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.35	112	695029	112.45058	ppb	0.00
Spiked Amount 200.000			Recovery = 56.226%			
5) Phenol-D6 (S)	4.51	99	832830	97.41019	ppb	0.00
Spiked Amount 200.000			Recovery = 48.705%			
21) Nitrobenzene-D5(S)	5.50	82	421258	49.42470	ppb	0.00
Spiked Amount 100.000			Recovery = 49.425%			
45) 2-Fluorobiphenyl(S)	7.53	172	745324	49.39294	ppb	0.00
Spiked Amount 100.000			Recovery = 49.393%			
63) 2,4,6-Tribromophenol(S)	9.23	330	243923	104.52712	ppb	0.00
Spiked Amount 200.000			Recovery = 52.263%			
81) Terphenyl-D14(S)	11.89	244	959232	49.60488	ppb	0.00
Spiked Amount 100.000			Recovery = 49.605%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.75	42	207992	45.43145	ppb	100
3) Pyridine	1.76	79	499289	51.05103	ppb	100
6) Phenol	4.52	94	480106	49.50952	ppb	100
7) Aniline	4.52	66	456200	47.77753	ppb	100
8) Bis (2-chloroethyl) ether	4.59	63	206942	47.47862	ppb	100
9) 2-Chlorophenol	4.65	128	370436	49.27197	ppb	100
10) 1,3-DCB	4.80	146	396306	48.64015	ppb	100
11) 1,4-DCB	4.89	146	407144	48.76421	ppb	100
12) Benzyl alcohol	5.06	108	223746	53.20189	ppb	100
13) 1,2-DCB	5.06	146	388817	49.97284	ppb	100
14) 2-Methylphenol	5.19	107	277560	48.68411	ppb	100
15) Bis (2-chloroisopropyl) et	5.19	45	424279	48.60428	ppb	100
16) Acetophenone	5.33	105	510342	48.02645	ppb	100
17) 3&4-Methylphenol	5.36	107	744509	98.71362	ppb	100
18) n-Nitrosodi-n-propylamine	5.34	70	262564	47.63603	ppb	100
19) Hexachloroethane	5.42	117	166560	48.09955	ppb	100
22) Nitrobenzene	5.52	77	426332	48.89327	ppb	100
23) Isophorone	5.80	82	706760	49.16418	ppb	100
24) 2-Nitrophenol	5.88	139	213979	51.54284	ppb	100
25) 2,4-Dimethylphenol	5.95	122	323836	50.04122	ppb	100
26) Benzoic acid	6.13	105	279445	53.40557	ppb	100
27) Bis (2-chloroethoxy) metha	6.04	93	396181	51.54248	ppb	100
28) 2,4-Dichlorophenol	6.17	162	325223	52.17353	ppb	100
29) 1,2,4-Trichlorobenzene	6.24	180	351337	51.02621	ppb	100
30) 3,4-Dimethylphenol	6.29	107	512874	49.69783	ppb	100
31) Naphthalene	6.32	128	1091949	50.77318	ppb	100
32) 4-Chloroaniline	6.40	127	395557	51.83434	ppb	100
33) 2,6-Dichlorophenol	6.41	162	296250	49.22564	ppb	100
34) Hexachloropropene	6.42	213	279000	50.93252	ppb	100
35) Hexachlorobutadiene	6.46	225	219413	49.96224	ppb	100
36) Caprolactum	6.83	55	159640	49.15407	ppb	100
37) 4-Chloro-3-methylphenol	6.99	107	341306	47.97517	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y008.D Vial: 8
Acq On : 7 Dec 16 12:02 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) 2-Methylnaphthalene	7.11	142	688780	47.97270	ppb	100
39) 1-Methylnaphthalene	7.22	142	659731	47.90535	ppb	100
41) Hexachlorocyclopentadiene	7.29	237	140004	52.99808	ppb	100
42) 1,2,4,5-Tetrachlorobenzene	7.31	216	332171	51.38560	ppb	100
43) 2,4,6-Trichlorophenol	7.46	196	218731	50.99205	ppb	100
44) 2,4,5-Trichlorophenol	7.52	196	226443	49.85239	ppb	100
46) 1,1'-Biphenyl	7.66	154	885084	49.14334	ppb	100
47) 2-Chloronaphthalene	7.67	162	727438	51.26833	ppb	100
48) 2-Nitroaniline	7.81	65	266093	52.81891	ppb	100
49) Dimethyl phthalate	8.02	163	914001	52.61807	ppb	100
50) 2,6-DNT	8.10	165	201713	52.17789	ppb	100
51) Acenaphthylene	8.15	152	1109739	50.31172	ppb	100
52) 3-Nitroaniline	8.30	138	209961	52.45890	ppb	100
53) Acenaphthene	8.34	154	674472	49.92765	ppb	100
54) 2,4-Dinitrophenol	8.44	184	97936	50.08681	ppb	100
55) 4-Nitrophenol	8.54	65	178570	53.03676	ppb	100
56) Dibenzofuran	8.55	168	1012092	51.38241	ppb	100
57) 2,4-DNT	8.57	165	296625	54.28044	ppb	100
58) 2,3,4,6-Tetrachlorophenol	8.71	232	207535	58.71469	ppb	100
59) Diethyl phthalate	8.83	149	866198	49.11547	ppb	100
60) 4-Chlorophenyl phenyl ethe	8.95	204	382969	47.77538	ppb	100
61) Fluorene	8.95	166	806446	49.70024	ppb	100
62) 4-Nitroaniline	9.01	138	206542	54.17700	ppb	100
65) 4,6-Dinitro-2-methylphenol	9.06	198	182950	53.34482	ppb	100
66) Diphenyl amine	9.10	169	1368741	102.34994	ppb	100
67) n-Nitrosodiphenylamine	9.10	169	1368741	102.34994	ppb	100
68) 1,2-Diphenylhydrazine	9.13	77	929548	43.90369	ppb	100
69) 4-Bromophenyl phenyl ether	9.51	248	243072	47.44020	ppb	100
70) Hexachlorobenzene	9.59	284	246139	45.09743	ppb	100
71) Atrazine	9.73	200	132213	24.68138	ppb	100
72) Pentachlorophenol	9.84	266	118335	60.26116	ppb	100
73) Phenanthrene	10.06	178	1304097	48.44918	ppb	100
74) Anthracene	10.12	178	1323292	47.27041	ppb	100
75) Carbazol	10.32	167	1272051	51.18068	ppb	100
76) Di-n-butylphthalate	10.73	149	1500155	45.08600	ppb	100
77) Fluoranthene	11.44	202	1330020	45.21326	ppb	100
79) Benzidine	11.61	184	505375	53.58983	ppb	100
80) Pyrene	11.70	202	1525772	53.66203	ppb	100
82) Butyl benzylphthalate	12.46	149	734576	51.58904	ppb	100
83) 3,3'-Dichlorobenzidine	13.08	252	470879	53.85786	ppb	100
84) Benz (a) anthracene	13.10	228	1345568	49.87784	ppb	100
85) Bis (2-ethylhexyl) phthala	13.13	149	996708	49.60253	ppb	100
86) Chrysene	13.14	228	1285778	49.58067	ppb	100
87) Di-n-octylphthalate	13.85	149	1959719	55.03689	ppb	100
89) Benzo (b) fluoranthene	14.29	252	1307332	44.75884	ppb	100
90) Benzo (k) fluoranthene	14.32	252	1321701	47.32466	ppb	100
91) Benzo (a) pyrene	14.68	252	1333161	48.46626	ppb	100
92) Indeno (1,2,3-cd) pyrene	16.30	276	1465032	46.80640	ppb	100
93) Dibenz (a,h) anthracene	16.32	278	1249734	46.93076	ppb	100
94) Benzo (g,h,i) perylene	16.76	276	1364184	51.53048	ppb	100

(#) = qualifier out of range (m) = manual integration

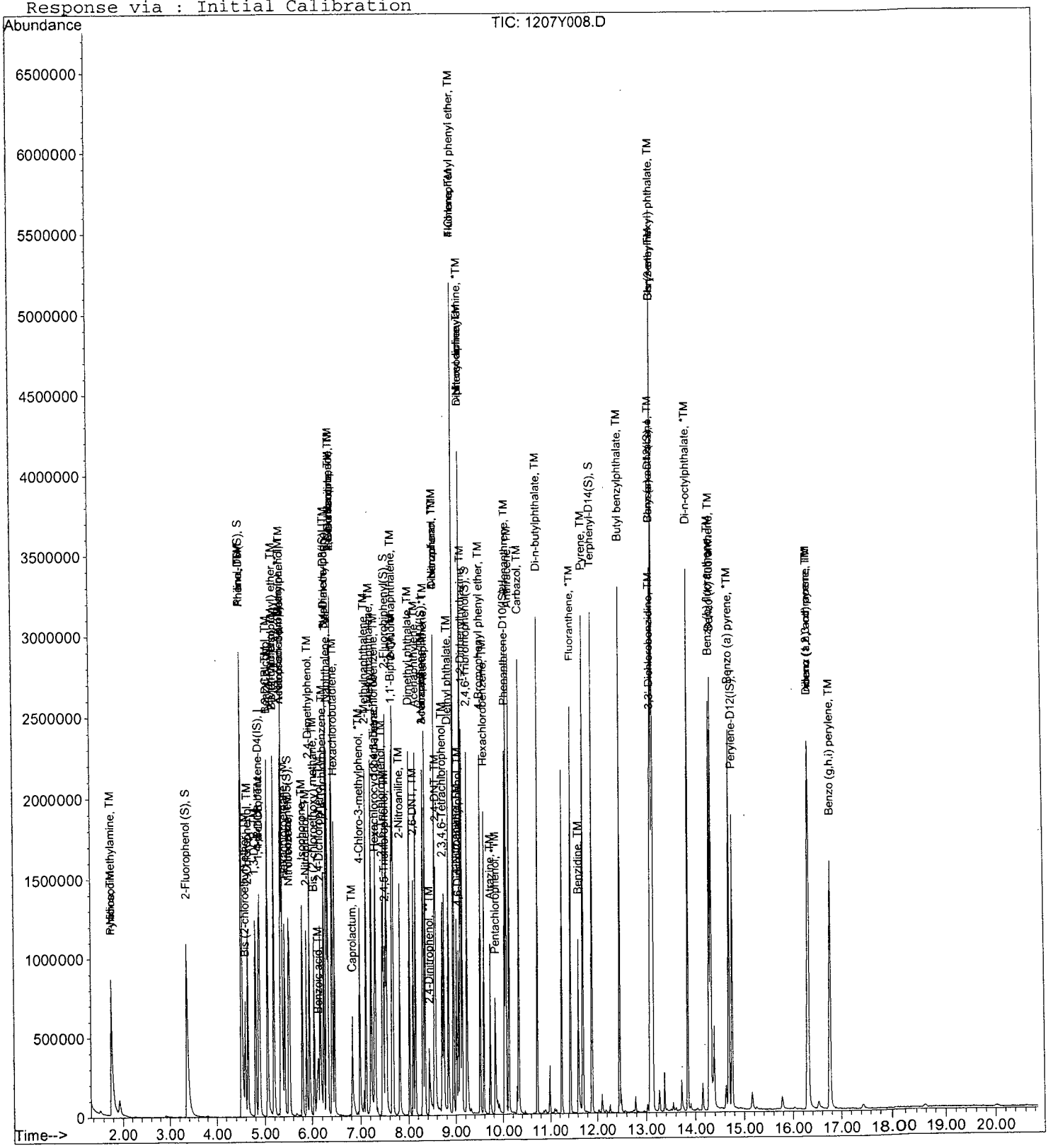
Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y008.D
Acq On : 7 Dec 16 12:02
Sample : 50ug/ml SVOC 12/06/16
Misc :

Vial: 8
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



345

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y009.D Vial: 9
Acq On : 7 Dec 16 12:32 Operator: MA
Sample : 60ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	218783	40.00000	ppb	0.00
20) Napthalene-D8(IS)	6.30	136	928479	40.00000	ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	561569	40.00000	ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	933722	40.00000	ppb	0.00
78) Chrysene-D12(IS)	13.11	240	884630	40.00000	ppb	0.00
88) Perylene-D12(IS)	14.75	264	1042796	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.35	112	865007	124.91090	ppb	0.00
Spiked Amount 200.000			Recovery =	62.456%		
5) Phenol-D6 (S)	4.51	99	1086222	113.39361	ppb	0.00
Spiked Amount 200.000			Recovery =	56.697%		
21) Nitrobenzene-D5(S)	5.50	82	539284	55.66825	ppb	0.00
Spiked Amount 100.000			Recovery =	55.668%		
45) 2-Fluorobiphenyl(S)	7.54	172	984076	55.18508	ppb	0.00
Spiked Amount 100.000			Recovery =	55.185%		
63) 2,4,6-Tribromophenol(S)	9.23	330	315998	114.58661	ppb	0.00
Spiked Amount 200.000			Recovery =	57.293%		
81) Terphenyl-D14(S)	11.89	244	1107571	55.23485	ppb	0.00
Spiked Amount 100.000			Recovery =	55.235%		
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.75	42	237687	46.33801	ppb	95
3) Pyridine	1.76	79	574794	52.45498	ppb	95
6) Phenol	4.52	94	637429	58.66854	ppb	94
7) Aniline	4.52	66	600249	56.10761	ppb	94
8) Bis (2-chloroethyl) ether	4.59	63	281001	57.54124	ppb	99
9) 2-Chlorophenol	4.65	128	506460	60.12483	ppb	98
10) 1,3-DCB	4.80	146	523668	57.36438	ppb	99
11) 1,4-DCB	4.89	146	527245	56.36215	ppb	97
12) Benzyl alcohol	5.06	108	288893	61.30992	ppb	96
13) 1,2-DCB	5.06	146	489566	56.15934	ppb	98
14) 2-Methylphenol	5.19	107	364148	57.00727	ppb	99
15) Bis (2-chloroisopropyl) et	5.19	45	554052	56.64941	ppb	96
16) Acetophenone	5.34	105	671773	56.42397	ppb	98
17) 3&4-Methylphenol	5.36	107	950588	112.49194	ppb	98
18) n-Nitrosodi-n-propylamine	5.35	70	340579	55.14933	ppb	98
19) Hexachloroethane	5.42	117	222476	57.34234	ppb	96
22) Nitrobenzene	5.52	77	554825	55.98238	ppb	98
23) Isophorone	5.80	82	928565	56.83073	ppb	99
24) 2-Nitrophenol	5.88	139	289592	61.37308	ppb	94
25) 2,4-Dimethylphenol	5.95	122	444516	60.43441	ppb	98
26) Benzoic acid	6.13	105	322257	54.17674	ppb	95
27) Bis (2-chloroethoxy) metha	6.04	93	529470	60.60482	ppb	99
28) 2,4-Dichlorophenol	6.16	162	429913	60.67973	ppb	96
29) 1,2,4-Trichlorobenzene	6.24	180	459705	58.74120	ppb	95
30) 3,4-Dimethylphenol	6.29	107	660163	56.28233	ppb	98
31) Naphthalene	6.32	128	1425995	58.33701	ppb	99
32) 4-Chloroaniline	6.40	127	513997	59.26021	ppb	98
33) 2,6-Dichlorophenol	6.41	162	389211	56.90000	ppb	98
34) Hexachloropropene	6.42	213	365095	58.63961	ppb	98
35) Hexachlorobutadiene	6.46	225	279947	56.08536	ppb	99
36) Caprolactum	6.84	55	221717	60.06354	ppb	98
37) 4-Chloro-3-methylphenol	6.99	107	480600	59.43613	ppb	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y009.D
Acq On : 7 Dec 16 12:32
Sample : 60ug/ml SVOC 12/06/16
Misc :

Vial: 9
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38)	2-Methylnaphthalene	7.11	142	945068	57.91231	ppb	98
39)	1-Methylnaphthalene	7.22	142	919036	58.71429	ppb	98
41)	Hexachlorocyclopentadiene	7.29	237	197642	60.29517	ppb	98
42)	1,2,4,5-Tetrachlorobenzene	7.31	216	445973	58.37966	ppb	99
43)	2,4,6-Trichlorophenol	7.46	196	297908	58.76890	ppb	98
44)	2,4,5-Trichlorophenol	7.52	196	321422	59.87920	ppb	94
46)	1,1'-Biphenyl	7.66	154	1207599	56.73829	ppb	98
47)	2-Chloronaphthalene	7.68	162	953118	56.84250	ppb	99
48)	2-Nitroaniline	7.81	65	333570	56.02944	ppb	97
49)	Dimethyl phthalate	8.02	163	1131837	55.13729	ppb	99
50)	2,6-DNT	8.10	165	262428	57.44286	ppb	99
51)	Acenaphthylene	8.15	152	1514599	58.10577	ppb	100
52)	3-Nitroaniline	8.30	138	286828	60.64227	ppb	100
53)	Acenaphthene	8.34	154	907464	56.84338	ppb	99
54)	2,4-Dinitrophenol	8.44	184	134887	57.13945	ppb	90
55)	4-Nitrophenol	8.54	65	232448	57.73526	ppb	99
56)	Dibenzofuran	8.55	168	1321081	56.75410	ppb	99
57)	2,4-DNT	8.58	165	379083	58.70069	ppb	99
58)	2,3,4,6-Tetrachlorophenol	8.71	232	264908	63.41964	ppb	97
59)	Diethyl phthalate	8.84	149	1169813	56.12946	ppb	95
60)	4-Chlorophenyl phenyl ethe	8.95	204	505362	53.34779	ppb	99
61)	Fluorene	8.95	166	1031075	53.77083	ppb	100
62)	4-Nitroaniline	9.01	138	270386	60.01559	ppb	96
65)	4,6-Dinitro-2-methylphenol	9.06	198	237031	72.20927	ppb	96
66)	Diphenyl amine	9.10	169	1658613	129.58040	ppb	99
67)	n-Nitrosodiphenylamine	9.10	169	1658613	129.58040	ppb	99
68)	1,2-Diphenylhydrazine	9.13	77	1349001	66.56860	ppb	99
69)	4-Bromophenyl phenyl ether	9.51	248	319227	65.09373	ppb	95
70)	Hexachlorobenzene	9.59	284	327981	62.78386	ppb	97
71)	Atrazine	9.73	200	151588	29.56569	ppb	96
72)	Pentachlorophenol	9.84	266	138587	71.04943	ppb	96
73)	Phenanthrene	10.06	178	1487228	57.72740	ppb	99
74)	Anthracene	10.12	178	1508389	56.29567	ppb	98
75)	Carbazol	10.32	167	1347464	56.64305	ppb	100
76)	Di-n-butylphthalate	10.73	149	1763308	55.36837	ppb	100
77)	Fluoranthene	11.44	202	1636819	58.13481	ppb	100
79)	Benzidine	11.61	184	608980	62.27482	ppb	98
80)	Pyrene	11.70	202	1793793	60.84019	ppb	99
82)	Butyl benzylphthalate	12.47	149	829390	56.17205	ppb	99
83)	3,3'-Dichlorobenzidine	13.08	252	531065	58.57715	ppb	98
84)	Benz (a) anthracene	13.10	228	1585364	56.67243	ppb	100
85)	Bis (2-ethylhexyl) phthala	13.13	149	1244971	59.74973	ppb	99
86)	Chrysene	13.14	228	1666038	61.95439	ppb	99
87)	Di-n-octylphthalate	13.85	149	2024092	54.81901	ppb	99
89)	Benzo (b) fluoranthene	14.29	252	1616583	46.23147	ppb	100
90)	Benzo (k) fluoranthene	14.32	252	1852486	55.40589	ppb	99
91)	Benzo (a) pyrene	14.68	252	1766595	53.64641	ppb	99
92)	Indeno (1,2,3-cd) pyrene	16.31	276	1712128	45.69210	ppb	98
93)	Dibenz (a,h) anthracene	16.32	278	1422360	44.61658	ppb	99
94)	Benzo (g,h,i) perylene	16.76	276	1382485	43.62128	ppb	99

(#) = qualifier out of range (m) = manual integration

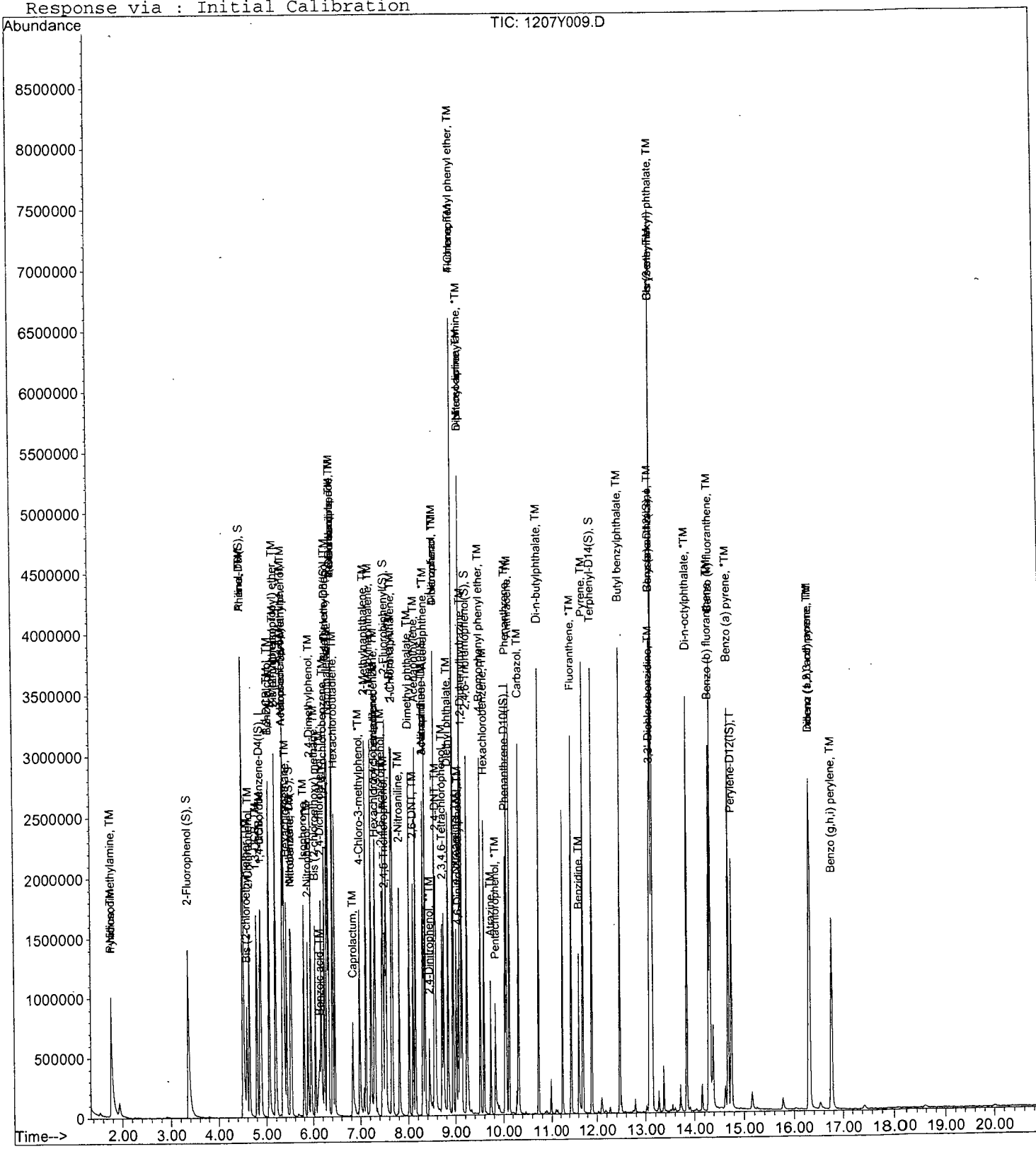
Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y009.D
Acq On : 7 Dec 16 12:32
Sample : 60ug/ml SVOC 12/06/16
Misc :

Vial: 9
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y010.D Vial: 10
Acq On : 7 Dec 16 13:02 Operator: MA
Sample : 80ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	195710	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.30	136	859926	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	527101	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	1005123	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.11	240	912863	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.75	264	909856	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.35	112	1083940	174.97924 ppb	0.00
Spiked Amount 200.000			Recovery =	87.490%	
5) Phenol-D6 (S)	4.51	99	1335540	155.85741 ppb	0.00
Spiked Amount 200.000			Recovery =	77.929%	
21) Nitrobenzene-D5(S)	5.51	82	643499	71.72142 ppb	0.00
Spiked Amount 100.000			Recovery =	71.721%	
45) 2-Fluorobiphenyl(S)	7.54	172	1210171	72.30179 ppb	0.00
Spiked Amount 100.000			Recovery =	72.302%	
63) 2,4,6-Tribromophenol(S)	9.24	330	416825	161.03215 ppb	0.00
Spiked Amount 200.000			Recovery =	80.516%	
81) Terphenyl-D14(S)	11.89	244	1546385	74.73349 ppb	0.00
Spiked Amount 100.000			Recovery =	74.733%	
Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.75	42	322164	70.21171 ppb	97
3) Pyridine	1.76	79	734964	74.97926 ppb	96
6) Phenol	4.53	94	791696	81.45777 ppb	83
7) Aniline	4.52	66	776371	81.12603 ppb	97
8) Bis (2-chloroethyl) ether	4.59	63	355760	81.43836 ppb	95
9) 2-Chlorophenol	4.65	128	615384	81.66867 ppb	98
10) 1,3-DCB	4.81	146	614066	75.19723 ppb	98
11) 1,4-DCB	4.89	146	652039	77.92005 ppb	98
12) Benzyl alcohol	5.06	108	348718	82.73108 ppb	90
13) 1,2-DCB	5.06	146	592989	76.04278 ppb	98
14) 2-Methylphenol	5.20	107	423761	74.16070 ppb	97
15) Bis (2-chloroisopropyl) et	5.19	45	634640	72.53922 ppb	96
16) Acetophenone	5.34	105	792534	74.41484 ppb	97
17) 3&4-Methylphenol	5.37	107	1142368	151.12477 ppb	98
18) n-Nitrosodi-n-propylamine	5.35	70	410995	74.39769 ppb	97
19) Hexachloroethane	5.42	117	261628	75.38363 ppb	97
22) Nitrobenzene	5.53	77	676884	73.74296 ppb	93
23) Isophorone	5.80	82	1089807	72.01642 ppb	95
24) 2-Nitrophenol	5.88	139	344463	78.82155 ppb	97
25) 2,4-Dimethylphenol	5.95	122	565844	83.06243 ppb	98
26) Benzoic acid	6.15	105	443247	81.69217 ppb	95
27) Bis (2-chloroethoxy) metha	6.05	93	679127	83.93205 ppb	98
28) 2,4-Dichlorophenol	6.17	162	547229	83.39561 ppb	100
29) 1,2,4-Trichlorobenzene	6.24	180	576211	79.49798 ppb	99
30) 3,4-Dimethylphenol	6.29	107	820634	75.54077 ppb	99
31) Naphthalene	6.33	128	1762100	77.83370 ppb	99
32) 4-Chloroaniline	6.41	127	626144	77.94493 ppb	93
33) 2,6-Dichlorophenol	6.41	162	470298	74.23545 ppb	98
34) Hexachloropropene	6.42	213	458828	79.56940 ppb	98
35) Hexachlorobutadiene	6.47	225	341554	73.88292 ppb	97
36) Caprolactum	6.85	55	263295	77.01327 ppb	97
37) 4-Chloro-3-methylphenol	6.99	107	569393	76.03086 ppb	86

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y010.D Vial: 10
Acq On : 7 Dec 16 13:02 Operator: MA
Sample : 80ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38) 2-Methylnaphthalene	7.12	142	1107600	73.28275	ppb		99
39) 1-Methylnaphthalene	7.23	142	1101455	75.97821	ppb		100
41) Hexachlorocyclopentadiene	7.29	237	283877	81.78811	ppb		98
42) 1,2,4,5-Tetrachlorobenzene	7.31	216	543057	75.73693	ppb		97
43) 2,4,6-Trichlorophenol	7.46	196	352380	74.06038	ppb		96
44) 2,4,5-Trichlorophenol	7.52	196	364305	72.30607	ppb		98
46) 1,1'-Biphenyl	7.66	154	1431535	71.65801	ppb		99
47) 2-Chloronaphthalene	7.67	162	1099952	69.88911	ppb		96
48) 2-Nitroaniline	7.81	65	409925	73.35725	ppb		87
49) Dimethyl phthalate	8.03	163	1345976	69.85672	ppb		98
50) 2,6-DNT	8.10	165	312732	72.93022	ppb	#	73
51) Acenaphthylene	8.15	152	1738197	71.04441	ppb		100
52) 3-Nitroaniline	8.30	138	350245	78.89239	ppb		86
53) Acenaphthene	8.35	154	1111537	74.17946	ppb		99
54) 2,4-Dinitrophenol	8.44	184	218209	93.07907	ppb		96
55) 4-Nitrophenol	8.54	65	306442	78.35915	ppb		97
56) Dibenzofuran	8.55	168	1632194	74.70485	ppb		94
57) 2,4-DNT	8.57	165	451681	74.51608	ppb	#	80
58) 2,3,4,6-Tetrachlorophenol	8.71	232	315865	80.56372	ppb		96
59) Diethyl phthalate	8.84	149	1405142	71.82968	ppb		99
60) 4-Chlorophenyl phenyl ethe	8.96	204	628797	70.71859	ppb		81
61) Fluorene	8.95	166	1287251	71.52024	ppb		98
62) 4-Nitroaniline	9.02	138	354043	83.72308	ppb		96
65) 4,6-Dinitro-2-methylphenol	9.06	198	328902	93.07921	ppb	#	68
66) Diphenyl amine	9.10	169	2177827	158.05783	ppb		99
67) n-Nitrosodiphenylamine	9.10	169	2177827	158.05783	ppb		99
68) 1,2-Diphenylhydrazine	9.14	77	1790205	82.06506	ppb	#	89
69) 4-Bromophenyl phenyl ether	9.52	248	376085	71.24001	ppb	#	81
70) Hexachlorobenzene	9.60	284	403389	71.73345	ppb	#	79
71) Atrazine	9.73	200	197787	35.83598	ppb		99
72) Pentachlorophenol	9.84	266	222525	97.90203	ppb		97
73) Phenanthrene	10.06	178	2029194	73.16888	ppb		99
74) Anthracene	10.12	178	2073870	71.90210	ppb		99
75) Carbazol	10.32	167	1832065	71.54326	ppb		97
76) Di-n-butylphthalate	10.73	149	2372548	69.20651	ppb		99
77) Fluoranthene	11.44	202	2349024	77.50352	ppb		99
79) Benzidine	11.61	184	843755	83.61455	ppb		99
80) Pyrene	11.70	202	2273483	74.72502	ppb		99
82) Butyl benzylphthalate	12.46	149	1147875	75.33766	ppb		93
83) 3,3'-Dichlorobenzidine	13.08	252	711820	76.08636	ppb		99
84) Benz (a) anthracene	13.10	228	2207148	76.45930	ppb		99
85) Bis (2-ethylhexyl) phthala	13.13	149	1603119	74.55873	ppb		98
86) Chrysene	13.14	228	2085134	75.14105	ppb		99
87) Di-n-octylphthalate	13.85	149	2762190	72.49541	ppb		96
89) Benzo (b) fluoranthene	14.29	252	2598169	85.15963	ppb		98
90) Benzo (k) fluoranthene	14.33	252	2204360	75.56317	ppb		98
91) Benzo (a) pyrene	14.69	252	2169513	75.50794	ppb		99
92) Indeno (1,2,3-cd) pyrene	16.31	276	2538105	77.63207	ppb		98
93) Dibenz (a,h) anthracene	16.34	278	2157371	77.56008	ppb		98
94) Benzo (g,h,i) perylene	16.77	276	1984638	71.77049	ppb		100

(#) = qualifier out of range (m) = manual integration

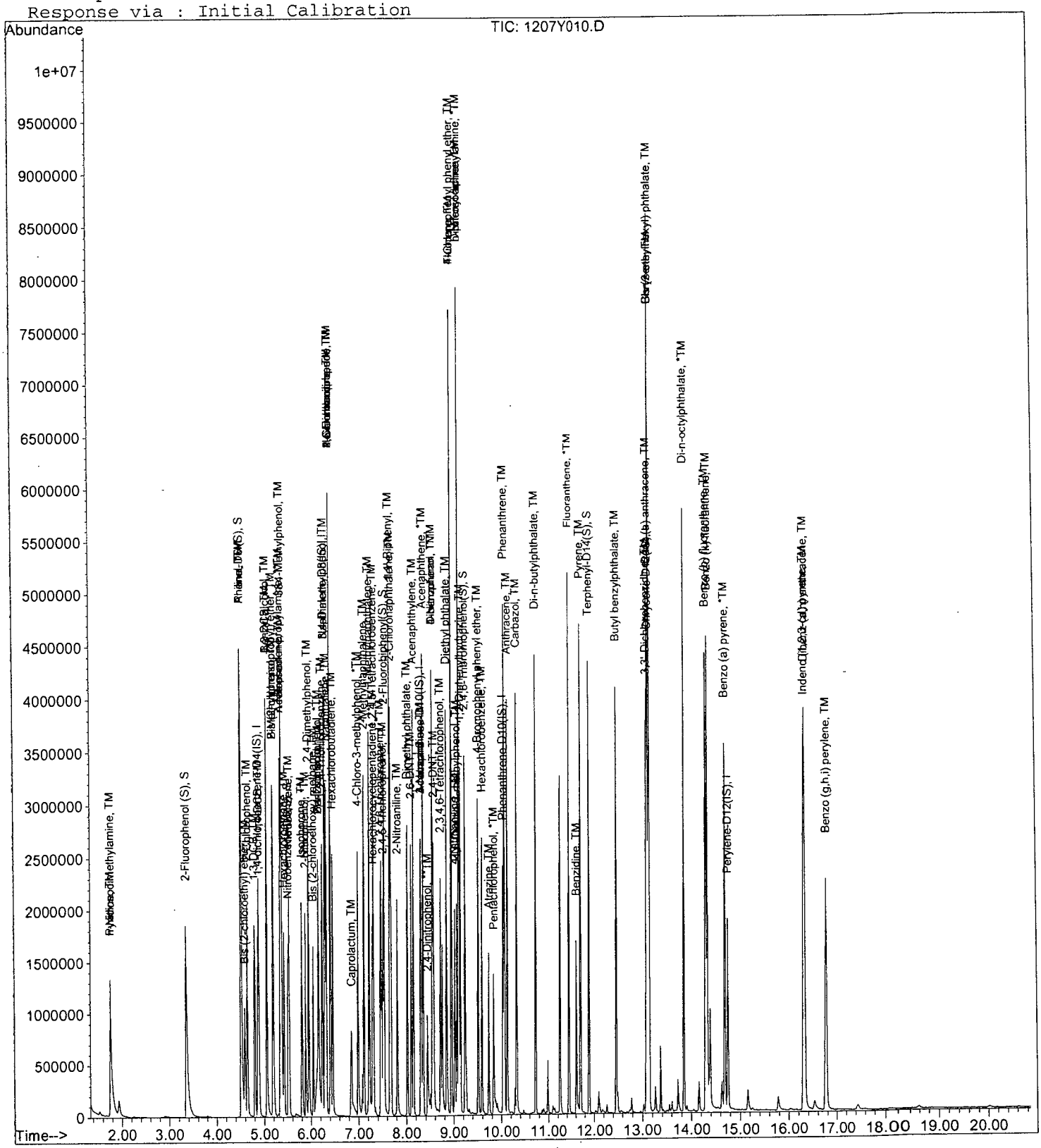
Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y010.D
Acq On : 7 Dec 16 13:02
Sample : 80ug/ml SVOC 12/06/16
Misc :

Vial: 10
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



351

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y011.D
Acq On : 7 Dec 16 13:32
Sample : 100ug/ml SVOC 12/06/16
Misc :

Vial: 11
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	214746	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.30	136	801273	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.31	164	479807	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.03	188	1038349	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.11	240	897961	40.00000 ppb		0.00
88) Perylene-D12(IS)	14.76	264	1012967	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.36	112	1442400	212.20467 ppb		0.00
Spiked Amount 200.000			Recovery = 106.103%			
5) Phenol-D6 (S)	4.52	99	1755614	186.71857 ppb		0.00
Spiked Amount 200.000			Recovery = 93.360%			
21) Nitrobenzene-D5(S)	5.51	82	880245	105.28952 ppb		0.00
Spiked Amount 100.000			Recovery = 105.290%			
45) 2-Fluorobiphenyl(S)	7.54	172	1444098	94.78208 ppb		0.00
Spiked Amount 100.000			Recovery = 94.782%			
63) 2,4,6-Tribromophenol(S)	9.24	330	537159	227.97590 ppb		0.00
Spiked Amount 200.000			Recovery = 113.988%			
81) Terphenyl-D14(S)	11.90	244	1906266	93.65464 ppb		0.00
Spiked Amount 100.000			Recovery = 93.655%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.75	42	427152	84.84044 ppb		98
3) Pyridine	1.76	79	954145	88.71098 ppb		96
6) Phenol	4.53	94	1029962	96.57911 ppb		91
7) Aniline	4.53	66	1005037	95.71079 ppb	#	76
8) Bis (2-chloroethyl) ether	4.59	63	462246	96.43463 ppb		99
9) 2-Chlorophenol	4.65	128	814431	98.50346 ppb		96
10) 1,3-DCB	4.81	146	851310	95.00850 ppb		98
11) 1,4-DCB	4.89	146	861705	93.84739 ppb		99
12) Benzyl alcohol	5.06	108	474310	102.55209 ppb		89
13) 1,2-DCB	5.06	146	785684	91.82209 ppb		98
14) 2-Methylphenol	5.20	107	595539	94.98412 ppb		96
15) Bis (2-chloroisopropyl) et	5.19	45	856467	89.21626 ppb		85
16) Acetophenone	5.34	105	1088689	93.16085 ppb		99
17) 3&4-Methylphenol	5.38	107	1562005	188.32154 ppb		92
18) n-Nitrosodi-n-propylamine	5.35	70	569115	93.88817 ppb		99
19) Hexachloroethane	5.43	117	354007	92.95925 ppb	#	76
22) Nitrobenzene	5.53	77	903147	105.59548 ppb		97
23) Isophorone	5.81	82	1523574	108.05033 ppb		96
24) 2-Nitrophenol	5.88	139	468219	114.98256 ppb		95
25) 2,4-Dimethylphenol	5.96	122	701715	110.54758 ppb		99
26) Benzoic acid	6.17	105	531913	109.09798 ppb		91
27) Bis (2-chloroethoxy) metha	6.05	93	810611	107.51520 ppb		99
28) 2,4-Dichlorophenol	6.17	162	626111	102.40142 ppb		99
29) 1,2,4-Trichlorobenzene	6.24	180	674426	99.85951 ppb		99
30) 3,4-Dimethylphenol	6.29	107	982967	97.10719 ppb		97
31) Naphthalene	6.33	128	2092381	99.18785 ppb		100
32) 4-Chloroaniline	6.41	127	726261	97.02573 ppb		97
33) 2,6-Dichlorophenol	6.41	162	585319	99.15426 ppb		97
34) Hexachloropropene	6.42	213	564663	105.09113 ppb		99
35) Hexachlorobutadiene	6.47	225	420352	97.58395 ppb		96
36) Caprolactum	6.87	55	323697	101.61135 ppb		95
37) 4-Chloro-3-methylphenol	6.99	107	718886	103.01925 ppb		84

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y011.D
Acq On : 7 Dec 16 13:32
Sample : 100ug/ml SVOC 12/06/16
Misc :

Vial: 11
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.12	142	1400630	99.45413	ppb		98
39)	1-Methylnaphthalene	7.23	142	1395356	103.29704	ppb		99
41)	Hexachlorocyclopentadiene	7.29	237	337941	98.72624	ppb		99
42)	1,2,4,5-Tetrachlorobenzene	7.31	216	637512	97.67376	ppb		98
43)	2,4,6-Trichlorophenol	7.46	196	430600	99.42051	ppb		98
44)	2,4,5-Trichlorophenol	7.52	196	452384	98.63798	ppb		89
46)	1,1'-Biphenyl	7.66	154	1743421	95.87212	ppb		98
47)	2-Chloronaphthalene	7.67	162	1364913	95.27260	ppb		95
48)	2-Nitroaniline	7.82	65	501195	98.53093	ppb		96
49)	Dimethyl phthalate	8.03	163	1691646	96.45119	ppb		99
50)	2,6-DNT	8.11	165	428985	109.90174	ppb		96
51)	Acenaphthylene	8.15	152	2176158	97.71215	ppb		100
52)	3-Nitroaniline	8.31	138	417728	103.36750	ppb	#	99
53)	Acenaphthene	8.35	154	1365612	100.11850	ppb		99
54)	2,4-Dinitrophenol	8.44	184	244053	112.65730	ppb		86
55)	4-Nitrophenol	8.54	65	381862	104.77768	ppb		94
56)	Dibenzofuran	8.56	168	2009957	101.06274	ppb		97
57)	2,4-DNT	8.58	165	559804	101.45686	ppb		98
58)	2,3,4,6-Tetrachlorophenol	8.71	232	407530	114.18916	ppb		93
59)	Diethyl phthalate	8.85	149	1833935	102.98996	ppb		97
60)	4-Chlorophenyl phenyl ethe	8.96	204	822846	101.66441	ppb		81
61)	Fluorene	8.96	166	1670986	101.99193	ppb		98
62)	4-Nitroaniline	9.03	138	400399	104.01822	ppb		94
65)	4,6-Dinitro-2-methylphenol	9.07	198	386581	105.90161	ppb	#	83
66)	Diphenyl amine	9.11	169	2820080	198.12073	ppb		100
67)	n-Nitrosodiphenylamine	9.11	169	2820080	198.12073	ppb		100
68)	1,2-Diphenylhydrazine	9.14	77	2276128	101.00156	ppb		96
69)	4-Bromophenyl phenyl ether	9.52	248	489978	89.84427	ppb		91
70)	Hexachlorobenzene	9.60	284	507014	87.27573	ppb		86
71)	Atrazine	9.73	200	255247	44.76701	ppb		97
72)	Pentachlorophenol	9.84	266	289057	117.11640	ppb		96
73)	Phenanthrene	10.06	178	2631951	91.86635	ppb		99
74)	Anthracene	10.12	178	2699734	90.60598	ppb		100
75)	Carbazol	10.33	167	2292694	86.66621	ppb		99
76)	Di-n-butylphthalate	10.74	149	3048385	86.07511	ppb		99
77)	Fluoranthene	11.44	202	3022326	96.52752	ppb	#	98
79)	Benzidine	11.62	184	1093324	110.14442	ppb		98
80)	Pyrene	11.71	202	3079365	102.89248	ppb		99
82)	Butyl benzylphthalate	12.47	149	1430703	95.45863	ppb		88
83)	3,3'-Dichlorobenzidine	13.08	252	910729	98.96324	ppb	#	97
84)	Benz (a) anthracene	13.10	228	2808833	98.91745	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.13	149	2022285	95.61439	ppb		96
86)	Chrysene	13.14	228	2799507	102.55881	ppb		98
87)	Di-n-octylphthalate	13.85	149	3529346	94.16713	ppb	#	93
89)	Benzo (b) fluoranthene	14.30	252	3038345	89.45009	ppb		99
90)	Benzo (k) fluoranthene	14.33	252	2973702	91.55930	ppb		100
91)	Benzo (a) pyrene	14.69	252	2841755	88.83710	ppb		97
92)	Indeno (1,2,3-cd) pyrene	16.31	276	2782713	76.44997	ppb		95
93)	Dibenz (a,h) anthracene	16.34	278	2299501	74.25478	ppb		97
94)	Benzo (g,h,i) perylene	16.78	276	2235653	72.61835	ppb		99

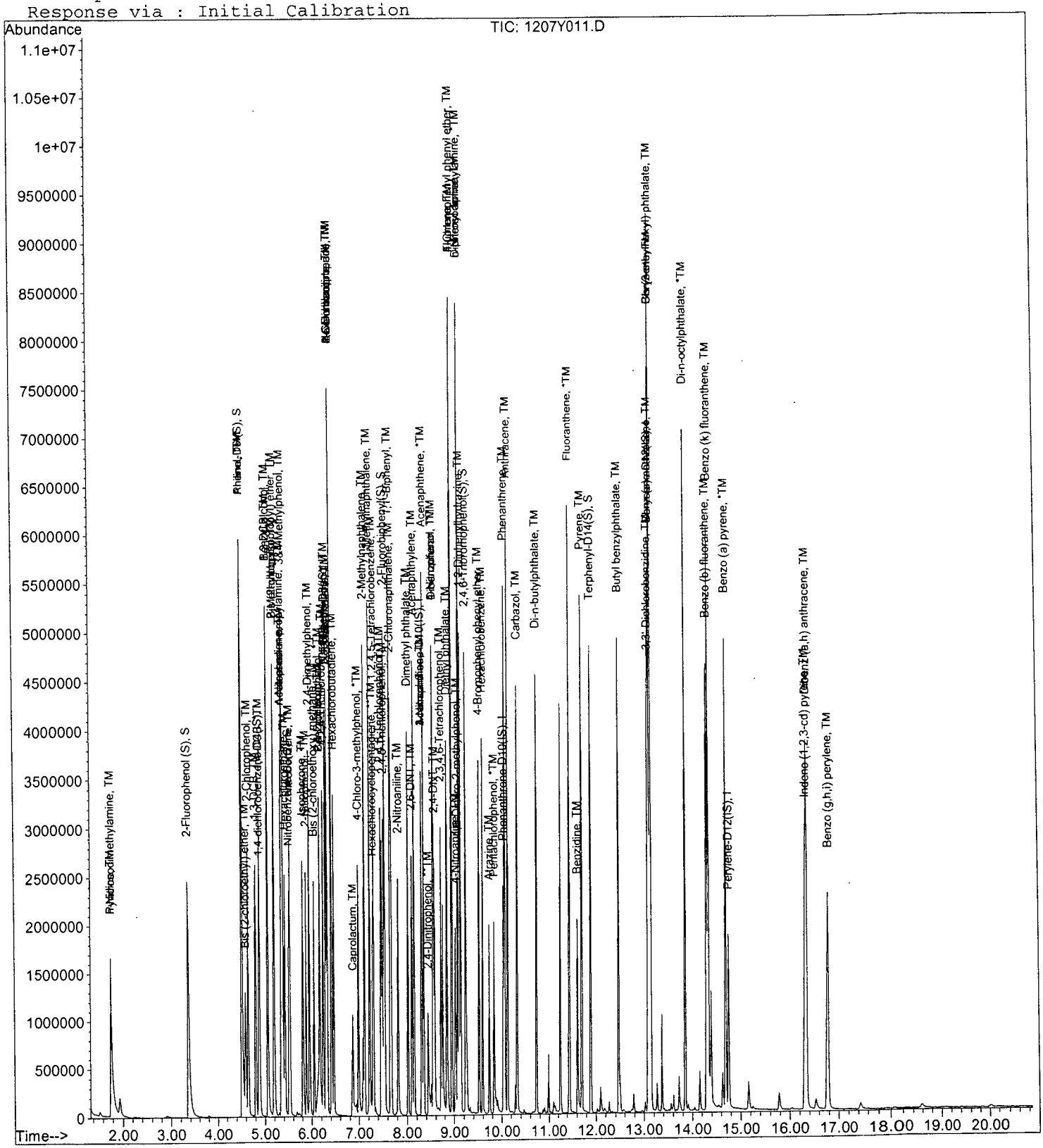
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y011.D Vial: 11
Acq On : 7 Dec 16 13:32 Operator: MA
Sample : 100ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 7 Dec 16 14:01
Instrument: Yoda
Initial Cal. Date: 12/07/16
Data File: 1207Y012.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	n-Nitrosodimethylamine	0.7942	0.8605	8.3	TM	
2	TM	Pyridine	1.794	2.065	15	TM	
3	*TM	Phenol	1.974	1.961	0.64	*TM	
4	TM	Aniline	1.868	1.717	8.1	TM	
5	TM	Bis (2-chloroethyl) ether	0.8648	0.9372	8.4	TM	
6	TM	2-Chlorophenol	1.576	1.492	5.4	TM	
7	TM	1,3-DCB	1.630	1.713	5.1	TM	
8	*TM	1,4-DCB	1.679	1.836	9.3	*TM	
9	TM	Benzyl alcohol	0.8717	0.9544	9.5	TM	
10	TM	1,2-DCB	1.537	1.648	7.2	TM	
11	TM	2-Methylphenol	1.120	1.183	5.6	TM	
12	TM	Bis (2-chloroisopropyl) ether	1.723	1.964	14	TM	
13	TM	Acetophenone	2.044	2.282	12	TM	
14	TM	3&4-Methylphenol	1.484	1.588	7.0	TM	
15	**TM	n-Nitrosodi-n-propylamine	1.052	1.111	5.6	**TM	
16	TM	Hexachloroethane	0.6713	0.7583	13	TM	
17	TM	Nitrobenzene	0.4083	0.4146	1.5	TM	
18	TM	Isophorone	0.6762	0.7401	9.5	TM	
19	*TM	2-Nitrophenol	0.2038	0.1897	6.9	*TM	
20	TM	2,4-Dimethylphenol	0.3231	0.2928	9.4	TM	
21	TML	Benzoic acid	0.2159	0.3029	40	TML	19
22	TM	Bis (2-chloroethoxy) methane	0.3856	0.3755	2.6	TM	
23	*TM	2,4-Dichlorophenol	0.3079	0.3092	0.41	*TM	
24	TM	1,2,4-Trichlorobenzene	0.3349	0.3788	13	TM	
25	TM	3,4-Dimethylphenol	0.4947	0.4722	4.5	TM	
26	TM	Naphthalene	1.049	1.030	1.9	TM	
27	TM	4-Chloroaniline	0.3882	0.3699	4.7	TM	
28	TM	2,6-Dichlorophenol	0.2970	0.2844	4.3	TM	
29	TM	Hexachloropropene	0.2678	0.2625	2.0	TM	
30	*TM	Hexachlorobutadiene	0.2134	0.2282	7.0	*TM	
31	TM	Caprolactum	0.1543	0.1430	7.3	TM	
32	*TM	4-Chloro-3-methylphenol	0.3401	0.3273	3.8	*TM	
33	TM	2-Methylnaphthalene	0.6856	0.6921	0.95	TM	
34	TM	1-Methylnaphthalene	0.6763	0.6628	2.0	TM	
35	**TMQ	Hexachlorocyclopentadiene	0.1853	0.2606	41	**TMQ	12
36	TM	1,2,4,5-Tetrachlorobenzene	0.5436	0.5813	6.9	TM	
37	*TM	2,4,6-Trichlorophenol	0.3508	0.3628	3.4	*TM	
38	TM	2,4,5-Trichlorophenol	0.3829	0.4030	5.3	TM	
39	TM	1,1'-Biphenyl	1.499	1.521	1.5	TM	
40	TM	2-Chloronaphthalene	1.159	1.302	12	TM	
		Average			8.2		

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 7 Dec 16 14:01
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y012.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	2-Nitroaniline	0.3982	0.4094	2.8	TM	
42	TM	Dimethyl phthalate	1.391	1.370	1.6	TM	
43	TM	2,6-DNT	0.3141	0.3323	5.8	TM	
44	TM	Acenaphthylene	1.826	1.754	3.9	TM	
45	TM	3-Nitroaniline	0.3430	0.3329	2.9	TM	
46	*TM	Acenaphthene	1.156	1.094	5.3	*TM	
47	**TMQ	2,4-Dinitrophenol	0.1593	0.1353	15	**TMQ	15
48	**TML	4-Nitrophenol	0.2439	0.2731	12	**TML	5.3
49	TM	Dibenzofuran	1.639	1.588	3.1	TM	
50	TM	2,4-DNT	0.4436	0.4519	1.9	TM	
51	TM	2,3,4,6-Tetrachlorophenol	0.3114	0.3085	0.94	TM	
52	TM	Diethyl phthalate	1.432	1.360	5.0	TM	
53	TM	4-Chlorophenyl phenyl ether	0.6394	0.6265	2.0	TM	
54	TM	Fluorene	1.324	1.241	6.3	TM	
55	TM	4-Nitroaniline	0.3249	0.3379	4.0	TM	
56	TM	4,6-Dinitro-2-methylphenol	0.1486	0.1339	9.9	TM	
57	TM	Diphenyl amine	0.5706	0.5203	8.8	TM	
58	*TM	n-Nitrosodiphenylamine	0.5706	0.5203	8.8	*TM	
59	TM	1,2-Diphenylhydrazine	0.8211	0.7495	8.7	TM	
60	TM	4-Bromophenyl phenyl ether	0.2072	0.2226	7.4	TM	
61	TM	Hexachlorobenzene	0.2130	0.2500	17	TM	
62	TM	Atrazine	0.2062	0.2070	0.41	TM	
63	*TML	Pentachlorophenol	0.0958	0.0912	4.8	*TML	9.9
64	TM	Phenanthrene	1.080	1.064	1.5	TM	
65	TM	Anthracene	1.111	1.042	6.2	TM	
66	TM	Carbazol	1.005	0.8998	11	TM	
67	TM	Di-n-butylphthalate	1.292	1.202	6.9	TM	
68	*TM	Fluoranthene	1.189	1.119	5.8	*TM	
69	TM	Benzidine	0.4531	0.5340	18	TM	
70	TM	Pyrene	1.357	1.408	3.8	TM	
71	TM	Butyl benzylphthalate	0.6517	0.6327	2.9	TM	
72	TM	3,3'-Dichlorobenzidine	0.4273	0.4953	16	TM	
73	TM	Benz (a) anthracene	1.249	1.200	3.9	TM	
74	TM	Bis (2-ethylhexyl) phthalate	0.9136	0.9271	1.5	TM	
75	TM	Chrysene	1.213	1.146	5.5	TM	
76	*TM	Di-n-octylphthalate	1.614	1.629	0.92	*TM	
77	TM	Benzo (b) fluoranthene	1.250	1.211	3.2	TM	
78	TM	Benzo (k) fluoranthene	1.189	1.125	5.4	TM	
79	*TM	Benzo (a) pyrene	1.168	1.100	5.9	*TM	
80	TM	Indeno (1,2,3-cd) pyrene	1.293	1.302	0.66	TM	
		Average			5.9		

0
0

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 7 Dec 16 14:01
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y012.D

		Compound	MEAN	CCRF	%D	%Drift	
81	TM	Dibenz (a,h) anthracene	1.091	1.084	0.59	TM	
82	TM	Benzo (g,h,i) perylene	1.161	1.030	11	TM	
83							
84							
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89							
90							
91							
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118							
119							
120							
		Average			5.8		

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y012.D Vial: 12
Acq On : 7 Dec 16 14:01 Operator: MA
Sample : 2ND SRC SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 14:56 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	191057	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.30	136	871568	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	523606	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	1016944	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.11	240	899173	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.75	264	937926	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	0.00	112	0	0.00000 ppb	
Spiked Amount 200.000			Recovery	= 0.000%	
5) Phenol-D6 (S)	0.00	99	0	0.00000 ppb	
Spiked Amount 200.000			Recovery	= 0.000%	
21) Nitrobenzene-D5(S)	5.42	82	51167	5.79164 ppb	-0.08
Spiked Amount 100.000			Recovery	= 5.792%	
45) 2-Fluorobiphenyl(S)	7.54	172	1678	0.10166 ppb	0.00
Spiked Amount 100.000			Recovery	= 0.102%	
63) 2,4,6-Tribromophenol(S)	0.00	330	0	0.00000 ppb	
Spiked Amount 200.000			Recovery	= 0.000%	
81) Terphenyl-D14(S)	11.90	244	2267	0.11150 ppb	0.01
Spiked Amount 100.000			Recovery	= 0.111%	

Algorithm = $\frac{1121605 \times 1 \times 40}{871568 \times 1.099} = 49.07$ HA 12/8/16

Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.75	42	205505	54.17418 ppb	99
3) Pyridine	1.76	79	493077	57.53832 ppb	100
6) Phenol	4.52	94	468384	49.67907 ppb	97
7) Aniline	4.52	66	410130	45.96281 ppb	94
8) Bis (2-chloroethyl) ether	4.58	63	223817	54.18477 ppb	97
9) 2-Chlorophenol	4.65	128	356278	47.32243 ppb	98
10) 1,3-DCB	4.80	146	409122	52.55606 ppb	98
11) 1,4-DCB	4.89	146	438492	54.66182 ppb	100
12) Benzyl alcohol	5.05	108	227935	54.74642 ppb	89
13) 1,2-DCB	5.06	146	393642	53.62112 ppb	98
14) 2-Methylphenol	5.19	107	282490	52.81375 ppb	99
15) Bis (2-chloroisopropyl) et	5.19	45	468942	56.98498 ppb	99
16) Acetophenone	5.34	105	544879	55.81351 ppb	99
17) 3&4-Methylphenol	5.36	107	758574	107.00501 ppb	99
18) n-Nitrosodi-n-propylamine	5.35	70	265350	52.78586 ppb	98
19) Hexachloroethane	5.42	117	181096	56.48025 ppb	95
22) Nitrobenzene	5.52	77	451653	50.77125 ppb	99
23) Isophorone	5.79	82	806347	54.72642 ppb	92
24) 2-Nitrophenol	5.88	139	206638	46.54256 ppb	97
25) 2,4-Dimethylphenol	5.95	122	319047	45.32287 ppb	99
26) Benzoic acid	6.13	105	329992	59.40511 ppb	98
27) Bis (2-chloroethoxy) metha	6.04	93	409113	48.69541 ppb	99
28) 2,4-Dichlorophenol	6.16	162	336842	50.20680 ppb	95
29) 1,2,4-Trichlorobenzene	6.24	180	412682	56.55773 ppb	97
30) 3,4-Dimethylphenol	6.29	107	514459	47.73195 ppb	99
31) Naphthalene	6.32	128	1121605	49.06908 ppb	99
32) 4-Chloroaniline	6.40	127	402969	47.64010 ppb	98
33) 2,6-Dichlorophenol	6.41	162	309823	47.86782 ppb	99
34) Hexachloropropene	6.42	213	285981	49.00147 ppb	99
35) Hexachlorobutadiene	6.46	225	248647	53.48708 ppb	98
36) Caprolactum	6.83	55	155831	46.33822 ppb	95
37) 4-Chloro-3-methylphenol	6.98	107	356630	48.12038 ppb	86

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y012.D
Acq On : 7 Dec 16 14:01
Sample : 2ND SRC SVOC 12/06/16
Misc :

Vial: 12
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 7 14:56 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38) 2-Methylnaphthalene	7.11	142	754038	50.47743	ppb		99
39) 1-Methylnaphthalene	7.22	142	722080	48.99775	ppb		100
41) Hexachlorocyclopentadiene	7.29	237	170588	55.81613	ppb		99
42) 1,2,4,5-Tetrachlorobenzene	7.31	216	380472	53.46579	ppb		99
43) 2,4,6-Trichlorophenol	7.45	196	237475	51.71288	ppb		98
44) 2,4,5-Trichlorophenol	7.51	196	263784	52.63506	ppb		91
46) 1,1'-Biphenyl	7.65	154	995419	50.73149	ppb	#	98
47) 2-Chloronaphthalene	7.68	162	852397	56.20556	ppb		98
48) 2-Nitroaniline	7.81	65	267928	51.40520	ppb		97
49) Dimethyl phthalate	8.02	163	896431	49.21645	ppb		100
50) 2,6-DNT	8.10	165	217507	52.89516	ppb		97
51) Acenaphthylene	8.15	152	1148034	48.03874	ppb		99
52) 3-Nitroaniline	8.30	138	217900	48.53466	ppb		96
53) Acenaphthene	8.34	154	716245	47.33371	ppb		98
54) 2,4-Dinitrophenol	8.44	184	88575	42.42116	ppb		93
55) 4-Nitrophenol	8.54	65	178738	47.34341	ppb		99
56) Dibenzofuran	8.55	168	1039530	48.44636	ppb		100
57) 2,4-DNT	8.58	165	295792	50.93595	ppb		96
58) 2,3,4,6-Tetrachlorophenol	8.71	232	201912	49.52960	ppb		97
59) Diethyl phthalate	8.84	149	890442	47.50284	ppb		99
60) 4-Chlorophenyl phenyl ethe	8.95	204	410071	48.99615	ppb		97
61) Fluorene	8.95	166	811998	46.83909	ppb		99
62) 4-Nitroaniline	9.01	138	221182	52.00204	ppb		99
65) 4,6-Dinitro-2-methylphenol	9.05	198	170147	45.02904	ppb	#	63
66) Diphenyl amine	9.10	169	1322713	91.17623	ppb		99
67) n-Nitrosodiphenylamine	9.10	169	1322713	91.17623	ppb		99
68) 1,2-Diphenylhydrazine	9.13	77	952702	45.63842	ppb		98
69) 4-Bromophenyl phenyl ether	9.51	248	282914	53.71191	ppb		98
70) Hexachlorobenzene	9.59	284	317774	58.69445	ppb		95
71) Atrazine	9.73	200	131578	25.10242	ppb		95
72) Pentachlorophenol	9.84	266	115962	45.03845	ppb		95
73) Phenanthrene	10.06	178	1351927	49.22811	ppb		100
74) Anthracene	10.12	178	1325118	46.92467	ppb		99
75) Carbazol	10.32	167	1143768	44.74849	ppb		100
76) Di-n-butylphthalate	10.73	149	1528545	46.53939	ppb		100
77) Fluoranthene	11.44	202	1422850	47.07737	ppb		100
79) Benzidine	11.61	184	600230m	58.92898	ppb		99
80) Pyrene	11.70	202	1583034	51.91299	ppb		98
82) Butyl benzylphthalate	12.47	149	711172	48.54397	ppb		99
83) 3,3'-Dichlorobenzidine	13.08	252	556753	57.96756	ppb		98
84) Benz (a) anthracene	13.10	228	1348312	48.02891	ppb		100
85) Bis (2-ethylhexyl) phthala	13.13	149	1042054	50.73897	ppb		97
86) Chrysene	13.13	228	1288110	47.23790	ppb		98
87) Di-n-octylphthalate	13.85	149	1830661	50.46239	ppb		99
89) Benzo (b) fluoranthene	14.29	252	1419865	48.42384	ppb		99
90) Benzo (k) fluoranthene	14.32	252	1318653	47.28739	ppb		99
91) Benzo (a) pyrene	14.68	252	1289082	47.06095	ppb		99
92) Indeno (1,2,3-cd) pyrene	16.30	276	1526262	50.33221	ppb		99
93) Dibenz (a,h) anthracene	16.32	278	1271230	49.70488	ppb		99
94) Benzo (g,h,i) perylene	16.76	276	1208044	44.36041	ppb		99

(#) = qualifier out of range (m) = manual integration

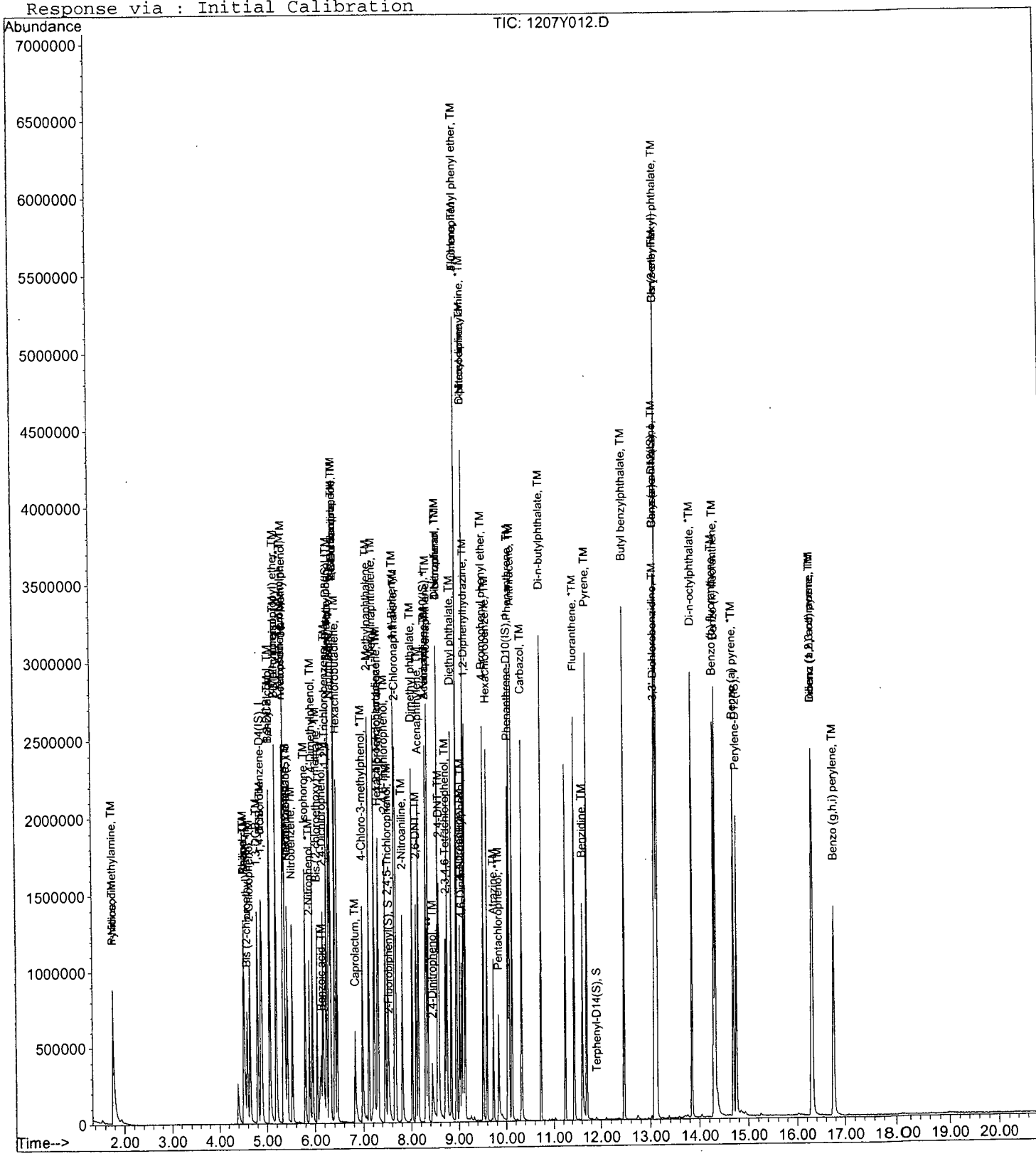
Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y012.D
Acq On : 7 Dec 16 14:01
Sample : 2ND SRC SVOC 12/06/16
Misc :

Vial: 12
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 7 14:56 2016 Quant Results File: Y1207.RES

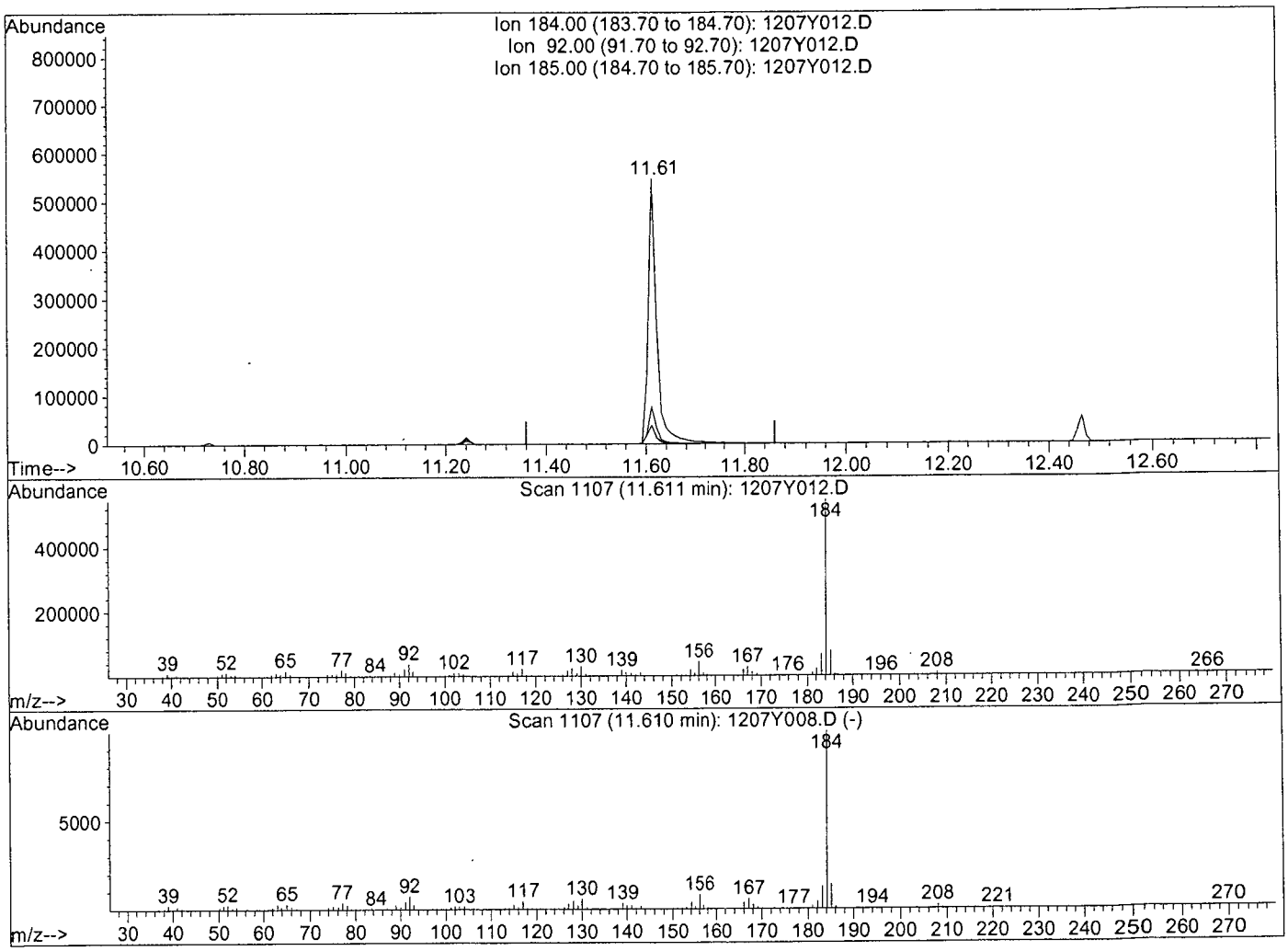
Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y012.D Vial: 12
Acq On : 7 Dec 16 14:01 Operator: MA
Sample : 2ND SRC SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Dec 7 14:46 2016 Quant Results File: temp.res

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Multiple Level Calibration



TIC: 1207Y012.D

(79) Benzidine (TM)

11.61min 62.5480ppb

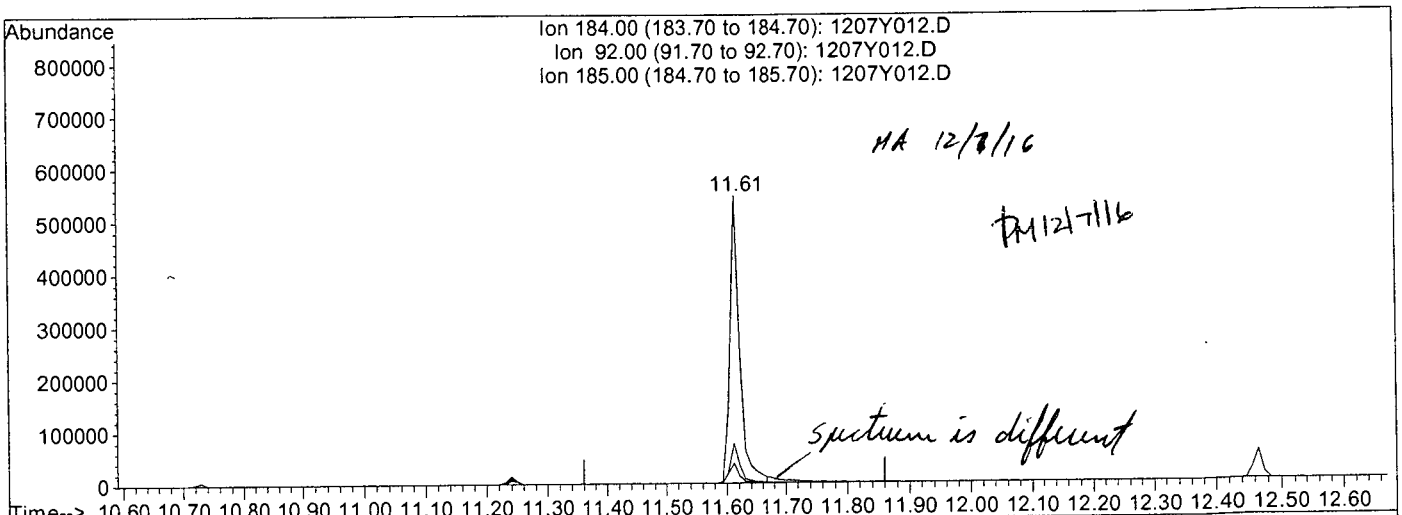
response 637092

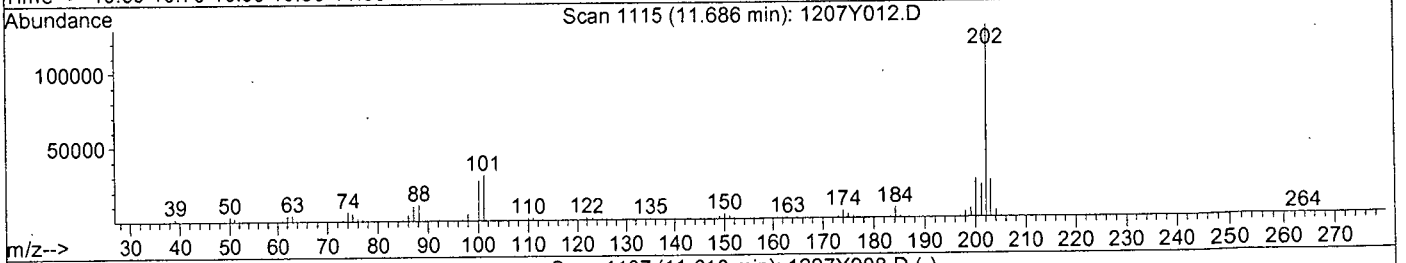
Ion	Exp%	Act%
184.00	100	100
92.00	7.20	7.03
185.00	13.80	14.19
0.00	0.00	0.00

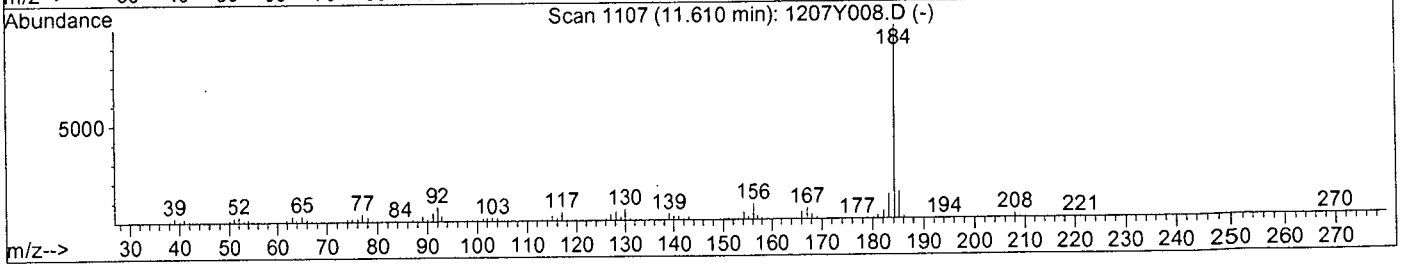
Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y012.D Vial: 12
Acq On : 7 Dec 16 14:01 Operator: MA
Sample : 2ND SRC SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Dec 7 14:56 2016 Quant Results File: temp.res

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Multiple Level Calibration







TIC: 1207Y012.D

(79) Benzidine (TM)

11.61min 58.9290ppb m

response 600230

Ion	Exp%	Act%
184.00	100	100
92.00	7.20	7.03
185.00	13.80	14.19
0.00	0.00	0.00

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Date Analyzed: 12/21/16

Matrix: Instrument: Yoda

Initial Cal. Date: 12/07/16

Data File: 1207Y172.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	n-Nitrosodimethylamine	0.7942	0.8748	10	TM	
3	TM	Pyridine	1.794	1.691	5.8	TM	
4	S	2-Fluorophenol (S)	1.316	1.325	0.70	S	
5	S	Phenol-D6 (S)	1.737	1.639	5.6	S	
6	*TM	Phenol	1.974	1.974	0.01	*TM	
7	TM	Aniline	1.868	1.802	3.5	TM	
8	TM	Bis (2-chloroethyl) ether	0.8648	0.9093	5.2	TM	
9	TM	2-Chlorophenol	1.576	1.508	4.3	TM	
10	TM	1,3-DCB	1.630	1.586	2.7	TM	
11	*TM	1,4-DCB	1.679	1.594	5.1	*TM	
12	TM	Benzyl alcohol	0.8717	0.8766	0.56	TM	
13	TM	1,2-DCB	1.537	1.439	6.4	TM	
14	TM	2-Methylphenol	1.120	1.102	1.6	TM	
15	TM	Bis (2-chloroisopropyl) ether	1.723	1.887	9.5	TM	
16	TM	Acetophenone	2.044	1.983	3.0	TM	
17	TM	3&4-Methylphenol	1.484	1.462	1.5	TM	
18	**TM	n-Nitrosodi-n-propylamine	1.052	1.060	0.71	**TM	
19	TM	Hexachloroethane	0.6713	0.6551	2.4	TM	
20	I	Napthalene-D8(IS)	ISTD			I	
21	S	Nitrobenzene-D5(S)	0.4055	0.3989	1.6	S	
22	TM	Nitrobenzene	0.4083	0.4123	0.98	TM	
23	TM	Isophorone	0.6762	0.6823	0.89	TM	
24	*TM	2-Nitrophenol	0.2038	0.2119	4.0	*TM	
25	TM	2,4-Dimethylphenol	0.3231	0.3193	1.2	TM	
26	TML	Benzoic acid	0.2159	0.2669	24	TML	5.6
27	TM	Bis (2-chloroethoxy) methane	0.3856	0.4035	4.6	TM	
28	*TM	2,4-Dichlorophenol	0.3079	0.3128	1.6	*TM	
29	TM	1,2,4-Trichlorobenzene	0.3349	0.3308	1.2	TM	
30	TM	3,4-Dimethylphenol	0.4947	0.4663	5.7	TM	
31	TM	Naphthalene	1.049	1.053	0.34	TM	
32	TM	4-Chloroaniline	0.3882	0.3839	1.1	TM	
33	TM	2,6-Dichlorophenol	0.2970	0.2757	7.2	TM	
34	TM	Hexachloropropene	0.2678	0.2479	7.4	TM	
35	*TM	Hexachlorobutadiene	0.2134	0.2011	5.8	*TM	
36	TM	Caprolactum	0.1543	0.1724	12	TM	
37	*TM	4-Chloro-3-methylphenol	0.3401	0.3450	1.4	*TM	
38	TM	2-Methylnaphthalene	0.6856	0.6958	1.5	TM	
39	TM	1-Methylnaphthalene	0.6763	0.6789	0.37	TM	
40	I	Acenaphthene-D10(IS)	ISTD			I	
		Average			4.1		

0
0

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/21/16
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y172.D

		Compound	MEAN	CCRF	%D		%Drift
41	**TMQ	Hexachlorocyclopentadiene	0.1853	0.1879	1.4	**TMQ	13
42	TM	1,2,4,5-Tetrachlorobenzene	0.5436	0.5298	2.5	TM	
43	*TM	2,4,6-Trichlorophenol	0.3508	0.3604	2.7	*TM	
44	TM	2,4,5-Trichlorophenol	0.3829	0.3736	2.4	TM	
45	S	2-Fluorobiphenyl(S)	1.261	1.193	5.4	S	
46	TM	1,1'-Biphenyl	1.499	1.469	2.0	TM	
47	TM	2-Chloronaphthalene	1.159	1.138	1.8	TM	
48	TM	2-Nitroaniline	0.3982	0.3969	0.33	TM	
49	TM	Dimethyl phthalate	1.391	1.348	3.1	TM	
50	TM	2,6-DNT	0.3141	0.3095	1.5	TM	
51	TM	Acenaphthylene	1.826	1.820	0.30	TM	
52	TM	3-Nitroaniline	0.3430	0.3420	0.27	TM	
53	*TM	Acenaphthene	1.156	1.103	4.6	*TM	
54	**TMQ	2,4-Dinitrophenol	0.1593	0.1780	12	**TMQ	5.1
55	**TML	4-Nitrophenol	0.2439	0.2577	5.6	**TML	10
56	TM	Dibenzofuran	1.639	1.579	3.7	TM	
57	TM	2,4-DNT	0.4436	0.4472	0.82	TM	
58	TM	2,3,4,6-Tetrachlorophenol	0.3114	0.3193	2.5	TM	
59	TM	Diethyl phthalate	1.432	1.366	4.6	TM	
60	TM	4-Chlorophenyl phenyl ether	0.6394	0.6020	5.8	TM	
61	TM	Fluorene	1.324	1.235	6.7	TM	
62	TM	4-Nitroaniline	0.3249	0.3350	3.1	TM	
63	S	2,4,6-Tribromophenol(S)	0.2006	0.1819	9.3	S	
64	I	Phenanthrene-D10(IS)	ISTD			I	
65	TM	4,6-Dinitro-2-methylphenol	0.1486	0.1527	2.8	TM	
66	TM	Diphenyl amine	0.5706	0.5348	6.3	TM	
67	*TM	n-Nitrosodiphenylamine	0.5706	0.5348	6.3	*TM	
68	TM	1,2-Diphenylhydrazine	0.8211	0.7697	6.3	TM	
69	TM	4-Bromophenyl phenyl ether	0.2072	0.2099	1.3	TM	
70	TM	Hexachlorobenzene	0.2130	0.2126	0.14	TM	
71	TM	Atrazine	0.2062	0.2075	0.65	TM	
72	*TML	Pentachlorophenol	0.0958	0.1026	7.1	*TML	0.17
73	TM	Phenanthrene	1.080	1.088	0.73	TM	
74	TM	Anthracene	1.111	1.115	0.35	TM	
75	TM	Carbazol	1.005	1.008	0.27	TM	
76	TM	Di-n-butylphthalate	1.292	1.270	1.7	TM	
77	*TM	Fluoranthene	1.189	1.199	0.83	*TM	
78	I	Chrysene-D12(IS)	ISTD			I	
79	TM	Benzidine	0.4531	0.4688	3.5	TM	
80	TM	Pyrene	1.357	1.260	7.2	TM	
		Average			3.4		

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/21/16
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y172.D

		Compound	MEAN	CCRF	%D		%Drift
81	S	Terphenyl-D14(S)	0.9045	0.8212	9.2	S	
82	TM	Butyl benzylphthalate	0.6517	0.5829	11	TM	
83	TM	3,3'-Dichlorobenzidine	0.4273	0.4273	0.00	TM	
84	TM	Benz (a) anthracene	1.249	1.184	5.2	TM	
85	TM	Bis (2-ethylhexyl) phthalate	0.9136	0.8344	8.7	TM	
86	TM	Chrysene	1.213	1.136	6.4	TM	
87	*TM	Di-n-octylphthalate	1.614	1.484	8.1	*TM	
88	I	Perylene-D12(IS)	ISTD			I	
89	TM	Benzo (b) fluoranthene	1.250	1.300	4.0	TM	
90	TM	Benzo (k) fluoranthene	1.189	1.094	8.0	TM	
91	*TM	Benzo (a) pyrene	1.168	1.146	1.9	*TM	
92	TM	Indeno (1,2,3-cd) pyrene	1.293	1.280	1.0	TM	
93	TM	Dibenz (a,h) anthracene	1.091	1.097	0.57	TM	
94	TM	Benzo (g,h,i) perylene	1.161	1.120	3.6	TM	
95							
96							
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			5.2		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y172.D
Acq On : 21 Dec 16 11:04
Sample : 50ug/ml SVOC 12/06/16
Misc : water

Vial: 72
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 21 11:19 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	205077	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.29	136	832706	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.30	164	509421	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	936226	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.11	240	924269	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.74	264	942225	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.35	112	679364	100.70268 ppb	0.00
Spiked Amount 200.000				Recovery = 50.352%	
5) Phenol-D6 (S)	4.50	99	840152	94.35615 ppb	0.00
Spiked Amount 200.000				Recovery = 47.178%	
21) Nitrobenzene-D5(S)	5.50	82	415237	49.19454 ppb	0.00
Spiked Amount 100.000				Recovery = 49.195%	
45) 2-Fluorobiphenyl(S)	7.53	172	759388	47.28688 ppb	0.00
Spiked Amount 100.000				Recovery = 47.287%	
63) 2,4,6-Tribromophenol(S)	9.23	330	231607	90.67524 ppb	0.00
Spiked Amount 200.000				Recovery = 45.338%	
81) Terphenyl-D14(S)	11.88	244	948718	45.39364 ppb	0.00
Spiked Amount 100.000				Recovery = 45.394%	
Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.75	42	224256	55.07570 ppb	97
3) Pyridine	1.76	79	433378	47.11457 ppb	94
6) Phenol	4.51	94	505932	49.99305 ppb	91
7) Aniline	4.51	66	462032	48.23953 ppb	96
8) Bis (2-chloroethyl) ether	4.59	63	233108	52.57597 ppb	98
9) 2-Chlorophenol	4.64	128	386516	47.82902 ppb	96
10) 1,3-DCB	4.79	146	406663	48.66880 ppb	99
11) 1,4-DCB	4.88	146	408723	47.46763 ppb	98
12) Benzyl alcohol	5.05	108	224709	50.28184 ppb	98
13) 1,2-DCB	5.05	146	368951	46.82191 ppb	99
14) 2-Methylphenol	5.19	107	282554	49.21431 ppb	94
15) Bis (2-chloroisopropyl) et	5.18	45	483769	54.76780 ppb	82
16) Acetophenone	5.33	105	508252	48.50252 ppb	99
17) 3&4-Methylphenol	5.36	107	749411	98.48549 ppb	95
18) n-Nitrosodi-n-propylamine	5.34	70	271702	50.35439 ppb	100
19) Hexachloroethane	5.41	117	167925	48.79206 ppb	92
22) Nitrobenzene	5.52	77	429118	50.48930 ppb	88
23) Isophorone	5.79	82	710143	50.44644 ppb	99
24) 2-Nitrophenol	5.88	139	220529	51.98947 ppb	95
25) 2,4-Dimethylphenol	5.94	122	332308	49.40981 ppb	99
26) Benzoic acid	6.13	105	277765	52.80481 ppb	93
27) Bis (2-chloroethoxy) metha	6.03	93	419964	52.31984 ppb	99
28) 2,4-Dichlorophenol	6.16	162	325608	50.79734 ppb	98
29) 1,2,4-Trichlorobenzene	6.24	180	344359	49.39665 ppb	97
30) 3,4-Dimethylphenol	6.29	107	485351	47.13288 ppb	99
31) Naphthalene	6.31	128	1095591	50.16791 ppb	100
32) 4-Chloroaniline	6.40	127	399636	49.45101 ppb	99
33) 2,6-Dichlorophenol	6.41	162	286963	46.40507 ppb	100
34) Hexachloropropene	6.42	213	258084	46.28525 ppb	98
35) Hexachlorobutadiene	6.45	225	209289	47.12178 ppb	99
36) Caprolactum	6.83	55	179488	55.86381 ppb	97
37) 4-Chloro-3-methylphenol	6.98	107	359150	50.72203 ppb	91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y172.D Vial: 72
Acq On : 21 Dec 16 11:04 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 21 11:19 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38) 2-Methylnaphthalene	7.10	142	724248	50.74589 ppb		97
39) 1-Methylnaphthalene	7.21	142	706633	50.18736 ppb		99
41) Hexachlorocyclopentadiene	7.29	237	119670	43.54121 ppb		99
42) 1,2,4,5-Tetrachlorobenzene	7.31	216	337373	48.72943 ppb		98
43) 2,4,6-Trichlorophenol	7.45	196	229464	51.35978 ppb		98
44) 2,4,5-Trichlorophenol	7.51	196	237898	48.79162 ppb		93
46) 1,1'-Biphenyl	7.65	154	935658	49.01360 ppb		99
47) 2-Chloronaphthalene	7.67	162	724450	49.09910 ppb		99
48) 2-Nitroaniline	7.81	65	252706	49.83475 ppb		94
49) Dimethyl phthalate	8.01	163	858469	48.44465 ppb		100
50) 2,6-DNT	8.10	165	197109	49.26936 ppb		91
51) Acenaphthylene	8.14	152	1159096	49.85217 ppb		99
52) 3-Nitroaniline	8.29	138	217802	49.86369 ppb		98
53) Acenaphthene	8.34	154	702539	47.72073 ppb		99
54) 2,4-Dinitrophenol	8.44	184	113316	52.52764 ppb		89
55) 4-Nitrophenol	8.54	65	164078	44.94397 ppb		93
56) Dibenzofuran	8.54	168	1005243	48.15296 ppb		99
57) 2,4-DNT	8.57	165	284798	50.40837 ppb		92
58) 2,3,4,6-Tetrachlorophenol	8.71	232	203301	51.25898 ppb		96
59) Diethyl phthalate	8.83	149	869539	47.67940 ppb		99
60) 4-Chlorophenyl phenyl ethe	8.94	204	383325	47.07581 ppb		99
61) Fluorene	8.94	166	786666	46.64140 ppb		99
62) 4-Nitroaniline	9.01	138	213342	51.55547 ppb		89
65) 4,6-Dinitro-2-methylphenol	9.05	198	178737	51.38061 ppb		95
66) Diphenyl amine	9.10	169	1251830	93.72980 ppb		98
67) n-Nitrosodiphenylamine	9.10	169	1251830	93.72980 ppb		98
68) 1,2-Diphenylhydrazine	9.13	77	900761	46.87048 ppb		99
69) 4-Bromophenyl phenyl ether	9.51	248	245699	50.66825 ppb		99
70) Hexachlorobenzene	9.59	284	248857	49.92808 ppb	#	73
71) Atrazine	9.73	200	121419	25.16143 ppb		98
72) Pentachlorophenol	9.83	266	120068	49.91299 ppb		99
73) Phenanthrene	10.05	178	1273329	50.36362 ppb		99
74) Anthracene	10.11	178	1304461	50.17578 ppb		99
75) Carbazol	10.31	167	1179681	50.13273 ppb		99
76) Di-n-butylphthalate	10.72	149	1486752	49.16968 ppb		99
77) Fluoranthene	11.44	202	1402798	50.41555 ppb		98
79) Benzidine	11.61	184	541623	51.73128 ppb		99
80) Pyrene	11.70	202	1455181	46.42454 ppb		100
82) Butyl benzylphthalate	12.46	149	673485	44.72326 ppb		92
83) 3,3'-Dichlorobenzidine	13.07	252	493619	49.99876 ppb		99
84) Benz (a) anthracene	13.09	228	1368066	47.40937 ppb		99
85) Bis (2-ethylhexyl) phthala	13.13	149	963989	45.66341 ppb		98
86) Chrysene	13.14	228	1312066	46.80995 ppb		99
87) Di-n-octylphthalate	13.84	149	1714351	45.97318 ppb		97
89) Benzo (b) fluoranthene	14.29	252	1531009	51.97612 ppb		99
90) Benzo (k) fluoranthene	14.32	252	1288329	45.98917 ppb		97
91) Benzo (a) pyrene	14.68	252	1350084	49.06309 ppb	#	97
92) Indeno (1,2,3-cd) pyrene	16.30	276	1507431	49.48440 ppb		98
93) Dibenz (a,h) anthracene	16.31	278	1292024	50.28743 ppb		98
94) Benzo (g,h,i) perylene	16.76	276	1319302	48.22486 ppb		98

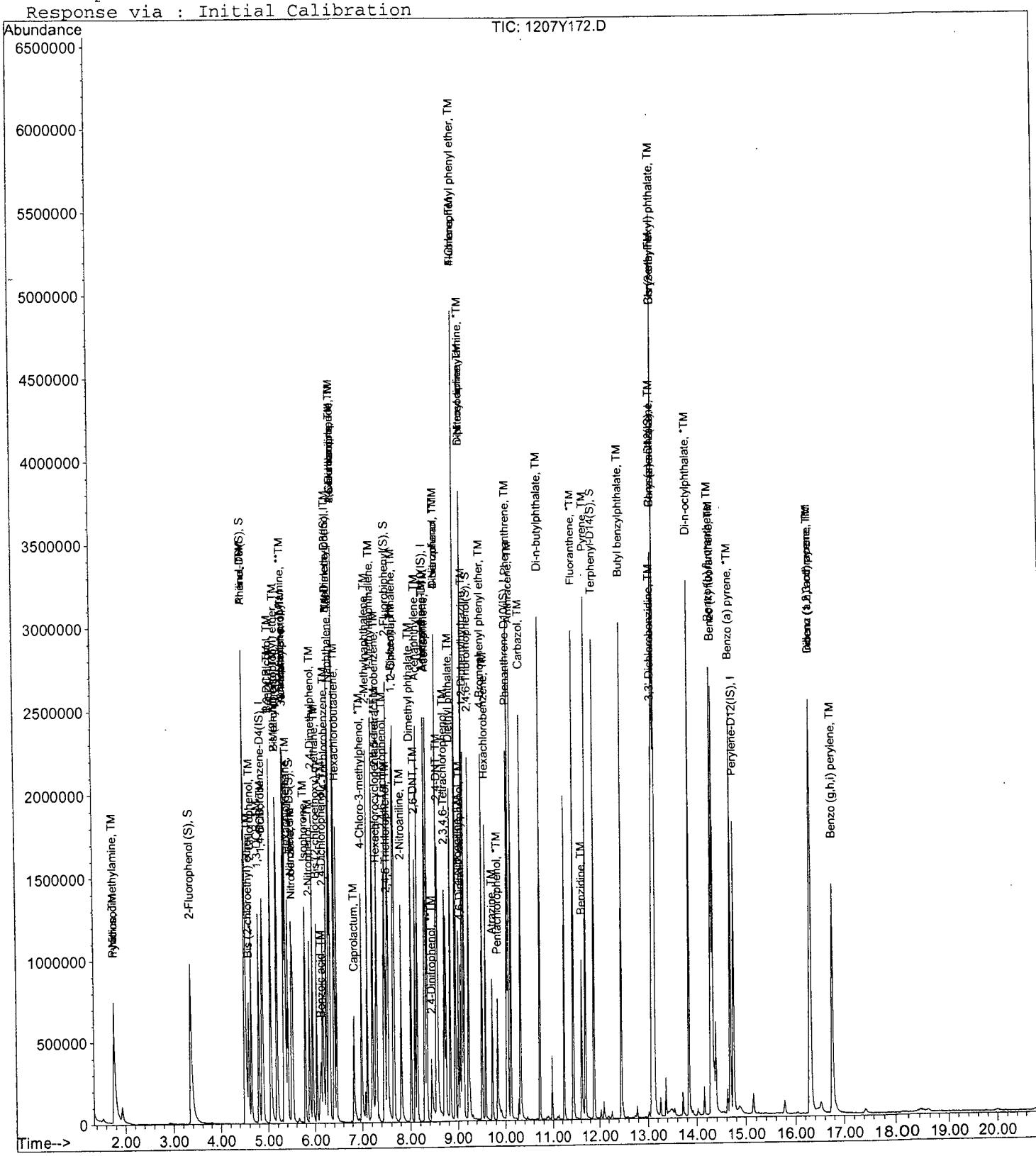
(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y161207\1207Y172.D
Acq On : 21 Dec 16 11:04
Sample : 50ug/ml SVOC 12/06/16
Misc : water

Vial: 72
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 21 11:19 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



368

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Date Analyzed: 12/21/16

Matrix: Instrument: Yoda

Initial Cal. Date: 12/07/16

Data File: 1207Y191.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	n-Nitrosodimethylamine	0.7942	0.7971	0.37	TM	
3	TM	Pyridine	1.794	1.867	4.0	TM	
4	S	2-Fluorophenol (S)	1.316	1.434	9.0	S	
5	S	Phenol-D6 (S)	1.737	1.784	2.7	S	
6	*TM	Phenol	1.974	2.035	3.1	*TM	
7	TM	Aniline	1.868	1.862	0.32	TM	
8	TM	Bis (2-chloroethyl) ether	0.8648	0.9963	15	TM	
9	TM	2-Chlorophenol	1.576	1.579	0.17	TM	
10	TM	1,3-DCB	1.630	1.622	0.49	TM	
11	*TM	1,4-DCB	1.679	1.656	1.4	*TM	
12	TM	Benzyl alcohol	0.8717	0.8930	2.4	TM	
13	TM	1,2-DCB	1.537	1.546	0.59	TM	
14	TM	2-Methylphenol	1.120	1.137	1.5	TM	
15	TM	Bis (2-chloroisopropyl) ether	1.723	2.106	22	TM	
16	TM	Acetophenone	2.044	2.050	0.29	TM	
17	TM	3&4-Methylphenol	1.484	1.520	2.4	TM	
18	**TM	n-Nitrosodi-n-propylamine	1.052	1.101	4.6	**TM	
19	TM	Hexachloroethane	0.6713	0.6883	2.5	TM	
20	I	Napthalene-D8(IS)	ISTD			I	
21	S	Nitrobenzene-D5(S)	0.4055	0.4332	6.8	S	
22	TM	Nitrobenzene	0.4083	0.4276	4.7	TM	
23	TM	Isophorone	0.6762	0.7054	4.3	TM	
24	*TM	2-Nitrophenol	0.2038	0.2165	6.2	*TM	
25	TM	2,4-Dimethylphenol	0.3231	0.3286	1.7	TM	
26	TML	Benzoic acid	0.2159	0.2651	23	TML	5.0
27	TM	Bis (2-chloroethoxy) methane	0.3856	0.4093	6.2	TM	
28	*TM	2,4-Dichlorophenol	0.3079	0.3171	3.0	*TM	
29	TM	1,2,4-Trichlorobenzene	0.3349	0.3408	1.8	TM	
30	TM	3,4-Dimethylphenol	0.4947	0.4755	3.9	TM	
31	TM	Naphthalene	1.049	1.071	2.0	TM	
32	TM	4-Chloroaniline	0.3882	0.3764	3.0	TM	
33	TM	2,6-Dichlorophenol	0.2970	0.2759	7.1	TM	
34	TM	Hexachloropropene	0.2678	0.2446	8.7	TM	
35	*TM	Hexachlorobutadiene	0.2134	0.2051	3.9	*TM	
36	TM	Caprolactum	0.1543	0.1781	15	TM	
37	*TM	4-Chloro-3-methylphenol	0.3401	0.3435	0.99	*TM	
38	TM	2-Methylnaphthalene	0.6856	0.6980	1.8	TM	
39	TM	1-Methylnaphthalene	0.6763	0.6854	1.3	TM	
40	I	Acenaphthene-D10(IS)	ISTD			I	
		Average			4.8		

0
0

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 12/21/16
Matrix: 0 Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y191.D

		Compound	MEAN	CCRF	%D		%Drift
41	**TMQ	Hexachlorocyclopentadiene	0.1853	0.1860	0.38	**TMQ	14
42	TM	1,2,4,5-Tetrachlorobenzene	0.5436	0.5440	0.06	TM	
43	*TM	2,4,6-Trichlorophenol	0.3508	0.3586	2.2	*TM	
44	TM	2,4,5-Trichlorophenol	0.3829	0.3901	1.9	TM	
45	S	2-Fluorobiphenyl(S)	1.261	1.278	1.3	S	
46	TM	1,1'-Biphenyl	1.499	1.478	1.4	TM	
47	TM	2-Chloronaphthalene	1.159	1.180	1.8	TM	
48	TM	2-Nitroaniline	0.3982	0.4182	5.0	TM	
49	TM	Dimethyl phthalate	1.391	1.380	0.85	TM	
50	TM	2,6-DNT	0.3141	0.3221	2.5	TM	
51	TM	Acenaphthylene	1.826	1.843	0.93	TM	
52	TM	3-Nitroaniline	0.3430	0.3536	3.1	TM	
53	*TM	Acenaphthene	1.156	1.121	3.0	*TM	
54	**TMQ	2,4-Dinitrophenol	0.1593	0.1801	13	**TMQ	6.0
55	**TML	4-Nitrophenol	0.2439	0.2581	5.8	**TML	10.0
56	TM	Dibenzofuran	1.639	1.591	2.9	TM	
57	TM	2,4-DNT	0.4436	0.4525	2.0	TM	
58	TM	2,3,4,6-Tetrachlorophenol	0.3114	0.2995	3.8	TM	
59	TM	Diethyl phthalate	1.432	1.370	4.3	TM	
60	TM	4-Chlorophenyl phenyl ether	0.6394	0.6040	5.5	TM	
61	TM	Fluorene	1.324	1.218	8.0	TM	
62	TM	4-Nitroaniline	0.3249	0.3410	5.0	TM	
63	S	2,4,6-Tribromophenol(S)	0.2006	0.1888	5.9	S	
64	I	Phenanthrene-D10(IS)	ISTD			I	
65	TM	4,6-Dinitro-2-methylphenol	0.1486	0.1532	3.1	TM	
66	TM	Diphenyl amine	0.5706	0.5297	7.2	TM	
67	*TM	n-Nitrosodiphenylamine	0.5706	0.5297	7.2	*TM	
68	TM	1,2-Diphenylhydrazine	0.8211	0.9327	14	TM	
69	TM	4-Bromophenyl phenyl ether	0.2072	0.2070	0.09	TM	
70	TM	Hexachlorobenzene	0.2130	0.2123	0.31	TM	
71	TM	Atrazine	0.2062	0.2017	2.2	TM	
72	*TML	Pentachlorophenol	0.0958	0.0918	4.2	*TML	9.5
73	TM	Phenanthrene	1.080	1.079	0.09	TM	
74	TM	Anthracene	1.111	1.122	1.0	TM	
75	TM	Carbazol	1.005	1.020	1.4	TM	
76	TM	Di-n-butylphthalate	1.292	1.283	0.69	TM	
77	*TM	Fluoranthene	1.189	1.207	1.5	*TM	
78	I	Chrysene-D12(IS)	ISTD			I	
79	TM	Benzidine	0.4531	0.4796	5.8	TM	
80	TM	Pyrene	1.357	1.291	4.9	TM	
		Average			3.5		

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 12/21/16
Matrix: 0 Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y191.D

		Compound	MEAN	CCRF	%D	%Drift	
81	S	Terphenyl-D14(S)	0.9045	0.8854	2.1	S	
82	TM	Butyl benzylphthalate	0.6517	0.6046	7.2	TM	
83	TM	3,3'-Dichlorobenzidine	0.4273	0.4464	4.5	TM	
84	TM	Benz (a) anthracene	1.249	1.194	4.4	TM	
85	TM	Bis (2-ethylhexyl) phthalate	0.9136	0.8143	11	TM	
86	TM	Chrysene	1.213	1.153	5.0	TM	
87	*TM	Di-n-octylphthalate	1.614	1.470	8.9	*TM	
88	I	Perylene-D12(IS)	ISTD			I	
89	TM	Benzo (b) fluoranthene	1.250	1.514	21	TM	
90	TM	Benzo (k) fluoranthene	1.189	1.552	30	TM	
91	*TM	Benzo (a) pyrene	1.168	1.470	26	*TM	
92	TM	Indeno (1,2,3-cd) pyrene	1.293	1.622	25	TM	
93	TM	Dibenz (a,h) anthracene	1.091	1.383	27	TM	
94	TM	Benzo (g,h,i) perylene	1.161	1.401	21	TM	
95							
96							
97							
98							
99							
100							
101							
102							
103							
104							
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107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			14.9		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y191.D Vial: 91
Acq On : 21 Dec 16 20:36 Operator: MA
Sample : 50ug/ml SVOC 12/16/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 22 8:41 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	196018	40.00000	ppb	0.00
20) Napthalene-D8(IS)	6.29	136	813286	40.00000	ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	489127	40.00000	ppb	0.00
64) Phenanthrene-D10(IS)	10.02	188	909600	40.00000	ppb	0.00
78) Chrysene-D12(IS)	13.11	240	882174	40.00000	ppb	0.00
88) Perylene-D12(IS)	14.75	264	697962	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.35	112	702891	109.00526	ppb	0.00
Spiked Amount 200.000			Recovery = 54.503%			
5) Phenol-D6 (S)	4.50	99	874370	102.73740	ppb	0.00
Spiked Amount 200.000			Recovery = 51.369%			
21) Nitrobenzene-D5(S)	5.50	82	440377	53.41877	ppb	0.00
Spiked Amount 100.000			Recovery = 53.419%			
45) 2-Fluorobiphenyl(S)	7.54	172	781295	50.66957	ppb	0.00
Spiked Amount 100.000			Recovery = 50.670%			
63) 2,4,6-Tribromophenol(S)	9.23	330	230807	94.11118	ppb	0.00
Spiked Amount 200.000			Recovery = 47.056%			
81) Terphenyl-D14(S)	11.89	244	976293	48.94206	ppb	0.00
Spiked Amount 100.000			Recovery = 48.942%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.75	42	195316	50.18510	ppb	98
3) Pyridine	1.76	79	457359	52.01955	ppb	95
6) Phenol	4.52	94	498654	51.55108	ppb	91
7) Aniline	4.52	66	456289	49.84160	ppb	94
8) Bis (2-chloroethyl) ether	4.58	63	244128	57.60613	ppb	93
9) 2-Chlorophenol	4.64	128	386855	50.08333	ppb	90
10) 1,3-DCB	4.80	146	397358	49.75296	ppb	99
11) 1,4-DCB	4.88	146	405666	49.28991	ppb	97
12) Benzyl alcohol	5.05	108	218800	51.22229	ppb	93
13) 1,2-DCB	5.06	146	378815	50.29544	ppb	98
14) 2-Methylphenol	5.19	107	278544	50.75803	ppb	96
15) Bis (2-chloroisopropyl) et	5.19	45	515970	61.11287	ppb	83
16) Acetophenone	5.33	105	502229	50.14273	ppb	99
17) 3&4-Methylphenol	5.36	107	744800	102.40304	ppb	100
18) n-Nitrosodi-n-propylamine	5.34	70	269830	52.31855	ppb	97
19) Hexachloroethane	5.42	117	168644	51.26556	ppb	87
22) Nitrobenzene	5.52	77	434734	52.37145	ppb	97
23) Isophorone	5.79	82	717088	52.15615	ppb	95
24) 2-Nitrophenol	5.88	139	220068	53.11962	ppb	90
25) 2,4-Dimethylphenol	5.95	122	334074	50.85849	ppb	93
26) Benzoic acid	6.13	105	269536	52.48935	ppb	96
27) Bis (2-chloroethoxy) metha	6.04	93	416110	53.07755	ppb	99
28) 2,4-Dichlorophenol	6.16	162	322349	51.48973	ppb	96
29) 1,2,4-Trichlorobenzene	6.24	180	346447	50.88283	ppb	98
30) 3,4-Dimethylphenol	6.29	107	483379	48.06226	ppb	98
31) Naphthalene	6.32	128	1088293	51.02368	ppb	100
32) 4-Chloroaniline	6.40	127	382634	48.47776	ppb	97
33) 2,6-Dichlorophenol	6.40	162	280485	46.44057	ppb	97
34) Hexachloropropene	6.41	213	248617	45.65210	ppb	99
35) Hexachlorobutadiene	6.46	225	208519	48.06947	ppb	98
36) Caprolactum	6.83	55	181066	57.70061	ppb	97
37) 4-Chloro-3-methylphenol	6.99	107	349219	50.49716	ppb	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y191.D Vial: 91
Acq On : 21 Dec 16 20:36 Operator: MA
Sample : 50ug/ml SVOC 12/16/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 22 8:41 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.11	142	709588	50.90591	ppb		99
39)	1-Methylnaphthalene	7.22	142	696733	50.66584	ppb		98
41)	Hexachlorocyclopentadiene	7.28	237	113741	43.20709	ppb		99
42)	1,2,4,5-Tetrachlorobenzene	7.30	216	332593	50.03217	ppb		98
43)	2,4,6-Trichlorophenol	7.45	196	219224	51.10365	ppb		99
44)	2,4,5-Trichlorophenol	7.52	196	238503	50.94523	ppb		93
46)	1,1'-Biphenyl	7.65	154	903679	49.30249	ppb	#	97
47)	2-Chloronaphthalene	7.67	162	721348	50.91727	ppb		99
48)	2-Nitroaniline	7.81	65	255666	52.51035	ppb		98
49)	Dimethyl phthalate	8.02	163	843467	49.57292	ppb		99
50)	2,6-DNT	8.10	165	196944	51.27060	ppb		85
51)	Acenaphthylene	8.14	152	1126582	50.46412	ppb		99
52)	3-Nitroaniline	8.30	138	216207	51.55223	ppb		95
53)	Acenaphthene	8.34	154	685358	48.48522	ppb		99
54)	2,4-Dinitrophenol	8.44	184	110123	53.02313	ppb		89
55)	4-Nitrophenol	8.55	65	157776	45.00364	ppb		98
56)	Dibenzofuran	8.55	168	972817	48.53313	ppb		94
57)	2,4-DNT	8.57	165	276680	51.00335	ppb		94
58)	2,3,4,6-Tetrachlorophenol	8.71	232	183101	48.08132	ppb		97
59)	Diethyl phthalate	8.83	149	837783	47.84411	ppb		98
60)	4-Chlorophenyl phenyl ethe	8.95	204	369276	47.23207	ppb		87
61)	Fluorene	8.95	166	744757	45.98869	ppb		98
62)	4-Nitroaniline	9.01	138	208520	52.48091	ppb		92
65)	4,6-Dinitro-2-methylphenol	9.05	198	174192	51.53986	ppb	#	68
66)	Diphenyl amine	9.09	169	1204486	92.82487	ppb		98
67)	n-Nitrosodiphenylamine	9.09	169	1204486	92.82487	ppb		98
68)	1,2-Diphenylhydrazine	9.13	77	1060476	56.79641	ppb		94
69)	4-Bromophenyl phenyl ether	9.51	248	235348	49.95435	ppb		86
70)	Hexachlorobenzene	9.59	284	241371	49.84371	ppb		85
71)	Atrazine	9.73	200	114652	24.45460	ppb		99
72)	Pentachlorophenol	9.84	266	104323	45.26515	ppb		93
73)	Phenanthrene	10.05	178	1227048	49.95375	ppb		99
74)	Anthracene	10.12	178	1275610	50.50230	ppb		100
75)	Carbazol	10.32	167	1159241	50.70617	ppb		96
76)	Di-n-butylphthalate	10.73	149	1458769	49.65644	ppb		99
77)	Fluoranthene	11.43	202	1372412	50.76731	ppb	#	97
79)	Benzidine	11.61	184	528843	52.92087	ppb		99
80)	Pyrene	11.70	202	1423148	47.56909	ppb		99
82)	Butyl benzylphthalate	12.46	149	666695	46.38493	ppb		94
83)	3,3'-Dichlorobenzidine	13.08	252	492257	52.24003	ppb		99
84)	Benz (a) anthracene	13.10	228	1316182	47.78782	ppb		100
85)	Bis (2-ethylhexyl) phthala	13.12	149	897921	44.56342	ppb	#	96
86)	Chrysene	13.13	228	1270985	47.50804	ppb		99
87)	Di-n-octylphthalate	13.84	149	1621015	45.54450	ppb	#	89
89)	Benzo (b) fluoranthene	14.29	252	1320719	60.52842	ppb		99
90)	Benzo (k) fluoranthene	14.32	252	1353845	65.24099	ppb		99
91)	Benzo (a) pyrene	14.68	252	1282544	62.92008	ppb		98
92)	Indeno (1,2,3-cd) pyrene	16.30	276	1415208	62.71537	ppb		96
93)	Dibenz (a,h) anthracene	16.32	278	1206910	63.41421	ppb		97
94)	Benzo (g,h,i) perylene	16.76	276	1222608	60.33049	ppb		97

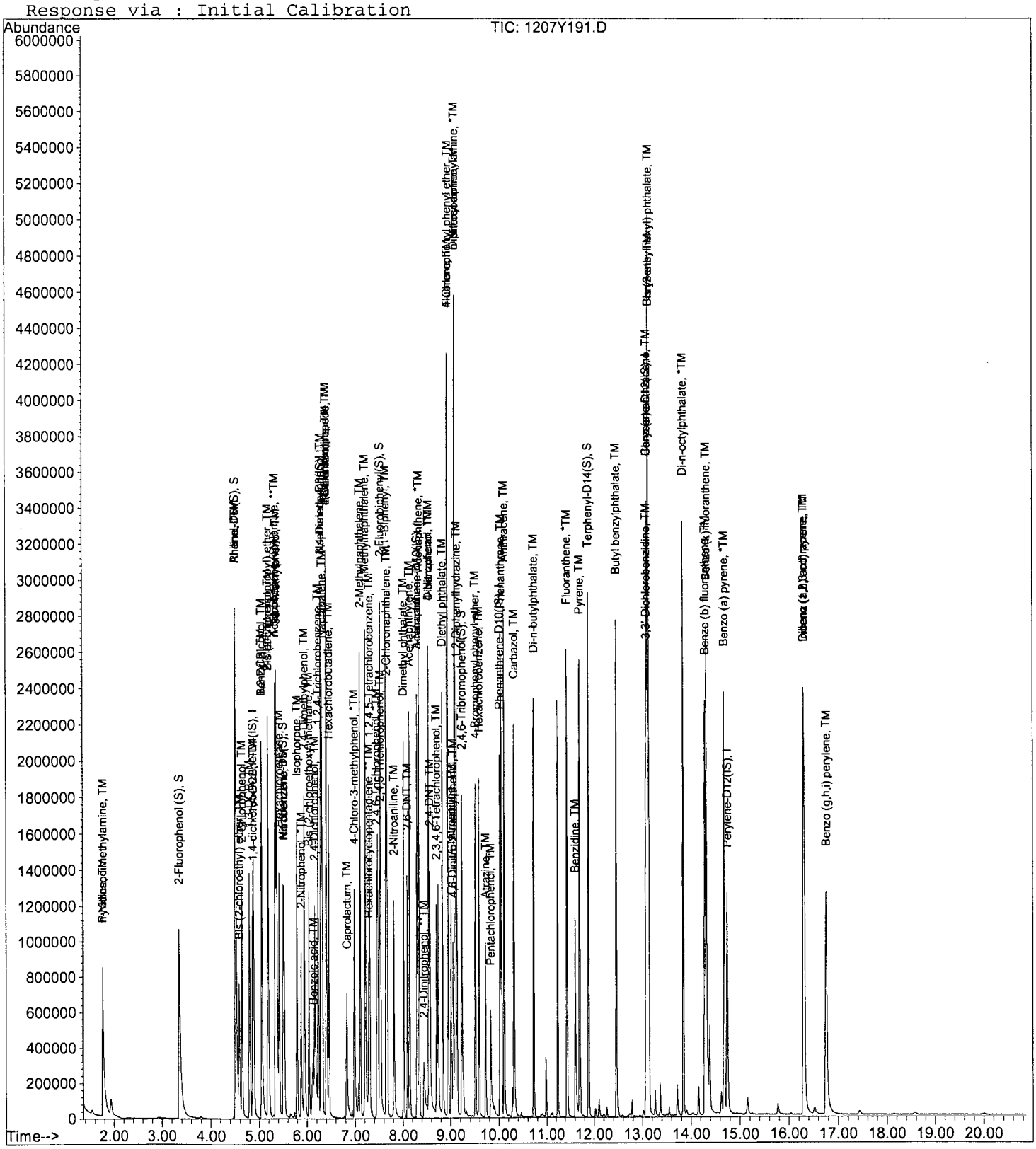
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y191.D Vial: 91
Acq On : 21 Dec 16 20:36 Operator: MA
Sample : 50ug/ml SVOC 12/16/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 22 8:41 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



ORGANICS

Raw Data

APPL, INC.

Method Blank
EPA 8270D WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161219W-47494 - 214871**
Batch ID: #87DC5-161219A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	12/19/16	12/21/16
BLANK	SURROGATE: 2,4,6-TRIBROMOP	51.6	43-140			%	12/19/16	12/21/16
BLANK	SURROGATE: 2-FLUORBIPHENY	47.8	44-119			%	12/19/16	12/21/16
BLANK	SURROGATE: 2-FLUOROPHENO	40.4	19-119			%	12/19/16	12/21/16
BLANK	SURROGATE: NITROBENZENE-	49.3	44-120			%	12/19/16	12/21/16
BLANK	SURROGATE: PHENOL-D6 (S)	29.9	10-115			%	12/19/16	12/21/16
BLANK	SURROGATE: TERPHENYL-D14 (	52.5	50-134			%	12/19/16	12/21/16

Quant Method:Y1207.M
Run #:1207Y183
Instrument:Yoda
Sequence:Y161207
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 12/22/16 8:59:21 AM

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y183.D Vial: 83
Acq On : 21 Dec 16 16:36 Operator: MA
Sample : 161219A BLK 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 21 16:57 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	210296	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.29	136	912750	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.30	164	525703	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	970707	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.10	240	955795	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.75	264	965499	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.34	112	558808	80.77687 ppb	0.00
Spiked Amount 200.000			Recovery =	40.389%	
5) Phenol-D6 (S)	4.50	99	545375	59.73014 ppb	0.00
Spiked Amount 200.000			Recovery =	29.865%	
21) Nitrobenzene-D5(S)	5.50	82	456385	49.32784 ppb	0.00
Spiked Amount 100.000			Recovery =	49.328%	
45) 2-Fluorobiphenyl(S)	7.54	172	792004	47.79041 ppb	0.00
Spiked Amount 100.000			Recovery =	47.790%	
63) 2,4,6-Tribromophenol(S)	9.23	330	272263	103.29090 ppb	0.00
Spiked Amount 200.000			Recovery =	51.646%	
81) Terphenyl-D14(S)	11.88	244	1135613	52.54385 ppb	0.00
Spiked Amount 100.000			Recovery =	52.544%	
Target Compounds					Qvalue

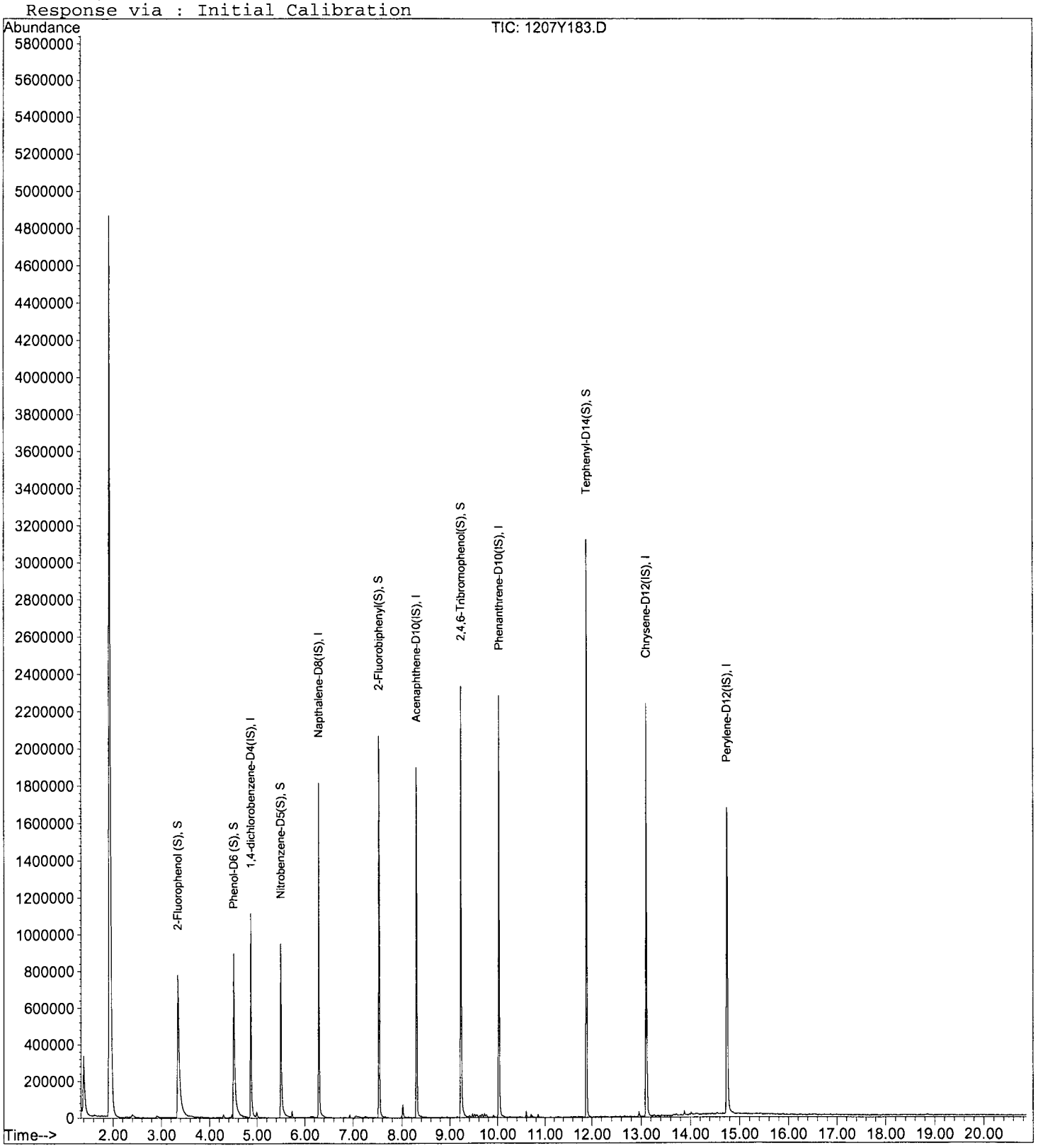
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y183.D Vial: 83
Acq On : 21 Dec 16 16:36 Operator: MA
Sample : 161219A BLK 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 21 16:57 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Laboratory Control Spike Recovery
EPA 8270D WATER

APPL ID: **161219W-47494 LCS - 214871**
Batch ID: #87DC5-161219A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
PHENOL	50.0	19.1	38.2	10-115
SURROGATE: 2,4,6-TRIBROMOPHENOL	200	150	75.0	43-140
SURROGATE: 2-FLUORBIPHENYL (S)	100	67.1	67.1	44-119
SURROGATE: 2-FLUOROPHENOL (S)	200	94.6	47.3	19-119
SURROGATE: NITROBENZENE-D5 (S)	100	71.1	71.1	44-120
SURROGATE: PHENOL-D6 (S)	200	60.6	30.3	10-115
SURROGATE: TERPHENYL-D14 (S)	100	73.5	73.5	50-134

Comments: _____

Primary	SPK
Quant Method :	Y1207.M
Extraction Date :	12/19/16
Analysis Date :	12/21/16
Instrument :	Yoda
Run :	1207Y174
Initials :	MA

Printed: 12/22/16 8:59:23 AM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y174.D Vial: 74
Acq On : 21 Dec 16 12:05 Operator: MA
Sample : 161219A LCS-1 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 21 12:23 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	219545	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.29	136	912040	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.31	164	545384	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.03	188	1018697	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.11	240	1003579	40.00000 ppb		0.00
88) Perylene-D12(IS)	14.75	264	1035620	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.34	112	683032	94.57426 ppb		0.00
Spiked Amount 200.000			Recovery = 47.287%			
5) Phenol-D6 (S)	4.50	99	577647	60.59939 ppb		0.00
Spiked Amount 200.000			Recovery = 30.299%			
21) Nitrobenzene-D5(S)	5.50	82	657464	71.11654 ppb		0.00
Spiked Amount 100.000			Recovery = 71.117%			
45) 2-Fluorobiphenyl(S)	7.54	172	1154261	67.13600 ppb		0.00
Spiked Amount 100.000			Recovery = 67.136%			
63) 2,4,6-Tribromophenol(S)	9.24	330	410261	150.02779 ppb		0.00
Spiked Amount 200.000			Recovery = 75.014%			
81) Terphenyl-D14(S)	11.89	244	1667223	73.46803 ppb		0.00
Spiked Amount 100.000			Recovery = 73.468%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.75	42	108118	24.80318 ppb		84
3) Pyridine	1.78	79	46333	4.70514 ppb		95
6) Phenol	4.52	94	207096	19.11536 ppb		98
7) Aniline	4.51	66	210512	20.53058 ppb	#	70
8) Bis (2-chloroethyl) ether	4.59	63	186256	39.24043 ppb		95
9) 2-Chlorophenol	4.64	128	291584	33.70397 ppb		96
10) 1,3-DCB	4.80	146	200904	22.45939 ppb		98
11) 1,4-DCB	4.88	146	213971	23.21222 ppb		97
12) Benzyl alcohol	5.05	108	163680	34.21210 ppb		100
13) 1,2-DCB	5.05	146	209322	24.81354 ppb		97
14) 2-Methylphenol	5.19	107	204000	33.19048 ppb		99
15) Bis (2-chloroisopropyl) et	5.18	45	391451	41.39597 ppb	#	68
16) Acetophenone	5.33	105	398398	35.51369 ppb		93
17) 3&4-Methylphenol	5.37	107	519073	63.71974 ppb		95
18) n-Nitrosodi-n-propylamine	5.34	70	223856	38.75312 ppb		99
19) Hexachloroethane	5.42	117	63387	17.20392 ppb		80
22) Nitrobenzene	5.52	77	340969	36.62818 ppb		92
23) Isophorone	5.79	82	600210	38.92833 ppb		99
24) 2-Nitrophenol	5.88	139	177082	38.11552 ppb		97
25) 2,4-Dimethylphenol	5.94	122	229321	31.13107 ppb		97
26) Benzoic acid	6.11	105	84379	17.48782 ppb		99
27) Bis (2-chloroethoxy) metha	6.04	93	348121	39.59701 ppb		98
28) 2,4-Dichlorophenol	6.16	162	262654	37.41172 ppb		97
29) 1,2,4-Trichlorobenzene	6.24	180	212638	27.84869 ppb		97
30) 3,4-Dimethylphenol	6.28	107	391132	34.67921 ppb		98
31) Naphthalene	6.32	128	808783	33.81329 ppb		99
32) 4-Chloroaniline	6.40	127	338642	38.25861 ppb		94
33) 2,6-Dichlorophenol	6.40	162	243376	35.93313 ppb		99
34) Hexachloropropene	6.41	213	99474	16.28804 ppb		97
35) Hexachlorobutadiene	6.46	225	84629	17.39692 ppb		95
36) Caprolactum	6.81	55	46180	13.12281 ppb		95
37) 4-Chloro-3-methylphenol	6.98	107	296635	38.24907 ppb		100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y174.D Vial: 74
Acq On : 21 Dec 16 12:05 Operator: MA
Sample : 161219A LCS-1 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 21 12:23 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	2-Methylnaphthalene	7.11	142	543355	34.75962 ppb		98
39)	1-Methylnaphthalene	7.22	142	541519	35.11494 ppb		99
41)	Hexachlorocyclopentadiene	7.29	237	26219	14.50691 ppb		98
42)	1,2,4,5-Tetrachlorobenzene	7.31	216	246982	33.32121 ppb		99
43)	2,4,6-Trichlorophenol	7.45	196	190428	39.81199 ppb		100
44)	2,4,5-Trichlorophenol	7.51	196	209311	40.09784 ppb		95
46)	1,1'-Biphenyl	7.65	154	746696	36.53573 ppb		98
47)	2-Chloronaphthalene	7.67	162	574696	36.38126 ppb		99
48)	2-Nitroaniline	7.81	65	219700	40.46888 ppb		84
49)	Dimethyl phthalate	8.02	163	801999	42.27362 ppb		99
50)	2,6-DNT	8.09	165	171041	39.93421 ppb		83
51)	Acenaphthylene	8.14	152	943818	37.91642 ppb		99
52)	3-Nitroaniline	8.29	138	181368	38.78445 ppb		92
53)	Acenaphthene	8.35	154	592460	37.58981 ppb		99
54)	2,4-Dinitrophenol	8.44	184	82575	38.89830 ppb		91
55)	4-Nitrophenol	8.57	65	67259	20.19782 ppb	#	49
56)	Dibenzofuran	8.54	168	865383	38.71994 ppb		91
57)	2,4-DNT	8.57	165	251289	41.54451 ppb	#	78
58)	2,3,4,6-Tetrachlorophenol	8.71	232	172298	40.57749 ppb		95
59)	Diethyl phthalate	8.84	149	807198	41.34245 ppb		96
60)	4-Chlorophenyl phenyl ethe	8.95	204	333888	38.30063 ppb	#	78
61)	Fluorene	8.94	166	675256	37.39591 ppb		99
62)	4-Nitroaniline	9.00	138	188372	42.51960 ppb		89
65)	4,6-Dinitro-2-methylphenol	9.05	198	156400	41.31970 ppb		88
66)	Diphenyl amine	9.10	169	1030496	70.91112 ppb		99
67)	n-Nitrosodiphenylamine	9.10	169	1030496	70.91112 ppb		99
68)	1,2-Diphenylhydrazine	9.13	77	947597	45.31575 ppb		97
69)	4-Bromophenyl phenyl ether	9.51	248	220243	41.74172 ppb	#	80
70)	Hexachlorobenzene	9.59	284	224761	41.44305 ppb	#	76
71)	Atrazine	9.73	200	118252	22.52127 ppb		97
72)	Pentachlorophenol	9.83	266	105330	41.39270 ppb		97
73)	Phenanthrene	10.05	178	1154729	41.97513 ppb		99
74)	Anthracene	10.12	178	1199766	42.41263 ppb		100
75)	Carbazol	10.31	167	1106469	43.21472 ppb		99
76)	Di-n-butylphthalate	10.72	149	1388548	42.20417 ppb		99
77)	Fluoranthene	11.44	202	1304314	43.08114 ppb	#	98
79)	Benzidine	11.63	184	32611	2.86858 ppb	#	91
80)	Pyrene	11.70	202	1346957	39.57594 ppb		99
82)	Butyl benzylphthalate	12.46	149	644983	39.44579 ppb		90
83)	3,3'-Dichlorobenzidine	13.07	252	396743	37.01037 ppb	#	99
84)	Benz (a) anthracene	13.09	228	1266705	40.42774 ppb		99
85)	Bis (2-ethylhexyl) phthala	13.13	149	864006	37.69293 ppb		97
86)	Chrysene	13.14	228	1232264	40.48863 ppb		99
87)	Di-n-octylphthalate	13.84	149	1577149	38.95151 ppb	#	94
89)	Benzo (b) fluoranthene	14.29	252	1371985	42.37695 ppb	#	98
90)	Benzo (k) fluoranthene	14.32	252	1216973	39.52427 ppb		99
91)	Benzo (a) pyrene	14.68	252	1237137	40.90403 ppb	#	97
92)	Indeno (1,2,3-cd) pyrene	16.30	276	1392501	41.58920 ppb		96
93)	Dibenz (a,h) anthracene	16.31	278	1187442	42.04898 ppb		97
94)	Benzo (g,h,i) perylene	16.76	276	1199352	39.88666 ppb		98

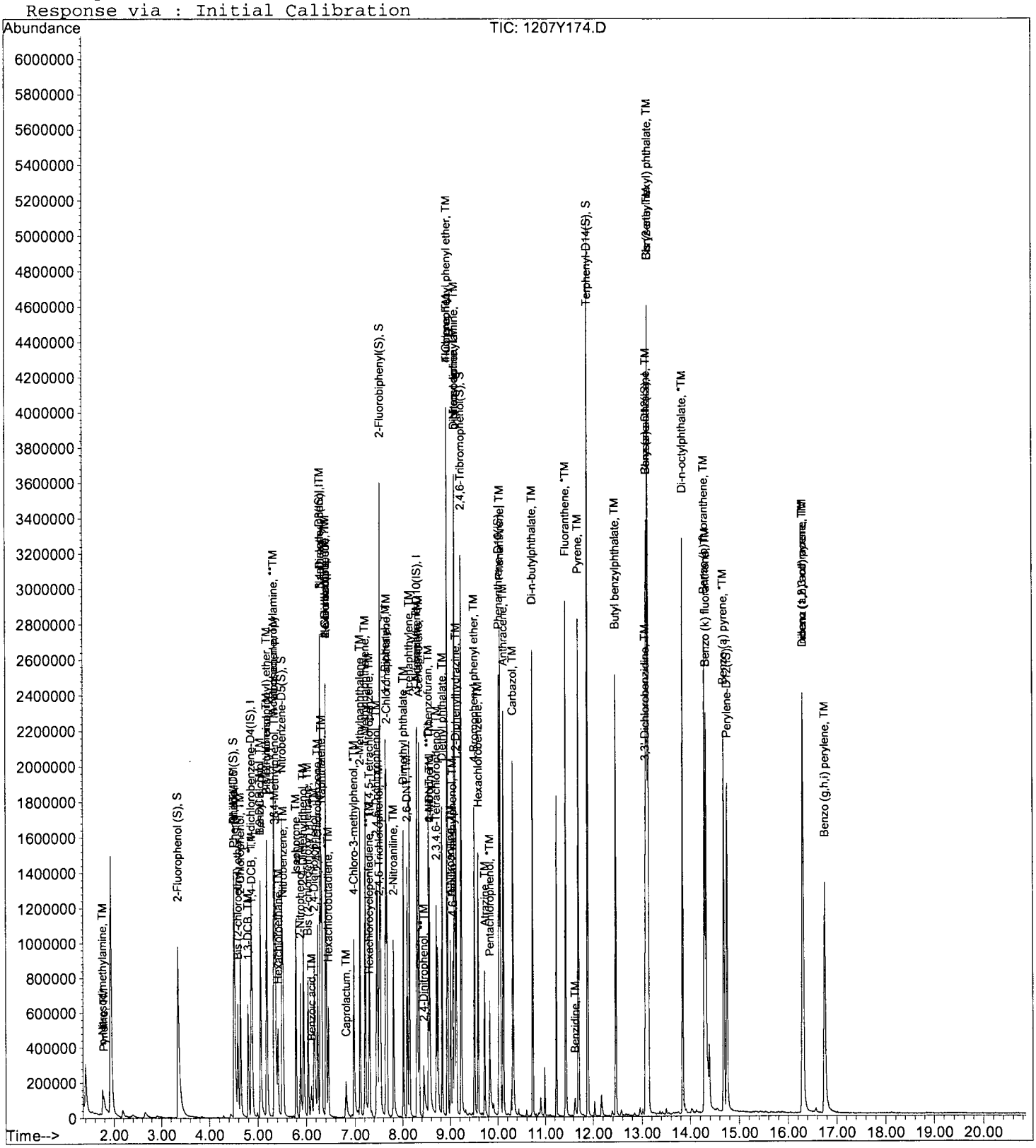
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y174.D Vial: 74
Acq On : 21 Dec 16 12:05 Operator: MA
Sample : 161219A LCS-1 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 21 12:23 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration

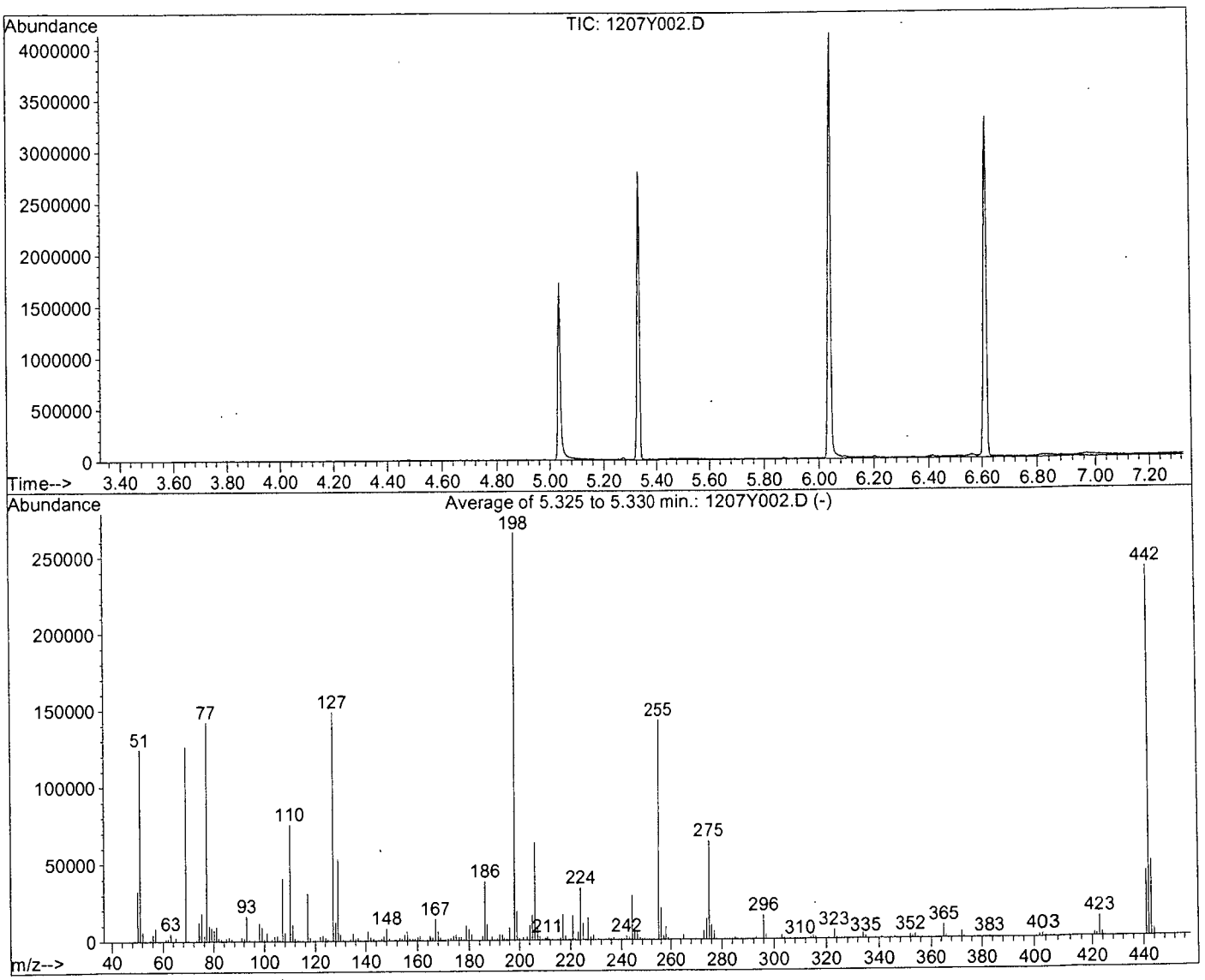


DFTPP

Data File : M:\YODA\DATA\Y161207\1207Y002.D
Acq On : 7 Dec 16 9:00
Sample : SV Tune 10/19/16
Misc :

Vial: 2
Operator: MA
Inst : Yoda
Multiplr: 1.00

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 696, 697, 698; Background Corrected with Scan 689

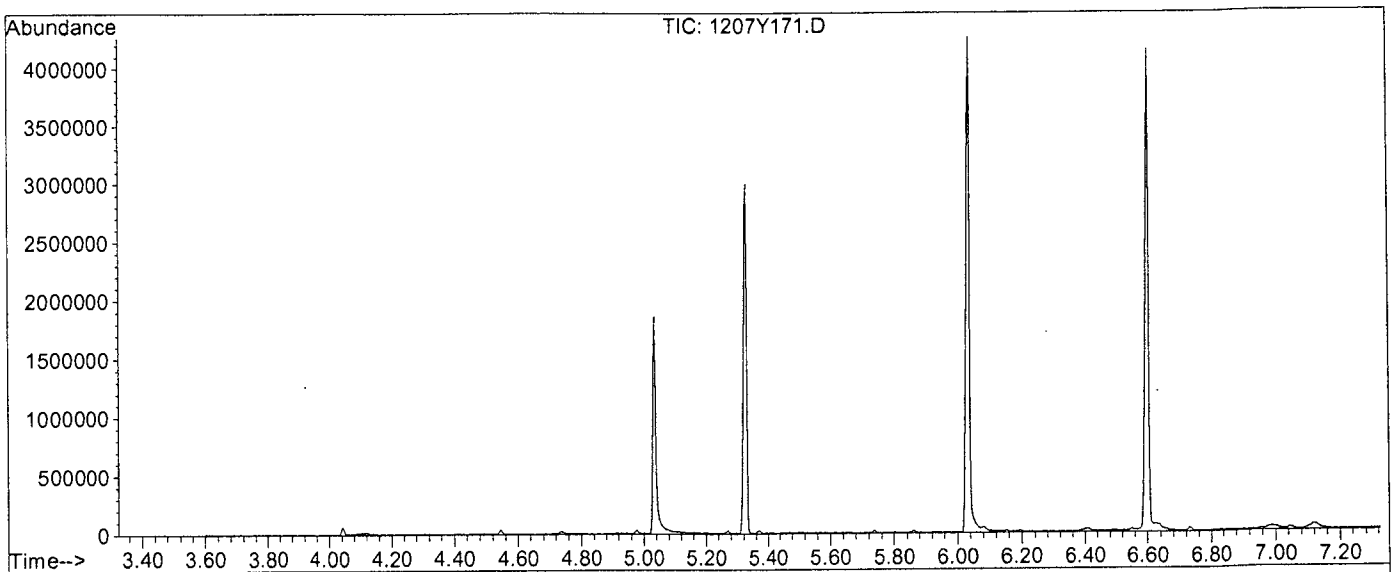
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	46.7	124269	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.7	911	PASS
127	198	40	60	56.0	148757	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	265856	PASS
199	198	5	9	6.9	18432	PASS
275	198	10	30	24.0	63789	PASS
365	198	1	100	3.1	8331	PASS
441	443	0.01	100	86.4	41829	PASS
442	198	50	150	90.6	240747	PASS
443	442	17	23	20.1	48427	PASS

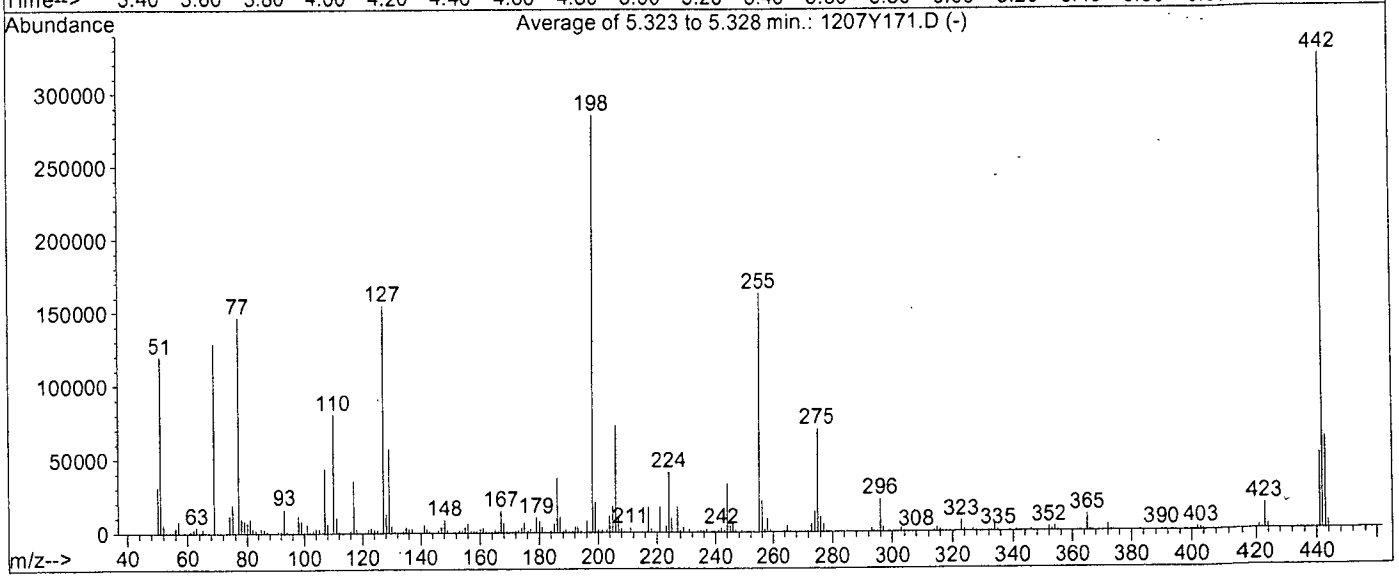
DFTPP

Data File : M:\YODA\DATA\Y161207\1207Y171.D
Acq On : 21 Dec 16 10:48
Sample : SV Tune 10/19/16
Misc : water

Vial: 71
Operator: MA
Inst : Yoda
Multiplr: 1.00

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C





AutoFind: Scans 694, 695, 696; Background Corrected with Scan 685

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	42.0	119629	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.3	385	PASS
127	198	40	60	54.2	154576	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	285141	PASS
199	198	5	9	7.2	20459	PASS
275	198	10	30	24.5	69829	PASS
365	198	1	100	3.9	11074	PASS
441	443	0.01	100	82.2	51024	PASS
442	198	50	150	113.7	324267	PASS
443	442	17	23	19.1	62093	PASS

SV Internal Stanard Stock Prep: 10/19/16 RH EXP: 10/19/17						
		Conc.				
Supplier	ID #	µg/mL	Lot #	Open Date	Exp.Date	µL
Supleco	CRM48902	2000	XA14020V-36611	10/19/16	10/19/17	1000
					fin vol.	1000

8270 Full Scan Standard Curve

PREP DATE:	12/06/16 RH							
8270 Standard Curve								
Exp:	2/11/17					5	10	20
		Conc.		Date				
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL
Absolute	8270 Stock	200	VAR	11/15/16	11/15/16	5	5	10
o2si	8270 BN:A	200/400	277272-36400	6/20/16	12/20/16	5	5	10
EM Science	Methylene Chloride		56098			190	90	80
Supelco	SV Internal	2000	A14020V-3661	12/06/16	12/16/16	4	2	2
				Final Vol.		204	102	102

8270 Full Scan Second Source (SS)

PREP DATE:	12/06/16 RH					
Exp:	1/18/17	Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
o2si	8270 Stock S	200	VAR	07/08/16	07/08/17	25
EM Science	Methylene Chloride		56098			75
Supelco	SV Internal	2000	A14020V-3661	12/06/16	12/06/16	2
				Final Vol.		102

40	**50**	**60**	**80**	**100**
µL	µL	µL	µL	µL
20	50	30	40	50
20	50	30	40	50
60	100	40	20	0
2	4	2	2	2
102	204	102	102	102

8270 SVOC Stock 10mL						
8270 Stock/Spike Standard						
prep:	11/15/2016 RH					
Exp:	11/15/17					
		Conc.				
Supplier	ID #	µg/mL	Lot #	Open Date	Exp.Date	µL
Absolute	10001	2000	053014-37136	11/15/16	11/15/17	1000
Absolute	10002	2000	062216-37144	11/15/16	11/15/17	1000
Absolute	10004	2000	012516-37147	11/15/16	11/15/17	1000
Absolute	10005	2000	110314-36848	11/15/16	11/15/17	1000
Absolute	10006	2000	022416-36850	11/15/16	11/15/17	1000
Absolute	10007	2000	020515-36853	11/15/16	11/15/17	1000
Absolute	10018	2000	030216-37081	11/15/16	11/15/17	1000
Absolute	70023	1000	042716-36858	11/15/16	11/15/17	1000
Absolute	82705	2000	012516-36862	11/15/16	11/15/17	1000
Absolute	94552	2000	042016-36488	11/15/16	11/15/17	1000
				Final Vol.		10000

8270 Surrog Mix 100/200ppm						
Prep: 11/15/16 -RH Ex: 2/15/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
8270 Acid Surrog Mix	10000 ug/ml	Restek Cat# 33029 Lot# A0118884-36875 Op: 11/15/16 EX: 11/15/17	2.0 mL	100 mL	200 ug/mL	MC
8270 B/N surrog Mix	5000 µg/mL	Restek Cat# 31086 Lot# A0119223-36871 Op: 11/15/16 EX: 11/15/17	2.0 mL	100 mL	100 ug/mL	MC

8270 Acid Surrog Stock 5000ppm						
Prep: 06/20/16 -LH Ex: 06/20/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
8270 Acid Surrog Mix	10,000 µg/mL	Restek Cat# 33029 Lot# A0115509-36718	10mL	20mL	5000 µg/ml	Acetone
	PREP:	06/20/16				
	Exp:	06/20/17				

8270 Surrog Mix 200/400ppm						
Prep: 06/20/16 -LH Ex: 12/20/16						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
8270 Acid Surrog Mix	5000 µg/mL	06/20/16	8.0mL	100 mL	400 µg/mL	MC
8270 B/N surrog Mix	5000 µg/mL	Restek Cat# 31086 Lot# A0119223-36720	4.0 mL	100 mL	200 ug/mL	MC
	PREP:	06/20/16				
	Exp:	12/20/16				

8270 Full Scan Second Source Stock						
	7/8/16 GA					
8270 Second Source Stock						
Exp:	07/08/17					
		Conc.		Date	Exp.	
Supplier	ID #	µg/mL	Lot #	Code	Date	µL
o2si	116070-02	2000	234696-35233	07/08/16	07/08/17	1000
o2si	110391-01	2000	252133-35880	07/08/16	07/08/17	1000
o2si	010337-01	1000	259144-35881	07/08/16	07/08/17	1000
o2si	110396-01	2000	252136-35882	07/08/16	07/08/17	1000
o2si	110397-01	2000	263077-35835	07/08/16	01/08/17	1000
o2si	110393-01	2000	252141-35248	07/08/16	07/08/17	1000
o2si	110394-01	2000	252143-35884	07/08/16	07/08/17	1000
o2si	**110395-01**	2000	252146-35885	07/08/16	07/08/17	1000
o2si	110392-01	2000	243259-35886	07/08/16	07/08/17	1000
Absolute	10006	2000	091115-35856	07/08/16	07/08/17	1000
				Final Vol.		10000

Organic Extraction Worksheet

Method	625/8270 Separatory Funnel Extra 3510C	Extraction Set	161219A	Extraction Method	SEP004	Units	mL

Spiked ID 1	8270T Spike 12-8-16 exp 12-8-17		Surrogate ID 1	8270 Surrogate 12-8-16 exp 3-8-17	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	12/19/16 15:50	
Spiked ID 8			Ext. End Time:	12/20/16 15:30	
			GC Requires Extract By:	**12/21/16 0:00**	

pH1	2	12/19/16 4:00:00 PM	Water Bath Temp Criteria	70,70 °C
pH2	14	12/19/16 6:00:00 PM		
pH3				

Spiked By: KY **Date** 12/19/16 **Witnessed By:** DL **Date** 12/19/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	161219A Blk				1	1	1000	1	2/1	12/19/16 15:50	
						equip	E-WB6				
2	161219A LCS-1		0.250	1	1	1	1000	1	2/1	12/19/16 15:50	
						equip	E-WB6				
3	161219A LCSD-1		0.250	1	1	1	1000	1	2/1	12/19/16 15:50	
						equip	E-WB6				
4	AZ47494	AZ47494W12			1	1	1070	1	2/1	12/19/16 15:50	81760 1 WEEK
						equip	E-WB6				
5	AZ47495	AZ47495W12			1	1	1070	1	2/1	12/19/16 15:50	81760 1 WEEK
						equip	E-WB5				
6	AZ47496	AZ47496W13			1	1	900	1	2/1	12/19/16 15:50	81760 1 WEEK
						equip	E-WB5				
7	AZ47497	AZ47497W10			1	1	1070	1	2/1	12/19/16 15:50	81760 1 WEEK
						equip	E-WB5				
8	AZ47498	AZ47498W14			1	1	1070	1	2/1	12/19/16 15:50	81760 1 WEEK
						equip	E-WB5				
9	AZ47658	AZ47658W12			1	1	1070	1	2/1	12/19/16 15:50	81776 1 WEEK
						equip	E-WB5				
10	AZ47659	AZ47659W08			1	1	1070	1	2/1	12/19/16 15:50	81776 1 WEEK
						equip	E-WB5				
11	AZ47660	AZ47660W12			1	1	1070	1	2/1	12/19/16 15:50	81776 1 WEEK
						equip	E-WB5				
12	AZ47661	AZ47661W08			1	1	1070	1	2/1	12/19/16 15:50	81776 1 WEEK
						equip	E-WB5				
13	AZ47662	AZ47662W08			1	1	1070	1	2/1	12/19/16 15:50	81776 1 WEEK
						equip	E-WB6				
14	AZ47663	AZ47663W10			1	1	1070	1	2/1	12/19/16 15:50	81776 1 WEEK
						equip	E-WB6				
15	AZ47664	AZ47664W10			1	1	1070	1	2/1	12/19/16 15:50	81776 1 WEEK
						equip	E-WB6				
16	AZ47665	AZ47665W14			1	1	1070	1	2/1	12/19/16 15:50	81776 1 WEEK
						equip	E-WB6				

Solvent and Lot#	
MC	56153
1+1 Sulfuric Acid	12-5-16
Acidified Na2SO4	11-3-16
B.Na2SO4	16C255214
10N NaOH	12-19-16
ph strips	HC 574756
Filter Paper	400112

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	RH
Date	12/20/16
Time	4:30
Refrigerator	GC-C

	Technician's Initials
Scanned By	KY
Sample Preparation	KY,JR,DL
Extraction	KY,JR,DL
Concentration	KY

Modified	12/20/16 4:03:00 PM

Reviewed By: **Date**

Injection Log

Directory: M:\YODA\DATA\Y161207\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	1207Y002.D	1	SV Tune 10/19/16		7 Dec 16 9:00
2	4	1207Y004.D	1	5ug/ml SVOC 12/06/16		7 Dec 16 10:01
3	5	1207Y005.D	1	10ug/ml SVOC 12/06/16		7 Dec 16 10:32
4	6	1207Y006.D	1	20ug/ml SVOC 12/06/16		7 Dec 16 11:02
5	7	1207Y007.D	1	40ug/ml SVOC 12/06/16		7 Dec 16 11:32
6	8	1207Y008.D	1	50ug/ml SVOC 12/06/16		7 Dec 16 12:02
7	9	1207Y009.D	1	60ug/ml SVOC 12/06/16		7 Dec 16 12:32
8	10	1207Y010.D	1	80ug/ml SVOC 12/06/16		7 Dec 16 13:02
9	11	1207Y011.D	1	100ug/ml SVOC 12/06/16		7 Dec 16 13:32
10	12	1207Y012.D	1	2ND SRC SVOC 12/06/16		7 Dec 16 14:01
11	71	1207Y171.D	1	SV Tune 10/19/16	water	21 Dec 16 10:48
12	72	1207Y172.D	1	50ug/ml SVOC 12/06/16	water	21 Dec 16 11:04
13	74	1207Y174.D	1	161219A LCS-1 1/1000	water	21 Dec 16 12:05
14	81	1207Y181.D	0.934579	AZ47658W12 1/1070	water	21 Dec 16 15:35
15	82	1207Y182.D	0.934579	AZ47659W08 1/1070	water	21 Dec 16 16:05
16	83	1207Y183.D	1	161219A BLK 1/1000	water	21 Dec 16 16:36
17	84	1207Y184.D	0.934579	AZ47660W12 1/1070	water	21 Dec 16 17:06
18	85	1207Y185.D	0.93458	AZ47661W08 1/1070	water	21 Dec 16 17:36
19	86	1207Y186.D	0.93458	AZ47662W08 1/1070	water	21 Dec 16 18:06
20	87	1207Y187.D	0.93458	AZ47663W10 1/1070	water	21 Dec 16 18:35
21	88	1207Y188.D	0.934579	AZ47664W10 1/1070	water	21 Dec 16 19:06
22	89	1207Y189.D	0.93458	AZ47665W14 1/1070	water	21 Dec 16 19:36
23	91	1207Y191.D	1	50ug/ml SVOC 12/16/16	water	21 Dec 16 20:36

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank
EPA 8270D MODIFIED WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161219W-47345 - 214859**
Batch ID: #87DME-161219A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2-(2-METHOXYETHOXY)-ETHAN	80.0 U	100	80.0	40.0	ug/L	12/19/16	12/20/16

Quant Method: Y0GLYCOL.
Run #: 1220Y013
Instrument: Yoda
Sequence: Y161220G
Initials: MA

GC SC-Blank-REG MDLs-DOD
Printed: 12/21/16 12:20:01 PM

Laboratory Control Spike Recovery
EPA 8270D MODIFIED WATER

APPL ID: **161219W-47345 LCS - 214859**
Batch ID: #87DME-161219A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
2-(2-METHOXYETHOXY)-ETHANOL	80.0	43.5	54.4	30-130

Comments: _____

Primary	SPK
Quant Method :	Y0GLYCOL.M
Extraction Date :	12/19/16
Analysis Date :	12/20/16
Instrument :	Yoda
Run :	1220Y017
Initials :	MA

Printed: 12/21/16 12:20:02 PM
APPL Standard LCS

EPA 8270D

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81776

Case No: 81776 Date Analyzed: 12/20/16

Matrix: WATER Instrument: Yoda

Blank ID: 161219A-BLK Time Analyzed: 1544

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161219A-BLK	Blank	1220Y013	12/20/16 1544
161219A-LCS	Lab Control Spike	1220Y017	12/20/16 1745
AZ47658	ERH147	1220Y025	12/20/16 2145
AZ47659	ERH148	1220Y026	12/20/16 2215
AZ47660	ERH152	1220Y027	12/20/16 2245
AZ47661	ERH149	1220Y028	12/20/16 2315
AZ47662	ERH150	1220Y029	12/20/16 2345
AZ47663	ERH138	1220Y030	12/21/16 0015
AZ47664	ERH144	1220Y031	12/21/16 0045
AZ47665	ERH140	1220Y032	12/21/16 0115

Comments: Batch: #87DME-161219A

Printed: 12/21/16 12:20:04 PM
Form 4, Blank Summary

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 1220Y002.D 81776
Matrix: Water mp1-4-17
ID: SV Tune 11/15/16

SDG No: mp1-4-17 ~~Yoda~~ 81776
Date Analyzed: 12/20/16
Instrument: Yoda
Time Analyzed: 9:12

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		50ug/ml DEG 11/22/16	1220Y003.D	12/20/16 9:32
2		100ug/ml DEG 11/22/1	1220Y004.D	12/20/16 10:02
3		200ug/ml DEG 11/22/1	1220Y005.D	12/20/16 11:27
4		400ug/ml DEG 11/22/1	1220Y006.D	12/20/16 11:57
5		500ug/ml DEG 11/22/1	1220Y007.D	12/20/16 12:27
6		600ug/ml DEG 11/22/1	1220Y008.D	12/20/16 12:57
7		800ug/ml DEG 11/22/1	1220Y009.D	12/20/16 13:28
8		1000ug/ml DEG 11/22/	1220Y010.D	12/20/16 13:58
9		SS2 DEG 11/22/16	1220Y011.D	12/20/16 15:01
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	44.4
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.0
127	40 - 60% of mass 198	53.6
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 197.95	100.0
199	5 - 9% of mass 198	6.3
275	10 - 30% of mass 198	21.8
365	1 - 100% of mass 198	3.0
441	0.01 - 100% of mass 443	85.0
442	50 - 150% of mass 197.95	98.0
443	17 - 23% of mass 442	19.1

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81776
Matrix: Water
ID: SV Tune 11/15/16

SDG No: 81776
Date Analyzed: 12/20/16
Instrument: Yoda
Time Analyzed: 15:27

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1	Blank	161219A BLK 2/500	1220Y013.D	12/20/16 15:44
2	Lab Control Spike	161219A LCS-1 2/500	1220Y017.D	12/20/16 17:45
3	ERH147	AZ47658W14 2/500	1220Y025.D	12/20/16 21:45
4	ERH148	AZ47659W09 2/500	1220Y026.D	12/20/16 22:15
5	ERH152	AZ47660W14 2/500	1220Y027.D	12/20/16 22:45
6	ERH149	AZ47661W06 2/500	1220Y028.D	12/20/16 23:15
7	ERH150	AZ47662W09 2/500	1220Y029.D	12/20/16 23:45
8	ERH138	AZ47663W09 2/500	1220Y030.D	12/21/16 0:15
9	ERH144	AZ47664W12 2/500	1220Y031.D	12/21/16 0:45
10	ERH140	AZ47665W11 2/500	1220Y032.D	12/21/16 1:15
11		500ug/ml DEG 11/22/1	1220Y036.D	12/21/16 2:58
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	42.2
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.6
127	40 - 60% of mass 198	55.1
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 197.95	100.0
199	5 - 9% of mass 198	6.9
275	10 - 30% of mass 198	23.4
365	1 - 100% of mass 198	3.8
441	0.01 - 100% of mass 443	89.8
442	50 - 150% of mass 197.95	95.3
443	17 - 23% of mass 442	18.4

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81776

Lab File ID (Standard): 1220Y007.D Date Analyzed: 12/20/16

Instrument ID: Yoda Time Analyzed: 12:27

GC Column: ID: Heated Purge: (Y/N)

		1,4-dichlorobenzene-D4(IS)		Napthalene-D8(IS)		Acenaphthene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	220710	4.87	916121	6.29	479952	8.31
	UPPER LIMIT	441420	5.37	1832242	6.79	959904	8.81
	LOWER LIMIT	110355	4.37	458061	5.79	239976	7.81
	SAMPLE NO.						
01	SS2 DEG 11/22/16	226449	4.88	946039	6.29	498527	8.31
02	161219A BLK 2/500	207897	4.89	889234	6.30	498710	8.31
03	161219A LCS-1 2/500	189835	4.89	856510	6.30	471037	8.31
04	AZ47658W14 2/500	214003	4.87	917151	6.29	529075	8.30
05	AZ47659W09 2/500	205404	4.87	927619	6.29	522868	8.31
06	AZ47660W14 2/500	216072	4.87	976243	6.29	549706	8.31
07	AZ47661W06 2/500	206728	4.87	908927	6.29	518201	8.31
08	AZ47662W09 2/500	218121	4.88	953062	6.29	546876	8.31
09	AZ47663W09 2/500	207684	4.86	933356	6.29	520965	8.31
10	AZ47664W12 2/500	198948	4.88	882857	6.30	508188	8.30
11	AZ47665W11 2/500	209365	4.89	909882	6.30	516699	8.31
12	500ug/ml DEG 11/22/16	193156	4.87	829027	6.29	475011	8.30
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81776

Lab File ID (Standard): 1220Y007.D Date Analyzed: 12/20/16

Instrument ID: Yoda Time Analyzed: 12:27

GC Column: ID: Heated Purge: (Y/N)

		Phenanthrene-D10(IS)		Chrysene-D12(IS)		Perylene-D12(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	893005	10.02	850646	13.11	931322	14.75
	UPPER LIMIT	1786010	10.52	1701292	13.61	1862644	15.25
	LOWER LIMIT	446503	9.52	425323	12.61	465661	14.25
	SAMPLE NO.						
01	SS2 DEG 11/22/16	939012	10.02	865583	13.11	853444	14.75
02	161219A BLK 2/500	922012	10.02	877245	13.10	1466320	14.75
03	161219A LCS-1 2/500	880654	10.02	842606	13.11	1097660	14.75
04	AZ47658W14 2/500	970570	10.03	936207	13.10	920312	14.74
05	AZ47659W09 2/500	956271	10.02	940326	13.10	909356	14.75
06	AZ47660W14 2/500	1009320	10.03	979904	13.10	863831	14.74
07	AZ47661W06 2/500	954171	10.02	913828	13.10	917486	14.75
08	AZ47662W09 2/500	1003330	10.02	977552	13.10	946190	14.75
09	AZ47663W09 2/500	959169	10.02	925813	13.10	1346000	14.75
10	AZ47664W12 2/500	926740	10.02	953720	13.10	921603	14.75
11	AZ47665W11 2/500	973956	10.02	934276	13.10	839473	14.75
12	500ug/ml DEG 11/22/16	879851	10.03	837836	13.10	717154	14.74
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

ORGANICS

Sample Data

APPL, INC.

EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH147
Sample Collection Date: 12/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776
APPL ID: AZ47658
QCG: #87DME-161219A-214859

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	12/19/16	12/20/16

Quant Method: Y0GLYCOL.M
Run #: 1220Y025
Instrument: Yoda
Sequence: Y161220G
Dilution Factor: 1
Initials: MA

Printed: 12/21/16 12:20:05 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y025.D Vial: 25
Acq On : 20 Dec 16 21:45 Operator: MA
Sample : AZ47658W14 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 21 10:16 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Dec 20 14:47:54 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	214003	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	917151	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	529075	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	970570	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	936207	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.74	264	920312	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

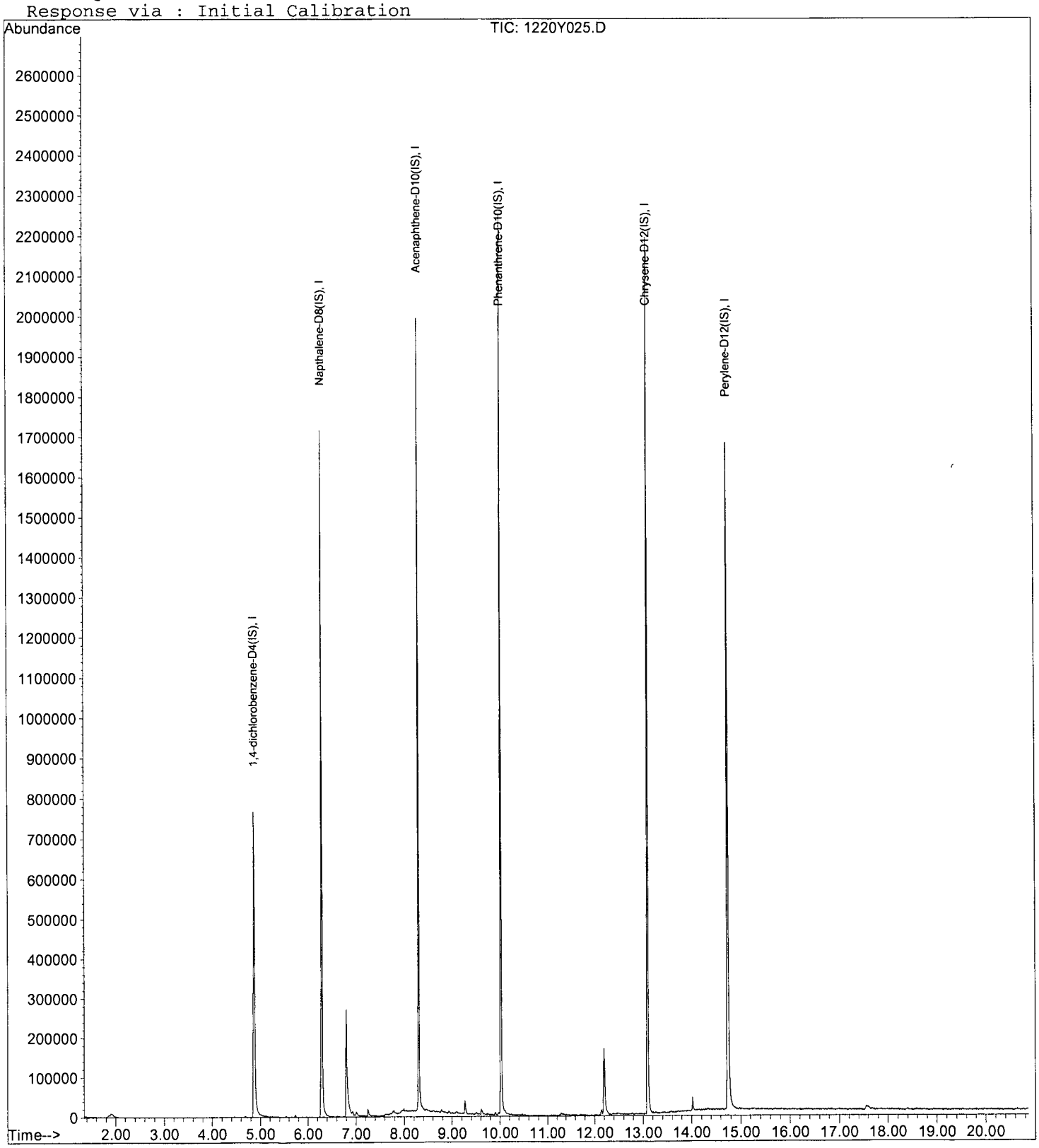
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y025.D Vial: 25
Acq On : 20 Dec 16 21:45 Operator: MA
Sample : AZ47658W14 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 21 10:16 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 21 10:44:23 2016
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH148
Sample Collection Date: 12/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776
APPL ID: AZ47659
QCG: #87DME-161219A-214859

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	12/19/16	12/20/16

Quant Method: Y0GLYCOL.M
Run #: 1220Y026
Instrument: Yoda
Sequence: Y161220G
Dilution Factor: 1
Initials: MA

Printed: 12/21/16 12:20:05 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y026.D Vial: 26
Acq On : 20 Dec 16 22:15 Operator: MA
Sample : AZ47659W09 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 21 10:16 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Dec 20 14:47:54 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	205404	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	927619	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	522868	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	956271	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	940326	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.75	264	909356	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

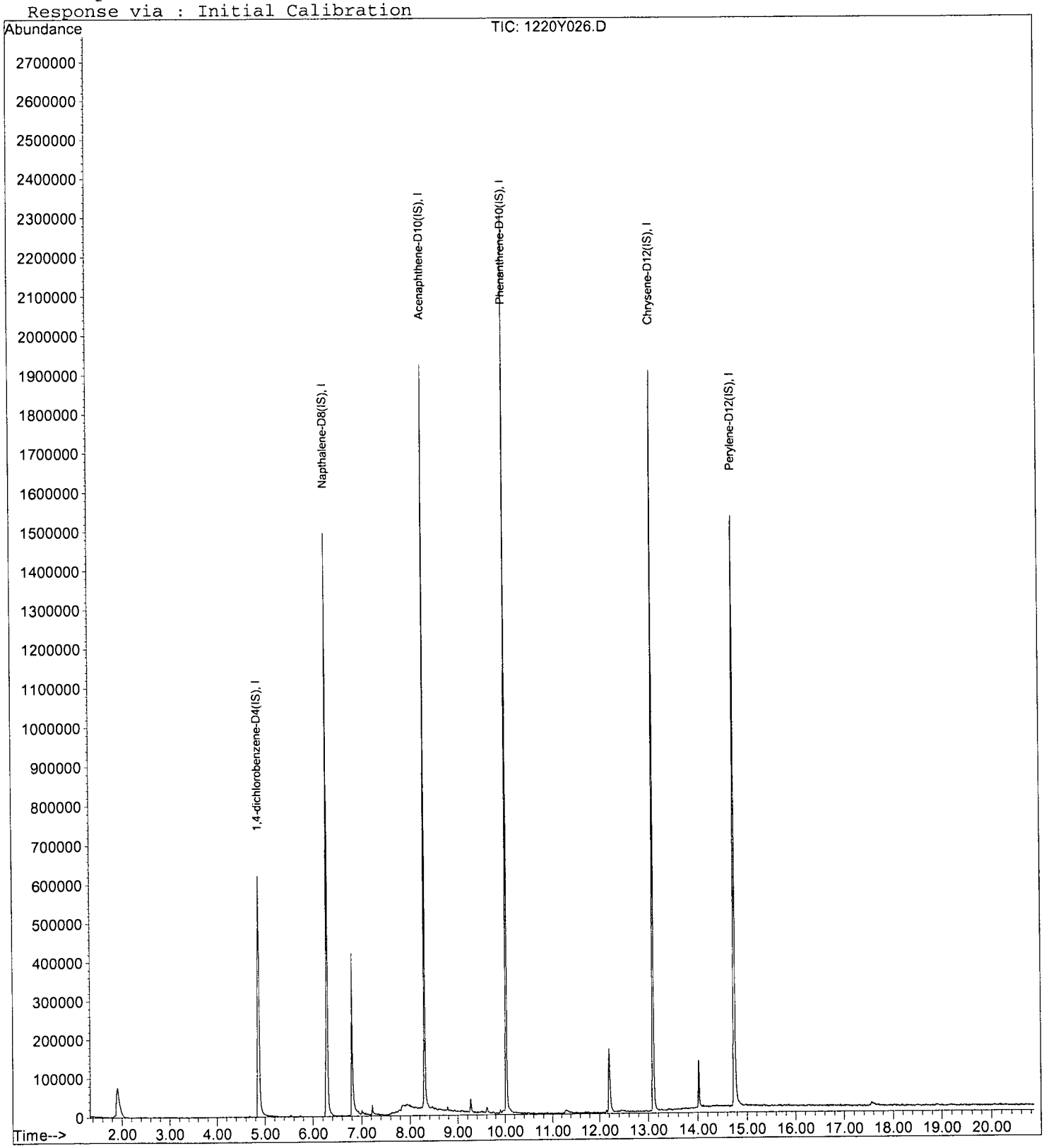
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y026.D
Acq On : 20 Dec 16 22:15
Sample : AZ47659W09 2/500
Misc :

Vial: 26
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 21 10:16 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 21 10:44:23 2016
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH152
Sample Collection Date: 12/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776
APPL ID: AZ47660
QCG: #87DME-161219A-214859

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	12/19/16	12/20/16

Quant Method: Y0GLYCOL.M
Run #: 1220Y027
Instrument: Yoda
Sequence: Y161220G
Dilution Factor: 1
Initials: MA

Printed: 12/21/16 12:20:05 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y027.D Vial: 27
Acq On : 20 Dec 16 22:45 Operator: MA
Sample : AZ47660W14 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 21 10:16 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Dec 20 14:47:54 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	216072	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	976243	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	549706	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	1009316	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	979904	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.74	264	863831	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

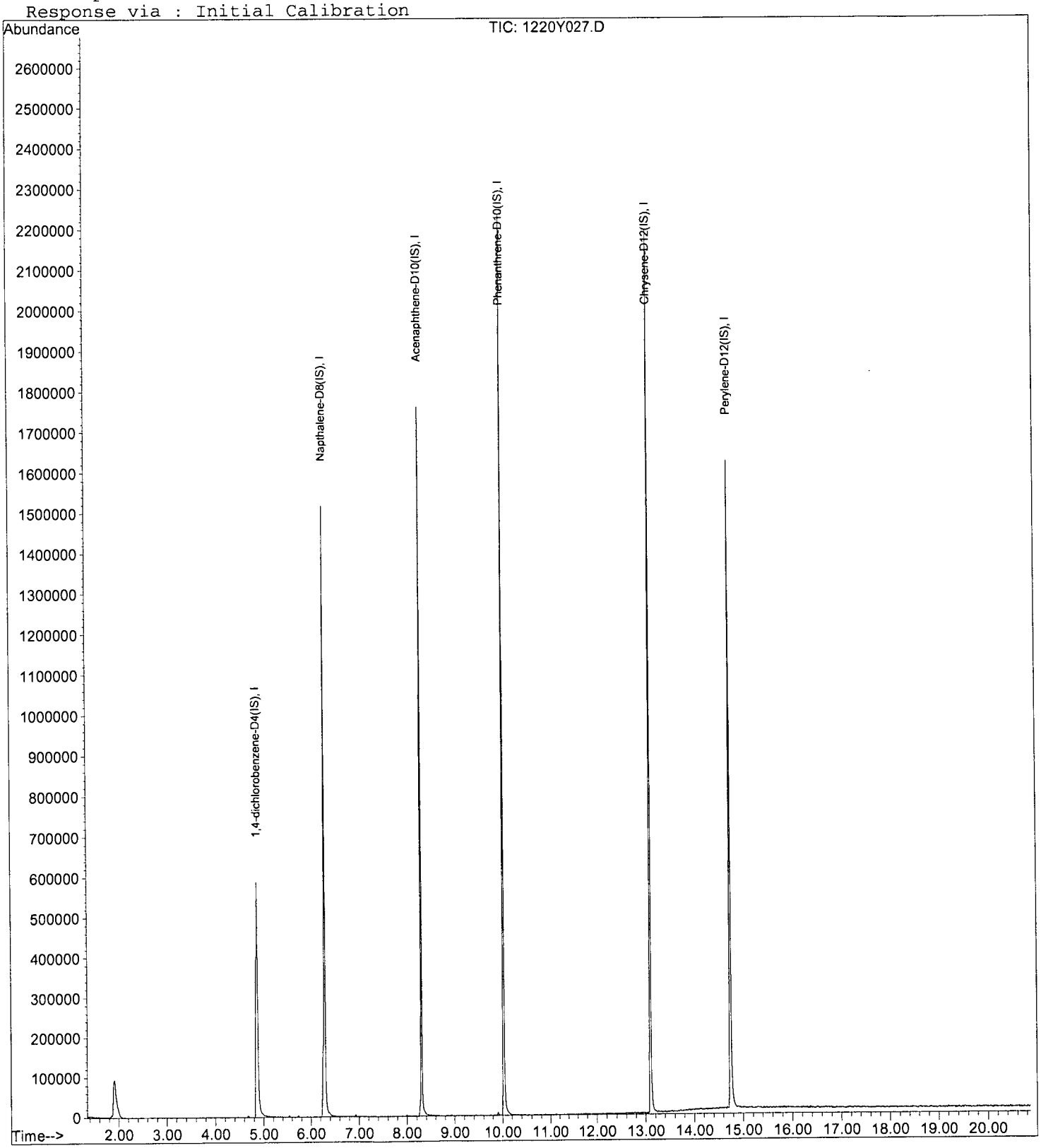
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y027.D
Acq On : 20 Dec 16 22:45
Sample : AZ47660W14 2/500
Misc :

Vial: 27
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 21 10:16 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 21 10:44:23 2016
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH149
Sample Collection Date: 12/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776
APPL ID: AZ47661
QCG: #87DME-161219A-214859

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	12/19/16	12/20/16

Quant Method: Y0GLYCOL.M
Run #: 1220Y028
Instrument: Yoda
Sequence: Y161220G
Dilution Factor: 1
Initials: MA

Printed: 12/21/16 12:20:05 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y028.D Vial: 28
Acq On : 20 Dec 16 23:15 Operator: MA
Sample : AZ47661W06 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 21 10:48 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Dec 20 14:47:54 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	206728	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	908927	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	518201	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	954171	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	913828	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.75	264	917486	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

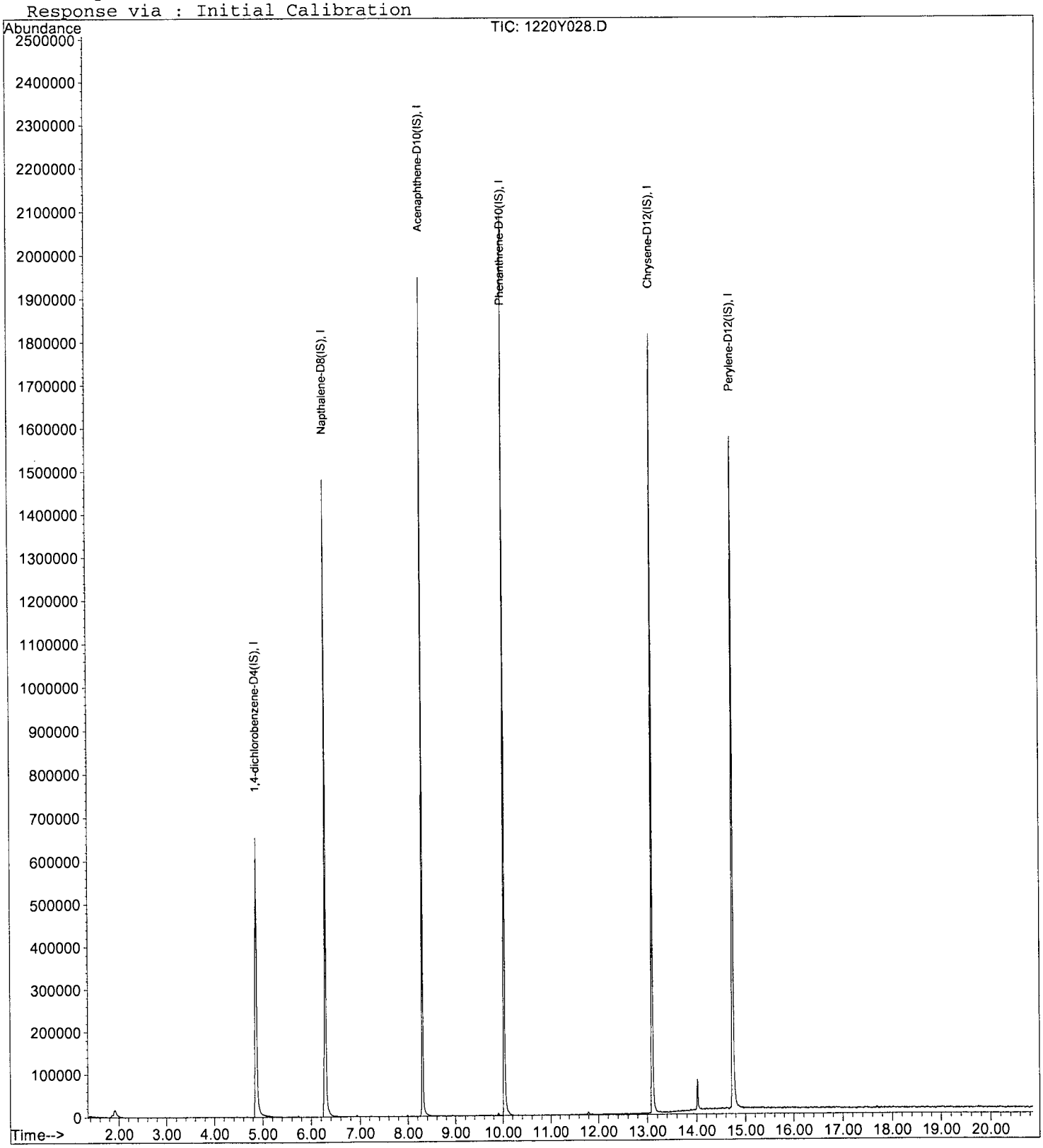
(#) = qualifier out of range (m) = manual integration
1220Y028.D Y0GLYCOL.M Wed Dec 21 10:51:18 2016

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y028.D Vial: 28
Acq On : 20 Dec 16 23:15 Operator: MA
Sample : AZ47661W06 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 21 10:48 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 21 10:44:23 2016
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH150
Sample Collection Date: 12/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776
APPL ID: AZ47662
QCG: #87DME-161219A-214859

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	12/19/16	12/20/16

Quant Method: Y0GLYCOL.M
Run #: 1220Y029
Instrument: Yoda
Sequence: Y161220G
Dilution Factor: 1
Initials: MA

Printed: 12/21/16 12:20:05 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y029.D Vial: 29
Acq On : 20 Dec 16 23:45 Operator: MA
Sample : AZ47662W09 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 21 10:16 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Dec 20 14:47:54 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.88	152	218121	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	953062	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	546876	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	1003334	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	977552	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.75	264	946190	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

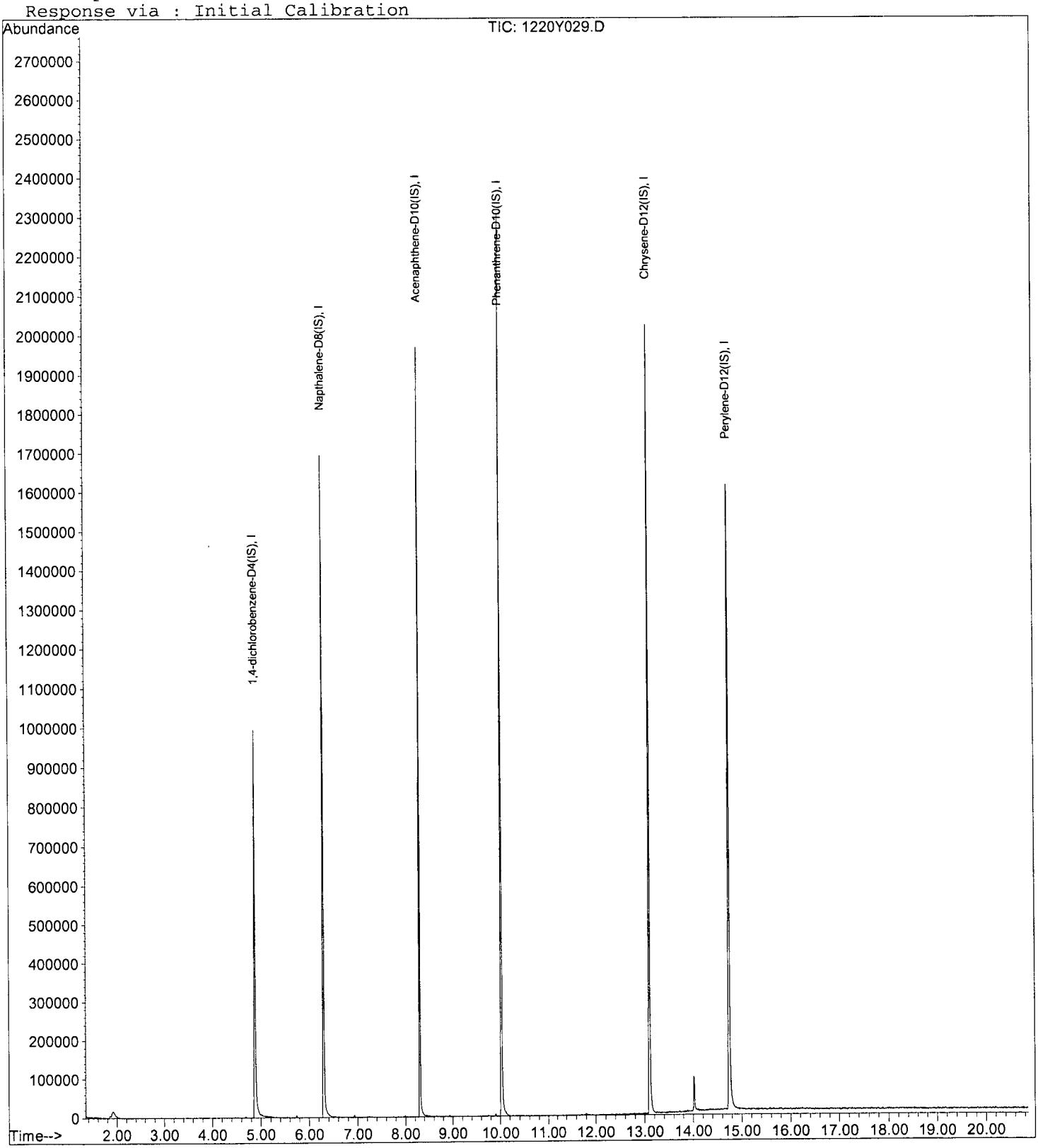
(#) = qualifier out of range (m) = manual integration
1220Y029.D Y0GLYCOL.M Wed Dec 21 10:51:22 2016

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y029.D Vial: 29
Acq On : 20 Dec 16 23:45 Operator: MA
Sample : AZ47662W09 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 21 10:16 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 21 10:44:23 2016
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH138
Sample Collection Date: 12/13/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776
APPL ID: AZ47663
QCG: #87DME-161219A-214859

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	12/19/16	12/21/16

Quant Method: Y0GLYCOL.M
Run #: 1220Y030
Instrument: Yoda
Sequence: Y161220G
Dilution Factor: 1
Initials: MA

Printed: 12/21/16 12:20:05 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y030.D Vial: 30
Acq On : 21 Dec 16 00:15 Operator: MA
Sample : AZ47663W09 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 21 10:16 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Dec 20 14:47:54 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	207684	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	933356	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	520965	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	959169	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	925813	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.75	264	1345996	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

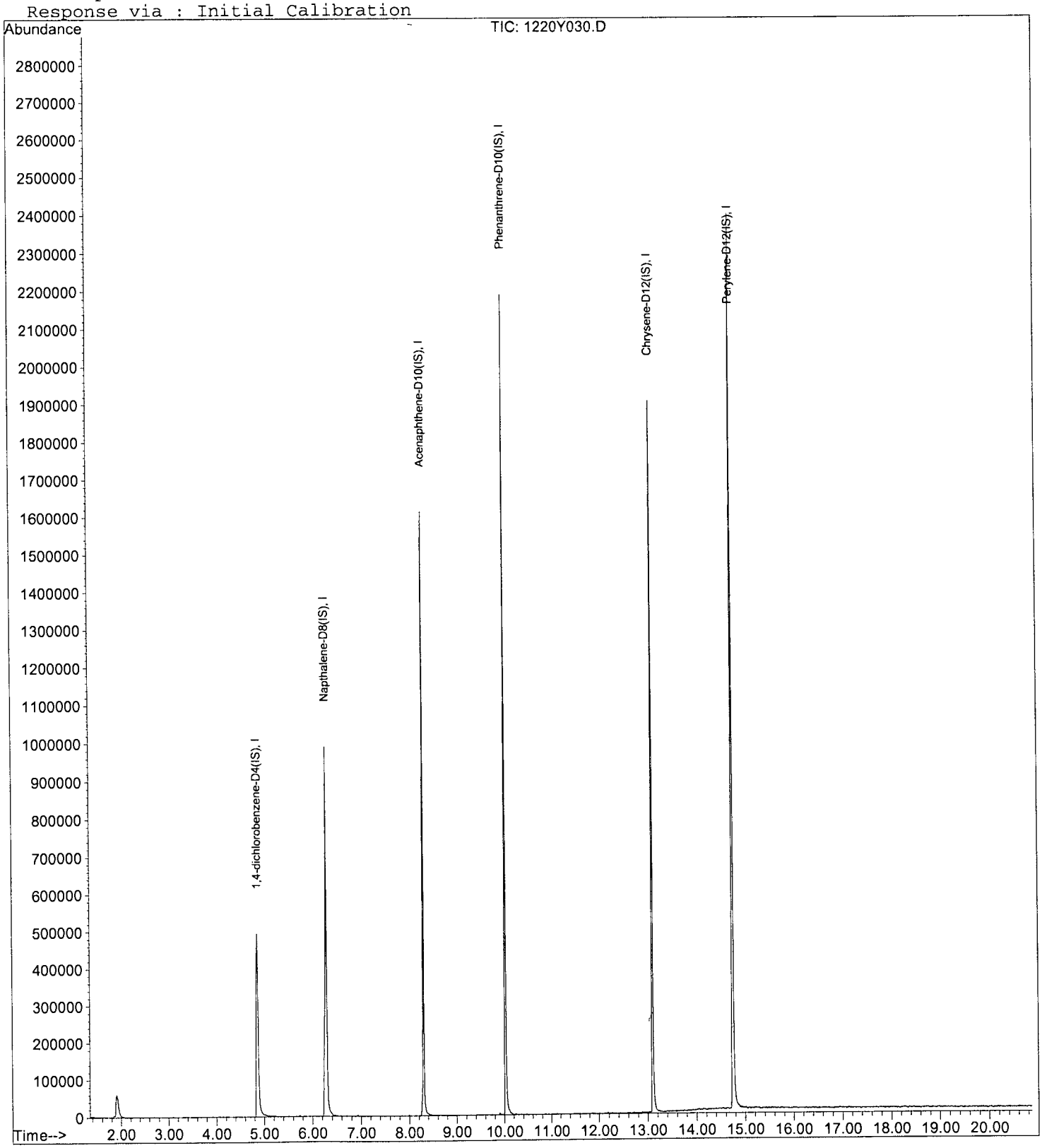
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y030.D
Acq On : 21 Dec 16 00:15
Sample : AZ47663W09 2/500
Misc :

Vial: 30
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 21 10:16 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 21 10:44:23 2016
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH144
Sample Collection Date: 12/13/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776
APPL ID: AZ47664
QCG: #87DME-161219A-214859

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	12/19/16	12/21/16

Quant Method: Y0GLYCOL.M
Run #: 1220Y031
Instrument: Yoda
Sequence: Y161220G
Dilution Factor: 1
Initials: MA

Printed: 12/21/16 12:20:05 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y031.D Vial: 31
Acq On : 21 Dec 16 00:45 Operator: MA
Sample : AZ47664W12 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 21 10:16 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Dec 20 14:47:54 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.88	152	198948	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.30	136	882857	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	508188	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	926740	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	953720	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.75	264	921603	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

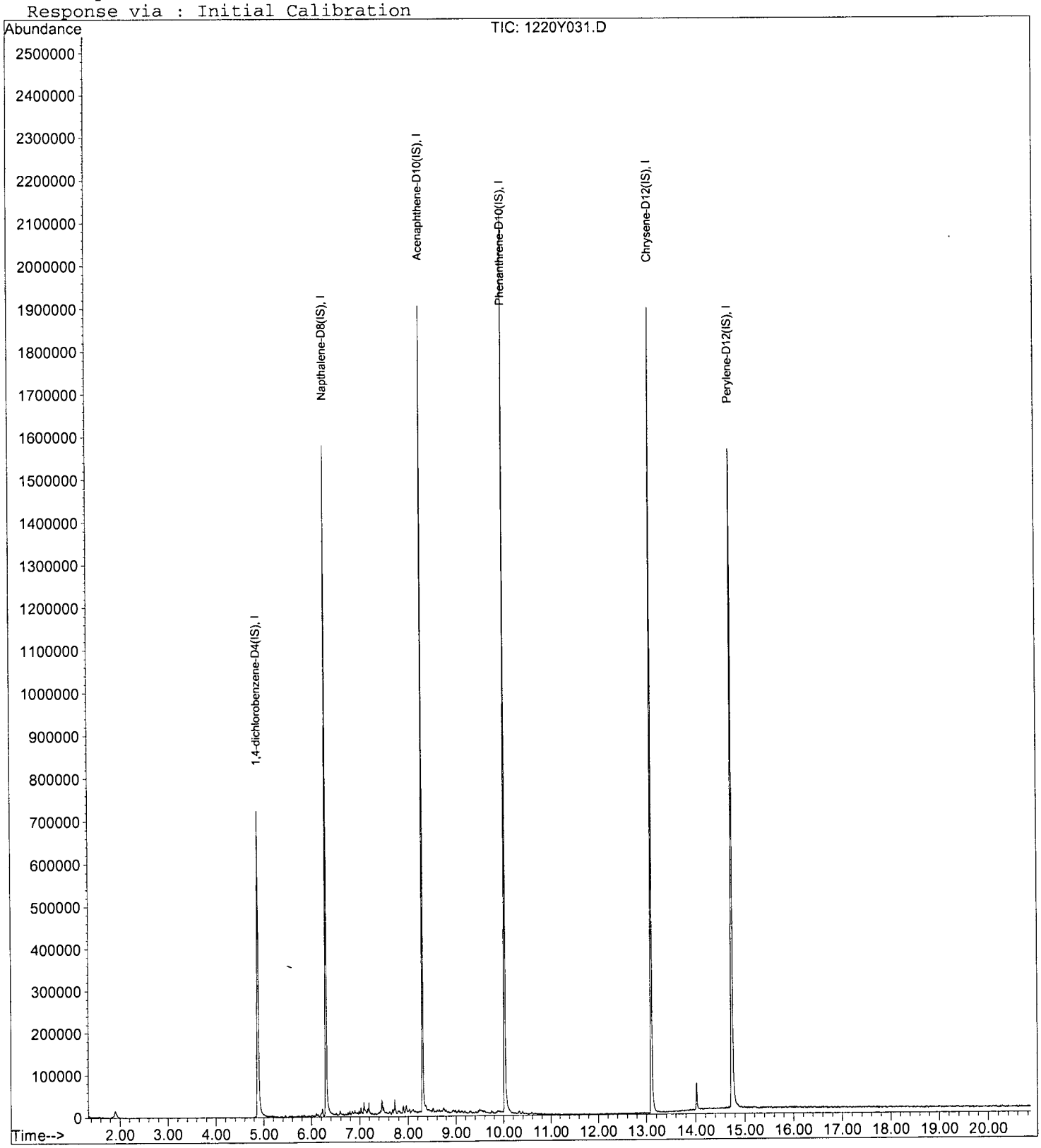
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y031.D Vial: 31
Acq On : 21 Dec 16 00:45 Operator: MA
Sample : AZ47664W12 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 21 10:16 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 21 10:44:23 2016
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH140
Sample Collection Date: 12/13/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776
APPL ID: AZ47665
QCG: #87DME-161219A-214859

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	12/19/16	12/21/16

Quant Method: Y0GLYCOL.M
Run #: 1220Y032
Instrument: Yoda
Sequence: Y161220G
Dilution Factor: 1
Initials: MA

Printed: 12/21/16 12:20:05 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y032.D Vial: 32
Acq On : 21 Dec 16 1:15 Operator: MA
Sample : AZ47665W11 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 21 10:48 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Dec 20 14:47:54 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.89	152	209365	40.00000	ppb	0.02
3) Napthalene-D8(IS)	6.30	136	909882	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	516699	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	973956	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	934276	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.75	264	839473	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

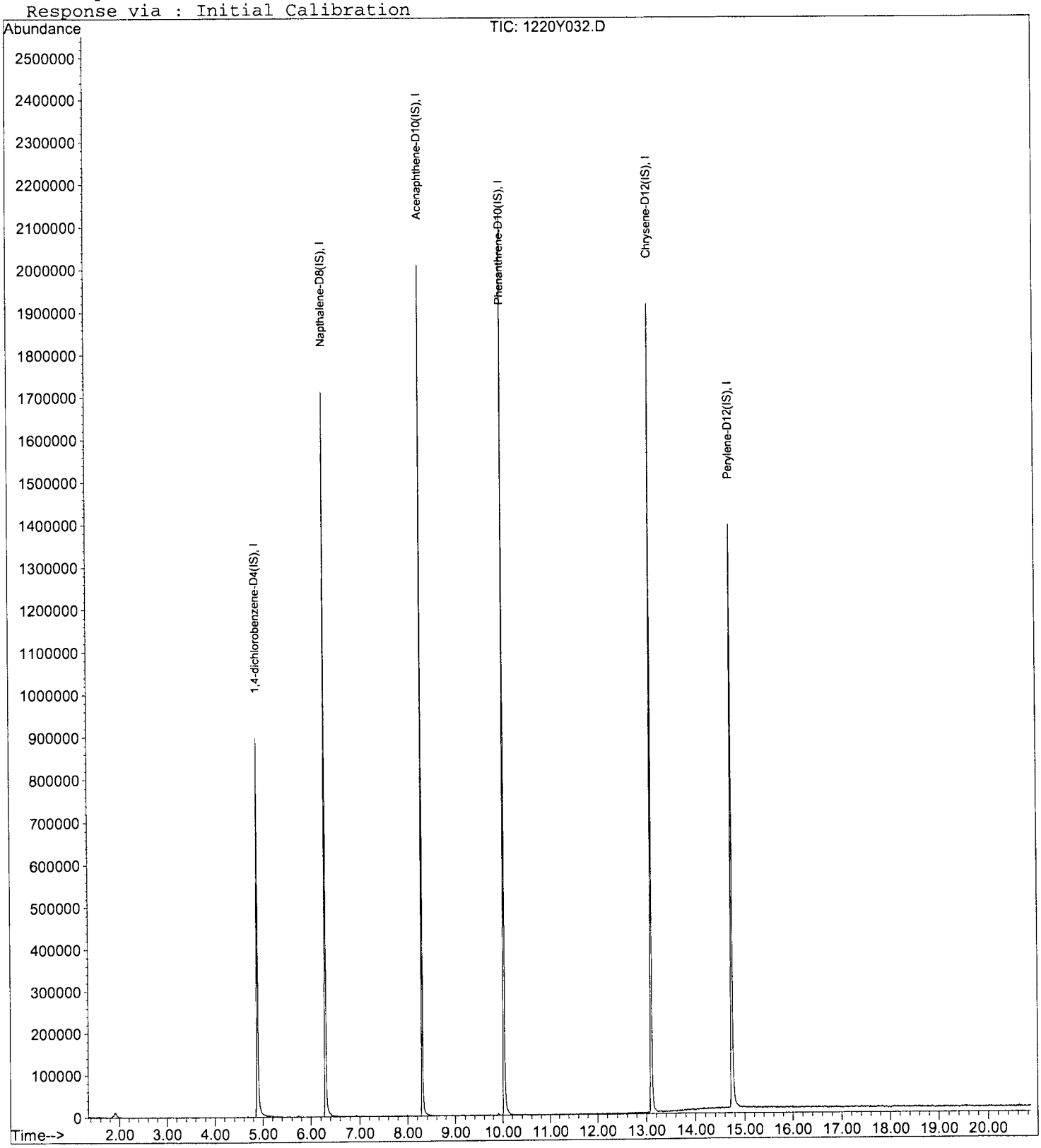
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y032.D Vial: 32
Acq On : 21 Dec 16 1:15 Operator: MA
Sample : AZ47665W11 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 21 10:48 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 21 10:44:23 2016
Response via : Initial Calibration



ORGANICS

Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:
SDG No:
Initial Cal. Date: 12/20/16
Instrument: Yoda
Initials:

		Compound	1220Y003.D 1	1220Y004.D 2	1220Y005.D 3	1220Y006.D 4	1220Y007.D 5	1220Y008 D 6	1220Y009.D 7	1220Y010 D 8			Avg	%RSD		
1	I	1,4-dichlorobenzene-D4(IS)														
2	TM	2-(2-Methoxyethoxy)ethanol	0.1800	0.1823	0.2140	0.2253	0.2267	0.2342	0.2268	0.2261			0.21	9.9	TM	
3	I	Napthalene-D8(IS)														
4	I	Acenaphthene-D10(IS)														
5	I	Phenanthrene-D10(IS)														
6	I	Chrysene-D12(IS)														
7	I	Perylene-D12(IS)														
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Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y003.D Vial: 3
Acq On : 20 Dec 16 9:32 Operator: MA
Sample : 50ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:24 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:24:33 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	235296	40.00	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	1020104	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	566383	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	1039128	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	951820	40.00	ppb	0.00
7) Perylene-D12(IS)	14.74	264	863918	40.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.12	45	52929	41.96	ppb	95

(#) = qualifier out of range (m) = manual integration
1220Y003.D Y0GLYCOL.M Thu Jan 19 15:24:57 2017 Page 1

Quantitation Report

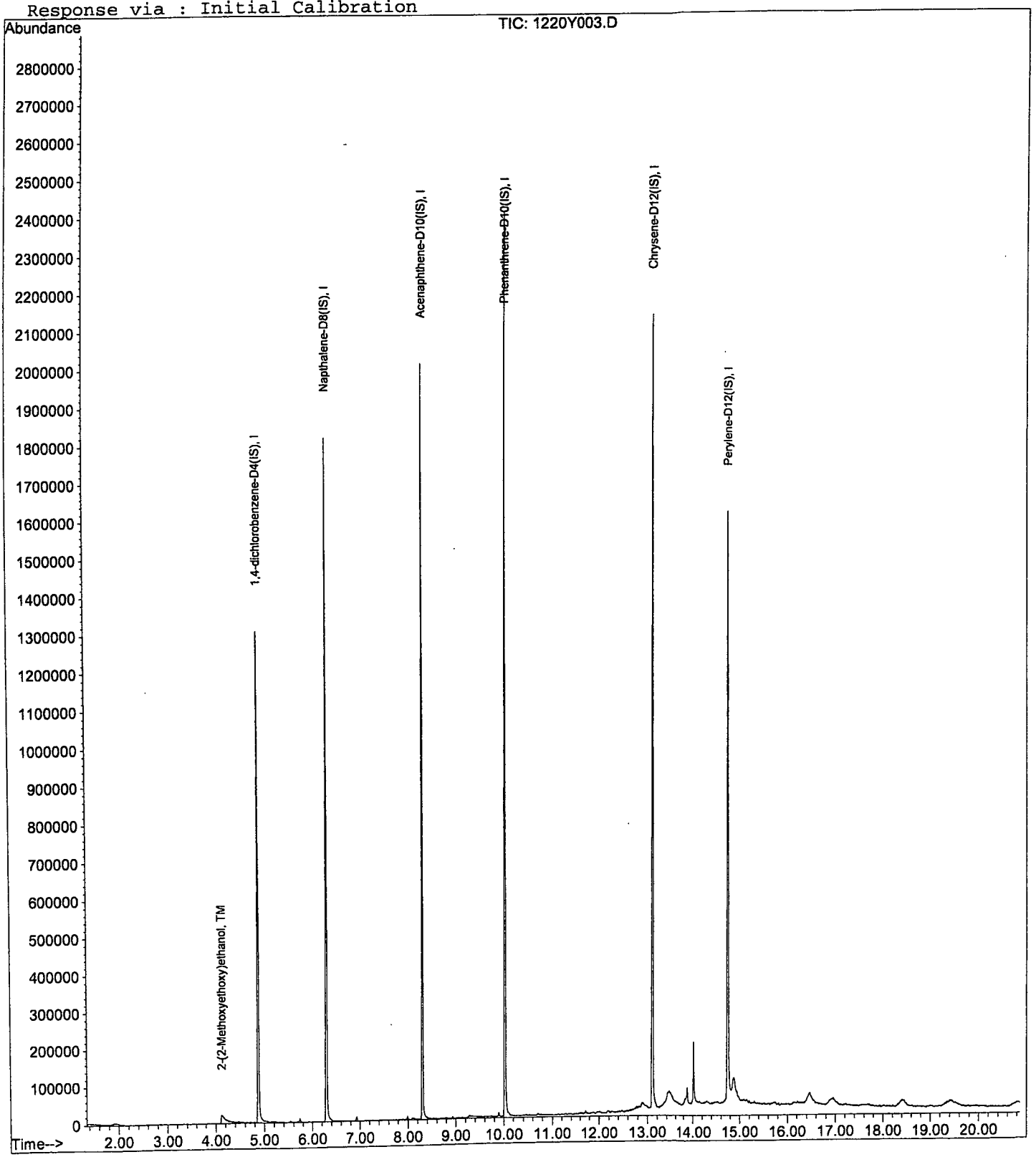
Data File : M:\YODA\DATA\Y161220G\1220Y003.D
Acq On : 20 Dec 16 9:32
Sample : 50ug/ml DEG 12/20/16
Misc :

Vial: 3
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:24 2017

Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:24:33 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y004.D
Acq On : 20 Dec 16 10:02
Sample : 100ug/ml DEG 12/20/16
Misc :

Vial: 4
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:28 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:27:52 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	236538	40.00	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	1021117	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	569209	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	1067696	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	1009921	40.00	ppb	0.00
7) Perylene-D12(IS)	14.74	264	992895	40.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.09	45	107826	85.04	ppb	92

(#) = qualifier out of range (m) = manual integration
1220Y004.D Y0GLYCOL.M Thu Jan 19 15:28:11 2017

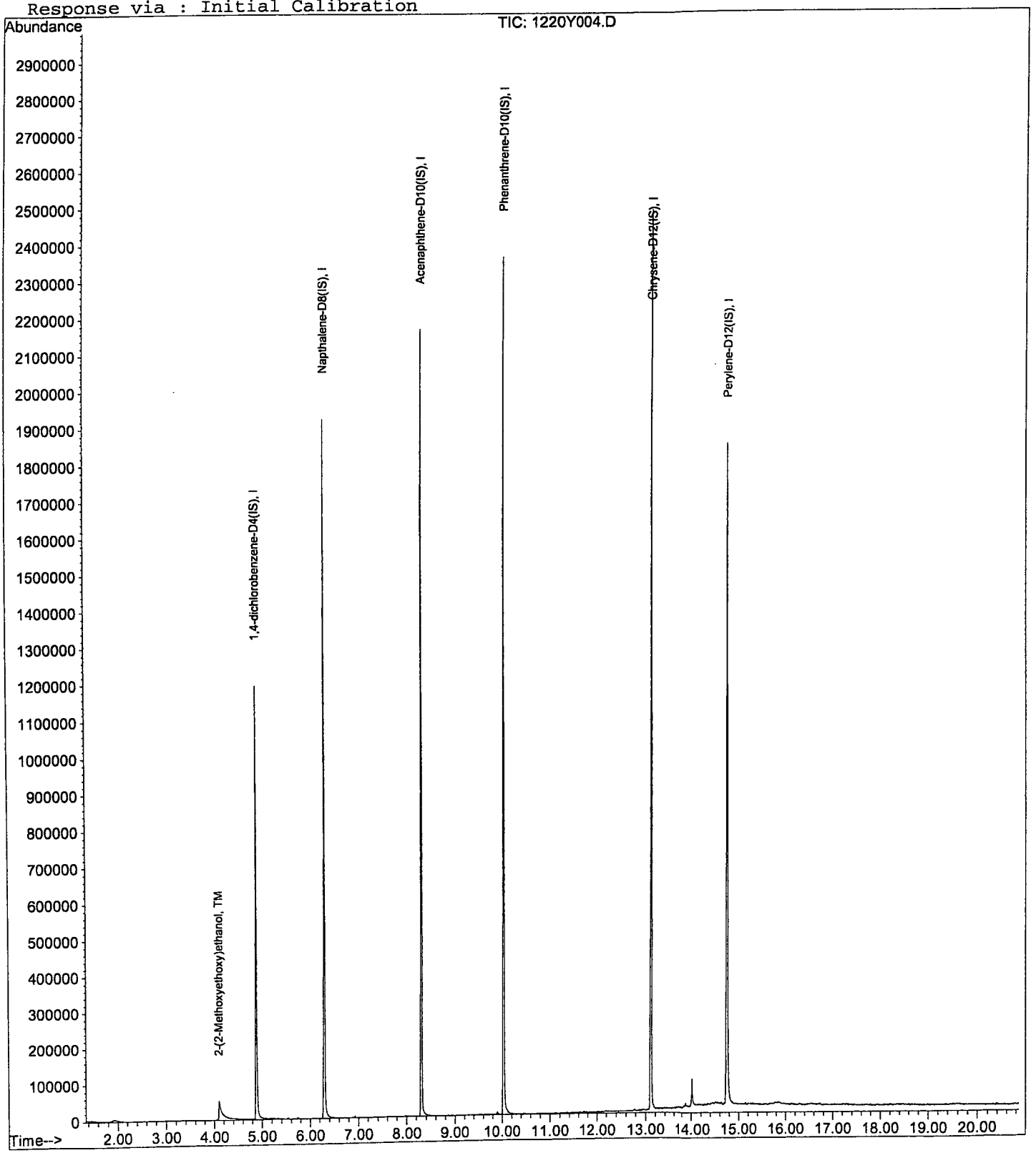
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y004.D
Acq On : 20 Dec 16 10:02
Sample : 100ug/ml DEG 12/20/16
Misc :

Vial: 4
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:28 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:27:52 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y005.D Vial: 5
Acq On : 20 Dec 16 11:27 Operator: MA
Sample : 200ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:31 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:27:52 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	219199	40.00	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	935952	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	541303	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	969145	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.11	240	850962	40.00	ppb	0.00
7) Perylene-D12(IS)	14.75	264	955898	40.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.06	45	234542	199.60	ppb	99

(#) = qualifier out of range (m) = manual integration
1220Y005.D Y0GLYCOL.M Thu Jan 19 15:31:38 2017

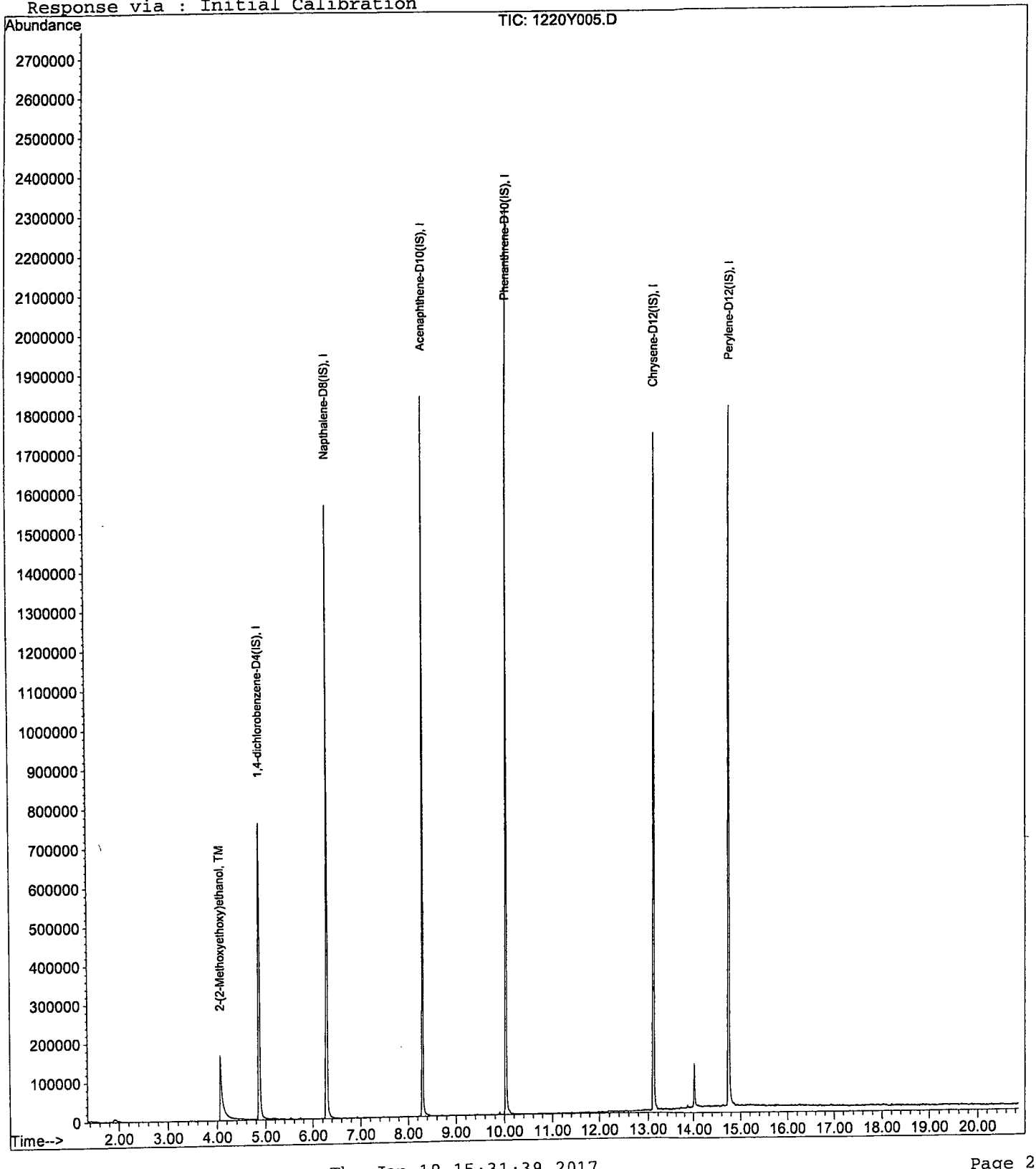
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y005.D
Acq On : 20 Dec 16 11:27
Sample : 200ug/ml DEG 12/20/16
Misc :

Vial: 5
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:31 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:27:52 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y006.D Vial: 6
Acq On : 20 Dec 16 11:57 Operator: MA
Sample : 400ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:31 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:27:52 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	219938	40.00	ppb	-0.02
3) Napthalene-D8(IS)	6.29	136	934708	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	524564	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	930250	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	927639	40.00	ppb	0.00
7) Perylene-D12(IS)	14.74	264	801484	40.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.07	45	495610	420.36	ppb	98

(#) = qualifier out of range (m) = manual integration
1220Y006.D Y0GLYCOL.M Thu Jan 19 15:32:08 2017 Page 1

Quantitation Report

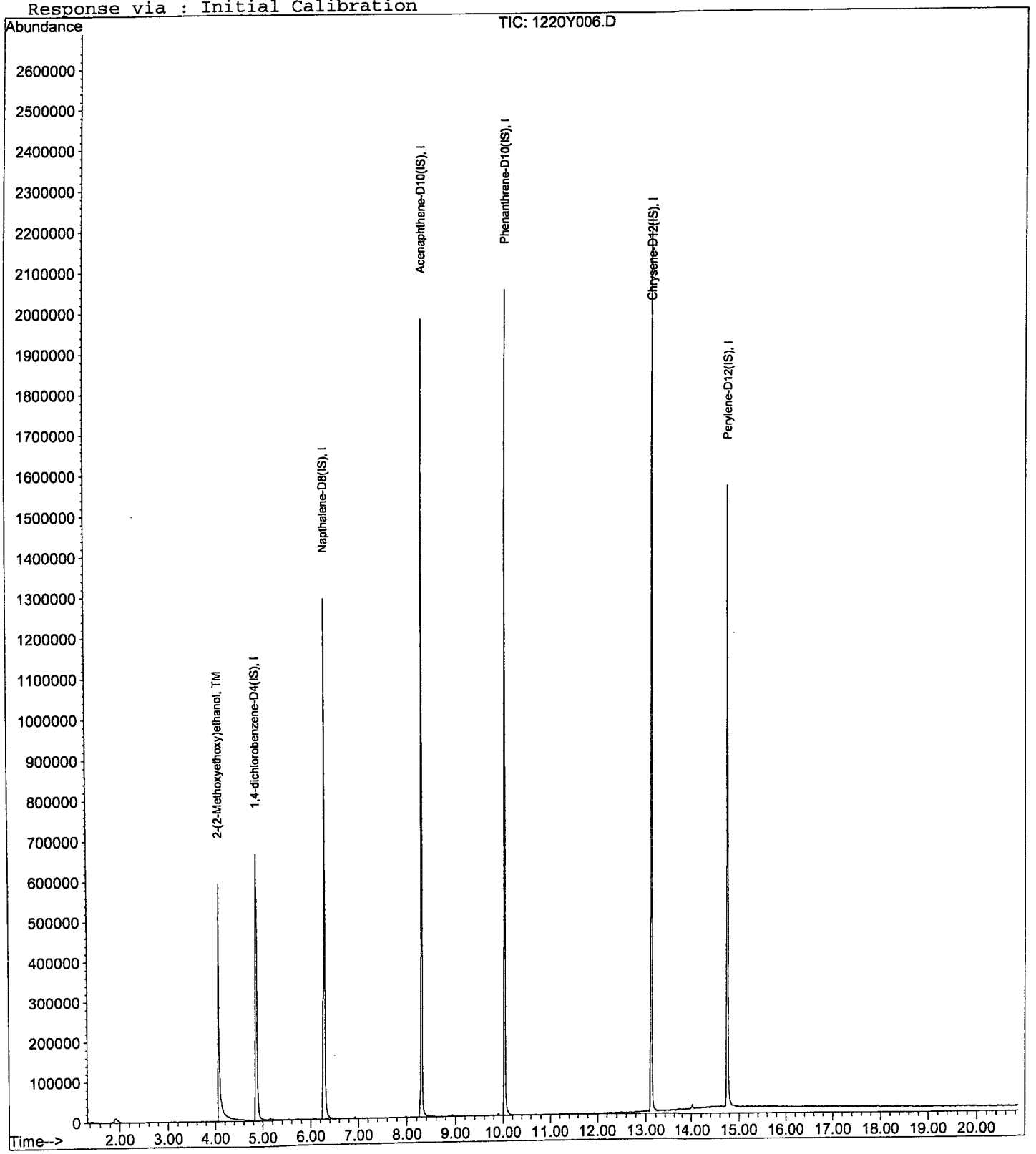
Data File : M:\YODA\DATA\Y161220G\1220Y006.D
Acq On : 20 Dec 16 11:57
Sample : 400ug/ml DEG 12/20/16
Misc :

Vial: 6
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:31 2017

Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:27:52 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y007.D
Acq On : 20 Dec 16 12:27
Sample : 500ug/ml DEG 12/20/16
Misc :

Vial: 7
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:34 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:34:38 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	220710	40.00	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	916121	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	479952	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	893005	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.11	240	850646	40.00	ppb	0.00
7) Perylene-D12(IS)	14.75	264	931322	40.00	ppb	0.00
System Monitoring Compounds						
						Qvalue
Target Compounds						
2) 2-(2-Methoxyethoxy)ethanol	4.07	45	625337	528.53	ppb	100

(#) = qualifier out of range (m) = manual integration
1220Y007.D Y0GLYCOL.M Thu Jan 19 15:34:55 2017

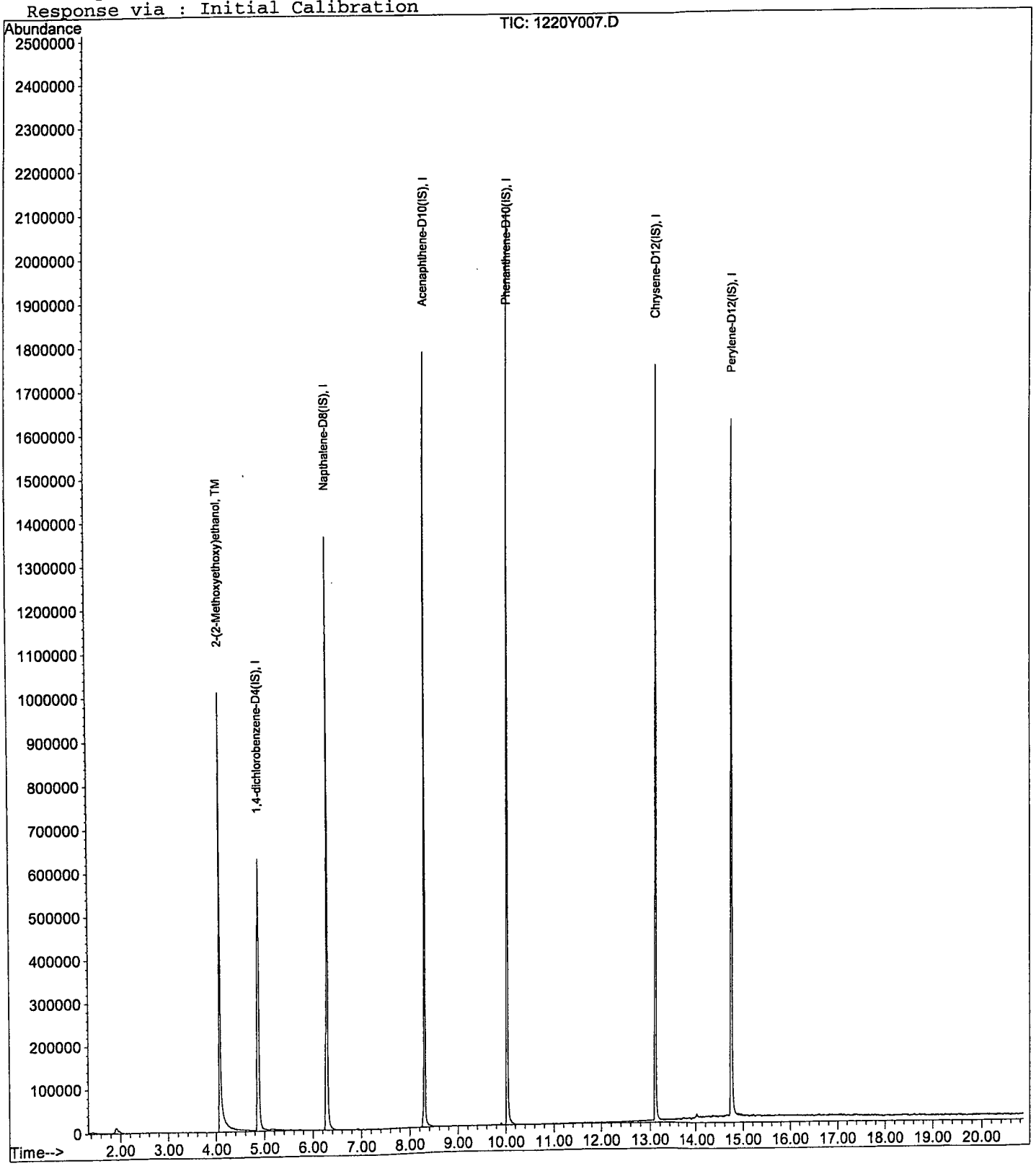
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y007.D
Acq On : 20 Dec 16 12:27
Sample : 500ug/ml DEG 12/20/16
Misc :

Vial: 7
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:34 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:34:38 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y008.D Vial: 8
Acq On : 20 Dec 16 12:57 Operator: MA
Sample : 600ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:35 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:35:45 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.88	152	218598	40.00	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	918286	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	502491	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	904865	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.11	240	875224	40.00	ppb	0.00
7) Perylene-D12(IS)	14.75	264	907883	40.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.08	45	767935	655.33	ppb	99

(#) = qualifier out of range (m) = manual integration
1220Y008.D Y0GLYCOL.M Thu Jan 19 15:36:02 2017 Page 1

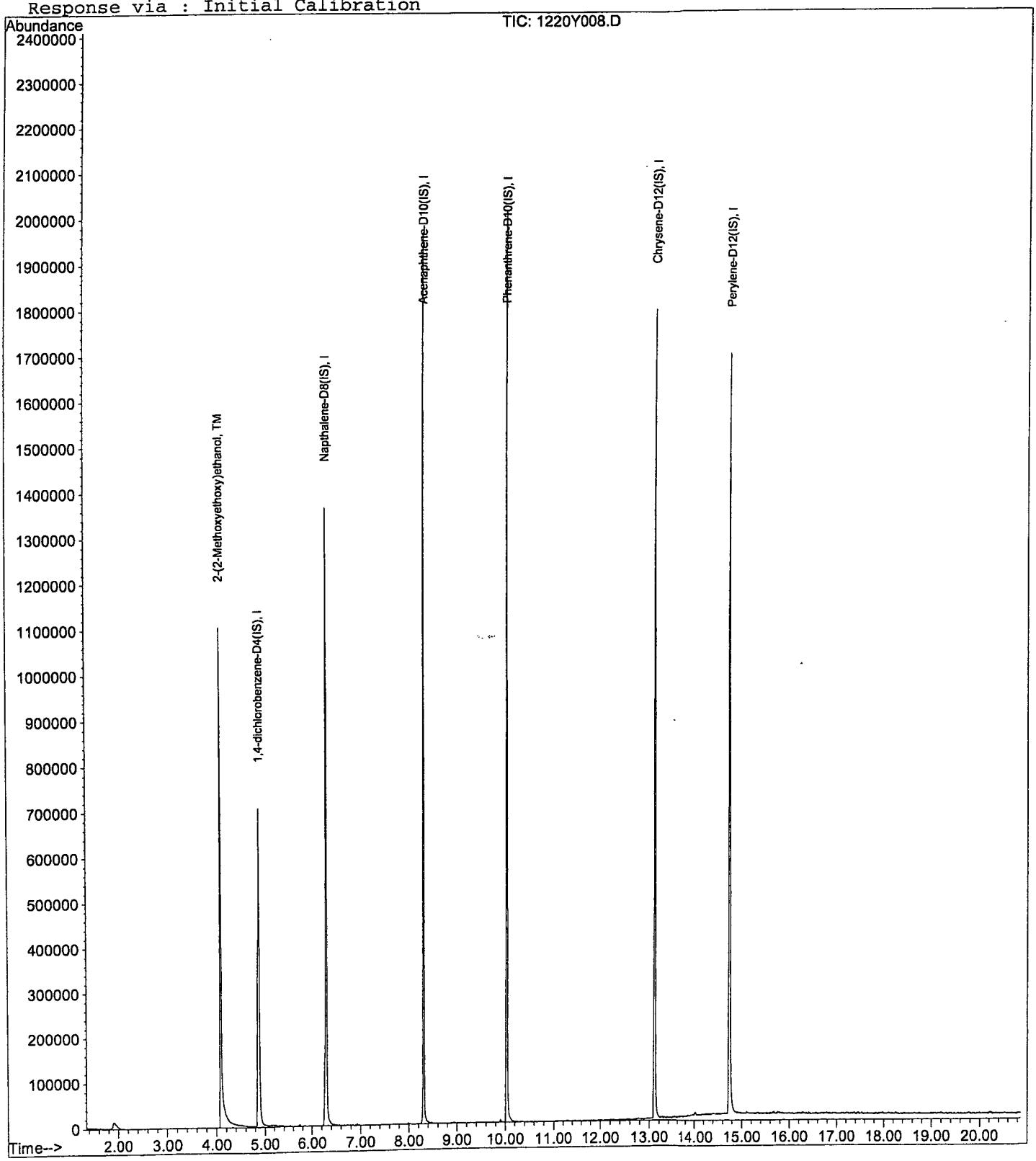
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y008.D
Acq On : 20 Dec 16 12:57
Sample : 600ug/ml DEG 12/20/16
Misc :

Vial: 8
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:35 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:35:45 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y009.D Vial: 9
Acq On : 20 Dec 16 13:28 Operator: MA
Sample : 800ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:36 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:35:45 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.88	152	224351	40.00	ppb	0.01
3) Napthalene-D8(IS)	6.29	136	955028	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	537186	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	1003381	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	910308	40.00	ppb	0.00
7) Perylene-D12(IS)	14.75	264	853883	40.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.09	45	1017711	846.21	ppb	98

(#) = qualifier out of range (m) = manual integration

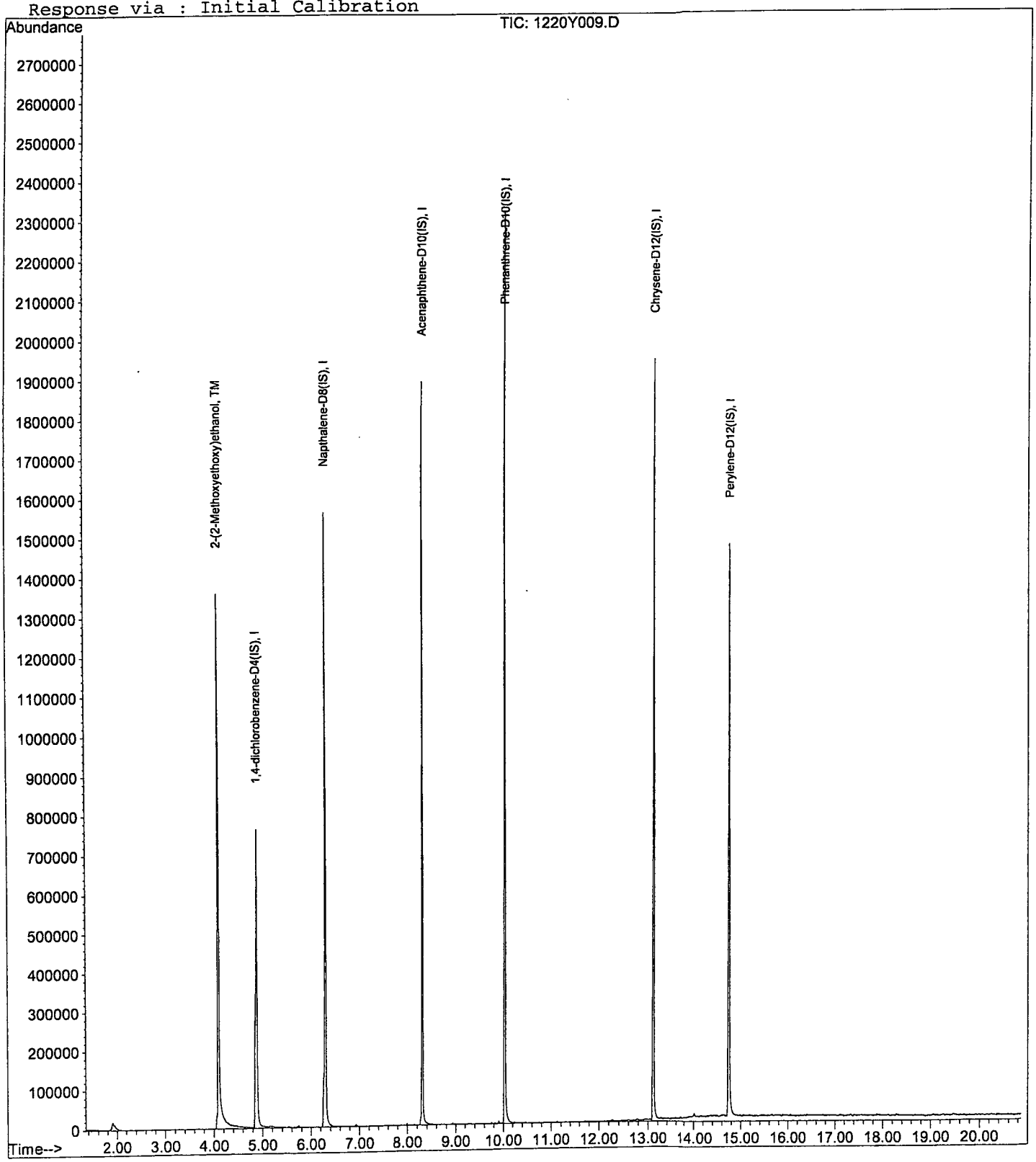
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y009.D
Acq On : 20 Dec 16 13:28
Sample : 800ug/ml DEG 12/20/16
Misc :

Vial: 9
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:36 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:35:45 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y010.D Vial: 10
Acq On : 20 Dec 16 13:58 Operator: MA
Sample : 1000ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:37 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:35:45 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	283148	40.00	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	1210963	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	689185	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	1234610	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.11	240	1201158	40.00	ppb	0.00
7) Perylene-D12(IS)	14.75	264	1162204	40.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.12	45	1600487	1054.44	ppb	99

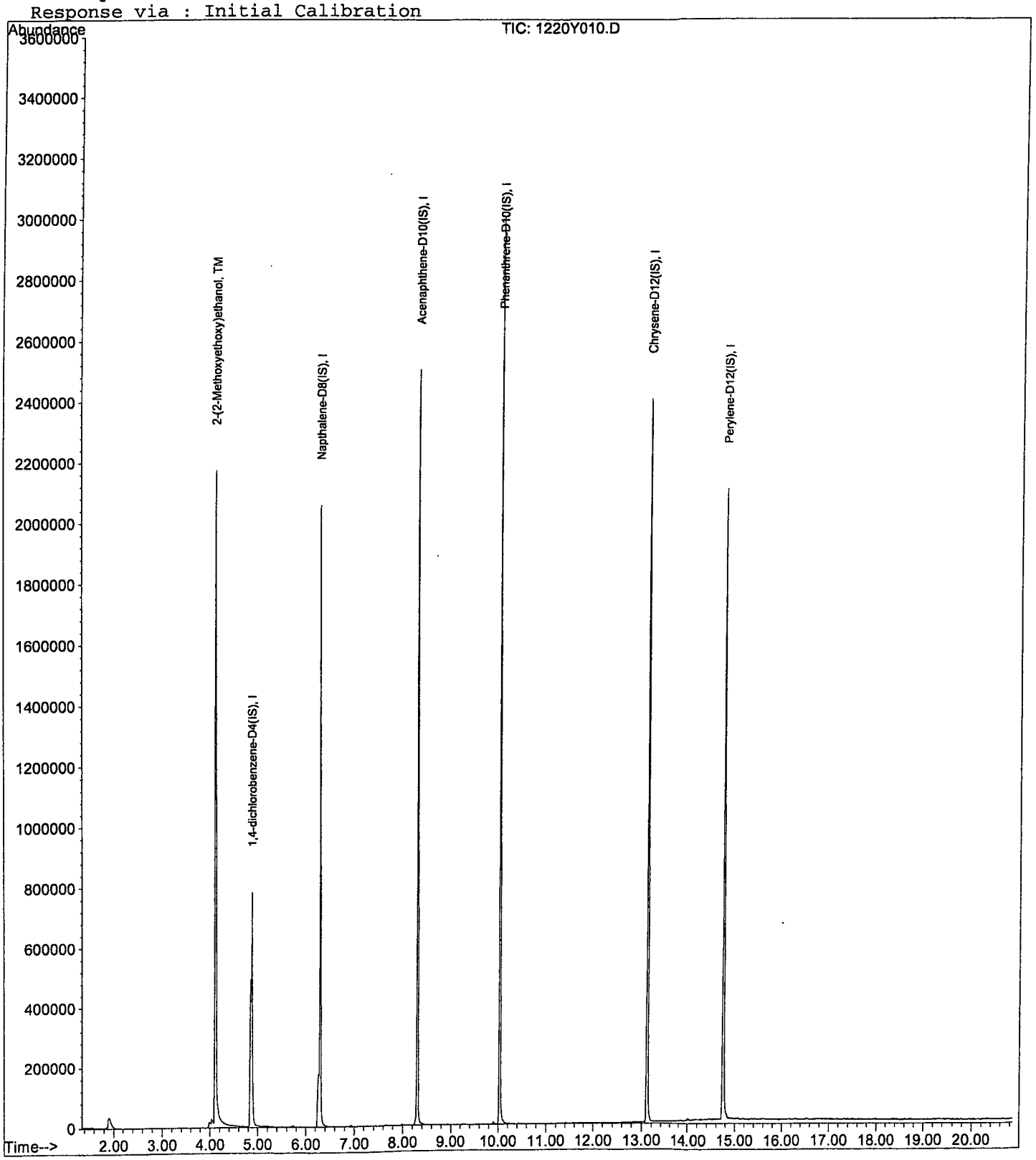
(#) = qualifier out of range (m) = manual integration
1220Y010.D Y0GLYCOL.M Thu Jan 19 15:37:34 2017 Page 1

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y010.D Vial: 10
Acq On : 20 Dec 16 13:58 Operator: MA
Sample : 1000ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:37 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:35:45 2017
Response via : Initial Calibration



Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/20/16
Instrument: Yoda
Initial Cal. Date: 12/20/16
Data File: 1220Y011.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TM	2-(2-Methoxyethoxy)ethanol	0.2144	0.2388	11	TM	
2							
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40							
		Average			11.0		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y011.D Vial: 11
Acq On : 20 Dec 16 15:01 Operator: MA
Sample : SS2 DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 15:16 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Dec 20 14:47:54 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.88	152	226449	40.00000 ppb	0.00
3) Napthalene-D8(IS)	6.29	136	946039	40.00000 ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	498527	40.00000 ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	939012	40.00000 ppb	0.00
6) Chrysene-D12(IS)	13.11	240	865583	40.00000 ppb	0.00
7) Perylene-D12(IS)	14.75	264	853444	40.00000 ppb	0.00

System Monitoring Compounds

Target Compounds					Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.08	45	676019	556.89065 ppb	99

(#) = qualifier out of range (m) = manual integration
1220Y011.D Y0GLYCOL.M Wed Dec 21 12:44:47 2016 Page 1

Quantitation Report

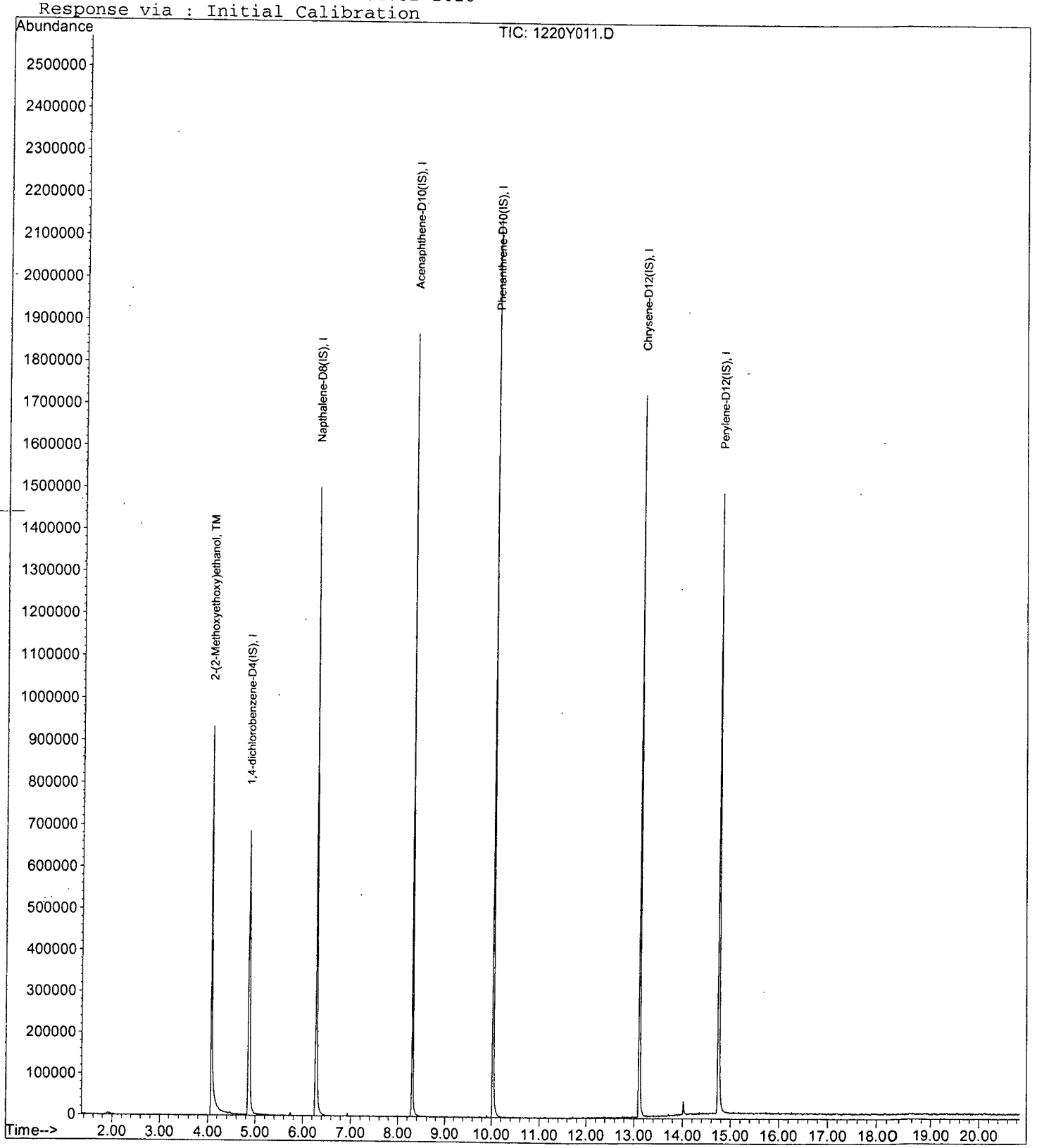
Data File : M:\YODA\DATA\Y161220G\1220Y011.D
Acq On : 20 Dec 16 15:01
Sample : SS2 DEG 12/20/16
Misc :

Vial: 11
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 20 15:16 2016

Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 21 10:52:52 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/21/16
Instrument: Yoda
Initial Cal. Date: 12/20/16
Data File: 1220Y036.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	2-(2-Methoxyethoxy)ethanol	0.2144	0.2292	6.9	TM	
3	I	Napthalene-D8(IS)	ISTD			I	
4	I	Acenaphthene-D10(IS)	ISTD			I	
5	I	Phenanthrene-D10(IS)	ISTD			I	
6	I	Chrysene-D12(IS)	ISTD			I	
7	I	Perylene-D12(IS)	ISTD			I	
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			6.9		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y036.D Vial: 36
Acq On : 21 Dec 16 2:58 Operator: MA
Sample : 500ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 21 10:11 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Dec 20 14:47:54 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	193156	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	829027	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	475011	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	879851	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	837836	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.74	264	717154	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.08	45	553398	534.45459	ppb	98

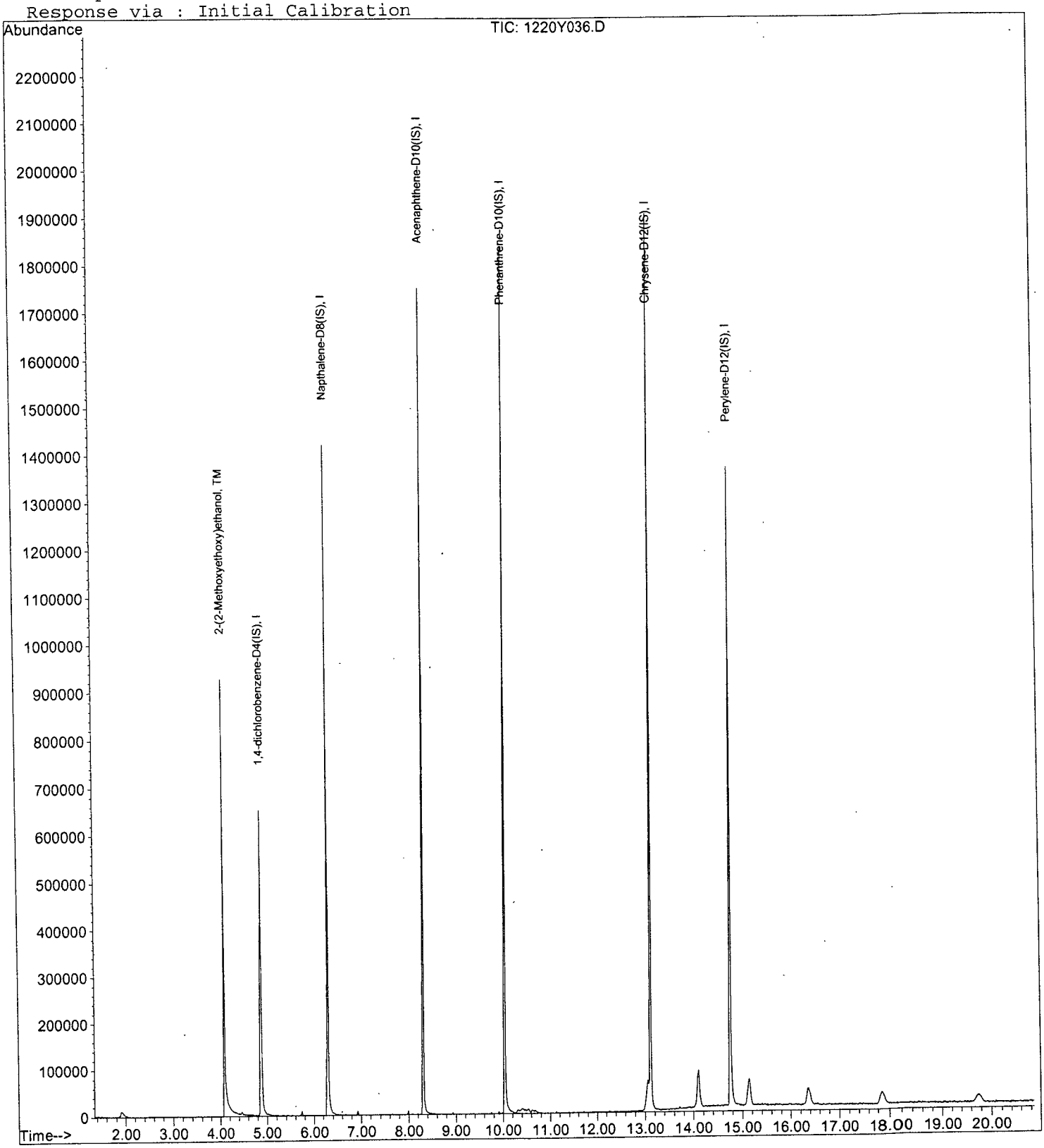
(#) = qualifier out of range (m) = manual integration
1220Y036.D Y0GLYCOL.M Wed Dec 21 12:45:16 2016

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y036.D Vial: 36
Acq On : 21 Dec 16 2:58 Operator: MA
Sample : 500ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 21 10:11 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 21 10:52:52 2016
Response via : Initial Calibration



ORGANICS

Raw Data

APPL, INC.

Method Blank
EPA 8270D MODIFIED WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161219W-47345 - 214859**
Batch ID: #87DME-161219A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2-(2-METHOXYETHOXY)-ETHAN	80.0 U	100	80.0	40.0	ug/L	12/19/16	12/20/16

Quant Method:Y0GLYCOL.
Run #:1220Y013
Instrument:Yoda
Sequence:Y161220G
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 12/21/16 12:20:06 PM

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y013.D Vial: 13
Acq On : 20 Dec 16 15:44 Operator: MA
Sample : 161219A BLK 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 16:14 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Dec 20 14:47:54 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.89	152	207897	40.00000	ppb	0.02
3) Napthalene-D8(IS)	6.30	136	889234	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	498710	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	922012	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	877245	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.75	264	1466318	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

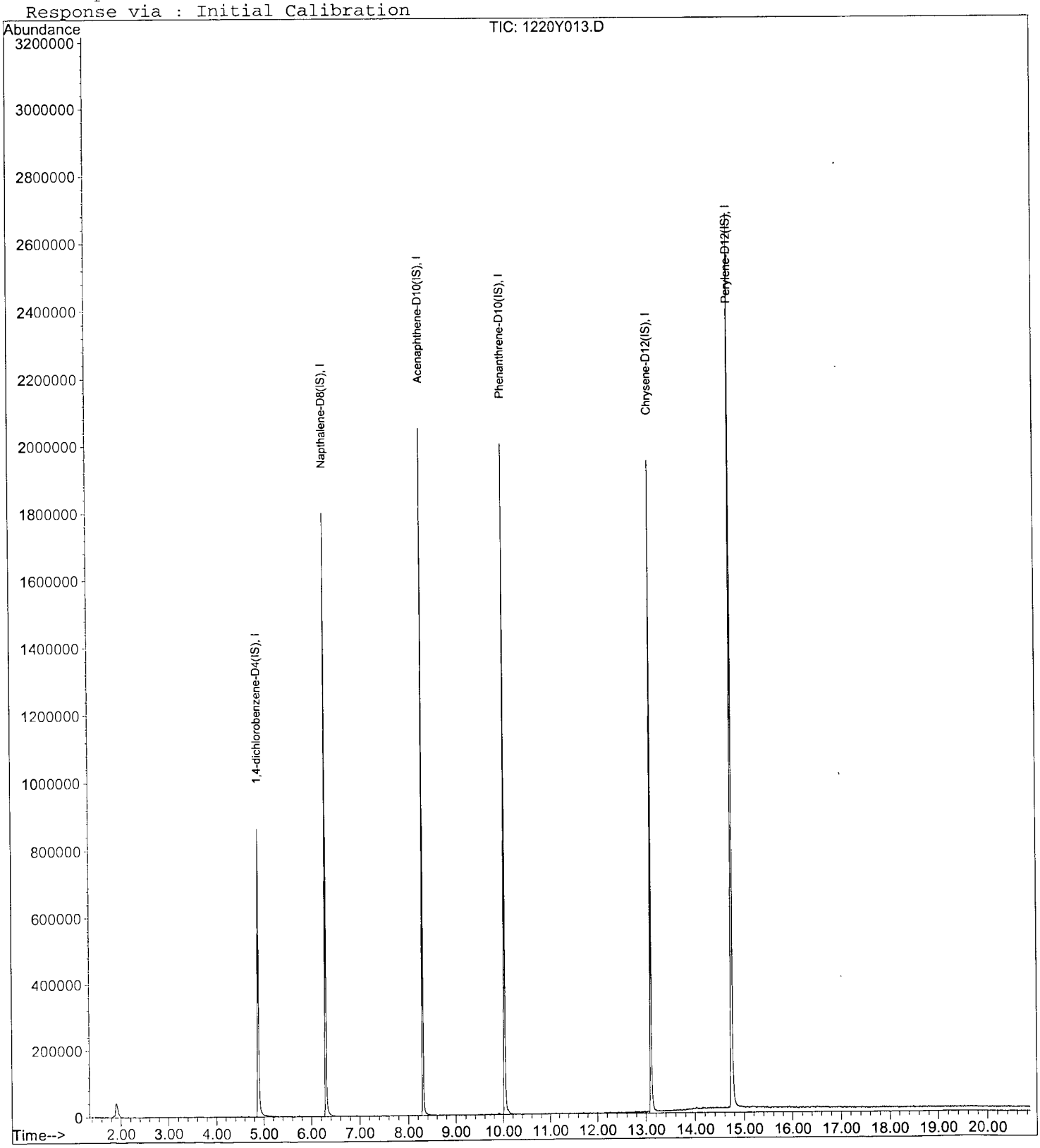
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y013.D
Acq On : 20 Dec 16 15:44
Sample : 161219A BLK 2/500
Misc :

Vial: 13
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 20 16:14 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Dec 20 14:47:54 2016
Response via : Initial Calibration



Laboratory Control Spike Recovery
EPA 8270D MODIFIED WATER

APPL ID: **161219W-47345 LCS - 214859**
Batch ID: #87DME-161219A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
2-(2-METHOXYETHOXY)-ETHANOL	80.0	43.5	54.4	30-130

Comments: _____

Primary	SPK
Quant Method :	Y0GLYCOL.M
Extraction Date :	12/19/16
Analysis Date :	12/20/16
Instrument :	Yoda
Run :	1220Y017
Initials :	MA

Printed: 12/21/16 12:20:06 PM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y017.D Vial: 17
Acq On : 20 Dec 16 17:45 Operator: MA
Sample : 161219A LCS-1 2/500 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 21 10:44 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 21 10:44:23 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.89	152	189835	40.00000 ppb	0.02
3) Napthalene-D8(IS)	6.30	136	856510	40.00000 ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	471037	40.00000 ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	880654	40.00000 ppb	0.00
6) Chrysene-D12(IS)	13.10	240	842606	40.00000 ppb	0.00
7) Perylene-D12(IS)	14.75	264	1097663	40.00000 ppb	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.19	45	44294	43.52613 ppb	97

Algorithm = $\frac{44294 \times 1 \times 40}{189835 \times 0.2144} = 43.5$ MA 12/21/16

(#) = qualifier out of range (m) = manual integration
1220Y017.D Y0GLYCOL.M Wed Dec 21 12:10:02 2016 Page 1

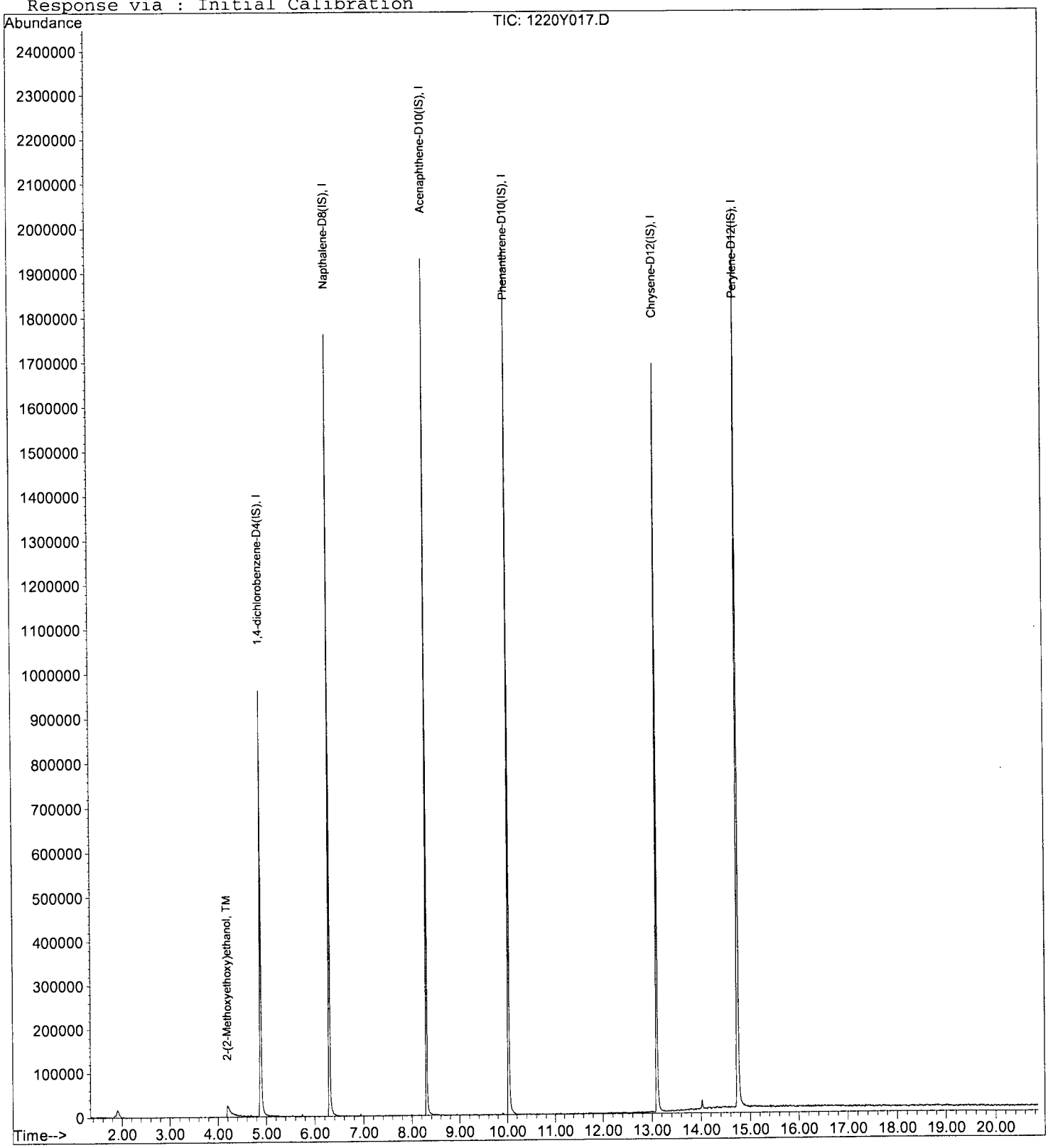
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y017.D
Acq On : 20 Dec 16 17:45
Sample : 161219A LCS-1 2/500
Misc :

Vial: 17
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 21 10:44 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 21 10:44:23 2016
Response via : Initial Calibration

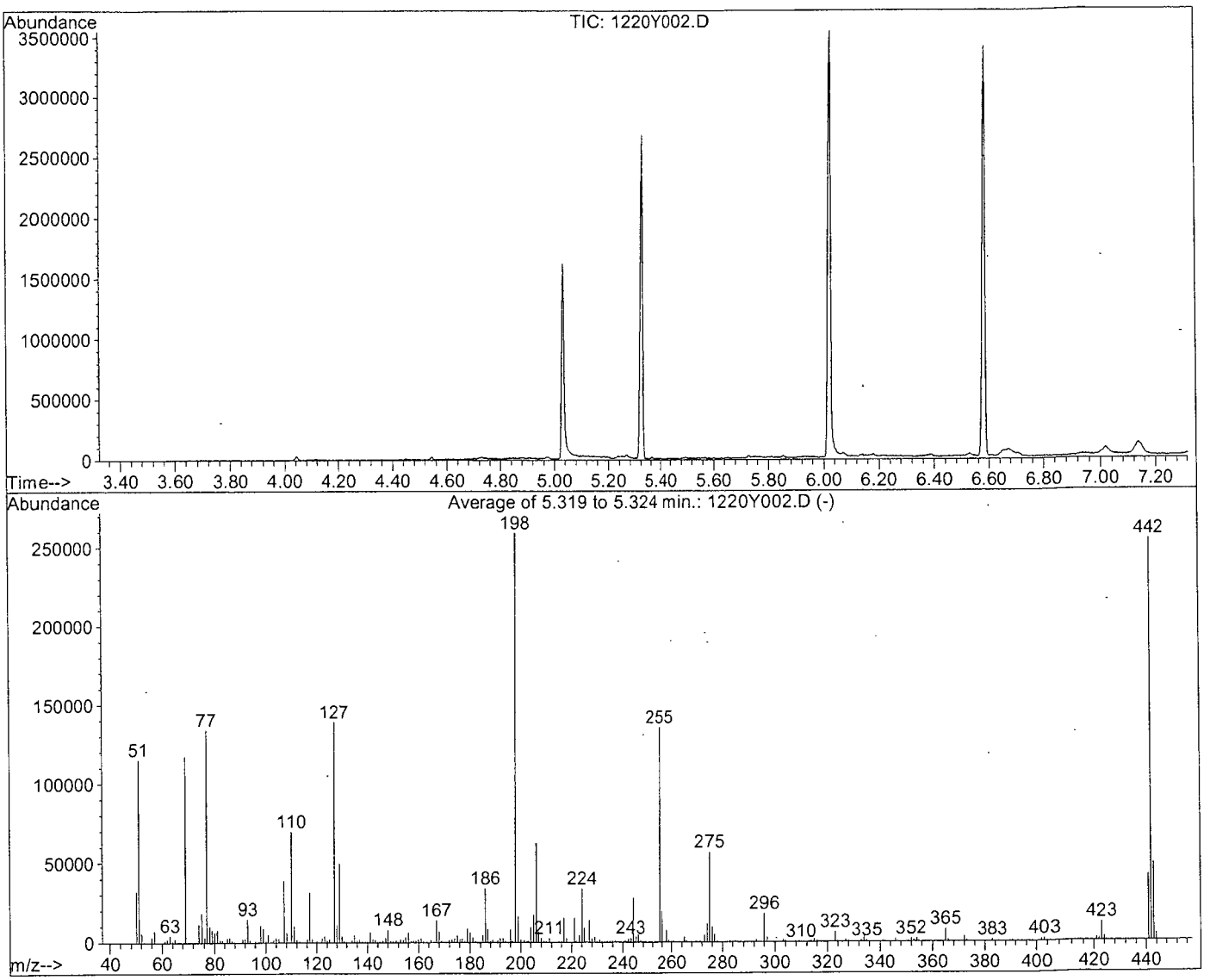


DFTPP

Data File : M:\YODA\DATA\Y161220G\1220Y002.D
Acq On : 20 Dec 16 9:12
Sample : SV Tune 11/15/16
Misc :

Vial: 2
Operator: MA
Inst : Yoda
Multiplr: 1.00

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 694, 695, 696; Background Corrected with Scan 686

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	44.4	115264	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.0	0	PASS
127	198	40	60	53.6	139077	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	259413	PASS
199	198	5	9	6.3	16297	PASS
275	198	10	30	21.8	56493	PASS
365	198	1	100	3.0	7796	PASS
441	443	0.01	100	85.0	41237	PASS
442	198	50	150	98.0	254272	PASS
443	442	17	23	19.1	48539	PASS

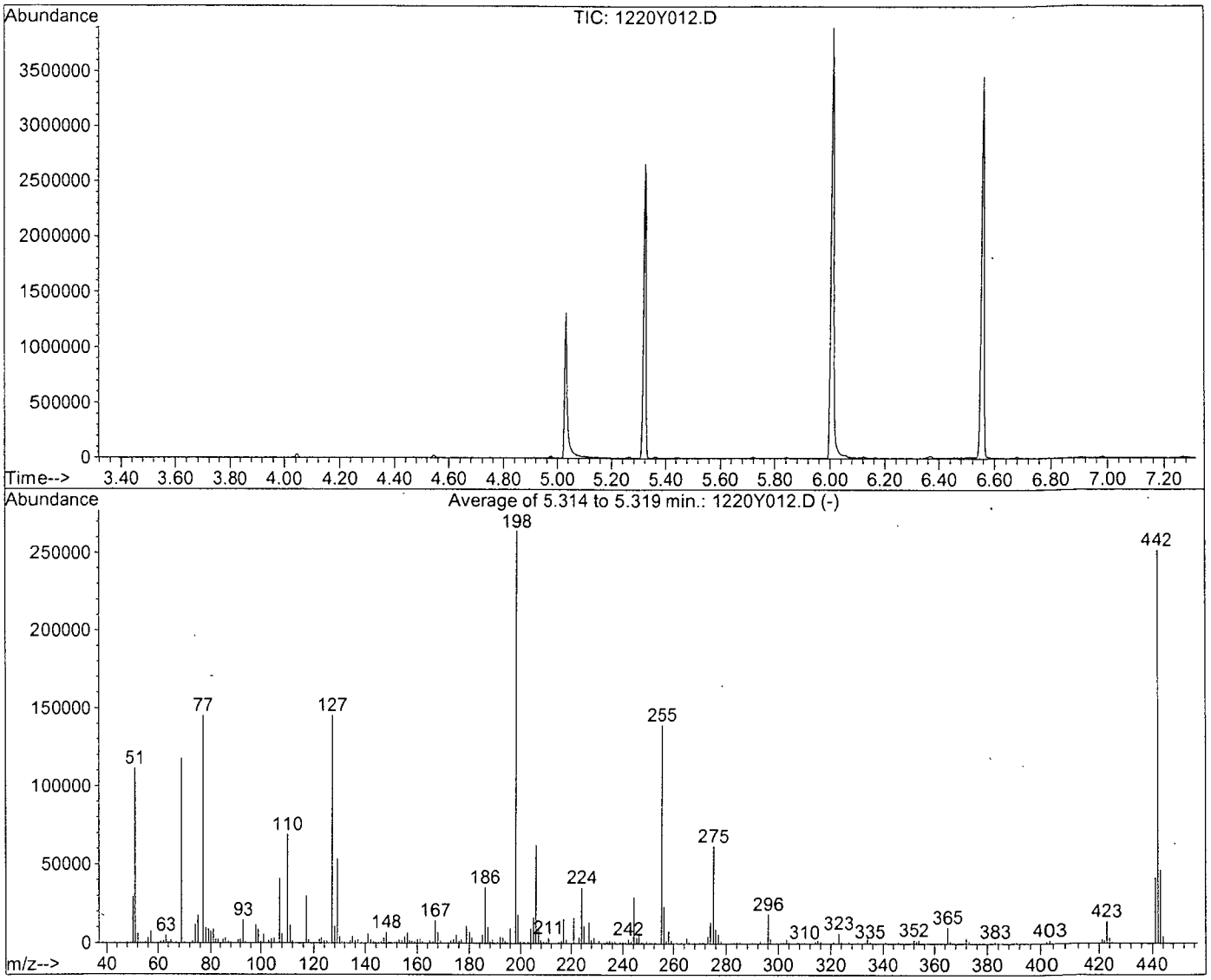
1220Y002.D Y0GLYCOL.M Tue Dec 20 09:18:08 2016

DFTPP

Data File : M:\YODA\DATA\Y161220G\1220Y012.D
Acq On : 20 Dec 16 15:27
Sample : SV Tune 11/15/16
Misc :

Vial: 12
Operator: MA
Inst : Yoda
Multiplr: 1.00

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 692, 693, 694; Background Corrected with Scan 685

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	42.2	111504	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.6	671	PASS
127	198	40	60	55.1	145493	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	264085	PASS
199	198	5	9	6.9	18147	PASS
275	198	10	30	23.4	61840	PASS
365	198	1	100	3.8	10103	PASS
441	443	0.01	100	89.8	41592	PASS
442	198	50	150	95.3	251797	PASS
443	442	17	23	18.4	46293	PASS

Semivolatile (SV) Tuning Solution -G.A.						
PREP DATE:	11/15/16	RH				
Semivolatile (SV) Tune Solution 50ug/ml						
Exp:	8/26/17					
		Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
Ultra Scient	Semivolatile GC	1000	N081628-37012	08/23/16	8/23/17	200
EM Science	Methylene Chloride		55098			3800
				Final Vol.		4000

GED Curve

PREP DATE:	12/20/16 RH											
8270 Standard Curve												
Exp:	2/11/17					**50**	**100**	**200**	**400**	**500**	**600**	**800**
		Conc.		Date								
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL	µL	µL	µL	µL
	GED MSTD Stc	2000	VAR	12/19/16	11/18/17	5	5	10	20	50	30	40
EM Science	Methanol		010616			195	95	90	80	150	70	60
Supelco	SV Internal	2000	A14020V-3660	11/09/16	11/09/17	4	2	2	2	4	2	2
				Final Vol.		204	102	102	102	204	102	102

GED Second Source (SS)

PREP DATE:	12/20/16 RH					**500**
Exp:	1/18/17	Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
	GED MSS Stoc	2000	VAR	12/19/16	10/27/17	50
EM Science	Methanol		010616			150
Supelco	SV Internal	2000	A14020V-3660	11/09/16	11/09/17	4
				Final Vol.		204

1000
μL
50
50
2
102

Methoxyethoxyethanol-Neat (MEE) Stock: 9/27/16-R.H. ex: 09/27/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
MEE	Neat 99.5%	HEM SERVIC	0.1154g	10 mL	11540 ug/ml	MC
		Cat: N-12404-1G				
		Lot: 5259000-37082				
		OP: 09/27/16				
		EXP: 09/27/17				

_MWE2MEE

Organic Extraction Worksheet

Method	Solid Phase Extraction of 2MEE in Water	Extraction Set	161219A	Extraction Method	MWE2MEE	Units	mL

Spiked ID 1	Diethylene Glycol 12-15-16 EXP 12-15-17		Surrogate ID 1		
Spiked ID 2	MEE 11540ug/mL 9-27-16 EXP 9-27-17		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	12/19/16 9:45	
Spiked ID 8			Ext. End Time:	12/19/16 17:00	
			GC Requires Extract By:	12/20/16 0:00	

pH1			Water Bath Temp Criteria	
pH2				
pH3				

Spiked By: KY **Date** 12/19/16 **Witnessed By:** CFM **Date** 12/19/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	161219A Blk				NA	NA equip	500	2	7	12/19/16 9:45	
2	161219A LCS-1		0.040	1	NA	NA equip	500	2	7	12/19/16 9:45	
3	161219A LCS-2		0.250	1	NA	NA equip	500	2	7	12/19/16 9:45	
4	AZ47343	AZ47343W14			NA	NA equip	500	2	7	12/19/16 9:45	81734 RUSH 1 WEEK
5	AZ47344	AZ47344W13			NA	NA equip	500	2	7	12/19/16 9:45	81734 RUSH 1 WEEK
6	AZ47345 MS-1	AZ47345W32	0.040	1	NA	NA equip	500	2	7	12/19/16 9:45	81734 RUSH 1 WEEK
7	AZ47345 MSD-1	AZ47345W32	0.040	1	NA	NA equip	500	2	7	12/19/16 9:45	81734 RUSH 1 WEEK
8	AZ47345	AZ47345W31			NA	NA equip	500	2	7	12/19/16 9:45	81734 RUSH 1 WEEK
9	AZ47494	AZ47494W14			NA	NA equip	500	2	7	12/19/16 9:45	81760 1 WEEK
10	AZ47495	AZ47495W10			NA	NA equip	500	2	7	12/19/16 9:45	81760 1 WEEK
11	AZ47496	AZ47496W11			NA	NA equip	500	2	7	12/19/16 9:45	81760 1 WEEK
12	AZ47497	AZ47497W14			NA	NA equip	500	2	7	12/19/16 9:45	81760 1 WEEK
13	AZ47498	AZ47498W17			NA	NA equip	500	2	7	12/19/16 9:45	81760 1 WEEK
14	AZ47658	AZ47658W14			NA	NA equip	500	2	7	12/19/16 9:45	81776 1 WEEK
15	AZ47659	AZ47659W09			NA	NA equip	500	2	7	12/19/16 9:45	81776 1 WEEK
16	AZ47660	AZ47660W14			NA	NA equip	500	2	7	12/19/16 9:45	81776 1 WEEK

Solvent and Lot#	
ENVI-Carb Plus 400MG/1ML	
Reverible Tube Lot:	8088704
PH Strip	HC 574756
Di Water	12-19-16
Dichloromethane	56153
Methanol	060316C

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	RH
Date	12/19/16
Time	5:00
Refrigerator	GC-C

	Technician's Initials
Scanned By	KY
Sample Preparation	CFM
Extraction	CFM,KY
Concentration	KY

Modified	12/19/16 11:23:17 AM

Reviewed By: KY **Date** 12/19/16

Organic Extraction Worksheet

Method	Solid Phase Extraction of 2MEE in Water	Extraction Set	161219A	Extraction Method	MWE2MEE	Units	mL

Spiked ID 1	Diethylene Glycol 12-15-16 EXP 12-15-17		Surrogate ID 1		
Spiked ID 2	MEE 11540ug/mL 9-27-16 EXP 9-27-17		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	12/19/16 9:45	
Spiked ID 8			Ext. End Time:	12/19/16 17:00	
			GC Requires Extract By:	**12/20/16 0:00**	

pH1			Water Bath Temp Criteria	
pH2				
pH3				

Spiked By: KY **Date** 12/19/16 **Witnessed By:** CFM **Date** 12/19/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
17	AZ47661	AZ47661W06			NA	NA equip	500	2	7	12/19/16 9:45	81776 1 WEEK
18	AZ47662	AZ47662W09			NA	NA equip	500	2	7	12/19/16 9:45	81776 1 WEEK
19	AZ47663	AZ47663W09			NA	NA equip	500	2	7	12/19/16 9:45	81776 1 WEEK
20	AZ47664	AZ47664W12			NA	NA equip	500	2	7	12/19/16 9:45	81776 1 WEEK
21	AZ47665	AZ47665W11			NA	NA equip	500	2	7	12/19/16 9:45	81776 1 WEEK
22	M STD		1	1	NA	NA equip	500	5	7	12/19/16 9:45	
23	SS		0.0870	2	NA	NA equip	500	2	7	12/19/16 9:45	

KY 12/19/16

Solvent and Lot#	
ENVI-Carb Plus 400MG/1ML	
Reverible Tube Lot:	8088704
PH Strip	HC 574756
Di Water	12-19-16
Dichloromethane	56153
Methanol	060316C

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	
Date	
Time	
Refrigerator	

	Technician's Initials
Scanned By	KY
Sample Preparation	CFM
Extraction	CFM,KY
Concentration	KY

Modified	12/19/16 11:23:17 AM

Reviewed By: KY **Date** 12/19/16

Injection Log

Directory: M:\YODA\DATA\Y161220G\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	1220Y002.D	1	SV Tune 11/15/16		20 Dec 16 9:12
2	3	1220Y003.D	1	50ug/ml DEG 12/20/16		20 Dec 16 9:32
3	4	1220Y004.D	1	100ug/ml DEG 12/20/16		20 Dec 16 10:02
4	5	1220Y005.D	1	200ug/ml DEG 12/20/16		20 Dec 16 11:27
5	6	1220Y006.D	1	400ug/ml DEG 12/20/16		20 Dec 16 11:57
6	7	1220Y007.D	1	500ug/ml DEG 12/20/16		20 Dec 16 12:27
7	8	1220Y008.D	1	600ug/ml DEG 12/20/16		20 Dec 16 12:57
8	9	1220Y009.D	1	800ug/ml DEG 12/20/16		20 Dec 16 13:28
9	10	1220Y010.D	1	1000ug/ml DEG 12/20/16		20 Dec 16 13:58
10	11	1220Y011.D	1	SS2 DEG 12/20/16		20 Dec 16 15:01
11	12	1220Y012.D	1	SV Tune 11/15/16		20 Dec 16 15:27
12	13	1220Y013.D	1	161219A BLK 2/500		20 Dec 16 15:44
13	17	1220Y017.D	1	161219A LCS-1 2/500		20 Dec 16 17:45
14	25	1220Y025.D	1	AZ47658W14 2/500		20 Dec 16 21:45
15	26	1220Y026.D	1	AZ47659W09 2/500		20 Dec 16 22:15
16	27	1220Y027.D	1	AZ47660W14 2/500		20 Dec 16 22:45
17	28	1220Y028.D	1	AZ47661W06 2/500		20 Dec 16 23:15
18	29	1220Y029.D	1	AZ47662W09 2/500		20 Dec 16 23:45
19	30	1220Y030.D	1	AZ47663W09 2/500		21 Dec 16 00:15
20	31	1220Y031.D	1	AZ47664W12 2/500		21 Dec 16 00:45
21	32	1220Y032.D	1	AZ47665W11 2/500		21 Dec 16 1:15
22	36	1220Y036.D	1	500ug/ml DEG 12/2016		21 Dec 16 2:58

EPA METHOD 8260B
Volatile Organic Compounds

APPL, INC.

EPA METHOD 8260B
Volatile Organic Compounds
QC Summary

APPL, INC.

Method Blank

EPA 8260B BTEX WATER

Blank Name/QCG: **161218W-47493 - 214886**

Batch ID: #86BTO-161218AL

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	12/18/16	12/18/16
BLANK	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	12/18/16	12/18/16
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	12/18/16	12/18/16
BLANK	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	12/18/16	12/18/16
BLANK	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	12/18/16	12/18/16
BLANK	SURROGATE: 1,2-DICHLOROET	96.8	81-118			%	12/18/16	12/18/16
BLANK	SURROGATE: 4-BROMOFLUORO	95.6	85-114			%	12/18/16	12/18/16
BLANK	SURROGATE: DIBROMOFLUOR	99.0	80-119			%	12/18/16	12/18/16
BLANK	SURROGATE: TOLUENE-D8 (S)	96.7	89-112			%	12/18/16	12/18/16

Quant Method: LALLW.M
Run #: 1218L08
Instrument: Loki
Sequence: 161216
Initials: DG

GC SC-Blank-REG MDLs-DOD
Printed: 01/03/17 3:20:13 PM

Method Blank
EPA 8260B GRO WATER

Blank Name/QCG: **161218W-47493 - 214887**
Batch ID: #GRO86-161218AL

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	12/18/16	12/18/16
BLANK	SURROGATE: 4-BROMOFLUORO	95.6	85-114			%	12/18/16	12/18/16

Quant Method: LSUR1216.M
Run #: 1218L08
Instrument: Loki
Sequence: 161216
Initials: DG

GC SC-Blank-REG MDLs-DOD
Printed: 12/29/16 9:31:08 AM

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81776

Case No: 81776 Date Analyzed: 12/18/16

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: 1,2-DICHLOROETHANE-D4 (S)			SURROGATE: 4-BROMOFLUOROBENZENE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161218AL-LCS	Lab Control Spike	81-118	94.4		85-114	99.6	
161218AL-BLK	Blank	81-118	96.8		85-114	95.6	
AZ47656	ERH151	81-118	95.6		85-114	92.3	
AZ47657	ERH142	81-118	96.4		85-114	92.7	
AZ47658	ERH147	81-118	95.9		85-114	97.2	
AZ47659	ERH148	81-118	93.9		85-114	91.2	
AZ47660	ERH152	81-118	95.6		85-114	90.9	
AZ47661	ERH149	81-118	95.4		85-114	88.9	
AZ47662	ERH150	81-118	94.1		85-114	92.0	
AZ47663	ERH138	81-118	95.0		85-114	92.9	
AZ47664	ERH144	81-118	95.3		85-114	97.9	
AZ47665	ERH140	81-118	92.5		85-114	93.2	

Comments: Batch: #86BTO-161218AL

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81776

Case No: 81776 Date Analyzed: 12/18/16

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: DIBROMOFLUOROMETHANE (S)			SURROGATE: TOLUENE-D8 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161218AL-LCS	Lab Control Spike	80-119	96.4		89-112	95.2	
161218AL-BLK	Blank	80-119	99.0		89-112	96.7	
AZ47656	ERH151	80-119	99.4		89-112	94.3	
AZ47657	ERH142	80-119	100		89-112	93.8	
AZ47658	ERH147	80-119	100		89-112	98.2	
AZ47659	ERH148	80-119	97.7		89-112	95.5	
AZ47660	ERH152	80-119	101		89-112	92.6	
AZ47661	ERH149	80-119	101		89-112	92.8	
AZ47662	ERH150	80-119	99.7		89-112	93.3	
AZ47663	ERH138	80-119	100		89-112	95.4	
AZ47664	ERH144	80-119	102		89-112	94.6	
AZ47665	ERH140	80-119	97.8		89-112	94.4	

Comments: Batch: #86BTO-161218AL

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81776

Case No: 81776 Date Analyzed: 12/18/16

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: 4-BROMOFLUOROBENZENE (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
161218AL-LCS	Lab Control Spike	85-114	98.0				
161218AL-BLK	Blank	85-114	95.6				
AZ47656	ERH151	85-114	92.3				
AZ47657	ERH142	85-114	92.7				
AZ47658	ERH147	85-114	97.2				
AZ47659	ERH148	85-114	91.2				
AZ47660	ERH152	85-114	90.9				
AZ47661	ERH149	85-114	88.9				
AZ47662	ERH150	85-114	92.0				
AZ47663	ERH138	85-114	92.9				
AZ47664	ERH144	85-114	97.9				
AZ47665	ERH140	85-114	93.2				

Comments: Batch: #GRO86-161218AL

Laboratory Control Spike Recovery

EPA 8260B BTEX WATER

APPL ID: **161218W-47493 LCS - 214886**
Batch ID: #86BTO-161218AL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1,2-DICHLOROETHANE	10.00	9.51	95.1	73-128
BENZENE	10.00	10.1	101	79-120
ETHYLBENZENE	10.00	10.6	106	79-121
TOLUENE	10.00	10.6	106	80-121
XYLENES (TOTAL)	30.0	32.4	108	79-121
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	23.6	94.4	81-118
SURROGATE: 4-BROMOFLUOROBENZE	25.0	24.9	99.6	85-114
SURROGATE: DIBROMOFLUOROMETH	25.0	24.1	96.4	80-119
SURROGATE: TOLUENE-D8 (S)	25.0	23.8	95.2	89-112

Comments: _____

Primary	SPK
Quant Method :	LALLW.M
Extraction Date :	12/18/16
Analysis Date :	12/18/16
Instrument :	Loki
Run :	1218L02
Initials :	DG

Printed: 01/03/17 3:24:07 PM
APPL Standard LCS

Laboratory Control Spike Recovery
EPA 8260B GRO WATER

APPL ID: **161218W-47493 LCS - 214887**
Batch ID: #GRO86-161218AL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
GASOLINE RANGE ORGANICS	300	277	92.3	78-122
SURROGATE: 4-BROMOFLUOROBENZE	25.0	24.5	98.0	85-114

Comments: _____

Primary	SPK
Quant Method :	LSUR1216.M
Extraction Date :	12/18/16
Analysis Date :	12/18/16
Instrument :	Loki
Run :	1218L04
Initials :	DG

Printed: 12/29/16 9:31:02 AM
APPL Standard LCS

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81776

Case No: 81776 Date Analyzed: 12/18/16

Matrix: WATER Instrument: Loki

Blank ID: 161218AL-BLK Time Analyzed: 1957

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161218AL-LCS	Lab Control Spike	1218L02	12/18/16 1709
161218AL-BLK	Blank	1218L08	12/18/16 1957
AZ47656	ERH151	1218L10	12/18/16 2053
AZ47657	ERH142	1218L11	12/18/16 2121
AZ47658	ERH147	1218L19	12/19/16 0104
AZ47659	ERH148	1218L20	12/19/16 0132
AZ47660	ERH152	1218L21	12/19/16 0200
AZ47661	ERH149	1218L22	12/19/16 0228
AZ47662	ERH150	1218L23	12/19/16 0256
AZ47663	ERH138	1218L24	12/19/16 0324
AZ47664	ERH144	1218L25	12/19/16 0352
AZ47665	ERH140	1218L26	12/19/16 0420

Comments: Batch: #86BTO-161218AL

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81776

Case No: 81776 Date Analyzed: 12/18/16

Matrix: WATER Instrument: Loki

Blank ID: 161218AL-BLK Time Analyzed: 1957

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161218AL-LCS	Lab Control Spike	1218L04	12/18/16 1805
161218AL-BLK	Blank	1218L08	12/18/16 1957
AZ47656	ERH151	1218L10	12/18/16 2053
AZ47657	ERH142	1218L11	12/18/16 2121
AZ47658	ERH147	1218L19	12/19/16 0104
AZ47659	ERH148	1218L20	12/19/16 0132
AZ47660	ERH152	1218L21	12/19/16 0200
AZ47661	ERH149	1218L22	12/19/16 0228
AZ47662	ERH150	1218L23	12/19/16 0256
AZ47663	ERH138	1218L24	12/19/16 0324
AZ47664	ERH144	1218L25	12/19/16 0352
AZ47665	ERH140	1218L26	12/19/16 0420

Comments: Batch: #GRO86-161218AL

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: ~~1216L00.D~~ 81776
Matrix: Water MP 1-4-17
ID: 5ng- BFB STD 12-15-16

SDG No: MP 1-4-17 ~~Loki~~ 81776
Date Analyzed: 12/16/16
Instrument: Loki
Time Analyzed: 11:37

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.3ug/L VOC STD 12/1	1216L04.D	12/16/16 13:18
2		0.5ug/L VOC STD 12/1	1216L05.D	12/16/16 13:46
3		1.0ug/L VOC STD 12/1	1216L06.D	12/16/16 14:14
4		2.0ug/L VOC STD 12/1	1216L07.D	12/16/16 14:42
5		5.0ug/L VOC STD 12/1	1216L08.D	12/16/16 15:10
6		10ug/L VOC STD 12/16	1216L09.D	12/16/16 15:38
7		20ug/L VOC STD 12/16	1216L10.D	12/16/16 16:06
8		40ug/L VOC STD 12/16	1216L11.D	12/16/16 16:35
9		100ug/L VOC STD 12/1	1216L12.D	12/16/16 17:03
10		(SS)10ug/L VOC STD 1	1216L17.D	12/16/16 19:23
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	17.0
75	30 - 60% of mass 95	48.6
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	6.7
173	0 - 2% of mass 174	0.0
174	50 - 100% of mass 95	91.2
175	5 - 9% of mass 174	7.5
176	95 - 101% of mass 174	98.0
177	5 - 9% of mass 176	6.3

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: ~~1211L00.D~~ 81776
Matrix: Water np 1-417
ID: 5ng- BFB STD 11-06-16

SDG No: np 1-417 ~~Loki~~ 81776
Date Analyzed: 12/11/16
Instrument: Loki
Time Analyzed: 9:57

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		20ug/L GAS STD 12/11	1211L06.D	12/11/16 12:39
2		50ug/L GAS STD 12/11	1211L07.D	12/11/16 13:07
3		100ug/L GAS STD 12/1	1211L08.D	12/11/16 13:35
4		300ug/L GAS STD 12/1	1211L09.D	12/11/16 14:03
5		600ug/L GAS STD 12/1	1211L10.D	12/11/16 14:32
6		800ug/L GAS STD 12/1	1211L11.D	12/11/16 15:00
7		1000ug/L GAS STD 12/	1211L12.D	12/11/16 15:28
8		(SS) 300ug/L GAS STD	1211L16.D	12/11/16 17:21
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	18.7
75	30 - 60% of mass 95	49.0
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	6.3
173	0 - 2% of mass 174	0.0
174	50 - 100% of mass 95	88.7
175	5 - 9% of mass 174	7.4
176	95 - 101% of mass 174	98.1
177	5 - 9% of mass 176	6.5

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81776
Matrix: Water
ID: 5ng- BFB STD 12-15-16

SDG No: 81776
Date Analyzed: 12/18/16
Instrument: Loki
Time Analyzed: 16:23

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1	Lab Control Spike	161218A CCV/LCS 10ug	1218L02.D	12/18/16 17:09
2	Lab Control Spike	161218A CCV/LCS 300u	1218L04.D	12/18/16 18:05
3	Blank	161218A BLK-1WL	1218L08.D	12/18/16 19:57
4	ERH151	AZ47656W01	1218L10.D	12/18/16 20:53
5	ERH142	AZ47657W01	1218L11.D	12/18/16 21:21
6	ERH147	AZ47658W01	1218L19.D	12/19/16 1:04
7	ERH148	AZ47659W01	1218L20.D	12/19/16 1:32
8	ERH152	AZ47660W01	1218L21.D	12/19/16 2:00
9	ERH149	AZ47661W01	1218L22.D	12/19/16 2:28
10	ERH150	AZ47662W01	1218L23.D	12/19/16 2:56
11	ERH138	AZ47663W01	1218L24.D	12/19/16 3:24
12	ERH144	AZ47664W01	1218L25.D	12/19/16 3:52
13	ERH140	AZ47665W01	1218L26.D	12/19/16 4:20
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	16.8
75	30 - 60% of mass 95	50.2
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	6.9
173	0 - 2% of mass 174	0.0
174	50 - 100% of mass 95	94.8
175	5 - 9% of mass 174	7.9
176	95 - 101% of mass 174	100.4
177	5 - 9% of mass 176	6.7

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81776

Lab File ID (Standard): 1216L09.D Date Analyzed: 12/16/16

Instrument ID: Loki Time Analyzed: 15:38

GC Column: ID: Heated Purge: (Y/N)

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	594432	5.38	542208	8.70	308288	11.03
	UPPER LIMIT	1188864	5.88	1084416	9.20	616576	11.53
	LOWER LIMIT	297216	4.88	271104	8.20	154144	10.53
	SAMPLE NO.						
01	(SS)10ug/L VOC STD 1	601856	5.38	542656	8.70	297856	11.03
02	161218A CCV/LCS 10u	574080	5.38	540800	8.70	303616	11.03
03	161218A BLK-1WL	543168	5.38	507456	8.70	262208	11.03
04	AZ47656W01	536960	5.38	505472	8.70	262336	11.03
05	AZ47657W01	532608	5.38	505536	8.70	252544	11.03
06	AZ47658W01	511680	5.38	481088	8.70	247808	11.03
07	AZ47659W01	531968	5.38	487616	8.70	244864	11.03
08	AZ47660W01	514944	5.38	499904	8.70	246912	11.03
09	AZ47661W01	505280	5.38	504384	8.70	250560	11.03
10	AZ47662W01	517184	5.38	494848	8.70	247616	11.03
11	AZ47663W01	508288	5.38	480512	8.70	251776	11.03
12	AZ47664W01	516544	5.38	490240	8.70	270080	11.03
13	AZ47665W01	524864	5.38	500544	8.70	255104	11.03
14	Ending CCV 8260 10ug/	535040	5.38	507840	8.70	279040	11.03
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

EPA METHOD 8260B
Volatile Organic Compounds
Sample Data

APPL, INC.

EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH151
Sample Collection Date: 12/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776
APPL ID: AZ47656
QCG: #86BTO-161218AL-214886

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	12/18/16	12/18/16
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	12/18/16	12/18/16
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	12/18/16	12/18/16
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	12/18/16	12/18/16
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	95.6	81-118			%	12/18/16	12/18/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	92.3	85-114			%	12/18/16	12/18/16
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	99.4	80-119			%	12/18/16	12/18/16
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	94.3	89-112			%	12/18/16	12/18/16

Quant Method: LALLW.M
Run #: 1218L10
Instrument: Loki
Sequence: 161216
Dilution Factor: 1
Initials: DG

Printed: 12/29/16 9:28:45 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L10.D Vial: 10
Acq On : 18 Dec 16 20:53 Operator: PM,DG,SV,CMM
Sample : AZ47656W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 10:47 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	536960	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	505472	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	262336	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.48	111	271612	24.86	ppb		0.00
Spiked Amount 25.000			Recovery = 99.424%				
37) 1,2-DCA-D4(S)	4.93	65	280914	23.91	ppb		0.00
Spiked Amount 25.000			Recovery = 95.624%				
57) Toluene-D8(S)	7.22	98	925511	23.57	ppb		0.00
Spiked Amount 25.000			Recovery = 94.296%				
65) 4-Bromofluorobenzene(S)	9.89	95	310179	23.08	ppb		0.00
Spiked Amount 25.000			Recovery = 92.336%				
Target Compounds							Qvalue
4) Chloromethane	0.96	50	1492	0.09	ppb		91
14) t-Butanol	2.38	59	2689	9.90	ppb	#	89
19) Methylene chloride	2.24	84	1843	-2.12	ppb		86
48) 2-Chloroethyl vinyl ether	6.56	43	42	-0.70	ppb		100
49) MIBK (methyl isobutyl ket	7.18	43	304	-0.88	ppb	#	42

(#) = qualifier out of range (m) = manual integration

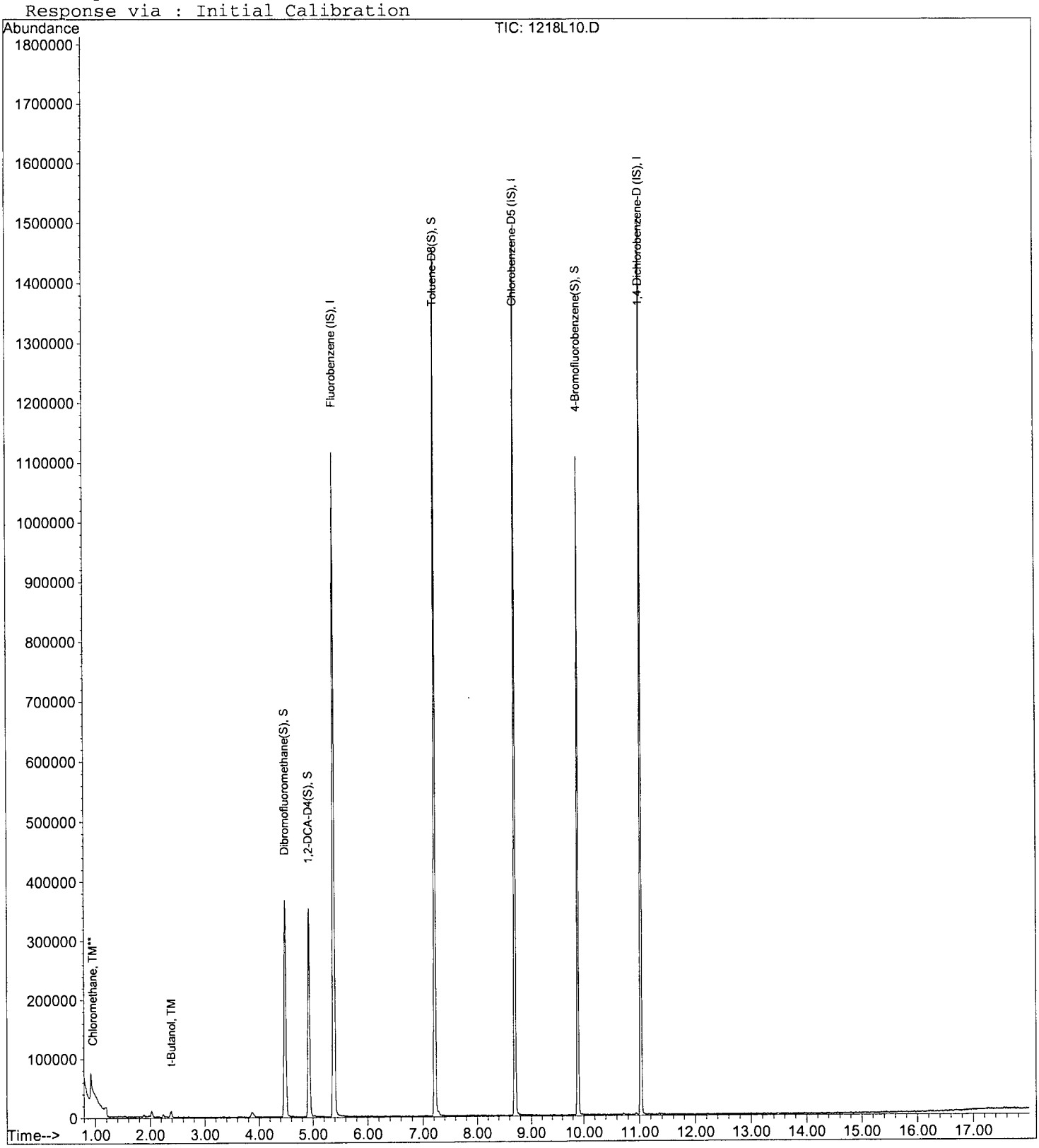
Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L10.D
Acq On : 18 Dec 16 20:53
Sample : AZ47656W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 10
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 10:47 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH151
Sample Collection Date: 12/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776
APPL ID: AZ47656
QCG: #GRO86-161218AL-214887

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	12/18/16	12/18/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	92.3	85-114			%	12/18/16	12/18/16

Quant Method: LSUR1216.M
Run #: 1218L10
Instrument: Loki
Sequence: 161216
Dilution Factor: 1
Initials: DG

Printed: 12/29/16 9:30:56 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L10.D Vial: 10
Acq On : 18 Dec 16 20:53 Operator: PM,DG,SV,CMM
Sample : AZ47656W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 11:19 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161216\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1115549	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1468819	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1510302	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.70	TIC	11003642m	10.27	ppb	100

(#) = qualifier out of range (m) = manual integration

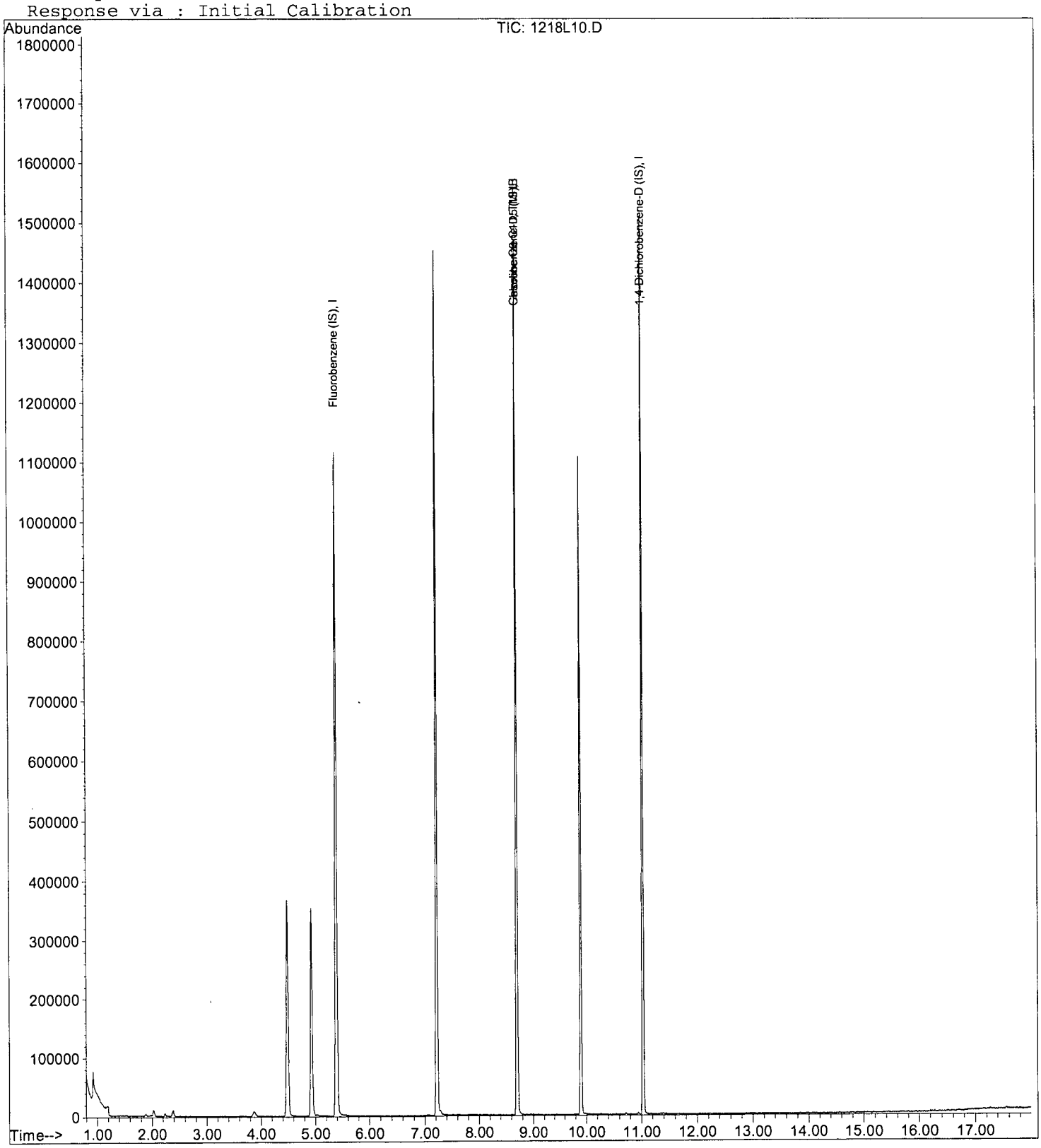
Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L10.D
Acq On : 18 Dec 16 20:53
Sample : AZ47656W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 10
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 11:19 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161216\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH142
Sample Collection Date: 12/13/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776
APPL ID: AZ47657
QCG: #86BTO-161218AL-214886

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	12/18/16	12/18/16
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	12/18/16	12/18/16
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	12/18/16	12/18/16
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	12/18/16	12/18/16
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	12/18/16	12/18/16
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	96.4	81-118			%	12/18/16	12/18/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	92.7	85-114			%	12/18/16	12/18/16
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	100	80-119			%	12/18/16	12/18/16
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	93.8	89-112			%	12/18/16	12/18/16

Quant Method: LALLW.M
Run #: 1218L11
Instrument: Loki
Sequence: 161216
Dilution Factor: 1
Initials: DG

Printed: 12/29/16 9:28:45 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L11.D
Acq On : 18 Dec 16 21:21
Sample : AZ47657W01
Misc : W IS&S 11/21/16, 11/14/16
Vial: 11
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 10:47 2016
Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	532608	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	505536	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	252544	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.48	111	272228	25.12	ppb		0.00
Spiked Amount 25.000			Recovery = 100.464%				
37) 1,2-DCA-D4(S)	4.92	65	280859	24.10	ppb		0.00
Spiked Amount 25.000			Recovery = 96.388%				
57) Toluene-D8(S)	7.22	98	920937	23.45	ppb		0.00
Spiked Amount 25.000			Recovery = 93.816%				
65) 4-Bromofluorobenzene(S)	9.89	95	311378	23.17	ppb		0.00
Spiked Amount 25.000			Recovery = 92.680%				
Target Compounds							Qvalue
4) Chloromethane	0.96	50	1859	0.11	ppb		98
19) Methylene chloride	2.24	84	1219	-2.18	ppb	#	74
27) MEK (2-Butanone)	3.81	43	43	-0.15	ppb	#	52

(#) = qualifier out of range (m) = manual integration

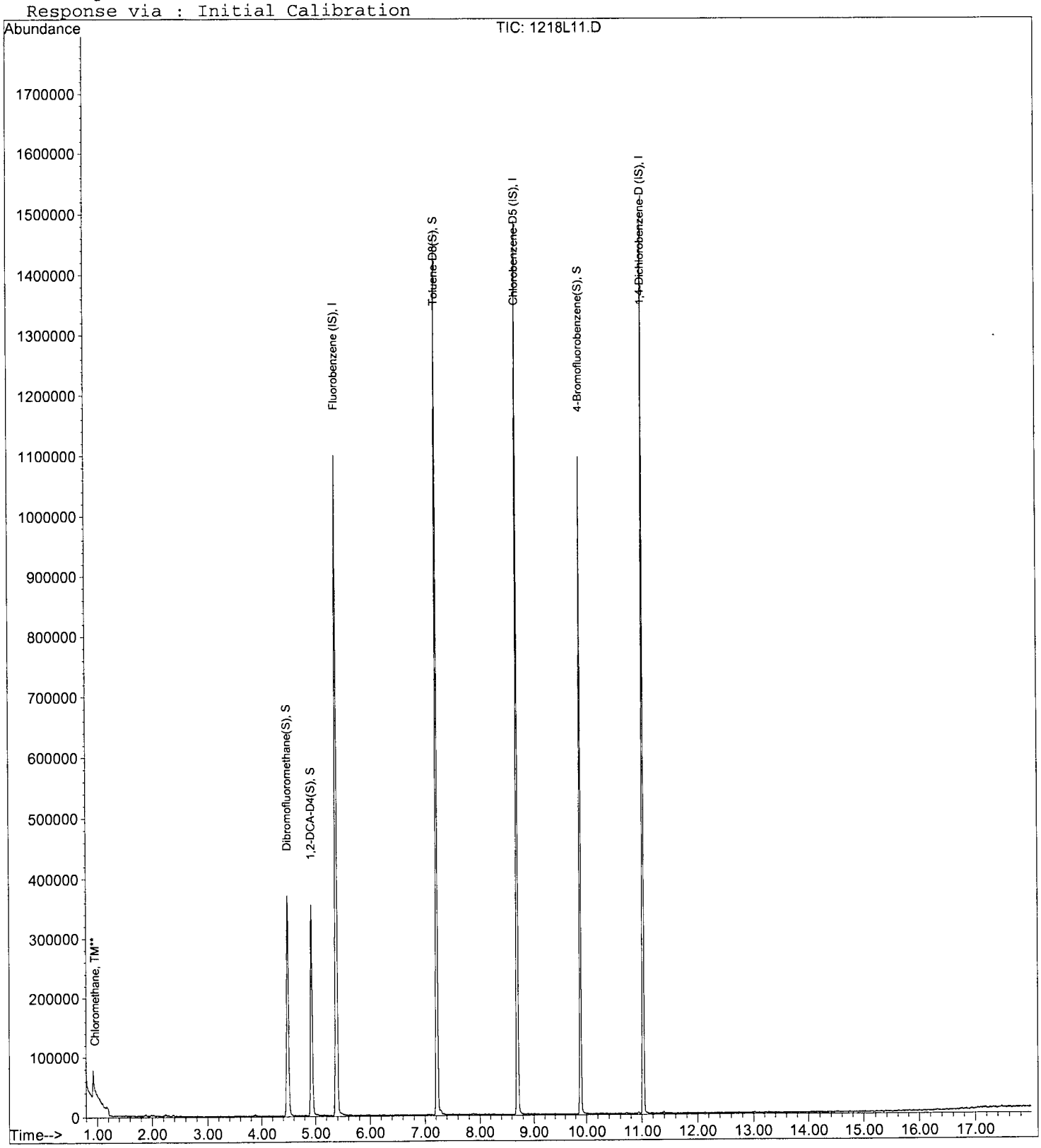
Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L11.D
Acq On : 18 Dec 16 21:21
Sample : AZ47657W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 11
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 10:47 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH142
Sample Collection Date: 12/13/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776
APPL ID: AZ47657
QCG: #GRO86-161218AL-214887

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	12/18/16	12/18/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	92.7	85-114			%	12/18/16	12/18/16

Quant Method: LSUR1216.M
Run #: 1218L11
Instrument: Loki
Sequence: 161216
Dilution Factor: 1
Initials: DG

Printed: 12/29/16 9:30:56 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L11.D Vial: 11
Acq On : 18 Dec 16 21:21 Operator: PM,DG,SV,CMM
Sample : AZ47657W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 11:51 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161216\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1099409	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1486415	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1495645	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.70	TIC	10849642m	10.41	ppb	100

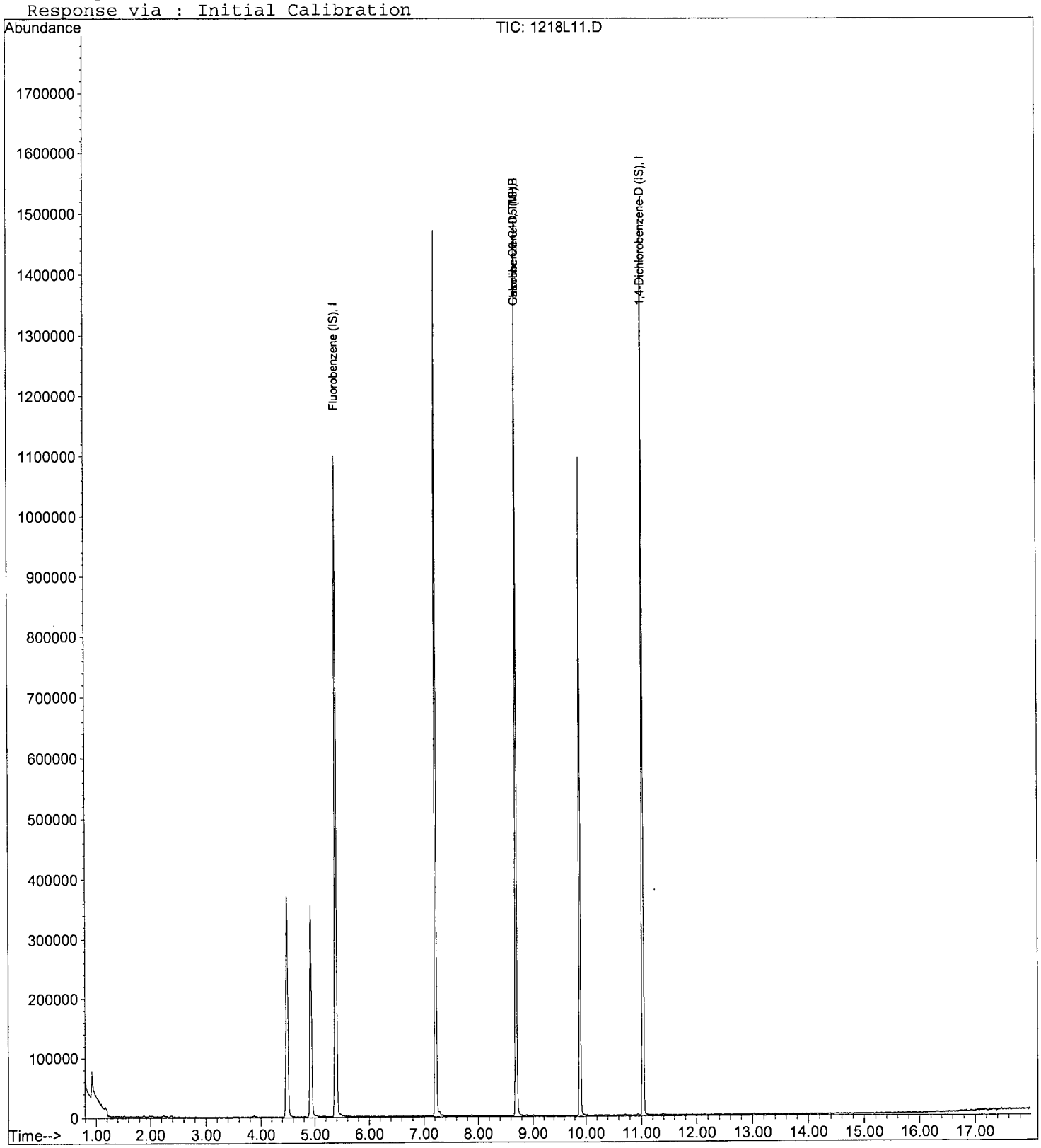
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L11.D Vial: 11
Acq On : 18 Dec 16 21:21 Operator: PM,DG,SV,CMM
Sample : AZ47657W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 11:51 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161216\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH147
Sample Collection Date: 12/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776
APPL ID: AZ47658
QCG: #86BTO-161218AL-214886

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	12/19/16	12/19/16
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	12/19/16	12/19/16
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	12/19/16	12/19/16
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	12/19/16	12/19/16
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	95.9	81-118			%	12/19/16	12/19/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	97.2	85-114			%	12/19/16	12/19/16
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	100	80-119			%	12/19/16	12/19/16
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	98.2	89-112			%	12/19/16	12/19/16

Quant Method: LALLW.M
Run #: 1218L19
Instrument: Loki
Sequence: 161216
Dilution Factor: 1
Initials: DG

Printed: 12/29/16 9:28:45 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L19.D Vial: 19
Acq On : 19 Dec 16 1:04 Operator: PM,DG,SV,CMM
Sample : AZ47658W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 10:48 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	511680	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	481088	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	247808	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.48	111	261214	25.09	ppb		0.00
Spiked Amount 25.000			Recovery = 100.340%				
37) 1,2-DCA-D4(S)	4.92	65	268530	23.98	ppb		0.00
Spiked Amount 25.000			Recovery = 95.928%				
57) Toluene-D8(S)	7.22	98	917281	24.55	ppb		0.00
Spiked Amount 25.000			Recovery = 98.192%				
65) 4-Bromofluorobenzene(S)	9.89	95	310780	24.30	ppb		0.00
Spiked Amount 25.000			Recovery = 97.204%				
Target Compounds							Qvalue
4) Chloromethane	0.96	50	2919	0.18	ppb		94
11) Acetone	1.88	43	185590	106.09	ppb		96
19) Methylene chloride	2.23	84	816	-2.21	ppb		98
27) MEK (2-Butanone)	3.80	43	84	-0.14	ppb	#	52
49) MIBK (methyl isobutyl ket	7.14	43	132	-0.91	ppb	#	42

(#) = qualifier out of range (m) = manual integration

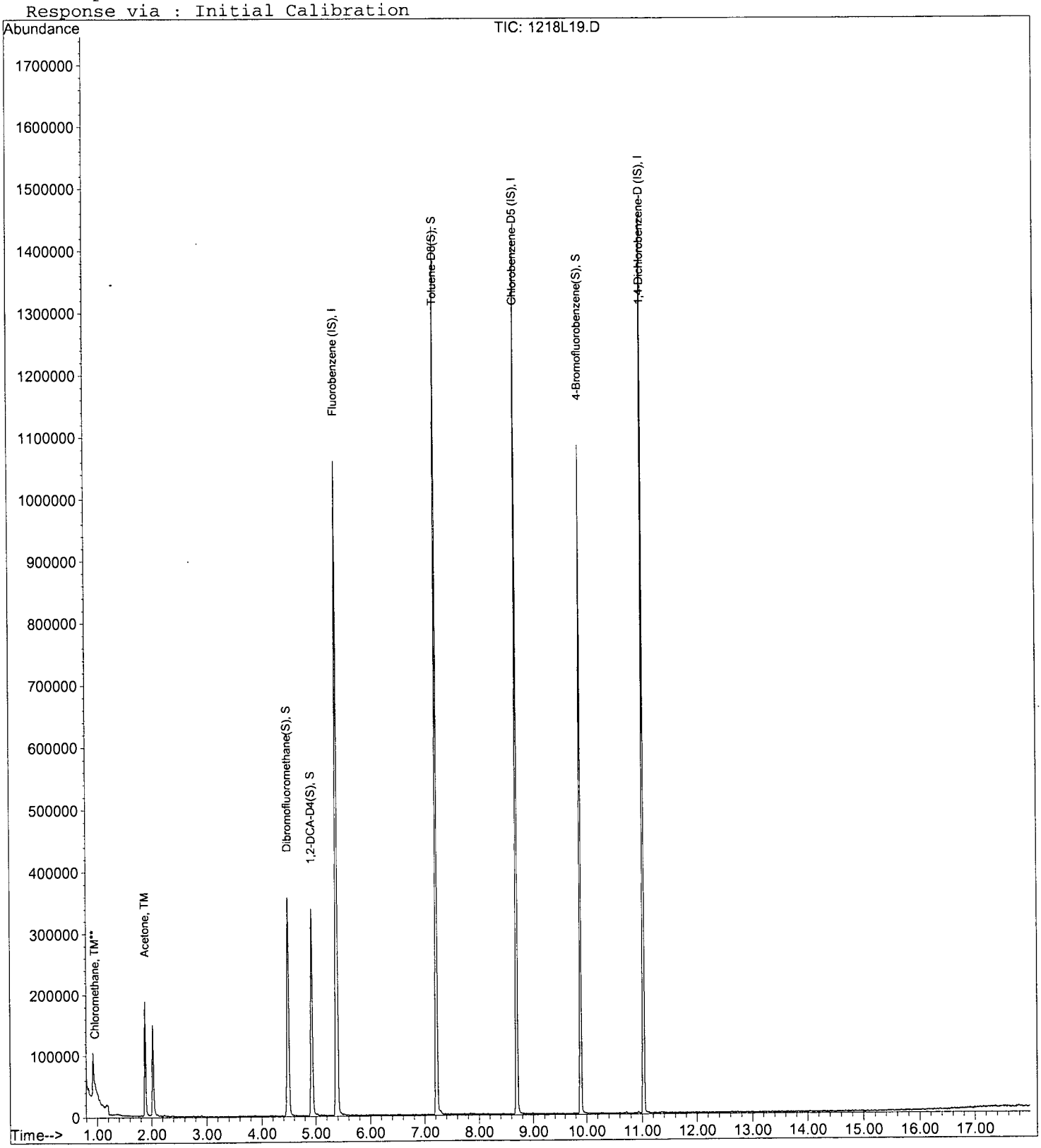
Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L19.D
Acq On : 19 Dec 16 1:04
Sample : AZ47658W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 19
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 10:48 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH147
Sample Collection Date: 12/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776
APPL ID: AZ47658
QCG: #GRO86-161218AL-214887

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	12/19/16	12/19/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	97.2	85-114			%	12/19/16	12/19/16

Quant Method: LSUR1216.M
Run #: 1218L19
Instrument: Loki
Sequence: 161216
Dilution Factor: 1
Initials: DG

Printed: 12/29/16 9:30:56 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L19.D Vial: 19
Acq On : 19 Dec 16 1:04 Operator: PM,DG,SV,CMM
Sample : AZ47658W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 11:52 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161216\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1059615	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1413967	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1454606	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	10621512m	14.86	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

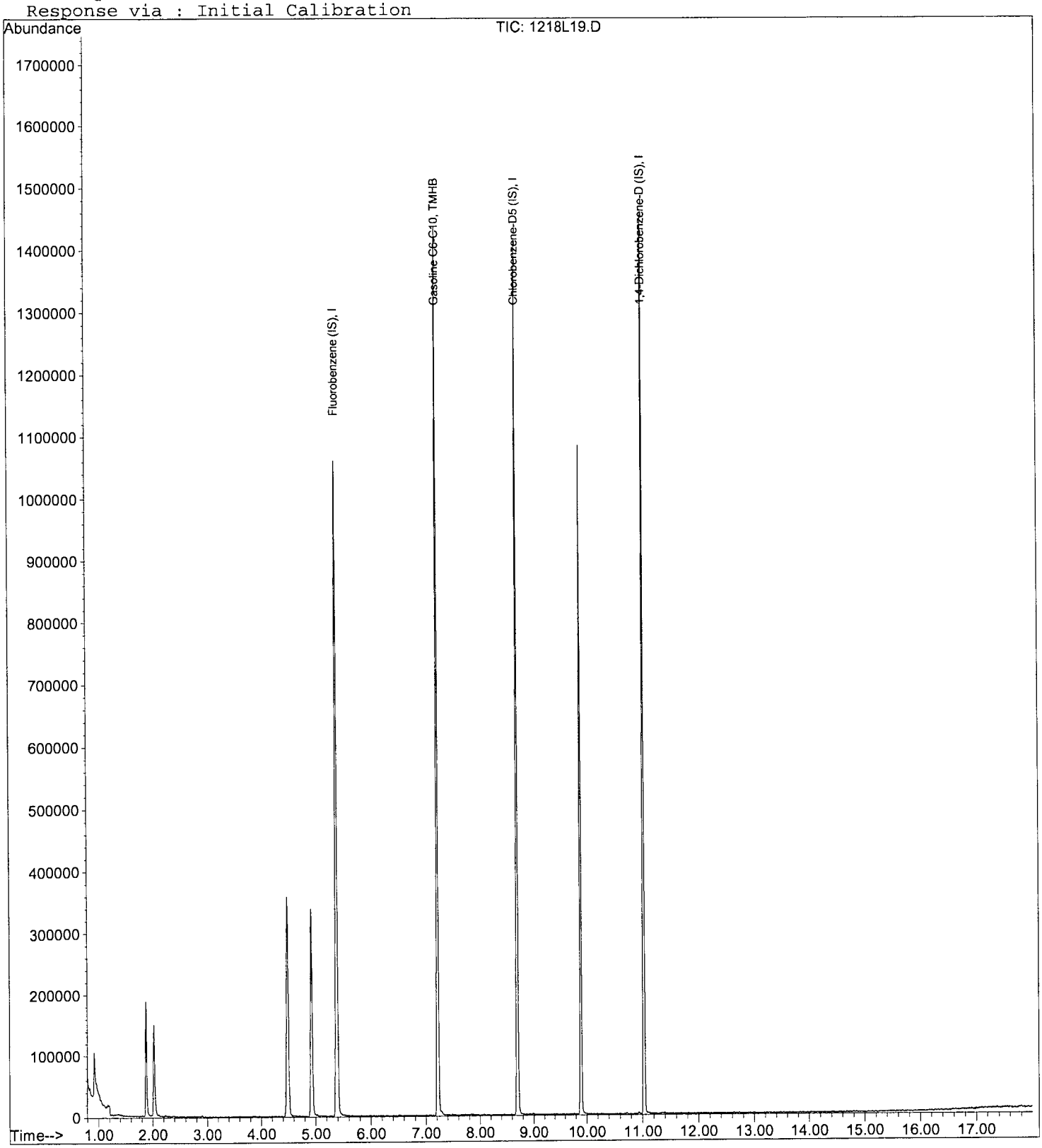
Data File : M:\LOKI\DATA\161216\1218L19.D
Acq On : 19 Dec 16 1:04
Sample : AZ47658W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 19
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 11:52 2016

Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161216\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH148
Sample Collection Date: 12/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776
APPL ID: AZ47659
QCG: #86BTO-161218AL-214886

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	12/19/16	12/19/16
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	12/19/16	12/19/16
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	12/19/16	12/19/16
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	12/19/16	12/19/16
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	93.9	81-118			%	12/19/16	12/19/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	91.2	85-114			%	12/19/16	12/19/16
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	97.7	80-119			%	12/19/16	12/19/16
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	95.5	89-112			%	12/19/16	12/19/16

Quant Method: LALLW.M
Run #: 1218L20
Instrument: Loki
Sequence: 161216
Dilution Factor: 1
Initials: DG

Printed: 12/29/16 9:28:45 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L20.D
Acq On : 19 Dec 16 1:32
Sample : AZ47659W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 20
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 10:49 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	531968	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	487616	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	244864	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.48	111	264353	24.42	ppb		0.00
Spiked Amount 25.000			Recovery =	97.676%			
37) 1,2-DCA-D4(S)	4.92	65	273406	23.49	ppb		0.00
Spiked Amount 25.000			Recovery =	93.944%			
57) Toluene-D8(S)	7.22	98	904253	23.88	ppb		0.00
Spiked Amount 25.000			Recovery =	95.500%			
65) 4-Bromofluorobenzene(S)	9.89	95	295697	22.81	ppb		0.00
Spiked Amount 25.000			Recovery =	91.248%			
Target Compounds							Qvalue
4) Chloromethane	0.96	50	3122	0.19	ppb		92
7) Chloroethane	1.28	64	580	0.09	ppb		99
11) Acetone	1.87	43	176165	96.66	ppb		100
19) Methylene chloride	2.23	84	888	-2.21	ppb		79
27) MEK (2-Butanone)	3.79	43	226	-0.09	ppb	#	52
48) 2-Chloroethyl vinyl ether	6.49	43	1050	0.78	ppb		100
49) MIBK (methyl isobutyl ket	7.15	43	43	-0.92	ppb	#	42

(#) = qualifier out of range (m) = manual integration

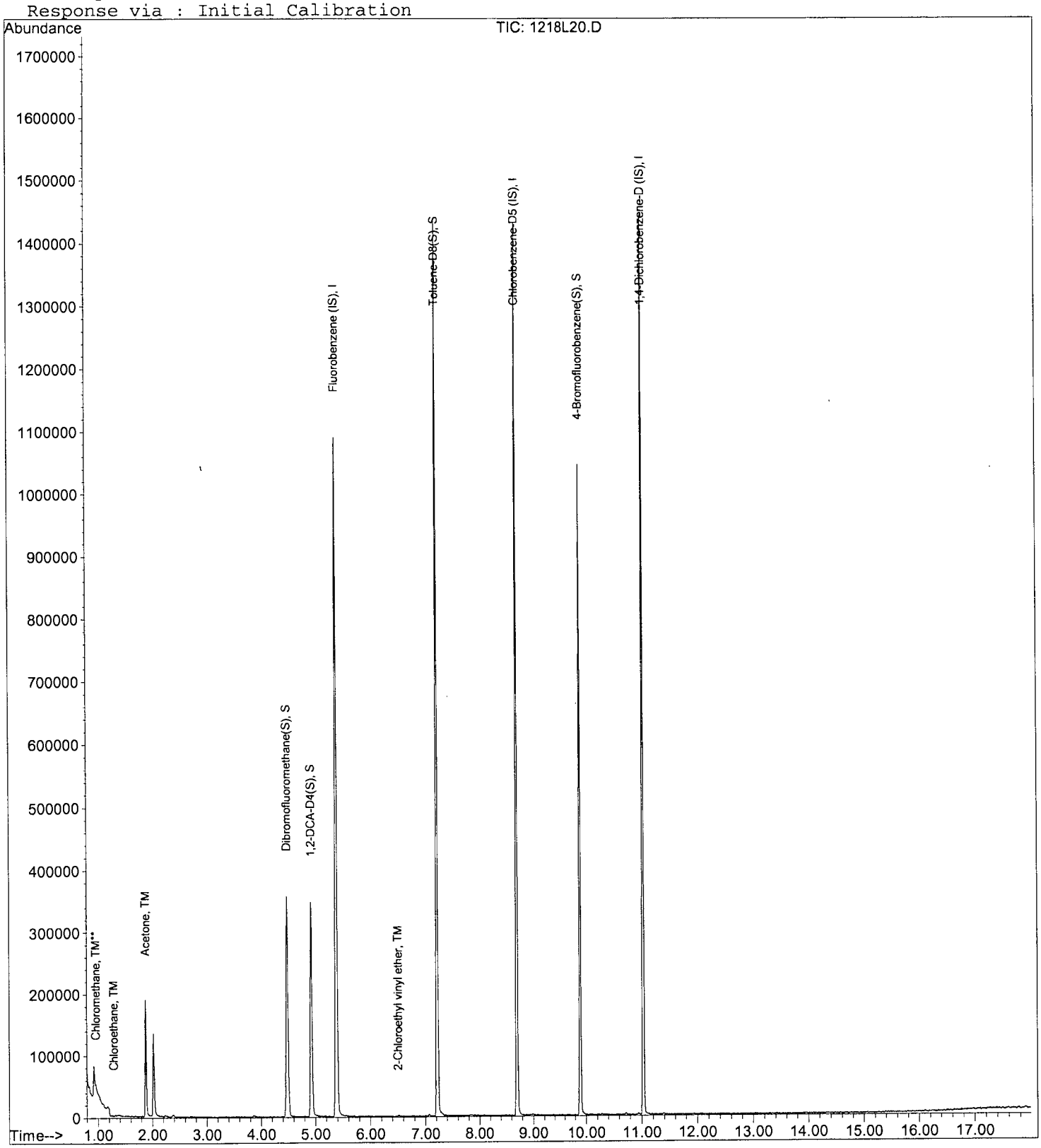
Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L20.D
Acq On : 19 Dec 16 1:32
Sample : AZ47659W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 20
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 10:49 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH148
Sample Collection Date: 12/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776
APPL ID: AZ47659
QCG: #GRO86-161218AL-214887

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	12/19/16	12/19/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	91.2	85-114			%	12/19/16	12/19/16

Quant Method: LSUR1216.M
Run #: 1218L20
Instrument: Loki
Sequence: 161216
Dilution Factor: 1
Initials: DG

Printed: 12/29/16 9:30:56 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L20.D
Acq On : 19 Dec 16 1:32
Sample : AZ47659W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 20
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 11:53 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161216\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1089721	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1430916	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1442558	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	10678770m	8.42	ppb	100

(#) = qualifier out of range (m) = manual integration
1218L20.D LGAS6Z11.M Thu Dec 29 11:10:47 2016

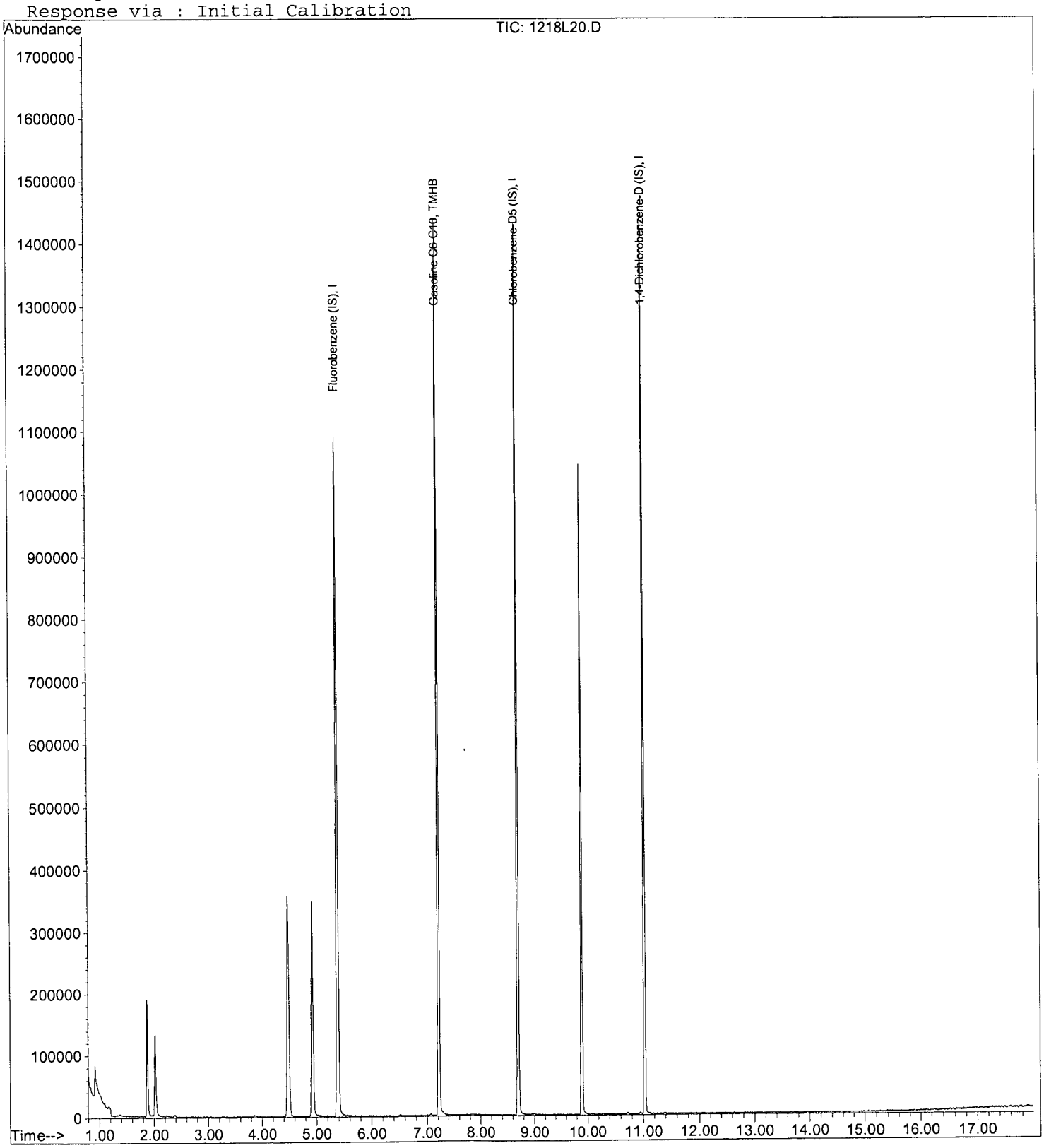
Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L20.D
Acq On : 19 Dec 16 1:32
Sample : AZ47659W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 20
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 11:53 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161216\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH152
Sample Collection Date: 12/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776
APPL ID: AZ47660
QCG: #86BTO-161218AL-214886

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	12/19/16	12/19/16
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	12/19/16	12/19/16
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	12/19/16	12/19/16
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	12/19/16	12/19/16
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	95.6	81-118			%	12/19/16	12/19/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	90.9	85-114			%	12/19/16	12/19/16
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	101	80-119			%	12/19/16	12/19/16
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	92.6	89-112			%	12/19/16	12/19/16

Quant Method: LALLW.M
Run #: 1218L21
Instrument: Loki
Sequence: 161216
Dilution Factor: 1
Initials: DG

Printed: 12/29/16 9:28:45 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L21.D Vial: 21
Acq On : 19 Dec 16 2:00 Operator: PM,DG,SV,CMM
Sample : AZ47660W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 10:50 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	514944	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	499904	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	246912	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.48	111	263622	25.16	ppb		0.00
Spiked Amount 25.000			Recovery = 100.624%				
37) 1,2-DCA-D4(S)	4.92	65	269204	23.89	ppb		0.00
Spiked Amount 25.000			Recovery = 95.556%				
57) Toluene-D8(S)	7.22	98	899169	23.16	ppb		0.00
Spiked Amount 25.000			Recovery = 92.632%				
65) 4-Bromofluorobenzene(S)	9.89	95	301966	22.72	ppb		0.00
Spiked Amount 25.000			Recovery = 90.892%				
Target Compounds							Qvalue
19) Methylene chloride	2.23	84	361	-2.26	ppb	#	19
27) MEK (2-Butanone)	3.82	43	170	-0.11	ppb	#	52
48) 2-Chloroethyl vinyl ether	6.53	43	170	-0.50	ppb		100
49) MIBK (methyl isobutyl ket	7.14	43	330	-0.87	ppb	#	34

(#) = qualifier out of range (m) = manual integration

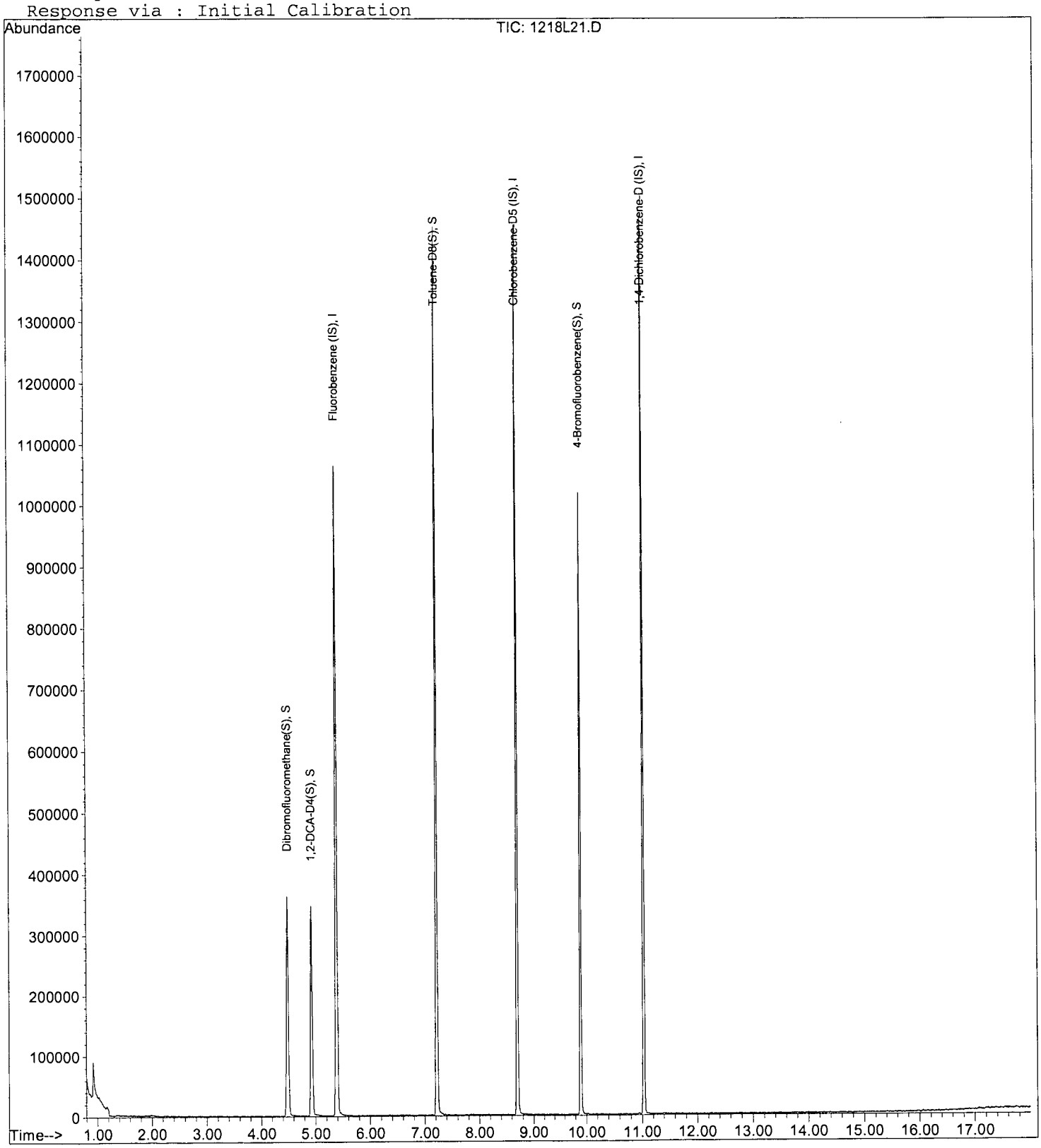
Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L21.D
Acq On : 19 Dec 16 2:00
Sample : AZ47660W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 21
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 10:50 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH152
Sample Collection Date: 12/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776
APPL ID: AZ47660
QCG: #GRO86-161218AL-214887

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	12/19/16	12/19/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	90.9	85-114			%	12/19/16	12/19/16

Quant Method: LSUR1216.M
Run #: 1218L21
Instrument: Loki
Sequence: 161216
Dilution Factor: 1
Initials: DG

Printed: 12/29/16 9:30:56 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L21.D Vial: 21
Acq On : 19 Dec 16 2:00 Operator: PM,DG,SV,CMM
Sample : AZ47660W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 11:53 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161216\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1063210	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1454697	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1469808	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.70	TIC	10582109m	12.83	ppb	100

(#) = qualifier out of range (m) = manual integration
1218L21.D LGAS6Z11.M Thu Dec 29 11:10:49 2016 Page 1

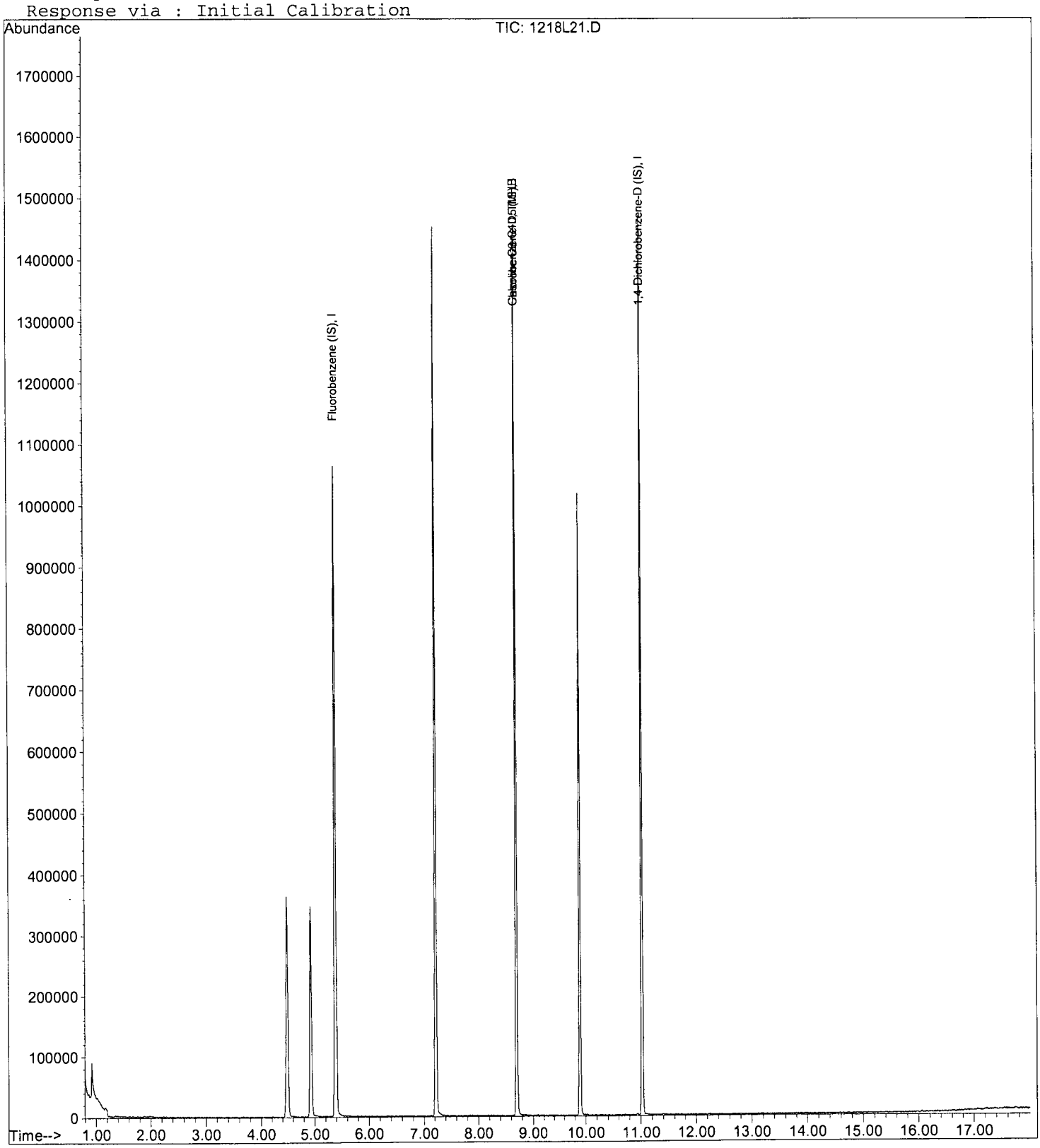
Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L21.D
Acq On : 19 Dec 16 2:00
Sample : AZ47660W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 21
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 11:53 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161216\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH149
Sample Collection Date: 12/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776
APPL ID: AZ47661
QCG: #86BTO-161218AL-214886

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	12/19/16	12/19/16
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	12/19/16	12/19/16
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	12/19/16	12/19/16
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	12/19/16	12/19/16
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	95.4	81-118			%	12/19/16	12/19/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	88.9	85-114			%	12/19/16	12/19/16
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	101	80-119			%	12/19/16	12/19/16
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	92.8	89-112			%	12/19/16	12/19/16

Quant Method: LALLW.M
Run #: 1218L22
Instrument: Loki
Sequence: 161216
Dilution Factor: 1
Initials: DG

Printed: 12/29/16 9:28:45 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L22.D Vial: 22
Acq On : 19 Dec 16 2:28 Operator: PM,DG,SV,CMM
Sample : AZ47661W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 10:51 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	505280	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	504384	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	250560	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.48	111	259093	25.20	ppb		0.00
Spiked Amount 25.000			Recovery =	100.788%			
37) 1,2-DCA-D4(S)	4.92	65	263854	23.86	ppb		0.00
Spiked Amount 25.000			Recovery =	95.448%			
57) Toluene-D8(S)	7.22	98	908987	23.20	ppb		0.00
Spiked Amount 25.000			Recovery =	92.812%			
65) 4-Bromofluorobenzene(S)	9.89	95	297850	22.21	ppb		0.00
Spiked Amount 25.000			Recovery =	88.856%			
Target Compounds							Qvalue
4) Chloromethane	0.96	50	1866	0.12	ppb		96
11) Acetone	1.88	43	1758	-1.35	ppb	#	74
20) Carbon disulfide	1.98	76	7265	0.34	ppb	#	89
27) MEK (2-Butanone)	3.79	43	147	-0.12	ppb	#	52
48) 2-Chloroethyl vinyl ether	6.54	43	125	-0.57	ppb		100
49) MIBK (methyl isobutyl ket	7.16	43	128	-0.91	ppb	#	60
62) m&p-Xylene	8.99	106	1438	0.08	ppb		92

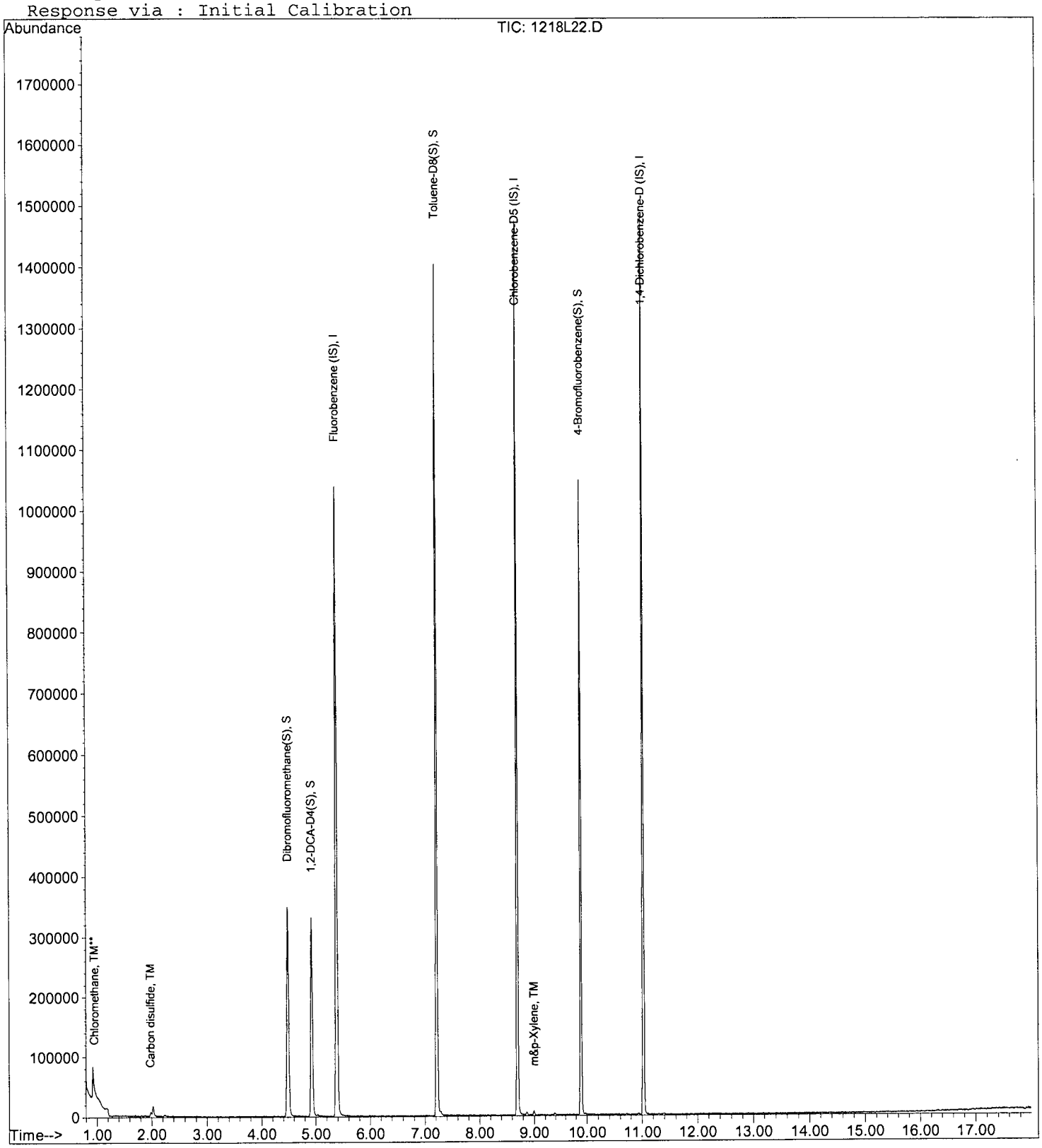
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L22.D Vial: 22
Acq On : 19 Dec 16 2:28 Operator: PM,DG,SV,CMM
Sample : AZ47661W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 10:51 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH149

Sample Collection Date: 12/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776

APPL ID: AZ47661

QCG: #GRO86-161218AL-214887

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	12/19/16	12/19/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	88.9	85-114			%	12/19/16	12/19/16

Quant Method:	LSUR1216.M
Run #:	1218L22
Instrument:	Loki
Sequence:	161216
Dilution Factor:	1
Initials:	DG

Printed: 12/29/16 9:30:56 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L22.D Vial: 22
Acq On : 19 Dec 16 2:28 Operator: PM,DG,SV,CMM
Sample : AZ47661W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 11:54 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161216\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1037604	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1473295	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1482965	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.70	TIC	10290131m	11.80	ppb	100

(#) = qualifier out of range (m) = manual integration

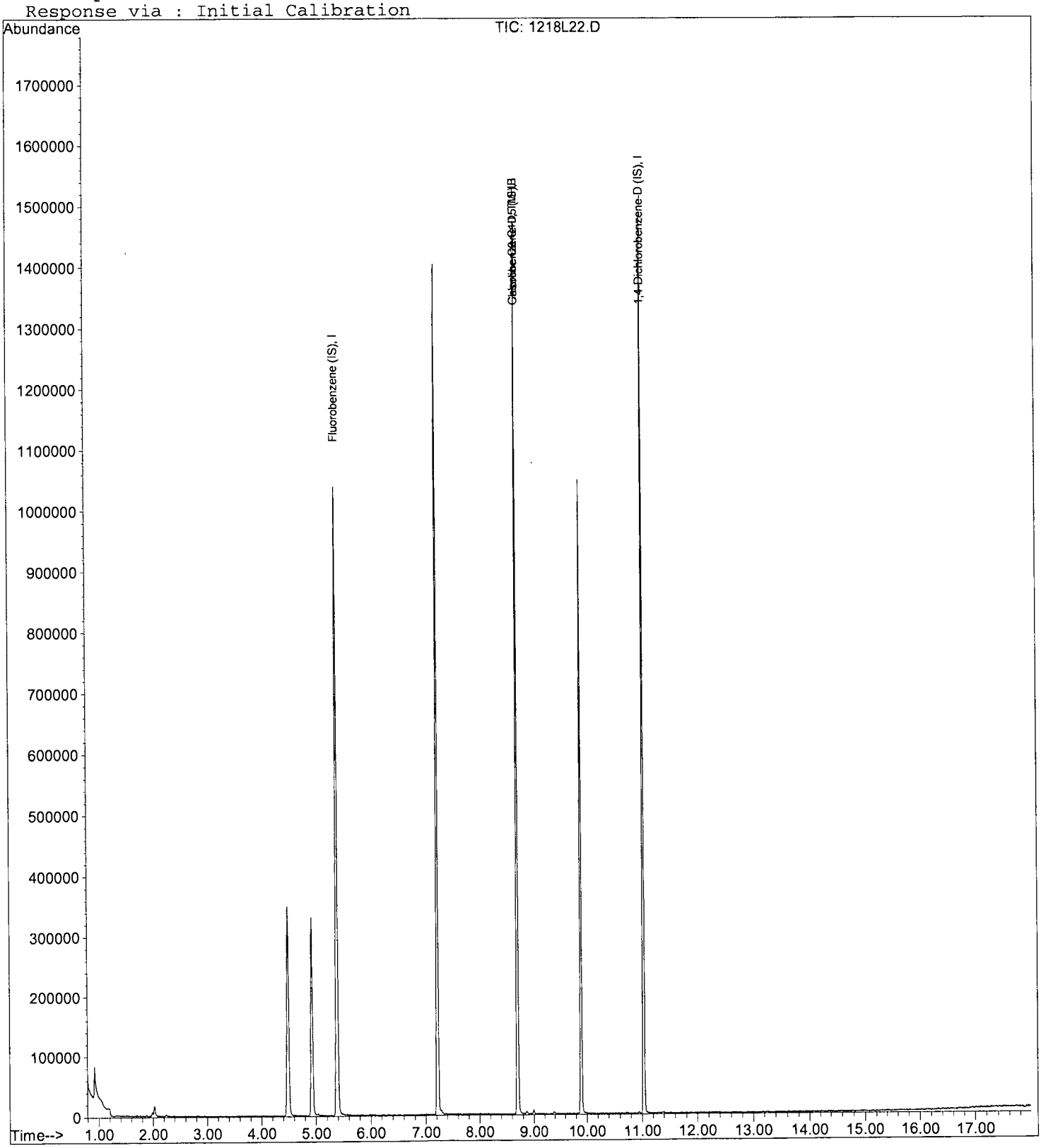
Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L22.D
Acq On : 19 Dec 16 2:28
Sample : AZ47661W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 22
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 11:54 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161216\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH150
Sample Collection Date: 12/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776
APPL ID: AZ47662
QCG: #86BTO-161218AL-214886

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	12/19/16	12/19/16
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	12/19/16	12/19/16
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	12/19/16	12/19/16
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	12/19/16	12/19/16
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	94.1	81-118			%	12/19/16	12/19/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	92.0	85-114			%	12/19/16	12/19/16
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	99.7	80-119			%	12/19/16	12/19/16
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	93.3	89-112			%	12/19/16	12/19/16

Quant Method: LALLW.M
Run #: 1218L23
Instrument: Loki
Sequence: 161216
Dilution Factor: 1
Initials: DG

Printed: 12/29/16 9:28:45 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L23.D Vial: 23
Acq On : 19 Dec 16 2:56 Operator: PM,DG,SV,CMM
Sample : AZ47662W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 10:52 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	517184	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	494848	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	247616	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.48	111	262429	24.93	ppb		0.00
Spiked Amount 25.000			Recovery = 99.736%				
37) 1,2-DCA-D4(S)	4.93	65	266329	23.53	ppb		0.00
Spiked Amount 25.000			Recovery = 94.128%				
57) Toluene-D8(S)	7.22	98	896275	23.32	ppb		0.00
Spiked Amount 25.000			Recovery = 93.276%				
65) 4-Bromofluorobenzene(S)	9.89	95	302524	23.00	ppb		0.00
Spiked Amount 25.000			Recovery = 91.992%				
Target Compounds							Qvalue
4) Chloromethane	0.96	50	2267	0.14	ppb		89
11) Acetone	1.88	43	2306	-1.06	ppb		95
19) Methylene chloride	2.23	84	1095	-2.19	ppb	#	73
27) MEK (2-Butanone)	3.82	43	20	-0.16	ppb	#	52
48) 2-Chloroethyl vinyl ether	6.54	43	22	-0.73	ppb		100
49) MIBK (methyl isobutyl ket	7.12	43	69	-0.92	ppb	#	42
62) m&p-Xylene	8.99	106	2121	0.13	ppb		88

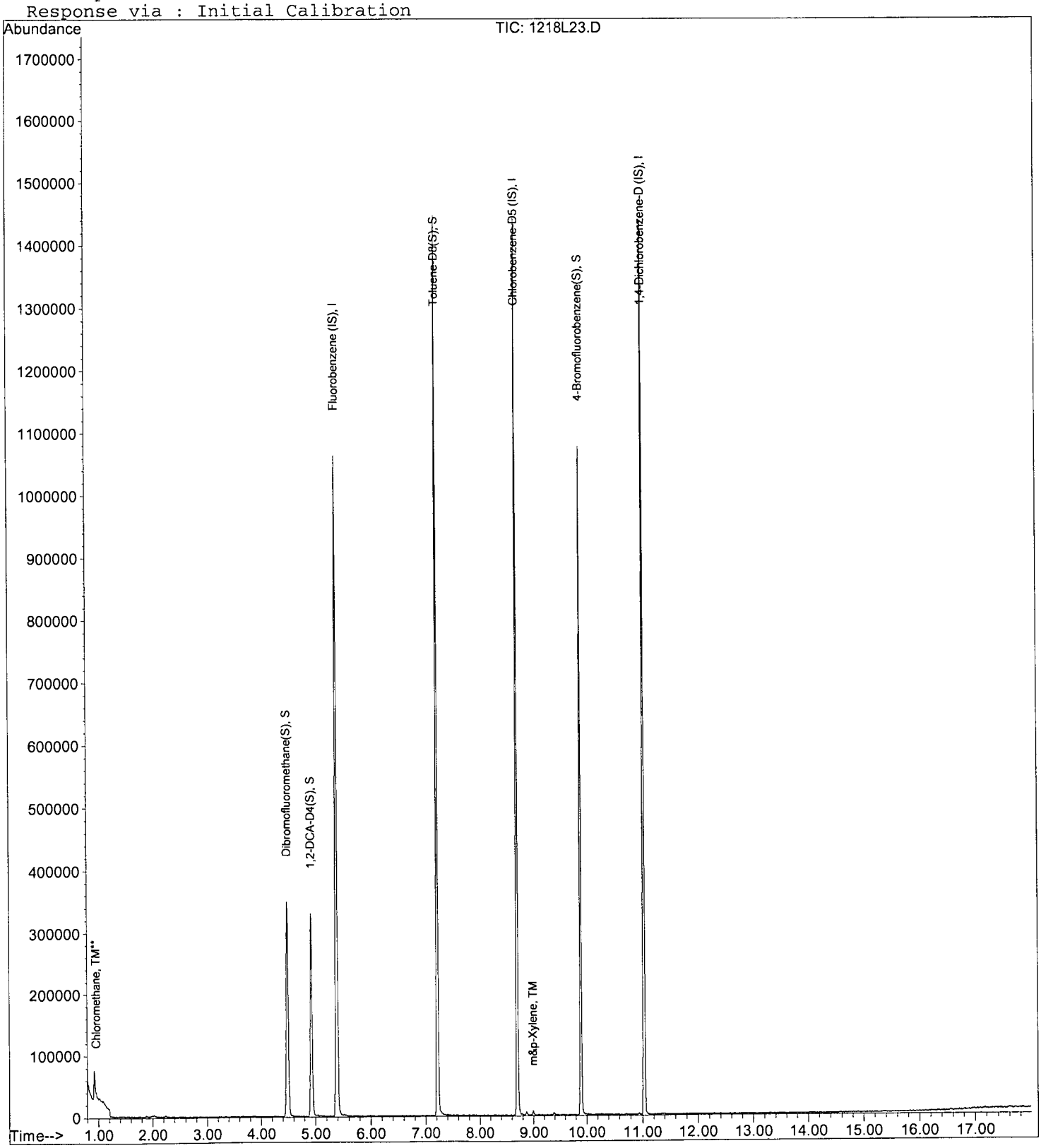
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L23.D Vial: 23
Acq On : 19 Dec 16 2:56 Operator: PM,DG,SV,CMM
Sample : AZ47662W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 10:52 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH150
Sample Collection Date: 12/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776
APPL ID: AZ47662
QCG: #GRO86-161218AL-214887

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	12/19/16	12/19/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	92.0	85-114			%	12/19/16	12/19/16

Quant Method: LSUR1216.M
Run #: 1218L23
Instrument: Loki
Sequence: 161216
Dilution Factor: 1
Initials: DG

Printed: 12/29/16 9:30:56 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L23.D
Acq On : 19 Dec 16 2:56
Sample : AZ47662W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 23
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 11:55 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161216\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1062533	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1441445	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1436498	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	10305197m	5.53	ppb	100

(#) = qualifier out of range (m) = manual integration
1218L23.D LGAS6Z11.M Thu Dec 29 11:10:53 2016

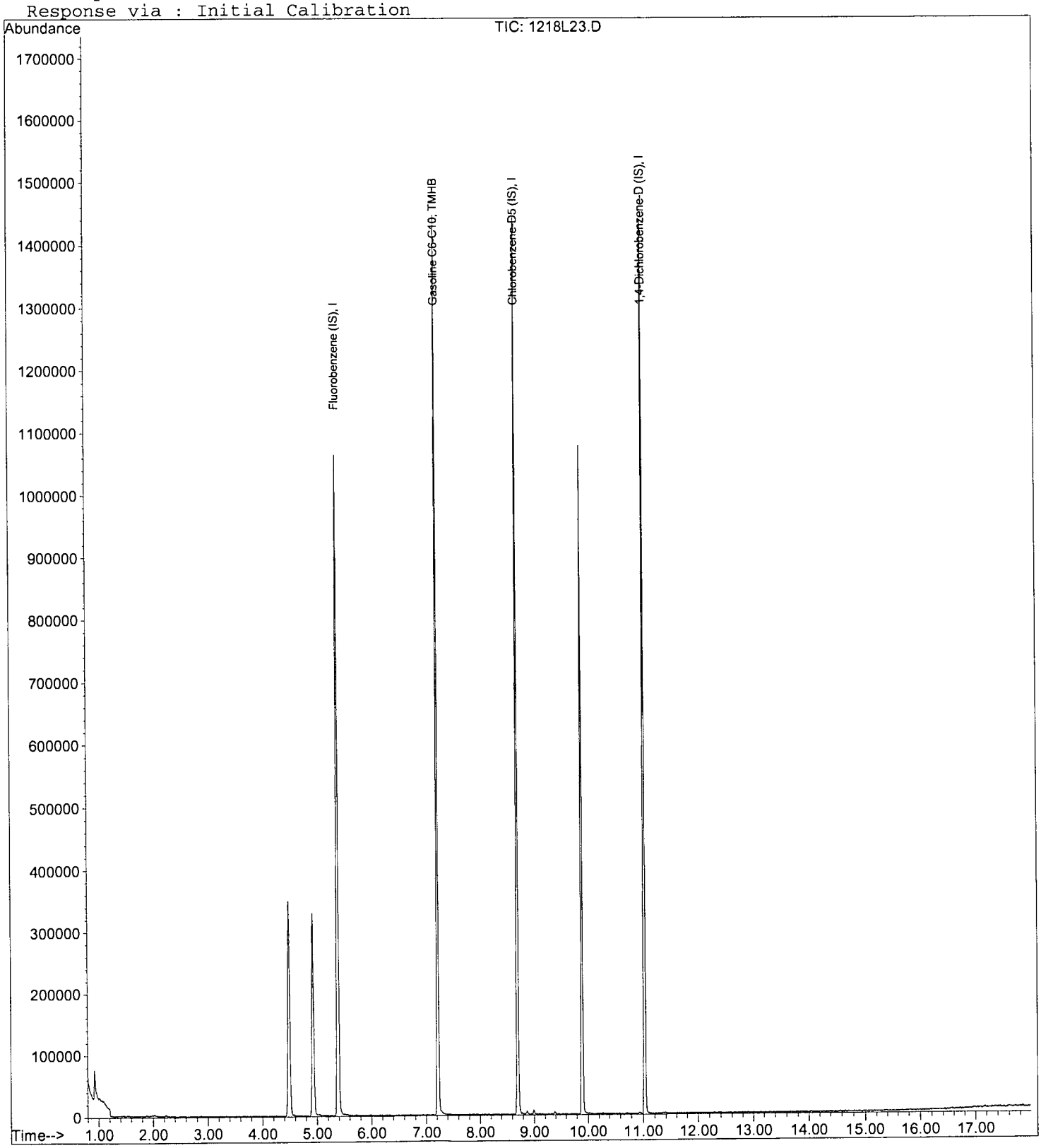
Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L23.D
Acq On : 19 Dec 16 2:56
Sample : AZ47662W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 23
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 11:55 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161216\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH138
Sample Collection Date: 12/13/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776
APPL ID: AZ47663
QCG: #86BTO-161218AL-214886

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	12/19/16	12/19/16
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	12/19/16	12/19/16
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	12/19/16	12/19/16
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	12/19/16	12/19/16
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	95.0	81-118			%	12/19/16	12/19/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	92.9	85-114			%	12/19/16	12/19/16
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	100	80-119			%	12/19/16	12/19/16
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	95.4	89-112			%	12/19/16	12/19/16

Quant Method: LALLW.M
Run #: 1218L24
Instrument: Loki
Sequence: 161216
Dilution Factor: 1
Initials: DG

Printed: 12/29/16 9:28:45 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L24.D Vial: 24
Acq On : 19 Dec 16 3:24 Operator: PM,DG,SV,CMM
Sample : AZ47663W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 10:52 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	508288	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	480512	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	251776	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.48	111	258685	25.01	ppb		0.00
Spiked Amount 25.000			Recovery =	100.032%			
37) 1,2-DCA-D4(S)	4.92	65	264172	23.75	ppb		0.00
Spiked Amount 25.000			Recovery =	95.000%			
57) Toluene-D8(S)	7.22	98	890211	23.85	ppb		0.00
Spiked Amount 25.000			Recovery =	95.408%			
65) 4-Bromofluorobenzene(S)	9.89	95	296653	23.22	ppb		0.00
Spiked Amount 25.000			Recovery =	92.896%			
Target Compounds							Qvalue
4) Chloromethane	0.96	50	2400	0.15	ppb		87
19) Methylene chloride	2.24	84	584	-2.24	ppb	#	69
27) MEK (2-Butanone)	3.80	43	116	-0.13	ppb	#	52
48) 2-Chloroethyl vinyl ether	6.52	43	22	-0.73	ppb		100
49) MIBK (methyl isobutyl ket	7.15	43	113	-0.91	ppb	#	42

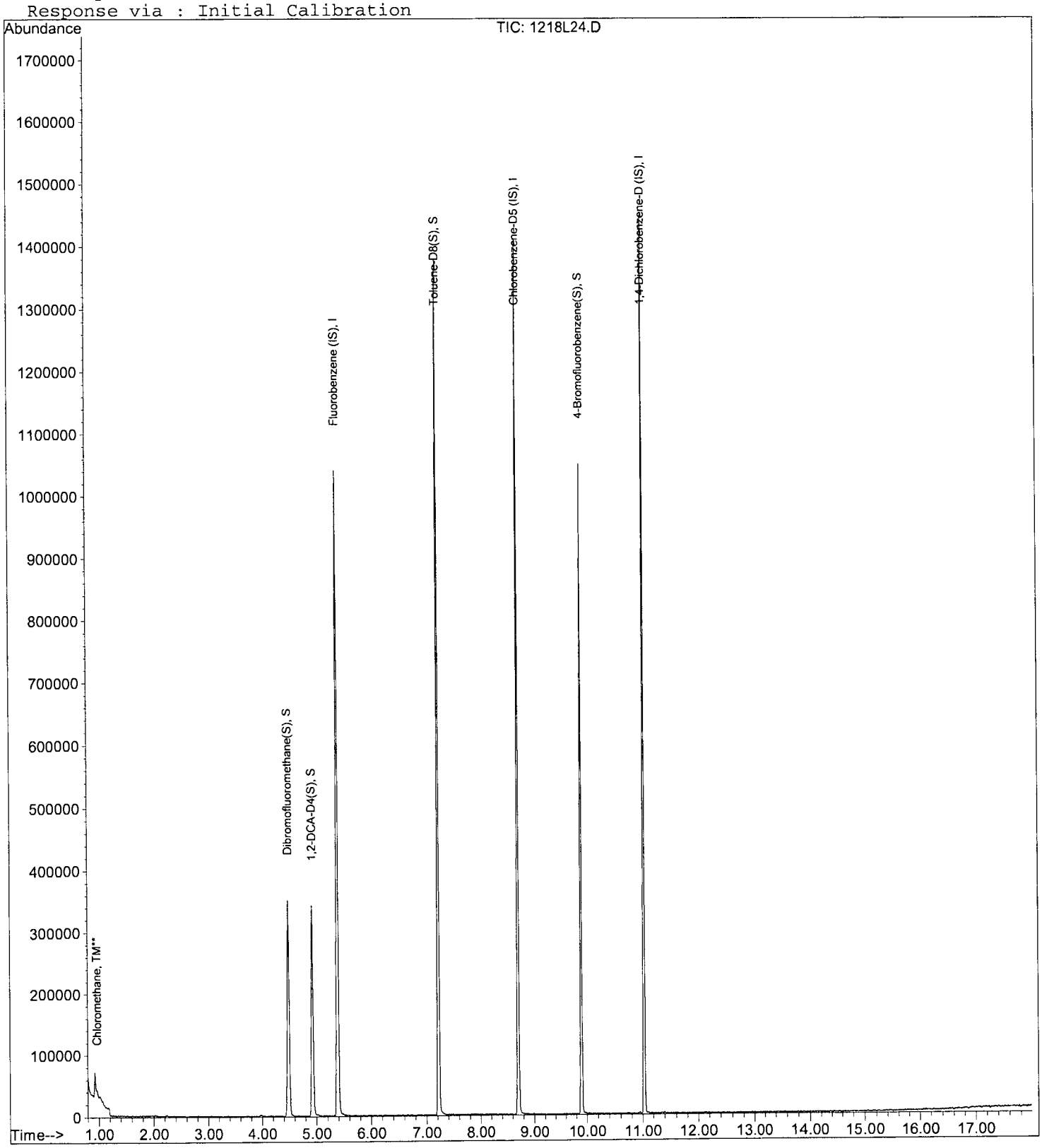
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L24.D Vial: 24
Acq On : 19 Dec 16 3:24 Operator: PM,DG,SV,CMM
Sample : AZ47663W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 10:52 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH138
Sample Collection Date: 12/13/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776
APPL ID: AZ47663
QCG: #GRO86-161218AL-214887

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	12/19/16	12/19/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	92.9	85-114			%	12/19/16	12/19/16

Quant Method: LSUR1216.M
Run #: 1218L24
Instrument: Loki
Sequence: 161216
Dilution Factor: 1
Initials: DG

Printed: 12/29/16 9:30:56 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L24.D Vial: 24
Acq On : 19 Dec 16 3:24 Operator: PM,DG,SV,CMM
Sample : AZ47663W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 11:56 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161216\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1038707	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1407778	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1447846	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.70	TIC	10170262m	8.19	ppb	100

(#) = qualifier out of range (m) = manual integration
1218L24.D LGAS6Z11.M Thu Dec 29 11:10:55 2016 Page 1

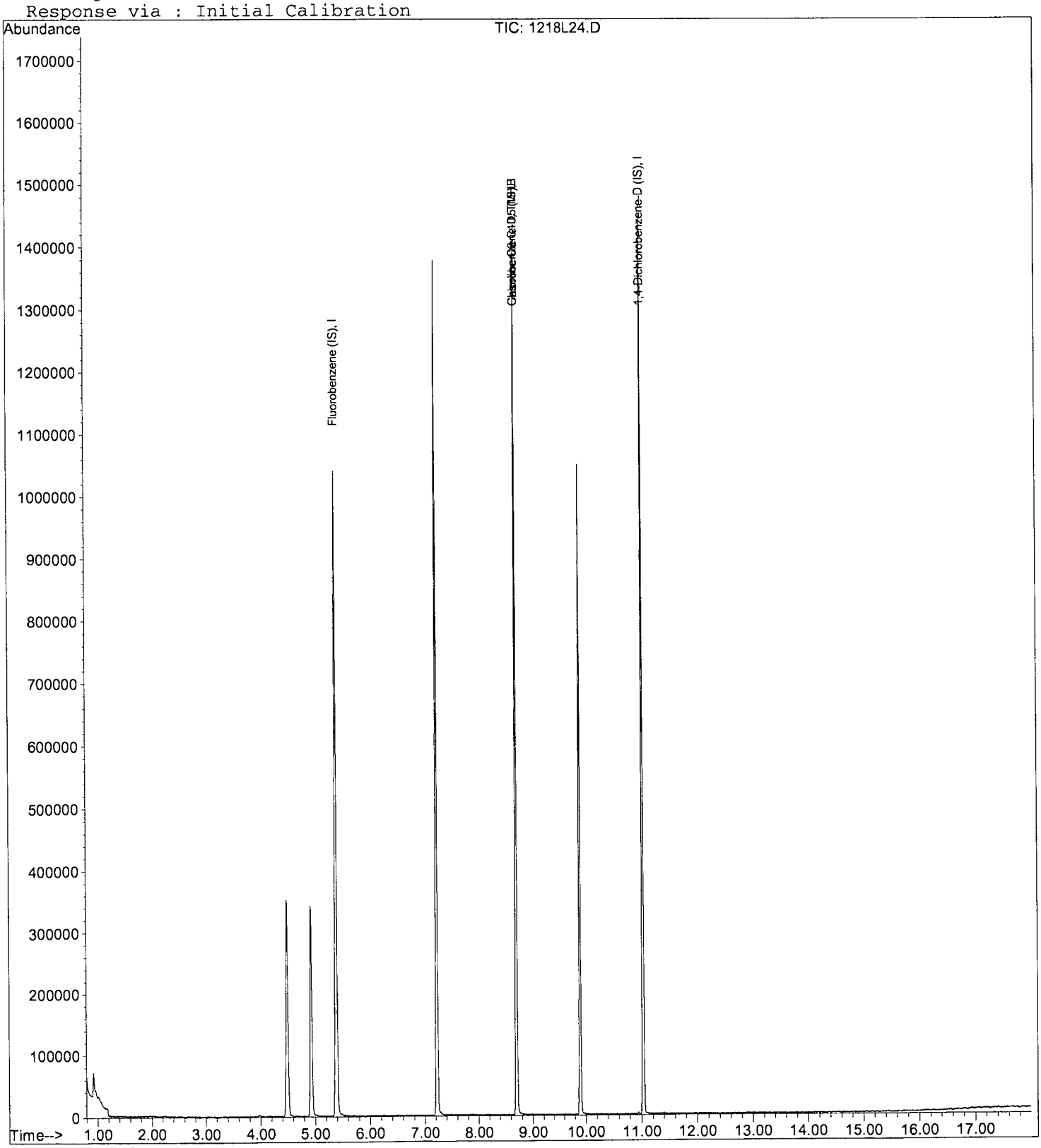
Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L24.D
Acq On : 19 Dec 16 3:24
Sample : AZ47663W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 24
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 11:56 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161216\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH144
Sample Collection Date: 12/13/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776
APPL ID: AZ47664
QCG: #86BTO-161218AL-214886

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	12/19/16	12/19/16
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	12/19/16	12/19/16
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	12/19/16	12/19/16
EPA 8260B	XYLENES (TOTAL)	0.19 J	2.0	0.30	0.19	ug/L	12/19/16	12/19/16
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	95.3	81-118			%	12/19/16	12/19/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	97.9	85-114			%	12/19/16	12/19/16
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	102	80-119			%	12/19/16	12/19/16
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	94.6	89-112			%	12/19/16	12/19/16

J = Estimated value.

Quant Method: LALLW.M
Run #: 1218L25
Instrument: Loki
Sequence: 161216
Dilution Factor: 1
Initials: DG

Printed: 12/29/16 9:28:45 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L25.D
Acq On : 19 Dec 16 3:52
Sample : AZ47664W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 25
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 10:55 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	516544	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	490240	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	270080	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.48	111	268478	25.54	ppb		0.00
Spiked Amount 25.000			Recovery =	102.160%			
37) 1,2-DCA-D4(S)	4.93	65	269386	23.83	ppb		0.00
Spiked Amount 25.000			Recovery =	95.324%			
57) Toluene-D8(S)	7.22	98	900588	23.65	ppb		0.00
Spiked Amount 25.000			Recovery =	94.604%			
65) 4-Bromofluorobenzene(S)	9.89	95	318857	24.47	ppb		0.00
Spiked Amount 25.000			Recovery =	97.868%			
Target Compounds							Qvalue
4) Chloromethane	0.96	50	3547	0.22	ppb		99
11) Acetone	1.89	43	2119	-1.17	ppb	#	65
19) Methylene chloride	2.23	84	406	-2.25	ppb	#	47
27) MEK (2-Butanone)	3.80	43	100	-0.13	ppb	#	52
46) Methyl Cyclohexane	6.04	83	3530	0.37	ppb		90
48) 2-Chloroethyl vinyl ether	6.52	43	1467	1.45	ppb		100
49) MIBK (methyl isobutyl ket	7.14	43	121	-0.91	ppb	#	42
63) o-Xylene	9.38	106	3087	0.19	ppb		96
69) Ethylbenzene	8.87	91	6005	0.14	ppb		97
72) Isopropylbenzene	9.76	105	100935	2.57	ppb		100
77) n-Propylbenzene	10.17	91	193412	4.09	ppb		99
82) Tert-Butylbenzene	10.66	119	17795	0.67	ppb		97
84) Sec-Butylbenzene	10.88	105	122349	3.21	ppb		96
89) n-Butylbenzene	11.44	91	99472	3.40	ppb		94
95) Naphthalene	13.22	128	1146747	81.32	ppb		100

(#) = qualifier out of range (m) = manual integration

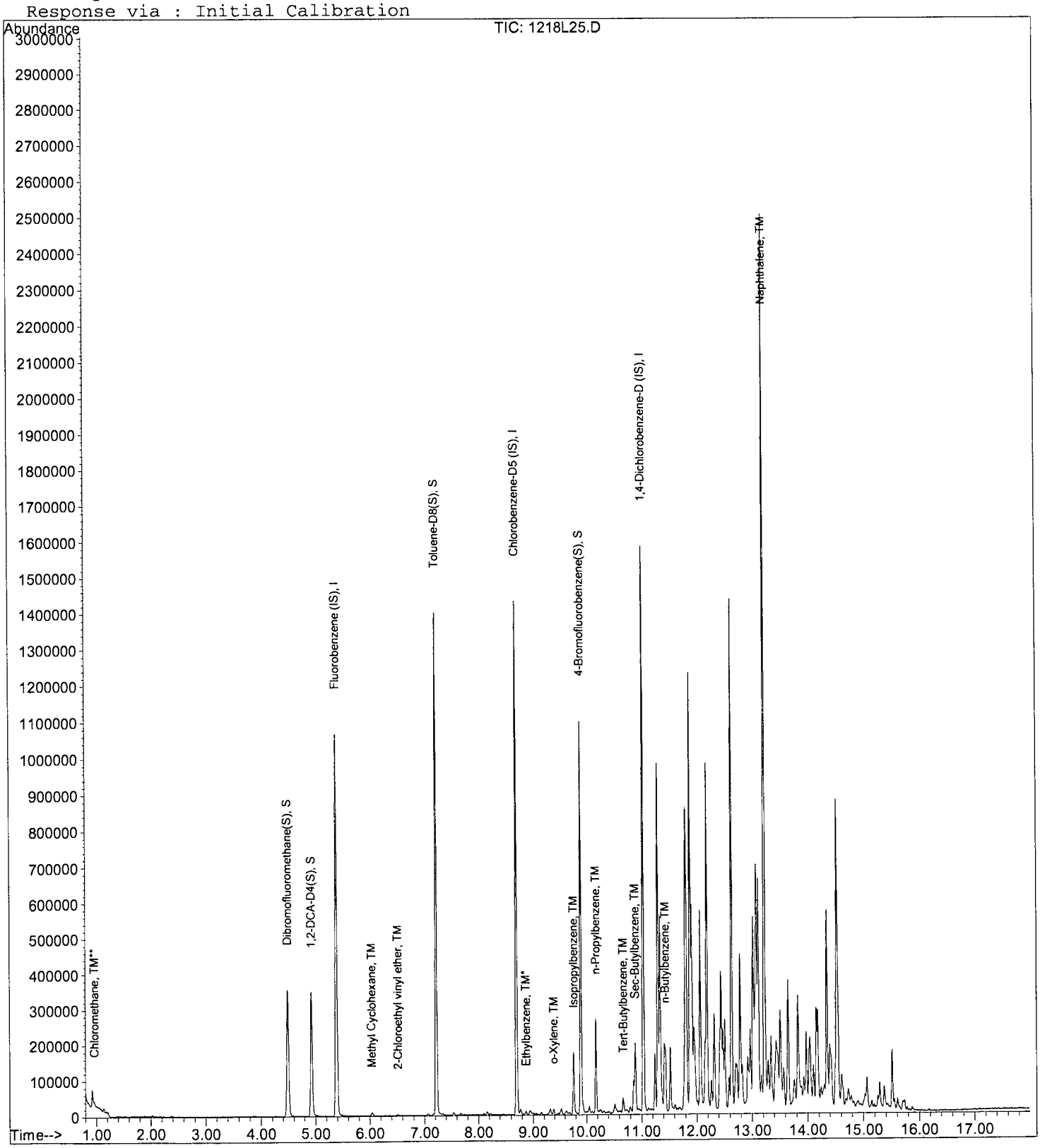
Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L25.D
Acq On : 19 Dec 16 3:52
Sample : AZ47664W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 25
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 10:55 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH144
Sample Collection Date: 12/13/16

ARF: 81776
APPL ID: AZ47664
QCG: #GRO86-161218AL-214887

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	12/19/16	12/19/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	97.9	85-114			%	12/19/16	12/19/16

Quant Method: LSUR1216.M
Run #: 1218L25
Instrument: Loki
Sequence: 161216
Dilution Factor: 1
Initials: DG

Printed: 12/29/16 9:30:56 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L25.D Vial: 25
Acq On : 19 Dec 16 3:52 Operator: PM,DG,SV,CMM
Sample : AZ47664W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 11:57 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161216\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1064766	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1430033	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1573127	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	8.70	TIC	11235280m	30.00	ppb	100

(#) = qualifier out of range (m) = manual integration
1218L25.D LGAS6Z11.M Thu Dec 29 11:10:57 2016 Page 1

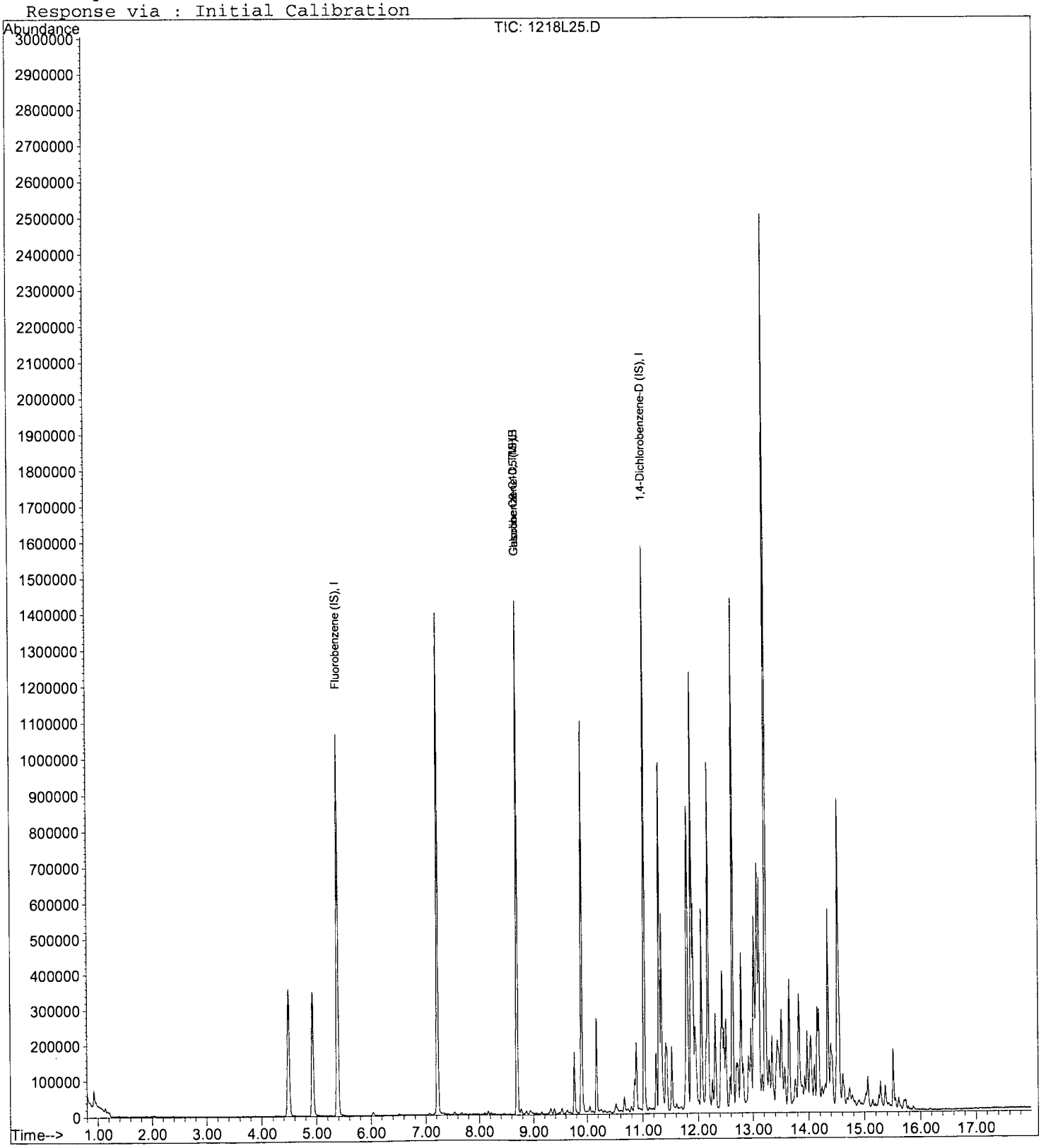
Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L25.D
Acq On : 19 Dec 16 3:52
Sample : AZ47664W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 25
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 11:57 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161216\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH140
Sample Collection Date: 12/13/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776
APPL ID: AZ47665
QCG: #86BTO-161218AL-214886

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	12/19/16	12/19/16
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	12/19/16	12/19/16
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	12/19/16	12/19/16
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	12/19/16	12/19/16
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	92.5	81-118			%	12/19/16	12/19/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	93.2	85-114			%	12/19/16	12/19/16
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	97.8	80-119			%	12/19/16	12/19/16
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	94.4	89-112			%	12/19/16	12/19/16

Quant Method: LALLW.M
Run #: 1218L26
Instrument: Loki
Sequence: 161216
Dilution Factor: 1
Initials: DG

Printed: 12/29/16 9:28:45 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L26.D
Acq On : 19 Dec 16 4:20
Sample : AZ47665W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 26
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 10:56 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	524864	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	500544	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	255104	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.48	111	261071	24.44	ppb		0.00
Spiked Amount 25.000			Recovery =	97.768%			
37) 1,2-DCA-D4(S)	4.92	65	265565	23.12	ppb		0.00
Spiked Amount 25.000			Recovery =	92.484%			
57) Toluene-D8(S)	7.22	98	917115	23.59	ppb		0.00
Spiked Amount 25.000			Recovery =	94.360%			
65) 4-Bromofluorobenzene(S)	9.89	95	309913	23.29	ppb		0.00
Spiked Amount 25.000			Recovery =	93.164%			
Target Compounds							Qvalue
4) Chloromethane	0.96	50	1840	0.11	ppb		88
19) Methylene chloride	2.24	84	1184	-2.18	ppb		89
27) MEK (2-Butanone)	3.82	43	145	-0.12	ppb	#	52
48) 2-Chloroethyl vinyl ether	6.53	43	230	-0.42	ppb		100
49) MIBK (methyl isobutyl ket	7.16	43	54	-0.92	ppb	#	12
95) Naphthalene	13.22	128	46544	3.49	ppb		95

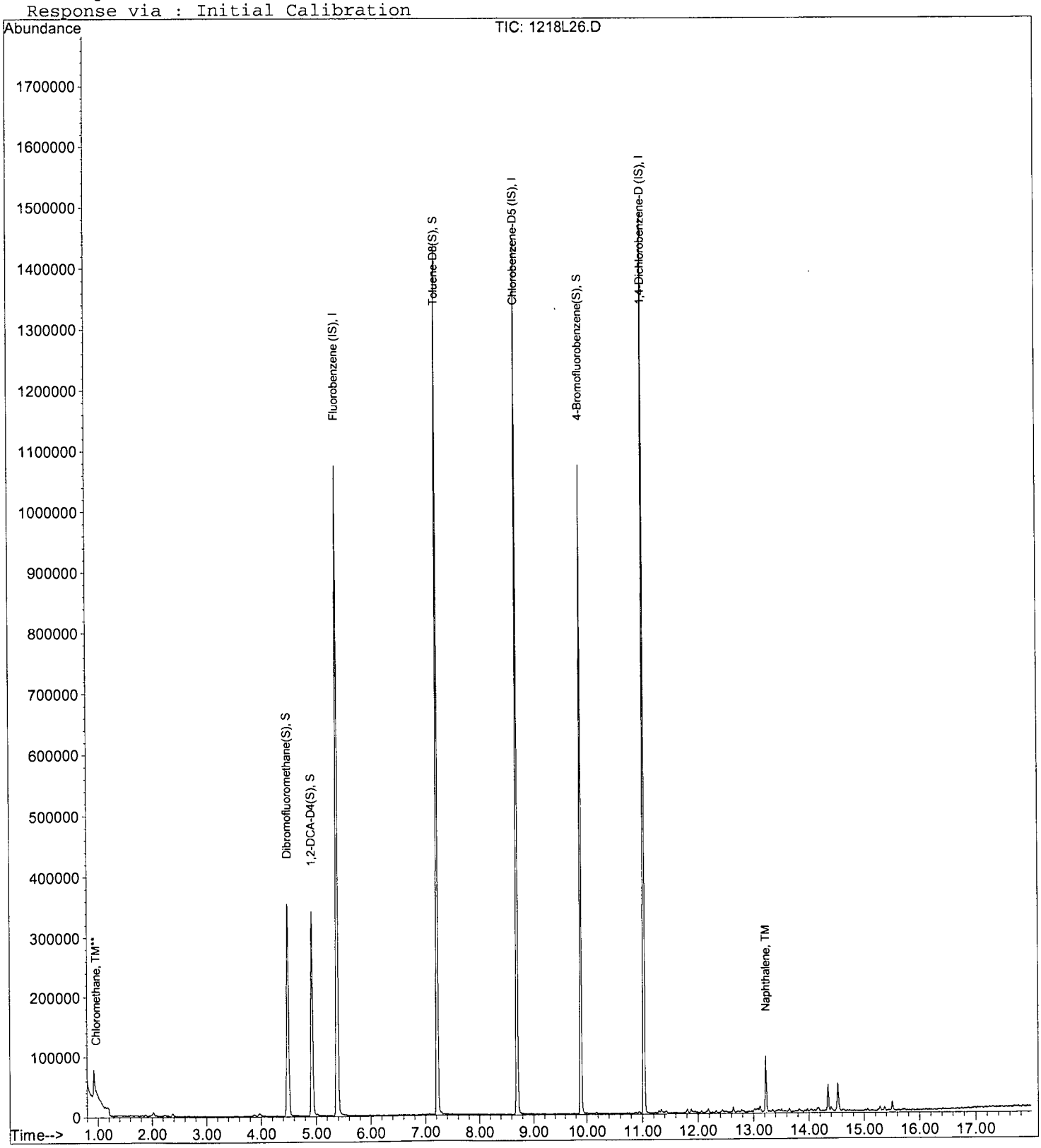
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L26.D Vial: 26
Acq On : 19 Dec 16 4:20 Operator: PM,DG,SV,CMM
Sample : AZ47665W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 10:56 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH140
Sample Collection Date: 12/13/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776
APPL ID: AZ47665
QCG: #GRO86-161218AL-214887

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	12/19/16	12/19/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	93.2	85-114			%	12/19/16	12/19/16

Quant Method: LSUR1216.M
Run #: 1218L26
Instrument: Loki
Sequence: 161216
Dilution Factor: 1
Initials: DG

Printed: 12/29/16 9:30:56 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L26.D Vial: 26
Acq On : 19 Dec 16 4:20 Operator: PM,DG,SV,CMM
Sample : AZ47665W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 11:57 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161216\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1074745	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1444919	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1485023	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	8.70	TIC	10511781m	7.88	ppb	100

(#) = qualifier out of range (m) = manual integration
1218L26.D LGAS6Z11.M Thu Dec 29 11:10:59 2016 Page 1

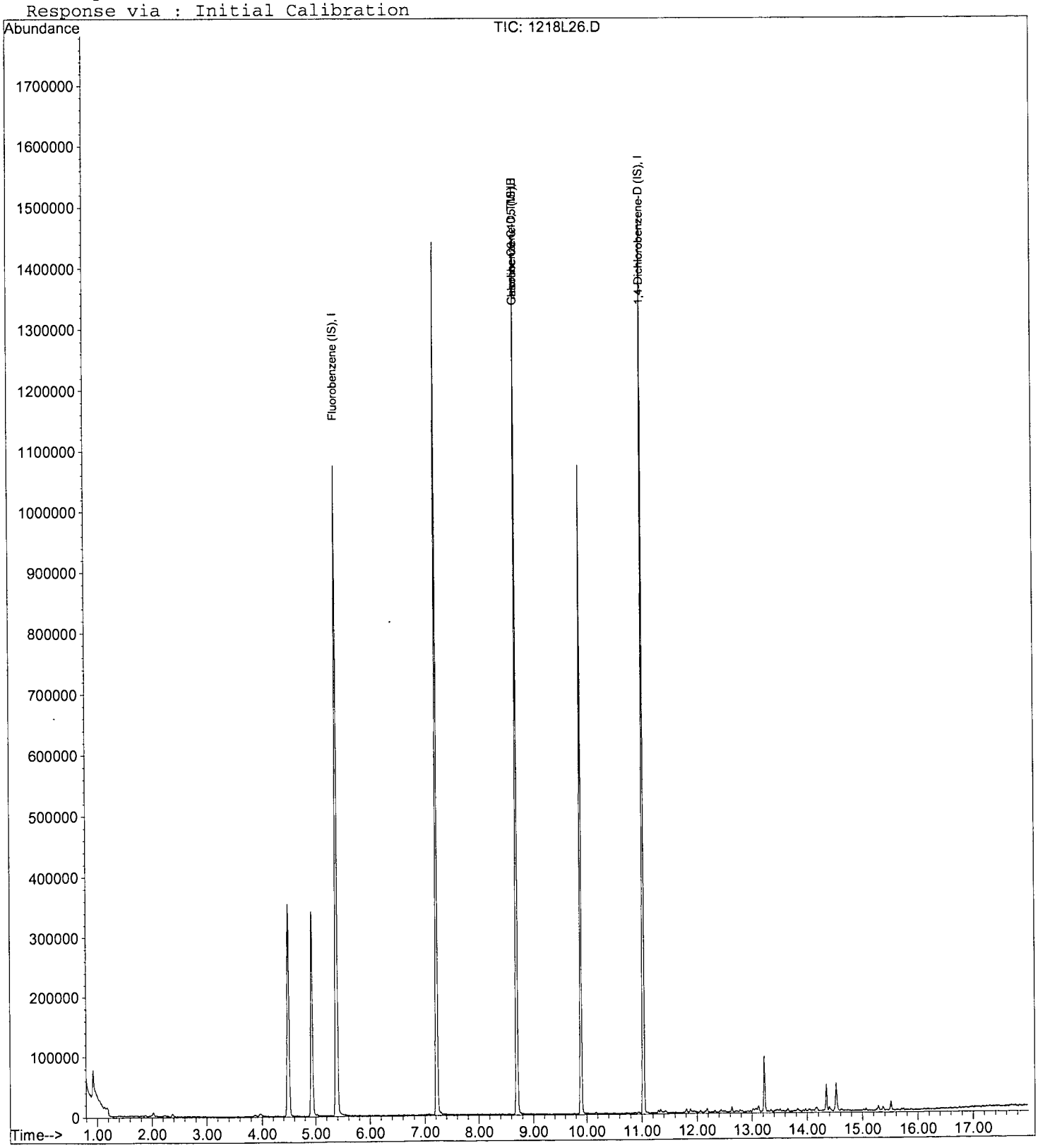
Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L26.D
Acq On : 19 Dec 16 4:20
Sample : AZ47665W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 26
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 11:57 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161216\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



EPA METHOD 8260B
Volatile Organic Compounds
Calibration Data

APPL, INC.

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Initial Cal. Date: 12/11/16
Instrument: Loki

Initials:

		Compound	1211L06.D	1211L07.D	1211L08.D	1211L09.D	1211L10.D	1211L11.D	1211L12.D				Avg	%RSD		
1	I	Fluorobenzene (IS)														
2	TMHBL	Gasoline C6-C10	12.7	5.590	3.275	1.662	1.266	1.171	1.108				3.8	111	TMHBL	1.00
3	I	Chlorobenzene-D5 (IS)														
4	I	1,4-Dichlorobenzene-D (IS)														
5																
6																
7																
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9																
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34																
35																

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1211L06.D Vial: 6
Acq On : 11 Dec 16 12:39 Operator: PM,DG,SV,CMM
Sample : 20ug/L GAS STD 12/11/16A Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:46 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:37:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1192046	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1555815	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1640058	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	12140223m	22.40865	ppb	100

(#) = qualifier out of range (m) = manual integration

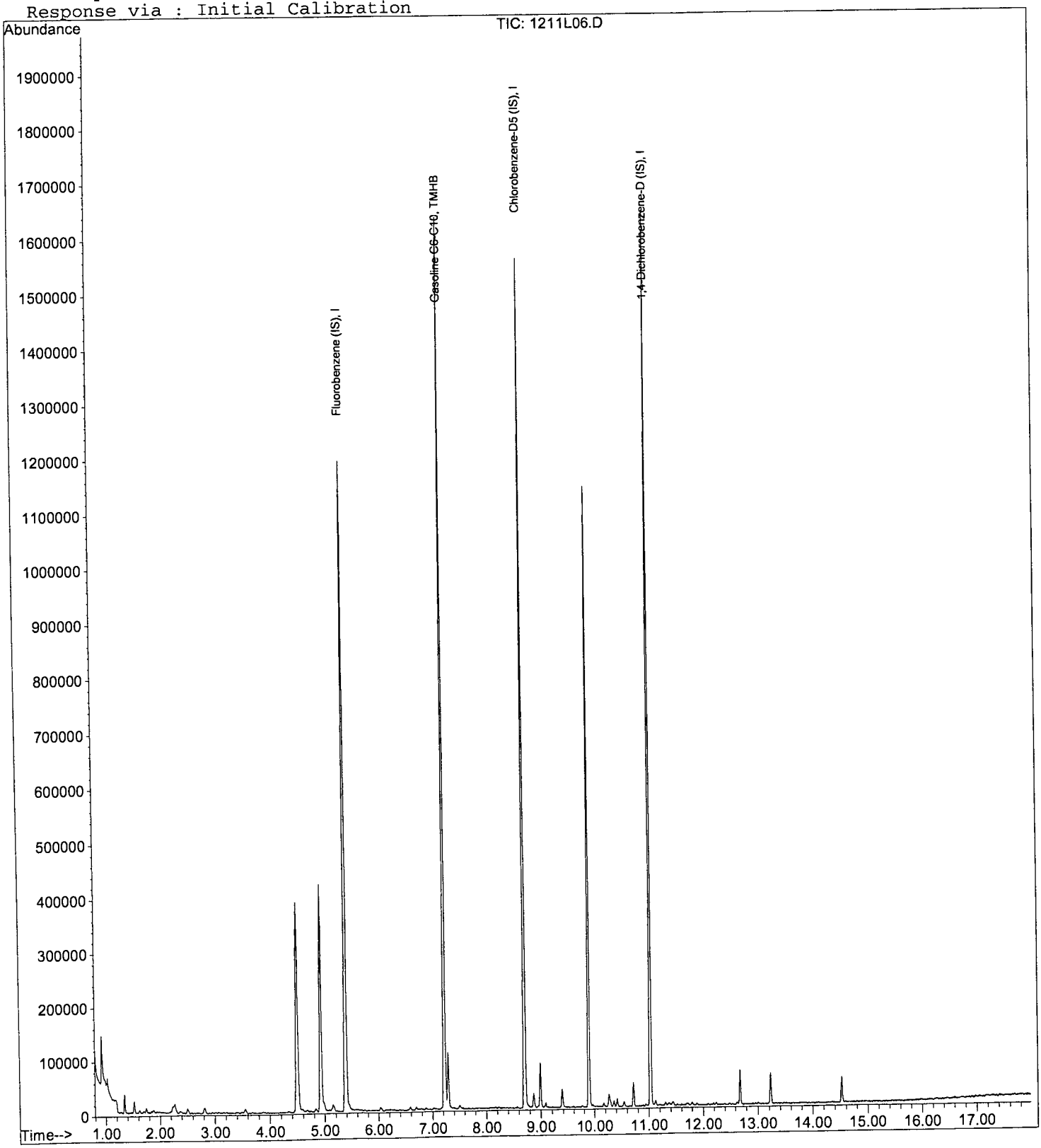
Quantitation Report

Data File : M:\LOKI\DATA\161210\1211L06.D
Acq On : 11 Dec 16 12:39
Sample : 20ug/L GAS STD 12/11/16A
Misc : W IS&S 11/21/16, 11/14/16

Vial: 6
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 13 8:46 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1211L07.D
Acq On : 11 Dec 16 13:07
Sample : 50ug/L GAS STD 12/11/16B
Misc : W IS&S 11/21/16, 11/14/16

Vial: 7
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 13 8:45 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:37:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1164223	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1556548	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1560800	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	13016126m	51.10504	ppb	100

(#) = qualifier out of range (m) = manual integration
1211L07.D LGAS6Z11.M Wed Dec 14 11:25:13 2016

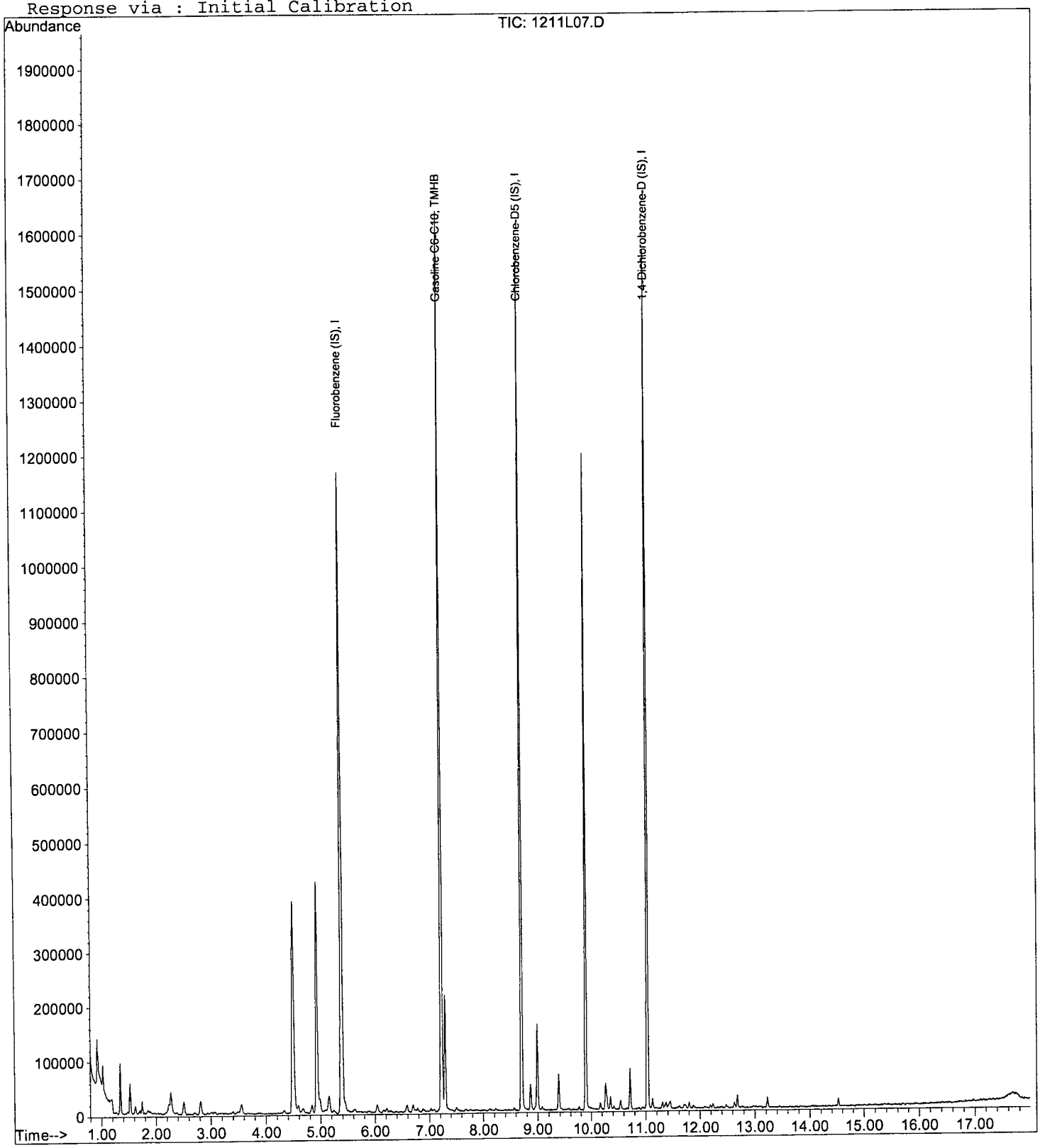
Quantitation Report

Data File : M:\LOKI\DATA\161210\1211L07.D
Acq On : 11 Dec 16 13:07
Sample : 50ug/L GAS STD 12/11/16B
Misc : W IS&S 11/21/16, 11/14/16

Vial: 7
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 13 8:45 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1211L08.D
Acq On : 11 Dec 16 13:35
Sample : 100ug/L GAS STD 12/11/16C
Misc : W IS&S 11/21/16, 11/14/16

Vial: 8
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 13 8:44 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:37:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1150108	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1536391	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1573350	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	15065779m	106.41914	ppb	100

(#) = qualifier out of range (m) = manual integration

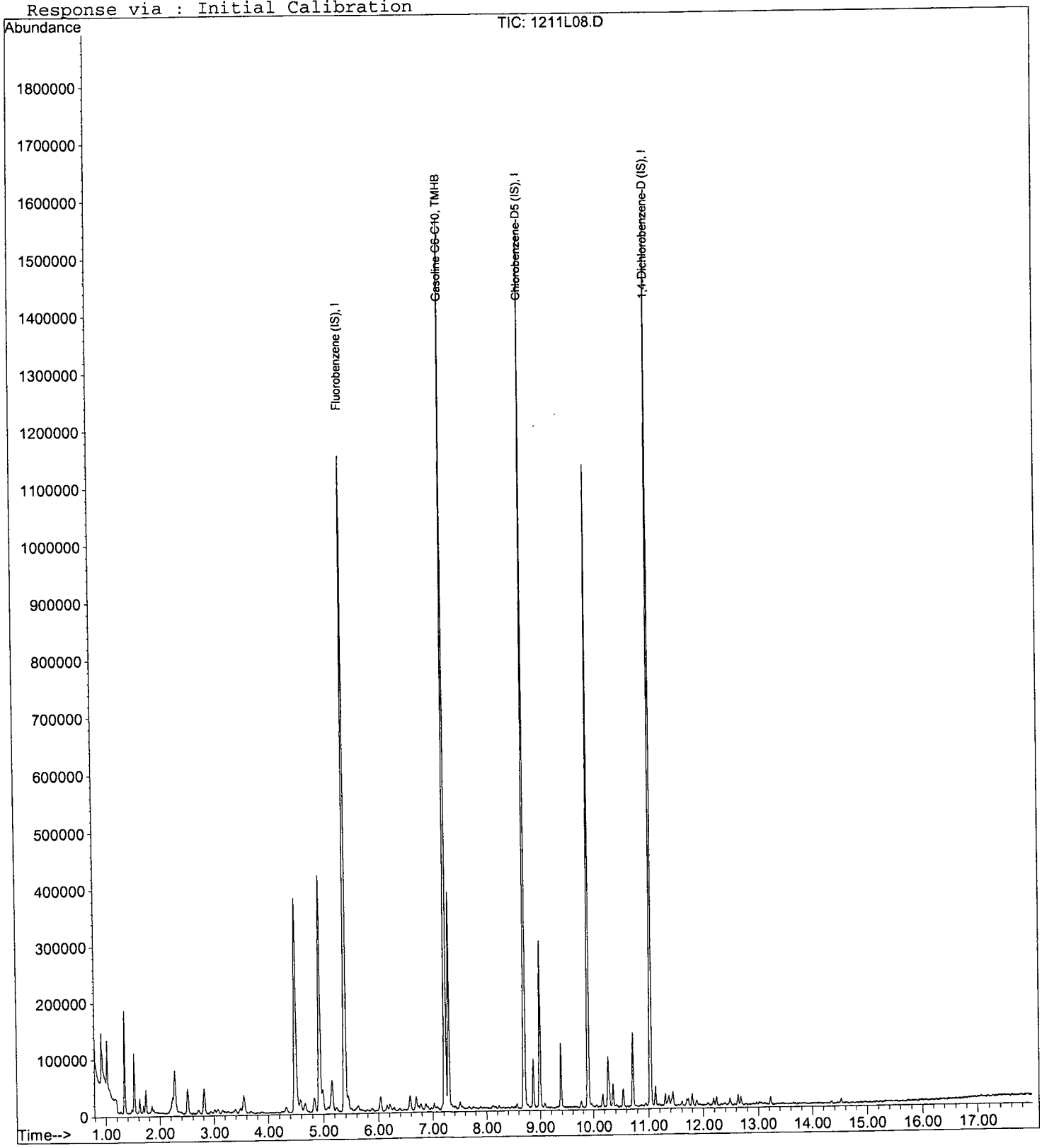
Quantitation Report

Data File : M:\LOKI\DATA\161210\1211L08.D
Acq On : 11 Dec 16 13:35
Sample : 100ug/L GAS STD 12/11/16C
Misc : W IS&S 11/21/16, 11/14/16

Vial: 8
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 13 8:44 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1211L09.D
Acq On : 11 Dec 16 14:03
Sample : 300ug/L GAS STD 12/11/16D
Misc : W IS&S 11/21/16, 11/14/16

Vial: 9
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 13 8:42 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:37:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1169273	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1551836	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1654152	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	23321195m	303.70347	ppb	100

(#) = qualifier out of range (m) = manual integration
1211L09.D LGAS6Z11.M Wed Dec 14 11:25:20 2016

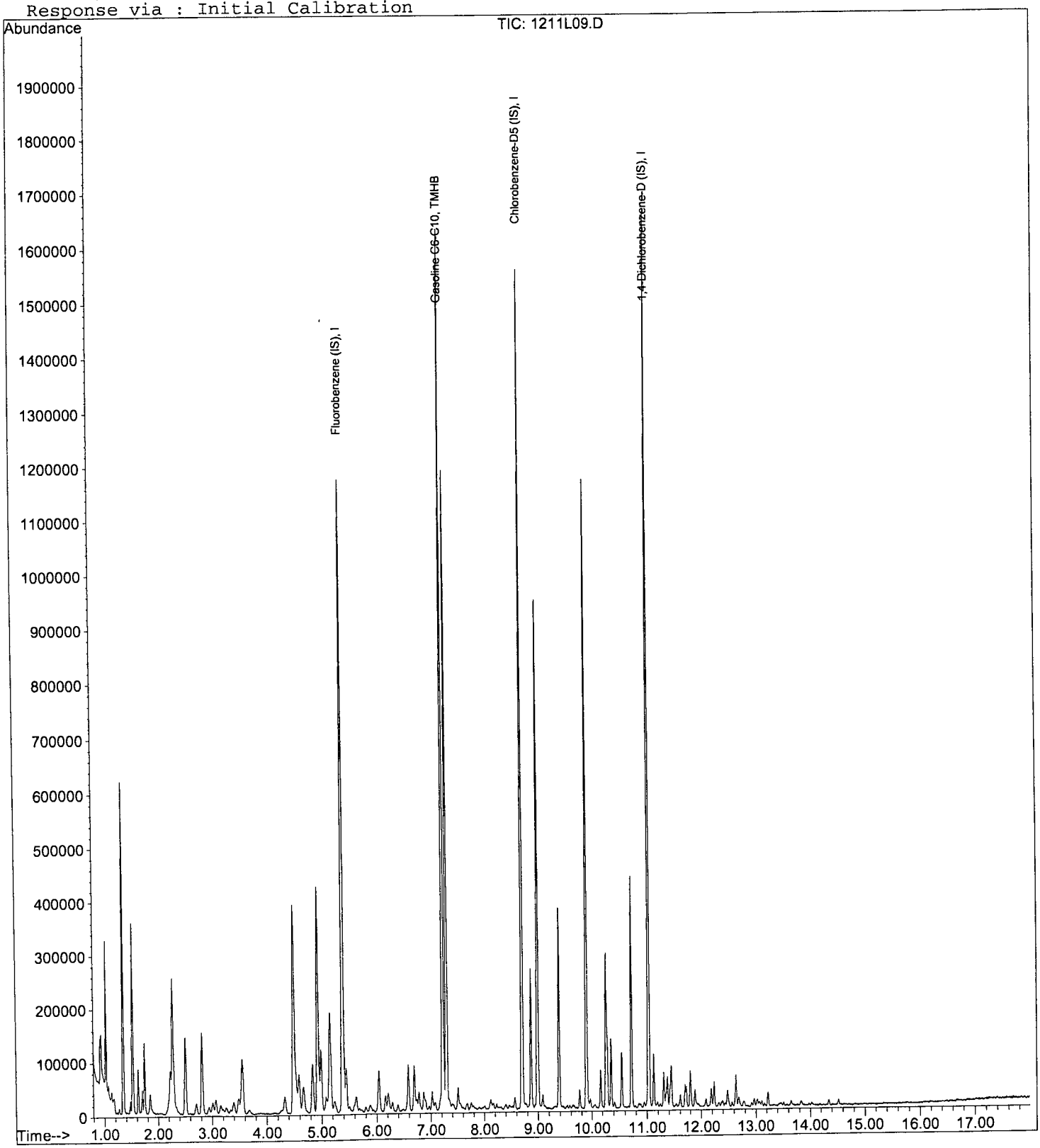
Quantitation Report

Data File : M:\LOKI\DATA\161210\1211L09.D
Acq On : 11 Dec 16 14:03
Sample : 300ug/L GAS STD 12/11/16D
Misc : W IS&S 11/21/16, 11/14/16

Vial: 9
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 13 8:42 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1211L10.D
Acq On : 11 Dec 16 14:32
Sample : 600ug/L GAS STD 12/11/16E
Misc : W IS&S 11/21/16, 11/14/16

Vial: 10
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 13 8:41 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:37:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1208734	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1596204	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1715661	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.29	TIC	36730733m	604.65448	ppb	100

(#) = qualifier out of range (m) = manual integration
1211L10.D LGAS6Z11.M Wed Dec 14 11:25:25 2016

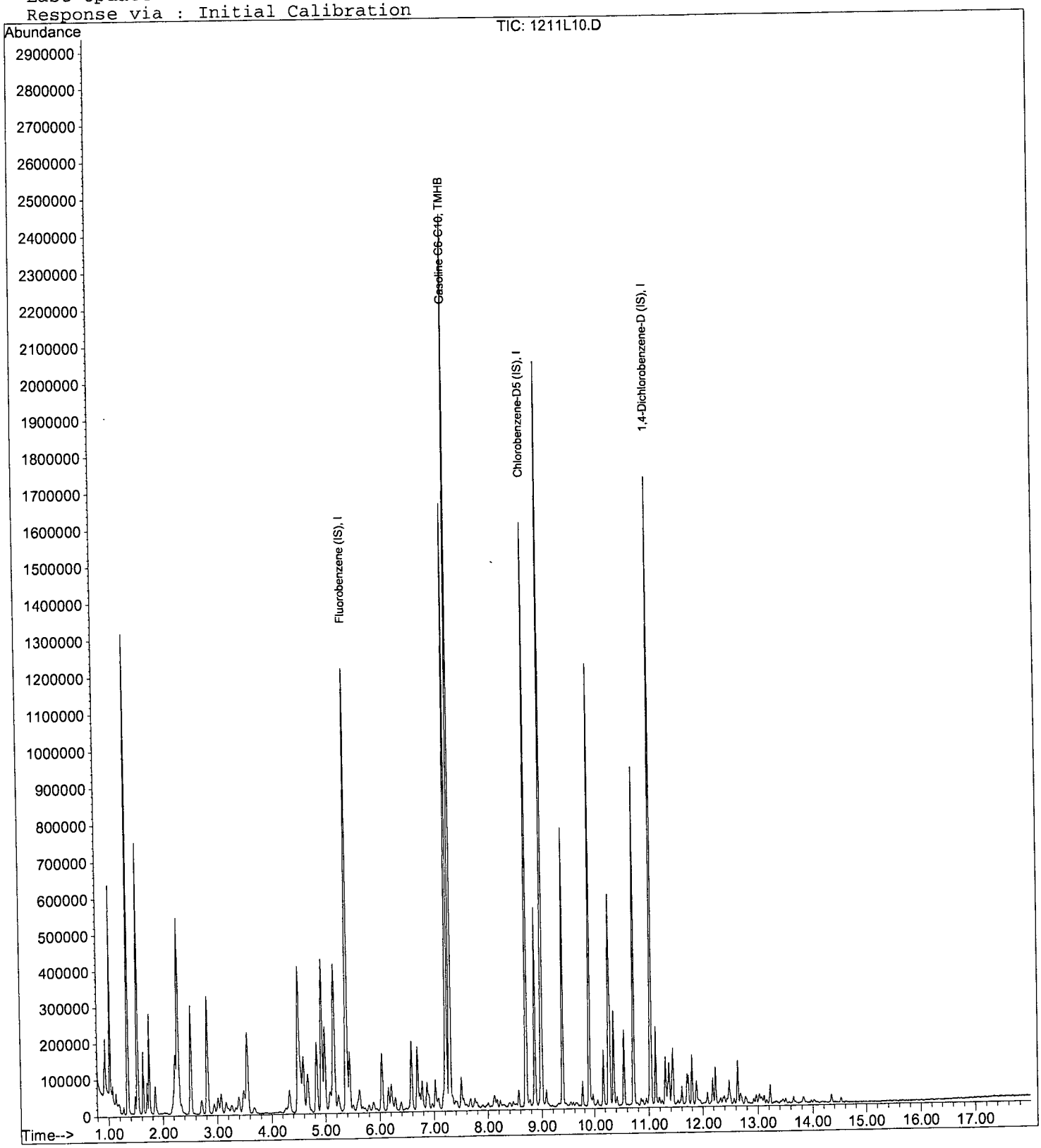
Quantitation Report

Data File : M:\LOKI\DATA\161210\1211L10.D
Acq On : 11 Dec 16 14:32
Sample : 600ug/L GAS STD 12/11/16E
Misc : W IS&S 11/21/16, 11/14/16

Vial: 10
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 13 8:41 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1211L11.D
Acq On : 11 Dec 16 15:00
Sample : 800ug/L GAS STD 12/11/16F
Misc : W IS&S 11/21/16, 11/14/16

Vial: 11
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 13 8:40 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:37:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1210565	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1627461	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1718776	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.29	TIC	45367431m	808.93848	ppb	100

(#) = qualifier out of range (m) = manual integration
1211L11.D LGAS6Z11.M Wed Dec 14 11:25:28 2016

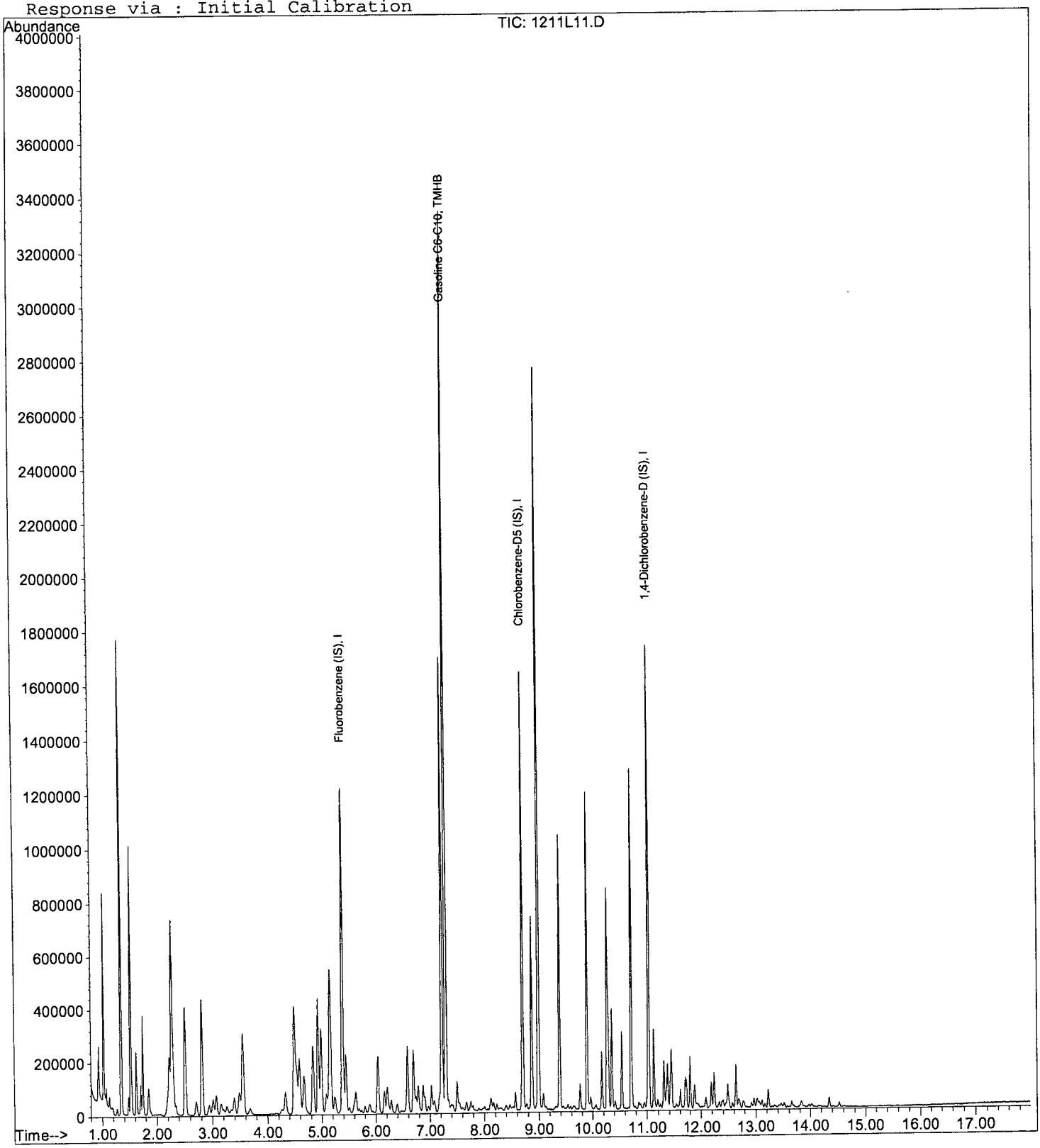
Quantitation Report

Data File : M:\LOKI\DATA\161210\1211L11.D
Acq On : 11 Dec 16 15:00
Sample : 800ug/L GAS STD 12/11/16F
Misc : W IS&S 11/21/16, 11/14/16

Vial: 11
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 13 8:40 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1211L12.D
Acq On : 11 Dec 16 15:28
Sample : 1000ug/L GAS STD 12/11/16G
Misc : W IS&S 11/21/16, 11/14/16

Vial: 12
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 13 8:39 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:37:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1244641	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1644090	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1763195	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.29	TIC	55171361m	1006.37530	ppb	100

(#) = qualifier out of range (m) = manual integration
1211L12.D LGAS6Z11.M Wed Dec 14 11:25:32 2016

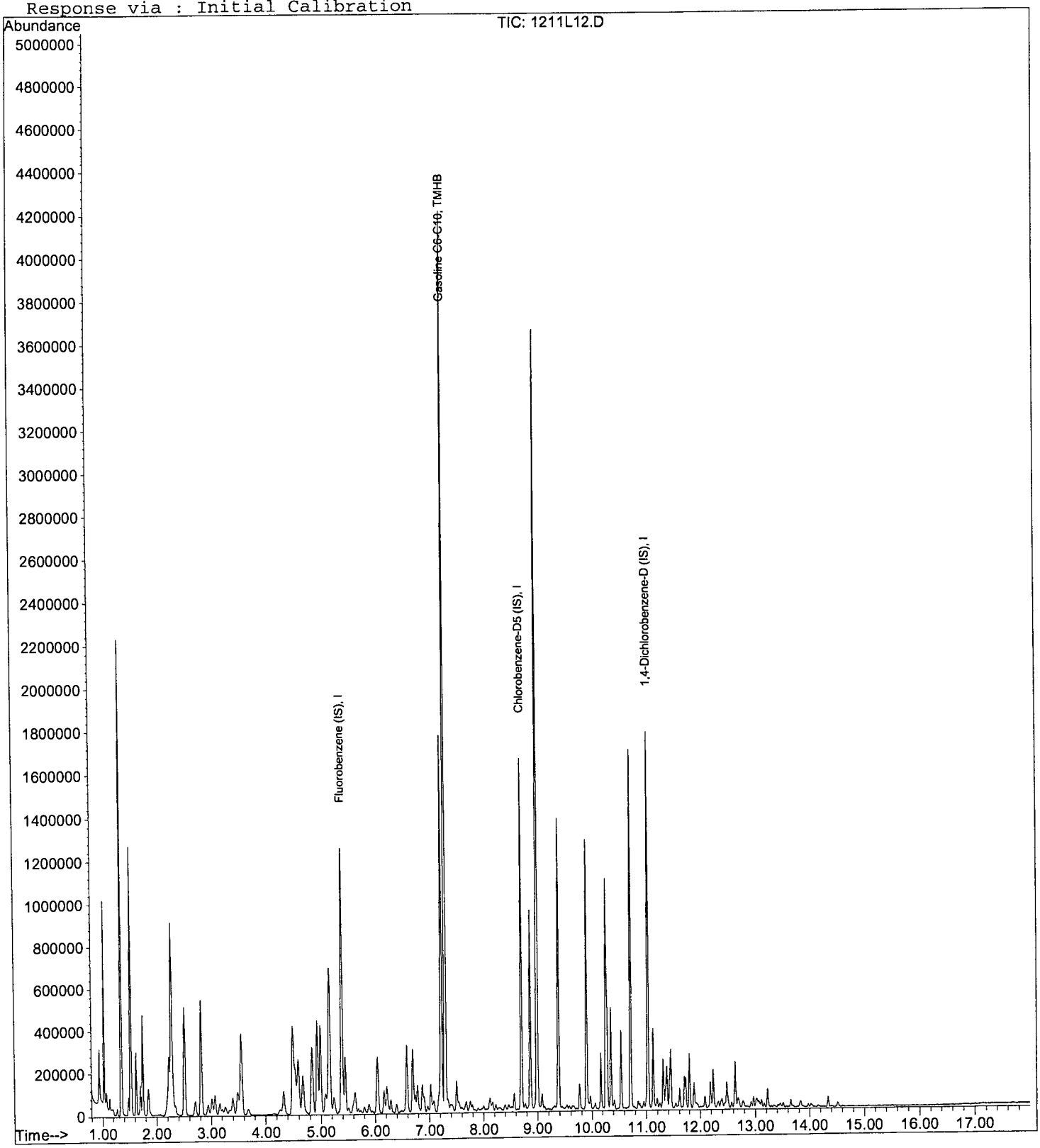
Quantitation Report

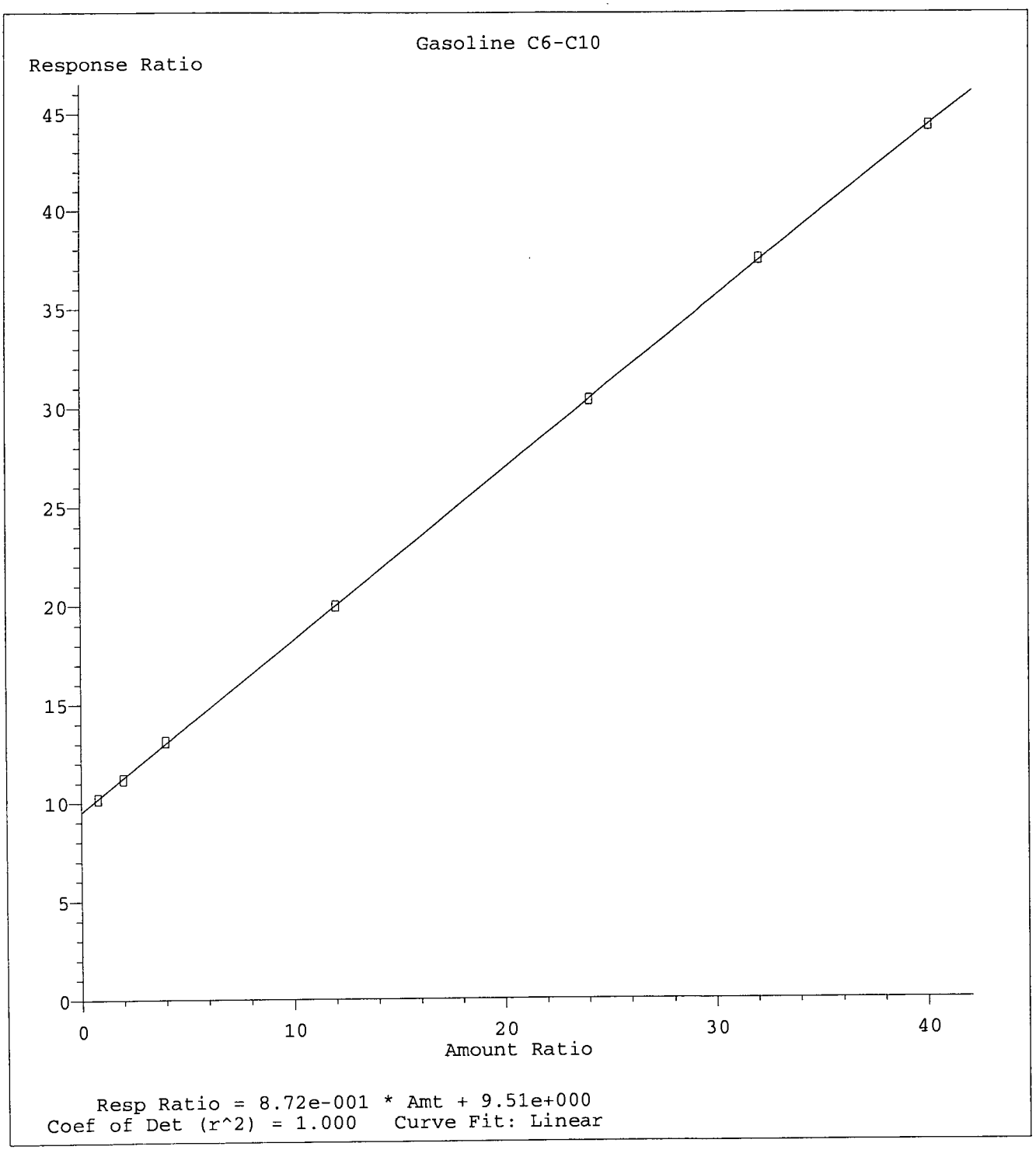
Data File : M:\LOKI\DATA\161210\1211L12.D
Acq On : 11 Dec 16 15:28
Sample : 1000ug/L GAS STD 12/11/16G
Misc : W IS&S 11/21/16, 11/14/16

Vial: 12
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 13 8:39 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration





Method Name: M:\LOKI\DATA\161210\LGAS6Z11.M
Calibration Table Last Updated: Tue Dec 13 08:47:40 2016

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/11/16
Instrument: Loki
Initial Cal. Date: 12/11/16
Data File: 1211L16.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TMHB	Gasoline C6-C10	3.829	1.674	56	TMHBL	1.2
2							
3							
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38							
39							
40							
		Average			56.0		

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1211L16.D Vial: 16
Acq On : 11 Dec 16 17:21 Operator: PM,DG,SV,CMM
Sample : (SS) 300ug/L GAS STD 12/11/16 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:50 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1221661	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1610523	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1685182	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	24545495m	303.64031	ppb	100

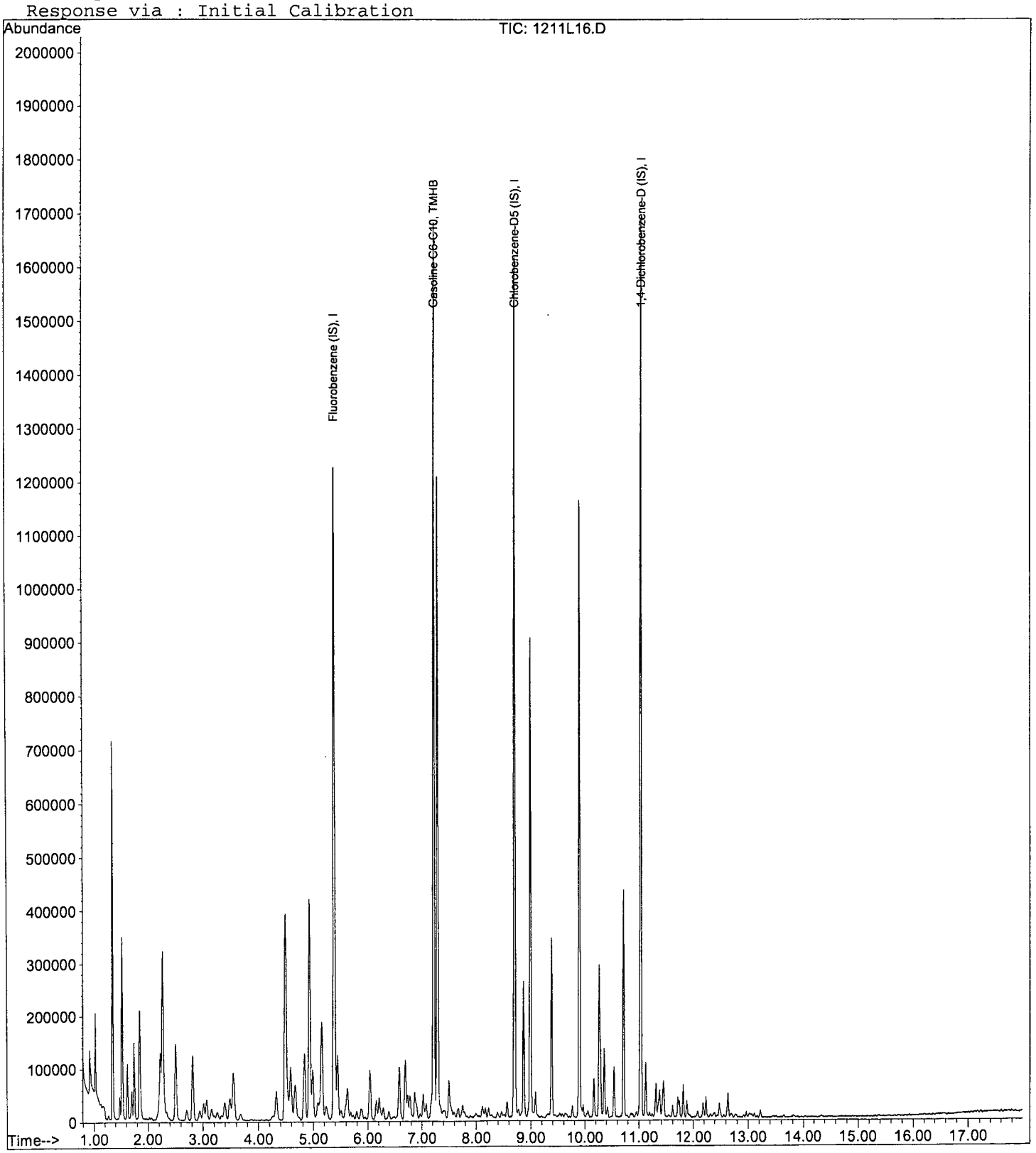
(#) = qualifier out of range (m) = manual integration
1211L16.D LGAS6Z11.M Wed Dec 14 11:25:36 2016 Page 1

Quantitation Report

Data File : M:\LOKI\DATA\161210\1211L16.D Vial: 16
Acq On : 11 Dec 16 17:21 Operator: PM,DG,SV,CMM
Sample : (SS) 300ug/L GAS STD 12/11/16 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:50 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: water

SDG No:
Initial Cal. Date: 12/16/16
Instrument: Loki

Initials: DG

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD		
			1216L04 D	1216L05.D	1216L06.D	1216L07 D	1216L08.D	1216L09.D	1216L10.D	1216L11.D	1216L12.D					
1	I	Fluorobenzene (IS)														
2	S	Dibromofluoromethane(S)	0.6038	0.5753	0.4807	0.4859	0.5082	0.5039	0.4767	0.4835	0.4607		0.51	9.5	S	
3	S	1,2-DCA-D4(S)	0.6316	0.6392	0.5243	0.5341	0.5492	0.5372	0.5189	0.5081	0.4813		0.55	9.8	S	
4	I	Chlorobenzene-D5 (IS)														
5	S	Toluene-D8(S)	2.140	2.113	1.779	1.826	1.908	1.970	1.913	1.987	1.840		1.9	6.4	S	
6	S	4-Bromofluorobenzene(S)	0.7277	0.6367	0.6079	0.6383	0.6540	0.6894	0.6701	0.7025	0.6545		0.66	5.6	S	
7	I	1,4-Dichlorobenzene-D (IS)														
8																
9																
10																
11																
12																
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15																
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Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L04.D
Acq On : 16 Dec 16 13:18
Sample : 0.3ug/L VOC STD 12/16/16AI
Misc : W IS&S 11/21/16, 11/14/16

Vial: 4
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 8:35 2016 Quant Results File: LSUR1216.RES

Quant Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	557056	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	504256	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	258752	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.49	111	67272	5.93	ppb	0.00
Spiked Amount 25.000			Recovery =	23.736%		
3) 1,2-DCA-D4(S)	4.92	65	70363	5.77	ppb	0.00
Spiked Amount 25.000			Recovery =	23.088%		
5) Toluene-D8(S)	7.22	98	215839	5.51	ppb	0.00
Spiked Amount 25.000			Recovery =	22.044%		
6) 4-Bromofluorobenzene(S)	9.89	95	73391	5.48	ppb	0.00
Spiked Amount 25.000			Recovery =	21.900%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

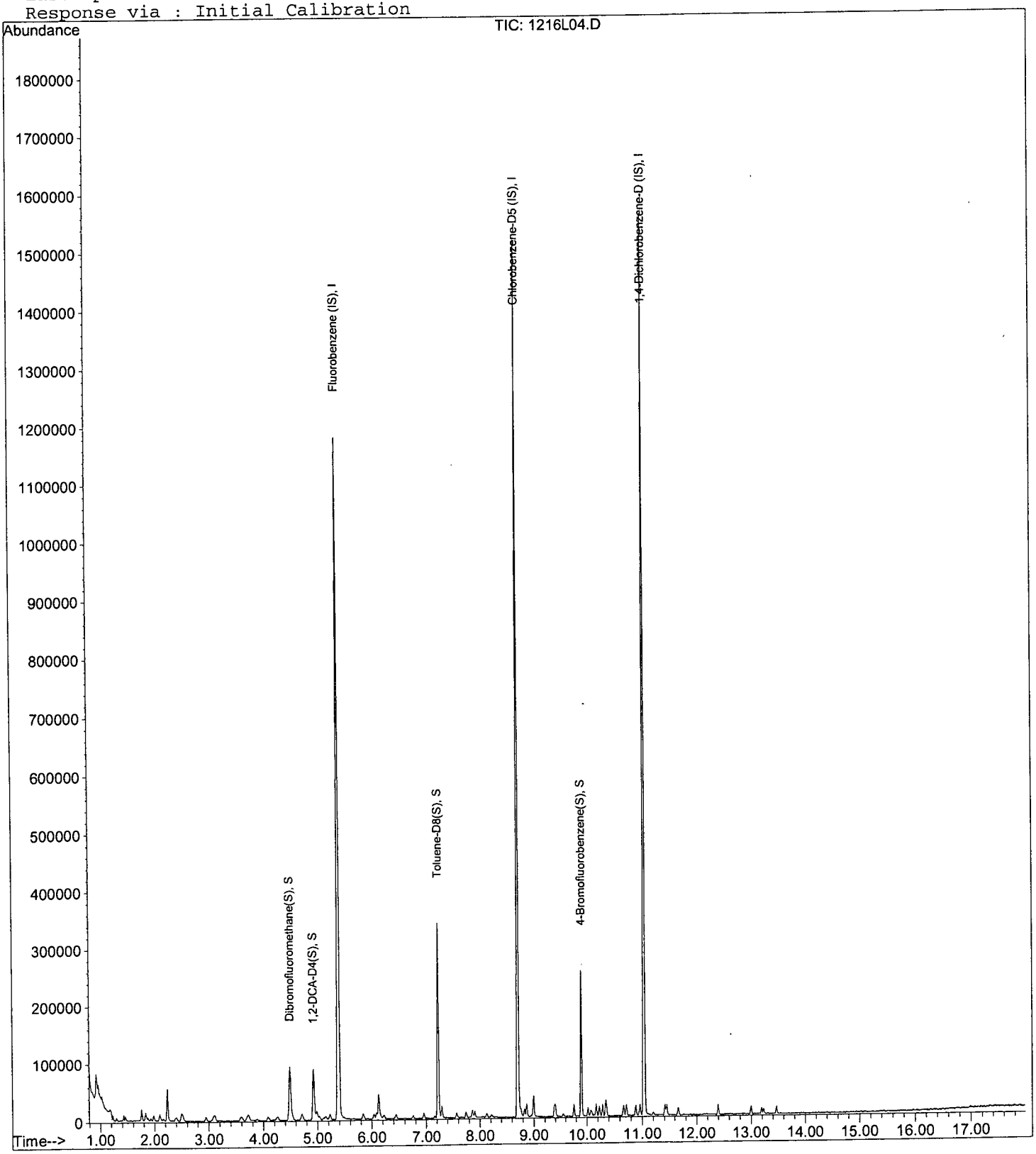
Data File : M:\LOKI\DATA\161216\1216L04.D
Acq On : 16 Dec 16 13:18
Sample : 0.3ug/L VOC STD 12/16/16AI
Misc : W IS&S 11/21/16, 11/14/16

Vial: 4
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 8:35 2016

Quant Results File: LSUR1216.RES

Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L05.D Vial: 5
Acq On : 16 Dec 16 13:46 Operator: PM,DG,SV,CMM
Sample : 0.5ug/L VOC STD 12/16/16AJ Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 8:35 2016 Quant Results File: LSUR1216.RES

Quant Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	563520	25.00 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	523328	25.00 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	275776	25.00 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.49	111	64843	5.65 ppb	0.00
Spiked Amount 25.000			Recovery	= 22.616%	
3) 1,2-DCA-D4(S)	4.93	65	72037	5.84 ppb	0.00
Spiked Amount 25.000			Recovery	= 23.368%	
5) Toluene-D8(S)	7.22	98	221201	5.44 ppb	0.00
Spiked Amount 25.000			Recovery	= 21.768%	
6) 4-Bromofluorobenzene(S)	9.89	95	73304	5.27 ppb	0.00
Spiked Amount 25.000			Recovery	= 21.076%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

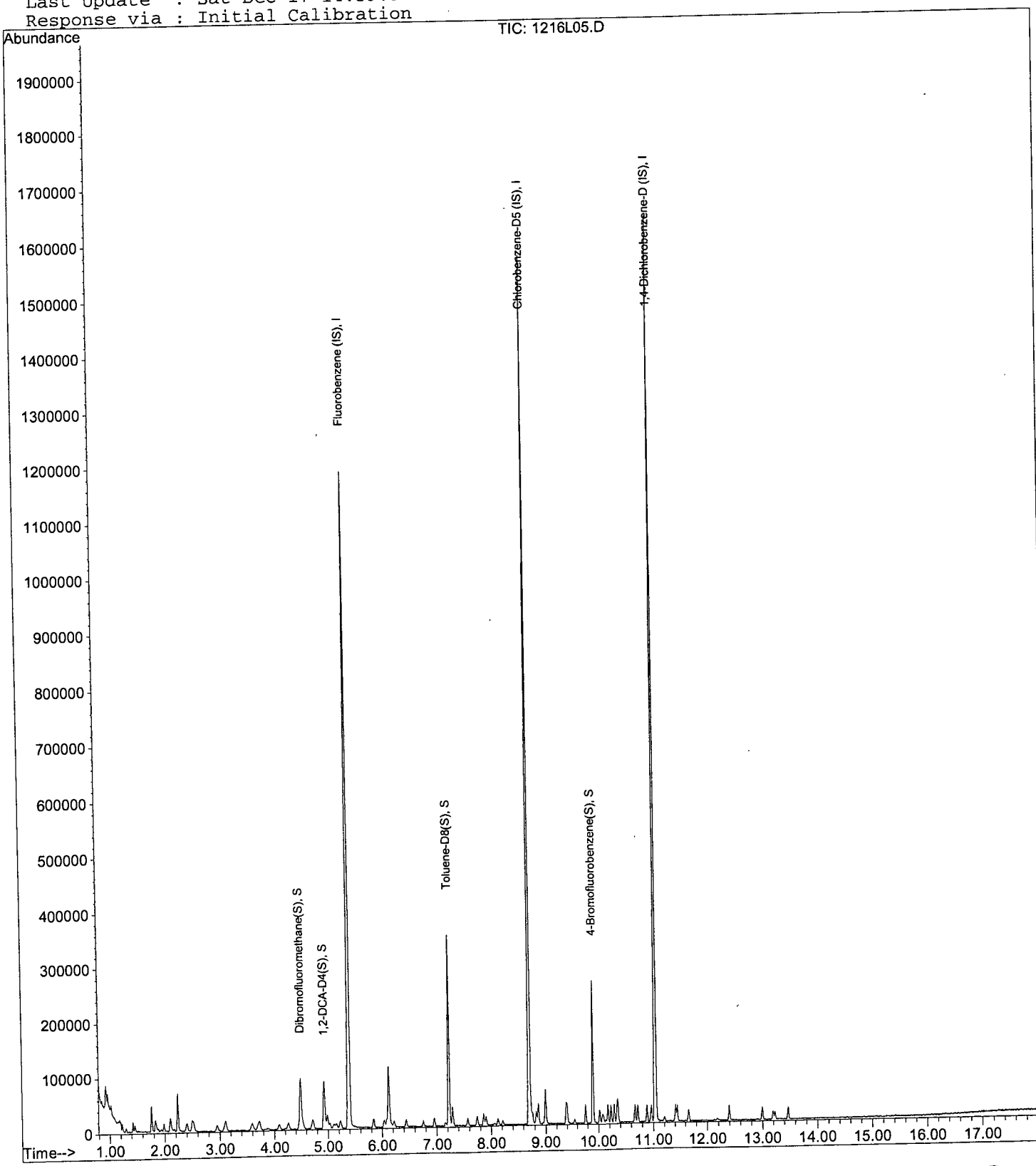
Data File : M:\LOKI\DATA\161216\1216L05.D
Acq On : 16 Dec 16 13:46
Sample : 0.5ug/L VOC STD 12/16/16AJ
Misc : W IS&S 11/21/16, 11/14/16

Vial: 5
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 8:35 2016

Quant Results File: LSUR1216.RES

Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L06.D
Acq On : 16 Dec 16 14:14
Sample : 1.0ug/L VOC STD 12/16/16AK
Misc : W IS&S 11/21/16, 11/14/16

Vial: 6
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 8:35 2016 Quant Results File: LSUR1216.RES

Quant Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	571200	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	513664	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	262848	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	109827	9.45	ppb	0.00
Spiked Amount 25.000			Recovery =	37.792%		
3) 1,2-DCA-D4(S)	4.93	65	119788	9.58	ppb	0.00
Spiked Amount 25.000			Recovery =	38.332%		
5) Toluene-D8(S)	7.22	98	365462	9.16	ppb	0.00
Spiked Amount 25.000			Recovery =	36.640%		
6) 4-Bromofluorobenzene(S)	9.89	95	124907	9.15	ppb	0.00
Spiked Amount 25.000			Recovery =	36.592%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

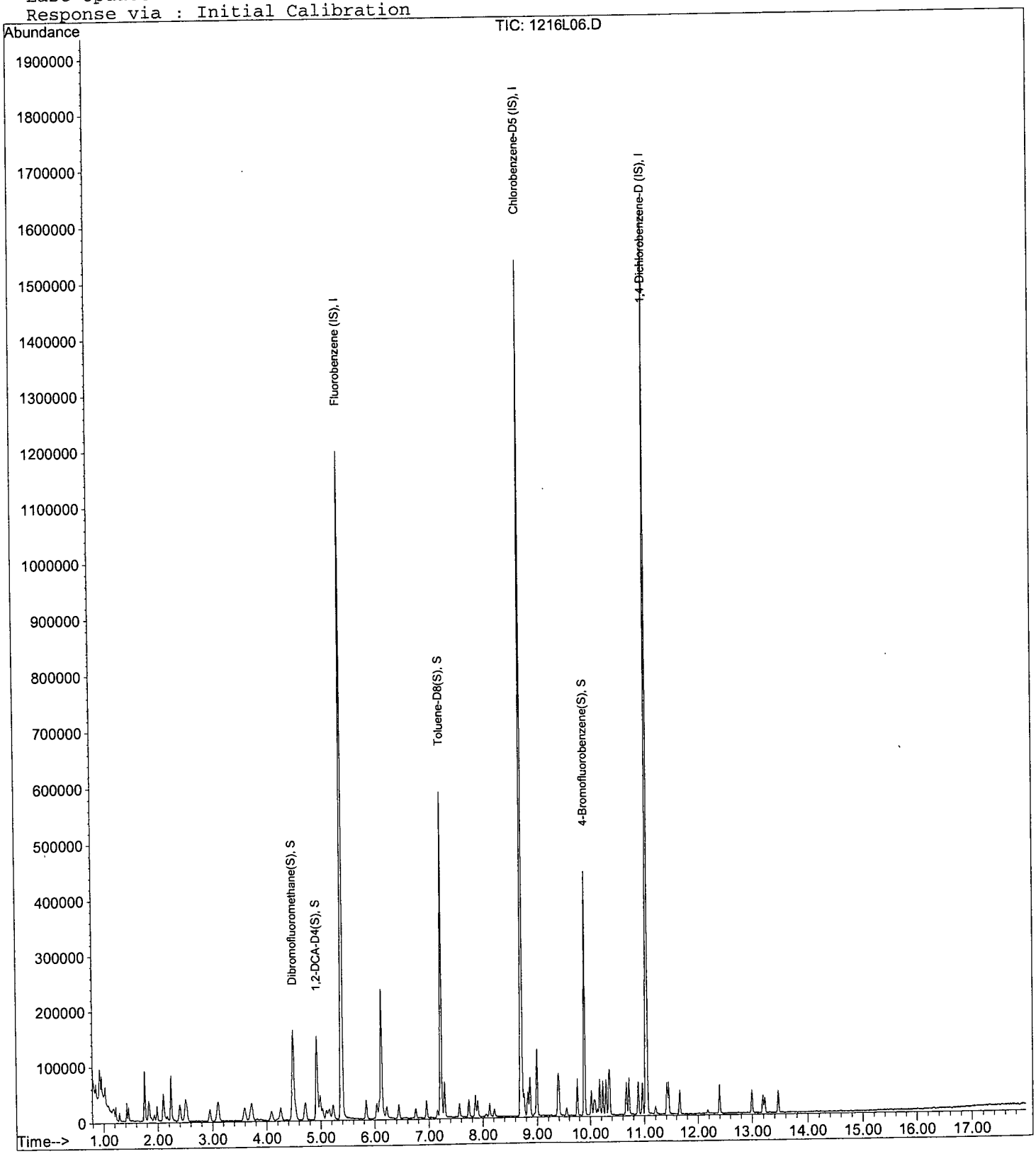
Data File : M:\LOKI\DATA\161216\1216L06.D
Acq On : 16 Dec 16 14:14
Sample : 1.0ug/L VOC STD 12/16/16AK
Misc : W IS&S 11/21/16, 11/14/16

Vial: 6
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 8:35 2016

Quant Results File: LSUR1216.RES

Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L07.D Vial: 7
Acq On : 16 Dec 16 14:42 Operator: PM,DG,SV,CMM
Sample : 2.0ug/L VOC STD 12/16/16AL Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 8:35 2016 Quant Results File: LSUR1216.RES

Quant Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	581312	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	521728	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	276544	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	112993	9.55	ppb	0.00
Spiked Amount 25.000			Recovery =	38.204%		
3) 1,2-DCA-D4(S)	4.93	65	124184	9.76	ppb	0.00
Spiked Amount 25.000			Recovery =	39.048%		
5) Toluene-D8(S)	7.22	98	381162	9.41	ppb	0.00
Spiked Amount 25.000			Recovery =	37.624%		
6) 4-Bromofluorobenzene(S)	9.89	95	133201	9.60	ppb	0.00
Spiked Amount 25.000			Recovery =	38.416%		
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration

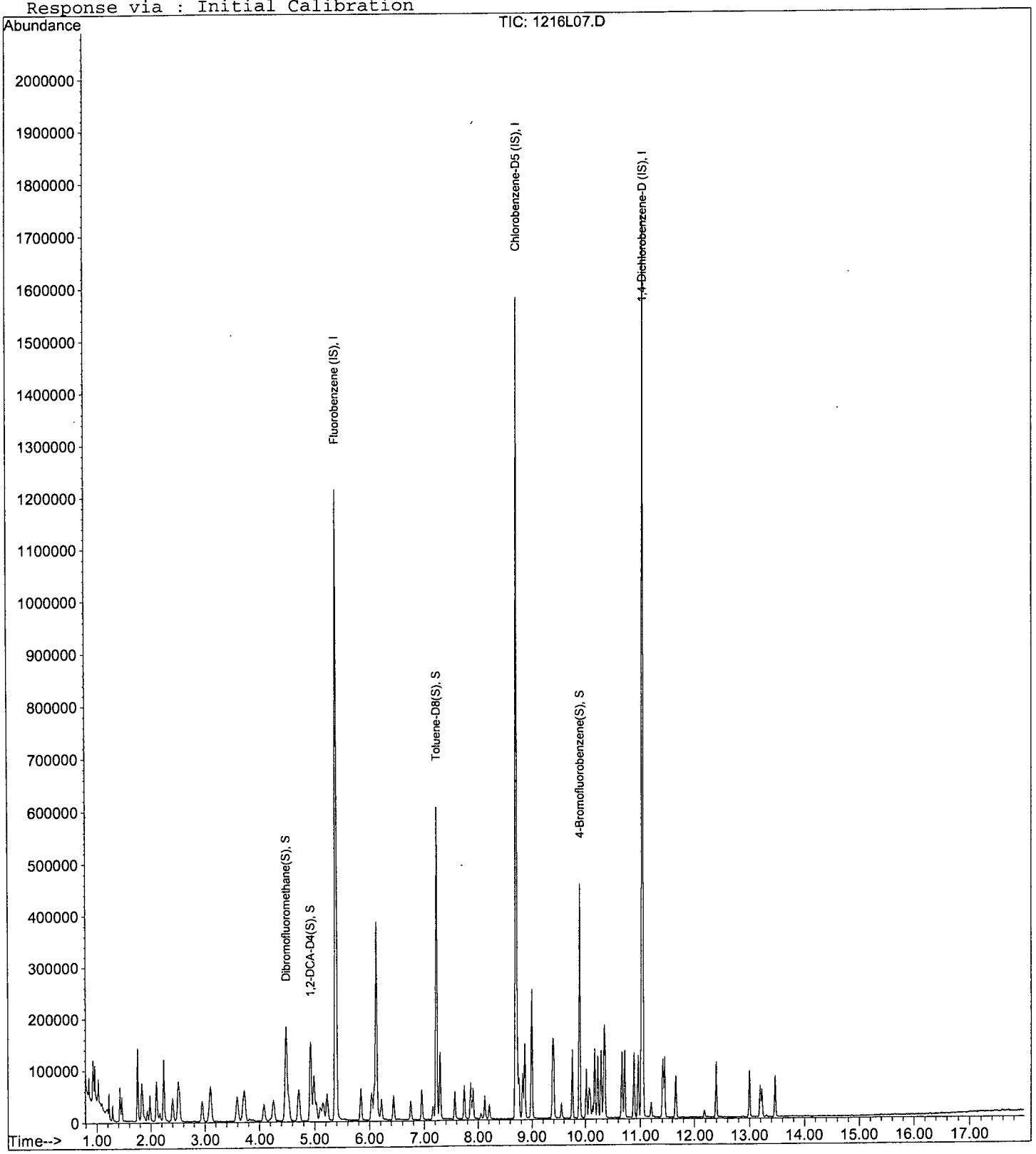
Quantitation Report

Data File : M:\LOKI\DATA\161216\1216L07.D
Acq On : 16 Dec 16 14:42
Sample : 2.0ug/L VOC STD 12/16/16AL
Misc : W IS&S 11/21/16, 11/14/16

Vial: 7
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 8:35 2016 Quant Results File: LSUR1216.RES

Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L08.D Vial: 8
Acq On : 16 Dec 16 15:10 Operator: PM,DG,SV,CMM
Sample : 5.0ug/L VOC STD 12/16/16AM Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 8:35 2016 Quant Results File: LSUR1216.RES

Quant Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	588544	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	546880	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	293056	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	299117	24.97	ppb	0.00
Spiked Amount 25.000			Recovery =	99.896%		
3) 1,2-DCA-D4(S)	4.92	65	323239	25.10	ppb	0.00
Spiked Amount 25.000			Recovery =	100.388%		
5) Toluene-D8(S)	7.22	98	1043176	24.56	ppb	0.00
Spiked Amount 25.000			Recovery =	98.236%		
6) 4-Bromofluorobenzene(S)	9.89	95	357675	24.60	ppb	0.00
Spiked Amount 25.000			Recovery =	98.412%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

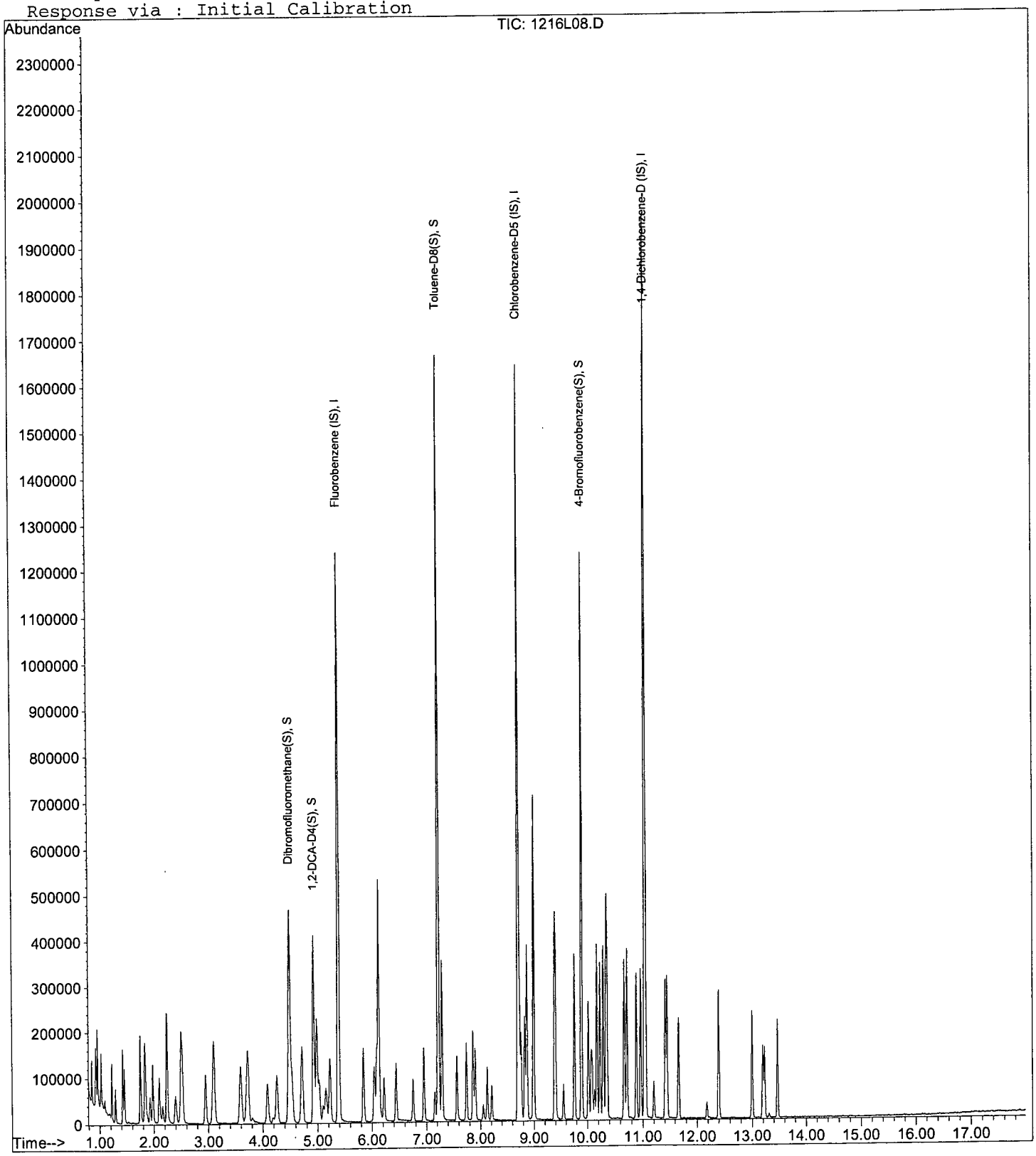
Quantitation Report

Data File : M:\LOKI\DATA\161216\1216L08.D
Acq On : 16 Dec 16 15:10
Sample : 5.0ug/L VOC STD 12/16/16AM
Misc : W IS&S 11/21/16, 11/14/16

Vial: 8
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 8:35 2016 Quant Results File: LSUR1216.RES

Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L09.D
Acq On : 16 Dec 16 15:38
Sample : 10ug/L VOC STD 12/16/16AN
Misc : W IS&S 11/21/16, 11/14/16

Vial: 9
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 8:35 2016 Quant Results File: LSUR1216.RES

Quant Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	594432	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	542208	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	308288	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	299563	24.76	ppb	0.00
Spiked Amount 25.000			Recovery = 99.052%			
3) 1,2-DCA-D4(S)	4.92	65	319303	24.55	ppb	0.00
Spiked Amount 25.000			Recovery = 98.184%			
5) Toluene-D8(S)	7.22	98	1068145	25.36	ppb	0.00
Spiked Amount 25.000			Recovery = 101.452%			
6) 4-Bromofluorobenzene(S)	9.89	95	373824	25.94	ppb	0.00
Spiked Amount 25.000			Recovery = 103.744%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

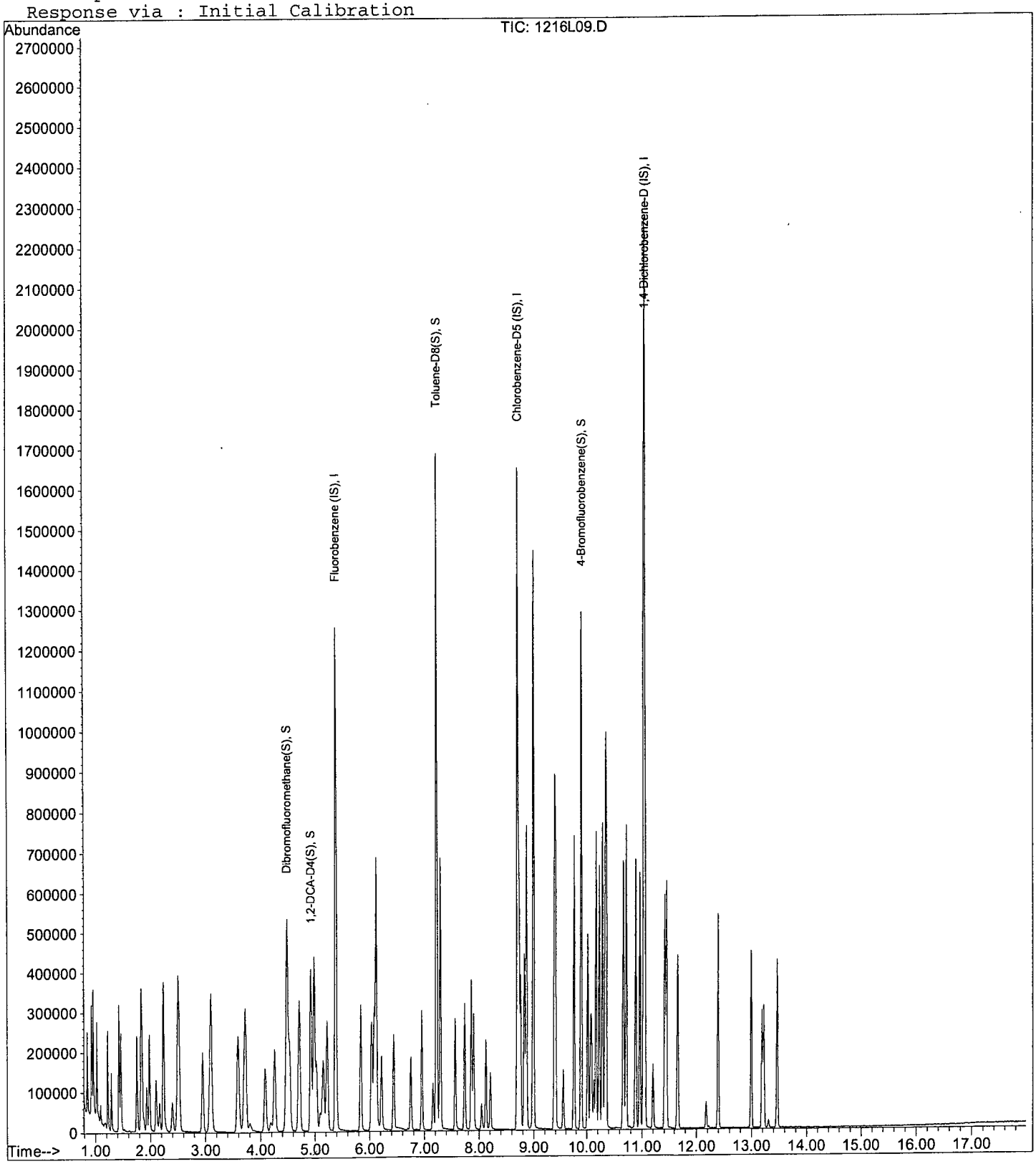
Quantitation Report

Data File : M:\LOKI\DATA\161216\1216L09.D
Acq On : 16 Dec 16 15:38
Sample : 10ug/L VOC STD 12/16/16AN
Misc : W IS&S 11/21/16, 11/14/16

Vial: 9
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 8:35 2016 Quant Results File: LSUR1216.RES

Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L10.D
Acq On : 16 Dec 16 16:06
Sample : 20ug/L VOC STD 12/16/16AO
Misc : W IS&S 11/21/16, 11/14/16

Vial: 10
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 8:35 2016 Quant Results File: LSUR1216.RES

Quant Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	632128	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	573568	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	311424	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	602676	46.85	ppb	0.00
Spiked Amount 25.000			Recovery =	187.396%		
3) 1,2-DCA-D4(S)	4.93	65	656081	47.43	ppb	0.00
Spiked Amount 25.000			Recovery =	189.712%		
5) Toluene-D8(S)	7.22	98	2193961	49.25	ppb	0.00
Spiked Amount 25.000			Recovery =	196.988%		
6) 4-Bromofluorobenzene(S)	9.89	95	768729	50.42	ppb	0.00
Spiked Amount 25.000			Recovery =	201.672%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

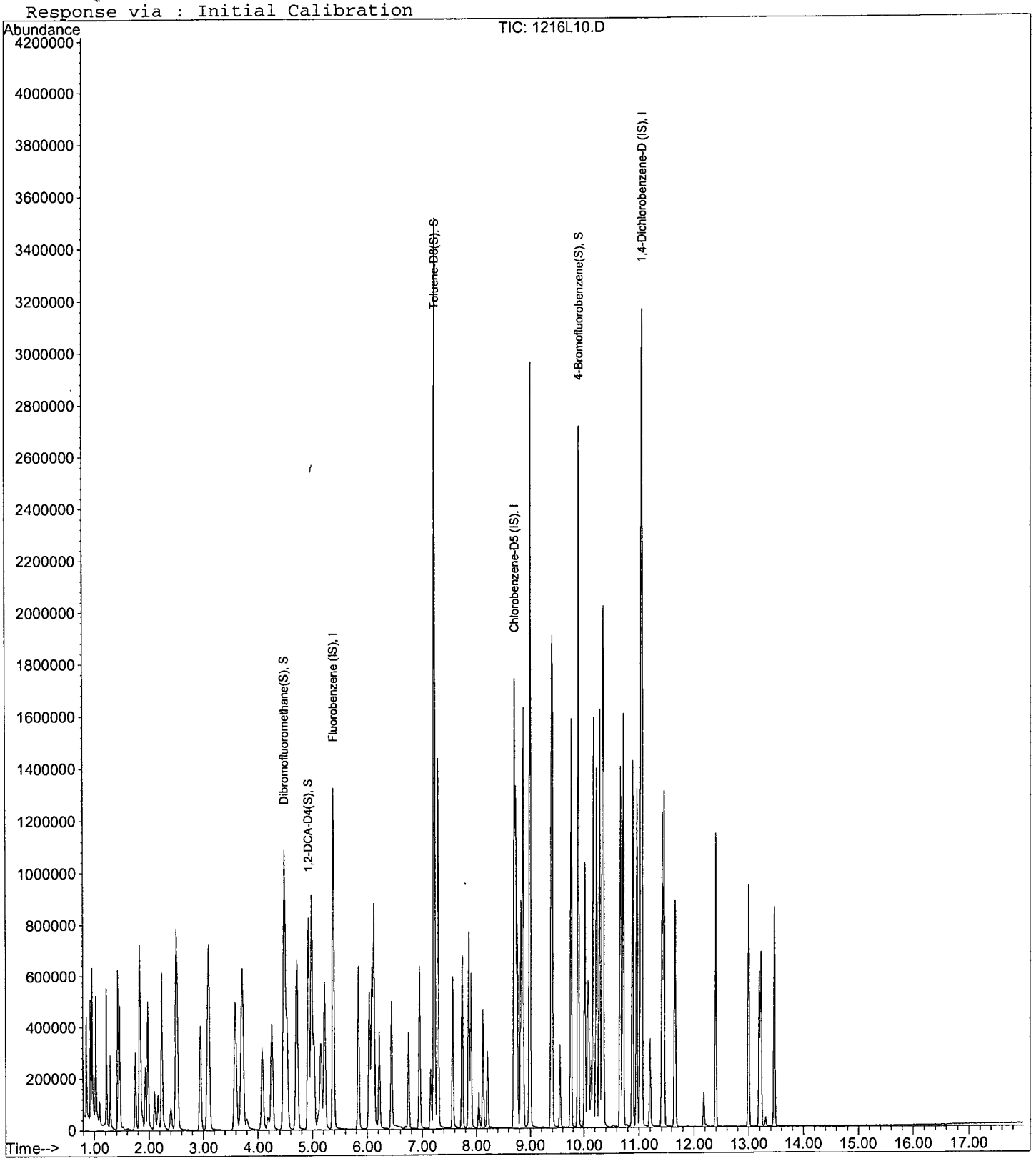
Quantitation Report

Data File : M:\LOKI\DATA\161216\1216L10.D
Acq On : 16 Dec 16 16:06
Sample : 20ug/L VOC STD 12/16/16AO
Misc : W IS&S 11/21/16, 11/14/16

Vial: 10
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 8:35 2016 Quant Results File: LSUR1216.RES

Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L11.D Vial: 11
Acq On : 16 Dec 16 16:35 Operator: PM,DG,SV,CMM
Sample : 40ug/L VOC STD 12/16/16AP Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 8:35 2016 Quant Results File: LSUR1216.RES

Quant Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	621760	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	556544	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	314176	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	601217	47.52	ppb	0.00
Spiked Amount 25.000			Recovery =	190.060%		
3) 1,2-DCA-D4(S)	4.92	65	631892	46.44	ppb	0.00
Spiked Amount 25.000			Recovery =	185.764%		
5) Toluene-D8(S)	7.22	98	2211650	51.16	ppb	0.00
Spiked Amount 25.000			Recovery =	204.652%		
6) 4-Bromofluorobenzene(S)	9.89	95	781916	52.85	ppb	0.00
Spiked Amount 25.000			Recovery =	211.408%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

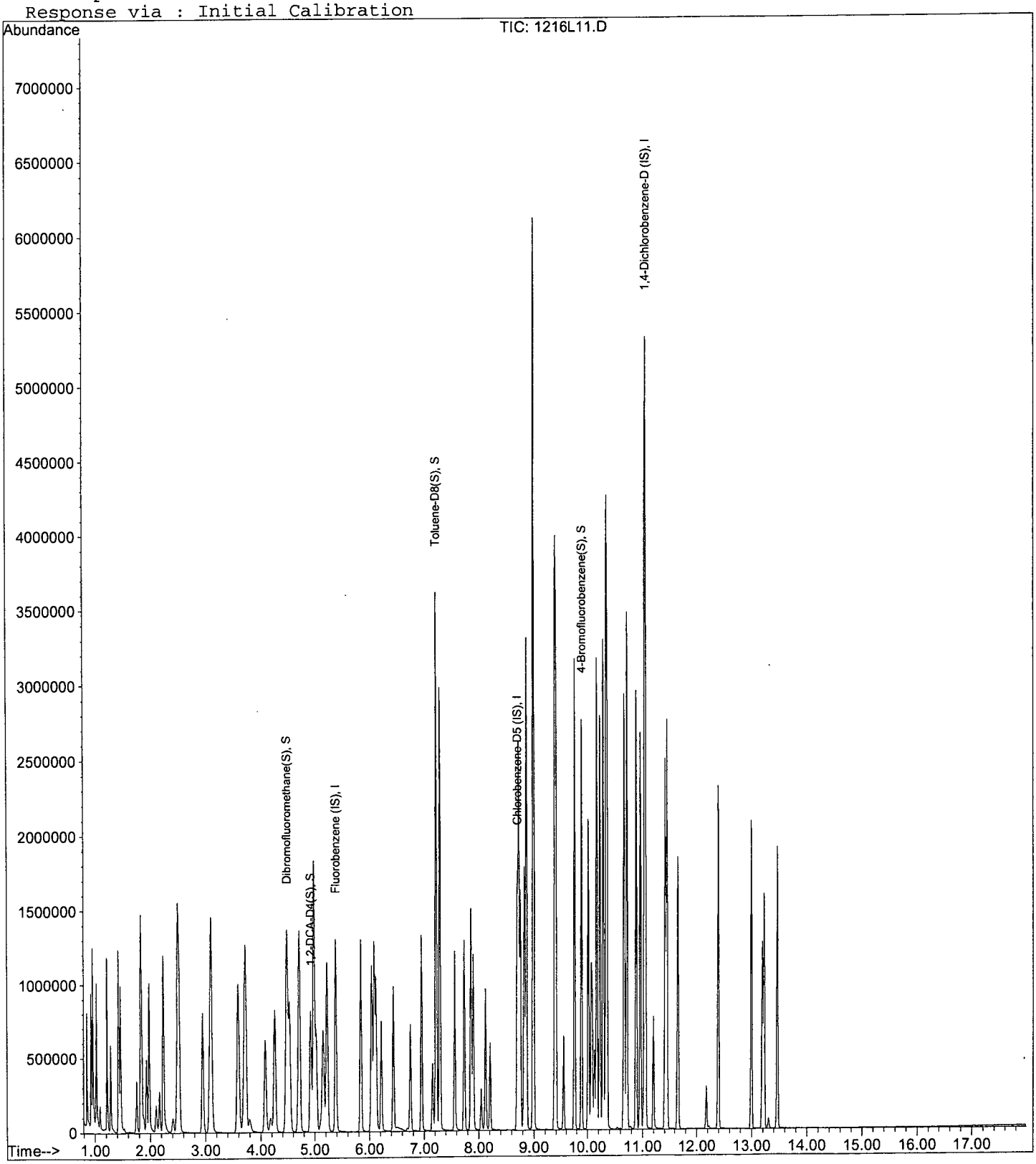
Quantitation Report

Data File : M:\LOKI\DATA\161216\1216L11.D
Acq On : 16 Dec 16 16:35
Sample : 40ug/L VOC STD 12/16/16AP
Misc : W IS&S 11/21/16, 11/14/16

Vial: 11
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 8:35 2016 Quant Results File: LSUR1216.RES

Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L12.D Vial: 12
Acq On : 16 Dec 16 17:03 Operator: PM,DG,SV,CMM
Sample : 100ug/L VOC STD 12/16/16AQ Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 8:36 2016 Quant Results File: LSUR1216.RES

Quant Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	628736	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	582144	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	353536	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	1158715	90.56	ppb	0.00
Spiked Amount 25.000			Recovery =	362.236%		
3) 1,2-DCA-D4(S)	4.92	65	1210321	87.97	ppb	0.00
Spiked Amount 25.000			Recovery =	351.864%		
5) Toluene-D8(S)	7.22	98	4285282	94.77	ppb	0.00
Spiked Amount 25.000			Recovery =	379.096%		
6) 4-Bromofluorobenzene(S)	9.89	95	1524009	98.48	ppb	0.00
Spiked Amount 25.000			Recovery =	393.924%		

Target Compounds Qvalue

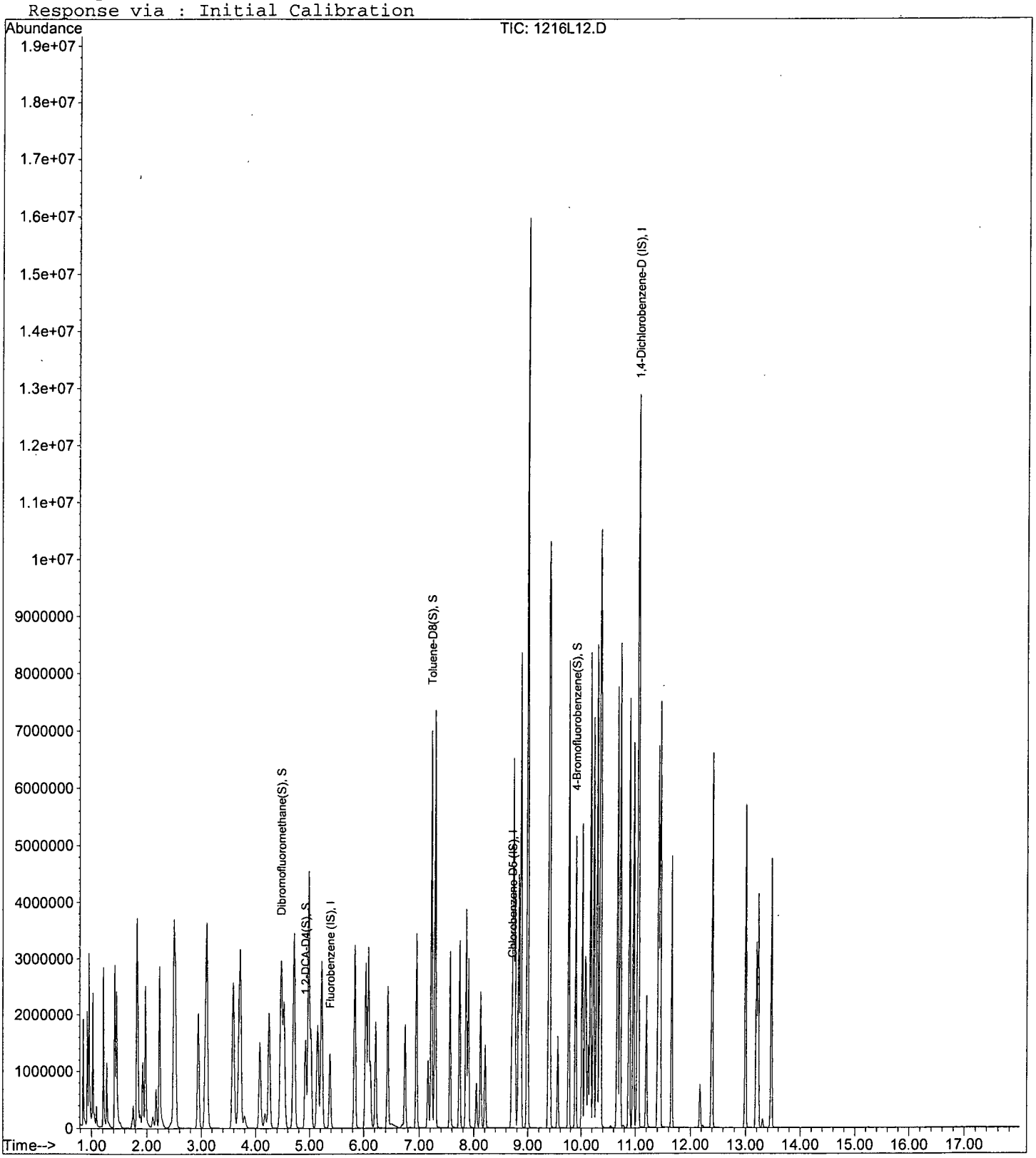
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161216\1216L12.D Vial: 12
Acq On : 16 Dec 16 17:03 Operator: PM,DG,SV,CMM
Sample : 100ug/L VOC STD 12/16/16AQ Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 22 8:36 2016 Quant Results File: LSUR1216.RES

Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/16/16
Matrix: Instrument: Loki
Initials:

		Compound	1216L04.D	1216L05.D	1216L06.D	1216L07.D	1216L08.D	1216L09.D	1216L10.D	1216L11.D	1216L12.D		Avg	%RSD		
1	I	Fluorobenzene (IS)														
2	TM	Dichlorodifluoromethane	0.5157	0.4523	0.4576	0.4461	0.4508	0.4802	0.4346	0.4312	0.4230		0.45	6.2	TM	
3	TM	Freon 114	0.2720	0.2990	0.2665	0.3221	0.2668	0.3206	0.2738	0.2937	0.2911		0.29	7.5	TM	
4	TM**	Chloromethane		0.8936	0.8262	0.7876	0.7994	0.7607	0.7145	0.7157	0.7129		0.78	8.2	TM**	
5	TM*	Vinyl chloride		0.5545	0.5501	0.5309	0.5751	0.5683	0.5366	0.5503	0.5561		0.55	2.7	TM*	
6	TM	Bromomethane		0.4034	0.3905	0.3592	0.3635	0.3547	0.3593	0.3875	0.3778		0.37	4.8	TM	
7	TM	Chloroethane		0.3100	0.2883	0.3236	0.3057	0.3045	0.2872	0.2909	0.2064		0.29	12	TM	
8	TM	Dichlorofluoromethane	0.9944	1.017	0.9833	0.9409	0.9171	0.9110	0.8660	0.8879	0.8868		0.93	5.7	TM	
9	TM	Trichlorofluoromethane	0.5490	0.5269	0.5959	0.5356	0.5562	0.5877	0.5346	0.5493	0.5756		0.56	4.4	TM	
10	TM	Acrolein	0.0552	0.0535	0.0523	0.0509	0.0509	0.0502	0.0502	0.0493	0.0511		0.05	3.6	TM	
11	TML	Acetone			0.3210	0.1777	0.1292	0.1066	0.0932	0.0855	0.0860		0.14	60	TML	1.000
12	TM	Freon-113		0.3114	0.3021	0.3038	0.2697	0.3011	0.2626	0.2764	0.2807		0.29	6.3	TM	
13	TM*	1,1-DCE	0.2887	0.3175	0.2511	0.2704	0.2637	0.2612	0.2377	0.2544	0.2374		0.26	9.6	TM*	
14	TM	t-Butanol	0.0138	0.0131	0.0132	0.0133	0.0132	0.0133	0.0115	0.0119	0.0107		0.01	8.3	TM	
15	TM	Acetonitrile	0.0574	0.0470	0.0474	0.0471	0.0452	0.0459	0.0403	0.0551	0.1184		0.06	43	TM	
16	TM	Methyl Acetate		0.3243	0.4270	0.3608	0.3124	0.3027	0.2866	0.2886	0.2872		0.32	15	TM	
17	TM	Iodomethane		0.2098	0.2491	0.2472	0.2686	0.2649	0.2764	0.2858	0.2687		0.26	9.1	TM	
18	TM	Acrylonitrile			0.1445	0.1284	0.1160	0.1067	0.1053	0.1044	0.1075		0.12	13	TM	
19	TML	Methylene chloride		2.636	1.486	1.085	0.8552	0.6674	0.5091	0.5170	0.5110		1.0	71	TML	0.999
20	TM	Carbon disulfide	0.9254	0.8238	1.187	1.153	1.158	1.115	1.100	1.121			1.1	12	TM	
21	TM	Methyl t-butyl ether (MtBE)	1.320	1.223	1.083	1.143	1.166	1.115	1.078	1.098	1.132		1.2	6.8	TM	
22	TM	Trans-1,2-DCE	0.5022	0.5054	0.4593	0.4438	0.4691	0.4423	0.4320	0.4439	0.4385		0.46	6.0	TM	
23	TM	Diisopropyl Ether	1.678	1.483	1.507	1.406	1.507	1.457	1.469	1.505	1.519		1.5	4.9	TM	
24	TM**	1,1-DCA	0.9019	0.9396	0.9270	0.9047	0.9141	0.8545	0.8314	0.8394	0.8323		0.88	4.9	TM**	
25	TM	Vinyl Acetate	0.3927	0.4222	0.3641	0.3573	0.3431	0.3182	0.3155	0.3232	0.3297		0.35	10	TM	
26	TM	Ethyl tert Butyl Ether	1.271	1.196	1.188	1.127	1.198	1.183	1.162	1.199	1.236		1.2	3.4	TM	
27	TML	MEK (2-Butanone)	0.2519	0.2502	0.1885	0.1431	0.1585	0.1413	0.1339	0.1378	0.1393		0.17	28	TML	1.000
28	TM	Cis-1,2-DCE	0.5390	0.6240	0.5261	0.5281	0.5465	0.5066	0.5063	0.5187	0.5199		0.54	6.7	TM	
29	TM	2,2-Dichloropropane	0.2359	0.2203	0.1975	0.1947	0.2099	0.2005	0.1927	0.1966	0.1948		0.20	7.2	TM	
30	TM*	Chloroform	0.8877	0.9593	0.9641	0.9024	0.9243	0.8843	0.8398	0.8548	0.8437		0.90	5.2	TM*	
31	TM	Bromochloromethane	0.2715	0.2885	0.2494	0.2501	0.2609	0.2493	0.2295	0.2331	0.2292		0.25	8.0	TM	
32	S	Dibromofluoromethane(S)	0.6038	0.5753	0.4807	0.4859	0.5082	0.5039	0.4767	0.4835	0.4607		0.51	9.5	S	
33	TM	1,1,1-TCA	0.6964	0.6392	0.7381	0.6660	0.6700	0.6362	0.6087	0.6416	0.6348		0.66	5.9	TM	
34	TM	Cyclohexane	0.3409	0.2934	0.2974	0.2817	0.2476	0.2811	0.2527	0.2738	0.2765		0.28	9.7	TM	
35	TM	1,1-Dichloropropene	0.5520	0.5372	0.5296	0.5378	0.5391	0.5384	0.5117	0.5336	0.5406		0.54	2.0	TM	

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No: _____
Case No: _____ Initial Cal. Date: 12/16/16
Matrix: _____ Instrument: Loki
Initials: _____

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD		
36	TM	2,2,4-Trimethylpentane	0.8313	0.7213	0.8838	0.7872	0.7239	0.8713	0.7807	0.8401	0.8804		0.81	7.8	TM	
37	S	1,2-DCA-D4(S)	0.6316	0.6392	0.5243	0.5341	0.5492	0.5372	0.5189	0.5081	0.4813		0.55	9.8	S	
38	TM	Carbon Tetrachloride	0.5074	0.5050	0.4952	0.4920	0.5068	0.5018	0.4547	0.4843	0.4832		0.49	3.4	TM	
39	TM	Tert Amyl Methyl Ether	1.148	1.019	0.9699	0.9755	1.045	1.048	1.015	1.062	1.092		1.0	5.4	TM	
40	TM	1,2-DCA	0.7209	0.6832	0.6883	0.6725	0.6688	0.6410	0.6143	0.6074	0.5985		0.65	6.4	TM	
41	TM	Benzene	2.051	2.035	1.902	1.833	1.973	1.866	1.817	1.858	1.834		1.9	4.7	TM	
42	TM	TCE	0.2274	0.2332	0.2586	0.2444	0.2386	0.2319	0.2265	0.2324	0.2344		0.24	4.2	TM	
43	TM	2-Pentanone	0.2245	0.2257	0.2237	0.2320	0.2378	0.2365	0.2335	0.2356	0.2379		0.23	2.5	TM	
44	TM*	1,2-Dichloropropane	0.6614	0.6594	0.5295	0.5142	0.5638	0.5098	0.4981	0.5029	0.5035		0.55	12	TM*	
45	TM	Bromodichloromethane	0.6597	0.7561	0.6880	0.6447	0.6717	0.6247	0.6140	0.6264	0.6353		0.66	6.7	TM	
46	TM	Methyl Cyclohexane	0.4597	0.5020	0.4668	0.4579	0.4204	0.4807	0.4284	0.4720	0.4976		0.47	6.0	TM	
47	TM	Dibromomethane	0.2848	0.3530	0.2934	0.2821	0.2840	0.2721	0.2694	0.2740	0.2657		0.29	9.2	TM	
48	TML	2-Chloroethyl vinyl ether				0.0600	0.0488	0.0317	0.0320	0.0310	0.0326		0.04	31	TML	0.998
49	TML	MIBK (methyl isobutyl ketone)			0.5253	0.4191	0.4232	0.3522	0.3219	0.3049	0.3129		0.38	21	TML	1.000
50	TM	1-Bromo-2-chloroethane	0.3599	0.4357	0.3455	0.3542	0.3682	0.3607	0.3462	0.3431	0.3387		0.36	8.2	TM	
51	TM	Cis-1,3-Dichloropropene	0.8328	0.7040	0.6952	0.6907	0.7429	0.6889	0.6943	0.7223	0.7491		0.72	6.4	TM	
52	TM*	Toluene	2.039	2.095	1.933	1.926	2.107	2.006	1.937	1.997	1.981		2.0	3.4	TM*	
53	TM	Trans-1,3-Dichloropropene	0.6110	0.6192	0.5622	0.5905	0.6165	0.6049	0.5875	0.6115	0.6362		0.60	3.6	TM	
54	TM	1,1,2-TCA	0.3059	0.3546	0.3235	0.3371	0.3560	0.3431	0.3317	0.3249	0.3283		0.33	4.8	TM	
55	TML	2-Hexanone			0.0617	0.0782	0.1054	0.1017	0.1034	0.1051	0.1180		0.10	20	TML	0.998
56	I	Chlorobenzene-D5 (IS)														
57	S	Toluene-D8(S)	2.140	2.113	1.779	1.826	1.908	1.970	1.913	1.987	1.840		1.9	6.4	S	
58	TM	1,2-EDB	0.4065	0.4227	0.3896	0.4213	0.4068	0.3870	0.3836	0.3910	0.3894		0.40	3.7	TM	
59	TM	Tetrachloroethene	0.5196	0.5414	0.4944	0.4650	0.4784	0.4866	0.4696	0.4741	0.4572		0.49	5.6	TM	
60	TM	1-Chlorohexane	0.5211	0.5008	0.5064	0.5030	0.4890	0.4785	0.4934	0.5298	0.5342		0.51	3.7	TM	
61	TM	1,1,1,2-Tetrachloroethane	0.5115	0.4925	0.5254	0.5252	0.4936	0.4981	0.4883	0.5038	0.4905		0.50	2.9	TM	
62	TM	m&p-Xylene	0.8684	0.8307	0.7502	0.8141	0.8592	0.8734	0.8720	0.9122	0.8874		0.85	5.6	TM	
63	TM	o-Xylene	0.7650	0.8014	0.7493	0.8274	0.8451	0.8564	0.8455	0.8910	0.8875		0.83	6.0	TM	
64	TM	Styrene	0.8327	0.7789	0.8453	0.8288	0.9458	0.9461	1.008	1.047	1.061		0.92	11	TM	
65	S	4-Bromofluorobenzene(S)	0.7277	0.6367	0.6079	0.6383	0.6540	0.6894	0.6701	0.7025	0.6545		0.66	5.6	S	
66	TM	1,3-Dichloropropane	0.7918	0.7913	0.7689	0.7743	0.7734	0.7352	0.7055	0.7184	0.6958		0.75	5.0	TM	
67	TM	Dibromochloromethane		0.4304	0.4664	0.4618	0.4898	0.4879	0.4751	0.4964	0.4892		0.47	4.6	TM	
68	TM**	Chlorobenzene	1.530	1.460	1.526	1.469	1.467	1.394	1.353	1.407	1.357		1.4	4.6	TM**	
69	TM*	Ethylbenzene	2.215	2.148	2.134	2.251	2.284	2.268	2.293	2.419	2.338		2.3	3.9	TM*	
70	TM**	Bromoform	0.2851	0.3075	0.2944	0.2878	0.2820	0.2838	0.2869	0.2919	0.2939		0.29	2.7	TM**	

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No: _____
Case No: _____ Initial Cal. Date: 12/16/16
Matrix: _____ Instrument: Loki
Initials: _____

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD		
71	I	1,4-Dichlorobenzene-D (IS)														
72	TM	Isopropylbenzene	3.608	3.567	3.582	3.550	3.684	3.575	3.766	3.816	3.520		3.6	2.8	TM	
73	TM**	1,1,2,2-Tetrachloroethane	1.068	0.9294	1.064	0.9815	0.9674	0.9038	0.9092	0.8806	0.8330		0.95	8.4	TM**	
74	TM	1,2,3-Trichloropropane		0.1537	0.2034	0.1850	0.1974	0.1685	0.1669	0.1642	0.1528		0.17	11	TM	
75	TM	t-1,4-Dichloro-2-Butene		0.2306	0.1936	0.2093	0.2315	0.1982	0.2116	0.2113	0.2077		0.21	6.4	TM	
76	TM	Bromobenzene	1.038	1.039	1.131	1.078	1.101	1.011	1.050	1.042	0.9504		1.0	5.0	TM	
77	TM	n-Propylbenzene	4.761	4.067	4.350	4.309	4.442	4.267	4.498	4.562	4.139		4.4	4.9	TM	
78	TM	4-Ethyltoluene	3.642	3.099	3.517	3.561	3.787	3.673	3.826	3.895	3.567		3.6	6.5	TM	
79	TM	2-Chlorotoluene	3.400	2.932	3.011	2.765	2.980	2.807	2.901	2.908	2.620		2.9	7.3	TM	
80	TM	1,3,5-Trimethylbenzene	3.198	2.613	3.109	3.025	3.351	3.217	3.341	3.357	3.038		3.1	7.5	TM	
81	TM	4-Chlorotoluene	3.236	2.982	3.385	3.145	3.427	3.285	3.380	3.353	3.060		3.3	4.8	TM	
82	TM	Tert-Butylbenzene	2.393	2.249	2.504	2.431	2.581	2.419	2.545	2.658	2.459		2.5	4.8	TM	
83	TM	1,2,4-Trimethylbenzene	2.944	2.856	3.062	3.023	3.325	3.155	3.394	3.447	3.182		3.2	6.5	TM	
84	TM	Sec-Butylbenzene	3.437	3.301	3.492	3.363	3.633	3.508	3.689	3.788	3.536		3.5	4.4	TM	
85	TM	p-Isopropyltoluene	3.046	2.903	3.064	2.980	3.109	3.035	3.171	3.257	3.079		3.1	3.3	TM	
86	TM	Benzyl Chloride	0.8927	0.9036	0.8369	0.8469	0.8954	0.8864	0.9637	1.020	1.114		0.93	9.6	TM	
87	TM	1,3-DCB	2.185	2.083	2.147	2.069	2.050	1.960	1.973	1.991	1.853		2.0	5.0	TM	
88	TM	1,4-DCB	2.412	2.139	2.372	2.065	2.105	1.962	2.017	2.000	1.898		2.1	8.4	TM	
89	TM	n-Butylbenzene	2.816	2.466	2.690	2.621	2.685	2.633	2.763	2.900	2.789		2.7	4.7	TM	
90	TM	1,2-DCB	2.085	1.916	2.016	1.985	1.994	1.800	1.842	1.864	1.798		1.9	5.3	TM	
91	TM	Hexachloroethane	0.7881	0.6971	0.6960	0.6373	0.6789	0.6365	0.6687	0.6836	0.6593		0.68	6.6	TM	
92	TM	1,2-Dibromo-3-chloropropane	0.1366	0.1657	0.1407	0.1502	0.1464	0.1386	0.1393	0.1428	0.1408		0.14	6.2	TM	
93	TM	1,2,4-Trichlorobenzene	1.424	1.146	1.165	1.094	1.150	1.088	1.115	1.183	1.144		1.2	8.7	TM	
94	TM	Hexachlorobutadiene	0.6077	0.5202	0.4880	0.4559	0.4521	0.4227	0.4153	0.4421	0.4200		0.47	13	TM	
95	TM	Naphthalene	1.172	1.248	1.254	1.185	1.290	1.231	1.355	1.572	1.442		1.3	10.0	TM	
96	TM	1,2,3-Trichlorobenzene	0.8760	0.7825	0.7878	0.6841	0.7081	0.6524	0.6797	0.7387	0.6671		0.73	10.0	TM	
97																
98																
99																
100																
101																
102																
103																
104																
105																

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L04.D Vial: 4
Acq On : 16 Dec 16 13:18 Operator: PM,DG,SV,CMM
Sample : 0.3ug/L VOC STD 12/16/16AI Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 17 15:00 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	557056	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	504256	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	258752	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	67272	5.93416 ppb		0.00
Spiked Amount 25.000			Recovery = 23.736%			
37) 1,2-DCA-D4(S)	4.92	65	70363	5.77202 ppb		0.00
Spiked Amount 25.000			Recovery = 23.088%			
57) Toluene-D8(S)	7.22	98	215839	5.51085 ppb		0.00
Spiked Amount 25.000			Recovery = 22.044%			
65) 4-Bromofluorobenzene(S)	9.89	95	73391	5.47506 ppb		0.00
Spiked Amount 25.000			Recovery = 21.900%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	3447	0.34028 ppb	#	84
3) Freon 114	0.93	85	1818	0.28183 ppb		94
4) Chloromethane	0.96	50	7548	0.43635 ppb		95
6) Bromomethane	1.22	96	3123	0.37427 ppb		95
7) Chloroethane	1.29	64	2750	0.42619 ppb		89
8) Dichlorofluoromethane	1.43	67	6647	0.31945 ppb		96
9) Trichlorofluoromethane	1.46	101	3670	0.29583 ppb		83
10) Acrolein	1.76	56	12307	10.72221 ppb	#	99
11) Acetone	1.88	43	4855	0.21392 ppb	#	79
12) Freon-113	1.84	101	2035	0.31658 ppb		86
13) 1,1-DCE	1.83	96	1930	0.32726 ppb		93
14) t-Butanol	2.39	59	3084	10.94233 ppb	#	92
15) Acetonitrile	2.10	41	12799	10.26091 ppb		97
16) Methyl Acetate	2.17	43	2849	0.39501 ppb		94
17) Iodomethane	1.93	142	1479	0.25645 ppb	#	89
18) Acrylonitrile	2.48	52	1112	0.42976 ppb		92
19) Methylene chloride	2.24	84	21934	-0.31436 ppb		99
20) Carbon disulfide	1.98	76	8730	0.36519 ppb		94
21) Methyl t-butyl ether (MtBE	2.52	73	8827	0.34419 ppb		95
22) Trans-1,2-DCE	2.50	96	3357	0.32779 ppb		92
23) Diisopropyl Ether	3.11	45	11217	0.33485 ppb		97
24) 1,1-DCA	2.95	63	6029	0.30650 ppb	#	94
25) Vinyl Acetate	3.08	43	2625	0.33491 ppb		93
26) Ethyl tert Butyl Ether	3.59	59	8498	0.31892 ppb	#	85
27) MEK (2-Butanone)	3.81	43	1684	0.37582 ppb		90
28) Cis-1,2-DCE	3.72	96	3603	0.30223 ppb		84
29) 2,2-Dichloropropane	3.72	77	1577	0.34562 ppb	#	83
30) Chloroform	4.26	83	5934	0.29735 ppb		99
31) Bromochloromethane	4.08	128	1815	0.32416 ppb		98
33) 1,1,1-TCA	4.48	97	4655	0.31701 ppb		92
34) Cyclohexane	4.54	41	2279	0.36166 ppb		83
35) 1,1-Dichloropropene	4.72	75	3690	0.30922 ppb	#	78
36) 2,2,4-Trimethylpentane	5.15	57	5557	0.30662 ppb	#	84
38) Carbon Tetrachloride	4.71	119	3392	0.30923 ppb		91
39) Tert Amyl Methyl Ether	5.23	73	7673	0.33059 ppb	#	92
40) 1,2-DCA	5.03	62	4819	0.33019 ppb		99
41) Benzene	4.99	78	13707	0.32248 ppb		93
42) TCE	5.84	95	1520	0.28861 ppb		92
43) 2-Pentanone	6.13	43	50029	9.68155 ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L04.D Vial: 4
Acq On : 16 Dec 16 13:18 Operator: PM,DG,SV,CMM
Sample : 0.3ug/L VOC STD 12/16/16AI Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 17 15:00 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
44)	1,2-Dichloropropane	6.09	63	4421	0.36129	ppb	#	85
45)	Bromodichloromethane	6.44	83	4410	0.30085	ppb	#	95
46)	Methyl Cyclohexane	6.03	83	3073	0.29655	ppb		78
47)	Dibromomethane	6.22	93	1904	0.29825	ppb		94
48)	2-Chloroethyl vinyl ether	6.53	43	290	-0.35483	ppb		100
49)	MIBK (methyl isobutyl ket	7.16	43	4691	-0.24390	ppb	#	89
50)	1-Bromo-2-chloroethane	6.75	63	2406	0.29880	ppb		96
51)	Cis-1,3-Dichloropropene	6.95	75	5567	0.34486	ppb		96
52)	Toluene	7.29	91	13629	0.30548	ppb		86
53)	Trans-1,3-Dichloropropene	7.57	75	4084	0.30325	ppb		93
54)	1,1,2-TCA	7.74	83	2045	0.27487	ppb	#	53
55)	2-Hexanone	8.05	43	629	1.68306	ppb	#	84
58)	1,2-EDB	8.21	107	2460	0.30507	ppb	#	71
59)	Tetrachloroethene	7.86	166	3144	0.31982	ppb	#	84
60)	1-Chlorohexane	8.76	91	3153	0.30878	ppb	#	73
61)	1,1,1,2-Tetrachloroethane	8.83	131	3095	0.30493	ppb		98
62)	m&p-Xylene	8.99	106	10509	0.61155	ppb		85
63)	o-Xylene	9.38	106	4629	0.27656	ppb		66
64)	Styrene	9.40	104	5039	0.27112	ppb		100
66)	1,3-Dichloropropane	7.90	76	4791	0.31649	ppb	#	82
67)	Dibromochloromethane	8.12	129	3492	0.36477	ppb		99
68)	Chlorobenzene	8.73	112	9259	0.31866	ppb		97
69)	Ethylbenzene	8.87	91	13404	0.29389	ppb		98
70)	Bromoform	9.55	173	1725	0.29454	ppb		89
72)	Isopropylbenzene	9.76	105	11204	0.29821	ppb		97
73)	1,1,2,2-Tetrachloroethane	10.07	83	3316	0.33777	ppb	#	98
74)	1,2,3-Trichloropropane	10.09	110	626	0.34761	ppb		86
75)	t-1,4-Dichloro-2-Butene	10.13	53	961	0.43853	ppb		84
76)	Bromobenzene	10.01	156	3224	0.29701	ppb		92
77)	n-Propylbenzene	10.17	91	14782	0.32629	ppb		98
78)	4-Ethyltoluene	10.29	105	11308	0.30193	ppb		99
79)	2-Chlorotoluene	10.23	91	10556	0.34870	ppb		99
80)	1,3,5-Trimethylbenzene	10.35	105	9930	0.30567	ppb		96
81)	4-Chlorotoluene	10.34	91	10047	0.29865	ppb		91
82)	Tert-Butylbenzene	10.66	119	7430	0.29051	ppb		96
83)	1,2,4-Trimethylbenzene	10.72	105	9141	0.28000	ppb		85
84)	Sec-Butylbenzene	10.89	105	10673	0.29233	ppb		98
85)	p-Isopropyltoluene	11.04	119	9459	0.29754	ppb	#	90
86)	Benzyl Chloride	11.20	91	2772	0.28833	ppb	#	92
87)	1,3-DCB	10.96	146	6785	0.32223	ppb		96
88)	1,4-DCB	11.05	146	7488	0.34325	ppb		97
89)	n-Butylbenzene	11.44	91	8745	0.31211	ppb		96
90)	1,2-DCB	11.41	146	6474	0.32541	ppb		92
91)	Hexachloroethane	11.65	117	2447	0.34623	ppb		78
92)	1,2-Dibromo-3-chloropropan	12.19	157	424	0.28338	ppb	#	73
93)	1,2,4-Trichlorobenzene	13.00	180	4422	0.36590	ppb		83
94)	Hexachlorobutadiene	13.19	225	1887	0.38846	ppb	#	74
95)	Naphthalene	13.23	128	3638	0.26927	ppb		93
96)	1,2,3-Trichlorobenzene	13.47	180	2720	0.35965	ppb		93

(#) = qualifier out of range (m) = manual integration

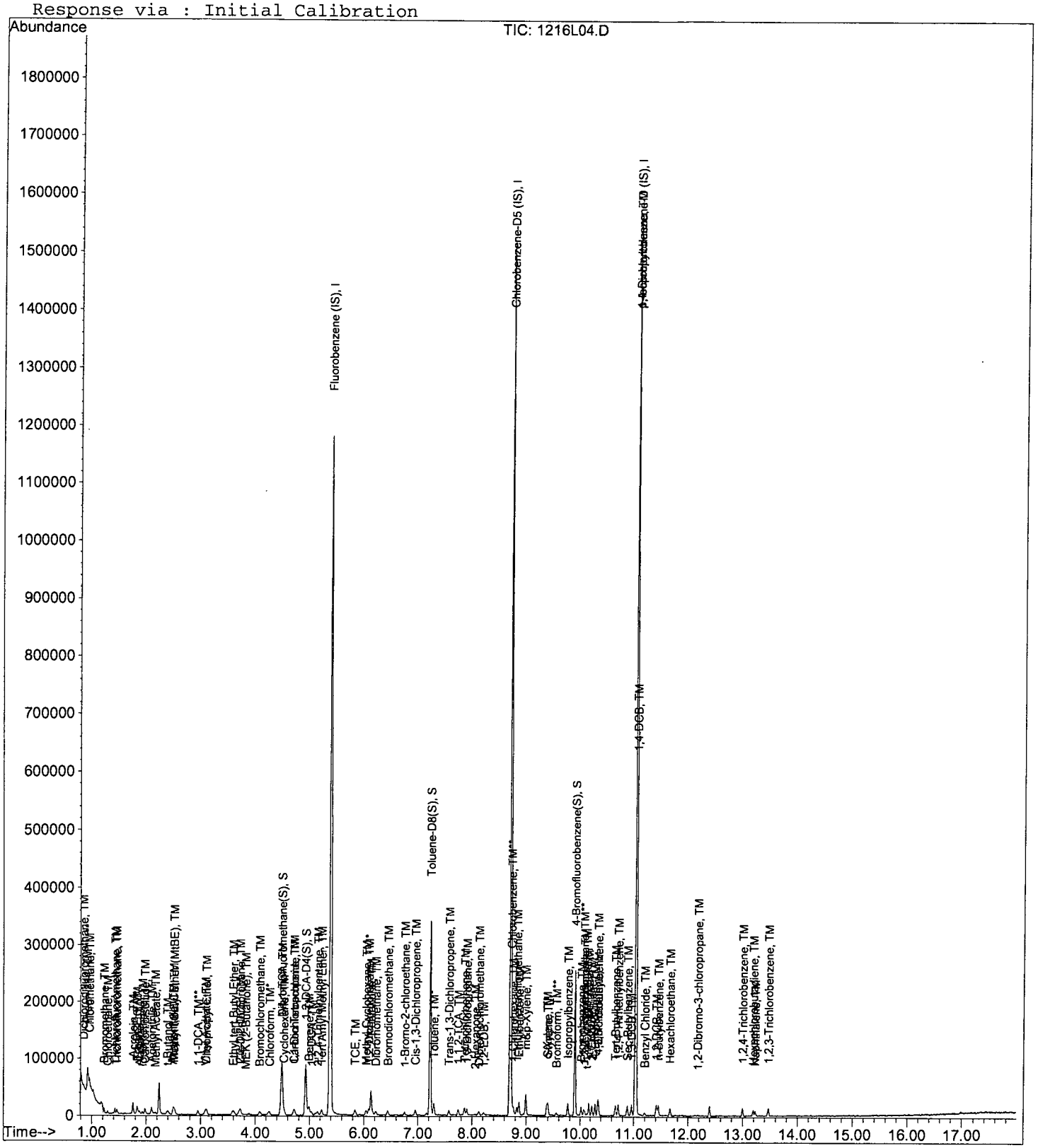
Quantitation Report

Data File : M:\LOKI\DATA\161216\1216L04.D
Acq On : 16 Dec 16 13:18
Sample : 0.3ug/L VOC STD 12/16/16AI
Misc : W IS&S 11/21/16, 11/14/16

Vial: 4
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:00 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L05.D
Acq On : 16 Dec 16 13:46
Sample : 0.5ug/L VOC STD 12/16/16AJ
Misc : W IS&S 11/21/16, 11/14/16

Vial: 5
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:00 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	563520	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	523328	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	275776	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	64843	5.65428 ppb		0.00
Spiked Amount 25.000			Recovery = 22.616%			
37) 1,2-DCA-D4(S)	4.93	65	72037	5.84155 ppb		0.00
Spiked Amount 25.000			Recovery = 23.368%			
57) Toluene-D8(S)	7.22	98	221201	5.44193 ppb		0.00
Spiked Amount 25.000			Recovery = 21.768%			
65) 4-Bromofluorobenzene(S)	9.89	95	73304	5.26927 ppb		0.00
Spiked Amount 25.000			Recovery = 21.076%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	5098	0.49749 ppb	#	88
3) Freon 114	0.93	85	3370	0.51642 ppb		88
4) Chloromethane	0.96	50	10071	0.57553 ppb		98
5) Vinyl chloride	1.03	62	6249	0.50156 ppb	#	74
6) Bromomethane	1.22	96	4546	0.53855 ppb		100
7) Chloroethane	1.29	64	3494	0.53528 ppb		99
8) Dichlorofluoromethane	1.43	67	11463	0.54458 ppb	#	83
9) Trichlorofluoromethane	1.46	101	5938	0.47316 ppb		86
10) Acrolein	1.76	56	30171	25.98432 ppb		90
11) Acetone	1.88	43	5102	0.31512 ppb		96
12) Freon-113	1.84	101	3510	0.53978 ppb		97
13) 1,1-DCE	1.83	96	3578	0.59974 ppb		94
14) t-Butanol	2.40	59	7354	25.79341 ppb		96
15) Acetonitrile	2.10	41	26459	20.96877 ppb		92
16) Methyl Acetate	2.17	43	3655	0.50094 ppb		91
17) Iodomethane	1.93	142	2365	0.40538 ppb		95
18) Acrylonitrile	2.48	52	1501	0.57344 ppb	#	59
19) Methylene chloride	2.24	84	29708	0.35647 ppb		99
20) Carbon disulfide	1.98	76	13468	0.55692 ppb	#	91
21) Methyl t-butyl ether (MtBE	2.52	73	13783	0.53127 ppb		97
22) Trans-1,2-DCE	2.50	96	5696	0.54980 ppb		87
23) Diisopropyl Ether	3.10	45	16710	0.49310 ppb		95
24) 1,1-DCA	2.94	63	10590	0.53220 ppb		98
25) Vinyl Acetate	3.10	43	4758	0.60008 ppb	#	83
26) Ethyl tert Butyl Ether	3.60	59	13483	0.50020 ppb		95
27) MEK (2-Butanone)	3.83	43	2820	0.73303 ppb		96
28) Cis-1,2-DCE	3.73	96	7033	0.58318 ppb		83
29) 2,2-Dichloropropane	3.70	77	2483	0.53794 ppb		94
30) Chloroform	4.26	83	10812	0.53557 ppb		91
31) Bromochloromethane	4.08	128	3252	0.57415 ppb		76
33) 1,1,1-TCA	4.47	97	7204	0.48498 ppb		99
34) Cyclohexane	4.53	41	3307	0.51878 ppb		84
35) 1,1-Dichloropropene	4.72	75	6054	0.50150 ppb	#	87
36) 2,2,4-Trimethylpentane	5.15	57	8129	0.44339 ppb	#	47
38) Carbon Tetrachloride	4.70	119	5692	0.51296 ppb	#	95
39) Tert Amyl Methyl Ether	5.23	73	11484	0.48911 ppb	#	84
40) 1,2-DCA	5.04	62	7700	0.52155 ppb	#	90
41) Benzene	4.99	78	22938	0.53346 ppb		94
42) TCE	5.84	95	2628	0.49327 ppb	#	83

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L05.D
Acq On : 16 Dec 16 13:46
Sample : 0.5ug/L VOC STD 12/16/16AJ
Misc : W IS&S 11/21/16, 11/14/16

Vial: 5
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:00 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43)	2-Pentanone	6.12	43	127170	24.32749 ppb		98
44)	1,2-Dichloropropane	6.09	63	7432	0.60039 ppb	#	85
45)	Bromodichloromethane	6.44	83	8522	0.57470 ppb	#	96
46)	Methyl Cyclohexane	6.05	83	5658	0.53974 ppb		86
47)	Dibromomethane	6.21	93	3978	0.61598 ppb	#	67
48)	2-Chloroethyl vinyl ether	6.51	43	474	-0.10508 ppb		100
49)	MIBK (methyl isobutyl ket	7.16	43	5270	-0.16848 ppb	#	92
50)	1-Bromo-2-chloroethane	6.75	63	4911	0.60290 ppb		92
51)	Cis-1,3-Dichloropropene	6.96	75	7934	0.48584 ppb		92
52)	Toluene	7.29	91	23613	0.52319 ppb		96
53)	Trans-1,3-Dichloropropene	7.56	75	6979	0.51228 ppb		98
54)	1,1,2-TCA	7.74	83	3996	0.53094 ppb		81
55)	2-Hexanone	8.06	43	1077	1.84862 ppb		99
58)	1,2-EDB	8.21	107	4424	0.52864 ppb		96
59)	Tetrachloroethene	7.86	166	5667	0.55546 ppb		91
60)	1-Chlorohexane	8.76	91	5242	0.49466 ppb		92
61)	1,1,1,2-Tetrachloroethane	8.83	131	5155	0.48938 ppb		76
62)	m&p-Xylene	9.00	106	17390	0.97510 ppb		83
63)	o-Xylene	9.38	106	8388	0.48287 ppb		100
64)	Styrene	9.40	104	8152	0.42263 ppb		95
66)	1,3-Dichloropropane	7.90	76	8282	0.52717 ppb		87
67)	Dibromochloromethane	8.12	129	4505	0.45344 ppb	#	69
68)	Chlorobenzene	8.73	112	15281	0.50675 ppb		97
69)	Ethylbenzene	8.87	91	22483	0.47499 ppb		98
70)	Bromoform	9.55	173	3218	0.52944 ppb		85
72)	Isopropylbenzene	9.76	105	19675	0.49136 ppb		92
73)	1,1,2,2-Tetrachloroethane	10.07	83	5126	0.48991 ppb	#	80
74)	1,2,3-Trichloropropane	10.08	110	848	0.44181 ppb		79
75)	t-1,4-Dichloro-2-Butene	10.13	53	1272	0.54461 ppb	#	69
76)	Bromobenzene	10.01	156	5731	0.49537 ppb		86
77)	n-Propylbenzene	10.17	91	22433	0.46461 ppb		99
78)	4-Ethyltoluene	10.29	105	17090	0.42815 ppb		96
79)	2-Chlorotoluene	10.23	91	16171	0.50120 ppb		97
80)	1,3,5-Trimethylbenzene	10.36	105	14414	0.41631 ppb		90
81)	4-Chlorotoluene	10.34	91	16448	0.45874 ppb		94
82)	Tert-Butylbenzene	10.66	119	12407	0.45516 ppb		84
83)	1,2,4-Trimethylbenzene	10.72	105	15752	0.45272 ppb		85
84)	Sec-Butylbenzene	10.89	105	18208	0.46792 ppb		95
85)	p-Isopropyltoluene	11.04	119	16009	0.47249 ppb	#	87
86)	Benzyl Chloride	11.20	91	4984	0.48642 ppb		98
87)	1,3-DCB	10.96	146	11489	0.51194 ppb		93
88)	1,4-DCB	11.05	146	11796	0.50736 ppb		92
89)	n-Butylbenzene	11.44	91	13603	0.45552 ppb		96
90)	1,2-DCB	11.41	146	10568	0.49840 ppb		93
91)	Hexachloroethane	11.65	117	3845	0.51045 ppb		76
92)	1,2-Dibromo-3-chloropropan	12.18	157	914	0.57317 ppb	#	83
93)	1,2,4-Trichlorobenzene	13.00	180	6319	0.49060 ppb	#	90
94)	Hexachlorobutadiene	13.19	225	2869	0.55416 ppb		93
95)	Naphthalene	13.22	128	6881	0.47786 ppb	#	90
96)	1,2,3-Trichlorobenzene	13.47	180	4316	0.53545 ppb		89

(#) = qualifier out of range (m) = manual integration

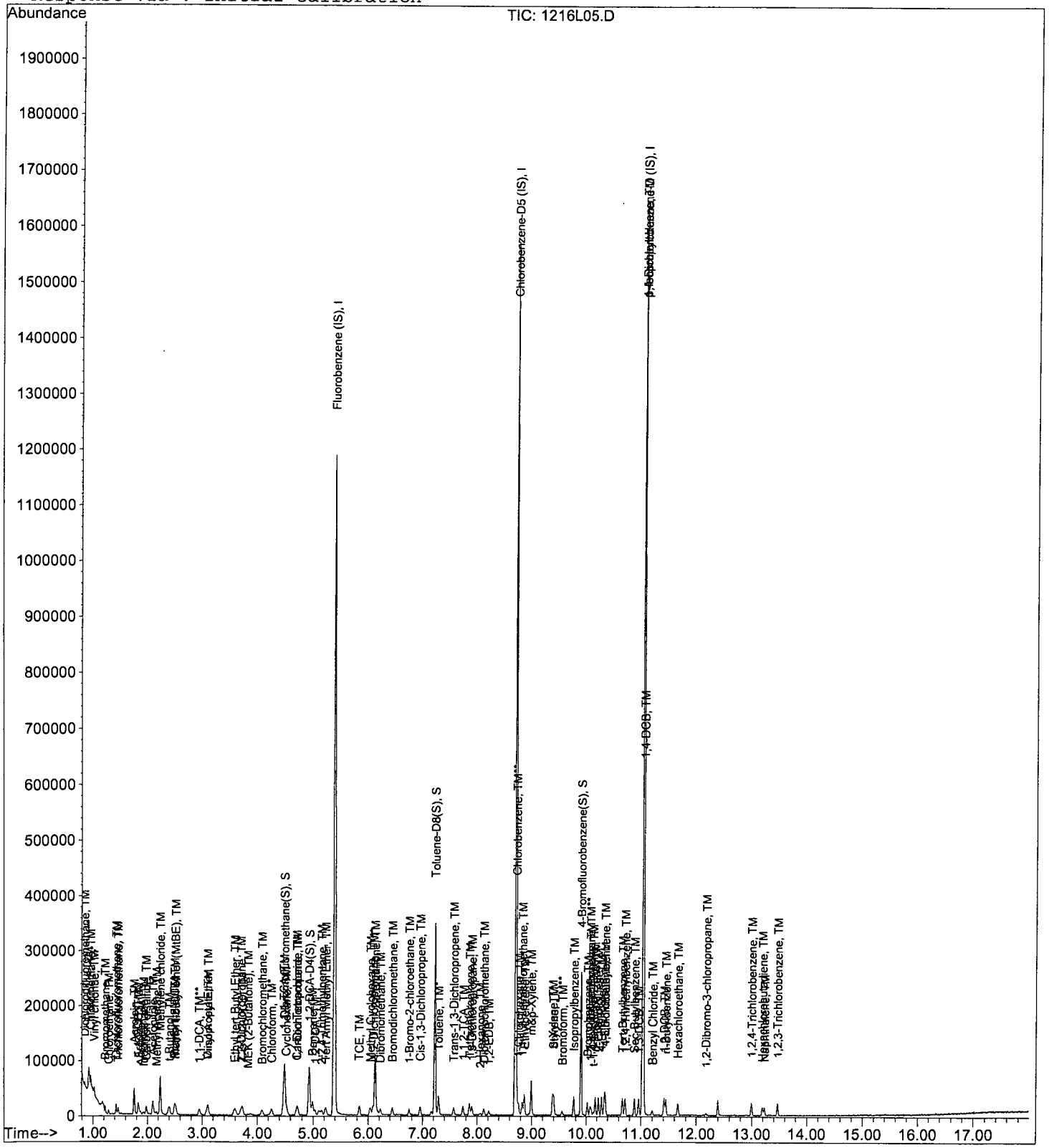
Quantitation Report

Data File : M:\LOKI\DATA\161216\1216L05.D
Acq On : 16 Dec 16 13:46
Sample : 0.5ug/L VOC STD 12/16/16AJ
Misc : W IS&S 11/21/16, 11/14/16

Vial: 5
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:00 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



590

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L06.D
Acq On : 16 Dec 16 14:14
Sample : 1.0ug/L VOC STD 12/16/16AK
Misc : W IS&S 11/21/16, 11/14/16

Vial: 6
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:01 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	571200	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	513664	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	262848	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	109827	9.44810 ppb		0.00
Spiked Amount 25.000			Recovery	= 37.792%		
37) 1,2-DCA-D4(S)	4.93	65	119788	9.58312 ppb		0.00
Spiked Amount 25.000			Recovery	= 38.332%		
57) Toluene-D8(S)	7.22	98	365462	9.16016 ppb		0.00
Spiked Amount 25.000			Recovery	= 36.640%		
65) 4-Bromofluorobenzene(S)	9.89	95	124907	9.14755 ppb		0.00
Spiked Amount 25.000			Recovery	= 36.592%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	10455	1.00654 ppb		93
3) Freon 114	0.93	85	6089	0.92054 ppb		90
4) Chloromethane	0.96	50	18876	1.06420 ppb		98
5) Vinyl chloride	1.02	62	12569	0.99526 ppb		89
6) Bromomethane	1.22	96	8921	1.04264 ppb		93
7) Chloroethane	1.29	64	6588	0.99571 ppb		86
8) Dichlorofluoromethane	1.43	67	22466	1.05295 ppb		90
9) Trichlorofluoromethane	1.46	101	13614	1.07023 ppb		95
10) Acrolein	1.75	56	59764	50.77880 ppb	#	95
11) Acetone	1.88	43	7334	1.44745 ppb		95
12) Freon-113	1.84	101	6902	1.04714 ppb		87
13) 1,1-DCE	1.83	96	5736	0.94854 ppb		96
14) t-Butanol	2.40	59	15037	52.03163 ppb		99
15) Acetonitrile	2.10	41	54099	42.29704 ppb		94
16) Methyl Acetate	2.17	43	9756	1.31915 ppb		94
17) Iodomethane	1.93	142	5692	0.96253 ppb		97
18) Acrylonitrile	2.47	52	3302	1.24454 ppb		80
19) Methylene chloride	2.24	84	33949	0.69410 ppb		96
20) Carbon disulfide	1.98	76	27111	1.10601 ppb		98
21) Methyl t-butyl ether (MtBE	2.52	73	24752	0.94125 ppb	#	89
22) Trans-1,2-DCE	2.50	96	10494	0.99930 ppb		90
23) Diisopropyl Ether	3.10	45	34433	1.00244 ppb		97
24) 1,1-DCA	2.95	63	21180	1.05010 ppb		99
25) Vinyl Acetate	3.10	43	8318	1.03496 ppb	#	80
26) Ethyl tert Butyl Ether	3.59	59	27145	0.99350 ppb		89
27) MEK (2-Butanone)	3.83	43	4306	1.18996 ppb	#	75
28) Cis-1,2-DCE	3.73	96	12020	0.98331 ppb		94
29) 2,2-Dichloropropane	3.71	77	4513	0.96459 ppb		91
30) Chloroform	4.26	83	22027	1.07644 ppb		93
31) Bromochloromethane	4.09	128	5698	0.99247 ppb		76
33) 1,1,1-TCA	4.47	97	16865	1.12009 ppb		92
34) Cyclohexane	4.53	41	6796	1.05178 ppb		85
35) 1,1-Dichloropropene	4.72	75	12100	0.98885 ppb		94
36) 2,2,4-Trimethylpentane	5.15	57	20192	1.08656 ppb	#	54
38) Carbon Tetrachloride	4.70	119	11315	1.00600 ppb		98
39) Tert Amyl Methyl Ether	5.23	73	22161	0.93116 ppb		98
40) 1,2-DCA	5.03	62	15726	1.05085 ppb		97
41) Benzene	4.99	78	43452	0.99697 ppb		97
42) TCE	5.84	95	5908	1.09401 ppb		92

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L06.D
Acq On : 16 Dec 16 14:14
Sample : 1.0ug/L VOC STD 12/16/16AK
Misc : W IS&S 11/21/16, 11/14/16

Vial: 6
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:01 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	2-Pentanone	6.12	43	255579	48.23463	ppb		98
44)	1,2-Dichloropropane	6.09	63	12098	0.96419	ppb	#	94
45)	Bromodichloromethane	6.44	83	15719	1.04580	ppb		88
46)	Methyl Cyclohexane	6.04	83	10665	1.00369	ppb		95
47)	Dibromomethane	6.22	93	6703	1.02398	ppb		94
48)	2-Chloroethyl vinyl ether	6.51	43	950	0.53541	ppb		100
49)	MIBK (methyl isobutyl ket	7.16	43	12003	0.77630	ppb		96
50)	1-Bromo-2-chloroethane	6.75	63	7895	0.95620	ppb		93
51)	Cis-1,3-Dichloropropene	6.95	75	15885	0.95965	ppb		96
52)	Toluene	7.29	91	44166	0.96543	ppb		99
53)	Trans-1,3-Dichloropropene	7.57	75	12844	0.93011	ppb		90
54)	1,1,2-TCA	7.74	83	7392	0.96895	ppb		92
55)	2-Hexanone	8.05	43	1409	1.96622	ppb	#	83
58)	1,2-EDB	8.21	107	8004	0.97442	ppb		99
59)	Tetrachloroethene	7.86	166	10158	1.01439	ppb		97
60)	1-Chlorohexane	8.76	91	10404	1.00023	ppb		92
61)	1,1,1,2-Tetrachloroethane	8.83	131	10795	1.04408	ppb		99
62)	m&p-Xylene	8.99	106	30829	1.76117	ppb		87
63)	o-Xylene	9.38	106	15395	0.90292	ppb		90
64)	Styrene	9.40	104	17368	0.91736	ppb		97
66)	1,3-Dichloropropane	7.90	76	15798	1.02450	ppb		98
67)	Dibromochloromethane	8.12	129	9582	0.98260	ppb		100
68)	Chlorobenzene	8.73	112	31353	1.05930	ppb		94
69)	Ethylbenzene	8.87	91	43852	0.94388	ppb		91
70)	Bromoform	9.55	173	6049	1.01393	ppb		86
72)	Isopropylbenzene	9.76	105	37664	0.98687	ppb		94
73)	1,1,2,2-Tetrachloroethane	10.07	83	11186	1.12166	ppb		98
74)	1,2,3-Trichloropropane	10.09	110	2139	1.16924	ppb		85
75)	t-1,4-Dichloro-2-Butene	10.13	53	2035	0.91415	ppb		92
76)	Bromobenzene	10.01	156	11886	1.07792	ppb		98
77)	n-Propylbenzene	10.17	91	45734	0.99378	ppb		99
78)	4-Ethyltoluene	10.29	105	36978	0.97196	ppb		96
79)	2-Chlorotoluene	10.23	91	31662	1.02959	ppb		95
80)	1,3,5-Trimethylbenzene	10.36	105	32687	0.99051	ppb		93
81)	4-Chlorotoluene	10.34	91	35589	1.04142	ppb		99
82)	Tert-Butylbenzene	10.66	119	26330	1.01345	ppb		94
83)	1,2,4-Trimethylbenzene	10.72	105	32194	0.97079	ppb		99
84)	Sec-Butylbenzene	10.88	105	36712	0.98986	ppb		96
85)	p-Isopropyltoluene	11.04	119	32216	0.99760	ppb		94
86)	Benzyl Chloride	11.20	91	8799	0.90098	ppb		95
87)	1,3-DCB	10.96	146	22576	1.05544	ppb		93
88)	1,4-DCB	11.05	146	24935	1.12522	ppb		97
89)	n-Butylbenzene	11.44	91	28285	0.99377	ppb		88
90)	1,2-DCB	11.41	146	21193	1.04865	ppb		97
91)	Hexachloroethane	11.66	117	7318	1.01930	ppb		82
92)	1,2-Dibromo-3-chloropropan	12.17	157	1479	0.97309	ppb	#	76
93)	1,2,4-Trichlorobenzene	13.00	180	12246	0.99752	ppb		95
94)	Hexachlorobutadiene	13.19	225	5131	1.03982	ppb		91
95)	Naphthalene	13.23	128	13189	0.96097	ppb		98
96)	1,2,3-Trichlorobenzene	13.46	180	8283	1.07815	ppb		92

(#) = qualifier out of range (m) = manual integration

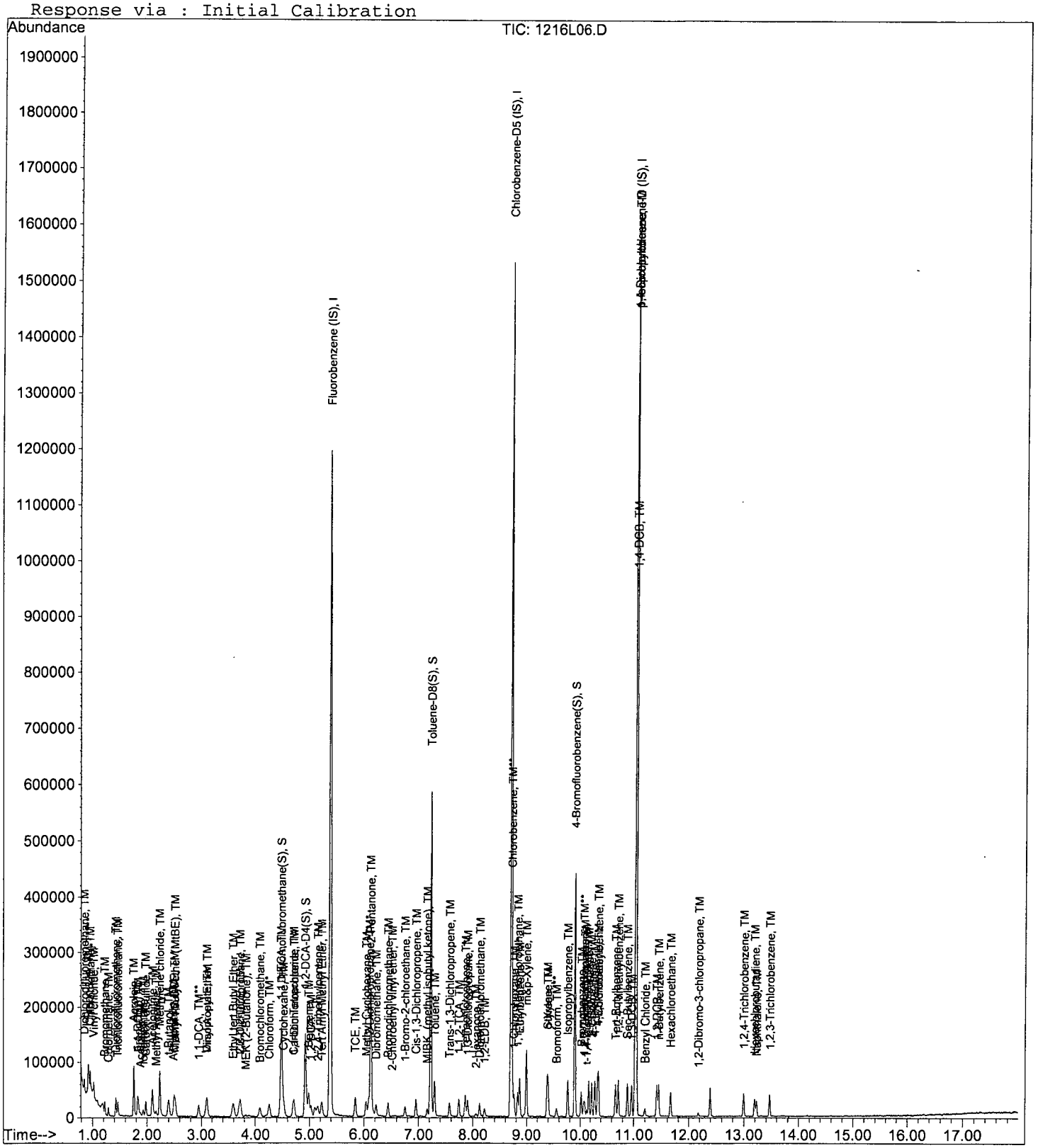
Quantitation Report

Data File : M:\LOKI\DATA\161216\1216L06.D
Acq On : 16 Dec 16 14:14
Sample : 1.0ug/L VOC STD 12/16/16AK
Misc : W IS&S 11/21/16, 11/14/16

Vial: 6
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:01 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



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Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L07.D
Acq On : 16 Dec 16 14:42
Sample : 2.0ug/L VOC STD 12/16/16AL
Misc : W IS&S 11/21/16, 11/14/16

Vial: 7
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:01 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	581312	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	521728	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	276544	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	112993	9.55137 ppb		0.00
Spiked Amount 25.000			Recovery =	38.204%		
37) 1,2-DCA-D4(S)	4.93	65	124184	9.76199 ppb		0.00
Spiked Amount 25.000			Recovery =	39.048%		
57) Toluene-D8(S)	7.22	98	381162	9.40601 ppb		0.00
Spiked Amount 25.000			Recovery =	37.624%		
65) 4-Bromofluorobenzene(S)	9.89	95	133201	9.60418 ppb		0.00
Spiked Amount 25.000			Recovery =	38.416%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	20744	1.96236 ppb		97
3) Freon 114	0.93	85	14981	2.22545 ppb		95
4) Chloromethane	0.96	50	36629	2.02917 ppb		96
5) Vinyl chloride	1.02	62	24690	1.92103 ppb		94
6) Bromomethane	1.22	96	16704	1.91832 ppb		100
7) Chloroethane	1.29	64	15047	2.23464 ppb		97
8) Dichlorofluoromethane	1.43	67	43758	2.01520 ppb		98
9) Trichlorofluoromethane	1.46	101	24907	1.92395 ppb		96
10) Acrolein	1.75	56	88716	74.06681 ppb	#	99
11) Acetone	1.88	43	8263	1.85864 ppb	#	80
12) Freon-113	1.85	101	14128	2.10616 ppb		92
13) 1,1-DCE	1.83	96	12576	2.04347 ppb		96
14) t-Butanol	2.40	59	23200	78.88114 ppb		98
15) Acetonitrile	2.10	41	82151	63.11207 ppb		94
16) Methyl Acetate	2.17	43	16777	2.22902 ppb		92
17) Iodomethane	1.93	142	11497	1.91035 ppb		98
18) Acrylonitrile	2.48	52	5972	2.21171 ppb		98
19) Methylene chloride	2.24	84	50475	2.07132 ppb		98
20) Carbon disulfide	1.98	76	53630	2.14980 ppb		95
21) Methyl t-butyl ether (MtBE	2.52	73	53147	1.98588 ppb		97
22) Trans-1,2-DCE	2.49	96	20639	1.93118 ppb		97
23) Diisopropyl Ether	3.10	45	65366	1.86988 ppb		100
24) 1,1-DCA	2.95	63	42072	2.04963 ppb		93
25) Vinyl Acetate	3.09	43	16616	2.03147 ppb	#	85
26) Ethyl tert Butyl Ether	3.59	59	52419	1.88514 ppb		97
27) MEK (2-Butanone)	3.81	43	6656	1.89520 ppb	#	84
28) Cis-1,2-DCE	3.73	96	24558	1.97404 ppb		93
29) 2,2-Dichloropropane	3.70	77	9056	1.90191 ppb		100
30) Chloroform	4.25	83	41966	2.01517 ppb		95
31) Bromochloromethane	4.08	128	11632	1.99080 ppb		98
33) 1,1,1-TCA	4.47	97	30971	2.02116 ppb		97
34) Cyclohexane	4.53	41	13102	1.99245 ppb		97
35) 1,1-Dichloropropene	4.72	75	25012	2.00851 ppb		89
36) 2,2,4-Trimethylpentane	5.15	57	36611	1.93582 ppb	#	54
38) Carbon Tetrachloride	4.70	119	22880	1.99883 ppb		97
39) Tert Amyl Methyl Ether	5.23	73	45367	1.87307 ppb		98
40) 1,2-DCA	5.03	62	31275	2.05352 ppb		99
41) Benzene	4.99	78	85239	1.92171 ppb		97
42) TCE	5.84	95	11365	2.06790 ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L07.D
Acq On : 16 Dec 16 14:42
Sample : 2.0ug/L VOC STD 12/16/16AL
Misc : W IS&S 11/21/16, 11/14/16

Vial: 7
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:01 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43)	2-Pentanone	6.12	43	404512	75.01430 ppb		99
44)	1,2-Dichloropropane	6.09	63	23912	1.87259 ppb	#	94
45)	Bromodichloromethane	6.44	83	29984	1.96016 ppb		94
46)	Methyl Cyclohexane	6.04	83	21295	1.96923 ppb		81
47)	Dibromomethane	6.22	93	13117	1.96896 ppb		91
48)	2-Chloroethyl vinyl ether	6.52	43	2791	2.98046 ppb		100
49)	MIBK (methyl isobutyl ket	7.16	43	19491	1.79026 ppb		94
50)	1-Bromo-2-chloroethane	6.75	63	16472	1.96029 ppb		98
51)	Cis-1,3-Dichloropropene	6.95	75	32123	1.90687 ppb		94
52)	Toluene	7.29	91	89547	1.92337 ppb		97
53)	Trans-1,3-Dichloropropene	7.56	75	27463	1.95415 ppb		98
54)	1,1,2-TCA	7.74	83	15678	2.01933 ppb		98
55)	2-Hexanone	8.04	43	3635	2.76777 ppb		97
58)	1,2-EDB	8.21	107	17586	2.10785 ppb		93
59)	Tetrachloroethene	7.86	166	19410	1.90834 ppb		90
60)	1-Chlorohexane	8.76	91	20995	1.98725 ppb		91
61)	1,1,1,2-Tetrachloroethane	8.83	131	21919	2.08721 ppb		97
62)	m&p-Xylene	8.99	106	67962	3.82246 ppb		96
63)	o-Xylene	9.38	106	34535	1.99418 ppb		97
64)	Styrene	9.40	104	34592	1.79887 ppb		97
66)	1,3-Dichloropropane	7.90	76	32318	2.06343 ppb		98
67)	Dibromochloromethane	8.12	129	19274	1.94594 ppb		98
68)	Chlorobenzene	8.73	112	61332	2.04015 ppb		96
69)	Ethylbenzene	8.87	91	93968	1.99132 ppb		98
70)	Bromoform	9.55	173	12014	1.98265 ppb		94
72)	Isopropylbenzene	9.76	105	78536	1.95588 ppb		95
73)	1,1,2,2-Tetrachloroethane	10.07	83	21715	2.06960 ppb		98
74)	1,2,3-Trichloropropane	10.09	110	4092	2.12603 ppb		76
75)	t-1,4-Dichloro-2-Butene	10.13	53	4631	1.97727 ppb	#	51
76)	Bromobenzene	10.02	156	23840	2.05493 ppb		95
77)	n-Propylbenzene	10.17	91	95323	1.96874 ppb		98
78)	4-Ethyltoluene	10.29	105	78789	1.96839 ppb		96
79)	2-Chlorotoluene	10.23	91	61175	1.89078 ppb		97
80)	1,3,5-Trimethylbenzene	10.36	105	66920	1.92744 ppb		94
81)	4-Chlorotoluene	10.34	91	69583	1.93532 ppb		99
82)	Tert-Butylbenzene	10.66	119	53792	1.96793 ppb		98
83)	1,2,4-Trimethylbenzene	10.72	105	66875	1.91669 ppb		94
84)	Sec-Butylbenzene	10.88	105	74402	1.90673 ppb		94
85)	p-Isopropyltoluene	11.04	119	65925	1.94033 ppb		92
86)	Benzyl Chloride	11.20	91	18737	1.82357 ppb		97
87)	1,3-DCB	10.96	146	45771	2.03385 ppb		98
88)	1,4-DCB	11.05	146	45679	1.95924 ppb		95
89)	n-Butylbenzene	11.44	91	57979	1.93615 ppb		96
90)	1,2-DCB	11.41	146	43909	2.06505 ppb		97
91)	Hexachloroethane	11.66	117	14100	1.86668 ppb		96
92)	1,2-Dibromo-3-chloropropan	12.18	157	3322	2.07743 ppb		88
93)	1,2,4-Trichlorobenzene	13.00	180	24199	1.87355 ppb		93
94)	Hexachlorobutadiene	13.19	225	10086	1.94275 ppb		97
95)	Naphthalene	13.22	128	26216	1.81553 ppb		96
96)	1,2,3-Trichlorobenzene	13.46	180	15134	1.87234 ppb		99

(#) = qualifier out of range (m) = manual integration

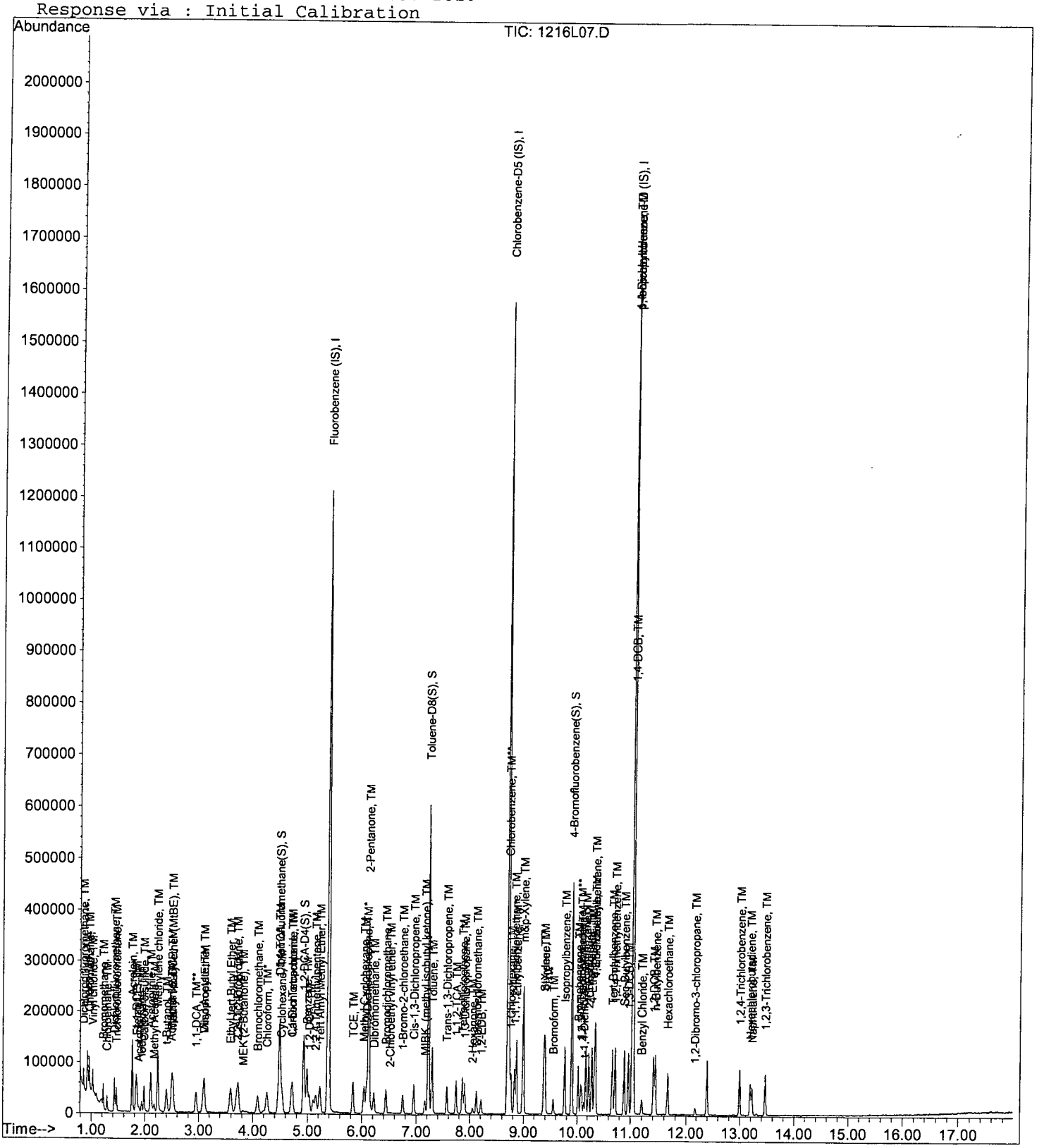
Quantitation Report

Data File : M:\LOKI\DATA\161216\1216L07.D
Acq On : 16 Dec 16 14:42
Sample : 2.0ug/L VOC STD 12/16/16AL
Misc : W IS&S 11/21/16, 11/14/16

Vial: 7
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:01 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



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Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L08.D
Acq On : 16 Dec 16 15:10
Sample : 5.0ug/L VOC STD 12/16/16AM
Misc : W IS&S 11/21/16, 11/14/16

Vial: 8
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:31 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	588544	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	546880	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	293056	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	299117	24.97386 ppb		0.00
Spiked Amount 25.000			Recovery = 99.896%			
37) 1,2-DCA-D4(S)	4.92	65	323239	25.09729 ppb		0.00
Spiked Amount 25.000			Recovery = 100.388%			
57) Toluene-D8(S)	7.22	98	1043176	24.55870 ppb		0.00
Spiked Amount 25.000			Recovery = 98.236%			
65) 4-Bromofluorobenzene(S)	9.89	95	357675	24.60331 ppb		0.00
Spiked Amount 25.000			Recovery = 98.412%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	53064	4.95812 ppb		98
3) Freon 114	0.93	85	31400	4.60719 ppb		99
4) Chloromethane	0.96	50	94094	5.14855 ppb		99
5) Vinyl chloride	1.02	62	67694	5.20228 ppb		100
6) Bromomethane	1.22	96	42792	4.85393 ppb		97
7) Chloroethane	1.29	64	35985	5.27849 ppb		95
8) Dichlorofluoromethane	1.43	67	107955	4.91060 ppb		99
9) Trichlorofluoromethane	1.46	101	65466	4.99480 ppb		98
10) Acrolein	1.75	56	119842	98.82369 ppb	#	97
11) Acetone	1.88	43	15210	5.33687 ppb		100
12) Freon-113	1.84	101	31750	4.67503 ppb		97
13) 1,1-DCE	1.83	96	31040	4.98169 ppb		97
14) t-Butanol	2.40	59	30992	104.07948 ppb		99
15) Acetonitrile	2.10	41	106452	80.77627 ppb		99
16) Methyl Acetate	2.17	43	36771	4.82543 ppb		97
17) Iodomethane	1.93	142	31616	5.18879 ppb		96
18) Acrylonitrile	2.47	52	13660	4.99678 ppb		97
19) Methylene chloride	2.23	84	100660	6.30444 ppb		99
20) Carbon disulfide	1.98	76	136273	5.39549 ppb		98
21) Methyl t-butyl ether (MtBE	2.52	73	137302	5.06736 ppb		98
22) Trans-1,2-DCE	2.50	96	55214	5.10286 ppb		97
23) Diisopropyl Ether	3.10	45	177381	5.01186 ppb		99
24) 1,1-DCA	2.95	63	107592	5.17717 ppb		97
25) Vinyl Acetate	3.09	43	40384	4.87668 ppb	#	84
26) Ethyl tert Butyl Ether	3.59	59	141048	5.01017 ppb		98
27) MEK (2-Butanone)	3.81	43	18658	5.54667 ppb		88
28) Cis-1,2-DCE	3.72	96	64325	5.10708 ppb		99
29) 2,2-Dichloropropane	3.70	77	24712	5.12617 ppb		96
30) Chloroform	4.25	83	108800	5.16028 ppb		96
31) Bromochloromethane	4.08	128	30711	5.19155 ppb		87
33) 1,1,1-TCA	4.47	97	78861	5.08322 ppb		96
34) Cyclohexane	4.53	41	29142	4.37723 ppb		89
35) 1,1-Dichloropropene	4.72	75	63462	5.03350 ppb		100
36) 2,2,4-Trimethylpentane	5.15	57	85215	4.45040 ppb		94
38) Carbon Tetrachloride	4.70	119	59652	5.14726 ppb		94
39) Tert Amyl Methyl Ether	5.22	73	123058	5.01826 ppb		97
40) 1,2-DCA	5.03	62	78719	5.10519 ppb		99
41) Benzene	4.99	78	232265	5.17206 ppb		98
42) TCE	5.84	95	28080	5.04647 ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L08.D Vial: 8
Acq On : 16 Dec 16 15:10 Operator: PM,DG,SV,CMM
Sample : 5.0ug/L VOC STD 12/16/16AM Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 17 15:31 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
43)	2-Pentanone	6.12	43	559773	102.53095 ppb	96
44)	1,2-Dichloropropane	6.09	63	66369	5.13362 ppb	100
45)	Bromodichloromethane	6.44	83	79068	5.10543 ppb	94
46)	Methyl Cyclohexane	6.04	83	49483	4.51965 ppb	96
47)	Dibromomethane	6.22	93	33435	4.95717 ppb	91
48)	2-Chloroethyl vinyl ether	6.55	43	5740	6.83861 ppb	100
49)	MIBK (methyl isobutyl ket	7.16	43	49820	5.93180 ppb	98
50)	1-Bromo-2-chloroethane	6.75	63	43336	5.09393 ppb	98
51)	Cis-1,3-Dichloropropene	6.95	75	87443	5.12697 ppb	98
52)	Toluene	7.29	91	248036	5.26207 ppb	99
53)	Trans-1,3-Dichloropropene	7.56	75	72573	5.10054 ppb	99
54)	1,1,2-TCA	7.74	83	41902	5.33068 ppb	96
55)	2-Hexanone	8.05	43	12403	5.90527 ppb	94
58)	1,2-EDB	8.21	107	44499	5.08833 ppb	93
59)	Tetrachloroethene	7.86	166	52324	4.90775 ppb	96
60)	1-Chlorohexane	8.76	91	53489	4.83006 ppb	95
61)	1,1,1,2-Tetrachloroethane	8.83	131	53991	4.90477 ppb	95
62)	m&p-Xylene	8.99	106	187954	10.08512 ppb	97
63)	o-Xylene	9.38	106	92431	5.09183 ppb	97
64)	Styrene	9.40	104	103448	5.13213 ppb	97
66)	1,3-Dichloropropane	7.90	76	84590	5.15248 ppb	98
67)	Dibromochloromethane	8.12	129	53569	5.15968 ppb	98
68)	Chlorobenzene	8.73	112	160507	5.09357 ppb	97
69)	Ethylbenzene	8.87	91	249841	5.05100 ppb	98
70)	Bromoform	9.55	173	30844	4.85602 ppb	98
72)	Isopropylbenzene	9.76	105	215926	5.07449 ppb	99
73)	1,1,2,2-Tetrachloroethane	10.07	83	56698	5.09927 ppb	99
74)	1,2,3-Trichloropropane	10.09	110	11572	5.67357 ppb	98
75)	t-1,4-Dichloro-2-Butene	10.13	53	13571	5.46785 ppb	95
76)	Bromobenzene	10.02	156	64535	5.24927 ppb	97
77)	n-Propylbenzene	10.17	91	260326	5.07366 ppb	99
78)	4-Ethyltoluene	10.29	105	221956	5.23271 ppb	95
79)	2-Chlorotoluene	10.23	91	174651	5.09391 ppb	99
80)	1,3,5-Trimethylbenzene	10.36	105	196404	5.33813 ppb	98
81)	4-Chlorotoluene	10.34	91	200854	5.27161 ppb	94
82)	Tert-Butylbenzene	10.67	119	151261	5.22194 ppb	96
83)	1,2,4-Trimethylbenzene	10.72	105	194884	5.27082 ppb	99
84)	Sec-Butylbenzene	10.89	105	212930	5.14939 ppb	97
85)	p-Isopropyltoluene	11.04	119	182223	5.06106 ppb	97
86)	Benzyl Chloride	11.20	91	52481	4.81989 ppb	98
87)	1,3-DCB	10.96	146	120124	5.03701 ppb	98
88)	1,4-DCB	11.05	146	123384	4.99393 ppb	99
89)	n-Butylbenzene	11.44	91	157356	4.95868 ppb	99
90)	1,2-DCB	11.41	146	116860	5.18629 ppb	95
91)	Hexachloroethane	11.66	117	39791	4.97106 ppb	99
92)	1,2-Dibromo-3-chloropropan	12.18	157	8578	5.06206 ppb	91
93)	1,2,4-Trichlorobenzene	13.00	180	67420	4.92573 ppb	97
94)	Hexachlorobutadiene	13.19	225	26496	4.81605 ppb	96
95)	Naphthalene	13.23	128	75632	4.94262 ppb	99
96)	1,2,3-Trichlorobenzene	13.47	180	41504	4.84544 ppb	98

(#) = qualifier out of range (m) = manual integration

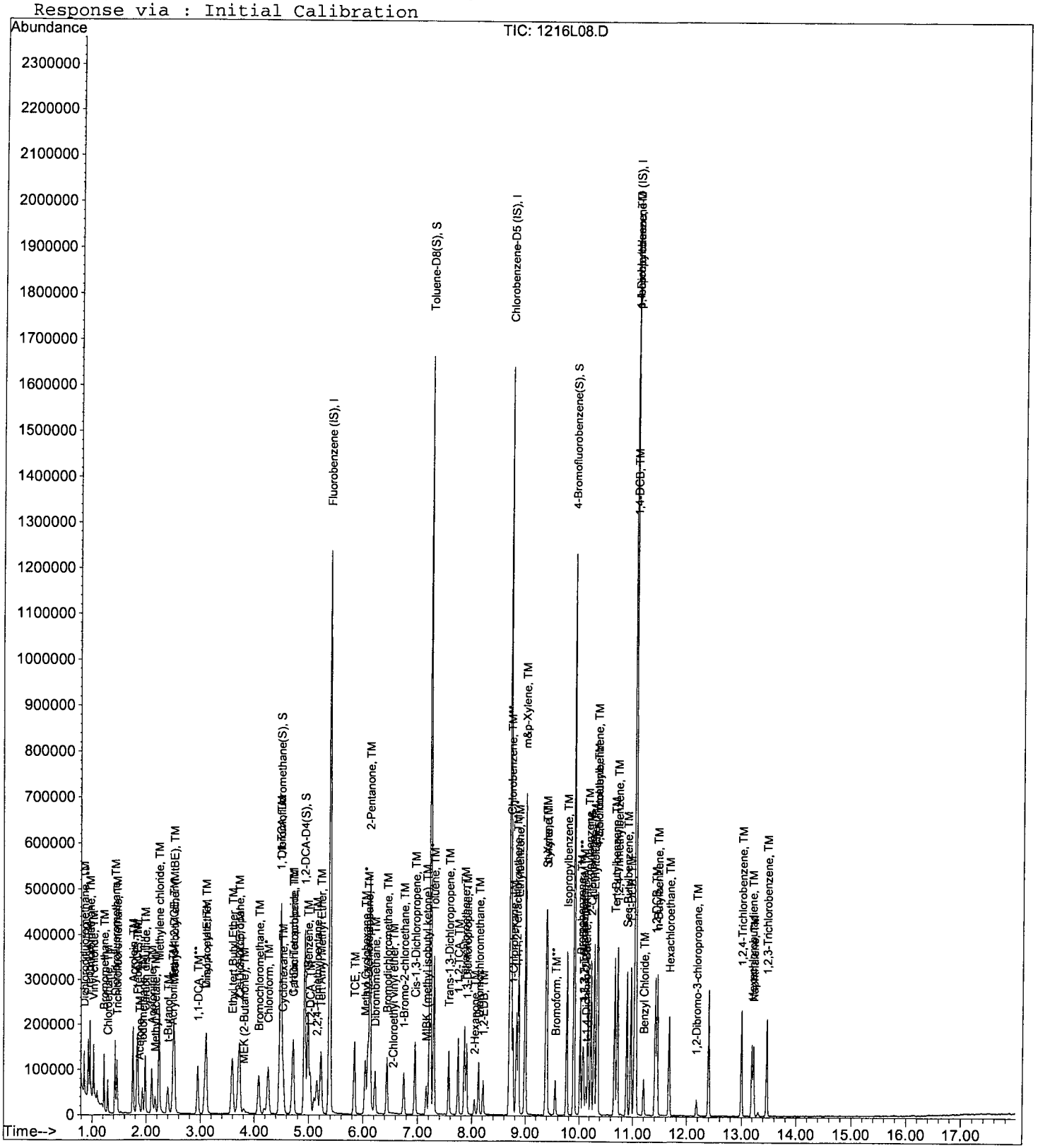
Quantitation Report

Data File : M:\LOKI\DATA\161216\1216L08.D
Acq On : 16 Dec 16 15:10
Sample : 5.0ug/L VOC STD 12/16/16AM
Misc : W IS&S 11/21/16, 11/14/16

Vial: 8
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:31 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L09.D
Acq On : 16 Dec 16 15:38
Sample : 10ug/L VOC STD 12/16/16AN
Misc : W IS&S 11/21/16, 11/14/16

Vial: 9
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:01 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	594432	25.00000 ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	542208	25.00000 ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	308288	25.00000 ppb	0.00
System Monitoring Compounds					
32) Dibromofluoromethane(S)	4.48	111	299563	24.76335 ppb	0.00
Spiked Amount 25.000				Recovery = 99.052%	
37) 1,2-DCA-D4(S)	4.92	65	319303	24.54612 ppb	0.00
Spiked Amount 25.000				Recovery = 98.184%	
57) Toluene-D8(S)	7.22	98	1068145	25.36321 ppb	0.00
Spiked Amount 25.000				Recovery = 101.452%	
65) 4-Bromofluorobenzene(S)	9.89	95	373824	25.93572 ppb	0.00
Spiked Amount 25.000				Recovery = 103.744%	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.85	85	114184	10.56328 ppb	100
3) Freon 114	0.93	85	76225	11.07340 ppb	100
4) Chloromethane	0.96	50	180867	9.79849 ppb	100
5) Vinyl chloride	1.02	62	135131	10.28195 ppb	100
6) Bromomethane	1.22	96	84342	9.47221 ppb	100
7) Chloroethane	1.29	64	72411	10.51646 ppb	100
8) Dichlorofluoromethane	1.43	67	216618	9.75581 ppb	100
9) Trichlorofluoromethane	1.46	101	139745	10.55639 ppb	100
10) Acrolein	1.75	56	149068	121.70634 ppb	100
11) Acetone	1.88	43	25342	10.35839 ppb	100
12) Freon-113	1.84	101	71593	10.43731 ppb	100
13) 1,1-DCE	1.83	96	62096	9.86724 ppb	100
14) t-Butanol	2.40	59	39552	131.51059 ppb	100
15) Acetonitrile	2.10	41	136527	102.57116 ppb	100
16) Methyl Acetate	2.17	43	71982	9.35257 ppb	100
17) Iodomethane	1.93	142	62976	10.23320 ppb	100
18) Acrylonitrile	2.47	52	25361	9.18508 ppb	100
19) Methylene chloride	2.23	84	158701	11.12797 ppb	100
20) Carbon disulfide	1.98	76	265110	10.39260 ppb	100
21) Methyl t-butyl ether (MtBE	2.52	73	265082	9.68639 ppb	100
22) Trans-1,2-DCE	2.50	96	105175	9.62395 ppb	100
23) Diisopropyl Ether	3.10	45	346480	9.69273 ppb	100
24) 1,1-DCA	2.95	63	203173	9.67954 ppb	100
25) Vinyl Acetate	3.07	43	75662	9.04627 ppb	100
26) Ethyl tert Butyl Ether	3.59	59	281396	9.89647 ppb	100
27) MEK (2-Butanone)	3.80	43	33602	10.02282 ppb	100
28) Cis-1,2-DCE	3.73	96	120461	9.46927 ppb	100
29) 2,2-Dichloropropane	3.70	77	47672	9.79095 ppb	100
30) Chloroform	4.25	83	210266	9.87393 ppb	100
31) Bromochloromethane	4.08	128	59277	9.92123 ppb	100
33) 1,1,1-TCA	4.47	97	151260	9.65333 ppb	100
34) Cyclohexane	4.53	41	66848	9.94135 ppb	100
35) 1,1-Dichloropropene	4.72	75	128013	10.05280 ppb	100
36) 2,2,4-Trimethylpentane	5.15	57	207175	10.71265 ppb	100
38) Carbon Tetrachloride	4.70	119	119318	10.19375 ppb	100
39) Tert Amyl Methyl Ether	5.22	73	249279	10.06481 ppb	100
40) 1,2-DCA	5.03	62	152404	9.78601 ppb	100
41) Benzene	4.99	78	443700	9.78241 ppb	100
42) TCE	5.84	95	55144	9.81217 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L09.D
Acq On : 16 Dec 16 15:38
Sample : 10ug/L VOC STD 12/16/16AN
Misc : W IS&S 11/21/16, 11/14/16

Vial: 9
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:01 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
43)	2-Pentanone	6.12	43	702980	127.48607	ppb	100
44)	1,2-Dichloropropane	6.09	63	121212	9.28283	ppb	100
45)	Bromodichloromethane	6.44	83	148538	9.49612	ppb	100
46)	Methyl Cyclohexane	6.04	83	114309	10.33728	ppb	100
47)	Dibromomethane	6.22	93	64708	9.49876	ppb	100
48)	2-Chloroethyl vinyl ether	6.54	43	7545	9.12927	ppb	100
49)	MIBK (methyl isobutyl ket	7.15	43	83735	10.48618	ppb	100
50)	1-Bromo-2-chloroethane	6.75	63	85776	9.98266	ppb	100
51)	Cis-1,3-Dichloropropene	6.95	75	163811	9.50945	ppb	100
52)	Toluene	7.29	91	476888	10.01695	ppb	100
53)	Trans-1,3-Dichloropropene	7.56	75	143826	10.00818	ppb	100
54)	1,1,2-TCA	7.74	83	81579	10.27549	ppb	100
55)	2-Hexanone	8.04	43	24184	10.05662	ppb	100
58)	1,2-EDB	8.21	107	83943	9.68134	ppb	100
59)	Tetrachloroethene	7.86	166	105543	9.98475	ppb	100
60)	1-Chlorohexane	8.76	91	103781	9.45218	ppb	100
61)	1,1,1,2-Tetrachloroethane	8.83	131	108025	9.89800	ppb	100
62)	m&p-Xylene	8.99	106	378835	20.50244	ppb	100
63)	o-Xylene	9.38	106	185740	10.32020	ppb	100
64)	Styrene	9.40	104	205184	10.26704	ppb	100
66)	1,3-Dichloropropane	7.90	76	159453	9.79616	ppb	100
67)	Dibromochloromethane	8.12	129	105826	10.28081	ppb	100
68)	Chlorobenzene	8.73	112	302433	9.68018	ppb	100
69)	Ethylbenzene	8.87	91	491905	10.03046	ppb	100
70)	Bromoform	9.55	173	61557	9.77492	ppb	100
72)	Isopropylbenzene	9.76	105	440870	9.84900	ppb	100
73)	1,1,2,2-Tetrachloroethane	10.07	83	111448	9.52810	ppb	100
74)	1,2,3-Trichloropropane	10.09	110	20776	9.68286	ppb	100
75)	t-1,4-Dichloro-2-Butene	10.12	53	24441	9.36091	ppb	100
76)	Bromobenzene	10.02	156	124663	9.63907	ppb	100
77)	n-Propylbenzene	10.17	91	526171	9.74820	ppb	100
78)	4-Ethyltoluene	10.29	105	452948	10.15085	ppb	100
79)	2-Chlorotoluene	10.23	91	346157	9.59726	ppb	100
80)	1,3,5-Trimethylbenzene	10.36	105	396645	10.24790	ppb	100
81)	4-Chlorotoluene	10.34	91	405060	10.10592	ppb	100
82)	Tert-Butylbenzene	10.67	119	298287	9.78888	ppb	100
83)	1,2,4-Trimethylbenzene	10.72	105	389070	10.00286	ppb	100
84)	Sec-Butylbenzene	10.88	105	432618	9.94530	ppb	100
85)	p-Isopropyltoluene	11.04	119	374309	9.88241	ppb	100
86)	Benzyl Chloride	11.19	91	109301	9.54230	ppb	100
87)	1,3-DCB	10.96	146	241711	9.63459	ppb	100
88)	1,4-DCB	11.05	146	241959	9.30936	ppb	100
89)	n-Butylbenzene	11.44	91	324744	9.72787	ppb	100
90)	1,2-DCB	11.41	146	222013	9.36619	ppb	100
91)	Hexachloroethane	11.66	117	78492	9.32144	ppb	100
92)	1,2-Dibromo-3-chloropropan	12.18	157	17095	9.58968	ppb	100
93)	1,2,4-Trichlorobenzene	13.00	180	134204	9.32055	ppb	100
94)	Hexachlorobutadiene	13.19	225	52127	9.00674	ppb	100
95)	Naphthalene	13.22	128	151744	9.42664	ppb	100
96)	1,2,3-Trichlorobenzene	13.46	180	80448	8.92797	ppb	100

(#) = qualifier out of range (m) = manual integration

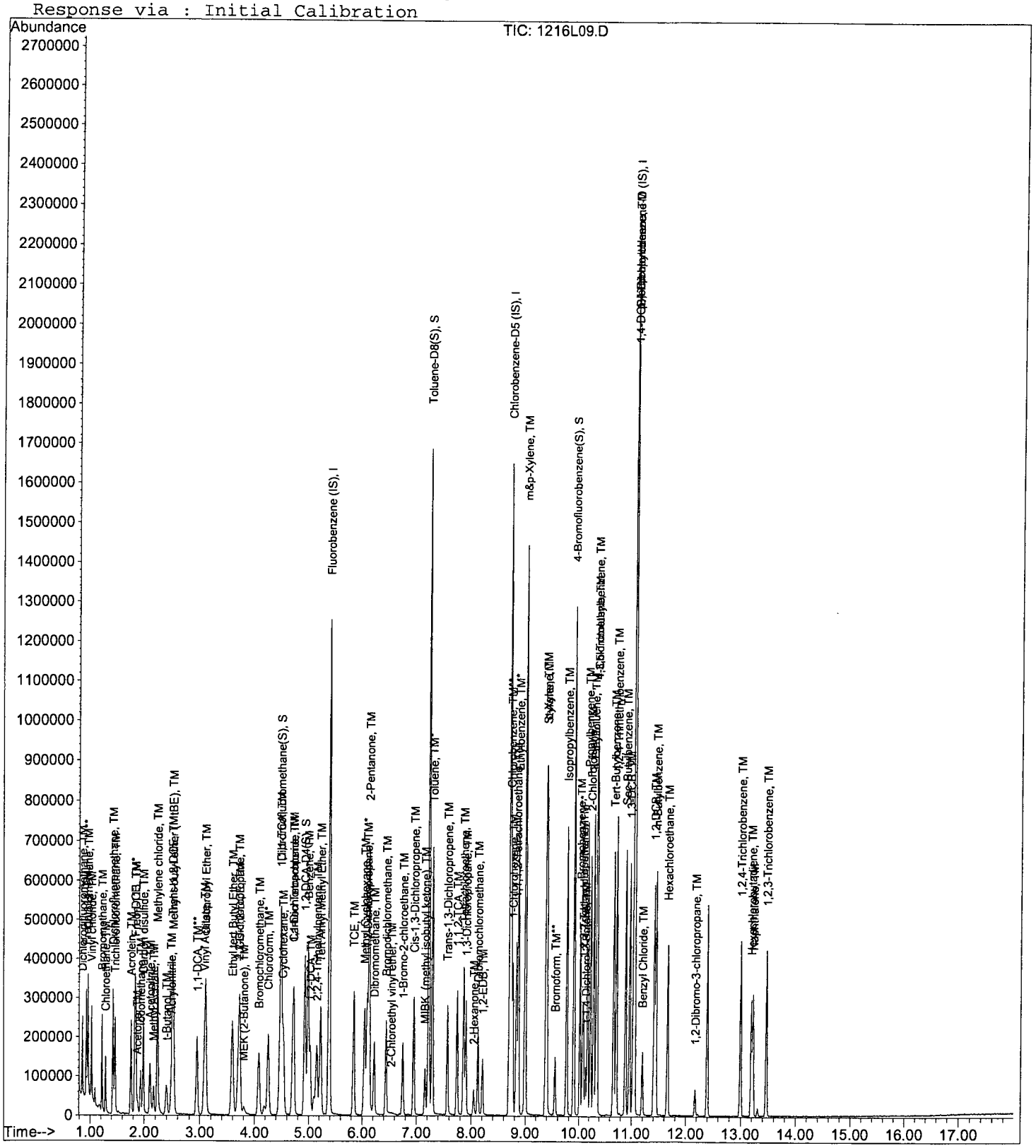
Quantitation Report

Data File : M:\LOKI\DATA\161216\1216L09.D
Acq On : 16 Dec 16 15:38
Sample : 10ug/L VOC STD 12/16/16AN
Misc : W IS&S 11/21/16, 11/14/16

Vial: 9
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:01 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L10.D
Acq On : 16 Dec 16 16:06
Sample : 20ug/L VOC STD 12/16/16AO
Misc : W IS&S 11/21/16, 11/14/16

Vial: 10
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:01 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	632128	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	573568	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	311424	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	602676	46.84922 ppb		0.00
Spiked Amount 25.000			Recovery = 187.396%			
37) 1,2-DCA-D4(S)	4.93	65	656081	47.42796 ppb		0.00
Spiked Amount 25.000			Recovery = 189.712%			
57) Toluene-D8(S)	7.22	98	2193961	49.24746 ppb		0.00
Spiked Amount 25.000			Recovery = 196.988%			
65) 4-Bromofluorobenzene(S)	9.89	95	768729	50.41798 ppb		0.00
Spiked Amount 25.000			Recovery = 201.672%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	219776	19.11925 ppb		98
3) Freon 114	0.93	85	138468	18.91604 ppb		95
4) Chloromethane	0.96	50	361321	18.40731 ppb		100
5) Vinyl chloride	1.02	62	271347	19.41523 ppb		99
6) Bromomethane	1.22	96	181696	19.18889 ppb		98
7) Chloroethane	1.29	64	145255	19.83778 ppb		98
8) Dichlorofluoromethane	1.42	67	437944	18.54746 ppb		99
9) Trichlorofluoromethane	1.46	101	270362	19.20534 ppb		98
10) Acrolein	1.75	56	190291	146.09797 ppb		98
11) Acetone	1.88	43	47138	19.91101 ppb		95
12) Freon-113	1.84	101	132811	18.20745 ppb		98
13) 1,1-DCE	1.83	96	120224	17.96472 ppb		96
14) t-Butanol	2.40	59	43552	136.17505 ppb		99
15) Acetonitrile	2.10	41	152665	107.85576 ppb		98
16) Methyl Acetate	2.17	43	144947	17.70979 ppb		98
17) Iodomethane	1.93	142	139776	21.35827 ppb		99
18) Acrylonitrile	2.48	52	53269	18.14212 ppb		95
19) Methylene chloride	2.23	84	257456	18.18152 ppb		98
20) Carbon disulfide	1.98	76	556265	20.50581 ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	545073	18.72981 ppb		99
22) Trans-1,2-DCE	2.49	96	218486	18.80017 ppb		97
23) Diisopropyl Ether	3.10	45	742923	19.54380 ppb		97
24) 1,1-DCA	2.94	63	420455	18.83673 ppb		99
25) Vinyl Acetate	3.09	43	159557	17.93926 ppb	#	85
26) Ethyl tert Butyl Ether	3.59	59	587811	19.44004 ppb		99
27) MEK (2-Butanone)	3.80	43	67721	19.14677 ppb		95
28) Cis-1,2-DCE	3.72	96	256014	18.92477 ppb		98
29) 2,2-Dichloropropane	3.70	77	97424	18.81588 ppb		99
30) Chloroform	4.25	83	424710	18.75472 ppb		98
31) Bromochloromethane	4.08	128	116037	18.26304 ppb		98
33) 1,1,1-TCA	4.47	97	307837	18.47443 ppb		100
34) Cyclohexane	4.53	41	127786	17.87053 ppb		96
35) 1,1-Dichloropropene	4.72	75	258773	19.10949 ppb		98
36) 2,2,4-Trimethylpentane	5.15	57	394823	19.19815 ppb		96
38) Carbon Tetrachloride	4.70	119	229959	18.47462 ppb		99
39) Tert Amyl Methyl Ether	5.22	73	513309	19.48929 ppb		99
40) 1,2-DCA	5.03	62	310648	18.75750 ppb		99
41) Benzene	4.99	78	918798	19.04906 ppb		98
42) TCE	5.84	95	114544	19.16622 ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L10.D
Acq On : 16 Dec 16 16:06
Sample : 20ug/L VOC STD 12/16/16AO
Misc : W IS&S 11/21/16, 11/14/16

Vial: 10
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:01 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
43)	2-Pentanone	6.12	43	885562	151.02050	ppb	99
44)	1,2-Dichloropropane	6.09	63	251866	18.13851	ppb	99
45)	Bromodichloromethane	6.44	83	310479	18.66543	ppb	96
46)	Methyl Cyclohexane	6.04	83	216626	18.42187	ppb	99
47)	Dibromomethane	6.22	93	136235	18.80593	ppb	96
48)	2-Chloroethyl vinyl ether	6.50	43	16189	19.19412	ppb	100
49)	MIBK (methyl isobutyl ket	7.15	43	162763	19.93411	ppb	99
50)	1-Bromo-2-chloroethane	6.75	63	175082	19.16105	ppb	99
51)	Cis-1,3-Dichloropropene	6.95	75	351118	19.16738	ppb	98
52)	Toluene	7.29	91	979743	19.35211	ppb	98
53)	Trans-1,3-Dichloropropene	7.56	75	297093	19.44050	ppb	100
54)	1,1,2-TCA	7.74	83	167741	19.86829	ppb	99
55)	2-Hexanone	8.04	43	52291	18.95579	ppb	96
58)	1,2-EDB	8.20	107	176032	19.19216	ppb	98
59)	Tetrachloroethene	7.86	166	215488	19.27134	ppb	97
60)	1-Chlorohexane	8.76	91	226407	19.49329	ppb	95
61)	1,1,1,2-Tetrachloroethane	8.83	131	224075	19.40876	ppb	99
62)	m&p-Xylene	8.99	106	800245	40.94109	ppb	100
63)	o-Xylene	9.38	106	387961	20.37754	ppb	91
64)	Styrene	9.40	104	462528	21.87866	ppb	100
66)	1,3-Dichloropropane	7.90	76	323720	18.80068	ppb	99
67)	Dibromochloromethane	8.12	129	217979	20.01846	ppb	100
68)	Chlorobenzene	8.73	112	620938	18.78812	ppb	98
69)	Ethylbenzene	8.87	91	1052107	20.28059	ppb	99
70)	Bromoform	9.55	173	131632	19.75960	ppb	91
72)	Isopropylbenzene	9.76	105	938355	20.75167	ppb	98
73)	1,1,2,2-Tetrachloroethane	10.07	83	226507	19.16993	ppb	98
74)	1,2,3-Trichloropropane	10.09	110	41576	19.18179	ppb	99
75)	t-1,4-Dichloro-2-Butene	10.13	53	52716	19.98693	ppb	97
76)	Bromobenzene	10.02	156	261501	20.01592	ppb	98
77)	n-Propylbenzene	10.17	91	1120551	20.55104	ppb	98
78)	4-Ethyltoluene	10.29	105	953179	21.14623	ppb	99
79)	2-Chlorotoluene	10.23	91	722723	19.83583	ppb	100
80)	1,3,5-Trimethylbenzene	10.36	105	832318	21.28759	ppb	98
81)	4-Chlorotoluene	10.34	91	842002	20.79573	ppb	100
82)	Tert-Butylbenzene	10.66	119	634018	20.59703	ppb	99
83)	1,2,4-Trimethylbenzene	10.72	105	845680	21.52320	ppb	100
84)	Sec-Butylbenzene	10.88	105	919168	20.91764	ppb	97
85)	p-Isopropyltoluene	11.04	119	790066	20.64906	ppb	98
86)	Benzyl Chloride	11.20	91	240087	20.74924	ppb	98
87)	1,3-DCB	10.96	146	491453	19.39203	ppb	100
88)	1,4-DCB	11.05	146	502512	19.13943	ppb	98
89)	n-Butylbenzene	11.44	91	688494	20.41650	ppb	99
90)	1,2-DCB	11.41	146	458825	19.16180	ppb	99
91)	Hexachloroethane	11.66	117	166599	19.58550	ppb	98
92)	1,2-Dibromo-3-chloropropan	12.18	157	34716	19.27831	ppb	91
93)	1,2,4-Trichlorobenzene	13.00	180	277681	19.09091	ppb	98
94)	Hexachlorobutadiene	13.19	225	103475	17.69885	ppb	97
95)	Naphthalene	13.22	128	337600	20.76121	ppb	100
96)	1,2,3-Trichlorobenzene	13.47	180	169344	18.60424	ppb	95

(#) = qualifier out of range (m) = manual integration

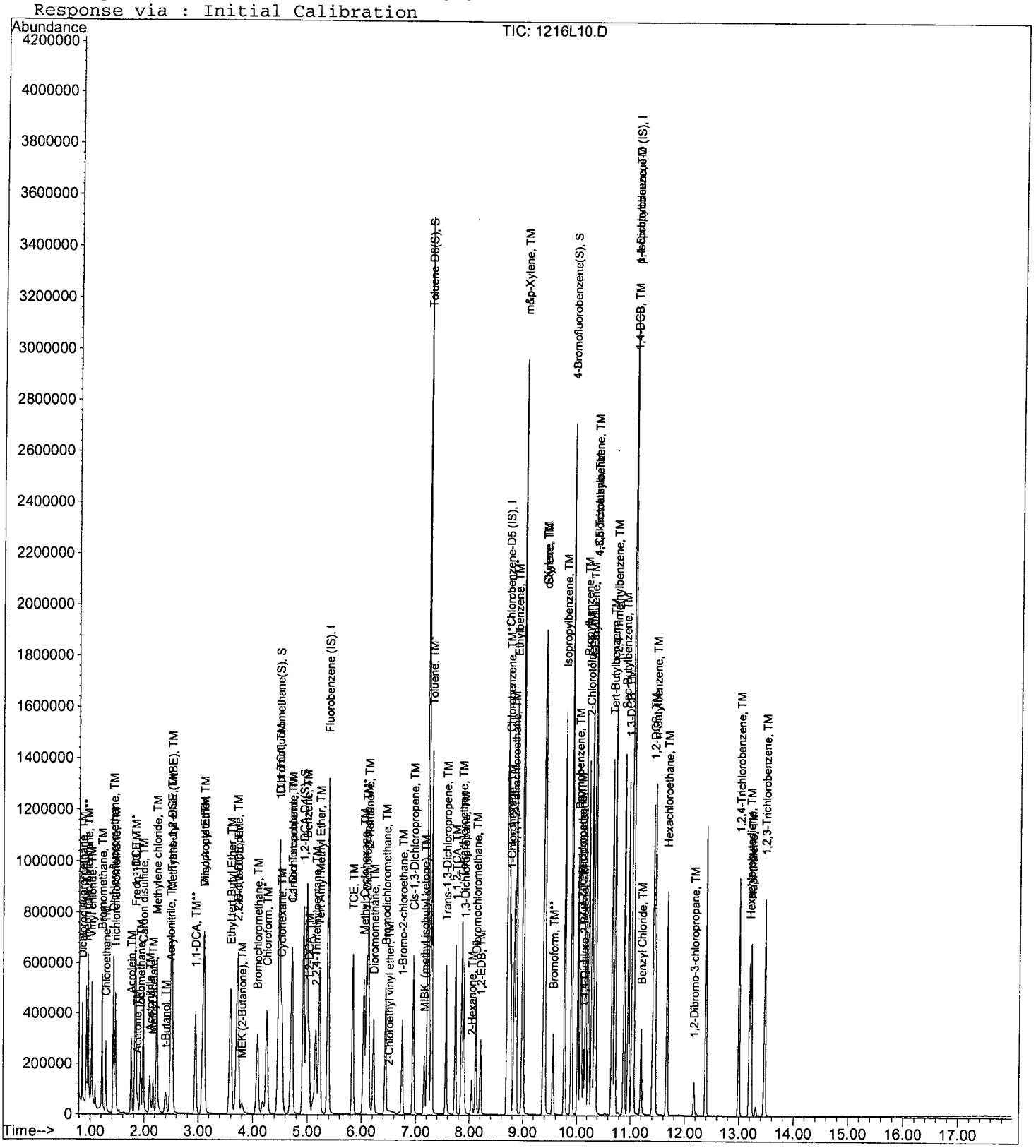
Quantitation Report

Data File : M:\LOKI\DATA\161216\1216L10.D
Acq On : 16 Dec 16 16:06
Sample : 20ug/L VOC STD 12/16/16AO
Misc : W IS&S 11/21/16, 11/14/16

Vial: 10
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:01 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



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Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L11.D
Acq On : 16 Dec 16 16:35
Sample : 40ug/L VOC STD 12/16/16AP
Misc : W IS&S 11/21/16, 11/14/16

Vial: 11
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:01 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	621760	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	556544	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	314176	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	601217	47.51513 ppb		0.00
Spiked Amount 25.000			Recovery = 190.060%			
37) 1,2-DCA-D4(S)	4.92	65	631892	46.44105 ppb		0.00
Spiked Amount 25.000			Recovery = 185.764%			
57) Toluene-D8(S)	7.22	98	2211650	51.16309 ppb		0.00
Spiked Amount 25.000			Recovery = 204.652%			
65) 4-Bromofluorobenzene(S)	9.89	95	781916	52.85154 ppb		0.00
Spiked Amount 25.000			Recovery = 211.408%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	428992	37.94216 ppb		100
3) Freon 114	0.93	85	292147	40.57556 ppb		96
4) Chloromethane	0.96	50	711951	36.87478 ppb		99
5) Vinyl chloride	1.02	62	547487	39.82664 ppb		98
6) Bromomethane	1.21	96	385472	41.38849 ppb		99
7) Chloroethane	1.28	64	289357	40.17708 ppb		98
8) Dichlorofluoromethane	1.42	67	883275	38.03155 ppb		99
9) Trichlorofluoromethane	1.46	101	546454	39.46500 ppb		98
10) Acrolein	1.75	56	214595	167.50501 ppb		97
11) Acetone	1.88	43	85091	38.54028 ppb		99
12) Freon-113	1.84	101	275004	38.32978 ppb		97
13) 1,1-DCE	1.83	96	253056	38.44397 ppb		98
14) t-Butanol	2.40	59	51656	164.20730 ppb		99
15) Acetonitrile	2.52	41	239937	172.33891 ppb	#	41
16) Methyl Acetate	2.17	43	287076	35.66016 ppb		99
17) Iodomethane	1.93	142	284352	44.17453 ppb		99
18) Acrylonitrile	2.47	52	103810	35.94471 ppb		96
19) Methylene chloride	2.23	84	514341	39.29358 ppb		100
20) Carbon disulfide	1.98	76	1115301	41.79936 ppb		100
21) Methyl t-butyl ether (MtBE	2.52	73	1092070	38.15149 ppb		99
22) Trans-1,2-DCE	2.49	96	441589	38.63123 ppb		97
23) Diisopropyl Ether	3.10	45	1497072	40.03965 ppb		99
24) 1,1-DCA	2.94	63	835092	38.03668 ppb		99
25) Vinyl Acetate	3.07	43	321490	36.74840 ppb		100
26) Ethyl tert Butyl Ether	3.59	59	1193039	40.11402 ppb		99
27) MEK (2-Butanone)	3.80	43	137084	39.58315 ppb		94
28) Cis-1,2-DCE	3.72	96	516030	38.78146 ppb		99
29) 2,2-Dichloropropane	3.70	77	195584	38.40380 ppb		98
30) Chloroform	4.25	83	850322	38.17541 ppb		100
31) Bromochloromethane	4.08	128	231906	37.10829 ppb		97
33) 1,1,1-TCA	4.47	97	638314	38.94636 ppb		96
34) Cyclohexane	4.53	41	272379	38.72666 ppb		95
35) 1,1-Dichloropropene	4.72	75	530851	39.85520 ppb		99
36) 2,2,4-Trimethylpentane	5.15	57	835778	41.31712 ppb	#	79
38) Carbon Tetrachloride	4.70	119	481789	39.35176 ppb		99
39) Tert Amyl Methyl Ether	5.22	73	1056338	40.77578 ppb		100
40) 1,2-DCA	5.03	62	604224	37.09254 ppb		99
41) Benzene	4.99	78	1848184	38.95660 ppb		98
42) TCE	5.84	95	231168	39.32549 ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L11.D
Acq On : 16 Dec 16 16:35
Sample : 40ug/L VOC STD 12/16/16AP
Misc : W IS&S 11/21/16, 11/14/16

Vial: 11
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:01 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	2-Pentanone	6.12	43	1025597	177.81808	ppb		100
44)	1,2-Dichloropropane	6.09	63	500265	36.62810	ppb		98
45)	Bromodichloromethane	6.44	83	623201	38.09046	ppb		98
46)	Methyl Cyclohexane	6.04	83	469561	40.59732	ppb		100
47)	Dibromomethane	6.22	93	272618	38.25982	ppb		93
48)	2-Chloroethyl vinyl ether	6.51	43	30825	37.86805	ppb		100
49)	MIBK (methyl isobutyl ket	7.16	43	303307	38.59491	ppb		99
50)	1-Bromo-2-chloroethane	6.75	63	341312	37.97621	ppb		98
51)	Cis-1,3-Dichloropropene	6.95	75	718539	39.87881	ppb		99
52)	Toluene	7.29	91	1986309	39.88826	ppb		99
53)	Trans-1,3-Dichloropropene	7.56	75	608333	40.47051	ppb		99
54)	1,1,2-TCA	7.74	83	323196	38.91971	ppb		99
55)	2-Hexanone	8.04	43	104506	37.02571	ppb		98
58)	1,2-EDB	8.20	107	348135	39.11697	ppb		98
59)	Tetrachloroethene	7.86	166	422169	38.90995	ppb		98
60)	1-Chlorohexane	8.76	91	471735	41.85803	ppb		95
61)	1,1,1,2-Tetrachloroethane	8.83	131	448595	40.04462	ppb		97
62)	m&p-Xylene	8.99	106	1624602	85.65817	ppb		99
63)	o-Xylene	9.38	106	793378	42.94664	ppb		93
64)	Styrene	9.40	104	931968	45.43275	ppb		100
66)	1,3-Dichloropropane	7.90	76	639736	38.29043	ppb		100
67)	Dibromochloromethane	8.12	129	442045	41.83770	ppb		100
68)	Chlorobenzene	8.73	112	1253019	39.07313	ppb		98
69)	Ethylbenzene	8.87	91	2153787	42.78670	ppb		100
70)	Bromoform	9.55	173	259901	40.20778	ppb		95
72)	Isopropylbenzene	9.76	105	1918182	42.04892	ppb		100
73)	1,1,2,2-Tetrachloroethane	10.07	83	442684	37.13742	ppb		99
74)	1,2,3-Trichloropropane	10.09	110	82560	37.75680	ppb		94
75)	t-1,4-Dichloro-2-Butene	10.13	53	106214	39.91760	ppb		95
76)	Bromobenzene	10.02	156	523573	39.72452	ppb		97
77)	n-Propylbenzene	10.17	91	2293174	41.68869	ppb		99
78)	4-Ethyltoluene	10.29	105	1958097	43.05977	ppb		99
79)	2-Chlorotoluene	10.23	91	1462049	39.77586	ppb		100
80)	1,3,5-Trimethylbenzene	10.36	105	1687434	42.78023	ppb		97
81)	4-Chlorotoluene	10.34	91	1685620	41.26671	ppb		99
82)	Tert-Butylbenzene	10.67	119	1336288	43.03108	ppb		98
83)	1,2,4-Trimethylbenzene	10.72	105	1732590	43.70948	ppb		100
84)	Sec-Butylbenzene	10.88	105	1904277	42.95630	ppb		98
85)	p-Isopropyltoluene	11.04	119	1636986	42.40930	ppb		100
86)	Benzyl Chloride	11.19	91	512684	43.92001	ppb		99
87)	1,3-DCB	10.96	146	1000807	39.14449	ppb		99
88)	1,4-DCB	11.05	146	1005268	37.95277	ppb		100
89)	n-Butylbenzene	11.44	91	1457842	42.85195	ppb		99
90)	1,2-DCB	11.41	146	937052	38.79109	ppb		98
91)	Hexachloroethane	11.66	117	343656	40.04657	ppb		95
92)	1,2-Dibromo-3-chloropropan	12.18	157	71807	39.52622	ppb	#	89
93)	1,2,4-Trichlorobenzene	13.00	180	594921	40.54327	ppb		98
94)	Hexachlorobutadiene	13.19	225	222228	37.67796	ppb		99
95)	Naphthalene	13.22	128	790080	48.16153	ppb		99
96)	1,2,3-Trichlorobenzene	13.46	180	371328	40.43700	ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

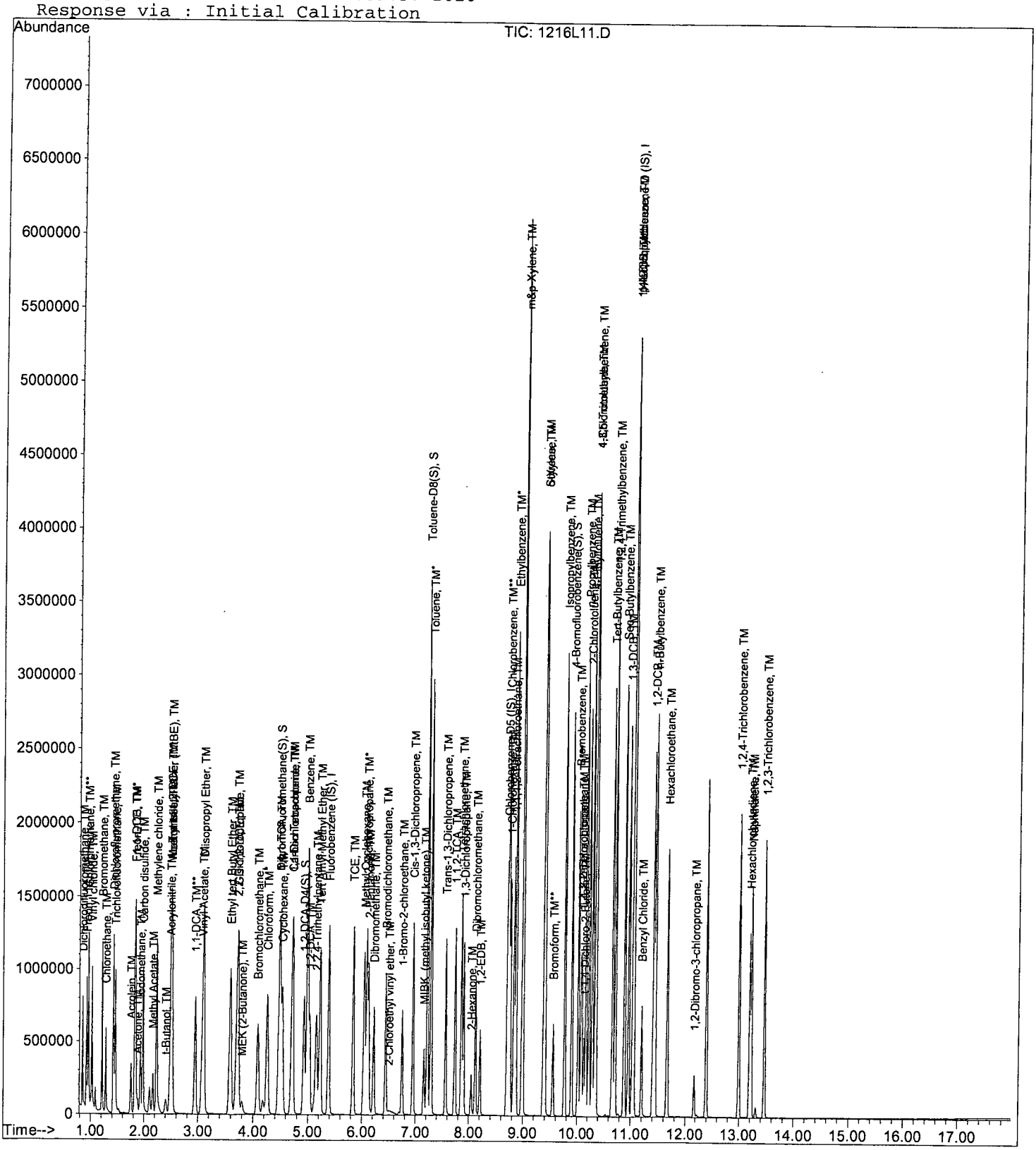
Data File : M:\LOKI\DATA\161216\1216L11.D
Acq On : 16 Dec 16 16:35
Sample : 40ug/L VOC STD 12/16/16AP
Misc : W IS&S 11/21/16, 11/14/16

Vial: 11
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:01 2016

Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



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Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L12.D Vial: 12
Acq On : 16 Dec 16 17:03 Operator: PM,DG,SV,CMM
Sample : 100ug/L VOC STD 12/16/16AQ Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 17 15:01 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	628736	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	582144	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	353536	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	1158715	90.55904 ppb		0.00
Spiked Amount 25.000			Recovery = 362.236%			
37) 1,2-DCA-D4(S)	4.92	65	1210321	87.96587 ppb		0.00
Spiked Amount 25.000			Recovery = 351.864%			
57) Toluene-D8(S)	7.22	98	4285282	94.77393 ppb		0.00
Spiked Amount 25.000			Recovery = 379.096%			
65) 4-Bromofluorobenzene(S)	9.89	95	1524009	98.48139 ppb		0.00
Spiked Amount 25.000			Recovery = 393.924%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	1063936	93.05566 ppb		99
3) Freon 114	0.93	85	732087	100.54958 ppb		96
4) Chloromethane	0.96	50	1793009	91.83670 ppb		99
5) Vinyl chloride	1.02	62	1398477	100.60269 ppb		100
6) Bromomethane	1.21	96	950208	100.89274 ppb		99
7) Chloroethane	1.28	64	519086	71.27514 ppb		96
8) Dichlorofluoromethane	1.42	67	2230190	94.96080 ppb		99
9) Trichlorofluoromethane	1.45	101	1447596	103.38568 ppb		98
10) Acrolein	1.76	56	257086	198.44542 ppb	#	99
11) Acetone	1.88	43	216391	100.54736 ppb		99
12) Freon-113	1.84	101	705826	97.28578 ppb		97
13) 1,1-DCE	1.83	96	597056	89.69765 ppb		96
14) t-Butanol	2.44	59	53608	168.52167 ppb		95
15) Acetonitrile	2.52	41	595682	423.11171 ppb	#	41
16) Methyl Acetate	2.17	43	722177	88.71244 ppb		100
17) Iodomethane	1.93	142	675776	103.81805 ppb		99
18) Acrylonitrile	2.47	52	270439	92.60184 ppb		98
19) Methylene chloride	2.23	84	1285220	100.47059 ppb		99
20) Carbon disulfide	1.98	76	2837021	105.14643 ppb		100
21) Methyl t-butyl ether (MtBE	2.52	73	2847021	98.35720 ppb		97
22) Trans-1,2-DCE	2.49	96	1102885	95.41244 ppb		99
23) Diisopropyl Ether	3.10	45	3820367	101.04320 ppb		100
24) 1,1-DCA	2.94	63	2093265	94.28594 ppb		99
25) Vinyl Acetate	3.07	43	829056	93.71504 ppb		97
26) Ethyl tert Butyl Ether	3.59	59	3109557	103.39382 ppb		97
27) MEK (2-Butanone)	3.80	43	350373	100.30657 ppb		92
28) Cis-1,2-DCE	3.72	96	1307544	97.17622 ppb		97
29) 2,2-Dichloropropane	3.70	77	489920	95.13066 ppb		100
30) Chloroform	4.25	83	2121942	94.20811 ppb		100
31) Bromochloromethane	4.08	128	576354	91.20164 ppb		95
33) 1,1,1-TCA	4.47	97	1596541	96.33121 ppb		98
34) Cyclohexane	4.53	41	695308	97.76154 ppb		93
35) 1,1-Dichloropropene	4.72	75	1359475	100.93412 ppb		100
36) 2,2,4-Trimethylpentane	5.15	57	2214271	108.24911 ppb		89
38) Carbon Tetrachloride	4.70	119	1215184	98.15304 ppb		98
39) Tert Amyl Methyl Ether	5.22	73	2745768	104.81360 ppb		97
40) 1,2-DCA	5.03	62	1505281	91.38199 ppb		100
41) Benzene	4.99	78	4611781	96.13000 ppb		98
42) TCE	5.84	95	589376	99.15013 ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L12.D
Acq On : 16 Dec 16 17:03
Sample : 100ug/L VOC STD 12/16/16AQ
Misc : W IS&S 11/21/16, 11/14/16

Vial: 12
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:01 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
43) 2-Pentanone	6.12	43	1196523	205.15149 ppb	99
44) 1,2-Dichloropropane	6.09	63	1266197	91.67904 ppb	98
45) Bromodichloromethane	6.44	83	1597635	96.56509 ppb	98
46) Methyl Cyclohexane	6.04	83	1251537	107.00485 ppb	100
47) Dibromomethane	6.22	93	668166	92.73148 ppb	96
48) 2-Chloroethyl vinyl ether	6.50	43	82106	100.98949 ppb	100
49) MIBK (methyl isobutyl ket	7.16	43	787030	100.48644 ppb	99
50) 1-Bromo-2-chloroethane	6.75	63	851904	93.73574 ppb	98
51) Cis-1,3-Dichloropropene	6.95	75	1884021	103.40273 ppb	97
52) Toluene	7.29	91	4981677	98.93007 ppb	98
53) Trans-1,3-Dichloropropene	7.56	75	1600127	105.27038 ppb	99
54) 1,1,2-TCA	7.74	83	825629	98.32026 ppb	99
55) 2-Hexanone	8.04	43	296642	101.32261 ppb	100
58) 1,2-EDB	8.20	107	906853	97.41449 ppb	98
59) Tetrachloroethene	7.86	166	1064668	93.81182 ppb	96
60) 1-Chlorohexane	8.76	91	1243909	105.52088 ppb	93
61) 1,1,1,2-Tetrachloroethane	8.83	131	1142269	97.48262 ppb	98
62) m&p-Xylene	8.99	106	4132625	208.31326 ppb	100
63) o-Xylene	9.38	106	2066550	106.94588 ppb	92
64) Styrene	9.40	104	2470400	115.13421 ppb	99
66) 1,3-Dichloropropane	7.90	76	1620136	92.70647 ppb	100
67) Dibromochloromethane	8.12	129	1139060	103.06639 ppb	98
68) Chlorobenzene	8.73	112	3159584	94.19319 ppb	98
69) Ethylbenzene	8.87	91	5443784	103.38939 ppb	100
70) Bromoform	9.55	173	684390	101.22198 ppb	97
72) Isopropylbenzene	9.76	105	4978407	96.98281 ppb	99
73) 1,1,2,2-Tetrachloroethane	10.07	83	1178016	87.82303 ppb	97
74) 1,2,3-Trichloropropane	10.09	110	216064	87.81067 ppb	100
75) t-1,4-Dichloro-2-Butene	10.13	53	293744	98.10497 ppb	89
76) Bromobenzene	10.02	156	1343998	90.61902 ppb	98
77) n-Propylbenzene	10.17	91	5853659	94.56883 ppb	99
78) 4-Ethyltoluene	10.29	105	5043710	98.56598 ppb	99
79) 2-Chlorotoluene	10.23	91	3704427	89.56081 ppb	99
80) 1,3,5-Trimethylbenzene	10.36	105	4296287	96.79412 ppb	97
81) 4-Chlorotoluene	10.34	91	4327831	94.15639 ppb	100
82) Tert-Butylbenzene	10.66	119	3476968	99.49981 ppb	99
83) 1,2,4-Trimethylbenzene	10.72	105	4499424	100.87328 ppb	99
84) Sec-Butylbenzene	10.89	105	4999886	100.22966 ppb	98
85) p-Isopropyltoluene	11.04	119	4353526	100.22974 ppb	99
86) Benzyl Chloride	11.20	91	1575773	119.96255 ppb	99
87) 1,3-DCB	10.96	146	2619776	91.05919 ppb	99
88) 1,4-DCB	11.05	146	2684739	90.07475 ppb	99
89) n-Butylbenzene	11.44	91	3943454	103.00926 ppb	99
90) 1,2-DCB	11.41	146	2543180	93.55881 ppb	99
91) Hexachloroethane	11.66	117	932395	96.55632 ppb	97
92) 1,2-Dibromo-3-chloropropan	12.18	157	199072	97.37960 ppb	92
93) 1,2,4-Trichlorobenzene	13.00	180	1617357	97.95008 ppb	99
94) Hexachlorobutadiene	13.19	225	593899	89.48300 ppb	98
95) Naphthalene	13.22	128	2039296	110.47115 ppb	100
96) 1,2,3-Trichlorobenzene	13.46	180	943360	91.29312 ppb	97

(#) = qualifier out of range (m) = manual integration

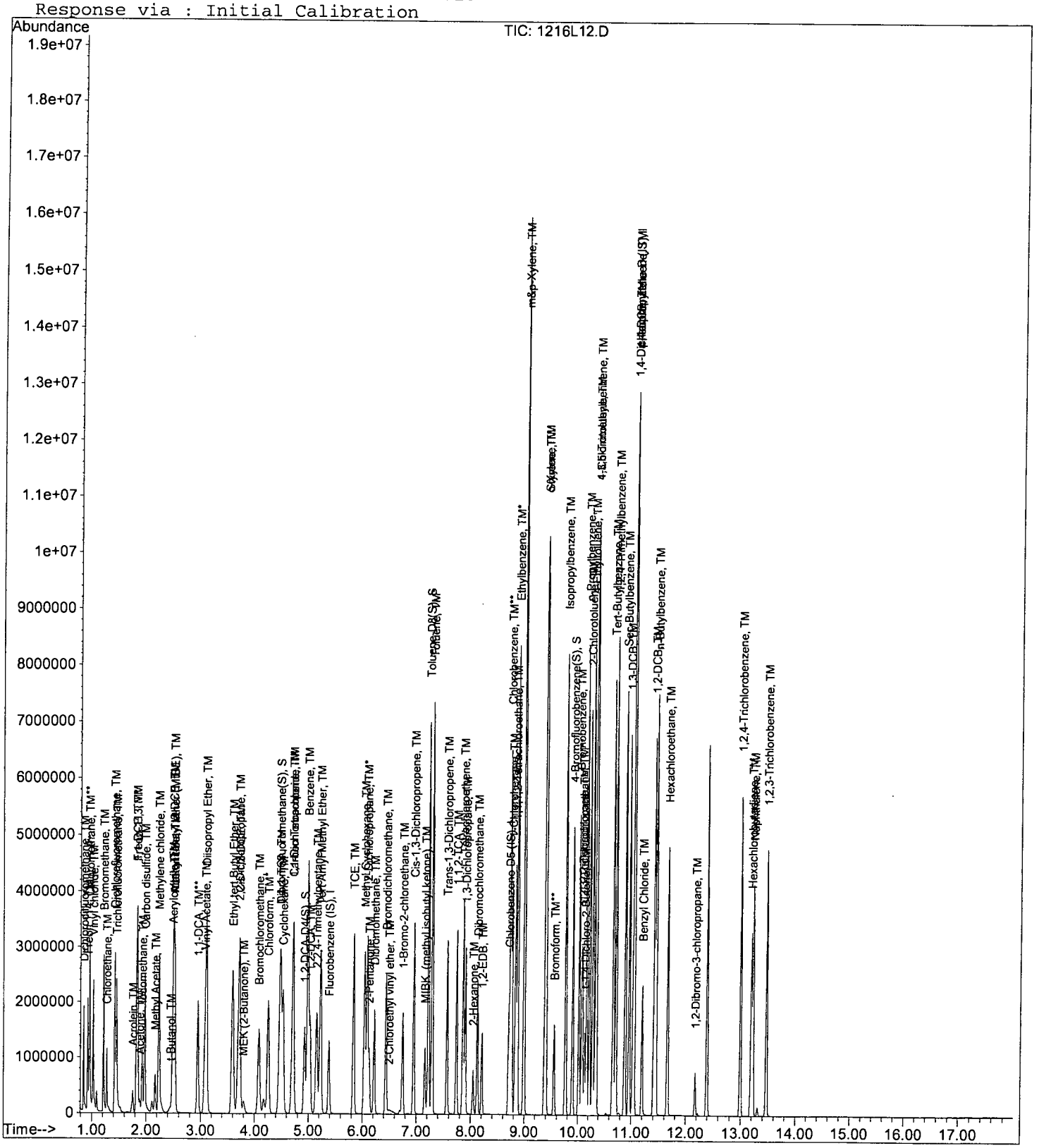
Quantitation Report

Data File : M:\LOKI\DATA\161216\1216L12.D
Acq On : 16 Dec 16 17:03
Sample : 100ug/L VOC STD 12/16/16AQ
Misc : W IS&S 11/21/16, 11/14/16

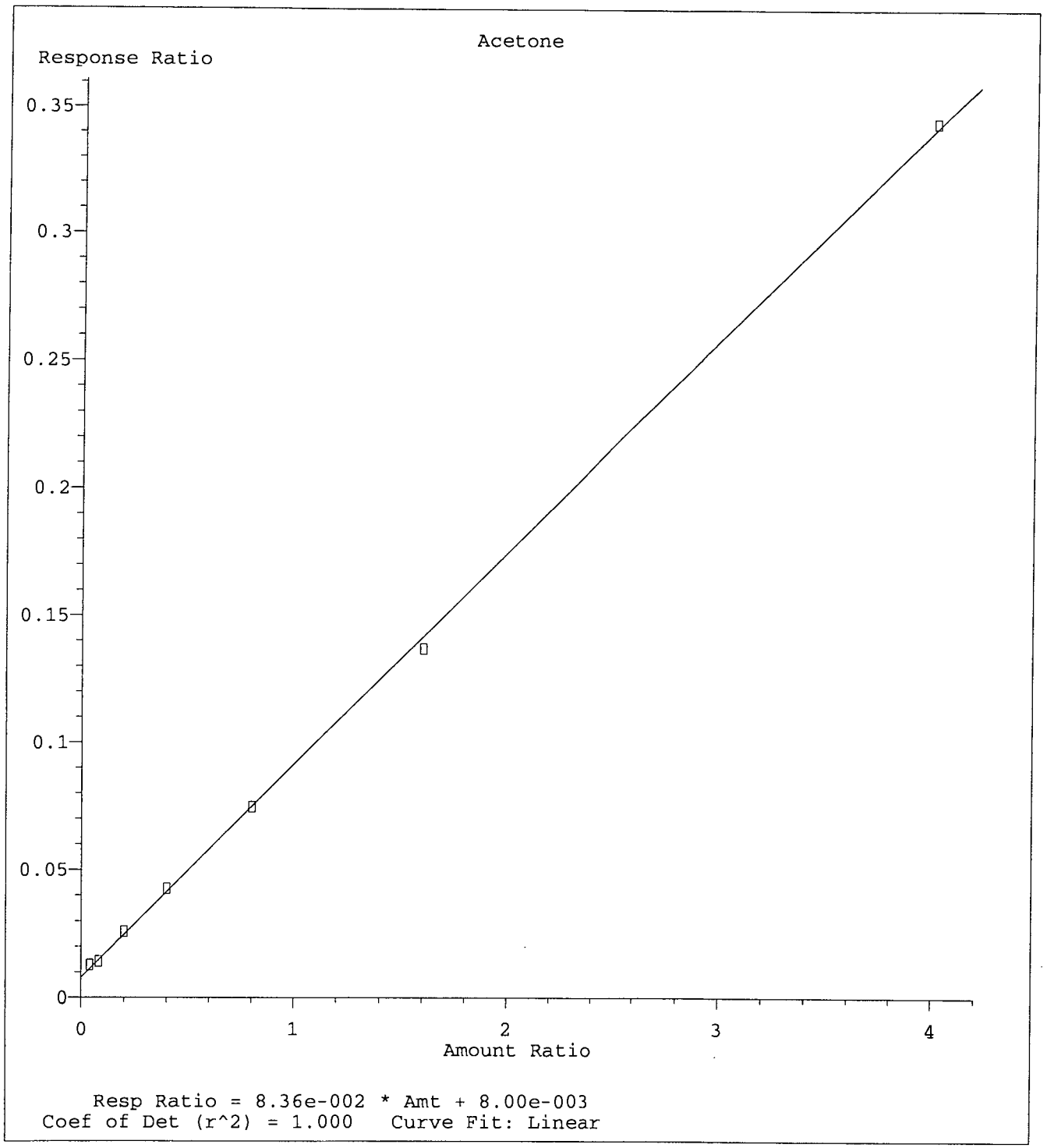
Vial: 12
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:01 2016 Quant Results File: LALLW.RES

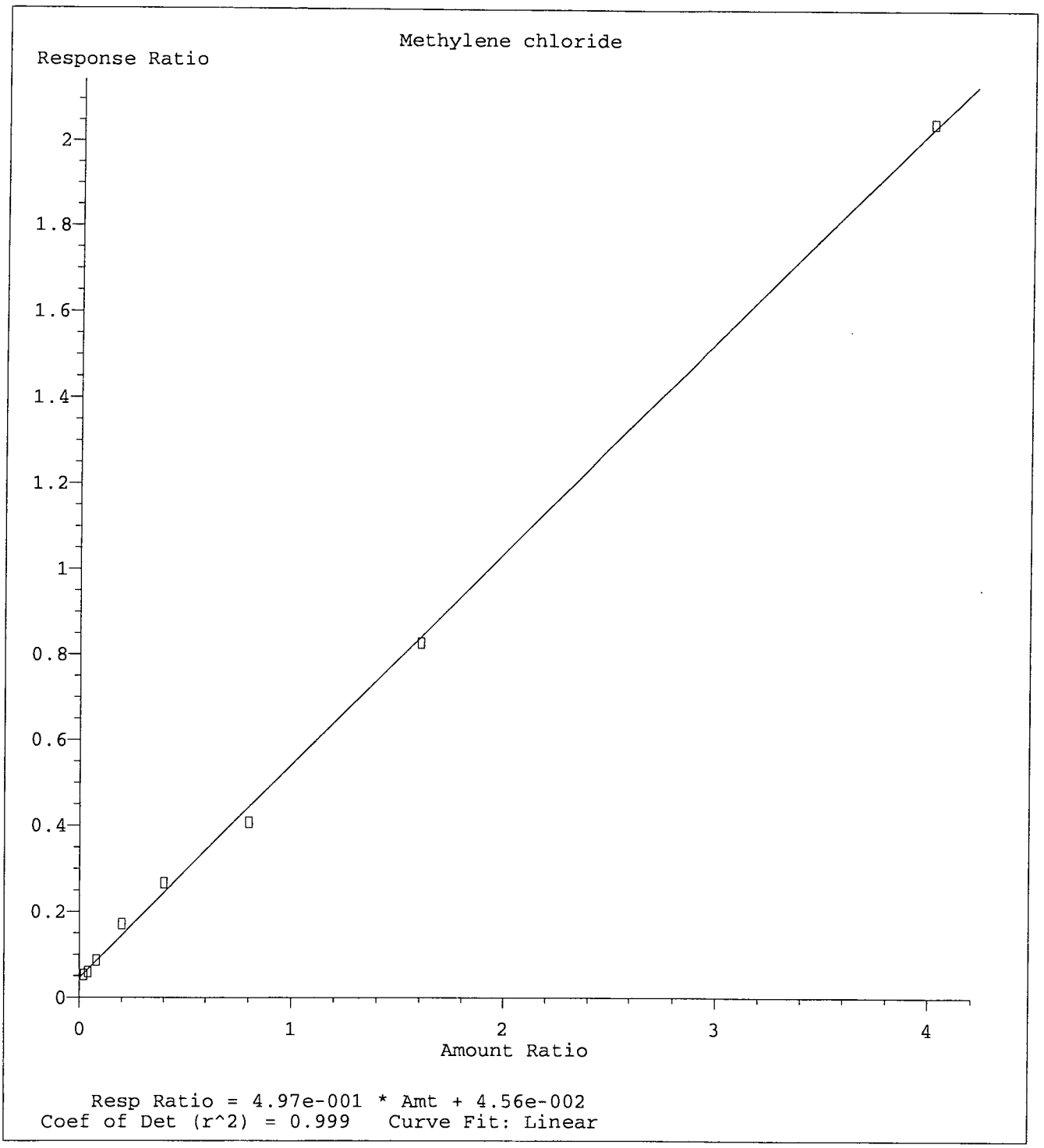
Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



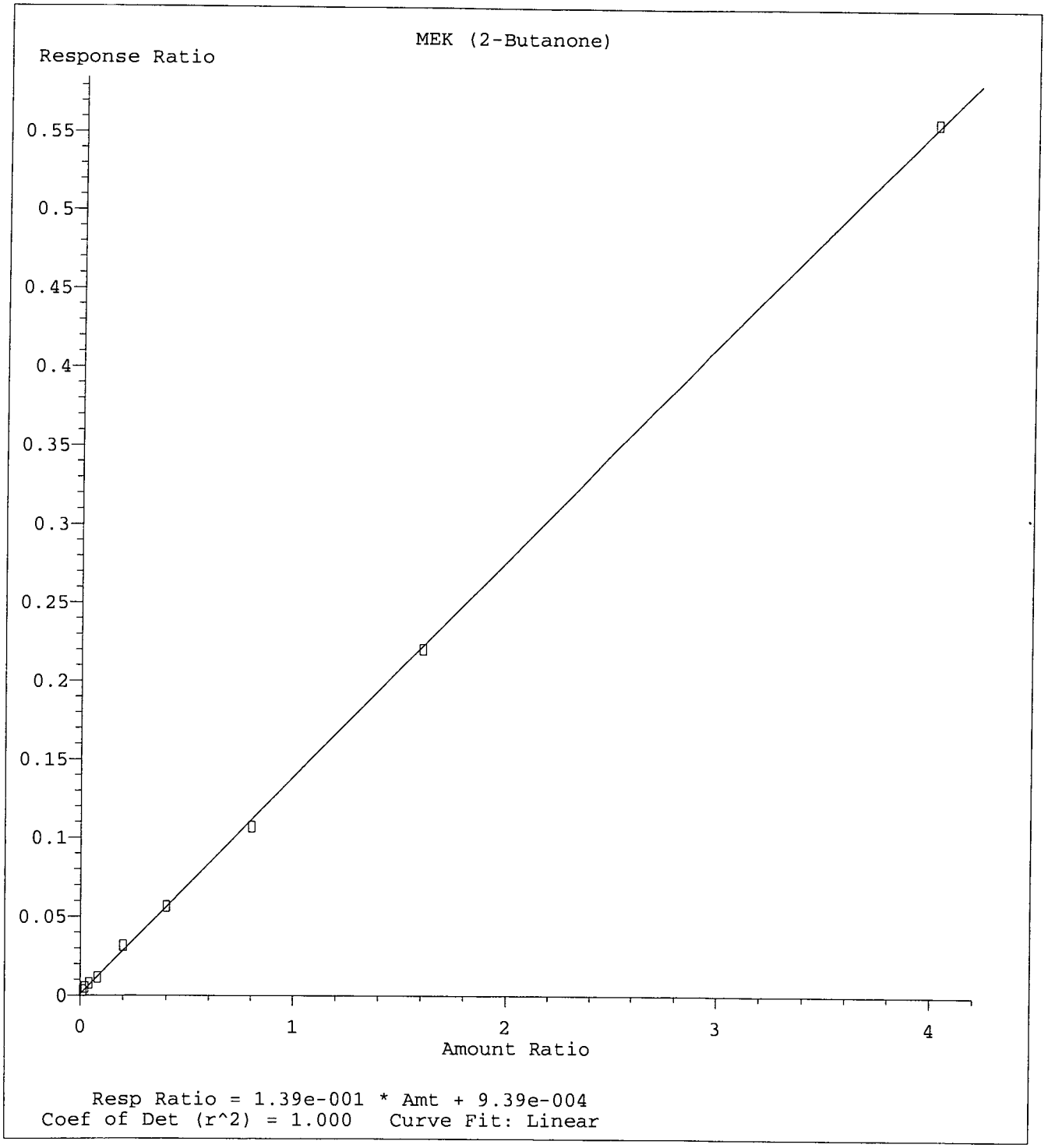
611



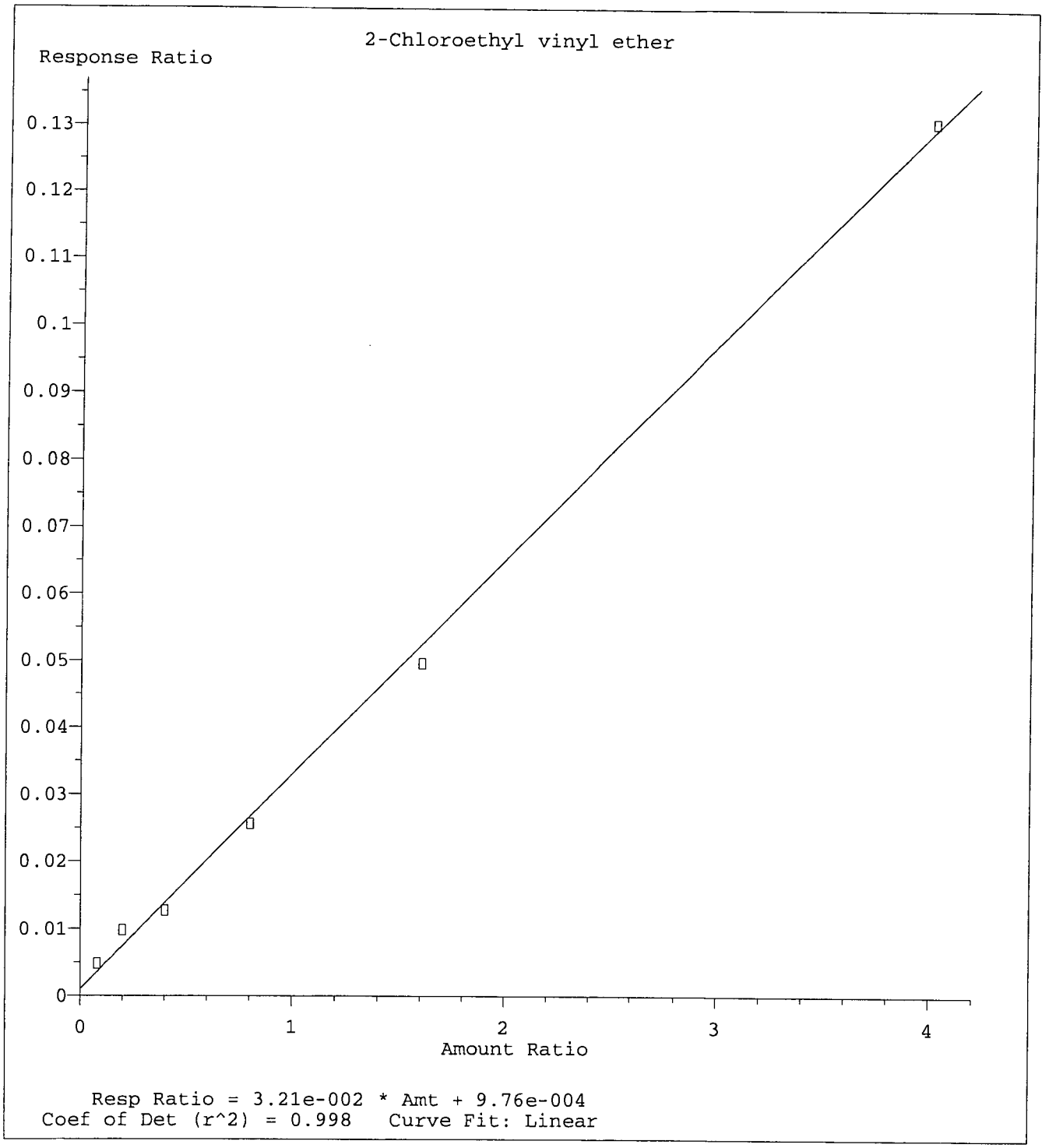
Method Name: M:\LOKI\DATA\161216\LALLW.M
Calibration Table Last Updated: Sat Dec 17 14:59:37 2016



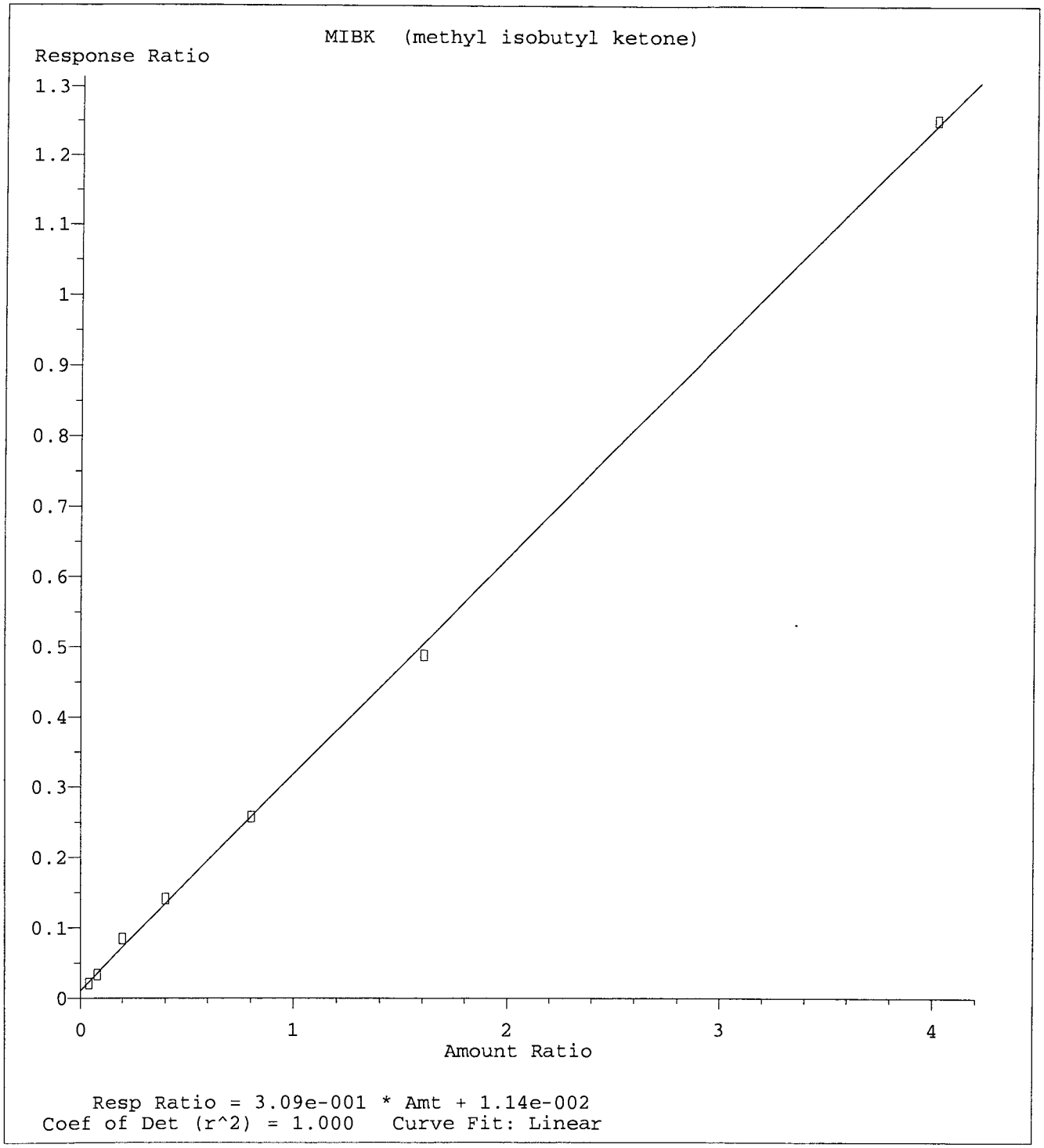
Method Name: M:\LOKI\DATA\161216\LALLW.M
Calibration Table Last Updated: Sat Dec 17 14:59:37 2016



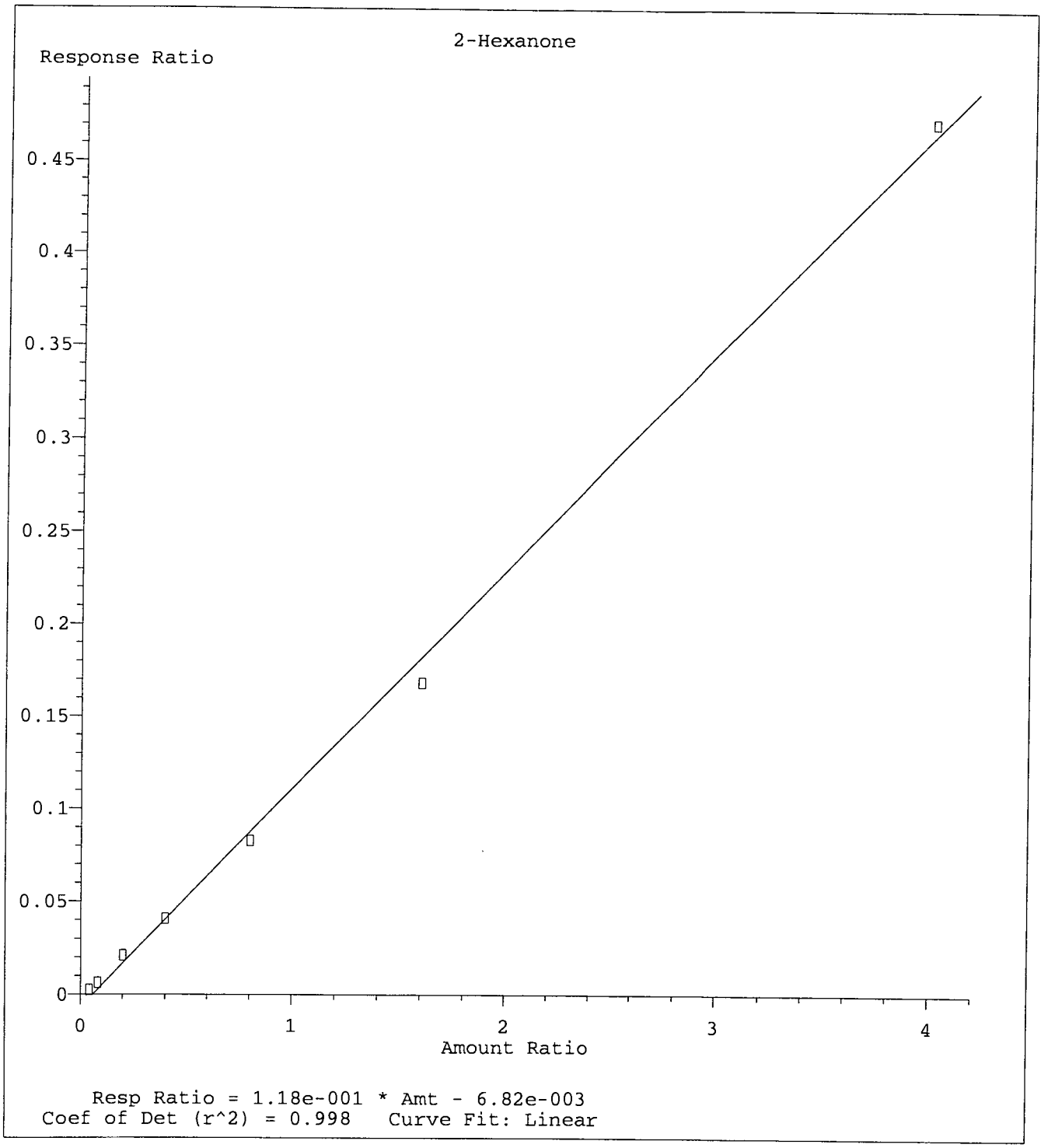
Method Name: M:\LOKI\DATA\161216\LALLW.M
Calibration Table Last Updated: Sat Dec 17 14:59:37 2016



Method Name: M:\LOKI\DATA\161216\LALLW.M
Calibration Table Last Updated: Sat Dec 17 14:59:37 2016



Method Name: M:\LOKI\DATA\161216\LALLW.M
Calibration Table Last Updated: Sat Dec 17 14:59:37 2016



Method Name: M:\LOKI\DATA\161216\LALLW.M
Calibration Table Last Updated: Sat Dec 17 14:59:37 2016

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/16/16
Instrument: Loki
Initial Cal. Date: 12/16/16
Data File: 1216L17.D

		Compound	MEAN	CCRF	%D		%Drift	
1	TM	Dichlorodifluoromethane	0.4546	0.4174	8.2	TM		
2	TM	Freon 114	0.2895	0.2715	6.2	TM		
3	TM**	Chloromethane	0.7763	0.6579	15	TM**		
4	TM*	Vinyl chloride	0.5527	0.4975	10.0	TM*		
5	TM	Bromomethane	0.3745	0.3175	15	TM		
6	TM	Chloroethane	0.2896	0.2718	6.2	TM		
7	TM	Dichlorofluoromethane	0.9338	0.8116	13	TM		
8	TM	Trichlorofluoromethane	0.5567	0.5749	3.3	TM		
9	TM	Acrolein	0.0515	0.0155	70	TM		nt
10	TML	Acetone	0.1428	0.0879	38	TML	19	
11	TM	Freon-113	0.2885	0.2626	9.0	TM		
12	TM*	1,1-DCE	0.2647	0.2719	2.7	TM*		
13	TM	t-Butanol	0.0126	0.0114	9.9	TM		
14	TM	Acetonitrile	0.0560	0.0396	29	TM		nt
15	TM	Methyl Acetate	0.3237	0.2601	20	TM		
16	TM	Iodomethane	0.2588	0.1701	34	TM		nt
17	TM	Acrylonitrile	0.1161	0.0906	22	TM		nt
18	TML	Methylene chloride	1.033	0.5421	48	TML	14	
19	TM	Carbon disulfide	1.073	0.9025	16	TM		
20	TM	Methyl t-butyl ether (MtBE)	1.151	1.004	13	TM		
21	TM	Trans-1,2-DCE	0.4596	0.4655	1.3	TM		
22	TM	Diisopropyl Ether	1.503	1.305	13	TM		
23	TM**	1,1-DCA	0.8828	0.8545	3.2	TM**		
24	TM	Vinyl Acetate	0.3518	0.3300	6.2	TM		
25	TM	Ethyl tert Butyl Ether	1.196	1.074	10	TM		
26	TML	MEK (2-Butanone)	0.1716	0.1178	31	TML	17	
27	TM	Cis-1,2-DCE	0.5350	0.5475	2.3	TM		
28	TM	2,2-Dichloropropane	0.2048	0.1988	2.9	TM		
29	TM*	Chloroform	0.8956	0.8451	5.6	TM*		
30	TM	Bromochloromethane	0.2513	0.2436	3.1	TM		
31	TM	1,1,1-TCA	0.6590	0.6278	4.7	TM		
32	TM	Cyclohexane	0.2828	0.2459	13	TM		
33	TM	1,1-Dichloropropene	0.5356	0.5359	0.06	TM		
34	TM	2,2,4-Trimethylpentane	0.8134	0.7420	8.8	TM		
35	TM	Carbon Tetrachloride	0.4923	0.4879	0.89	TM		
36	TM	Tert Amyl Methyl Ether	1.042	0.9339	10	TM		
37	TM	1,2-DCA	0.6550	0.6164	5.9	TM		
38	TM	Benzene	1.908	1.877	1.6	TM		
39	TM	TCE	0.2364	0.2385	0.89	TM		
40	TM	2-Pentanone	0.2319	0.2188	5.7	TM		
		Average			13.0			

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/16/16
Instrument: Loki
Cal. Date: 12/16/16
Data File: 1216L17.D

		Compound	MEAN	CCRF	%D		%Drift	
41	TM*	1,2-Dichloropropane	0.5492	0.5068	7.7	TM*		
42	TM	Bromodichloromethane	0.6579	0.6142	6.6	TM		
43	TM	Methyl Cyclohexane	0.4651	0.4098	12	TM		
44	TM	Dibromomethane	0.2865	0.2799	2.3	TM		
45	TML	2-Chloroethyl vinyl ether	0.0394	0.0235	40	TML	34	nt
46	TML	MIBK (methyl isobutyl ketone)	0.3799	0.2834	25	TML	17	
47	TM	1-Bromo-2-chloroethane	0.3614	0.3018	16	TM		
48	TM	Cis-1,3-Dichloropropene	0.7245	0.7079	2.3	TM		
49	TM*	Toluene	2.002	2.019	0.86	TM*		
50	TM	Trans-1,3-Dichloropropene	0.6044	0.5759	4.7	TM		
51	TM	1,1,2-TCA	0.3339	0.3259	2.4	TM		
52	TML	2-Hexanone	0.0962	0.0814	15	TML	17	
53	TM	1,2-EDB	0.3998	0.3947	1.3	TM		
54	TM	Tetrachloroethene	0.4874	0.4826	0.99	TM		
55	TM	1-Chlorohexane	0.5062	0.4455	12	TM		
56	TM	1,1,1,2-Tetrachloroethane	0.5032	0.4979	1.1	TM		
57	TM	m&p-Xylene	0.8520	0.8867	4.1	TM		
58	TM	o-Xylene	0.8298	0.8500	2.4	TM		
59	TM	Styrene	0.9215	0.9689	5.1	TM		
60	TM	1,3-Dichloropropane	0.7505	0.7410	1.3	TM		
61	TM	Dibromochloromethane	0.4746	0.4577	3.6	TM		
62	TM**	Chlorobenzene	1.441	1.408	2.3	TM**		
63	TM*	Ethylbenzene	2.261	2.296	1.6	TM*		
64	TM**	Bromoform	0.2904	0.2568	12	TM**		
65	TM	Isopropylbenzene	3.630	3.724	2.6	TM		
66	TM**	1,1,2,2-Tetrachloroethane	0.9485	0.9299	2.0	TM**		
67	TM	1,2,3-Trichloropropane	0.1740	0.1666	4.3	TM		
68	TM	t-1,4-Dichloro-2-Butene	0.2117	0.1514	28	TM		nt
69	TM	Bromobenzene	1.049	1.093	4.2	TM		
70	TM	n-Propylbenzene	4.377	4.537	3.6	TM		
71	TM	4-Ethyltoluene	3.619	3.503	3.2	TM		
72	TM	2-Chlorotoluene	2.925	2.932	0.25	TM		
73	TM	1,3,5-Trimethylbenzene	3.139	3.373	7.5	TM		
74	TM	4-Chlorotoluene	3.250	3.340	2.8	TM		
75	TM	Tert-Butylbenzene	2.471	2.555	3.4	TM		
76	TM	1,2,4-Trimethylbenzene	3.154	3.396	7.7	TM		
77	TM	Sec-Butylbenzene	3.528	3.736	5.9	TM		
78	TM	p-Isopropyltoluene	3.071	3.140	2.2	TM		
79	TM	Benzyl Chloride	0.9289	0.7047	24	TM		nt
80	TM	1,3-DCB	2.034	2.009	1.3	TM		
		Average			7.1			

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/16/16
Instrument: Loki
Cal. Date: 12/16/16
Data File: 1216L17.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	1,4-DCB	2.108	2.050	2.8	TM	
82	TM	n-Butylbenzene	2.707	2.728	0.76	TM	
83	TM	1,2-DCB	1.922	1.840	4.3	TM	
84	TM	Hexachloroethane	0.6828	0.6049	11	TM	
85	TM	1,2-Dibromo-3-chloropropane	0.1446	0.1370	5.3	TM	
86	TM	1,2,4-Trichlorobenzene	1.168	1.126	3.6	TM	
87	TM	Hexachlorobutadiene	0.4693	0.4492	4.3	TM	
88	TM	Naphthalene	1.305	1.253	4.0	TM	
89	TM	1,2,3-Trichlorobenzene	0.7307	0.6504	11	TM	
90							
91							
92							
93							
94							
95							
96							
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			5.2		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L17.D
Acq On : 16 Dec 16 19:23
Sample : (SS)10ug/L VOC STD 12/16/16
Misc : W IS&S 11/21/16, 11/14/16

Vial: 17
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:01 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	601856	25.00000 ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	542656	25.00000 ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	297856	25.00000 ppb	0.00
System Monitoring Compounds					
32) Dibromofluoromethane(S)	4.48	111	302342	24.68479 ppb	0.00
Spiked Amount 25.000			Recovery = 98.740%		
37) 1,2-DCA-D4(S)	4.92	65	330222	25.07237 ppb	0.00
Spiked Amount 25.000			Recovery = 100.288%		
57) Toluene-D8(S)	7.22	98	1062661	25.21216 ppb	0.00
Spiked Amount 25.000			Recovery = 100.848%		
65) 4-Bromofluorobenzene(S)	9.89	95	376737	26.11624 ppb	0.00
Spiked Amount 25.000			Recovery = 104.464%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.85	85	100480	9.18084 ppb	96
3) Freon 114	0.93	85	65368	9.37904 ppb	99
4) Chloromethane	0.96	50	158383	8.47458 ppb	98
5) Vinyl chloride	1.02	62	119767	9.00051 ppb	98
6) Bromomethane	1.22	96	76440	8.47886 ppb	98
7) Chloroethane	1.29	64	65426	9.38480 ppb	99
8) Dichlorofluoromethane	1.43	67	195389	8.69117 ppb	99
9) Trichlorofluoromethane	1.46	101	138395	10.32545 ppb	97
10) Acrolein	1.75	56	46755	37.70218 ppb	99
11) Acetone	1.88	43	21155	8.12033 ppb	99
12) Freon-113	1.84	101	63207	9.10107 ppb	96
13) 1,1-DCE	1.83	96	65448	10.27160 ppb	96
14) t-Butanol	2.39	59	34288	112.60146 ppb	93
15) Acetonitrile	2.10	41	119044	88.33317 ppb	99
16) Methyl Acetate	2.17	43	62605	8.03389 ppb	99
17) Iodomethane	1.93	142	40952	6.57235 ppb	99
18) Acrylonitrile	2.47	52	21820	7.80514 ppb	92
19) Methylene chloride	2.23	84	130505	8.60720 ppb	96
20) Carbon disulfide	1.98	76	217261	8.41181 ppb	99
21) Methyl t-butyl ether (MtBE	2.52	73	241755	8.72502 ppb	99
22) Trans-1,2-DCE	2.50	96	112072	10.12856 ppb	95
23) Diisopropyl Ether	3.10	45	314183	8.68081 ppb	97
24) 1,1-DCA	2.95	63	205720	9.67999 ppb	99
25) Vinyl Acetate	3.07	43	79448	9.38176 ppb	100
26) Ethyl tert Butyl Ether	3.59	59	258468	8.97798 ppb	98
27) MEK (2-Butanone)	3.81	43	28349	8.32343 ppb	93
28) Cis-1,2-DCE	3.72	96	131797	10.23258 ppb	99
29) 2,2-Dichloropropane	3.70	77	47848	9.70588 ppb	97
30) Chloroform	4.25	83	203440	9.43554 ppb	100
31) Bromochloromethane	4.08	128	58634	9.69256 ppb	87
33) 1,1,1-TCA	4.47	97	151139	9.52663 ppb	97
34) Cyclohexane	4.53	41	59187	8.69346 ppb	99
35) 1,1-Dichloropropene	4.72	75	129013	10.00636 ppb	98
36) 2,2,4-Trimethylpentane	5.15	57	178619	9.12214 ppb	97
38) Carbon Tetrachloride	4.70	119	117456	9.91089 ppb	98
39) Tert Amyl Methyl Ether	5.22	73	224832	8.96577 ppb	95
40) 1,2-DCA	5.03	62	148399	9.41130 ppb	95
41) Benzene	4.99	78	451992	9.84230 ppb	98
42) TCE	5.84	95	57408	10.08902 ppb	93

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1216L17.D
Acq On : 16 Dec 16 19:23
Sample : (SS)10ug/L VOC STD 12/16/16
Misc : W IS&S 11/21/16, 11/14/16

Vial: 17
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:01 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
43) 2-Pentanone	6.12	43	658329	117.91589 ppb	100
44) 1,2-Dichloropropane	6.09	63	122016	9.22914 ppb	99
45) Bromodichloromethane	6.44	83	147853	9.33573 ppb	99
46) Methyl Cyclohexane	6.04	83	98653	8.81142 ppb	100
47) Dibromomethane	6.22	93	67382	9.76928 ppb	97
48) 2-Chloroethyl vinyl ether	6.49	43	5654	6.55920 ppb	100
49) MIBK (methyl isobutyl ket	7.16	43	68216	8.25640 ppb	97
50) 1-Bromo-2-chloroethane	6.75	63	72656	8.35145 ppb	95
51) Cis-1,3-Dichloropropene	6.95	75	170424	9.77131 ppb	97
52) Toluene	7.29	91	486173	10.08601 ppb	100
53) Trans-1,3-Dichloropropene	7.56	75	138643	9.52852 ppb	98
54) 1,1,2-TCA	7.74	83	78460	9.76073 ppb	99
55) 2-Hexanone	8.04	43	19600	8.33803 ppb	94
58) 1,2-EDB	8.20	107	85684	9.87398 ppb	94
59) Tetrachloroethene	7.86	166	104748	9.90136 ppb	95
60) 1-Chlorohexane	8.76	91	96710	8.80090 ppb	99
61) 1,1,1,2-Tetrachloroethane	8.83	131	108076	9.89450 ppb	96
62) m&p-Xylene	8.99	106	384953	20.81634 ppb	99
63) o-Xylene	9.38	106	184495	10.24256 ppb	97
64) Styrene	9.40	104	210304	10.51454 ppb	100
66) 1,3-Dichloropropane	7.90	76	160843	9.87340 ppb	99
67) Dibromochloromethane	8.12	129	99347	9.64342 ppb	93
68) Chlorobenzene	8.73	112	305615	9.77395 ppb	98
69) Ethylbenzene	8.87	91	498455	10.15563 ppb	99
70) Bromoform	9.55	173	55750	8.84549 ppb	97
72) Isopropylbenzene	9.76	105	443714	10.25970 ppb	100
73) 1,1,2,2-Tetrachloroethane	10.07	83	110792	9.80377 ppb	99
74) 1,2,3-Trichloropropane	10.09	110	19848	9.57434 ppb	92
75) t-1,4-Dichloro-2-Butene	10.12	53	18038	7.15052 ppb	93
76) Bromobenzene	10.01	156	130235	10.42259 ppb	99
77) n-Propylbenzene	10.17	91	540496	10.36431 ppb	98
78) 4-Ethyltoluene	10.29	105	417366	9.68102 ppb	100
79) 2-Chlorotoluene	10.23	91	349349	10.02499 ppb	100
80) 1,3,5-Trimethylbenzene	10.36	105	401837	10.74566 ppb	100
81) 4-Chlorotoluene	10.34	91	397973	10.27686 ppb	98
82) Tert-Butylbenzene	10.66	119	304406	10.33956 ppb	99
83) 1,2,4-Trimethylbenzene	10.72	105	404567	10.76557 ppb	99
84) Sec-Butylbenzene	10.88	105	445096	10.59052 ppb	97
85) p-Isopropyltoluene	11.04	119	374051	10.22147 ppb	100
86) Benzyl Chloride	11.19	91	83960	7.58668 ppb	99
87) 1,3-DCB	10.96	146	239333	9.87392 ppb	98
88) 1,4-DCB	11.05	146	244189	9.72421 ppb	99
89) n-Butylbenzene	11.44	91	324980	10.07589 ppb	97
90) 1,2-DCB	11.41	146	219240	9.57315 ppb	98
91) Hexachloroethane	11.66	117	72064	8.85781 ppb	96
92) 1,2-Dibromo-3-chloropropan	12.18	157	16319	9.47499 ppb	93
93) 1,2,4-Trichlorobenzene	13.00	180	134110	9.64023 ppb	98
94) Hexachlorobutadiene	13.19	225	53518	9.57095 ppb	100
95) Naphthalene	13.22	128	149248	9.59631 ppb	100
96) 1,2,3-Trichlorobenzene	13.46	180	77496	8.90158 ppb	97

(#) = qualifier out of range (m) = manual integration

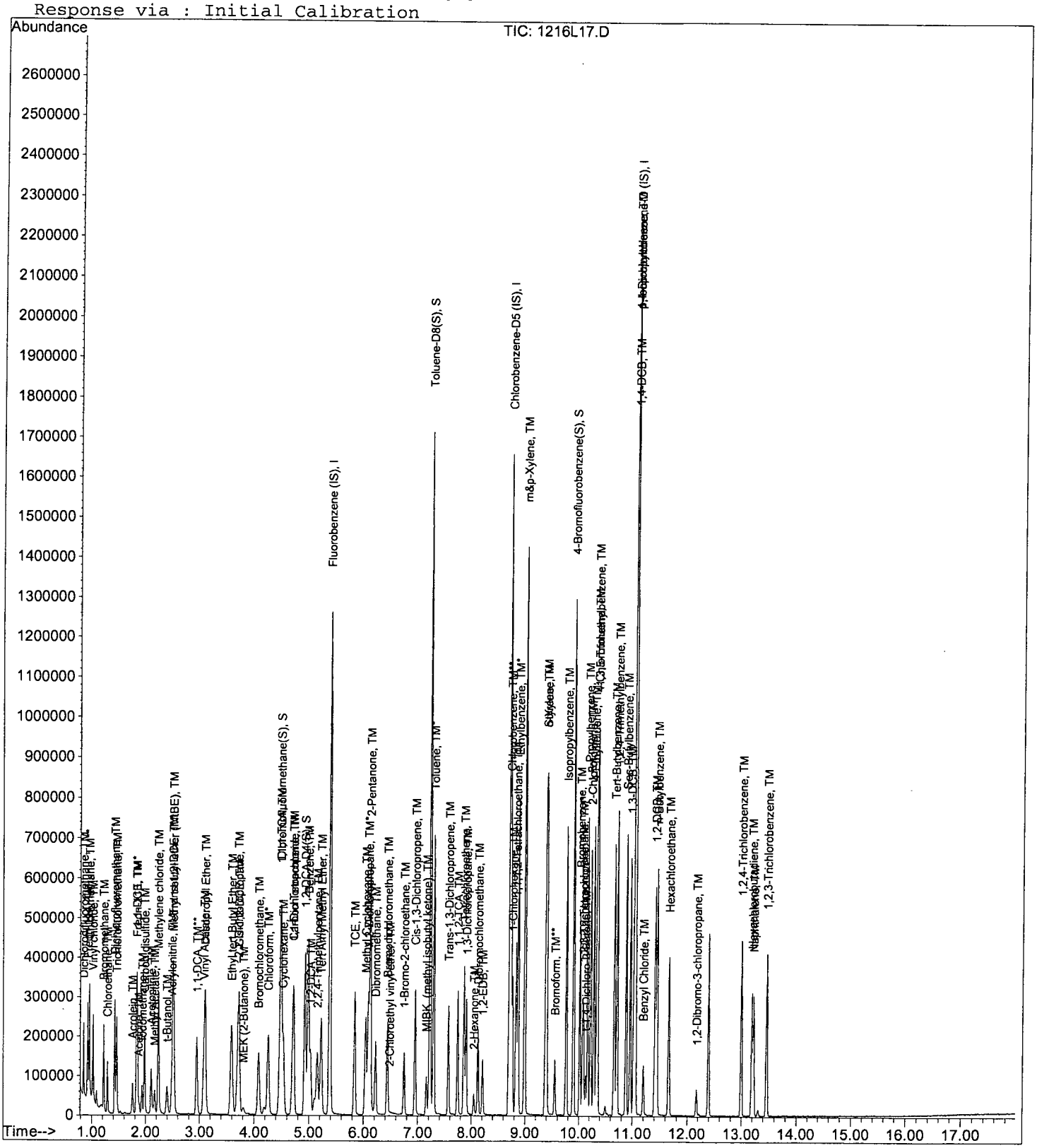
Quantitation Report

Data File : M:\LOKI\DATA\161216\1216L17.D
Acq On : 16 Dec 16 19:23
Sample : (SS)10ug/L VOC STD 12/16/16
Misc : W IS&S 11/21/16, 11/14/16

Vial: 17
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 17 15:01 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



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VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 12/18/16
Matrix: Instrument: Loki
Initial Cal. Date: 12/16/16
Data File: 1218L02.D

		Compound	MEAN	CCRF	%D	%Drift		
1	I	Fluorobenzene (IS)	ISTD			I		
2	TM	Dichlorodifluoromethane	0.4546	0.4770	4.9	TM		
3	TM	Freon 114	0.2895	0.3109	7.4	TM		
4	TM**	Chloromethane	0.7763	0.6680	14	TM**		
5	TM*	Vinyl chloride	0.5527	0.5451	1.4	TM*		
6	TM	Bromomethane	0.3745	0.4168	11	TM		
7	TM	Chloroethane	0.2896	0.3007	3.8	TM		
8	TM	Dichlorofluoromethane	0.9338	0.8792	5.9	TM		
9	TM	Trichlorofluoromethane	0.5567	0.5878	5.6	TM		
10	TM	Acrolein	0.0515	0.0434	16	TM		
11	TML	Acetone	0.1428	0.0771	46	TML	32	nt
12	TM	Freon-113	0.2885	0.2865	0.70	TM		
13	TM*	1,1-DCE	0.2647	0.2600	1.8	TM*		
14	TM	t-Butanol	0.0126	0.0114	10.0	TM		
15	TM	Acetonitrile	0.0560	0.0376	33	TM		nt
16	TM	Methyl Acetate	0.3237	0.2731	16	TM		
17	TM	Iodomethane	0.2588	0.2390	7.7	TM		
18	TM	Acrylonitrile	0.1161	0.0972	16	TM		
19	TML	Methylene chloride	1.033	0.5293	49	TML	17	
20	TM	Carbon disulfide	1.073	1.092	1.8	TM		
21	TM	Methyl t-butyl ether (MtBE)	1.151	1.070	7.1	TM		
22	TM	Trans-1,2-DCE	0.4596	0.4583	0.30	TM		
23	TM	Diisopropyl Ether	1.503	1.353	10	TM		
24	TM**	1,1-DCA	0.8828	0.8544	3.2	TM**		
25	TM	Vinyl Acetate	0.3518	0.3131	11	TM		
26	TM	Ethyl tert Butyl Ether	1.196	1.114	6.8	TM		
27	TML	MEK (2-Butanone)	0.1716	0.1267	26	TML	10	
28	TM	Cis-1,2-DCE	0.5350	0.5353	0.05	TM		
29	TM	2,2-Dichloropropane	0.2048	0.2237	9.2	TM		
30	TM*	Chloroform	0.8956	0.8929	0.31	TM*		
31	TM	Bromochloromethane	0.2513	0.2461	2.1	TM		
32	S	Dibromofluoromethane(S)	0.5088	0.4910	3.5	S		
33	TM	1,1,1-TCA	0.6590	0.6893	4.6	TM		
34	TM	Cyclohexane	0.2828	0.2582	8.7	TM		
35	TM	1,1-Dichloropropene	0.5356	0.5455	1.9	TM		
36	TM	2,2,4-Trimethylpentane	0.8134	0.8690	6.8	TM		
37	S	1,2-DCA-D4(S)	0.5471	0.5160	5.7	S		
38	TM	Carbon Tetrachloride	0.4923	0.5328	8.2	TM		
39	TM	Tert Amyl Methyl Ether	1.042	1.023	1.8	TM		
40	TM	1,2-DCA	0.6550	0.6229	4.9	TM		
		Average			9.6			

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/18/16
Instrument: Loki
Cal. Date: 12/16/16
Data File: 1218L02.D

		Compound	MEAN	CCRF	%D		%Drift	
41	TM	Benzene	1.908	1.927	1.0	TM		
42	TM	TCE	0.2364	0.2487	5.2	TM		
43	TM	2-Pentanone	0.2319	0.2141	7.7	TM		
44	TM*	1,2-Dichloropropane	0.5492	0.5047	8.1	TM*		
45	TM	Bromodichloromethane	0.6579	0.6331	3.8	TM		
46	TM	Methyl Cyclohexane	0.4651	0.4776	2.7	TM		
47	TM	Dibromomethane	0.2865	0.2758	3.7	TM		
48	TML	2-Chloroethyl vinyl ether	0.0394	0.0008	98	TML	105	nt
49	TML	MIBK (methyl isobutyl ketone)	0.3799	0.3054	20	TML	10	
50	TM	1-Bromo-2-chloroethane	0.3614	0.3278	9.3	TM		
51	TM	Cis-1,3-Dichloropropene	0.7245	0.7204	0.56	TM		
52	TM*	Toluene	2.002	2.119	5.8	TM*		
53	TM	Trans-1,3-Dichloropropene	0.6044	0.5920	2.0	TM		
54	TM	1,1,2-TCA	0.3339	0.3279	1.8	TM		
55	TML	2-Hexanone	0.0962	0.0838	13	TML	15	
56	I	Chlorobenzene-D5 (IS)	ISTD			I		
57	S	Toluene-D8(S)	1.942	1.852	4.6	S		
58	TM	1,2-EDB	0.3998	0.3744	6.3	TM		
59	TM	Tetrachloroethene	0.4874	0.5161	5.9	TM		
60	TM	1-Chlorohexane	0.5062	0.5073	0.21	TM		
61	TM	1,1,1,2-Tetrachloroethane	0.5032	0.5004	0.55	TM		
62	TM	m&p-Xylene	0.8520	0.9270	8.8	TM		
63	TM	o-Xylene	0.8298	0.8811	6.2	TM		
64	TM	Styrene	0.9215	0.9814	6.5	TM		
65	S	4-Bromofluorobenzene(S)	0.6646	0.6623	0.35	S		
66	TM	1,3-Dichloropropane	0.7505	0.6870	8.5	TM		
67	TM	Dibromochloromethane	0.4746	0.4766	0.42	TM		
68	TM**	Chlorobenzene	1.441	1.414	1.9	TM**		
69	TM*	Ethylbenzene	2.261	2.389	5.7	TM*		
70	TM**	Bromoform	0.2904	0.2773	4.5	TM**		
71	I	1,4-Dichlorobenzene-D (IS)	ISTD			I		
72	TM	Isopropylbenzene	3.630	3.866	6.5	TM		
73	TM**	1,1,2,2-Tetrachloroethane	0.9485	0.8768	7.6	TM**		
74	TM	1,2,3-Trichloropropane	0.1740	0.1605	7.7	TM		
75	TM	t-1,4-Dichloro-2-Butene	0.2117	0.1697	20	TM		
76	TM	Bromobenzene	1.049	1.080	2.9	TM		
77	TM	n-Propylbenzene	4.377	4.668	6.6	TM		
78	TM	4-Ethyltoluene	3.619	3.936	8.8	TM		
79	TM	2-Chlorotoluene	2.925	2.958	1.1	TM		
80	TM	1,3,5-Trimethylbenzene	3.139	3.478	11	TM		
		Average			8.3			

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/18/16
Instrument: Loki
Cal. Date: 12/16/16
Data File: 1218L02.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	4-Chlorotoluene	3.250	3.431	5.6	TM	
82	TM	Tert-Butylbenzene	2.471	2.677	8.3	TM	
83	TM	1,2,4-Trimethylbenzene	3.154	3.564	13	TM	
84	TM	Sec-Butylbenzene	3.528	3.819	8.3	TM	
85	TM	p-Isopropyltoluene	3.071	3.322	8.1	TM	
86	TM	Benzyl Chloride	0.9289	1.060	14	TM	
87	TM	1,3-DCB	2.034	2.062	1.4	TM	
88	TM	1,4-DCB	2.108	2.091	0.80	TM	
89	TM	n-Butylbenzene	2.707	2.842	5.0	TM	
90	TM	1,2-DCB	1.922	1.884	2.0	TM	
91	TM	Hexachloroethane	0.6828	0.6918	1.3	TM	
92	TM	1,2-Dibromo-3-chloropropane	0.1446	0.1316	9.0	TM	
93	TM	1,2,4-Trichlorobenzene	1.168	1.155	1.1	TM	
94	TM	Hexachlorobutadiene	0.4693	0.4855	3.4	TM	
95	TM	Naphthalene	1.305	1.236	5.3	TM	
96	TM	1,2,3-Trichlorobenzene	0.7307	0.6479	11	TM	
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			6.1		

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L02.D Vial: 2
Acq On : 18 Dec 16 17:09 Operator: PM,DG,SV,CMM
Sample : 161218A CCV/LCS 10ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 18 17:51 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	574080	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	540800	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	303616	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.48	111	281883	24.13	ppb		0.00
Spiked Amount 25.000			Recovery = 96.512%				
37) 1,2-DCA-D4(S)	4.93	65	296244	23.58	ppb		0.00
Spiked Amount 25.000			Recovery = 94.324%				
57) Toluene-D8(S)	7.22	98	1001304	23.84	ppb		0.00
Spiked Amount 25.000			Recovery = 95.352%				
65) 4-Bromofluorobenzene(S)	9.89	95	358151	24.91	ppb		0.00
Spiked Amount 25.000			Recovery = 99.652%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.85	85	109544	10.49	ppb		99
3) Freon 114	0.93	85	71386	10.74	ppb		97
4) Chloromethane	0.96	50	153399	8.61	ppb		99
5) Vinyl chloride	1.02	62	125167	9.86	ppb		97
6) Bromomethane	1.22	96	95720	11.13	ppb		98
7) Chloroethane	1.29	64	69044	10.38	ppb		100
8) Dichlorofluoromethane	1.43	67	201883	9.41	ppb		99
9) Trichlorofluoromethane	1.46	101	134981	10.56	ppb		98
10) Acrolein	1.75	56	124587	105.32	ppb		99
11) Acetone	1.88	43	17695	6.83	ppb		98
12) Freon-113	1.84	101	65782	9.93	ppb		94
13) 1,1-DCE	1.83	96	59712	9.82	ppb		95
14) t-Butanol	2.40	59	32680	112.51	ppb		100
15) Acetonitrile	2.10	41	107914	83.95	ppb		98
16) Methyl Acetate	2.17	43	62715	8.44	ppb		98
17) Iodomethane	1.93	142	54872	9.23	ppb		96
18) Acrylonitrile	2.48	52	22314	8.37	ppb		94
19) Methylene chloride	2.24	84	121543	8.35	ppb		100
20) Carbon disulfide	1.98	76	250837	10.18	ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	245596	9.29	ppb		96
22) Trans-1,2-DCE	2.50	96	105230	9.97	ppb		98
23) Diisopropyl Ether	3.10	45	310697	9.00	ppb		96
24) 1,1-DCA	2.95	63	196200	9.68	ppb		99
25) Vinyl Acetate	3.09	43	71903	8.90	ppb	#	82
26) Ethyl tert Butyl Ether	3.59	59	255808	9.32	ppb		95
27) MEK (2-Butanone)	3.80	43	29091	8.97	ppb		92
28) Cis-1,2-DCE	3.73	96	122918	10.00	ppb		96
29) 2,2-Dichloropropane	3.70	77	51360	10.92	ppb		98
30) Chloroform	4.25	83	205030	9.97	ppb		99
31) Bromochloromethane	4.08	128	56507	9.79	ppb		95
33) 1,1,1-TCA	4.47	97	158277	10.46	ppb		93
34) Cyclohexane	4.53	41	59288	9.13	ppb		92
35) 1,1-Dichloropropene	4.72	75	125274	10.19	ppb		96
36) 2,2,4-Trimethylpentane	5.15	57	199557	10.68	ppb		96
38) Carbon Tetrachloride	4.71	119	122353	10.82	ppb		95
39) Tert Amyl Methyl Ether	5.22	73	234808	9.82	ppb		97
40) 1,2-DCA	5.03	62	143039	9.51	ppb		99
41) Benzene	4.99	78	442470	10.10	ppb		97
42) TCE	5.84	95	57112	10.52	ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L02.D
Acq On : 18 Dec 16 17:09
Sample : 161218A CCV/LCS 10ug/L
Misc : W IS&S 11/21/16, 11/14/16

Vial: 2
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 18 17:51 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	2-Pentanone	6.12	43	614641	115.42	ppb		97
44)	1,2-Dichloropropane	6.09	63	115885	9.19	ppb		98
45)	Bromodichloromethane	6.44	83	145369	9.62	ppb		98
46)	Methyl Cyclohexane	6.04	83	109674	10.27	ppb		98
47)	Dibromomethane	6.22	93	63325	9.63	ppb		97
48)	2-Chloroethyl vinyl ether	6.55	43	183	-0.51	ppb		100
49)	MIBK (methyl isobutyl ket	7.16	43	70128	8.97	ppb		97
50)	1-Bromo-2-chloroethane	6.75	63	75280	9.07	ppb		95
51)	Cis-1,3-Dichloropropene	6.95	75	165436	9.94	ppb		96
52)	Toluene	7.29	91	486567	10.58	ppb		99
53)	Trans-1,3-Dichloropropene	7.56	75	135946	9.80	ppb		95
54)	1,1,2-TCA	7.74	83	75298	9.82	ppb		93
55)	2-Hexanone	8.04	43	19250	8.54	ppb	#	93
58)	1,2-EDB	8.20	107	80994	9.37	ppb		97
59)	Tetrachloroethene	7.86	166	111635	10.59	ppb		98
60)	1-Chlorohexane	8.76	91	109742	10.02	ppb		93
61)	1,1,1,2-Tetrachloroethane	8.83	131	108255	9.94	ppb		97
62)	m&p-Xylene	8.99	106	401071	21.76	ppb		99
63)	o-Xylene	9.38	106	190598	10.62	ppb		94
64)	Styrene	9.39	104	212288	10.65	ppb		99
66)	1,3-Dichloropropane	7.90	76	148621	9.15	ppb		99
67)	Dibromochloromethane	8.12	129	103097	10.04	ppb		98
68)	Chlorobenzene	8.73	112	305818	9.81	ppb		97
69)	Ethylbenzene	8.87	91	516801	10.57	ppb		98
70)	Bromoform	9.55	173	59995	9.55	ppb		93
72)	Isopropylbenzene	9.76	105	469568	10.65	ppb		100
73)	1,1,2,2-Tetrachloroethane	10.07	83	106487	9.24	ppb		99
74)	1,2,3-Trichloropropane	10.09	110	19496	9.23	ppb		100
75)	t-1,4-Dichloro-2-Butene	10.12	53	20614	8.02	ppb		100
76)	Bromobenzene	10.01	156	131121	10.29	ppb		98
77)	n-Propylbenzene	10.17	91	566919	10.66	ppb		99
78)	4-Ethyltoluene	10.28	105	478017	10.88	ppb		98
79)	2-Chlorotoluene	10.22	91	359211	10.11	ppb		97
80)	1,3,5-Trimethylbenzene	10.36	105	422436	11.08	ppb		96
81)	4-Chlorotoluene	10.34	91	416734	10.56	ppb		98
82)	Tert-Butylbenzene	10.66	119	325142	10.83	ppb		97
83)	1,2,4-Trimethylbenzene	10.71	105	432890	11.30	ppb		100
84)	Sec-Butylbenzene	10.88	105	463771	10.83	ppb		99
85)	p-Isopropyltoluene	11.04	119	403416	10.81	ppb		99
86)	Benzyl Chloride	11.19	91	128686	11.41	ppb		99
87)	1,3-DCB	10.96	146	250428	10.14	ppb		99
88)	1,4-DCB	11.05	146	253914	9.92	ppb		99
89)	n-Butylbenzene	11.44	91	345102	10.50	ppb		99
90)	1,2-DCB	11.41	146	228813	9.80	ppb		97
91)	Hexachloroethane	11.66	117	84011	10.13	ppb		88
92)	1,2-Dibromo-3-chloropropan	12.18	157	15982	9.10	ppb	#	86
93)	1,2,4-Trichlorobenzene	13.00	180	140277	9.89	ppb		99
94)	Hexachlorobutadiene	13.19	225	58960	10.34	ppb		96
95)	Naphthalene	13.22	128	150080	9.47	ppb		100
96)	1,2,3-Trichlorobenzene	13.46	180	78680	8.87	ppb		98

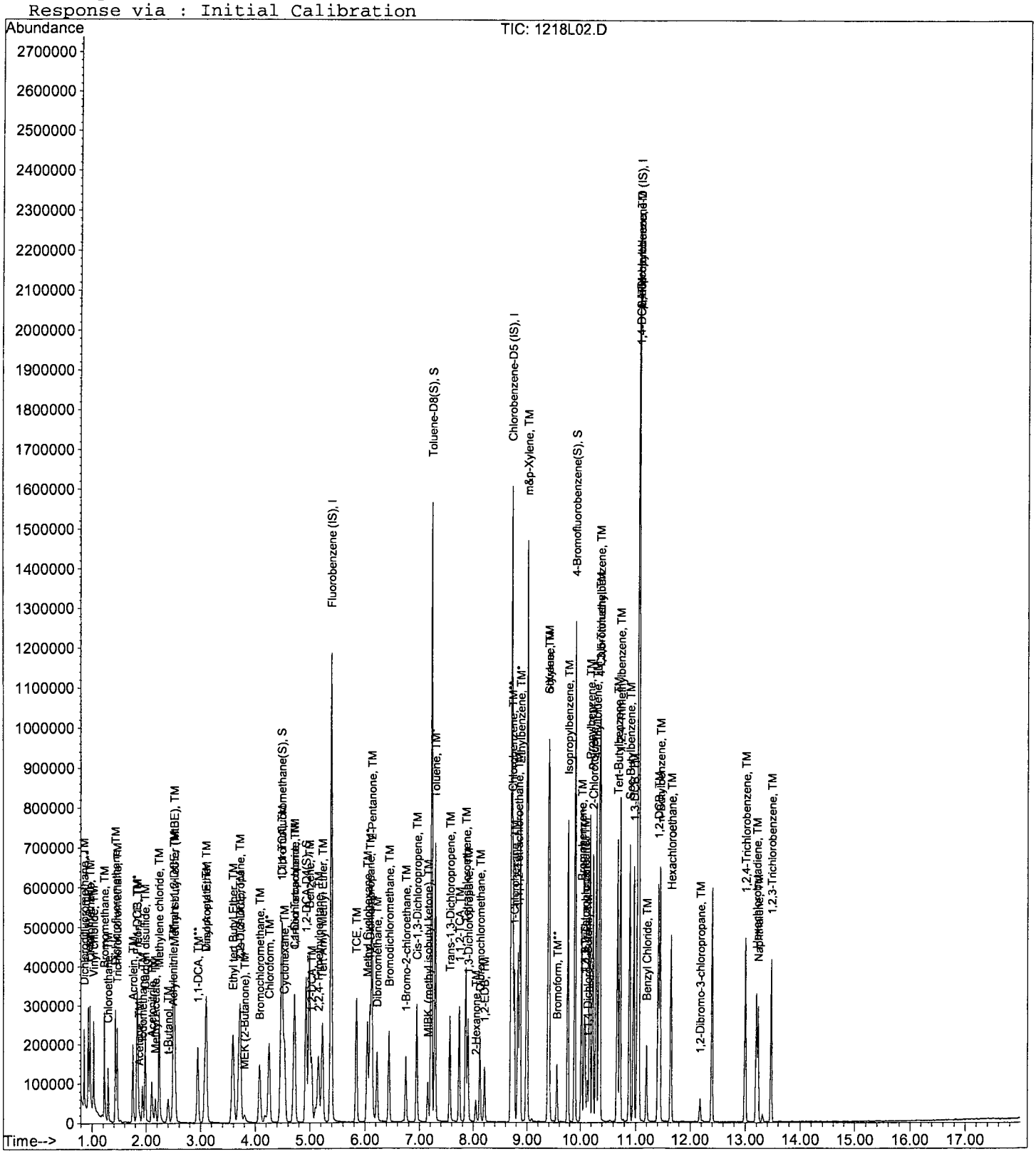
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L02.D Vial: 2
Acq On : 18 Dec 16 17:09 Operator: PM,DG,SV,CMM
Sample : 161218A CCV/LCS 10ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 18 17:51 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/18/16
Instrument: Loki
Initial Cal. Date: 12/16/16
Data File: 1218L04.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	3.829	1.598	58	TMHBL	7.5
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
5							
6							
7							
8							
9							
10							
11							
12							
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28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			58.0		

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L04.D
Acq On : 18 Dec 16 18:05
Sample : 161218A CCV/LCS 300ug/L
Misc : W IS&S 11/21/16, 11/14/16

Vial: 4
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 8:54 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161216\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1132652	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1521502	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1678133	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	21722884m	277.45	ppb	100

(#) = qualifier out of range (m) = manual integration

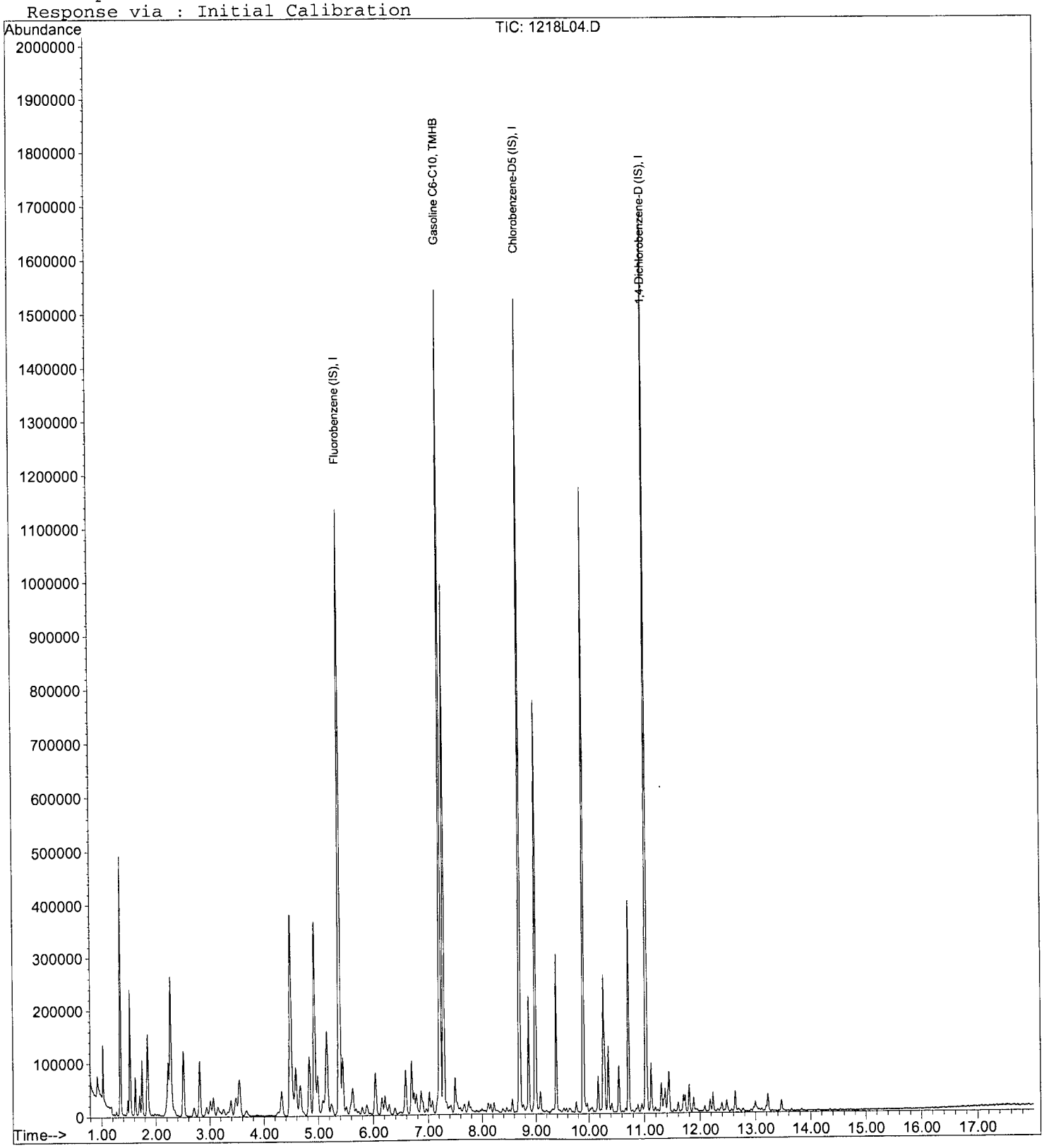
Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L04.D
Acq On : 18 Dec 16 18:05
Sample : 161218A CCV/LCS 300ug/L
Misc : W IS&S 11/21/16, 11/14/16

Vial: 4
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 8:54 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161216\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/18/16
Instrument: Loki
Initial Cal. Date: 12/16/16
Data File: 1218L04.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	S	Dibromofluoromethane(S)	0.5088	0.4935	3.0	S	
3	S	1,2-DCA-D4(S)	0.5471	0.5278	3.5	S	
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	S	Toluene-D8(S)	1.942	1.920	1.1	S	
6	S	4-Bromofluorobenzene(S)	0.6646	0.6504	2.1	S	
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
8							
9							
10							
11							
12							
13							
14							
15							
16							
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35							
36							
37							
38							
39							
40							
		Average			2.4		

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L04.D
Acq On : 18 Dec 16 18:05
Sample : 161218A CCV/LCS 300ug/L
Misc : W IS&S 11/21/16, 11/14/16

Vial: 4
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 29 8:15 2016 Quant Results File: LSUR1216.RES

Quant Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	555648	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	518912	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	284928	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	274215	24.25	ppb	0.00
Spiked Amount 25.000			Recovery =	97.000%		
3) 1,2-DCA-D4(S)	4.92	65	293279	24.12	ppb	0.00
Spiked Amount 25.000			Recovery =	96.476%		
5) Toluene-D8(S)	7.22	98	996106	24.71	ppb	0.00
Spiked Amount 25.000			Recovery =	98.856%		
6) 4-Bromofluorobenzene(S)	9.89	95	337508	24.47	ppb	0.00
Spiked Amount 25.000			Recovery =	97.868%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

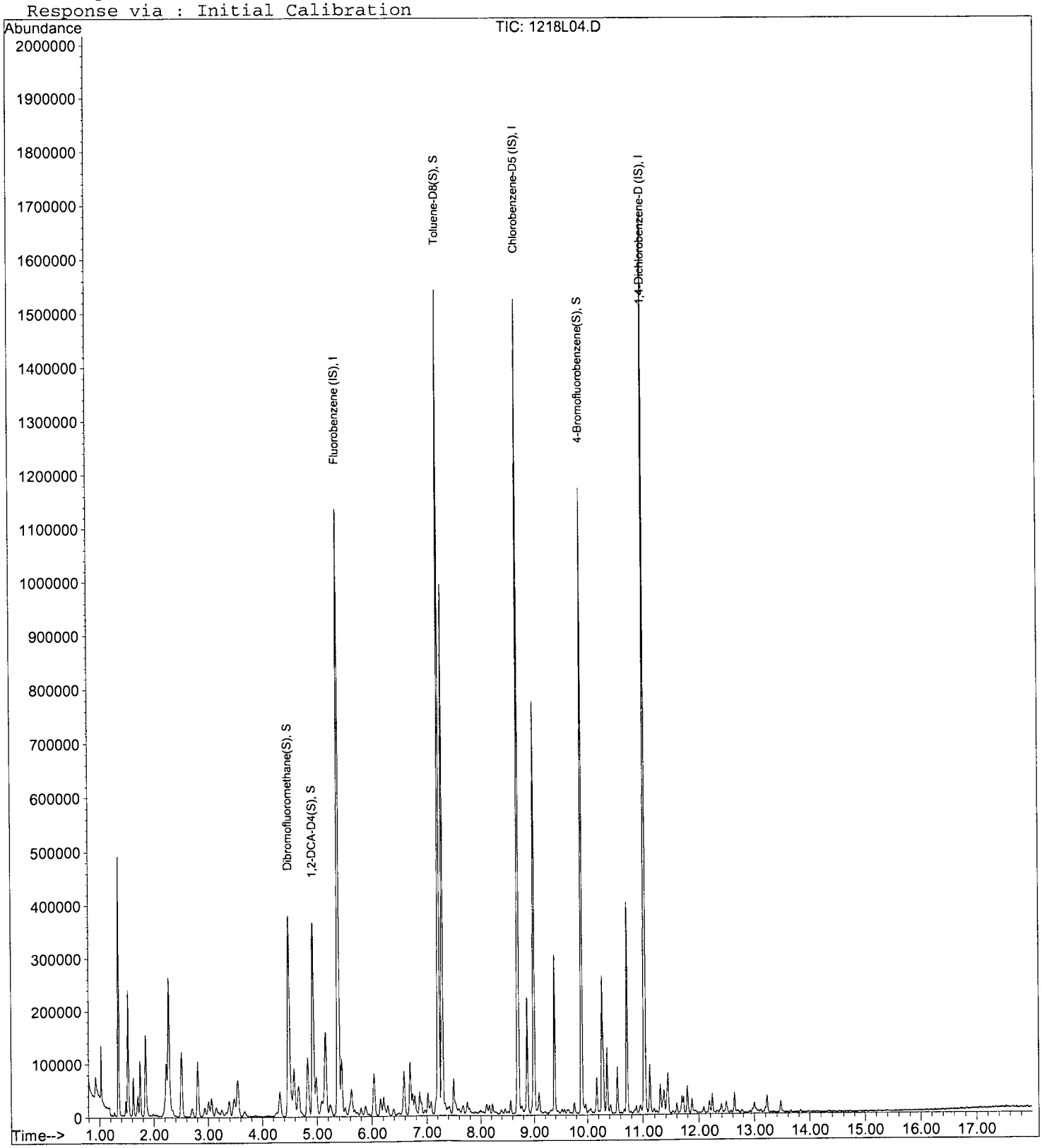
Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L04.D
Acq On : 18 Dec 16 18:05
Sample : 161218A CCV/LCS 300ug/L
Misc : W IS&S 11/21/16, 11/14/16

Vial: 4
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 29 8:15 2016 Quant Results File: LSUR1216.RES

Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 12/19/16
Matrix: Instrument: Loki
Initial Cal. Date: 12/16/16
Data File: 1218L27.D

		Compound	MEAN	CCRF	%D	%Drift		
1	I	Fluorobenzene (IS)	ISTD			I		
2	TM	Dichlorodifluoromethane	0.4546	0.4649	2.3	TM		
3	TM	Freon 114	0.2895	0.3062	5.8	TM		
4	TM**	Chloromethane	0.7763	0.6250	19	TM**		
5	TM*	Vinyl chloride	0.5527	0.4978	9.9	TM*		
6	TM	Bromomethane	0.3745	0.3426	8.5	TM		
7	TM	Chloroethane	0.2896	0.2781	4.0	TM		
8	TM	Dichlorofluoromethane	0.9338	0.8080	13	TM		
9	TM	Trichlorofluoromethane	0.5567	0.5719	2.7	TM		
10	TM	Acrolein	0.0515	0.0383	26	TM		nt
11	TML	Acetone	0.1428	0.0796	44	TML	29	nt
12	TM	Freon-113	0.2885	0.2794	3.1	TM		
13	TM*	1,1-DCE	0.2647	0.2410	9.0	TM*		
14	TM	t-Butanol	0.0126	0.0106	16	TM		
15	TM	Acetonitrile	0.0560	0.0380	32	TM		nt
16	TM	Methyl Acetate	0.3237	0.2416	25	TM		nt
17	TM	Iodomethane	0.2588	0.2628	1.5	TM		
18	TM	Acrylonitrile	0.1161	0.0954	18	TM		
19	TML	Methylene chloride	1.033	0.5174	50	TML	19	
20	TM	Carbon disulfide	1.073	1.023	4.6	TM		
21	TM	Methyl t-butyl ether (MtBE)	1.151	1.036	10.0	TM		
22	TM	Trans-1,2-DCE	0.4596	0.4508	1.9	TM		
23	TM	Diisopropyl Ether	1.503	1.297	14	TM		
24	TM**	1,1-DCA	0.8828	0.8207	7.0	TM**		
25	TM	Vinyl Acetate	0.3518	0.2856	19	TM		
26	TM	Ethyl tert Butyl Ether	1.196	1.077	10.0	TM		
27	TML	MEK (2-Butanone)	0.1716	0.1254	27	TML	11	
28	TM	Cis-1,2-DCE	0.5350	0.5247	1.9	TM		
29	TM	2,2-Dichloropropane	0.2048	0.1872	8.6	TM		
30	TM*	Chloroform	0.8956	0.8898	0.65	TM*		
31	TM	Bromochloromethane	0.2513	0.2448	2.6	TM		
32	S	Dibromofluoromethane(S)	0.5088	0.4958	2.6	S		
33	TM	1,1,1-TCA	0.6590	0.6711	1.8	TM		
34	TM	Cyclohexane	0.2828	0.2370	16	TM		
35	TM	1,1-Dichloropropene	0.5356	0.5275	1.5	TM		
36	TM	2,2,4-Trimethylpentane	0.8134	0.7692	5.4	TM		
37	S	1,2-DCA-D4(S)	0.5471	0.5119	6.4	S		
38	TM	Carbon Tetrachloride	0.4923	0.5348	8.6	TM		
39	TM	Tert Amyl Methyl Ether	1.042	0.9732	6.6	TM		
40	TM	1,2-DCA	0.6550	0.5956	9.1	TM		
		Average			11.7			

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/19/16
Instrument: Loki
Cal. Date: 12/16/16
Data File: 1218L27.D

		Compound	MEAN	CCRF	%D		%Drift	
41	TM	Benzene	1.908	1.860	2.5	TM		
42	TM	TCE	0.2364	0.2584	9.3	TM		
43	TM	2-Pentanone	0.2319	0.1988	14	TM		
44	TM*	1,2-Dichloropropane	0.5492	0.4965	9.6	TM*		
45	TM	Bromodichloromethane	0.6579	0.6327	3.8	TM		
46	TM	Methyl Cyclohexane	0.4651	0.4579	1.5	TM		
47	TM	Dibromomethane	0.2865	0.2739	4.4	TM		
48	TML	2-Chloroethyl vinyl ether	0.0394	0.0022	94	TML	101	nt
49	TML	MIBK (methyl isobutyl ketone)	0.3799	0.2744	28	TML	20	
50	TM	1-Bromo-2-chloroethane	0.3614	0.3132	13	TM		
51	TM	Cis-1,3-Dichloropropene	0.7245	0.6626	8.5	TM		
52	TM*	Toluene	2.002	2.025	1.1	TM*		
53	TM	Trans-1,3-Dichloropropene	0.6044	0.5567	7.9	TM		
54	TM	1,1,2-TCA	0.3339	0.3190	4.5	TM		
55	TML	2-Hexanone	0.0962	0.0743	23	TML	23	nt
56	I	Chlorobenzene-D5 (IS)	ISTD			I		
57	S	Toluene-D8(S)	1.942	1.872	3.6	S		
58	TM	1,2-EDB	0.3998	0.3705	7.3	TM		
59	TM	Tetrachloroethene	0.4874	0.5089	4.4	TM		
60	TM	1-Chlorohexane	0.5062	0.5065	0.04	TM		
61	TM	1,1,1,2-Tetrachloroethane	0.5032	0.4949	1.7	TM		
62	TM	m&p-Xylene	0.8520	0.8932	4.8	TM		
63	TM	o-Xylene	0.8298	0.8433	1.6	TM		
64	TM	Styrene	0.9215	1.004	9.0	TM		
65	S	4-Bromofluorobenzene(S)	0.6646	0.6582	0.96	S		
66	TM	1,3-Dichloropropane	0.7505	0.6599	12	TM		
67	TM	Dibromochloromethane	0.4746	0.4663	1.8	TM		
68	TM**	Chlorobenzene	1.441	1.379	4.3	TM**		
69	TM*	Ethylbenzene	2.261	2.295	1.5	TM*		
70	TM**	Bromoform	0.2904	0.2816	3.0	TM**		
71	I	1,4-Dichlorobenzene-D (IS)	ISTD			I		
72	TM	Isopropylbenzene	3.630	3.710	2.2	TM		
73	TM**	1,1,2,2-Tetrachloroethane	0.9485	0.8055	15	TM**		
74	TM	1,2,3-Trichloropropane	0.1740	0.1630	6.3	TM		
75	TM	t-1,4-Dichloro-2-Butene	0.2117	0.1751	17	TM		
76	TM	Bromobenzene	1.049	1.092	4.1	TM		
77	TM	n-Propylbenzene	4.377	4.383	0.13	TM		
78	TM	4-Ethyltoluene	3.619	3.860	6.7	TM		
79	TM	2-Chlorotoluene	2.925	2.791	4.6	TM		
80	TM	1,3,5-Trimethylbenzene	3.139	3.370	7.4	TM		
		Average			9.1			

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/19/16
Instrument: Loki
Cal. Date: 12/16/16
Data File: 1218L27.D

		Compound	MEAN	CCRF	%D	%Drift	
81	TM	4-Chlorotoluene	3.250	3.380	4.0	TM	
82	TM	Tert-Butylbenzene	2.471	2.618	6.0	TM	
83	TM	1,2,4-Trimethylbenzene	3.154	3.368	6.8	TM	
84	TM	Sec-Butylbenzene	3.528	3.704	5.0	TM	
85	TM	p-Isopropyltoluene	3.071	3.248	5.8	TM	
86	TM	Benzyl Chloride	0.9289	0.7226	22	TM	nt
87	TM	1,3-DCB	2.034	2.032	0.14	TM	
88	TM	1,4-DCB	2.108	2.035	3.5	TM	
89	TM	n-Butylbenzene	2.707	2.692	0.56	TM	
90	TM	1,2-DCB	1.922	1.906	0.82	TM	
91	TM	Hexachloroethane	0.6828	0.6627	3.0	TM	
92	TM	1,2-Dibromo-3-chloropropane	0.1446	0.1265	13	TM	
93	TM	1,2,4-Trichlorobenzene	1.168	1.118	4.2	TM	
94	TM	Hexachlorobutadiene	0.4693	0.4509	3.9	TM	
95	TM	Naphthalene	1.305	1.372	5.1	TM	
96	TM	1,2,3-Trichlorobenzene	0.7307	0.6891	5.7	TM	
97							
98							
99							
100							
101							
102							
103							
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114							
115							
116							
117							
118							
119							
120							
		Average			5.6		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1218L27.D Vial: 27
Acq On : 19 Dec 16 4:48 Operator: PM,DG,SV,CMM
Sample : Ending CCV 8260 10ug/L 12/18/16 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 19 7:12 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	535040	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	507840	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	279040	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.48	111	265265	24.36	ppb		0.00
Spiked Amount 25.000			Recovery = 97.448%				
37) 1,2-DCA-D4(S)	4.92	65	273871	23.39	ppb		0.00
Spiked Amount 25.000			Recovery = 93.564%				
57) Toluene-D8(S)	7.22	98	950523	24.10	ppb		0.00
Spiked Amount 25.000			Recovery = 96.392%				
65) 4-Bromofluorobenzene(S)	9.89	95	334252	24.76	ppb		0.00
Spiked Amount 25.000			Recovery = 99.040%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.85	85	99504	10.23	ppb		100
3) Freon 114	0.93	85	65528	10.58	ppb		94
4) Chloromethane	0.96	50	133757	8.05	ppb		99
5) Vinyl chloride	1.03	62	106536	9.01	ppb		98
6) Bromomethane	1.22	96	73320	9.15	ppb		98
7) Chloroethane	1.29	64	59516	9.60	ppb		97
8) Dichlorofluoromethane	1.43	67	172931	8.65	ppb		98
9) Trichlorofluoromethane	1.46	101	122391	10.27	ppb		100
10) Acrolein	1.75	56	102467	92.95	ppb	#	98
11) Acetone	1.88	43	17036	7.13	ppb		98
12) Freon-113	1.84	101	59805	9.69	ppb		95
13) 1,1-DCE	1.83	96	51568	9.10	ppb		95
14) t-Butanol	2.39	59	28432	105.03	ppb		99
15) Acetonitrile	2.10	41	101706	84.89	ppb		97
16) Methyl Acetate	2.17	43	51711	7.46	ppb		92
17) Iodomethane	1.93	142	56240	10.15	ppb		99
18) Acrylonitrile	2.47	52	20418	8.22	ppb		100
19) Methylene chloride	2.23	84	110728	8.11	ppb		99
20) Carbon disulfide	1.98	76	219002	9.54	ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	221810	9.00	ppb		95
22) Trans-1,2-DCE	2.50	96	96474	9.81	ppb		91
23) Diisopropyl Ether	3.10	45	277477	8.62	ppb		95
24) 1,1-DCA	2.95	63	175640	9.30	ppb		98
25) Vinyl Acetate	3.09	43	61120	8.12	ppb	#	82
26) Ethyl tert Butyl Ether	3.59	59	230456	9.00	ppb		99
27) MEK (2-Butanone)	3.81	43	26846	8.88	ppb		99
28) Cis-1,2-DCE	3.73	96	112290	9.81	ppb		92
29) 2,2-Dichloropropane	3.70	77	40072	9.14	ppb		97
30) Chloroform	4.25	83	190437	9.94	ppb		97
31) Bromochloromethane	4.08	128	52388	9.74	ppb		95
33) 1,1,1-TCA	4.47	97	143623	10.18	ppb		98
34) Cyclohexane	4.53	41	50726	8.38	ppb		87
35) 1,1-Dichloropropene	4.72	75	112903	9.85	ppb		94
36) 2,2,4-Trimethylpentane	5.15	57	164624	9.46	ppb		98
38) Carbon Tetrachloride	4.70	119	114458	10.86	ppb		99
39) Tert Amyl Methyl Ether	5.22	73	208277	9.34	ppb		100
40) 1,2-DCA	5.03	62	127470	9.09	ppb		98
41) Benzene	4.98	78	398003	9.75	ppb		99
42) TCE	5.84	95	55304	10.93	ppb		94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1218L27.D Vial: 27
Acq On : 19 Dec 16 4:48 Operator: PM,DG,SV,CMM
Sample : Ending CCV 8260 10ug/L 12/18/16 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 19 7:12 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	2-Pentanone	6.12	43	531811	107.15	ppb		97
44)	1,2-Dichloropropane	6.09	63	106255	9.04	ppb		99
45)	Bromodichloromethane	6.44	83	135401	9.62	ppb		98
46)	Methyl Cyclohexane	6.04	83	98001	9.85	ppb		98
47)	Dibromomethane	6.22	93	58629	9.56	ppb		99
48)	2-Chloroethyl vinyl ether	6.53	43	467	-0.08	ppb		100
49)	MIBK (methyl isobutyl ket	7.16	43	58725	7.97	ppb		94
50)	1-Bromo-2-chloroethane	6.75	63	67040	8.67	ppb		97
51)	Cis-1,3-Dichloropropene	6.95	75	141811	9.15	ppb		94
52)	Toluene	7.29	91	433293	10.11	ppb		97
53)	Trans-1,3-Dichloropropene	7.56	75	119149	9.21	ppb		99
54)	1,1,2-TCA	7.74	83	68267	9.55	ppb		99
55)	2-Hexanone	8.05	43	15911	7.74	ppb		95
58)	1,2-EDB	8.21	107	75257	9.27	ppb		95
59)	Tetrachloroethene	7.86	166	103369	10.44	ppb		98
60)	1-Chlorohexane	8.76	91	102879	10.00	ppb		86
61)	1,1,1,2-Tetrachloroethane	8.83	131	100522	9.83	ppb		99
62)	m&p-Xylene	8.99	106	362869	20.97	ppb		97
63)	o-Xylene	9.38	106	171310	10.16	ppb		95
64)	Styrene	9.40	104	204032	10.90	ppb		98
66)	1,3-Dichloropropane	7.90	76	134046	8.79	ppb		99
67)	Dibromochloromethane	8.12	129	94722	9.82	ppb		97
68)	Chlorobenzene	8.73	112	280109	9.57	ppb		97
69)	Ethylbenzene	8.87	91	466297	10.15	ppb		99
70)	Bromoform	9.55	173	57207	9.70	ppb		93
72)	Isopropylbenzene	9.76	105	414142	10.22	ppb		98
73)	1,1,2,2-Tetrachloroethane	10.07	83	89905	8.49	ppb		99
74)	1,2,3-Trichloropropane	10.09	110	18192	9.37	ppb		93
75)	t-1,4-Dichloro-2-Butene	10.13	53	19539	8.27	ppb		94
76)	Bromobenzene	10.02	156	121907	10.41	ppb		98
77)	n-Propylbenzene	10.17	91	489198	10.01	ppb		98
78)	4-Ethyltoluene	10.29	105	430796	10.67	ppb		100
79)	2-Chlorotoluene	10.23	91	311515	9.54	ppb		98
80)	1,3,5-Trimethylbenzene	10.36	105	376196	10.74	ppb		97
81)	4-Chlorotoluene	10.34	91	377229	10.40	ppb		98
82)	Tert-Butylbenzene	10.67	119	292246	10.60	ppb		97
83)	1,2,4-Trimethylbenzene	10.72	105	375957	10.68	ppb		98
84)	Sec-Butylbenzene	10.88	105	413429	10.50	ppb		100
85)	p-Isopropyltoluene	11.04	119	362542	10.58	ppb		99
86)	Benzyl Chloride	11.20	91	80657	7.78	ppb		98
87)	1,3-DCB	10.96	146	226769	9.99	ppb		98
88)	1,4-DCB	11.05	146	227133	9.65	ppb		99
89)	n-Butylbenzene	11.44	91	300470	9.94	ppb		96
90)	1,2-DCB	11.41	146	212782	9.92	ppb		97
91)	Hexachloroethane	11.66	117	73967	9.70	ppb		93
92)	1,2-Dibromo-3-chloropropan	12.18	157	14117	8.75	ppb	#	90
93)	1,2,4-Trichlorobenzene	13.00	180	124835	9.58	ppb		95
94)	Hexachlorobutadiene	13.19	225	50327	9.61	ppb		96
95)	Naphthalene	13.22	128	153088	10.51	ppb		100
96)	1,2,3-Trichlorobenzene	13.46	180	76912	9.43	ppb		97

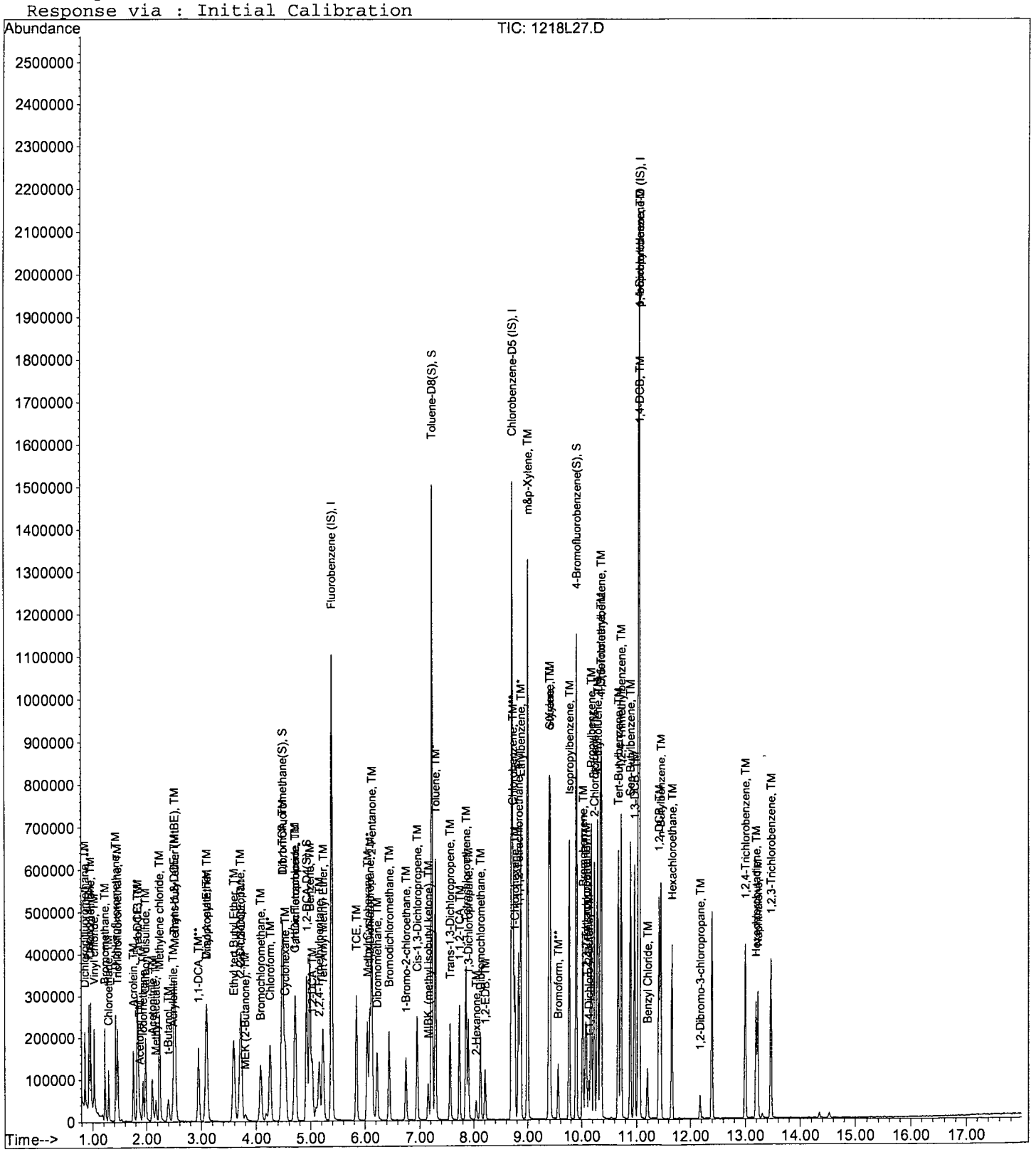
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L27.D Vial: 27
Acq On : 19 Dec 16 4:48 Operator: PM,DG,SV,CMM
Sample : Ending CCV 8260 10ug/L 12/18/16 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 19 7:12 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



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VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/19/16
Instrument: Loki
Initial Cal. Date: 12/16/16
Data File: 1218L28.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	3.829	1.270	67	TMHBL	45
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
5							
6							
7							
8							
9							
10							
11							
12							
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14							
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35							
36							
37							
38							
39							
40							
		Average			67.0		

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L28.D Vial: 28
Acq On : 19 Dec 16 5:16 Operator: PM,DG,SV,CMM
Sample : Ending CCV 8260 300ug/L 12/18/16 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 28 17:03 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1090235	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1472179	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1586241	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	16609784m	164.33	ppb	100

(#) = qualifier out of range (m) = manual integration

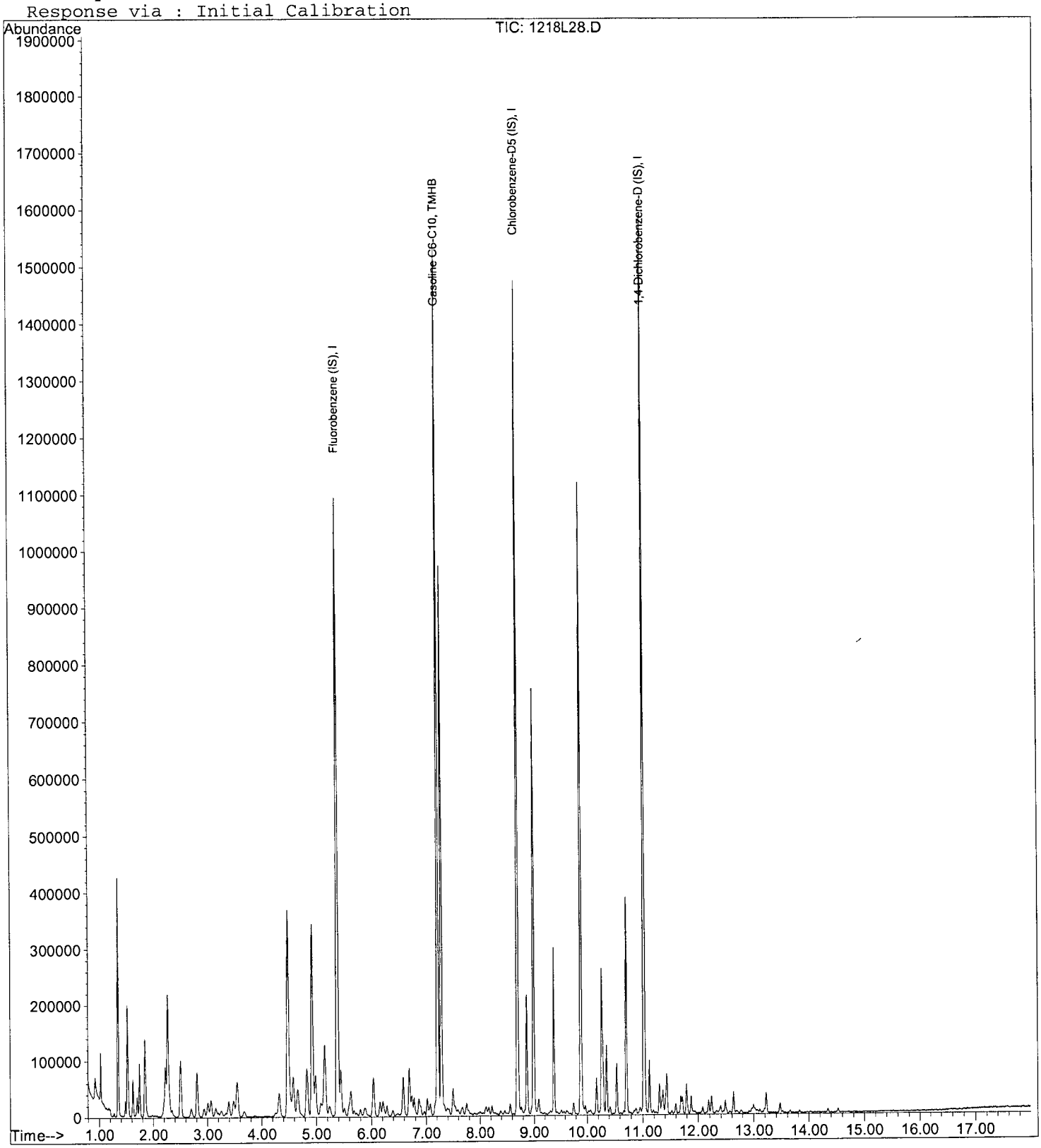
Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L28.D
Acq On : 19 Dec 16 5:16
Sample : Ending CCV 8260 300ug/L 12/18/16
Misc : W IS&S 11/21/16, 11/14/16

Vial: 28
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 28 17:03 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161216\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/19/16
Instrument: Loki
Initial Cal. Date: 12/16/16
Data File: 1218L28.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	S	Dibromofluoromethane(S)	0.5088	0.5035	1.0	S	
3	S	1,2-DCA-D4(S)	0.5471	0.5185	5.2	S	
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	S	Toluene-D8(S)	1.942	1.937	0.24	S	
6	S	4-Bromofluorobenzene(S)	0.6646	0.6621	0.38	S	
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
8							
9							
10							
11							
12							
13							
14							
15							
16							
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34							
35							
36							
37							
38							
39							
40							
		Average			1.7		

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L28.D
Acq On : 19 Dec 16 5:16
Sample : Ending CCV 8260 300ug/L 12/18/16
Misc : W IS&S 11/21/16, 11/14/16

Vial: 28
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 29 8:15 2016 Quant Results File: LSUR1216.RES

Quant Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	530368	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	499392	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	271488	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	267041	24.74	ppb	0.00
Spiked Amount 25.000			Recovery = 98.964%			
3) 1,2-DCA-D4(S)	4.93	65	275014	23.70	ppb	0.00
Spiked Amount 25.000			Recovery = 94.780%			
5) Toluene-D8(S)	7.22	98	967357	24.94	ppb	0.00
Spiked Amount 25.000			Recovery = 99.756%			
6) 4-Bromofluorobenzene(S)	9.89	95	330632	24.91	ppb	0.00
Spiked Amount 25.000			Recovery = 99.624%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

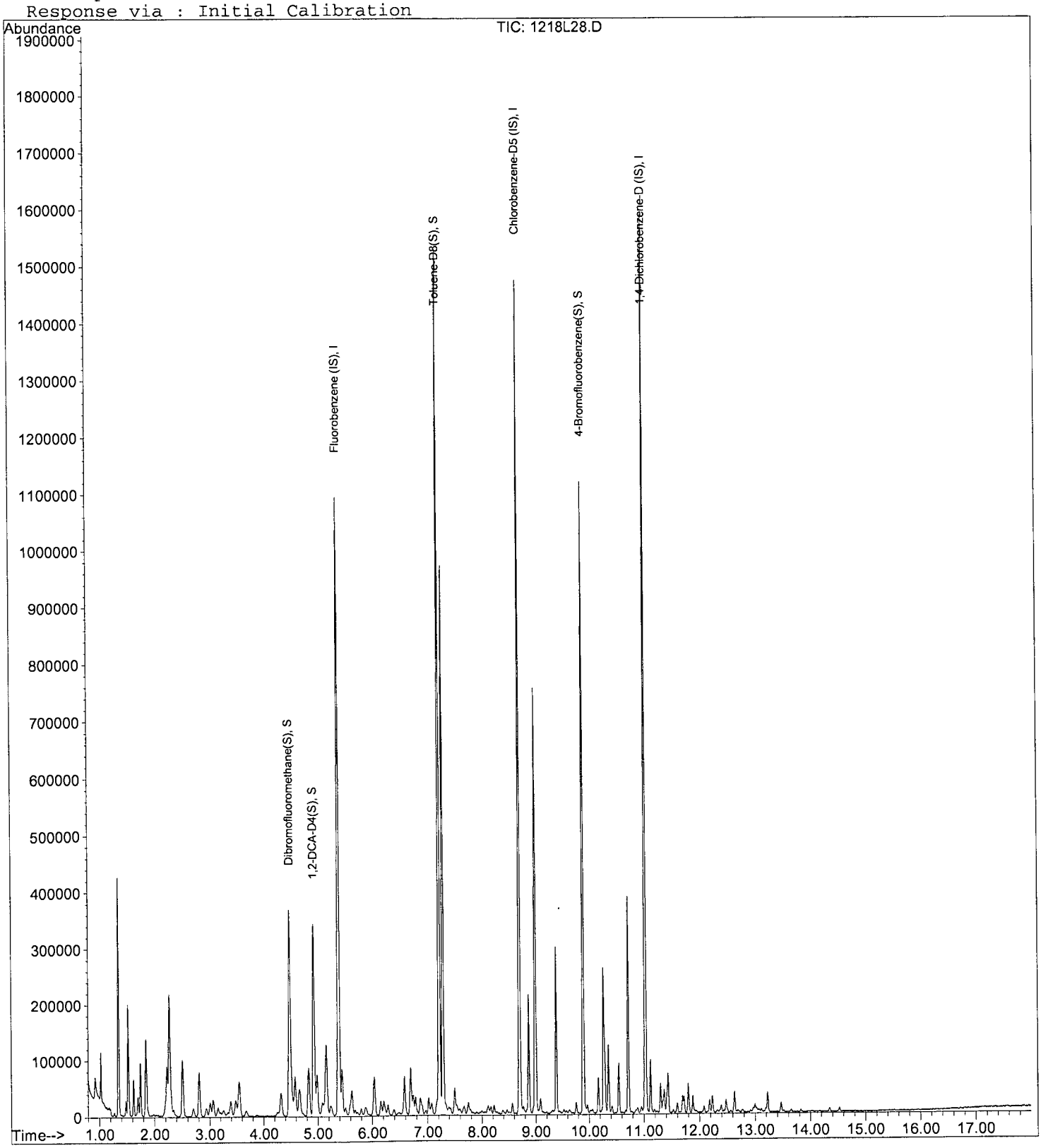
Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L28.D
Acq On : 19 Dec 16 5:16
Sample : Ending CCV 8260 300ug/L 12/18/16
Misc : W IS&S 11/21/16, 11/14/16

Vial: 28
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 29 8:15 2016 Quant Results File: LSUR1216.RES

Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



EPA METHOD 8260B
Volatile Organic Compounds
Raw Data

APPL, INC.

Method Blank

EPA 8260B BTEX WATER

Blank Name/QCG: **161218W-47493 - 214886**
Batch ID: #86BTO-161218AL

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	12/18/16	12/18/16
BLANK	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	12/18/16	12/18/16
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	12/18/16	12/18/16
BLANK	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	12/18/16	12/18/16
BLANK	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	12/18/16	12/18/16
BLANK	SURROGATE: 1,2-DICHLOROET	96.8	81-118			%	12/18/16	12/18/16
BLANK	SURROGATE: 4-BROMOFLUORO	95.6	85-114			%	12/18/16	12/18/16
BLANK	SURROGATE: DIBROMOFLUOR	99.0	80-119			%	12/18/16	12/18/16
BLANK	SURROGATE: TOLUENE-D8 (S)	96.7	89-112			%	12/18/16	12/18/16

Quant Method: LALLW.M
Run #: 1218L08
Instrument: Loki
Sequence: 161216
Initials: DG

GC SC-Blank-REG MDLs-DOD
Printed: 01/03/17 3:20:13 PM

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161216\1218L08.D Vial: 8
Acq On : 18 Dec 16 19:57 Operator: PM,DG,SV,CMM
Sample : 161218A BLK-1WL Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 19 7:12 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	543168	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	507456	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	262208	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.48	111	273480	24.74	ppb		0.00
Spiked Amount 25.000			Recovery = 98.964%				
37) 1,2-DCA-D4(S)	4.92	65	287538	24.19	ppb		0.00
Spiked Amount 25.000			Recovery = 96.760%				
57) Toluene-D8(S)	7.22	98	953279	24.19	ppb		0.00
Spiked Amount 25.000			Recovery = 96.744%				
65) 4-Bromofluorobenzene(S)	9.89	95	322458	23.90	ppb		0.00
Spiked Amount 25.000			Recovery = 95.616%				
Target Compounds							Qvalue
4) Chloromethane	0.96	50	2067	0.12	ppb		95
10) Acrolein	1.77	56	169	0.15	ppb	#	13
11) Acetone	1.89	43	1435	-1.60	ppb	#	39
14) t-Butanol	2.39	59	394	1.43	ppb	#	74
15) Acetonitrile	2.26	41	267	0.22	ppb	#	1
16) Methyl Acetate	2.17	43	539	0.08	ppb	#	51
19) Methylene chloride	2.23	84	684	-2.23	ppb	#	67
27) MEK (2-Butanone)	3.84	43	123	-0.13	ppb	#	52
39) Tert Amyl Methyl Ether	5.38	73	14074	0.62	ppb	#	34
48) 2-Chloroethyl vinyl ether	6.54	43	48	-0.69	ppb		100
49) MIBK (methyl isobutyl ket	7.18	43	93	-0.91	ppb	#	42
55) 2-Hexanone	8.10	43	149	1.50	ppb	#	55

(#) = qualifier out of range (m) = manual integration

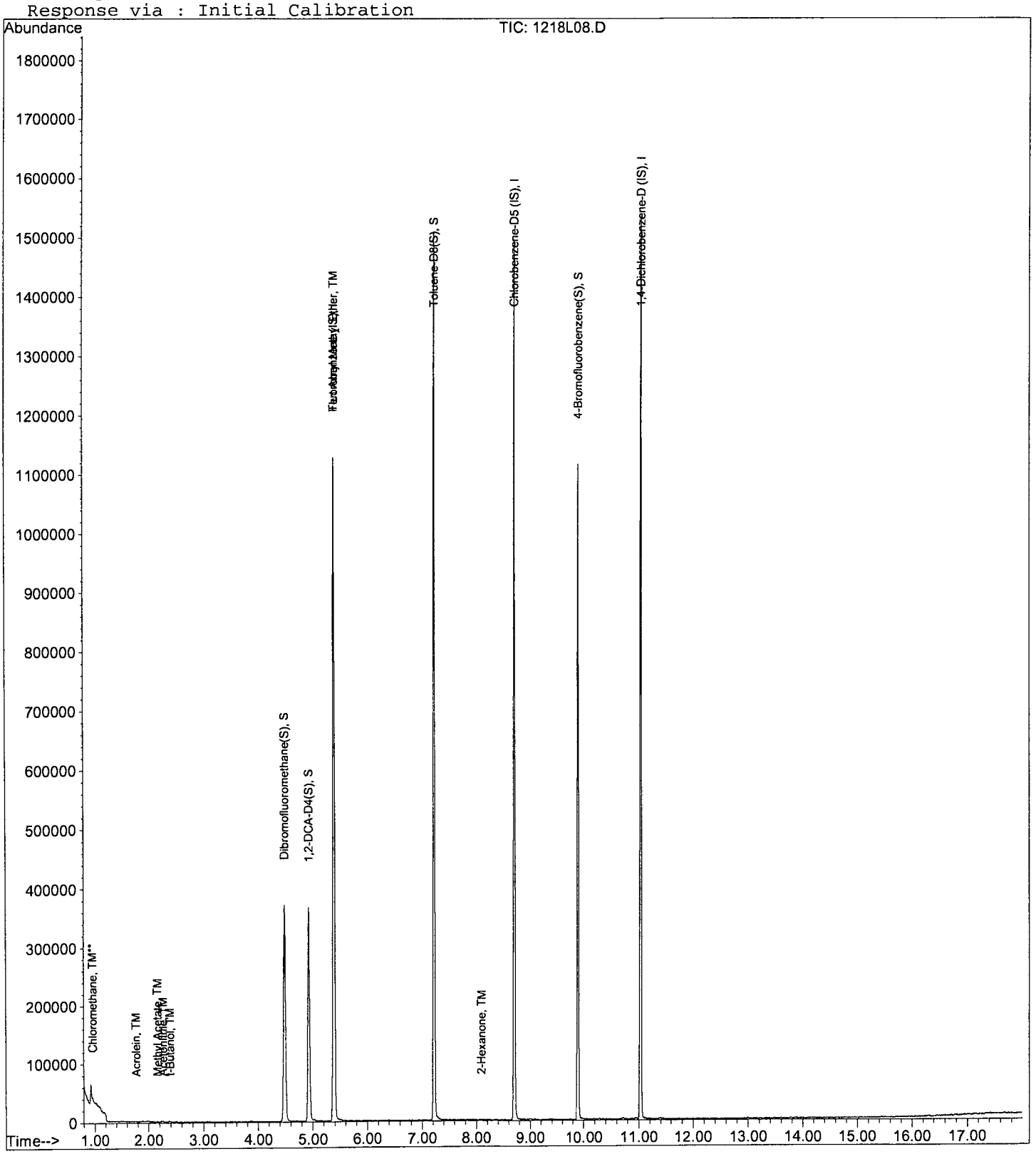
Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L08.D
Acq On : 18 Dec 16 19:57
Sample : 161218A BLK-1WL
Misc : W IS&S 11/21/16, 11/14/16

Vial: 8
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 19 7:12 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



Data File : M:\LOKI\DATA\161216\1218L08.D
Acq On : 18 Dec 16 19:57
Sample : 161218A BLK-1WL
Misc : W IS&S 11/21/16, 11/14/16

Vial: 8
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 10:27 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161216\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1127092	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1494012	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1533633	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	11221698m	12.92	ppb	100

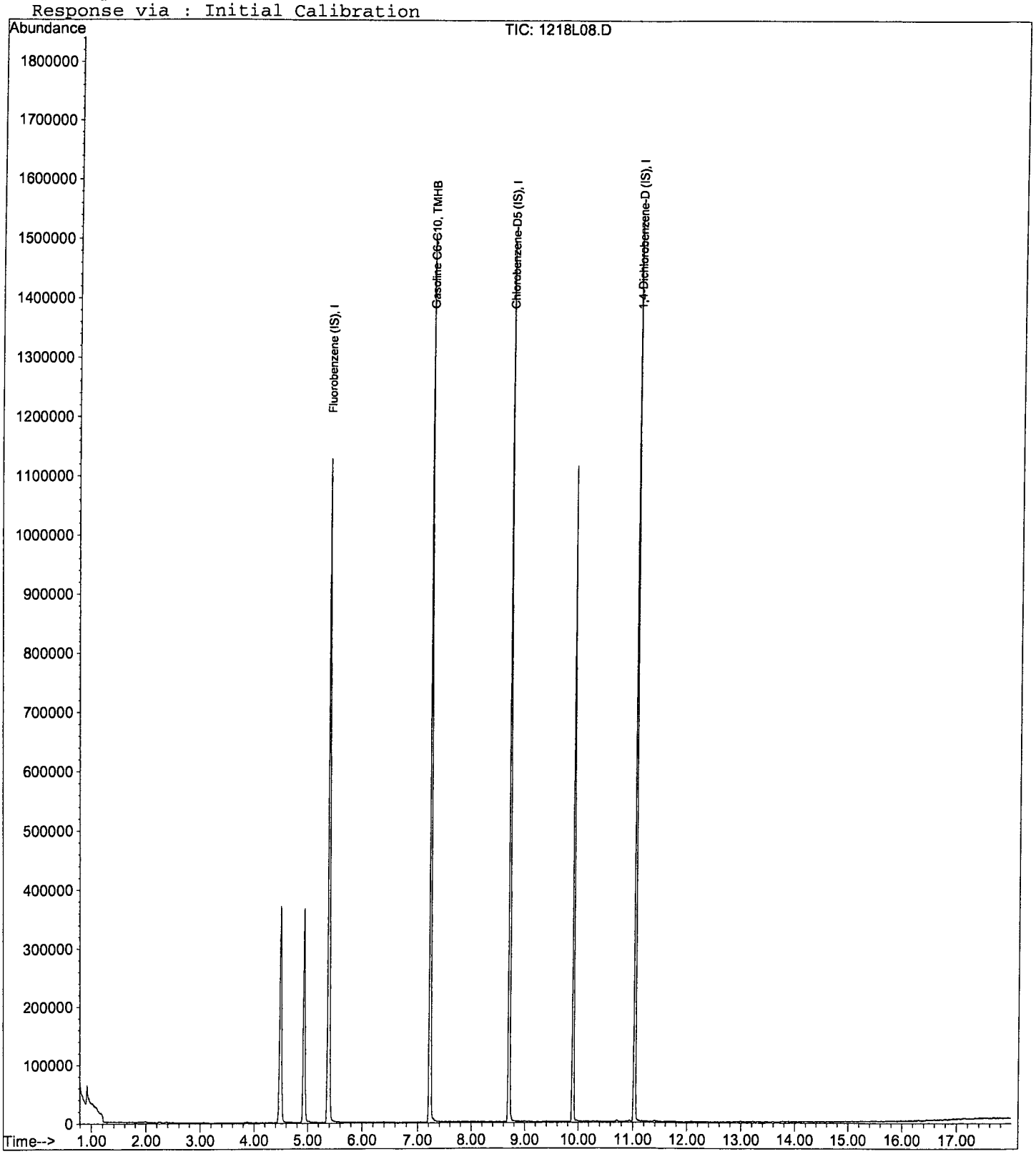
(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161216\1218L08.D
Acq On : 18 Dec 16 19:57
Sample : 161218A BLK-1WL
Misc : W IS&S 11/21/16, 11/14/16

Vial: 8
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 22 10:27 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161216\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Data File : M:\LOKI\DATA\161216\1218L08.D
Acq On : 18 Dec 16 19:57
Sample : 161218A BLK-1WL
Misc : W IS&S 11/21/16, 11/14/16

Vial: 8
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 29 8:15 2016 Quant Results File: LSUR1216.RES

Quant Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	543168	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	507456	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	262208	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	273480	24.74	ppb	0.00
Spiked Amount 25.000			Recovery = 98.964%			
3) 1,2-DCA-D4(S)	4.92	65	287538	24.19	ppb	0.00
Spiked Amount 25.000			Recovery = 96.760%			
5) Toluene-D8(S)	7.22	98	953279	24.19	ppb	0.00
Spiked Amount 25.000			Recovery = 96.744%			
6) 4-Bromofluorobenzene(S)	9.89	95	322458	23.90	ppb	0.00
Spiked Amount 25.000			Recovery = 95.616%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
1218L08.D LSUR1216.M Thu Dec 29 11:00:44 2016 Page 1

Quantitation Report

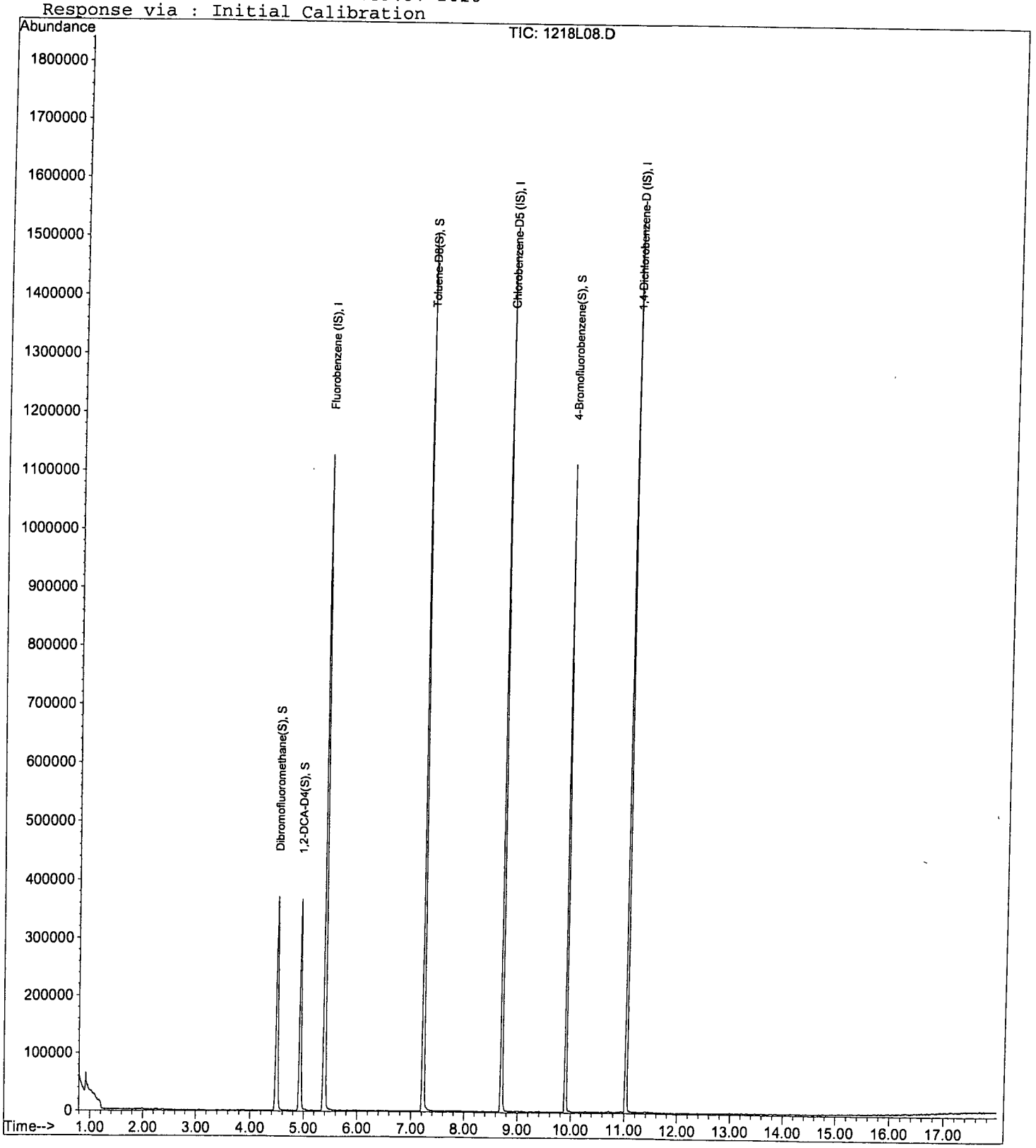
Data File : M:\LOKI\DATA\161216\1218L08.D
Acq On : 18 Dec 16 19:57
Sample : 161218A BLK-1WL
Misc : W IS&S 11/21/16, 11/14/16

Vial: 8
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 29 8:15 2016

Quant Results File: LSUR1216.RES

Method : M:\LOKI\DATA\161216\LSUR1216.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



Laboratory Control Spike Recovery
EPA 8260B BTEX WATER

APPL ID: **161218W-47493 LCS - 214886**
Batch ID: #86BTO-161218AL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1,2-DICHLOROETHANE	10.00	9.51	95.1	73-128
BENZENE	10.00	10.1	101	79-120
ETHYLBENZENE	10.00	10.6	106	79-121
TOLUENE	10.00	10.6	106	80-121
XYLENES (TOTAL)	30.0	32.4	108	79-121
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	23.6	94.4	81-118
SURROGATE: 4-BROMOFLUOROBENZE	25.0	24.9	99.6	85-114
SURROGATE: DIBROMOFLUOROMETH	25.0	24.1	96.4	80-119
SURROGATE: TOLUENE-D8 (S)	25.0	23.8	95.2	89-112

Comments: _____

Primary	SPK
Quant Method :	LALLW.M
Extraction Date :	12/18/16
Analysis Date :	12/18/16
Instrument :	Loki
Run :	1218L02
Initials :	DG

Printed: 01/03/17 3:24:07 PM
APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161216\1218L02.D Vial: 2
Acq On : 18 Dec 16 17:09 Operator: PM,DG,SV,CMM
Sample : 161218A CCV/LCS 10ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 18 17:51 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	574080	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	540800	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	303616	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.48	111	281883	24.13	ppb		0.00
Spiked Amount 25.000			Recovery = 96.512%				
37) 1,2-DCA-D4(S)	4.93	65	296244	23.58	ppb		0.00
Spiked Amount 25.000			Recovery = 94.324%				
57) Toluene-D8(S)	7.22	98	1001304	23.84	ppb		0.00
Spiked Amount 25.000			Recovery = 95.352%				
65) 4-Bromofluorobenzene(S)	9.89	95	358151	24.91	ppb		0.00
Spiked Amount 25.000			Recovery = 99.652%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.85	85	109544	10.49	ppb		99
3) Freon 114	0.93	85	71386	10.74	ppb		97
4) Chloromethane	0.96	50	153399	8.61	ppb		99
5) Vinyl chloride	1.02	62	125167	9.86	ppb		97
6) Bromomethane	1.22	96	95720	11.13	ppb		98
7) Chloroethane	1.29	64	69044	10.38	ppb		100
8) Dichlorofluoromethane	1.43	67	201883	9.41	ppb		99
9) Trichlorofluoromethane	1.46	101	134981	10.56	ppb		98
10) Acrolein	1.75	56	124587	105.32	ppb		99
11) Acetone	1.88	43	17695	6.83	ppb		98
12) Freon-113	1.84	101	65782	9.93	ppb		94
13) 1,1-DCE	1.83	96	59712	9.82	ppb		95
14) t-Butanol	2.40	59	32680	112.51	ppb		100
15) Acetonitrile	2.10	41	107914	83.95	ppb		98
16) Methyl Acetate	2.17	43	62715	8.44	ppb		98
17) Iodomethane	1.93	142	54872	9.23	ppb		96
18) Acrylonitrile	2.48	52	22314	8.37	ppb		94
19) Methylene chloride	2.24	84	121543	8.35	ppb		100
20) Carbon disulfide	1.98	76	250837	10.18	ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	245596	9.29	ppb		96
22) Trans-1,2-DCE	2.50	96	105230	9.97	ppb		98
23) Diisopropyl Ether	3.10	45	310697	9.00	ppb		96
24) 1,1-DCA	2.95	63	196200	9.68	ppb		99
25) Vinyl Acetate	3.09	43	71903	8.90	ppb	#	82
26) Ethyl tert Butyl Ether	3.59	59	255808	9.32	ppb		95
27) MEK (2-Butanone)	3.80	43	29091	8.97	ppb		92
28) Cis-1,2-DCE	3.73	96	122918	10.00	ppb		96
29) 2,2-Dichloropropane	3.70	77	51360	10.92	ppb		98
30) Chloroform	4.25	83	205030	9.97	ppb		99
31) Bromochloromethane	4.08	128	56507	9.79	ppb		95
33) 1,1,1-TCA	4.47	97	158277	10.46	ppb		93
34) Cyclohexane	4.53	41	59288	9.13	ppb		92
35) 1,1-Dichloropropene	4.72	75	125274	10.19	ppb		96
36) 2,2,4-Trimethylpentane	5.15	57	199557	10.68	ppb		96
38) Carbon Tetrachloride	4.71	119	122353	10.82	ppb		95
39) Tert Amyl Methyl Ether	5.22	73	234808	9.82	ppb		97
40) 1,2-DCA	5.03	62	143039	9.51	ppb		99
41) Benzene	4.99	78	442470	10.10	ppb		97
42) TCE	5.84	95	57112	10.52	ppb		97

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161216\1218L02.D Vial: 2
Acq On : 18 Dec 16 17:09 Operator: PM,DG,SV,CMM
Sample : 161218A CCV/LCS 10ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 18 17:51 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	2-Pentanone	6.12	43	614641	115.42	ppb		97
44)	1,2-Dichloropropane	6.09	63	115885	9.19	ppb		98
45)	Bromodichloromethane	6.44	83	145369	9.62	ppb		98
46)	Methyl Cyclohexane	6.04	83	109674	10.27	ppb		98
47)	Dibromomethane	6.22	93	63325	9.63	ppb		97
48)	2-Chloroethyl vinyl ether	6.55	43	183	-0.51	ppb		100
49)	MIBK (methyl isobutyl ket	7.16	43	70128	8.97	ppb		97
50)	1-Bromo-2-chloroethane	6.75	63	75280	9.07	ppb		95
51)	Cis-1,3-Dichloropropene	6.95	75	165436	9.94	ppb		96
52)	Toluene	7.29	91	486567	10.58	ppb		99
53)	Trans-1,3-Dichloropropene	7.56	75	135946	9.80	ppb		95
54)	1,1,2-TCA	7.74	83	75298	9.82	ppb		93
55)	2-Hexanone	8.04	43	19250	8.54	ppb	#	93
58)	1,2-EDB	8.20	107	80994	9.37	ppb		97
59)	Tetrachloroethene	7.86	166	111635	10.59	ppb		98
60)	1-Chlorohexane	8.76	91	109742	10.02	ppb		93
61)	1,1,1,2-Tetrachloroethane	8.83	131	108255	9.94	ppb		97
62)	m&p-Xylene	8.99	106	401071	21.76	ppb		99
63)	o-Xylene	9.38	106	190598	10.62	ppb		94
64)	Styrene	9.39	104	212288	10.65	ppb		99
66)	1,3-Dichloropropane	7.90	76	148621	9.15	ppb		99
67)	Dibromochloromethane	8.12	129	103097	10.04	ppb		98
68)	Chlorobenzene	8.73	112	305818	9.81	ppb		97
69)	Ethylbenzene	8.87	91	516801	10.57	ppb		98
70)	Bromoform	9.55	173	59995	9.55	ppb		93
72)	Isopropylbenzene	9.76	105	469568	10.65	ppb		100
73)	1,1,2,2-Tetrachloroethane	10.07	83	106487	9.24	ppb		99
74)	1,2,3-Trichloropropane	10.09	110	19496	9.23	ppb		100
75)	t-1,4-Dichloro-2-Butene	10.12	53	20614	8.02	ppb		100
76)	Bromobenzene	10.01	156	131121	10.29	ppb		98
77)	n-Propylbenzene	10.17	91	566919	10.66	ppb		99
78)	4-Ethyltoluene	10.28	105	478017	10.88	ppb		98
79)	2-Chlorotoluene	10.22	91	359211	10.11	ppb		97
80)	1,3,5-Trimethylbenzene	10.36	105	422436	11.08	ppb		96
81)	4-Chlorotoluene	10.34	91	416734	10.56	ppb		98
82)	Tert-Butylbenzene	10.66	119	325142	10.83	ppb		97
83)	1,2,4-Trimethylbenzene	10.71	105	432890	11.30	ppb		100
84)	Sec-Butylbenzene	10.88	105	463771	10.83	ppb		99
85)	p-Isopropyltoluene	11.04	119	403416	10.81	ppb		99
86)	Benzyl Chloride	11.19	91	128686	11.41	ppb		99
87)	1,3-DCB	10.96	146	250428	10.14	ppb		99
88)	1,4-DCB	11.05	146	253914	9.92	ppb		99
89)	n-Butylbenzene	11.44	91	345102	10.50	ppb		99
90)	1,2-DCB	11.41	146	228813	9.80	ppb		97
91)	Hexachloroethane	11.66	117	84011	10.13	ppb		88
92)	1,2-Dibromo-3-chloropropan	12.18	157	15982	9.10	ppb	#	86
93)	1,2,4-Trichlorobenzene	13.00	180	140277	9.89	ppb		99
94)	Hexachlorobutadiene	13.19	225	58960	10.34	ppb		96
95)	Naphthalene	13.22	128	150080	9.47	ppb		100
96)	1,2,3-Trichlorobenzene	13.46	180	78680	8.87	ppb		98

(#) = qualifier out of range (m) = manual integration

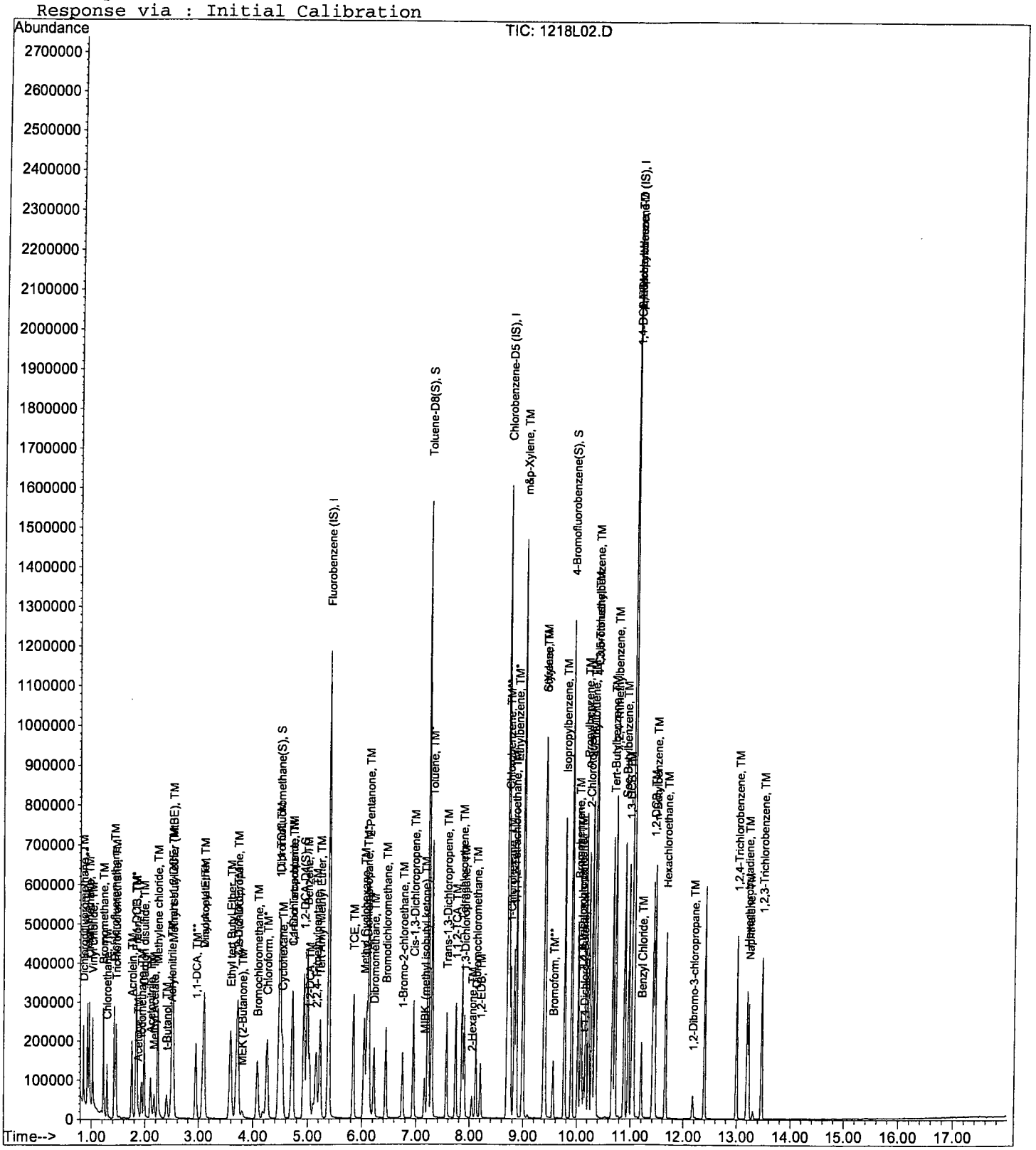
Quantitation Report

Data File : M:\LOKI\DATA\161216\1218L02.D
Acq On : 18 Dec 16 17:09
Sample : 161218A CCV/LCS 10ug/L
Misc : W IS&S 11/21/16, 11/14/16

Vial: 2
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 18 17:51 2016 Quant Results File: LALLW.RES

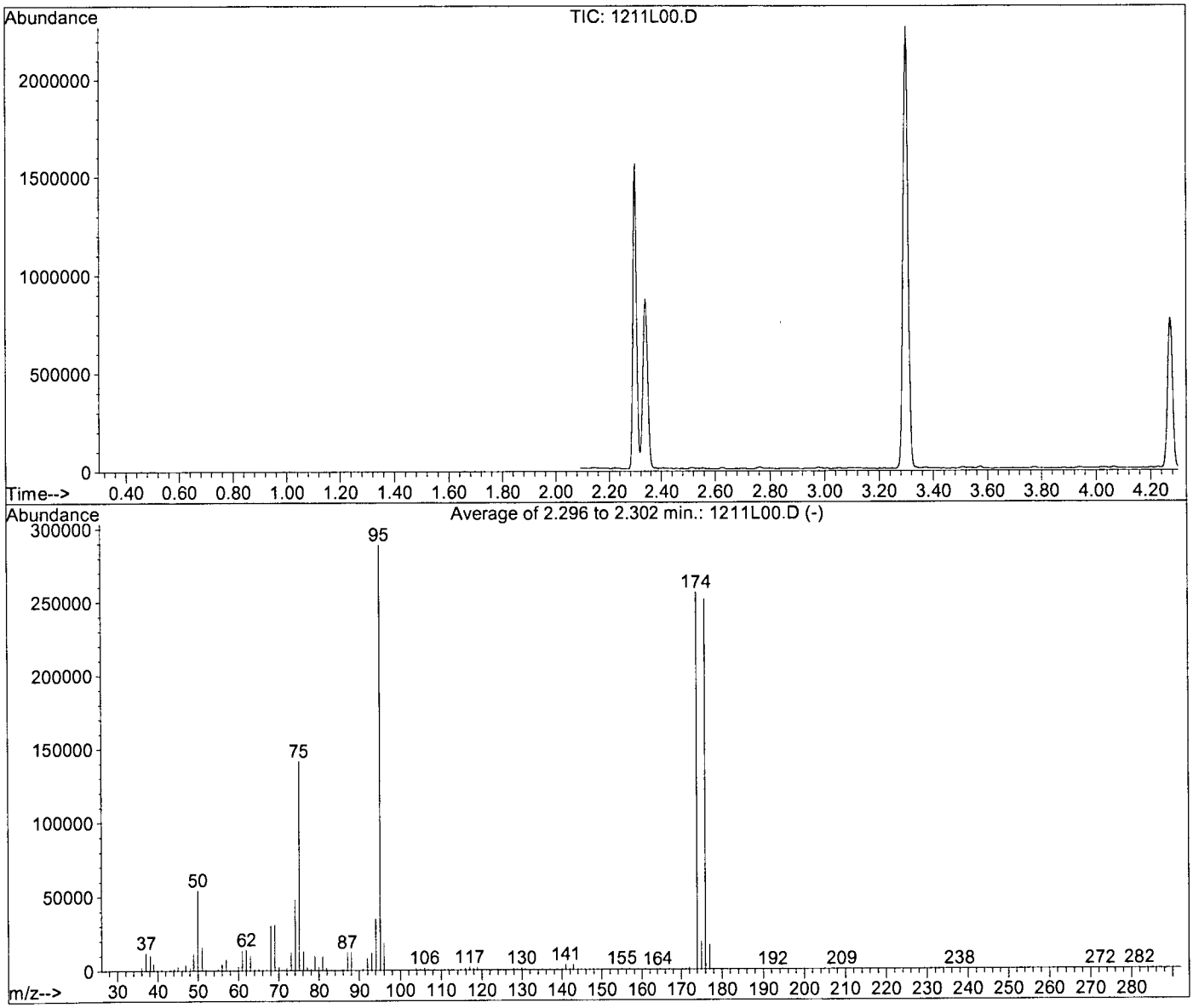
Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Sat Dec 17 14:59:37 2016
Response via : Initial Calibration



Data File : M:\LOKI\DATA\161210\1211L00.D
Acq On : 11 Dec 16 9:57
Sample : 5ng- BFB STD 11-06-16
Misc : 2ul

Vial: 1
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Method : M:\MAX\DATA\M161210\MALLW.M (RTE Integrator)
Title : METHOD 8260B



Spectrum Information: Average of 2.296 to 2.302 min.

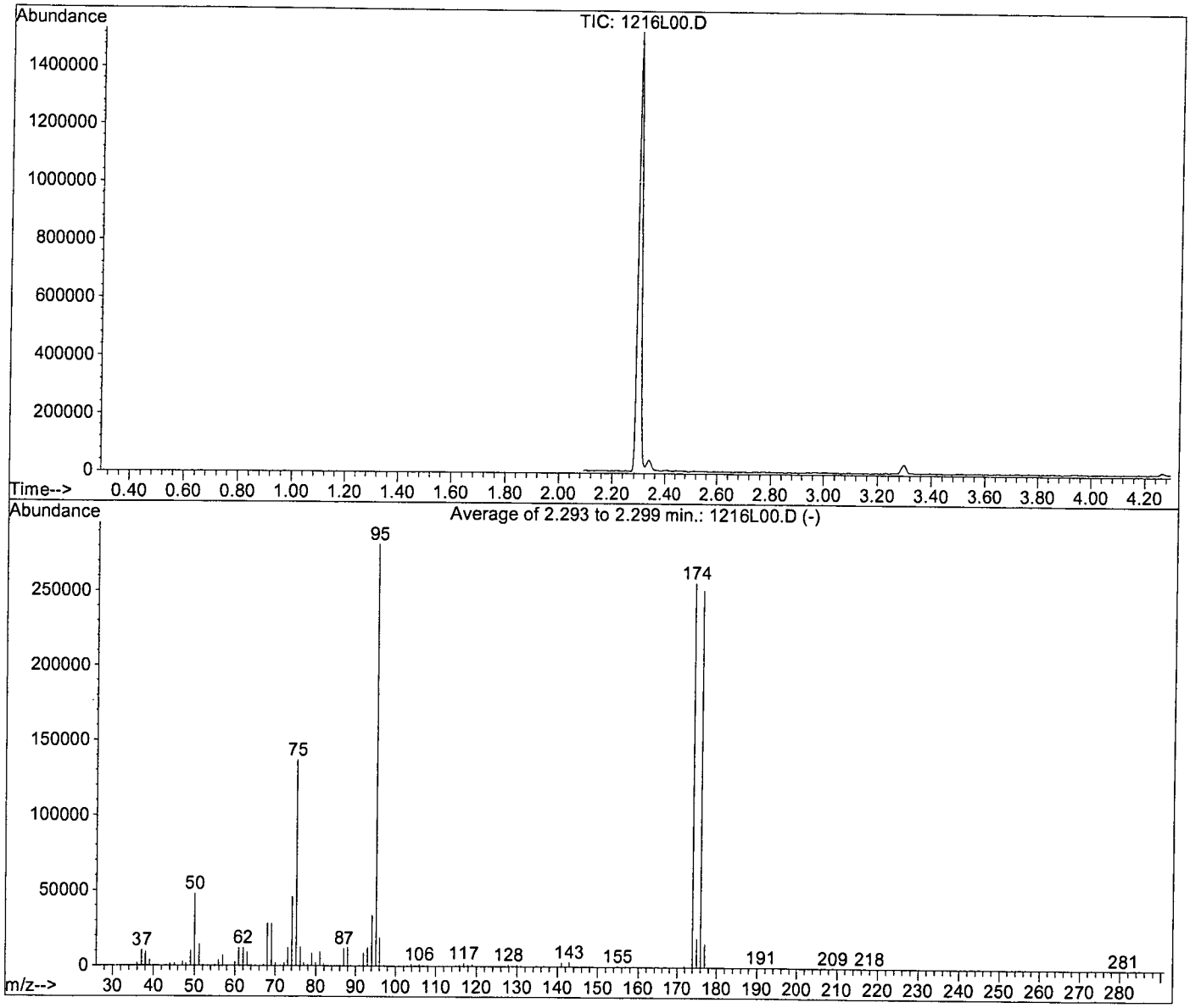
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.7	54010	PASS
75	95	30	60	49.0	141438	PASS
95	95	100	100	100.0	288917	PASS
96	95	5	9	6.3	18227	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	88.7	256235	PASS
175	174	5	9	7.4	18872	PASS
176	174	95	101	98.1	251349	PASS
177	176	5	9	6.5	16357	PASS

1211L00.D MALLW.M Thu Dec 29 10:31:42 2016

Data File : M:\LOKI\DATA\161216\1216L00.D
Acq On : 16 Dec 16 11:37
Sample : 5ng- BFB STD 12-15-16
Misc : 2ul

Vial: 1
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Method : M:\LOKI\DATA\161216\LALLW.M (RTE Integrator)
Title : METHOD 8260B



AutoFind: Scans 63, 64, 65; Background Corrected with Scan 54

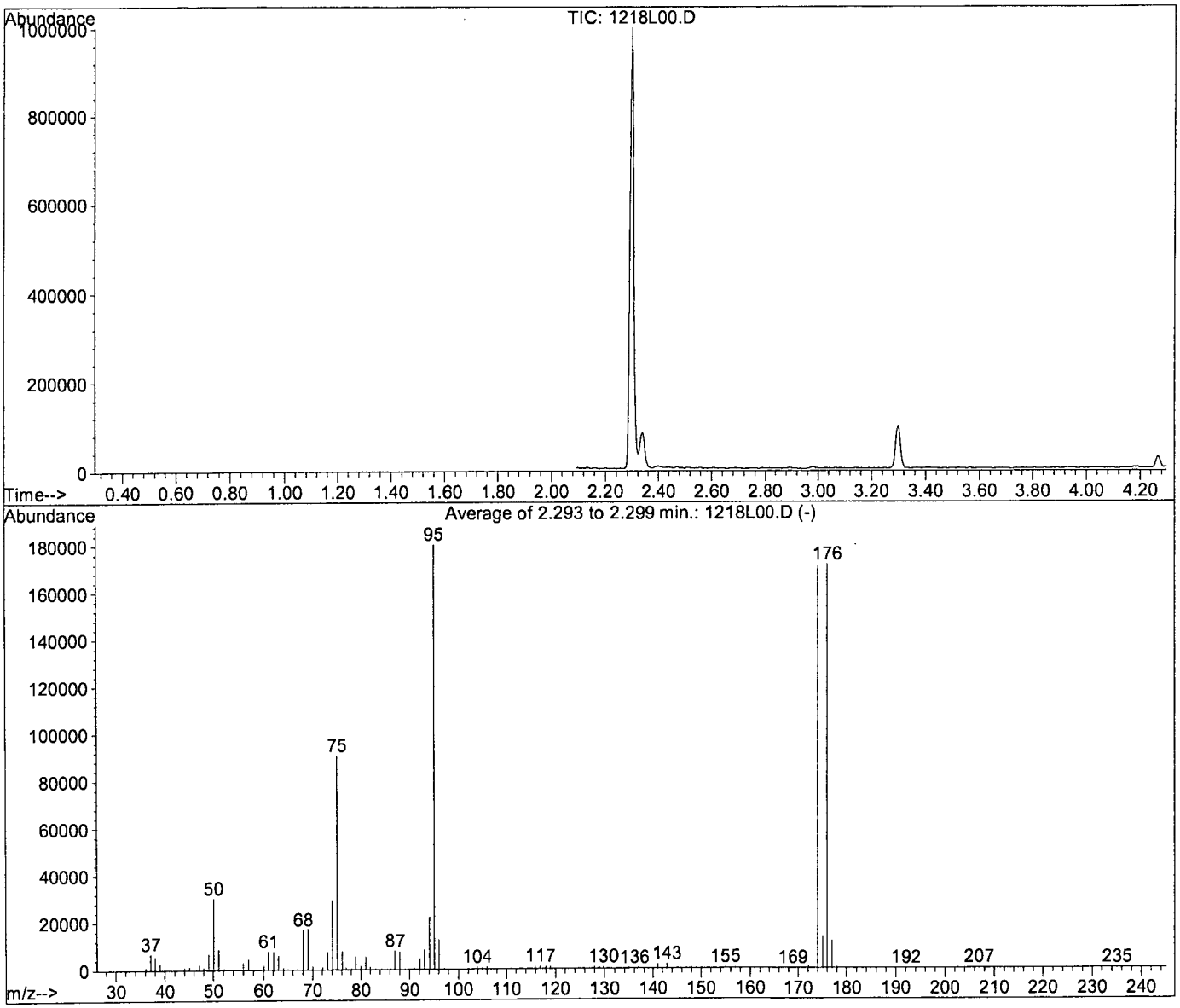
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.0	47940	PASS
75	95	30	60	48.6	136755	PASS
95	95	100	100	100.0	281493	PASS
96	95	5	9	6.7	18792	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	91.2	256619	PASS
175	174	5	9	7.5	19277	PASS
176	174	95	101	98.0	251563	PASS
177	176	5	9	6.3	15766	PASS

1216L00.D LALLW.M Wed Dec 28 11:58:01 2016

Data File : M:\LOKI\DATA\161216\1218L00.D
Acq On : 18 Dec 16 16:23
Sample : 5ng- BFB STD 12-15-16
Misc : 2ul

Vial: 1
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Method : M:\MAX\DATA\M161210\MALLW.M (RTE Integrator)
Title : METHOD 8260B



Spectrum Information: Average of 2.293 to 2.299 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.8	30251	PASS
75	95	30	60	50.2	90595	PASS
95	95	100	100	100.0	180352	PASS
96	95	5	9	6.9	12455	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	94.8	171051	PASS
175	174	5	9	7.9	13477	PASS
176	174	95	101	100.4	171712	PASS
177	176	5	9	6.7	11581	PASS

1218L00.D MALLW.M Thu Dec 29 10:52:52 2016

PRIMARY STANDARD

12/06/16H							
50ug/ml Vol Work Std #7							
Exp:01/06/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120016-03	Gas Mix	2000	279822-36645	12/06/16A-CMM	02/19/19	100
02SI	020049-02	HEXACHLOROETHANE	1000	254167-36562	12/06/16B-CMM	12/28/17	200
02SI	020228-02	Benzyl Chloride	1000	279824-36573	12/06/16C-CMM	05/24/18	200
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	3500
12/06/16I							
50ug/ml Vol Work Std #1							
Exp:01/06/17					Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	020145-02-02	2-CEVE	2000	288264-37217	11/22/16C-CMM	09/19/19	50
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	1950
12/06/16J							
50ug/ml Vol Work Std #8							
Exp:01/06/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	122039-02	Volatile Mix, 20-29	2000	258033-37168	11/12/16B-CMM	08/17/17	100
02SI	120023-03	VOC'S-54 COMP	2000	271929-36580	11/12/16C-CMM	02/15/18	100
02SI	020232-02	Vinyl Acetate	2000	292241-37193	11/22/16D-CMM	08/01/17	100
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	3700
12/06/16K							
50ug/ml Vol Work Std #2							
Exp:01/06/17							
Supplier	ID #	ID	ug/ml				
02SI	121020-05	HSL'S-Ketone Solution	2000	292248-37204	11/22/16B-CMM	11/08/18	100
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	3900
		12/06/16L					
		5ug/ml Vol Work Std #9					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #7		**12/06/16H**	Exp:01/06/17	200	
		50ug/ml Vol Work Std #8		**12/06/16J**	Exp:01/06/17	200	
		J&T Brand		11/15/16	11/15/17	1600	
		12/06/16M					
		5ug/ml Vol Work Std #10					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #1		**12/06/16I**	Exp:01/06/17	200	
		J&T Brand		11/15/16	11/15/17	1800	
		12/06/16N					
		5ug/ml Vol Work Std #12					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #2		**12/06/16K**	Exp:01/06/17	200	
		J&T Brand		11/15/16	11/15/17	1800	
12/06/16O							
250ug/ml TBA/IBA/Acetonitrile/Cyclohexanone/Acrolein/2-P							
Exp:01/06/17			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
02SI	120166-01	Volatile Mix 4-3	2000	275544-36407	12/06/16D-CMM	03/28/18	500
02SI	020229-09-02	Acrolein	10000	291928-37174	11/22/16E-CMM	12/12/16	100
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	3400

SECONDARY SOURCE

12/06/16P							
50ug/ml VOC Std#4							
Exp:01/06/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120296-01-SS	Custom 8260 Solution	2000	258037-36087	11/03/16D-CMM	08/18/17	50
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	1950
12/06/16Q							
50ug/ml VOC Std#5							
Exp:01/06/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120016-03-SS	8260 Gases(SS)	2000	279826-36674	12/06/16E-CMM	06/01/19	50
02SI	020145-02-02-SS	2-CEVE (SS)	2000	254171-35384	11/22/16G-CMM	06/21/17	50
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	1900
12/06/16R							

50ug/ml VOC Std#6							
Exp:01/06/17							
	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120023-03-SS	VOC'S 54 COMP.	2000	265897-35926	11/12/16H-CMM	11/29/17	50
02SI	020232-02-SS	Vinyl Acetate(SS)	2000	287420-37046	11/22/16H-CMM	11/27/16	50
02SI	020049-02-SS	HEXACHLOROETHANE (SS)	1000	265899-35938	12/06/16F-CMM	11/30/17	100
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	1800
12/06/16S							
250ug/ml TBA/IBA/Acetonitrile/Acrolein/2-P							
Exp:01/06/17			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
02SI	120166-01-SS	VOC Mix 4-3 (SS)	2000	258040-37229	12/06/16G-CMM	08/22/18	250
02SI	020229-09-SS	Acrolein SOLUTION (SS)	10000	291929-37176	11/22/16I-CMM	12/12/16	50
J&T Brand		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	1700
8260 water		spiked with		Total Vol			
CCV/LCS	10ug/L Vol Std	10uL of 50ug/ml Std #7		50mL P&T H2O			
Ending CCV		10uL of 50ug/ml Std #8					
		10uL of 50ug/ml Std #1					
		10uL of 50ug/ml Std #2					
		25uL of 250ug/ml Std TBA					
X4 ketones							
LCS	10ug/L Vol Std	10uL of 50ug/ml Std #7		50mL P&T H2O			
		10uL of 50ug/ml Std #8					
		10uL of 50ug/ml Std #1					
		40uL of 50ug/ml Std #2					
		25uL of 250ug/ml Std TBA					
8260 soil		spiked with		Total Vol			
CCV/LCS	50ug/Kg Vol Std	5uL of 50ug/ml Std #7		5mL P&T H2O			
Ending CCV		5uL of 50ug/ml Std #8					
		5uL of 50ug/ml Std #1					
		5uL of 50ug/ml Std #2					
		5uL of 250ug/ml Std TBA					
Matrix spikes are prepared with same standards as ccv (see above) into the sample.							
8260water		spiked with		Total Vol			
SS	10ug/L STD	10uL of 50ug/ml Std #4		50mL P&T H2O			
		10uL of 50ug/ml Std #5					
		10uL of 50ug/ml Std #6					
		25uL of 250ug/ml Std TBA					
8260 SOIL	50ug/Kg STD	5uL of 50ug/ml Std #4		Total Vol			
SS		5uL of 50ug/ml Std #5		5mL P&T H2O			
		5uL of 50ug/ml Std #6					
		5uL of 250ug/ml Std TBA					

GASOLINE							
12/04/16A							
Gasoline 2000ug/ml PRIMARY SOURCE					Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
Restek		Unleaded Gasoline	50,000	A0101233-35581	07/09/16ADG	03/31/21	80
OMNISOLV		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	1920
12/05/16B							
Gasoline 2000ug/ml SECONDARY SOURCE			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
O2SI	020246-06	Unleaded Gasoline	5,000	250389-36597	12/5/16ADG	05/04/18	800
OMNISOLV		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	1200

Injection Log

Directory: M:\LOKI\DATA\161210\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1211L00.D	1	5ng- BFB STD 11-06-16	2ul	11 Dec 16 9:57
2	6	1211L06.D	1	20ug/L GAS STD 12/11/16A	W IS&S 11/21/16, 11/14/16	11 Dec 16 12:39
3	7	1211L07.D	1	50ug/L GAS STD 12/11/16B	W IS&S 11/21/16, 11/14/16	11 Dec 16 13:07
4	8	1211L08.D	1	100ug/L GAS STD 12/11/16C	W IS&S 11/21/16, 11/14/16	11 Dec 16 13:35
5	9	1211L09.D	1	300ug/L GAS STD 12/11/16D	W IS&S 11/21/16, 11/14/16	11 Dec 16 14:03
6	10	1211L10.D	1	600ug/L GAS STD 12/11/16E	W IS&S 11/21/16, 11/14/16	11 Dec 16 14:32
7	11	1211L11.D	1	800ug/L GAS STD 12/11/16F	W IS&S 11/21/16, 11/14/16	11 Dec 16 15:00
8	12	1211L12.D	1	1000ug/L GAS STD 12/11/16G	W IS&S 11/21/16, 11/14/16	11 Dec 16 15:28
9	16	1211L16.D	1	(SS) 300ug/L GAS STD 12/11/16	W IS&S 11/21/16, 11/14/16	11 Dec 16 17:21
10	1	1216L00.D	1	5ng- BFB STD 12-15-16	2ul	16 Dec 16 11:37
11	4	1216L04.D	1	0.3ug/L VOC STD 12/16/16AI	W IS&S 11/21/16, 11/14/16	16 Dec 16 13:18
12	5	1216L05.D	1	0.5ug/L VOC STD 12/16/16AJ	W IS&S 11/21/16, 11/14/16	16 Dec 16 13:46
13	6	1216L06.D	1	1.0ug/L VOC STD 12/16/16AK	W IS&S 11/21/16, 11/14/16	16 Dec 16 14:14
14	7	1216L07.D	1	2.0ug/L VOC STD 12/16/16AL	W IS&S 11/21/16, 11/14/16	16 Dec 16 14:42
15	8	1216L08.D	1	5.0ug/L VOC STD 12/16/16AM	W IS&S 11/21/16, 11/14/16	16 Dec 16 15:10
16	9	1216L09.D	1	10ug/L VOC STD 12/16/16AN	W IS&S 11/21/16, 11/14/16	16 Dec 16 15:38
17	10	1216L10.D	1	20ug/L VOC STD 12/16/16AO	W IS&S 11/21/16, 11/14/16	16 Dec 16 16:06
18	11	1216L11.D	1	40ug/L VOC STD 12/16/16AP	W IS&S 11/21/16, 11/14/16	16 Dec 16 16:35
19	12	1216L12.D	1	100ug/L VOC STD 12/16/16AQ	W IS&S 11/21/16, 11/14/16	16 Dec 16 17:03
20	17	1216L17.D	1	(SS)10ug/L VOC STD 12/16/16	W IS&S 11/21/16, 11/14/16	16 Dec 16 19:23
21	1	1218L00.D	1	5ng- BFB STD 12-15-16	2ul	18 Dec 16 16:23
22	2	1218L02.D	1	161218A CCV/LCS 10ug/L	W IS&S 11/21/16, 11/14/16	18 Dec 16 17:09
23	4	1218L04.D	1	161218A CCV/LCS 300ug/L	W IS&S 11/21/16, 11/14/16	18 Dec 16 18:05
24	8	1218L08.D	1	161218A BLK-1WL	W IS&S 11/21/16, 11/14/16	18 Dec 16 19:57
25	10	1218L10.D	1	AZ47656W01	W IS&S 11/21/16, 11/14/16	18 Dec 16 20:53
26	11	1218L11.D	1	AZ47657W01	W IS&S 11/21/16, 11/14/16	18 Dec 16 21:21
27	19	1218L19.D	1	AZ47658W01	W IS&S 11/21/16, 11/14/16	19 Dec 16 1:04
28	20	1218L20.D	1	AZ47659W01	W IS&S 11/21/16, 11/14/16	19 Dec 16 1:32
29	21	1218L21.D	1	AZ47660W01	W IS&S 11/21/16, 11/14/16	19 Dec 16 2:00
30	22	1218L22.D	1	AZ47661W01	W IS&S 11/21/16, 11/14/16	19 Dec 16 2:28
31	23	1218L23.D	1	AZ47662W01	W IS&S 11/21/16, 11/14/16	19 Dec 16 2:56
32	24	1218L24.D	1	AZ47663W01	W IS&S 11/21/16, 11/14/16	19 Dec 16 3:24
33	25	1218L25.D	1	AZ47664W01	W IS&S 11/21/16, 11/14/16	19 Dec 16 3:52
34	26	1218L26.D	1	AZ47665W01	W IS&S 11/21/16, 11/14/16	19 Dec 16 4:20
35	27	1218L27.D	1	Ending CCV 8260 10ug/L 12/18/16	W IS&S 11/21/16, 11/14/16	19 Dec 16 4:48
36	28	1218L28.D	1	Ending CCV 8260 300ug/L 12/18/16	W IS&S 11/21/16, 11/14/16	19 Dec 16 5:16

ORGANICS

APPL, INC.

ORGANICS
QC Summary

APPL, INC.

Method Blank
METHANE

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161217W-47345 - 214809**
Batch ID: #RSKME-161217A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	METHANE	1.00 U	5.0	1.00	0.25	ug/L	12/17/16	12/17/16

Quant Method: RSK0901.M
Run #: 1217008
Instrument: Rocky
Sequence: 160901
Initials: CMO

GC SC-Blank-REG MDLs-DOD
Printed: 12/21/16 11:44:19 AM

Laboratory Control Spike Recovery
METHANE

APPL ID: **161217W-47345 LCS - 214809**
Batch ID: #RSKME-161217A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
METHANE	668	815	122	72-125

Primary	SPK
Quant Method :	RSK0901.M
Extraction Date :	12/17/16
Analysis Date :	12/17/16
Instrument :	Rocky
Run :	1217007
Initials :	CMO

Comments: _____

Printed: 12/21/16 1:13:19 PM
APPL Standard LCS

RSK 175

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81776

Case No: 81776 Date Analyzed: 12/17/16

Matrix: WATER Instrument: Rocky

Blank ID: 161217A-BLK Time Analyzed: 0957

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161217A-LCS	Lab Control Spike	1217007	12/17/16 0948
161217A-BLK	Blank	1217008	12/17/16 0957
AZ47656	ERH151	1217018	12/17/16 1225
AZ47657	ERH142	1217019	12/17/16 1229
AZ47658	ERH147	1217020	12/17/16 1237
AZ47660	ERH152	1217021	12/17/16 1241
AZ47663	ERH138	1217022	12/17/16 1247
AZ47665	ERH140	1217024	12/17/16 1304
AZ47664	ERH144	1217025	12/17/16 1307

Comments: Batch: #RSKME-161217A

Printed: 12/21/16 11:29:14 AM
Form 4, Blank Summary

ORGANICS
Sample Data

APPL, INC.

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH151
Sample Collection Date: 12/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776
APPL ID: AZ47656
QCG: #RSKME-161217A-214809

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	12/17/16	12/17/16

Quant Method:	RSK0901.M
Run #:	1217018
Instrument:	Rocky
Sequence:	160901
Dilution Factor:	1
Initials:	CMO

Printed: 12/21/16 11:29:28 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1217018.D Vial: 6
Acq On : 17 Dec 16 12:25 Operator: lac
Sample : AZ47656W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 21 11:59 2016 Quant Results File: RSK0901.RES

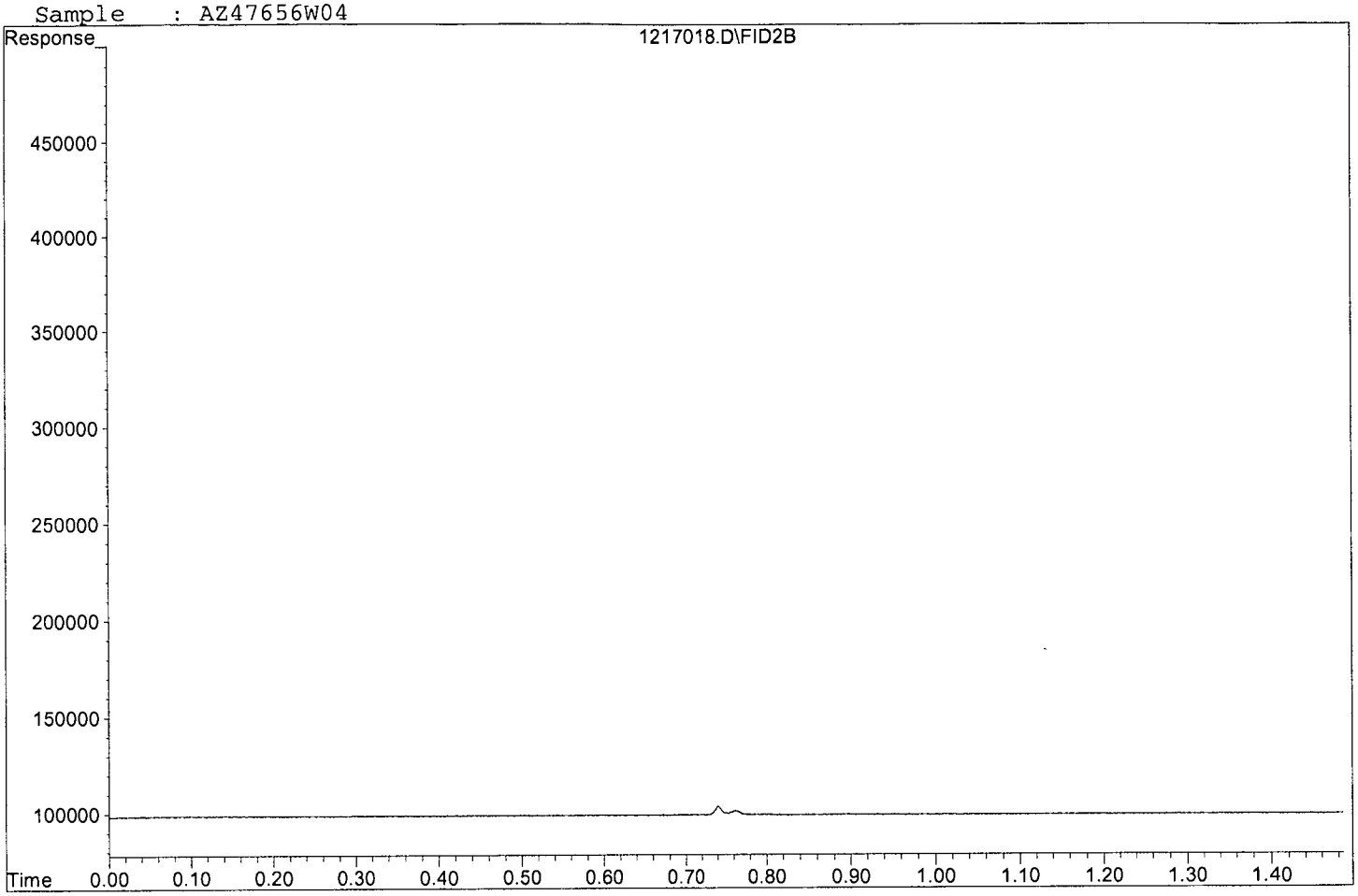
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Dec 21 11:57:46 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.76	2401	N.D.	ppb
2) ATM Ethane	0.91	329	N.D.	ppb
3) ATM Ethene	0.99	297	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1217018.D
Sample : AZ47656W04



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH142
Sample Collection Date: 12/13/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776
APPL ID: AZ47657
QCG: #RSKME-161217A-214809

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	12/17/16	12/17/16

Quant Method: RSK0901.M
Run #: 1217019
Instrument: Rocky
Sequence: 160901
Dilution Factor: 1
Initials: CMO

Printed: 12/21/16 11:29:28 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1217019.D Vial: 7
Acq On : 17 Dec 16 12:29 Operator: lac
Sample : AZ47657W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 21 11:59 2016 Quant Results File: RSK0901.RES

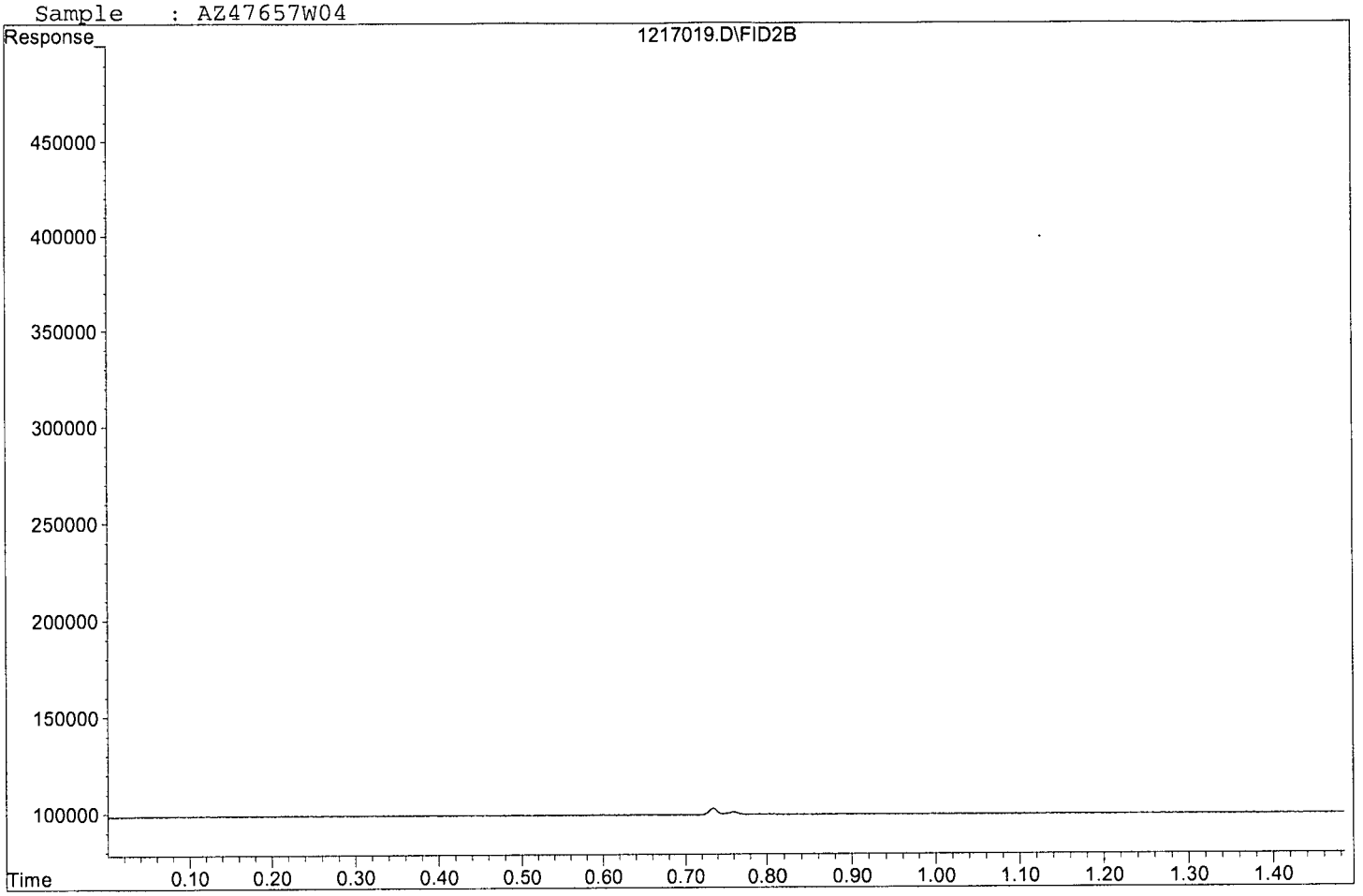
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Dec 21 11:57:46 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.76	1661	N.D.	ppb
2) ATM Ethane	0.91	387	N.D.	ppb
3) ATM Ethene	0.99	259	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1217019.D
Sample : AZ47657W04



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH147
Sample Collection Date: 12/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776
APPL ID: AZ47658
QCG: #RSKME-161217A-214809

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	12/17/16	12/17/16

Quant Method: RSK0901.M
Run #: 1217020
Instrument: Rocky
Sequence: 160901
Dilution Factor: 1
Initials: CMO

Printed: 12/21/16 11:29:28 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1217020.D Vial: 8
Acq On : 17 Dec 16 12:37 Operator: lac
Sample : AZ47658W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 21 11:59 2016 Quant Results File: RSK0901.RES

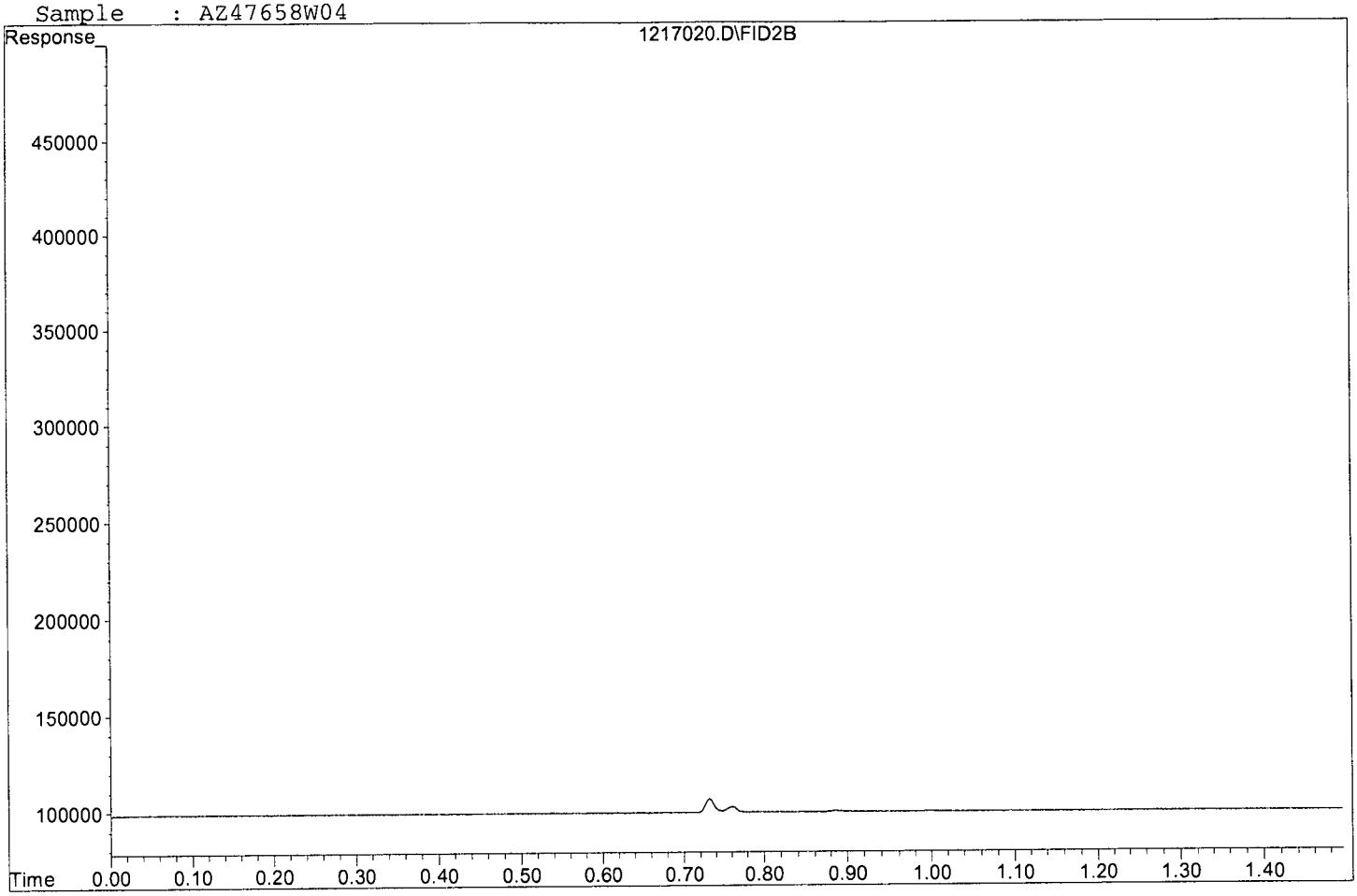
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Dec 21 11:57:46 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.76	3210	N.D.	ppb
2) ATM Ethane	0.91	426	N.D.	ppb
3) ATM Ethene	0.99	390	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1217020.D
Sample : AZ47658W04



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH152
Sample Collection Date: 12/14/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776
APPL ID: AZ47660
QCG: #RSKME-161217A-214809

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	12/17/16	12/17/16

Quant Method:	RSK0901.M
Run #:	1217021
Instrument:	Rocky
Sequence:	160901
Dilution Factor:	1
Initials:	CMO

Printed: 12/21/16 11:29:28 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1217021.D Vial: 9
Acq On : 17 Dec 16 12:41 Operator: lac
Sample : AZ47660W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 21 11:59 2016 Quant Results File: RSK0901.RES

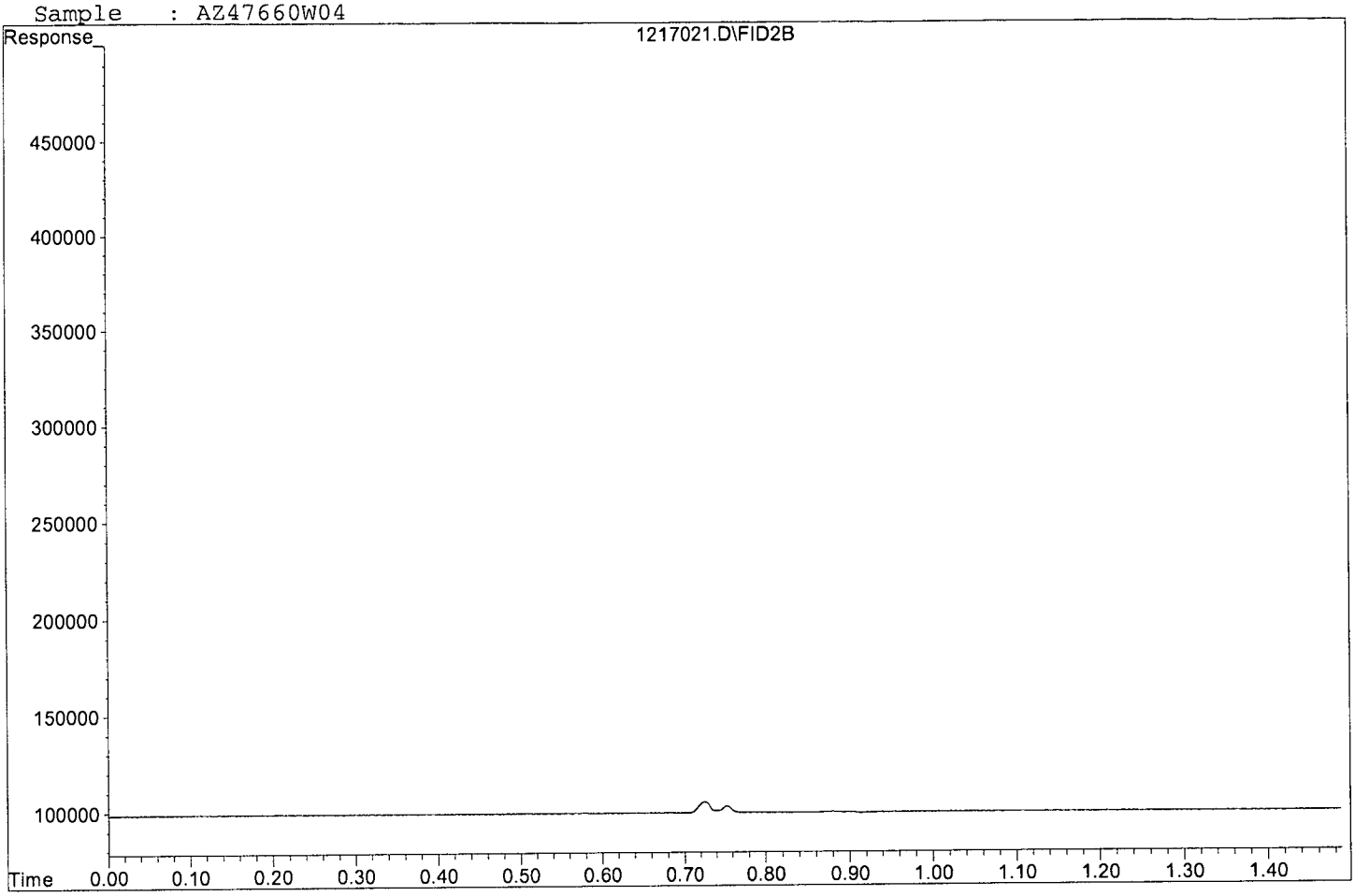
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Dec 21 11:57:46 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.75	3596	N.D.	ppb
2) ATM Ethane	0.90	543	N.D.	ppb
3) ATM Ethene	0.99	423	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1217021.D
Sample : AZ47660W04



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH138
Sample Collection Date: 12/13/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776
APPL ID: AZ47663
QCG: #RSKME-161217A-214809

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	12/17/16	12/17/16

Quant Method:	RSK0901.M
Run #:	1217022
Instrument:	Rocky
Sequence:	160901
Dilution Factor:	1
Initials:	CMO

Printed: 12/21/16 11:29:28 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1217022.D Vial: 10
Acq On : 17 Dec 16 12:47 Operator: lac
Sample : AZ47663W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 21 11:59 2016 Quant Results File: RSK0901.RES

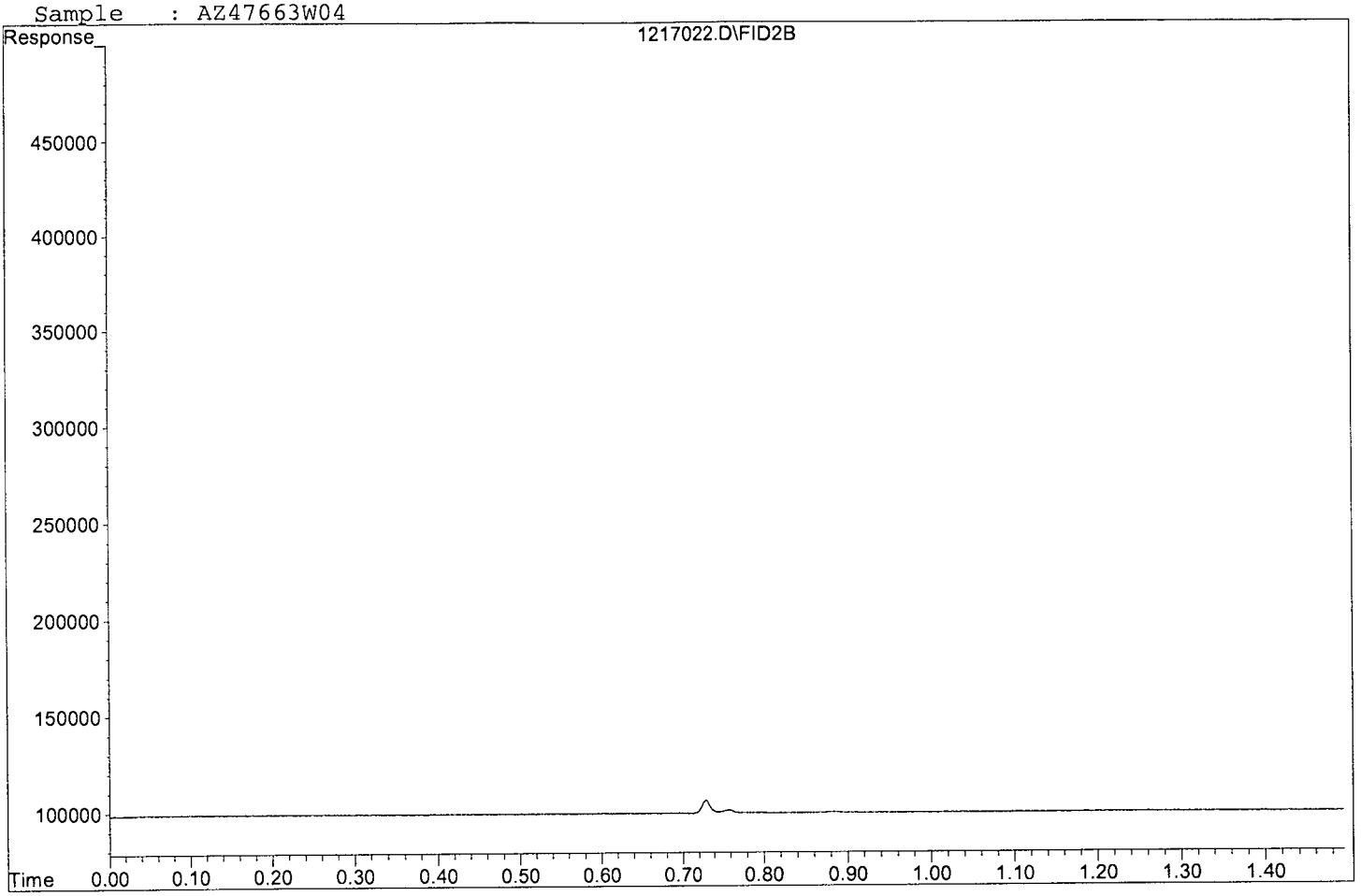
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Dec 21 11:57:46 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.76	1789	N.D.	ppb
2) ATM Ethane	0.91	360	N.D.	ppb
3) ATM Ethene	1.00	240	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1217022.D
Sample : AZ47663W04



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH144
Sample Collection Date: 12/13/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776
APPL ID: AZ47664
QCG: #RSKME-161217A-214809

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	16000	250.0	50.00	12.50	ug/L	12/17/16	12/17/16

Quant Method: RSK0901.M
Run #: 1217025
Instrument: Rocky
Sequence: 160901
Dilution Factor: 50
Initials: CMO

Printed: 12/21/16 11:29:28 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1217025.D Vial: 13
Acq On : 17 Dec 16 13:07 Operator: lac
Sample : AZ47664W04 DF50 Inst : 7890
Misc : Multiplr: 50.00
IntFile : autoint1.e
Quant Time: Dec 21 11:59 2016 Quant Results File: RSK0901.RES

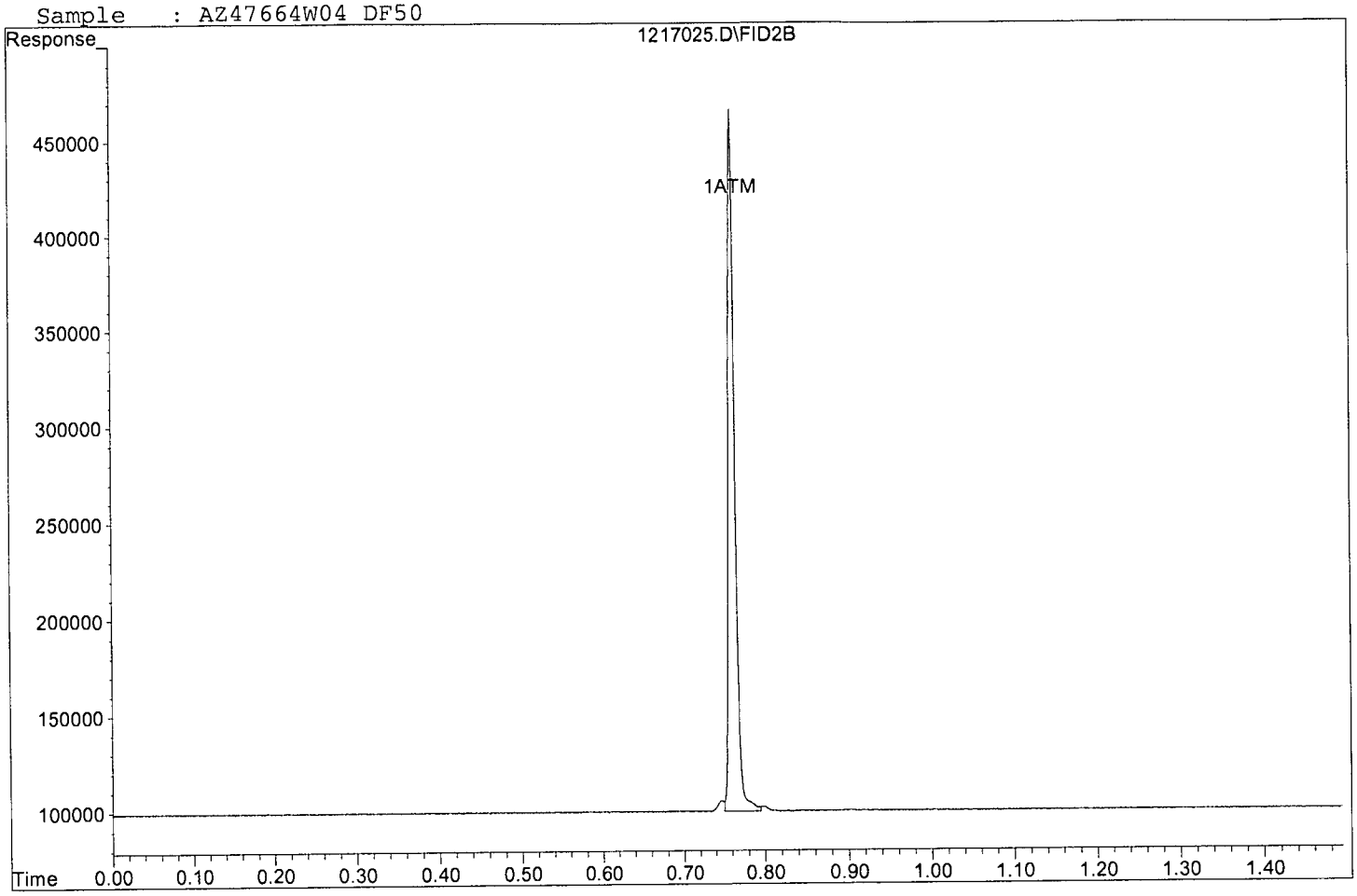
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Dec 21 11:57:46 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.76	366618	16260.037	ppb
Target Compounds				
2) ATM Ethane	0.92	188	N.D.	ppb
3) ATM Ethene	0.99	256	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1217025.D
Sample : AZ47664W04 DF50



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH140
Sample Collection Date: 12/13/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81776
APPL ID: AZ47665
QCG: #RSKME-161217A-214809

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	12/17/16	12/17/16

Quant Method:	RSK0901.M
Run #:	1217024
Instrument:	Rocky
Sequence:	160901
Dilution Factor:	1
Initials:	CMO

Printed: 12/21/16 11:29:28 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1217024.D Vial: 12
Acq On : 17 Dec 16 13:04 Operator: lac
Sample : AZ47665W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 21 11:59 2016 Quant Results File: RSK0901.RES

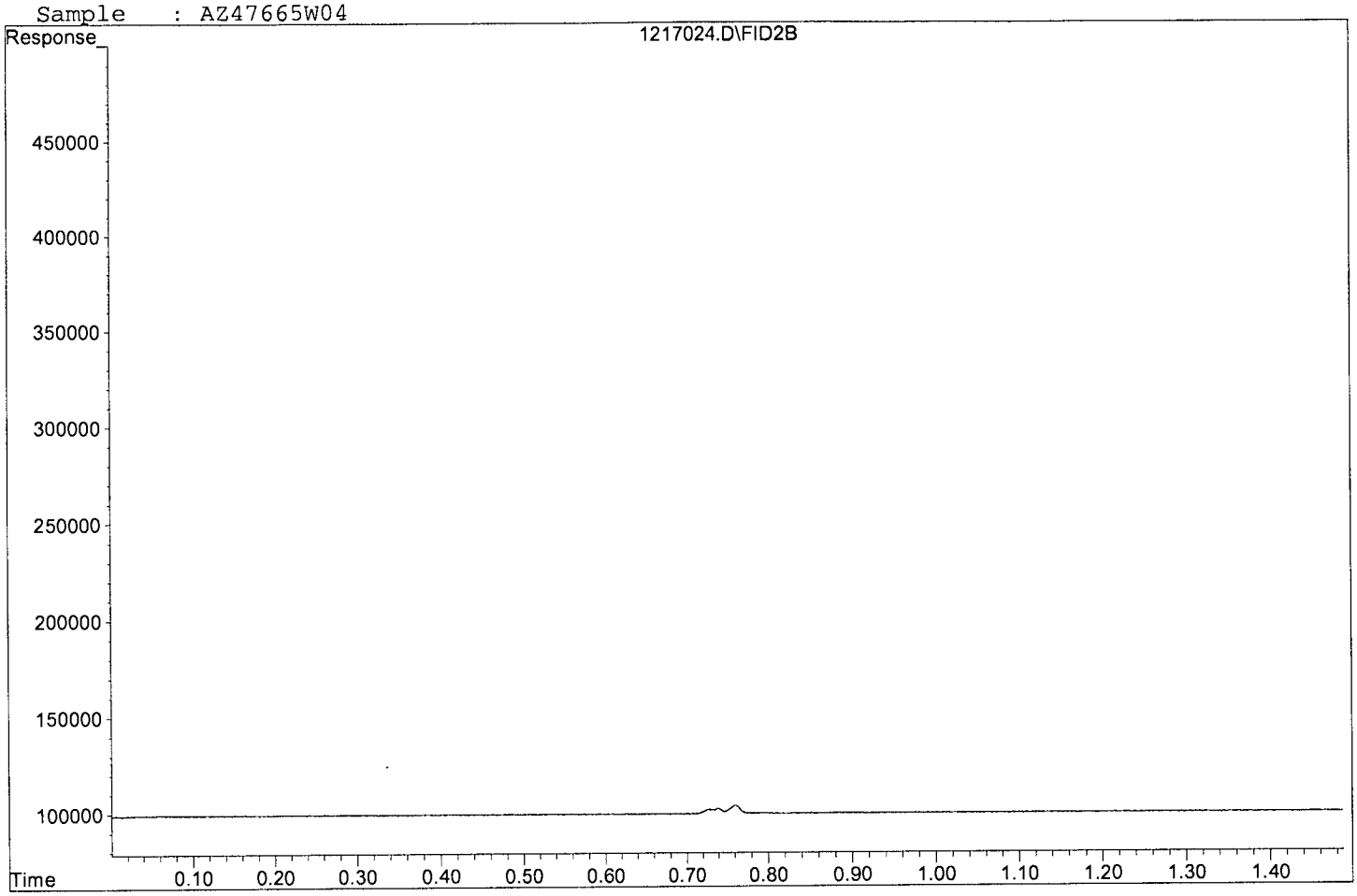
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Dec 21 11:57:46 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.76	4438	N.D.	ppb
2) ATM Ethane	0.91	268	N.D.	ppb
3) ATM Ethene	1.00	310	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1217024.D
Sample : AZ47665W04



ORGANICS
Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:
SDG No:
Initial Cal. Date: 09/01/16
Instrument: 7890
Initials:

		Compound	0901000.D 1	0901001.D 2	0901002.D 3	0901003.D 4	0901004.D 5	0901005.D 6	0901006.D 7	0901007.D 8	0901008.D 9	0901009.D 10	Avg	%RSD		
1	ATM	Methane	7448	5672	3042	3435	1074	1006	1184	1314	1084	1089	2635	87	ATM	
2	ATM	Ethane	1509	1521	1416	2554	478	657	816	933	791	798	1147	54	ATM	
3	ATM	Ethene	1826	1525	1280	2301	444	570	693	733	628	626	1063	60	ATM	
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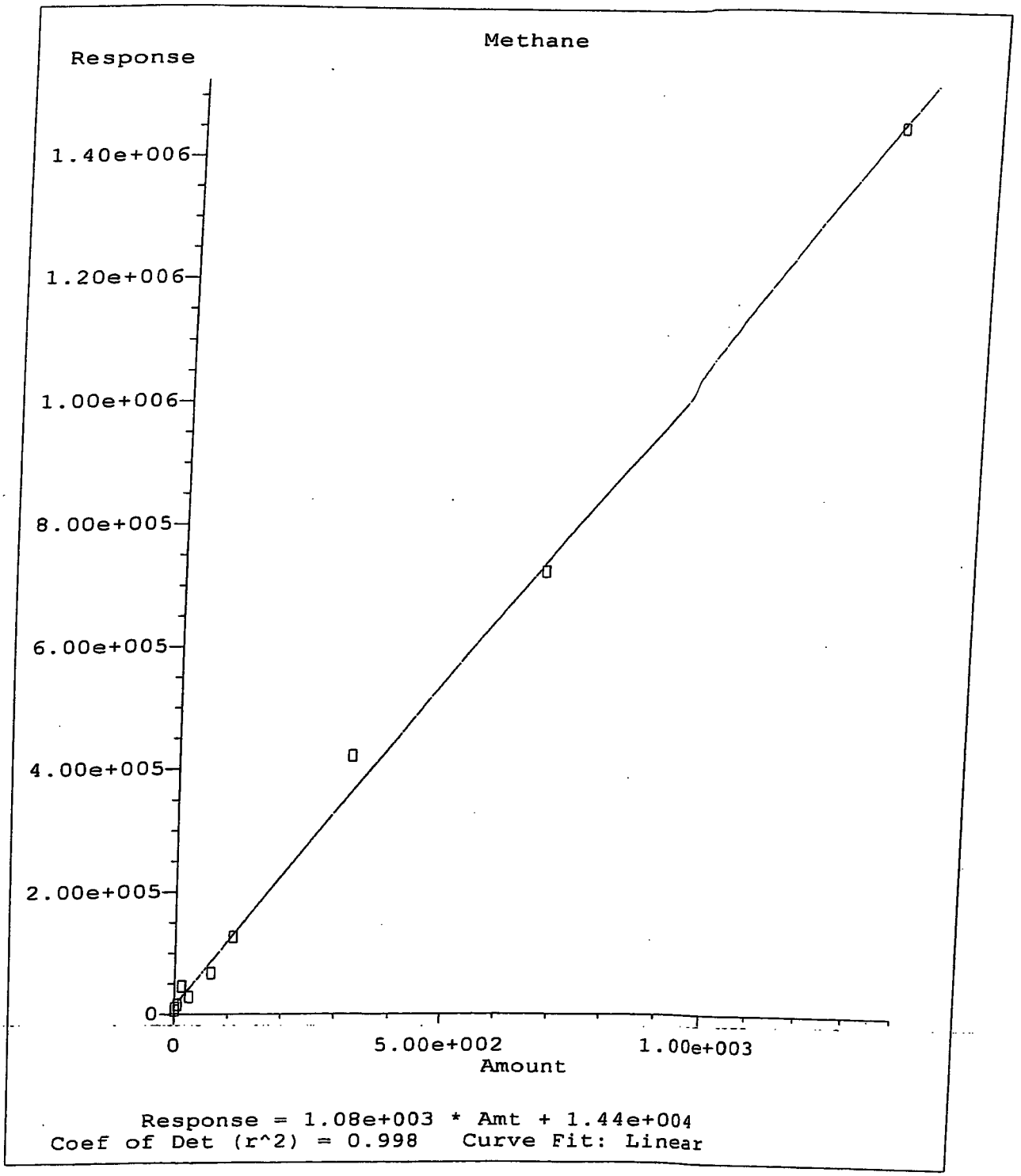
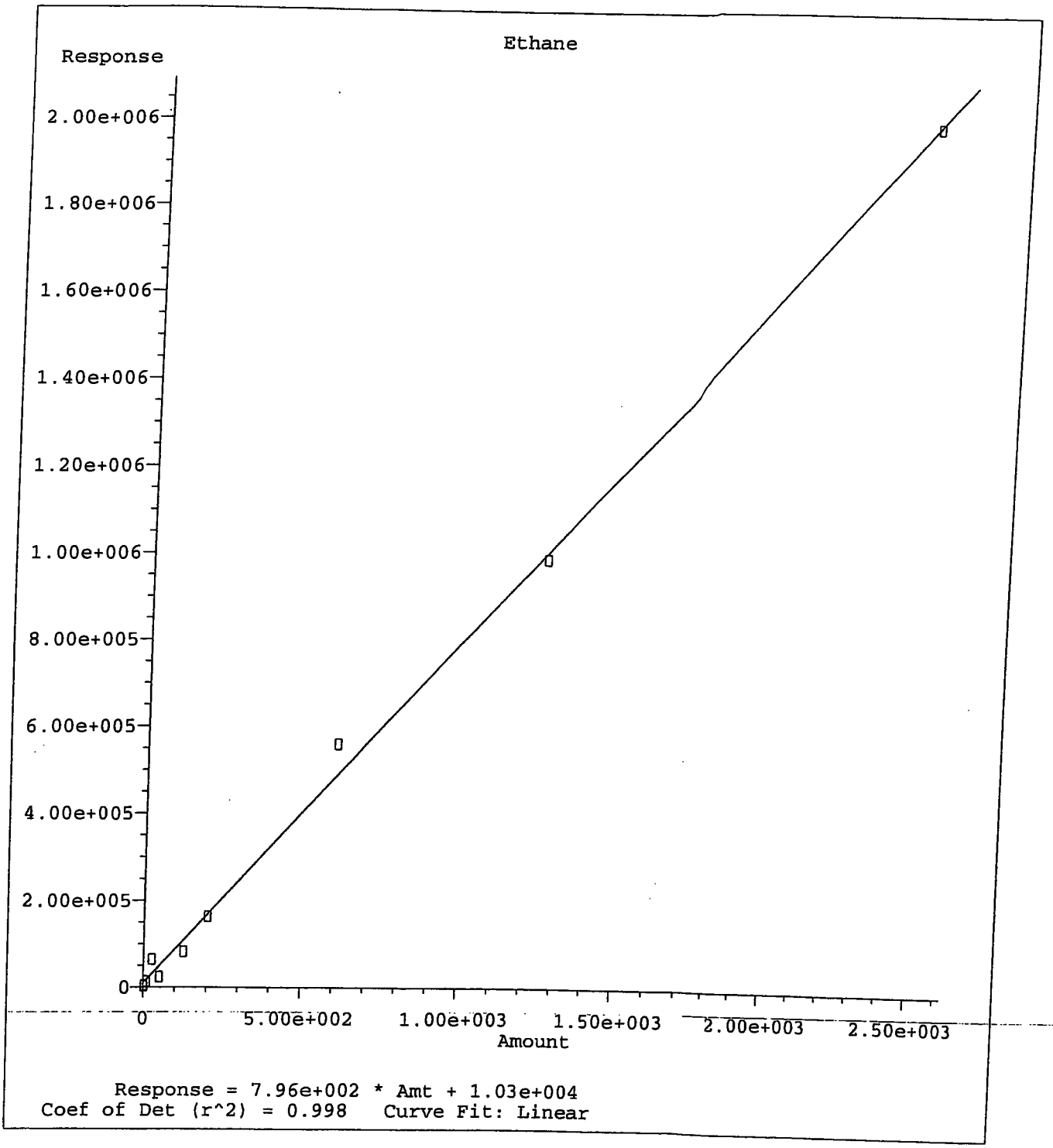
5.7170224

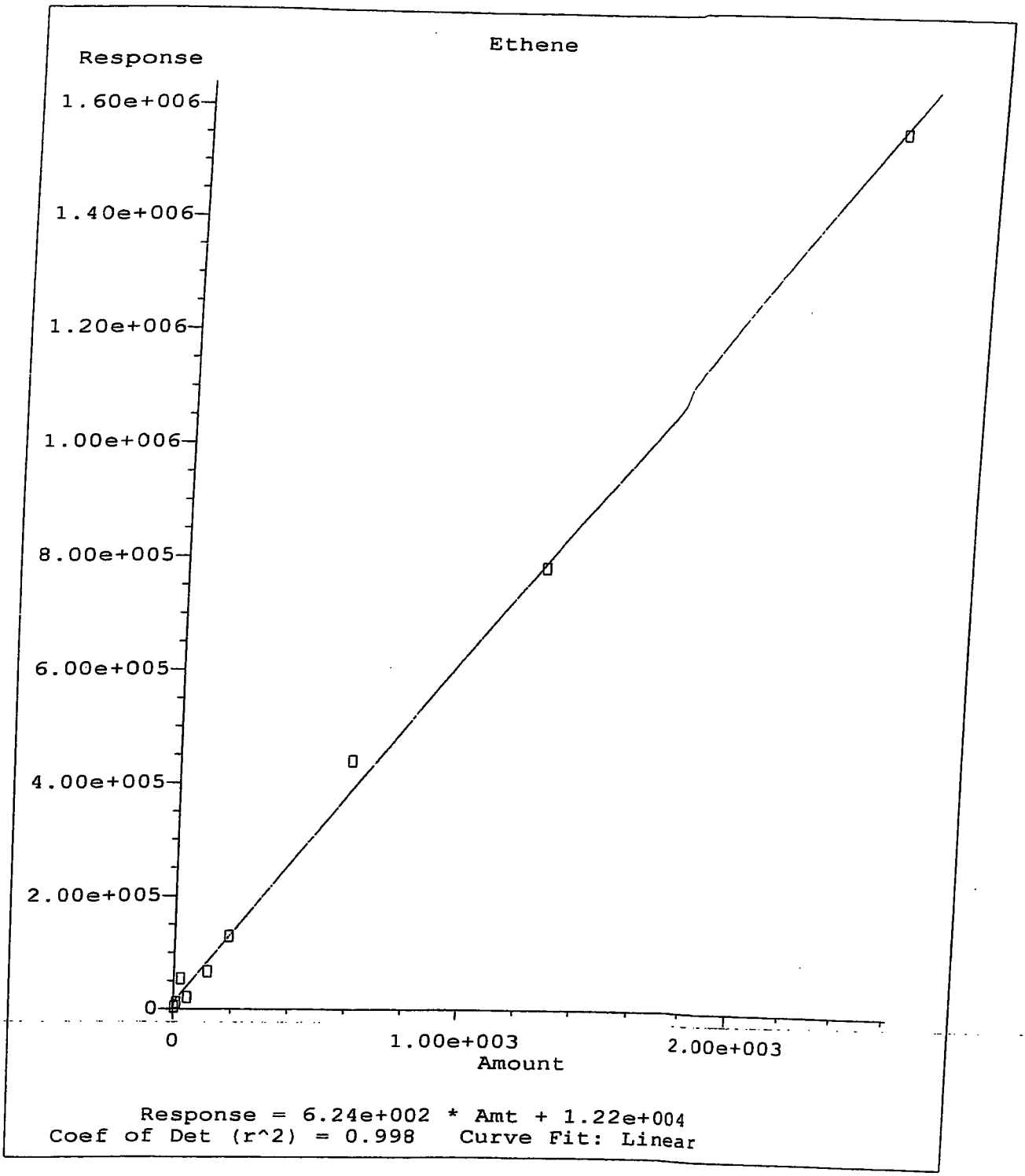
FORM61



Method Name: G:\ROCKY\DATA\160901R\RSK0901.M
Calibration Table Last Updated: Fri Sep 02 15:25:38 2016



Method Name: G:\ROCKY\DATA\160901R\RSK0901.M
Calibration Table Last Updated: Thu Nov 10 08:49:51 2016



Method Name: G:\ROCKY\DATA\160901R\RSK0901.M
Calibration Table Last Updated: Fri Sep 02 15:25:38 2016

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901000.D
Acq On : 1 Sep 16 11:38
Sample : RSK Level 1 08/15/16
Misc :
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Vial: 1
Operator: lac
Inst : 7890
Multiplr: 1.00

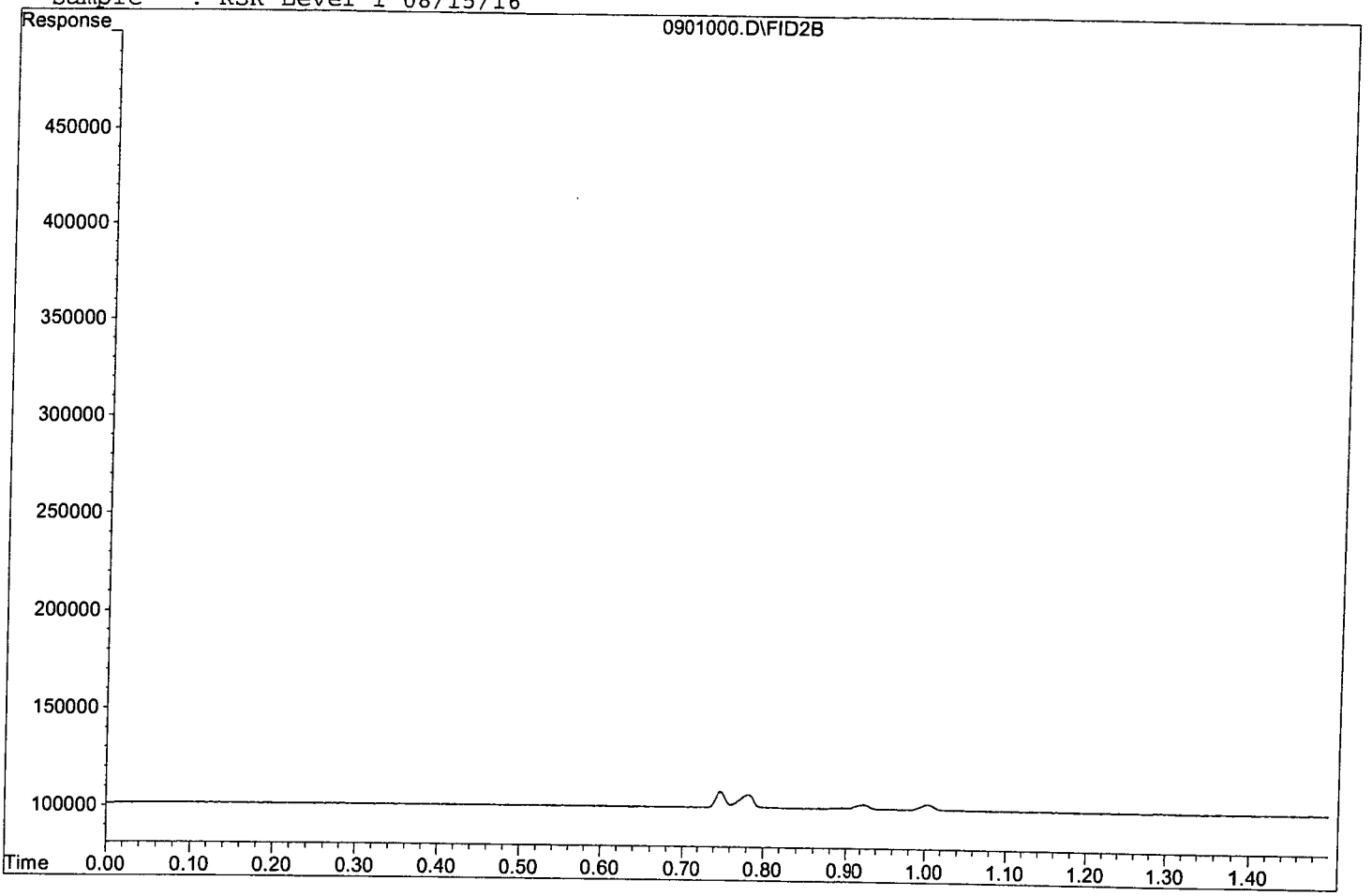
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.78	6703	N.D.	ppb
2) ATM Ethane	0.92	2566	N.D.	ppb
3) ATM Ethene	1.00	2922	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901000.D
Sample : RSK Level 1 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901001.D Vial: 2
Acq On : 1 Sep 16 11:41 Operator: lac
Sample : RSK Level 2 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

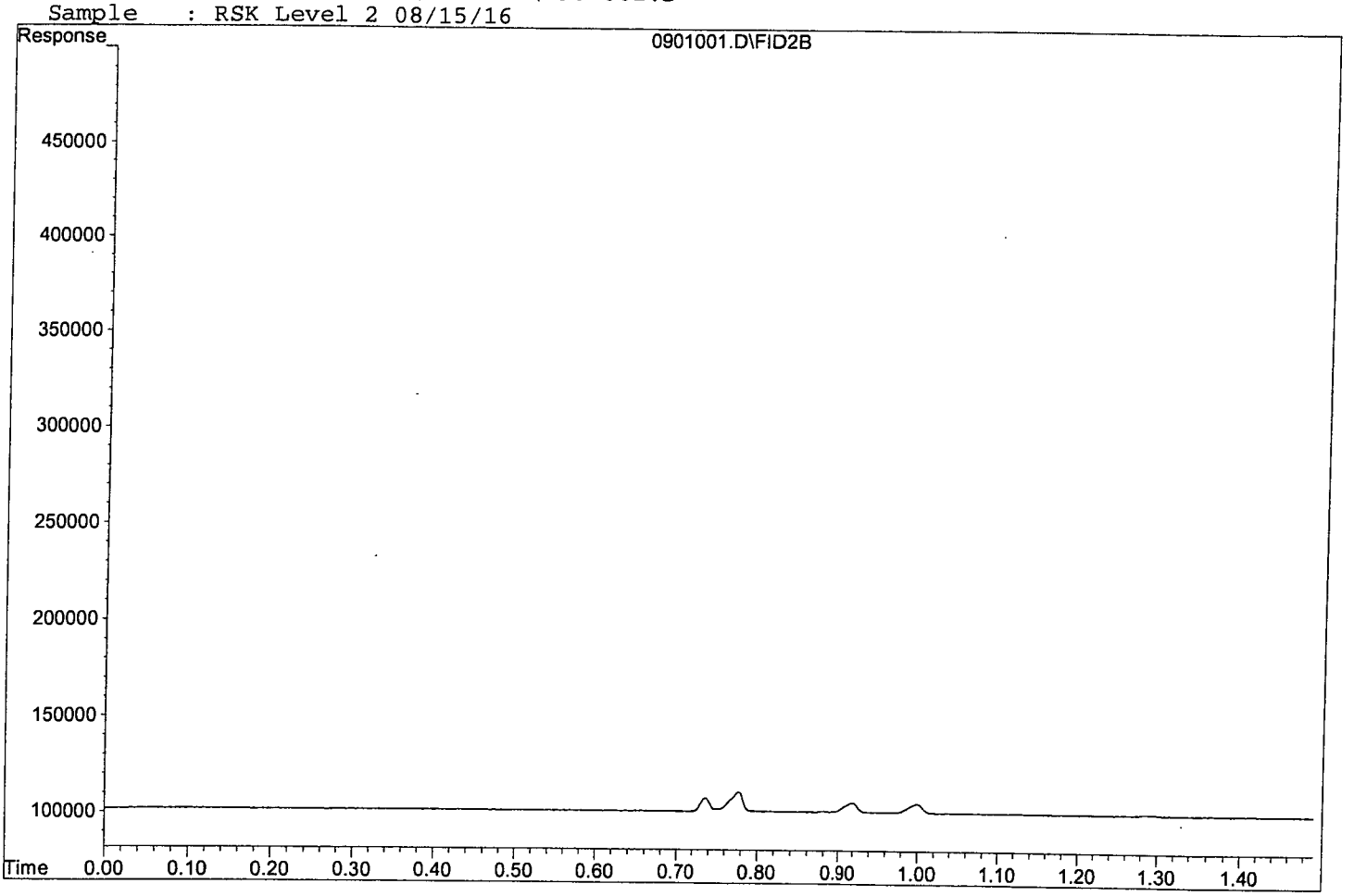
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.79	569	N.D.	ppb
2) ATM Ethane	0.94	352	N.D.	ppb
3) ATM Ethene	1.02	250	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901001.D
Sample : RSK Level 2 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901002.D Vial: 3
Acq On : 1 Sep 16 11:44 Operator: lac
Sample : RSK Level 3 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 14 13:31 2016 Quant Results File: RSK0901.RES

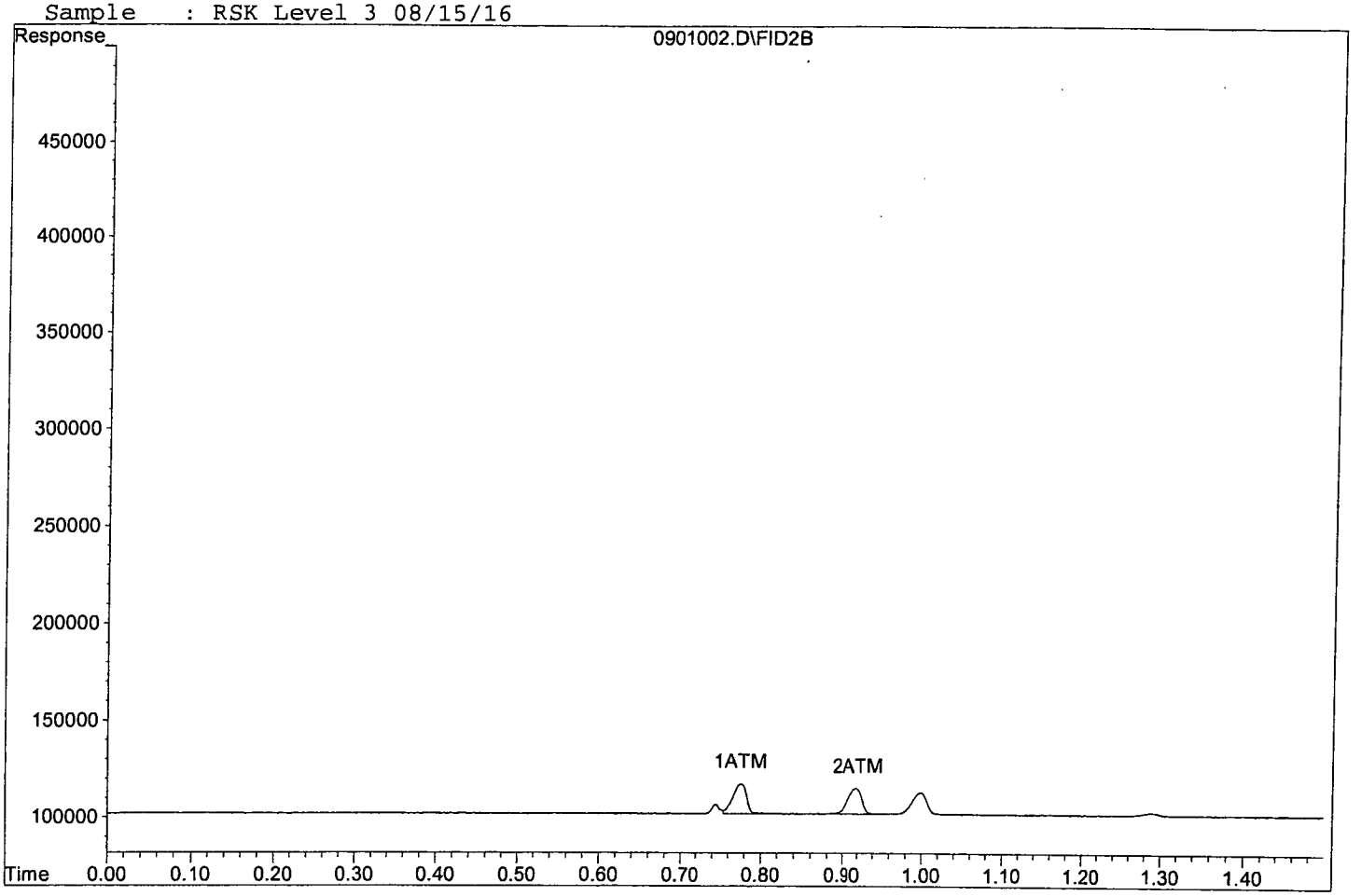
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.77	15515	1.054 ppb
2) ATM Ethane	0.92	13452	3.912 ppb
Target Compounds			
3) ATM Ethene	1.00	11390	N.D. ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901002.D
Sample : RSK Level 3 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901003.D Vial: 4
Acq On : 1 Sep 16 11:46 Operator: lac
Sample : RSK Level 4 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

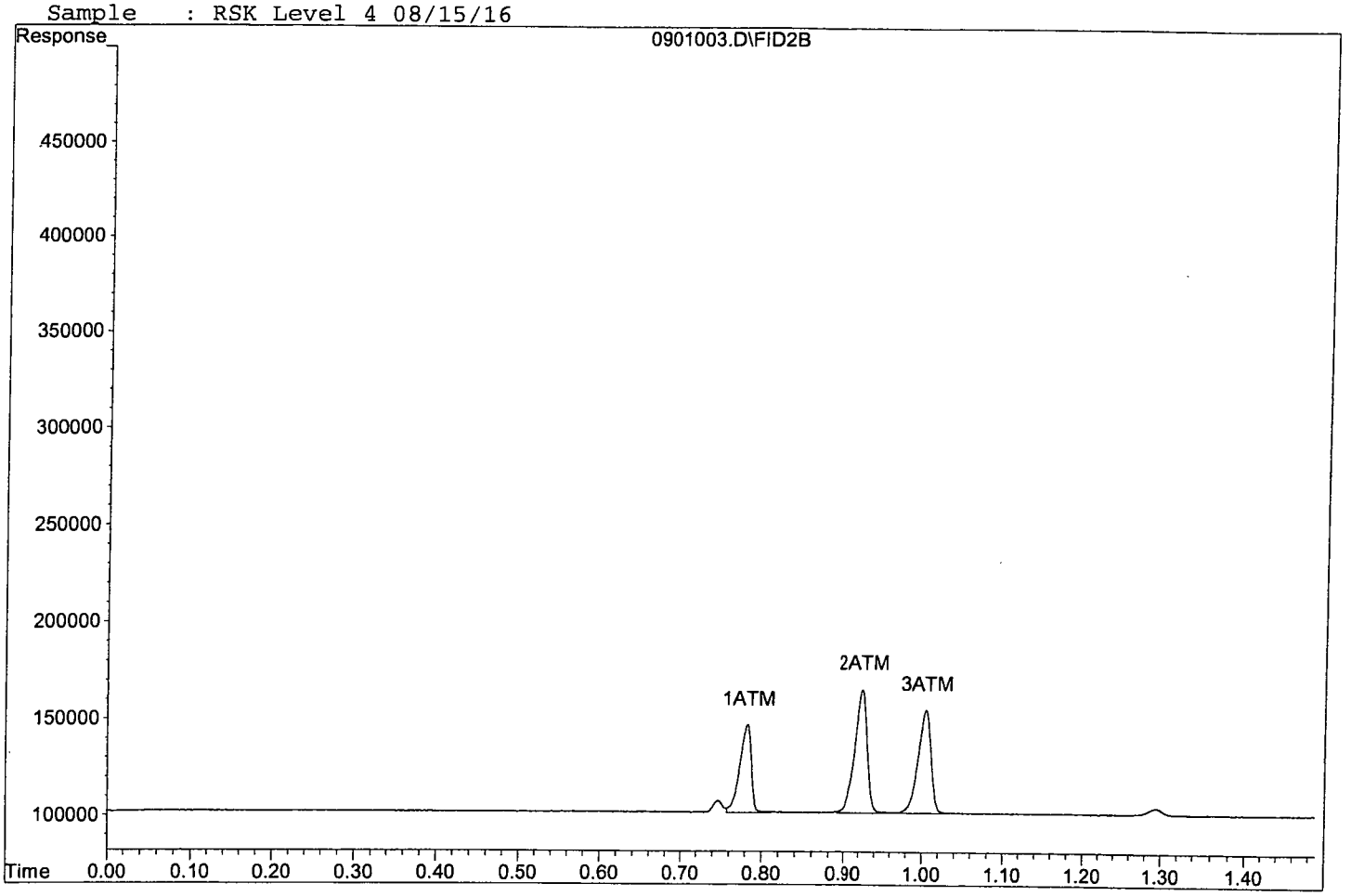
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.78	45792	29.006 ppb
2) ATM Ethane	0.92	63853	67.197 ppb
3) ATM Ethene	1.00	53608	66.354 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901003.D
Sample : RSK Level 4 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901004.D Vial: 5
Acq On : 1 Sep 16 11:48 Operator: lac
Sample : RSK Level 5 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

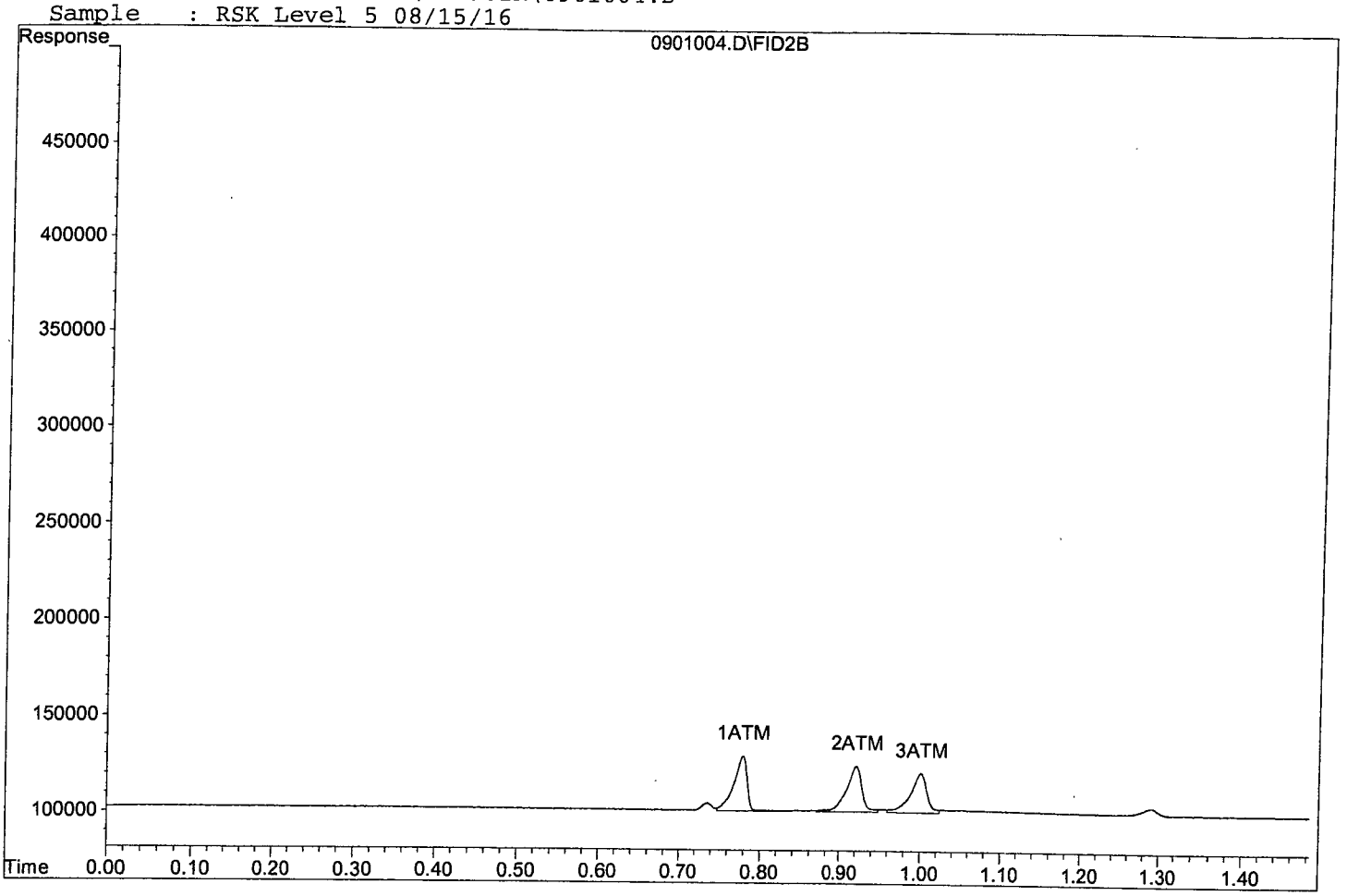
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.78	28664	13.193 ppb
2) ATM Ethane	0.92	23891	17.020 ppb
3) ATM Ethene	1.00	20700	13.631 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901004.D
Sample : RSK Level 5 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901005.D Vial: 6
Acq On : 1 Sep 16 11:50 Operator: lac
Sample : RSK Level 6 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

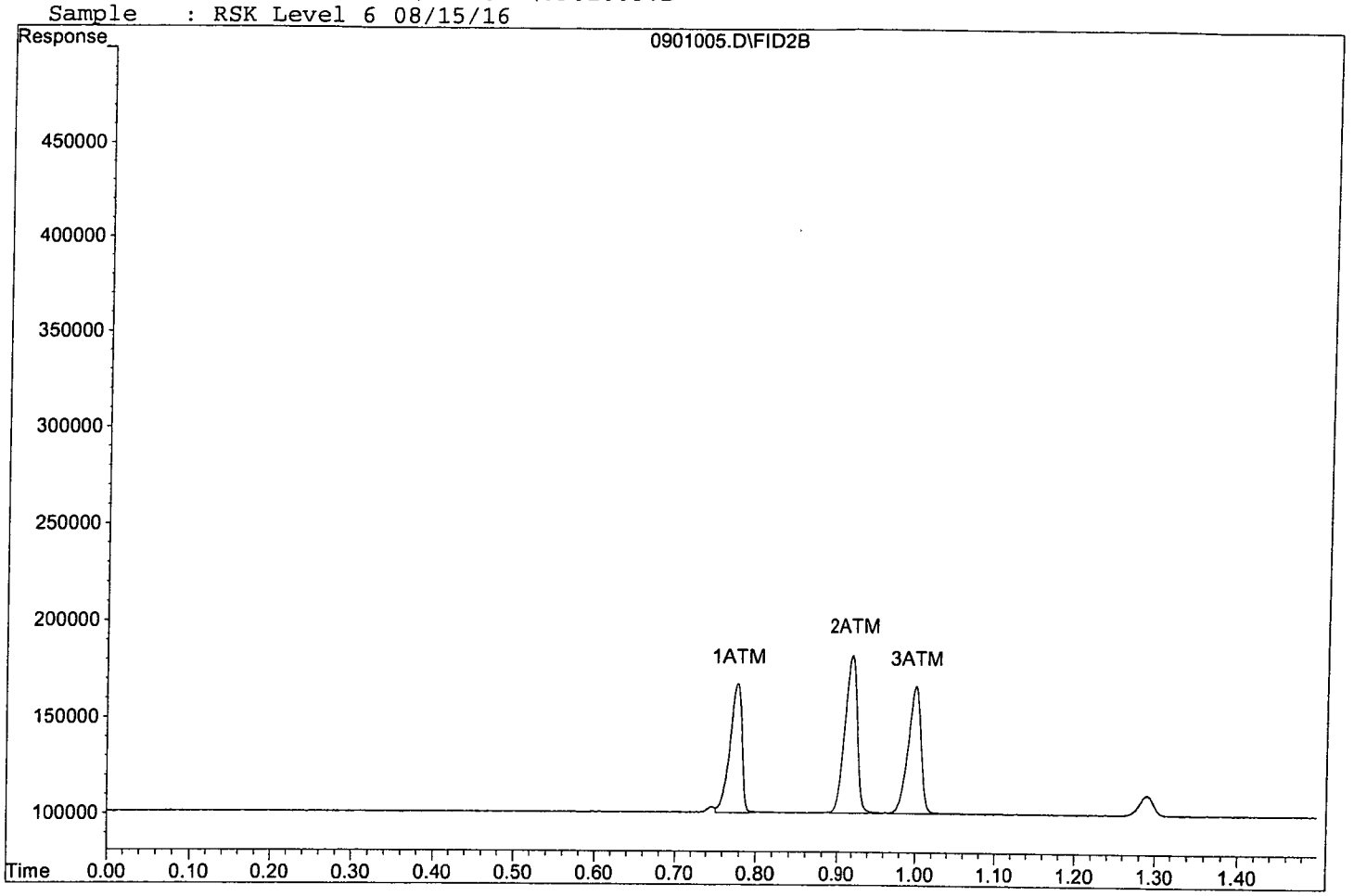
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.78	67137	48.712 ppb
2) ATM Ethane	0.92	82167	90.193 ppb
3) ATM Ethene	1.00	66348	86.764 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901005.D
Sample : RSK Level 6 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901006.D Vial: 7
Acq On : 1 Sep 16 11:52 Operator: lac
Sample : RSK Level 7 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

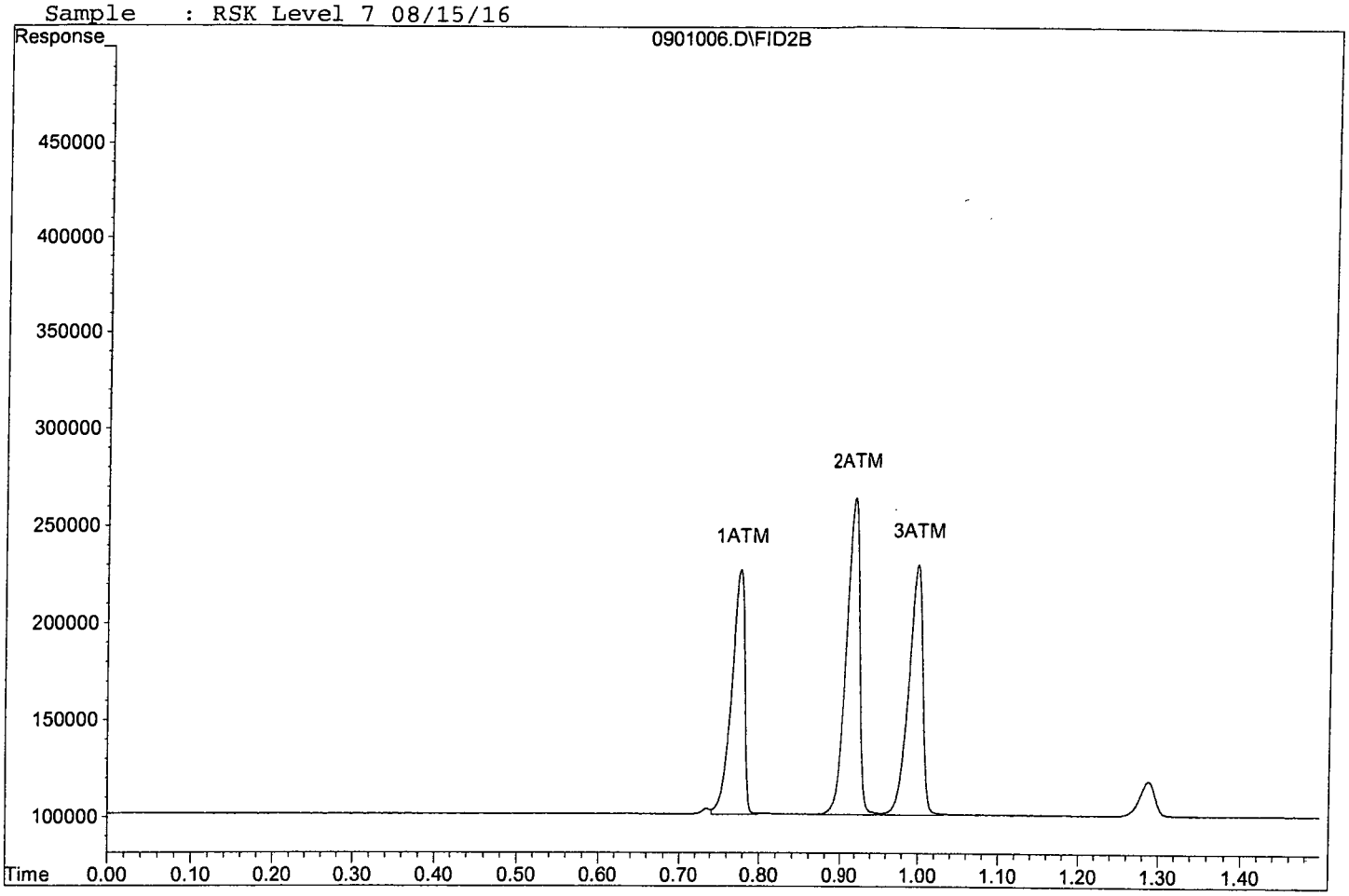
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.78	126422	103.446 ppb
2) ATM Ethane	0.92	163281	192.041 ppb
3) ATM Ethene	1.00	129200	187.460 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901006.D
Sample : RSK Level 7 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901007.D Vial: 8
Acq On : 1 Sep 16 11:55 Operator: lac
Sample : RSK Level 8 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

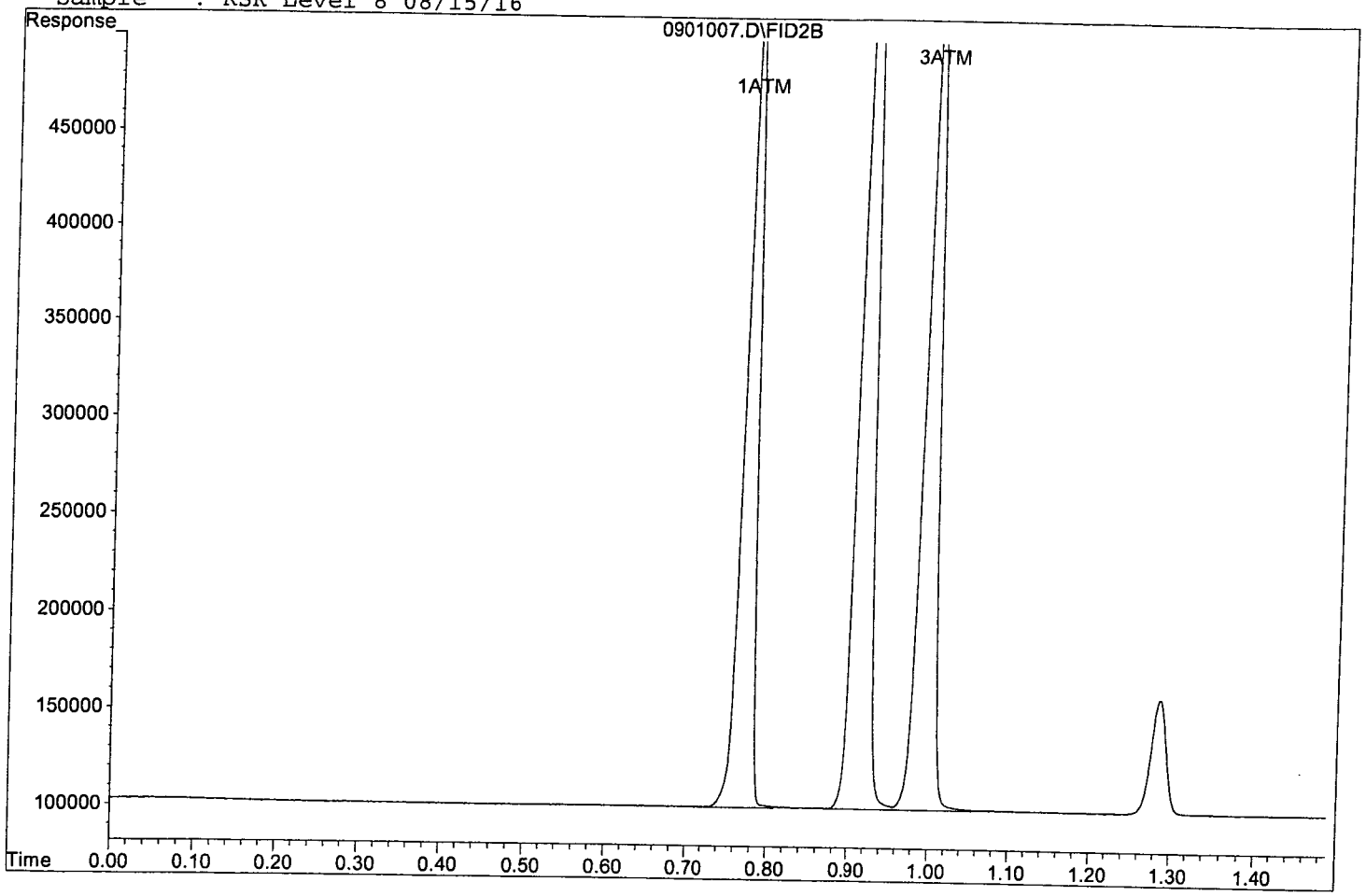
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.77	421052	375.455 ppb
2) ATM Ethane	0.92	559640	689.720 ppb
3) ATM Ethene	1.00	439383	684.403 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901007.D
Sample : RSK Level 8 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901008.D Vial: 9
Acq On : 1 Sep 16 11:57 Operator: lac
Sample : RSK Level 9 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

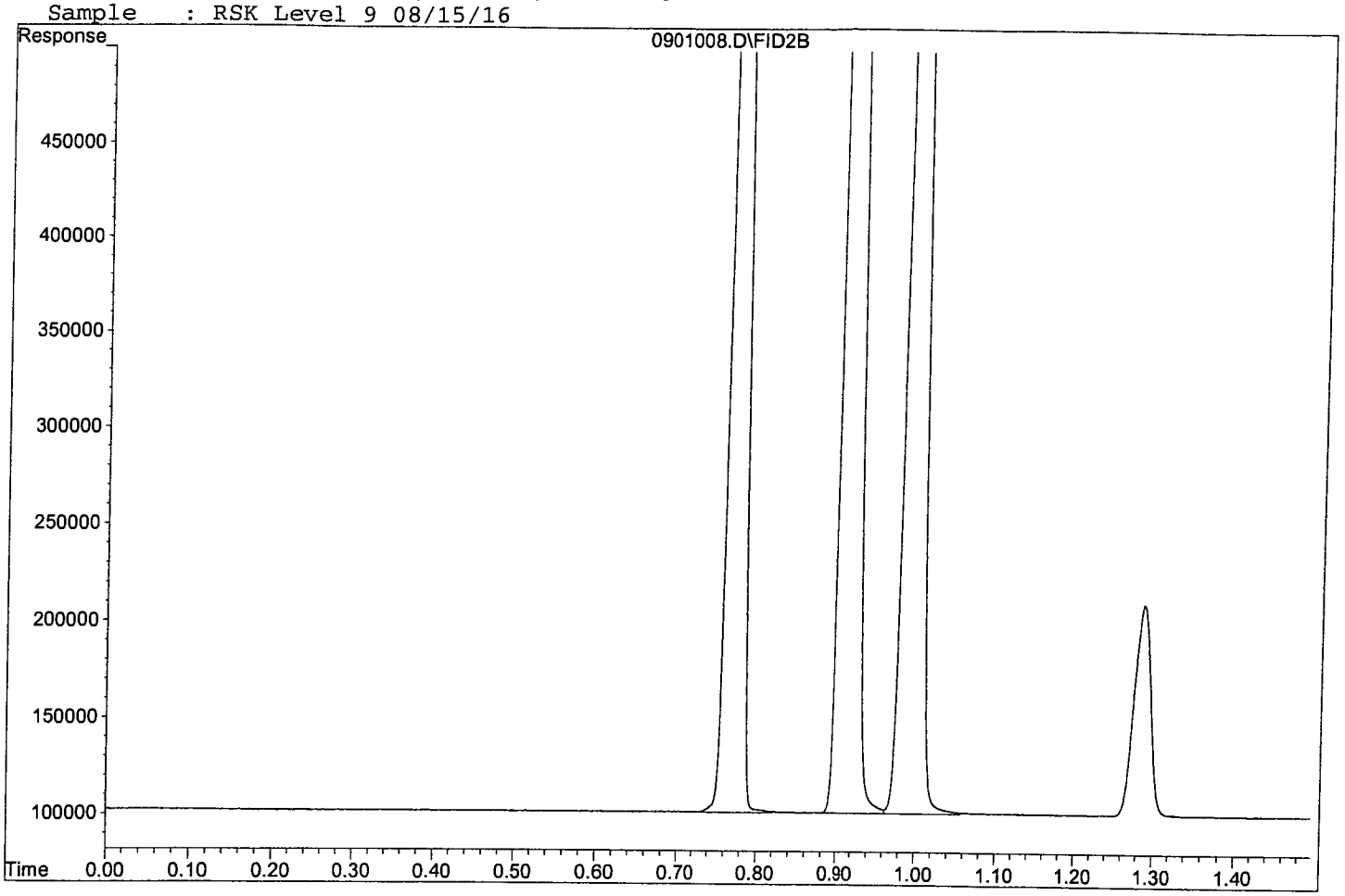
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.78	723824	654.982	ppb
2) ATM Ethane	0.92	989344	1229.268	ppb
3) ATM Ethene	1.00	783615	1235.897	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901008.D
Sample : RSK Level 9 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901009.D Vial: 10
Acq On : 1 Sep 16 11:59 Operator: lac
Sample : RSK Level 10 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

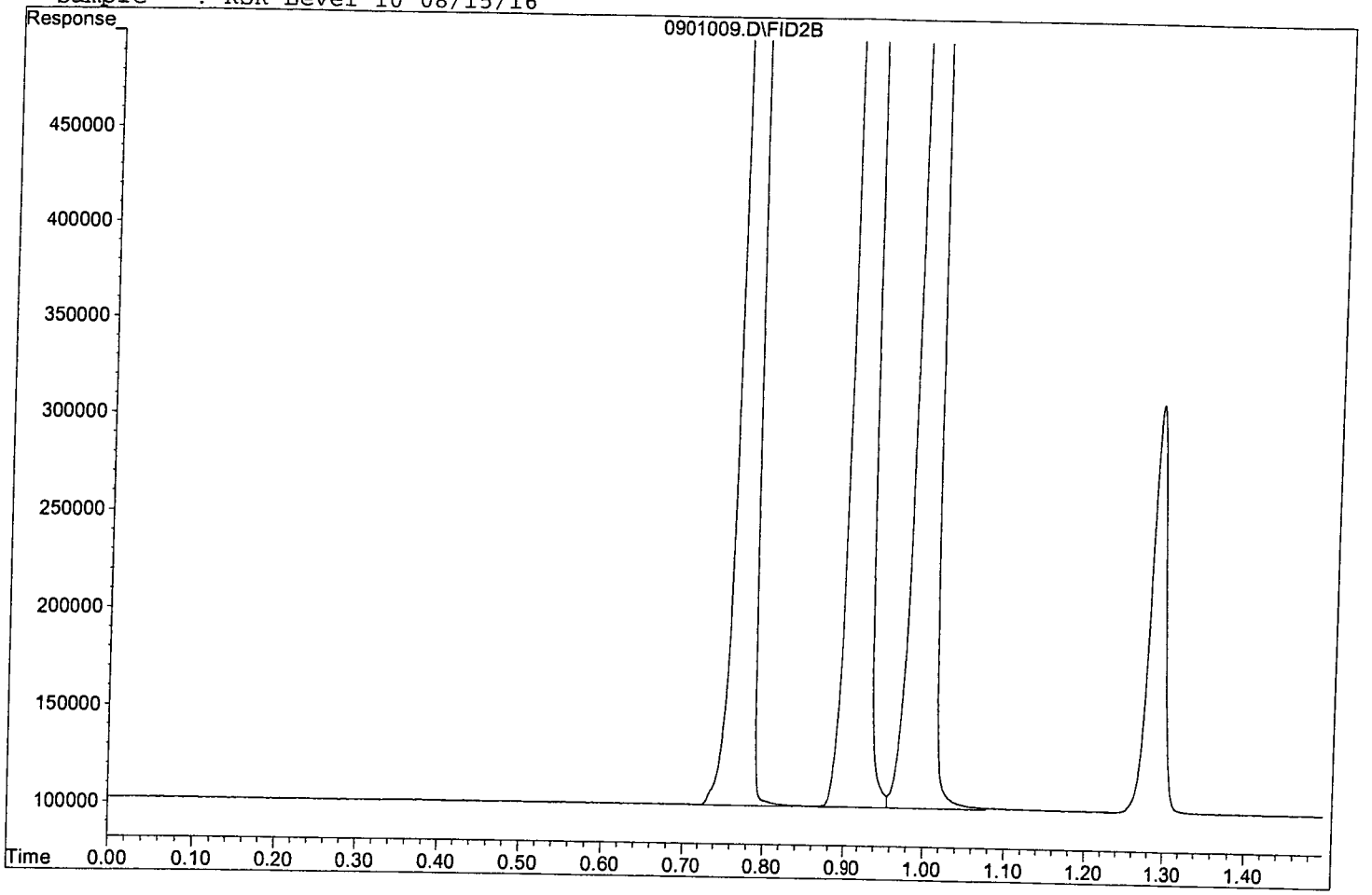
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.78	1454283	1329.358	ppb
2) ATM Ethane	0.92	1994598	2491.490	ppb
3) ATM Ethene	1.00	1562244	2483.337	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901009.D
Sample : RSK Level 10 08/15/16



Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 1 Sep 16 13:11
Instrument: 7890
Initial Cal. Date: 09/01/16
Data File: 0901018.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	2635	1090	59	ATML	19
2	ATML	Ethane	1147	964	16	ATML	11
3	ATML	Ethene	1063	853	20	ATML	20
4							
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40							
		Average			31.7		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901018.D
Acq On : 1 Sep 16 13:11
Sample : (SS/LCS) RSK Level 6 09/01/16
Misc :
IntFile : autoint1.e
Quant Time: Sep 1 13:16 2016 Quant Results File: RSK0901.RES

Vial: 19
Operator: lac
Inst : 7890
Multiplr: 1.00

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Thu Sep 01 14:40:19 2016
Response via : Multiple Level Calibration

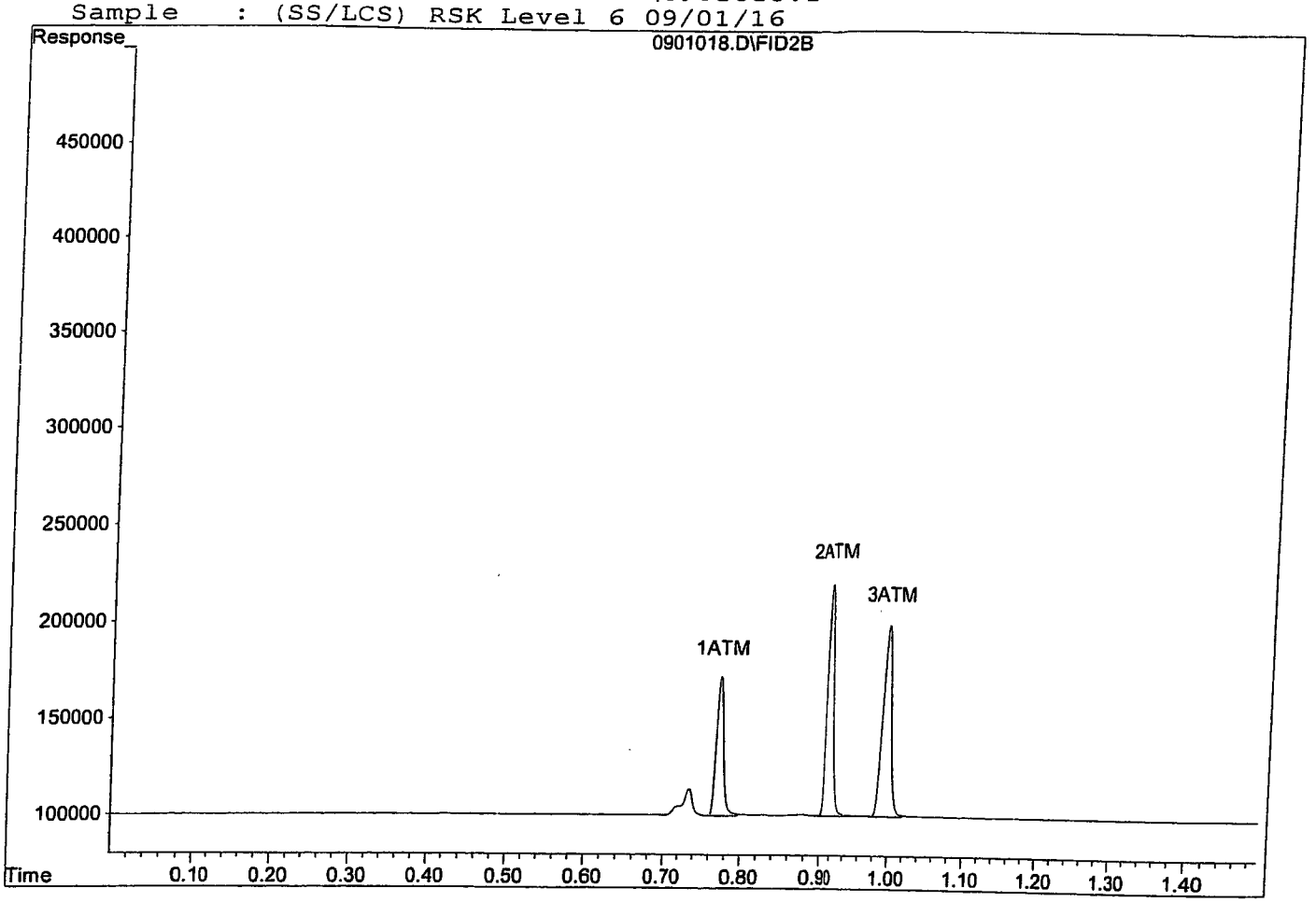
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.77	72750	53.894 ppb
2) ATM Ethane	0.91	120545	138.382 ppb
3) ATM Ethene	0.99	99349	139.636 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.
0901018.D RSK0901.M Fri Sep 02 08:47:45 2016 Page 1

Quantitation Report

Data File: G:\ROCKY\DATA\160901R\0901018.D
Sample : (SS/LCS) RSK Level 6 09/01/16



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/17/16
Instrument: 7890
Initial Cal. Date: 09/01/16
Data File: 1217007.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	2635	1344	49	ATML	22
2	ATML	Ethane	1147	803	30	ATML	0.16
3	ATML	Ethene	1063	588	45	ATML	7.3
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40							
		Average			41.3		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1217007.D Vial: 8
Acq On : 17 Dec 16 9:48 Operator: lac
Sample : 161217A LCS/CCV RSK Level 9 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 21 11:59 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Dec 21 11:57:46 2016
Response via : Multiple Level Calibration

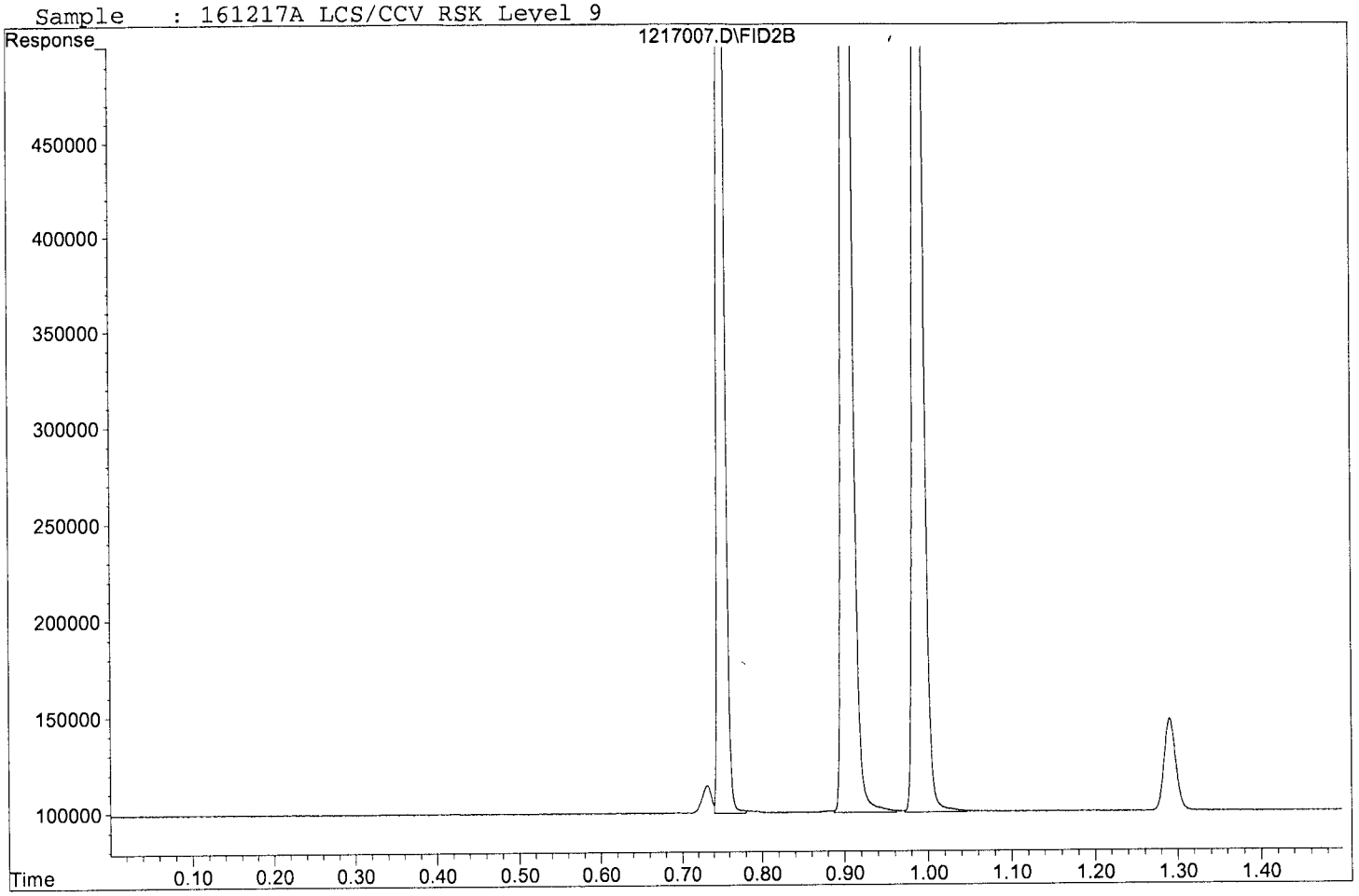
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.75	897206	815.052	ppb
2) ATM Ethane	0.90	1004261	1247.998	ppb
3) ATM Ethene	0.99	734600	1157.369	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1217007.D
Sample : 161217A LCS/CCV RSK Level 9



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/17/16
Instrument: 7890
Initial Cal. Date: 09/01/16
Data File: 1217030.D

		Compound	MEAN	CCRF	%D	%Drift	
1	ATML	Methane	2635	948	64	ATML	14
2	ATML	Ethane	1147	634	45	ATML	21
3	ATML	Ethene	1063	479	55	ATML	25
4							
5							
6							
7							
8							
9							
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33							
34							
35							
36							
37							
38							
39							
40							
		Average			54.7		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1217030.D Vial: 18
Acq On : 17 Dec 16 13:36 Operator: lac
Sample : Ending CCV RSK Level 9 12/17/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 21 11:59 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Dec 21 11:57:46 2016
Response via : Multiple Level Calibration

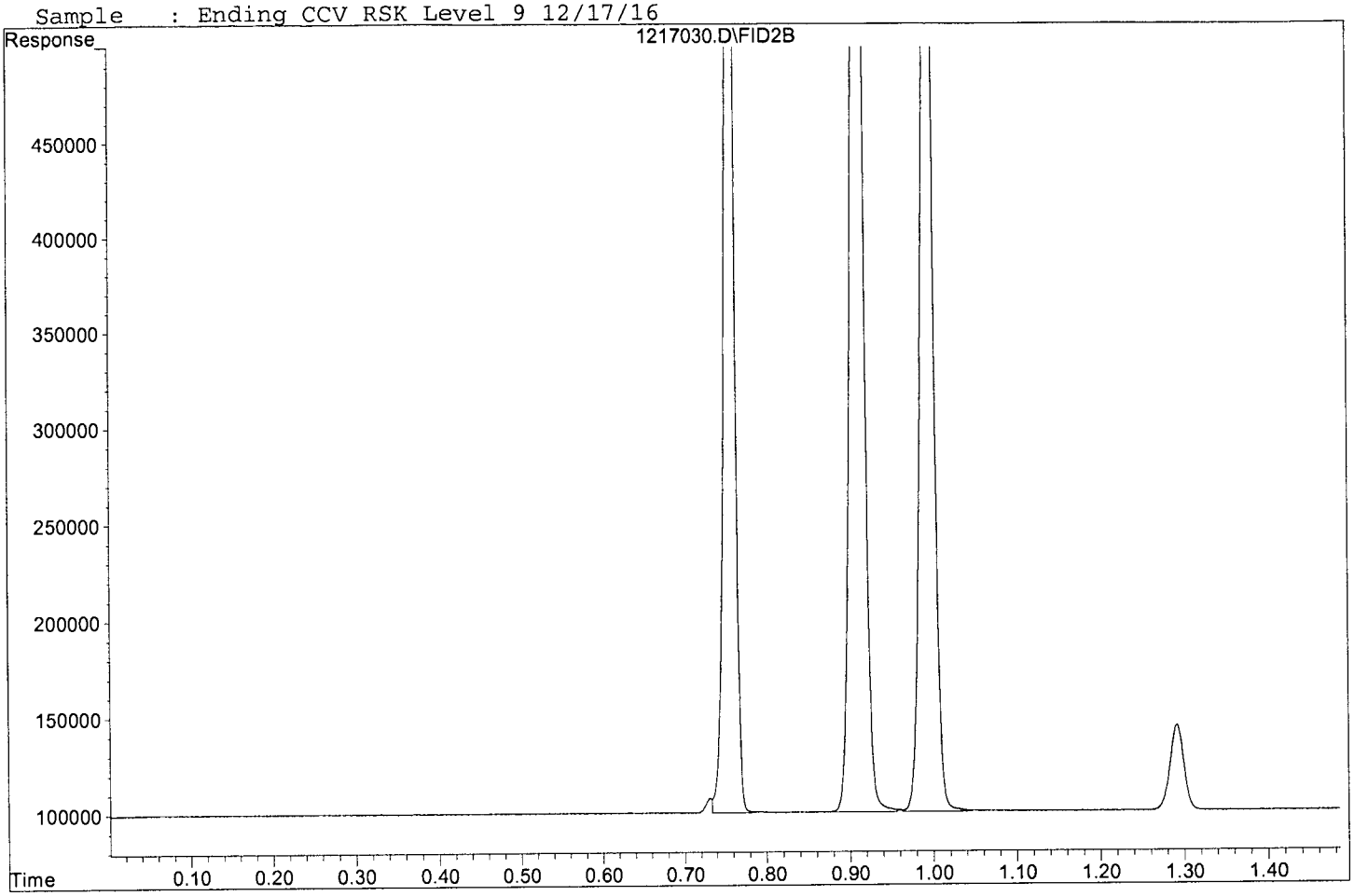
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.76	633053	571.179 ppb
2) ATM Ethane	0.91	792155	981.672 ppb
3) ATM Ethene	1.00	597866	938.308 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1217030.D
Sample : Ending CCV RSK Level 9 12/17/16



ORGANICS
Raw Data

APPL, INC.

Method Blank
METHANE

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161217W-47345 - 214809**
Batch ID: #RSKME-161217A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	METHANE	1.00 U	5.0	1.00	0.25	ug/L	12/17/16	12/17/16

Quant Method: RSK0901.M
Run #: 1217008
Instrument: Rocky
Sequence: 160901
Initials: CMO

GC SC-Blank-REG MDLs-DOD
Printed: 12/21/16 11:29:32 AM

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1217008.D Vial: 9
Acq On : 17 Dec 16 9:57 Operator: lac
Sample : 161217A BLK RSK Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 21 11:59 2016 Quant Results File: RSK0901.RES

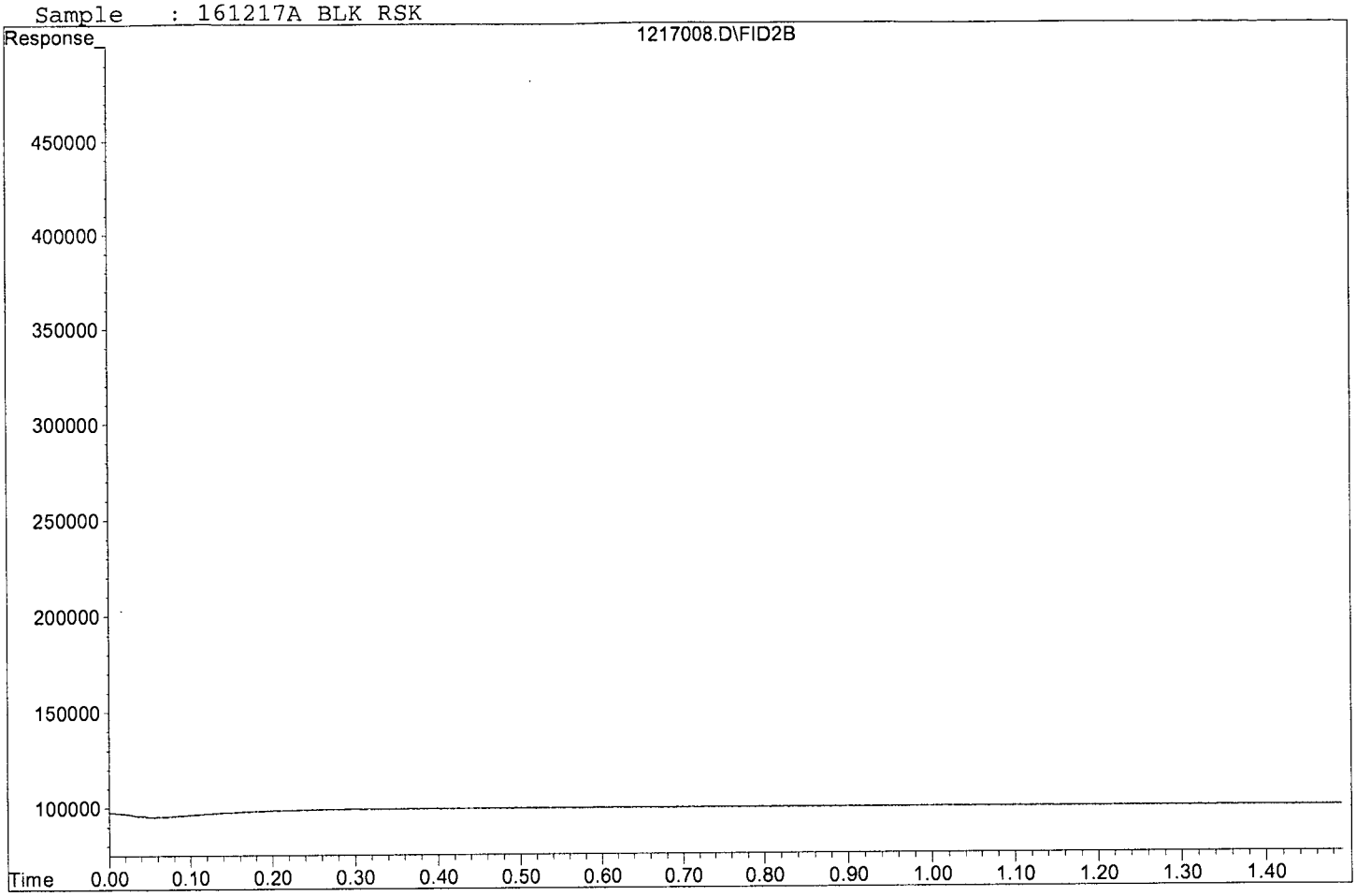
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Dec 21 11:57:46 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.75	2153	N.D.	ppb
2) ATM Ethane	0.91	1632	N.D.	ppb
3) ATM Ethene	0.99	1486	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1217008.D
Sample : 161217A BLK RSK



Laboratory Control Spike Recovery
METHANE

APPL ID: **161217W-47345 LCS - 214809**
Batch ID: #RSKME-161217A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
METHANE	668	815	122	72-125

Primary	SPK
Quant Method :	RSK0901.M
Extraction Date :	12/17/16
Analysis Date :	12/17/16
Instrument :	Rocky
Run :	1217007
Initials :	CMO

Comments: _____

Printed: 12/21/16 11:44:13 AM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1217007.D Vial: 8
Acq On : 17 Dec 16 9:48 Operator: lac
Sample : 161217A LCS/CCV RSK Level 9 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 21 12:19 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Dec 21 11:57:46 2016
Response via : Multiple Level Calibration

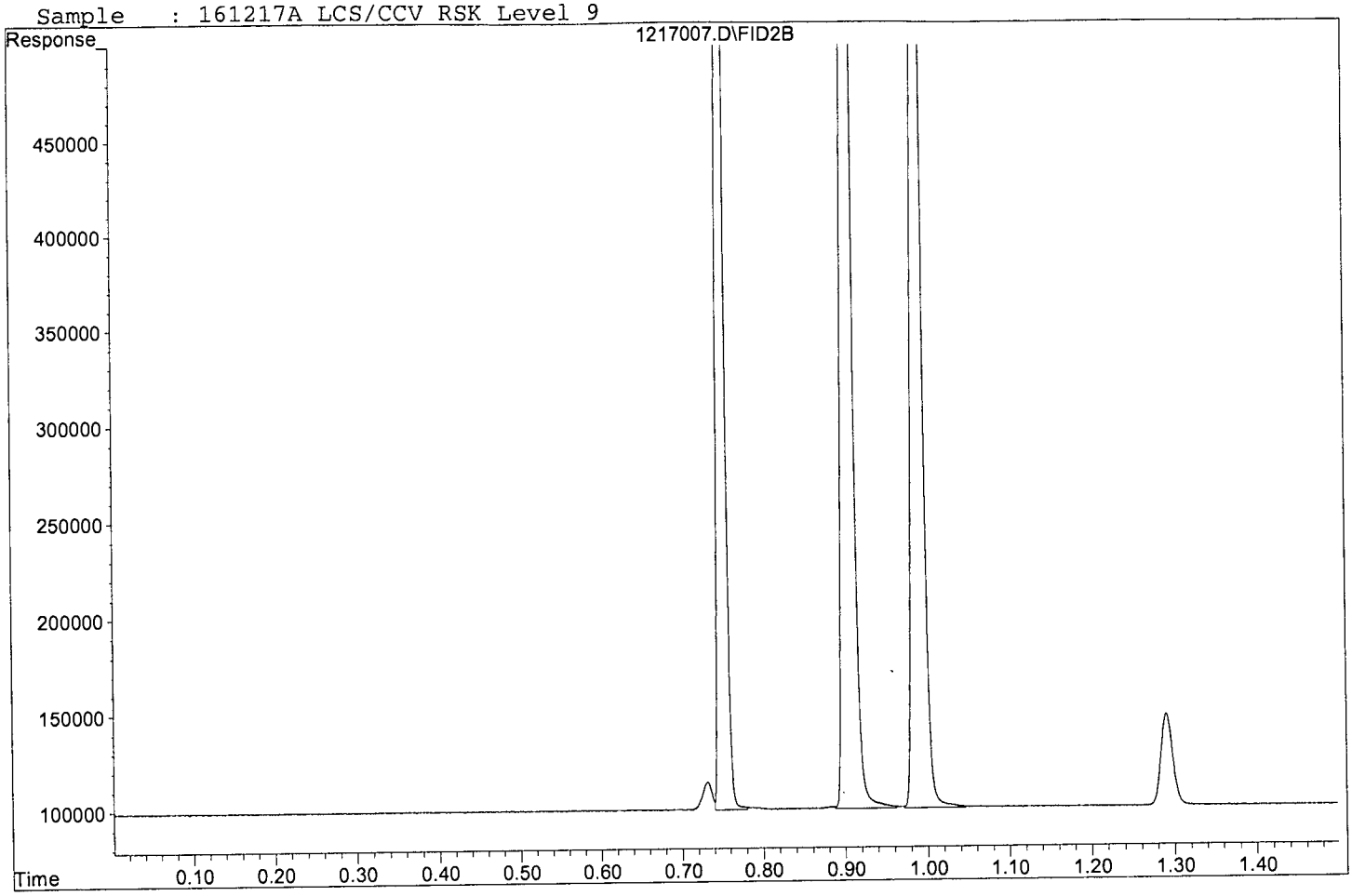
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.75	897206	815.052	ppb
2) ATM Ethane	0.90	1004261	1247.998	ppb
3) ATM Ethene	0.99	734600	1157.369	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1217007.D
Sample : 161217A LCS/CCV RSK Level 9



Primary Source Stock Standard 10,000ppmV Manufacturer Exp date 7-8-2017 CM 8/15/16

RSK Gas Mix (Scott Specialty Gas) Cat.# 23452, Lot # 164PLU4SPC05L-34436

1% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

Intermediate Calibration Stock Standard 100ppmV **Expires 8/15/17** CM 8/15/16

Prepared in a 1 L Tedlar bag. Add 990mL Nitrogen and 10mL of 164PLU4SPC05L-34436 standard.

RSK Calibration Curve **Vial expiration date 9/28/16** CM 9/1/16

Analye	Conc Std 1 (ug/L)	Conc Std 2 (ug/L)	Conc Std 3 (ug/L)	Conc Std 4 (ug/L)	Conc Std 5 (ug/L)	Conc Std 6 (ug/L)	Conc Std 7 (ug/L)	Conc Std 8 (ug/L)	Conc Std 9 (ug/L)	Conc Std 10 (ug/L)
Methane (MW 16.	0.90	1.80	5.10	13.33	26.70	66.75	106.80	320.4	667.5	1335.0
Ethane (MW 30.0	1.70	3.40	9.50	25.00	50.00	125.00	200.00	600.0	1250.0	2500.0
Ethene (MW 28.0	1.60	3.20	8.90	23.30	46.60	116.50	186.40	599.2	1248.0	2496.0
Stock Source	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Primary Source Std #164PLU4SPC05L-34436	Primary Source Std #164PLU4SPC05L-34436	Primary Source Std #164PLU4SPC05L-34436	Primary Source Std #164PLU4SPC05L-34436
Stock Conc (ppr	100 ppmV	100 ppmV	100 ppmV	100 ppmV	100 ppmV	100 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV
Stock Aliquot (m	0.135 mL	0.270 mL	0.760 mL	2.0 mL	4.0 mL	10.0 mL	0.160 mL	0.480 mL	1.00 mL	2.00 mL
Final Volume P&T W	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL

Second Source Stock Standard 10,000ppmV Manufacturer Exp Date 6-19-18 CM 8/15/16

RSK Gas Mix (Scott Specialty Gas) Cat.# 0104E40028`4, Lot # 170PLU5SPC06L-35410

1% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

Intermediate Second Source Standard 100ppmV **Expires 8/15/17** CM 8/15/16

Prepared in a 1 L Tedlar bag. Add 990mL Nitrogen and 10mL of lot# 170PLU5SPC06L-35410 standard.

Second Source / LCS - Level 6 **Expires 10/1/16** CM 9/1/16

10.0mL of Intermediate SS stock 8/15/16 into 10mL P&T water

final conc:66.7ppb Methane, 125.0ppb Ethane, and 116.5 ppb Ethene

CCV/LCS - Level 9 **Expires 01/17/16** CM 12/17/16

1.0mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water

final conc:667.5ppb Methane,1250 ppb Ethane, and 1248 ppb Ethene

Injection Log

Directory: G:\ROCKY\DATA\160901R\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0901000.D	1	RSK Level 1 08/15/16	Methane 0.9, Ethane, 1.7 Etl	1 Sep 16 11:38
2	2	0901001.D	1	RSK Level 2 08/15/16		1 Sep 16 11:41
3	3	0901002.D	1	RSK Level 3 08/15/16	Methane 5.1, Ethane, 9.5 Etl	1 Sep 16 11:44
4	4	0901003.D	1	RSK Level 4 08/15/16		1 Sep 16 11:46
5	5	0901004.D	1	RSK Level 5 08/15/16		1 Sep 16 11:48
6	6	0901005.D	1	RSK Level 6 08/15/16		1 Sep 16 11:50
7	7	0901006.D	1	RSK Level 7 08/15/16		1 Sep 16 11:52
8	8	0901007.D	1	RSK Level 8 08/15/16		1 Sep 16 11:55
9	9	0901008.D	1	RSK Level 9 08/15/16		1 Sep 16 11:57
10	10	0901009.D	1	RSK Level 10 08/15/16		1 Sep 16 11:59
11	19	0901018.D	1	(SS/LCS) RSK Level 6 09/01/16		1 Sep 16 13:11
12	8	1217007.D	1	161217A LCS/CCV RSK Level 9		17 Dec 16 9:48
13	9	1217008.D	1	161217A BLK RSK		17 Dec 16 9:57
14	6	1217018.D	1	AZ47656W04		17 Dec 16 12:25
15	7	1217019.D	1	AZ47657W04		17 Dec 16 12:29
16	8	1217020.D	1	AZ47658W04		17 Dec 16 12:37
17	9	1217021.D	1	AZ47660W04		17 Dec 16 12:41
18	10	1217022.D	1	AZ47663W04		17 Dec 16 12:47
19	12	1217024.D	1	AZ47665W04		17 Dec 16 13:04
20	13	1217025.D	50	AZ47664W04 DF50		17 Dec 16 13:07
21	18	1217030.D	1	Ending CCV RSK Level 9 12/17/16		17 Dec 16 13:36

INORGANIC ANALYSIS

APPL, INC.

INORGANIC ANALYSIS
QC Summary

APPL, INC.

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
SM 2320B	BICARBONATE AS	1.6 J	2.0	1.70	0.85	mg/L	12/20/16	12/20/16	#232W-161220A2-AZ47498
SM 2320B	CARBONATE AS CA	1.70 U	2.0	1.70	0.85	mg/L	12/20/16	12/20/16	#232W-161220A2-AZ47498
SM 2320B	TOTAL ALKALINITY	1.6 J	2.0	1.70	0.85	mg/L	12/20/16	12/20/16	#232W-161220A2-AZ47498
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	12/20/16	12/20/16	#300WD-161220A2-AZ47658
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	12/15/16	12/15/16	#300W-161215A2-AZ47664
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	12/15/16	12/15/16	#300W-161215A2-AZ47664
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	12/15/16	12/15/16	#300W-161215A2-AZ47664
SM3500Fe	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	12/15/16	12/15/16	#35FE-161215A-AZ47665

Wetlab SC-Blank-REG MDLs
Printed: 12/28/16 4:29:02 PM

Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	20.0	18.2	91.0	90-110	12/15/16	12/15/16	#300W-161215A2-AZ47664
EPA 300.0	NITRATE	22.1	20.3	91.9	90-110	12/15/16	12/15/16	#300W-161215A2-AZ47664
EPA 300.0	SULFATE	20.0	18.8	94.0	90-110	12/15/16	12/15/16	#300W-161215A2-AZ47664

Comments: _____

Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	20.0	18.7	93.5	90-110	12/20/16	12/20/16	#300WD-161220A2-AZ47658
SM 2320B	BICARBONATE AS CACO3	250	244	97.6	90-110	12/20/16	12/20/16	#232W-161220A2-AZ47498
SM 2320B	TOTAL ALKALINITY AS CACO3	250	244	97.6	90-110	12/20/16	12/20/16	#232W-161220A2-AZ47498

Comments: _____

Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
SM3500Fe	FERROUS IRON	3.00	3.09	103	80-120	12/15/16	12/15/16	#35FE-161215A-AZ47665

Comments: _____

INORGANIC ANALYSIS
Sample Data

APPL, INC.

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH147

Sample Collection Date: 12/14/16

APPL ID: AZ47658

ARF: 81776

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	CHLORIDE	649	20.0	4.00	1.60	mg/L	20	12/20/16	12/20/16
EPA 300.0	NITRATE	10.1	2.5	0.90	0.20	mg/L	5	12/15/16	12/15/16
EPA 300.0	SULFATE	78.0	5.0	1.00	0.45	mg/L	5	12/15/16	12/15/16
SM 2320B	BICARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	12/20/16	12/20/16
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	12/20/16	12/20/16
SM 2320B	TOTAL ALKALINITY AS CACO3	234	2.0	1.70	0.85	mg/L	1	12/20/16	12/20/16
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	12/15/16	12/15/16

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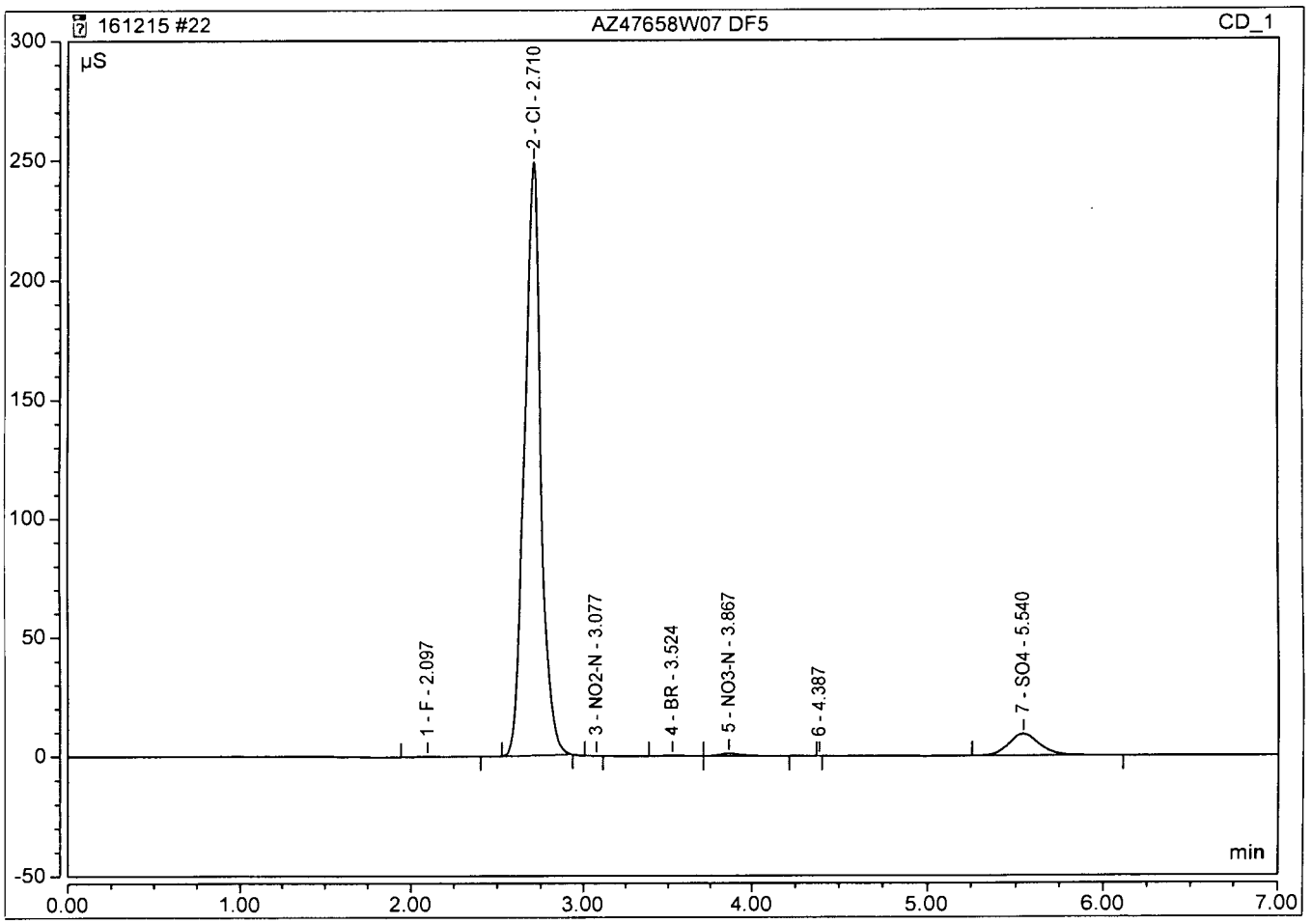
APPL-F1-SC-NoMC-REG MDLs

Peak Integration Report

Sample Name:	**AZ47658W07 DF5**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**5.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**15-Dec-2016 / 14:03**	*Run Time:*	**7.00**

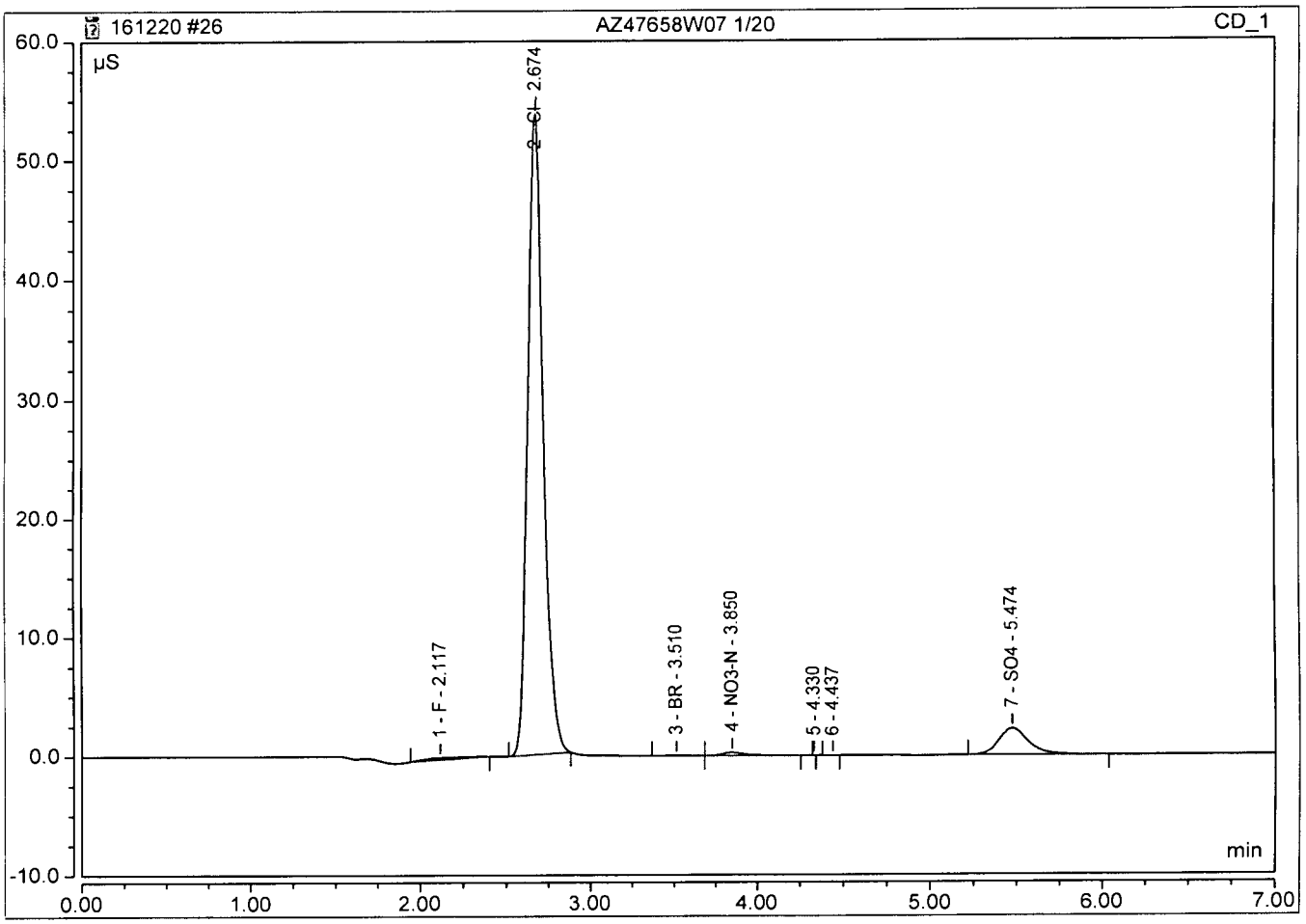
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB	0.031	0.110	0.8813
2	2.71	Cl	BMB	27.394	248.537	756.8160
3	3.08	NO2-N	BMB	0.000	0.006	0.1111
4	3.52	BR	BMB	0.018	0.150	2.0926
5	3.87	NO3-N	BMB	0.148	1.028	2.2784
7	5.54	SO4	BMB	1.845	9.042	78.0150
TOTAL:				29.44	258.87	840.19



Peak Integration Report

Sample Name:	**AZ47658W07 1/20**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**20.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Dec-2016 / 14:42**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.12	F	BMB	0.051	0.176	5.2817
2	2.67	Cl	BMB	5.800	53.701	649.1719
3	3.51	BR	BMB	0.005	0.037	4.0236
4	3.85	NO3-N	BMB	0.038	0.257	3.7395
7	5.47	SO4	BMB	0.436	2.201	81.2409
TOTAL:				6.33	56.37	743.46



Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH152

Sample Collection Date: 12/14/16

APPL ID: AZ47660

ARF: 81776

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	CHLORIDE	45.0	1.0	0.20	0.08	mg/L	1	12/15/16	12/15/16
EPA 300.0	NITRATE	5.8	0.5	0.18	0.04	mg/L	1	12/15/16	12/15/16
EPA 300.0	SULFATE	44.1	1.0	0.20	0.09	mg/L	1	12/15/16	12/15/16
SM 2320B	BICARBONATE AS CACO3	289	2.0	1.70	0.85	mg/L	1	12/20/16	12/20/16
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	12/20/16	12/20/16
SM 2320B	TOTAL ALKALINITY AS CACO3	289	2.0	1.70	0.85	mg/L	1	12/20/16	12/20/16
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	12/15/16	12/15/16

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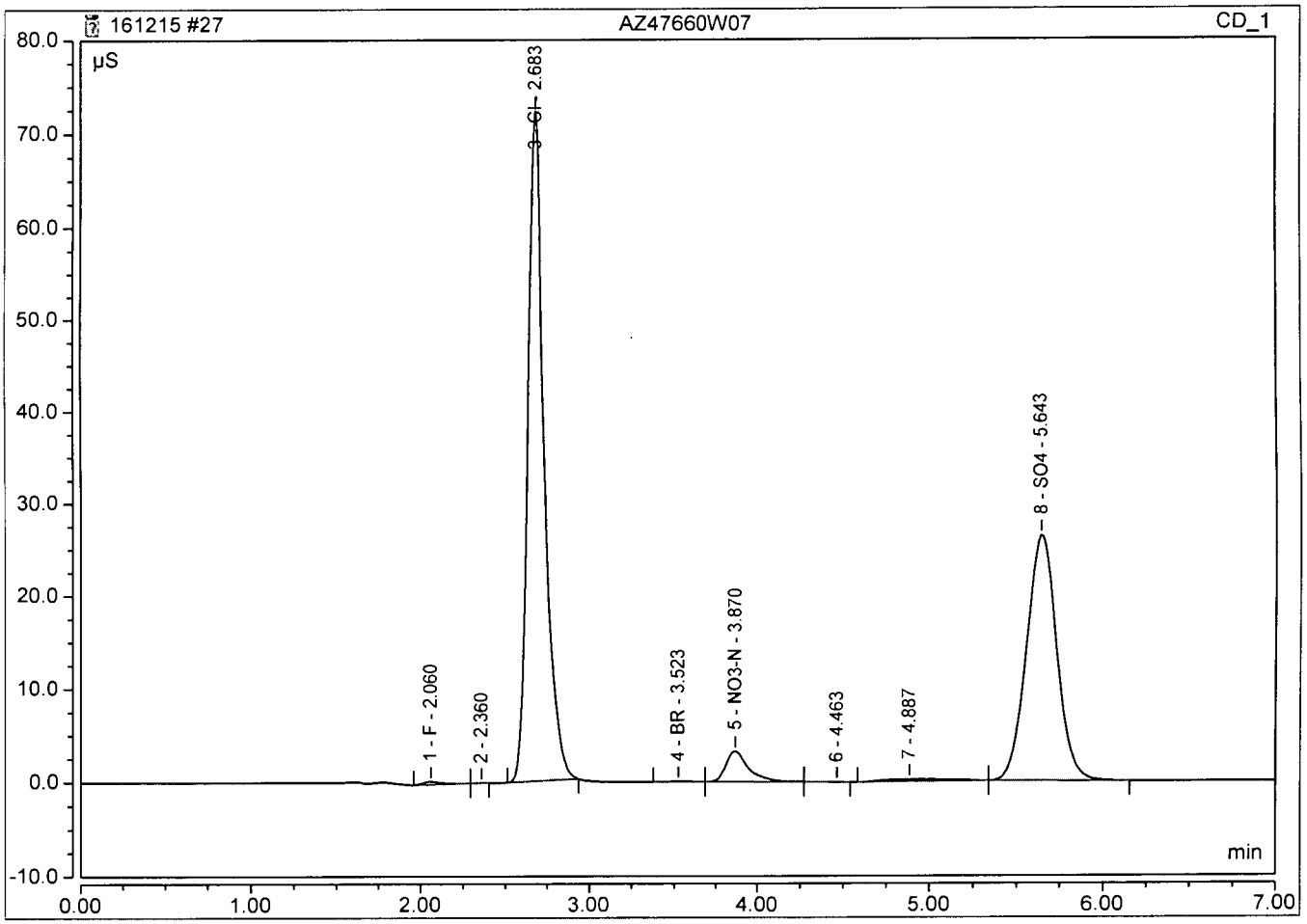
APPL-F1-SC-NoMC-REG MDLs

Peak Integration Report

Sample Name:	**AZ47660W07**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**15-Dec-2016 / 15:08**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.06	F	BMB	0.037	0.304	0.2029
3	2.68	Cl	BMB	8.085	72.228	45.0394
4	3.52	BR	BMB	0.010	0.078	0.2773
5	3.87	NO3-N	BMB	0.504	3.265	1.3197
8	5.64	SO4	BMB	5.331	26.344	44.1464
TOTAL:				13.97	102.22	90.99



Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH138

APPL ID: AZ47663

Sample Collection Date: 12/13/16

ARF: 81776

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	CHLORIDE	76.3	2.0	0.40	0.16	mg/L	2	12/20/16	12/20/16
EPA 300.0	NITRATE	2.4	0.5	0.18	0.04	mg/L	1	12/15/16	12/15/16
EPA 300.0	SULFATE	9.8	1.0	0.20	0.09	mg/L	1	12/15/16	12/15/16
SM 2320B	BICARBONATE AS CACO3	76.7	2.0	1.70	0.85	mg/L	1	12/20/16	12/20/16
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	12/20/16	12/20/16
SM 2320B	TOTAL ALKALINITY AS CACO3	76.7	2.0	1.70	0.85	mg/L	1	12/20/16	12/20/16
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	12/15/16	12/15/16

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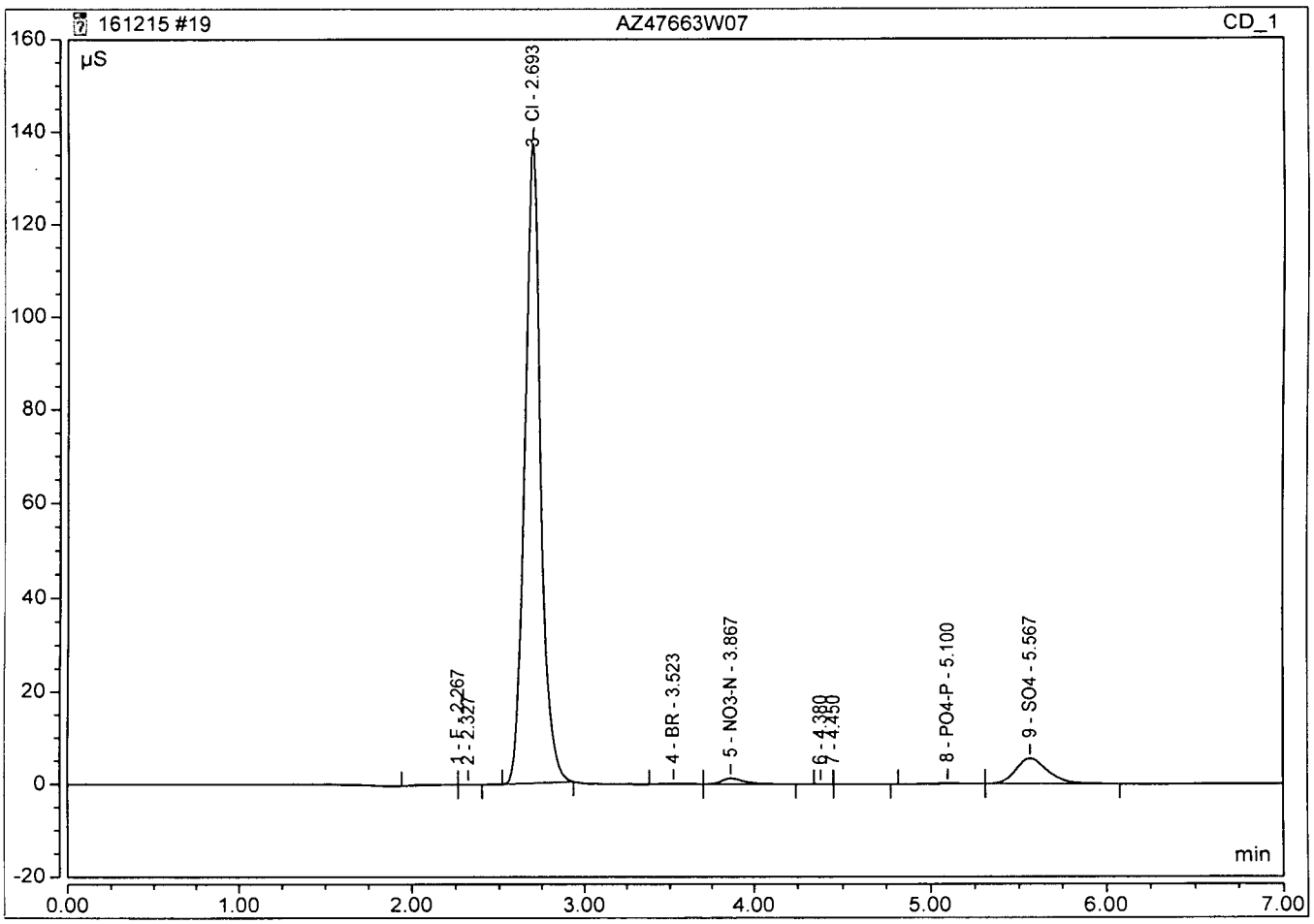
APPL-F1-SC-NoMC-REG MDLs

Peak Integration Report

Sample Name:	**AZ47663W07**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**15-Dec-2016 / 13:24**	*Run Time:*	**7.00**

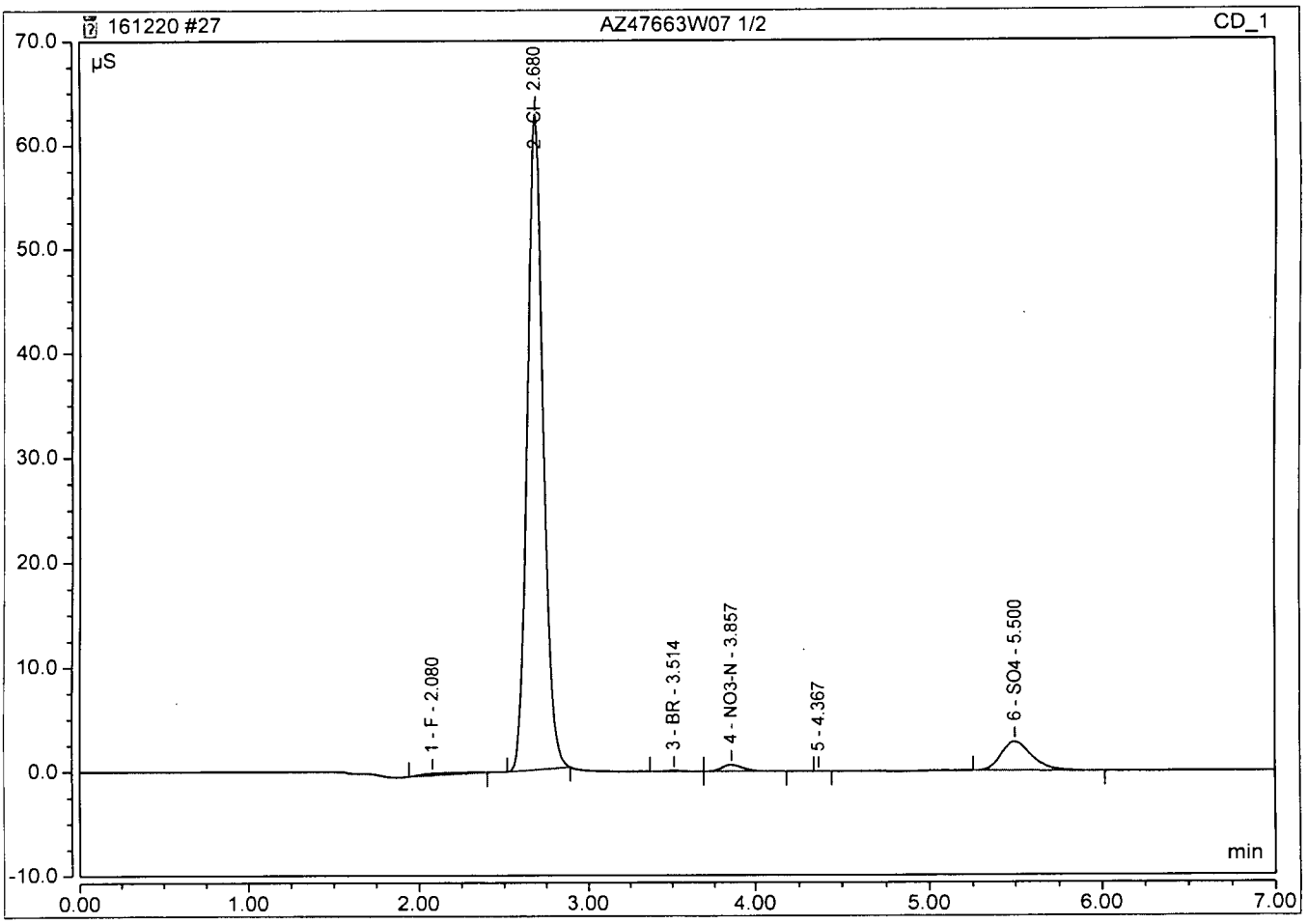
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.27	F	BMB	0.026	0.000	0.1529
3	2.69	Cl	BMB	14.823	137.112	82.1436
4	3.52	BR	BMB	0.014	0.115	0.3520
5	3.87	NO3-N	BMB	0.182	1.238	0.5374
8	5.10	PO4-P	BMB	0.024	0.091	0.2585
9	5.57	SO4	BMB	1.133	5.452	9.7704
TOTAL:				16.20	144.01	93.21



Peak Integration Report

Sample Name:	**AZ47663W07 1/2**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**2.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Dec-2016 / 14:55**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.08	F	BMB	0.048	0.188	0.5036
2	2.68	Cl	BMB	6.835	62.751	76.3115
3	3.51	BR	BMB	0.007	0.057	0.4834
4	3.86	NO3-N	BMB	0.092	0.626	0.6366
6	5.50	SO4	BMB	0.559	2.765	10.1390
TOTAL:				7.54	66.39	88.07



Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH144

Sample Collection Date: 12/13/16

APPL ID: AZ47664

ARF: 81776

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	CHLORIDE	37.5	1.0	0.20	0.08	mg/L	1	12/15/16	12/15/16
EPA 300.0	NITRATE	0.43 J	0.5	0.18	0.04	mg/L	1	12/15/16	12/15/16
EPA 300.0	SULFATE	1.2	1.0	0.20	0.09	mg/L	1	12/15/16	12/15/16
SM 2320B	BICARBONATE AS CACO3	195	2.0	1.70	0.85	mg/L	1	12/20/16	12/20/16
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	12/20/16	12/20/16
SM 2320B	TOTAL ALKALINITY AS CACO3	195	2.0	1.70	0.85	mg/L	1	12/20/16	12/20/16
SM3500FeB	FERROUS IRON	2.5	1.0	0.32	0.16	mg/L	1	12/15/16	12/15/16

J = Estimated value.

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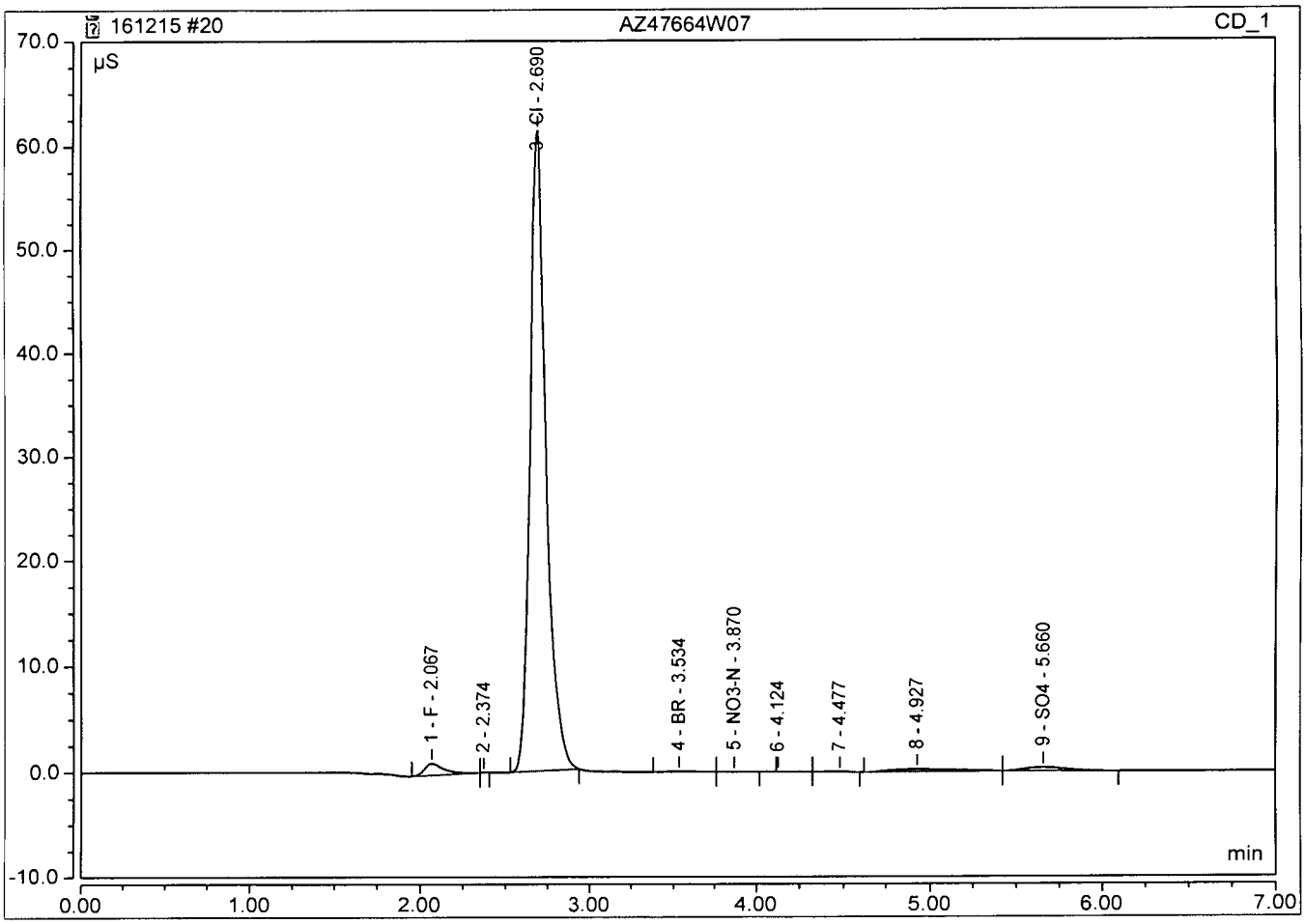
APPL-F1-SC-NoMC-REG MDLs

Peak Integration Report

Sample Name:	**AZ47664W07**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**15-Dec-2016 / 13:37**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.07	F	BMB	0.145	1.113	0.6811
3	2.69	Cl	BMB	6.723	61.397	37.5406
4	3.53	BR	BMB	0.008	0.063	0.2577
5	3.87	NO3-N	BMB	0.001	0.006	0.0974
9	5.66	SO4	BMB	0.086	0.318	1.1942
TOTAL:				6.96	62.90	39.77



Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH140

APPL ID: AZ47665

Sample Collection Date: 12/13/16

ARF: 81776

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	CHLORIDE	382	20.0	4.00	1.60	mg/L	20	12/20/16	12/20/16
EPA 300.0	NITRATE	3.9	1.0	0.36	0.08	mg/L	2	12/15/16	12/15/16
EPA 300.0	SULFATE	68.5	2.0	0.40	0.18	mg/L	2	12/15/16	12/15/16
SM 2320B	BICARBONATE AS CACO3	121	2.0	1.70	0.85	mg/L	1	12/20/16	12/20/16
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	12/20/16	12/20/16
SM 2320B	TOTAL ALKALINITY AS CACO3	121	2.0	1.70	0.85	mg/L	1	12/20/16	12/20/16
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	12/15/16	12/15/16

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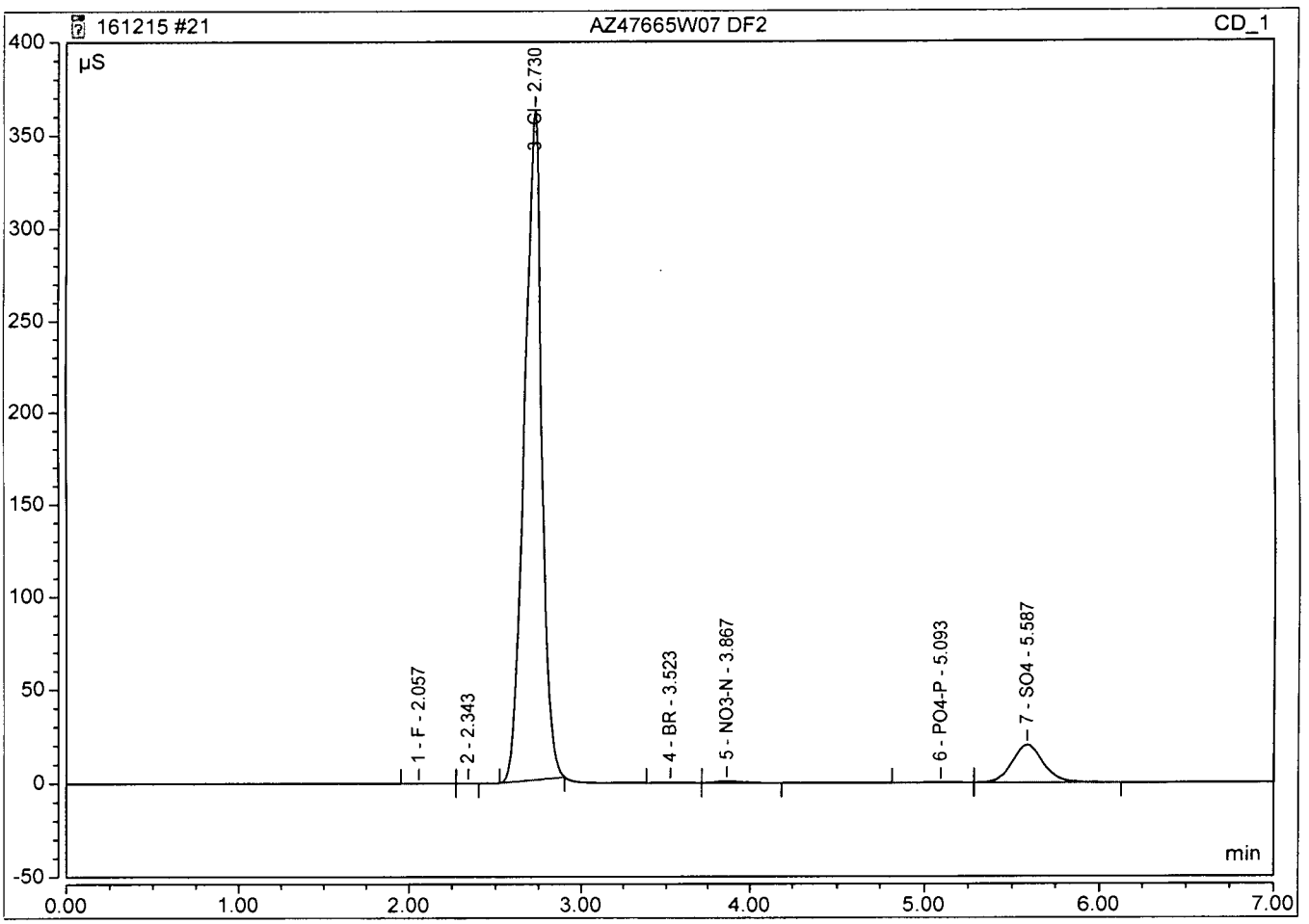
APPL-F1-SC-NoMC-REG MDLs

Peak Integration Report

Sample Name:	**AZ47665W07 DF2**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**2.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**15-Dec-2016 / 13:50**	*Run Time:*	**7.00**

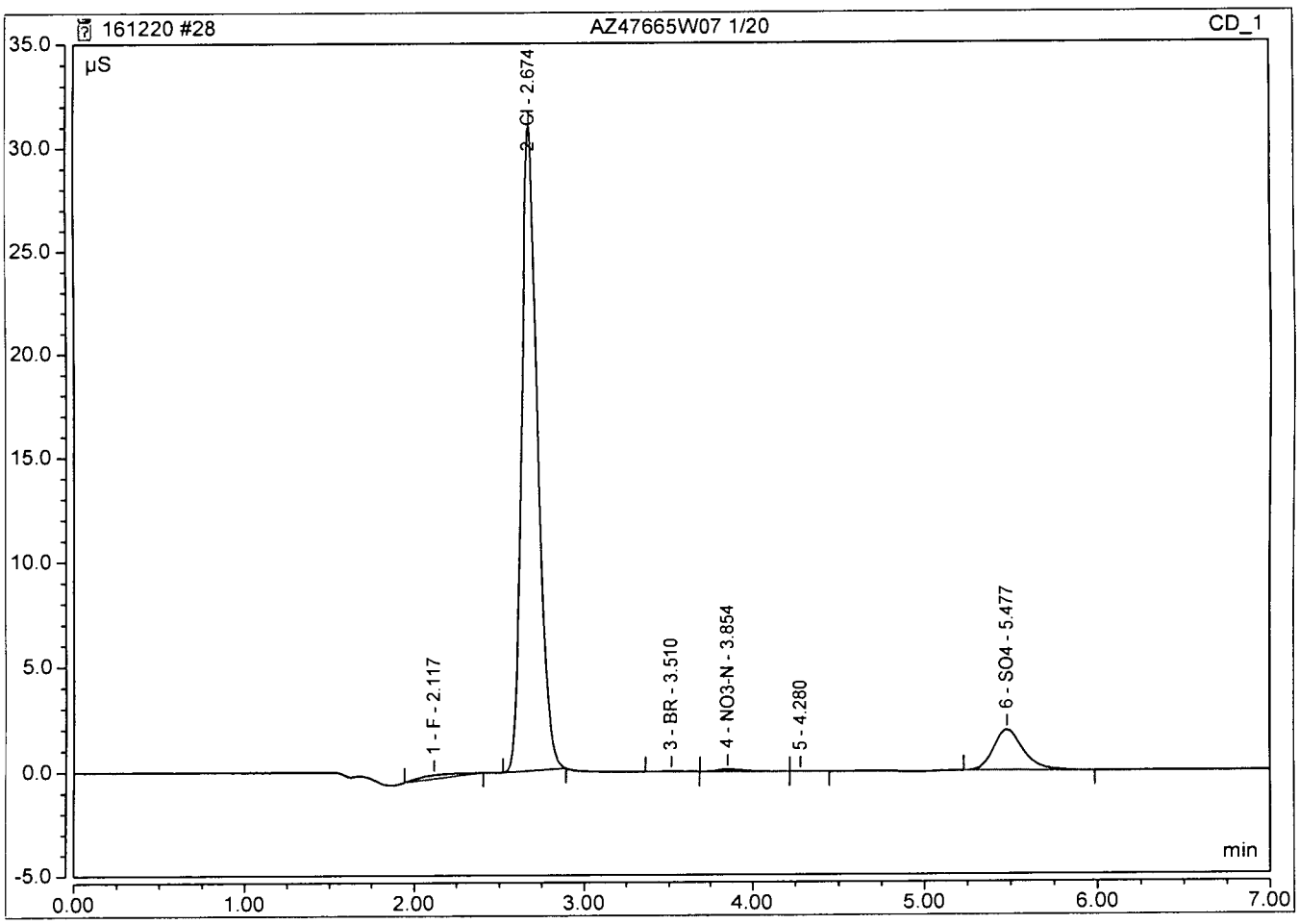
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.06	F	BMB	0.010	0.068	0.1651
3	2.73	Cl	BMB	42.103	361.336	464.7151
4	3.52	BR	BMB	0.035	0.280	1.3646
5	3.87	NO3-N	BMB	0.143	0.981	0.8834
6	5.09	PO4-P	BMB	0.019	0.074	0.4447
7	5.59	SO4	BMB	4.122	19.982	68.4916
TOTAL:				46.43	382.72	536.06



Peak Integration Report

Sample Name:	**AZ47665W07 1/20**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**20.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Dec-2016 / 15:08**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.12	F	BMB	0.053	0.184	5.4567
2	2.67	Cl	BMB	3.376	30.970	382.1940
3	3.51	BR	BMB	0.004	0.030	3.7139
4	3.85	NO3-N	BMB	0.015	0.106	2.6667
6	5.48	SO4	BMB	0.376	1.903	71.4799
TOTAL:				3.82	33.19	465.51



INORGANIC ANALYSIS
Calibration Data

APPL, INC.

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No: 81776 SDG: 81776

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 10/20/16

Analyte	Calibration Verification									M
	True ICV	Found 12:37	%R(1)	True	Found	%R(1)	True	Found	%R(1)	
chloride	20	18.2183	91.1							
Nitrate(NO3)	22.1	20.0573	90.8							
sulfate	20	18.4058	92.0							

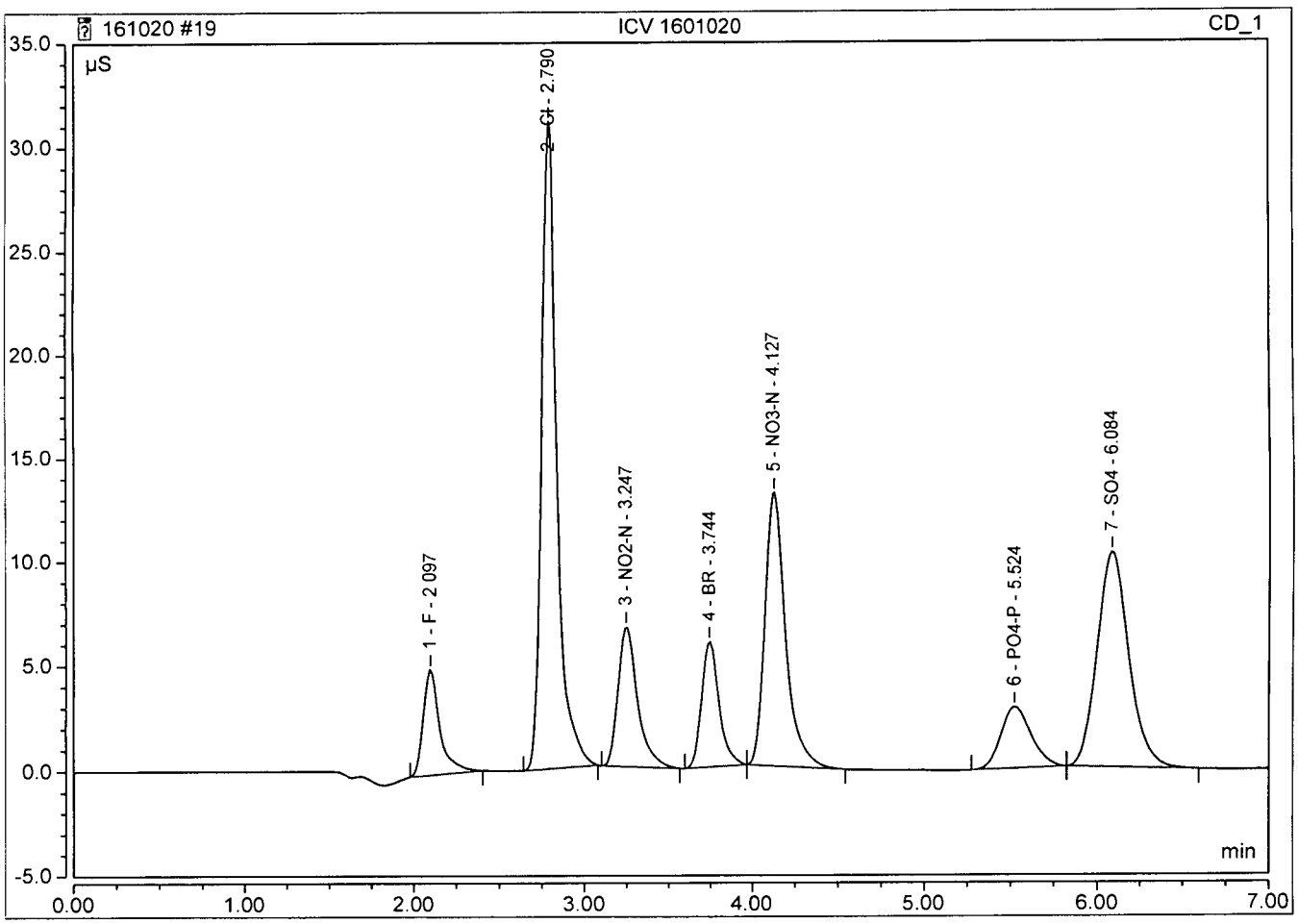
(1) Control Limits: 90-110

ILM02.0

Peak Integration Report

Sample Name:	**ICV 1601020**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:37**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB	0.568	5.018	2.5594
2	2.79	Cl	BMB	3.214	31.139	18.2184
3	3.25	NO2-N	BMB	0.894	6.653	2.9873
4	3.74	BR	BMB	0.739	5.970	11.8423
5	4.13	NO3-N	BMB	1.827	13.075	4.5291
6	5.52	PO4-P	BMB	0.590	2.913	4.8011
7	6.08	SO4	BMB	2.187	10.255	18.4058
TOTAL:				10.02	75.02	63.34



Algorithm Check
$y = .1816x - .0943$ y: Peak Area
$x = 18.22$ ✓ x: Amount
MM 12/28/16

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 81776 SDG: 81776

Preparation Blank Matrix (soil/water): water

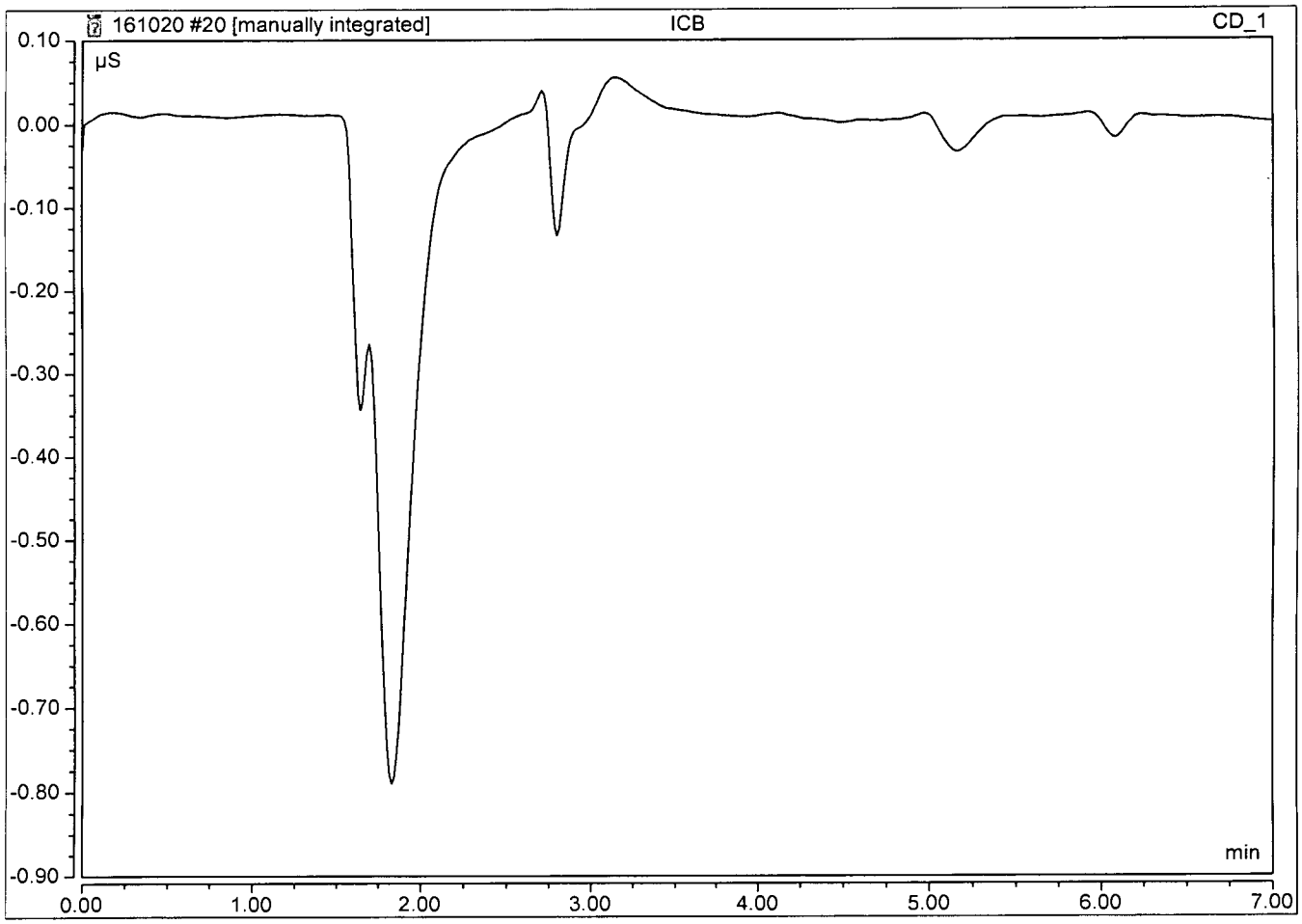
Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	ICB 10/20/16 12:50	C		C		C		C		C	
chloride	1.000	U									
Nitrate(NO3)	.500	U									
sulfate	1.000	U									

Peak Integration Report

Sample Name:	**ICB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:50**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
		TOTAL:		0.00	0.00	0.00



A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No: 81776 SDG: 81776

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 12/15/16

Analyte	Calibration Verification									M
	True CCV1	Found 10:20	%R(1)	True CCV1	Found 14:29	%R(1)	True CCV1	Found 16:26	%R(1)	
chloride	25	23.4054	93.6	25	23.5831	94.3	25	23.4937	94.0	
Nitrate(NO3)-N	5	4.7472	94.9	5	4.7823	95.6	5	4.7745	95.5	
sulfate	25	22.8286	91.3	25	22.9246	91.7	25	22.9418	91.8	

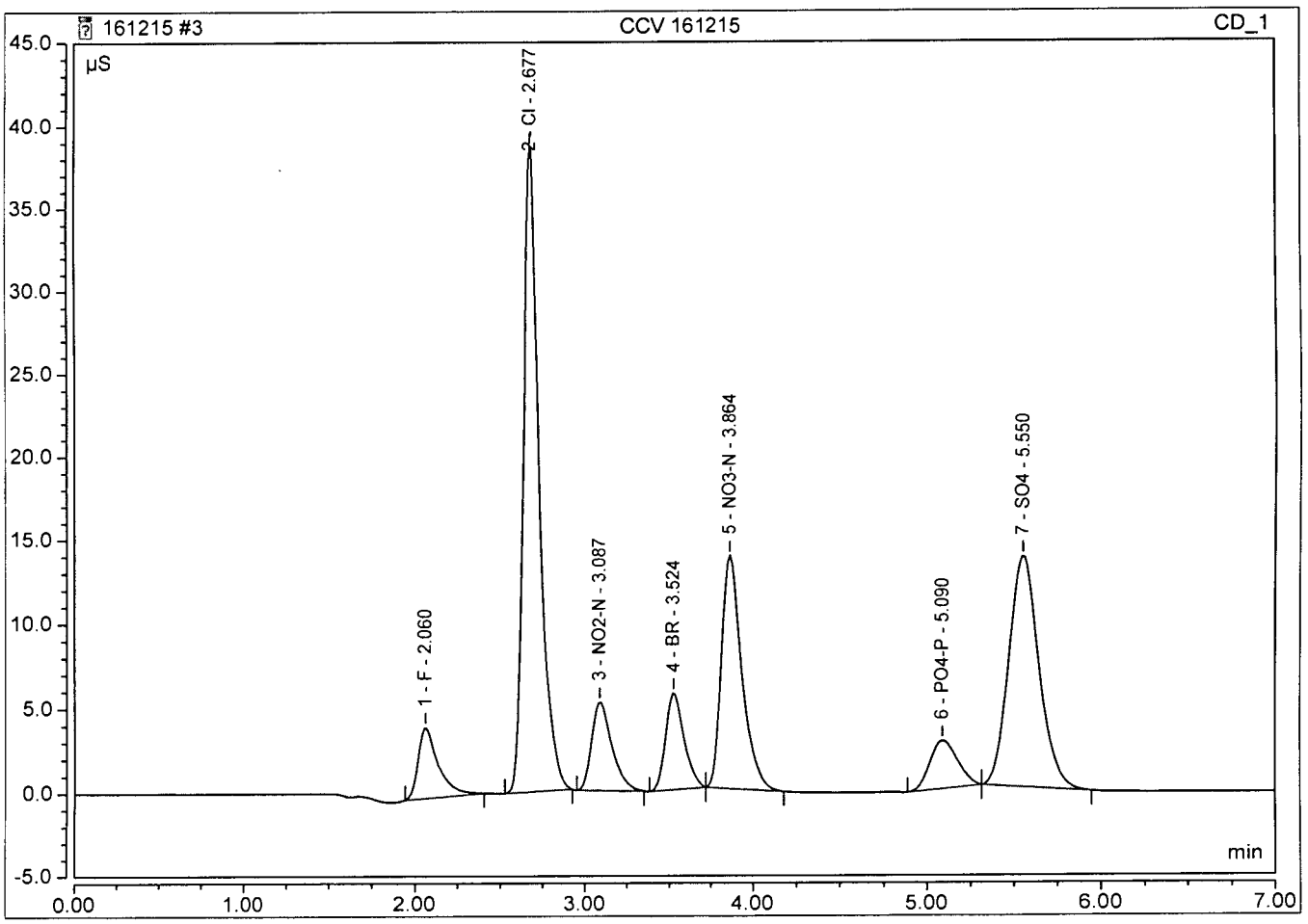
(1) Control Limits: 90-110

ILM02.0

Peak Integration Report

Sample Name:	**CCV 161215**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**15-Dec-2016 / 10:20**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.06	F	BMB	0.569	4.201	2.5641
2	2.68	Cl	BMB	4.156	38.669	23.4054
3	3.09	NO2-N	BMB	0.726	5.233	2.4293
4	3.52	BR	BMB	0.717	5.709	11.4852
5	3.86	NO3-N	BMB	1.917	13.766	4.7471
6	5.09	PO4-P	BMB	0.517	2.836	4.2126
7	5.55	SO4	BMB	2.728	13.644	22.8286
TOTAL:				11.33	84.06	71.67

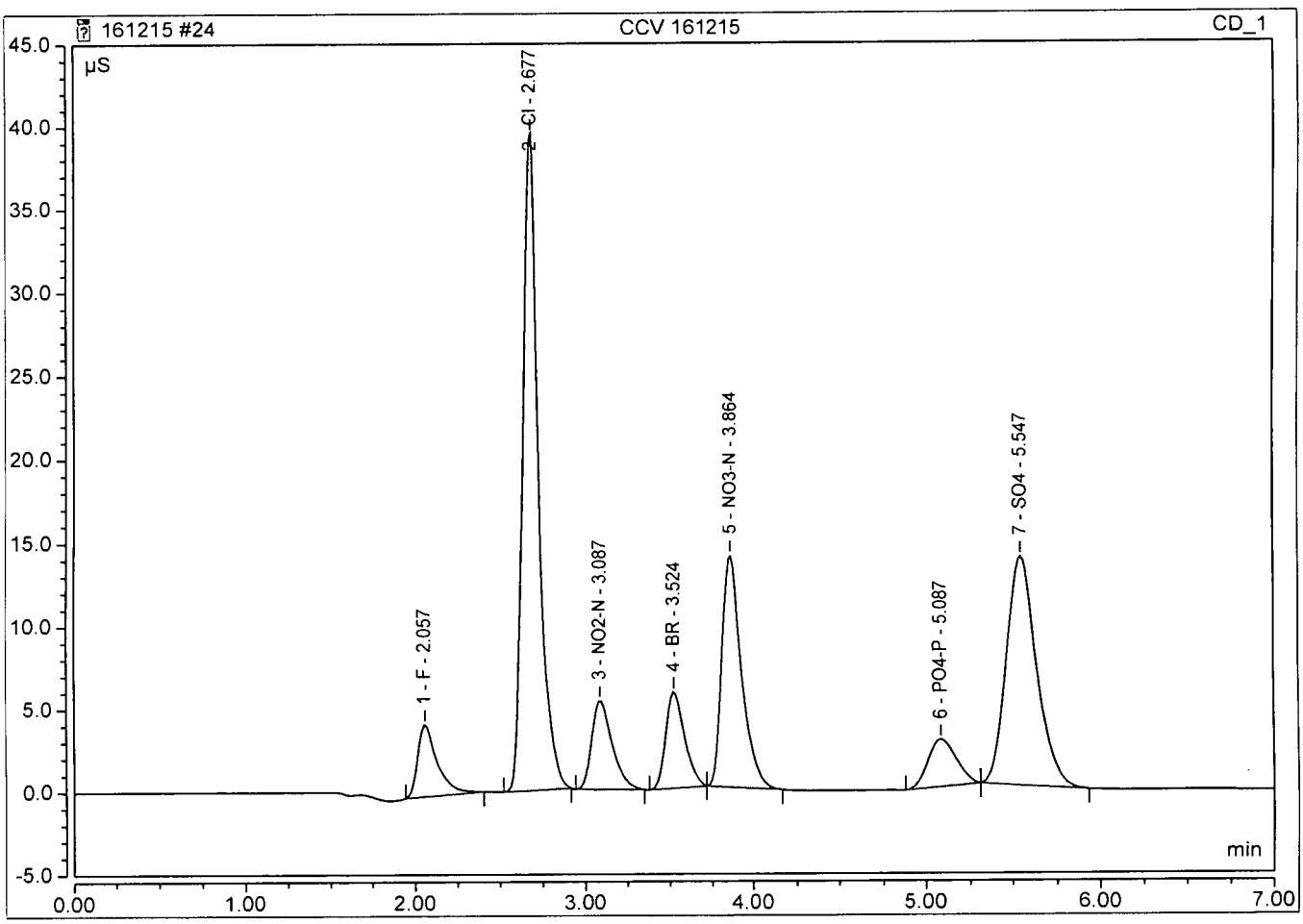


Algorithm Check
y = .1816x - .0983
y = 23.40 ✓
y: Peak Area
x: Amnt
MM 12/28/16

Peak Integration Report

Sample Name:	**CCV 161215**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**15-Dec-2016 / 14:29**	*Run Time:*	**7.00**

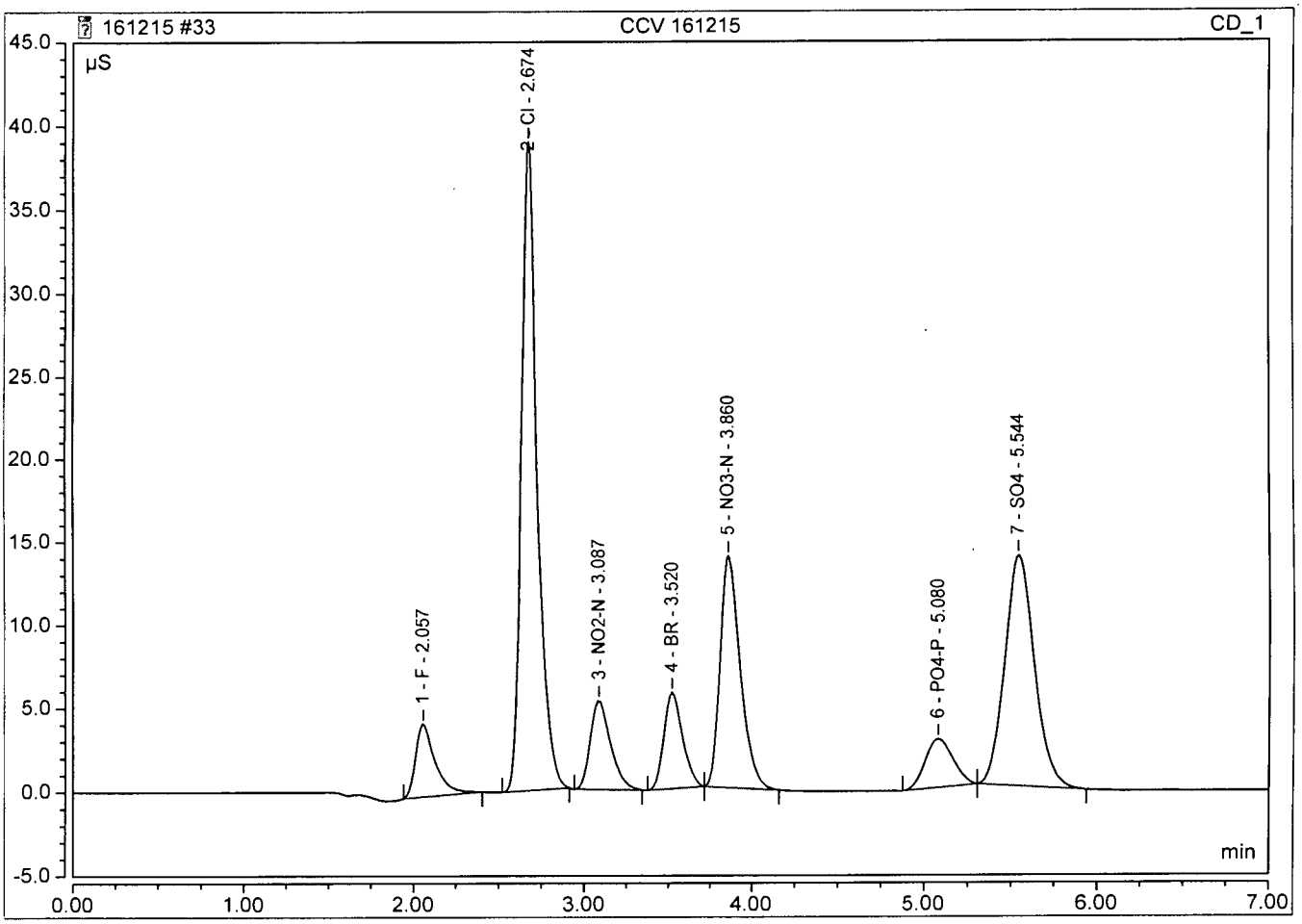
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.06	F	BMB	0.574	4.356	2.5870
2	2.68	Cl	BMB	4.188	39.472	23.5831
3	3.09	NO2-N	BMB	0.739	5.361	2.4745
4	3.52	BR	BMB	0.726	5.816	11.6340
5	3.86	NO3-N	BMB	1.931	14.005	4.7823
6	5.09	PO4-P	BMB	0.521	2.851	4.2493
7	5.55	SO4	BMB	2.739	13.823	22.9246
TOTAL:				11.42	85.68	72.23



Peak Integration Report

Sample Name:	**CCV 161215**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**15-Dec-2016 / 16:26**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.06	F	BMB	0.575	4.347	2.5906
2	2.67	Cl	BMB	4.172	38.935	23.4937
3	3.09	NO2-N	BMB	0.735	5.300	2.4595
4	3.52	BR	BMB	0.726	5.762	11.6377
5	3.86	NO3-N	BMB	1.928	13.886	4.7745
6	5.08	PO4-P	BMB	0.532	2.908	4.3356
7	5.54	SO4	BMB	2.741	13.840	22.9418
TOTAL:				11.41	84.98	72.23



A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 81776 SDG: 81776

Preparation Blank Matrix (soil/water): water

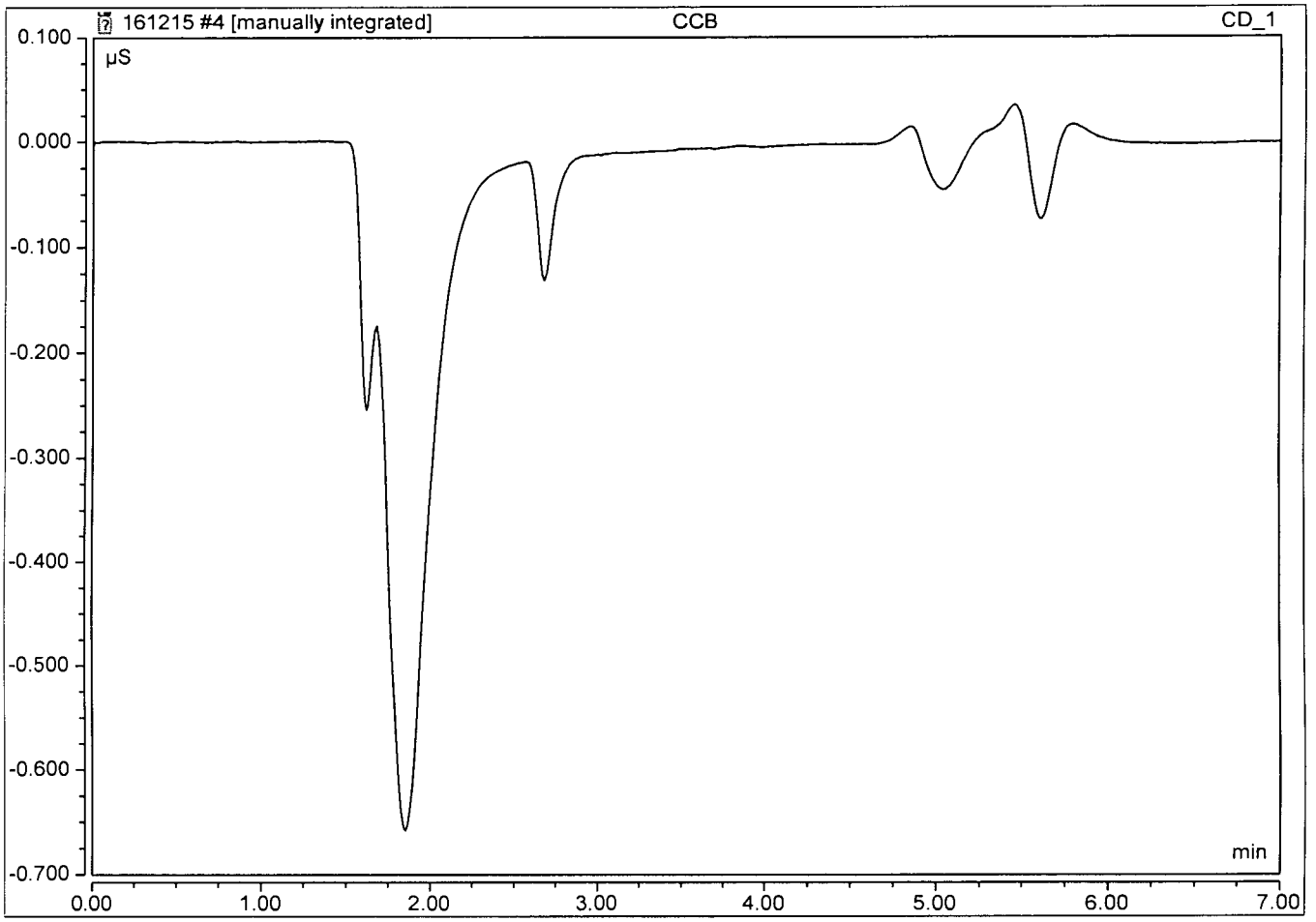
Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	CCB 12/15/16 10:33	C	CCB 12/15/16 14:42	C	CCB 12/15/16 16:40	C		C		C	
chloride	1.000	U	1.000	U	1.000	U					
Nitrate(NO3)-N	.200	U	.200	U	.200	U					
sulfate	1.000	U	1.000	U	1.000	U					

Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**15-Dec-2016 / 10:33**	*Run Time:*	**7.00**

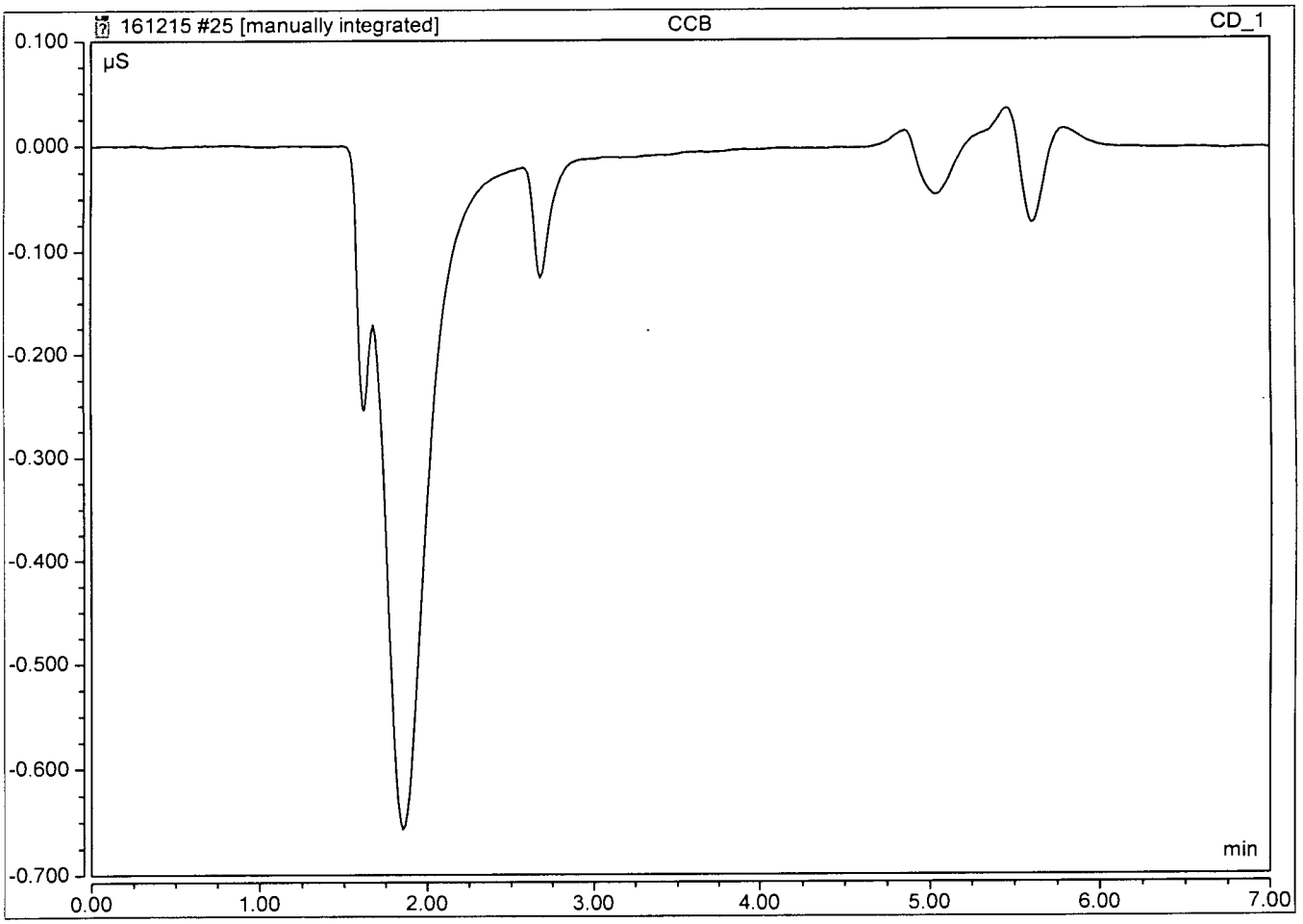
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
		TOTAL:		0.00	0.00	0.00



Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**15-Dec-2016 / 14:42**	*Run Time:*	**7.00**

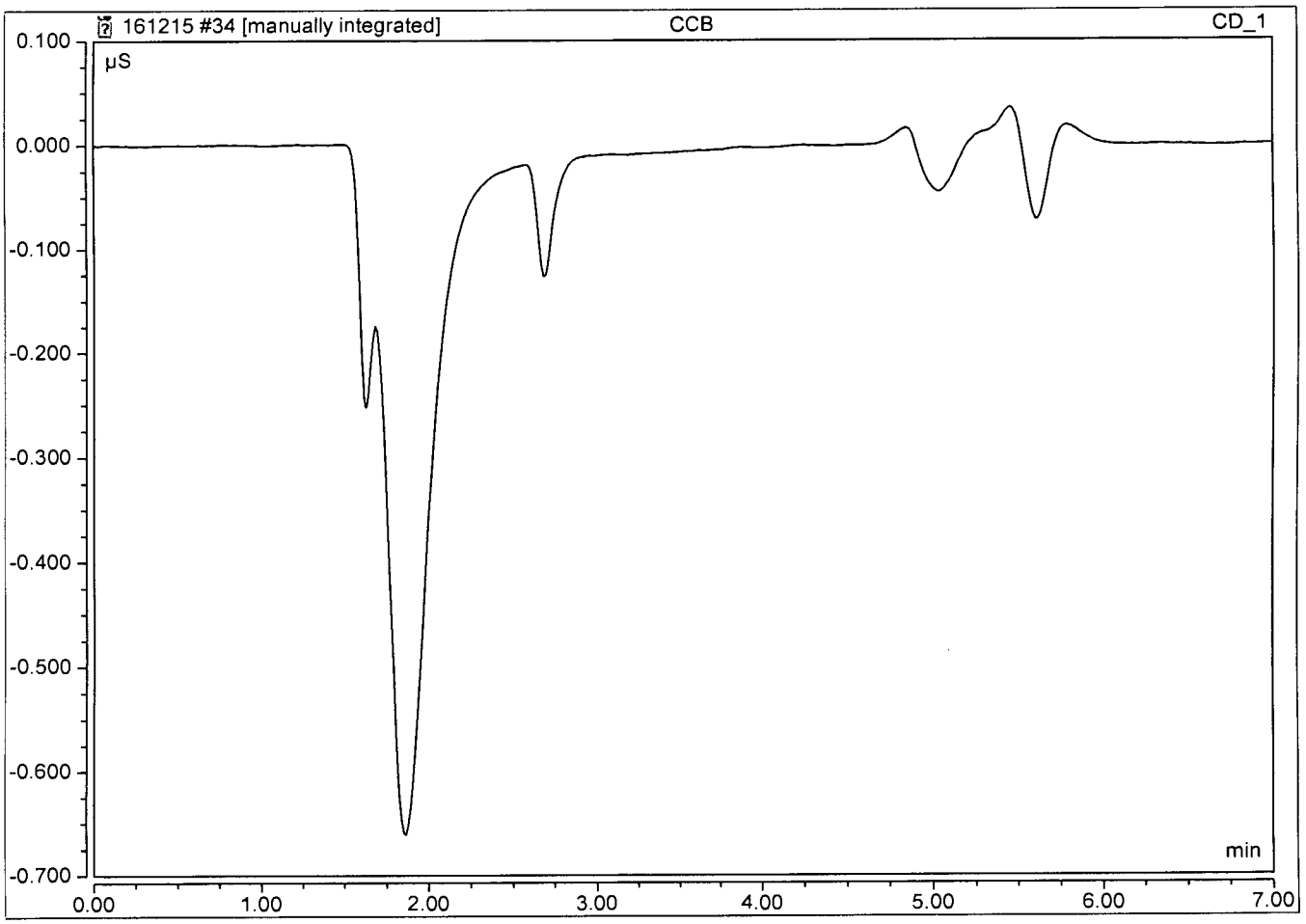
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
		TOTAL:		0.00	0.00	0.00



Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**15-Dec-2016 / 16:40**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
		TOTAL:		0.00	0.00	0.00



A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No: 81776 SDG: 81776

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 12/20/16

Analyte	Calibration Verification									M
	True CCV1	Found 9:29	%R(1)	True CCV1	Found 12:05	%R(1)	True CCV1	Found 15:21	%R(1)	
chloride	25	23.6931	94.8	25	23.7338	94.9	25	23.3354	93.3	

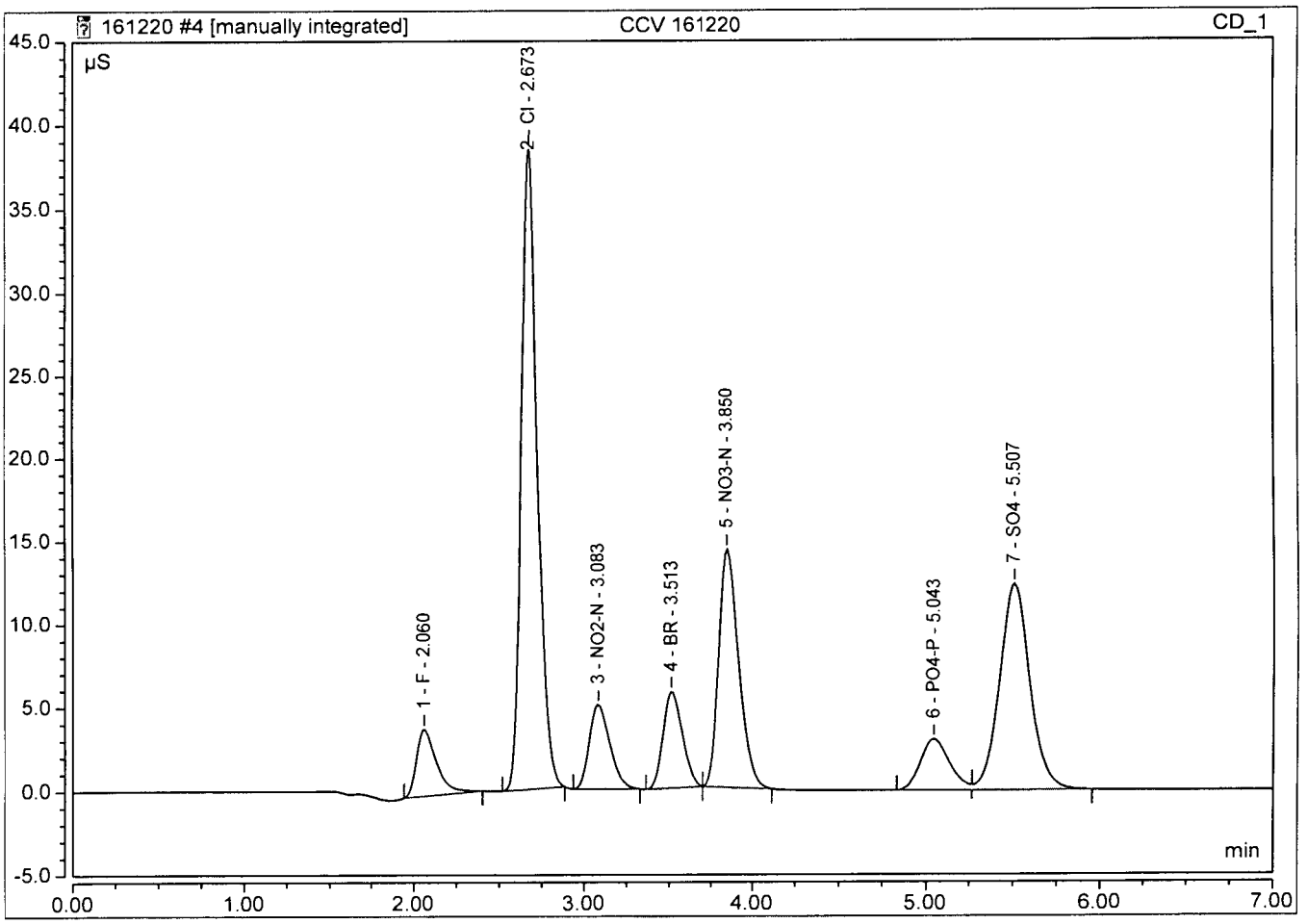
(1) Control Limits: 90-110

ILM02.0

Peak Integration Report

Sample Name:	**CCV 161220**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Dec-2016 / 09:29**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.06	F	BMB	0.546	4.004	2.4631
2	2.67	Cl	BMB	4.208	38.420	23.6931
3	3.08	NO2-N	BMB	0.703	5.042	2.3532
4	3.51	BR	BMB	0.740	5.777	11.8529
5	3.85	NO3-N	BMB	1.983	14.287	4.9091
6	5.04	PO4-P	BM *	0.591	3.035	4.8077
7	5.51	SO4	MB*	2.453	12.325	20.5813
TOTAL:				11.22	82.89	70.66

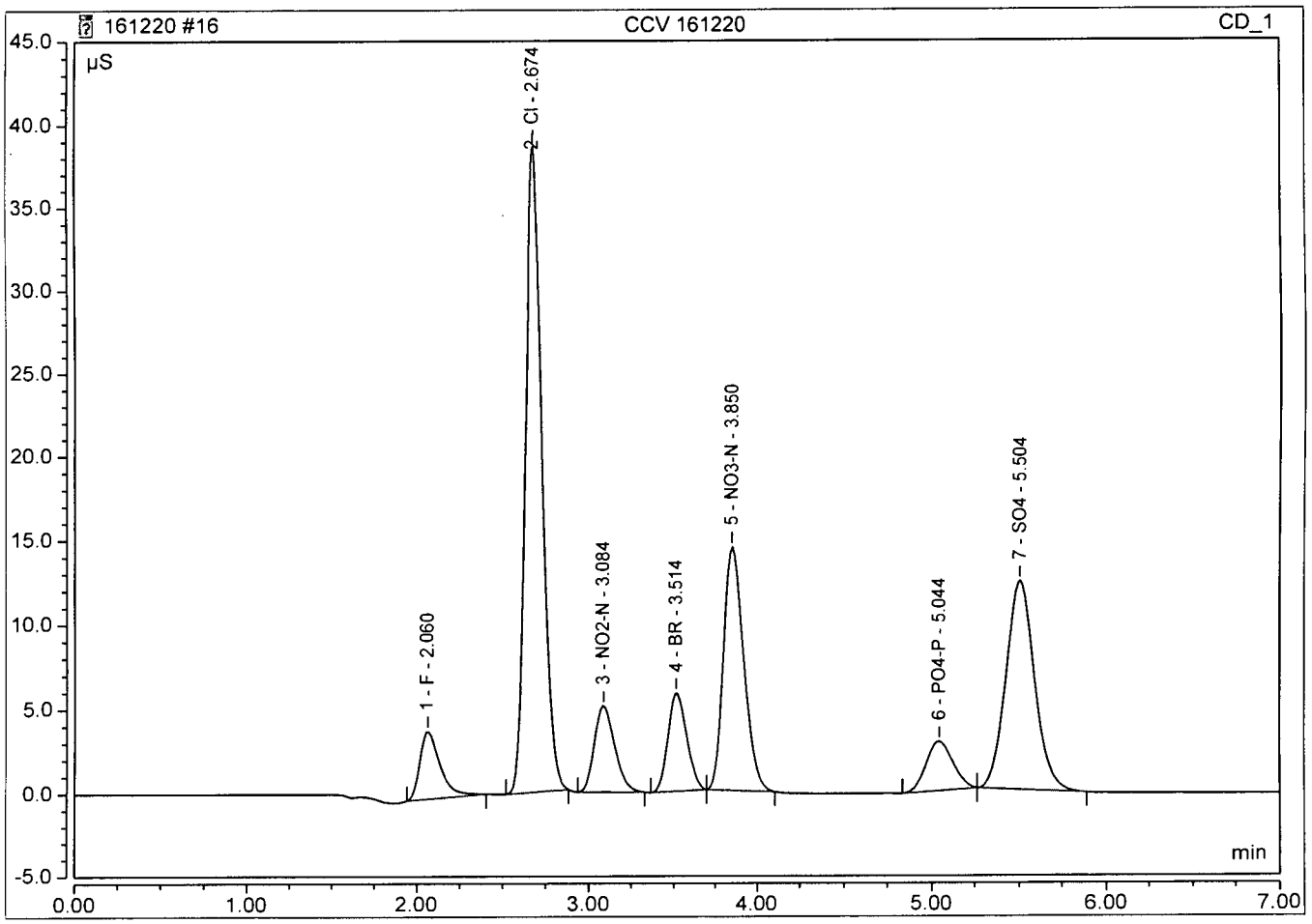


Algorithm Check
$y = .1816x - .0943$
$x = 23.69$
y = Peak Area
x = Amount
mm 12/28/16

Peak Integration Report

Sample Name:	**CCV 161220**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Dec-2016 / 12:05**	*Run Time:*	**7.00**

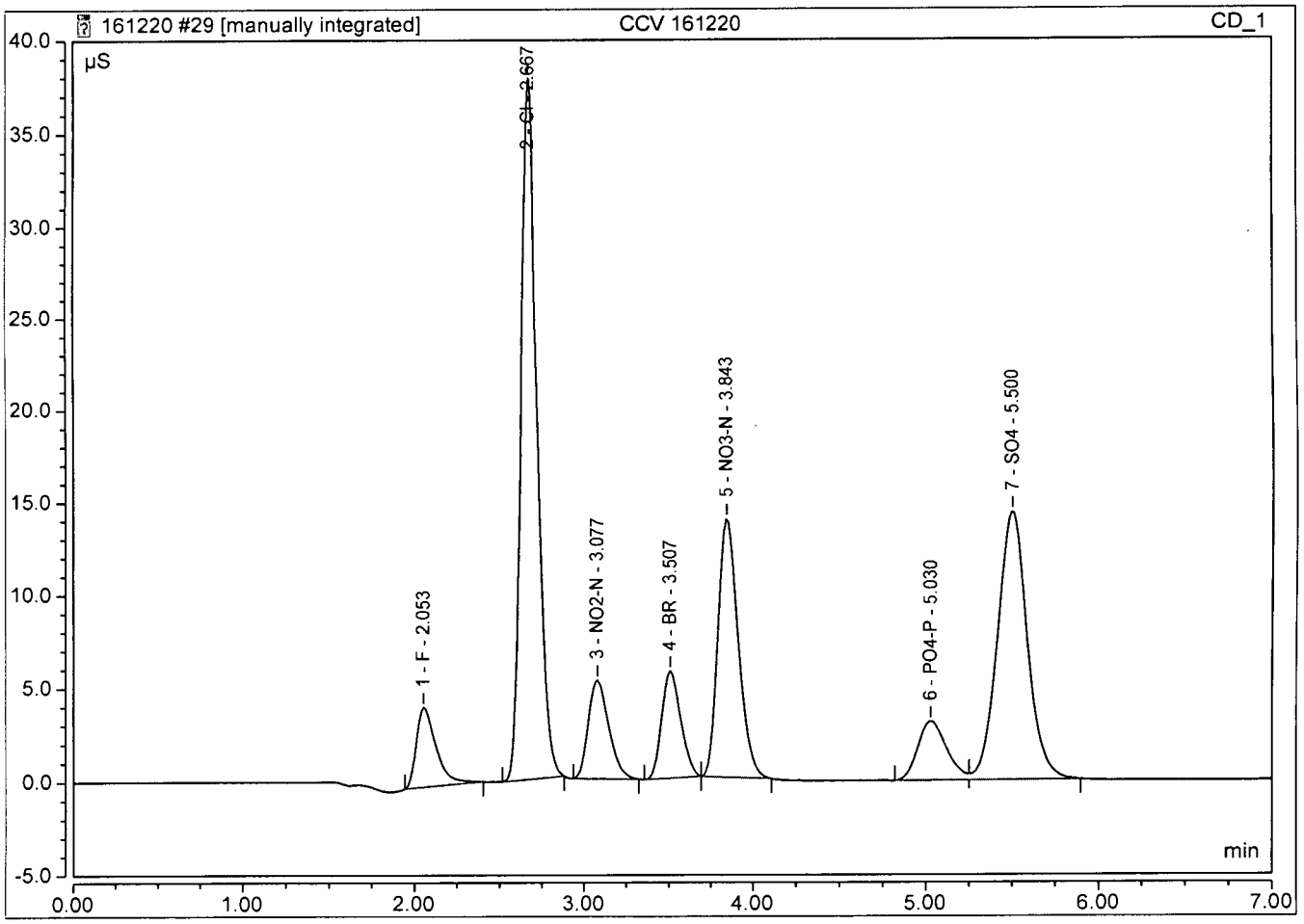
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.06	F	BMB	0.548	4.031	2.4697
2	2.67	Cl	BMB	4.216	38.534	23.7338
3	3.08	NO2-N	BMB	0.707	5.078	2.3666
4	3.51	BR	BMB	0.742	5.799	11.8834
5	3.85	NO3-N	BMB	1.987	14.364	4.9188
6	5.04	PO4-P	BMB	0.528	2.907	4.3032
7	5.50	SO4	BMB	2.371	12.280	19.9056
TOTAL:				11.10	82.99	69.58



Peak Integration Report

Sample Name:	**CCV 161220**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Dec-2016 / 15:21**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.05	F	BMB	0.571	4.263	2.5745
2	2.67	Cl	BMB	4.144	37.832	23.3354
3	3.08	NO2-N	BMB	0.735	5.280	2.4614
4	3.51	BR	BMB	0.732	5.725	11.7323
5	3.84	NO3-N	BMB	1.926	13.871	4.7709
6	5.03	PO4-P	BM *	0.612	3.147	4.9810
7	5.50	SO4	MB*	2.852	14.371	23.8518
TOTAL:				11.57	84.49	73.71



A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 81776 SDG: 81776

Preparation Blank Matrix (soil/water): water

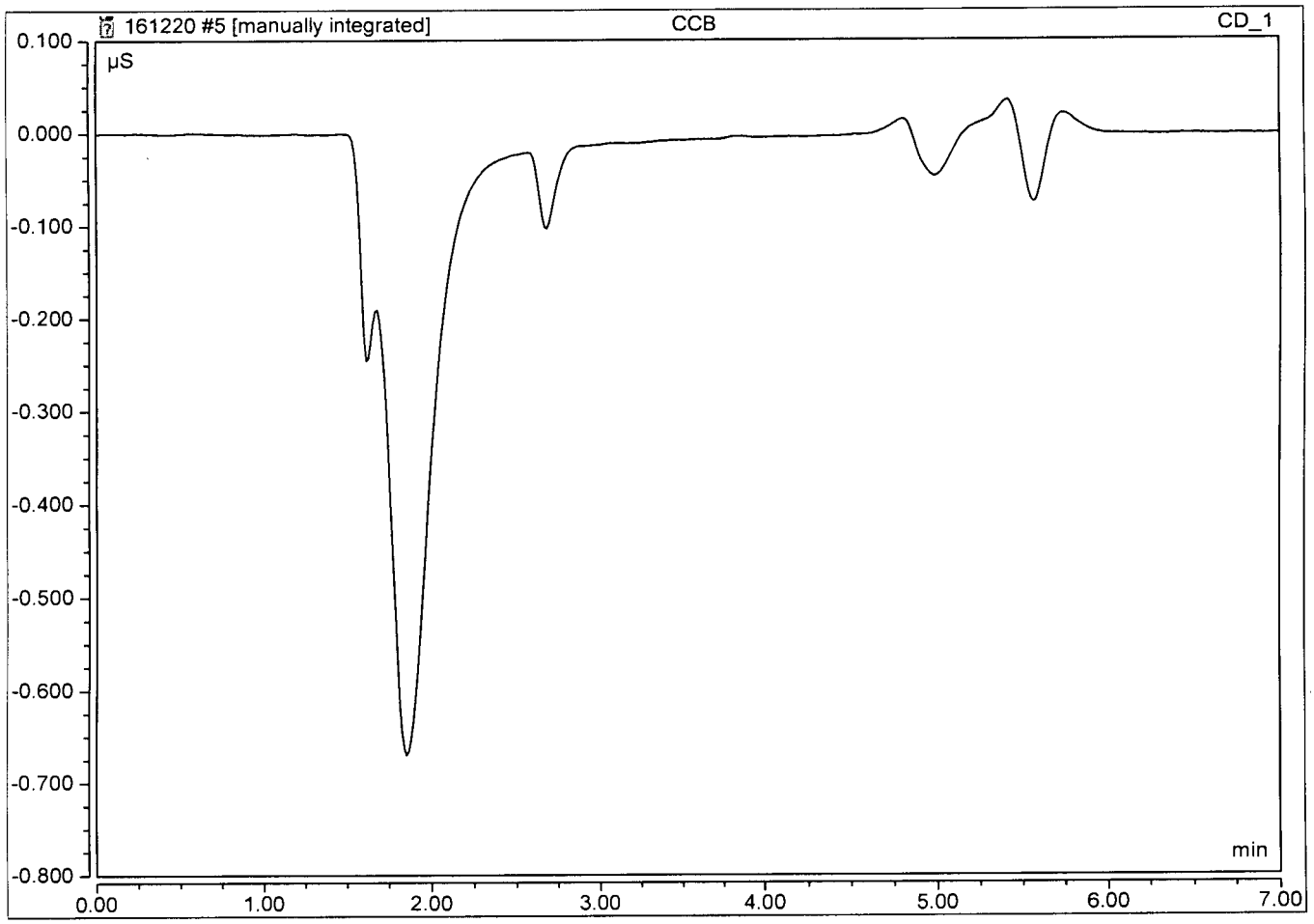
Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	CCB 12/20/16 09:42	C	CCB 12/20/16 12:18	C	CCB 12/20/16 15:34	C		C		C	
chloride	1.000	U	1.000	U	1.000	U					

Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Dec-2016 / 09:42**	*Run Time:*	**7.00**

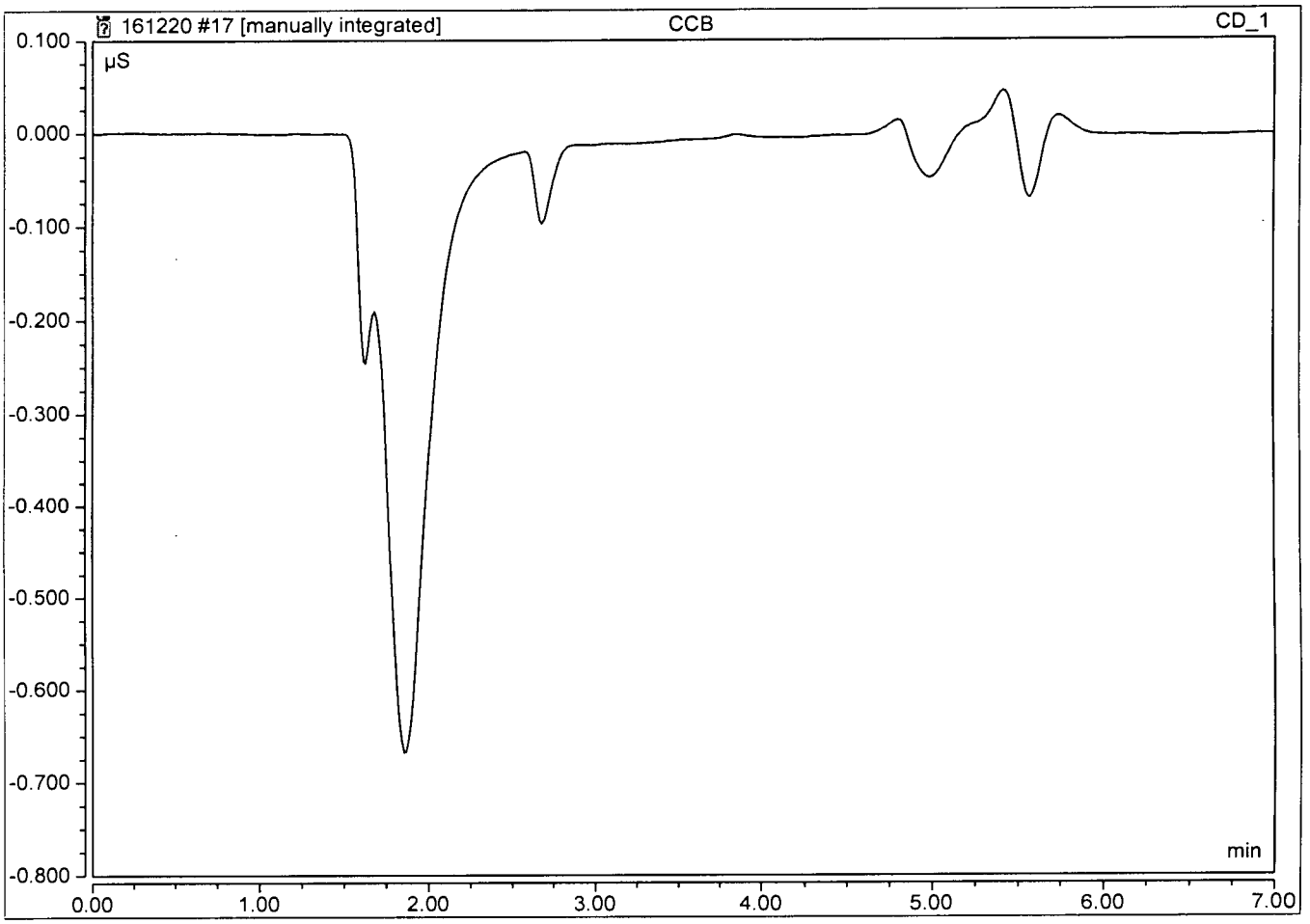
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
		TOTAL:		0.00	0.00	0.00



Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Dec-2016 / 12:18**	*Run Time:*	**7.00**

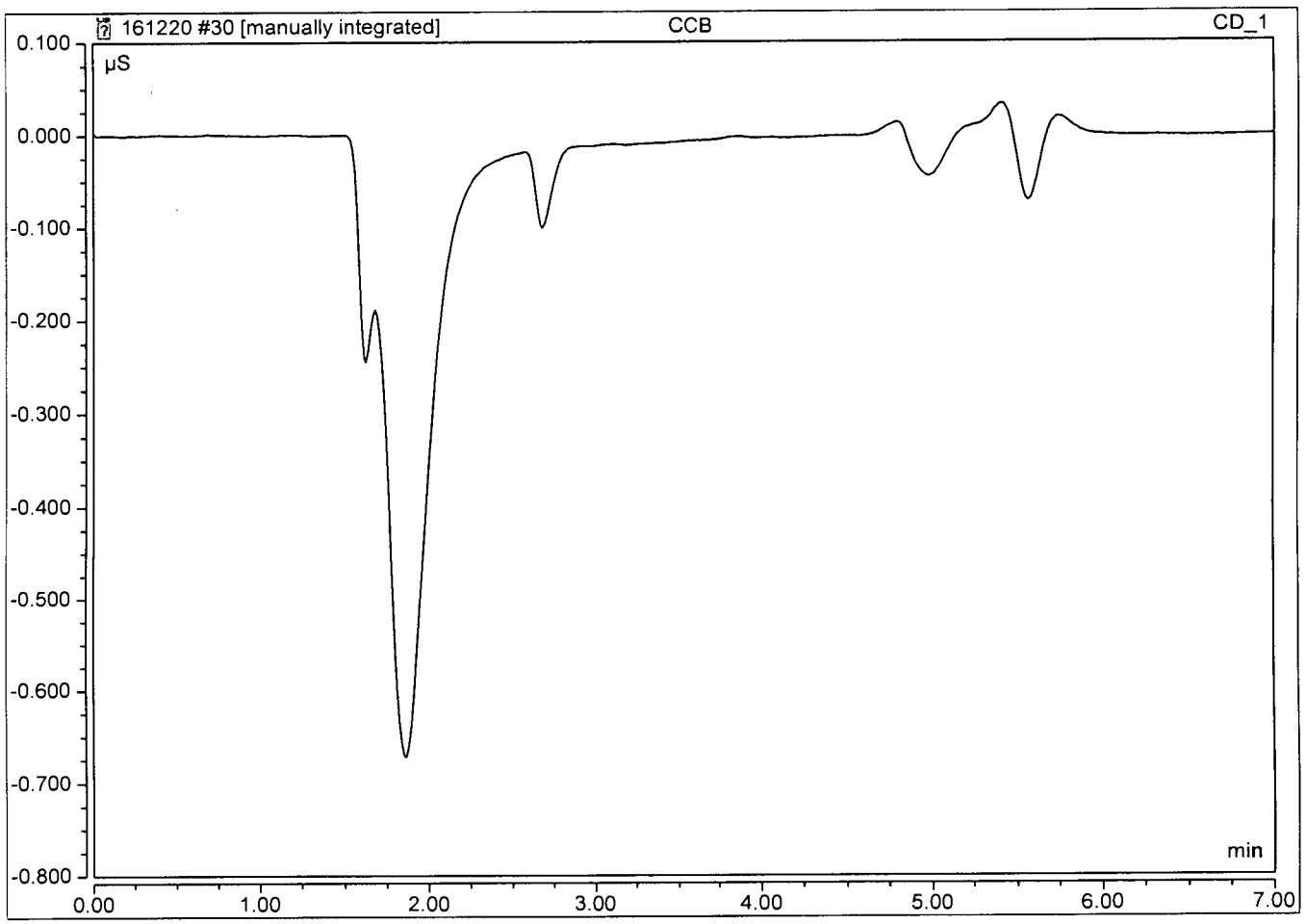
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
		TOTAL:		0.00	0.00	0.00



Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Dec-2016 / 15:34**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
		TOTAL:		0.00	0.00	0.00



A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No: 81776 SDG: 81776

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 05/20/16

Analyte	Calibration Verification									M
	True ICV	Found 12:41	%R(1)	True CCV1	Found 15:45	%R(1)	True CCV1	Found 15:56	%R(1)	
Ferrous Iron	3	3.01396	100	3	2.82415	94.1	3	2.77419	92.5	

(1) Control Limits: 90-110

ILM02.0

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

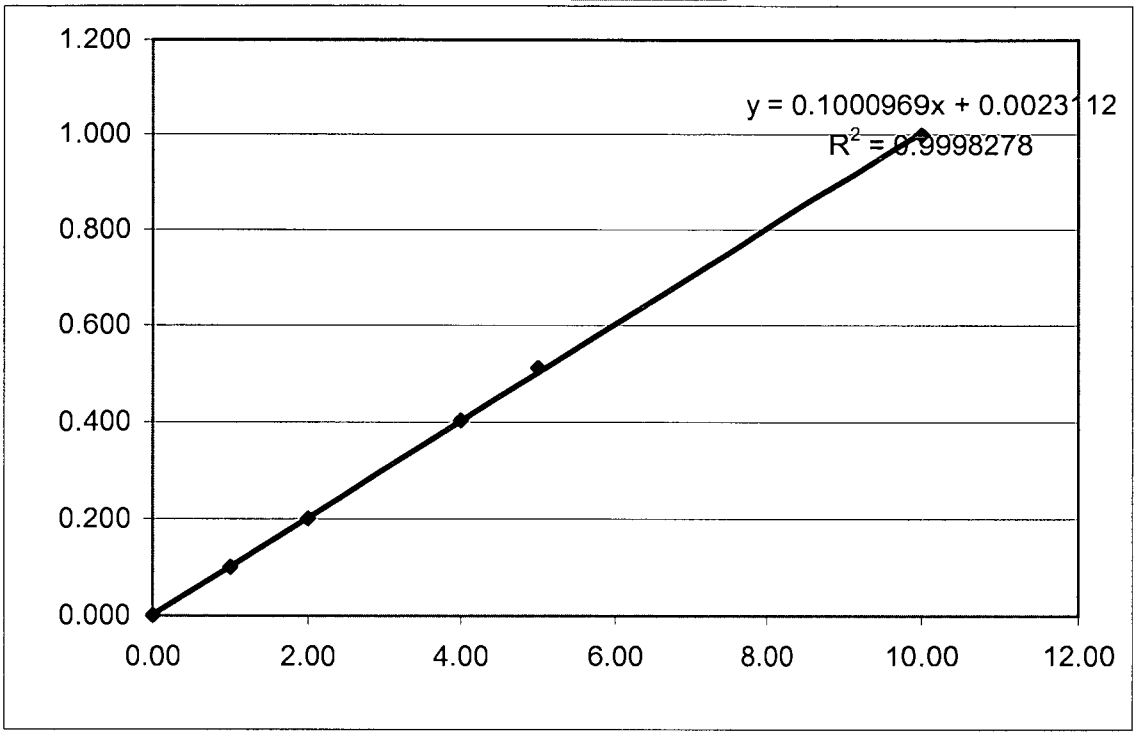
ARF No.: 81776 SDG: 81776

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	ICB 05/20/16 12:42	C	CCB 12/15/16 15:46	C	CCB 12/15/16 15:57	C		C		C	
Ferrous Iron	1.000	U	1.000	U	1.000	U					

Ferrous Iron **161215A**



X	Y
0.00	0.000
1.00	0.101
2.00	0.201
4.00	0.403
5.00	0.512
10.00	0.999

Algorithm Check

reading (y)=	0.312	12/15/16	15:47
dilution=	1		
result (x)=	3.09 ✓		

mm 12/28/16

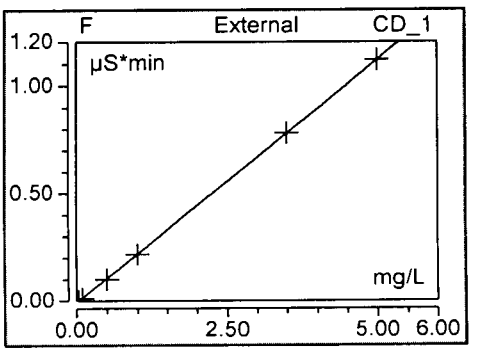
Calibration Batch Report

Sequence:	**161020**	*Injection Volume:*	**25.00**
Instrument Method:	**Program 1**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:24**	*Run Time:*	**7**

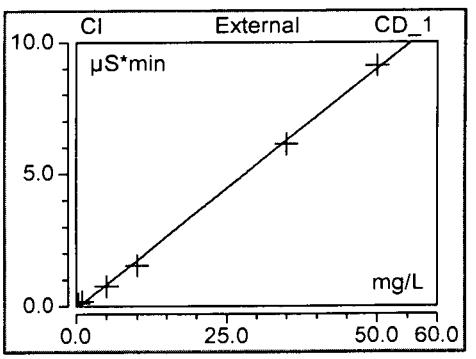
Calibration Summary

Peak Name	Eval.Type	Cal.Type	Points	Offset (C0)	Slope (C1)	Curve (C2)	Coeff.Det. %
F	Area	WithOffset,	6.000	-0.009	0.225	0.000	99.9840
Cl	Area	in, WithOffse	6.000	-0.094	0.182	0.000	99.8613
NO2-N	Area	in, WithOffse	6.000	-0.007	0.301	0.000	99.9917
BR	Area	in, WithOffse	6.000	-0.008	0.063	0.000	99.9802
NO3-N	Area	in, WithOffse	6.000	-0.039	0.412	0.000	99.9329
PO4-P	Area	in, WithOffse	6.000	-0.008	0.125	0.000	99.9563
SO4	Area	in, WithOffse	6.000	-0.060	0.122	0.000	99.9400
		AVERAGE:		-0.0322	0.2043	0.0000	99.9495

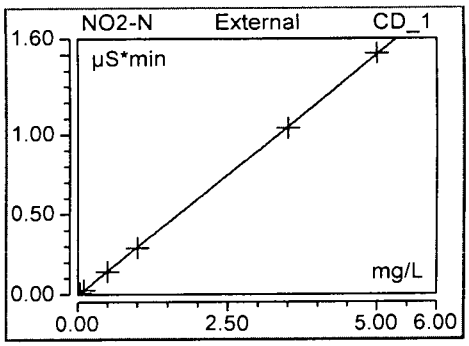
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	F	F	F	F
ICAL 1 10/20/16	2.123	0.0012	0.022	0.044
ICAL 2 10/20/16	2.107	0.0123	0.139	0.093
ICAL 3 10/20/16	2.100	0.1000	0.922	0.483
ICAL 4 10/20/16	2.104	0.2174	1.958	1.004
ICAL 5 10/20/16	2.097	0.7826	6.953	3.513
ICAL 6 10/20/16	2.103	1.1183	9.996	5.004
Average	2.106			
Rel. Std. Dev.	0.443 %			



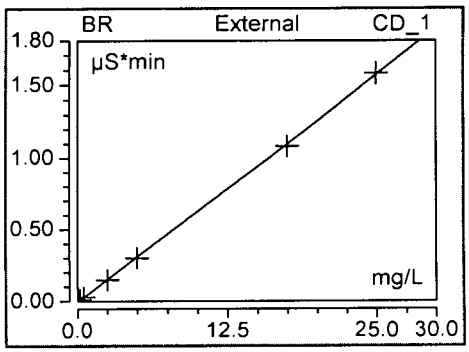
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	Cl	Cl	Cl	Cl
ICAL 1 10/20/16	2.793	0.1132	1.052	1.143
ICAL 2 10/20/16	2.790	0.1861	1.743	1.544
ICAL 3 10/20/16	2.790	0.7617	7.117	4.714
ICAL 4 10/20/16	2.797	1.5419	14.708	9.010
ICAL 5 10/20/16	2.793	6.1288	59.398	34.268
ICAL 6 10/20/16	2.803	9.1171	87.978	50.723
Average	2.795			
Rel. Std. Dev.	0.179 %			



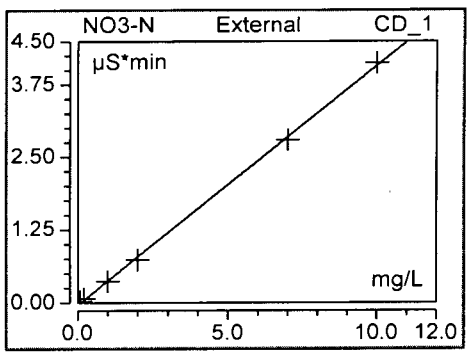
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	NO2-N	NO2-N	NO2-N	NO2-N
ICAL 1 10/20/16	3.250	0.0095	0.073	0.053
ICAL 2 10/20/16	3.247	0.0276	0.209	0.113
ICAL 3 10/20/16	3.250	0.1420	1.072	0.493
ICAL 4 10/20/16	3.254	0.2907	2.188	0.986
ICAL 5 10/20/16	3.250	1.0405	7.775	3.473
ICAL 6 10/20/16	3.257	1.5072	11.205	5.022
Average	3.251			
Rel. Std. Dev.	0.106 %			



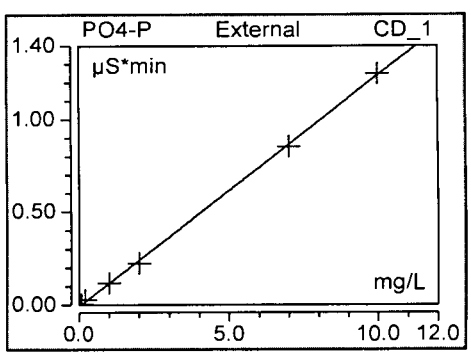
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	BR	BR	BR	BR
ICAL 1 10/20/16	3.757	0.0109	0.087	0.299
ICAL 2 10/20/16	3.753	0.0293	0.232	0.589
ICAL 3 10/20/16	3.750	0.1485	1.179	2.478
ICAL 4 10/20/16	3.754	0.2993	2.389	4.870
ICAL 5 10/20/16	3.743	1.0832	8.801	17.295
ICAL 6 10/20/16	3.747	1.5800	13.023	25.169
Average	3.751			
Rel. Std. Dev.	0.131 %			



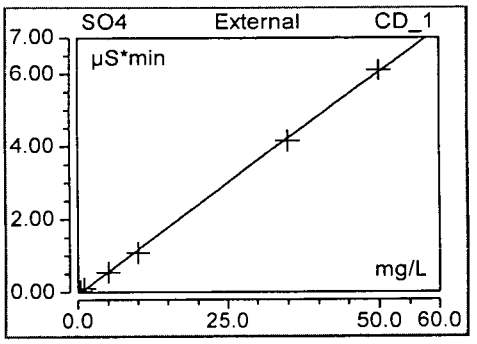
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	NO3-N	NO3-N	NO3-N	NO3-N
ICAL 1 10/20/16	4.143	0.0290	0.196	0.166
ICAL 2 10/20/16	4.140	0.0717	0.496	0.270
ICAL 3 10/20/16	4.137	0.3656	2.533	0.983
ICAL 4 10/20/16	4.140	0.7330	5.168	1.875
ICAL 5 10/20/16	4.123	2.7923	20.144	6.873
ICAL 6 10/20/16	4.123	4.1278	30.098	10.114
Average	4.135			
Rel. Std. Dev.	0.215 %			



Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	PO4-P	PO4-P	PO4-P	PO4-P
ICAL 1 10/20/16	5.540	0.0032	0.021	0.092
ICAL 2 10/20/16	5.540	0.0284	0.107	0.295
ICAL 3 10/20/16	5.537	0.1191	0.557	1.022
ICAL 4 10/20/16	5.537	0.2251	1.103	1.873
ICAL 5 10/20/16	5.520	0.8544	4.243	6.922
ICAL 6 10/20/16	5.523	1.2473	6.244	10.075
Average	5.533			
Rel. Std. Dev.	0.160 %			



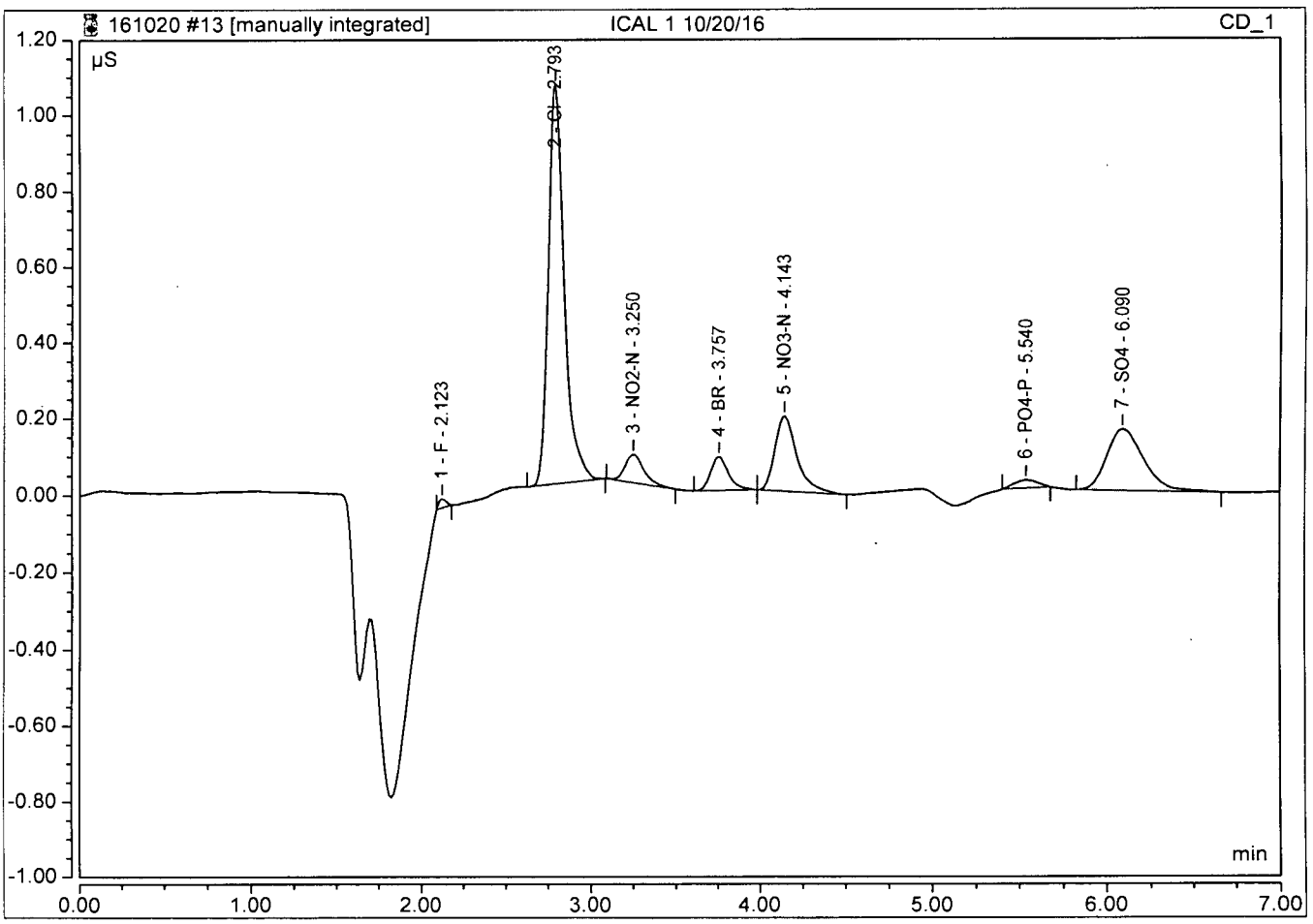
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	SO4	SO4	SO4	SO4
ICAL 1 10/20/16	6.090	0.0385	0.159	0.808
ICAL 2 10/20/16	6.093	0.1046	0.455	1.350
ICAL 3 10/20/16	6.097	0.5456	2.464	4.961
ICAL 4 10/20/16	6.100	1.0756	4.975	9.302
ICAL 5 10/20/16	6.097	4.1512	19.714	34.487
ICAL 6 10/20/16	6.110	6.1057	29.270	50.492
Average	6.098			
Rel. Std. Dev.	0.113 %			



Peak Integration Report

Sample Name:	**ICAL 1 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:19**	*Run Time:*	**7.00**

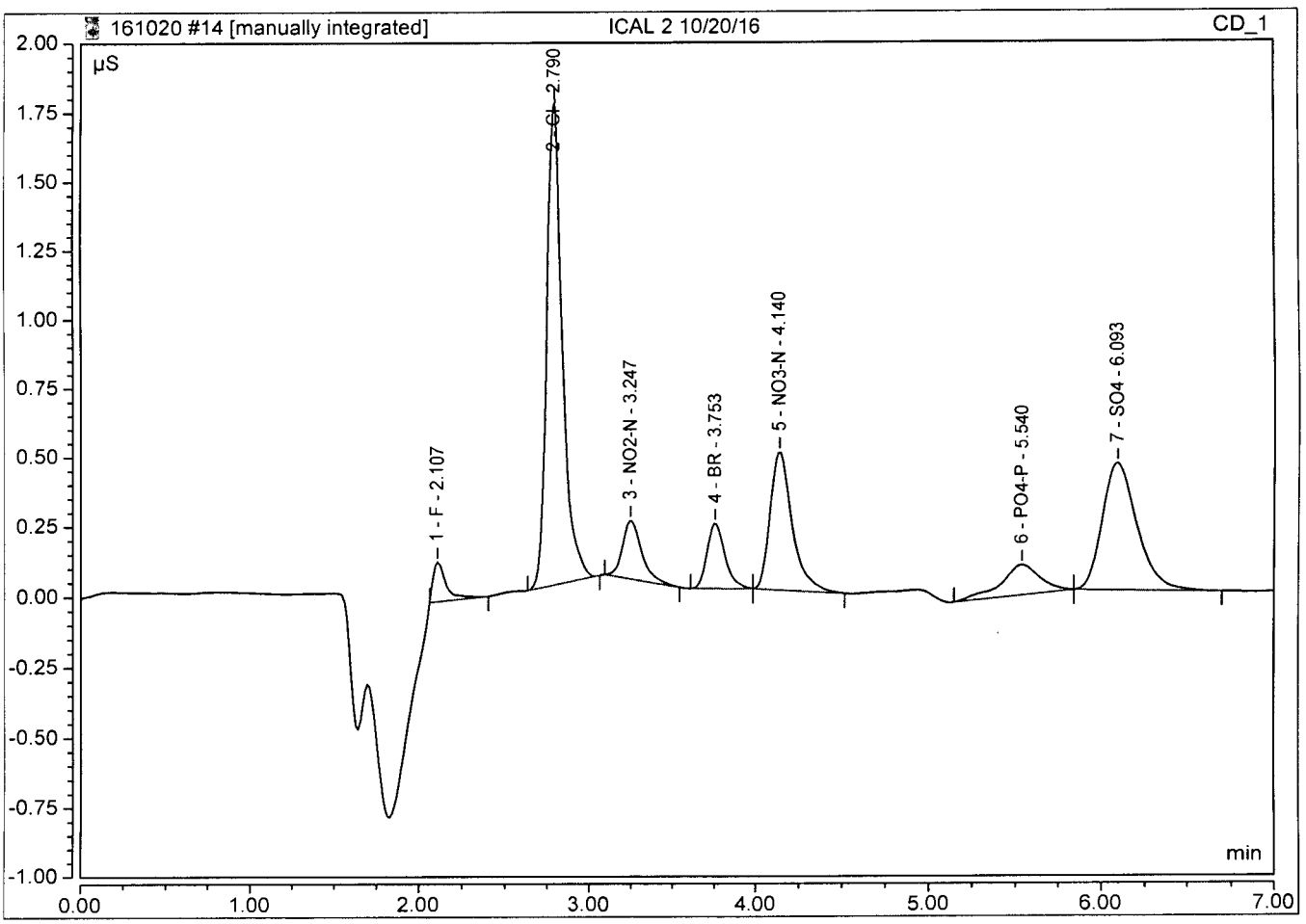
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.12	F	BMB*	0.001	0.022	0.0438
2	2.79	Cl	BMB	0.113	1.052	1.1427
3	3.25	NO2-N	BMB	0.009	0.073	0.0531
4	3.76	BR	BMB	0.011	0.087	0.2985
5	4.14	NO3-N	BMB	0.029	0.196	0.1660
6	5.54	PO4-P	BMB*	0.003	0.021	0.0923
7	6.09	SO4	BMB	0.038	0.159	0.8084
TOTAL:				0.21	1.61	2.60



Peak Integration Report

Sample Name:	**ICAL 2 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:32**	*Run Time:*	**7.00**

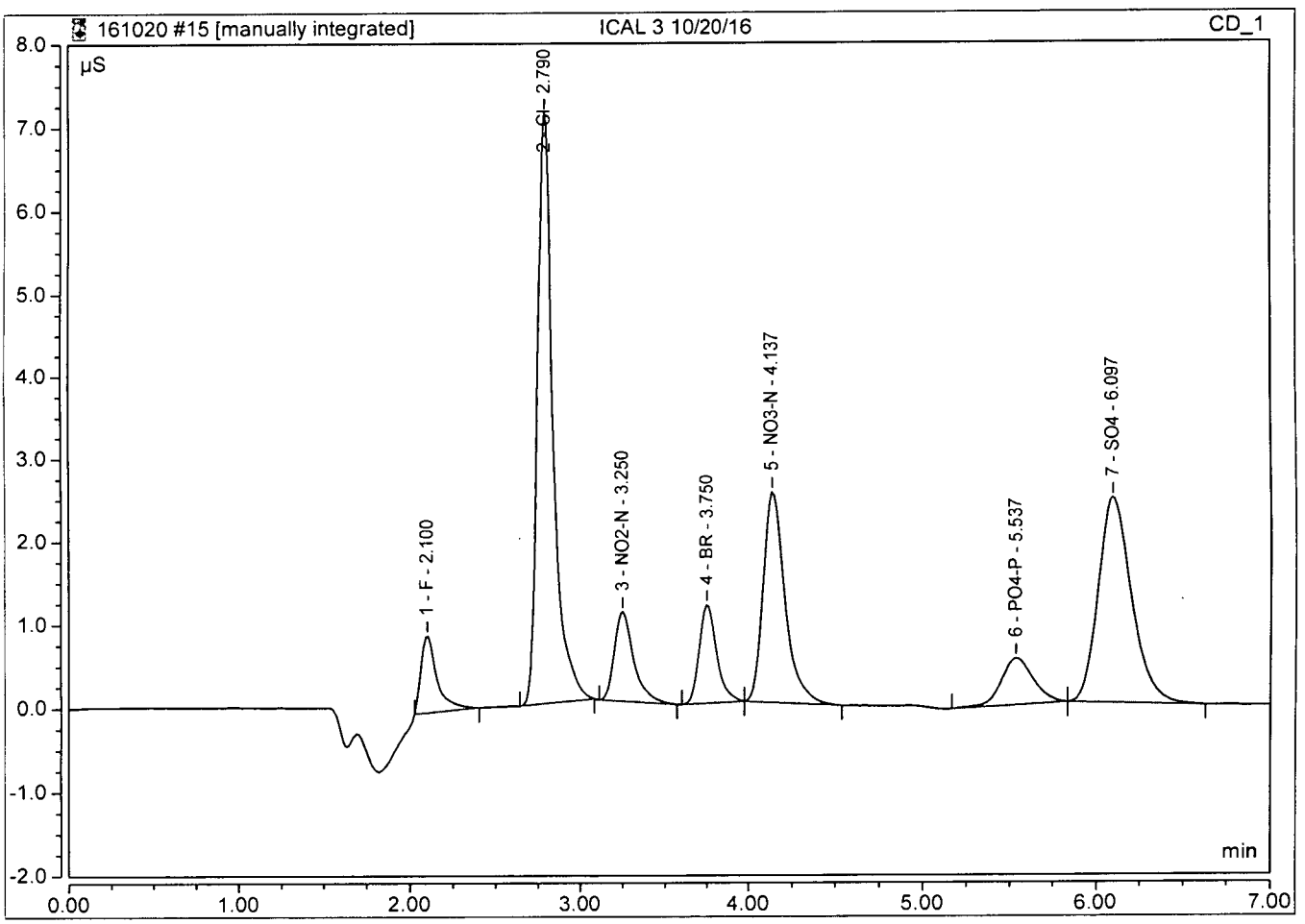
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.11	F	BMB*	0.012	0.139	0.0933
2	2.79	Cl	BMB	0.186	1.743	1.5439
3	3.25	NO2-N	BMB	0.028	0.209	0.1132
4	3.75	BR	BMB	0.029	0.232	0.5894
5	4.14	NO3-N	BMB	0.072	0.496	0.2699
6	5.54	PO4-P	BMB	0.028	0.107	0.2946
7	6.09	SO4	BMB	0.105	0.455	1.3496
TOTAL:				0.46	3.38	4.25



Peak Integration Report

Sample Name:	**ICAL 3 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:45**	*Run Time:*	**7.00**

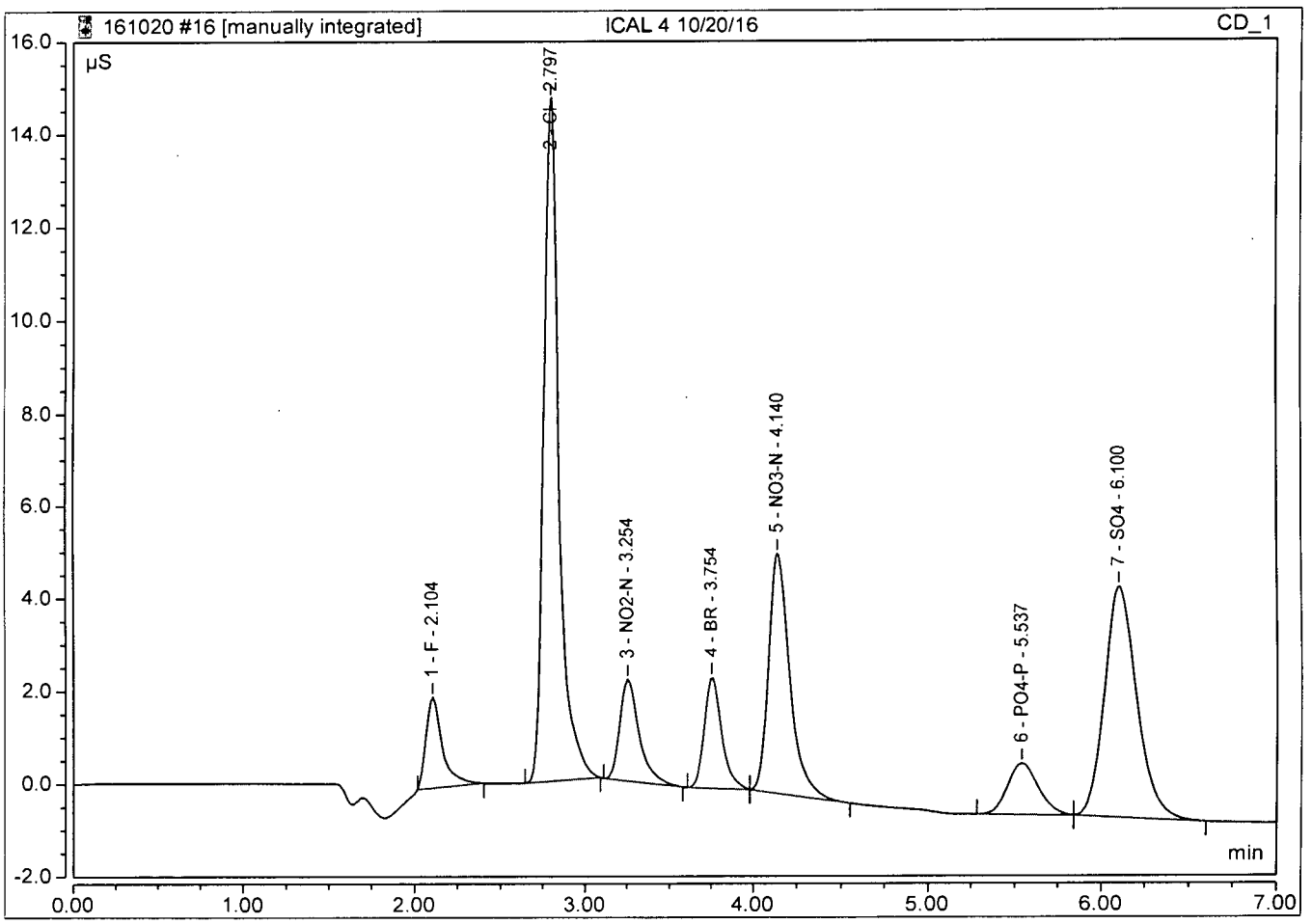
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB*	0.100	0.922	0.4827
2	2.79	Cl	BMB	0.762	7.117	4.7137
3	3.25	NO2-N	BMB	0.142	1.072	0.4926
4	3.75	BR	BMB	0.148	1.179	2.4784
5	4.14	NO3-N	BMB	0.366	2.533	0.9830
6	5.54	PO4-P	BMB	0.119	0.557	1.0221
7	6.10	SO4	BMB	0.546	2.464	4.9609
TOTAL:				2.18	15.84	15.13



Peak Integration Report

Sample Name:	**ICAL 4 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:58**	*Run Time:*	**7.00**

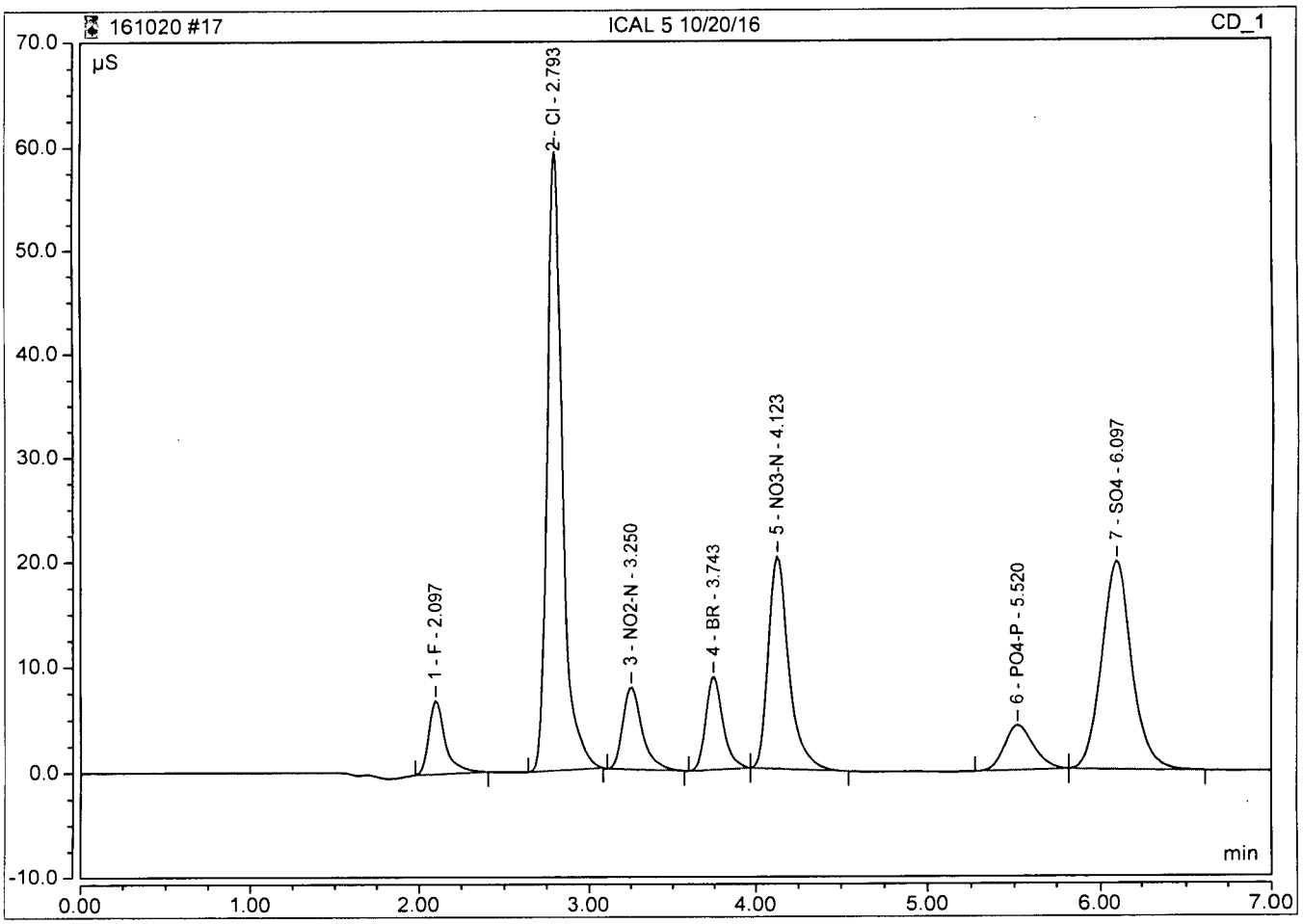
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB*	0.217	1.958	1.0036
2	2.80	Cl	BMB	1.542	14.708	9.0096
3	3.25	NO2-N	BMB	0.291	2.188	0.9859
4	3.75	BR	BMB	0.299	2.389	4.8695
5	4.14	NO3-N	BMB	0.733	5.168	1.8746
6	5.54	PO4-P	BMB	0.225	1.103	1.8731
7	6.10	SO4	BMB	1.076	4.975	9.3015
TOTAL:				4.38	32.49	28.92



Peak Integration Report

Sample Name:	**ICAL 5 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:11**	*Run Time:*	**7.00**

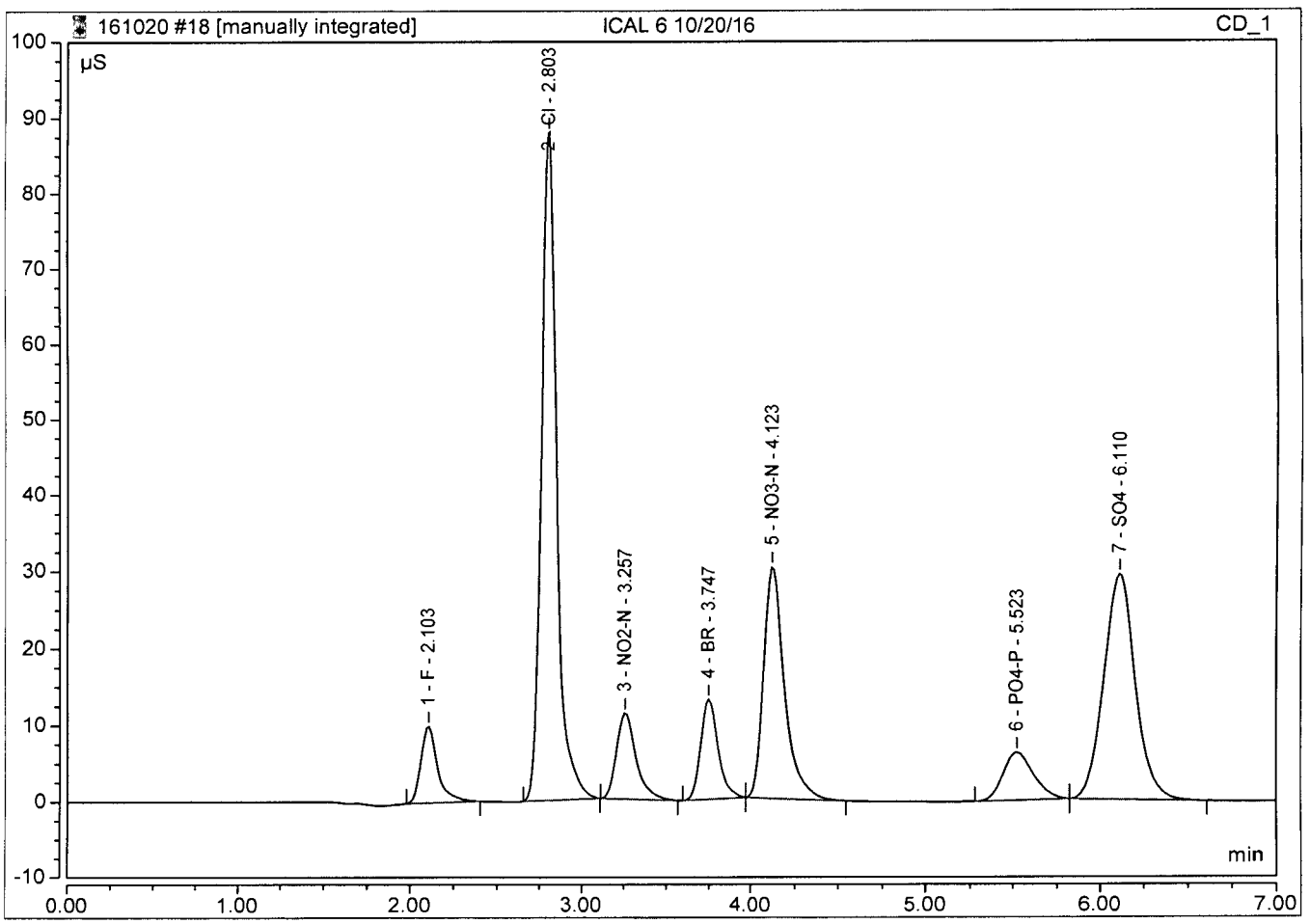
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB	0.783	6.953	3.5131
2	2.79	Cl	BMB	6.129	59.398	34.2675
3	3.25	NO2-N	BMB	1.040	7.775	3.4734
4	3.74	BR	BMB	1.083	8.801	17.2948
5	4.12	NO3-N	BMB	2.792	20.144	6.8727
6	5.52	PO4-P	BMB	0.854	4.243	6.9225
7	6.10	SO4	BMB	4.151	19.714	34.4871
TOTAL:				16.83	127.03	106.83



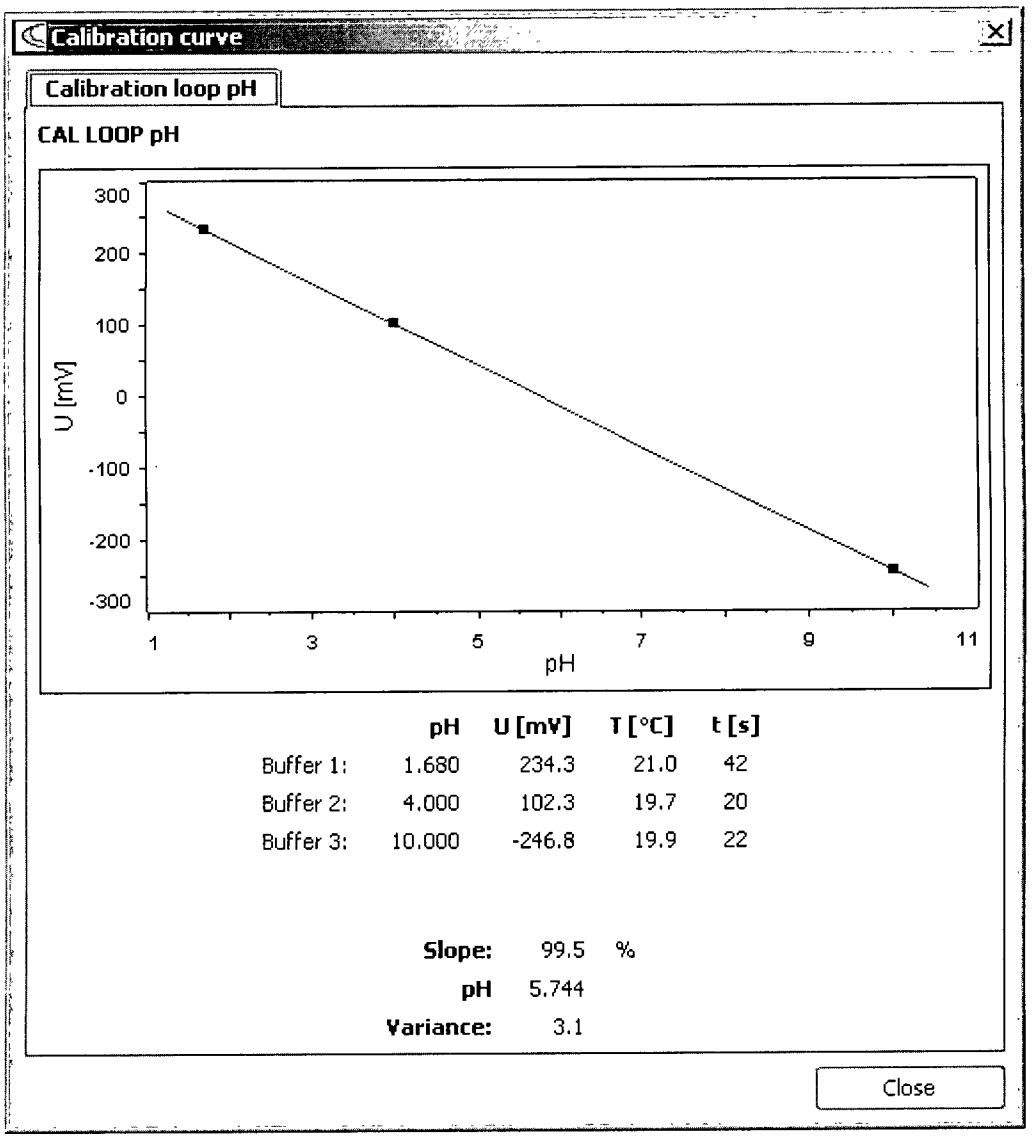
Peak Integration Report

Sample Name:	**ICAL 6 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:24**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB	1.118	9.996	5.0036
2	2.80	Cl	BMB*	9.117	87.978	50.7226
3	3.26	NO2-N	BMB	1.507	11.205	5.0218
4	3.75	BR	BMB	1.580	13.023	25.1693
5	4.12	NO3-N	BMB	4.128	30.098	10.1138
6	5.52	PO4-P	BMB	1.247	6.244	10.0755
7	6.11	SO4	BMB	6.106	29.270	50.4924
TOTAL:				24.80	187.81	156.60



Tiamo Calibration Curve
12/20/16



INORGANIC ANALYSIS
Raw Data

APPL, INC.

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
SM 2320B	BICARBONATE AS	1.6 J	2.0	1.70	0.85	mg/L	12/20/16	12/20/16	#232W-161220A2-AZ47498
SM 2320B	CARBONATE AS CA	1.70 U	2.0	1.70	0.85	mg/L	12/20/16	12/20/16	#232W-161220A2-AZ47498
SM 2320B	TOTAL ALKALINITY	1.6 J	2.0	1.70	0.85	mg/L	12/20/16	12/20/16	#232W-161220A2-AZ47498
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	12/20/16	12/20/16	¥300WD-161220A2-AZ47658
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	12/15/16	12/15/16	#300W-161215A2-AZ47664
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	12/15/16	12/15/16	#300W-161215A2-AZ47664
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	12/15/16	12/15/16	#300W-161215A2-AZ47664
SM3500Fe	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	12/15/16	12/15/16	#35FE-161215A-AZ47665

Wetlab SC-Blank-REG MDLs
Printed: 12/28/16 4:29:02 PM

Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	20.0	18.2	91.0	90-110	12/15/16	12/15/16	#300W-161215A2-AZ47664
EPA 300.0	NITRATE	22.1	20.3	91.9	90-110	12/15/16	12/15/16	#300W-161215A2-AZ47664
EPA 300.0	SULFATE	20.0	18.8	94.0	90-110	12/15/16	12/15/16	#300W-161215A2-AZ47664

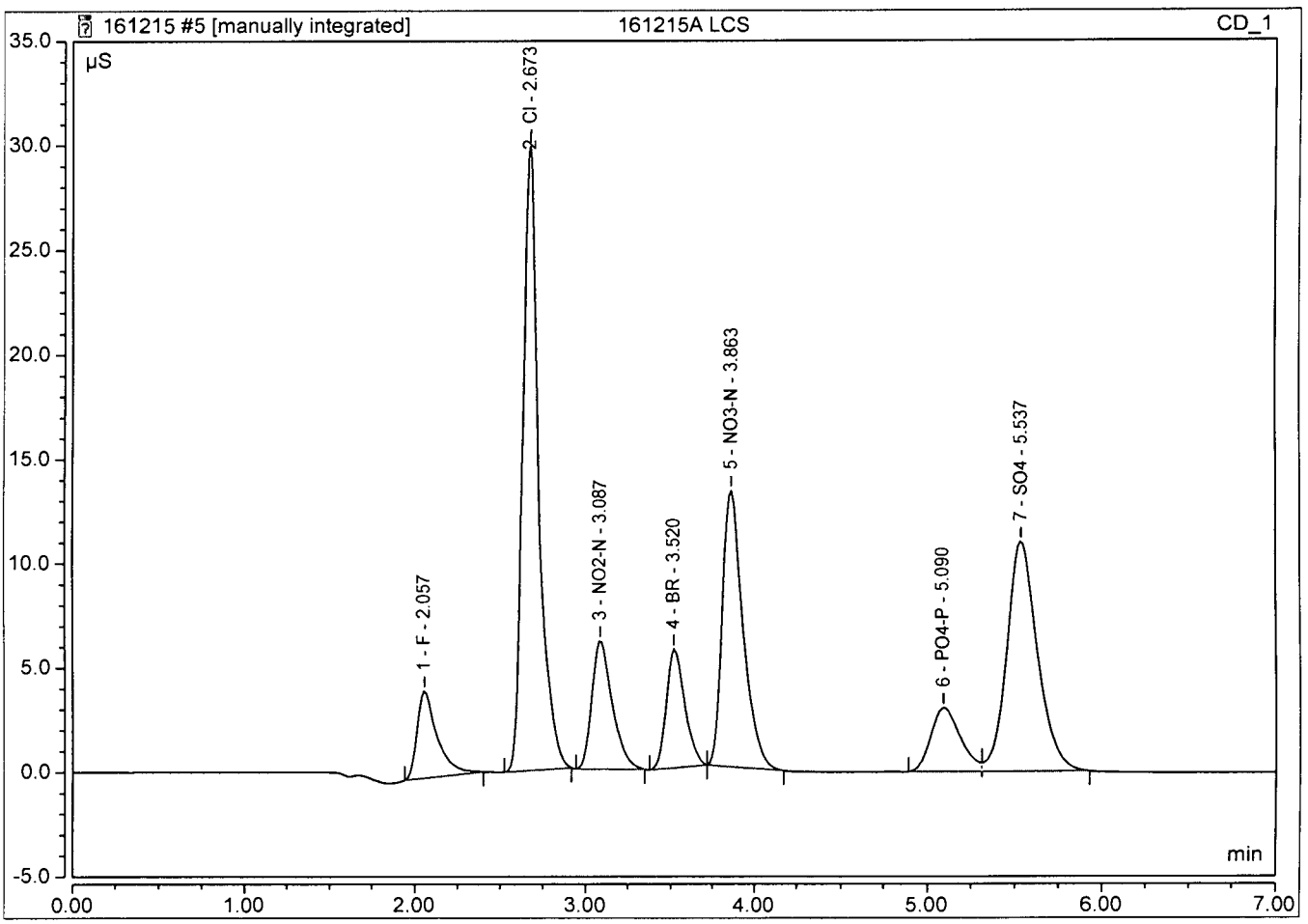
Comments: _____

Peak Integration Report

MI MM 12/28/16

Sample Name:	**161215A LCS**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**15-Dec-2016 / 10:46**	*Run Time:*	**7.00**

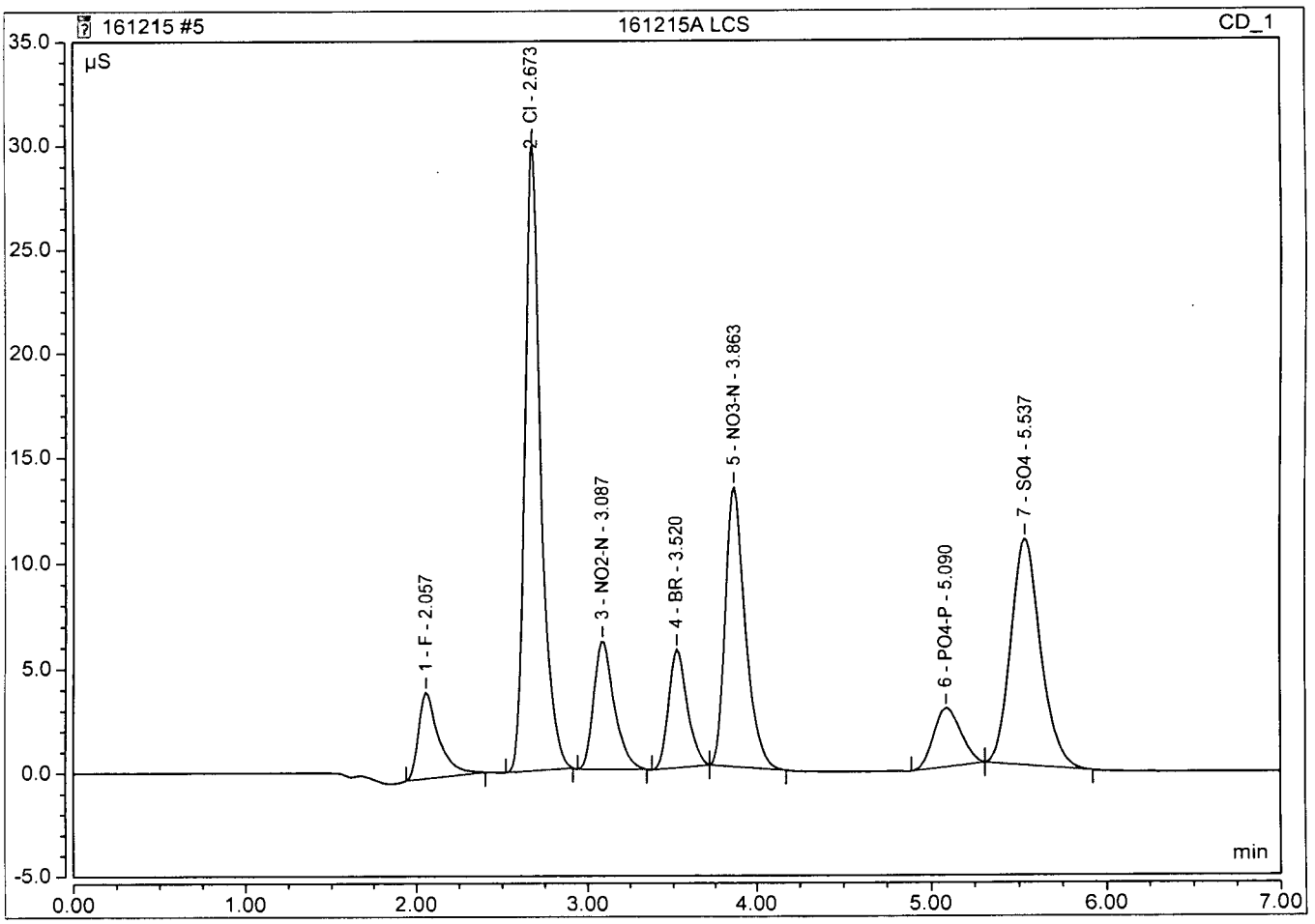
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.06	F	BMB	0.566	4.178	2.5527
2	2.67	Cl	BMB	3.216	29.858	18.2303
3	3.09	NO2-N	BMB	0.860	6.146	2.8731
4	3.52	BR	BMB	0.714	5.681	11.4462
5	3.86	NO3-N	BMB	1.852	13.268	4.5914
6	5.09	PO4-P	BM *	0.604	3.049	4.9120
7	5.54	SO4	MB*	2.239	10.994	18.8261
TOTAL:				10.05	73.17	63.43



Peak Integration Report

Sample Name:	**161215A LCS**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**15-Dec-2016 / 10:46**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.06	F	BMB	0.566	4.178	2.5527
2	2.67	Cl	BMB	3.216	29.858	18.2303
3	3.09	NO2-N	BMB	0.860	6.146	2.8731
4	3.52	BR	BMB	0.714	5.681	11.4462
5	3.86	NO3-N	BMB	1.852	13.268	4.5914
6	5.09	PO4-P	BMB	0.517	2.852	4.2153
7	5.54	SO4	BMB	2.112	10.734	17.7879
TOTAL:				9.84	72.72	61.70



Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

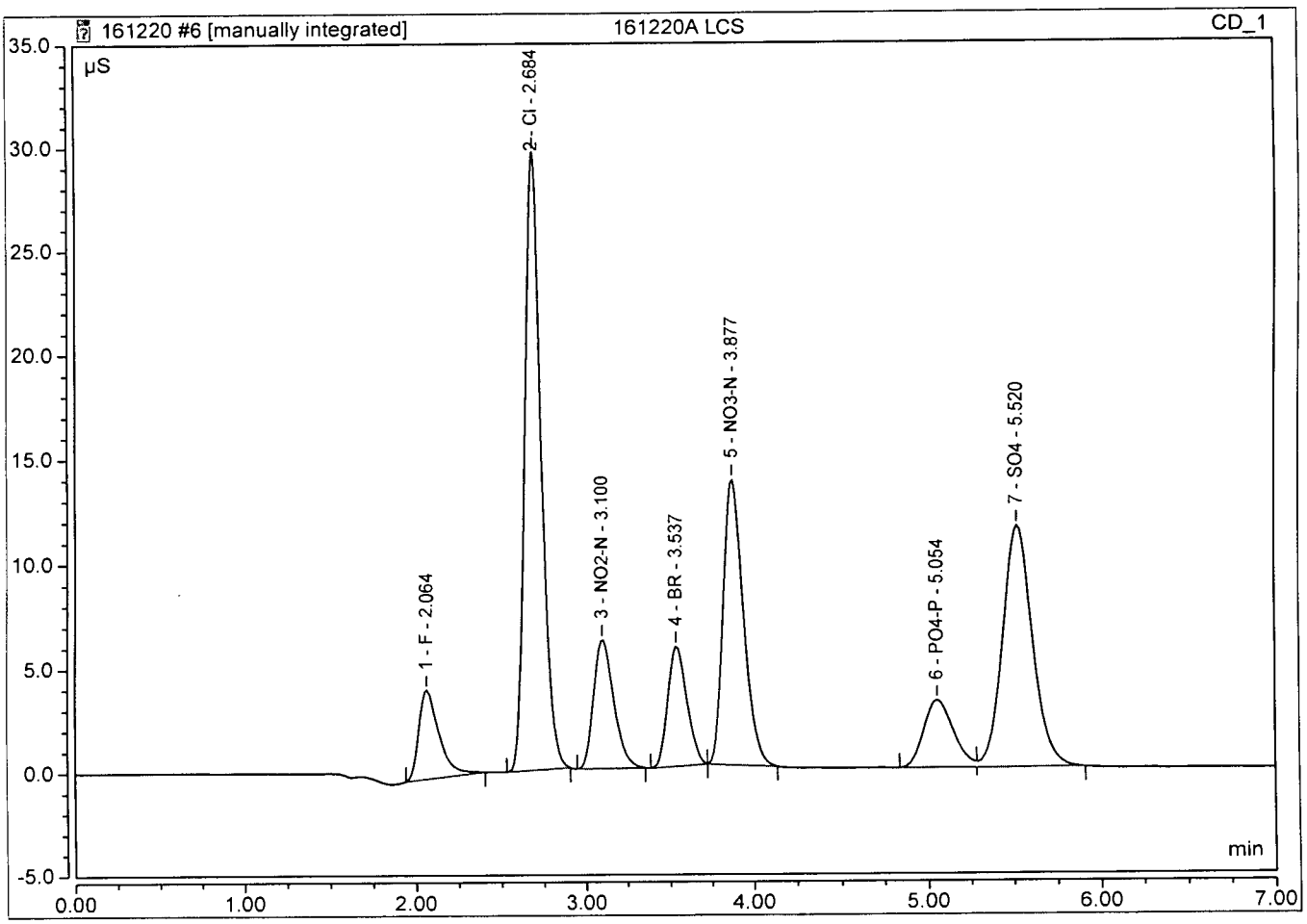
Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	20.0	18.7	93.5	90-110	12/20/16	12/20/16	#300WD-161220A2-AZ47658
SM 2320B	BICARBONATE AS CACO3	250	244	97.6	90-110	12/20/16	12/20/16	#232W-161220A2-AZ47498
SM 2320B	TOTAL ALKALINITY AS CACO3	250	244	97.6	90-110	12/20/16	12/20/16	#232W-161220A2-AZ47498

Comments: _____

Peak Integration Report

Sample Name:	**161220A LCS**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Dec-2016 / 09:55**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.06	F	BMB	0.588	4.324	2.6502
2	2.68	Cl	BMB	3.296	29.673	18.6688
3	3.10	NO2-N	BMB	0.883	6.241	2.9526
4	3.54	BR	BMB	0.749	5.816	11.9899
5	3.88	NO3-N	BMB	1.905	13.663	4.7198
6	5.05	PO4-P	BM *	0.639	3.269	5.1919
7	5.52	SO4	MB*	2.287	11.566	19.2214
TOTAL:				10.35	74.55	65.39



Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
SM3500Fe	FERROUS IRON	3.00	3.09	103	80-120	12/15/16	12/15/16	#35FE-161215A-AZ47665

Comments: _____

SPECTROPHOTOMETRIC ANALYSIS (Ferrous Iron)

Method: SM3500Fe
Analyte: Ferrous Iron
Analyst: MM
Units: mg/L
QCG: 161215A
Notes:
Final Volume: 50mL

Instrument: GENESYS 10UV
Raw Spec: abs. @ 510nm
R-Squared: 0.99983
Reagent (lot#): COLORIZING REAGENT (12/09/16)
BUFFER (12/09/16)

Date	Time	APPL ID	25mL	Raw Result	SubSample Amt	Raw BLK	Calc Conc	Result	QC True	QC%
05/20/16	12:37	0 BB 5/20/16	1	0.000						
05/20/16	12:38	1	1	0.101						
05/20/16	12:39	2	1	0.201						
05/20/16	12:39	4	1	0.403						
05/20/16	12:40	5	1	0.512						
05/20/16	12:40	10	1	0.999						
05/20/16	12:41	160520A ICV 3.0	1	0.304	25mL		3.01	3.01	3.000	100.5%
05/20/16	12:42	160520A ICB	1	0.000	25mL		-0.02	-0.02		
12/15/16	15:45	CCV 3.0 161215	1	0.285	25mL		2.82	2.824	3.000	*94.14*
12/15/16	15:46	CCB 161215	1	-0.001	25mL		-0.03	-0.033		
12/15/16	15:47	161215A LCS 3.0	1	0.312	25mL		3.09	3.094	3.000	*103.13*
12/15/16	15:48	161215A LCSD 3.0	1	0.309	25mL		3.06	3.064	3.000	*102.13*
12/15/16	15:49	AZ47658W08	1	0.013	25mL		0.11	0.107		
12/15/16	15:50	AZ47660W08	1	0.003	25mL		0.01	0.007		
12/15/16	15:51	AZ47663W08	1	0.000	25mL		-0.02	-0.023		
12/15/16	15:52	AZ47664W08	1	0.256	25mL		2.53	2.534		
12/15/16	15:53	AZ47665W08	1	0.002	25mL		0.00	-0.003		
12/15/16	15:54	AZ47665W08 MS	1	0.306	25mL		3.03	3.034	3.00	*101.13*
12/15/16	15:55	AZ47665W08 MSD	1	0.307	25mL		3.04	3.044	3.00	*101.46*
12/15/16	15:56	CCV 3.0 161215	1	0.280	25mL		2.77	2.774	3.00	*92.47*
12/15/16	15:57	CCB 161215	1	-0.001	25mL		-0.03	-0.033		

Metrohm 814/809 Titrando Data

Sample ID	Analysis Date/Time	Method	Titration Volume (to 8.3)	Titration Volume (total)	OH	CO3	HCO3	Total Alk	Unit	Sample Vol	N	Batch	Initials
AZ47665W07	2016-12-20 18:58:18 UTC-8	Alkalinity	0.000	2.922	0.00	0.00	120.97	120.97	mg/L	25 mL	0.0207	161220A	AH
AZ47664W07	2016-12-20 18:47:27 UTC-8	Alkalinity	0.000	4.708	0.00	0.00	194.91	194.91	mg/L	25 mL	0.0207	161220A	AH
AZ47663W07	2016-12-20 18:42:02 UTC-8	Alkalinity	0.000	1.852	0.00	0.00	76.67	76.67	mg/L	25 mL	0.0207	161220A	AH
AZ47660W07	2016-12-20 18:28:44 UTC-8	Alkalinity	0.000	6.982	0.00	0.00	289.05	289.05	mg/L	25 mL	0.0207	161220A	AH
AZ47658W07	2016-12-20 18:25:27 UTC-8	Alkalinity	5.644	5.644	233.66	0.00	0.00	233.66	mg/L	25 mL	0.0207	161220A	AH
161220A LCS	2016-12-20 14:14:06 UTC-8	Alkalinity	0.000	5.892	0.00	0.00	243.93	243.93	mg/L	25 mL	0.0207	161220A	AH
161220A Blk	2016-12-20 14:10:44 UTC-8	Alkalinity	0.000	0.038	0.00	0.00	1.57	1.57	mg/L	25 mL	0.0207	161220A	AH

Ferrous Iron Standard Prep

Stock Standard Prep:

Prep Date: 5/20/16
Exp Date: 5/20/17
Prep'd By: BB

CCV Stock (200 mg/L): 0.3502 g $Fe(NH_4)2(SO_4)_2*6H_2O$ EMD Lot #2013050298 up to 250 mL with DI

ICV Stock (200 mg/L): 0.3500 g $Fe(NH_4)2(SO_4)_2*6H_2O$ JT Baker Lot #0000068681 up to 250 mL with DI

QC Prep

Prep Date: 12/15/16
Exp Date: 12/16/16
Prep'd By: MM

CCV (3.0 mg/L): 0.375 mL of CCV Stock (prep: 5/20/16) into 25 mL DI then carried through sample prep procedure

LCS (3.0 mg/L): 0.375 mL of ICV Stock (prep: 5/20/16) into 25 mL DI then carried through sample prep procedure

MS/MSD (3.0 mg/L): 0.375 mL of ICV Stock (prep: 5/20/16) into 25 mL sample then carried through sample prep procedure

METHOD 300 / 9056		ANION STOCK					PW 10/20/16
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)	
O2SI	F-	1,000	1085520-36282	07/24/17	0.25	5	
O2SI*	Cl-	5,000	1069557-34558	01/08/17	0.5	50	
O2SI	NO2-N	1,000	1088548-36281	09/26/17	0.25	5	
Ultra Scientific	Br-	1,000	CL-3274-36926	08/31/20	1.25	25	
O2SI	NO3-N	1,000	1078397-35587	01/30/17	0.5	10	
O2SI	PO4-P	1,000	1072004-34911	09/03/16	0.5	10	
Ultra Scientific	SO4	5,000	CP-1469-36296	04/30/18	0.5	50	
Brought up with milipore water to Final Volume of:						50	

METHOD 300 / 9056		ANION ICV / LCS/MS/MSD				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
CPI	F-	1,000	16B115-36204	09/03/17	0.125	2.50
CPI	Cl-	1,000	16E065-36694	12/06/17	1.00	20.00
CPI	NO2-N	304	15J001-36257	09/24/17	0.50	3.04
CPI	Br-	1,000	15L093-36101	07/21/17	0.625	12.50
CPI	NO3-N	1,000	16E022-36783	12/30/17	0.25	5.00
CPI	PO4-P	1,000	15B116-36258	09/24/17	0.25	5.00
CPI	SO4	1,000	16E104-36693	12/06/17	1.00	20.00
Brought up with milipore water to Final Volume of:					50	

METHOD 300 / 9056		ANION CAL CURVE							
				ICAL #1	ICAL#2	ICAL #3	ICAL #4	ICAL #5	ICAL #6
ID#	mg/L	Prep Date	EXP. DATE	mL	mL	mL	mL	mL	mL
ANION STOCK	100	08/19/16	08/21/16	0.4	2	10	2	7	10
Brought up w/ Milipore Water to final volume of (mL):				50	100	100	10	10	na
Final Conc F (mg/L):				0.04	0.1	0.5	1	3.5	5
Final Conc Cl (mg/L):				0.4	1	5	10	35	50
Final Conc NO2-N (mg/L):				0.04	0.1	0.5	1	3.5	5
Final Conc Br (mg/L):				0.2	0.5	2.5	5	17.5	25
Final Conc NO3-N (mg/L):				0.08	0.2	1	2	7	10
Final Conc PO4-P (mg/L):				0.08	0.2	1	2	7	10
Final Conc SO4 (mg/L):				0.4	1	5	10	35	50

161215 PW

		CCV				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
O2SI	F-	1,000	1085520-36282	07/24/17	0.125	2.50
O2SI	Cl-	5,000	1069557-34558	01/08/17	0.25	25.0
O2SI	NO2-N	1,000	1088548-36281	09/26/17	0.125	2.5
Ultra Scientific	Br-	1,000	CL-3274-36926	08/31/20	0.625	12.50
O2SI	NO3-N	1,000	1078397-35587	01/30/17	0.25	5.0
O2SI	PO4-P	1,000	1072004-34911	09/03/16	0.25	5.0
Ultra Scientific	SO4	5,000	CP-1469-36296	04/30/18	0.25	25.0
Brought up with milipore water to Final Volume of:					50	

METHOD 300 / 9056		ICV LCS MS				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
CPI	F-	1,000	16B115-36204	09/03/17	0.125	2.50
CPI	Cl-	1,000	16E065-36694	12/06/17	1.00	20.00
CPI	NO2-N	304	15C058-35411	09/24/17	0.50	3.04
CPI	Br-	1,000	15L093-36101	07/21/17	0.63	12.50
CPI	NO3-N	1,000	16E022-36783	12/30/17	0.250	5.00
CPI	PO4-P	1,000	15B116-36258	09/24/17	0.25	5.00
CPI	SO4	1,000	16E104-36693	12/06/17	1.00	20.00
Final Volume of Sample: (mL)					50	

161220 PW

		CCV				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
O2SI	F-	1,000	1085520-36282	07/24/17	0.125	2.50
O2SI	Cl-	5,000	1069557-34558	01/08/17	0.25	25.0
O2SI	NO2-N	1,000	1088548-36281	09/26/17	0.125	2.5
Ultra Scientific	Br-	1,000	CL-3274-36926	08/31/20	0.625	12.50
O2SI	NO3-N	1,000	1078397-35587	01/30/17	0.25	5.0
O2SI	PO4-P	1,000	1072004-34911	09/03/16	0.25	5.0
Ultra Scientific	SO4	5,000	CP-1469-36296	04/30/18	0.25	25.0
Brought up with milipore water to Final Volume of:					50	

METHOD 300 / 9056		ICV LCS MS				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
CPI	F-	1,000	16B115-36204	09/03/17	0.125	2.50
CPI	Cl-	1,000	16E065-36694	12/06/17	1.00	20.00
CPI	NO2-N	304	15C058-35411	09/24/17	0.50	3.04
CPI	Br-	1,000	15L093-36101	07/21/17	0.63	12.50
CPI	NO3-N	1,000	16E022-36783	12/30/17	0.250	5.00
CPI	PO4-P	1,000	15B116-36258	09/24/17	0.25	5.00
CPI	SO4	1,000	16E104-36693	12/06/17	1.00	20.00
Final Volume of Sample: (mL)					50	

0.02N H_2SO_4 Titrant for Alkalinity

400 mL 0.1N H_2SO_4 (prep 11/16/16)
Final vol 2L w/ DI water
Prep 11/21/16
Exp 11/21/17
AH 11/21/16

Inorganic Spiking Solution

3.4999g NaHCO3 BDH lot#1575C510
Final vol 500 mL w/DI water
Prep: 11/01/16
Exp: 10/10/17
AH

SM3500 Injection Log

Directory: I:\Spec Sheets\Ferrous Iron (Fe2)\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	20 May 2016	12:37	0 BB 5/20/16		161215a	1.
2	20 May 2016	12:38	1		161215a	1.
3	20 May 2016	12:39	2		161215a	1.
4	20 May 2016	12:39	4		161215a	1.
5	20 May 2016	12:40	5		161215a	1.
6	20 May 2016	12:40	10		161215a	1.
7	20 May 2016	12:41	160520A ICV 3.0		161215a	1.
8	20 May 2016	12:42	160520A ICB		161215a	1.
9	15 Dec 2016	15:45	CCV 3.0 161215		161215a	1.
10	15 Dec 2016	15:46	CCB 161215		161215a	1.
11	15 Dec 2016	15:47	161215A LCS 3.0		161215a	1.
13	15 Dec 2016	15:49	AZ47658W08		161215a	1.
14	15 Dec 2016	15:50	AZ47660W08		161215a	1.
15	15 Dec 2016	15:51	AZ47663W08		161215a	1.
16	15 Dec 2016	15:52	AZ47664W08		161215a	1.
17	15 Dec 2016	15:53	AZ47665W08		161215a	1.
20	15 Dec 2016	15:56	CCV 3.0 161215		161215a	1.
21	15 Dec 2016	15:57	CCB 161215		161215a	1.

300/9056A Injection Log

Directory: I:\Dionex\Charlie\Anions\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
14	20 Oct 2016	11:19	ICAL 1 10/20/16		161020	1.
15	20 Oct 2016	11:32	ICAL 2 10/20/16		161020	1.
16	20 Oct 2016	11:45	ICAL 3 10/20/16		161020	1.
17	20 Oct 2016	11:58	ICAL 4 10/20/16		161020	1.
18	20 Oct 2016	12:11	ICAL 5 10/20/16		161020	1.
19	20 Oct 2016	12:24	ICAL 6 10/20/16		161020	1.
20	20 Oct 2016	12:37	ICV 1601020		161020	1.
21	20 Oct 2016	12:50	ICB		161020	1.

300/9056A Injection Log

Directory: I:\Dionex\Charlie\Anions\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
3	15 Dec 2016	10:20	CCV 161215		161215	1.
4	15 Dec 2016	10:33	CCB		161215	1.
5	15 Dec 2016	10:46	161215A LCS		161215	1.
19	15 Dec 2016	13:24	AZ47663W07		161215	1.
20	15 Dec 2016	13:37	AZ47664W07		161215	1.
21	15 Dec 2016	13:50	AZ47665W07 DF2		161215	2.
22	15 Dec 2016	14:03	AZ47658W07 DF5		161215	5.
24	15 Dec 2016	14:29	CCV 161215		161215	1.
25	15 Dec 2016	14:42	CCB		161215	1.
27	15 Dec 2016	15:08	AZ47660W07		161215	1.
33	15 Dec 2016	16:26	CCV 161215		161215	1.
34	15 Dec 2016	16:40	CCB		161215	1.

300/9056A Injection Log

Directory: I:\Dionex\Charlie\Anions\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
7	20 Dec 2016	09:29	CCV 161220		161220	1.
8	20 Dec 2016	09:42	CCB		161220	1.
9	20 Dec 2016	09:55	161220A LCS		161220	1.
19	20 Dec 2016	12:05	CCV 161220		161220	1.
20	20 Dec 2016	12:18	CCB		161220	1.
29	20 Dec 2016	14:42	AZ47658W07 1/20		161220	20.
30	20 Dec 2016	14:55	AZ47663W07 1/2		161220	2.
31	20 Dec 2016	15:08	AZ47665W07 1/20		161220	20.
32	20 Dec 2016	15:21	CCV 161220		161220	1.
33	20 Dec 2016	15:34	CCB		161220	1.

310/SM2320B Injection Log

Directory: I:\Tiamo\EXPORT\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	20 Dec 2016	14:10	161220A Blk		161220A_AL	1.
2	20 Dec 2016	14:14	161220A LCS		161220A_AL	1.
17	20 Dec 2016	18:25	AZ47658W07		161220A_AL	1.
18	20 Dec 2016	18:28	AZ47660W07		161220A_AL	1.
19	20 Dec 2016	18:42	AZ47663W07		161220A_AL	1.
20	20 Dec 2016	18:47	AZ47664W07		161220A_AL	1.
21	20 Dec 2016	18:58	AZ47665W07		161220A_AL	1.

908 North Temperance Ave. ∇ Clovis, CA 93611 ∇ Phone 559-275-2175 ∇ Fax 559-275-4422

Certification Number: CA1312
NELAP Certification number: CA00046
DoD-ELAP Certificate number: 4064.01

Data Validatable Report

January 13, 2017

AECOM
1001 Bishop Street, Suite 1600
Honolulu, Hawaii 96813

Attn: Margie Thach

Title: Report of Data: Case 81842

Project: 60481245 CIV0053 Red Hill Fuel Storage. HI

Contract #: Prime contract # for DoD: NAVY CLEAN N62742-12-D-1829, CTO 0053
Subcontract: 14S-16234-HI16

Dear Ms. Thach:

Three water samples were received December 22, 2016. Written results for the requested analyses are being provided on this January 13, 2017.

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

If you have any questions or require further information, please contact your APPL Project Manager, Libby Cheeseborough, libby@applinc.com, at your convenience. Thank you for choosing APPL, Inc.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. These test results meet all requirements of NELAC and DoD QSM. Release of the hard copy has been authorized by the Laboratory Manager or her designee, as verified by the following signature.

Paula McCartney

Paula McCartney, Laboratory Director
APPL, Inc.

PM/rp
Enclosure
cc: File

Number of pages in this report: 632

Data Validation Package
for
60481245 CIV 0053 Red Hill Fuel Storage
APPL SDG 81842
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Sample Data 590

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Raw Data 616

SAMPLE RECEIPT INFORMATION

Sample Receipt Information

ARF: 81842

Project: 60481245 CIV0053 Red Hill Fuel Storage. HI

Sample Receipt Information:

Three water samples were received December 22, 2016, at 1.5°C, 2.0°C, and 2.0°C. The sample group was assigned Analytical Request Form (ARF) number 81842. The sample numbers and requested analyses were compared to the chains of custody. No exception was encountered.

Sample Table

CLIENT ID	APPL ID	Matrix	Date Sampled	Date Received
ERH156	AZ48082	WATER	12/21/16	12/22/16
ERH157	AZ48083	WATER	12/21/16	12/22/16
ERH158	AZ48084	WATER	12/21/16	12/22/16

The samples and blanks were screened for J-value responses between the detection limit (DL) and limit of quantitation (LOQ).

APPL's Laboratory control limits generated in house statistically do not meet the control limits listed in DoD QSM 5.0 for all analytes. Laboratory control spike recoveries for this project meet all control limits listed in the DoD QSM 5.0 except where noted. A copy of our in house generated control limits is available upon request. In addition, a copy of our LOQ control limits, established using 7 data points, are also available upon request.

Only the portion of the injection log relative to these samples is included. A full sequence log is available upon request.

Measurement uncertainty can be reported upon request.

CASE NARRATIVE

EPA Method 8011
EDB

Sample Preparation:

The water samples were extracted according to EPA method 8011. All holding times were met.

Sample Analysis Information:

The samples were analyzed according to the method using an Agilent Gas Chromatograph with an ECD.

Quality Control/Assurance

Calibrations:

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Blanks:

No target analyte was detected above one-half the limit of quantitation (LOQ) in the method blank.

Spikes:

A Laboratory Control Spike (LCS) was used for quality assurance. All acceptance criteria were met.

No sample was designated by the client for MS/MSD analysis.

Surrogates

The surrogate recoveries are summarized in the Form 2 & 8. All surrogate recoveries were within the control limits.

Summary:

No analytical problem was encountered. The data generated are acceptable.

EPA Method 8015B

Total Petroleum Hydrocarbons - Diesel & Oil

Sample Preparation:

The water samples were extracted according to EPA method 3510C. All holding times were met.

Sample Analysis Information:

The samples were analyzed according to the method using an Agilent Gas Chromatograph with a flame ionization detector.

Quality Control/Assurance

Calibrations:

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Blanks:

No target analyte was detected above one-half the LOQ in the method blank.

Spikes:

A Laboratory Control Spike (LCS) was used for quality assurance. All acceptance criteria were met.

No sample was designated by the client for MS/MSD analysis.

Surrogates:

Surrogate recoveries are summarized on the Form 2 & 8. All surrogate recoveries were acceptable.

Summary:

No analytical problem was encountered. The data generated are acceptable.

EPA Method 8270D-SIM
Polynuclear Aromatic Hydrocarbons

Sample Preparation:

The water samples were extracted according to EPA method 3510C. All holding times were met.

Analysis Information:

The samples were analyzed according to EPA Method 8270D using an Agilent Gas Chromatograph with a mass spectrometer detector, in selective ion monitoring mode (SIM).

Manual integrations were performed in accordance with APPL's SOP. 2-Methyl-naphthalene was manually integrated in a calibration standard. Before and after chromatograms are included in the package.

Quality Control/Assurance

Spike Recovery

A Laboratory Control Spike (LCS) was used for quality assurance. All LCS recoveries met acceptance criteria.

No sample was designated by the client for MS/MSD analysis.

Method blanks

No target compound was detected at or above one-half the LOQ in the method blank.

Surrogates

Surrogate recoveries are summarized on the Form 2 & 8. All surrogate recoveries met acceptance criteria.

Calibration

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Tuning:

The instrument was tuned using DFTPP. All method criteria were met.

Internal Standards

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8270. All acceptance criteria were met.

Summary:

No other analytical exception was encountered. The data generated are acceptable.

EPA Method 8270D
Semi-Volatile Organic Compounds

Sample Preparation:

The water samples were extracted according to EPA method 3510C. All holding times were met.

Analysis Information:

The samples were analyzed according to EPA Method 8270D using an Agilent Gas Chromatograph with a mass spectrometer detector.

Quality Control/Assurance

Spike Recovery

A Laboratory Control Spike (LCS) was used for quality assurance. All LCS recoveries met acceptance criteria.

No sample was designated by the client for MS/MSD analysis.

Method blanks

No target compound was detected at or above one-half the LOQ in the method blank.

Surrogates

Surrogate recoveries are summarized on the Form 2 & 8. All other surrogate recoveries met acceptance criteria.

Calibration

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Tuning:

The instrument was tuned using DFTPP. All method criteria were met.

Internal Standards

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8270. All acceptance criteria were met.

Summary:

No analytical exception was encountered. The data generated are acceptable.

APPL SOP ANA2MEE

2-(2-Methoxyethoxy) ethanol by SPE, GC/MS

Sample Preparation:

The water samples were extracted according to EPA method 3535. All holding times were met.

Analysis Information:

The samples were analyzed according to an internal method APPL SOP ANA2MEE using an Agilent Gas Chromatograph with a mass spectrometer detector.

Quality Control/Assurance

Spike Recovery

A Laboratory Control Spike (LCS) was used for quality assurance. All LCS recoveries met acceptance criteria.

No sample was designated by the client for MS/MSD analysis.

Method blanks

No target compound was detected at or above one-half the LOQ in the method blank.

Surrogates

No surrogate was used for this method.

Calibration

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Tuning:

The instrument was tuned using DFTPP. All method criteria were met.

Internal Standards

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8270. All acceptance criteria were met.

Summary:

No analytical exception was encountered. The data generated are acceptable.

EPA Method 8260B
Volatile Organic Analysis

Sample Preparation:

The water samples were purged according to EPA method 5030B. All holding times were met.

Sample Analysis Information:

The samples were analyzed according to EPA method 8260B using an Agilent Gas Chromatograph with a mass spectrometer detector.

Quality Control/Assurance:

Calibrations:

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Blanks:

No analyte was detected above one-half the limit of quantitation (LOQ) in the method blank.

Spikes:

A Laboratory Control Spike (LCS) was used for quality assurance. All LCS recovery acceptance criteria were met.

No sample was designated by the client for MS/MSD analysis.

Surrogates:

Surrogate recoveries are summarized on the Form 2 & 8. All surrogate recoveries were acceptable.

Tuning:

The instrument was tuned using BFB. All method criteria were met.

Internal Standards:

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8260. All method acceptance criteria were met.

Summary:

No problem was encountered. The data generated are acceptable.

EPA Method 8260B
Gasoline

Sample Preparation:

The water samples were purged according to EPA method 5030B. All holding times were met.

Sample Analysis Information:

The samples were analyzed according to EPA method 8260B using an Agilent Gas Chromatograph with a mass spectrometer detector.

Quality Control/Assurance:

Calibrations:

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Blanks:

No analyte was detected above one-half the limit of quantitation (LOQ) in the method blank.

Spikes:

A Laboratory Control Spike (LCS) was used for quality assurance. All LCS recovery acceptance criteria were met.

No sample was designated by the client for MS/MSD analysis.

Surrogates:

Surrogate recoveries are summarized on the Form 2 & 8. All surrogate recoveries were acceptable.

Tuning:

The instrument was tuned using BFB. All method criteria were met.

Internal Standards:

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8260. All method acceptance criteria were met.

Summary:

No problem was encountered. The data generated are acceptable.

Methane
RSK-175

Sample Preparation and Analysis

The water samples were analyzed with guidance from RSK-175. The samples were allowed to equilibrate for 10 minutes at 40°C and a portion of the headspace was analyzed using a Hewlett Packard Gas Chromatograph with a flame ionization detector. All holding times were met.

Quality Control/Assurance

Spike Recovery

A Laboratory Control Spike (LCS) was used for quality assurance. All acceptance criteria were met.

No sample was designated by the client for MS/MSD analysis.

Method blanks

The blank contained no target analyte above one-half the limit of quantitation (LOQ).

Calibration

Initial and continuing calibrations were performed according to the method and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Summary:

No analytical exception is noted.

EPA Method 300.0 and SM 2320B, and SM 3500 FeB

Inorganic Analyses

Sample Preparation Information:

The water sample was prepared according to the methods.

Analysis Information:

Samples:

The sample was analyzed according to the methods. A Dionex DX500 ion chromatograph was used for the EPA 300.0 analysis. The sample was analyzed for ferrous iron as soon as possible. All other holding times were met.

Calibrations:

Initial and continuing calibrations were performed according to the methods and the DoD QSM v5.0. A second source standard was injected to verify the initial calibration. All calibration acceptance criteria were met.

Blanks:

Alkalinity was detected above one-half the LOQ in the method blank. The sample contained greater than ten times the concentration detected in the method blank. The blanks contained no target analyte above one-half the limit of quantitation (LOQ).

Spikes:

Laboratory Control Spikes (LCS) were used for quality assurance. All recoveries were within acceptance limits in the LCS.

No sample was designated by the client for MS/MSD analysis.

Summary:

No other analytical exception is noted. All data are acceptable.

APPL Inc.
Abbreviations and Flags

FLAG	DESCRIPTION
#	Recovery or RPD outside control limits
*	Recovery or RPD outside control limits
B	Analyte detected in associated method blank
C1	Reason for correction: wrote incorrect response
C2	Reason for correction: calculated incorrectly
C3	Reason for correction: needs to be rechecked
C4	Reason for correction: data not usable
DO	Diluted out
E	Exceeds linear range
F	Estimated value
G1	Includes a wide range of hydrocarbons which does not match our gasoline standard
G10	Includes a match to hydrocarbon profiles within the range of mineral spirits
G11	Includes a match to hydrocarbon profiles within the range of JP-4
G12	Pattern does not match the gasoline standard; the carbon range for this sample is consistent with JP8
G13	Closely resembles the hydrocarbon profile of aviation gasoline
G14	Analyte concentration may be biased due to carry over
G2	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G3	Includes higher boiling hydrocarbons
G4	Includes dominant peak(s) not indicative of petroleum hydrocarbons
G5	Is mainly dominant peak(s) not indicative of petroleum hydrocarbons
G6	Contains recognizable contaminant peak(s) which has been removed from quantitation
G7	Is mainly a match to hydrocarbons within the range of gasoline
G8	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G9	Includes hydrocarbons within the range of kerosene
J	Estimated value
M	Matrix effect
MI1	Manual integration: integration does not follow baseline
MI2	Manual integration: non-target peak interference
MI3	Manual integration: to split a peak that was integrated as one peak by the computer.
MI4	Manual integration: to integrate a split peak
MI5	Manual integration: the whole peak or part of the peak was not integrated
MI6	Manual integration: computer integrated wrong peak
MI7	Manual integration: other – (See case narrative)
MDL	Method detection limit
ND	Not detected
NT	Non-target
Q	Acceptance criteria not met
T1 I	Includes wide range of hydrocarbons not indicative of diesel
T1 M	Is mainly wide range of hydrocarbons not necessarily indicative of diesel
T2 I	Includes lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T2 M	Is mainly lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T3 I	Includes higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T3 M	Is mainly higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T4 I	Includes dominant peak(s) not indicative of hydrocarbons
T4 M	Is mainly dominant peak(s) not indicative of hydrocarbons
T5	Contains recognizable contaminant peak(s) which has been removed from quantitation
T6	Is mainly a match to hydrocarbons within range of diesel fuel
T7	Closely resembles the boiling point hydrocarbon profile consistent with diesel fuel
T8	Includes a match to hydrocarbon profiles within range of diesel and kerosene fuel
T9 I	Includes non-diesel hydrocarbons within boiling point range of diesel fuel
T9 M	Is mainly non-diesel hydrocarbons within boiling point range of diesel fuel
U	Not detected
Y	Percent difference between primary and confirmation column > 40%

CHAIN OF CUSTODY,

ARF, CRF, AND

CLIENT COMMUNICATION

APPL - Analysis Request Form 81842

Client: **AECOM**
Address: **1001 Bishop Street, Suite 1600**
Honolulu, HI 96813
Attn: **Margie Thach**
Phone: **808-356-5373** Fax: **808-523-8950**
Job: **60481245 CIV0053 Red Hill Fuel Storage**
PO #: **14S-16234-HI16, PO# 77265**
Chain of Custody (Y/N): **Y** # **122116A-C**
RAD Screen (Y/N): **Y** pH (Y/N): **Y**
Turn Around Type: **ONE WEEK**

Received by: **SMA**
Date Received: **12/22/16** Time: **10:25**
Delivered by: **FED EX**
Shuttle Custody Seals (Y/N): **Y** Time Zone: **-10**
Chest Temp(s): **1.5,°C 2 X 2.0°C**
Color: **VOA/H-PURPLEGRN**
Samples Chilled until Placed in Refrig/Freezer: **Y**
Project Manager: **Libby Cheesebor**
QC Report Type: **DVP4DOD/EQUIS/HI**
Due Date: **12/29/16**

Comments:
7 day TAT for Form 1s; 21 day TAT for DVP; F1s, login to Margie.Thach@aecom.com
A: DOD QSM ver 5.0; DOD Forms (LOQ/LOD database/DL) Print ND as LOD w/U Qual.
8260: BTEX & TPH-G only; 8270 SIM: 1-methylnaphthalene, 2-methylnaphthalene & naphthalene only.
TPH D & O; RSK: Methane only; 8011: EDB only;
$87DC53W5: report phenol only; $87DMEEW5: 2-MEE (LCS Spk 80ppb).

FR: HC to LDC, 2 labeled CDs to Margie Thach. Before FR is sent, the PM needs to review after Admin Re
EDD: AECOM EQuIS EDD 2.5.3 to Margie.Thach@aecom.com & jecklund@lab-data.com

Sample Distribution:
GC: 3-$8011, 2-$87DC53W5, 2-$87DMEEW5, 2-$DOC53W5, 2-$SIMDOD5W
Extractions: 3-_MWE012, 2-_MWE2MEE, 2-_SEP004, 2-_SEP004S, 2-_SEP011LL
VOA: 3-$86BTOTXDOD5W, 3-$GASBL, 3-$GRO86BW, 2-$RSKMETH
Wetlab: 1-$232W(HCO3,CO3,ALK), 1-$300W(NO3,CL,SO4), 1-$35FE

Charges:

Invoice To:
ACCOUNTS PAYABLE
1001 Bishop Street, Ste 1600
USAPImaging@aecom.com
mary.basano@aecom.com

	Client ID	APPL ID	Sampled	Analyses Requested
1.	ERH156	AZ48082W	12/21/16 08:30	$8011, $86BTOTXDOD5W, $GASBL, $GRO86BW, $RSKMETH -- 8260: BTEX + 1,2-DCA
2.	ERH157	AZ48083W	12/21/16 09:45	$232W(HCO3,CO3,ALK), $300W(NO3,CL,SO4), $35FE, $8011, $86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $RSKMETH, $SIMDOD5W -- 2-MEE-LCS 80ppb spk; 8260 BTEX + 1,2-DCA

Note: All times, excluding sample collection times, are Pacific Time Zone unless noted otherwise. Collection times are in: -10 UTC

3.	ERH158	AZ48084W 12/21/16 09:45		$8011, $86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $SIMDOD5W -- 2-MEE-LCS 80ppb spk; 8260 BTEX + 1,2-DCA

APPL Sample Receipt Form

ARF# **81842**

Sample	Container Type	Count	pH
AZ48082	[13] VOAs - HCL	5	na
	[15] VOAs - NP	3	na
AZ48083	[3] PL 250mL	1	na
	[13] VOAs - HCL	7	na
	[15] VOAs - NP	3	na
	[17] Amber Liter	5	na
	[17] Amber Liter	1	1.7
	[38] 250mL brn poly, HCl prsvd	1	1.7
AZ48084	[13] VOAs - HCL	5	na
	[15] VOAs - NP	3	na
	[17] Amber Liter	6	na

Sample	Container Type	Count	pH

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C.

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number	Sampler (Print)
CIV 53 / 60481245	CB/AM/DF/ES
Purchase Order Number	**Sampler (Signature)**
77265	Karla Shiba

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil	8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O WF SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate,Sulfate,Chloride	RSK175M Methane	Comments:
ERH156	Trip Blank	12/21/16	0830	HST	8	X			X	X	X	X								X	MW 6/23/17

Analysis Requested/Method Number

Date Shipped: 12/21/16
Carrier: FedEX
Tracking No.:

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Karla Shiba	12/21/16	1400					
Relinquished by:	**Date**	**Time**	**Received by:**	**Relinquished by:**	**Date**	**Time**	**Received at Lab by:**
					12/22/16	10:25	

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C.

Report to: PLEASE PRINT

Company Name: AECOM Phone: 808-356-5373
Address: 1001 Bishop St. Suite 1600
Honolulu, Hawaii 96813 Fax:
Attn: Margie Thach Email: margie.thach@aecom.com

Invoice to: PLEASE PRINT

Company Name: AECOM Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600
Honolulu, Hawaii 96813 Fax:
Attn: Mary Basano Email: mary.basano@aecom.com

Project Name/Number: CIV 53 / 60481245
Purchase Order Number: 77265
Sampler (Print): DF, CB, AM, KS
Sampler (Signature): Kaela Shirai

Date Shipped: 12/21/16
Carrier: FedEX
Tracking No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil		8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O W/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate,Sulfate,Chloride	RSK175M Methane	Alk SM2320B
ERH 157	RHMW08	12/21/16	0945	HST	8	X				X	X	X	X	X	X		X	X	X	X	X	X

Analysis Requested/Method Number

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Kaela Shirai	12/21/16	1400					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					12-22-16	1035	

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

24 O.O. 15 '8842

APPL LABS

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C.

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number	Sampler (Print)	Purchase Order Number	Sampler (Signature)
CIV 53 / 60481245	AMICOLDFIKS	77265	Kaela Shiigi

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil	8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O w/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	2540C Alkalinity, 300.0 Nitrate, Sulfate, Chloride, 4500 Total P, Diss. P	RSK175M Methane	6010B d. silica	6010B d. calcium	6010B d. magnesium
ERH157	RHMW08	12/21/16	0945	HST	10	X			X	X	X	X								X			

Date Shipped: 12/21/16
Carrier: Fedex
Tracking No.:
Comments:

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Kaela Shiigi	12/21/16	1400					
Relinquished by:	**Date**	**Time**	**Received by:**	**Relinquished by:**	**Date**	**Time**	**Received at lab by:**
					12/22/16	10:25	

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise. 24

APPL LABS

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C.

Report to: PLEASE PRINT

Company Name: AECOM
Phone: 808-356-5373
Address: 1001 Bishop St. Suite 1600
Honolulu, Hawaii 96813
Fax:
Attn: Margie Thach
Email: margie.thach@aecom.com

Invoice to: PLEASE PRINT

Company Name: AECOM
Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600
Honolulu, Hawaii 96813
Fax:
Attn: Mary Basano
Email: mary.basano@aecom.com

Project Name/Number: CIV 53 / 60481245
Sampler (Print): CB/AM/DF/KS
Purchase Order Number: 77265
Sampler (Signature): Kaela

Date Shipped: 12/21/16
Carrier: FedEX
Tracking No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil	Matrix:	8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O W/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate,Sulfate,Chloride	RSK175M Methane			
ERH158	RHMW08	12/21/16	0945	HST	14	X				X	X	X	X	X	X		X	X						

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Kaela Shiigi	12/21/16	1400					
Relinquished by:	**Date**	**Time**	**Received by:**	**Relinquished by:**	**Date**	**Time**	**Received at lab by:**
					12/22/16	1025	

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

COOLER RECEIPT FORM

ARF: 81842 +81849

1) Project: 60481245 CIV0053 Red Hill Fuel Storage Date Received: 12/22/16

2) Coolers: Number of Coolers: 3

3) YES Were custody seals present and intact?
How many? 6 Name/Date on seal? See below

4) YES Was there a shipping slip? Carrier name: FED EX

5) Type of packing in cooler: X bubble wrap __ popcorn __ foam X plastic bags
X wet ice __ dry ice __ no ice __ other

6) YES Were cooler temperatures acceptable?

7) Serial number of certified NIST thermometer use J5297

8) Cooler temp(s): In °C
1: 1.5 2: 2.0 3: 2.0 4: 5: 6:
7: 8: 9: 10: 11: 12:

CUSTODY SEAL
AECOM (808) 523-8874
Initials KS Date 12/22/16

Chain of custody:

9) YES Was a chain of custody received?

10) YES Were the custody papers complete/signed in the appropriate places?

Sample Labels:

11) YES Were all sample labels complete (sample ID, date/time of sampling, etc.)?

12) YES Did all container labels agree with custody papers?

Sample Containers:

13) YES Were all containers sealed in separate bags?

14) YES Did all containers arrive in good condition:(unbroken, no leakage, no cracked/broken lids)?

15) YES Were correct containers and preservatives used for the tests indicated?

16) YES Was a sufficient amount of sample sent for tests indicated?

17) Yes Were bubbles present in volatile samples?
If yes, the following were received with air bubbles:
Larger than a pea: AZ48082W04-W05
Smaller than a pea:

Preservation Hold time:

18) Yes Was a sufficient amount of holding time remaining to analyze the samples?

19) Yes Was the pH taken of all non-VOA preserved samples and written on the sample container?

20) Yes Was the pH of acid preserved non-VOA samples < 2?

21) NA Was the pH of sodium hydroxide preserved samples for Cyanide > 12 and Sulfide >9?

22) NO Were unpreserved VOA Vials received?

23) NA Are unpreserved VOA vials noted in the ADD TEST FIELD on the ARF?
pH strip lot number: 90B2031
Lab notified if pH was not adequate:

Notes/Deficiencies:
Received ferrous iron greater than 24 hours for sample ERH157.

Personnel receiving samples: YL Second reviewer: RM
Personnel labeling samples:
Project manager notified: YL Date/Time of notification 12/22/16 12:57
Name of client notified: Date/Time of notification

Revision: 22, November 5, 2013

ORGANICS

APPL, INC.

ORGANICS
QC Summary

APPL, INC.

Method Blank
EPA 8011

Blank Name/QCG: **161228W-48082 - 215078**
Batch ID: #8011-161228A1

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	EDB	0.020 U	0.02	0.020	0.010	ug/L	12/28/16	12/28/16
BLANK	SURROGATE: 1,3-DIBROMOPRO	79.7	70-132			%	12/28/16	12/28/16

Quant Method:80111228.M
Run #:1214098
Instrument:Herbie
Sequence:161214
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 12/29/16 2:24:35 PM

8011

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81842

Case No: 81842 Date Analyzed: 12/28/16

Matrix: WATER Instrument: Herbie

APPL ID.	Client Sample No.	SURROGATE: 1,3-DIBROMOPROPANE (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
161228A1-BLK	Blank	70-132	79.7				
161228A1-LCS	Lab Control Spike	70-132	73.7				
AZ48082	ERH156	70-132	85.2				
AZ48083	ERH157	70-132	92.0				
AZ48084	ERH158	70-132	80.4				

Comments: Batch: #8011-161228A1

Printed: 12/29/16 2:24:36 PM

Form 2 & 8, Surrogate Recovery Summary

Laboratory Control Spike Recovery

EPA 8011

APPL ID: **161228W-48082 LCS - 215078**
Batch ID: #8011-161228A1

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
EDB	0.250	0.264	106	60-140
SURROGATE: 1,3-DIBROMOPROPANE (	0.350	0.258	73.7	70-132

Comments: _____

Primary	SPK
Quant Method :	80111228.M
Extraction Date :	12/28/16
Analysis Date :	12/28/16
Instrument :	Herbie
Run :	1214100
Initials :	MA

Printed: 12/29/16 2:24:37 PM
APPL Standard LCS

8011

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81842

Case No: 81842 Date Analyzed: 12/28/16

Matrix: WATER Instrument: Herbie

Blank ID: 161228A1-BLK Time Analyzed: 1345

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161228A1-BLK	Blank	1214098	12/28/16 1345
161228A1-LCS	Lab Control Spike	1214100	12/28/16 1427
AZ48082	ERH156	1214103	12/28/16 1529
AZ48083	ERH157	1214104	12/28/16 1550
AZ48084	ERH158	1214105	12/28/16 1611

Comments: Batch: #8011-161228A1

Printed: 12/29/16 2:24:38 PM
Form 4, Blank Summary

ORGANICS
Sample Data

APPL, INC.

EPA 8011

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH156
Sample Collection Date: 12/21/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81842
APPL ID: AZ48082
QCG: #8011-161228A1-215078

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8011	EDB	0.020 U	0.02	0.020	0.010	ug/L	12/28/16	12/28/16
8011	SURROGATE: 1,3-DIBROMOPROPANE	85.2	70-132			%	12/28/16	12/28/16

Quant Method: 80111228.M
Run #: 1214103
Instrument: Herbie
Sequence: 161214
Dilution Factor: 1
Initials: MA

Printed: 12/29/16 2:24:39 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214103.D\ECD1A.CH Vial: 3
Signal #2 : G:\HERBIE\DATA\161214\1214103.D\ECD2B.CH
Acq On : 12-28-16 15:29:58 Operator: RH
Sample : AZ48082W06 2/34.91G Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 29 14:27 2016 Quant Results File: 80111228.RES

Quant Method : G:\HERBIE\DATA\161214\80111228.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Dec 28 13:38:53 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

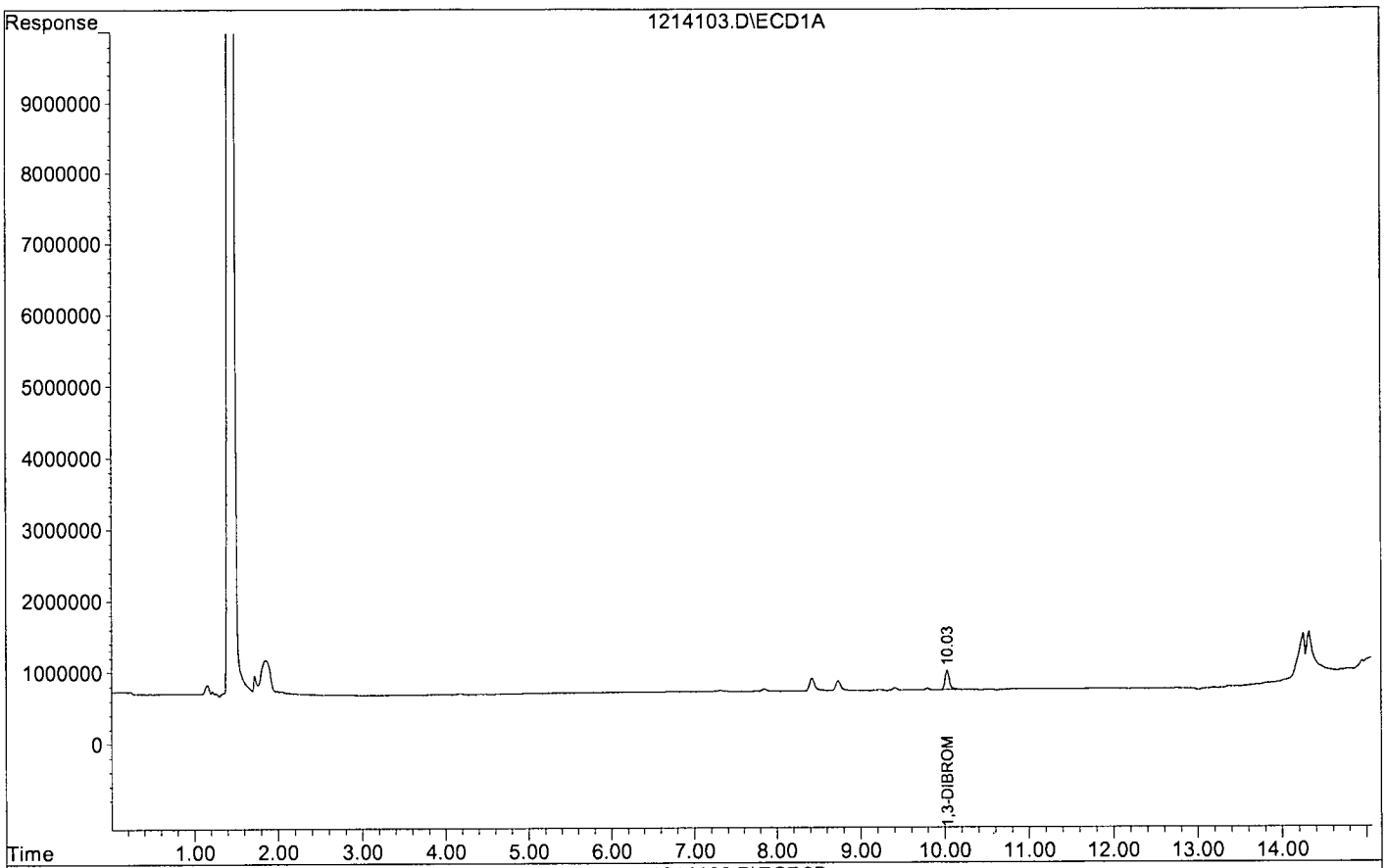
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	273757	439748	0.299	0.295
Spiked Amount	0.351			Recovery	=	85.21%	84.07%
	Target Compounds						
	Target Compounds						
1) TM	EDB	0.00	0.00	0	0	N.D. d	N.D. d
2) TM	1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4) TM	DBCP	0.00	0.00	0	0	N.D. d	N.D. d

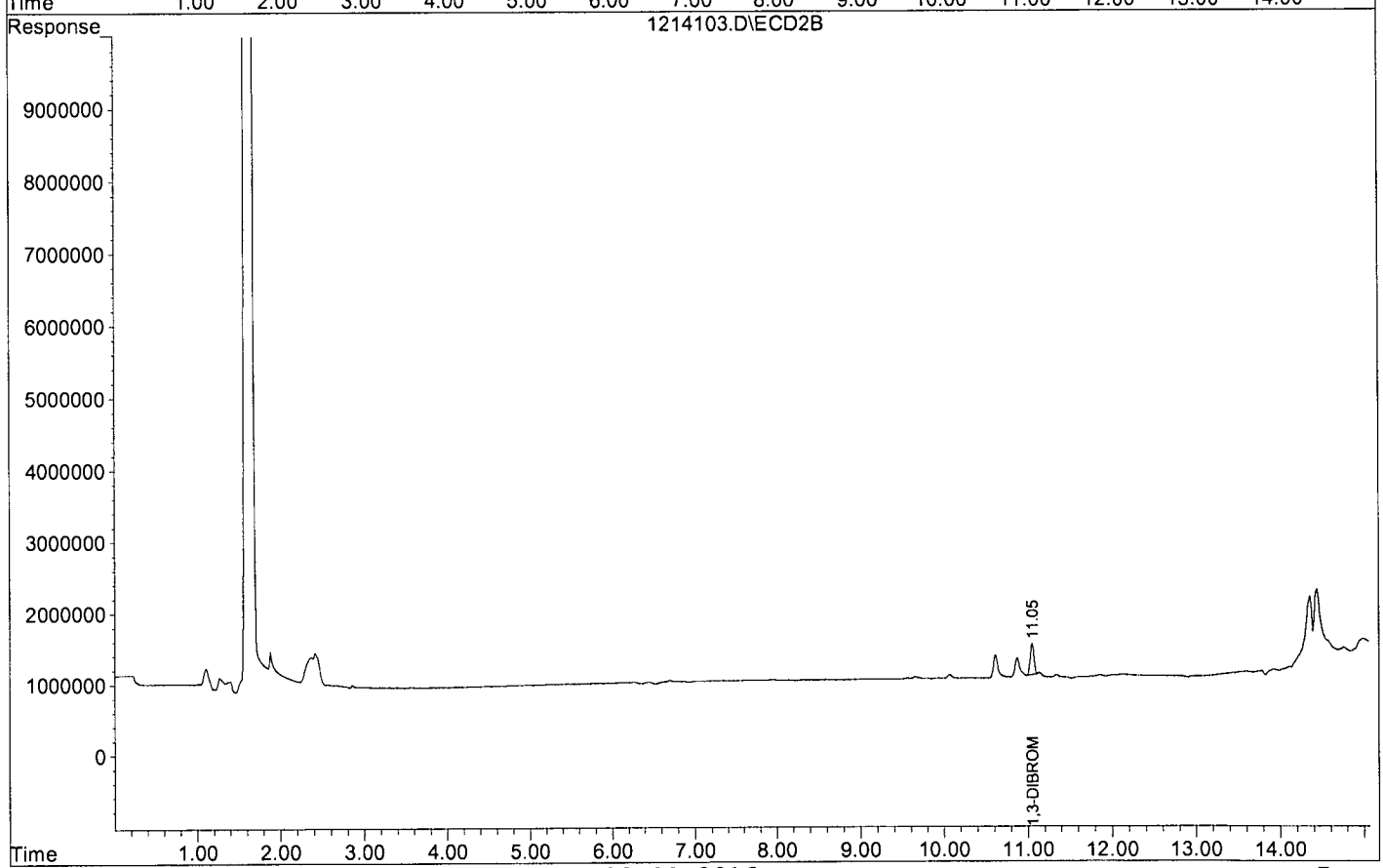
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\161214\1214103.D
Acq On : 12-28-16 15:29:58
Sample : AZ48082W06 2/34.91G
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111228.M

Vial: 3
Operator: RH
Inst : Herbie
Multiplr: 1.00





EPA 8011

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH157
Sample Collection Date: 12/21/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81842
APPL ID: AZ48083
QCG: #8011-161228A1-215078

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8011	EDB	0.020 U	0.02	0.020	0.010	ug/L	12/28/16	12/28/16
8011	SURROGATE: 1,3-DIBROMOPROPANE	92.0	70-132			%	12/28/16	12/28/16

Quant Method: 80111228.M
Run #: 1214104
Instrument: Herbie
Sequence: 161214
Dilution Factor: 1
Initials: MA

Printed: 12/29/16 2:24:39 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214104.D\ECD1A.CH Vial: 4
Signal #2 : G:\HERBIE\DATA\161214\1214104.D\ECD2B.CH
Acq On : 12-28-16 15:50:42 Operator: RH
Sample : AZ48083W08 2/34.67G Inst : Herbie
Misc : Multiplr: 1.01
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 29 14:27 2016 Quant Results File: 80111228.RES

Quant Method : G:\HERBIE\DATA\161214\80111228.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Dec 28 13:38:53 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

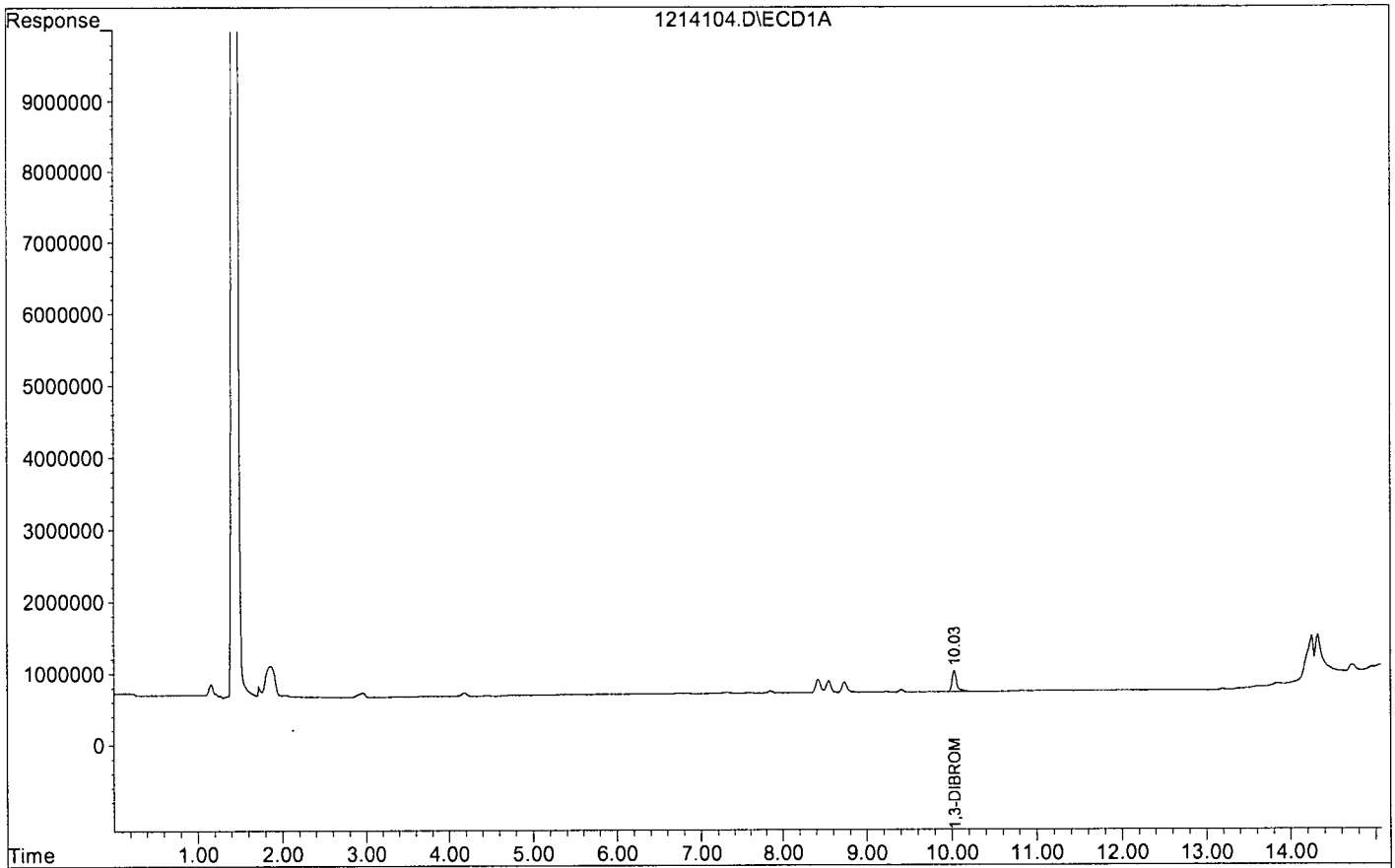
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	296155	484281	0.325	0.327
Spiked Amount	0.353			Recovery	=	91.98%	92.55%
	Target Compounds						
	Target Compounds						
1) TM	EDB	0.00	0.00	0	0	N.D. d	N.D. d
2) TM	1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4) TM	DBCP	0.00	0.00	0	0	N.D. d	N.D. d

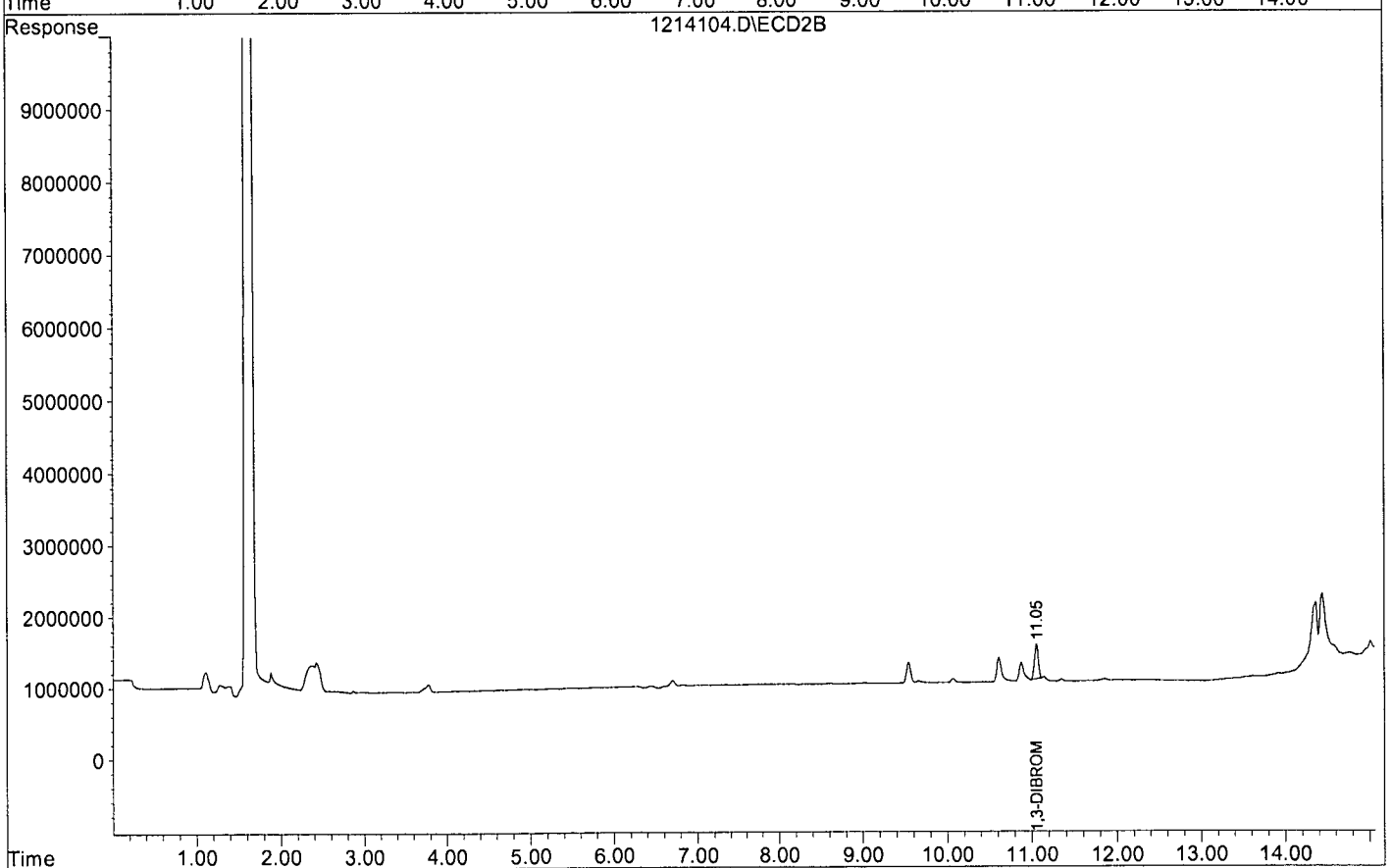
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\161214\1214104.D
Acq On : 12-28-16 15:50:42
Sample : AZ48083W08 2/34.67G
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111228.M

Vial: 4
Operator: RH
Inst : Herbie
Multiplr: 1.01





EPA 8011

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH158
Sample Collection Date: 12/21/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81842
APPL ID: AZ48084
QCG: #8011-161228A1-215078

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8011	EDB	0.020 U	0.02	0.020	0.010	ug/L	12/28/16	12/28/16
8011	SURROGATE: 1,3-DIBROMOPROPANE	80.4	70-132			%	12/28/16	12/28/16

Quant Method: 80111228.M
Run #: 1214105
Instrument: Herbie
Sequence: 161214
Dilution Factor: 1
Initials: MA

Printed: 12/29/16 2:24:39 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214105.D\ECD1A.CH Vial: 5
Signal #2 : G:\HERBIE\DATA\161214\1214105.D\ECD2B.CH
Acq On : 12-28-16 16:11:34 Operator: RH
Sample : AZ48084W06 2/34.82G Inst : Herbie
Misc : Multiplr: 1.01
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 29 14:27 2016 Quant Results File: 80111228.RES

Quant Method : G:\HERBIE\DATA\161214\80111228.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Dec 28 13:38:53 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

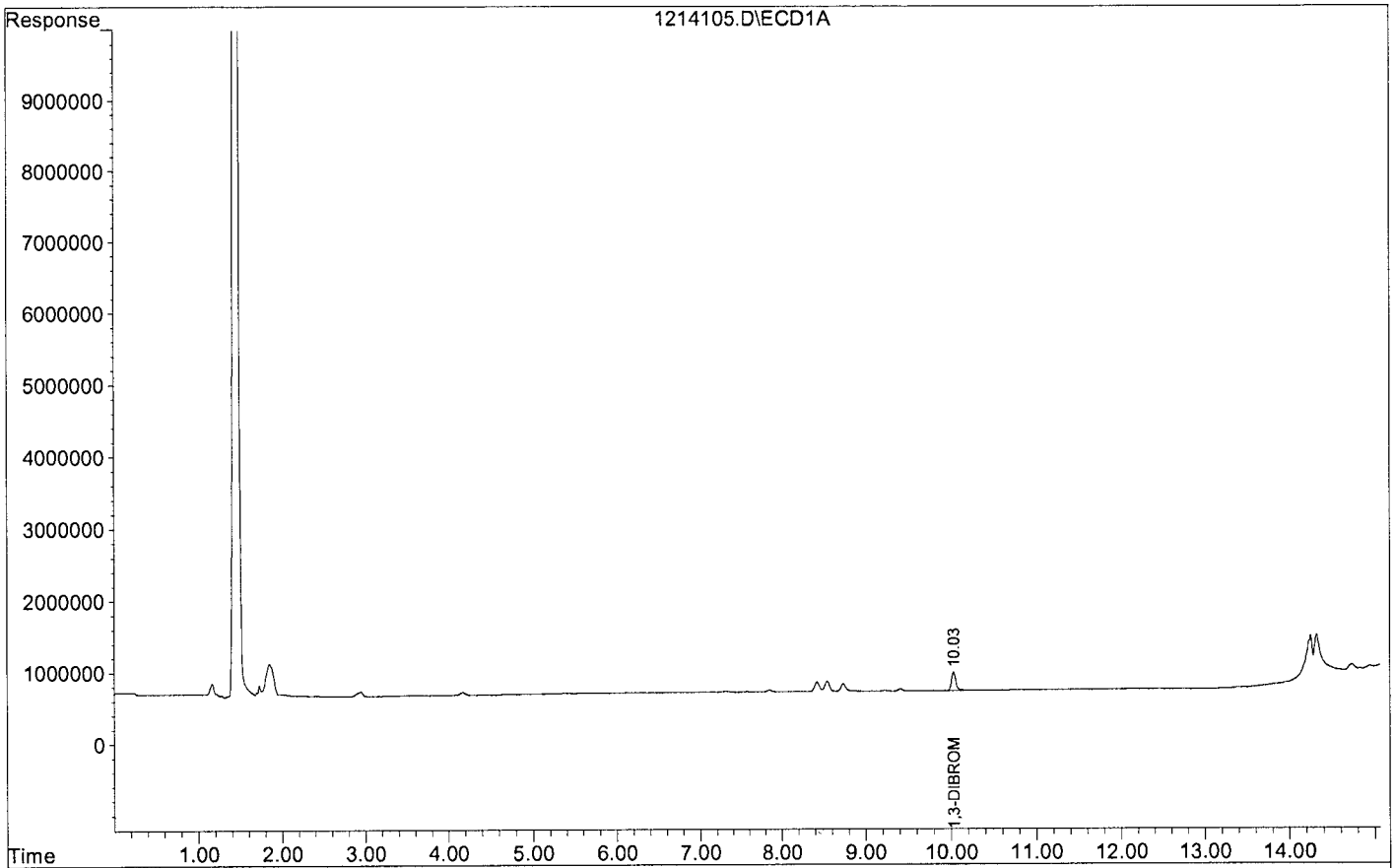
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.06	258995	414719	0.283	0.279
Spiked Amount	0.352			Recovery	=	80.44%	79.30%
	Target Compounds						
	Target Compounds						
1) TM	EDB	0.00	0.00	0	0	N.D. d	N.D. d
2) TM	1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4) TM	DBCP	0.00	0.00	0	0	N.D. d	N.D. d

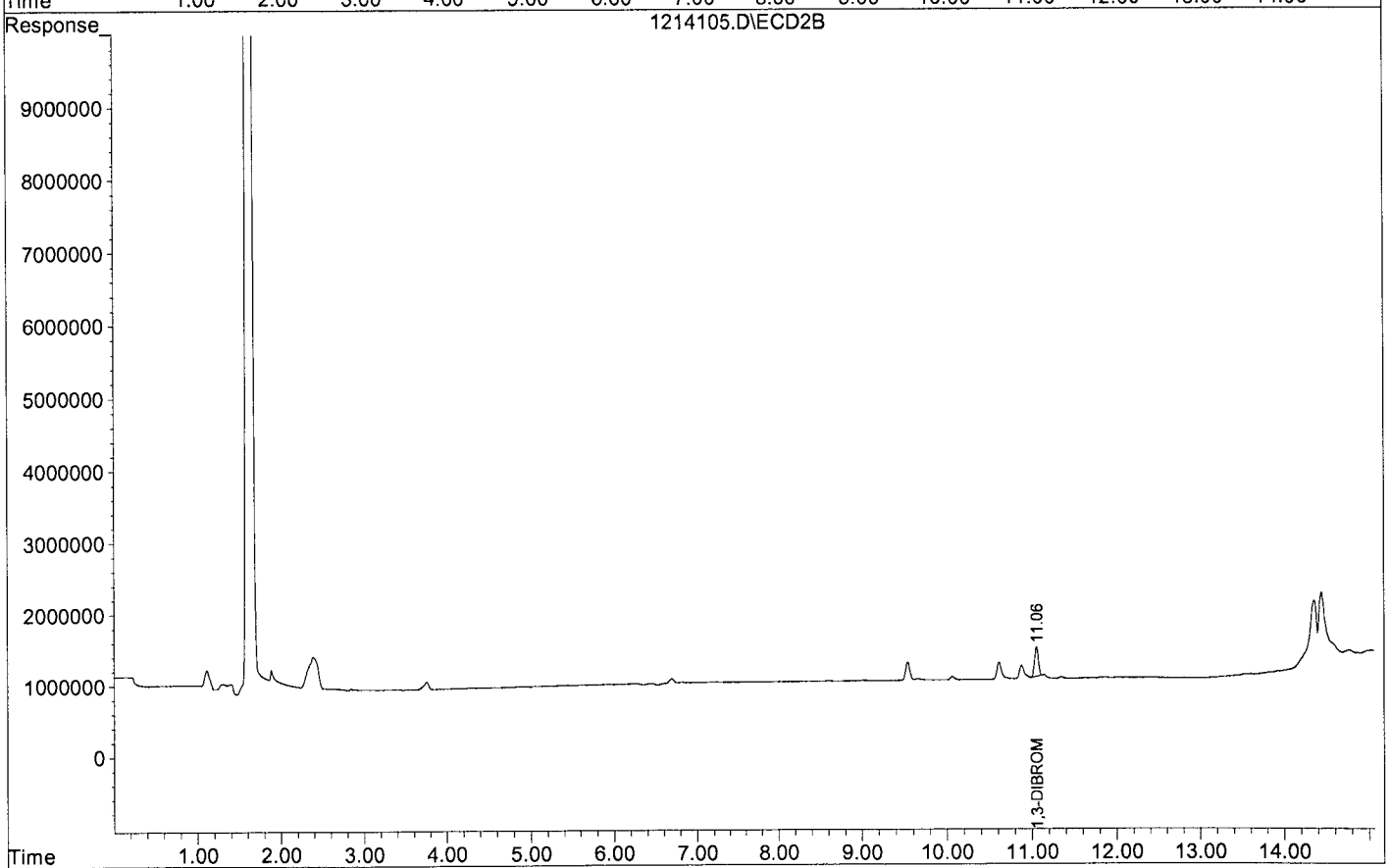
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\161214\1214105.D
Acq On : 12-28-16 16:11:34
Sample : AZ48084W06 2/34.82G
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111228.M

Vial: 5
Operator: RH
Inst : Herbie
Multiplr: 1.01





ORGANICS
Calibration Data

APPL, INC.

DBCP/EDB/1,2,3-TCP Analysis by
504 8011 1215

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:
SDG No:
Initial Cal. Date: 12/28/16
Instrument: Herbie
Initials:

			1214091.D	1214092.D	1214093.D	1214094.D	1214095.D	1214096 D								
		Compound	1	2	3	4	5	6					Avg	%RSD		
1	TML	EDB	738525	634565	584020	568576	587983						622734	11	TML	0.999
2	TML	1,2,3-TCP	288250	151555	123384	127399	131502						164418	43	TML	0.998
3	S	1,3-DIBROMOPROPANE(S)	540150	445335	439980	426465	446706						459727	9.9	S	
4	TM	DBCP	1811000	1594045	1389568	1515088	1620884						1586117	9.7	TM	
5		Signal #2														
6	TML	EDB #2	1622400	1309375	1239310	1296981	1381147						1369843	11	TML	0.997
7	TML	1,2,3-TCP #2	336225	236155	216862	228135	238846						251245	19	TML	0.998
8	S	1,3-DIBROMOPROPANE(S) #2	748450	729265	690290	759085	812361						747890	6.0	S	
9	TM	DBCP #2	4525025	3826215	3612086	3963524	4405109						4066392	9.5	TM	
10																
11																
12																
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33																
34																
35																

3.4014639

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214091.D\ECD1A.CH Vial: 91
Signal #2 : G:\HERBIE\DATA\161214\1214091.D\ECD2B.CH
Acq On : 12-28-16 11:20:36 Operator: RH
Sample : 8011 1 12/28/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 28 13:21 2016 Quant Results File: 80111228.RES

Quant Method : G:\HERBIE\DATA\161214\80111228.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Dec 28 13:18:23 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

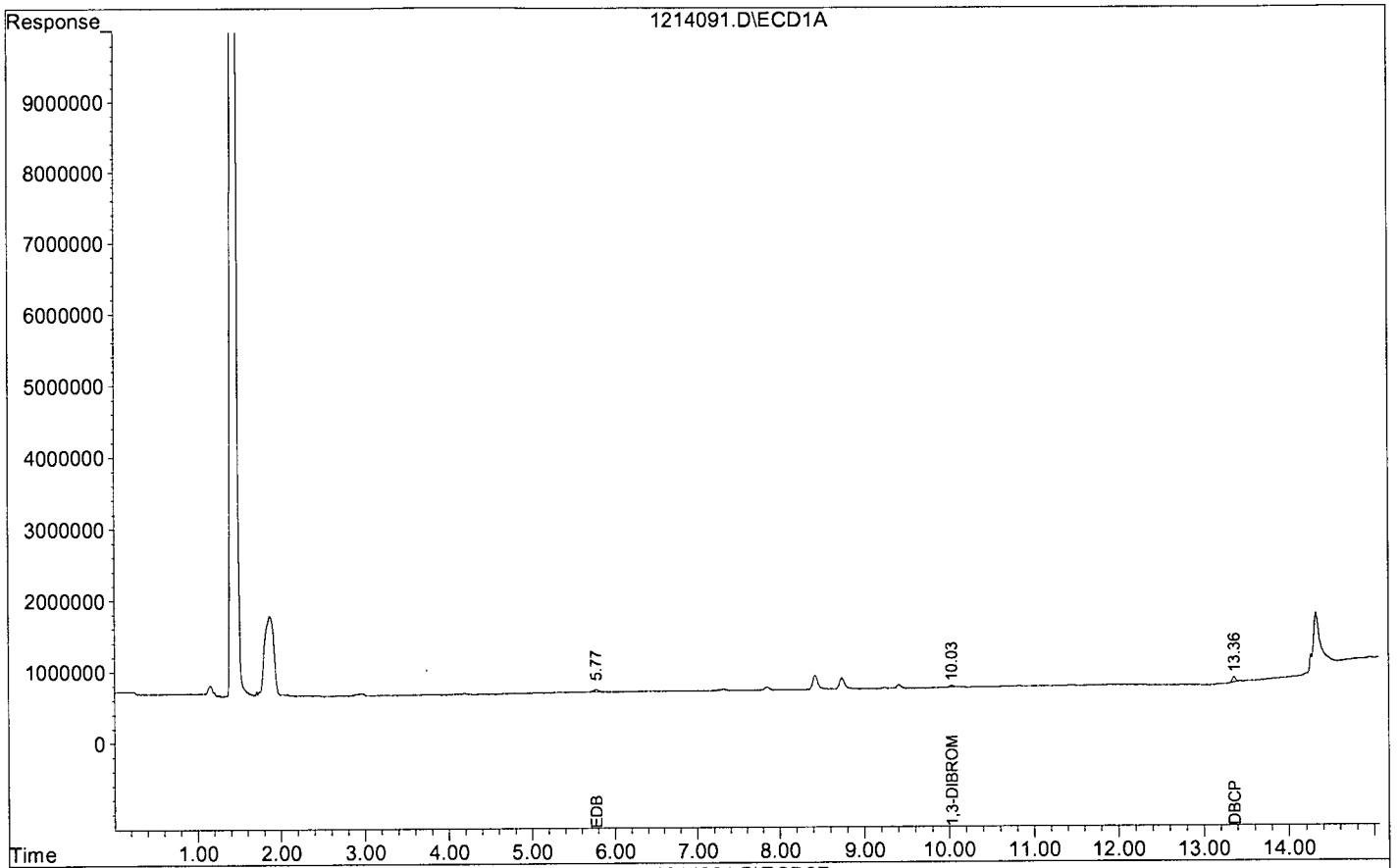
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	21606	29938	0.015	0.014
Spiked Amount	0.350			Recovery	=	4.29%	4.00%
	Target Compounds						
1) TM	EDB	5.77	7.22	29541	64896	0.018	0.017
4) TM	DBCP	13.36	14.10	72440	181001	0.015	0.018
	Target Compounds						
2) TM	1,2,3-TCP	9.24	10.46	11530	13449	N.D.	0.020

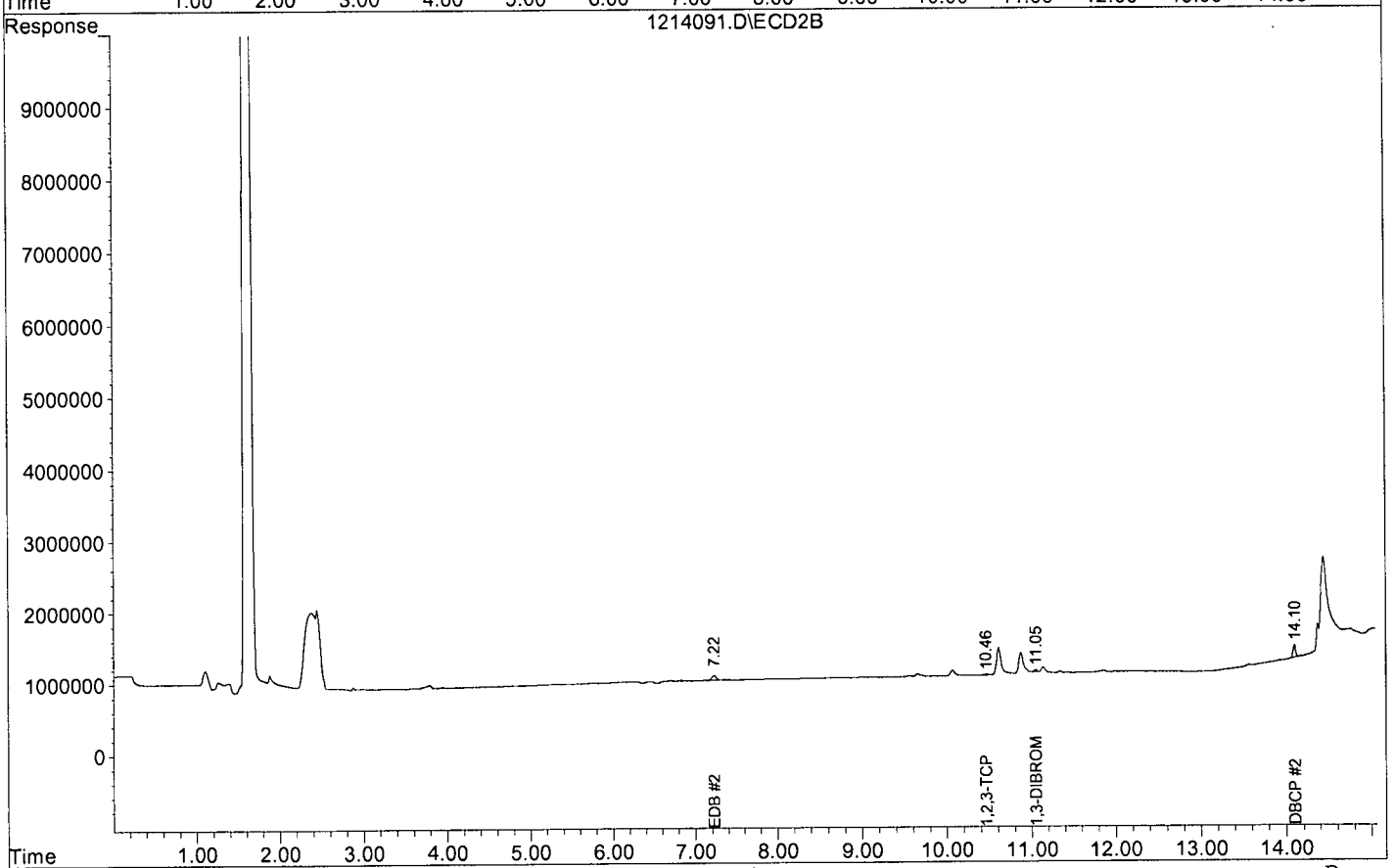
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214091.D
Acq On : 12-28-16 11:20:36
Sample : 8011 1 12/28/16
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111228.M

Vial: 91
Operator: RH
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214092.D\ECD1A.CH Vial: 92
Acq On : 12-28-16 11:41:14 Operator: RH
Sample : 8011 2 12/28/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile : rteint.p

Data File : G:\HERBIE\DATA\161214\1214092.D\ECD2B.CH Vial: 92
Acq On : 12-28-16 11:41:13 Operator: RH
Sample : 8011 2 12/28/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile : rteint2.p
Quant Time: Dec 28 13:21 2016 Quant Results File: 80111228.RES

Quant Method : G:\HERBIE\DATA\161214\80111228.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Dec 28 13:18:23 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	System Monitoring Compounds							
3) S	1,3-DIBROMOPROPA	10.03	11.05	89067	145853	0.063	0.068	
Spiked Amount	0.350			Recovery	=	18.00%	19.43%	
	Target Compounds							
1) TM	EDB	5.77	7.22	126913	261875	0.076	0.069	
2) TM	1,2,3-TCP	9.26	10.46	30311	47231	0.016	0.072	#
4) TM	DBCP	13.36	14.10	318809	765243	0.067	0.076	

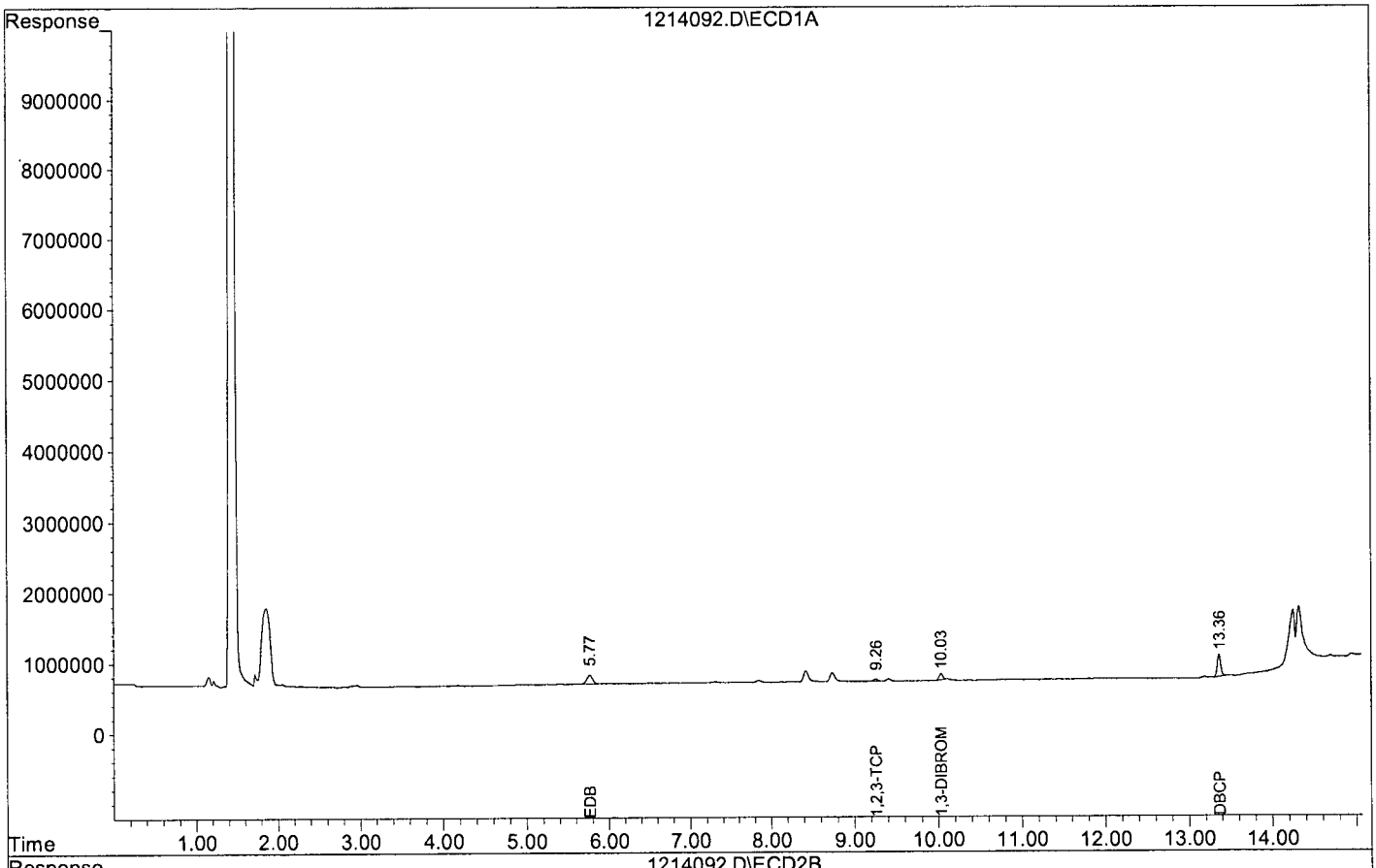
Target Compounds

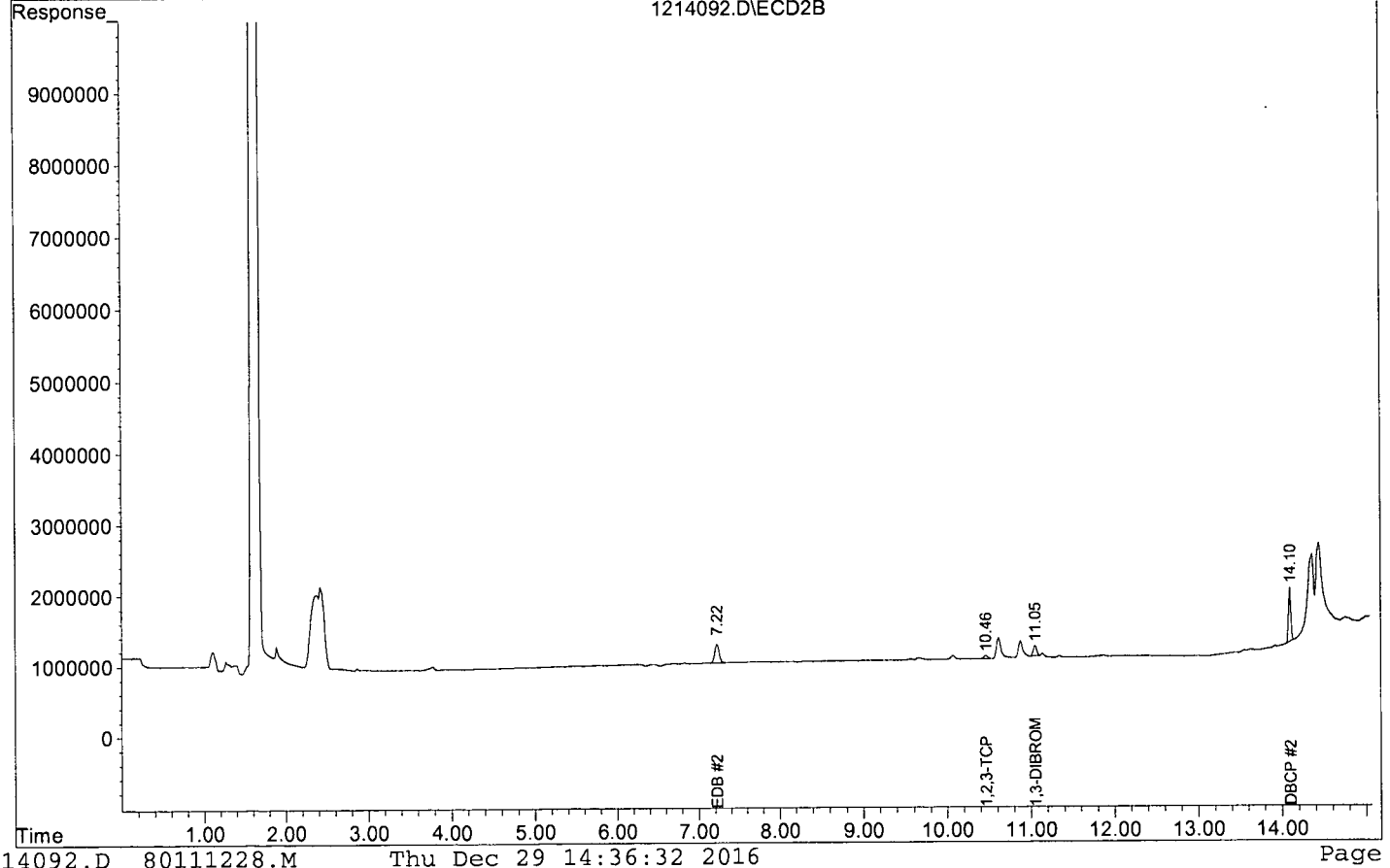
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214092.D
Acq On : 12-28-16 11:41:14
Sample : 8011 2 12/28/16
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111228.M

Vial: 92
Operator: RH
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214093.D\ECD1A.CH Vial: 93
Signal #2 : G:\HERBIE\DATA\161214\1214093.D\ECD2B.CH
Acq On : 12-28-16 12:02:03 Operator: RH
Sample : 8011 3 12/28/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 28 13:21 2016 Quant Results File: 80111228.RES

Quant Method : G:\HERBIE\DATA\161214\80111228.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Dec 28 13:18:23 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.06	219990	345145	0.157	0.161
Spiked Amount	0.350			Recovery	=	44.86%	46.00%
	Target Compounds						
1) TM	EDB	5.77	7.22	292010	619655	0.174	0.164
2) TM	1,2,3-TCP	9.26	10.46	61692	108431	0.115	0.165 #
4) TM	DBCP	13.36	14.10	694784	1806043	0.147	0.179

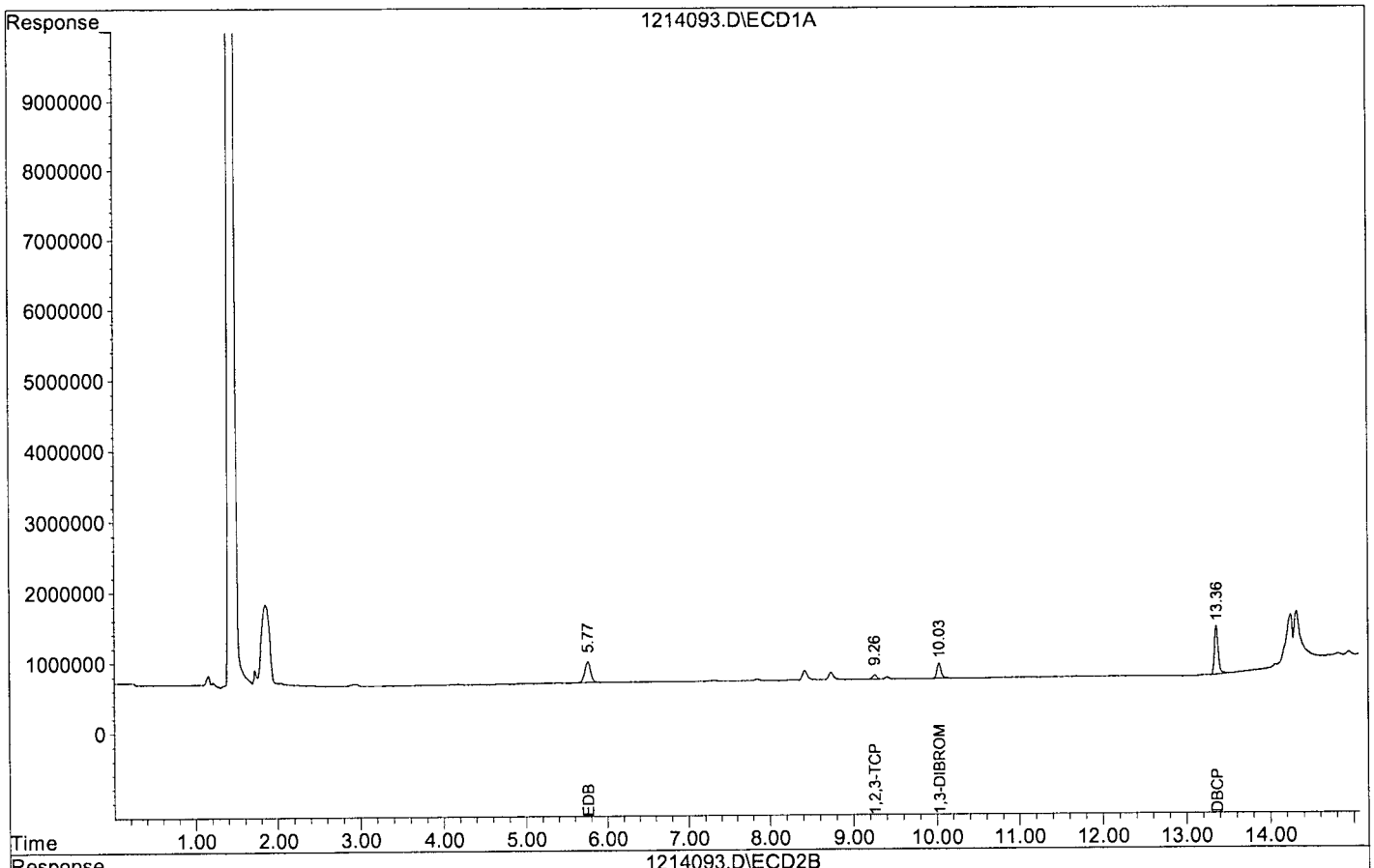
Target Compounds

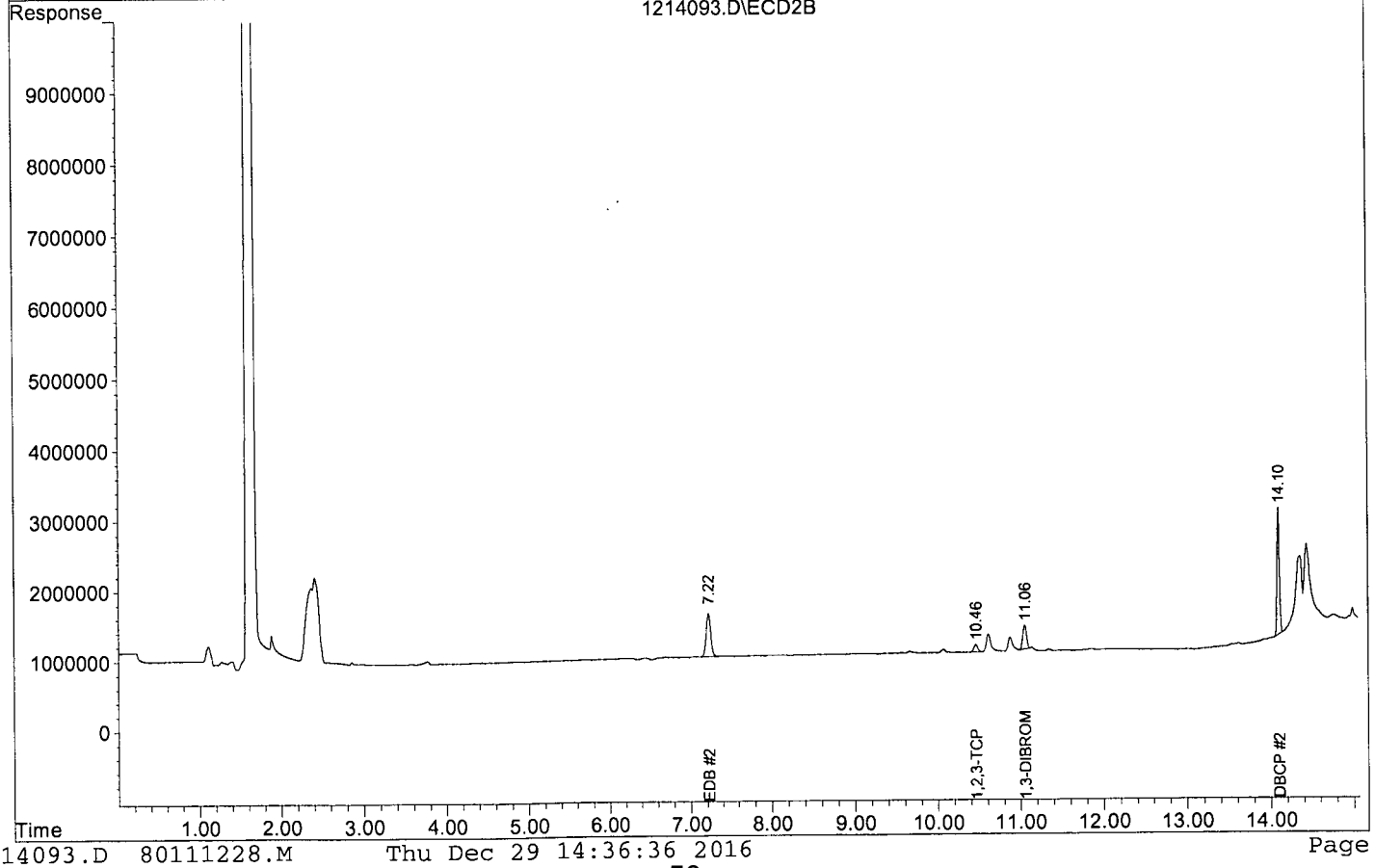
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214093.D
Acq On : 12-28-16 12:02:03
Sample : 8011 3 12/28/16
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111228.M

Vial: 93
Operator: RH
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214094.D\ECD1A.CH Vial: 94
Signal #2 : G:\HERBIE\DATA\161214\1214094.D\ECD2B.CH
Acq On : 12-28-16 12:22:48 Operator: RH
Sample : 8011 4 12/28/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 28 13:21 2016 Quant Results File: 80111228.RES

Quant Method : G:\HERBIE\DATA\161214\80111228.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Dec 28 13:18:23 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	426465	759085	0.304	0.355
Spiked Amount	0.350			Recovery	=	86.86%	101.43%
	Target Compounds						
1) TM	EDB	5.77	7.22	568576	1296981	0.340	0.343
2) TM	1,2,3-TCP	9.26	10.46	127399	228135	0.324	0.347
4) TM	DBCP	13.36	14.10	1515088	3963524	0.320	0.392

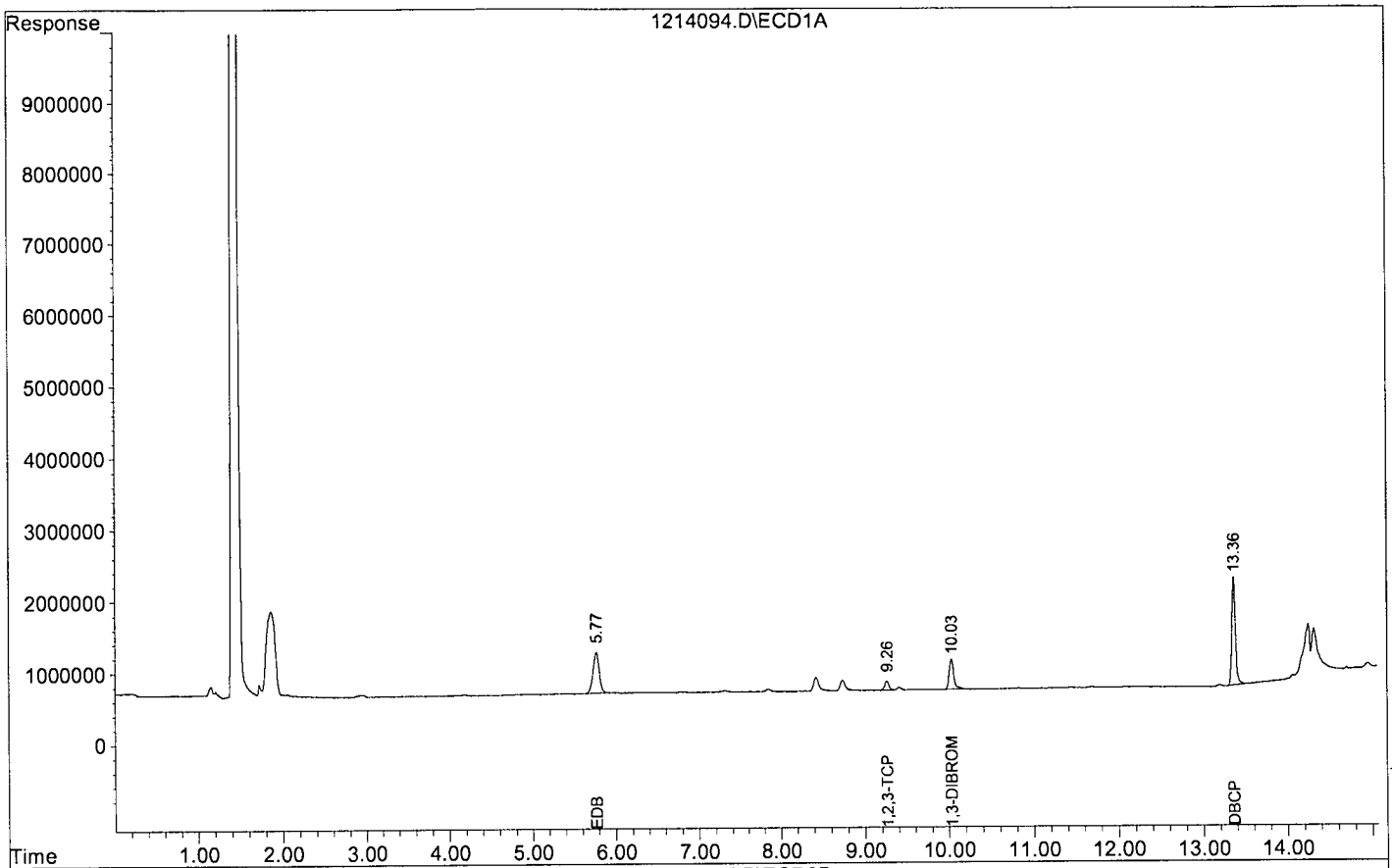
Target Compounds

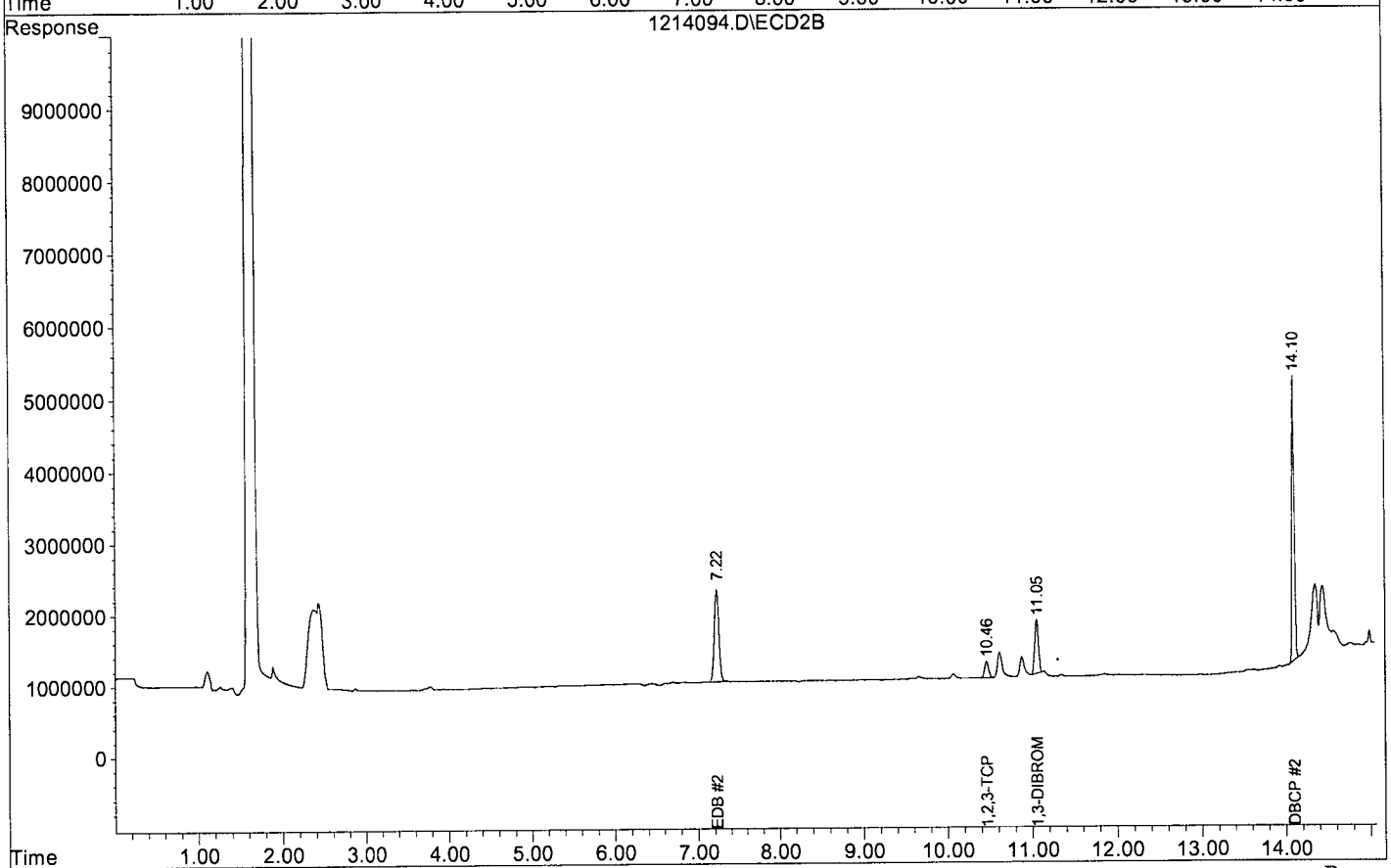
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214094.D
Acq On : 12-28-16 12:22:48
Sample : 8011 4 12/28/16
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111228.M

Vial: 94
Operator: RH
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214095.D\ECD1A.CH Vial: 95
Signal #2 : G:\HERBIE\DATA\161214\1214095.D\ECD2B.CH
Acq On : 12-28-16 12:43:32 Operator: RH
Sample : 8011 5 12/28/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 28 13:21 2016 Quant Results File: 80111228.RES

Quant Method : G:\HERBIE\DATA\161214\80111228.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Dec 28 13:18:23 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	System Monitoring Compounds							
3) S	1,3-DIBROMOPROPA	10.03	11.05	670059	1218541	0.478	0.569	
	Spiked Amount 0.350			Recovery	=	136.57%	162.57%	
	Target Compounds							
1) TM	EDB	5.77	7.22	881975	2071720	0.527	0.547	
2) TM	1,2,3-TCP	9.26	10.46	197253	358269	0.545	0.545	
4) TM	DBCP	13.36	14.10	2431326	6607664	0.514	0.653	#

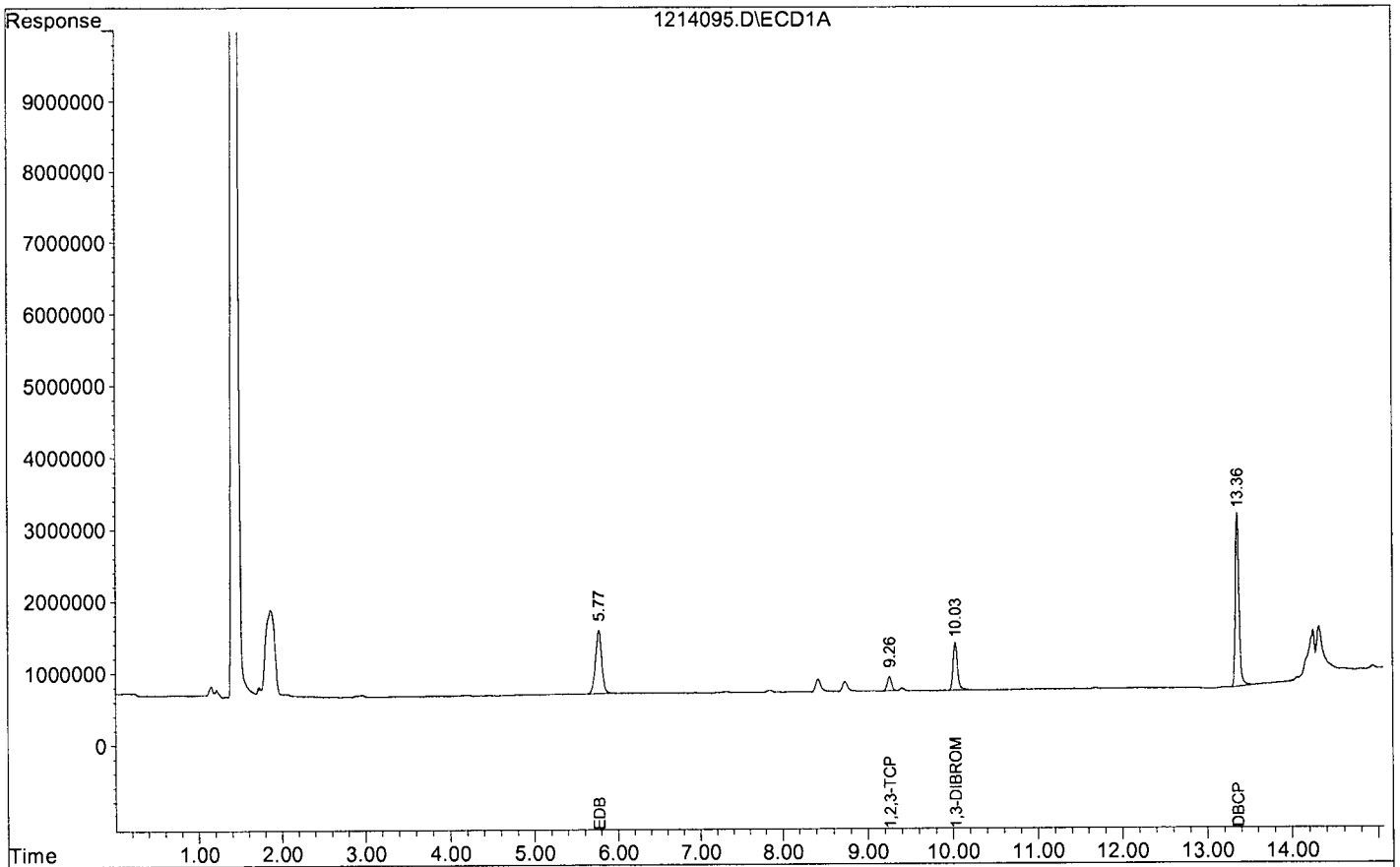
Target Compounds

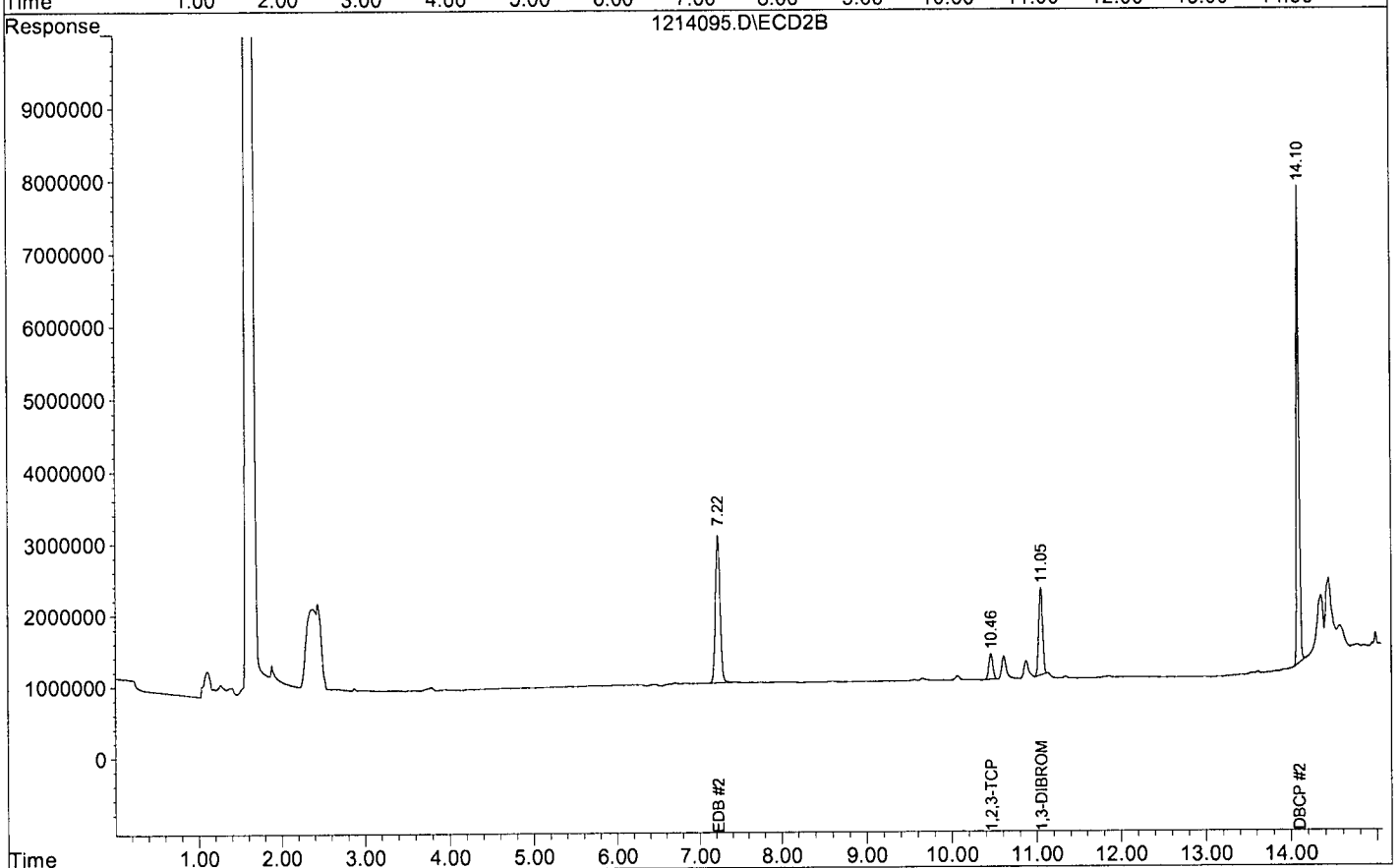
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214095.D
Acq On : 12-28-16 12:43:32
Sample : 8011 5 12/28/16
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111228.M

Vial: 95
Operator: RH
Inst : Herbie
Multiplr: 1.00





DBCP/EDB/1,2,3-TCP Analysis by
504 8011 1215

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/28/16
Instrument: Herbie
Initial Cal. Date: 12/28/16
Data File: 1214099.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TML	EDB	622734	644570	3.5	TML	7.0
2	TML	1,2,3-TCP	164418	158620	3.5	TML	12
3	TM	DBCP	1586120	1763760	11	TM	
4	signal #2						
5	TML	EDB	1369840	1356720	0.96	TML	7.8
6	TML	1,2,3-TCP	251245	263560	4.9	TML	15
7	TM	DBCP	4066390	4096840	0.75	TM	
8							
9							
10							
11							
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		Average			#REF!		

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214099.D\ECD1A.CH Vial: 99
Signal #2 : G:\HERBIE\DATA\161214\1214099.D\ECD2B.CH
Acq On : 12-28-16 14:06:47 Operator: RH
Sample : 161228A LCS-1 2/35.55G Inst : Herbie
Misc : Multiplr: 0.98
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 28 16:54 2016 Quant Results File: 80111228.RES

Quant Method : G:\HERBIE\DATA\161214\80111228.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Dec 28 13:38:53 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.06	304231	494032	0.326	0.325
Spiked Amount	0.345			Recovery	=	94.61%	94.32%
	Target Compounds						
1) TM	EDB	5.77	7.23	128914	271344	0.105	0.106
2) TM	1,2,3-TCP	9.26	10.46	31724	52712	0.110	0.114
4) TM	DBCP	13.36	14.10	352751	819367	0.109	0.099

Target Compounds

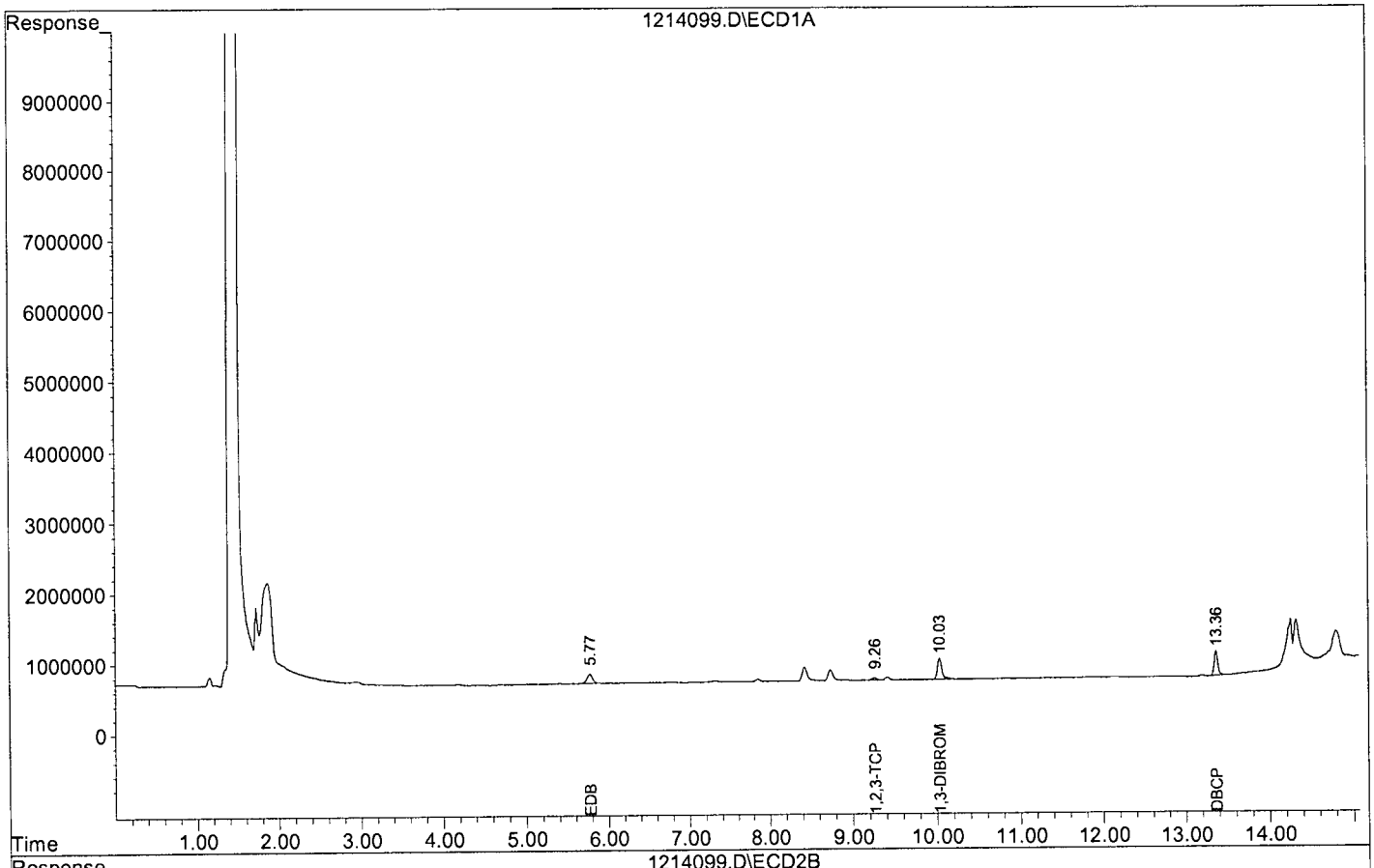
Algorithm = $\frac{352751 \times 0.98}{2 \times 1586120} = 0.109$ MA 12/29/16

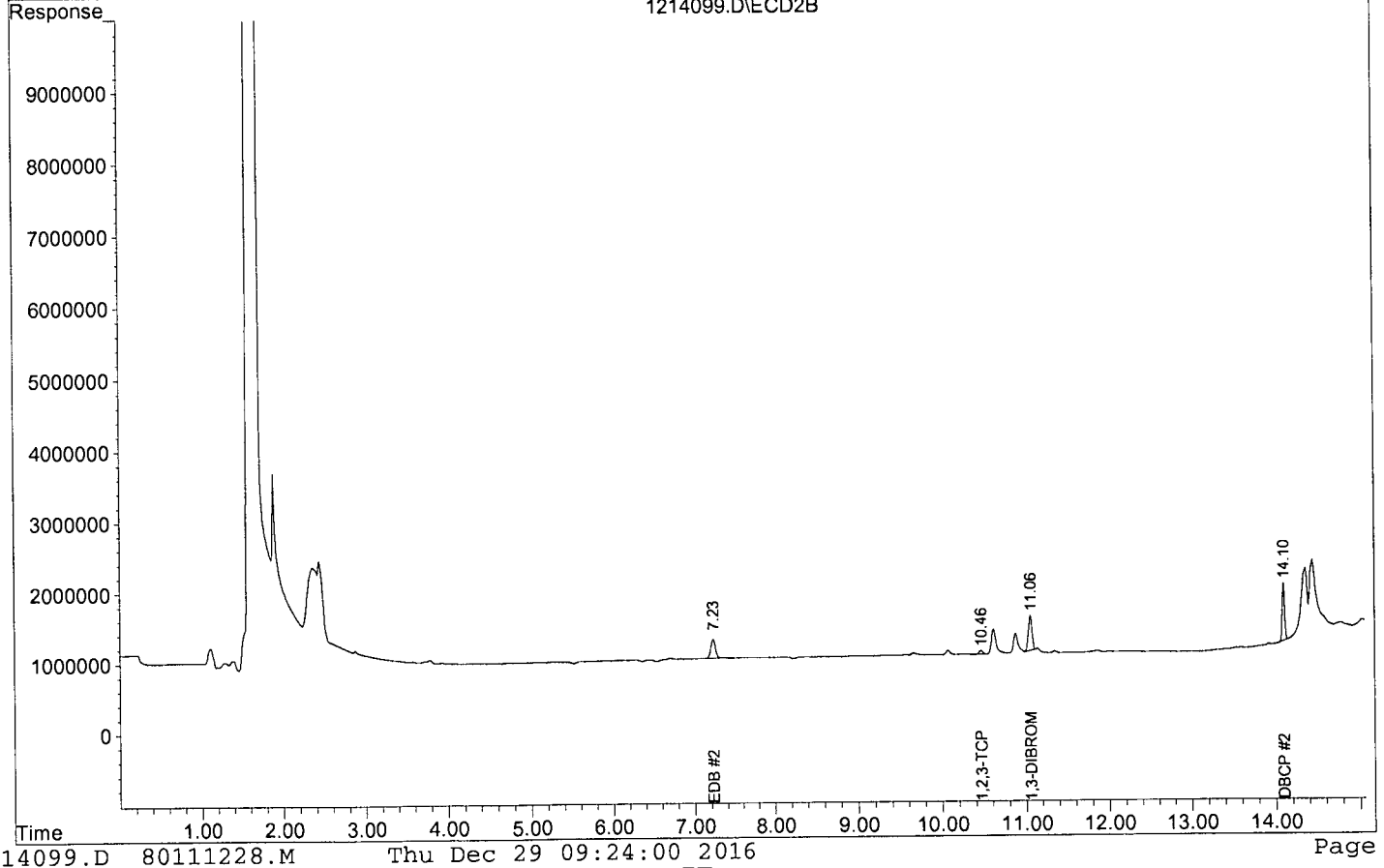
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214099.D
Acq On : 12-28-16 14:06:47
Sample : 161228A LCS-1 2/35.55G
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111228.M

Vial: 99
Operator: RH
Inst : Herbie
Multiplr: 0.98





DBCP/EDB/1,2,3-TCP Analysis by
504 8011 1215

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/28/16
Instrument: Herbie
Initial Cal. Date: 12/28/16
Data File: 1214113.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TML	EDB	622734	643046	3.3	TML	9.4
2	TML	1,2,3-TCP	164418	138600	16	TML	3.9
3	S	1,3-DIBROMOPROPANE(S)	459727	490570	6.7	S	
4	TM	DBCP	1586120	1663720	4.9	TM	
5	signal #2						
6	TML	EDB	1369840	1398490	2.1	TML	5.7
7	TML	1,2,3-TCP	251245	246188	2.0	TML	5.9
8	S	1,3-DIBROMOPROPANE(S)	747890	800490	7.0	S	
9	TM	DBCP	4066390	4022410	1.1	TM	
10							
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		Average			#REF!		

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214113.D\ECD1A.CH Vial: 13
Signal #2 : G:\HERBIE\DATA\161214\1214113.D\ECD2B.CH
Acq On : 12-28-16 18:57:46 Operator: RH
Sample : 8011 3 12/28/16 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 29 8:59 2016 Quant Results File: 80111228.RES

Quant Method : G:\HERBIE\DATA\161214\80111228.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Dec 28 13:38:53 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	245285	400245	0.267	0.268
Spiked Amount	0.350			Recovery	=	76.29%	76.57%
	Target Compounds						
1) TM	EDB	5.77	7.22	321523	699245	0.274	0.264
2) TM	1,2,3-TCP	9.26	10.46	69300	123094	0.260	0.265
4) TM	DBCP	13.36	14.10	831861	2011207	0.262	0.247

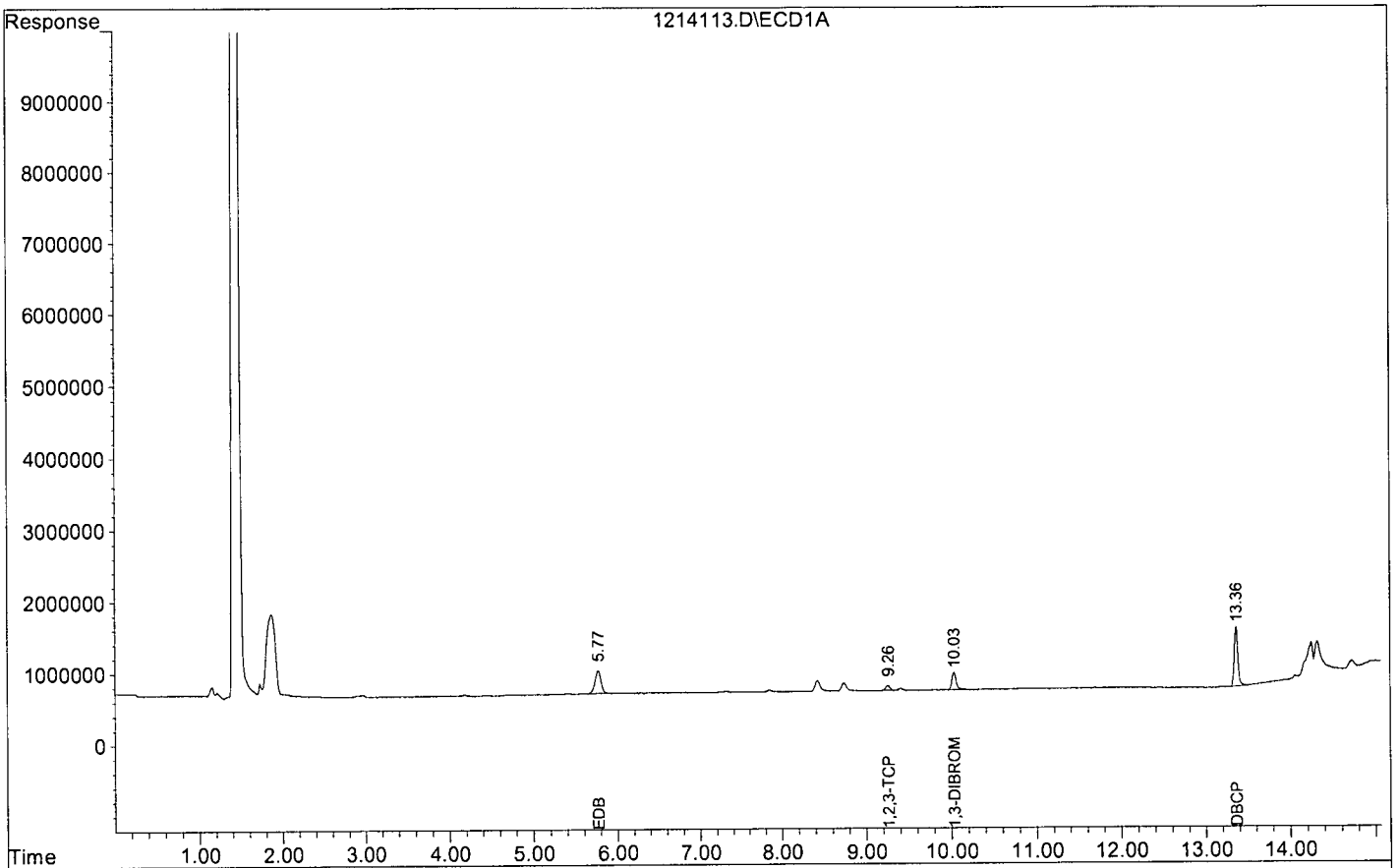
Target Compounds

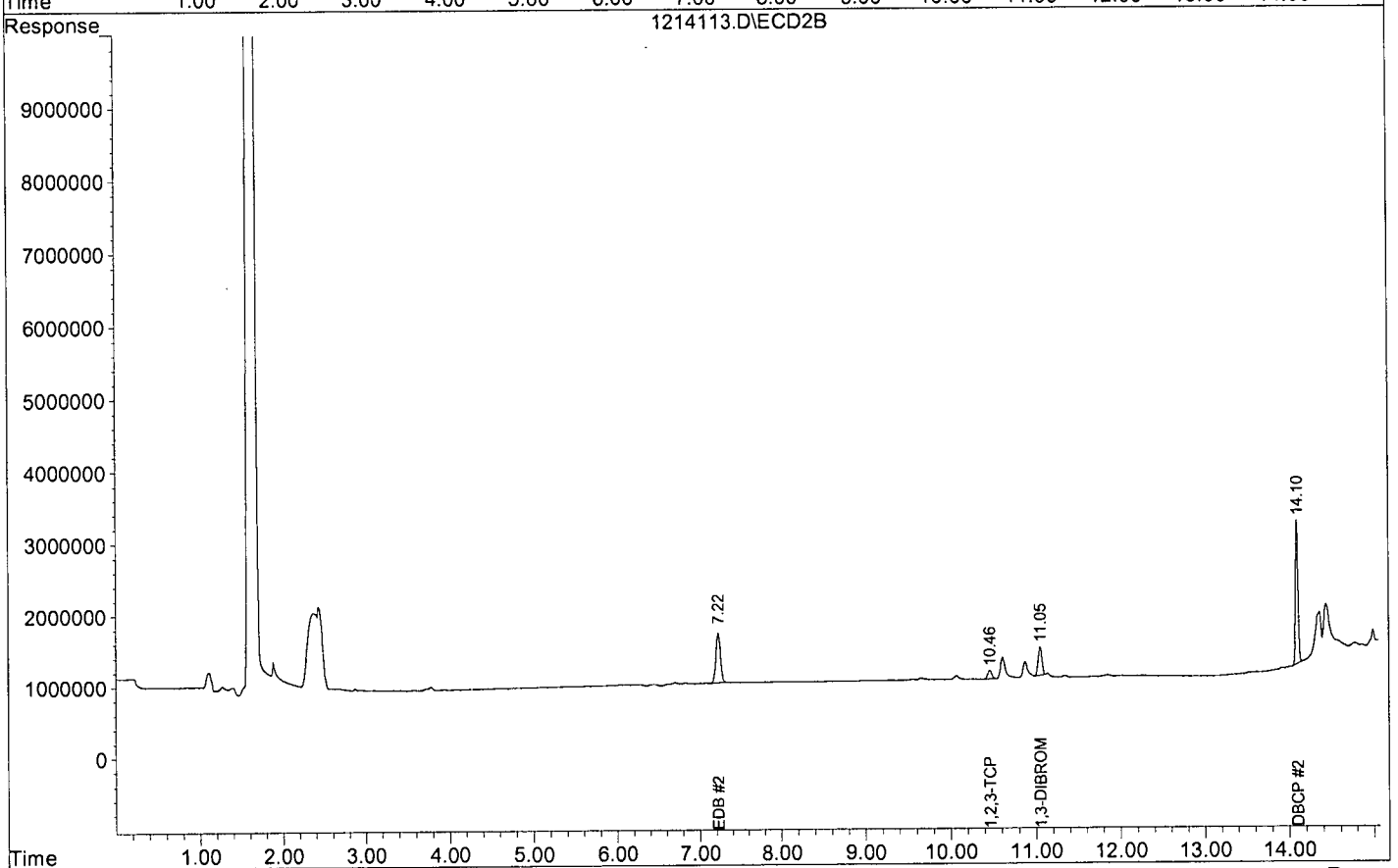
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214113.D
Acq On : 12-28-16 18:57:46
Sample : 8011 3 12/28/16
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111228.M

Vial: 13
Operator: RH
Inst : Herbie
Multiplr: 1.00





ORGANICS
Raw Data

APPL, INC.

Method Blank
EPA 8011

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161228W-48082 - 215078**
Batch ID: #8011-161228A1

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	EDB	0.020 U	0.02	0.020	0.010	ug/L	12/28/16	12/28/16
BLANK	SURROGATE: 1,3-DIBROMOPRO	79.7	70-132			%	12/28/16	12/28/16

Quant Method: 80111228.M
Run #: 1214098
Instrument: Herbie
Sequence: 161214
Initials: MA

GC SC-Blank-REG MDLs-DOD
Printed: 12/29/16 2:24:40 PM

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214098.D\ECD1A.CH Vial: 98
Signal #2 : G:\HERBIE\DATA\161214\1214098.D\ECD2B.CH
Acq On : 12-28-16 13:45:54 Operator: RH
Sample : 161228A BLK 2/34.51G Inst : Herbie
Misc : Multiplr: 1.01
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 28 16:55 2016 Quant Results File: 80111228.RES

Quant Method : G:\HERBIE\DATA\161214\80111228.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Dec 28 13:38:53 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

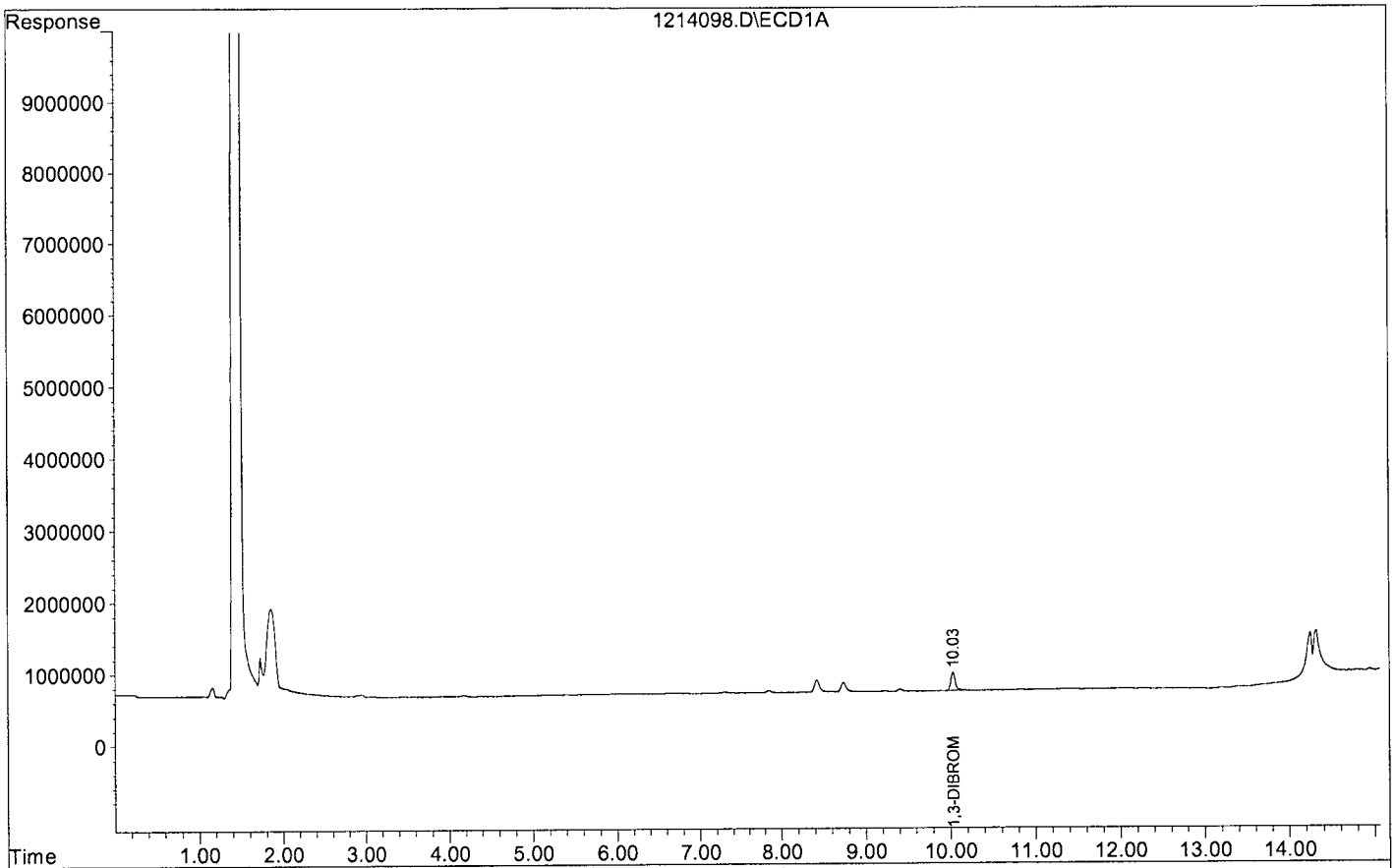
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	256674	429146	0.283	0.291
Spiked Amount	0.355			Recovery	=	79.73%	81.98%
	Target Compounds						
	Target Compounds						
1) TM	EDB	0.00	0.00	0	0	N.D. d	N.D. d
2) TM	1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4) TM	DBCP	0.00	0.00	0	0	N.D. d	N.D. d

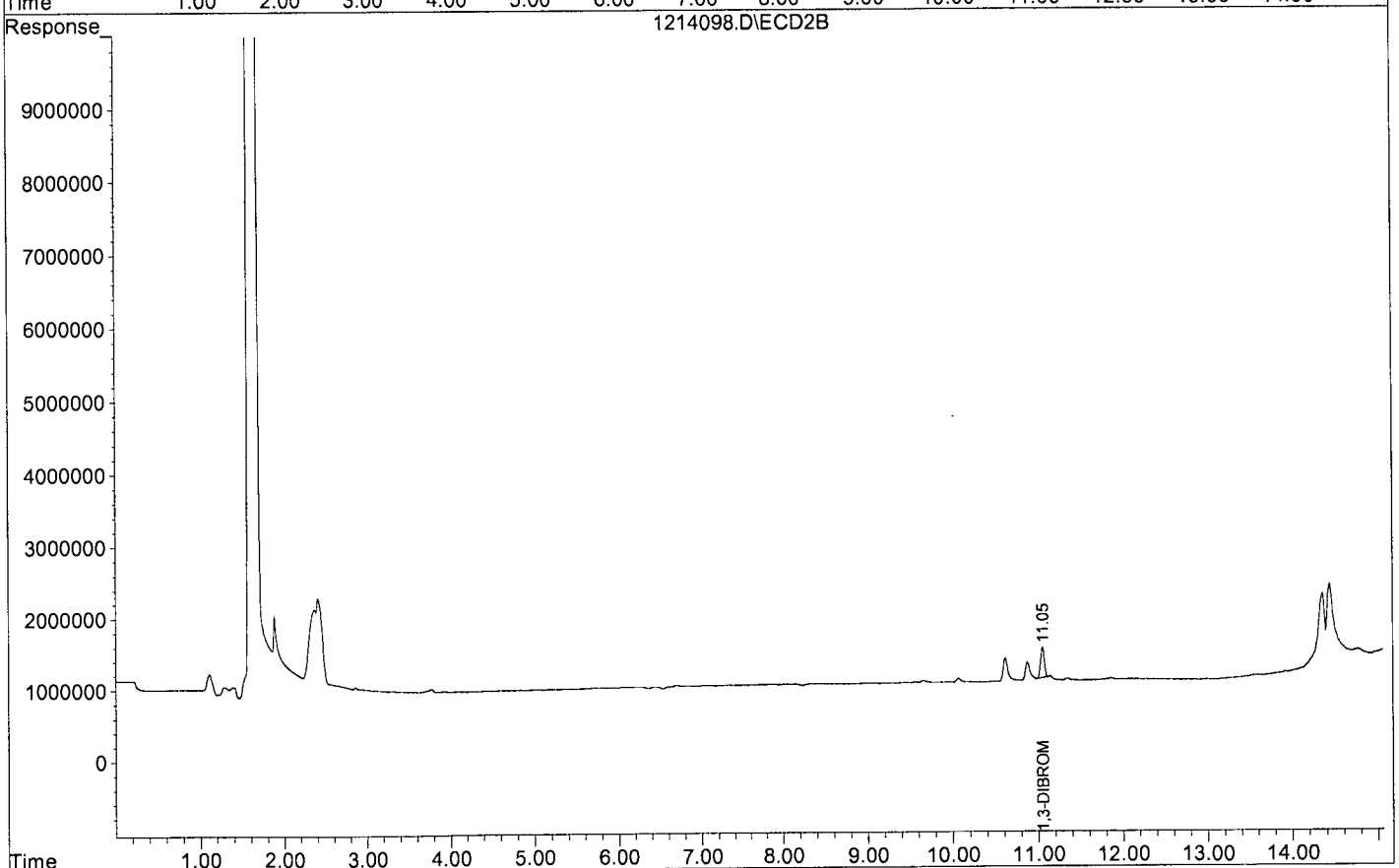
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\161214\1214098.D
Acq On : 12-28-16 13:45:54
Sample : 161228A BLK 2/34.51G
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111228.M

Vial: 98
Operator: RH
Inst : Herbie
Multiplr: 1.01





Laboratory Control Spike Recovery
EPA 8011

APPL ID: **161228W-48082 LCS - 215078**
Batch ID: #8011-161228A1

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
EDB	0.250	0.264	106	60-140
SURROGATE: 1,3-DIBROMOPROPANE (	0.350	0.258	73.7	70-132

Comments: _____

Primary	SPK
Quant Method :	80111228.M
Extraction Date :	12/28/16
Analysis Date :	12/28/16
Instrument :	Herbie
Run :	1214100
Initials :	MA

Printed: 12/29/16 2:24:41 PM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214100.D\ECD1A.CH Vial: 100
Signal #2 : G:\HERBIE\DATA\161214\1214100.D\ECD2B.CH
Acq On : 12-28-16 14:27:34 Operator: RH
Sample : 161228A LCS-2 2/35.60G Inst : Herbie
Misc : Multiplr: 0.98
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Dec 28 16:54 2016 Quant Results File: 80111228.RES

Quant Method : G:\HERBIE\DATA\161214\80111228.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Dec 28 13:38:53 2016
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	241659	390840	0.258	0.257
Spiked Amount	0.344			Recovery	=	74.98%	74.69%
	Target Compounds						
1) TM	EDB	5.77	7.22	316180	697430	0.264	0.259
2) TM	1,2,3-TCP	9.26	10.46	69805	122390	0.257	0.259
4) TM	DBCP	13.36	14.10	783085	2043340	0.243	0.247

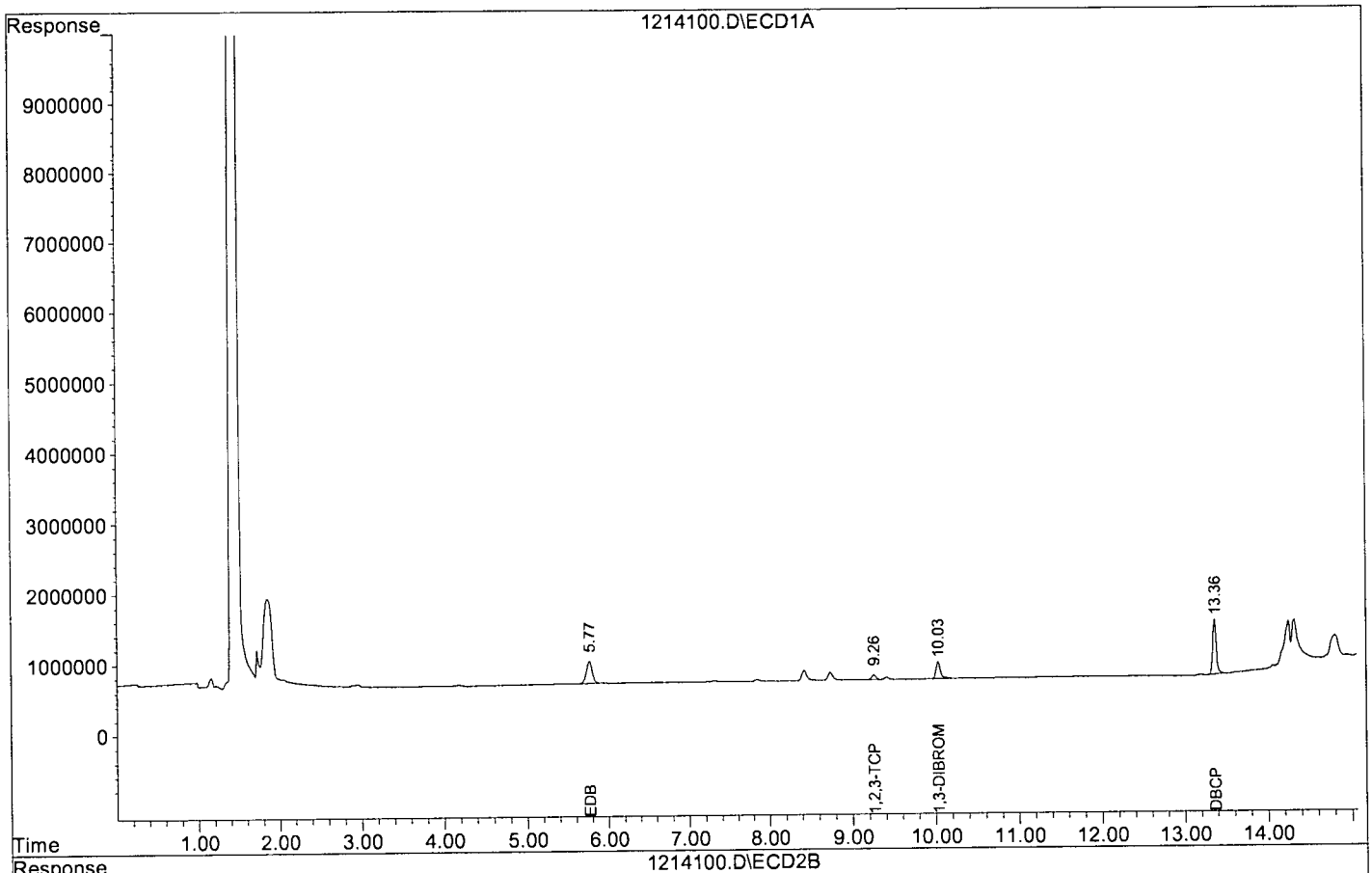
Target Compounds

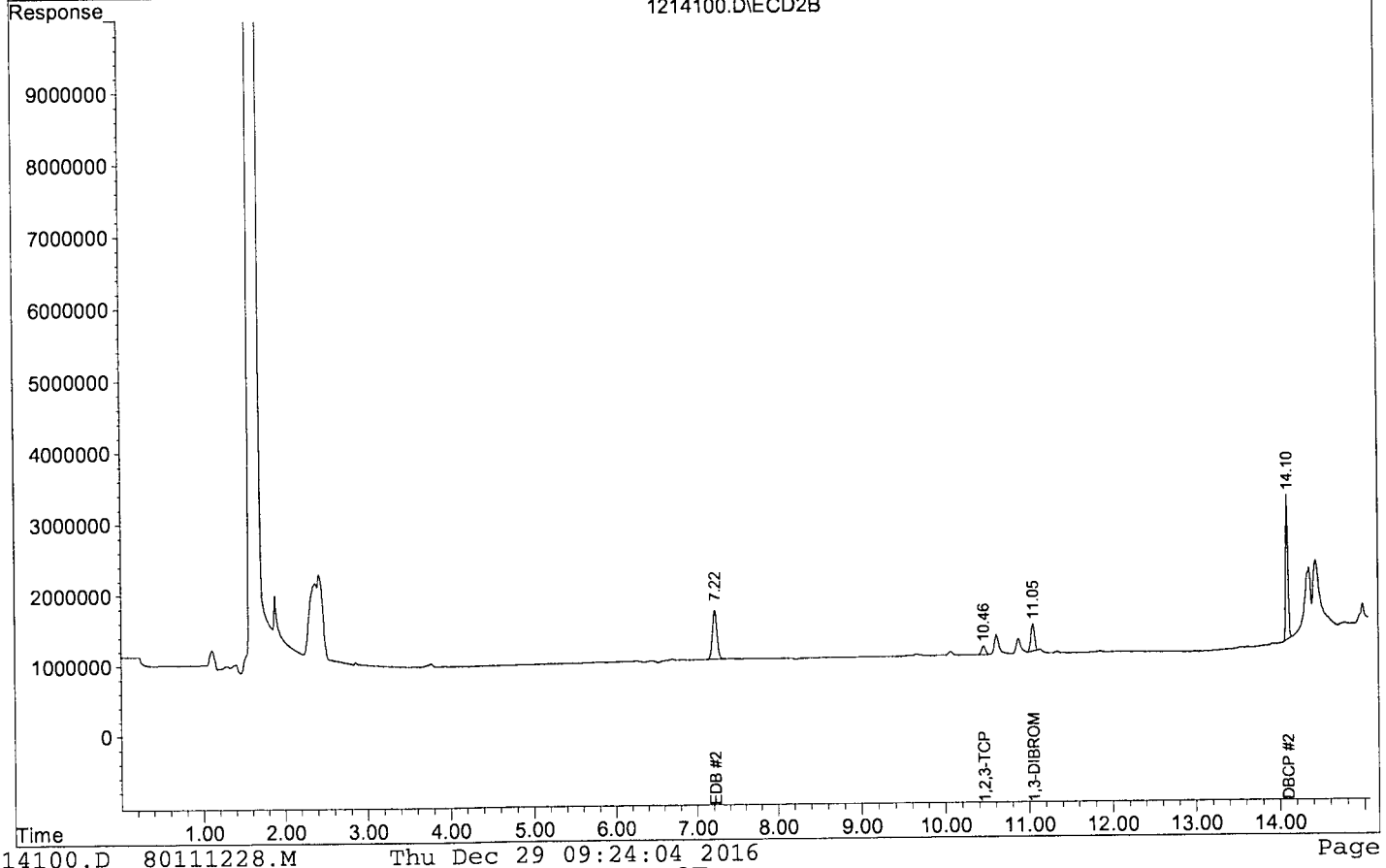
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214100.D
Acq On : 12-28-16 14:27:34
Sample : 161228A LCS-2 2/35.60G
Misc :
Quant Method : G:\HERBIE\DATA\161214\80111228.M

Vial: 100
Operator: RH
Inst : Herbie
Multiplr: 0.98





	504/8011 SS					
Prep:03/11/16-L.H. Ex: 12/30/16						
Compound	**Initial Conc.**	**Source**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
EDB	0.35ug/mL	504/8011 SPI	1000uL	10mL	0.035ug/mL	Methanol
TCP		prep. 12/30/15				021915C
DBCP		Exp: 12/30/16				

		504/8011 SS STOCK				
Prep: 12/30/15-L.H. Ex: 12/30/16						
Compound	**Initial Conc.**	**Source**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
EDB	200ug/mL	Absolute	44uL	25mL	0.35ug/mL	Methanol
TCP		CAT 30096				070913A
DBCP		Lot 010615-34593				
		open 12/30/15				
		exp 12/30/16				

	504/8011 M STD					
Prep: 12/19/16 Exp: 04/19/17 RH						
Compound	**Initial Conc.**	**Source**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
EDB	0.35ug/mL	/8011 M STD	1000uL	10mL	0.035ug/mL	Methanol
TCP		prep.12/08/16				021915C
DBCP		exp: 04/08/17				
1,3 DBP						

		504/8011 M STD					
Prep: 12/08/16 Exp: 04/08/17 RH							
Compound	**Initial Conc.**	**Source**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**	
EDB	0.35ug/mL	504/8011 M STD STK	1000uL	10mL	0.035ug/mL	Methanol	
TCP		prep.12/08/16				021915C	
DBCP		exp: 04/08/17					
1,3 DBP							

504/8011 M STD STOCK							
Prep: 12/08/16-R.H.		Ex: 04/08/17					
Compound	**Initial Conc.**	**Source**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**	
EDB	20ug/mL	504/DOHS STOCK	438uL	25mL	0.35ug/mL	Methanol	
TCP		prep. 06/07/16				021915C	
DBCP		exp: 06/07/17					
1,3 DBP	100ug/mL	1,3 DBP STOCK	88uL				
		prep.06/07/16					
		exp. 06/07/17					

	504/8011 SURROGATE					
Prep: 11/22/16-R.H. Ex: 12/30/16						
Compound	**Initial Conc.**	**Source**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
1,3 DBP	100	1,3 DBP STOCK	35ul	10mL	0.35ug/mL	Methanol
		prep.12/30/15				070913A
		exp. 12/30/16				

_MWE012

Organic Extraction Worksheet

Method	EPA Method 8011 DBCP/EDB	Extraction Set	161228A	Extraction Method	MWE012	Units	mL

Spiked ID 1	504.1 SS 3-11-16 exp 12-30-16		Surrogate ID 1	504.1 Surrogate 11-22-16 exp 12-30-16	
Spiked ID 2	504.1 M. STD 12-19-16 exp 4-8-17		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	12/28/16 8:35	
Spiked ID 8			Ext. End Time:	12/28/16 9:40	
			GC Requires Extract By:	12/29/16 0:00	

pH1			Water Bath Temp Criteria	
pH2				
pH3				

Spiked By: KY **Date** 12/28/16 **Witnessed By:** JR **Date** 12/28/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	161228A Blk				0.035	1 equip	34.51g	2	7	12/28/16 8:35	
2	161228A LCS-1		0.1	1	0.035	1 equip	35.55g	2	7	12/28/16 8:35	
3	161228A LCS-2		0.250	2	NA	NA equip	35.60g	2	7	12/28/16 8:35	
4	AZ48067	AZ48067W05			0.035	1 equip	34.45g	2	7	12/28/16 8:35	81839
5	AZ48068	AZ48068W04			0.035	1 equip	34.96g	2	7	12/28/16 8:35	81839
6	AZ48082	AZ48082W06			0.035	1 equip	34.91g	2	7	12/28/16 8:35	81842 1 WEEK
7	AZ48083	AZ48083W08			0.035	1 equip	34.67g	2	7	12/28/16 8:35	81842 1 WEEK
8	AZ48084	AZ48084W06			0.035	1 equip	34.82g	2	7	12/28/16 8:35	81842 1 WEEK
9	AZ48106	AZ48106W05			0.035	1 equip	34.85g	2	7	12/28/16 8:35	81850
10	M STD 1		0.020	2	NA	NA equip	35.52g	2	7	12/28/16 8:35	
11	M STD 2		0.1	2	NA	NA equip	35.61g	2	7	12/28/16 8:35	
12	M STD 3		0.250	2	NA	NA equip	35.61g	2	7	12/28/16 8:35	
13	M STD 4		0.5	2	NA	NA equip	35.67g	2	7	12/28/16 8:35	
14	M STD 5		0.750	2	NA	NA equip	35.50g	2	7	12/28/16 8:35	
15	M STD 6		1	2	NA	NA equip	35.25g	2	7	12/28/16 8:35	

J.R. 12/28/16

Solvent and Lot#	
NaCL	16B100011
Sod. Thiosulfate	16C255214
GC2 Hexane	DN636

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	RH
Date	12/28/16
Time	10:30
Refrigerator	Hobert

	Technician's Initials
Scanned By	KY
Sample Preparation	KY
Extraction	KY
Concentration	----------

Modified	12/28/16 9:52:45 AM

Reviewed By: J.R. **Date** 12/28/16

12/28/16 9:54:46 AM Ext_ID 73 53649

Injection Log

Directory: G:\HERBIE\DATA\161214\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	91	1214091.D	1	8011 1 12/28/16		12-28-16 11:20:36
2	92	1214092.D	1	8011 2 12/28/16		12-28-16 11:41:14
3	93	1214093.D	1	8011 3 12/28/16		12-28-16 12:02:03
4	94	1214094.D	1	8011 4 12/28/16		12-28-16 12:22:48
5	95	1214095.D	1	8011 5 12/28/16		12-28-16 12:43:32
6	98	1214098.D	1.0142	161228A BLK 2/34.51G		12-28-16 13:45:54
7	99	1214099.D	0.98453	161228A LCS-1 2/35.55G		12-28-16 14:06:47
8	100	1214100.D	0.98315	161228A LCS-2 2/35.60G		12-28-16 14:27:34
9	3	1214103.D	1.00258	AZ48082W06 2/34.91G		12-28-16 15:29:58
10	4	1214104.D	1.00952	AZ48083W08 2/34.67G		12-28-16 15:50:42
11	5	1214105.D	1.00517	AZ48084W06 2/34.82G		12-28-16 16:11:34
12	13	1214113.D	1	8011 3 12/28/16		12-28-16 18:57:46

ORGANICS

APPL, INC.

ORGANICS
QC Summary

APPL, INC.

Method Blank

EPA 8015B TPH WATER

Blank Name/QCG: **161227W-48083 - 215137**
Batch ID: #DOC53-161227A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	12/27/16	12/29/16
BLANK	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	12/27/16	12/29/16
BLANK	SURROGATE: OCTACOSANE (S)	100	60-142			%	12/27/16	12/29/16
BLANK	SURROGATE: ORTHO-TERPHEN	78.9	56-125			%	12/27/16	12/29/16

Quant Method:DOC1103.M
Run #:1229018
Instrument:Apollo
Sequence:161229
Initials:DPO

GC SC-Blank-REG MDLs-DOD
Printed: 01/03/17 9:00:47 AM

Laboratory Control Spike Recovery

EPA 8015B TPH WATER

APPL ID: **161227W-48083 LCS - 215137**
Batch ID: #DOC53-161227A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
DIESEL (C10-C24)	1330	940	70.5	36-132
OIL (C24-C40)	1330	1160	87.0	41-113
SURROGATE: OCTACOSANE (S)	40.0	37.3	93.3	60-142
SURROGATE: ORTHO-TERPHENYL (S)	40.0	36.3	90.8	56-125

Comments: _____

Primary	SPK
Quant Method :	DOC1103.M
Extraction Date :	12/27/16
Analysis Date :	12/29/16
Instrument :	Apollo
Run :	1229019
Initials :	DPO

Printed: 01/03/17 9:00:40 AM
APPL Standard LCS

EPA 8015B-eLL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc.
Case No: 81842
Matrix: WATER

SDG No: 81842
Date Analyzed: 12/29/16
Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: OCTACOSANE (S)			SURROGATE: ORTHO-TERPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161227A-BLK	Blank	60-142	100		56-125	78.9	
161227A-LCS	Lab Control Spike	60-142	93.3		56-125	90.8	
AZ48083	ERH157	60-142	90.1		56-125	70.3	
AZ48084	ERH158	60-142	96.4		56-125	73.2	

Comments: Batch: #DOC53-161227A

EPA 8015B-eL

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81842

Case No: 81842 Date Analyzed: 12/29/16

Matrix: WATER Instrument: Apollo

Blank ID: 161227A-BLK Time Analyzed: 1800

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161227A-BLK	Blank	1229018	12/29/16 1800
161227A-LCS	Lab Control Spike	1229019	12/29/16 1820
AZ48083	ERH157	1229023	12/29/16 1941
AZ48084	ERH158	1229024	12/29/16 2001

Comments: Batch: #DOC53-161227A

Printed: 01/03/17 9:00:38 AM
Form 4, Blank Summary

ORGANICS
Sample Data

APPL, INC.

EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH157
Sample Collection Date: 12/21/16

ARF: 81842
APPL ID: AZ48083
QCG: #DOC53-161227A-215137

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	12/27/16	12/29/16
EPA 8015B-eL	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	12/27/16	12/29/16
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	90.1	60-142			%	12/27/16	12/29/16
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	70.3	56-125			%	12/27/16	12/29/16

Quant Method: DOC1103.M
Run #: 1229023
Instrument: Apollo
Sequence: 161229
Dilution Factor: 1
Initials: DPO

Printed: 01/03/17 9:00:36 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161229\1229023.D Vial: 23
Acq On : 12-29-16 19:41:28 Operator: DP
Sample : AZ48083W16 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Jan 3 8:57 2017 Quant Results File: DOC1103.RES

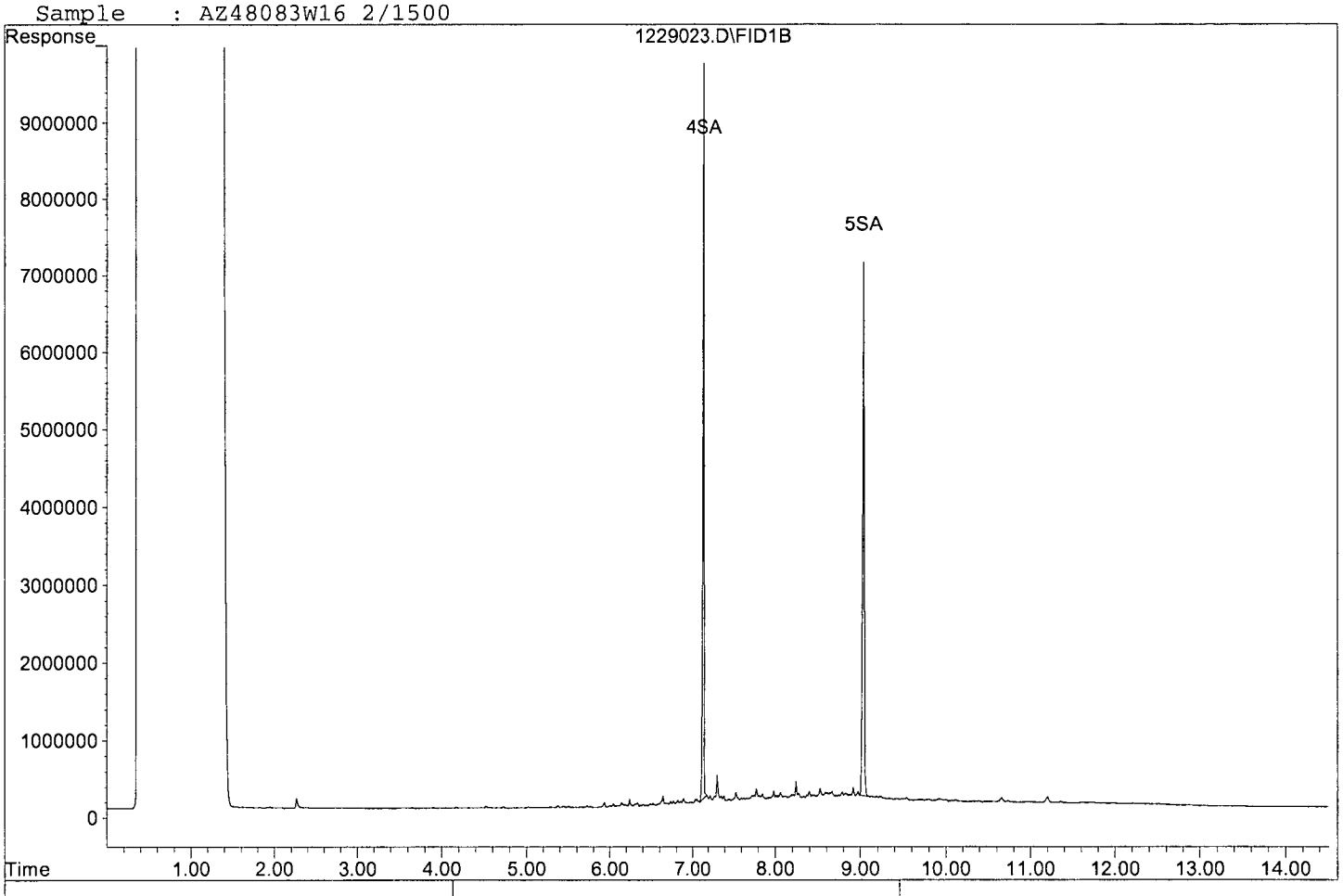
Method : G:\APOLLO\DATA\161229\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Wed Dec 21 09:13:41 2016
Response via : Multiple Level Calibration

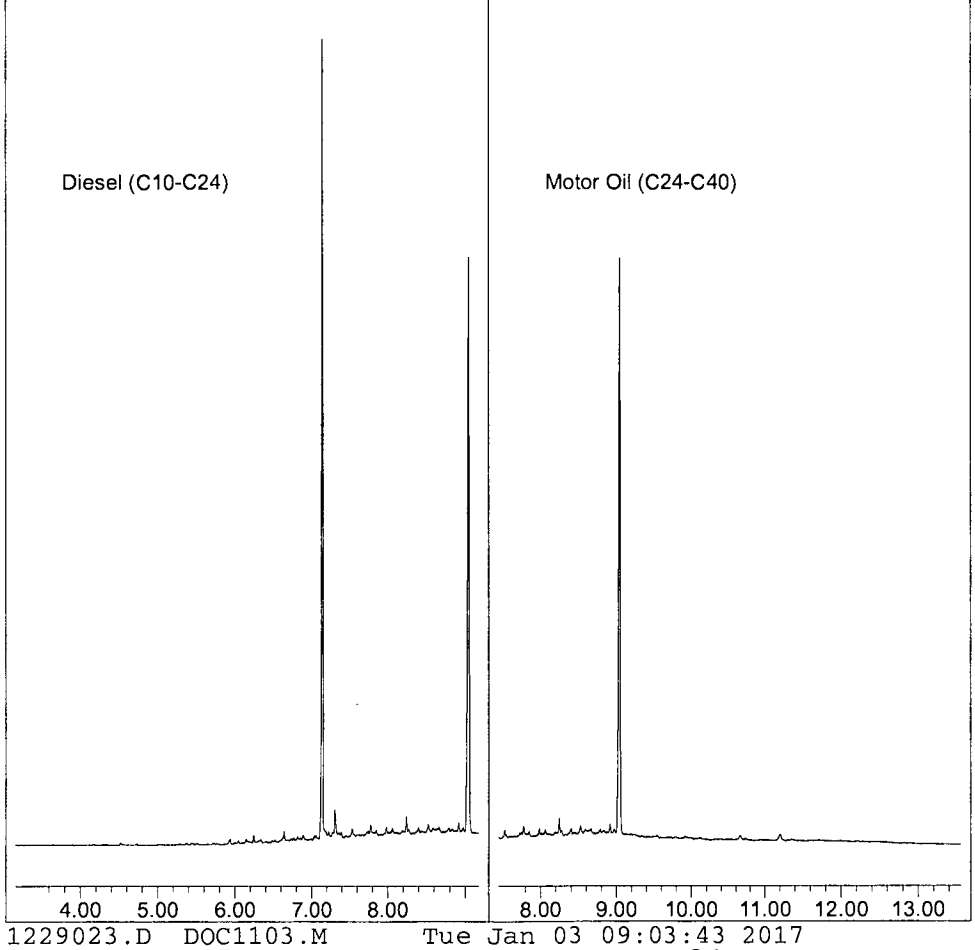
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.14	98306440	28.101 ppb
Surrogate Spike 40.000		Recovery =	70.25%
5) SA Octacosane(S)	9.04	94549605	36.022 ppb
Surrogate Spike 40.000		Recovery =	90.05%
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161229\1229023.D
Sample : AZ48083W16 2/1500





EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH158
Sample Collection Date: 12/21/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81842
APPL ID: AZ48084
QCG: #DOC53-161227A-215137

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	63 ++	40.0	25.00	13.07	ug/L	12/27/16	12/29/16
EPA 8015B-eL	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	12/27/16	12/29/16
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	96.4	60-142			%	12/27/16	12/29/16
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	73.2	56-125			%	12/27/16	12/29/16

++(T6) The analyst has noted that the chromatogram of this sample is mainly a match to hydrocarbons within the range of diesel fuel.

Quant Method: DOC1103.M
Run #: 1229024
Instrument: Apollo
Sequence: 161229
Dilution Factor: 1
Initials: DPO

Printed: 01/03/17 9:00:36 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161229\1229024.D Vial: 24
Acq On : 12-29-16 20:01:44 Operator: DP
Sample : AZ48084W10 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Jan 3 8:57 2017 Quant Results File: DOC1103.RES

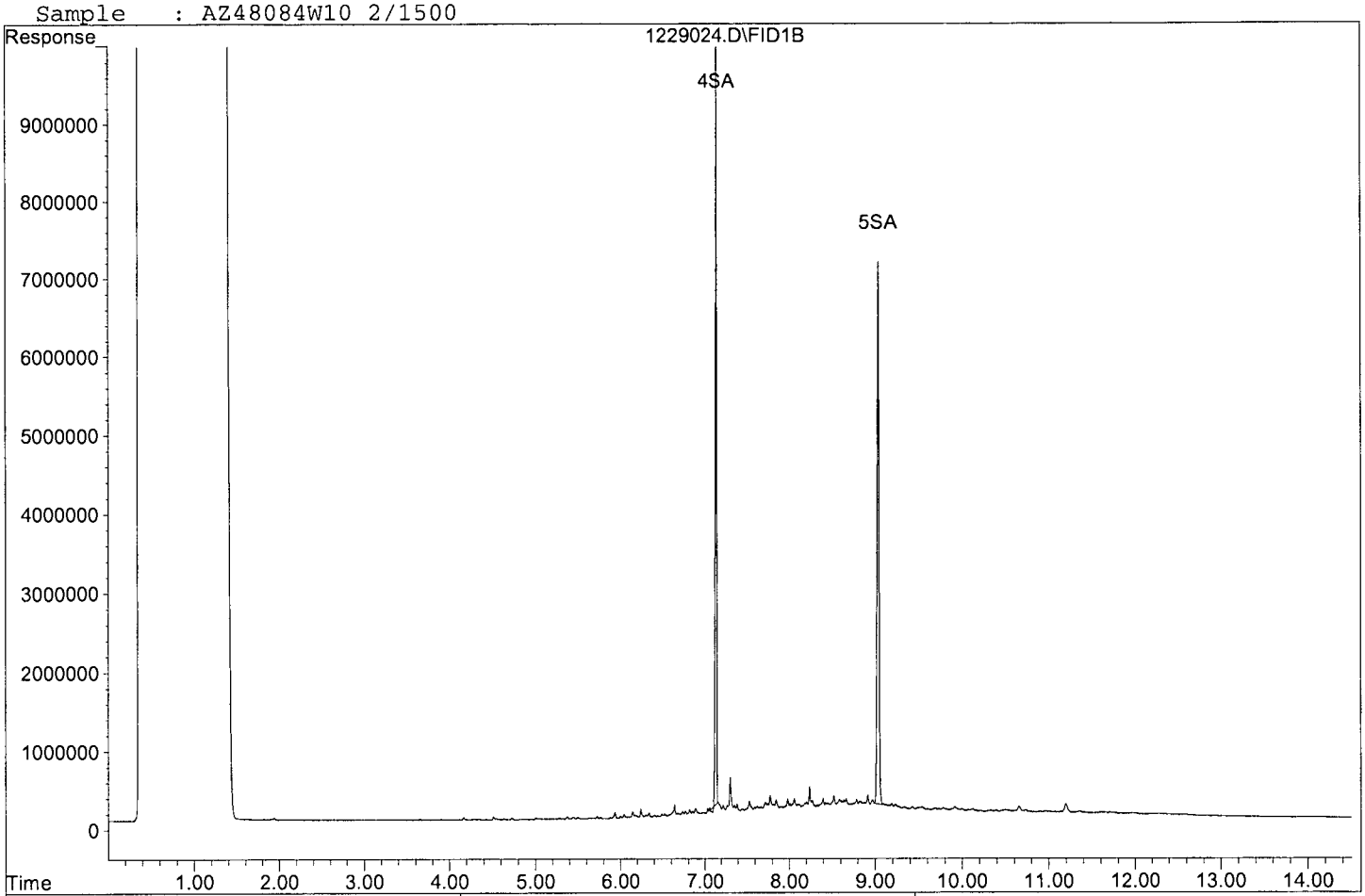
Method : G:\APOLLO\DATA\161229\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Wed Dec 21 09:13:41 2016
Response via : Multiple Level Calibration

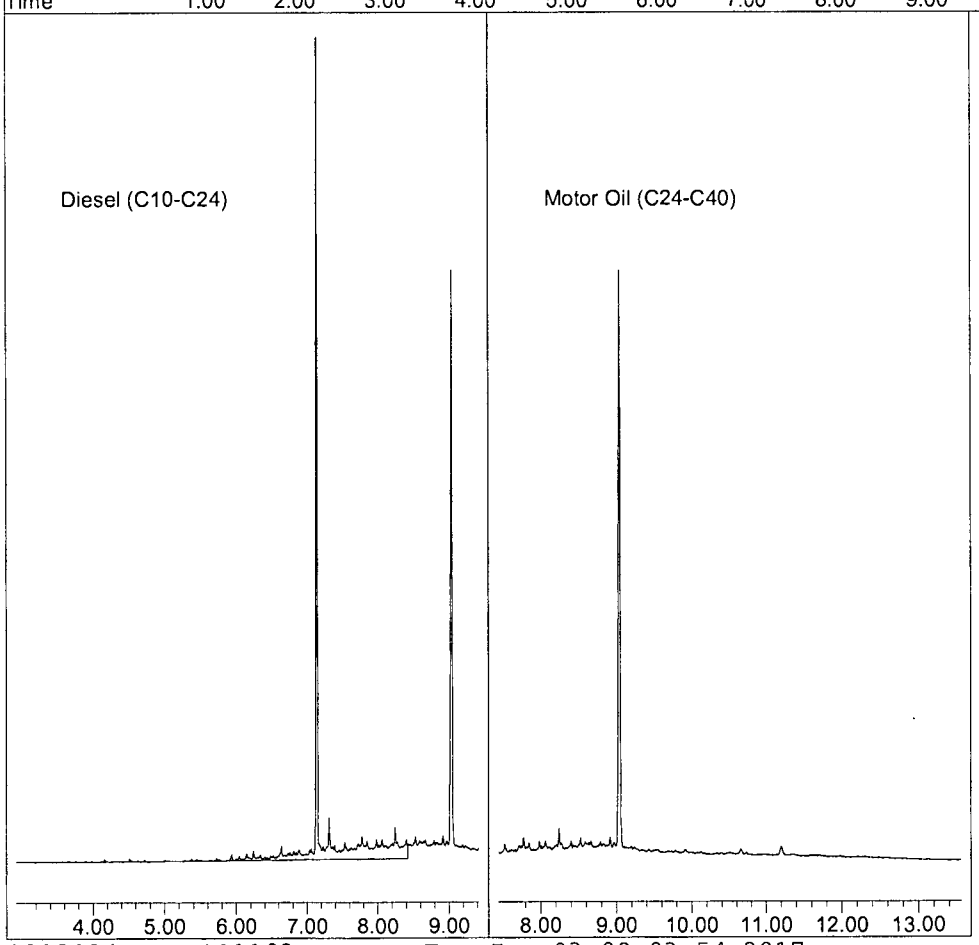
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.14	102402175	29.272 ppb
Surrogate Spike 40.000		Recovery =	73.18%
5) SA Octacosane(S)	9.04	101152315	38.538 ppb
Surrogate Spike 40.000		Recovery =	96.35%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	162234782	62.622 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161229\1229024.D
Sample : AZ48084W10 2/1500





ORGANICS
Calibration Data

APPL, INC.

TPH Extractables
DOC1103

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:
Diesel: 1103004.D 1103011 D 1103006.D 1103007.D 1103008.D 1103009.D
Motor Oil: 1028002.D 1028003.D 1028004.D 1028005.D 1028006.D 1028007.D

SDG No:
Initial Cal. Date: 11/03/16
Instrument: Apollo

Initials:

		Compound	1	2	3	4	5	6					Avg	%RSD		
1	HATM	Diesel (C10-C24)	1713970	2056602	1625582	1697733	1643335	1625559					1727130	9.6	HATM	
2	HBTM	Motor Oil (C24-C40)	1562690	1603769	1282978	1340015	1321969	1245819					1392873	11	HBTM	
3	SC	Decanoic Acid(S)	436509	643644	711658	659596	590571	627574					611592	15	SC	
4	SA	Ortho-Terphenyl(S)		2687660	2255130	2296757	2215766	2205848					2332232	8.7	SA	
5	SA	Octacosane(S)	1736016	2067699	1697441	1704564	1657038	1636278					1749839	9.1	SA	
6																
7																
8																
9																
10																
11																
12																
13																
14																
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1.5347542

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161103\1103004.D Vial: 4
Acq On : 11-3-16 9:45:14 Operator: DP
Sample : DIESEL 10ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

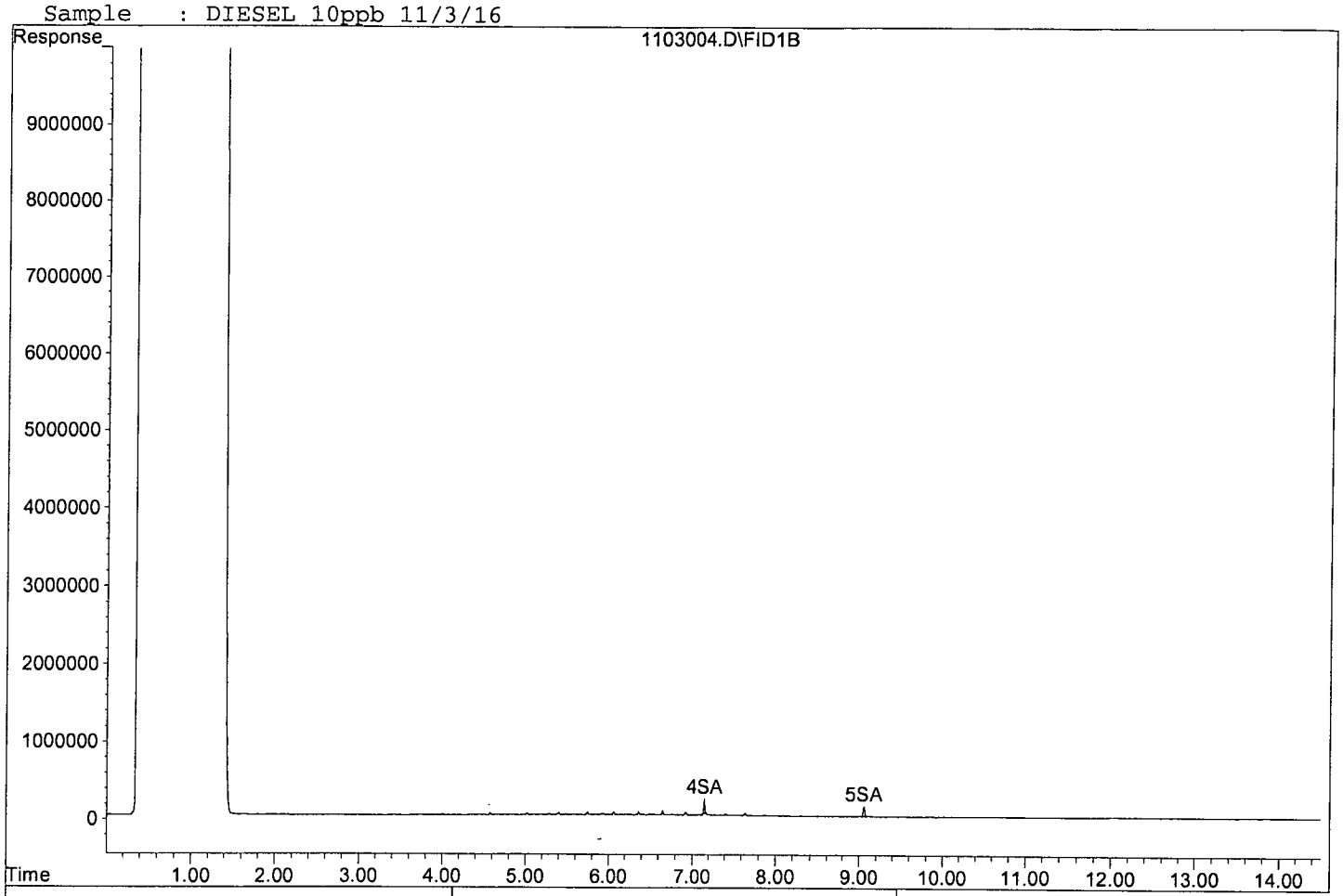
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

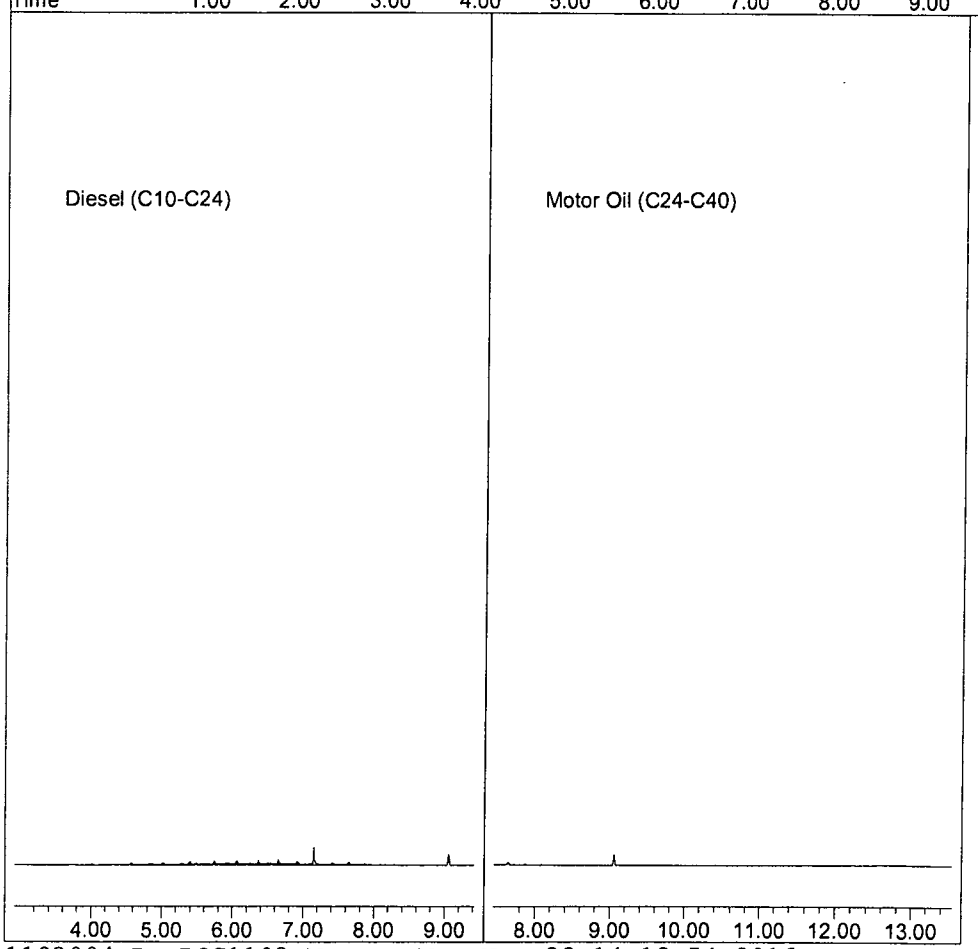
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.15	1320666	0.233 ppb
Surrogate Spike 30.000	Recovery	=	0.78%
5) SA Octacosane(S)	9.06	1736016	0.492 ppb
Surrogate Spike 30.000	Recovery	=	1.64%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	34279391	10.218 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103004.D
Sample : DIESEL 10ppb 11/3/16





1103004.D DOC1103.M Mon Nov 28 14:18:54 2016

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161103\1103011.D Vial: 11
Acq On : 11-3-16 12:56:47 Operator: DP
Sample : DIESEL 100ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

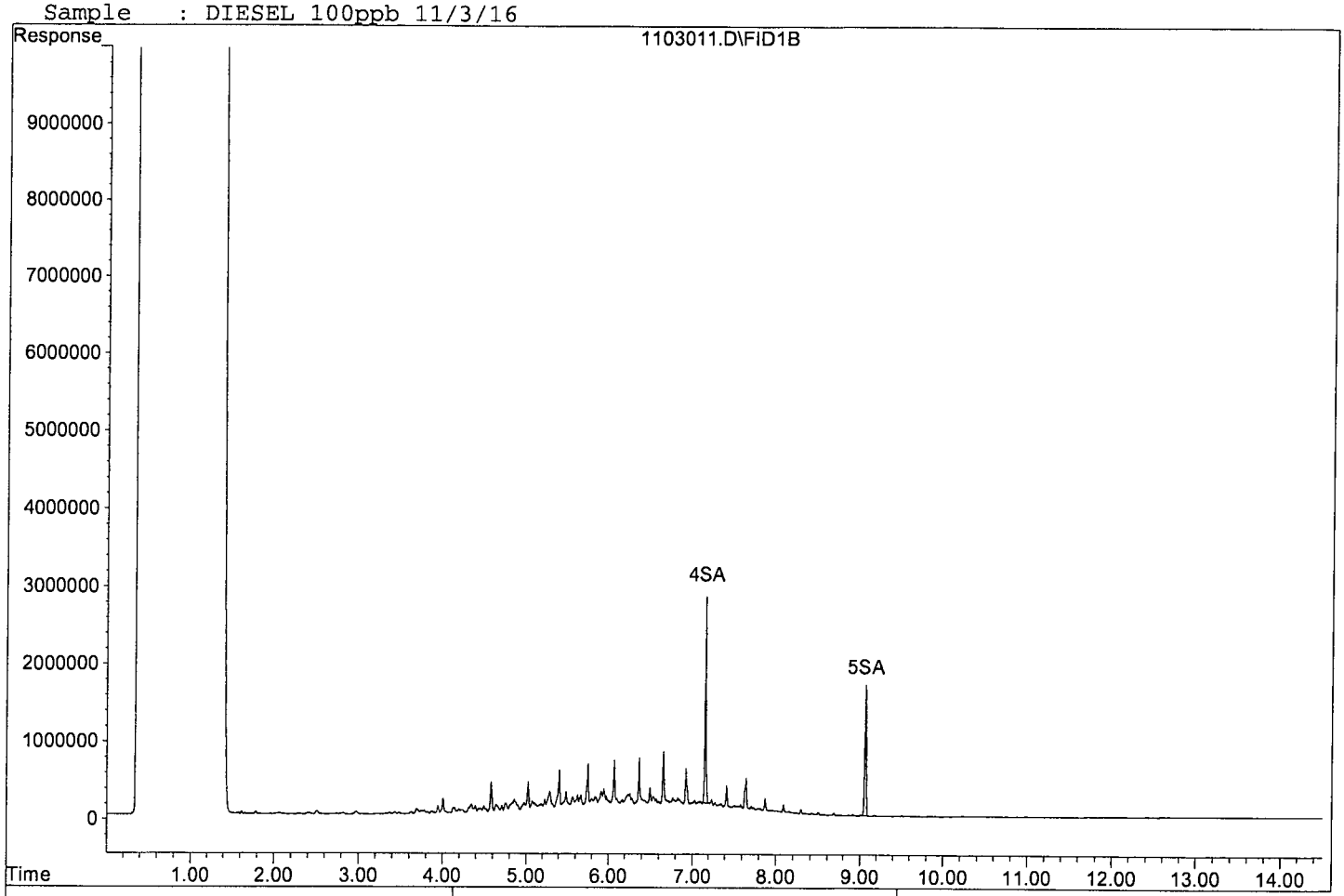
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

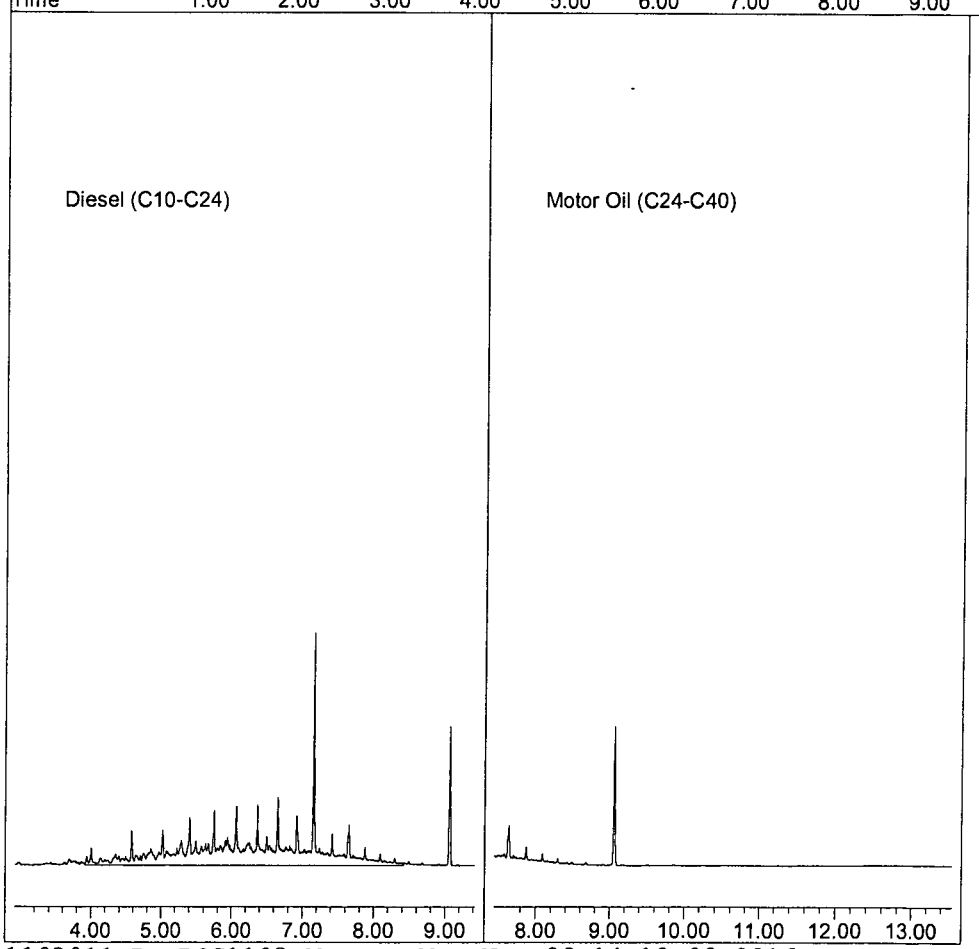
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.16	26876603	4.740 ppb
Surrogate Spike 30.000	Recovery =		15.80%
5) SA Octacosane(S)	9.06	20676993	5.864 ppb
Surrogate Spike 30.000	Recovery =		19.55%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	411320381	122.610 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103011.D
Sample : DIESEL 100ppb 11/3/16





1103011.D DOC1103.M Mon Nov 28 14:19:09 2016

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103006.D Vial: 6
Acq On : 11-3-16 10:26:16 Operator: DP
Sample : DIESEL 400ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

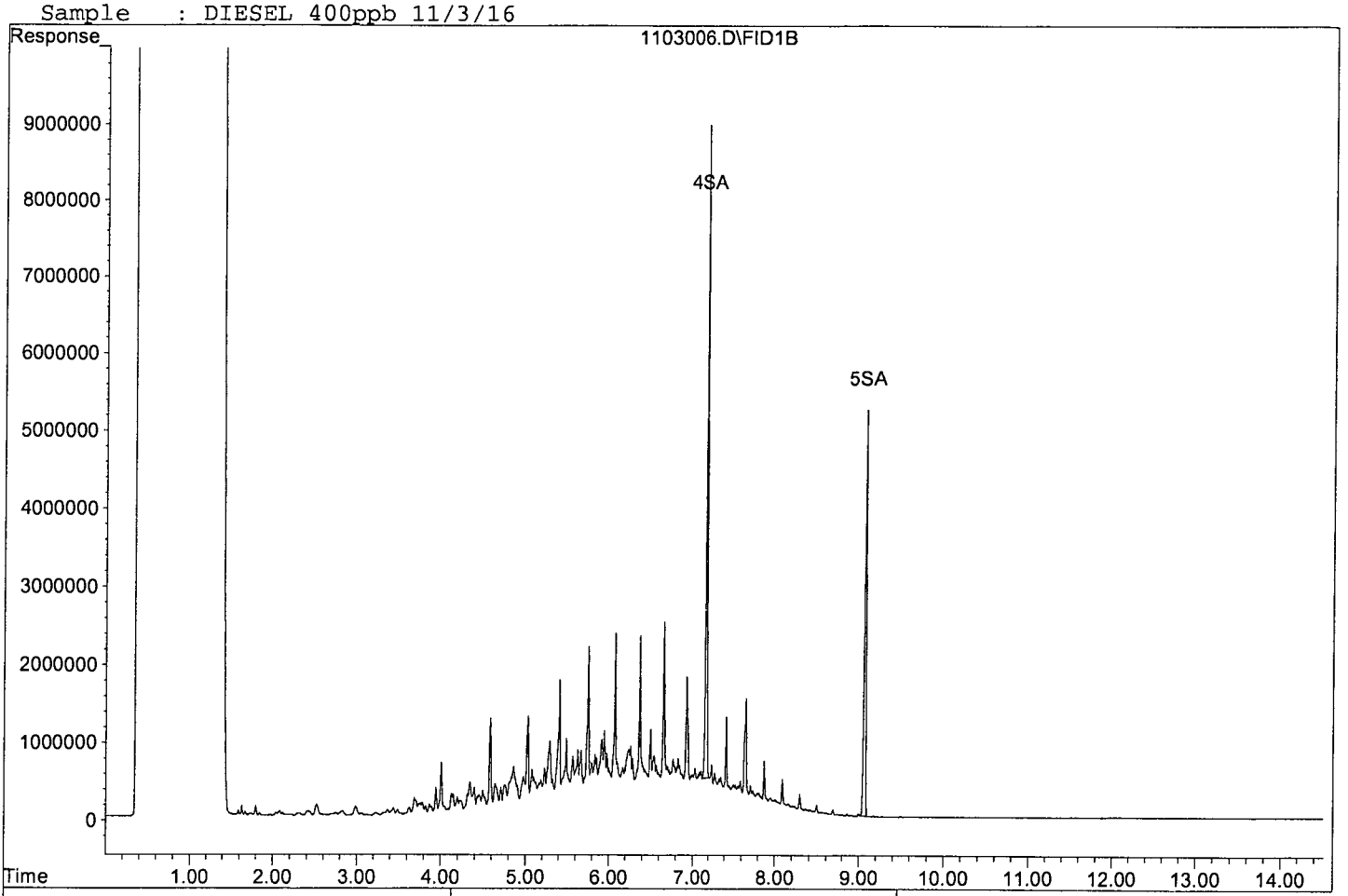
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

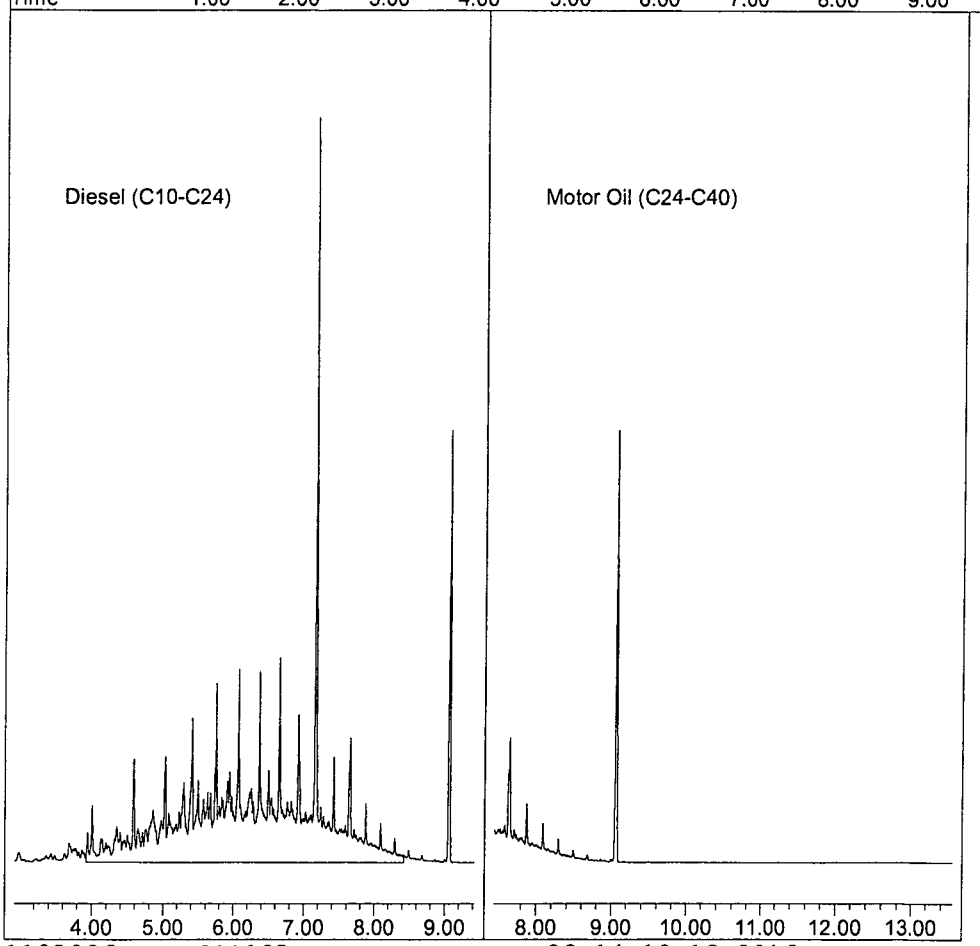
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.16	90205209	15.909 ppb
Surrogate Spike 30.000	Recovery =		53.03%
5) SA Octacosane(S)	9.07	67897660	19.256 ppb
Surrogate Spike 30.000	Recovery =		64.19%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	1300465223	387.653 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103006.D
Sample : DIESEL 400ppb 11/3/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103007.D Vial: 7
Acq On : 11-3-16 10:46:56 Operator: DP
Sample : DIESEL 600ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

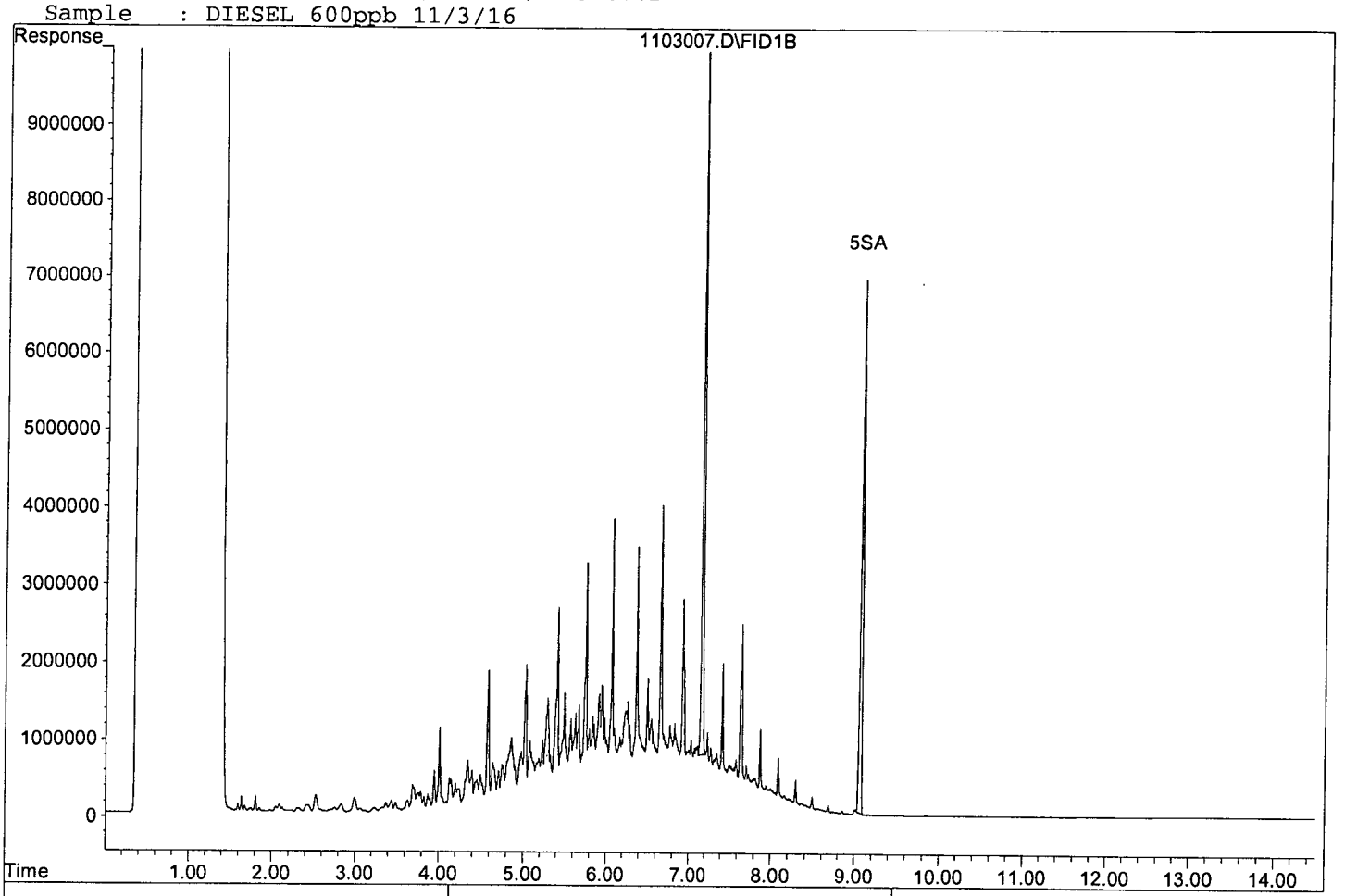
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

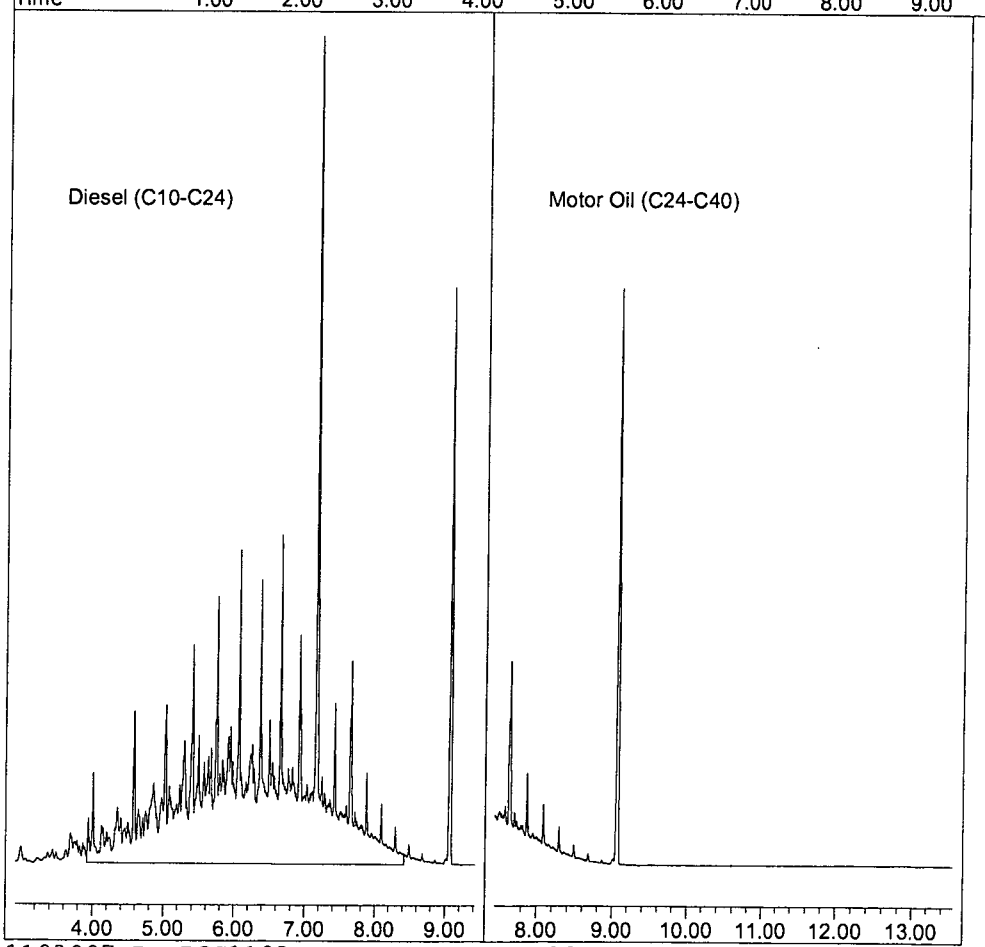
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.17	137805437	24.304 ppb
Surrogate Spike 30.000	Recovery =		81.01%
5) SA Octacosane(S)	9.07	102273844	29.005 ppb
Surrogate Spike 30.000	Recovery =		96.68%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	2037280173	607.288 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103007.D
Sample : DIESEL 600ppb 11/3/16





1103007.D DOC1103.M Mon Nov 28 14:19:24 2016

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103008.D Vial: 8
Acq On : 11-3-16 11:07:39 Operator: DP
Sample : DIESEL 800ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

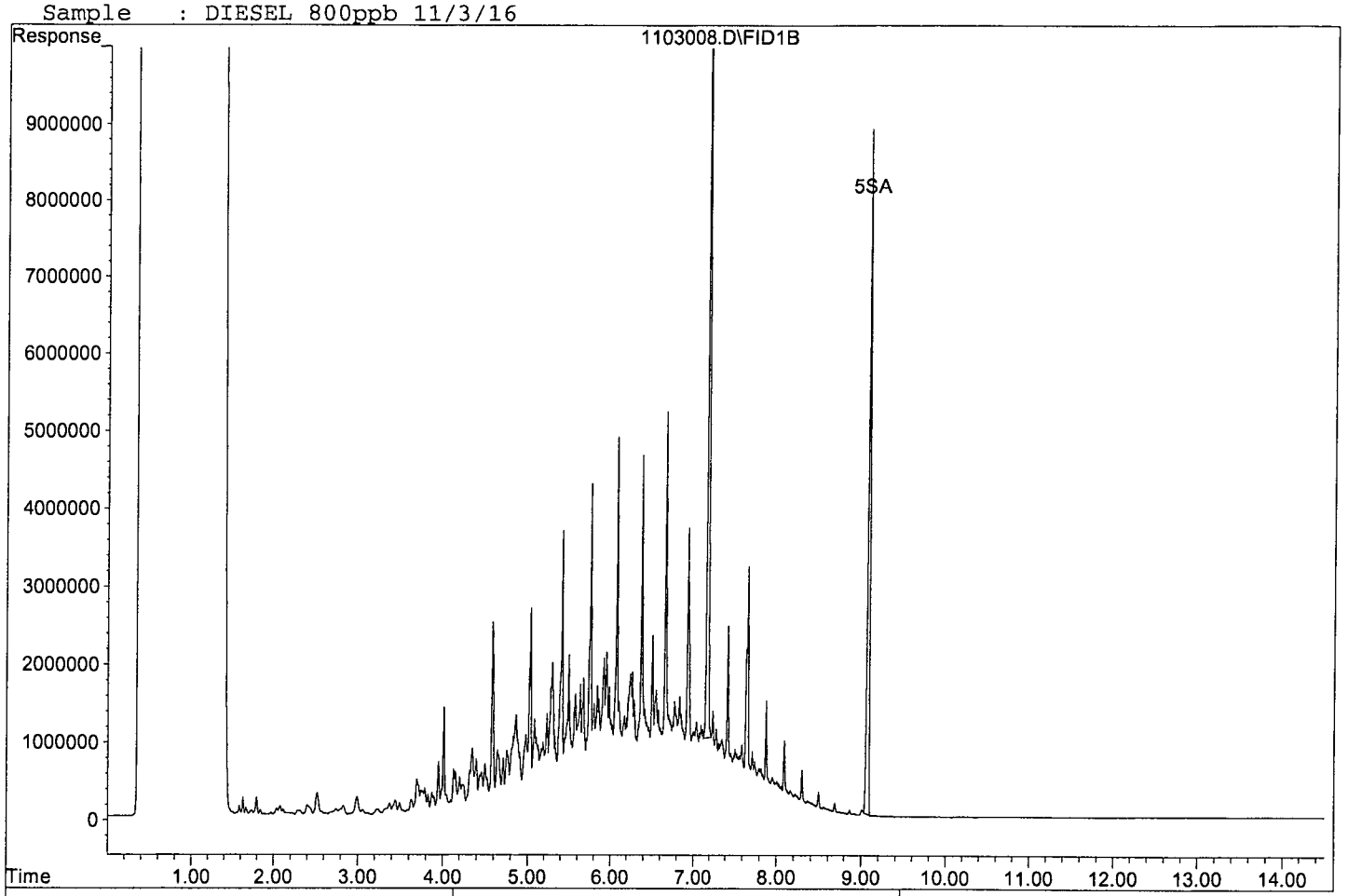
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

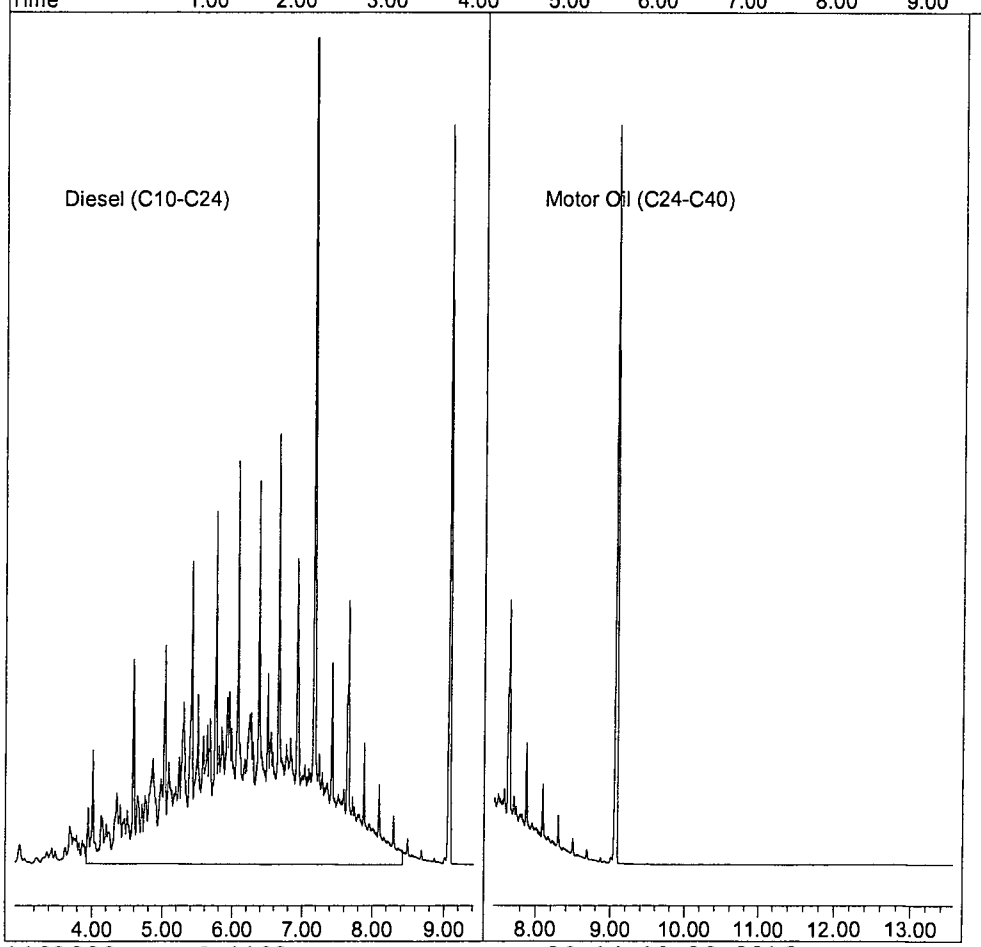
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.17	177261246	31.263 ppb
Surrogate Spike 30.000		Recovery =	104.21%
5) SA Octacosane(S)	9.08	132563050	37.596 ppb
Surrogate Spike 30.000		Recovery =	125.32%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	2629335633	783.773 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161103\1103008.D
Sample : DIESEL 800ppb 11/3/16





1103008.D DOC1103.M Mon Nov 28 14:19:30 2016

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103009.D Vial: 9
Acq On : 11-3-16 11:28:31 Operator: DP
Sample : DIESEL 1000ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

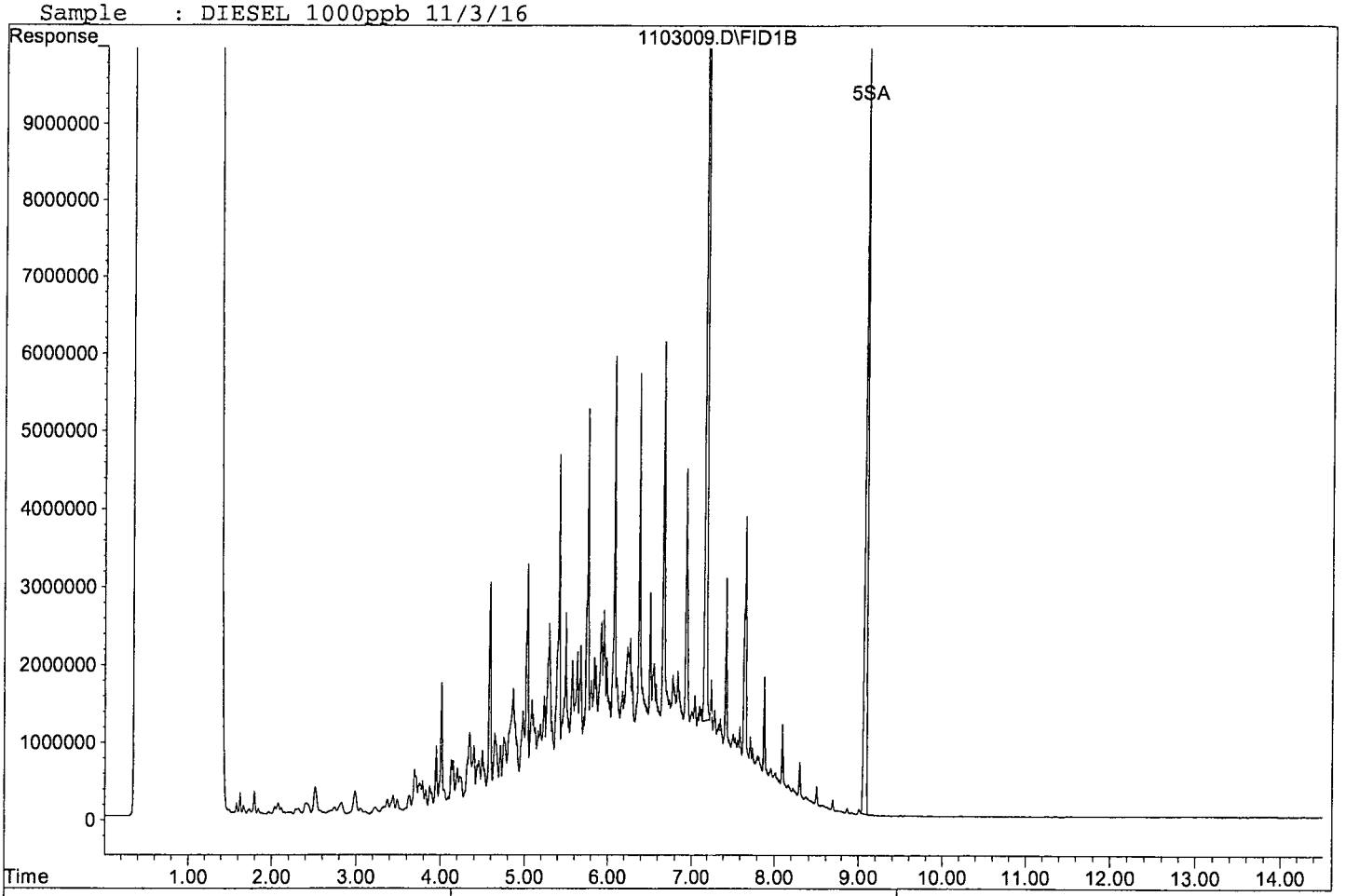
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

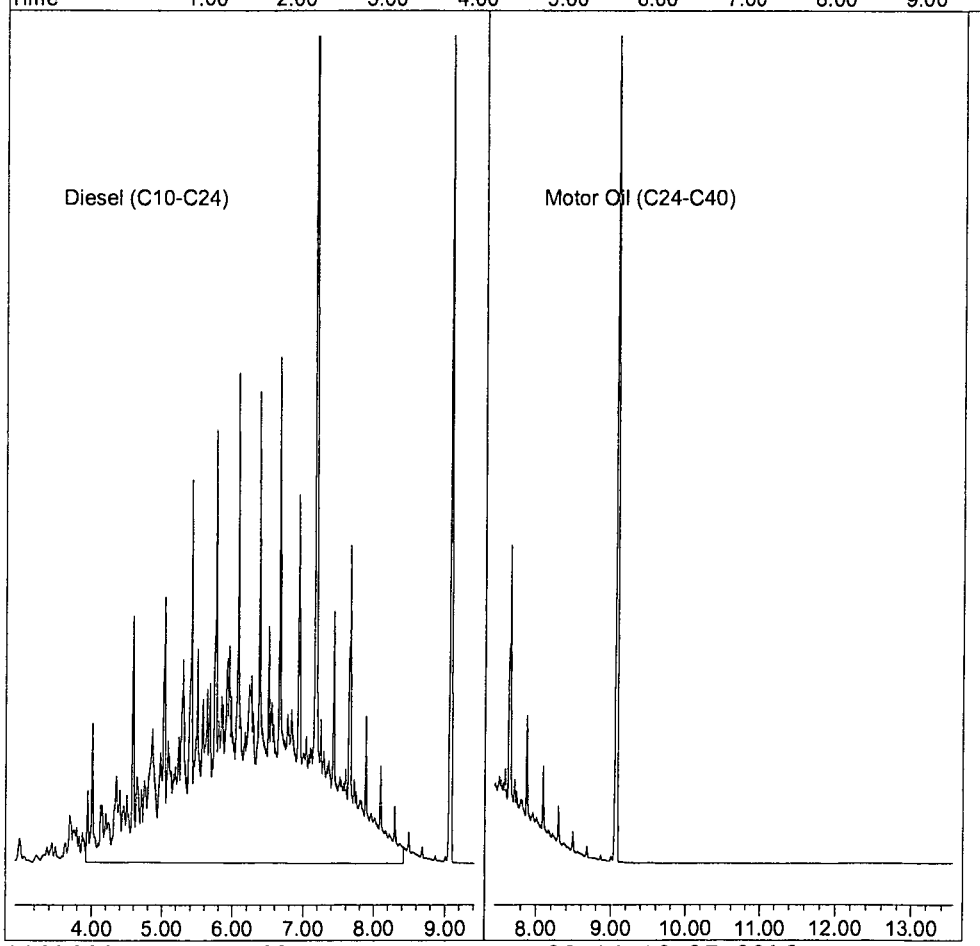
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.18	220584770	38.903 ppb
Surrogate Spike 30.000		Recovery =	129.68%
5) SA Octacosane(S)	9.08	163627822	46.406 ppb
Surrogate Spike 30.000		Recovery =	154.69%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	3251118324	969.119 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161103\1103009.D
Sample : DIESEL 1000ppb 11/3/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028002.D Vial: 2
Acq On : 10-28-16 9:07:30 Operator: DP
Sample : MO 20ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:24 2016 Quant Results File: DOC1103.RES

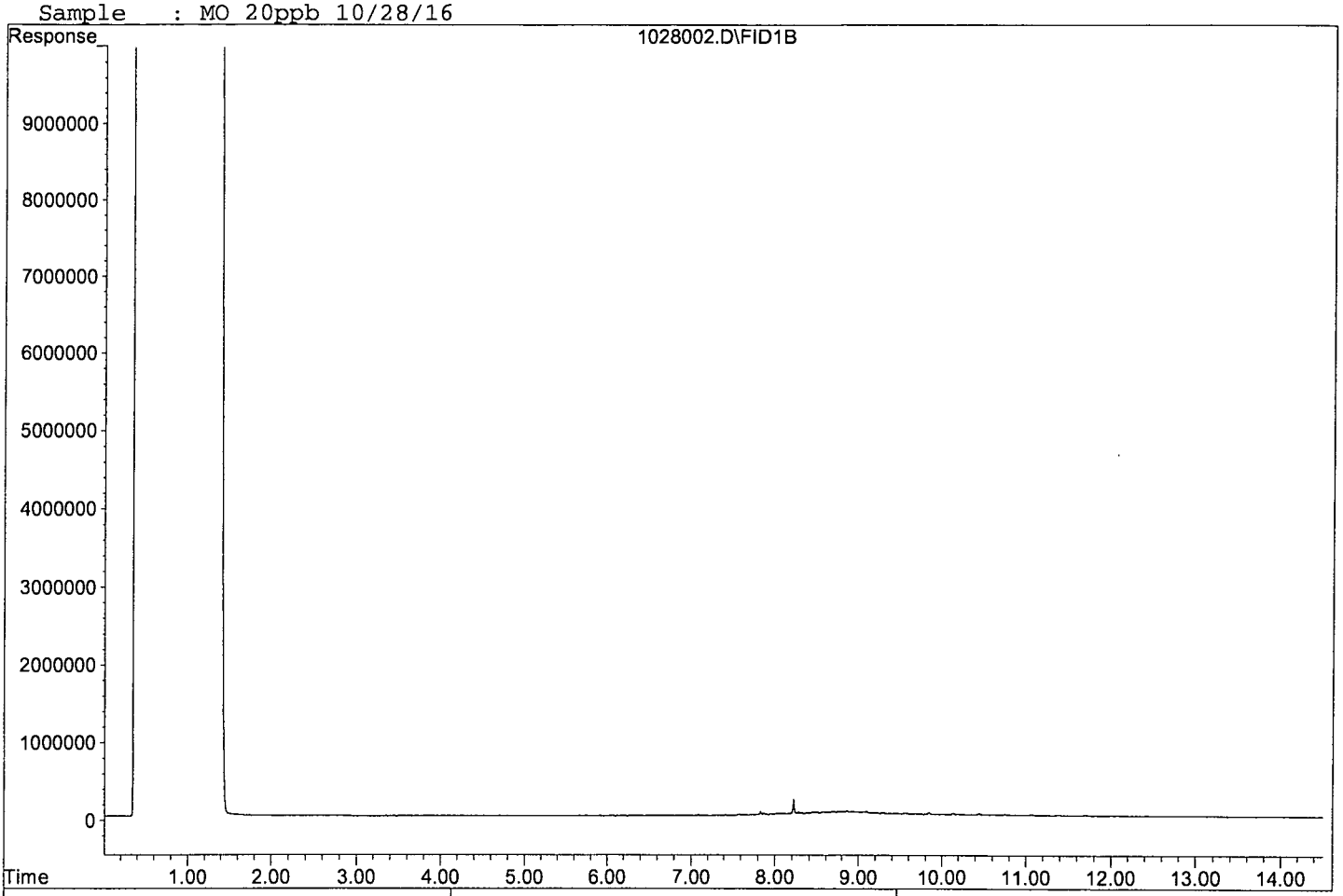
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

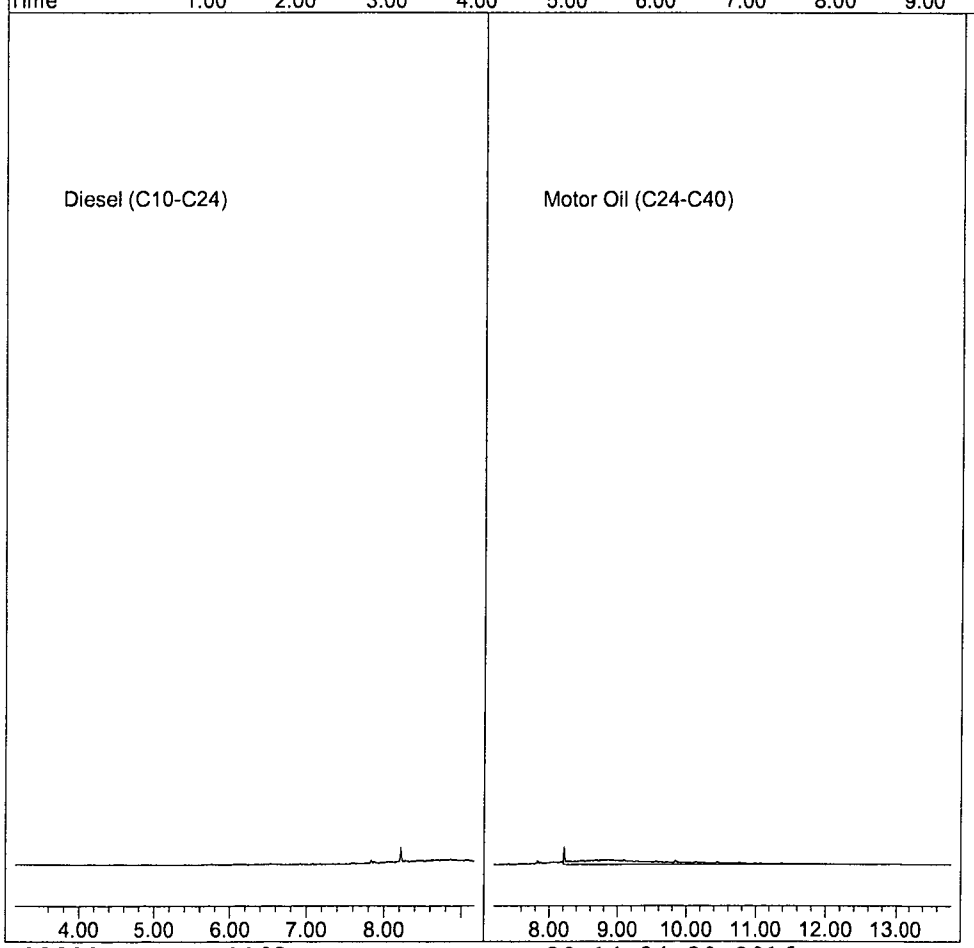
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	62507592	22.438 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028002.D
Sample : MO 20ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028003.D Vial: 3
Acq On : 10-28-16 9:28:13 Operator: DP
Sample : MO 50ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:24 2016 Quant Results File: DOC1103.RES

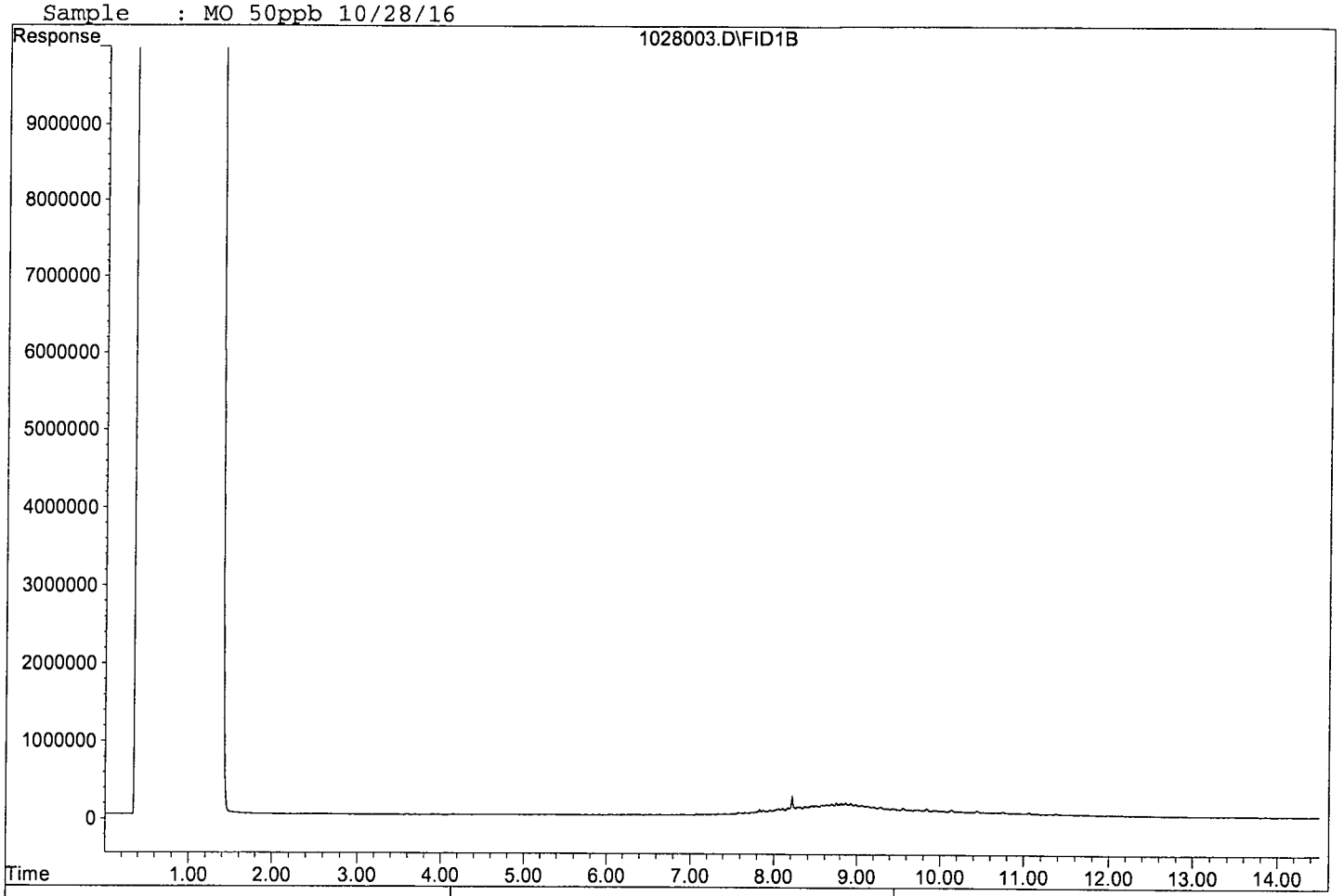
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

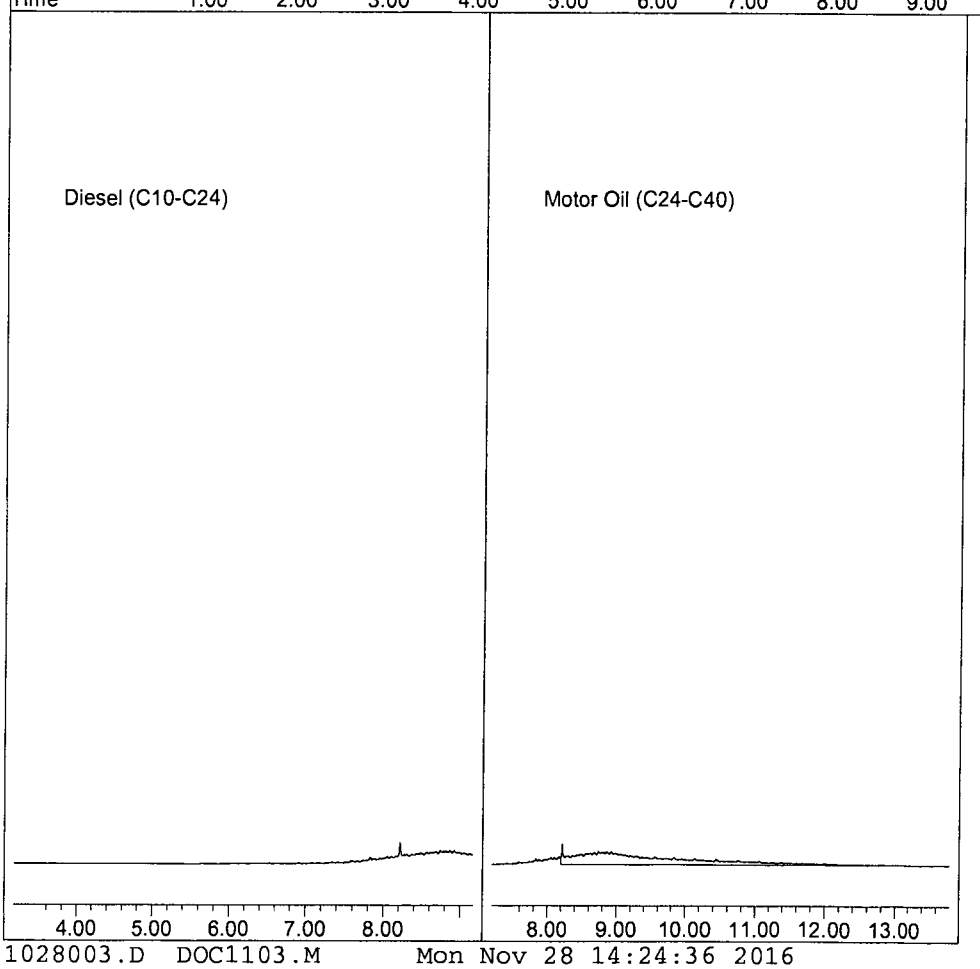
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	160376925	57.571 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028003.D
Sample : MO 50ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028004.D Vial: 4
Acq On : 10-28-16 9:49:06 Operator: DP
Sample : MO 250ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:24 2016 Quant Results File: DOC1103.RES

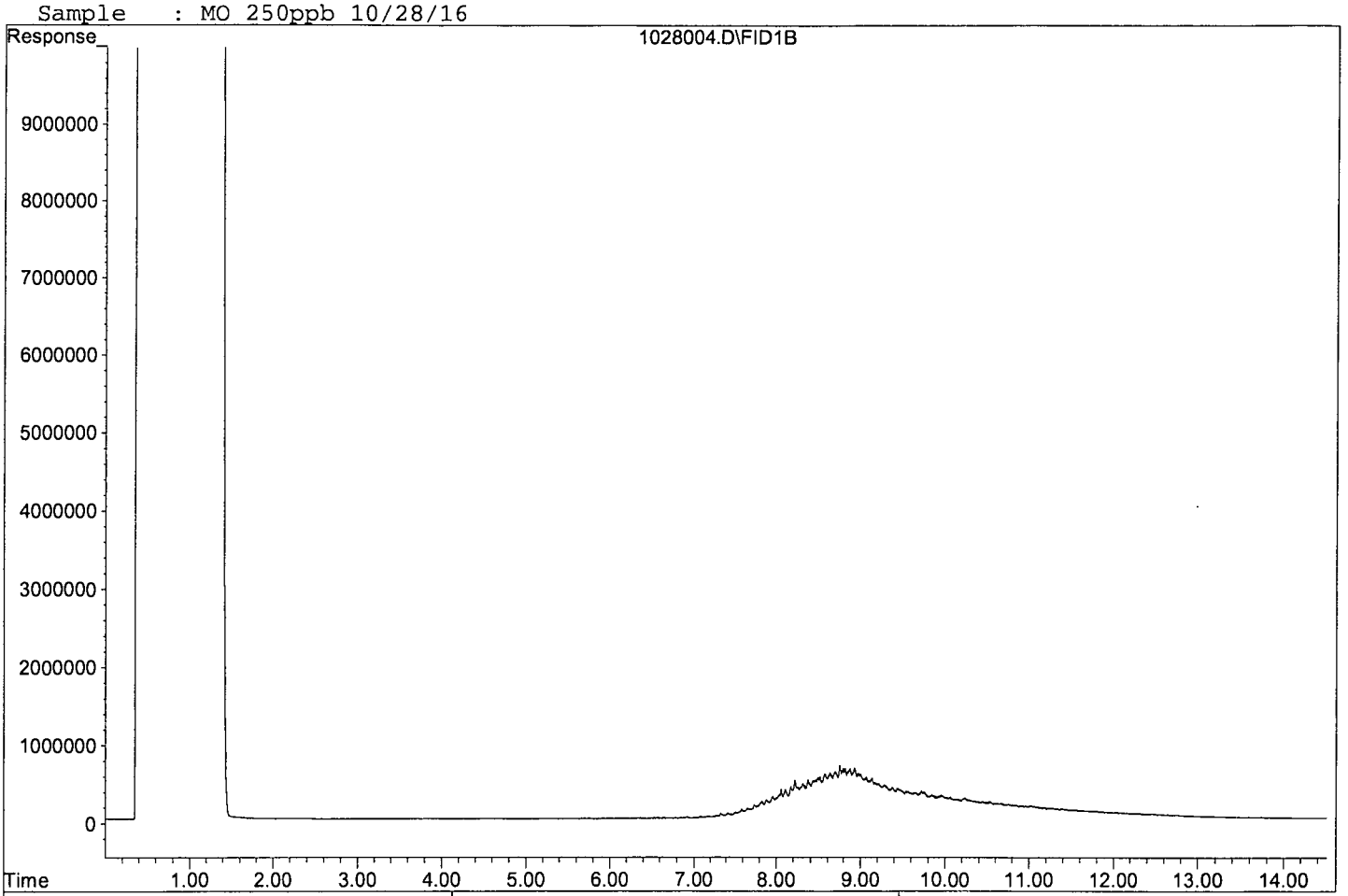
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

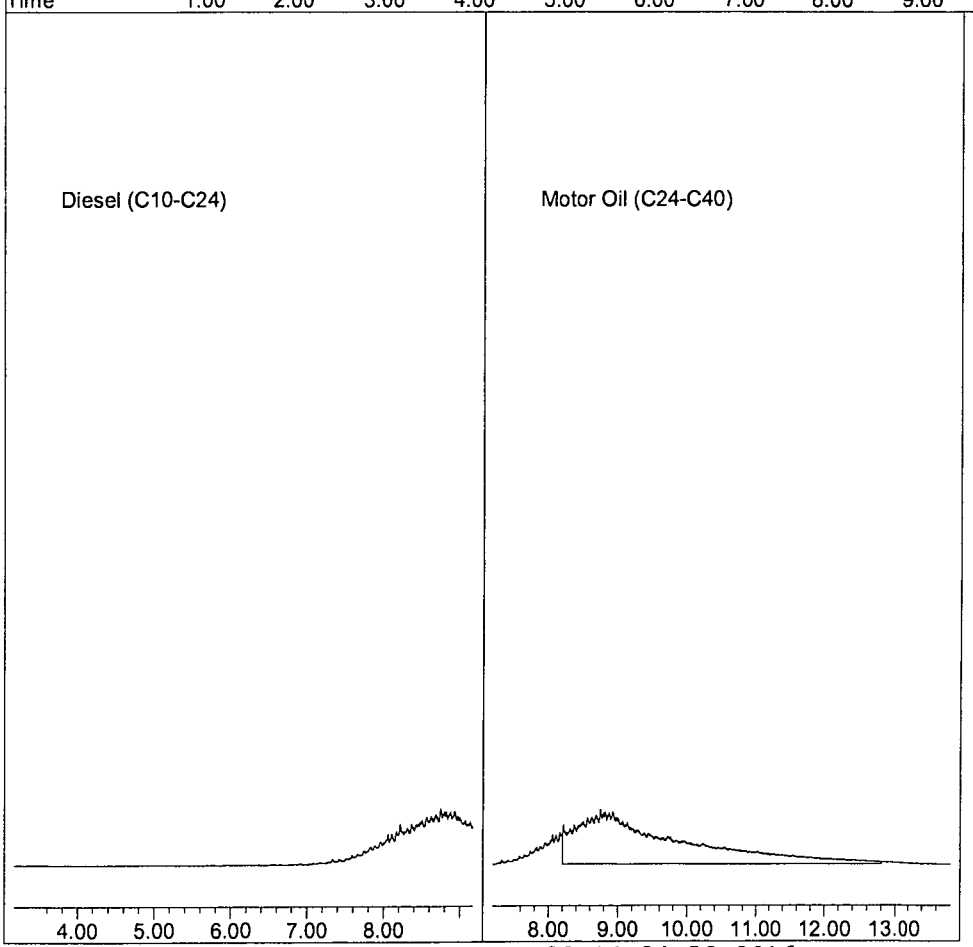
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
Target Compounds				
2) HBTM Motor Oil (C24-C40)	10.50	641488837	230.275	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028004.D
Sample : MO 250ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028005.D Vial: 5
Acq On : 10-28-16 10:09:58 Operator: DP
Sample : MO 1000ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:25 2016 Quant Results File: DOC1103.RES

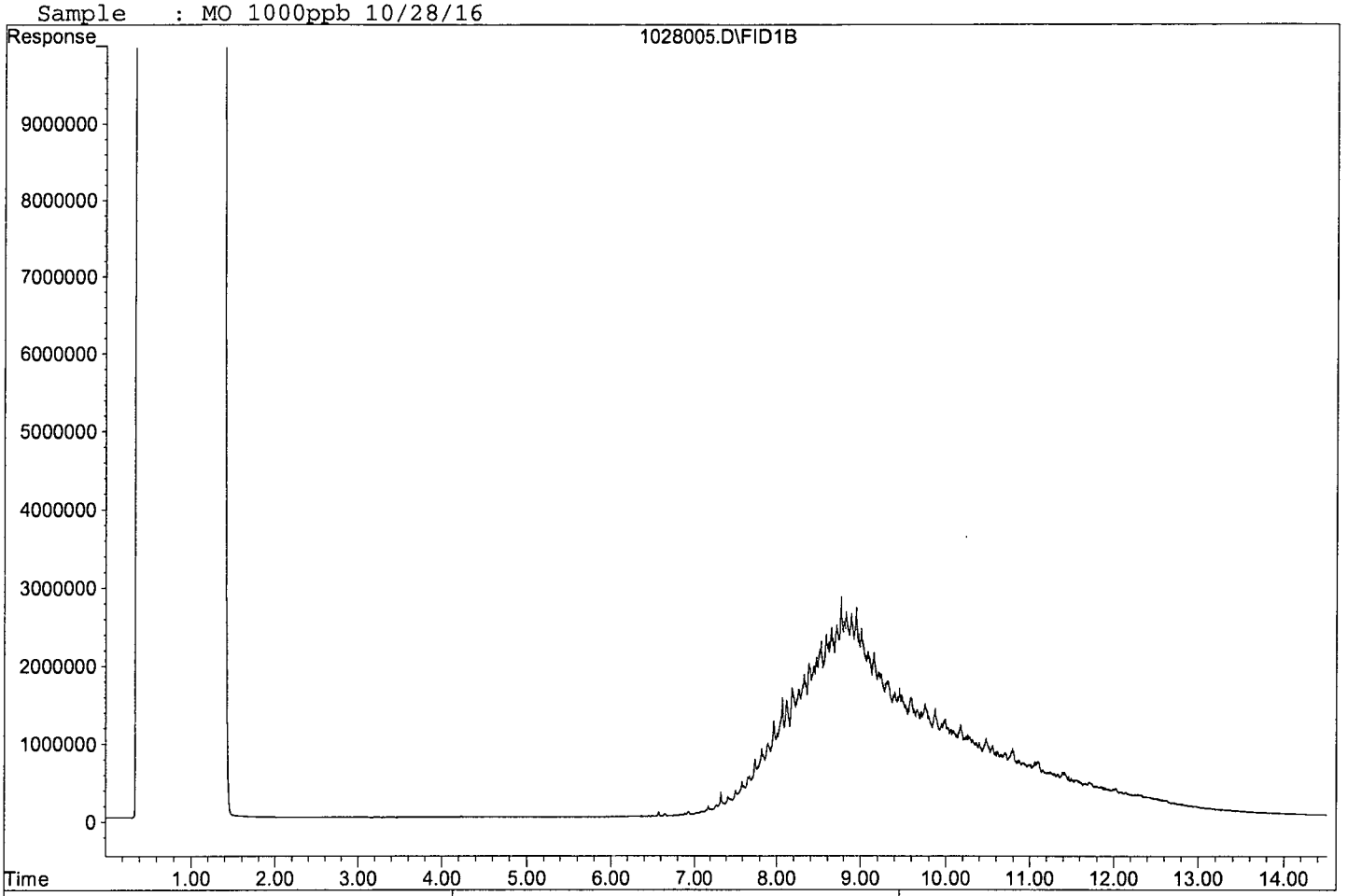
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

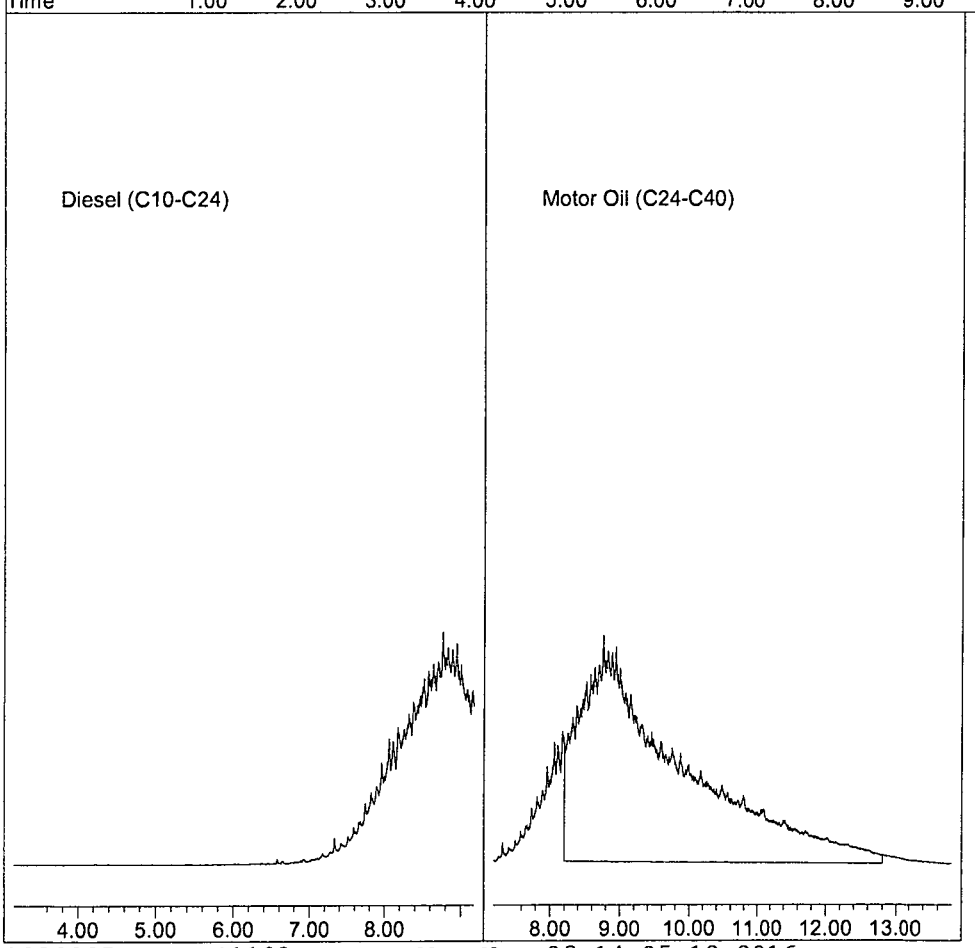
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	2680029704	962.051 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028005.D
Sample : MO 1000ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028006.D Vial: 6
Acq On : 10-28-16 10:30:51 Operator: DP
Sample : MO 1500ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:25 2016 Quant Results File: DOC1103.RES

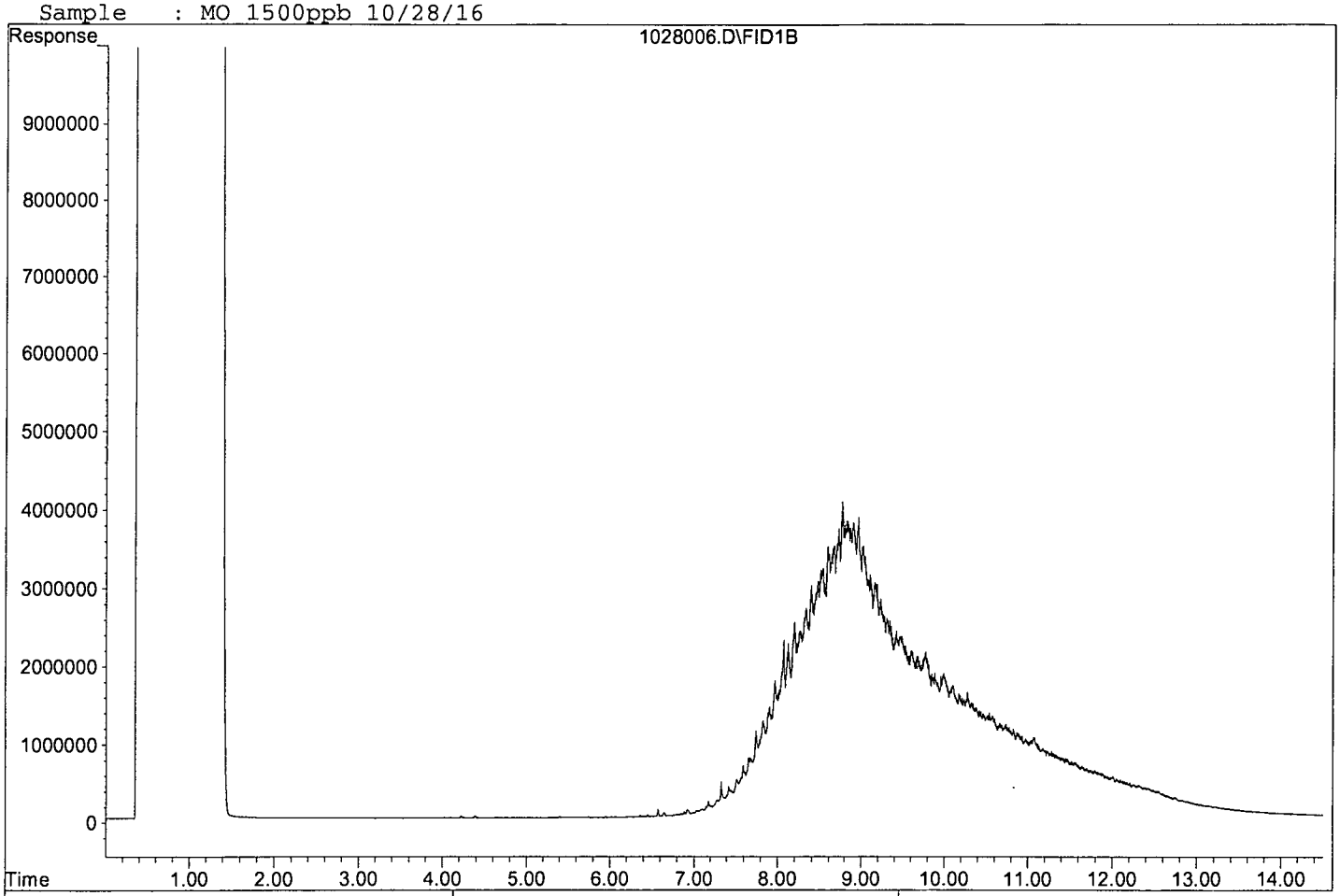
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

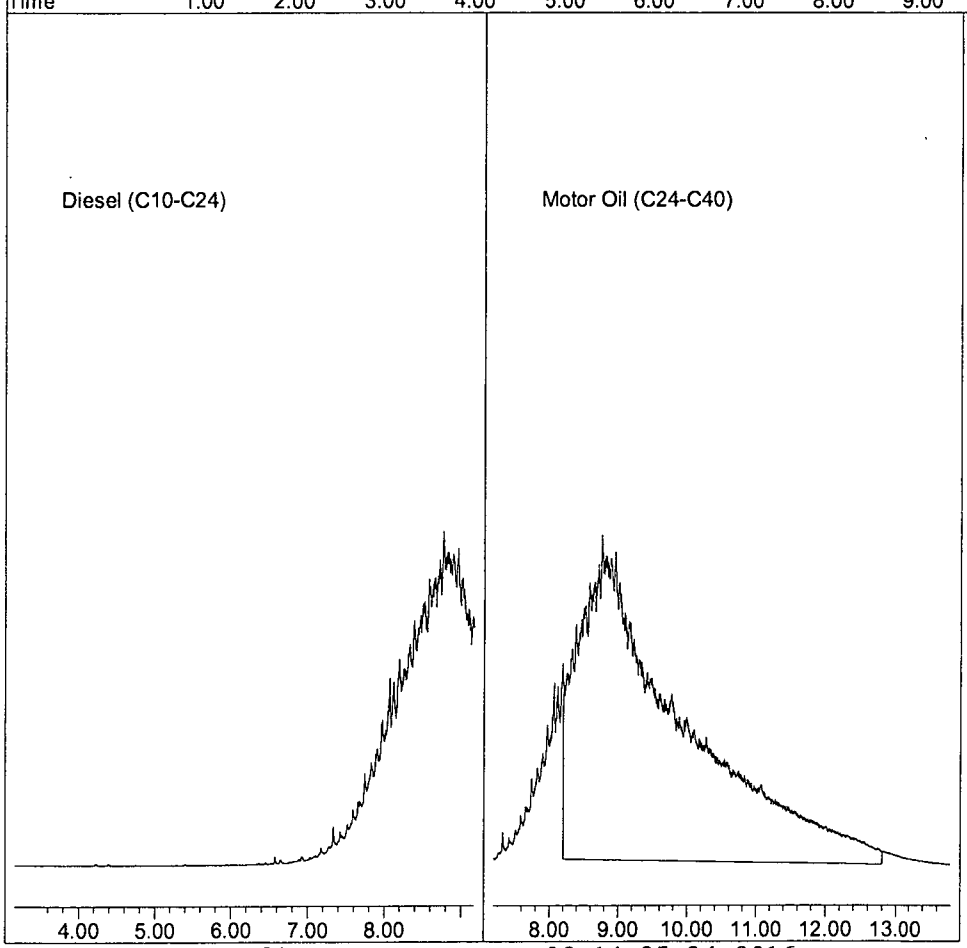
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
Target Compounds				
2) HBTM Motor Oil (C24-C40)	10.50	3965906010	1423.642	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028006.D
Sample : MO 1500ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028007.D Vial: 7
Acq On : 10-28-16 10:51:50 Operator: DP
Sample : MO 2000ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:25 2016 Quant Results File: DOC1103.RES

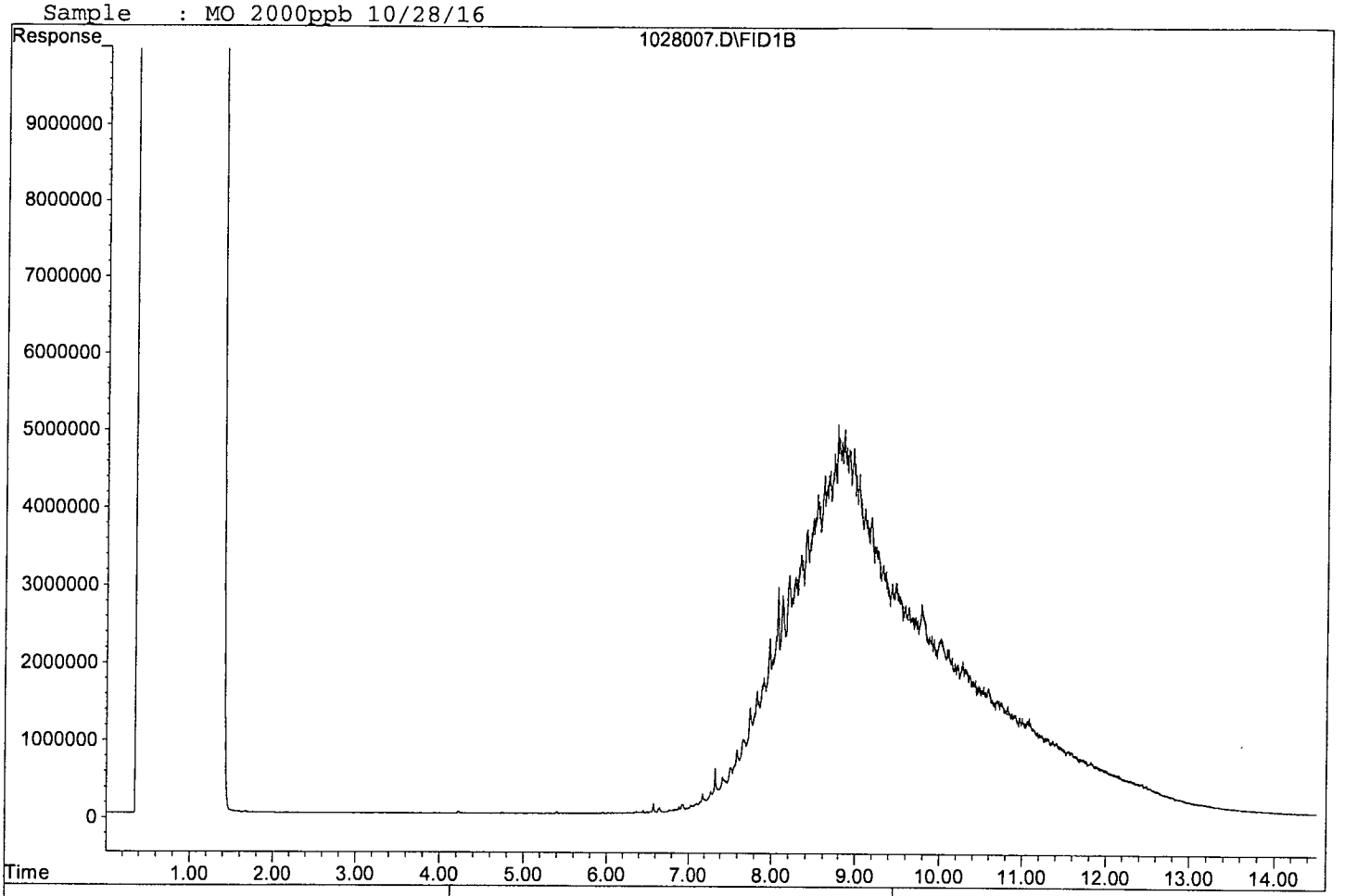
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

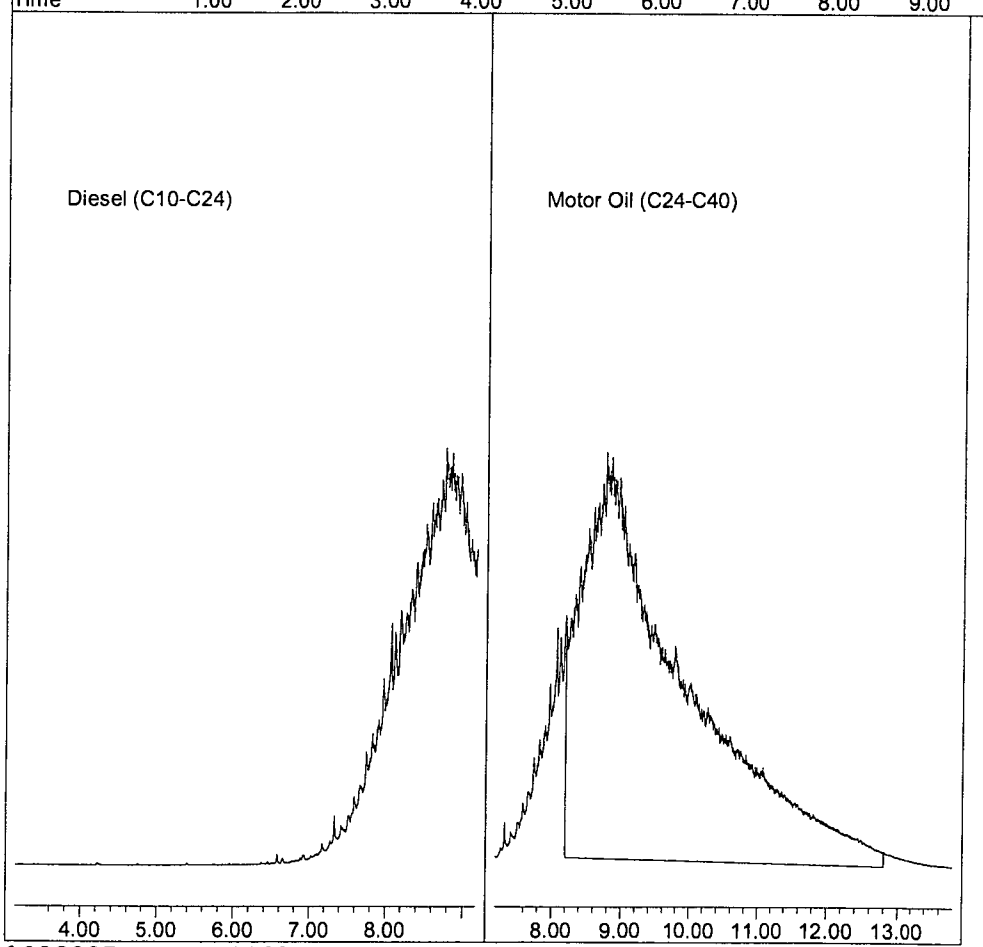
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
Target Compounds				
2) HBTM Motor Oil (C24-C40)	10.50	4983276169	1788.848	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028007.D
Sample : MO 2000ppb 10/28/16





TPH Extractables
DOC1103

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/03/16
Instrument: Apollo
Initial Cal. Date: 11/03/16
Data File: 1103012.D (Diesel) 1028008.D (Motor Oil)

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C24)	1727130	1667670	3.4	HATM	
2	HBTM	Motor Oil (C24-C40)	1392870	1239910	11	HBTM	
3							
4							
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38							
39							
40							
		Average			7.2		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103012.D Vial: 12
Acq On : 11-3-16 13:25:11 Operator: DP
Sample : DIESEL-SS 400ppb 8/1/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 15:21 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

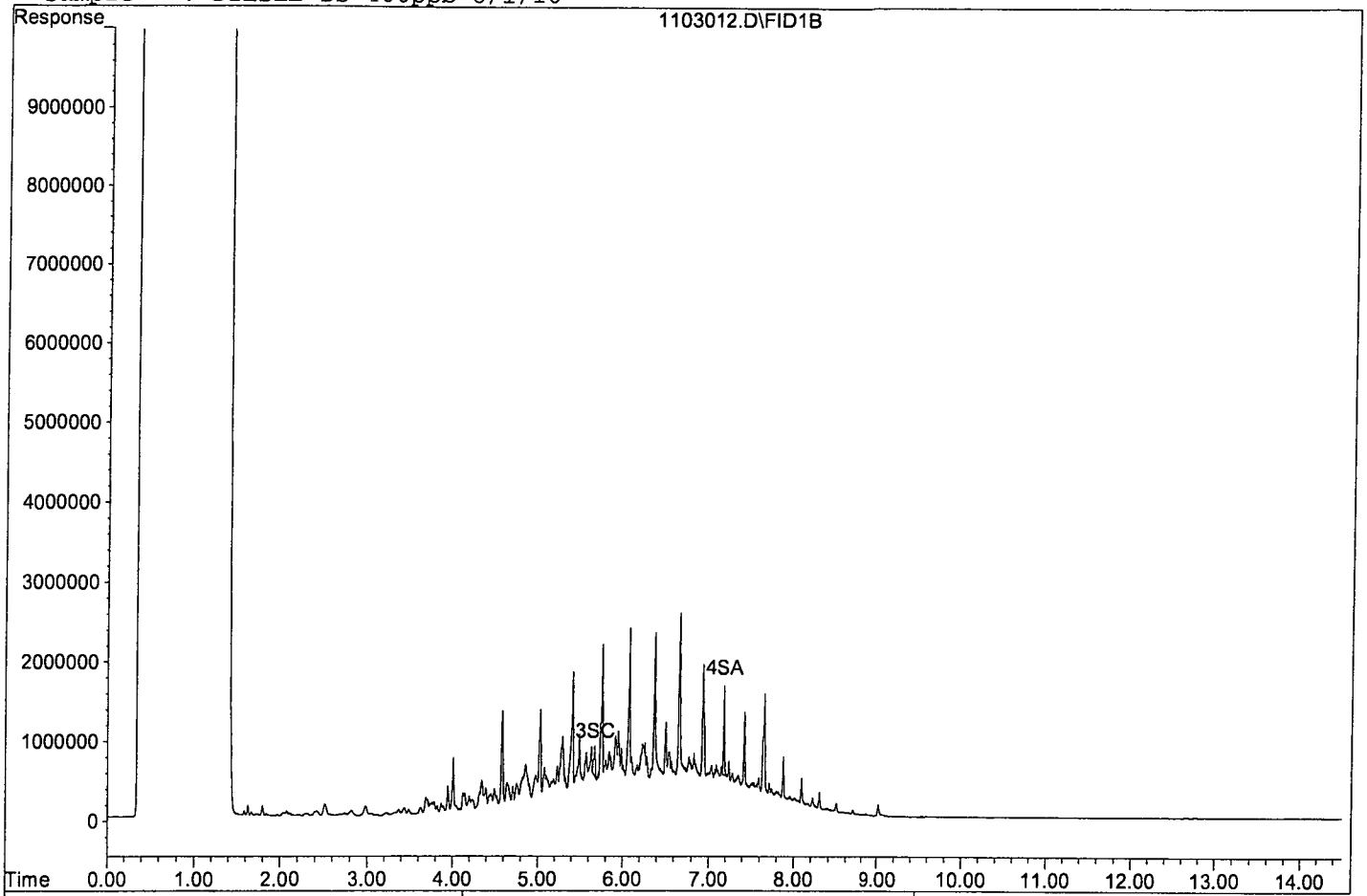
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SC Decanoic Acid(S)	5.67	4681185	3.827 ppb
Surrogate Spike 48.000	Recovery =		7.97%
4) SA Ortho-Terphenyl(S)	7.18	9886456	2.120 ppb
Surrogate Spike 30.000	Recovery =		7.07%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	1345831567	389.615 ppb
2) HBTM Motor Oil (C24-C40)	10.50	43170153	15.497 ppb

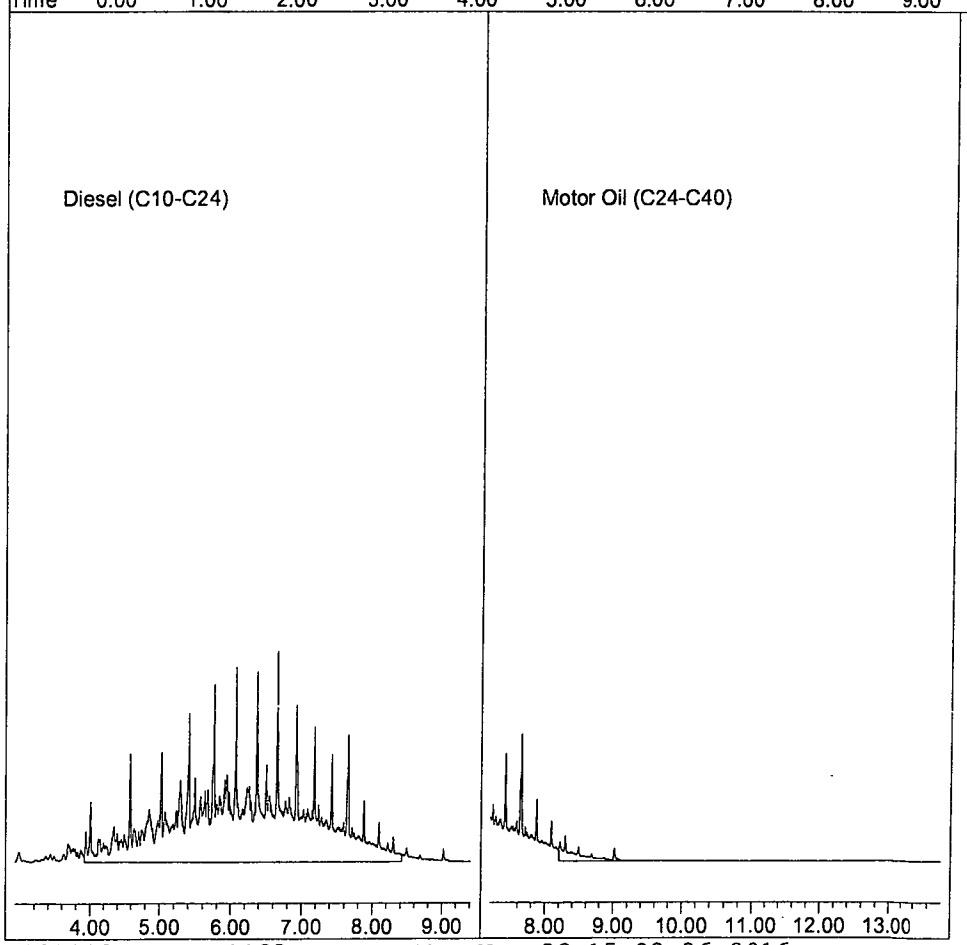
algorithm check: $\frac{1345831567 \times 1}{1727130 \times 2} = 389.6150165$

D.P. 11/28/16

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103012.D
Sample : DIESEL-SS 400ppb 8/1/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161028\1028008.D Vial: 8
Acq On : 10-28-16 11:12:44 Operator: DP
Sample : MO SS 1000ppb 7/6/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 15:22 2016 Quant Results File: DOC1103.RES

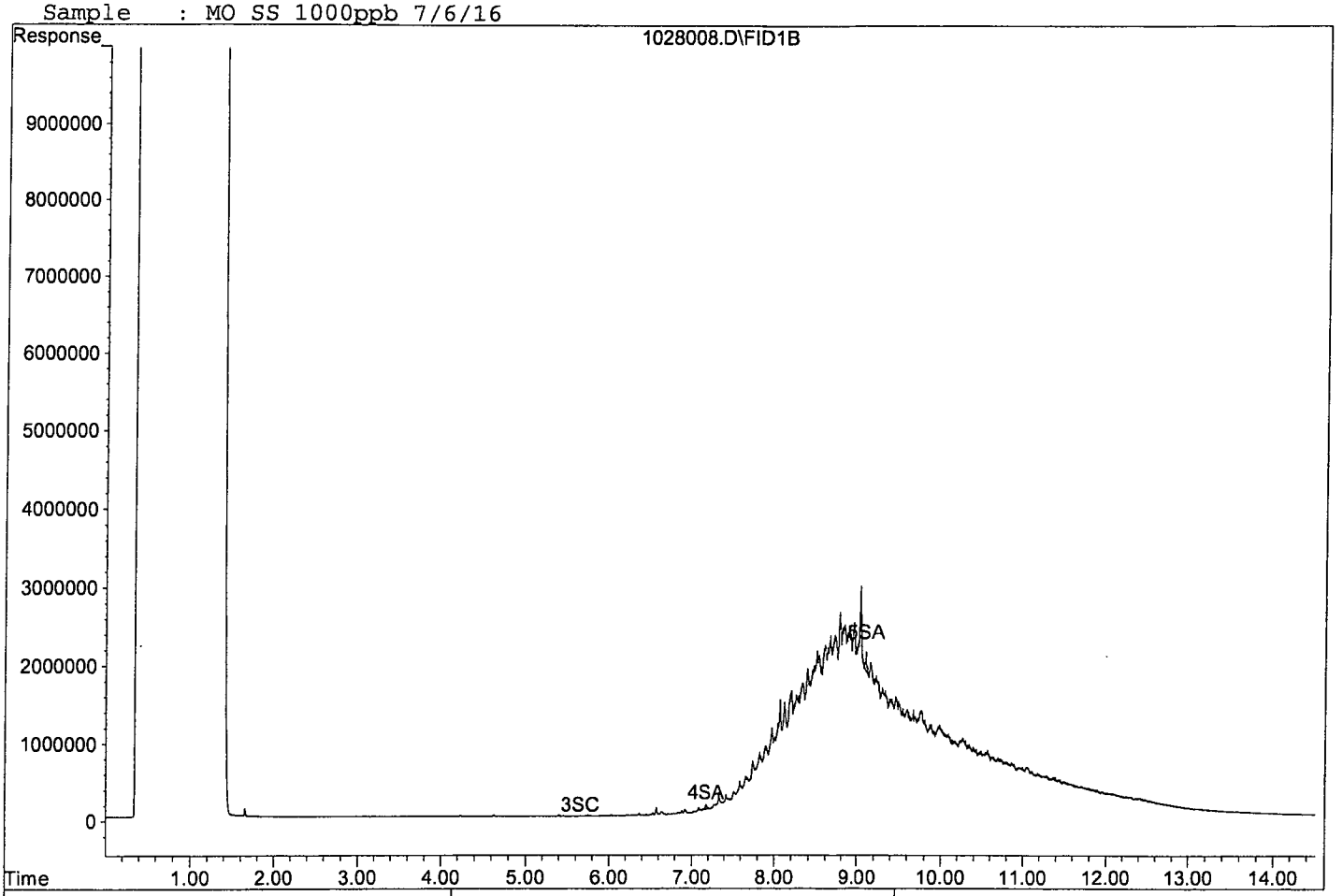
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

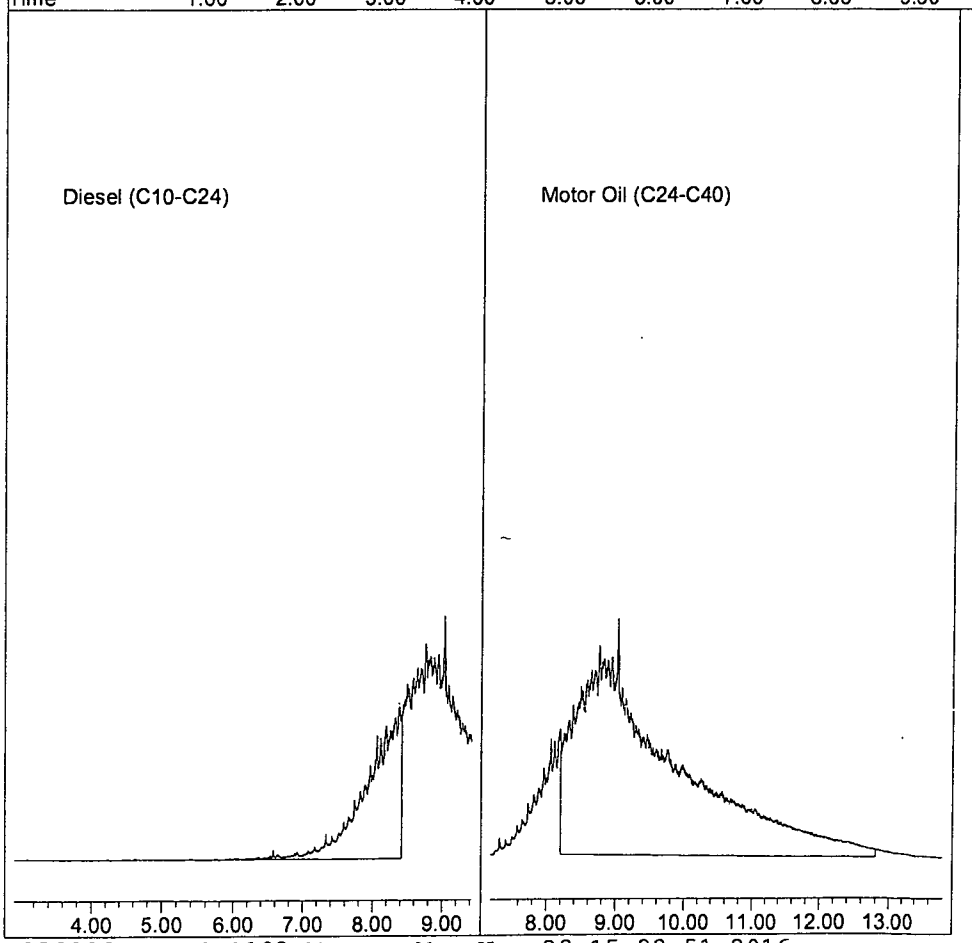
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SC Decanoic Acid(S)	5.65	6816	0.006	ppb
Surrogate Spike 48.000	Recovery =		0.01%	
4) SA Ortho-Terphenyl(S)	7.17	747984	0.160	ppb
Surrogate Spike 30.000	Recovery =		0.53%	
5) SA Octacosane(S)	9.09	2492290	0.712	ppb
Surrogate Spike 30.000	Recovery =		2.37%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	603419098	174.688	ppb
2) HBTM Motor Oil (C24-C40)	10.50	2511616588	901.596	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028008.D
Sample : MO SS 1000ppb 7/6/16





TPH Extractables
DOC1103

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/29/16
Instrument: Apollo
Initial Cal. Date: 10/19/16
Data File: 1229016-17.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1727130	1696740	1.8	HATM	
2	HBTM	Motor Oil (C24-C40)	1392870	1363490	2.1	HBTM	
3							
4							
5							
6							
7							
8							
9							
10							
11							
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29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			2.0		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161229\1229016.D Vial: 16
Acq On : 12-29-16 17:19:26 Operator: DP
Sample : CCV: DIESEL 400ppb 12/8/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jan 3 8:50 2017 Quant Results File: DOC1103.RES

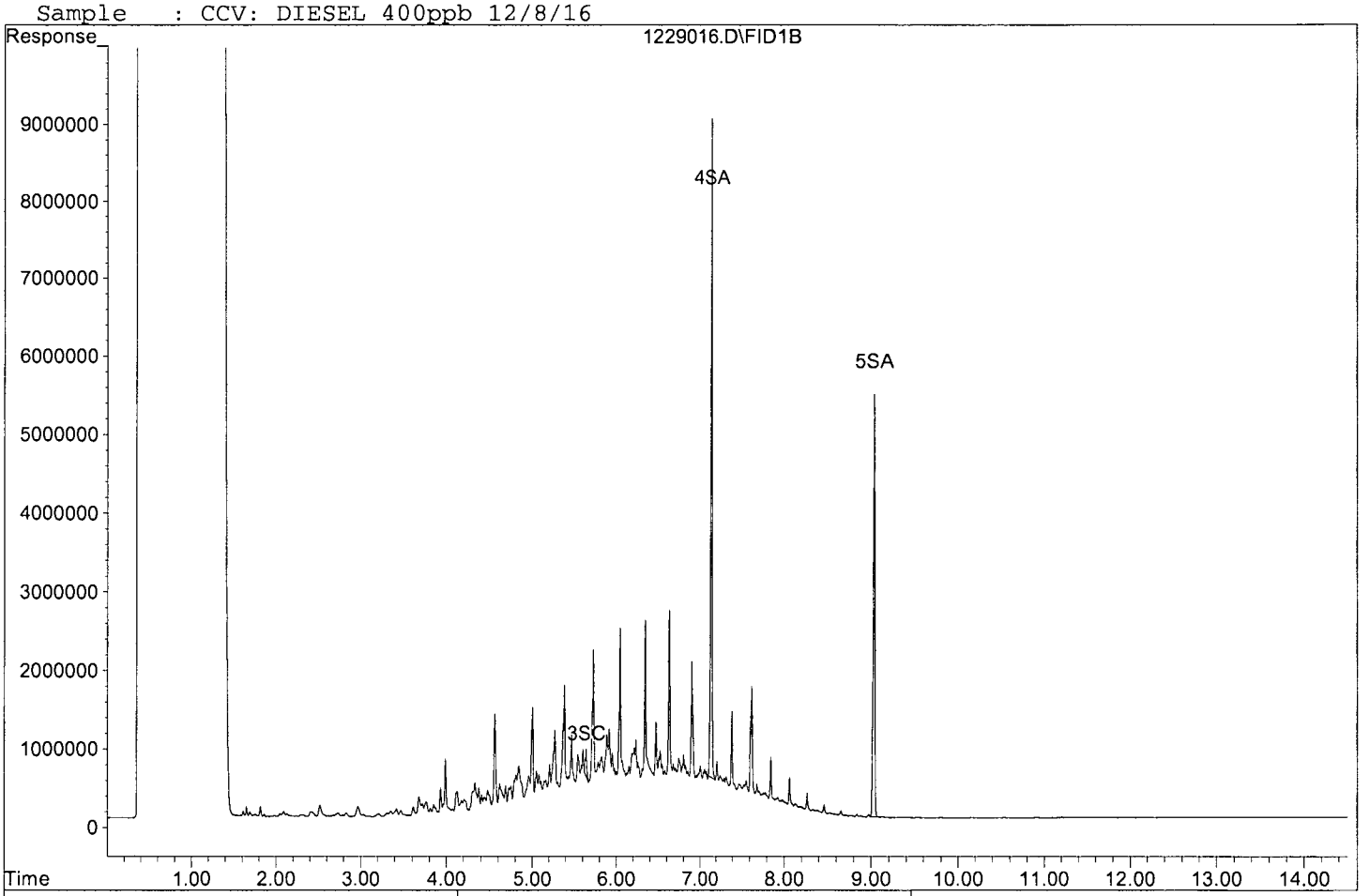
Method : G:\APOLLO\DATA\161229\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Wed Dec 21 09:13:41 2016
Response via : Multiple Level Calibration

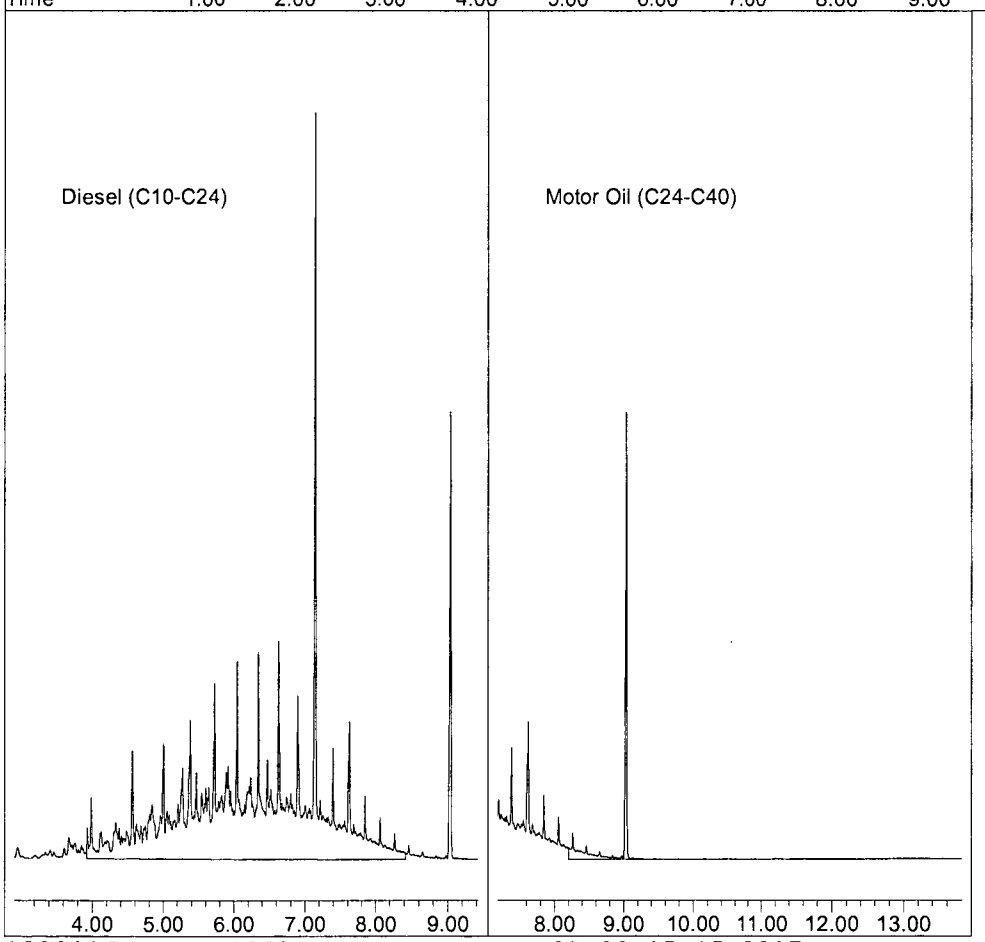
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SC Decanoic Acid(S)	5.64	4488754	3.670	ppb
Surrogate Spike 48.000		Recovery =	7.65%	
4) SA Ortho-Terphenyl(S)	7.14	91572405	19.632	ppb
Surrogate Spike 30.000		Recovery =	65.44%	
5) SA Octacosane(S)	9.03	67577698	19.310	ppb
Surrogate Spike 30.000		Recovery =	64.37%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	1357394634	392.962	ppb
2) HBTM Motor Oil (C24-C40)	10.50	38014948	13.646	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161229\1229016.D
Sample : CCV: DIESEL 400ppb 12/8/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161229\1229017.D Vial: 17
Acq On : 12-29-16 17:39:48 Operator: DP
Sample : CCV: MO 1000ppb 12/8/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Jan 3 8:50 2017 Quant Results File: DOC1103.RES

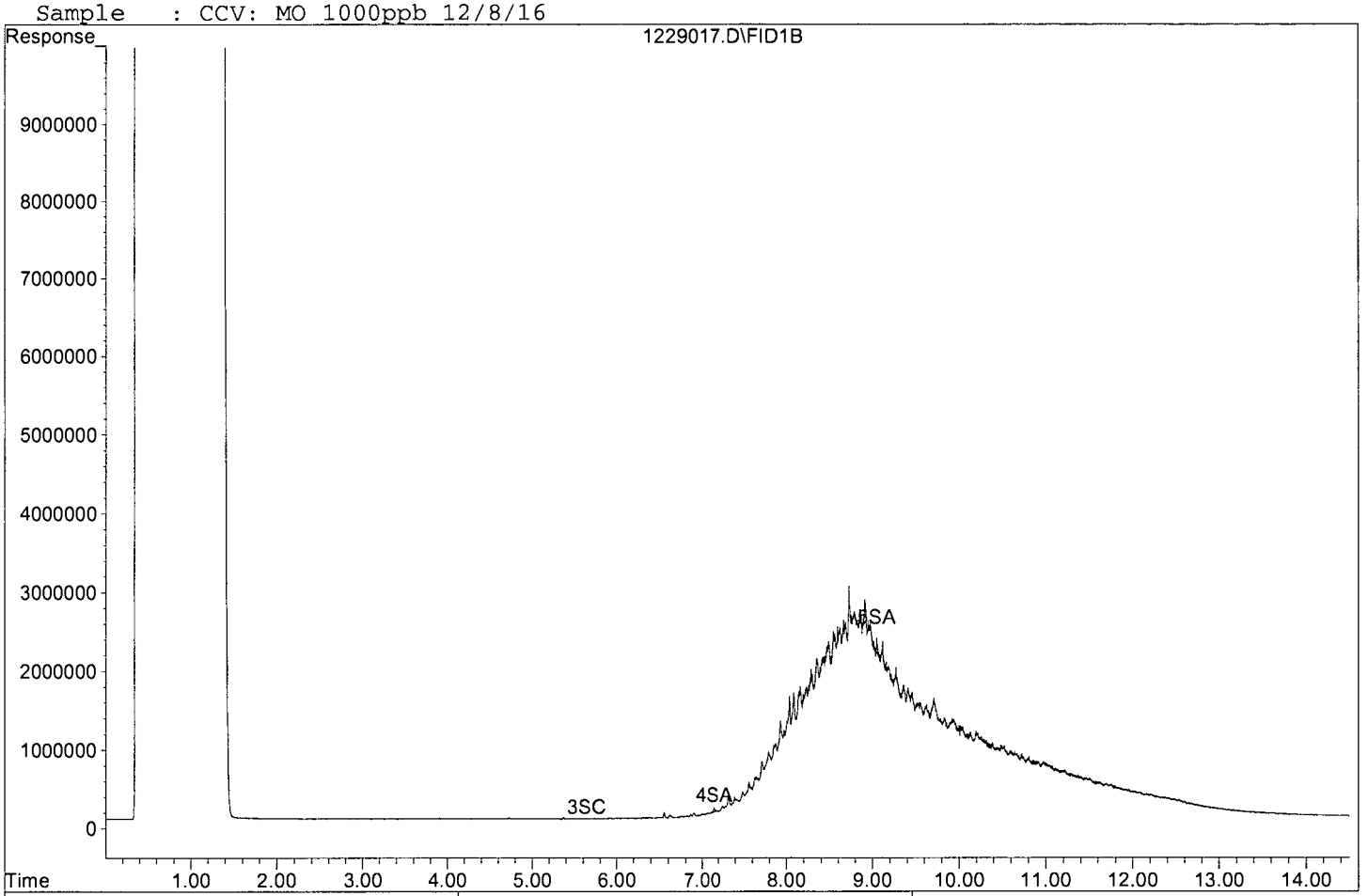
Method : G:\APOLLO\DATA\161229\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Wed Dec 21 09:13:41 2016
Response via : Multiple Level Calibration

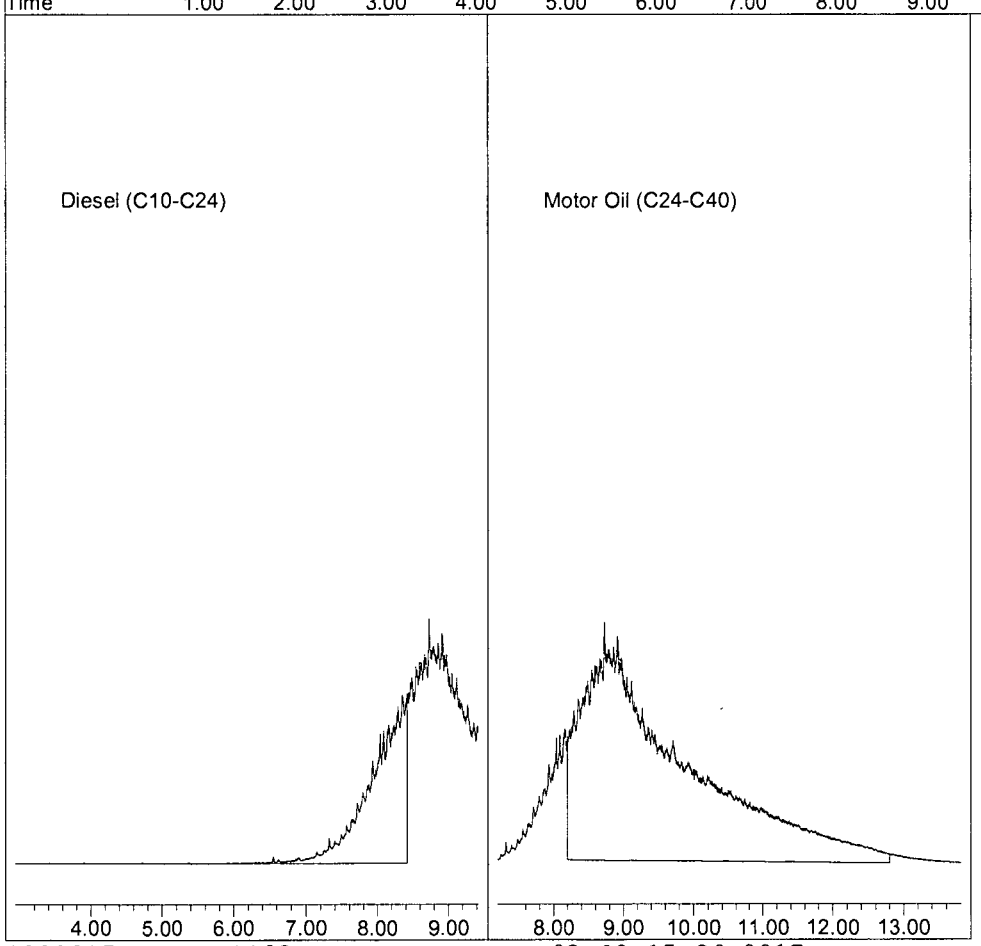
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SC Decanoic Acid(S)	5.64	11416	0.009	ppb
Surrogate Spike 48.000	Recovery	=	0.02%	
4) SA Ortho-Terphenyl(S)	7.15	616113	0.132	ppb
Surrogate Spike 30.000	Recovery	=	0.44%	
5) SA Octacosane(S)	9.05	839550	0.240	ppb
Surrogate Spike 30.000	Recovery	=	0.80%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	667543181	193.252	ppb
2) HBTM Motor Oil (C24-C40)	10.50	2726981700	978.905	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161229\1229017.D
Sample : CCV: MO 1000ppb 12/8/16





TPH Extractables
DOC1103

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 12/29/16
Matrix: Instrument: Apollo
Initial Cal. Date: 10/19/16
Data File: 1229025-26.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1727130	1733890	0.39	HATM	
2	HBTM	Motor Oil (C24-C40)	1392870	1362800	2.2	HBTM	
3							
4							
5							
6							
7							
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12							
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35							
36							
37							
38							
39							
40							
		Average			1.3		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161229\1229025.D Vial: 25
Acq On : 12-29-16 20:21:57 Operator: DP
Sample : CCV: DIESEL 400ppb 12/8/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jan 3 8:52 2017 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161229\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Wed Dec 21 09:13:41 2016
Response via : Multiple Level Calibration

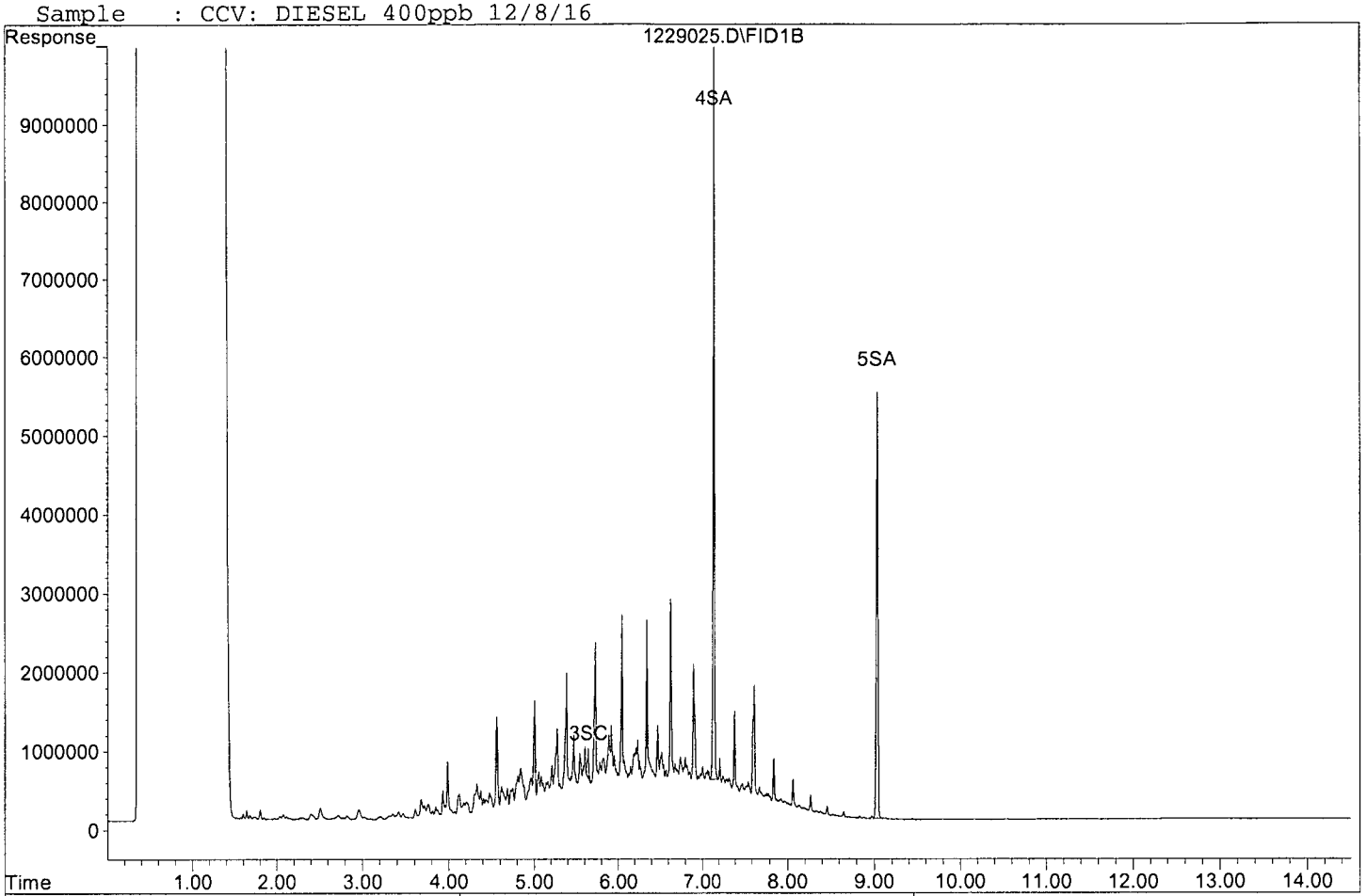
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

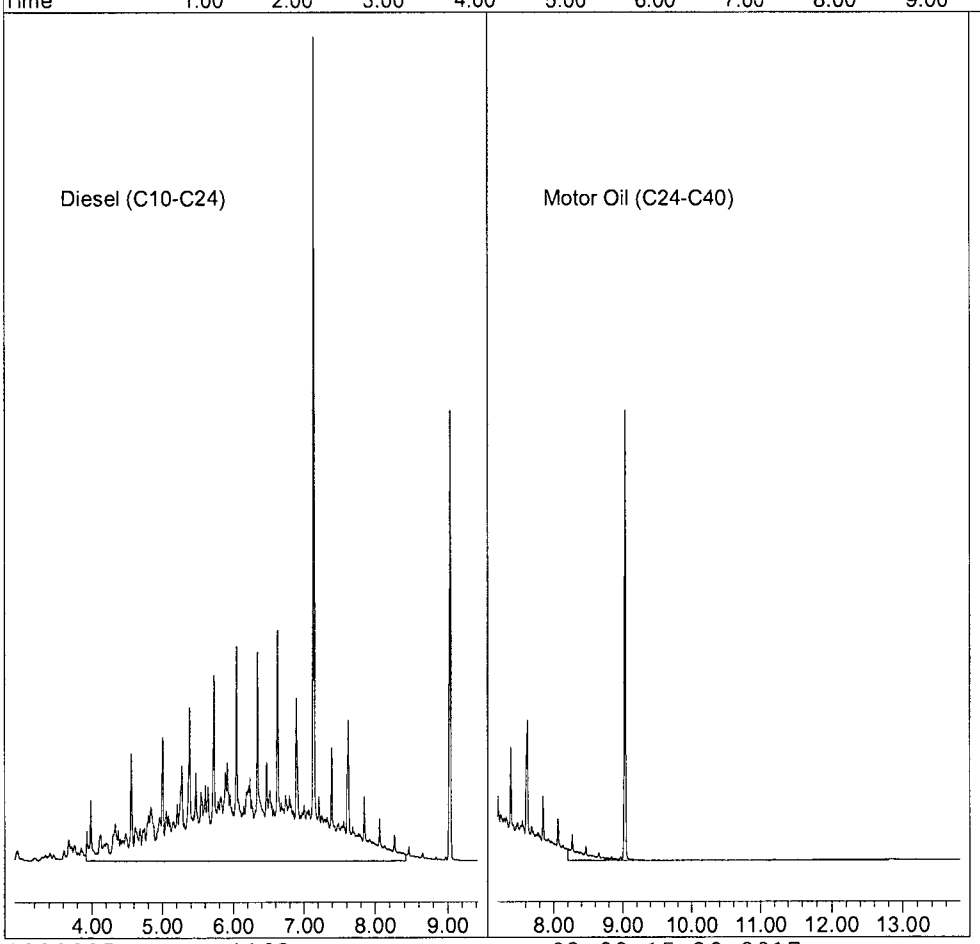
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SC Decanoic Acid(S)	5.64	4515331	3.691	ppb
Surrogate Spike 48.000		Recovery =	7.69%	
4) SA Ortho-Terphenyl(S)	7.14	95026772	20.372	ppb
Surrogate Spike 30.000		Recovery =	67.91%	
5) SA Octacosane(S)	9.03	70433329	20.126	ppb
Surrogate Spike 30.000		Recovery =	67.09%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	1387111128	401.565	ppb
2) HBTM Motor Oil (C24-C40)	10.50	41553188	14.916	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161229\1229025.D
Sample : CCV: DIESEL 400ppb 12/8/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161229\1229026.D Vial: 26
Acq On : 12-29-16 20:42:10 Operator: DP
Sample : CCV: MO 1000ppb 12/8/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Jan 3 8:52 2017 Quant Results File: DOC1103.RES

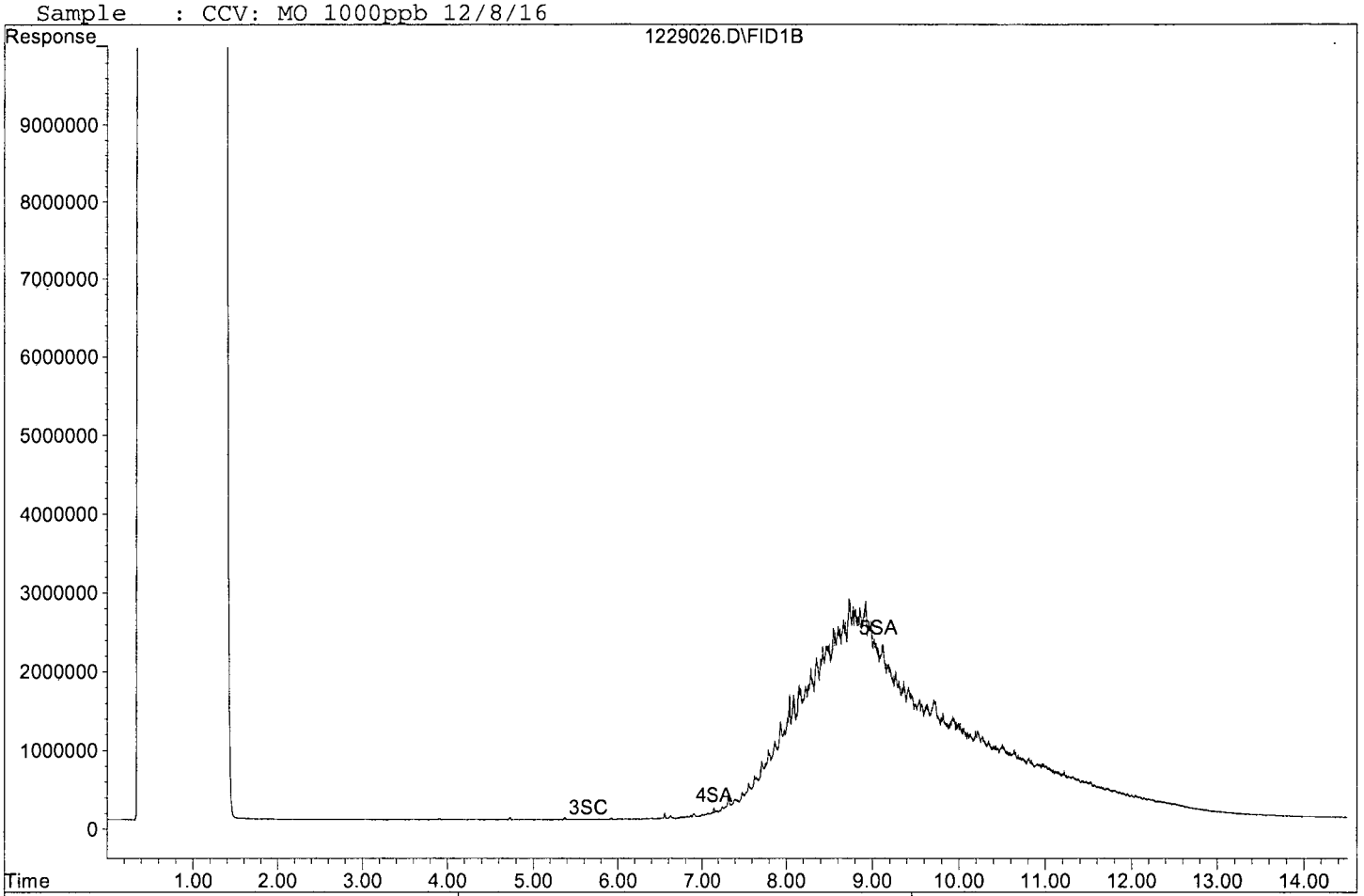
Method : G:\APOLLO\DATA\161229\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Wed Dec 21 09:13:41 2016
Response via : Multiple Level Calibration

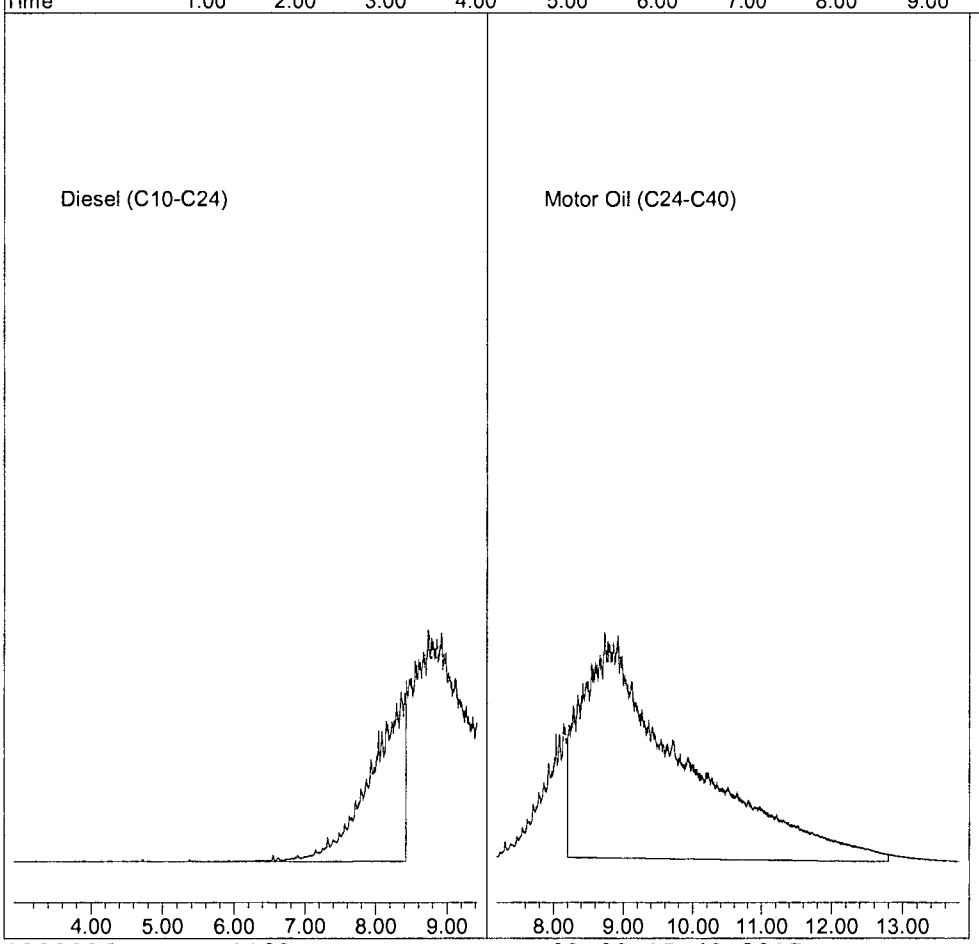
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SC Decanoic Acid(S)	5.64	17978	0.015	ppb
Surrogate Spike 48.000	Recovery =		0.03%	
4) SA Ortho-Terphenyl(S)	7.15	729765	0.156	ppb
Surrogate Spike 30.000	Recovery =		0.52%	
5) SA Octacosane(S)	9.06	1169355	0.334	ppb
Surrogate Spike 30.000	Recovery =		1.11%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	673831910	195.073	ppb
2) HBTM Motor Oil (C24-C40)	10.50	2725608934	978.412	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161229\1229026.D
Sample : CCV: MO 1000ppb 12/8/16





ORGANICS
Raw Data

APPL, INC.

Method Blank

EPA 8015B TPH WATER

Blank Name/QCG: **161227W-48083 - 215137**
Batch ID: #DOC53-161227A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	12/27/16	12/29/16
BLANK	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	12/27/16	12/29/16
BLANK	SURROGATE: OCTACOSANE (S)	100	60-142			%	12/27/16	12/29/16
BLANK	SURROGATE: ORTHO-TERPHEN	78.9	56-125			%	12/27/16	12/29/16

Quant Method:DOC1103.M
Run #:1229018
Instrument:Apollo
Sequence:161229
Initials:DPO

GC SC-Blank-REG MDLs-DOD
Printed: 01/03/17 9:00:48 AM

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161229\1229018.D Vial: 18
Acq On : 12-29-16 18:00:06 Operator: DP
Sample : 161227A BLK 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Jan 3 8:56 2017 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161229\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Wed Dec 21 09:13:41 2016
Response via : Multiple Level Calibration

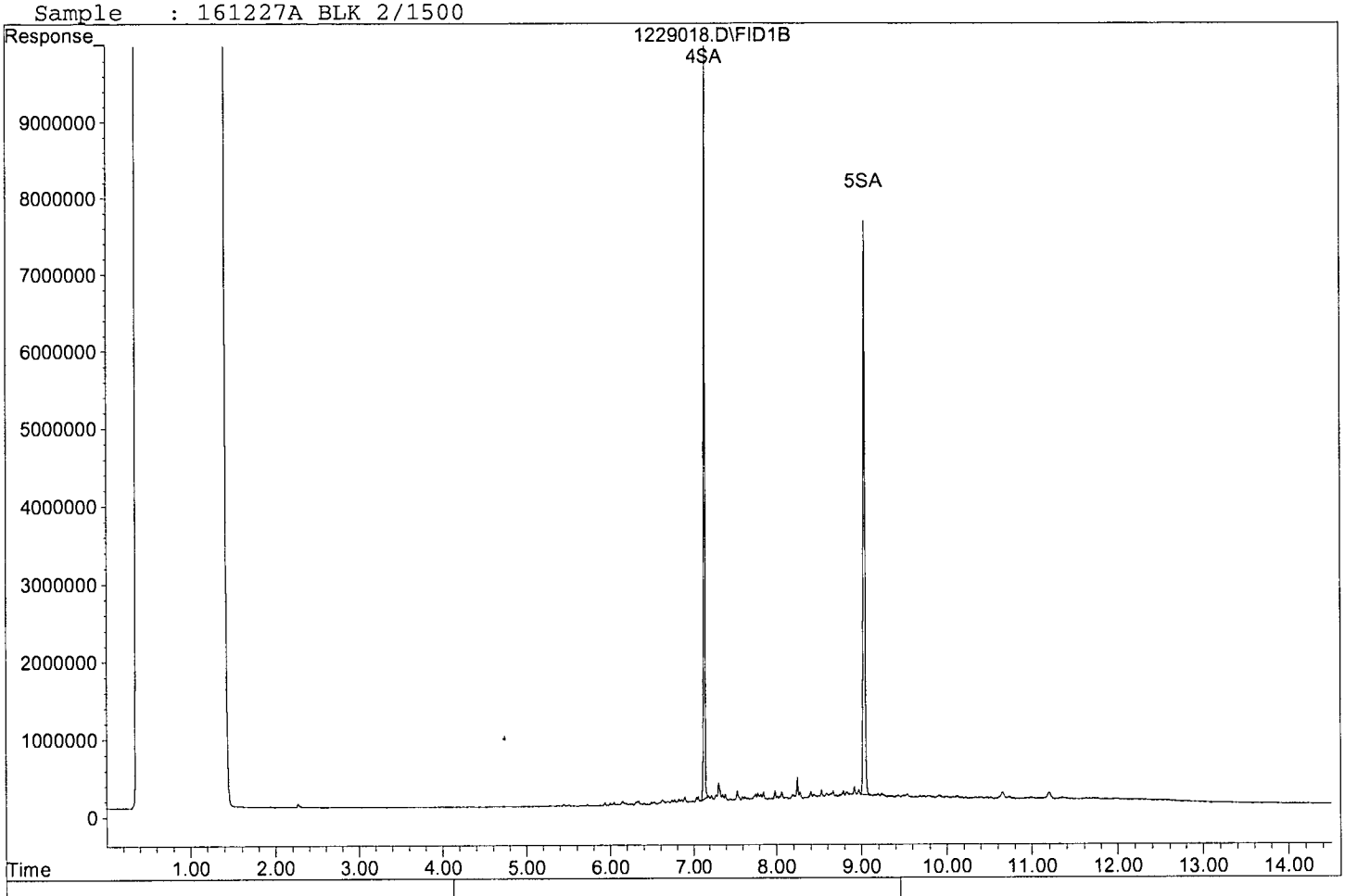
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

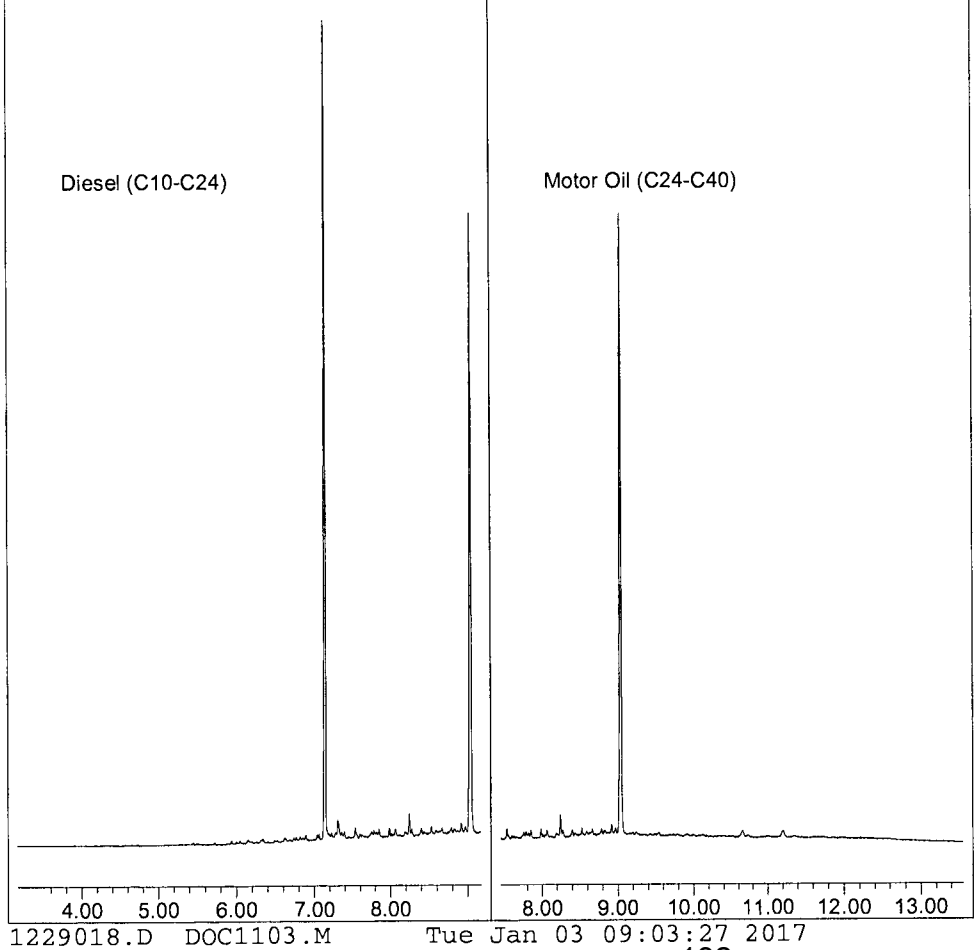
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.14	110352548	31.544	ppb
Surrogate Spike 40.000		Recovery =	78.86%	
5) SA Octacosane(S)	9.04	105065540	40.029	ppb
Surrogate Spike 40.000		Recovery =	100.07%	
Target Compounds				

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161229\1229018.D
Sample : 161227A BLK 2/1500





Laboratory Control Spike Recovery
EPA 8015B TPH WATER

APPL ID: **161227W-48083 LCS - 215137**
Batch ID: #DOC53-161227A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
DIESEL (C10-C24)	1330	940	70.5	36-132
OIL (C24-C40)	1330	1160	87.0	41-113
SURROGATE: OCTACOSANE (S)	40.0	37.3	93.3	60-142
SURROGATE: ORTHO-TERPHENYL (S)	40.0	36.3	90.8	56-125

Comments: _____

Primary	SPK
Quant Method :	DOC1103.M
Extraction Date :	12/27/16
Analysis Date :	12/29/16
Instrument :	Apollo
Run :	1229019
Initials :	DPO

Printed: 01/03/17 9:00:42 AM
APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161229\1229019.D Vial: 19
Acq On : 12-29-16 18:20:22 Operator: DP
Sample : 161227A LCS-1 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Jan 3 8:56 2017 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161229\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Wed Dec 21 09:13:41 2016
Response via : Multiple Level Calibration

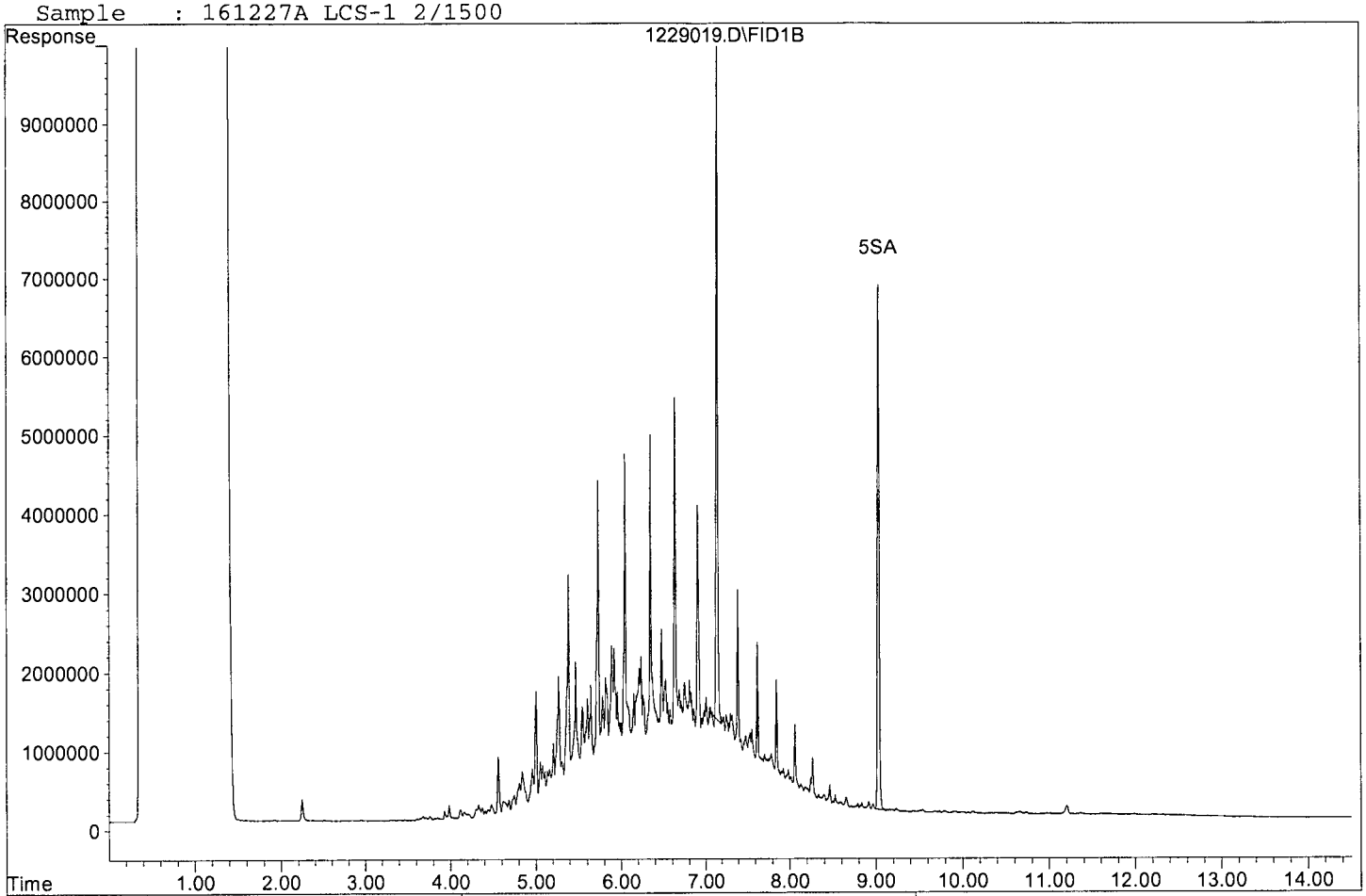
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

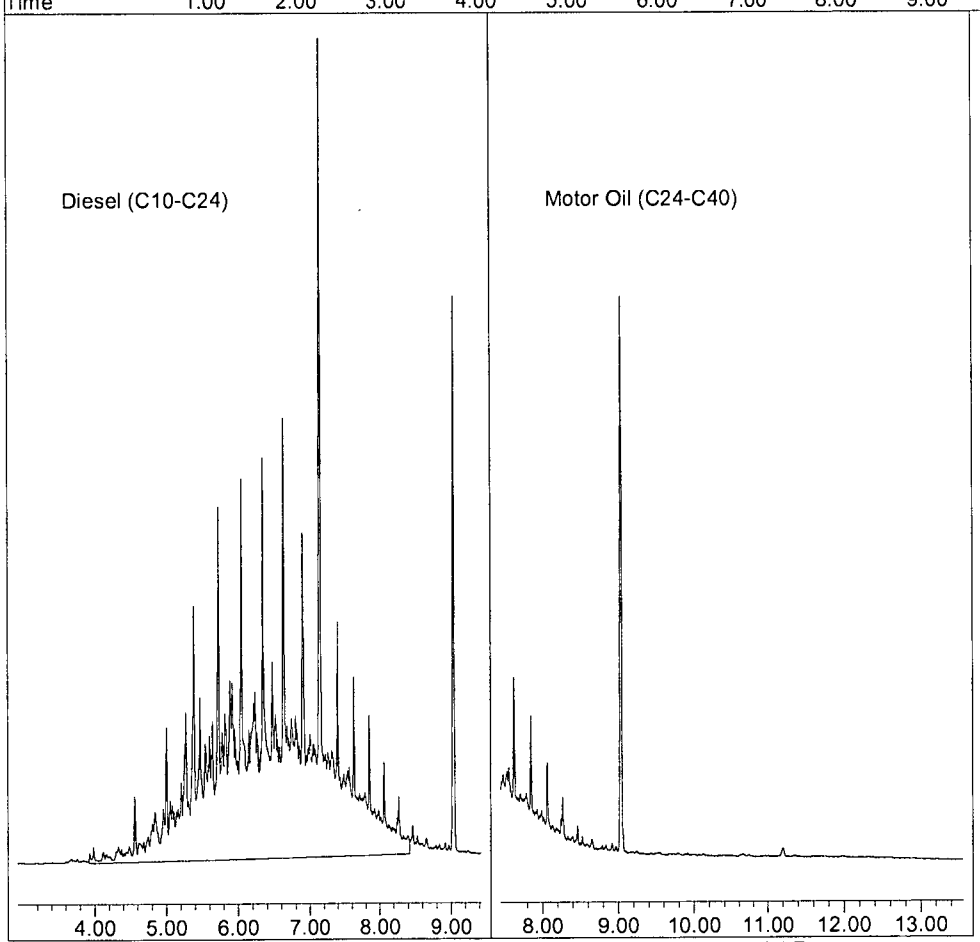
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.15	127111974	36.335 ppb
Surrogate Spike 40.000		Recovery =	90.84%
5) SA Octacosane(S)	9.04	97866890	37.286 ppb
Surrogate Spike 40.000		Recovery =	93.22%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	2434564774	939.732 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161229\1229019.D
Sample : 161227A LCS-1 2/1500





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161229\1229020.D Vial: 20
Acq On : 12-29-16 18:40:40 Operator: DP
Sample : 161227A LCS-2 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Jan 3 8:56 2017 Quant Results File: DOC1103.RES

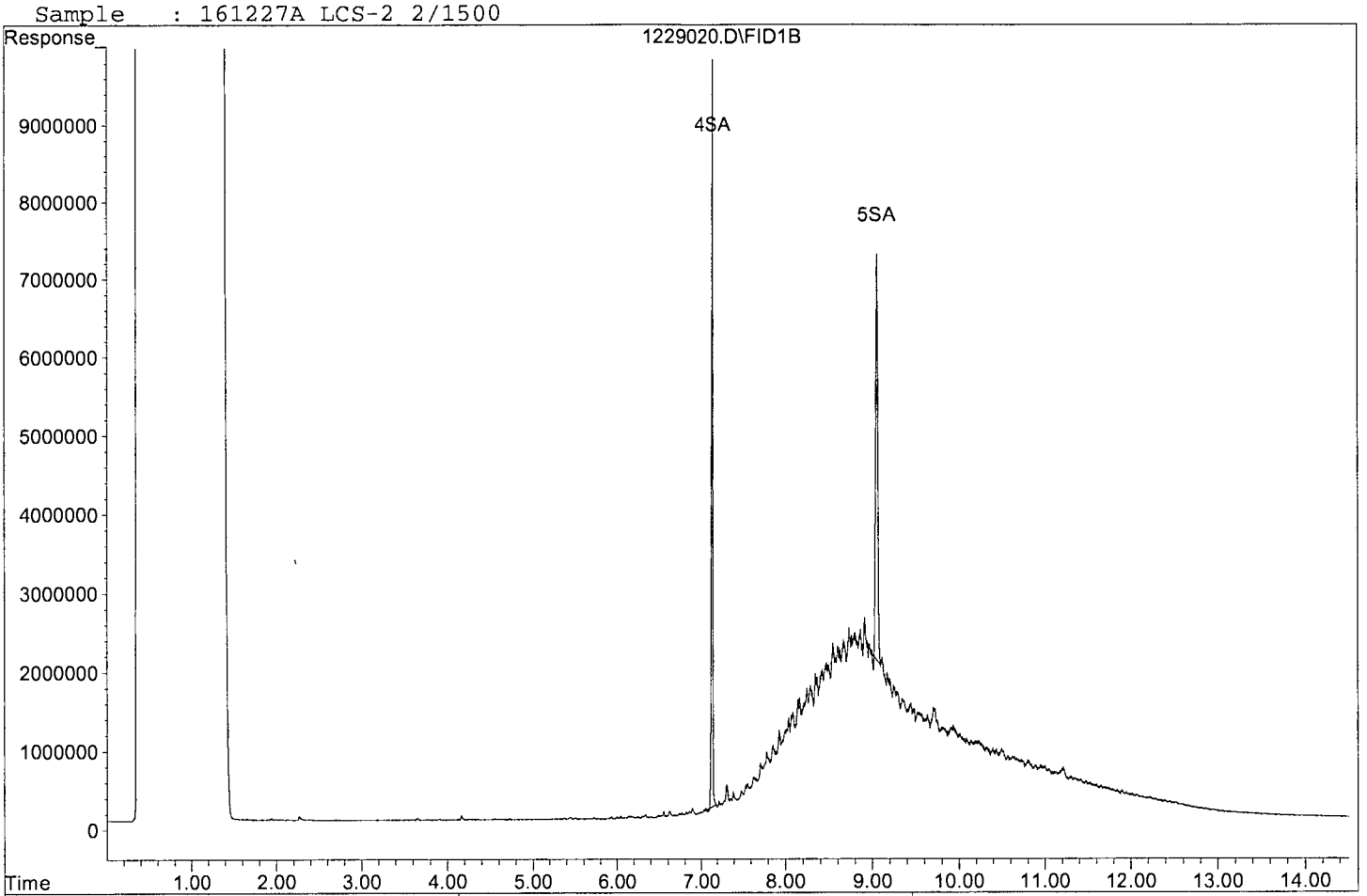
Method : G:\APOLLO\DATA\161229\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Wed Dec 21 09:13:41 2016
Response via : Multiple Level Calibration

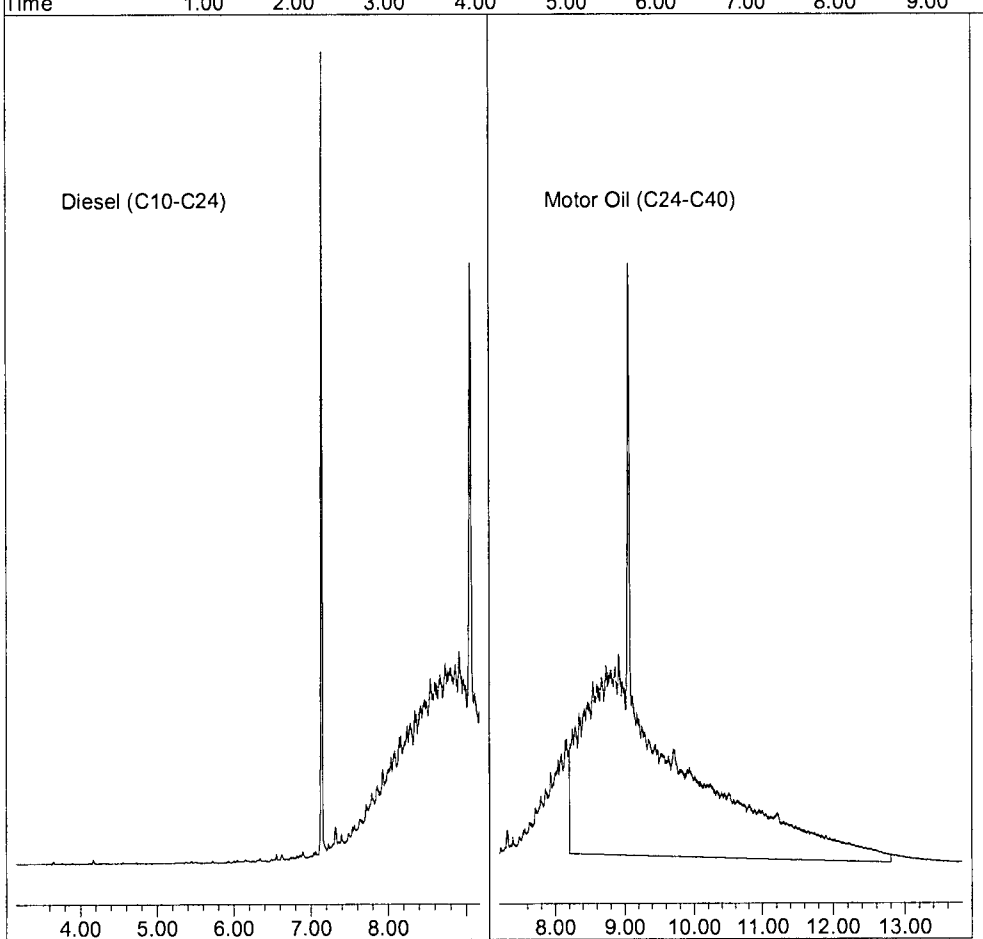
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.14	101986745	29.153	ppb
Surrogate Spike 40.000	Recovery =		72.88%	
5) SA Octacosane(S)	9.06	87170167	33.211	ppb
Surrogate Spike 40.000	Recovery =		83.03%	
Target Compounds				
2) HBTM Motor Oil (C24-C40)	10.50	2420933983	1158.721	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161229\1229020.D
Sample : 161227A LCS-2 2/1500





DIESEL CURVE		prep:11/03/16-D.P.		ex:6/03/17						
STD	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL
DIESEL	1000	237562-37104	11/03/16	06/03/17	10	10	40	60	80	100
MC	N/A	56098			990	90	60	40	20	NA
				Final VOL.	1000	100	100	100	100	100
				ppm	10	100	400	600	800	1000

MOTOR OIL CURVE		prep: 10/28/16-D.P.		ex:4/26/17						
STD	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL
MOTOR OIL	2000		10/26/16	04/26/17	10	25	125	500	750	200
MC	N/A	56098			990	975	875	500	250	NA
				Final VOL.	1000	1000	1000	1000	1000	200
				ppm	20	50	250	1000	1500	2000

Prep: 11/03/16-D.P. Exp: 6/03/17						
DIESEL CAL STD.						
STD.	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT / LOT#
DIESEL FUEL #2	50,000 ug/mL	O2SI CAT#011598-03 LOT#237562-37104 OP: 11/03/06 EXP: 11/03/17	500 µL	25 mL	1000ug/mL	MC LOT# 56098
O-TERPHENYL OCTACOSANE	600 ug/mL	O2SI CAT#110316-05 LOT#266278-37107 OP: 10/27/16 EXP: 10/27/17	2080 µL		50ug/mL	

Prep: 10/26/16 -D.P. Ex: 4/26/17						
MOTOR OIL CAL STD						
STD.	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT / LOT#
MOTOR OIL	50,000 ug/mL	O2SI CAT#116390-02 LOT#239390-36901 OP:10/26/16 EXP:10/26/17	1mL	25mL	2000ug/mL	MC LOT# 56098

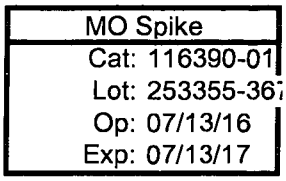
DIESEL SECOND SOURCE prep: 08/01/16-D.P. ex: 07/6/17						
standard	initial conc.	SOURCE DATE	ALIQUOT	FINAL VOL.	FINAL CONC.	SOLVENT LOT
DIESEL SECOND SOURCE	50,000 ug/mL	O2SI CAT#011598-03-SS LOT#244813-34634 OP: 08/28/15 Exp 03/14/19	200uL	10mL	1000ug/mL	MC #56061

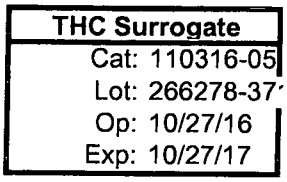
MOTOR OIL SECOND SOURCE prep: 07/6/16-L.H. ex: 07/6/17						
standard	initial conc.	SOURCE DATE	ALIQUOT	FINAL VOL.	FINAL CONC.	SOLVENT LOT
MOTOR OIL SECOND SOURCE	50,000 ug/mL	O2SI CAT#116390-02-SS LOT#244814-34637 OP: 07/06/16 Exp 07/06/17	200uL	10mL	1000ug/mL	MC #56061

DIESEL CCV 400ug/ml						
Prep: 11/03/16-D.P. Ex: 02/03/16						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
DIESEL STD.	1000 µg/mL	Diesel Std.	2000µL	5mL	400 µg/ml	MC
	PREP:	11/03/16				56098
	Exp:	06/03/17				

MOTOR OIL CCV 1000ppm						
Prep: 11/21/16-G.A. Ex: 2/21/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
MO STD.	2000 µg/mL	MO Std.	2500µL	5mL	1000 µg/ml	MC
	PREP:	10/26/16				56098
	Exp:	04/26/17				

Diesel Fuel #2
Conc. 50000 ug/ml
O2SI
CAT #011598-03
LOT# 237562-37102
OP: 10/25/16 RH
EXP: 10/25/17


MO Spike
Cat: 116390-01
Lot: 253355-367
Op: 07/13/16
Exp: 07/13/17


THC Surrogate
Cat: 110316-05
Lot: 266278-37
Op: 10/27/16
Exp: 10/27/17

_SEP011LL

Organic Extraction Worksheet

Method	THC Sep Fun Ext 3510C (LOW LEVEL)	Extraction Set	161227A	Extraction Method	SEP011LL	Units	mL

Spiked ID 1	Diesel Spike 12-27-16 exp 12-27-17		Surrogate ID 1	THC Surrogate 12-14-16 exp 12-14-17	
Spiked ID 2	Motor Oil Spike 12-12-16 exp 12-12-17		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	12/27/16 9:45	
Spiked ID 8			Ext. End Time:	12/29/16 11:00	
			GC Requires Extract By:	**12/29/16 0:00**	

pH1			Water Bath Temp Criteria	35,35,35 °
pH2				
pH3				

Spiked By: KY **Date** 12/27/16 **Witnessed By:** DL **Date** 12/27/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	161227A Blk				0.1	1	1500	2	7	12/27/16 9:45	
						equip	E-WB1				
2	161227A LCS-1		0.040	1	0.1	1	1500	2	7	12/27/16 9:45	
						equip	E-WB2				
3	161227A LCS-2		0.040	2	0.1	1	1500	2	7	12/27/16 9:45	
						equip	E-WB3				
4	161227A LCSD-1		0.040	1	0.1	1	1500	2	7	12/27/16 9:45	
						equip	E-WB1				
5	161227A LCSD-2		0.040	2	0.1	1	1500	2	7	12/27/16 9:45	
						equip	E-WB2				
6	AZ48083	AZ48083W16			0.1	1	1500	2	7	12/27/16 9:45	81842 1 WEEK
						equip	E-WB3				
7	AZ48084	AZ48084W10			0.1	1	1500	2	7	12/27/16 9:45	81842 1 WEEK
						equip	E-WB1				

Ky 12/29/16

Solvent and Lot#	
MC	56153
Na2SO4	16C255214
ph-indicator strips	HC 574756
Filter Paper	400112

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	D.P.
Date	12/29/16
Time	12:00
Refrigerator	Hobart

	Technician's Initials
Scanned By	DL
Sample Preparation	DL
Extraction	DL,KY,JR
Concentration	DL

Modified	12/29/16 11:27:51 AM

Reviewed By: Ky **Date** 12/29/16

12/29/16 11:27:59 AM

Ext_ID 14953654

Injection Log

Directory: G:\APOLLO\DATA\161028\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	1028002.D	1	MO 20ppb 10/28/16	Mix(B)	10-28-16 9:07:30
2	3	1028003.D	1	MO 50ppb 10/28/16	Mix(B)	10-28-16 9:28:13
3	4	1028004.D	1	MO 250ppb 10/28/16	Mix(B)	10-28-16 9:49:06
4	5	1028005.D	1	MO 1000ppb 10/28/16	Mix(B)	10-28-16 10:09:58
5	6	1028006.D	1	MO 1500ppb 10/28/16	Mix(B)	10-28-16 10:30:51
6	7	1028007.D	1	MO 2000ppb 10/28/16	Mix(B)	10-28-16 10:51:50
7	8	1028008.D	1	MO SS 1000ppb 7/6/16	Mix(B)	10-28-16 11:12:44
8	4	1103004.D	1	DIESEL 10ppb 11/3/16	Mix(A)	11-3-16 9:45:14
9	6	1103006.D	1	DIESEL 400ppb 11/3/16	Mix(A)	11-3-16 10:26:16
10	7	1103007.D	1	DIESEL 600ppb 11/3/16	Mix(A)	11-3-16 10:46:56
11	8	1103008.D	1	DIESEL 800ppb 11/3/16	Mix(A)	11-3-16 11:07:39
12	9	1103009.D	1	DIESEL 1000ppb 11/3/16	Mix(A)	11-3-16 11:28:31
13	11	1103011.D	1	DIESEL 100ppb 11/3/16	Mix(A)	11-3-16 12:56:47
14	12	1103012.D	1	DIESEL-SS 400ppb 8/1/16	Mix(A)	11-3-16 13:25:11
15	16	1229016.D	1	CCV: DIESEL 400ppb 12/8/16	Mix(A)	12-29-16 17:19:26
16	17	1229017.D	1	CCV: MO 1000ppb 12/8/16	Mix(B)	12-29-16 17:39:48
17	18	1229018.D	1.33333	161227A BLK 2/1500	Water	12-29-16 18:00:06
18	19	1229019.D	1.33333	161227A LCS-1 2/1500	Water	12-29-16 18:20:22
19	20	1229020.D	1.33333	161227A LCS-2 2/1500	Water	12-29-16 18:40:40
20	23	1229023.D	1.33333	AZ48083W16 2/1500	Water	12-29-16 19:41:28
21	24	1229024.D	1.33333	AZ48084W10 2/1500	Water	12-29-16 20:01:44
22	25	1229025.D	1	CCV: DIESEL 400ppb 12/8/16	Mix(A)	12-29-16 20:21:57
23	26	1229026.D	1	CCV: MO 1000ppb 12/8/16	Mix(B)	12-29-16 20:42:10

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank
EPA 8270D SIM

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161227W-48083 - 215033**
Batch ID: #SIMDO-161227A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/27/16	12/27/16
BLANK	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/27/16	12/27/16
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	12/27/16	12/27/16
BLANK	SURROGATE: 2-FLUORBIPHENY	57.0	53-106			%	12/27/16	12/27/16
BLANK	SURROGATE: NITROBENZENE-	67.0	55-111			%	12/27/16	12/27/16
BLANK	SURROGATE: TERPHENYL-D14 (	77.1	58-132			%	12/27/16	12/27/16

Quant Method: L1212P.M
Run #: 1212L176
Instrument: Linus
Sequence: L161212
Initials: RHA

GC SC-Blank-REG MDLs-DOD
Printed: 12/28/16 9:57:51 AM

Laboratory Control Spike Recovery
EPA 8270D SIM

APPL ID: **161227W-48083 LCS - 215033**
Batch ID: #SIMDO-161227A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1-METHYLNAPHTHALENE	5.00	4.42	88.4	41-115
2-METHYLNAPHTHALENE	5.00	4.38	87.6	39-114
NAPHTHALENE	5.00	3.87	77.4	43-114
SURROGATE: 2-FLUORBIPHENYL (S)	5.00	4.00	80.0	53-106
SURROGATE: NITROBENZENE-D5 (S)	5.00	4.28	85.6	55-111
SURROGATE: TERPHENYL-D14 (S)	5.00	4.60	92.0	58-132

Comments: _____

Primary	SPK
Quant Method :	L1212P.M
Extraction Date :	12/27/16
Analysis Date :	12/27/16
Instrument :	Linus
Run :	1212L177
Initials :	RHA

Printed: 12/28/16 9:57:44 AM
APPL Standard LCS

8270D-SIM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81842

Case No: 81842 Date Analyzed: 12/27/16

Matrix: WATER Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: 2-FLUORBIPHENYL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161227A-BLK	Blank	53-106	57.0		55-111	67.0	
161227A-LCS	Lab Control Spike	53-106	80.0		55-111	85.6	
AZ48083	ERH157	53-106	60.6		55-111	67.6	
AZ48084	ERH158	53-106	57.5		55-111	67.2	

Comments: Batch: #SIMDO-161227A

8270D-SIM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81842

Case No: 81842 Date Analyzed: 12/27/16

Matrix: WATER Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: TERPHENYL-D14 (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
161227A-BLK	Blank	58-132	77.1				
161227A-LCS	Lab Control Spike	58-132	92.0				
AZ48083	ERH157	58-132	81.3				
AZ48084	ERH158	58-132	79.9				

Comments: Batch: #SIMDO-161227A

8270D-SIM

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81842

Case No: 81842 Date Analyzed: 12/27/16

Matrix: WATER Instrument: Linus

Blank ID: 161227A-BLK Time Analyzed: 1653

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161227A-BLK	Blank	1212L176	12/27/16 1653
161227A-LCS	Lab Control Spike	1212L177	12/27/16 1727
AZ48083	ERH157	1212L179	12/27/16 1833
AZ48084	ERH158	1212L180	12/27/16 1907

Comments: Batch: #SIMDO-161227A

Printed: 12/28/16 9:57:42 AM

Form 4, Blank Summary

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81842
Matrix: Water
ID: SV Tune 11/15/16

SDG No: 81842
Date Analyzed: 12/12/16
Instrument: Linus
Time Analyzed: 10:19

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.1 ug/ml PAH 12/12/	1212L005.D	12/12/16 10:36
2		0.2 ug/ml PAH 12/12/	1212L006.D	12/12/16 11:09
3		5.0 ug/ml PAH 12/12/	1212L009.D	12/12/16 12:49
4		10.0 ug/ml PAH 12/12	1212L010.D	12/12/16 13:22
5		50.0 ug/ml PAH 12/12	1212L011.D	12/12/16 13:54
6		100.0 ug/ml PAH 12/1	1212L012.D	12/12/16 14:28
7		0.5 ug/ml PAH 12/12/	1212L013.D	12/12/16 15:01
8		1.0 ug/ml PAH 12/12/	1212L014.D	12/12/16 15:34
9		SS PAH 12/12/16	1212L015.D	12/12/16 16:07
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	30 - 60% of mass 198	31.0
68	0 - 2% of mass 69	0.0
69	100 - 100% of mass 69	100.0
70	0 - 2% of mass 69	0.6
127	40 - 60% of mass 198	50.3
197	0 - 1% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.9
275	10 - 30% of mass 198	26.2
365	1 - 100% of mass 198	2.6
441	0.01 - 100% of mass 443	76.7
442	40 - 150% of mass 198	65.3
443	17 - 23% of mass 442	21.6

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81842
Matrix: Water
ID: SV Tune 12/15/16

SDG No: 81842
Date Analyzed: 12/27/16
Instrument: Linus
Time Analyzed: 12:11

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		5.0 ug/ml PAH 12/27/	1212L168.D	12/27/16 12:28
2	Blank	161227A BLK 1/1000	1212L176.D	12/27/16 16:53
3	Lab Control Spike	161227A LCS-1 1/1000	1212L177.D	12/27/16 17:27
4	ERH157	AZ48083W18 1/1070	1212L179.D	12/27/16 18:33
5	ERH158	AZ48084W11 1/1070	1212L180.D	12/27/16 19:07
6		5.0 ug/ml PAH 12/27/	1212L182.D	12/27/16 19:56
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	30 - 60% of mass 198	30.7
68	0 - 2% of mass 69	0.0
69	100 - 100% of mass 69	100.0
70	0 - 2% of mass 69	0.5
127	40 - 60% of mass 198	49.1
197	0 - 1% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.9
275	10 - 30% of mass 198	26.6
365	1 - 100% of mass 198	2.6
441	0.01 - 100% of mass 443	77.3
442	40 - 150% of mass 198	70.8
443	17 - 23% of mass 442	21.3

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81842

Lab File ID (Standard): 1212L009.D Date Analyzed: 12/12/16

Instrument ID: Linus Time Analyzed: 12:49

GC Column: ID: Heated Purge: (Y/N)

		Napthalene-D8(IS)		Acenaphthene-D10(IS)		Phenanthrene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1900	5.87	1038	7.92	1930	9.84
	UPPER LIMIT	3800	6.37	2076	8.42	3860	10.34
	LOWER LIMIT	950	5.37	519	7.42	965	9.34
	SAMPLE NO.						
01	5.0 ug/ml PAH 12/27/16	2070	5.87	1154	7.92	2091	9.84
02	161227A BLK 1/1000	2080	5.88	1184	7.93	2035	9.86
03	161227A LCS-1 1/1000	1729	5.88	973	7.92	1751	9.85
04	AZ48083W18 1/1070	2079	5.88	1168	7.92	2025	9.86
05	AZ48084W11 1/1070	1969	5.88	1124	7.93	1948	9.86
06	5.0 ug/ml PAH 12/27/16	1878	5.88	1049	7.92	1903	9.85
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 81842

Lab File ID (Standard): 1212L009.D Date Analyzed: 12/12/16

Instrument ID: Linus Time Analyzed: 12:49

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Chrysene-D12(IS)		Perylene-D12(IS)			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	2367	16.79	2172	20.54		
	UPPER LIMIT	4734	17.29	4344	21.04		
	LOWER LIMIT	1184	16.29	1086	20.04		
	SAMPLE NO.						
01	5.0 ug/ml PAH 12/27/16	2639	16.80	2445	20.56		
02	161227A BLK 1/1000	2572	16.84	2419	20.61		
03	161227A LCS-1 1/1000	2255	16.80	2141	20.57		
04	AZ48083W18 1/1070	2611	16.82	2436	20.59		
05	AZ48084W11 1/1070	2522	16.82	2304	20.59		
06	5.0 ug/ml PAH 12/27/16	2449	16.80	2264	20.57		
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

ORGANICS

Sample Data

APPL, INC.

EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH157
Sample Collection Date: 12/21/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81842
APPL ID: AZ48083
QCG: #SIMDO-161227A-215033

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/27/16	12/27/16
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/27/16	12/27/16
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	12/27/16	12/27/16
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	60.6	53-106			%	12/27/16	12/27/16
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	67.6	55-111			%	12/27/16	12/27/16
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	81.3	58-132			%	12/27/16	12/27/16

Quant Method: L1212P.M
Run #: 1212L179
Instrument: Linus
Sequence: L161212
Dilution Factor: 1
Initials: RHA

Printed: 12/28/16 9:57:39 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L179.D Vial: 79
Acq On : 27 Dec 16 18:33 Operator: MA
Sample : AZ48083W18 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Dec 28 8:57 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	2079	2.50000	ppb	0.01
6) Acenaphthene-D10(IS)	7.92	164	1168	2.50000	ppb	0.00
11) Phenanthrene-D10(IS)	9.86	188	2025	2.50000	ppb	0.02
15) Chrysene-D12(IS)	16.82	240	2611	2.50000	ppb	0.03
21) Perylene-D12(IS)	20.59	264	2436	2.50000	ppb	0.05
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.05	82	842	3.15812	ppb	0.01
Spiked Amount 4.673			Recovery = 67.581%			
7) Surrogate Recovery (FBP)	7.13	172	2060	2.83136	ppb	0.00
Spiked Amount 4.673			Recovery = 60.583%			
17) Surrogate Recovery (TPH)	13.81	244	3335	3.79731	ppb	0.00
Spiked Amount 4.673			Recovery = 81.256%			

Target Compounds Qvalue

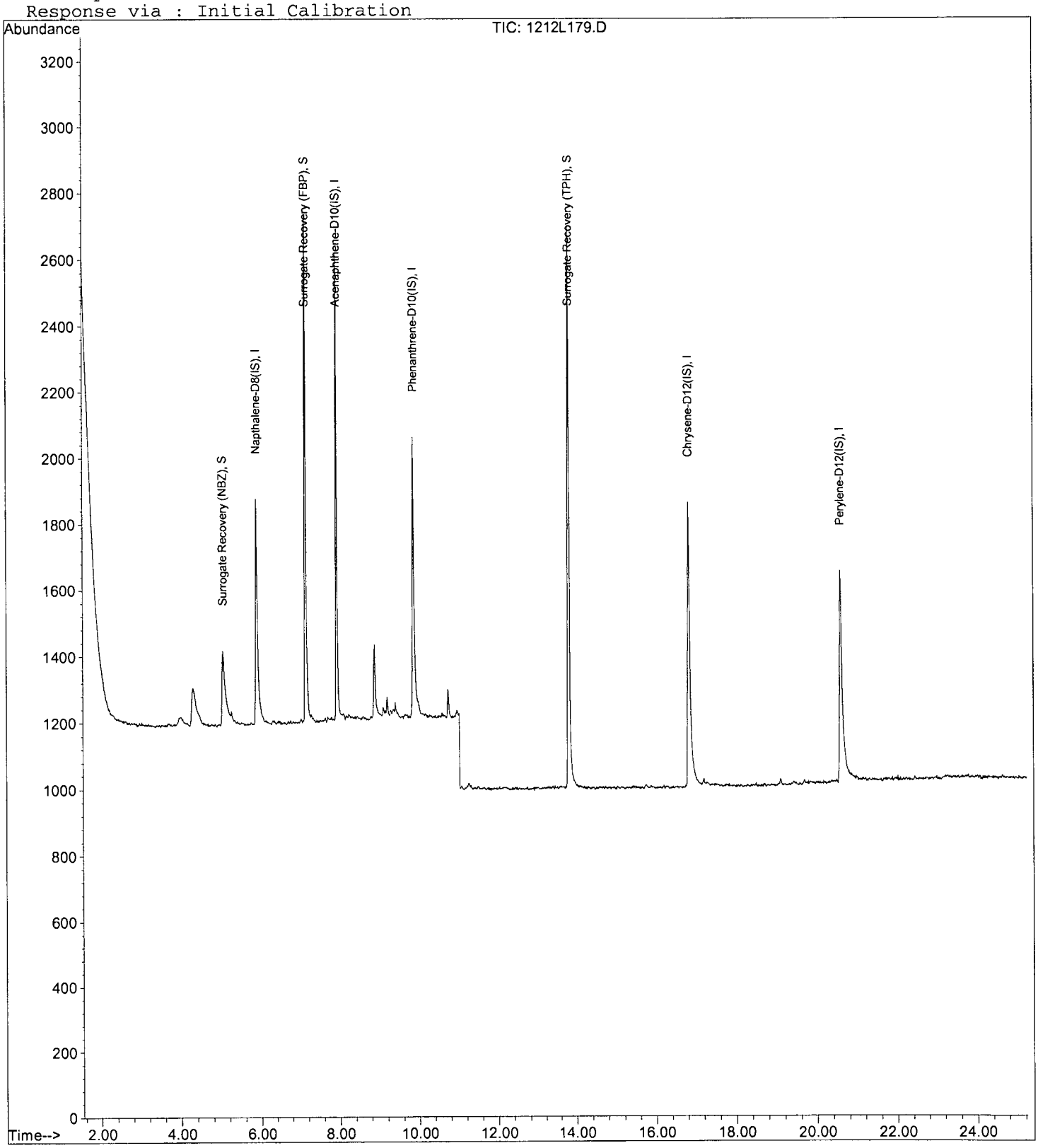
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L179.D Vial: 79
Acq On : 27 Dec 16 18:33 Operator: MA
Sample : AZ48083W18 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Dec 28 8:57 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH158
Sample Collection Date: 12/21/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81842
APPL ID: AZ48084
QCG: #SIMDO-161227A-215033

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/27/16	12/27/16
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/27/16	12/27/16
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	12/27/16	12/27/16
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	57.5	53-106			%	12/27/16	12/27/16
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	67.2	55-111			%	12/27/16	12/27/16
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	79.9	58-132			%	12/27/16	12/27/16

Quant Method: L1212P.M
Run #: 1212L180
Instrument: Linus
Sequence: L161212
Dilution Factor: 1
Initials: RHA

Printed: 12/28/16 9:57:39 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L180.D Vial: 80
Acq On : 27 Dec 16 19:07 Operator: MA
Sample : AZ48084W11 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Dec 28 8:58 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	1969	2.50000	ppb	0.01
6) Acenaphthene-D10(IS)	7.93	164	1124	2.50000	ppb	0.01
11) Phenanthrene-D10(IS)	9.86	188	1948	2.50000	ppb	0.02
15) Chrysene-D12(IS)	16.82	240	2522	2.50000	ppb	0.03
21) Perylene-D12(IS)	20.59	264	2304	2.50000	ppb	0.05
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.05	82	793	3.14138	ppb	0.01
Spiked Amount 4.673			Recovery = 67.217%			
7) Surrogate Recovery (FBP)	7.15	172	1887	2.68801	ppb	0.01
Spiked Amount 4.673			Recovery = 57.523%			
17) Surrogate Recovery (TPH)	13.81	244	3168	3.73255	ppb	0.00
Spiked Amount 4.673			Recovery = 79.886%			

Target Compounds Qvalue

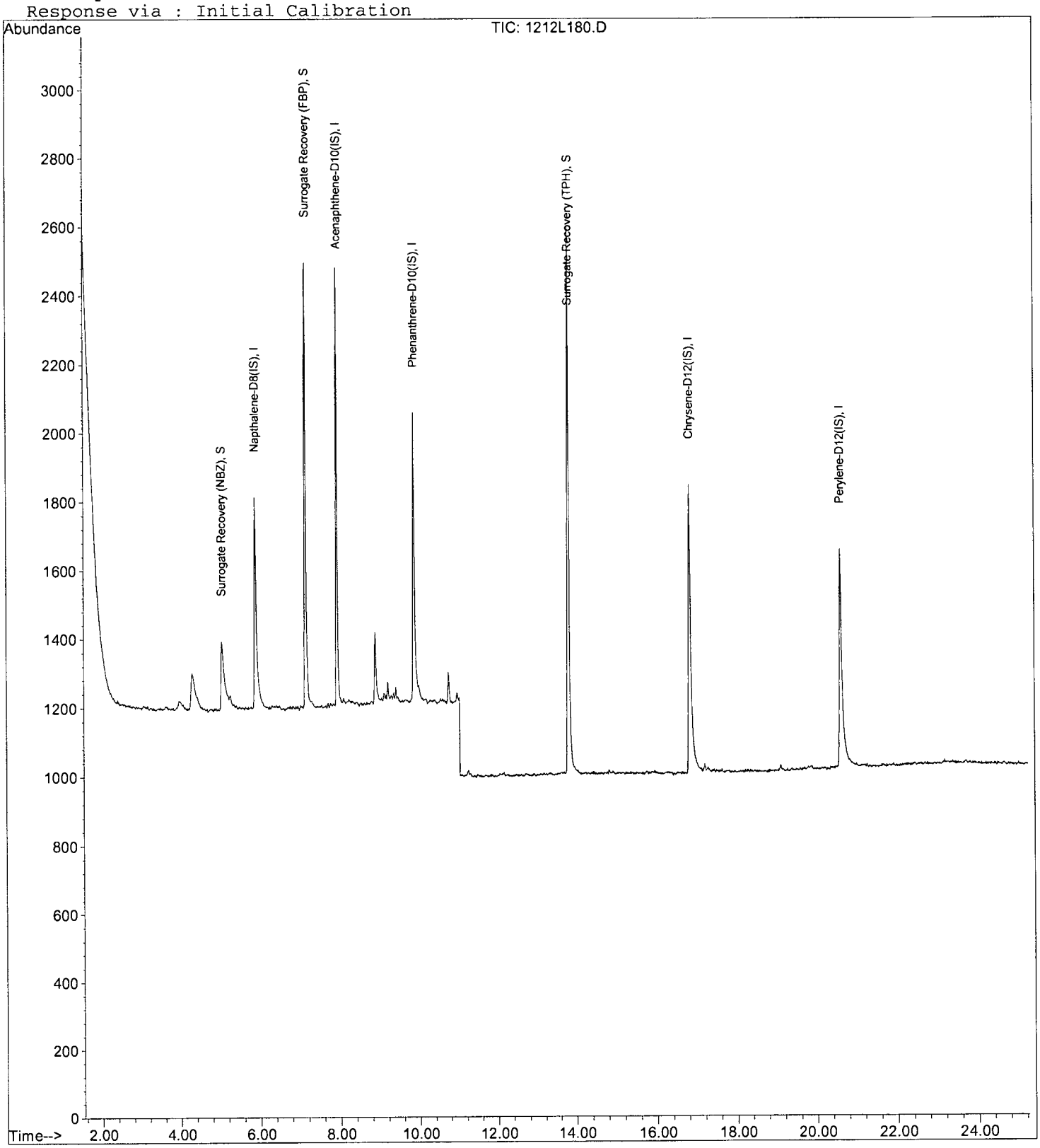
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L180.D Vial: 80
Acq On : 27 Dec 16 19:07 Operator: MA
Sample : AZ48084W11 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Dec 28 8:58 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



ORGANICS

Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/12/16
Matrix: Instrument: Linus Initials:

			1212L005.D	1212L006.D	1212L013.D	1212L014.D	1212L009.D	1212L010.D	1212L011.D	1212L012.D							
		Compound	0.1	0.2	0.5	1	5	10	50	100			Avg	%RSD			
1	I	Napthalene-D8(IS)															
2	SL	Surrogate Recovery (NBZ)			0.1025	0.1761	0.2637	0.3064	0.3197	0.3127			0.25	36	SL	1.000	
3	TM	Naphthalene	1.031	0.9780	0.9862	0.9477	1.118	1.054	1.003	0.9513			1.0	5.7	TM		
4	TM	2-Methylnaphthalene	0.5550	0.5854	0.5149	0.5323	0.7182	0.6983	0.6712	0.6317			0.61	13	TM		
5	TM	1-Methylnaphthalene	0.7135	0.7853	0.6711	0.6467	0.7284	0.6774	0.6350	0.5896			0.68	8.9	TM		
6	I	Acenaphthene-D10(IS)															
7	SL	Surrogate Recovery (FBP)	2.045	1.941	1.395	1.435	1.344	1.504	1.449	1.373			1.6	17	SL	0.999	
8	TM	Acenaphthylene	1.826	1.954	1.831	1.759	2.172	2.083	2.017	1.896			1.9	7.3	TM		
9	*TM	Acenaphthene	1.241	1.216	1.124	1.053	1.283	1.224	1.174	1.102			1.2	6.7	*TM		
10	TM	Fluorene	1.363	1.307	1.278	1.221	1.525	1.462	1.419	1.328			1.4	7.4	TM		
11	I	Phenanthrene-D10(IS)															
12	TM	Phenanthrene	1.035	1.103	0.9894	0.9754	1.171	1.129	1.120	1.072			1.1	6.5	TM		
13	TM	Anthracene	0.9809	0.8442	0.8021	0.8311	1.116	1.103	1.105	1.012			0.97	14	TM		
14	*TM	Fluoranthene	1.499	1.511	1.288	1.295	1.594	1.582	1.618	1.561			1.5	8.8	*TM		
15	I	Chrysene-D12(IS)															
16	TM	Pyrene	1.265	1.248	1.144	1.116	1.350	1.290	1.282	1.228			1.2	6.2	TM		
17	SL	Surrogate Recovery (TPH)	1.141	1.125	0.7856	0.7730	0.6907	0.7963	0.8068	0.7547			0.86	20	SL	0.999	
18	TM	Benz (a) anthracene	1.153	0.9846	0.9136	0.8374	1.173	1.136	1.200	1.138			1.1	13	TM		
19	TM	Chrysene	1.231	1.235	1.285	1.193	1.266	1.202	1.143	1.075			1.2	5.7	TM		
20	TM	Indeno (1,2,3-cd) pyrene	1.253	1.162	0.9852	1.016	1.310	1.273	1.125	1.175			1.2	10	TM		
21	I	Perylene-D12(IS)															
22	TM	Benzo (b) fluoranthene	0.9076	0.9504	0.9240	0.9294	1.188	1.191	1.264	1.230			1.1	15	TM		
23	TM	Benzo (k) fluoranthene	1.126	1.186	1.191	1.043	1.104	1.110	1.151	1.129			1.1	4.2	TM		
24	*TM	Benzo (a) pyrene	1.011	1.095	1.051	1.010	1.199	1.156	1.179	1.156			1.1	6.9	*TM		
25	TM	Dibenz (a,h) anthracene	1.011	0.8783	0.8525	0.9697	1.189	1.150	1.168	1.100			1.0	13	TM		
26	TM	Benzo (g,h,i) perylene	0.8732	0.9963	0.9608	0.9222	1.163	1.125	1.141	0.9740			1.0	11	TM		
27																	
28																	
29																	
30																	
31																	
32																	
33																	
34																	
35																	

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L005.D Vial: 3
Acq On : 12 Dec 16 10:36 Operator: MA
Sample : 0.1 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 13 14:49 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:03:27 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

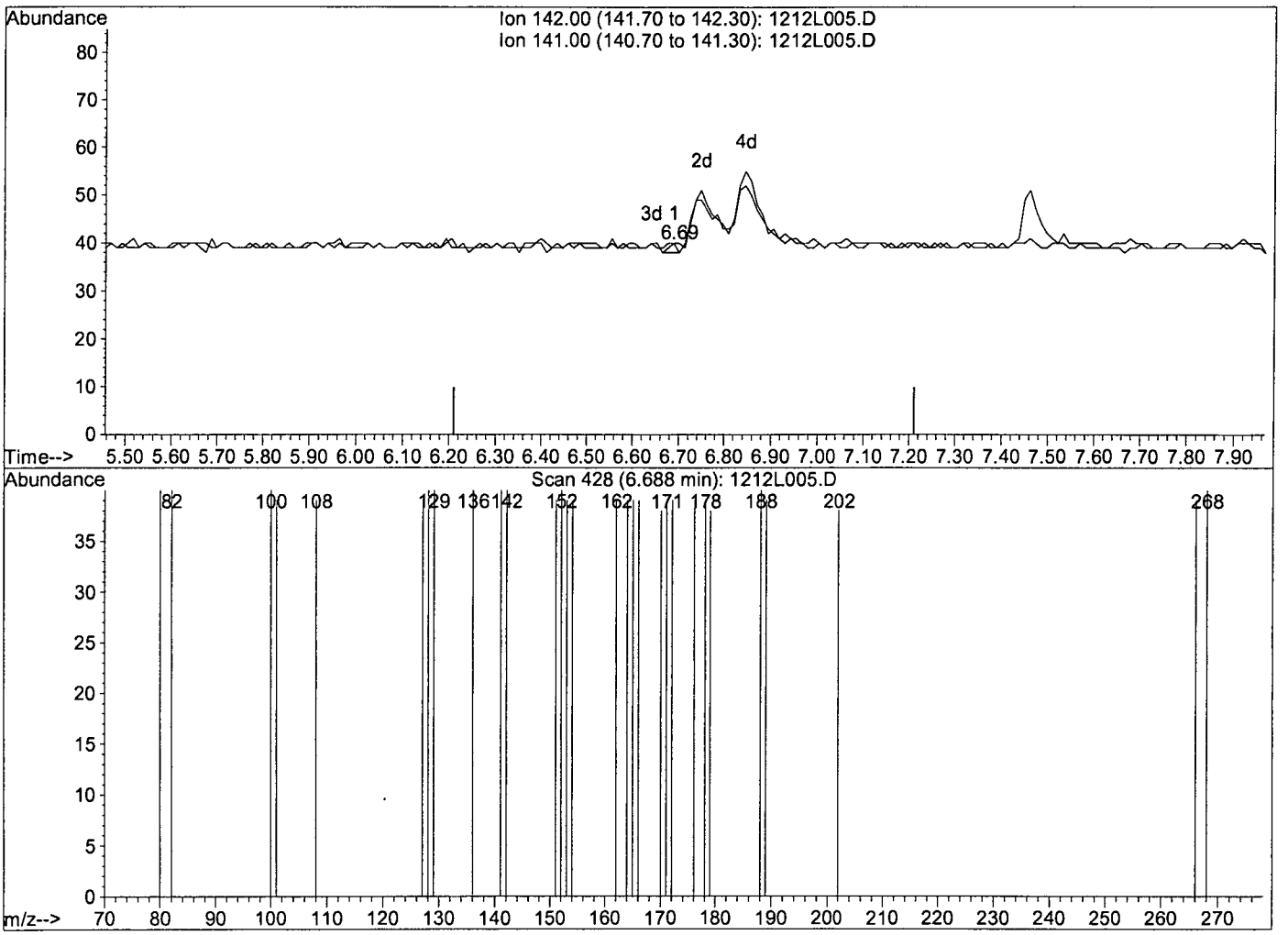
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	1892	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.92	164	1027	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.85	188	1835	2.50000	ppb		0.01
15) Chrysene-D12(IS)	16.80	240	2234	2.50000	ppb		0.01
21) Perylene-D12(IS)	20.55	264	2176	2.50000	ppb		0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.02	82	1	0.13676	ppb		-0.01
Spiked Amount 5.000			Recovery = 2.740%				
7) Surrogate Recovery (FBP)	7.16	172	42	-0.08389	ppb		0.02
Spiked Amount 5.000			Recovery = -1.680%				
17) Surrogate Recovery (TPH)	13.84	244	51	-0.04876	ppb		0.02
Spiked Amount 5.000			Recovery = -0.980%				
Target Compounds							Qvalue
3) Naphthalene	5.89	128	78	0.10219	ppb		97
4) 2-Methylnaphthalene	6.75	142	42m	-0.29925	ppb		62
5) 1-Methylnaphthalene	6.84	142	54	0.10480	ppb		79
8) Acenaphthylene	7.77	152	75	0.09400	ppb		97
9) Acenaphthene	7.95	154	51	0.10546	ppb		92
10) Fluorene	8.59	166	56	0.10002	ppb		95
12) Phenanthrene	9.89	178	76	0.09636	ppb	#	92
13) Anthracene	10.01	178	72	0.10069	ppb	#	89
14) Fluoranthene	12.67	202	110	0.10035	ppb		96
16) Pyrene	13.30	202	113	0.10196	ppb	#	89
18) Benz (a) anthracene	16.78	228	103	0.10803	ppb		95
19) Chrysene	16.87	228	110	0.10226	ppb	#	87
20) Indeno (1,2,3-cd) pyrene	22.93	276	112	0.10781	ppb	#	94
22) Benzo (b) fluoranthene	19.68	252	79	0.08458	ppb		98
23) Benzo (k) fluoranthene	19.75	252	98m	0.24586	ppb		88
24) Benzo (a) pyrene	20.31	252	88	0.09132	ppb		95
25) Dibenz (a,h) anthracene	22.96	278	88	-0.17327	ppb		89
26) Benzo (g,h,i) perylene	23.45	276	76	0.08566	ppb		89

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L005.D Vial: 3
Acq On : 12 Dec 16 10:36 Operator: MA
Sample : 0.1 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 14:10 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:13:16 2016
Response via : Multiple Level Calibration



TIC: 1212L005.D

(4) 2-Methylnaphthalene (TM)

6.69min -0.3822ppb

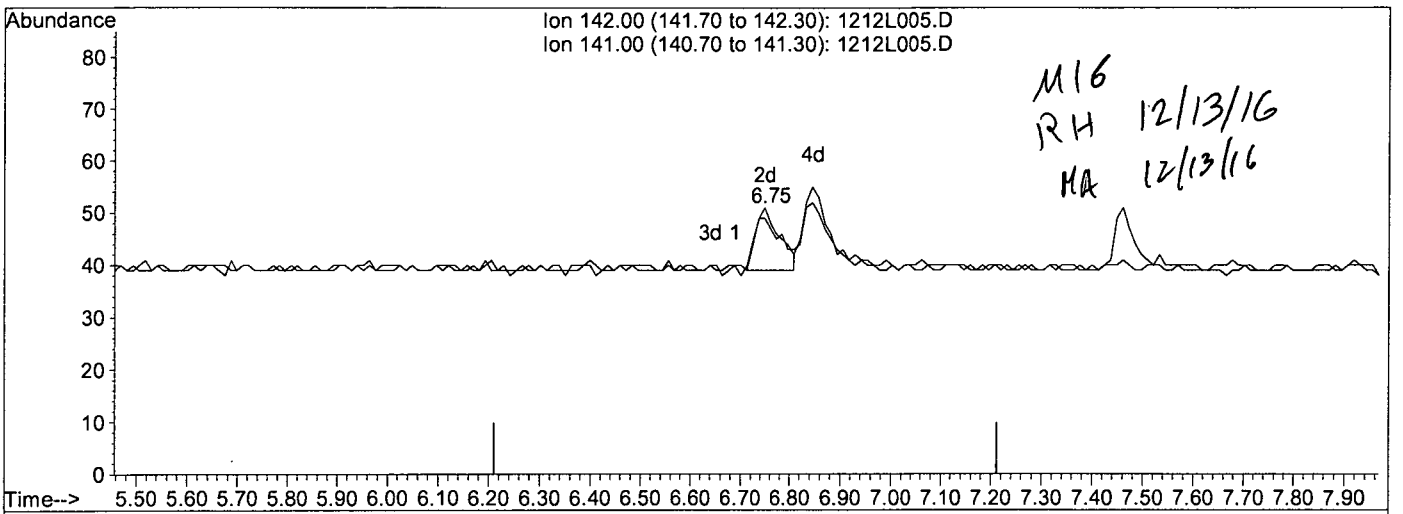
response 2

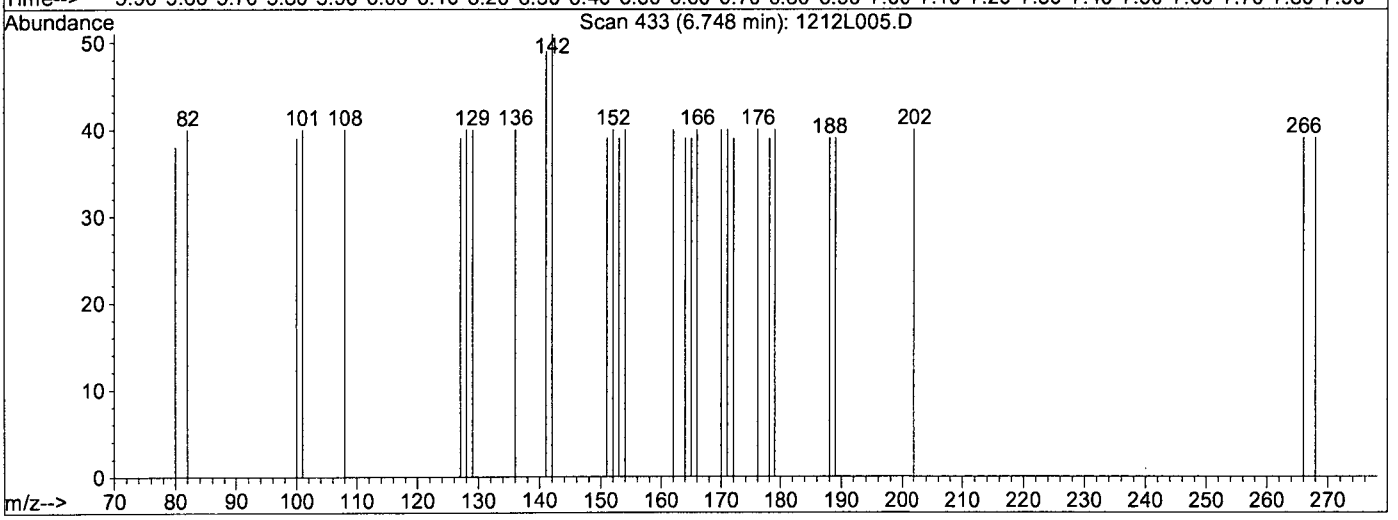
Ion	Exp%	Act%
142.00	100	100
141.00	84.90	50.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L005.D Vial: 3
Acq On : 12 Dec 16 10:36 Operator: MA
Sample : 0.1 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 14:49 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:13:16 2016
Response via : Multiple Level Calibration





TIC: 1212L005.D

(4) 2-Methylnaphthalene (TM)

6.75min -0.2992ppb m

response 42

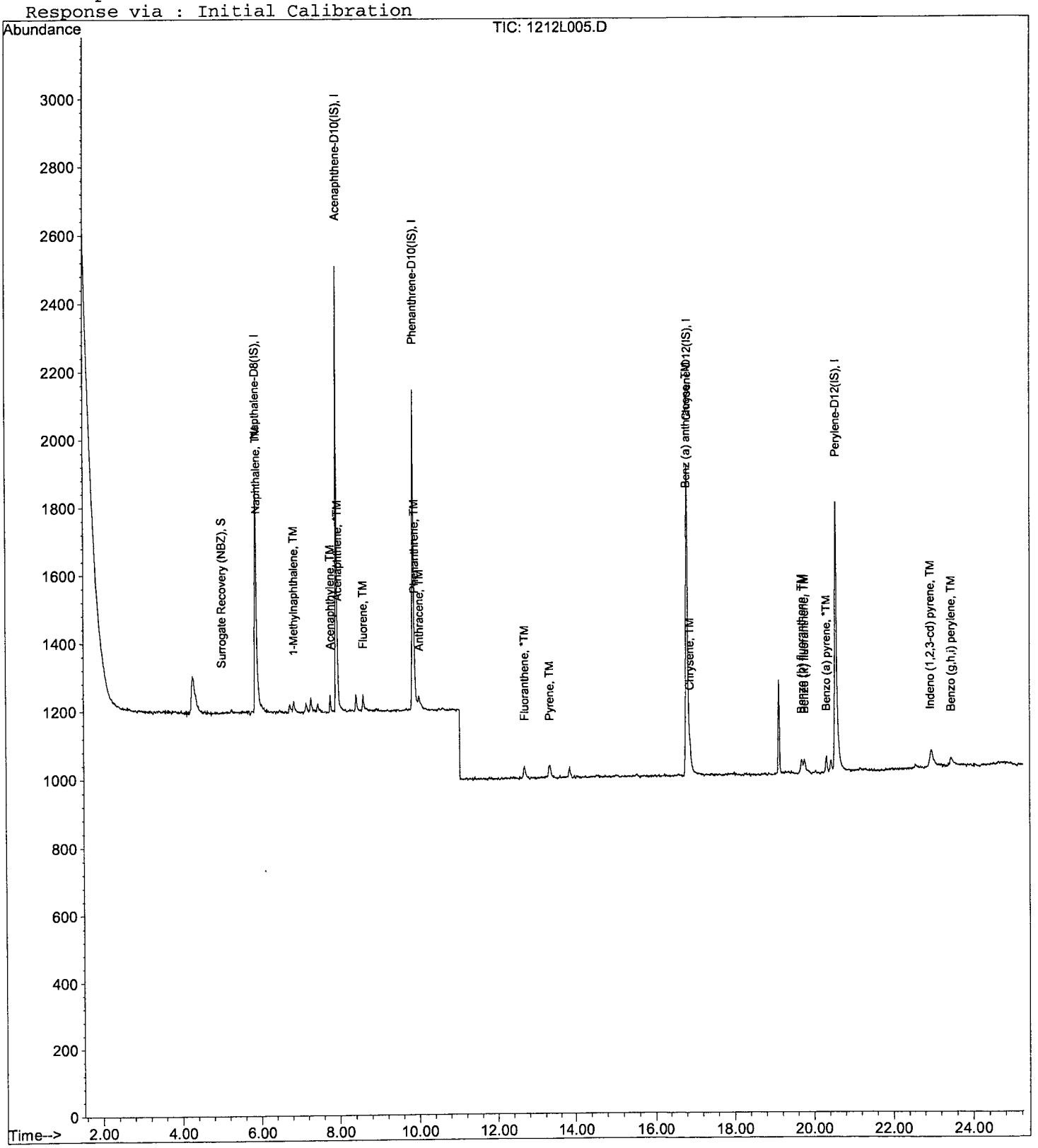
Ion	Exp%	Act%
142.00	100	100
141.00	84.90	96.08
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L005.D Vial: 3
Acq On : 12 Dec 16 10:36 Operator: MA
Sample : 0.1 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 13 14:49 2016 Quant Results File: L1212P.RES

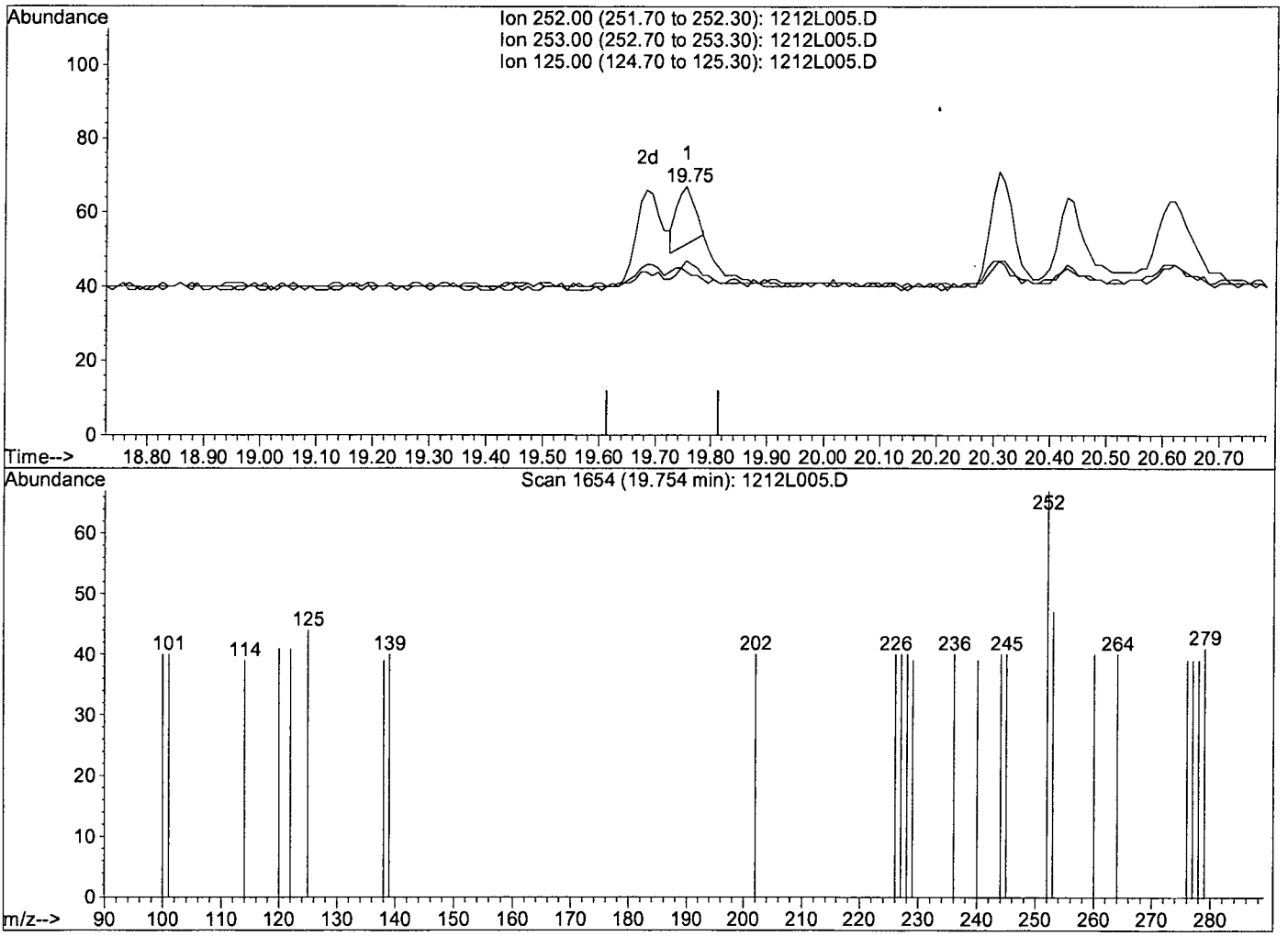
Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L005.D Vial: 3
Acq On : 12 Dec 16 10:36 Operator: MA
Sample : 0.1 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 14:04 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:06:14 2016
Response via : Multiple Level Calibration



TIC: 1212L005.D

(23) Benzo (k) fluoranthene (TM)

19.75min 0.1831ppb

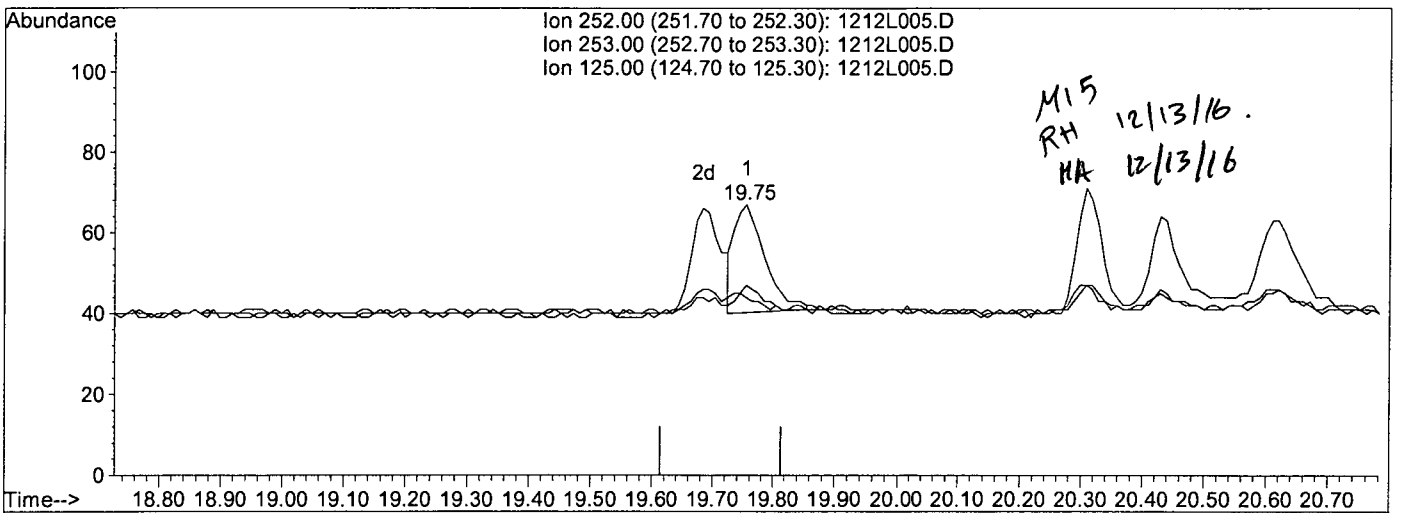
response 36

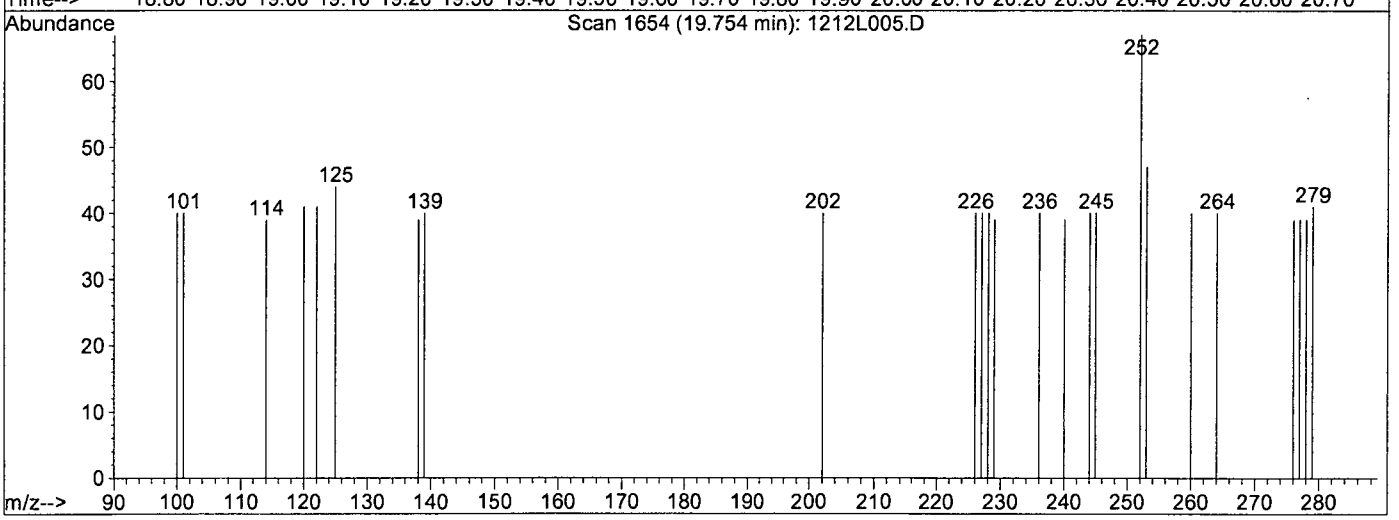
Ion	Exp%	Act%
252.00	100	100
253.00	23.40	30.77#
125.00	13.10	15.38
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L005.D Vial: 3
Acq On : 12 Dec 16 10:36 Operator: MA
Sample : 0.1 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 14:10 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:06:14 2016
Response via : Multiple Level Calibration





TIC: 1212L005.D

(23) Benzo (k) fluoranthene (TM)

19.75min 0.2459ppb m

response 98

Ion	Exp%	Act%
252.00	100	100
253.00	23.40	70.15#
125.00	13.10	65.67#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L006.D Vial: 4
Acq On : 12 Dec 16 11:09 Operator: MA
Sample : 0.2 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 13 14:11 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:03:42 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.88	136	1751	2.50000	ppb		0.01
6) Acenaphthene-D10(IS)	7.92	164	966	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.85	188	1688	2.50000	ppb		0.01
15) Chrysene-D12(IS)	16.80	240	2044	2.50000	ppb		0.01
21) Perylene-D12(IS)	20.55	264	1907	2.50000	ppb		0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.06	82	4	0.15069	ppb		0.02
Spiked Amount 5.000			Recovery =	3.020%			
7) Surrogate Recovery (FBP)	7.17	172	75	-0.01749	ppb		0.04
Spiked Amount 5.000			Recovery =	-0.340%			
17) Surrogate Recovery (TPH)	13.85	244	92	0.02394	ppb		0.03
Spiked Amount 5.000			Recovery =	0.480%			
Target Compounds							Qvalue
3) Naphthalene	5.90	128	137	0.19395	ppb		95
4) 2-Methylnaphthalene	6.75	142	82	-0.20257	ppb		95
5) 1-Methylnaphthalene	6.84	142	110	0.23066	ppb		96
8) Acenaphthylene	7.77	152	151	0.20121	ppb		98
9) Acenaphthene	7.97	154	94	0.20664	ppb		97
10) Fluorene	8.59	166	101	0.19179	ppb		99
12) Phenanthrene	9.90	178	149	0.20537	ppb		95
13) Anthracene	10.01	178	114	0.17332	ppb	#	92
14) Fluoranthene	12.67	202	204	0.20231	ppb	#	91
16) Pyrene	13.30	202	204	0.20118	ppb		95
18) Benz (a) anthracene	16.79	228	161	0.18456	ppb		93
19) Chrysene	16.88	228	202	0.20524	ppb		96
20) Indeno (1,2,3-cd) pyrene	22.92	276	190	0.19989	ppb	#	93
22) Benzo (b) fluoranthene	19.68	252	145	0.17714	ppb		99
23) Benzo (k) fluoranthene	19.75	252	181m	0.35570	ppb		91
24) Benzo (a) pyrene	20.31	252	167	0.19775	ppb		97
25) Dibenz (a,h) anthracene	22.97	278	134	-0.10610	ppb		95
26) Benzo (g,h,i) perylene	23.45	276	152	0.19548	ppb		95

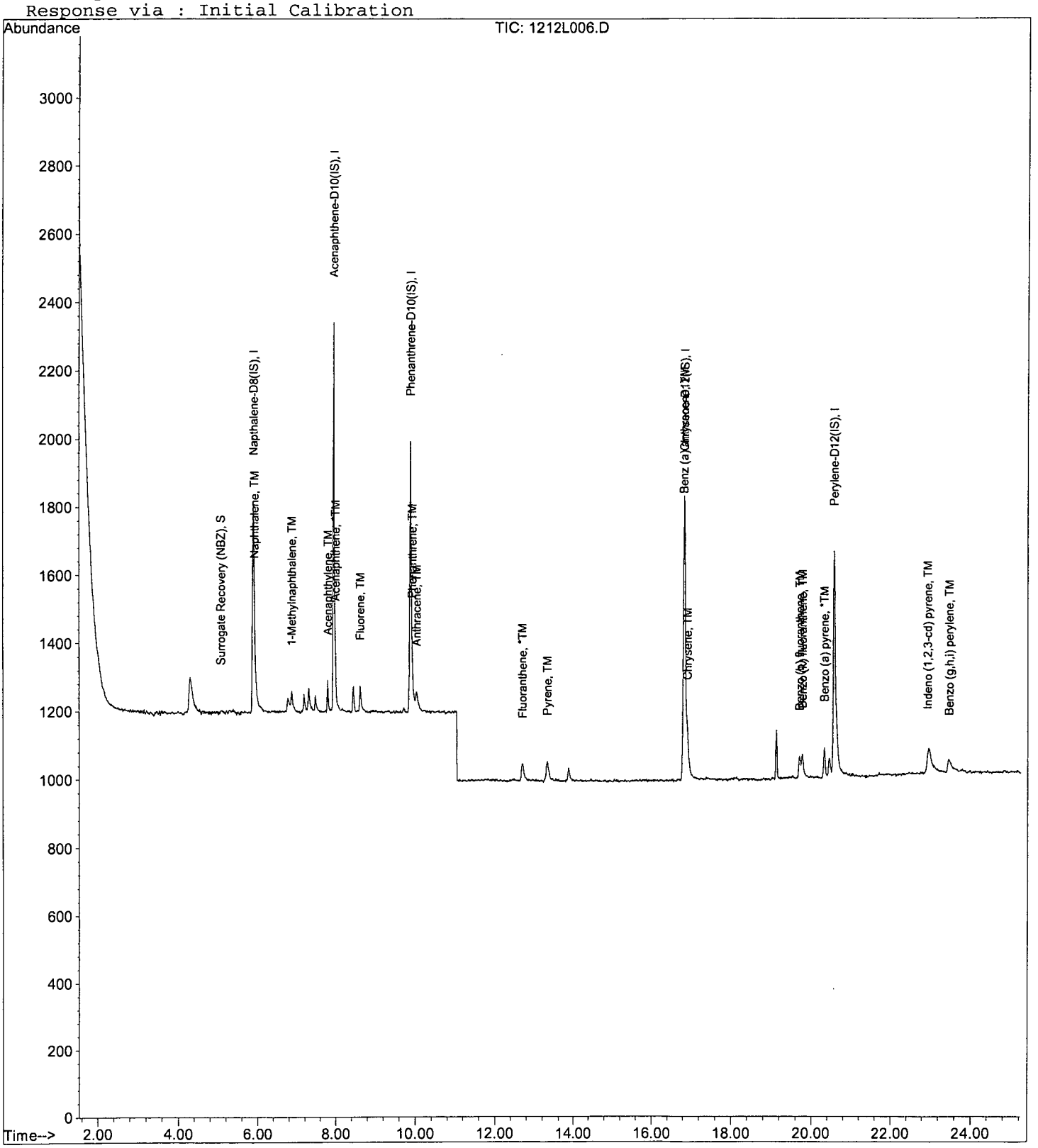
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L006.D Vial: 4
Acq On : 12 Dec 16 11:09 Operator: MA
Sample : 0.2 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 13 14:11 2016 Quant Results File: L1212P.RES

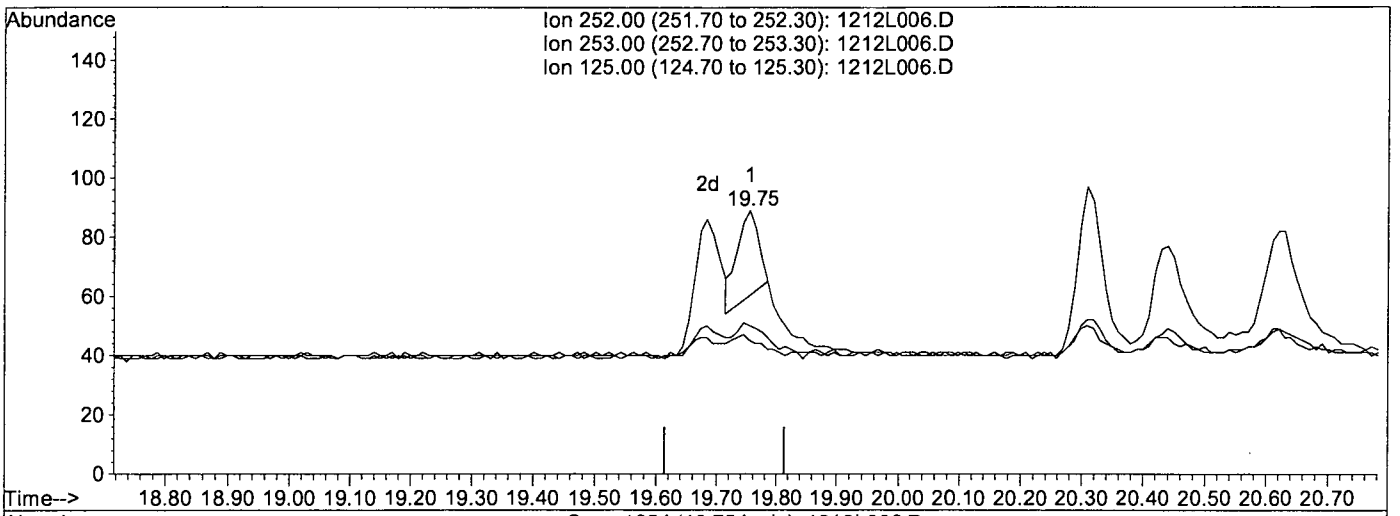
Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration

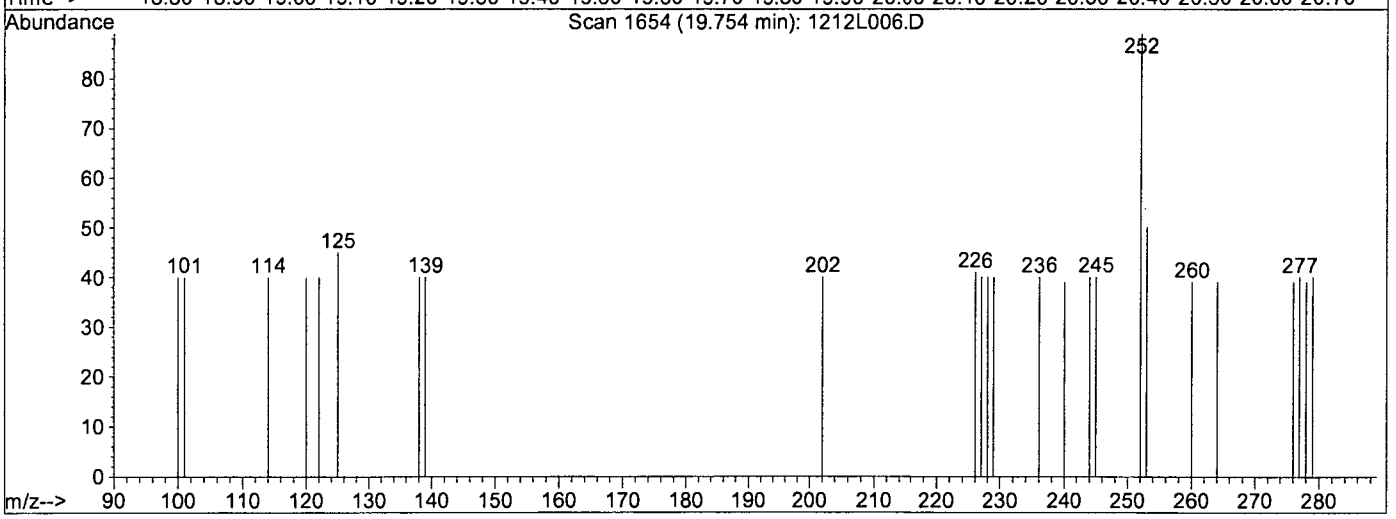


Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L006.D Vial: 4
Acq On : 12 Dec 16 11:09 Operator: MA
Sample : 0.2 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 14:04 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:06:14 2016
Response via : Multiple Level Calibration





TIC: 1212L006.D

(23) Benzo (k) fluoranthene (TM)

19.75min 0.2321ppb

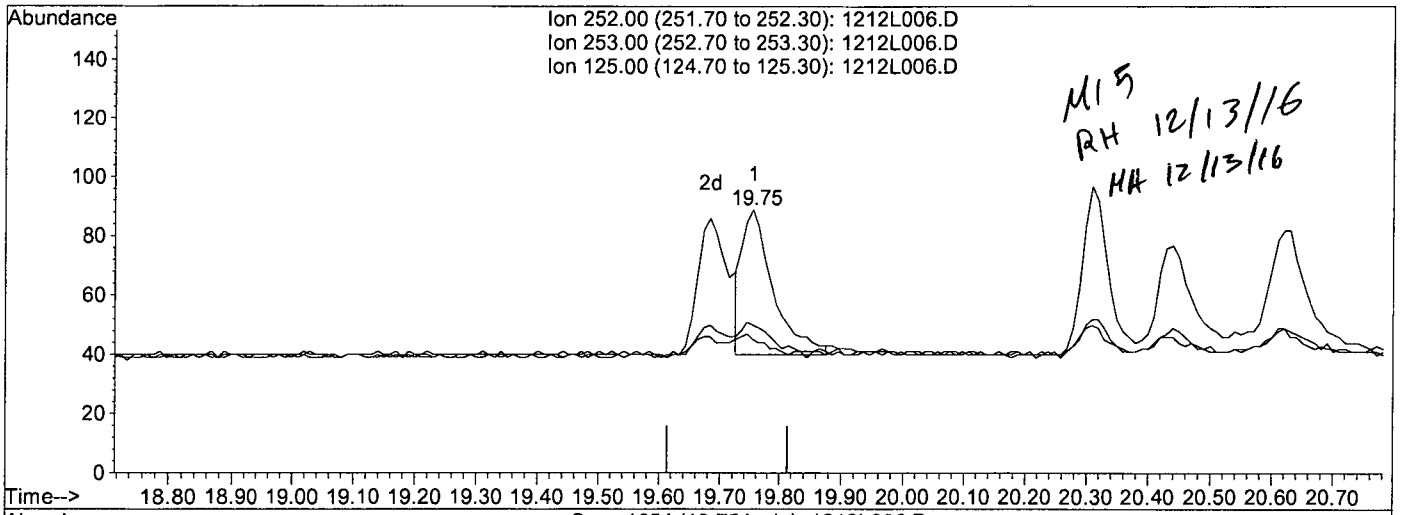
response 74

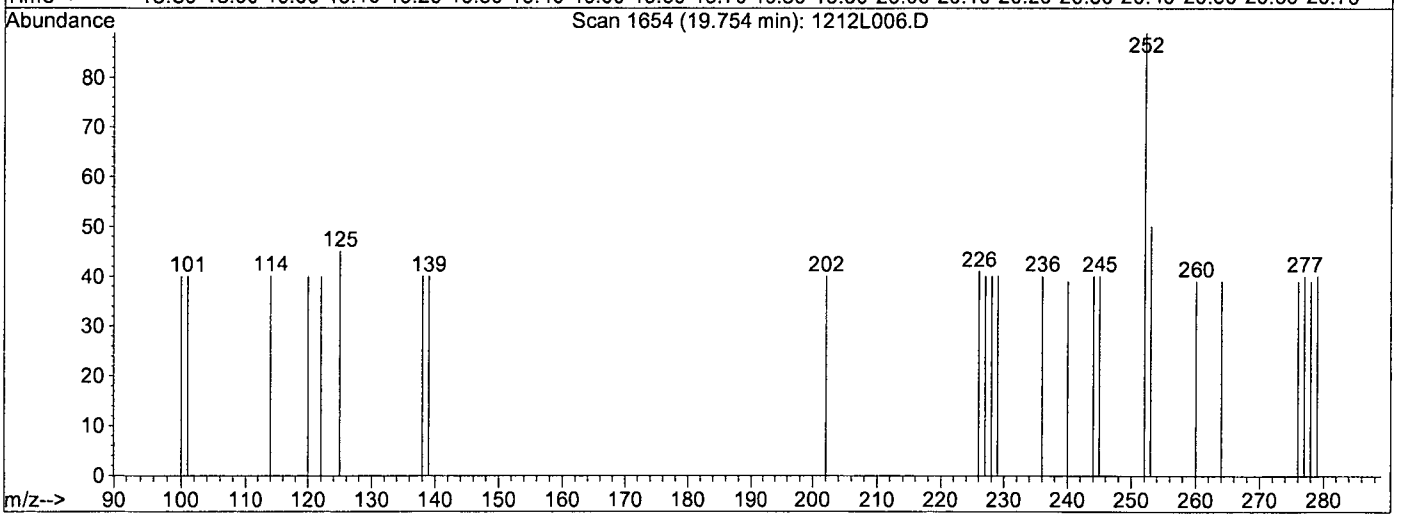
Ion	Exp%	Act%
252.00	100	100
253.00	23.40	16.67
125.00	13.10	12.50
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L006.D Vial: 4
Acq On : 12 Dec 16 11:09 Operator: MA
Sample : 0.2 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 14:11 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:06:14 2016
Response via : Multiple Level Calibration





TIC: 1212L006.D

(23) Benzo (k) fluoranthene (TM)

19.75min 0.3557ppb m

response 181

Ion	Exp%	Act%
252.00	100	100
253.00	23.40	56.18#
125.00	13.10	50.56#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L013.D Vial: 11
Acq On : 12 Dec 16 15:01 Operator: MA
Sample : 0.5 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 13 14:12 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:03:42 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	1952	2.50000 ppb	0.01
6) Acenaphthene-D10(IS)	7.93	164	1068	2.50000 ppb	0.01
11) Phenanthrene-D10(IS)	9.85	188	1895	2.50000 ppb	0.01
15) Chrysene-D12(IS)	16.81	240	2304	2.50000 ppb	0.02
21) Perylene-D12(IS)	20.56	264	2170	2.50000 ppb	0.02
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.08	82	20	0.21387 ppb	0.05
Spiked Amount 5.000			Recovery =	4.280%	
7) Surrogate Recovery (FBP)	7.17	172	149	0.09433 ppb	0.04
Spiked Amount 5.000			Recovery =	1.880%	
17) Surrogate Recovery (TPH)	13.87	244	181	0.13391 ppb	0.05
Spiked Amount 5.000			Recovery =	2.680%	
Target Compounds					Qvalue
3) Naphthalene	5.90	128	385	0.48892 ppb	99
5) 1-Methylnaphthalene	6.84	142	262	0.49282 ppb	97
8) Acenaphthylene	7.77	152	391	0.47126 ppb	98
9) Acenaphthene	7.97	154	240	0.47721 ppb	99
10) Fluorene	8.59	166	273	0.46889 ppb	100
12) Phenanthrene	9.90	178	375	0.46040 ppb	99
13) Anthracene	10.02	178	304	0.41169 ppb	98
14) Fluoranthene	12.67	202	488	0.43109 ppb	92
16) Pyrene	13.30	202	527	0.46106 ppb	98
18) Benz (a) anthracene	16.79	228	421	0.42815 ppb	100
19) Chrysene	16.88	228	592	0.53363 ppb	96
20) Indeno (1,2,3-cd) pyrene	22.91	276	454	0.42373 ppb #	97
22) Benzo (b) fluoranthene	19.68	252	401	0.43051 ppb	96
23) Benzo (k) fluoranthene	19.74	252	517m	0.67137 ppb	95
24) Benzo (a) pyrene	20.31	252	456	0.47453 ppb	96
25) Dibenz (a,h) anthracene	22.96	278	370	0.11963 ppb	95
26) Benzo (g,h,i) perylene	23.43	276	417	0.47130 ppb	96

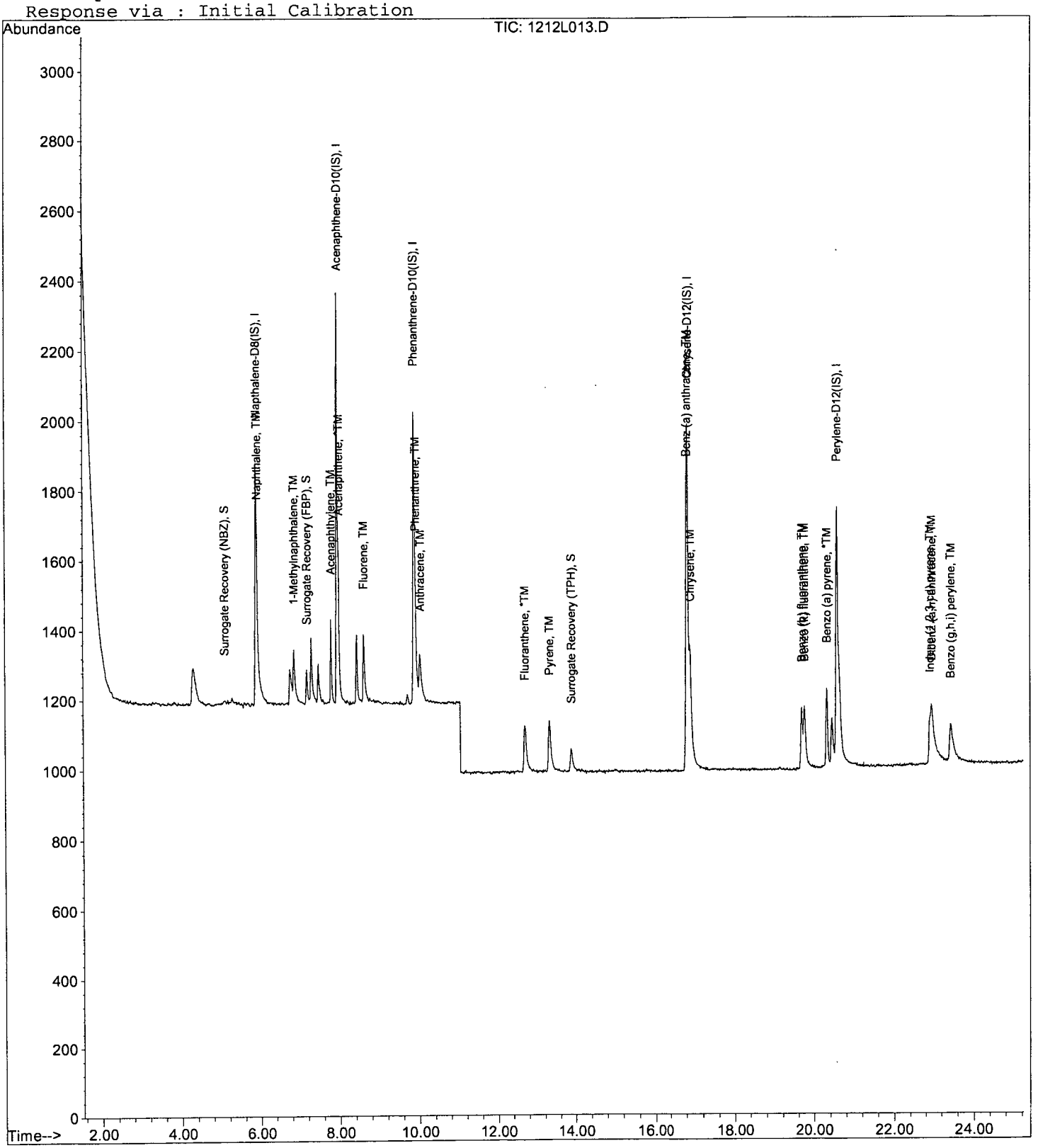
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L013.D Vial: 11
Acq On : 12 Dec 16 15:01 Operator: MA
Sample : 0.5 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 13 14:12 2016 Quant Results File: L1212P.RES

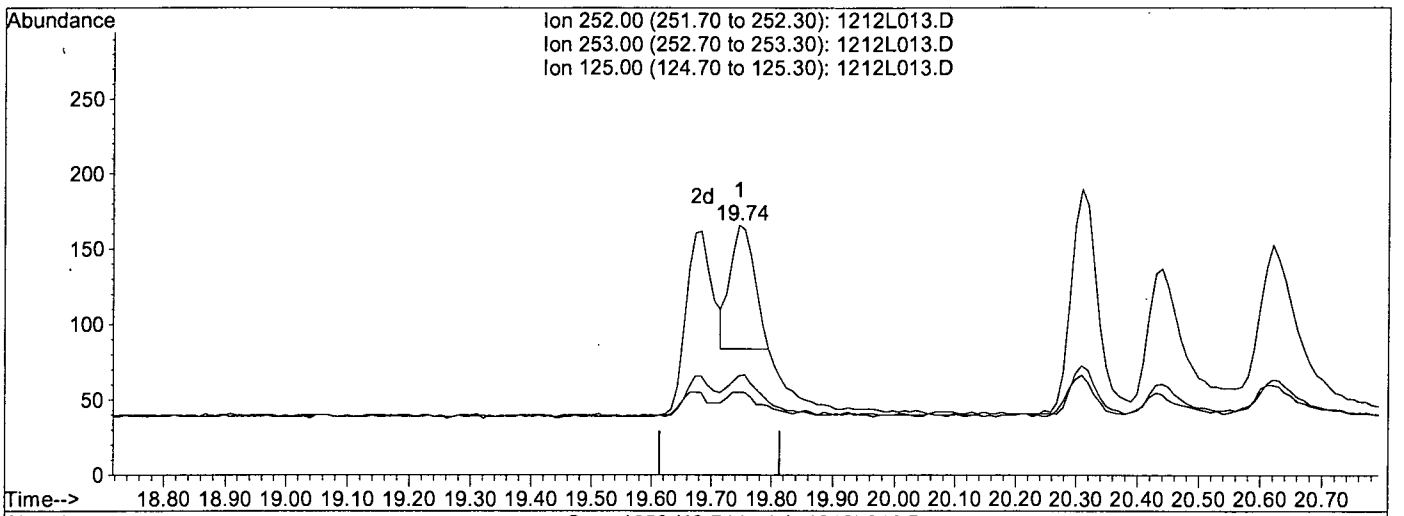
Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration

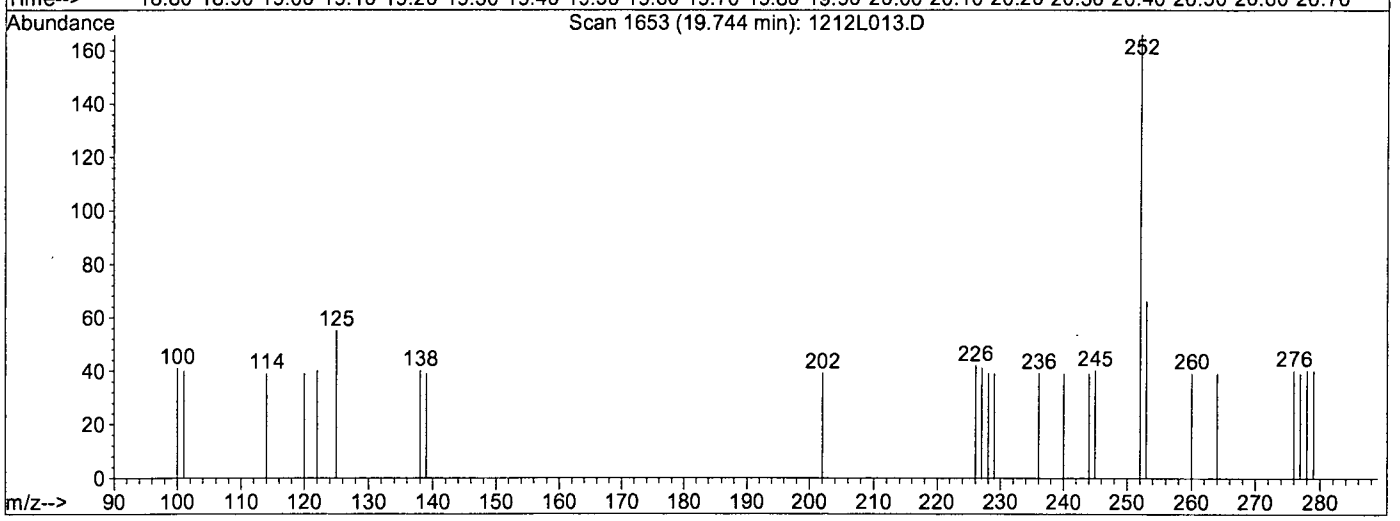


Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L013.D Vial: 11
Acq On : 12 Dec 16 15:01 Operator: MA
Sample : 0.5 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 14:04 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:06:14 2016
Response via : Multiple Level Calibration





TIC: 1212L013.D

(23) Benzo (k) fluoranthene (TM)

19.74min 0.3771ppb

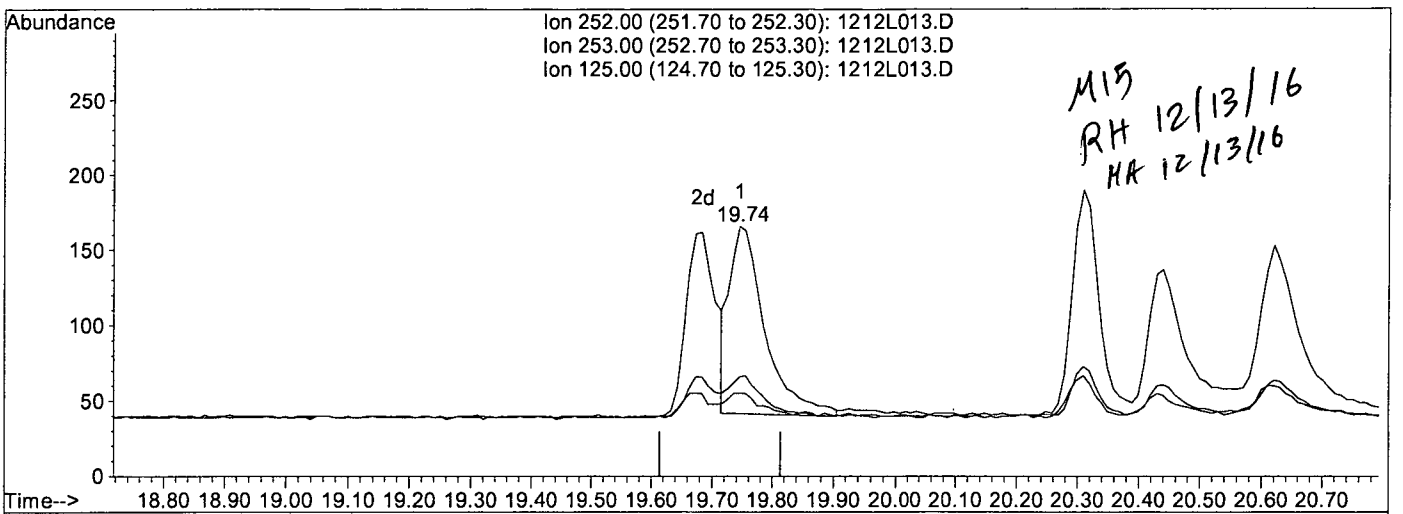
response 227

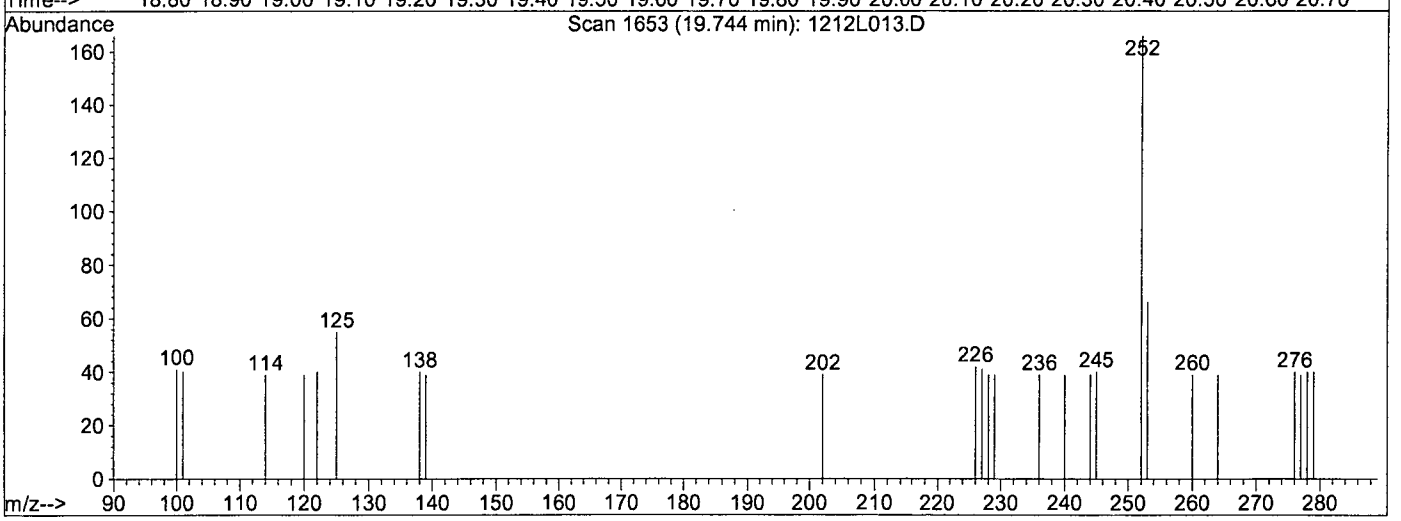
Ion	Exp%	Act%
252.00	100	100
253.00	23.40	20.73
125.00	13.10	10.98
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L013.D Vial: 11
Acq On : 12 Dec 16 15:01 Operator: MA
Sample : 0.5 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 14:12 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:06:14 2016
Response via : Multiple Level Calibration





TIC: 1212L013.D

(23) Benzo (k) fluoranthene (TM)

19.74min 0.6714ppb m

response 517

Ion	Exp%	Act%
252.00	100	100
253.00	23.40	39.76#
125.00	13.10	33.13#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L014.D Vial: 12
Acq On : 12 Dec 16 15:34 Operator: MA
Sample : 1.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 13 14:12 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:03:42 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.88	136	1902	2.50000	ppb		0.01
6) Acenaphthene-D10(IS)	7.92	164	1042	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.85	188	1853	2.50000	ppb		0.01
15) Chrysene-D12(IS)	16.80	240	2251	2.50000	ppb		0.01
21) Perylene-D12(IS)	20.55	264	2109	2.50000	ppb		0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.07	82	67	0.41209	ppb		0.04
Spiked Amount 5.000			Recovery = 8.240%				
7) Surrogate Recovery (FBP)	7.16	172	299	0.36077	ppb		0.02
Spiked Amount 5.000			Recovery = 7.220%				
17) Surrogate Recovery (TPH)	13.86	244	348	0.38315	ppb		0.04
Spiked Amount 5.000			Recovery = 7.660%				
Target Compounds							Qvalue
3) Naphthalene	5.90	128	721	0.93968	ppb		98
4) 2-Methylnaphthalene	6.74	142	405	0.44937	ppb		98
5) 1-Methylnaphthalene	6.83	142	492	0.94978	ppb		96
8) Acenaphthylene	7.77	152	733	0.90551	ppb		98
9) Acenaphthene	7.97	154	439	0.89468	ppb		98
10) Fluorene	8.59	166	509	0.89604	ppb		99
12) Phenanthrene	9.90	178	723	0.90778	ppb		100
13) Anthracene	10.01	178	616	0.85312	ppb		99
14) Fluoranthene	12.66	202	960	0.86727	ppb		92
16) Pyrene	13.29	202	1005	0.89996	ppb		99
18) Benz (a) anthracene	16.79	228	754	0.78487	ppb		96
19) Chrysene	16.88	228	1074	0.99090	ppb		97
20) Indeno (1,2,3-cd) pyrene	22.89	276	915	0.87410	ppb	#	95
22) Benzo (b) fluoranthene	19.66	252	784	0.86604	ppb		96
23) Benzo (k) fluoranthene	19.73	252	880m	1.06561	ppb		96
24) Benzo (a) pyrene	20.31	252	852	0.91226	ppb		94
25) Dibenz (a,h) anthracene	22.94	278	818	0.60911	ppb		95
26) Benzo (g,h,i) perylene	23.41	276	778	0.90474	ppb		95

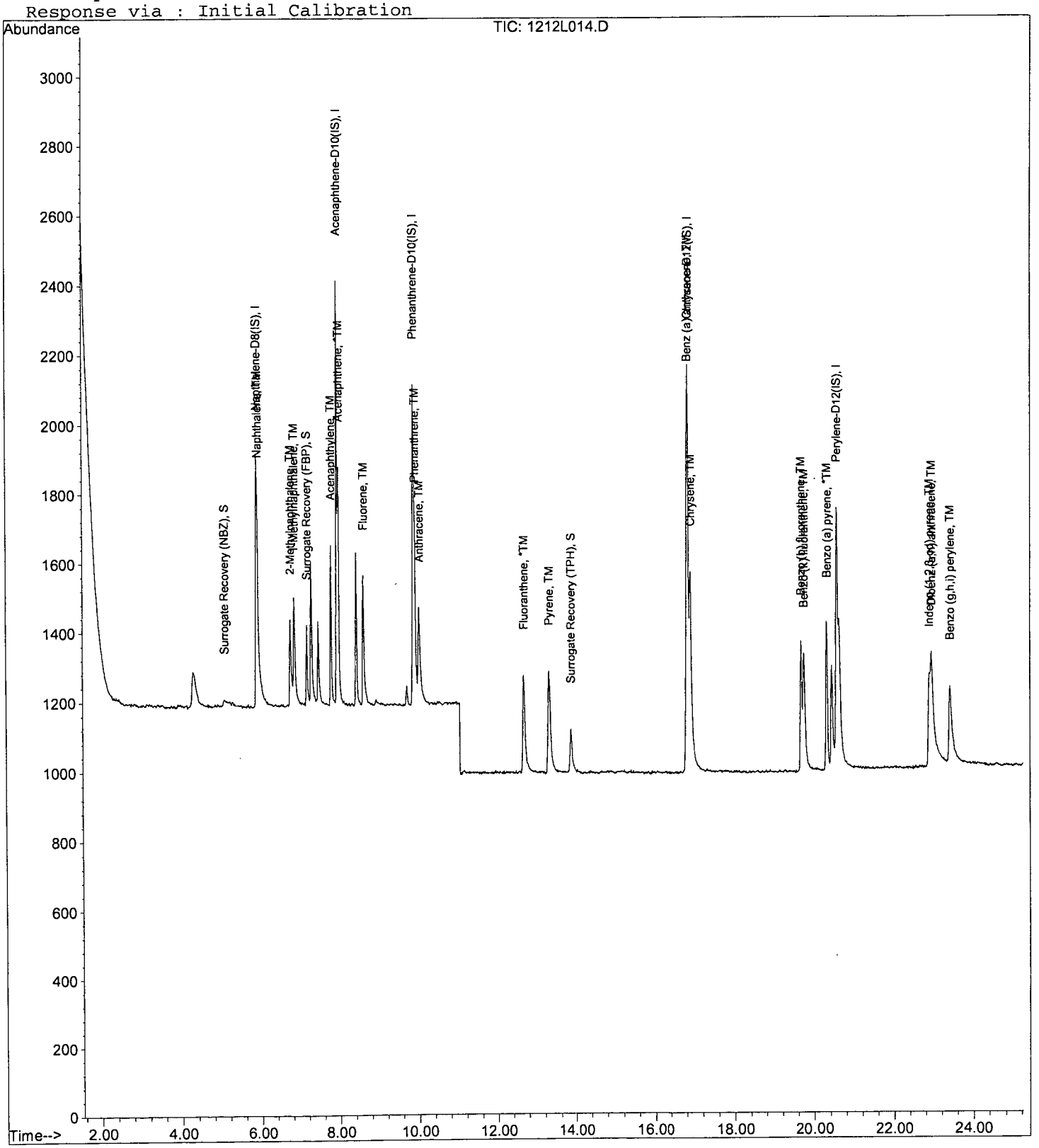
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L014.D Vial: 12
Acq On : 12 Dec 16 15:34 Operator: MA
Sample : 1.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 13 14:12 2016 Quant Results File: L1212P.RES

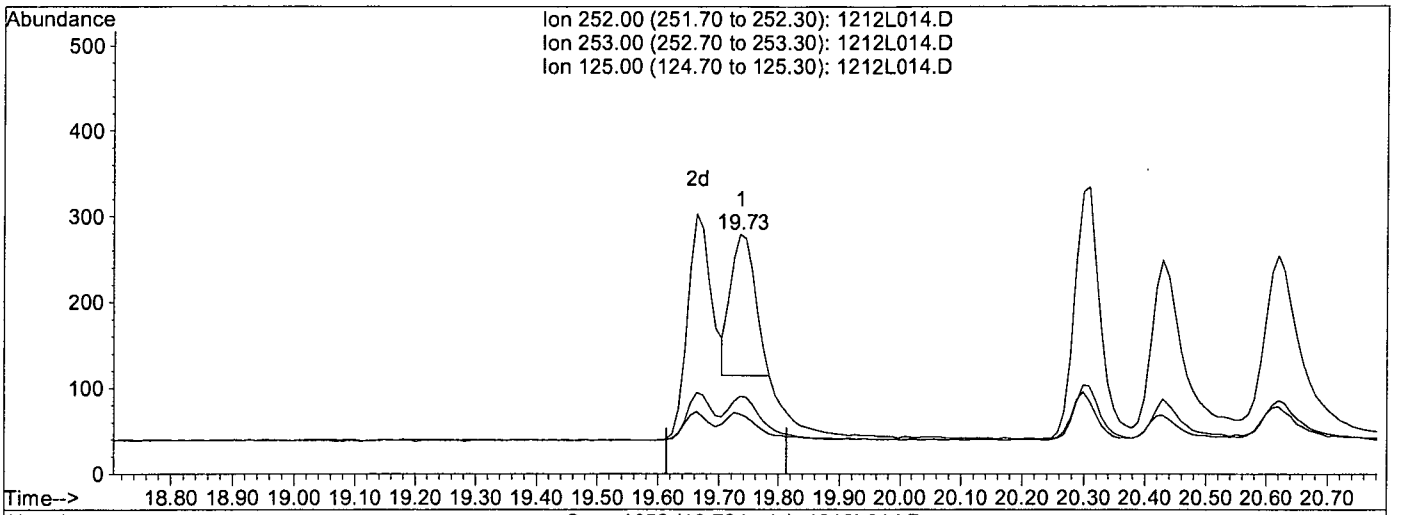
Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration

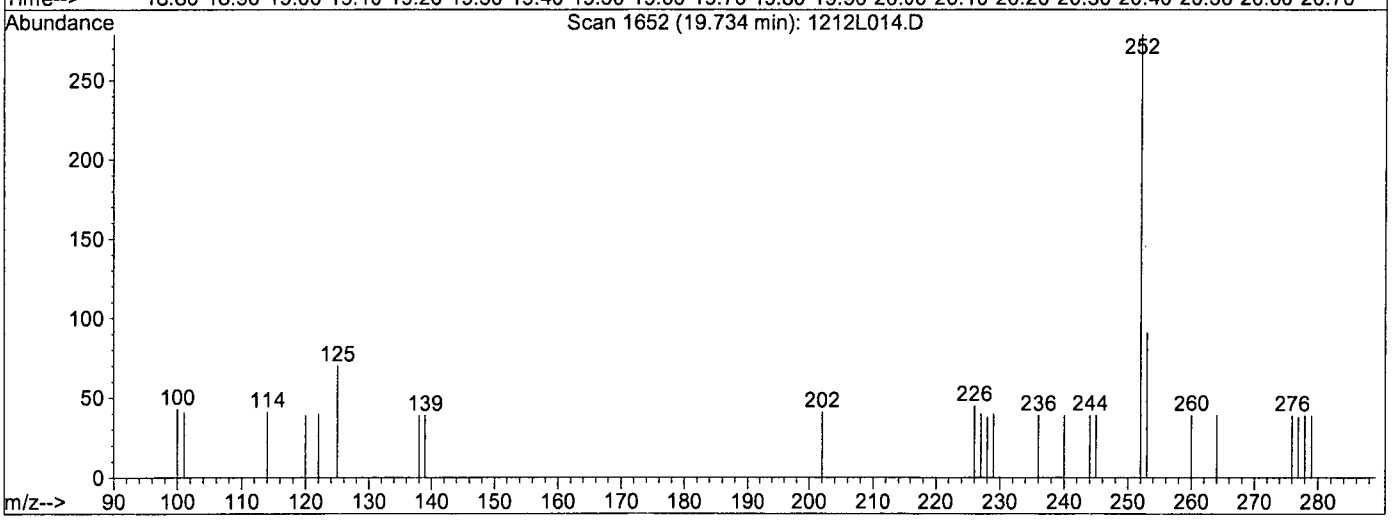


Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L014.D Vial: 12
Acq On : 12 Dec 16 15:34 Operator: MA
Sample : 1.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 14:04 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:06:14 2016
Response via : Multiple Level Calibration





TIC: 1212L014.D

(23) Benzo (k) fluoranthene (TM)

19.73min 0.6322ppb

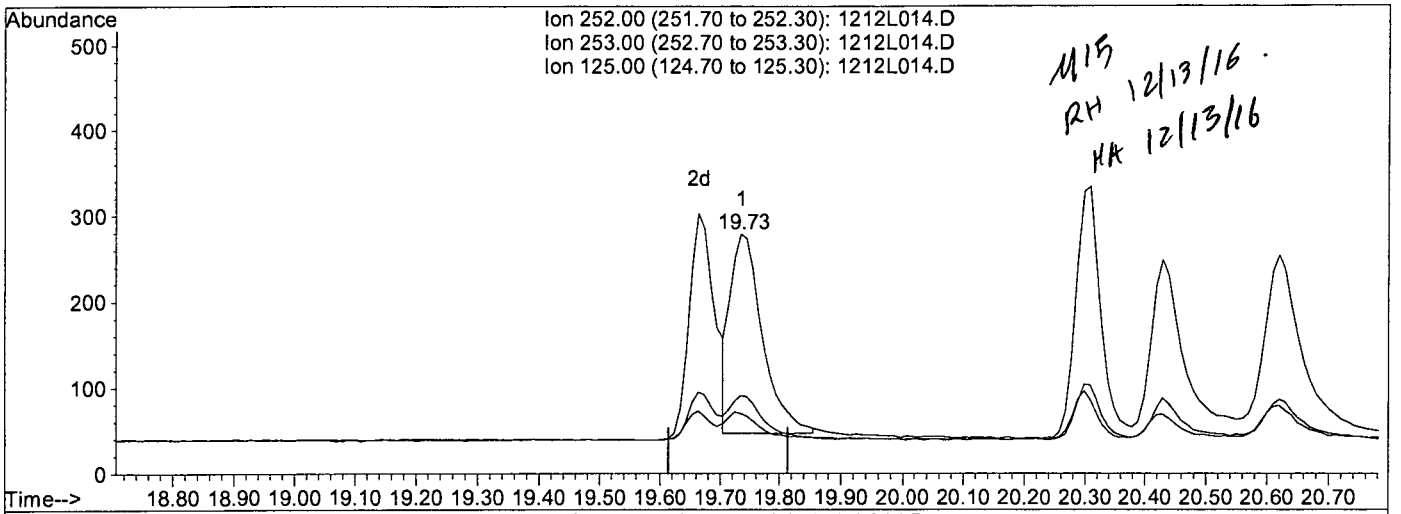
response 465

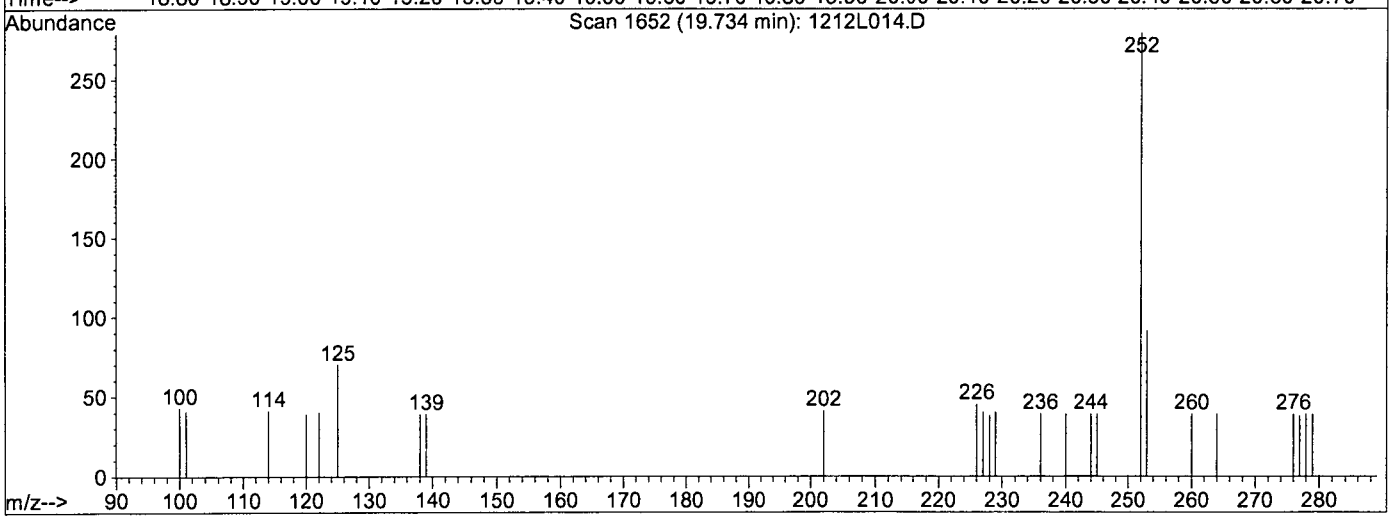
Ion	Exp%	Act%
252.00	100	100
253.00	23.40	21.34
125.00	13.10	14.02
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L014.D Vial: 12
Acq On : 12 Dec 16 15:34 Operator: MA
Sample : 1.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 14:12 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:06:14 2016
Response via : Multiple Level Calibration





TIC: 1212L014.D

(23) Benzo (k) fluoranthene (TM)

19.73min 1.0656ppb m

response 880

Ion	Exp%	Act%
252.00	100	100
253.00	23.40	32.62#
125.00	13.10	25.09#
0.00	0.00	0.00

1212L014.D L1212P.M Tue Dec 13 14:12:48 2016

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L009.D Vial: 7
Acq On : 12 Dec 16 12:49 Operator: MA
Sample : 5.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 13 14:04 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:03:42 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	1900	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.92	164	1038	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.84	188	1930	2.50000	ppb		0.00
15) Chrysene-D12(IS)	16.79	240	2367	2.50000	ppb		0.00
21) Perylene-D12(IS)	20.54	264	2172	2.50000	ppb		0.00
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.03	82	501	2.22494	ppb		0.00
Spiked Amount 5.000			Recovery = 44.500%				
7) Surrogate Recovery (FBP)	7.13	172	1395	2.27095	ppb		0.00
Spiked Amount 5.000			Recovery = 45.420%				
17) Surrogate Recovery (TPH)	13.82	244	1635	2.14055	ppb		0.00
Spiked Amount 5.000			Recovery = 42.820%				
Target Compounds							Qvalue
3) Naphthalene	5.89	128	4247	5.54092	ppb		100
4) 2-Methylnaphthalene	6.71	142	2729	5.25106	ppb		99
5) 1-Methylnaphthalene	6.82	142	2768	5.34910	ppb		97
8) Acenaphthylene	7.76	152	4510	5.59288	ppb		97
9) Acenaphthene	7.95	154	2664	5.45016	ppb		99
10) Fluorene	8.57	166	3165	5.59310	ppb		100
12) Phenanthrene	9.89	178	4521	5.44995	ppb		99
13) Anthracene	9.97	178	4306	5.72563	ppb		100
14) Fluoranthene	12.62	202	6154	5.33775	ppb		95
16) Pyrene	13.26	202	6389	5.44084	ppb		98
18) Benz (a) anthracene	16.77	228	5554	5.49804	ppb		97
19) Chrysene	16.86	228	5994	5.25919	ppb		96
20) Indeno (1,2,3-cd) pyrene	22.84	276	6203	5.63530	ppb	#	96
22) Benzo (b) fluoranthene	19.64	252	5160	5.53465	ppb		96
23) Benzo (k) fluoranthene	19.71	252	4795	5.00856	ppb		96
24) Benzo (a) pyrene	20.28	252	5209	5.41563	ppb		97
25) Dibenz (a,h) anthracene	22.89	278	5166	5.09186	ppb		95
26) Benzo (g,h,i) perylene	23.36	276	5050	5.70231	ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report

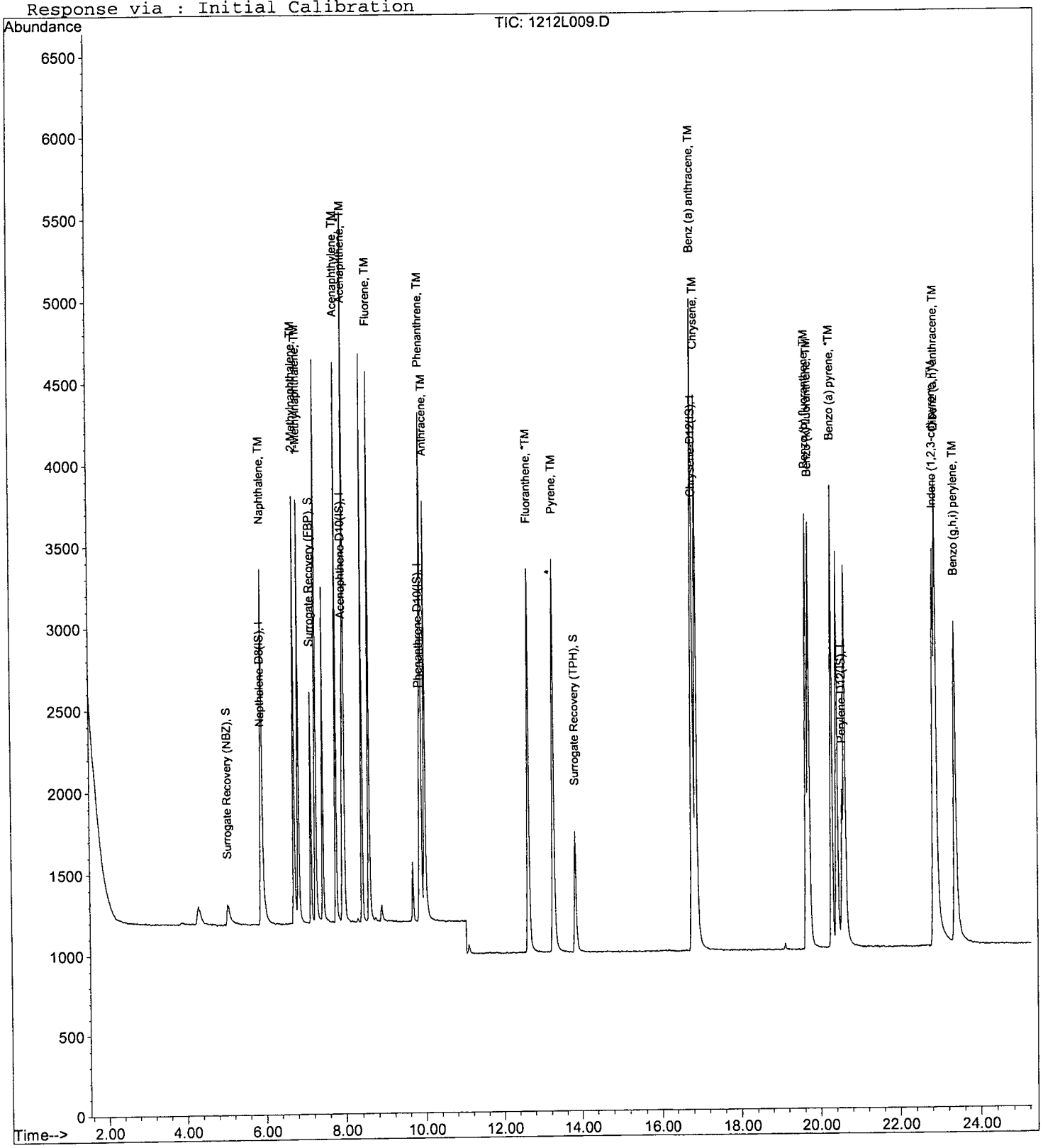
Data File : M:\LINUS\DATA\L161212\1212L009.D
Acq On : 12 Dec 16 12:49
Sample : 5.0 ug/ml PAH 12/12/16
Misc : water

Vial: 7
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Dec 13 14:04 2016

Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



1212L009.D L1212P.M Wed Dec 14 09:33:04 2016

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L010.D Vial: 8
Acq On : 12 Dec 16 13:22 Operator: MA
Sample : 10.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 13 14:04 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:03:42 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	1924	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	7.92	164	1050	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.84	188	1952	2.50000 ppb		0.00
15) Chrysene-D12(IS)	16.79	240	2464	2.50000 ppb		0.00
21) Perylene-D12(IS)	20.54	264	2236	2.50000 ppb		0.00
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.02	82	1179	4.99512 ppb		-0.01
Spiked Amount 5.000			Recovery = 99.900%			
7) Surrogate Recovery (FBP)	7.13	172	3159	5.27928 ppb		0.00
Spiked Amount 5.000			Recovery = 105.580%			
17) Surrogate Recovery (TPH)	13.82	244	3924	5.09644 ppb		0.00
Spiked Amount 5.000			Recovery = 101.920%			
Target Compounds						Qvalue
3) Naphthalene	5.89	128	8109	10.44758 ppb		100
4) 2-Methylnaphthalene	6.71	142	5374	10.57649 ppb		98
5) 1-Methylnaphthalene	6.82	142	5213	9.94836 ppb		97
8) Acenaphthylene	7.76	152	8747	10.72323 ppb		97
9) Acenaphthene	7.95	154	5139	10.39350 ppb		99
10) Fluorene	8.56	166	6140	10.72642 ppb		98
12) Phenanthrene	9.87	178	8812	10.50292 ppb		100
13) Anthracene	9.97	178	8611	11.32088 ppb		100
14) Fluoranthene	12.62	202	12352	10.59291 ppb		94
16) Pyrene	13.26	202	12712	10.39931 ppb		98
18) Benz (a) anthracene	16.76	228	11201	10.65163 ppb		98
19) Chrysene	16.86	228	11843	9.98209 ppb		97
20) Indeno (1,2,3-cd) pyrene	22.83	276	12547	10.94996 ppb	#	98
22) Benzo (b) fluoranthene	19.64	252	10653	11.09942 ppb		96
23) Benzo (k) fluoranthene	19.70	252	9928	9.92504 ppb		98
24) Benzo (a) pyrene	20.28	252	10342	10.44449 ppb		98
25) Dibenz (a,h) anthracene	22.89	278	10283	10.09209 ppb		93
26) Benzo (g,h,i) perylene	23.36	276	10063	11.03761 ppb		93

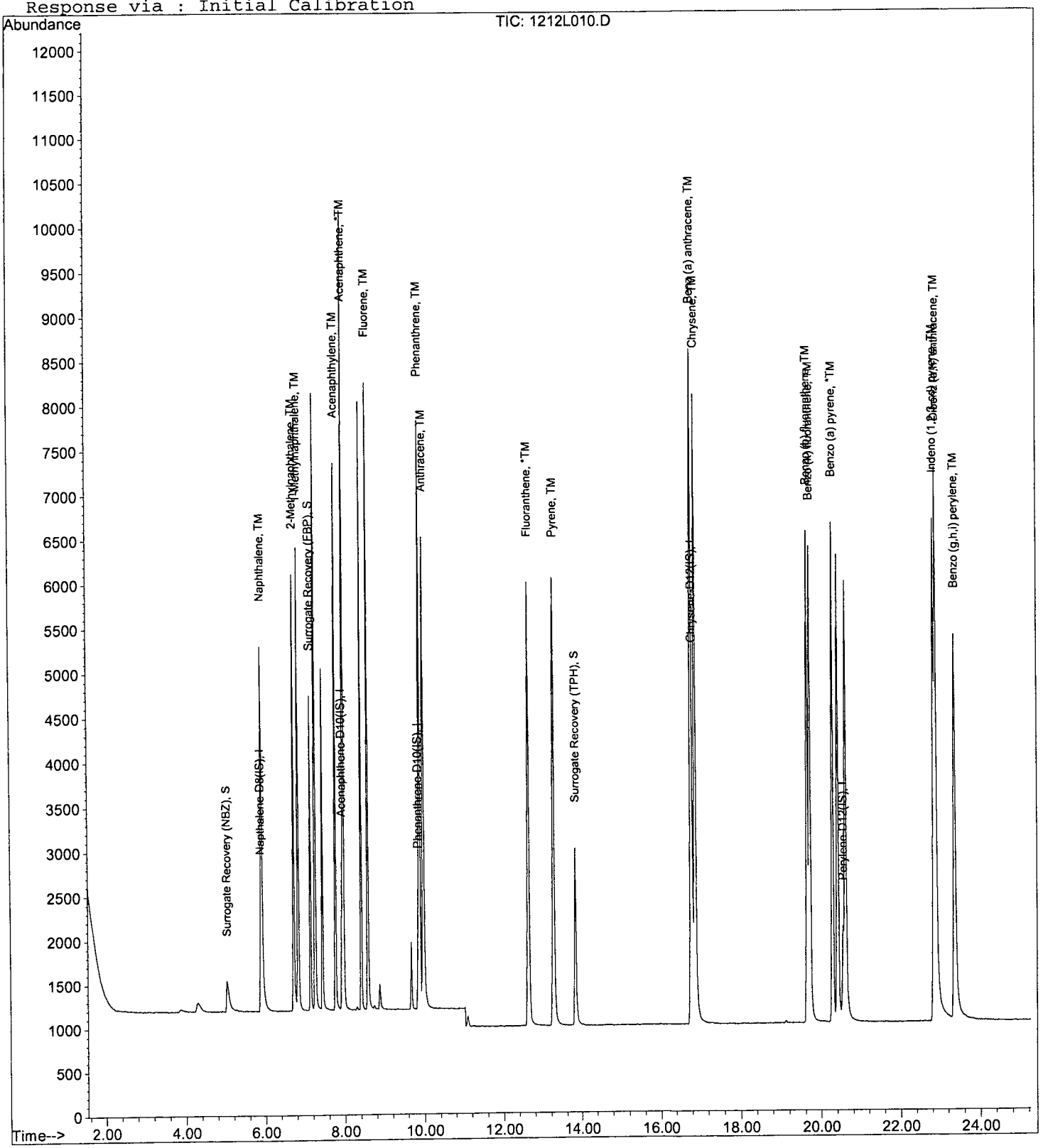
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L010.D Vial: 8
Acq On : 12 Dec 16 13:22 Operator: MA
Sample : 10.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 13 14:04 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L011.D Vial: 9
Acq On : 12 Dec 16 13:54 Operator: MA
Sample : 50.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 13 14:04 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:03:42 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	1851	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.92	164	987	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.84	188	1836	2.50000	ppb		0.00
15) Chrysene-D12(IS)	16.80	240	2363	2.50000	ppb		0.01
21) Perylene-D12(IS)	20.55	264	2104	2.50000	ppb		0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.01	82	5918	25.50280	ppb		-0.02
Spiked Amount 5.000			Recovery = 510.060%				
7) Surrogate Recovery (FBP)	7.13	172	14297	26.02000	ppb		0.00
Spiked Amount 5.000			Recovery = 520.400%				
17) Surrogate Recovery (TPH)	13.82	244	19064	26.32087	ppb		0.00
Spiked Amount 5.000			Recovery = 526.420%				
Target Compounds							Qvalue
3) Naphthalene	5.89	128	37135	49.73138	ppb		100
4) 2-Methylnaphthalene	6.70	142	24848	52.30218	ppb		99
5) 1-Methylnaphthalene	6.82	142	23509	46.63332	ppb		98
8) Acenaphthylene	7.76	152	39815	51.92608	ppb		97
9) Acenaphthene	7.95	154	23180	49.87339	ppb		99
10) Fluorene	8.56	166	28020	52.07471	ppb		97
12) Phenanthrene	9.89	178	41143	52.13612	ppb		99
13) Anthracene	9.97	178	40562	56.69611	ppb		99
14) Fluoranthene	12.63	202	59396	54.15545	ppb		93
16) Pyrene	13.26	202	60604	51.69745	ppb		99
18) Benz (a) anthracene	16.78	228	56712	56.23559	ppb		97
19) Chrysene	16.88	228	54023	47.48052	ppb		97
20) Indeno (1,2,3-cd) pyrene	22.87	276	53175	48.39015	ppb	#	97
22) Benzo (b) fluoranthene	19.66	252	53199	58.90579	ppb		96
23) Benzo (k) fluoranthene	19.73	252	48451	50.86128	ppb		98
24) Benzo (a) pyrene	20.31	252	49594	53.22771	ppb		96
25) Dibenz (a,h) anthracene	22.92	278	49155	52.34757	ppb		93
26) Benzo (g,h,i) perylene	23.39	276	47996	55.94722	ppb		97

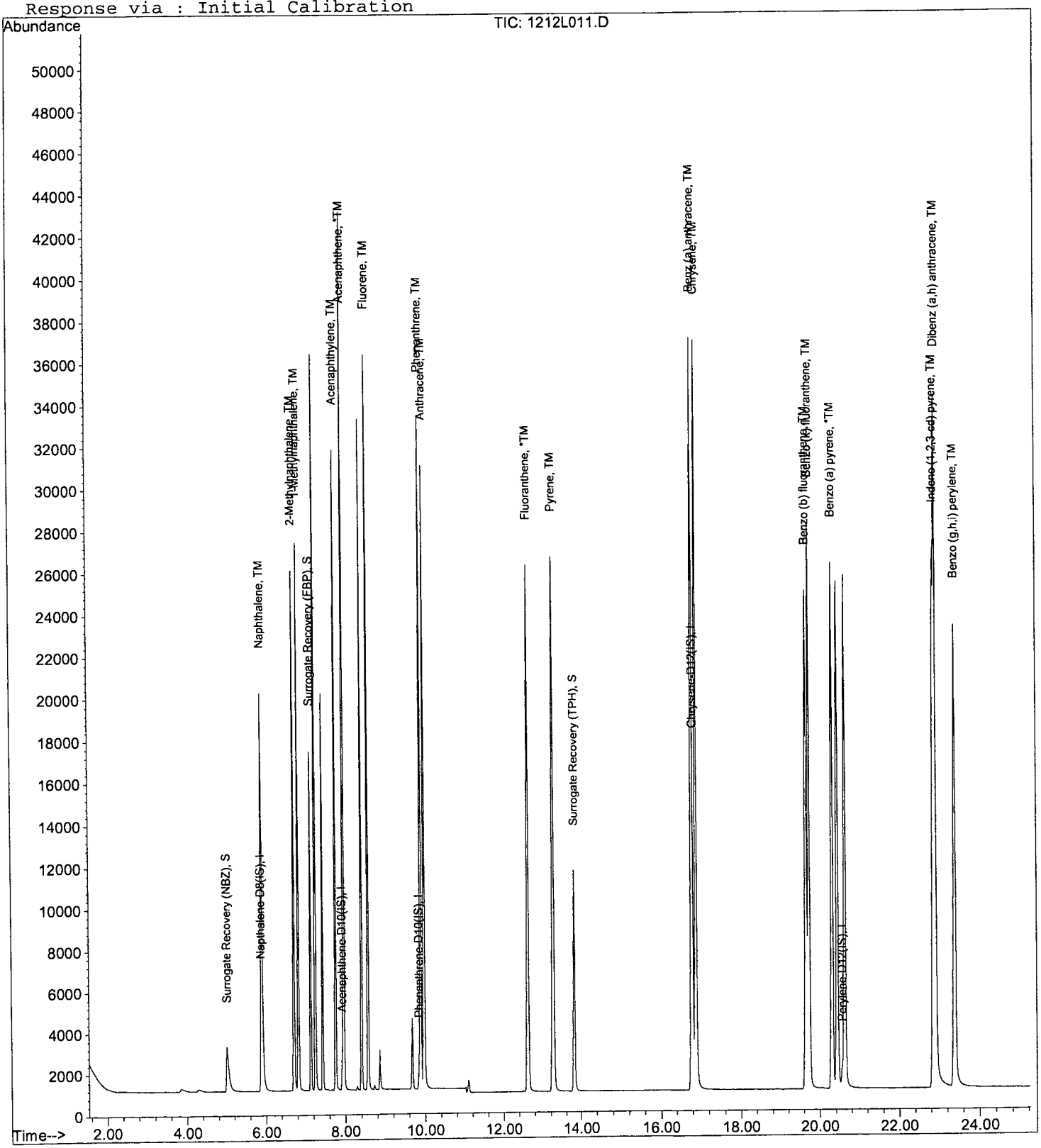
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L011.D Vial: 9
Acq On : 12 Dec 16 13:54 Operator: MA
Sample : 50.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 13 14:04 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L012.D Vial: 10
Acq On : 12 Dec 16 14:28 Operator: MA
Sample : 100.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 13 14:04 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 14:03:42 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	1964	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.92	164	1044	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.85	188	1914	2.50000	ppb		0.01
15) Chrysene-D12(IS)	16.82	240	2483	2.50000	ppb		0.03
21) Perylene-D12(IS)	20.57	264	2159	2.50000	ppb		0.03
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.01	82	12284	49.76371	ppb		-0.02
Spiked Amount 5.000			Recovery = 995.280%				
7) Surrogate Recovery (FBP)	7.13	172	28673	49.47606	ppb		0.00
Spiked Amount 5.000			Recovery = 989.520%				
17) Surrogate Recovery (TPH)	13.82	244	37477	49.34989	ppb		0.00
Spiked Amount 5.000			Recovery = 987.000%				
Target Compounds							Qvalue
3) Naphthalene	5.89	128	74732	94.32321	ppb		100
4) 2-Methylnaphthalene	6.71	142	49626	98.78791	ppb		98
5) 1-Methylnaphthalene	6.82	142	46322	86.59931	ppb		97
8) Acenaphthylene	7.76	152	79194	97.64449	ppb		98
9) Acenaphthene	7.97	154	46028	93.62552	ppb		96
10) Fluorene	8.57	166	55451	97.42823	ppb		99
12) Phenanthrene	9.90	178	82102	99.79924	ppb		99
13) Anthracene	9.98	178	77479	103.88399	ppb		99
14) Fluoranthene	12.65	202	119546	104.55643	ppb		93
16) Pyrene	13.29	202	121997	99.03848	ppb		98
18) Benz (a) anthracene	16.80	228	112984	106.62039	ppb		97
19) Chrysene	16.91	228	106807	89.33538	ppb		97
20) Indeno (1,2,3-cd) pyrene	22.91	276	116748	101.10810	ppb	#	91
22) Benzo (b) fluoranthene	19.68	252	106244	114.64418	ppb		97
23) Benzo (k) fluoranthene	19.77	252	97479	99.58057	ppb		97
24) Benzo (a) pyrene	20.34	252	99871	104.45787	ppb		97
25) Dibenz (a,h) anthracene	22.96	278	94993	98.81911	ppb		95
26) Benzo (g,h,i) perylene	23.44	276	84112	95.54865	ppb		93

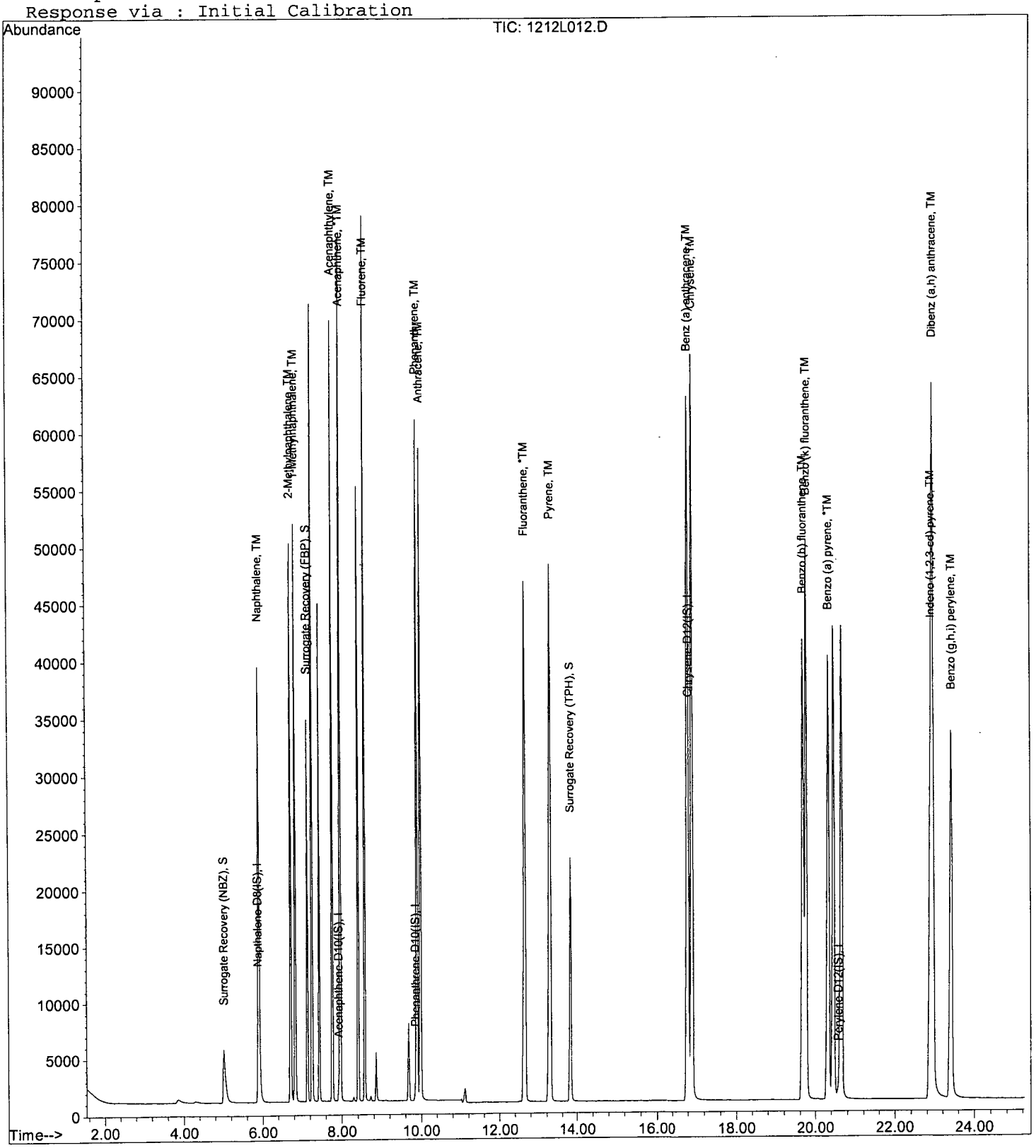
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L012.D Vial: 10
Acq On : 12 Dec 16 14:28 Operator: MA
Sample : 100.0 ug/ml PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 13 14:04 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/12/16
Instrument: Linus
Initial Cal. Date: 12/12/16
Data File: 1212L015.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	Naphthalene	1.009	0.9374	7.1	TM	
2	TM	2-Methylnaphthalene	0.6134	0.5778	5.8	TM	
3	TM	1-Methylnaphthalene	0.6809	0.6194	9.0	TM	
4	TM	Acenaphthylene	1.942	1.717	12	TM	
5	*TM	Acenaphthene	1.177	1.035	12	*TM	
6	TM	Fluorene	1.363	1.224	10	TM	
7	TM	Phenanthrene	1.075	0.9323	13	TM	
8	TM	Anthracene	0.9742	0.8964	8.0	TM	
9	*TM	Fluoranthene	1.493	1.306	13	*TM	
10	TM	Pyrene	1.240	1.069	14	TM	
11	TM	Benz (a) anthracene	1.067	0.9074	15	TM	
12	TM	Chrysene	1.204	1.018	15	TM	
13	TM	Indeno (1,2,3-cd) pyrene	1.163	1.016	13	TM	
14	TM	Benzo (b) fluoranthene	1.073	0.9137	15	TM	
15	TM	Benzo (k) fluoranthene	1.130	1.060	6.2	TM	
16	*TM	Benzo (a) pyrene	1.107	0.9559	14	*TM	
17	TM	Dibenz (a,h) anthracene	1.040	0.8922	14	TM	
18	TM	Benzo (g,h,i) perylene	1.019	0.8874	13	TM	
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
		Average			11.6		

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L015.D Vial: 15
Acq On : 12 Dec 16 16:07 Operator: MA
Sample : SS PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 13 15:18 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.88	136	1717	2.50000 ppb		0.01
6) Acenaphthene-D10(IS)	7.92	164	946	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.85	188	1728	2.50000 ppb		0.01
15) Chrysene-D12(IS)	16.79	240	2149	2.50000 ppb		0.00
21) Perylene-D12(IS)	20.55	264	1971	2.50000 ppb		0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.08	82	1	0.17309 ppb		0.05
Spiked Amount 5.000			Recovery =	3.460%		
7) Surrogate Recovery (FBP)	7.15	172	9	-0.14061 ppb		0.01
Spiked Amount 5.000			Recovery =	-2.820%		
17) Surrogate Recovery (TPH)	13.50	244	4	-0.11749 ppb		-0.32
Spiked Amount 5.000			Recovery =	-2.340%		
Target Compounds						Qvalue
3) Naphthalene	5.90	128	3219	✓4.64734 ppb		100
4) 2-Methylnaphthalene	6.71	142	1984	4.70973 ppb		100
5) 1-Methylnaphthalene	6.82	142	2127	4.54848 ppb		97
8) Acenaphthylene	7.76	152	3248	4.41958 ppb		98
9) Acenaphthene	7.95	154	1958	4.39536 ppb		99
10) Fluorene	8.57	166	2315	4.48886 ppb		98
12) Phenanthrene	9.89	178	3222	4.33808 ppb		99
13) Anthracene	9.98	178	3098	4.60092 ppb		100
14) Fluoranthene	12.63	202	4512	4.37102 ppb		94
16) Pyrene	13.26	202	4594	4.30910 ppb		99
18) Benz (a) anthracene	16.77	228	3900	4.25234 ppb		97
19) Chrysene	16.86	228	4376	4.22904 ppb		97
20) Indeno (1,2,3-cd) pyrene	22.84	276	4366	4.36878 ppb	#	98
22) Benzo (b) fluoranthene	19.64	252	3602	4.25753 ppb		96
23) Benzo (k) fluoranthene	19.71	252	4177m	4.68818 ppb		97
24) Benzo (a) pyrene	20.29	252	3768	4.31697 ppb		95
25) Dibenz (a,h) anthracene	22.90	278	3517	4.29008 ppb		94
26) Benzo (g,h,i) perylene	23.37	276	3498	4.35264 ppb		94

Algorithum check = $\frac{3219 * 1 * 2.5}{1 * 1717 * 1.009} = \frac{8047.5}{1732.453} = 4.645$

RH 12/14/16

(#) = qualifier out of range (m) = manual integration
1212L015.D L1212P.M Wed Dec 14 09:33:50 2016

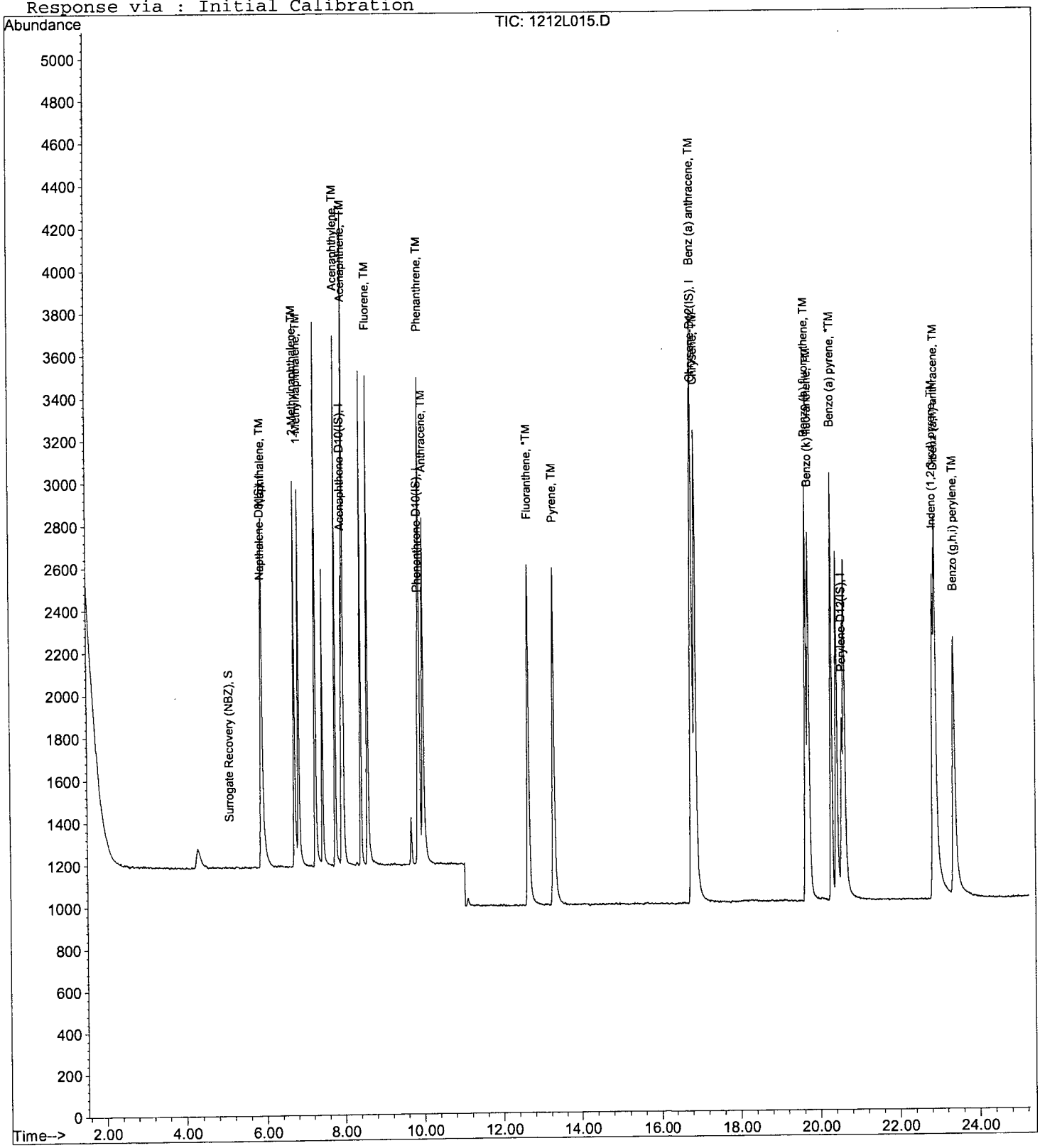
Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L015.D
Acq On : 12 Dec 16 16:07
Sample : SS PAH 12/12/16
Misc : water

Vial: 15
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Dec 13 15:18 2016 Quant Results File: L1212P.RES

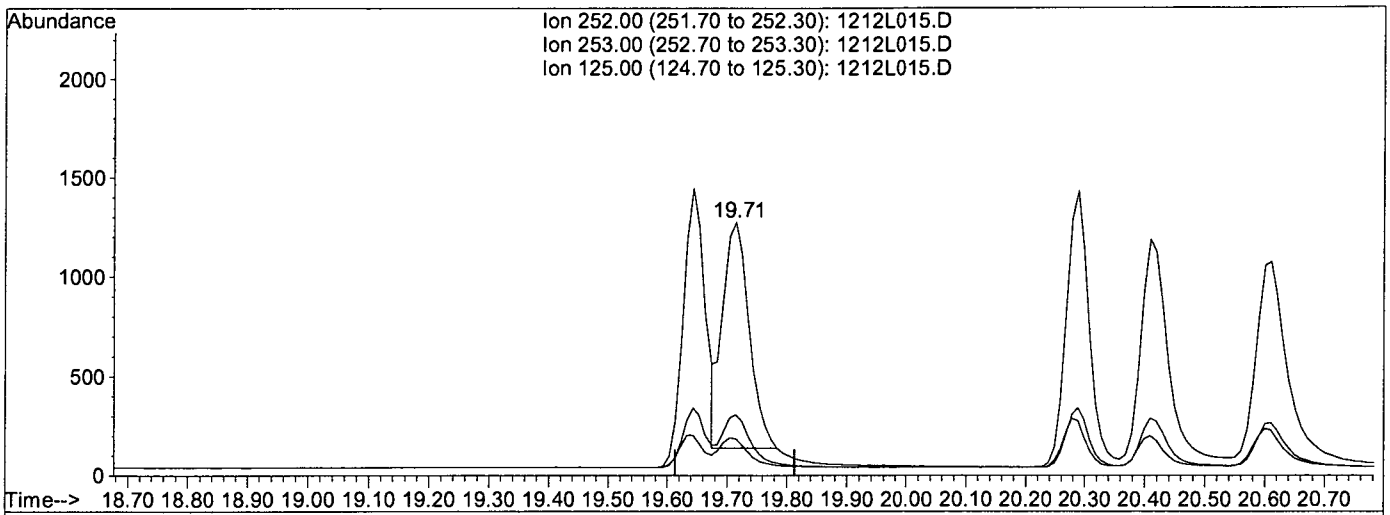
Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration

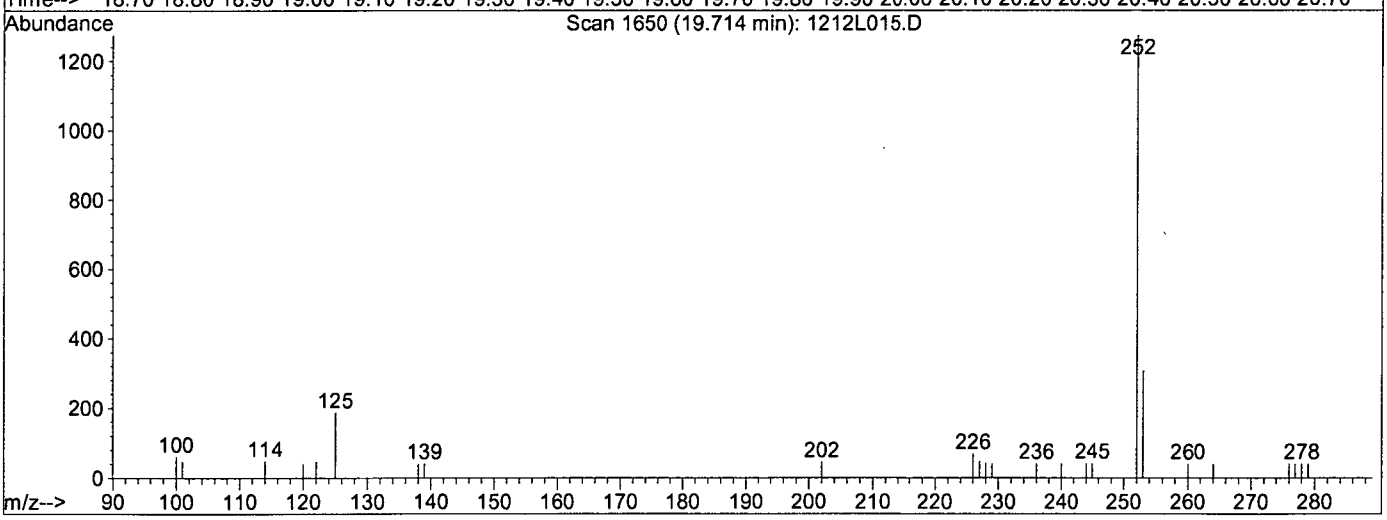


Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L015.D Vial: 15
Acq On : 12 Dec 16 16:07 Operator: MA
Sample : SS PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 15:12 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Multiple Level Calibration





TIC: 1212L015.D

(23) Benzo (k) fluoranthene (TM)

19.71min 3.9238ppb

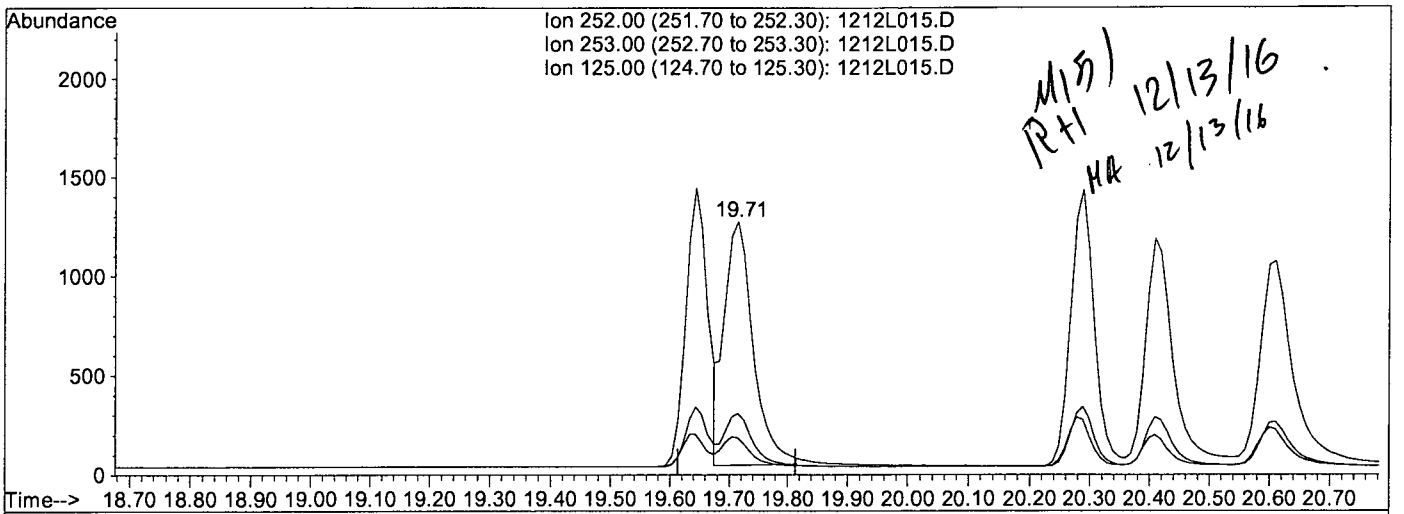
response 3496

Ion	Exp%	Act%
252.00	100	100
253.00	23.40	21.55
125.00	13.10	11.96
0.00	0.00	0.00

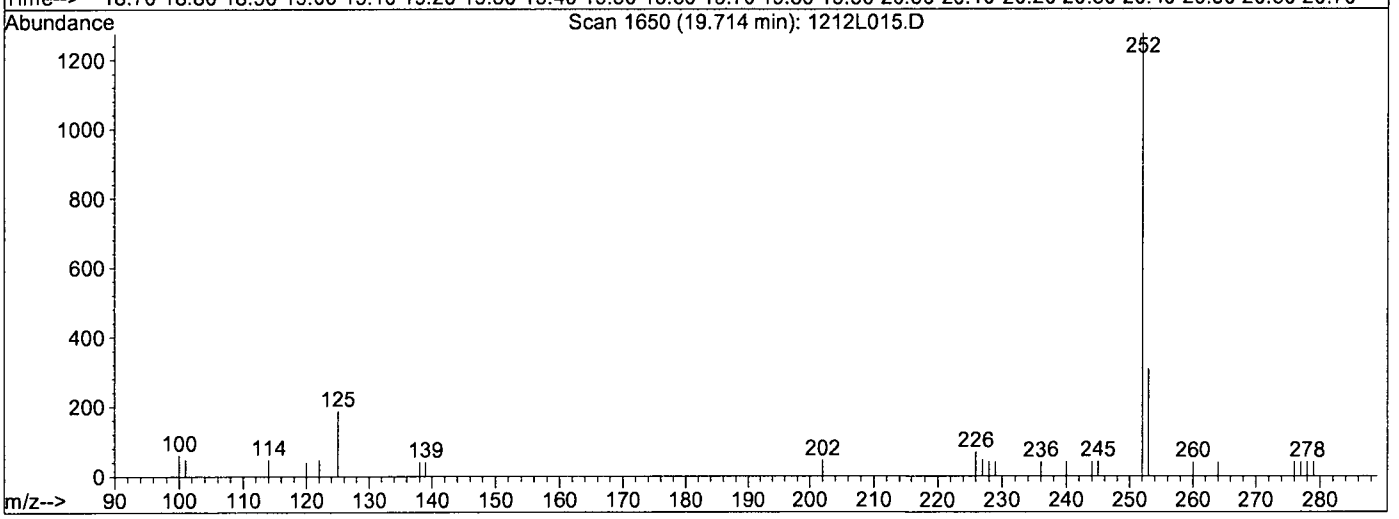
Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L015.D Vial: 15
Acq On : 12 Dec 16 16:07 Operator: MA
Sample : SS PAH 12/12/16 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Dec 13 15:18 2016 Quant Results File: temp.res

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Multiple Level Calibration



M15) 12/13/16
RT 12/13/16
HA



TIC: 1212L015.D

(23) Benzo (k) fluoranthene (TM)

19.71min 4.6882ppb m

response 4177

Ion	Exp%	Act%
252.00	100	100
253.00	23.40	24.08
125.00	13.10	14.67
0.00	0.00	0.00

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Date Analyzed: 12/27/16

Matrix: Instrument: Linus

Initial Cal. Date: 12/12/16

Data File: 1212L168.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	SL	Surrogate Recovery (NBZ)	0.2469	0.2807	14	SL	4.3
3	TM	Naphthalene	1.009	1.058	4.9	TM	
4	TM	2-Methylnaphthalene	0.6134	0.6809	11	TM	
5	TM	1-Methylnaphthalene	0.6809	0.6915	1.6	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	SL	Surrogate Recovery (FBP)	1.561	1.417	9.2	SL	3.9
8	TM	Acenaphthylene	1.942	2.033	4.7	TM	
9	*TM	Acenaphthene	1.177	1.200	1.9	*TM	
10	TM	Fluorene	1.363	1.427	4.7	TM	
11	I	Phenanthrene-D10(IS)	ISTD			I	
12	TM	Phenanthrene	1.075	1.112	3.5	TM	
13	TM	Anthracene	0.9742	1.074	10	TM	
14	*TM	Fluoranthene	1.493	1.565	4.8	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.240	1.288	3.8	TM	
17	SL	Surrogate Recovery (TPH)	0.8592	0.7541	12	SL	6.1
18	TM	Benz (a) anthracene	1.067	1.038	2.7	TM	
19	TM	Chrysene	1.204	1.232	2.3	TM	
20	TM	Indeno (1,2,3-cd) pyrene	1.163	1.113	4.3	TM	
21	I	Perylene-D12(IS)	ISTD			I	
22	TM	Benzo (b) fluoranthene	1.073	1.049	2.2	TM	
23	TM	Benzo (k) fluoranthene	1.130	0.9830	13	TM	
24	*TM	Benzo (a) pyrene	1.107	1.111	0.32	*TM	
25	TM	Dibenz (a,h) anthracene	1.040	0.9315	10	TM	
26	TM	Benzo (g,h,i) perylene	1.019	0.9348	8.3	TM	
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			6.2		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L168.D Vial: 68
Acq On : 27 Dec 16 12:28 Operator: MA
Sample : 5.0 ug/ml PAH 12/27/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 27 12:54 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	2070	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.92	164	1154	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.84	188	2091	2.50000	ppb		0.00
15) Chrysene-D12(IS)	16.80	240	2639	2.50000	ppb		0.01
21) Perylene-D12(IS)	20.56	264	2445	2.50000	ppb		0.02
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.05	82	581	2.39358	ppb		0.01
Spiked Amount 5.000			Recovery = 47.880%				
7) Surrogate Recovery (FBP)	7.13	172	1635	2.40265	ppb		0.00
Spiked Amount 5.000			Recovery = 48.060%				
17) Surrogate Recovery (TPH)	13.82	244	1990	2.34812	ppb		0.00
Spiked Amount 5.000			Recovery = 46.960%				
Target Compounds							Qvalue
3) Naphthalene	5.89	128	4381	5.24634	ppb		100
4) 2-Methylnaphthalene	6.71	142	2819	5.55072	ppb		99
5) 1-Methylnaphthalene	6.82	142	2863	5.07832	ppb		98
8) Acenaphthylene	7.76	152	4693	5.23481	ppb		97
9) Acenaphthene	7.95	154	2770	5.09737	ppb		98
10) Fluorene	8.57	166	3293	5.23434	ppb		100
12) Phenanthrene	9.89	178	4649	5.17274	ppb		99
13) Anthracene	9.97	178	4491	5.51183	ppb		100
14) Fluoranthene	12.63	202	6544	5.23898	ppb		94
16) Pyrene	13.26	202	6798	5.19246	ppb		100
18) Benz (a) anthracene	16.77	228	5477	4.86299	ppb		97
19) Chrysene	16.87	228	6500	5.11534	ppb		97
20) Indeno (1,2,3-cd) pyrene	22.87	276	5872	4.78476	ppb	#	99
22) Benzo (b) fluoranthene	19.65	252	5130	4.88809	ppb		96
23) Benzo (k) fluoranthene	19.72	252	4807	4.34933	ppb		97
24) Benzo (a) pyrene	20.30	252	5431	5.01597	ppb		95
25) Dibenz (a,h) anthracene	22.92	278	4555	4.47909	ppb		95
26) Benzo (g,h,i) perylene	23.40	276	4571	4.58513	ppb		95

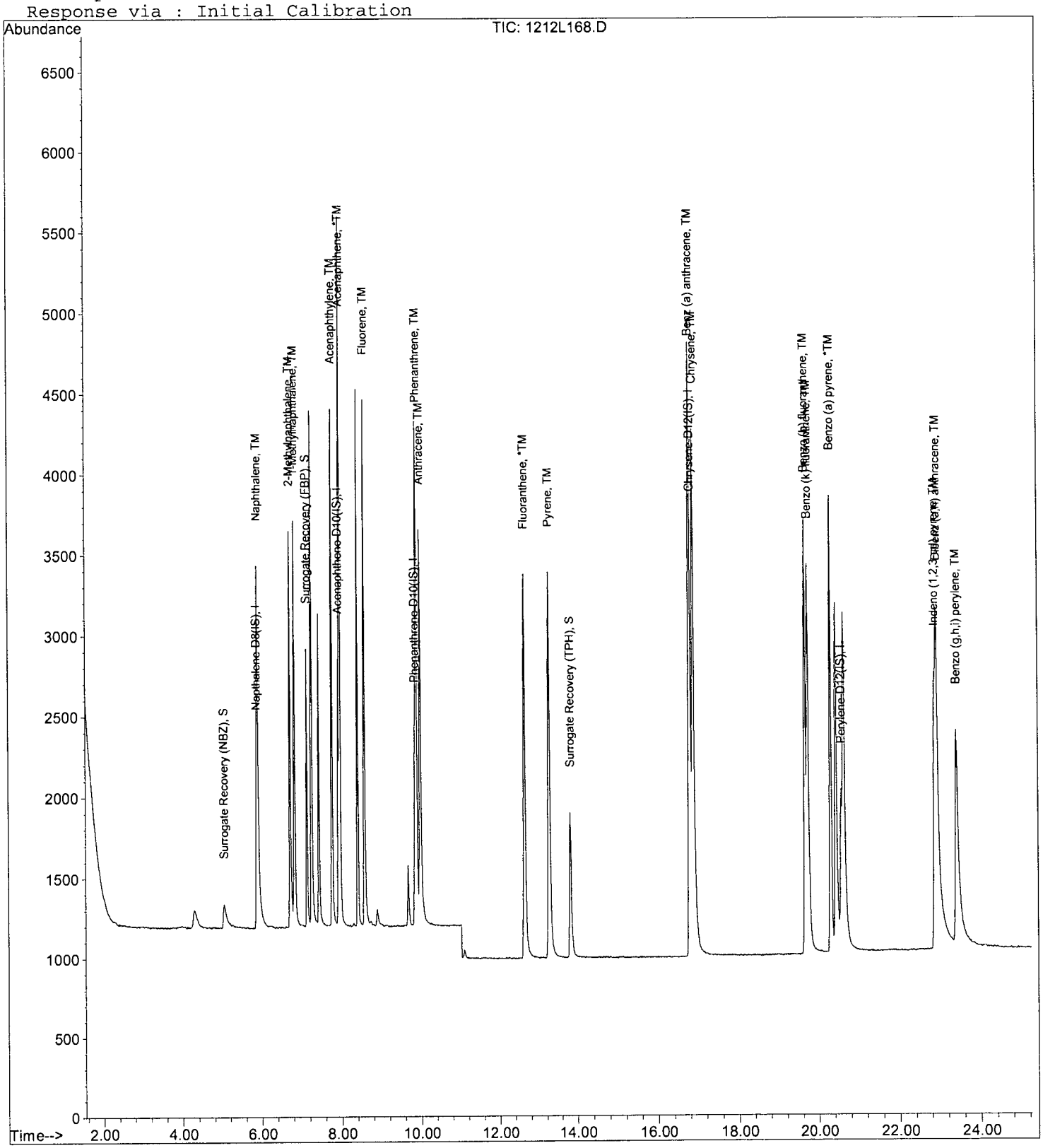
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L168.D Vial: 68
Acq On : 27 Dec 16 12:28 Operator: MA
Sample : 5.0 ug/ml PAH 12/27/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 27 12:54 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/27/16
Instrument: Linus
Initial Cal. Date: 12/12/16
Data File: 1212L182.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Napthalene-D8(IS)	ISTD			I	
2	SL	Surrogate Recovery (NBZ)	0.2469	0.2854	16	SL	2.8
3	TM	Naphthalene	1.009	1.068	5.9	TM	
4	TM	2-Methylnaphthalene	0.6134	0.6704	9.3	TM	
5	TM	1-Methylnaphthalene	0.6809	0.7191	5.6	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	SL	Surrogate Recovery (FBP)	1.561	1.431	8.3	SL	2.9
8	TM	Acenaphthylene	1.942	2.057	5.9	TM	
9	*TM	Acenaphthene	1.177	1.215	3.2	*TM	
10	TM	Fluorene	1.363	1.447	6.2	TM	
11	I	Phenanthrene-D10(IS)	ISTD			I	
12	TM	Phenanthrene	1.075	1.103	2.6	TM	
13	TM	Anthracene	0.9742	1.040	6.8	TM	
14	*TM	Fluoranthene	1.493	1.550	3.8	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.240	1.246	0.43	TM	
17	SL	Surrogate Recovery (TPH)	0.8592	0.7354	14	SL	8.5
18	TM	Benz (a) anthracene	1.067	0.9586	10	TM	
19	TM	Chrysene	1.204	1.224	1.7	TM	
20	TM	Indeno (1,2,3-cd) pyrene	1.163	1.182	1.7	TM	
21	I	Perylene-D12(IS)	ISTD			I	
22	TM	Benzo (b) fluoranthene	1.073	1.033	3.7	TM	
23	TM	Benzo (k) fluoranthene	1.130	0.9435	17	TM	
24	*TM	Benzo (a) pyrene	1.107	1.105	0.20	*TM	
25	TM	Dibenz (a,h) anthracene	1.040	1.033	0.69	TM	
26	TM	Benzo (g,h,i) perylene	1.019	0.9675	5.1	TM	
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			6.1		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L182.D Vial: 82
Acq On : 27 Dec 16 19:56 Operator: MA
Sample : 5.0 ug/ml PAH 12/27/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 28 8:40 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.88	136	1878	2.50000	ppb		0.01
6) Acenaphthene-D10(IS)	7.92	164	1049	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.85	188	1903	2.50000	ppb		0.01
15) Chrysene-D12(IS)	16.80	240	2449	2.50000	ppb		0.01
21) Perylene-D12(IS)	20.57	264	2264	2.50000	ppb		0.03
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.06	82	536	2.43110	ppb		0.02
Spiked Amount 5.000			Recovery = 48.620%				
7) Surrogate Recovery (FBP)	7.15	172	1501	2.42809	ppb		0.01
Spiked Amount 5.000			Recovery = 48.560%				
17) Surrogate Recovery (TPH)	13.83	244	1801	2.28692	ppb		0.01
Spiked Amount 5.000			Recovery = 45.740%				
Target Compounds							Qvalue
3) Naphthalene	5.90	128	4012	5.29564	ppb		100
4) 2-Methylnaphthalene	6.71	142	2518	5.46493	ppb		99
5) 1-Methylnaphthalene	6.82	142	2701	5.28077	ppb		97
8) Acenaphthylene	7.76	152	4316	5.29617	ppb		97
9) Acenaphthene	7.95	154	2550	5.16223	ppb		99
10) Fluorene	8.57	166	3036	5.30887	ppb		98
12) Phenanthrene	9.89	178	4198	5.13238	ppb		100
13) Anthracene	9.98	178	3960	5.34027	ppb		100
14) Fluoranthene	12.64	202	5900	5.19004	ppb		95
16) Pyrene	13.27	202	6101	5.02162	ppb		100
18) Benz (a) anthracene	16.78	228	4695	4.49207	ppb		97
19) Chrysene	16.88	228	5995	5.08395	ppb		97
20) Indeno (1,2,3-cd) pyrene	22.88	276	5789	5.08309	ppb	#	97
22) Benzo (b) fluoranthene	19.66	252	4679	4.81478	ppb		96
23) Benzo (k) fluoranthene	19.73	252	4272	4.17428	ppb		97
24) Benzo (a) pyrene	20.30	252	5003	4.99009	ppb		98
25) Dibenz (a,h) anthracene	22.94	278	4676	4.96567	ppb		95
26) Benzo (g,h,i) perylene	23.41	276	4381	4.74587	ppb		95

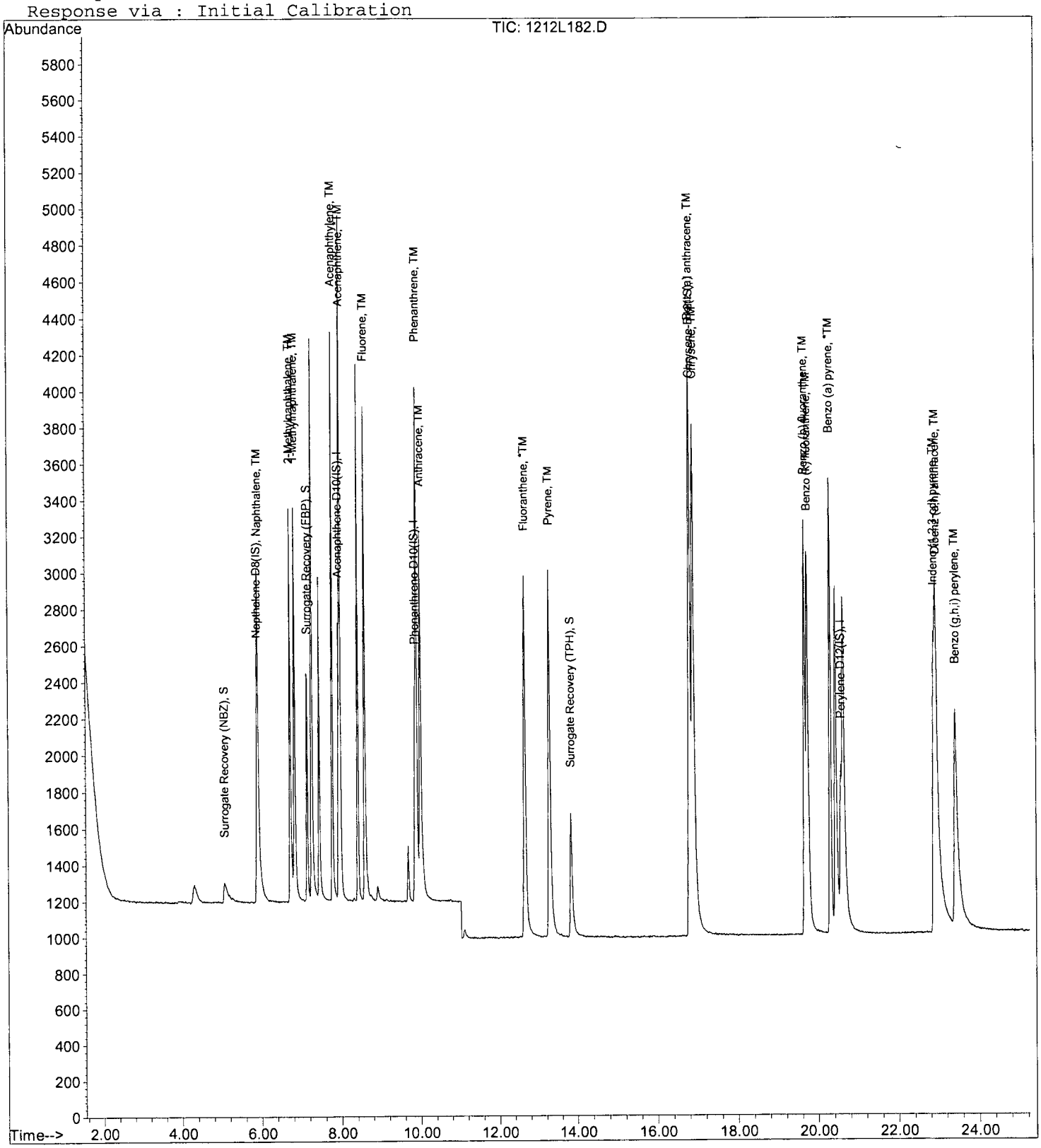
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L182.D Vial: 82
Acq On : 27 Dec 16 19:56 Operator: MA
Sample : 5.0 ug/ml PAH 12/27/16 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 28 8:40 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



ORGANICS

Raw Data

APPL, INC.

Method Blank
EPA 8270D SIM

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161227W-48083 - 215033**
Batch ID: #SIMDO-161227A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/27/16	12/27/16
BLANK	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	12/27/16	12/27/16
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	12/27/16	12/27/16
BLANK	SURROGATE: 2-FLUORBIPHENY	57.0	53-106			%	12/27/16	12/27/16
BLANK	SURROGATE: NITROBENZENE-	67.0	55-111			%	12/27/16	12/27/16
BLANK	SURROGATE: TERPHENYL-D14 (	77.1	58-132			%	12/27/16	12/27/16

Quant Method: L1212P.M
Run #: 1212L176
Instrument: Linus
Sequence: L161212
Initials: RHA

GC SC-Blank-REG MDLs-DOD
Printed: 12/28/16 9:57:51 AM

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L176.D Vial: 76
Acq On : 27 Dec 16 16:53 Operator: MA
Sample : 161227A BLK 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 28 8:54 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	2080	2.50000	ppb	0.01
6) Acenaphthene-D10(IS)	7.93	164	1184	2.50000	ppb	0.01
11) Phenanthrene-D10(IS)	9.86	188	2035	2.50000	ppb	0.02
15) Chrysene-D12(IS)	16.84	240	2572	2.50000	ppb	0.05
21) Perylene-D12(IS)	20.61	264	2419	2.50000	ppb	0.07
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.05	82	835	3.35097	ppb	0.01
Spiked Amount 5.000			Recovery = 67.020%			
7) Surrogate Recovery (FBP)	7.15	172	1970	2.84911	ppb	0.01
Spiked Amount 5.000			Recovery = 56.980%			
17) Surrogate Recovery (TPH)	13.82	244	3123	3.85643	ppb	0.00
Spiked Amount 5.000			Recovery = 77.120%			

Target Compounds	Qvalue

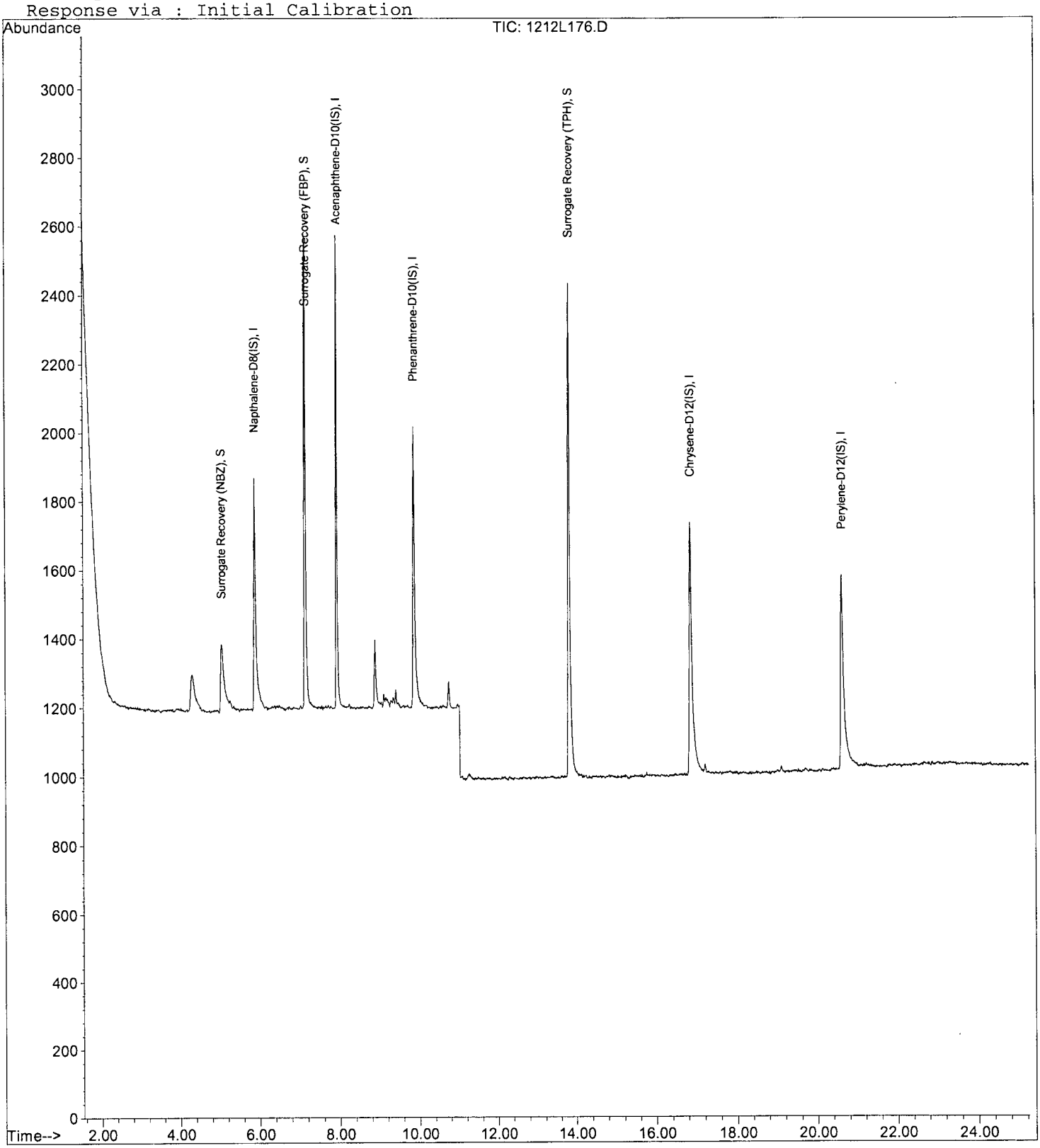
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L176.D Vial: 76
Acq On : 27 Dec 16 16:53 Operator: MA
Sample : 161227A BLK 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 28 8:54 2016 Quant Results File: L1212P.RES

Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



Laboratory Control Spike Recovery
EPA 8270D SIM

APPL ID: **161227W-48083 LCS - 215033**
Batch ID: #SIMDO-161227A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1-METHYLNAPHTHALENE	5.00	4.42	88.4	41-115
2-METHYLNAPHTHALENE	5.00	4.38	87.6	39-114
NAPHTHALENE	5.00	3.87	77.4	43-114
SURROGATE: 2-FLUORBIPHENYL (S)	5.00	4.00	80.0	53-106
SURROGATE: NITROBENZENE-D5 (S)	5.00	4.28	85.6	55-111
SURROGATE: TERPHENYL-D14 (S)	5.00	4.60	92.0	58-132

Comments: _____

Primary	SPK
Quant Method :	L1212P.M
Extraction Date :	12/27/16
Analysis Date :	12/27/16
Instrument :	Linus
Run :	1212L177
Initials :	RHA

Printed: 12/28/16 9:57:44 AM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L161212\1212L177.D Vial: 77
Acq On : 27 Dec 16 17:27 Operator: MA
Sample : 161227A LCS-1 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 28 8:50 2016 Quant Results File: L1212P.RES

Quant Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.88	136	1729	2.50000	ppb		0.01
6) Acenaphthene-D10(IS)	7.92	164	973	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.85	188	1751	2.50000	ppb		0.01
15) Chrysene-D12(IS)	16.80	240	2255	2.50000	ppb		0.01
21) Perylene-D12(IS)	20.57	264	2141	2.50000	ppb		0.03
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.05	82	896	4.27673	ppb		0.01
Spiked Amount 5.000			Recovery = 85.540%				
7) Surrogate Recovery (FBP)	7.13	172	2236	3.99522	ppb		0.00
Spiked Amount 5.000			Recovery = 79.900%				
17) Surrogate Recovery (TPH)	13.82	244	3251	4.60199	ppb		0.00
Spiked Amount 5.000			Recovery = 92.040%				
Target Compounds							Qvalue
3) Naphthalene	5.90	128	2697	3.86669	ppb		100
4) 2-Methylnaphthalene	6.71	142	1859	4.38237	ppb		99
5) 1-Methylnaphthalene	6.82	142	2083	4.42347	ppb		97
8) Acenaphthylene	7.76	152	3271	4.32737	ppb		97
9) Acenaphthene	7.95	154	1915	4.17954	ppb		99
10) Fluorene	8.57	166	2413	4.54905	ppb		99
12) Phenanthrene	9.89	178	3448	4.58138	ppb		99
13) Anthracene	9.98	178	3261	4.77938	ppb		99
14) Fluoranthene	12.64	202	5030	4.80883	ppb		94
16) Pyrene	13.27	202	5220	4.66612	ppb		100
18) Benz (a) anthracene	16.78	228	4061	4.21975	ppb		97
19) Chrysene	16.88	228	5108	4.70441	ppb		97
20) Indeno (1,2,3-cd) pyrene	22.89	276	4644	4.42852	ppb	#	97
22) Benzo (b) fluoranthene	19.66	252	3912	4.25679	ppb		97
23) Benzo (k) fluoranthene	19.73	252	3678	3.80033	ppb		97
24) Benzo (a) pyrene	20.31	252	4245	4.47729	ppb		96
25) Dibenz (a,h) anthracene	22.94	278	3955	4.44130	ppb		95
26) Benzo (g,h,i) perylene	23.42	276	3727	4.26935	ppb		96

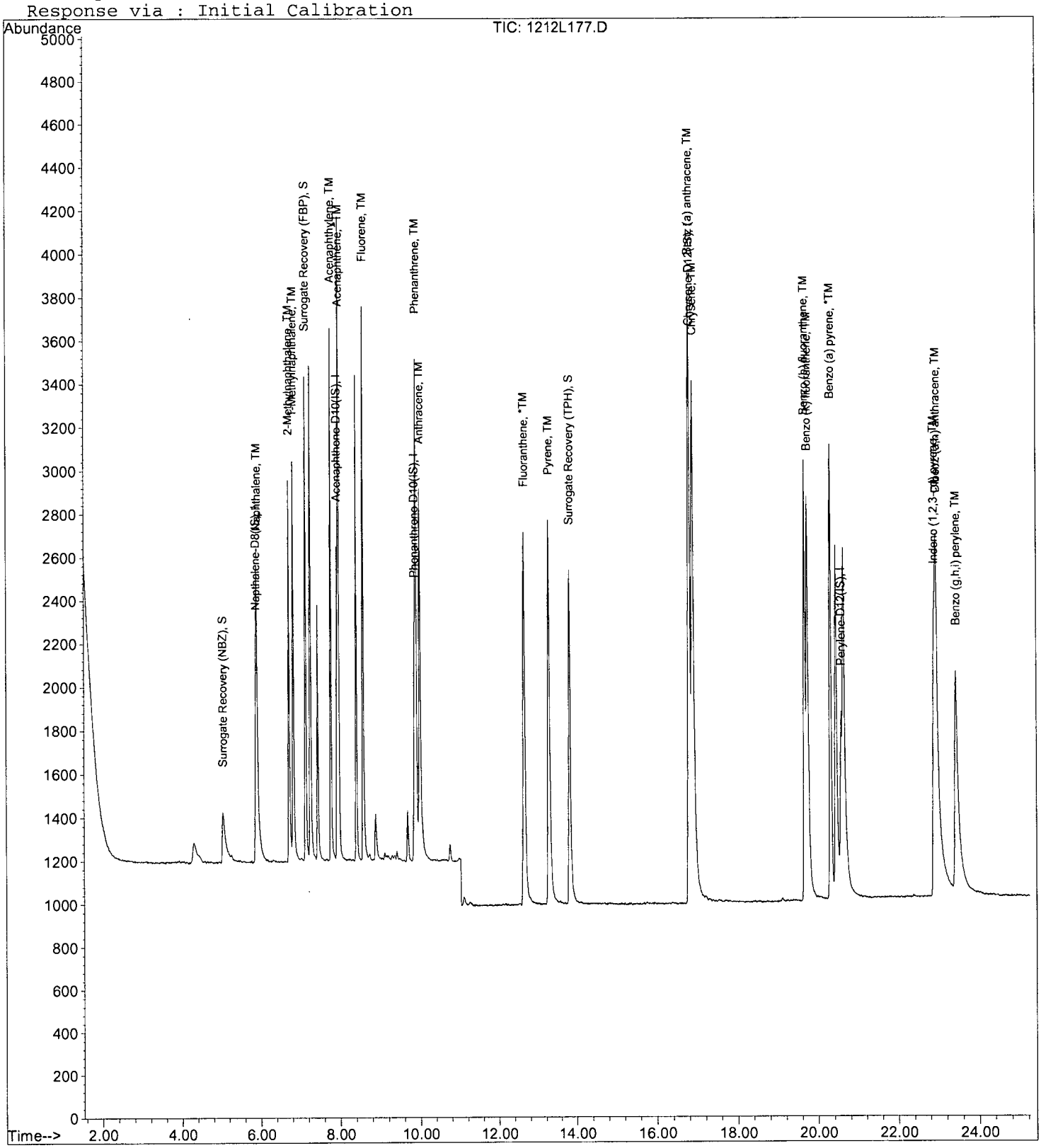
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L161212\1212L177.D Vial: 77
Acq On : 27 Dec 16 17:27 Operator: MA
Sample : 161227A LCS-1 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Dec 28 8:50 2016 Quant Results File: L1212P.RES

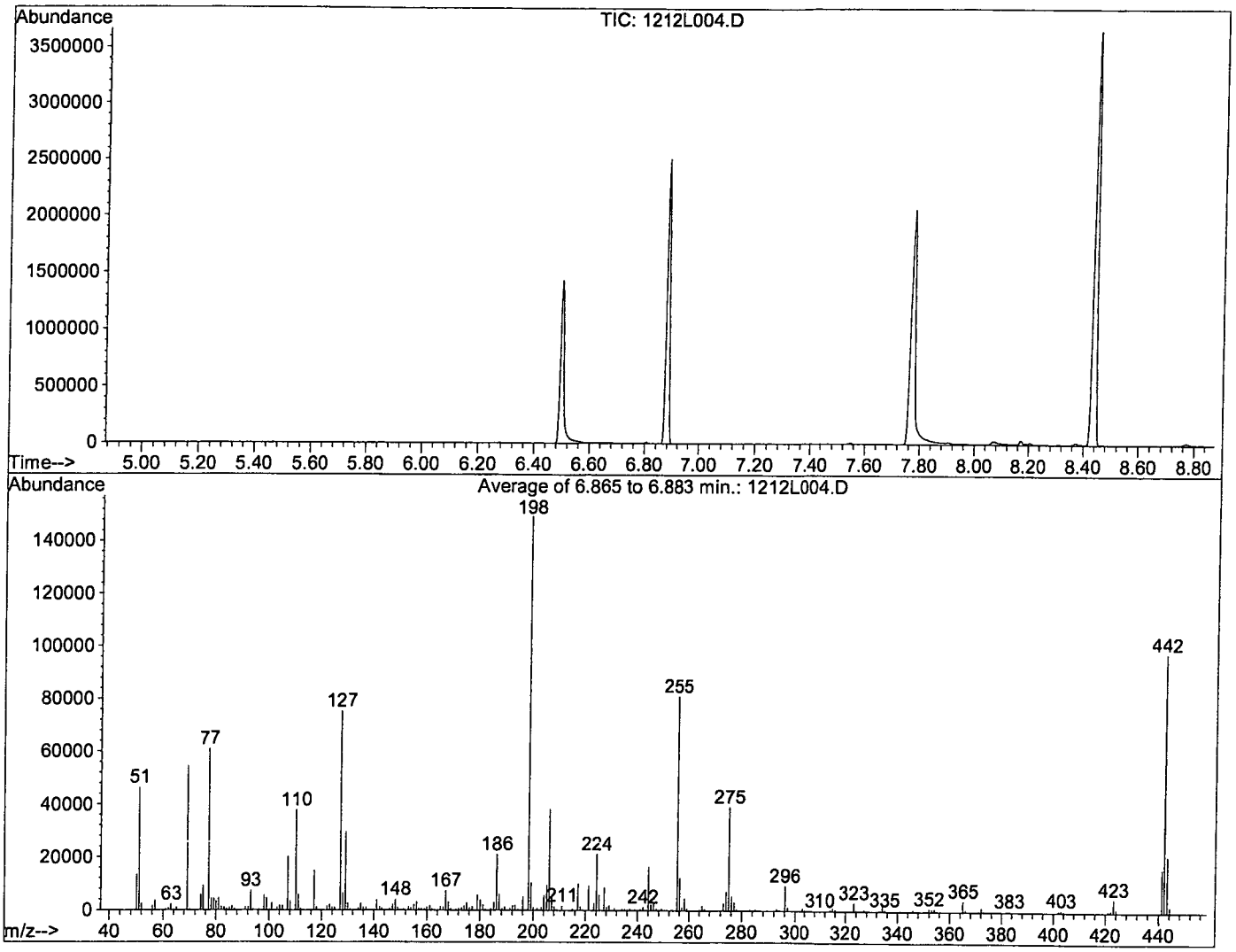
Method : M:\LINUS\DATA\L161212\L1212P.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Dec 13 15:06:11 2016
Response via : Initial Calibration



Data File : M:\LINUS\DATA\L161212\1212L004.D
Acq On : 12 Dec 16 10:19
Sample : SV Tune 11/15/16
Misc : water

Vial: 2
Operator: MA
Inst : Linus
Multiplr: 1.00

Method : M:\LINUS\DATA\L161026\DFTPP2.M (Chemstation Integrator)
Title :



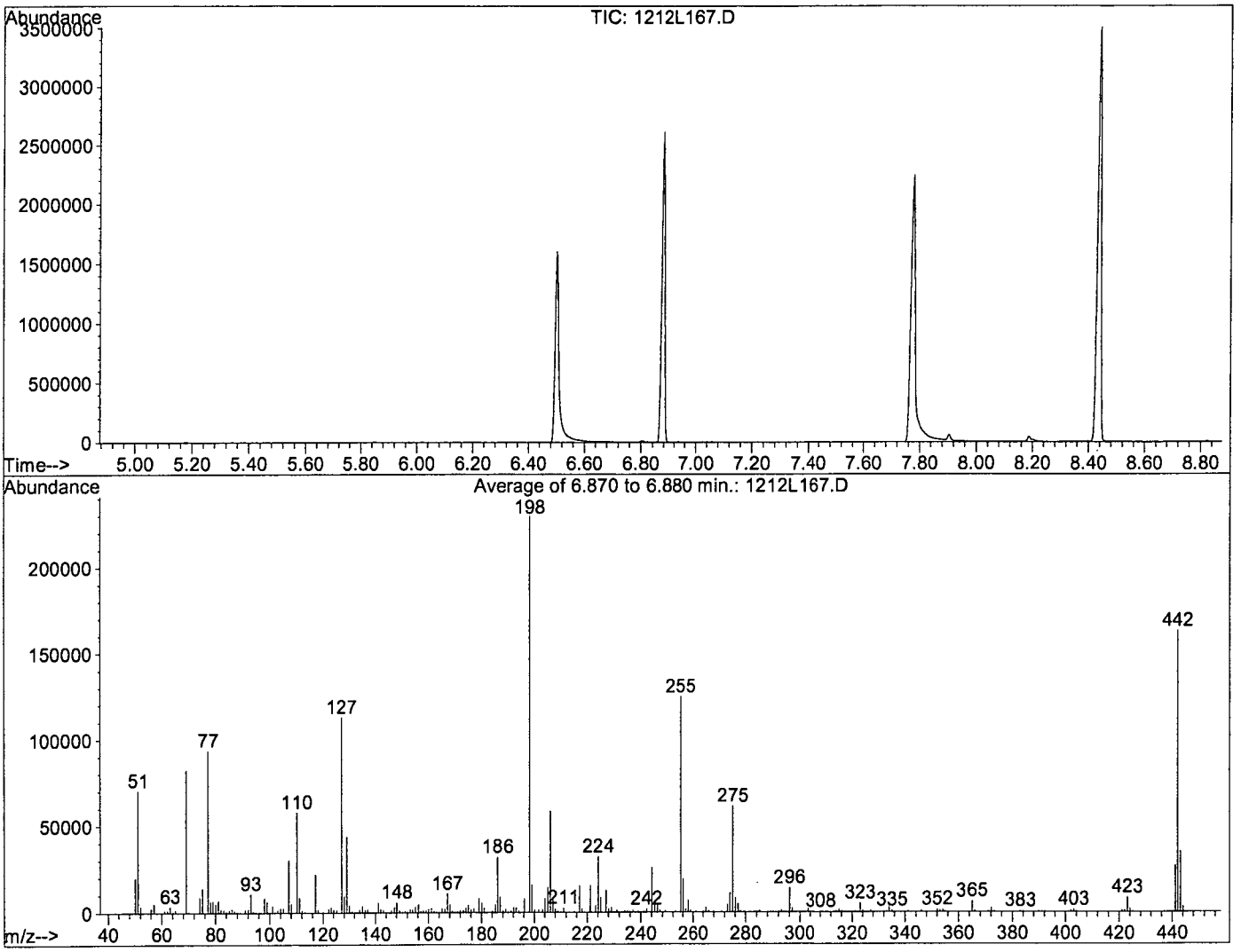
Spectrum Information: Average of 6.865 to 6.883 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	31.0	46351	PASS
68	69	0.00	2	0.0	0	PASS
69	69	100	100	100.0	54581	PASS
70	69	0.00	2	0.6	344	PASS
127	198	40	60	50.3	75268	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	149562	PASS
199	198	5	9	6.9	10325	PASS
275	198	10	30	26.2	39172	PASS
365	198	1	100	2.6	3864	PASS
441	443	0.01	100	76.7	16188	PASS
442	198	40	150	65.3	97607	PASS
443	442	17	23	21.6	21119	PASS

1212L004.D DFTPP2.M Mon Dec 12 10:39:40 2016

Data File : M:\LINUS\DATA\L161212\1212L167.D Vial: 67
Acq On : 27 Dec 16 12:11 Operator: MA
Sample : SV Tune 12/15/16 Inst : Linus
Misc : water Multiplr: 1.00

Method : M:\LINUS\DATA\L161026\DFTPP2.M (Chemstation Integrator)
Title :



Spectrum Information: Average of 6.870 to 6.880 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	30.7	70565	PASS
68	69	0.00	2	0.0	0	PASS
69	69	100	100	100.0	82554	PASS
70	69	0.00	2	0.5	414	PASS
127	198	40	60	49.1	112962	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	229931	PASS
199	198	5	9	6.9	15928	PASS
275	198	10	30	26.6	61222	PASS
365	198	1	100	2.6	6024	PASS
441	443	0.01	100	77.3	26853	PASS
442	198	40	150	70.8	162826	PASS
443	442	17	23	21.3	34749	PASS

8270 PAH SIM Standard Curve

PREP DATE:	12/12/16 RH											
8270 PAH SIM STANDARD CURVE												
Exp.DATE:	**2/15/17**					0.1	0.2	0.5	1	5	10	50
		Conc.		Date								
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL	µL	µL	µL	µL
O2si	8270 PAH SIM Stock	200	278353-36992	9/12/16	9/12/17	0	0	0	0	5	5	25
	5.0ug/mL	5		9/12/16	7/29/17	0	0	10	20	0	0	0
	1.0ug/mL	1		9/12/16	7/29/17	10	20	0	0	0	0	0
O2SI	BNA SURR.	100/200		11/15/16	2/15/17	0	0	0	0	5	5	25
EM Science	Methylene Chloride		56061			90	80	90	80	190	90	50
Supelco	SV Internal Standar	2000	XA14020V-36768	10/10/16	10/10/17	2	2	2	2	4	2	2
				Final Vol.		102	102	102	102	204	102	102

100
µL
50
0
0
50
0
2
102

8270 PAH SIM 2ND SRC

8270 PAH SIM 2ND SRC			Prep: 09/06/16 Exp 01/12/17 RH		
Supplier	**Standard**	**Conc.**	**Prep**	**Exp**	**µL**
O2SI	8270 2ND SRC	VARIOUS	06/03/16	01/21/17	25
Methylene Chloride					75
o2si	V Internal Standar	2000	10/10/16	10/10/17	2
LOT#:	XA10079V-35507			Final Vol.	102

SIM SPIKE	
CAT:	110780-01
Lot:	278353-369
OP: 11/21/16-R.H.	
EX: 11/21/17	

8270 SIM PAH Internal Standard						
PREP DATE:	10/10/16 RH.					
8270 SIM PAH Internal Standard Mix 125ug/ml						
Exp.DATE:	10/10/17					
		Conc.		Date	Exp.	125
Supplier	ID #	µg/mL	Lot #	Code	Date	µL
Supelco	SV Internal	2000	XA14020V-36768	10/10/16	10/10/17	350
EM Science	Methylene Chloride		56061			5250
				Final Vol.		5600

PAH SIM STD prep: 09/12/16-R.H.						
Exp:	19/12/17					
		Conc.				
Supplier	ID #	mg/L	Lot #	Open Date	Exp.Date	µL
o2si	110780-01	200	278353-36992	6/22/16	6/22/17	1000
				Fin Vol.		1000

Semivolatile (SV) Tuning Solution -G.A.						
PREP DATE:	11/15/16	RH				
Semivolatile (SV) Tune Solution 50ug/ml						
Exp:	8/26/17					
		Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
Ultra Scient	Semivolatile GC	1000	N081628-37012	08/23/16	8/23/17	200
EM Science	Methylene Chloride		55098			3800
				Final Vol.		4000

8270 Surrog Mix 100/200ppm						
Prep: 11/15/16 -RH Ex: 2/15/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
8270 Acid Surrog Mix	10000 ug/ml	Restek Cat# 33029 Lot# A0118884-36875 Op: 11/15/16 EX: 11/15/17	2.0 mL	100 mL	200 ug/mL	MC
8270 B/N surrog Mix	5000 µg/mL	Restek Cat# 31086 Lot# A0119223-36871 Op: 11/15/16 EX: 11/15/17	2.0 mL	100 mL	100 ug/mL	MC

8270 PAH SIM CCV (2)

PREP DATE:	12/27/16 RH					
8270 PAH SIM STANDARD CURVE						
Exp.DATE:	**2/15/17**					**5**
		Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
O2si	8270 PAH SIM S	200	278353-36992	9/12/16	9/12/17	5
	5.0ug/mL	5		9/12/16	7/29/17	0
	1.0ug/mL	1		9/12/16	7/29/17	0
O2SI	BNA SURR.	100/200		11/15/16	2/15/17	5
EM Science	Methylene Chloride		56061			190
Supelco	SV Internal St	2000	XA14020V-36768	10/10/16	10/10/17	4
				Final Vol.		204

_SEP004S

Organic Extraction Worksheet

Method	SIM Separatory Funnel Extra 3510C	Extraction Set	161227A	Extraction Method	SEP004S	Units	mL

Spiked ID 1	PAH SIM Spike 12-22-16 EXP 12-22-17		Surrogate ID 1	8270 Surrogate 12-8-16 EXP 3-8-17	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	12/27/16 9:40	
Spiked ID 8			Ext. End Time:	12/27/16 15:40	
			GC Requires Extract By:	**12/29/16 0:00**	

pH1	2	12/27/16 9:50:00 AM	Water Bath Temp Criteria	75 °C
pH2	14	2/27/16 12:50:00 PM		
pH3				

Spiked By: KY **Date** 12/27/16 **Witnessed By:** DL **Date** 12/27/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	161227A Blk				0.050	1	1000	1	2/1	12/27/16 9:40	
						equip	E-WB6				
2	161227A LCS-1		0.0250	1	0.050	1	1000	1	2/1	12/27/16 9:40	
						equip	E-WB6				
3	161227A LCSD-1		0.0250	1	0.050	1	1000	1	2/1	12/27/16 9:40	
						equip	E-WB6				
4	AZ48083	AZ48083W18			0.050	1	1070	1	2/1	12/27/16 9:40	81842 1 WEEK
						equip	E-WB6				
5	AZ48084	AZ48084W11			0.050	1	1070	1	2/1	12/27/16 9:40	81842 1 WEEK
						equip	E-WB6				

KY 12/27/16

Solvent and Lot#	
1+1 SULFURIC ACID	12-5-16
PH STRIP	HC 574756
MC	56153
A. Na2SO4	11-3-16
10N NaOH	12-19-16
B. Na2SO4	16C255214
FILTER PAPER	400112

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	RH
Date	12/27/16
Time	4:10
Refrigerator	GC-C

	Technician's Initials
Scanned By	DL
Sample Preparation	DL
Extraction	DL,KY,JR
Concentration	KY

Modified	12/27/16 3:50:06 PM

Reviewed By: KY **Date** 12/27/16

12/27/16 3:50:44 PM

Ext_ID 225_53653

Injection Log

Directory: M:\LINUS\DATA\L161212\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	1212L004.D	1	SV Tune 11/15/16	water	12 Dec 16 10:19
2	3	1212L005.D	1	0.1 ug/ml PAH 12/12/16	water	12 Dec 16 10:36
3	4	1212L006.D	1	0.2 ug/ml PAH 12/12/16	water	12 Dec 16 11:09
4	7	1212L009.D	1	5.0 ug/ml PAH 12/12/16	water	12 Dec 16 12:49
5	8	1212L010.D	1	10.0 ug/ml PAH 12/12/16	water	12 Dec 16 13:22
6	9	1212L011.D	1	50.0 ug/ml PAH 12/12/16	water	12 Dec 16 13:54
7	10	1212L012.D	1	100.0 ug/ml PAH 12/12/16	water	12 Dec 16 14:28
8	11	1212L013.D	1	0.5 ug/ml PAH 12/12/16	water	12 Dec 16 15:01
9	12	1212L014.D	1	1.0 ug/ml PAH 12/12/16	water	12 Dec 16 15:34
10	15	1212L015.D	1	SS PAH 12/12/16	water	12 Dec 16 16:07
11	67	1212L167.D	1	SV Tune 12/15/16	water	27 Dec 16 12:11
12	68	1212L168.D	1	5.0 ug/ml PAH 12/27/16	water	27 Dec 16 12:28
13	76	1212L176.D	1	161227A BLK 1/1000	water	27 Dec 16 16:53
14	77	1212L177.D	1	161227A LCS-1 1/1000	water	27 Dec 16 17:27
15	79	1212L179.D	0.93458	AZ48083W18 1/1070	water	27 Dec 16 18:33
16	80	1212L180.D	0.93458	AZ48084W11 1/1070	water	27 Dec 16 19:07
17	82	1212L182.D	1	5.0 ug/ml PAH 12/27/16	water	27 Dec 16 19:56

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank
EPA 8270D WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161227W-48083 - 215034**
Batch ID: #87DC5-161227A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	12/27/16	12/27/16
BLANK	SURROGATE: 2,4,6-TRIBROMOP	62.5	43-140			%	12/27/16	12/27/16
BLANK	SURROGATE: 2-FLUORBIPHENY	62.4	44-119			%	12/27/16	12/27/16
BLANK	SURROGATE: 2-FLUOROPHENO	45.9	19-119			%	12/27/16	12/27/16
BLANK	SURROGATE: NITROBENZENE-	64.9	44-120			%	12/27/16	12/27/16
BLANK	SURROGATE: PHENOL-D6 (S)	30.1	10-115			%	12/27/16	12/27/16
BLANK	SURROGATE: TERPHENYL-D14 (	63.1	50-134			%	12/27/16	12/27/16

Quant Method:Y1207.M
Run #:1207Y208
Instrument:Yoda
Sequence:Y161207
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 12/28/16 10:08:17 AM

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81842

Case No: 81842 Date Analyzed: 12/27/16

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2,4,6-TRIBROMOPHENOL (S)			SURROGATE: 2-FLUORBIPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161227A-BLK	Blank	43-140	62.5		44-119	62.4	
161227A-LCS	Lab Control Spike	43-140	59.0		44-119	58.1	
AZ48083	ERH157	43-140	59.2		44-119	58.5	
AZ48084	ERH158	43-140	53.9		44-119	56.9	

Comments: Batch: #87DC5-161227A

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81842

Case No: 81842 Date Analyzed: 12/27/16

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2-FLUOROPHENOL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161227A-BLK	Blank	19-119	45.9		44-120	64.9	
161227A-LCS	Lab Control Spike	19-119	44.6		44-120	64.8	
AZ48083	ERH157	19-119	40.5		44-120	61.2	
AZ48084	ERH158	19-119	39.6		44-120	58.8	

Comments: Batch: #87DC5-161227A

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81842

Case No: 81842 Date Analyzed: 12/27/16

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: PHENOL-D6 (S)			SURROGATE: TERPHENYL-D14 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161227A-BLK	Blank	10-115	30.1		50-134	63.1	
161227A-LCS	Lab Control Spike	10-115	29.2		50-134	61.2	
AZ48083	ERH157	10-115	26.6		50-134	60.0	
AZ48084	ERH158	10-115	27.0		50-134	55.8	

Comments: Batch: #87DC5-161227A

Laboratory Control Spike Recovery
EPA 8270D WATER

APPL ID: **161227W-48083 LCS - 215034**
Batch ID: #87DC5-161227A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
PHENOL	50.0	18.3	36.6	10-115
SURROGATE: 2,4,6-TRIBROMOPHENOL	200	118	59.0	43-140
SURROGATE: 2-FLUORBIPHENYL (S)	100	58.1	58.1	44-119
SURROGATE: 2-FLUOROPHENOL (S)	200	89.2	44.6	19-119
SURROGATE: NITROBENZENE-D5 (S)	100	64.8	64.8	44-120
SURROGATE: PHENOL-D6 (S)	200	58.4	29.2	10-115
SURROGATE: TERPHENYL-D14 (S)	100	61.2	61.2	50-134

Comments: _____

Primary	SPK
Quant Method :	Y1207.M
Extraction Date :	12/27/16
Analysis Date :	12/27/16
Instrument :	Yoda
Run :	1207Y209
Initials :	MA

Printed: 12/28/16 10:08:19 AM
APPL Standard LCS

EPA 8270D

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81842

Case No: 81842 Date Analyzed: 12/27/16

Matrix: WATER Instrument: Yoda

Blank ID: 161227A-BLK Time Analyzed: 1742

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161227A-BLK	Blank	1207Y208	12/27/16 1742
161227A-LCS	Lab Control Spike	1207Y209	12/27/16 1813
AZ48083	ERH157	1207Y211	12/27/16 1913
AZ48084	ERH158	1207Y212	12/27/16 1943

Comments: Batch: #87DC5-161227A

Printed: 12/28/16 10:08:21 AM
Form 4, Blank Summary

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: water
ID: SV Tune 10/19/16

SDG No:
Date Analyzed: 12/07/16
Instrument: Yoda
Time Analyzed: 9:00

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		5ug/ml SVOC 12/06/16	1207Y004.D	12/07/16 10:01
2		10ug/ml SVOC 12/06/1	1207Y005.D	12/07/16 10:32
3		20ug/ml SVOC 12/06/1	1207Y006.D	12/07/16 11:02
4		40ug/ml SVOC 12/06/1	1207Y007.D	12/07/16 11:32
5		50ug/ml SVOC 12/06/1	1207Y008.D	12/07/16 12:02
6		60ug/ml SVOC 12/06/1	1207Y009.D	12/07/16 12:32
7		80ug/ml SVOC 12/06/1	1207Y010.D	12/07/16 13:02
8		100ug/ml SVOC 12/06/	1207Y011.D	12/07/16 13:32
9		2ND SRC SVOC 12/06/1	1207Y012.D	12/07/16 14:01
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	46.7
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.7
127	40 - 60% of mass 198	56.0
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 197.95	100.0
199	5 - 9% of mass 198	6.9
275	10 - 30% of mass 198	24.0
365	1 - 100% of mass 198	3.1
441	0.01 - 100% of mass 443	86.4
442	50 - 150% of mass 197.95	90.6
443	17 - 23% of mass 442	20.1

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81842
Matrix: Water
ID: SV Tune 10/19/16

SDG No: 81842
Date Analyzed: 12/27/16
Instrument: Yoda
Time Analyzed: 9:38

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		50ug/ml SVOC 12/06/1	1207Y194.D	12/27/16 10:43
2	Blank	161227A BLK 1/1000	1207Y208.D	12/27/16 17:42
3	Lab Control Spike	161227A LCS-1 1/1000	1207Y209.D	12/27/16 18:13
4	ERH157	AZ48083W14 1/1070	1207Y211.D	12/27/16 19:13
5	ERH158	AZ48084W14 1/1060	1207Y212.D	12/27/16 19:43
6		50ug/ml SVOC 12/06/1	1207Y214.D	12/27/16 20:26
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	30 - 60% of mass 198	43.5
68	0 - 2% of mass 69	0.0
69	100 - 100% of mass 69	100.0
70	0 - 2% of mass 69	0.2
127	40 - 60% of mass 198	55.8
197	0 - 1% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.4
275	10 - 30% of mass 198	25.1
365	1 - 100% of mass 198	4.0
441	0.01 - 100% of mass 443	84.6
442	40 - 150% of mass 198	108.4
443	17 - 23% of mass 442	19.0

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 81842

Lab File ID (Standard): 1207Y008.D Date Analyzed: 7 Dec 16 12:02

Instrument ID: Yoda Time Analyzed: 7 Dec 16 12:02

GC Column: _____ ID: Heated Purge: (Y/N) _____

		1,4-dichlorobenzene-D4(IS)		Napthalene-D8(IS)		Acenaphthene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	195270	4.87	816895	6.30	475200	8.31
	UPPER LIMIT	390540	5.37	1633790	6.80	950400	8.81
	LOWER LIMIT	97635	4.37	408448	5.80	237600	7.81
	SAMPLE NO.						
01	50ug/ml SVOC 12/06/16	206555	4.86	845054	6.29	497564	8.30
02	161227A BLK 1/1000	228131	4.86	973211	6.29	541589	8.30
03	161227A LCS-1 1/1000	218340	4.86	906233	6.29	542507	8.31
04	AZ48083W14 1/1070	232260	4.86	1001330	6.29	571478	8.30
05	AZ48084W14 1/1060	226986	4.86	971220	6.29	560221	8.31
06	50ug/ml SVOC 12/06/16	280682	4.86	1125310	6.29	677242	8.31
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 81842

Lab File ID (Standard): 1207Y008.D Date Analyzed: 7 Dec 16 12:02

Instrument ID: Yoda Time Analyzed: 7 Dec 16 12:02

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Phenanthrene-D10(IS)		Chrysene-D12(IS)		Perylene-D12(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	975541	10.03	853105	13.10	871056	14.75
	UPPER LIMIT	1951082	10.53	1706210	13.60	1742112	15.25
	LOWER LIMIT	487771	9.53	426553	12.60	435528	14.25
	SAMPLE NO.						
01	50ug/ml SVOC 12/06/16	937578	10.03	904635	13.11	949995	14.75
02	161227A BLK 1/1000	1009350	10.03	1024100	13.10	1016450	14.74
03	161227A LCS-1 1/1000	997687	10.02	991187	13.11	1051340	14.75
04	AZ48083W14 1/1070	1051050	10.03	1058840	13.10	1066450	14.74
05	AZ48084W14 1/1060	1026020	10.02	1024270	13.11	1052530	14.75
06	50ug/ml SVOC 12/06/16	1298140	10.03	1257390	13.11	1023250	14.75
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

ORGANICS

Sample Data

APPL, INC.

EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH157
Sample Collection Date: 12/21/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81842
APPL ID: AZ48083
QCG: #87DC5-161227A-215034

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	12/27/16	12/27/16
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	59.2	43-140			%	12/27/16	12/27/16
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	58.5	44-119			%	12/27/16	12/27/16
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	40.5	19-119			%	12/27/16	12/27/16
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	61.2	44-120			%	12/27/16	12/27/16
EPA 8270D	SURROGATE: PHENOL-D6 (S)	26.6	10-115			%	12/27/16	12/27/16
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	60.0	50-134			%	12/27/16	12/27/16

Quant Method: Y1207.M
Run #: 1207Y211
Instrument: Yoda
Sequence: Y161207
Dilution Factor: 1
Initials: MA

Printed: 12/28/16 10:08:21 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y211.D Vial: 11
Acq On : 27 Dec 16 19:13 Operator: MA
Sample : AZ48083W14 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Dec 28 9:00 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	232260	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.29	136	1001330	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.30	164	571478	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	1051051	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.10	240	1058835	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.74	264	1066447	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.34	112	619503	75.77761 ppb	0.00
Spiked Amount 186.916			Recovery =	40.541%	
5) Phenol-D6 (S)	4.50	99	535710	49.64792 ppb	0.00
Spiked Amount 186.916			Recovery =	26.562%	
21) Nitrobenzene-D5(S)	5.50	82	621344	57.21158 ppb	0.00
Spiked Amount 93.458			Recovery =	61.217%	
45) 2-Fluorobiphenyl(S)	7.53	172	1053519	54.65289 ppb	0.00
Spiked Amount 93.458			Recovery =	58.479%	
63) 2,4,6-Tribromophenol(S)	9.23	330	339000	110.56828 ppb	0.00
Spiked Amount 186.916			Recovery =	59.154%	
81) Terphenyl-D14(S)	11.89	244	1437405	56.10785 ppb	0.00
Spiked Amount 93.458			Recovery =	60.036%	
Target Compounds					Qvalue

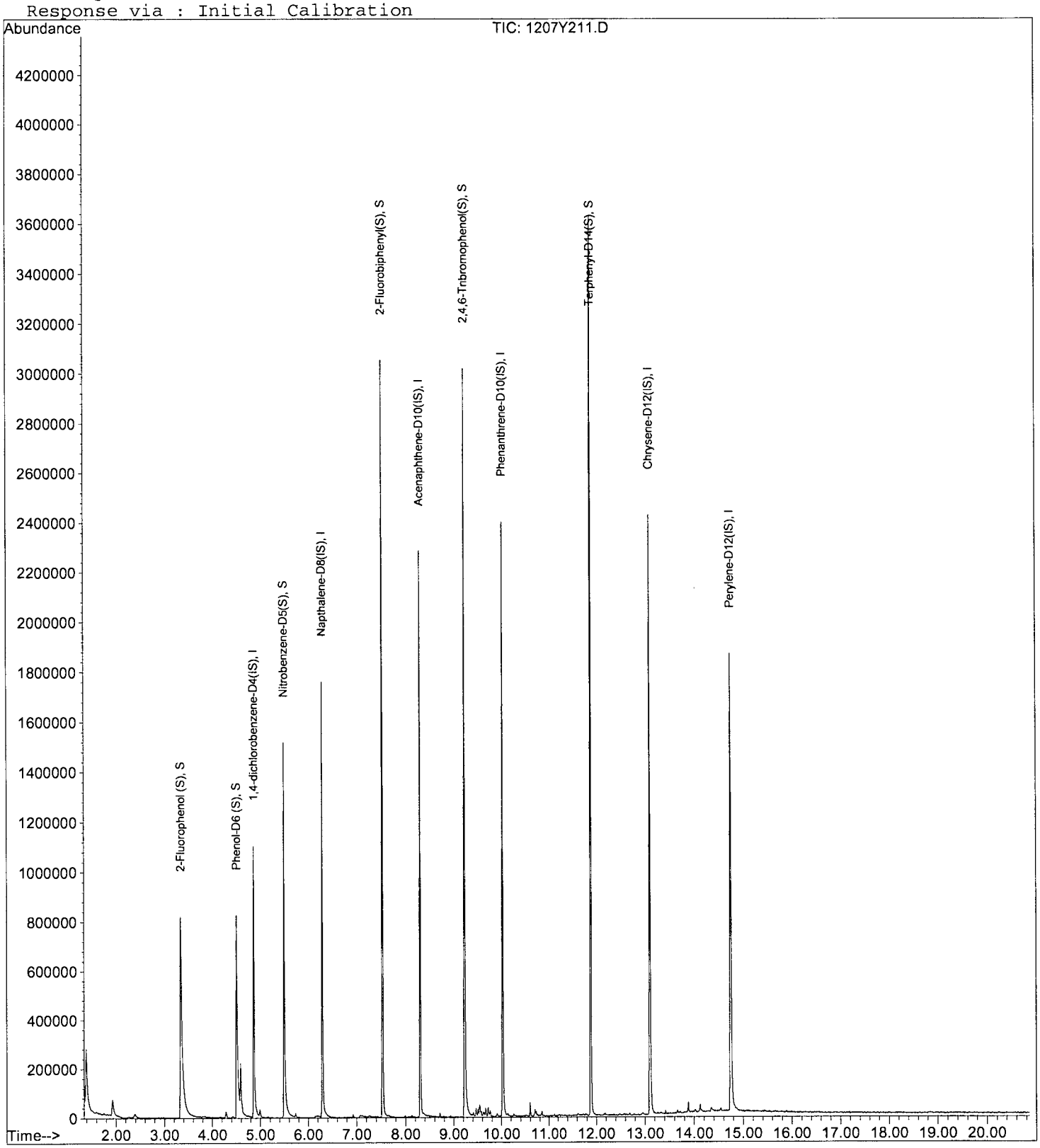
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y211.D Vial: 11
Acq On : 27 Dec 16 19:13 Operator: MA
Sample : AZ48083W14 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Dec 28 9:00 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH158

Sample Collection Date: 12/21/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81842

APPL ID: AZ48084

QCG: #87DC5-161227A-215034

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	12/27/16	12/27/16
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	53.9	43-140			%	12/27/16	12/27/16
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	56.9	44-119			%	12/27/16	12/27/16
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	39.6	19-119			%	12/27/16	12/27/16
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	58.8	44-120			%	12/27/16	12/27/16
EPA 8270D	SURROGATE: PHENOL-D6 (S)	27.0	10-115			%	12/27/16	12/27/16
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	55.8	50-134			%	12/27/16	12/27/16

Quant Method: Y1207.M
Run #: 1207Y212
Instrument: Yoda
Sequence: Y161207
Dilution Factor: 1
Initials: MA

Printed: 12/28/16 10:08:21 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y212.D Vial: 12
Acq On : 27 Dec 16 19:43 Operator: MA
Sample : AZ48084W14 1/1060 Inst : Yoda
Misc : water Multiplr: 0.94

Quant Time: Dec 28 9:01 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	226986	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.29	136	971220	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	560221	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.02	188	1026019	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.11	240	1024266	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.75	264	1052528	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.34	112	592035	74.79966 ppb	0.00
Spiked Amount 188.679			Recovery =	39.644%	
5) Phenol-D6 (S)	4.50	99	531799	50.90654 ppb	0.00
Spiked Amount 188.679			Recovery =	26.981%	
21) Nitrobenzene-D5(S)	5.49	82	578388	55.42556 ppb	0.00
Spiked Amount 94.340			Recovery =	58.752%	
45) 2-Fluorobiphenyl(S)	7.54	172	1004430	53.65497 ppb	0.00
Spiked Amount 94.340			Recovery =	56.874%	
63) 2,4,6-Tribromophenol(S)	9.23	330	303058	101.78320 ppb	0.00
Spiked Amount 188.679			Recovery =	53.945%	
81) Terphenyl-D14(S)	11.89	244	1292209	52.63470 ppb	0.00
Spiked Amount 94.340			Recovery =	55.793%	

Target Compounds Qvalue

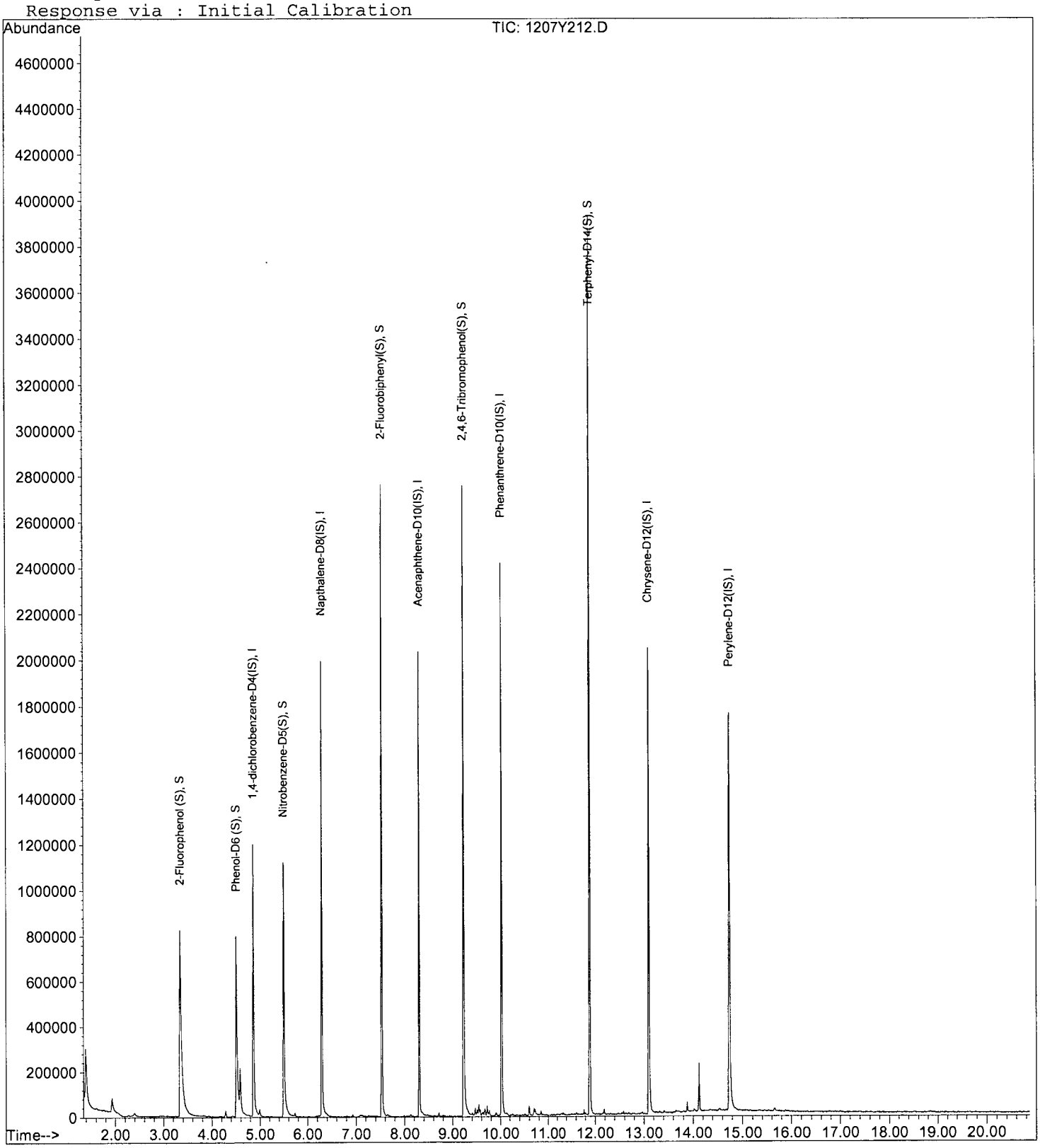
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y212.D Vial: 12
Acq On : 27 Dec 16 19:43 Operator: MA
Sample : AZ48084W14 1/1060 Inst : Yoda
Misc : water Multiplr: 0.94

Quant Time: Dec 28 9:01 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



ORGANICS

Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/07/16
Matrix: Instrument: Yoda
Initials:

		Compound	1207Y004.D 5	1207Y005.D 10	1207Y006.D 20	1207Y007.D 40	1207Y008.D 50	1207Y009.D 60	1207Y010.D 80	1207Y011.D 100			Avg	%RSD		
1	I	1,4-dichlorobenzene-D4(IS)														
2	TM	n-Nitrosodimethylamine	0.7148	0.8188	0.8173	0.8076	0.8521	0.7243	0.8231	0.7956			0.79	6.2	TM	
3	TM	Pyridine	1.581	1.725	1.660	1.936	2.046	1.751	1.878	1.777			1.8	8.5	TM	
4	S	2-Fluorophenol (S)	1.066	1.299	1.267	1.425	1.424	1.318	1.385	1.343			1.3	8.8	S	
5	S	Phenol-D6 (S)	1.822	1.785	1.823	1.762	1.706	1.655	1.706	1.635			1.7	4.2	S	
6	*TM	Phenol	1.948	1.915	2.075	2.002	1.967	1.942	2.023	1.918			2.0	2.8	*TM	
7	TM	Aniline	1.776	1.833	1.896	1.887	1.869	1.829	1.983	1.872			1.9	3.2	TM	
8	TM	Bis (2-chloroethyl) ether	0.8418	0.7909	0.9135	0.8982	0.8478	0.8563	0.9089	0.8610			0.86	4.7	TM	
9	TM	2-Chlorophenol	1.635	1.632	1.616	1.577	1.518	1.543	1.572	1.517			1.6	3.1	TM	
10	TM	1,3-DCB	1.660	1.666	1.674	1.664	1.624	1.596	1.569	1.586			1.6	2.6	TM	
11	*TM	1,4-DCB	1.785	1.781	1.664	1.660	1.668	1.607	1.666	1.605			1.7	4.1	*TM	
12	TM	Benzyl alcohol	0.7838	0.8402	0.9167	0.8614	0.9167	0.8803	0.8909	0.8835			0.87	5.0	TM	
13	TM	1,2-DCB	1.611	1.557	1.581	1.484	1.593	1.492	1.515	1.463			1.5	3.6	TM	
14	TM	2-Methylphenol	1.082	1.139	1.181	1.118	1.137	1.110	1.083	1.109			1.1	2.9	TM	
15	TM	Bis (2-chloroisopropyl) ether	1.873	1.751	1.831	1.685	1.738	1.688	1.621	1.595			1.7	5.6	TM	
16	TM	Acetophenone	2.043	2.072	2.030	2.015	2.091	2.047	2.025	2.028			2.0	1.3	TM	
17	TM	3&4-Methylphenol	1.558	1.530	1.459	1.440	1.525	1.448	1.459	1.455			1.5	3.1	TM	
18	**TM	n-Nitrosodi-n-propylamine	1.068	1.045	1.056	1.027	1.076	1.038	1.050	1.060			1.1	1.5	**TM	
19	TM	Hexachloroethane	0.6682	0.7054	0.6470	0.6617	0.6824	0.6779	0.6684	0.6594			0.67	2.6	TM	
20	I	Napthalene-D8(IS)														
21	S	Nitrobenzene-D5(S)	0.4047	0.4332	0.3921	0.4003	0.4125	0.3872	0.3742	0.4394			0.41	5.5	S	
22	TM	Nitrobenzene	0.4054	0.4067	0.3889	0.4048	0.4175	0.3984	0.3936	0.4509			0.41	4.7	TM	
23	TM	Isophorone	0.6691	0.6862	0.6315	0.6698	0.6921	0.6667	0.6337	0.7606			0.68	6.0	TM	
24	*TM	2-Nitrophenol	0.1845	0.1935	0.1942	0.2063	0.2096	0.2079	0.2003	0.2337			0.20	7.3	*TM	
25	TM	2,4-Dimethylphenol	0.3139	0.3382	0.3012	0.3156	0.3171	0.3192	0.3290	0.3503			0.32	4.8	TM	
26	TML	Benzoic acid	0.0808	0.1551	0.2077	0.2553	0.2737	0.2314	0.2577	0.2655			0.22	31	TML	0.997
27	TM	Bis (2-chloroethoxy) methane	0.3810	0.3848	0.3681	0.3830	0.3880	0.3802	0.3949	0.4047			0.39	2.8	TM	
28	*TM	2,4-Dichlorophenol	0.2878	0.3066	0.3011	0.3098	0.3185	0.3087	0.3182	0.3126			0.31	3.2	*TM	
29	TM	1,2,4-Trichlorobenzene	0.3408	0.3409	0.3112	0.3403	0.3441	0.3301	0.3350	0.3367			0.33	3.1	TM	
30	TM	3,4-Dimethylphenol	0.5455	0.4964	0.4910	0.4802	0.5023	0.4740	0.4772	0.4907			0.49	4.6	TM	
31	TM	Naphthalene	1.044	1.055	1.078	1.053	1.069	1.024	1.025	1.045			1.0	1.8	TM	
32	TM	4-Chloroaniline	0.3632	0.4265	0.4327	0.4002	0.3874	0.3691	0.3641	0.3626			0.39	7.4	TM	
33	TM	2,6-Dichlorophenol	0.3045	0.3311	0.3196	0.2860	0.2901	0.2795	0.2735	0.2922			0.30	6.7	TM	
34	TM	Hexachloropropene	0.2445	0.2667	0.2704	0.2771	0.2732	0.2621	0.2668	0.2819			0.27	4.2	TM	
35	*TM	Hexachlorobutadiene	0.2289	0.2214	0.2210	0.2112	0.2149	0.2010	0.1986	0.2098			0.21	4.9	*TM	

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/07/16
Matrix: Instrument: Yoda Initials:

		Compound	5	10	20	40	50	60	80	100			Avg	%RSD		
36	TM	Caprolactum	0.1439	0.1548	0.1512	0.1546	0.1563	0.1592	0.1531	0.1616			0.15	3.5	TM	
37	*TM	4-Chloro-3-methylphenol	0.3364	0.3339	0.3371	0.3445	0.3342	0.3451	0.3311	0.3589			0.34	2.7	*TM	
38	TM	2-Methylnaphthalene	0.7065	0.6994	0.6918	0.6907	0.6745	0.6786	0.6440	0.6992			0.69	2.9	TM	
39	TM	1-Methylnaphthalene	0.7218	0.7325	0.6455	0.6679	0.6461	0.6599	0.6404	0.6966			0.68	5.3	TM	
40	I	Acenaphthene-D10(IS)														
41	**TMQ	Hexachlorocyclopentadiene	0.0352	0.0821	0.1454	0.1986	0.2357	0.2346	0.2693	0.2817			0.19	48	**TMQ	0.999
42	TM	1,2,4,5-Tetrachlorobenzene	0.5396	0.5929	0.5621	0.5192	0.5592	0.5294	0.5151	0.5315			0.54	4.8	TM	
43	*TM	2,4,6-Trichlorophenol	0.3344	0.3592	0.3491	0.3486	0.3682	0.3537	0.3343	0.3590			0.35	3.4	*TM	
44	TM	2,4,5-Trichlorophenol	0.3919	0.4003	0.4163	0.3688	0.3812	0.3816	0.3456	0.3771			0.38	5.5	TM	
45	S	2-Fluorobiphenyl(S)	1.278	1.499	1.336	1.200	1.255	1.168	1.148	1.204			1.3	9.0	S	
46	TM	1,1'-Biphenyl	1.579	1.616	1.598	1.463	1.490	1.434	1.358	1.453			1.5	6.1	TM	
47	TM	2-Chloronaphthalene	1.172	1.197	1.217	1.145	1.225	1.131	1.043	1.138			1.2	5.1	TM	
48	TM	2-Nitroaniline	0.3683	0.3867	0.3740	0.4057	0.4480	0.3960	0.3888	0.4178			0.40	6.5	TM	
49	TM	Dimethyl phthalate	1.403	1.430	1.345	1.384	1.539	1.344	1.277	1.410			1.4	5.5	TM	
50	TM	2,6-DNT	0.2902	0.3118	0.2967	0.3089	0.3396	0.3115	0.2967	0.3576			0.31	7.4	TM	
51	TM	Acenaphthylene	1.893	2.056	1.776	1.750	1.868	1.798	1.649	1.814			1.8	6.5	TM	
52	TM	3-Nitroaniline	0.3015	0.3535	0.3595	0.3549	0.3535	0.3405	0.3322	0.3482			0.34	5.5	TM	
53	*TM	Acenaphthene	1.206	1.354	1.171	1.111	1.135	1.077	1.054	1.138			1.2	8.1	*TM	
54	**TMQ	2,4-Dinitrophenol		0.0853	0.1314	0.1627	0.1649	0.1601	0.2070	0.2035			0.16	26	**TMQ	0.996
55	**TML	4-Nitrophenol	0.0179	0.2323	0.2452	0.2706	0.3006	0.2760	0.2907	0.3183			0.24	39	**TML	0.997
56	TM	Dibenzofuran	1.728	1.704	1.645	1.541	1.704	1.568	1.548	1.676			1.6	4.6	TM	
57	TM	2,4-DNT	0.3927	0.4369	0.4320	0.4428	0.4994	0.4500	0.4285	0.4667			0.44	7.0	TM	
58	TM	2,3,4,6-Tetrachlorophenol	0.2780	0.2939	0.2952	0.3210	0.3494	0.3145	0.2996	0.3397			0.31	7.8	TM	
59	TM	Diethyl phthalate	1.443	1.475	1.388	1.441	1.458	1.389	1.333	1.529			1.4	4.2	TM	
60	TM	4-Chlorophenyl phenyl ether	0.6635	0.6948	0.6104	0.6191	0.6447	0.5999	0.5965	0.6860			0.64	6.1	TM	
61	TM	Fluorene	1.411	1.429	1.285	1.274	1.358	1.224	1.221	1.393			1.3	6.3	TM	
62	TM	4-Nitroaniline	0.3060	0.3370	0.3011	0.3170	0.3477	0.3210	0.3358	0.3338			0.32	5.0	TM	
63	S	2,4,6-Tribromophenol(S)	0.1946	0.2125	0.1908	0.1921	0.2053	0.1876	0.1977	0.2239			0.20	6.2	S	
64	I	Phenanthrene-D10(IS)														
65	TM	4,6-Dinitro-2-methylphenol		0.1149	0.1515	0.1421	0.1500	0.1692	0.1636	0.1489			0.15	12	TM	
66	TM	Diphenyl amine	0.6122	0.5551	0.6348	0.5246	0.5612	0.5921	0.5417	0.5432			0.57	6.7	TM	
67	*TM	n-Nitrosodiphenylamine	0.6122	0.5551	0.6348	0.5246	0.5612	0.5921	0.5417	0.5432			0.57	6.7	*TM	
68	TM	1,2-Diphenylhydrazine	0.7947	0.7385	0.8154	0.7273	0.7623	0.9632	0.8905	0.8768			0.82	10	TM	
69	TM	4-Bromophenyl phenyl ether	0.2256	0.2010	0.2098	0.2179	0.1993	0.2279	0.1871	0.1888			0.21	7.6	TM	
70	TM	Hexachlorobenzene	0.2229	0.2118	0.2232	0.2136	0.2018	0.2342	0.2007	0.1953			0.21	6.3	TM	

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/07/16
Matrix: Instrument: Yoda
Initials:

		Compound	5	10	20	40	50	60	80	100			Avg	%RSD		
71	TM	Atrazine	0.2136	0.1976	0.2108	0.2007	0.2168	0.2165	0.1968	0.1967			0.21	4.4	TM	
72	*TML	Pentachlorophenol		0.0652	0.0888	0.0985	0.0970	0.0990	0.1107	0.1114			0.10	16	*TML	0.998
73	TM	Phenanthrene	1.144	1.128	1.146	1.069	1.069	1.062	1.009	1.014			1.1	5.0	TM	
74	TM	Anthracene	1.227	1.144	1.172	1.109	1.085	1.077	1.032	1.040			1.1	6.0	TM	
75	TM	Carbazol	1.068	1.073	1.153	0.9493	1.043	0.9621	0.9114	0.8832			1.0	9.2	TM	
76	TM	Di-n-butylphthalate	1.394	1.275	1.537	1.286	1.230	1.259	1.180	1.174			1.3	9.3	TM	
77	*TM	Fluoranthene	1.281	1.183	1.301	1.152	1.091	1.169	1.169	1.164			1.2	5.8	*TM	
78	I	Chrysene-D12(IS)														
79	TM	Benzidine	0.3957	0.4105	0.4699	0.4668	0.4739	0.4589	0.4621	0.4870			0.45	7.1	TM	
80	TM	Pyrene	1.421	1.287	1.412	1.333	1.431	1.352	1.245	1.372			1.4	4.9	TM	
81	S	Terphenyl-D14(S)	0.9641	0.9527	1.005	0.8842	0.8995	0.8347	0.8470	0.8492			0.90	6.9	S	
82	TM	Butyl benzylphthalate	0.6615	0.6073	0.6728	0.6922	0.6888	0.6250	0.6287	0.6373			0.65	4.8	TM	
83	TM	3,3'-Dichlorobenzidine	0.3845	0.4505	0.4988	0.4470	0.4416	0.4002	0.3899	0.4057			0.43	9.1	TM	
84	TM	Benz (a) anthracene	1.241	1.281	1.288	1.263	1.262	1.195	1.209	1.251			1.2	2.6	TM	
85	TM	Bis (2-ethylhexyl) phthalate	0.9437	0.8855	0.9320	0.8960	0.9347	0.9382	0.8781	0.9008			0.91	2.9	TM	
86	TM	Chrysene	1.291	1.177	1.223	1.163	1.206	1.256	1.142	1.247			1.2	4.2	TM	
87	*TM	Di-n-octylphthalate	1.601	1.536	1.745	1.580	1.838	1.525	1.513	1.572			1.6	7.2	*TM	
88	I	Perylene-D12(IS)														
89	TM	Benzo (b) fluoranthene	1.137	1.363	1.356	1.287	1.201	1.033	1.428	1.200			1.3	11	TM	
90	TM	Benzo (k) fluoranthene	1.302	1.071	1.186	1.172	1.214	1.184	1.211	1.174			1.2	5.4	TM	
91	*TM	Benzo (a) pyrene	1.164	1.037	1.248	1.228	1.224	1.129	1.192	1.122			1.2	6.0	*TM	
92	TM	Indeno (1,2,3-cd) pyrene	1.367	1.331	1.391	1.324	1.346	1.095	1.395	1.099			1.3	9.6	TM	
93	TM	Dibenz (a,h) anthracene	1.172	1.113	1.158	1.132	1.148	0.9093	1.186	0.9080			1.1	11	TM	
94	TM	Benzo (g,h,i) perylene	1.161	1.064	1.406	1.271	1.253	0.8838	1.091				1.2	15	TM	
95																
96																
97																
98																
99																
100																
101																
102																
103																
104																
105																

Data File : M:\YODA\DATA\Y161207\1207Y004.D Vial: 4
Acq On : 7 Dec 16 10:01 Operator: MA
Sample : 5ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	195458	40.00000	ppb		0.00
20) Napthalene-D8(IS)	6.29	136	827060	40.00000	ppb		0.00
40) Acenaphthene-D10(IS)	8.30	164	490768	40.00000	ppb		0.00
64) Phenanthrene-D10(IS)	10.03	188	877101	40.00000	ppb		0.00
78) Chrysene-D12(IS)	13.10	240	839105	40.00000	ppb		0.00
88) Perylene-D12(IS)	14.74	264	900919	40.00000	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol (S)	3.38	112	52072	8.41676	ppb		0.03
Spiked Amount 200.000			Recovery =	4.209%			
5) Phenol-D6 (S)	4.51	99	89036	10.40389	ppb		0.00
Spiked Amount 200.000			Recovery =	5.202%			
21) Nitrobenzene-D5(S)	5.51	82	41840	4.84860	ppb		0.00
Spiked Amount 100.000			Recovery =	4.849%			
45) 2-Fluorobiphenyl(S)	7.54	172	78403	5.03098	ppb		0.00
Spiked Amount 100.000			Recovery =	5.031%			
63) 2,4,6-Tribromophenol(S)	9.23	330	23872	9.90525	ppb		0.00
Spiked Amount 200.000			Recovery =	4.953%			
81) Terphenyl-D14(S)	11.88	244	101120	5.31648	ppb		0.00
Spiked Amount 100.000			Recovery =	5.316%			
Target Compounds							Qvalue
2) n-Nitrosodimethylamine	1.77	42	17464	3.81097	ppb		99
3) Pyridine	1.79	79	38617	3.94469	ppb		99
6) Phenol	4.53	94	47601	4.90399	ppb		95
7) Aniline	4.53	66	43393	4.54015	ppb		90
8) Bis (2-chloroethyl) ether	4.60	63	20566	4.71391	ppb		92
9) 2-Chlorophenol	4.65	128	39939	5.30721	ppb		95
10) 1,3-DCB	4.80	146	40566	4.97403	ppb		98
11) 1,4-DCB	4.88	146	43609	5.21809	ppb		96
12) Benzyl alcohol	5.07	108	19149	4.54883	ppb		90
13) 1,2-DCB	5.06	146	39360	5.05389	ppb		97
14) 2-Methylphenol	5.20	107	26445	4.63400	ppb		97
15) Bis (2-chloroisopropyl) et	5.18	45	45768	5.23802	ppb	#	53
16) Acetophenone	5.34	105	49921	4.69337	ppb		98
17) 3&4-Methylphenol	5.38	107	76111	10.08177	ppb		91
18) n-Nitrosodi-n-propylamine	5.33	70	26103	4.73122	ppb		90
19) Hexachloroethane	5.42	117	16326	4.71012	ppb	#	68
22) Nitrobenzene	5.53	77	41914	4.74777	ppb		98
23) Isophorone	5.78	82	69169	4.75245	ppb		93
24) 2-Nitrophenol	5.90	139	19072	4.53756	ppb		95
25) 2,4-Dimethylphenol	5.95	122	32456	4.95367	ppb		91
26) Benzoic acid	6.13	105	8358	6.59749	ppb		89
27) Bis (2-chloroethoxy) metha	6.04	93	39384	5.06082	ppb		97
28) 2,4-Dichlorophenol	6.19	162	29754	4.71459	ppb		94
29) 1,2,4-Trichlorobenzene	6.24	180	35230	5.05372	ppb		98
30) 3,4-Dimethylphenol	6.29	107	56394	5.39745	ppb		81
31) Naphthalene	6.31	128	107955	4.95797	ppb		100
32) 4-Chloroaniline	6.42	127	37545	4.85948	ppb		96
33) 2,6-Dichlorophenol	6.42	162	31478	5.16618	ppb		97
34) Hexachloropropene	6.42	213	25276	4.55752	ppb		98
35) Hexachlorobutadiene	6.46	225	23664	5.32227	ppb		92
36) Caprolactum	6.79	55	14872	4.52289	ppb		92
37) 4-Chloro-3-methylphenol	6.99	107	34775	4.82802	ppb		87

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y161207\1207Y004.D Vial: 4
Acq On : 7 Dec 16 10:01 Operator: MA
Sample : 5ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

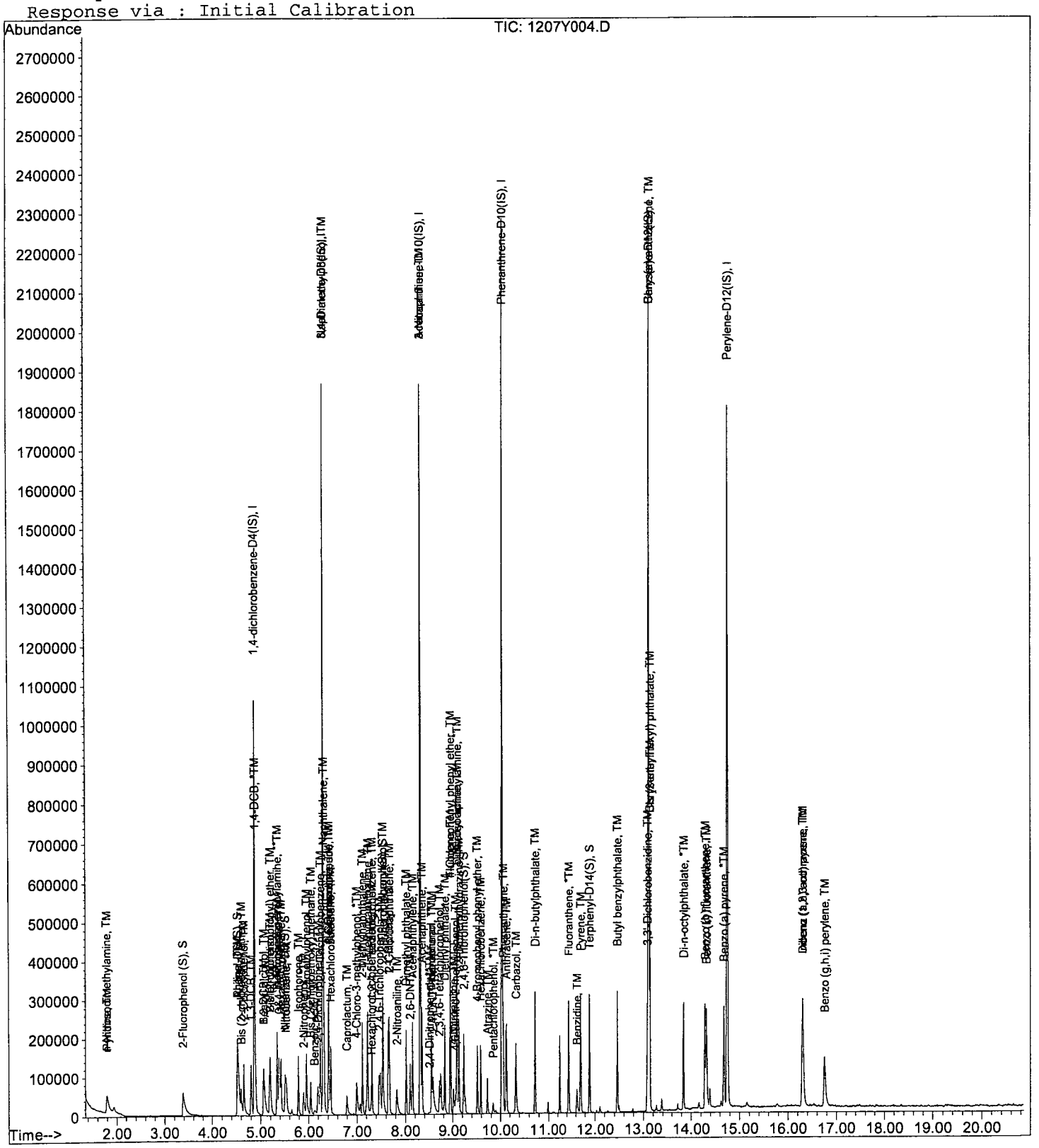
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.11	142	73035	5.02428	ppb		98
39)	1-Methylnaphthalene	7.22	142	74622	5.35196	ppb		98
41)	Hexachlorocyclopentadiene	7.29	237	2162	7.14608	ppb	#	91
42)	1,2,4,5-Tetrachlorobenzene	7.31	216	33104	4.95861	ppb		93
43)	2,4,6-Trichlorophenol	7.46	196	20513	4.63043	ppb		92
44)	2,4,5-Trichlorophenol	7.53	196	24042	5.12505	ppb		88
46)	1,1'-Biphenyl	7.65	154	96876	5.20831	ppb		97
47)	2-Chloronaphthalene	7.67	162	71906	4.90703	ppb		97
48)	2-Nitroaniline	7.82	65	22595	4.34279	ppb		78
49)	Dimethyl phthalate	8.01	163	86082	4.79845	ppb		99
50)	2,6-DNT	8.10	165	17800	4.45834	ppb		80
51)	Acenaphthylene	8.14	152	116157	5.09910	ppb		99
52)	3-Nitroaniline	8.31	138	18493	4.47392	ppb	#	34
53)	Acenaphthene	8.34	154	74001	5.30414	ppb		97
54)	2,4-Dinitrophenol	8.51	184	1898	8.26475	ppb	#	71
55)	4-Nitrophenol	8.54	65	1096	7.02827	ppb	#	38
56)	Dibenzofuran	8.54	168	105976	5.20957	ppb		89
57)	2,4-DNT	8.58	165	24091	4.26865	ppb		83
58)	2,3,4,6-Tetrachlorophenol	8.72	232	17055	4.67205	ppb		95
59)	Diethyl phthalate	8.83	149	88512	4.85963	ppb		98
60)	4-Chlorophenyl phenyl ethe	8.95	204	40703	4.91663	ppb	#	76
61)	Fluorene	8.94	166	86563	5.16554	ppb		96
62)	4-Nitroaniline	9.01	138	18769	4.76703	ppb		93
65)	4,6-Dinitro-2-methylphenol	9.05	198	8901	2.88665	ppb	#	85
66)	Diphenyl amine	9.09	169	134244	11.16496	ppb		99
67)	n-Nitrosodiphenylamine	9.09	169	134244	11.16496	ppb		99
68)	1,2-Diphenylhydrazine	9.13	77	87129	4.57707	ppb		99
69)	4-Bromophenyl phenyl ether	9.52	248	24730	5.36824	ppb	#	83
70)	Hexachlorobenzene	9.59	284	24441	4.98065	ppb	#	74
71)	Atrazine	9.72	200	11708	2.43094	ppb		95
72)	Pentachlorophenol	9.84	266	6437	7.80595	ppb		92
73)	Phenanthrene	10.05	178	125410	5.18209	ppb		98
74)	Anthracene	10.12	178	134548	5.34573	ppb		98
75)	Carbazol	10.32	167	117070	5.23894	ppb		99
76)	Di-n-butylphthalate	10.72	149	152801	5.10773	ppb		100
77)	Fluoranthene	11.44	202	140468	5.31106	ppb	#	97
79)	Benzidine	11.62	184	41503	4.47439	ppb	#	89
80)	Pyrene	11.70	202	149080	5.33068	ppb		99
82)	Butyl benzylphthalate	12.46	149	69384	4.95412	ppb		100
83)	3,3'-Dichlorobenzidine	13.07	252	40328	4.68957	ppb	#	98
84)	Benz (a) anthracene	13.09	228	130185	4.90624	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.13	149	98983	5.00821	ppb		99
86)	Chrysene	13.14	228	135366	5.30692	ppb		94
87)	Di-n-octylphthalate	13.84	149	167938	4.79507	ppb		99
89)	Benzo (b) fluoranthene	14.29	252	127992	4.23678	ppb		95
90)	Benzo (k) fluoranthene	14.32	252	146637	5.07643	ppb		97
91)	Benzo (a) pyrene	14.68	252	131139	4.60945	ppb		94
92)	Indeno (1,2,3-cd) pyrene	16.29	276	153935	4.75506	ppb	#	88
93)	Dibenz (a,h) anthracene	16.31	278	131937	4.79035	ppb		96
94)	Benzo (g,h,i) perylene	16.76	276	130754	4.77536	ppb		95

(#) = qualifier out of range (m) = manual integration
1207Y004.D Y1207.M Wed Dec 07 14:58:03 2016

Data File : M:\YODA\DATA\Y161207\1207Y004.D Vial: 4
Acq On : 7 Dec 16 10:01 Operator: MA
Sample : 5ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Data File : M:\YODA\DATA\Y161207\1207Y005.D Vial: 5
Acq On : 7 Dec 16 10:32 Operator: MA
Sample : 10ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	199996	40.00000	ppb		0.00
20) Napthalene-D8(IS)	6.29	136	835678	40.00000	ppb		0.00
40) Acenaphthene-D10(IS)	8.31	164	491315	40.00000	ppb		0.00
64) Phenanthrene-D10(IS)	10.02	188	976841	40.00000	ppb		0.00
78) Chrysene-D12(IS)	13.11	240	927503	40.00000	ppb		0.00
88) Perylene-D12(IS)	14.75	264	990341	40.00000	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol (S)	3.37	112	129921	20.52354	ppb		0.02
Spiked Amount 200.000			Recovery = 10.262%				
5) Phenol-D6 (S)	4.51	99	178462	20.38018	ppb		0.00
Spiked Amount 200.000			Recovery = 10.190%				
21) Nitrobenzene-D5(S)	5.50	82	90507	10.38019	ppb		0.00
Spiked Amount 100.000			Recovery = 10.380%				
45) 2-Fluorobiphenyl(S)	7.54	172	184156	11.80380	ppb		0.00
Spiked Amount 100.000			Recovery = 11.804%				
63) 2,4,6-Tribromophenol(S)	9.23	330	52209	21.63904	ppb		0.00
Spiked Amount 200.000			Recovery = 10.820%				
81) Terphenyl-D14(S)	11.89	244	220919	10.50802	ppb		0.00
Spiked Amount 100.000			Recovery = 10.508%				
Target Compounds							Qvalue
2) n-Nitrosodimethylamine	1.76	42	40937	8.73052	ppb		87
3) Pyridine	1.78	79	86226	8.60805	ppb		94
6) Phenol	4.53	94	95766	9.64222	ppb		94
7) Aniline	4.52	66	91627	9.36928	ppb	#	79
8) Bis (2-chloroethyl) ether	4.59	63	39545	8.85840	ppb		97
9) 2-Chlorophenol	4.65	128	81615	10.59915	ppb		96
10) 1,3-DCB	4.80	146	83321	9.98465	ppb		99
11) 1,4-DCB	4.89	146	89069	10.41583	ppb		97
12) Benzyl alcohol	5.06	108	42008	9.75255	ppb		93
13) 1,2-DCB	5.06	146	77858	9.77026	ppb		96
14) 2-Methylphenol	5.20	107	56924	9.74855	ppb		92
15) Bis (2-chloroisopropyl) et	5.19	45	87550	9.79249	ppb		84
16) Acetophenone	5.33	105	103596	9.51867	ppb		98
17) 3&4-Methylphenol	5.36	107	152989	19.80531	ppb		96
18) n-Nitrosodi-n-propylamine	5.33	70	52236	9.25304	ppb		95
19) Hexachloroethane	5.42	117	35267	9.94382	ppb		92
22) Nitrobenzene	5.53	77	84968	9.52541	ppb		90
23) Isophorone	5.79	82	143360	9.74837	ppb		96
24) 2-Nitrophenol	5.89	139	40432	9.52028	ppb		93
25) 2,4-Dimethylphenol	5.95	122	70653	10.67236	ppb		94
26) Benzoic acid	6.11	105	32406	10.34814	ppb		90
27) Bis (2-chloroethoxy) metha	6.04	93	80395	10.22417	ppb		98
28) 2,4-Dichlorophenol	6.18	162	64057	10.04530	ppb		97
29) 1,2,4-Trichlorobenzene	6.24	180	71216	10.11054	ppb		95
30) 3,4-Dimethylphenol	6.29	107	103715	9.82416	ppb		98
31) Naphthalene	6.32	128	220486	10.02167	ppb		99
32) 4-Chloroaniline	6.40	127	89109	11.41451	ppb		99
33) 2,6-Dichlorophenol	6.41	162	69177	11.23627	ppb		98
34) Hexachloropropene	6.41	213	55717	9.94274	ppb		97
35) Hexachlorobutadiene	6.46	225	46253	10.29548	ppb		97
36) Caprolactum	6.79	55	32338	9.73326	ppb		96
37) 4-Chloro-3-methylphenol	6.99	107	69749	9.58380	ppb		95

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y161207\1207Y005.D
Acq On : 7 Dec 16 10:32
Sample : 10ug/ml SVOC 12/06/16
Misc :

Vial: 5
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

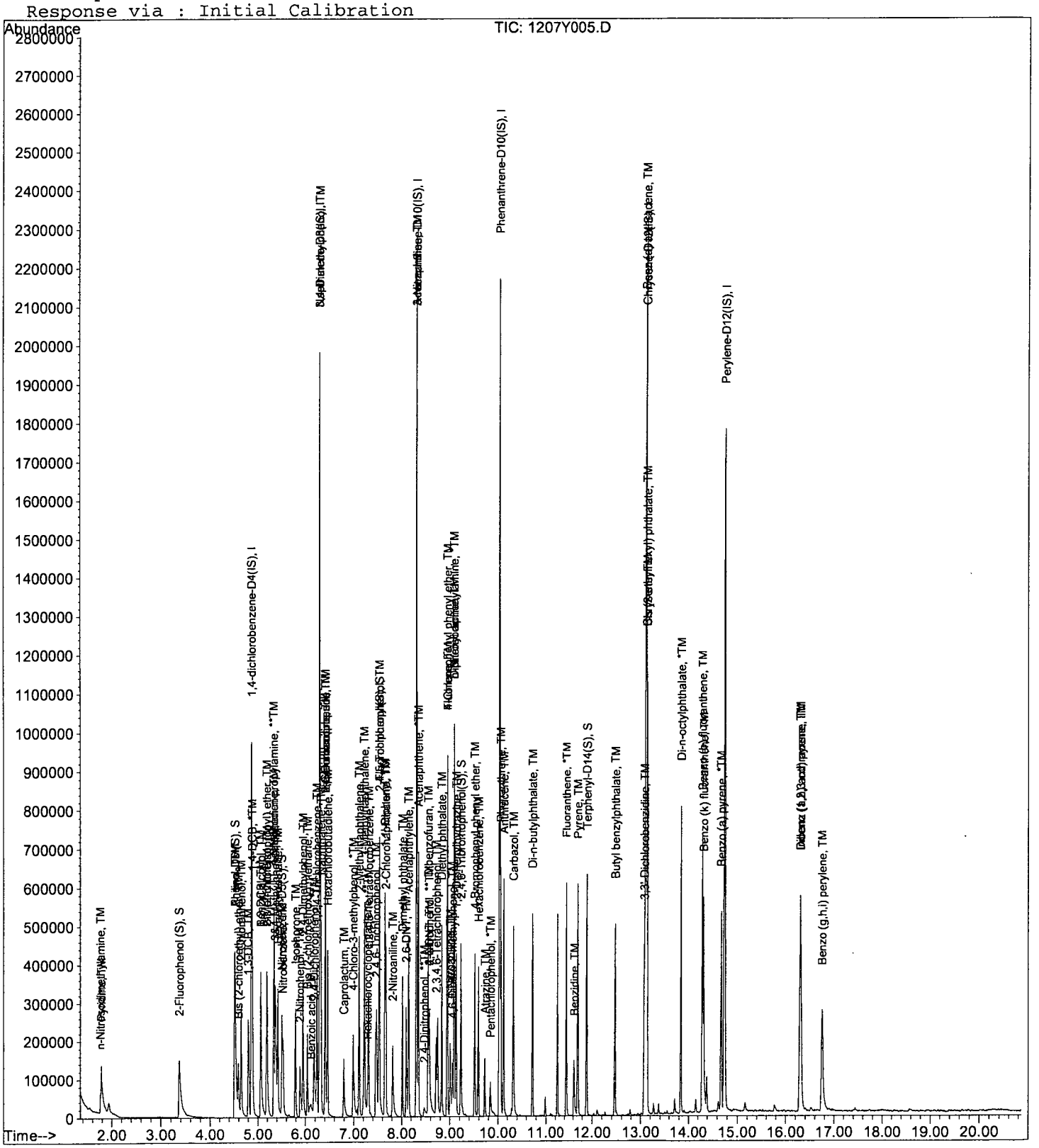
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.11	142	146114	9.94793	ppb		99
39)	1-Methylnaphthalene	7.22	142	153034	10.86256	ppb		99
41)	Hexachlorocyclopentadiene	7.28	237	10085	10.30509	ppb		83
42)	1,2,4,5-Tetrachlorobenzene	7.31	216	72826	10.89639	ppb		96
43)	2,4,6-Trichlorophenol	7.46	196	44123	9.94887	ppb		99
44)	2,4,5-Trichlorophenol	7.53	196	49164	10.46865	ppb		96
46)	1,1'-Biphenyl	7.65	154	198489	10.65941	ppb	#	96
47)	2-Chloronaphthalene	7.66	162	146978	10.01894	ppb		94
48)	2-Nitroaniline	7.81	65	47494	9.11824	ppb		90
49)	Dimethyl phthalate	8.02	163	175672	9.78154	ppb	#	97
50)	2,6-DNT	8.09	165	38304	9.58326	ppb	#	73
51)	Acenaphthylene	8.14	152	252596	11.07621	ppb		99
52)	3-Nitroaniline	8.30	138	43416	10.49172	ppb	#	91
53)	Acenaphthene	8.34	154	166258	11.90354	ppb		96
54)	2,4-Dinitrophenol	8.46	184	10475	11.87415	ppb	#	60
55)	4-Nitrophenol	8.57	65	28528	13.90485	ppb		75
56)	Dibenzofuran	8.55	168	209346	10.27958	ppb		88
57)	2,4-DNT	8.57	165	53666	9.49842	ppb		97
58)	2,3,4,6-Tetrachlorophenol	8.71	232	36099	9.87795	ppb		95
59)	Diethyl phthalate	8.83	149	181223	9.93873	ppb		99
60)	4-Chlorophenyl phenyl ethe	8.95	204	85344	10.29746	ppb		87
61)	Fluorene	8.95	166	175510	10.46168	ppb		97
62)	4-Nitroaniline	9.00	138	41396	10.50223	ppb		90
65)	4,6-Dinitro-2-methylphenol	9.05	198	28069	8.17351	ppb	#	74
66)	Diphenyl amine	9.09	169	271128	20.24708	ppb		99
67)	n-Nitrosodiphenylamine	9.09	169	271128	20.24708	ppb		99
68)	1,2-Diphenylhydrazine	9.13	77	180355	8.50705	ppb	#	91
69)	4-Bromophenyl phenyl ether	9.51	248	49097	9.56948	ppb		92
70)	Hexachlorobenzene	9.59	284	51734	9.46606	ppb		86
71)	Atrazine	9.73	200	24123	4.49726	ppb		94
72)	Pentachlorophenol	9.84	266	15917	12.48338	ppb		97
73)	Phenanthrene	10.05	178	275480	10.22088	ppb		98
74)	Anthracene	10.12	178	279374	9.96647	ppb		100
75)	Carbazol	10.32	167	261994	10.52724	ppb		98
76)	Di-n-butylphthalate	10.72	149	311416	9.34691	ppb		97
77)	Fluoranthene	11.43	202	289008	9.81159	ppb	#	97
79)	Benzidine	11.62	184	95179	9.28318	ppb		97
80)	Pyrene	11.69	202	298339	9.65105	ppb		98
82)	Butyl benzylphthalate	12.46	149	140818	9.09633	ppb		87
83)	3,3'-Dichlorobenzidine	13.07	252	104450	10.98842	ppb	#	93
84)	Benz (a) anthracene	13.09	228	297055	10.12805	ppb		97
85)	Bis (2-ethylhexyl) phthala	13.12	149	205324	9.39859	ppb	#	98
86)	Chrysene	13.13	228	272893	9.67890	ppb		99
87)	Di-n-octylphthalate	13.84	149	356276	9.20309	ppb	#	91
89)	Benzo (b) fluoranthene	14.28	252	337345	10.15848	ppb	#	97
90)	Benzo (k) fluoranthene	14.31	252	265091	8.34854	ppb		98
91)	Benzo (a) pyrene	14.67	252	256785	8.21085	ppb	#	97
92)	Indeno (1,2,3-cd) pyrene	16.30	276	329541	9.26038	ppb		96
93)	Dibenz (a,h) anthracene	16.31	278	275683	9.10566	ppb		98
94)	Benzo (g,h,i) perylene	16.74	276	263509	8.75484	ppb		98

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y161207\1207Y005.D Vial: 5
Acq On : 7 Dec 16 10:32 Operator: MA
Sample : 10ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y006.D Vial: 6
Acq On : 7 Dec 16 11:02 Operator: MA
Sample : 20ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	213922	40.00000	ppb	0.00
20) Napthalene-D8(IS)	6.30	136	877521	40.00000	ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	527221	40.00000	ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	919632	40.00000	ppb	0.00
78) Chrysene-D12(IS)	13.10	240	874733	40.00000	ppb	0.00
88) Perylene-D12(IS)	14.75	264	909225	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.36	112	271002	40.02316	ppb	0.00
Spiked Amount 200.000			Recovery = 20.012%			
5) Phenol-D6 (S)	4.50	99	390048	41.64340	ppb	0.00
Spiked Amount 200.000			Recovery = 20.822%			
21) Nitrobenzene-D5(S)	5.50	82	172033	18.78955	ppb	0.00
Spiked Amount 100.000			Recovery = 18.790%			
45) 2-Fluorobiphenyl(S)	7.53	172	352090	21.03087	ppb	0.00
Spiked Amount 100.000			Recovery = 21.031%			
63) 2,4,6-Tribromophenol(S)	9.23	330	100581	38.84865	ppb	0.00
Spiked Amount 200.000			Recovery = 19.425%			
81) Terphenyl-D14(S)	11.89	244	439341	22.15795	ppb	0.00
Spiked Amount 100.000			Recovery = 22.158%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.76	42	87421	17.43034	ppb	92
3) Pyridine	1.77	79	177528	16.56912	ppb	97
6) Phenol	4.52	94	221931	20.89054	ppb	96
7) Aniline	4.52	66	202813	19.38850	ppb	86
8) Bis (2-chloroethyl) ether	4.58	63	97711	20.46317	ppb	93
9) 2-Chlorophenol	4.65	128	172852	20.98656	ppb	99
10) 1,3-DCB	4.80	146	179050	20.05944	ppb	100
11) 1,4-DCB	4.89	146	178026	19.46331	ppb	97
12) Benzyl alcohol	5.06	108	98047	21.28071	ppb	97
13) 1,2-DCB	5.06	146	169067	19.83480	ppb	97
14) 2-Methylphenol	5.19	107	126350	20.22952	ppb	97
15) Bis (2-chloroisopropyl) et	5.19	45	195850	20.47984	ppb	93
16) Acetophenone	5.33	105	217146	18.65310	ppb	96
17) 3&4-Methylphenol	5.36	107	312061	37.76824	ppb	99
18) n-Nitrosodi-n-propylamine	5.33	70	112913	18.69926	ppb	99
19) Hexachloroethane	5.42	117	69201	18.24159	ppb	91
22) Nitrobenzene	5.52	77	170617	18.21513	ppb	98
23) Isophorone	5.79	82	277084	17.94308	ppb	99
24) 2-Nitrophenol	5.88	139	85225	19.11054	ppb	95
25) 2,4-Dimethylphenol	5.95	122	132147	19.00942	ppb	99
26) Benzoic acid	6.09	105	91123	19.04059	ppb	95
27) Bis (2-chloroethoxy) metha	6.04	93	161526	19.56243	ppb	97
28) 2,4-Dichlorophenol	6.17	162	132126	19.73177	ppb	98
29) 1,2,4-Trichlorobenzene	6.24	180	136552	18.46189	ppb	97
30) 3,4-Dimethylphenol	6.29	107	215414	19.43164	ppb	99
31) Naphthalene	6.32	128	472793	20.46500	ppb	100
32) 4-Chloroaniline	6.40	127	189841	23.15833	ppb	96
33) 2,6-Dichlorophenol	6.40	162	140216	21.68899	ppb	97
34) Hexachloropropene	6.41	213	118650	20.16357	ppb	99
35) Hexachlorobutadiene	6.46	225	96965	20.55433	ppb	96
36) Caprolactum	6.80	55	66358	19.02041	ppb	94
37) 4-Chloro-3-methylphenol	6.99	107	147903	19.35345	ppb	96

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y161207\1207Y006.D Vial: 6
Acq On : 7 Dec 16 11:02 Operator: MA
Sample : 20ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

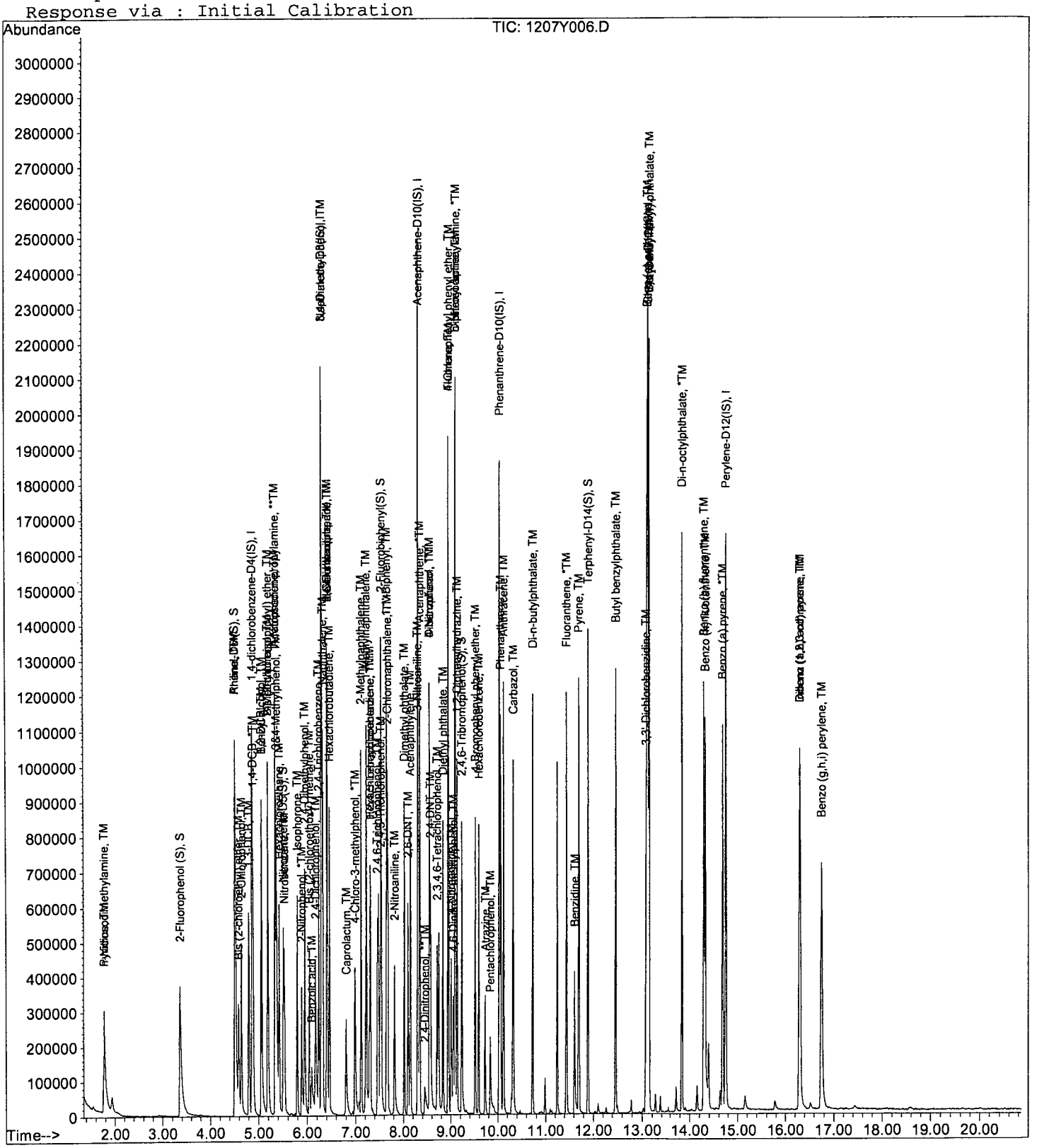
Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38) 2-Methylnaphthalene	7.11	142	303522	19.67943	ppb		99
39) 1-Methylnaphthalene	7.22	142	283238	19.14597	ppb		99
41) Hexachlorocyclopentadiene	7.29	237	38317	19.84270	ppb		95
42) 1,2,4,5-Tetrachlorobenzene	7.31	216	148167	20.65927	ppb		98
43) 2,4,6-Trichlorophenol	7.46	196	92029	19.33751	ppb		97
44) 2,4,5-Trichlorophenol	7.52	196	109748	21.77747	ppb		97
46) 1,1'-Biphenyl	7.65	154	421333	21.08577	ppb	#	98
47) 2-Chloronaphthalene	7.66	162	320827	20.38017	ppb		97
48) 2-Nitroaniline	7.81	65	98585	17.63805	ppb		95
49) Dimethyl phthalate	8.02	163	354455	18.39218	ppb		99
50) 2,6-DNT	8.09	165	78220	18.23703	ppb	#	70
51) Acenaphthylene	8.15	152	468200	19.13214	ppb		100
52) 3-Nitroaniline	8.29	138	94776	21.34336	ppb		82
53) Acenaphthene	8.34	154	308667	20.59449	ppb		98
54) 2,4-Dinitrophenol	8.44	184	34650	21.05674	ppb		92
55) 4-Nitrophenol	8.55	65	64643	21.85482	ppb		87
56) Dibenzofuran	8.55	168	433602	19.84127	ppb		95
57) 2,4-DNT	8.57	165	113885	18.78390	ppb	#	69
58) 2,3,4,6-Tetrachlorophenol	8.71	232	77826	19.84558	ppb		96
59) Diethyl phthalate	8.83	149	365822	18.69626	ppb		94
60) 4-Chlorophenyl phenyl ethe	8.95	204	160915	18.09343	ppb		95
61) Fluorene	8.95	166	338778	18.81837	ppb		100
62) 4-Nitroaniline	9.00	138	79383	18.76799	ppb		95
65) 4,6-Dinitro-2-methylphenol	9.05	198	69659	21.54609	ppb	#	85
66) Diphenyl amine	9.09	169	583796	46.30830	ppb		100
67) n-Nitrosodiphenylamine	9.09	169	583796	46.30830	ppb		100
68) 1,2-Diphenylhydrazine	9.13	77	374925	18.78473	ppb	#	91
69) 4-Bromophenyl phenyl ether	9.51	248	96477	19.97408	ppb		93
70) Hexachlorobenzene	9.59	284	102637	19.94834	ppb		87
71) Atrazine	9.73	200	48458	9.59604	ppb		94
72) Pentachlorophenol	9.84	266	40851	26.44051	ppb		95
73) Phenanthrene	10.05	178	526900	20.76520	ppb		98
74) Anthracene	10.12	178	538899	20.42079	ppb		99
75) Carbazol	10.32	167	530270	22.63237	ppb		97
76) Di-n-butylphthalate	10.73	149	706599	22.52735	ppb		99
77) Fluoranthene	11.43	202	598343	21.57691	ppb	#	97
79) Benzidine	11.61	184	205525	21.25496	ppb		99
80) Pyrene	11.69	202	617378	21.17657	ppb		99
82) Butyl benzylphthalate	12.46	149	294257	20.15461	ppb		91
83) 3,3'-Dichlorobenzidine	13.07	252	218137	24.33302	ppb	#	95
84) Benz (a) anthracene	13.09	228	563481	20.37081	ppb		100
85) Bis (2-ethylhexyl) phthala	13.12	149	407629	19.78463	ppb	#	96
86) Chrysene	13.13	228	535016	20.12056	ppb		99
87) Di-n-octylphthalate	13.84	149	763144	20.90228	ppb	#	92
89) Benzo (b) fluoranthene	14.28	252	616293	20.21412	ppb	#	98
90) Benzo (k) fluoranthene	14.31	252	538976	18.48836	ppb		98
91) Benzo (a) pyrene	14.67	252	567407	19.76179	ppb		98
92) Indeno (1,2,3-cd) pyrene	16.29	276	632150	19.34875	ppb		97
93) Dibenz (a,h) anthracene	16.31	278	526382	18.93720	ppb		98
94) Benzo (g,h,i) perylene	16.74	276	639018	23.12486	ppb		97

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y161207\1207Y006.D Vial: 6
Acq On : 7 Dec 16 11:02 Operator: MA
Sample : 20ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



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Data File : M:\YODA\DATA\Y161207\1207Y007.D Vial: 7
Acq On : 7 Dec 16 11:32 Operator: MA
Sample : 40ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	200058	40.00000	ppb		0.00
20) Napthalene-D8(IS)	6.30	136	812959	40.00000	ppb		0.00
40) Acenaphthene-D10(IS)	8.31	164	497677	40.00000	ppb		0.00
64) Phenanthrene-D10(IS)	10.03	188	928405	40.00000	ppb		0.00
78) Chrysene-D12(IS)	13.11	240	850533	40.00000	ppb		0.00
88) Perylene-D12(IS)	14.75	264	888701	40.00000	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol (S)	3.35	112	570340	90.06835	ppb		0.00
Spiked Amount 200.000			Recovery	= 45.034%			
5) Phenol-D6 (S)	4.50	99	704877	80.47129	ppb		0.00
Spiked Amount 200.000			Recovery	= 40.236%			
21) Nitrobenzene-D5(S)	5.50	82	325441	38.36770	ppb		0.00
Spiked Amount 100.000			Recovery	= 38.368%			
45) 2-Fluorobiphenyl(S)	7.54	172	597194	37.78888	ppb		0.00
Spiked Amount 100.000			Recovery	= 37.789%			
63) 2,4,6-Tribromophenol(S)	9.23	330	191228	78.24500	ppb		0.00
Spiked Amount 200.000			Recovery	= 39.123%			
81) Terphenyl-D14(S)	11.89	244	752070	39.00950	ppb		0.00
Spiked Amount 100.000			Recovery	= 39.009%			
Target Compounds							Qvalue
2) n-Nitrosodimethylamine	1.75	42	161566	34.44606	ppb		97
3) Pyridine	1.76	79	387358	38.65847	ppb		98
6) Phenol	4.52	94	400577	40.31969	ppb		93
7) Aniline	4.51	66	377482	38.58729	ppb	#	75
8) Bis (2-chloroethyl) ether	4.59	63	179689	40.23931	ppb		98
9) 2-Chlorophenol	4.64	128	315428	40.95120	ppb		91
10) 1,3-DCB	4.80	146	332809	39.86933	ppb		99
11) 1,4-DCB	4.89	146	332016	38.81430	ppb		99
12) Benzyl alcohol	5.05	108	172333	39.99630	ppb		92
13) 1,2-DCB	5.06	146	296826	37.23663	ppb		100
14) 2-Methylphenol	5.19	107	223633	38.28652	ppb		95
15) Bis (2-chloroisopropyl) et	5.19	45	337003	37.68221	ppb		98
16) Acetophenone	5.34	105	403185	37.03421	ppb		99
17) 3&4-Methylphenol	5.36	107	576124	74.55945	ppb		97
18) n-Nitrosodi-n-propylamine	5.34	70	205499	36.39064	ppb		92
19) Hexachloroethane	5.42	117	132371	37.31150	ppb		93
22) Nitrobenzene	5.52	77	329118	37.92717	ppb		95
23) Isophorone	5.79	82	544538	38.06296	ppb		95
24) 2-Nitrophenol	5.88	139	167729	40.59784	ppb		97
25) 2,4-Dimethylphenol	5.95	122	256596	39.84284	ppb		99
26) Benzoic acid	6.12	105	207583	40.37949	ppb		96
27) Bis (2-chloroethoxy) metha	6.04	93	311390	40.70745	ppb		99
28) 2,4-Dichlorophenol	6.16	162	251852	40.59868	ppb		93
29) 1,2,4-Trichlorobenzene	6.24	180	276620	40.36924	ppb		98
30) 3,4-Dimethylphenol	6.28	107	390385	38.01171	ppb		99
31) Naphthalene	6.32	128	855871	39.98876	ppb		99
32) 4-Chloroaniline	6.40	127	325340	42.83942	ppb		96
33) 2,6-Dichlorophenol	6.40	162	232500	38.81983	ppb		95
34) Hexachloropropene	6.42	213	225297	41.32796	ppb		97
35) Hexachlorobutadiene	6.46	225	171693	39.28527	ppb		94
36) Caprolactum	6.82	55	125688	38.88743	ppb		97
37) 4-Chloro-3-methylphenol	6.98	107	280036	39.55342	ppb		87

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y161207\1207Y007.D
Acq On : 7 Dec 16 11:32
Sample : 40ug/ml SVOC 12/06/16
Misc :

Vial: 7
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

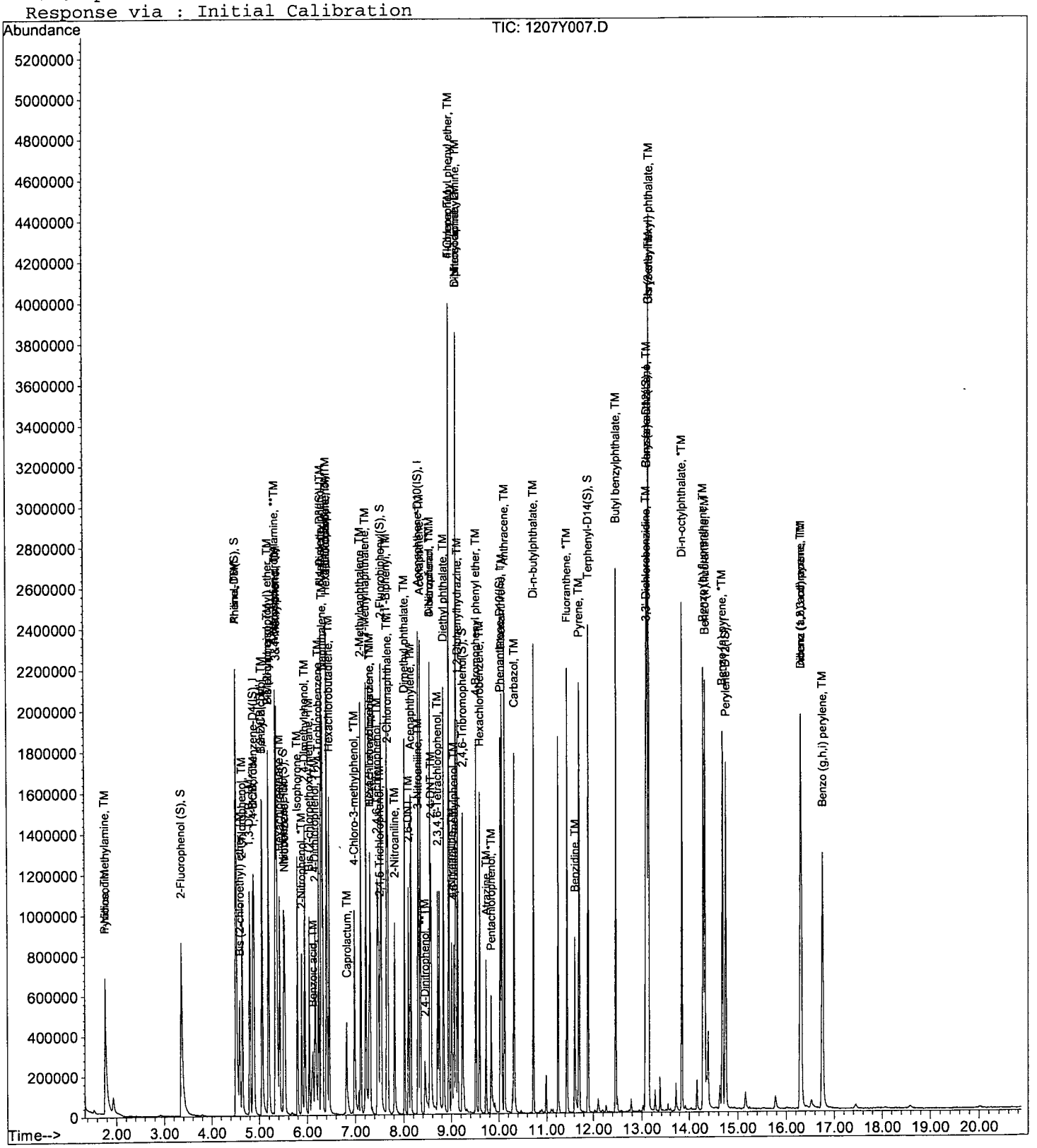
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.11	142	561485	39.29610	ppb		100
39)	1-Methylnaphthalene	7.22	142	542998	39.61986	ppb		98
41)	Hexachlorocyclopentadiene	7.29	237	98846	39.78650	ppb		94
42)	1,2,4,5-Tetrachlorobenzene	7.31	216	258378	38.16490	ppb		97
43)	2,4,6-Trichlorophenol	7.45	196	173513	38.62362	ppb		100
44)	2,4,5-Trichlorophenol	7.51	196	183541	38.58238	ppb	#	88
46)	1,1'-Biphenyl	7.65	154	728113	38.60182	ppb	#	97
47)	2-Chloronaphthalene	7.67	162	569966	38.35579	ppb		98
48)	2-Nitroaniline	7.81	65	201923	38.27108	ppb		97
49)	Dimethyl phthalate	8.02	163	688771	37.86099	ppb		99
50)	2,6-DNT	8.10	165	153741	37.97267	ppb		91
51)	Acenaphthylene	8.15	152	870855	37.69841	ppb		100
52)	3-Nitroaniline	8.29	138	176613	42.13394	ppb		87
53)	Acenaphthene	8.34	154	553092	39.09340	ppb		100
54)	2,4-Dinitrophenol	8.45	184	80953	41.10463	ppb		83
55)	4-Nitrophenol	8.54	65	134675	40.08311	ppb		98
56)	Dibenzofuran	8.55	168	766792	37.17071	ppb		98
57)	2,4-DNT	8.58	165	220382	38.50708	ppb		97
58)	2,3,4,6-Tetrachlorophenol	8.71	232	159761	43.15738	ppb		96
59)	Diethyl phthalate	8.84	149	717251	38.83302	ppb		98
60)	4-Chlorophenyl phenyl ethe	8.95	204	308111	36.70089	ppb		96
61)	Fluorene	8.95	166	633972	37.30629	ppb		100
62)	4-Nitroaniline	9.01	138	157741	39.50755	ppb		89
65)	4,6-Dinitro-2-methylphenol	9.05	198	131972	40.43428	ppb	#	84
66)	Diphenyl amine	9.10	169	974102	76.53830	ppb		99
67)	n-Nitrosodiphenylamine	9.10	169	974102	76.53830	ppb		99
68)	1,2-Diphenylhydrazine	9.13	77	675207	33.50998	ppb		95
69)	4-Bromophenyl phenyl ether	9.51	248	202318	41.49103	ppb		94
70)	Hexachlorobenzene	9.59	284	198345	38.18569	ppb		91
71)	Atrazine	9.73	200	93179	18.27769	ppb		100
72)	Pentachlorophenol	9.83	266	91407	50.75984	ppb		95
73)	Phenanthrene	10.06	178	992611	38.74928	ppb		99
74)	Anthracene	10.12	178	1029607	38.64677	ppb		99
75)	Carbazol	10.32	167	881300	37.25919	ppb		99
76)	Di-n-butylphthalate	10.73	149	1193622	37.69472	ppb		99
77)	Fluoranthene	11.43	202	1069844	38.21520	ppb	#	96
79)	Benzidine	11.61	184	397025	42.22773	ppb		99
80)	Pyrene	11.70	202	1133899	40.00029	ppb		99
82)	Butyl benzylphthalate	12.47	149	588724	41.47093	ppb		93
83)	3,3'-Dichlorobenzidine	13.08	252	380229	43.62107	ppb		97
84)	Benz (a) anthracene	13.10	228	1074534	39.95154	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.13	149	762045	38.03889	ppb		98
86)	Chrysene	13.13	228	989386	38.26692	ppb		100
87)	Di-n-octylphthalate	13.84	149	1343797	37.85342	ppb	#	87
89)	Benzo (b) fluoranthene	14.28	252	1144127	38.39349	ppb	#	98
90)	Benzo (k) fluoranthene	14.32	252	1041436	36.54915	ppb		99
91)	Benzo (a) pyrene	14.68	252	1090904	38.87173	ppb		98
92)	Indeno (1,2,3-cd) pyrene	16.30	276	1176312	36.83588	ppb		98
93)	Dibenz (a,h) anthracene	16.32	278	1006185	37.03465	ppb		99
94)	Benzo (g,h,i) perylene	16.75	276	1129852	41.83148	ppb		97

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y161207\1207Y007.D Vial: 7
Acq On : 7 Dec 16 11:32 Operator: MA
Sample : 40ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Data File : M:\YODA\DATA\Y161207\1207Y008.D Vial: 8
Acq On : 7 Dec 16 12:02 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	195270	40.00000	ppb	0.00
20) Napthalene-D8(IS)	6.30	136	816895	40.00000	ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	475200	40.00000	ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	975541	40.00000	ppb	0.00
78) Chrysene-D12(IS)	13.10	240	853105	40.00000	ppb	0.00
88) Perylene-D12(IS)	14.75	264	871056	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.35	112	695029	112.45058	ppb	0.00
Spiked Amount 200.000			Recovery = 56.226%			
5) Phenol-D6 (S)	4.51	99	832830	97.41019	ppb	0.00
Spiked Amount 200.000			Recovery = 48.705%			
21) Nitrobenzene-D5(S)	5.50	82	421258	49.42470	ppb	0.00
Spiked Amount 100.000			Recovery = 49.425%			
45) 2-Fluorobiphenyl(S)	7.53	172	745324	49.39294	ppb	0.00
Spiked Amount 100.000			Recovery = 49.393%			
63) 2,4,6-Tribromophenol(S)	9.23	330	243923	104.52712	ppb	0.00
Spiked Amount 200.000			Recovery = 52.263%			
81) Terphenyl-D14(S)	11.89	244	959232	49.60488	ppb	0.00
Spiked Amount 100.000			Recovery = 49.605%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.75	42	207992	45.43145	ppb	100
3) Pyridine	1.76	79	499289	51.05103	ppb	100
6) Phenol	4.52	94	480106	49.50952	ppb	100
7) Aniline	4.52	66	456200	47.77753	ppb	100
8) Bis (2-chloroethyl) ether	4.59	63	206942	47.47862	ppb	100
9) 2-Chlorophenol	4.65	128	370436	49.27197	ppb	100
10) 1,3-DCB	4.80	146	396306	48.64015	ppb	100
11) 1,4-DCB	4.89	146	407144	48.76421	ppb	100
12) Benzyl alcohol	5.06	108	223746	53.20189	ppb	100
13) 1,2-DCB	5.06	146	388817	49.97284	ppb	100
14) 2-Methylphenol	5.19	107	277560	48.68411	ppb	100
15) Bis (2-chloroisopropyl) et	5.19	45	424279	48.60428	ppb	100
16) Acetophenone	5.33	105	510342	48.02645	ppb	100
17) 3&4-Methylphenol	5.36	107	744509	98.71362	ppb	100
18) n-Nitrosodi-n-propylamine	5.34	70	262564	47.63603	ppb	100
19) Hexachloroethane	5.42	117	166560	48.09955	ppb	100
22) Nitrobenzene	5.52	77	426332	48.89327	ppb	100
23) Isophorone	5.80	82	706760	49.16418	ppb	100
24) 2-Nitrophenol	5.88	139	213979	51.54284	ppb	100
25) 2,4-Dimethylphenol	5.95	122	323836	50.04122	ppb	100
26) Benzoic acid	6.13	105	279445	53.40557	ppb	100
27) Bis (2-chloroethoxy) metha	6.04	93	396181	51.54248	ppb	100
28) 2,4-Dichlorophenol	6.17	162	325223	52.17353	ppb	100
29) 1,2,4-Trichlorobenzene	6.24	180	351337	51.02621	ppb	100
30) 3,4-Dimethylphenol	6.29	107	512874	49.69783	ppb	100
31) Naphthalene	6.32	128	1091949	50.77318	ppb	100
32) 4-Chloroaniline	6.40	127	395557	51.83434	ppb	100
33) 2,6-Dichlorophenol	6.41	162	296250	49.22564	ppb	100
34) Hexachloropropene	6.42	213	279000	50.93252	ppb	100
35) Hexachlorobutadiene	6.46	225	219413	49.96224	ppb	100
36) Caprolactum	6.83	55	159640	49.15407	ppb	100
37) 4-Chloro-3-methylphenol	6.99	107	341306	47.97517	ppb	100

(#) = qualifier out of range (m) = manual integration
1207Y008.D Y1207.M Wed Dec 07 14:58:31 2016 Page 1

Data File : M:\YODA\DATA\Y161207\1207Y008.D Vial: 8
Acq On : 7 Dec 16 12:02 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

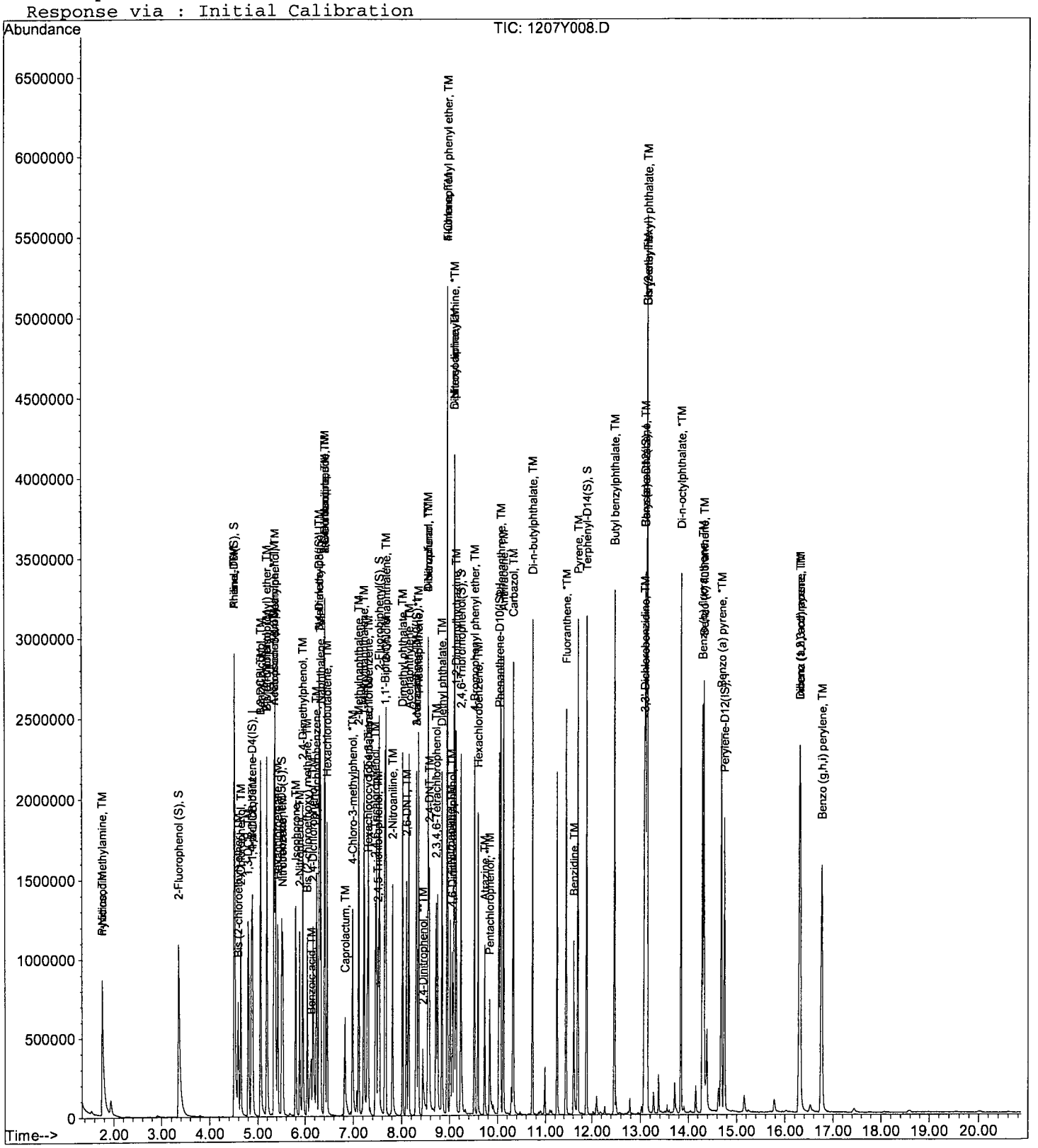
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) 2-Methylnaphthalene	7.11	142	688780	47.97270	ppb	100
39) 1-Methylnaphthalene	7.22	142	659731	47.90535	ppb	100
41) Hexachlorocyclopentadiene	7.29	237	140004	52.99808	ppb	100
42) 1,2,4,5-Tetrachlorobenzene	7.31	216	332171	51.38560	ppb	100
43) 2,4,6-Trichlorophenol	7.46	196	218731	50.99205	ppb	100
44) 2,4,5-Trichlorophenol	7.52	196	226443	49.85239	ppb	100
46) 1,1'-Biphenyl	7.66	154	885084	49.14334	ppb	100
47) 2-Chloronaphthalene	7.67	162	727438	51.26833	ppb	100
48) 2-Nitroaniline	7.81	65	266093	52.81891	ppb	100
49) Dimethyl phthalate	8.02	163	914001	52.61807	ppb	100
50) 2,6-DNT	8.10	165	201713	52.17789	ppb	100
51) Acenaphthylene	8.15	152	1109739	50.31172	ppb	100
52) 3-Nitroaniline	8.30	138	209961	52.45890	ppb	100
53) Acenaphthene	8.34	154	674472	49.92765	ppb	100
54) 2,4-Dinitrophenol	8.44	184	97936	50.08681	ppb	100
55) 4-Nitrophenol	8.54	65	178570	53.03676	ppb	100
56) Dibenzofuran	8.55	168	1012092	51.38241	ppb	100
57) 2,4-DNT	8.57	165	296625	54.28044	ppb	100
58) 2,3,4,6-Tetrachlorophenol	8.71	232	207535	58.71469	ppb	100
59) Diethyl phthalate	8.83	149	866198	49.11547	ppb	100
60) 4-Chlorophenyl phenyl ethe	8.95	204	382969	47.77538	ppb	100
61) Fluorene	8.95	166	806446	49.70024	ppb	100
62) 4-Nitroaniline	9.01	138	206542	54.17700	ppb	100
65) 4,6-Dinitro-2-methylphenol	9.06	198	182950	53.34482	ppb	100
66) Diphenyl amine	9.10	169	1368741	102.34994	ppb	100
67) n-Nitrosodiphenylamine	9.10	169	1368741	102.34994	ppb	100
68) 1,2-Diphenylhydrazine	9.13	77	929548	43.90369	ppb	100
69) 4-Bromophenyl phenyl ether	9.51	248	243072	47.44020	ppb	100
70) Hexachlorobenzene	9.59	284	246139	45.09743	ppb	100
71) Atrazine	9.73	200	132213	24.68138	ppb	100
72) Pentachlorophenol	9.84	266	118335	60.26116	ppb	100
73) Phenanthrene	10.06	178	1304097	48.44918	ppb	100
74) Anthracene	10.12	178	1323292	47.27041	ppb	100
75) Carbazol	10.32	167	1272051	51.18068	ppb	100
76) Di-n-butylphthalate	10.73	149	1500155	45.08600	ppb	100
77) Fluoranthene	11.44	202	1330020	45.21326	ppb	100
79) Benzidine	11.61	184	505375	53.58983	ppb	100
80) Pyrene	11.70	202	1525772	53.66203	ppb	100
82) Butyl benzylphthalate	12.46	149	734576	51.58904	ppb	100
83) 3,3'-Dichlorobenzidine	13.08	252	470879	53.85786	ppb	100
84) Benz (a) anthracene	13.10	228	1345568	49.87784	ppb	100
85) Bis (2-ethylhexyl) phthala	13.13	149	996708	49.60253	ppb	100
86) Chrysene	13.14	228	1285778	49.58067	ppb	100
87) Di-n-octylphthalate	13.85	149	1959719	55.03689	ppb	100
89) Benzo (b) fluoranthene	14.29	252	1307332	44.75884	ppb	100
90) Benzo (k) fluoranthene	14.32	252	1321701	47.32466	ppb	100
91) Benzo (a) pyrene	14.68	252	1333161	48.46626	ppb	100
92) Indeno (1,2,3-cd) pyrene	16.30	276	1465032	46.80640	ppb	100
93) Dibenz (a,h) anthracene	16.32	278	1249734	46.93076	ppb	100
94) Benzo (g,h,i) perylene	16.76	276	1364184	51.53048	ppb	100

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y161207\1207Y008.D Vial: 8
Acq On : 7 Dec 16 12:02 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Data File : M:\YODA\DATA\Y161207\1207Y009.D Vial: 9
Acq On : 7 Dec 16 12:32 Operator: MA
Sample : 60ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	218783	40.00000	ppb	0.00
20) Napthalene-D8(IS)	6.30	136	928479	40.00000	ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	561569	40.00000	ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	933722	40.00000	ppb	0.00
78) Chrysene-D12(IS)	13.11	240	884630	40.00000	ppb	0.00
88) Perylene-D12(IS)	14.75	264	1042796	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.35	112	865007	124.91090	ppb	0.00
Spiked Amount 200.000			Recovery = 62.456%			
5) Phenol-D6 (S)	4.51	99	1086222	113.39361	ppb	0.00
Spiked Amount 200.000			Recovery = 56.697%			
21) Nitrobenzene-D5(S)	5.50	82	539284	55.66825	ppb	0.00
Spiked Amount 100.000			Recovery = 55.668%			
45) 2-Fluorobiphenyl(S)	7.54	172	984076	55.18508	ppb	0.00
Spiked Amount 100.000			Recovery = 55.185%			
63) 2,4,6-Tribromophenol(S)	9.23	330	315998	114.58661	ppb	0.00
Spiked Amount 200.000			Recovery = 57.293%			
81) Terphenyl-D14(S)	11.89	244	1107571	55.23485	ppb	0.00
Spiked Amount 100.000			Recovery = 55.235%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.75	42	237687	46.33801	ppb	95
3) Pyridine	1.76	79	574794	52.45498	ppb	95
6) Phenol	4.52	94	637429	58.66854	ppb	94
7) Aniline	4.52	66	600249	56.10761	ppb	94
8) Bis (2-chloroethyl) ether	4.59	63	281001	57.54124	ppb	99
9) 2-Chlorophenol	4.65	128	506460	60.12483	ppb	98
10) 1,3-DCB	4.80	146	523668	57.36438	ppb	99
11) 1,4-DCB	4.89	146	527245	56.36215	ppb	97
12) Benzyl alcohol	5.06	108	288893	61.30992	ppb	96
13) 1,2-DCB	5.06	146	489566	56.15934	ppb	98
14) 2-Methylphenol	5.19	107	364148	57.00727	ppb	99
15) Bis (2-chloroisopropyl) et	5.19	45	554052	56.64941	ppb	96
16) Acetophenone	5.34	105	671773	56.42397	ppb	98
17) 3&4-Methylphenol	5.36	107	950588	112.49194	ppb	98
18) n-Nitrosodi-n-propylamine	5.35	70	340579	55.14933	ppb	98
19) Hexachloroethane	5.42	117	222476	57.34234	ppb	96
22) Nitrobenzene	5.52	77	554825	55.98238	ppb	98
23) Isophorone	5.80	82	928565	56.83073	ppb	99
24) 2-Nitrophenol	5.88	139	289592	61.37308	ppb	94
25) 2,4-Dimethylphenol	5.95	122	444516	60.43441	ppb	98
26) Benzoic acid	6.13	105	322257	54.17674	ppb	95
27) Bis (2-chloroethoxy) metha	6.04	93	529470	60.60482	ppb	99
28) 2,4-Dichlorophenol	6.16	162	429913	60.67973	ppb	96
29) 1,2,4-Trichlorobenzene	6.24	180	459705	58.74120	ppb	95
30) 3,4-Dimethylphenol	6.29	107	660163	56.28233	ppb	98
31) Naphthalene	6.32	128	1425995	58.33701	ppb	99
32) 4-Chloroaniline	6.40	127	513997	59.26021	ppb	98
33) 2,6-Dichlorophenol	6.41	162	389211	56.90000	ppb	98
34) Hexachloropropene	6.42	213	365095	58.63961	ppb	98
35) Hexachlorobutadiene	6.46	225	279947	56.08536	ppb	99
36) Caprolactum	6.84	55	221717	60.06354	ppb	98
37) 4-Chloro-3-methylphenol	6.99	107	480600	59.43613	ppb	96

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y161207\1207Y009.D Vial: 9
Acq On : 7 Dec 16 12:32 Operator: MA
Sample : 60ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

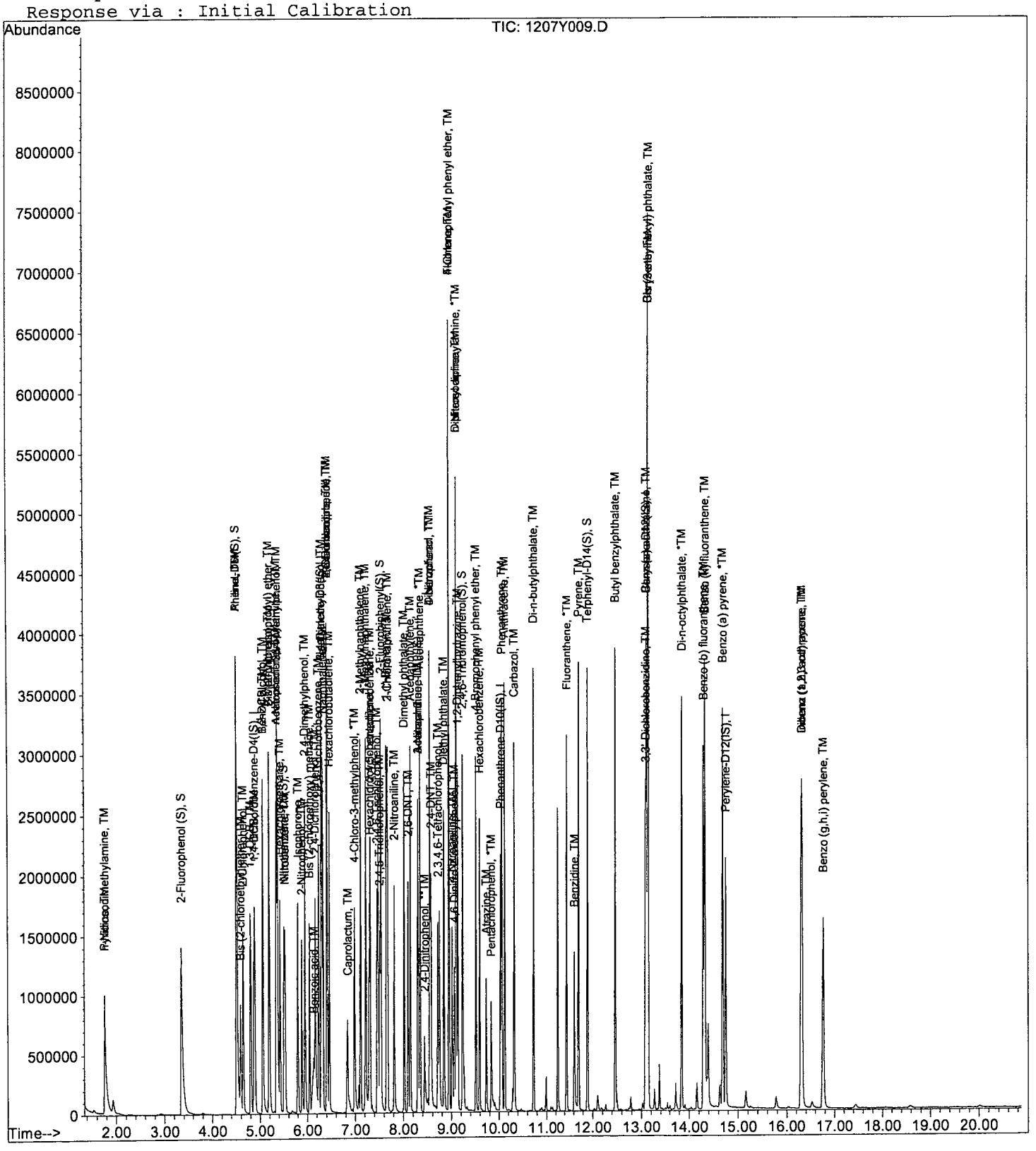
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38)	2-Methylnaphthalene	7.11	142	945068	57.91231	ppb	98
39)	1-Methylnaphthalene	7.22	142	919036	58.71429	ppb	98
41)	Hexachlorocyclopentadiene	7.29	237	197642	60.29517	ppb	98
42)	1,2,4,5-Tetrachlorobenzene	7.31	216	445973	58.37966	ppb	99
43)	2,4,6-Trichlorophenol	7.46	196	297908	58.76890	ppb	98
44)	2,4,5-Trichlorophenol	7.52	196	321422	59.87920	ppb	94
46)	1,1'-Biphenyl	7.66	154	1207599	56.73829	ppb	98
47)	2-Chloronaphthalene	7.68	162	953118	56.84250	ppb	99
48)	2-Nitroaniline	7.81	65	333570	56.02944	ppb	97
49)	Dimethyl phthalate	8.02	163	1131837	55.13729	ppb	99
50)	2,6-DNT	8.10	165	262428	57.44286	ppb	99
51)	Acenaphthylene	8.15	152	1514599	58.10577	ppb	100
52)	3-Nitroaniline	8.30	138	286828	60.64227	ppb	100
53)	Acenaphthene	8.34	154	907464	56.84338	ppb	99
54)	2,4-Dinitrophenol	8.44	184	134887	57.13945	ppb	90
55)	4-Nitrophenol	8.54	65	232448	57.73526	ppb	99
56)	Dibenzofuran	8.55	168	1321081	56.75410	ppb	99
57)	2,4-DNT	8.58	165	379083	58.70069	ppb	99
58)	2,3,4,6-Tetrachlorophenol	8.71	232	264908	63.41964	ppb	97
59)	Diethyl phthalate	8.84	149	1169813	56.12946	ppb	95
60)	4-Chlorophenyl phenyl ethe	8.95	204	505362	53.34779	ppb	99
61)	Fluorene	8.95	166	1031075	53.77083	ppb	100
62)	4-Nitroaniline	9.01	138	270386	60.01559	ppb	96
65)	4,6-Dinitro-2-methylphenol	9.06	198	237031	72.20927	ppb	96
66)	Diphenyl amine	9.10	169	1658613	129.58040	ppb	99
67)	n-Nitrosodiphenylamine	9.10	169	1658613	129.58040	ppb	99
68)	1,2-Diphenylhydrazine	9.13	77	1349001	66.56860	ppb	99
69)	4-Bromophenyl phenyl ether	9.51	248	319227	65.09373	ppb	95
70)	Hexachlorobenzene	9.59	284	327981	62.78386	ppb	97
71)	Atrazine	9.73	200	151588	29.56569	ppb	96
72)	Pentachlorophenol	9.84	266	138587	71.04943	ppb	96
73)	Phenanthrene	10.06	178	1487228	57.72740	ppb	99
74)	Anthracene	10.12	178	1508389	56.29567	ppb	98
75)	Carbazol	10.32	167	1347464	56.64305	ppb	100
76)	Di-n-butylphthalate	10.73	149	1763308	55.36837	ppb	100
77)	Fluoranthene	11.44	202	1636819	58.13481	ppb	100
79)	Benzidine	11.61	184	608980	62.27482	ppb	98
80)	Pyrene	11.70	202	1793793	60.84019	ppb	99
82)	Butyl benzylphthalate	12.47	149	829390	56.17205	ppb	99
83)	3,3'-Dichlorobenzidine	13.08	252	531065	58.57715	ppb	98
84)	Benz (a) anthracene	13.10	228	1585364	56.67243	ppb	100
85)	Bis (2-ethylhexyl) phthala	13.13	149	1244971	59.74973	ppb	99
86)	Chrysene	13.14	228	1666038	61.95439	ppb	99
87)	Di-n-octylphthalate	13.85	149	2024092	54.81901	ppb	99
89)	Benzo (b) fluoranthene	14.29	252	1616583	46.23147	ppb	100
90)	Benzo (k) fluoranthene	14.32	252	1852486	55.40589	ppb	99
91)	Benzo (a) pyrene	14.68	252	1766595	53.64641	ppb	99
92)	Indeno (1,2,3-cd) pyrene	16.31	276	1712128	45.69210	ppb	98
93)	Dibenz (a,h) anthracene	16.32	278	1422360	44.61658	ppb	99
94)	Benzo (g,h,i) perylene	16.76	276	1382485	43.62128	ppb	99

(#) = qualifier out of range (m) = manual integration
1207Y009.D Y1207.M Wed Dec 07 14:58:39 2016 Page 2

Data File : M:\YODA\DATA\Y161207\1207Y009.D Vial: 9
Acq On : 7 Dec 16 12:32 Operator: MA
Sample : 60ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Data File : M:\YODA\DATA\Y161207\1207Y010.D Vial: 10
Acq On : 7 Dec 16 13:02 Operator: MA
Sample : 80ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	195710	40.00000	ppb	0.00
20) Napthalene-D8(IS)	6.30	136	859926	40.00000	ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	527101	40.00000	ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	1005123	40.00000	ppb	0.00
78) Chrysene-D12(IS)	13.11	240	912863	40.00000	ppb	0.00
88) Perylene-D12(IS)	14.75	264	909856	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.35	112	1083940	174.97924	ppb	0.00
Spiked Amount 200.000			Recovery = 87.490%			
5) Phenol-D6 (S)	4.51	99	1335540	155.85741	ppb	0.00
Spiked Amount 200.000			Recovery = 77.929%			
21) Nitrobenzene-D5(S)	5.51	82	643499	71.72142	ppb	0.00
Spiked Amount 100.000			Recovery = 71.721%			
45) 2-Fluorobiphenyl(S)	7.54	172	1210171	72.30179	ppb	0.00
Spiked Amount 100.000			Recovery = 72.302%			
63) 2,4,6-Tribromophenol(S)	9.24	330	416825	161.03215	ppb	0.00
Spiked Amount 200.000			Recovery = 80.516%			
81) Terphenyl-D14(S)	11.89	244	1546385	74.73349	ppb	0.00
Spiked Amount 100.000			Recovery = 74.733%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.75	42	322164	70.21171	ppb	97
3) Pyridine	1.76	79	734964	74.97926	ppb	96
6) Phenol	4.53	94	791696	81.45777	ppb	83
7) Aniline	4.52	66	776371	81.12603	ppb	97
8) Bis (2-chloroethyl) ether	4.59	63	355760	81.43836	ppb	95
9) 2-Chlorophenol	4.65	128	615384	81.66867	ppb	98
10) 1,3-DCB	4.81	146	614066	75.19723	ppb	98
11) 1,4-DCB	4.89	146	652039	77.92005	ppb	98
12) Benzyl alcohol	5.06	108	348718	82.73108	ppb	90
13) 1,2-DCB	5.06	146	592989	76.04278	ppb	98
14) 2-Methylphenol	5.20	107	423761	74.16070	ppb	97
15) Bis (2-chloroisopropyl) et	5.19	45	634640	72.53922	ppb	96
16) Acetophenone	5.34	105	792534	74.41484	ppb	97
17) 3&4-Methylphenol	5.37	107	1142368	151.12477	ppb	98
18) n-Nitrosodi-n-propylamine	5.35	70	410995	74.39769	ppb	97
19) Hexachloroethane	5.42	117	261628	75.38363	ppb	97
22) Nitrobenzene	5.53	77	676884	73.74296	ppb	93
23) Isophorone	5.80	82	1089807	72.01642	ppb	95
24) 2-Nitrophenol	5.88	139	344463	78.82155	ppb	97
25) 2,4-Dimethylphenol	5.95	122	565844	83.06243	ppb	98
26) Benzoic acid	6.15	105	443247	81.69217	ppb	95
27) Bis (2-chloroethoxy) metha	6.05	93	679127	83.93205	ppb	98
28) 2,4-Dichlorophenol	6.17	162	547229	83.39561	ppb	100
29) 1,2,4-Trichlorobenzene	6.24	180	576211	79.49798	ppb	99
30) 3,4-Dimethylphenol	6.29	107	820634	75.54077	ppb	99
31) Naphthalene	6.33	128	1762100	77.83370	ppb	99
32) 4-Chloroaniline	6.41	127	626144	77.94493	ppb	93
33) 2,6-Dichlorophenol	6.41	162	470298	74.23545	ppb	98
34) Hexachloropropene	6.42	213	458828	79.56940	ppb	98
35) Hexachlorobutadiene	6.47	225	341554	73.88292	ppb	97
36) Caprolactum	6.85	55	263295	77.01327	ppb	97
37) 4-Chloro-3-methylphenol	6.99	107	569393	76.03086	ppb	86

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y161207\1207Y010.D Vial: 10
Acq On : 7 Dec 16 13:02 Operator: MA
Sample : 80ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

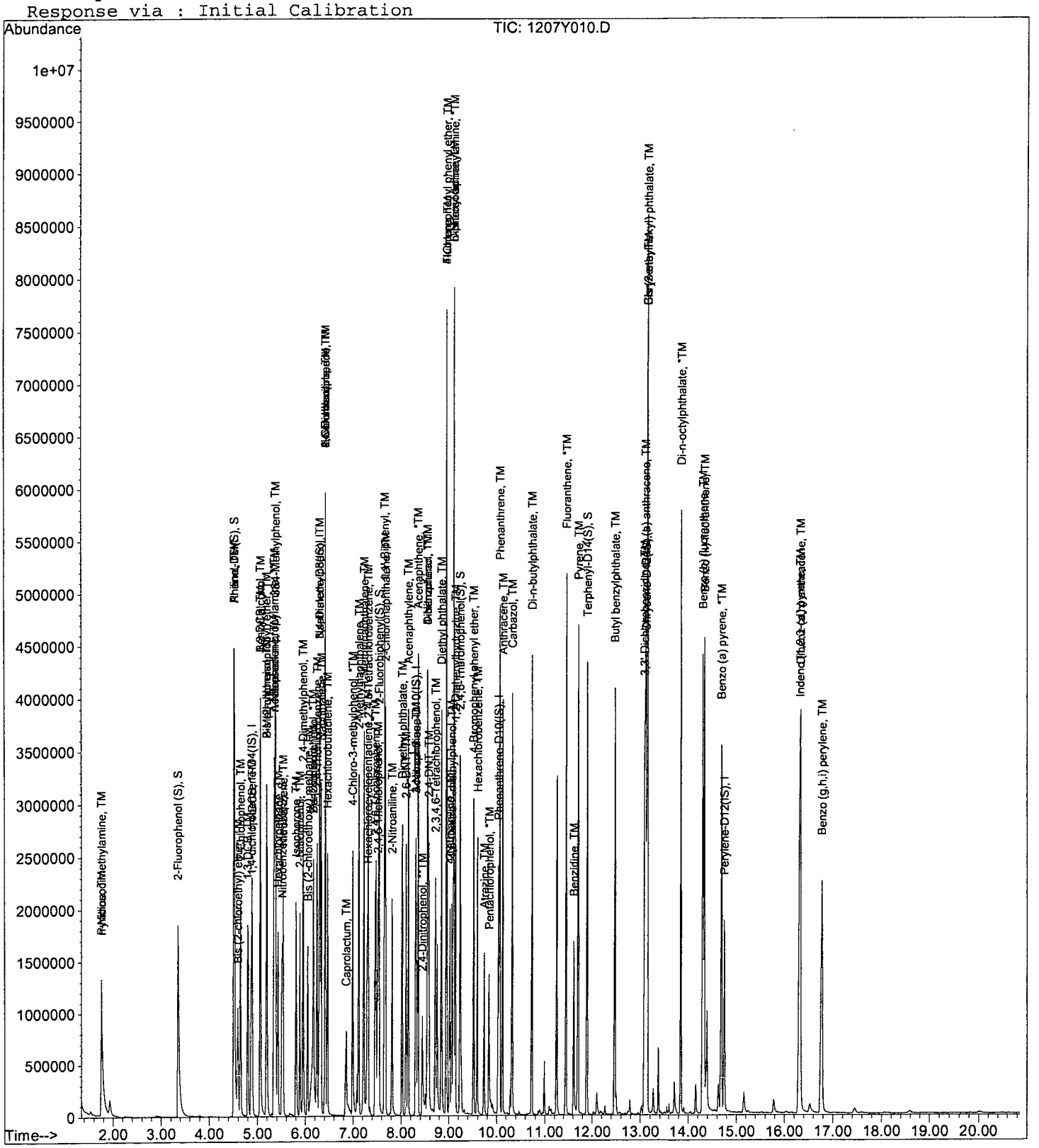
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.12	142	1107600	73.28275	ppb		99
39)	1-Methylnaphthalene	7.23	142	1101455	75.97821	ppb		100
41)	Hexachlorocyclopentadiene	7.29	237	283877	81.78811	ppb		98
42)	1,2,4,5-Tetrachlorobenzene	7.31	216	543057	75.73693	ppb		97
43)	2,4,6-Trichlorophenol	7.46	196	352380	74.06038	ppb		96
44)	2,4,5-Trichlorophenol	7.52	196	364305	72.30607	ppb		98
46)	1,1'-Biphenyl	7.66	154	1431535	71.65801	ppb		99
47)	2-Chloronaphthalene	7.67	162	1099952	69.88911	ppb		96
48)	2-Nitroaniline	7.81	65	409925	73.35725	ppb		87
49)	Dimethyl phthalate	8.03	163	1345976	69.85672	ppb		98
50)	2,6-DNT	8.10	165	312732	72.93022	ppb	#	73
51)	Acenaphthylene	8.15	152	1738197	71.04441	ppb		100
52)	3-Nitroaniline	8.30	138	350245	78.89239	ppb		86
53)	Acenaphthene	8.35	154	1111537	74.17946	ppb		99
54)	2,4-Dinitrophenol	8.44	184	218209	93.07907	ppb		96
55)	4-Nitrophenol	8.54	65	306442	78.35915	ppb		97
56)	Dibenzofuran	8.55	168	1632194	74.70485	ppb		94
57)	2,4-DNT	8.57	165	451681	74.51608	ppb	#	80
58)	2,3,4,6-Tetrachlorophenol	8.71	232	315865	80.56372	ppb		96
59)	Diethyl phthalate	8.84	149	1405142	71.82968	ppb		99
60)	4-Chlorophenyl phenyl ethe	8.96	204	628797	70.71859	ppb		81
61)	Fluorene	8.95	166	1287251	71.52024	ppb		98
62)	4-Nitroaniline	9.02	138	354043	83.72308	ppb		96
65)	4,6-Dinitro-2-methylphenol	9.06	198	328902	93.07921	ppb	#	68
66)	Diphenyl amine	9.10	169	2177827	158.05783	ppb		99
67)	n-Nitrosodiphenylamine	9.10	169	2177827	158.05783	ppb		99
68)	1,2-Diphenylhydrazine	9.14	77	1790205	82.06506	ppb	#	89
69)	4-Bromophenyl phenyl ether	9.52	248	376085	71.24001	ppb	#	81
70)	Hexachlorobenzene	9.60	284	403389	71.73345	ppb	#	79
71)	Atrazine	9.73	200	197787	35.83598	ppb		99
72)	Pentachlorophenol	9.84	266	222525	97.90203	ppb		97
73)	Phenanthrene	10.06	178	2029194	73.16888	ppb		99
74)	Anthracene	10.12	178	2073870	71.90210	ppb		99
75)	Carbazol	10.32	167	1832065	71.54326	ppb		97
76)	Di-n-butylphthalate	10.73	149	2372548	69.20651	ppb		99
77)	Fluoranthene	11.44	202	2349024	77.50352	ppb		99
79)	Benzidine	11.61	184	843755	83.61455	ppb		99
80)	Pyrene	11.70	202	2273483	74.72502	ppb		99
82)	Butyl benzylphthalate	12.46	149	1147875	75.33766	ppb		93
83)	3,3'-Dichlorobenzidine	13.08	252	711820	76.08636	ppb		99
84)	Benz (a) anthracene	13.10	228	2207148	76.45930	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.13	149	1603119	74.55873	ppb		98
86)	Chrysene	13.14	228	2085134	75.14105	ppb		99
87)	Di-n-octylphthalate	13.85	149	2762190	72.49541	ppb		96
89)	Benzo (b) fluoranthene	14.29	252	2598169	85.15963	ppb		98
90)	Benzo (k) fluoranthene	14.33	252	2204360	75.56317	ppb		98
91)	Benzo (a) pyrene	14.69	252	2169513	75.50794	ppb		99
92)	Indeno (1,2,3-cd) pyrene	16.31	276	2538105	77.63207	ppb		98
93)	Dibenz (a,h) anthracene	16.34	278	2157371	77.56008	ppb		98
94)	Benzo (g,h,i) perylene	16.77	276	1984638	71.77049	ppb		100

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y161207\1207Y010.D Vial: 10
Acq On : 7 Dec 16 13:02 Operator: MA
Sample : 80ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Data File : M:\YODA\DATA\Y161207\1207Y011.D Vial: 11
Acq On : 7 Dec 16 13:32 Operator: MA
Sample : 100ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	214746	40.00000	ppb		0.00
20) Napthalene-D8(IS)	6.30	136	801273	40.00000	ppb		0.00
40) Acenaphthene-D10(IS)	8.31	164	479807	40.00000	ppb		0.00
64) Phenanthrene-D10(IS)	10.03	188	1038349	40.00000	ppb		0.00
78) Chrysene-D12(IS)	13.11	240	897961	40.00000	ppb		0.00
88) Perylene-D12(IS)	14.76	264	1012967	40.00000	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol (S)	3.36	112	1442400	212.20467	ppb		0.00
Spiked Amount 200.000			Recovery	= 106.103%			
5) Phenol-D6 (S)	4.52	99	1755614	186.71857	ppb		0.00
Spiked Amount 200.000			Recovery	= 93.360%			
21) Nitrobenzene-D5(S)	5.51	82	880245	105.28952	ppb		0.00
Spiked Amount 100.000			Recovery	= 105.290%			
45) 2-Fluorobiphenyl(S)	7.54	172	1444098	94.78208	ppb		0.00
Spiked Amount 100.000			Recovery	= 94.782%			
63) 2,4,6-Tribromophenol(S)	9.24	330	537159	227.97590	ppb		0.00
Spiked Amount 200.000			Recovery	= 113.988%			
81) Terphenyl-D14(S)	11.90	244	1906266	93.65464	ppb		0.00
Spiked Amount 100.000			Recovery	= 93.655%			
Target Compounds							Qvalue
2) n-Nitrosodimethylamine	1.75	42	427152	84.84044	ppb		98
3) Pyridine	1.76	79	954145	88.71098	ppb		96
6) Phenol	4.53	94	1029962	96.57911	ppb		91
7) Aniline	4.53	66	1005037	95.71079	ppb	#	76
8) Bis (2-chloroethyl) ether	4.59	63	462246	96.43463	ppb		99
9) 2-Chlorophenol	4.65	128	814431	98.50346	ppb		96
10) 1,3-DCB	4.81	146	851310	95.00850	ppb		98
11) 1,4-DCB	4.89	146	861705	93.84739	ppb		99
12) Benzyl alcohol	5.06	108	474310	102.55209	ppb		89
13) 1,2-DCB	5.06	146	785684	91.82209	ppb		98
14) 2-Methylphenol	5.20	107	595539	94.98412	ppb		96
15) Bis (2-chloroisopropyl) et	5.19	45	856467	89.21626	ppb		85
16) Acetophenone	5.34	105	1088689	93.16085	ppb		99
17) 3&4-Methylphenol	5.38	107	1562005	188.32154	ppb		92
18) n-Nitrosodi-n-propylamine	5.35	70	569115	93.88817	ppb		99
19) Hexachloroethane	5.43	117	354007	92.95925	ppb	#	76
22) Nitrobenzene	5.53	77	903147	105.59548	ppb		97
23) Isophorone	5.81	82	1523574	108.05033	ppb		96
24) 2-Nitrophenol	5.88	139	468219	114.98256	ppb		95
25) 2,4-Dimethylphenol	5.96	122	701715	110.54758	ppb		99
26) Benzoic acid	6.17	105	531913	109.09798	ppb		91
27) Bis (2-chloroethoxy) metha	6.05	93	810611	107.51520	ppb		99
28) 2,4-Dichlorophenol	6.17	162	626111	102.40142	ppb		99
29) 1,2,4-Trichlorobenzene	6.24	180	674426	99.85951	ppb		99
30) 3,4-Dimethylphenol	6.29	107	982967	97.10719	ppb		97
31) Naphthalene	6.33	128	2092381	99.18785	ppb		100
32) 4-Chloroaniline	6.41	127	726261	97.02573	ppb		97
33) 2,6-Dichlorophenol	6.41	162	585319	99.15426	ppb		97
34) Hexachloropropene	6.42	213	564663	105.09113	ppb		99
35) Hexachlorobutadiene	6.47	225	420352	97.58395	ppb		96
36) Caprolactum	6.87	55	323697	101.61135	ppb		95
37) 4-Chloro-3-methylphenol	6.99	107	718886	103.01925	ppb		84

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y161207\1207Y011.D Vial: 11
Acq On : 7 Dec 16 13:32 Operator: MA
Sample : 100ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

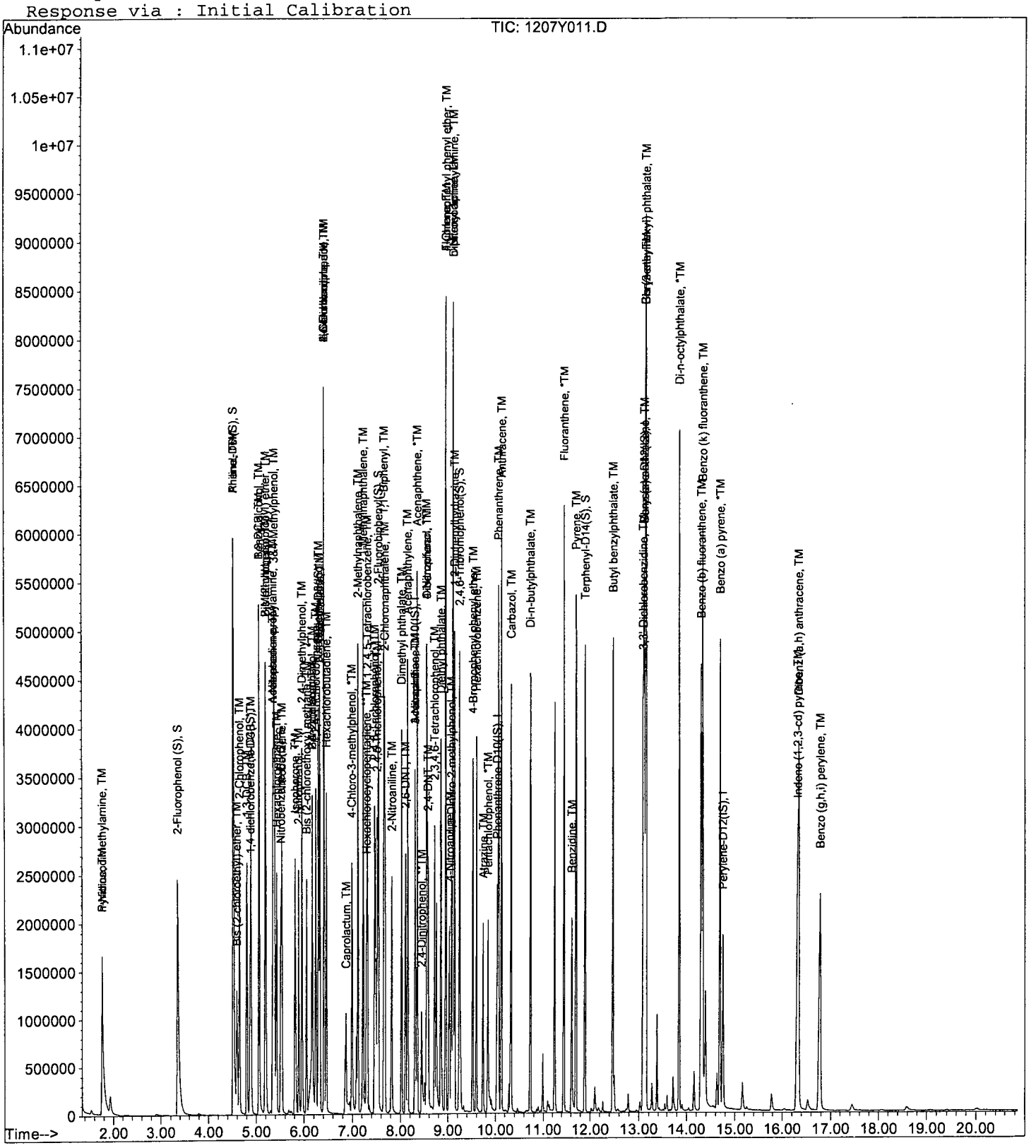
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.12	142	1400630	99.45413	ppb		98
39)	1-Methylnaphthalene	7.23	142	1395356	103.29704	ppb		99
41)	Hexachlorocyclopentadiene	7.29	237	337941	98.72624	ppb		99
42)	1,2,4,5-Tetrachlorobenzene	7.31	216	637512	97.67376	ppb		98
43)	2,4,6-Trichlorophenol	7.46	196	430600	99.42051	ppb		98
44)	2,4,5-Trichlorophenol	7.52	196	452384	98.63798	ppb		89
46)	1,1'-Biphenyl	7.66	154	1743421	95.87212	ppb		98
47)	2-Chloronaphthalene	7.67	162	1364913	95.27260	ppb		95
48)	2-Nitroaniline	7.82	65	501195	98.53093	ppb		96
49)	Dimethyl phthalate	8.03	163	1691646	96.45119	ppb		99
50)	2,6-DNT	8.11	165	428985	109.90174	ppb		96
51)	Acenaphthylene	8.15	152	2176158	97.71215	ppb		100
52)	3-Nitroaniline	8.31	138	417728	103.36750	ppb	#	99
53)	Acenaphthene	8.35	154	1365612	100.11850	ppb		99
54)	2,4-Dinitrophenol	8.44	184	244053	112.65730	ppb		86
55)	4-Nitrophenol	8.54	65	381862	104.77768	ppb		94
56)	Dibenzofuran	8.56	168	2009957	101.06274	ppb		97
57)	2,4-DNT	8.58	165	559804	101.45686	ppb		98
58)	2,3,4,6-Tetrachlorophenol	8.71	232	407530	114.18916	ppb		93
59)	Diethyl phthalate	8.85	149	1833935	102.98996	ppb		97
60)	4-Chlorophenyl phenyl ethe	8.96	204	822846	101.66441	ppb		81
61)	Fluorene	8.96	166	1670986	101.99193	ppb		98
62)	4-Nitroaniline	9.03	138	400399	104.01822	ppb		94
65)	4,6-Dinitro-2-methylphenol	9.07	198	386581	105.90161	ppb	#	83
66)	Diphenyl amine	9.11	169	2820080	198.12073	ppb		100
67)	n-Nitrosodiphenylamine	9.11	169	2820080	198.12073	ppb		100
68)	1,2-Diphenylhydrazine	9.14	77	2276128	101.00156	ppb		96
69)	4-Bromophenyl phenyl ether	9.52	248	489978	89.84427	ppb		91
70)	Hexachlorobenzene	9.60	284	507014	87.27573	ppb		86
71)	Atrazine	9.73	200	255247	44.76701	ppb		97
72)	Pentachlorophenol	9.84	266	289057	117.11640	ppb		96
73)	Phenanthrene	10.06	178	2631951	91.86635	ppb		99
74)	Anthracene	10.12	178	2699734	90.60598	ppb		100
75)	Carbazol	10.33	167	2292694	86.66621	ppb		99
76)	Di-n-butylphthalate	10.74	149	3048385	86.07511	ppb		99
77)	Fluoranthene	11.44	202	3022326	96.52752	ppb	#	98
79)	Benzidine	11.62	184	1093324	110.14442	ppb		98
80)	Pyrene	11.71	202	3079365	102.89248	ppb		99
82)	Butyl benzylphthalate	12.47	149	1430703	95.45863	ppb		88
83)	3,3'-Dichlorobenzidine	13.08	252	910729	98.96324	ppb	#	97
84)	Benz (a) anthracene	13.10	228	2808833	98.91745	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.13	149	2022285	95.61439	ppb		96
86)	Chrysene	13.14	228	2799507	102.55881	ppb		98
87)	Di-n-octylphthalate	13.85	149	3529346	94.16713	ppb	#	93
89)	Benzo (b) fluoranthene	14.30	252	3038345	89.45009	ppb		99
90)	Benzo (k) fluoranthene	14.33	252	2973702	91.55930	ppb		100
91)	Benzo (a) pyrene	14.69	252	2841755	88.83710	ppb		97
92)	Indeno (1,2,3-cd) pyrene	16.31	276	2782713	76.44997	ppb		95
93)	Dibenz (a,h) anthracene	16.34	278	2299501	74.25478	ppb		97
94)	Benzo (g,h,i) perylene	16.78	276	2235653	72.61835	ppb		99

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y161207\1207Y011.D Vial: 11
Acq On : 7 Dec 16 13:32 Operator: MA
Sample : 100ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Form 7

Second Source Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Date Analyzed: 7 Dec 16 14:01

Matrix: Instrument: Yoda

Initial Cal. Date: 12/07/16

Data File: 1207Y012.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	n-Nitrosodimethylamine	0.7942	0.8605	8.3	TM	
2	TM	Pyridine	1.794	2.065	15	TM	
3	*TM	Phenol	1.974	1.961	0.64	*TM	
4	TM	Aniline	1.868	1.717	8.1	TM	
5	TM	Bis (2-chloroethyl) ether	0.8648	0.9372	8.4	TM	
6	TM	2-Chlorophenol	1.576	1.492	5.4	TM	
7	TM	1,3-DCB	1.630	1.713	5.1	TM	
8	*TM	1,4-DCB	1.679	1.836	9.3	*TM	
9	TM	Benzyl alcohol	0.8717	0.9544	9.5	TM	
10	TM	1,2-DCB	1.537	1.648	7.2	TM	
11	TM	2-Methylphenol	1.120	1.183	5.6	TM	
12	TM	Bis (2-chloroisopropyl) ether	1.723	1.964	14	TM	
13	TM	Acetophenone	2.044	2.282	12	TM	
14	TM	3&4-Methylphenol	1.484	1.588	7.0	TM	
15	**TM	n-Nitrosodi-n-propylamine	1.052	1.111	5.6	**TM	
16	TM	Hexachloroethane	0.6713	0.7583	13	TM	
17	TM	Nitrobenzene	0.4083	0.4146	1.5	TM	
18	TM	Isophorone	0.6762	0.7401	9.5	TM	
19	*TM	2-Nitrophenol	0.2038	0.1897	6.9	*TM	
20	TM	2,4-Dimethylphenol	0.3231	0.2928	9.4	TM	
21	TML	Benzoic acid	0.2159	0.3029	40	TML	19
22	TM	Bis (2-chloroethoxy) methane	0.3856	0.3755	2.6	TM	
23	*TM	2,4-Dichlorophenol	0.3079	0.3092	0.41	*TM	
24	TM	1,2,4-Trichlorobenzene	0.3349	0.3788	13	TM	
25	TM	3,4-Dimethylphenol	0.4947	0.4722	4.5	TM	
26	TM	Naphthalene	1.049	1.030	1.9	TM	
27	TM	4-Chloroaniline	0.3882	0.3699	4.7	TM	
28	TM	2,6-Dichlorophenol	0.2970	0.2844	4.3	TM	
29	TM	Hexachloropropene	0.2678	0.2625	2.0	TM	
30	*TM	Hexachlorobutadiene	0.2134	0.2282	7.0	*TM	
31	TM	Caprolactum	0.1543	0.1430	7.3	TM	
32	*TM	4-Chloro-3-methylphenol	0.3401	0.3273	3.8	*TM	
33	TM	2-Methylnaphthalene	0.6856	0.6921	0.95	TM	
34	TM	1-Methylnaphthalene	0.6763	0.6628	2.0	TM	
35	**TMQ	Hexachlorocyclopentadiene	0.1853	0.2606	41	**TMQ	12
36	TM	1,2,4,5-Tetrachlorobenzene	0.5436	0.5813	6.9	TM	
37	*TM	2,4,6-Trichlorophenol	0.3508	0.3628	3.4	*TM	
38	TM	2,4,5-Trichlorophenol	0.3829	0.4030	5.3	TM	
39	TM	1,1'-Biphenyl	1.499	1.521	1.5	TM	
40	TM	2-Chloronaphthalene	1.159	1.302	12	TM	
		Average			8.2		

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 7 Dec 16 14:01
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y012.D

		Compound	MEAN	CCRF	%D	%Drift	
41	TM	2-Nitroaniline	0.3982	0.4094	2.8	TM	
42	TM	Dimethyl phthalate	1.391	1.370	1.6	TM	
43	TM	2,6-DNT	0.3141	0.3323	5.8	TM	
44	TM	Acenaphthylene	1.826	1.754	3.9	TM	
45	TM	3-Nitroaniline	0.3430	0.3329	2.9	TM	
46	*TM	Acenaphthene	1.156	1.094	5.3	*TM	
47	**TMQ	2,4-Dinitrophenol	0.1593	0.1353	15	**TMQ	15
48	**TML	4-Nitrophenol	0.2439	0.2731	12	**TML	5.3
49	TM	Dibenzofuran	1.639	1.588	3.1	TM	
50	TM	2,4-DNT	0.4436	0.4519	1.9	TM	
51	TM	2,3,4,6-Tetrachlorophenol	0.3114	0.3085	0.94	TM	
52	TM	Diethyl phthalate	1.432	1.360	5.0	TM	
53	TM	4-Chlorophenyl phenyl ether	0.6394	0.6265	2.0	TM	
54	TM	Fluorene	1.324	1.241	6.3	TM	
55	TM	4-Nitroaniline	0.3249	0.3379	4.0	TM	
56	TM	4,6-Dinitro-2-methylphenol	0.1486	0.1339	9.9	TM	
57	TM	Diphenyl amine	0.5706	0.5203	8.8	TM	
58	*TM	n-Nitrosodiphenylamine	0.5706	0.5203	8.8	*TM	
59	TM	1,2-Diphenylhydrazine	0.8211	0.7495	8.7	TM	
60	TM	4-Bromophenyl phenyl ether	0.2072	0.2226	7.4	TM	
61	TM	Hexachlorobenzene	0.2130	0.2500	17	TM	
62	TM	Atrazine	0.2062	0.2070	0.41	TM	
63	*TML	Pentachlorophenol	0.0958	0.0912	4.8	*TML	9.9
64	TM	Phenanthrene	1.080	1.064	1.5	TM	
65	TM	Anthracene	1.111	1.042	6.2	TM	
66	TM	Carbazol	1.005	0.8998	11	TM	
67	TM	Di-n-butylphthalate	1.292	1.202	6.9	TM	
68	*TM	Fluoranthene	1.189	1.119	5.8	*TM	
69	TM	Benzidine	0.4531	0.5340	18	TM	
70	TM	Pyrene	1.357	1.408	3.8	TM	
71	TM	Butyl benzylphthalate	0.6517	0.6327	2.9	TM	
72	TM	3,3'-Dichlorobenzidine	0.4273	0.4953	16	TM	
73	TM	Benz (a) anthracene	1.249	1.200	3.9	TM	
74	TM	Bis (2-ethylhexyl) phthalate	0.9136	0.9271	1.5	TM	
75	TM	Chrysene	1.213	1.146	5.5	TM	
76	*TM	Di-n-octylphthalate	1.614	1.629	0.92	*TM	
77	TM	Benzo (b) fluoranthene	1.250	1.211	3.2	TM	
78	TM	Benzo (k) fluoranthene	1.189	1.125	5.4	TM	
79	*TM	Benzo (a) pyrene	1.168	1.100	5.9	*TM	
80	TM	Indeno (1,2,3-cd) pyrene	1.293	1.302	0.66	TM	
		Average			5.9		

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 7 Dec 16 14:01
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y012.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	Dibenz (a,h) anthracene	1.091	1.084	0.59	TM	
82	TM	Benzo (g,h,i) perylene	1.161	1.030	11	TM	
83							
84							
85							
86							
87							
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89							
90							
91							
92							
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110							
111							
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118							
119							
120							
		Average			5.8		

Data File : M:\YODA\DATA\Y161207\1207Y012.D Vial: 12
Acq On : 7 Dec 16 14:01 Operator: MA
Sample : 2ND SRC SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 14:56 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	191057	40.00000	ppb	0.00
20) Napthalene-D8(IS)	6.30	136	871568	40.00000	ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	523606	40.00000	ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	1016944	40.00000	ppb	0.00
78) Chrysene-D12(IS)	13.11	240	899173	40.00000	ppb	0.00
88) Perylene-D12(IS)	14.75	264	937926	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	0.00	112	0	0.00000	ppb	
Spiked Amount 200.000			Recovery =	0.000%		
5) Phenol-D6 (S)	0.00	99	0	0.00000	ppb	
Spiked Amount 200.000			Recovery =	0.000%		
21) Nitrobenzene-D5(S)	5.42	82	51167	5.79164	ppb	-0.08
Spiked Amount 100.000			Recovery =	5.792%		
45) 2-Fluorobiphenyl(S)	7.54	172	1678	0.10166	ppb	0.00
Spiked Amount 100.000			Recovery =	0.102%		
63) 2,4,6-Tribromophenol(S)	0.00	330	0	0.00000	ppb	
Spiked Amount 200.000			Recovery =	0.000%		
81) Terphenyl-D14(S)	11.90	244	2267	0.11150	ppb	0.01
Spiked Amount 100.000			Recovery =	0.111%		

Algorithm = $\frac{1121605 \times 1 \times 40}{871568 \times 1.049} = 49.07$ HA 12/8/16

Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.75	42	205505	54.17418	ppb	99
3) Pyridine	1.76	79	493077	57.53832	ppb	100
6) Phenol	4.52	94	468384	49.67907	ppb	97
7) Aniline	4.52	66	410130	45.96281	ppb	94
8) Bis (2-chloroethyl) ether	4.58	63	223817	54.18477	ppb	97
9) 2-Chlorophenol	4.65	128	356278	47.32243	ppb	98
10) 1,3-DCB	4.80	146	409122	52.55606	ppb	98
11) 1,4-DCB	4.89	146	438492	54.66182	ppb	100
12) Benzyl alcohol	5.05	108	227935	54.74642	ppb	89
13) 1,2-DCB	5.06	146	393642	53.62112	ppb	98
14) 2-Methylphenol	5.19	107	282490	52.81375	ppb	99
15) Bis (2-chloroisopropyl) et	5.19	45	468942	56.98498	ppb	99
16) Acetophenone	5.34	105	544879	55.81351	ppb	99
17) 3&4-Methylphenol	5.36	107	758574	107.00501	ppb	99
18) n-Nitrosodi-n-propylamine	5.35	70	265350	52.78586	ppb	98
19) Hexachloroethane	5.42	117	181096	56.48025	ppb	95
22) Nitrobenzene	5.52	77	451653	50.77125	ppb	99
23) Isophorone	5.79	82	806347	54.72642	ppb	92
24) 2-Nitrophenol	5.88	139	206638	46.54256	ppb	97
25) 2,4-Dimethylphenol	5.95	122	319047	45.32287	ppb	99
26) Benzoic acid	6.13	105	329992	59.40511	ppb	98
27) Bis (2-chloroethoxy) metha	6.04	93	409113	48.69541	ppb	99
28) 2,4-Dichlorophenol	6.16	162	336842	50.20680	ppb	95
29) 1,2,4-Trichlorobenzene	6.24	180	412682	56.55773	ppb	97
30) 3,4-Dimethylphenol	6.29	107	514459	47.73195	ppb	99
31) Naphthalene	6.32	128	1121605	49.06908	ppb	99
32) 4-Chloroaniline	6.40	127	402969	47.64010	ppb	98
33) 2,6-Dichlorophenol	6.41	162	309823	47.86782	ppb	99
34) Hexachloropropene	6.42	213	285981	49.00147	ppb	99
35) Hexachlorobutadiene	6.46	225	248647	53.48708	ppb	98
36) Caprolactum	6.83	55	155831	46.33822	ppb	95
37) 4-Chloro-3-methylphenol	6.98	107	356630	48.12038	ppb	86

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y161207\1207Y012.D Vial: 12
Acq On : 7 Dec 16 14:01 Operator: MA
Sample : 2ND SRC SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 14:56 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.11	142	754038	50.47743	ppb		99
39)	1-Methylnaphthalene	7.22	142	722080	48.99775	ppb		100
41)	Hexachlorocyclopentadiene	7.29	237	170588	55.81613	ppb		99
42)	1,2,4,5-Tetrachlorobenzene	7.31	216	380472	53.46579	ppb		99
43)	2,4,6-Trichlorophenol	7.45	196	237475	51.71288	ppb		98
44)	2,4,5-Trichlorophenol	7.51	196	263784	52.63506	ppb		91
46)	1,1'-Biphenyl	7.65	154	995419	50.73149	ppb	#	98
47)	2-Chloronaphthalene	7.68	162	852397	56.20556	ppb		98
48)	2-Nitroaniline	7.81	65	267928	51.40520	ppb		97
49)	Dimethyl phthalate	8.02	163	896431	49.21645	ppb		100
50)	2,6-DNT	8.10	165	217507	52.89516	ppb		97
51)	Acenaphthylene	8.15	152	1148034	48.03874	ppb		99
52)	3-Nitroaniline	8.30	138	217900	48.53466	ppb		96
53)	Acenaphthene	8.34	154	716245	47.33371	ppb		98
54)	2,4-Dinitrophenol	8.44	184	88575	42.42116	ppb		93
55)	4-Nitrophenol	8.54	65	178738	47.34341	ppb		99
56)	Dibenzofuran	8.55	168	1039530	48.44636	ppb		100
57)	2,4-DNT	8.58	165	295792	50.93595	ppb		96
58)	2,3,4,6-Tetrachlorophenol	8.71	232	201912	49.52960	ppb		97
59)	Diethyl phthalate	8.84	149	890442	47.50284	ppb		99
60)	4-Chlorophenyl phenyl ethe	8.95	204	410071	48.99615	ppb		97
61)	Fluorene	8.95	166	811998	46.83909	ppb		99
62)	4-Nitroaniline	9.01	138	221182	52.00204	ppb		99
65)	4,6-Dinitro-2-methylphenol	9.05	198	170147	45.02904	ppb	#	63
66)	Diphenyl amine	9.10	169	1322713	91.17623	ppb		99
67)	n-Nitrosodiphenylamine	9.10	169	1322713	91.17623	ppb		99
68)	1,2-Diphenylhydrazine	9.13	77	952702	45.63842	ppb		98
69)	4-Bromophenyl phenyl ether	9.51	248	282914	53.71191	ppb		98
70)	Hexachlorobenzene	9.59	284	317774	58.69445	ppb		95
71)	Atrazine	9.73	200	131578	25.10242	ppb		95
72)	Pentachlorophenol	9.84	266	115962	45.03845	ppb		95
73)	Phenanthrene	10.06	178	1351927	49.22811	ppb		100
74)	Anthracene	10.12	178	1325118	46.92467	ppb		99
75)	Carbazol	10.32	167	1143768	44.74849	ppb		100
76)	Di-n-butylphthalate	10.73	149	1528545	46.53939	ppb		100
77)	Fluoranthene	11.44	202	1422850	47.07737	ppb		100
79)	Benzidine	11.61	184	600230m	58.92898	ppb		99
80)	Pyrene	11.70	202	1583034	51.91299	ppb		98
82)	Butyl benzylphthalate	12.47	149	711172	48.54397	ppb		99
83)	3,3'-Dichlorobenzidine	13.08	252	556753	57.96756	ppb		98
84)	Benz (a) anthracene	13.10	228	1348312	48.02891	ppb		100
85)	Bis (2-ethylhexyl) phthala	13.13	149	1042054	50.73897	ppb		97
86)	Chrysene	13.13	228	1288110	47.23790	ppb		98
87)	Di-n-octylphthalate	13.85	149	1830661	50.46239	ppb		99
89)	Benzo (b) fluoranthene	14.29	252	1419865	48.42384	ppb		99
90)	Benzo (k) fluoranthene	14.32	252	1318653	47.28739	ppb		99
91)	Benzo (a) pyrene	14.68	252	1289082	47.06095	ppb		99
92)	Indeno (1,2,3-cd) pyrene	16.30	276	1526262	50.33221	ppb		99
93)	Dibenz (a,h) anthracene	16.32	278	1271230	49.70488	ppb		99
94)	Benzo (g,h,i) perylene	16.76	276	1208044	44.36041	ppb		99

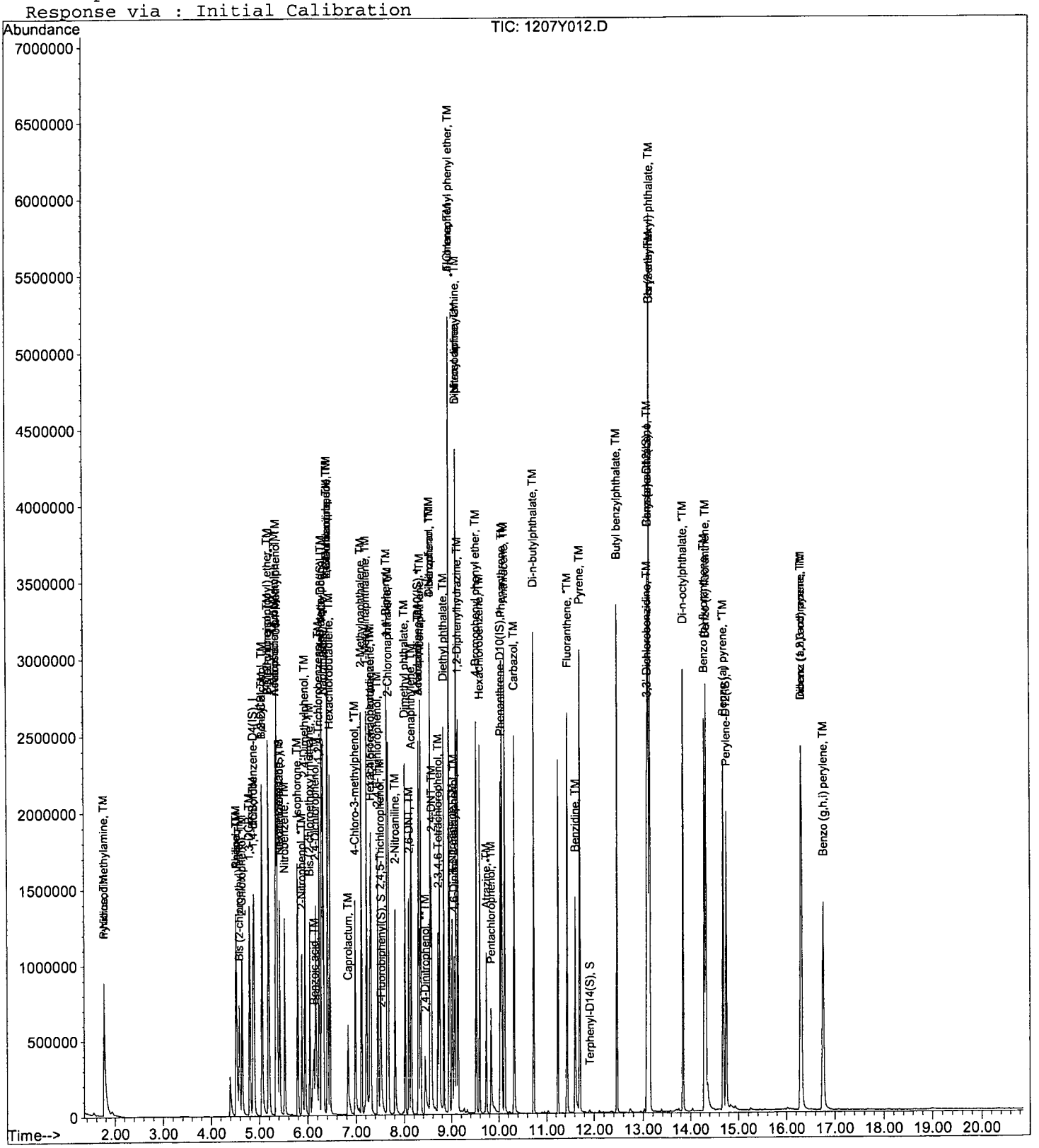
(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y161207\1207Y012.D
Acq On : 7 Dec 16 14:01
Sample : 2ND SRC SVOC 12/06/16
Misc :

Vial: 12
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 7 14:56 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Date Analyzed: 12/27/16

Matrix: Instrument: Yoda

Initial Cal. Date: 12/07/16

Data File: 1207Y194.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	n-Nitrosodimethylamine	0.7942	0.8544	7.6	TM	
3	TM	Pyridine	1.794	1.977	10	TM	
4	S	2-Fluorophenol (S)	1.316	1.325	0.67	S	
5	S	Phenol-D6 (S)	1.737	1.665	4.1	S	
6	*TM	Phenol	1.974	2.029	2.8	*TM	
7	TM	Aniline	1.868	1.795	3.9	TM	
8	TM	Bis (2-chloroethyl) ether	0.8648	0.9691	12	TM	
9	TM	2-Chlorophenol	1.576	1.536	2.5	TM	
10	TM	1,3-DCB	1.630	1.573	3.5	TM	
11	*TM	1,4-DCB	1.679	1.626	3.2	*TM	
12	TM	Benzyl alcohol	0.8717	0.8896	2.1	TM	
13	TM	1,2-DCB	1.537	1.473	4.2	TM	
14	TM	2-Methylphenol	1.120	1.113	0.57	TM	
15	TM	Bis (2-chloroisopropyl) ether	1.723	2.001	16	TM	
16	TM	Acetophenone	2.044	2.001	2.1	TM	
17	TM	3&4-Methylphenol	1.484	1.491	0.45	TM	
18	**TM	n-Nitrosodi-n-propylamine	1.052	1.073	1.9	**TM	
19	TM	Hexachloroethane	0.6713	0.6778	0.96	TM	
20	I	Napthalene-D8(IS)	ISTD			I	
21	S	Nitrobenzene-D5(S)	0.4055	0.4051	0.10	S	
22	TM	Nitrobenzene	0.4083	0.4139	1.4	TM	
23	TM	Isophorone	0.6762	0.6943	2.7	TM	
24	*TM	2-Nitrophenol	0.2038	0.2110	3.6	*TM	
25	TM	2,4-Dimethylphenol	0.3231	0.3237	0.19	TM	
26	TML	Benzoic acid	0.2159	0.2471	14	TML	1.6
27	TM	Bis (2-chloroethoxy) methane	0.3856	0.4056	5.2	TM	
28	*TM	2,4-Dichlorophenol	0.3079	0.3076	0.10	*TM	
29	TM	1,2,4-Trichlorobenzene	0.3349	0.3317	0.95	TM	
30	TM	3,4-Dimethylphenol	0.4947	0.4626	6.5	TM	
31	TM	Naphthalene	1.049	1.051	0.18	TM	
32	TM	4-Chloroaniline	0.3882	0.3716	4.3	TM	
33	TM	2,6-Dichlorophenol	0.2970	0.2689	9.5	TM	
34	TM	Hexachloropropene	0.2678	0.2335	13	TM	
35	*TM	Hexachlorobutadiene	0.2134	0.1957	8.3	*TM	
36	TM	Caprolactum	0.1543	0.1805	17	TM	
37	*TM	4-Chloro-3-methylphenol	0.3401	0.3376	0.73	*TM	
38	TM	2-Methylnaphthalene	0.6856	0.6967	1.6	TM	
39	TM	1-Methylnaphthalene	0.6763	0.6792	0.42	TM	
40	I	Acenaphthene-D10(IS)	ISTD			I	
		Average			4.5		

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/27/16
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y194.D

		Compound	MEAN	CCRF	%D		%Drift
41	**TMQ	Hexachlorocyclopentadiene	0.1853	0.1804	2.6	**TMQ	16
42	TM	1,2,4,5-Tetrachlorobenzene	0.5436	0.5401	0.65	TM	
43	*TM	2,4,6-Trichlorophenol	0.3508	0.3543	0.98	*TM	
44	TM	2,4,5-Trichlorophenol	0.3829	0.3753	2.0	TM	
45	S	2-Fluorobiphenyl(S)	1.261	1.206	4.4	S	
46	TM	1,1'-Biphenyl	1.499	1.502	0.22	TM	
47	TM	2-Chloronaphthalene	1.159	1.172	1.2	TM	
48	TM	2-Nitroaniline	0.3982	0.4162	4.5	TM	
49	TM	Dimethyl phthalate	1.391	1.381	0.78	TM	
50	TM	2,6-DNT	0.3141	0.3158	0.52	TM	
51	TM	Acenaphthylene	1.826	1.853	1.5	TM	
52	TM	3-Nitroaniline	0.3430	0.3561	3.8	TM	
53	*TM	Acenaphthene	1.156	1.122	2.9	*TM	
54	**TMQ	2,4-Dinitrophenol	0.1593	0.1768	11	**TMQ	4.5
55	**TML	4-Nitrophenol	0.2439	0.2489	2.0	**TML	13
56	TM	Dibenzofuran	1.639	1.619	1.3	TM	
57	TM	2,4-DNT	0.4436	0.4508	1.6	TM	
58	TM	2,3,4,6-Tetrachlorophenol	0.3114	0.3084	0.96	TM	
59	TM	Diethyl phthalate	1.432	1.377	3.9	TM	
60	TM	4-Chlorophenyl phenyl ether	0.6394	0.6156	3.7	TM	
61	TM	Fluorene	1.324	1.222	7.7	TM	
62	TM	4-Nitroaniline	0.3249	0.3396	4.5	TM	
63	S	2,4,6-Tribromophenol(S)	0.2006	0.1768	12	S	
64	I	Phenanthrene-D10(IS)	ISTD			I	
65	TM	4,6-Dinitro-2-methylphenol	0.1486	0.1416	4.8	TM	
66	TM	Diphenyl amine	0.5706	0.5320	6.8	TM	
67	*TM	n-Nitrosodiphenylamine	0.5706	0.5320	6.8	*TM	
68	TM	1,2-Diphenylhydrazine	0.8211	0.9257	13	TM	
69	TM	4-Bromophenyl phenyl ether	0.2072	0.2056	0.76	TM	
70	TM	Hexachlorobenzene	0.2130	0.2115	0.66	TM	
71	TM	Atrazine	0.2062	0.2107	2.2	TM	
72	*TML	Pentachlorophenol	0.0958	0.0867	9.4	*TML	14
73	TM	Phenanthrene	1.080	1.069	1.0	TM	
74	TM	Anthracene	1.111	1.114	0.28	TM	
75	TM	Carbazol	1.005	0.9969	0.84	TM	
76	TM	Di-n-butylphthalate	1.292	1.247	3.5	TM	
77	*TM	Fluoranthene	1.189	1.192	0.28	*TM	
78	I	Chrysene-D12(IS)	ISTD			I	
79	TM	Benzidine	0.4531	0.4795	5.8	TM	
80	TM	Pyrene	1.357	1.278	5.8	TM	
		Average			3.6		

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/27/16
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y194.D

		Compound	MEAN	CCRF	%D	%Drift	
81	S	Terphenyl-D14(S)	0.9045	0.8142	10.0	S	
82	TM	Butyl benzylphthalate	0.6517	0.6069	6.9	TM	
83	TM	3,3'-Dichlorobenzidine	0.4273	0.4372	2.3	TM	
84	TM	Benz (a) anthracene	1.249	1.199	4.0	TM	
85	TM	Bis (2-ethylhexyl) phthalate	0.9136	0.8294	9.2	TM	
86	TM	Chrysene	1.213	1.136	6.4	TM	
87	*TM	Di-n-octylphthalate	1.614	1.530	5.2	*TM	
88	I	Perylene-D12(IS)	ISTD			I	
89	TM	Benzo (b) fluoranthene	1.250	1.251	0.06	TM	
90	TM	Benzo (k) fluoranthene	1.189	1.102	7.3	TM	
91	*TM	Benzo (a) pyrene	1.168	1.126	3.6	*TM	
92	TM	Indeno (1,2,3-cd) pyrene	1.293	1.266	2.1	TM	
93	TM	Dibenz (a,h) anthracene	1.091	1.098	0.64	TM	
94	TM	Benzo (g,h,i) perylene	1.161	1.094	5.8	TM	
95							
96							
97							
98							
99							
100							
101							
102							
103							
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120							
		Average			4.9		

Data File : M:\YODA\DATA\Y161207\1207Y194.D Vial: 94
Acq On : 27 Dec 16 10:43 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 27 10:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	206555	40.00000 ppb		-0.01
20) Napthalene-D8(IS)	6.29	136	845054	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.30	164	497564	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.03	188	937578	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.11	240	904635	40.00000 ppb		0.00
88) Perylene-D12(IS)	14.75	264	949995	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.34	112	684046	100.67115 ppb		0.00
Spiked Amount 200.000			Recovery	= 50.336%		
5) Phenol-D6 (S)	4.50	99	859824	95.87450 ppb		0.00
Spiked Amount 200.000			Recovery	= 47.938%		
21) Nitrobenzene-D5(S)	5.50	82	427885	49.95226 ppb		0.00
Spiked Amount 100.000			Recovery	= 49.952%		
45) 2-Fluorobiphenyl(S)	7.53	172	750068	47.81955 ppb		0.00
Spiked Amount 100.000			Recovery	= 47.820%		
63) 2,4,6-Tribromophenol(S)	9.23	330	219963	88.16873 ppb		0.00
Spiked Amount 200.000			Recovery	= 44.085%		
81) Terphenyl-D14(S)	11.88	244	920739	45.01108 ppb		0.00
Spiked Amount 100.000			Recovery	= 45.011%		
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.74	42	220612	53.79307 ppb		96
3) Pyridine	1.75	79	510538	55.10585 ppb		98
6) Phenol	4.51	94	523952	51.40320 ppb		88
7) Aniline	4.51	66	463435	48.03979 ppb		93
8) Bis (2-chloroethyl) ether	4.58	63	250212	56.02986 ppb		94
9) 2-Chlorophenol	4.63	128	396644	48.73109 ppb		91
10) 1,3-DCB	4.79	146	406085	48.25187 ppb		98
11) 1,4-DCB	4.87	146	419857	48.41178 ppb		97
12) Benzyl alcohol	5.05	108	229689	51.02842 ppb		95
13) 1,2-DCB	5.04	146	380223	47.90712 ppb		98
14) 2-Methylphenol	5.19	107	287484	49.71470 ppb		94
15) Bis (2-chloroisopropyl) et	5.18	45	516656	58.07242 ppb	#	80
16) Acetophenone	5.33	105	516545	48.94120 ppb		99
17) 3&4-Methylphenol	5.36	107	769878	100.45125 ppb		96
18) n-Nitrosodi-n-propylamine	5.34	70	277010	50.97077 ppb		99
19) Hexachloroethane	5.41	117	174992	50.48161 ppb		90
22) Nitrobenzene	5.51	77	437183	50.68659 ppb		98
23) Isophorone	5.78	82	733449	51.34071 ppb		92
24) 2-Nitrophenol	5.88	139	222895	51.77942 ppb		93
25) 2,4-Dimethylphenol	5.94	122	341918	50.09583 ppb		99
26) Benzoic acid	6.14	105	261003	49.18457 ppb		94
27) Bis (2-chloroethoxy) metha	6.03	93	428422	52.59365 ppb		99
28) 2,4-Dichlorophenol	6.16	162	324917	49.94886 ppb		98
29) 1,2,4-Trichlorobenzene	6.23	180	350378	49.52564 ppb		98
30) 3,4-Dimethylphenol	6.29	107	488652	46.76005 ppb		95
31) Naphthalene	6.31	128	1110108	50.08989 ppb		99
32) 4-Chloroaniline	6.40	127	392549	47.86430 ppb		98
33) 2,6-Dichlorophenol	6.41	162	284046	45.26218 ppb		100
34) Hexachloropropene	6.42	213	246662	43.59041 ppb		99
35) Hexachlorobutadiene	6.45	225	206721	45.86349 ppb		98
36) Caprolactum	6.83	55	190677	58.47909 ppb		94
37) 4-Chloro-3-methylphenol	6.98	107	356647	49.63254 ppb		87

(#) = qualifier out of range (m) = manual integration
1207Y194.D Y1207.M Tue Dec 27 10:58:26 2016

Data File : M:\YODA\DATA\Y161207\1207Y194.D Vial: 94
Acq On : 27 Dec 16 10:43 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 27 10:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

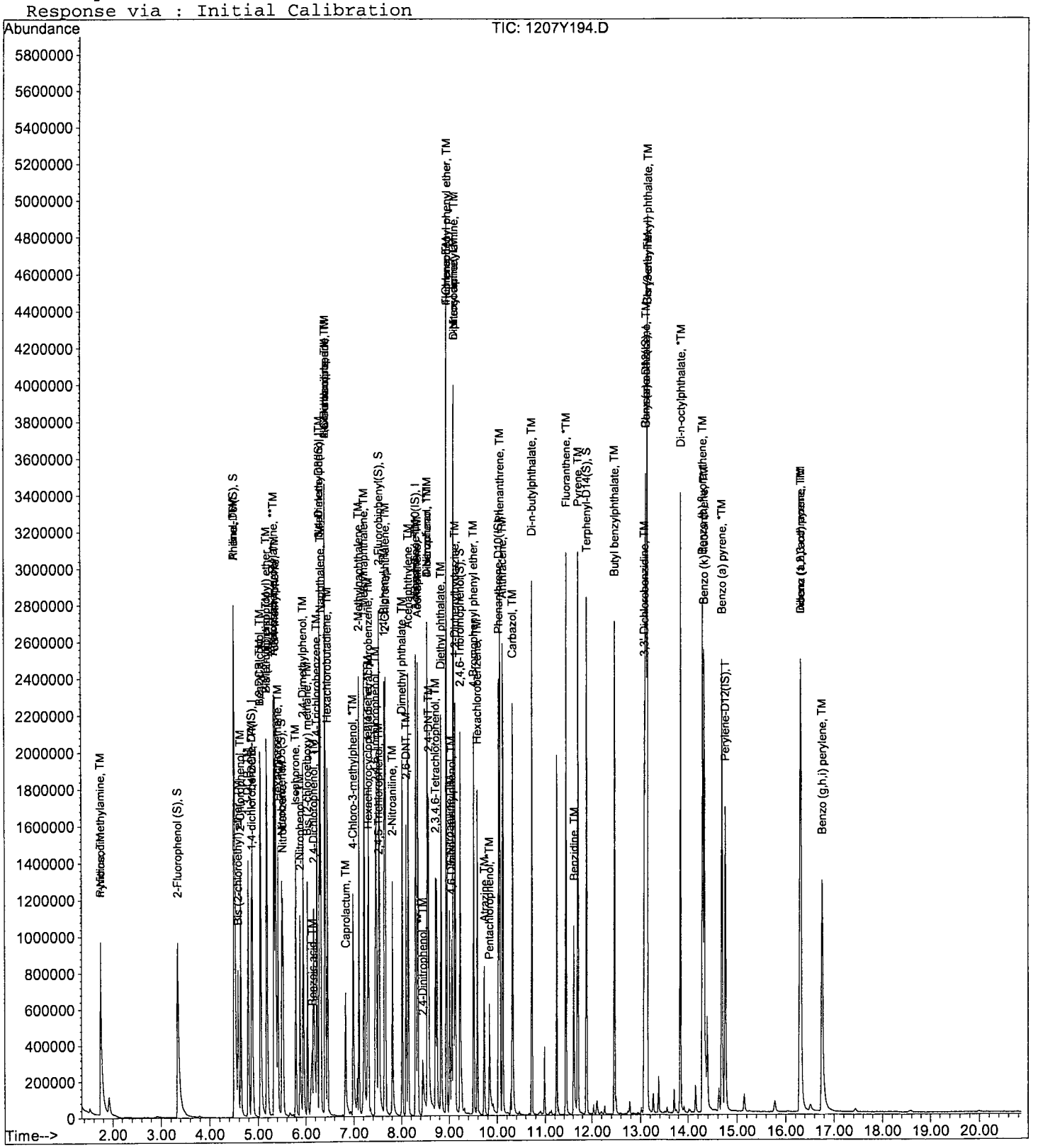
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.10	142	735940	50.81164	ppb		97
39)	1-Methylnaphthalene	7.21	142	717427	50.20944	ppb		97
41)	Hexachlorocyclopentadiene	7.29	237	112227	42.21998	ppb		97
42)	1,2,4,5-Tetrachlorobenzene	7.31	216	335921	49.67594	ppb		98
43)	2,4,6-Trichlorophenol	7.45	196	220338	50.49238	ppb		100
44)	2,4,5-Trichlorophenol	7.51	196	233420	49.01403	ppb		91
46)	1,1'-Biphenyl	7.65	154	934305	50.10903	ppb		98
47)	2-Chloronaphthalene	7.67	162	729208	50.59929	ppb		99
48)	2-Nitroaniline	7.81	65	258888	52.27048	ppb		90
49)	Dimethyl phthalate	8.01	163	858622	49.60793	ppb		99
50)	2,6-DNT	8.10	165	196391	50.25971	ppb		88
51)	Acenaphthylene	8.14	152	1152578	50.75313	ppb		99
52)	3-Nitroaniline	8.29	138	221462	51.90983	ppb		93
53)	Acenaphthene	8.34	154	698128	48.55116	ppb		99
54)	2,4-Dinitrophenol	8.44	184	109931	52.25139	ppb		92
55)	4-Nitrophenol	8.55	65	154805	43.57926	ppb		91
56)	Dibenzofuran	8.54	168	1006704	49.37210	ppb		94
57)	2,4-DNT	8.57	165	280396	50.81190	ppb		84
58)	2,3,4,6-Tetrachlorophenol	8.71	232	191837	49.52115	ppb		95
59)	Diethyl phthalate	8.83	149	856289	48.07175	ppb		100
60)	4-Chlorophenyl phenyl ethe	8.94	204	382880	48.14168	ppb		98
61)	Fluorene	8.94	166	760242	46.14886	ppb		99
62)	4-Nitroaniline	9.01	138	211239	52.26373	ppb		86
65)	4,6-Dinitro-2-methylphenol	9.05	198	165896	47.62050	ppb		88
66)	Diphenyl amine	9.10	169	1246879	93.22447	ppb		99
67)	n-Nitrosodiphenylamine	9.10	169	1246879	93.22447	ppb		99
68)	1,2-Diphenylhydrazine	9.13	77	1084873	56.36922	ppb		99
69)	4-Bromophenyl phenyl ether	9.51	248	240972	49.62179	ppb		98
70)	Hexachlorobenzene	9.59	284	247927	49.66977	ppb	#	71
71)	Atrazine	9.73	200	123451	25.54562	ppb		97
72)	Pentachlorophenol	9.83	266	101665	43.11968	ppb		97
73)	Phenanthrene	10.05	178	1253247	49.49784	ppb		98
74)	Anthracene	10.11	178	1305414	50.14003	ppb		99
75)	Carbazol	10.31	167	1168331	49.57880	ppb		99
76)	Di-n-butylphthalate	10.72	149	1461097	48.25154	ppb		99
77)	Fluoranthene	11.44	202	1397200	50.14195	ppb	#	98
79)	Benzidine	11.61	184	542244	52.91464	ppb		99
80)	Pyrene	11.70	202	1444968	47.09924	ppb		99
82)	Butyl benzylphthalate	12.46	149	686281	46.56209	ppb		93
83)	3,3'-Dichlorobenzidine	13.07	252	494384	51.16309	ppb	#	98
84)	Benz (a) anthracene	13.09	228	1355564	47.99569	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.13	149	937883	45.39102	ppb		99
86)	Chrysene	13.14	228	1284075	46.80561	ppb		99
87)	Di-n-octylphthalate	13.84	149	1730007	47.39992	ppb		95
89)	Benzo (b) fluoranthene	14.29	252	1485889	50.03176	ppb	#	98
90)	Benzo (k) fluoranthene	14.32	252	1308524	46.32802	ppb		99
91)	Benzo (a) pyrene	14.68	252	1336856	48.18502	ppb	#	96
92)	Indeno (1,2,3-cd) pyrene	16.30	276	1503043	48.93680	ppb		96
93)	Dibenz (a,h) anthracene	16.32	278	1303553	50.32118	ppb		99
94)	Benzo (g,h,i) perylene	16.77	276	1299311	47.10567	ppb		99

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y161207\1207Y194.D Vial: 94
Acq On : 27 Dec 16 10:43 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 27 10:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Date Analyzed: 12/27/16

Matrix: Instrument: Yoda

Initial Cal. Date: 12/07/16

Data File: 1207Y214.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	n-Nitrosodimethylamine	0.7942	0.8784	11	TM	
3	TM	Pyridine	1.794	1.830	2.0	TM	
4	S	2-Fluorophenol (S)	1.316	1.473	12	S	
5	S	Phenol-D6 (S)	1.737	1.722	0.86	S	
6	*TM	Phenol	1.974	2.036	3.1	*TM	
7	TM	Aniline	1.868	1.878	0.54	TM	
8	TM	Bis (2-chloroethyl) ether	0.8648	0.9823	14	TM	
9	TM	2-Chlorophenol	1.576	1.600	1.5	TM	
10	TM	1,3-DCB	1.630	1.644	0.85	TM	
11	*TM	1,4-DCB	1.679	1.645	2.0	*TM	
12	TM	Benzyl alcohol	0.8717	0.9117	4.6	TM	
13	TM	1,2-DCB	1.537	1.467	4.6	TM	
14	TM	2-Methylphenol	1.120	1.127	0.68	TM	
15	TM	Bis (2-chloroisopropyl) ether	1.723	2.059	20	TM	
16	TM	Acetophenone	2.044	2.060	0.78	TM	
17	TM	3&4-Methylphenol	1.484	1.481	0.18	TM	
18	**TM	n-Nitrosodi-n-propylamine	1.052	1.104	4.9	**TM	
19	TM	Hexachloroethane	0.6713	0.6846	2.0	TM	
20	I	Napthalene-D8(IS)	ISTD			I	
21	S	Nitrobenzene-D5(S)	0.4055	0.4527	12	S	
22	TM	Nitrobenzene	0.4083	0.4441	8.8	TM	
23	TM	Isophorone	0.6762	0.7415	9.6	TM	
24	*TM	2-Nitrophenol	0.2038	0.2227	9.3	*TM	
25	TM	2,4-Dimethylphenol	0.3231	0.3382	4.7	TM	
26	TML	Benzoic acid	0.2159	0.2390	11	TML	4.6
27	TM	Bis (2-chloroethoxy) methane	0.3856	0.4189	8.6	TM	
28	*TM	2,4-Dichlorophenol	0.3079	0.3228	4.8	*TM	
29	TM	1,2,4-Trichlorobenzene	0.3349	0.3449	3.0	TM	
30	TM	3,4-Dimethylphenol	0.4947	0.4781	3.3	TM	
31	TM	Naphthalene	1.049	1.090	3.9	TM	
32	TM	4-Chloroaniline	0.3882	0.3647	6.0	TM	
33	TM	2,6-Dichlorophenol	0.2970	0.2676	9.9	TM	
34	TM	Hexachloropropene	0.2678	0.2616	2.3	TM	
35	*TM	Hexachlorobutadiene	0.2134	0.2074	2.8	*TM	
36	TM	Caprolactum	0.1543	0.1892	23	TM	
37	*TM	4-Chloro-3-methylphenol	0.3401	0.3590	5.5	*TM	
38	TM	2-Methylnaphthalene	0.6856	0.7123	3.9	TM	
39	TM	1-Methylnaphthalene	0.6763	0.6925	2.4	TM	
40	I	Acenaphthene-D10(IS)	ISTD			I	
		Average			6.0		

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/27/16
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y214.D

		Compound	MEAN	CCRF	%D		%Drift
41	**TMQ	Hexachlorocyclopentadiene	0.1853	0.2235	21	**TMQ	0.66
42	TM	1,2,4,5-Tetrachlorobenzene	0.5436	0.5417	0.36	TM	
43	*TM	2,4,6-Trichlorophenol	0.3508	0.3695	5.3	*TM	
44	TM	2,4,5-Trichlorophenol	0.3829	0.3825	0.08	TM	
45	S	2-Fluorobiphenyl(S)	1.261	1.241	1.6	S	
46	TM	1,1'-Biphenyl	1.499	1.485	0.91	TM	
47	TM	2-Chloronaphthalene	1.159	1.208	4.3	TM	
48	TM	2-Nitroaniline	0.3982	0.4306	8.2	TM	
49	TM	Dimethyl phthalate	1.391	1.432	2.9	TM	
50	TM	2,6-DNT	0.3141	0.3282	4.5	TM	
51	TM	Acenaphthylene	1.826	1.855	1.6	TM	
52	TM	3-Nitroaniline	0.3430	0.3480	1.5	TM	
53	*TM	Acenaphthene	1.156	1.130	2.2	*TM	
54	**TMQ	2,4-Dinitrophenol	0.1593	0.1712	7.5	**TMQ	1.9
55	**TML	4-Nitrophenol	0.2439	0.2678	9.8	**TML	7.0
56	TM	Dibenzofuran	1.639	1.577	3.8	TM	
57	TM	2,4-DNT	0.4436	0.4639	4.6	TM	
58	TM	2,3,4,6-Tetrachlorophenol	0.3114	0.3204	2.9	TM	
59	TM	Diethyl phthalate	1.432	1.437	0.32	TM	
60	TM	4-Chlorophenyl phenyl ether	0.6394	0.6210	2.9	TM	
61	TM	Fluorene	1.324	1.238	6.5	TM	
62	TM	4-Nitroaniline	0.3249	0.3554	9.4	TM	
63	S	2,4,6-Tribromophenol(S)	0.2006	0.1904	5.1	S	
64	I	Phenanthrene-D10(IS)	ISTD			I	
65	TM	4,6-Dinitro-2-methylphenol	0.1486	0.1509	1.5	TM	
66	TM	Diphenyl amine	0.5706	0.5207	8.8	TM	
67	*TM	n-Nitrosodiphenylamine	0.5706	0.5207	8.8	*TM	
68	TM	1,2-Diphenylhydrazine	0.8211	0.9325	14	TM	
69	TM	4-Bromophenyl phenyl ether	0.2072	0.2035	1.8	TM	
70	TM	Hexachlorobenzene	0.2130	0.2107	1.0	TM	
71	TM	Atrazine	0.2062	0.2083	1.1	TM	
72	*TML	Pentachlorophenol	0.0958	0.0928	3.1	*TML	8.6
73	TM	Phenanthrene	1.080	1.065	1.5	TM	
74	TM	Anthracene	1.111	1.114	0.25	TM	
75	TM	Carbazol	1.005	1.010	0.42	TM	
76	TM	Di-n-butylphthalate	1.292	1.295	0.23	TM	
77	*TM	Fluoranthene	1.189	1.183	0.52	*TM	
78	I	Chrysene-D12(IS)	ISTD			I	
79	TM	Benzidine	0.4531	0.4729	4.4	TM	
80	TM	Pyrene	1.357	1.262	7.0	TM	
		Average			4.3		

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/27/16
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y214.D

		Compound	MEAN	CCRF	%D		%Drift
81	S	Terphenyl-D14(S)	0.9045	0.8660	4.3	S	
82	TM	Butyl benzylphthalate	0.6517	0.6107	6.3	TM	
83	TM	3,3'-Dichlorobenzidine	0.4273	0.4209	1.5	TM	
84	TM	Benz (a) anthracene	1.249	1.197	4.1	TM	
85	TM	Bis (2-ethylhexyl) phthalate	0.9136	0.8723	4.5	TM	
86	TM	Chrysene	1.213	1.201	1.0	TM	
87	*TM	Di-n-octylphthalate	1.614	1.546	4.2	*TM	
88	I	Perylene-D12(IS)	ISTD			I	
89	TM	Benzo (b) fluoranthene	1.250	1.722	38	TM	
90	TM	Benzo (k) fluoranthene	1.189	1.326	12	TM	
91	*TM	Benzo (a) pyrene	1.168	1.468	26	*TM	
92	TM	Indeno (1,2,3-cd) pyrene	1.293	1.617	25	TM	
93	TM	Dibenz (a,h) anthracene	1.091	1.389	27	TM	
94	TM	Benzo (g,h,i) perylene	1.161	1.423	23	TM	
95							
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120							
		Average			13.6		

Data File : M:\YODA\DATA\Y161207\1207Y214.D Vial: 14
Acq On : 27 Dec 16 20:26 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 28 8:46 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	280682	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.29	136	1125313	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.31	164	677242	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.03	188	1298137	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.11	240	1257392	40.00000 ppb		0.00
88) Perylene-D12(IS)	14.75	264	1023250	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.34	112	1033356	111.91566 ppb		0.00
Spiked Amount 200.000			Recovery = 55.958%			
5) Phenol-D6 (S)	4.51	99	1208233	99.14377 ppb		0.00
Spiked Amount 200.000			Recovery = 49.572%			
21) Nitrobenzene-D5(S)	5.50	82	636819	55.82840 ppb		0.00
Spiked Amount 100.000			Recovery = 55.828%			
45) 2-Fluorobiphenyl(S)	7.54	172	1050215	49.19128 ppb		0.00
Spiked Amount 100.000			Recovery = 49.191%			
63) 2,4,6-Tribromophenol(S)	9.23	330	322317	94.91901 ppb		0.00
Spiked Amount 200.000			Recovery = 47.460%			
81) Terphenyl-D14(S)	11.89	244	1361095	47.87117 ppb		0.00
Spiked Amount 100.000			Recovery = 47.871%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.74	42	308182	55.30007 ppb		97
3) Pyridine	1.75	79	641933	50.98947 ppb		93
6) Phenol	4.52	94	714347	51.57379 ppb		87
7) Aniline	4.52	66	658956	50.26779 ppb		82
8) Bis (2-chloroethyl) ether	4.58	63	344649	56.79493 ppb		91
9) 2-Chlorophenol	4.64	128	561509	50.76719 ppb		93
10) 1,3-DCB	4.80	146	576660	50.42411 ppb		98
11) 1,4-DCB	4.88	146	577249	48.98172 ppb		99
12) Benzyl alcohol	5.05	108	319868	52.29544 ppb		92
13) 1,2-DCB	5.05	146	514649	47.71929 ppb		96
14) 2-Methylphenol	5.19	107	395577	50.34117 ppb		97
15) Bis (2-chloroisopropyl) et	5.18	45	722363	59.75099 ppb	#	58
16) Acetophenone	5.34	105	722665	50.38771 ppb		99
17) 3&4-Methylphenol	5.37	107	1039545	99.81547 ppb		95
18) n-Nitrosodi-n-propylamine	5.34	70	387490	52.46955 ppb		96
19) Hexachloroethane	5.42	117	240188	50.99029 ppb		83
22) Nitrobenzene	5.52	77	624682	54.38760 ppb		98
23) Isophorone	5.80	82	1042965	54.82426 ppb		97
24) 2-Nitrophenol	5.88	139	313297	54.65429 ppb		88
25) 2,4-Dimethylphenol	5.95	122	475709	52.33980 ppb		96
26) Benzoic acid	6.16	105	336163	47.70024 ppb		94
27) Bis (2-chloroethoxy) metha	6.04	93	589210	54.31788 ppb		98
28) 2,4-Dichlorophenol	6.16	162	454037	52.41499 ppb		94
29) 1,2,4-Trichlorobenzene	6.24	180	485120	51.49364 ppb		99
30) 3,4-Dimethylphenol	6.29	107	672531	48.32799 ppb		99
31) Naphthalene	6.32	128	1533294	51.95429 ppb		99
32) 4-Chloroaniline	6.40	127	513061	46.97837 ppb		98
33) 2,6-Dichlorophenol	6.41	162	376406	45.04166 ppb		99
34) Hexachloropropene	6.41	213	367935	48.82823 ppb		98
35) Hexachlorobutadiene	6.46	225	291679	48.59580 ppb		96
36) Caprolactum	6.85	55	266170	61.30171 ppb		92
37) 4-Chloro-3-methylphenol	6.99	107	504996	52.77485 ppb		96

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y161207\1207Y214.D Vial: 14
Acq On : 27 Dec 16 20:26 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 28 8:46 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.11	142	1001990	51.95116	ppb		98
39)	1-Methylnaphthalene	7.22	142	974152	51.19712	ppb		98
41)	Hexachlorocyclopentadiene	7.28	237	189227	49.67021	ppb		98
42)	1,2,4,5-Tetrachlorobenzene	7.30	216	458545	49.81911	ppb		96
43)	2,4,6-Trichlorophenol	7.46	196	312812	52.66535	ppb		97
44)	2,4,5-Trichlorophenol	7.52	196	323832	49.95824	ppb		95
46)	1,1'-Biphenyl	7.65	154	1257416	49.54632	ppb	#	98
47)	2-Chloronaphthalene	7.67	162	1022919	52.14820	ppb		97
48)	2-Nitroaniline	7.81	65	364544	54.07538	ppb		93
49)	Dimethyl phthalate	8.02	163	1212132	51.45221	ppb		99
50)	2,6-DNT	8.10	165	277810	52.23376	ppb		89
51)	Acenaphthylene	8.15	152	1570629	50.81258	ppb		100
52)	3-Nitroaniline	8.30	138	294590	50.73101	ppb		90
53)	Acenaphthene	8.34	154	956605	48.87675	ppb		99
54)	2,4-Dinitrophenol	8.45	184	144938	50.97159	ppb		88
55)	4-Nitrophenol	8.55	65	226721	46.52311	ppb		97
56)	Dibenzofuran	8.55	168	1334723	48.09235	ppb		99
57)	2,4-DNT	8.57	165	392735	52.28755	ppb		87
58)	2,3,4,6-Tetrachlorophenol	8.71	232	271214	51.43699	ppb		99
59)	Diethyl phthalate	8.83	149	1216098	50.15835	ppb		99
60)	4-Chlorophenyl phenyl ethe	8.95	204	525674	48.56016	ppb		94
61)	Fluorene	8.95	166	1048151	46.74531	ppb		98
62)	4-Nitroaniline	9.02	138	300834	54.68375	ppb		94
65)	4,6-Dinitro-2-methylphenol	9.06	198	244878	50.76854	ppb	#	74
66)	Diphenyl amine	9.10	169	1689777	91.24770	ppb		99
67)	n-Nitrosodiphenylamine	9.10	169	1689777	91.24770	ppb		99
68)	1,2-Diphenylhydrazine	9.13	77	1513079	56.78212	ppb		98
69)	4-Bromophenyl phenyl ether	9.51	248	330240	49.11593	ppb		94
70)	Hexachlorobenzene	9.59	284	341931	49.47590	ppb		96
71)	Atrazine	9.74	200	169039	25.26363	ppb		95
72)	Pentachlorophenol	9.84	266	150540	45.70235	ppb		97
73)	Phenanthrene	10.06	178	1727384	49.27486	ppb		99
74)	Anthracene	10.12	178	1806970	50.12728	ppb		100
75)	Carbazol	10.32	167	1638268	50.21135	ppb		99
76)	Di-n-butylphthalate	10.73	149	2101210	50.11739	ppb		100
77)	Fluoranthene	11.44	202	1919073	49.74175	ppb		99
79)	Benzidine	11.61	184	743308	52.18583	ppb		98
80)	Pyrene	11.70	202	1983794	46.52163	ppb		100
82)	Butyl benzylphthalate	12.46	149	959856	46.85321	ppb		97
83)	3,3'-Dichlorobenzidine	13.08	252	661599	49.25949	ppb		97
84)	Benz (a) anthracene	13.10	228	1882111	47.94354	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.12	149	1371021	47.73842	ppb	#	95
86)	Chrysene	13.14	228	1887216	49.49164	ppb		99
87)	Di-n-octylphthalate	13.84	149	2430551	47.91122	ppb	#	87
89)	Benzo (b) fluoranthene	14.29	252	2202372	68.84773	ppb		98
90)	Benzo (k) fluoranthene	14.33	252	1696140	55.75237	ppb		97
91)	Benzo (a) pyrene	14.68	252	1877139	62.81501	ppb	#	97
92)	Indeno (1,2,3-cd) pyrene	16.31	276	2068032	62.51165	ppb		96
93)	Dibenz (a,h) anthracene	16.33	278	1777127	63.69131	ppb		99
94)	Benzo (g,h,i) perylene	16.77	276	1819990	61.25882	ppb		100

(#) = qualifier out of range (m) = manual integration

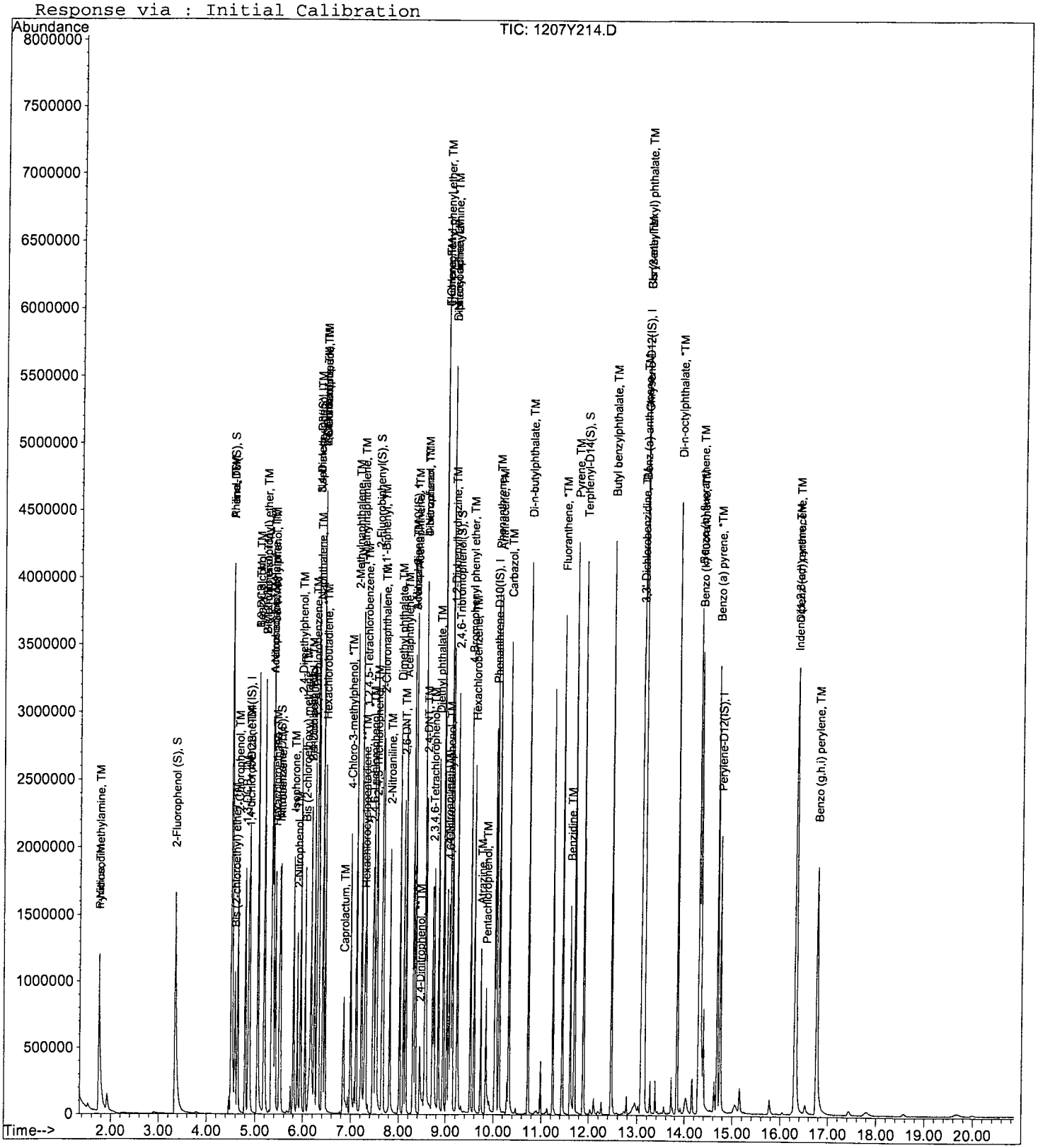
Data File : M:\YODA\DATA\Y161207\1207Y214.D
Acq On : 27 Dec 16 20:26
Sample : 50ug/ml SVOC 12/06/16
Misc : water

Vial: 14
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 28 8:46 2016

Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



ORGANICS

Raw Data

APPL, INC.

Method Blank
EPA 8270D WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161227W-48083 - 215034**
Batch ID: #87DC5-161227A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	12/27/16	12/27/16
BLANK	SURROGATE: 2,4,6-TRIBROMOP	62.5	43-140			%	12/27/16	12/27/16
BLANK	SURROGATE: 2-FLUORBIPHENY	62.4	44-119			%	12/27/16	12/27/16
BLANK	SURROGATE: 2-FLUOROPHENO	45.9	19-119			%	12/27/16	12/27/16
BLANK	SURROGATE: NITROBENZENE-	64.9	44-120			%	12/27/16	12/27/16
BLANK	SURROGATE: PHENOL-D6 (S)	30.1	10-115			%	12/27/16	12/27/16
BLANK	SURROGATE: TERPHENYL-D14 (	63.1	50-134			%	12/27/16	12/27/16

Quant Method:Y1207.M
Run #:1207Y208
Instrument:Yoda
Sequence:Y161207
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 12/28/16 10:08:22 AM

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y208.D Vial: 8
Acq On : 27 Dec 16 17:42 Operator: MA
Sample : 161227A BLK 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 28 8:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	228131	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.29	136	973211	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.30	164	541589	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	1009350	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.10	240	1024096	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.74	264	1016452	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.34	112	689119	91.82594 ppb	0.00
Spiked Amount 200.000			Recovery =	45.913%	
5) Phenol-D6 (S)	4.50	99	596418	60.21376 ppb	0.00
Spiked Amount 200.000			Recovery =	30.107%	
21) Nitrobenzene-D5(S)	5.50	82	640483	64.92518 ppb	0.00
Spiked Amount 100.000			Recovery =	64.925%	
45) 2-Fluorobiphenyl(S)	7.54	172	1065818	62.42622 ppb	0.00
Spiked Amount 100.000			Recovery =	62.426%	
63) 2,4,6-Tribromophenol(S)	9.23	330	339524	125.03008 ppb	0.00
Spiked Amount 200.000			Recovery =	62.515%	
81) Terphenyl-D14(S)	11.89	244	1462163	63.14099 ppb	0.00
Spiked Amount 100.000			Recovery =	63.141%	

Target Compounds	Qvalue

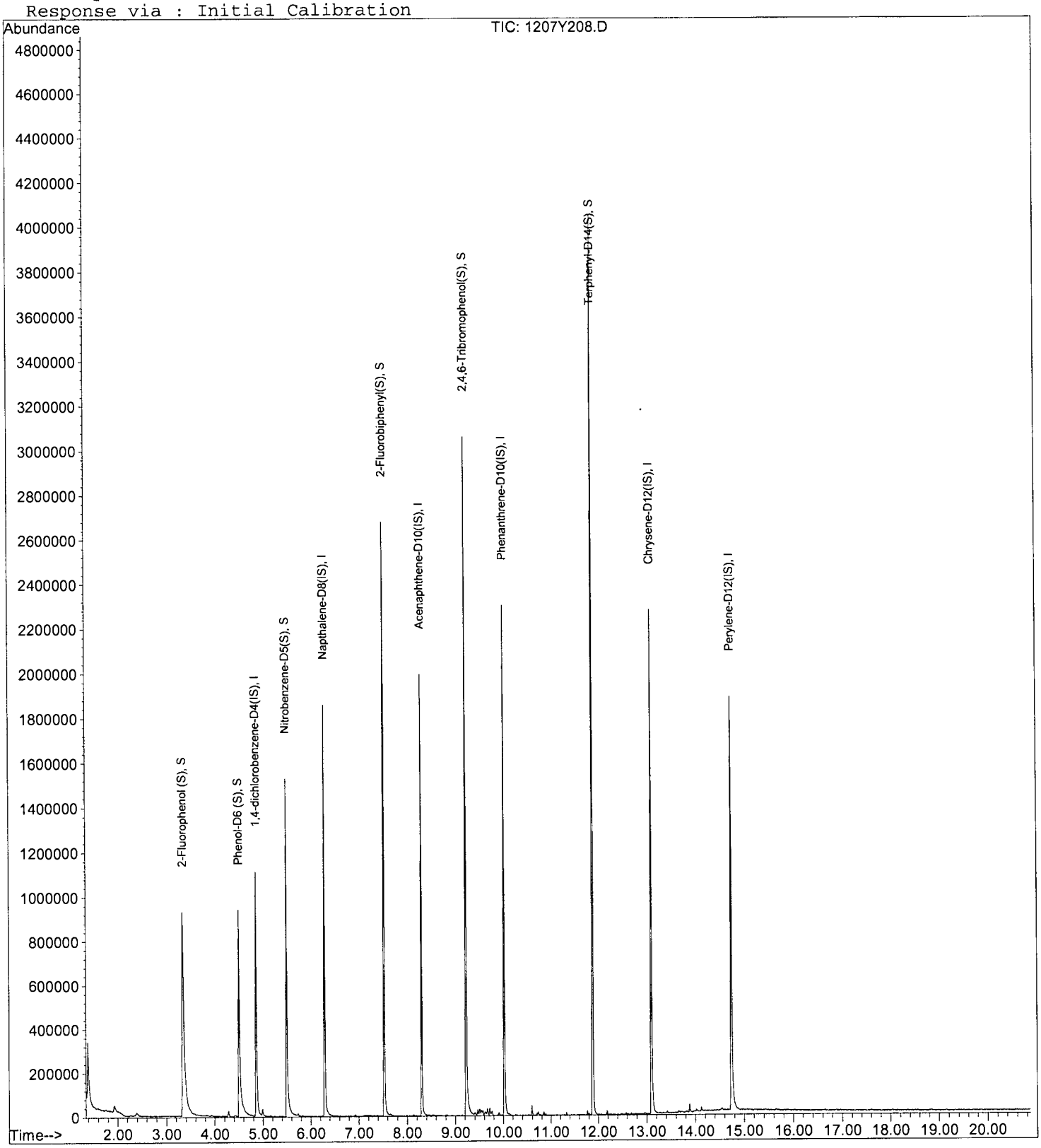
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y208.D Vial: 8
Acq On : 27 Dec 16 17:42 Operator: MA
Sample : 161227A BLK 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 28 8:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Laboratory Control Spike Recovery
EPA 8270D WATER

APPL ID: **161227W-48083 LCS - 215034**
Batch ID: #87DC5-161227A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
PHENOL	50.0	18.3	36.6	10-115
SURROGATE: 2,4,6-TRIBROMOPHENOL	200	118	59.0	43-140
SURROGATE: 2-FLUORBIPHENYL (S)	100	58.1	58.1	44-119
SURROGATE: 2-FLUOROPHENOL (S)	200	89.2	44.6	19-119
SURROGATE: NITROBENZENE-D5 (S)	100	64.8	64.8	44-120
SURROGATE: PHENOL-D6 (S)	200	58.4	29.2	10-115
SURROGATE: TERPHENYL-D14 (S)	100	61.2	61.2	50-134

Comments: _____

Primary	SPK
Quant Method :	Y1207.M
Extraction Date :	12/27/16
Analysis Date :	12/27/16
Instrument :	Yoda
Run :	1207Y209
Initials :	MA

Printed: 12/28/16 10:08:23 AM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y209.D Vial: 9
Acq On : 27 Dec 16 18:13 Operator: MA
Sample : 161227A LCS-1 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 28 8:54 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	218340	40.00000	ppb		0.00
20) Napthalene-D8(IS)	6.29	136	906233	40.00000	ppb		0.00
40) Acenaphthene-D10(IS)	8.31	164	542507	40.00000	ppb		0.00
64) Phenanthrene-D10(IS)	10.02	188	997687	40.00000	ppb		0.00
78) Chrysene-D12(IS)	13.11	240	991187	40.00000	ppb		0.00
88) Perylene-D12(IS)	14.75	264	1051341	40.00000	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol (S)	3.34	112	640769	89.21207	ppb		0.00
Spiked Amount 200.000			Recovery = 44.606%				
5) Phenol-D6 (S)	4.50	99	553867	58.42537	ppb		0.00
Spiked Amount 200.000			Recovery = 29.213%				
21) Nitrobenzene-D5(S)	5.50	82	595186	64.79260	ppb		0.00
Spiked Amount 100.000			Recovery = 64.793%				
45) 2-Fluorobiphenyl(S)	7.54	172	994273	58.13720	ppb		0.00
Spiked Amount 100.000			Recovery = 58.137%				
63) 2,4,6-Tribromophenol(S)	9.23	330	321867	118.32731	ppb		0.00
Spiked Amount 200.000			Recovery = 59.164%				
81) Terphenyl-D14(S)	11.89	244	1371884	61.20939	ppb		0.00
Spiked Amount 100.000			Recovery = 61.209%				
Target Compounds							Qvalue
2) n-Nitrosodimethylamine	1.74	42	111456	25.71006	ppb		72
3) Pyridine	1.76	79	141556	14.45441	ppb		99
6) Phenol	4.52	94	197629	18.34221	ppb		97
7) Aniline	4.51	66	239208	23.45797	ppb	#	53
8) Bis (2-chloroethyl) ether	4.58	63	185145	39.22164	ppb		94
9) 2-Chlorophenol	4.64	128	282713	32.85893	ppb		96
10) 1,3-DCB	4.80	146	206725	23.23767	ppb		97
11) 1,4-DCB	4.88	146	218042	23.78440	ppb		96
12) Benzyl alcohol	5.05	108	155957	32.77775	ppb		96
13) 1,2-DCB	5.05	146	209094	24.92331	ppb		99
14) 2-Methylphenol	5.19	107	199399	32.62094	ppb		93
15) Bis (2-chloroisopropyl) et	5.18	45	397105	42.22564	ppb	#	61
16) Acetophenone	5.34	105	390476	34.99961	ppb		94
17) 3&4-Methylphenol	5.36	107	498988	61.59223	ppb		99
18) n-Nitrosodi-n-propylamine	5.34	70	219182	38.15338	ppb		98
19) Hexachloroethane	5.41	117	72647	19.82600	ppb		100
22) Nitrobenzene	5.52	77	333103	36.01247	ppb		93
23) Isophorone	5.79	82	571417	37.29835	ppb		97
24) 2-Nitrophenol	5.88	139	161993	35.09116	ppb		88
25) 2,4-Dimethylphenol	5.95	122	246535	33.68238	ppb		92
26) Benzoic acid	6.11	105	82528	17.27542	ppb		96
27) Bis (2-chloroethoxy) metha	6.04	93	329507	37.71992	ppb		99
28) 2,4-Dichlorophenol	6.16	162	247015	35.40960	ppb		95
29) 1,2,4-Trichlorobenzene	6.24	180	198467	26.15930	ppb		99
30) 3,4-Dimethylphenol	6.28	107	366969	32.74532	ppb		96
31) Naphthalene	6.32	128	781687	32.88988	ppb		99
32) 4-Chloroaniline	6.40	127	326932	37.17234	ppb		93
33) 2,6-Dichlorophenol	6.40	162	236810	35.18774	ppb		97
34) Hexachloropropene	6.41	213	98054	16.15841	ppb		98
35) Hexachlorobutadiene	6.46	225	89527	18.52171	ppb		95
36) Caprolactum	6.81	55	45276	12.94837	ppb		94
37) 4-Chloro-3-methylphenol	6.98	107	264312	34.29963	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y209.D Vial: 9
Acq On : 27 Dec 16 18:13 Operator: MA
Sample : 161227A LCS-1 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 28 8:54 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38) 2-Methylnaphthalene	7.11	142	513204	33.04117 ppb		98
39) 1-Methylnaphthalene	7.22	142	508392	33.17806 ppb		98
41) Hexachlorocyclopentadiene	7.29	237	18973	12.20856 ppb		100
42) 1,2,4,5-Tetrachlorobenzene	7.30	216	220486	29.90429 ppb		98
43) 2,4,6-Trichlorophenol	7.45	196	174984	36.77718 ppb		98
44) 2,4,5-Trichlorophenol	7.51	196	181809	35.01397 ppb		94
46) 1,1'-Biphenyl	7.65	154	693522	34.11389 ppb	#	97
47) 2-Chloronaphthalene	7.67	162	518107	32.97282 ppb		99
48) 2-Nitroaniline	7.81	65	193560	35.84296 ppb		88
49) Dimethyl phthalate	8.02	163	685357	36.31696 ppb		98
50) 2,6-DNT	8.09	165	155725	36.55109 ppb	#	81
51) Acenaphthylene	8.14	152	868064	35.05806 ppb		99
52) 3-Nitroaniline	8.29	138	162094	34.84664 ppb	#	81
53) Acenaphthene	8.34	154	546013	34.82661 ppb		98
54) 2,4-Dinitrophenol	8.45	184	67254	33.28175 ppb		89
55) 4-Nitrophenol	8.58	65	51839	16.74048 ppb	#	56
56) Dibenzofuran	8.55	168	784401	35.28268 ppb		80
57) 2,4-DNT	8.57	165	217960	36.22547 ppb	#	74
58) 2,3,4,6-Tetrachlorophenol	8.71	232	141212	33.43286 ppb		92
59) Diethyl phthalate	8.84	149	687857	35.41697 ppb		94
60) 4-Chlorophenyl phenyl ethe	8.95	204	291950	33.66748 ppb		81
61) Fluorene	8.94	166	611736	34.05781 ppb		97
62) 4-Nitroaniline	9.01	138	164287	37.27976 ppb		87
65) 4,6-Dinitro-2-methylphenol	9.05	198	133081	35.89940 ppb	#	78
66) Diphenyl amine	9.10	169	921780	64.76584 ppb		100
67) n-Nitrosodiphenylamine	9.10	169	921780	64.76584 ppb		100
68) 1,2-Diphenylhydrazine	9.13	77	722131	35.26080 ppb	#	89
69) 4-Bromophenyl phenyl ether	9.51	248	189137	36.60121 ppb	#	79
70) Hexachlorobenzene	9.59	284	186491	35.11069 ppb	#	81
71) Atrazine	9.73	200	94365	18.35042 ppb		97
72) Pentachlorophenol	9.84	266	79075	33.11637 ppb		98
73) Phenanthrene	10.05	178	1008457	37.43002 ppb		99
74) Anthracene	10.12	178	1052541	37.99167 ppb		99
75) Carbazol	10.32	167	953686	38.03195 ppb		98
76) Di-n-butylphthalate	10.72	149	1205389	37.40868 ppb		99
77) Fluoranthene	11.44	202	1121574	37.82542 ppb	#	96
79) Benzidine	11.62	184	208291	18.55109 ppb		100
80) Pyrene	11.70	202	1172386	34.87740 ppb		99
82) Butyl benzylphthalate	12.47	149	558220	34.56637 ppb		89
83) 3,3'-Dichlorobenzidine	13.07	252	349721	33.03177 ppb	#	98
84) Benz (a) anthracene	13.10	228	1105584	35.72660 ppb		99
85) Bis (2-ethylhexyl) phthala	13.12	149	751901	33.21236 ppb		98
86) Chrysene	13.13	228	1088462	36.21084 ppb		98
87) Di-n-octylphthalate	13.84	149	1401872	35.05548 ppb	#	93
89) Benzo (b) fluoranthene	14.29	252	1180336	35.91226 ppb	#	97
90) Benzo (k) fluoranthene	14.32	252	1135556	36.32857 ppb		99
91) Benzo (a) pyrene	14.68	252	1087735	35.42650 ppb		98
92) Indeno (1,2,3-cd) pyrene	16.30	276	1241657	36.52948 ppb		96
93) Dibenz (a,h) anthracene	16.32	278	1068974	37.28782 ppb		98
94) Benzo (g,h,i) perylene	16.75	276	1064811	34.88272 ppb		96

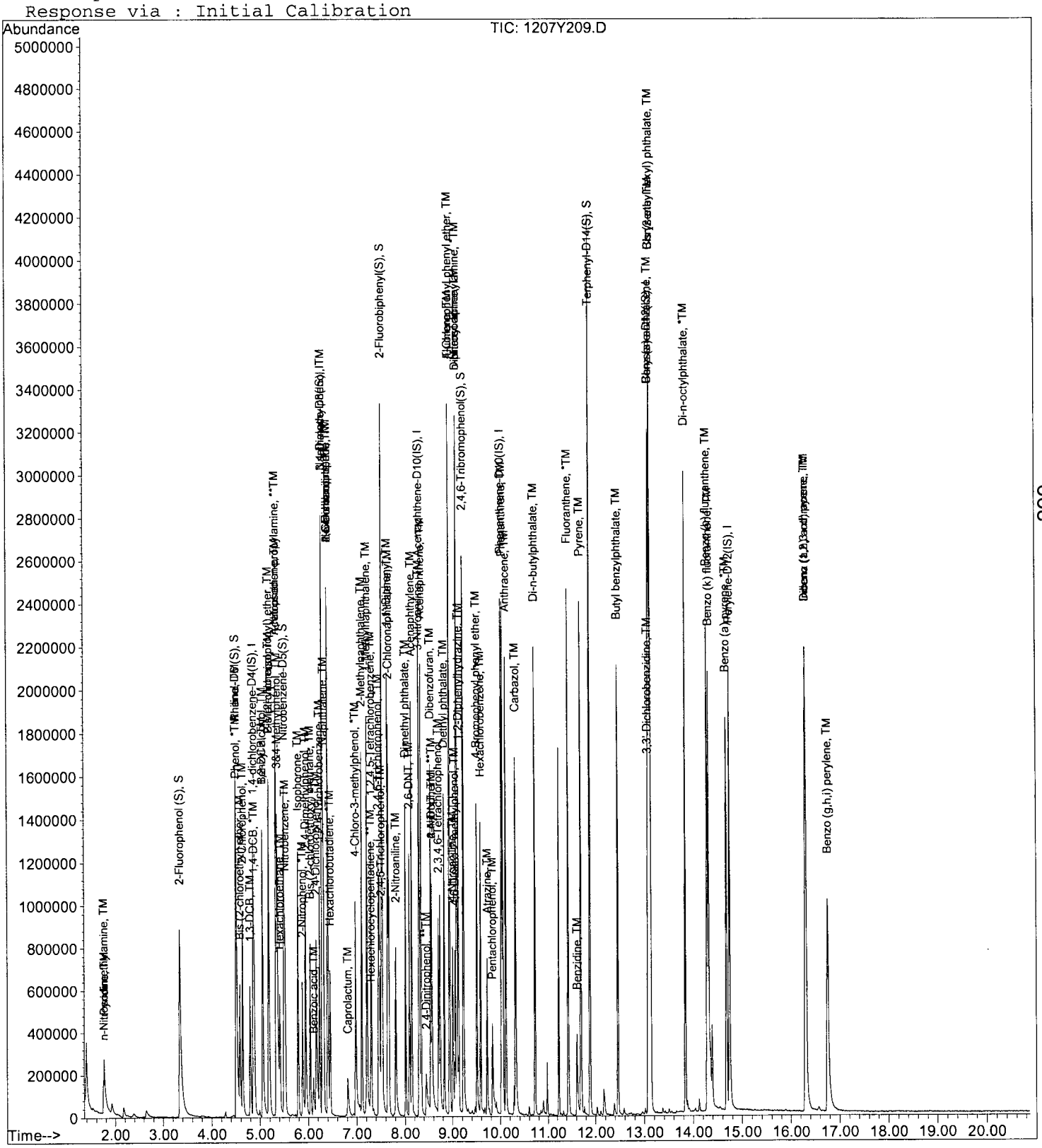
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y209.D Vial: 9
Acq On : 27 Dec 16 18:13 Operator: MA
Sample : 161227A LCS-1 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 28 8:54 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration

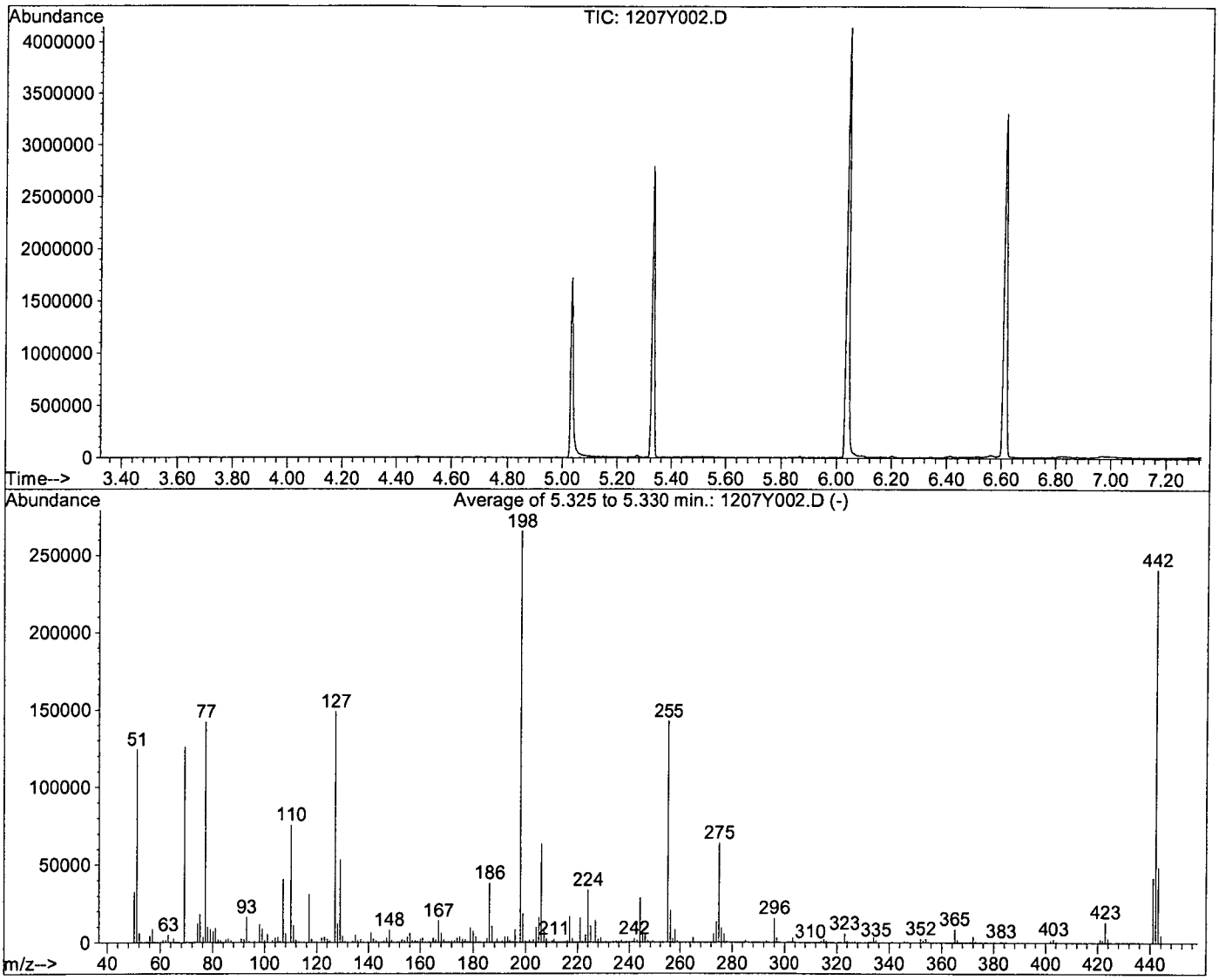


299

Data File : M:\YODA\DATA\Y161207\1207Y002.D
Acq On : 7 Dec 16 9:00
Sample : SV Tune 10/19/16
Misc :

Vial: 2
Operator: MA
Inst : Yoda
Multiplr: 1.00

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 696, 697, 698; Background Corrected with Scan 689

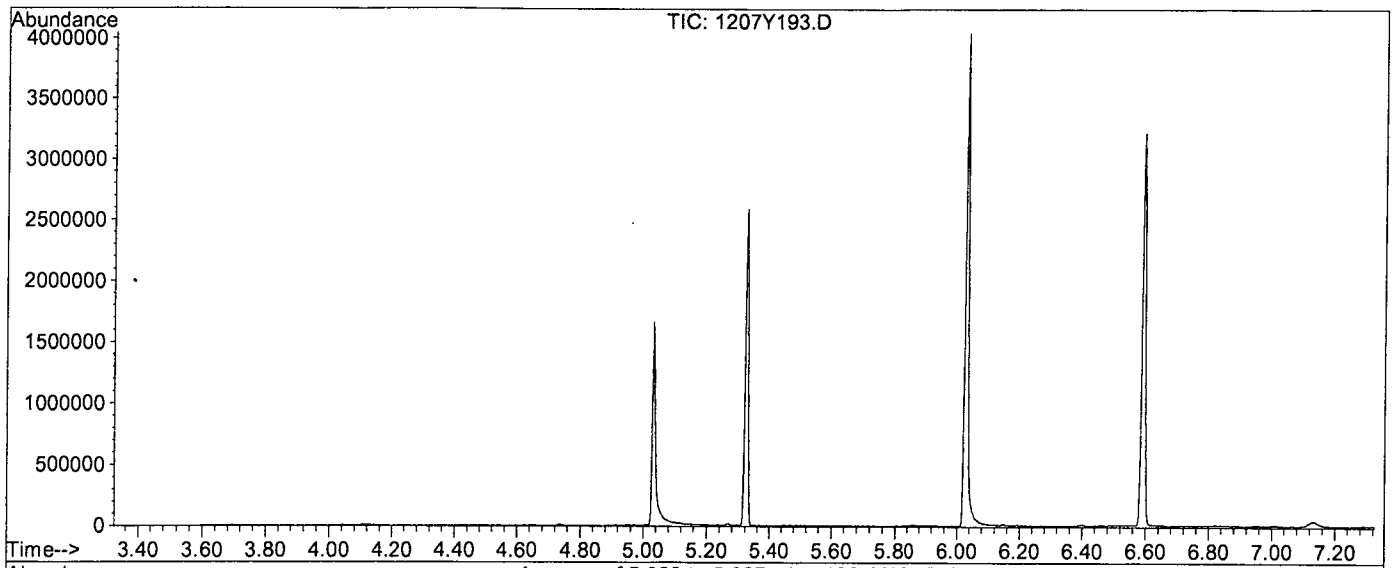
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	46.7	124269	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.7	911	PASS
127	198	40	60	56.0	148757	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	265856	PASS
199	198	5	9	6.9	18432	PASS
275	198	10	30	24.0	63789	PASS
365	198	1	100	3.1	8331	PASS
441	443	0.01	100	86.4	41829	PASS
442	198	50	150	90.6	240747	PASS
443	442	17	23	20.1	48427	PASS

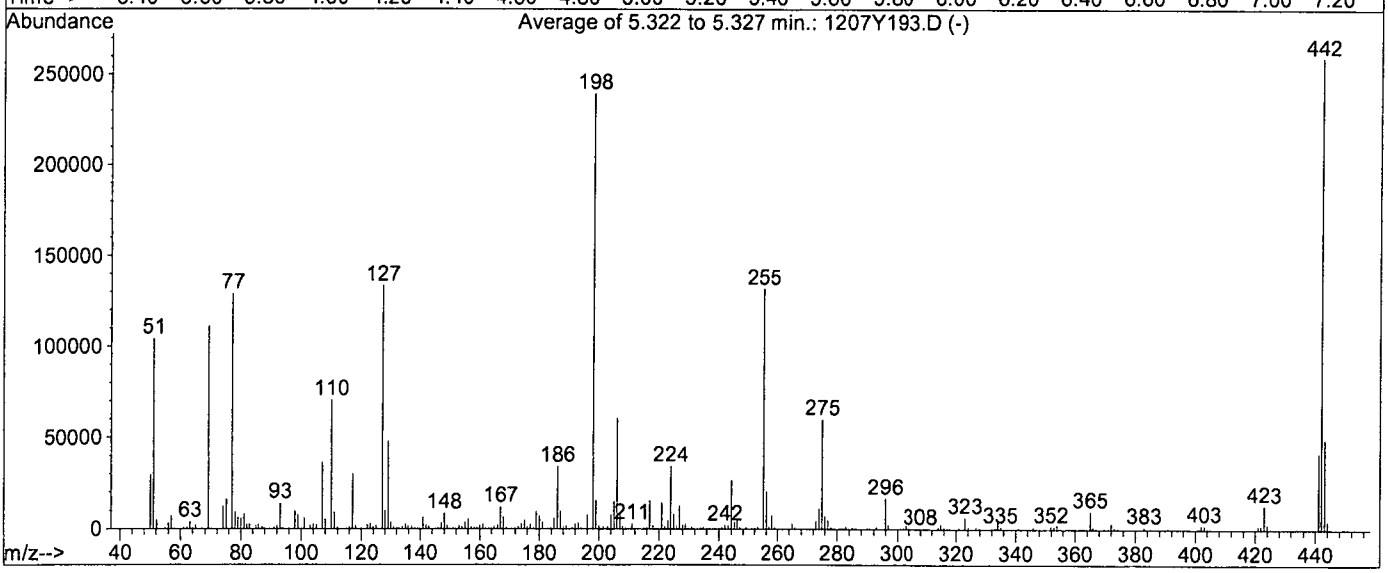
1207Y002.D Y1207.M Wed Dec 07 15:01:22 2016

Data File : M:\YODA\DATA\Y161207\1207Y193.D
Acq On : 27 Dec 16 9:38
Sample : SV Tune 10/19/16
Misc : water

Vial: 93
Operator: MA
Inst : Yoda
Multiplr: 1.00

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C





AutoFind: Scans 695, 696, 697; Background Corrected with Scan 687

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	43.5	104208	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.2	219	PASS
127	198	40	60	55.8	133464	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	239339	PASS
199	198	5	9	6.4	15398	PASS
275	198	10	30	25.1	60155	PASS
365	198	1	100	4.0	9571	PASS
441	443	0.01	100	84.6	41683	PASS
442	198	50	150	108.4	259392	PASS
443	442	17	23	19.0	49269	PASS

1207Y193.D Y1207.M Tue Dec 27 09:48:28 2016

SV Internal Stanard Stock Prep: 10/19/16 RH EXP: 10/19/17						
		Conc.				
Supplier	ID #	µg/mL	Lot #	Open Date	Exp.Date	µL
Supleco	CRM48902	2000	XA14020V-36611	10/19/16	10/19/17	1000
					fin vol.	1000

8270 Full Scan Standard Curve

PREP DATE:	12/06/16 RH							
8270 Standard Curve								
Exp:	2/11/17					**5**	**10**	**20**
		Conc.		Date				
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL
Absolute	8270 Stock	200	VAR	11/15/16	11/15/16	5	5	10
o2si	8270 BN:A	200/400	277272-36400	6/20/16	12/20/16	5	5	10
EM Science	Methylene Chloride		56098			190	90	80
Supelco	SV Internal	2000	A14020V-3661	12/06/16	12/16/16	4	2	2
				Final Vol.		204	102	102

8270 Full Scan Second Source (SS)

PREP DATE:	12/06/16 RH					
Exp:	1/18/17	Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
o2si	8270 Stock S	200	VAR	07/08/16	07/08/17	25
EM Science	Methylene Chloride		56098			75
Supelco	SV Internal	2000	A14020V-3661	12/06/16	12/06/16	2
				Final Vol.		102

40	**50**	**60**	**80**	**100**
µL	µL	µL	µL	µL
20	50	30	40	50
20	50	30	40	50
60	100	40	20	0
2	4	2	2	2
102	204	102	102	102

8270 SVOC Stock 10mL						
8270 Stock/Spike Standard						
prep:	11/15/2016 RH					
Exp:	11/15/17					
		Conc.				
Supplier	ID #	µg/mL	Lot #	Open Date	Exp.Date	µL
Absolute	10001	2000	053014-37136	11/15/16	11/15/17	1000
Absolute	10002	2000	062216-37144	11/15/16	11/15/17	1000
Absolute	10004	2000	012516-37147	11/15/16	11/15/17	1000
Absolute	10005	2000	110314-36848	11/15/16	11/15/17	1000
Absolute	10006	2000	022416-36850	11/15/16	11/15/17	1000
Absolute	10007	2000	020515-36853	11/15/16	11/15/17	1000
Absolute	10018	2000	030216-37081	11/15/16	11/15/17	1000
Absolute	70023	1000	042716-36858	11/15/16	11/15/17	1000
Absolute	82705	2000	012516-36862	11/15/16	11/15/17	1000
Absolute	94552	2000	042016-36488	11/15/16	11/15/17	1000
				Final Vol.		10000

8270 Surrog Mix 100/200ppm						
Prep: 11/15/16 -RH Ex: 2/15/17						
STANDARD	**INITIAL CONC.**	**SOURCE DATE**	**ALIQUOT**	**FINAL VOL**	**FINAL CONC.**	**SOLVENT /LOT#**
8270 Acid Surrog Mix	10000 ug/ml	Restek Cat# 33029 Lot# A0118884-36875 Op: 11/15/16 EX: 11/15/17	2.0 mL	100 mL	200 ug/mL	MC
8270 B/N surrog Mix	5000 µg/mL	Restek Cat# 31086 Lot# A0119223-36871 Op: 11/15/16 EX: 11/15/17	2.0 mL	100 mL	100 ug/mL	MC

8270 Acid Surrog Stock 5000ppm						
Prep: 06/20/16 -LH Ex: 06/20/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
8270 Acid Surrog Mix	10,000 µg/mL	Restek Cat# 33029 Lot# A0115509-36718	10mL	20mL	5000 µg/ml	Acetone
	PREP:	06/20/16				
	Exp:	06/20/17				

8270 Surrog Mix 200/400ppm						
Prep: 06/20/16 -LH Ex: 12/20/16						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
8270 Acid Surrog Mix	5000 µg/mL	06/20/16	8.0mL	100 mL	400 µg/mL	MC
8270 B/N surrog Mix	5000 µg/mL	Restek Cat# 31086 Lot# A0119223-36720	4.0 mL	100 mL	200 ug/mL	MC
	PREP:	06/20/16				
	Exp:	12/20/16				

8270 Full Scan Second Source Stock

	7/8/16 GA					
8270 Second Source Stock						
Exp:	07/08/17					
		Conc.		Date	Exp.	
Supplier	ID #	µg/mL	Lot #	Code	Date	µL
o2si	116070-02	2000	234696-35233	07/08/16	07/08/17	1000
o2si	110391-01	2000	252133-35880	07/08/16	07/08/17	1000
o2si	010337-01	1000	259144-35881	07/08/16	07/08/17	1000
o2si	110396-01	2000	252136-35882	07/08/16	07/08/17	1000
o2si	110397-01	2000	263077-35835	07/08/16	01/08/17	1000
o2si	110393-01	2000	252141-35248	07/08/16	07/08/17	1000
o2si	110394-01	2000	252143-35884	07/08/16	07/08/17	1000
o2si	**110395-01**	2000	252146-35885	07/08/16	07/08/17	1000
o2si	110392-01	2000	243259-35886	07/08/16	07/08/17	1000
Absolute	10006	2000	091115-35856	07/08/16	07/08/17	1000
				Final Vol.		10000

_SEP004

Organic Extraction Worksheet

Method	625/8270 Separatory Funnel Extra 3510C	Extraction Set	161227A	Extraction Method	SEP004	Units	mL

Spiked ID 1	8270T Spike 12-8-16 exp 12-8-17		Surrogate ID 1	8270 Surrogate 12-8-16 exp 3-8-17	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	12/27/16 9:40	
Spiked ID 8			Ext. End Time:	12/27/16 15:40	
			GC Requires Extract By:	**12/29/16 0:00**	

pH1	2	12/27/16 9:50:00 AM	Water Bath Temp Criteria	75 °C
pH2	14	2/27/16 12:50:00 PM		
pH3				

Spiked By: KY **Date** 12/27/16 **Witnessed By:** DL **Date** 12/27/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	161227A Blk				1	1	1000	1	2/1	12/27/16 9:40	
						equip	E-WB6				
2	161227A LCS-1		0.250		1	1	1000	1	2/1	12/27/16 9:40	
						equip	E-WB6				
3	161227A LCSD-1		0.250	1	1	1	1000	1	2/1	12/27/16 9:40	
						equip	E-WB6				
4	AZ48083	AZ48083W14			1	1	1070	1	2/1	12/27/16 9:40	81842 1 WEEK
						equip	E-WB6				
5	AZ48084	AZ48084W14			1	1	1060	1	2/1	12/27/16 9:40	81842 1 WEEK
						equip	E-WB6				

KY 12/27/16

Solvent and Lot#	
MC	56153
1+1 Sulfuric Acid	12-5-16
Acidified Na2SO4	11-3-16
B.Na2SO4	16C255214
10N NaOH	12-19-16
ph strips	HC 574756
Filter Paper	400112

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	RH
Date	12/27/16
Time	4:10
Refrigerator	GC-C

	Technician's Initials
Scanned By	DL
Sample Preparation	DL
Extraction	DL,KY,JR
Concentration	KY

Modified	12/27/16 3:46:43 PM

Reviewed By: KY **Date** 12/27/16

Injection Log

Directory: M:\YODA\DATA\Y161207\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	1207Y002.D	1	SV Tune 10/19/16		7 Dec 16 9:00
2	4	1207Y004.D	1	5ug/ml SVOC 12/06/16		7 Dec 16 10:01
3	5	1207Y005.D	1	10ug/ml SVOC 12/06/16		7 Dec 16 10:32
4	6	1207Y006.D	1	20ug/ml SVOC 12/06/16		7 Dec 16 11:02
5	7	1207Y007.D	1	40ug/ml SVOC 12/06/16		7 Dec 16 11:32
6	8	1207Y008.D	1	50ug/ml SVOC 12/06/16		7 Dec 16 12:02
7	9	1207Y009.D	1	60ug/ml SVOC 12/06/16		7 Dec 16 12:32
8	10	1207Y010.D	1	80ug/ml SVOC 12/06/16		7 Dec 16 13:02
9	11	1207Y011.D	1	100ug/ml SVOC 12/06/16		7 Dec 16 13:32
10	12	1207Y012.D	1	2ND SRC SVOC 12/06/16		7 Dec 16 14:01
11	93	1207Y193.D	1	SV Tune 10/19/16	water	27 Dec 16 9:38
12	94	1207Y194.D	1	50ug/ml SVOC 12/06/16	water	27 Dec 16 10:43
13	8	1207Y208.D	1	161227A BLK 1/1000	water	27 Dec 16 17:42
14	9	1207Y209.D	1	161227A LCS-1 1/1000	water	27 Dec 16 18:13
15	11	1207Y211.D	0.93458	AZ48083W14 1/1070	water	27 Dec 16 19:13
16	12	1207Y212.D	0.9434	AZ48084W14 1/1060	water	27 Dec 16 19:43
17	14	1207Y214.D	1	50ug/ml SVOC 12/06/16	water	27 Dec 16 20:26

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank

EPA 8270D MODIFIED WATER

Blank Name/QCG: **161228W-48083 - 215061**
Batch ID: #87DME-161228A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2-(2-METHOXYETHOXY)-ETHAN	80.0 U	100	80.0	40.0	ug/L	12/28/16	12/28/16

Quant Method:Y0GLYCOL.
Run #:1220Y044
Instrument:Yoda
Sequence:Y161220G
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 12/29/16 11:14:03 AM

Laboratory Control Spike Recovery
EPA 8270D MODIFIED WATER

APPL ID: **161228W-48083 LCS - 215061**
Batch ID: #87DME-161228A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
2-(2-METHOXYETHOXY)-ETHANOL	80.0	95.5	119	30-130

Comments: _____

Primary	SPK
Quant Method :	Y0GLYCOL.M
Extraction Date :	12/28/16
Analysis Date :	12/28/16
Instrument :	Yoda
Run :	1220Y042
Initials :	MA

Printed: 12/29/16 11:14:14 AM
APPL Standard LCS

EPA 8270D

Form 4

Blank Summary

Lab Name: APPL, Inc.
Case No: 81842
Matrix: WATER
Blank ID: 161228A-BLK

SDG No: 81842
Date Analyzed: 12/28/16
Instrument: Yoda
Time Analyzed: 1745

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161228A-LCS	Lab Control Spike	1220Y042	12/28/16 1645
161228A-BLK	Blank	1220Y044	12/28/16 1745
AZ48083	ERH157	1220Y045	12/28/16 1815
AZ48084	ERH158	1220Y046	12/28/16 1845

Comments: Batch: #87DME-161228A

Printed: 12/29/16 11:14:16 AM
Form 4, Blank Summary

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: ~~1220Y002.D~~ 81842
Matrix: Water mp1-13-17
ID: SV Tune 11/15/16

SDG No: mp1-13-17 ~~Yoda~~ 81842
Date Analyzed: 12/20/16
Instrument: Yoda
Time Analyzed: 9:12

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		50ug/ml DEG 11/22/16	1220Y003.D	12/20/16 9:32
2		100ug/ml DEG 11/22/1	1220Y004.D	12/20/16 10:02
3		200ug/ml DEG 11/22/1	1220Y005.D	12/20/16 11:27
4		400ug/ml DEG 11/22/1	1220Y006.D	12/20/16 11:57
5		500ug/ml DEG 11/22/1	1220Y007.D	12/20/16 12:27
6		600ug/ml DEG 11/22/1	1220Y008.D	12/20/16 12:57
7		800ug/ml DEG 11/22/1	1220Y009.D	12/20/16 13:28
8		1000ug/ml DEG 11/22/	1220Y010.D	12/20/16 13:58
9		SS2 DEG 11/22/16	1220Y011.D	12/20/16 15:01
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	44.4
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.0
127	40 - 60% of mass 198	53.6
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 197.95	100.0
199	5 - 9% of mass 198	6.3
275	10 - 30% of mass 198	21.8
365	1 - 100% of mass 198	3.0
441	0.01 - 100% of mass 443	85.0
442	50 - 150% of mass 197.95	98.0
443	17 - 23% of mass 442	19.1

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81842
Matrix: Water
ID: SV Tune 11/15/16

SDG No: 81842
Date Analyzed: 12/28/16
Instrument: Yoda
Time Analyzed: 13:19

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		500ug/ml DEG 11/22/1	1220Y041.D	12/28/16 13:36
2	Lab Control Spike	161228A LCS-1 2/500	1220Y042.D	12/28/16 16:45
3	Blank	161228A BLK 2/500	1220Y044.D	12/28/16 17:45
4	ERH157	AZ48083W15 2/500	1220Y045.D	12/28/16 18:15
5	ERH158	AZ48084W12 2/500	1220Y046.D	12/28/16 18:45
6		500ug/ml DEG 11/22/1	1220Y048.D	12/28/16 19:28
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	45.6
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.6
127	40 - 60% of mass 198	56.4
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.4
275	10 - 30% of mass 198	25.6
365	1 - 100% of mass 198	3.8
441	0.01 - 100% of mass 443	85.5
442	50 - 150% of mass 198	106.4
443	17 - 23% of mass 442	19.1

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc.
Contract: Review
Lab Code:
SDG No.: 81842
Lab File ID (Standard): 1220Y007.D
Date Analyzed: 12/20/16
Instrument ID: Yoda
Time Analyzed: 12:27
GC Column:
ID:
Heated Purge: (Y/N)

	1,4-dichlorobenzene-D4(IS)		Napthalene-D8(IS)		Acenaphthene-D10(IS)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	220710	4.87	916121	6.29	479952	8.31
UPPER LIMIT	441420	5.37	1832242	6.79	959904	8.81
LOWER LIMIT	110355	4.37	458061	5.79	239976	7.81
SAMPLE NO.						
01 500ug/ml DEG 11/22/16	203108	4.87	895188	6.29	500304	8.30
02 161228A LCS-1 2/500	171101	4.87	757217	6.29	423254	8.31
03 161228A BLK 2/500	204977	4.87	886016	6.29	502893	8.31
04 AZ48083W15 2/500	182716	4.87	798693	6.29	446731	8.31
05 AZ48084W12 2/500	195294	4.86	860508	6.29	480732	8.30
06 500ug/ml DEG 11/22/16	165478	4.88	726637	6.29	409644	8.30
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81842

Lab File ID (Standard): 1220Y007.D Date Analyzed: 12/20/16

Instrument ID: Yoda Time Analyzed: 12:27

GC Column: ID: Heated Purge: (Y/N)

		Phenanthrene-D10(IS)		Chrysene-D12(IS)		Perylene-D12(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	893005	10.02	850646	13.11	931322	14.75
	UPPER LIMIT	1786010	10.52	1701292	13.61	1862644	15.25
	LOWER LIMIT	446503	9.52	425323	12.61	465661	14.25
	SAMPLE NO.						
01	500ug/ml DEG 11/22/16	926764	10.03	875571	13.10	733740	14.74
02	161228A LCS-1 2/500	791002	10.02	748241	13.10	791067	14.74
03	161228A BLK 2/500	902936	10.02	851049	13.10	1037510	14.75
04	AZ48083W15 2/500	814029	10.02	768179	13.10	928844	14.74
05	AZ48084W12 2/500	881694	10.03	832366	13.10	733527	14.74
06	500ug/ml DEG 11/22/16	765578	10.02	736433	13.10	599192	14.75
07							
08							
09							
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AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

ORGANICS

Sample Data

APPL, INC.

EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH157
Sample Collection Date: 12/21/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81842
APPL ID: AZ48083
QCG: #87DME-161228A-215061

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	12/28/16	12/28/16

Quant Method: Y0GLYCOL.M
Run #: 1220Y045
Instrument: Yoda
Sequence: Y161220G
Dilution Factor: 1
Initials: MA

Printed: 12/29/16 11:14:16 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y045.D Vial: 45
Acq On : 28 Dec 16 18:15 Operator: MA
Sample : AZ48083W15 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 29 9:38 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 28 17:07:14 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	182716	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	798693	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	446731	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	814029	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	768179	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.74	264	928844	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

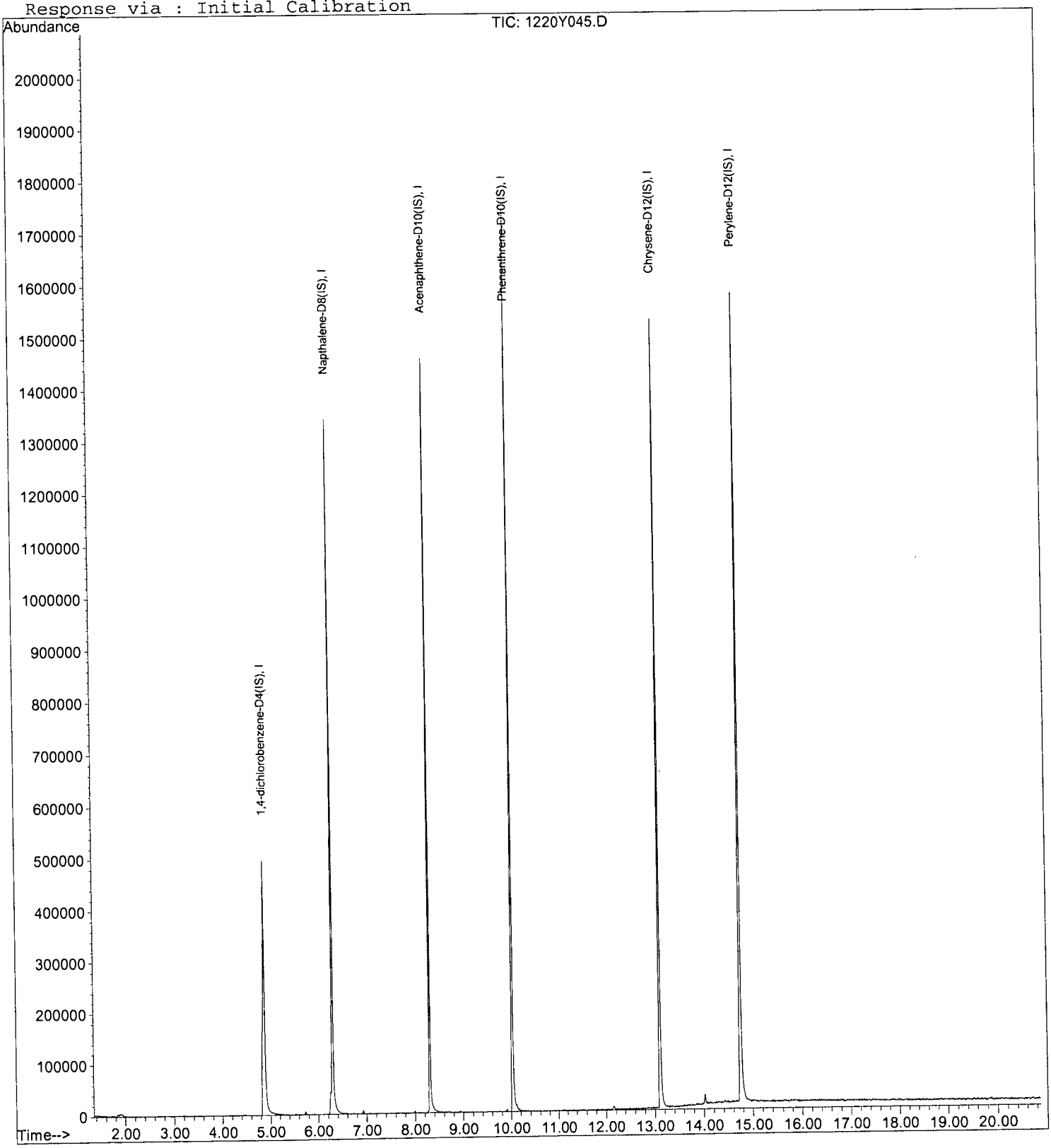
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y045.D
Acq On : 28 Dec 16 18:15
Sample : AZ48083W15 2/500
Misc : water

Vial: 45
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 29 9:38 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 29 09:38:53 2016
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH158
Sample Collection Date: 12/21/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81842
APPL ID: AZ48084
QCG: #87DME-161228A-215061

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	12/28/16	12/28/16

Quant Method: Y0GLYCOL.M
Run #: 1220Y046
Instrument: Yoda
Sequence: Y161220G
Dilution Factor: 1
Initials: MA

Printed: 12/29/16 11:14:16 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y046.D
Acq On : 28 Dec 16 18:45
Sample : AZ48084W12 2/500
Misc : water

Vial: 46
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 29 9:38 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 28 17:07:14 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	195294	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	860508	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	480732	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	881694	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	832366	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.74	264	733527	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

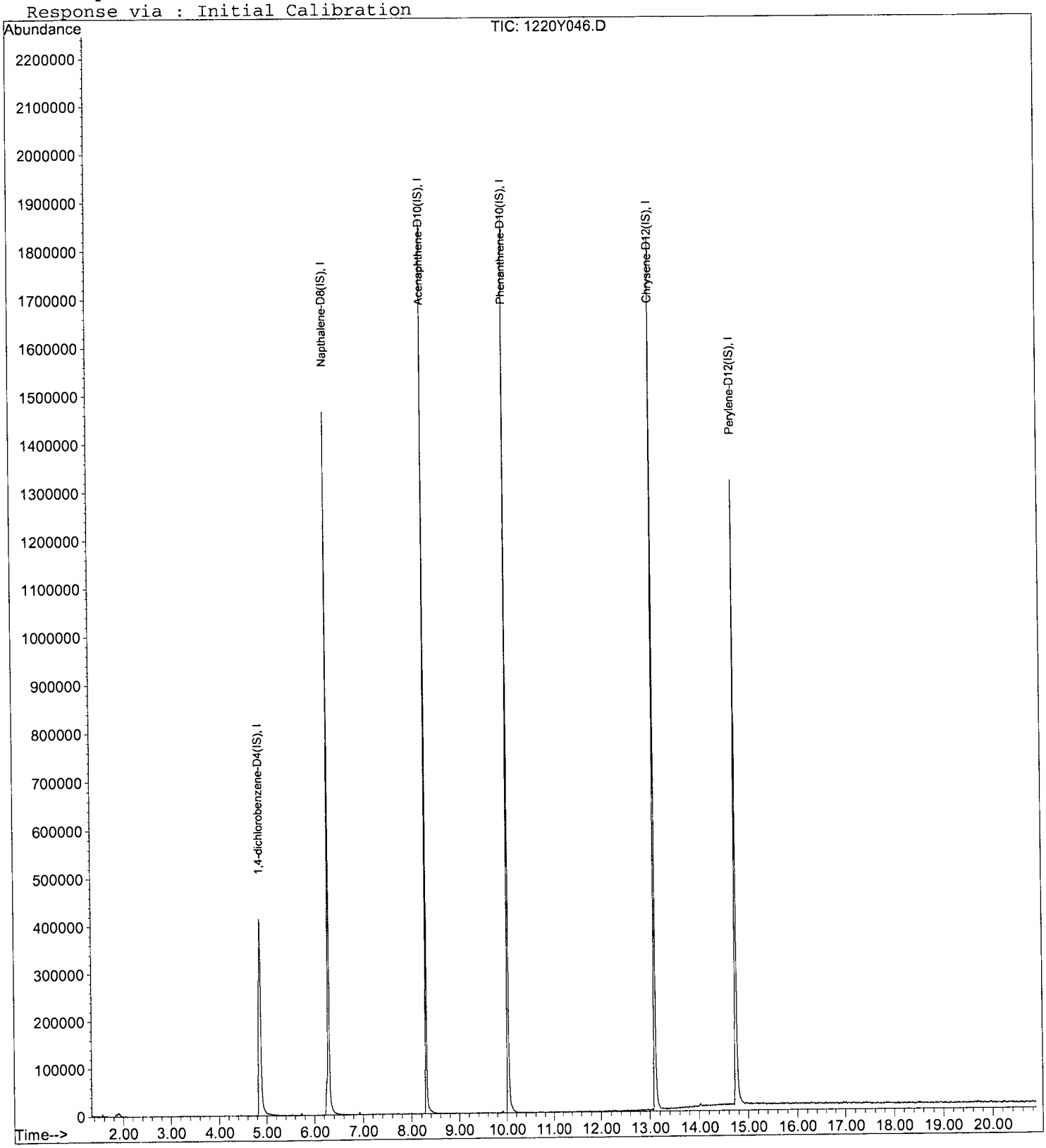
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y046.D
Acq On : 28 Dec 16 18:45
Sample : AZ48084W12 2/500
Misc : water

Vial: 46
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 29 9:38 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 29 09:38:53 2016
Response via : Initial Calibration



ORGANICS

Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/20/16
Matrix: Instrument: Yoda
Initials:

		Compound	1220Y003.D 1	1220Y004.D 2	1220Y005.D 3	1220Y006.D 4	1220Y007.D 5	1220Y008.D 6	1220Y009.D 7	1220Y010.D 8			Avg	%RSD		
1	I	1,4-dichlorobenzene-D4(IS)														
2	TM	2-(2-Methoxyethoxy)ethanol	0.1800	0.1823	0.2140	0.2253	0.2267	0.2342	0.2268	0.2261			0.21	9.9	TM	
3	I	Napthalene-D8(IS)														
4	I	Acenaphthene-D10(IS)														
5	I	Phenanthrene-D10(IS)														
6	I	Chrysene-D12(IS)														
7	I	Perylene-D12(IS)														
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Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y003.D Vial: 3
Acq On : 20 Dec 16 9:32 Operator: MA
Sample : 50ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:24 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:24:33 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	235296	40.00	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	1020104	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	566383	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	1039128	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	951820	40.00	ppb	0.00
7) Perylene-D12(IS)	14.74	264	863918	40.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.12	45	52929	41.96	ppb	95

(#) = qualifier out of range (m) = manual integration
1220Y003.D Y0GLYCOL.M Thu Jan 19 15:24:57 2017 Page 1

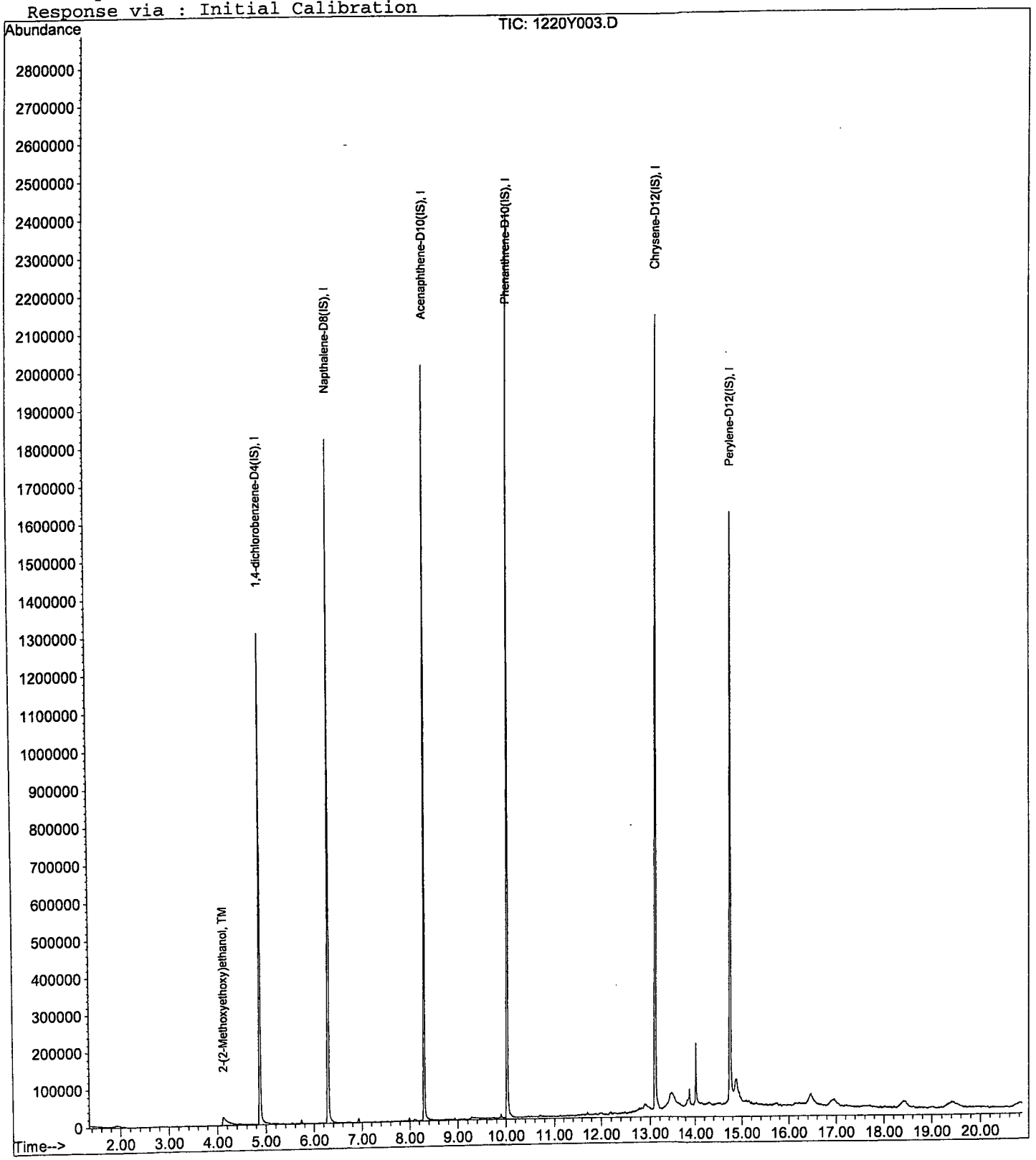
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y003.D
Acq On : 20 Dec 16 9:32
Sample : 50ug/ml DEG 12/20/16
Misc :

Vial: 3
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:24 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:24:33 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y004.D
Acq On : 20 Dec 16 10:02
Sample : 100ug/ml DEG 12/20/16
Misc :

Vial: 4
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:28 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:27:52 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	236538	40.00	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	1021117	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	569209	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	1067696	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	1009921	40.00	ppb	0.00
7) Perylene-D12(IS)	14.74	264	992895	40.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.09	45	107826	85.04	ppb	92

(#) = qualifier out of range (m) = manual integration
1220Y004.D Y0GLYCOL.M Thu Jan 19 15:28:11 2017

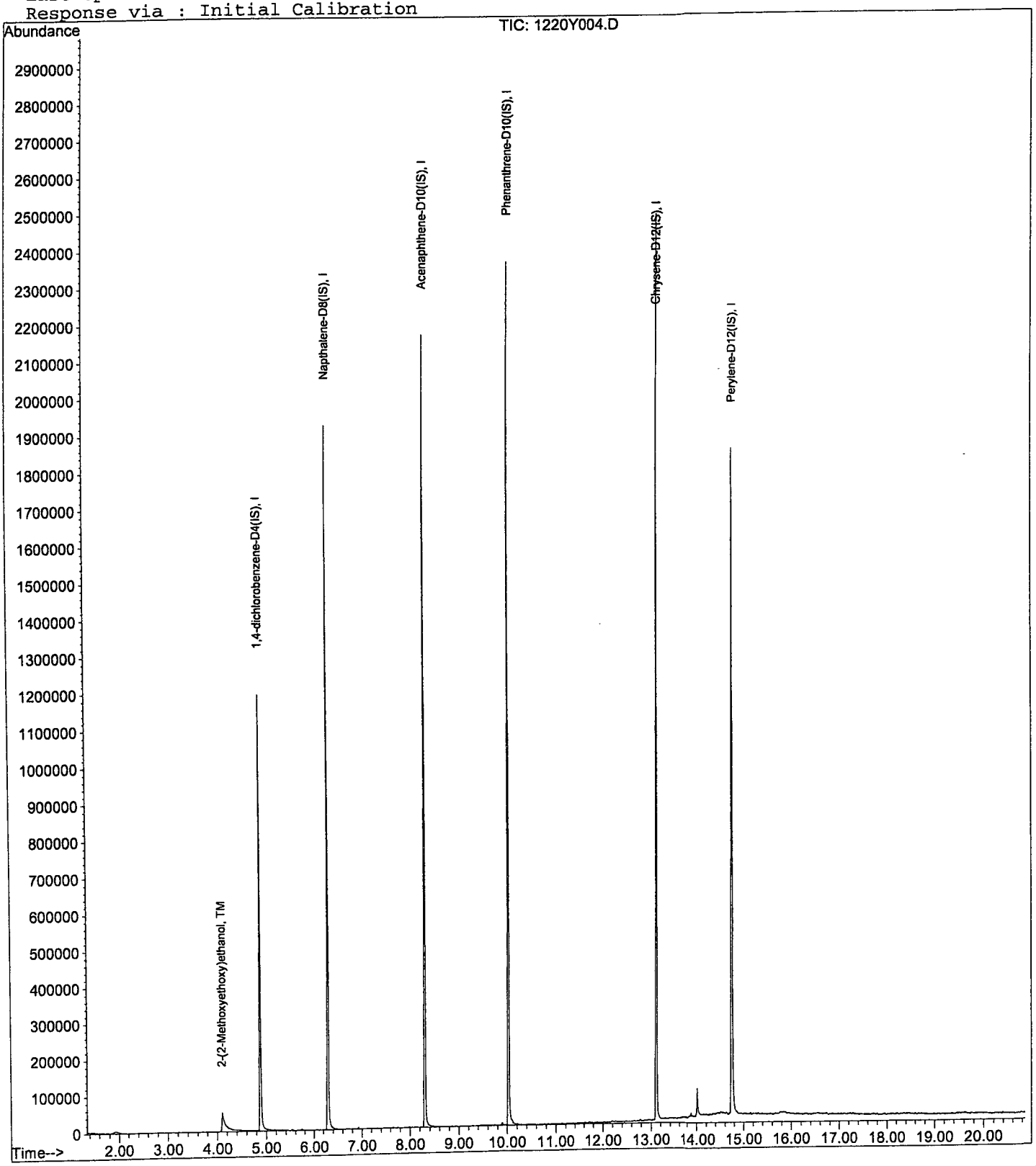
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y004.D
Acq On : 20 Dec 16 10:02
Sample : 100ug/ml DEG 12/20/16
Misc :

Vial: 4
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:28 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:27:52 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y005.D Vial: 5
Acq On : 20 Dec 16 11:27 Operator: MA
Sample : 200ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:31 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:27:52 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	219199	40.00	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	935952	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	541303	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	969145	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.11	240	850962	40.00	ppb	0.00
7) Perylene-D12(IS)	14.75	264	955898	40.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.06	45	234542	199.60	ppb	99

(#) = qualifier out of range (m) = manual integration
1220Y005.D Y0GLYCOL.M Thu Jan 19 15:31:38 2017 Page 1

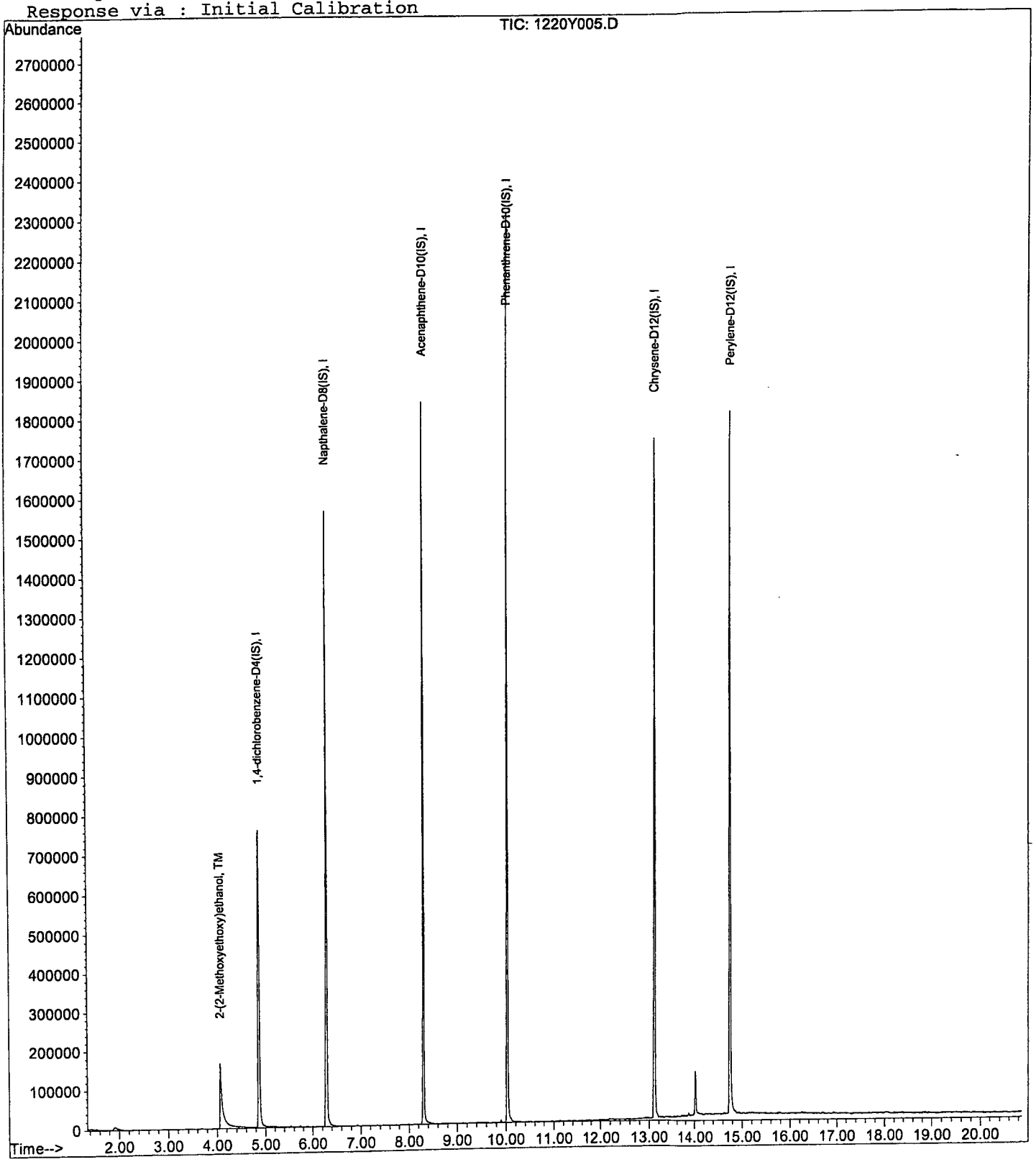
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y005.D
Acq On : 20 Dec 16 11:27
Sample : 200ug/ml DEG 12/20/16
Misc :

Vial: 5
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:31 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:27:52 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y006.D Vial: 6
Acq On : 20 Dec 16 11:57 Operator: MA
Sample : 400ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:31 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:27:52 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	219938	40.00	ppb	-0.02
3) Napthalene-D8(IS)	6.29	136	934708	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	524564	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	930250	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	927639	40.00	ppb	0.00
7) Perylene-D12(IS)	14.74	264	801484	40.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.07	45	495610	420.36	ppb	98

(#) = qualifier out of range (m) = manual integration
1220Y006.D Y0GLYCOL.M Thu Jan 19 15:32:08 2017 Page 1

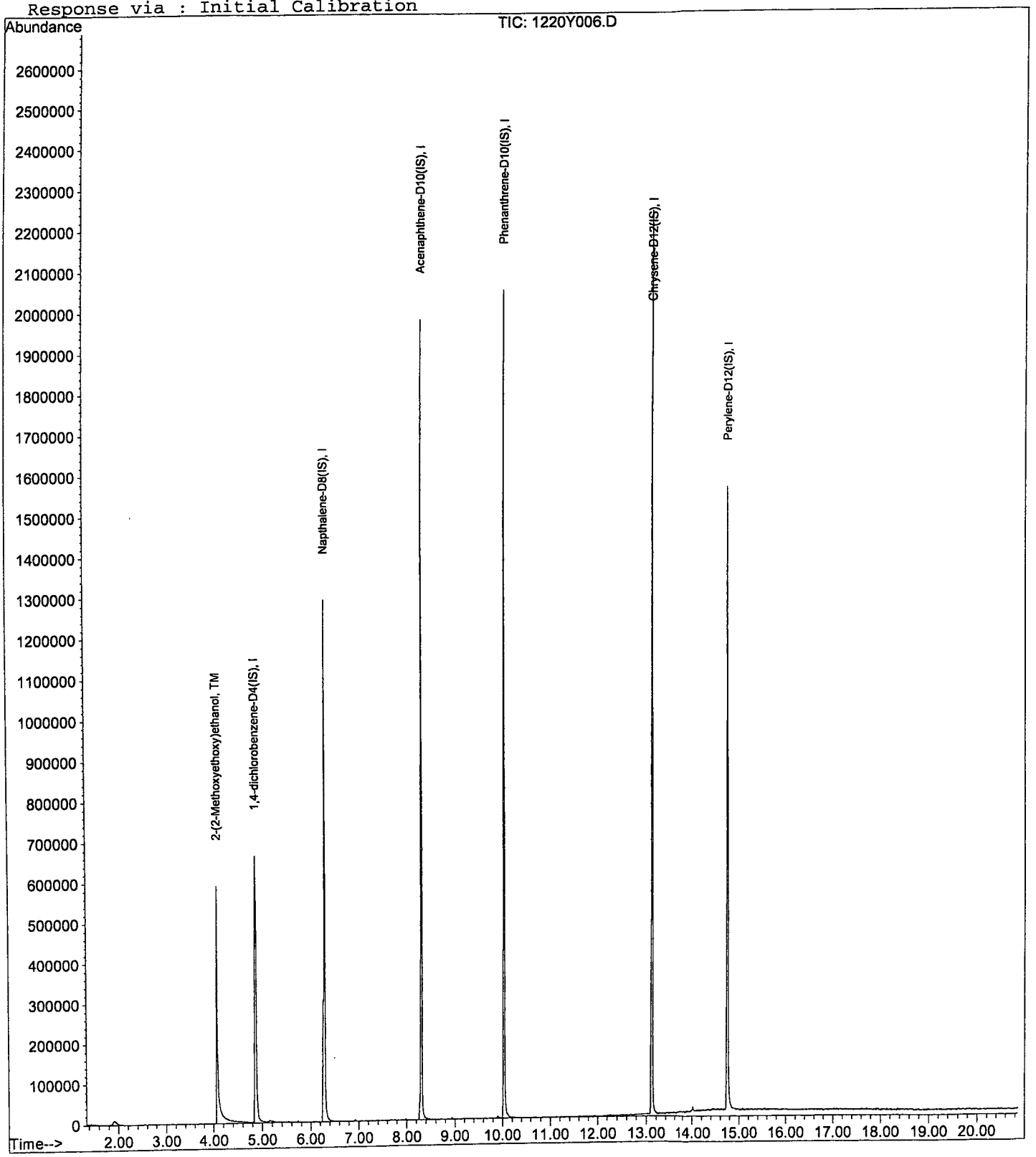
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y006.D
Acq On : 20 Dec 16 11:57
Sample : 400ug/ml DEG 12/20/16
Misc :

Vial: 6
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:31 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:27:52 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y007.D
Acq On : 20 Dec 16 12:27
Sample : 500ug/ml DEG 12/20/16
Misc :

Vial: 7
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:34 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:34:38 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	220710	40.00	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	916121	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	479952	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	893005	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.11	240	850646	40.00	ppb	0.00
7) Perylene-D12(IS)	14.75	264	931322	40.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.07	45	625337	528.53	ppb	100

(#) = qualifier out of range (m) = manual integration
1220Y007.D Y0GLYCOL.M Thu Jan 19 15:34:55 2017 Page 1

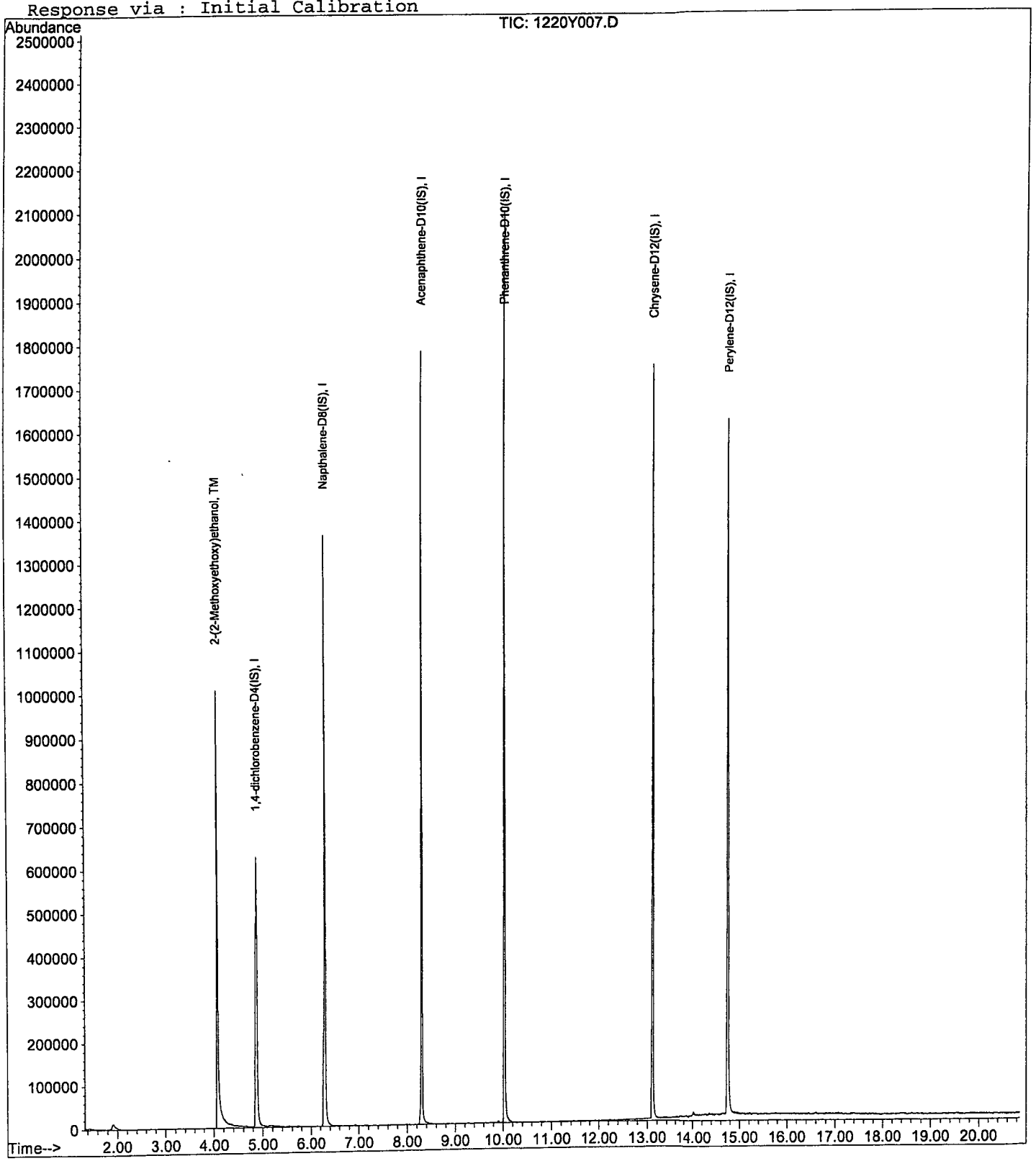
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y007.D
Acq On : 20 Dec 16 12:27
Sample : 500ug/ml DEG 12/20/16
Misc :

Vial: 7
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:34 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:34:38 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y008.D Vial: 8
Acq On : 20 Dec 16 12:57 Operator: MA
Sample : 600ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:35 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:35:45 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.88	152	218598	40.00 ppb	0.00
3) Napthalene-D8(IS)	6.29	136	918286	40.00 ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	502491	40.00 ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	904865	40.00 ppb	0.00
6) Chrysene-D12(IS)	13.11	240	875224	40.00 ppb	0.00
7) Perylene-D12(IS)	14.75	264	907883	40.00 ppb	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.08	45	767935	655.33 ppb	99

(#) = qualifier out of range (m) = manual integration
1220Y008.D Y0GLYCOL.M Thu Jan 19 15:36:02 2017 Page 1

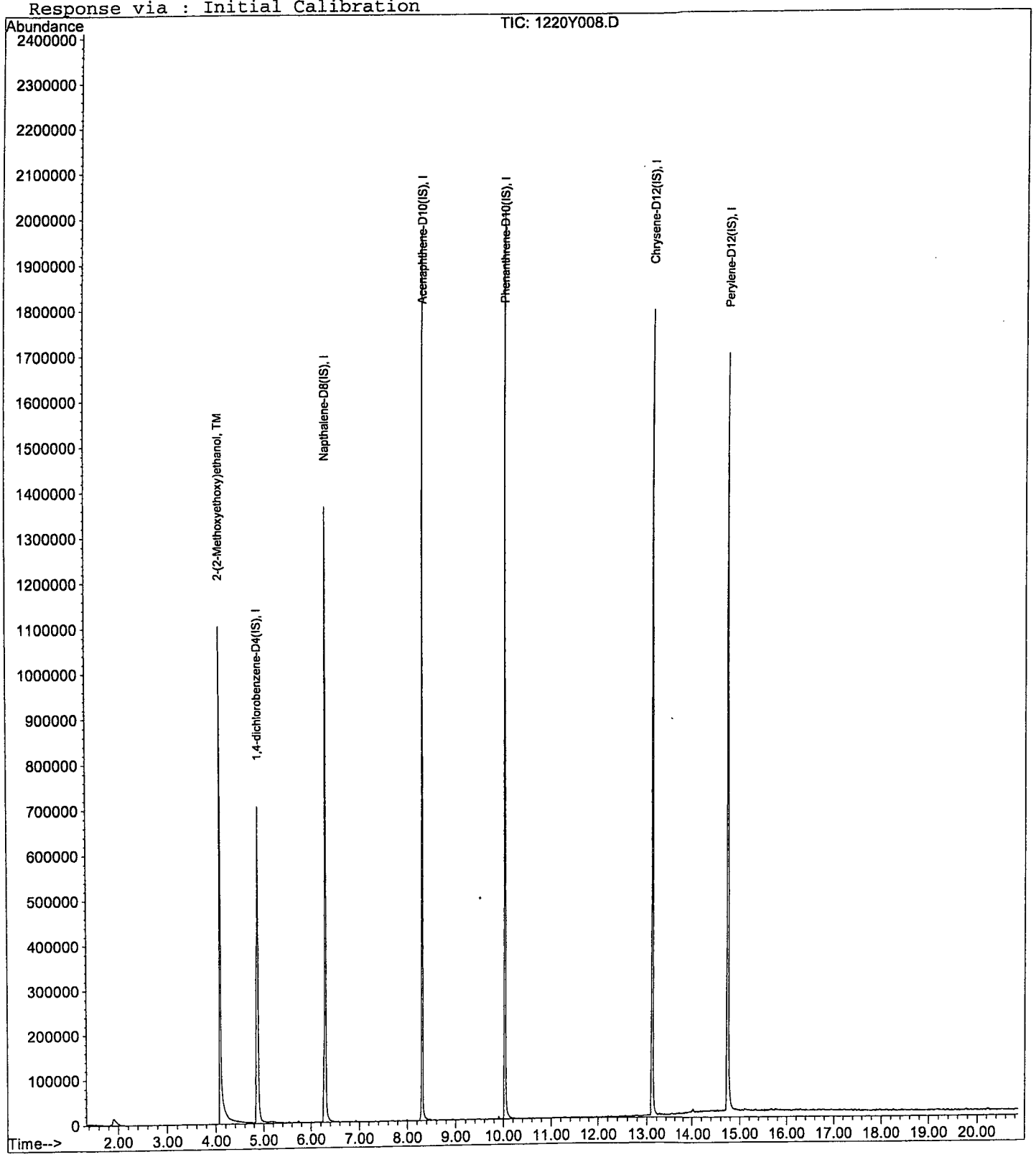
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y008.D
Acq On : 20 Dec 16 12:57
Sample : 600ug/ml DEG 12/20/16
Misc :

Vial: 8
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:35 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:35:45 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y009.D Vial: 9
Acq On : 20 Dec 16 13:28 Operator: MA
Sample : 800ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:36 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:35:45 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.88	152	224351	40.00	ppb	0.01
3) Napthalene-D8(IS)	6.29	136	955028	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	537186	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	1003381	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	910308	40.00	ppb	0.00
7) Perylene-D12(IS)	14.75	264	853883	40.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.09	45	1017711	846.21	ppb	98

(#) = qualifier out of range (m) = manual integration
1220Y009.D Y0GLYCOL.M Thu Jan 19 15:36:33 2017 Page 1

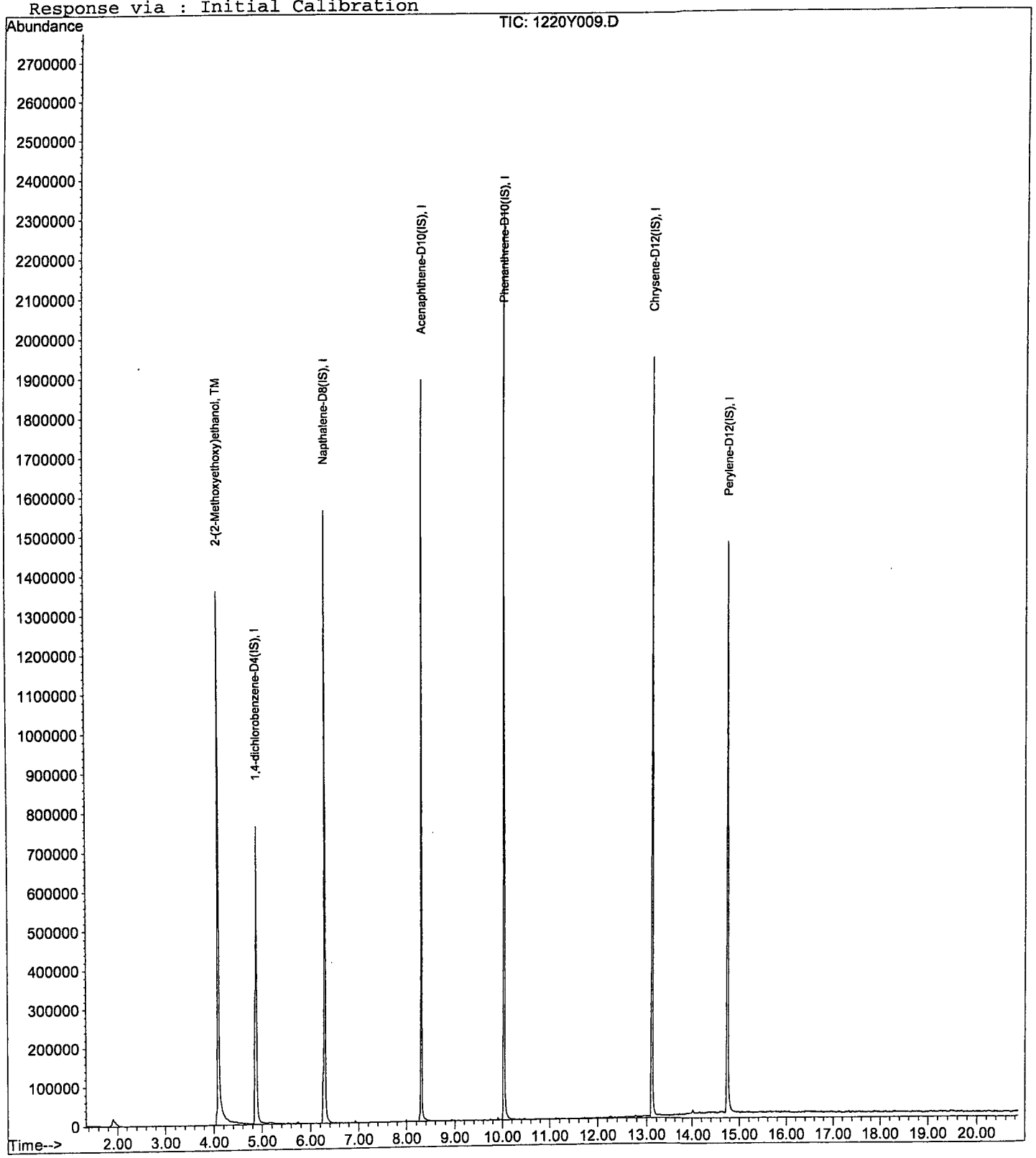
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y009.D
Acq On : 20 Dec 16 13:28
Sample : 800ug/ml DEG 12/20/16
Misc :

Vial: 9
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:36 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:35:45 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y010.D Vial: 10
Acq On : 20 Dec 16 13:58 Operator: MA
Sample : 1000ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:37 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:35:45 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	283148	40.00	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	1210963	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	689185	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	1234610	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.11	240	1201158	40.00	ppb	0.00
7) Perylene-D12(IS)	14.75	264	1162204	40.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.12	45	1600487	1054.44	ppb	99

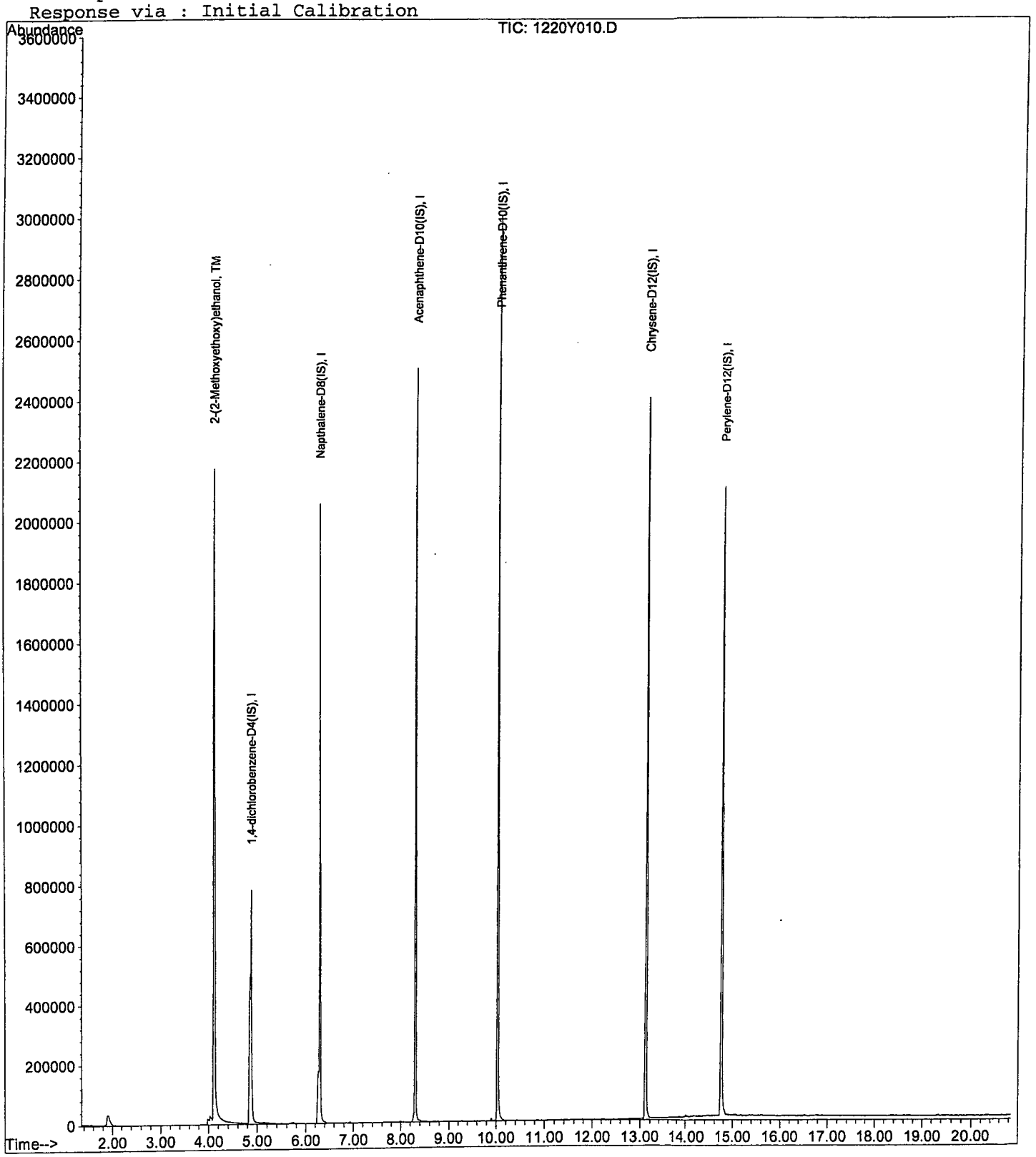
(#) = qualifier out of range (m) = manual integration
1220Y010.D Y0GLYCOL.M Thu Jan 19 15:37:34 2017 Page 1

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y010.D Vial: 10
Acq On : 20 Dec 16 13:58 Operator: MA
Sample : 1000ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:37 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:35:45 2017
Response via : Initial Calibration



Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/20/16
Instrument: Yoda
Initial Cal. Date: 12/20/16
Data File: 1220Y011.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	2-(2-Methoxyethoxy)ethanol	0.2144	0.2388	11	TM	
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			11.0		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y011.D Vial: 11
Acq On : 20 Dec 16 15:01 Operator: MA
Sample : SS2 DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 15:16 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Dec 20 14:47:54 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.88	152	226449	40.00000 ppb	0.00
3) Napthalene-D8(IS)	6.29	136	946039	40.00000 ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	498527	40.00000 ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	939012	40.00000 ppb	0.00
6) Chrysene-D12(IS)	13.11	240	865583	40.00000 ppb	0.00
7) Perylene-D12(IS)	14.75	264	853444	40.00000 ppb	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.08	45	676019	556.89065 ppb	99

Algorithm = $\frac{676019 \times 40 \times 1}{226449 \times 0.2144} = 556.9$ MA 12/29/16

(#) = qualifier out of range (m) = manual integration
1220Y011.D Y0GLYCOL.M Wed Dec 21 12:44:47 2016 Page 1

Quantitation Report

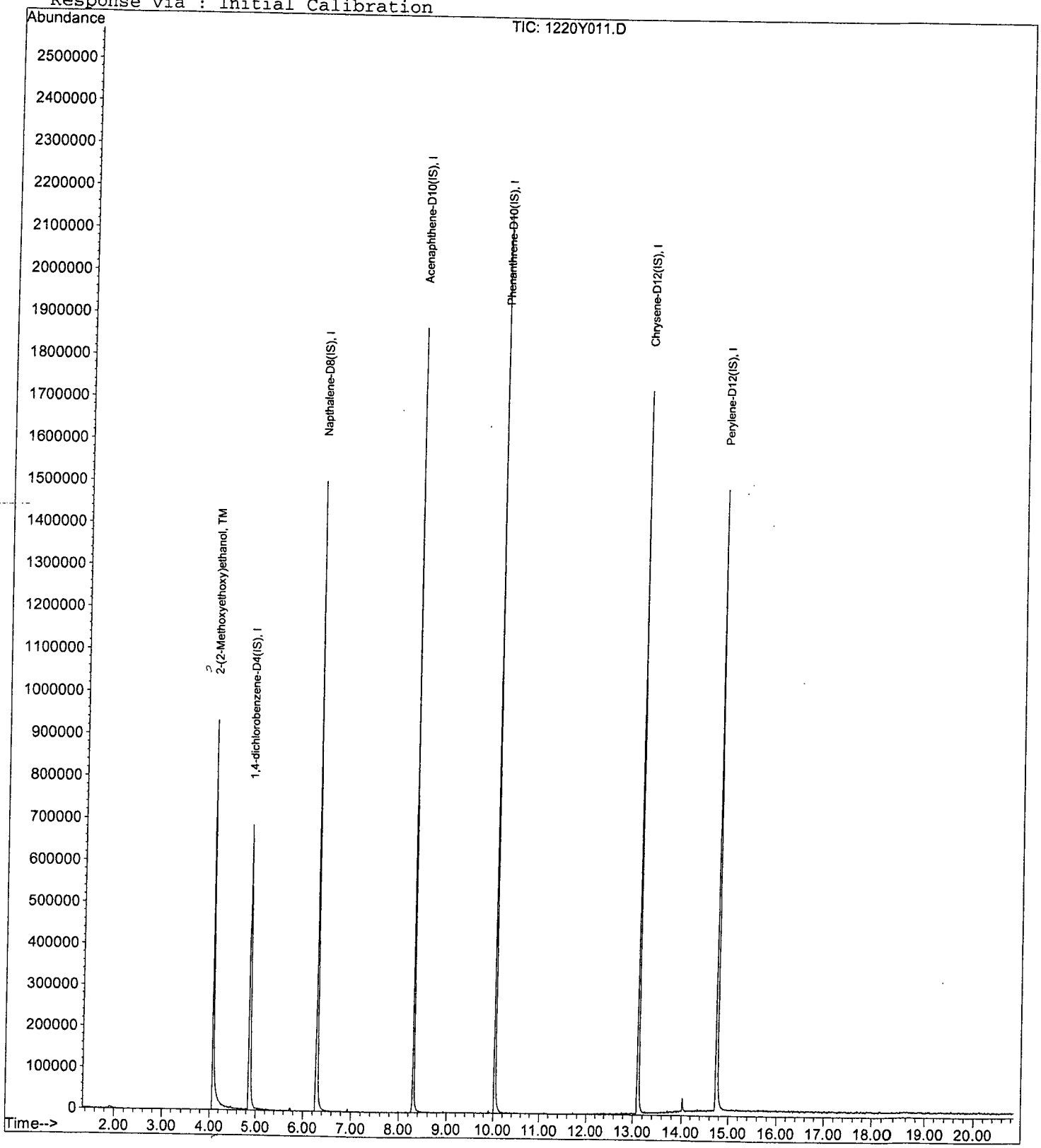
Data File : M:\YODA\DATA\Y161220G\1220Y011.D
Acq On : 20 Dec 16 15:01
Sample : SS2 DEG 12/20/16
Misc :

Vial: 11
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 20 15:16 2016

Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 21 10:52:52 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/28/16
Instrument: Yoda
Initial Cal. Date: 12/20/16
Data File: 1220Y041.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	2-(2-Methoxyethoxy)ethanol	0.2144	0.2534	18	TM	
3	I	Napthalene-D8(IS)	ISTD			I	
4	I	Acenaphthene-D10(IS)	ISTD			I	
5	I	Phenanthrene-D10(IS)	ISTD			I	
6	I	Chrysene-D12(IS)	ISTD			I	
7	I	Perylene-D12(IS)	ISTD			I	
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
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27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			18.0		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y041.D Vial: 41
Acq On : 28 Dec 16 13:36 Operator: MA
Sample : 500ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 28 13:57 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 21 10:52:52 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	203108	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	895188	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	500304	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	926764	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	875571	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.74	264	733740	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.07	45	643340	590.87410	ppb	100

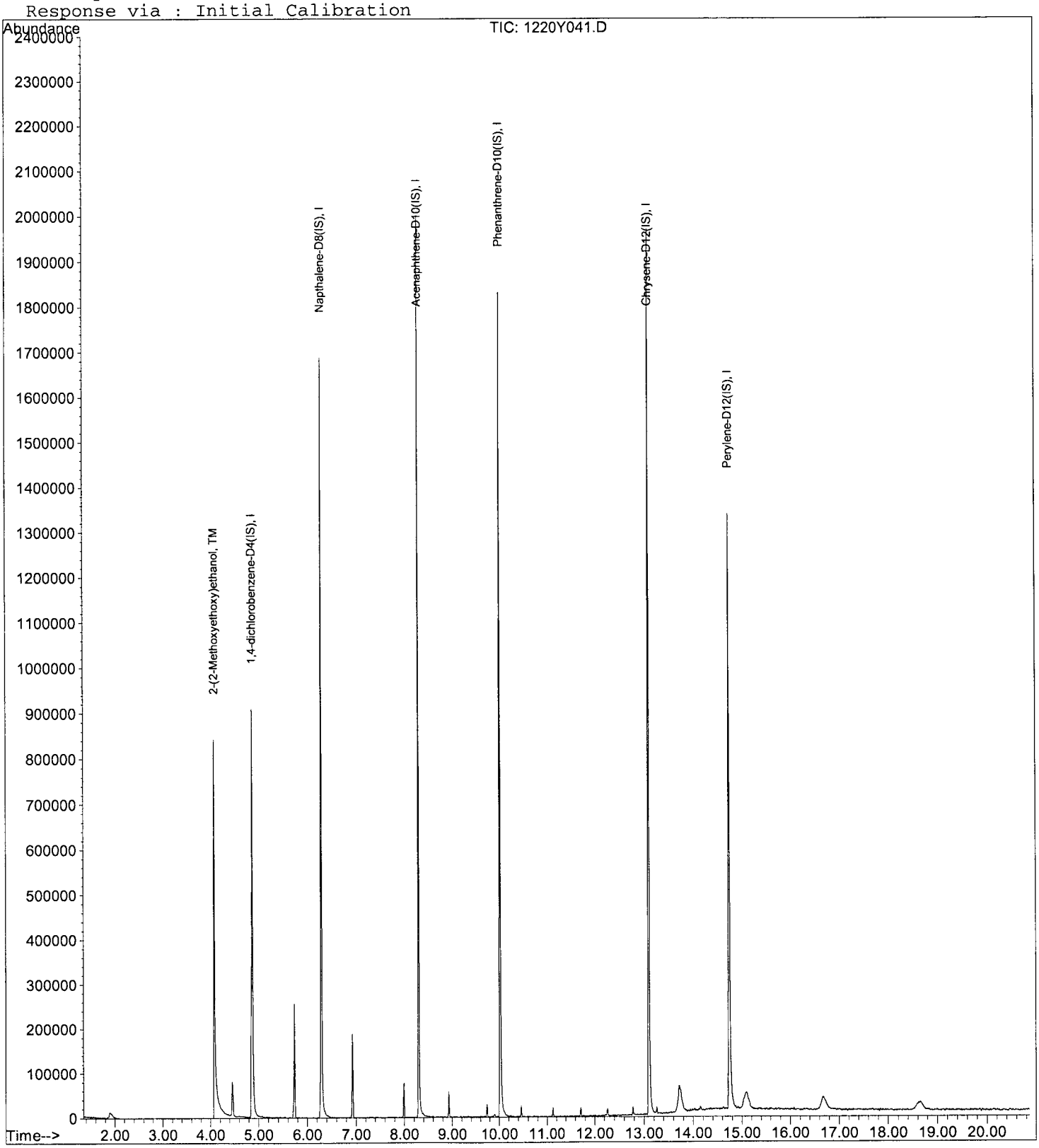
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y041.D Vial: 41
Acq On : 28 Dec 16 13:36 Operator: MA
Sample : 500ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 28 13:57 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 29 09:38:53 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/28/16
Instrument: Yoda
Initial Cal. Date: 12/20/16
Data File: 1220Y048.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	2-(2-Methoxyethoxy)ethanol	0.2144	0.2332	8.7	TM	
3	I	Napthalene-D8(IS)	ISTD			I	
4	I	Acenaphthene-D10(IS)	ISTD			I	
5	I	Phenanthrene-D10(IS)	ISTD			I	
6	I	Chrysene-D12(IS)	ISTD			I	
7	I	Perylene-D12(IS)	ISTD			I	
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			8.7		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y048.D Vial: 48
Acq On : 28 Dec 16 19:28 Operator: MA
Sample : 500ug/ml DEG 12/20/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 29 9:39 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 29 09:38:53 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.88	152	165478	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	726637	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	409644	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	765578	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	736433	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.75	264	599192	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.08	45	482344	543.74847	ppb	99

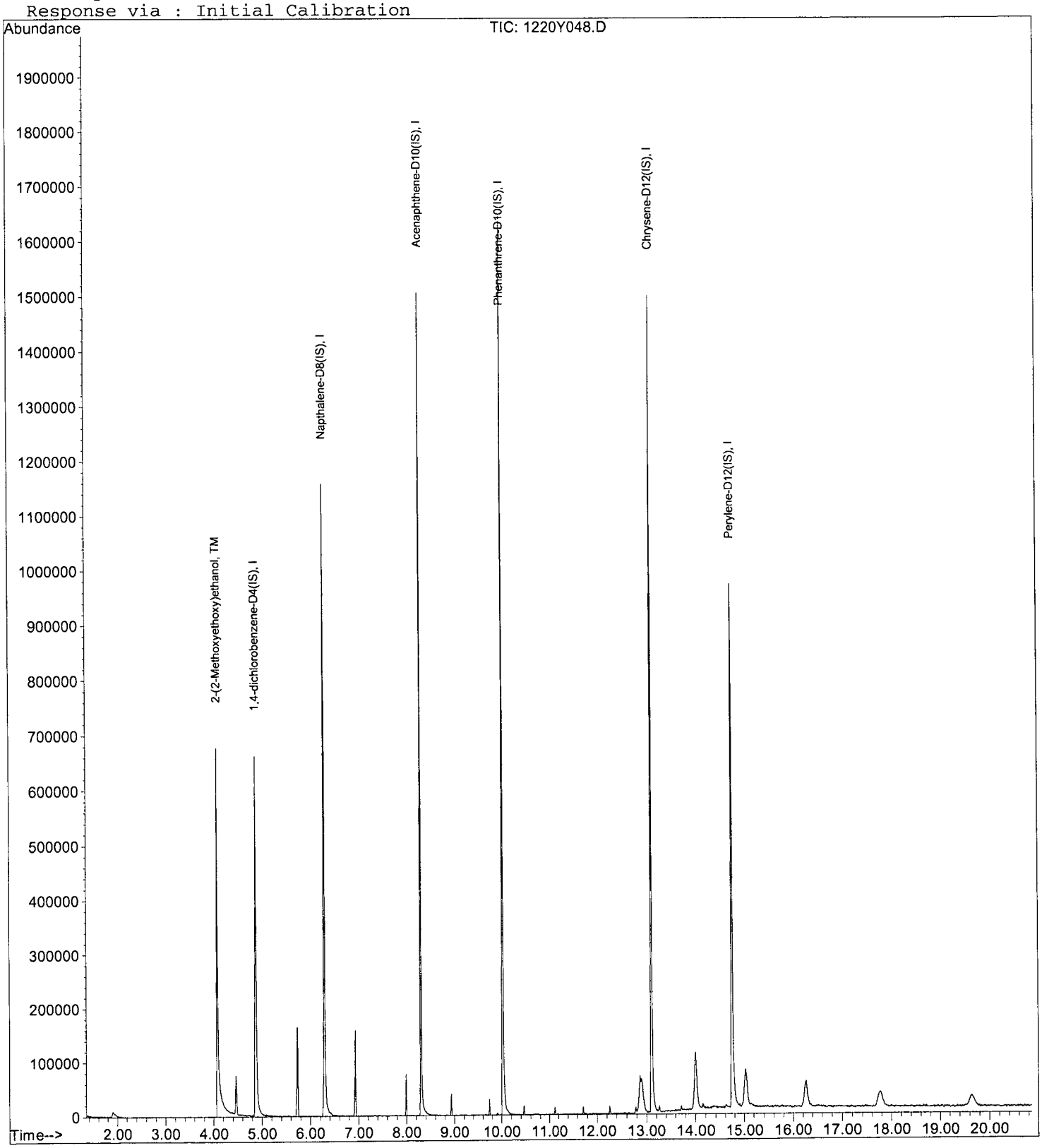
(#) = qualifier out of range (m) = manual integration
1220Y048.D Y0GLYCOL.M Thu Dec 29 11:32:35 2016 Page 1

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y048.D Vial: 48
Acq On : 28 Dec 16 19:28 Operator: MA
Sample : 500ug/ml DEG 12/20/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 29 9:39 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 29 09:38:53 2016
Response via : Initial Calibration



ORGANICS

Raw Data

APPL, INC.

Method Blank

EPA 8270D MODIFIED WATER

Blank Name/QCG: **161228W-48083 - 215061**

Batch ID: #87DME-161228A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2-(2-METHOXYETHOXY)-ETHAN	80.0 U	100	80.0	40.0	ug/L	12/28/16	12/28/16

Quant Method:Y0GLYCOL.
Run #:1220Y044
Instrument:Yoda
Sequence:Y161220G
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 12/29/16 11:14:17 AM

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y044.D
Acq On : 28 Dec 16 17:45
Sample : 161228A BLK 2/500
Misc : water

Vial: 44
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 29 9:37 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 28 17:07:14 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	204977	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	886016	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	502893	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	902936	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	851049	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.75	264	1037510	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
1220Y044.D Y0GLYCOL.M Thu Dec 29 11:16:22 2016

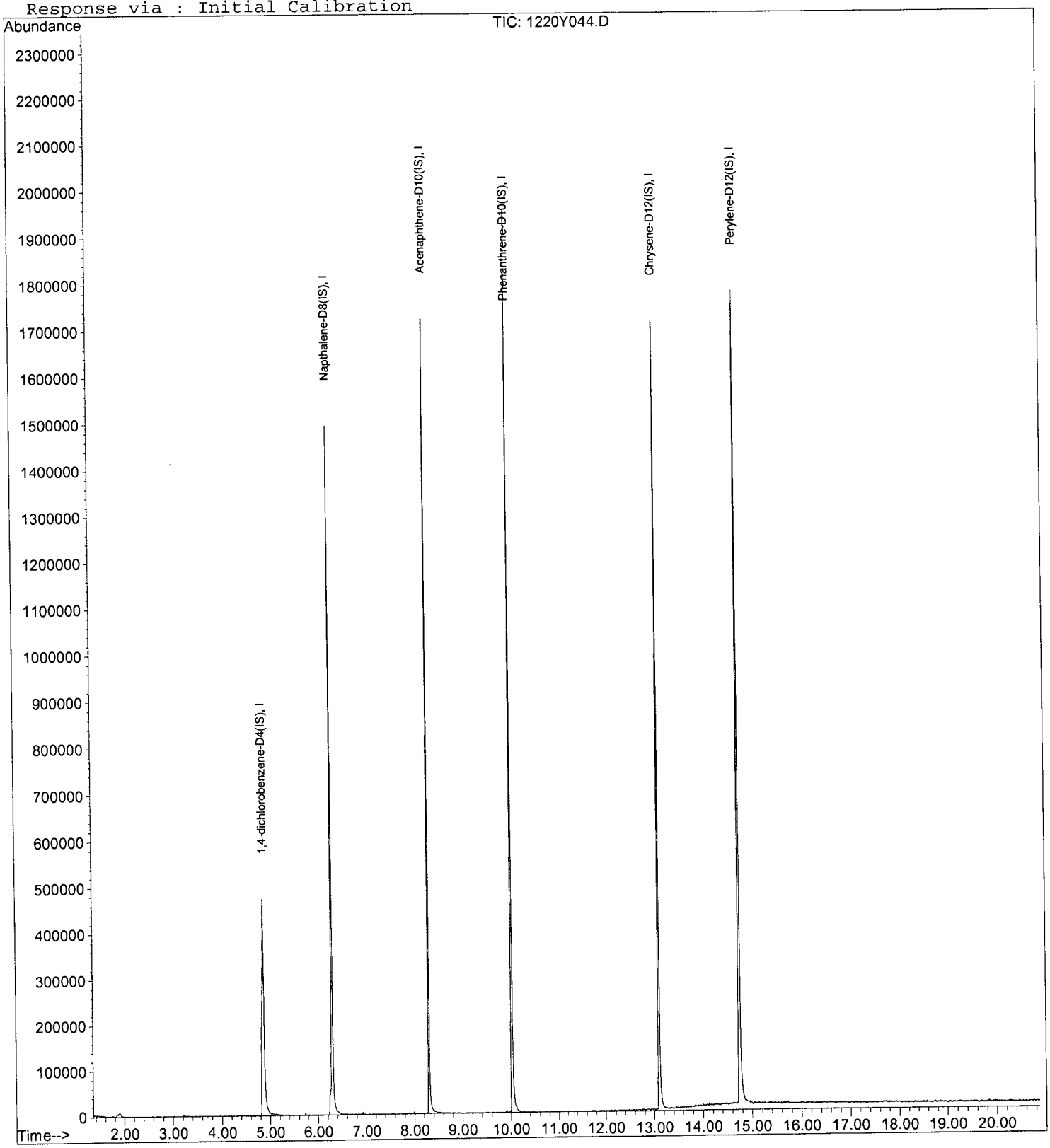
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y044.D
Acq On : 28 Dec 16 17:45
Sample : 161228A BLK 2/500
Misc : water

Vial: 44
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 29 9:37 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 29 09:38:53 2016
Response via : Initial Calibration



Laboratory Control Spike Recovery
EPA 8270D MODIFIED WATER

APPL ID: **161228W-48083 LCS - 215061**
Batch ID: #87DME-161228A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
2-(2-METHOXYETHOXY)-ETHANOL	80.0	95.5	119	30-130

Comments: _____

Primary	SPK
Quant Method :	Y0GLYCOL.M
Extraction Date :	12/28/16
Analysis Date :	12/28/16
Instrument :	Yoda
Run :	1220Y042
Initials :	MA

Printed: 12/29/16 11:14:18 AM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y042.D Vial: 42
Acq On : 28 Dec 16 16:45 Operator: MA
Sample : 161228A LCS-1 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 28 17:07 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 28 17:07:14 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	171101	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	757217	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	423254	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	791002	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	748241	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.74	264	791067	40.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.19	45	87577	95.48144	ppb	100

(#) = qualifier out of range (m) = manual integration
1220Y042.D Y0GLYCOL.M Thu Dec 29 11:16:18 2016 Page 1

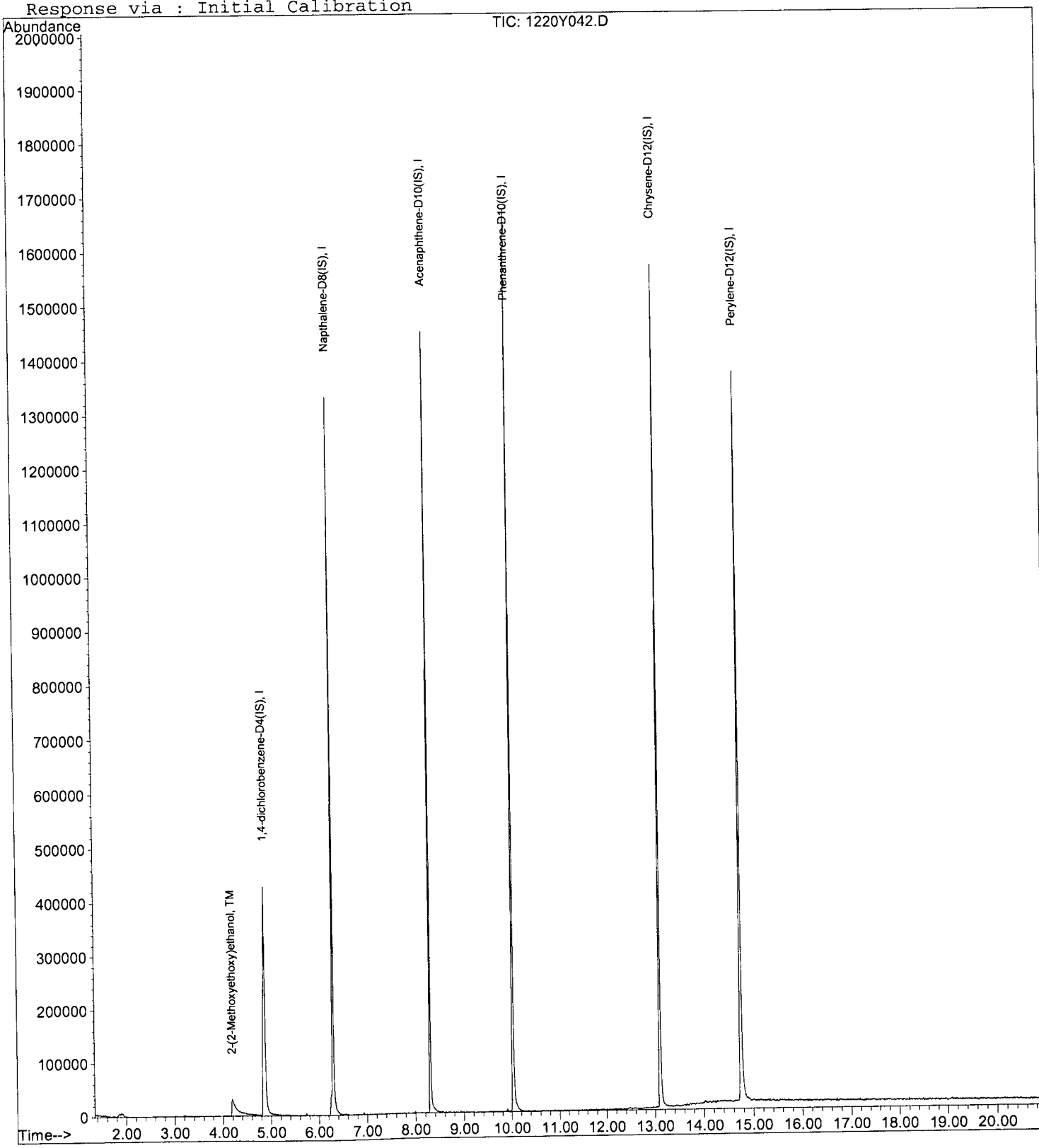
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y042.D
Acq On : 28 Dec 16 16:45
Sample : 161228A LCS-1 2/500
Misc : water

Vial: 42
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 28 17:07 2016 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 29 09:38:53 2016
Response via : Initial Calibration

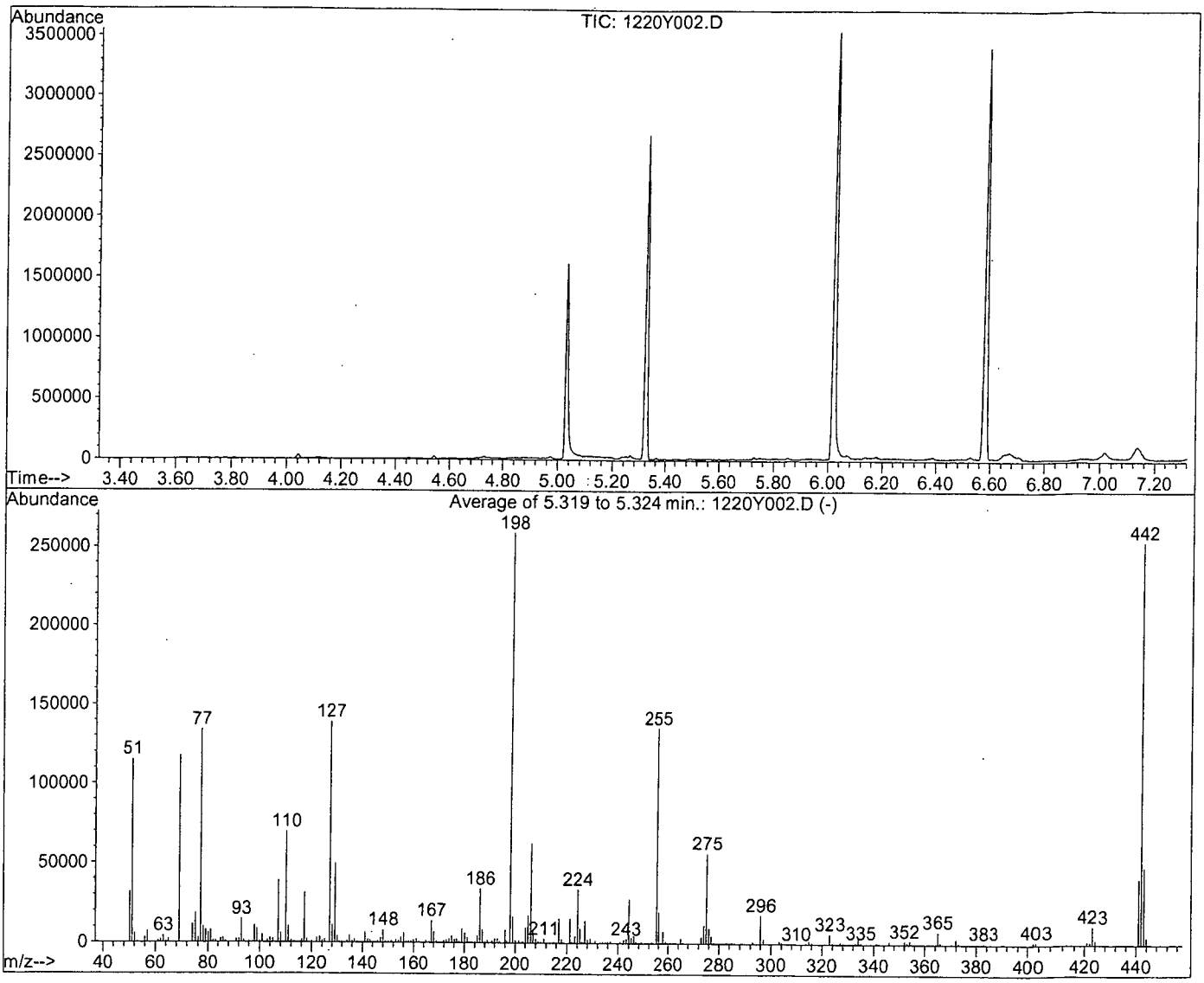


DFTPP

Data File : M:\YODA\DATA\Y161220G\1220Y002.D
Acq On : 20 Dec 16 9:12
Sample : SV Tune 11/15/16
Misc :

Vial: 2
Operator: MA
Inst : Yoda
Multiplr: 1.00

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 694, 695, 696; Background Corrected with Scan 686

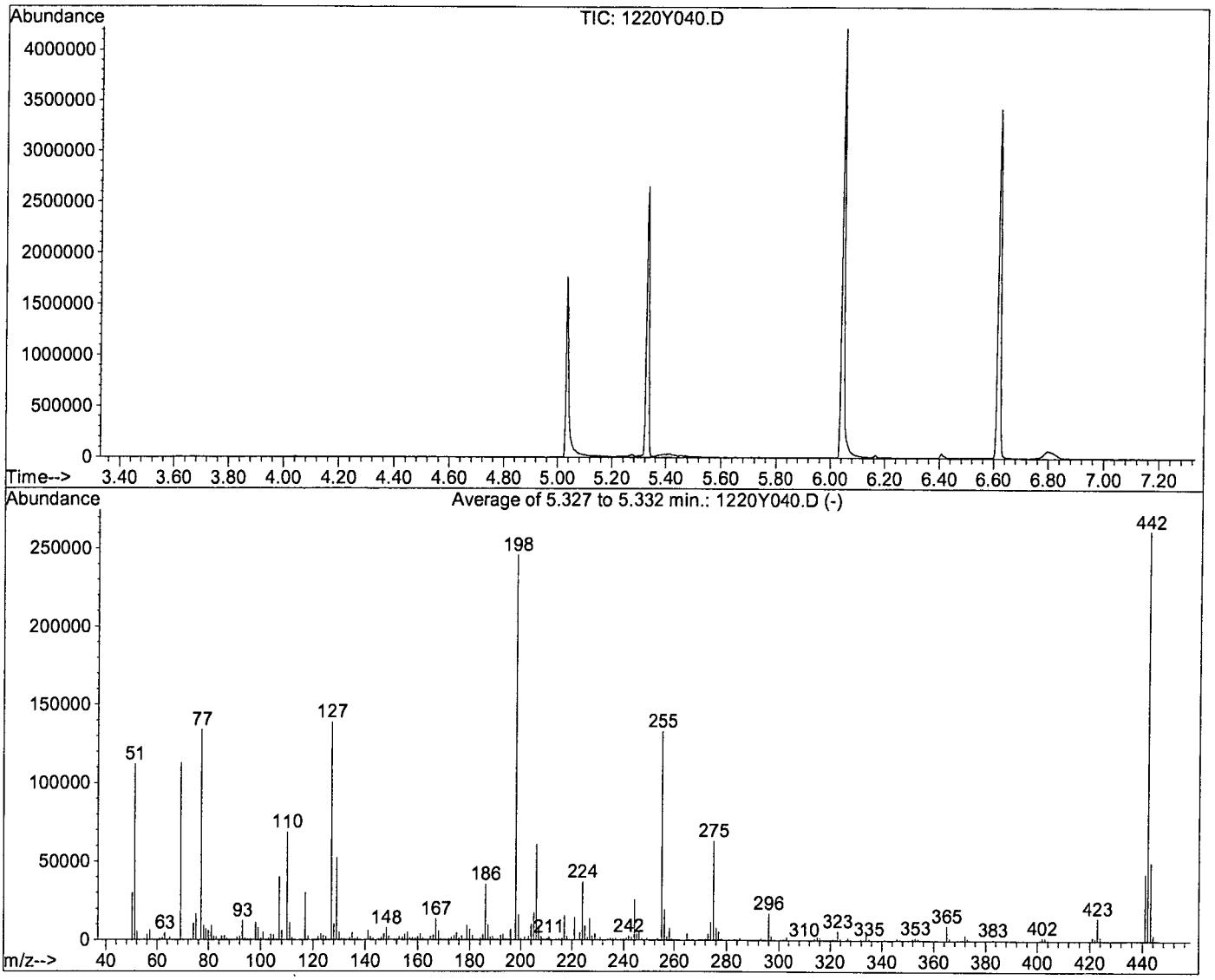
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	44.4	115264	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.0	0	PASS
127	198	40	60	53.6	139077	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	259413	PASS
199	198	5	9	6.3	16297	PASS
275	198	10	30	21.8	56493	PASS
365	198	1	100	3.0	7796	PASS
441	443	0.01	100	85.0	41237	PASS
442	198	50	150	98.0	254272	PASS
443	442	17	23	19.1	48539	PASS

1220Y002.D Y0GLYCOL.M Tue Dec 20 09:18:08 2016

DFTPP

Data File : M:\YODA\DATA\Y161220G\1220Y040.D Vial: 40
Acq On : 28 Dec 16 13:19 Operator: MA
Sample : SV Tune 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 697, 698, 699; Background Corrected with Scan 687

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	45.6	112123	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.6	698	PASS
127	198	40	60	56.4	138827	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	245995	PASS
199	198	5	9	6.4	15811	PASS
275	198	10	30	25.6	63096	PASS
365	198	1	100	3.8	9278	PASS
441	443	0.01	100	85.5	42635	PASS
442	198	50	150	106.4	261781	PASS
443	442	17	23	19.1	49883	PASS

GED Curve

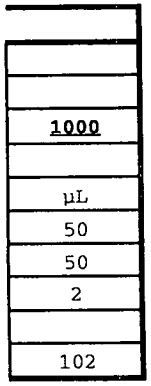
PREP DATE:	21/20/16 RH											
8270 Standard Curve												
Exp:	2/11/17					**50**	**100**	**200**	**400**	**500**	**600**	**800**
		Conc.		Date								
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL	µL	µL	µL	µL
	GED MSTD Std	2000	VAR	*12/19/16	11/18/17	5	5	10	20	50	30	40
EM Science	Methanol		010616			195	95	90	80	150	70	60
Supelco	SV Internal	2000	A14020V-3660	11/09/16	11/09/17	4	2	2	2	4	2	2
				Final Vol.		204	102	102	102	204	102	102

GED Second Source (SS)

PREP DATE:	12/20/16 RH					**500**
Exp:	1/18/17	Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
	GED MSS Stoc	2000	VAR	12/19/16	10/27/17	50
EM Science	Methanol		010616			150
Supelco	SV Internal	2000	A14020V-3660	11/09/16	11/09/17	4
				Final Vol.		204

→ MSS extracted on 12/19/16 using HEE Stock 9/27/17
MA 12/29/16

* Method Std. extracted on 12/19/16 using Std 11/18/16
MA 12/29/16


1000
µL
50
50
2
102

Diethylene Glycol						
Prep: 11/18/16 -GA Ex: 11/18/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
Diethylene glycol monomethyl ether	2000 ug/ml	AcuuStandard Cat# S-72273 Lot# 216101007-37091 and 37092 Op: 11/18/16 EX: 11/1817	2.0 mL	4 ml	1000 ug/ml	Methanol Lot# 010616A

Methoxyethoxyethanol-Neat (MEE) Stock: 9/27/16-R.H. ex: 09/27/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
MEE	Neat 99.5%	HEM SERVIC	0.1154g	10 mL	11540 ug/ml	MC
		Cat: N-12404-1G				
		Lot: 5259000-37082				
		OP: 09/27/16				
		EXP: 09/27/17				

0.087ml were spiked in 500ml of water and extracted on 10/27/16. Final concentration is 2000ug/ml

Organic Extraction Worksheet

Method	Solid Phase Extraction of 2MEE in Water	Extraction Set	161228A	Extraction Method	MWE2MEE	Units	mL

Spiked ID 1	Diethylene Glycol 12-15-16 EXP 12-15-17		Surrogate ID 1		
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	12/28/16 8:00	
Spiked ID 8			Ext. End Time:	12/28/16 14:50	
			GC Requires Extract By:	**12/29/16 0:00**	

pH1			Water Bath Temp Criteria	
pH2				
pH3				

Spiked By: KY **Date** 12/28/16 **Witnessed By:** JR **Date** 12/28/16

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	161228A Blk				NA	NA equip	500	2	7	12/28/16 8:00	
2	161228A LCS-1		0.040	1	NA	NA equip	500	2	7	12/28/16 8:00	
3	161228A LCSD-1		0.040	1	NA	NA equip	500	2	7	12/28/16 8:00	
4	AZ48083	AZ48083W15			NA	NA equip	500	2	7	12/28/16 8:00	81842 1 WEEK
5	AZ48084	AZ48084W12			NA	NA equip	500	2	7	12/28/16 8:00	81842 1 WEEK

KY 12/28/16

Solvent and Lot#	
ENVI-Carb Plus 400MG/1ML	.
Reverible Tube Lot:	8088704
PH Strip	hc 574756
Di Water	12-28-16
Dichloromethane	56153
Methanol	060316C

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	RH
Date	12/28/16
Time	4:00
Refrigerator	GC-C

	Technician's Initials
Scanned By	KY
Sample Preparation	CFM
Extraction	CFM,KY
Concentration	KY

Modified	12/28/16 2:56:37 PM

Reviewed By: KY **Date** 12/28/16

12/28/16 2:57:49 PM

Ext_ID 36653650

Injection Log

Directory: M:\YODA\DATA\Y161220G\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	1220Y002.D	1	SV Tune 11/15/16		20 Dec 16 9:12
2	3	1220Y003.D	1	50ug/ml DEG 12/20/16		20 Dec 16 9:32
3	4	1220Y004.D	1	100ug/ml DEG 12/20/16		20 Dec 16 10:02
4	5	1220Y005.D	1	200ug/ml DEG 12/20/16		20 Dec 16 11:27
5	6	1220Y006.D	1	400ug/ml DEG 12/20/16		20 Dec 16 11:57
6	7	1220Y007.D	1	500ug/ml DEG 12/20/16		20 Dec 16 12:27
7	8	1220Y008.D	1	600ug/ml DEG 12/20/16		20 Dec 16 12:57
8	9	1220Y009.D	1	800ug/ml DEG 12/20/16		20 Dec 16 13:28
9	10	1220Y010.D	1	1000ug/ml DEG 12/20/16		20 Dec 16 13:58
10	11	1220Y011.D	1	SS2 DEG 12/20/16		20 Dec 16 15:01
11	40	1220Y040.D	1	SV Tune 11/15/16		28 Dec 16 13:19
12	41	1220Y041.D	1	500ug/ml DEG 12/20/16		28 Dec 16 13:36
13	42	1220Y042.D	1	161228A LCS-1 2/500	water	28 Dec 16 16:45
14	44	1220Y044.D	1	161228A BLK 2/500	water	28 Dec 16 17:45
15	45	1220Y045.D	1	AZ48083W15 2/500	water	28 Dec 16 18:15
16	46	1220Y046.D	1	AZ48084W12 2/500	water	28 Dec 16 18:45
17	48	1220Y048.D	1	500ug/ml DEG 12/20/16	water	28 Dec 16 19:28

EPA METHOD 8260B
Volatile Organic Compounds

APPL, INC.

EPA METHOD 8260B
Volatile Organic Compounds
QC Summary

APPL, INC.

Method Blank
EPA 8260B BTEX WATER

Blank Name/QCG: **161228W-48082 - 215063**
Batch ID: #86BTO-161228AL

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	12/28/16	12/28/16
BLANK	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	12/28/16	12/28/16
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	12/28/16	12/28/16
BLANK	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	12/28/16	12/28/16
BLANK	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	12/28/16	12/28/16
BLANK	SURROGATE: 1,2-DICHLOROET	101	81-118			%	12/28/16	12/28/16
BLANK	SURROGATE: 4-BROMOFLUOR	95.3	85-114			%	12/28/16	12/28/16
BLANK	SURROGATE: DIBROMOFLUOR	102	80-119			%	12/28/16	12/28/16
BLANK	SURROGATE: TOLUENE-D8 (S)	96.5	89-112			%	12/28/16	12/28/16

Quant Method: LALLW.M
Run #: 1228L12
Instrument: Loki
Sequence: 161227
Initials: SV

GC SC-Blank-REG MDLs-DOD
Printed: 1/9/17 9:24:27 AM

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81842

Case No: 81842 Date Analyzed: 12/28/16

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: 1,2-DICHLOROETHANE-D4 (S)			SURROGATE: 4-BROMOFLUOROBENZENE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161228AL-LCS	Lab Control Spike	81-118	98.0		85-114	102	
161228AL-BLK	Blank	81-118	101		85-114	95.3	
AZ48082	ERH156	81-118	98.8		85-114	93.6	
AZ48083	ERH157	81-118	101		85-114	94.0	
AZ48084	ERH158	81-118	100		85-114	93.3	

Comments: Batch: #86BTO-161228AL

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81842

Case No: 81842 Date Analyzed: 12/28/16

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: DIBROMOFLUOROMETHANE (S)			SURROGATE: TOLUENE-D8 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
161228AL-LCS	Lab Control Spike	80-119	98.4		89-112	99.2	
161228AL-BLK	Blank	80-119	102		89-112	96.5	
AZ48082	ERH156	80-119	103		89-112	94.2	
AZ48083	ERH157	80-119	104		89-112	95.6	
AZ48084	ERH158	80-119	103		89-112	94.1	

Comments: Batch: #86BTO-161228AL

Laboratory Control Spike Recovery
EPA 8260B BTEX WATER

APPL ID: **161228W-48082 LCS - 215063**
Batch ID: #86BTO-161228AL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1,2-DICHLOROETHANE	10.00	9.78	97.8	73-128
BENZENE	10.00	10.2	102	79-120
ETHYLBENZENE	10.00	10.3	103	79-121
TOLUENE	10.00	10.5	105	80-121
XYLENES (TOTAL)	30.0	32.0	107	79-121
SURROGATE: 1,2-DICHLOROETHANE-	25.0	24.5	98.0	81-118
SURROGATE: 4-BROMOFLUOROBENZ	25.0	25.6	102	85-114
SURROGATE: DIBROMOFLUOROMETH	25.0	24.6	98.4	80-119
SURROGATE: TOLUENE-D8 (S)	25.0	24.8	99.2	89-112

Comments:

Primary	SPK
Quant Method :	LALLW.M
Extraction Date :	12/28/16
Analysis Date :	12/28/16
Instrument :	Loki
Run :	1228L03
Initials :	SV

Printed: 1/9/17 9:24:37 AM
APPL Standard LCS

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81842

Case No: 81842 Date Analyzed: 12/28/16

Matrix: WATER Instrument: Loki

Blank ID: 161228AL-BLK Time Analyzed: 1415

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161228AL-LCS	Lab Control Spike	1228L03	12/28/16 1003
161228AL-BLK	Blank	1228L12	12/28/16 1415
AZ48082	ERH156	1228L15	12/28/16 1539
AZ48083	ERH157	1228L16	12/28/16 1607
AZ48084	ERH158	1228L17	12/28/16 1635

Comments: Batch: #86BTO-161228AL

Printed: 1/9/17 9:24:40 AM
Form 4, Blank Summary

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: ~~1227L01.D~~ 81842
Matrix: Water mpl-13-17
ID: 5ng- BFB STD 12-15-16

mpl-13-17
SDG No: ~~Loki~~ 81842
Date Analyzed: 12/27/16
Instrument: Loki
Time Analyzed: 12:35

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.3ug/L VOC STD 12/2	1227L05.D	12/27/16 14:16
2		0.5ug/L VOC STD 12/2	1227L06.D	12/27/16 14:44
3		1.0ug/L VOC STD 12/2	1227L07.D	12/27/16 15:12
4		2.0ug/L VOC STD 12/2	1227L08.D	12/27/16 15:40
5		5.0ug/L VOC STD 12/2	1227L09.D	12/27/16 16:08
6		10ug/L VOC STD 12/27	1227L10.D	12/27/16 16:36
7		20ug/L VOC STD 12/27	1227L11.D	12/27/16 17:04
8		40ug/L VOC STD 12/27	1227L12.D	12/27/16 17:32
9		100ug/L VOC STD 12/2	1227L13.D	12/27/16 18:00
10		(SS)10ug/L VOC STD 1	1227L18.D	12/27/16 20:20
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	16.4
75	30 - 60% of mass 95	48.4
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	6.8
173	0 - 2% of mass 174	0.0
174	50 - 100% of mass 95	96.0
175	5 - 9% of mass 174	7.6
176	95 - 101% of mass 174	95.8
177	5 - 9% of mass 176	6.9

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81842
Matrix: Water
ID: 5ng- BFB STD 12-15-16

SDG No: 81842
Date Analyzed: 12/28/16
Instrument: Loki
Time Analyzed: 9:17

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1	Lab Control Spike	161228A CCV/LCS-1WL	1228L03.D	12/28/16 10:03
2	Blank	161228A BLK-1WL	1228L12.D	12/28/16 14:15
3	ERH156	AZ48082W01	1228L15.D	12/28/16 15:39
4	ERH157	AZ48083W01	1228L16.D	12/28/16 16:07
5	ERH158	AZ48084W01	1228L17.D	12/28/16 16:35
6		Ending CCV 8260 10ug	1228L28.D	12/28/16 21:43
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	15.3
75	30 - 60% of mass 95	47.6
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	6.9
173	0 - 2% of mass 174	0.0
174	50 - 100% of mass 95	98.8
175	5 - 9% of mass 174	7.8
176	95 - 101% of mass 174	98.2
177	5 - 9% of mass 176	6.7

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81842

Lab File ID (Standard): 1227L10.D Date Analyzed: 12/27/16

Instrument ID: Loki Time Analyzed: 16:36

GC Column: ID: Heated Purge: (Y/N)

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	593920	5.38	548032	8.70	323712	11.03
	UPPER LIMIT	1187840	5.88	1096064	9.20	647424	11.53
	LOWER LIMIT	296960	4.88	274016	8.20	161856	10.53
	SAMPLE NO.						
01	(SS)10ug/L VOC STD 1	573248	5.38	539776	8.70	310528	11.03
02	161228A CCV/LCS-1WL	573120	5.38	557568	8.70	309568	11.03
03	161228A BLK-1WL	527424	5.38	516608	8.70	272704	11.03
04	AZ48082W01	492800	5.38	498816	8.70	260864	11.03
05	AZ48083W01	499712	5.38	504512	8.70	273088	11.03
06	AZ48084W01	491008	5.38	498112	8.70	266944	11.03
07	Ending CCV 8260 10ug/	510592	5.38	505728	8.70	295168	11.03
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

EPA METHOD 8260B
Volatile Organic Compounds
Sample Data

APPL, INC.

EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81842

Sample ID: ERH156

APPL ID: AZ48082

Sample Collection Date: 12/21/16

QCG: #86BTO-161228AL-215063

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	12/28/16	12/28/16
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	12/28/16	12/28/16
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	12/28/16	12/28/16
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	12/28/16	12/28/16
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	12/28/16	12/28/16
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	98.8	81-118			%	12/28/16	12/28/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	93.6	85-114			%	12/28/16	12/28/16
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	103	80-119			%	12/28/16	12/28/16
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	94.2	89-112			%	12/28/16	12/28/16

Quant Method: LALLW.M
Run #: 1228L15
Instrument: Loki
Sequence: 161227
Dilution Factor: 1
Initials: SV

Printed: 1/9/17 9:24:44 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161227\1228L15.D Vial: 14
Acq On : 28 Dec 16 15:39 Operator: PM,DG,SV,CMM
Sample : AZ48082W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 10:24 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	492800	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	498816	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	260864	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	265883	25.75	ppb	0.00
Spiked Amount 25.000			Recovery = 102.992%			
37) 1,2-DCA-D4(S)	4.93	65	247162	24.70	ppb	0.00
Spiked Amount 25.000			Recovery = 98.808%			
57) Toluene-D8(S)	7.22	98	875815	23.55	ppb	0.00
Spiked Amount 25.000			Recovery = 94.192%			
65) 4-Bromofluorobenzene(S)	9.89	95	298507	23.40	ppb	0.00
Spiked Amount 25.000			Recovery = 93.612%			

Target Compounds Qvalue

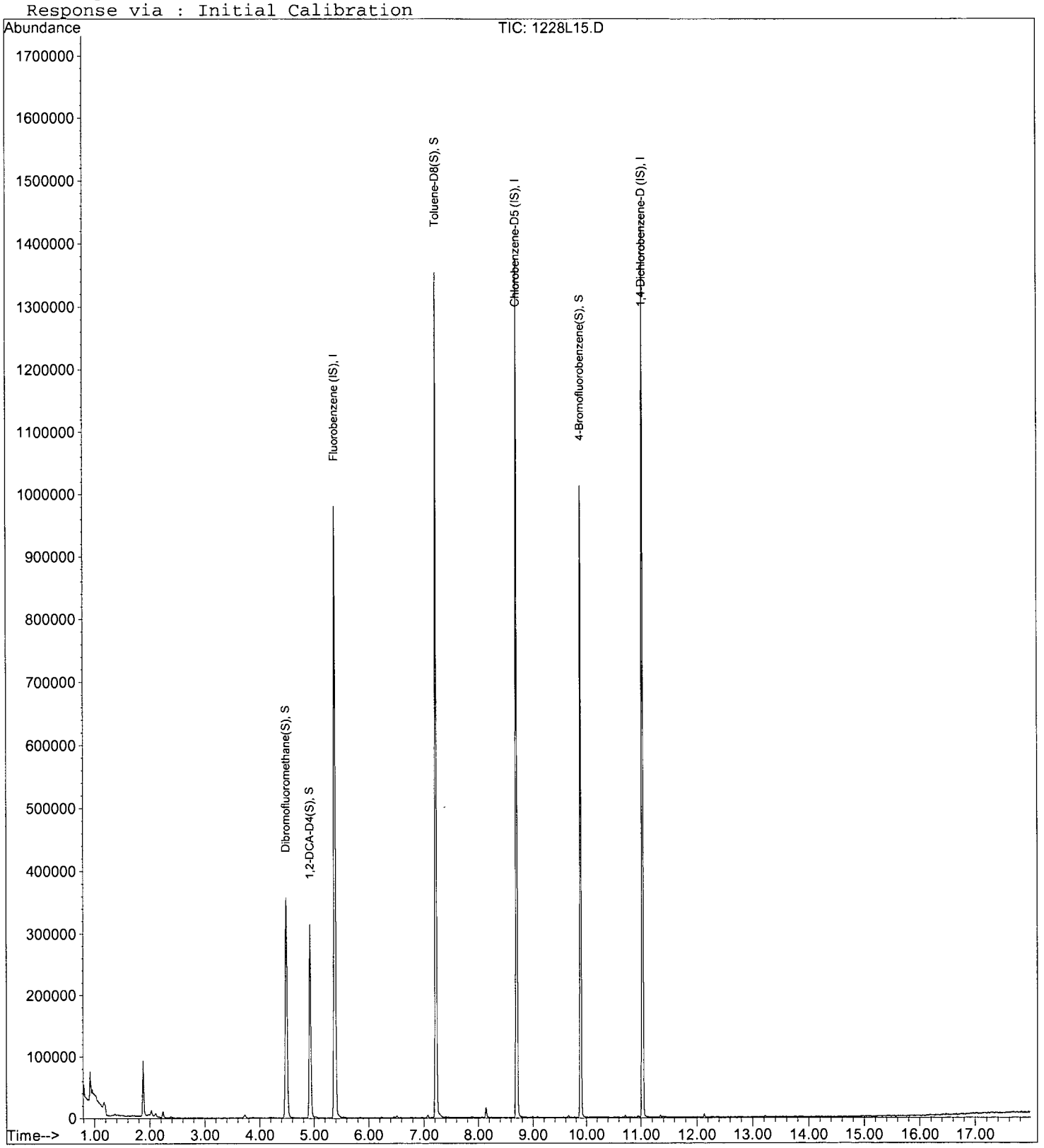
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161227\1228L15.D Vial: 14
Acq On : 28 Dec 16 15:39 Operator: PM,DG,SV,CMM
Sample : AZ48082W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 10:24 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH157
Sample Collection Date: 12/21/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81842
APPL ID: AZ48083
QCG: #86BTO-161228AL-215063

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	12/28/16	12/28/16
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	12/28/16	12/28/16
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	12/28/16	12/28/16
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	12/28/16	12/28/16
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	12/28/16	12/28/16
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	101	81-118			%	12/28/16	12/28/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	94.0	85-114			%	12/28/16	12/28/16
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	104	80-119			%	12/28/16	12/28/16
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	95.6	89-112			%	12/28/16	12/28/16

Quant Method: LALLW.M
Run #: 1228L16
Instrument: Loki
Sequence: 161227
Dilution Factor: 1
Initials: SV

Printed: 1/9/17 9:24:44 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161227\1228L16.D Vial: 15
Acq On : 28 Dec 16 16:07 Operator: PM,DG,SV,CMM
Sample : AZ48083W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 10:25 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	499712	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	504512	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	273088	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	271211	25.90	ppb	0.00
Spiked Amount 25.000			Recovery = 103.600%			
37) 1,2-DCA-D4(S)	4.93	65	256283	25.26	ppb	0.00
Spiked Amount 25.000			Recovery = 101.040%			
57) Toluene-D8(S)	7.22	98	898971	23.90	ppb	0.00
Spiked Amount 25.000			Recovery = 95.588%			
65) 4-Bromofluorobenzene(S)	9.89	95	303280	23.51	ppb	0.00
Spiked Amount 25.000			Recovery = 94.032%			

Target Compounds Qvalue

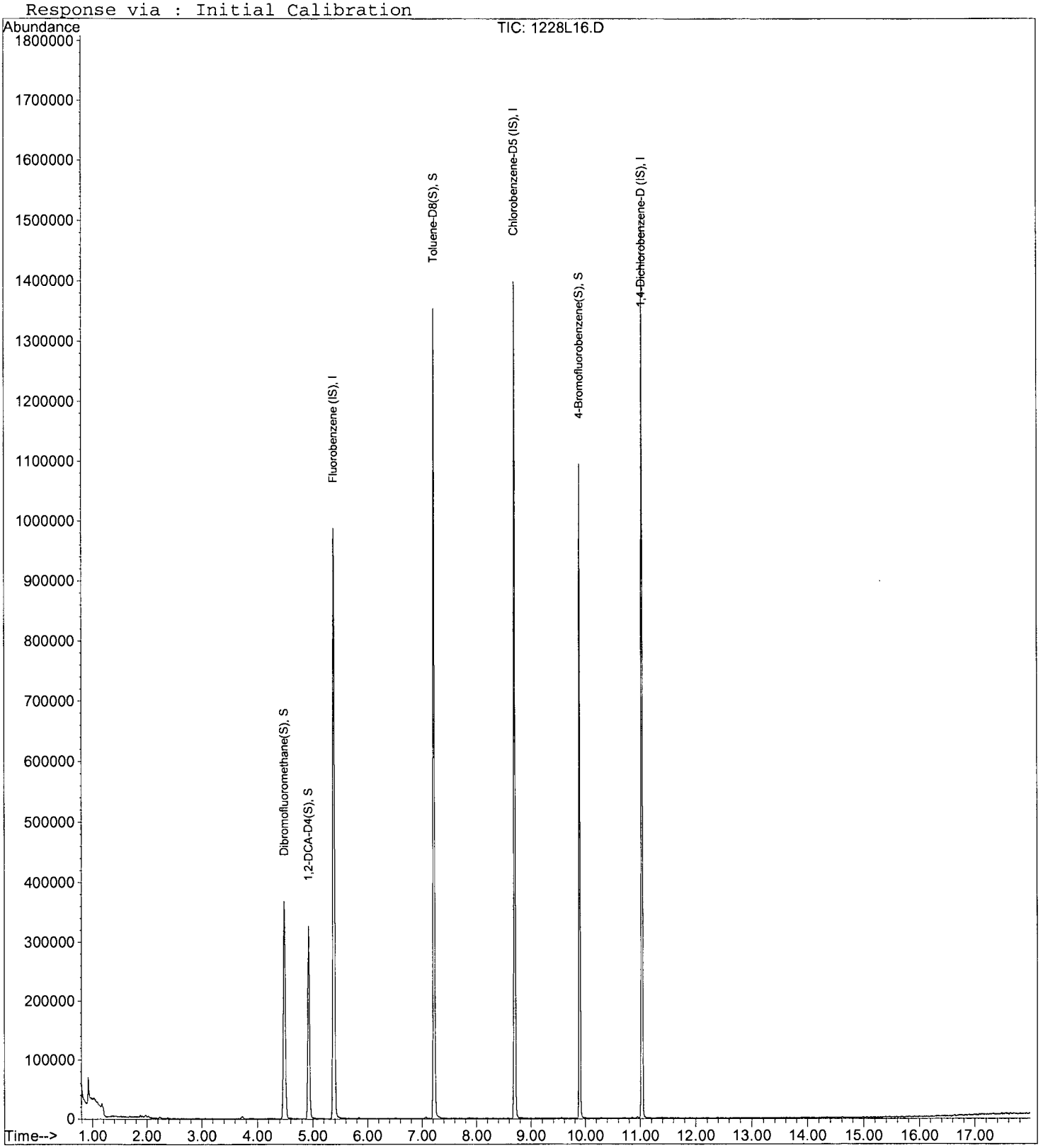
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161227\1228L16.D Vial: 15
Acq On : 28 Dec 16 16:07 Operator: PM,DG,SV,CMM
Sample : AZ48083W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 10:25 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH158
Sample Collection Date: 12/21/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81842
APPL ID: AZ48084
QCG: #86BTO-161228AL-215063

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	12/28/16	12/28/16
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	12/28/16	12/28/16
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	12/28/16	12/28/16
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	12/28/16	12/28/16
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	12/28/16	12/28/16
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	100	81-118			%	12/28/16	12/28/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	93.3	85-114			%	12/28/16	12/28/16
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	103	80-119			%	12/28/16	12/28/16
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	94.1	89-112			%	12/28/16	12/28/16

Quant Method: LALLW.M
Run #: 1228L17
Instrument: Loki
Sequence: 161227
Dilution Factor: 1
Initials: SV

Printed: 1/9/17 9:24:44 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161227\1228L17.D Vial: 16
Acq On : 28 Dec 16 16:35 Operator: PM,DG,SV,CMM
Sample : AZ48084W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 10:25 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	491008	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	498112	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	266944	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	264848	25.74	ppb	0.00
Spiked Amount 25.000			Recovery = 102.964%			
37) 1,2-DCA-D4(S)	4.92	65	249483	25.03	ppb	0.00
Spiked Amount 25.000			Recovery = 100.100%			
57) Toluene-D8(S)	7.22	98	874004	23.53	ppb	0.00
Spiked Amount 25.000			Recovery = 94.128%			
65) 4-Bromofluorobenzene(S)	9.89	95	297043	23.32	ppb	0.00
Spiked Amount 25.000			Recovery = 93.284%			

Target Compounds Qvalue

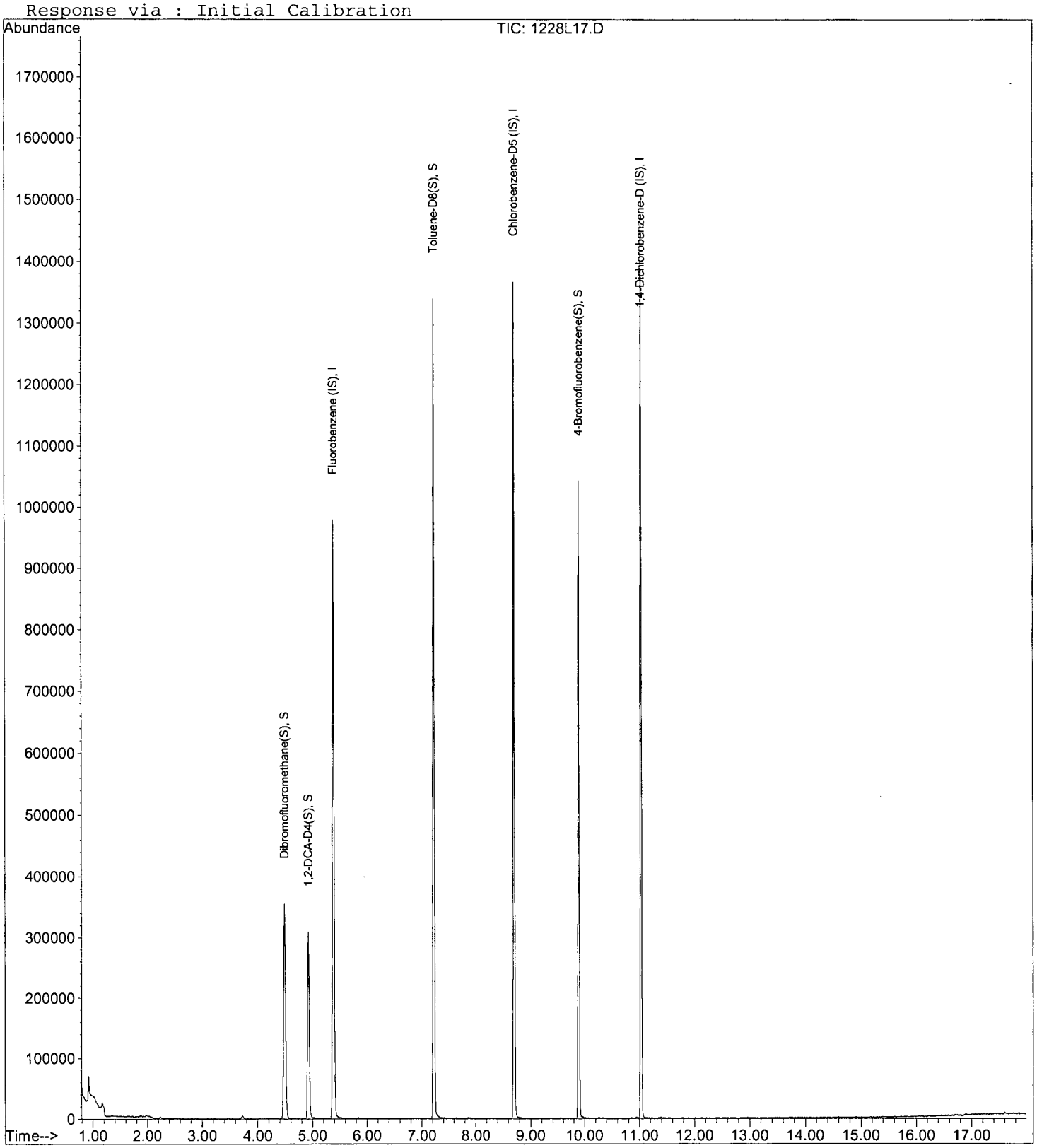
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161227\1228L17.D Vial: 16
Acq On : 28 Dec 16 16:35 Operator: PM,DG,SV,CMM
Sample : AZ48084W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 10:25 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration



EPA METHOD 8260B
Volatile Organic Compounds
Calibration Data

APPL, INC.

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/27/16
Matrix: Instrument: Loki Initials:

		Compound	1227L05 D	1227L06.D	1227L07.D	1227L08 D	1227L09.D	1227L10.D	1227L11.D	1227L12.D	1227L13.D		Avg	%RSD		
1	I	Fluorobenzene (IS)														
2	TM	Dichlorodifluoromethane		0.3897	0.4005	0.4360	0.4223	0.4249	0.4099	0.3873	0.3754		0.41	5.2	TM	
3	TM	Freon 114		0.2470	0.2565	0.2741	0.3040	0.2784	0.2889	0.2811	0.3041		0.28	7.3	TM	
4	TM**	Chloromethane		0.8194	0.7160	0.6457	0.6151	0.6202	0.5514	0.5771	0.5504		0.64	14	TM**	
5	TM*	Vinyl chloride	0.4920	0.5791	0.5837	0.5449	0.5656	0.5695	0.5134	0.5296	0.4955		0.54	6.6	TM*	
6	TM	Bromomethane		0.4674	0.3687	0.4034	0.3725	0.3949	0.3900	0.4769	0.4367		0.41	10	TM	
7	TM	Chloroethane		0.3711	0.3550	0.3478	0.3325	0.3404	0.3063	0.3230	0.2256		0.33	14	TM	
8	TM	Dichlorofluoromethane	0.8529	1.095	1.044	1.018	1.020	0.9988	0.9338	1.008	1.067		1.0	7.2	TM	
9	TM	Trichlorofluoromethane	0.5659	0.5822	0.5968	0.6647	0.6273	0.6160	0.5969	0.5973	0.6392		0.61	5.0	TM	
10	TM	Acrolein	0.0429	0.0375	0.0382	0.0373	0.0360	0.0365	0.0351	0.0358	0.0375		0.04	6.1	TM	
11	TML	Acetone			0.1507	0.1200	0.1131	0.1021	0.0963	0.0973	0.0923		0.11	18	TML	1.000
12	TM	Freon-113	0.3106	0.3313	0.3692	0.3392	0.3470	0.3441	0.3324	0.3390	0.3705		0.34	5.5	TM	
13	TM*	1,1-DCE	0.2706	0.2802	0.2723	0.2855	0.2986	0.2805	0.2662	0.2856	0.2888		0.28	3.6	TM*	
14	TM	t-Butanol	0.0119	0.0120	0.0116	0.0112	0.0108	0.0112	0.0103	0.0094			0.01	7.9	TM	
15	TM	Acetonitrile	0.0444	0.0472	0.0421	0.0427	0.0412	0.0397	0.0368	0.0457			0.04	7.9	TM	
16	TML	Methyl Acetate		0.3913	0.2494	0.2726	0.2871	0.2531	0.2349	0.2603	0.2731		0.28	18	TML	0.999
17	TM	Iodomethane		0.2513	0.2498	0.2733	0.2864	0.3057	0.2860	0.3081	0.3198		0.29	9.1	TM	
18	TM	Acrylonitrile		0.1266	0.0844	0.0997	0.0903	0.0913	0.0861	0.0885	0.0959		0.10	14	TM	
19	TML	Methylene chloride		0.9681	0.8409	0.6098	0.5639	0.5189	0.4555	0.4924	0.4975		0.62	30	TML	1.000
20	TM	Carbon disulfide		1.447	1.293	1.274	1.300	1.280	1.182	1.298	1.372		1.3	5.9	TM	
21	TM	Methyl t-butyl ether (MtBE)		0.9958	0.9473	0.9677	1.007	0.9853	0.9368	1.013	1.097		0.99	5.0	TM	
22	TM	Trans-1,2-DCE	0.4413	0.4691	0.4186	0.4247	0.4299	0.4191	0.3854	0.4211	0.4451		0.43	5.4	TM	
23	TM	Diisopropyl Ether	0.8960	1.109	1.125	1.089	1.152	1.144	1.088	1.229	1.330		1.1	10	TM	
24	TM**	1,1-DCA	0.5978	0.7903	0.7650	0.7294	0.7422	0.7232	0.6799	0.7260	0.7613		0.72	7.8	TM**	
25	TM	Vinyl Acetate	0.2855	0.3172	0.2836	0.2557	0.2688	0.2557	0.2317	0.2591	0.2777		0.27	9.0	TM	
26	TM	Ethyl tert Butyl Ether	0.7928	0.9094	0.9047	0.8844	0.9801	0.9614	0.9347	1.046	1.145		0.95	11	TM	
27	TM	MEK (2-Butanone)			0.1272	0.1273	0.1090	0.1118	0.1043	0.1157	0.1135		0.12	7.6	TM	
28	TM	Cis-1,2-DCE	0.5156	0.5864	0.5207	0.4750	0.4699	0.4789	0.4392	0.4928	0.5132		0.50	8.4	TM	
29	TM	2,2-Dichloropropane		0.2529	0.1908	0.1803	0.1948	0.1862	0.1746	0.1866	0.1997		0.20	12	TM	
30	TM*	Chloroform	0.7444	0.8143	0.7934	0.7498	0.8004	0.8021	0.7145	0.7715	0.8099		0.78	4.5	TM*	
31	TM	Bromochloromethane	0.1921	0.2309	0.2218	0.2346	0.2248	0.2276	0.2102	0.2288	0.2326		0.22	6.1	TM	
32	S	Dibromofluoromethane(S)	0.6002	0.5878	0.5055	0.4933	0.5124	0.5171	0.4975	0.5101	0.4909		0.52	7.8	S	
33	TM	1,1,1-TCA	0.5207	0.6004	0.5735	0.5895	0.6153	0.5945	0.5579	0.6101	0.6380		0.59	5.9	TM	
34	TM	Cyclohexane	0.2090	0.2218	0.2402	0.2114	0.2172	0.2104	0.2205	0.2240	0.2516		0.22	6.4	TM	
35	TM	1,1-Dichloropropene	0.3786	0.4521	0.4317	0.4268	0.4704	0.4568	0.4458	0.4791	0.5217		0.45	8.7	TM	

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/27/16
Matrix: Instrument: Loki
Initials:

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD		
36	TM	2,2,4-Trimethylpentane		0.7859	0.7531	0.7330	0.7789	0.7371	0.7791	0.7802	0.9568		0.79	9.0	TM	
37	S	1,2-DCA-D4(S)	0.5938	0.5796	0.4911	0.4729	0.5071	0.4956	0.4741	0.4855	0.4685		0.51	9.2	S	
38	TM	Carbon Tetrachloride	0.4058	0.4880	0.4492	0.4707	0.4690	0.4693	0.4426	0.4764	0.5101		0.46	6.4	TM	
39	TM	Tert Amyl Methyl Ether		0.8474	0.8251	0.8403	0.9018	0.9052	0.8683	0.9683	1.055		0.90	8.6	TM	
40	TM	1,2-DCA	0.4182	0.5659	0.5129	0.5297	0.5410	0.5210	0.4791	0.5151	0.5372		0.51	8.3	TM	
41	TM	Benzene	1.384	1.552	1.607	1.550	1.647	1.636	1.520	1.663	1.722		1.6	6.2	TM	
42	TM	TCE	0.2668	0.2955	0.2486	0.2267	0.2119	0.2289	0.2035	0.2181	0.2366		0.24	12	TM	
43	TM	2-Pentanone	0.1802	0.1777	0.1804	0.1829	0.1793	0.1874	0.1760	0.1791	0.1836		0.18	1.9	TM	
44	TM*	1,2-Dichloropropane	0.3759	0.4402	0.4523	0.4190	0.4269	0.4326	0.3960	0.4317	0.4467		0.42	5.8	TM*	
45	TM	Bromodichloromethane	0.4489	0.5463	0.5390	0.5631	0.5636	0.5658	0.5221	0.5632	0.5916		0.54	7.5	TM	
46	TM	Methyl Cyclohexane	0.3968	0.4186	0.4150	0.4225	0.4443	0.4261	0.4469	0.4644	0.5479		0.44	10	TM	
47	TM	Dibromomethane	0.2253	0.2421	0.2413	0.2554	0.2593	0.2477	0.2276	0.2435	0.2539		0.24	4.8	TM	
48	TM	2-Chloroethyl vinyl ether													TM	
49	TML	MIBK (methyl isobutyl ketone)		0.3135	0.4205	0.3514	0.2918	0.2593	0.2415	0.2387	0.2442		0.30	22	TML	1.000
50	TM	1-Bromo-2-chloroethane		0.2986	0.3084	0.2943	0.3110	0.2914	0.2713	0.3023	0.3203		0.30	4.9	TM	
51	TM	Cis-1,3-Dichloropropene		0.5855	0.5831	0.5594	0.6080	0.6070	0.5738	0.6342	0.6953		0.61	7.1	TM	
52	TM*	Toluene	1.361	1.631	1.656	1.692	1.862	1.824	1.700	1.850	1.921		1.7	9.8	TM*	
53	TM	Trans-1,3-Dichloropropene		0.4959	0.4995	0.4558	0.5243	0.5128	0.4963	0.5462	0.5875		0.51	7.6	TM	
54	TM	1,1,2-TCA	0.2809	0.2960	0.3039	0.2667	0.3098	0.2868	0.2773	0.2917	0.3067		0.29	5.0	TM	
55	TM	2-Hexanone			0.0569	0.0700	0.0741	0.0701	0.0775	0.0865			0.07	14	TM	
56	I	Chlorobenzene-D5 (IS)														
57	S	Toluene-D8(S)	2.011	2.011	1.705	1.695	1.856	1.925	1.850	1.903	1.821		1.9	6.1	S	
58	TM	1,2-EDB		0.3663	0.3209	0.3102	0.3598	0.3568	0.3267	0.3465	0.3625		0.34	6.3	TM	
59	TM	Tetrachloroethene	0.3466	0.4800	0.4799	0.4150	0.4849	0.4609	0.4234	0.4563	0.4738		0.45	10	TM	
60	TM	1-Chlorohexane	0.3712	0.4699	0.4162	0.4021	0.4619	0.4629	0.4395	0.4895	0.5349		0.45	11	TM	
61	TM	1,1,1,2-Tetrachloroethane	0.3622	0.4379	0.4102	0.4156	0.4674	0.4691	0.4195	0.4496	0.4736		0.43	8.3	TM	
62	TM	m&p-Xylene	0.5399	0.7067	0.6462	0.6593	0.7746	0.8064	0.7345	0.8148	0.8555		0.73	14	TM	
63	TM	o-Xylene	0.5592	0.6883	0.6599	0.5863	0.7345	0.7943	0.7084	0.7921	0.8407		0.71	13	TM	
64	TM	Styrene		0.6882	0.7088	0.6896	0.8021	0.8645	0.8328	0.9133	1.018		0.81	14	TM	
65	S	4-Bromofluorobenzene(S)	0.6803	0.6348	0.5610	0.5741	0.6464	0.6971	0.6483	0.6645	0.6471		0.64	7.1	S	
66	TM	1,3-Dichloropropane	0.4593	0.5984	0.5599	0.5578	0.6300	0.6082	0.5587	0.5935	0.6152		0.58	8.9	TM	
67	TM	Dibromochloromethane	0.4204	0.4358	0.4342	0.3897	0.4354	0.4529	0.4109	0.4450	0.4654		0.43	5.3	TM	
68	TM**	Chlorobenzene	1.051	1.212	1.277	1.192	1.298	1.299	1.160	1.246	1.294		1.2	6.7	TM**	
69	TM*	Ethylbenzene	1.659	1.811	1.850	1.728	1.964	2.070	1.900	2.089	2.194		1.9	9.2	TM*	
70	TM**	Bromoform	0.2298	0.3282	0.2464	0.2377	0.2727	0.2693	0.2546	0.2671	0.2871		0.27	11	TM**	

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/27/16
Matrix: Instrument: Loki

Initials:

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD		
71	I	1,4-Dichlorobenzene-D (IS)														
72	TM	Isopropylbenzene	2.421	3.045	2.790	2.770	3.128	3.138	3.005	3.457	3.358		3.0	11	TM	
73	TM**	1,1,2,2-Tetrachloroethane	0.7077	0.8260	0.7530	0.7421	0.7840	0.7346	0.6815	0.7478	0.7379		0.75	5.6	TM**	
74	TML	1,2,3-Trichloropropane		0.2202	0.1420	0.1317	0.1379	0.1560	0.1319	0.1472	0.1386		0.15	19	TML	0.999
75	TM	t-1,4-Dichloro-2-Butene		0.1795	0.1561	0.1432	0.1720	0.1495	0.1491	0.1581	0.1796		0.16	8.9	TM	
76	TM	Bromobenzene	0.8151	0.8942	0.8804	0.8586	0.9671	0.9423	0.8619	0.9632	0.9103		0.90	5.7	TM	
77	TM	n-Propylbenzene	3.041	3.620	3.325	3.226	3.753	3.762	3.627	4.054	3.906		3.6	9.2	TM	
78	TM	4-Ethyltoluene	2.421	2.999	2.850	2.817	3.332	3.336	3.205	3.645	3.512		3.1	12	TM	
79	TM	2-Chlorotoluene	1.946	2.315	2.164	2.135	2.440	2.413	2.243	2.549	2.410		2.3	8.2	TM	
80	TM	1,3,5-Trimethylbenzene		2.466	2.379	2.383	2.799	2.925	2.683	3.053	2.880		2.7	9.7	TM	
81	TM	4-Chlorotoluene	2.066	2.601	2.496	2.381	2.875	2.836	2.661	2.964	2.828		2.6	11	TM	
82	TM	Tert-Butylbenzene	1.812	2.072	1.910	2.018	2.192	2.195	2.088	2.380	2.369		2.1	9.1	TM	
83	TM	1,2,4-Trimethylbenzene		2.576	2.299	2.435	2.769	2.803	2.692	3.117	2.996		2.7	10	TM	
84	TM	Sec-Butylbenzene		3.031	2.682	2.769	3.155	3.177	2.990	3.414	3.427		3.1	8.8	TM	
85	TM	p-Isopropyltoluene		2.632	2.255	2.464	2.759	2.749	2.647	2.990	3.009		2.7	9.4	TM	
86	TM	Benzyl Chloride		0.7264	0.7812	0.7933	0.8205	0.8108	0.8068	0.9258	1.009		0.83	11	TM	
87	TM	1,3-DCB	1.492	1.813	1.628	1.648	1.821	1.789	1.642	1.827	1.777		1.7	6.8	TM	
88	TM	1,4-DCB	1.805	1.976	1.863	1.745	1.872	1.846	1.661	1.852	1.797		1.8	4.8	TM	
89	TM	n-Butylbenzene		2.339	2.047	2.043	2.333	2.317	2.195	2.595	2.670		2.3	9.9	TM	
90	TM	1,2-DCB	1.260	1.824	1.703	1.540	1.747	1.639	1.513	1.680	1.709		1.6	10	TM	
91	TM	Hexachloroethane	0.5557	0.5863	0.5645	0.5491	0.6019	0.5824	0.5358	0.6056	0.5733		0.57	4.1	TM	
92	TM	1,2-Dibromo-3-chloropropane			0.1450	0.1181	0.1183	0.1177	0.1164	0.1316	0.1364		0.13	9.0	TM	
93	TM	1,2,4-Trichlorobenzene	0.9673	1.043	0.9163	0.9378	1.026	1.005	0.9528	1.101	1.144		1.0	7.6	TM	
94	TM	Hexachlorobutadiene	0.4526	0.4789	0.4002	0.4033	0.4113	0.3896	0.3795	0.4214	0.4317		0.42	7.5	TM	
95	TM	Naphthalene	1.145	1.061	0.9287	1.032	1.053	1.040	1.070	1.312	1.405		1.1	13	TM	
96	TM	1,2,3-Trichlorobenzene	0.5777	0.6427	0.6135	0.5800	0.5941	0.6143	0.5771	0.6986	0.6649		0.62	6.9	TM	
97																
98																
99																
100																
101																
102																
103																
104																
105																

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161227\1227L05.D Vial: 4
Acq On : 27 Dec 16 14:16 Operator: PM,DG,SV,CMM
Sample : 0.3ug/L VOC STD 12/27/16AJ Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 28 7:43 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 07:42:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	578240	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	565952	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	288512	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	69414	5.88193 ppb		0.00
Spiked Amount 25.000			Recovery	= 23.528%		
37) 1,2-DCA-D4(S)	4.93	65	68677	5.47346 ppb		0.00
Spiked Amount 25.000			Recovery	= 21.892%		
57) Toluene-D8(S)	7.22	98	227624	5.19163 ppb		0.00
Spiked Amount 25.000			Recovery	= 20.768%		
65) 4-Bromofluorobenzene(S)	9.89	95	77009	5.11217 ppb		0.00
Spiked Amount 25.000			Recovery	= 20.448%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	2270	0.21884 ppb		90
3) Freon 114	0.93	85	1594	0.24197 ppb	#	41
4) Chloromethane	0.96	50	5414	0.30850 ppb		97
5) Vinyl chloride	1.03	62	3414	0.26697 ppb	#	62
6) Bromomethane	1.22	96	2395	0.27285 ppb	#	75
7) Chloroethane	1.29	64	2714	0.39902 ppb		96
8) Dichlorofluoromethane	1.43	67	5918	0.27116 ppb		96
9) Trichlorofluoromethane	1.46	101	3927	0.30324 ppb		97
10) Acrolein	1.76	56	9929	8.58646 ppb	#	88
11) Acetone	1.88	43	2269	-1.11428 ppb		96
12) Freon-113	1.84	101	2155	0.31707 ppb	#	70
13) 1,1-DCE	1.83	96	1878	0.30430 ppb		86
14) t-Butanol	2.40	59	2756	9.59973 ppb		97
15) Acetonitrile	2.10	41	10278	8.03815 ppb		89
16) Methyl Acetate	2.16	43	2395	0.32615 ppb		85
17) Iodomethane	1.93	142	1650	0.27030 ppb		94
18) Acrylonitrile	2.48	52	479	0.18178 ppb	#	66
19) Methylene chloride	2.24	84	11100	-0.85071 ppb		86
20) Carbon disulfide	1.98	76	8123	0.32117 ppb	#	76
21) Methyl t-butyl ether (MtBE	2.52	73	6061	0.23056 ppb	#	90
22) Trans-1,2-DCE	2.50	96	3062	0.28966 ppb	#	88
23) Diisopropyl Ether	3.10	45	6217	0.18302 ppb		93
24) 1,1-DCA	2.95	63	4148	0.20657 ppb	#	87
25) Vinyl Acetate	3.10	43	1981	0.24839 ppb	#	87
26) Ethyl tert Butyl Ether	3.58	59	5501	0.20307 ppb	#	82
27) MEK (2-Butanone)	3.80	43	355	0.22578 ppb	#	47
28) Cis-1,2-DCE	3.73	96	3578	0.29081 ppb		91
29) 2,2-Dichloropropane	3.70	77	1088	0.23151 ppb		87
30) Chloroform	4.25	83	5165	0.25191 ppb		91
31) Bromochloromethane	4.08	128	1333	0.23158 ppb		88
33) 1,1,1-TCA	4.48	97	3613	0.23871 ppb		96
34) Cyclohexane	4.53	41	1450	0.22801 ppb	#	61
35) 1,1-Dichloropropene	4.73	75	2627	0.21573 ppb	#	66
36) 2,2,4-Trimethylpentane	5.15	57	4433	0.24004 ppb	#	58
38) Carbon Tetrachloride	4.71	119	2816	0.24915 ppb		85
39) Tert Amyl Methyl Ether	5.22	73	4290	0.18082 ppb	#	87
40) 1,2-DCA	5.03	62	2902	0.19554 ppb	#	70
41) Benzene	4.99	78	9606	0.22067 ppb		95
42) TCE	5.84	95	1851	0.33907 ppb	#	79

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161227\1227L05.D Vial: 4
Acq On : 27 Dec 16 14:16 Operator: PM,DG,SV,CMM
Sample : 0.3ug/L VOC STD 12/27/16AJ Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 28 7:43 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 07:42:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43)	2-Pentanone	6.13	43	41670	7.95556 ppb		92
44)	1,2-Dichloropropane	6.09	63	2608	0.20858 ppb	#	87
45)	Bromodichloromethane	6.44	83	3115	0.20678 ppb	#	78
46)	Methyl Cyclohexane	6.04	83	2753	0.25932 ppb	#	67
47)	Dibromomethane	6.22	93	1563	0.23812 ppb	#	64
48)	2-Chloroethyl vinyl ether	6.48	43	291	0.09628 ppb		100
49)	MIBK (methyl isobutyl ket	7.16	43	3302	0.12087 ppb		99
50)	1-Bromo-2-chloroethane	6.76	63	1563	0.19107 ppb		95
51)	Cis-1,3-Dichloropropene	6.96	75	3736	0.22579 ppb		93
52)	Toluene	7.29	91	9446	0.20605 ppb		99
53)	Trans-1,3-Dichloropropene	7.57	75	2507	0.18242 ppb	#	65
54)	1,1,2-TCA	7.74	83	1949	0.25718 ppb		74
55)	2-Hexanone	8.06	43	621	2.17932 ppb	#	67
58)	1,2-EDB	8.20	107	1684	0.18765 ppb		83
59)	Tetrachloroethene	7.86	166	2354	0.21461 ppb		86
60)	1-Chlorohexane	8.76	91	2521	0.22073 ppb	#	80
61)	1,1,1,2-Tetrachloroethane	8.83	131	2460	0.21734 ppb		73
62)	m&p-Xylene	8.99	106	7333	0.38356 ppb		97
63)	o-Xylene	9.38	106	3798	0.20387 ppb		89
64)	Styrene	9.40	104	3736	0.18088 ppb		97
66)	1,3-Dichloropropane	7.90	76	3119	0.18710 ppb		92
67)	Dibromochloromethane	8.12	129	2855	0.26820 ppb	#	67
68)	Chlorobenzene	8.73	112	7136	0.22044 ppb		90
69)	Ethylbenzene	8.87	91	11270	0.22233 ppb		83
70)	Bromoform	9.55	173	1561	0.23880 ppb	#	78
72)	Isopropylbenzene	9.76	105	8381	0.20278 ppb		96
73)	1,1,2,2-Tetrachloroethane	10.07	83	2450	0.22834 ppb	#	89
74)	1,2,3-Trichloropropane	10.09	110	388	0.19497 ppb		77
75)	t-1,4-Dichloro-2-Butene	10.13	53	431	0.18161 ppb		99
76)	Bromobenzene	10.01	156	2822	0.23486 ppb		79
77)	n-Propylbenzene	10.17	91	10528	0.21112 ppb		93
78)	4-Ethyltoluene	10.29	105	8383	0.20284 ppb		100
79)	2-Chlorotoluene	10.22	91	6736	0.20259 ppb		99
80)	1,3,5-Trimethylbenzene	10.36	105	6664	0.18589 ppb		91
81)	4-Chlorotoluene	10.34	91	7154	0.19369 ppb		96
82)	Tert-Butylbenzene	10.66	119	6274	0.22224 ppb		93
83)	1,2,4-Trimethylbenzene	10.72	105	6704	0.18648 ppb		98
84)	Sec-Butylbenzene	10.88	105	7761	0.19265 ppb		96
85)	p-Isopropyltoluene	11.04	119	7273	0.20733 ppb	#	86
86)	Benzyl Chloride	11.20	91	2547	0.23977 ppb	#	92
87)	1,3-DCB	10.96	146	5164	0.22202 ppb	#	82
88)	1,4-DCB	11.05	146	6248	0.25845 ppb		80
89)	n-Butylbenzene	11.44	91	6651	0.21569 ppb		95
90)	1,2-DCB	11.41	146	4363	0.19853 ppb		93
91)	Hexachloroethane	11.66	117	1924	0.24632 ppb		82
92)	1,2-Dibromo-3-chloropropan	12.18	157	266	0.16205 ppb	#	46
93)	1,2,4-Trichlorobenzene	13.00	180	3349	0.25053 ppb		93
94)	Hexachlorobutadiene	13.19	225	1567	0.29160 ppb		83
95)	Naphthalene	13.23	128	3965	0.26753 ppb		97
96)	1,2,3-Trichlorobenzene	13.47	180	2000	0.23855 ppb		98

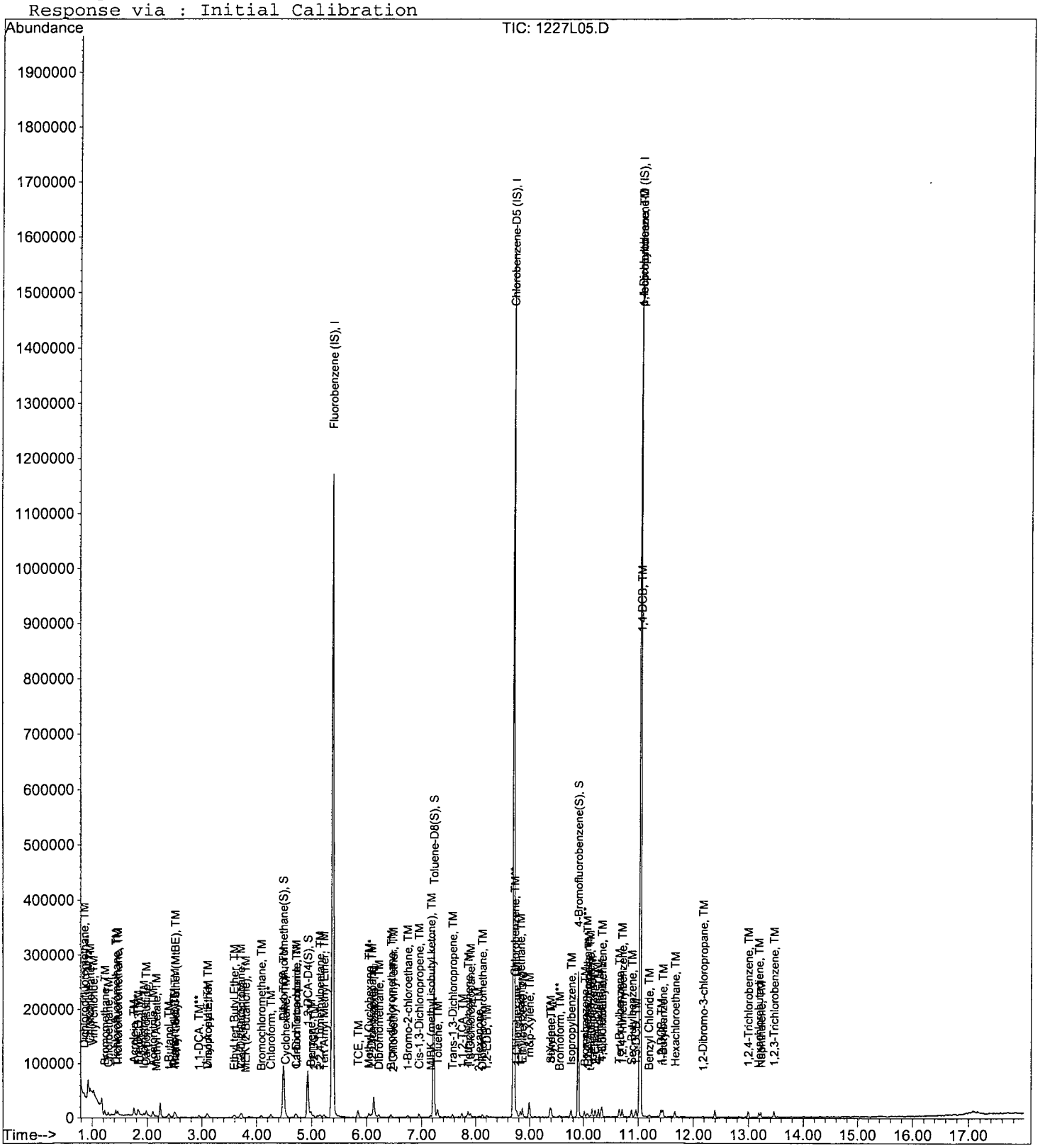
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161227\1227L05.D Vial: 4
Acq On : 27 Dec 16 14:16 Operator: PM,DG,SV,CMM
Sample : 0.3ug/L VOC STD 12/27/16AJ Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 28 7:43 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration



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Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161227\1227L06.D
Acq On : 27 Dec 16 14:44
Sample : 0.5ug/L VOC STD 12/27/16AK
Misc : W IS&S 11/21/16, 11/14/16

Vial: 5
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 28 7:43 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 07:42:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	570240	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	532864	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	277952	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	67042	5.76063 ppb		0.00
Spiked Amount 25.000			Recovery = 23.044%			
37) 1,2-DCA-D4(S)	4.92	65	66103	5.34222 ppb		0.00
Spiked Amount 25.000			Recovery = 21.368%			
57) Toluene-D8(S)	7.22	98	214286	5.19090 ppb		0.00
Spiked Amount 25.000			Recovery = 20.764%			
65) 4-Bromofluorobenzene(S)	9.89	95	74413	5.24658 ppb		0.00
Spiked Amount 25.000			Recovery = 20.988%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	4445	0.43454 ppb		91
3) Freon 114	0.93	85	2817	0.43362 ppb		79
4) Chloromethane	0.96	50	9345	0.53996 ppb		91
5) Vinyl chloride	1.03	62	6604	0.52367 ppb		99
6) Bromomethane	1.22	96	5331	0.61585 ppb		81
7) Chloroethane	1.29	64	4232	0.63092 ppb		92
8) Dichlorofluoromethane	1.42	67	12491	0.58036 ppb		94
9) Trichlorofluoromethane	1.46	101	6640	0.51993 ppb		87
10) Acrolein	1.76	56	21365	18.73536 ppb	#	98
11) Acetone	1.88	43	2644	-0.90135 ppb		98
12) Freon-113	1.85	101	3778	0.56366 ppb		95
13) 1,1-DCE	1.83	96	3196	0.52513 ppb	#	79
14) t-Butanol	2.40	59	6840	24.15941 ppb	#	88
15) Acetonitrile	2.11	41	26927	21.35432 ppb		96
16) Methyl Acetate	2.17	43	4463	0.61629 ppb	#	75
17) Iodomethane	1.93	142	2866	0.47608 ppb		92
18) Acrylonitrile	2.47	52	1444	0.55569 ppb	#	44
19) Methylene chloride	2.23	84	11041	-0.84241 ppb		91
20) Carbon disulfide	1.98	76	16498	0.66145 ppb		96
21) Methyl t-butyl ether (MtBE	2.52	73	11357	0.43808 ppb		95
22) Trans-1,2-DCE	2.50	96	5350	0.51320 ppb		83
23) Diisopropyl Ether	3.10	45	12644	0.37745 ppb		92
24) 1,1-DCA	2.95	63	9013	0.45513 ppb	#	90
25) Vinyl Acetate	3.10	43	3618	0.46000 ppb	#	87
26) Ethyl tert Butyl Ether	3.59	59	10371	0.38822 ppb		92
27) MEK (2-Butanone)	3.81	43	1783	0.67774 ppb		97
28) Cis-1,2-DCE	3.72	96	6688	0.55121 ppb		91
29) 2,2-Dichloropropane	3.70	77	2884	0.62229 ppb		93
30) Chloroform	4.26	83	9287	0.45930 ppb		92
31) Bromochloromethane	4.08	128	2633	0.46384 ppb		93
33) 1,1,1-TCA	4.47	97	6848	0.45880 ppb		96
34) Cyclohexane	4.53	41	2530	0.40342 ppb		80
35) 1,1-Dichloropropene	4.72	75	5156	0.42934 ppb	#	82
36) 2,2,4-Trimethylpentane	5.15	57	8963	0.49214 ppb	#	58
38) Carbon Tetrachloride	4.71	119	5565	0.49927 ppb		91
39) Tert Amyl Methyl Ether	5.23	73	9664	0.41305 ppb	#	95
40) 1,2-DCA	5.04	62	6454	0.44097 ppb		94
41) Benzene	4.98	78	17705	0.41243 ppb		97
42) TCE	5.84	95	3370	0.62598 ppb		89

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161227\1227L06.D Vial: 5
Acq On : 27 Dec 16 14:44 Operator: PM,DG,SV,CMM
Sample : 0.5ug/L VOC STD 12/27/16AK Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 28 7:43 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 07:42:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43)	2-Pentanone	6.12	43	101309	19.61307 ppb		98
44)	1,2-Dichloropropane	6.09	63	5020	0.40712 ppb	#	91
45)	Bromodichloromethane	6.44	83	6230	0.41936 ppb	#	94
46)	Methyl Cyclohexane	6.05	83	4774	0.45600 ppb		79
47)	Dibromomethane	6.21	93	2761	0.42654 ppb		89
48)	2-Chloroethyl vinyl ether	6.47	43	140	-0.10349 ppb		100
49)	MIBK (methyl isobutyl ket	7.16	43	3575	0.16587 ppb	#	91
50)	1-Bromo-2-chloroethane	6.75	63	3405	0.42209 ppb		99
51)	Cis-1,3-Dichloropropene	6.95	75	6678	0.40926 ppb		91
52)	Toluene	7.29	91	18604	0.41151 ppb		92
53)	Trans-1,3-Dichloropropene	7.57	75	5656	0.41733 ppb		100
54)	1,1,2-TCA	7.74	83	3376	0.45173 ppb		99
55)	2-Hexanone	8.06	43	908	2.28847 ppb	#	70
58)	1,2-EDB	8.20	107	3904	0.46203 ppb		87
59)	Tetrachloroethene	7.86	166	5115	0.49529 ppb		93
60)	1-Chlorohexane	8.76	91	5008	0.46571 ppb		97
61)	1,1,1,2-Tetrachloroethane	8.83	131	4667	0.43793 ppb		91
62)	m&p-Xylene	8.99	106	15062	0.83675 ppb		88
63)	o-Xylene	9.38	106	7335	0.41818 ppb		93
64)	Styrene	9.40	104	7334	0.37713 ppb		93
66)	1,3-Dichloropropane	7.90	76	6377	0.40629 ppb		99
67)	Dibromochloromethane	8.12	129	4644	0.46335 ppb		80
68)	Chlorobenzene	8.73	112	12912	0.42364 ppb		91
69)	Ethylbenzene	8.87	91	19299	0.40436 ppb		97
70)	Bromoform	9.55	173	3498	0.56836 ppb	#	76
72)	Isopropylbenzene	9.76	105	16926	0.42508 ppb		99
73)	1,1,2,2-Tetrachloroethane	10.07	83	4592	0.44424 ppb		96
74)	1,2,3-Trichloropropane	10.09	110	1224	0.63844 ppb		78
75)	t-1,4-Dichloro-2-Butene	10.13	53	998	0.43650 ppb		90
76)	Bromobenzene	10.01	156	4971	0.42944 ppb	#	70
77)	n-Propylbenzene	10.17	91	20121	0.41883 ppb		89
78)	4-Ethyltoluene	10.29	105	16672	0.41874 ppb		100
79)	2-Chlorotoluene	10.23	91	12871	0.40181 ppb		99
80)	1,3,5-Trimethylbenzene	10.36	105	13711	0.39700 ppb		92
81)	4-Chlorotoluene	10.34	91	14458	0.40632 ppb		94
82)	Tert-Butylbenzene	10.67	119	11517	0.42347 ppb		97
83)	1,2,4-Trimethylbenzene	10.72	105	14322	0.41353 ppb		96
84)	Sec-Butylbenzene	10.88	105	16852	0.43421 ppb		99
85)	p-Isopropyltoluene	11.04	119	14629	0.43287 ppb		99
86)	Benzyl Chloride	11.20	91	4038	0.39457 ppb		93
87)	1,3-DCB	10.96	146	10078	0.44975 ppb		99
88)	1,4-DCB	11.05	146	10983	0.47157 ppb	#	84
89)	n-Butylbenzene	11.44	91	13002	0.43768 ppb		94
90)	1,2-DCB	11.41	146	10139	0.47888 ppb		88
91)	Hexachloroethane	11.65	117	3259	0.43308 ppb		91
92)	1,2-Dibromo-3-chloropropan	12.17	157	781	0.49386 ppb	#	60
93)	1,2,4-Trichlorobenzene	13.00	180	5796	0.45005 ppb		96
94)	Hexachlorobutadiene	13.19	225	2662	0.51418 ppb		85
95)	Naphthalene	13.22	128	5898	0.41307 ppb		95
96)	1,2,3-Trichlorobenzene	13.46	180	3573	0.44236 ppb		94

(#) = qualifier out of range (m) = manual integration

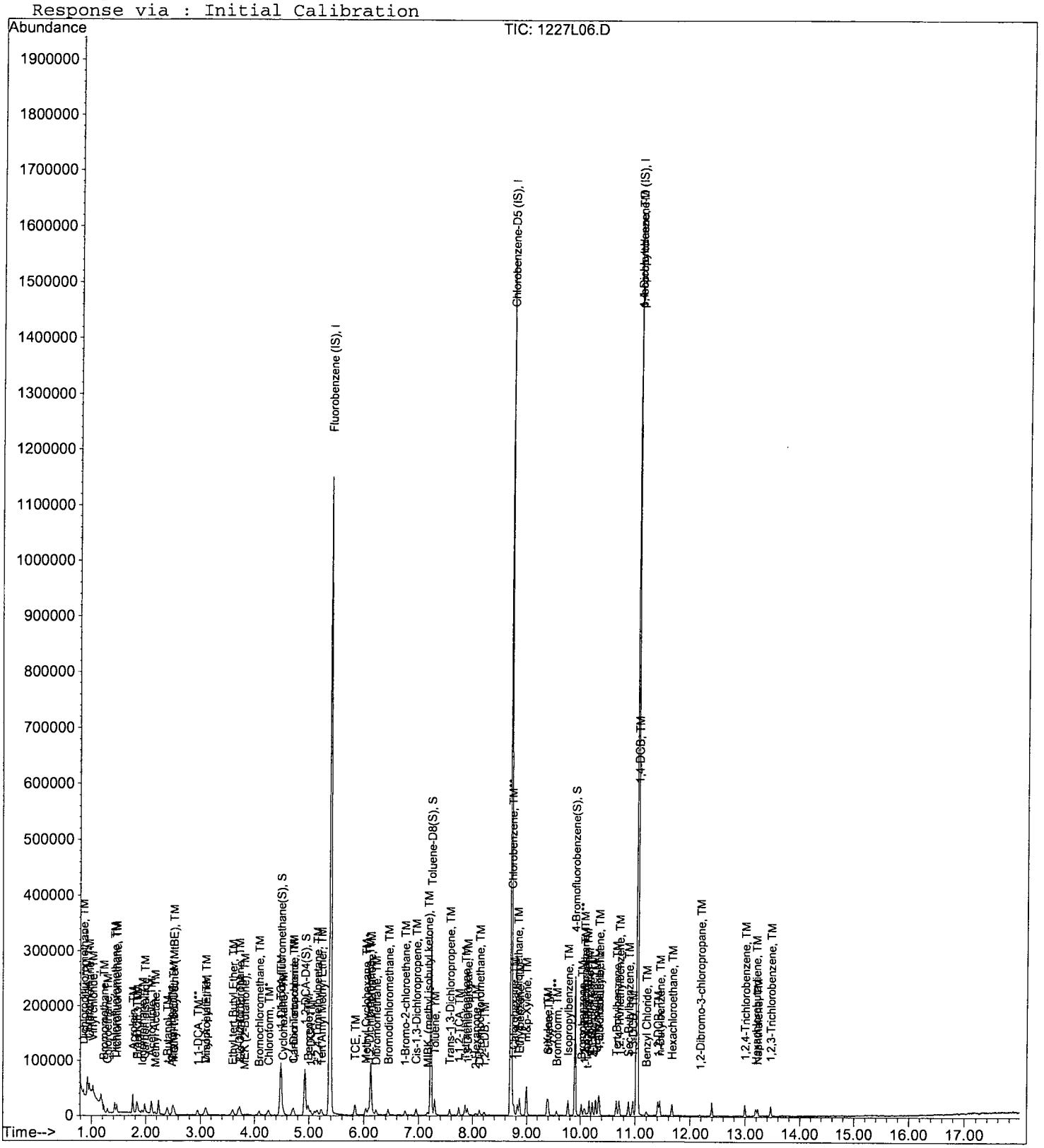
Quantitation Report

Data File : M:\LOKI\DATA\161227\1227L06.D
Acq On : 27 Dec 16 14:44
Sample : 0.5ug/L VOC STD 12/27/16AK
Misc : W IS&S 11/21/16, 11/14/16

Vial: 5
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 28 7:43 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161227\1227L07.D
Acq On : 27 Dec 16 15:12
Sample : 1.0ug/L VOC STD 12/27/16AL
Misc : W IS&S 11/21/16, 11/14/16

Vial: 6
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 28 7:43 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 07:42:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	565952	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	546752	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	298816	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	114442	9.90802 ppb		0.00
Spiked Amount 25.000			Recovery = 39.632%			
37) 1,2-DCA-D4(S)	4.92	65	111185	9.05368 ppb		0.00
Spiked Amount 25.000			Recovery = 36.216%			
57) Toluene-D8(S)	7.22	98	372964	8.80525 ppb		0.00
Spiked Amount 25.000			Recovery = 35.220%			
65) 4-Bromofluorobenzene(S)	9.89	95	122683	8.43020 ppb		0.00
Spiked Amount 25.000			Recovery = 33.720%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	9067	0.89309 ppb		95
3) Freon 114	0.93	85	5807	0.90063 ppb		91
4) Chloromethane	0.96	50	16209	0.94366 ppb		98
5) Vinyl chloride	1.02	62	13214	1.05576 ppb		93
6) Bromomethane	1.22	96	8347	0.97157 ppb		87
7) Chloroethane	1.29	64	8036	1.20711 ppb		95
8) Dichlorofluoromethane	1.43	67	23626	1.10604 ppb		94
9) Trichlorofluoromethane	1.46	101	13510	1.06589 ppb		98
10) Acrolein	1.75	56	43281	38.24147 ppb	#	97
11) Acetone	1.88	43	3412	-0.48542 ppb		90
12) Freon-113	1.84	101	8359	1.25657 ppb		90
13) 1,1-DCE	1.83	96	6165	1.02064 ppb	#	93
14) t-Butanol	2.40	59	13082	46.55672 ppb		97
15) Acetonitrile	2.10	41	47596	38.03176 ppb		99
16) Methyl Acetate	2.17	43	5646	0.78555 ppb		95
17) Iodomethane	1.93	142	5654	0.94632 ppb		95
18) Acrylonitrile	2.48	52	1910	0.74059 ppb		82
19) Methylene chloride	2.24	84	19037	-0.12799 ppb		88
20) Carbon disulfide	1.98	76	29274	1.18257 ppb		98
21) Methyl t-butyl ether (MtBE	2.52	73	21445	0.83348 ppb		94
22) Trans-1,2-DCE	2.50	96	9476	0.91587 ppb		98
23) Diisopropyl Ether	3.10	45	25471	0.76613 ppb		98
24) 1,1-DCA	2.95	63	17318	0.88114 ppb		92
25) Vinyl Acetate	3.09	43	6420	0.82245 ppb		100
26) Ethyl tert Butyl Ether	3.58	59	20481	0.77248 ppb		96
27) MEK (2-Butanone)	3.82	43	2879	1.03031 ppb		95
28) Cis-1,2-DCE	3.73	96	11787	0.97881 ppb		84
29) 2,2-Dichloropropane	3.70	77	4320	0.93921 ppb		97
30) Chloroform	4.26	83	17960	0.89496 ppb		87
31) Bromochloromethane	4.09	128	5021	0.89122 ppb		88
33) 1,1,1-TCA	4.47	97	12983	0.87642 ppb		89
34) Cyclohexane	4.52	41	5438	0.87368 ppb	#	59
35) 1,1-Dichloropropene	4.72	75	9772	0.81989 ppb		96
36) 2,2,4-Trimethylpentane	5.15	57	17049	0.94323 ppb	#	58
38) Carbon Tetrachloride	4.70	119	10168	0.91915 ppb		85
39) Tert Amyl Methyl Ether	5.22	73	18678	0.80437 ppb	#	90
40) 1,2-DCA	5.03	62	11612	0.79940 ppb		95
41) Benzene	4.99	78	36383	0.85395 ppb		95
42) TCE	5.84	95	5628	1.05333 ppb		93

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161227\1227L07.D
Acq On : 27 Dec 16 15:12
Sample : 1.0ug/L VOC STD 12/27/16AL
Misc : W IS&S 11/21/16, 11/14/16

Vial: 6
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 28 7:43 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 07:42:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43)	2-Pentanone	6.12	43	204141	39.82043 ppb		100
44)	1,2-Dichloropropane	6.09	63	10240	0.83675 ppb		99
45)	Bromodichloromethane	6.44	83	12201	0.82751 ppb	#	83
46)	Methyl Cyclohexane	6.04	83	9395	0.90418 ppb		100
47)	Dibromomethane	6.22	93	5463	0.85036 ppb		92
48)	2-Chloroethyl vinyl ether	6.48	43	769	0.75938 ppb		100
49)	MIBK (methyl isobutyl ket	7.15	43	9520	1.01556 ppb		92
50)	1-Bromo-2-chloroethane	6.75	63	6981	0.87194 ppb		93
51)	Cis-1,3-Dichloropropene	6.95	75	13200	0.81509 ppb		94
52)	Toluene	7.29	91	37483	0.83538 ppb		99
53)	Trans-1,3-Dichloropropene	7.56	75	11308	0.84069 ppb		91
54)	1,1,2-TCA	7.74	83	6879	0.92743 ppb		89
55)	2-Hexanone	8.05	43	1288	2.43238 ppb	#	97
58)	1,2-EDB	8.20	107	7019	0.80959 ppb		95
59)	Tetrachloroethene	7.86	166	10496	0.99052 ppb		93
60)	1-Chlorohexane	8.76	91	9102	0.82493 ppb		94
61)	1,1,1,2-Tetrachloroethane	8.83	131	8971	0.82041 ppb		98
62)	m&p-Xylene	8.99	106	28264	1.53029 ppb		93
63)	o-Xylene	9.38	106	14432	0.80189 ppb		93
64)	Styrene	9.40	104	15501	0.77684 ppb		98
66)	1,3-Dichloropropane	7.90	76	12244	0.76027 ppb		97
67)	Dibromochloromethane	8.12	129	9497	0.92348 ppb		78
68)	Chlorobenzene	8.73	112	27936	0.89330 ppb		92
69)	Ethylbenzene	8.87	91	40461	0.82622 ppb		96
70)	Bromoform	9.55	173	5388	0.85321 ppb		81
72)	Isopropylbenzene	9.76	105	33350	0.77908 ppb		99
73)	1,1,2,2-Tetrachloroethane	10.07	83	9000	0.80988 ppb		98
74)	1,2,3-Trichloropropane	10.09	110	1697	0.82335 ppb		86
75)	t-1,4-Dichloro-2-Butene	10.13	53	1866	0.75915 ppb	#	65
76)	Bromobenzene	10.02	156	10523	0.84559 ppb		92
77)	n-Propylbenzene	10.17	91	39746	0.76956 ppb		98
78)	4-Ethyltoluene	10.29	105	34070	0.79597 ppb		98
79)	2-Chlorotoluene	10.23	91	25860	0.75093 ppb		87
80)	1,3,5-Trimethylbenzene	10.36	105	28435	0.76585 ppb		99
81)	4-Chlorotoluene	10.34	91	29831	0.77981 ppb		94
82)	Tert-Butylbenzene	10.67	119	22824	0.78062 ppb		93
83)	1,2,4-Trimethylbenzene	10.72	105	27478	0.73799 ppb		98
84)	Sec-Butylbenzene	10.88	105	32059	0.76836 ppb		100
85)	p-Isopropyltoluene	11.04	119	26954	0.74187 ppb		93
86)	Benzyl Chloride	11.20	91	9337	0.84866 ppb		90
87)	1,3-DCB	10.96	146	19458	0.80772 ppb		97
88)	1,4-DCB	11.05	146	22267	0.88931 ppb		96
89)	n-Butylbenzene	11.44	91	24471	0.76623 ppb		96
90)	1,2-DCB	11.41	146	20350	0.89405 ppb		98
91)	Hexachloroethane	11.66	117	6747	0.83400 ppb		91
92)	1,2-Dibromo-3-chloropropan	12.18	157	1733	1.01934 ppb	#	85
93)	1,2,4-Trichlorobenzene	13.00	180	10952	0.79103 ppb		90
94)	Hexachlorobutadiene	13.19	225	4783	0.85936 ppb		91
95)	Naphthalene	13.22	128	11100	0.72311 ppb		98
96)	1,2,3-Trichlorobenzene	13.47	180	7333	0.84449 ppb		92

(#) = qualifier out of range (m) = manual integration

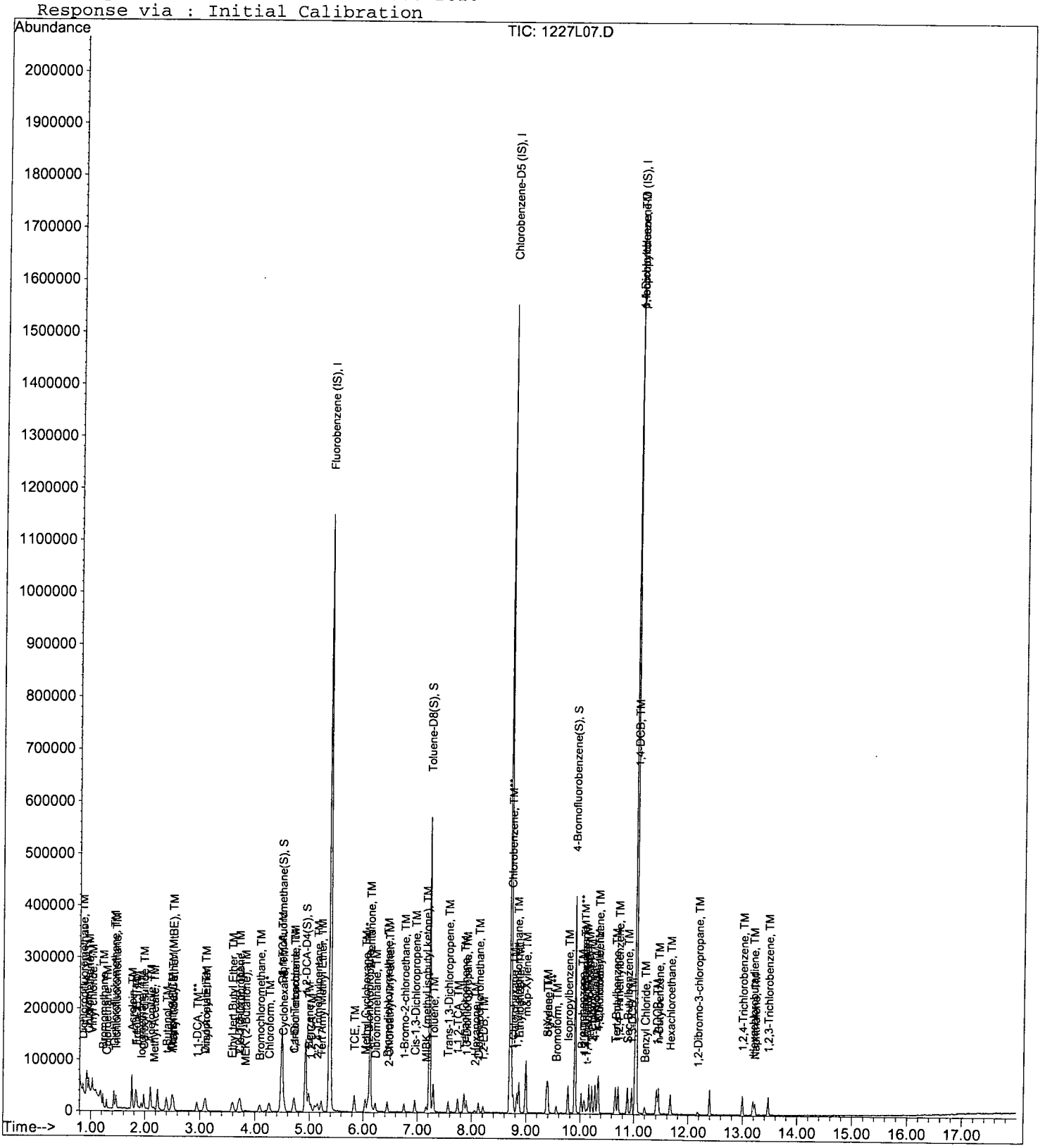
Quantitation Report

Data File : M:\LOKI\DATA\161227\1227L07.D
Acq On : 27 Dec 16 15:12
Sample : 1.0ug/L VOC STD 12/27/16AL
Misc : W IS&S 11/21/16, 11/14/16

Vial: 6
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 28 7:43 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161227\1227L08.D
Acq On : 27 Dec 16 15:40
Sample : 2.0ug/L VOC STD 12/27/16AM
Misc : W IS&S 11/21/16, 11/14/16

Vial: 7
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 28 7:43 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 07:42:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	573632	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	552960	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	306560	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	113193	9.66868 ppb		0.00
Spiked Amount 25.000			Recovery = 38.676%			
37) 1,2-DCA-D4(S)	4.92	65	108499	8.71668 ppb		0.00
Spiked Amount 25.000			Recovery = 34.868%			
57) Toluene-D8(S)	7.22	98	374934	8.75238 ppb		0.00
Spiked Amount 25.000			Recovery = 35.008%			
65) 4-Bromofluorobenzene(S)	9.89	95	126975	8.62717 ppb		0.00
Spiked Amount 25.000			Recovery = 34.508%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	20008	1.94438 ppb		95
3) Freon 114	0.93	85	12579	1.92481 ppb		98
4) Chloromethane	0.96	50	29630	1.70192 ppb		100
5) Vinyl chloride	1.02	62	25006	1.97116 ppb		92
6) Bromomethane	1.22	96	18512	2.12590 ppb		99
7) Chloroethane	1.29	64	15962	2.36560 ppb		98
8) Dichlorofluoromethane	1.43	67	46719	2.15784 ppb		99
9) Trichlorofluoromethane	1.46	101	30504	2.37442 ppb		90
10) Acrolein	1.75	56	64218	55.98096 ppb		100
11) Acetone	1.88	43	5506	0.58112 ppb		99
12) Freon-113	1.84	101	15564	2.30833 ppb		89
13) 1,1-DCE	1.83	96	13103	2.14022 ppb		96
14) t-Butanol	2.40	59	19312	67.80813 ppb		94
15) Acetonitrile	2.10	41	73433	57.89132 ppb		96
16) Methyl Acetate	2.17	43	12512	1.71754 ppb		98
17) Iodomethane	1.93	142	12542	2.07108 ppb		98
18) Acrylonitrile	2.47	52	4573	1.74940 ppb		95
19) Methylene chloride	2.23	84	27985	0.63015 ppb		92
20) Carbon disulfide	1.98	76	58460	2.32998 ppb		97
21) Methyl t-butyl ether (MtBE	2.52	73	44408	1.70285 ppb		96
22) Trans-1,2-DCE	2.50	96	19489	1.85843 ppb		88
23) Diisopropyl Ether	3.10	45	49979	1.48316 ppb		99
24) 1,1-DCA	2.95	63	33473	1.68031 ppb		99
25) Vinyl Acetate	3.10	43	11732	1.48283 ppb	#	90
26) Ethyl tert Butyl Ether	3.59	59	40585	1.51026 ppb		94
27) MEK (2-Butanone)	3.82	43	5842	1.94711 ppb		85
28) Cis-1,2-DCE	3.73	96	21798	1.78591 ppb		93
29) 2,2-Dichloropropane	3.71	77	8273	1.77454 ppb		93
30) Chloroform	4.25	83	34408	1.69162 ppb		87
31) Bromochloromethane	4.08	128	10764	1.88501 ppb		85
33) 1,1,1-TCA	4.47	97	27053	1.80177 ppb		92
34) Cyclohexane	4.52	41	9702	1.53788 ppb		95
35) 1,1-Dichloropropene	4.72	75	19588	1.62146 ppb		89
36) 2,2,4-Trimethylpentane	5.15	57	33637	1.83604 ppb	#	58
38) Carbon Tetrachloride	4.70	119	21599	1.92634 ppb		93
39) Tert Amyl Methyl Ether	5.23	73	38560	1.63837 ppb		98
40) 1,2-DCA	5.03	62	24309	1.65109 ppb		98
41) Benzene	4.98	78	71121	1.64695 ppb		96
42) TCE	5.84	95	10404	1.92113 ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161227\1227L08.D Vial: 7
Acq On : 27 Dec 16 15:40 Operator: PM,DG,SV,CMM
Sample : 2.0ug/L VOC STD 12/27/16AM Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 28 7:43 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 07:42:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	2-Pentanone	6.12	43	314760	60.57612	ppb		99
44)	1,2-Dichloropropane	6.09	63	19227	1.55007	ppb		99
45)	Bromodichloromethane	6.44	83	25839	1.72901	ppb		98
46)	Methyl Cyclohexane	6.04	83	19391	1.84123	ppb		99
47)	Dibromomethane	6.22	93	11721	1.80004	ppb		91
48)	2-Chloroethyl vinyl ether	6.50	43	285	0.09130	ppb		100
49)	MIBK (methyl isobutyl ket	7.16	43	16128	1.92503	ppb	#	88
50)	1-Bromo-2-chloroethane	6.75	63	13507	1.66447	ppb		94
51)	Cis-1,3-Dichloropropene	6.95	75	25669	1.56381	ppb		97
52)	Toluene	7.29	91	77663	1.70770	ppb		99
53)	Trans-1,3-Dichloropropene	7.56	75	20918	1.53433	ppb		100
54)	1,1,2-TCA	7.74	83	12239	1.62798	ppb		91
55)	2-Hexanone	8.05	43	3213	3.13253	ppb	#	82
58)	1,2-EDB	8.21	107	13722	1.56496	ppb		91
59)	Tetrachloroethene	7.86	166	18360	1.71320	ppb		97
60)	1-Chlorohexane	8.76	91	17787	1.59396	ppb		97
61)	1,1,1,2-Tetrachloroethane	8.83	131	18385	1.66246	ppb		95
62)	m&p-Xylene	8.99	106	58329	3.12264	ppb		91
63)	o-Xylene	9.38	106	25936	1.42491	ppb		90
64)	Styrene	9.40	104	30504	1.51156	ppb		97
66)	1,3-Dichloropropane	7.90	76	24674	1.51489	ppb		95
67)	Dibromochloromethane	8.12	129	17237	1.65730	ppb		96
68)	Chlorobenzene	8.73	112	52711	1.66659	ppb		98
69)	Ethylbenzene	8.87	91	76442	1.54342	ppb		98
70)	Bromoform	9.55	173	10515	1.64640	ppb		98
72)	Isopropylbenzene	9.76	105	67938	1.54699	ppb		98
73)	1,1,2,2-Tetrachloroethane	10.07	83	18201	1.59648	ppb		91
74)	1,2,3-Trichloropropane	10.09	110	3230	1.52755	ppb		84
75)	t-1,4-Dichloro-2-Butene	10.13	53	3513	1.39310	ppb		95
76)	Bromobenzene	10.02	156	21057	1.64932	ppb		87
77)	n-Propylbenzene	10.17	91	79110	1.49303	ppb		97
78)	4-Ethyltoluene	10.29	105	69079	1.57310	ppb		97
79)	2-Chlorotoluene	10.23	91	52349	1.48173	ppb		100
80)	1,3,5-Trimethylbenzene	10.36	105	58443	1.53430	ppb		98
81)	4-Chlorotoluene	10.34	91	58405	1.48819	ppb		93
82)	Tert-Butylbenzene	10.67	119	49487	1.64978	ppb		99
83)	1,2,4-Trimethylbenzene	10.72	105	59726	1.56357	ppb		96
84)	Sec-Butylbenzene	10.88	105	67917	1.58665	ppb		99
85)	p-Isopropyltoluene	11.04	119	60434	1.62134	ppb		98
86)	Benzyl Chloride	11.20	91	19455	1.72363	ppb		94
87)	1,3-DCB	10.96	146	40420	1.63548	ppb		97
88)	1,4-DCB	11.05	146	42786	1.66563	ppb		99
89)	n-Butylbenzene	11.44	91	50106	1.52928	ppb		96
90)	1,2-DCB	11.41	146	37765	1.61725	ppb		93
91)	Hexachloroethane	11.66	117	13466	1.62249	ppb		89
92)	1,2-Dibromo-3-chloropropan	12.17	157	2896	1.66038	ppb		93
93)	1,2,4-Trichlorobenzene	13.00	180	23000	1.61926	ppb		96
94)	Hexachlorobutadiene	13.19	225	9891	1.73222	ppb		90
95)	Naphthalene	13.22	128	25312	1.60730	ppb		97
96)	1,2,3-Trichlorobenzene	13.46	180	14225	1.59681	ppb		99

(#) = qualifier out of range (m) = manual integration

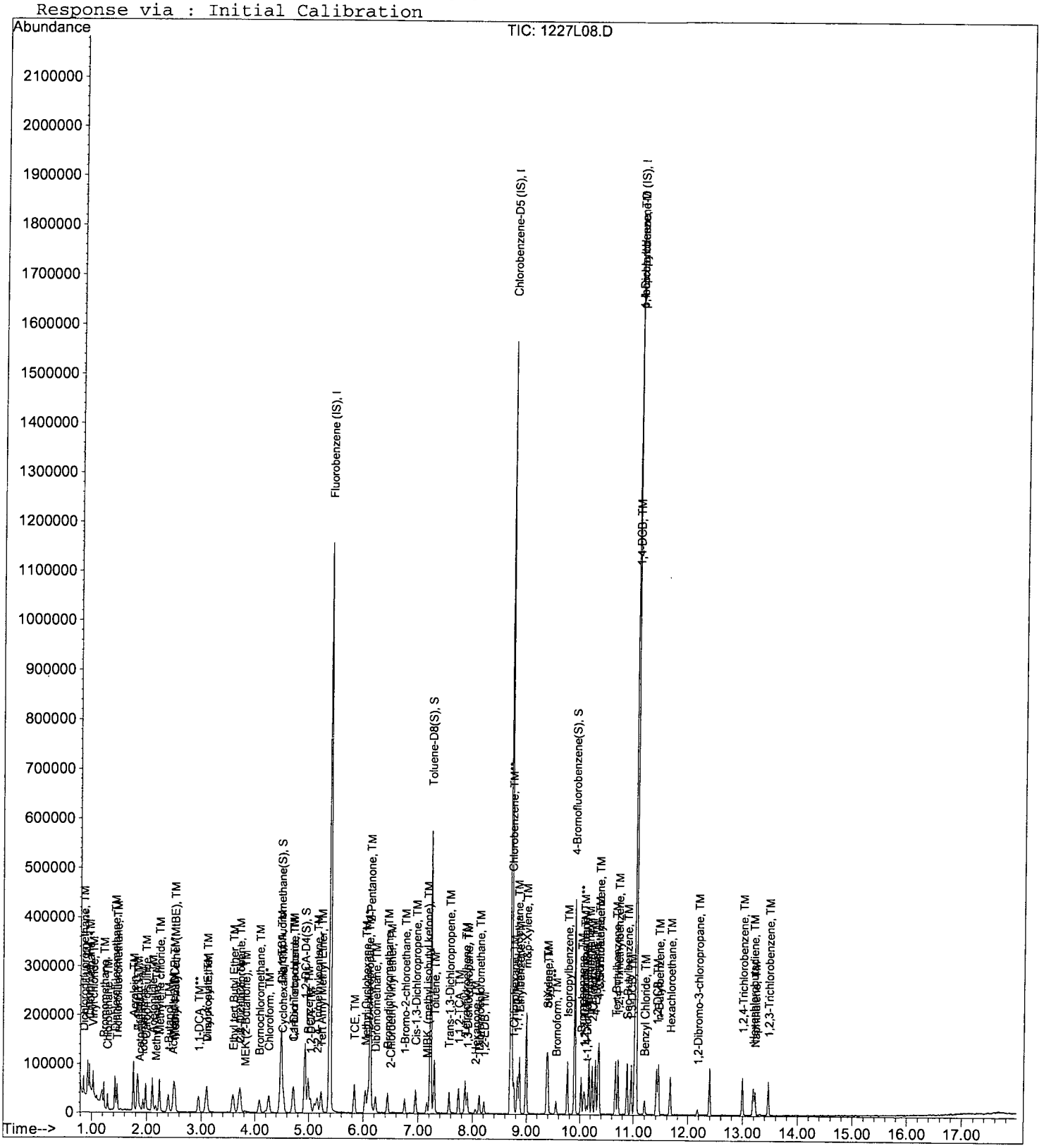
Quantitation Report

Data File : M:\LOKI\DATA\161227\1227L08.D
Acq On : 27 Dec 16 15:40
Sample : 2.0ug/L VOC STD 12/27/16AM
Misc : W IS&S 11/21/16, 11/14/16

Vial: 7
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 28 7:43 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161227\1227L09.D Vial: 8
Acq On : 27 Dec 16 16:08 Operator: PM,DG,SV,CMM
Sample : 5.0ug/L VOC STD 12/27/16AN Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 28 7:43 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 07:42:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	588416	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	558016	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	319680	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	301477	25.10445 ppb		0.00
Spiked Amount 25.000			Recovery = 100.416%			
37) 1,2-DCA-D4(S)	4.93	65	298377	23.36896 ppb		0.00
Spiked Amount 25.000			Recovery = 93.476%			
57) Toluene-D8(S)	7.22	98	1035649	23.95693 ppb		0.00
Spiked Amount 25.000			Recovery = 95.828%			
65) 4-Bromofluorobenzene(S)	9.89	95	360674	24.28354 ppb		0.00
Spiked Amount 25.000			Recovery = 97.136%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	49696	4.70812 ppb		95
3) Freon 114	0.93	85	35776	5.33682 ppb		100
4) Chloromethane	0.96	50	72385	4.05327 ppb		99
5) Vinyl chloride	1.02	62	66566	5.11539 ppb		96
6) Bromomethane	1.22	96	43840	4.90805 ppb		95
7) Chloroethane	1.29	64	39130	5.65345 ppb		98
8) Dichlorofluoromethane	1.43	67	119992	5.40290 ppb		97
9) Trichlorofluoromethane	1.46	101	73823	5.60199 ppb		95
10) Acrolein	1.75	56	84774	72.04355 ppb	#	99
11) Acetone	1.88	43	13314	4.47367 ppb		94
12) Freon-113	1.84	101	40832	5.90373 ppb		94
13) 1,1-DCE	1.83	96	35136	5.59485 ppb		96
14) t-Butanol	2.39	59	25400	86.94350 ppb		93
15) Acetonitrile	2.10	41	97070	74.60296 ppb		98
16) Methyl Acetate	2.17	43	33786	4.52134 ppb		100
17) Iodomethane	1.93	142	33704	5.42575 ppb		98
18) Acrylonitrile	2.47	52	10624	3.96210 ppb		95
19) Methylene chloride	2.23	84	66363	3.83299 ppb		90
20) Carbon disulfide	1.98	76	153007	5.94501 ppb		98
21) Methyl t-butyl ether (MtBE	2.52	73	118555	4.43185 ppb		99
22) Trans-1,2-DCE	2.50	96	50594	4.70333 ppb		96
23) Diisopropyl Ether	3.10	45	135556	3.92164 ppb		98
24) 1,1-DCA	2.95	63	87340	4.27422 ppb		98
25) Vinyl Acetate	3.08	43	31636	3.89806 ppb	#	90
26) Ethyl tert Butyl Ether	3.59	59	115341	4.18425 ppb		98
27) MEK (2-Butanone)	3.80	43	12822	4.03467 ppb		97
28) Cis-1,2-DCE	3.73	96	55301	4.41697 ppb		96
29) 2,2-Dichloropropane	3.70	77	22928	4.79444 ppb		98
30) Chloroform	4.25	83	94199	4.51479 ppb		95
31) Bromochloromethane	4.09	128	26455	4.51646 ppb		95
33) 1,1,1-TCA	4.47	97	72407	4.70124 ppb		96
34) Cyclohexane	4.52	41	25561	3.94992 ppb		96
35) 1,1-Dichloropropene	4.72	75	55359	4.46739 ppb		98
36) 2,2,4-Trimethylpentane	5.15	57	91663	4.87761 ppb		93
38) Carbon Tetrachloride	4.70	119	55191	4.79861 ppb		97
39) Tert Amyl Methyl Ether	5.22	73	106128	4.39595 ppb		98
40) 1,2-DCA	5.03	62	63661	4.21528 ppb		97
41) Benzene	4.99	78	193858	4.37638 ppb		98
42) TCE	5.83	95	24936	4.48881 ppb		96

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161227\1227L09.D Vial: 8
Acq On : 27 Dec 16 16:08 Operator: PM,DG,SV,CMM
Sample : 5.0ug/L VOC STD 12/27/16AN Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 28 7:43 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 07:42:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	2-Pentanone	6.12	43	421945	79.16381	ppb		99
44)	1,2-Dichloropropane	6.09	63	50241	3.94864	ppb	#	94
45)	Bromodichloromethane	6.44	83	66328	4.32681	ppb	#	90
46)	Methyl Cyclohexane	6.04	83	52281	4.83949	ppb		99
47)	Dibromomethane	6.22	93	30511	4.56796	ppb		97
49)	MIBK (methyl isobutyl ket	7.15	43	34340	4.36043	ppb		97
50)	1-Bromo-2-chloroethane	6.75	63	36600	4.39690	ppb		99
51)	Cis-1,3-Dichloropropene	6.95	75	71555	4.24977	ppb		98
52)	Toluene	7.29	91	219167	4.69808	ppb		100
53)	Trans-1,3-Dichloropropene	7.56	75	61707	4.41247	ppb		97
54)	1,1,2-TCA	7.74	83	36454	4.72714	ppb		91
55)	2-Hexanone	8.05	43	8725	5.07525	ppb		96
58)	1,2-EDB	8.20	107	40154	4.53798	ppb		98
59)	Tetrachloroethene	7.85	166	54118	5.00408	ppb		92
60)	1-Chlorohexane	8.76	91	51554	4.57810	ppb		95
61)	1,1,1,2-Tetrachloroethane	8.83	131	52166	4.67436	ppb		96
62)	m&p-Xylene	8.99	106	172897	9.17218	ppb		99
63)	o-Xylene	9.38	106	81975	4.46285	ppb		98
64)	Styrene	9.40	104	89520	4.39576	ppb		98
66)	1,3-Dichloropropane	7.90	76	70312	4.27776	ppb		98
67)	Dibromochloromethane	8.12	129	48592	4.62968	ppb		94
68)	Chlorobenzene	8.73	112	144859	4.53859	ppb		98
69)	Ethylbenzene	8.87	91	219184	4.38540	ppb		100
70)	Bromoform	9.55	173	30435	4.72222	ppb		97
72)	Isopropylbenzene	9.76	105	199972	4.36661	ppb		95
73)	1,1,2,2-Tetrachloroethane	10.07	83	50128	4.21647	ppb		98
74)	1,2,3-Trichloropropane	10.09	110	8815	3.99775	ppb		89
75)	t-1,4-Dichloro-2-Butene	10.13	53	10999	4.18270	ppb	#	77
76)	Bromobenzene	10.01	156	61832	4.64432	ppb		96
77)	n-Propylbenzene	10.17	91	239980	4.34324	ppb		99
78)	4-Ethyltoluene	10.28	105	213026	4.65204	ppb		99
79)	2-Chlorotoluene	10.22	91	155977	4.23370	ppb		98
80)	1,3,5-Trimethylbenzene	10.35	105	178970	4.50564	ppb		99
81)	4-Chlorotoluene	10.34	91	183801	4.49114	ppb		98
82)	Tert-Butylbenzene	10.66	119	140141	4.48022	ppb		98
83)	1,2,4-Trimethylbenzene	10.72	105	177061	4.44504	ppb		98
84)	Sec-Butylbenzene	10.88	105	201737	4.51948	ppb		96
85)	p-Isopropyltoluene	11.04	119	176405	4.53841	ppb		99
86)	Benzyl Chloride	11.20	91	52458	4.45682	ppb		97
87)	1,3-DCB	10.96	146	116455	4.51864	ppb		98
88)	1,4-DCB	11.05	146	119696	4.46846	ppb		98
89)	n-Butylbenzene	11.44	91	149161	4.36568	ppb		96
90)	1,2-DCB	11.41	146	111724	4.58811	ppb		96
91)	Hexachloroethane	11.66	117	38483	4.44643	ppb		92
92)	1,2-Dibromo-3-chloropropan	12.17	157	7562	4.15763	ppb		96
93)	1,2,4-Trichlorobenzene	13.00	180	65597	4.42867	ppb		97
94)	Hexachlorobutadiene	13.19	225	26295	4.41608	ppb		92
95)	Naphthalene	13.22	128	67336	4.10033	ppb		100
96)	1,2,3-Trichlorobenzene	13.46	180	37984	4.08884	ppb		95

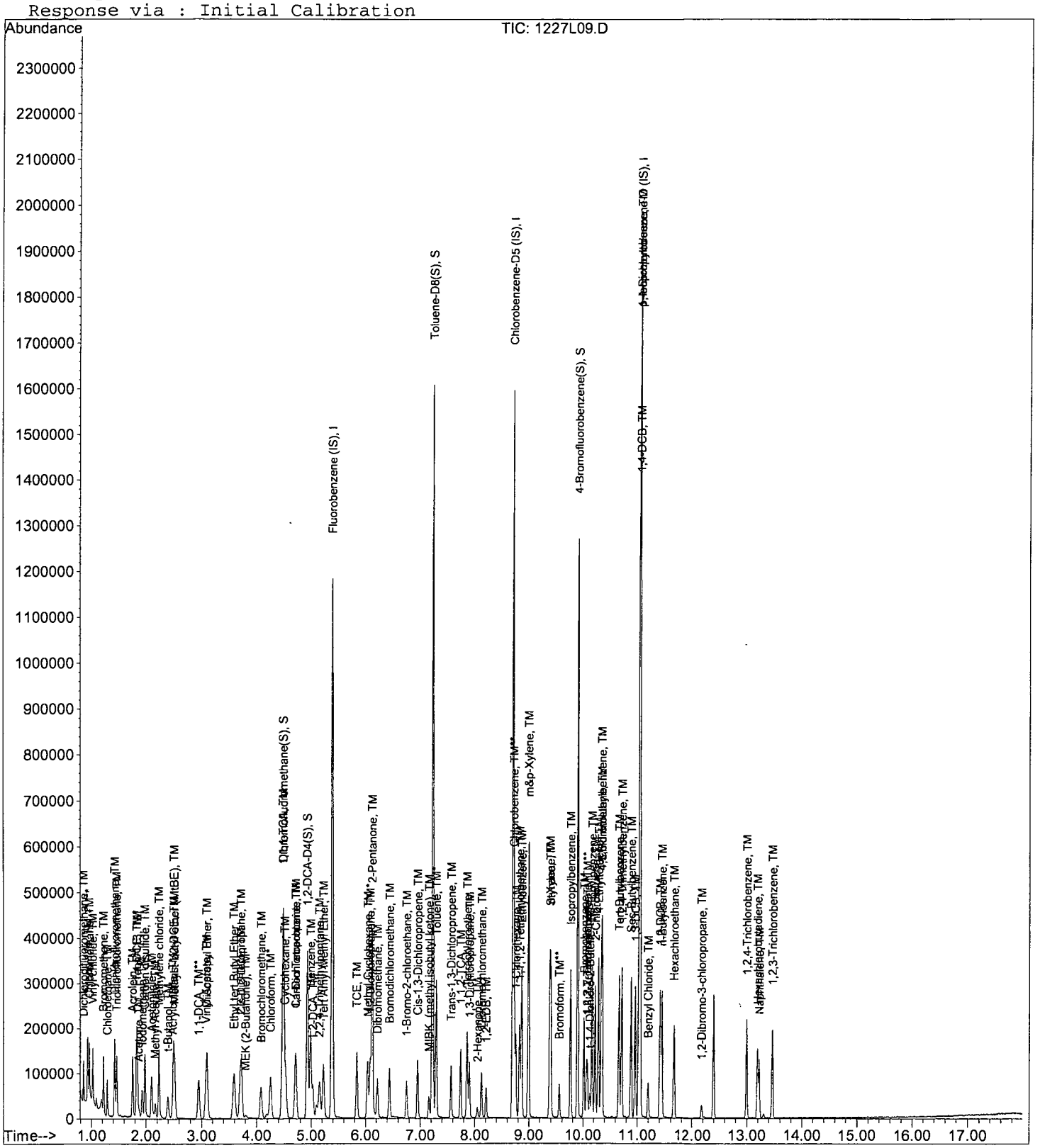
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161227\1227L09.D Vial: 8
Acq On : 27 Dec 16 16:08 Operator: PM,DG,SV,CMM
Sample : 5.0ug/L VOC STD 12/27/16AN Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 28 7:43 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration



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Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161227\1227L10.D Vial: 9
Acq On : 27 Dec 16 16:36 Operator: PM,DG,SV,CMM
Sample : 10ug/L VOC STD 12/27/16AO Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 28 7:43 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 07:42:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	593920	25.00000 ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	548032	25.00000 ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	323712	25.00000 ppb	0.00
System Monitoring Compounds					
32) Dibromofluoromethane(S)	4.48	111	307096	25.33537 ppb	0.00
Spiked Amount 25.000			Recovery = 101.340%		
37) 1,2-DCA-D4(S)	4.93	65	294376	22.84194 ppb	0.00
Spiked Amount 25.000			Recovery = 91.368%		
57) Toluene-D8(S)	7.22	98	1054834	24.84525 ppb	0.00
Spiked Amount 25.000			Recovery = 99.380%		
65) 4-Bromofluorobenzene(S)	9.89	95	382018	26.18917 ppb	0.00
Spiked Amount 25.000			Recovery = 104.756%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.85	85	100936	9.47391 ppb	100
3) Freon 114	0.93	85	66137	9.77444 ppb	100
4) Chloromethane	0.96	50	147329	8.17338 ppb	100
5) Vinyl chloride	1.02	62	135286	10.29995 ppb	100
6) Bromomethane	1.22	96	93816	10.40571 ppb	100
7) Chloroethane	1.29	64	80878	11.57686 ppb	100
8) Dichlorofluoromethane	1.42	67	237283	10.58516 ppb	100
9) Trichlorofluoromethane	1.46	101	146349	11.00264 ppb	100
10) Acrolein	1.75	56	108383	91.25362 ppb	100
11) Acetone	1.88	43	24261	9.91798 ppb	100
12) Freon-113	1.84	101	81737	11.70850 ppb	100
13) 1,1-DCE	1.83	96	66640	10.51302 ppb	100
14) t-Butanol	2.40	59	33200	112.58953 ppb	100
15) Acetonitrile	2.10	41	117763	89.66778 ppb	100
16) Methyl Acetate	2.17	43	60128	7.97193 ppb	100
17) Iodomethane	1.93	142	72616	11.58156 ppb	100
18) Acrylonitrile	2.48	52	21682	8.01113 ppb	100
19) Methylene chloride	2.23	84	123265	8.57555 ppb	100
20) Carbon disulfide	1.98	76	304102	11.70624 ppb	100
21) Methyl t-butyl ether (MtBE	2.52	73	234076	8.66919 ppb	100
22) Trans-1,2-DCE	2.50	96	99562	9.16972 ppb	100
23) Diisopropyl Ether	3.10	45	271832	7.79123 ppb	100
24) 1,1-DCA	2.95	63	171805	8.32983 ppb	100
25) Vinyl Acetate	3.09	43	60752	7.41625 ppb	100
26) Ethyl tert Butyl Ether	3.59	59	228402	8.20900 ppb	100
27) MEK (2-Butanone)	3.80	43	26568	8.16116 ppb	100
28) Cis-1,2-DCE	3.73	96	113781	9.00363 ppb	100
29) 2,2-Dichloropropane	3.70	77	44224	9.16192 ppb	100
30) Chloroform	4.25	83	190552	9.04818 ppb	100
31) Bromochloromethane	4.08	128	54064	9.14439 ppb	100
33) 1,1,1-TCA	4.47	97	141234	9.08505 ppb	100
34) Cyclohexane	4.53	41	49993	7.65378 ppb	100
35) 1,1-Dichloropropene	4.72	75	108518	8.67609 ppb	100
36) 2,2,4-Trimethylpentane	5.15	57	175117	9.23204 ppb	100
38) Carbon Tetrachloride	4.70	119	111484	9.60321 ppb	100
39) Tert Amyl Methyl Ether	5.22	73	215043	8.82480 ppb	100
40) 1,2-DCA	5.03	62	123782	8.12021 ppb	100
41) Benzene	4.99	78	388685	8.69331 ppb	100
42) TCE	5.84	95	54376	9.69769 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161227\1227L10.D Vial: 9
Acq On : 27 Dec 16 16:36 Operator: PM,DG,SV,CMM
Sample : 10ug/L VOC STD 12/27/16AO Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 28 7:43 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 07:42:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
43)	2-Pentanone	6.12	43	556641	103.46717	ppb	100
44)	1,2-Dichloropropane	6.09	63	102769	8.00217	ppb	100
45)	Bromodichloromethane	6.44	83	134408	8.68666	ppb	100
46)	Methyl Cyclohexane	6.04	83	101218	9.28261	ppb	100
47)	Dibromomethane	6.22	93	58842	8.72790	ppb	100
48)	2-Chloroethyl vinyl ether	6.48	43	5917	7.42814	ppb	100
49)	MIBK (methyl isobutyl ket	7.16	43	61604	8.01335	ppb	100
50)	1-Bromo-2-chloroethane	6.75	63	69216	8.23812	ppb	100
51)	Cis-1,3-Dichloropropene	6.95	75	144194	8.48455	ppb	100
52)	Toluene	7.29	91	433239	9.20088	ppb	100
53)	Trans-1,3-Dichloropropene	7.56	75	121835	8.63130	ppb	100
54)	1,1,2-TCA	7.74	83	68138	8.75384	ppb	100
55)	2-Hexanone	8.04	43	16664	7.86079	ppb	100
58)	1,2-EDB	8.20	107	78219	9.00092	ppb	100
59)	Tetrachloroethene	7.86	166	101036	9.51260	ppb	100
60)	1-Chlorohexane	8.76	91	101476	9.17545	ppb	100
61)	1,1,1,2-Tetrachloroethane	8.83	131	102824	9.38144	ppb	100
62)	m&p-Xylene	8.99	106	353539	19.09691	ppb	100
63)	o-Xylene	9.38	106	174110	9.65152	ppb	100
64)	Styrene	9.40	104	189504	9.47488	ppb	100
66)	1,3-Dichloropropane	7.90	76	133321	8.25898	ppb	100
67)	Dibromochloromethane	8.12	129	99271	9.63051	ppb	100
68)	Chlorobenzene	8.73	112	284802	9.08572	ppb	100
69)	Ethylbenzene	8.87	91	453830	9.24559	ppb	100
70)	Bromoform	9.55	173	59038	9.32707	ppb	100
72)	Isopropylbenzene	9.76	105	406305	8.76161	ppb	100
73)	1,1,2,2-Tetrachloroethane	10.07	83	95117	7.90103	ppb	100
74)	1,2,3-Trichloropropane	10.09	110	20200	9.04693	ppb	100
75)	t-1,4-Dichloro-2-Butene	10.13	53	19361	7.27089	ppb	100
76)	Bromobenzene	10.01	156	122011	9.05034	ppb	100
77)	n-Propylbenzene	10.17	91	487149	8.70677	ppb	100
78)	4-Ethyltoluene	10.28	105	431988	9.31621	ppb	100
79)	2-Chlorotoluene	10.22	91	312403	8.37398	ppb	100
80)	1,3,5-Trimethylbenzene	10.36	105	378762	9.41672	ppb	100
81)	4-Chlorotoluene	10.34	91	367241	8.86170	ppb	100
82)	Tert-Butylbenzene	10.66	119	284219	8.97313	ppb	100
83)	1,2,4-Trimethylbenzene	10.72	105	362982	8.99901	ppb	100
84)	Sec-Butylbenzene	10.88	105	411428	9.10236	ppb	100
85)	p-Isopropyltoluene	11.04	119	355983	9.04438	ppb	100
86)	Benzyl Chloride	11.19	91	104986	8.80849	ppb	100
87)	1,3-DCB	10.96	146	231678	8.87751	ppb	100
88)	1,4-DCB	11.05	146	239073	8.81384	ppb	100
89)	n-Butylbenzene	11.44	91	300009	8.67136	ppb	100
90)	1,2-DCB	11.41	146	212268	8.60852	ppb	100
91)	Hexachloroethane	11.66	117	75408	8.60432	ppb	100
92)	1,2-Dibromo-3-chloropropan	12.18	157	15244	8.27685	ppb	100
93)	1,2,4-Trichlorobenzene	13.00	180	130081	8.67282	ppb	100
94)	Hexachlorobutadiene	13.19	225	50448	8.36689	ppb	100
95)	Naphthalene	13.22	128	134720	8.10141	ppb	100
96)	1,2,3-Trichlorobenzene	13.46	180	79544	8.45598	ppb	100

(#) = qualifier out of range (m) = manual integration

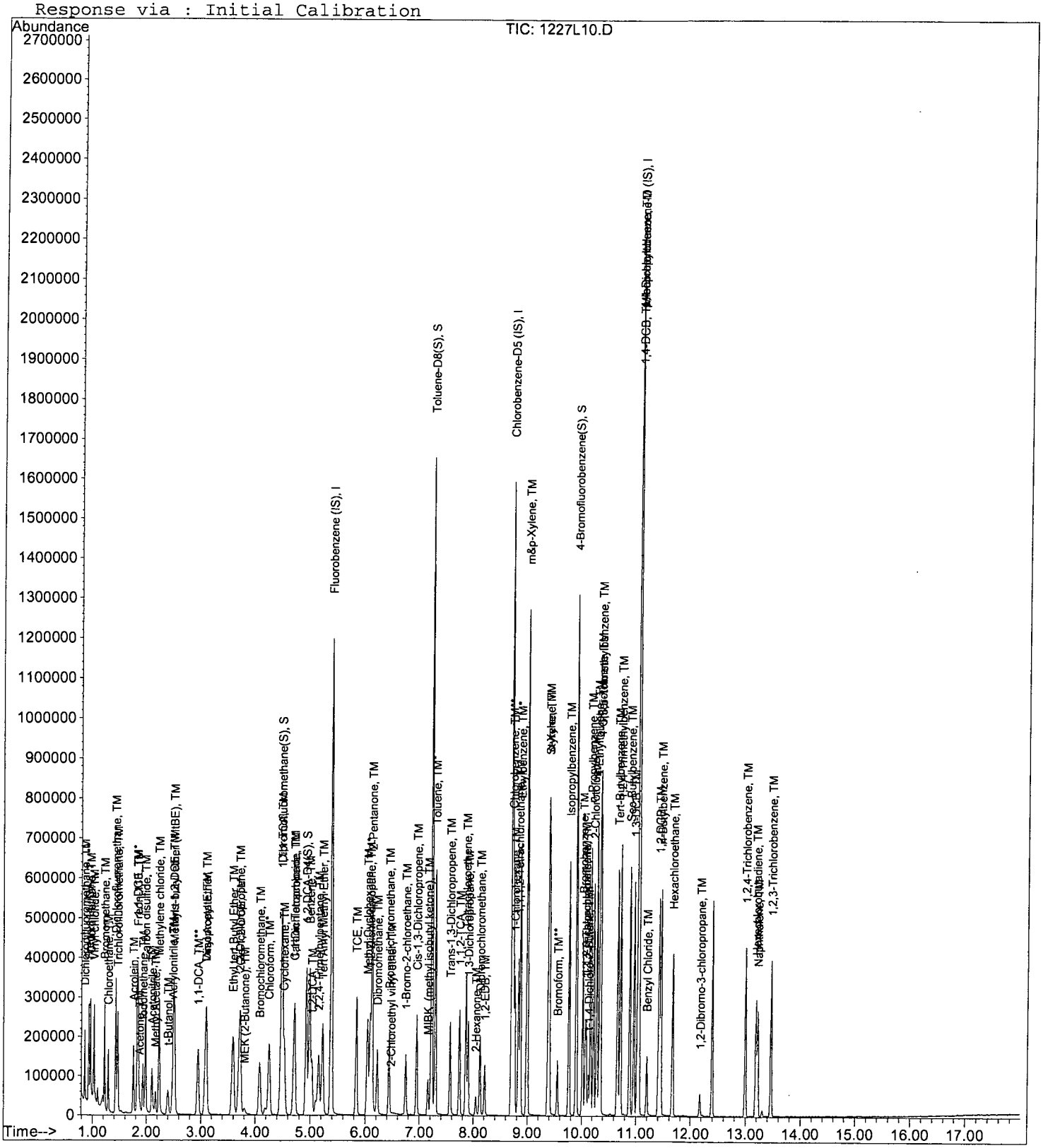
Quantitation Report

Data File : M:\LOKI\DATA\161227\1227L10.D
Acq On : 27 Dec 16 16:36
Sample : 10ug/L VOC STD 12/27/16AO
Misc : W IS&S 11/21/16, 11/14/16

Vial: 9
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 28 7:43 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration



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Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161227\1227L11.D
Acq On : 27 Dec 16 17:04
Sample : 20ug/L VOC STD 12/27/16AP
Misc : W IS&S 11/21/16, 11/14/16

Vial: 10
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 28 7:43 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 07:42:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	641920	25.00000 ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	605760	25.00000 ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	348928	25.00000 ppb	0.00
System Monitoring Compounds					
32) Dibromofluoromethane(S)	4.48	111	638651	48.74878 ppb	0.00
Spiked Amount 25.000				Recovery = 194.996%	
37) 1,2-DCA-D4(S)	4.93	65	608647	43.69615 ppb	0.00
Spiked Amount 25.000				Recovery = 174.784%	
57) Toluene-D8(S)	7.22	98	2241028	47.75424 ppb	0.00
Spiked Amount 25.000				Recovery = 191.016%	
65) 4-Bromofluorobenzene(S)	9.89	95	785453	48.71507 ppb	0.00
Spiked Amount 25.000				Recovery = 194.860%	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.85	85	210496	18.27990 ppb	97
3) Freon 114	0.93	85	148381	20.28956 ppb	98
4) Chloromethane	0.96	50	283158	14.53413 ppb	99
5) Vinyl chloride	1.02	62	263632	18.57067 ppb	97
6) Bromomethane	1.22	96	200256	20.55074 ppb	99
7) Chloroethane	1.29	64	157280	20.82959 ppb	97
8) Dichlorofluoromethane	1.42	67	479552	19.79309 ppb	99
9) Trichlorofluoromethane	1.46	101	306522	21.32140 ppb	98
10) Acrolein	1.75	56	135333	105.42405 ppb	99
11) Acetone	1.88	43	49433	20.72142 ppb	96
12) Freon-113	1.84	101	170700	22.62366 ppb	97
13) 1,1-DCE	1.83	96	136704	19.95357 ppb	99
14) t-Butanol	2.40	59	39616	124.30184 ppb	92
15) Acetonitrile	2.10	41	141809	99.90297 ppb	99
16) Methyl Acetate	2.17	43	120608	14.79482 ppb	98
17) Iodomethane	1.93	142	146880	21.67427 ppb	99
18) Acrylonitrile	2.47	52	44237	15.12262 ppb	99
19) Methylene chloride	2.23	84	233910	16.42522 ppb	96
20) Carbon disulfide	1.98	76	606881	21.61467 ppb	100
21) Methyl t-butyl ether (MtBE	2.52	73	481071	16.48458 ppb	98
22) Trans-1,2-DCE	2.49	96	197914	16.86499 ppb	97
23) Diisopropyl Ether	3.10	45	558687	14.81567 ppb	98
24) 1,1-DCA	2.95	63	349132	15.66164 ppb	98
25) Vinyl Acetate	3.09	43	119000	13.44057 ppb	96
26) Ethyl tert Butyl Ether	3.59	59	479986	15.96121 ppb	97
27) MEK (2-Butanone)	3.80	43	53539	15.11661 ppb	92
28) Cis-1,2-DCE	3.73	96	225553	16.51367 ppb	96
29) 2,2-Dichloropropane	3.70	77	89688	17.19134 ppb	100
30) Chloroform	4.25	83	366936	16.12075 ppb	92
31) Bromochloromethane	4.08	128	107958	16.89462 ppb	94
33) 1,1,1-TCA	4.47	97	286509	17.05193 ppb	98
34) Cyclohexane	4.53	41	113222	16.03779 ppb	95
35) 1,1-Dichloropropene	4.72	75	228916	16.93345 ppb	95
36) 2,2,4-Trimethylpentane	5.15	57	400110	19.51622 ppb	93
38) Carbon Tetrachloride	4.70	119	227279	18.11383 ppb	100
39) Tert Amyl Methyl Ether	5.22	73	445904	16.93043 ppb	100
40) 1,2-DCA	5.03	62	246032	14.93305 ppb	98
41) Benzene	4.98	78	780704	16.15551 ppb	99
42) TCE	5.83	95	104480	17.24015 ppb	97

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161227\1227L11.D Vial: 10
Acq On : 27 Dec 16 17:04 Operator: PM,DG,SV,CMM
Sample : 20ug/L VOC STD 12/27/16AP Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 28 7:43 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 07:42:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
43) 2-Pentanone	6.12	43	677968	116.59599 ppb	100
44) 1,2-Dichloropropane	6.09	63	203345	14.64961 ppb	100
45) Bromodichloromethane	6.44	83	268142	16.03392 ppb	100
46) Methyl Cyclohexane	6.04	83	229478	19.47154 ppb	97
47) Dibromomethane	6.22	93	116904	16.04348 ppb	98
48) 2-Chloroethyl vinyl ether	6.48	43	12084	14.29711 ppb	100
49) MIBK (methyl isobutyl ket	7.15	43	124042	15.22117 ppb	95
50) 1-Bromo-2-chloroethane	6.75	63	139328	15.34289 ppb	99
51) Cis-1,3-Dichloropropene	6.95	75	294672	16.04234 ppb	97
52) Toluene	7.29	91	872791	17.14980 ppb	98
53) Trans-1,3-Dichloropropene	7.56	75	254843	16.70412 ppb	97
54) 1,1,2-TCA	7.74	83	142388	16.92505 ppb	97
55) 2-Hexanone	8.04	43	39815	15.01265 ppb	97
58) 1,2-EDB	8.20	107	158318	16.48202 ppb	95
59) Tetrachloroethene	7.86	166	205195	17.47814 ppb	98
60) 1-Chlorohexane	8.76	91	212972	17.42175 ppb	96
61) 1,1,1,2-Tetrachloroethane	8.83	131	203306	16.78149 ppb	97
62) m&p-Xylene	8.99	106	711935	34.79136 ppb	96
63) o-Xylene	9.38	106	343300	17.21675 ppb	95
64) Styrene	9.40	104	403584	18.25553 ppb	98
66) 1,3-Dichloropropane	7.90	76	270743	15.17367 ppb	98
67) Dibromochloromethane	8.12	129	199145	17.47840 ppb	100
68) Chlorobenzene	8.73	112	562294	16.22876 ppb	99
69) Ethylbenzene	8.87	91	920893	16.97289 ppb	100
70) Bromoform	9.55	173	123405	17.63809 ppb	100
72) Isopropylbenzene	9.76	105	838705	16.77891 ppb	100
73) 1,1,2,2-Tetrachloroethane	10.07	83	190233	14.66001 ppb	99
74) 1,2,3-Trichloropropane	10.09	110	36824	15.30043 ppb	92
75) t-1,4-Dichloro-2-Butene	10.13	53	41629	14.50370 ppb	93
76) Bromobenzene	10.02	156	240595	16.55676 ppb	97
77) n-Propylbenzene	10.17	91	1012507	16.78866 ppb	98
78) 4-Ethyltoluene	10.29	105	894681	17.90024 ppb	98
79) 2-Chlorotoluene	10.22	91	626025	15.56794 ppb	100
80) 1,3,5-Trimethylbenzene	10.36	105	749064	17.27727 ppb	96
81) 4-Chlorotoluene	10.34	91	742857	16.63006 ppb	100
82) Tert-Butylbenzene	10.66	119	582829	17.07084 ppb	99
83) 1,2,4-Trimethylbenzene	10.72	105	751520	17.28516 ppb	99
84) Sec-Butylbenzene	10.88	105	834759	17.13342 ppb	98
85) p-Isopropyltoluene	11.04	119	738835	17.41485 ppb	99
86) Benzyl Chloride	11.19	91	225224	17.53104 ppb	97
87) 1,3-DCB	10.96	146	458222	16.28941 ppb	100
88) 1,4-DCB	11.05	146	463711	15.86007 ppb	97
89) n-Butylbenzene	11.44	91	612644	16.42798 ppb	99
90) 1,2-DCB	11.41	146	422272	15.88764 ppb	99
91) Hexachloroethane	11.66	117	149553	15.83132 ppb	99
92) 1,2-Dibromo-3-chloropropan	12.18	157	32497	16.36938 ppb	96
93) 1,2,4-Trichlorobenzene	13.00	180	265964	16.45100 ppb	97
94) Hexachlorobutadiene	13.19	225	105935	16.29982 ppb	87
95) Naphthalene	13.22	128	298560	16.65647 ppb	99
96) 1,2,3-Trichlorobenzene	13.46	180	161088	15.88703 ppb	99

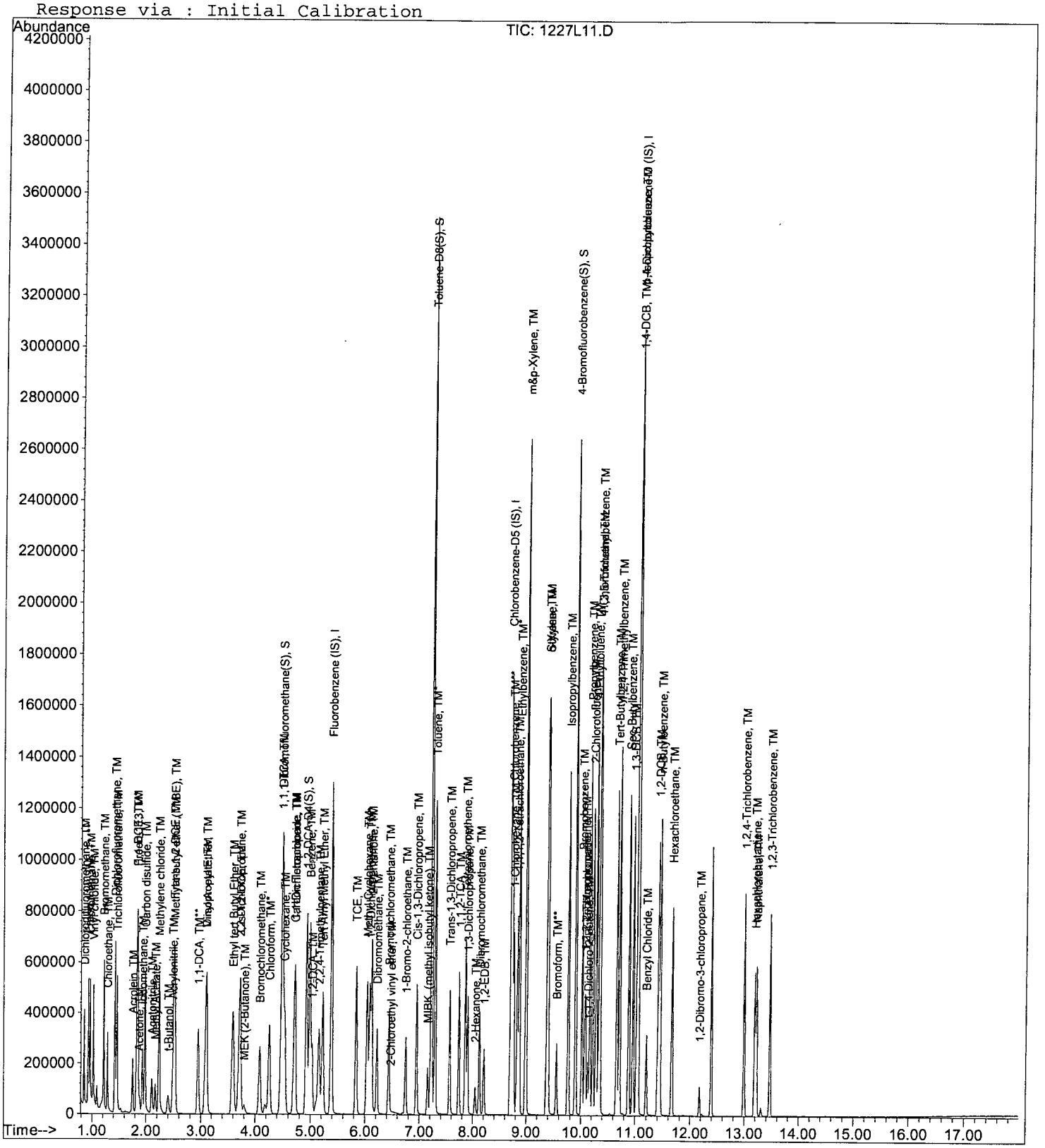
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161227\1227L11.D Vial: 10
Acq On : 27 Dec 16 17:04 Operator: PM,DG,SV,CMM
Sample : 20ug/L VOC STD 12/27/16AP Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 28 7:43 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161227\1227L12.D Vial: 11
Acq On : 27 Dec 16 17:32 Operator: PM,DG,SV,CMM
Sample : 40ug/L VOC STD 12/27/16AQ Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 28 7:43 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 07:42:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	631168	25.00000	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	606464	25.00000	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	334080	25.00000	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.48	111	643980	49.99292	ppb		0.00
Spiked Amount 25.000			Recovery = 199.972%				
37) 1,2-DCA-D4(S)	4.92	65	612851	44.74747	ppb		0.00
Spiked Amount 25.000			Recovery = 178.988%				
57) Toluene-D8(S)	7.22	98	2308490	49.13468	ppb		0.00
Spiked Amount 25.000			Recovery = 196.540%				
65) 4-Bromofluorobenzene(S)	9.89	95	805974	49.92979	ppb		0.00
Spiked Amount 25.000			Recovery = 199.720%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.85	85	391104	34.54285	ppb		97
3) Freon 114	0.93	85	283913	39.48349	ppb		100
4) Chloromethane	0.96	50	582841	30.42610	ppb		99
5) Vinyl chloride	1.02	62	534799	38.31387	ppb		99
6) Bromomethane	1.21	96	481600	50.26485	ppb		98
7) Chloroethane	1.29	64	326236	43.94152	ppb		98
8) Dichlorofluoromethane	1.42	67	1018218	42.74198	ppb		98
9) Trichlorofluoromethane	1.46	101	603164	42.67027	ppb		99
10) Acrolein	1.75	56	158334	125.44291	ppb		98
11) Acetone	1.88	43	98304	44.24736	ppb		97
12) Freon-113	1.84	101	342392	46.15184	ppb		98
13) 1,1-DCE	1.83	96	288448	42.81962	ppb		98
14) t-Butanol	2.41	59	41472	132.34205	ppb		98
15) Acetonitrile	2.52	41	202080	144.78844	ppb	#	41
16) Methyl Acetate	2.17	43	262857	32.79361	ppb		99
17) Iodomethane	1.93	142	311104	46.68995	ppb		99
18) Acrylonitrile	2.47	52	89413	31.08693	ppb		98
19) Methylene chloride	2.23	84	497267	37.61812	ppb		97
20) Carbon disulfide	1.98	76	1310630	47.47457	ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	1022743	35.64276	ppb		98
22) Trans-1,2-DCE	2.49	96	425218	36.85167	ppb		95
23) Diisopropyl Ether	3.10	45	1241175	33.47508	ppb		99
24) 1,1-DCA	2.94	63	733146	33.44828	ppb		98
25) Vinyl Acetate	3.09	43	261696	30.06101	ppb	#	93
26) Ethyl tert Butyl Ether	3.59	59	1056065	35.71609	ppb		100
27) MEK (2-Butanone)	3.80	43	116793	33.39741	ppb		98
28) Cis-1,2-DCE	3.72	96	497665	37.05681	ppb		97
29) 2,2-Dichloropropane	3.70	77	188480	36.74317	ppb		100
30) Chloroform	4.25	83	779157	34.81415	ppb		96
31) Bromochloromethane	4.08	128	231026	36.76972	ppb		93
33) 1,1,1-TCA	4.47	97	616126	37.29415	ppb		99
34) Cyclohexane	4.53	41	226219	32.58957	ppb		90
35) 1,1-Dichloropropene	4.72	75	483812	36.39836	ppb		97
36) 2,2,4-Trimethylpentane	5.15	57	787851	39.08375	ppb		91
38) Carbon Tetrachloride	4.70	119	481135	38.99903	ppb		99
39) Tert Amyl Methyl Ether	5.22	73	977857	37.76051	ppb		99
40) 1,2-DCA	5.03	62	520232	32.11368	ppb		98
41) Benzene	4.99	78	1678985	35.33598	ppb		99
42) TCE	5.83	95	220224	36.95800	ppb		97

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161227\1227L12.D
Acq On : 27 Dec 16 17:32
Sample : 40ug/L VOC STD 12/27/16AQ
Misc : W IS&S 11/21/16, 11/14/16

Vial: 11
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 28 7:43 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 07:42:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
43) 2-Pentanone	6.12	43	791499	138.43972 ppb	99
44) 1,2-Dichloropropane	6.09	63	435914	31.93959 ppb	99
45) Bromodichloromethane	6.44	83	568749	34.58849 ppb	97
46) Methyl Cyclohexane	6.04	83	468999	40.47315 ppb	95
47) Dibromomethane	6.22	93	245934	34.32604 ppb	97
48) 2-Chloroethyl vinyl ether	6.48	43	23444	28.49602 ppb	100
49) MIBK (methyl isobutyl ket	7.16	43	241074	30.41711 ppb	97
50) 1-Bromo-2-chloroethane	6.75	63	305280	34.19031 ppb	99
51) Cis-1,3-Dichloropropene	6.95	75	640491	35.46318 ppb	99
52) Toluene	7.29	91	1868737	37.34504 ppb	99
53) Trans-1,3-Dichloropropene	7.56	75	551542	36.76762 ppb	97
54) 1,1,2-TCA	7.74	83	294552	35.60856 ppb	96
55) 2-Hexanone	8.04	43	87392	31.10636 ppb	98
58) 1,2-EDB	8.20	107	336179	34.95797 ppb	97
59) Tetrachloroethene	7.86	166	442725	37.66673 ppb	97
60) 1-Chlorohexane	8.76	91	474943	38.80666 ppb	95
61) 1,1,1,2-Tetrachloroethane	8.83	131	436268	35.96907 ppb	95
62) m&p-Xylene	8.99	106	1581278	77.18535 ppb	98
63) o-Xylene	9.38	106	768630	38.50262 ppb	96
64) Styrene	9.40	104	886208	40.03978 ppb	99
66) 1,3-Dichloropropane	7.90	76	575854	32.23601 ppb	100
67) Dibromochloromethane	8.12	129	431782	37.85231 ppb	100
68) Chlorobenzene	8.73	112	1208669	34.84374 ppb	99
69) Ethylbenzene	8.87	91	2027382	37.32310 ppb	100
70) Bromoform	9.55	173	259153	36.99734 ppb	95
72) Isopropylbenzene	9.76	105	1847891	38.61146 ppb	99
73) 1,1,2,2-Tetrachloroethane	10.07	83	399708	32.17190 ppb	95
74) 1,2,3-Trichloropropane	10.09	110	78696	34.15157 ppb	95
75) t-1,4-Dichloro-2-Butene	10.12	53	84499	30.74821 ppb	94
76) Bromobenzene	10.01	156	514880	37.00667 ppb	98
77) n-Propylbenzene	10.17	91	2167129	37.53083 ppb	99
78) 4-Ethyltoluene	10.29	105	1948224	40.71130 ppb	99
79) 2-Chlorotoluene	10.22	91	1362278	35.38268 ppb	99
80) 1,3,5-Trimethylbenzene	10.36	105	1631991	39.31510 ppb	99
81) 4-Chlorotoluene	10.34	91	1584485	37.04777 ppb	99
82) Tert-Butylbenzene	10.67	119	1272076	38.91457 ppb	98
83) 1,2,4-Trimethylbenzene	10.72	105	1666332	40.02946 ppb	100
84) Sec-Butylbenzene	10.88	105	1824922	39.12124 ppb	98
85) p-Isopropyltoluene	11.04	119	1598387	39.34954 ppb	99
86) Benzyl Chloride	11.19	91	494856	40.23065 ppb	99
87) 1,3-DCB	10.96	146	976360	36.25141 ppb	99
88) 1,4-DCB	11.05	146	989845	35.35983 ppb	99
89) n-Butylbenzene	11.44	91	1386859	38.84129 ppb	100
90) 1,2-DCB	11.41	146	897997	35.28803 ppb	99
91) Hexachloroethane	11.66	117	323697	35.78870 ppb	97
92) 1,2-Dibromo-3-chloropropan	12.18	157	70343	37.00796 ppb	97
93) 1,2,4-Trichlorobenzene	13.00	180	588286	38.00523 ppb	98
94) Hexachlorobutadiene	13.19	225	225263	36.20082 ppb	92
95) Naphthalene	13.22	128	701312	40.86467 ppb	98
96) 1,2,3-Trichlorobenzene	13.46	180	373440	38.46677 ppb	99

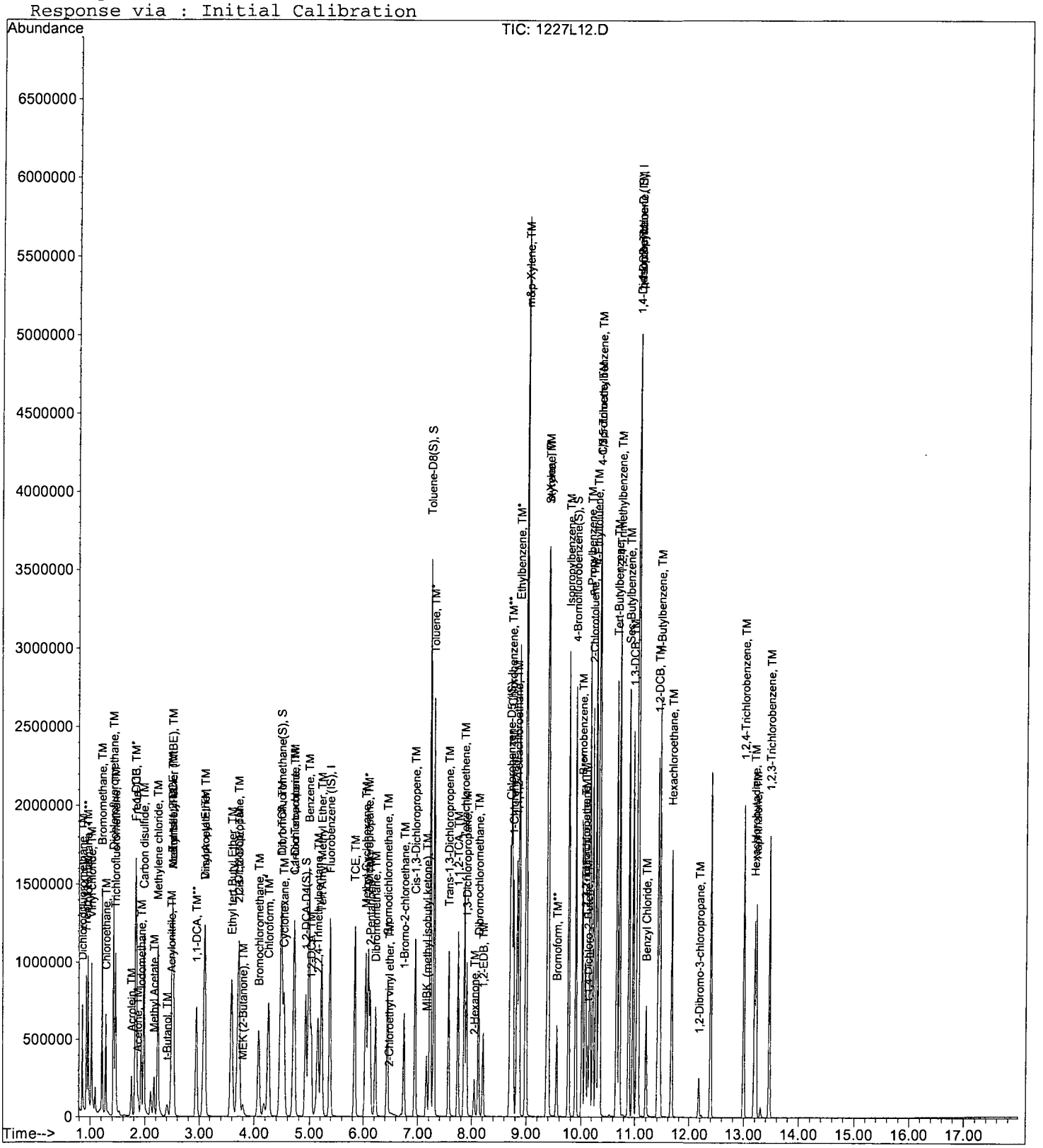
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161227\1227L12.D Vial: 11
Acq On : 27 Dec 16 17:32 Operator: PM,DG,SV,CMM
Sample : 40ug/L VOC STD 12/27/16AQ Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 28 7:43 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161227\1227L13.D Vial: 12
Acq On : 27 Dec 16 18:00 Operator: PM,DG,SV,CMM
Sample : 100ug/L VOC STD 12/27/16AR Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 28 7:43 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 07:42:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	629760	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	603776	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	370944	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	1236583	96.21200 ppb		0.00
Spiked Amount 25.000			Recovery = 384.848%			
37) 1,2-DCA-D4(S)	4.92	65	1180241	86.36826 ppb		0.00
Spiked Amount 25.000			Recovery = 345.472%			
57) Toluene-D8(S)	7.22	98	4397555	94.01575 ppb		0.00
Spiked Amount 25.000			Recovery = 376.064%			
65) 4-Bromofluorobenzene(S)	9.89	95	1562862	97.24976 ppb		0.00
Spiked Amount 25.000			Recovery = 389.000%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	945728	83.71477 ppb		98
3) Freon 114	0.93	85	765929	106.75512 ppb		97
4) Chloromethane	0.96	50	1386574	72.54527 ppb		100
5) Vinyl chloride	1.02	62	1248065	89.61332 ppb		100
6) Bromomethane	1.21	96	1100154	115.08038 ppb		98
7) Chloroethane	1.28	64	568326	76.72036 ppb		100
8) Dichlorofluoromethane	1.42	67	2689041	113.13090 ppb		99
9) Trichlorofluoromethane	1.45	101	1610064	114.15712 ppb		99
10) Acrolein	1.76	56	189043	150.10752 ppb		100
11) Acetone	1.88	43	232606	108.06789 ppb		94
12) Freon-113	1.84	101	933178	126.06652 ppb		97
13) 1,1-DCE	1.82	96	727488	108.23582 ppb		97
14) t-Butanol	2.44	59	42432	135.70826 ppb		100
15) Acetonitrile	2.52	41	517438	371.56840 ppb	#	40
16) Methyl Acetate	2.17	43	687850	86.00690 ppb		97
17) Iodomethane	1.93	142	805504	121.15892 ppb		99
18) Acrylonitrile	2.47	52	241459	84.13768 ppb		100
19) Methylene chloride	2.23	84	1253138	97.77518 ppb		95
20) Carbon disulfide	1.98	76	3457261	125.51136 ppb		100
21) Methyl t-butyl ether (MtBE	2.52	73	2762159	96.47690 ppb		98
22) Trans-1,2-DCE	2.49	96	1121107	97.37837 ppb		95
23) Diisopropyl Ether	3.10	45	3349303	90.53427 ppb		100
24) 1,1-DCA	2.94	63	1917812	87.69187 ppb		99
25) Vinyl Acetate	3.07	43	699647	80.54812 ppb	#	81
26) Ethyl tert Butyl Ether	3.59	59	2884755	97.78046 ppb		100
27) MEK (2-Butanone)	3.79	43	285926	81.77676 ppb		100
28) Cis-1,2-DCE	3.72	96	1292875	96.48446 ppb		99
29) 2,2-Dichloropropane	3.70	77	503168	98.30922 ppb		99
30) Chloroform	4.25	83	2040220	91.36456 ppb		96
31) Bromochloromethane	4.08	128	585842	93.45013 ppb		98
33) 1,1,1-TCA	4.47	97	1607191	97.50089 ppb		99
34) Cyclohexane	4.53	41	633737	91.50157 ppb		93
35) 1,1-Dichloropropene	4.72	75	1314287	99.09808 ppb		95
36) 2,2,4-Trimethylpentane	5.15	57	2410301	119.83767 ppb		87
38) Carbon Tetrachloride	4.70	119	1284850	104.37805 ppb		100
39) Tert Amyl Methyl Ether	5.22	73	2657173	102.83767 ppb		98
40) 1,2-DCA	5.03	62	1353218	83.72027 ppb		98
41) Benzene	4.98	78	4336811	91.47674 ppb		98
42) TCE	5.83	95	595968	100.23898 ppb		98

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161227\1227L13.D Vial: 12
Acq On : 27 Dec 16 18:00 Operator: PM,DG,SV,CMM
Sample : 100ug/L VOC STD 12/27/16AR Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 28 7:43 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 07:42:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

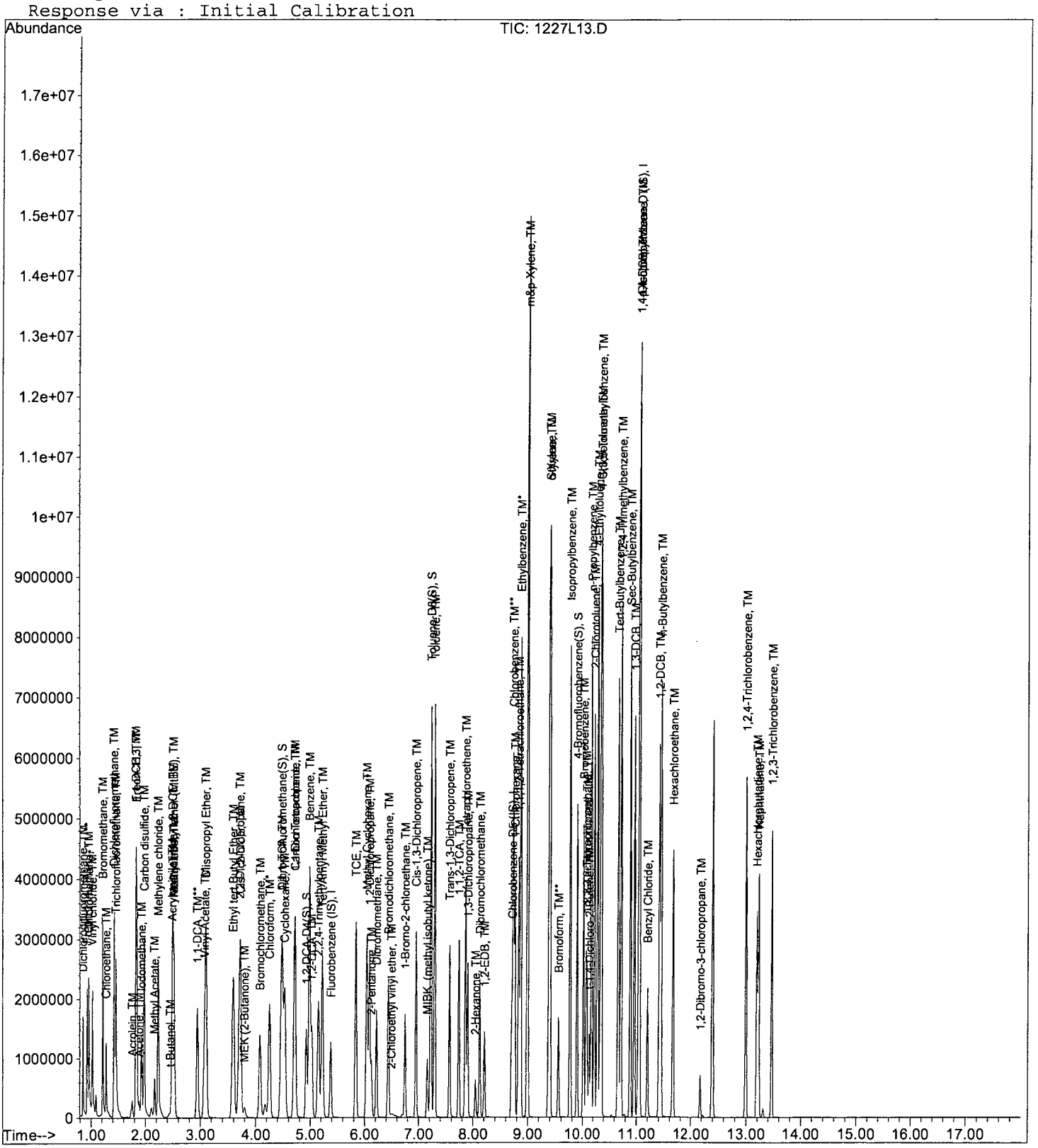
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43)	2-Pentanone	6.12	43	925153	162.17870	ppb	99
44)	1,2-Dichloropropane	6.09	63	1125163	82.62547	ppb	99
45)	Bromodichloromethane	6.44	83	1490336	90.83746	ppb	96
46)	Methyl Cyclohexane	6.04	83	1380121	119.36642	ppb	96
47)	Dibromomethane	6.22	93	639502	89.45753	ppb	98
48)	2-Chloroethyl vinyl ether	6.49	43	59572	73.02566	ppb	100
49)	MIBK (methyl isobutyl ket	7.16	43	615115	78.31246	ppb	99
50)	1-Bromo-2-chloroethane	6.75	63	806723	90.55220	ppb	99
51)	Cis-1,3-Dichloropropene	6.95	75	1751456	97.19273	ppb	99
52)	Toluene	7.29	91	4838262	96.90452	ppb	100
53)	Trans-1,3-Dichloropropene	7.56	75	1479848	98.87214	ppb	99
54)	1,1,2-TCA	7.74	83	772504	93.59724	ppb	97
55)	2-Hexanone	8.04	43	233618	80.06024	ppb	98
58)	1,2-EDB	8.20	107	875560	91.45149	ppb	99
59)	Tetrachloroethene	7.86	166	1144213	97.78224	ppb	98
60)	1-Chlorohexane	8.76	91	1291772	106.01804	ppb	92
61)	1,1,1,2-Tetrachloroethane	8.83	131	1143894	94.73072	ppb	96
62)	m&p-Xylene	8.99	106	4132256	202.60168	ppb	98
63)	o-Xylene	9.38	106	2030482	102.16480	ppb	95
64)	Styrene	9.40	104	2458112	111.55444	ppb	100
66)	1,3-Dichloropropane	7.90	76	1485783	83.54364	ppb	100
67)	Dibromochloromethane	8.12	129	1124105	98.98376	ppb	99
68)	Chlorobenzene	8.73	112	3125777	90.51167	ppb	99
69)	Ethylbenzene	8.87	91	5299269	97.99125	ppb	100
70)	Bromoform	9.55	173	693447	99.43899	ppb	99
72)	Isopropylbenzene	9.76	105	4982012	93.75335	ppb	100
73)	1,1,2,2-Tetrachloroethane	10.07	83	1094828	79.36370	ppb	97
74)	1,2,3-Trichloropropane	10.09	110	205696	80.39445	ppb	91
75)	t-1,4-Dichloro-2-Butene	10.13	53	266413	87.31037	ppb	85
76)	Bromobenzene	10.02	156	1350697	87.43274	ppb	97
77)	n-Propylbenzene	10.17	91	5795392	90.39165	ppb	99
78)	4-Ethyltoluene	10.29	105	5211115	98.07286	ppb	98
79)	2-Chlorotoluene	10.23	91	3576568	83.66302	ppb	99
80)	1,3,5-Trimethylbenzene	10.36	105	4272802	92.70359	ppb	98
81)	4-Chlorotoluene	10.34	91	4196683	88.37355	ppb	100
82)	Tert-Butylbenzene	10.66	119	3515801	96.86471	ppb	99
83)	1,2,4-Trimethylbenzene	10.72	105	4444738	96.16266	ppb	100
84)	Sec-Butylbenzene	10.88	105	5084266	98.16094	ppb	99
85)	p-Isopropyltoluene	11.04	119	4464888	98.99436	ppb	99
86)	Benzyl Chloride	11.20	91	1496688	109.58513	ppb	99
87)	1,3-DCB	10.96	146	2637354	88.19123	ppb	100
88)	1,4-DCB	11.05	146	2665917	85.76928	ppb	98
89)	n-Butylbenzene	11.44	91	3961694	99.92735	ppb	100
90)	1,2-DCB	11.41	146	2536094	89.75528	ppb	99
91)	Hexachloroethane	11.66	117	850622	84.70050	ppb	97
92)	1,2-Dibromo-3-chloropropan	12.18	157	202372	95.88857	ppb	97
93)	1,2,4-Trichlorobenzene	13.00	180	1698132	98.80260	ppb	97
94)	Hexachlorobutadiene	13.19	225	640478	92.69897	ppb	93
95)	Naphthalene	13.22	128	2085376	109.43676	ppb	98
96)	1,2,3-Trichlorobenzene	13.46	180	986624	91.52899	ppb	99

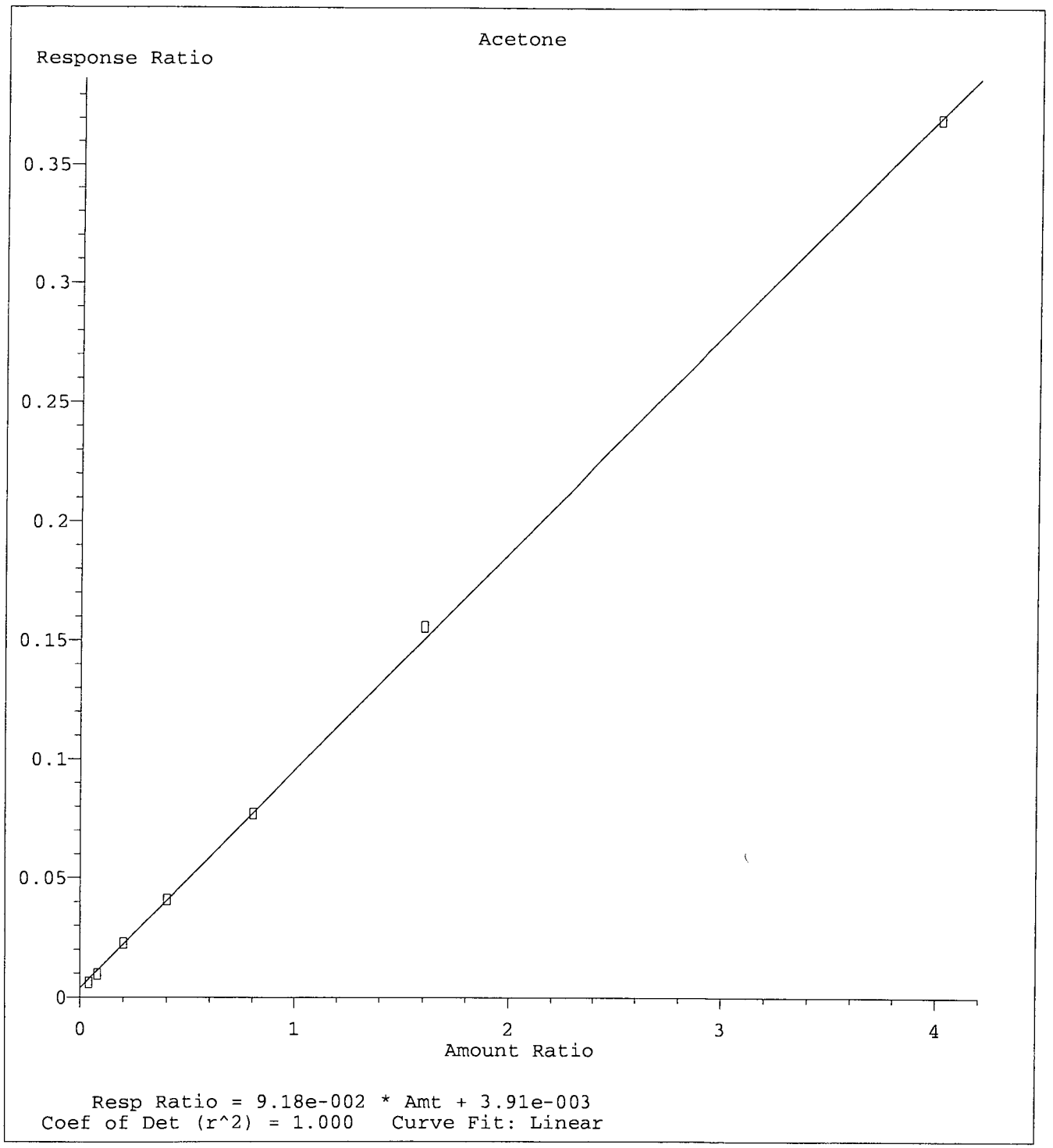
(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161227\1227L13.D Vial: 12
Acq On : 27 Dec 16 18:00 Operator: PM,DG,SV,CMM
Sample : 100ug/L VOC STD 12/27/16AR Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

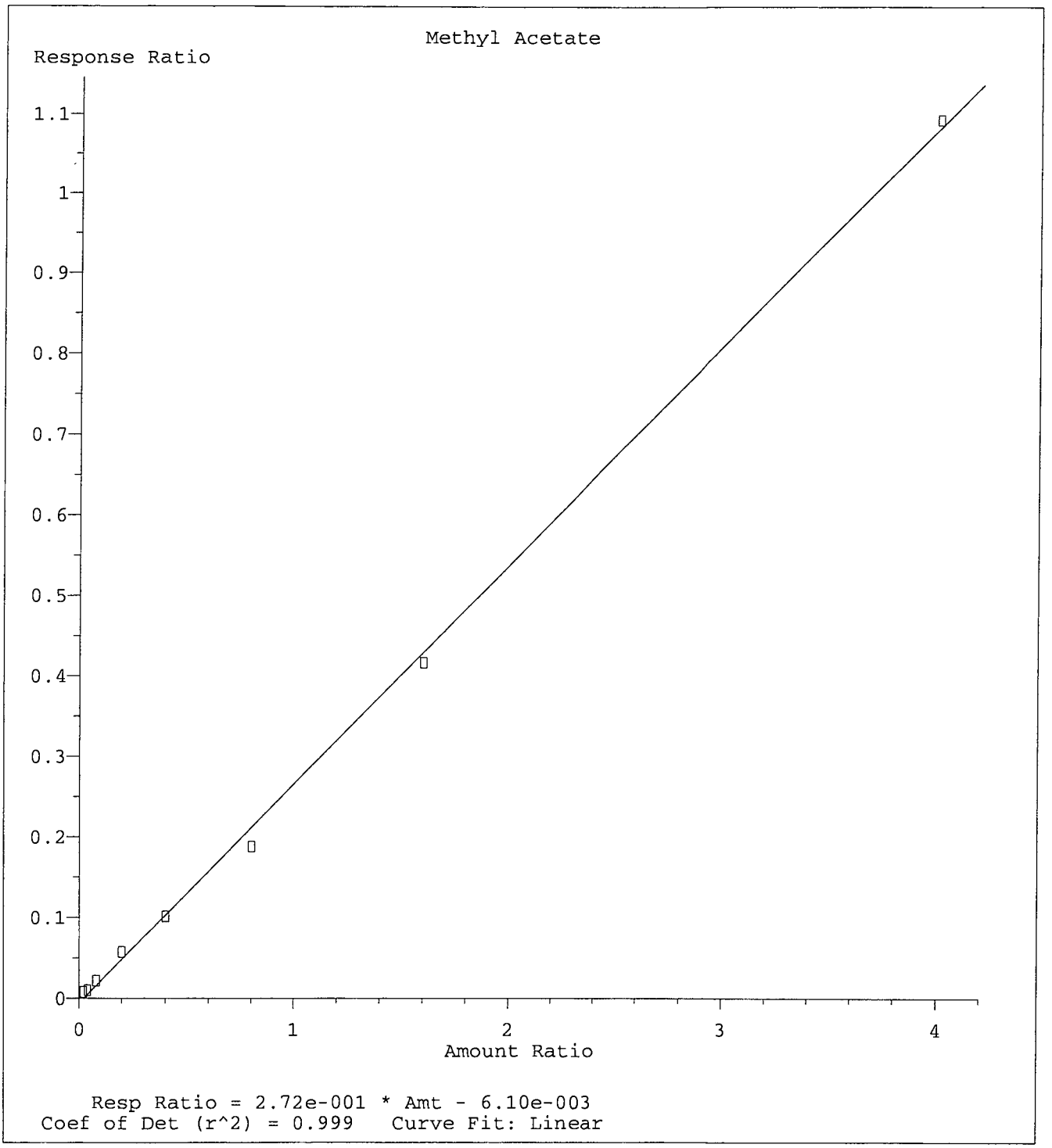
Quant Time: Dec 28 7:43 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration

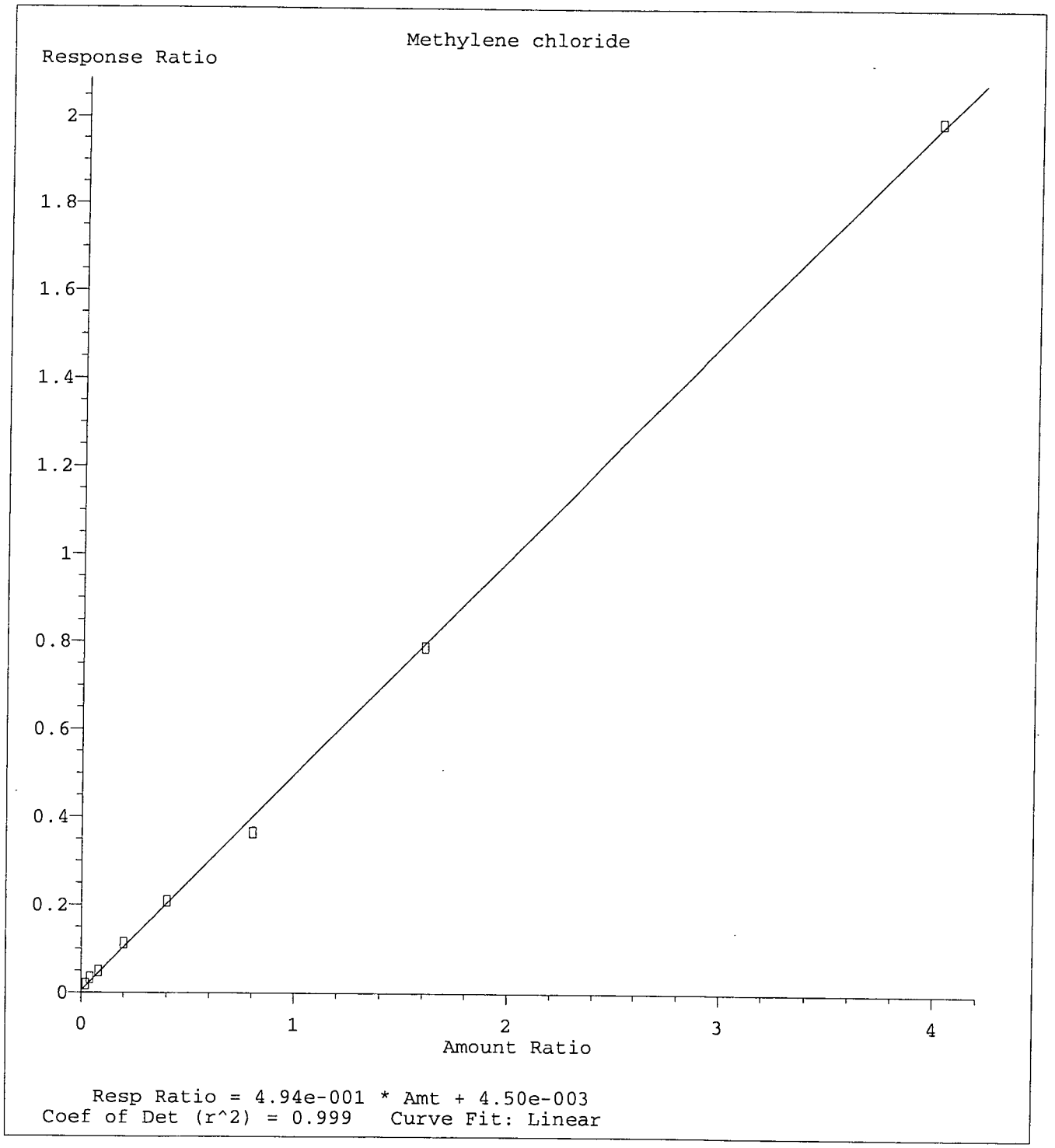




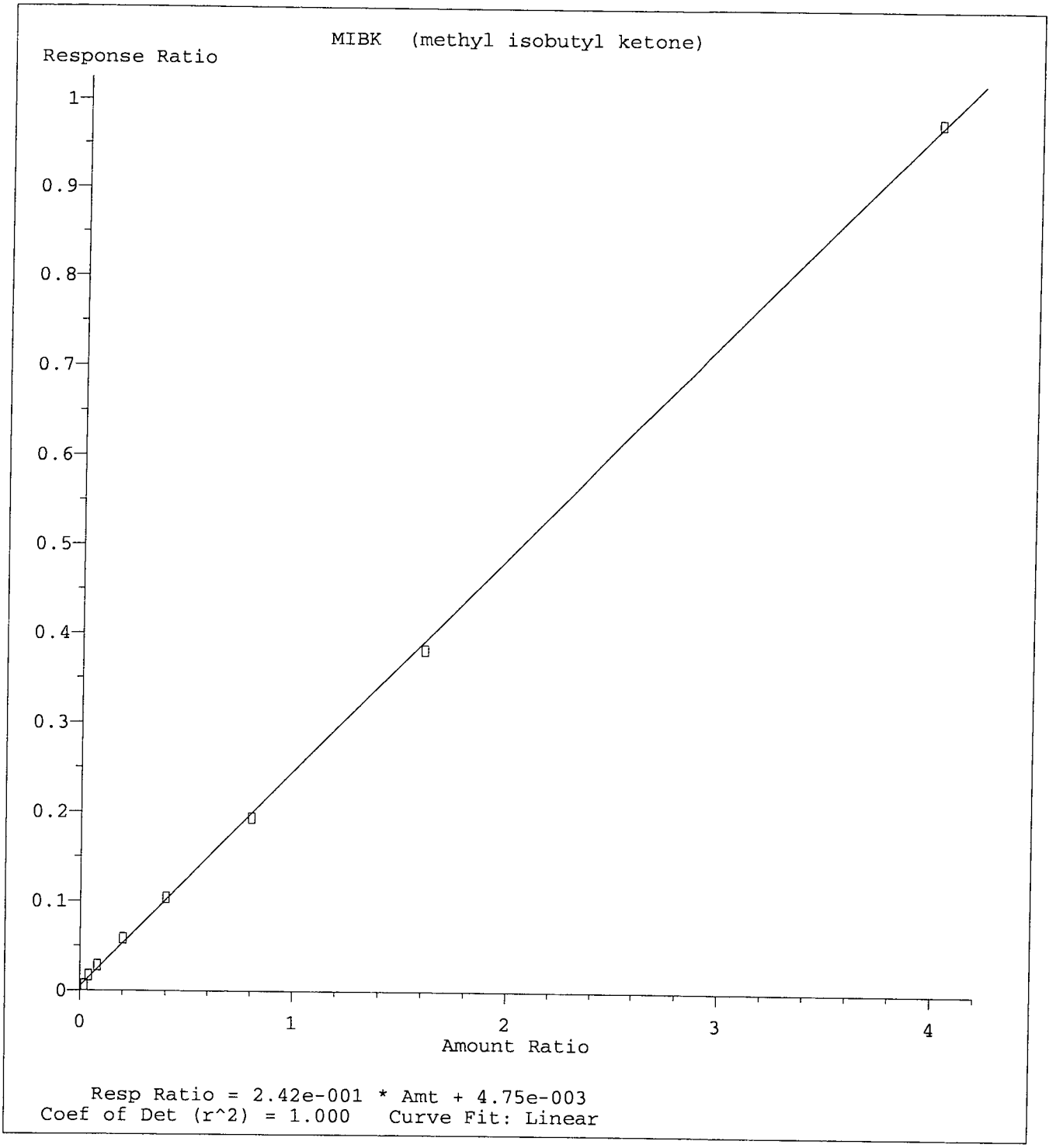
Method Name: M:\LOKI\DATA\161227\LALLW.M
Calibration Table Last Updated: Wed Dec 28 08:02:38 2016



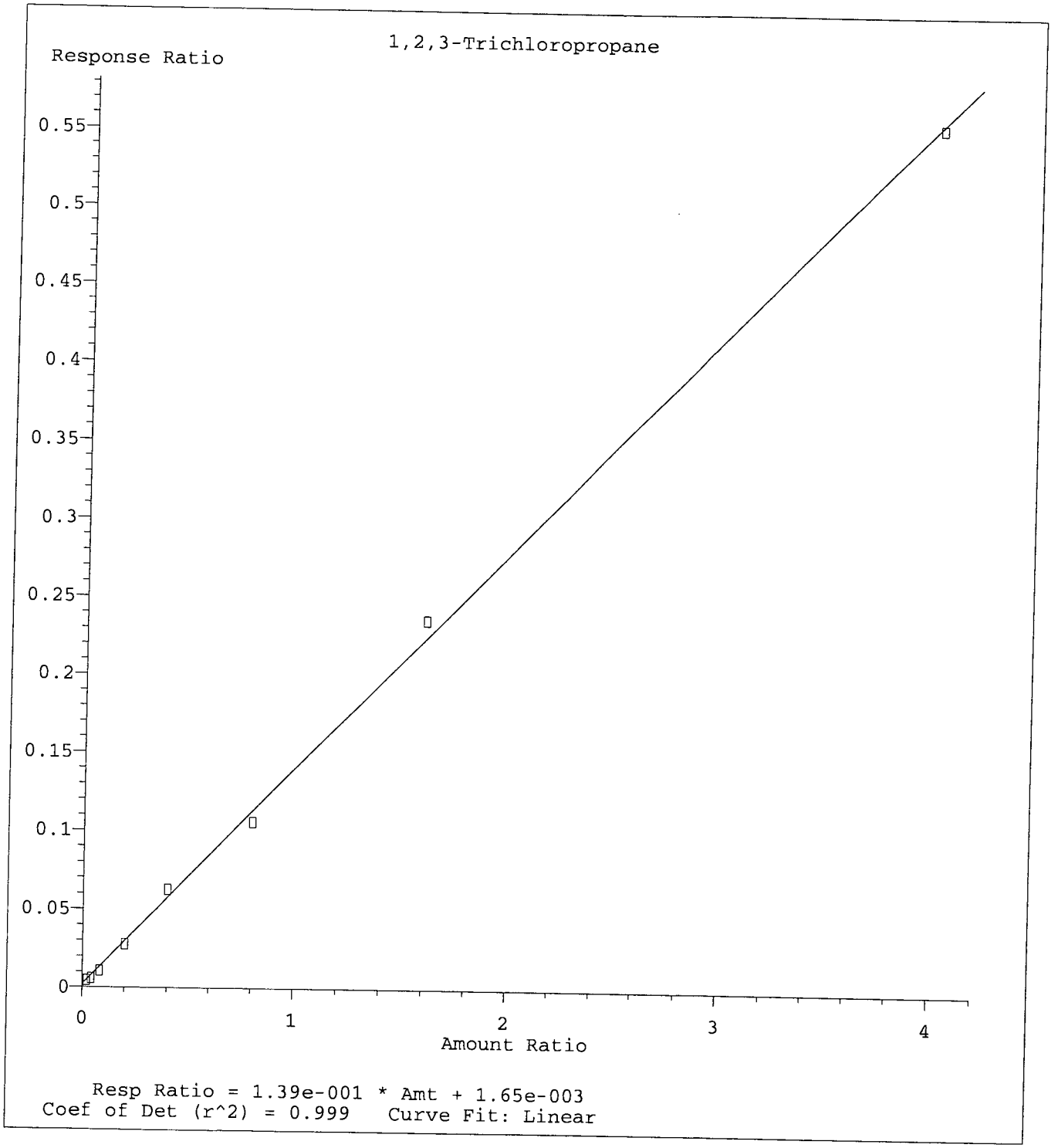
Method Name: M:\LOKI\DATA\161227\LALLW.M
Calibration Table Last Updated: Wed Dec 28 08:02:38 2016



Method Name: M:\LOKI\DATA\161227\LALLW.M
Calibration Table Last Updated: Wed Dec 28 08:02:38 2016



Method Name: M:\LOKI\DATA\161227\LALLW.M
Calibration Table Last Updated: Wed Dec 28 08:02:38 2016



Method Name: M:\LOKI\DATA\161227\LALLW.M
Calibration Table Last Updated: Wed Dec 28 08:02:38 2016

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 12/27/16
Matrix: Instrument: Loki
Initial Cal. Date: 12/27/16
Data File: 1227L18.D

		Compound	MEAN	CCRF	%D		%Drift	
1	TM	Dichlorodifluoromethane	0.4058	0.4202	3.6	TM		
2	TM	Freon 114	0.2793	0.2784	0.30	TM		
3	TM**	Chloromethane	0.6369	0.5284	17	TM**		
4	TM*	Vinyl chloride	0.5415	0.5066	6.4	TM*		
5	TM	Bromomethane	0.4138	0.3776	8.8	TM		
6	TM	Chloroethane	0.3252	0.3173	2.4	TM		
7	TM	Dichlorofluoromethane	1.004	0.9714	3.3	TM		
8	TM	Trichlorofluoromethane	0.6096	0.6044	0.85	TM		
9	TM	Acrolein	0.0374	0.0155	59	TM		nt
10	TML	Acetone	0.1103	0.0982	11	TML	3.7	
11	TM	Freon-113	0.3426	0.3540	3.3	TM		
12	TM*	1,1-DCE	0.2809	0.2995	6.6	TM*		
13	TM	t-Butanol	0.0110	0.0108	2.1	TM		
14	TM	Acetonitrile	0.0425	0.0362	15	TM		
15	TML	Methyl Acetate	0.2777	0.2420	13	TML	5.5	
16	TM	Iodomethane	0.2850	0.2136	25	TM		nt
17	TM	Acrylonitrile	0.0953	0.0783	18	TM		
18	TML	Methylene chloride	0.6184	0.5731	7.3	TML	14	
19	TM	Carbon disulfide	1.306	1.106	15	TM		
20	TM	Methyl t-butyl ether (MtBE)	0.9937	0.9953	0.16	TM		
21	TM	Trans-1,2-DCE	0.4282	0.4406	2.9	TM		
22	TM	Diisopropyl Ether	1.129	1.137	0.72	TM		
23	TM**	1,1-DCA	0.7239	0.7234	0.06	TM**		
24	TM	Vinyl Acetate	0.2706	0.2492	7.9	TM		
25	TM	Ethyl tert Butyl Ether	0.9509	1.009	6.1	TM		
26	TM	MEK (2-Butanone)	0.1155	0.1019	12	TM		
27	TM	Cis-1,2-DCE	0.4991	0.5022	0.61	TM		
28	TM	2,2-Dichloropropane	0.1957	0.1833	6.3	TM		
29	TM*	Chloroform	0.7778	0.7854	0.98	TM*		
30	TM	Bromochloromethane	0.2226	0.2369	6.4	TM		
31	TM	1,1,1-TCA	0.5889	0.6230	5.8	TM		
32	TM	Cyclohexane	0.2229	0.2247	0.82	TM		
33	TM	1,1-Dichloropropene	0.4514	0.4859	7.6	TM		
34	TM	2,2,4-Trimethylpentane	0.7880	0.7753	1.6	TM		
35	TM	Carbon Tetrachloride	0.4645	0.5005	7.7	TM		
36	TM	Tert Amyl Methyl Ether	0.9014	0.9021	0.07	TM		
37	TM	1,2-DCA	0.5134	0.5197	1.2	TM		
38	TM	Benzene	1.587	1.715	8.1	TM		
39	TM	TCE	0.2374	0.2311	2.6	TM		
40	TM	2-Pentanone	0.1807	0.1824	0.92	TM		
		Average			7.5			

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/27/16
Instrument: Loki
Cal. Date: 12/27/16
Data File: 1227L18.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM*	1,2-Dichloropropane	0.4246	0.4362	2.7	TM*	
42	TM	Bromodichloromethane	0.5448	0.5734	5.3	TM	
43	TM	Methyl Cyclohexane	0.4425	0.4457	0.73	TM	
44	TM	Dibromomethane	0.2440	0.2618	7.3	TM	
45	TM	2-Chloroethyl vinyl ether	0.0000	0.0206	0.00	TM	
46	TML	MIBK (methyl isobutyl ketone)	0.2951	0.2454	17	TML	3.5
47	TM	1-Bromo-2-chloroethane	0.2997	0.2719	9.3	TM	
48	TM	Cis-1,3-Dichloropropene	0.6058	0.6229	2.8	TM	
49	TM*	Toluene	1.722	1.847	7.3	TM*	
50	TM	Trans-1,3-Dichloropropene	0.5148	0.5253	2.1	TM	
51	TM	1,1,2-TCA	0.2911	0.2939	0.97	TM	
52	TM	2-Hexanone	0.0725	0.0713	1.7	TM	
53	TM	1,2-EDB	0.3437	0.3611	5.1	TM	
54	TM	Tetrachloroethene	0.4468	0.4812	7.7	TM	
55	TM	1-Chlorohexane	0.4498	0.4581	1.9	TM	
56	TM	1,1,1,2-Tetrachloroethane	0.4339	0.4575	5.4	TM	
57	TM	m&p-Xylene	0.7264	0.7983	9.9	TM	
58	TM	o-Xylene	0.7071	0.7919	12	TM	
59	TM	Styrene	0.8146	0.8644	6.1	TM	
60	TM	1,3-Dichloropropane	0.5756	0.6050	5.1	TM	
61	TM	Dibromochloromethane	0.4322	0.4501	4.1	TM	
62	TM**	Chlorobenzene	1.225	1.275	4.1	TM**	
63	TM*	Ethylbenzene	1.919	2.044	6.6	TM*	
64	TM**	Bromoform	0.2659	0.2637	0.81	TM**	
65	TM	Isopropylbenzene	3.012	3.258	8.1	TM	
66	TM**	1,1,2,2-Tetrachloroethane	0.7461	0.7287	2.3	TM**	
67	TML	1,2,3-Trichloropropane	0.1507	0.1510	0.23	TML	5.6
68	TM	t-1,4-Dichloro-2-Butene	0.1609	0.1409	12	TM	
69	TM	Bromobenzene	0.8992	0.9702	7.9	TM	
70	TM	n-Propylbenzene	3.590	3.834	6.8	TM	
71	TM	4-Ethyltoluene	3.124	3.373	8.0	TM	
72	TM	2-Chlorotoluene	2.290	2.490	8.7	TM	
73	TM	1,3,5-Trimethylbenzene	2.696	2.921	8.3	TM	
74	TM	4-Chlorotoluene	2.634	2.945	12	TM	
75	TM	Tert-Butylbenzene	2.115	2.247	6.2	TM	
76	TM	1,2,4-Trimethylbenzene	2.711	2.950	8.8	TM	
77	TM	Sec-Butylbenzene	3.081	3.278	6.4	TM	
78	TM	p-Isopropyltoluene	2.688	2.786	3.6	TM	
79	TM	Benzyl Chloride	0.8342	0.7053	15	TM	
80	TM	1,3-DCB	1.715	1.848	7.7	TM	
		Average			6.2		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/27/16
Instrument: Loki
Cal. Date: 12/27/16
Data File: 1227L18.D

		Compound	MEAN	CCRF	%D	%Drift	
81	TM	1,4-DCB	1.824	1.892	3.7	TM	
82	TM	n-Butylbenzene	2.317	2.290	1.2	TM	
83	TM	1,2-DCB	1.624	1.659	2.2	TM	
84	TM	Hexachloroethane	0.5727	0.5884	2.7	TM	
85	TM	1,2-Dibromo-3-chloropropane	0.1262	0.1241	1.6	TM	
86	TM	1,2,4-Trichlorobenzene	1.010	1.002	0.84	TM	
87	TM	Hexachlorobutadiene	0.4187	0.4226	0.92	TM	
88	TM	Naphthalene	1.116	1.107	0.82	TM	
89	TM	1,2,3-Trichlorobenzene	0.6181	0.6585	6.5	TM	
90							
91							
92							
93							
94							
95							
96							
97							
98							
99							
100							
101							
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109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			2.3		

Data File : M:\LOKI\DATA\161227\1227L18.D Vial: 17
Acq On : 27 Dec 16 20:20 Operator: PM,DG,SV,CMM
Sample : (SS)10ug/L VOC STD 12/27/16 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 28 8:06 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	573248	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	539776	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	310528	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	302096	25.14894 ppb		0.00
Spiked Amount 25.000			Recovery = 100.596%			
37) 1,2-DCA-D4(S)	4.92	65	293971	25.25753 ppb		0.00
Spiked Amount 25.000			Recovery = 101.032%			
57) Toluene-D8(S)	7.22	98	1021234	25.37386 ppb		0.00
Spiked Amount 25.000			Recovery = 101.496%			
65) 4-Bromofluorobenzene(S)	9.89	95	364343	26.39660 ppb		0.00
Spiked Amount 25.000			Recovery = 105.588%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	96352	10.35609 ppb		100
3) Freon 114	0.93	85	63843	9.96983 ppb		94
4) Chloromethane	0.96	50	121167	8.29668 ppb		99
5) Vinyl chloride	1.02	62	116161	9.35597 ppb		99
6) Bromomethane	1.22	96	86576	9.12397 ppb		99
7) Chloroethane	1.29	64	72751	9.75576 ppb		97
8) Dichlorofluoromethane	1.43	67	222744	9.67349 ppb		99
9) Trichlorofluoromethane	1.46	101	138587	9.91479 ppb		100
10) Acrolein	1.75	56	44356	51.66693 ppb		96
11) Acetone	1.88	43	22522	9.63099 ppb		99
12) Freon-113	1.84	101	81172	10.33359 ppb		97
13) 1,1-DCE	1.83	96	68672	10.66025 ppb		97
14) t-Butanol	2.39	59	30992	122.40764 ppb		95
15) Acetonitrile	2.10	41	103895	106.66353 ppb		98
16) Methyl Acetate	2.17	43	55493	9.45067 ppb		99
17) Iodomethane	1.93	142	48976	7.49352 ppb		98
18) Acrylonitrile	2.47	52	17963	8.21686 ppb		91
19) Methylene chloride	2.23	84	131412	11.37009 ppb		99
20) Carbon disulfide	1.98	76	253650	8.47183 ppb		98
21) Methyl t-butyl ether (MtBE	2.52	73	228221	10.01614 ppb		98
22) Trans-1,2-DCE	2.50	96	101031	10.28878 ppb		97
23) Diisopropyl Ether	3.10	45	260758	10.07208 ppb		97
24) 1,1-DCA	2.95	63	165880	9.99357 ppb		97
25) Vinyl Acetate	3.09	43	57144	9.21061 ppb	#	94
26) Ethyl tert Butyl Ether	3.59	59	231444	10.61442 ppb		95
27) MEK (2-Butanone)	3.80	43	23375	8.82412 ppb		100
28) Cis-1,2-DCE	3.72	96	115145	10.06143 ppb		96
29) 2,2-Dichloropropane	3.70	77	42040	9.36612 ppb		97
30) Chloroform	4.25	83	180103	10.09816 ppb		95
31) Bromochloromethane	4.08	128	54315	10.64200 ppb		92
33) 1,1,1-TCA	4.47	97	142851	10.57915 ppb		98
34) Cyclohexane	4.53	41	51531	10.08204 ppb		97
35) 1,1-Dichloropropene	4.72	75	111418	10.76346 ppb		95
36) 2,2,4-Trimethylpentane	5.15	57	177765	9.83805 ppb		97
38) Carbon Tetrachloride	4.70	119	114757	10.77327 ppb		96
39) Tert Amyl Methyl Ether	5.22	73	206842	10.00744 ppb		99
40) 1,2-DCA	5.03	62	119164	10.12333 ppb		98
41) Benzene	4.99	78	393183	10.80584 ppb		99
42) TCE	5.84	95	53000	9.73693 ppb		96

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161227\1227L18.D Vial: 17
Acq On : 27 Dec 16 20:20 Operator: PM,DG,SV,CMM
Sample : (SS)10ug/L VOC STD 12/27/16 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 28 8:06 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

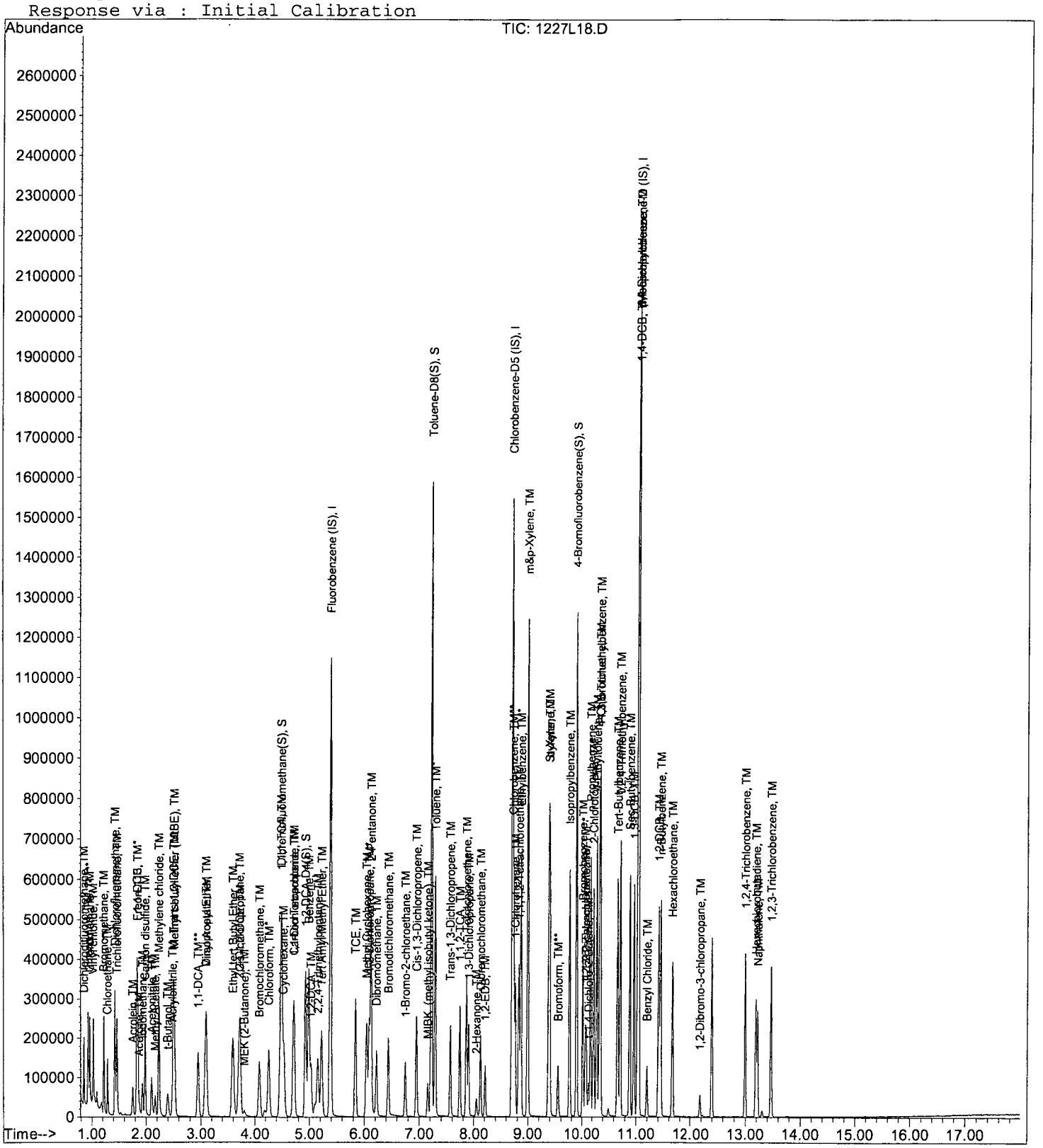
Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43) 2-Pentanone	6.12	43	522802	126.15283 ppb		98
44) 1,2-Dichloropropane	6.09	63	100024	10.27433 ppb	#	95
45) Bromodichloromethane	6.44	83	131491	10.52509 ppb		94
46) Methyl Cyclohexane	6.04	83	102203	10.07309 ppb		97
47) Dibromomethane	6.22	93	60026	10.72837 ppb		98
49) MIBK (methyl isobutyl ket	7.15	43	56279	9.65486 ppb		96
50) 1-Bromo-2-chloroethane	6.75	63	62352	9.07367 ppb		97
51) Cis-1,3-Dichloropropene	6.95	75	142821	10.28180 ppb		99
52) Toluene	7.29	91	423598	10.72842 ppb		99
53) Trans-1,3-Dichloropropene	7.56	75	120461	10.20500 ppb		99
54) 1,1,2-TCA	7.74	83	67390	10.09698 ppb		99
55) 2-Hexanone	8.04	43	16353	9.83093 ppb		98
58) 1,2-EDB	8.20	107	77972	10.50659 ppb		96
59) Tetrachloroethene	7.86	166	103887	10.77004 ppb		98
60) 1-Chlorohexane	8.76	91	98913	10.18538 ppb		95
61) 1,1,1,2-Tetrachloroethane	8.83	131	98778	10.54355 ppb		98
62) m&p-Xylene	8.99	106	344739	21.97990 ppb		96
63) o-Xylene	9.38	106	170973	11.19913 ppb		99
64) Styrene	9.40	104	186624	10.61048 ppb		99
66) 1,3-Dichloropropane	7.90	76	130624	10.50983 ppb		98
67) Dibromochloromethane	8.12	129	97182	10.41461 ppb		96
68) Chlorobenzene	8.73	112	275325	10.40625 ppb		99
69) Ethylbenzene	8.87	91	441413	10.65639 ppb		99
70) Bromoform	9.55	173	56942	9.91874 ppb		98
72) Isopropylbenzene	9.76	105	404652	10.81490 ppb		100
73) 1,1,2,2-Tetrachloroethane	10.07	83	90515	9.76753 ppb		99
74) 1,2,3-Trichloropropane	10.09	110	18760	10.56305 ppb		95
75) t-1,4-Dichloro-2-Butene	10.12	53	17501	8.75678 ppb		98
76) Bromobenzene	10.02	156	120506	10.78880 ppb		92
77) n-Propylbenzene	10.17	91	476278	10.67939 ppb		99
78) 4-Ethyltoluene	10.29	105	419018	10.79785 ppb		97
79) 2-Chlorotoluene	10.23	91	309325	10.87319 ppb		98
80) 1,3,5-Trimethylbenzene	10.35	105	362786	10.83300 ppb		98
81) 4-Chlorotoluene	10.34	91	365853	11.18077 ppb		98
82) Tert-Butylbenzene	10.66	119	279045	10.62168 ppb		99
83) 1,2,4-Trimethylbenzene	10.72	105	366456	10.88237 ppb		99
84) Sec-Butylbenzene	10.88	105	407191	10.64063 ppb		98
85) p-Isopropyltoluene	11.04	119	345992	10.36211 ppb		100
86) Benzyl Chloride	11.20	91	87600	8.45443 ppb		95
87) 1,3-DCB	10.96	146	229508	10.77267 ppb		99
88) 1,4-DCB	11.05	146	234997	10.37229 ppb		95
89) n-Butylbenzene	11.44	91	284442	9.88208 ppb		99
90) 1,2-DCB	11.41	146	206098	10.21764 ppb		99
91) Hexachloroethane	11.66	117	73081	10.27322 ppb		98
92) 1,2-Dibromo-3-chloropropan	12.18	157	15419	9.83549 ppb		99
93) 1,2,4-Trichlorobenzene	13.00	180	124429	9.91566 ppb		96
94) Hexachlorobutadiene	13.19	225	52489	10.09238 ppb		92
95) Naphthalene	13.22	128	137536	9.91824 ppb		99
96) 1,2,3-Trichlorobenzene	13.46	180	81792	10.65327 ppb		95

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161227\1227L18.D Vial: 17
Acq On : 27 Dec 16 20:20 Operator: PM,DG,SV,CMM
Sample : (SS)10ug/L VOC STD 12/27/16 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 28 8:06 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/28/16
Instrument: Loki
Initial Cal. Date: 12/27/16
Data File: 1228L03.D

		Compound	MEAN	CCRF	%D		%Drift	
1	I	Fluorobenzene (IS)	ISTD			I		
2	TM	Dichlorodifluoromethane	0.4058	0.4076	0.46	TM		
3	TM	Freon 114	0.2793	0.2874	2.9	TM		
4	TM**	Chloromethane	0.6369	0.4913	23	TM**		*
5	TM*	Vinyl chloride	0.5415	0.5329	1.6	TM*		
6	TM	Bromomethane	0.4138	0.3574	14	TM		
7	TM	Chloroethane	0.3252	0.3183	2.1	TM		
8	TM	Dichlorofluoromethane	1.004	0.9835	2.1	TM		
9	TM	Trichlorofluoromethane	0.6096	0.6116	0.34	TM		
10	TM	Acrolein	0.0374	0.0356	5.0	TM		
11	TML	Acetone	0.1103	0.0948	14	TML	7.4	
12	TM	Freon-113	0.3426	0.3490	1.9	TM		
13	TM*	1,1-DCE	0.2809	0.2862	1.9	TM*		
14	TM	t-Butanol	0.0110	0.0107	2.9	TM		
15	TM	Acetonitrile	0.0425	0.0360	15	TM		
16	TML	Methyl Acetate	0.2777	0.2328	16	TML	8.9	
17	TM	Iodomethane	0.2850	0.2493	13	TM		
18	TM	Acrylonitrile	0.0953	0.0824	14	TM		
19	TML	Methylene chloride	0.6184	0.4797	22	TML	5.2	
20	TM	Carbon disulfide	1.306	1.274	2.4	TM		
21	TM	Methyl t-butyl ether (MtBE)	0.9937	0.9540	4.0	TM		
22	TM	Trans-1,2-DCE	0.4282	0.4160	2.9	TM		
23	TM	Diisopropyl Ether	1.129	1.098	2.8	TM		
24	TM**	1,1-DCA	0.7239	0.7051	2.6	TM**		
25	TM	Vinyl Acetate	0.2706	0.2463	9.0	TM		
26	TM	Ethyl tert Butyl Ether	0.9509	0.9450	0.62	TM		
27	TM	MEK (2-Butanone)	0.1155	0.1081	6.5	TM		
28	TM	Cis-1,2-DCE	0.4991	0.5281	5.8	TM		
29	TM	2,2-Dichloropropane	0.1957	0.1909	2.5	TM		
30	TM*	Chloroform	0.7778	0.7857	1.0	TM*		
31	TM	Bromochloromethane	0.2226	0.2317	4.1	TM		
32	S	Dibromofluoromethane(S)	0.5239	0.5164	1.4	S		
33	TM	1,1,1-TCA	0.5889	0.5994	1.8	TM		
34	TM	Cyclohexane	0.2229	0.2060	7.6	TM		
35	TM	1,1-Dichloropropene	0.4514	0.4504	0.24	TM		
36	TM	2,2,4-Trimethylpentane	0.7880	0.7637	3.1	TM		
37	S	1,2-DCA-D4(S)	0.5076	0.4967	2.1	S		
38	TM	Carbon Tetrachloride	0.4645	0.4711	1.4	TM		
39	TM	Tert Amyl Methyl Ether	0.9014	0.8723	3.2	TM		
40	TM	1,2-DCA	0.5134	0.5023	2.2	TM		
		Average			5.6			

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/28/16
Instrument: Loki
Cal. Date: 12/27/16
Data File: 1228L03.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	Benzene	1.587	1.625	2.4	TM	
42	TM	TCE	0.2374	0.2174	8.4	TM	
43	TM	2-Pentanone	0.1807	0.1719	4.9	TM	
44	TM*	1,2-Dichloropropane	0.4246	0.4143	2.4	TM*	
45	TM	Bromodichloromethane	0.5448	0.5563	2.1	TM	
46	TM	Methyl Cyclohexane	0.4425	0.4400	0.57	TM	
47	TM	Dibromomethane	0.2440	0.2406	1.4	TM	
48	TM	2-Chloroethyl vinyl ether	0.0000	0.0253	0.00	TM	
49	TML	MIBK (methyl isobutyl ketone)	0.2951	0.2235	24	TML	13
50	TM	1-Bromo-2-chloroethane	0.2997	0.2848	5.0	TM	
51	TM	Cis-1,3-Dichloropropene	0.6058	0.5942	1.9	TM	
52	TM*	Toluene	1.722	1.806	4.9	TM*	
53	TM	Trans-1,3-Dichloropropene	0.5148	0.5090	1.1	TM	
54	TM	1,1,2-TCA	0.2911	0.2882	0.97	TM	
55	TM	2-Hexanone	0.0725	0.0700	3.5	TM	
56	I	Chlorobenzene-D5 (IS)	ISTD			I	
57	S	Toluene-D8(S)	1.864	1.849	0.83	S	
58	TM	1,2-EDB	0.3437	0.3342	2.8	TM	
59	TM	Tetrachloroethene	0.4468	0.4719	5.6	TM	
60	TM	1-Chlorohexane	0.4498	0.4499	0.03	TM	
61	TM	1,1,1,2-Tetrachloroethane	0.4339	0.4585	5.7	TM	
62	TM	m&p-Xylene	0.7264	0.7749	6.7	TM	
63	TM	o-Xylene	0.7071	0.7553	6.8	TM	
64	TM	Styrene	0.8146	0.8500	4.3	TM	
65	S	4-Bromofluorobenzene(S)	0.6393	0.6534	2.2	S	
66	TM	1,3-Dichloropropane	0.5756	0.5536	3.8	TM	
67	TM	Dibromochloromethane	0.4322	0.4267	1.3	TM	
68	TM**	Chlorobenzene	1.225	1.230	0.37	TM**	
69	TM*	Ethylbenzene	1.919	1.986	3.5	TM*	
70	TM**	Bromoform	0.2659	0.2608	1.9	TM**	
71	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
72	TM	Isopropylbenzene	3.012	3.262	8.3	TM	
73	TM**	1,1,2,2-Tetrachloroethane	0.7461	0.7372	1.2	TM**	
74	TML	1,2,3-Trichloropropane	0.1507	0.1494	0.88	TML	4.4
75	TM	t-1,4-Dichloro-2-Butene	0.1609	0.1521	5.5	TM	
76	TM	Bromobenzene	0.8992	0.9904	10	TM	
77	TM	n-Propylbenzene	3.590	3.740	4.2	TM	
78	TM	4-Ethyltoluene	3.124	3.481	11	TM	
79	TM	2-Chlorotoluene	2.290	2.530	10	TM	
80	TM	1,3,5-Trimethylbenzene	2.696	2.962	9.9	TM	
		Average			4.5		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 12/28/16
Matrix: 0 Instrument: Loki
Cal. Date: 12/27/16
Data File: 1228L03.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	4-Chlorotoluene	2.634	2.932	11	TM	
82	TM	Tert-Butylbenzene	2.115	2.298	8.6	TM	
83	TM	1,2,4-Trimethylbenzene	2.711	2.927	8.0	TM	
84	TM	Sec-Butylbenzene	3.081	3.256	5.7	TM	
85	TM	p-Isopropyltoluene	2.688	2.869	6.7	TM	
86	TM	Benzyl Chloride	0.8342	0.8374	0.39	TM	
87	TM	1,3-DCB	1.715	1.829	6.6	TM	
88	TM	1,4-DCB	1.824	1.901	4.2	TM	
89	TM	n-Butylbenzene	2.317	2.381	2.8	TM	
90	TM	1,2-DCB	1.624	1.701	4.8	TM	
91	TM	Hexachloroethane	0.5727	0.5881	2.7	TM	
92	TM	1,2-Dibromo-3-chloropropane	0.1262	0.1303	3.2	TM	
93	TM	1,2,4-Trichlorobenzene	1.010	1.039	2.9	TM	
94	TM	Hexachlorobutadiene	0.4187	0.4396	5.0	TM	
95	TM	Naphthalene	1.116	1.182	5.9	TM	
96	TM	1,2,3-Trichlorobenzene	0.6181	0.6438	4.2	TM	
97							
98							
99							
100							
101							
102							
103							
104							
105							
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107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			5.2		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161227\1228L03.D
Acq On : 28 Dec 16 10:03
Sample : 161228A CCV/LCS-1WL 10ug/L
Misc : W IS&S 11/21/16, 11/14/16

Vial: 2
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 29 9:53 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	573120	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	557568	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	309568	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	295950	24.64280 ppb		0.00
Spiked Amount 25.000			Recovery = 98.572%			
37) 1,2-DCA-D4(S)	4.92	65	284665	24.46344 ppb		0.00
Spiked Amount 25.000			Recovery = 97.852%			
57) Toluene-D8(S)	7.22	98	1030707	24.79204 ppb		0.00
Spiked Amount 25.000			Recovery = 99.168%			
65) 4-Bromofluorobenzene(S)	9.89	95	364311	25.55204 ppb		0.00
Spiked Amount 25.000			Recovery = 102.208%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	93448	10.04620 ppb		96
3) Freon 114	0.93	85	65890	10.29179 ppb		97
4) Chloromethane	0.96	50	112633	7.71405 ppb		98
5) Vinyl chloride	1.02	62	122176	9.84264 ppb		99
6) Bromomethane	1.22	96	81928	8.63606 ppb		94
7) Chloroethane	1.29	64	72959	9.78583 ppb		99
8) Dichlorofluoromethane	1.42	67	225460	9.79363 ppb		98
9) Trichlorofluoromethane	1.46	101	140218	10.03372 ppb		97
10) Acrolein	1.75	56	101943	118.77216 ppb		98
11) Acetone	1.88	43	21728	9.25622 ppb		98
12) Freon-113	1.84	101	80002	10.18692 ppb		99
13) 1,1-DCE	1.83	96	65616	10.18813 ppb		97
14) t-Butanol	2.40	59	30728	121.39204 ppb		99
15) Acetonitrile	2.10	41	103155	105.92746 ppb		100
16) Methyl Acetate	2.17	43	53373	9.11295 ppb		94
17) Iodomethane	1.93	142	57152	8.74643 ppb		100
18) Acrylonitrile	2.47	52	18887	8.64145 ppb		96
19) Methylene chloride	2.23	84	109979	9.48068 ppb		93
20) Carbon disulfide	1.98	76	292010	9.75522 ppb		100
21) Methyl t-butyl ether (MtBE	2.52	73	218704	9.60060 ppb		97
22) Trans-1,2-DCE	2.50	96	95371	9.71455 ppb		92
23) Diisopropyl Ether	3.10	45	251610	9.72090 ppb		95
24) 1,1-DCA	2.95	63	161637	9.74012 ppb		96
25) Vinyl Acetate	3.09	43	56464	9.10304 ppb	#	95
26) Ethyl tert Butyl Ether	3.59	59	216645	9.93793 ppb		99
27) MEK (2-Butanone)	3.80	43	24774	9.35434 ppb		93
28) Cis-1,2-DCE	3.72	96	121061	10.58074 ppb		98
29) 2,2-Dichloropropane	3.70	77	43768	9.75328 ppb		95
30) Chloroform	4.25	83	180119	10.10131 ppb		95
31) Bromochloromethane	4.08	128	53118	10.40980 ppb		99
33) 1,1,1-TCA	4.47	97	137413	10.17870 ppb		100
34) Cyclohexane	4.52	41	47228	9.24222 ppb		86
35) 1,1-Dichloropropene	4.72	75	103243	9.97595 ppb		98
36) 2,2,4-Trimethylpentane	5.15	57	175076	9.69139 ppb		96
38) Carbon Tetrachloride	4.70	119	107993	10.14054 ppb		96
39) Tert Amyl Methyl Ether	5.22	73	199964	9.67683 ppb		98
40) 1,2-DCA	5.03	62	115155	9.78493 ppb		97
41) Benzene	4.99	78	372594	10.24228 ppb		99
42) TCE	5.84	95	49848	9.15991 ppb		92

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161227\1228L03.D
Acq On : 28 Dec 16 10:03
Sample : 161228A CCV/LCS-1WL 10ug/L
Misc : W IS&S 11/21/16, 11/14/16

Vial: 2
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 29 9:53 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
43)	2-Pentanone	6.12	43	492658	118.90559	ppb	95
44)	1,2-Dichloropropane	6.09	63	94978	9.75819	ppb	99
45)	Bromodichloromethane	6.44	83	127536	10.21079	ppb	98
46)	Methyl Cyclohexane	6.04	83	100861	9.94304	ppb	100
47)	Dibromomethane	6.22	93	55164	9.86160	ppb	93
49)	MIBK (methyl isobutyl ket	7.16	43	51241	8.74866	ppb	95
50)	1-Bromo-2-chloroethane	6.75	63	65280	9.50189	ppb	99
51)	Cis-1,3-Dichloropropene	6.95	75	136222	9.80892	ppb	97
52)	Toluene	7.29	91	413926	10.48580	ppb	100
53)	Trans-1,3-Dichloropropene	7.56	75	116691	9.88783	ppb	98
54)	1,1,2-TCA	7.74	83	66079	9.90277	ppb	99
55)	2-Hexanone	8.04	43	16043	9.64673	ppb	99
58)	1,2-EDB	8.20	107	74544	9.72415	ppb	99
59)	Tetrachloroethene	7.86	166	105257	10.56386	ppb	94
60)	1-Chlorohexane	8.76	91	100347	10.00331	ppb	95
61)	1,1,1,2-Tetrachloroethane	8.83	131	102251	10.56598	ppb	95
62)	m&p-Xylene	8.99	106	345627	21.33334	ppb	98
63)	o-Xylene	9.38	106	168453	10.68196	ppb	98
64)	Styrene	9.40	104	189568	10.43394	ppb	99
66)	1,3-Dichloropropane	7.90	76	123458	9.61630	ppb	96
67)	Dibromochloromethane	8.12	129	95157	9.87220	ppb	100
68)	Chlorobenzene	8.73	112	274309	10.03701	ppb	97
69)	Ethylbenzene	8.87	91	442844	10.34979	ppb	98
70)	Bromoform	9.55	173	58155	9.80678	ppb	100
72)	Isopropylbenzene	9.76	105	403869	10.82745	ppb	98
73)	1,1,2,2-Tetrachloroethane	10.07	83	91290	9.88171	ppb	94
74)	1,2,3-Trichloropropane	10.09	110	18496	10.44343	ppb	99
75)	t-1,4-Dichloro-2-Butene	10.12	53	18830	9.45097	ppb	87
76)	Bromobenzene	10.02	156	122638	11.01372	ppb	98
77)	n-Propylbenzene	10.17	91	463082	10.41570	ppb	99
78)	4-Ethyltoluene	10.28	105	431010	11.14132	ppb	97
79)	2-Chlorotoluene	10.22	91	313236	11.04481	ppb	98
80)	1,3,5-Trimethylbenzene	10.36	105	366806	10.98701	ppb	99
81)	4-Chlorotoluene	10.34	91	363044	11.12933	ppb	100
82)	Tert-Butylbenzene	10.66	119	284498	10.86283	ppb	99
83)	1,2,4-Trimethylbenzene	10.72	105	362442	10.79655	ppb	99
84)	Sec-Butylbenzene	10.88	105	403178	10.56844	ppb	99
85)	p-Isopropyltoluene	11.04	119	355281	10.67331	ppb	98
86)	Benzyl Chloride	11.19	91	103699	10.03921	ppb	98
87)	1,3-DCB	10.96	146	226439	10.66158	ppb	98
88)	1,4-DCB	11.05	146	235391	10.42190	ppb	99
89)	n-Butylbenzene	11.44	91	294869	10.27610	ppb	99
90)	1,2-DCB	11.41	146	210646	10.47550	ppb	98
91)	Hexachloroethane	11.66	117	72819	10.26814	ppb	96
92)	1,2-Dibromo-3-chloropropan	12.18	157	16132	10.32221	ppb	89
93)	1,2,4-Trichlorobenzene	13.00	180	128685	10.28662	ppb	100
94)	Hexachlorobutadiene	13.19	225	54432	10.49843	ppb	92
95)	Naphthalene	13.22	128	146368	10.58788	ppb	99
96)	1,2,3-Trichlorobenzene	13.46	180	79720	10.41560	ppb	98

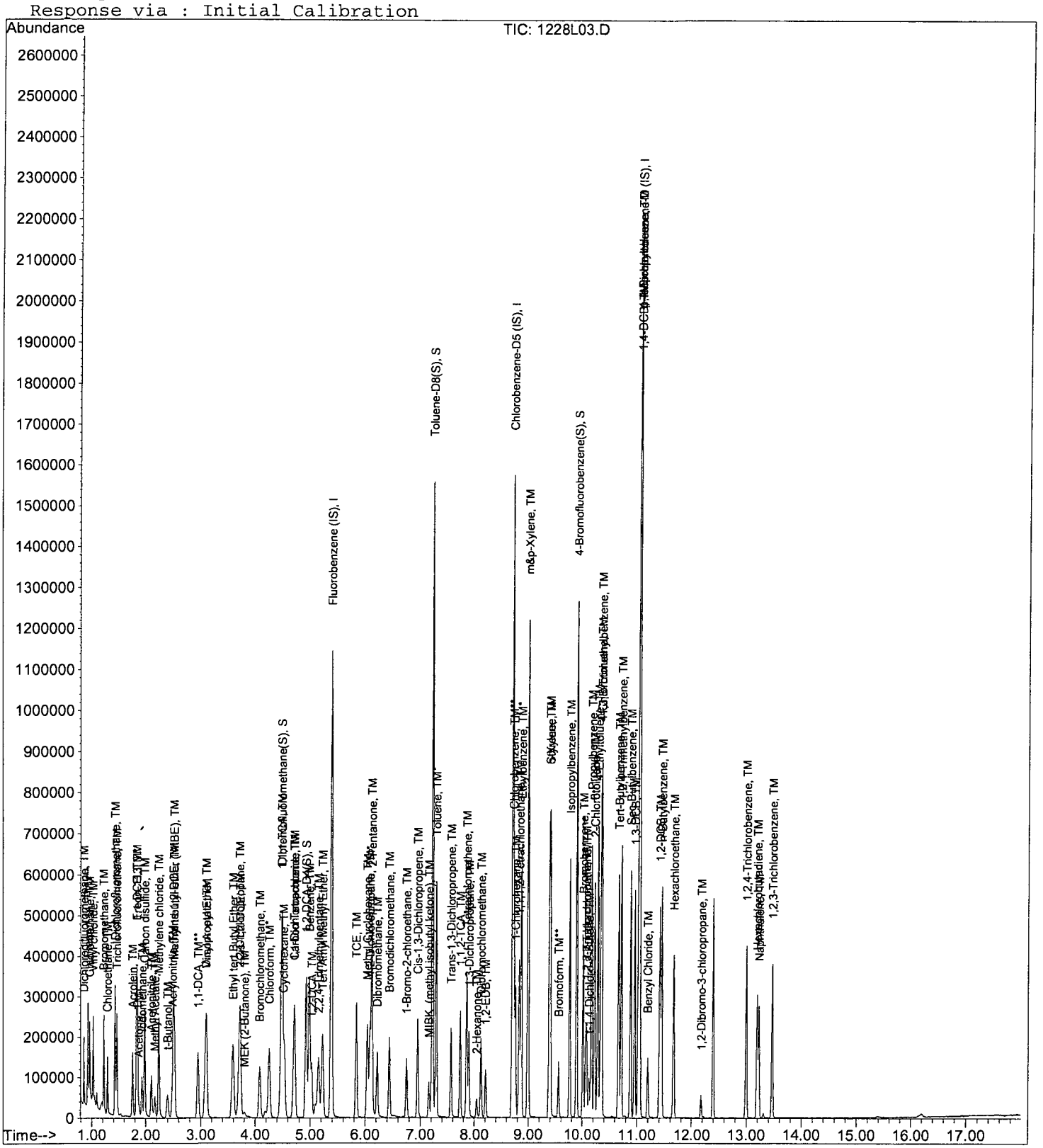
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161227\1228L03.D Vial: 2
Acq On : 28 Dec 16 10:03 Operator: PM,DG,SV,CMM
Sample : 161228A CCV/LCS-1WL 10ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 9:53 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 12/28/16
Matrix: Instrument: Loki
Initial Cal. Date: 12/27/16
Data File: 1228L28.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	TM	Dichlorodifluoromethane	0.4058	0.3867	4.7	TM	
3	TM	Freon 114	0.2793	0.2509	10	TM	
4	TM**	Chloromethane	0.6369	0.5088	20	TM**	
5	TM*	Vinyl chloride	0.5415	0.4984	7.9	TM*	
6	TM	Bromomethane	0.4138	0.3984	3.7	TM	
7	TM	Chloroethane	0.3252	0.3278	0.80	TM	
8	TM	Dichlorofluoromethane	1.004	0.9881	1.6	TM	
9	TM	Trichlorofluoromethane	0.6096	0.6158	1.0	TM	
10	TM	Acrolein	0.0374	0.0352	6.1	TM	
11	TML	Acetone	0.1103	0.1296	18	TML	30
12	TM	Freon-113	0.3426	0.3330	2.8	TM	
13	TM*	1,1-DCE	0.2809	0.2828	0.68	TM*	
14	TM	t-Butanol	0.0110	0.0107	2.8	TM	
15	TM	Acetonitrile	0.0425	0.0349	18	TM	
16	TML	Methyl Acetate	0.2777	0.2396	14	TML	6.4
17	TM	Iodomethane	0.2850	0.3056	7.2	TM	
18	TM	Acrylonitrile	0.0953	0.0791	17	TM	
19	TML	Methylene chloride	0.6184	0.5080	18	TML	0.52
20	TM	Carbon disulfide	1.306	1.255	3.9	TM	
21	TM	Methyl t-butyl ether (MtBE)	0.9937	0.9637	3.0	TM	
22	TM	Trans-1,2-DCE	0.4282	0.4166	2.7	TM	
23	TM	Diisopropyl Ether	1.129	1.030	8.8	TM	
24	TM**	1,1-DCA	0.7239	0.6731	7.0	TM**	
25	TM	Vinyl Acetate	0.2706	0.2398	11	TM	
26	TM	Ethyl tert Butyl Ether	0.9509	0.8935	6.0	TM	
27	TM	MEK (2-Butanone)	0.1155	0.0999	14	TM	
28	TM	Cis-1,2-DCE	0.4991	0.5032	0.82	TM	
29	TM	2,2-Dichloropropane	0.1957	0.1674	14	TM	
30	TM*	Chloroform	0.7778	0.7694	1.1	TM*	
31	TM	Bromochloromethane	0.2226	0.2426	9.0	TM	
32	S	Dibromofluoromethane(S)	0.5239	0.5221	0.34	S	
33	TM	1,1,1-TCA	0.5889	0.6006	2.0	TM	
34	TM	Cyclohexane	0.2229	0.1876	16	TM	
35	TM	1,1-Dichloropropene	0.4514	0.4375	3.1	TM	
36	TM	2,2,4-Trimethylpentane	0.7880	0.6322	20	TM	
37	S	1,2-DCA-D4(S)	0.5076	0.4956	2.4	S	
38	TM	Carbon Tetrachloride	0.4645	0.4831	4.0	TM	
39	TM	Tert Amyl Methyl Ether	0.9014	0.8775	2.6	TM	
40	TM	1,2-DCA	0.5134	0.5217	1.6	TM	
		Average			7.4		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/28/16
Instrument: Loki
Cal. Date: 12/27/16
Data File: 1228L28.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	Benzene	1.587	1.596	0.56	TM	
42	TM	TCE	0.2374	0.2174	8.4	TM	
43	TM	2-Pentanone	0.1807	0.1643	9.1	TM	
44	TM*	1,2-Dichloropropane	0.4246	0.4034	5.0	TM*	
45	TM	Bromodichloromethane	0.5448	0.5550	1.9	TM	
46	TM	Methyl Cyclohexane	0.4425	0.4091	7.6	TM	
47	TM	Dibromomethane	0.2440	0.2528	3.6	TM	
48	TM	2-Chloroethyl vinyl ether	0.0000	0.0036	0.00	TM	
49	TML	MIBK (methyl isobutyl ketone)	0.2951	0.2329	21	TML	8.6
50	TM	1-Bromo-2-chloroethane	0.2997	0.2764	7.8	TM	
51	TM	Cis-1,3-Dichloropropene	0.6058	0.5899	2.6	TM	
52	TM*	Toluene	1.722	1.846	7.2	TM*	
53	TM	Trans-1,3-Dichloropropene	0.5148	0.5052	1.9	TM	
54	TM	1,1,2-TCA	0.2911	0.2941	1.0	TM	
55	TM	2-Hexanone	0.0725	0.0732	0.92	TM	
56	I	Chlorobenzene-D5 (IS)	ISTD			I	
57	S	Toluene-D8(S)	1.864	1.802	3.3	S	
58	TM	1,2-EDB	0.3437	0.3378	1.7	TM	
59	TM	Tetrachloroethene	0.4468	0.4559	2.1	TM	
60	TM	1-Chlorohexane	0.4498	0.4287	4.7	TM	
61	TM	1,1,1,2-Tetrachloroethane	0.4339	0.4717	8.7	TM	
62	TM	m&p-Xylene	0.7264	0.7770	7.0	TM	
63	TM	o-Xylene	0.7071	0.7718	9.2	TM	
64	TM	Styrene	0.8146	0.8457	3.8	TM	
65	S	4-Bromofluorobenzene(S)	0.6393	0.6572	2.8	S	
66	TM	1,3-Dichloropropane	0.5756	0.5620	2.4	TM	
67	TM	Dibromochloromethane	0.4322	0.4516	4.5	TM	
68	TM**	Chlorobenzene	1.225	1.244	1.5	TM**	
69	TM*	Ethylbenzene	1.919	1.961	2.2	TM*	
70	TM**	Bromoform	0.2659	0.2902	9.1	TM**	
71	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
72	TM	Isopropylbenzene	3.012	3.095	2.7	TM	
73	TM**	1,1,2,2-Tetrachloroethane	0.7461	0.6969	6.6	TM**	
74	TML	1,2,3-Trichloropropane	0.1507	0.1457	3.3	TML	1.8
75	TM	t-1,4-Dichloro-2-Butene	0.1609	0.1315	18	TM	
76	TM	Bromobenzene	0.8992	0.9822	9.2	TM	
77	TM	n-Propylbenzene	3.590	3.710	3.3	TM	
78	TM	4-Ethyltoluene	3.124	3.316	6.1	TM	
79	TM	2-Chlorotoluene	2.290	2.365	3.3	TM	
80	TM	1,3,5-Trimethylbenzene	2.696	2.838	5.2	TM	
		Average			5.2		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/28/16
Instrument: Loki
Cal. Date: 12/27/16
Data File: 1228L28.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	4-Chlorotoluene	2.634	2.786	5.8	TM	
82	TM	Tert-Butylbenzene	2.115	2.229	5.4	TM	
83	TM	1,2,4-Trimethylbenzene	2.711	2.856	5.3	TM	
84	TM	Sec-Butylbenzene	3.081	3.108	0.87	TM	
85	TM	p-Isopropyltoluene	2.688	2.782	3.5	TM	
86	TM	Benzyl Chloride	0.8342	0.7205	14	TM	
87	TM	1,3-DCB	1.715	1.864	8.7	TM	
88	TM	1,4-DCB	1.824	1.859	1.9	TM	
89	TM	n-Butylbenzene	2.317	2.203	4.9	TM	
90	TM	1,2-DCB	1.624	1.710	5.3	TM	
91	TM	Hexachloroethane	0.5727	0.5941	3.7	TM	
92	TM	1,2-Dibromo-3-chloropropane	0.1262	0.1244	1.4	TM	
93	TM	1,2,4-Trichlorobenzene	1.010	1.030	2.0	TM	
94	TM	Hexachlorobutadiene	0.4187	0.4315	3.1	TM	
95	TM	Naphthalene	1.116	1.091	2.2	TM	
96	TM	1,2,3-Trichlorobenzene	0.6181	0.6105	1.2	TM	
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			4.3		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161227\1228L28.D
Acq On : 28 Dec 16 21:43
Sample : Ending CCV 8260 10ug/l 12/28/16
Misc : W IS&S 11/21/16, 11/14/16

Vial: 27
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 29 9:54 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	510592	25.00000 ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	505728	25.00000 ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	295168	25.00000 ppb	0.00
System Monitoring Compounds					
32) Dibromofluoromethane(S)	4.48	111	266571	24.91473 ppb	0.00
Spiked Amount 25.000			Recovery =	99.660%	
37) 1,2-DCA-D4(S)	4.92	65	253050	24.40964 ppb	0.00
Spiked Amount 25.000			Recovery =	97.640%	
57) Toluene-D8(S)	7.22	98	911265	24.16588 ppb	0.00
Spiked Amount 25.000			Recovery =	96.664%	
65) 4-Bromofluorobenzene(S)	9.89	95	332341	25.69910 ppb	0.00
Spiked Amount 25.000			Recovery =	102.796%	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.85	85	78976	9.53013 ppb	94
3) Freon 114	0.93	85	51242	8.98399 ppb	95
4) Chloromethane	0.96	50	103910	7.98814 ppb	100
5) Vinyl chloride	1.02	62	101801	9.20554 ppb	95
6) Bromomethane	1.22	96	81376	9.62834 ppb	99
7) Chloroethane	1.29	64	66956	10.08045 ppb	99
8) Dichlorofluoromethane	1.42	67	201808	9.83975 ppb	95
9) Trichlorofluoromethane	1.46	101	125778	10.10263 ppb	96
10) Acrolein	1.75	56	89775	117.40436 ppb	99
11) Acetone	1.88	43	26470	13.04851 ppb	96
12) Freon-113	1.84	101	68013	9.72088 ppb	94
13) 1,1-DCE	1.83	96	57768	10.06801 ppb	97
14) t-Butanol	2.40	59	27400	121.50049 ppb	94
15) Acetonitrile	2.10	41	89030	102.61863 ppb	98
16) Methyl Acetate	2.17	43	48925	9.36027 ppb	97
17) Iodomethane	1.93	142	62408	10.72041 ppb	98
18) Acrylonitrile	2.47	52	16145	8.29151 ppb	93
19) Methylene chloride	2.23	84	103743	10.05170 ppb	96
20) Carbon disulfide	1.98	76	256279	9.61001 ppb	100
21) Methyl t-butyl ether (MtBE	2.52	73	196816	9.69781 ppb	96
22) Trans-1,2-DCE	2.50	96	85086	9.72828 ppb	90
23) Diisopropyl Ether	3.10	45	210330	9.12118 ppb	95
24) 1,1-DCA	2.95	63	137465	9.29795 ppb	96
25) Vinyl Acetate	3.09	43	48968	8.86133 ppb	100
26) Ethyl tert Butyl Ether	3.59	59	182485	9.39606 ppb	100
27) MEK (2-Butanone)	3.80	43	20398	8.64522 ppb	95
28) Cis-1,2-DCE	3.72	96	102770	10.08207 ppb	93
29) 2,2-Dichloropropane	3.70	77	34184	8.55044 ppb	97
30) Chloroform	4.25	83	157130	9.89120 ppb	95
31) Bromochloromethane	4.08	128	49552	10.90017 ppb	98
33) 1,1,1-TCA	4.47	97	122668	10.19923 ppb	100
34) Cyclohexane	4.53	41	38320	8.41732 ppb	94
35) 1,1-Dichloropropene	4.72	75	89357	9.69156 ppb	100
36) 2,2,4-Trimethylpentane	5.15	57	129110	8.02216 ppb	98
38) Carbon Tetrachloride	4.70	119	98670	10.39973 ppb	98
39) Tert Amyl Methyl Ether	5.22	73	179221	9.73513 ppb	98
40) 1,2-DCA	5.03	62	106546	10.16211 ppb	95
41) Benzene	4.99	78	325899	10.05577 ppb	98
42) TCE	5.84	95	44400	9.15794 ppb	94

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161227\1228L28.D
Acq On : 28 Dec 16 21:43
Sample : Ending CCV 8260 10ug/l 12/28/16
Misc : W IS&S 11/21/16, 11/14/16

Vial: 27
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 29 9:54 2016

Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43)	2-Pentanone	6.12	43	419385	113.61645	ppb	93
44)	1,2-Dichloropropane	6.09	63	82394	9.50196	ppb #	95
45)	Bromodichloromethane	6.44	83	113357	10.18701	ppb #	93
46)	Methyl Cyclohexane	6.04	83	83546	9.24471	ppb	89
47)	Dibromomethane	6.22	93	51629	10.35993	ppb	95
49)	MIBK (methyl isobutyl ket	7.16	43	47572	9.13757	ppb	96
50)	1-Bromo-2-chloroethane	6.75	63	56456	9.22383	ppb	96
51)	Cis-1,3-Dichloropropene	6.95	75	120487	9.73836	ppb	98
52)	Toluene	7.29	91	376954	10.71862	ppb	98
53)	Trans-1,3-Dichloropropene	7.56	75	103184	9.81403	ppb	99
54)	1,1,2-TCA	7.74	83	60063	10.10350	ppb	98
55)	2-Hexanone	8.04	43	14953	10.09240	ppb	90
58)	1,2-EDB	8.21	107	68327	9.82680	ppb	97
59)	Tetrachloroethene	7.86	166	92233	10.20561	ppb	98
60)	1-Chlorohexane	8.76	91	86722	9.53125	ppb	90
61)	1,1,1,2-Tetrachloroethane	8.83	131	95430	10.87196	ppb	93
62)	m&p-Xylene	8.99	106	314346	21.39143	ppb	98
63)	o-Xylene	9.38	106	156130	10.91540	ppb	95
64)	Styrene	9.40	104	171072	10.38109	ppb	99
66)	1,3-Dichloropropane	7.90	76	113694	9.76353	ppb	97
67)	Dibromochloromethane	8.12	129	91354	10.44916	ppb	95
68)	Chlorobenzene	8.73	112	251555	10.14795	ppb	96
69)	Ethylbenzene	8.87	91	396733	10.22257	ppb	99
70)	Bromoform	9.55	173	58702	10.91373	ppb	95
72)	Isopropylbenzene	9.76	105	365397	10.27395	ppb	100
73)	1,1,2,2-Tetrachloroethane	10.07	83	82284	9.34138	ppb	99
74)	1,2,3-Trichloropropane	10.09	110	17200	10.17813	ppb	95
75)	t-1,4-Dichloro-2-Butene	10.12	53	15527	8.17336	ppb	87
76)	Bromobenzene	10.01	156	115963	10.92233	ppb	97
77)	n-Propylbenzene	10.17	91	438082	10.33410	ppb	97
78)	4-Ethyltoluene	10.29	105	391496	10.61362	ppb	99
79)	2-Chlorotoluene	10.22	91	279214	10.32548	ppb	99
80)	1,3,5-Trimethylbenzene	10.35	105	335035	10.52495	ppb	98
81)	4-Chlorotoluene	10.34	91	328929	10.57545	ppb	97
82)	Tert-Butylbenzene	10.66	119	263176	10.53894	ppb	99
83)	1,2,4-Trimethylbenzene	10.72	105	337183	10.53413	ppb	97
84)	Sec-Butylbenzene	10.88	105	366916	10.08713	ppb	97
85)	p-Isopropyltoluene	11.04	119	328427	10.34791	ppb	99
86)	Benzyl Chloride	11.19	91	85071	8.63760	ppb	98
87)	1,3-DCB	10.96	146	220046	10.86602	ppb	99
88)	1,4-DCB	11.05	146	219438	10.18956	ppb	97
89)	n-Butylbenzene	11.44	91	260108	9.50692	ppb	99
90)	1,2-DCB	11.41	146	201887	10.52971	ppb	97
91)	Hexachloroethane	11.66	117	70146	10.37377	ppb	99
92)	1,2-Dibromo-3-chloropropan	12.18	157	14692	9.85944	ppb	98
93)	1,2,4-Trichlorobenzene	13.00	180	121666	10.20001	ppb	96
94)	Hexachlorobutadiene	13.19	225	50949	10.30606	ppb	91
95)	Naphthalene	13.22	128	128856	9.77585	ppb	100
96)	1,2,3-Trichlorobenzene	13.46	180	72080	9.87685	ppb	93

(#) = qualifier out of range (m) = manual integration

Quantitation Report

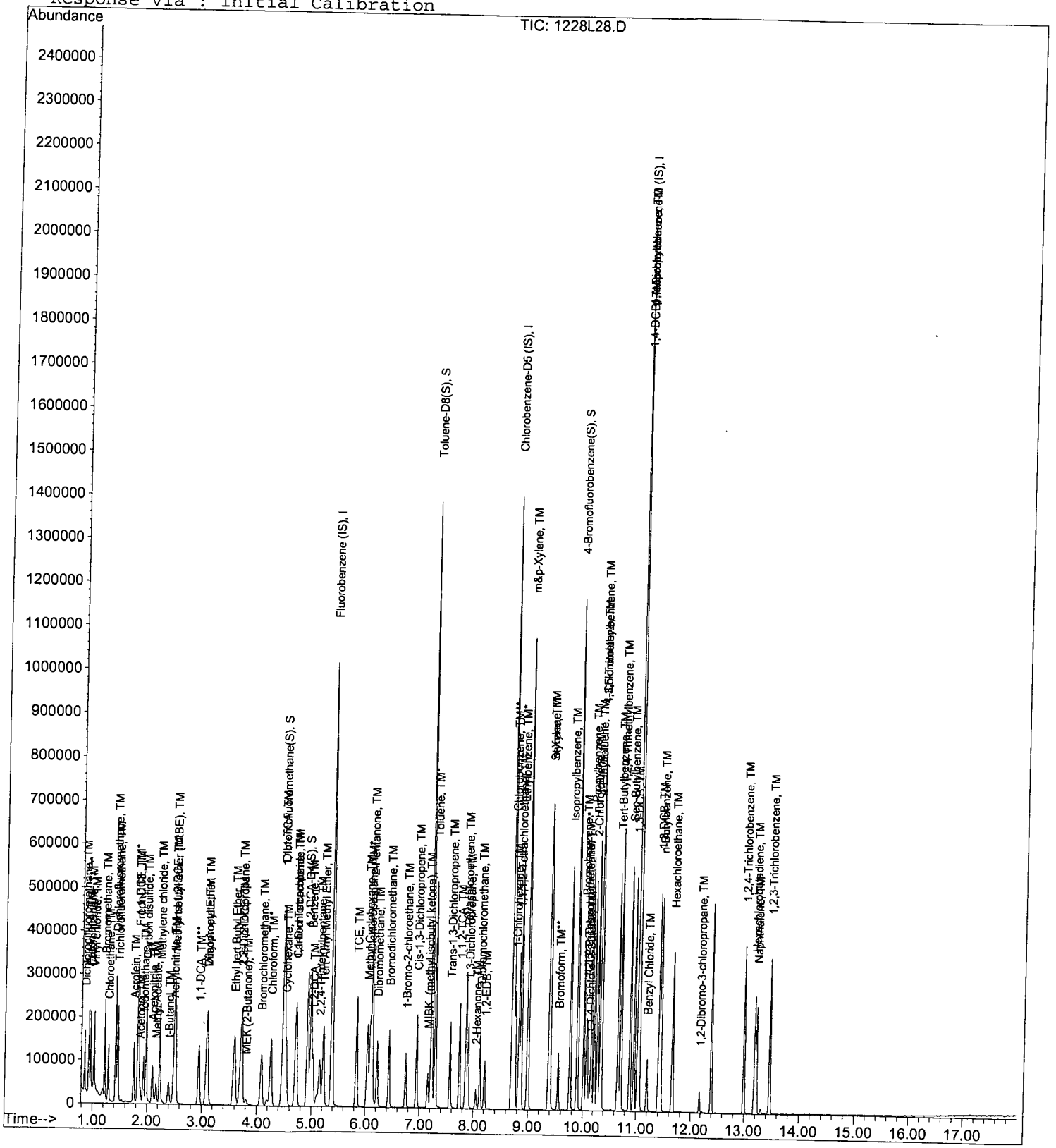
Data File : M:\LOKI\DATA\161227\1228L28.D
Acq On : 28 Dec 16 21:43
Sample : Ending CCV 8260 10ug/l 12/28/16
Misc : W IS&S 11/21/16, 11/14/16

Vial: 27
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 29 9:54 2016

Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration



441

EPA METHOD 8260B
Volatile Organic Compounds
Raw Data

APPL, INC.

Method Blank

EPA 8260B BTEX WATER

Blank Name/QCG: **161228W-48082 - 215063**
Batch ID: #86BTO-161228AL

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	12/28/16	12/28/16
BLANK	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	12/28/16	12/28/16
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	12/28/16	12/28/16
BLANK	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	12/28/16	12/28/16
BLANK	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	12/28/16	12/28/16
BLANK	SURROGATE: 1,2-DICHLOROET	101	81-118			%	12/28/16	12/28/16
BLANK	SURROGATE: 4-BROMOFLUOR	95.3	85-114			%	12/28/16	12/28/16
BLANK	SURROGATE: DIBROMOFLUOR	102	80-119			%	12/28/16	12/28/16
BLANK	SURROGATE: TOLUENE-D8 (S)	96.5	89-112			%	12/28/16	12/28/16

Quant Method: LALLW.M
Run #: 1228L12
Instrument: Loki
Sequence: 161227
Initials: SV

GC SC-Blank-REG MDLs-DOD
Printed: 1/9/17 9:24:48 AM

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161227\1228L12.D Vial: 11
Acq On : 28 Dec 16 14:15 Operator: PM,DG,SV,CMM
Sample : 161228A BLK-1WL Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 10:04 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	527424	25.00000 ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	516608	25.00000 ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	272704	25.00000 ppb	0.00
System Monitoring Compounds					
32) Dibromofluoromethane(S)	4.48	111	282009	25.51646 ppb	0.00
Spiked Amount 25.000			Recovery = 102.064%		
37) 1,2-DCA-D4(S)	4.92	65	269156	25.13467 ppb	0.00
Spiked Amount 25.000			Recovery = 100.540%		
57) Toluene-D8(S)	7.22	98	929586	24.13256 ppb	0.00
Spiked Amount 25.000			Recovery = 96.532%		
65) 4-Bromofluorobenzene(S)	9.89	95	314654	23.81898 ppb	0.00
Spiked Amount 25.000			Recovery = 95.276%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

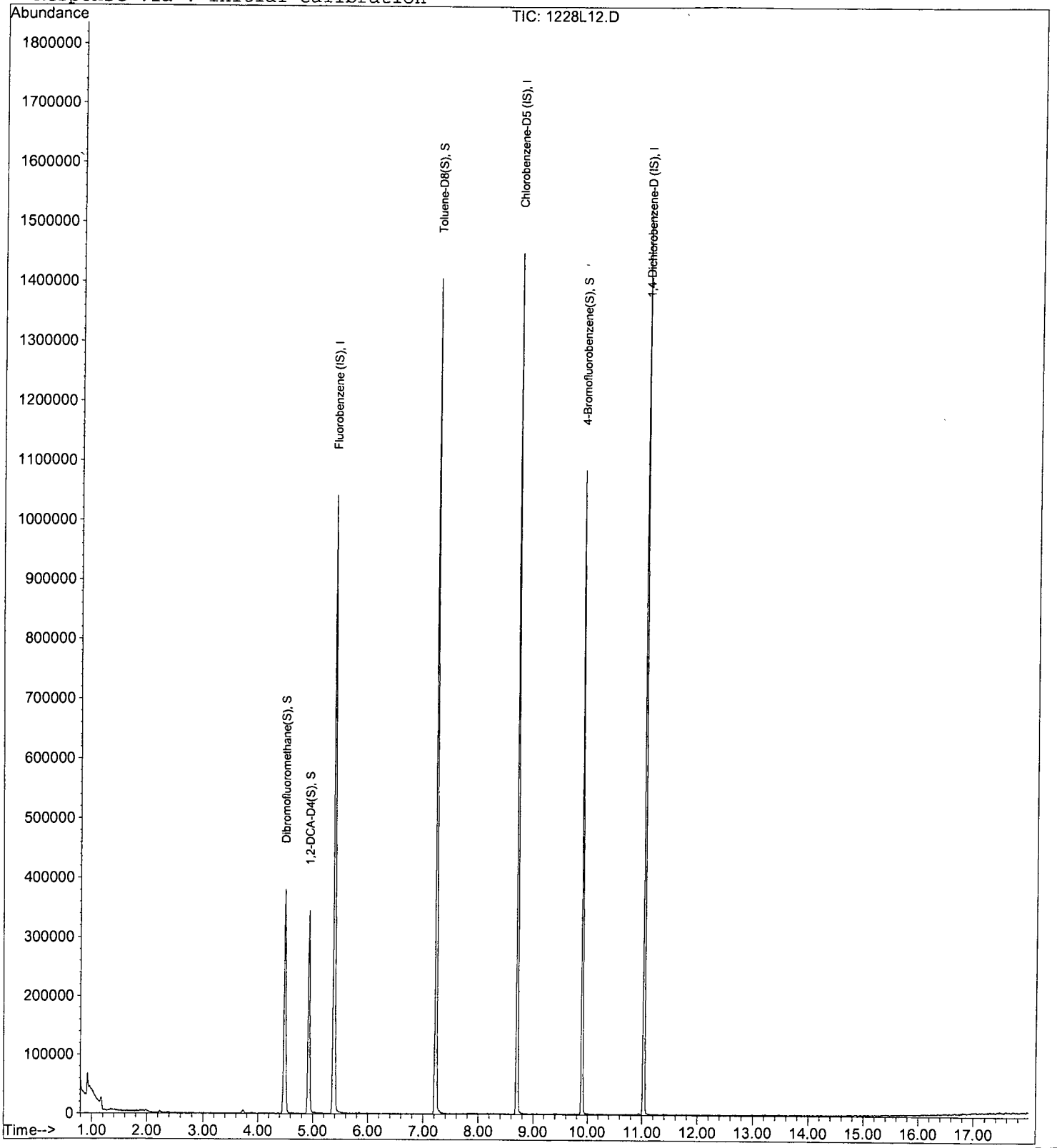
Quantitation Report

Data File : M:\LOKI\DATA\161227\1228L12.D
Acq On : 28 Dec 16 14:15
Sample : 161228A BLK-1WL
Misc : W IS&S 11/21/16, 11/14/16

Vial: 11
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 29 10:04 2016 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration



Laboratory Control Spike Recovery

EPA 8260B BTEX WATER

APPL ID: **161228W-48082 LCS - 215063**
Batch ID: #86BTO-161228AL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1,2-DICHLOROETHANE	10.00	9.78	97.8	73-128
BENZENE	10.00	10.2	102	79-120
ETHYLBENZENE	10.00	10.3	103	79-121
TOLUENE	10.00	10.5	105	80-121
XYLENES (TOTAL)	30.0	32.0	107	79-121
SURROGATE: 1,2-DICHLOROETHANE-	25.0	24.5	98.0	81-118
SURROGATE: 4-BROMOFLUOROBENZ	25.0	25.6	102	85-114
SURROGATE: DIBROMOFLUOROMETH	25.0	24.6	98.4	80-119
SURROGATE: TOLUENE-D8 (S)	25.0	24.8	99.2	89-112

Comments:

Primary	SPK
Quant Method :	LALLW.M
Extraction Date :	12/28/16
Analysis Date :	12/28/16
Instrument :	Loki
Run :	1228L03
Initials :	SV

Printed: 1/9/17 9:24:52 AM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161227\1228L03.D Vial: 2
Acq On : 28 Dec 16 10:03 Operator: PM,DG,SV,CMM
Sample : 161228A CCV/LCS-1WL 10ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 9:53 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	573120	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	557568	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	309568	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.48	111	295950	24.64	ppb		0.00
Spiked Amount 25.000			Recovery = 98.572%				
37) 1,2-DCA-D4(S)	4.92	65	284665	24.46	ppb		0.00
Spiked Amount 25.000			Recovery = 97.852%				
57) Toluene-D8(S)	7.22	98	1030707	24.79	ppb		0.00
Spiked Amount 25.000			Recovery = 99.168%				
65) 4-Bromofluorobenzene(S)	9.89	95	364311	25.55	ppb		0.00
Spiked Amount 25.000			Recovery = 102.208%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.85	85	93448	10.05	ppb		96
3) Freon 114	0.93	85	65890	10.29	ppb		97
4) Chloromethane	0.96	50	112633	7.71	ppb		98
5) Vinyl chloride	1.02	62	122176	9.84	ppb		99
6) Bromomethane	1.22	96	81928	8.64	ppb		94
7) Chloroethane	1.29	64	72959	9.79	ppb		99
8) Dichlorofluoromethane	1.42	67	225460	9.79	ppb		98
9) Trichlorofluoromethane	1.46	101	140218	10.03	ppb		97
10) Acrolein	1.75	56	101943	118.77	ppb		98
11) Acetone	1.88	43	21728	9.26	ppb		98
12) Freon-113	1.84	101	80002	10.19	ppb		99
13) 1,1-DCE	1.83	96	65616	10.19	ppb		97
14) t-Butanol	2.40	59	30728	121.39	ppb		99
15) Acetonitrile	2.10	41	103155	105.93	ppb		100
16) Methyl Acetate	2.17	43	53373	9.11	ppb		94
17) Iodomethane	1.93	142	57152	8.75	ppb		100
18) Acrylonitrile	2.47	52	18887	8.64	ppb		96
19) Methylene chloride	2.23	84	109979	9.48	ppb		93
20) Carbon disulfide	1.98	76	292010	9.76	ppb		100
21) Methyl t-butyl ether (MtBE	2.52	73	218704	9.60	ppb		97
22) Trans-1,2-DCE	2.50	96	95371	9.71	ppb		92
23) Diisopropyl Ether	3.10	45	251610	9.72	ppb		95
24) 1,1-DCA	2.95	63	161637	9.74	ppb		96
25) Vinyl Acetate	3.09	43	56464	9.10	ppb	#	95
26) Ethyl tert Butyl Ether	3.59	59	216645	9.94	ppb		99
27) MEK (2-Butanone)	3.80	43	24774	9.35	ppb		93
28) Cis-1,2-DCE	3.72	96	121061	10.58	ppb		98
29) 2,2-Dichloropropane	3.70	77	43768	9.75	ppb		95
30) Chloroform	4.25	83	180119	10.10	ppb		95
31) Bromochloromethane	4.08	128	53118	10.41	ppb		99
33) 1,1,1-TCA	4.47	97	137413	10.18	ppb		100
34) Cyclohexane	4.52	41	47228	9.24	ppb		86
35) 1,1-Dichloropropene	4.72	75	103243	9.98	ppb		98
36) 2,2,4-Trimethylpentane	5.15	57	175076	9.69	ppb		96
38) Carbon Tetrachloride	4.70	119	107993	10.14	ppb		96
39) Tert Amyl Methyl Ether	5.22	73	199964	9.68	ppb		98
40) 1,2-DCA	5.03	62	115155	9.78	ppb		97
41) Benzene	4.99	78	372594	10.24	ppb		99
42) TCE	5.84	95	49848	9.16	ppb		92

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\161227\1228L03.D Vial: 2
Acq On : 28 Dec 16 10:03 Operator: PM,DG,SV,CMM
Sample : 161228A CCV/LCS-1WL 10ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 9:53 2016 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
43) 2-Pentanone	6.12	43	492658	118.91	ppb	95
44) 1,2-Dichloropropane	6.09	63	94978	9.76	ppb	99
45) Bromodichloromethane	6.44	83	127536	10.21	ppb	98
46) Methyl Cyclohexane	6.04	83	100861	9.94	ppb	100
47) Dibromomethane	6.22	93	55164	9.86	ppb	93
49) MIBK (methyl isobutyl ket	7.16	43	51241	8.75	ppb	95
50) 1-Bromo-2-chloroethane	6.75	63	65280	9.50	ppb	99
51) Cis-1,3-Dichloropropene	6.95	75	136222	9.81	ppb	97
52) Toluene	7.29	91	413926	10.49	ppb	100
53) Trans-1,3-Dichloropropene	7.56	75	116691	9.89	ppb	98
54) 1,1,2-TCA	7.74	83	66079	9.90	ppb	99
55) 2-Hexanone	8.04	43	16043	9.65	ppb	99
58) 1,2-EDB	8.20	107	74544	9.72	ppb	99
59) Tetrachloroethene	7.86	166	105257	10.56	ppb	94
60) 1-Chlorohexane	8.76	91	100347	10.00	ppb	95
61) 1,1,1,2-Tetrachloroethane	8.83	131	102251	10.57	ppb	95
62) m&p-Xylene	8.99	106	345627	21.33	ppb	98
63) o-Xylene	9.38	106	168453	10.68	ppb	98
64) Styrene	9.40	104	189568	10.43	ppb	99
66) 1,3-Dichloropropane	7.90	76	123458	9.62	ppb	96
67) Dibromochloromethane	8.12	129	95157	9.87	ppb	100
68) Chlorobenzene	8.73	112	274309	10.04	ppb	97
69) Ethylbenzene	8.87	91	442844	10.35	ppb	98
70) Bromoform	9.55	173	58155	9.81	ppb	100
72) Isopropylbenzene	9.76	105	403869	10.83	ppb	98
73) 1,1,2,2-Tetrachloroethane	10.07	83	91290	9.88	ppb	94
74) 1,2,3-Trichloropropane	10.09	110	18496	10.44	ppb	99
75) t-1,4-Dichloro-2-Butene	10.12	53	18830	9.45	ppb	87
76) Bromobenzene	10.02	156	122638	11.01	ppb	98
77) n-Propylbenzene	10.17	91	463082	10.42	ppb	99
78) 4-Ethyltoluene	10.28	105	431010	11.14	ppb	97
79) 2-Chlorotoluene	10.22	91	313236	11.04	ppb	98
80) 1,3,5-Trimethylbenzene	10.36	105	366806	10.99	ppb	99
81) 4-Chlorotoluene	10.34	91	363044	11.13	ppb	100
82) Tert-Butylbenzene	10.66	119	284498	10.86	ppb	99
83) 1,2,4-Trimethylbenzene	10.72	105	362442	10.80	ppb	99
84) Sec-Butylbenzene	10.88	105	403178	10.57	ppb	99
85) p-Isopropyltoluene	11.04	119	355281	10.67	ppb	98
86) Benzyl Chloride	11.19	91	103699	10.04	ppb	98
87) 1,3-DCB	10.96	146	226439	10.66	ppb	98
88) 1,4-DCB	11.05	146	235391	10.42	ppb	99
89) n-Butylbenzene	11.44	91	294869	10.28	ppb	99
90) 1,2-DCB	11.41	146	210646	10.48	ppb	98
91) Hexachloroethane	11.66	117	72819	10.27	ppb	96
92) 1,2-Dibromo-3-chloropropan	12.18	157	16132	10.32	ppb	89
93) 1,2,4-Trichlorobenzene	13.00	180	128685	10.29	ppb	100
94) Hexachlorobutadiene	13.19	225	54432	10.50	ppb	92
95) Naphthalene	13.22	128	146368	10.59	ppb	99
96) 1,2,3-Trichlorobenzene	13.46	180	79720	10.42	ppb	98

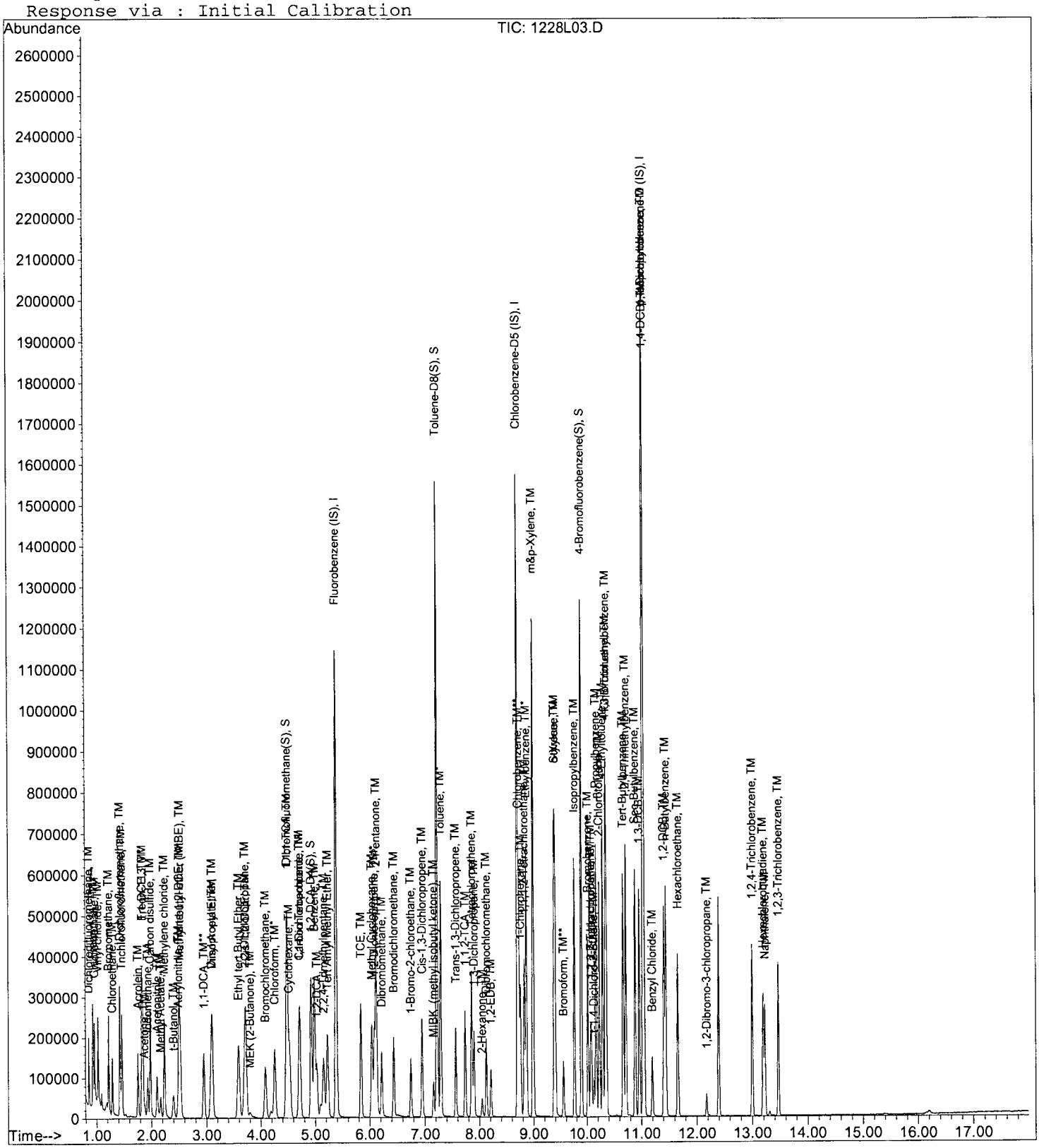
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161227\1228L03.D Vial: 2
Acq On : 28 Dec 16 10:03 Operator: PM,DG,SV,CMM
Sample : 161228A CCV/LCS-1WL 10ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 9:53 2016 Quant Results File: LALLW.RES

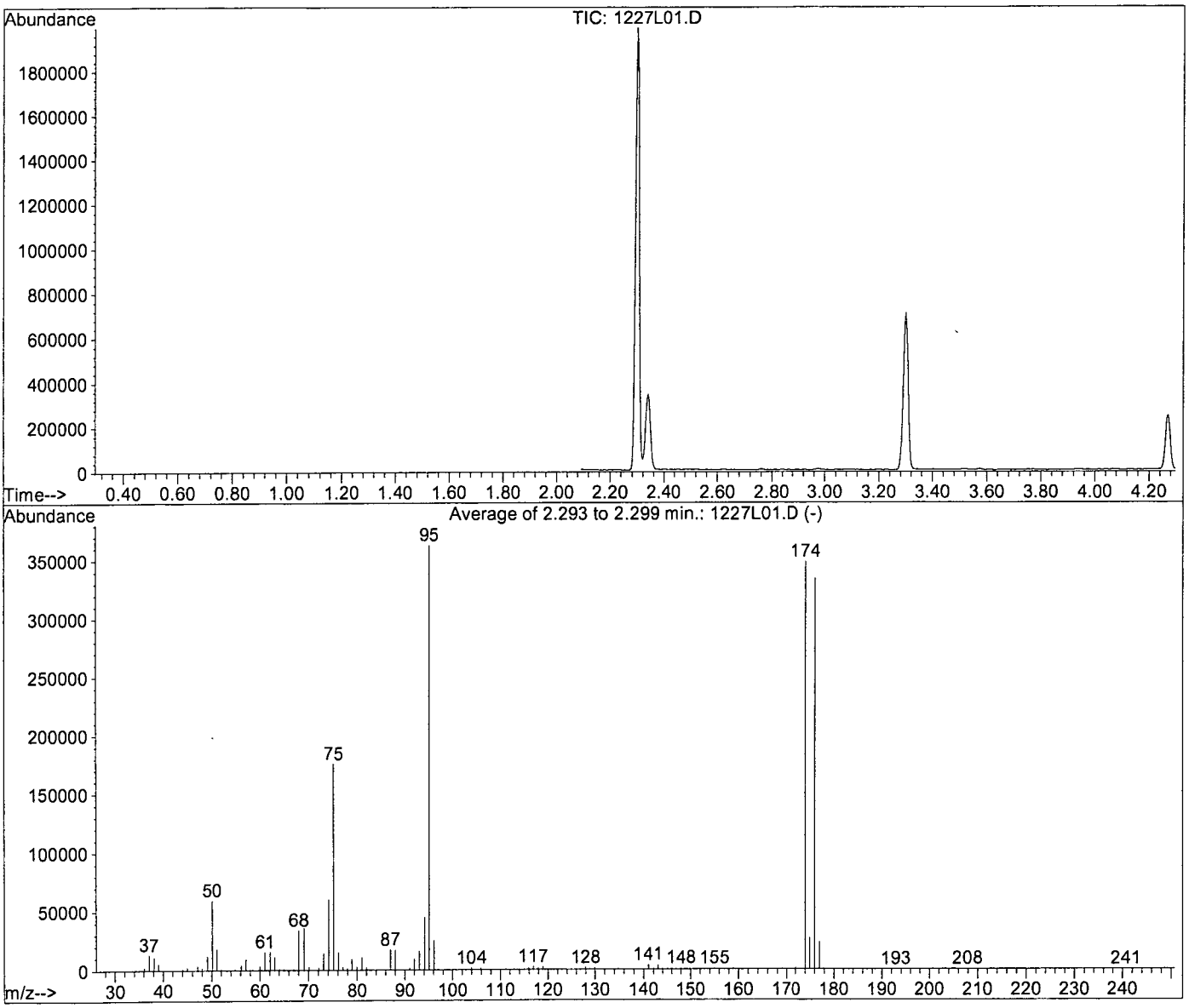
Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration



Data File : M:\LOKI\DATA\161227\1227L01.D
Acq On : 27 Dec 16 12:35
Sample : 5ng- BFB STD 12-15-16
Misc : 2ul

Vial: 1
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B



AutoFind: Scans 63, 64, 65; Background Corrected with Scan 54

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.4	59501	PASS
75	95	30	60	48.4	175680	PASS
95	95	100	100	100.0	363072	PASS
96	95	5	9	6.8	24832	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	96.0	348715	PASS
175	174	5	9	7.6	26499	PASS
176	174	95	101	95.8	334101	PASS
177	176	5	9	6.9	22915	PASS

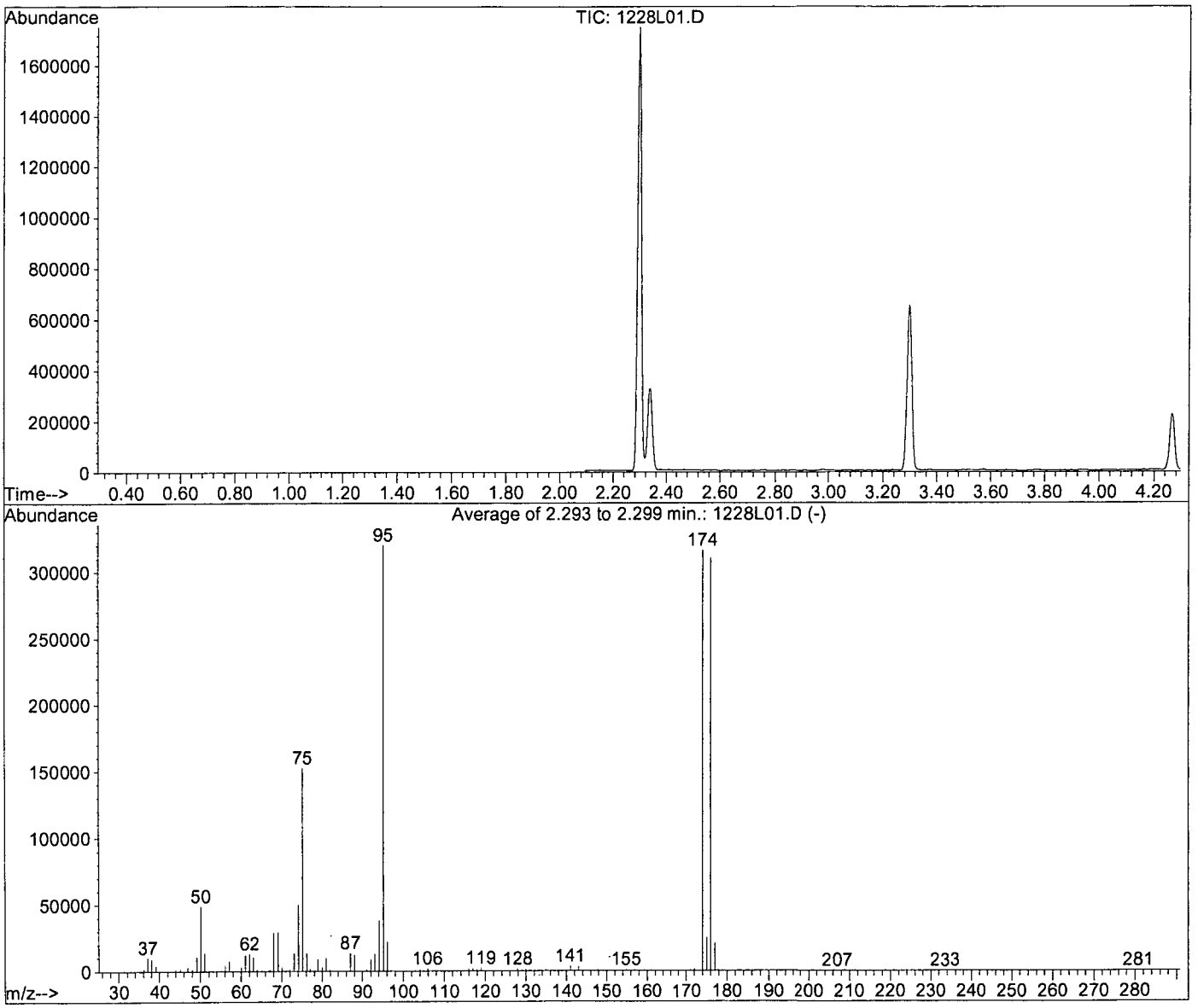
1227L01.D LALLW.M Wed Dec 28 08:13:14 2016

BFB

Data File : M:\LOKI\DATA\161227\1228L01.D
Acq On : 28 Dec 16 9:17
Sample : 5ng- BFB STD 12-15-16
Misc : 2ul

Vial: 1
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Method : M:\LOKI\DATA\161227\LALLW.M (RTE Integrator)
Title : METHOD 8260B



AutoFind: Scans 63, 64, 65; Background Corrected with Scan 54

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.3	48851	PASS
75	95	30	60	47.6	152192	PASS
95	95	100	100	100.0	319962	PASS
96	95	5	9	6.9	22043	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	98.8	316075	PASS
175	174	5	9	7.8	24800	PASS
176	174	95	101	98.2	310336	PASS
177	176	5	9	6.7	20789	PASS

Volatile Standard Curve Preparation for 10mL Purge (8260 water)-LOKI										
Exp Date:	12/28/16	5µg/mL	5µg/mL	5µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	250µg/mL	
		Vol Std #9	Vol Std #10	Vol Std #12	Vol Std #7	Vol Std #8	Vol Std #1	Vol Std #2	TBA	
		12/17/16J	12/27/16K	12/27/16L	12/27/16F	12/27/16H	12/27/16G	12/27/16I	12/27/16M	Final Vol
	Conc.	0127/2017	0127/2017	0127/2017	0127/2017	0127/2017	0127/2017	0127/2017	0127/2017	w/P&T H2O
Date/code	µg/L	ul	ul	ul	ul	ul	ul	ul	ul	mL
12/27/16AJ-DG	0.3	3	3	3	n/a	n/a	n/a	n/a	2	50
12/27/16AK-DG	0.5	5	5	5	n/a	n/a	n/a	n/a	5	50
12/27/16AL-DG	1	10	10	10	n/a	n/a	n/a	n/a	10	50
12/27/16AM-DG	2	20	20	20	n/a	n/a	n/a	n/a	15	50
12/27/16AN-DG	5	n/a	n/a	n/a	5	5	5	5	20	50
12/27/16AO-DG	10	n/a	n/a	n/a	10	10	10	10	25	50
12/27/16AP-DG	20	n/a	n/a	n/a	20	20	20	20	30	50
12/27/16AQ-DG	40	n/a	n/a	n/a	40	40	40	40	35	50
12/27/16AR-DG	100	n/a	n/a	n/a	100	100	100	100	40	50

PRIMARY STANDARD

12/27/16F							
50ug/ml Vol Work Std #7							
Exp:01/27/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120016-03	Gas Mix	2000	279822-36638	12/27/16A-CMM	02/19/19	100
02SI	020049-02	HEXACHLOROETHANE	1000	254167-36564	12/27/16C-CMM	12/28/17	200
02SI	020228-02	Benzyl Chloride	1000	279824-36569	12/27/16E-CMM	05/24/18	200
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	11/15/17	3500
12/27/16G							
50ug/ml Vol Work Std #1							
Exp:01/27/17					Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	020145-02-02	2-CEVE	2000	288264-37217	11/22/16C-CMM	09/19/19	50
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	11/15/17	1950
12/27/16H							
50ug/ml Vol Work Std #8							
Exp:01/27/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	122039-02	Volatile Mix, 20-29	2000	258033-37169	12/16/16C-CMM	08/17/17	100
02SI	120023-03	VOC'S-54 COMP	2000	271929-36581	12/16/16D-CMM	02/15/18	100
02SI	020232-02	Vinyl Acetate	2000	292241-37194	12/16/16E-CMM	02/01/17	100
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	11/15/17	3700
12/27/16I							
50ug/ml Vol Work Std #2							
Exp:01/27/17							
Supplier	ID #	ID	ug/ml				
02SI	121020-05	HSL'S-Ketone Solution	2000	292248-37204	11/22/16B-CMM	11/08/18	100
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	11/15/17	3900
		12/27/16J					
		5ug/ml Vol Work Std #9					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #7		**12/27/16F**	Exp:01/27/17	200	
		50ug/ml Vol Work Std #8		**12/27/16H**	Exp:01/27/17	200	
		J&T Brand		12/16/16	11/15/17	1600	
		12/27/16K					
		5ug/ml Vol Work Std #10					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #1		**12/27/16G**	Exp:01/27/17	200	
		J&T Brand		12/16/16	11/15/17	1800	
		12/27/16L					
		5ug/ml Vol Work Std #12					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #2		**12/27/16I**	Exp:01/27/17	200	
		J&T Brand		12/16/16	11/15/17	1800	
12/27/16M							
250ug/ml TBA/IBA/Acetonitrile/Cyclohexanone/Acrolein/2-P							
Exp:01/27/17			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
02SI	120166-01	Volatile Mix 4-3	2000	275544-36413	12/16/16F-CMM	03/28/18	500
02SI	020229-09-02	Acrolein	10000	294146-37312	12/16/16G-CMM	01/14/17	100
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	11/15/17	3400

SECONDARY SOURCE

12/27/16N							
50ug/ml VOC Std#4							
Exp:01/27/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120296-01-SS	Custom 8260 Solution	2000	279826-36671	12/27/16B-CMM	06/01/19	50
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	11/15/17	1950
12/27/16O							
50ug/ml VOC Std#5							
Exp:01/27/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120016-03-SS	8260 Gases(SS)	2000	279826-36675	12/16/16I-CMM	06/01/19	50
02SI	020145-02-02-SS	2-CEVE (SS)	2000	254171-35380	12/16/16J-CMM	06/21/17	50
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	11/15/17	1900
12/27/16P							

50ug/ml VOC Std#6							
Exp:01/27/17							
	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120023-03-SS	VOC'S 54 COMP.	2000	265897-35927	12/16/16K-CMM	11/29/17	50
02SI	020232-02-SS	Vinyl Acetate(SS)	2000	292243-37196	12/16/16L-CMM	02/01/17	50
02SI	020049-02-SS	HEXACHLOROETHANE (SS)	1000	254167-36563	12/27/16D-CMM	12/28/17	100
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	11/15/17	1800
12/27/16Q							
250ug/ml TBA/IBA/Acetonitrile/Acrolein/2-P							
Exp:01/27/17			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
02SI	120166-01-SS	VOC Mix 4-3 (SS)	2000	258040-37229	12/06/16G-CMM	08/22/18	250
02SI	020229-09-SS	Acrolein SOLUTION (SS)	10000	291929-37176	11/22/16I-CMM	12/12/16	50
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	11/15/17	1700
8260 water		spiked with		Total Vol			
CCV/LCS	10ug/L Vol Std	10uL of 50ug/ml Std #7		50mL P&T H2O			
Ending CCV		10uL of 50ug/ml Std #8					
		10uL of 50ug/ml Std #1					
		10uL of 50ug/ml Std #2					
		25uL of 250ug/ml Std TBA					
X4 ketones							
LCS	10ug/L Vol Std	10uL of 50ug/ml Std #7		50mL P&T H2O			
		10uL of 50ug/ml Std #8					
		10uL of 50ug/ml Std #1					
		40uL of 50ug/ml Std #2					
		25uL of 250ug/ml Std TBA					
8260 soil		spiked with		Total Vol			
CCV/LCS	50ug/Kg Vol Std	5uL of 50ug/ml Std #7		5mL P&T H2O			
Ending CCV		5uL of 50ug/ml Std #8					
		5uL of 50ug/ml Std #1					
		5uL of 50ug/ml Std #2					
		5uL of 250ug/ml Std TBA					
Matrix spikes are prepared with same standards as ccv (see above) into the sample.							
8260water		spiked with		Total Vol			
SS	10ug/L STD	10uL of 50ug/ml Std #4		50mL P&T H2O			
		10uL of 50ug/ml Std #5					
		10uL of 50ug/ml Std #6					
		25uL of 250ug/ml Std TBA					
8260 SOIL	50ug/Kg STD	5uL of 50ug/ml Std #4		Total Vol			
SS		5uL of 50ug/ml Std #5		5mL P&T H2O			
		5uL of 50ug/ml Std #6					
		5uL of 250ug/ml Std TBA					

Injection Log

Directory: M:\LOKI\DATA\161227\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1227L01.D	1	5ng- BFB STD 12-15-16	2ul	27 Dec 16 12:35
2	4	1227L05.D	1	0.3ug/L VOC STD 12/27/16AJ	W IS&S 11/21/16, 11/14/16	27 Dec 16 14:16
3	5	1227L06.D	1	0.5ug/L VOC STD 12/27/16AK	W IS&S 11/21/16, 11/14/16	27 Dec 16 14:44
4	6	1227L07.D	1	1.0ug/L VOC STD 12/27/16AL	W IS&S 11/21/16, 11/14/16	27 Dec 16 15:12
5	7	1227L08.D	1	2.0ug/L VOC STD 12/27/16AM	W IS&S 11/21/16, 11/14/16	27 Dec 16 15:40
6	8	1227L09.D	1	5.0ug/L VOC STD 12/27/16AN	W IS&S 11/21/16, 11/14/16	27 Dec 16 16:08
7	9	1227L10.D	1	10ug/L VOC STD 12/27/16AO	W IS&S 11/21/16, 11/14/16	27 Dec 16 16:36
8	10	1227L11.D	1	20ug/L VOC STD 12/27/16AP	W IS&S 11/21/16, 11/14/16	27 Dec 16 17:04
9	11	1227L12.D	1	40ug/L VOC STD 12/27/16AQ	W IS&S 11/21/16, 11/14/16	27 Dec 16 17:32
10	12	1227L13.D	1	100ug/L VOC STD 12/27/16AR	W IS&S 11/21/16, 11/14/16	27 Dec 16 18:00
11	17	1227L18.D	1	(SS)10ug/L VOC STD 12/27/16	W IS&S 11/21/16, 11/14/16	27 Dec 16 20:20
12	1	1228L01.D	1	5ng- BFB STD 12-15-16	2ul	28 Dec 16 9:17
13	2	1228L03.D	1	161228A CCV/LCS-1WL 10ug/L	W IS&S 11/21/16, 11/14/16	28 Dec 16 10:03
14	11	1228L12.D	1	161228A BLK-1WL	W IS&S 11/21/16, 11/14/16	28 Dec 16 14:15
15	14	1228L15.D	1	AZ48082W01	W IS&S 11/21/16, 11/14/16	28 Dec 16 15:39
16	15	1228L16.D	1	AZ48083W01	W IS&S 11/21/16, 11/14/16	28 Dec 16 16:07
17	16	1228L17.D	1	AZ48084W01	W IS&S 11/21/16, 11/14/16	28 Dec 16 16:35
18	27	1228L28.D	1	Ending CCV 8260 10ug/l 12/28/1(	W IS&S 11/21/16, 11/14/16	28 Dec 16 21:43

ORGANICS

APPL, INC.

ORGANICS
QC Summary

APPL, INC.

Method Blank
EPA 8260B GRO WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161228W-48082 - 215066**
Batch ID: #GRO86-161228AL1

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	12/28/16	12/28/16
BLANK	SURROGATE: 4-BROMOFLUOR	95.3	85-114			%	12/28/16	12/28/16

Quant Method: LGAS6Z11.M
Run #: 1228L12
Instrument: Loki
Sequence: 161227
Initials: SV

GC SC-Blank-REG MDLs-DOD
Printed: 1/9/17 9:25:45 AM

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81842

Case No: 81842 Date Analyzed: 12/28/16

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: 4-BROMOFLUOROBENZENE (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
161228AL1-LCS	Lab Control Spike	85-114	97.2				
161228AL1-BLK	Blank	85-114	95.3				
AZ48082	ERH156	85-114	93.6				
AZ48083	ERH157	85-114	94.0				
AZ48084	ERH158	85-114	93.3				

Comments: Batch: #GRO86-161228AL

Laboratory Control Spike Recovery
EPA 8260B GRO WATER

APPL ID: **161228W-48082 LCS - 215066**
Batch ID: #GRO86-161228AL1

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
GASOLINE RANGE ORGANICS	300	241	80.3	78-122
SURROGATE: 4-BROMOFLUOROBENZ	25.0	24.3	97.2	85-114

Comments: _____

Primary	SPK
Quant Method :	LGAS6Z11.M
Extraction Date :	12/28/16
Analysis Date :	12/28/16
Instrument :	Loki
Run :	1228L06
Initials :	SV

Printed: 1/9/17 9:25:54 AM
APPL Standard LCS

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81842

Case No: 81842 Date Analyzed: 12/28/16

Matrix: WATER Instrument: Loki

Blank ID: 161228AL1-BLK Time Analyzed: 1415

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161228AL1-LCS	Lab Control Spike	1228L06	12/28/16 1127
161228AL1-BLK	Blank	1228L12	12/28/16 1415
AZ48082	ERH156	1228L15	12/28/16 1539
AZ48083	ERH157	1228L16	12/28/16 1607
AZ48084	ERH158	1228L17	12/28/16 1635

Comments: Batch: #GRO86-161228AL

Printed: 1/9/17 9:25:57 AM
Form 4, Blank Summary

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81842

Lab File ID (Standard): 1227L10.D Date Analyzed: 12/27/16

Instrument ID: Loki Time Analyzed: 16:36

GC Column: ID: Heated Purge: (Y/N)

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	593920	5.38	548032	8.70	323712	11.03
	UPPER LIMIT	1187840	5.88	1096064	9.20	647424	11.53
	LOWER LIMIT	296960	4.88	274016	8.20	161856	10.53
	SAMPLE NO.						
01	161228A CCV/LCS-1WL	561728	5.38	552960	8.70	284224	11.03
02	161228A BLK-1WL	527424	5.38	516608	8.70	272704	11.03
03	AZ48082W01	492800	5.38	498816	8.70	260864	11.03
04	AZ48083W01	499712	5.38	504512	8.70	273088	11.03
05	AZ48084W01	491008	5.38	498112	8.70	266944	11.03
06	Ending CCV GAS 300ug	504640	5.38	496448	8.70	283200	11.03
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

ORGANICS
Sample Data

APPL, INC.

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81842

Sample ID: ERH156

APPL ID: AZ48082

Sample Collection Date: 12/21/16

QCG: #GRO86-161228AL1-21506

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	12/28/16	12/28/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	93.6	85-114			%	12/28/16	12/28/16

Quant Method:	LGAS6Z11.M
Run #:	1228L15
Instrument:	Loki
Sequence:	161227
Dilution Factor:	1
Initials:	SV

Printed: 1/9/17 9:26:01 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161227\1228L15.D
Acq On : 28 Dec 16 15:39
Sample : AZ48082W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 14
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 29 11:29 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161227\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	979948	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1376802	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1442658	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

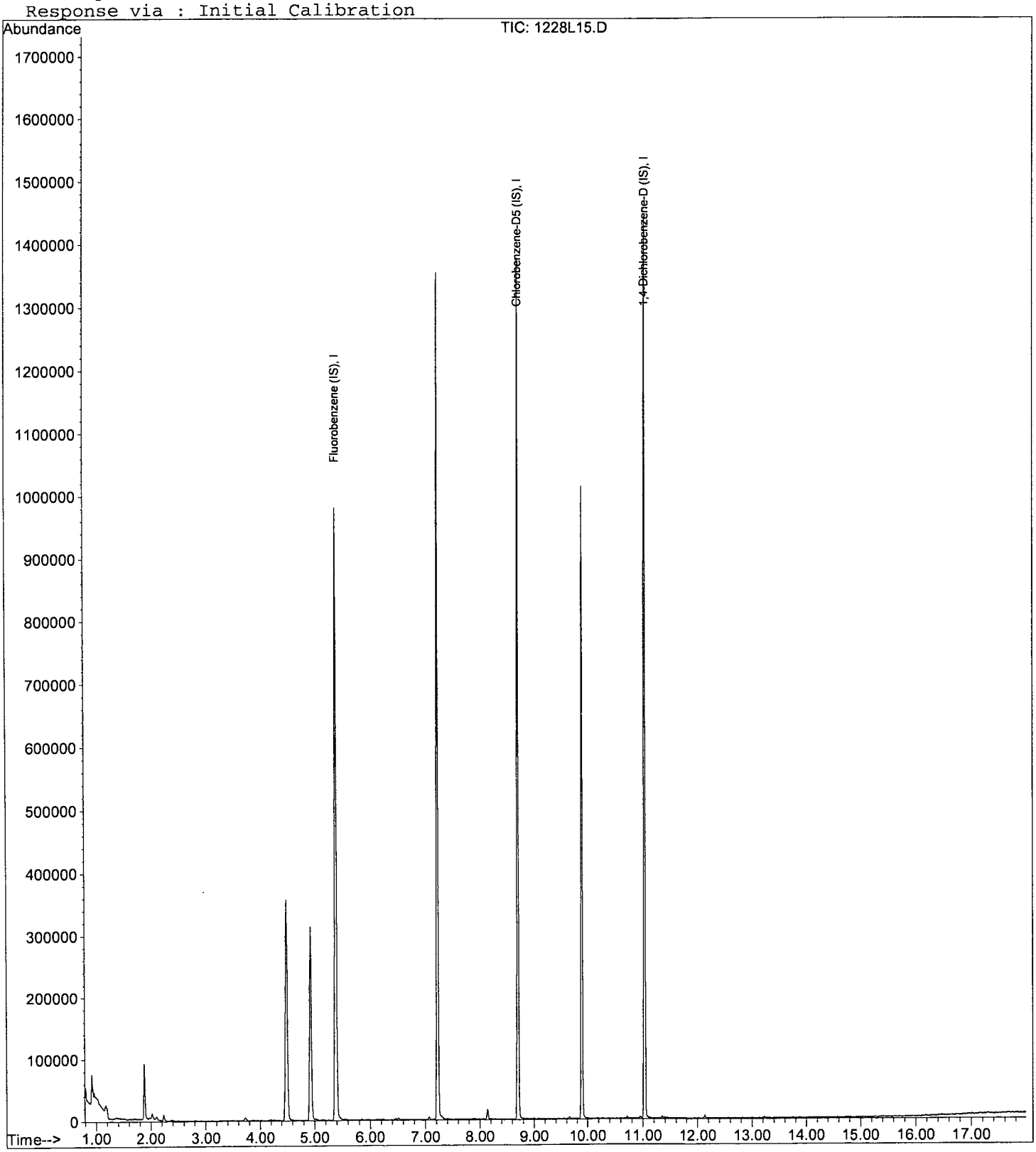
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161227\1228L15.D Vial: 14
Acq On : 28 Dec 16 15:39 Operator: PM,DG,SV,CMM
Sample : AZ48082W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 11:29 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161227\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161227\1228L15.D Vial: 14
Acq On : 28 Dec 16 15:39 Operator: PM,DG,SV,CMM
Sample : AZ48082W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 11:40 2016 Quant Results File: LSURZ27.RES

Quant Method : M:\LOKI\DATA\161227\LSURZ27.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	492800	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	498816	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	260864	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.48	111	265883	25.74762 ppb	0.00
Spiked Amount 25.000			Recovery = 102.992%		
3) 1,2-DCA-D4(S)	4.93	65	247162	24.70245 ppb	0.00
Spiked Amount 25.000			Recovery = 98.808%		
5) Toluene-D8(S)	7.22	98	875815	23.54761 ppb	0.00
Spiked Amount 25.000			Recovery = 94.192%		
6) 4-Bromofluorobenzene(S)	9.89	95	298507	23.40266 ppb	0.00
Spiked Amount 25.000			Recovery = 93.612%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
1228L15.D LSURZ27.M Thu Dec 29 11:43:04 2016 Page 1

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81842

Sample ID: ERH157

APPL ID: AZ48083

Sample Collection Date: 12/21/16

QCG: #GRO86-161228AL1-21506

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	12/28/16	12/28/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	94.0	85-114			%	12/28/16	12/28/16

Quant Method:	LGAS6Z11.M
Run #:	1228L16
Instrument:	Loki
Sequence:	161227
Dilution Factor:	1
Initials:	SV

Printed: 1/9/17 9:26:01 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161227\1228L16.D Vial: 15
Acq On : 28 Dec 16 16:07 Operator: PM,DG,SV,CMM
Sample : AZ48083W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 11:29 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161227\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	987732	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1398484	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1506205	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

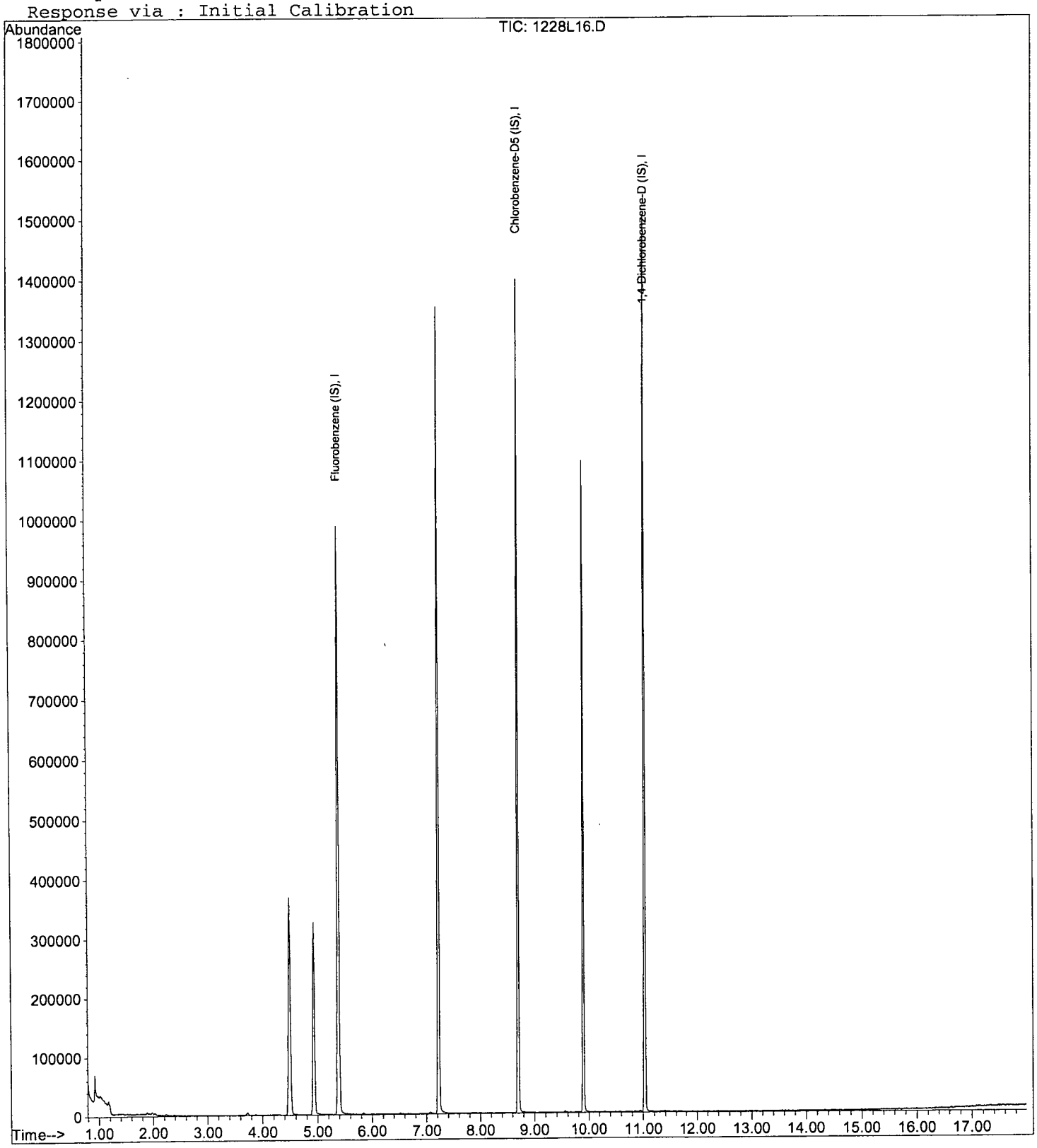
Quantitation Report

Data File : M:\LOKI\DATA\161227\1228L16.D
Acq On : 28 Dec 16 16:07
Sample : AZ48083W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 15
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 29 11:29 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161227\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161227\1228L16.D Vial: 15
Acq On : 28 Dec 16 16:07 Operator: PM,DG,SV,CMM
Sample : AZ48083W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 11:40 2016 Quant Results File: LSURZ27.RES

Quant Method : M:\LOKI\DATA\161227\LSURZ27.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	499712	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	504512	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	273088	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.48	111	271211	25.90030 ppb	0.00
Spiked Amount 25.000			Recovery = 103.600%		
3) 1,2-DCA-D4(S)	4.93	65	256283	25.25975 ppb	0.00
Spiked Amount 25.000			Recovery = 101.040%		
5) Toluene-D8(S)	7.22	98	898971	23.89731 ppb	0.00
Spiked Amount 25.000			Recovery = 95.588%		
6) 4-Bromofluorobenzene(S)	9.89	95	303280	23.50841 ppb	0.00
Spiked Amount 25.000			Recovery = 94.032%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81842

Sample ID: ERH158

APPL ID: AZ48084

Sample Collection Date: 12/21/16

QCG: #GRO86-161228AL1-21506

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	12/28/16	12/28/16
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	93.3	85-114			%	12/28/16	12/28/16

Quant Method:	LGAS6Z11.M
Run #:	1228L17
Instrument:	Loki
Sequence:	161227
Dilution Factor:	1
Initials:	SV

Printed: 1/9/17 9:26:01 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161227\1228L17.D Vial: 16
Acq On : 28 Dec 16 16:35 Operator: PM,DG,SV,CMM
Sample : AZ48084W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 11:29 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161227\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	978703	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1365881	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1470958	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
1228L17.D LGAS6Z11.M Thu Dec 29 11:34:40 2016 Page 1

Quantitation Report

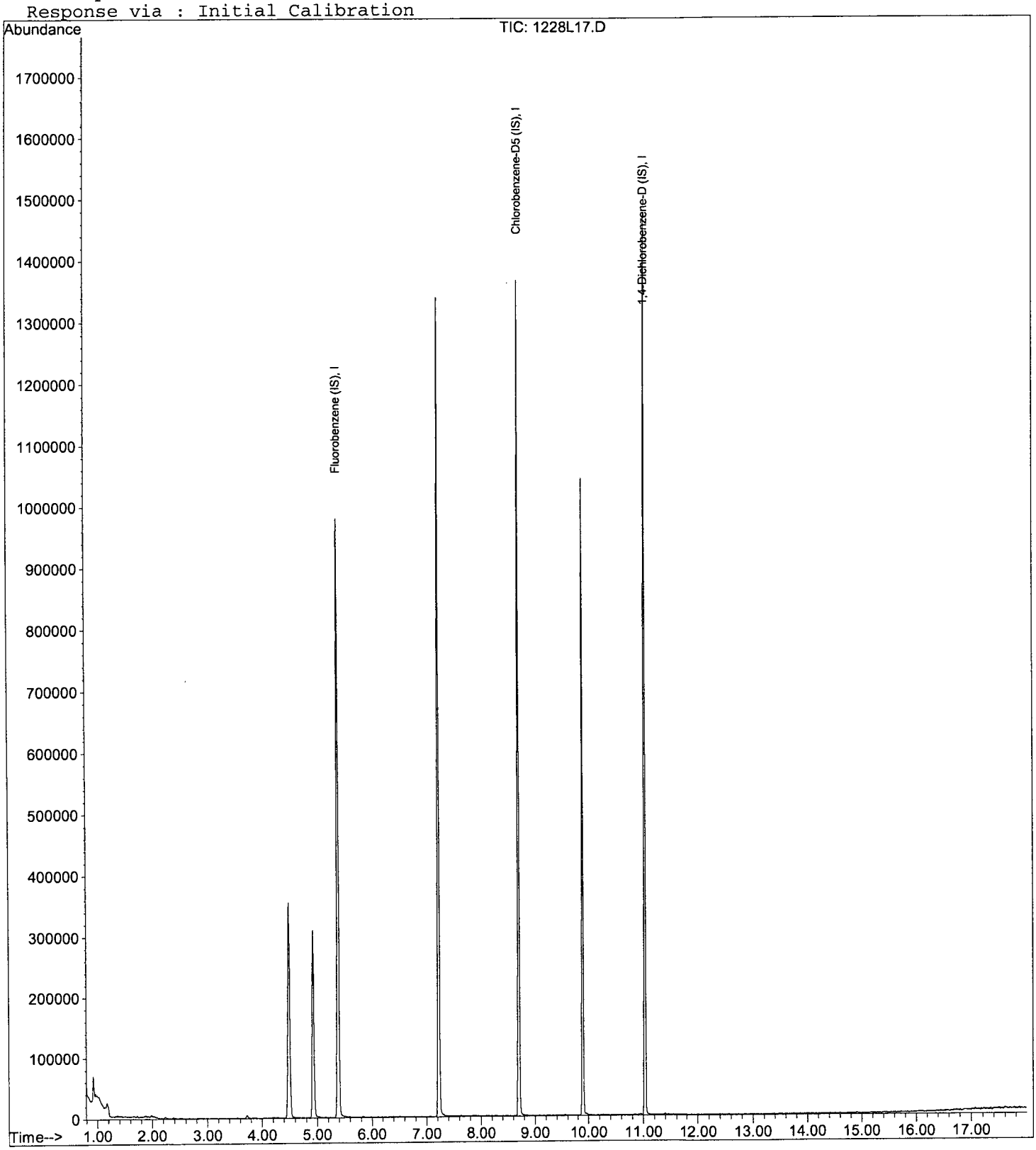
Data File : M:\LOKI\DATA\161227\1228L17.D
Acq On : 28 Dec 16 16:35
Sample : AZ48084W01
Misc : W IS&S 11/21/16, 11/14/16

Vial: 16
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 29 11:29 2016

Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161227\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161227\1228L17.D Vial: 16
Acq On : 28 Dec 16 16:35 Operator: PM,DG,SV,CMM
Sample : AZ48084W01 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 11:40 2016 Quant Results File: LSURZ27.RES

Quant Method : M:\LOKI\DATA\161227\LSURZ27.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	491008	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	498112	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	266944	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.48	111	264848	25.74100 ppb	0.00
Spiked Amount 25.000			Recovery = 102.964%		
3) 1,2-DCA-D4(S)	4.92	65	249483	25.02542 ppb	0.00
Spiked Amount 25.000			Recovery = 100.100%		
5) Toluene-D8(S)	7.22	98	874004	23.53213 ppb	0.00
Spiked Amount 25.000			Recovery = 94.128%		
6) 4-Bromofluorobenzene(S)	9.89	95	297043	23.32080 ppb	0.00
Spiked Amount 25.000			Recovery = 93.284%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

ORGANICS
Calibration Data

APPL, INC.

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/11/16
Matrix: Instrument: Loki Initials:

			1211L06.D	1211L07.D	1211L08.D	1211L09.D	1211L10.D	1211L11.D	1211L12.D							
		Compound	1	2	3	4	5	6	7				Avg	%RSD		
1	I	Fluorobenzene (IS)														
2	TMHBL	Gasoline C6-C10	12.7	5.590	3.275	1.662	1.266	1.171	1.108				3.8	111	TMHBL	1.00
3	I	Chlorobenzene-D5 (IS)														
4	I	1,4-Dichlorobenzene-D (IS)														
5																
6																
7																
8																
9																
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Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1211L06.D Vial: 6
Acq On : 11 Dec 16 12:39 Operator: PM,DG,SV,CMM
Sample : 20ug/L GAS STD 12/11/16A Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:46 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:37:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1192046	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1555815	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1640058	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	12140223m	22.40865	ppb	100

(#) = qualifier out of range (m) = manual integration

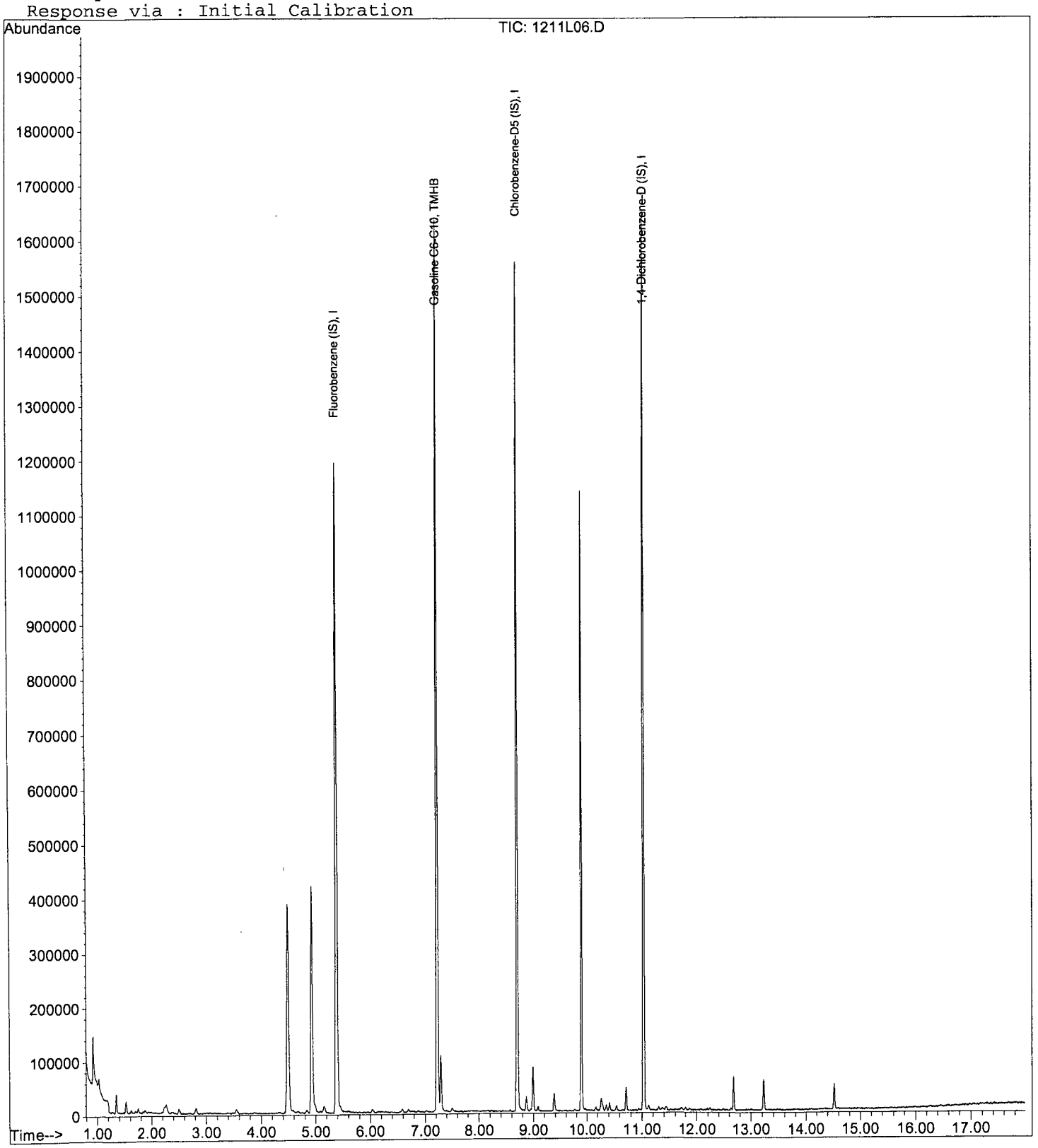
Quantitation Report

Data File : M:\LOKI\DATA\161210\1211L06.D
Acq On : 11 Dec 16 12:39
Sample : 20ug/L GAS STD 12/11/16A
Misc : W IS&S 11/21/16, 11/14/16

Vial: 6
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 13 8:46 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1211L07.D Vial: 7
Acq On : 11 Dec 16 13:07 Operator: PM,DG,SV,CMM
Sample : 50ug/L GAS STD 12/11/16B Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:45 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:37:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1164223	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1556548	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1560800	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	13016126m	51.10504	ppb	100

(#) = qualifier out of range (m) = manual integration

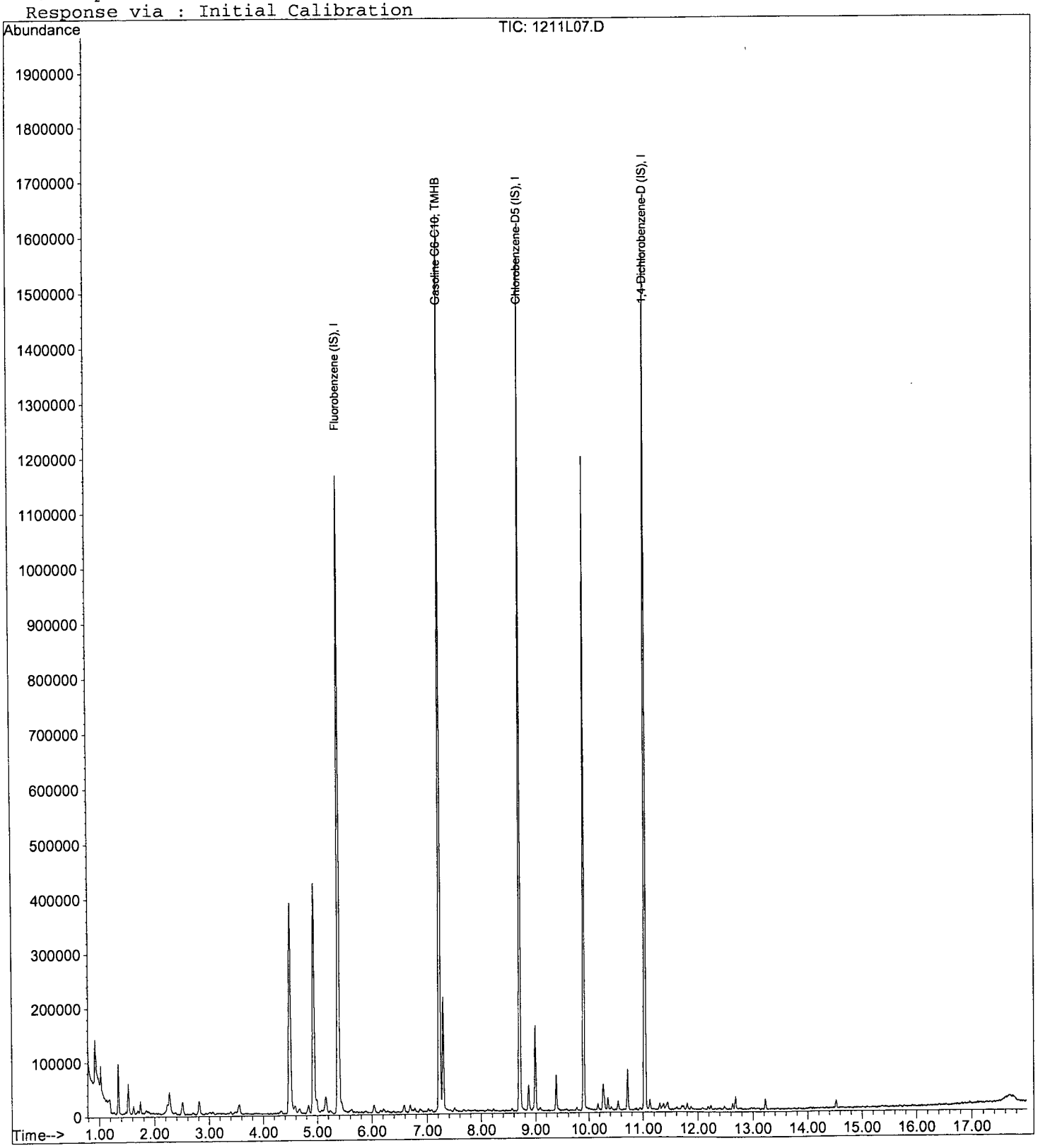
Quantitation Report

Data File : M:\LOKI\DATA\161210\1211L07.D
Acq On : 11 Dec 16 13:07
Sample : 50ug/L GAS STD 12/11/16B
Misc : W IS&S 11/21/16, 11/14/16

Vial: 7
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 13 8:45 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1211L08.D Vial: 8
Acq On : 11 Dec 16 13:35 Operator: PM,DG,SV,CMM
Sample : 100ug/L GAS STD 12/11/16C Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:44 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:37:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1150108	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1536391	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1573350	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	15065779m	106.41914	ppb	100

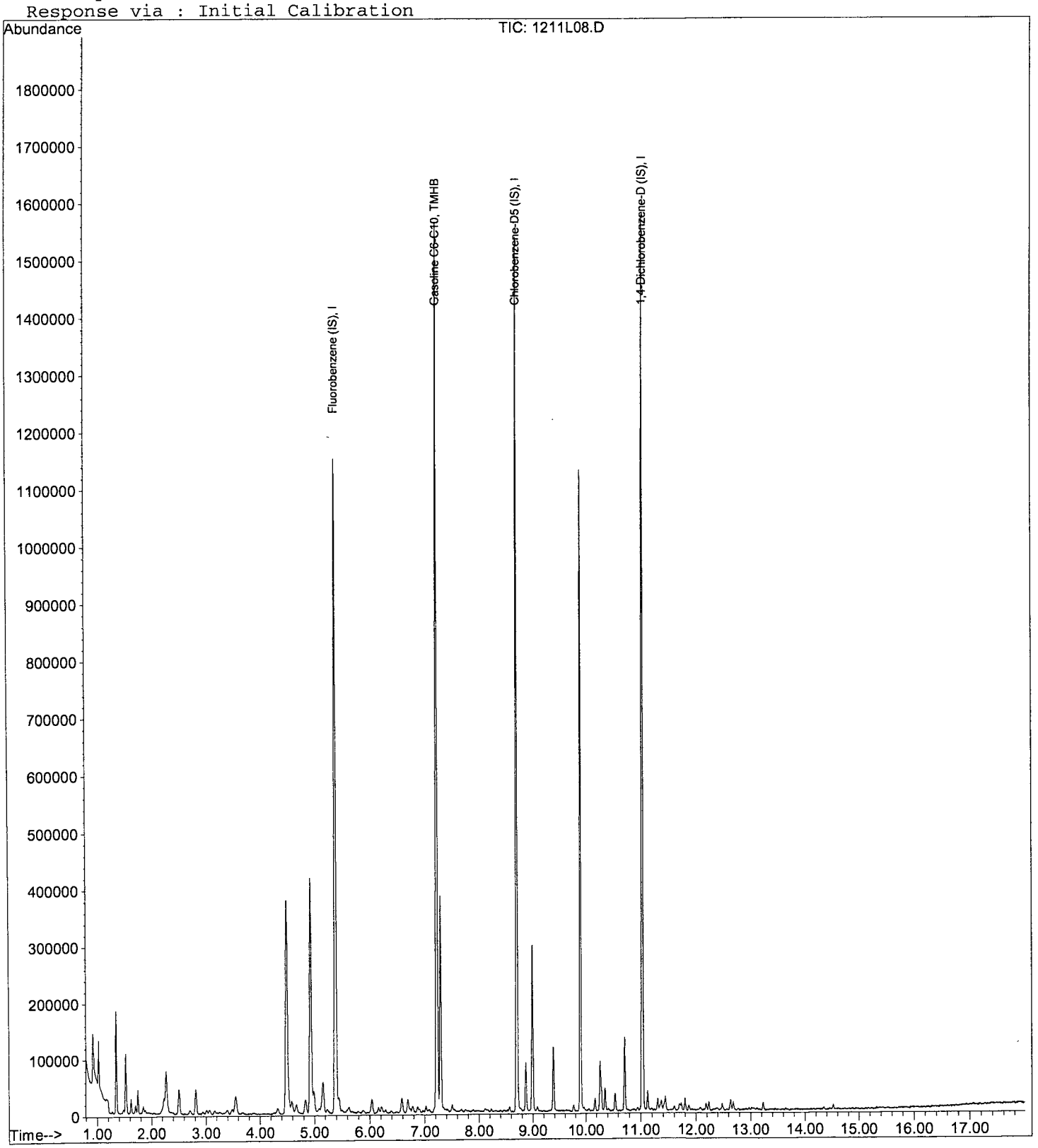
(#) = qualifier out of range (m) = manual integration
1211L08.D LGAS6Z11.M Wed Dec 14 11:25:17 2016 Page 1

Quantitation Report

Data File : M:\LOKI\DATA\161210\1211L08.D Vial: 8
Acq On : 11 Dec 16 13:35 Operator: PM,DG,SV,CMM
Sample : 100ug/L GAS STD 12/11/16C Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:44 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1211L09.D Vial: 9
Acq On : 11 Dec 16 14:03 Operator: PM,DG,SV,CMM
Sample : 300ug/L GAS STD 12/11/16D Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:42 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:37:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1169273	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1551836	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1654152	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	23321195m	303.70347	ppb	100

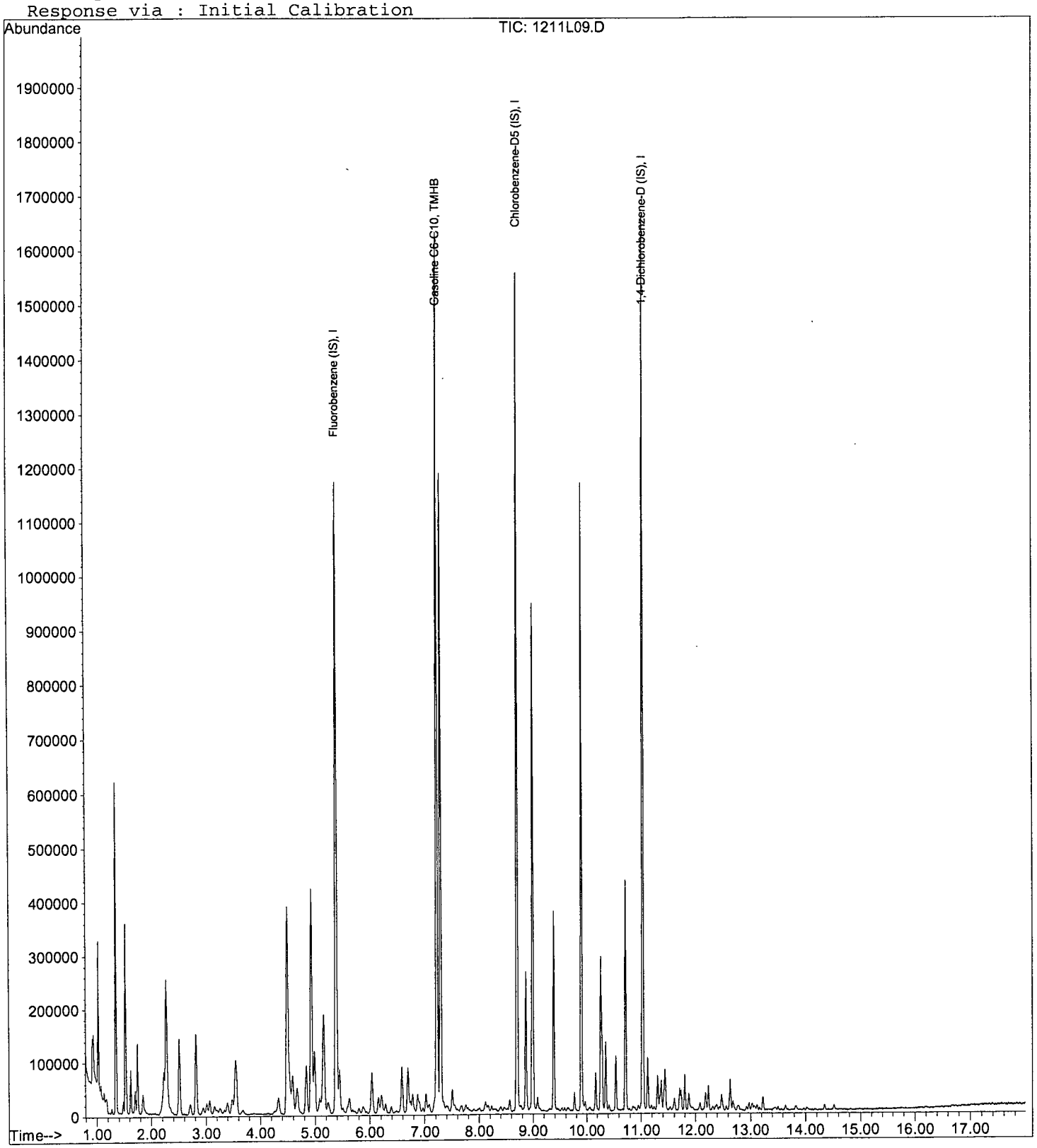
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161210\1211L09.D Vial: 9
Acq On : 11 Dec 16 14:03 Operator: PM,DG,SV,CMM
Sample : 300ug/L GAS STD 12/11/16D Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:42 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1211L10.D Vial: 10
Acq On : 11 Dec 16 14:32 Operator: PM,DG,SV,CMM
Sample : 600ug/L GAS STD 12/11/16E Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:41 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:37:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1208734	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1596204	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1715661	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.29	TIC	36730733m	604.65448	ppb	100

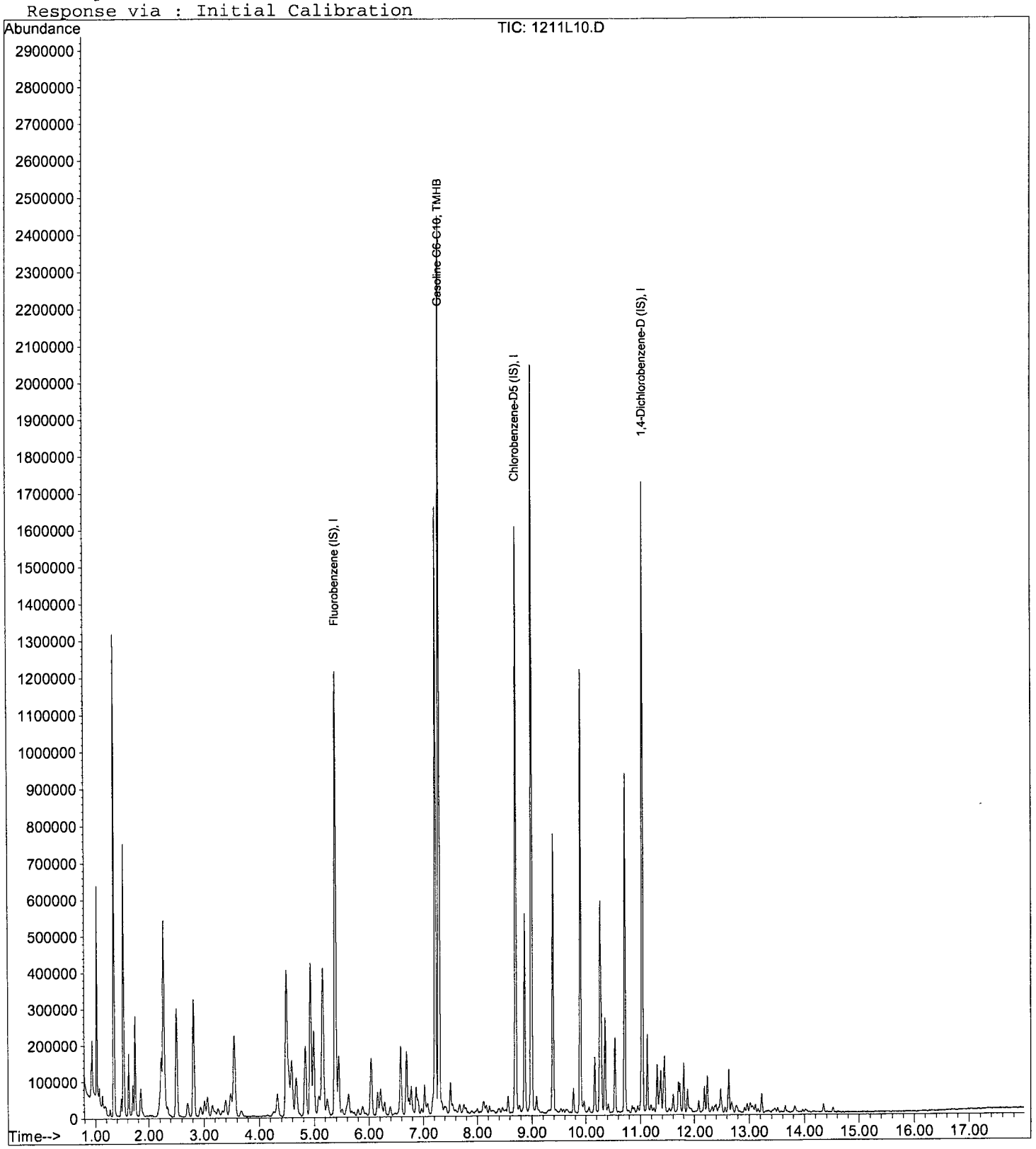
(#) = qualifier out of range (m) = manual integration
1211L10.D LGAS6Z11.M Wed Dec 14 11:25:25 2016 Page 1

Quantitation Report

Data File : M:\LOKI\DATA\161210\1211L10.D Vial: 10
Acq On : 11 Dec 16 14:32 Operator: PM,DG,SV,CMM
Sample : 600ug/L GAS STD 12/11/16E Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:41 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1211L11.D Vial: 11
Acq On : 11 Dec 16 15:00 Operator: PM,DG,SV,CMM
Sample : 800ug/L GAS STD 12/11/16F Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:40 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:37:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1210565	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1627461	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1718776	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.29	TIC	45367431m	808.93848	ppb	100

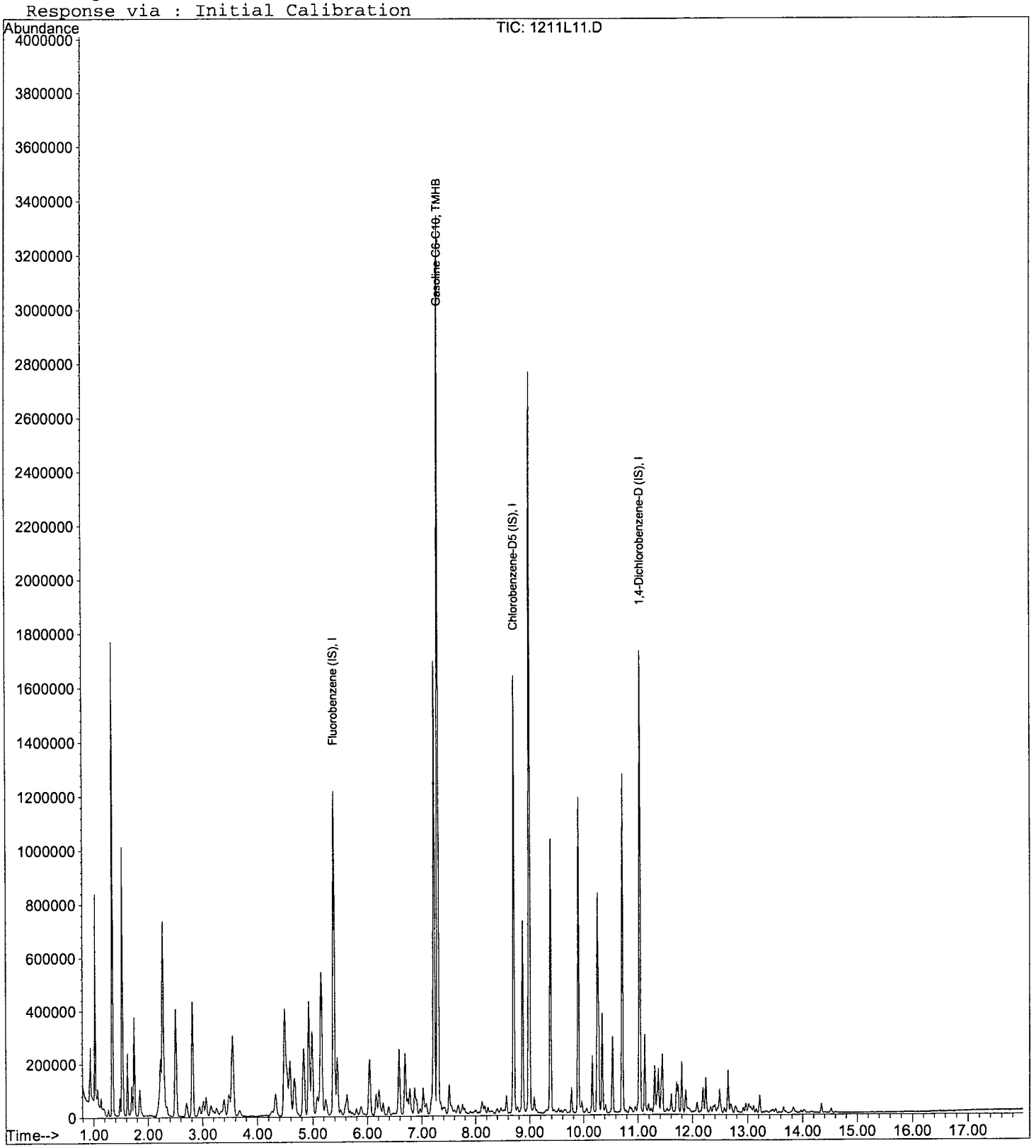
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161210\1211L11.D Vial: 11
Acq On : 11 Dec 16 15:00 Operator: PM,DG,SV,CMM
Sample : 800ug/L GAS STD 12/11/16F Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:40 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1211L12.D Vial: 12
Acq On : 11 Dec 16 15:28 Operator: PM,DG,SV,CMM
Sample : 1000ug/L GAS STD 12/11/16G Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:39 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:37:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1244641	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1644090	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1763195	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.29	TIC	55171361m	1006.37530	ppb	100

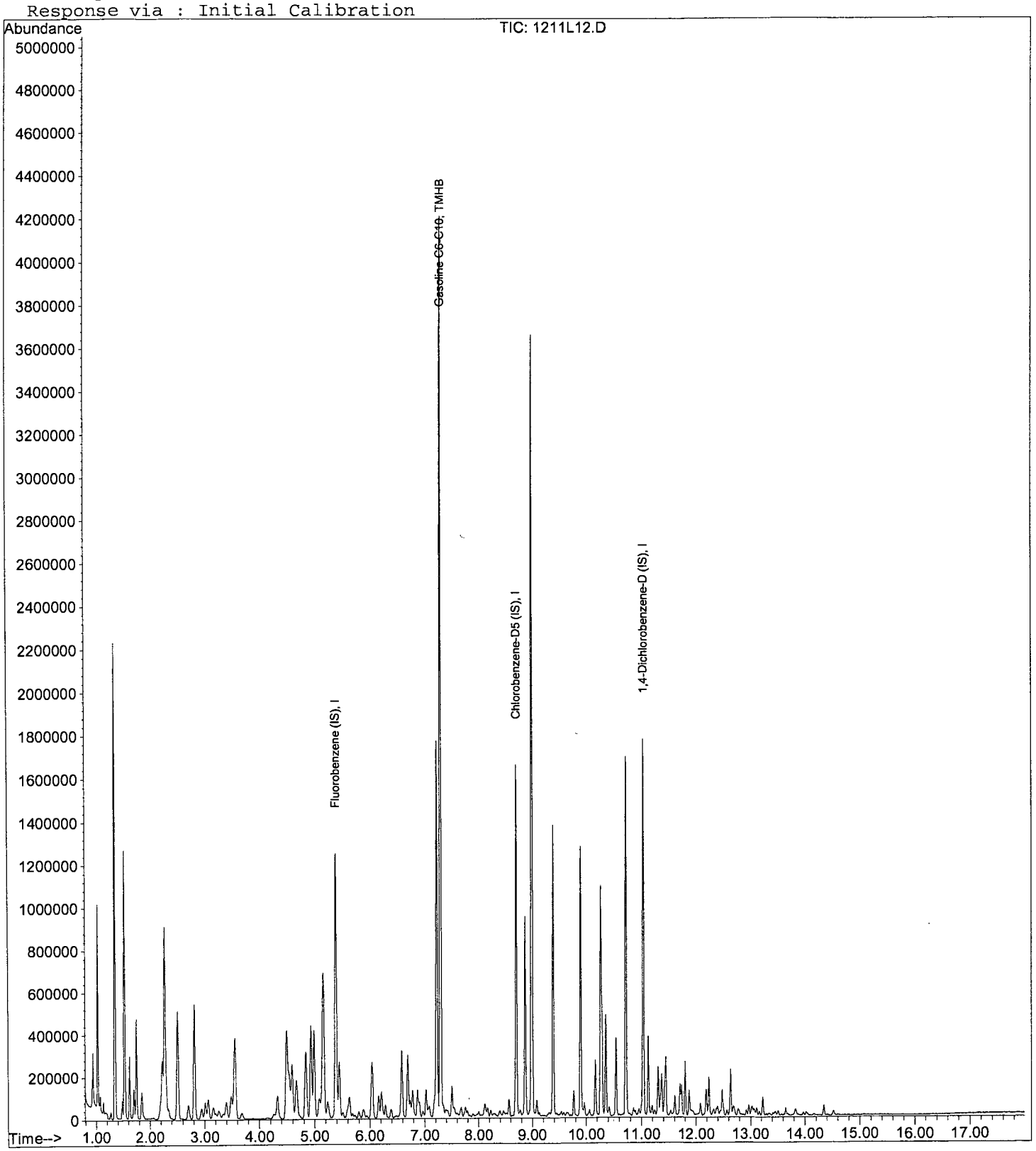
(#) = qualifier out of range (m) = manual integration
1211L12.D LGAS6Z11.M Wed Dec 14 11:25:32 2016 Page 1

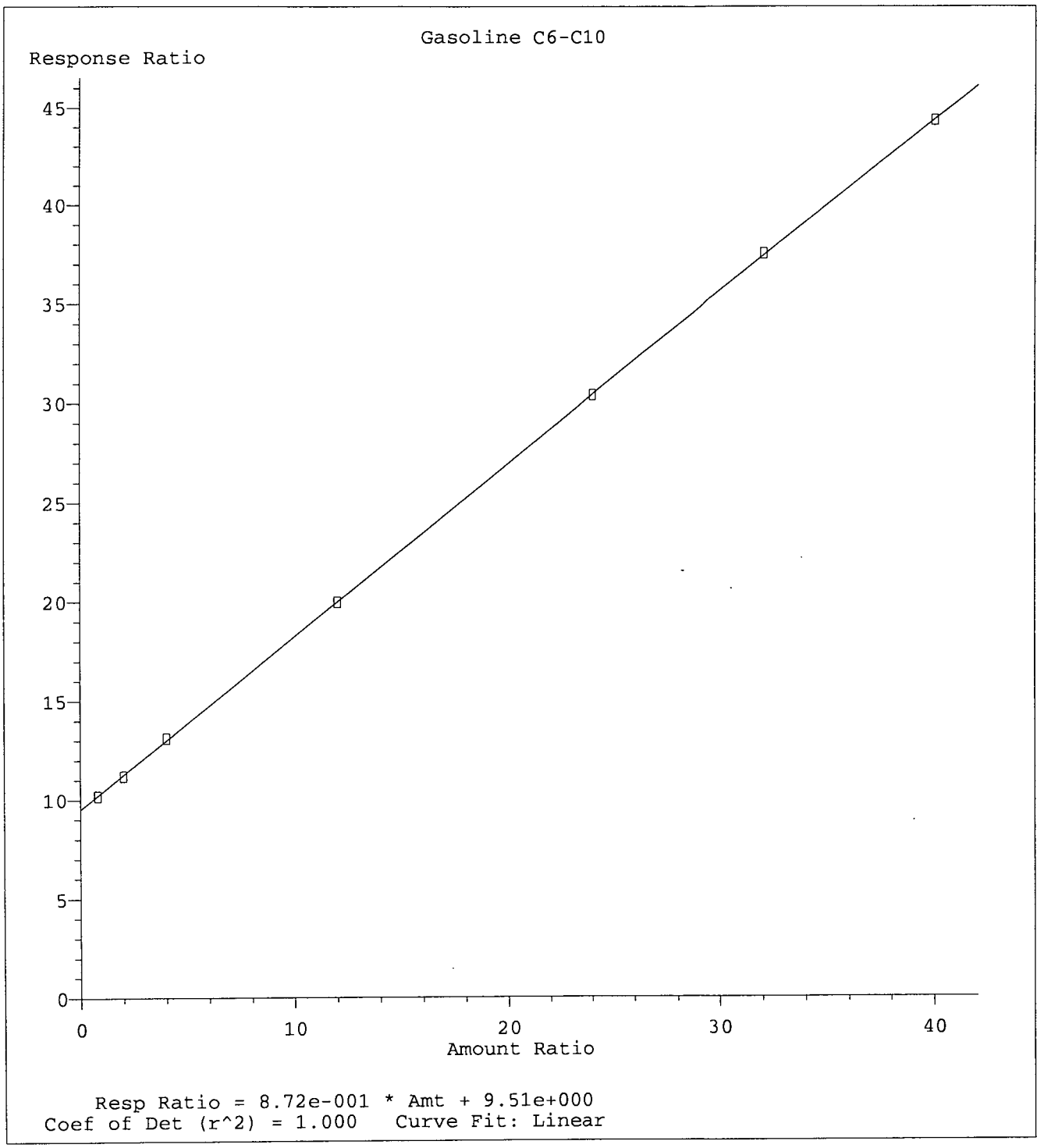
Quantitation Report

Data File : M:\LOKI\DATA\161210\1211L12.D Vial: 12
Acq On : 11 Dec 16 15:28 Operator: PM,DG,SV,CMM
Sample : 1000ug/L GAS STD 12/11/16G Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:39 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration





Method Name: M:\LOKI\DATA\161210\LGAS6Z11.M
Calibration Table Last Updated: Tue Dec 13 08:47:40 2016

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/11/16
Instrument: Loki
Initial Cal. Date: 12/11/16
Data File: 1211L16.D

		Compound	MEAN	CCRF	%D		%Drift
1	TMHB	Gasoline C6-C10	3.829	1.674	56	TMHBL	1.2
2							
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38							
39							
40							
		Average			56.0		

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161210\1211L16.D Vial: 16
Acq On : 11 Dec 16 17:21 Operator: PM,DG,SV,CMM
Sample : (SS) 300ug/L GAS STD 12/11/16 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:50 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1221661	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1610523	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1685182	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	24545495m	303.64031	ppb	100

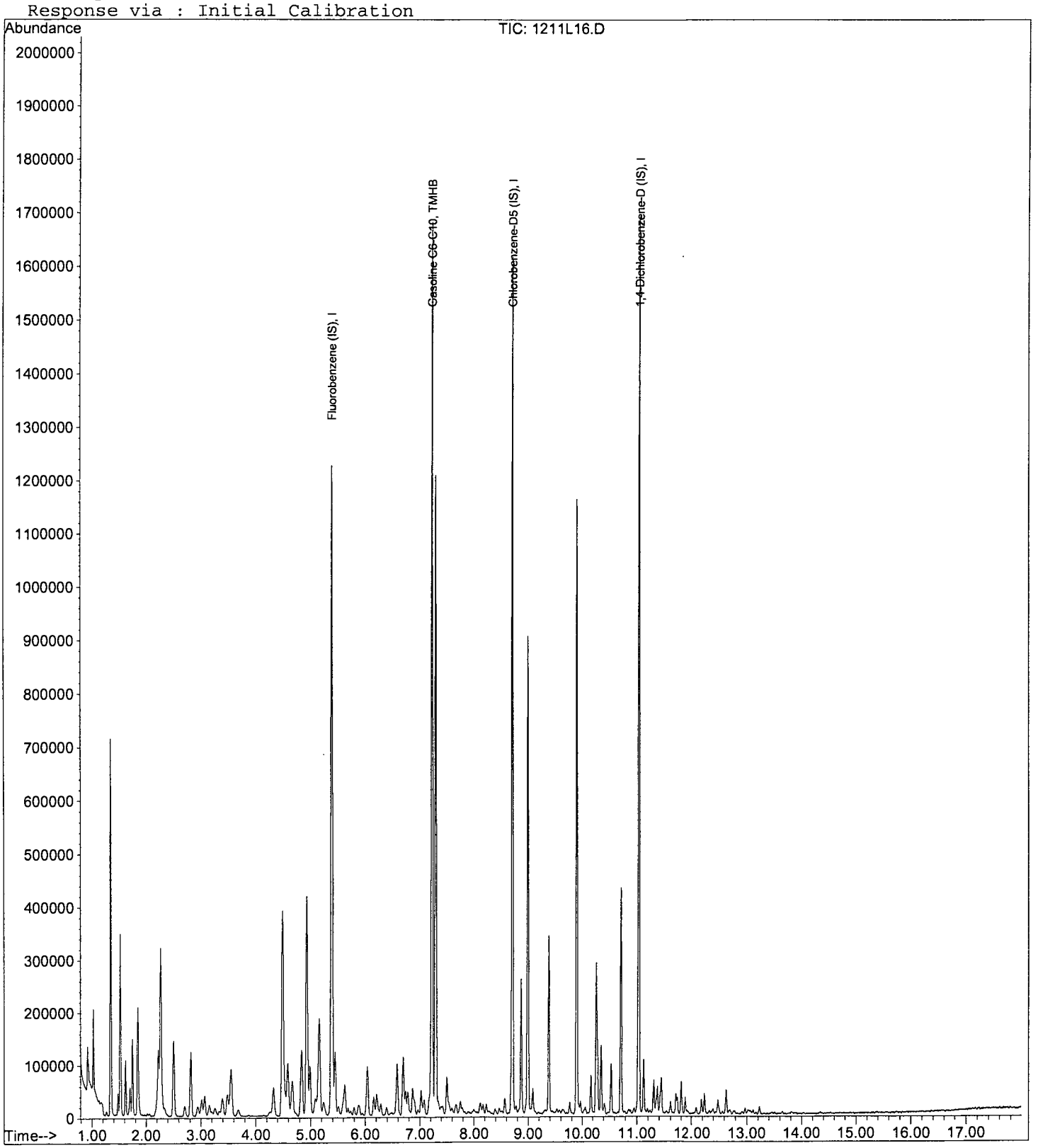
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\161210\1211L16.D Vial: 16
Acq On : 11 Dec 16 17:21 Operator: PM,DG,SV,CMM
Sample : (SS) 300ug/L GAS STD 12/11/16 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 13 8:50 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161210\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/27/16
Matrix: Instrument: Loki Initials:

		Compound	1227L05.D	1227L06.D	1227L07.D	1227L08.D	1227L09.D	1227L10.D	1227L11.D	1227L12.D	1227L13.D		Avg	%RSD		
1	I	Fluorobenzene (IS)														
2	S	Dibromofluoromethane(S)	0.6002	0.5878	0.5055	0.4933	0.5124	0.5171	0.4975	0.5101	0.4909		0.52	7.8	S	
3	S	1,2-DCA-D4(S)	0.5938	0.5796	0.4911	0.4729	0.5071	0.4956	0.4741	0.4855	0.4685		0.51	9.2	S	
4	I	Chlorobenzene-D5 (IS)														
5	S	Toluene-D8(S)	2.011	2.011	1.705	1.695	1.856	1.925	1.850	1.903	1.821		1.9	6.1	S	
6	S	4-Bromofluorobenzene(S)	0.6803	0.6348	0.5610	0.5741	0.6464	0.6971	0.6483	0.6645	0.6471		0.64	7.1	S	
7	I	1,4-Dichlorobenzene-D (IS)														
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Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161227\1227L05.D Vial: 4
Acq On : 27 Dec 16 14:16 Operator: PM,DG,SV,CMM
Sample : 0.3ug/L VOC STD 12/27/16AJ Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 11:39 2016 Quant Results File: LSURZ27.RES

Quant Method : M:\LOKI\DATA\161227\LSURZ27.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	578240	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	565952	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	288512	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.49	111	69414	5.72870 ppb	0.00
Spiked Amount 25.000			Recovery	= 22.916%	
3) 1,2-DCA-D4(S)	4.93	65	68677	5.84968 ppb	0.00
Spiked Amount 25.000			Recovery	= 23.400%	
5) Toluene-D8(S)	7.22	98	227624	5.39403 ppb	0.00
Spiked Amount 25.000			Recovery	= 21.576%	
6) 4-Bromofluorobenzene(S)	9.89	95	77009	5.32124 ppb	0.00
Spiked Amount 25.000			Recovery	= 21.284%	
Target Compounds					Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161227\1227L06.D Vial: 5
Acq On : 27 Dec 16 14:44 Operator: PM,DG,SV,CMM
Sample : 0.5ug/L VOC STD 12/27/16AK Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 11:39 2016 Quant Results File: LSURZ27.RES

Quant Method : M:\LOKI\DATA\161227\LSURZ27.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	570240	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	532864	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	277952	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.48	111	67042	5.61056 ppb	0.00
Spiked Amount 25.000			Recovery	= 22.444%	
3) 1,2-DCA-D4(S)	4.92	65	66103	5.70943 ppb	0.00
Spiked Amount 25.000			Recovery	= 22.836%	
5) Toluene-D8(S)	7.22	98	214286	5.39327 ppb	0.00
Spiked Amount 25.000			Recovery	= 21.572%	
6) 4-Bromofluorobenzene(S)	9.89	95	74413	5.46114 ppb	0.00
Spiked Amount 25.000			Recovery	= 21.844%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
1227L06.D LSURZ27.M Thu Dec 29 11:41:06 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161227\1227L07.D Vial: 6
Acq On : 27 Dec 16 15:12 Operator: PM,DG,SV,CMM
Sample : 1.0ug/L VOC STD 12/27/16AL Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 11:39 2016 Quant Results File: LSURZ27.RES

Quant Method : M:\LOKI\DATA\161227\LSURZ27.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	565952	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	546752	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	298816	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.48	111	114442	9.64991 ppb	0.00
Spiked Amount 25.000			Recovery	= 38.600%	
3) 1,2-DCA-D4(S)	4.92	65	111185	9.67599 ppb	0.00
Spiked Amount 25.000			Recovery	= 38.704%	
5) Toluene-D8(S)	7.22	98	372964	9.14853 ppb	0.00
Spiked Amount 25.000			Recovery	= 36.596%	
6) 4-Bromofluorobenzene(S)	9.89	95	122683	8.77496 ppb	0.00
Spiked Amount 25.000			Recovery	= 35.100%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161227\1227L08.D Vial: 7
Acq On : 27 Dec 16 15:40 Operator: PM,DG,SV,CMM
Sample : 2.0ug/L VOC STD 12/27/16AM Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 11:39 2016 Quant Results File: LSURZ27.RES

Quant Method : M:\LOKI\DATA\161227\LSURZ27.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	573632	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	552960	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	306560	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.48	111	113193	9.41680 ppb	0.00
Spiked Amount 25.000			Recovery	= 37.668%	
3) 1,2-DCA-D4(S)	4.92	65	108499	9.31583 ppb	0.00
Spiked Amount 25.000			Recovery	= 37.264%	
5) Toluene-D8(S)	7.22	98	374934	9.09360 ppb	0.00
Spiked Amount 25.000			Recovery	= 36.376%	
6) 4-Bromofluorobenzene(S)	9.89	95	126975	8.97998 ppb	0.00
Spiked Amount 25.000			Recovery	= 35.920%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161227\1227L09.D Vial: 8
Acq On : 27 Dec 16 16:08 Operator: PM,DG,SV,CMM
Sample : 5.0ug/L VOC STD 12/27/16AN Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 11:39 2016 Quant Results File: LSURZ27.RES

Quant Method : M:\LOKI\DATA\161227\LSURZ27.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	588416	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	558016	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	319680	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.48	111	301477	24.45046 ppb	0.00
Spiked Amount 25.000			Recovery =	97.800%	
3) 1,2-DCA-D4(S)	4.93	65	298377	24.97525 ppb	0.00
Spiked Amount 25.000			Recovery =	99.900%	
5) Toluene-D8(S)	7.22	98	1035649	24.89091 ppb	0.00
Spiked Amount 25.000			Recovery =	99.564%	
6) 4-Bromofluorobenzene(S)	9.89	95	360674	25.27663 ppb	0.00
Spiked Amount 25.000			Recovery =	101.108%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161227\1227L10.D Vial: 9
Acq On : 27 Dec 16 16:36 Operator: PM,DG,SV,CMM
Sample : 10ug/L VOC STD 12/27/16AO Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 11:40 2016 Quant Results File: LSURZ27.RES

Quant Method : M:\LOKI\DATA\161227\LSURZ27.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	593920	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	548032	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	323712	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.48	111	307096	24.67536 ppb	0.00
Spiked Amount 25.000			Recovery = 98.700%		
3) 1,2-DCA-D4(S)	4.93	65	294376	24.41200 ppb	0.00
Spiked Amount 25.000			Recovery = 97.648%		
5) Toluene-D8(S)	7.22	98	1054834	25.81387 ppb	0.00
Spiked Amount 25.000			Recovery = 103.256%		
6) 4-Bromofluorobenzene(S)	9.89	95	382018	27.26020 ppb	0.00
Spiked Amount 25.000			Recovery = 109.040%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161227\1227L11.D Vial: 10
Acq On : 27 Dec 16 17:04 Operator: PM,DG,SV,CMM
Sample : 20ug/L VOC STD 12/27/16AP Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 11:40 2016 Quant Results File: LSURZ27.RES

Quant Method : M:\LOKI\DATA\161227\LSURZ27.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	641920	25.00000	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	605760	25.00000	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	348928	25.00000	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	638651	47.47882	ppb	0.00
Spiked Amount 25.000			Recovery = 189.916%			
3) 1,2-DCA-D4(S)	4.93	65	608647	46.69964	ppb	0.00
Spiked Amount 25.000			Recovery = 186.800%			
5) Toluene-D8(S)	7.22	98	2241028	49.61598	ppb	0.00
Spiked Amount 25.000			Recovery = 198.464%			
6) 4-Bromofluorobenzene(S)	9.89	95	785453	50.70732	ppb	0.00
Spiked Amount 25.000			Recovery = 202.828%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161227\1227L12.D Vial: 11
Acq On : 27 Dec 16 17:32 Operator: PM,DG,SV,CMM
Sample : 40ug/L VOC STD 12/27/16AQ Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 11:40 2016 Quant Results File: LSURZ27.RES

Quant Method : M:\LOKI\DATA\161227\LSURZ27.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	631168	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	606464	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	334080	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.48	111	643980	48.69055 ppb	0.00
Spiked Amount 25.000			Recovery	= 194.764%	
3) 1,2-DCA-D4(S)	4.92	65	612851	47.82323 ppb	0.00
Spiked Amount 25.000			Recovery	= 191.292%	
5) Toluene-D8(S)	7.22	98	2308490	51.05025 ppb	0.00
Spiked Amount 25.000			Recovery	= 204.200%	
6) 4-Bromofluorobenzene(S)	9.89	95	805974	51.97172 ppb	0.00
Spiked Amount 25.000			Recovery	= 207.888%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161227\1227L13.D Vial: 12
Acq On : 27 Dec 16 18:00 Operator: PM,DG,SV,CMM
Sample : 100ug/L VOC STD 12/27/16AR Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 11:40 2016 Quant Results File: LSURZ27.RES

Quant Method : M:\LOKI\DATA\161227\LSURZ27.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	629760	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	603776	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	370944	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.48	111	1236583	93.70558 ppb	0.00
Spiked Amount 25.000				Recovery = 374.824%	
3) 1,2-DCA-D4(S)	4.92	65	1180241	92.30487 ppb	0.00
Spiked Amount 25.000				Recovery = 369.220%	
5) Toluene-D8(S)	7.22	98	4397555	97.68105 ppb	0.00
Spiked Amount 25.000				Recovery = 390.724%	
6) 4-Bromofluorobenzene(S)	9.89	95	1562862	101.22688 ppb	0.00
Spiked Amount 25.000				Recovery = 404.908%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 12/28/16
Matrix: Instrument: Loki
Initial Cal. Date: 12/11/16
Data File: 1228L06.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	3.829	1.494	61	TMHBL	20
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
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		Average			61.0		

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161227\1228L06.D Vial: 5
Acq On : 28 Dec 16 11:27 Operator: PM,DG,SV,CMM
Sample : 161228A CCV/LCS-1WL 300ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 11:26 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161227\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1120808	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1533959	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1651961	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	8.70	TIC	20090394m	241.48472	ppb	100

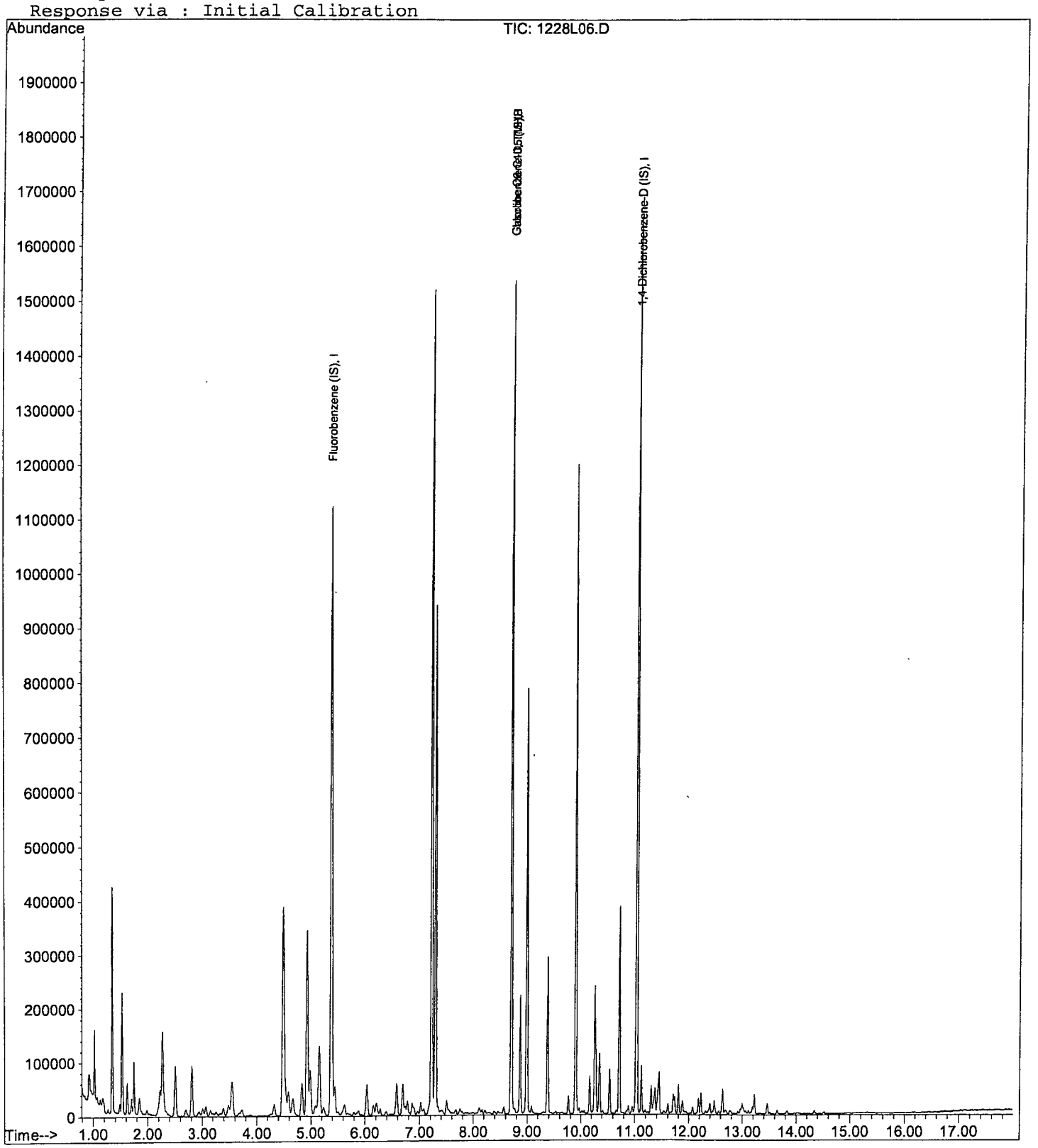
(#) = qualifier out of range (m) = manual integration
1228L06.D LGAS6Z11.M Thu Dec 29 11:34:06 2016 Page 1

Quantitation Report

Data File : M:\LOKI\DATA\161227\1228L06.D Vial: 5
Acq On : 28 Dec 16 11:27 Operator: PM,DG,SV,CMM
Sample : 161228A CCV/LCS-1WL 300ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 11:26 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161227\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 12/28/16
Matrix: Instrument: Loki
Initial Cal. Date: 12/27/16
Data File: 1228L06.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	S	Dibromofluoromethane(S)	0.5239	0.5158	1.5	S	
3	S	1,2-DCA-D4(S)	0.5076	0.4960	2.3	S	
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	S	Toluene-D8(S)	1.864	1.786	4.2	S	
6	S	4-Bromofluorobenzene(S)	0.6393	0.6209	2.9	S	
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
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		Average			2.7		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161227\1228L06.D Vial: 5
Acq On : 28 Dec 16 11:27 Operator: PM,DG,SV,CMM
Sample : 161228A CCV/LCS-1WL 300ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 11:40 2016 Quant Results File: LSURZ27.RES

Quant Method : M:\LOKI\DATA\161227\LSURZ27.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	561728	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	552960	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	284224	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.48	111	289730	24.61414 ppb	0.00
Spiked Amount 25.000			Recovery = 98.456%		
3) 1,2-DCA-D4(S)	4.93	65	278620	24.42954 ppb	0.00
Spiked Amount 25.000			Recovery = 97.720%		
5) Toluene-D8(S)	7.22	98	987805	23.95810 ppb	0.00
Spiked Amount 25.000			Recovery = 95.832%		
6) 4-Bromofluorobenzene(S)	9.89	95	343319	24.28036 ppb	0.00
Spiked Amount 25.000			Recovery = 97.120%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/28/16
Instrument: Loki
Initial Cal. Date: 12/11/16
Data File: 1228L29.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	3.829	1.516	60	TMHBL	17
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			60.0		

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161227\1228L29.D Vial: 28
Acq On : 28 Dec 16 22:10 Operator: PM,DG,SV,CMM
Sample : Ending CCV GAS 300ug/l 12/28/16 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 11:33 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161227\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	989841	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1399719	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1570933	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	8.70	TIC	18009815m	249.22151	ppb	100

(#) = qualifier out of range (m) = manual integration
1228L29.D LGAS6Z11.M Thu Dec 29 11:34:52 2016 Page 1

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/28/16
Instrument: Loki
Initial Cal. Date: 12/27/16
Data File: 1228L29.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	S	Dibromofluoromethane(S)	0.5239	0.5100	2.6	S	
3	S	1,2-DCA-D4(S)	0.5076	0.4742	6.6	S	
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	S	Toluene-D8(S)	1.864	1.797	3.6	S	
6	S	4-Bromofluorobenzene(S)	0.6393	0.6340	0.83	S	
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			3.4		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161227\1228L29.D Vial: 28
Acq On : 28 Dec 16 22:10 Operator: PM,DG,SV,CMM
Sample : Ending CCV GAS 300ug/l 12/28/16 Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 11:40 2016 Quant Results File: LSURZ27.RES

Quant Method : M:\LOKI\DATA\161227\LSURZ27.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	504640	25.00000	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	496448	25.00000	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	283200	25.00000	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	257367	24.33820	ppb	0.00
Spiked Amount 25.000			Recovery = 97.352%			
3) 1,2-DCA-D4(S)	4.92	65	239307	23.35623	ppb	0.00
Spiked Amount 25.000			Recovery = 93.424%			
5) Toluene-D8(S)	7.22	98	892199	24.10254	ppb	0.00
Spiked Amount 25.000			Recovery = 96.412%			
6) 4-Bromofluorobenzene(S)	9.89	95	314734	24.79254	ppb	0.00
Spiked Amount 25.000			Recovery = 99.172%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
1228L29.D LSURZ27.M Thu Dec 29 11:43:23 2016 Page 1

ORGANICS
Raw Data

APPL, INC.

Method Blank
EPA 8260B GRO WATER

Blank Name/QCG: **161228W-48082 - 215066**
Batch ID: #GRO86-161228AL1

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	12/28/16	12/28/16
BLANK	SURROGATE: 4-BROMOFLUOR	95.3	85-114			%	12/28/16	12/28/16

Quant Method: LGAS6Z11.M
Run #: 1228L12
Instrument: Loki
Sequence: 161227
Initials: SV

GC SC-Blank-REG MDLs-DOD
Printed: 1/9/17 9:26:06 AM

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161227\1228L12.D Vial: 11
Acq On : 28 Dec 16 14:15 Operator: PM,DG,SV,CMM
Sample : 161228A BLK-1WL Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 11:28 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161227\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1041675	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1449001	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1528995	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

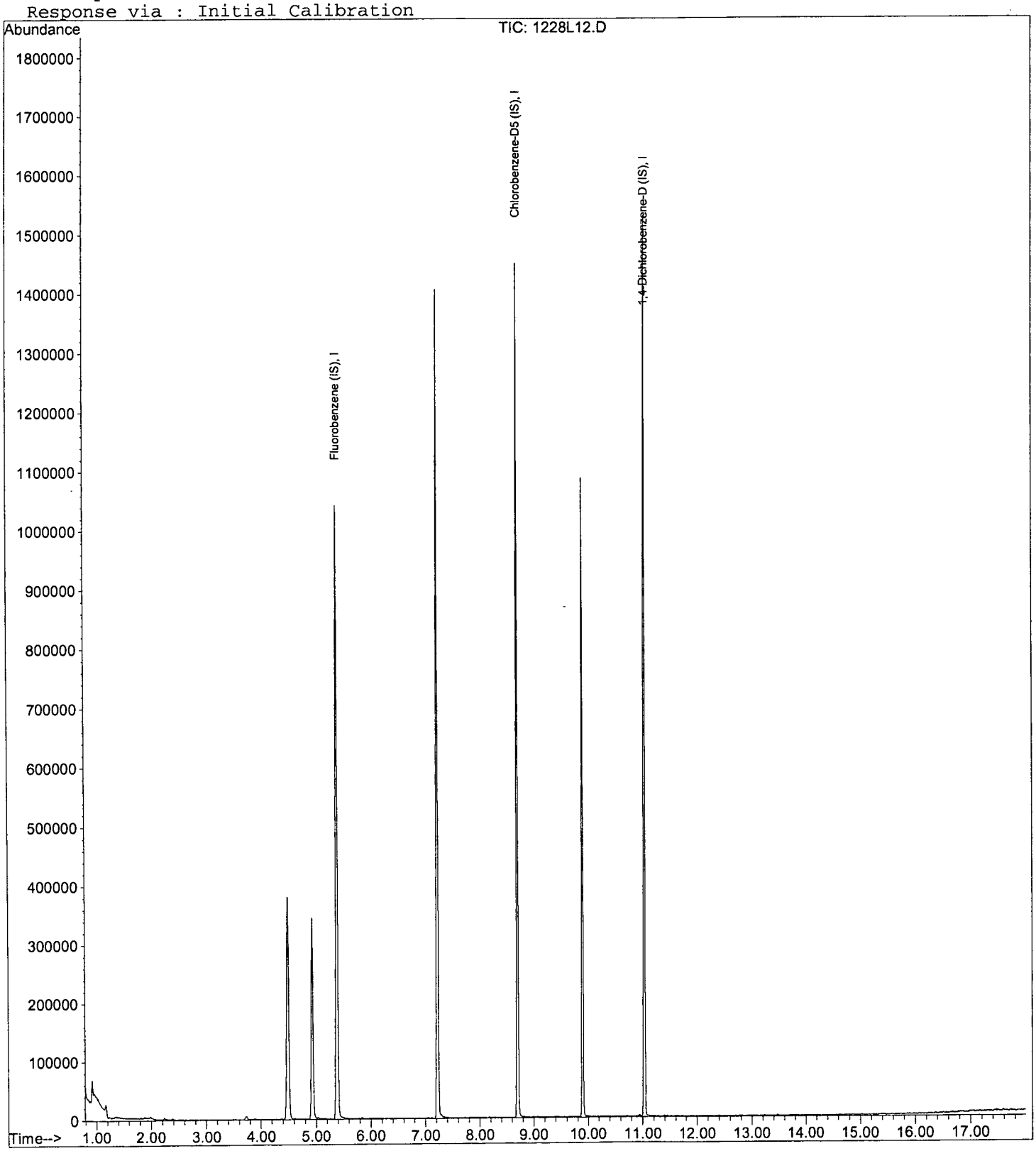
Quantitation Report

Data File : M:\LOKI\DATA\161227\1228L12.D
Acq On : 28 Dec 16 14:15
Sample : 161228A BLK-1WL
Misc : W IS&S 11/21/16, 11/14/16

Vial: 11
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Dec 29 11:28 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161227\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161227\1228L12.D Vial: 11
Acq On : 28 Dec 16 14:15 Operator: PM,DG,SV,CMM
Sample : 161228A BLK-1WL Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 11:40 2016 Quant Results File: LSURZ27.RES

Quant Method : M:\LOKI\DATA\161227\LSURZ27.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	527424	25.00000	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	516608	25.00000	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	272704	25.00000	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	282009	25.51646	ppb	0.00
Spiked Amount 25.000			Recovery = 102.064%			
3) 1,2-DCA-D4(S)	4.92	65	269156	25.13467	ppb	0.00
Spiked Amount 25.000			Recovery = 100.540%			
5) Toluene-D8(S)	7.22	98	929586	24.13256	ppb	0.00
Spiked Amount 25.000			Recovery = 96.532%			
6) 4-Bromofluorobenzene(S)	9.89	95	314654	23.81898	ppb	0.00
Spiked Amount 25.000			Recovery = 95.276%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Laboratory Control Spike Recovery
EPA 8260B GRO WATER

APPL ID: **161228W-48082 LCS - 215066**
Batch ID: #GRO86-161228AL1

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
GASOLINE RANGE ORGANICS	300	241	80.3	78-122
SURROGATE: 4-BROMOFLUOROBENZ	25.0	24.3	97.2	85-114

Comments: _____

Primary	SPK
Quant Method :	LGAS6Z11.M
Extraction Date :	12/28/16
Analysis Date :	12/28/16
Instrument :	Loki
Run :	1228L06
Initials :	SV

Printed: 1/9/17 9:26:10 AM
APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\161227\1228L06.D Vial: 5
Acq On : 28 Dec 16 11:27 Operator: PM,DG,SV,CMM
Sample : 161228A CCV/LCS-1WL 300ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 11:26 2016 Quant Results File: LGAS6Z11.RES

Quant Method : M:\LOKI\DATA\161227\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	1120808	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1533959	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1651961	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.70	TIC	20090394m	241.48472	ppb	100

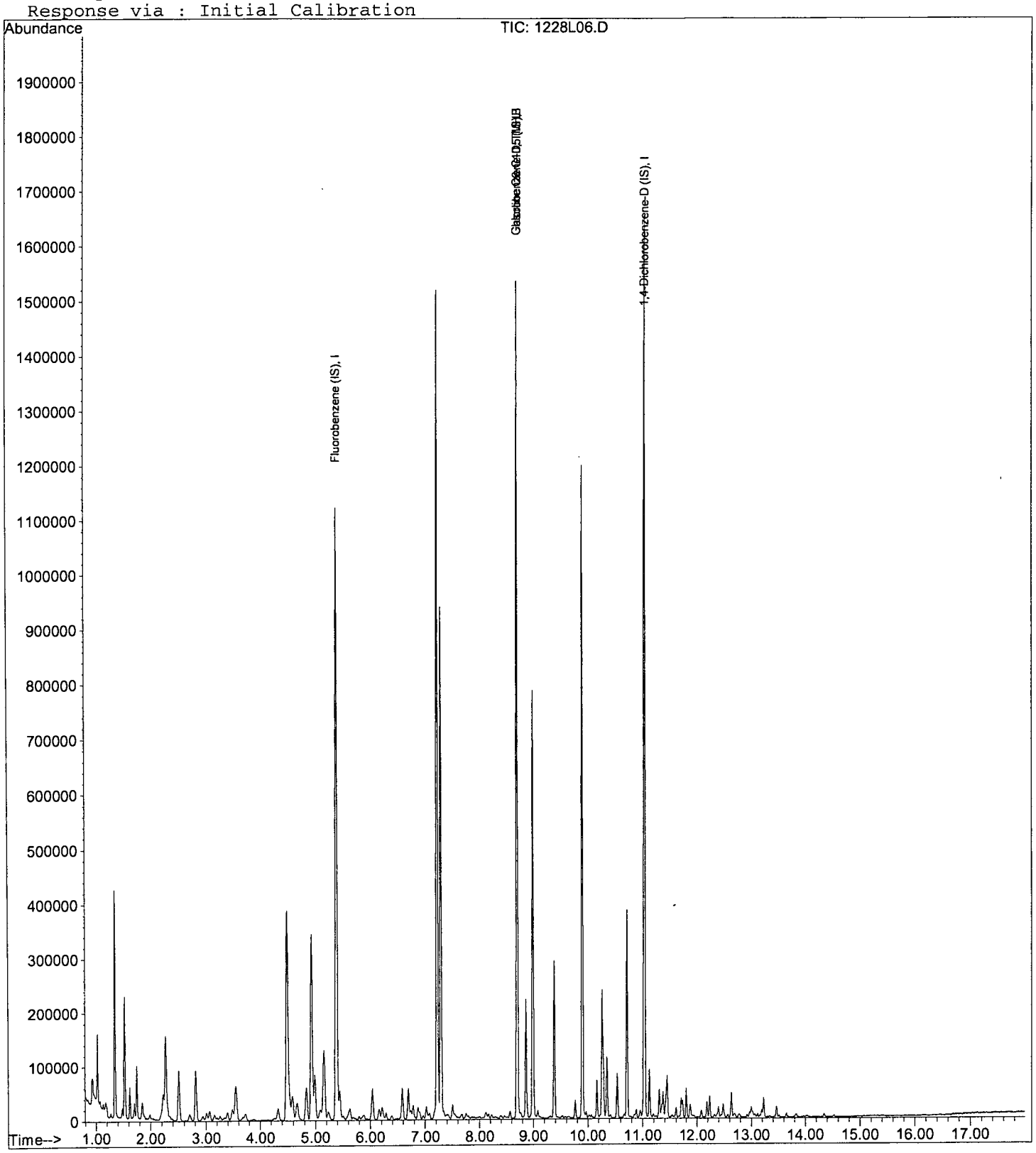
(#) = qualifier out of range (m) = manual integration
1228L06.D LGAS6Z11.M Thu Dec 29 11:34:06 2016 Page 1

Quantitation Report

Data File : M:\LOKI\DATA\161227\1228L06.D Vial: 5
Acq On : 28 Dec 16 11:27 Operator: PM,DG,SV,CMM
Sample : 161228A CCV/LCS-1WL 300ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 11:26 2016 Quant Results File: LGAS6Z11.RES

Method : M:\LOKI\DATA\161227\LGAS6Z11.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Dec 13 08:47:40 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\161227\1228L06.D Vial: 5
Acq On : 28 Dec 16 11:27 Operator: PM,DG,SV,CMM
Sample : 161228A CCV/LCS-1WL 300ug/L Inst : Loki
Misc : W IS&S 11/21/16, 11/14/16 Multiplr: 1.00

Quant Time: Dec 29 11:40 2016 Quant Results File: LSURZ27.RES

Quant Method : M:\LOKI\DATA\161227\LSURZ27.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 28 08:02:38 2016
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	561728	25.00000	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	552960	25.00000	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	284224	25.00000	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	289730	24.61414	ppb	0.00
Spiked Amount 25.000			Recovery = 98.456%			
3) 1,2-DCA-D4(S)	4.93	65	278620	24.42954	ppb	0.00
Spiked Amount 25.000			Recovery = 97.720%			
5) Toluene-D8(S)	7.22	98	987805	23.95810	ppb	0.00
Spiked Amount 25.000			Recovery = 95.832%			
6) 4-Bromofluorobenzene(S)	9.89	95	343319	24.28036	ppb	0.00
Spiked Amount 25.000			Recovery = 97.120%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
1228L06.D LSURZ27.M Thu Dec 29 11:42:41 2016 Page 1

PRIMARY STANDARD

12/27/16F							
50ug/ml Vol Work Std #7							
Exp:01/27/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120016-03	Gas Mix	2000	279822-36638	12/27/16A-CMM	02/19/19	100
02SI	020049-02	HEXACHLOROETHANE	1000	254167-36564	12/27/16C-CMM	12/28/17	200
02SI	020228-02	Benzyl Chloride	1000	279824-36569	12/27/16E-CMM	05/24/18	200
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	11/15/17	3500
12/27/16G							
50ug/ml Vol Work Std #1							
Exp:01/27/17					Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	020145-02-02	2-CEVE	2000	288264-37217	11/22/16C-CMM	09/19/19	50
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	11/15/17	1950
12/27/16H							
50ug/ml Vol Work Std #8							
Exp:01/27/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	122039-02	Volatile Mix, 20-29	2000	258033-37169	12/16/16C-CMM	08/17/17	100
02SI	120023-03	VOC'S-54 COMP	2000	271929-36581	12/16/16D-CMM	02/15/18	100
02SI	020232-02	Vinyl Acetate	2000	292241-37194	12/16/16E-CMM	02/01/17	100
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	11/15/17	3700
12/27/16I							
50ug/ml Vol Work Std #2							
Exp:01/27/17							
Supplier	ID #	ID	ug/ml				
02SI	121020-05	HSL'S-Ketone Solution	2000	292248-37204	11/22/16B-CMM	11/08/18	100
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	11/15/17	3900
		12/27/16J					
		5ug/ml Vol Work Std #9					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #7		**12/27/16F**	Exp:01/27/17	200	
		50ug/ml Vol Work Std #8		**12/27/16H**	Exp:01/27/17	200	
		J&T Brand		12/16/16	11/15/17	1600	
		12/27/16K					
		5ug/ml Vol Work Std #10					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #1		**12/27/16G**	Exp:01/27/17	200	
		J&T Brand		12/16/16	11/15/17	1800	
		12/27/16L					
		5ug/ml Vol Work Std #12					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #2		**12/27/16I**	Exp:01/27/17	200	
		J&T Brand		12/16/16	11/15/17	1800	
12/27/16M							
250ug/ml TBA/IBA/Acetonitrile/Cyclohexanone/Acrolein/2-P							
Exp:01/27/17			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
02SI	120166-01	Volatile Mix 4-3	2000	275544-36413	12/16/16F-CMM	03/28/18	500
02SI	020229-09-02	Acrolein	10000	294146-37312	12/16/16G-CMM	01/14/17	100
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	11/15/17	3400

SECONDARY SOURCE

12/27/16N							
50ug/ml VOC Std#4							
Exp:01/27/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120296-01-SS	Custom 8260 Solution	2000	279826-36671	12/27/16B-CMM	06/01/19	50
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	11/15/17	1950
12/27/16O							
50ug/ml VOC Std#5							
Exp:01/27/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120016-03-SS	8260 Gases(SS)	2000	279826-36675	12/16/16I-CMM	06/01/19	50
02SI	020145-02-02-SS	2-CEVE (SS)	2000	254171-35380	12/16/16J-CMM	06/21/17	50
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	11/15/17	1900
12/27/16P							

50ug/ml VOC Std#6							
Exp:01/27/17							
	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120023-03-SS	VOC'S 54 COMP.	2000	265897-35927	12/16/16K-CMM	11/29/17	50
02SI	020232-02-SS	Vinyl Acetate(SS)	2000	292243-37196	12/16/16L-CMM	02/01/17	50
02SI	020049-02-SS	HEXACHLOROETHANE (SS)	1000	254167-36563	12/27/16D-CMM	12/28/17	100
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	11/15/17	1800
12/27/16Q							
250ug/ml TBA/IBA/Acetonitrile/Acrolein/2-P							
Exp:01/27/17			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
02SI	120166-01-SS	VOC Mix 4-3 (SS)	2000	258040-37229	12/06/16G-CMM	08/22/18	250
02SI	020229-09-SS	Acrolein SOLUTION (SS)	10000	291929-37176	11/22/16I-CMM	12/12/16	50
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	11/15/17	1700
8260 water		spiked with		Total Vol			
CCV/LCS	10ug/L Vol Std	10uL of 50ug/ml Std #7		50mL P&T H2O			
Ending CCV		10uL of 50ug/ml Std #8					
		10uL of 50ug/ml Std #1					
		10uL of 50ug/ml Std #2					
		25uL of 250ug/ml Std TBA					
X4 ketones							
LCS	10ug/L Vol Std	10uL of 50ug/ml Std #7		50mL P&T H2O			
		10uL of 50ug/ml Std #8					
		10uL of 50ug/ml Std #1					
		40uL of 50ug/ml Std #2					
		25uL of 250ug/ml Std TBA					
8260 soil		spiked with		Total Vol			
CCV/LCS	50ug/Kg Vol Std	5uL of 50ug/ml Std #7		5mL P&T H2O			
Ending CCV		5uL of 50ug/ml Std #8					
		5uL of 50ug/ml Std #1					
		5uL of 50ug/ml Std #2					
		5uL of 250ug/ml Std TBA					
Matrix spikes are prepared with same standards as ccv (see above) into the sample.							
8260water		spiked with		Total Vol			
SS	10ug/L STD	10uL of 50ug/ml Std #4		50mL P&T H2O			
		10uL of 50ug/ml Std #5					
		10uL of 50ug/ml Std #6					
		25uL of 250ug/ml Std TBA					
8260 SOIL	50ug/Kg STD	5uL of 50ug/ml Std #4		Total Vol			
SS		5uL of 50ug/ml Std #5		5mL P&T H2O			
		5uL of 50ug/ml Std #6					
		5uL of 250ug/ml Std TBA					

Volatile Standard Curve Preparation for 10mL Purge (8260 water)-LOKI										
Exp Date:	12/28/16	5µg/mL	5µg/mL	5µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	250µg/mL	
		Vol Std #9	Vol Std #10	Vol Std #12	Vol Std #7	Vol Std #8	Vol Std #1	Vol Std #2	TBA	
		12/17/16J	12/27/16K	12/27/16L	12/27/16F	12/27/16H	12/27/16G	12/27/16I	12/27/16M	Final Vol
	Conc.	0127/2017	0127/2017	0127/2017	0127/2017	0127/2017	0127/2017	0127/2017	0127/2017	w/P&T H2O
Date/code	µg/L	ul	ul	ul	ul	ul	ul	ul	ul	mL
12/27/16AJ-DG	0.3	3	3	3	n/a	n/a	n/a	n/a	2	50
12/27/16AK-DG	0.5	5	5	5	n/a	n/a	n/a	n/a	5	50
12/27/16AL-DG	1	10	10	10	n/a	n/a	n/a	n/a	10	50
12/27/16AM-DG	2	20	20	20	n/a	n/a	n/a	n/a	15	50
12/27/16AN-DG	5	n/a	n/a	n/a	5	5	5	5	20	50
12/27/16AO-DG	10	n/a	n/a	n/a	10	10	10	10	25	50
12/27/16AP-DG	20	n/a	n/a	n/a	20	20	20	20	30	50
12/27/16AQ-DG	40	n/a	n/a	n/a	40	40	40	40	35	50
12/27/16AR-DG	100	n/a	n/a	n/a	100	100	100	100	40	50

GASOLINE							
12/04/16A							
Gasoline 2000ug/ml PRIMARY SOURCE							
Supplier	ID #		ug/ml	Lot #	Date Code	Exp. Date	uL
Restek		Unleaded Gasoline	50,000	A0101233-35581	07/09/16ADG	03/31/21	80
OMNISOLV		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	1920
12/05/16B							
Gasoline 2000ug/ml SECONDARY SOURCE			Conc.				
Supplier	ID #		ug/ml	Lot #	Date Code	Exp. Date	uL
O2SI	020246-06	Unleaded Gasoline	5,000	250389-36597	12/5/16ADG	05/04/18	800
OMNISOLV		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	1200

Gasoline Curve Preparation for 100mL Purge (water)-LOKI			
Exp Date:	12/12/16	2000ug/ml	
		12/4/16A	Final Volume
	Conc.	Exp.03/31/21	w/ P&T H2O
Date/code	µg/L	uL	mL
12/11/16-DG	20	1	100
12/11/16-DG	50	2.5	100
12/11/16-DG	100	5	100
12/11/16-DG	300	15	100
12/11/16-DG	600	30	100
12/11/16-DG	800	40	100
12/11/16-DG	1000	50	100

Gasoline SECOND SOURCE preparation @300ppb-MAX			
Exp Date:	12/12/16	2000ug/ml	
		12/05/16B	Final Volume
	Conc.	Exp.05-04-18	w/ P&T H2O
Date/code	µg/L	uL	mL
12/11/16	300	15	100

GASOLINE							
12/04/16A							
Gasoline 2000ug/ml PRIMARY SOURCE					Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
Restek		Unleaded Gasoline	50,000	A0101233-35581	07/09/16ADG	03/31/21	80
OMNISOLV		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	1920
12/05/16B							
Gasoline 2000ug/ml SECONDARY SOURCE			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
O2SI	020246-06	Unleaded Gasoline	5,000	250389-36597	12/5/16ADG	05/04/18	800
OMNISOLV		Purge & Trap MeOH		55344-00866	11/15/16	11/15/17	1200

Injection Log

Directory: M:\LOKI\DATA\161210\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	6	1211L06.D	1	20ug/L GAS STD 12/11/16A	W IS&S 11/21/16, 11/14/16	11 Dec 16 12:39
2	7	1211L07.D	1	50ug/L GAS STD 12/11/16B	W IS&S 11/21/16, 11/14/16	11 Dec 16 13:07
3	8	1211L08.D	1	100ug/L GAS STD 12/11/16C	W IS&S 11/21/16, 11/14/16	11 Dec 16 13:35
4	9	1211L09.D	1	300ug/L GAS STD 12/11/16D	W IS&S 11/21/16, 11/14/16	11 Dec 16 14:03
5	10	1211L10.D	1	600ug/L GAS STD 12/11/16E	W IS&S 11/21/16, 11/14/16	11 Dec 16 14:32
6	11	1211L11.D	1	800ug/L GAS STD 12/11/16F	W IS&S 11/21/16, 11/14/16	11 Dec 16 15:00
7	12	1211L12.D	1	1000ug/L GAS STD 12/11/16G	W IS&S 11/21/16, 11/14/16	11 Dec 16 15:28
8	16	1211L16.D	1	(SS) 300ug/L GAS STD 12/11/16	W IS&S 11/21/16, 11/14/16	11 Dec 16 17:21
9	4	1227L05.D	1	0.3ug/L VOC STD 12/27/16AJ	W IS&S 11/21/16, 11/14/16	27 Dec 16 14:16
10	5	1227L06.D	1	0.5ug/L VOC STD 12/27/16AK	W IS&S 11/21/16, 11/14/16	27 Dec 16 14:44
11	6	1227L07.D	1	1.0ug/L VOC STD 12/27/16AL	W IS&S 11/21/16, 11/14/16	27 Dec 16 15:12
12	7	1227L08.D	1	2.0ug/L VOC STD 12/27/16AM	W IS&S 11/21/16, 11/14/16	27 Dec 16 15:40
13	8	1227L09.D	1	5.0ug/L VOC STD 12/27/16AN	W IS&S 11/21/16, 11/14/16	27 Dec 16 16:08
14	9	1227L10.D	1	10ug/L VOC STD 12/27/16AO	W IS&S 11/21/16, 11/14/16	27 Dec 16 16:36
15	10	1227L11.D	1	20ug/L VOC STD 12/27/16AP	W IS&S 11/21/16, 11/14/16	27 Dec 16 17:04
16	11	1227L12.D	1	40ug/L VOC STD 12/27/16AQ	W IS&S 11/21/16, 11/14/16	27 Dec 16 17:32
17	12	1227L13.D	1	100ug/L VOC STD 12/27/16AR	W IS&S 11/21/16, 11/14/16	27 Dec 16 18:00
18	5	1228L06.D	1	161228A CCV/LCS-1WL 300ug/L	W IS&S 11/21/16, 11/14/16	28 Dec 16 11:27
19	11	1228L12.D	1	161228A BLK-1WL	W IS&S 11/21/16, 11/14/16	28 Dec 16 14:15
20	14	1228L15.D	1	AZ48082W01	W IS&S 11/21/16, 11/14/16	28 Dec 16 15:39
21	15	1228L16.D	1	AZ48083W01	W IS&S 11/21/16, 11/14/16	28 Dec 16 16:07
22	16	1228L17.D	1	AZ48084W01	W IS&S 11/21/16, 11/14/16	28 Dec 16 16:35
23	28	1228L29.D	1	Ending CCV GAS 300ug/l 12/28/1(	W IS&S 11/21/16, 11/14/16	28 Dec 16 22:10

ORGANICS

ORGANICS
QC Summary

APPL, INC.

Method Blank
METHANE

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161224W-48082 - 214960**
Batch ID: #RSKME-161224A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	METHANE	1.00 U	5.0	1.00	0.25	ug/L	12/24/16	12/24/16

Quant Method: RSK0901.M
Run #: 1224001
Instrument: Rocky
Sequence: 160901
Initials: CMO

GC SC-Blank-REG MDLs-DOD
Printed: 01/02/17 10:23:19 AM

Laboratory Control Spike Recovery
METHANE

APPL ID: **161224W-48082 LCS - 214960**
Batch ID: #RSKME-161224A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
METHANE	1340	1120	83.9	72-125

Comments: _____

Primary	SPK
Quant Method :	RSK0901.M
Extraction Date :	12/24/16
Analysis Date :	12/24/16
Instrument :	Rocky
Run :	1224000
Initials :	CMO

Printed: 01/02/17 10:23:08 AM
APPL Standard LCS

RSK 175

Form 4

Blank Summary

Lab Name: APPL, Inc.
Case No: 81842
Matrix: WATER
Blank ID: 161224A-BLK

SDG No: 81842
Date Analyzed: 12/24/16
Instrument: Rocky
Time Analyzed: 1058

APPL ID.	Client Sample No.	File ID.	Date Analyzed
161224A-LCS	Lab Control Spike	1224000	12/24/16 1049
161224A-BLK	Blank	1224001	12/24/16 1058
AZ48082	ERH156	1224005	12/24/16 1117
AZ48083	ERH157	1224006	12/24/16 1120

Comments: Batch: #RSKME-161224A

Printed: 01/02/17 10:23:03 AM
Form 4, Blank Summary

ORGANICS
Sample Data

APPL, INC.

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH156
Sample Collection Date: 12/21/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81842
APPL ID: AZ48082
QCG: #RSKME-161224A-214960

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	12/24/16	12/24/16

Quant Method:	RSK0901.M
Run #:	1224005
Instrument:	Rocky
Sequence:	160901
Dilution Factor:	1
Initials:	CMO

Printed: 01/02/17 10:23:14 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1224005.D Vial: 6
Acq On : 24 Dec 16 11:17 Operator: lac
Sample : AZ48082W05 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 24 11:19 2016 Quant Results File: RSK0901.RES

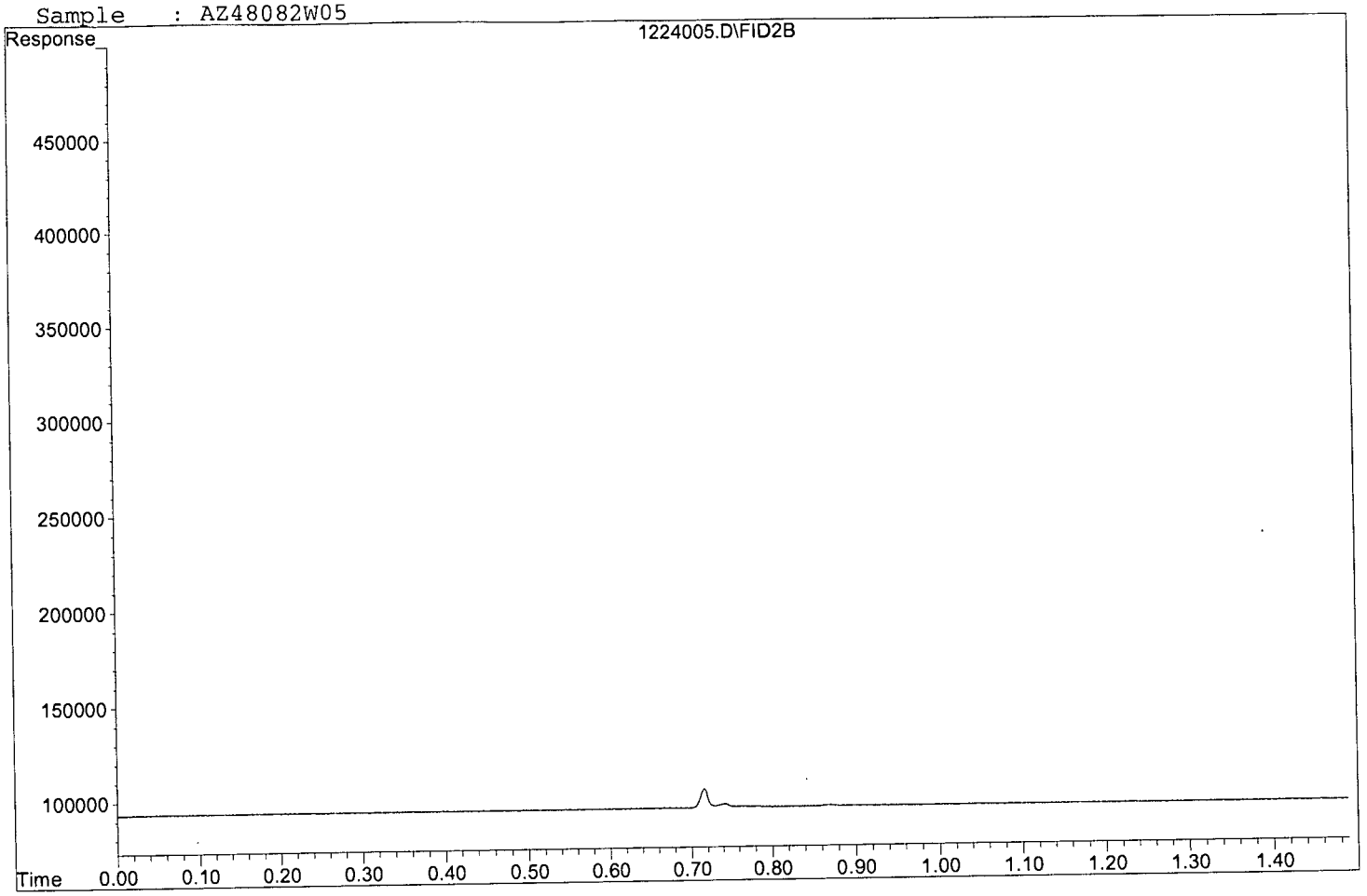
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Thu Dec 29 15:33:34 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.74	1945	N.D.	ppb
2) ATM Ethane	0.89	346	N.D.	ppb
3) ATM Ethene	0.99	195	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1224005.D
Sample : AZ48082W05



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH157
Sample Collection Date: 12/21/16

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81842
APPL ID: AZ48083
QCG: #RSKME-161224A-214960

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	12/24/16	12/24/16

Quant Method: RSK0901.M
Run #: 1224006
Instrument: Rocky
Sequence: 160901
Dilution Factor: 1
Initials: CMO

Printed: 01/02/17 10:23:14 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1224006.D Vial: 7
Acq On : 24 Dec 16 11:20 Operator: lac
Sample : AZ48083W05 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 24 11:22 2016 Quant Results File: RSK0901.RES

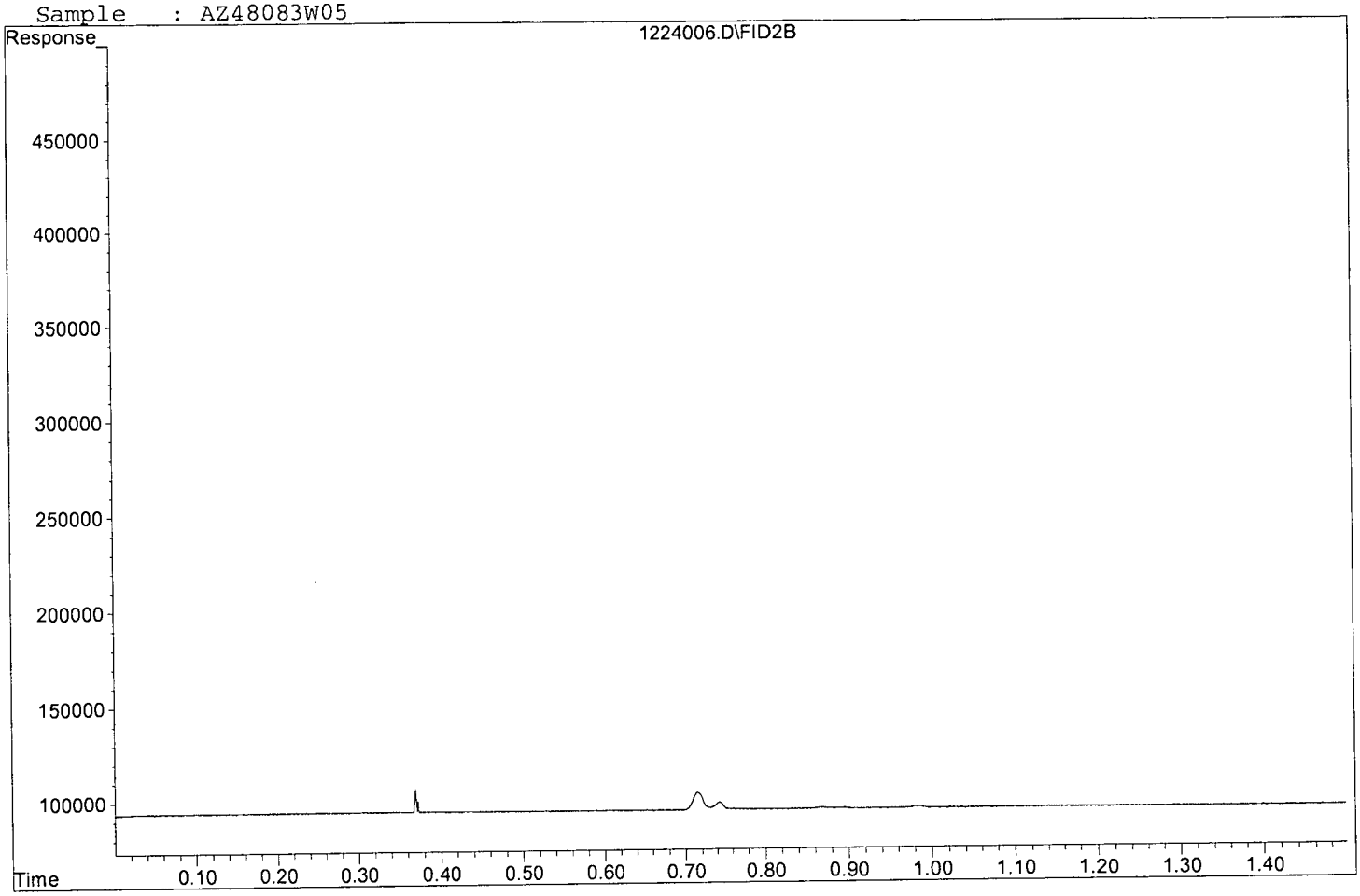
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Thu Dec 29 15:33:34 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.74	4136	N.D.	ppb
2) ATM Ethane	0.90	737	N.D.	ppb
3) ATM Ethene	1.00	296	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1224006.D
Sample : AZ48083W05



ORGANICS
Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:
SDG No:
Initial Cal. Date: 09/01/16
Instrument: 7890
Initials:

		Compound	1	2	3	4	5	6	7	8	9	10	Avg	%RSD		
			0901000.D	0901001.D	0901002.D	0901003.D	0901004.D	0901005.D	0901006.D	0901007.D	0901008.D	0901009.D				
1	ATM	Methane	7448	5672	3042	3435	1074	1006	1184	1314	1084	1089	2635	87	ATM	
2	ATM	Ethane	1509	1521	1416	2554	478	657	816	933	791	798	1147	54	ATM	
3	ATM	Ethene	1826	1525	1280	2301	444	570	693	733	628	626	1063	60	ATM	
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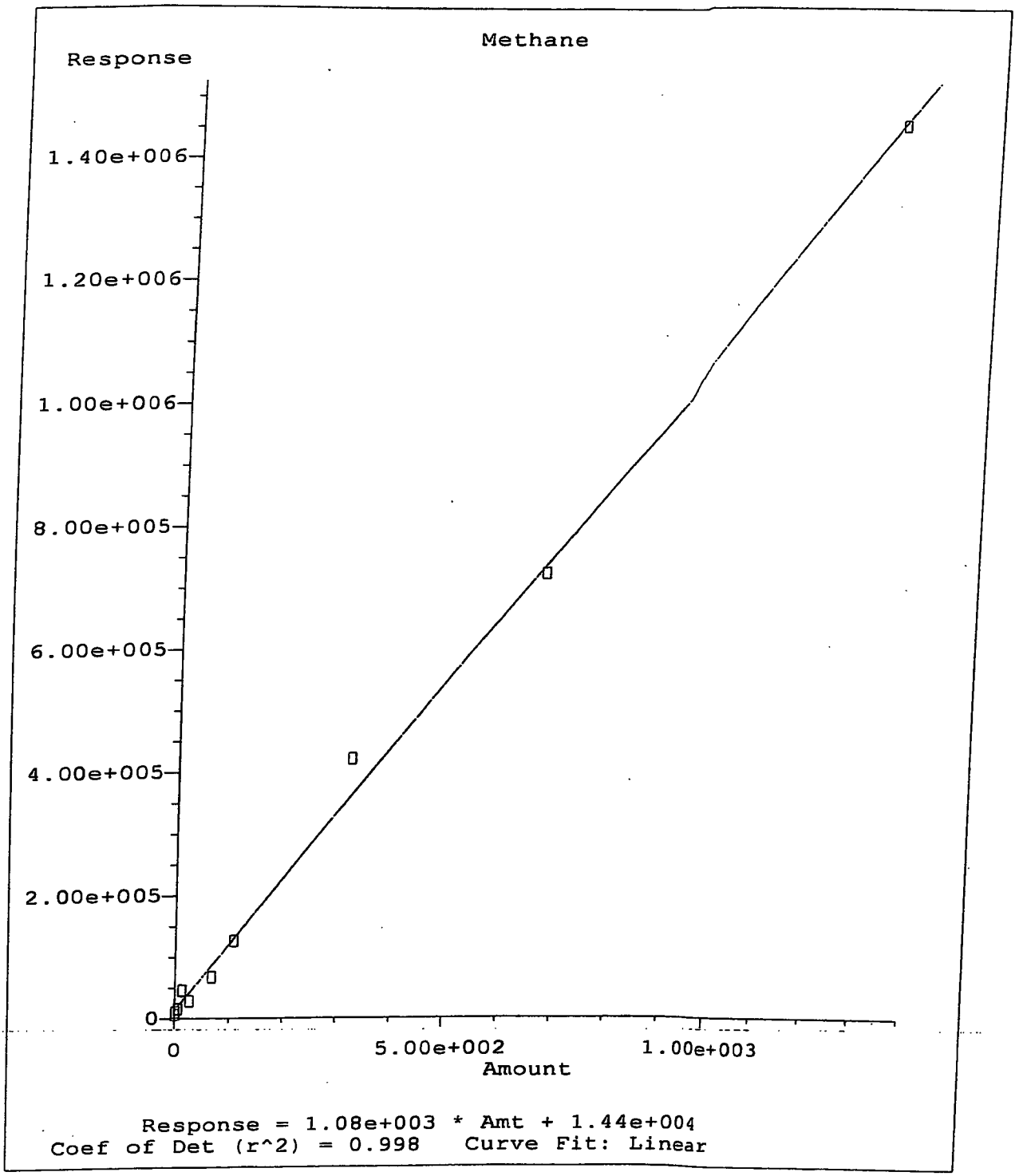
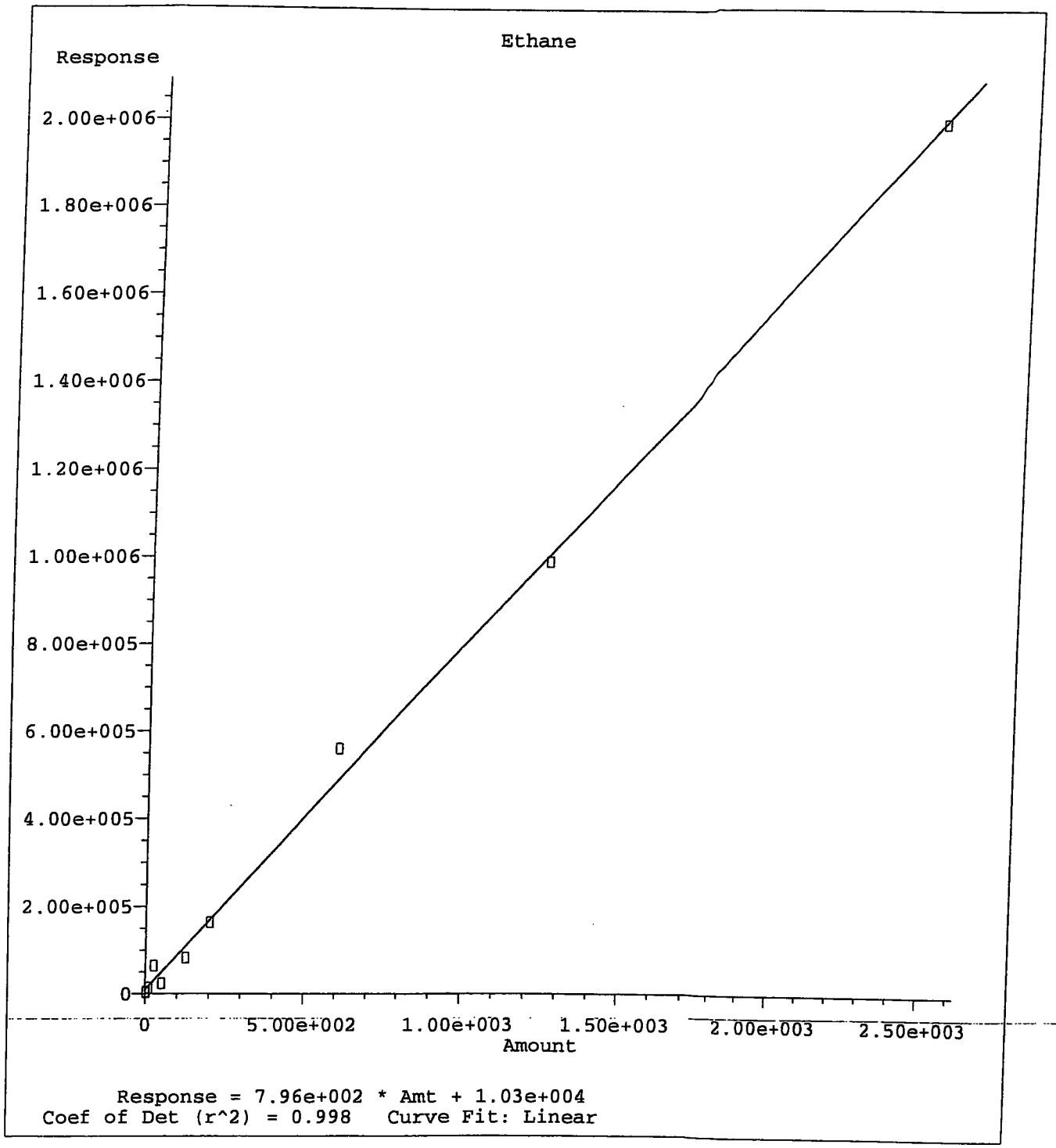
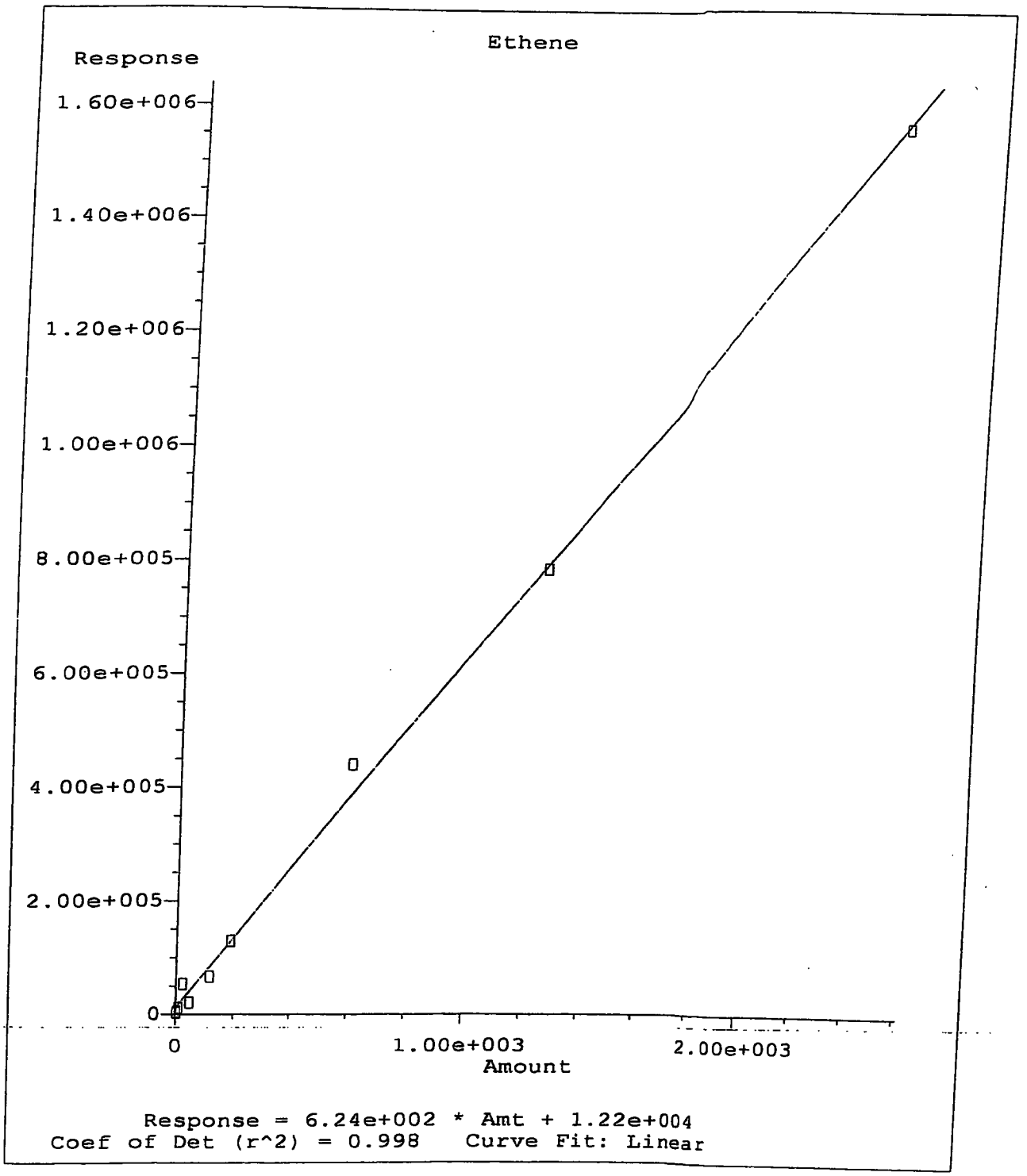
FORM61



Method Name: G:\ROCKY\DATA\160901R\RSK0901.M
Calibration Table Last Updated: Fri Sep 02 15:25:38 2016



Method Name: G:\ROCKY\DATA\160901R\RSK0901.M
Calibration Table Last Updated: Thu Nov 10 08:49:51 2016



Method Name: G:\ROCKY\DATA\160901R\RSK0901.M
Calibration Table Last Updated: Fri Sep 02 15:25:38 2016

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901000.D Vial: 1
Acq On : 1 Sep 16 11:38 Operator: lac
Sample : RSK Level 1 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

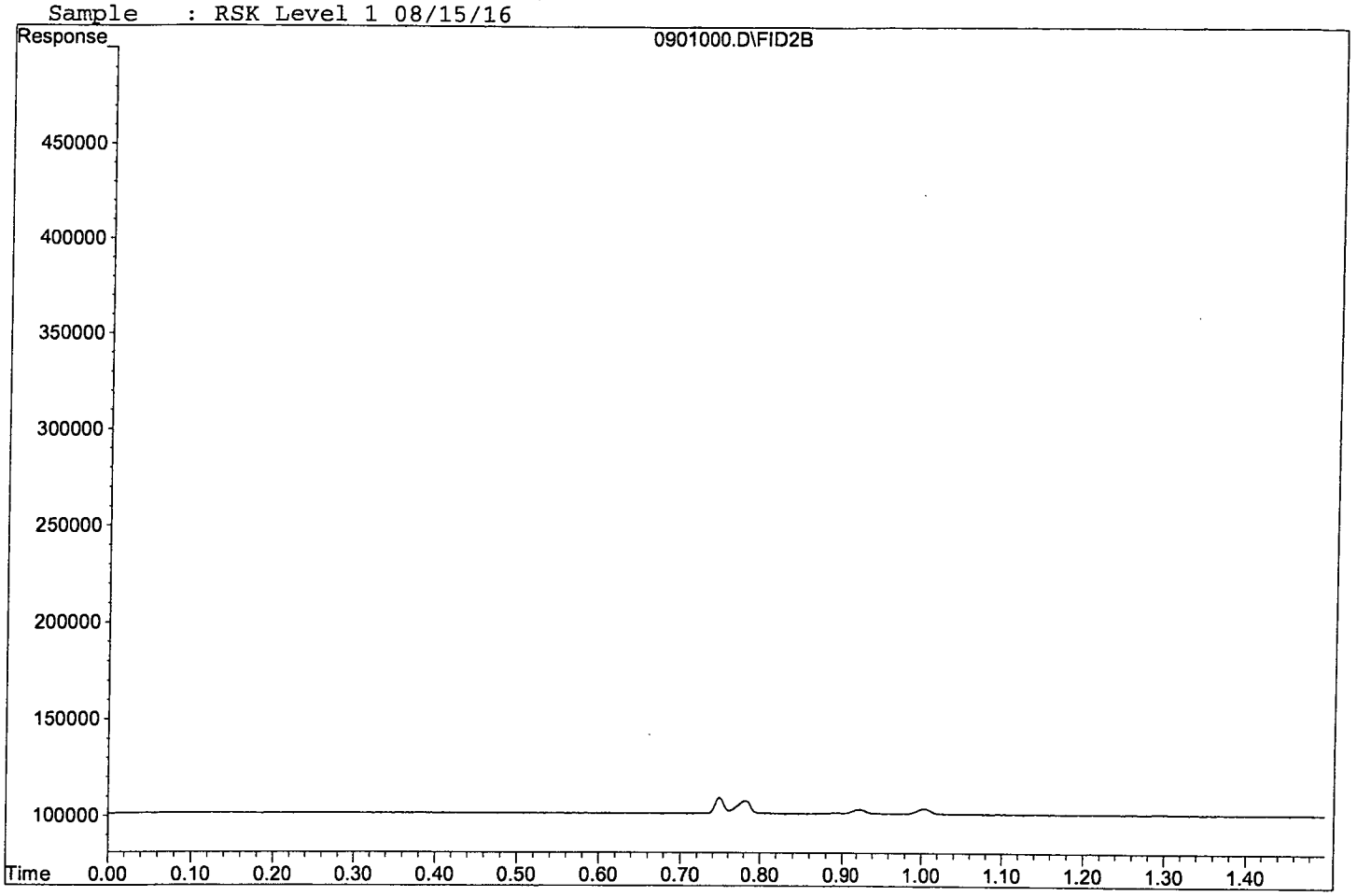
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.78	6703	N.D.	ppb
2) ATM Ethane	0.92	2566	N.D.	ppb
3) ATM Ethene	1.00	2922	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901000.D
Sample : RSK Level 1 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901001.D Vial: 2
Acq On : 1 Sep 16 11:41 Operator: lac
Sample : RSK Level 2 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

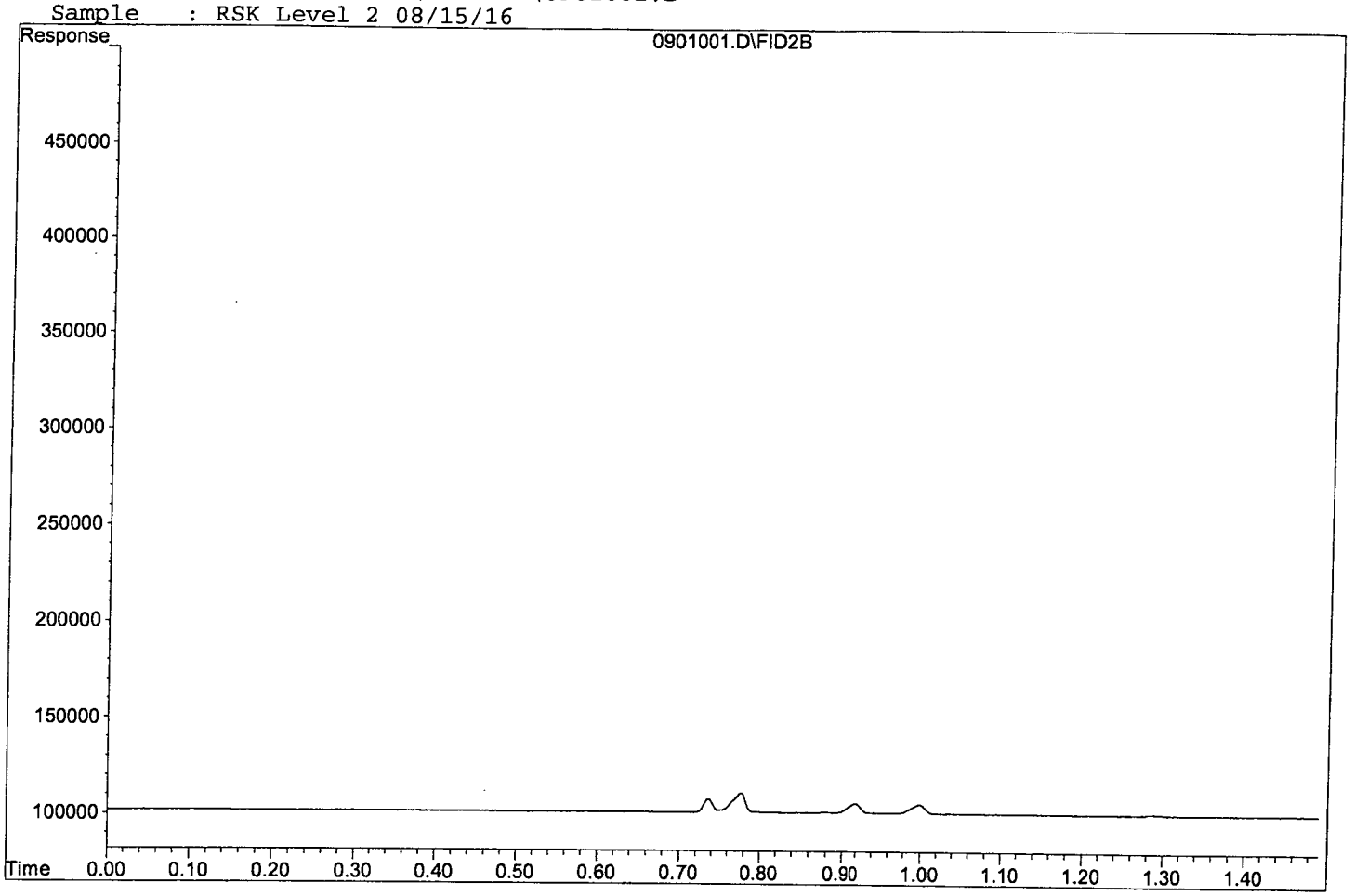
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.79	569	N.D.	ppb
2) ATM Ethane	0.94	352	N.D.	ppb
3) ATM Ethene	1.02	250	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901001.D
Sample : RSK Level 2 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901002.D Vial: 3
Acq On : 1 Sep 16 11:44 Operator: lac
Sample : RSK Level 3 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 14 13:31 2016 Quant Results File: RSK0901.RES

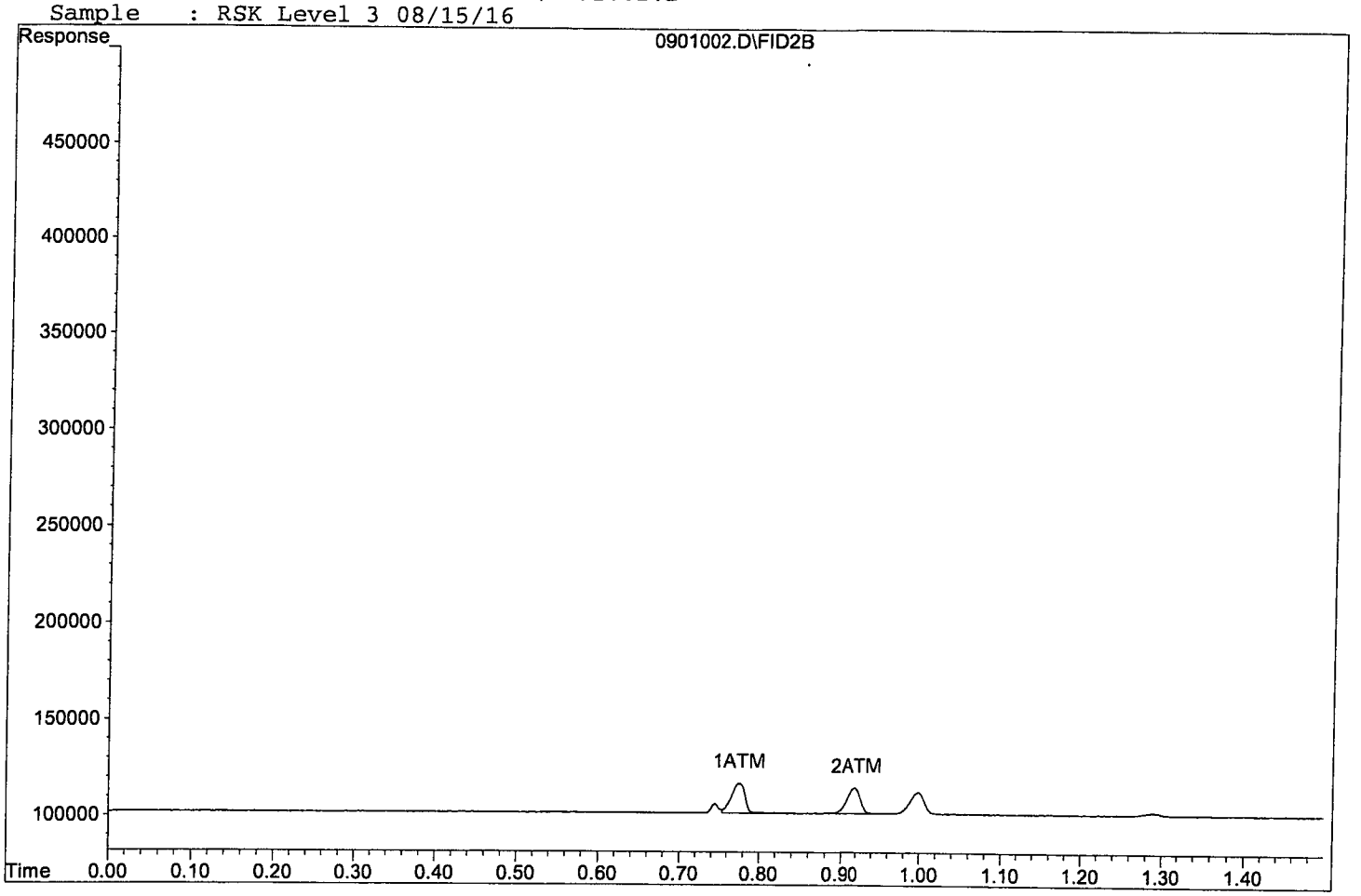
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.77	15515	1.054	ppb
2) ATM Ethane	0.92	13452	3.912	ppb
Target Compounds				
3) ATM Ethene	1.00	11390	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901002.D
Sample : RSK Level 3 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901003.D Vial: 4
Acq On : 1 Sep 16 11:46 Operator: lac
Sample : RSK Level 4 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

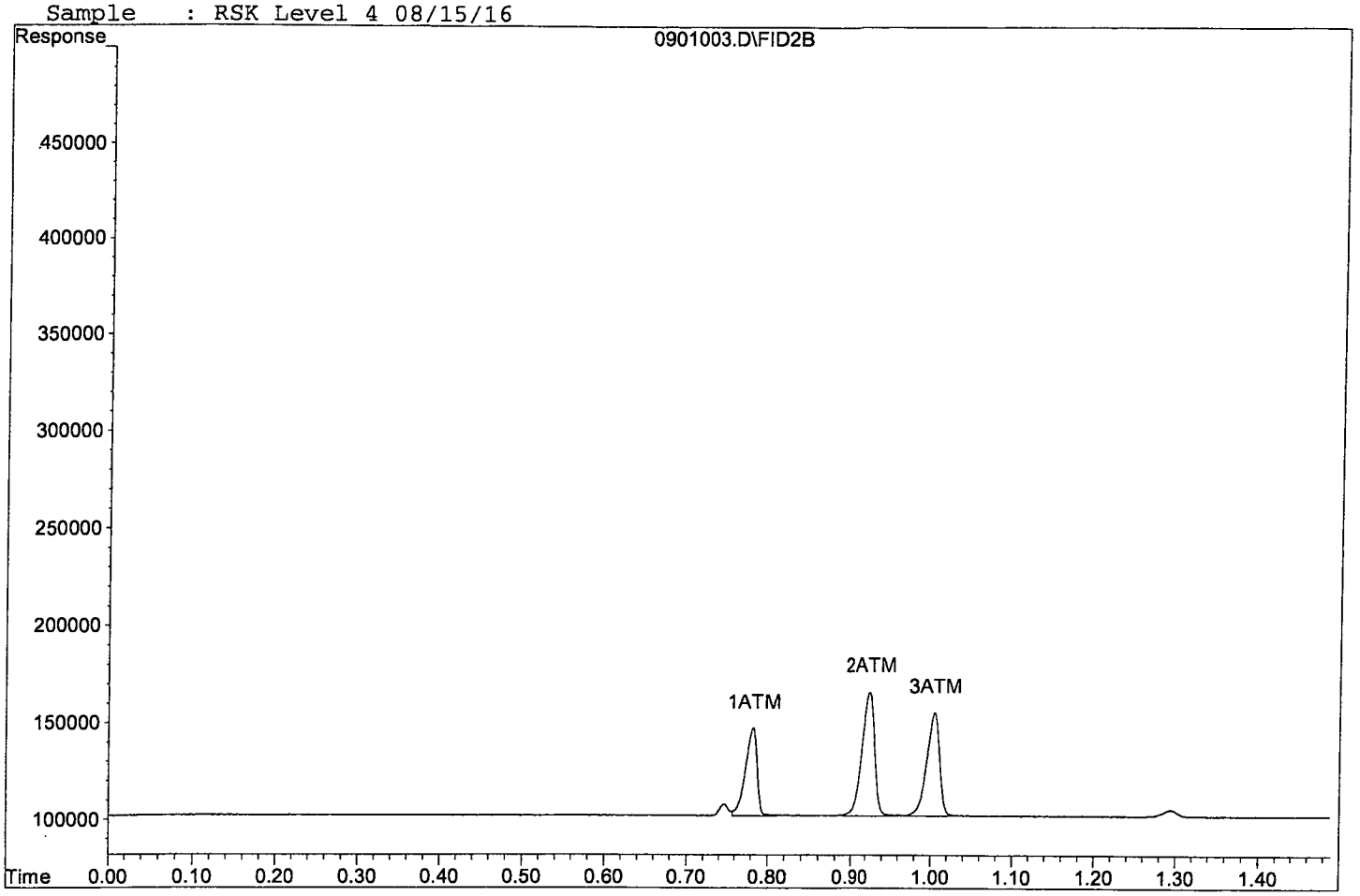
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.78	45792	29.006 ppb
2) ATM Ethane	0.92	63853	67.197 ppb
3) ATM Ethene	1.00	53608	66.354 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901003.D
Sample : RSK Level 4 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901004.D Vial: 5
Acq On : 1 Sep 16 11:48 Operator: lac
Sample : RSK Level 5 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

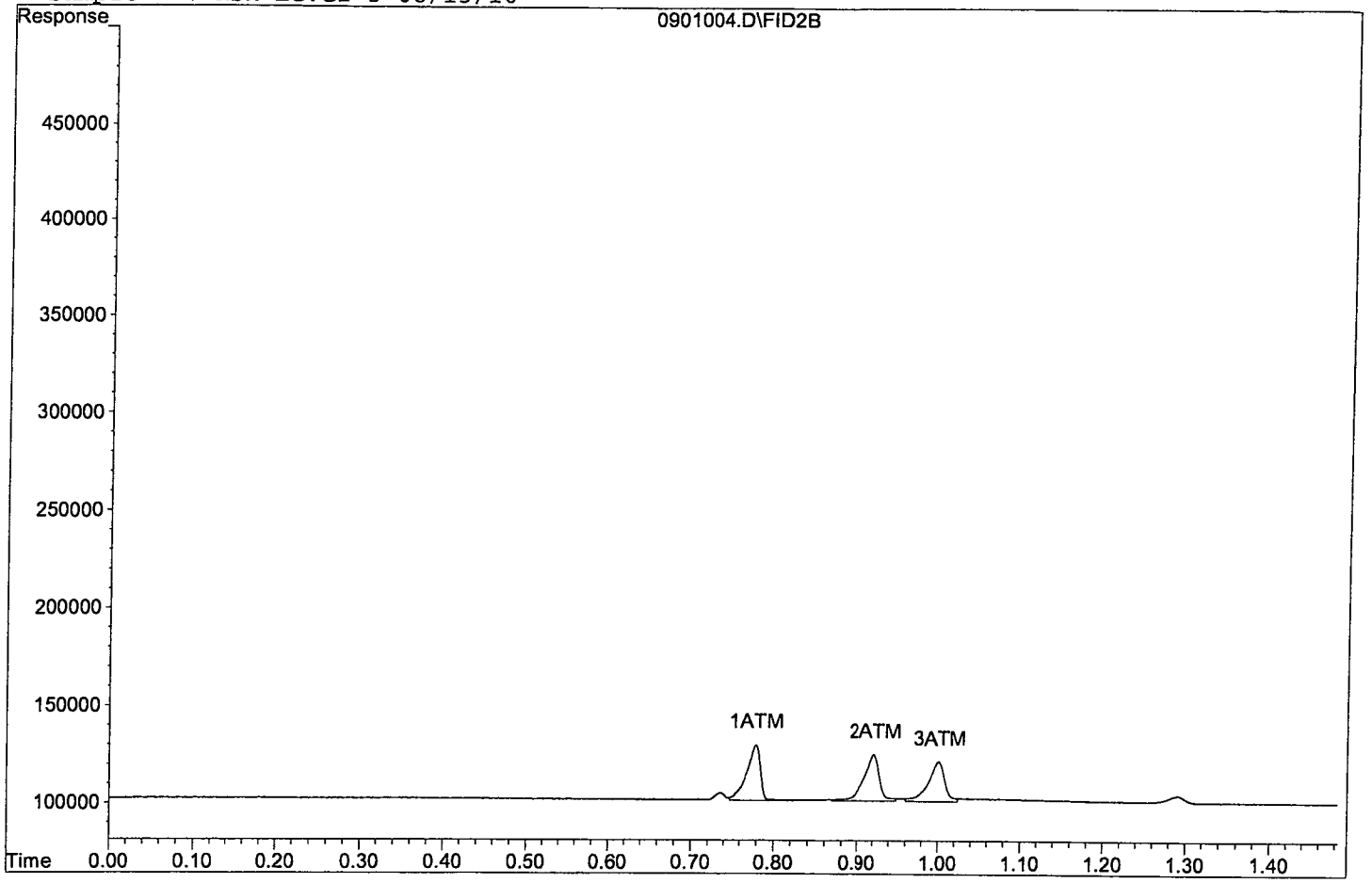
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.78	28664	13.193 ppb
2) ATM Ethane	0.92	23891	17.020 ppb
3) ATM Ethene	1.00	20700	13.631 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901004.D
Sample : RSK Level 5 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901005.D Vial: 6
Acq On : 1 Sep 16 11:50 Operator: lac
Sample : RSK Level 6 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

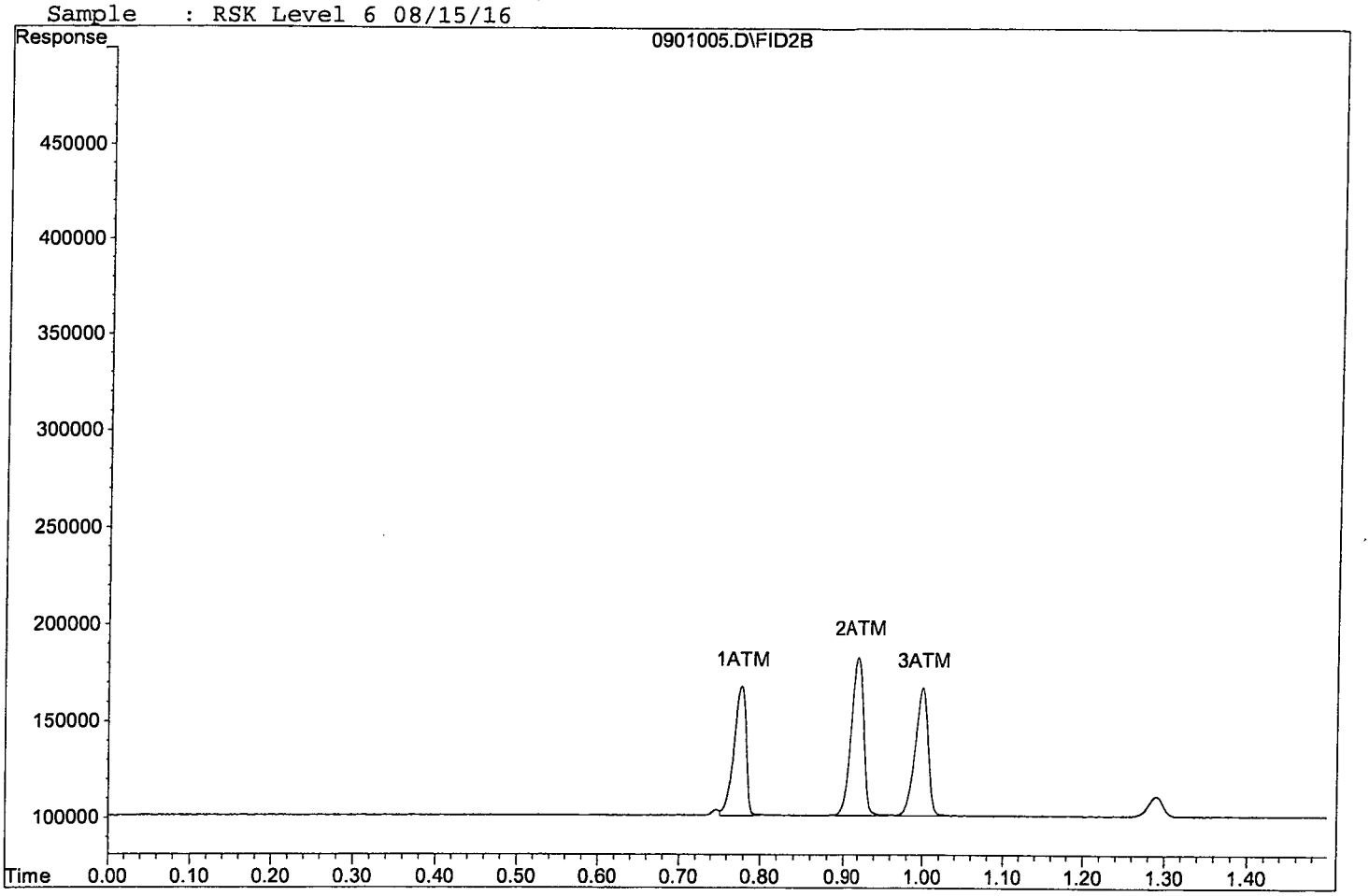
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.78	67137	48.712 ppb
2) ATM Ethane	0.92	82167	90.193 ppb
3) ATM Ethene	1.00	66348	86.764 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901005.D
Sample : RSK Level 6 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901006.D Vial: 7
Acq On : 1 Sep 16 11:52 Operator: lac
Sample : RSK Level 7 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

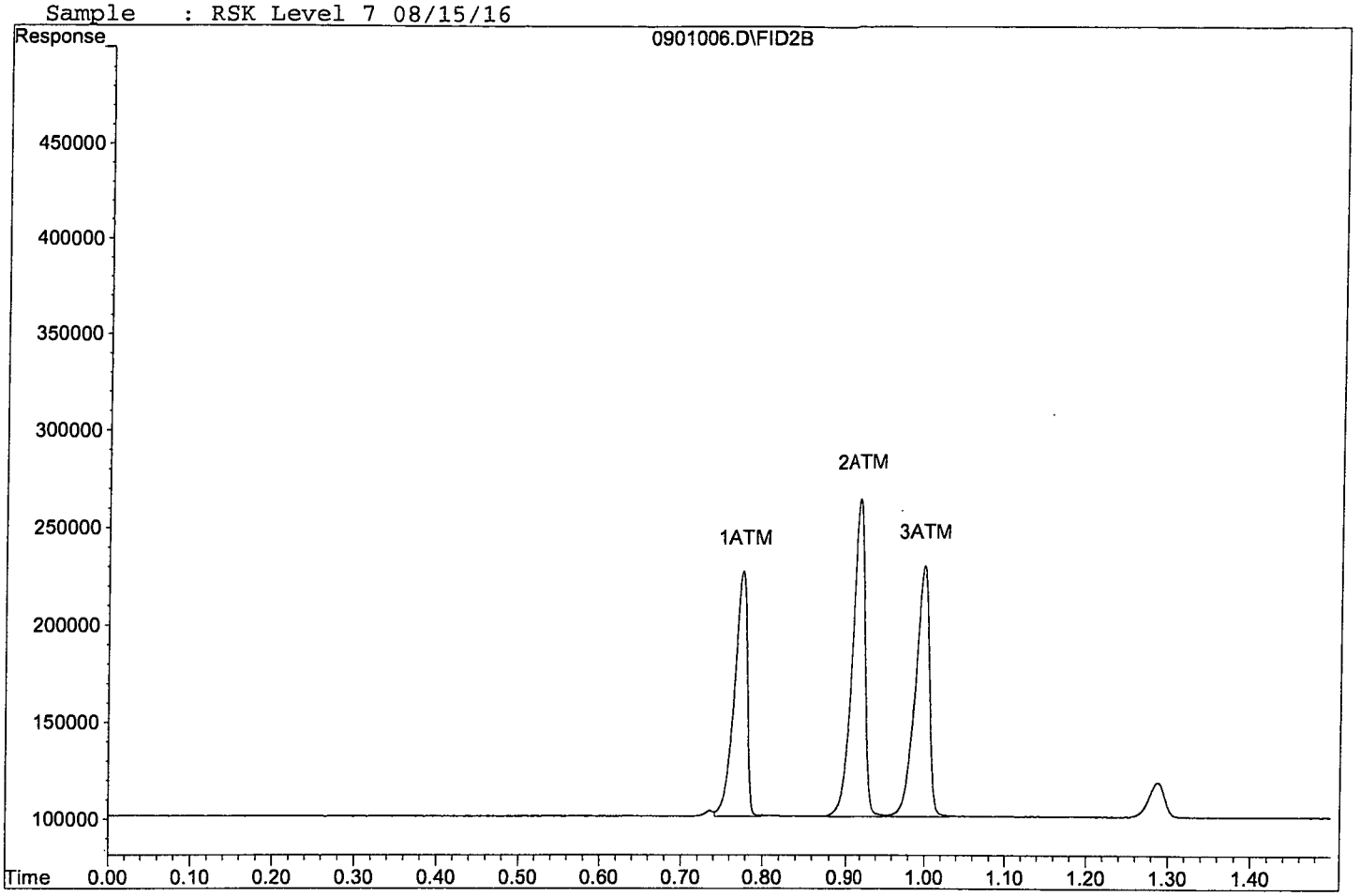
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.78	126422	103.446 ppb
2) ATM Ethane	0.92	163281	192.041 ppb
3) ATM Ethene	1.00	129200	187.460 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901006.D
Sample : RSK Level 7 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901007.D Vial: 8
Acq On : 1 Sep 16 11:55 Operator: lac
Sample : RSK Level 8 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

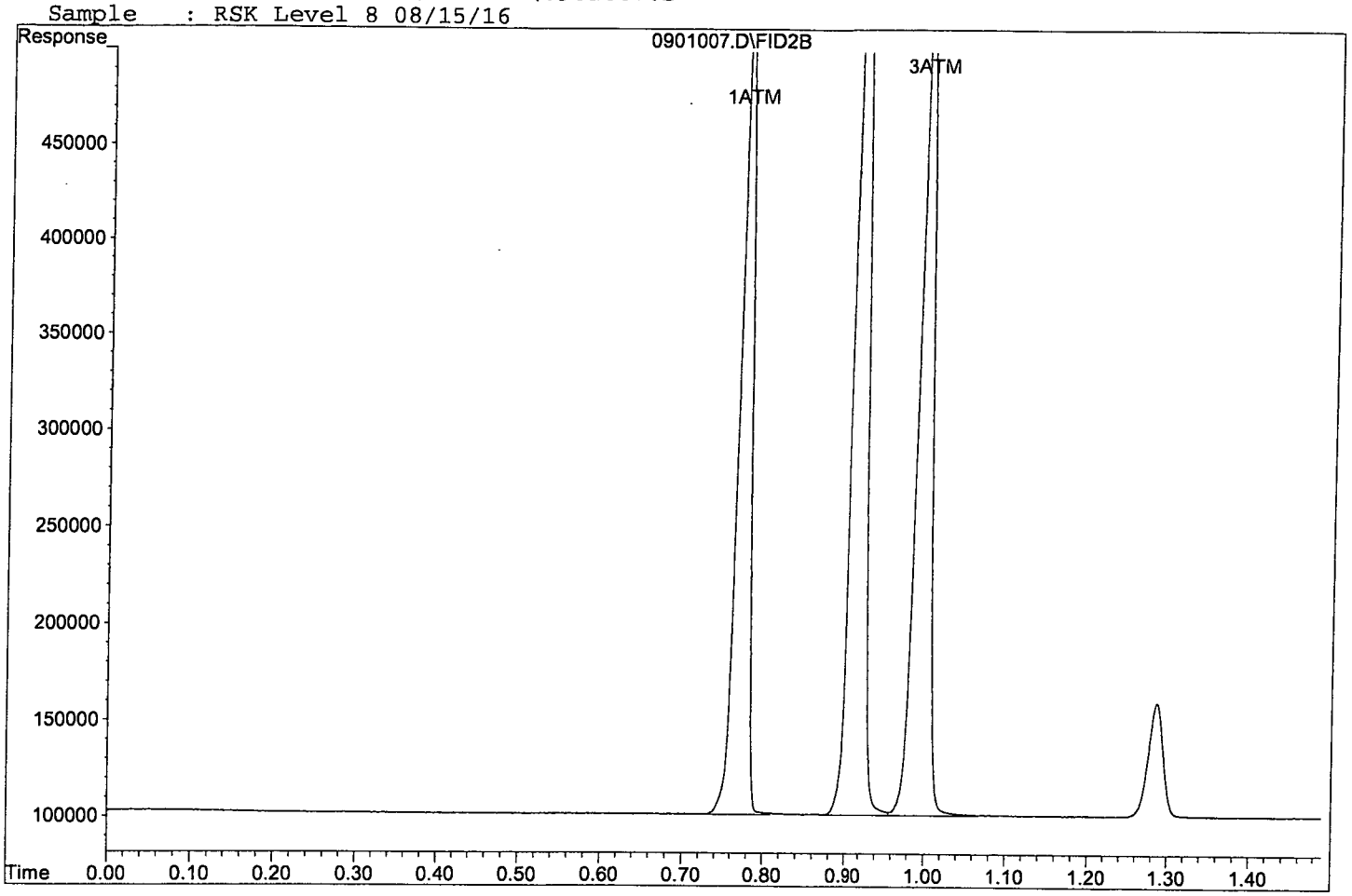
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.77	421052	375.455 ppb
2) ATM Ethane	0.92	559640	689.720 ppb
3) ATM Ethene	1.00	439383	684.403 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901007.D
Sample : RSK Level 8 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901008.D Vial: 9
Acq On : 1 Sep 16 11:57 Operator: lac
Sample : RSK Level 9 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

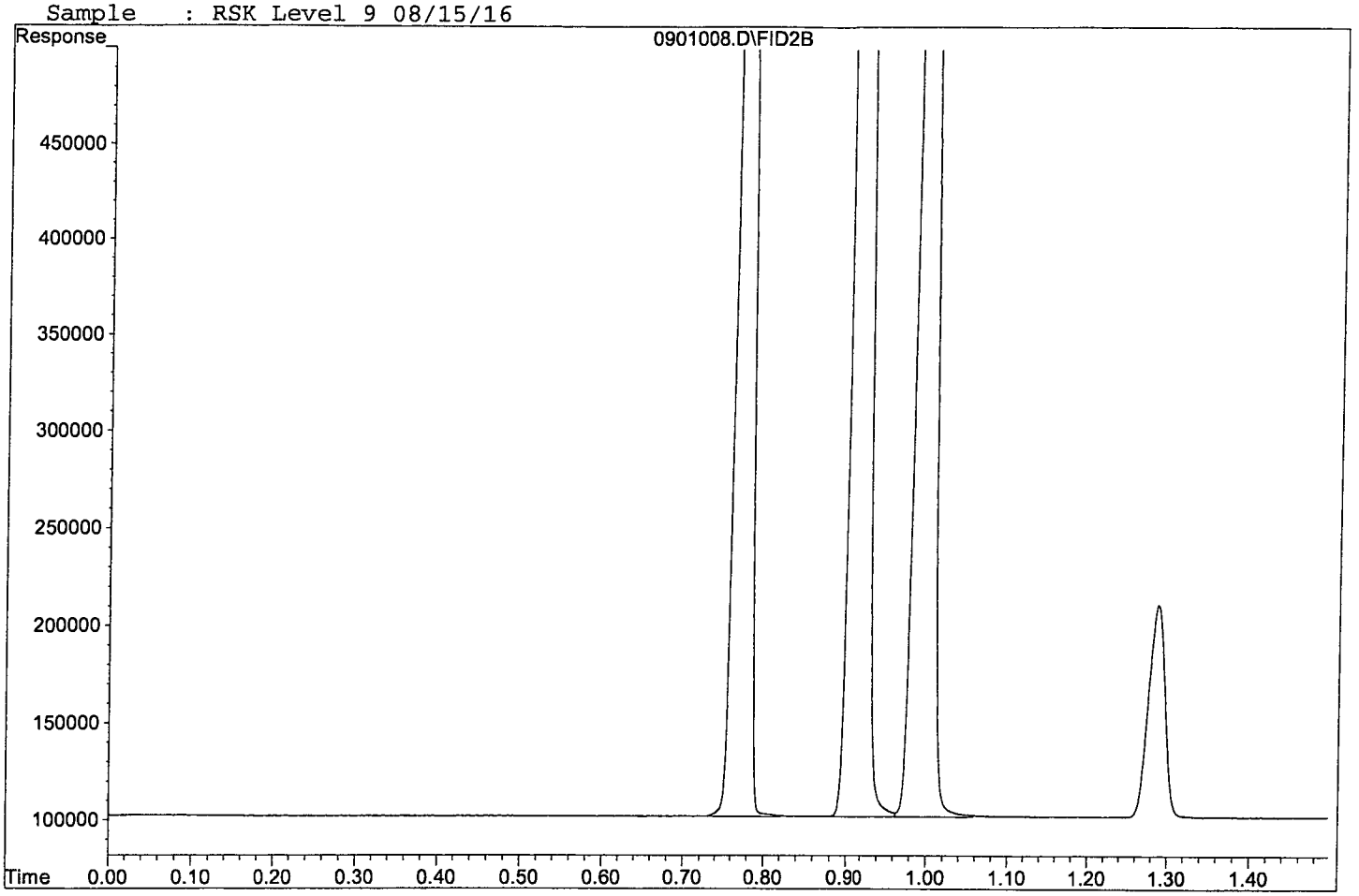
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.78	723824	654.982	ppb
2) ATM Ethane	0.92	989344	1229.268	ppb
3) ATM Ethene	1.00	783615	1235.897	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901008.D
Sample : RSK Level 9 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901009.D Vial: 10
Acq On : 1 Sep 16 11:59 Operator: lac
Sample : RSK Level 10 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

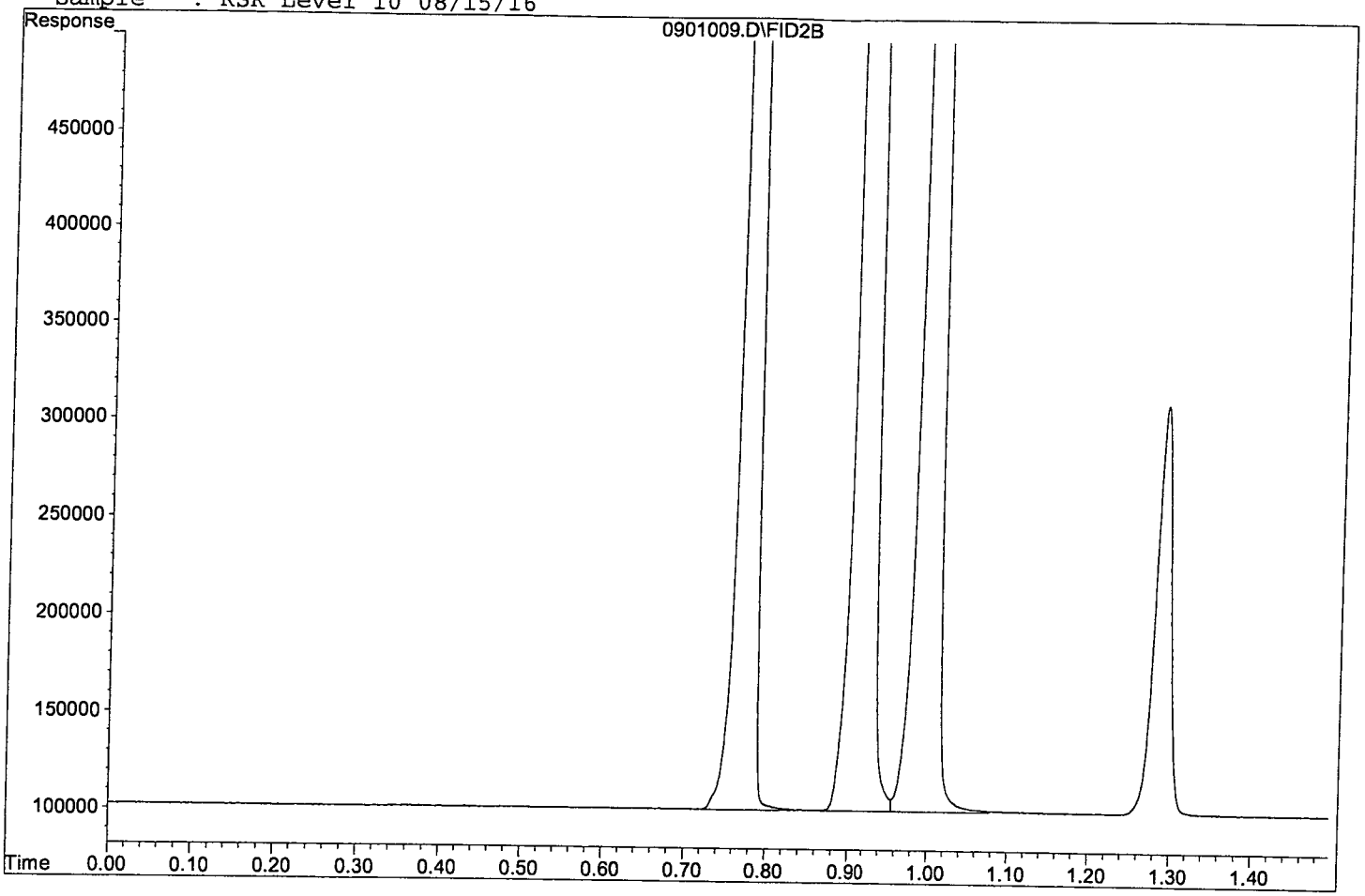
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.78	1454283	1329.358	ppb
2) ATM Ethane	0.92	1994598	2491.490	ppb
3) ATM Ethene	1.00	1562244	2483.337	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901009.D
Sample : RSK Level 10 08/15/16



Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 1 Sep 16 13:11
Instrument: 7890
Initial Cal. Date: 09/01/16
Data File: 0901018.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	2635	1090	59	ATML	19
2	ATML	Ethane	1147	964	16	ATML	11
3	ATML	Ethene	1063	853	20	ATML	20
4							
5							
6							
7							
8							
9							
10							
11							
12							
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32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			31.7		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901018.D
Acq On : 1 Sep 16 13:11
Sample : (SS/LCS) RSK Level 6 09/01/16
Misc :
IntFile : autoint1.e
Quant Time: Sep 1 13:16 2016 Quant Results File: RSK0901.RES

Vial: 19
Operator: lac
Inst : 7890
Multiplr: 1.00

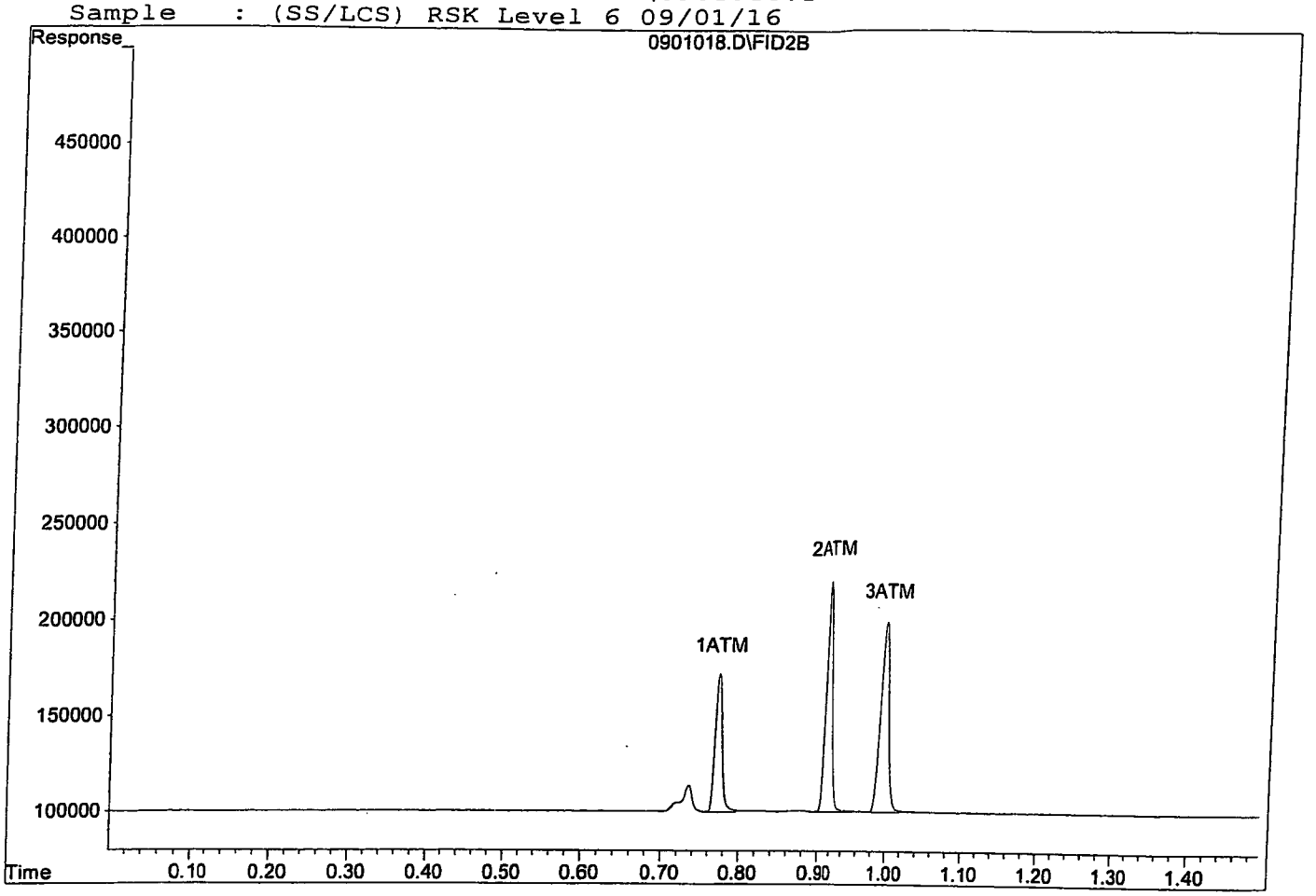
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Thu Sep 01 14:40:19 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.77	72750	53.894 ppb
2) ATM Ethane	0.91	120545	138.382 ppb
3) ATM Ethene	0.99	99349	139.636 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901018.D
Sample : (SS/LCS) RSK Level 6 09/01/16



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/24/16
Instrument: 7890
Initial Cal. Date: 09/01/16
Data File: 1224000.D

		Compound	MEAN	CCRF	%D	%Drift	
1	ATML	Methane	2635	922	65	ATML	16
2	ATML	Ethane	1147	649	43	ATML	19
3	ATML	Ethene	1063	481	55	ATML	24
4							
5							
6							
7							
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32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			54.3		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1224000.D Vial: 1
Acq On : 24 Dec 16 10:49 Operator: lac
Sample : 161224A LCS/CCV RSK Level 10 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 24 10:54 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Thu Dec 29 15:33:34 2016
Response via : Multiple Level Calibration

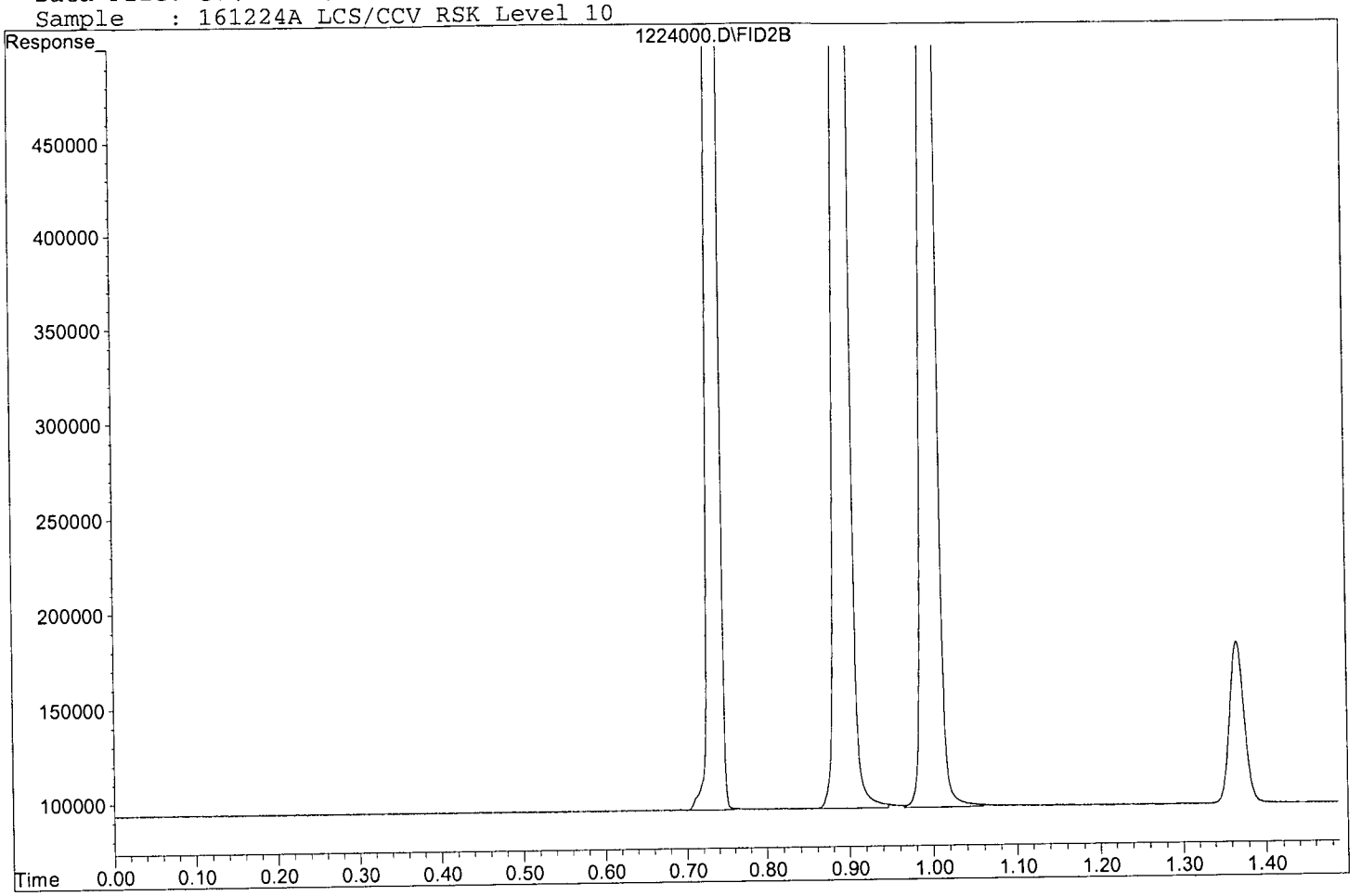
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.74	1230458	1122.718	ppb
2) ATM Ethane	0.89	1621520	2023.043	ppb
3) ATM Ethene	1.00	1200136	1903.204	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1224000.D
Sample : 161224A LCS/CCV RSK Level 10



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/24/16
Instrument: 7890
Initial Cal. Date: 09/01/16
Data File: 1224008.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	2635	1074	59	ATML	1.9
2	ATML	Ethane	1147	756	34	ATML	5.6
3	ATML	Ethene	1063	573	46	ATML	9.0
4							
5							
6							
7							
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38							
39							
40							
		Average			46.3		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1224008.D Vial: 9
Acq On : 24 Dec 16 12:25 Operator: lac
Sample : Ending CCV RSK Level 10 12/24/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 24 12:31 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Thu Dec 29 15:33:34 2016
Response via : Multiple Level Calibration

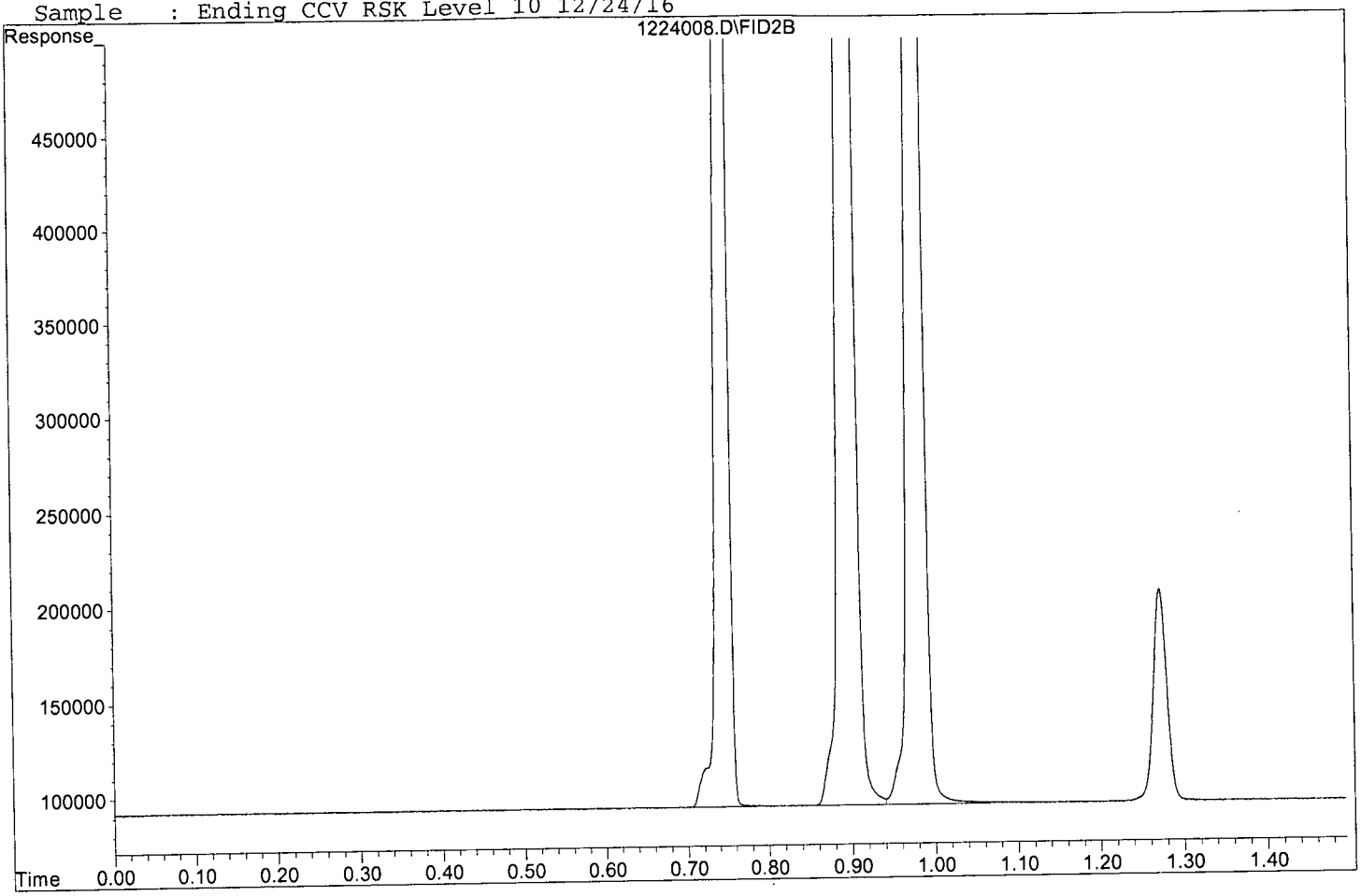
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.75	1433486	1310.158	ppb
2) ATM Ethane	0.90	1889849	2359.965	ppb
3) ATM Ethene	0.98	1430154	2271.715	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1224008.D
Sample : Ending CCV RSK Level 10 12/24/16



ORGANICS
Raw Data

APPL, INC.

Method Blank
METHANE

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **161224W-48082 - 214960**
Batch ID: #RSKME-161224A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	METHANE	1.00 U	5.0	1.00	0.25	ug/L	12/24/16	12/24/16

Quant Method: RSK0901.M
Run #: 1224001
Instrument: Rocky
Sequence: 160901
Initials: CMO

GC SC-Blank-REG MDLs-DOD
Printed: 01/02/17 10:23:19 AM

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1224001.D Vial: 2
Acq On : 24 Dec 16 10:58 Operator: lac
Sample : 161224A BLK RSK Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 24 11:04 2016 Quant Results File: RSK0901.RES

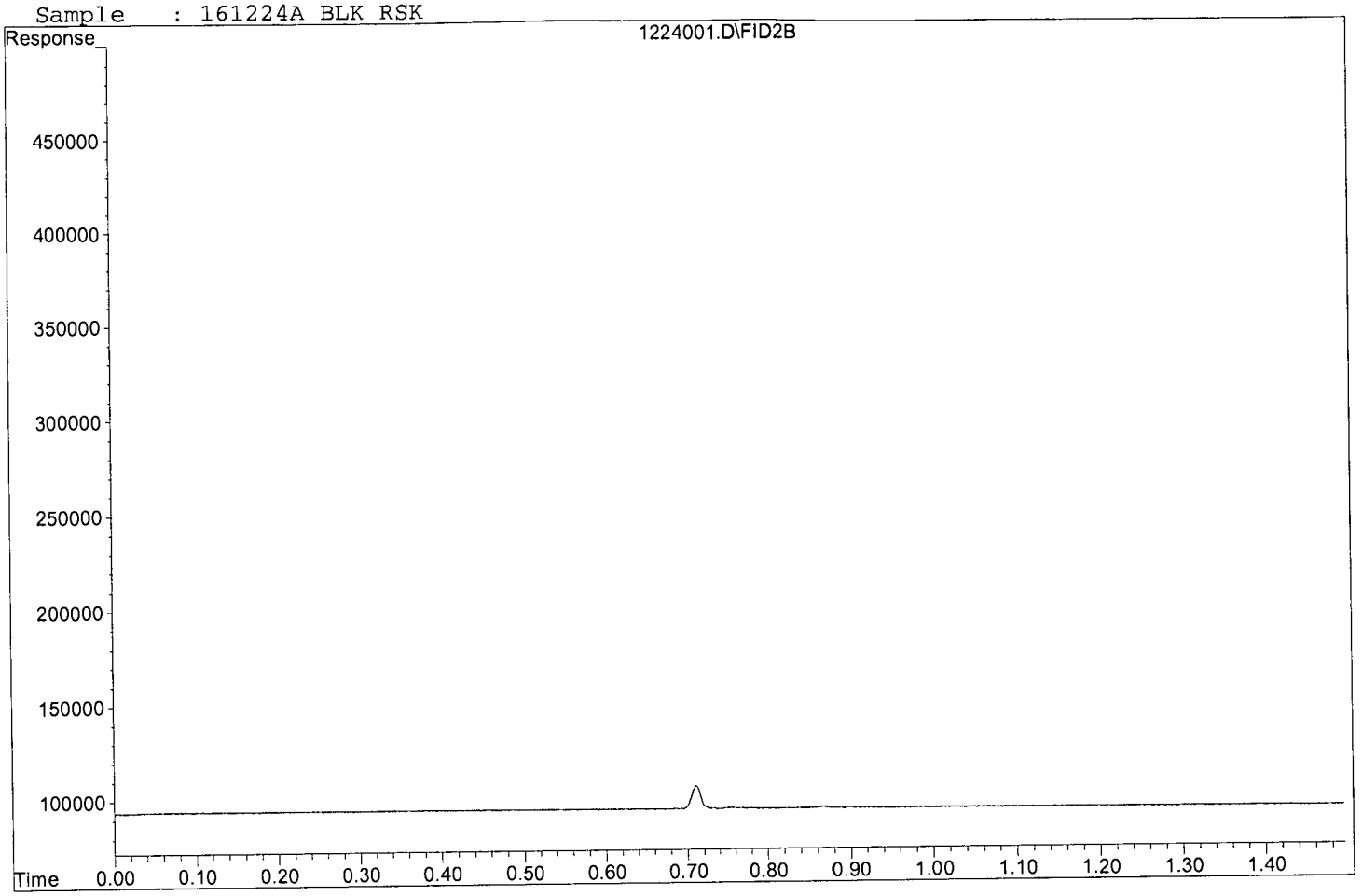
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Thu Dec 29 15:33:34 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.73	587	N.D.	ppb
2) ATM Ethane	0.90	448	N.D.	ppb
3) ATM Ethene	1.00	275	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1224001.D
Sample : 161224A BLK RSK



Laboratory Control Spike Recovery
METHANE

APPL ID: **161224W-48082 LCS - 214960**
Batch ID: #RSKME-161224A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
METHANE	1340	1120	83.9	72-125

Comments: _____

Primary	SPK
Quant Method :	RSK0901.M
Extraction Date :	12/24/16
Analysis Date :	12/24/16
Instrument :	Rocky
Run :	1224000
Initials :	CMO

Printed: 01/02/17 10:23:08 AM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\1224000.D Vial: 1
Acq On : 24 Dec 16 10:49 Operator: lac
Sample : 161224A LCS/CCV RSK Level 10 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 24 10:54 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Thu Dec 29 15:33:34 2016
Response via : Multiple Level Calibration

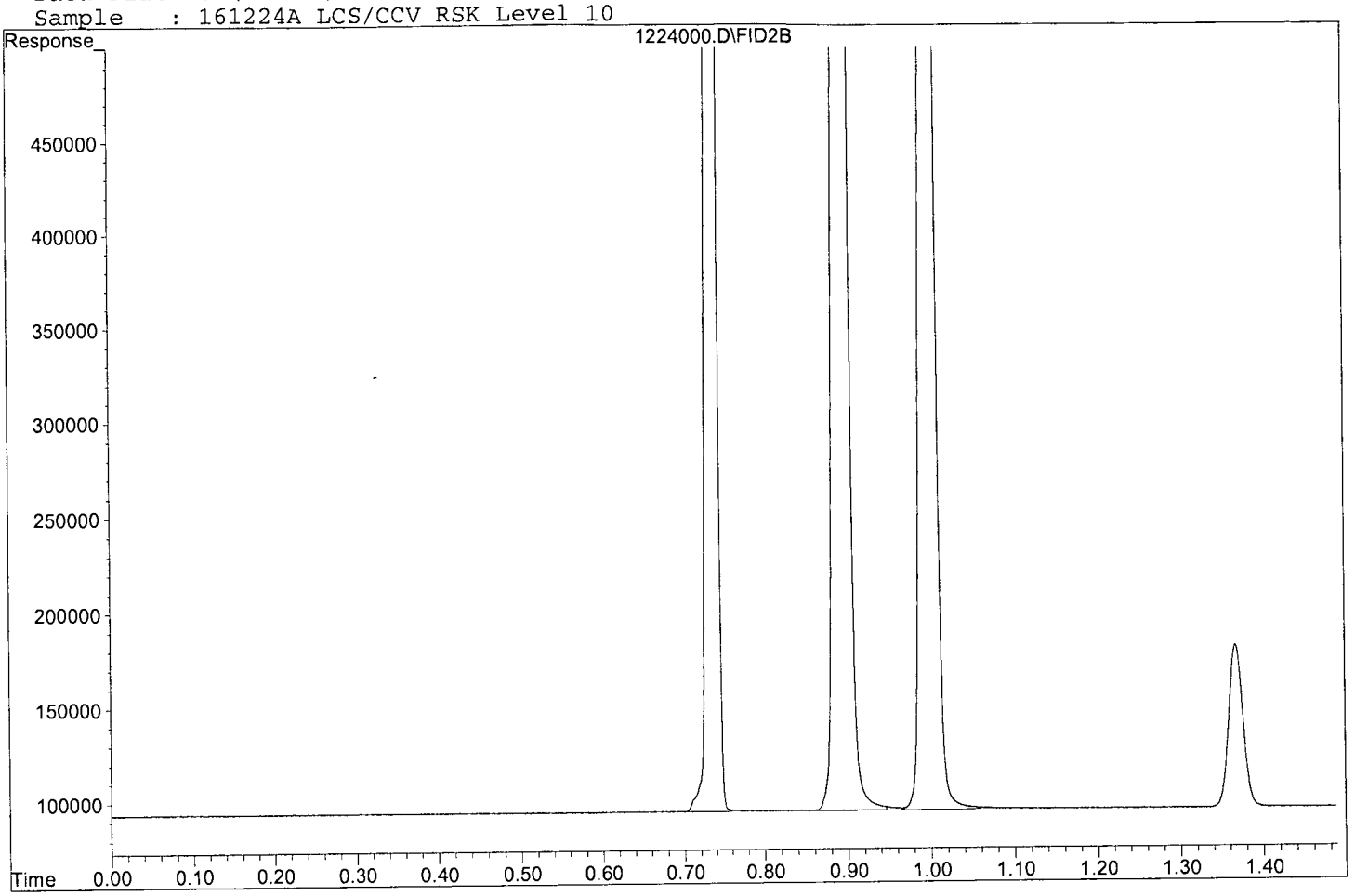
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.74	1230458	1122.718	ppb
2) ATM Ethane	0.89	1621520	2023.043	ppb
3) ATM Ethene	1.00	1200136	1903.204	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\1224000.D
Sample : 161224A LCS/CCV RSK Level 10



Primary Source Stock Standard 10,000ppmV **Manufacturer Exp date 7-8-2017** CM 8/15/16

RSK Gas Mix (Scott Specialty Gas) Cat.# 23452, Lot # 164PLU4SPC05L-34436

1% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

Intermediate Calibration Stock Standard 100ppmV **Expires 8/15/17** CM 8/15/16

Prepared in a 1 L Tedlar bag. Add 990mL Nitrogen and 10mL of 164PLU4SPC05L-34436 standard.

RSK Calibration Curve **Vial expiration date 9/28/16** CM 9/1/16

Analye	Conc Std 1 (ug/L)	Conc Std 2 (ug/L)	Conc Std 3 (ug/L)	Conc Std 4 (ug/L)	Conc Std 5 (ug/L)	Conc Std 6 (ug/L)	Conc Std 7 (ug/L)	Conc Std 8 (ug/L)	Conc Std 9 (ug/L)	Conc Std 10 (ug/L)
Methane (MW 16.	0.90	1.80	5.10	13.33	26.70	66.75	106.80	320.4	667.5	1335.0
Ethane (MW 30.0	1.70	3.40	9.50	25.00	50.00	125.00	200.00	600.0	1250.0	2500.0
Ethene (MW 28.0	1.60	3.20	8.90	23.30	46.60	116.50	186.40	599.2	1248.0	2496.0
Stock Source	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Primary Source Std #164PLU4SPC05L-34436	Primary Source Std #164PLU4SPC05L-34436	Primary Source Std #164PLU4SPC05L-34436	Primary Source Std #164PLU4SPC05L-34436
Stock Conc (ppr	100 ppmV	100 ppmV	100 ppmV	100 ppmV	100 ppmV	100 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV
Stock Aliquot (m	0.135 mL	0.270 mL	0.760 mL	2.0 mL	4.0 mL	10.0 mL	0.160 mL	0.480 mL	1.00 mL	2.00 mL
Final Volume P&T W	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL

Second Source Stock Standard 10,000ppmV **Manufacturer Exp Date 6-19-18** CM 8/15/16

RSK Gas Mix (Scott Specialty Gas) Cat.# 0104E40028`4, Lot # 170PLU5SPC06L-35410

1% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

Intermediate Second Source Standard 100ppmV **Expires 8/15/17** CM 8/15/16

Prepared in a 1 L Tedlar bag. Add 990mL Nitrogen and 10mL of lot# 170PLU5SPC06L-35410 standard.

Second Source / LCS - Level 6 **Expires 10/1/16** CM 9/1/16

10.0mL of Intermediate SS stock 8/15/16 into 10mL P&T water

final conc:66.7ppb Methane, 125.0ppb Ethane, and 116.5 ppb Ethene

CCV/LCS - Level 10 **Expires 01/24/16** CM 12/24/16

2.0mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water

final conc:1335.0ppb Methane,2500.0 ppb Ethane, and 2496.0 ppb Ethene

Injection Log

Directory: G:\ROCKY\DATA\160901R\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0901000.D	1	RSK Level 1 08/15/16	Methane 0.9, Ethane, 1.7 Etl	1 Sep 16 11:38
2	2	0901001.D	1	RSK Level 2 08/15/16		1 Sep 16 11:41
3	3	0901002.D	1	RSK Level 3 08/15/16	Methane 5.1, Ethane, 9.5 Etl	1 Sep 16 11:44
4	4	0901003.D	1	RSK Level 4 08/15/16		1 Sep 16 11:46
5	5	0901004.D	1	RSK Level 5 08/15/16		1 Sep 16 11:48
6	6	0901005.D	1	RSK Level 6 08/15/16		1 Sep 16 11:50
7	7	0901006.D	1	RSK Level 7 08/15/16		1 Sep 16 11:52
8	8	0901007.D	1	RSK Level 8 08/15/16		1 Sep 16 11:55
9	9	0901008.D	1	RSK Level 9 08/15/16		1 Sep 16 11:57
10	10	0901009.D	1	RSK Level 10 08/15/16		1 Sep 16 11:59
11	19	0901018.D	1	(SS/LCS) RSK Level 6 09/01/16		1 Sep 16 13:11
12	1	1224000.D	1	161224A LCS/CCV RSK Level 10		24 Dec 16 10:49
13	2	1224001.D	1	161224A BLK RSK		24 Dec 16 10:58
14	6	1224005.D	1	AZ48082W05		24 Dec 16 11:17
15	7	1224006.D	1	AZ48083W05		24 Dec 16 11:20
16	9	1224008.D	1	Ending CCV RSK Level 10 12/24/16		24 Dec 16 12:25

INORGANIC ANALYSIS

APPL, INC.

INORGANIC ANALYSIS
QC Summary

APPL, INC.

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
SM 2320B	BICARBONATE AS	1.6 J	2.0	1.70	0.85	mg/L	01/03/17	01/03/17	#232W-170103A-AZ48083
SM 2320B	CARBONATE AS CA	1.70 U	2.0	1.70	0.85	mg/L	01/03/17	01/03/17	#232W-170103A-AZ48083
SM 2320B	TOTAL ALKALINITY	1.6 J	2.0	1.70	0.85	mg/L	01/03/17	01/03/17	#232W-170103A-AZ48083
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	12/22/16	12/22/16	#300W-161222A-AZ48083
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	12/22/16	12/22/16	#300W-161222A-AZ48083
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	12/22/16	12/22/16	#300W-161222A-AZ48083
SM3500Fe	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	12/22/16	12/22/16	#35FE-161222A-AZ48083

Wetlab SC-Blank-REG MDLs
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Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	20.0	18.1	90.5	90-110	12/22/16	12/22/16	#300W-161222A-AZ48083
EPA 300.0	NITRATE	22.1	20.6	93.2	90-110	12/22/16	12/22/16	#300W-161222A-AZ48083
EPA 300.0	SULFATE	20.0	18.7	93.5	90-110	12/22/16	12/22/16	#300W-161222A-AZ48083
SM 2320B	BICARBONATE AS CACO3	250	243	97.2	90-110	01/03/17	01/03/17	#232W-170103A-AZ48083
SM 2320B	TOTAL ALKALINITY AS CACO3	250	243	97.2	90-110	01/03/17	01/03/17	#232W-170103A-AZ48083
SM3500Fe	FERROUS IRON	3.00	2.99	99.7	80-120	12/22/16	12/22/16	#35FE-161222A-AZ48083

Comments: _____

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APPL Standard LCS

INORGANIC ANALYSIS
Sample Data

APPL, INC.

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH157

APPL ID: AZ48083

Sample Collection Date: 12/21/16

ARF: 81842

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	CHLORIDE	12.7	1.0	0.20	0.08	mg/L	1	12/22/16	12/22/16
EPA 300.0	NITRATE	16.1	0.5	0.18	0.04	mg/L	1	12/22/16	12/22/16
EPA 300.0	SULFATE	13.4	1.0	0.20	0.09	mg/L	1	12/22/16	12/22/16
SM 2320B	BICARBONATE AS CACO3	63.1	2.0	1.70	0.85	mg/L	1	01/03/17	01/03/17
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	01/03/17	01/03/17
SM 2320B	TOTAL ALKALINITY AS CACO3	63.1	2.0	1.70	0.85	mg/L	1	01/03/17	01/03/17
SM3500FeB	FERROUS IRON	0.28 J	1.0	0.32	0.16	mg/L	1	12/22/16	12/22/16

J = Estimated value.

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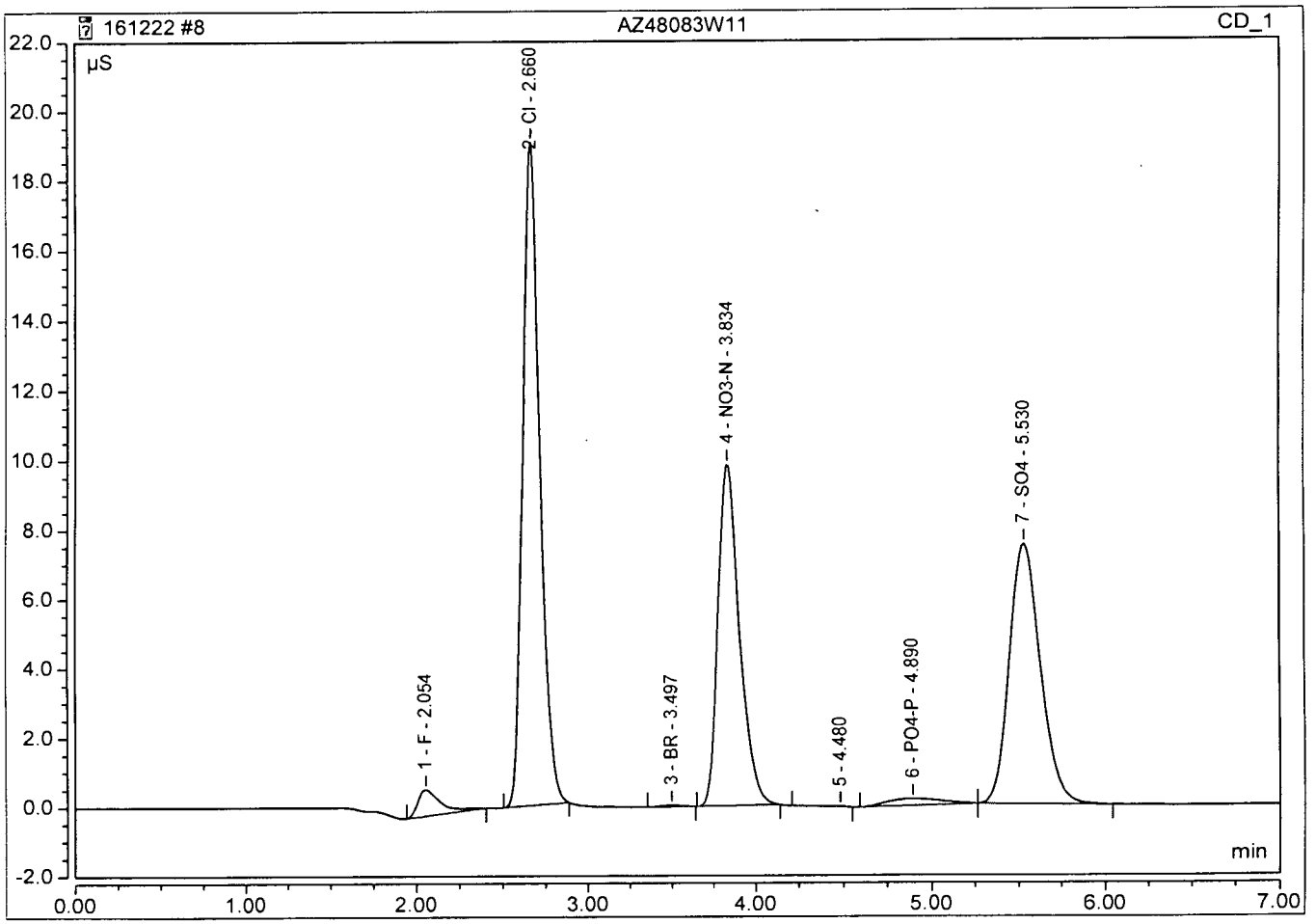
APPL-F1-SC-NoMC-REG MDLs

Peak Integration Report

Sample Name:	**AZ48083W11**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**22-Dec-2016 / 17:40**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.05	F	BMB	0.114	0.764	0.5462
2	2.66	Cl	BMB	2.207	19.037	12.6701
3	3.50	BR	BMB	0.005	0.038	0.1995
4	3.83	NO3-N	BMB	1.459	9.825	3.6367
6	4.89	PO4-P	BMB	0.068	0.193	0.6135
7	5.53	SO4	BMB	1.579	7.482	13.4197
TOTAL:				5.43	37.34	31.09



INORGANIC ANALYSIS
Calibration Data

APPL, INC.

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No: 81842 SDG: 81842

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 05/20/16

Analyte	Calibration Verification									M
	True ICV	Found 12:41	%R(1)	True CCV1	Found 16:32	%R(1)	True CCV1	Found 16:37	%R(1)	
Ferrous Iron	3	3.01396	100	4	3.86314	96.6	4	3.99301	99.8	

(1) Control Limits: 90-110

ILM02.0

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

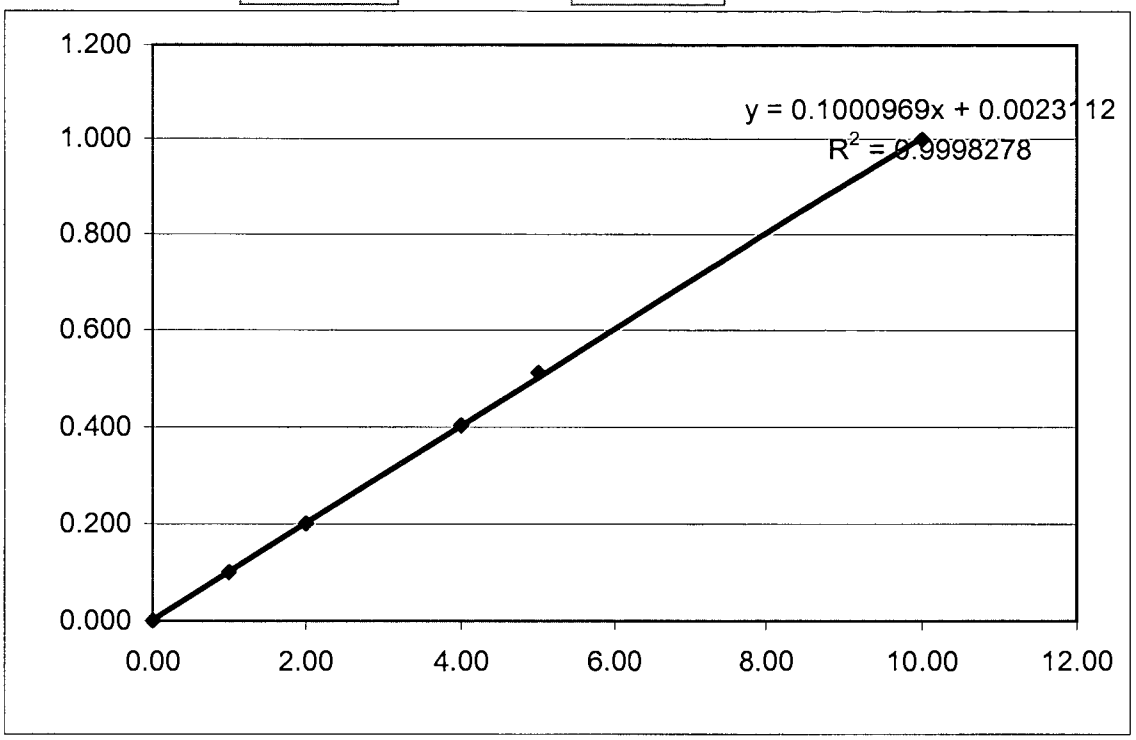
ARF No.: 81842 SDG: 81842

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	ICB 05/20/16 12:42	C	CCB 12/22/16 16:33	C	CCB 12/22/16 16:38	C		C		C	
Ferrous Iron	1.000	U	1.000	U	1.000	U					

Ferrous Iron **161222A**



X	Y
0.00	0.000
1.00	0.101
2.00	0.201
4.00	0.403
5.00	0.512
10.00	0.999

Algorithm Check

reading (y)=	0.302	12/22/16	16:34
dilution=	1		
result (x)=	2.99 ✓		

MM 1/5/17

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM
ARF No: 81842 SDG: 81842
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 10/20/16

Analyte	Calibration Verification									M
	True ICV	Found 12:37	%R(1)	True	Found	%R(1)	True	Found	%R(1)	
chloride	20	18.2183	91.1							
Nitrate(NO3)	22.1	20.0573	90.8							
sulfate	20	18.4058	92.0							

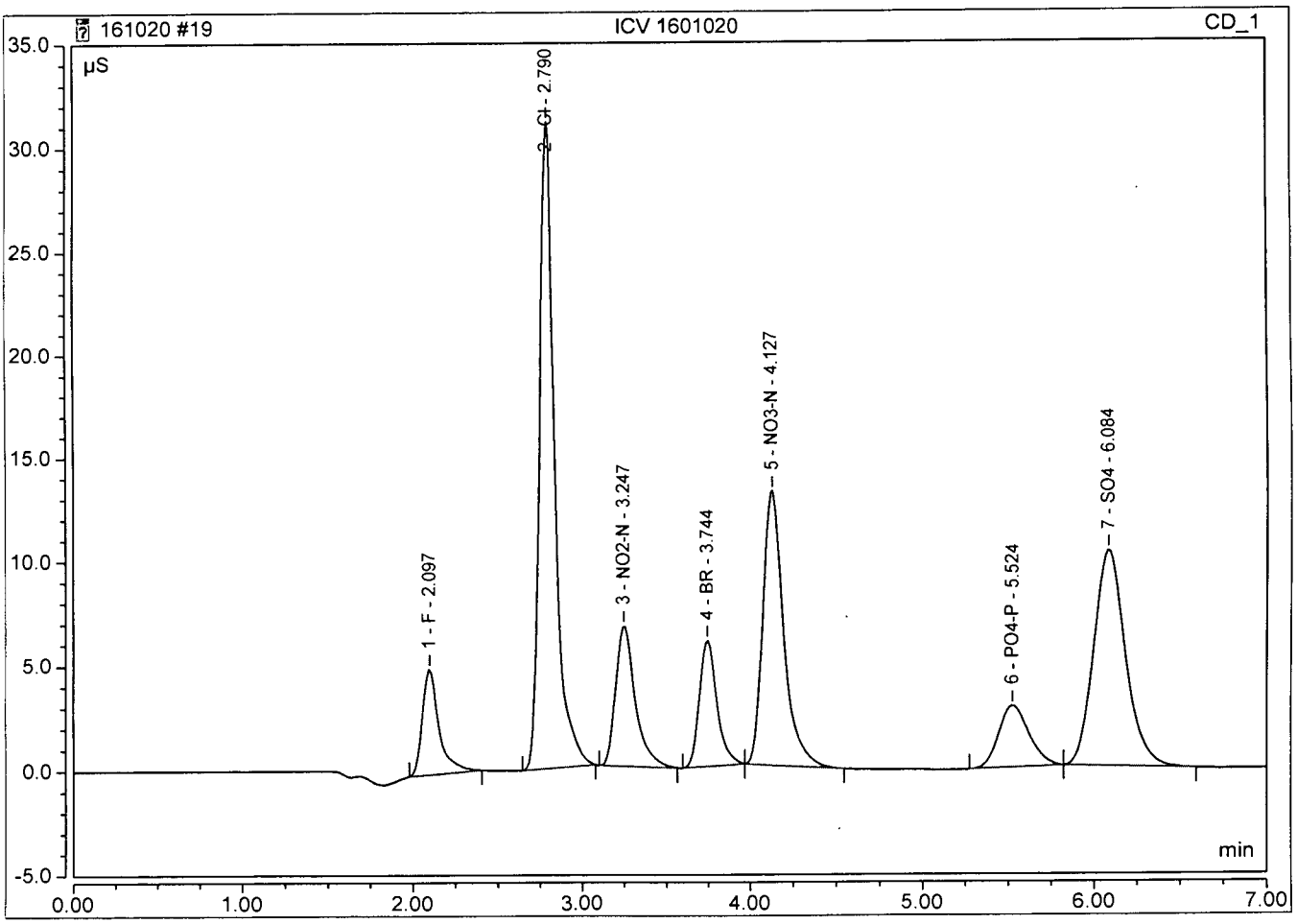
(1) Control Limits: 90-110

ILM02.0

Peak Integration Report

Sample Name:	**ICV 1601020**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:37**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB	0.568	5.018	2.5594
2	2.79	Cl	BMB	3.214	31.139	18.2184
3	3.25	NO2-N	BMB	0.894	6.653	2.9873
4	3.74	BR	BMB	0.739	5.970	11.8423
5	4.13	NO3-N	BMB	1.827	13.075	4.5291
6	5.52	PO4-P	BMB	0.590	2.913	4.8011
7	6.08	SO4	BMB	2.187	10.255	18.4058
TOTAL:				10.02	75.02	63.34



Algorithm Check
y = .1816x - .0943
y = 18.22 ✓
y = Peak Area
x = Amount
MM 1/5/17

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 81842 SDG: 81842

Preparation Blank Matrix (soil/water): water

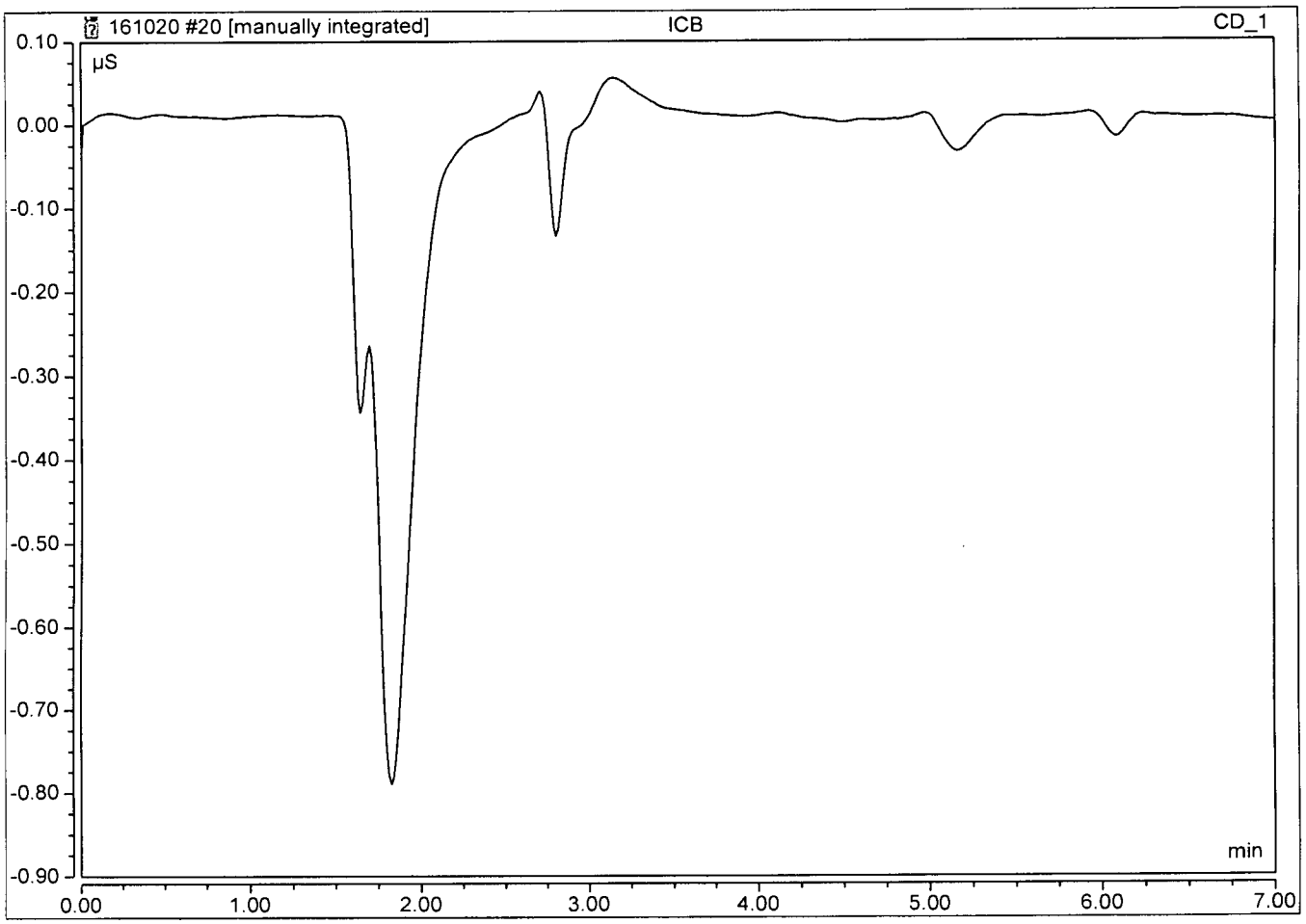
Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	ICB 10/20/16 12:50	C		C		C		C		C	
chloride	1.000	U									
Nitrate(NO3)	.500	U									
sulfate	1.000	U									

Peak Integration Report

Sample Name:	**ICB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:50**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
		TOTAL:		0.00	0.00	0.00



A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM
ARF No: 81842 SDG: 81842
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 12/22/16

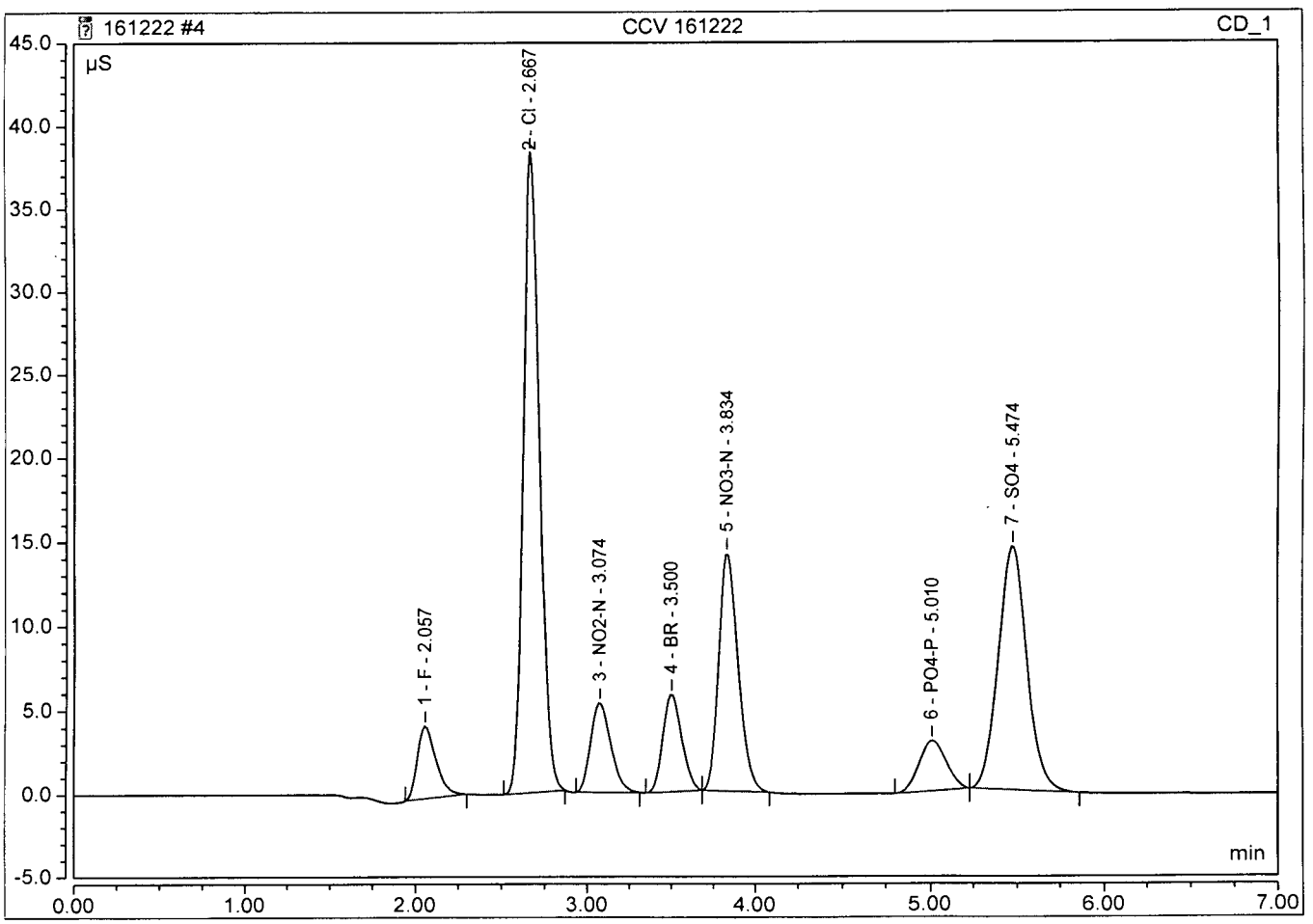
Analyte	Calibration Verification									M
	True CCV1	Found 16:48	%R(1)	True CCV1	Found 20:17	%R(1)	True	Found	%R(1)	
chloride	25	23.5066	94.0	25	23.507	94.0				
Nitrate(NO3)	22.1	21.2382	96.1	22.1	21.2683	96.2				
sulfate	25	23.0958	92.4	25	23.0702	92.3				

(1) Control Limits: 90-110

Peak Integration Report

Sample Name:	**CCV 161222**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**22-Dec-2016 / 16:48**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.06	F	BMB	0.552	4.385	2.4908
2	2.67	Cl	BMB	4.175	38.295	23.5066
3	3.07	NO2-N	BMB	0.739	5.347	2.4745
4	3.50	BR	BMB	0.740	5.812	11.8515
5	3.83	NO3-N	BMB	1.937	14.092	4.7957
6	5.01	PO4-P	BMB	0.547	3.044	4.4554
7	5.47	SO4	BMB	2.760	14.415	23.0958
TOTAL:				11.45	85.39	72.67

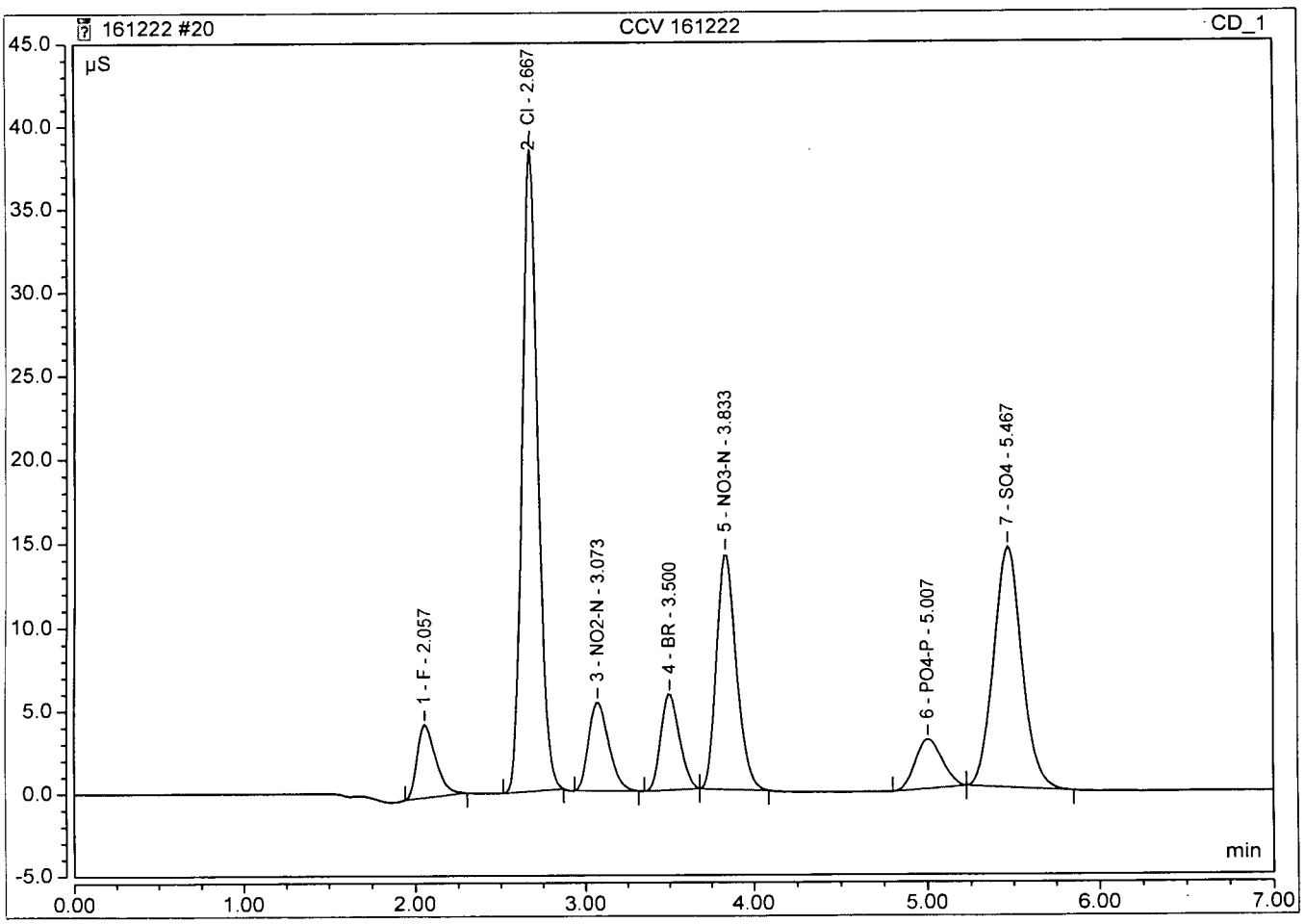


Algorithm Check
y = Peak Area
x = Amnt
y = .1816x - .0943
x = 23.51 ✓ mm 1/5/17

Peak Integration Report

Sample Name:	**CCV 161222**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**22-Dec-2016 / 20:17**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.06	F	BMB	0.556	4.427	2.5063
2	2.67	Cl	BMB	4.175	38.439	23.5070
3	3.07	NO2-N	BMB	0.742	5.363	2.4817
4	3.50	BR	BMB	0.739	5.818	11.8441
5	3.83	NO3-N	BMB	1.939	14.102	4.8025
6	5.01	PO4-P	BMB	0.536	2.978	4.3703
7	5.47	SO4	BMB	2.757	14.374	23.0702
TOTAL:				11.44	85.50	72.58



A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 81842 SDG: 81842

Preparation Blank Matrix (soil/water): water

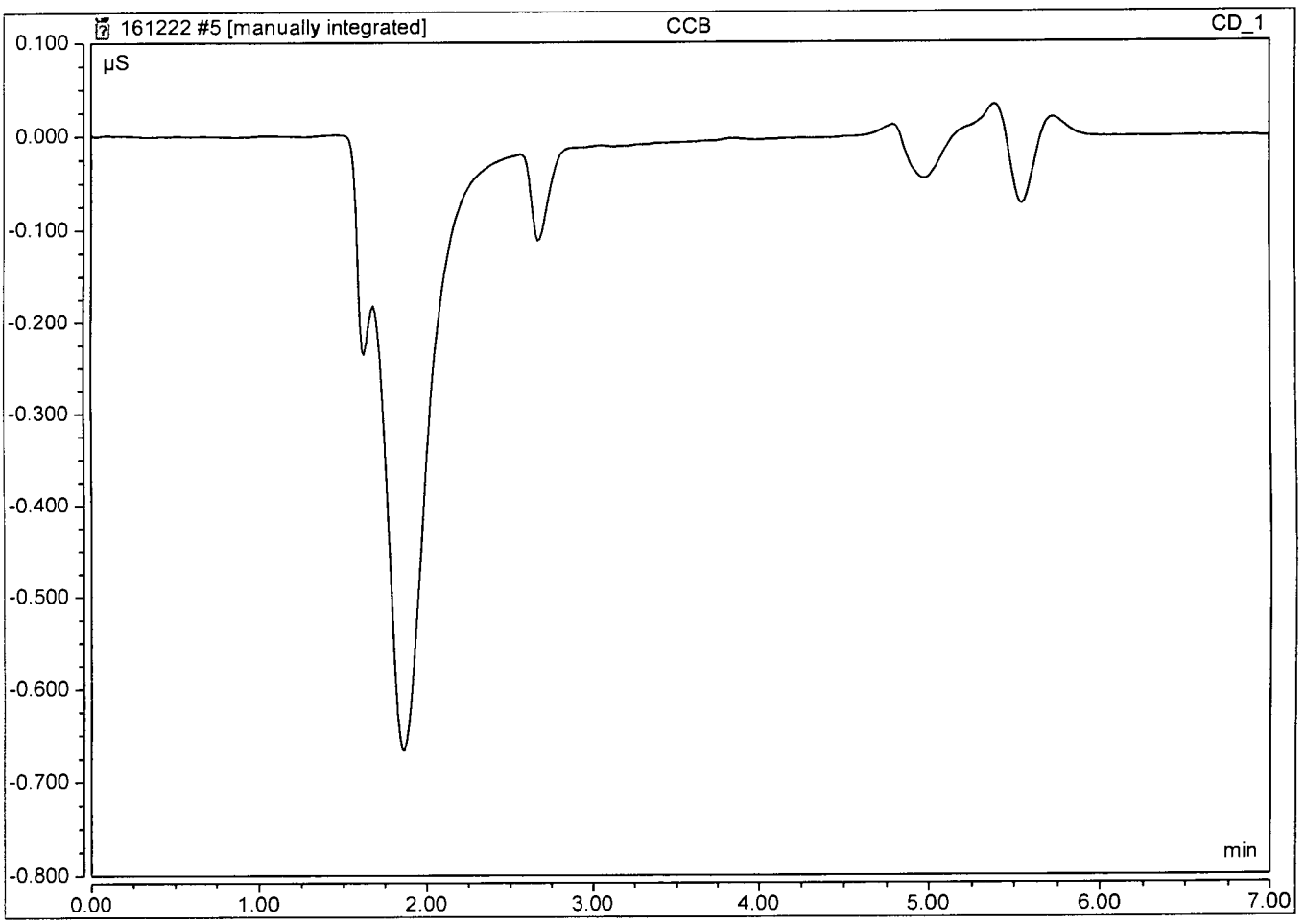
Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	CCB 12/22/16 17:01	C	CCB 12/22/16 20:30	C		C		C		C	
chloride	1.000	U	1.000	U							
Nitrate(NO3)	.500	U	.500	U							
sulfate	1.000	U	1.000	U							

Peak Integration Report

Sample Name:	CCB	*Inj. Vol.:*	**25.00**
Injection Type:	Unknown	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**22-Dec-2016 / 17:01**	*Run Time:*	**7.00**

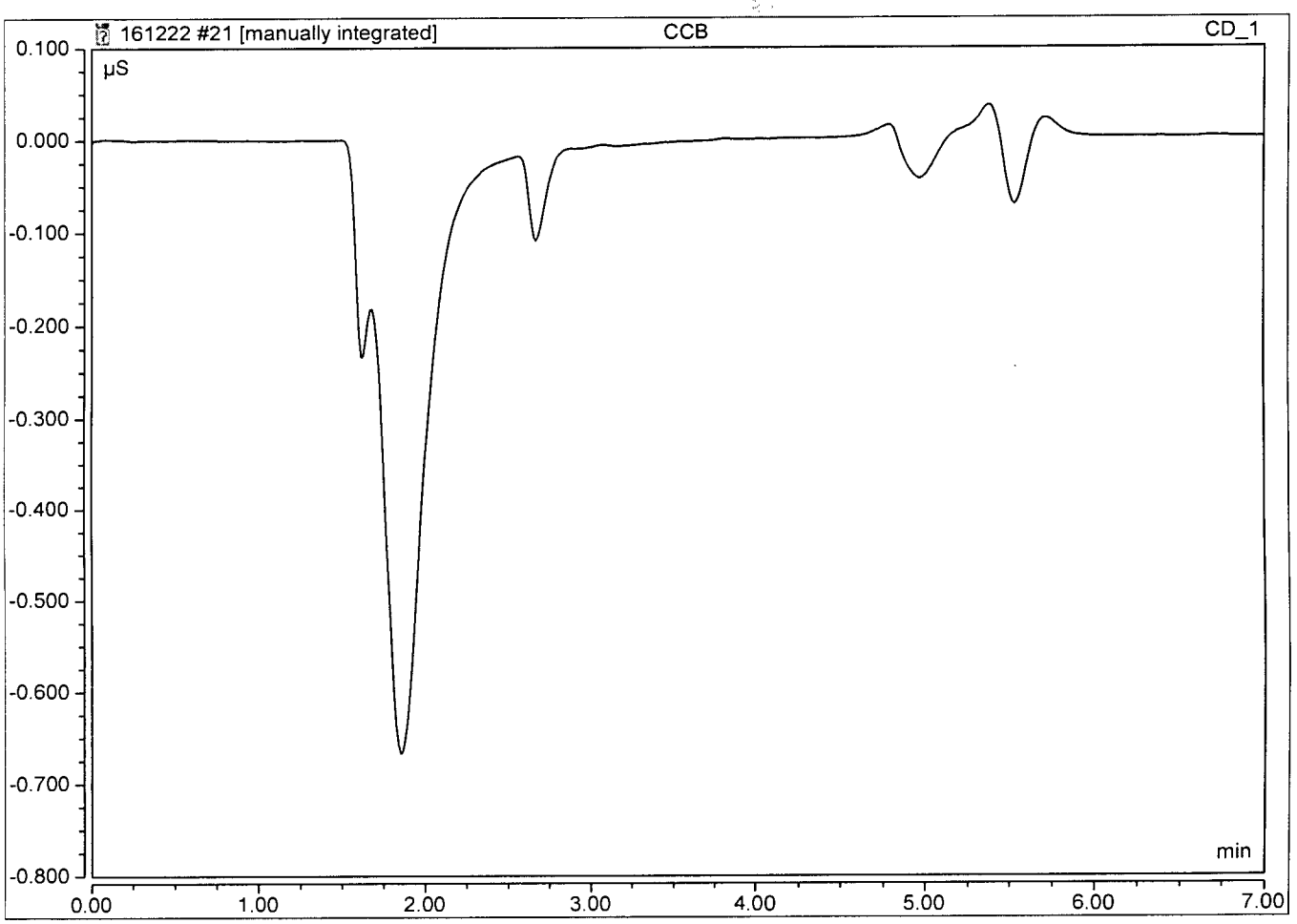
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
TOTAL:				0.00	0.00	0.00



Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**22-Dec-2016 / 20:30**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
TOTAL:				0.00	0.00	0.00



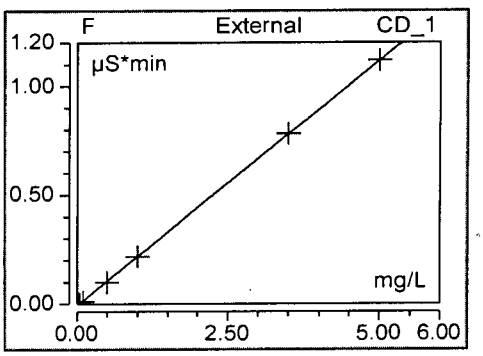
Calibration Batch Report

Sequence:	**161020**	*Injection Volume:*	**25.00**
Instrument Method:	**Program 1**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:24**	*Run Time:*	**7**

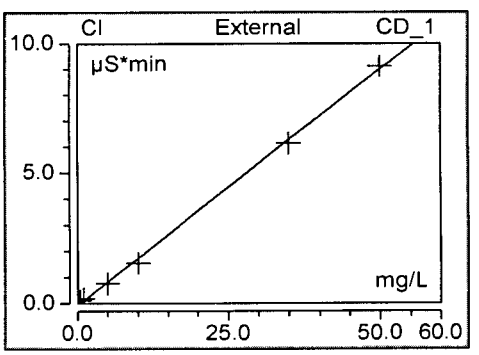
Calibration Summary

Peak Name	Eval.Type	Cal.Type	Points	Offset (C0)	Slope (C1)	Curve (C2)	Coeff.Det. %
F	Area	WithOffset,	6.000	-0.009	0.225	0.000	99.9840
Cl	Area	in, WithOffse	6.000	-0.094	0.182	0.000	99.8613
NO2-N	Area	in, WithOffse	6.000	-0.007	0.301	0.000	99.9917
BR	Area	in, WithOffse	6.000	-0.008	0.063	0.000	99.9802
NO3-N	Area	in, WithOffse	6.000	-0.039	0.412	0.000	99.9329
PO4-P	Area	in, WithOffse	6.000	-0.008	0.125	0.000	99.9563
SO4	Area	in, WithOffse	6.000	-0.060	0.122	0.000	99.9400
		AVERAGE:		-0.0322	0.2043	0.0000	99.9495

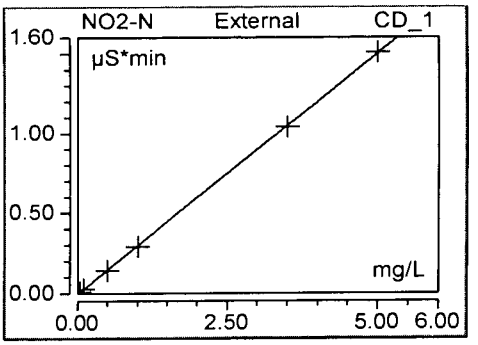
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	F	F	F	F
ICAL 1 10/20/16	2.123	0.0012	0.022	0.044
ICAL 2 10/20/16	2.107	0.0123	0.139	0.093
ICAL 3 10/20/16	2.100	0.1000	0.922	0.483
ICAL 4 10/20/16	2.104	0.2174	1.958	1.004
ICAL 5 10/20/16	2.097	0.7826	6.953	3.513
ICAL 6 10/20/16	2.103	1.1183	9.996	5.004
Average	2.106			
Rel. Std. Dev.	0.443 %			



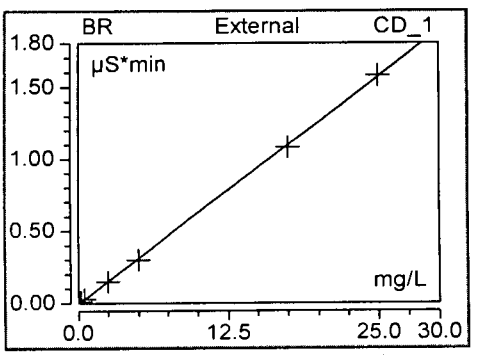
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	Cl	Cl	Cl	Cl
ICAL 1 10/20/16	2.793	0.1132	1.052	1.143
ICAL 2 10/20/16	2.790	0.1861	1.743	1.544
ICAL 3 10/20/16	2.790	0.7617	7.117	4.714
ICAL 4 10/20/16	2.797	1.5419	14.708	9.010
ICAL 5 10/20/16	2.793	6.1288	59.398	34.268
ICAL 6 10/20/16	2.803	9.1171	87.978	50.723
Average	2.795			
Rel. Std. Dev.	0.179 %			



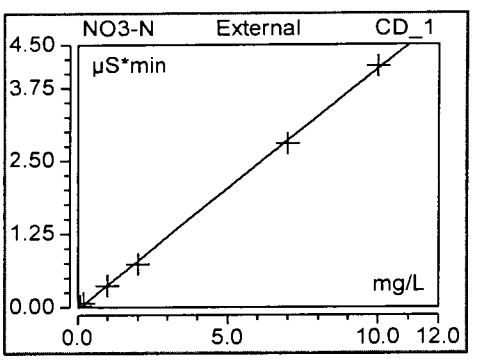
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	NO2-N	NO2-N	NO2-N	NO2-N
ICAL 1 10/20/16	3.250	0.0095	0.073	0.053
ICAL 2 10/20/16	3.247	0.0276	0.209	0.113
ICAL 3 10/20/16	3.250	0.1420	1.072	0.493
ICAL 4 10/20/16	3.254	0.2907	2.188	0.986
ICAL 5 10/20/16	3.250	1.0405	7.775	3.473
ICAL 6 10/20/16	3.257	1.5072	11.205	5.022
Average	3.251			
Rel. Std. Dev.	0.106 %			



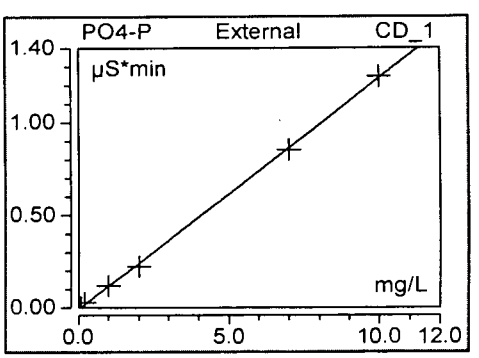
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	BR	BR	BR	BR
ICAL 1 10/20/16	3.757	0.0109	0.087	0.299
ICAL 2 10/20/16	3.753	0.0293	0.232	0.589
ICAL 3 10/20/16	3.750	0.1485	1.179	2.478
ICAL 4 10/20/16	3.754	0.2993	2.389	4.870
ICAL 5 10/20/16	3.743	1.0832	8.801	17.295
ICAL 6 10/20/16	3.747	1.5800	13.023	25.169
Average	3.751			
Rel. Std. Dev.	0.131 %			



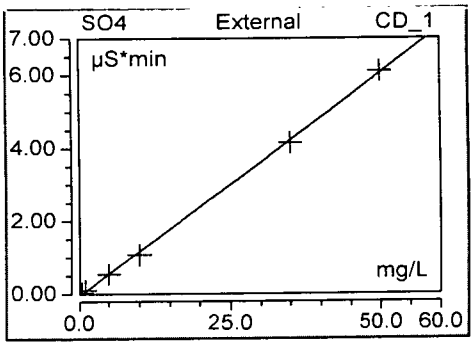
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	NO3-N	NO3-N	NO3-N	NO3-N
ICAL 1 10/20/16	4.143	0.0290	0.196	0.166
ICAL 2 10/20/16	4.140	0.0717	0.496	0.270
ICAL 3 10/20/16	4.137	0.3656	2.533	0.983
ICAL 4 10/20/16	4.140	0.7330	5.168	1.875
ICAL 5 10/20/16	4.123	2.7923	20.144	6.873
ICAL 6 10/20/16	4.123	4.1278	30.098	10.114
Average	4.135			
Rel. Std. Dev.	0.215 %			



Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	PO4-P	PO4-P	PO4-P	PO4-P
ICAL 1 10/20/16	5.540	0.0032	0.021	0.092
ICAL 2 10/20/16	5.540	0.0284	0.107	0.295
ICAL 3 10/20/16	5.537	0.1191	0.557	1.022
ICAL 4 10/20/16	5.537	0.2251	1.103	1.873
ICAL 5 10/20/16	5.520	0.8544	4.243	6.922
ICAL 6 10/20/16	5.523	1.2473	6.244	10.075
Average	5.533			
Rel. Std. Dev.	0.160 %			



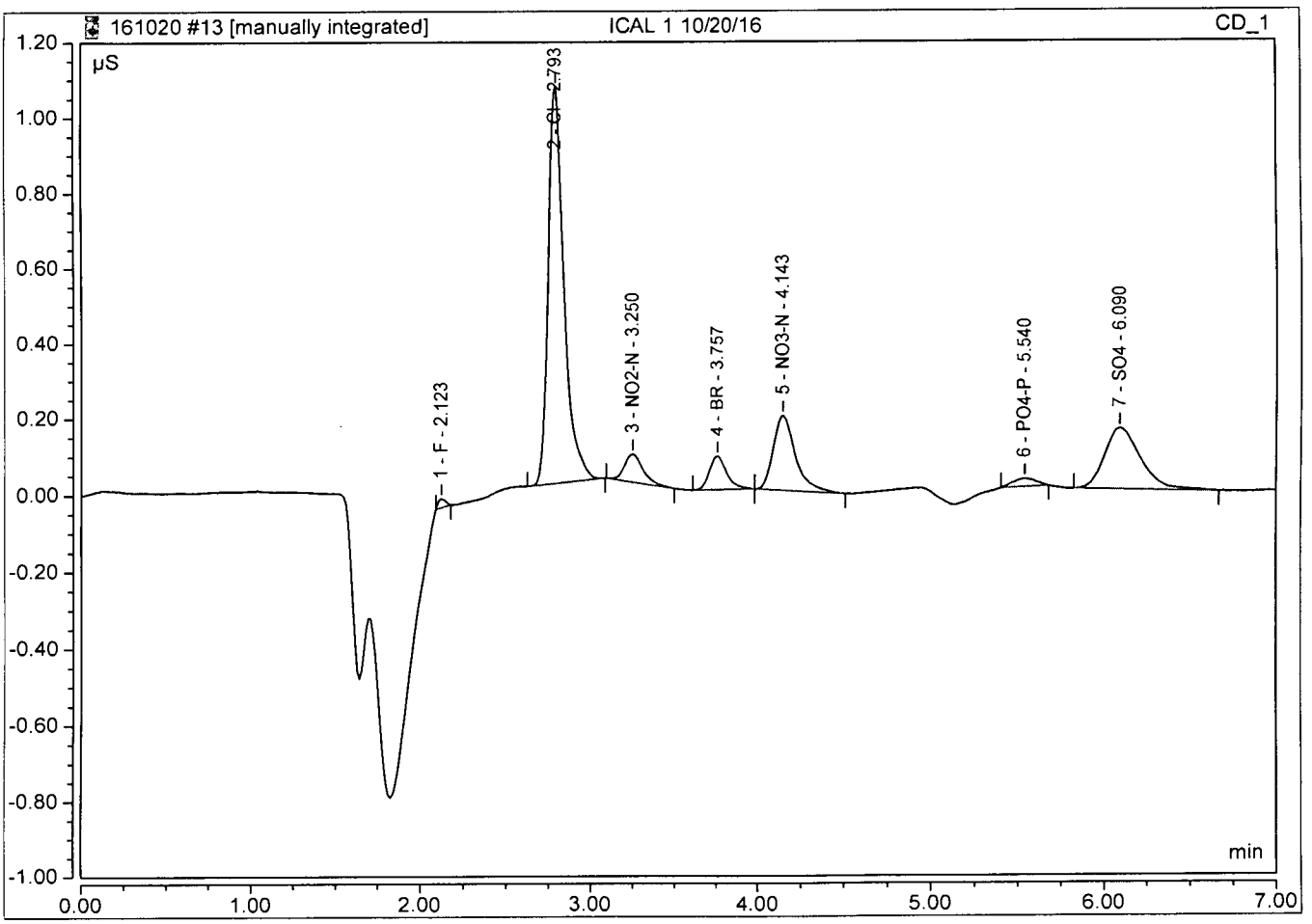
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	SO4	SO4	SO4	SO4
ICAL 1 10/20/16	6.090	0.0385	0.159	0.808
ICAL 2 10/20/16	6.093	0.1046	0.455	1.350
ICAL 3 10/20/16	6.097	0.5456	2.464	4.961
ICAL 4 10/20/16	6.100	1.0756	4.975	9.302
ICAL 5 10/20/16	6.097	4.1512	19.714	34.487
ICAL 6 10/20/16	6.110	6.1057	29.270	50.492
Average	6.098			
Rel. Std. Dev.	0.113 %			



Peak Integration Report

Sample Name:	**ICAL 1 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:19**	*Run Time:*	**7.00**

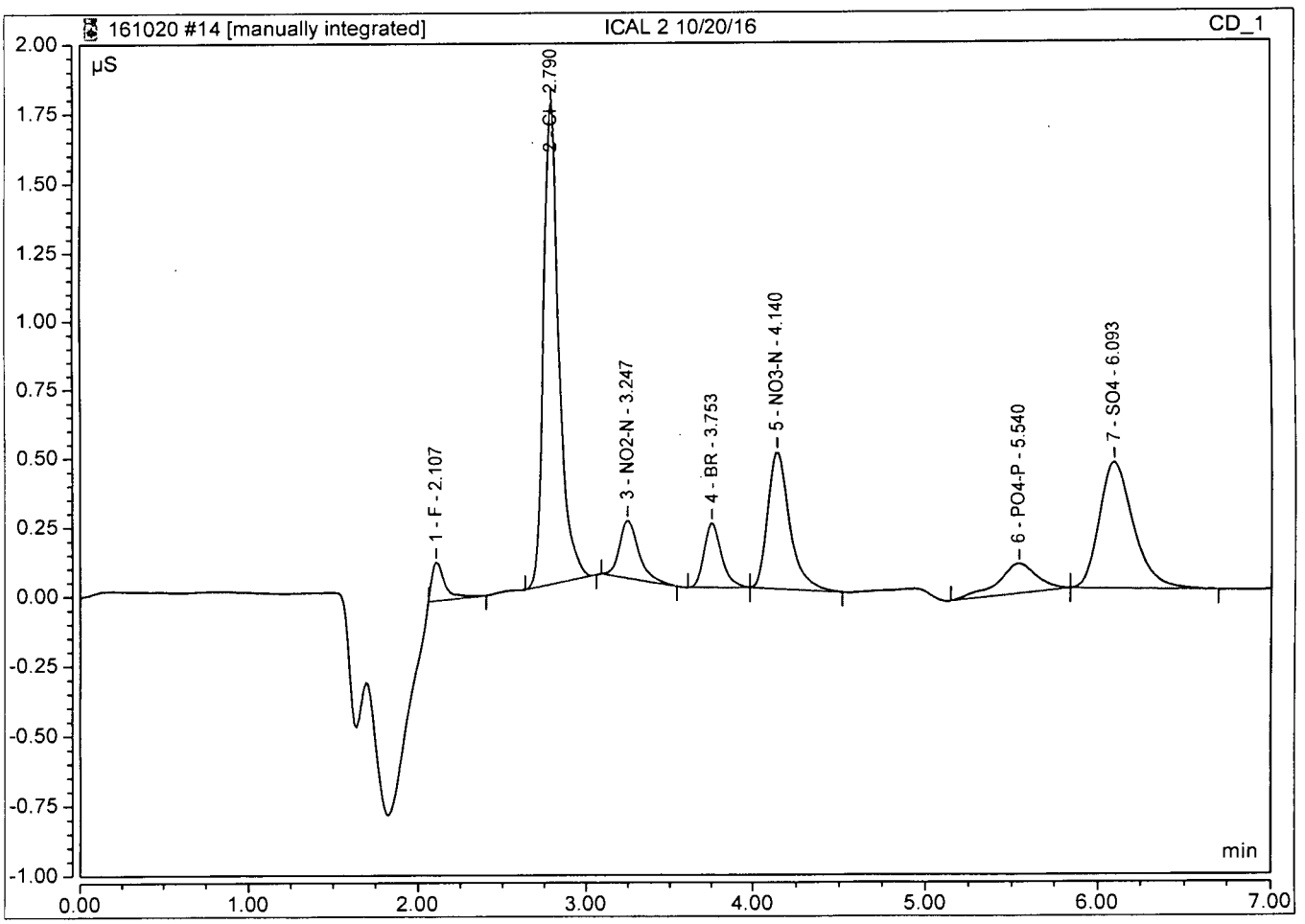
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.12	F	BMB*	0.001	0.022	0.0438
2	2.79	Cl	BMB	0.113	1.052	1.1427
3	3.25	NO2-N	BMB	0.009	0.073	0.0531
4	3.76	BR	BMB	0.011	0.087	0.2985
5	4.14	NO3-N	BMB	0.029	0.196	0.1660
6	5.54	PO4-P	BMB*	0.003	0.021	0.0923
7	6.09	SO4	BMB	0.038	0.159	0.8084
TOTAL:				0.21	1.61	2.60



Peak Integration Report

Sample Name:	**ICAL 2 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:32**	*Run Time:*	**7.00**

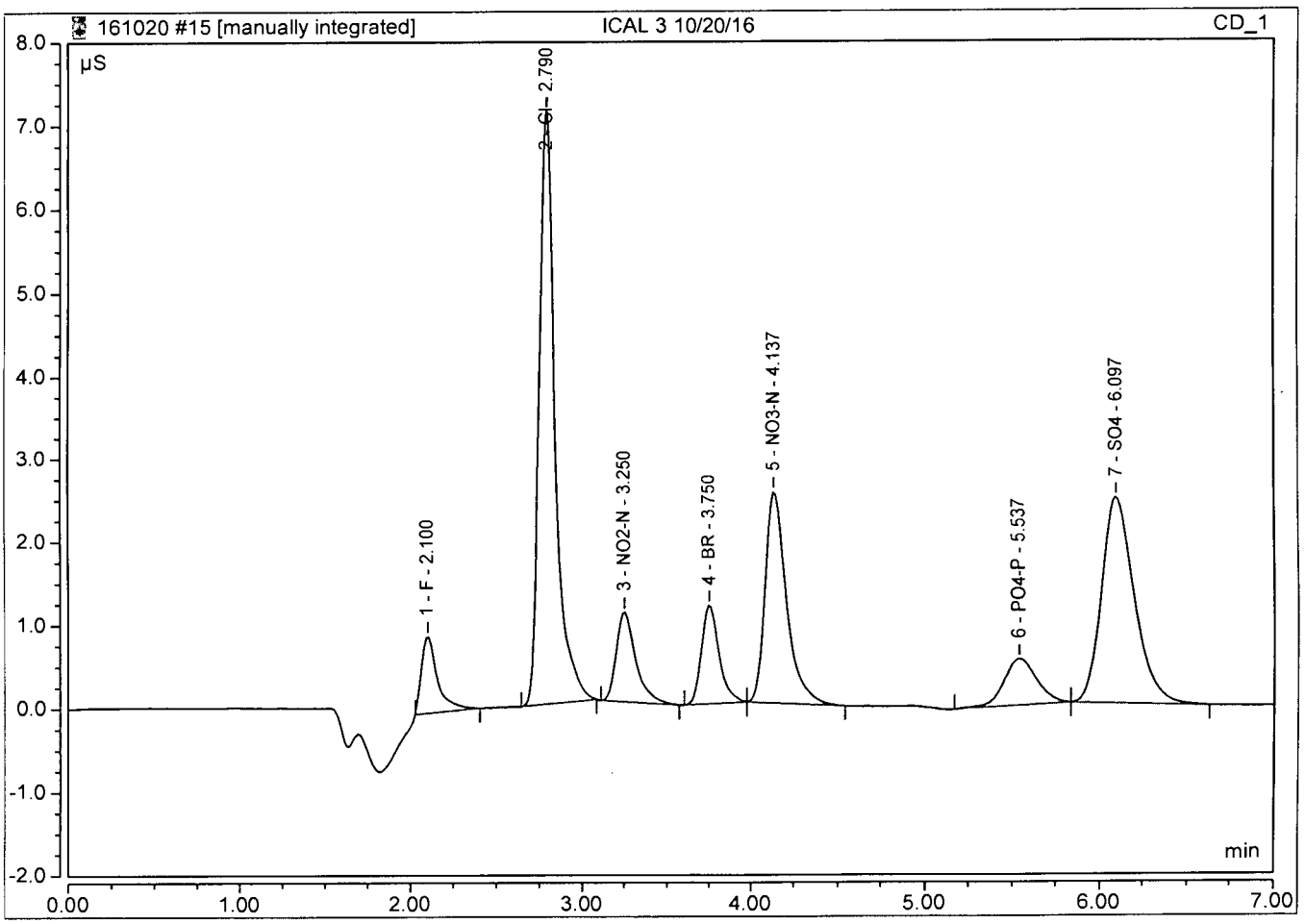
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.11	F	BMB*	0.012	0.139	0.0933
2	2.79	Cl	BMB	0.186	1.743	1.5439
3	3.25	NO2-N	BMB	0.028	0.209	0.1132
4	3.75	BR	BMB	0.029	0.232	0.5894
5	4.14	NO3-N	BMB	0.072	0.496	0.2699
6	5.54	PO4-P	BMB	0.028	0.107	0.2946
7	6.09	SO4	BMB	0.105	0.455	1.3496
TOTAL:				0.46	3.38	4.25



Peak Integration Report

Sample Name:	**ICAL 3 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:45**	*Run Time:*	**7.00**

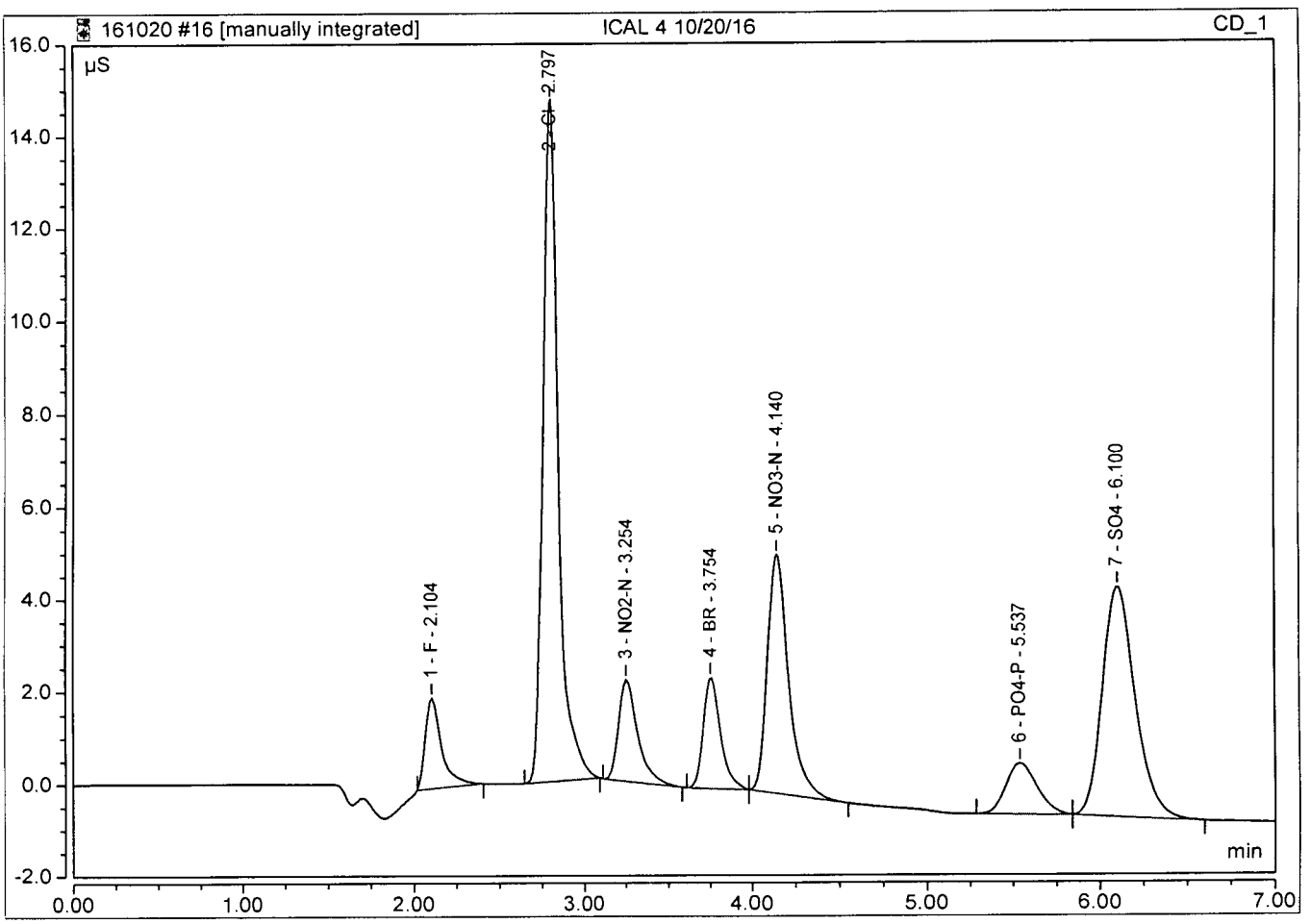
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB*	0.100	0.922	0.4827
2	2.79	Cl	BMB	0.762	7.117	4.7137
3	3.25	NO2-N	BMB	0.142	1.072	0.4926
4	3.75	BR	BMB	0.148	1.179	2.4784
5	4.14	NO3-N	BMB	0.366	2.533	0.9830
6	5.54	PO4-P	BMB	0.119	0.557	1.0221
7	6.10	SO4	BMB	0.546	2.464	4.9609
TOTAL:				2.18	15.84	15.13



Peak Integration Report

Sample Name:	**ICAL 4 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:58**	*Run Time:*	**7.00**

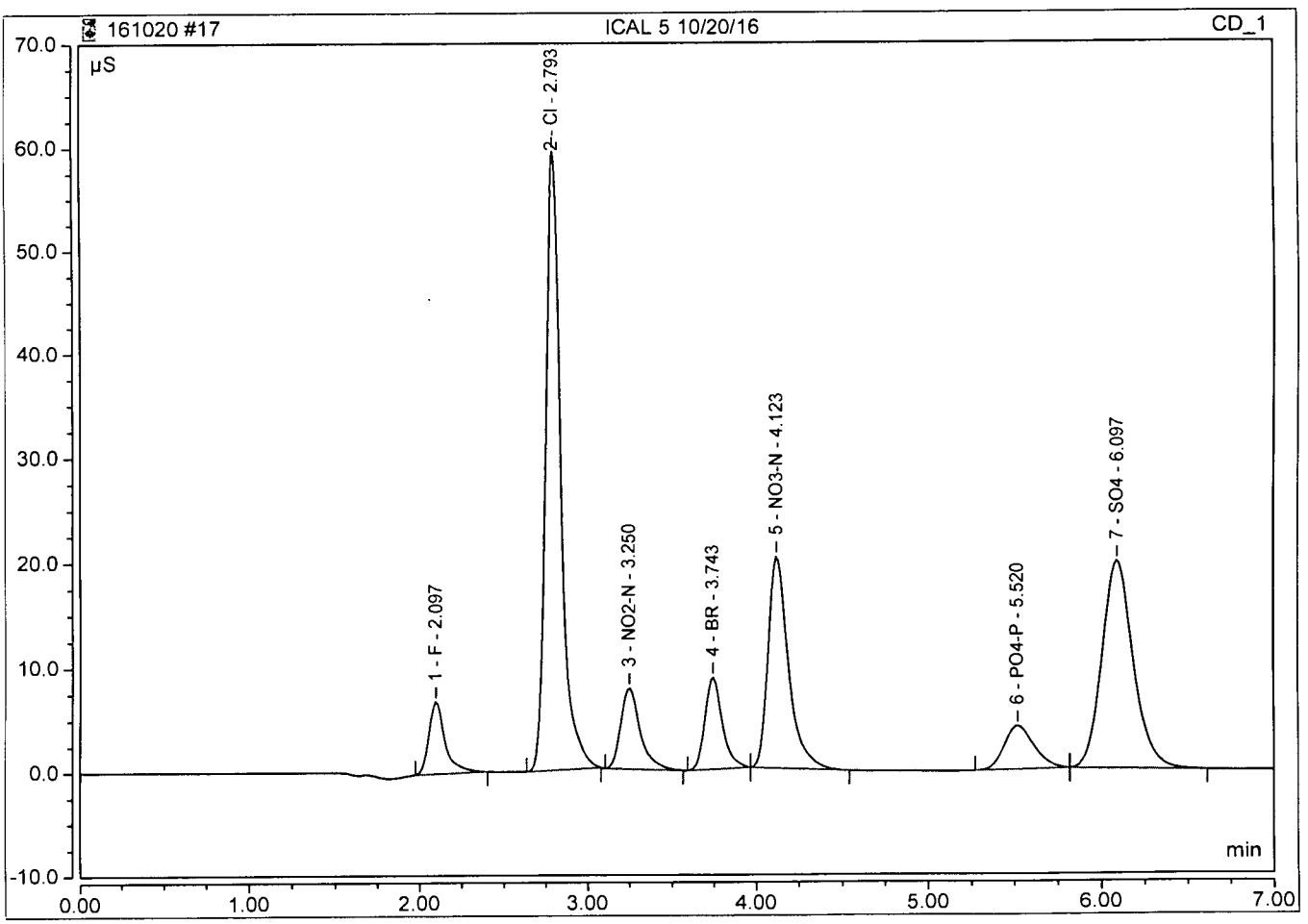
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB*	0.217	1.958	1.0036
2	2.80	Cl	BMB	1.542	14.708	9.0096
3	3.25	NO2-N	BMB	0.291	2.188	0.9859
4	3.75	BR	BMB	0.299	2.389	4.8695
5	4.14	NO3-N	BMB	0.733	5.168	1.8746
6	5.54	PO4-P	BMB	0.225	1.103	1.8731
7	6.10	SO4	BMB	1.076	4.975	9.3015
TOTAL:				4.38	32.49	28.92



Peak Integration Report

Sample Name:	**ICAL 5 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:11**	*Run Time:*	**7.00**

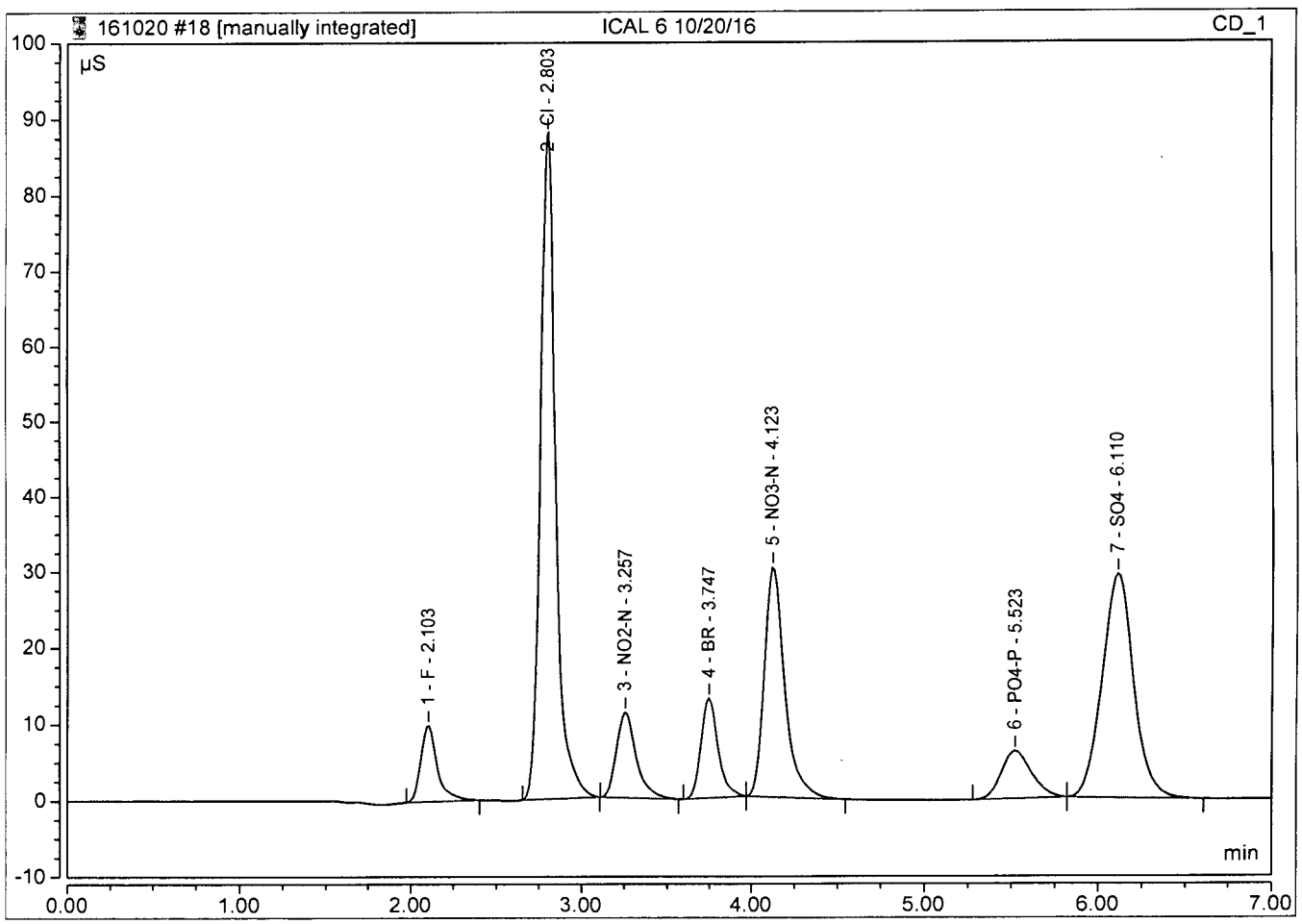
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB	0.783	6.953	3.5131
2	2.79	Cl	BMB	6.129	59.398	34.2675
3	3.25	NO2-N	BMB	1.040	7.775	3.4734
4	3.74	BR	BMB	1.083	8.801	17.2948
5	4.12	NO3-N	BMB	2.792	20.144	6.8727
6	5.52	PO4-P	BMB	0.854	4.243	6.9225
7	6.10	SO4	BMB	4.151	19.714	34.4871
TOTAL:				16.83	127.03	106.83



Peak Integration Report

Sample Name:	**ICAL 6 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:24**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB	1.118	9.996	5.0036
2	2.80	Cl	BMB*	9.117	87.978	50.7226
3	3.26	NO2-N	BMB	1.507	11.205	5.0218
4	3.75	BR	BMB	1.580	13.023	25.1693
5	4.12	NO3-N	BMB	4.128	30.098	10.1138
6	5.52	PO4-P	BMB	1.247	6.244	10.0755
7	6.11	SO4	BMB	6.106	29.270	50.4924
TOTAL:				24.80	187.81	156.60



INORGANIC ANALYSIS
Raw Data

APPL, INC.

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
SM 2320B	BICARBONATE AS	1.6 J	2.0	1.70	0.85	mg/L	01/03/17	01/03/17	#232W-170103A-AZ48083
SM 2320B	CARBONATE AS CA	1.70 U	2.0	1.70	0.85	mg/L	01/03/17	01/03/17	#232W-170103A-AZ48083
SM 2320B	TOTAL ALKALINITY	1.6 J	2.0	1.70	0.85	mg/L	01/03/17	01/03/17	#232W-170103A-AZ48083
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	12/22/16	12/22/16	#300W-161222A-AZ48083
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	12/22/16	12/22/16	#300W-161222A-AZ48083
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	12/22/16	12/22/16	#300W-161222A-AZ48083
SM3500Fe	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	12/22/16	12/22/16	#35FE-161222A-AZ48083

Wetlab SC-Blank-REG MDLs
Printed: 01/03/17 4:28:16 PM

Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	20.0	18.1	90.5	90-110	12/22/16	12/22/16	#300W-161222A-AZ48083
EPA 300.0	NITRATE	22.1	20.6	93.2	90-110	12/22/16	12/22/16	#300W-161222A-AZ48083
EPA 300.0	SULFATE	20.0	18.7	93.5	90-110	12/22/16	12/22/16	#300W-161222A-AZ48083
SM 2320B	BICARBONATE AS CACO3	250	243	97.2	90-110	01/03/17	01/03/17	#232W-170103A-AZ48083
SM 2320B	TOTAL ALKALINITY AS CACO3	250	243	97.2	90-110	01/03/17	01/03/17	#232W-170103A-AZ48083
SM3500Fe	FERROUS IRON	3.00	2.99	99.7	80-120	12/22/16	12/22/16	#35FE-161222A-AZ48083

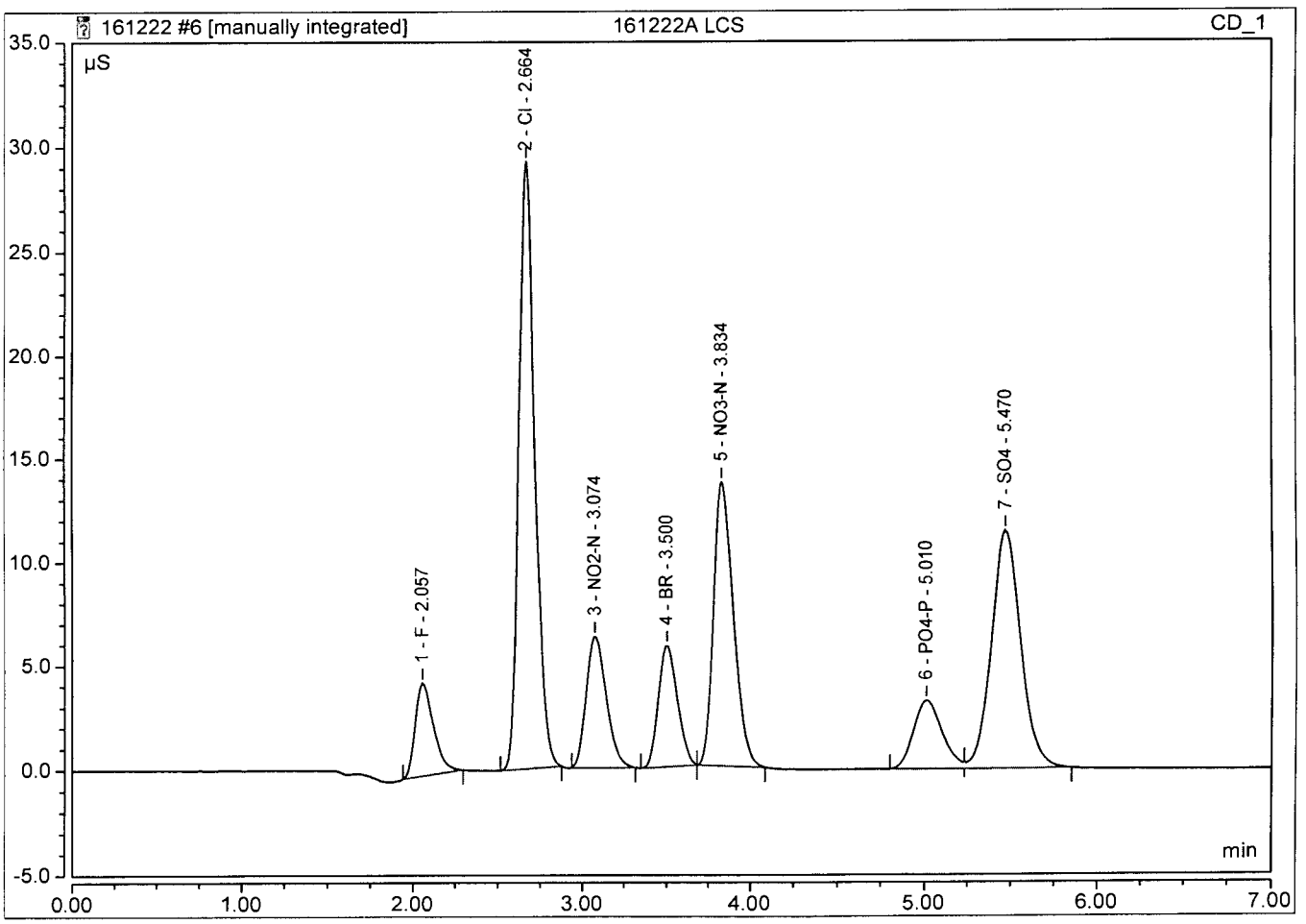
Comments: _____

MI MM 1/5/17

Peak Integration Report PW

Sample Name:	**161222A LCS**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**22-Dec-2016 / 17:14**	*Run Time:*	**7.00**

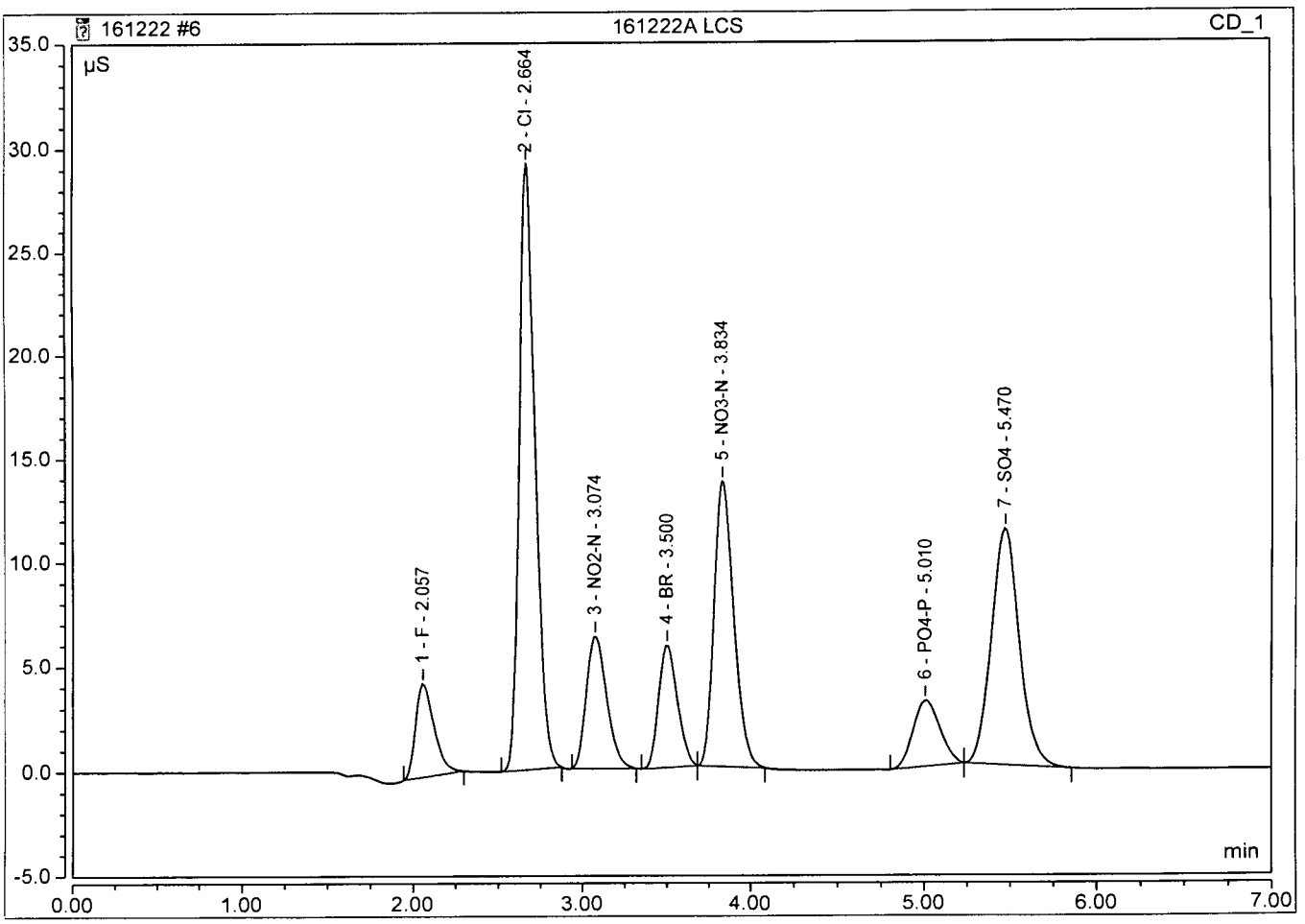
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.06	F	BMB	0.559	4.451	2.5202
2	2.66	Cl	BMB	3.200	29.218	18.1410
3	3.07	NO2-N	BMB	0.875	6.292	2.9237
4	3.50	BR	BMB	0.739	5.813	11.8421
5	3.83	NO3-N	BMB	1.873	13.622	4.6413
6	5.01	PO4-P	BM *	0.624	3.262	5.0761
7	5.47	SO4	MB*	2.224	11.425	18.7056
TOTAL:				10.09	74.08	63.85



Peak Integration Report

Sample Name:	**161222A LCS**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**22-Dec-2016 / 17:14**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.06	F	BMB	0.559	4.451	2.5202
2	2.66	Cl	BMB	3.200	29.218	18.1410
3	3.07	NO2-N	BMB	0.875	6.292	2.9237
4	3.50	BR	BMB	0.739	5.813	11.8421
5	3.83	NO3-N	BMB	1.873	13.622	4.6413
6	5.01	PO4-P	BMB	0.563	3.126	4.5861
7	5.47	SO4	BMB	2.136	11.250	17.9847
TOTAL:				9.95	73.77	62.64



SPECTROPHOTOMETRIC ANALYSIS (Ferrous Iron)

Method: SM3500Fe
Analyte: Ferrous Iron
Analyst: MM
Units: mg/L
QCG: 161222A
Notes:
Final Volume: 50mL

Instrument: GENESYS 10UV
Raw Spec: abs. @ 510nm
R-Squared: 0.99983
Reagent (lot#): COLORIZING REAGENT (12/14/16)
BUFFER (12/09/16)

Date	Time	APPL ID	DF	Raw Result	SubSample Amt	Raw BLK	Calc Conc	Result	QC True	QC%
05/20/16	12:37	0 BB 5/20/16	1	0.000						
05/20/16	12:38	1	1	0.101						
05/20/16	12:39	2	1	0.201						
05/20/16	12:39	4	1	0.403						
05/20/16	12:40	5	1	0.512						
05/20/16	12:40	10	1	0.999						
05/20/16	12:41	160520A ICV 3.0	1	0.304	25mL		3.01	3.01	3.000	100.5%
05/20/16	12:42	160520A ICB	1	0.000	25mL		-0.02	-0.02		
12/22/16	16:32	CCV 4.0 161222	1	0.389	25mL		3.86	3.863	4.000	*96.58*
12/22/16	16:33	CCB 161222	1	0.000	25mL		-0.02	-0.023		
12/22/16	16:34	161222A LCS 3.0	1	0.302	25mL		2.99	2.994	3.000	*99.80*
12/22/16	16:35	AZ48083W12	1	0.030	25mL		0.28	0.277		
12/22/16	16:36	AZ48083W12 MS	1	0.332	25mL		3.29	3.294	3.000	*109.79*
12/22/16	16:37	CCV 4.0 161222	1	0.402	25mL		3.99	3.993	4.000	*99.83*
12/22/16	16:38	CCB 161222	1	0.000	25mL		-0.02	-0.023		

Metrohm 814/809 Titrando Data

Sample ID	Analysis Date/Time	Method	Titration Volume (to 8.3)	Titration Volume (total)	OH	CO3	HCO3	Total Alk	Unit	Sample Vol	N	Batch	Initials
AZ48083W11	2017-01-03 13:40:53 UTC-8	Alkalinity	0.000	1.496	0.00	0.00	63.13	63.13	mg/L	25 mL	0.0211	170103A	AH
170103A LCS	2017-01-03 12:07:22 UTC-8	Alkalinity	0.000	5.756	0.00	0.00	242.90	242.90	mg/L	25 mL	0.0211	170103A	AH
170103A Blk	2017-01-03 11:39:28 UTC-8	Alkalinity	0.000	0.038	0.00	0.00	1.60	1.60	mg/L	25 mL	0.0211	170103A	AH

Ferrous Iron Standard Prep

Stock Standard Prep:

Prep Date: 5/20/16
Exp Date: 5/20/17
Prep'd By: BB

CCV Stock (200 mg/L): 0.3502 g $Fe(NH_4)2(SO_4)_2*6H_2O$ EMD Lot #2013050298 up to 250 mL with DI

ICV Stock (200 mg/L): 0.3500 g $Fe(NH_4)2(SO_4)_2*6H_2O$ JT Baker Lot #0000068681 up to 250 mL with DI

QC Prep

Prep Date: 12/22/16
Exp Date: 12/23/16
Prep'd By: MM

CCV (4.0 mg/L): 0.500 mL of CCV Stock (prep: 5/20/16) into 25 mL DI then carried through sample prep procedure

LCS (3.0 mg/L): 0.375 mL of ICV Stock (prep: 5/20/16) into 25 mL DI then carried through sample prep procedure

MS/MSD (3.0 mg/L): 0.375 mL of ICV Stock (prep: 5/20/16) into 25 mL sample then carried through sample prep procedure

METHOD 300 / 9056		ANION STOCK					PW 10/20/16
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)	
O2SI	F-	1,000	1085520-36282	07/24/17	0.25	5	
O2SI*	Cl-	5,000	1069557-34558	01/08/17	0.5	50	
O2SI	NO2-N	1,000	1088548-36281	09/26/17	0.25	5	
Ultra Scientific	Br-	1,000	CL-3274-36926	08/31/20	1.25	25	
O2SI	NO3-N	1,000	1078397-35587	01/30/17	0.5	10	
O2SI	PO4-P	1,000	1072004-34911	09/03/16	0.5	10	
Ultra Scientific	SO4	5,000	CP-1469-36296	04/30/18	0.5	50	
Brought up with milipore water to Final Volume of:						50	

METHOD 300 / 9056		ANION ICV / LCS/MS/MSD				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
CPI	F-	1,000	16B115-36204	09/03/17	0.125	2.50
CPI	Cl-	1,000	16E065-36694	12/06/17	1.00	20.00
CPI	NO2-N	304	15J001-36257	09/24/17	0.50	3.04
CPI	Br-	1,000	15L093-36101	07/21/17	0.625	12.50
CPI	NO3-N	1,000	16E022-36783	12/30/17	0.25	5.00
CPI	PO4-P	1,000	15B116-36258	09/24/17	0.25	5.00
CPI	SO4	1,000	16E104-36693	12/06/17	1.00	20.00
Brought up with milipore water to Final Volume of:					50	

METHOD 300 / 9056			ANION CAL CURVE						
				ICAL #1	ICAL#2	ICAL #3	ICAL #4	ICAL #5	ICAL #6
ID#	mg/L	Prep Date	EXP. DATE	mL	mL	mL	mL	mL	mL
ANION STOCK	100	08/19/16	08/21/16	0.4	2	10	2	7	10
Brought up w/ Milipore Water to final volume of (mL):				50	100	100	10	10	na
Final Conc F (mg/L):				0.04	0.1	0.5	1	3.5	5
Final Conc Cl (mg/L):				0.4	1	5	10	35	50
Final Conc NO2-N (mg/L):				0.04	0.1	0.5	1	3.5	5
Final Conc Br (mg/L):				0.2	0.5	2.5	5	17.5	25
Final Conc NO3-N (mg/L):				0.08	0.2	1	2	7	10
Final Conc PO4-P (mg/L):				0.08	0.2	1	2	7	10
Final Conc SO4 (mg/L):				0.4	1	5	10	35	50

161222 PW

		CCV				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
O2SI	F-	1,000	1085520-36282	07/24/17	0.125	2.50
O2SI	Cl-	5,000	1069557-34558	01/08/17	0.25	25.0
O2SI	NO2-N	1,000	1088548-36281	09/26/17	0.125	2.5
Ultra Scientific	Br-	1,000	CL-3274-36926	08/31/20	0.625	12.50
O2SI	NO3-N	1,000	1078397-35587	01/30/17	0.25	5.0
O2SI	PO4-P	1,000	1072004-34911	09/03/16	0.25	5.0
Ultra Scientific	SO4	5,000	CP-1469-36296	04/30/18	0.25	25.0
Brought up with milipore water to Final Volume of:					50	

METHOD 300 / 9056		ICV LCS MS				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
CPI	F-	1,000	16B115-36204	09/03/17	0.125	2.50
CPI	Cl-	1,000	16E065-36694	12/06/17	1.00	20.00
CPI	NO2-N	304	15C058-35411	09/24/17	0.50	3.04
CPI	Br-	1,000	15L093-36101	07/21/17	0.63	12.50
CPI	NO3-N	1,000	16E022-36783	12/30/17	0.250	5.00
CPI	PO4-P	1,000	15B116-36258	09/24/17	0.25	5.00
CPI	SO4	1,000	16E104-36693	12/06/17	1.00	20.00
Final Volume of Sample: (mL)					50	

Inorganic Spiking Solution

7.0001g NaHCO3 BDH lot#1575C510
Final vol 1L w/DI water
Prep: 12/28/16
Exp: 05/28/17
AH

0.02N H_2SO_4 Titrant for Alkalinity

400 mL 0.1N H_2SO_4 (prep 11/16/16)
Final vol 2L w/ DI water
Prep 11/21/16
Exp 11/21/17
AH 11/21/16

SM3500 Injection Log

Directory: I:\Spec Sheets\Ferrous Iron (Fe2)\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	20 May 2016	12:37	0 BB 5/20/16		161222a	1.
2	20 May 2016	12:38	1		161222a	1.
4	20 May 2016	12:39	2		161222a	1.
3	20 May 2016	12:39	4		161222a	1.
6	20 May 2016	12:40	10		161222a	1.
5	20 May 2016	12:40	5		161222a	1.
7	20 May 2016	12:41	160520A ICV 3.0		161222a	1.
8	20 May 2016	12:42	160520A ICB		161222a	1.
9	22 Dec 2016	16:32	CCV 4.0 161222		161222a	1.
10	22 Dec 2016	16:33	CCB 161222		161222a	1.
11	22 Dec 2016	16:34	161222A LCS 3.0		161222a	1.
12	22 Dec 2016	16:35	AZ48083W12		161222a	1.
14	22 Dec 2016	16:37	CCV 4.0 161222		161222a	1.
15	22 Dec 2016	16:38	CCB 161222		161222a	1.

300/9056A Injection Log

Directory: I:\Dionex\Charlie\Anions\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
14	20 Oct 2016	11:19	ICAL 1 10/20/16		161020	1.
15	20 Oct 2016	11:32	ICAL 2 10/20/16		161020	1.
16	20 Oct 2016	11:45	ICAL 3 10/20/16		161020	1.
17	20 Oct 2016	11:58	ICAL 4 10/20/16		161020	1.
18	20 Oct 2016	12:11	ICAL 5 10/20/16		161020	1.
19	20 Oct 2016	12:24	ICAL 6 10/20/16		161020	1.
20	20 Oct 2016	12:37	ICV 1601020		161020	1.
21	20 Oct 2016	12:50	ICB		161020	1.

300/9056A Injection Log

Directory: I:\Dionex\Charlie\Anions\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
4	22 Dec 2016	16:48	CCV 161222		161222	1.
5	22 Dec 2016	17:01	CCB		161222	1.
6	22 Dec 2016	17:14	161222A LCS		161222	1.
8	22 Dec 2016	17:40	AZ48083W11		161222	1.
20	22 Dec 2016	20:17	CCV 161222		161222	1.
21	22 Dec 2016	20:30	CCB		161222	1.

310/SM2320B Injection Log

Directory: I:\Tiamo\EXPORT\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	03 Jan 2017	11:39	170103A Blk		170103A_AL	1.
2	03 Jan 2017	12:07	170103A LCS		170103A_AL	1.
7	03 Jan 2017	13:40	AZ48083W11		170103A_AL	1.

908 North Temperance Ave. ∇ Clovis, CA 93611 ∇ Phone 559-275-2175 ∇ Fax 559-275-4422

Certification Number: CA1312
NELAP Certification number: CA00046
DoD-ELAP Certificate number: 4064.01

Data Validatable Report

January 23, 2017

AECOM
1001 Bishop Street, Suite 1600
Honolulu, Hawaii 96813

Attn: Margie Thach

Title: Report of Data: Case 81936

Project: 60481245 CIV0053 Red Hill Fuel Storage. HI

Contract #: Prime contract # for DoD: NAVY CLEAN N62742-12-D-1829, CTO 0053
Subcontract: 14S-16234-HI16

Dear Ms. Thach:

Five water samples were received January 10, 2017. Written results for the requested analyses are being provided on this January 23, 2017.

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

If you have any questions or require further information, please contact your APPL Project Manager, Libby Cheeseborough, libby@applinc.com, at your convenience. Thank you for choosing APPL, Inc.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. These test results meet all requirements of NELAC and DoD QSM. Release of the hard copy has been authorized by the Laboratory Manager or her designee, as verified by the following signature.

Paula McCartney

Paula McCartney, Laboratory Director
APPL, Inc.

PM/rp
Enclosure
cc: File

Number of pages in this report: 616

Data Validation Package
for
60481245 CIV 0053 Red Hill Fuel Storage
APPL SDG 81936
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CASE NARRATIVE

Case Narrative

ARF: 81936

Project: 60481245 CIV0053 Red Hill Fuel Storage. HI

Sample Receipt Information:

Five water samples were received January 10, 2017, at 3.5°C, 3.0°C, and 3.0°C. The sample group was assigned Analytical Request Form (ARF) number 81936. A metals container was received for sample ERH166. No other exception was encountered.

Sample Preparation and Analysis Information:

For the EPA 8015B analysis, the samples were extracted according to EPA method 3510C.

For the EPA 8270D SIM analysis, the samples were extracted according to EPA method 3510C.

For the EPA 8270D Phenol analysis, the samples were extracted according to EPA method 3510C.

For the APPL SOP ANA2MEE analysis, the samples were extracted according to EPA method 3535.

For the EPA 8260B BTEX and GRO analyses, the samples were purged according to EPA method 5030B.

For the RSK-175 analysis, the samples were allowed to equilibrate for 10 minutes at 40°C and a portion of the headspace was analyzed.

For the EPA 300.0, SM 2320B and 3500FeB analyses, the samples were prepared according to the methods.

Only the portion of the injection log relative to these samples is included. A full sequence log is available upon request.

Measurement uncertainty can be reported upon request.

Analytical Exceptions, Deviations and Abnormalities.

EPA 8270D SIM: Manual integrations were performed in accordance with APPL's SOP. 1-Methylnaphthalene was manually integrated in the calibration standards. Before and after chromatograms are included in the package.

APPL SOP ANA2MEE: Manual integrations were performed in accordance with APPL's SOP. 2-(2-Methoxyethoxy) ethanol was manually integrated in the lab control spike. Before and after chromatograms are included in the package.

SM 2320B: Alkalinity was detected above one-half the LOQ in the method blank. The sample contained greater than ten times the concentration detected in the method blank.

SDG	Received	APPL ID	Client ID	Collected Date	Collected Time	Matrix	Method	Method Description
81936	01/10/17	AZ48676	ERH166	01/09/17	10:00 AM	WATER	SM 2320B	Wetlab 2320B - Water
81936	01/10/17	AZ48676	ERH166	01/09/17	10:00 AM	WATER	EPA 300.0	Wetlab 300.0 - Water
81936	01/10/17	AZ48676	ERH166	01/09/17	10:00 AM	WATER	SM3500FeB	Ferrous Iron
81936	01/10/17	AZ48676	ERH166	01/09/17	10:00 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
81936	01/10/17	AZ48676	ERH166	01/09/17	10:00 AM	WATER	EPA 8270D^AECOM	EPA 8270D WATER
81936	01/10/17	AZ48676	ERH166	01/09/17	10:00 AM	WATER	EPA 8270D^AECOM	EPA 8270D MODIFIED WATER
81936	01/10/17	AZ48676	ERH166	01/09/17	10:00 AM	WATER	EPA 8015B-eLL	EPA 8015B TPH WATER
81936	01/10/17	AZ48676	ERH166	01/09/17	10:00 AM	WATER	EPA 8260-GAS	EPA 8260 with GAS
81936	01/10/17	AZ48676	ERH166	01/09/17	10:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
81936	01/10/17	AZ48676	ERH166	01/09/17	10:00 AM	WATER	RSK 175^2015	METHANE BY RSK 175
81936	01/10/17	AZ48676	ERH166	01/09/17	10:00 AM	WATER	8270D-SIM	EPA 8270D SIM
81936	01/10/17	AZ48677	ERH165	01/09/17	08:25 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
81936	01/10/17	AZ48677	ERH165	01/09/17	08:25 AM	WATER	EPA 8260-GAS	EPA 8260 with GAS
81936	01/10/17	AZ48677	ERH165	01/09/17	08:25 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
81936	01/10/17	AZ48677	ERH165	01/09/17	08:25 AM	WATER	RSK 175^2015	METHANE BY RSK 175
81936	01/10/17	AZ48678	ERH191	01/06/17	11:20 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
81936	01/10/17	AZ48678	ERH191	01/06/17	11:20 AM	WATER	EPA 8270D^AECOM	EPA 8270D WATER
81936	01/10/17	AZ48678	ERH191	01/06/17	11:20 AM	WATER	EPA 8270D^AECOM	EPA 8270D MODIFIED WATER
81936	01/10/17	AZ48678	ERH191	01/06/17	11:20 AM	WATER	EPA 8015B-eLL	EPA 8015B TPH WATER
81936	01/10/17	AZ48678	ERH191	01/06/17	11:20 AM	WATER	EPA 8260-GAS	EPA 8260 with GAS
81936	01/10/17	AZ48678	ERH191	01/06/17	11:20 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
81936	01/10/17	AZ48678	ERH191	01/06/17	11:20 AM	WATER	8270D-SIM	EPA 8270D SIM
81936	01/10/17	AZ48679	ERH192	01/06/17	11:30 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
81936	01/10/17	AZ48679	ERH192	01/06/17	11:30 AM	WATER	EPA 8270D^AECOM	EPA 8270D WATER
81936	01/10/17	AZ48679	ERH192	01/06/17	11:30 AM	WATER	EPA 8270D^AECOM	EPA 8270D MODIFIED WATER
81936	01/10/17	AZ48679	ERH192	01/06/17	11:30 AM	WATER	EPA 8015B-eLL	EPA 8015B TPH WATER
81936	01/10/17	AZ48679	ERH192	01/06/17	11:30 AM	WATER	EPA 8260-GAS	EPA 8260 with GAS
81936	01/10/17	AZ48679	ERH192	01/06/17	11:30 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
81936	01/10/17	AZ48679	ERH192	01/06/17	11:30 AM	WATER	8270D-SIM	EPA 8270D SIM
81936	01/10/17	AZ48680	ERH193	01/06/17	11:10 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
81936	01/10/17	AZ48680	ERH193	01/06/17	11:10 AM	WATER	EPA 8260-GAS	EPA 8260 with GAS
81936	01/10/17	AZ48680	ERH193	01/06/17	11:10 AM	WATER	EPA 8260B	EPA 8260B GRO WATER

APPL Inc.
Abbreviations and Flags

FLAG	DESCRIPTION
#	Recovery or RPD outside control limits
*	Recovery or RPD outside control limits
B	Analyte detected in associated method blank
C1	Reason for correction: wrote incorrect response
C2	Reason for correction: calculated incorrectly
C3	Reason for correction: needs to be rechecked
C4	Reason for correction: data not usable
DO	Diluted out
E	Exceeds linear range
F	Estimated value
G1	Includes a wide range of hydrocarbons which does not match our gasoline standard
G10	Includes a match to hydrocarbon profiles within the range of mineral spirits
G11	Includes a match to hydrocarbon profiles within the range of JP-4
G12	Pattern does not match the gasoline standard; the carbon range for this sample is consistent with JP8
G13	Closely resembles the hydrocarbon profile of aviation gasoline
G14	Analyte concentration may be biased due to carry over
G2	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G3	Includes higher boiling hydrocarbons
G4	Includes dominant peak(s) not indicative of petroleum hydrocarbons
G5	Is mainly dominant peak(s) not indicative of petroleum hydrocarbons
G6	Contains recognizable contaminant peak(s) which has been removed from quantitation
G7	Is mainly a match to hydrocarbons within the range of gasoline
G8	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G9	Includes hydrocarbons within the range of kerosene
J	Estimated value
M	Matrix effect
MI1	Manual integration: integration does not follow baseline
MI2	Manual integration: non-target peak interference
MI3	Manual integration: to split a peak that was integrated as one peak by the computer.
MI4	Manual integration: to integrate a split peak
MI5	Manual integration: the whole peak or part of the peak was not integrated
MI6	Manual integration: computer integrated wrong peak
MI7	Manual integration: other – (See case narrative)
MDL	Method detection limit
ND	Not detected
NT	Non-target
Q	Acceptance criteria not met
T1 I	Includes wide range of hydrocarbons not indicative of diesel
T1 M	Is mainly wide range of hydrocarbons not necessarily indicative of diesel
T2 I	Includes lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T2 M	Is mainly lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T3 I	Includes higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T3 M	Is mainly higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T4 I	Includes dominant peak(s) not indicative of hydrocarbons
T4 M	Is mainly dominant peak(s) not indicative of hydrocarbons
T5	Contains recognizable contaminant peak(s) which has been removed from quantitation
T6	Is mainly a match to hydrocarbons within range of diesel fuel
T7	Closely resembles the boiling point hydrocarbon profile consistent with diesel fuel
T8	Includes a match to hydrocarbon profiles within range of diesel and kerosene fuel
T9 I	Includes non-diesel hydrocarbons within boiling point range of diesel fuel
T9 M	Is mainly non-diesel hydrocarbons within boiling point range of diesel fuel
U	Not detected
Y	Percent difference between primary and confirmation column > 40%

SAMPLE MANAGEMENT RECORDS

CHAIN OF CUSTODY,

ARF, CRF, AND

CLIENT COMMUNICATION

APPL - Analysis Request Form 81936

Client: AECOM
Address: 1001 Bishop Street, Suite 1600
Honolulu, HI 96813
Attn: Margie Thach
Phone: 808-356-5373 Fax: 808-523-8950
Job: 60481245 CIV0053 Red Hill Fuel Storage
PO #: 14S-16234-HI16, PO# 77265
Chain of Custody (Y/N): Y # 010917a,b,c
RAD Screen (Y/N): Y pH (Y/N): Y
Turn Around Type: ONE WEEK

Received by: SMA
Date Received: 01/10/17 Time: 09:40
Delivered by: FED EX
Shuttle Custody Seals (Y/N): Y Time Zone: -10
Chest Temp(s): 2X3.0, 3.5°C
Color: VOA/E-BROWN/R-ORNGYL
Samples Chilled until Placed in Refrig/Freezer: Y
Project Manager: Libby Cheesebor
QC Report Type: DVP4DOD/EQUIS/HI
Due Date: 01/17/17

Comments:
1-week TAT for Form 1s; 21 day TAT for DVP; F1s, login to Margie.Thach@aecom.com
A: DOD QSM ver 5.0; DOD Forms (LOQ/LOD database/DL) Print ND as LOD w/U Qual.
8260: BTEX & TPH-G only; 8270 SIM: 1-methylnaphthalene, 2-methylnaphthalene & naphthalene only.
TPH D & O; RSK: Methane only;
$87DC53W5: report phenol only; $87DMEEW5: 2-MEE (LCS Spk 80ppb).
FR: HC to LDC, 2 labeled CDs to Margie Thach. Before FR is sent, the PM needs to review after Admin Review is complete.
EDD: AECOM EQuIS EDD 2.5.3 to Margie.Thach@aecom.com & jecklund@lab-data.com

Sample Distribution:
GC: 3-$87DC53W5, 3-$87DMEEW5, 3-$DOC53W5, 3-$SIMDOD5W
Extractions: 3-_MWE2MEE, 3-_SEP004, 3-_SEP004S, 3-_SEP011LL
VOA: 5-$86BTOTXDOD5W, 5-$GASBL, 5-$GRO86BW, 2-$RSKMETH
Wetlab: 1-$232W(HCO3,CO3,ALK), 1-$300W(NO3,CL,SO4), 1-$35FE

Charges:

Invoice To:
ACCOUNTS PAYABLE
1001 Bishop Street, Ste 1600
USAPImaging@aecom.com
mary.basano@aecom.com

	Client ID	APPL ID	Sampled	Analyses Requested
1.	ERH166	AZ48676W	01/09/17 10:00	$232W(HCO3,CO3,ALK), $300W(NO3,CL,SO4), $35FE, $86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $RSKMETH, $SIMDOD5W
2.	ERH165	AZ48677W	01/09/17 08:25	$86BTOTXDOD5W, $GASBL, $GRO86BW, $RSKMETH
3.	ERH191	AZ48678W	01/06/17 11:20	$86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $SIMDOD5W

Note: All times, excluding sample collection times, are Pacific Time Zone unless noted otherwise. Collection times are in: -10 UTC

4.	ERH192	AZ48679W	01/06/17	11:30	$86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $SIMDOD5W
5.	ERH193	AZ48680W	01/06/17	11:10	$86BTOTXDOD5W, $GASBL, $GRO86BW

APPL Sample Receipt Form

ARF# **81936**

Sample	Container Type	Count	pH
AZ48676	[3] PL 250mL	1	NA
	[6] PL 500mL - HNO3	1	NA
	[13] VOAs - HCL	6	NA
	[17] Amber Liter	5	NA
	[17] Amber Liter	1	1.7
	[38] 250mL brn poly, HCl prsvd	1	NA
AZ48677	[13] VOAs - HCL	5	NA
AZ48678	[13] VOAs - HCL	4	NA
	[17] Amber Liter	6	NA
AZ48679	[13] VOAs - HCL	4	NA
	[17] Amber Liter	6	NA
AZ48680	[13] VOAs - HCL	5	NA

Sample	Container Type	Count	pH

RECEIVING APPL

From: RECEIVING APPL <receiving@applinc.com>
Sent: Tuesday, January 10, 2017 12:26 PM
To: libby@applinc.com
Cc: cmoua@applinc.com; danderson@applinc.com; rpatterson@applinc.com; pyoung@applinc.com
Subject: ARF 81936 Receiving Notes
Attachments: COC81936_20170110_0956.pdf

Libby,

Client: AECOM
Job: 60481245 CIV0053 Red Hill Fuel Storage

- Received plastic 500 mL w/ HNO3 for metals but no metals analysis on COC. This is for sample ERH166.

Thanks,

Yang Lor

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C.

Report to: PLEASE PRINT

Company Name: AECOM Phone: 808-356-5373
Address: 1001 Bishop St. Suite 1600
Honolulu, Hawaii 96813 Fax:
Attn: Margie Thach Email: margie.thach@aecom.com

Invoice to: PLEASE PRINT

Company Name: AECOM Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600
Honolulu, Hawaii 96813 Fax:
Attn: Mary Basano Email: mary.basano@aecom.com

Project Name/Number: CIV 53 / 60481245
Purchase Order Number: 77265
Sampler (Print): AM ICB
Sampler (Signature): Kalla for AM ICB

Date Shipped: 1/9/17
Carrier: Fed Ex
Tracking No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil	8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O w/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate,Sulfate,Chloride	RSK175M Methane	Comments
ERH 166	RHMW04	1/9/17	1000	HST	15	X			X	X			X	X	X	X	X	X	X	X	X
ERH 165	Trip Blank	1/9/17	0825	HST	5	X			X	X					ES					X	
									YS												

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Isaela Shigi, AECOM	1/9/17	1400					
Relinquished by:	**Date**	**Time**	**Received by:**	**Relinquished by:**	**Date**	**Time**	**Received at lab by:**
					1/10/17	09:40	Yang

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C.

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number	Sampler (Print)	Purchase Order Number	Sampler (Signature)
CIV 53 / 60481245	AM + KE	77265	Kaela for AM/KE

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil	Matrix:	8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	8015C/8015C TPH-D/O W/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate,Sulfate,Chloride	RSK175M Methane	NL SM2320B
ERH 191	EB#1	1/6/17	1120	HST	6	X								X	X	X ES	X	X				

Date Shipped: 1/9/17
Carrier: FedEx
Tracking No.:
Comments:

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Kaela Shiigi	1/9/17	1400					
Relinquished by:	**Date**	**Time**	**Received by:**	**Relinquished by:**	**Date**	**Time**	**Received at lab by:**
					1/10/17	09:40	Jang Zn

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

81936 2x 3.0 3.5

APPL LABS

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C.

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number	Sampler (Print)
CIV 53 / 60481245	AM & KE
Purchase Order Number	**Sampler (Signature)**
77265	Kaela Shiigi for AM/KE

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil	Matrix:	8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3550C/8015C TPH-D/O w/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate,Sulfate,Chloride	RSK175M Methane	AW SM3500
ERH 191	EB #1	1/6/17	1120	HST	4	X				X	X			~~X~~	~~X~~ ES, 1/9/17							
ERH 192	EB #2	1/6/17	1130	HST	10	X				X	X			X	X	X	X	X				
ERH 193	Trip Blank	1/6/17	1110	HST	5	X				X	X					ES						

Analysis Requested/Method Number

Date Shipped: 1/9/17
Carrier: Fed Ex
Tracking No.:
Comments:

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Kaela Shiigi	1/9/17	1400					
Relinquished by:	**Date**	**Time**	**Received by:**	**Relinquished by:**	**Date**	**Time**	**Received at lab by:**
					1/10/17	09:40	Yang Zou

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

COOLER RECEIPT FORM **ARF: 81936**

1) Project: 60481245 CIV0053 Red Hill Fuel Storage Date Received: 01/10/17

2) Coolers: Number of Coolers: 2

3) YES Were custody seals present and intact?
How many? 6 Name/Date on seal? See below

4) YES Was there a shipping slip? Carrier name: FED EX

5) Type of packing in cooler: X bubble wrap __popcorn __foam X plastic bags
X wet ice __dry ice __no ice __other

6) YES Were cooler temperatures acceptable?

7) Serial number of certified NIST thermometer use J5297

8) Cooler temp(s): In °C
1: 3.0 2: 3.0 3: 3.5 4: ____ 5: ____ 6: ____
7: ____ 8: ____ 9: ____ 10: ____ 11: ____ 12: ____

Chain of custody:

9) YES Was a chain of custody received?

10) YES Were the custody papers complete/signed in the appropriate places?

Sample Labels:

11) YES Were all sample labels complete (sample ID, date/time of sampling, etc.)?

12) YES Did all container labels agree with custody papers?

Sample Containers:

13) YES Were all containers sealed in separate bags?

14) YES Did all containers arrive in good condition:(unbroken, no leakage, no cracked/broken lids)?

15) YES Were correct containers and preservatives used for the tests indicated?

16) YES Was a sufficient amount of sample sent for tests indicated?

17) No Were bubbles present in volatile samples?
If yes, the following were received with air bubbles:
Larger than a pea: ____
Smaller than a pea: ____

Preservation Hold time:

18) Yes Was a sufficient amount of holding time remaining to analyze the samples?

19) Yes Was the pH taken of all non-VOA preserved samples and written on the sample container?

20) Yes Was the pH of acid preserved non-VOA samples < 2?

21) NA Was the pH of sodium hydroxide preserved samples for Cyanide > 12 and Sulfide >9?

22) NO Were unpreserved VOA Vials received?

23) NA Are unpreserved VOA vials noted in the ADD TEST FIELD on the ARF?
pH strip lot number: 90B2031
Lab notified if pH was not adequate: ____

Notes/Deficiencies:
Received plastic 500 mL w/ HNO3 for metals but no metals analysis on COC. This is for sample ERH166.

CUSTODY SEAL
APPL, Inc.
(559) 275-2175
Initials MT
Date 1/9/17

Personnel receiving samples: YL Second reviewer: SM
Personnel labeling samples: ____
Project manager notified: YL Date/Time of notification 1/10/17 12:26
Name of client notified: ____ Date/Time of notification ____

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank
EPA 8015B TPH WATER

Blank Name/QCG: **170112W-48676 - 215565**
Batch ID: #DOC53-170112A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	01/12/17	01/17/17
BLANK	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	01/12/17	01/17/17
BLANK	SURROGATE: OCTACOSANE (S)	93.7	60-142			%	01/12/17	01/17/17
BLANK	SURROGATE: ORTHO-TERPHEN	78.1	56-125			%	01/12/17	01/17/17

Quant Method: DOC1103.M
Run #: 117004
Instrument: Apollo
Sequence: 170117
Initials: DPO

GC SC-Blank-REG MDLs-DOD
Printed: 01/17/17 3:51:56 PM

EPA 8015B-eLL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81936

Case No: 81936 Date Analyzed: 01/17/17

Matrix: WATER Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: OCTACOSANE (S)			SURROGATE: ORTHO-TERPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
170112A-BLK	Blank	60-142	93.7		56-125	78.1	
170112A-LCS	Lab Control Spike	60-142	96.3		56-125	100	
AZ48676	ERH166	60-142	94.1		56-125	80.5	
AZ48678	ERH191	60-142	92.3		56-125	78.9	
AZ48679	ERH192	60-142	92.1		56-125	78.1	

Comments: Batch: #DOC53-170112A

Laboratory Control Spike Recovery
EPA 8015B TPH WATER

APPL ID: **170112W-48676 LCS - 215565**
Batch ID: #DOC53-170112A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
DIESEL (C10-C24)	1330	929	69.7	36-132
OIL (C24-C40)	1330	950	71.3	41-113
SURROGATE: OCTACOSANE (S)	40.0	38.5	96.3	60-142
SURROGATE: ORTHO-TERPHENYL (S)	40.0	40.0	100	56-125

Comments: _____

Primary	SPK
Quant Method :	DOC1103.M
Extraction Date :	01/12/17
Analysis Date :	01/17/17
Instrument :	Apollo
Run :	117005
Initials :	DPO

Printed: 01/17/17 3:51:52 PM
APPL Standard LCS

EPA 8015B-eL

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81936

Case No: 81936 Date Analyzed: 01/17/17

Matrix: WATER Instrument: Apollo

Blank ID: 170112A-BLK Time Analyzed: 1306

APPL ID.	Client Sample No.	File ID.	Date Analyzed
170112A-BLK	Blank	117004	01/17/17 1306
170112A-LCS	Lab Control Spike	117005	01/17/17 1326
AZ48676	ERH166	117009	01/17/17 1449
AZ48678	ERH191	117010	01/17/17 1509
AZ48679	ERH192	117011	01/17/17 1530

Comments: Batch: #DOC53-170112A

Printed: 01/17/17 3:51:49 PM

Form 4, Blank Summary

ORGANICS

Sample Data

APPL, INC.

EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81936

Sample ID: ERH166

APPL ID: AZ48676

Sample Collection Date: 01/09/17

QCG: #DOC53-170112A-215565

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	01/12/17	01/17/17
EPA 8015B-eL	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	01/12/17	01/17/17
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	94.1	60-142			%	01/12/17	01/17/17
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	80.5	56-125			%	01/12/17	01/17/17

Quant Method: DOC1103.M
Run #: 117009
Instrument: Apollo
Sequence: 170117
Dilution Factor: 1
Initials: DPO

Printed: 01/17/17 3:51:47 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\170117\117009.D Vial: 9
Acq On : 1-17-17 14:49:03 Operator: DP
Sample : AZ48676W10 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Jan 17 15:12 2017 Quant Results File: DOC1103.RES

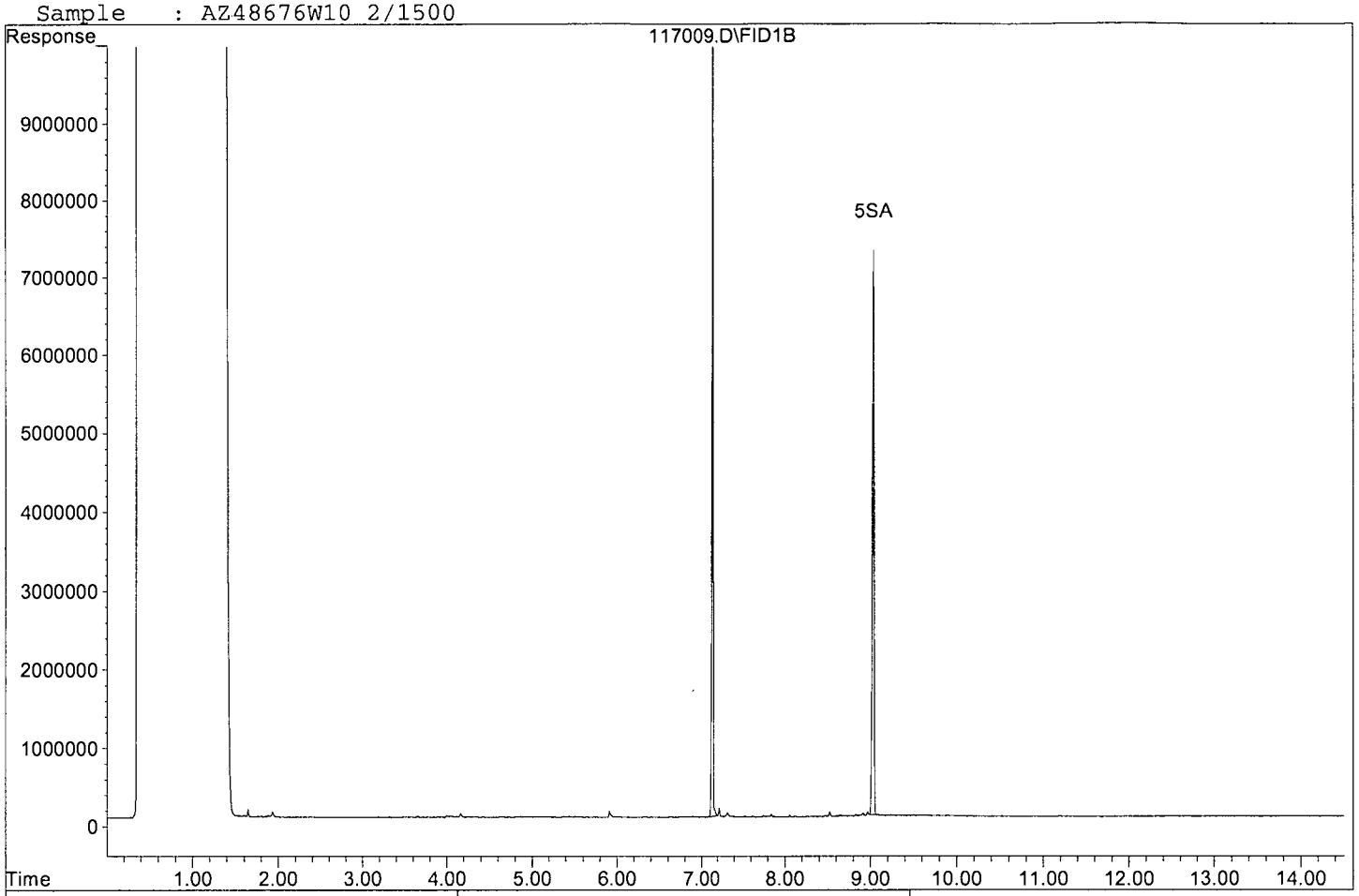
Method : G:\APOLLO\DATA\170117\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

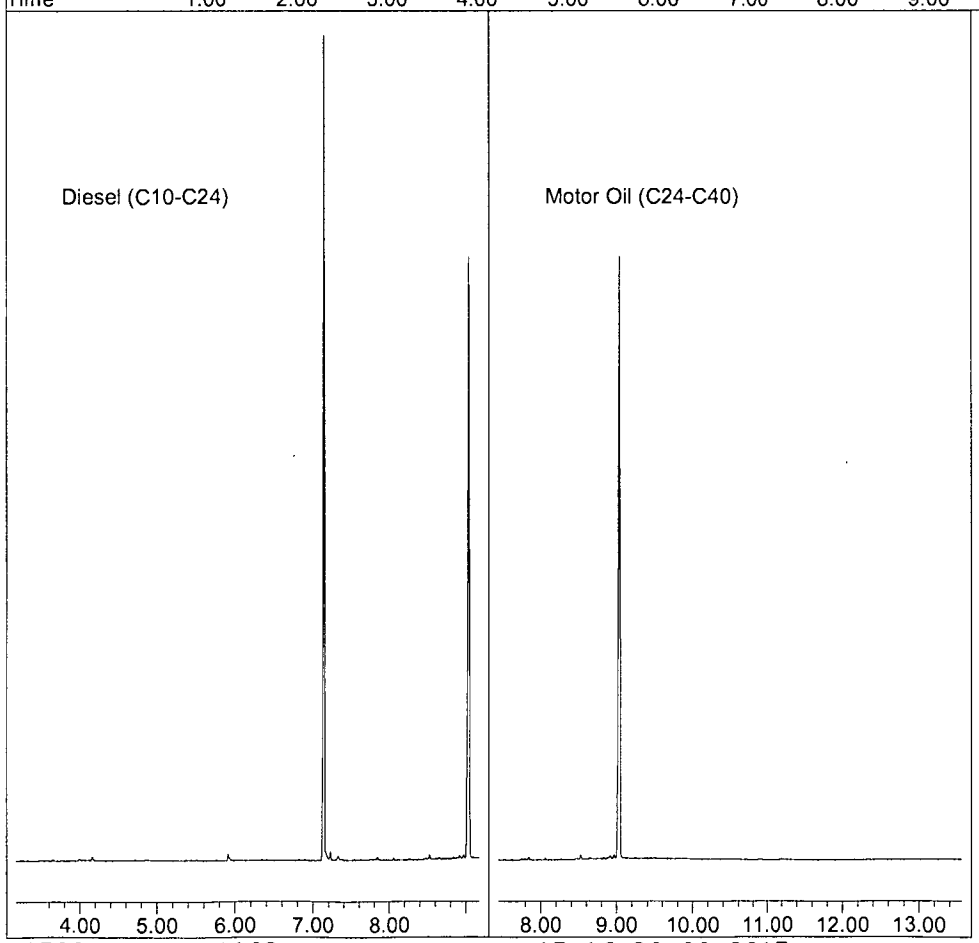
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.14	112701875	32.216 ppb
Surrogate Spike 40.000		Recovery =	80.54%
5) SA Octacosane(S)	9.04	98836106	37.655 ppb
Surrogate Spike 40.000		Recovery =	94.14%
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\170117\117009.D
Sample : AZ48676W10 2/1500





EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH191
Sample Collection Date: 01/06/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81936
APPL ID: AZ48678
QCG: #DOC53-170112A-215565

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	01/12/17	01/17/17
EPA 8015B-eL	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	01/12/17	01/17/17
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	92.3	60-142			%	01/12/17	01/17/17
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	78.9	56-125			%	01/12/17	01/17/17

Quant Method: DOC1103.M
Run #: 117010
Instrument: Apollo
Sequence: 170117
Dilution Factor: 1
Initials: DPO

Printed: 01/17/17 3:51:47 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\170117\117010.D Vial: 10
Acq On : 1-17-17 15:09:41 Operator: DP
Sample : AZ48678W10 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Jan 17 15:25 2017 Quant Results File: DOC1103.RES

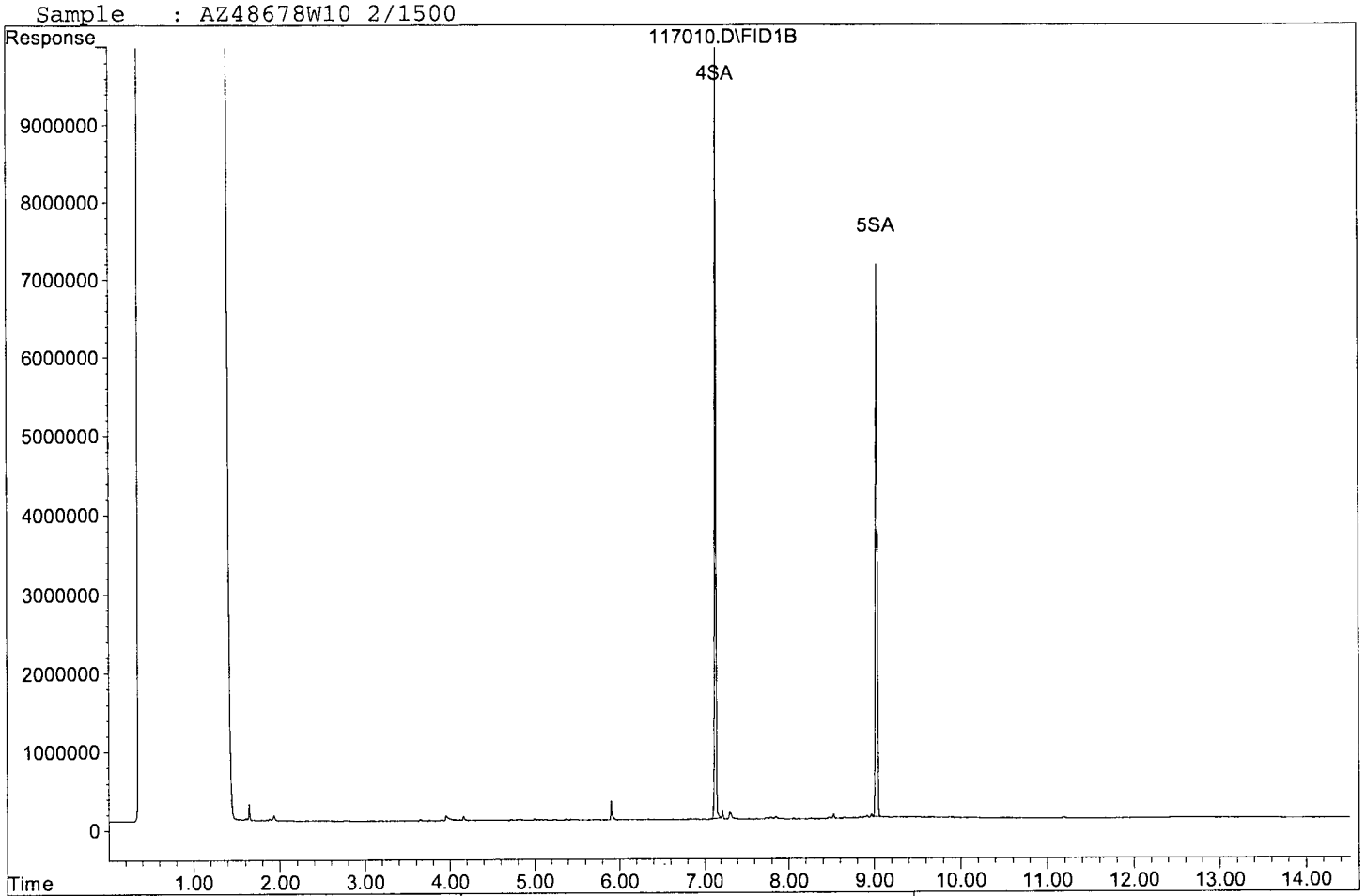
Method : G:\APOLLO\DATA\170117\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

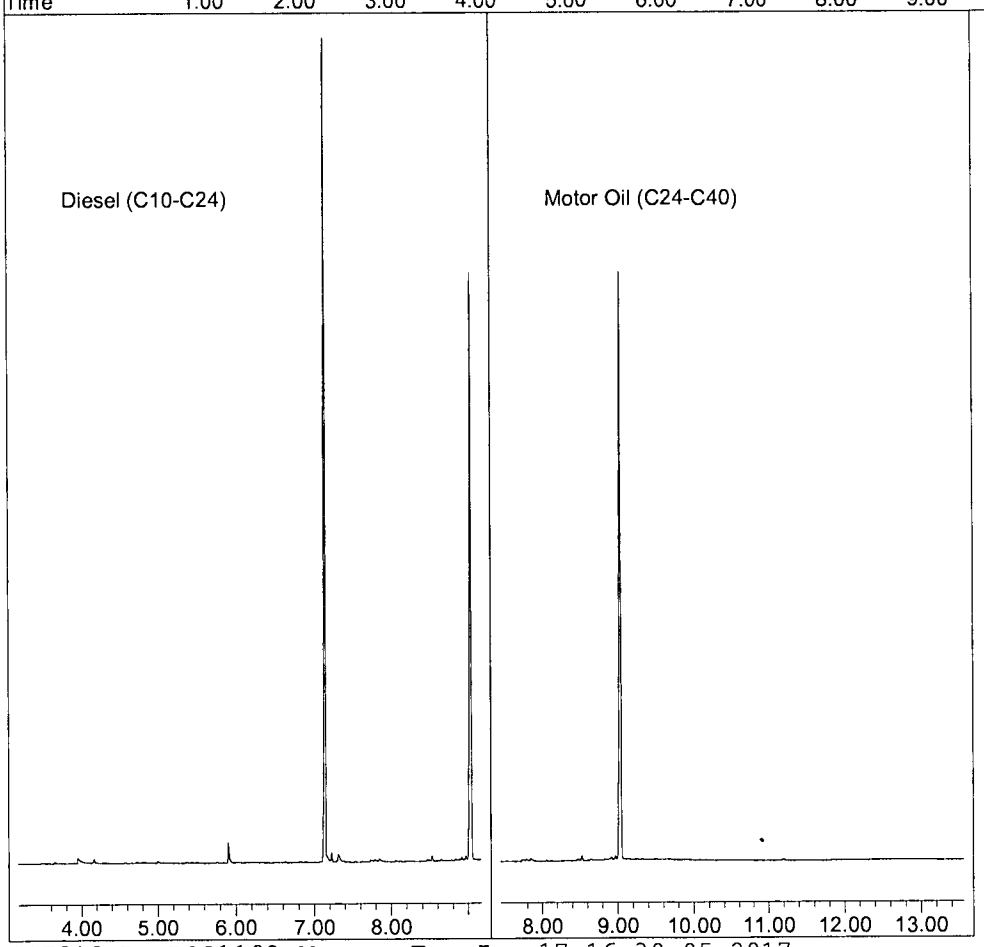
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.14	110342398	31.541	ppb
Surrogate Spike 40.000		Recovery =	78.85%	
5) SA Octacosane(S)	9.04	96917998	36.924	ppb
Surrogate Spike 40.000		Recovery =	92.31%	
Target Compounds				

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\170117\117010.D
Sample : AZ48678W10 2/1500





EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH192

Sample Collection Date: 01/06/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81936

APPL ID: AZ48679

QCG: #DOC53-170112A-215565

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	42 ++	40.0	25.00	13.07	ug/L	01/12/17	01/17/17
EPA 8015B-eL	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	01/12/17	01/17/17
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	92.1	60-142			%	01/12/17	01/17/17
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	78.1	56-125			%	01/12/17	01/17/17

++(T4I) The analyst has noted that the chromatogram of this sample includes a dominant peak(s) which is not indicative of petroleum hydrocarbons.

Quant Method: DOC1103.M
Run #: 117011
Instrument: Apollo
Sequence: 170117
Dilution Factor: 1
Initials: DPO

Printed: 01/17/17 3:51:47 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\170117\117011.D Vial: 11
Acq On : 1-17-17 15:30:14 Operator: DP
Sample : AZ48679W08 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Jan 17 15:48 2017 Quant Results File: DOC1103.RES

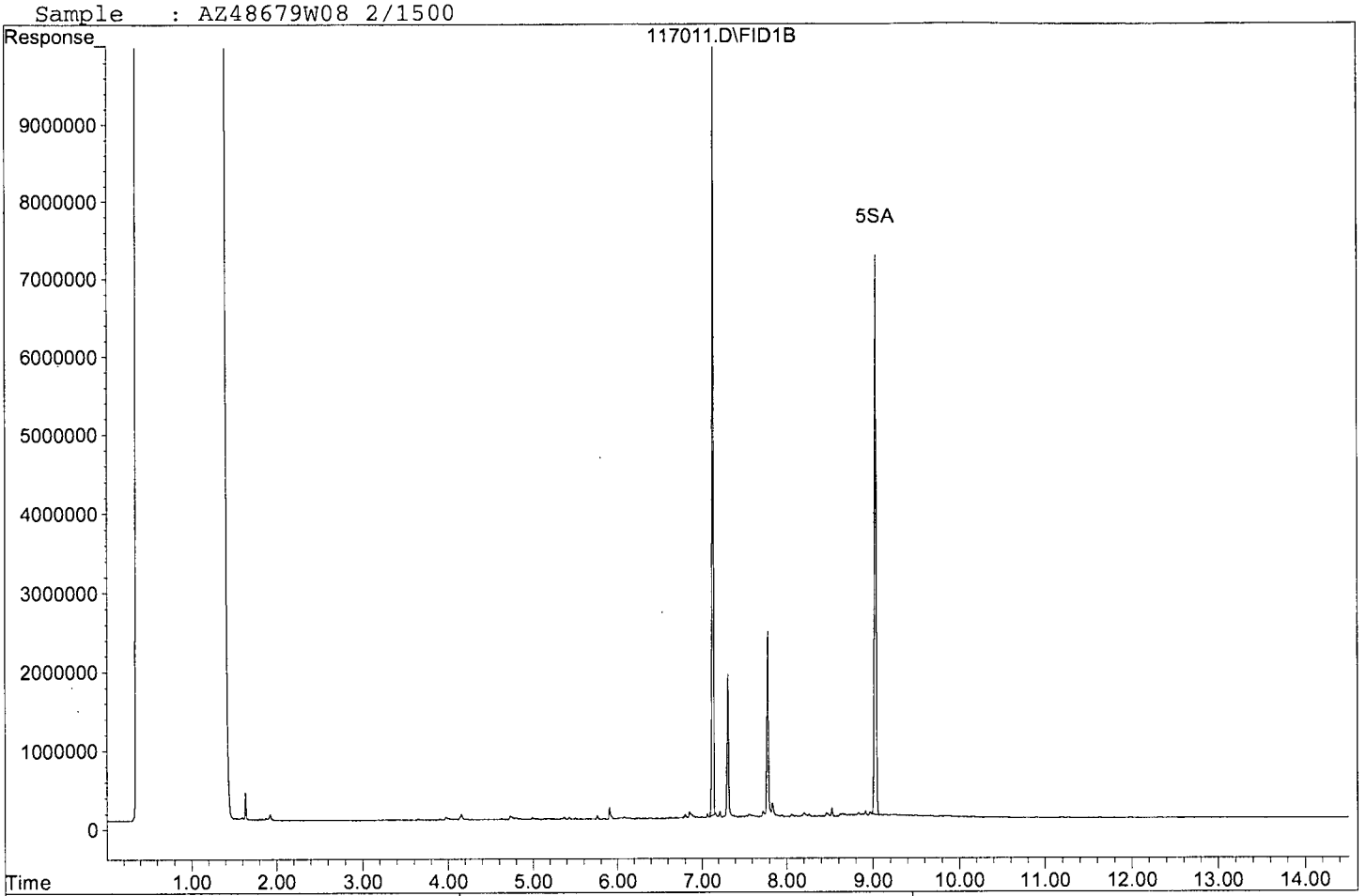
Method : G:\APOLLO\DATA\170117\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

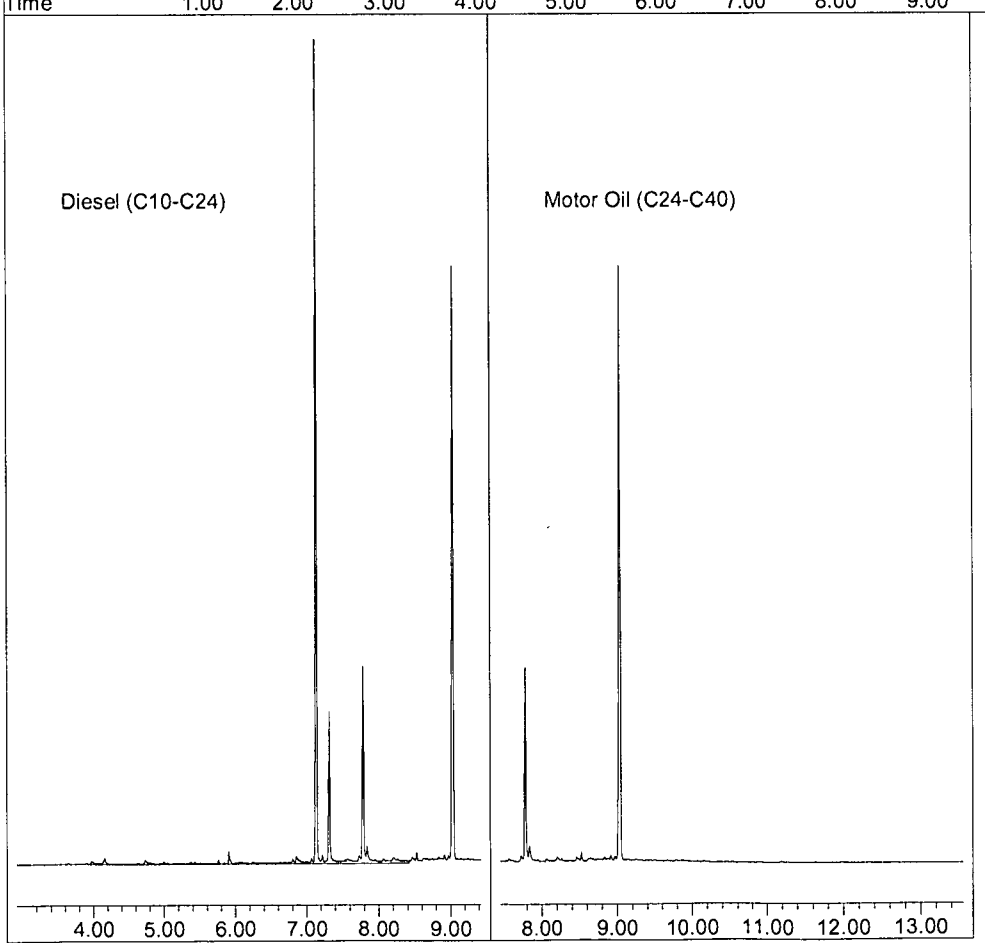
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.14	109265795	31.233 ppb
Surrogate Spike 40.000		Recovery =	78.08%
5) SA Octacosane(S)	9.04	96716485	36.848 ppb
Surrogate Spike 40.000		Recovery =	92.12%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	109139165	42.127 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\170117\117011.D
Sample : AZ48679W08 2/1500





ORGANICS

Calibration Data

APPL, INC.

TPH Extractables
DOC1103

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 11/03/16
Matrix: Instrument: Apollo
Initials:

			1	2	3	4	5	6					Avg	%RSD		
		Compound														
Diesel:			1103004.D	1103011.D	1103006.D	1103007.D	1103008.D	1103009.D								
Motor Oil:			1028002.D	1028003.D	1028004.D	1028005.D	1028006.D	1028007.D								
1	HATM	Diesel (C10-C24)	1713970	2056602	1625582	1697733	1643335	1625559					1727130	9.6	HATM	
2	HBTM	Motor Oil (C24-C40)	1562690	1603769	1282978	1340015	1321969	1245819					1392873	11	HBTM	
3	SC	Decanoic Acid(S)	436509	643644	711658	659596	590571	627574					611592	15	SC	
4	SA	Ortho-Terphenyl(S)		2687660	2255130	2296757	2215766	2205848					2332232	8.7	SA	
5	SA	Octacosane(S)	1736016	2067699	1697441	1704564	1657038	1636278					1749839	9.1	SA	
6																
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1.5347542

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161103\1103004.D Vial: 4
Acq On : 11-3-16 9:45:14 Operator: DP
Sample : DIESEL 10ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

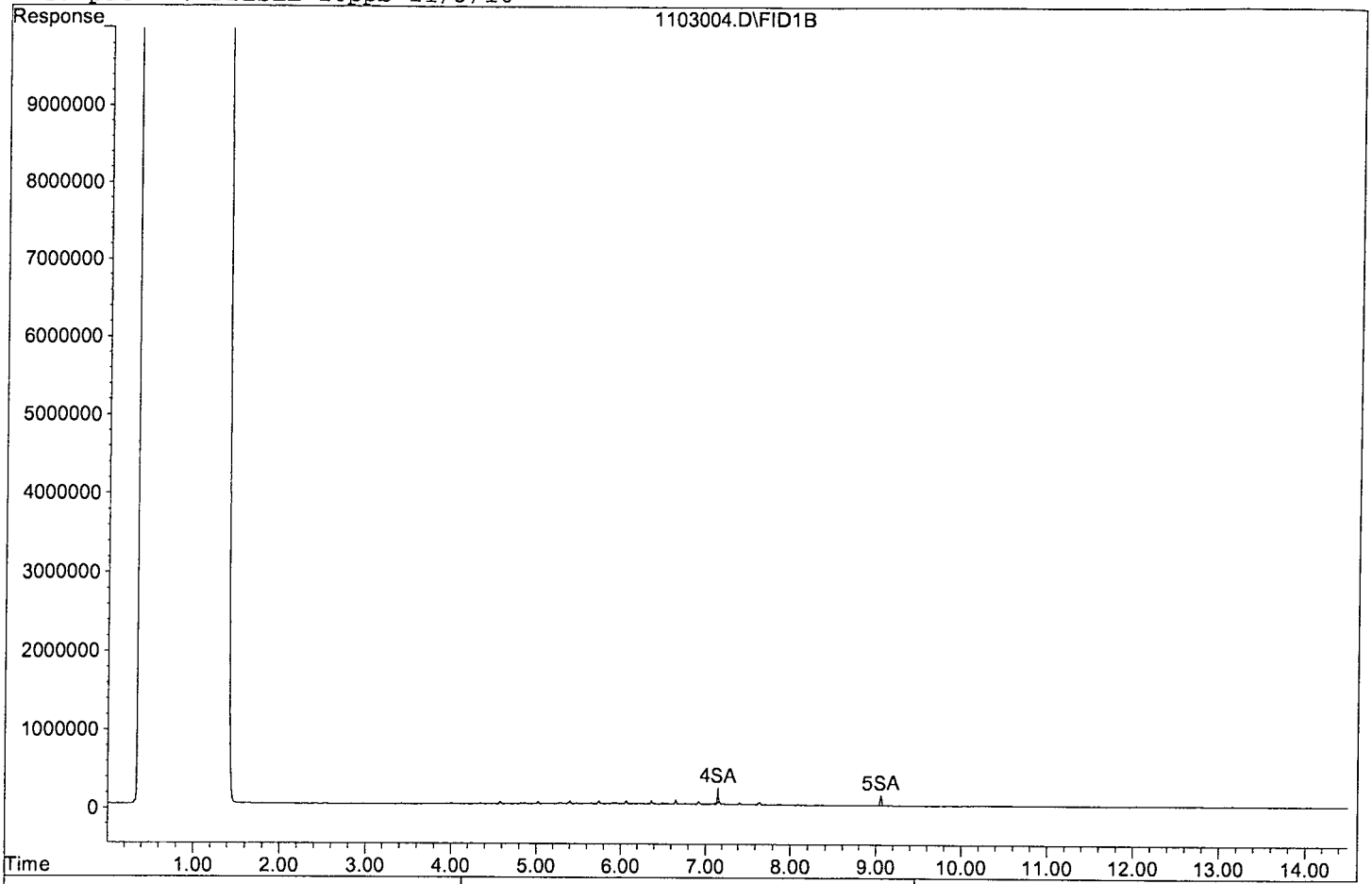
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

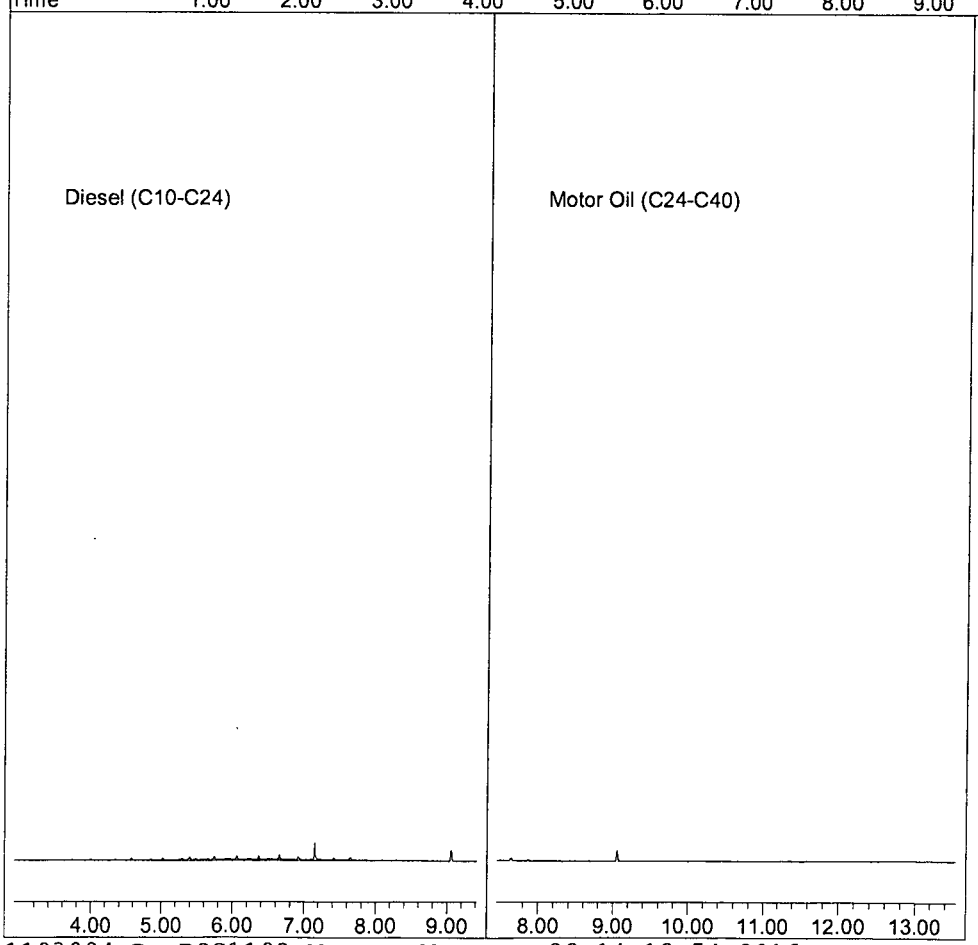
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.15	1320666	0.233 ppb
Surrogate Spike 30.000	Recovery =		0.78%
5) SA Octacosane(S)	9.06	1736016	0.492 ppb
Surrogate Spike 30.000	Recovery =		1.64%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	34279391	10.218 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103004.D
Sample : DIESEL 10ppb 11/3/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161103\1103011.D Vial: 11
Acq On : 11-3-16 12:56:47 Operator: DP
Sample : DIESEL 100ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

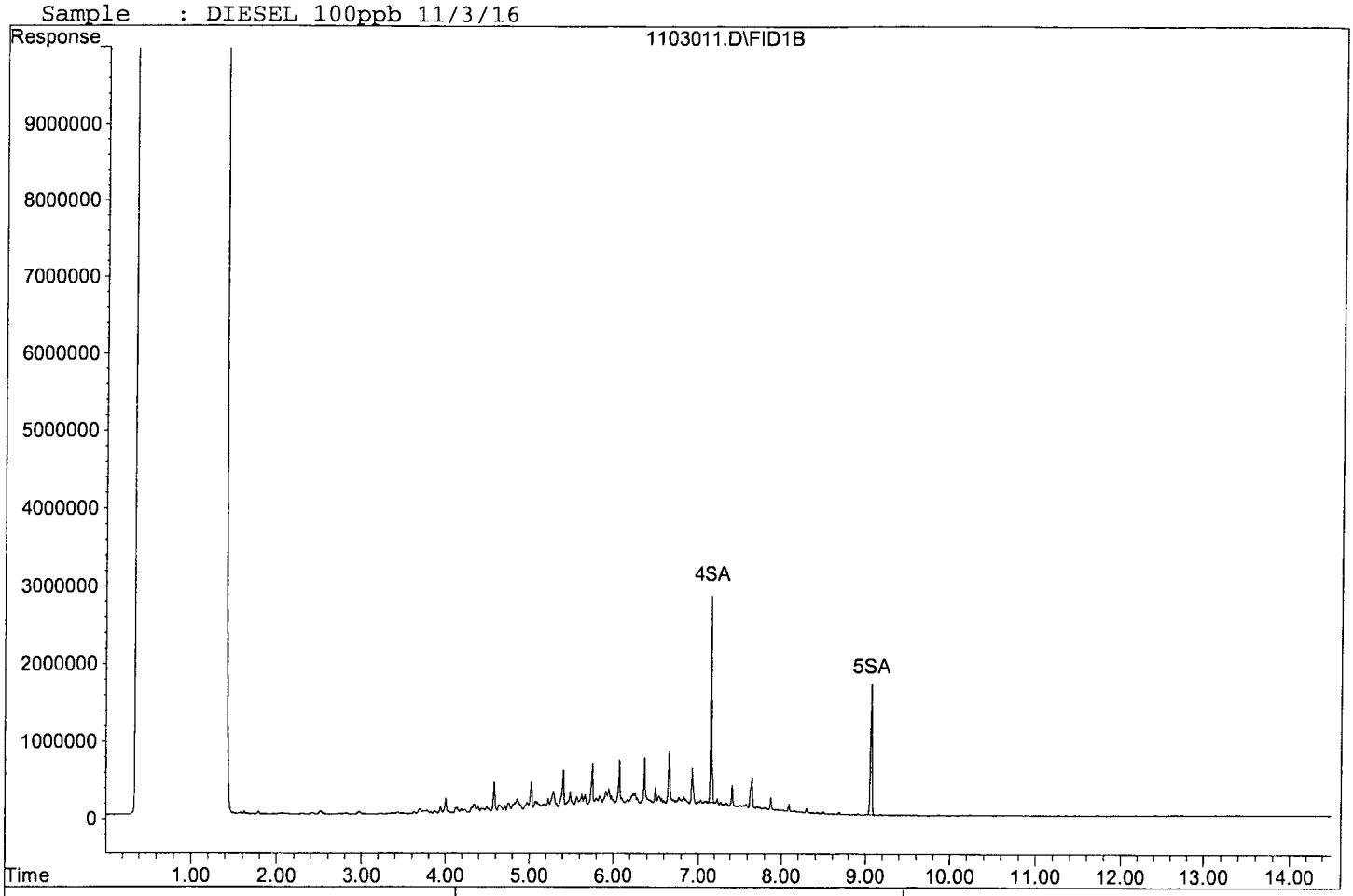
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

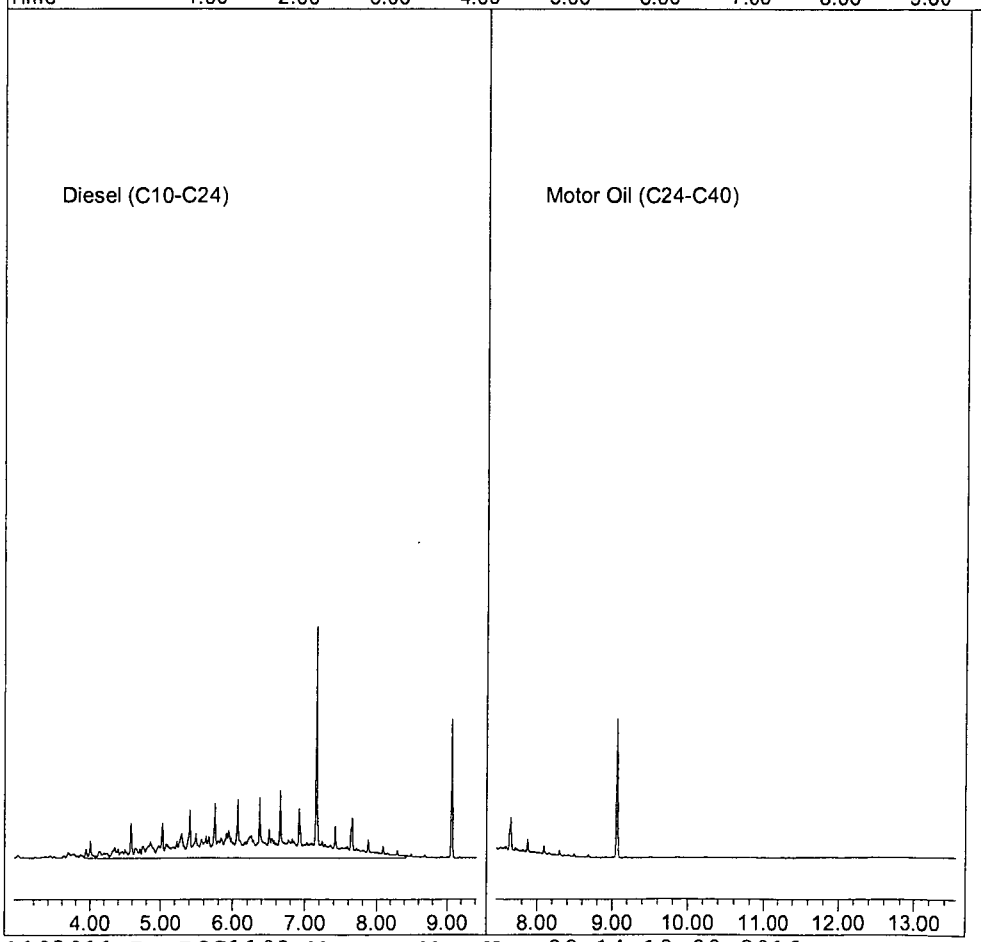
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.16	26876603	4.740 ppb
Surrogate Spike 30.000		Recovery =	15.80%
5) SA Octacosane(S)	9.06	20676993	5.864 ppb
Surrogate Spike 30.000		Recovery =	19.55%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	411320381	122.610 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103011.D
Sample : DIESEL 100ppb 11/3/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103006.D Vial: 6
Acq On : 11-3-16 10:26:16 Operator: DP
Sample : DIESEL 400ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

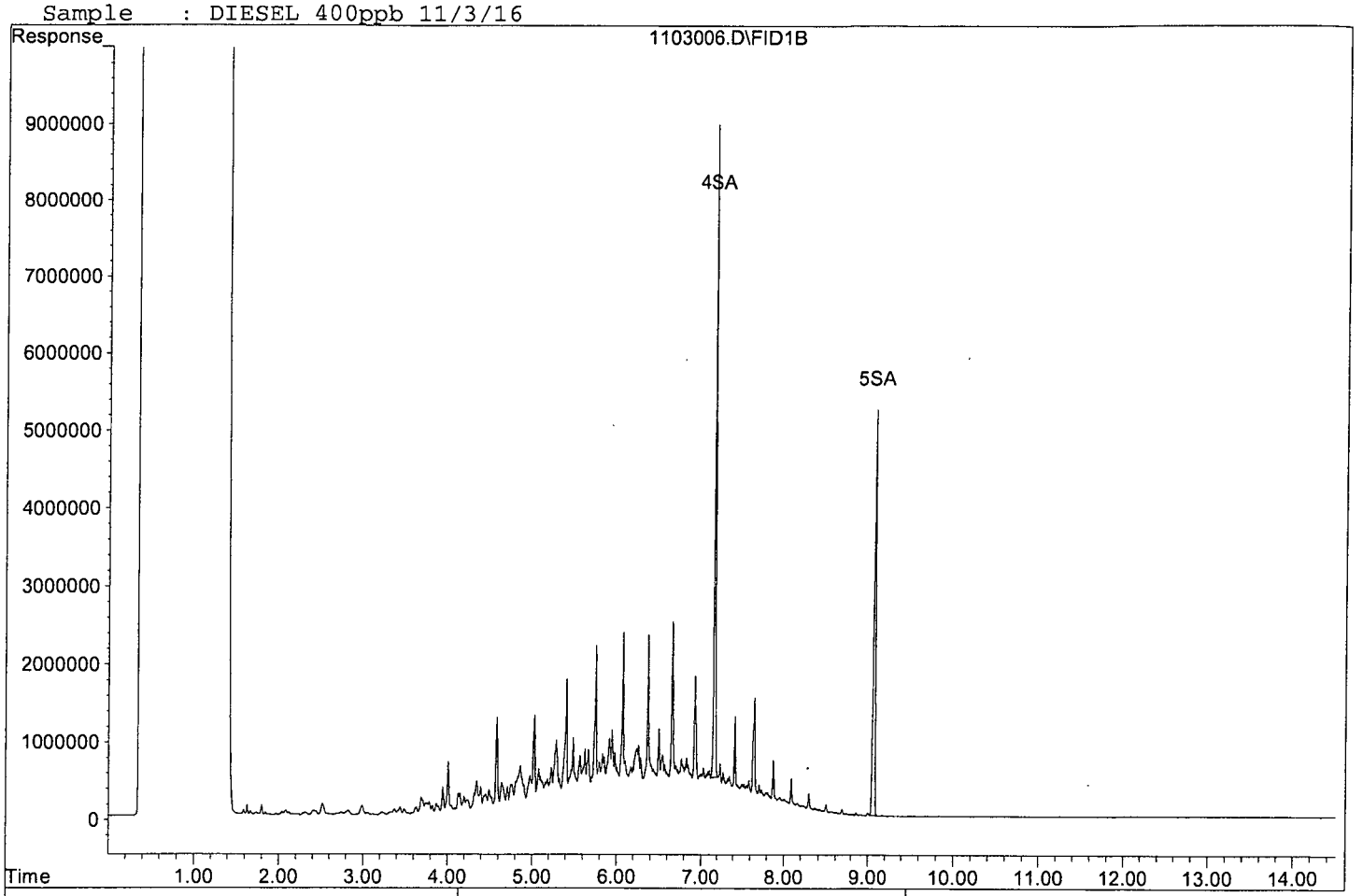
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

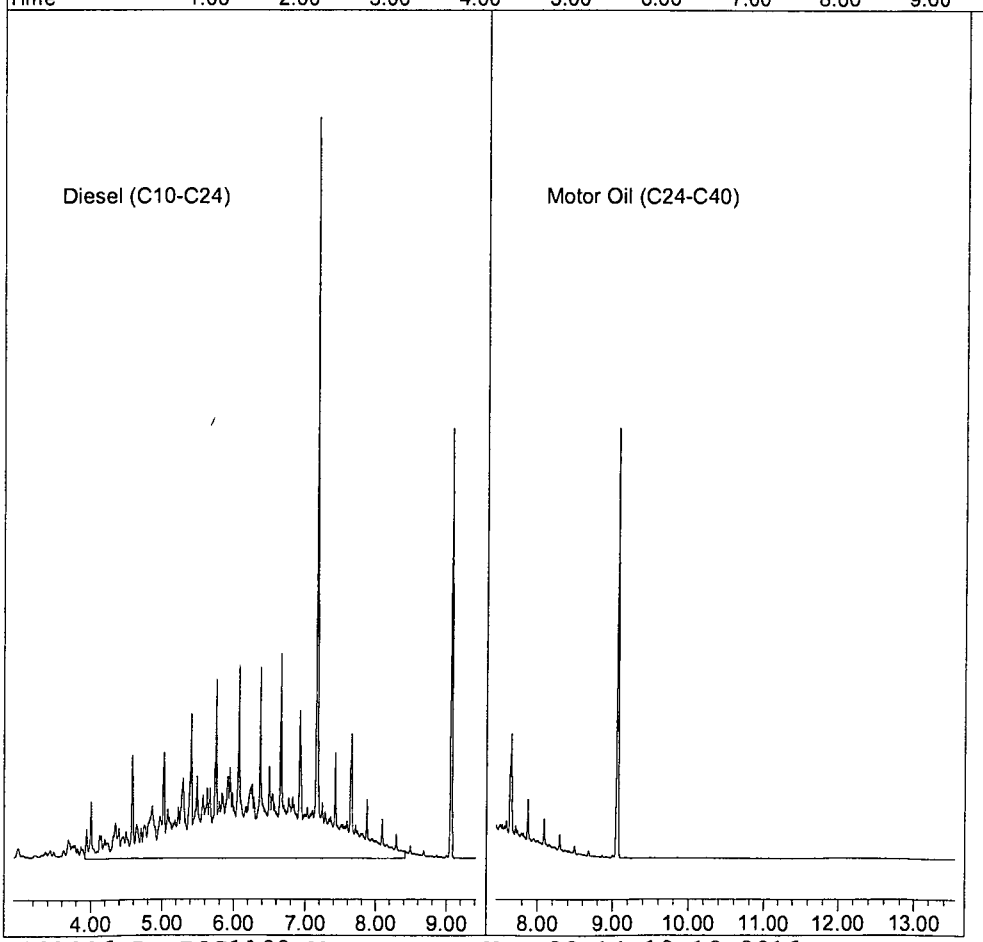
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.16	90205209	15.909 ppb
Surrogate Spike 30.000		Recovery =	53.03%
5) SA Octacosane(S)	9.07	67897660	19.256 ppb
Surrogate Spike 30.000		Recovery =	64.19%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	1300465223	387.653 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103006.D
Sample : DIESEL 400ppb 11/3/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103007.D Vial: 7
Acq On : 11-3-16 10:46:56 Operator: DP
Sample : DIESEL 600ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

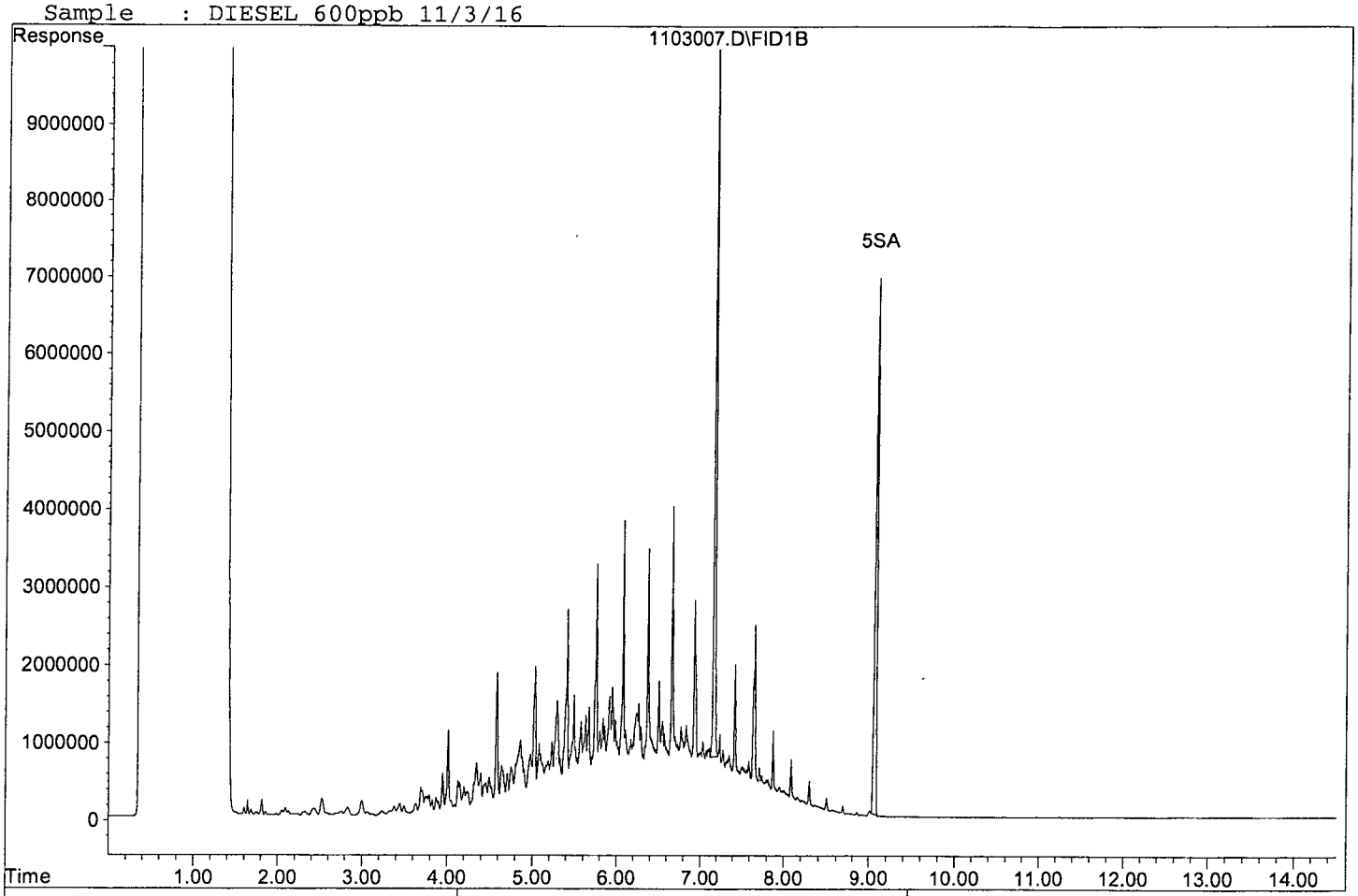
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

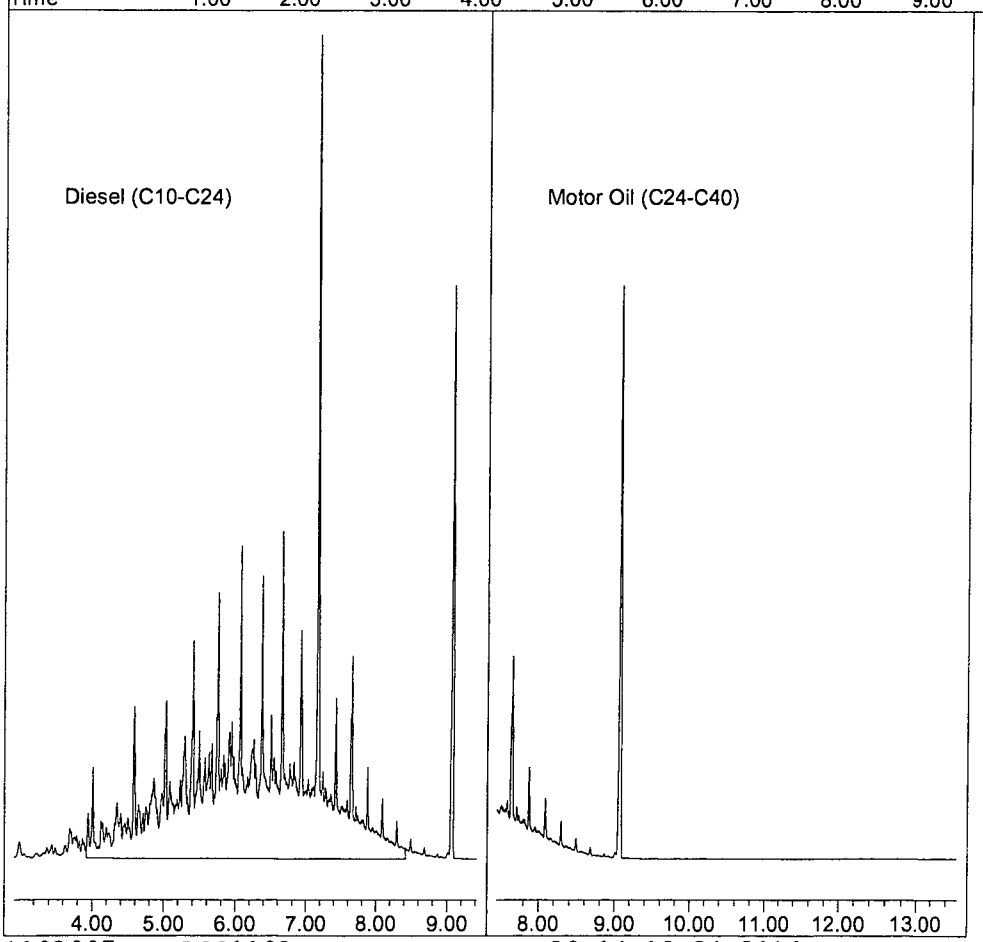
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.17	137805437	24.304 ppb
Surrogate Spike 30.000		Recovery =	81.01%
5) SA Octacosane(S)	9.07	102273844	29.005 ppb
Surrogate Spike 30.000		Recovery =	96.68%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	2037280173	607.288 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103007.D
Sample : DIESEL 600ppb 11/3/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103008.D Vial: 8
Acq On : 11-3-16 11:07:39 Operator: DP
Sample : DIESEL 800ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

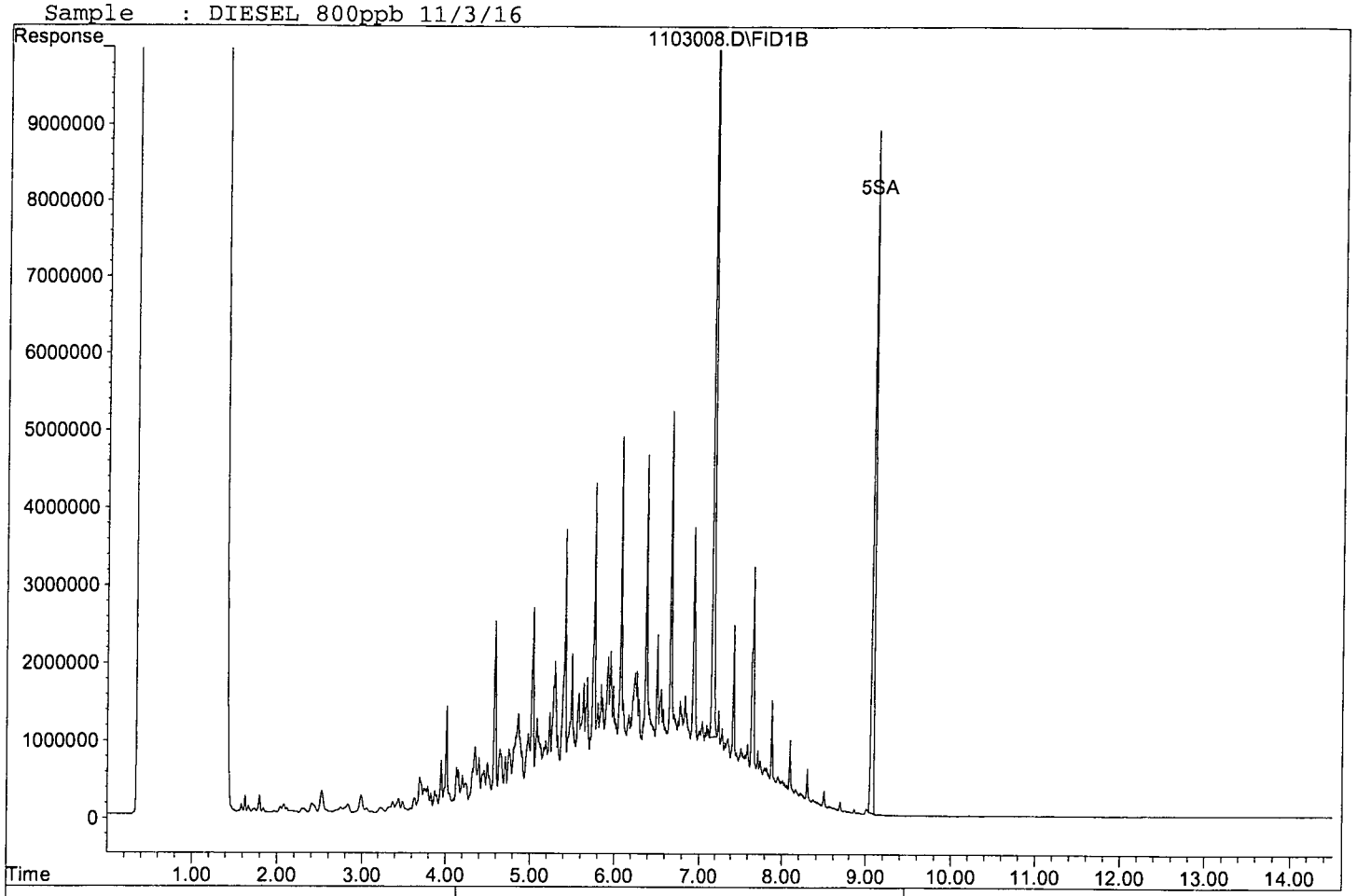
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

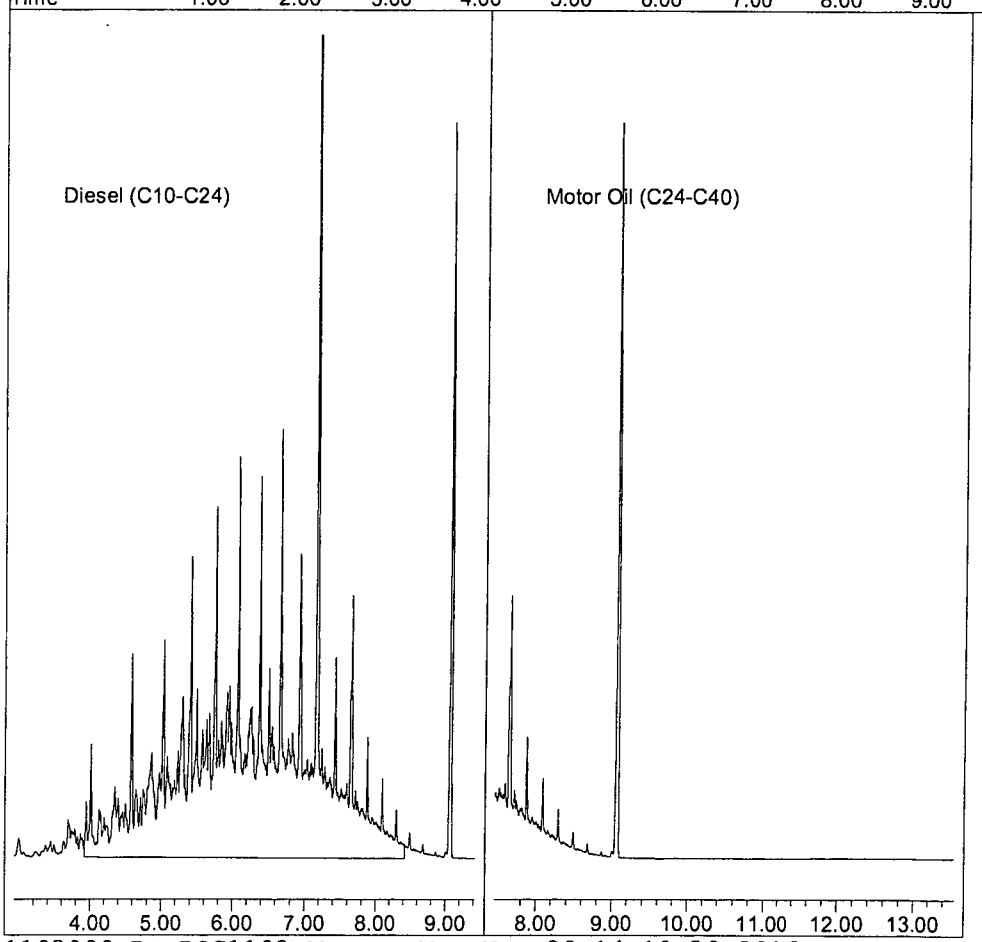
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.17	177261246	31.263 ppb
Surrogate Spike 30.000		Recovery =	104.21%
5) SA Octacosane(S)	9.08	132563050	37.596 ppb
Surrogate Spike 30.000		Recovery =	125.32%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	2629335633	783.773 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103008.D
Sample : DIESEL 800ppb 11/3/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103009.D Vial: 9
Acq On : 11-3-16 11:28:31 Operator: DP
Sample : DIESEL 1000ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

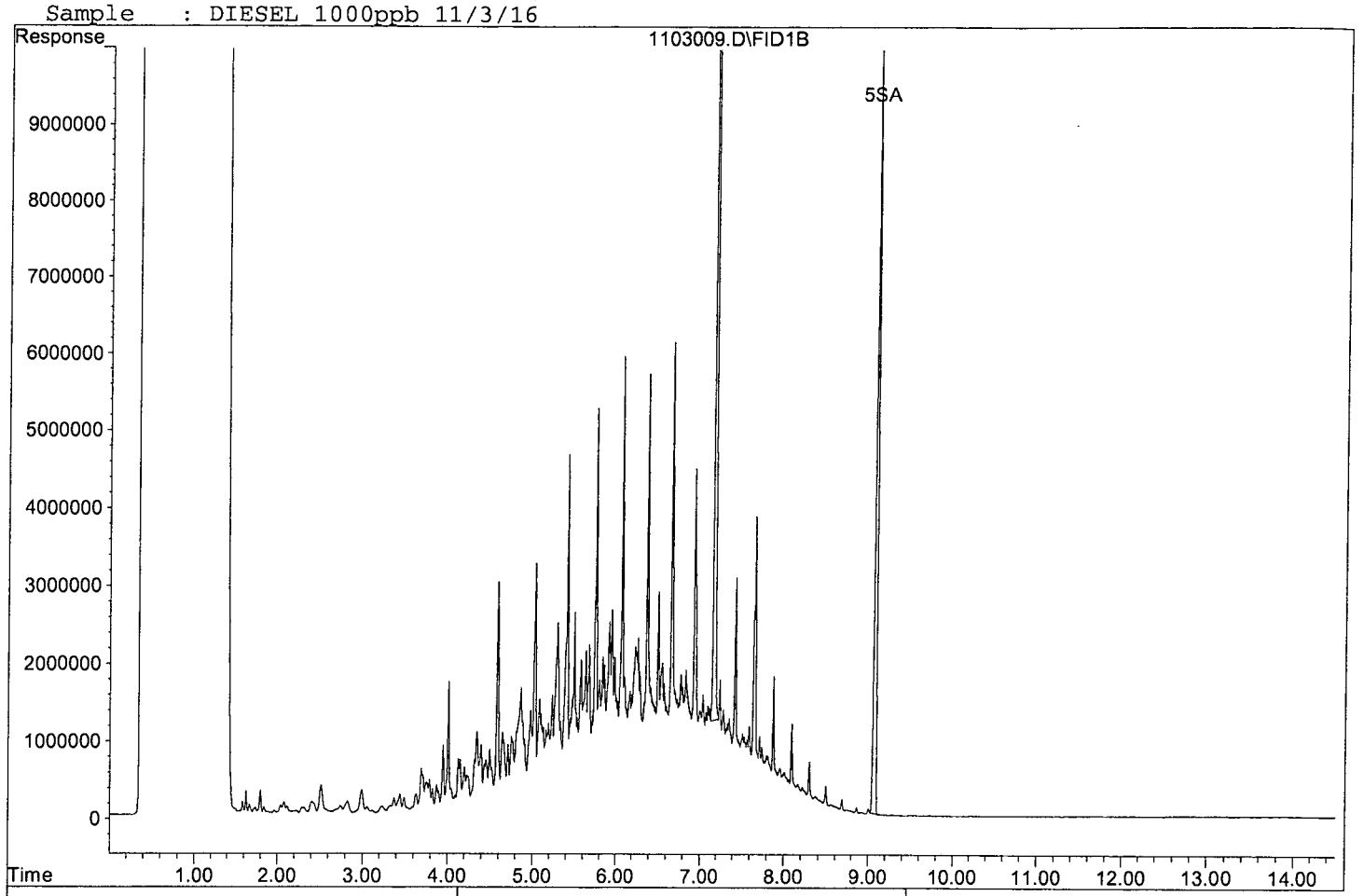
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

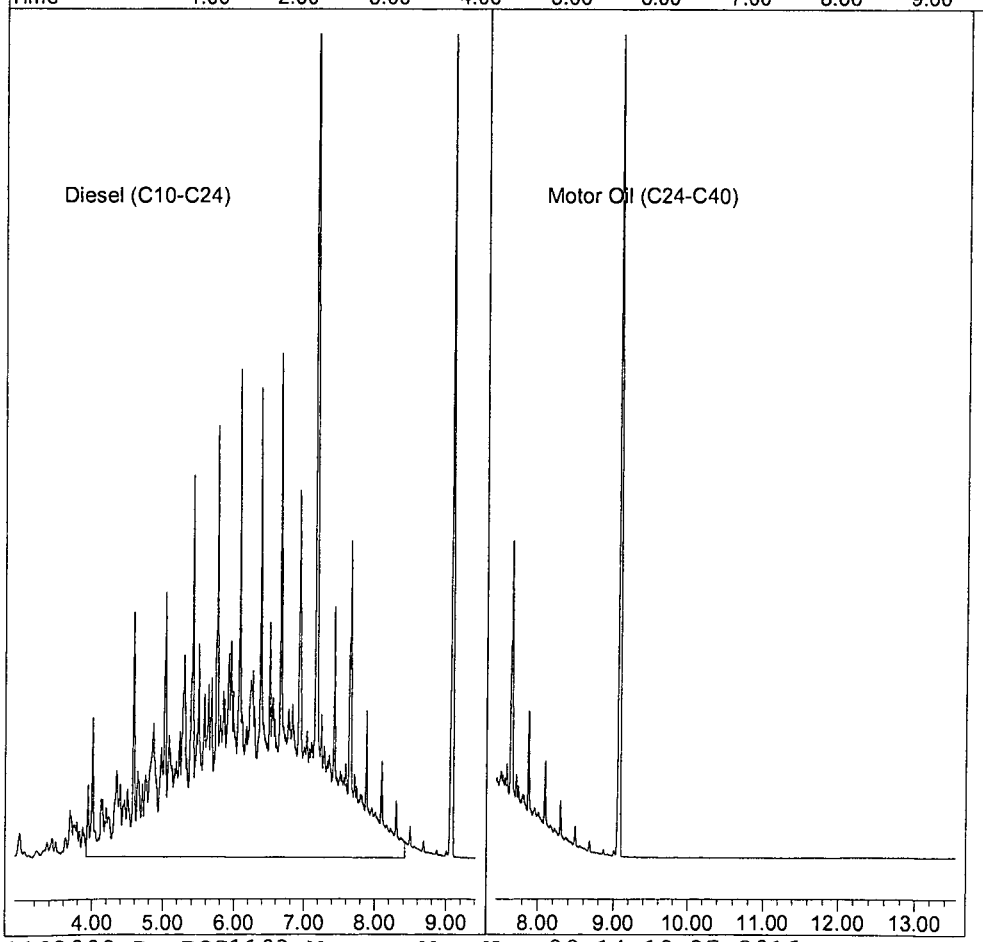
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.18	220584770	38.903 ppb
Surrogate Spike 30.000		Recovery =	129.68%
5) SA Octacosane(S)	9.08	163627822	46.406 ppb
Surrogate Spike 30.000		Recovery =	154.69%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	3251118324	969.119 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103009.D
Sample : DIESEL 1000ppb 11/3/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028002.D Vial: 2
Acq On : 10-28-16 9:07:30 Operator: DP
Sample : MO 20ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:24 2016 Quant Results File: DOC1103.RES

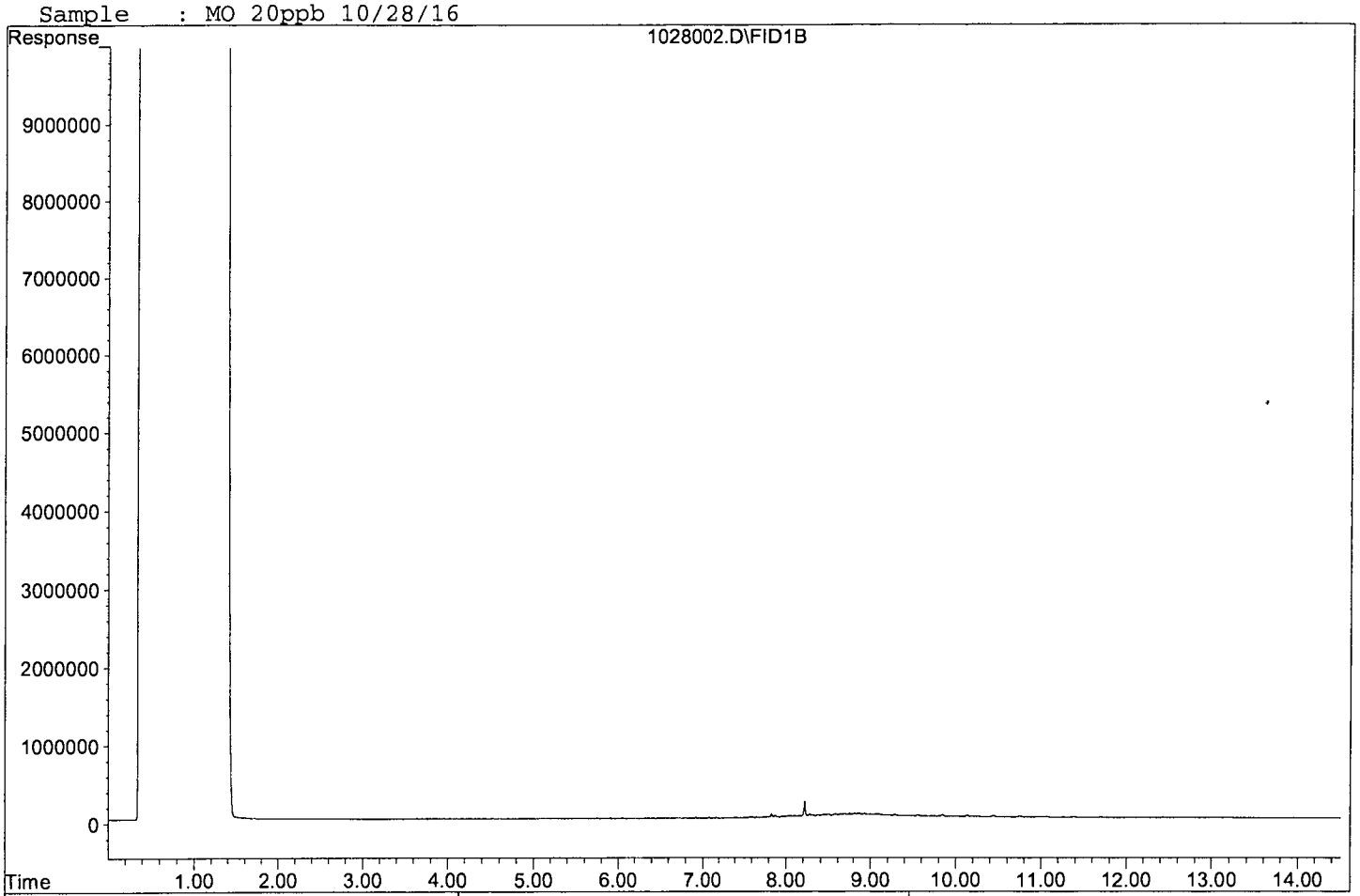
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

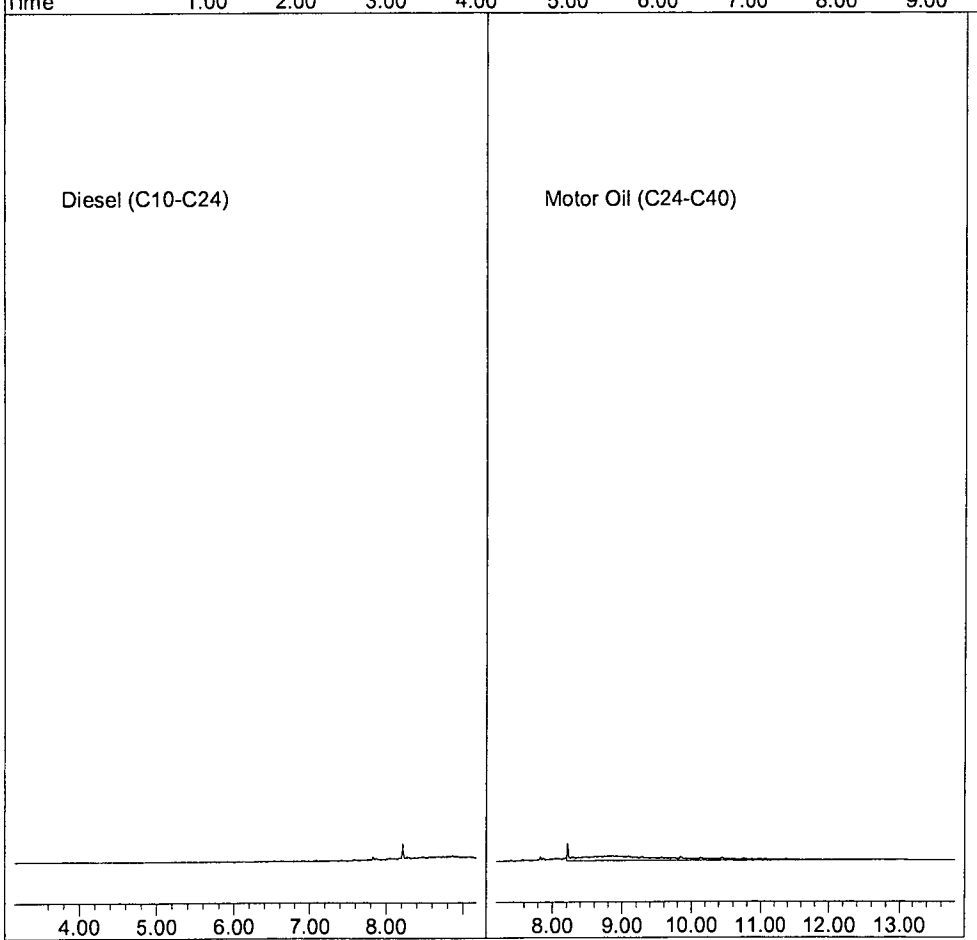
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	62507592	22.438 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028002.D
Sample : MO 20ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028003.D Vial: 3
Acq On : 10-28-16 9:28:13 Operator: DP
Sample : MO 50ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:24 2016 Quant Results File: DOC1103.RES

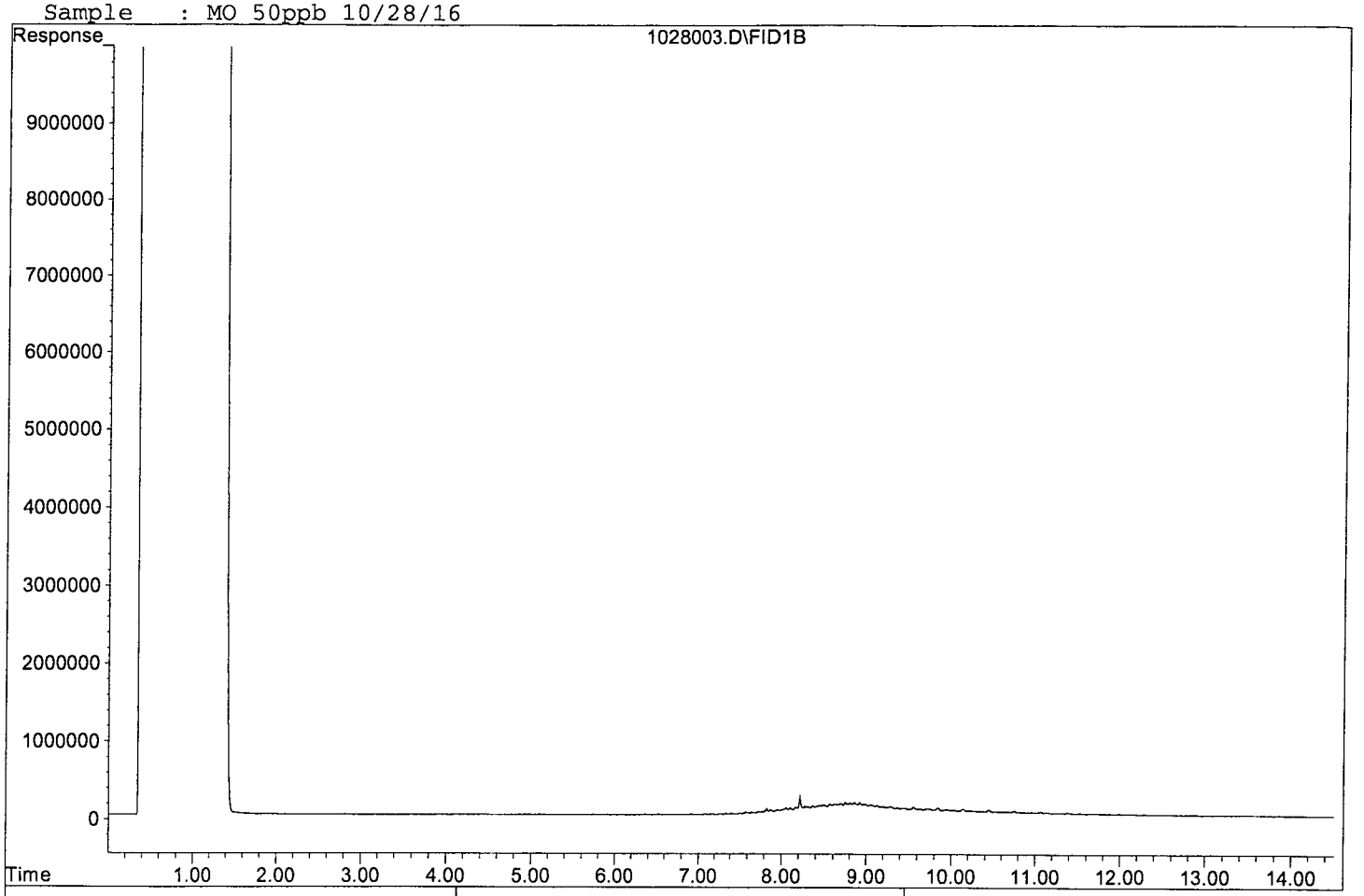
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

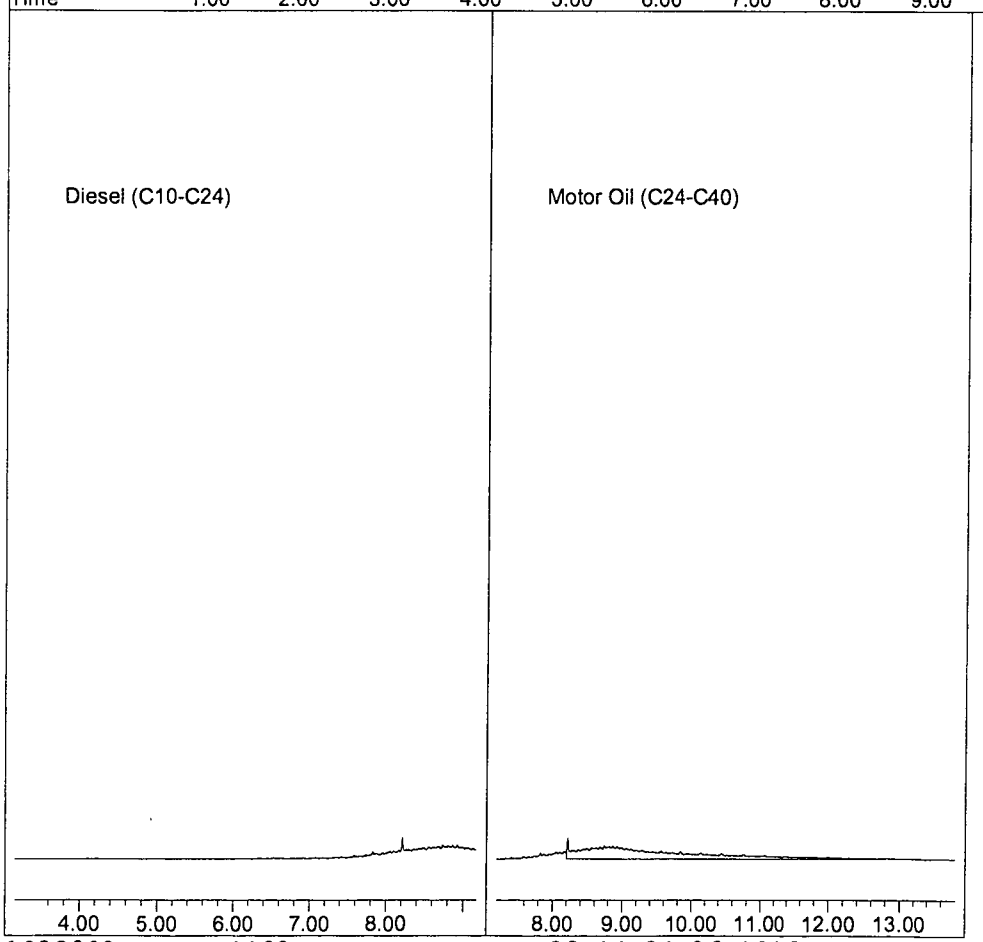
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	160376925	57.571 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028003.D
Sample : MO 50ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028004.D Vial: 4
Acq On : 10-28-16 9:49:06 Operator: DP
Sample : MO 250ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:24 2016 Quant Results File: DOC1103.RES

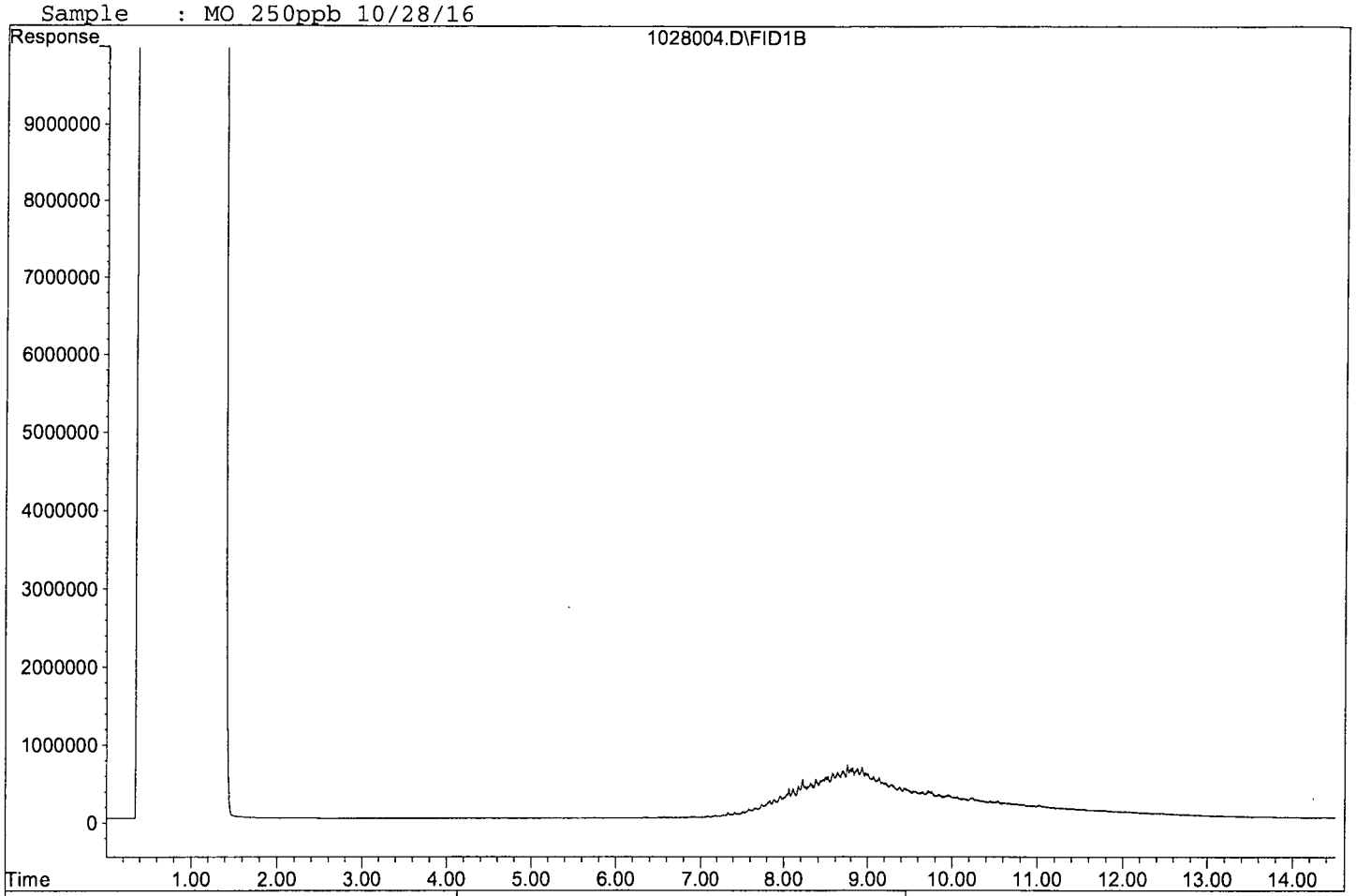
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

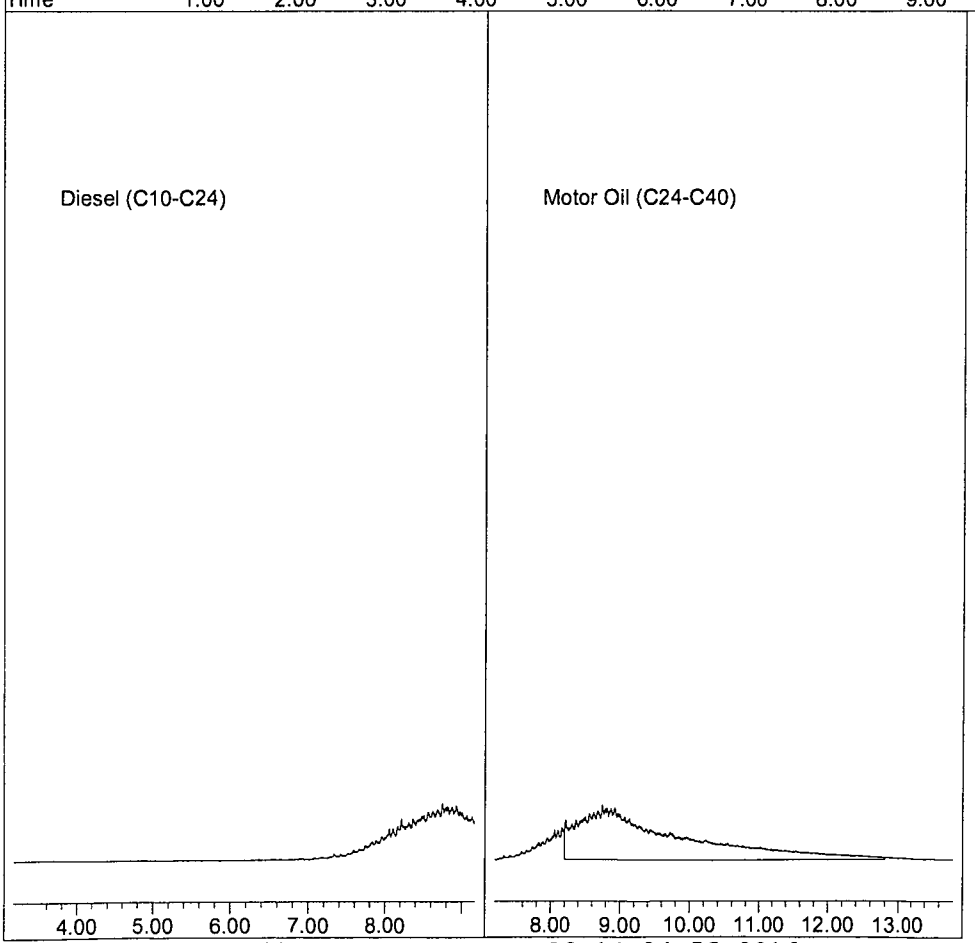
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	641488837	230.275 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028004.D
Sample : MO 250ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028005.D Vial: 5
Acq On : 10-28-16 10:09:58 Operator: DP
Sample : MO 1000ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:25 2016 Quant Results File: DOC1103.RES

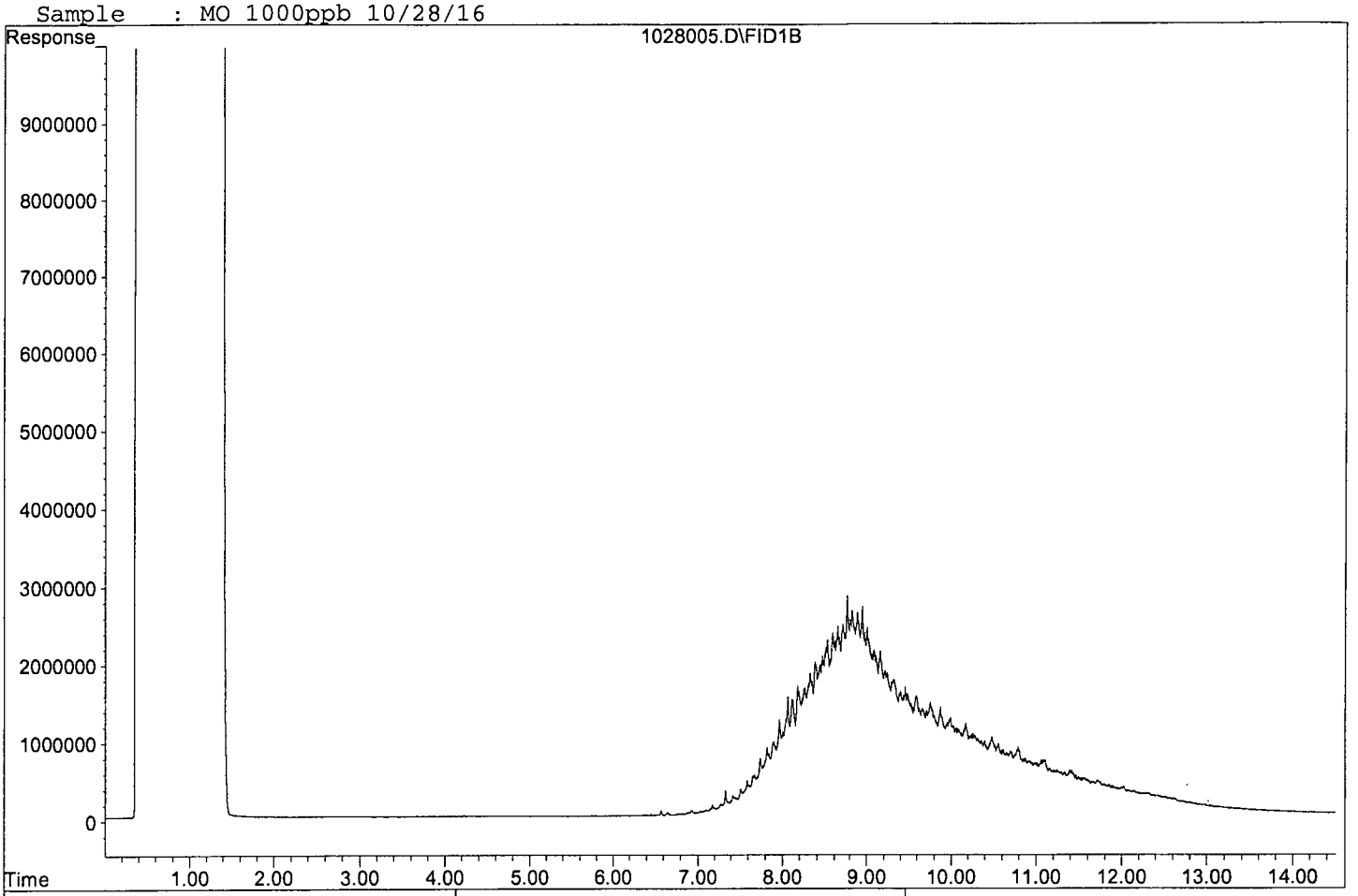
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

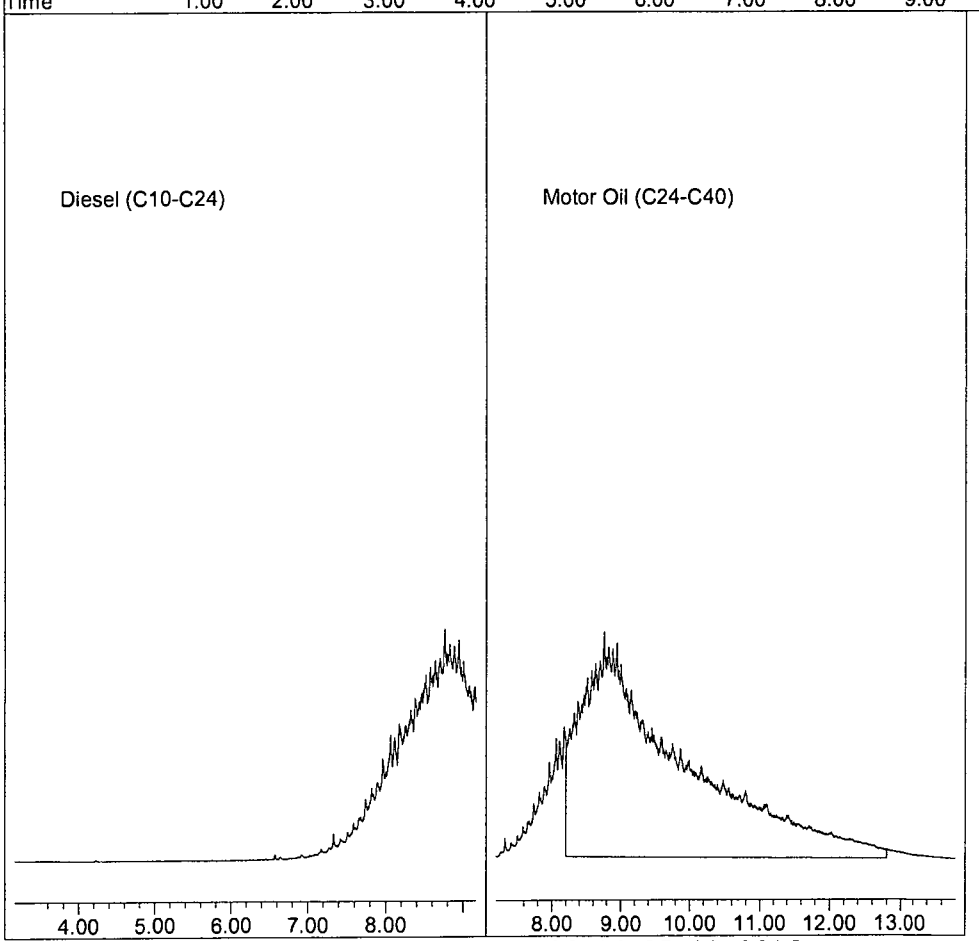
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	2680029704	962.051 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028005.D
Sample : MO 1000ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028006.D Vial: 6
Acq On : 10-28-16 10:30:51 Operator: DP
Sample : MO 1500ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:25 2016 Quant Results File: DOC1103.RES

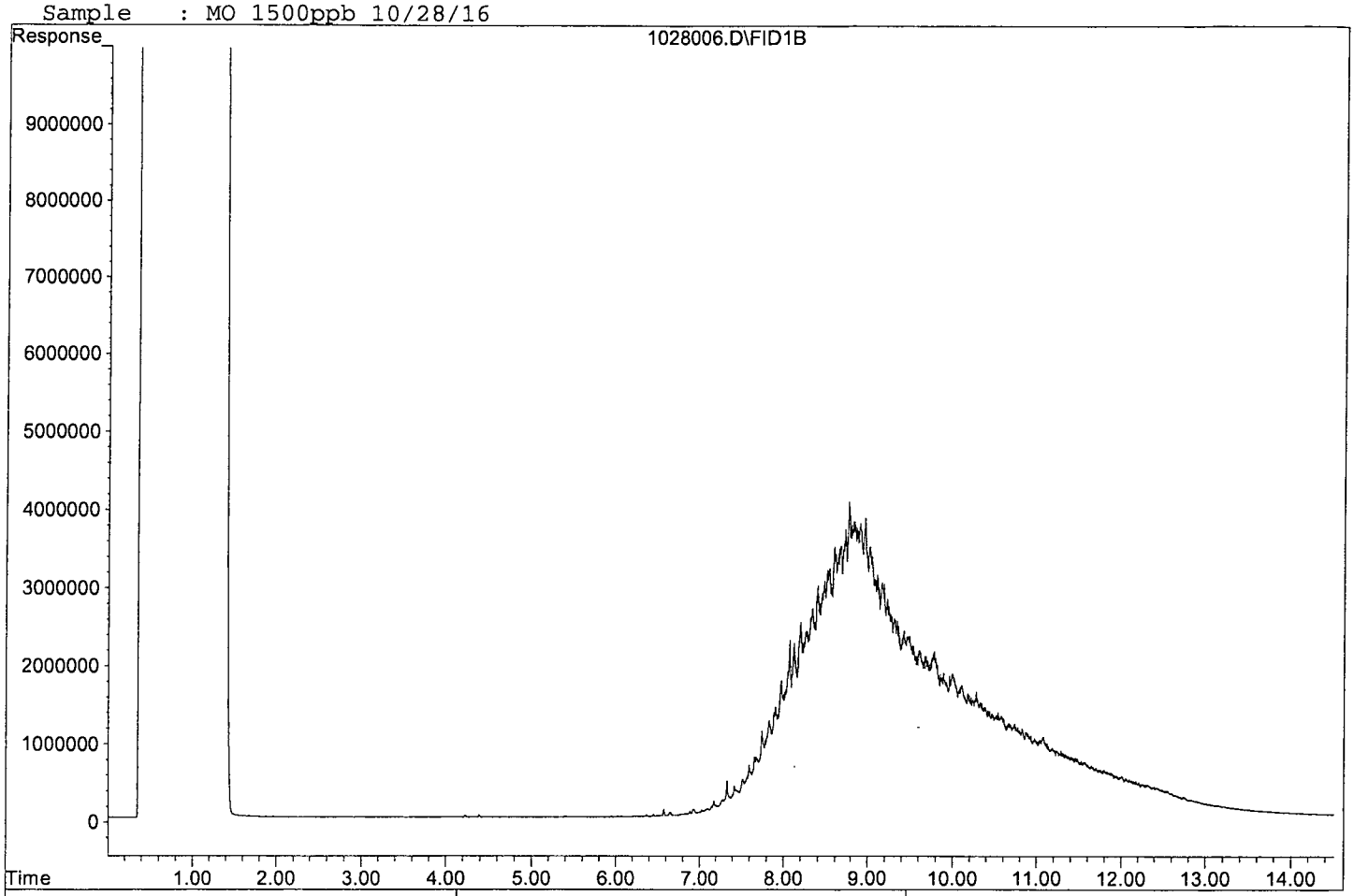
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

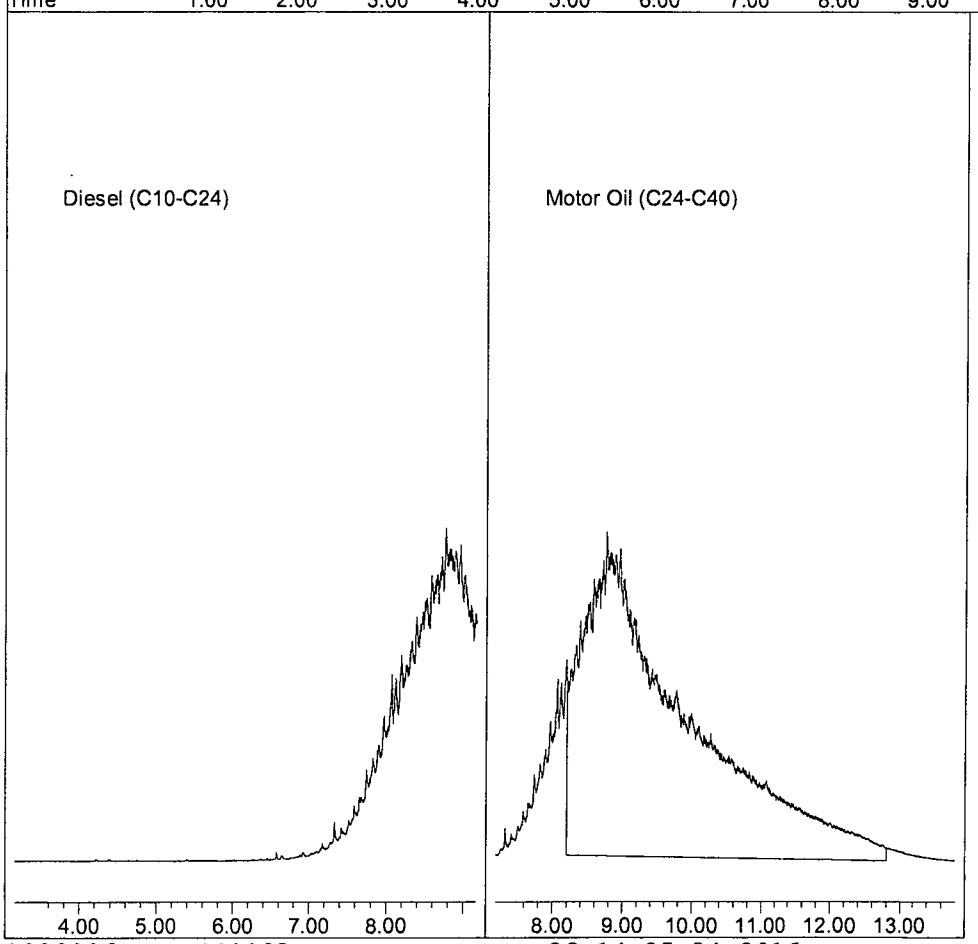
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
Target Compounds				
2) HBTM Motor Oil (C24-C40)	10.50	3965906010	1423.642	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028006.D
Sample : MO 1500ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028007.D Vial: 7
Acq On : 10-28-16 10:51:50 Operator: DP
Sample : MO 2000ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:25 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

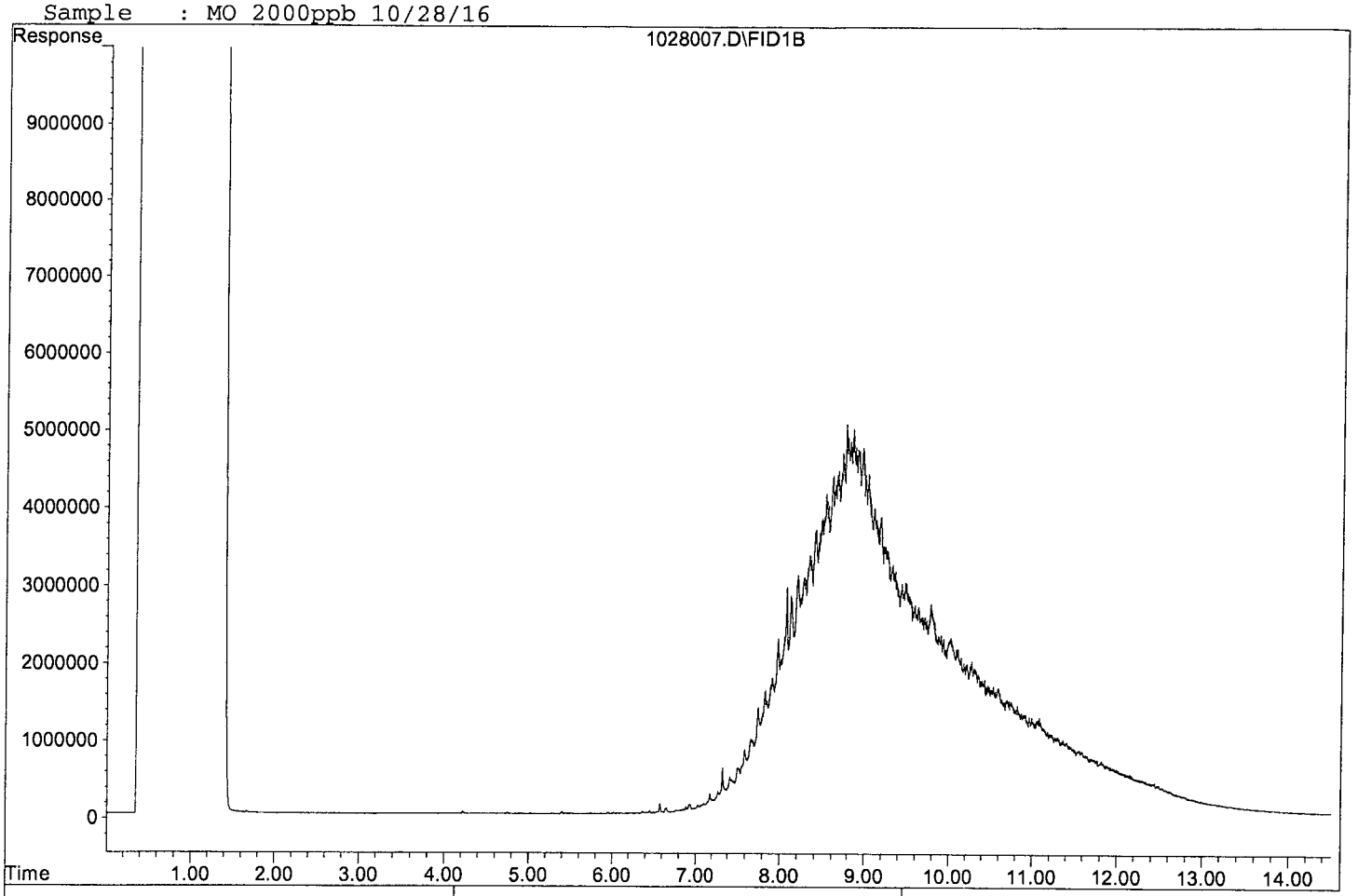
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

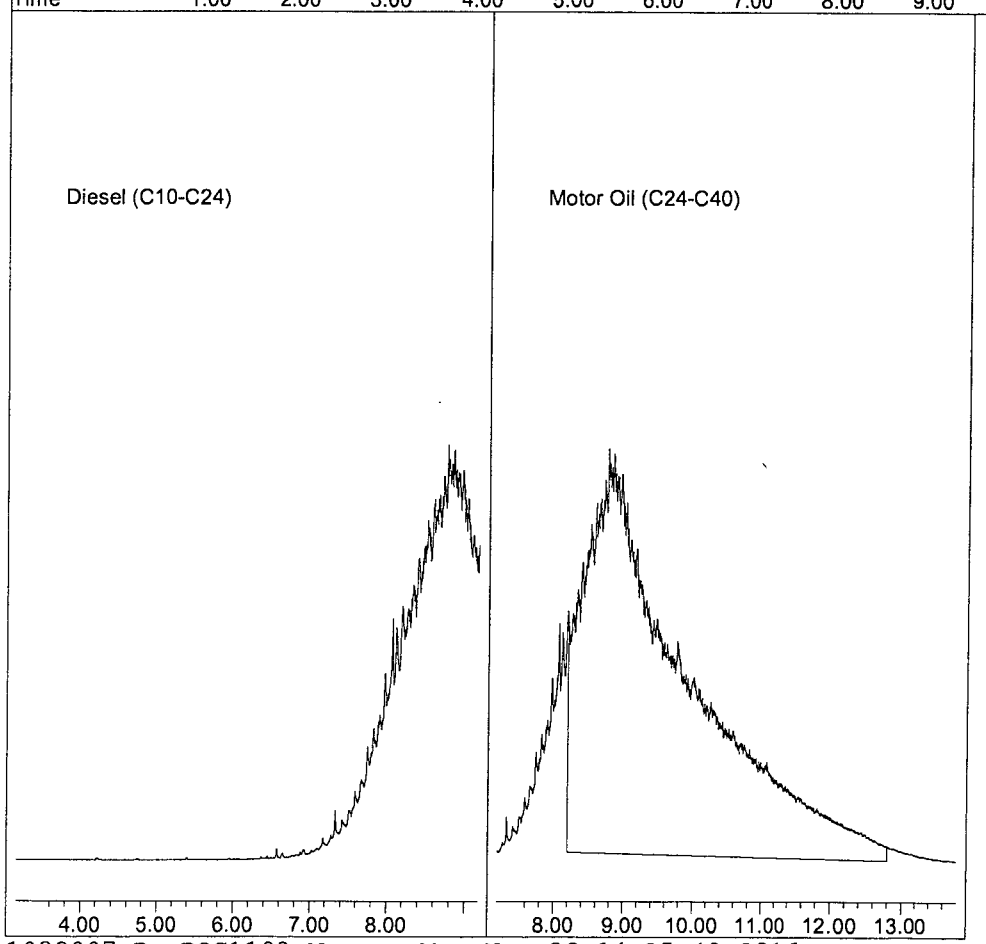
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
Target Compounds				
2) HBTM Motor Oil (C24-C40)	10.50	4983276169	1788.848	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161028\1028007.D
Sample : MO 2000ppb 10/28/16





1028007.D DOC1103.M Mon Nov 28 14:25:49 2016

TPH Extractables
DOC1103

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/03/16
Instrument: Apollo
Initial Cal. Date: 11/03/16
Data File: 1103012.D (Diesel) 1028008.D (Motor Oil)

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C24)	1727130	1667670	3.4	HATM	
2	HBTM	Motor Oil (C24-C40)	1392870	1239910	11	HBTM	
3							
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40							
		Average			7.2		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103012.D Vial: 12
Acq On : 11-3-16 13:25:11 Operator: DP
Sample : DIESEL-SS 400ppb 8/1/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 15:21 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

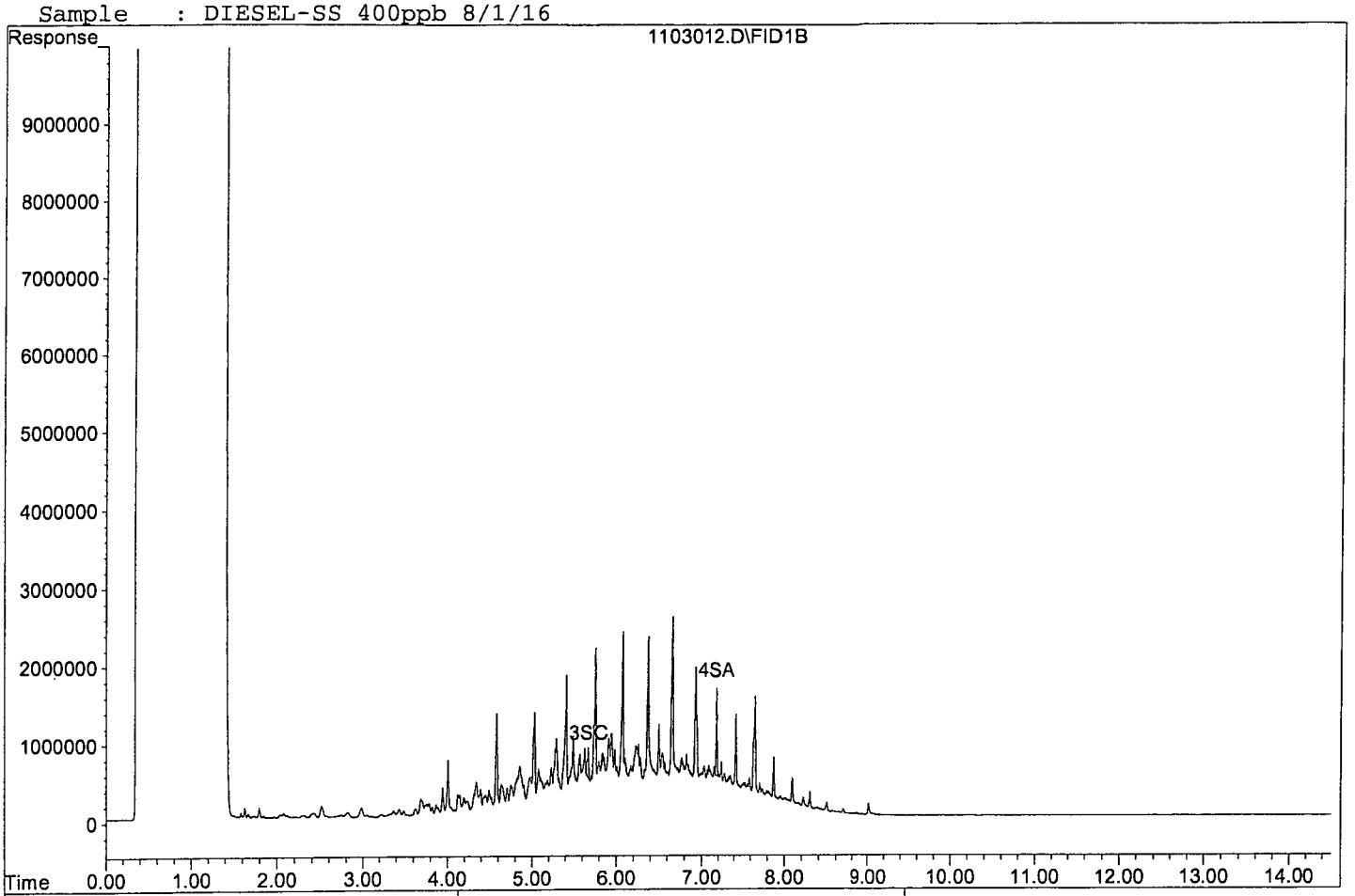
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SC Decanoic Acid(S)	5.67	4681185	3.827 ppb
Surrogate Spike 48.000	Recovery =		7.97%
4) SA Ortho-Terphenyl(S)	7.18	9886456	2.120 ppb
Surrogate Spike 30.000	Recovery =		7.07%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	1345831567	389.615 ppb
2) HBTM Motor Oil (C24-C40)	10.50	43170153	15.497 ppb

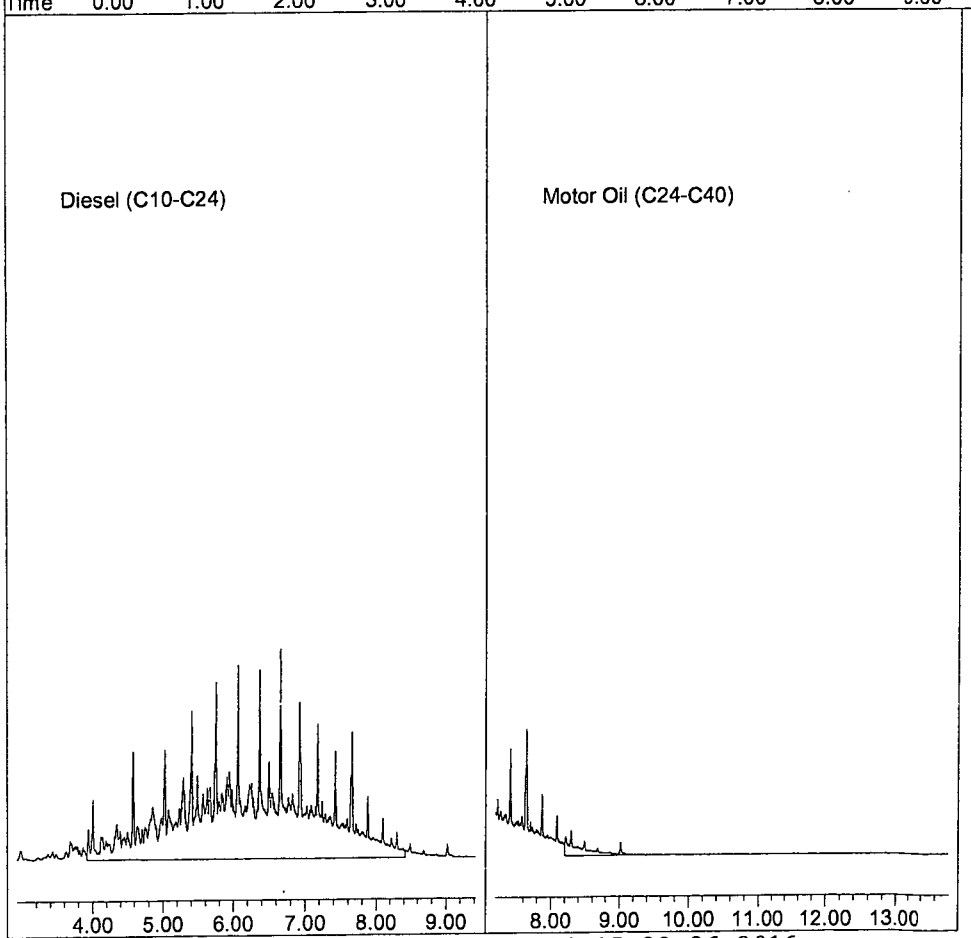
algorithm check: $\frac{1345831567 \times 1}{1727130 \times 2} = 389.6150165$

D.P. 11/28/16

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103012.D
Sample : DIESEL-SS 400ppb 8/1/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161028\1028008.D Vial: 8
Acq On : 10-28-16 11:12:44 Operator: DP
Sample : MO SS 1000ppb 7/6/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 15:22 2016 Quant Results File: DOC1103.RES

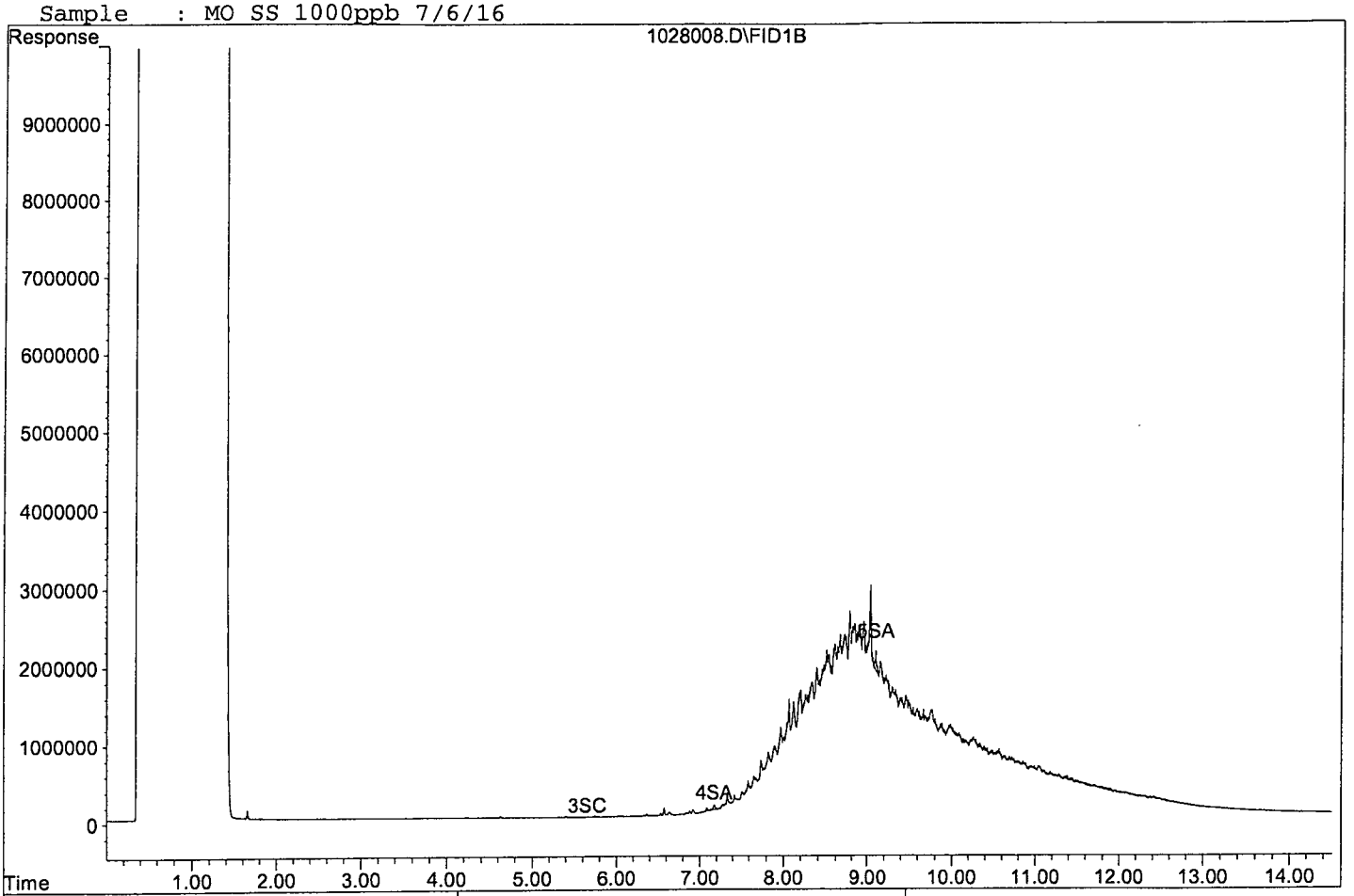
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

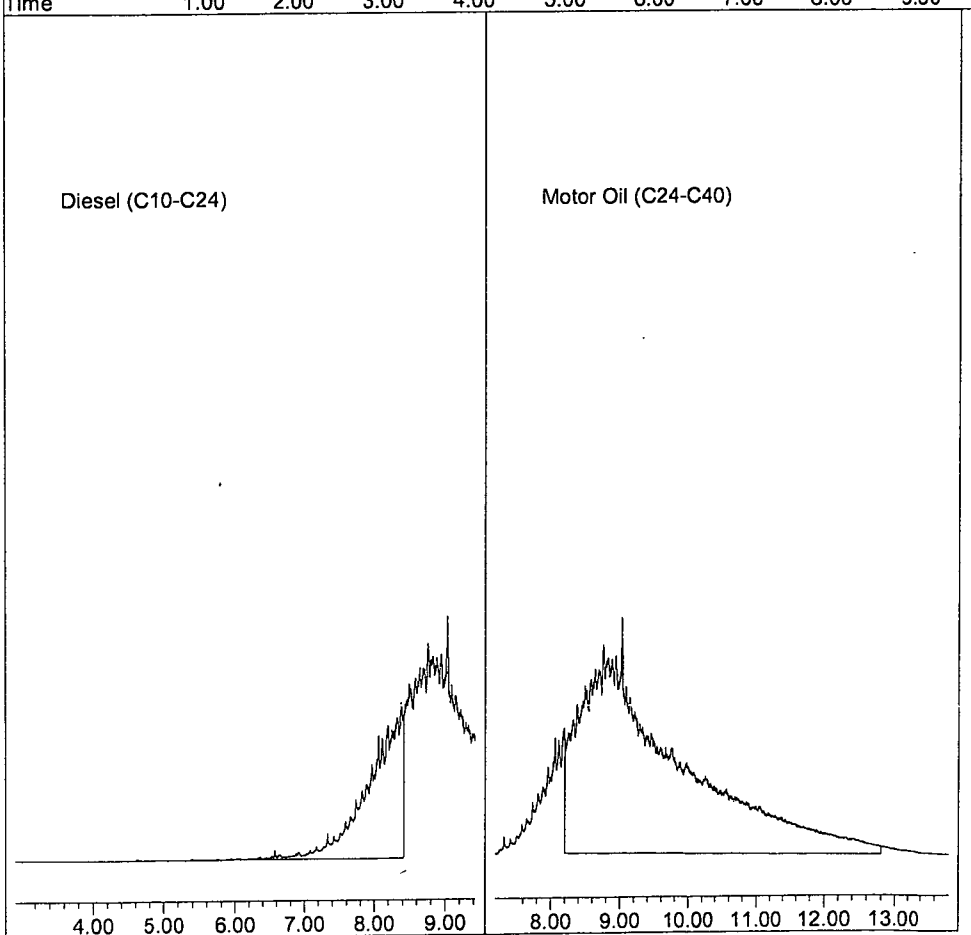
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SC Decanoic Acid(S)	5.65	6816	0.006 ppb
Surrogate Spike 48.000	Recovery	=	0.01%
4) SA Ortho-Terphenyl(S)	7.17	747984	0.160 ppb
Surrogate Spike 30.000	Recovery	=	0.53%
5) SA Octacosane(S)	9.09	2492290	0.712 ppb
Surrogate Spike 30.000	Recovery	=	2.37%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	603419098	174.688 ppb
2) HBTM Motor Oil (C24-C40)	10.50	2511616588	901.596 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028008.D
Sample : MO SS 1000ppb 7/6/16





1028008.D DOC1103.M Mon Nov 28 15:22:51 2016

TPH Extractables
DOC1103

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/17/17
Instrument: Apollo
Initial Cal. Date: 10/19/16
Data File: 117002-3.D

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C24)	1727130	1661940	3.8	HATM	
2	HBTM	Motor Oil (C24-C40)	1392870	1126650	19	HBTM	
3							
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36							
37							
38							
39							
40							
		Average			11.4		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\170117\117002.D Vial: 2
Acq On : 1-17-17 12:25:14 Operator: DP
Sample : CCV: Diesel 400 ppb 1/12/17 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jan 17 13:27 2017 Quant Results File: DOC1103.RES

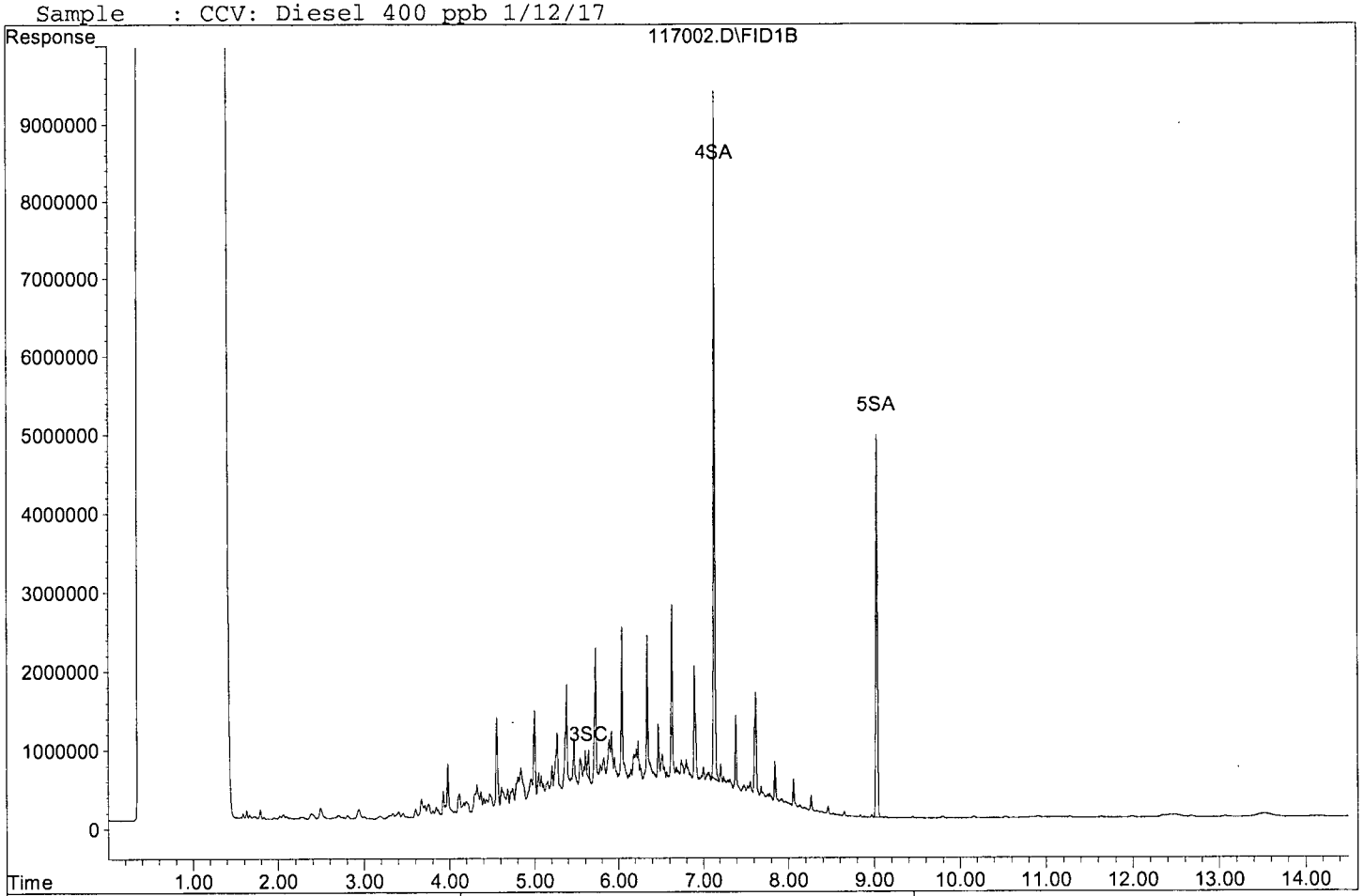
Method : G:\APOLLO\DATA\170117\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

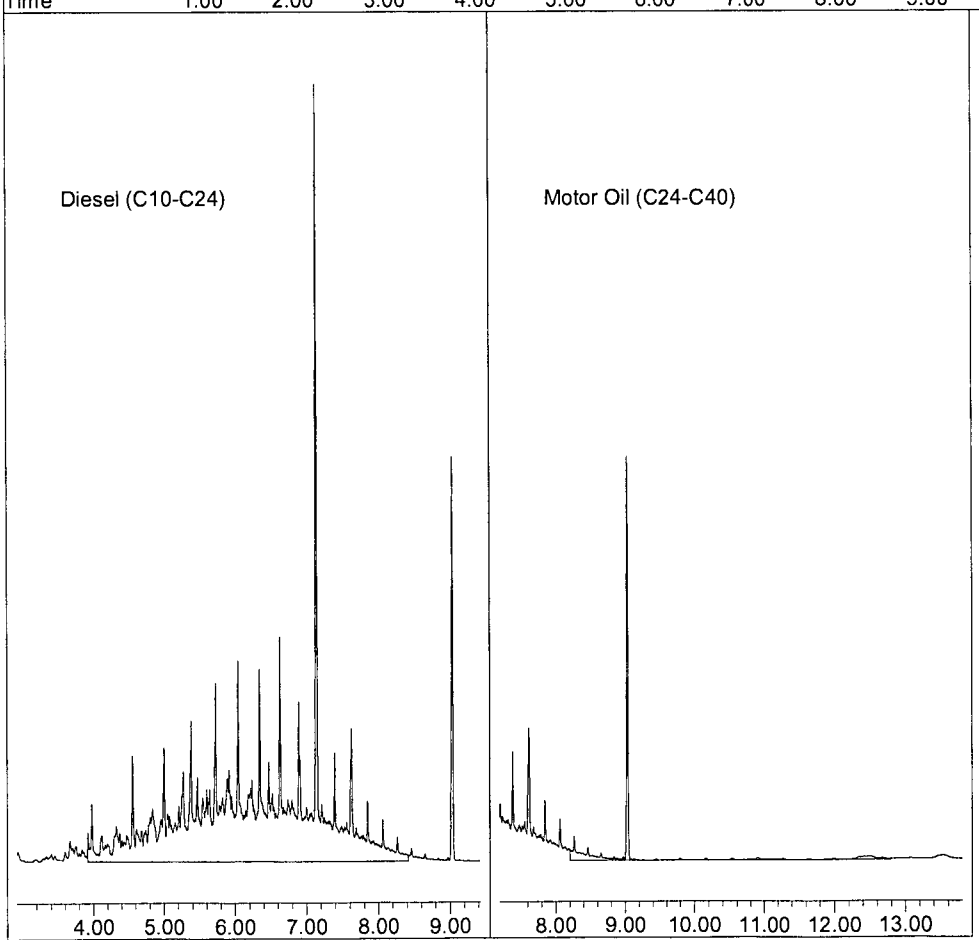
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SC Decanoic Acid(S)	5.64	4199085	3.433	ppb
Surrogate Spike 48.000	Recovery =		7.15%	
4) SA Ortho-Terphenyl(S)	7.14	89329590	19.151	ppb
Surrogate Spike 30.000	Recovery =		63.84%	
5) SA Octacosane(S)	9.03	62526079	17.866	ppb
Surrogate Spike 30.000	Recovery =		59.55%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	1329550602	384.902	ppb
2) HBTM Motor Oil (C24-C40)	10.50	45613767	16.374	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\170117\117002.D
Sample : CCV: Diesel 400 ppb 1/12/17





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\170117\117003.D Vial: 3
Acq On : 1-17-17 12:45:38 Operator: DP
Sample : CCV: MO 1000 ppb 1/12/17 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Jan 17 13:28 2017 Quant Results File: DOC1103.RES

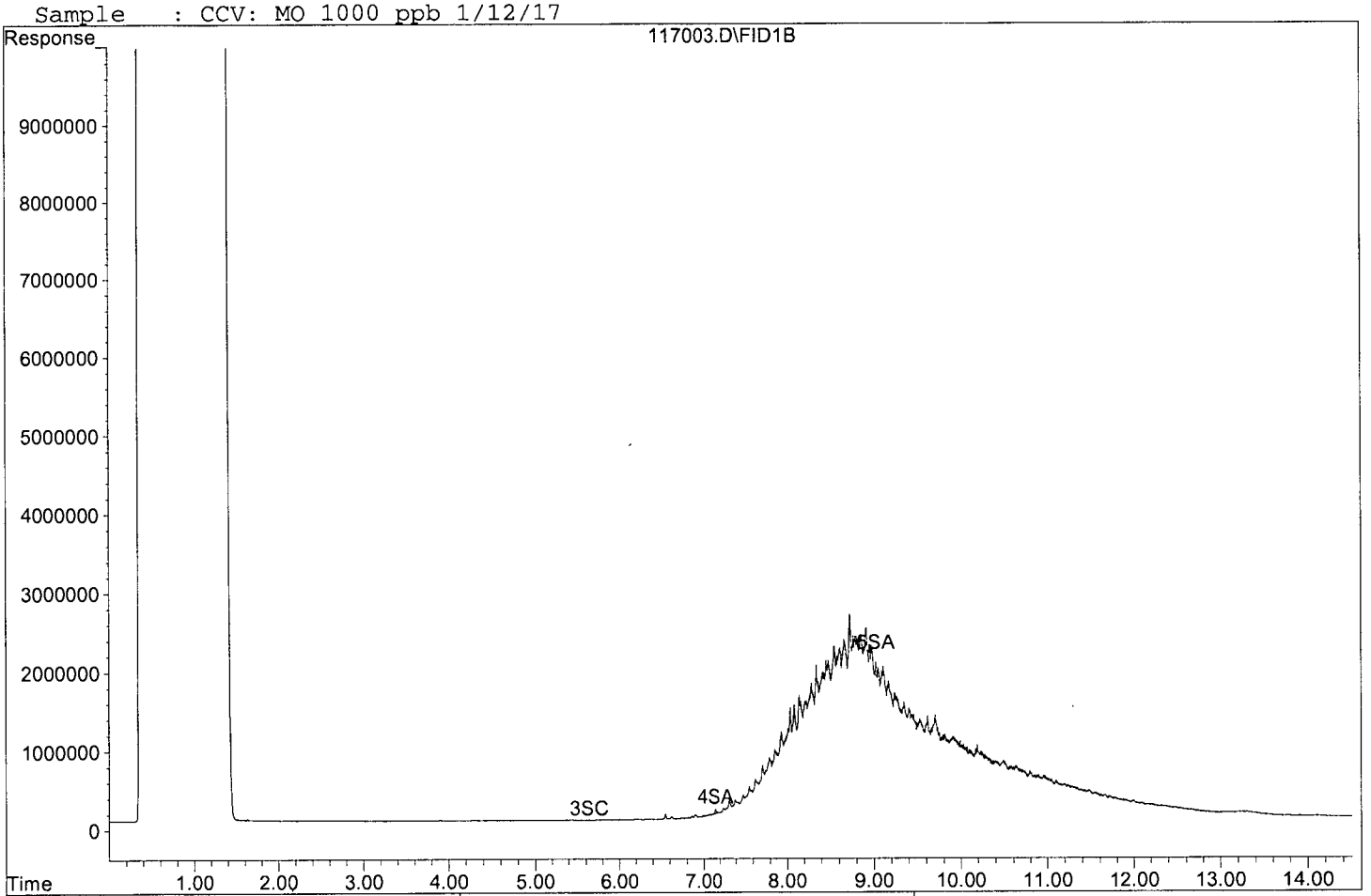
Method : G:\APOLLO\DATA\170117\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

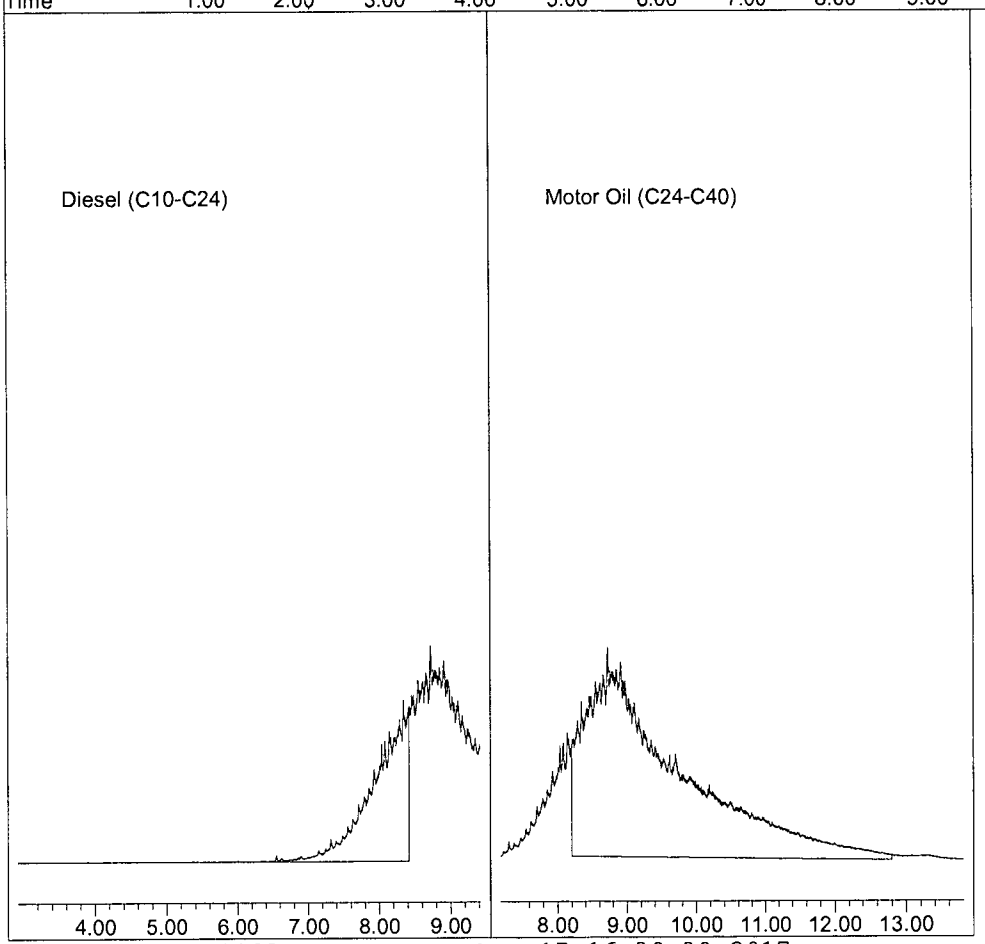
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SC Decanoic Acid(S)	5.64	8427	0.007	ppb
Surrogate Spike 48.000	Recovery =		0.01%	
4) SA Ortho-Terphenyl(S)	7.15	812648	0.174	ppb
Surrogate Spike 30.000	Recovery =		0.58%	
5) SA Octacosane(S)	9.02	1528696	0.437	ppb
Surrogate Spike 30.000	Recovery =		1.46%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	612074933	177.194	ppb
2) HBTM Motor Oil (C24-C40)	10.50	2253298524	808.867	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\170117\117003.D
Sample : CCV: MO 1000 ppb 1/12/17





117003.D DOC1103.M Tue Jan 17 16:30:39 2017

TPH Extractables
DOC1103

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/17/17
Instrument: Apollo
Initial Cal. Date: 10/19/16
Data File: 117012-13.D

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C24)	1727130	1687450	2.3	HATM	
2	HBTM	Motor Oil (C24-C40)	1392870	1143150	18	HBTM	
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			10.2		

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\170117\117012.D Vial: 12
Acq On : 1-17-17 15:50:43 Operator: DP
Sample : CCV: Diesel 400 ppb 1/12/17 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jan 17 16:15 2017 Quant Results File: DOC1103.RES

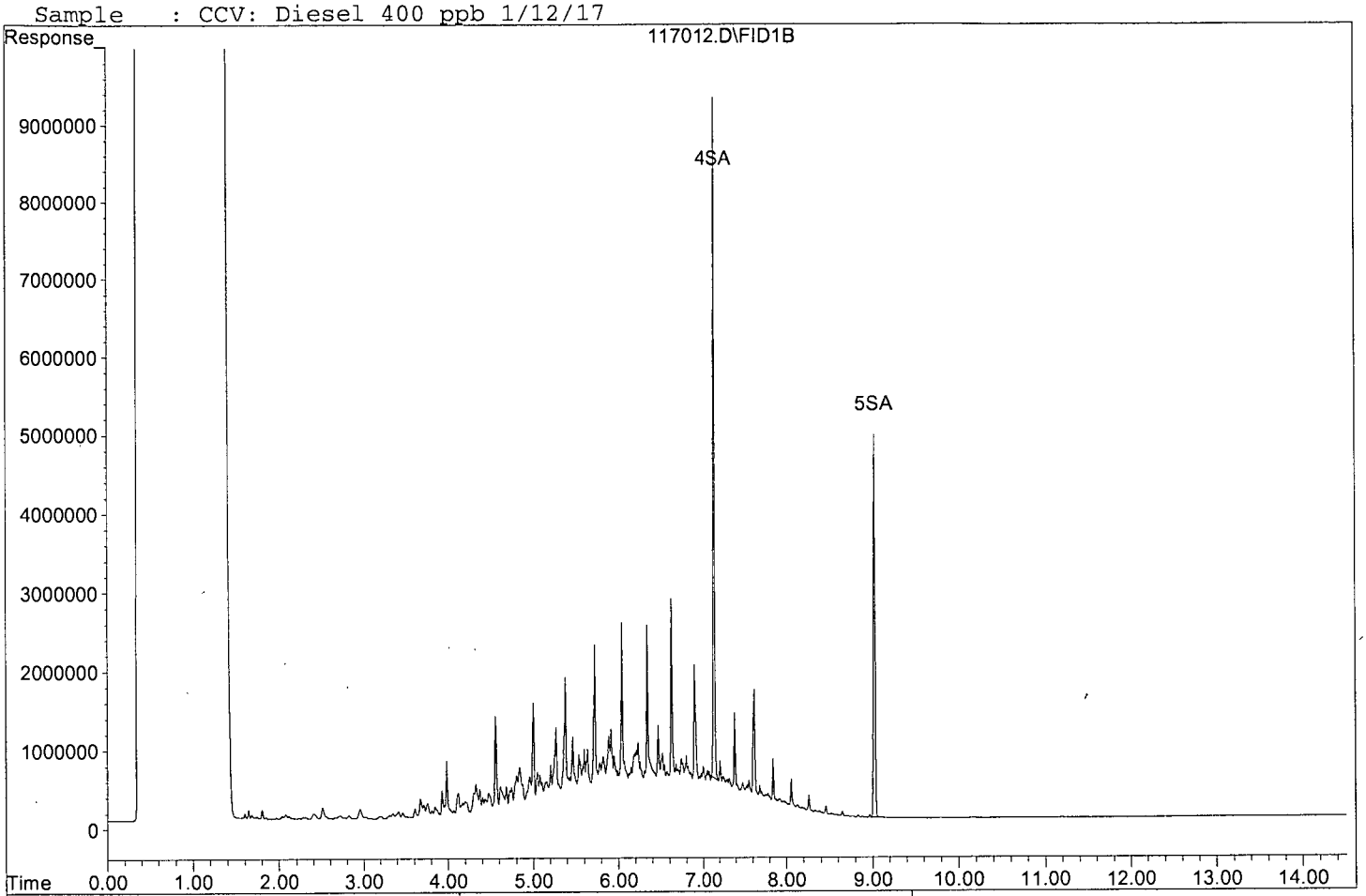
Method : G:\APOLLO\DATA\170117\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

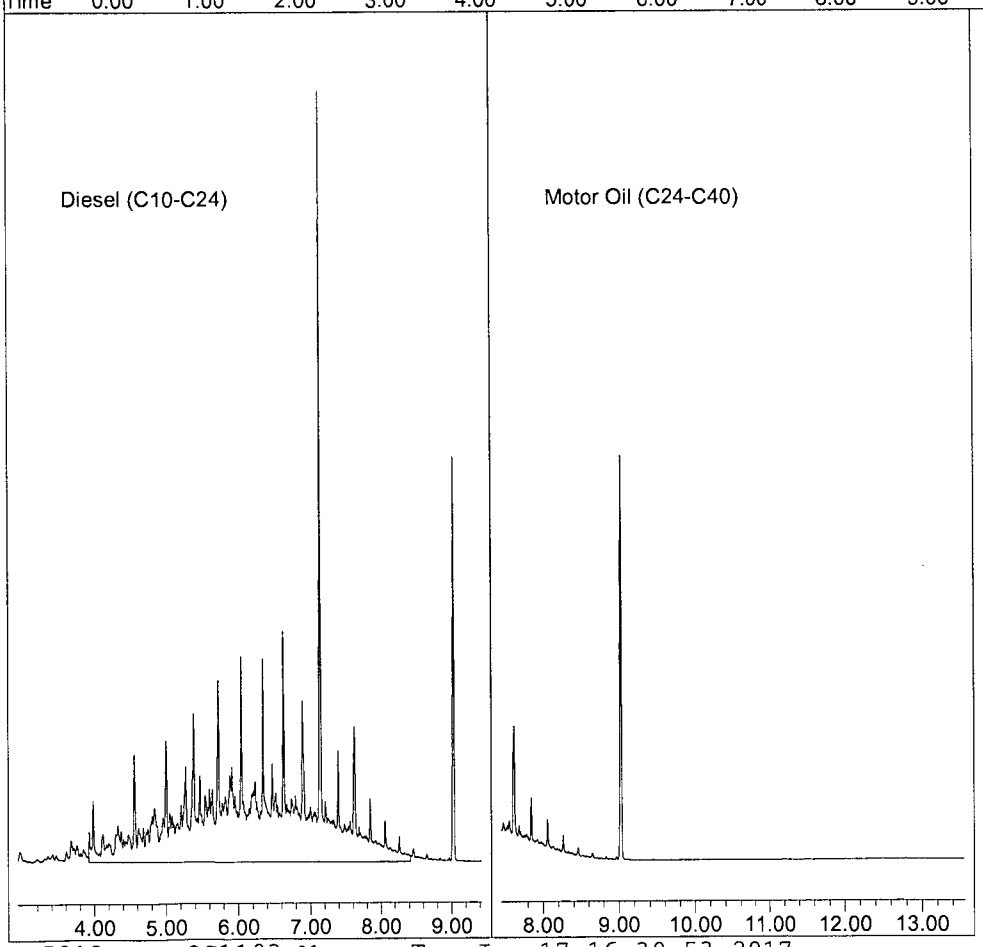
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.14	90223637	19.343 ppb
Surrogate Spike 30.000	Recovery =		64.48%
5) SA Octacosane(S)	9.03	62820376	17.950 ppb
Surrogate Spike 30.000	Recovery =		59.83%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	1349960192	390.810 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\170117\117012.D
Sample : CCV: Diesel 400 ppb 1/12/17





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\170117\117013.D Vial: 13
Acq On : 1-17-17 16:11:15 Operator: DP
Sample : CCV: MO 1000 ppb 1/12/17 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Jan 17 16:26 2017 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\170117\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

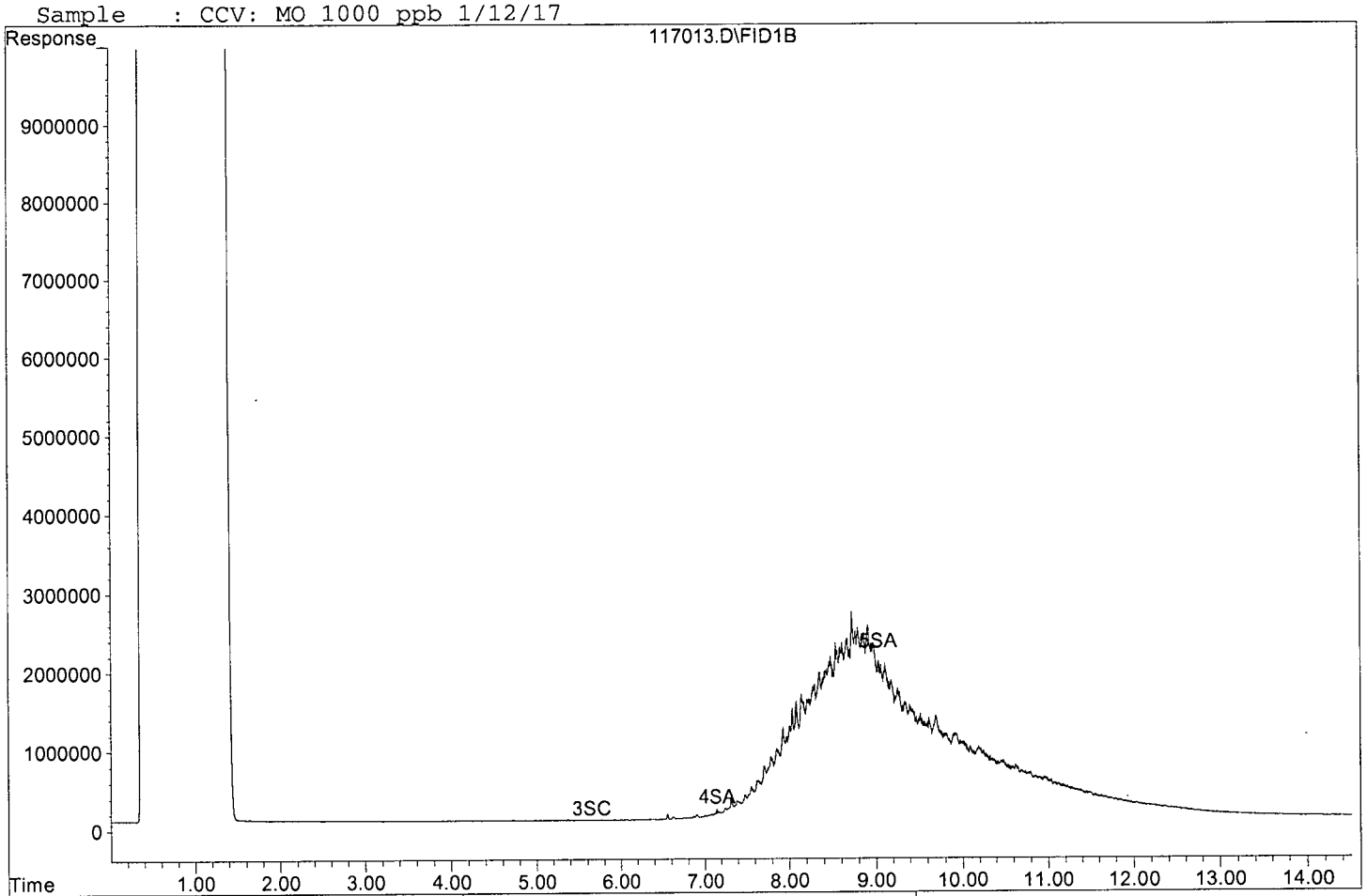
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

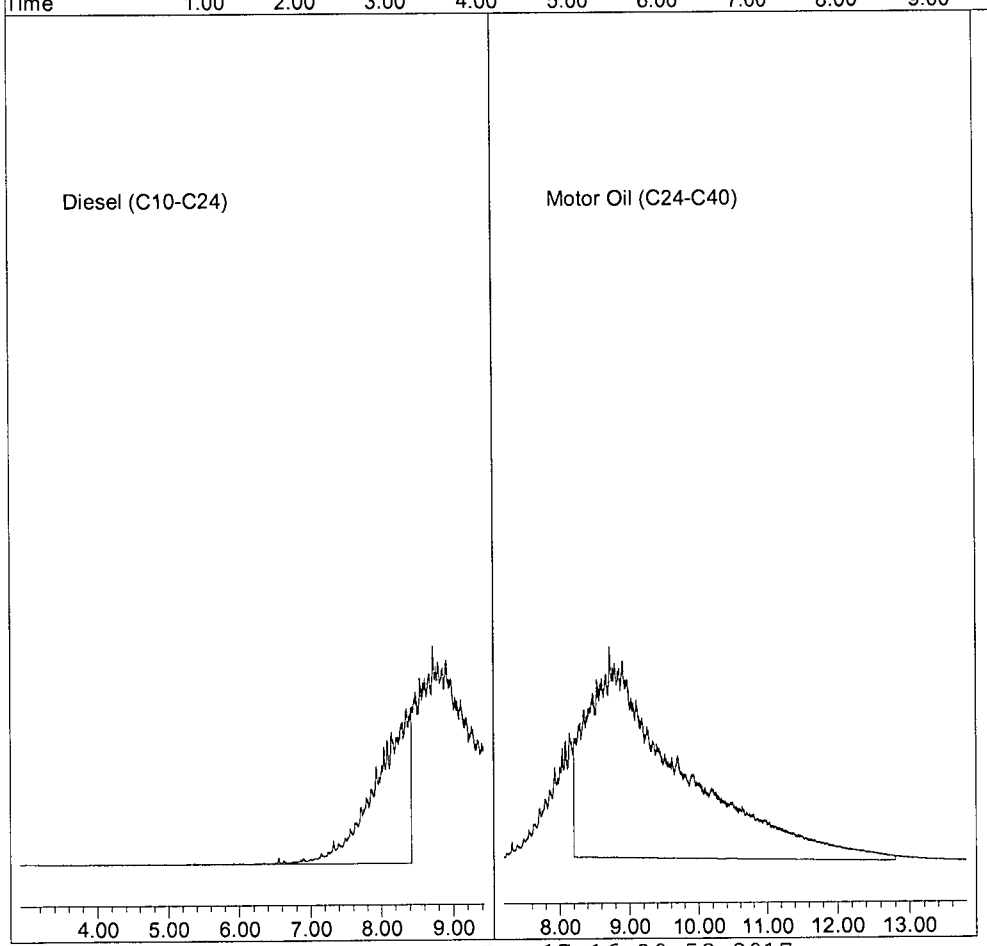
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SC Decanoic Acid(S)	5.64	9120	0.007	ppb
Surrogate Spike 48.000	Recovery =		0.01%	
4) SA Ortho-Terphenyl(S)	7.15	532482	0.114	ppb
Surrogate Spike 30.000	Recovery =		0.38%	
5) SA Octacosane(S)	9.03	1279589	0.366	ppb
Surrogate Spike 30.000	Recovery =		1.22%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	624322262	180.740	ppb
2) HBTM Motor Oil (C24-C40)	10.50	2286307406	820.716	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\170117\117013.D
Sample : CCV: MO 1000 ppb 1/12/17





117013.D DOC1103.M Tue Jan 17 16:30:58 2017

ORGANICS

Raw Data

APPL, INC.

Method Blank
EPA 8015B TPH WATER

Blank Name/QCG: **170112W-48676 - 215565**
Batch ID: #DOC53-170112A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	01/12/17	01/17/17
BLANK	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	01/12/17	01/17/17
BLANK	SURROGATE: OCTACOSANE (S)	93.7	60-142			%	01/12/17	01/17/17
BLANK	SURROGATE: ORTHO-TERPHEN	78.1	56-125			%	01/12/17	01/17/17

Quant Method:DOC1103.M
Run #:117004
Instrument:Apollo
Sequence:170117
Initials:DPO

GC SC-Blank-REG MDLs-DOD
Printed: 01/17/17 3:51:56 PM

Quantitation Report (QT Reviewed)

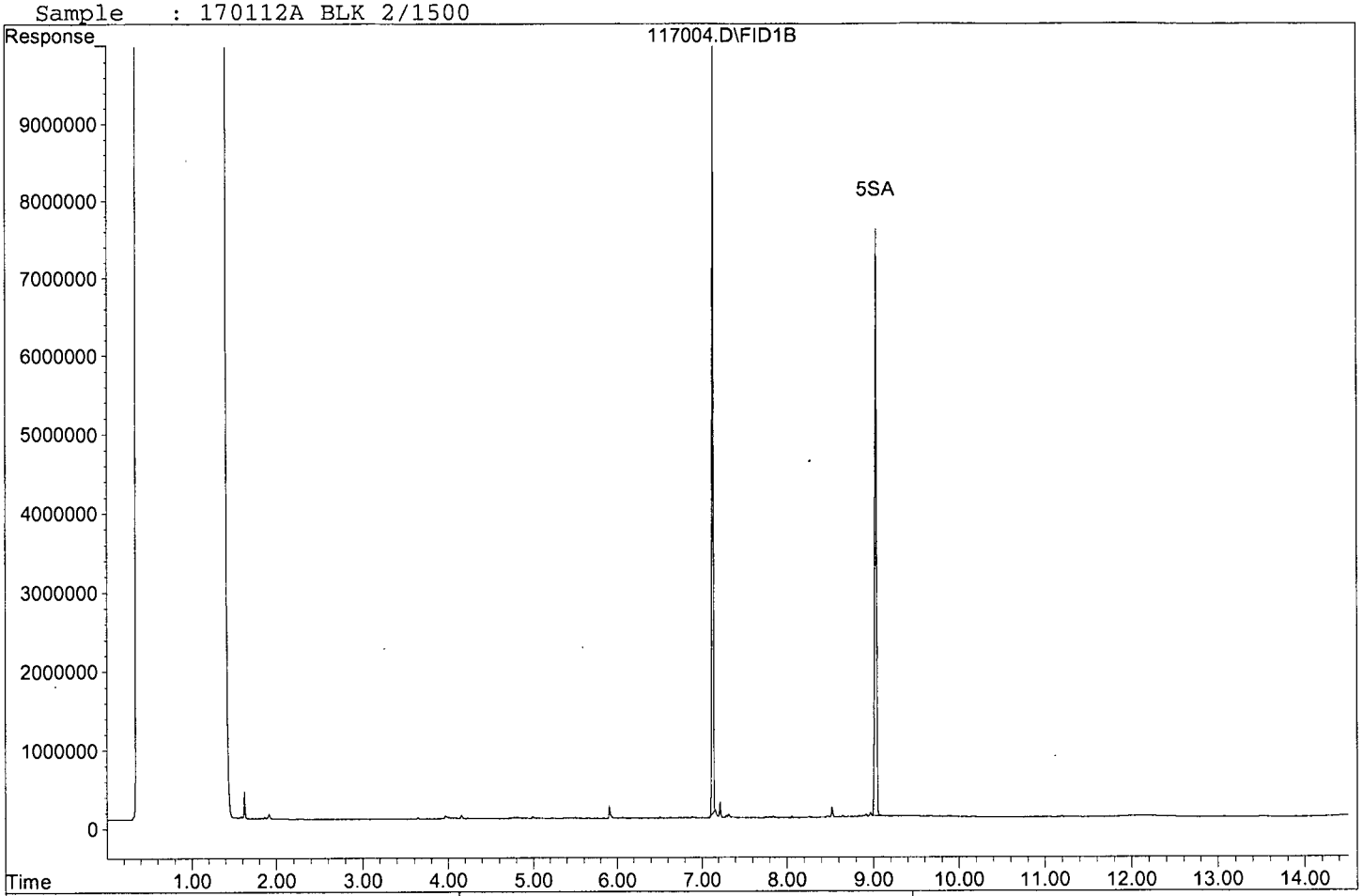
Data File : G:\APOLLO\DATA\170117\117004.D Vial: 4
Acq On : 1-17-17 13:06:05 Operator: DP
Sample : 170112A BLK 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Jan 17 13:29 2017 Quant Results File: DOC1103.RES

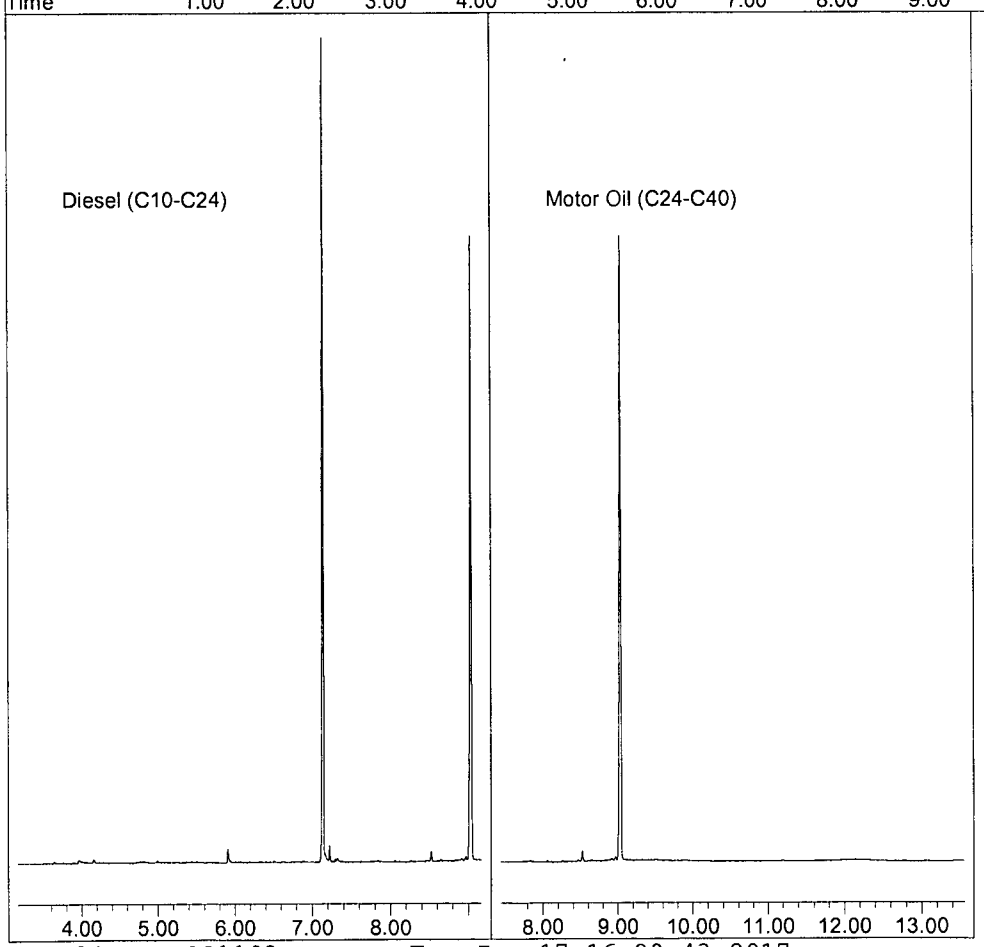
Method : G:\APOLLO\DATA\170117\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.14	109236028	31.225 ppb
Surrogate Spike 40.000		Recovery =	78.06%
5) SA Octacosane(S)	9.04	98385704	37.484 ppb
Surrogate Spike 40.000		Recovery =	93.71%
Target Compounds			

Data File: G:\APOLLO\DATA\170117\117004.D
Sample : 170112A BLK 2/1500





Laboratory Control Spike Recovery
EPA 8015B TPH WATER

APPL ID: **170112W-48676 LCS - 215565**
Batch ID: #DOC53-170112A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
DIESEL (C10-C24)	1330	929	69.7	36-132
OIL (C24-C40)	1330	950	71.3	41-113
SURROGATE: OCTACOSANE (S)	40.0	38.5	96.3	60-142
SURROGATE: ORTHO-TERPHENYL (S)	40.0	40.0	100	56-125

Comments: _____

Primary	SPK
Quant Method :	DOC1103.M
Extraction Date :	01/12/17
Analysis Date :	01/17/17
Instrument :	Apollo
Run :	117005
Initials :	DPO

Printed: 01/17/17 3:51:52 PM
APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\170117\117005.D Vial: 5
Acq On : 1-17-17 13:26:42 Operator: DP
Sample : 170112A LCS-1 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Jan 17 13:54 2017 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\170117\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

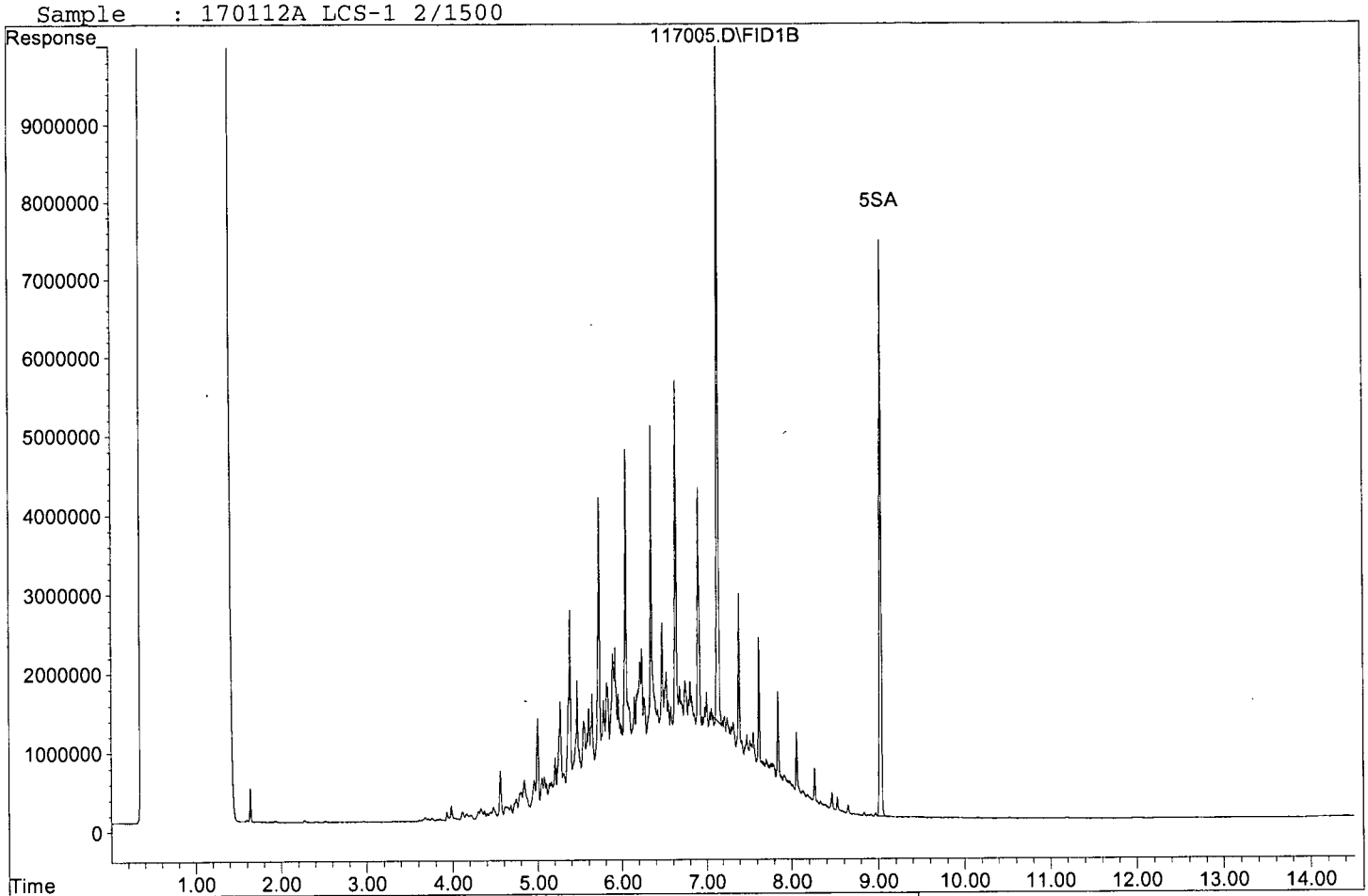
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

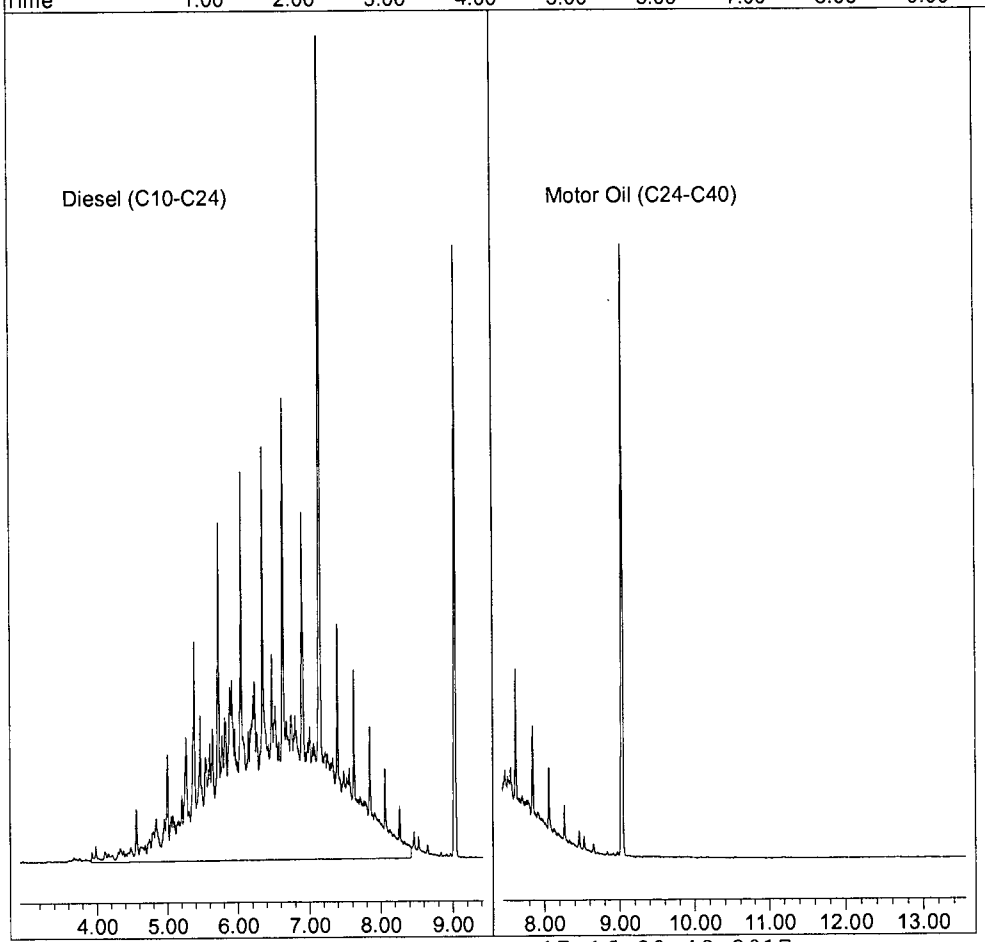
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.15	139774676	39.954 ppb
Surrogate Spike 40.000		Recovery =	99.89%
5) SA Octacosane(S)	9.04	101021996	38.488 ppb
Surrogate Spike 40.000		Recovery =	96.22%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	2406781645	929.008 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\170117\117005.D
Sample : 170112A LCS-1 2/1500





117005.D DOC1103.M Tue Jan 17 16:29:48 2017

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\170117\117006.D Vial: 6
Acq On : 1-17-17 13:47:14 Operator: DP
Sample : 170112A LCS-2 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Jan 17 14:08 2017 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\170117\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

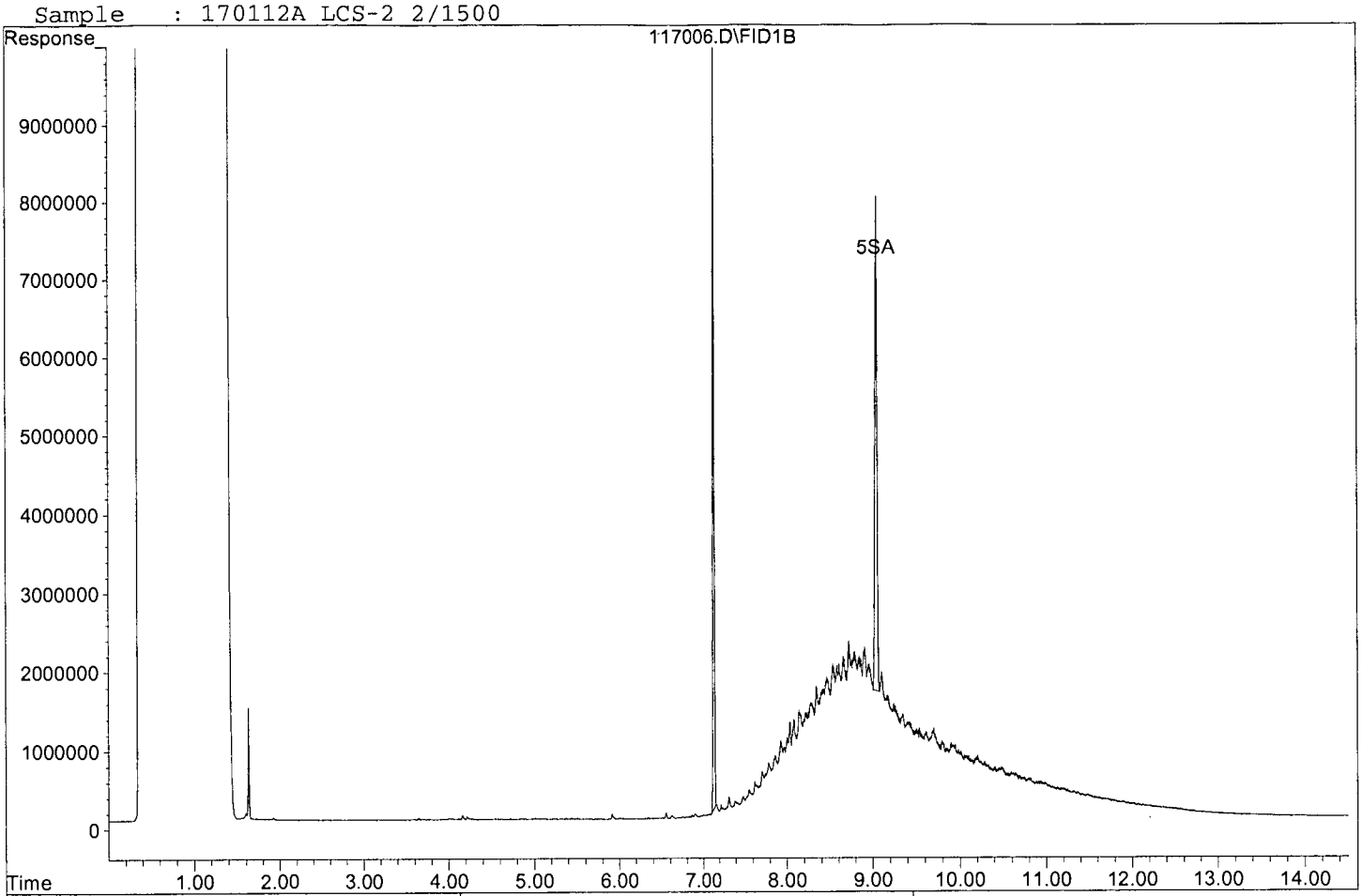
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

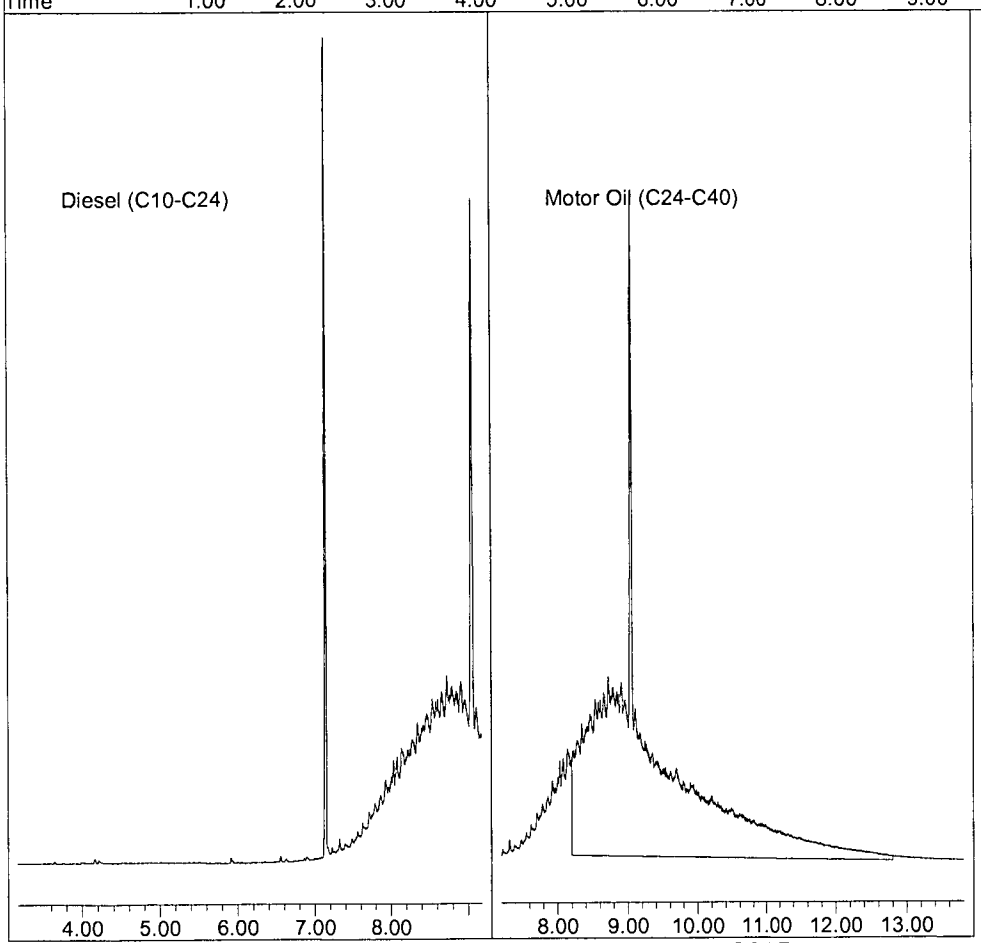
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.14	112662365	32.204	ppb
Surrogate Spike 40.000		Recovery =	80.51%	
5) SA Octacosane(S)	9.05	99692670	37.982	ppb
Surrogate Spike 40.000		Recovery =	94.96%	
Target Compounds				
2) HBTM Motor Oil (C24-C40)	10.50	1985494893	950.309	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\170117\117006.D
Sample : 170112A LCS-2 2/1500





117006.D DOC1103.M Tue Jan 17 16:29:54 2017

DIESEL CURVE		prep:11/03/16-D.P.		ex:6/03/17						
STD	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL
DIESEL	1000	237562-37104	11/03/16	06/03/17	10	10	40	60	80	100
MC	N/A	56098			990	90	60	40	20	NA
				Final VOL.	1000	100	100	100	100	100
				ppm	10	100	400	600	800	1000

MOTOR OIL CURVE		prep: 10/28/16-D.P.		ex:4/26/17						
STD	**[µg/mL]**	**LOT #**	**DATE**	**EXP. DATE**	**µL**	**µL**	**µL**	**µL**	**µL**	**µL**
MOTOR OIL	2000		10/26/16	04/26/17	10	25	125	500	750	200
MC	N/A	56098			990	975	875	500	250	NA
				Final VOL.	1000	1000	1000	1000	1000	200
				ppm	20	50	250	1000	1500	2000

Prep: 11/03/16-D.P. Exp: 6/03/17						
DIESEL CAL STD.						
STD.	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT / LOT#
DIESEL FUEL #2	50,000 ug/mL	O2SI CAT#011598-03 LOT#237562-37104 OP: 11/03/06 EXP: 11/03/17	500 µL	25 mL	1000ug/mL	MC LOT# 56098
O-TERPHENYL OCTACOSANE	600 ug/mL	O2SI CAT#110316-05 LOT#266278-37107 OP: 10/27/16 EXP: 10/27/17	2080 µL		50ug/mL	

Prep: 10/26/16 -D.P. Ex: 4/26/17						
MOTOR OIL CAL STD						
STD.	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT / LOT#
MOTOR OIL	50,000 ug/mL	O2SI CAT#116390-02 LOT#239390-36901 OP:10/26/16 EXP:10/26/17	1mL	25mL	2000ug/mL	MC LOT# 56098

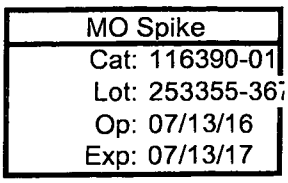
DIESEL SECOND SOURCE prep: 08/01/16-D.P. ex: 07/6/17						
standard	initial conc.	SOURCE DATE	ALIQUOT	FINAL VOL.	FINAL CONC.	SOLVENT LOT
DIESEL SECOND SOURCE	50,000 ug/mL	O2SI CAT#011598-03-SS LOT#244813-34634 OP: 08/28/15 Exp 03/14/19	200uL	10mL	1000ug/mL	MC #56061

MOTOR OIL SECOND SOURCE prep: 07/6/16-L.H. ex: 07/6/17						
standard	initial conc.	SOURCE DATE	ALIQUOT	FINAL VOL.	FINAL CONC.	SOLVENT LOT
MOTOR OIL SECOND SOURCE	50,000 ug/mL	O2SI CAT#116390-02-SS LOT#244814-34637 OP: 07/06/16 Exp 07/06/17	200uL	10mL	1000ug/mL	MC #56061

DIESEL CCV 400ug/ml						
Prep: 11/03/16-D.P. Ex: 02/03/16						
STANDARD	**INITIAL CONC.**	**SOURCE DATE**	**ALIQUOT**	**FINAL VOL**	**FINAL CONC.**	**SOLVENT /LOT#**
DIESEL STD.	1000 µg/mL	Diesel Std.	2000µL	5mL	400 µg/ml	MC
	PREP:	11/03/16				56098
	Exp:	06/03/17				

MOTOR OIL CCV 1000ppm						
Prep: 11/21/16-G.A. Ex: 2/21/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
MO STD.	2000 µg/mL	MO Std.	2500µL	5mL	1000 µg/ml	MC
	PREP:	10/26/16				56098
	Exp:	04/26/17				

Diesel Fuel #2
Conc. 50000 ug/ml
O2SI
CAT #011598-03
LOT# 237562-37102
OP: 10/25/16 RH
EXP: 10/25/17


MO Spike
Cat: 116390-01
Lot: 253355-367
Op: 07/13/16
Exp: 07/13/17

THC Surrogate
Cat: 110316-05
Lot: 266278-37
Op: 10/27/16
Exp: 10/27/17

_SEP011LL

Organic Extraction Worksheet

Method	THC Sep Fun Ext 3510C (LOW LEVEL)	Extraction Set	170112A	Extraction Method	SEP011LL	Units	mL

Spiked ID 1	Diesel Spike 12-27-16 EXP 12-27-17		Surrogate ID 1	THC Surrogate 12-27-16 EXP 12-27-17	
Spiked ID 2	Motor Oil Spike 12-27-16 EXP 12-27-17		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	01/12/17 10:48	
Spiked ID 8			Ext. End Time:	01/17/17 8:50	
			GC Requires Extract By:		

pH1			Water Bath Temp Criteria	35,35,35 °
pH2				
pH3				

Spiked By: DL **Date** 01/12/17 **Witnessed By:** JR **Date** 01/12/17

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	170112A Blk				0.1	1	1500	2	7	01/12/17 10:48	
						equip	E-WB1				
2	170112A LCS-1		0.040	1	0.1	1	1500	2	7	01/12/17 10:48	
						equip	E-WB2				
3	170112A LCS-2		0.040	2	0.1	1	1500	2	7	01/12/17 10:48	
						equip	E-WB3				
4	170112A LCSD-1		0.040	1	0.1	1	1500	2	7	01/12/17 10:48	
						equip	E-WB1				
5	170112A LCSD-2		0.040	2	0.1	1	1500	2	7	01/12/17 10:48	
						equip	E-WB2				
6	AZ48676	AZ48676W10			0.1	1	1500	2	7	01/12/17 10:48	81936
						equip	E-WB3				
7	AZ48678	AZ48678W10			0.1	1	1500	2	7	01/12/17 10:48	81936
						equip	E-WB1				
8	AZ48679	AZ48679W08			0.1	1	1500	2	7	01/12/17 10:48	81936
						equip	E-WB2				

Ky 1/17/17

Solvent and Lot#	
MC	56153
Na2SO4	16c255214
ph-indicator strips	HC574756
Filter Paper	400112

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	D.P.
Date	1/17/17
Time	12:00
Refrigerator	Hubart

	Technician's Initials
Scanned By	DL
Sample Preparation	DL
Extraction	DL,JR
Concentration	DL

Modified	01/17/17 8:56:12 AM

Reviewed By: Ky **Date** 1/17/17

Injection Log

Directory: G:\APOLLO\DATA\161028\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	1028002.D	1	MO 20ppb 10/28/16	Mix(B)	10-28-16 9:07:30
2	3	1028003.D	1	MO 50ppb 10/28/16	Mix(B)	10-28-16 9:28:13
3	4	1028004.D	1	MO 250ppb 10/28/16	Mix(B)	10-28-16 9:49:06
4	5	1028005.D	1	MO 1000ppb 10/28/16	Mix(B)	10-28-16 10:09:58
5	6	1028006.D	1	MO 1500ppb 10/28/16	Mix(B)	10-28-16 10:30:51
6	7	1028007.D	1	MO 2000ppb 10/28/16	Mix(B)	10-28-16 10:51:50
7	8	1028008.D	1	MO SS 1000ppb 7/6/16	Mix(B)	10-28-16 11:12:44
8	4	1103004.D	1	DIESEL 10ppb 11/3/16	Mix(A)	11-3-16 9:45:14
9	6	1103006.D	1	DIESEL 400ppb 11/3/16	Mix(A)	11-3-16 10:26:16
10	7	1103007.D	1	DIESEL 600ppb 11/3/16	Mix(A)	11-3-16 10:46:56
11	8	1103008.D	1	DIESEL 800ppb 11/3/16	Mix(A)	11-3-16 11:07:39
12	9	1103009.D	1	DIESEL 1000ppb 11/3/16	Mix(A)	11-3-16 11:28:31
13	11	1103011.D	1	DIESEL 100ppb 11/3/16	Mix(A)	11-3-16 12:56:47
14	12	1103012.D	1	DIESEL-SS 400ppb 8/1/16	Mix(A)	11-3-16 13:25:11
15	2	117002.D	1	CCV: Diesel 400 ppb 1/12/17	Mix(A)	1-17-17 12:25:14
16	3	117003.D	1	CCV: MO 1000 ppb 1/12/17	Mix(B)	1-17-17 12:45:38
17	4	117004.D	1.33333	170112A BLK 2/1500	Water	1-17-17 13:06:05
18	5	117005.D	1.33333	170112A LCS-1 2/1500	Water	1-17-17 13:26:42
19	6	117006.D	1.33333	170112A LCS-2 2/1500	Water	1-17-17 13:47:14
20	9	117009.D	1.33333	AZ48676W10 2/1500	Water	1-17-17 14:49:03
21	10	117010.D	1.33333	AZ48678W10 2/1500	Water	1-17-17 15:09:41
22	11	117011.D	1.33333	AZ48679W08 2/1500	Water	1-17-17 15:30:14
23	12	117012.D	1	CCV: Diesel 400 ppb 1/12/17	Mix(A)	1-17-17 15:50:43
24	13	117013.D	1	CCV: MO 1000 ppb 1/12/17	Mix(B)	1-17-17 16:11:15

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank
EPA 8270D SIM

Blank Name/QCG: **170112W-48676 - 215561**
Batch ID: #SIMDO-170112A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/12/17	01/16/17
BLANK	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/12/17	01/16/17
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	01/12/17	01/16/17
BLANK	SURROGATE: 2-FLUORBIPHENY	79.8	53-106			%	01/12/17	01/16/17
BLANK	SURROGATE: NITROBENZENE-	81.6	55-111			%	01/12/17	01/16/17
BLANK	SURROGATE: TERPHENYL-D14 (	92.0	58-132			%	01/12/17	01/16/17

Quant Method: L0116PR.M
Run #: 0116L013
Instrument: Linus
Sequence: L170116
Initials: RHA

GC SC-Blank-REG MDLs-DOD
Printed: 01/17/17 3:33:56 PM

Laboratory Control Spike Recovery
EPA 8270D SIM

APPL ID: **170112W-48676 LCS - 215561**
Batch ID: #SIMDO-170112A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1-METHYLNAPHTHALENE	5.00	4.54	90.8	41-115
2-METHYLNAPHTHALENE	5.00	4.15	83.0	39-114
NAPHTHALENE	5.00	4.28	85.6	43-114
SURROGATE: 2-FLUORBIPHENYL (S)	5.00	4.47	89.4	53-106
SURROGATE: NITROBENZENE-D5 (S)	5.00	4.19	83.8	55-111
SURROGATE: TERPHENYL-D14 (S)	5.00	5.03	101	58-132

Comments: _____

Primary	SPK
Quant Method :	L0116PR.M
Extraction Date :	01/12/17
Analysis Date :	01/16/17
Instrument :	Linus
Run :	0116L014
Initials :	RHA

Printed: 01/17/17 3:33:49 PM
APPL Standard LCS

8270D-SIM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81936

Case No: 81936 Date Analyzed: 01/16/17

Matrix: WATER Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: 2-FLUORBIPHENYL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
170112A-BLK	Blank	53-106	79.8		55-111	81.6	
170112A-LCS	Lab Control Spike	53-106	89.4		55-111	83.8	
AZ48676	ERH166	53-106	81.9		55-111	61.5	
AZ48678	ERH191	53-106	68.3		55-111	66.1	
AZ48679	ERH192	53-106	89.2		55-111	83.7	

Comments: Batch: #SIMDO-170112A

8270D-SIM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81936

Case No: 81936 Date Analyzed: 01/16/17

Matrix: WATER Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: TERPHENYL-D14 (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
170112A-BLK	Blank	58-132	92.0				
170112A-LCS	Lab Control Spike	58-132	101				
AZ48676	ERH166	58-132	91.4				
AZ48678	ERH191	58-132	76.6				
AZ48679	ERH192	58-132	95.2				

Comments: Batch: #SIMDO-170112A

8270D-SIM

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81936

Case No: 81936 Date Analyzed: 01/16/17

Matrix: WATER Instrument: Linus

Blank ID: 170112A-BLK Time Analyzed: 2221

APPL ID.	Client Sample No.	File ID.	Date Analyzed
170112A-BLK	Blank	0116L013	01/16/17 2221
170112A-LCS	Lab Control Spike	0116L014	01/16/17 2248
AZ48676	ERH166	0116L015	01/16/17 2316
AZ48678	ERH191	0116L016	01/16/17 2344
AZ48679	ERH192	0116L017	01/17/17 0012

Comments: Batch: #SIMDO-170112A

Printed: 01/17/17 3:33:45 PM

Form 4, Blank Summary

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81936
Matrix: Water
ID: SV Tune 11/15/16

SDG No: 81936
Date Analyzed: 01/16/17
Instrument: Linus
Time Analyzed: 17:36

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.1 SIM 1/13/17	0116L003.D	01/16/17 17:54
2		0.2 SIM 1/13/17	0116L004.D	01/16/17 18:22
3		0.5 SIM 1/13/17	0116L005.D	01/16/17 18:50
4		1.0 SIM 1/13/17	0116L006.D	01/16/17 19:17
5		5.0 SIM 1/13/17	0116L007.D	01/16/17 19:45
6		10 SIM 1/13/17	0116L008.D	01/16/17 20:13
7		50 SIM 1/13/17	0116L009.D	01/16/17 20:41
8		100 SIM 1/13/17	0116L010.D	01/16/17 21:09
9		SS SIM 1/13/17	0116L011.D	01/16/17 21:37
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	30 - 60% of mass 198	50.8
68	0 - 2% of mass 69	0.0
69	100 - 100% of mass 69	100.0
70	0 - 2% of mass 69	0.3
127	40 - 60% of mass 198	54.5
197	0 - 1% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.7
275	10 - 30% of mass 198	21.5
365	1 - 100% of mass 198	2.7
441	0.01 - 100% of mass 443	91.6
442	40 - 150% of mass 198	58.4
443	17 - 23% of mass 442	18.4

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81936
Matrix: Water
ID: SV Tune 11/15/16

SDG No: 81936
Date Analyzed: 01/16/17
Instrument: Linus
Time Analyzed: 22:03

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1	Blank	170112A BLK 1/1000	0116L013.D	01/16/17 22:21
2	Lab Control Spike	170112A LCS-1 1/1000	0116L014.D	01/16/17 22:48
3	ERH166	AZ48676W14 1/1060	0116L015.D	01/16/17 23:16
4	ERH191	AZ48678W06 1/1040	0116L016.D	01/16/17 23:44
5	ERH192	AZ48679W05 1/1050	0116L017.D	01/17/17 0:12
6		5.0 SIM 1/13/17	0116L019.D	01/17/17 1:07
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	30 - 60% of mass 198	47.8
68	0 - 2% of mass 69	0.0
69	100 - 100% of mass 69	100.0
70	0 - 2% of mass 69	0.6
127	40 - 60% of mass 198	53.9
197	0 - 1% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.0
275	10 - 30% of mass 198	20.4
365	1 - 100% of mass 198	2.2
441	0.01 - 100% of mass 443	50.1
442	40 - 150% of mass 198	58.5
443	17 - 23% of mass 442	20.1

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81936

Lab File ID (Standard): 0116L007.D Date Analyzed: 01/16/17

Instrument ID: Linus Time Analyzed: 19:45

GC Column: ID: Heated Purge: (Y/N)

		Napthalene-D8(IS)		Acenaphthene-D10(IS)		Phenanthrene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	20107	5.87	10094	7.91	19784	9.66
	UPPER LIMIT	40214	6.37	20188	8.41	39568	10.16
	LOWER LIMIT	10054	5.37	5047	7.41	9892	9.16
	SAMPLE NO.						
01	170112A BLK 1/1000	20579	5.87	10742	7.91	20678	9.67
02	170112A LCS-1 1/1000	19011	5.87	9505	7.91	18920	9.66
03	AZ48676W14 1/1060	21229	5.88	10843	7.92	20649	9.67
04	AZ48678W06 1/1040	24463	5.87	12737	7.91	24832	9.67
05	AZ48679W05 1/1050	19900	5.88	10203	7.91	19839	9.67
06	5.0 SIM 1/13/17	19630	5.87	9961	7.91	19943	9.66
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 81936

Lab File ID (Standard): 0116L007.D Date Analyzed: 01/16/17

Instrument ID: Linus Time Analyzed: 19:45

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Chrysene-D12(IS)		Perylene-D12(IS)			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	24551	12.81	20981	15.33		
	UPPER LIMIT	49102	13.31	41962	15.83		
	LOWER LIMIT	12276	12.31	10491	14.83		
	SAMPLE NO.						
01	170112A BLK 1/1000	25701	12.82	21802	15.35		
02	170112A LCS-1 1/1000	23517	12.80	19639	15.32		
03	AZ48676W14 1/1060	25152	12.82	21840	15.34		
04	AZ48678W06 1/1040	30995	12.82	27110	15.34		
05	AZ48679W05 1/1050	25283	12.82	21667	15.34		
06	5.0 SIM 1/13/17	24630	12.81	21161	15.32		
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

ORGANICS

Sample Data

APPL, INC.

EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH166
Sample Collection Date: 01/09/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81936
APPL ID: AZ48676
QCG: #SIMDO-170112A-215561

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/12/17	01/16/17
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/12/17	01/16/17
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	01/12/17	01/16/17
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	81.9	53-106			%	01/12/17	01/16/17
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	61.5	55-111			%	01/12/17	01/16/17
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	91.4	58-132			%	01/12/17	01/16/17

Quant Method: L0116PR.M
Run #: 0116L015
Instrument: Linus
Sequence: L170116
Dilution Factor: 1
Initials: RHA

Printed: 01/17/17 3:33:42 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L015.D Vial: 15
Acq On : 16 Jan 17 23:16 Operator: MA
Sample : AZ48676W14 1/1060 Inst : Linus
Misc : water Multiplr: 0.94

Quant Time: Jan 17 16:20 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	21229	2.50000	ppb	0.01
6) Acenaphthene-D10(IS)	7.92	164	10843	2.50000	ppb	0.01
11) Phenanthrene-D10(IS)	9.67	188	20649	2.50000	ppb	0.01
15) Chrysene-D12(IS)	12.82	240	25152	2.50000	ppb	0.00
21) Perylene-D12(IS)	15.34	264	21840	2.50000	ppb	0.00
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.05	82	10283	2.90042	ppb	0.00
Spiked Amount 4.717			Recovery = 61.480%			
7) Surrogate Recovery (FBP)	7.13	172	27921	3.86544	ppb	0.00
Spiked Amount 4.717			Recovery = 81.938%			
17) Surrogate Recovery (TPH)	11.52	244	35669	4.31213	ppb	-0.01
Spiked Amount 4.717			Recovery = 91.414%			
Target Compounds						Qvalue

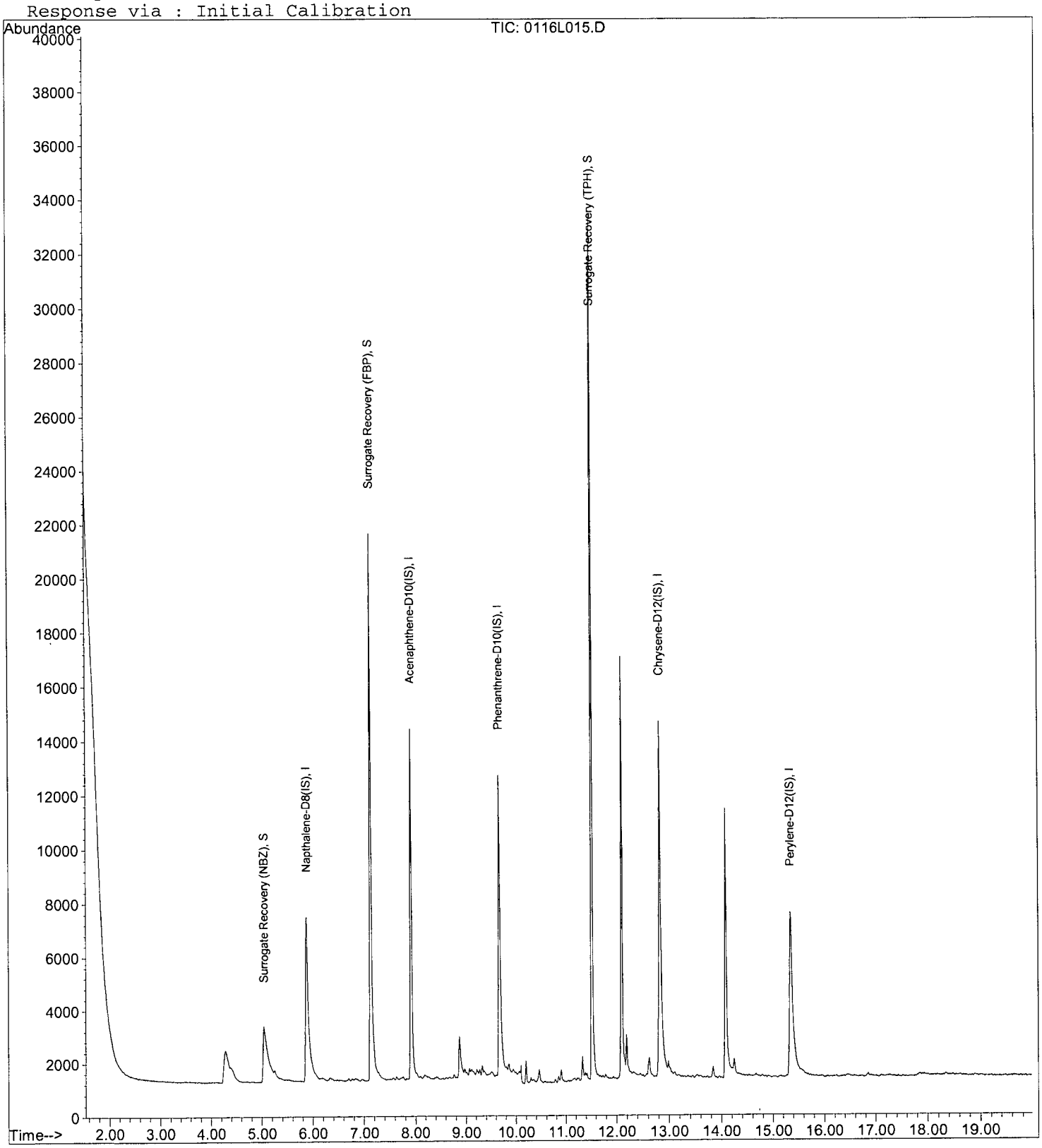
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L015.D Vial: 15
Acq On : 16 Jan 17 23:16 Operator: MA
Sample : AZ48676W14 1/1060 Inst : Linus
Misc : water Multiplr: 0.94

Quant Time: Jan 17 16:20 2017 Quant Results File: L0116PR.RES

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH191
Sample Collection Date: 01/06/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81936
APPL ID: AZ48678
QCG: #SIMDO-170112A-215561

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/12/17	01/16/17
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/12/17	01/16/17
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	01/12/17	01/16/17
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	68.3	53-106			%	01/12/17	01/16/17
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	66.1	55-111			%	01/12/17	01/16/17
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	76.6	58-132			%	01/12/17	01/16/17

Quant Method: L0116PR.M
Run #: 0116L016
Instrument: Linus
Sequence: L170116
Dilution Factor: 1
Initials: RHA

Printed: 01/17/17 3:33:42 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L016.D Vial: 16
Acq On : 16 Jan 17 23:44 Operator: MA
Sample : AZ48678W06 1/1040 Inst : Linus
Misc : water Multiplr: 0.96

Quant Time: Jan 17 16:21 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.87	136	24463	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	7.91	164	12737	2.50000	ppb	0.00
11) Phenanthrene-D10(IS)	9.67	188	24832	2.50000	ppb	0.01
15) Chrysene-D12(IS)	12.82	240	30995	2.50000	ppb	0.00
21) Perylene-D12(IS)	15.34	264	27110	2.50000	ppb	0.00
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.03	82	12791	3.17645	ppb	-0.01
Spiked Amount 4.808			Recovery = 66.061%			
7) Surrogate Recovery (FBP)	7.12	172	27333	3.28329	ppb	-0.01
Spiked Amount 4.808			Recovery = 68.286%			
17) Surrogate Recovery (TPH)	11.52	244	36830	3.68260	ppb	-0.01
Spiked Amount 4.808			Recovery = 76.606%			
Target Compounds						Qvalue

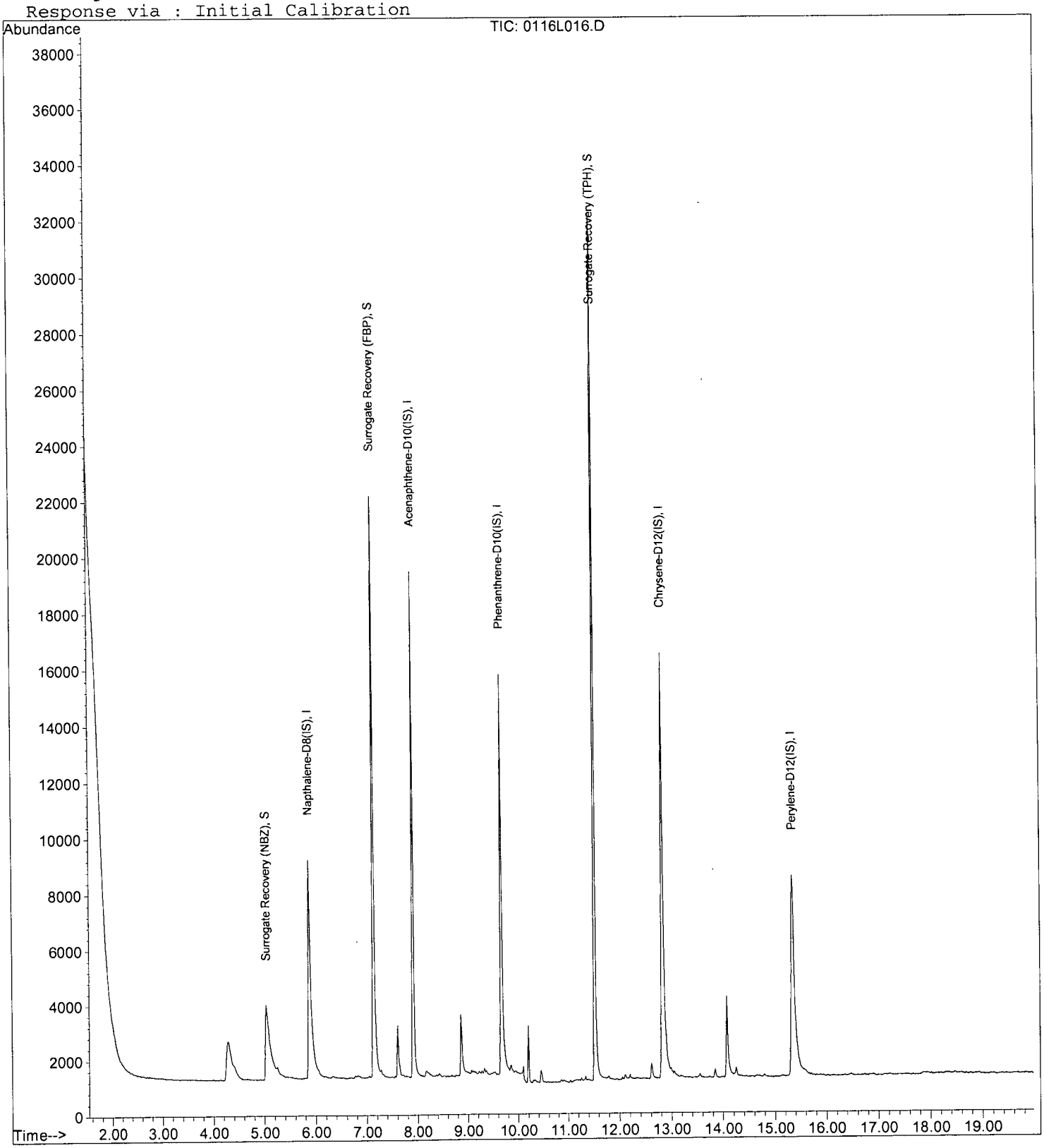
(#) = qualifier out of range (m) = manual integration
0116L016.D L0116PR.M Wed Jan 18 13:08:14 2017

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L016.D Vial: 16
Acq On : 16 Jan 17 23:44 Operator: MA
Sample : AZ48678W06 1/1040 Inst : Linus
Misc : water Multiplr: 0.96

Quant Time: Jan 17 16:21 2017 Quant Results File: L0116PR.RES

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH192
Sample Collection Date: 01/06/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81936
APPL ID: AZ48679
QCG: #SIMDO-170112A-215561

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/12/17	01/17/17
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/12/17	01/17/17
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	01/12/17	01/17/17
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	89.2	53-106			%	01/12/17	01/17/17
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	83.7	55-111			%	01/12/17	01/17/17
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	95.2	58-132			%	01/12/17	01/17/17

Quant Method: L0116PR.M
Run #: 0116L017
Instrument: Linus
Sequence: L170116
Dilution Factor: 1
Initials: RHA

Printed: 01/17/17 3:33:42 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L017.D Vial: 17
Acq On : 17 Jan 17 00:12 Operator: MA
Sample : AZ48679W05 1/1050 Inst : Linus
Misc : water Multiplr: 0.95

Quant Time: Jan 17 16:21 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	19900	2.50000	ppb	0.01
6) Acenaphthene-D10(IS)	7.91	164	10203	2.50000	ppb	0.00
11) Phenanthrene-D10(IS)	9.67	188	19839	2.50000	ppb	0.01
15) Chrysene-D12(IS)	12.82	240	25283	2.50000	ppb	0.01
21) Perylene-D12(IS)	15.34	264	21667	2.50000	ppb	0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.03	82	13353	3.98589	ppb	-0.01
Spiked Amount 4.762			Recovery = 83.706%			
7) Surrogate Recovery (FBP)	7.13	172	28605	4.24860	ppb	0.00
Spiked Amount 4.762			Recovery = 89.229%			
17) Surrogate Recovery (TPH)	11.52	244	37347	4.53435	ppb	-0.01
Spiked Amount 4.762			Recovery = 95.214%			
Target Compounds						Qvalue

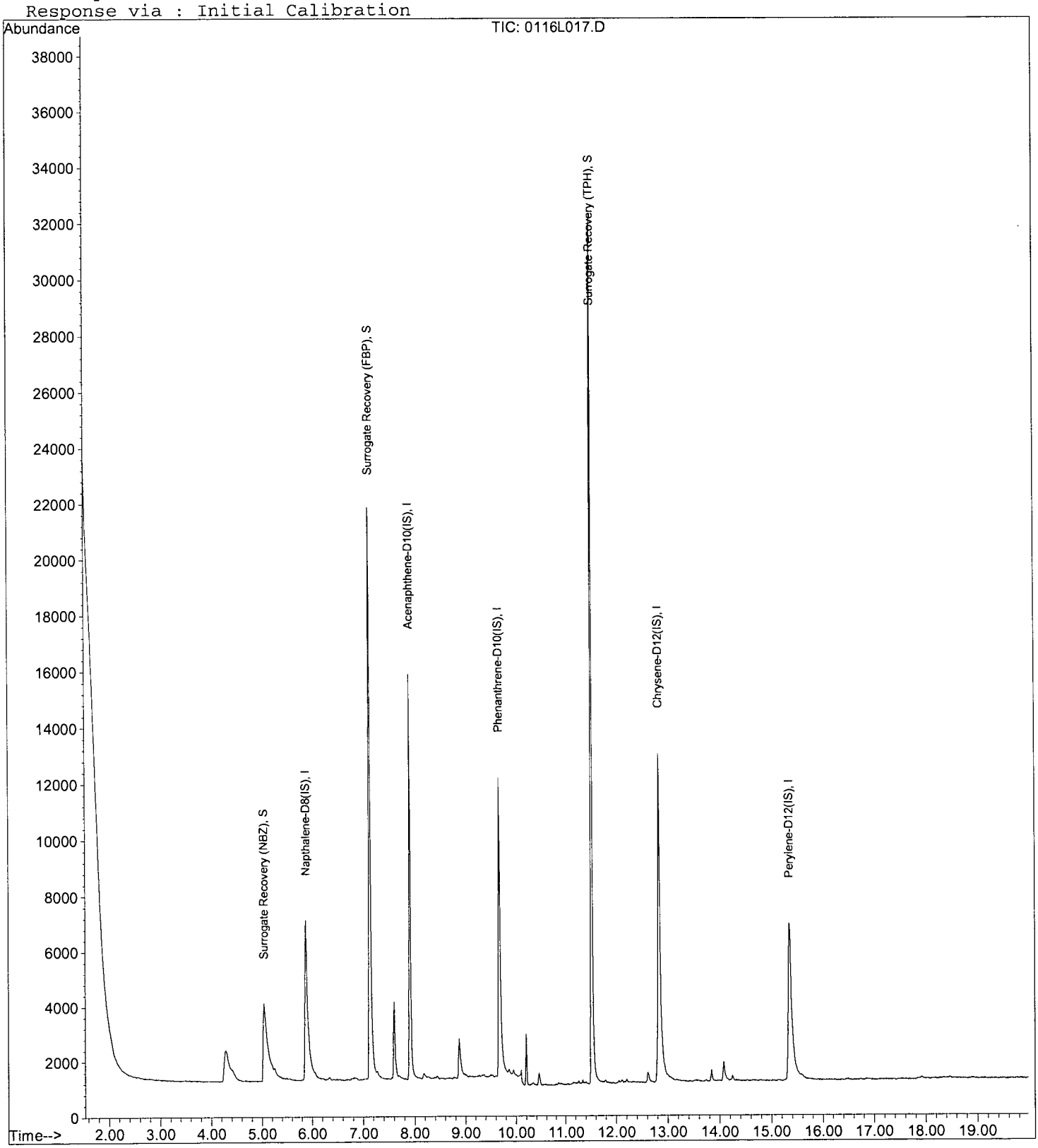
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L017.D Vial: 17
Acq On : 17 Jan 17 00:12 Operator: MA
Sample : AZ48679W05 1/1050 Inst : Linus
Misc : water Multiplr: 0.95

Quant Time: Jan 17 16:21 2017 Quant Results File: L0116PR.RES

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



ORGANICS

Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/16/17
Matrix: Instrument: Linus
Initials:

		Compound	0116L003.D 0.1	0116L004.D 0.2	0116L005.D 0.5	0116L006.D 1	0116L007.D 5	0116L008.D 10	0116L009.D 50	0116L010.D 100			Avg	%RSD		
1	I	Napthalene-D8(IS)														
2	SL	Surrogate Recovery (NBZ)			0.0634	0.1193	0.3785	0.4286	0.4160	0.4184						
3	TM	Naphthalene	0.8641	0.8899	1.014	1.051	1.158	1.210	1.029	0.9625			0.30	55	SL	1.000
4	TML	2-Methylnaphthalene	0.3844	0.3669	0.4696	0.5130	0.6848	0.7310	0.6163	0.5795			1.0	12	TM	
5	TM	1-Methylnaphthalene	0.7503	0.7307	0.7345	0.7190	0.7025	0.7267	0.5843	0.5392			0.54	25	TML	0.999
6	I	Acenaphthene-D10(IS)											0.69	11	TM	
7	S	Surrogate Recovery (FBP)	1.431	1.366	1.559	1.629	1.721	1.833	1.537	1.494						
8	TM	Acenaphthylene	1.711	1.804	2.071	2.040	2.374	2.524	2.074	1.954			1.6	9.7	S	
9	*TM	Acenaphthene	1.304	1.189	1.320	1.273	1.380	1.447	1.178	1.116			2.1	13	TM	
10	TM	Fluorene	1.306	1.197	1.381	1.381	1.572	1.633	1.348	1.260			1.3	8.7	*TM	
11	I	Phenanthrene-D10(IS)											1.4	11	TM	
12	TM	Phenanthrene	1.005	0.9837	1.024	1.013	1.160	1.211	1.017	0.9340						
13	TM	Anthracene	0.9050	0.8051	0.9610	0.9801	1.146	1.221	0.9880	0.8505			1.0	8.9	TM	
14	*TM	Fluoranthene	1.590	1.496	1.677	1.650	1.885	1.985	1.642	1.517			0.98	14	TM	
15	I	Chrysene-D12(IS)											1.7	10	*TM	
16	TM	Pyrene	1.302	1.242	1.401	1.393	1.588	1.653	1.426	1.337						
17	S	Surrogate Recovery (TPH)	0.7624	0.6994	0.8025	0.7619	0.8194	0.8577	0.7659	0.7360			1.4	9.8	TM	
18	TML	Benz (a) anthracene	0.7445	0.4548	0.7894	0.7434	1.193	1.413	1.267	1.247			0.78	6.4	S	
19	TML	Chrysene	1.637	1.740	1.624	1.629	1.469	1.388	1.150	1.066			0.98	35	TML	1.000
20	TML	Indeno (1,2,3-cd) pyrene	0.2668	0.6438	0.8971	0.9645	1.142	1.226	1.097	1.068			1.5	17	TML	0.998
21	I	Perylene-D12(IS)											0.91	35	TML	1.000
22	TML	Benzo (b) fluoranthene	0.9696	0.8802	0.9868	0.9448	1.242	1.523	1.342	1.315						
23	TM	Benzo (k) fluoranthene	1.264	1.256	1.534	1.451	1.496	1.396	1.144	1.072			1.2	20	TML	1.000
24	*TML	Benzo (a) pyrene	0.7195	0.9626	1.096	1.058	1.321	1.393	1.203	1.142			1.3	13	TM	
25	TML	Dibenz (a,h) anthracene	0.7096	0.8215	0.9390	0.8766	1.104	1.161	1.001	0.9674			1.1	19	*TML	0.999
26	TML	Benzo (g,h,i) perylene	0.7140	0.7693	0.9214	0.9032	1.082	1.157	1.000	0.9251			0.95	16	TML	0.999
27													0.93	16	TML	0.998
28																
29																
30																
31																
32																
33																
34																
35																

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L003.D Vial: 3
Acq On : 16 Jan 17 17:54 Operator: MA
Sample : 0.1 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:25 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 16 16:54:35 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	21525	2.50000	ppb		0.01
6) Acenaphthene-D10(IS)	7.92	164	10869	2.50000	ppb		0.01
11) Phenanthrene-D10(IS)	9.68	188	20774	2.50000	ppb		0.02
15) Chrysene-D12(IS)	12.83	240	26428	2.50000	ppb		0.02
21) Perylene-D12(IS)	15.35	264	22690	2.50000	ppb		0.02
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.03	82	4	0.16995	ppb		0.01
Spiked Amount 5.000			Recovery = 3.400%				
7) Surrogate Recovery (FBP)	7.19	172	311	-0.10609	ppb		0.07
Spiked Amount 5.000			Recovery = -2.120%				
17) Surrogate Recovery (TPH)	11.56	244	403	-0.07361	ppb		0.04
Spiked Amount 5.000			Recovery = -1.480%				
Target Compounds							Qvalue
3) Naphthalene	5.89	128	744	0.08568	ppb		99
4) 2-Methylnaphthalene	6.82	142	331	0.06268	ppb		91
5) 1-Methylnaphthalene	6.89	142	646m	0.11019	ppb		90
8) Acenaphthylene	7.79	152	744	0.08811	ppb		92
9) Acenaphthene	7.95	154	567	0.11078	ppb		98
10) Fluorene	8.63	166	568	0.09586	ppb		99
12) Phenanthrene	9.70	178	835	0.09352	ppb		97
13) Anthracene	9.81	178	752	0.09290	ppb	#	94
14) Fluoranthene	11.15	202	1321	0.10645	ppb		97
16) Pyrene	11.41	202	1376	0.10495	ppb		98
18) Benz (a) anthracene	12.83	228	787	0.06978	ppb		89
19) Chrysene	12.87	228	1730	0.13595	ppb		95
20) Indeno (1,2,3-cd) pyrene	17.75	276	282	0.02295	ppb	#	87
22) Benzo (b) fluoranthene	14.61	252	880	0.09035	ppb		99
23) Benzo (k) fluoranthene	14.66	252	1147m	0.11183	ppb		97
24) Benzo (a) pyrene	15.26	252	653	0.06499	ppb	#	90
25) Dibenz (a,h) anthracene	17.76	278	644	0.06824	ppb		94
26) Benzo (g,h,i) perylene	18.29	276	648	0.07004	ppb		96

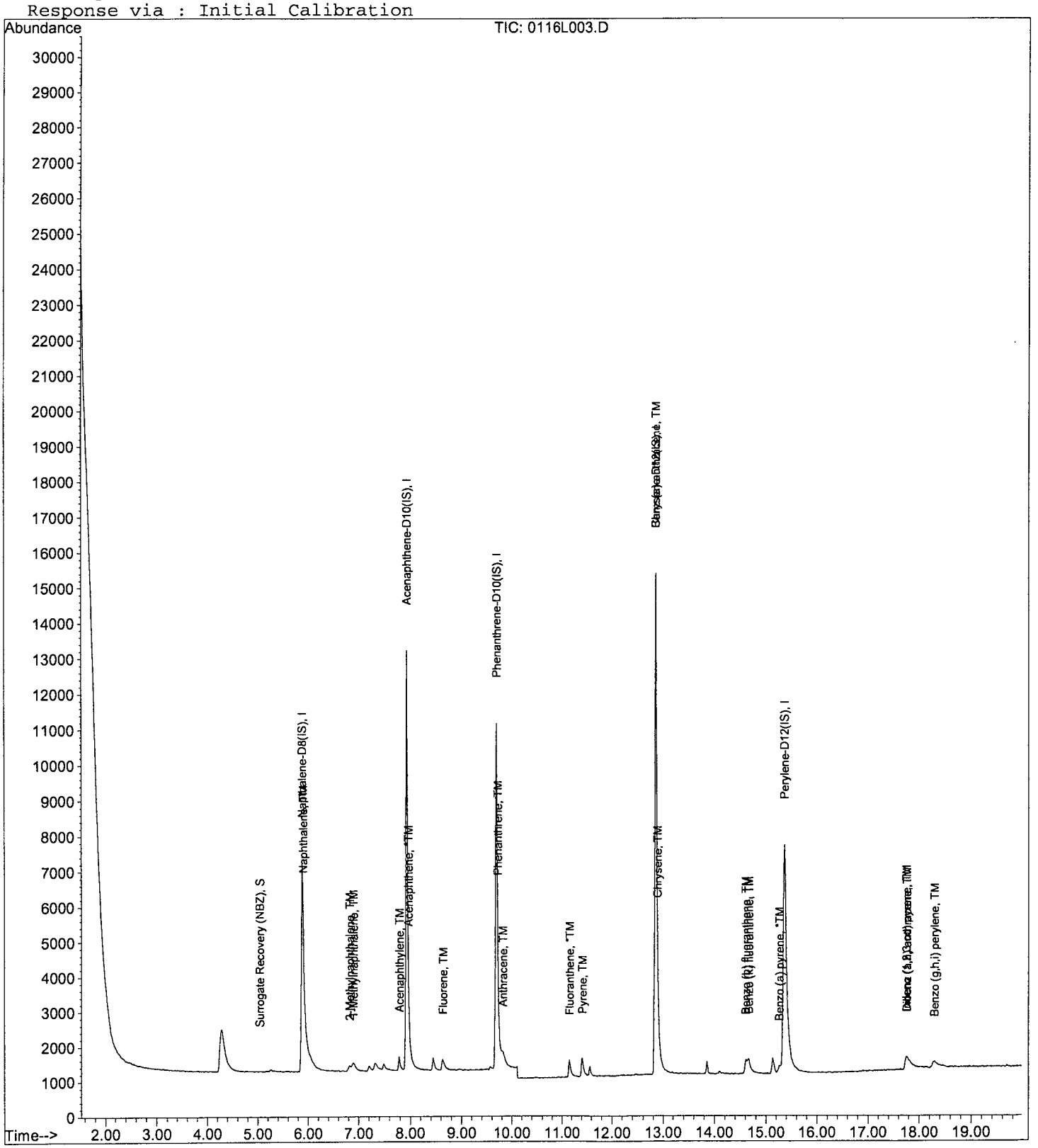
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L003.D Vial: 3
Acq On : 16 Jan 17 17:54 Operator: MA
Sample : 0.1 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:25 2017 Quant Results File: L0116PR.RES

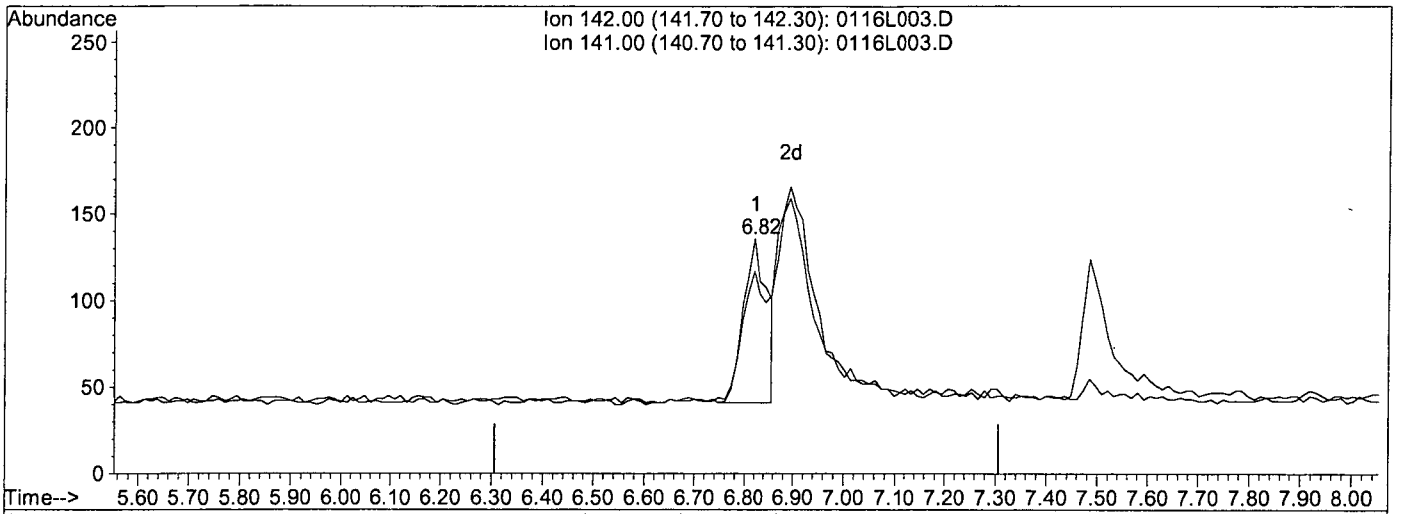
Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration

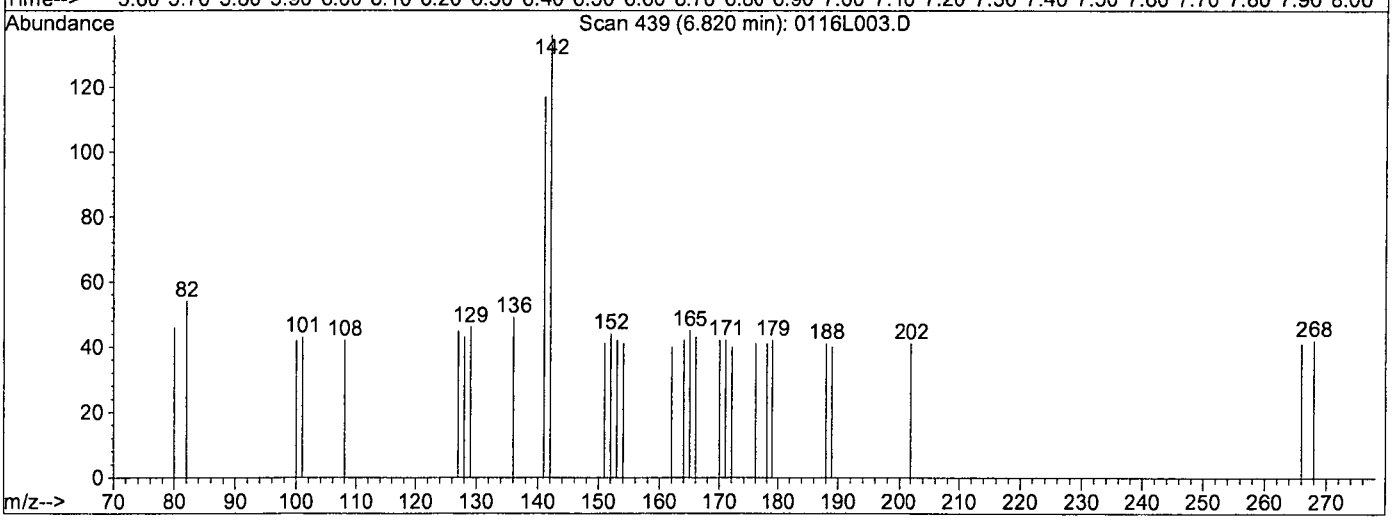


Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L003.D Vial: 3
Acq On : 16 Jan 17 17:54 Operator: MA
Sample : 0.1 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 8:55 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 10:31:40 2017
Response via : Multiple Level Calibration





TIC: 0116L003.D

(5) 1-Methylnaphthalene (TM)

6.82min 0.0565ppb

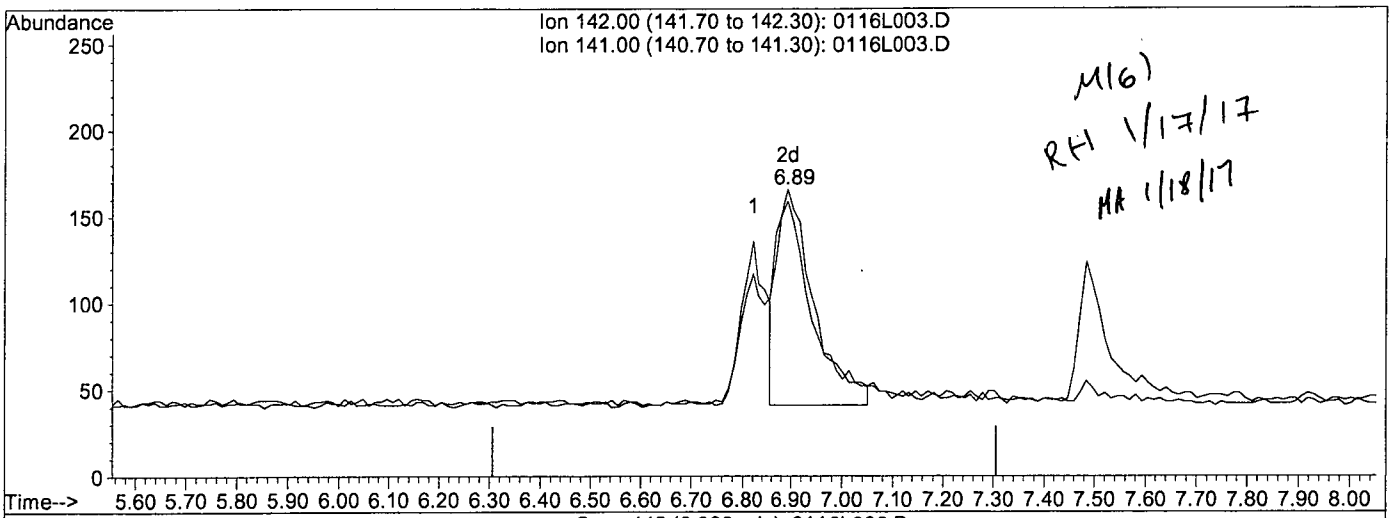
response 331

Ion	Exp%	Act%
142.00	100	100
141.00	86.00	76.84
0.00	0.00	0.00
0.00	0.00	0.00

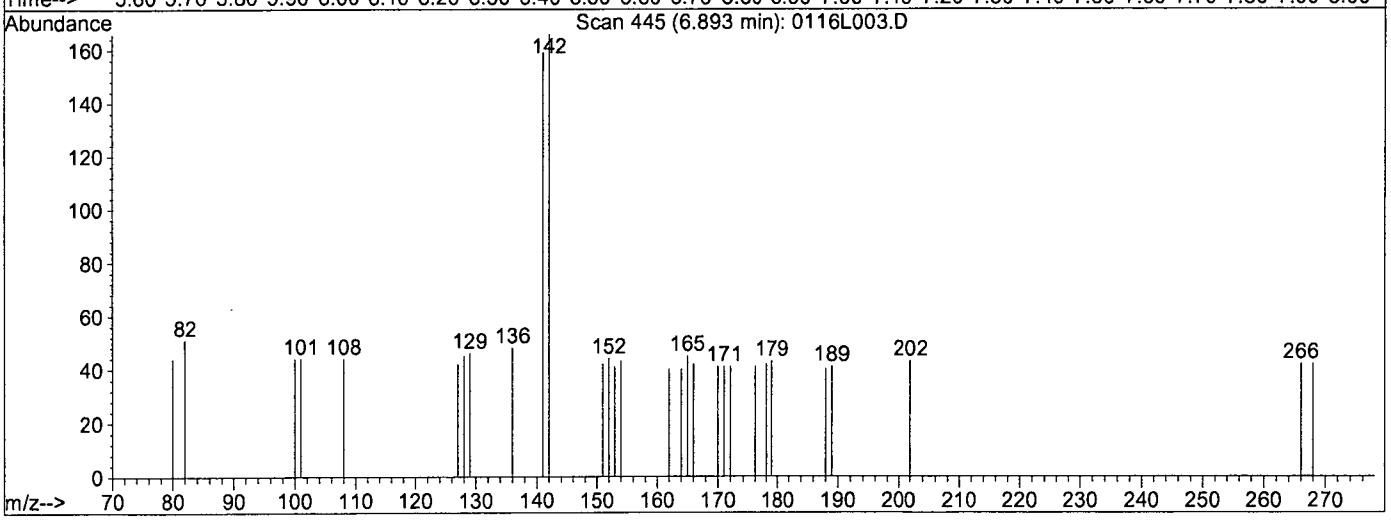
Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L003.D Vial: 3
Acq On : 16 Jan 17 17:54 Operator: MA
Sample : 0.1 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 10:55 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 10:31:40 2017
Response via : Multiple Level Calibration



M16)
RH 1/17/17
MA 1/18/17



TIC: 0116L003.D

(5) 1-Methylnaphthalene (TM)

6.89min 0.1102ppb m

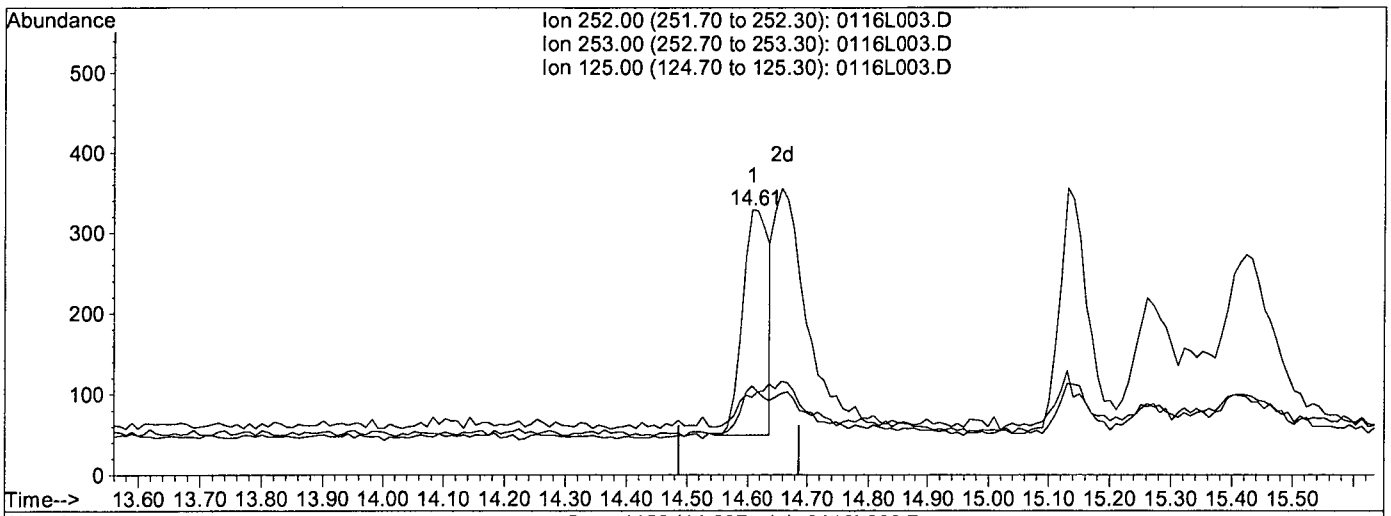
response 646

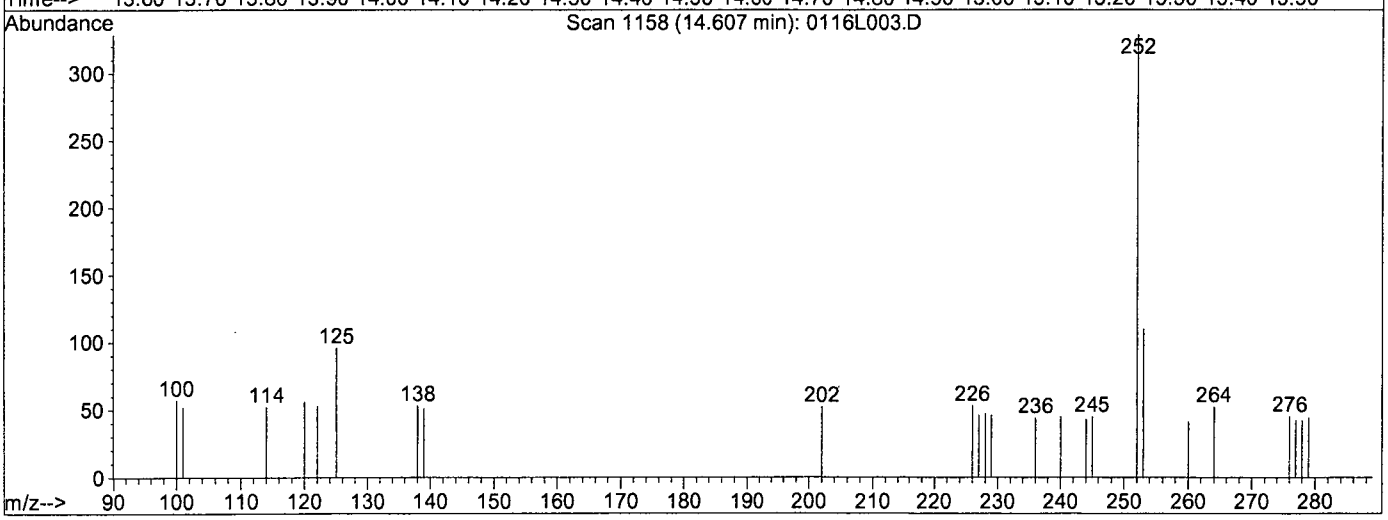
Ion	Exp%	Act%
142.00	100	100
141.00	86.00	95.78
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L003.D Vial: 3
Acq On : 16 Jan 17 17:54 Operator: MA
Sample : 0.1 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 10:55 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:21:29 2017
Response via : Multiple Level Calibration





TIC: 0116L003.D

(23) Benzo (k) fluoranthene (TM)

14.61min 0.0858ppb

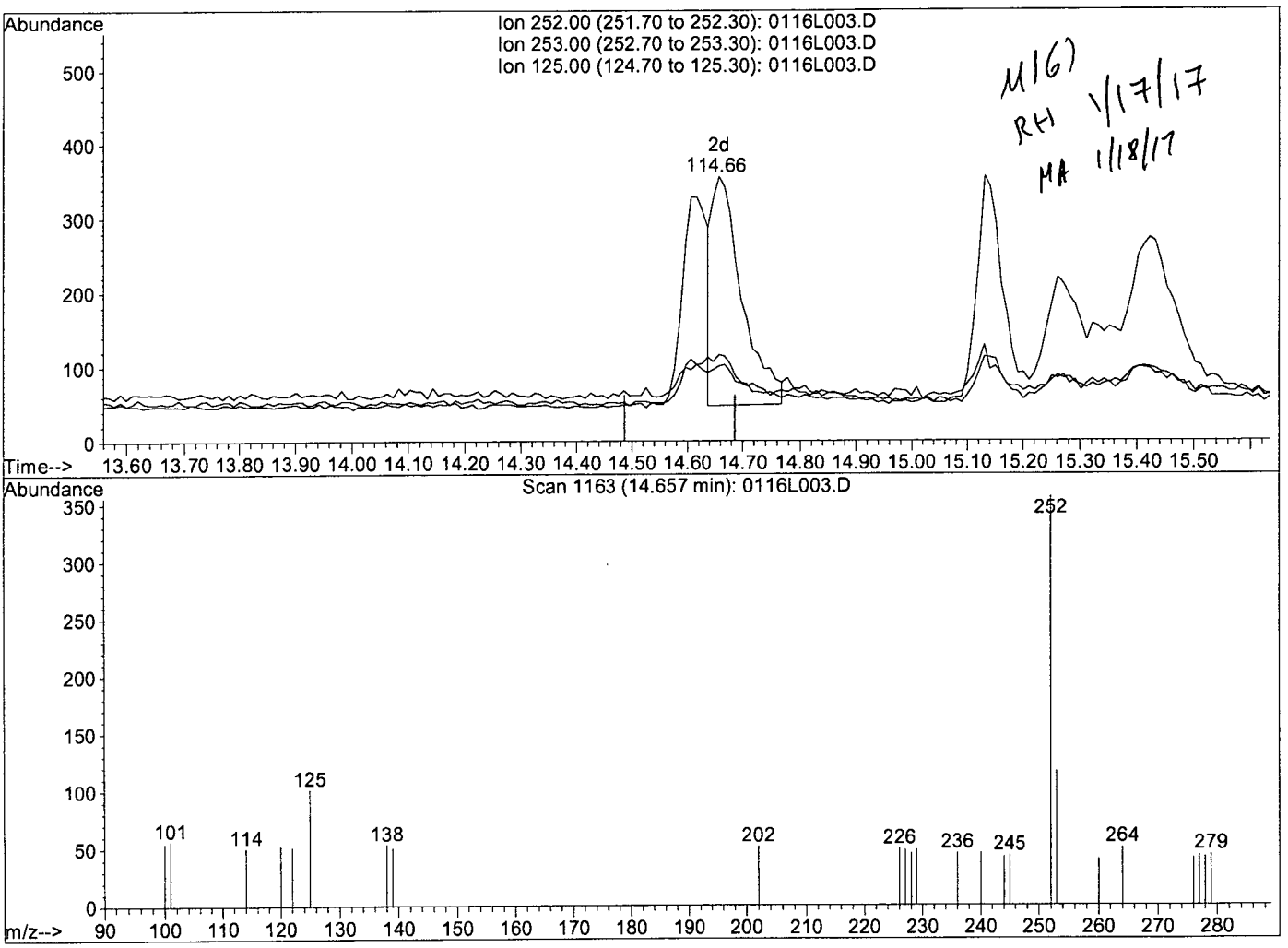
response 880

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	21.07
125.00	10.50	12.50
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L003.D Vial: 3
Acq On : 16 Jan 17 17:54 Operator: MA
Sample : 0.1 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 11:25 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:21:29 2017
Response via : Multiple Level Calibration



M16)
RH 1/17/17
MA 1/18/17

TIC: 0116L003.D

(23) Benzo (k) fluoranthene (TM)

14.66min 0.1118ppb m

response 1147

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	32.58#
125.00	10.50	28.37#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L004.D Vial: 4
Acq On : 16 Jan 17 18:22 Operator: MA
Sample : 0.2 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 10:59 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 16 16:54:35 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.88	136	20031	2.50000	ppb		0.02
6) Acenaphthene-D10(IS)	7.92	164	10246	2.50000	ppb		0.01
11) Phenanthrene-D10(IS)	9.68	188	19657	2.50000	ppb		0.02
15) Chrysene-D12(IS)	12.83	240	24737	2.50000	ppb		0.02
21) Perylene-D12(IS)	15.35	264	21530	2.50000	ppb		0.02
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.03	82	7	0.17124	ppb		0.01
Spiked Amount 5.000			Recovery = 3.420%				
7) Surrogate Recovery (FBP)	7.19	172	560	-0.05903	ppb		0.07
Spiked Amount 5.000			Recovery = -1.180%				
17) Surrogate Recovery (TPH)	11.56	244	692	-0.03190	ppb		0.04
Spiked Amount 5.000			Recovery = -0.640%				
Target Compounds							Qvalue
3) Naphthalene	5.90	128	1426	0.17647	ppb		98
4) 2-Methylnaphthalene	6.81	142	588	0.11965	ppb		97
5) 1-Methylnaphthalene	6.88	142	1171m	0.21465	ppb		95
8) Acenaphthylene	7.77	152	1479	0.18581	ppb		99
9) Acenaphthene	7.95	154	975	0.20208	ppb		97
10) Fluorene	8.62	166	981	0.17563	ppb		87
12) Phenanthrene	9.70	178	1547	0.18310	ppb		96
13) Anthracene	9.81	178	1266	0.16528	ppb		97
14) Fluoranthene	11.14	202	2352	0.20030	ppb		97
16) Pyrene	11.40	202	2458	0.20029	ppb		99
18) Benz (a) anthracene	12.83	228	900m	0.08525	ppb		0
19) Chrysene	12.87	228	3443m	0.28906	ppb		96
20) Indeno (1,2,3-cd) pyrene	17.74	276	1274	0.11075	ppb	#	85
22) Benzo (b) fluoranthene	14.60	252	1516	0.16404	ppb		98
23) Benzo (k) fluoranthene	14.66	252	2164m	0.22235	ppb		97
24) Benzo (a) pyrene	15.26	252	1658	0.17390	ppb		92
25) Dibenz (a,h) anthracene	17.75	278	1415	0.15801	ppb		97
26) Benzo (g,h,i) perylene	18.27	276	1325	0.15094	ppb		98

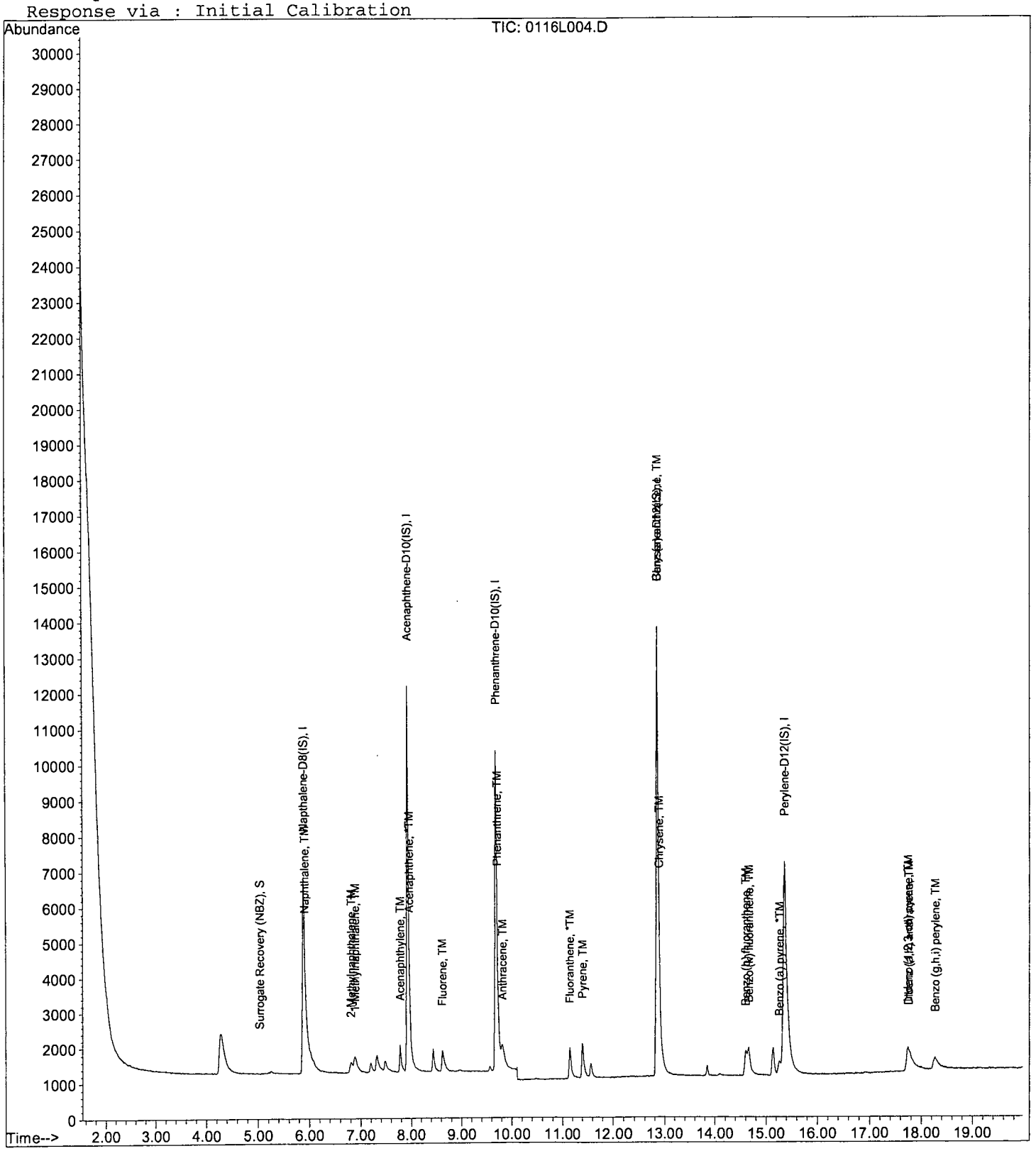
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L004.D Vial: 4
Acq On : 16 Jan 17 18:22 Operator: MA
Sample : 0.2 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 10:59 2017 Quant Results File: L0116PR.RES

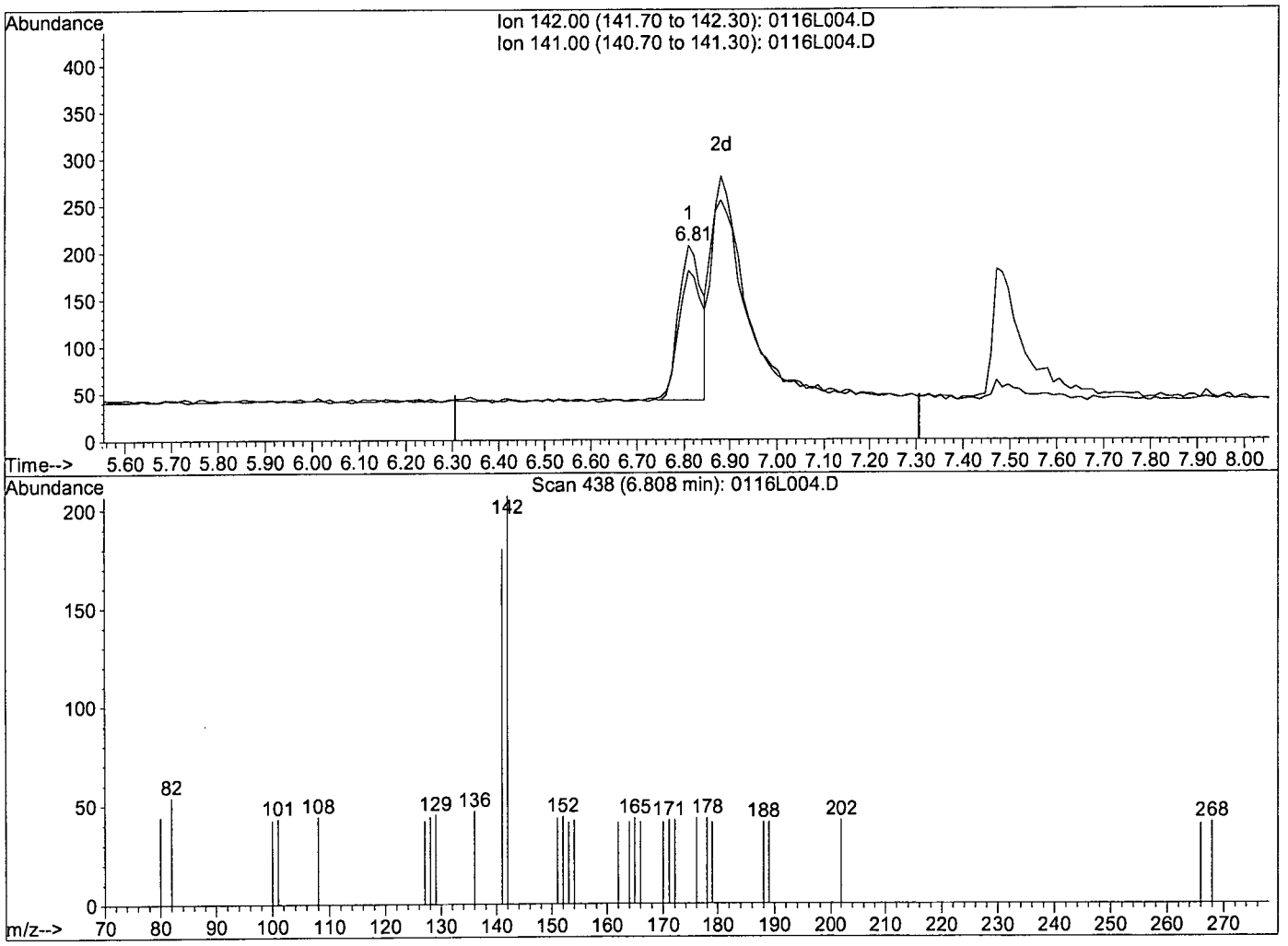
Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L004.D Vial: 4
Acq On : 16 Jan 17 18:22 Operator: MA
Sample : 0.2 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 8:55 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 10:31:40 2017
Response via : Multiple Level Calibration



TIC: 0116L004.D

(5) 1-Methylnaphthalene (TM)

6.81min 0.1078ppb

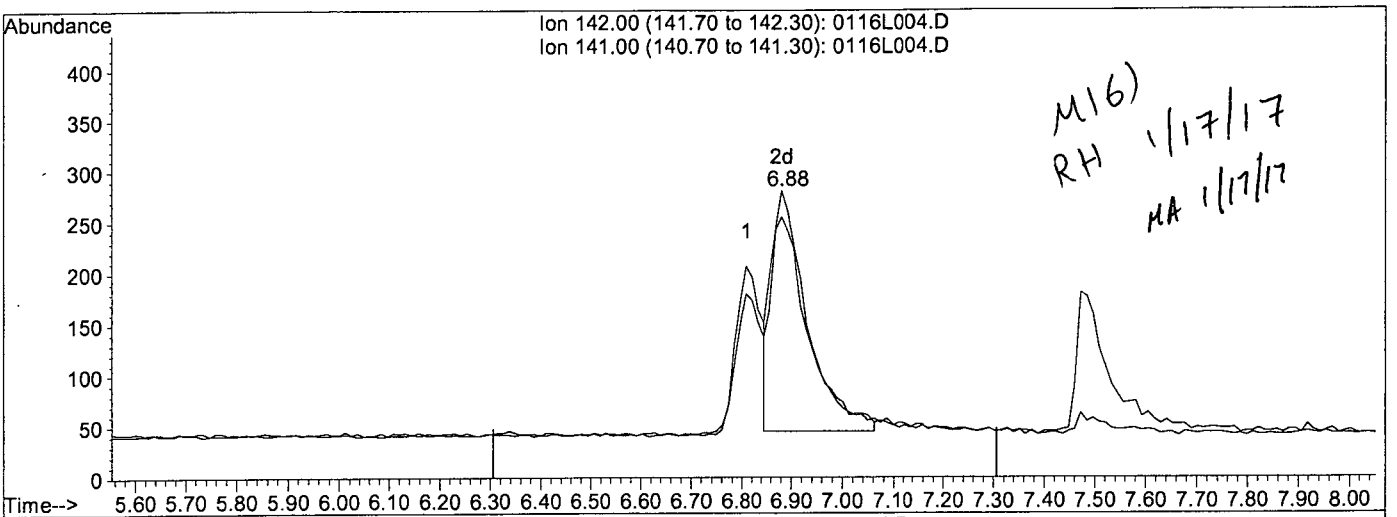
response 588

Ion	Exp%	Act%
142.00	100	100
141.00	86.00	81.82
0.00	0.00	0.00
0.00	0.00	0.00

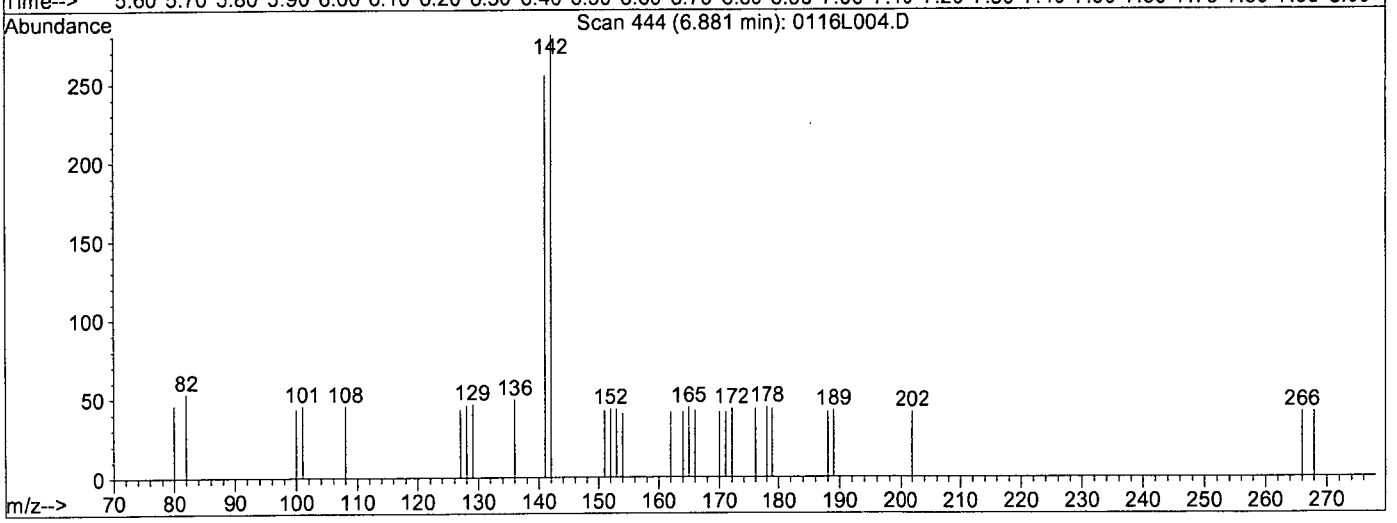
Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L004.D Vial: 4
Acq On : 16 Jan 17 18:22 Operator: MA
Sample : 0.2 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 10:58 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 10:31:40 2017
Response via : Multiple Level Calibration



M16) RH 1/17/17 MA 1/17/17



TIC: 0116L004.D

(5) 1-Methylnaphthalene (TM)

6.88min 0.2146ppb m

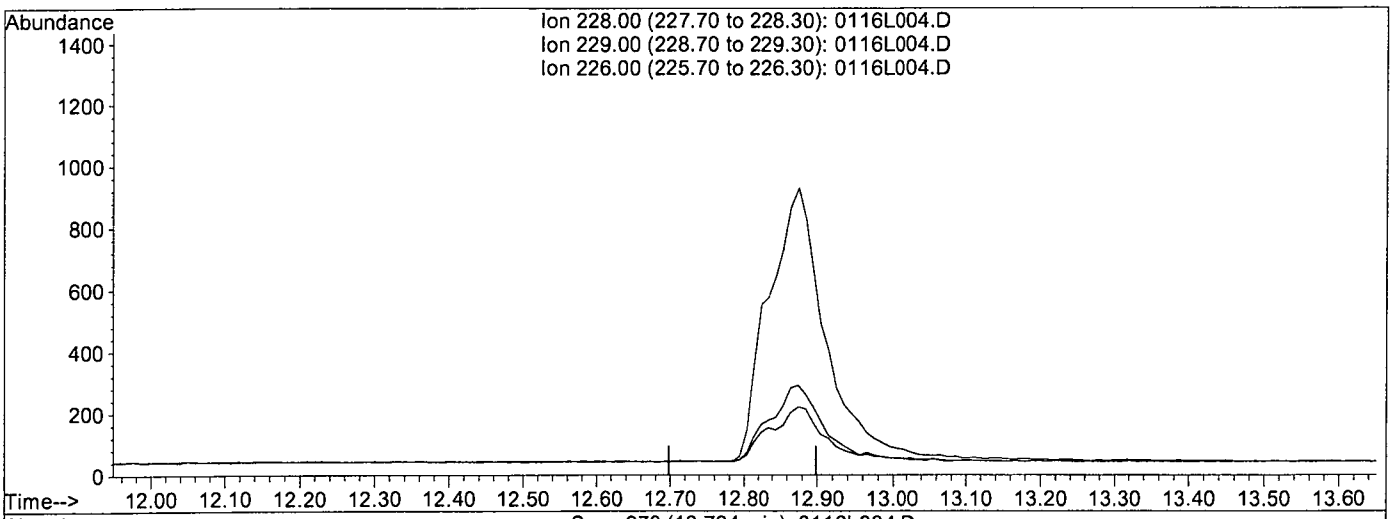
response 1171

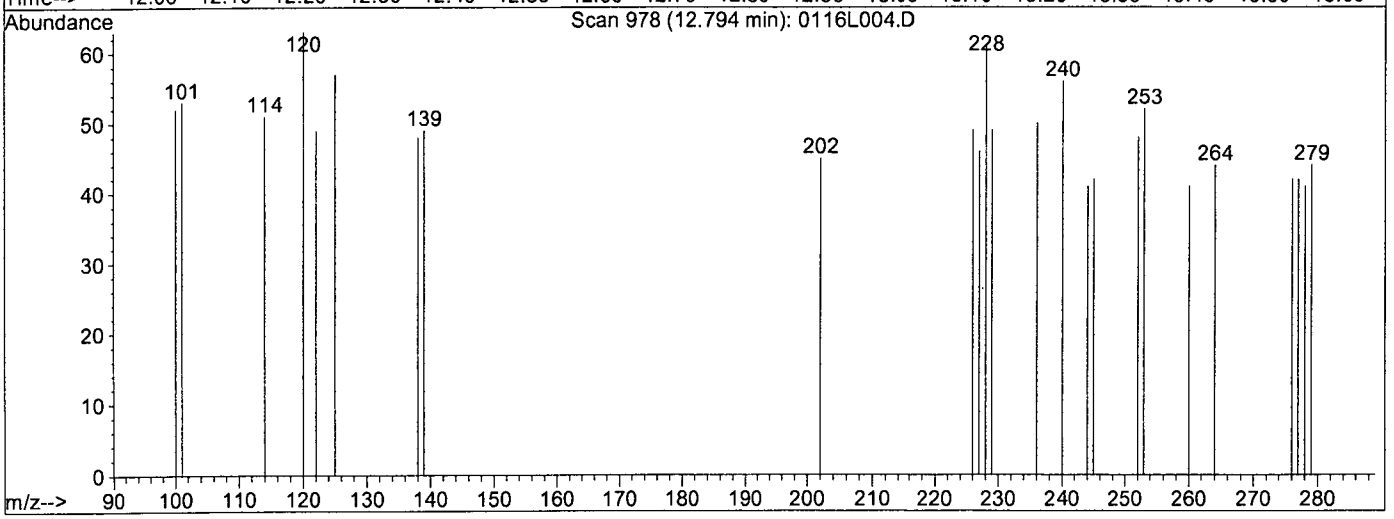
Ion	Exp%	Act%
142.00	100	100
141.00	86.00	90.75
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L004.D Vial: 4
Acq On : 16 Jan 17 18:22 Operator: MA
Sample : 0.2 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 8:55 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 10:31:40 2017
Response via : Multiple Level Calibration





TIC: 0116L004.D

(18) Benz (a) anthracene (TM)

12.80min 0.0000ppb

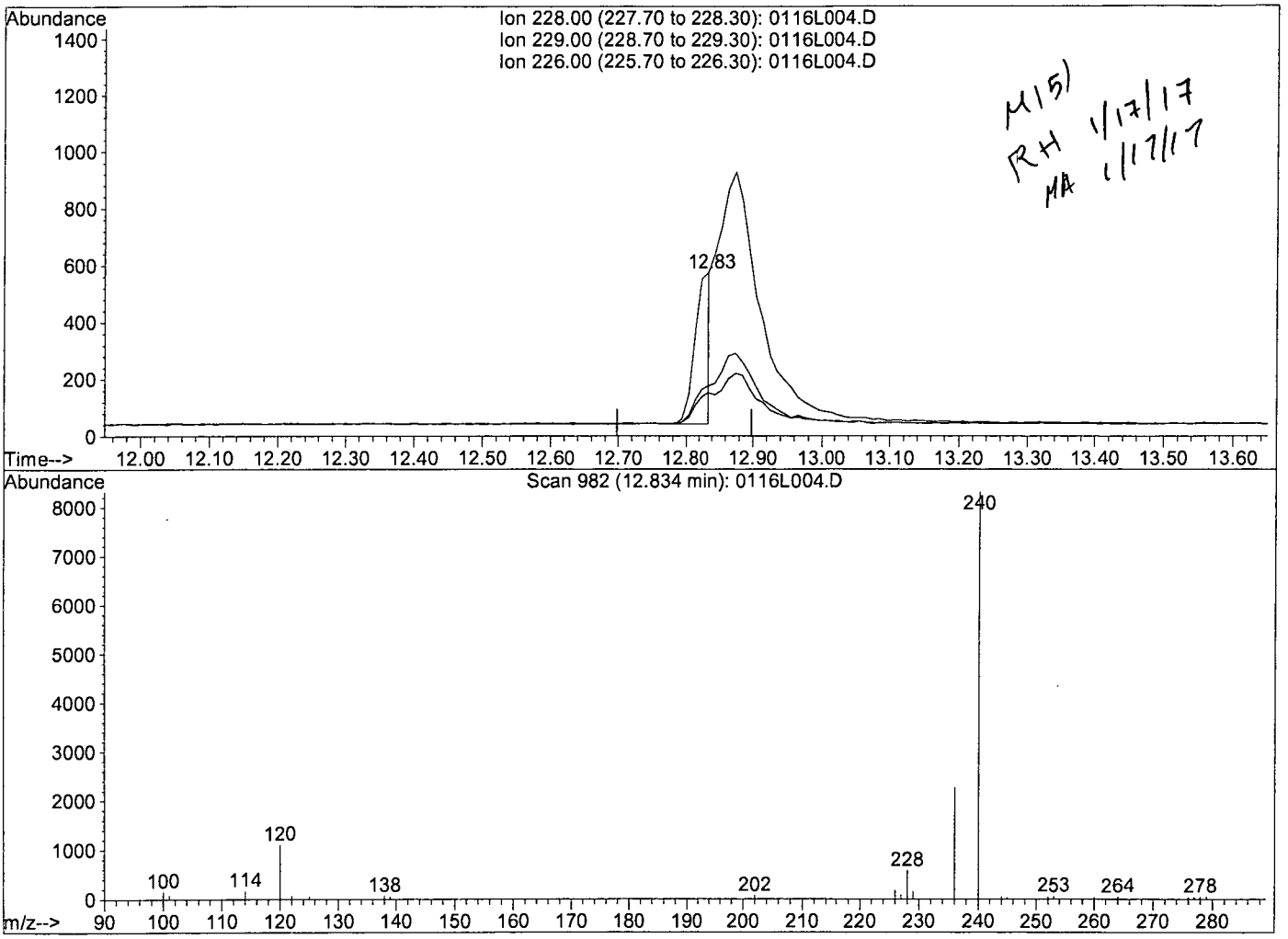
response 0

Ion	Exp%	Act%
228.00	100	0.00
229.00	21.30	0.00#
226.00	27.20	0.00#
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L004.D Vial: 4
Acq On : 16 Jan 17 18:22 Operator: MA
Sample : 0.2 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 10:58 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 10:31:40 2017
Response via : Multiple Level Calibration



M15) 1/17/17
RH 1/17/17
MA 1/17/17

TIC: 0116L004.D

(18) Benz (a) anthracene (TM)

12.83min 0.0853ppb m

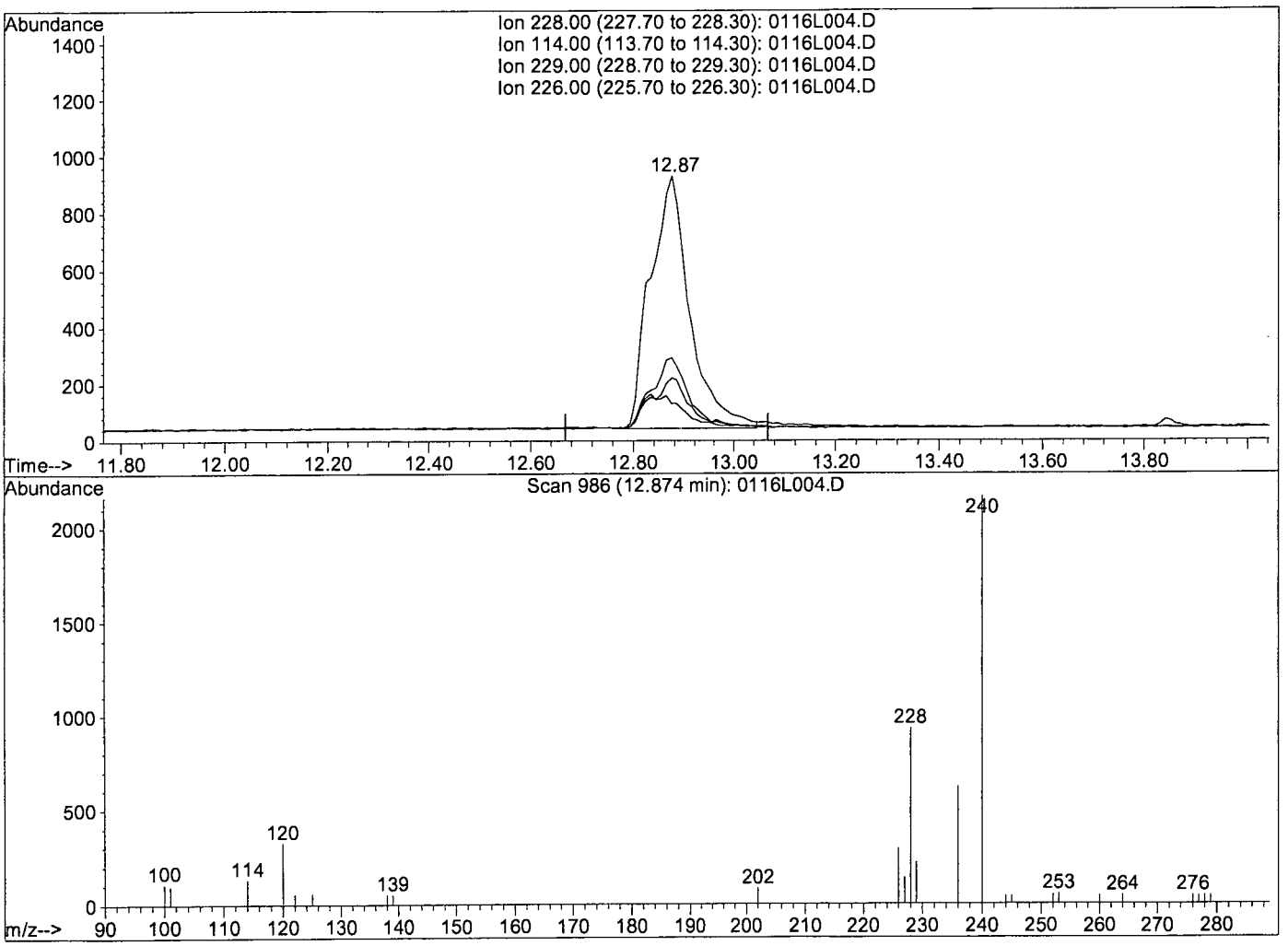
response 900

Ion	Exp%	Act%
228.00	100	100
229.00	21.30	26.66
226.00	27.20	30.84
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L004.D Vial: 4
Acq On : 16 Jan 17 18:22 Operator: MA
Sample : 0.2 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 10:58 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 10:31:40 2017
Response via : Multiple Level Calibration



TIC: 0116L004.D

(19) Chrysene (TM)

12.87min 0.3997ppb

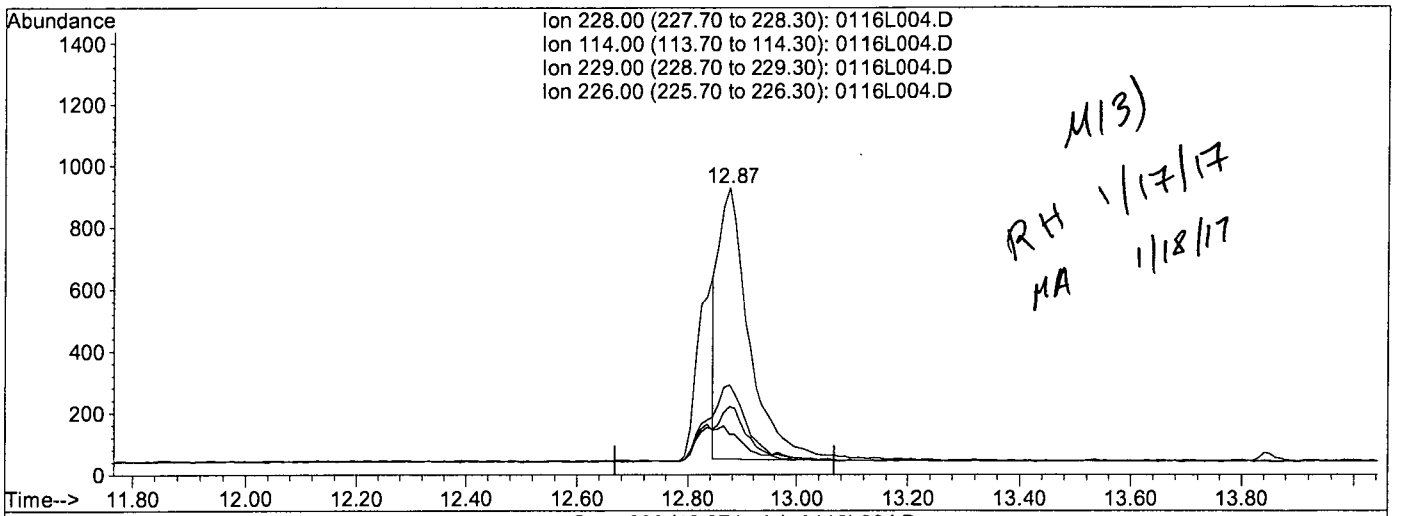
response 4761

Ion	Exp%	Act%
228.00	100	100
114.00	12.90	9.71
229.00	21.00	19.86
226.00	29.70	27.77

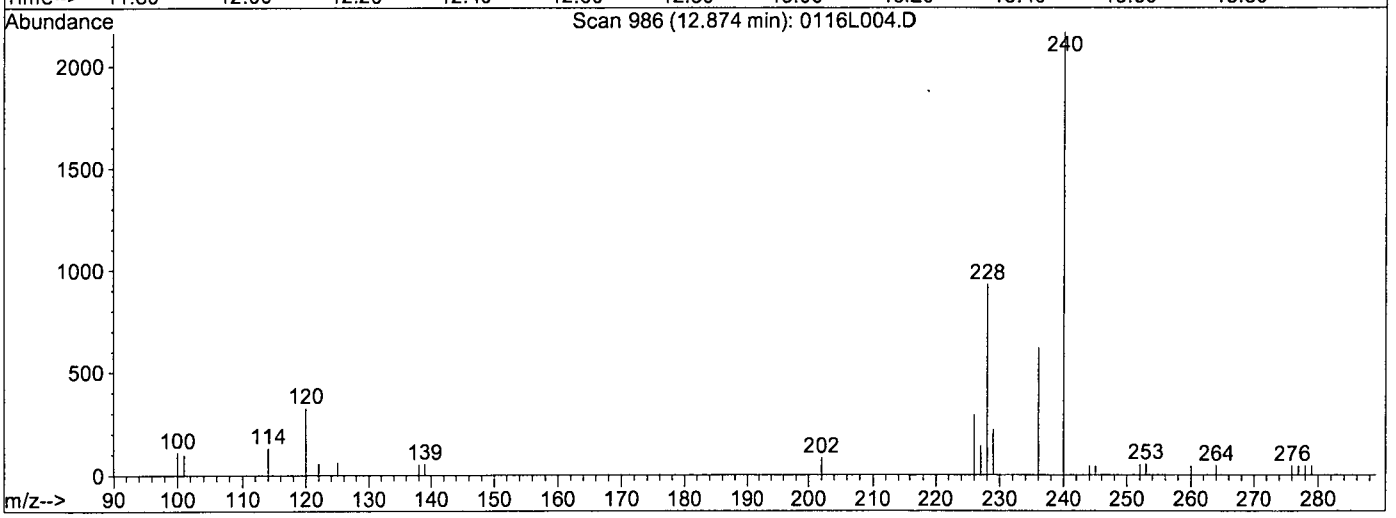
Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L004.D Vial: 4
Acq On : 16 Jan 17 18:22 Operator: MA
Sample : 0.2 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 10:58 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 10:31:40 2017
Response via : Multiple Level Calibration



M13)
RH 1/17/17
MA 1/18/17



TIC: 0116L004.D

(19) Chrysene (TM)

12.87min 0.2891ppb m

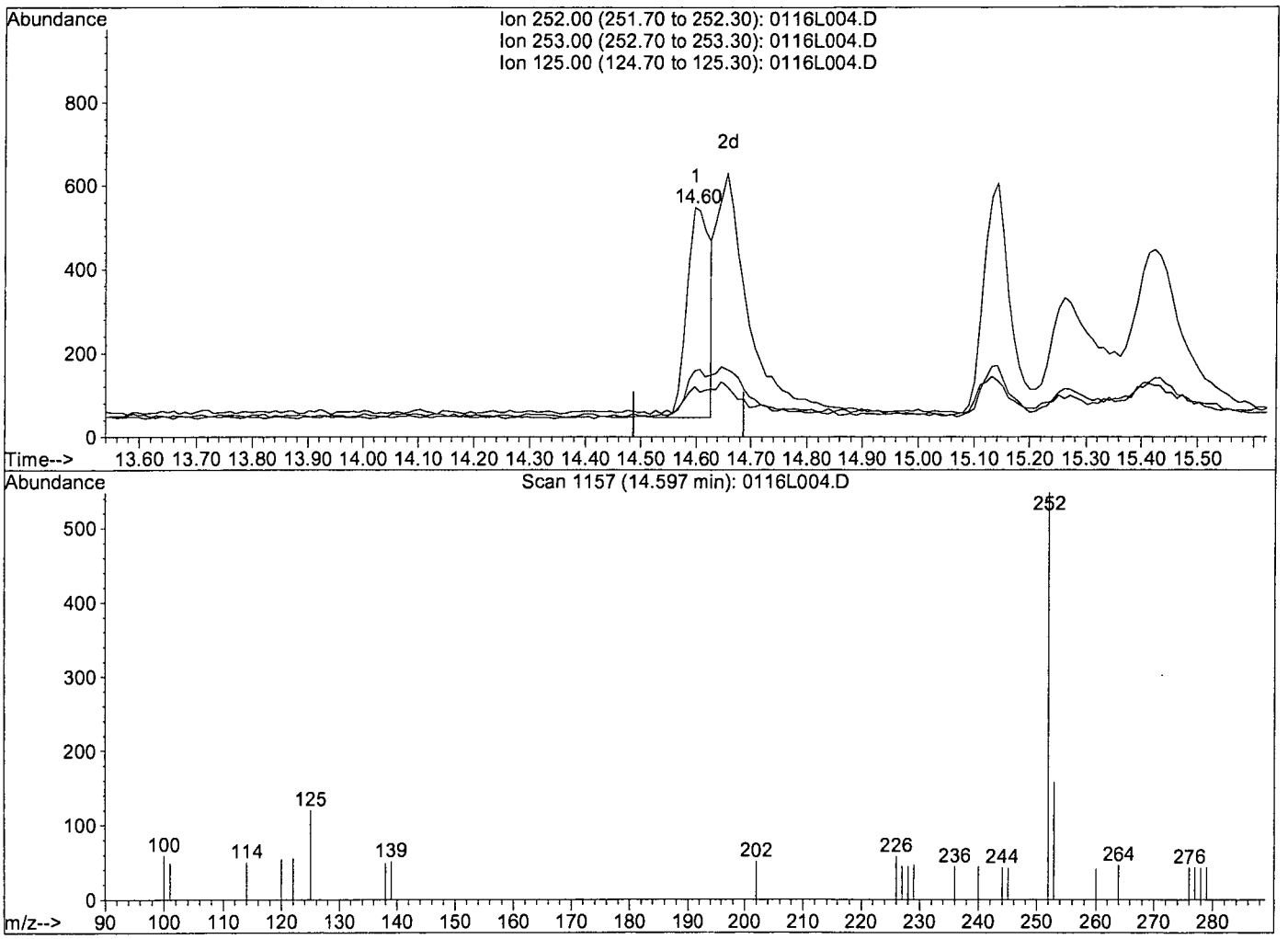
response 3443

Ion	Exp%	Act%
228.00	100	100
114.00	12.90	14.01
229.00	21.00	23.71
226.00	29.70	31.36

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L004.D Vial: 4
Acq On : 16 Jan 17 18:22 Operator: MA
Sample : 0.2 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 10:58 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 10:31:40 2017
Response via : Multiple Level Calibration



TIC: 0116L004.D

(23) Benzo (k) fluoranthene (TM)

14.60min 0.1558ppb

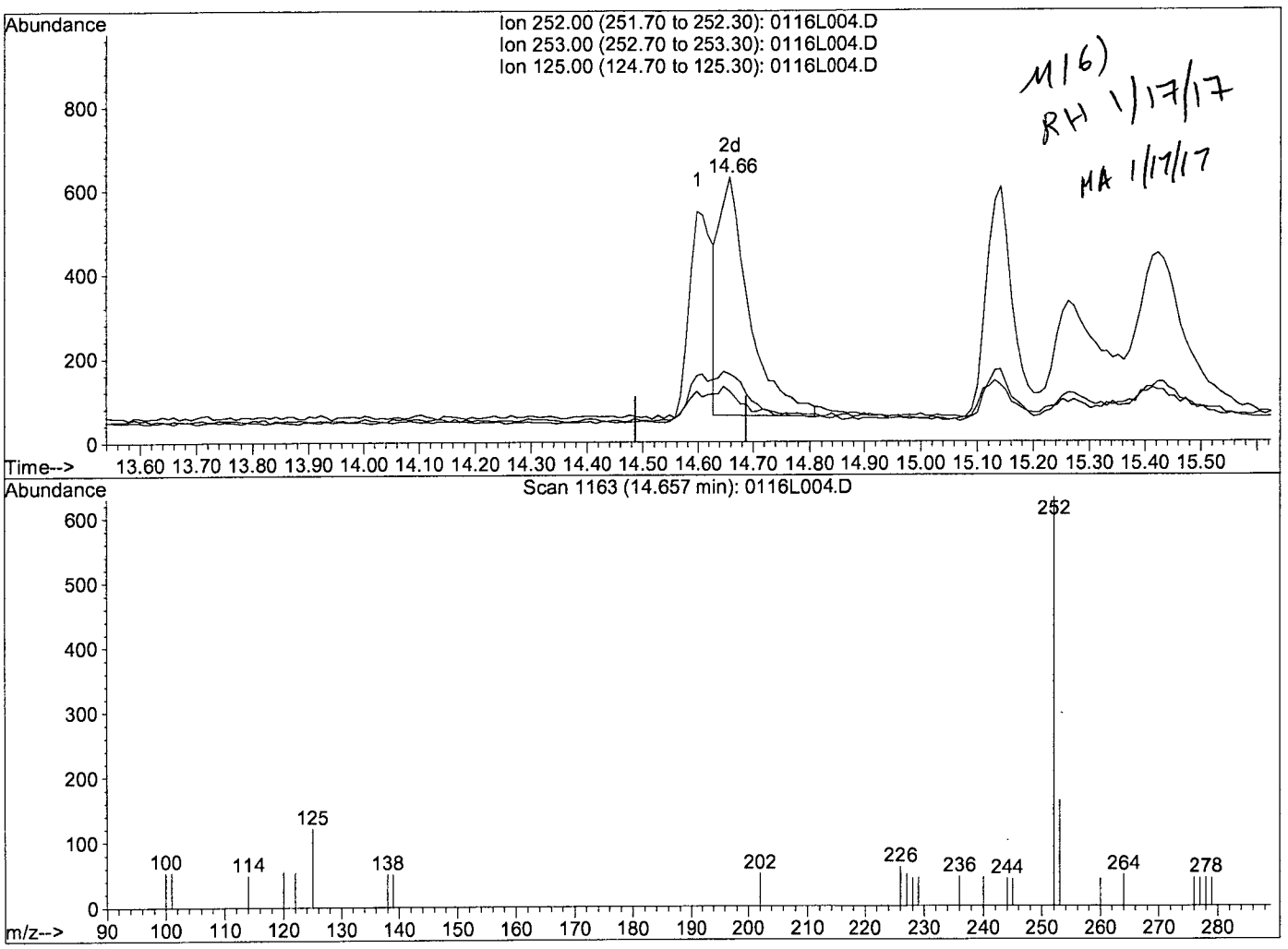
response 1516

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	20.92
125.00	10.50	12.75
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L004.D Vial: 4
Acq On : 16 Jan 17 18:22 Operator: MA
Sample : 0.2 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 10:59 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 10:31:40 2017
Response via : Multiple Level Calibration



TIC: 0116L004.D

(23) Benzo (k) fluoranthene (TM)

14.66min 0.2224ppb m

response 2164

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	25.71
125.00	10.50	19.21#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L005.D Vial: 5
Acq On : 16 Jan 17 18:50 Operator: MA
Sample : 0.5 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:27 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 16 16:54:35 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.88	136	19570	2.50000 ppb		0.02
6) Acenaphthene-D10(IS)	7.92	164	9925	2.50000 ppb		0.01
11) Phenanthrene-D10(IS)	9.68	188	19203	2.50000 ppb		0.02
15) Chrysene-D12(IS)	12.83	240	24062	2.50000 ppb		0.02
21) Perylene-D12(IS)	15.35	264	20718	2.50000 ppb		0.02
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.14	82	124	0.21870 ppb		0.12
Spiked Amount 5.000			Recovery = 4.380%			
7) Surrogate Recovery (FBP)	7.17	172	1547	0.12388 ppb		0.05
Spiked Amount 5.000			Recovery = 2.480%			
17) Surrogate Recovery (TPH)	11.55	244	1931	0.13946 ppb		0.03
Spiked Amount 5.000			Recovery = 2.780%			
Target Compounds						Qvalue
3) Naphthalene	5.90	128	3969	0.50274 ppb		99
4) 2-Methylnaphthalene	6.78	142	1838	0.38281 ppb		97
5) 1-Methylnaphthalene	6.86	142	2875	0.53941 ppb		92
8) Acenaphthylene	7.77	152	4111	0.53318 ppb		96
9) Acenaphthene	7.95	154	2620	0.56059 ppb		98
10) Fluorene	8.61	166	2742	0.50677 ppb		96
12) Phenanthrene	9.70	178	3933	0.47651 ppb		99
13) Anthracene	9.80	178	3691	0.49327 ppb		99
14) Fluoranthene	11.12	202	6441	0.56149 ppb		99
16) Pyrene	11.39	202	6742	0.56479 ppb		99
18) Benz (a) anthracene	12.83	228	3799	0.36995 ppb		97
19) Chrysene	12.87	228	7816	0.67461 ppb		95
20) Indeno (1,2,3-cd) pyrene	17.70	276	4317	0.38580 ppb	#	93
22) Benzo (b) fluoranthene	14.59	252	4089	0.45980 ppb		99
23) Benzo (k) fluoranthene	14.64	252	6355m	0.67857 ppb		99
24) Benzo (a) pyrene	15.25	252	4540	0.49484 ppb		97
25) Dibenz (a,h) anthracene	17.71	278	3891	0.45154 ppb		96
26) Benzo (g,h,i) perylene	18.23	276	3818	0.45197 ppb		99

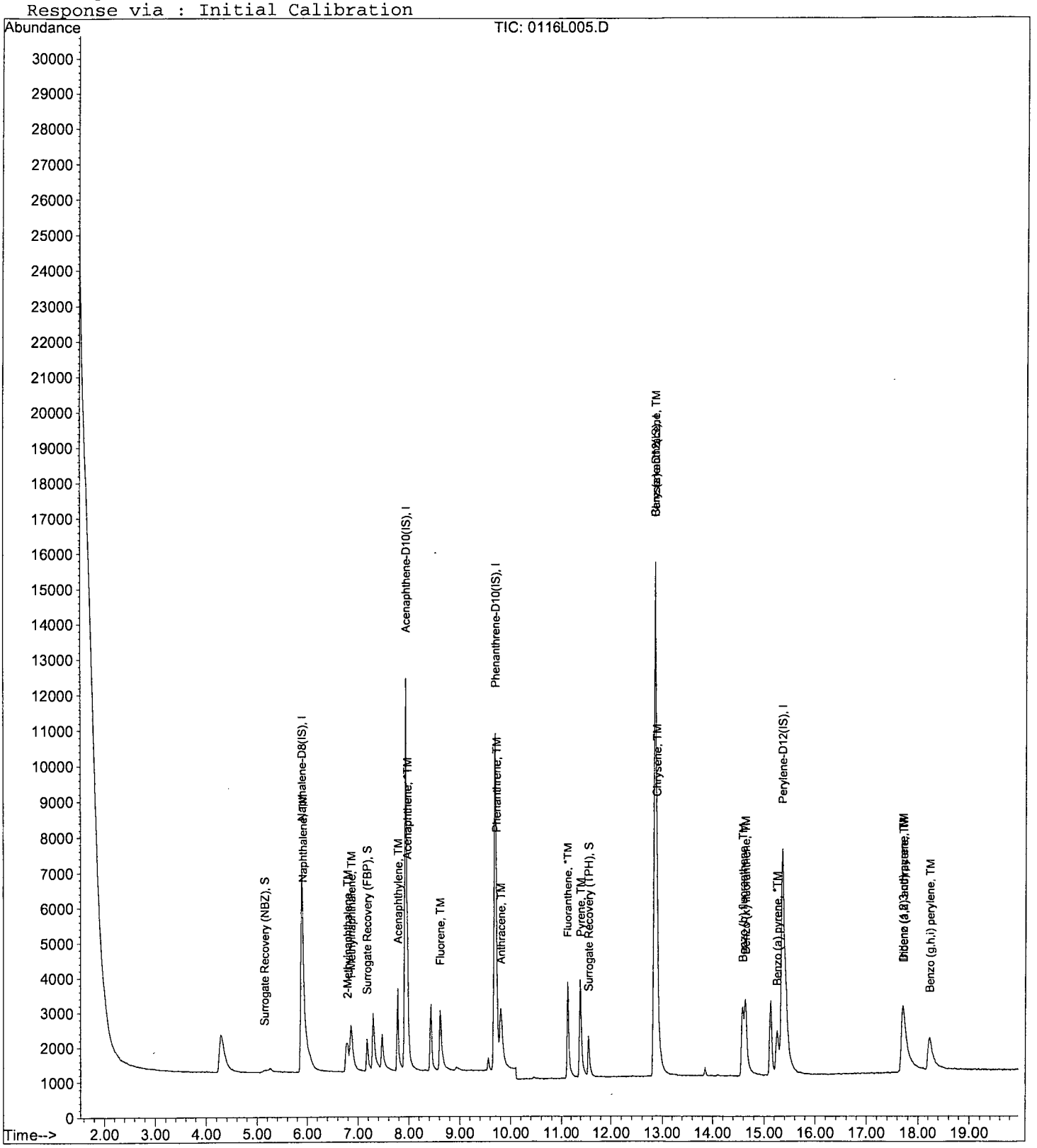
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L005.D Vial: 5
Acq On : 16 Jan 17 18:50 Operator: MA
Sample : 0.5 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:27 2017 Quant Results File: L0116PR.RES

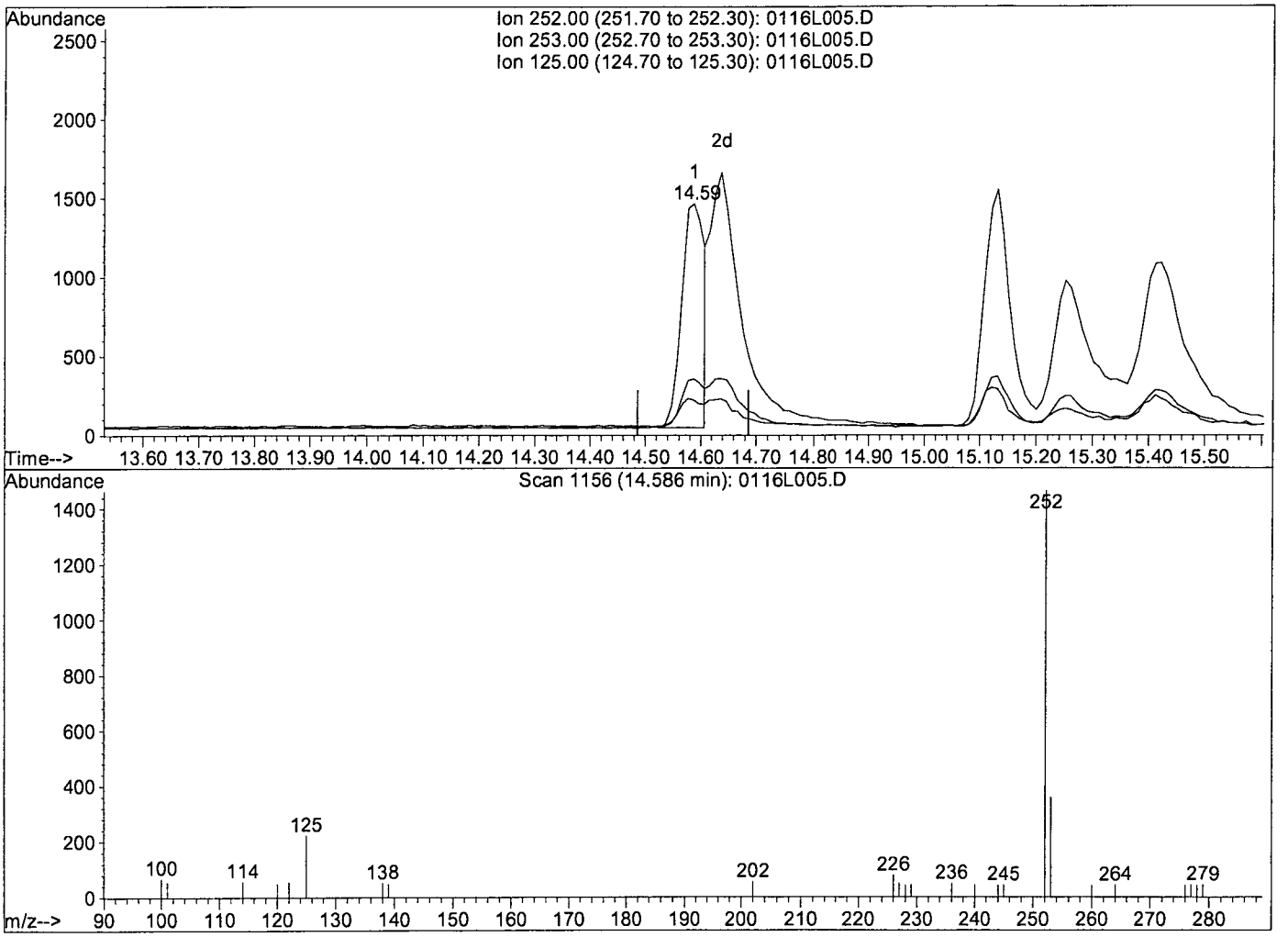
Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L005.D Vial: 5
Acq On : 16 Jan 17 18:50 Operator: MA
Sample : 0.5 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 8:55 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:24:14 2017
Response via : Multiple Level Calibration



TIC: 0116L005.D

(23) Benzo (k) fluoranthene (TM)

14.59min 0.4366ppb

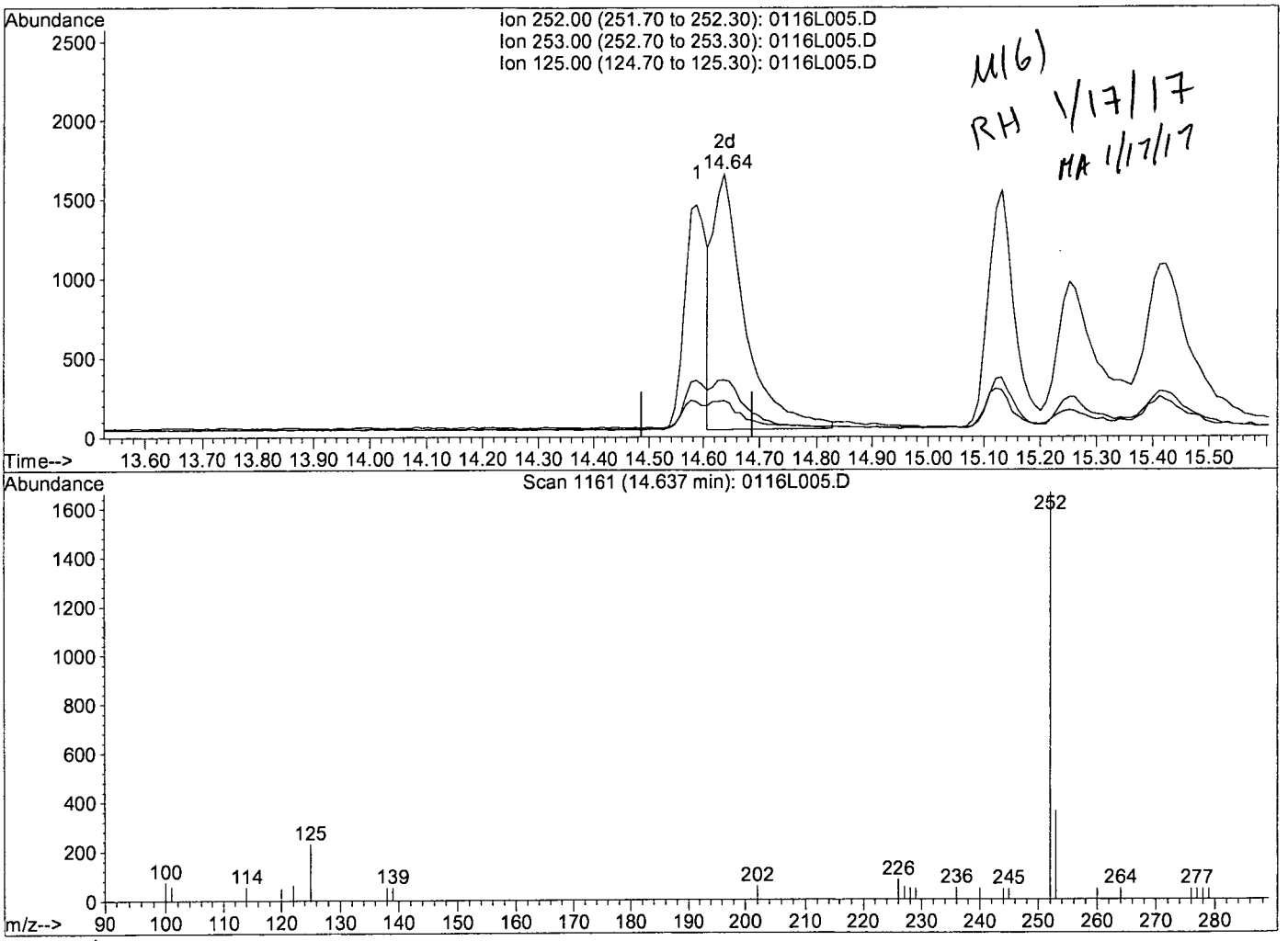
response 4089

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	21.68
125.00	10.50	11.58
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L005.D Vial: 5
Acq On : 16 Jan 17 18:50 Operator: MA
Sample : 0.5 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 11:27 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:24:14 2017
Response via : Multiple Level Calibration



M(6)
RH 1/17/17
MA 1/17/17

TIC: 0116L005.D

(23) Benzo (k) fluoranthene (TM)

14.64min 0.6786ppb m

response 6355

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	21.59
125.00	10.50	13.77#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L006.D Vial: 6
Acq On : 16 Jan 17 19:17 Operator: MA
Sample : 1.0 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:28 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 16 16:54:35 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.88	136	19747	2.50000	ppb		0.02
6) Acenaphthene-D10(IS)	7.92	164	10027	2.50000	ppb		0.01
11) Phenanthrene-D10(IS)	9.67	188	19409	2.50000	ppb		0.01
15) Chrysene-D12(IS)	12.82	240	24216	2.50000	ppb		0.01
21) Perylene-D12(IS)	15.34	264	20959	2.50000	ppb		0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.16	82	471	0.35756	ppb		0.13
Spiked Amount 5.000			Recovery =	7.160%			
7) Surrogate Recovery (FBP)	7.16	172	3266	0.43084	ppb		0.04
Spiked Amount 5.000			Recovery =	8.620%			
17) Surrogate Recovery (TPH)	11.55	244	3690	0.37588	ppb		0.03
Spiked Amount 5.000			Recovery =	7.520%			
Target Compounds							Qvalue
3) Naphthalene	5.90	128	8302	1.04216	ppb		99
4) 2-Methylnaphthalene	6.75	142	4052	0.83636	ppb		99
5) 1-Methylnaphthalene	6.84	142	5679	1.05594	ppb		95
8) Acenaphthylene	7.76	152	8184	1.05063	ppb		98
9) Acenaphthene	7.95	154	5107	1.08160	ppb		99
10) Fluorene	8.59	166	5539	1.01330	ppb		100
12) Phenanthrene	9.70	178	7863	0.94254	ppb		100
13) Anthracene	9.79	178	7609	1.00608	ppb		99
14) Fluoranthene	11.11	202	12811	1.10494	ppb		97
16) Pyrene	11.37	202	13493	1.12315	ppb		98
18) Benz (a) anthracene	12.82	228	7201	0.69677	ppb		97
19) Chrysene	12.86	228	15776	1.35299	ppb		96
20) Indeno (1,2,3-cd) pyrene	17.66	276	9343	0.82965	ppb	#	90
22) Benzo (b) fluoranthene	14.57	252	7921	0.88046	ppb		98
23) Benzo (k) fluoranthene	14.62	252	12165m	1.28401	ppb		96
24) Benzo (a) pyrene	15.24	252	8874	0.95610	ppb		98
25) Dibenz (a,h) anthracene	17.69	278	7349	0.84302	ppb		98
26) Benzo (g,h,i) perylene	18.19	276	7572	0.88605	ppb		99

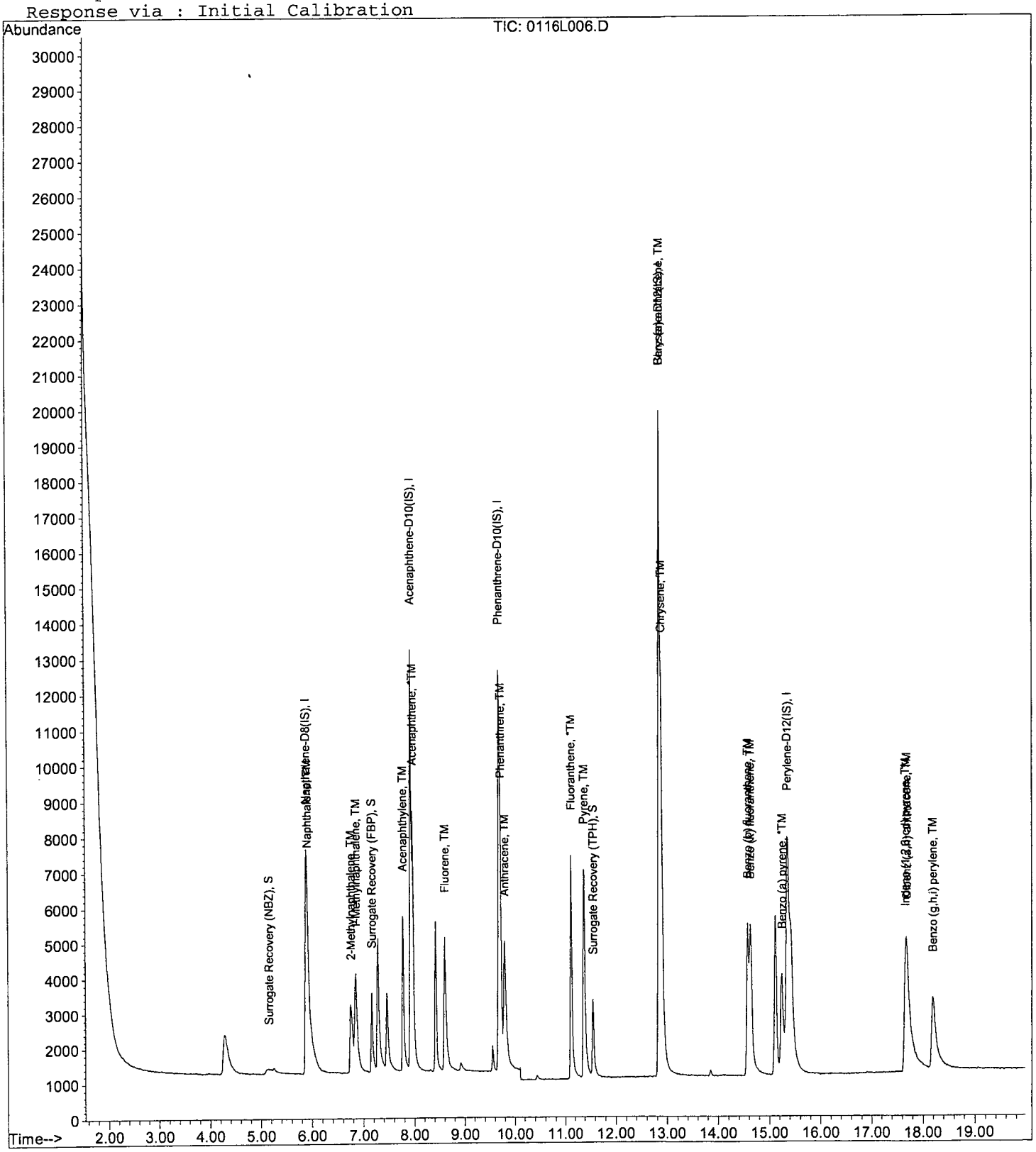
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L006.D Vial: 6
Acq On : 16 Jan 17 19:17 Operator: MA
Sample : 1.0 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:28 2017 Quant Results File: L0116PR.RES

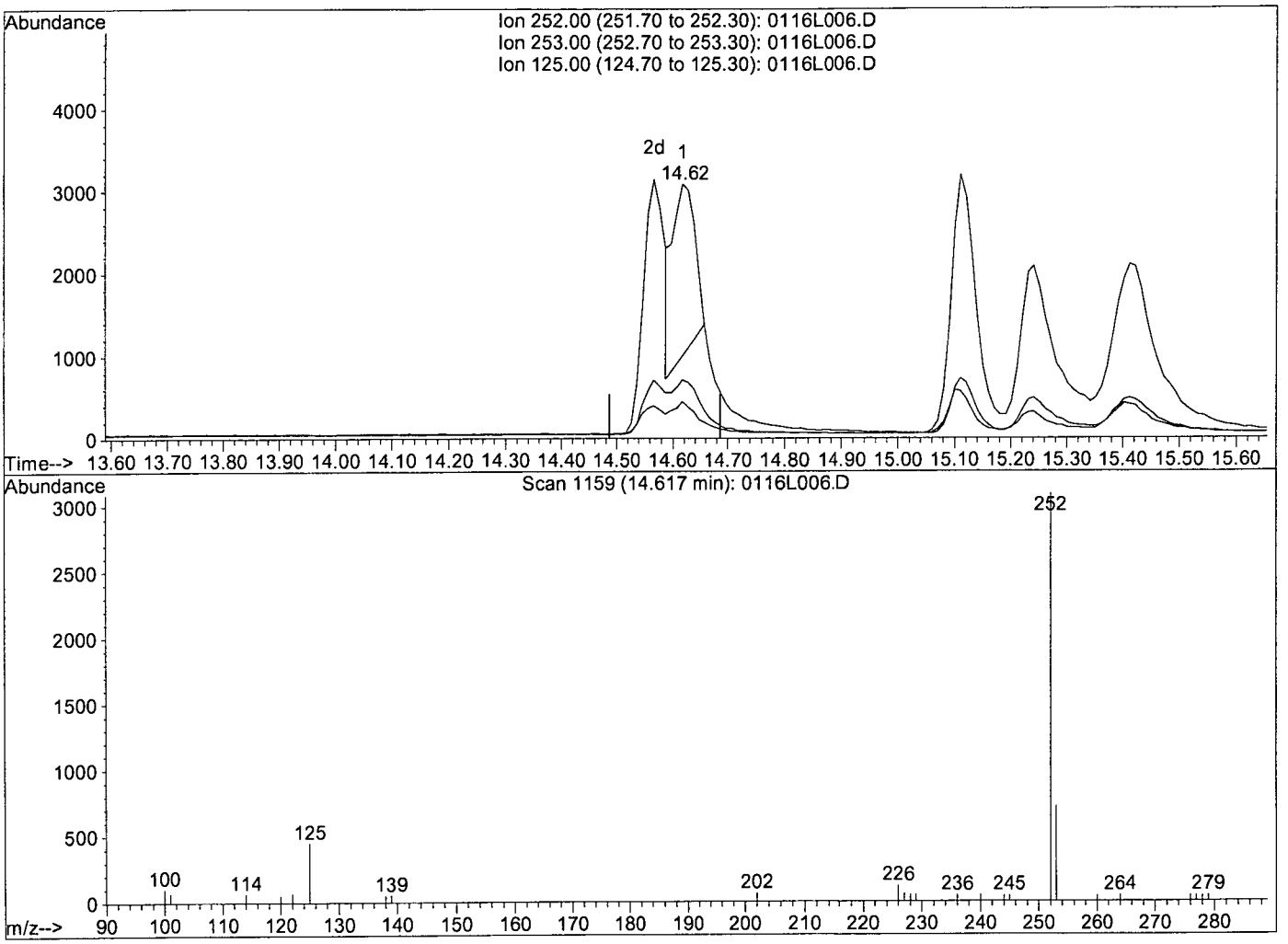
Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L006.D Vial: 6
Acq On : 16 Jan 17 19:17 Operator: MA
Sample : 1.0 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 8:55 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:24:14 2017
Response via : Multiple Level Calibration



TIC: 0116L006.D

(23) Benzo (k) fluoranthene (TM)

14.62min 0.6271ppb

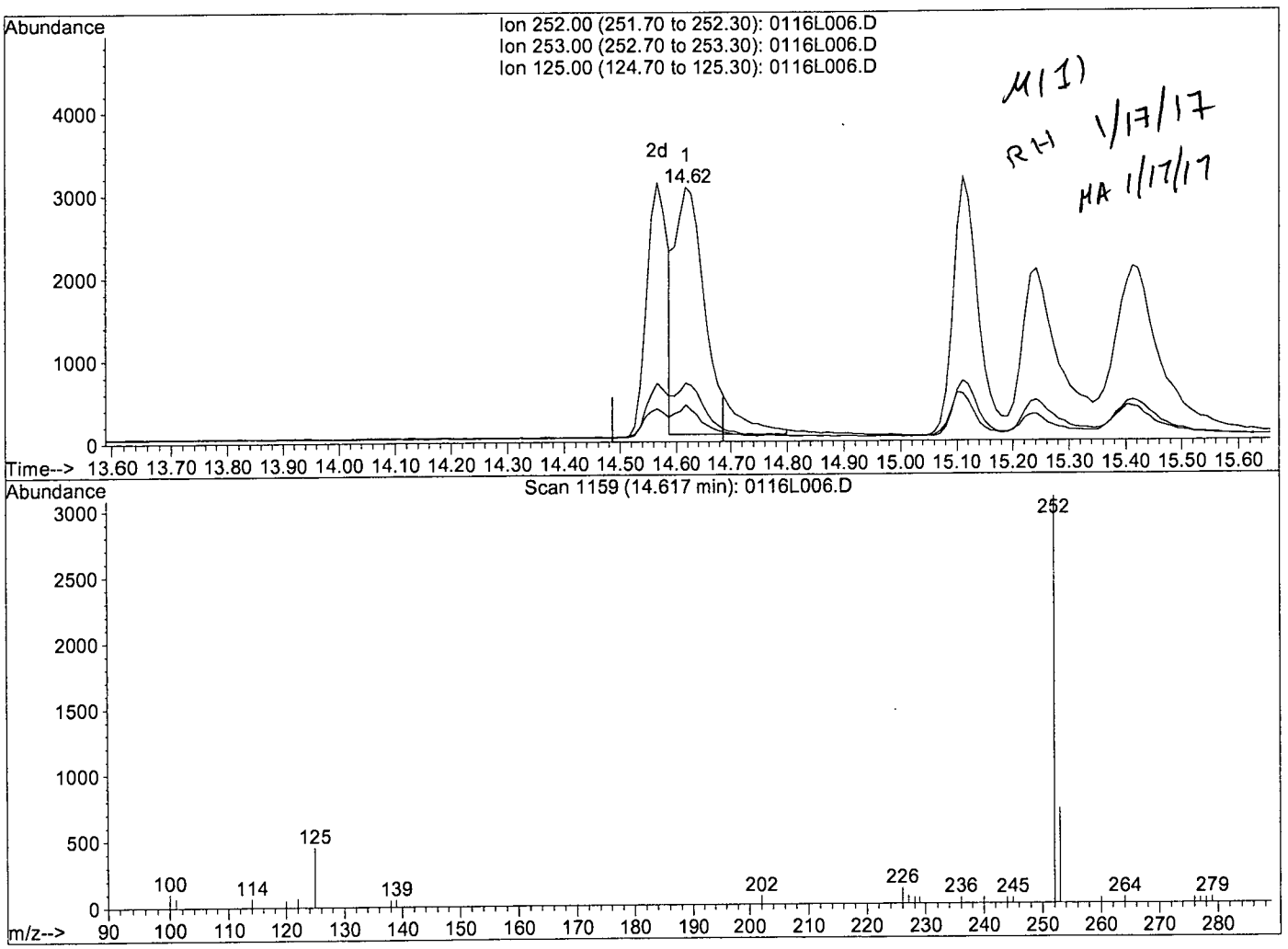
response 5941

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	21.68
125.00	10.50	14.69#
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L006.D Vial: 6
Acq On : 16 Jan 17 19:17 Operator: MA
Sample : 1.0 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 11:28 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:24:14 2017
Response via : Multiple Level Calibration



M(1) RH 1/17/17 MA 1/17/17

TIC: 0116L006.D

(23) Benzo (k) fluoranthene (TM)

14.62min 1.2840ppb m

response 12165

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	23.13
125.00	10.50	14.54#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L007.D Vial: 7
Acq On : 16 Jan 17 19:45 Operator: MA
Sample : 5.0 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:28 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 16 16:54:35 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	20107	2.50000	ppb		0.01
6) Acenaphthene-D10(IS)	7.91	164	10094	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.66	188	19784	2.50000	ppb		0.00
15) Chrysene-D12(IS)	12.81	240	24551	2.50000	ppb		0.00
21) Perylene-D12(IS)	15.33	264	20981	2.50000	ppb		0.00
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.05	82	7610	3.16889	ppb		0.02
Spiked Amount 5.000			Recovery = 63.380%				
7) Surrogate Recovery (FBP)	7.13	172	17369	2.95189	ppb		0.01
Spiked Amount 5.000			Recovery = 59.040%				
17) Surrogate Recovery (TPH)	11.53	244	20116	2.56211	ppb		0.01
Spiked Amount 5.000			Recovery = 51.240%				
Target Compounds							Qvalue
3) Naphthalene	5.89	128	46569	5.74121	ppb		100
4) 2-Methylnaphthalene	6.71	142	27540	5.58266	ppb		98
5) 1-Methylnaphthalene	6.82	142	28249	5.15851	ppb		98
8) Acenaphthylene	7.75	152	47918	6.11071	ppb		98
9) Acenaphthene	7.94	154	27862	5.86167	ppb		98
10) Fluorene	8.56	166	31743	5.76847	ppb		96
12) Phenanthrene	9.69	178	45906	5.39847	ppb		99
13) Anthracene	9.75	178	45335	5.88066	ppb		99
14) Fluoranthene	11.08	202	74570	6.30969	ppb		99
16) Pyrene	11.35	202	77989	6.40318	ppb		99
18) Benz (a) anthracene	12.80	228	58564	5.58935	ppb		97
19) Chrysene	12.85	228	72146	6.10300	ppb		96
20) Indeno (1,2,3-cd) pyrene	17.60	276	56056	4.90983	ppb	#	93
22) Benzo (b) fluoranthene	14.54	252	52100	5.78511	ppb		99
23) Benzo (k) fluoranthene	14.59	252	62778m	6.61924	ppb		99
24) Benzo (a) pyrene	15.21	252	55446	5.96758	ppb		98
25) Dibenz (a,h) anthracene	17.63	278	46320	5.30790	ppb		98
26) Benzo (g,h,i) perylene	18.13	276	45396	5.30653	ppb		99

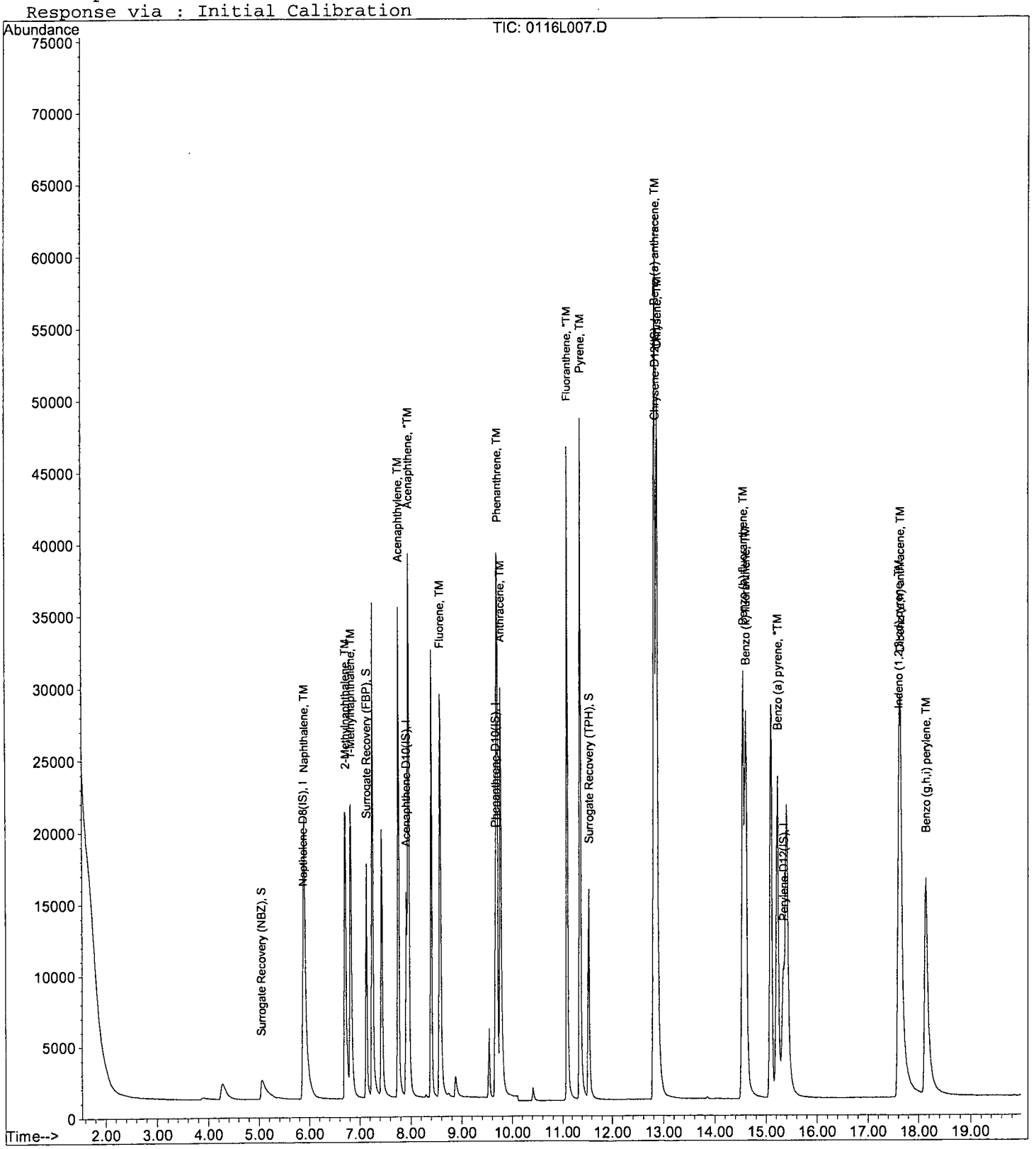
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L007.D Vial: 7
Acq On : 16 Jan 17 19:45 Operator: MA
Sample : 5.0 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:28 2017 Quant Results File: L0116PR.RES

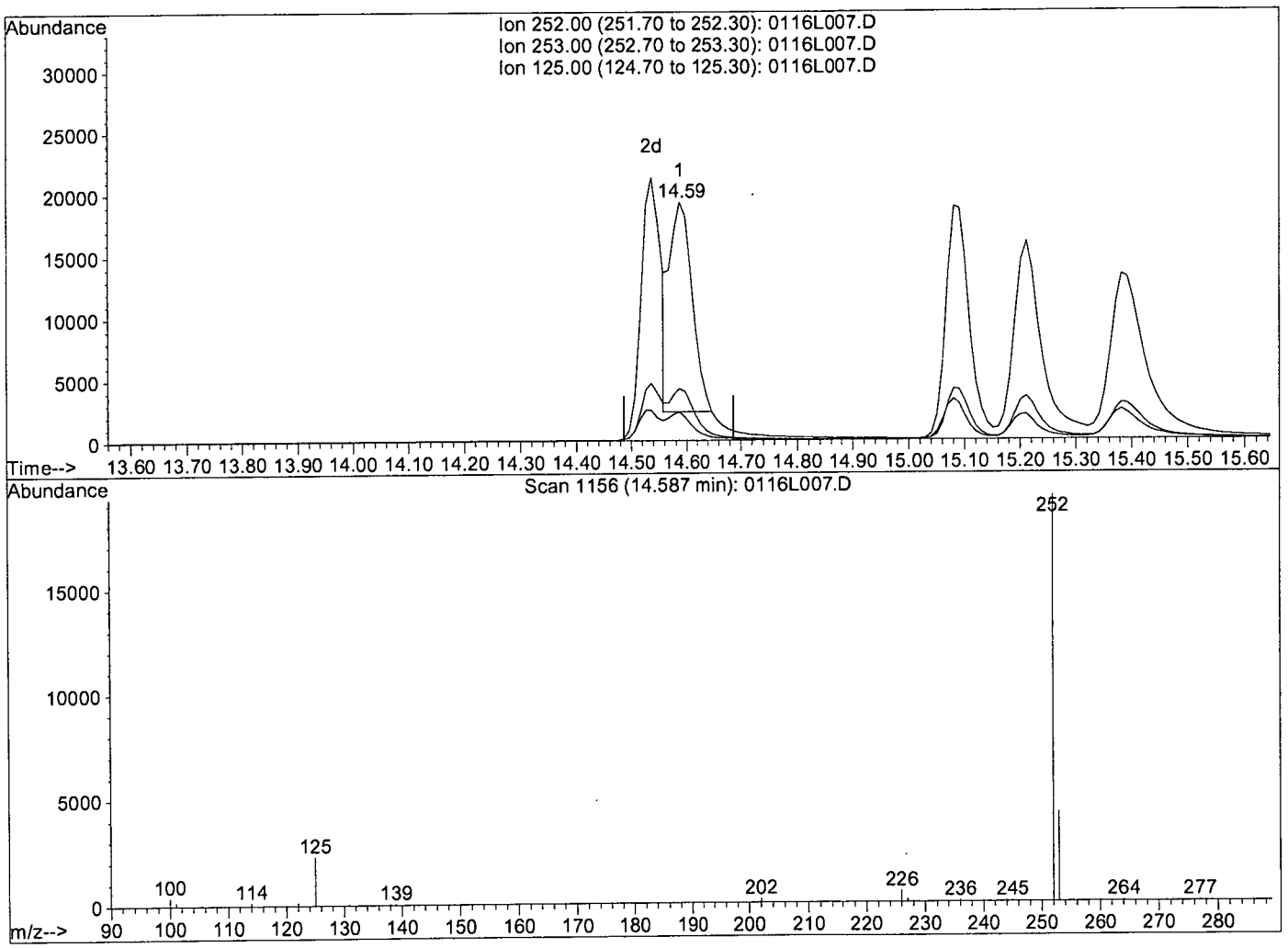
Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L007.D Vial: 7
Acq On : 16 Jan 17 19:45 Operator: MA
Sample : 5.0 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 8:36 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:24:14 2017
Response via : Multiple Level Calibration



TIC: 0116L007.D

(23) Benzo (k) fluoranthene (TM)

14.59min 5.2440ppb

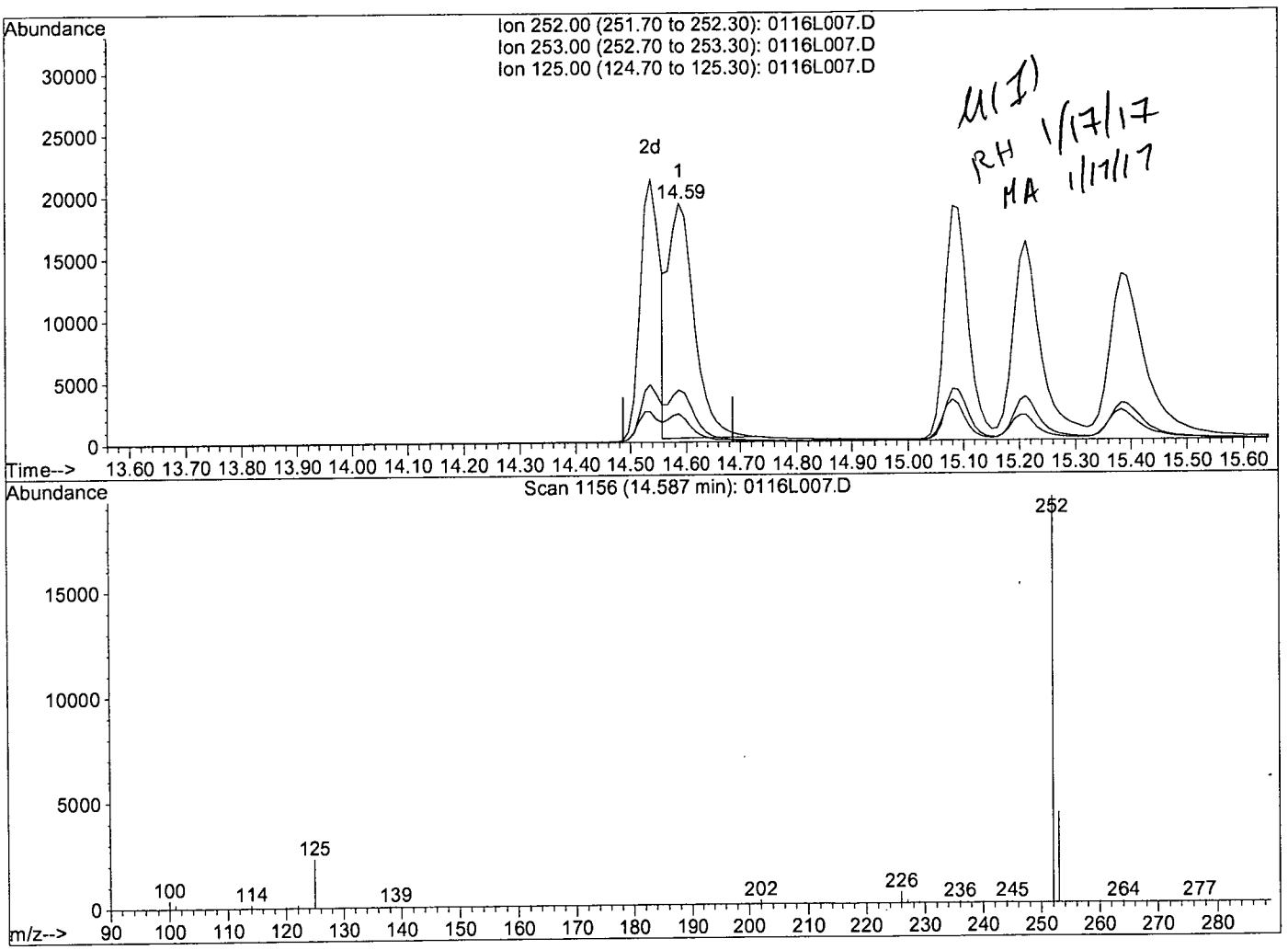
response 49735

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	21.70
125.00	10.50	11.95
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L007.D Vial: 7
Acq On : 16 Jan 17 19:45 Operator: MA
Sample : 5.0 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 11:28 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:24:14 2017
Response via : Multiple Level Calibration



TIC: 0116L007.D

(23) Benzo (k) fluoranthene (TM)

14.59min 6.6192ppb m

response 62778

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	21.93
125.00	10.50	11.88
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L008.D Vial: 8
Acq On : 16 Jan 17 20:13 Operator: MA
Sample : 10 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:29 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 16 16:54:35 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.86	136	19673	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.91	164	9750	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.66	188	19102	2.50000	ppb		0.00
15) Chrysene-D12(IS)	12.81	240	23707	2.50000	ppb		0.00
21) Perylene-D12(IS)	15.32	264	20339	2.50000	ppb		0.00
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.03	82	16864	6.96418	ppb		0.01
Spiked Amount 5.000			Recovery	= 139.280%			
7) Surrogate Recovery (FBP)	7.12	172	35736	6.46599	ppb		0.00
Spiked Amount 5.000			Recovery	= 129.320%			
17) Surrogate Recovery (TPH)	11.52	244	40668	5.49931	ppb		0.00
Spiked Amount 5.000			Recovery	= 109.980%			
Target Compounds							Qvalue
3) Naphthalene	5.88	128	95242	12.00083	ppb		99
4) 2-Methylnaphthalene	6.70	142	57524	11.91799	ppb		99
5) 1-Methylnaphthalene	6.81	142	57182	10.67228	ppb		97
8) Acenaphthylene	7.75	152	98439	12.99626	ppb		97
9) Acenaphthene	7.94	154	56437	12.29227	ppb		99
10) Fluorene	8.56	166	63672	11.97898	ppb		99
12) Phenanthrene	9.68	178	92495	11.26561	ppb		99
13) Anthracene	9.75	178	93269	12.53040	ppb		99
14) Fluoranthene	11.08	202	151671	13.29173	ppb		97
16) Pyrene	11.35	202	156778	13.33030	ppb		97
18) Benz (a) anthracene	12.79	228	133958	13.24012	ppb		97
19) Chrysene	12.84	228	131592	11.52798	ppb		96
20) Indeno (1,2,3-cd) pyrene	17.60	276	116290	10.54822	ppb	#	93
22) Benzo (b) fluoranthene	14.53	252	123922	14.19447	ppb		99
23) Benzo (k) fluoranthene	14.58	252	113592m	12.35506	ppb		98
24) Benzo (a) pyrene	15.20	252	113349	12.58469	ppb		97
25) Dibenz (a,h) anthracene	17.63	278	94486	11.16909	ppb		99
26) Benzo (g,h,i) perylene	18.12	276	94164	11.35467	ppb		99

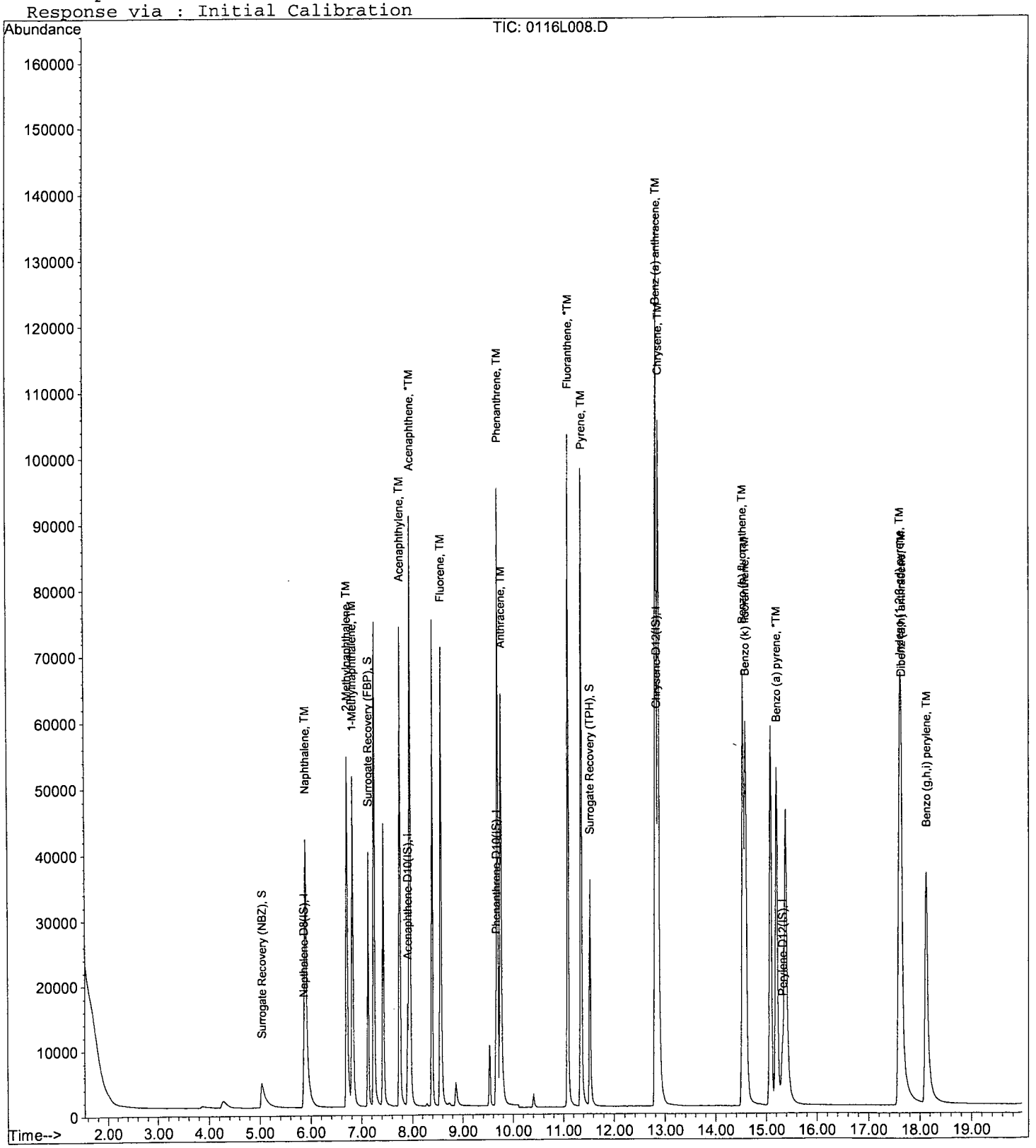
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L008.D Vial: 8
Acq On : 16 Jan 17 20:13 Operator: MA
Sample : 10 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:29 2017 Quant Results File: L0116PR.RES

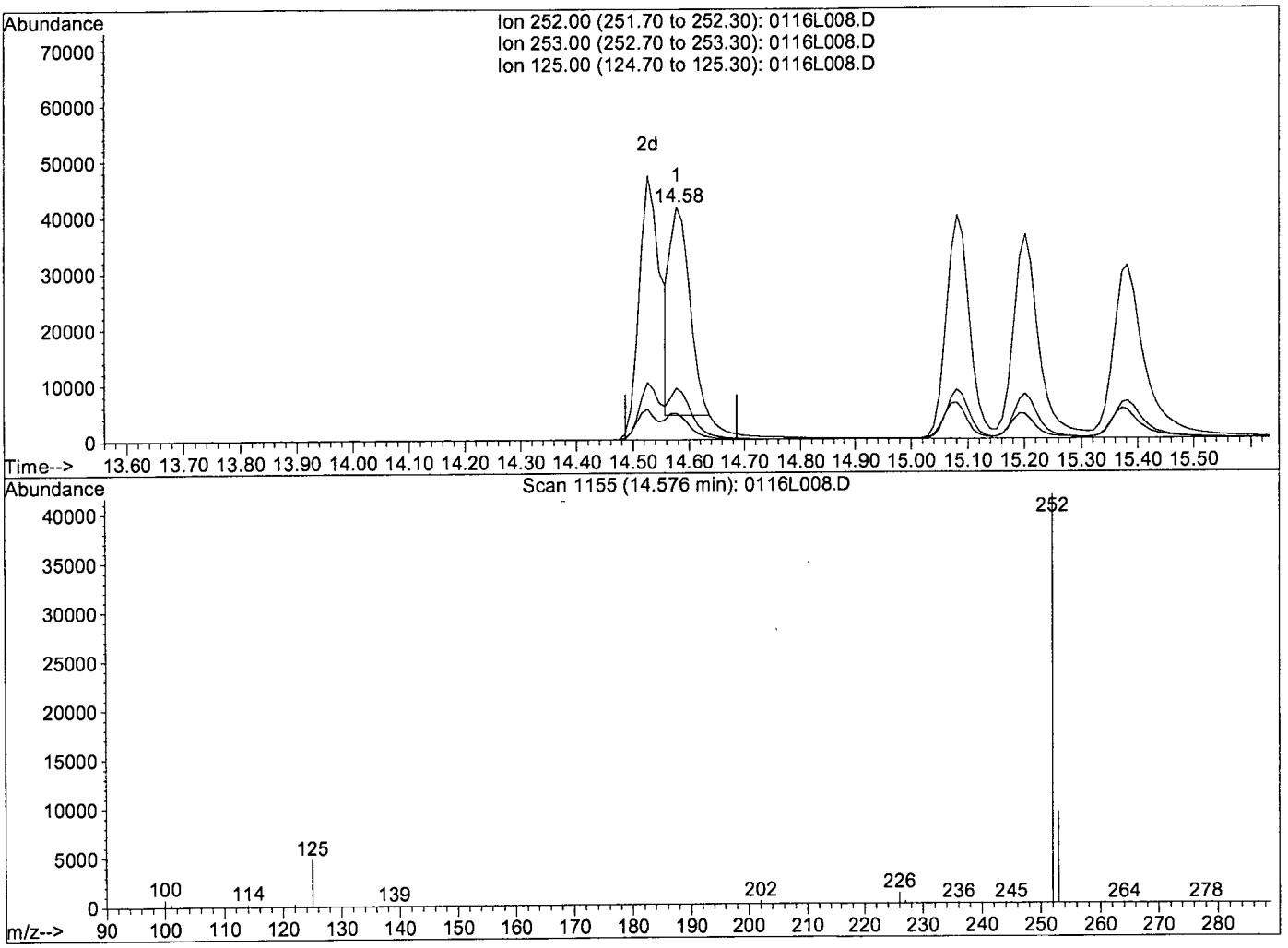
Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L008.D Vial: 8
Acq On : 16 Jan 17 20:13 Operator: MA
Sample : 10 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 8:55 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:24:14 2017
Response via : Multiple Level Calibration



TIC: 0116L008.D

(23) Benzo (k) fluoranthene (TM)

14.58min 10.0109ppb

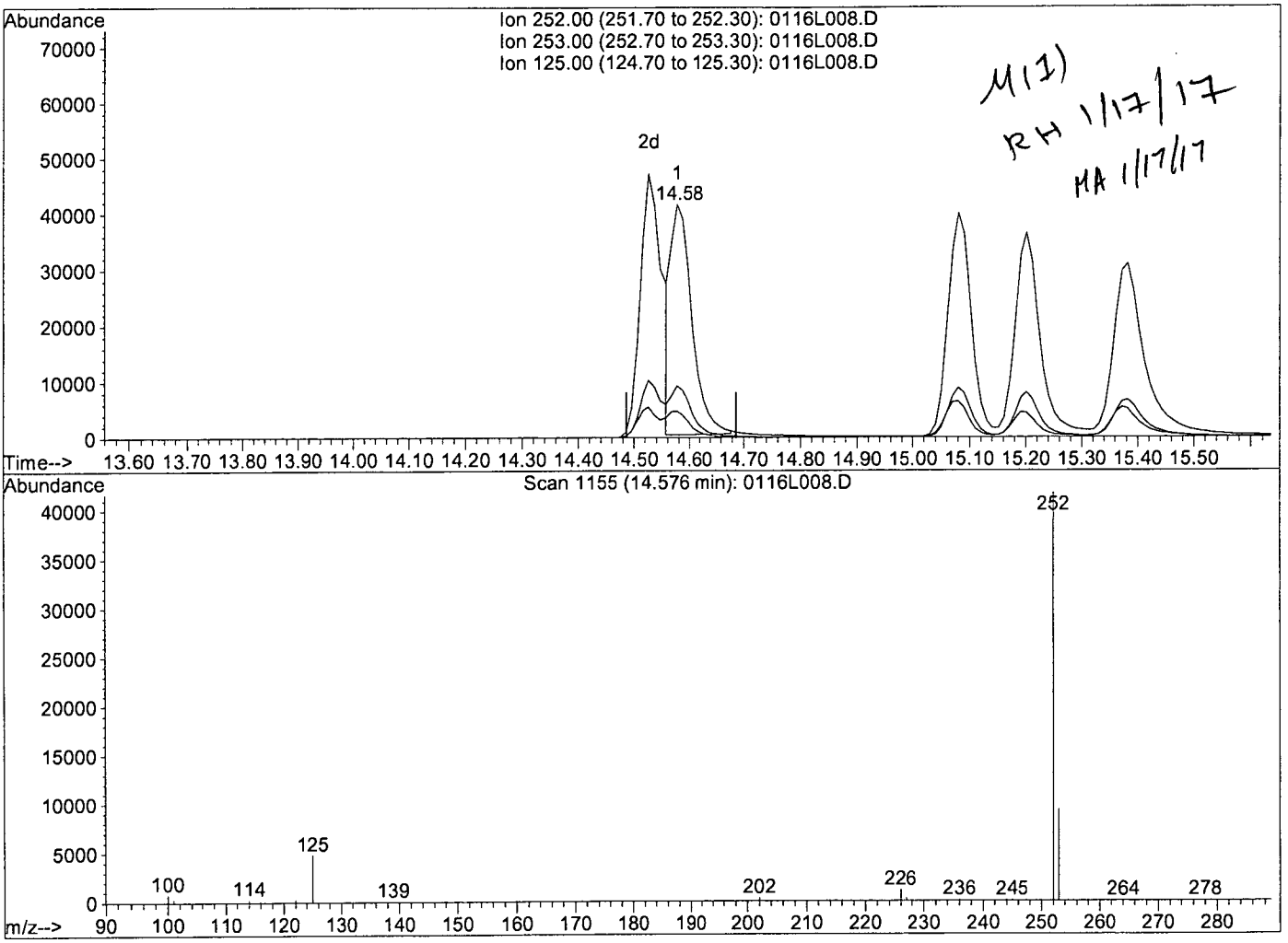
response 92040

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	22.27
125.00	10.50	11.57
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L008.D Vial: 8
Acq On : 16 Jan 17 20:13 Operator: MA
Sample : 10 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 11:29 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:24:14 2017
Response via : Multiple Level Calibration



TIC: 0116L008.D

(23) Benzo (k) fluoranthene (TM)

14.58min 12.3551ppb m

response 113592

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	22.24
125.00	10.50	11.48
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L009.D Vial: 9
Acq On : 16 Jan 17 20:41 Operator: MA
Sample : 50 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:30 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 16 16:54:35 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.86	136	19918	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.91	164	9670	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.66	188	18783	2.50000	ppb		0.00
15) Chrysene-D12(IS)	12.81	240	22284	2.50000	ppb		0.00
21) Perylene-D12(IS)	15.32	264	19749	2.50000	ppb		-0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.01	82	82852	33.14475	ppb		-0.01
Spiked Amount 5.000			Recovery = 662.900%				
7) Surrogate Recovery (FBP)	7.12	172	148664	27.62556	ppb		0.00
Spiked Amount 5.000			Recovery = 552.520%				
17) Surrogate Recovery (TPH)	11.52	244	170664	24.97985	ppb		0.00
Spiked Amount 5.000			Recovery = 499.600%				
Target Compounds							Qvalue
3) Naphthalene	5.88	128	409822	51.00385	ppb		100
4) 2-Methylnaphthalene	6.69	142	245527	50.24327	ppb		98
5) 1-Methylnaphthalene	6.81	142	232751	42.90565	ppb		98
8) Acenaphthylene	7.75	152	401113	53.39446	ppb		98
9) Acenaphthene	7.94	154	227796	50.02559	ppb		99
10) Fluorene	8.56	166	260628	49.43910	ppb		99
12) Phenanthrene	9.68	178	382140	47.33397	ppb		99
13) Anthracene	9.74	178	371152	50.70997	ppb		98
14) Fluoranthene	11.08	202	616975	54.98703	ppb		97
16) Pyrene	11.34	202	635650	57.49849	ppb		97
18) Benz (a) anthracene	12.79	228	564611	59.36852	ppb		98
19) Chrysene	12.84	228	512414	47.75604	ppb		98
20) Indeno (1,2,3-cd) pyrene	17.63	276	488779	47.16639	ppb	#	89
22) Benzo (b) fluoranthene	14.54	252	530069	62.52987	ppb		99
23) Benzo (k) fluoranthene	14.60	252	451672m	50.59468	ppb		100
24) Benzo (a) pyrene	15.22	252	475288	54.34582	ppb		97
25) Dibenz (a,h) anthracene	17.66	278	395543	48.15359	ppb		97
26) Benzo (g,h,i) perylene	18.14	276	395011	49.05500	ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

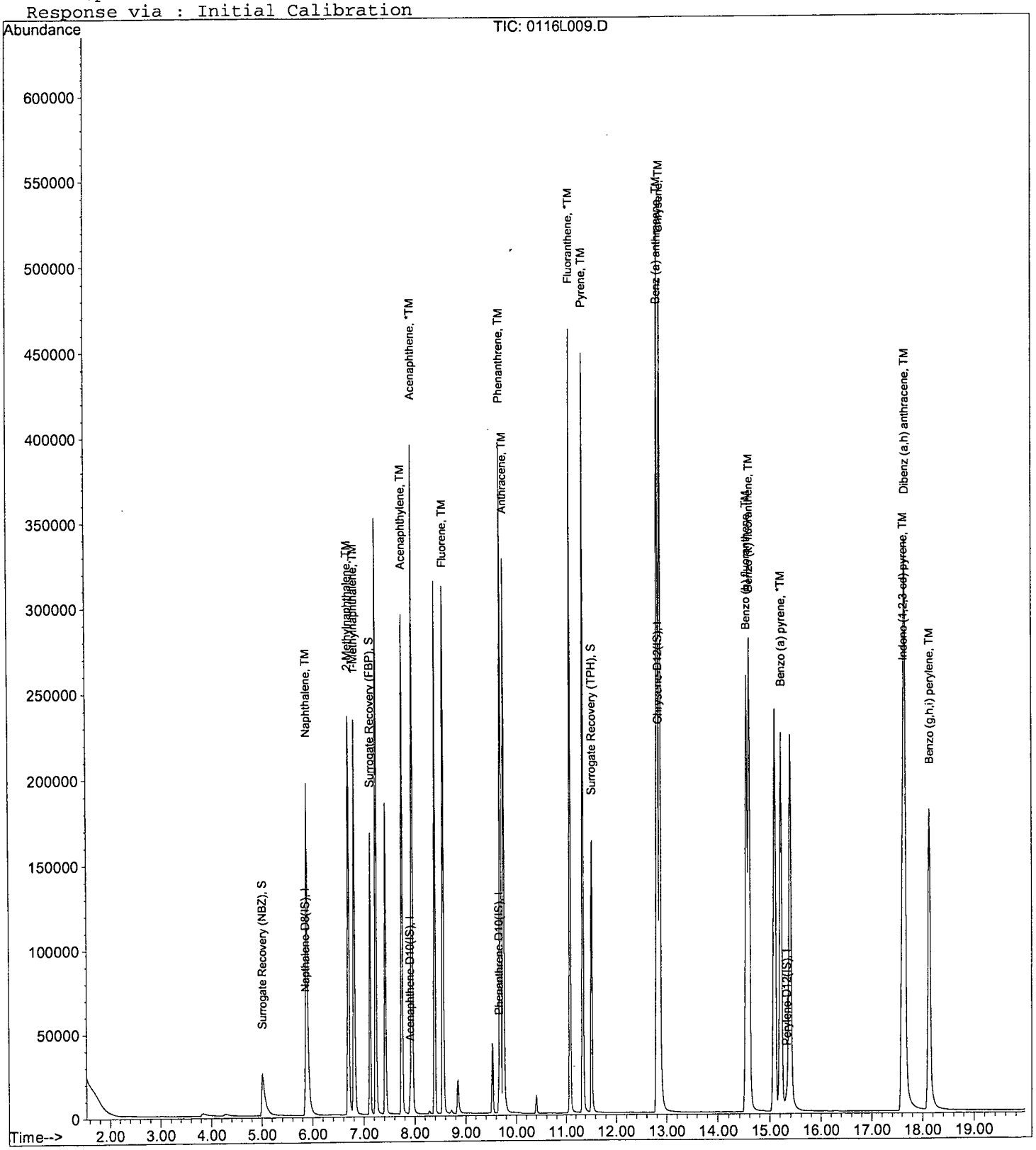
Data File : M:\LINUS\DATA\L170116\0116L009.D
Acq On : 16 Jan 17 20:41
Sample : 50 SIM 1/13/17
Misc : water

Vial: 9
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Jan 17 11:30 2017

Quant Results File: L0116PR.RES

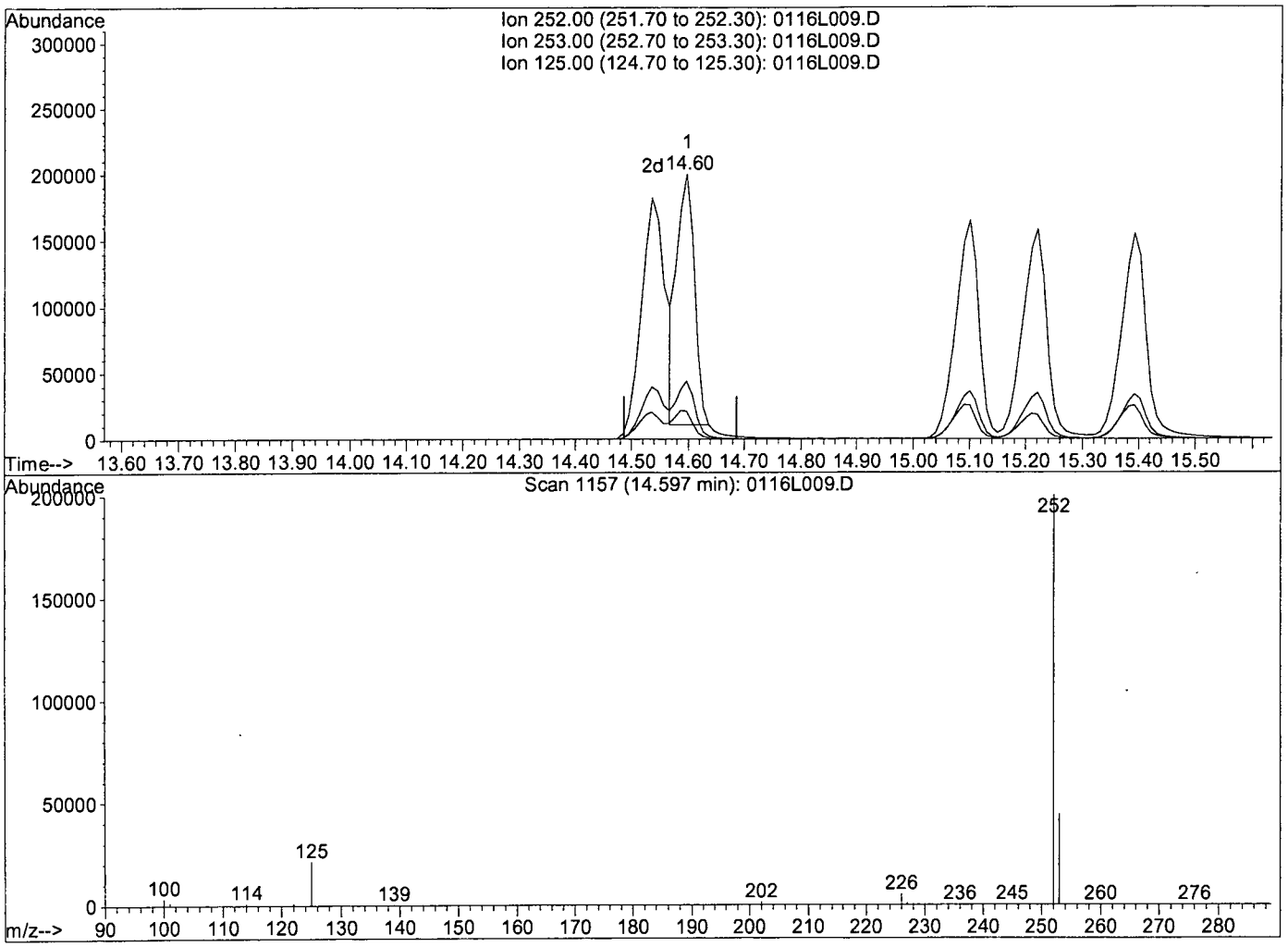
Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L009.D Vial: 9
Acq On : 16 Jan 17 20:41 Operator: MA
Sample : 50 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 8:55 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:24:14 2017
Response via : Multiple Level Calibration



TIC: 0116L009.D

(23) Benzo (k) fluoranthene (TM)

14.60min 46.0973ppb

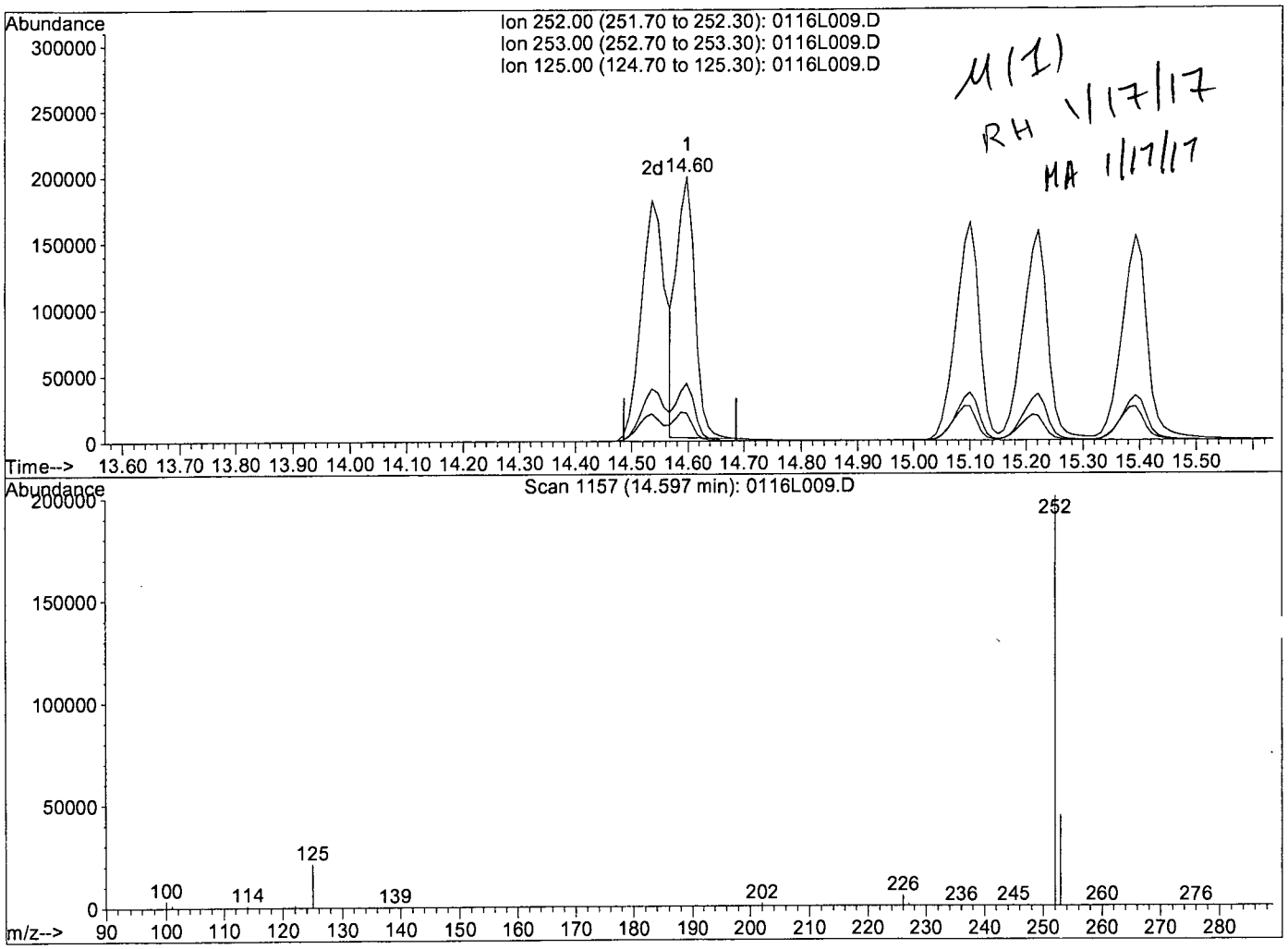
response 411523

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	21.96
125.00	10.50	10.59
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L009.D Vial: 9
Acq On : 16 Jan 17 20:41 Operator: MA
Sample : 50 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 11:30 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:24:14 2017
Response via : Multiple Level Calibration



TIC: 0116L009.D

(23) Benzo (k) fluoranthene (TM)

14.60min 50.5947ppb m

response 451672

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	21.94
125.00	10.50	10.53
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L010.D Vial: 10
Acq On : 16 Jan 17 21:09 Operator: MA
Sample : 100 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:30 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 16 16:54:35 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.86	136	18975	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	7.91	164	9121	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.66	188	18054	2.50000 ppb		0.00
15) Chrysene-D12(IS)	12.82	240	20947	2.50000 ppb		0.01
21) Perylene-D12(IS)	15.34	264	18966	2.50000 ppb		0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.00	82	158793	66.51129 ppb		-0.03
Spiked Amount 5.000			Recovery	= 1330.220%		
7) Surrogate Recovery (FBP)	7.12	172	272565	53.84709 ppb		0.00
Spiked Amount 5.000			Recovery	= 1076.940%		
17) Surrogate Recovery (TPH)	11.52	244	308342	48.12618 ppb		0.00
Spiked Amount 5.000			Recovery	= 962.520%		
Target Compounds						Qvalue
3) Naphthalene	5.88	128	730521	95.43428 ppb		99
4) 2-Methylnaphthalene	6.70	142	439807	94.47235 ppb		98
5) 1-Methylnaphthalene	6.81	142	409217	79.18456 ppb		98
8) Acenaphthylene	7.75	152	713052	100.63167 ppb		98
9) Acenaphthene	7.94	154	407011	94.76246 ppb		99
10) Fluorene	8.56	166	459815	92.47335 ppb		99
12) Phenanthrene	9.69	178	674498	86.92059 ppb		99
13) Anthracene	9.75	178	614227	87.30960 ppb		98
14) Fluoranthene	11.08	202	1095355	101.56384 ppb		100
16) Pyrene	11.35	202	1120001	107.77750 ppb		98
18) Benz (a) anthracene	12.80	228	1044565	116.84595 ppb		98
19) Chrysene	12.86	228	893174	88.55533 ppb	#	96
20) Indeno (1,2,3-cd) pyrene	17.68	276	894908	91.86916 ppb	#	83
22) Benzo (b) fluoranthene	14.56	252	997372	122.51286 ppb		98
23) Benzo (k) fluoranthene	14.62	252	812892m	94.81650 ppb		99
24) Benzo (a) pyrene	15.25	252	866328	103.14804 ppb		97
25) Dibenz (a,h) anthracene	17.70	278	733907	93.03478 ppb		97
26) Benzo (g,h,i) perylene	18.17	276	701789	90.75071 ppb		99

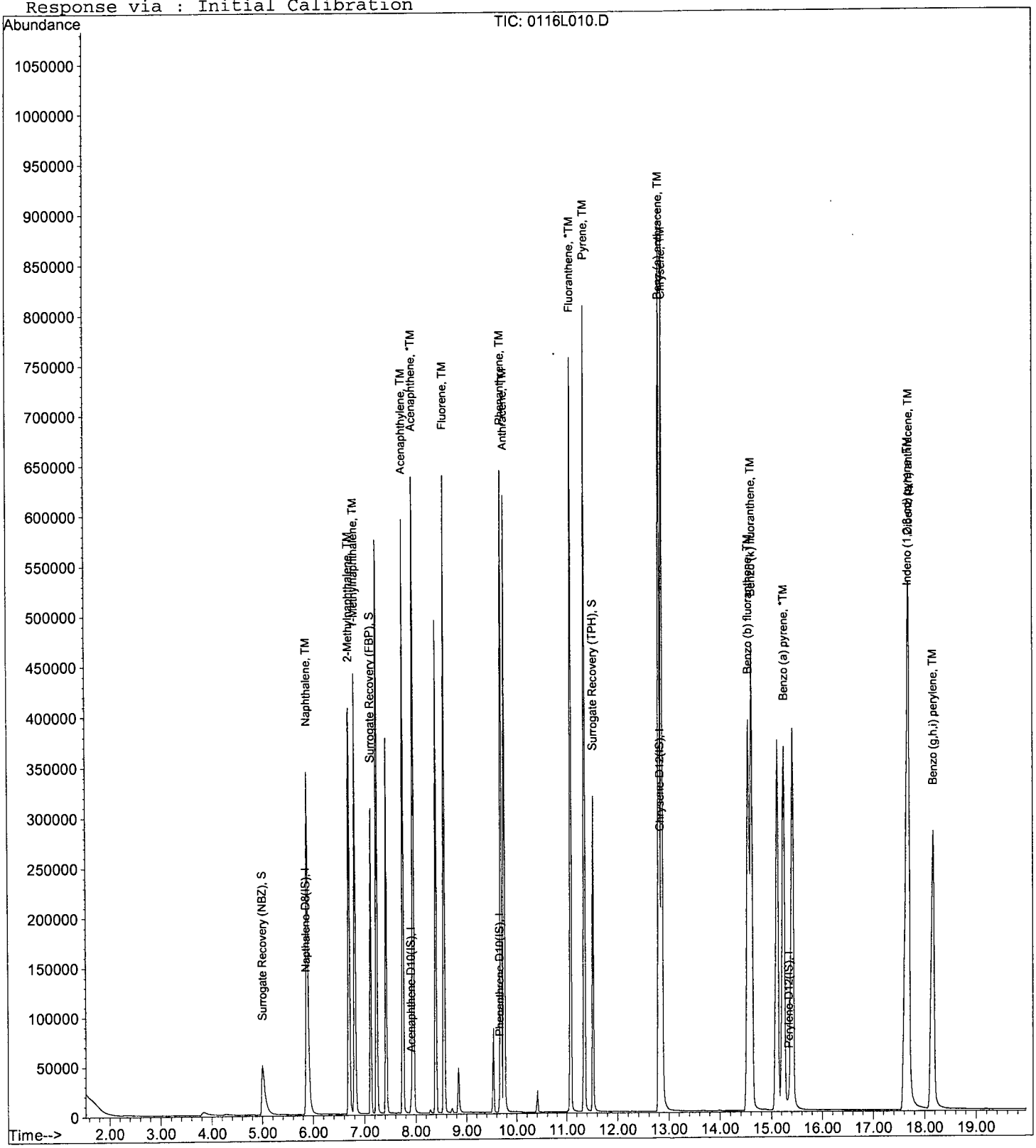
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L010.D Vial: 10
Acq On : 16 Jan 17 21:09 Operator: MA
Sample : 100 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:30 2017 Quant Results File: L0116PR.RES

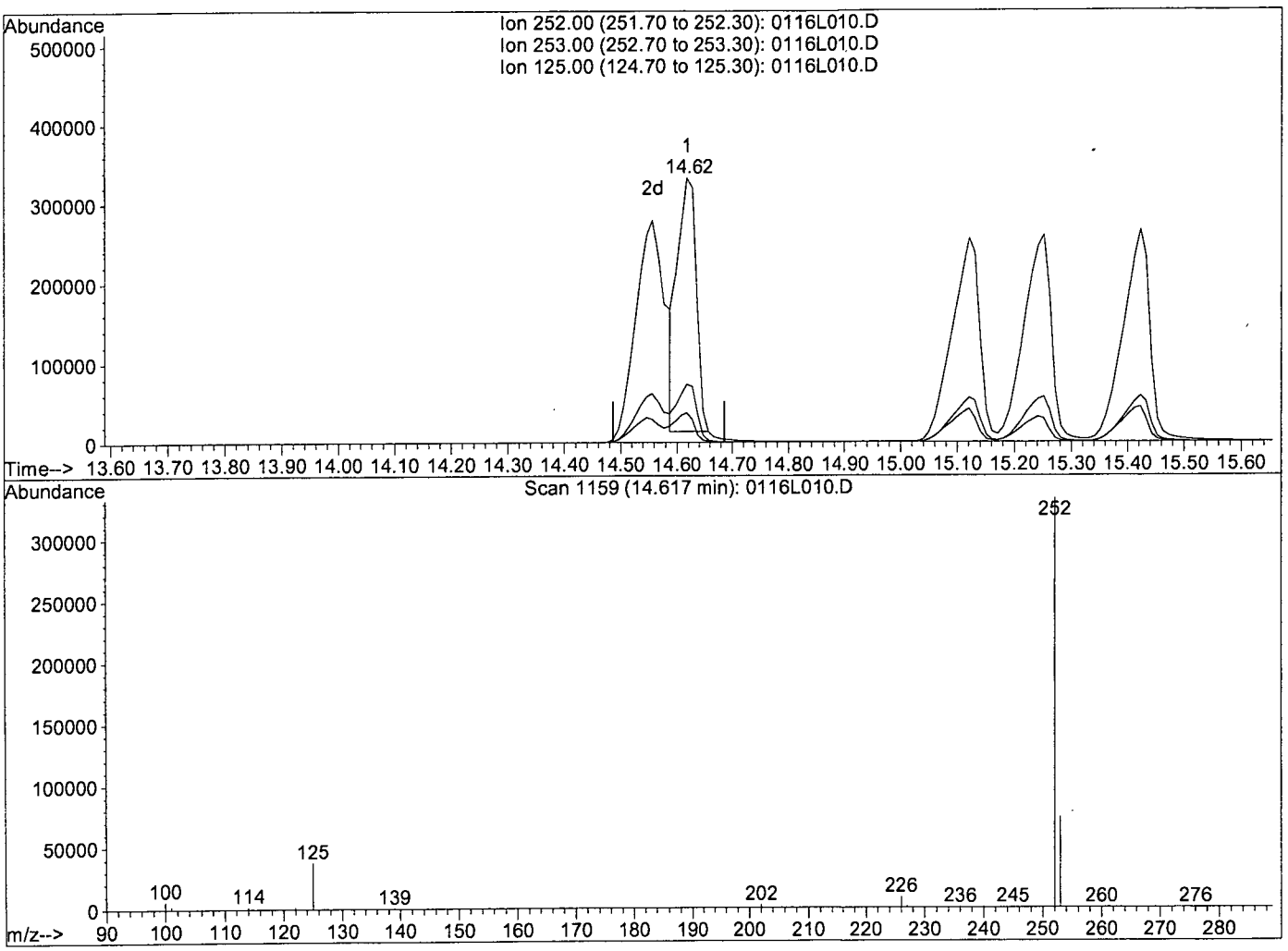
Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L010.D Vial: 10
Acq On : 16 Jan 17 21:09 Operator: MA
Sample : 100 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 8:55 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:24:14 2017
Response via : Multiple Level Calibration



TIC: 0116L010.D

(23) Benzo (k) fluoranthene (TM)

14.62min 88.5922ppb

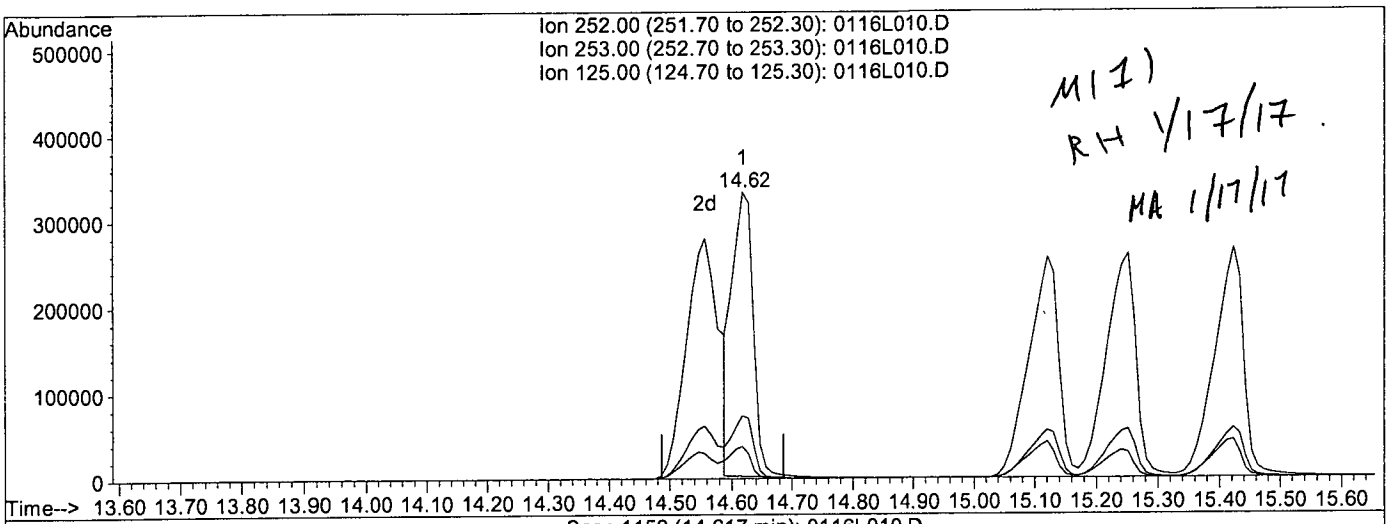
response 759529

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	21.98
125.00	10.50	11.38
0.00	0.00	0.00

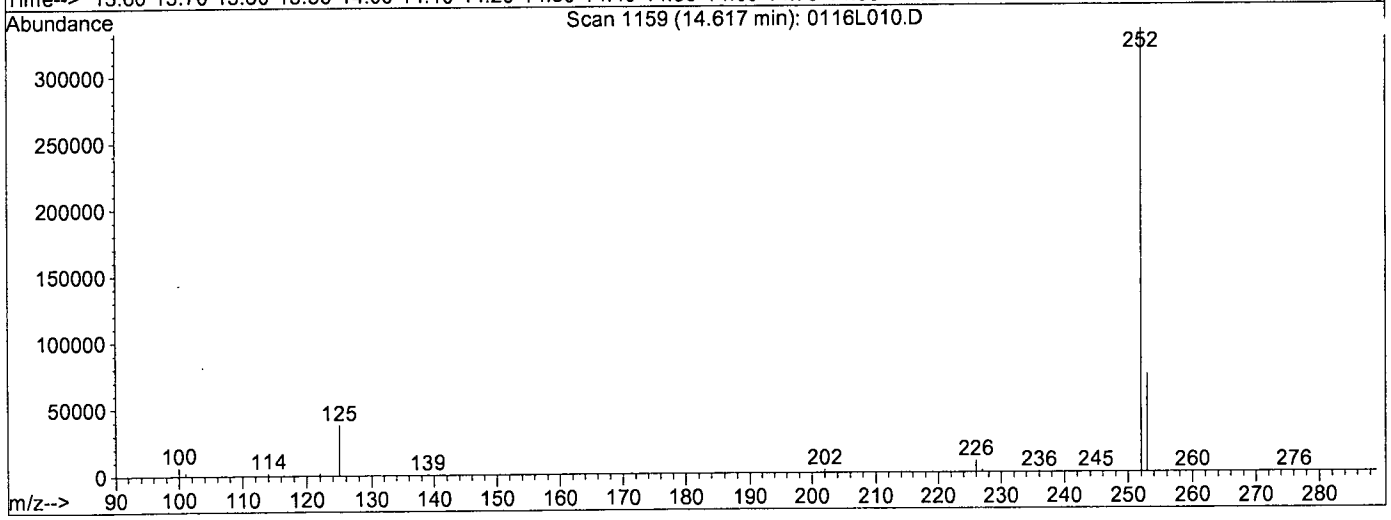
Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L010.D Vial: 10
Acq On : 16 Jan 17 21:09 Operator: MA
Sample : 100 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 11:30 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:24:14 2017
Response via : Multiple Level Calibration



M1 1)
RH 1/17/17.
MA 1/17/17



TIC: 0116L010.D

(23) Benzo (k) fluoranthene (TM)

14.62min 94.8165ppb m

response 812892

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	21.98
125.00	10.50	11.26
0.00	0.00	0.00

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/16/17
Instrument: Linus
Initial Cal. Date: 01/16/17
Data File: 0116L011.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TM	Naphthalene	1.022	0.9836	3.8	TM	
2	TML	2-Methylnaphthalene	0.5432	0.5784	6.5	TML	2.1
3	TM	1-Methylnaphthalene	0.6859	0.5604	18	TM	
4	TM	Acenaphthylene	2.069	1.926	6.9	TM	
5	*TM	Acenaphthene	1.276	1.098	14	*TM	
6	TM	Fluorene	1.385	1.249	9.8	TM	
7	TM	Phenanthrene	1.043	0.9324	11	TM	
8	TM	Anthracene	0.9820	0.9045	7.9	TM	
9	*TM	Fluoranthene	1.680	1.533	8.8	*TM	
10	TM	Pyrene	1.418	1.291	8.9	TM	
11	TML	Benz (a) anthracene	0.9814	1.180	20	TML	5.8
12	TML	Chrysene	1.463	1.015	31	TML	7.4
13	TML	Indeno (1,2,3-cd) pyrene	0.9131	0.9928	8.7	TML	7.9
14	TML	Benzo (b) fluoranthene	1.150	1.130	1.8	TML	15
15	TM	Benzo (k) fluoranthene	1.327	1.064	20	TM	
16	*TML	Benzo (a) pyrene	1.112	1.089	2.0	*TML	6.2
17	TML	Dibenz (a,h) anthracene	0.9476	0.9060	4.4	TML	7.5
18	TML	Benzo (g,h,i) perylene	0.9340	0.8963	4.0	TML	5.4
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			10.4		

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L011.D Vial: 11
Acq On : 16 Jan 17 21:37 Operator: MA
Sample : SS SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:35 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.86	136	19517	2.50000 ppb		-0.01
6) Acenaphthene-D10(IS)	7.91	164	9558	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.66	188	18678	2.50000 ppb		0.00
15) Chrysene-D12(IS)	12.81	240	22555	2.50000 ppb		0.00
21) Perylene-D12(IS)	15.32	264	19722	2.50000 ppb		-0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	0.00	82	0d	0.19140 ppb		
Spiked Amount 5.000			Recovery	= 3.820%		
7) Surrogate Recovery (FBP)	0.00	172	0d	0.00000 ppb		
Spiked Amount 5.000			Recovery	= 0.000%		
17) Surrogate Recovery (TPH)	0.00	244	0d	0.00000 ppb		
Spiked Amount 5.000			Recovery	= 0.000%		
Target Compounds						Qvalue
3) Naphthalene	5.88	128	383936	48.10529 ppb		100
4) 2-Methylnaphthalene	6.69	142	225784	48.93929 ppb		99
5) 1-Methylnaphthalene	6.81	142	218736	40.85026 ppb		99
8) Acenaphthylene	7.74	152	368117	46.53342 ppb		98
9) Acenaphthene	7.94	154	209918	43.03203 ppb		99
10) Fluorene	8.55	166	238752	45.09477 ppb		97
12) Phenanthrene	9.68	178	348307	44.67952 ppb		99
13) Anthracene	9.74	178	337869	46.05103 ppb		98
14) Fluoranthene	11.08	202	572698	45.62279 ppb		94
16) Pyrene	11.34	202	582500	45.53918 ppb		98
18) Benz (a) anthracene	12.79	228	532295	47.09967 ppb		98
19) Chrysene	12.84	228	457835	46.28938 ppb		97
20) Indeno (1,2,3-cd) pyrene	17.61	276	447861	46.05623 ppb	#	93
22) Benzo (b) fluoranthene	14.54	252	445574	42.66550 ppb		99
23) Benzo (k) fluoranthene	14.59	252	419522	40.08913 ppb		99
24) Benzo (a) pyrene	15.21	252	429676	46.87839 ppb		99
25) Dibenz (a,h) anthracene	17.65	278	357363	46.22858 ppb		97
26) Benzo (g,h,i) perylene	18.13	276	353532	47.29936 ppb		99

Algorithum check = $\frac{383936 * 1 * 2.5}{1 * 19517 * 1.022} = 48.121$

RH 1/18/17

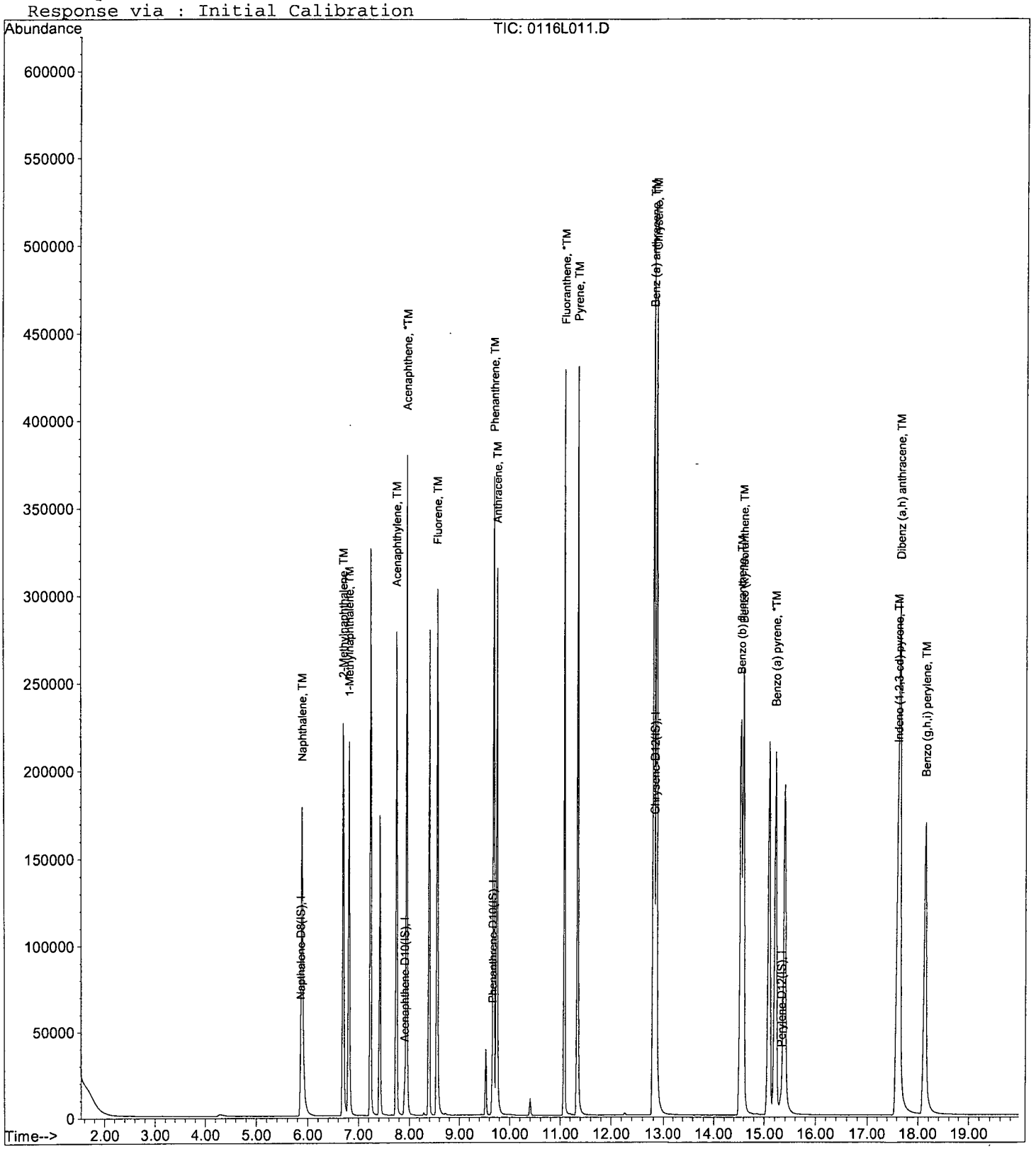
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L011.D Vial: 11
Acq On : 16 Jan 17 21:37 Operator: MA
Sample : SS SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:35 2017 Quant Results File: L0116PR.RES

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/17/17
Instrument: Linus
Initial Cal. Date: 01/16/17
Data File: 0116L019.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	SL	Surrogate Recovery (NBZ)	0.3040	0.3832	26	SL	1.1
3	TM	Naphthalene	1.022	1.174	15	TM	
4	TML	2-Methylnaphthalene	0.5432	0.6894	27	TML	4.9
5	TM	1-Methylnaphthalene	0.6859	0.7185	4.8	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	S	Surrogate Recovery (FBP)	1.571	1.751	11	S	
8	TM	Acenaphthylene	2.069	2.385	15	TM	
9	*TM	Acenaphthene	1.276	1.379	8.0	*TM	
10	TM	Fluorene	1.385	1.564	13	TM	
11	I	Phenanthrene-D10(IS)	ISTD			I	
12	TM	Phenanthrene	1.043	1.146	9.9	TM	
13	TM	Anthracene	0.9820	1.120	14	TM	
14	*TM	Fluoranthene	1.680	1.876	12	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.418	1.597	13	TM	
17	S	Surrogate Recovery (TPH)	0.7756	0.8221	6.0	S	
18	TML	Benz (a) anthracene	0.9814	1.203	23	TML	5.4
19	TML	Chrysene	1.463	1.442	1.4	TML	12
20	TML	Indeno (1,2,3-cd) pyrene	0.9131	1.174	29	TML	3.7
21	I	Perylene-D12(IS)	ISTD			I	
22	TML	Benzo (b) fluoranthene	1.150	1.312	14	TML	3.9
23	TM	Benzo (k) fluoranthene	1.327	1.069	19	TM	
24	*TML	Benzo (a) pyrene	1.112	1.315	18	*TML	3.0
25	TML	Dibenz (a,h) anthracene	0.9476	1.102	16	TML	3.9
26	TML	Benzo (g,h,i) perylene	0.9340	1.079	16	TML	1.1
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			14.8		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L019.D Vial: 7
Acq On : 17 Jan 17 1:07 Operator: MA
Sample : 5.0 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:36 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	19630	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	7.91	164	9961	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.66	188	19943	2.50000 ppb		0.00
15) Chrysene-D12(IS)	12.81	240	24630	2.50000 ppb		0.00
21) Perylene-D12(IS)	15.32	264	21161	2.50000 ppb		-0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.06	82	7522	2.47212 ppb		0.01
Spiked Amount 5.000			Recovery	= 49.440%		
7) Surrogate Recovery (FBP)	7.13	172	17438	2.78558 ppb		0.00
Spiked Amount 5.000			Recovery	= 55.720%		
17) Surrogate Recovery (TPH)	11.53	244	20248	2.64969 ppb		0.00
Spiked Amount 5.000			Recovery	= 53.000%		
Target Compounds						Qvalue
3) Naphthalene	5.89	128	46085	5.74098 ppb		99
4) 2-Methylnaphthalene	6.71	142	27065	5.24583 ppb		99
5) 1-Methylnaphthalene	6.82	142	28210	5.23806 ppb		97
8) Acenaphthylene	7.75	152	47511	5.76285 ppb		98
9) Acenaphthene	7.94	154	27463	5.40200 ppb		97
10) Fluorene	8.56	166	31154	5.64621 ppb		96
12) Phenanthrene	9.69	178	45722	5.49302 ppb		99
13) Anthracene	9.75	178	44657	5.70060 ppb		98
14) Fluoranthene	11.09	202	74832	5.58320 ppb		95
16) Pyrene	11.35	202	78666	5.63190 ppb		100
18) Benz (a) anthracene	12.79	228	59283	4.72947 ppb		98
19) Chrysene	12.84	228	71050	5.59317 ppb		97
20) Indeno (1,2,3-cd) pyrene	17.60	276	57855	5.18536 ppb	#	92
22) Benzo (b) fluoranthene	14.54	252	55509	4.80535 ppb		98
23) Benzo (k) fluoranthene	14.59	252	45236	4.02876 ppb		99
24) Benzo (a) pyrene	15.20	252	55666	5.14779 ppb		99
25) Dibenz (a,h) anthracene	17.63	278	46638	5.19467 ppb		98
26) Benzo (g,h,i) perylene	18.13	276	45678	5.05389 ppb		98

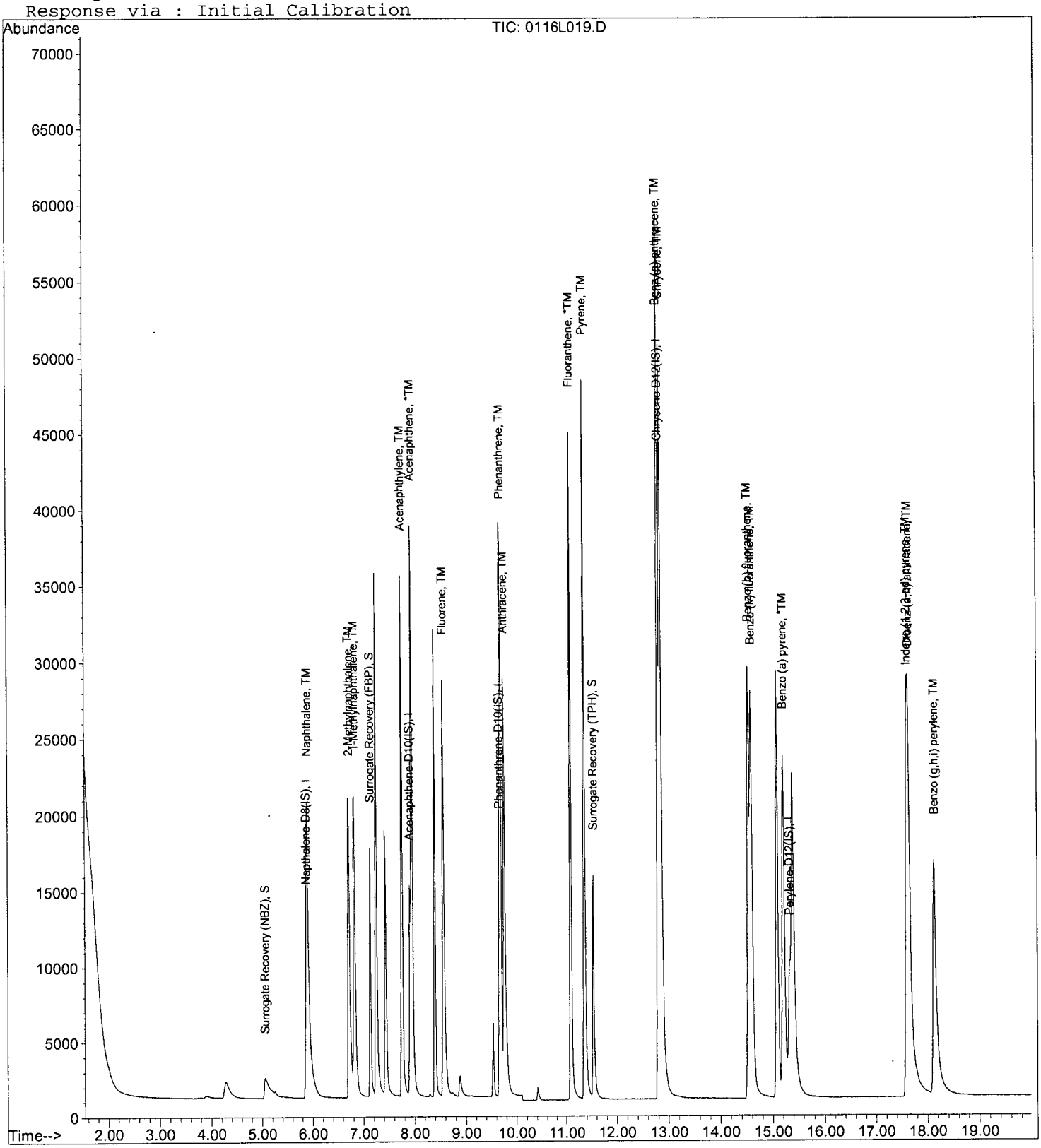
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L019.D Vial: 7
Acq On : 17 Jan 17 1:07 Operator: MA
Sample : 5.0 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:36 2017 Quant Results File: L0116PR.RES

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



ORGANICS

Raw Data

APPL, INC.

Method Blank
EPA 8270D SIM

Blank Name/QCG: **170112W-48676 - 215561**
Batch ID: #SIMDO-170112A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/12/17	01/16/17
BLANK	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/12/17	01/16/17
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	01/12/17	01/16/17
BLANK	SURROGATE: 2-FLUORBIPHENY	79.8	53-106			%	01/12/17	01/16/17
BLANK	SURROGATE: NITROBENZENE-	81.6	55-111			%	01/12/17	01/16/17
BLANK	SURROGATE: TERPHENYL-D14 (	92.0	58-132			%	01/12/17	01/16/17

Quant Method: L0116PR.M
Run #: 0116L013
Instrument: Linus
Sequence: L170116
Initials: RHA

GC SC-Blank-REG MDLs-DOD
Printed: 01/17/17 3:33:56 PM

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L013.D Vial: 13
Acq On : 16 Jan 17 22:21 Operator: MA
Sample : 170112A BLK 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 15:21 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.87	136	20579	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	7.91	164	10742	2.50000	ppb	0.00
11) Phenanthrene-D10(IS)	9.67	188	20678	2.50000	ppb	0.01
15) Chrysene-D12(IS)	12.82	240	25701	2.50000	ppb	0.01
21) Perylene-D12(IS)	15.35	264	21802	2.50000	ppb	0.02
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.03	82	13450	4.08147	ppb	-0.01
Spiked Amount 5.000			Recovery = 81.620%			
7) Surrogate Recovery (FBP)	7.12	172	26942	3.99086	ppb	-0.01
Spiked Amount 5.000			Recovery = 79.820%			
17) Surrogate Recovery (TPH)	11.52	244	36678	4.59974	ppb	-0.01
Spiked Amount 5.000			Recovery = 92.000%			
Target Compounds						Qvalue

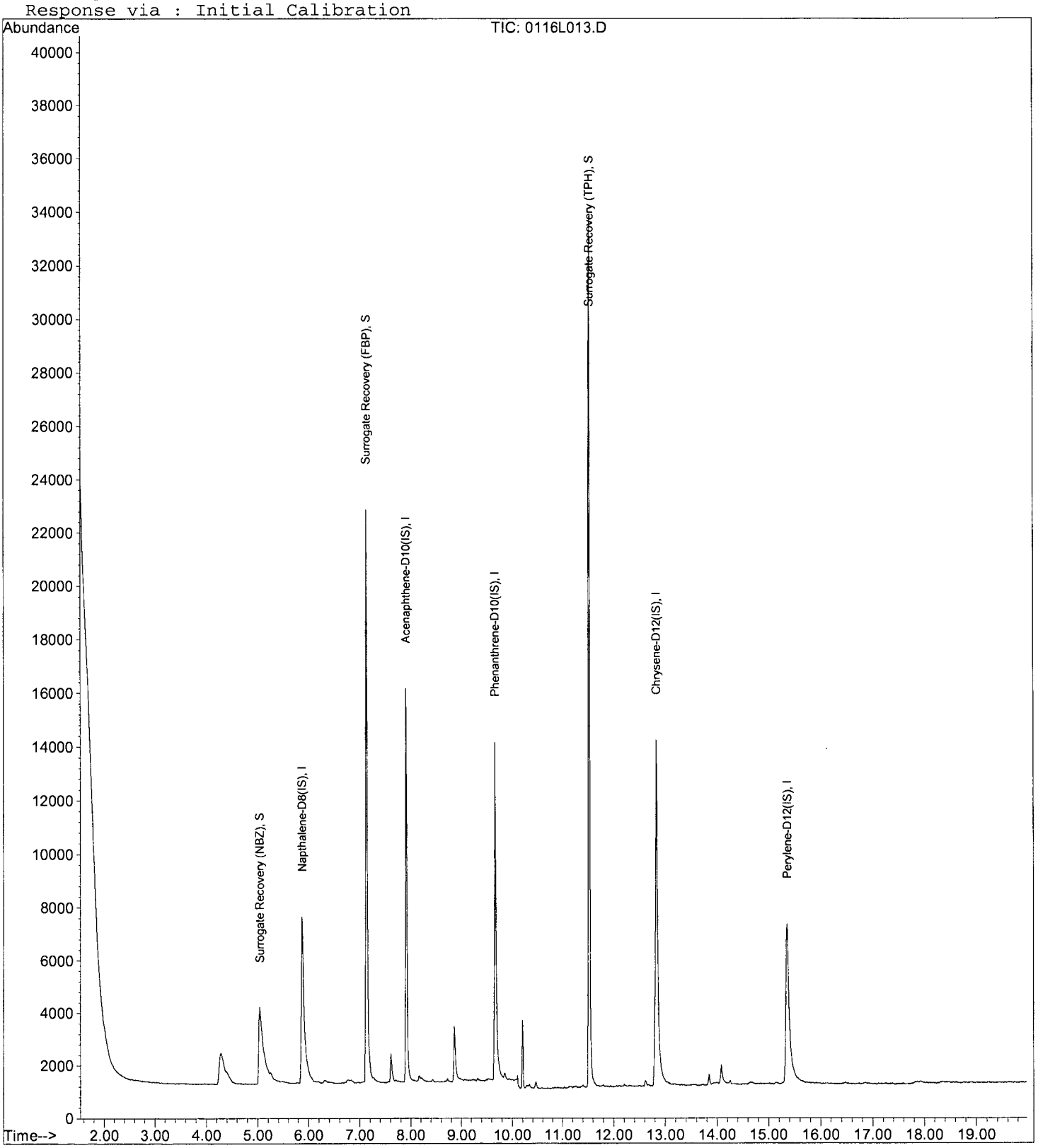
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L013.D Vial: 13
Acq On : 16 Jan 17 22:21 Operator: MA
Sample : 170112A BLK 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 15:21 2017 Quant Results File: L0116PR.RES

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



Laboratory Control Spike Recovery

EPA 8270D SIM

APPL ID: **170112W-48676 LCS - 215561**
Batch ID: #SIMDO-170112A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1-METHYLNAPHTHALENE	5.00	4.54	90.8	41-115
2-METHYLNAPHTHALENE	5.00	4.15	83.0	39-114
NAPHTHALENE	5.00	4.28	85.6	43-114
SURROGATE: 2-FLUORBIPHENYL (S)	5.00	4.47	89.4	53-106
SURROGATE: NITROBENZENE-D5 (S)	5.00	4.19	83.8	55-111
SURROGATE: TERPHENYL-D14 (S)	5.00	5.03	101	58-132

Comments: _____

Primary	SPK
Quant Method :	L0116PR.M
Extraction Date :	01/12/17
Analysis Date :	01/16/17
Instrument :	Linus
Run :	0116L014
Initials :	RHA

Printed: 01/17/17 3:33:48 PM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L014.D Vial: 14
Acq On : 16 Jan 17 22:48 Operator: MA
Sample : 170112A LCS-1 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 15:17 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	19011	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.91	164	9505	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.66	188	18920	2.50000	ppb		0.00
15) Chrysene-D12(IS)	12.80	240	23517	2.50000	ppb		-0.01
21) Perylene-D12(IS)	15.32	264	19639	2.50000	ppb		-0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.03	82	12774	4.19068	ppb		-0.01
Spiked Amount 5.000			Recovery	= 83.820%			
7) Surrogate Recovery (FBP)	7.12	172	26683	4.46688	ppb		-0.01
Spiked Amount 5.000			Recovery	= 89.340%			
17) Surrogate Recovery (TPH)	11.52	244	36717	5.03226	ppb		-0.01
Spiked Amount 5.000			Recovery	= 100.640%			
Target Compounds							Qvalue
3) Naphthalene	5.89	128	33261	4.27836	ppb		99
4) 2-Methylnaphthalene	6.70	142	21346	4.14840	ppb		98
5) 1-Methylnaphthalene	6.81	142	23672	4.53855	ppb		96
8) Acenaphthylene	7.75	152	37022	4.70602	ppb		98
9) Acenaphthene	7.94	154	21729	4.47916	ppb		99
10) Fluorene	8.56	166	26722	5.07531	ppb		97
12) Phenanthrene	9.68	178	39101	4.95157	ppb		99
13) Anthracene	9.75	178	37798	5.08591	ppb		98
14) Fluoranthene	11.08	202	65525	5.15315	ppb		98
16) Pyrene	11.35	202	68537	5.13896	ppb		98
18) Benz (a) anthracene	12.79	228	56054	4.68271	ppb		98
19) Chrysene	12.84	228	59429	4.75739	ppb		97
20) Indeno (1,2,3-cd) pyrene	17.60	276	47507	4.41766	ppb	#	91
22) Benzo (b) fluoranthene	14.53	252	49972	4.65624	ppb		100
23) Benzo (k) fluoranthene	14.58	252	40760	3.91145	ppb		98
24) Benzo (a) pyrene	15.20	252	46024	4.52237	ppb		98
25) Dibenz (a,h) anthracene	17.63	278	40912	4.88334	ppb		98
26) Benzo (g,h,i) perylene	18.13	276	40101	4.74124	ppb		97

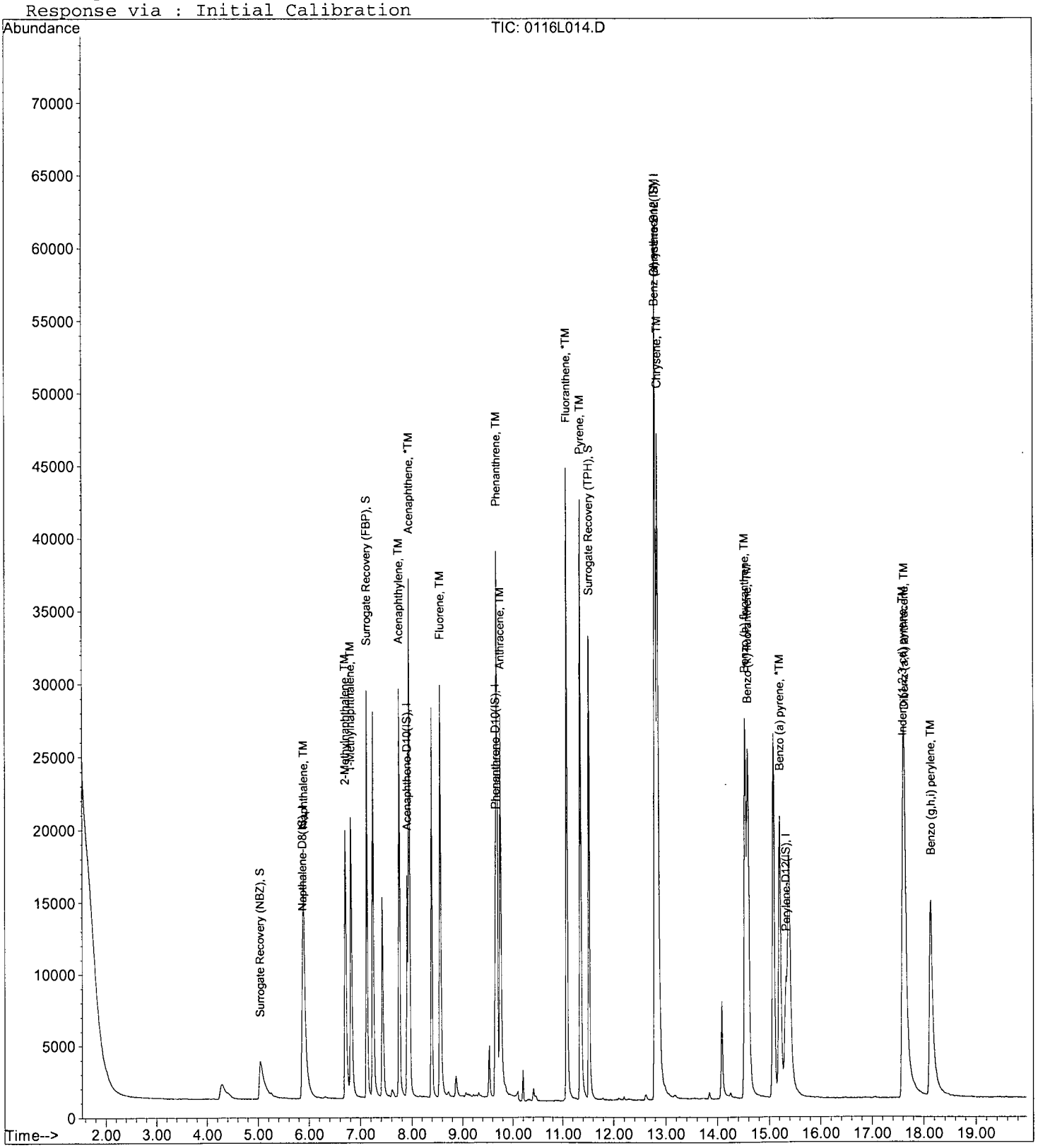
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L014.D Vial: 14
Acq On : 16 Jan 17 22:48 Operator: MA
Sample : 170112A LCS-1 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 15:17 2017 Quant Results File: L0116PR.RES

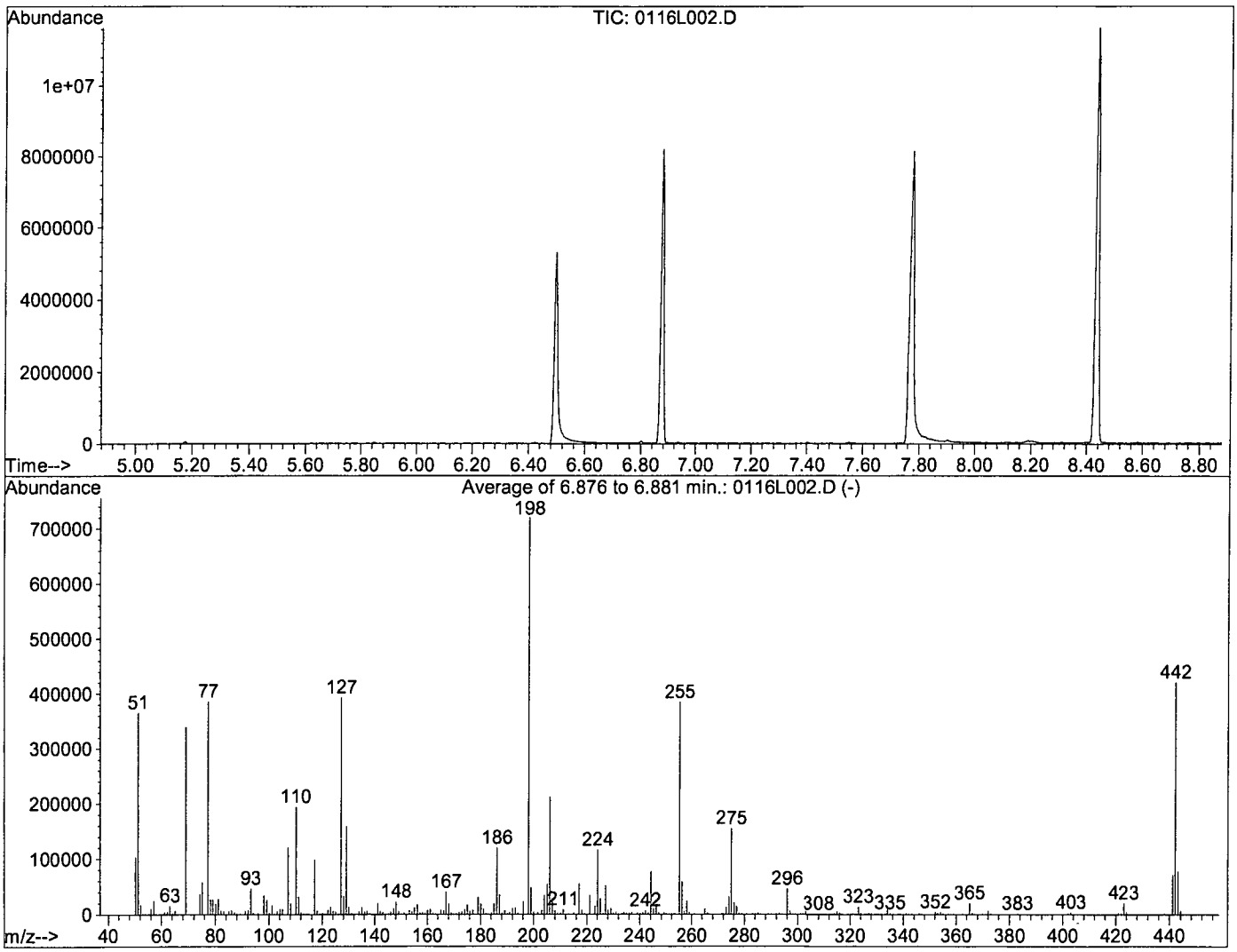
Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



DFTPP

Data File : M:\LINUS\DATA\L170116\0116L002.D Vial: 2
Acq On : 16 Jan 17 17:36 Operator: MA
Sample : SV Tune 11/15/16 Inst : Linus
Misc : water Multiplr: 1.00

Method : M:\LINUS\DATA\L161026\DFTPP2.M (Chemstation Integrator)
Title :

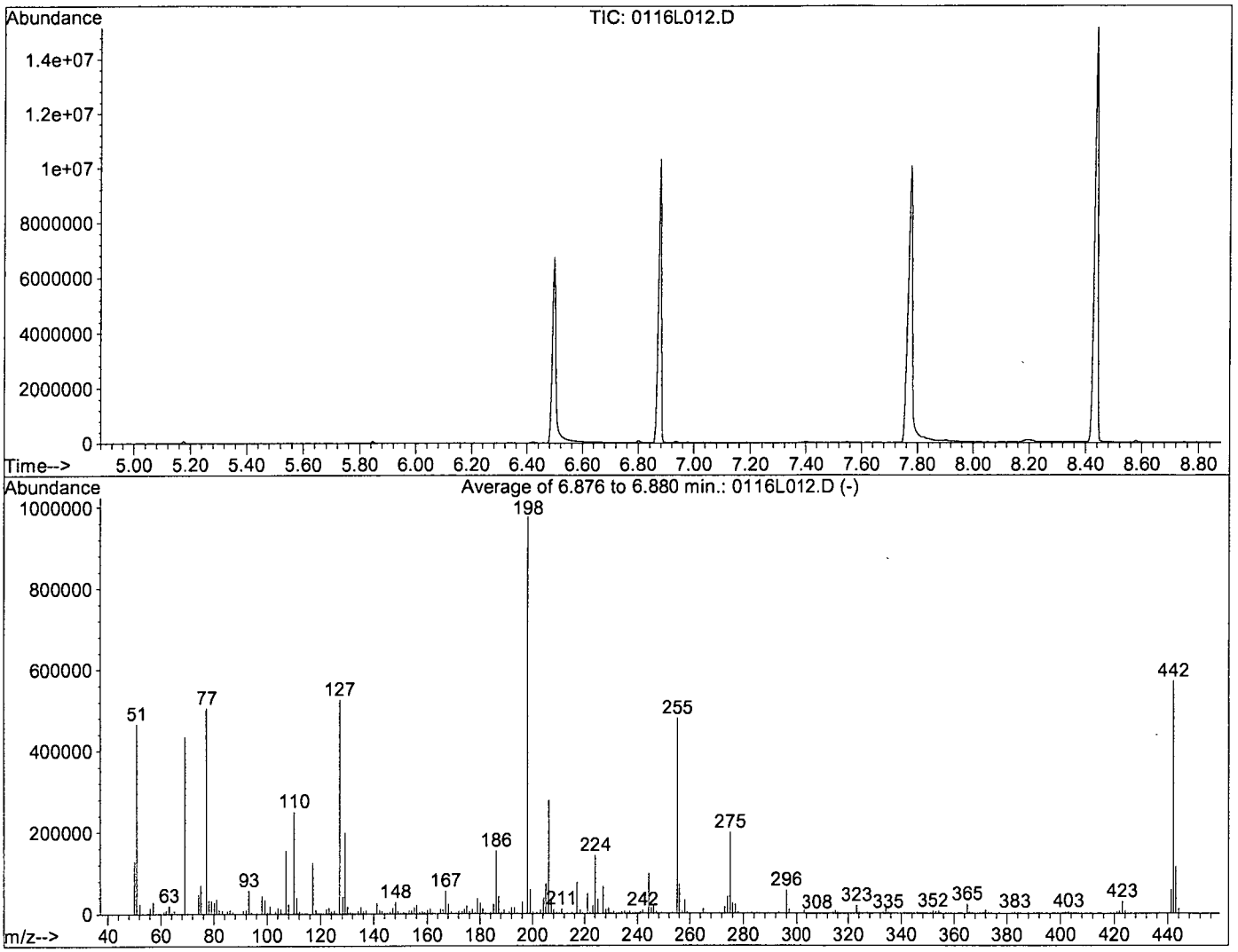


Spectrum Information: Average of 6.876 to 6.881 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	50.8	365889	PASS
68	69	0.00	2	0.0	0	PASS
69	69	100	100	100.0	339490	PASS
70	69	0.00	2	0.3	1019	PASS
127	198	40	60	54.5	392491	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	720555	PASS
199	198	5	9	6.7	48024	PASS
275	198	10	30	21.5	154683	PASS
365	198	1	100	2.7	19688	PASS
441	443	0.01	100	91.6	70885	PASS
442	198	40	150	58.4	420715	PASS
443	442	17	23	18.4	77376	PASS

Data File : M:\LINUS\DATA\L170116\0116L012.D Vial: 12
Acq On : 16 Jan 17 22:03 Operator: MA
Sample : SV Tune 11/15/16 Inst : Linus
Misc : water Multiplr: 1.00

Method : M:\LINUS\DATA\L161026\DFTPP2.M (Chemstation Integrator)
Title :



Spectrum Information: Average of 6.876 to 6.880 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	47.8	466000	PASS
68	69	0.00	2	0.0	0	PASS
69	69	100	100	100.0	433493	PASS
70	69	0.00	2	0.6	2395	PASS
127	198	40	60	53.9	525376	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	975296	PASS
199	198	5	9	6.0	58875	PASS
275	198	10	30	20.4	198827	PASS
365	198	1	100	2.2	21670	PASS
441	443	0.01	100	50.1	57507	PASS
442	198	40	150	58.5	570283	PASS
443	442	17	23	20.1	114776	PASS

8270 PAH SIM Standard Curve

PREP DATE:	01/13/17 RH										
8270 PAH SIM STANDARD CURVE											
Exp.DATE:	**04/13/17**					**0.1**	**0.2**	**0.5**	**1**	**5**	**10**
		Conc.		Date							
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL	µL	µL	µL
O2si	8270 PAH SIM Stock	200	278353-36992	9/12/16	9/12/17	0	0	0	0	5	5
	5.0ug/mL	5		9/12/16	7/29/17	0	0	10	20	0	0
	1.0ug/mL	1		9/12/16	7/29/17	10	20	0	0	0	0
O2SI	BNA SURR.	100/200		1/12/17	3/08/17	0	0	0	0	5	5
EM Science	Methylene Chloride		56061			90	80	90	80	190	90
Supelco	SV Internal Standard	2000	XA14020V-36768	10/10/16	10/10/17	2	2	2	2	4	2
				Final Vol.		102	102	102	102	204	102

50	**100**
µL	µL
25	50
0	0
0	0
25	50
50	0
2	2
102	102

8270 PAH SIM 2ND SRC

8270 PAH SIM 2ND SRC			Prep: 09/06/16 Exp 01/12/17 RH		
Supplier	**Standard**	**Conc.**	**Prep**	**Exp**	**µL**
O2SI	8270 2ND SRC	VARIOUS	06/03/16	01/21/17	25
	Methylene Chloride				75
o2si	SV Internal Standar	2000	10/10/16	10/10/17	2
LOT#	XA10079V-35507			Final Vol.	102

8270 SIM PAH Internal Standard						
PREP DATE:	10/10/16 RH.					
8270 SIM PAH Internal Standard Mix 125ug/ml						
Exp.DATE:	10/10/17					
		Conc.		Date	Exp.	125
Supplier	ID #	µg/mL	Lot #	Code	Date	µL
Supelco	SV Internal	2000	XA14020V-36768	10/10/16	10/10/17	350
EM Science	Methylene Chloride		56061			5250
				Final Vol.		5600

Semivolatile (SV) Tuning Solution -G.A.						
PREP DATE:	11/15/16	RH				
Semivolatile (SV) Tune Solution 50ug/ml						
Exp:	8/26/17					
		Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
Ultra Scient	Semivolatile GC	1000	N081628-37012	08/23/16	8/23/17	200
EM Science	Methylene Chloride		55098			3800
				Final Vol.		4000

SIM SPIKE	
CAT:	110780-01
Lot:	291544-37
OP: 12/22/16 -R.H.	
EX: 12/22/17	

PAH SIM STD prep: 09/12/16-R.H.						
Exp:	9/12/17					
		Conc.				
Supplier	ID #	mg/L	Lot #	Open Date	Exp.Date	µL
o2si	110780-01	200	278353-36992	6/22/16	6/22/17	1000
				Fin Vol.		1000

8270 Surrog Mix 100/200ppm						
Prep: 12/08/16 -RH Ex: 3/08/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
8270 Acid Surrog Mix	10000 ug/ml	Restek Cat# 33029 Lot# A0118884-36875 Op: 11/15/16 EX: 11/15/17	2.0 mL	100 mL	200 ug/mL	MC
8270 B/N surrog Mix	5000 µg/mL	Restek Cat# 31086 Lot# A0119223-36871 Op: 11/15/16 EX: 11/15/17	2.0 mL	100 mL	100 ug/mL	MC

8270 PAH SIM CCV (2)

PREP DATE:	01/13/17 RH					
8270 PAH SIM STANDARD CURVE						
Exp.DATE:	**4/13/17**					**5**
		Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
O2si	8270 PAH SIM Stock	200	278353-36992	9/12/16	9/12/17	5
	5.0ug/mL	5		9/12/16	7/29/17	0
	1.0ug/mL	1		9/12/16	7/29/17	0
O2SI	BNA SURR.	100/200		1/12/17	3/8/17	5
EM Science	Methylene Chloride		56061			190
Supelco	SV Internal Standard	2000	XA14020V-36768	10/10/16	10/10/17	4
				Final Vol.		204

_SEP004S

Organic Extraction Worksheet

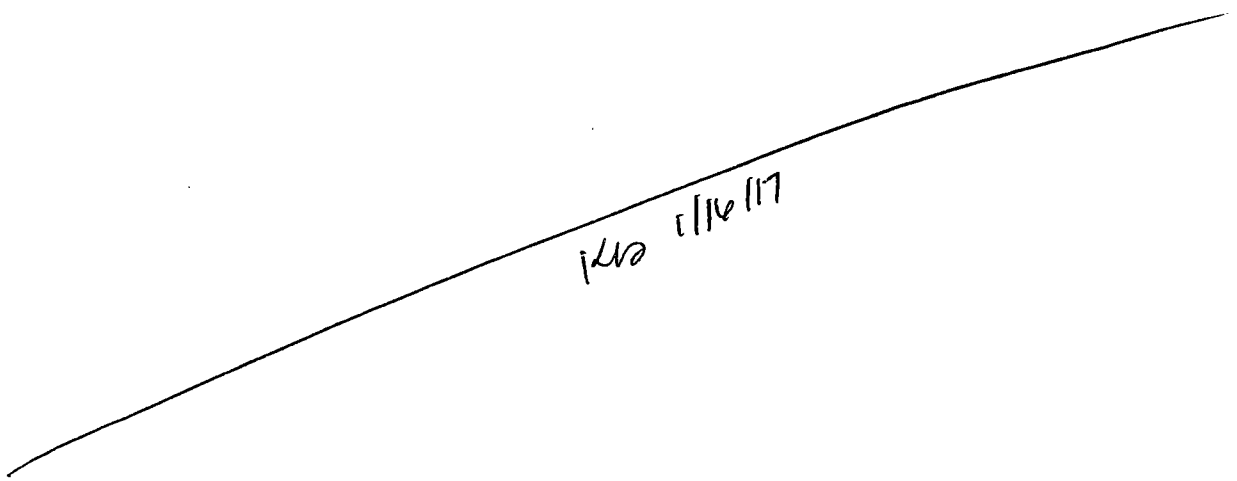
Method	SIM Separatory Funnel Extra 3510C	Extraction Set	170112A	Extraction Method	SEP004S	Units	mL

Spiked ID 1	PAH SIM Spike 12-22-16 EXP 12-22-17		Surrogate ID 1	8270 Surrogate 12-8-16 EXP 3-8-17	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	01/12/17 15:40	
Spiked ID 8			Ext. End Time:	01/13/17 16:05	
			GC Requires Extract By:		

pH1	2	01/12/17 3:45:00 PM	Water Bath Temp Criteria	75 °C
pH2	14	01/12/17 4:00:00 PM		
pH3				

Spiked By: DL **Date** 01/12/17 **Witnessed By:** CFM **Date** 01/12/17

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	170112A Blk				0.050	1	1000	1	2/1	01/12/17 15:40	
						equip	E-WB6				
2	170112A LCS-1		0.0250	1	0.050	1	1000	1	2/1	01/12/17 15:40	
						equip	E-WB6				
3	AZ48676	AZ48676W14			0.050	1	1060	1	2/1	01/12/17 15:40	81936 ONE WEEK
						equip	E-WB6				
4	AZ48678	AZ48678W06			0.050	1	1040	1	2/1	01/12/17 15:40	81936 ONE WEEK
						equip	E-WB6				
5	AZ48679	AZ48679W05			0.050	1	1050	1	2/1	01/12/17 15:40	81936 ONE WEEK
						equip	E-WB6				



Solvent and Lot#	
1+1 SULFURIC ACID	12-5-16
PH STRIP	HC 574756
MC	56153
A. Na2SO4	1-3-17
10N NaOH	12-19-16
B. Na2SO4	16C255214
FILTER PAPER	400112

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	RH
Date	1/16/17
Time	2:00
Refrigerator	GC-C

	Technician's Initials
Scanned By	DL
Sample Preparation	DL,JR
Extraction	DL,JR
Concentration	DL

Modified	01/16/17 10:04:25 AM

Reviewed By: KY **Date** 1/16/17

Injection Log

Directory: M:\LINUS\DATA\L170116\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	0116L002.D	1	SV Tune 11/15/16	water	16 Jan 17 17:36
2	3	0116L003.D	1	0.1 SIM 1/13/17	water	16 Jan 17 17:54
3	4	0116L004.D	1	0.2 SIM 1/13/17	water	16 Jan 17 18:22
4	5	0116L005.D	1	0.5 SIM 1/13/17	water	16 Jan 17 18:50
5	6	0116L006.D	1	1.0 SIM 1/13/17	water	16 Jan 17 19:17
6	7	0116L007.D	1	5.0 SIM 1/13/17	water	16 Jan 17 19:45
7	8	0116L008.D	1	10 SIM 1/13/17	water	16 Jan 17 20:13
8	9	0116L009.D	1	50 SIM 1/13/17	water	16 Jan 17 20:41
9	10	0116L010.D	1	100 SIM 1/13/17	water	16 Jan 17 21:09
10	11	0116L011.D	1	SS SIM 1/13/17	water	16 Jan 17 21:37
11	12	0116L012.D	1	SV Tune 11/15/16	water	16 Jan 17 22:03
12	13	0116L013.D	1	170112A BLK 1/1000	water	16 Jan 17 22:21
13	14	0116L014.D	1	170112A LCS-1 1/1000	water	16 Jan 17 22:48
14	15	0116L015.D	0.9434	AZ48676W14 1/1060	water	16 Jan 17 23:16
15	16	0116L016.D	0.96154	AZ48678W06 1/1040	water	16 Jan 17 23:44
16	17	0116L017.D	0.95238	AZ48679W05 1/1050	water	17 Jan 17 00:12
17	7	0116L019.D	1	5.0 SIM 1/13/17	water	17 Jan 17 1:07

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank
EPA 8270D WATER

Blank Name/QCG: **170112W-48676 - 215555**
Batch ID: #87DC5-170112A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/12/17	01/17/17
BLANK	SURROGATE: 2,4,6-TRIBROMOP	57.0	43-140			%	01/12/17	01/17/17
BLANK	SURROGATE: 2-FLUORBIPHENY	54.9	44-119			%	01/12/17	01/17/17
BLANK	SURROGATE: 2-FLUOROPHENO	42.4	19-119			%	01/12/17	01/17/17
BLANK	SURROGATE: NITROBENZENE-	60.4	44-120			%	01/12/17	01/17/17
BLANK	SURROGATE: PHENOL-D6 (S)	27.5	10-115			%	01/12/17	01/17/17
BLANK	SURROGATE: TERPHENYL-D14 (	58.9	50-134			%	01/12/17	01/17/17

Quant Method:Y1207.M
Run #:1207Y313
Instrument:Yoda
Sequence:Y161207
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 01/17/17 2:37:43 PM

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81936

Case No: 81936 Date Analyzed: 01/17/17

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2,4,6-TRIBROMOPHENOL (S)			SURROGATE: 2-FLUORBIPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
170112A-BLK	Blank	43-140	57.0		44-119	54.9	
170112A-LCS	Lab Control Spike	43-140	56.5		44-119	51.5	
AZ48676	ERH166	43-140	59.8		44-119	60.0	
AZ48678	ERH191	43-140	67.2		44-119	66.9	
AZ48679	ERH192	43-140	65.9		44-119	70.6	

Comments: Batch: #87DC5-170112A

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81936

Case No: 81936 Date Analyzed: 01/17/17

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2-FLUOROPHENOL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
170112A-BLK	Blank	19-119	42.4		44-120	60.4	
170112A-LCS	Lab Control Spike	19-119	43.6		44-120	62.6	
AZ48676	ERH166	19-119	39.7		44-120	65.9	
AZ48678	ERH191	19-119	46.9		44-120	70.5	
AZ48679	ERH192	19-119	48.1		44-120	75.1	

Comments: Batch: #87DC5-170112A

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81936

Case No: 81936 Date Analyzed: 01/17/17

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: PHENOL-D6 (S)			SURROGATE: TERPHENYL-D14 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
170112A-BLK	Blank	10-115	27.5		50-134	58.9	
170112A-LCS	Lab Control Spike	10-115	28.1		50-134	57.4	
AZ48676	ERH166	10-115	26.1		50-134	62.8	
AZ48678	ERH191	10-115	30.8		50-134	67.8	
AZ48679	ERH192	10-115	32.1		50-134	66.9	

Comments: Batch: #87DC5-170112A

Laboratory Control Spike Recovery
EPA 8270D WATER

APPL ID: **170112W-48676 LCS - 215555**
Batch ID: #87DC5-170112A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
PHENOL	50.0	19.7	39.4	10-115
SURROGATE: 2,4,6-TRIBROMOPHENOL	200	113	56.5	43-140
SURROGATE: 2-FLUORBIPHENYL (S)	100	51.5	51.5	44-119
SURROGATE: 2-FLUOROPHENOL (S)	200	87.2	43.6	19-119
SURROGATE: NITROBENZENE-D5 (S)	100	62.6	62.6	44-120
SURROGATE: PHENOL-D6 (S)	200	56.1	28.1	10-115
SURROGATE: TERPHENYL-D14 (S)	100	57.4	57.4	50-134

Comments: _____

Primary	SPK
Quant Method :	Y1207.M
Extraction Date :	01/12/17
Analysis Date :	01/17/17
Instrument :	Yoda
Run :	1207Y314
Initials :	MA

Printed: 01/17/17 2:37:46 PM
APPL Standard LCS

EPA 8270D

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81936

Case No: 81936 Date Analyzed: 01/17/17

Matrix: WATER Instrument: Yoda

Blank ID: 170112A-BLK Time Analyzed: 1112

APPL ID.	Client Sample No.	File ID.	Date Analyzed
170112A-BLK	Blank	1207Y313	01/17/17 1112
170112A-LCS	Lab Control Spike	1207Y314	01/17/17 1142
AZ48676	ERH166	1207Y315	01/17/17 1212
AZ48678	ERH191	1207Y316	01/17/17 1243
AZ48679	ERH192	1207Y317	01/17/17 1313

Comments: Batch: #87DC5-170112A

Printed: 01/17/17 2:38:08 PM
Form 4, Blank Summary

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: water
ID: SV Tune 10/19/16

SDG No:
Date Analyzed: 12/07/16
Instrument: Yoda
Time Analyzed: 9:00

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		5ug/ml SVOC 12/06/16	1207Y004.D	12/07/16 10:01
2		10ug/ml SVOC 12/06/1	1207Y005.D	12/07/16 10:32
3		20ug/ml SVOC 12/06/1	1207Y006.D	12/07/16 11:02
4		40ug/ml SVOC 12/06/1	1207Y007.D	12/07/16 11:32
5		50ug/ml SVOC 12/06/1	1207Y008.D	12/07/16 12:02
6		60ug/ml SVOC 12/06/1	1207Y009.D	12/07/16 12:32
7		80ug/ml SVOC 12/06/1	1207Y010.D	12/07/16 13:02
8		100ug/ml SVOC 12/06/	1207Y011.D	12/07/16 13:32
9		2ND SRC SVOC 12/06/1	1207Y012.D	12/07/16 14:01
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	46.7
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.7
127	40 - 60% of mass 198	56.0
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 197.95	100.0
199	5 - 9% of mass 198	6.9
275	10 - 30% of mass 198	24.0
365	1 - 100% of mass 198	3.1
441	0.01 - 100% of mass 443	86.4
442	50 - 150% of mass 197.95	90.6
443	17 - 23% of mass 442	20.1

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81936
Matrix: Water
ID: SV Tune 10/19/16

SDG No: 81936
Date Analyzed: 01/17/17
Instrument: Yoda
Time Analyzed: 9:04

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		50ug/ml SVOC 12/06/1	1207Y312.D	01/17/17 9:20
2	Blank	170112A BLK 1/1000	1207Y313.D	01/17/17 11:12
3	Lab Control Spike	170112A LCS-1 1/1000	1207Y314.D	01/17/17 11:42
4	ERH166	AZ48676W12 1/1050	1207Y315.D	01/17/17 12:12
5	ERH191	AZ48678W07 1/1040	1207Y316.D	01/17/17 12:43
6	ERH192	AZ48679W06 1/1040	1207Y317.D	01/17/17 13:13
7		50ug/ml SVOC 12/06/1	1207Y319.D	01/17/17 14:26
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	44.1
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.0
127	40 - 60% of mass 198	57.6
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	7.4
275	10 - 30% of mass 198	25.6
365	1 - 100% of mass 198	4.4
441	0.01 - 100% of mass 443	85.4
442	50 - 150% of mass 198	109.8
443	17 - 23% of mass 442	19.8

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81936

Lab File ID (Standard): 1207Y008.D Date Analyzed: 7 Dec 16 12:02

Instrument ID: Yoda Time Analyzed: 7 Dec 16 12:02

GC Column: ID: Heated Purge: (Y/N)

		1,4-dichlorobenzene-D4(IS)		Napthalene-D8(IS)		Acenaphthene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	195270	4.87	816895	6.30	475200	8.31
	UPPER LIMIT	390540	5.37	1633790	6.80	950400	8.81
	LOWER LIMIT	97635	4.37	408448	5.80	237600	7.81
	SAMPLE NO.						
01	50ug/ml SVOC 12/06/16	187819	4.86	771156	6.29	465112	8.30
02	170112A BLK 1/1000	195333	4.85	844830	6.28	474625	8.30
03	170112A LCS-1 1/1000	189223	4.86	813713	6.29	494956	8.31
04	AZ48676W12 1/1050	186508	4.86	802623	6.29	485295	8.30
05	AZ48678W07 1/1040	184387	4.87	792797	6.29	457755	8.30
06	AZ48679W06 1/1040	182269	4.86	786778	6.29	472137	8.30
07	50ug/ml SVOC 12/06/16	182253	4.86	767159	6.29	468594	8.31
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81936

Lab File ID (Standard): 1207Y008.D Date Analyzed: 7 Dec 16 12:02

Instrument ID: Yoda Time Analyzed: 7 Dec 16 12:02

GC Column: ID: Heated Purge: (Y/N)

		Phenanthrene-D10(IS)		Chrysene-D12(IS)		Perylene-D12(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	975541	10.03	853105	13.10	871056	14.75
	UPPER LIMIT	1951082	10.53	1706210	13.60	1742112	15.25
	LOWER LIMIT	487771	9.53	426553	12.60	435528	14.25
	SAMPLE NO.						
01	50ug/ml SVOC 12/06/16	855928	10.02	841074	13.11	842313	14.75
02	170112A BLK 1/1000	918513	10.02	887511	13.10	903456	14.74
03	170112A LCS-1 1/1000	926623	10.02	898775	13.11	938113	14.75
04	AZ48676W12 1/1050	897556	10.02	895227	13.10	956836	14.74
05	AZ48678W07 1/1040	892581	10.03	872792	13.10	882900	14.74
06	AZ48679W06 1/1040	887609	10.02	897895	13.10	967500	14.74
07	50ug/ml SVOC 12/06/16	878414	10.02	841314	13.11	872319	14.75
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

ORGANICS

Sample Data

APPL, INC.

EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH166

Sample Collection Date: 01/09/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81936

APPL ID: AZ48676

QCG: #87DC5-170112A-215555

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/12/17	01/17/17
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	59.8	43-140			%	01/12/17	01/17/17
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	60.0	44-119			%	01/12/17	01/17/17
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	39.7	19-119			%	01/12/17	01/17/17
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	65.9	44-120			%	01/12/17	01/17/17
EPA 8270D	SURROGATE: PHENOL-D6 (S)	26.1	10-115			%	01/12/17	01/17/17
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	62.8	50-134			%	01/12/17	01/17/17

Quant Method: Y1207.M
Run #: 1207Y315
Instrument: Yoda
Sequence: Y161207
Dilution Factor: 1
Initials: MA

Printed: 01/17/17 2:38:09 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y315.D Vial: 15
Acq On : 17 Jan 17 12:12 Operator: MA
Sample : AZ48676W12 1/1050 Inst : Yoda
Misc : water Multiplr: 0.95

Quant Time: Jan 17 16:42 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	186508	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.29	136	802623	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.30	164	485295	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.02	188	897556	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.10	240	895227	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.74	264	956836	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.34	112	486576	75.52998 ppb	0.00
Spiked Amount 190.476			Recovery =	39.653%	
5) Phenol-D6 (S)	4.50	99	423280	49.78176 ppb	0.00
Spiked Amount 190.476			Recovery =	26.136%	
21) Nitrobenzene-D5(S)	5.49	82	536216	62.76990 ppb	0.00
Spiked Amount 95.238			Recovery =	65.909%	
45) 2-Fluorobiphenyl(S)	7.54	172	917673	57.12769 ppb	0.00
Spiked Amount 95.238			Recovery =	59.984%	
63) 2,4,6-Tribromophenol(S)	9.22	330	290815	113.82446 ppb	0.00
Spiked Amount 190.476			Recovery =	59.758%	
81) Terphenyl-D14(S)	11.89	244	1272198	59.85336 ppb	0.00
Spiked Amount 95.238			Recovery =	62.846%	

Target Compounds Qvalue

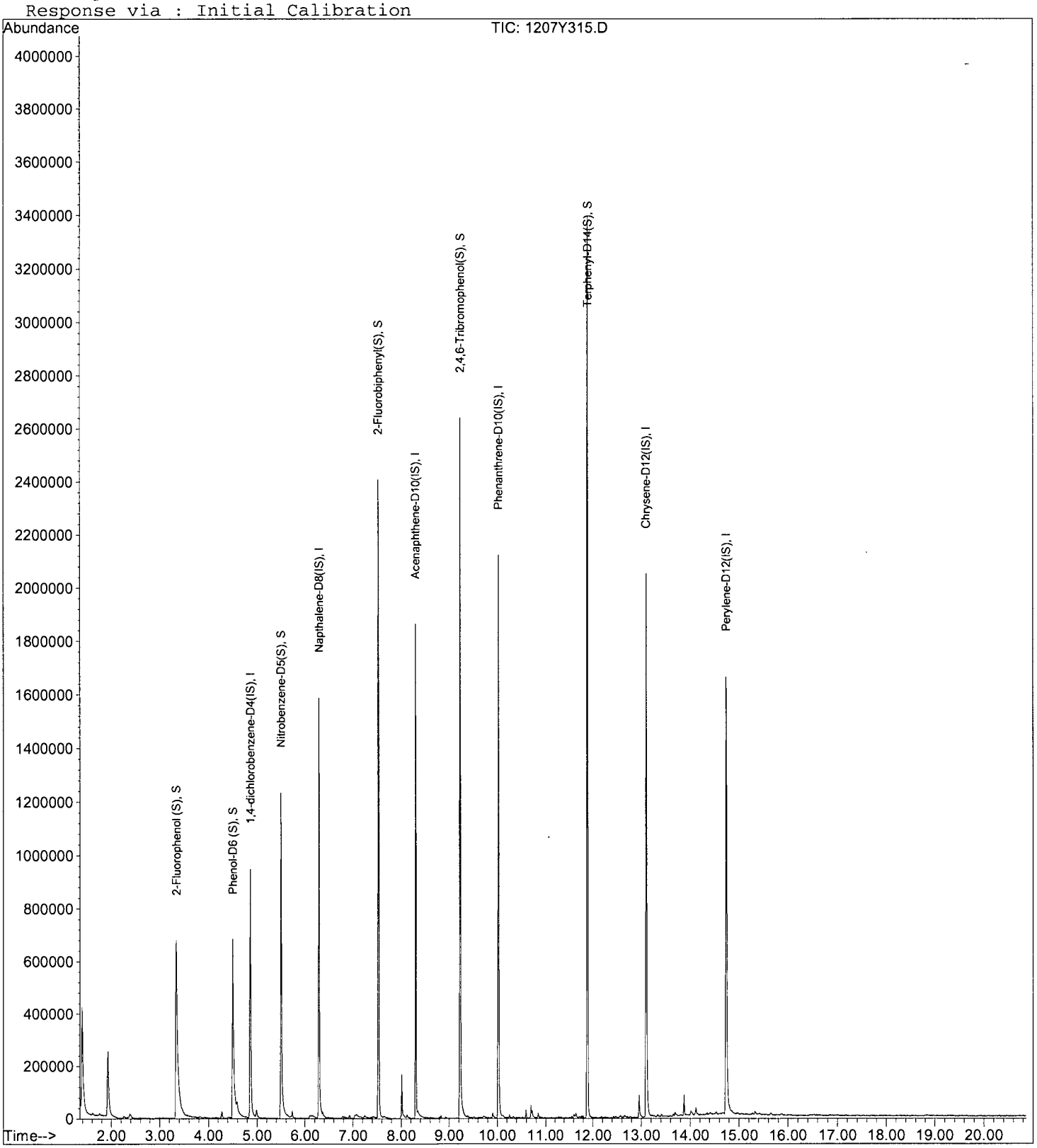
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y315.D Vial: 15
Acq On : 17 Jan 17 12:12 Operator: MA
Sample : AZ48676W12 1/1050 Inst : Yoda
Misc : water Multiplr: 0.95

Quant Time: Jan 17 16:42 2017 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration



EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH191

Sample Collection Date: 01/06/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81936

APPL ID: AZ48678

QCG: #87DC5-170112A-215555

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	2.5 J	5.0	4.00	1.00	ug/L	01/12/17	01/17/17
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	67.2	43-140			%	01/12/17	01/17/17
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	66.9	44-119			%	01/12/17	01/17/17
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	46.9	19-119			%	01/12/17	01/17/17
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	70.5	44-120			%	01/12/17	01/17/17
EPA 8270D	SURROGATE: PHENOL-D6 (S)	30.8	10-115			%	01/12/17	01/17/17
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	67.8	50-134			%	01/12/17	01/17/17

J = Estimated value.

Quant Method: Y1207.M
Run #: 1207Y316
Instrument: Yoda
Sequence: Y161207
Dilution Factor: 1
Initials: MA

Printed: 01/17/17 2:38:09 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y316.D Vial: 16
Acq On : 17 Jan 17 12:43 Operator: MA
Sample : AZ48678W07 1/1040 Inst : Yoda
Misc : water Multiplr: 0.96

Quant Time: Jan 17 13:47 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	184387	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.29	136	792797	40.00000 ppb	-0.01
40) Acenaphthene-D10(IS)	8.30	164	457755	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	892581	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.10	240	872792	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.74	264	882900	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.33	112	569531	90.28362 ppb	-0.01
Spiked Amount 192.308			Recovery =	46.948%	
5) Phenol-D6 (S)	4.49	99	492403	59.14065 ppb	-0.01
Spiked Amount 192.308			Recovery =	30.753%	
21) Nitrobenzene-D5(S)	5.50	82	566208	67.74746 ppb	0.00
Spiked Amount 96.154			Recovery =	70.457%	
45) 2-Fluorobiphenyl(S)	7.53	172	964773	64.28539 ppb	0.00
Spiked Amount 96.154			Recovery =	66.856%	
63) 2,4,6-Tribromophenol(S)	9.23	330	308291	129.15407 ppb	0.00
Spiked Amount 192.308			Recovery =	67.160%	
81) Terphenyl-D14(S)	11.88	244	1337781	65.17740 ppb	0.00
Spiked Amount 96.154			Recovery =	67.784%	
Target Compounds					Qvalue
6) Phenol	4.52	94	24100	2.54676 ppb	90

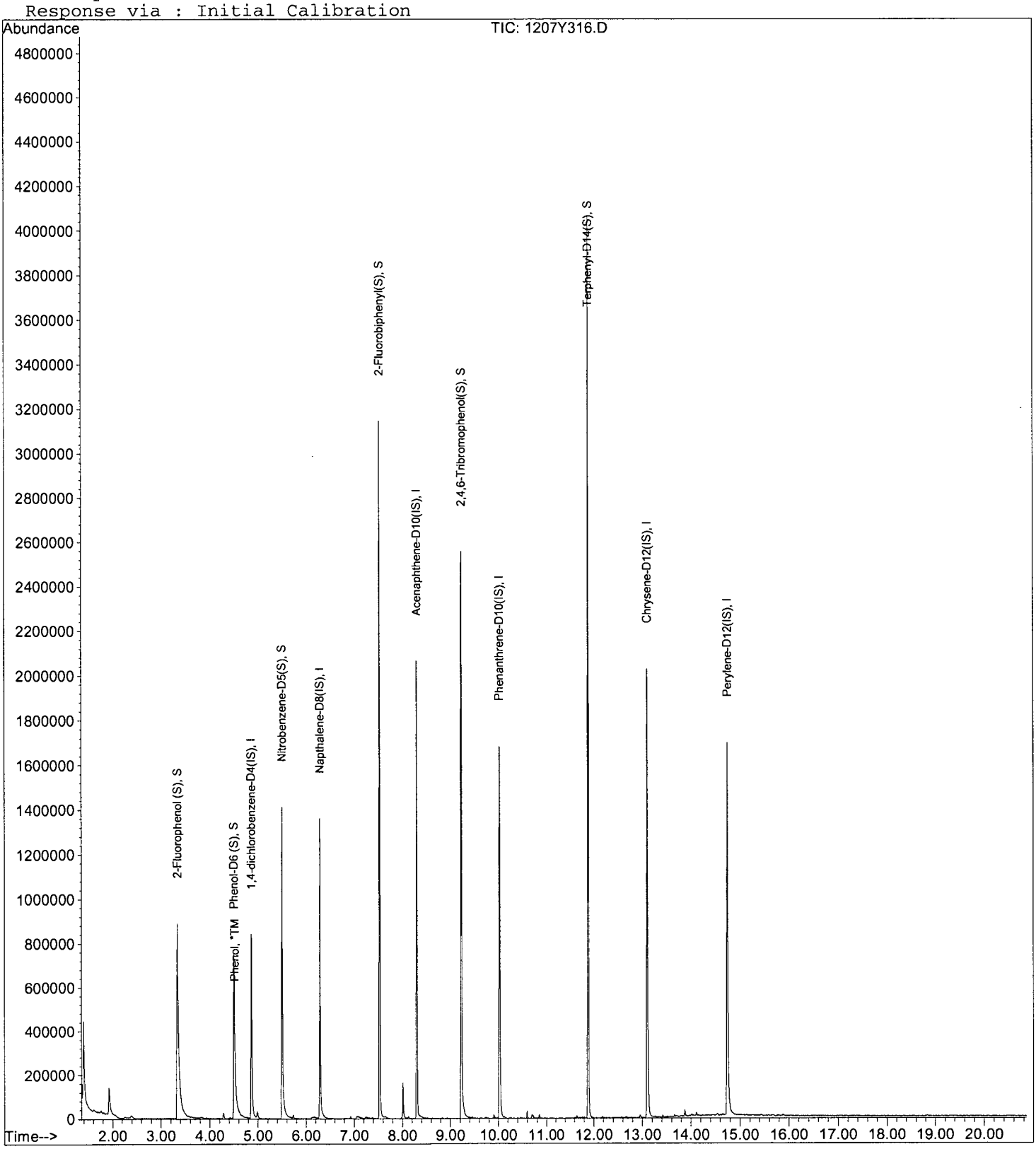
(#) = qualifier out of range (m) = manual integration

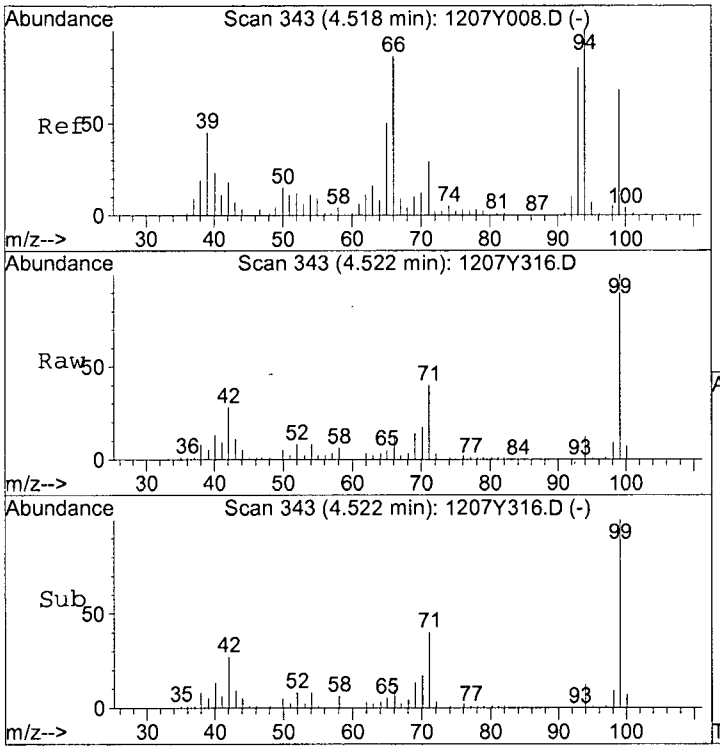
Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y316.D Vial: 16
Acq On : 17 Jan 17 12:43 Operator: MA
Sample : AZ48678W07 1/1040 Inst : Yoda
Misc : water Multiplr: 0.96

Quant Time: Jan 17 13:47 2017 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration

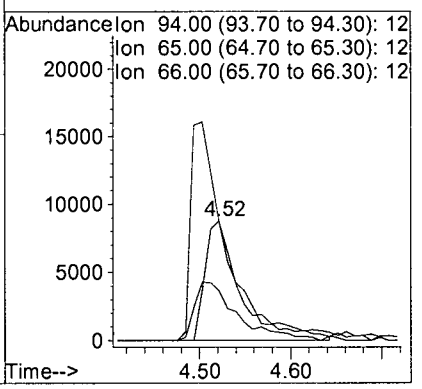




#6
Phenol
Concen: 2.54676 ppb
RT: 4.52 min Scan# 343
Delta R.T. 0.00 min
Lab File: 1207Y316.D
Acq: 17 Jan 17 12:43

Tgt Ion: 94 Resp: 24100

Ion	Ratio	Lower	Upper
94	100		
65	39.1	35.0	65.0
66	92.4	60.1	111.5



EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81936

Sample ID: ERH192

APPL ID: AZ48679

Sample Collection Date: 01/06/17

QCG: #87DC5-170112A-215555

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/12/17	01/17/17
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	65.9	43-140			%	01/12/17	01/17/17
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	70.6	44-119			%	01/12/17	01/17/17
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	48.1	19-119			%	01/12/17	01/17/17
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	75.1	44-120			%	01/12/17	01/17/17
EPA 8270D	SURROGATE: PHENOL-D6 (S)	32.1	10-115			%	01/12/17	01/17/17
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	66.9	50-134			%	01/12/17	01/17/17

Quant Method: Y1207.M
Run #: 1207Y317
Instrument: Yoda
Sequence: Y161207
Dilution Factor: 1
Initials: MA

Printed: 01/17/17 2:38:09 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y317.D Vial: 17
Acq On : 17 Jan 17 13:13 Operator: MA
Sample : AZ48679W06 1/1040 Inst : Yoda
Misc : water Multiplr: 0.96

Quant Time: Jan 17 16:40 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	182269	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.29	136	786778	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.30	164	472137	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.02	188	887609	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.10	240	897895	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.74	264	967500	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.33	112	577134	92.55199 ppb	-0.02
Spiked Amount 192.308			Recovery =	48.127%	
5) Phenol-D6 (S)	4.50	99	508758	61.81504 ppb	0.00
Spiked Amount 192.308			Recovery =	32.144%	
21) Nitrobenzene-D5(S)	5.49	82	598859	72.20236 ppb	0.00
Spiked Amount 96.154			Recovery =	75.090%	
45) 2-Fluorobiphenyl(S)	7.54	172	1050925	67.89283 ppb	0.00
Spiked Amount 96.154			Recovery =	70.609%	
63) 2,4,6-Tribromophenol(S)	9.23	330	312197	126.80636 ppb	0.00
Spiked Amount 192.308			Recovery =	65.939%	
81) Terphenyl-D14(S)	11.89	244	1357896	64.30781 ppb	0.00
Spiked Amount 96.154			Recovery =	66.880%	

Target Compounds Qvalue

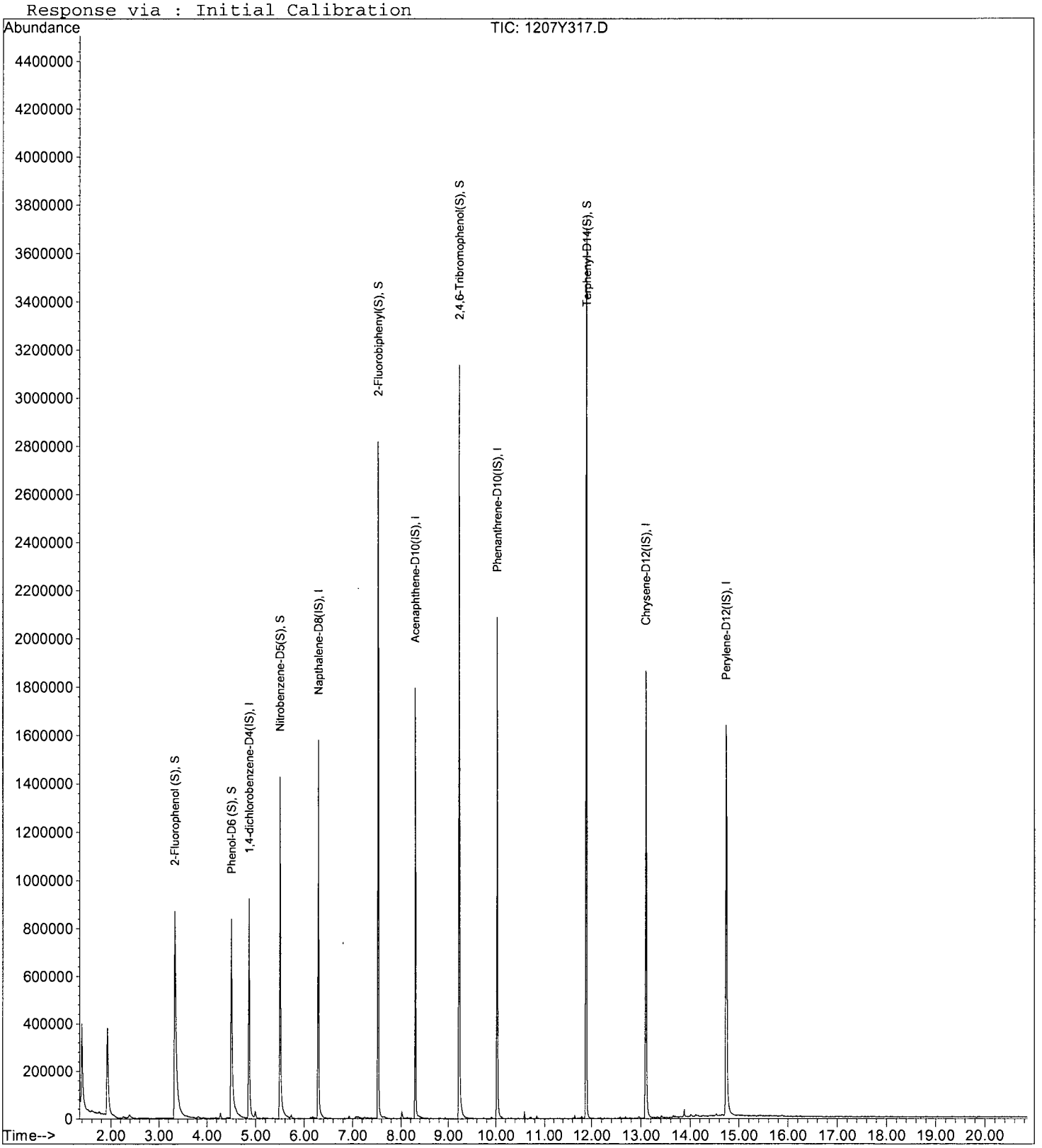
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y317.D Vial: 17
Acq On : 17 Jan 17 13:13 Operator: MA
Sample : AZ48679W06 1/1040 Inst : Yoda
Misc : water Multiplr: 0.96

Quant Time: Jan 17 16:40 2017 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration



ORGANICS

Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/07/16
Matrix: Instrument: Yoda
Initials:

		Compound	1207Y004.D 5	1207Y005.D 10	1207Y006.D 20	1207Y007.D 40	1207Y008.D 50	1207Y009.D 60	1207Y010.D 80	1207Y011.D 100			Avg	%RSD		
1	I	1,4-dichlorobenzene-D4(IS)														
2	TM	n-Nitrosodimethylamine	0.7148	0.8188	0.8173	0.8076	0.8521	0.7243	0.8231	0.7956			0.79	6.2	TM	
3	TM	Pyridine	1.581	1.725	1.660	1.936	2.046	1.751	1.878	1.777			1.8	8.5	TM	
4	S	2-Fluorophenol (S)	1.066	1.299	1.267	1.425	1.424	1.318	1.385	1.343			1.3	8.8	S	
5	S	Phenol-D6 (S)	1.822	1.785	1.823	1.762	1.706	1.655	1.706	1.635			1.7	4.2	S	
6	*TM	Phenol	1.948	1.915	2.075	2.002	1.967	1.942	2.023	1.918			2.0	2.8	*TM	
7	TM	Aniline	1.776	1.833	1.896	1.887	1.869	1.829	1.983	1.872			1.9	3.2	TM	
8	TM	Bis (2-chloroethyl) ether	0.8418	0.7909	0.9135	0.8982	0.8478	0.8563	0.9089	0.8610			0.86	4.7	TM	
9	TM	2-Chlorophenol	1.635	1.632	1.616	1.577	1.518	1.543	1.572	1.517			1.6	3.1	TM	
10	TM	1,3-DCB	1.660	1.666	1.674	1.664	1.624	1.596	1.569	1.586			1.6	2.6	TM	
11	*TM	1,4-DCB	1.785	1.781	1.664	1.660	1.668	1.607	1.666	1.605			1.7	4.1	*TM	
12	TM	Benzyl alcohol	0.7838	0.8402	0.9167	0.8614	0.9167	0.8803	0.8909	0.8835			0.87	5.0	TM	
13	TM	1,2-DCB	1.611	1.557	1.581	1.484	1.593	1.492	1.515	1.463			1.5	3.6	TM	
14	TM	2-Methylphenol	1.082	1.139	1.181	1.118	1.137	1.110	1.083	1.109			1.1	2.9	TM	
15	TM	Bis (2-chloroisopropyl) ether	1.873	1.751	1.831	1.685	1.738	1.688	1.621	1.595			1.7	5.6	TM	
16	TM	Acetophenone	2.043	2.072	2.030	2.015	2.091	2.047	2.025	2.028			2.0	1.3	TM	
17	TM	3&4-Methylphenol	1.558	1.530	1.459	1.440	1.525	1.448	1.459	1.455			1.5	3.1	TM	
18	**TM	n-Nitrosodi-n-propylamine	1.068	1.045	1.056	1.027	1.076	1.038	1.050	1.060			1.1	1.5	**TM	
19	TM	Hexachloroethane	0.6682	0.7054	0.6470	0.6617	0.6824	0.6779	0.6684	0.6594			0.67	2.6	TM	
20	I	Napthalene-D8(IS)														
21	S	Nitrobenzene-D5(S)	0.4047	0.4332	0.3921	0.4003	0.4125	0.3872	0.3742	0.4394			0.41	5.5	S	
22	TM	Nitrobenzene	0.4054	0.4067	0.3889	0.4048	0.4175	0.3984	0.3936	0.4509			0.41	4.7	TM	
23	TM	Isophorone	0.6691	0.6862	0.6315	0.6698	0.6921	0.6667	0.6337	0.7606			0.68	6.0	TM	
24	*TM	2-Nitrophenol	0.1845	0.1935	0.1942	0.2063	0.2096	0.2079	0.2003	0.2337			0.20	7.3	*TM	
25	TM	2,4-Dimethylphenol	0.3139	0.3382	0.3012	0.3156	0.3171	0.3192	0.3290	0.3503			0.32	4.8	TM	
26	TML	Benzoic acid	0.0808	0.1551	0.2077	0.2553	0.2737	0.2314	0.2577	0.2655			0.22	31	TML	0.997
27	TM	Bis (2-chloroethoxy) methane	0.3810	0.3848	0.3681	0.3830	0.3880	0.3802	0.3949	0.4047			0.39	2.8	TM	
28	*TM	2,4-Dichlorophenol	0.2878	0.3066	0.3011	0.3098	0.3185	0.3087	0.3182	0.3126			0.31	3.2	*TM	
29	TM	1,2,4-Trichlorobenzene	0.3408	0.3409	0.3112	0.3403	0.3441	0.3301	0.3350	0.3367			0.33	3.1	TM	
30	TM	3,4-Dimethylphenol	0.5455	0.4964	0.4910	0.4802	0.5023	0.4740	0.4772	0.4907			0.49	4.6	TM	
31	TM	Naphthalene	1.044	1.055	1.078	1.053	1.069	1.024	1.025	1.045			1.0	1.8	TM	
32	TM	4-Chloroaniline	0.3632	0.4265	0.4327	0.4002	0.3874	0.3691	0.3641	0.3626			0.39	7.4	TM	
33	TM	2,6-Dichlorophenol	0.3045	0.3311	0.3196	0.2860	0.2901	0.2795	0.2735	0.2922			0.30	6.7	TM	
34	TM	Hexachloropropene	0.2445	0.2667	0.2704	0.2771	0.2732	0.2621	0.2668	0.2819			0.27	4.2	TM	
35	*TM	Hexachlorobutadiene	0.2289	0.2214	0.2210	0.2112	0.2149	0.2010	0.1986	0.2098			0.21	4.9	*TM	

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/07/16
Matrix: Instrument: Yoda Initials:

		Compound	5	10	20	40	50	60	80	100			Avg	%RSD		
36	TM	Caprolactum	0.1439	0.1548	0.1512	0.1546	0.1563	0.1592	0.1531	0.1616			0.15	3.5	TM	
37	*TM	4-Chloro-3-methylphenol	0.3364	0.3339	0.3371	0.3445	0.3342	0.3451	0.3311	0.3589			0.34	2.7	*TM	
38	TM	2-Methylnaphthalene	0.7065	0.6994	0.6918	0.6907	0.6745	0.6786	0.6440	0.6992			0.69	2.9	TM	
39	TM	1-Methylnaphthalene	0.7218	0.7325	0.6455	0.6679	0.6461	0.6599	0.6404	0.6966			0.68	5.3	TM	
40	I	Acenaphthene-D10(IS)														
41	**TMQ	Hexachlorocyclopentadiene	0.0352	0.0821	0.1454	0.1986	0.2357	0.2346	0.2693	0.2817			0.19	48	**TMQ	0.999
42	TM	1,2,4,5-Tetrachlorobenzene	0.5396	0.5929	0.5621	0.5192	0.5592	0.5294	0.5151	0.5315			0.54	4.8	TM	
43	*TM	2,4,6-Trichlorophenol	0.3344	0.3592	0.3491	0.3486	0.3682	0.3537	0.3343	0.3590			0.35	3.4	*TM	
44	TM	2,4,5-Trichlorophenol	0.3919	0.4003	0.4163	0.3688	0.3812	0.3816	0.3456	0.3771			0.38	5.5	TM	
45	S	2-Fluorobiphenyl(S)	1.278	1.499	1.336	1.200	1.255	1.168	1.148	1.204			1.3	9.0	S	
46	TM	1,1'-Biphenyl	1.579	1.616	1.598	1.463	1.490	1.434	1.358	1.453			1.5	6.1	TM	
47	TM	2-Chloronaphthalene	1.172	1.197	1.217	1.145	1.225	1.131	1.043	1.138			1.2	5.1	TM	
48	TM	2-Nitroaniline	0.3683	0.3867	0.3740	0.4057	0.4480	0.3960	0.3888	0.4178			0.40	6.5	TM	
49	TM	Dimethyl phthalate	1.403	1.430	1.345	1.384	1.539	1.344	1.277	1.410			1.4	5.5	TM	
50	TM	2,6-DNT	0.2902	0.3118	0.2967	0.3089	0.3396	0.3115	0.2967	0.3576			0.31	7.4	TM	
51	TM	Acenaphthylene	1.893	2.056	1.776	1.750	1.868	1.798	1.649	1.814			1.8	6.5	TM	
52	TM	3-Nitroaniline	0.3015	0.3535	0.3595	0.3549	0.3535	0.3405	0.3322	0.3482			0.34	5.5	TM	
53	*TM	Acenaphthene	1.206	1.354	1.171	1.111	1.135	1.077	1.054	1.138			1.2	8.1	*TM	
54	**TMQ	2,4-Dinitrophenol		0.0853	0.1314	0.1627	0.1649	0.1601	0.2070	0.2035			0.16	26	**TMQ	0.996
55	**TML	4-Nitrophenol	0.0179	0.2323	0.2452	0.2706	0.3006	0.2760	0.2907	0.3183			0.24	39	**TML	0.997
56	TM	Dibenzofuran	1.728	1.704	1.645	1.541	1.704	1.568	1.548	1.676			1.6	4.6	TM	
57	TM	2,4-DNT	0.3927	0.4369	0.4320	0.4428	0.4994	0.4500	0.4285	0.4667			0.44	7.0	TM	
58	TM	2,3,4,6-Tetrachlorophenol	0.2780	0.2939	0.2952	0.3210	0.3494	0.3145	0.2996	0.3397			0.31	7.8	TM	
59	TM	Diethyl phthalate	1.443	1.475	1.388	1.441	1.458	1.389	1.333	1.529			1.4	4.2	TM	
60	TM	4-Chlorophenyl phenyl ether	0.6635	0.6948	0.6104	0.6191	0.6447	0.5999	0.5965	0.6860			0.64	6.1	TM	
61	TM	Fluorene	1.411	1.429	1.285	1.274	1.358	1.224	1.221	1.393			1.3	6.3	TM	
62	TM	4-Nitroaniline	0.3060	0.3370	0.3011	0.3170	0.3477	0.3210	0.3358	0.3338			0.32	5.0	TM	
63	S	2,4,6-Tribromophenol(S)	0.1946	0.2125	0.1908	0.1921	0.2053	0.1876	0.1977	0.2239			0.20	6.2	S	
64	I	Phenanthrene-D10(IS)														
65	TM	4,6-Dinitro-2-methylphenol		0.1149	0.1515	0.1421	0.1500	0.1692	0.1636	0.1489			0.15	12	TM	
66	TM	Diphenyl amine	0.6122	0.5551	0.6348	0.5246	0.5612	0.5921	0.5417	0.5432			0.57	6.7	TM	
67	*TM	n-Nitrosodiphenylamine	0.6122	0.5551	0.6348	0.5246	0.5612	0.5921	0.5417	0.5432			0.57	6.7	*TM	
68	TM	1,2-Diphenylhydrazine	0.7947	0.7385	0.8154	0.7273	0.7623	0.9632	0.8905	0.8768			0.82	10	TM	
69	TM	4-Bromophenyl phenyl ether	0.2256	0.2010	0.2098	0.2179	0.1993	0.2279	0.1871	0.1888			0.21	7.6	TM	
70	TM	Hexachlorobenzene	0.2229	0.2118	0.2232	0.2136	0.2018	0.2342	0.2007	0.1953			0.21	6.3	TM	

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/07/16
Matrix: Instrument: Yoda
Initials:

		Compound	5	10	20	40	50	60	80	100			Avg	%RSD		
71	TM	Atrazine	0.2136	0.1976	0.2108	0.2007	0.2168	0.2165	0.1968	0.1967			0.21	4.4	TM	
72	*TML	Pentachlorophenol		0.0652	0.0888	0.0985	0.0970	0.0990	0.1107	0.1114			0.10	16	*TML	0.998
73	TM	Phenanthrene	1.144	1.128	1.146	1.069	1.069	1.062	1.009	1.014			1.1	5.0	TM	
74	TM	Anthracene	1.227	1.144	1.172	1.109	1.085	1.077	1.032	1.040			1.1	6.0	TM	
75	TM	Carbazol	1.068	1.073	1.153	0.9493	1.043	0.9621	0.9114	0.8832			1.0	9.2	TM	
76	TM	Di-n-butylphthalate	1.394	1.275	1.537	1.286	1.230	1.259	1.180	1.174			1.3	9.3	TM	
77	*TM	Fluoranthene	1.281	1.183	1.301	1.152	1.091	1.169	1.169	1.164			1.2	5.8	*TM	
78	I	Chrysene-D12(IS)														
79	TM	Benzidine	0.3957	0.4105	0.4699	0.4668	0.4739	0.4589	0.4621	0.4870			0.45	7.1	TM	
80	TM	Pyrene	1.421	1.287	1.412	1.333	1.431	1.352	1.245	1.372			1.4	4.9	TM	
81	S	Terphenyl-D14(S)	0.9641	0.9527	1.005	0.8842	0.8995	0.8347	0.8470	0.8492			0.90	6.9	S	
82	TM	Butyl benzylphthalate	0.6615	0.6073	0.6728	0.6922	0.6888	0.6250	0.6287	0.6373			0.65	4.8	TM	
83	TM	3,3'-Dichlorobenzidine	0.3845	0.4505	0.4988	0.4470	0.4416	0.4002	0.3899	0.4057			0.43	9.1	TM	
84	TM	Benz (a) anthracene	1.241	1.281	1.288	1.263	1.262	1.195	1.209	1.251			1.2	2.6	TM	
85	TM	Bis (2-ethylhexyl) phthalate	0.9437	0.8855	0.9320	0.8960	0.9347	0.9382	0.8781	0.9008			0.91	2.9	TM	
86	TM	Chrysene	1.291	1.177	1.223	1.163	1.206	1.256	1.142	1.247			1.2	4.2	TM	
87	*TM	Di-n-octylphthalate	1.601	1.536	1.745	1.580	1.838	1.525	1.513	1.572			1.6	7.2	*TM	
88	I	Perylene-D12(IS)														
89	TM	Benzo (b) fluoranthene	1.137	1.363	1.356	1.287	1.201	1.033	1.428	1.200			1.3	11	TM	
90	TM	Benzo (k) fluoranthene	1.302	1.071	1.186	1.172	1.214	1.184	1.211	1.174			1.2	5.4	TM	
91	*TM	Benzo (a) pyrene	1.164	1.037	1.248	1.228	1.224	1.129	1.192	1.122			1.2	6.0	*TM	
92	TM	Indeno (1,2,3-cd) pyrene	1.367	1.331	1.391	1.324	1.346	1.095	1.395	1.099			1.3	9.6	TM	
93	TM	Dibenz (a,h) anthracene	1.172	1.113	1.158	1.132	1.148	0.9093	1.186	0.9080			1.1	11	TM	
94	TM	Benzo (g,h,i) perylene	1.161	1.064	1.406	1.271	1.253	0.8838	1.091				1.2	15	TM	
95																
96																
97																
98																
99																
100																
101																
102																
103																
104																
105																

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y004.D Vial: 4
Acq On : 7 Dec 16 10:01 Operator: MA
Sample : 5ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	195458	40.00000	ppb		0.00
20) Napthalene-D8(IS)	6.29	136	827060	40.00000	ppb		0.00
40) Acenaphthene-D10(IS)	8.30	164	490768	40.00000	ppb		0.00
64) Phenanthrene-D10(IS)	10.03	188	877101	40.00000	ppb		0.00
78) Chrysene-D12(IS)	13.10	240	839105	40.00000	ppb		0.00
88) Perylene-D12(IS)	14.74	264	900919	40.00000	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol (S)	3.38	112	52072	8.41676	ppb		0.03
Spiked Amount 200.000			Recovery =	4.209%			
5) Phenol-D6 (S)	4.51	99	89036	10.40389	ppb		0.00
Spiked Amount 200.000			Recovery =	5.202%			
21) Nitrobenzene-D5(S)	5.51	82	41840	4.84860	ppb		0.00
Spiked Amount 100.000			Recovery =	4.849%			
45) 2-Fluorobiphenyl(S)	7.54	172	78403	5.03098	ppb		0.00
Spiked Amount 100.000			Recovery =	5.031%			
63) 2,4,6-Tribromophenol(S)	9.23	330	23872	9.90525	ppb		0.00
Spiked Amount 200.000			Recovery =	4.953%			
81) Terphenyl-D14(S)	11.88	244	101120	5.31648	ppb		0.00
Spiked Amount 100.000			Recovery =	5.316%			
Target Compounds							Qvalue
2) n-Nitrosodimethylamine	1.77	42	17464	3.81097	ppb		99
3) Pyridine	1.79	79	38617	3.94469	ppb		99
6) Phenol	4.53	94	47601	4.90399	ppb		95
7) Aniline	4.53	66	43393	4.54015	ppb		90
8) Bis (2-chloroethyl) ether	4.60	63	20566	4.71391	ppb		92
9) 2-Chlorophenol	4.65	128	39939	5.30721	ppb		95
10) 1,3-DCB	4.80	146	40566	4.97403	ppb		98
11) 1,4-DCB	4.88	146	43609	5.21809	ppb		96
12) Benzyl alcohol	5.07	108	19149	4.54883	ppb		90
13) 1,2-DCB	5.06	146	39360	5.05389	ppb		97
14) 2-Methylphenol	5.20	107	26445	4.63400	ppb		97
15) Bis (2-chloroisopropyl) et	5.18	45	45768	5.23802	ppb	#	53
16) Acetophenone	5.34	105	49921	4.69337	ppb		98
17) 3&4-Methylphenol	5.38	107	76111	10.08177	ppb		91
18) n-Nitrosodi-n-propylamine	5.33	70	26103	4.73122	ppb		90
19) Hexachloroethane	5.42	117	16326	4.71012	ppb	#	68
22) Nitrobenzene	5.53	77	41914	4.74777	ppb		98
23) Isophorone	5.78	82	69169	4.75245	ppb		93
24) 2-Nitrophenol	5.90	139	19072	4.53756	ppb		95
25) 2,4-Dimethylphenol	5.95	122	32456	4.95367	ppb		91
26) Benzoic acid	6.13	105	8358	6.59749	ppb		89
27) Bis (2-chloroethoxy) metha	6.04	93	39384	5.06082	ppb		97
28) 2,4-Dichlorophenol	6.19	162	29754	4.71459	ppb		94
29) 1,2,4-Trichlorobenzene	6.24	180	35230	5.05372	ppb		98
30) 3,4-Dimethylphenol	6.29	107	56394	5.39745	ppb		81
31) Naphthalene	6.31	128	107955	4.95797	ppb		100
32) 4-Chloroaniline	6.42	127	37545	4.85948	ppb		96
33) 2,6-Dichlorophenol	6.42	162	31478	5.16618	ppb		97
34) Hexachloropropene	6.42	213	25276	4.55752	ppb		98
35) Hexachlorobutadiene	6.46	225	23664	5.32227	ppb		92
36) Caprolactum	6.79	55	14872	4.52289	ppb		92
37) 4-Chloro-3-methylphenol	6.99	107	34775	4.82802	ppb		87

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y004.D Vial: 4
Acq On : 7 Dec 16 10:01 Operator: MA
Sample : 5ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38) 2-Methylnaphthalene	7.11	142	73035	5.02428	ppb		98
39) 1-Methylnaphthalene	7.22	142	74622	5.35196	ppb		98
41) Hexachlorocyclopentadiene	7.29	237	2162	7.14608	ppb	#	91
42) 1,2,4,5-Tetrachlorobenzene	7.31	216	33104	4.95861	ppb		93
43) 2,4,6-Trichlorophenol	7.46	196	20513	4.63043	ppb		92
44) 2,4,5-Trichlorophenol	7.53	196	24042	5.12505	ppb		88
46) 1,1'-Biphenyl	7.65	154	96876	5.20831	ppb		97
47) 2-Chloronaphthalene	7.67	162	71906	4.90703	ppb		97
48) 2-Nitroaniline	7.82	65	22595	4.34279	ppb		78
49) Dimethyl phthalate	8.01	163	86082	4.79845	ppb		99
50) 2,6-DNT	8.10	165	17800	4.45834	ppb		80
51) Acenaphthylene	8.14	152	116157	5.09910	ppb		99
52) 3-Nitroaniline	8.31	138	18493	4.47392	ppb	#	34
53) Acenaphthene	8.34	154	74001	5.30414	ppb		97
54) 2,4-Dinitrophenol	8.51	184	1898	8.26475	ppb	#	71
55) 4-Nitrophenol	8.54	65	1096	7.02827	ppb	#	38
56) Dibenzofuran	8.54	168	105976	5.20957	ppb		89
57) 2,4-DNT	8.58	165	24091	4.26865	ppb		83
58) 2,3,4,6-Tetrachlorophenol	8.72	232	17055	4.67205	ppb		95
59) Diethyl phthalate	8.83	149	88512	4.85963	ppb		98
60) 4-Chlorophenyl phenyl ethe	8.95	204	40703	4.91663	ppb	#	76
61) Fluorene	8.94	166	86563	5.16554	ppb		96
62) 4-Nitroaniline	9.01	138	18769	4.76703	ppb		93
65) 4,6-Dinitro-2-methylphenol	9.05	198	8901	2.88665	ppb	#	85
66) Diphenyl amine	9.09	169	134244	11.16496	ppb		99
67) n-Nitrosodiphenylamine	9.09	169	134244	11.16496	ppb		99
68) 1,2-Diphenylhydrazine	9.13	77	87129	4.57707	ppb		99
69) 4-Bromophenyl phenyl ether	9.52	248	24730	5.36824	ppb	#	83
70) Hexachlorobenzene	9.59	284	24441	4.98065	ppb	#	74
71) Atrazine	9.72	200	11708	2.43094	ppb		95
72) Pentachlorophenol	9.84	266	6437	7.80595	ppb		92
73) Phenanthrene	10.05	178	125410	5.18209	ppb		98
74) Anthracene	10.12	178	134548	5.34573	ppb		98
75) Carbazol	10.32	167	117070	5.23894	ppb		99
76) Di-n-butylphthalate	10.72	149	152801	5.10773	ppb		100
77) Fluoranthene	11.44	202	140468	5.31106	ppb	#	97
79) Benzidine	11.62	184	41503	4.47439	ppb	#	89
80) Pyrene	11.70	202	149080	5.33068	ppb		99
82) Butyl benzylphthalate	12.46	149	69384	4.95412	ppb		100
83) 3,3'-Dichlorobenzidine	13.07	252	40328	4.68957	ppb	#	98
84) Benz (a) anthracene	13.09	228	130185	4.90624	ppb		99
85) Bis (2-ethylhexyl) phthala	13.13	149	98983	5.00821	ppb		99
86) Chrysene	13.14	228	135366	5.30692	ppb		94
87) Di-n-octylphthalate	13.84	149	167938	4.79507	ppb		99
89) Benzo (b) fluoranthene	14.29	252	127992	4.23678	ppb		95
90) Benzo (k) fluoranthene	14.32	252	146637	5.07643	ppb		97
91) Benzo (a) pyrene	14.68	252	131139	4.60945	ppb		94
92) Indeno (1,2,3-cd) pyrene	16.29	276	153935	4.75506	ppb	#	88
93) Dibenz (a,h) anthracene	16.31	278	131937	4.79035	ppb		96
94) Benzo (g,h,i) perylene	16.76	276	130754	4.77536	ppb		95

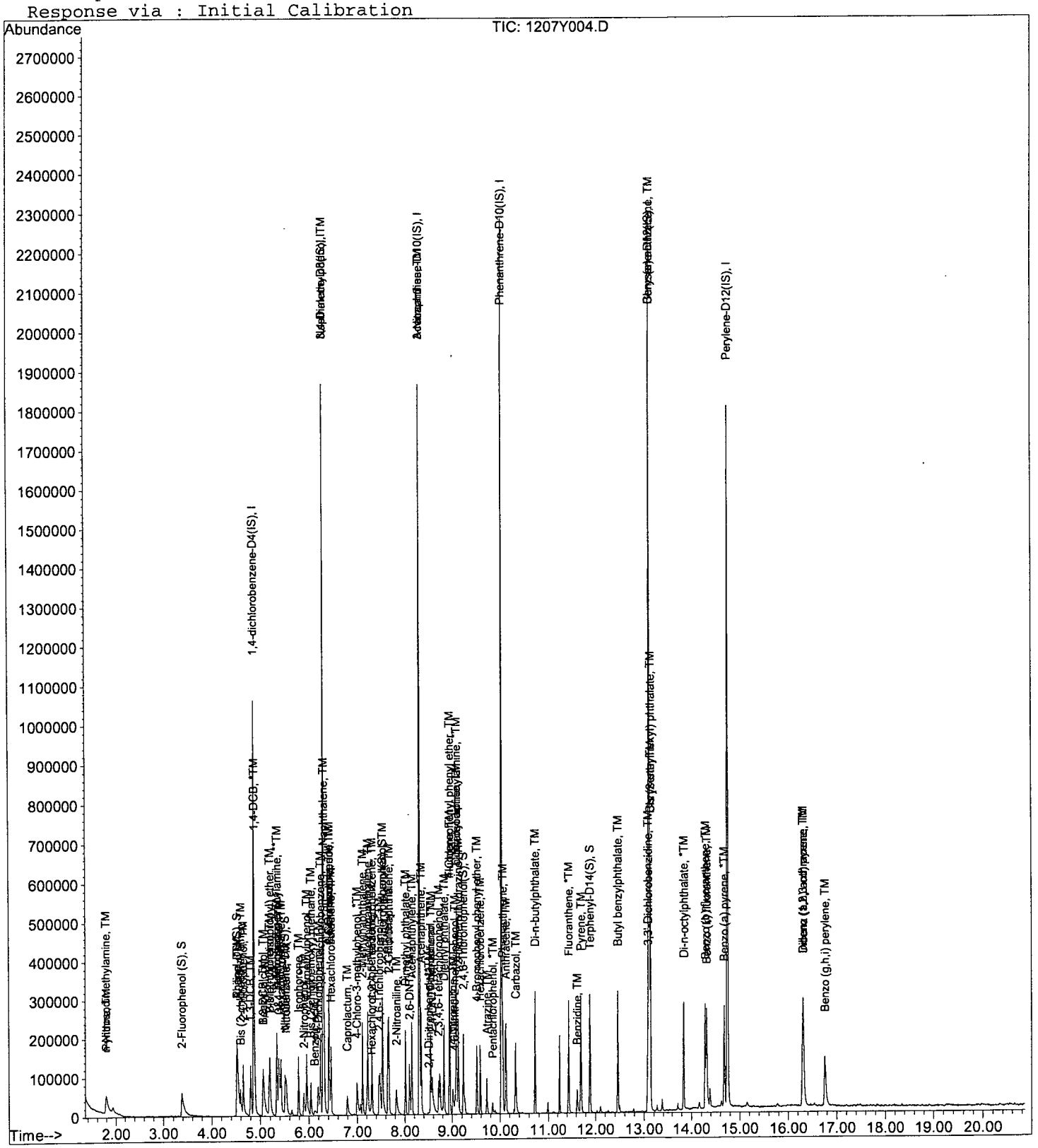
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y004.D Vial: 4
Acq On : 7 Dec 16 10:01 Operator: MA
Sample : 5ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y005.D Vial: 5
Acq On : 7 Dec 16 10:32 Operator: MA
Sample : 10ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	199996	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.29	136	835678	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.31	164	491315	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.02	188	976841	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.11	240	927503	40.00000 ppb		0.00
88) Perylene-D12(IS)	14.75	264	990341	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.37	112	129921	20.52354 ppb		0.02
Spiked Amount 200.000			Recovery =	10.262%		
5) Phenol-D6 (S)	4.51	99	178462	20.38018 ppb		0.00
Spiked Amount 200.000			Recovery =	10.190%		
21) Nitrobenzene-D5(S)	5.50	82	90507	10.38019 ppb		0.00
Spiked Amount 100.000			Recovery =	10.380%		
45) 2-Fluorobiphenyl(S)	7.54	172	184156	11.80380 ppb		0.00
Spiked Amount 100.000			Recovery =	11.804%		
63) 2,4,6-Tribromophenol(S)	9.23	330	52209	21.63904 ppb		0.00
Spiked Amount 200.000			Recovery =	10.820%		
81) Terphenyl-D14(S)	11.89	244	220919	10.50802 ppb		0.00
Spiked Amount 100.000			Recovery =	10.508%		
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.76	42	40937	8.73052 ppb		87
3) Pyridine	1.78	79	86226	8.60805 ppb		94
6) Phenol	4.53	94	95766	9.64222 ppb		94
7) Aniline	4.52	66	91627	9.36928 ppb	#	79
8) Bis (2-chloroethyl) ether	4.59	63	39545	8.85840 ppb		97
9) 2-Chlorophenol	4.65	128	81615	10.59915 ppb		96
10) 1,3-DCB	4.80	146	83321	9.98465 ppb		99
11) 1,4-DCB	4.89	146	89069	10.41583 ppb		97
12) Benzyl alcohol	5.06	108	42008	9.75255 ppb		93
13) 1,2-DCB	5.06	146	77858	9.77026 ppb		96
14) 2-Methylphenol	5.20	107	56924	9.74855 ppb		92
15) Bis (2-chloroisopropyl) et	5.19	45	87550	9.79249 ppb		84
16) Acetophenone	5.33	105	103596	9.51867 ppb		98
17) 3&4-Methylphenol	5.36	107	152989	19.80531 ppb		96
18) n-Nitrosodi-n-propylamine	5.33	70	52236	9.25304 ppb		95
19) Hexachloroethane	5.42	117	35267	9.94382 ppb		92
22) Nitrobenzene	5.53	77	84968	9.52541 ppb		90
23) Isophorone	5.79	82	143360	9.74837 ppb		96
24) 2-Nitrophenol	5.89	139	40432	9.52028 ppb		93
25) 2,4-Dimethylphenol	5.95	122	70653	10.67236 ppb		94
26) Benzoic acid	6.11	105	32406	10.34814 ppb		90
27) Bis (2-chloroethoxy) metha	6.04	93	80395	10.22417 ppb		98
28) 2,4-Dichlorophenol	6.18	162	64057	10.04530 ppb		97
29) 1,2,4-Trichlorobenzene	6.24	180	71216	10.11054 ppb		95
30) 3,4-Dimethylphenol	6.29	107	103715	9.82416 ppb		98
31) Naphthalene	6.32	128	220486	10.02167 ppb		99
32) 4-Chloroaniline	6.40	127	89109	11.41451 ppb		99
33) 2,6-Dichlorophenol	6.41	162	69177	11.23627 ppb		98
34) Hexachloropropene	6.41	213	55717	9.94274 ppb		97
35) Hexachlorobutadiene	6.46	225	46253	10.29548 ppb		97
36) Caprolactum	6.79	55	32338	9.73326 ppb		96
37) 4-Chloro-3-methylphenol	6.99	107	69749	9.58380 ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y005.D Vial: 5
Acq On : 7 Dec 16 10:32 Operator: MA
Sample : 10ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38) 2-Methylnaphthalene	7.11	142	146114	9.94793	ppb		99
39) 1-Methylnaphthalene	7.22	142	153034	10.86256	ppb		99
41) Hexachlorocyclopentadiene	7.28	237	10085	10.30509	ppb		83
42) 1,2,4,5-Tetrachlorobenzene	7.31	216	72826	10.89639	ppb		96
43) 2,4,6-Trichlorophenol	7.46	196	44123	9.94887	ppb		99
44) 2,4,5-Trichlorophenol	7.53	196	49164	10.46865	ppb		96
46) 1,1'-Biphenyl	7.65	154	198489	10.65941	ppb	#	96
47) 2-Chloronaphthalene	7.66	162	146978	10.01894	ppb		94
48) 2-Nitroaniline	7.81	65	47494	9.11824	ppb		90
49) Dimethyl phthalate	8.02	163	175672	9.78154	ppb	#	97
50) 2,6-DNT	8.09	165	38304	9.58326	ppb	#	73
51) Acenaphthylene	8.14	152	252596	11.07621	ppb		99
52) 3-Nitroaniline	8.30	138	43416	10.49172	ppb	#	91
53) Acenaphthene	8.34	154	166258	11.90354	ppb		96
54) 2,4-Dinitrophenol	8.46	184	10475	11.87415	ppb	#	60
55) 4-Nitrophenol	8.57	65	28528	13.90485	ppb		75
56) Dibenzofuran	8.55	168	209346	10.27958	ppb		88
57) 2,4-DNT	8.57	165	53666	9.49842	ppb		97
58) 2,3,4,6-Tetrachlorophenol	8.71	232	36099	9.87795	ppb		95
59) Diethyl phthalate	8.83	149	181223	9.93873	ppb		99
60) 4-Chlorophenyl phenyl ethe	8.95	204	85344	10.29746	ppb		87
61) Fluorene	8.95	166	175510	10.46168	ppb		97
62) 4-Nitroaniline	9.00	138	41396	10.50223	ppb		90
65) 4,6-Dinitro-2-methylphenol	9.05	198	28069	8.17351	ppb	#	74
66) Diphenyl amine	9.09	169	271128	20.24708	ppb		99
67) n-Nitrosodiphenylamine	9.09	169	271128	20.24708	ppb		99
68) 1,2-Diphenylhydrazine	9.13	77	180355	8.50705	ppb	#	91
69) 4-Bromophenyl phenyl ether	9.51	248	49097	9.56948	ppb		92
70) Hexachlorobenzene	9.59	284	51734	9.46606	ppb		86
71) Atrazine	9.73	200	24123	4.49726	ppb		94
72) Pentachlorophenol	9.84	266	15917	12.48338	ppb		97
73) Phenanthrene	10.05	178	275480	10.22088	ppb		98
74) Anthracene	10.12	178	279374	9.96647	ppb		100
75) Carbazol	10.32	167	261994	10.52724	ppb		98
76) Di-n-butylphthalate	10.72	149	311416	9.34691	ppb		97
77) Fluoranthene	11.43	202	289008	9.81159	ppb	#	97
79) Benzidine	11.62	184	95179	9.28318	ppb		97
80) Pyrene	11.69	202	298339	9.65105	ppb		98
82) Butyl benzylphthalate	12.46	149	140818	9.09633	ppb		87
83) 3,3'-Dichlorobenzidine	13.07	252	104450	10.98842	ppb	#	93
84) Benz (a) anthracene	13.09	228	297055	10.12805	ppb		97
85) Bis (2-ethylhexyl) phthala	13.12	149	205324	9.39859	ppb	#	98
86) Chrysene	13.13	228	272893	9.67890	ppb		99
87) Di-n-octylphthalate	13.84	149	356276	9.20309	ppb	#	91
89) Benzo (b) fluoranthene	14.28	252	337345	10.15848	ppb	#	97
90) Benzo (k) fluoranthene	14.31	252	265091	8.34854	ppb		98
91) Benzo (a) pyrene	14.67	252	256785	8.21085	ppb	#	97
92) Indeno (1,2,3-cd) pyrene	16.30	276	329541	9.26038	ppb		96
93) Dibenz (a,h) anthracene	16.31	278	275683	9.10566	ppb		98
94) Benzo (g,h,i) perylene	16.74	276	263509	8.75484	ppb		98

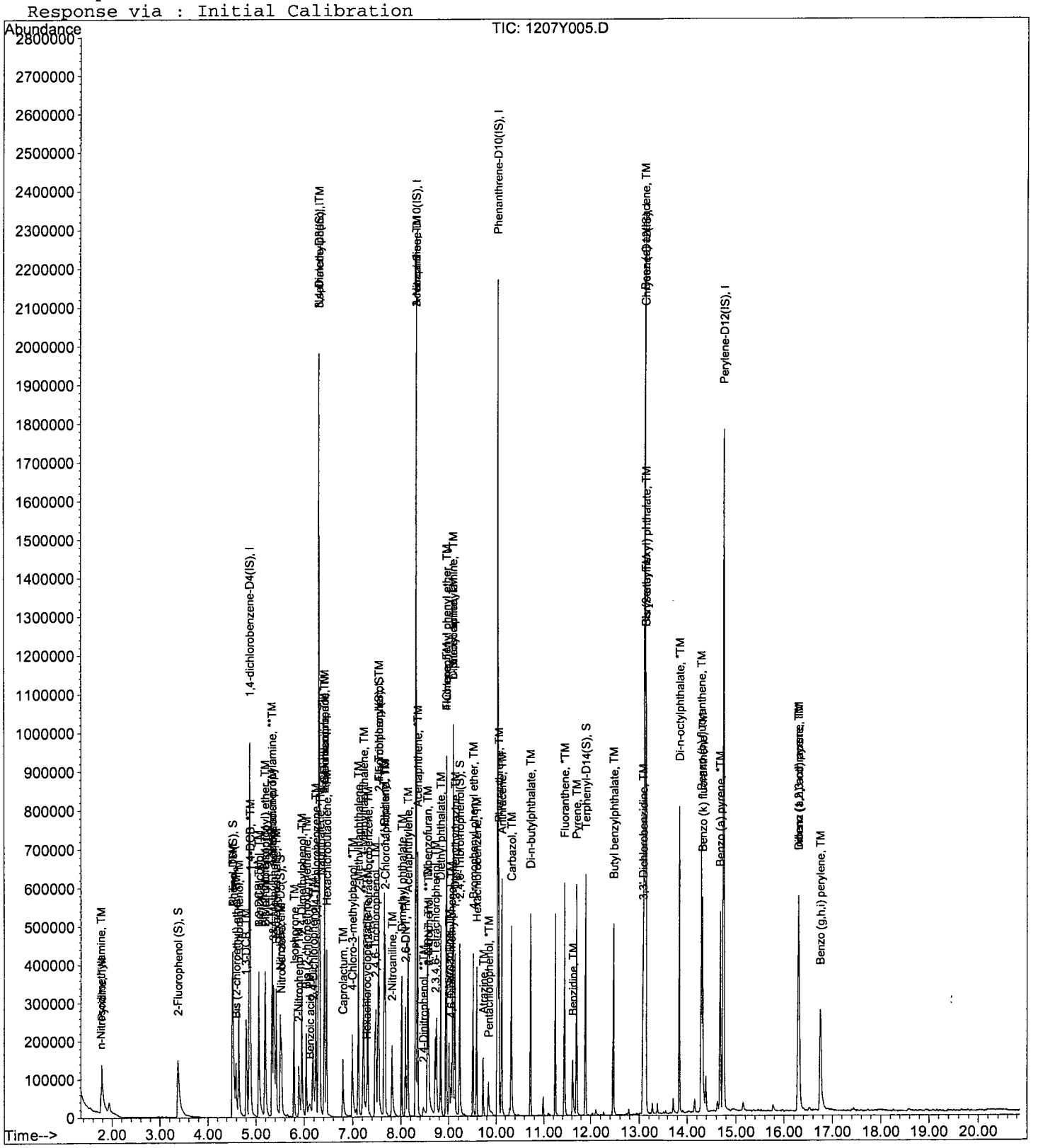
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y005.D Vial: 5
Acq On : 7 Dec 16 10:32 Operator: MA
Sample : 10ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y006.D Vial: 6
Acq On : 7 Dec 16 11:02 Operator: MA
Sample : 20ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	213922	40.00000	ppb	0.00
20) Napthalene-D8(IS)	6.30	136	877521	40.00000	ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	527221	40.00000	ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	919632	40.00000	ppb	0.00
78) Chrysene-D12(IS)	13.10	240	874733	40.00000	ppb	0.00
88) Perylene-D12(IS)	14.75	264	909225	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.36	112	271002	40.02316	ppb	0.00
Spiked Amount 200.000			Recovery = 20.012%			
5) Phenol-D6 (S)	4.50	99	390048	41.64340	ppb	0.00
Spiked Amount 200.000			Recovery = 20.822%			
21) Nitrobenzene-D5(S)	5.50	82	172033	18.78955	ppb	0.00
Spiked Amount 100.000			Recovery = 18.790%			
45) 2-Fluorobiphenyl(S)	7.53	172	352090	21.03087	ppb	0.00
Spiked Amount 100.000			Recovery = 21.031%			
63) 2,4,6-Tribromophenol(S)	9.23	330	100581	38.84865	ppb	0.00
Spiked Amount 200.000			Recovery = 19.425%			
81) Terphenyl-D14(S)	11.89	244	439341	22.15795	ppb	0.00
Spiked Amount 100.000			Recovery = 22.158%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.76	42	87421	17.43034	ppb	92
3) Pyridine	1.77	79	177528	16.56912	ppb	97
6) Phenol	4.52	94	221931	20.89054	ppb	96
7) Aniline	4.52	66	202813	19.38850	ppb	86
8) Bis (2-chloroethyl) ether	4.58	63	97711	20.46317	ppb	93
9) 2-Chlorophenol	4.65	128	172852	20.98656	ppb	99
10) 1,3-DCB	4.80	146	179050	20.05944	ppb	100
11) 1,4-DCB	4.89	146	178026	19.46331	ppb	97
12) Benzyl alcohol	5.06	108	98047	21.28071	ppb	97
13) 1,2-DCB	5.06	146	169067	19.83480	ppb	97
14) 2-Methylphenol	5.19	107	126350	20.22952	ppb	97
15) Bis (2-chloroisopropyl) et	5.19	45	195850	20.47984	ppb	93
16) Acetophenone	5.33	105	217146	18.65310	ppb	96
17) 3&4-Methylphenol	5.36	107	312061	37.76824	ppb	99
18) n-Nitrosodi-n-propylamine	5.33	70	112913	18.69926	ppb	99
19) Hexachloroethane	5.42	117	69201	18.24159	ppb	91
22) Nitrobenzene	5.52	77	170617	18.21513	ppb	98
23) Isophorone	5.79	82	277084	17.94308	ppb	99
24) 2-Nitrophenol	5.88	139	85225	19.11054	ppb	95
25) 2,4-Dimethylphenol	5.95	122	132147	19.00942	ppb	99
26) Benzoic acid	6.09	105	91123	19.04059	ppb	95
27) Bis (2-chloroethoxy) metha	6.04	93	161526	19.56243	ppb	97
28) 2,4-Dichlorophenol	6.17	162	132126	19.73177	ppb	98
29) 1,2,4-Trichlorobenzene	6.24	180	136552	18.46189	ppb	97
30) 3,4-Dimethylphenol	6.29	107	215414	19.43164	ppb	99
31) Naphthalene	6.32	128	472793	20.46500	ppb	100
32) 4-Chloroaniline	6.40	127	189841	23.15833	ppb	96
33) 2,6-Dichlorophenol	6.40	162	140216	21.68899	ppb	97
34) Hexachloropropene	6.41	213	118650	20.16357	ppb	99
35) Hexachlorobutadiene	6.46	225	96965	20.55433	ppb	96
36) Caprolactum	6.80	55	66358	19.02041	ppb	94
37) 4-Chloro-3-methylphenol	6.99	107	147903	19.35345	ppb	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y006.D Vial: 6
Acq On : 7 Dec 16 11:02 Operator: MA
Sample : 20ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.11	142	303522	19.67943	ppb		99
39)	1-Methylnaphthalene	7.22	142	283238	19.14597	ppb		99
41)	Hexachlorocyclopentadiene	7.29	237	38317	19.84270	ppb		95
42)	1,2,4,5-Tetrachlorobenzene	7.31	216	148167	20.65927	ppb		98
43)	2,4,6-Trichlorophenol	7.46	196	92029	19.33751	ppb		97
44)	2,4,5-Trichlorophenol	7.52	196	109748	21.77747	ppb		97
46)	1,1'-Biphenyl	7.65	154	421333	21.08577	ppb	#	98
47)	2-Chloronaphthalene	7.66	162	320827	20.38017	ppb		97
48)	2-Nitroaniline	7.81	65	98585	17.63805	ppb		95
49)	Dimethyl phthalate	8.02	163	354455	18.39218	ppb		99
50)	2,6-DNT	8.09	165	78220	18.23703	ppb	#	70
51)	Acenaphthylene	8.15	152	468200	19.13214	ppb		100
52)	3-Nitroaniline	8.29	138	94776	21.34336	ppb		82
53)	Acenaphthene	8.34	154	308667	20.59449	ppb		98
54)	2,4-Dinitrophenol	8.44	184	34650	21.05674	ppb		92
55)	4-Nitrophenol	8.55	65	64643	21.85482	ppb		87
56)	Dibenzofuran	8.55	168	433602	19.84127	ppb		95
57)	2,4-DNT	8.57	165	113885	18.78390	ppb	#	69
58)	2,3,4,6-Tetrachlorophenol	8.71	232	77826	19.84558	ppb		96
59)	Diethyl phthalate	8.83	149	365822	18.69626	ppb		94
60)	4-Chlorophenyl phenyl ethe	8.95	204	160915	18.09343	ppb		95
61)	Fluorene	8.95	166	338778	18.81837	ppb		100
62)	4-Nitroaniline	9.00	138	79383	18.76799	ppb		95
65)	4,6-Dinitro-2-methylphenol	9.05	198	69659	21.54609	ppb	#	85
66)	Diphenyl amine	9.09	169	583796	46.30830	ppb		100
67)	n-Nitrosodiphenylamine	9.09	169	583796	46.30830	ppb		100
68)	1,2-Diphenylhydrazine	9.13	77	374925	18.78473	ppb	#	91
69)	4-Bromophenyl phenyl ether	9.51	248	96477	19.97408	ppb		93
70)	Hexachlorobenzene	9.59	284	102637	19.94834	ppb		87
71)	Atrazine	9.73	200	48458	9.59604	ppb		94
72)	Pentachlorophenol	9.84	266	40851	26.44051	ppb		95
73)	Phenanthrene	10.05	178	526900	20.76520	ppb		98
74)	Anthracene	10.12	178	538899	20.42079	ppb		99
75)	Carbazol	10.32	167	530270	22.63237	ppb		97
76)	Di-n-butylphthalate	10.73	149	706599	22.52735	ppb		99
77)	Fluoranthene	11.43	202	598343	21.57691	ppb	#	97
79)	Benzidine	11.61	184	205525	21.25496	ppb		99
80)	Pyrene	11.69	202	617378	21.17657	ppb		99
82)	Butyl benzylphthalate	12.46	149	294257	20.15461	ppb		91
83)	3,3'-Dichlorobenzidine	13.07	252	218137	24.33302	ppb	#	95
84)	Benz (a) anthracene	13.09	228	563481	20.37081	ppb		100
85)	Bis (2-ethylhexyl) phthala	13.12	149	407629	19.78463	ppb	#	96
86)	Chrysene	13.13	228	535016	20.12056	ppb		99
87)	Di-n-octylphthalate	13.84	149	763144	20.90228	ppb	#	92
89)	Benzo (b) fluoranthene	14.28	252	616293	20.21412	ppb	#	98
90)	Benzo (k) fluoranthene	14.31	252	538976	18.48836	ppb		98
91)	Benzo (a) pyrene	14.67	252	567407	19.76179	ppb		98
92)	Indeno (1,2,3-cd) pyrene	16.29	276	632150	19.34875	ppb		97
93)	Dibenz (a,h) anthracene	16.31	278	526382	18.93720	ppb		98
94)	Benzo (g,h,i) perylene	16.74	276	639018	23.12486	ppb		97

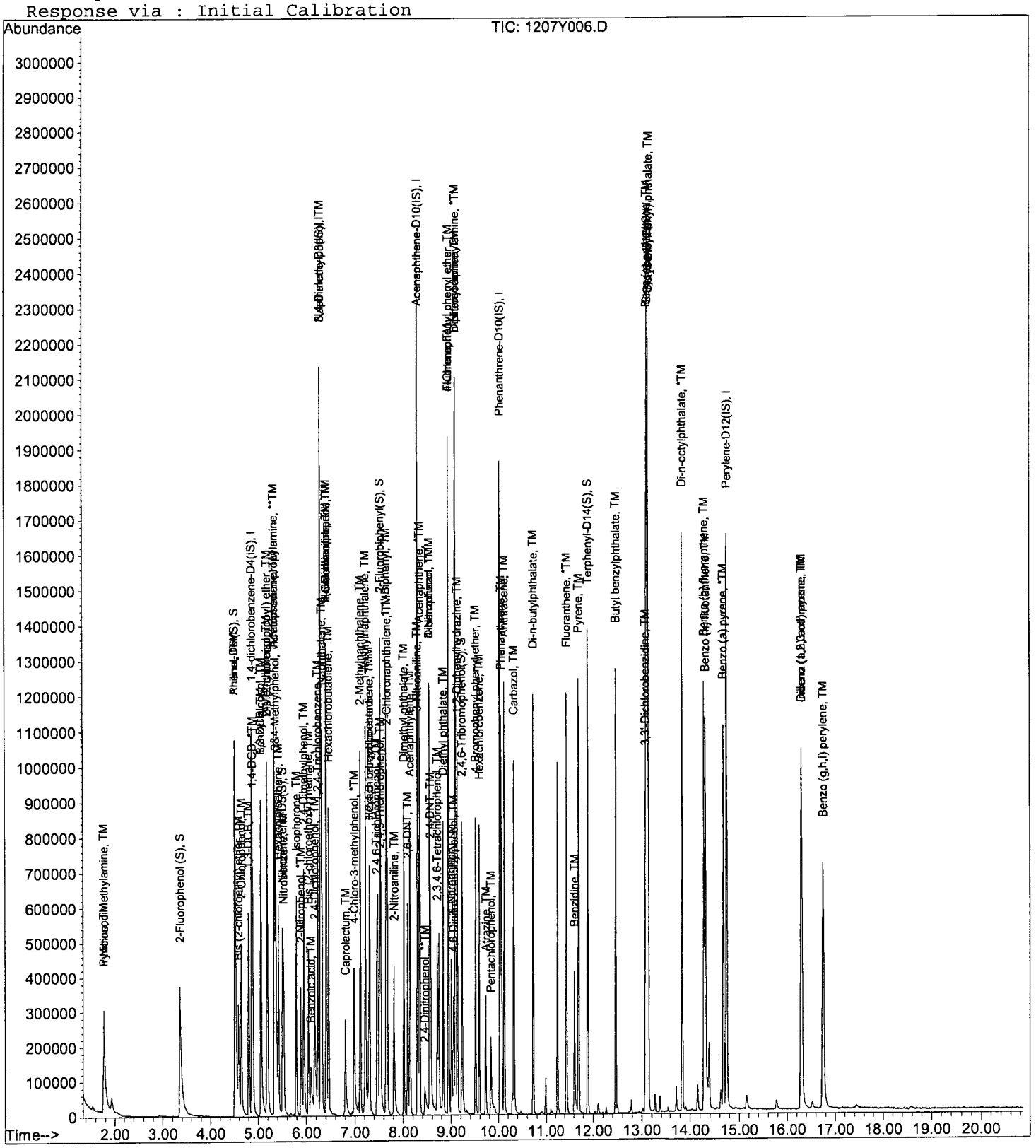
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y006.D Vial: 6
Acq On : 7 Dec 16 11:02 Operator: MA
Sample : 20ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



219

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y007.D Vial: 7
Acq On : 7 Dec 16 11:32 Operator: MA
Sample : 40ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	200058	40.00000	ppb		0.00
20) Napthalene-D8(IS)	6.30	136	812959	40.00000	ppb		0.00
40) Acenaphthene-D10(IS)	8.31	164	497677	40.00000	ppb		0.00
64) Phenanthrene-D10(IS)	10.03	188	928405	40.00000	ppb		0.00
78) Chrysene-D12(IS)	13.11	240	850533	40.00000	ppb		0.00
88) Perylene-D12(IS)	14.75	264	888701	40.00000	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol (S)	3.35	112	570340	90.06835	ppb		0.00
Spiked Amount 200.000			Recovery = 45.034%				
5) Phenol-D6 (S)	4.50	99	704877	80.47129	ppb		0.00
Spiked Amount 200.000			Recovery = 40.236%				
21) Nitrobenzene-D5(S)	5.50	82	325441	38.36770	ppb		0.00
Spiked Amount 100.000			Recovery = 38.368%				
45) 2-Fluorobiphenyl(S)	7.54	172	597194	37.78888	ppb		0.00
Spiked Amount 100.000			Recovery = 37.789%				
63) 2,4,6-Tribromophenol(S)	9.23	330	191228	78.24500	ppb		0.00
Spiked Amount 200.000			Recovery = 39.123%				
81) Terphenyl-D14(S)	11.89	244	752070	39.00950	ppb		0.00
Spiked Amount 100.000			Recovery = 39.009%				
Target Compounds							Qvalue
2) n-Nitrosodimethylamine	1.75	42	161566	34.44606	ppb		97
3) Pyridine	1.76	79	387358	38.65847	ppb		98
6) Phenol	4.52	94	400577	40.31969	ppb		93
7) Aniline	4.51	66	377482	38.58729	ppb	#	75
8) Bis (2-chloroethyl) ether	4.59	63	179689	40.23931	ppb		98
9) 2-Chlorophenol	4.64	128	315428	40.95120	ppb		91
10) 1,3-DCB	4.80	146	332809	39.86933	ppb		99
11) 1,4-DCB	4.89	146	332016	38.81430	ppb		99
12) Benzyl alcohol	5.05	108	172333	39.99630	ppb		92
13) 1,2-DCB	5.06	146	296826	37.23663	ppb		100
14) 2-Methylphenol	5.19	107	223633	38.28652	ppb		95
15) Bis (2-chloroisopropyl) et	5.19	45	337003	37.68221	ppb		98
16) Acetophenone	5.34	105	403185	37.03421	ppb		99
17) 3&4-Methylphenol	5.36	107	576124	74.55945	ppb		97
18) n-Nitrosodi-n-propylamine	5.34	70	205499	36.39064	ppb		92
19) Hexachloroethane	5.42	117	132371	37.31150	ppb		93
22) Nitrobenzene	5.52	77	329118	37.92717	ppb		95
23) Isophorone	5.79	82	544538	38.06296	ppb		95
24) 2-Nitrophenol	5.88	139	167729	40.59784	ppb		97
25) 2,4-Dimethylphenol	5.95	122	256596	39.84284	ppb		99
26) Benzoic acid	6.12	105	207583	40.37949	ppb		96
27) Bis (2-chloroethoxy) metha	6.04	93	311390	40.70745	ppb		99
28) 2,4-Dichlorophenol	6.16	162	251852	40.59868	ppb		93
29) 1,2,4-Trichlorobenzene	6.24	180	276620	40.36924	ppb		98
30) 3,4-Dimethylphenol	6.28	107	390385	38.01171	ppb		99
31) Naphthalene	6.32	128	855871	39.98876	ppb		99
32) 4-Chloroaniline	6.40	127	325340	42.83942	ppb		96
33) 2,6-Dichlorophenol	6.40	162	232500	38.81983	ppb		95
34) Hexachloropropene	6.42	213	225297	41.32796	ppb		97
35) Hexachlorobutadiene	6.46	225	171693	39.28527	ppb		94
36) Caprolactum	6.82	55	125688	38.88743	ppb		97
37) 4-Chloro-3-methylphenol	6.98	107	280036	39.55342	ppb		87

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y007.D Vial: 7
Acq On : 7 Dec 16 11:32 Operator: MA
Sample : 40ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38) 2-Methylnaphthalene	7.11	142	561485	39.29610	ppb		100
39) 1-Methylnaphthalene	7.22	142	542998	39.61986	ppb		98
41) Hexachlorocyclopentadiene	7.29	237	98846	39.78650	ppb		94
42) 1,2,4,5-Tetrachlorobenzene	7.31	216	258378	38.16490	ppb		97
43) 2,4,6-Trichlorophenol	7.45	196	173513	38.62362	ppb		100
44) 2,4,5-Trichlorophenol	7.51	196	183541	38.58238	ppb	#	88
46) 1,1'-Biphenyl	7.65	154	728113	38.60182	ppb	#	97
47) 2-Chloronaphthalene	7.67	162	569966	38.35579	ppb		98
48) 2-Nitroaniline	7.81	65	201923	38.27108	ppb		97
49) Dimethyl phthalate	8.02	163	688771	37.86099	ppb		99
50) 2,6-DNT	8.10	165	153741	37.97267	ppb		91
51) Acenaphthylene	8.15	152	870855	37.69841	ppb		100
52) 3-Nitroaniline	8.29	138	176613	42.13394	ppb		87
53) Acenaphthene	8.34	154	553092	39.09340	ppb		100
54) 2,4-Dinitrophenol	8.45	184	80953	41.10463	ppb		83
55) 4-Nitrophenol	8.54	65	134675	40.08311	ppb		98
56) Dibenzofuran	8.55	168	766792	37.17071	ppb		98
57) 2,4-DNT	8.58	165	220382	38.50708	ppb		97
58) 2,3,4,6-Tetrachlorophenol	8.71	232	159761	43.15738	ppb		96
59) Diethyl phthalate	8.84	149	717251	38.83302	ppb		98
60) 4-Chlorophenyl phenyl ethe	8.95	204	308111	36.70089	ppb		96
61) Fluorene	8.95	166	633972	37.30629	ppb		100
62) 4-Nitroaniline	9.01	138	157741	39.50755	ppb		89
65) 4,6-Dinitro-2-methylphenol	9.05	198	131972	40.43428	ppb	#	84
66) Diphenyl amine	9.10	169	974102	76.53830	ppb		99
67) n-Nitrosodiphenylamine	9.10	169	974102	76.53830	ppb		99
68) 1,2-Diphenylhydrazine	9.13	77	675207	33.50998	ppb		95
69) 4-Bromophenyl phenyl ether	9.51	248	202318	41.49103	ppb		94
70) Hexachlorobenzene	9.59	284	198345	38.18569	ppb		91
71) Atrazine	9.73	200	93179	18.27769	ppb		100
72) Pentachlorophenol	9.83	266	91407	50.75984	ppb		95
73) Phenanthrene	10.06	178	992611	38.74928	ppb		99
74) Anthracene	10.12	178	1029607	38.64677	ppb		99
75) Carbazol	10.32	167	881300	37.25919	ppb		99
76) Di-n-butylphthalate	10.73	149	1193622	37.69472	ppb		99
77) Fluoranthene	11.43	202	1069844	38.21520	ppb	#	96
79) Benzidine	11.61	184	397025	42.22773	ppb		99
80) Pyrene	11.70	202	1133899	40.00029	ppb		99
82) Butyl benzylphthalate	12.47	149	588724	41.47093	ppb		93
83) 3,3'-Dichlorobenzidine	13.08	252	380229	43.62107	ppb		97
84) Benz (a) anthracene	13.10	228	1074534	39.95154	ppb		99
85) Bis (2-ethylhexyl) phthala	13.13	149	762045	38.03889	ppb		98
86) Chrysene	13.13	228	989386	38.26692	ppb		100
87) Di-n-octylphthalate	13.84	149	1343797	37.85342	ppb	#	87
89) Benzo (b) fluoranthene	14.28	252	1144127	38.39349	ppb	#	98
90) Benzo (k) fluoranthene	14.32	252	1041436	36.54915	ppb		99
91) Benzo (a) pyrene	14.68	252	1090904	38.87173	ppb		98
92) Indeno (1,2,3-cd) pyrene	16.30	276	1176312	36.83588	ppb		98
93) Dibenz (a,h) anthracene	16.32	278	1006185	37.03465	ppb		99
94) Benzo (g,h,i) perylene	16.75	276	1129852	41.83148	ppb		97

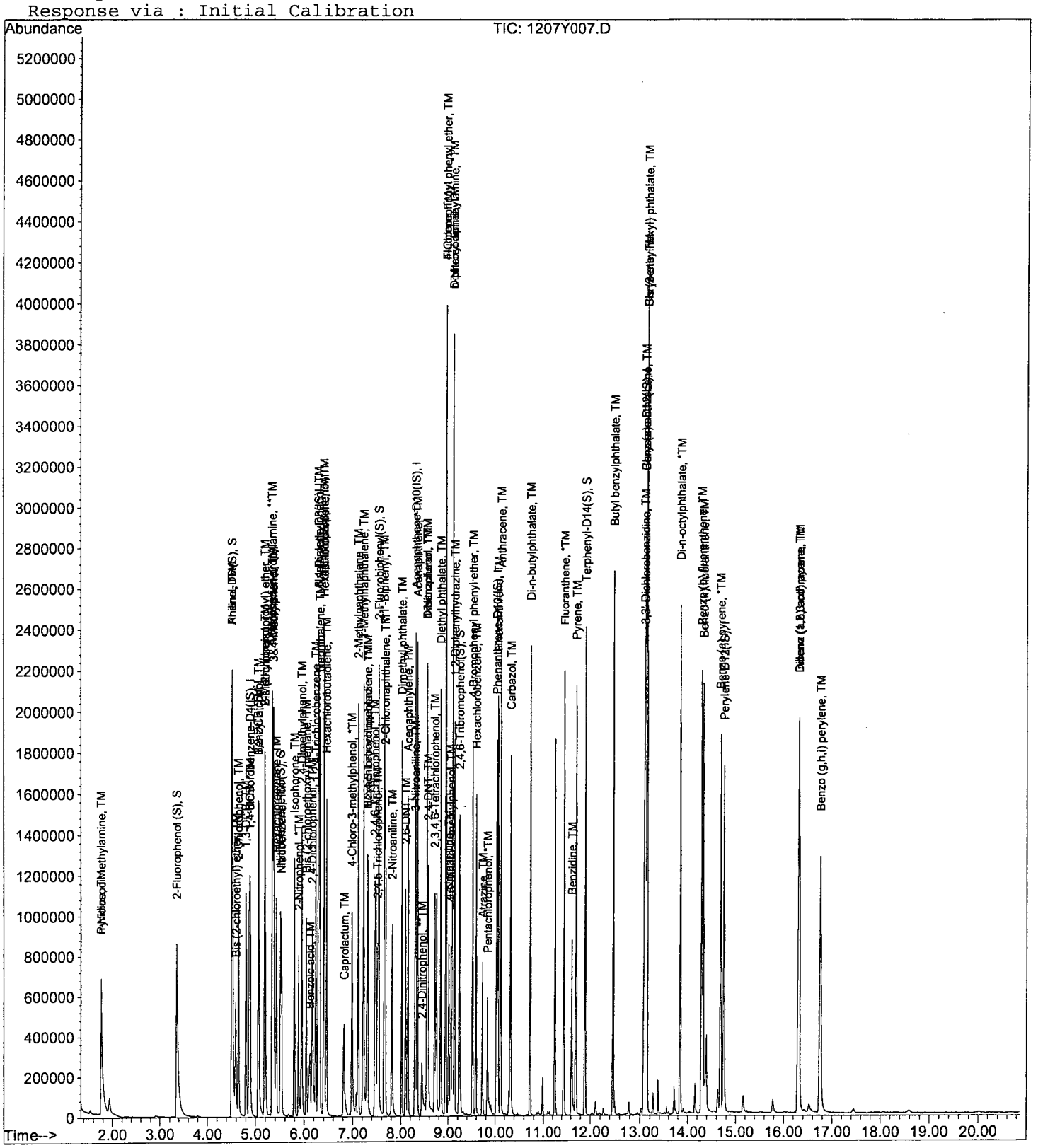
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y007.D Vial: 7
Acq On : 7 Dec 16 11:32 Operator: MA
Sample : 40ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y008.D Vial: 8
Acq On : 7 Dec 16 12:02 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	195270	40.00000	ppb	0.00
20) Napthalene-D8(IS)	6.30	136	816895	40.00000	ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	475200	40.00000	ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	975541	40.00000	ppb	0.00
78) Chrysene-D12(IS)	13.10	240	853105	40.00000	ppb	0.00
88) Perylene-D12(IS)	14.75	264	871056	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.35	112	695029	112.45058	ppb	0.00
Spiked Amount 200.000			Recovery = 56.226%			
5) Phenol-D6 (S)	4.51	99	832830	97.41019	ppb	0.00
Spiked Amount 200.000			Recovery = 48.705%			
21) Nitrobenzene-D5(S)	5.50	82	421258	49.42470	ppb	0.00
Spiked Amount 100.000			Recovery = 49.425%			
45) 2-Fluorobiphenyl(S)	7.53	172	745324	49.39294	ppb	0.00
Spiked Amount 100.000			Recovery = 49.393%			
63) 2,4,6-Tribromophenol(S)	9.23	330	243923	104.52712	ppb	0.00
Spiked Amount 200.000			Recovery = 52.263%			
81) Terphenyl-D14(S)	11.89	244	959232	49.60488	ppb	0.00
Spiked Amount 100.000			Recovery = 49.605%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.75	42	207992	45.43145	ppb	100
3) Pyridine	1.76	79	499289	51.05103	ppb	100
6) Phenol	4.52	94	480106	49.50952	ppb	100
7) Aniline	4.52	66	456200	47.77753	ppb	100
8) Bis (2-chloroethyl) ether	4.59	63	206942	47.47862	ppb	100
9) 2-Chlorophenol	4.65	128	370436	49.27197	ppb	100
10) 1,3-DCB	4.80	146	396306	48.64015	ppb	100
11) 1,4-DCB	4.89	146	407144	48.76421	ppb	100
12) Benzyl alcohol	5.06	108	223746	53.20189	ppb	100
13) 1,2-DCB	5.06	146	388817	49.97284	ppb	100
14) 2-Methylphenol	5.19	107	277560	48.68411	ppb	100
15) Bis (2-chloroisopropyl) et	5.19	45	424279	48.60428	ppb	100
16) Acetophenone	5.33	105	510342	48.02645	ppb	100
17) 3&4-Methylphenol	5.36	107	744509	98.71362	ppb	100
18) n-Nitrosodi-n-propylamine	5.34	70	262564	47.63603	ppb	100
19) Hexachloroethane	5.42	117	166560	48.09955	ppb	100
22) Nitrobenzene	5.52	77	426332	48.89327	ppb	100
23) Isophorone	5.80	82	706760	49.16418	ppb	100
24) 2-Nitrophenol	5.88	139	213979	51.54284	ppb	100
25) 2,4-Dimethylphenol	5.95	122	323836	50.04122	ppb	100
26) Benzoic acid	6.13	105	279445	53.40557	ppb	100
27) Bis (2-chloroethoxy) metha	6.04	93	396181	51.54248	ppb	100
28) 2,4-Dichlorophenol	6.17	162	325223	52.17353	ppb	100
29) 1,2,4-Trichlorobenzene	6.24	180	351337	51.02621	ppb	100
30) 3,4-Dimethylphenol	6.29	107	512874	49.69783	ppb	100
31) Naphthalene	6.32	128	1091949	50.77318	ppb	100
32) 4-Chloroaniline	6.40	127	395557	51.83434	ppb	100
33) 2,6-Dichlorophenol	6.41	162	296250	49.22564	ppb	100
34) Hexachloropropene	6.42	213	279000	50.93252	ppb	100
35) Hexachlorobutadiene	6.46	225	219413	49.96224	ppb	100
36) Caprolactum	6.83	55	159640	49.15407	ppb	100
37) 4-Chloro-3-methylphenol	6.99	107	341306	47.97517	ppb	100

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y161207\1207Y008.D Vial: 8
Acq On : 7 Dec 16 12:02 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) 2-Methylnaphthalene	7.11	142	688780	47.97270	ppb	100
39) 1-Methylnaphthalene	7.22	142	659731	47.90535	ppb	100
41) Hexachlorocyclopentadiene	7.29	237	140004	52.99808	ppb	100
42) 1,2,4,5-Tetrachlorobenzene	7.31	216	332171	51.38560	ppb	100
43) 2,4,6-Trichlorophenol	7.46	196	218731	50.99205	ppb	100
44) 2,4,5-Trichlorophenol	7.52	196	226443	49.85239	ppb	100
46) 1,1'-Biphenyl	7.66	154	885084	49.14334	ppb	100
47) 2-Chloronaphthalene	7.67	162	727438	51.26833	ppb	100
48) 2-Nitroaniline	7.81	65	266093	52.81891	ppb	100
49) Dimethyl phthalate	8.02	163	914001	52.61807	ppb	100
50) 2,6-DNT	8.10	165	201713	52.17789	ppb	100
51) Acenaphthylene	8.15	152	1109739	50.31172	ppb	100
52) 3-Nitroaniline	8.30	138	209961	52.45890	ppb	100
53) Acenaphthene	8.34	154	674472	49.92765	ppb	100
54) 2,4-Dinitrophenol	8.44	184	97936	50.08681	ppb	100
55) 4-Nitrophenol	8.54	65	178570	53.03676	ppb	100
56) Dibenzofuran	8.55	168	1012092	51.38241	ppb	100
57) 2,4-DNT	8.57	165	296625	54.28044	ppb	100
58) 2,3,4,6-Tetrachlorophenol	8.71	232	207535	58.71469	ppb	100
59) Diethyl phthalate	8.83	149	866198	49.11547	ppb	100
60) 4-Chlorophenyl phenyl ethe	8.95	204	382969	47.77538	ppb	100
61) Fluorene	8.95	166	806446	49.70024	ppb	100
62) 4-Nitroaniline	9.01	138	206542	54.17700	ppb	100
65) 4,6-Dinitro-2-methylphenol	9.06	198	182950	53.34482	ppb	100
66) Diphenyl amine	9.10	169	1368741	102.34994	ppb	100
67) n-Nitrosodiphenylamine	9.10	169	1368741	102.34994	ppb	100
68) 1,2-Diphenylhydrazine	9.13	77	929548	43.90369	ppb	100
69) 4-Bromophenyl phenyl ether	9.51	248	243072	47.44020	ppb	100
70) Hexachlorobenzene	9.59	284	246139	45.09743	ppb	100
71) Atrazine	9.73	200	132213	24.68138	ppb	100
72) Pentachlorophenol	9.84	266	118335	60.26116	ppb	100
73) Phenanthrene	10.06	178	1304097	48.44918	ppb	100
74) Anthracene	10.12	178	1323292	47.27041	ppb	100
75) Carbazol	10.32	167	1272051	51.18068	ppb	100
76) Di-n-butylphthalate	10.73	149	1500155	45.08600	ppb	100
77) Fluoranthene	11.44	202	1330020	45.21326	ppb	100
79) Benzidine	11.61	184	505375	53.58983	ppb	100
80) Pyrene	11.70	202	1525772	53.66203	ppb	100
82) Butyl benzylphthalate	12.46	149	734576	51.58904	ppb	100
83) 3,3'-Dichlorobenzidine	13.08	252	470879	53.85786	ppb	100
84) Benz (a) anthracene	13.10	228	1345568	49.87784	ppb	100
85) Bis (2-ethylhexyl) phthala	13.13	149	996708	49.60253	ppb	100
86) Chrysene	13.14	228	1285778	49.58067	ppb	100
87) Di-n-octylphthalate	13.85	149	1959719	55.03689	ppb	100
89) Benzo (b) fluoranthene	14.29	252	1307332	44.75884	ppb	100
90) Benzo (k) fluoranthene	14.32	252	1321701	47.32466	ppb	100
91) Benzo (a) pyrene	14.68	252	1333161	48.46626	ppb	100
92) Indeno (1,2,3-cd) pyrene	16.30	276	1465032	46.80640	ppb	100
93) Dibenz (a,h) anthracene	16.32	278	1249734	46.93076	ppb	100
94) Benzo (g,h,i) perylene	16.76	276	1364184	51.53048	ppb	100

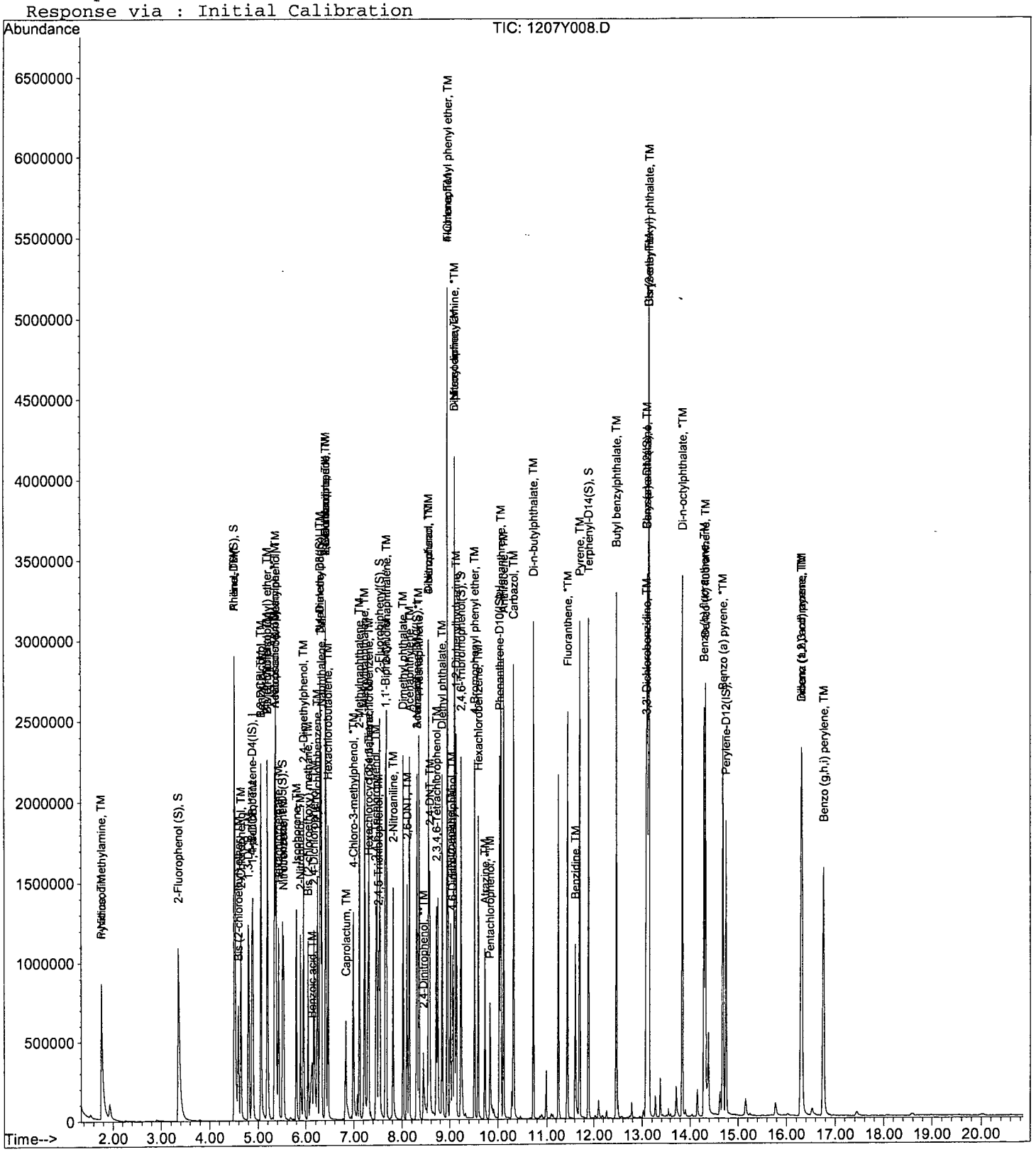
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y008.D Vial: 8
Acq On : 7 Dec 16 12:02 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y009.D Vial: 9
Acq On : 7 Dec 16 12:32 Operator: MA
Sample : 60ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	218783	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.30	136	928479	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	561569	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	933722	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.11	240	884630	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.75	264	1042796	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.35	112	865007	124.91090 ppb	0.00
Spiked Amount 200.000			Recovery =	62.456%	
5) Phenol-D6 (S)	4.51	99	1086222	113.39361 ppb	0.00
Spiked Amount 200.000			Recovery =	56.697%	
21) Nitrobenzene-D5(S)	5.50	82	539284	55.66825 ppb	0.00
Spiked Amount 100.000			Recovery =	55.668%	
45) 2-Fluorobiphenyl(S)	7.54	172	984076	55.18508 ppb	0.00
Spiked Amount 100.000			Recovery =	55.185%	
63) 2,4,6-Tribromophenol(S)	9.23	330	315998	114.58661 ppb	0.00
Spiked Amount 200.000			Recovery =	57.293%	
81) Terphenyl-D14(S)	11.89	244	1107571	55.23485 ppb	0.00
Spiked Amount 100.000			Recovery =	55.235%	
Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.75	42	237687	46.33801 ppb	95
3) Pyridine	1.76	79	574794	52.45498 ppb	95
6) Phenol	4.52	94	637429	58.66854 ppb	94
7) Aniline	4.52	66	600249	56.10761 ppb	94
8) Bis (2-chloroethyl) ether	4.59	63	281001	57.54124 ppb	99
9) 2-Chlorophenol	4.65	128	506460	60.12483 ppb	98
10) 1,3-DCB	4.80	146	523668	57.36438 ppb	99
11) 1,4-DCB	4.89	146	527245	56.36215 ppb	97
12) Benzyl alcohol	5.06	108	288893	61.30992 ppb	96
13) 1,2-DCB	5.06	146	489566	56.15934 ppb	98
14) 2-Methylphenol	5.19	107	364148	57.00727 ppb	99
15) Bis (2-chloroisopropyl) et	5.19	45	554052	56.64941 ppb	96
16) Acetophenone	5.34	105	671773	56.42397 ppb	98
17) 3&4-Methylphenol	5.36	107	950588	112.49194 ppb	98
18) n-Nitrosodi-n-propylamine	5.35	70	340579	55.14933 ppb	98
19) Hexachloroethane	5.42	117	222476	57.34234 ppb	96
22) Nitrobenzene	5.52	77	554825	55.98238 ppb	98
23) Isophorone	5.80	82	928565	56.83073 ppb	99
24) 2-Nitrophenol	5.88	139	289592	61.37308 ppb	94
25) 2,4-Dimethylphenol	5.95	122	444516	60.43441 ppb	98
26) Benzoic acid	6.13	105	322257	54.17674 ppb	95
27) Bis (2-chloroethoxy) metha	6.04	93	529470	60.60482 ppb	99
28) 2,4-Dichlorophenol	6.16	162	429913	60.67973 ppb	96
29) 1,2,4-Trichlorobenzene	6.24	180	459705	58.74120 ppb	95
30) 3,4-Dimethylphenol	6.29	107	660163	56.28233 ppb	98
31) Naphthalene	6.32	128	1425995	58.33701 ppb	99
32) 4-Chloroaniline	6.40	127	513997	59.26021 ppb	98
33) 2,6-Dichlorophenol	6.41	162	389211	56.90000 ppb	98
34) Hexachloropropene	6.42	213	365095	58.63961 ppb	98
35) Hexachlorobutadiene	6.46	225	279947	56.08536 ppb	99
36) Caprolactum	6.84	55	221717	60.06354 ppb	98
37) 4-Chloro-3-methylphenol	6.99	107	480600	59.43613 ppb	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y009.D Vial: 9
Acq On : 7 Dec 16 12:32 Operator: MA
Sample : 60ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
38) 2-Methylnaphthalene	7.11	142	945068	57.91231 ppb	98
39) 1-Methylnaphthalene	7.22	142	919036	58.71429 ppb	98
41) Hexachlorocyclopentadiene	7.29	237	197642	60.29517 ppb	98
42) 1,2,4,5-Tetrachlorobenzene	7.31	216	445973	58.37966 ppb	99
43) 2,4,6-Trichlorophenol	7.46	196	297908	58.76890 ppb	98
44) 2,4,5-Trichlorophenol	7.52	196	321422	59.87920 ppb	94
46) 1,1'-Biphenyl	7.66	154	1207599	56.73829 ppb	98
47) 2-Chloronaphthalene	7.68	162	953118	56.84250 ppb	99
48) 2-Nitroaniline	7.81	65	333570	56.02944 ppb	97
49) Dimethyl phthalate	8.02	163	1131837	55.13729 ppb	99
50) 2,6-DNT	8.10	165	262428	57.44286 ppb	99
51) Acenaphthylene	8.15	152	1514599	58.10577 ppb	100
52) 3-Nitroaniline	8.30	138	286828	60.64227 ppb	100
53) Acenaphthene	8.34	154	907464	56.84338 ppb	99
54) 2,4-Dinitrophenol	8.44	184	134887	57.13945 ppb	90
55) 4-Nitrophenol	8.54	65	232448	57.73526 ppb	99
56) Dibenzofuran	8.55	168	1321081	56.75410 ppb	99
57) 2,4-DNT	8.58	165	379083	58.70069 ppb	99
58) 2,3,4,6-Tetrachlorophenol	8.71	232	264908	63.41964 ppb	97
59) Diethyl phthalate	8.84	149	1169813	56.12946 ppb	95
60) 4-Chlorophenyl phenyl ethe	8.95	204	505362	53.34779 ppb	99
61) Fluorene	8.95	166	1031075	53.77083 ppb	100
62) 4-Nitroaniline	9.01	138	270386	60.01559 ppb	96
65) 4,6-Dinitro-2-methylphenol	9.06	198	237031	72.20927 ppb	96
66) Diphenyl amine	9.10	169	1658613	129.58040 ppb	99
67) n-Nitrosodiphenylamine	9.10	169	1658613	129.58040 ppb	99
68) 1,2-Diphenylhydrazine	9.13	77	1349001	66.56860 ppb	99
69) 4-Bromophenyl phenyl ether	9.51	248	319227	65.09373 ppb	95
70) Hexachlorobenzene	9.59	284	327981	62.78386 ppb	97
71) Atrazine	9.73	200	151588	29.56569 ppb	96
72) Pentachlorophenol	9.84	266	138587	71.04943 ppb	96
73) Phenanthrene	10.06	178	1487228	57.72740 ppb	99
74) Anthracene	10.12	178	1508389	56.29567 ppb	98
75) Carbazol	10.32	167	1347464	56.64305 ppb	100
76) Di-n-butylphthalate	10.73	149	1763308	55.36837 ppb	100
77) Fluoranthene	11.44	202	1636819	58.13481 ppb	100
79) Benzidine	11.61	184	608980	62.27482 ppb	98
80) Pyrene	11.70	202	1793793	60.84019 ppb	99
82) Butyl benzylphthalate	12.47	149	829390	56.17205 ppb	99
83) 3,3'-Dichlorobenzidine	13.08	252	531065	58.57715 ppb	98
84) Benz (a) anthracene	13.10	228	1585364	56.67243 ppb	100
85) Bis (2-ethylhexyl) phthala	13.13	149	1244971	59.74973 ppb	99
86) Chrysene	13.14	228	1666038	61.95439 ppb	99
87) Di-n-octylphthalate	13.85	149	2024092	54.81901 ppb	99
89) Benzo (b) fluoranthene	14.29	252	1616583	46.23147 ppb	100
90) Benzo (k) fluoranthene	14.32	252	1852486	55.40589 ppb	99
91) Benzo (a) pyrene	14.68	252	1766595	53.64641 ppb	99
92) Indeno (1,2,3-cd) pyrene	16.31	276	1712128	45.69210 ppb	98
93) Dibenz (a,h) anthracene	16.32	278	1422360	44.61658 ppb	99
94) Benzo (g,h,i) perylene	16.76	276	1382485	43.62128 ppb	99

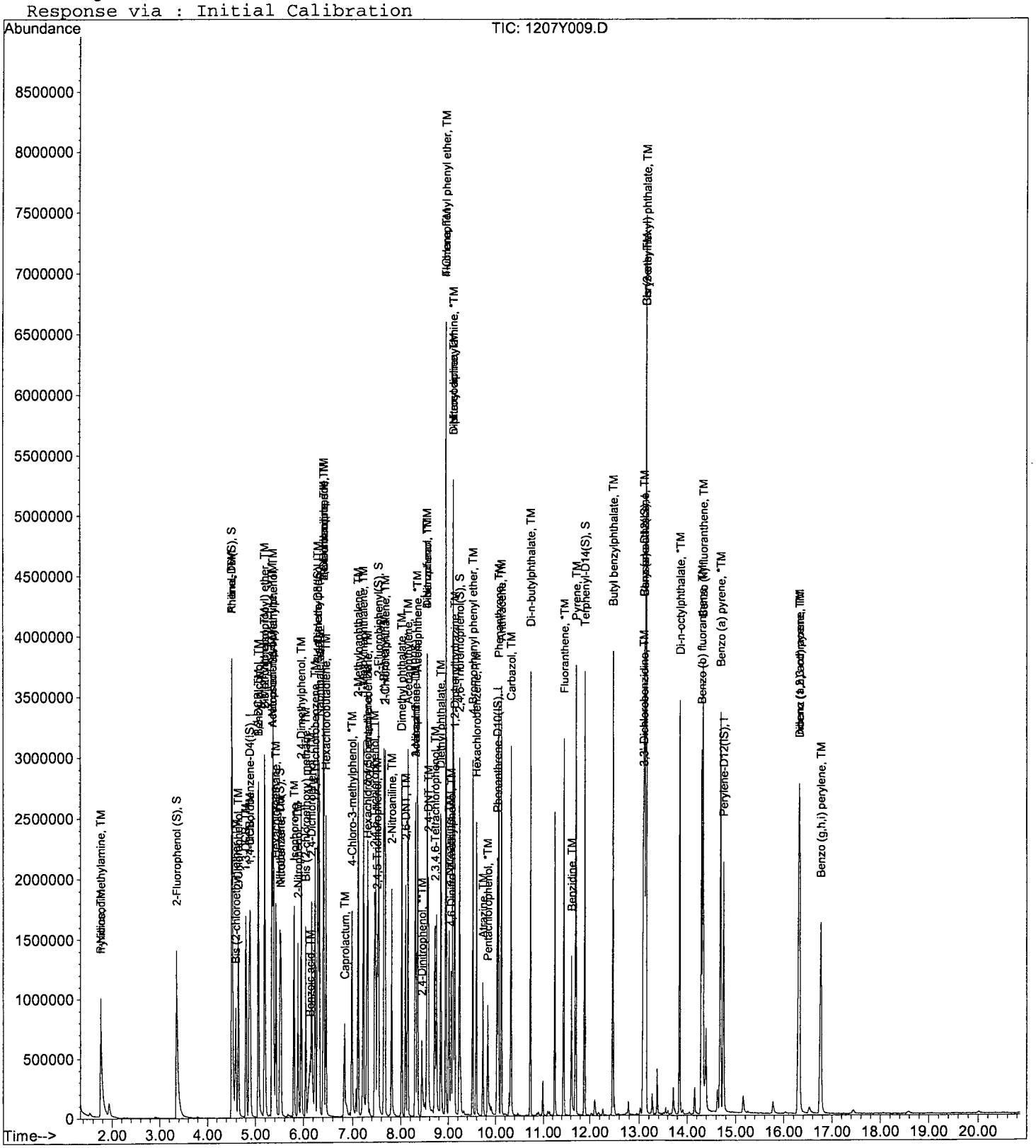
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y009.D Vial: 9
Acq On : 7 Dec 16 12:32 Operator: MA
Sample : 60ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y010.D Vial: 10
Acq On : 7 Dec 16 13:02 Operator: MA
Sample : 80ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	195710	40.00000	ppb	0.00
20) Napthalene-D8(IS)	6.30	136	859926	40.00000	ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	527101	40.00000	ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	1005123	40.00000	ppb	0.00
78) Chrysene-D12(IS)	13.11	240	912863	40.00000	ppb	0.00
88) Perylene-D12(IS)	14.75	264	909856	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.35	112	1083940	174.97924	ppb	0.00
Spiked Amount 200.000			Recovery =	87.490%		
5) Phenol-D6 (S)	4.51	99	1335540	155.85741	ppb	0.00
Spiked Amount 200.000			Recovery =	77.929%		
21) Nitrobenzene-D5(S)	5.51	82	643499	71.72142	ppb	0.00
Spiked Amount 100.000			Recovery =	71.721%		
45) 2-Fluorobiphenyl(S)	7.54	172	1210171	72.30179	ppb	0.00
Spiked Amount 100.000			Recovery =	72.302%		
63) 2,4,6-Tribromophenol(S)	9.24	330	416825	161.03215	ppb	0.00
Spiked Amount 200.000			Recovery =	80.516%		
81) Terphenyl-D14(S)	11.89	244	1546385	74.73349	ppb	0.00
Spiked Amount 100.000			Recovery =	74.733%		
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.75	42	322164	70.21171	ppb	97
3) Pyridine	1.76	79	734964	74.97926	ppb	96
6) Phenol	4.53	94	791696	81.45777	ppb	83
7) Aniline	4.52	66	776371	81.12603	ppb	97
8) Bis (2-chloroethyl) ether	4.59	63	355760	81.43836	ppb	95
9) 2-Chlorophenol	4.65	128	615384	81.66867	ppb	98
10) 1,3-DCB	4.81	146	614066	75.19723	ppb	98
11) 1,4-DCB	4.89	146	652039	77.92005	ppb	98
12) Benzyl alcohol	5.06	108	348718	82.73108	ppb	90
13) 1,2-DCB	5.06	146	592989	76.04278	ppb	98
14) 2-Methylphenol	5.20	107	423761	74.16070	ppb	97
15) Bis (2-chloroisopropyl) et	5.19	45	634640	72.53922	ppb	96
16) Acetophenone	5.34	105	792534	74.41484	ppb	97
17) 3&4-Methylphenol	5.37	107	1142368	151.12477	ppb	98
18) n-Nitrosodi-n-propylamine	5.35	70	410995	74.39769	ppb	97
19) Hexachloroethane	5.42	117	261628	75.38363	ppb	97
22) Nitrobenzene	5.53	77	676884	73.74296	ppb	93
23) Isophorone	5.80	82	1089807	72.01642	ppb	95
24) 2-Nitrophenol	5.88	139	344463	78.82155	ppb	97
25) 2,4-Dimethylphenol	5.95	122	565844	83.06243	ppb	98
26) Benzoic acid	6.15	105	443247	81.69217	ppb	95
27) Bis (2-chloroethoxy) metha	6.05	93	679127	83.93205	ppb	98
28) 2,4-Dichlorophenol	6.17	162	547229	83.39561	ppb	100
29) 1,2,4-Trichlorobenzene	6.24	180	576211	79.49798	ppb	99
30) 3,4-Dimethylphenol	6.29	107	820634	75.54077	ppb	99
31) Naphthalene	6.33	128	1762100	77.83370	ppb	99
32) 4-Chloroaniline	6.41	127	626144	77.94493	ppb	93
33) 2,6-Dichlorophenol	6.41	162	470298	74.23545	ppb	98
34) Hexachloropropene	6.42	213	458828	79.56940	ppb	98
35) Hexachlorobutadiene	6.47	225	341554	73.88292	ppb	97
36) Caprolactum	6.85	55	263295	77.01327	ppb	97
37) 4-Chloro-3-methylphenol	6.99	107	569393	76.03086	ppb	86

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y010.D Vial: 10
Acq On : 7 Dec 16 13:02 Operator: MA
Sample : 80ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.12	142	1107600	73.28275	ppb		99
39)	1-Methylnaphthalene	7.23	142	1101455	75.97821	ppb		100
41)	Hexachlorocyclopentadiene	7.29	237	283877	81.78811	ppb		98
42)	1,2,4,5-Tetrachlorobenzene	7.31	216	543057	75.73693	ppb		97
43)	2,4,6-Trichlorophenol	7.46	196	352380	74.06038	ppb		96
44)	2,4,5-Trichlorophenol	7.52	196	364305	72.30607	ppb		98
46)	1,1'-Biphenyl	7.66	154	1431535	71.65801	ppb		99
47)	2-Chloronaphthalene	7.67	162	1099952	69.88911	ppb		96
48)	2-Nitroaniline	7.81	65	409925	73.35725	ppb		87
49)	Dimethyl phthalate	8.03	163	1345976	69.85672	ppb		98
50)	2,6-DNT	8.10	165	312732	72.93022	ppb	#	73
51)	Acenaphthylene	8.15	152	1738197	71.04441	ppb		100
52)	3-Nitroaniline	8.30	138	350245	78.89239	ppb		86
53)	Acenaphthene	8.35	154	1111537	74.17946	ppb		99
54)	2,4-Dinitrophenol	8.44	184	218209	93.07907	ppb		96
55)	4-Nitrophenol	8.54	65	306442	78.35915	ppb		97
56)	Dibenzofuran	8.55	168	1632194	74.70485	ppb		94
57)	2,4-DNT	8.57	165	451681	74.51608	ppb	#	80
58)	2,3,4,6-Tetrachlorophenol	8.71	232	315865	80.56372	ppb		96
59)	Diethyl phthalate	8.84	149	1405142	71.82968	ppb		99
60)	4-Chlorophenyl phenyl ethe	8.96	204	628797	70.71859	ppb		81
61)	Fluorene	8.95	166	1287251	71.52024	ppb		98
62)	4-Nitroaniline	9.02	138	354043	83.72308	ppb		96
65)	4,6-Dinitro-2-methylphenol	9.06	198	328902	93.07921	ppb	#	68
66)	Diphenyl amine	9.10	169	2177827	158.05783	ppb		99
67)	n-Nitrosodiphenylamine	9.10	169	2177827	158.05783	ppb		99
68)	1,2-Diphenylhydrazine	9.14	77	1790205	82.06506	ppb	#	89
69)	4-Bromophenyl phenyl ether	9.52	248	376085	71.24001	ppb	#	81
70)	Hexachlorobenzene	9.60	284	403389	71.73345	ppb	#	79
71)	Atrazine	9.73	200	197787	35.83598	ppb		99
72)	Pentachlorophenol	9.84	266	222525	97.90203	ppb		97
73)	Phenanthrene	10.06	178	2029194	73.16888	ppb		99
74)	Anthracene	10.12	178	2073870	71.90210	ppb		99
75)	Carbazol	10.32	167	1832065	71.54326	ppb		97
76)	Di-n-butylphthalate	10.73	149	2372548	69.20651	ppb		99
77)	Fluoranthene	11.44	202	2349024	77.50352	ppb		99
79)	Benzidine	11.61	184	843755	83.61455	ppb		99
80)	Pyrene	11.70	202	2273483	74.72502	ppb		99
82)	Butyl benzylphthalate	12.46	149	1147875	75.33766	ppb		93
83)	3,3'-Dichlorobenzidine	13.08	252	711820	76.08636	ppb		99
84)	Benz (a) anthracene	13.10	228	2207148	76.45930	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.13	149	1603119	74.55873	ppb		98
86)	Chrysene	13.14	228	2085134	75.14105	ppb		99
87)	Di-n-octylphthalate	13.85	149	2762190	72.49541	ppb		96
89)	Benzo (b) fluoranthene	14.29	252	2598169	85.15963	ppb		98
90)	Benzo (k) fluoranthene	14.33	252	2204360	75.56317	ppb		98
91)	Benzo (a) pyrene	14.69	252	2169513	75.50794	ppb		99
92)	Indeno (1,2,3-cd) pyrene	16.31	276	2538105	77.63207	ppb		98
93)	Dibenz (a,h) anthracene	16.34	278	2157371	77.56008	ppb		98
94)	Benzo (g,h,i) perylene	16.77	276	1984638	71.77049	ppb		100

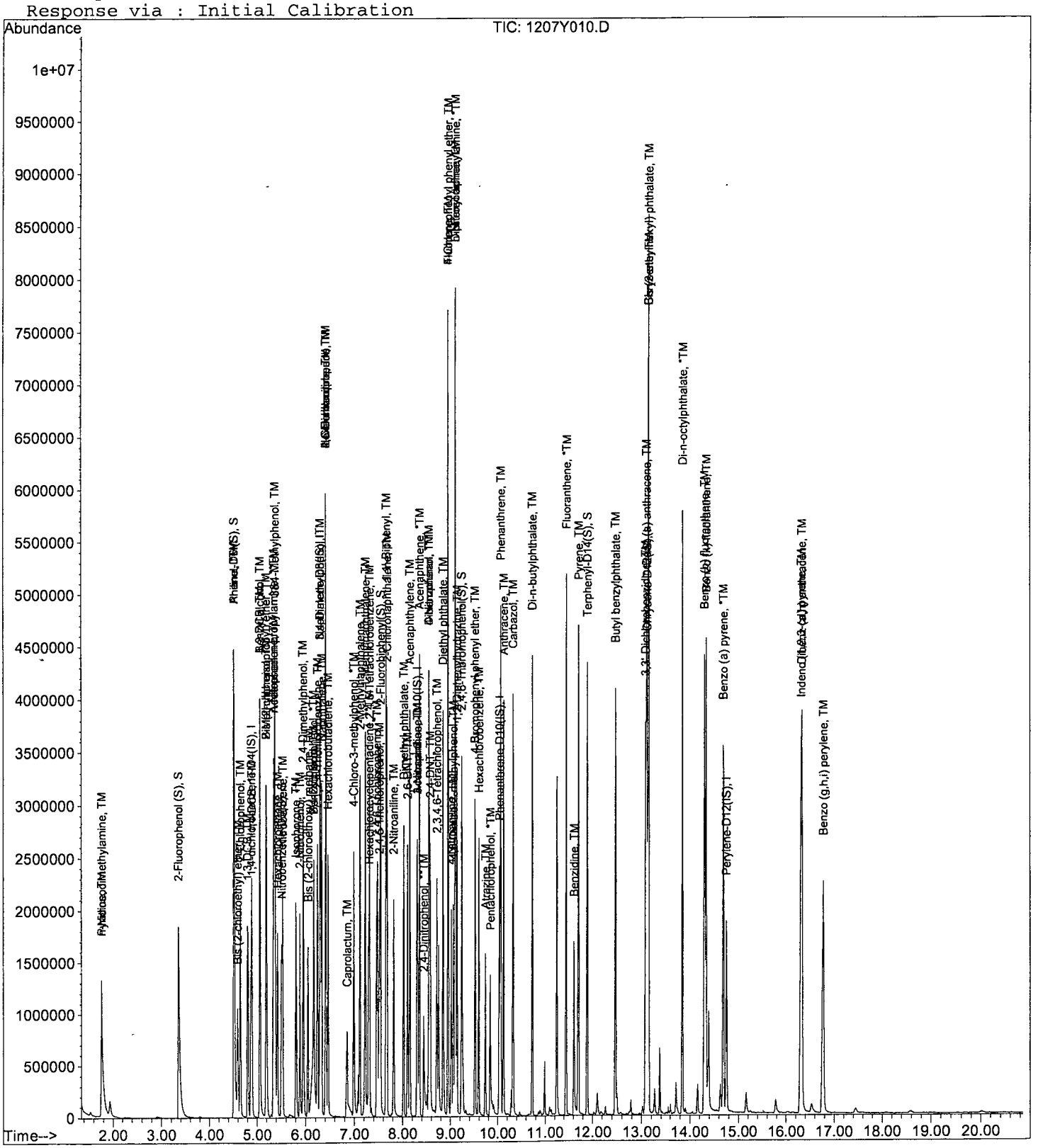
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y010.D Vial: 10
Acq On : 7 Dec 16 13:02 Operator: MA
Sample : 80ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y011.D Vial: 11
Acq On : 7 Dec 16 13:32 Operator: MA
Sample : 100ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	214746	40.00000	ppb		0.00
20) Napthalene-D8(IS)	6.30	136	801273	40.00000	ppb		0.00
40) Acenaphthene-D10(IS)	8.31	164	479807	40.00000	ppb		0.00
64) Phenanthrene-D10(IS)	10.03	188	1038349	40.00000	ppb		0.00
78) Chrysene-D12(IS)	13.11	240	897961	40.00000	ppb		0.00
88) Perylene-D12(IS)	14.76	264	1012967	40.00000	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol (S)	3.36	112	1442400	212.20467	ppb		0.00
Spiked Amount 200.000			Recovery = 106.103%				
5) Phenol-D6 (S)	4.52	99	1755614	186.71857	ppb		0.00
Spiked Amount 200.000			Recovery = 93.360%				
21) Nitrobenzene-D5(S)	5.51	82	880245	105.28952	ppb		0.00
Spiked Amount 100.000			Recovery = 105.290%				
45) 2-Fluorobiphenyl(S)	7.54	172	1444098	94.78208	ppb		0.00
Spiked Amount 100.000			Recovery = 94.782%				
63) 2,4,6-Tribromophenol(S)	9.24	330	537159	227.97590	ppb		0.00
Spiked Amount 200.000			Recovery = 113.988%				
81) Terphenyl-D14(S)	11.90	244	1906266	93.65464	ppb		0.00
Spiked Amount 100.000			Recovery = 93.655%				
Target Compounds							Qvalue
2) n-Nitrosodimethylamine	1.75	42	427152	84.84044	ppb		98
3) Pyridine	1.76	79	954145	88.71098	ppb		96
6) Phenol	4.53	94	1029962	96.57911	ppb		91
7) Aniline	4.53	66	1005037	95.71079	ppb	#	76
8) Bis (2-chloroethyl) ether	4.59	63	462246	96.43463	ppb		99
9) 2-Chlorophenol	4.65	128	814431	98.50346	ppb		96
10) 1,3-DCB	4.81	146	851310	95.00850	ppb		98
11) 1,4-DCB	4.89	146	861705	93.84739	ppb		99
12) Benzyl alcohol	5.06	108	474310	102.55209	ppb		89
13) 1,2-DCB	5.06	146	785684	91.82209	ppb		98
14) 2-Methylphenol	5.20	107	595539	94.98412	ppb		96
15) Bis (2-chloroisopropyl) et	5.19	45	856467	89.21626	ppb		85
16) Acetophenone	5.34	105	1088689	93.16085	ppb		99
17) 3&4-Methylphenol	5.38	107	1562005	188.32154	ppb		92
18) n-Nitrosodi-n-propylamine	5.35	70	569115	93.88817	ppb		99
19) Hexachloroethane	5.43	117	354007	92.95925	ppb	#	76
22) Nitrobenzene	5.53	77	903147	105.59548	ppb		97
23) Isophorone	5.81	82	1523574	108.05033	ppb		96
24) 2-Nitrophenol	5.88	139	468219	114.98256	ppb		95
25) 2,4-Dimethylphenol	5.96	122	701715	110.54758	ppb		99
26) Benzoic acid	6.17	105	531913	109.09798	ppb		91
27) Bis (2-chloroethoxy) metha	6.05	93	810611	107.51520	ppb		99
28) 2,4-Dichlorophenol	6.17	162	626111	102.40142	ppb		99
29) 1,2,4-Trichlorobenzene	6.24	180	674426	99.85951	ppb		99
30) 3,4-Dimethylphenol	6.29	107	982967	97.10719	ppb		97
31) Naphthalene	6.33	128	2092381	99.18785	ppb		100
32) 4-Chloroaniline	6.41	127	726261	97.02573	ppb		97
33) 2,6-Dichlorophenol	6.41	162	585319	99.15426	ppb		97
34) Hexachloropropene	6.42	213	564663	105.09113	ppb		99
35) Hexachlorobutadiene	6.47	225	420352	97.58395	ppb		96
36) Caprolactum	6.87	55	323697	101.61135	ppb		95
37) 4-Chloro-3-methylphenol	6.99	107	718886	103.01925	ppb		84

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y161207\1207Y011.D Vial: 11
Acq On : 7 Dec 16 13:32 Operator: MA
Sample : 100ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.12	142	1400630	99.45413	ppb		98
39)	1-Methylnaphthalene	7.23	142	1395356	103.29704	ppb		99
41)	Hexachlorocyclopentadiene	7.29	237	337941	98.72624	ppb		99
42)	1,2,4,5-Tetrachlorobenzene	7.31	216	637512	97.67376	ppb		98
43)	2,4,6-Trichlorophenol	7.46	196	430600	99.42051	ppb		98
44)	2,4,5-Trichlorophenol	7.52	196	452384	98.63798	ppb		89
46)	1,1'-Biphenyl	7.66	154	1743421	95.87212	ppb		98
47)	2-Chloronaphthalene	7.67	162	1364913	95.27260	ppb		95
48)	2-Nitroaniline	7.82	65	501195	98.53093	ppb		96
49)	Dimethyl phthalate	8.03	163	1691646	96.45119	ppb		99
50)	2,6-DNT	8.11	165	428985	109.90174	ppb		96
51)	Acenaphthylene	8.15	152	2176158	97.71215	ppb		100
52)	3-Nitroaniline	8.31	138	417728	103.36750	ppb	#	99
53)	Acenaphthene	8.35	154	1365612	100.11850	ppb		99
54)	2,4-Dinitrophenol	8.44	184	244053	112.65730	ppb		86
55)	4-Nitrophenol	8.54	65	381862	104.77768	ppb		94
56)	Dibenzofuran	8.56	168	2009957	101.06274	ppb		97
57)	2,4-DNT	8.58	165	559804	101.45686	ppb		98
58)	2,3,4,6-Tetrachlorophenol	8.71	232	407530	114.18916	ppb		93
59)	Diethyl phthalate	8.85	149	1833935	102.98996	ppb		97
60)	4-Chlorophenyl phenyl ethe	8.96	204	822846	101.66441	ppb		81
61)	Fluorene	8.96	166	1670986	101.99193	ppb		98
62)	4-Nitroaniline	9.03	138	400399	104.01822	ppb		94
65)	4,6-Dinitro-2-methylphenol	9.07	198	386581	105.90161	ppb	#	83
66)	Diphenyl amine	9.11	169	2820080	198.12073	ppb		100
67)	n-Nitrosodiphenylamine	9.11	169	2820080	198.12073	ppb		100
68)	1,2-Diphenylhydrazine	9.14	77	2276128	101.00156	ppb		96
69)	4-Bromophenyl phenyl ether	9.52	248	489978	89.84427	ppb		91
70)	Hexachlorobenzene	9.60	284	507014	87.27573	ppb		86
71)	Atrazine	9.73	200	255247	44.76701	ppb		97
72)	Pentachlorophenol	9.84	266	289057	117.11640	ppb		96
73)	Phenanthrene	10.06	178	2631951	91.86635	ppb		99
74)	Anthracene	10.12	178	2699734	90.60598	ppb		100
75)	Carbazol	10.33	167	2292694	86.66621	ppb		99
76)	Di-n-butylphthalate	10.74	149	3048385	86.07511	ppb		99
77)	Fluoranthene	11.44	202	3022326	96.52752	ppb	#	98
79)	Benzidine	11.62	184	1093324	110.14442	ppb		98
80)	Pyrene	11.71	202	3079365	102.89248	ppb		99
82)	Butyl benzylphthalate	12.47	149	1430703	95.45863	ppb		88
83)	3,3'-Dichlorobenzidine	13.08	252	910729	98.96324	ppb	#	97
84)	Benz (a) anthracene	13.10	228	2808833	98.91745	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.13	149	2022285	95.61439	ppb		96
86)	Chrysene	13.14	228	2799507	102.55881	ppb		98
87)	Di-n-octylphthalate	13.85	149	3529346	94.16713	ppb	#	93
89)	Benzo (b) fluoranthene	14.30	252	3038345	89.45009	ppb		99
90)	Benzo (k) fluoranthene	14.33	252	2973702	91.55930	ppb		100
91)	Benzo (a) pyrene	14.69	252	2841755	88.83710	ppb		97
92)	Indeno (1,2,3-cd) pyrene	16.31	276	2782713	76.44997	ppb		95
93)	Dibenz (a,h) anthracene	16.34	278	2299501	74.25478	ppb		97
94)	Benzo (g,h,i) perylene	16.78	276	2235653	72.61835	ppb		99

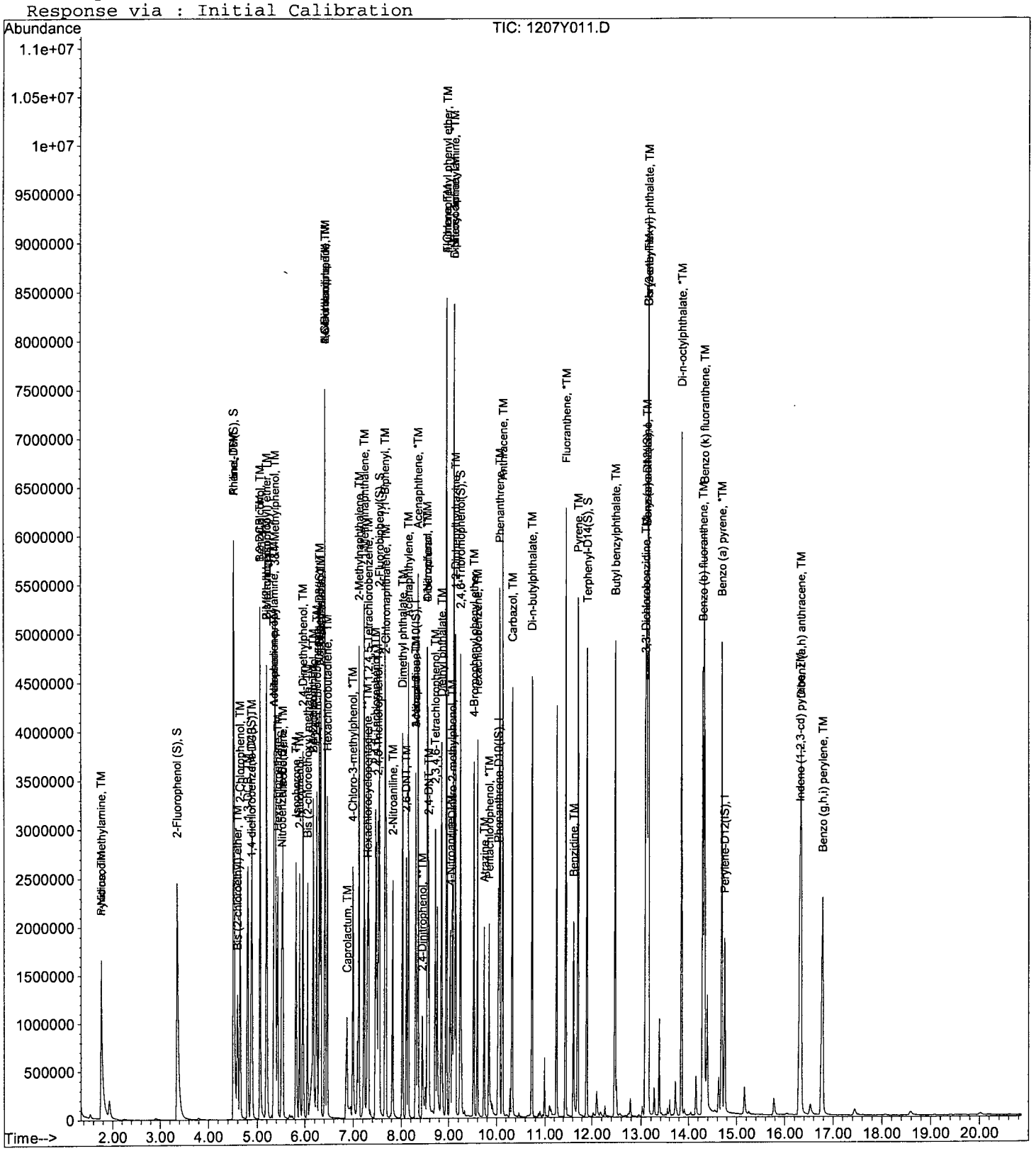
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y011.D Vial: 11
Acq On : 7 Dec 16 13:32 Operator: MA
Sample : 100ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 7 Dec 16 14:01
Instrument: Yoda
Initial Cal. Date: 12/07/16
Data File: 1207Y012.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	n-Nitrosodimethylamine	0.7942	0.8605	8.3	TM	
2	TM	Pyridine	1.794	2.065	15	TM	
3	*TM	Phenol	1.974	1.961	0.64	*TM	
4	TM	Aniline	1.868	1.717	8.1	TM	
5	TM	Bis (2-chloroethyl) ether	0.8648	0.9372	8.4	TM	
6	TM	2-Chlorophenol	1.576	1.492	5.4	TM	
7	TM	1,3-DCB	1.630	1.713	5.1	TM	
8	*TM	1,4-DCB	1.679	1.836	9.3	*TM	
9	TM	Benzyl alcohol	0.8717	0.9544	9.5	TM	
10	TM	1,2-DCB	1.537	1.648	7.2	TM	
11	TM	2-Methylphenol	1.120	1.183	5.6	TM	
12	TM	Bis (2-chloroisopropyl) ether	1.723	1.964	14	TM	
13	TM	Acetophenone	2.044	2.282	12	TM	
14	TM	3&4-Methylphenol	1.484	1.588	7.0	TM	
15	**TM	n-Nitrosodi-n-propylamine	1.052	1.111	5.6	**TM	
16	TM	Hexachloroethane	0.6713	0.7583	13	TM	
17	TM	Nitrobenzene	0.4083	0.4146	1.5	TM	
18	TM	Isophorone	0.6762	0.7401	9.5	TM	
19	*TM	2-Nitrophenol	0.2038	0.1897	6.9	*TM	
20	TM	2,4-Dimethylphenol	0.3231	0.2928	9.4	TM	
21	TML	Benzoic acid	0.2159	0.3029	40	TML	19
22	TM	Bis (2-chloroethoxy) methane	0.3856	0.3755	2.6	TM	
23	*TM	2,4-Dichlorophenol	0.3079	0.3092	0.41	*TM	
24	TM	1,2,4-Trichlorobenzene	0.3349	0.3788	13	TM	
25	TM	3,4-Dimethylphenol	0.4947	0.4722	4.5	TM	
26	TM	Naphthalene	1.049	1.030	1.9	TM	
27	TM	4-Chloroaniline	0.3882	0.3699	4.7	TM	
28	TM	2,6-Dichlorophenol	0.2970	0.2844	4.3	TM	
29	TM	Hexachloropropene	0.2678	0.2625	2.0	TM	
30	*TM	Hexachlorobutadiene	0.2134	0.2282	7.0	*TM	
31	TM	Caprolactum	0.1543	0.1430	7.3	TM	
32	*TM	4-Chloro-3-methylphenol	0.3401	0.3273	3.8	*TM	
33	TM	2-Methylnaphthalene	0.6856	0.6921	0.95	TM	
34	TM	1-Methylnaphthalene	0.6763	0.6628	2.0	TM	
35	**TMQ	Hexachlorocyclopentadiene	0.1853	0.2606	41	**TMQ	12
36	TM	1,2,4,5-Tetrachlorobenzene	0.5436	0.5813	6.9	TM	
37	*TM	2,4,6-Trichlorophenol	0.3508	0.3628	3.4	*TM	
38	TM	2,4,5-Trichlorophenol	0.3829	0.4030	5.3	TM	
39	TM	1,1'-Biphenyl	1.499	1.521	1.5	TM	
40	TM	2-Chloronaphthalene	1.159	1.302	12	TM	
		Average			8.2		

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 7 Dec 16 14:01
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y012.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	2-Nitroaniline	0.3982	0.4094	2.8	TM	
42	TM	Dimethyl phthalate	1.391	1.370	1.6	TM	
43	TM	2,6-DNT	0.3141	0.3323	5.8	TM	
44	TM	Acenaphthylene	1.826	1.754	3.9	TM	
45	TM	3-Nitroaniline	0.3430	0.3329	2.9	TM	
46	*TM	Acenaphthene	1.156	1.094	5.3	*TM	
47	**TMQ	2,4-Dinitrophenol	0.1593	0.1353	15	**TMQ	15
48	**TML	4-Nitrophenol	0.2439	0.2731	12	**TML	5.3
49	TM	Dibenzofuran	1.639	1.588	3.1	TM	
50	TM	2,4-DNT	0.4436	0.4519	1.9	TM	
51	TM	2,3,4,6-Tetrachlorophenol	0.3114	0.3085	0.94	TM	
52	TM	Diethyl phthalate	1.432	1.360	5.0	TM	
53	TM	4-Chlorophenyl phenyl ether	0.6394	0.6265	2.0	TM	
54	TM	Fluorene	1.324	1.241	6.3	TM	
55	TM	4-Nitroaniline	0.3249	0.3379	4.0	TM	
56	TM	4,6-Dinitro-2-methylphenol	0.1486	0.1339	9.9	TM	
57	TM	Diphenyl amine	0.5706	0.5203	8.8	TM	
58	*TM	n-Nitrosodiphenylamine	0.5706	0.5203	8.8	*TM	
59	TM	1,2-Diphenylhydrazine	0.8211	0.7495	8.7	TM	
60	TM	4-Bromophenyl phenyl ether	0.2072	0.2226	7.4	TM	
61	TM	Hexachlorobenzene	0.2130	0.2500	17	TM	
62	TM	Atrazine	0.2062	0.2070	0.41	TM	
63	*TML	Pentachlorophenol	0.0958	0.0912	4.8	*TML	9.9
64	TM	Phenanthrene	1.080	1.064	1.5	TM	
65	TM	Anthracene	1.111	1.042	6.2	TM	
66	TM	Carbazol	1.005	0.8998	11	TM	
67	TM	Di-n-butylphthalate	1.292	1.202	6.9	TM	
68	*TM	Fluoranthene	1.189	1.119	5.8	*TM	
69	TM	Benzidine	0.4531	0.5340	18	TM	
70	TM	Pyrene	1.357	1.408	3.8	TM	
71	TM	Butyl benzylphthalate	0.6517	0.6327	2.9	TM	
72	TM	3,3'-Dichlorobenzidine	0.4273	0.4953	16	TM	
73	TM	Benz (a) anthracene	1.249	1.200	3.9	TM	
74	TM	Bis (2-ethylhexyl) phthalate	0.9136	0.9271	1.5	TM	
75	TM	Chrysene	1.213	1.146	5.5	TM	
76	*TM	Di-n-octylphthalate	1.614	1.629	0.92	*TM	
77	TM	Benzo (b) fluoranthene	1.250	1.211	3.2	TM	
78	TM	Benzo (k) fluoranthene	1.189	1.125	5.4	TM	
79	*TM	Benzo (a) pyrene	1.168	1.100	5.9	*TM	
80	TM	Indeno (1,2,3-cd) pyrene	1.293	1.302	0.66	TM	
		Average			5.9		

0
0

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 7 Dec 16 14:01
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y012.D

		Compound	MEAN	CCRF	%D	%Drift	
81	TM	Dibenz (a,h) anthracene	1.091	1.084	0.59	TM	
82	TM	Benzo (g,h,i) perylene	1.161	1.030	11	TM	
83							
84							
85							
86							
87							
88							
89							
90							
91							
92							
93							
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114							
115							
116							
117							
118							
119							
120							
		Average			5.8		

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y012.D Vial: 12
Acq On : 7 Dec 16 14:01 Operator: MA
Sample : 2ND SRC SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 14:56 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	191057	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.30	136	871568	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	523606	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	1016944	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.11	240	899173	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.75	264	937926	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	0.00	112	0	0.00000 ppb	
Spiked Amount 200.000			Recovery	= 0.000%	
5) Phenol-D6 (S)	0.00	99	0	0.00000 ppb	
Spiked Amount 200.000			Recovery	= 0.000%	
21) Nitrobenzene-D5(S)	5.42	82	51167	5.79164 ppb	-0.08
Spiked Amount 100.000			Recovery	= 5.792%	
45) 2-Fluorobiphenyl(S)	7.54	172	1678	0.10166 ppb	0.00
Spiked Amount 100.000			Recovery	= 0.102%	
63) 2,4,6-Tribromophenol(S)	0.00	330	0	0.00000 ppb	
Spiked Amount 200.000			Recovery	= 0.000%	
81) Terphenyl-D14(S)	11.90	244	2267	0.11150 ppb	0.01
Spiked Amount 100.000			Recovery	= 0.111%	

Algorithm = $\frac{1121605 \times 1 \times 40}{871568 \times 1.049} = 49.07$ HA 12/8/16

Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.75	42	205505	54.17418 ppb	99
3) Pyridine	1.76	79	493077	57.53832 ppb	100
6) Phenol	4.52	94	468384	49.67907 ppb	97
7) Aniline	4.52	66	410130	45.96281 ppb	94
8) Bis (2-chloroethyl) ether	4.58	63	223817	54.18477 ppb	97
9) 2-Chlorophenol	4.65	128	356278	47.32243 ppb	98
10) 1,3-DCB	4.80	146	409122	52.55606 ppb	98
11) 1,4-DCB	4.89	146	438492	54.66182 ppb	100
12) Benzyl alcohol	5.05	108	227935	54.74642 ppb	89
13) 1,2-DCB	5.06	146	393642	53.62112 ppb	98
14) 2-Methylphenol	5.19	107	282490	52.81375 ppb	99
15) Bis (2-chloroisopropyl) et	5.19	45	468942	56.98498 ppb	99
16) Acetophenone	5.34	105	544879	55.81351 ppb	99
17) 3&4-Methylphenol	5.36	107	758574	107.00501 ppb	99
18) n-Nitrosodi-n-propylamine	5.35	70	265350	52.78586 ppb	98
19) Hexachloroethane	5.42	117	181096	56.48025 ppb	95
22) Nitrobenzene	5.52	77	451653	50.77125 ppb	99
23) Isophorone	5.79	82	806347	54.72642 ppb	92
24) 2-Nitrophenol	5.88	139	206638	46.54256 ppb	97
25) 2,4-Dimethylphenol	5.95	122	319047	45.32287 ppb	99
26) Benzoic acid	6.13	105	329992	59.40511 ppb	98
27) Bis (2-chloroethoxy) metha	6.04	93	409113	48.69541 ppb	99
28) 2,4-Dichlorophenol	6.16	162	336842	50.20680 ppb	95
29) 1,2,4-Trichlorobenzene	6.24	180	412682	56.55773 ppb	97
30) 3,4-Dimethylphenol	6.29	107	514459	47.73195 ppb	99
31) Naphthalene	6.32	128	1121605	49.06908 ppb	99
32) 4-Chloroaniline	6.40	127	402969	47.64010 ppb	98
33) 2,6-Dichlorophenol	6.41	162	309823	47.86782 ppb	99
34) Hexachloropropene	6.42	213	285981	49.00147 ppb	99
35) Hexachlorobutadiene	6.46	225	248647	53.48708 ppb	98
36) Caprolactum	6.83	55	155831	46.33822 ppb	95
37) 4-Chloro-3-methylphenol	6.98	107	356630	48.12038 ppb	86

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y012.D Vial: 12
Acq On : 7 Dec 16 14:01 Operator: MA
Sample : 2ND SRC SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 14:56 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.11	142	754038	50.47743	ppb		99
39)	1-Methylnaphthalene	7.22	142	722080	48.99775	ppb		100
41)	Hexachlorocyclopentadiene	7.29	237	170588	55.81613	ppb		99
42)	1,2,4,5-Tetrachlorobenzene	7.31	216	380472	53.46579	ppb		99
43)	2,4,6-Trichlorophenol	7.45	196	237475	51.71288	ppb		98
44)	2,4,5-Trichlorophenol	7.51	196	263784	52.63506	ppb		91
46)	1,1'-Biphenyl	7.65	154	995419	50.73149	ppb	#	98
47)	2-Chloronaphthalene	7.68	162	852397	56.20556	ppb		98
48)	2-Nitroaniline	7.81	65	267928	51.40520	ppb		97
49)	Dimethyl phthalate	8.02	163	896431	49.21645	ppb		100
50)	2,6-DNT	8.10	165	217507	52.89516	ppb		97
51)	Acenaphthylene	8.15	152	1148034	48.03874	ppb		99
52)	3-Nitroaniline	8.30	138	217900	48.53466	ppb		96
53)	Acenaphthene	8.34	154	716245	47.33371	ppb		98
54)	2,4-Dinitrophenol	8.44	184	88575	42.42116	ppb		93
55)	4-Nitrophenol	8.54	65	178738	47.34341	ppb		99
56)	Dibenzofuran	8.55	168	1039530	48.44636	ppb		100
57)	2,4-DNT	8.58	165	295792	50.93595	ppb		96
58)	2,3,4,6-Tetrachlorophenol	8.71	232	201912	49.52960	ppb		97
59)	Diethyl phthalate	8.84	149	890442	47.50284	ppb		99
60)	4-Chlorophenyl phenyl ethe	8.95	204	410071	48.99615	ppb		97
61)	Fluorene	8.95	166	811998	46.83909	ppb		99
62)	4-Nitroaniline	9.01	138	221182	52.00204	ppb		99
65)	4,6-Dinitro-2-methylphenol	9.05	198	170147	45.02904	ppb	#	63
66)	Diphenyl amine	9.10	169	1322713	91.17623	ppb		99
67)	n-Nitrosodiphenylamine	9.10	169	1322713	91.17623	ppb		99
68)	1,2-Diphenylhydrazine	9.13	77	952702	45.63842	ppb		98
69)	4-Bromophenyl phenyl ether	9.51	248	282914	53.71191	ppb		98
70)	Hexachlorobenzene	9.59	284	317774	58.69445	ppb		95
71)	Atrazine	9.73	200	131578	25.10242	ppb		95
72)	Pentachlorophenol	9.84	266	115962	45.03845	ppb		95
73)	Phenanthrene	10.06	178	1351927	49.22811	ppb		100
74)	Anthracene	10.12	178	1325118	46.92467	ppb		99
75)	Carbazol	10.32	167	1143768	44.74849	ppb		100
76)	Di-n-butylphthalate	10.73	149	1528545	46.53939	ppb		100
77)	Fluoranthene	11.44	202	1422850	47.07737	ppb		100
79)	Benzidine	11.61	184	600230m	58.92898	ppb		99
80)	Pyrene	11.70	202	1583034	51.91299	ppb		98
82)	Butyl benzylphthalate	12.47	149	711172	48.54397	ppb		99
83)	3,3'-Dichlorobenzidine	13.08	252	556753	57.96756	ppb		98
84)	Benz (a) anthracene	13.10	228	1348312	48.02891	ppb		100
85)	Bis (2-ethylhexyl) phthala	13.13	149	1042054	50.73897	ppb		97
86)	Chrysene	13.13	228	1288110	47.23790	ppb		98
87)	Di-n-octylphthalate	13.85	149	1830661	50.46239	ppb		99
89)	Benzo (b) fluoranthene	14.29	252	1419865	48.42384	ppb		99
90)	Benzo (k) fluoranthene	14.32	252	1318653	47.28739	ppb		99
91)	Benzo (a) pyrene	14.68	252	1289082	47.06095	ppb		99
92)	Indeno (1,2,3-cd) pyrene	16.30	276	1526262	50.33221	ppb		99
93)	Dibenz (a,h) anthracene	16.32	278	1271230	49.70488	ppb		99
94)	Benzo (g,h,i) perylene	16.76	276	1208044	44.36041	ppb		99

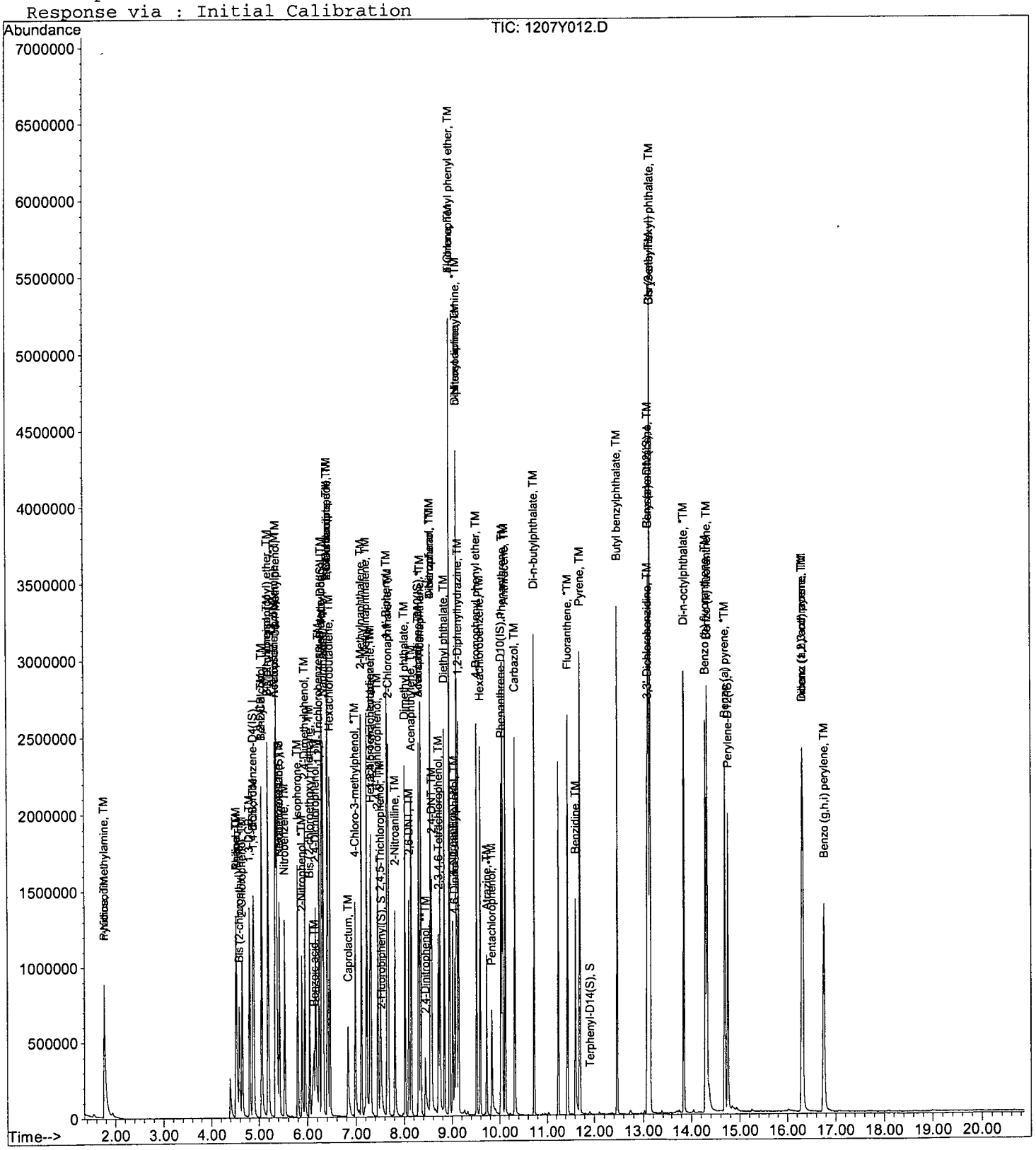
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y012.D Vial: 12
Acq On : 7 Dec 16 14:01 Operator: MA
Sample : 2ND SRC SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 14:56 2016 Quant Results File: Y1207.RES

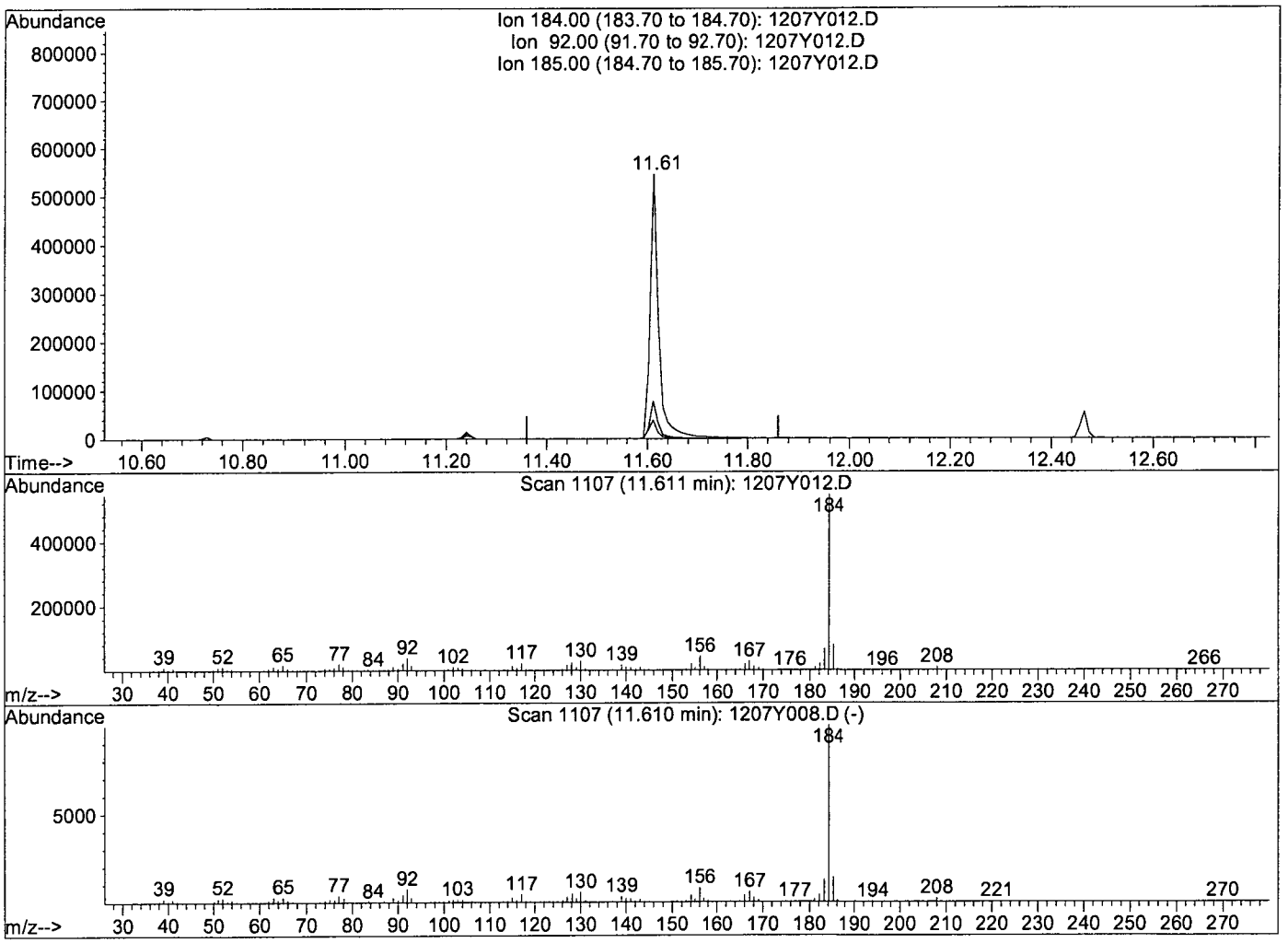
Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y012.D Vial: 12
Acq On : 7 Dec 16 14:01 Operator: MA
Sample : 2ND SRC SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Dec 7 14:46 2016 Quant Results File: temp.res

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Multiple Level Calibration



TIC: 1207Y012.D

(79) Benzidine (TM)

11.61min 62.5480ppb

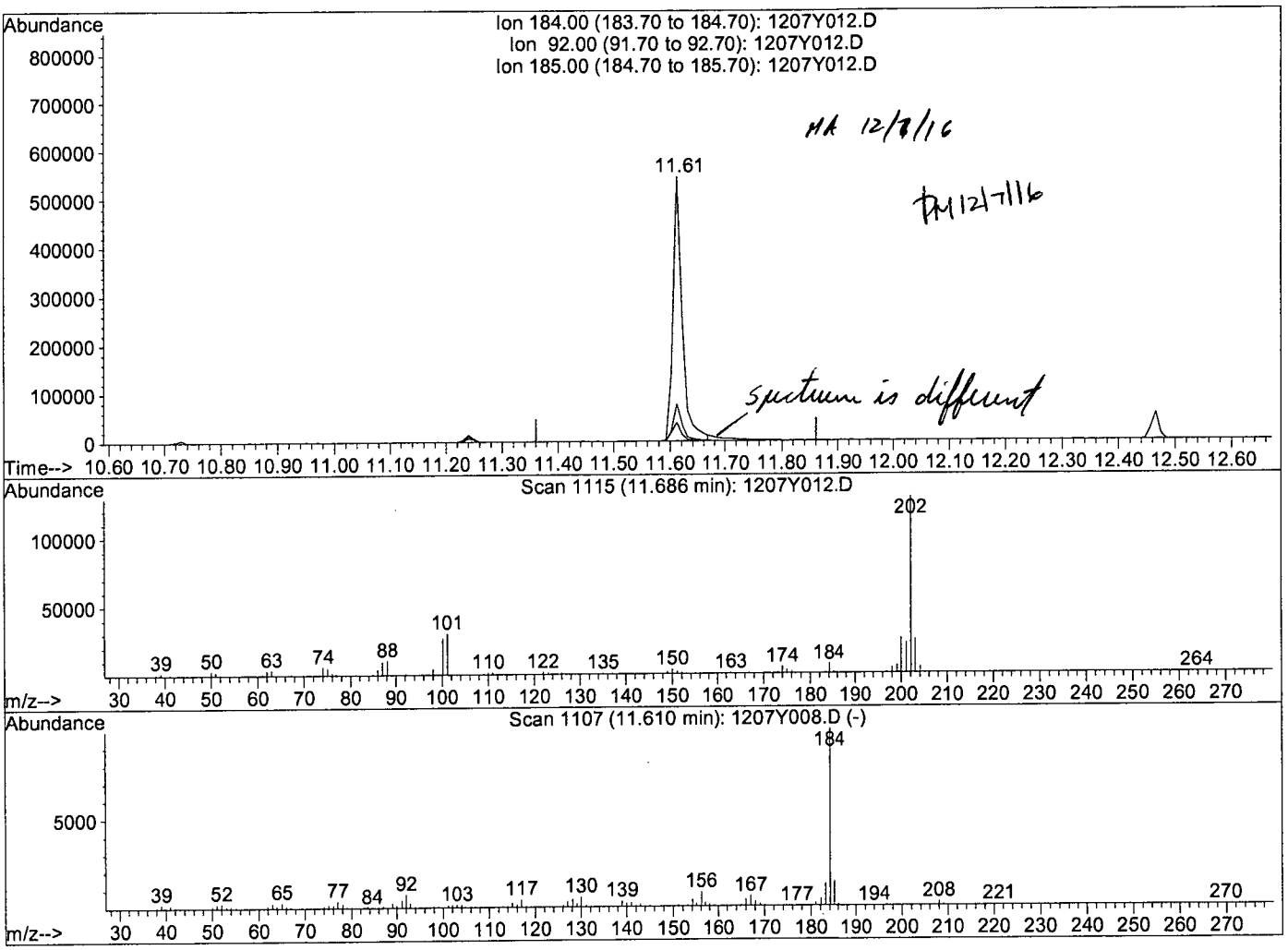
response 637092

Ion	Exp%	Act%
184.00	100	100
92.00	7.20	7.03
185.00	13.80	14.19
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y012.D Vial: 12
Acq On : 7 Dec 16 14:01 Operator: MA
Sample : 2ND SRC SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Dec 7 14:56 2016 Quant Results File: temp.res

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Multiple Level Calibration



TIC: 1207Y012.D

(79) Benzidine (TM)

11.61min 58.9290ppb m

response 600230

Ion	Exp%	Act%
184.00	100	100
92.00	7.20	7.03
185.00	13.80	14.19
0.00	0.00	0.00

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/17/17
Instrument: Yoda
Initial Cal. Date: 12/07/16
Data File: 1207Y312.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	n-Nitrosodimethylamine	0.7942	0.9114	15	TM	
3	TM	Pyridine	1.794	1.984	11	TM	
4	S	2-Fluorophenol (S)	1.316	1.328	0.96	S	
5	S	Phenol-D6 (S)	1.737	1.717	1.1	S	
6	*TM	Phenol	1.974	1.974	0.01	*TM	
7	TM	Aniline	1.868	1.840	1.5	TM	
8	TM	Bis (2-chloroethyl) ether	0.8648	0.9228	6.7	TM	
9	TM	2-Chlorophenol	1.576	1.524	3.3	TM	
10	TM	1,3-DCB	1.630	1.589	2.5	TM	
11	*TM	1,4-DCB	1.679	1.588	5.5	*TM	
12	TM	Benzyl alcohol	0.8717	0.8861	1.7	TM	
13	TM	1,2-DCB	1.537	1.465	4.7	TM	
14	TM	2-Methylphenol	1.120	1.109	0.97	TM	
15	TM	Bis (2-chloroisopropyl) ether	1.723	2.007	17	TM	
16	TM	Acetophenone	2.044	1.987	2.8	TM	
17	TM	3&4-Methylphenol	1.484	1.452	2.2	TM	
18	**TM	n-Nitrosodi-n-propylamine	1.052	1.108	5.3	**TM	
19	TM	Hexachloroethane	0.6713	0.6640	1.1	TM	
20	I	Napthalene-D8(IS)	ISTD			I	
21	S	Nitrobenzene-D5(S)	0.4055	0.4196	3.5	S	
22	TM	Nitrobenzene	0.4083	0.4157	1.8	TM	
23	TM	Isophorone	0.6762	0.6891	1.9	TM	
24	*TM	2-Nitrophenol	0.2038	0.2141	5.1	*TM	
25	TM	2,4-Dimethylphenol	0.3231	0.3217	0.42	TM	
26	TML	Benzoic acid	0.2159	0.2023	6.3	TML	18
27	TM	Bis (2-chloroethoxy) methane	0.3856	0.3917	1.6	TM	
28	*TM	2,4-Dichlorophenol	0.3079	0.3058	0.67	*TM	
29	TM	1,2,4-Trichlorobenzene	0.3349	0.3267	2.4	TM	
30	TM	3,4-Dimethylphenol	0.4947	0.4601	7.0	TM	
31	TM	Naphthalene	1.049	1.029	1.9	TM	
32	TM	4-Chloroaniline	0.3882	0.3606	7.1	TM	
33	TM	2,6-Dichlorophenol	0.2970	0.2697	9.2	TM	
34	TM	Hexachloropropene	0.2678	0.2527	5.6	TM	
35	*TM	Hexachlorobutadiene	0.2134	0.1941	9.0	*TM	
36	TM	Caprolactum	0.1543	0.1736	12	TM	
37	*TM	4-Chloro-3-methylphenol	0.3401	0.3295	3.1	*TM	
38	TM	2-Methylnaphthalene	0.6856	0.6846	0.14	TM	
39	TM	1-Methylnaphthalene	0.6763	0.6745	0.27	TM	
40	I	Acenaphthene-D10(IS)	ISTD			I	
		Average			4.4		

0
0

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/17/17
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y312.D

		Compound	MEAN	CCRF	%D		%Drift
41	**TMQ	Hexachlorocyclopentadiene	0.1853	0.1812	2.2	**TMQ	15
42	TM	1,2,4,5-Tetrachlorobenzene	0.5436	0.5101	6.2	TM	
43	*TM	2,4,6-Trichlorophenol	0.3508	0.3443	1.9	*TM	
44	TM	2,4,5-Trichlorophenol	0.3829	0.3593	6.2	TM	
45	S	2-Fluorobiphenyl(S)	1.261	1.188	5.8	S	
46	TM	1,1'-Biphenyl	1.499	1.437	4.1	TM	
47	TM	2-Chloronaphthalene	1.159	1.097	5.3	TM	
48	TM	2-Nitroaniline	0.3982	0.3890	2.3	TM	
49	TM	Dimethyl phthalate	1.391	1.331	4.4	TM	
50	TM	2,6-DNT	0.3141	0.3051	2.9	TM	
51	TM	Acenaphthylene	1.826	1.735	5.0	TM	
52	TM	3-Nitroaniline	0.3430	0.3267	4.8	TM	
53	*TM	Acenaphthene	1.156	1.061	8.2	*TM	
54	**TMQ	2,4-Dinitrophenol	0.1593	0.1792	13	**TMQ	5.6
55	**TML	4-Nitrophenol	0.2439	0.2594	6.3	**TML	9.6
56	TM	Dibenzofuran	1.639	1.549	5.5	TM	
57	TM	2,4-DNT	0.4436	0.4274	3.7	TM	
58	TM	2,3,4,6-Tetrachlorophenol	0.3114	0.2961	4.9	TM	
59	TM	Diethyl phthalate	1.432	1.353	5.5	TM	
60	TM	4-Chlorophenyl phenyl ether	0.6394	0.5799	9.3	TM	
61	TM	Fluorene	1.324	1.186	10	TM	
62	TM	4-Nitroaniline	0.3249	0.3091	4.9	TM	
63	S	2,4,6-Tribromophenol(S)	0.2006	0.1789	11	S	
64	I	Phenanthrene-D10(IS)	ISTD			I	
65	TM	4,6-Dinitro-2-methylphenol	0.1486	0.1421	4.4	TM	
66	TM	Diphenyl amine	0.5706	0.5223	8.5	TM	
67	*TM	n-Nitrosodiphenylamine	0.5706	0.5223	8.5	*TM	
68	TM	1,2-Diphenylhydrazine	0.8211	0.9434	15	TM	
69	TM	4-Bromophenyl phenyl ether	0.2072	0.1962	5.3	TM	
70	TM	Hexachlorobenzene	0.2130	0.2003	5.9	TM	
71	TM	Atrazine	0.2062	0.1883	8.7	TM	
72	*TML	Pentachlorophenol	0.0958	0.0959	0.13	*TML	5.9
73	TM	Phenanthrene	1.080	1.020	5.5	TM	
74	TM	Anthracene	1.111	1.065	4.1	TM	
75	TM	Carbazol	1.005	0.9524	5.3	TM	
76	TM	Di-n-butylphthalate	1.292	1.219	5.7	TM	
77	*TM	Fluoranthene	1.189	1.114	6.3	*TM	
78	I	Chrysene-D12(IS)	ISTD			I	
79	TM	Benzidine	0.4531	0.4288	5.4	TM	
80	TM	Pyrene	1.357	1.190	12	TM	
		Average			6.2		

0
0

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/17/17
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y312.D

		Compound	MEAN	CCRF	%D	%Drift	
81	S	Terphenyl-D14(S)	0.9045	0.8004	12	S	
82	TM	Butyl benzylphthalate	0.6517	0.5674	13	TM	
83	TM	3,3'-Dichlorobenzidine	0.4273	0.4086	4.4	TM	
84	TM	Benz (a) anthracene	1.249	1.142	8.5	TM	
85	TM	Bis (2-ethylhexyl) phthalate	0.9136	0.8286	9.3	TM	
86	TM	Chrysene	1.213	1.077	11	TM	
87	*TM	Di-n-octylphthalate	1.614	1.487	7.8	*TM	
88	I	Perylene-D12(IS)	ISTD			I	
89	TM	Benzo (b) fluoranthene	1.250	1.158	7.4	TM	
90	TM	Benzo (k) fluoranthene	1.189	1.100	7.5	TM	
91	*TM	Benzo (a) pyrene	1.168	1.088	6.9	*TM	
92	TM	Indeno (1,2,3-cd) pyrene	1.293	1.204	6.9	TM	
93	TM	Dibenz (a,h) anthracene	1.091	1.021	6.4	TM	
94	TM	Benzo (g,h,i) perylene	1.161	1.009	13	TM	
95							
96							
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			8.8		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y312.D Vial: 12
Acq On : 17 Jan 17 9:20 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 17 10:17 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	187819	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.29	136	771156	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.30	164	465112	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.02	188	855928	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.11	240	841074	40.00000 ppb		0.00
88) Perylene-D12(IS)	14.75	264	842313	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.34	112	623791	100.96132 ppb		0.00
Spiked Amount 200.000			Recovery = 50.480%			
5) Phenol-D6 (S)	4.50	99	806382	98.88504 ppb		0.00
Spiked Amount 200.000			Recovery = 49.443%			
21) Nitrobenzene-D5(S)	5.49	82	404488	51.74590 ppb		0.00
Spiked Amount 100.000			Recovery = 51.746%			
45) 2-Fluorobiphenyl(S)	7.53	172	690762	47.11126 ppb		0.00
Spiked Amount 100.000			Recovery = 47.111%			
63) 2,4,6-Tribromophenol(S)	9.23	330	207989	89.18600 ppb		0.00
Spiked Amount 200.000			Recovery = 44.593%			
81) Terphenyl-D14(S)	11.88	244	841465	44.24438 ppb		0.00
Spiked Amount 100.000			Recovery = 44.244%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.74	42	213973	57.37892 ppb		92
3) Pyridine	1.75	79	465892	55.30330 ppb		98
6) Phenol	4.51	94	463391	49.99683 ppb		97
7) Aniline	4.51	66	432033	49.25217 ppb		98
8) Bis (2-chloroethyl) ether	4.57	63	216653	53.35465 ppb		89
9) 2-Chlorophenol	4.64	128	357839	48.34918 ppb		97
10) 1,3-DCB	4.79	146	372951	48.73548 ppb		99
11) 1,4-DCB	4.88	146	372732	47.26531 ppb		97
12) Benzyl alcohol	5.05	108	208027	50.82622 ppb		100
13) 1,2-DCB	5.05	146	343905	47.65368 ppb		98
14) 2-Methylphenol	5.19	107	260369	49.51726 ppb		92
15) Bis (2-chloroisopropyl) et	5.18	45	471268	58.25492 ppb	#	77
16) Acetophenone	5.33	105	466439	48.60238 ppb		97
17) 3&4-Methylphenol	5.36	107	681765	97.82826 ppb		97
18) n-Nitrosodi-n-propylamine	5.34	70	260173	52.64827 ppb		98
19) Hexachloroethane	5.41	117	155890	49.45719 ppb		94
22) Nitrobenzene	5.52	77	400680	50.90608 ppb		89
23) Isophorone	5.79	82	664228	50.95084 ppb		99
24) 2-Nitrophenol	5.87	139	206352	52.53005 ppb		98
25) 2,4-Dimethylphenol	5.94	122	310125	49.79189 ppb		97
26) Benzoic acid	6.13	105	195015	40.98387 ppb		95
27) Bis (2-chloroethoxy) metha	6.03	93	377565	50.79202 ppb		99
28) 2,4-Dichlorophenol	6.16	162	294811	49.66369 ppb		98
29) 1,2,4-Trichlorobenzene	6.24	180	314952	48.78428 ppb		99
30) 3,4-Dimethylphenol	6.28	107	443496	46.50581 ppb		97
31) Naphthalene	6.31	128	992035	49.05170 ppb		99
32) 4-Chloroaniline	6.39	127	347645	46.45110 ppb		98
33) 2,6-Dichlorophenol	6.40	162	259931	45.38863 ppb		99
34) Hexachloropropene	6.41	213	243622	47.17886 ppb		98
35) Hexachlorobutadiene	6.45	225	187130	45.49547 ppb		98
36) Caprolactum	6.83	55	167361	56.24693 ppb		95
37) 4-Chloro-3-methylphenol	6.98	107	317626	48.43800 ppb		87

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y312.D Vial: 12
Acq On : 17 Jan 17 9:20 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 17 10:17 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.10	142	659924	49.92947	ppb		99
39)	1-Methylnaphthalene	7.21	142	650172	49.86297	ppb		98
41)	Hexachlorocyclopentadiene	7.28	237	105338	42.35118	ppb		98
42)	1,2,4,5-Tetrachlorobenzene	7.30	216	296579	46.91813	ppb		98
43)	2,4,6-Trichlorophenol	7.45	196	200144	49.06485	ppb		99
44)	2,4,5-Trichlorophenol	7.51	196	208892	46.92406	ppb	#	90
46)	1,1'-Biphenyl	7.65	154	835640	47.94441	ppb		98
47)	2-Chloronaphthalene	7.67	162	637967	47.35683	ppb		99
48)	2-Nitroaniline	7.80	65	226143	48.84489	ppb		84
49)	Dimethyl phthalate	8.01	163	773703	47.82057	ppb		100
50)	2,6-DNT	8.09	165	177372	48.55957	ppb		86
51)	Acenaphthylene	8.14	152	1008492	47.50687	ppb		100
52)	3-Nitroaniline	8.29	138	189925	47.62379	ppb		89
53)	Acenaphthene	8.34	154	616715	45.88180	ppb		99
54)	2,4-Dinitrophenol	8.44	184	104193	52.81696	ppb		95
55)	4-Nitrophenol	8.55	65	150795	45.20853	ppb		95
56)	Dibenzofuran	8.54	168	900298	47.23430	ppb		92
57)	2,4-DNT	8.57	165	248492	48.17231	ppb	#	76
58)	2,3,4,6-Tetrachlorophenol	8.71	232	172130	47.53422	ppb		95
59)	Diethyl phthalate	8.83	149	786603	47.24073	ppb		99
60)	4-Chlorophenyl phenyl ethe	8.94	204	337155	45.35024	ppb		97
61)	Fluorene	8.94	166	689726	44.78959	ppb		98
62)	4-Nitroaniline	9.01	138	179734	47.57162	ppb		96
65)	4,6-Dinitro-2-methylphenol	9.05	198	151987	47.78974	ppb	#	77
66)	Diphenyl amine	9.10	169	1117663	91.53489	ppb		100
67)	n-Nitrosodiphenylamine	9.10	169	1117663	91.53489	ppb		100
68)	1,2-Diphenylhydrazine	9.12	77	1009374	57.44939	ppb		95
69)	4-Bromophenyl phenyl ether	9.50	248	209928	47.35287	ppb		97
70)	Hexachlorobenzene	9.59	284	214337	47.03657	ppb	#	76
71)	Atrazine	9.73	200	100726	22.83146	ppb		97
72)	Pentachlorophenol	9.83	266	102615	47.04682	ppb		99
73)	Phenanthrene	10.05	178	1091750	47.23272	ppb		98
74)	Anthracene	10.12	178	1139367	47.93692	ppb		99
75)	Carbazol	10.31	167	1019003	47.36698	ppb		100
76)	Di-n-butylphthalate	10.72	149	1303821	47.16505	ppb		99
77)	Fluoranthene	11.43	202	1191586	46.84230	ppb		98
79)	Benzidine	11.61	184	450844	47.32020	ppb		99
80)	Pyrene	11.69	202	1250735	43.84904	ppb		99
82)	Butyl benzylphthalate	12.46	149	596559	43.53345	ppb		92
83)	3,3'-Dichlorobenzidine	13.07	252	429620	47.82071	ppb	#	98
84)	Benz (a) anthracene	13.09	228	1201009	45.73699	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.12	149	871160	45.34803	ppb		98
86)	Chrysene	13.13	228	1132489	44.39977	ppb		100
87)	Di-n-octylphthalate	13.84	149	1563779	46.08338	ppb		95
89)	Benzo (b) fluoranthene	14.28	252	1219369	46.30654	ppb	#	97
90)	Benzo (k) fluoranthene	14.32	252	1158075	46.24306	ppb		99
91)	Benzo (a) pyrene	14.67	252	1145561	46.56863	ppb	#	96
92)	Indeno (1,2,3-cd) pyrene	16.30	276	1267399	46.53989	ppb		96
93)	Dibenz (a,h) anthracene	16.32	278	1074797	46.79467	ppb		99
94)	Benzo (g,h,i) perylene	16.75	276	1062818	43.45771	ppb		97

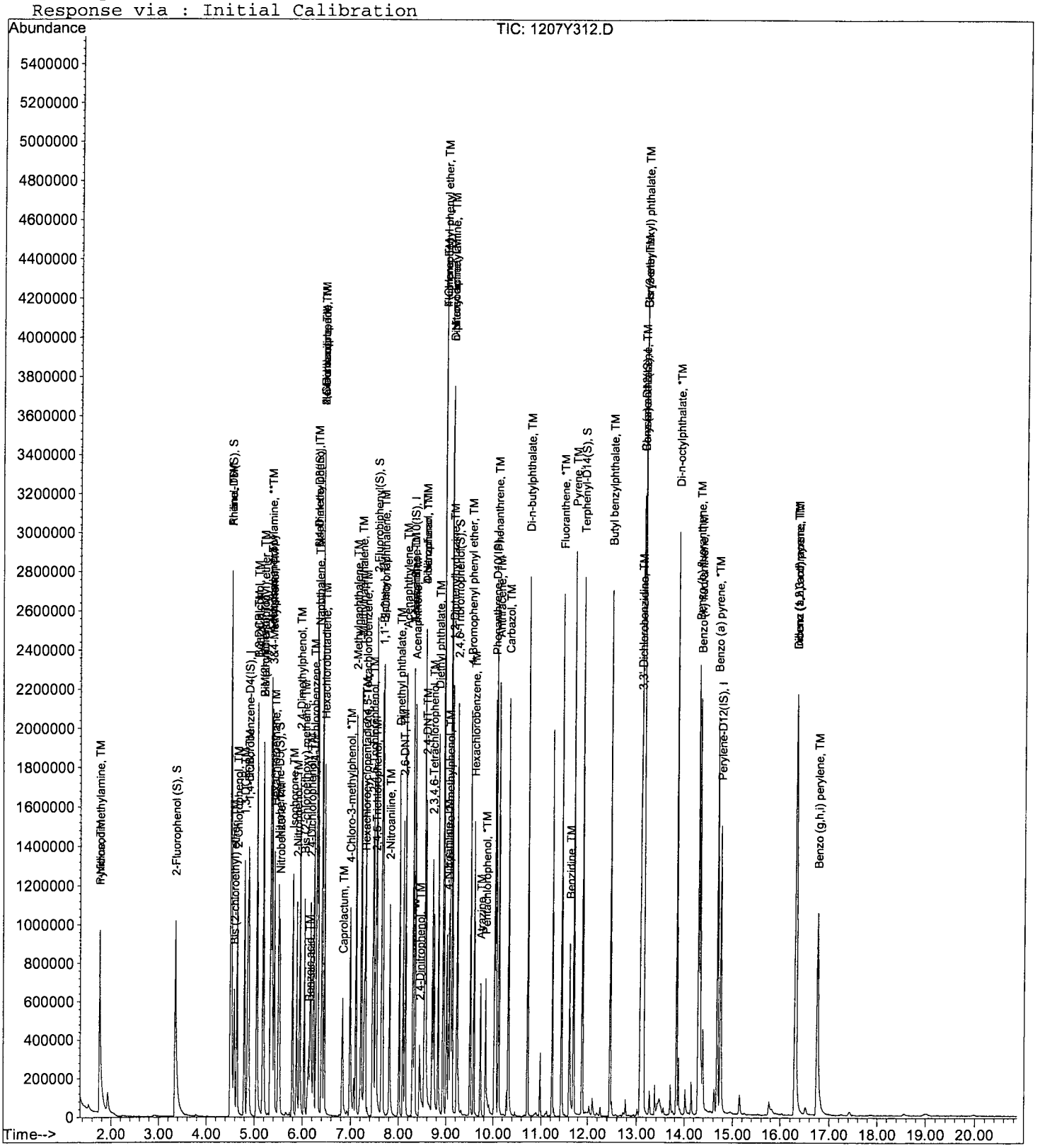
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y312.D Vial: 12
Acq On : 17 Jan 17 9:20 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 17 10:17 2017 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/17/17
Instrument: Yoda
Initial Cal. Date: 12/07/16
Data File: 1207Y319.D

		Compound	MEAN	CCRF	%D		%Drift	
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I		
2	TM	n-Nitrosodimethylamine	0.7942	0.9139	15	TM		
3	TM	Pyridine	1.794	1.943	8.3	TM		
4	S	2-Fluorophenol (S)	1.316	1.340	1.8	S		
5	S	Phenol-D6 (S)	1.737	1.709	1.6	S		
6	*TM	Phenol	1.974	2.007	1.7	*TM		
7	TM	Aniline	1.868	1.878	0.53	TM		
8	TM	Bis (2-chloroethyl) ether	0.8648	0.9383	8.5	TM		
9	TM	2-Chlorophenol	1.576	1.522	3.4	TM		
10	TM	1,3-DCB	1.630	1.572	3.6	TM		
11	*TM	1,4-DCB	1.679	1.637	2.5	*TM		
12	TM	Benzyl alcohol	0.8717	0.9056	3.9	TM		
13	TM	1,2-DCB	1.537	1.485	3.4	TM		
14	TM	2-Methylphenol	1.120	1.111	0.79	TM		
15	TM	Bis (2-chloroisopropyl) ether	1.723	2.051	19	TM		
16	TM	Acetophenone	2.044	2.040	0.17	TM		
17	TM	3&4-Methylphenol	1.484	1.484	0.01	TM		
18	**TM	n-Nitrosodi-n-propylamine	1.052	1.108	5.3	**TM		
19	TM	Hexachloroethane	0.6713	0.6731	0.27	TM		
20	I	Napthalene-D8(IS)	ISTD			I		
21	S	Nitrobenzene-D5(S)	0.4055	0.4126	1.8	S		
22	TM	Nitrobenzene	0.4083	0.4154	1.7	TM		
23	TM	Isophorone	0.6762	0.6906	2.1	TM		
24	*TM	2-Nitrophenol	0.2038	0.2016	1.0	*TM		
25	TM	2,4-Dimethylphenol	0.3231	0.3083	4.6	TM		
26	TML	Benzoic acid	0.2159	0.1879	13	TML	23	*NT
27	TM	Bis (2-chloroethoxy) methane	0.3856	0.3940	2.2	TM		
28	*TM	2,4-Dichlorophenol	0.3079	0.2974	3.4	*TM		
29	TM	1,2,4-Trichlorobenzene	0.3349	0.3296	1.6	TM		
30	TM	3,4-Dimethylphenol	0.4947	0.4612	6.8	TM		
31	TM	Naphthalene	1.049	1.031	1.7	TM		
32	TM	4-Chloroaniline	0.3882	0.3476	10	TM		
33	TM	2,6-Dichlorophenol	0.2970	0.2657	11	TM		
34	TM	Hexachloropropene	0.2678	0.2417	9.8	TM		
35	*TM	Hexachlorobutadiene	0.2134	0.1972	7.6	*TM		
36	TM	Caprolactum	0.1543	0.1709	11	TM		
37	*TM	4-Chloro-3-methylphenol	0.3401	0.3384	0.52	*TM		
38	TM	2-Methylnaphthalene	0.6856	0.6963	1.6	TM		
39	TM	1-Methylnaphthalene	0.6763	0.6585	2.6	TM		
40	I	Acenaphthene-D10(IS)	ISTD			I		
		Average			4.7			

0
0

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/17/17
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y319.D

		Compound	MEAN	CCRF	%D		%Drift
41	**TMQ	Hexachlorocyclopentadiene	0.1853	0.1822	1.7	**TMQ	15
42	TM	1,2,4,5-Tetrachlorobenzene	0.5436	0.5100	6.2	TM	
43	*TM	2,4,6-Trichlorophenol	0.3508	0.3320	5.4	*TM	
44	TM	2,4,5-Trichlorophenol	0.3829	0.3546	7.4	TM	
45	S	2-Fluorobiphenyl(S)	1.261	1.200	4.9	S	
46	TM	1,1'-Biphenyl	1.499	1.435	4.3	TM	
47	TM	2-Chloronaphthalene	1.159	1.113	3.9	TM	
48	TM	2-Nitroaniline	0.3982	0.4078	2.4	TM	
49	TM	Dimethyl phthalate	1.391	1.324	4.9	TM	
50	TM	2,6-DNT	0.3141	0.3069	2.3	TM	
51	TM	Acenaphthylene	1.826	1.760	3.6	TM	
52	TM	3-Nitroaniline	0.3430	0.3272	4.6	TM	
53	*TM	Acenaphthene	1.156	1.088	5.9	*TM	
54	**TMQ	2,4-Dinitrophenol	0.1593	0.1681	5.6	**TMQ	0.51
55	**TML	4-Nitrophenol	0.2439	0.2521	3.3	**TML	12
56	TM	Dibenzofuran	1.639	1.554	5.2	TM	
57	TM	2,4-DNT	0.4436	0.4242	4.4	TM	
58	TM	2,3,4,6-Tetrachlorophenol	0.3114	0.2964	4.8	TM	
59	TM	Diethyl phthalate	1.432	1.374	4.1	TM	
60	TM	4-Chlorophenyl phenyl ether	0.6394	0.5776	9.7	TM	
61	TM	Fluorene	1.324	1.173	11	TM	
62	TM	4-Nitroaniline	0.3249	0.3216	1.0	TM	
63	S	2,4,6-Tribromophenol(S)	0.2006	0.1803	10	S	
64	I	Phenanthrene-D10(IS)	ISTD			I	
65	TM	4,6-Dinitro-2-methylphenol	0.1486	0.1393	6.3	TM	
66	TM	Diphenyl amine	0.5706	0.5144	9.8	TM	
67	*TM	n-Nitrosodiphenylamine	0.5706	0.5144	9.8	*TM	
68	TM	1,2-Diphenylhydrazine	0.8211	0.9289	13	TM	
69	TM	4-Bromophenyl phenyl ether	0.2072	0.1966	5.1	TM	
70	TM	Hexachlorobenzene	0.2130	0.2024	5.0	TM	
71	TM	Atrazine	0.2062	0.1972	4.4	TM	
72	*TML	Pentachlorophenol	0.0958	0.0864	9.8	*TML	14
73	TM	Phenanthrene	1.080	1.020	5.5	TM	
74	TM	Anthracene	1.111	1.087	2.1	TM	
75	TM	Carbazol	1.005	0.9615	4.4	TM	
76	TM	Di-n-butylphthalate	1.292	1.232	4.7	TM	
77	*TM	Fluoranthene	1.189	1.122	5.6	*TM	
78	I	Chrysene-D12(IS)	ISTD			I	
79	TM	Benzidine	0.4531	0.4423	2.4	TM	
80	TM	Pyrene	1.357	1.251	7.8	TM	
		Average			5.6		

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/17/17
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y319.D

		Compound	MEAN	CCRF	%D	%Drift	
81	S	Terphenyl-D14(S)	0.9045	0.8461	6.5	S	
82	TM	Butyl benzylphthalate	0.6517	0.6069	6.9	TM	
83	TM	3,3'-Dichlorobenzidine	0.4273	0.4209	1.5	TM	
84	TM	Benz (a) anthracene	1.249	1.174	6.0	TM	
85	TM	Bis (2-ethylhexyl) phthalate	0.9136	0.7990	13	TM	
86	TM	Chrysene	1.213	1.115	8.1	TM	
87	*TM	Di-n-octylphthalate	1.614	1.485	8.0	*TM	
88	I	Perylene-D12(IS)	ISTD			I	
89	TM	Benzo (b) fluoranthene	1.250	1.135	9.3	TM	
90	TM	Benzo (k) fluoranthene	1.189	1.112	6.5	TM	
91	*TM	Benzo (a) pyrene	1.168	1.086	7.0	*TM	
92	TM	Indeno (1,2,3-cd) pyrene	1.293	1.198	7.4	TM	
93	TM	Dibenz (a,h) anthracene	1.091	1.016	6.9	TM	
94	TM	Benzo (g,h,i) perylene	1.161	1.013	13	TM	
95							
96							
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			7.7		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y319.D Vial: 19
Acq On : 17 Jan 17 14:26 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 15:07 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	182253	40.00000	ppb	0.00
20) Napthalene-D8(IS)	6.29	136	767159	40.00000	ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	468594	40.00000	ppb	0.00
64) Phenanthrene-D10(IS)	10.02	188	878414	40.00000	ppb	0.00
78) Chrysene-D12(IS)	13.11	240	841314	40.00000	ppb	0.00
88) Perylene-D12(IS)	14.75	264	872319	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.34	112	610559	101.83766	ppb	0.00
Spiked Amount 200.000			Recovery = 50.919%			
5) Phenol-D6 (S)	4.50	99	778488	98.37993	ppb	0.00
Spiked Amount 200.000			Recovery = 49.190%			
21) Nitrobenzene-D5(S)	5.49	82	395641	50.87781	ppb	0.00
Spiked Amount 100.000			Recovery = 50.878%			
45) 2-Fluorobiphenyl(S)	7.54	172	702708	47.56987	ppb	0.00
Spiked Amount 100.000			Recovery = 47.570%			
63) 2,4,6-Tribromophenol(S)	9.23	330	211247	89.90994	ppb	0.00
Spiked Amount 200.000			Recovery = 44.955%			
81) Terphenyl-D14(S)	11.88	244	889846	46.77492	ppb	0.00
Spiked Amount 100.000			Recovery = 46.775%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.74	42	208193	57.53397	ppb	92
3) Pyridine	1.75	79	442656	54.14982	ppb	94
6) Phenol	4.51	94	457285	50.84482	ppb	93
7) Aniline	4.51	66	427855	50.26548	ppb	94
8) Bis (2-chloroethyl) ether	4.58	63	213765	54.25116	ppb	95
9) 2-Chlorophenol	4.64	128	346718	48.27727	ppb	99
10) 1,3-DCB	4.79	146	358077	48.22083	ppb	99
11) 1,4-DCB	4.88	146	372918	48.73310	ppb	98
12) Benzyl alcohol	5.05	108	206317	51.94789	ppb	97
13) 1,2-DCB	5.05	146	338323	48.31192	ppb	96
14) 2-Methylphenol	5.19	107	253092	49.60330	ppb	94
15) Bis (2-chloroisopropyl) et	5.18	45	467233	59.52001	ppb	81
16) Acetophenone	5.33	105	464843	49.91531	ppb	96
17) 3&4-Methylphenol	5.35	107	676321	100.01090	ppb	96
18) n-Nitrosodi-n-propylamine	5.34	70	252445	52.64456	ppb	93
19) Hexachloroethane	5.41	117	153340	50.13390	ppb	92
22) Nitrobenzene	5.52	77	398350	50.87375	ppb	92
23) Isophorone	5.79	82	662278	51.06594	ppb	98
24) 2-Nitrophenol	5.87	139	193363	49.47996	ppb	94
25) 2,4-Dimethylphenol	5.94	122	295642	47.71389	ppb	99
26) Benzoic acid	6.13	105	180156	38.33914	ppb	92
27) Bis (2-chloroethoxy) metha	6.03	93	377847	51.09479	ppb	99
28) 2,4-Dichlorophenol	6.16	162	285231	48.30020	ppb	98
29) 1,2,4-Trichlorobenzene	6.24	180	316068	49.21221	ppb	99
30) 3,4-Dimethylphenol	6.28	107	442285	46.62046	ppb	98
31) Naphthalene	6.31	128	988884	49.15065	ppb	100
32) 4-Chloroaniline	6.40	127	333375	44.77648	ppb	93
33) 2,6-Dichlorophenol	6.40	162	254810	44.72623	ppb	99
34) Hexachloropropene	6.41	213	231803	45.12393	ppb	99
35) Hexachlorobutadiene	6.45	225	189059	46.20393	ppb	100
36) Caprolactum	6.83	55	163915	55.37581	ppb	92
37) 4-Chloro-3-methylphenol	6.98	107	324472	49.73983	ppb	86

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y319.D Vial: 19
Acq On : 17 Jan 17 14:26 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 15:07 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

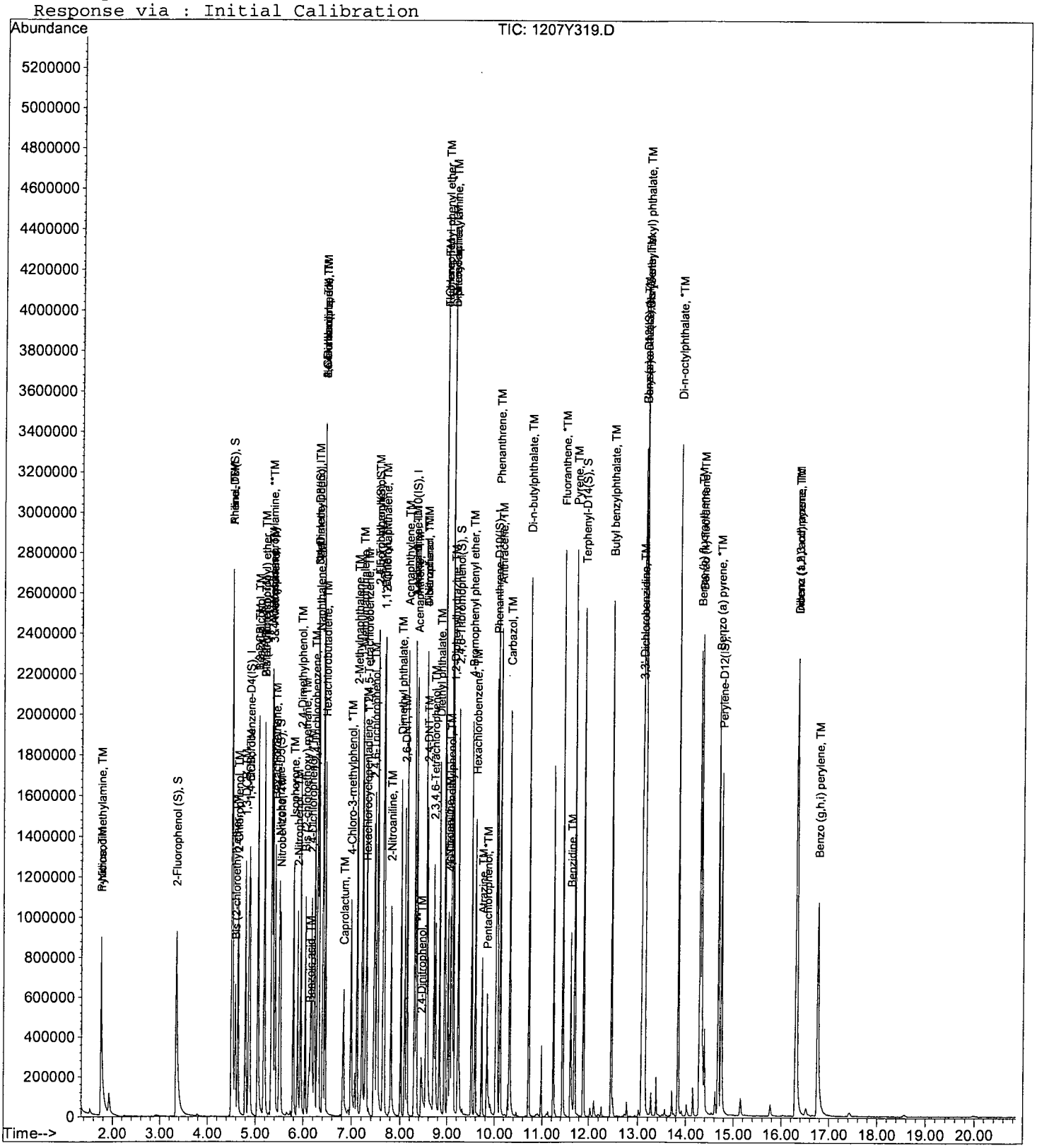
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.11	142	667715	50.78214	ppb		100
39)	1-Methylnaphthalene	7.22	142	631501	48.68339	ppb		100
41)	Hexachlorocyclopentadiene	7.28	237	106747	42.53859	ppb		99
42)	1,2,4,5-Tetrachlorobenzene	7.30	216	298730	46.90725	ppb		97
43)	2,4,6-Trichlorophenol	7.45	196	194444	47.31330	ppb		97
44)	2,4,5-Trichlorophenol	7.52	196	207721	46.31429	ppb		97
46)	1,1'-Biphenyl	7.65	154	840414	47.86002	ppb		97
47)	2-Chloronaphthalene	7.67	162	652011	48.03968	ppb		98
48)	2-Nitroaniline	7.80	65	238875	51.21150	ppb		83
49)	Dimethyl phthalate	8.02	163	775274	47.56161	ppb		98
50)	2,6-DNT	8.09	165	179748	48.84439	ppb	#	76
51)	Acenaphthylene	8.14	152	1030995	48.20603	ppb		99
52)	3-Nitroaniline	8.29	138	191667	47.70347	ppb		85
53)	Acenaphthene	8.34	154	637364	47.06568	ppb		99
54)	2,4-Dinitrophenol	8.45	184	98478	50.25465	ppb		89
55)	4-Nitrophenol	8.55	65	147639	44.07007	ppb		93
56)	Dibenzofuran	8.54	168	910509	47.41506	ppb		94
57)	2,4-DNT	8.57	165	248482	47.81243	ppb	#	69
58)	2,3,4,6-Tetrachlorophenol	8.71	232	173600	47.58393	ppb		92
59)	Diethyl phthalate	8.84	149	804692	47.96799	ppb		96
60)	4-Chlorophenyl phenyl ethe	8.94	204	338313	45.16785	ppb		98
61)	Fluorene	8.94	166	686905	44.27494	ppb		98
62)	4-Nitroaniline	9.01	138	188354	49.48270	ppb		95
65)	4,6-Dinitro-2-methylphenol	9.05	198	152953	46.86237	ppb	#	65
66)	Diphenyl amine	9.09	169	1129743	90.15575	ppb		99
67)	n-Nitrosodiphenylamine	9.09	169	1129743	90.15575	ppb		99
68)	1,2-Diphenylhydrazine	9.12	77	1019975	56.56670	ppb		94
69)	4-Bromophenyl phenyl ether	9.50	248	215861	47.44475	ppb		96
70)	Hexachlorobenzene	9.59	284	222220	47.51816	ppb	#	78
71)	Atrazine	9.73	200	108264	23.91190	ppb		96
72)	Pentachlorophenol	9.83	266	94911	42.98750	ppb		92
73)	Phenanthrene	10.05	178	1120277	47.22622	ppb		99
74)	Anthracene	10.12	178	1193986	48.94899	ppb		99
75)	Carbazol	10.31	167	1055763	47.81946	ppb		99
76)	Di-n-butylphthalate	10.72	149	1352208	47.66326	ppb		99
77)	Fluoranthene	11.43	202	1232093	47.19482	ppb	#	96
79)	Benzidine	11.61	184	465112	48.80383	ppb		98
80)	Pyrene	11.69	202	1315276	46.09861	ppb		99
82)	Butyl benzylphthalate	12.46	149	638212	46.55976	ppb		86
83)	3,3'-Dichlorobenzidine	13.07	252	442652	49.25724	ppb	#	98
84)	Benz (a) anthracene	13.10	228	1234943	47.01586	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.12	149	840245	43.72628	ppb		97
86)	Chrysene	13.13	228	1172317	45.94813	ppb		99
87)	Di-n-octylphthalate	13.84	149	1562178	46.02307	ppb	#	90
89)	Benzo (b) fluoranthene	14.28	252	1237398	45.37481	ppb	#	97
90)	Benzo (k) fluoranthene	14.32	252	1212968	46.76893	ppb		99
91)	Benzo (a) pyrene	14.68	252	1184103	46.47966	ppb		99
92)	Indeno (1,2,3-cd) pyrene	16.31	276	1305798	46.30055	ppb		95
93)	Dibenz (a,h) anthracene	16.32	278	1107363	46.55412	ppb		97
94)	Benzo (g,h,i) perylene	16.76	276	1104796	43.62025	ppb		99

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y161207\1207Y319.D Vial: 19
Acq On : 17 Jan 17 14:26 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 15:07 2017 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration



ORGANICS

Raw Data

APPL, INC.

Method Blank
EPA 8270D WATER

Blank Name/QCG: **170112W-48676 - 215555**
Batch ID: #87DC5-170112A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/12/17	01/17/17
BLANK	SURROGATE: 2,4,6-TRIBROMOP	57.0	43-140			%	01/12/17	01/17/17
BLANK	SURROGATE: 2-FLUORBIPHENY	54.9	44-119			%	01/12/17	01/17/17
BLANK	SURROGATE: 2-FLUOROPHENO	42.4	19-119			%	01/12/17	01/17/17
BLANK	SURROGATE: NITROBENZENE-	60.4	44-120			%	01/12/17	01/17/17
BLANK	SURROGATE: PHENOL-D6 (S)	27.5	10-115			%	01/12/17	01/17/17
BLANK	SURROGATE: TERPHENYL-D14 (	58.9	50-134			%	01/12/17	01/17/17

Quant Method:Y1207.M
Run #:1207Y313
Instrument:Yoda
Sequence:Y161207
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 01/17/17 2:38:15 PM

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y313.D Vial: 13
Acq On : 17 Jan 17 11:12 Operator: MA
Sample : 170112A BLK 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 16:49 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.85	152	195333	40.00000 ppb	-0.02
20) Napthalene-D8(IS)	6.28	136	844830	40.00000 ppb	-0.02
40) Acenaphthene-D10(IS)	8.30	164	474625	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.02	188	918513	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.10	240	887511	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.74	264	903456	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.33	112	544247	84.69853 ppb	-0.02
Spiked Amount 200.000			Recovery =	42.350%	
5) Phenol-D6 (S)	4.49	99	466296	54.98134 ppb	-0.02
Spiked Amount 200.000			Recovery =	27.491%	
21) Nitrobenzene-D5(S)	5.49	82	517233	60.39896 ppb	0.00
Spiked Amount 100.000			Recovery =	60.399%	
45) 2-Fluorobiphenyl(S)	7.53	172	822041	54.94101 ppb	0.00
Spiked Amount 100.000			Recovery =	54.941%	
63) 2,4,6-Tribromophenol(S)	9.23	330	271056	113.89963 ppb	0.00
Spiked Amount 200.000			Recovery =	56.950%	
81) Terphenyl-D14(S)	11.88	244	1182498	58.92274 ppb	0.00
Spiked Amount 100.000			Recovery =	58.923%	

Target Compounds Qvalue

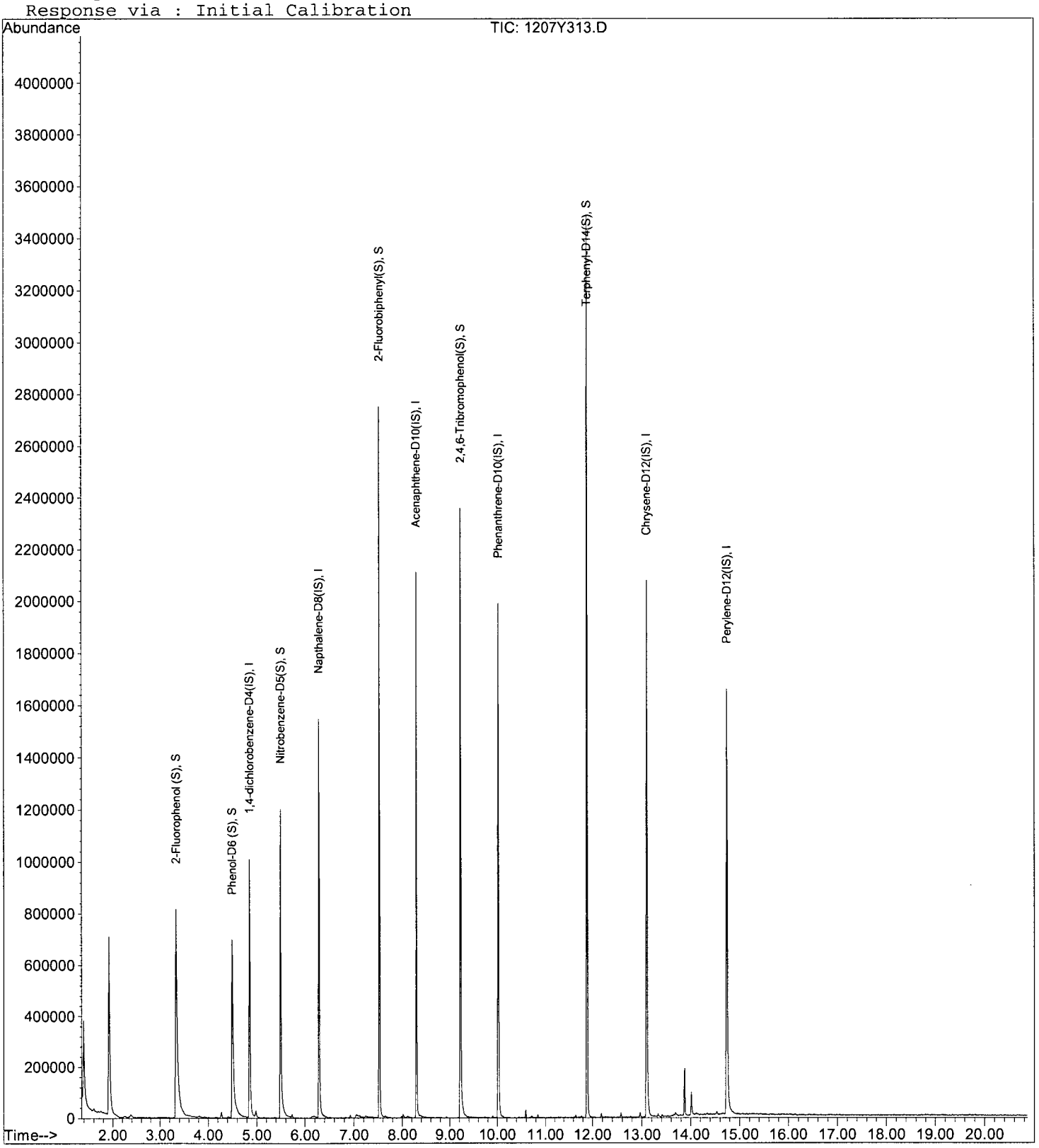
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y313.D Vial: 13
Acq On : 17 Jan 17 11:12 Operator: MA
Sample : 170112A BLK 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 16:49 2017 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration



Laboratory Control Spike Recovery
EPA 8270D WATER

APPL ID: **170112W-48676 LCS - 215555**
Batch ID: #87DC5-170112A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
PHENOL	50.0	19.7	39.4	10-115
SURROGATE: 2,4,6-TRIBROMOPHENOL	200	113	56.5	43-140
SURROGATE: 2-FLUORBIPHENYL (S)	100	51.5	51.5	44-119
SURROGATE: 2-FLUOROPHENOL (S)	200	87.2	43.6	19-119
SURROGATE: NITROBENZENE-D5 (S)	100	62.6	62.6	44-120
SURROGATE: PHENOL-D6 (S)	200	56.1	28.1	10-115
SURROGATE: TERPHENYL-D14 (S)	100	57.4	57.4	50-134

Comments: _____

Primary	SPK
Quant Method :	Y1207.M
Extraction Date :	01/12/17
Analysis Date :	01/17/17
Instrument :	Yoda
Run :	1207Y314
Initials :	MA

Printed: 01/17/17 2:38:16 PM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y314.D Vial: 14
Acq On : 17 Jan 17 11:42 Operator: MA
Sample : 170112A LCS-1 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 16:37 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	189223	40.00000	ppb		0.00
20) Napthalene-D8(IS)	6.29	136	813713	40.00000	ppb		0.00
40) Acenaphthene-D10(IS)	8.31	164	494956	40.00000	ppb		0.00
64) Phenanthrene-D10(IS)	10.02	188	926623	40.00000	ppb		0.00
78) Chrysene-D12(IS)	13.11	240	898775	40.00000	ppb		0.00
88) Perylene-D12(IS)	14.75	264	938113	40.00000	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol (S)	3.34	112	542761	87.19471	ppb		0.00
Spiked Amount 200.000			Recovery = 43.598%				
5) Phenol-D6 (S)	4.50	99	460842	56.09284	ppb		0.00
Spiked Amount 200.000			Recovery = 28.047%				
21) Nitrobenzene-D5(S)	5.49	82	516491	62.61870	ppb		0.00
Spiked Amount 100.000			Recovery = 62.619%				
45) 2-Fluorobiphenyl(S)	7.53	172	803586	51.50146	ppb		0.00
Spiked Amount 100.000			Recovery = 51.501%				
63) 2,4,6-Tribromophenol(S)	9.22	330	280716	113.11350	ppb		0.00
Spiked Amount 200.000			Recovery = 56.557%				
81) Terphenyl-D14(S)	11.89	244	1167040	57.42368	ppb		0.00
Spiked Amount 100.000			Recovery = 57.424%				
Target Compounds							Qvalue
2) n-Nitrosodimethylamine	1.75	42	112281	29.88583	ppb		94
3) Pyridine	1.76	79	161226	18.99619	ppb		99
6) Phenol	4.51	94	184281	19.73518	ppb	#	55
7) Aniline	4.50	66	225524	25.51918	ppb	#	41
8) Bis (2-chloroethyl) ether	4.58	63	152641	37.31164	ppb		98
9) 2-Chlorophenol	4.64	128	248109	33.27435	ppb		99
10) 1,3-DCB	4.80	146	122911	15.94226	ppb		98
11) 1,4-DCB	4.88	146	133654	16.82261	ppb		96
12) Benzyl alcohol	5.05	108	142573	34.57570	ppb		97
13) 1,2-DCB	5.05	146	123938	17.04622	ppb		95
14) 2-Methylphenol	5.19	107	170161	32.12129	ppb		95
15) Bis (2-chloroisopropyl) et	5.18	45	327504	40.18342	ppb	#	72
16) Acetophenone	5.33	105	336029	34.75402	ppb		95
17) 3&4-Methylphenol	5.35	107	427574	60.89849	ppb		94
18) n-Nitrosodi-n-propylamine	5.33	70	186080	37.37552	ppb		96
19) Hexachloroethane	5.41	117	41077	12.93527	ppb		96
22) Nitrobenzene	5.52	77	277676	33.43346	ppb		91
23) Isophorone	5.78	82	485858	35.31949	ppb		93
24) 2-Nitrophenol	5.87	139	138082	33.31249	ppb		93
25) 2,4-Dimethylphenol	5.94	122	164505	25.03064	ppb		95
26) Benzoic acid	6.11	105	54779	13.79617	ppb		95
27) Bis (2-chloroethoxy) metha	6.03	93	284056	36.21419	ppb		97
28) 2,4-Dichlorophenol	6.16	162	203851	32.54462	ppb		95
29) 1,2,4-Trichlorobenzene	6.24	180	120755	17.72604	ppb		99
30) 3,4-Dimethylphenol	6.28	107	306263	30.43568	ppb		98
31) Naphthalene	6.31	128	518016	24.27399	ppb		99
32) 4-Chloroaniline	6.39	127	311450	39.43841	ppb		100
33) 2,6-Dichlorophenol	6.40	162	201634	33.36751	ppb		99
34) Hexachloropropene	6.41	213	66403	12.18680	ppb		98
35) Hexachlorobutadiene	6.45	225	51098	11.77334	ppb		96
36) Caprolactum	6.81	55	43857	13.96865	ppb		96
37) 4-Chloro-3-methylphenol	6.98	107	230151	33.26243	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y314.D Vial: 14
Acq On : 17 Jan 17 11:42 Operator: MA
Sample : 170112A LCS-1 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 16:37 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.11	142	358128	25.67865	ppb		99
39)	1-Methylnaphthalene	7.22	142	371996	27.03704	ppb		99
41)	Hexachlorocyclopentadiene	7.28	237	15872	11.69292	ppb	#	94
42)	1,2,4,5-Tetrachlorobenzene	7.30	216	174024	25.87024	ppb		99
43)	2,4,6-Trichlorophenol	7.45	196	147399	33.95575	ppb		98
44)	2,4,5-Trichlorophenol	7.51	196	159171	33.59918	ppb		92
46)	1,1'-Biphenyl	7.65	154	542750	29.26237	ppb	#	99
47)	2-Chloronaphthalene	7.66	162	400616	27.94497	ppb		99
48)	2-Nitroaniline	7.80	65	178854	36.30159	ppb		92
49)	Dimethyl phthalate	8.01	163	614033	35.66343	ppb		99
50)	2,6-DNT	8.09	165	136374	35.08426	ppb		87
51)	Acenaphthylene	8.14	152	728704	32.25715	ppb		99
52)	3-Nitroaniline	8.29	138	158073	37.24693	ppb		88
53)	Acenaphthene	8.33	154	440622	30.80442	ppb		97
54)	2,4-Dinitrophenol	8.44	184	60933	33.10188	ppb		87
55)	4-Nitrophenol	8.58	65	45785	16.36059	ppb		92
56)	Dibenzofuran	8.54	168	655340	32.30940	ppb		89
57)	2,4-DNT	8.57	165	190219	34.65213	ppb		79
58)	2,3,4,6-Tetrachlorophenol	8.70	232	125369	32.53351	ppb		96
59)	Diethyl phthalate	8.83	149	604117	34.09361	ppb		99
60)	4-Chlorophenyl phenyl ethe	8.94	204	252201	31.87775	ppb		96
61)	Fluorene	8.94	166	533159	32.53481	ppb		99
62)	4-Nitroaniline	9.00	138	154555	38.44074	ppb		92
65)	4,6-Dinitro-2-methylphenol	9.05	198	113796	33.05136	ppb		86
66)	Diphenyl amine	9.09	169	810740	61.33263	ppb		99
67)	n-Nitrosodiphenylamine	9.09	169	810740	61.33263	ppb		99
68)	1,2-Diphenylhydrazine	9.12	77	629784	33.10999	ppb		97
69)	4-Bromophenyl phenyl ether	9.50	248	159886	33.31352	ppb		98
70)	Hexachlorobenzene	9.59	284	167164	33.88562	ppb	#	74
71)	Atrazine	9.72	200	89668	18.77430	ppb		95
72)	Pentachlorophenol	9.83	266	73305	33.06546	ppb		99
73)	Phenanthrene	10.05	178	874627	34.95238	ppb		99
74)	Anthracene	10.11	178	903135	35.09888	ppb		99
75)	Carbazol	10.31	167	823531	35.36017	ppb		100
76)	Di-n-butylphthalate	10.72	149	1047390	34.99813	ppb		99
77)	Fluoranthene	11.43	202	961071	34.89816	ppb	#	97
79)	Benzidine	11.62	184	122126	11.99532	ppb		98
80)	Pyrene	11.69	202	1016125	33.33690	ppb		99
82)	Butyl benzylphthalate	12.46	149	483991	33.05143	ppb		93
83)	3,3'-Dichlorobenzidine	13.07	252	379950	39.57685	ppb	#	98
84)	Benz (a) anthracene	13.09	228	961573	34.26785	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.12	149	674295	32.84684	ppb		99
86)	Chrysene	13.13	228	913178	33.50313	ppb		99
87)	Di-n-octylphthalate	13.84	149	1173655	32.36627	ppb		97
89)	Benzo (b) fluoranthene	14.28	252	1004867	34.26369	ppb	#	98
90)	Benzo (k) fluoranthene	14.31	252	908657	32.57828	ppb		98
91)	Benzo (a) pyrene	14.67	252	909514	33.19732	ppb	#	95
92)	Indeno (1,2,3-cd) pyrene	16.30	276	1027811	33.88782	ppb		95
93)	Dibenz (a,h) anthracene	16.31	278	880757	34.43058	ppb		97
94)	Benzo (g,h,i) perylene	16.75	276	875409	32.13936	ppb		94

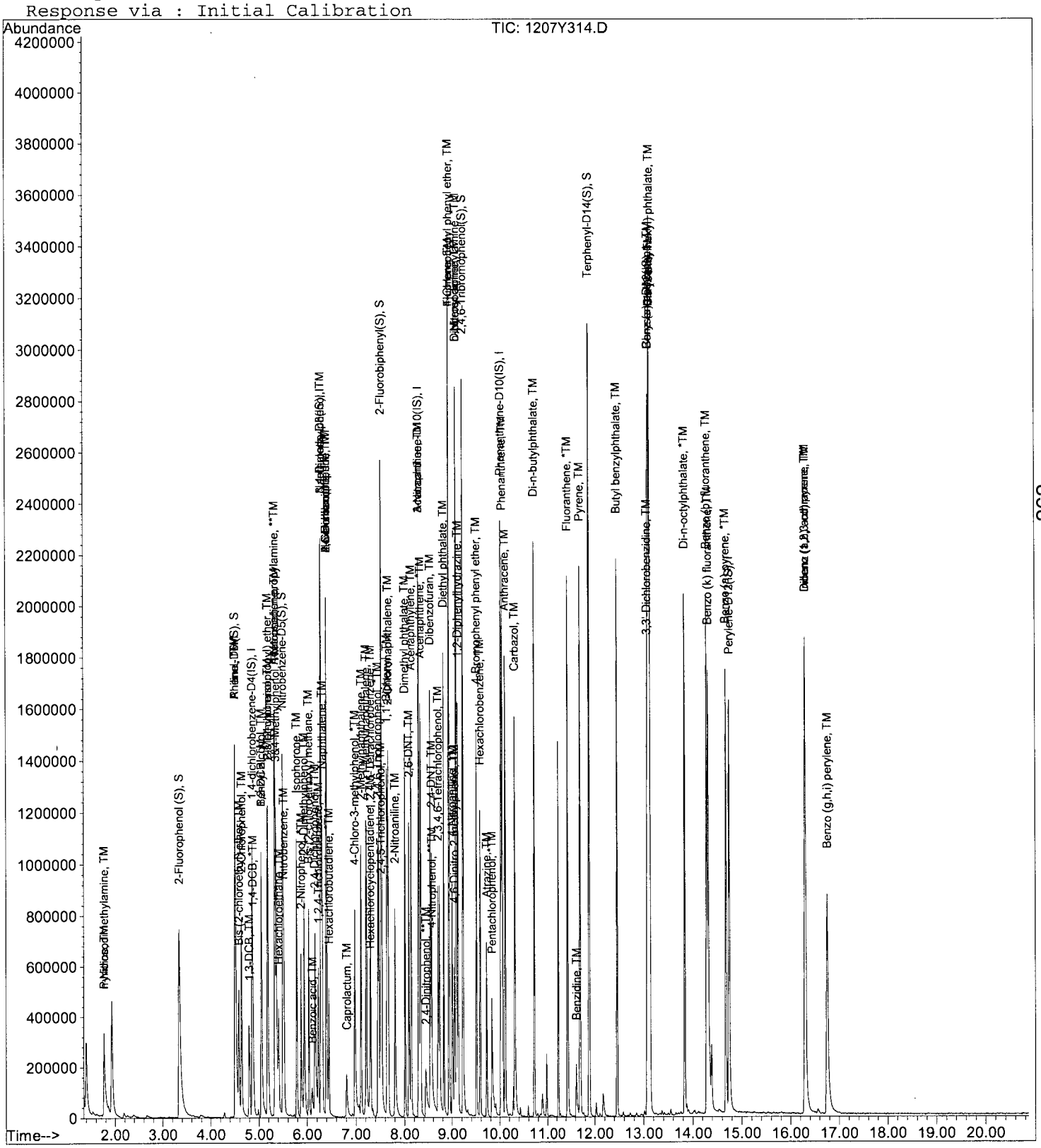
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y314.D Vial: 14
Acq On : 17 Jan 17 11:42 Operator: MA
Sample : 170112A LCS-1 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 16:37 2017 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration



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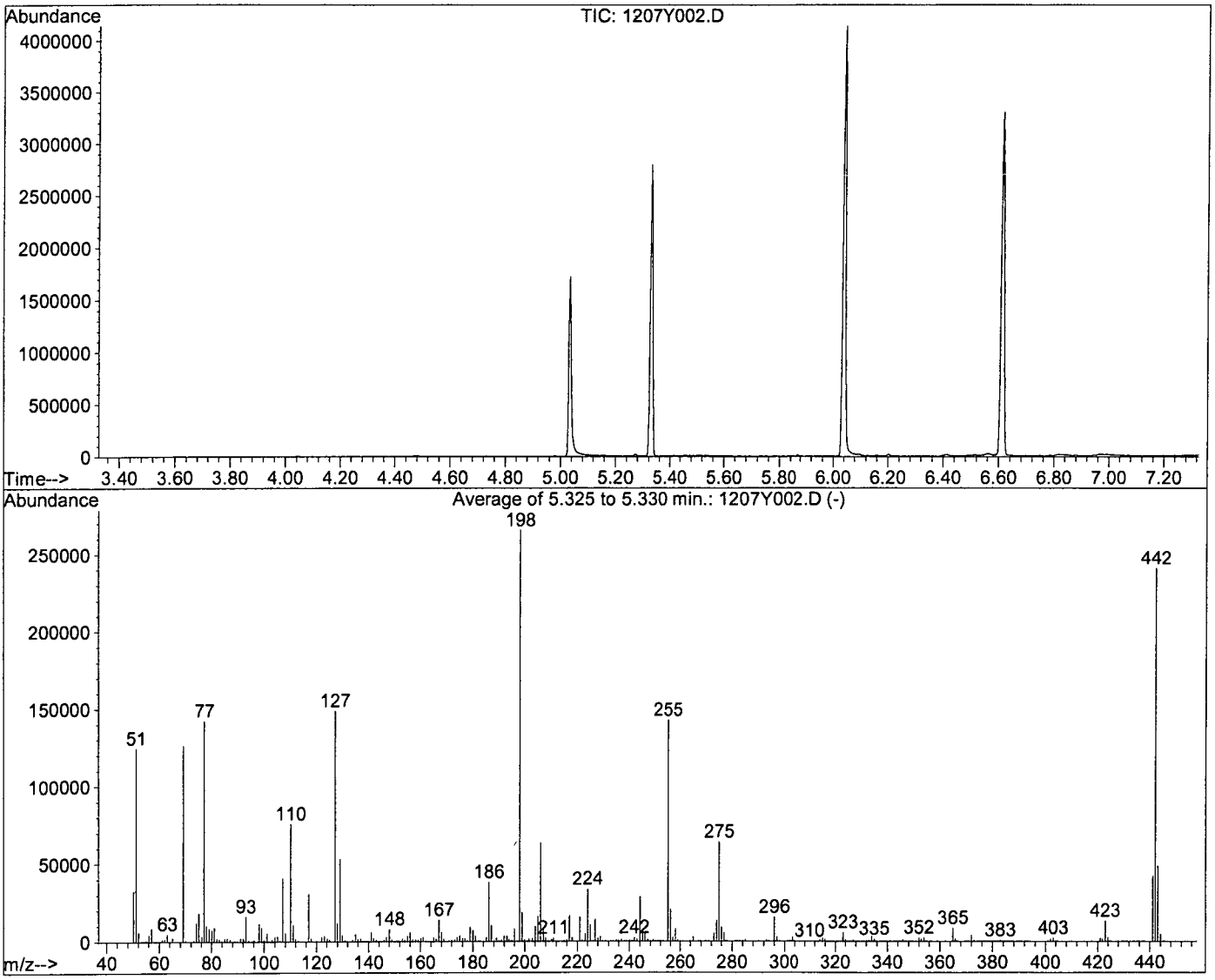
DFTPP

Data File : M:\YODA\DATA\Y161207\1207Y002.D Vial: 2
Acq On : 7 Dec 16 9:00 Operator: MA
Sample : SV Tune 10/19/16 Inst : Yoda
Misc : Multiplr: 1.00

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C



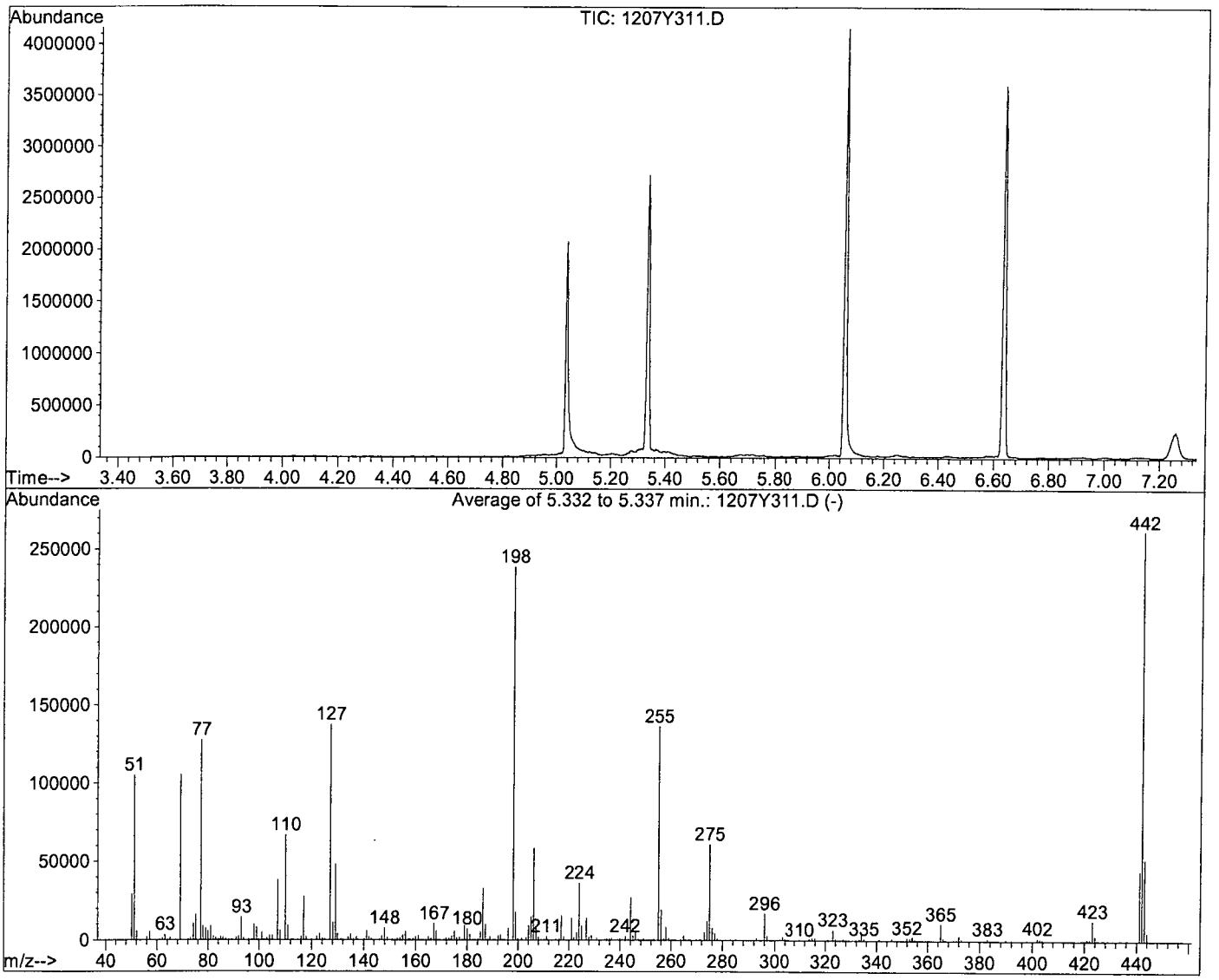
AutoFind: Scans 696, 697, 698; Background Corrected with Scan 689

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	46.7	124269	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.7	911	PASS
127	198	40	60	56.0	148757	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	265856	PASS
199	198	5	9	6.9	18432	PASS
275	198	10	30	24.0	63789	PASS
365	198	1	100	3.1	8331	PASS
441	443	0.01	100	86.4	41829	PASS
442	198	50	150	90.6	240747	PASS
443	442	17	23	20.1	48427	PASS

Data File : M:\YODA\DATA\Y161207\1207Y311.D
Acq On : 17 Jan 17 9:04
Sample : SV Tune 10/19/16
Misc : soil

Vial: 11
Operator: MA
Inst : Yoda
Multiplr: 1.00

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 699, 700, 701; Background Corrected with Scan 690

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	44.1	105228	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.0	0	PASS
127	198	40	60	57.6	137499	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	238805	PASS
199	198	5	9	7.4	17590	PASS
275	198	10	30	25.6	61024	PASS
365	198	1	100	4.4	10617	PASS
441	443	0.01	100	85.4	44389	PASS
442	198	50	150	109.8	262123	PASS
443	442	17	23	19.8	51979	PASS

SV Internal Stanard Stock Prep: 10/19/16 RH EXP: 10/19/17						
		Conc.				
Supplier	ID #	µg/mL	Lot #	Open Date	Exp.Date	µL
Supleco	CRM48902	2000	XA14020V-36611	10/19/16	10/19/17	1000
					fin vol.	1000

8270 Full Scan Standard Curve

PREP DATE:	12/06/16 RH							
8270 Standard Curve								
Exp:	2/11/17					5	10	20
		Conc.		Date				
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL
Absolute	8270 Stock	200	VAR	11/15/16	11/15/16	5	5	10
o2si	8270 BN:A	200/400	277272-36400	6/20/16	12/20/16	5	5	10
EM Science	Methylene Chloride		56098			190	90	80
Supelco	SV Internal	2000	A14020V-3661	12/06/16	12/16/16	4	2	2
				Final Vol.		204	102	102

8270 Full Scan Second Source (SS)

PREP DATE:	12/06/16 RH					
Exp:	1/18/17	Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
o2si	8270 Stock S	200	VAR	07/08/16	07/08/17	25
EM Science	Methylene Chloride		56098			75
Supelco	SV Internal	2000	A14020V-3661	12/06/16	12/06/16	2
				Final Vol.		102

40	**50**	**60**	**80**	**100**
µL	µL	µL	µL	µL
20	50	30	40	50
20	50	30	40	50
60	100	40	20	0
2	4	2	2	2
102	204	102	102	102

8270 SVOC Stock 10mL						
8270 Stock/Spike Standard						
prep:	11/15/2016 RH					
Exp:	11/15/17					
		Conc.				
Supplier	ID #	µg/mL	Lot #	Open Date	Exp.Date	µL
Absolute	10001	2000	053014-37136	11/15/16	11/15/17	1000
Absolute	10002	2000	062216-37144	11/15/16	11/15/17	1000
Absolute	10004	2000	012516-37147	11/15/16	11/15/17	1000
Absolute	10005	2000	110314-36848	11/15/16	11/15/17	1000
Absolute	10006	2000	022416-36850	11/15/16	11/15/17	1000
Absolute	10007	2000	020515-36853	11/15/16	11/15/17	1000
Absolute	10018	2000	030216-37081	11/15/16	11/15/17	1000
Absolute	70023	1000	042716-36858	11/15/16	11/15/17	1000
Absolute	82705	2000	012516-36862	11/15/16	11/15/17	1000
Absolute	94552	2000	042016-36488	11/15/16	11/15/17	1000
				Final Vol.		10000

8270 Surrog Mix 100/200ppm						
Prep: 11/15/16 -RH Ex: 2/15/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
8270 Acid Surrog Mix	10000 ug/ml	Restek Cat# 33029 Lot# A0118884-36875 Op: 11/15/16 EX: 11/15/17	2.0 mL	100 mL	200 ug/mL	MC
8270 B/N surrog Mix	5000 µg/mL	Restek Cat# 31086 Lot# A0119223-36871 Op: 11/15/16 EX: 11/15/17	2.0 mL	100 mL	100 ug/mL	MC

8270 Acid Surrog Stock 5000ppm						
Prep: 06/20/16 -LH Ex: 06/20/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
8270 Acid Surrog Mix	10,000 µg/mL	Restek Cat# 33029 Lot# A0115509-36718	10mL	20mL	5000 µg/ml	Acetone
	PREP:	06/20/16				
	Exp:	06/20/17				

8270 Surrog Mix 200/400ppm						
Prep: 06/20/16 -LH Ex: 12/20/16						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
8270 Acid Surrog Mix	5000 µg/mL	06/20/16	8.0mL	100 mL	400 µg/mL	MC
8270 B/N surrog Mix	5000 µg/mL	Restek Cat# 31086 Lot# A0119223-36720	4.0 mL	100 mL	200 ug/mL	MC
	PREP:	06/20/16				
	Exp:	12/20/16				

8270 Full Scan Second Source Stock

	7/8/16 GA					
8270 Second Source Stock						
Exp:	07/08/17					
		Conc.		Date	Exp.	
Supplier	ID #	µg/mL	Lot #	Code	Date	µL
o2si	116070-02	2000	234696-35233	07/08/16	07/08/17	1000
o2si	110391-01	2000	252133-35880	07/08/16	07/08/17	1000
o2si	010337-01	1000	259144-35881	07/08/16	07/08/17	1000
o2si	110396-01	2000	252136-35882	07/08/16	07/08/17	1000
o2si	110397-01	2000	263077-35835	07/08/16	01/08/17	1000
o2si	110393-01	2000	252141-35248	07/08/16	07/08/17	1000
o2si	110394-01	2000	252143-35884	07/08/16	07/08/17	1000
o2si	**110395-01**	2000	252146-35885	07/08/16	07/08/17	1000
o2si	110392-01	2000	243259-35886	07/08/16	07/08/17	1000
Absolute	10006	2000	091115-35856	07/08/16	07/08/17	1000
				Final Vol.		10000

_SEP004

Organic Extraction Worksheet

Method	625/8270 Separatory Funnel Extra 3510C	Extraction Set	170112A	Extraction Method	SEP004	Units	mL

Spiked ID 1	8270T Spike 12-8-16 EXP 12-8-17		Surrogate ID 1	8270 Surrogate 1-12-17 EXP 7-12-17	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	01/12/17 15:40	
Spiked ID 8			Ext. End Time:	01/13/17 16:05	
			GC Requires Extract By:		

pH1	2	01/12/17 3:45:00 PM	Water Bath Temp Criteria	75 °C
pH2	14	01/12/17 4:00:00 PM		
pH3				

Spiked By: DL **Date** 01/12/17 **Witnessed By:** JR **Date** 01/12/17

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	170112A Blk				1	1	1000	1	2/1	01/12/17 15:40	
						equip	E-WB6				
2	170112A LCS-1		0.250	1	1	1	1000	1	2/1	01/12/17 15:40	
						equip	E-WB6				
3	AZ48676	AZ48676W12			1	1	1050	1	2/1	01/12/17 15:40	81936 ONE WEEK
						equip	E-WB6				
4	AZ48678	AZ48678W07			1	1	1040	1	2/1	01/12/17 15:40	81936 ONE WEEK
						equip	E-WB6				
5	AZ48679	AZ48679W06			1	1	1040	1	2/1	01/12/17 15:40	81936 ONE WEEK
						equip	E-WB6				

KY 1/16/17

Solvent and Lot#	
MC	56153
1+1 Sulfuric Acid	12-5-16
Acidified Na2SO4	1-3-17
B.Na2SO4	16C255214
10N NaOH	12-19-16
ph strips	HC 574756
Filter Paper	400112

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	RH
Date	1/16/17
Time	2:00
Refrigerator	GC-C

	Technician's Initials
Scanned By	DL
Sample Preparation	DL,JR
Extraction	DL,JR
Concentration	DL

Modified	01/16/17 10:04:59 AM

Reviewed By: KY **Date** 1/16/17

Injection Log

Directory: M:\YODA\DATA\Y161207\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	1207Y002.D	1	SV Tune 10/19/16		7 Dec 16 9:00
2	4	1207Y004.D	1	5ug/ml SVOC 12/06/16		7 Dec 16 10:01
3	5	1207Y005.D	1	10ug/ml SVOC 12/06/16		7 Dec 16 10:32
4	6	1207Y006.D	1	20ug/ml SVOC 12/06/16		7 Dec 16 11:02
5	7	1207Y007.D	1	40ug/ml SVOC 12/06/16		7 Dec 16 11:32
6	8	1207Y008.D	1	50ug/ml SVOC 12/06/16		7 Dec 16 12:02
7	9	1207Y009.D	1	60ug/ml SVOC 12/06/16		7 Dec 16 12:32
8	10	1207Y010.D	1	80ug/ml SVOC 12/06/16		7 Dec 16 13:02
9	11	1207Y011.D	1	100ug/ml SVOC 12/06/16		7 Dec 16 13:32
10	12	1207Y012.D	1	2ND SRC SVOC 12/06/16		7 Dec 16 14:01
11	11	1207Y311.D	1	SV Tune 10/19/16	soil	17 Jan 17 9:04
12	12	1207Y312.D	1	50ug/ml SVOC 12/06/16	soil	17 Jan 17 9:20
13	13	1207Y313.D	1	170112A BLK 1/1000	water	17 Jan 17 11:12
14	14	1207Y314.D	1	170112A LCS-1 1/1000	water	17 Jan 17 11:42
15	15	1207Y315.D	0.952381	AZ48676W12 1/1050	water	17 Jan 17 12:12
16	16	1207Y316.D	0.961538	AZ48678W07 1/1040	water	17 Jan 17 12:43
17	17	1207Y317.D	0.961538	AZ48679W06 1/1040	water	17 Jan 17 13:13
18	19	1207Y319.D	1	50ug/ml SVOC 12/06/16	water	17 Jan 17 14:26

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank

EPA 8270D MODIFIED WATER

Blank Name/QCG: **170113W-48676 - 215544**
Batch ID: #87DME-170113A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2-(2-METHOXYETHOXY)-ETHAN	80.0 U	100	80.0	40.0	ug/L	01/13/17	01/16/17

Quant Method: Y0GLYCOL.
Run #: 1220Y055
Instrument: Yoda
Sequence: Y161220G
Initials: MA

GC SC-Blank-REG MDLs-DOD
Printed: 01/17/17 2:19:35 PM

Laboratory Control Spike Recovery
EPA 8270D MODIFIED WATER

APPL ID: **170113W-48676 LCS - 215544**
Batch ID: #87DME-170113A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
2-(2-METHOXYETHOXY)-ETHANOL	80.0	79.7	99.6	30-130

Comments: _____

Primary	SPK
Quant Method :	Y0GLYCOL.M
Extraction Date :	01/13/17
Analysis Date :	01/16/17
Instrument :	Yoda
Run :	1220Y053
Initials :	MA

Printed: 01/20/17 8:36:58 AM
APPL Standard LCS

EPA 8270D

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81936

Case No: 81936 Date Analyzed: 01/16/17

Matrix: WATER Instrument: Yoda

Blank ID: 170113A-BLK Time Analyzed: 1650

APPL ID.	Client Sample No.	File ID.	Date Analyzed
170113A-LCS	Lab Control Spike	1220Y053	01/16/17 1549
170113A-BLK	Blank	1220Y055	01/16/17 1650
AZ48676	ERH166	1220Y056	01/16/17 1720
AZ48678	ERH191	1220Y057	01/16/17 1750
AZ48679	ERH192	1220Y058	01/16/17 1820

Comments: Batch: #87DME-170113A

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: ~~1220Y002.D~~ 81936
Matrix: Water mp1-23-17
ID: SV Tune 11/15/16

SDG No: ~~Yoda~~ 81939 mp1-23-17
Date Analyzed: 12/20/16
Instrument: Yoda
Time Analyzed: 9:12

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		50ug/ml DEG 11/22/16	1220Y003.D	12/20/16 9:32
2		100ug/ml DEG 11/22/1	1220Y004.D	12/20/16 10:02
3		200ug/ml DEG 11/22/1	1220Y005.D	12/20/16 11:27
4		400ug/ml DEG 11/22/1	1220Y006.D	12/20/16 11:57
5		500ug/ml DEG 11/22/1	1220Y007.D	12/20/16 12:27
6		600ug/ml DEG 11/22/1	1220Y008.D	12/20/16 12:57
7		800ug/ml DEG 11/22/1	1220Y009.D	12/20/16 13:28
8		1000ug/ml DEG 11/22/	1220Y010.D	12/20/16 13:58
9		SS2 DEG 11/22/16	1220Y011.D	12/20/16 15:01
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	44.4
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.0
127	40 - 60% of mass 198	53.6
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 197.95	100.0
199	5 - 9% of mass 198	6.3
275	10 - 30% of mass 198	21.8
365	1 - 100% of mass 198	3.0
441	0.01 - 100% of mass 443	85.0
442	50 - 150% of mass 197.95	98.0
443	17 - 23% of mass 442	19.1

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81936
Matrix: Water
ID: SV Tune 11/15/16

SDG No: 81936
Date Analyzed: 01/16/17
Instrument: Yoda
Time Analyzed: 14:30

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		500ug/ml DEG 11/22/1	1220Y052.D	01/16/17 15:17
2	Lab Control Spike	170113A LCS-1 2/500	1220Y053.D	01/16/17 15:49
3	Blank	170113A BLK 2/500	1220Y055.D	01/16/17 16:50
4	ERH166	AZ48676W13 2/500	1220Y056.D	01/16/17 17:20
5	ERH191	AZ48678W09 2/500	1220Y057.D	01/16/17 17:50
6	ERH192	AZ48679W09 2/500	1220Y058.D	01/16/17 18:20
7		500ug/ml DEG 11/22/1	1220Y071.D	01/17/17 0:51
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	48.7
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.6
127	40 - 60% of mass 198	56.6
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 197.95	100.0
199	5 - 9% of mass 198	6.7
275	10 - 30% of mass 198	24.9
365	1 - 100% of mass 198	3.4
441	0.01 - 100% of mass 443	84.7
442	50 - 150% of mass 197.95	95.2
443	17 - 23% of mass 442	19.5

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81936

Lab File ID (Standard): 1220Y007.D Date Analyzed: 12/20/16

Instrument ID: Yoda Time Analyzed: 12:27

GC Column: ID: Heated Purge: (Y/N)

		1,4-dichlorobenzene-D4(IS)		Napthalene-D8(IS)		Acenaphthene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	220710	4.87	916121	6.29	479952	8.31
	UPPER LIMIT	441420	5.37	1832242	6.79	959904	8.81
	LOWER LIMIT	110355	4.37	458061	5.79	239976	7.81
	SAMPLE NO.						
01	500ug/ml DEG 11/22/16	156199	4.87	717794	6.29	399525	8.30
02	170113A LCS-1 2/500	184441	4.87	759894	6.29	434184	8.31
03	170113A BLK 2/500	178877	4.89	770079	6.30	418516	8.31
04	AZ48676W13 2/500	169114	4.88	730365	6.29	434533	8.30
05	AZ48678W09 2/500	184996	4.87	843124	6.29	477136	8.30
06	AZ48679W09 2/500	184126	4.89	817595	6.30	466140	8.31
07	500ug/ml DEG 11/22/16	139035	4.87	662704	6.29	376399	8.30
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81936

Lab File ID (Standard): 1220Y007.D Date Analyzed: 12/20/16

Instrument ID: Yoda Time Analyzed: 12:27

GC Column: ID: Heated Purge: (Y/N)

		Phenanthrene-D10(IS)		Chrysene-D12(IS)		Perylene-D12(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	893005	10.02	850646	13.11	931322	14.75
	UPPER LIMIT	1786010	10.52	1701292	13.61	1862644	15.25
	LOWER LIMIT	446503	9.52	425323	12.61	465661	14.25
	SAMPLE NO.						
01	500ug/ml DEG 11/22/16	726618	10.03	674115	13.10	624829	14.74
02	170113A LCS-1 2/500	913539	10.02	867376	13.10	991645	14.75
03	170113A BLK 2/500	740058	10.02	694848	13.10	715567	14.75
04	AZ48676W13 2/500	782563	10.03	831399	13.10	847810	14.74
05	AZ48678W09 2/500	878908	10.03	840853	13.10	687985	14.74
06	AZ48679W09 2/500	873800	10.02	841504	13.10	997022	14.75
07	500ug/ml DEG 11/22/16	699842	10.03	672779	13.10	576980	14.74
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

ORGANICS

Sample Data

APPL, INC.

EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH166
Sample Collection Date: 01/09/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81936
APPL ID: AZ48676
QCG: #87DME-170113A-215544

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	01/13/17	01/16/17

Quant Method:	Y0GLYCOL.M
Run #:	1220Y056
Instrument:	Yoda
Sequence:	Y161220G
Dilution Factor:	1
Initials:	MA

Printed: 01/17/17 2:20:05 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y056.D Vial: 56
Acq On : 16 Jan 17 17:20 Operator: MA
Sample : AZ48676W13 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 8:28 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 17 08:26:13 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.88	152	169114	40.00000	ppb	0.01
3) Napthalene-D8(IS)	6.29	136	730365	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	434533	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	782563	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	831399	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.74	264	847810	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

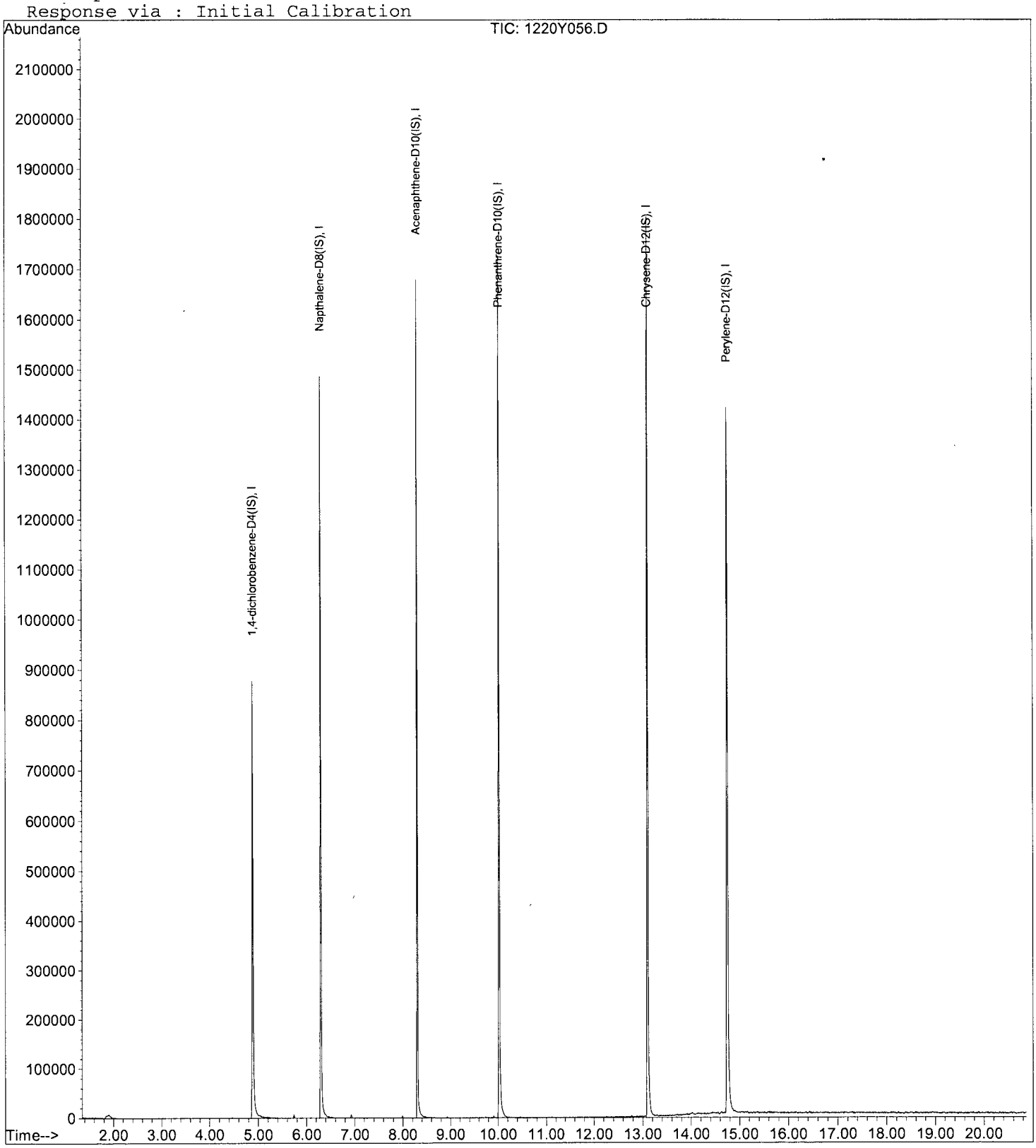
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y056.D Vial: 56
Acq On : 16 Jan 17 17:20 Operator: MA
Sample : AZ48676W13 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 8:28 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 17 08:26:13 2017
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH191
Sample Collection Date: 01/06/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81936
APPL ID: AZ48678
QCG: #87DME-170113A-215544

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	01/13/17	01/16/17

Quant Method:	Y0GLYCOL.M
Run #:	1220Y057
Instrument:	Yoda
Sequence:	Y161220G
Dilution Factor:	1
Initials:	MA

Printed: 01/17/17 2:20:05 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y057.D Vial: 57
Acq On : 16 Jan 17 17:50 Operator: MA
Sample : AZ48678W09 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 8:28 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 17 08:26:13 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	184996	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	843124	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	477136	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	878908	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	840853	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.74	264	687985	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

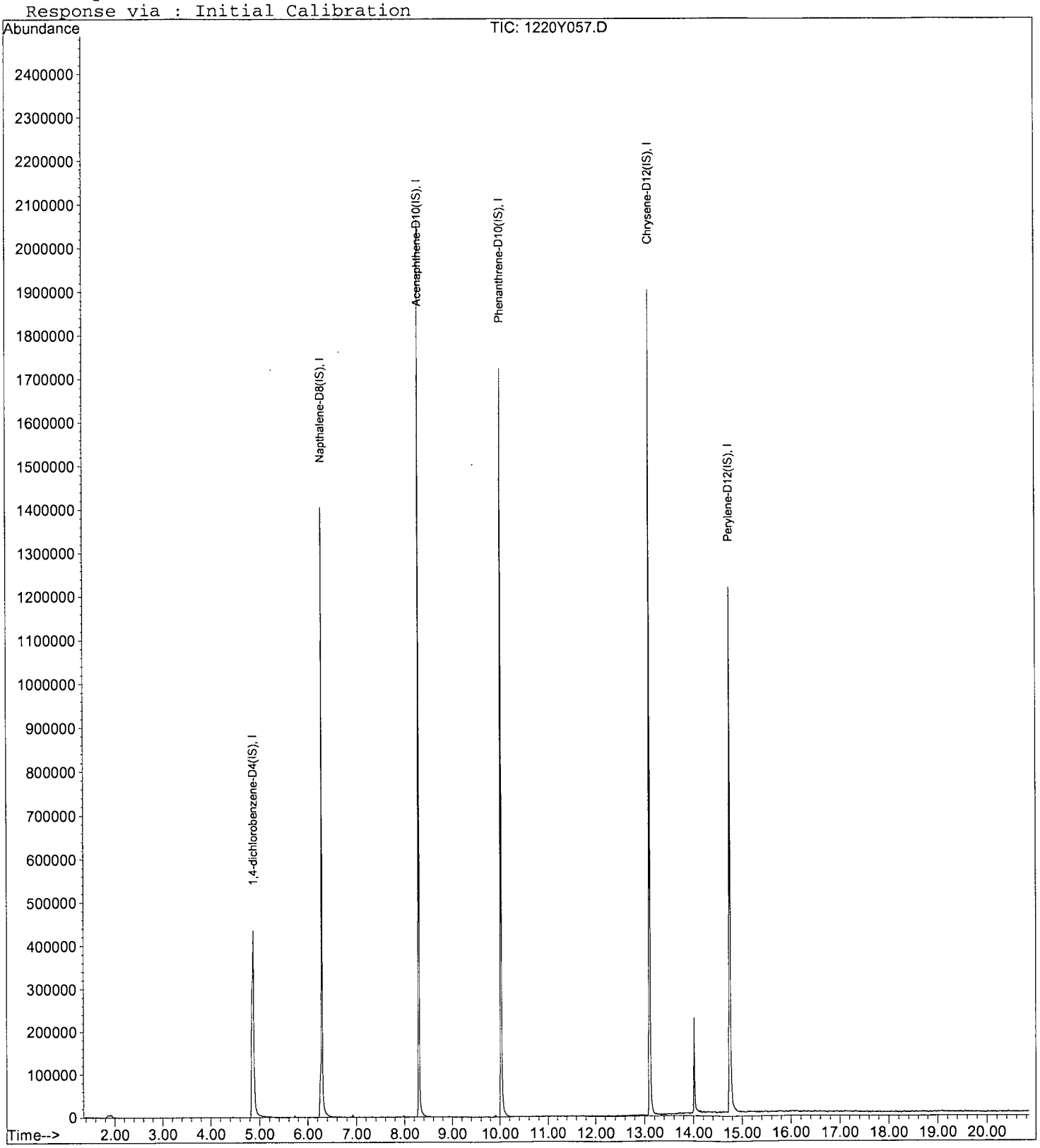
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y057.D Vial: 57
Acq On : 16 Jan 17 17:50 Operator: MA
Sample : AZ48678W09 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 8:28 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 17 08:26:13 2017
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH192
Sample Collection Date: 01/06/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81936
APPL ID: AZ48679
QCG: #87DME-170113A-215544

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	01/13/17	01/16/17

Quant Method: Y0GLYCOL.M
Run #: 1220Y058
Instrument: Yoda
Sequence: Y161220G
Dilution Factor: 1
Initials: MA

Printed: 01/17/17 2:20:05 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y058.D Vial: 58
Acq On : 16 Jan 17 18:20 Operator: MA
Sample : AZ48679W09 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 8:28 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 17 08:26:13 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.89	152	184126	40.00000	ppb	0.02
3) Napthalene-D8(IS)	6.30	136	817595	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	466140	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	873800	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	841504	40.00000	ppb	-0.01
7) Perylene-D12(IS)	14.75	264	997022	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

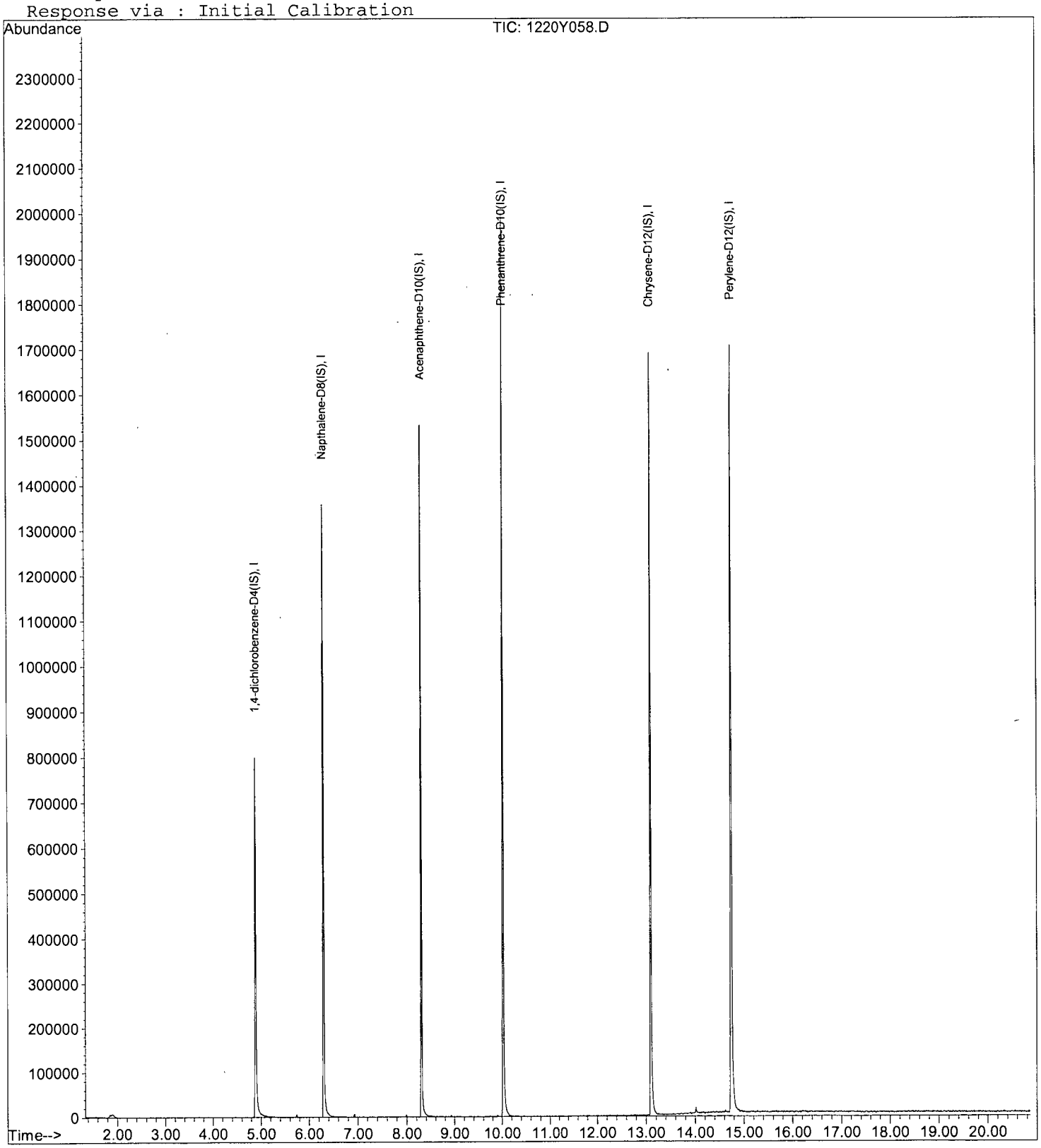
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y058.D Vial: 58
Acq On : 16 Jan 17 18:20 Operator: MA
Sample : AZ48679W09 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 8:28 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 17 08:26:13 2017
Response via : Initial Calibration



ORGANICS

Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/20/16
Matrix: Instrument: Yoda
Initials:

			1220Y003.D	1220Y004.D	1220Y005.D	1220Y006.D	1220Y007.D	1220Y008.D	1220Y009.D	1220Y010.D						
		Compound	1	2	3	4	5	6	7	8			Avg	%RSD		
1	I	1,4-dichlorobenzene-D4(IS)														
2	TM	2-(2-Methoxyethoxy)ethanol	0.1800	0.1823	0.2140	0.2253	0.2267	0.2342	0.2268	0.2261						
3	I	Napthalene-D8(IS)											0.21	9.9	TM	
4	I	Acenaphthene-D10(IS)														
5	I	Phenanthrene-D10(IS)														
6	I	Chrysene-D12(IS)														
7	I	Perylene-D12(IS)														
8																
9																
10																
11																
12																
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Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y003.D Vial: 3
Acq On : 20 Dec 16 9:32 Operator: MA
Sample : 50ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:24 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:24:33 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	235296	40.00	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	1020104	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	566383	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	1039128	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	951820	40.00	ppb	0.00
7) Perylene-D12(IS)	14.74	264	863918	40.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.12	45	52929	41.96	ppb	95

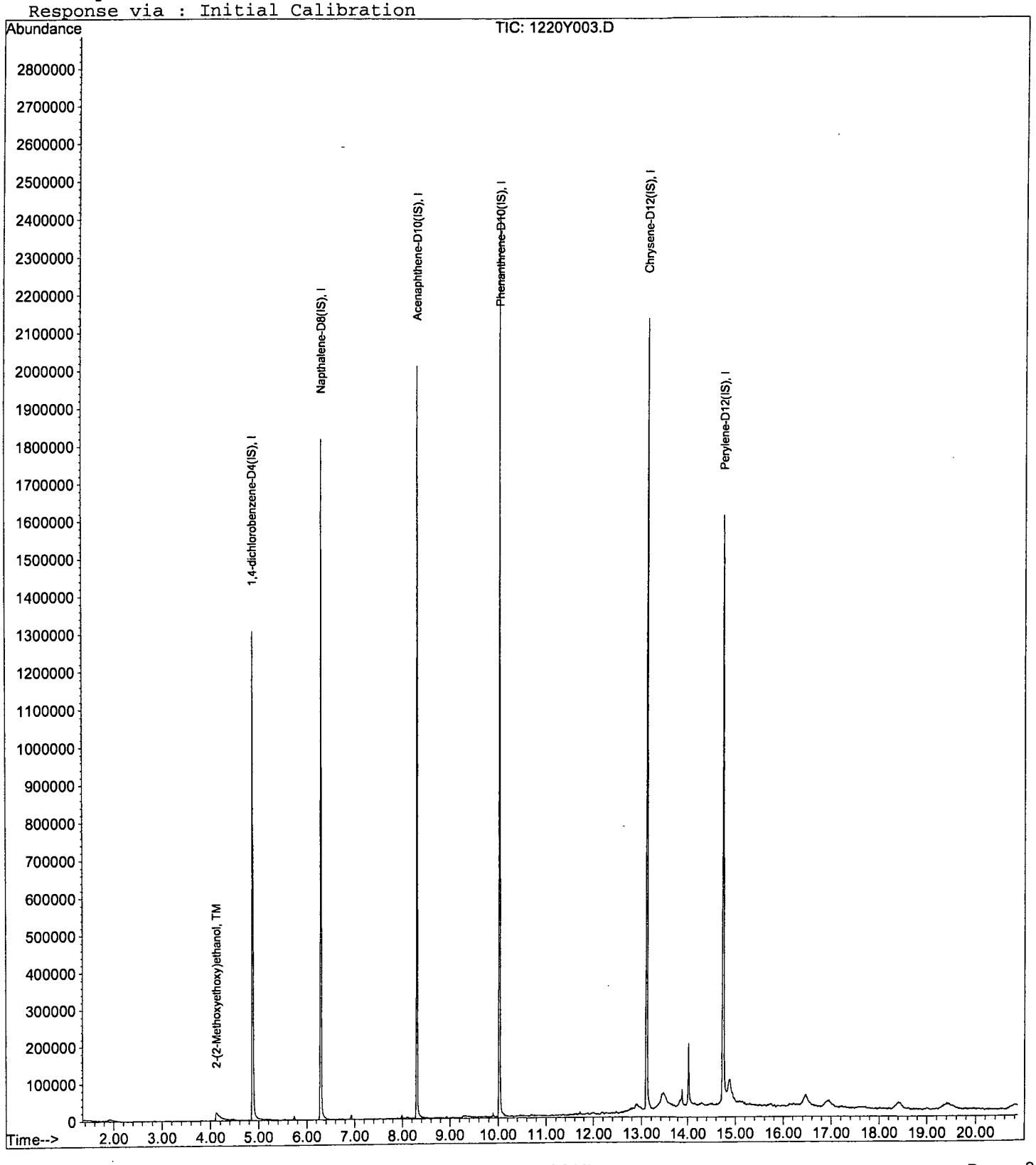
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y003.D Vial: 3
Acq On : 20 Dec 16 9:32 Operator: MA
Sample : 50ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:24 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:24:33 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y004.D Vial: 4
Acq On : 20 Dec 16 10:02 Operator: MA
Sample : 100ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:28 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:27:52 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	236538	40.00	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	1021117	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	569209	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	1067696	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	1009921	40.00	ppb	0.00
7) Perylene-D12(IS)	14.74	264	992895	40.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.09	45	107826	85.04	ppb	92

(#) = qualifier out of range (m) = manual integration
1220Y004.D Y0GLYCOL.M Thu Jan 19 15:28:11 2017 Page 1

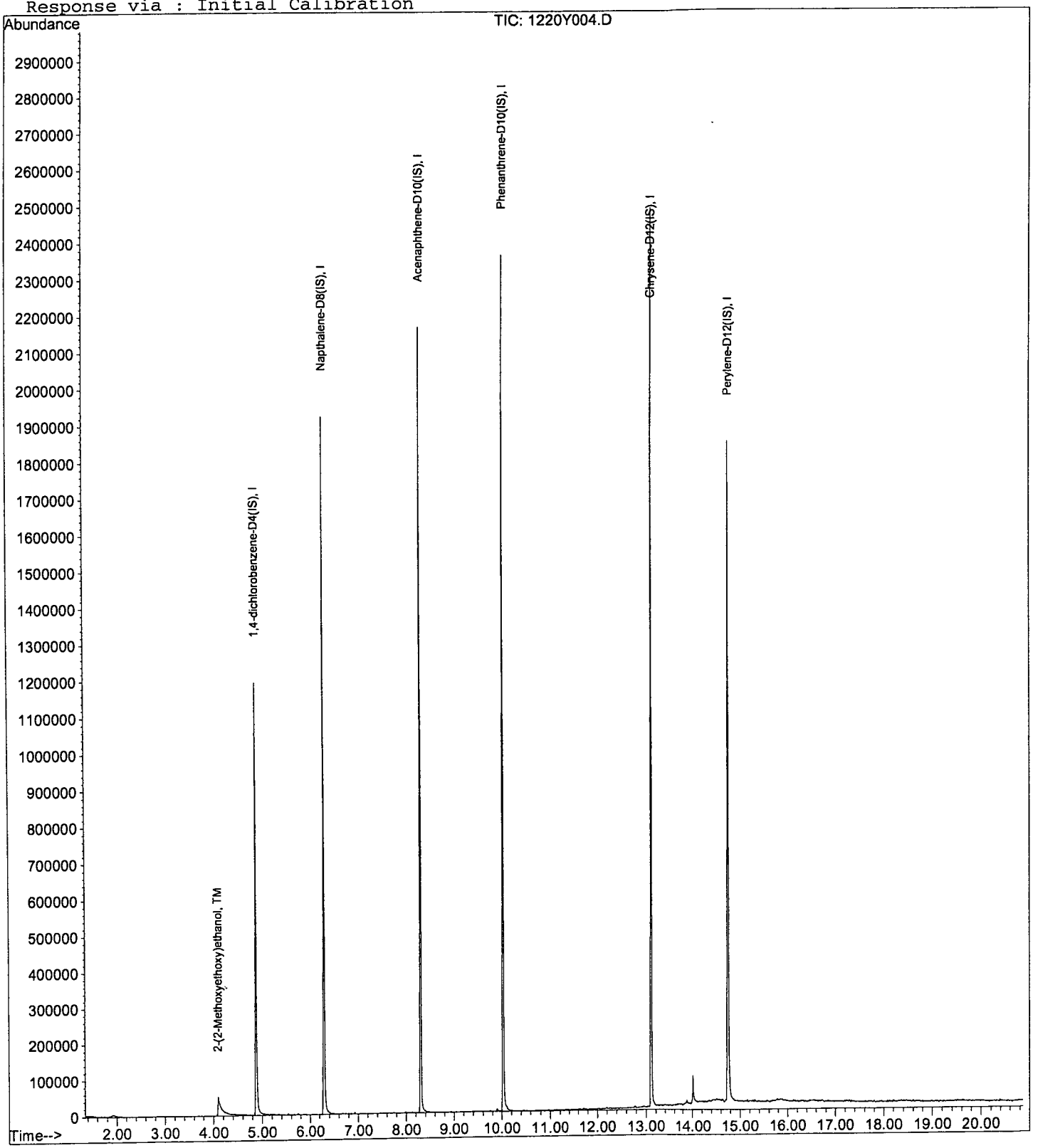
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y004.D
Acq On : 20 Dec 16 10:02
Sample : 100ug/ml DEG 12/20/16
Misc :

Vial: 4
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:28 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:27:52 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y005.D Vial: 5
Acq On : 20 Dec 16 11:27 Operator: MA
Sample : 200ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:31 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:27:52 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	219199	40.00	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	935952	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	541303	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	969145	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.11	240	850962	40.00	ppb	0.00
7) Perylene-D12(IS)	14.75	264	955898	40.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.06	45	234542	199.60	ppb	99

(#) = qualifier out of range (m) = manual integration
1220Y005.D Y0GLYCOL.M Thu Jan 19 15:31:38 2017 Page 1

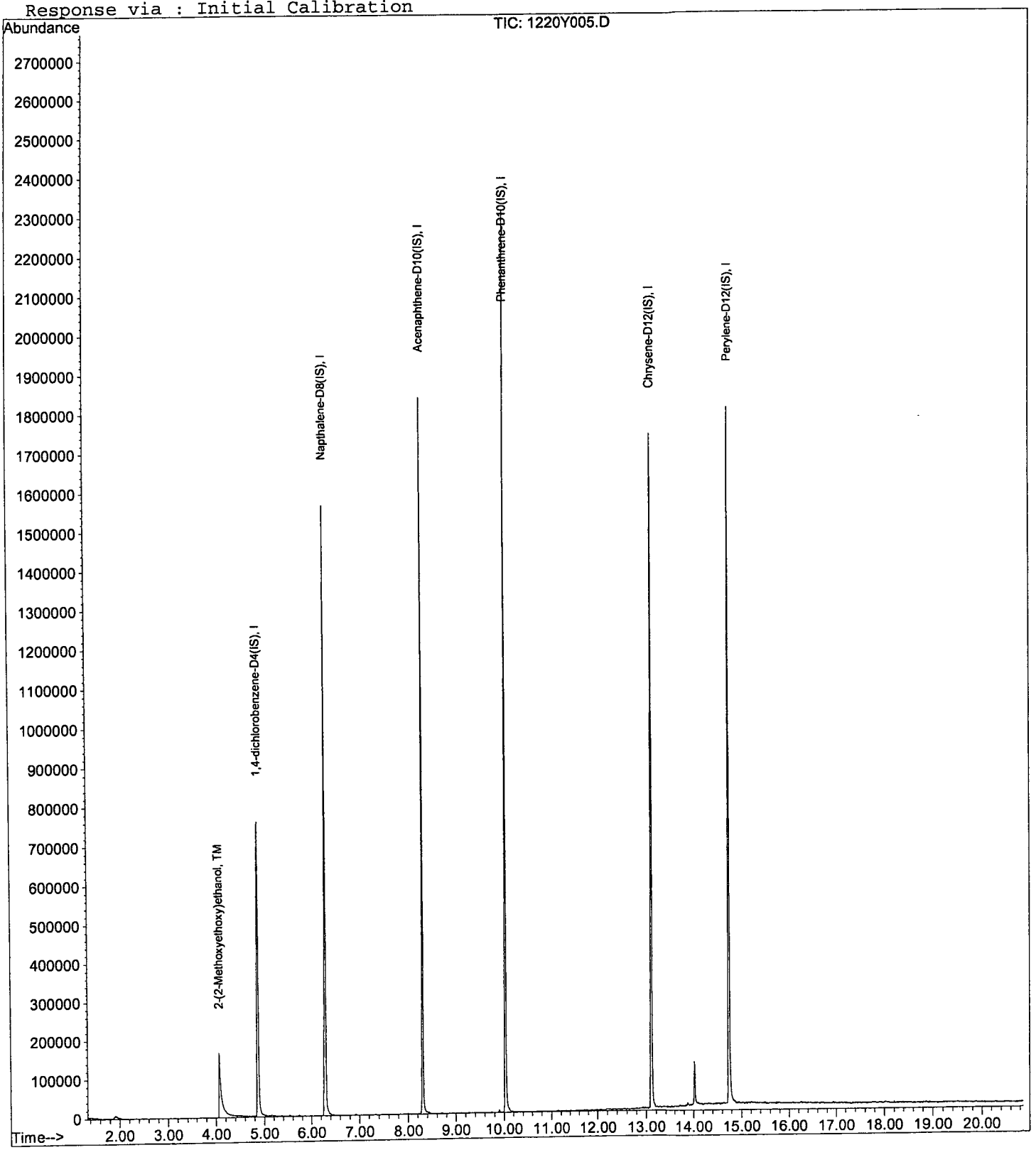
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y005.D
Acq On : 20 Dec 16 11:27
Sample : 200ug/ml DEG 12/20/16
Misc :

Vial: 5
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:31 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:27:52 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y006.D Vial: 6
Acq On : 20 Dec 16 11:57 Operator: MA
Sample : 400ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:31 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:27:52 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	219938	40.00	ppb	-0.02
3) Napthalene-D8(IS)	6.29	136	934708	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	524564	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	930250	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	927639	40.00	ppb	0.00
7) Perylene-D12(IS)	14.74	264	801484	40.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.07	45	495610	420.36	ppb	98

(#) = qualifier out of range (m) = manual integration
1220Y006.D Y0GLYCOL.M Thu Jan 19 15:32:08 2017 Page 1

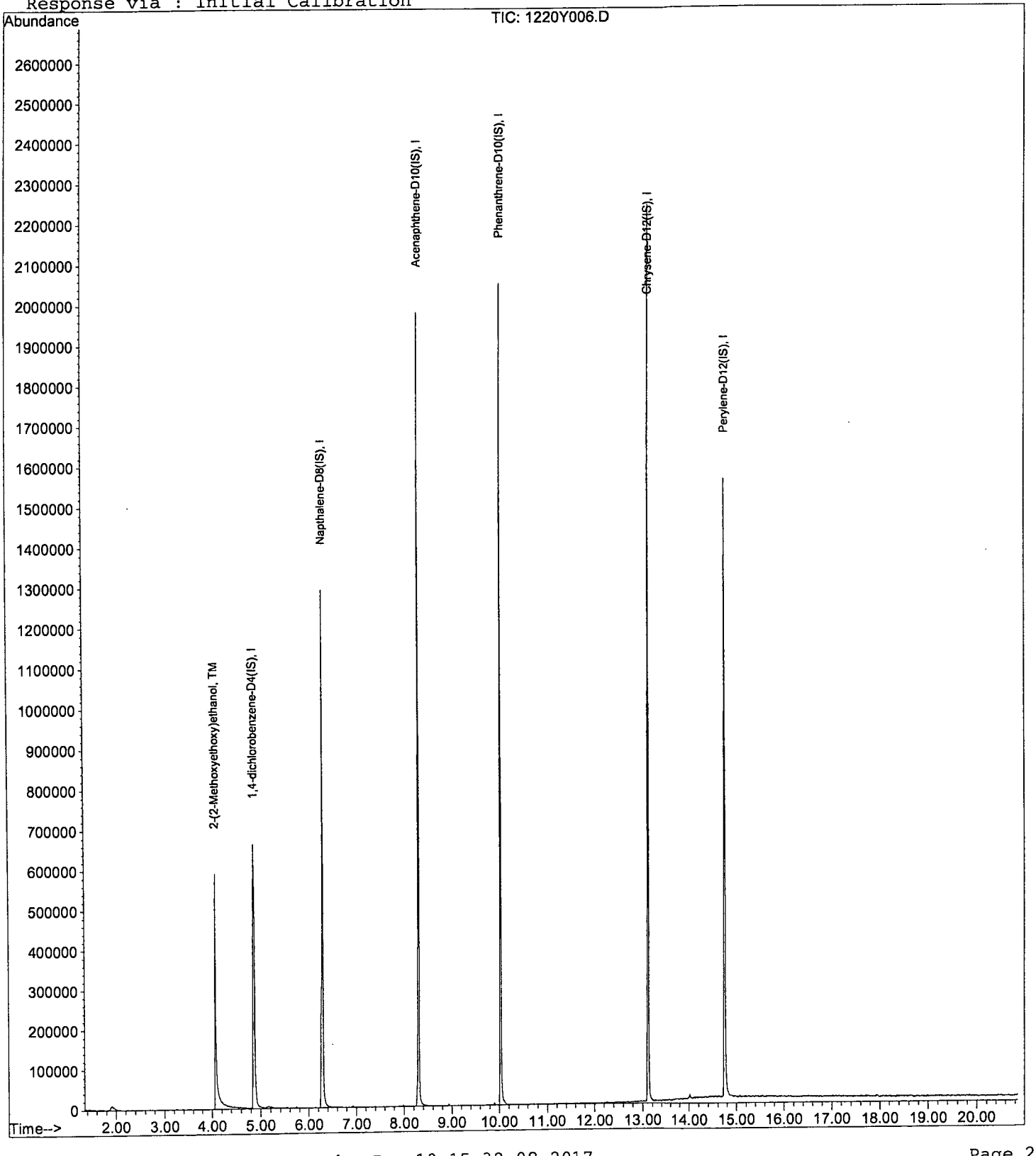
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y006.D
Acq On : 20 Dec 16 11:57
Sample : 400ug/ml DEG 12/20/16
Misc :

Vial: 6
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:31 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:27:52 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y007.D
Acq On : 20 Dec 16 12:27
Sample : 500ug/ml DEG 12/20/16
Misc :

Vial: 7
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:34 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:34:38 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	220710	40.00	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	916121	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	479952	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	893005	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.11	240	850646	40.00	ppb	0.00
7) Perylene-D12(IS)	14.75	264	931322	40.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.07	45	625337	528.53	ppb	100

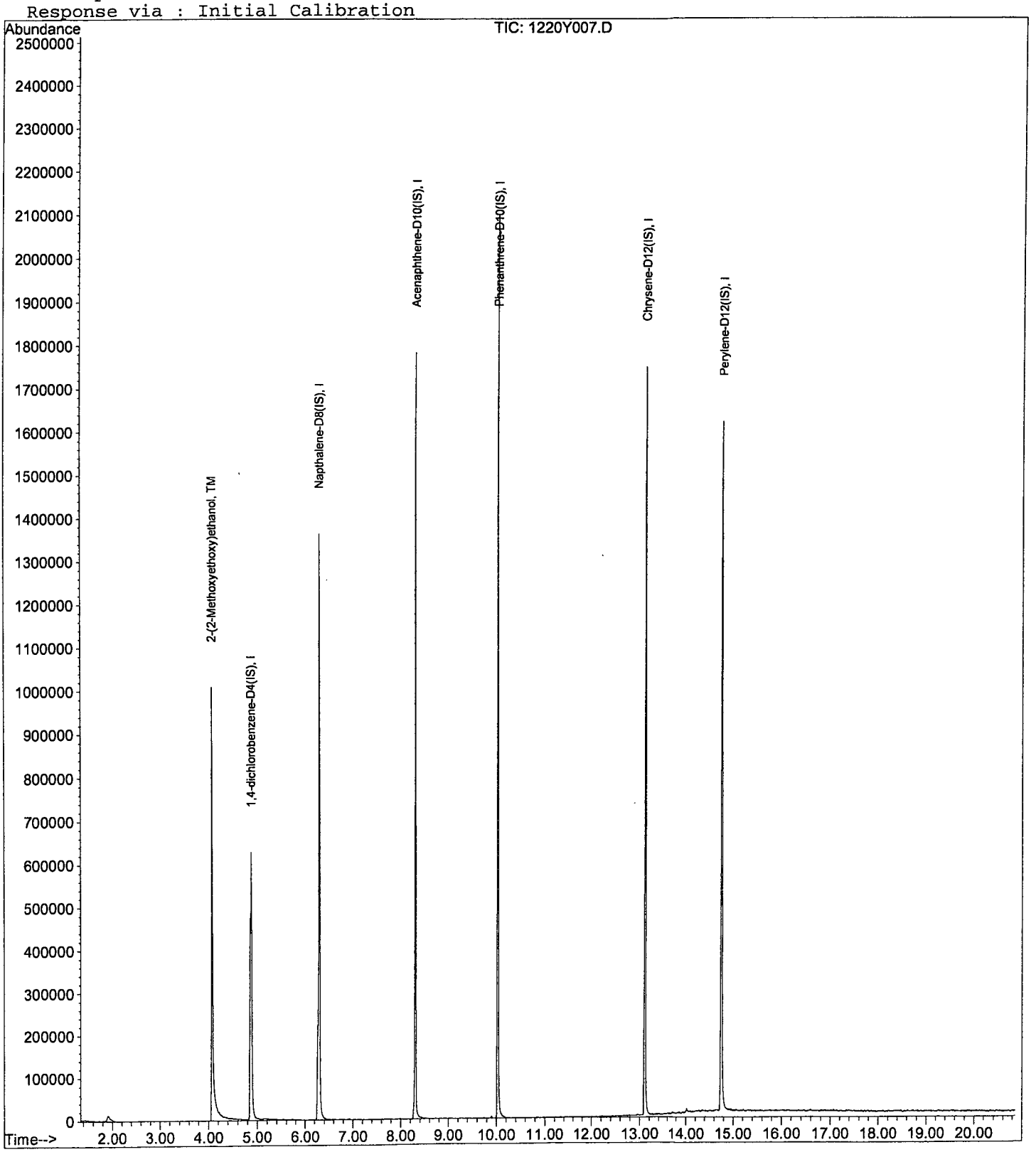
(#) = qualifier out of range (m) = manual integration
1220Y007.D Y0GLYCOL.M Thu Jan 19 15:34:55 2017 Page 1

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y007.D Vial: 7
Acq On : 20 Dec 16 12:27 Operator: MA
Sample : 500ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:34 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:34:38 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y008.D
Acq On : 20 Dec 16 12:57
Sample : 600ug/ml DEG 12/20/16
Misc :

Vial: 8
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:35 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:35:45 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.88	152	218598	40.00	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	918286	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	502491	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	904865	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.11	240	875224	40.00	ppb	0.00
7) Perylene-D12(IS)	14.75	264	907883	40.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.08	45	767935	655.33	ppb	99

(#) = qualifier out of range (m) = manual integration
1220Y008.D Y0GLYCOL.M Thu Jan 19 15:36:02 2017

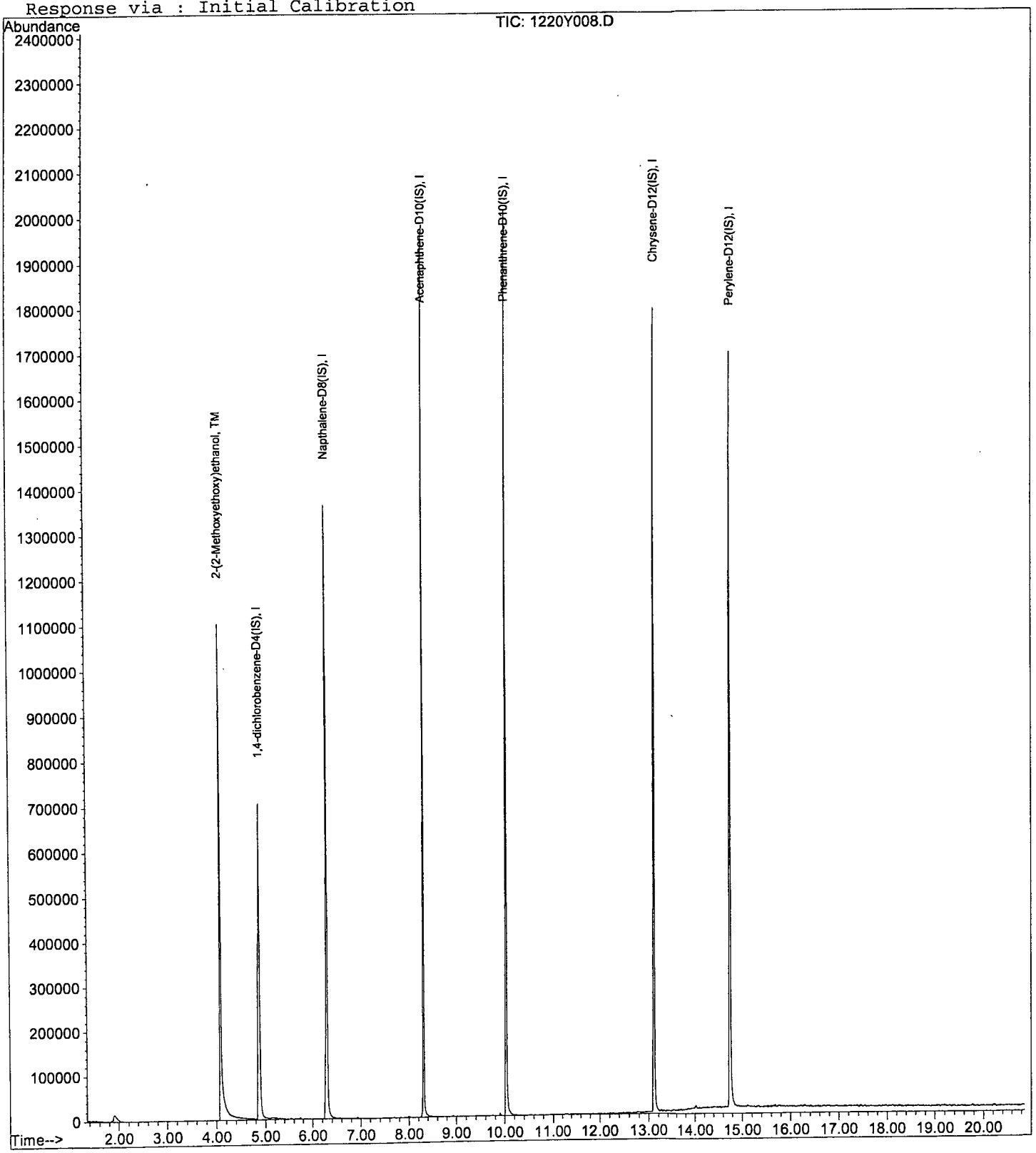
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y008.D
Acq On : 20 Dec 16 12:57
Sample : 600ug/ml DEG 12/20/16
Misc :

Vial: 8
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:35 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:35:45 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y009.D Vial: 9
Acq On : 20 Dec 16 13:28 Operator: MA
Sample : 800ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:36 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:35:45 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.88	152	224351	40.00	ppb	0.01
3) Napthalene-D8(IS)	6.29	136	955028	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	537186	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	1003381	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	910308	40.00	ppb	0.00
7) Perylene-D12(IS)	14.75	264	853883	40.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.09	45	1017711	846.21	ppb	98

(#) = qualifier out of range (m) = manual integration

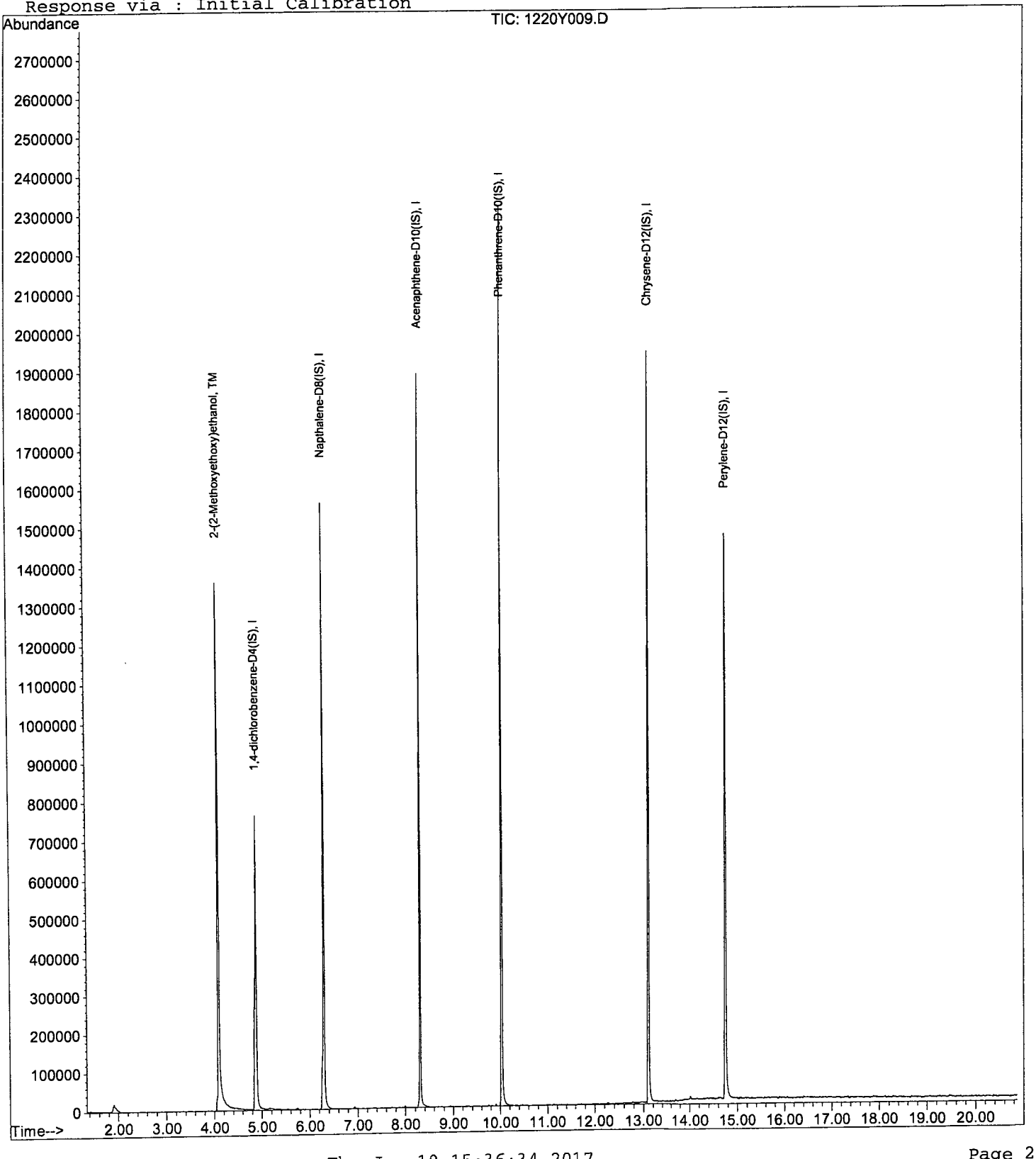
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y009.D
Acq On : 20 Dec 16 13:28
Sample : 800ug/ml DEG 12/20/16
Misc :

Vial: 9
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:36 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:35:45 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y010.D Vial: 10
Acq On : 20 Dec 16 13:58 Operator: MA
Sample : 1000ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:37 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:35:45 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	283148	40.00	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	1210963	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	689185	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	1234610	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.11	240	1201158	40.00	ppb	0.00
7) Perylene-D12(IS)	14.75	264	1162204	40.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.12	45	1600487	1054.44	ppb	99

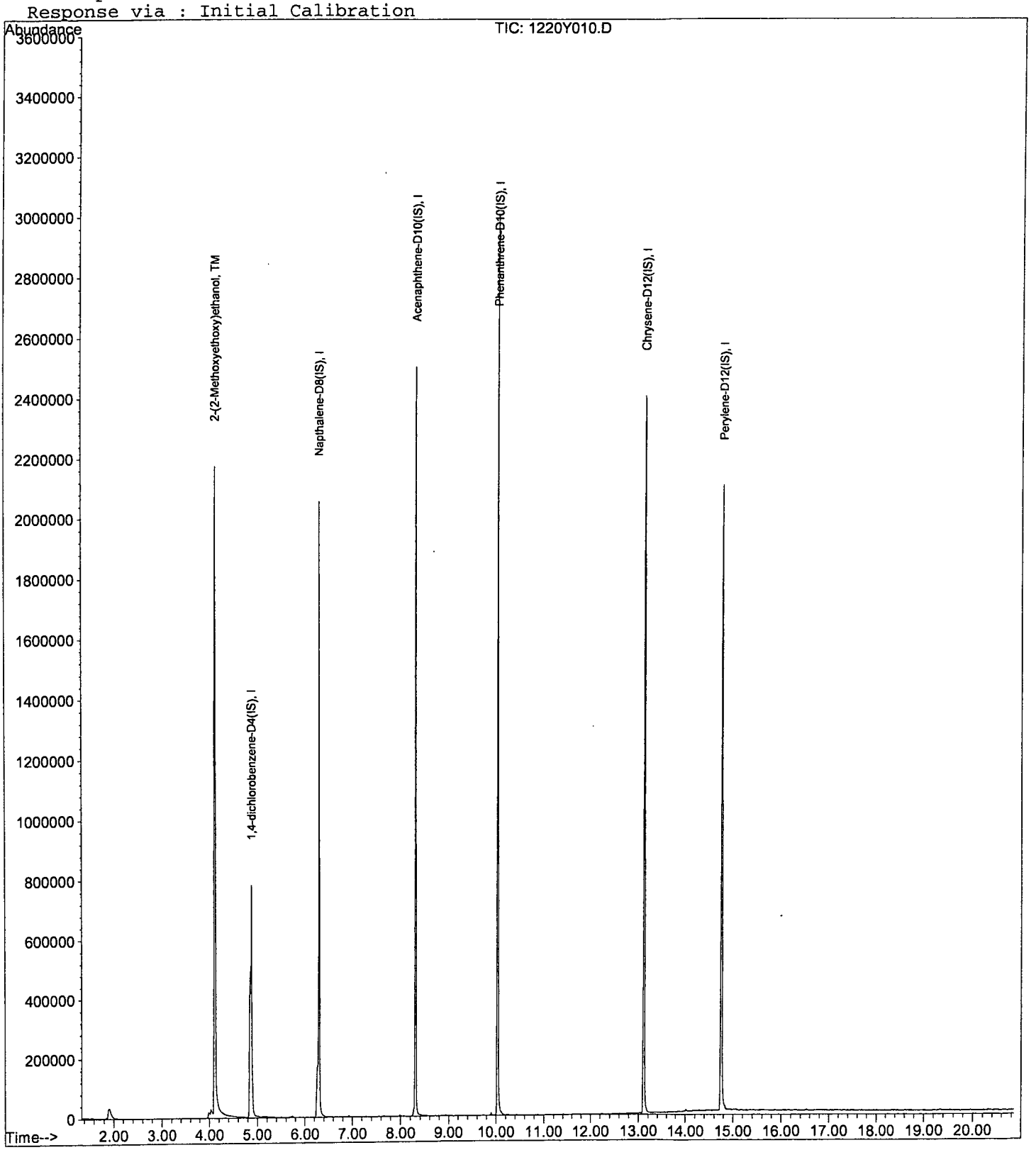
(#) = qualifier out of range (m) = manual integration
1220Y010.D Y0GLYCOL.M Thu Jan 19 15:37:34 2017 Page 1

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y010.D Vial: 10
Acq On : 20 Dec 16 13:58 Operator: MA
Sample : 1000ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:37 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:35:45 2017
Response via : Initial Calibration



Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/20/16
Instrument: Yoda
Initial Cal. Date: 12/20/16
Data File: 1220Y011.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TM	2-(2-Methoxyethoxy)ethanol	0.2144	0.2388	11	TM	
2							
3							
4							
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40							
		Average			11.0		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y011.D Vial: 11
Acq On : 20 Dec 16 15:01 Operator: MA
Sample : SS2 DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 15:16 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Dec 20 14:47:54 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.88	152	226449	40.00000 ppb	0.00
3) Napthalene-D8(IS)	6.29	136	946039	40.00000 ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	498527	40.00000 ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	939012	40.00000 ppb	0.00
6) Chrysene-D12(IS)	13.11	240	865583	40.00000 ppb	0.00
7) Perylene-D12(IS)	14.75	264	853444	40.00000 ppb	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.08	45	676019	556.89065 ppb	99

Algorithm = $\frac{676019 \times 40 \times 1}{226449 \times 0.2144} = 556.9$ MA 12/29/16

(#) = qualifier out of range (m) = manual integration
1220Y011.D Y0GLYCOL.M Wed Dec 21 12:44:47 2016 Page 1

Quantitation Report

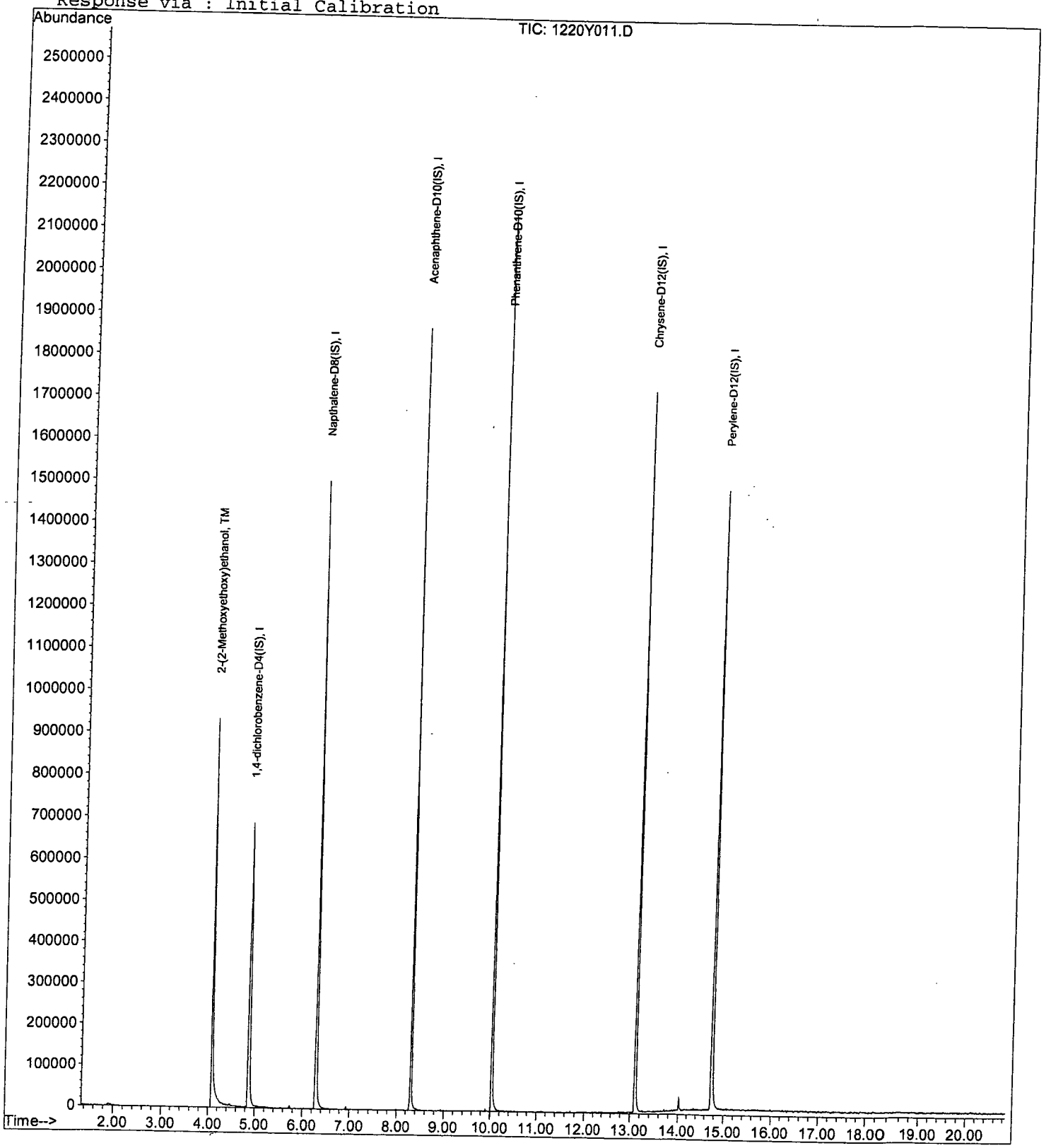
Data File : M:\YODA\DATA\Y161220G\1220Y011.D
Acq On : 20 Dec 16 15:01
Sample : SS2 DEG 12/20/16
Misc :

Vial: 11
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 20 15:16 2016

Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 21 10:52:52 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Date Analyzed: 01/16/17

Matrix: Instrument: Yoda

Initial Cal. Date: 12/20/16

Data File: 1220Y052.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	2-(2-Methoxyethoxy)ethanol	0.2144	0.2184	1.9	TM	
3	I	Napthalene-D8(IS)	ISTD			I	
4	I	Acenaphthene-D10(IS)	ISTD			I	
5	I	Phenanthrene-D10(IS)	ISTD			I	
6	I	Chrysene-D12(IS)	ISTD			I	
7	I	Perylene-D12(IS)	ISTD			I	
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			1.9		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y052.D
Acq On : 16 Jan 17 15:17
Sample : 500ug/ml DEG 11/22/16
Misc : water

Vial: 52
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 20 8:19 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 20 08:19:39 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	156199	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	717794	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	399525	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	726618	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	674115	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.74	264	624829	40.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.06	45	426417	509.25780	ppb	100

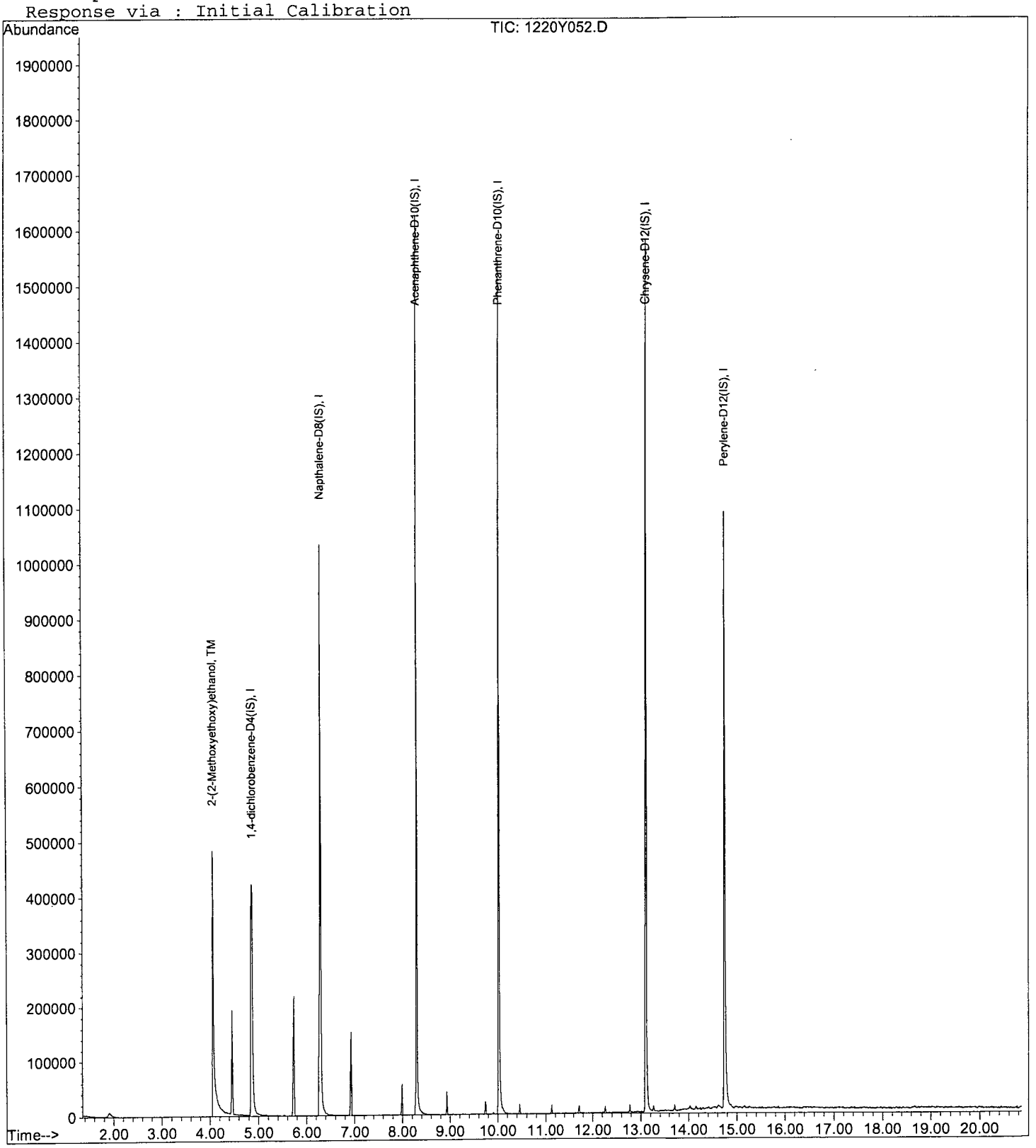
(#) = qualifier out of range (m) = manual integration
1220Y052.D Y0GLYCOL.M Fri Jan 20 08:20:12 2017

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y052.D Vial: 52
Acq On : 16 Jan 17 15:17 Operator: MA
Sample : 500ug/ml DEG 11/22/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 20 8:19 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 20 08:19:39 2017
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/17/17
Instrument: Yoda
Initial Cal. Date: 12/20/16
Data File: 1220Y071.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	2-(2-Methoxyethoxy)ethanol	0.2144	0.1904	11	TM	
3	I	Napthalene-D8(IS)	ISTD			I	
4	I	Acenaphthene-D10(IS)	ISTD			I	
5	I	Phenanthrene-D10(IS)	ISTD			I	
6	I	Chrysene-D12(IS)	ISTD			I	
7	I	Perylene-D12(IS)	ISTD			I	
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			11.0		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y071.D Vial: 71
Acq On : 17 Jan 17 00:51 Operator: MA
Sample : 500ug/ml DEG 11/22/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 8:26 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 17 08:26:13 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	139035	40.00000 ppb	0.00
3) Napthalene-D8(IS)	6.29	136	662704	40.00000 ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	376399	40.00000 ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	699842	40.00000 ppb	0.00
6) Chrysene-D12(IS)	13.10	240	672779	40.00000 ppb	0.00
7) Perylene-D12(IS)	14.74	264	576980	40.00000 ppb	0.00

System Monitoring Compounds

Target Compounds					Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.08	45	330916	443.99191 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

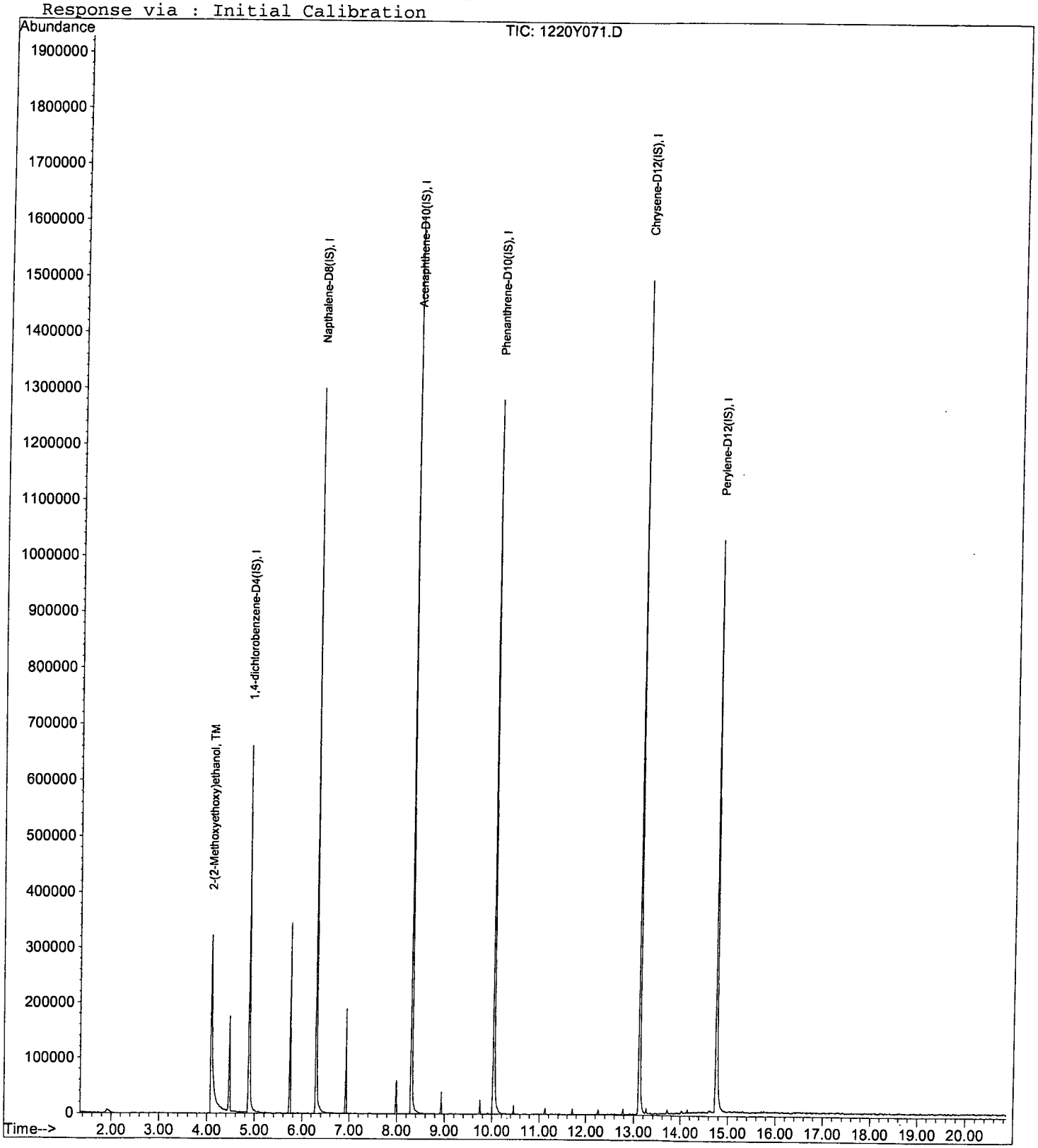
Data File : M:\YODA\DATA\Y161220G\1220Y071.D
Acq On : 17 Jan 17 00:51
Sample : 500ug/ml DEG 11/22/16
Misc : water

Vial: 71
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 17 8:26 2017

Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 17 08:26:13 2017
Response via : Initial Calibration



ORGANICS

Raw Data

APPL, INC.

Method Blank

EPA 8270D MODIFIED WATER

Blank Name/QCG: **170113W-48676 - 215544**

Batch ID: #87DME-170113A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2-(2-METHOXYETHOXY)-ETHAN	80.0 U	100	80.0	40.0	ug/L	01/13/17	01/16/17

Quant Method:Y0GLYCOL.
Run #:1220Y055
Instrument:Yoda
Sequence:Y161220G
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 01/17/17 2:20:11 PM

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y055.D Vial: 55
Acq On : 16 Jan 17 16:50 Operator: MA
Sample : 170113A BLK 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 8:28 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 17 08:26:13 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.89	152	178877	40.00000	ppb	0.02
3) Napthalene-D8(IS)	6.30	136	770079	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	418516	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	740058	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	694848	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.75	264	715567	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

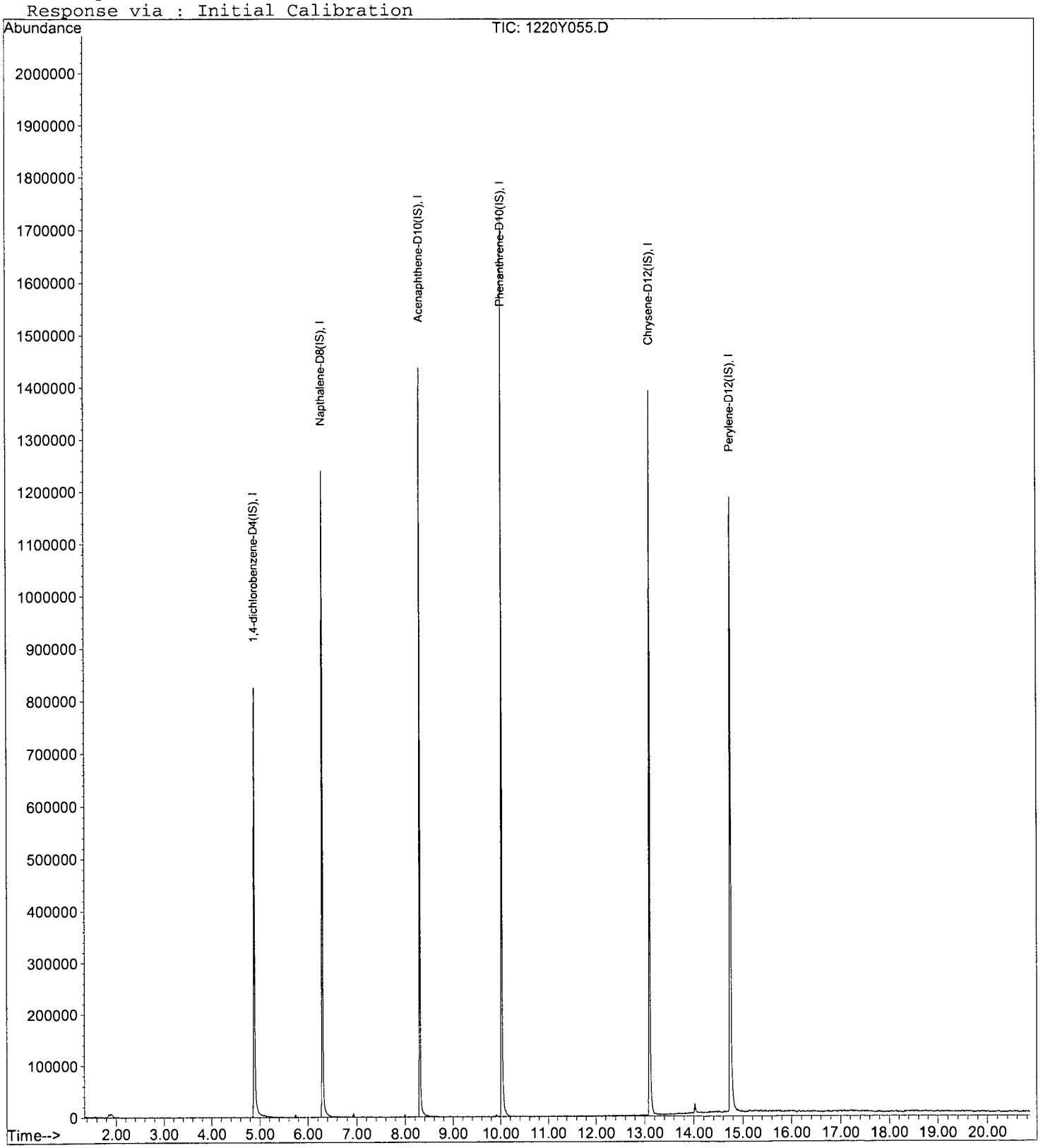
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y055.D Vial: 55
Acq On : 16 Jan 17 16:50 Operator: MA
Sample : 170113A BLK 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 8:28 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 17 08:26:13 2017
Response via : Initial Calibration



Laboratory Control Spike Recovery
EPA 8270D MODIFIED WATER

APPL ID: **170113W-48676 LCS - 215544**
Batch ID: #87DME-170113A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
2-(2-METHOXYETHOXY)-ETHANOL	80.0	79.7	99.6	30-130

Comments: _____

Primary	SPK
Quant Method :	Y0GLYCOL.M
Extraction Date :	01/13/17
Analysis Date :	01/16/17
Instrument :	Yoda
Run :	1220Y053
Initials :	MA

Printed: 01/20/17 8:36:57 AM
APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y053.D Vial: 53
Acq On : 16 Jan 17 15:49 Operator: MA
Sample : 170113A LCS-1 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 20 8:24 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 20 08:22:52 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	184441	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	759894	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	434184	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	913539	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	867376	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.75	264	991645	40.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.19	45	78833m	79.73188	ppb	100

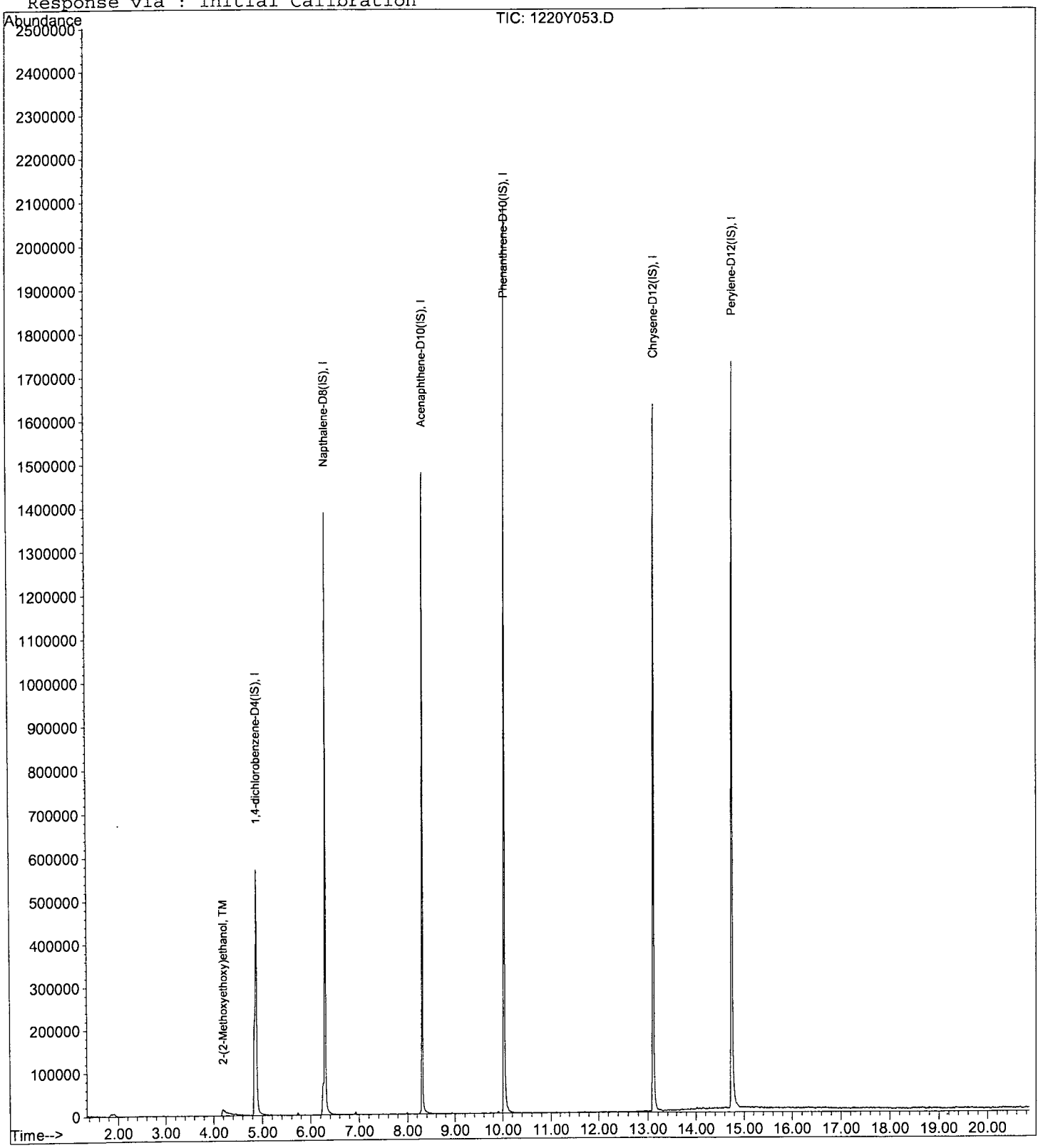
(#) = qualifier out of range (m) = manual integration
1220Y053.D Y0GLYCOL.M Fri Jan 20 08:24:58 2017 Page 1

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y053.D Vial: 53
Acq On : 16 Jan 17 15:49 Operator: MA
Sample : 170113A LCS-1 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 20 8:24 2017 Quant Results File: Y0GLYCOL.RES

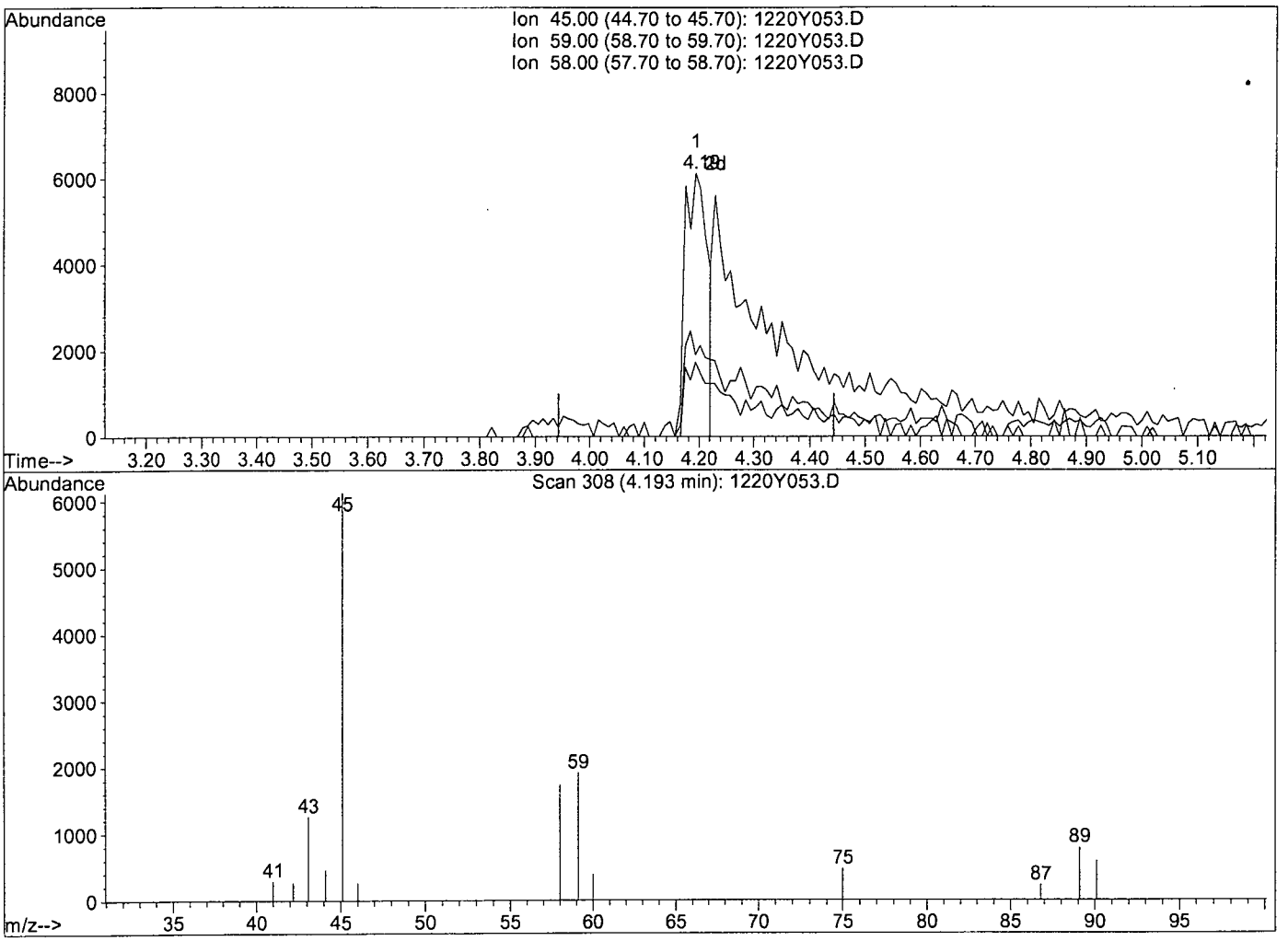
Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 20 08:22:52 2017
Response via : Initial Calibration



Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y053.D Vial: 53
Acq On : 16 Jan 17 15:49 Operator: MA
Sample : 170113A LCS-1 2/500 Inst : Yoda
Misc : water Multiplr: 1.00
Quant Time: Jan 20 8:23 2017 Quant Results File: temp.res

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 20 08:22:52 2017
Response via : Multiple Level Calibration



TIC: 1220Y053.D

(2) 2-(2-Methoxyethoxy)ethanol (TM)

4.19min 18.2730ppb

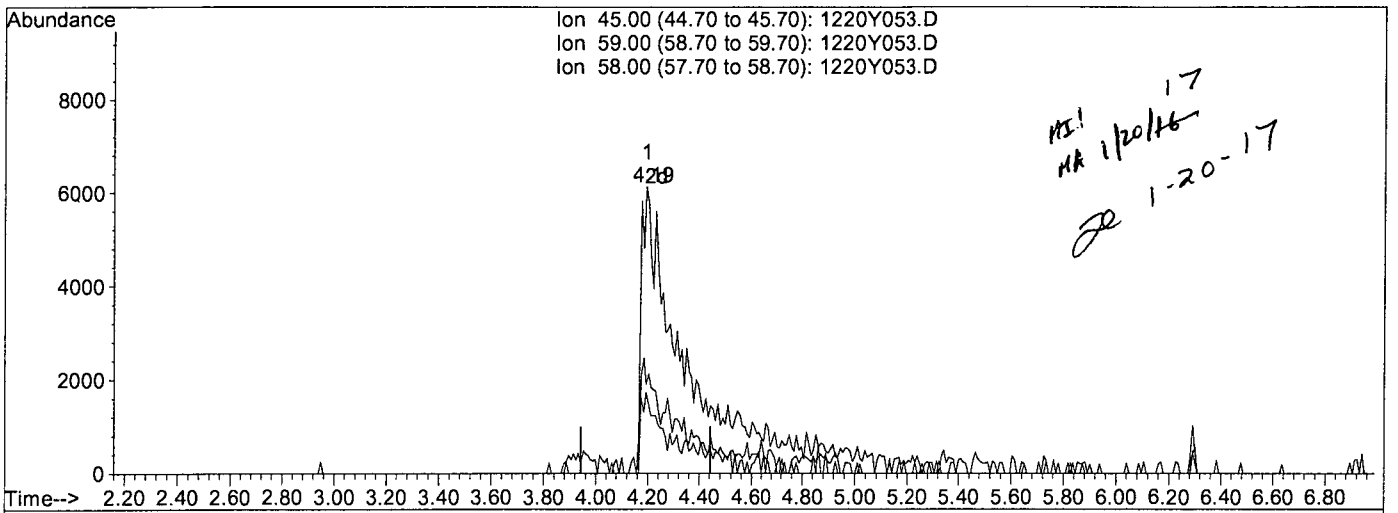
response 18067

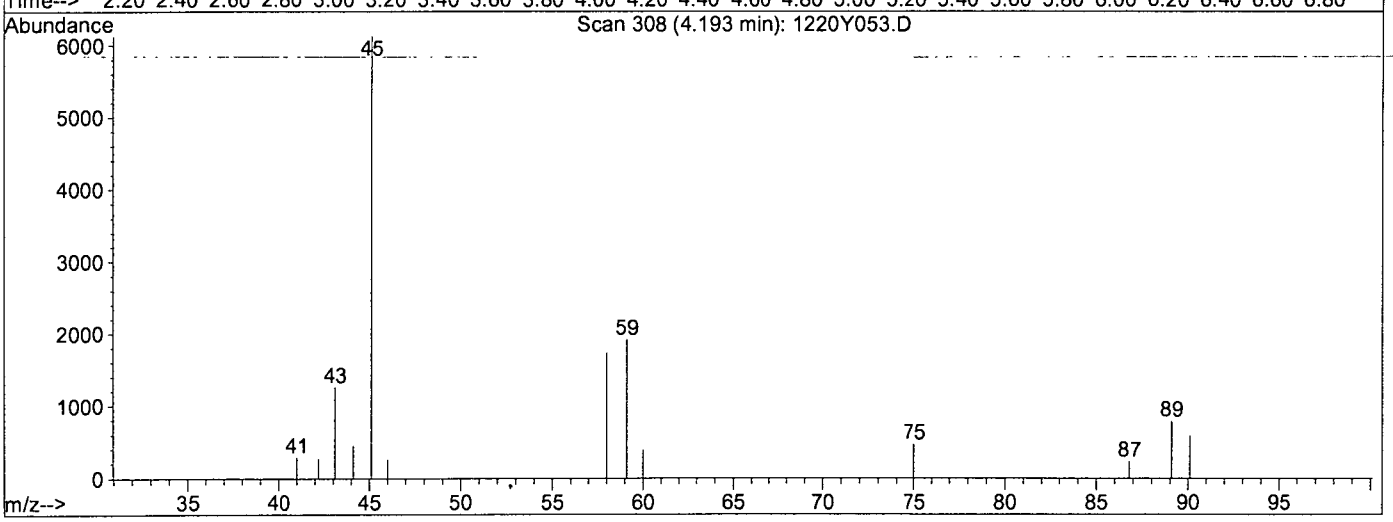
Ion	Exp%	Act%
45.00	100	100
59.00	31.20	31.16
58.00	28.30	28.25
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y053.D Vial: 53
Acq On : 16 Jan 17 15:49 Operator: MA
Sample : 170113A LCS-1 2/500 Inst : Yoda
Misc : water Multiplr: 1.00
Quant Time: Jan 20 8:24 2017 Quant Results File: temp.res

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 20 08:22:52 2017
Response via : Multiple Level Calibration





TIC: 1220Y053.D

(2) 2-(2-Methoxyethoxy)ethanol (TM)

4.19min 79.7319ppb m

response 78833

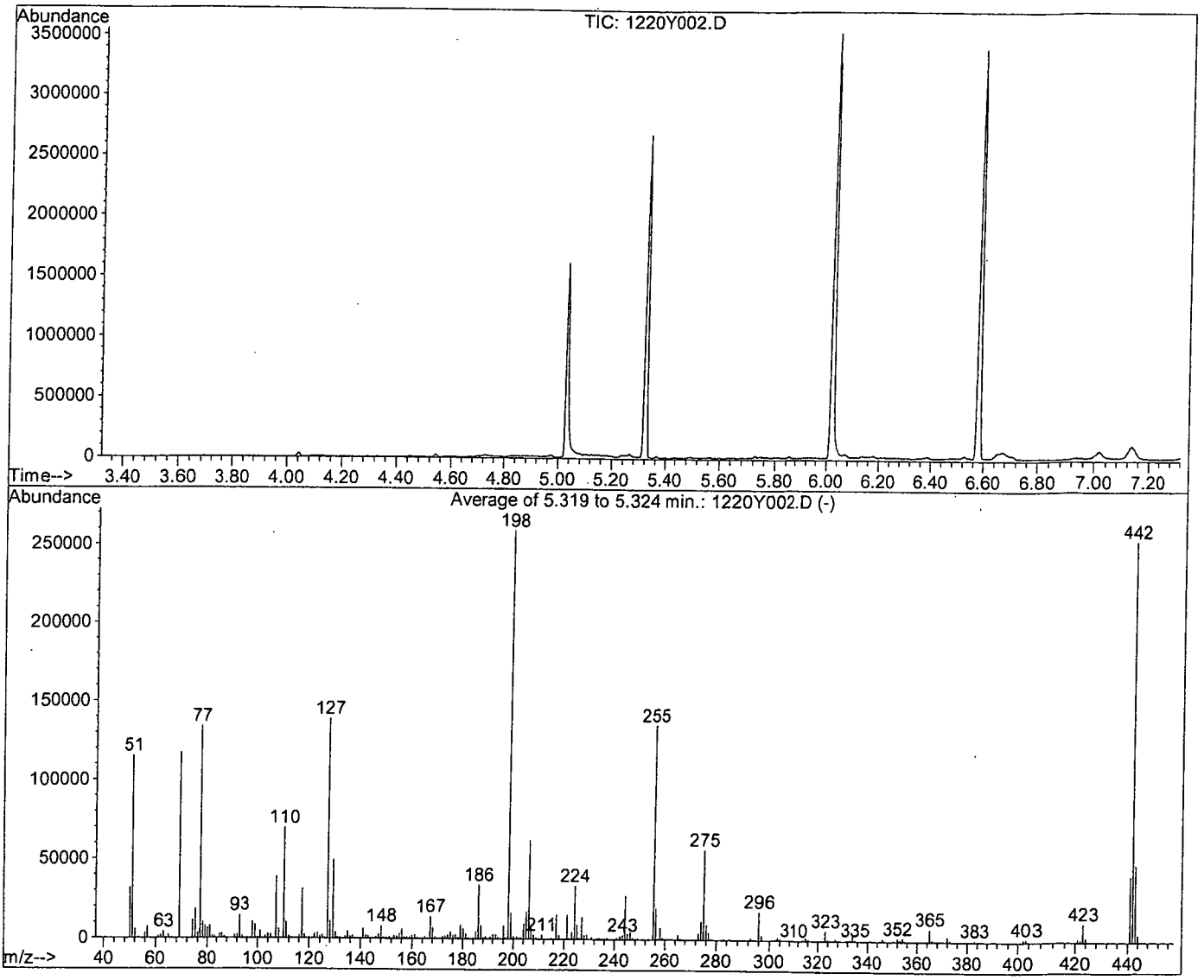
Ion	Exp%	Act%
45.00	100	100
59.00	31.20	31.16
58.00	28.30	28.25
0.00	0.00	0.00

DFTPP

Data File : M:\YODA\DATA\Y161220G\1220Y002.D
Acq On : 20 Dec 16 9:12
Sample : SV Tune 11/15/16
Misc :

Vial: 2
Operator: MA
Inst : Yoda
Multiplr: 1.00

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 694, 695, 696; Background Corrected with Scan 686

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	44.4	115264	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.0	0	PASS
127	198	40	60	53.6	139077	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	259413	PASS
199	198	5	9	6.3	16297	PASS
275	198	10	30	21.8	56493	PASS
365	198	1	100	3.0	7796	PASS
441	443	0.01	100	85.0	41237	PASS
442	198	50	150	98.0	254272	PASS
443	442	17	23	19.1	48539	PASS

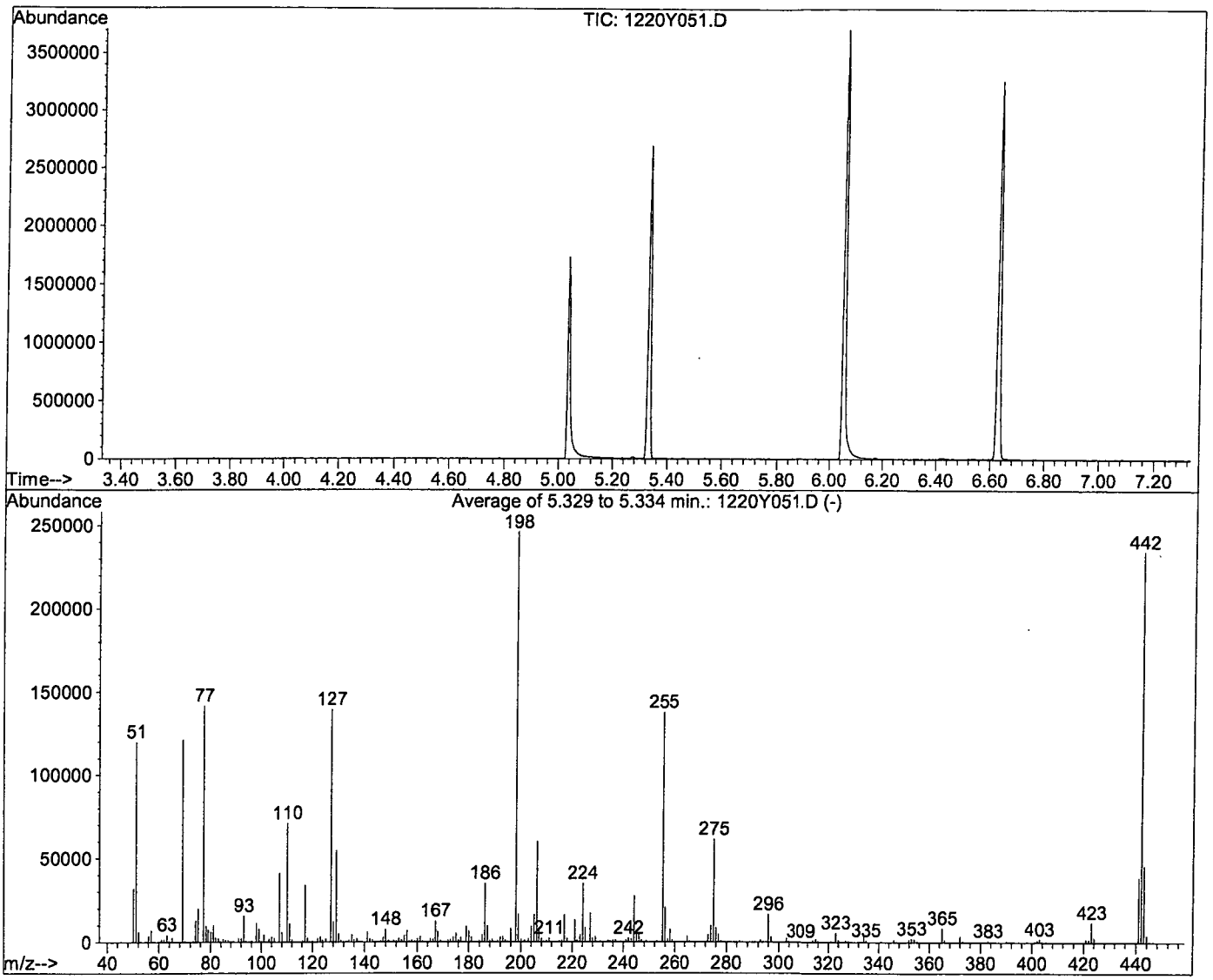
1220Y002.D Y0GLYCOL.M Tue Dec 20 09:18:08 2016

DFTPP

Data File : M:\YODA\DATA\Y161220G\1220Y051.D
Acq On : 16 Jan 17 14:30
Sample : SV Tune 11/15/16
Misc : water

Vial: 51
Operator: MA
Inst : Yoda
Multiplr: 1.00

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 698, 699, 700; Background Corrected with Scan 691

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	48.7	119997	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.6	737	PASS
127	198	40	60	56.6	139435	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	246187	PASS
199	198	5	9	6.7	16441	PASS
275	198	10	30	24.9	61371	PASS
365	198	1	100	3.4	8460	PASS
441	443	0.01	100	84.7	38637	PASS
442	198	50	150	95.2	234389	PASS
443	442	17	23	19.5	45613	PASS

1220Y051.D Y0GLYCOL.M Mon Jan 16 14:41:02 2017

GED Curve

PREP DATE:	21/20/16 RH											
8270 Standard Curve												
Exp:	2/11/17					**50**	**100**	**200**	**400**	**500**	**600**	**800**
		Conc.		Date								
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL	µL	µL	µL	µL
	GED MSTD Stc	2000	VAR	*12/19/16	11/18/17	5	5	10	20	50	30	40
EM Science	Methanol		010616			195	95	90	80	150	70	60
Supelco	SV Internal	2000	A14020V-3660	11/09/16	11/09/17	4	2	2	2	4	2	2
				Final Vol.		204	102	102	102	204	102	102

GED Second Source (SS)

PREP DATE:	12/20/16 RH					**500**
Exp:	1/18/17	Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
	GED MSS Stoc	2000	VAR	12/19/16	10/27/17	50
EM Science	Methanol		010616			150
Supelco	SV Internal	2000	A14020V-3660	11/09/16	11/09/17	4
				Final Vol.		204

→ MSS extracted on 12/19/16 using HEE Stock 9/27/17
MA 12/29/16

* Method Std. extracted on 12/19/16 using Std 11/18/16
MA 12/29/16

102
2
50
50
μL
1000

Diethylene Glycol						
Prep: 11/18/16 -GA Ex: 11/18/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
Diethylene glycol monomethyl ether	2000 ug/ml	AcuuStandard Cat# S-72273 Lot# 216101007-37091 and 37092 Op: 11/18/16 EX: 11/1817	2.0 mL	4 ml	1000 ug/ml	Methanol Lot# 010616A

Methoxyethoxyethanol-Neat (MEE) Stock: 9/27/16-R.H. ex: 09/27/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
MEE	Neat 99.5%	HEM SERVIC	0.1154g	10 mL	11540 ug/ml	MC
		Cat: N-12404-1G				
		Lot: 5259000-37082				
		OP: 09/27/16				
		EXP: 09/27/17				

0.087ml were spiked in 500ml of water and extracted on 10/27/16. Final concentration is 2000ug/ml

_MWE2MEE

Organic Extraction Worksheet

Method	Solid Phase Extraction of 2MEE in Water	Extraction Set	170113A	Extraction Method	MWE2MEE	Units	mL

Spiked ID 1	Diethylene Glycol 11/18/16 exp 11/18/17		Surrogate ID 1		
Spiked ID 2	MEE 11540ug/mL 9-27-16		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	01/13/17 9:25	
Spiked ID 8			Ext. End Time:	01/13/17 15:30	
			GC Requires Extract By:		

pH1			Water Bath Temp Criteria	
pH2				
pH3				

Spiked By: DL **Date** 01/13/17 **Witnessed By:** CFM **Date** 01/13/17

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	170113A Blk				NA	NA equip	500	2	7	01/13/17 9:25	
2	170113A LCS-1		0.040	1	NA	NA equip	500	2	7	01/13/17 9:25	
3	170113A LCSD-1		0.040	1	NA	NA equip	500	2	7	01/13/17 9:25	
4	AZ48676	AZ48676W13			NA	NA equip	500	2	7	01/13/17 9:25	81936
5	AZ48678	*AZ48678W09			NA	NA equip	500	2	7	01/13/17 9:25	81936
6	AZ48679	AZ48679W09			NA	NA equip	500	2	7	01/13/17 9:25	81936
7	AZ48866	AZ48866W28			NA	NA equip	500	2	7	01/13/17 9:25	81965
8	AZ48867	AZ48867W06			NA	NA equip	500	2	7	01/13/17 9:25	81965
9	AZ48868	AZ48868W12			NA	NA equip	500	2	7	01/13/17 9:25	81965
10	AZ48871	AZ48871W11			NA	NA equip	500	2	7	01/13/17 9:25	81965
11	AZ48872	AZ48872W24			NA	NA equip	500	2	7	01/13/17 9:25	81965
12	AZ48873	AZ48873W09			NA	NA equip	500	2	7	01/13/17 9:25	81965
13	AZ48875	AZ48875W09			NA	NA equip	500	2	7	01/13/17 9:25	81965
14	AZ48877	AZ48877W10			NA	NA equip	500	2	7	01/13/17 9:25	81965
15	AZ48878	AZ48878W11			NA	NA equip	500	2	7	01/13/17 9:25	81965
16	AZ48880	AZ48880W06			NA	NA equip	500	2	7	01/13/17 9:25	81965

Solvent and Lot#	
ENVI-Carb Plus 400MG/1ML	.
Reverible Tube Lot:	8088704
PH Strip	HC 574756
Di Water	1-13-17
Dichloromethane	56153
Methanol	060316C

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	RH
Date	1/16/17
Time	2:00
Refrigerator	GC-C

	Technician's Initials
Scanned By	DL
Sample Preparation	CFM
Extraction	CFM
Concentration	----------

Modified	01/13/17 9:10:19 AM

Reviewed By: KY **Date** 1/16/17

Organic Extraction Worksheet

Method	Solid Phase Extraction of 2MEE in Water	Extraction Set	170113A	Extraction Method	MWE2MEE	Units	mL

Spiked ID 1	Diethylene Glycol 11/18/16 exp 11/18/17		Surrogate ID 1		
Spiked ID 2	MEE 11540ug/mL 9-27-16		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	01/13/17 9:25	
Spiked ID 8			Ext. End Time:	01/13/17 15:30	
			GC Requires Extract By:		

pH1			Water Bath Temp Criteria	
pH2				
pH3				

Spiked By: DL **Date** 01/13/17 **Witnessed By:** CFM **Date** 01/13/17

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
17	AZ48881	AZ48881W06			NA	NA equip	500	2	7	01/13/17 9:25	81965
18	SS		0.0870	2	NA	NA equip	500	2	7	01/13/17 9:25	

KY 1/16/17

Solvent and Lot#	
ENVI-Carb Plus 400MG/1ML	
Reverible Tube Lot:	8088704
PH Strip	HC 574756
Di Water	1-13-17
Dichloromethane	56153
Methanol	060316C

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	
Date	
Time	
Refrigerator	

	Technician's Initials
Scanned By	DL
Sample Preparation	CFM
Extraction	CFM
Concentration	----------

Modified	01/13/17 9:10:19 AM

Reviewed By: KY **Date** 1/16/17

Injection Log

Directory: M:\YODA\DATA\Y161220G\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	1220Y002.D	1	SV Tune 11/15/16		20 Dec 16 9:12
2	3	1220Y003.D	1	50ug/ml DEG 12/20/16		20 Dec 16 9:32
3	4	1220Y004.D	1	100ug/ml DEG 12/20/16		20 Dec 16 10:02
4	5	1220Y005.D	1	200ug/ml DEG 12/20/16		20 Dec 16 11:27
5	6	1220Y006.D	1	400ug/ml DEG 12/20/16		20 Dec 16 11:57
6	7	1220Y007.D	1	500ug/ml DEG 12/20/16		20 Dec 16 12:27
7	8	1220Y008.D	1	600ug/ml DEG 12/20/16		20 Dec 16 12:57
8	9	1220Y009.D	1	800ug/ml DEG 12/20/16		20 Dec 16 13:28
9	10	1220Y010.D	1	1000ug/ml DEG 12/20/16		20 Dec 16 13:58
10	11	1220Y011.D	1	SS2 DEG 12/20/16		20 Dec 16 15:01
11	51	1220Y051.D	1	SV Tune 11/15/16	water	16 Jan 17 14:30
12	52	1220Y052.D	1	500ug/ml DEG 11/22/16	water	16 Jan 17 15:17
13	53	1220Y053.D	1	170113A LCS-1 2/500	water	16 Jan 17 15:49
14	55	1220Y055.D	1	170113A BLK 2/500	water	16 Jan 17 16:50
15	56	1220Y056.D	1	AZ48676W13 2/500	water	16 Jan 17 17:20
16	57	1220Y057.D	1	AZ48678W09 2/500	water	16 Jan 17 17:50
17	58	1220Y058.D	1	AZ48679W09 2/500	water	16 Jan 17 18:20
18	71	1220Y071.D	1	500ug/ml DEG 11/22/16	water	17 Jan 17 00:51

ORGANICS

APPL, INC.

ORGANICS
QC Summary

APPL, INC.

Method Blank

EPA 8260B BTEX WATER

Blank Name/QCG: **170111W-48676 - 215412**
Batch ID: #86BTO-170111AM

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	1/12/17	1/12/17
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	1/12/17	1/12/17
BLANK	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	1/12/17	1/12/17
BLANK	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	1/12/17	1/12/17
BLANK	SURROGATE: 1,2-DICHLOROET	93.9	81-118			%	1/12/17	1/12/17
BLANK	SURROGATE: 4-BROMOFLUOR	95.6	85-114			%	1/12/17	1/12/17
BLANK	SURROGATE: DIBROMOFLUOR	98.7	80-119			%	1/12/17	1/12/17
BLANK	SURROGATE: TOLUENE-D8 (S)	101	89-112			%	1/12/17	1/12/17

Quant Method: MALLW.M
Run #: 0111M35
Instrument: Max
Sequence: M170111
Initials: SV

GC SC-Blank-REG MDLs-DOD
Printed: 1/12/17 1:58:20 PM

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81936

Case No: 81936 Date Analyzed: 1/11/17

Matrix: WATER Instrument: Max

APPL ID.	Client Sample No.	SURROGATE: 1,2-DICHLOROETHANE-D4 (S)			SURROGATE: 4-BROMOFLUOROBENZENE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
170111AM-LCS	Lab Control Spike	81-118	96.0		85-114	98.0	
170111AM-BLK	Blank	81-118	93.9		85-114	95.6	
AZ48676	ERH166	81-118	93.5		85-114	97.1	
AZ48677	ERH165	81-118	95.3		85-114	96.3	
AZ48678	ERH191	81-118	92.4		85-114	98.7	
AZ48679	ERH192	81-118	96.9		85-114	94.7	
AZ48680	ERH193	81-118	95.0		85-114	95.8	

Comments: Batch: #86BTO-170111AM

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81936

Case No: 81936 Date Analyzed: 1/11/17

Matrix: WATER Instrument: Max

APPL ID.	Client Sample No.	SURROGATE: DIBROMOFLUOROMETHANE (S)			SURROGATE: TOLUENE-D8 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
170111AM-LCS	Lab Control Spike	80-119	96.8		89-112	100	
170111AM-BLK	Blank	80-119	98.7		89-112	101	
AZ48676	ERH166	80-119	98.4		89-112	100	
AZ48677	ERH165	80-119	98.1		89-112	102	
AZ48678	ERH191	80-119	98.7		89-112	101	
AZ48679	ERH192	80-119	99.3		89-112	99.9	
AZ48680	ERH193	80-119	98.3		89-112	101	

Comments: Batch: #86BTO-170111AM

Laboratory Control Spike Recovery
EPA 8260B BTEX WATER

APPL ID: **170111W-48676 LCS - 215412**
Batch ID: #86BTO-170111AM

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
BENZENE	10.00	10.5	105	79-120
ETHYLBENZENE	10.00	11.0	110	79-121
TOLUENE	10.00	10.4	104	80-121
XYLENES (TOTAL)	30.0	32.1	107	79-121
SURROGATE: 1,2-DICHLOROETHANE-	25.0	24.0	96.0	81-118
SURROGATE: 4-BROMOFLUOROBENZ	25.0	24.5	98.0	85-114
SURROGATE: DIBROMOFLUOROMETH	25.0	24.2	96.8	80-119
SURROGATE: TOLUENE-D8 (S)	25.0	25.0	100	89-112

Comments:

Primary	SPK
Quant Method :	MALLW.M
Extraction Date :	1/11/17
Analysis Date :	1/11/17
Instrument :	Max
Run :	0111M20
Initials :	SV

Printed: 1/12/17 1:58:29 PM
APPL Standard LCS

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81936

Case No: 81936 Date Analyzed: 1/12/17

Matrix: WATER Instrument: Max

Blank ID: 170111AM-BLK Time Analyzed: 0104

APPL ID.	Client Sample No.	File ID.	Date Analyzed
170111AM-LCS	Lab Control Spike	0111M20	1/11/17 1800
170111AM-BLK	Blank	0111M35	1/12/17 0104
AZ48676	ERH166	0111M36	1/12/17 0132
AZ48677	ERH165	0111M37	1/12/17 0200
AZ48678	ERH191	0111M38	1/12/17 0228
AZ48679	ERH192	0111M39	1/12/17 0257
AZ48680	ERH193	0111M40	1/12/17 0325

Comments: Batch: #86BTO-170111AM

Printed: 1/12/17 1:58:33 PM
Form 4, Blank Summary

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: ~~0111M01.D~~ 81936
Matrix: Water np1-23-17
ID: 5ng BFB STD 12/15/16

SDG No: np1-23-17 ~~Max~~ 81936
Date Analyzed: 01/11/17
Instrument: Max
Time Analyzed: 9:34

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.3ug/L VOC STD 1/11	0111M06.D	01/11/17 11:24
2		0.5ug/L VOC STD 1/11	0111M07.D	01/11/17 11:52
3		1.0ug/L VOC STD 1/11	0111M08.D	01/11/17 12:21
4		2.0ug/L VOC STD 1/11	0111M09.D	01/11/17 12:49
5		5.0ug/L VOC STD 1/11	0111M10.D	01/11/17 13:17
6		10ug/L VOC STD 1/11/	0111M11.D	01/11/17 13:46
7		20ug/L VOC STD 1/11/	0111M12.D	01/11/17 14:14
8		40ug/L VOC STD 1/11/	0111M13.D	01/11/17 14:42
9		100ug/L VOC STD 1/11	0111M14.D	01/11/17 15:10
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	16.6
75	30 - 60% of mass 95	46.7
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	7.3
173	0 - 2% of mass 174	0.0
174	50 - 100% of mass 95	99.6
175	5 - 9% of mass 174	6.9
176	95.06 - 101% of mass 174	99.4
177	5 - 9% of mass 176	6.5

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81936
Matrix: Water
ID: 5ng BFB STD 12/15/16

SDG No: 81936
Date Analyzed: 01/11/17
Instrument: Max
Time Analyzed: 17:03

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		(SS)10ug/L VOC STD 1	0111M19.D	01/11/17 17:32
2	Lab Control Spike	170111A CCV/LCS-1WM	0111M20.D	01/11/17 18:00
3	Blank	170111A BLK-1WM	0111M35.D	01/12/17 1:04
4	ERH166	AZ48676W01	0111M36.D	01/12/17 1:32
5	ERH165	AZ48677W01	0111M37.D	01/12/17 2:00
6	ERH191	AZ48678W01	0111M38.D	01/12/17 2:28
7	ERH192	AZ48679W01	0111M39.D	01/12/17 2:57
8	ERH193	AZ48680W01	0111M40.D	01/12/17 3:25
9		Ending CCV 8260 10ug	0111M41.D	01/12/17 3:53
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	18.1
75	30 - 60% of mass 95	47.9
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	7.3
173	0 - 2% of mass 174	0.0
174	50 - 100% of mass 95	99.7
175	5 - 9% of mass 174	8.0
176	95.06 - 101% of mass 174	96.9
177	5 - 9% of mass 176	6.5

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81936

Lab File ID (Standard): 0111M11.D Date Analyzed: 01/11/17

Instrument ID: Max Time Analyzed: 13:46

GC Column: ID: Heated Purge: (Y/N)

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	337093	5.51	240952	9.15	127119	12.35
	UPPER LIMIT	674186	6.01	481904	9.65	254238	12.85
	LOWER LIMIT	168547	5.01	120476	8.65	63560	11.85
	SAMPLE NO.						
01	(SS)10ug/L VOC STD 1/	348322	5.51	244262	9.15	127954	12.35
02	170111A CCV/LCS-1WI	347505	5.51	239524	9.15	124682	12.35
03	170111A BLK-1WM	334296	5.51	234008	9.15	114014	12.35
04	AZ48676W01	321389	5.51	225633	9.16	107748	12.35
05	AZ48677W01	323122	5.51	222809	9.15	110527	12.35
06	AZ48678W01	326527	5.51	223291	9.15	112397	12.35
07	AZ48679W01	332827	5.51	234992	9.15	114803	12.35
08	AZ48680W01	315927	5.51	221106	9.15	108514	12.35
09	Ending CCV 8260 10ug/	327048	5.51	229844	9.15	121237	12.35
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

ORGANICS
Sample Data

APPL, INC.

EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81936

Sample ID: ERH166

APPL ID: AZ48676

Sample Collection Date: 01/09/17

QCG: #86BTO-170111AM-215412

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/12/17	01/12/17
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/12/17	01/12/17
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/12/17	01/12/17
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/12/17	01/12/17
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	93.5	81-118			%	01/12/17	01/12/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	97.1	85-114			%	01/12/17	01/12/17
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	98.4	80-119			%	01/12/17	01/12/17
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	100	89-112			%	01/12/17	01/12/17

Quant Method: MALLW.M
Run #: 0111M36
Instrument: Max
Sequence: M170111
Dilution Factor: 1
Initials: SV

Printed: 1/12/17 1:58:37 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0111M36.D
Acq On : 12 Jan 17 1:32
Sample : AZ48676W01
Misc : IS&S 10/20/16

Vial: 34
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 11:49 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:17:20 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	321389	25.00	ppb	0.00
55) Chlorobenzene-D5 (IS)	9.16	117	225633	25.00	ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	107748	25.00	ppb	0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	4.78	111	69446	24.59	ppb	0.00
Spiked Amount 25.000			Recovery =	98.360%		
36) 1,2-DCA-D4(S)	5.13	65	54334	23.36	ppb	0.00
Spiked Amount 25.000			Recovery =	93.460%		
56) Toluene-D8(S)	7.35	98	284846	25.08	ppb	0.00
Spiked Amount 25.000			Recovery =	100.336%		
64) 4-Bromofluorobenzene(S)	10.74	95	98899	24.29	ppb	0.00
Spiked Amount 25.000			Recovery =	97.144%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

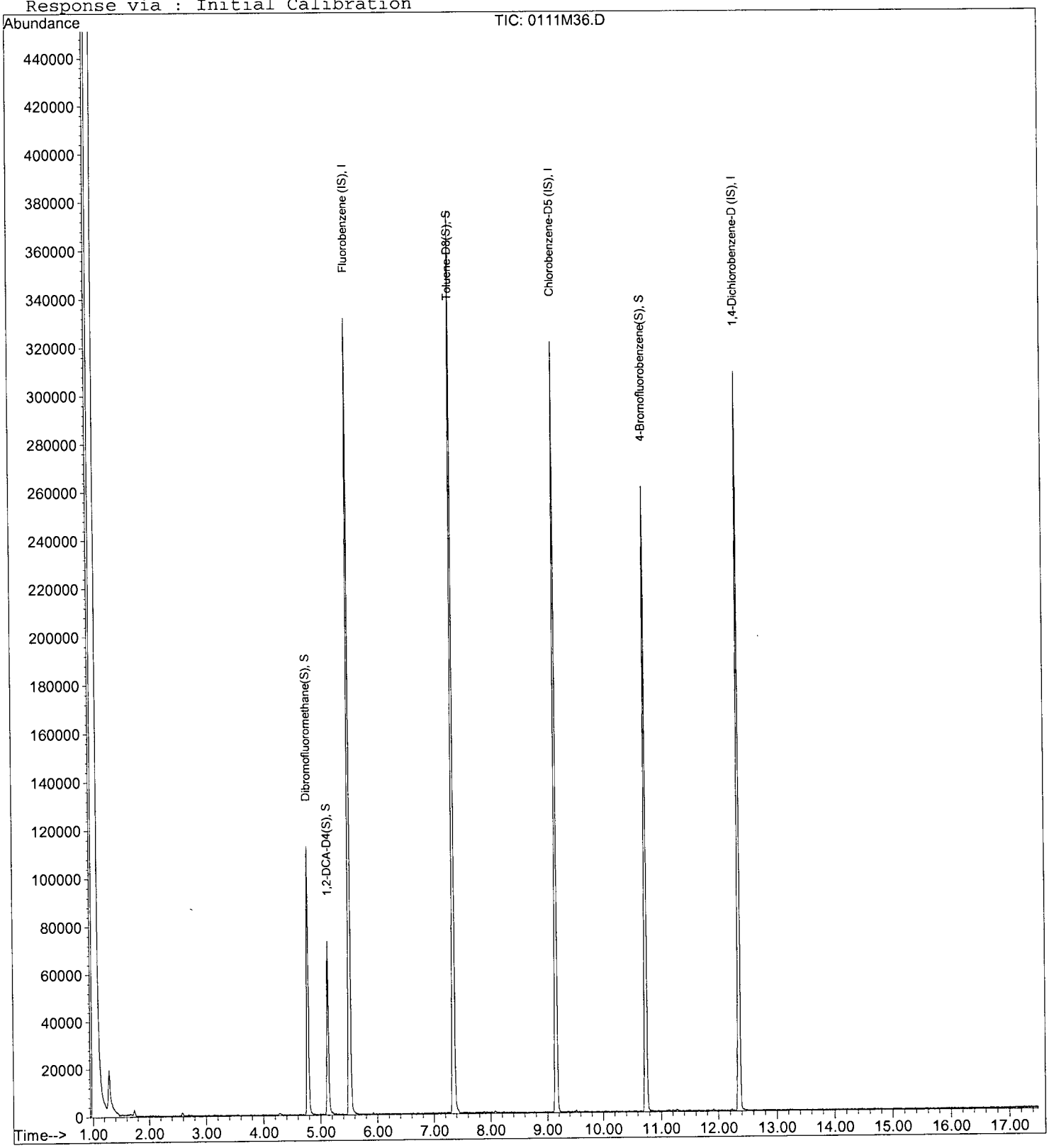
Quantitation Report

Data File : M:\MAX\DATA\M170111\0111M36.D
Acq On : 12 Jan 17 1:32
Sample : AZ48676W01
Misc : IS&S 10/20/16

Vial: 34
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 11:49 2017 Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH165
Sample Collection Date: 01/09/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81936
APPL ID: AZ48677
QCG: #86BTO-170111AM-215412

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/12/17	01/12/17
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/12/17	01/12/17
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/12/17	01/12/17
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/12/17	01/12/17
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	95.3	81-118			%	01/12/17	01/12/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	96.3	85-114			%	01/12/17	01/12/17
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	98.1	80-119			%	01/12/17	01/12/17
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	102	89-112			%	01/12/17	01/12/17

Quant Method: MALLW.M
Run #: 0111M37
Instrument: Max
Sequence: M170111
Dilution Factor: 1
Initials: SV

Printed: 1/12/17 1:58:37 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0111M37.D
Acq On : 12 Jan 17 2:00
Sample : AZ48677W01
Misc : IS&S 10/20/16

Vial: 35
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 11:49 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:17:20 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	323122	25.00	ppb	0.00
55) Chlorobenzene-D5 (IS)	9.15	117	222809	25.00	ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	110527	25.00	ppb	0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	4.78	111	69623	24.52	ppb	0.00
Spiked Amount 25.000			Recovery = 98.080%			
36) 1,2-DCA-D4(S)	5.13	65	55686	23.82	ppb	0.00
Spiked Amount 25.000			Recovery = 95.272%			
56) Toluene-D8(S)	7.35	98	285394	25.45	ppb	0.00
Spiked Amount 25.000			Recovery = 101.804%			
64) 4-Bromofluorobenzene(S)	10.74	95	96796	24.07	ppb	0.00
Spiked Amount 25.000			Recovery = 96.284%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

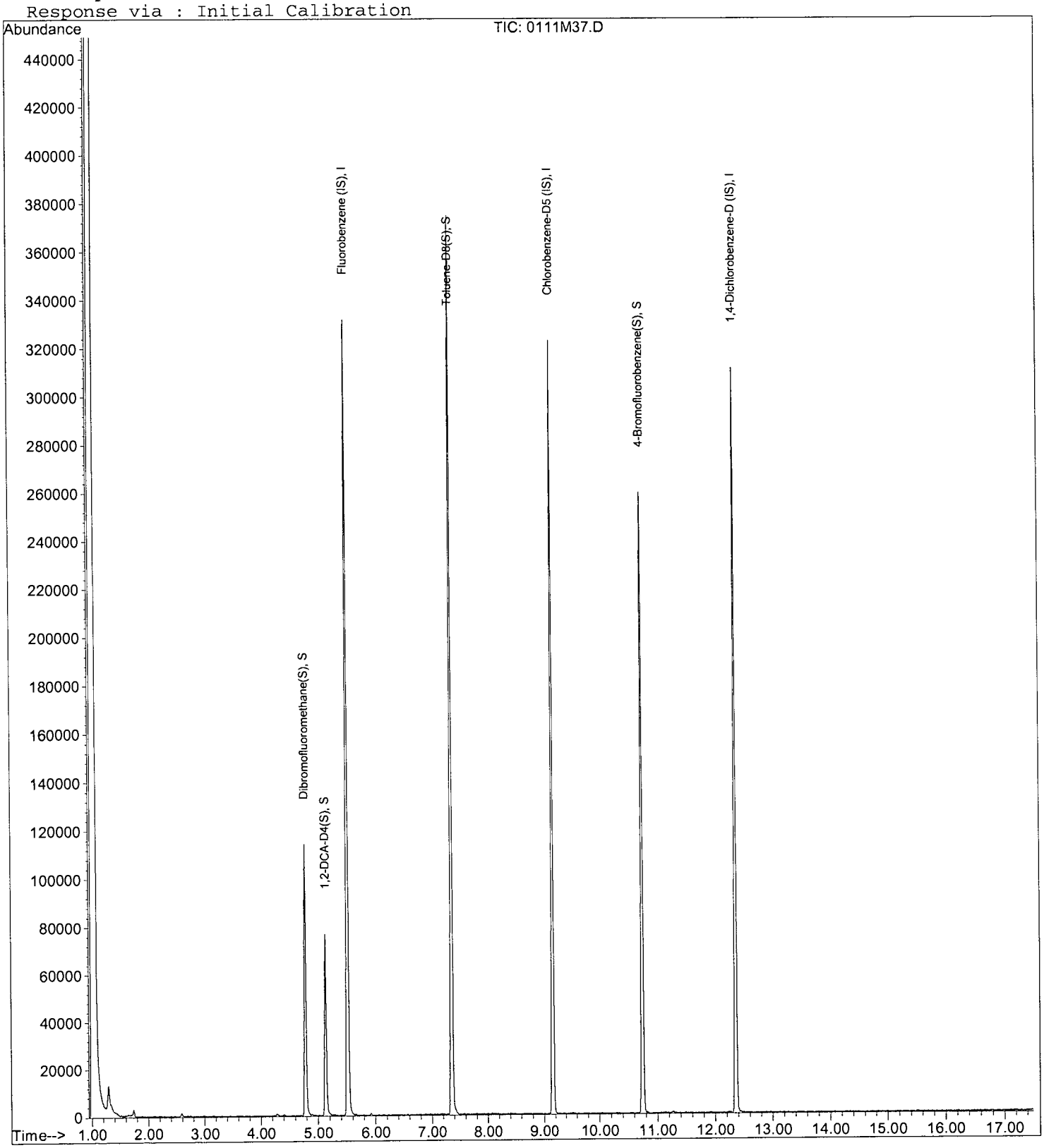
Quantitation Report

Data File : M:\MAX\DATA\M170111\0111M37.D
Acq On : 12 Jan 17 2:00
Sample : AZ48677W01
Misc : IS&S 10/20/16

Vial: 35
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 11:49 2017 Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81936

Sample ID: ERH191

APPL ID: AZ48678

Sample Collection Date: 01/06/17

QCG: #86BTO-170111AM-215412

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/12/17	01/12/17
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/12/17	01/12/17
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/12/17	01/12/17
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/12/17	01/12/17
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	92.4	81-118			%	01/12/17	01/12/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	98.7	85-114			%	01/12/17	01/12/17
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	98.7	80-119			%	01/12/17	01/12/17
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	101	89-112			%	01/12/17	01/12/17

Quant Method: MALLW.M
Run #: 0111M38
Instrument: Max
Sequence: M170111
Dilution Factor: 1
Initials: SV

Printed: 1/12/17 1:58:37 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0111M38.D
Acq On : 12 Jan 17 2:28
Sample : AZ48678W01
Misc : IS&S 10/20/16

Vial: 36
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 11:50 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:17:20 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	326527	25.00	ppb	0.00
55) Chlorobenzene-D5 (IS)	9.15	117	223291	25.00	ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	112397	25.00	ppb	0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	4.78	111	70772	24.67	ppb	0.00
Spiked Amount 25.000			Recovery =	98.660%		
36) 1,2-DCA-D4(S)	5.13	65	54552	23.09	ppb	0.00
Spiked Amount 25.000			Recovery =	92.360%		
56) Toluene-D8(S)	7.35	98	282813	25.17	ppb	0.00
Spiked Amount 25.000			Recovery =	100.664%		
64) 4-Bromofluorobenzene(S)	10.74	95	99473	24.68	ppb	0.00
Spiked Amount 25.000			Recovery =	98.732%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

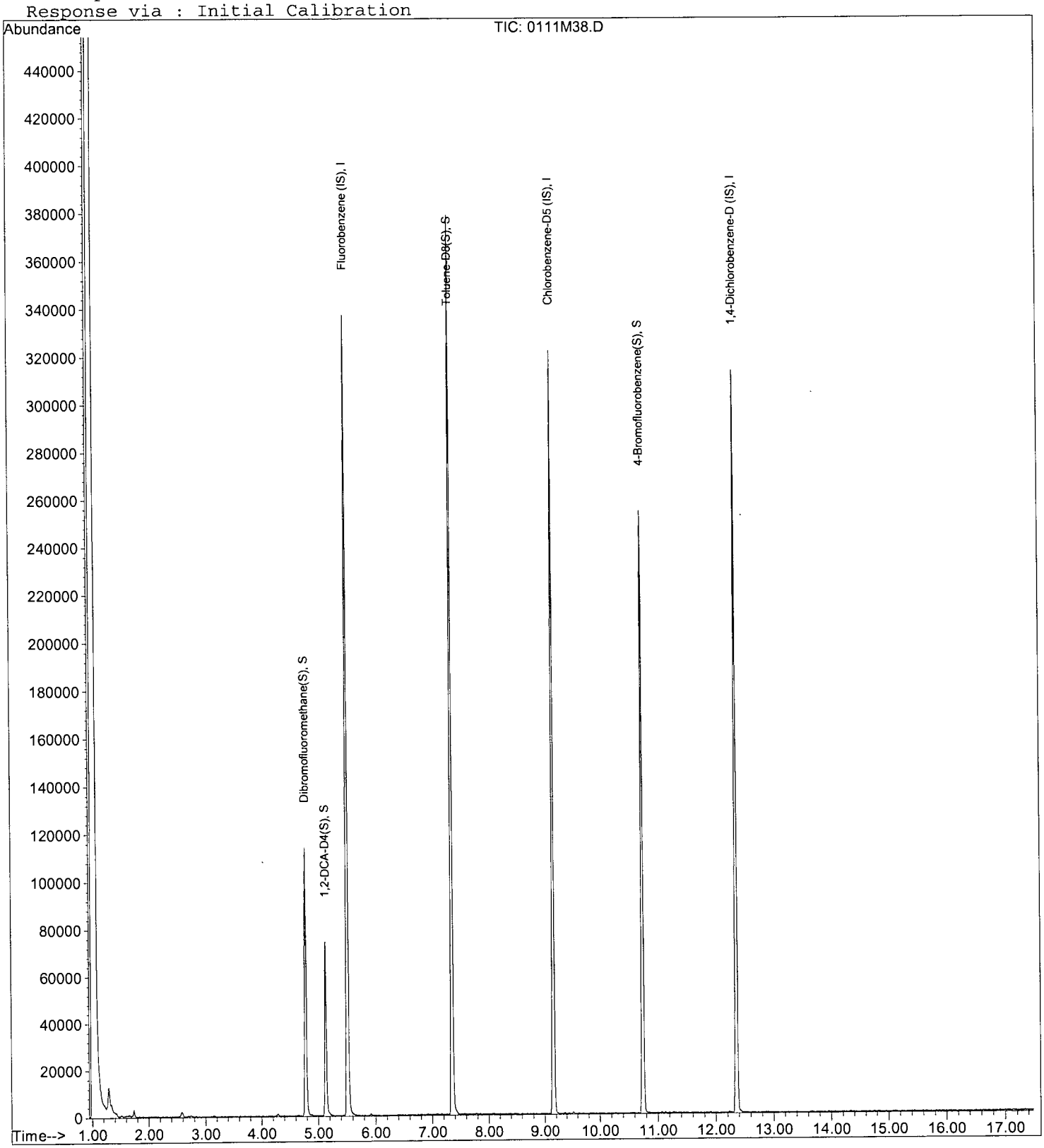
Quantitation Report

Data File : M:\MAX\DATA\M170111\0111M38.D
Acq On : 12 Jan 17 2:28
Sample : AZ48678W01
Misc : IS&S 10/20/16

Vial: 36
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 11:50 2017 Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81936

Sample ID: ERH192

APPL ID: AZ48679

Sample Collection Date: 01/06/17

QCG: #86BTO-170111AM-215412

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/12/17	01/12/17
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/12/17	01/12/17
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/12/17	01/12/17
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/12/17	01/12/17
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	96.9	81-118			%	01/12/17	01/12/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	94.7	85-114			%	01/12/17	01/12/17
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	99.3	80-119			%	01/12/17	01/12/17
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	99.9	89-112			%	01/12/17	01/12/17

Quant Method: MALLW.M
Run #: 0111M39
Instrument: Max
Sequence: M170111
Dilution Factor: 1
Initials: SV

Printed: 1/12/17 1:58:37 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0111M39.D
Acq On : 12 Jan 17 2:57
Sample : AZ48679W01
Misc : IS&S 10/20/16

Vial: 37
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 11:50 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:17:20 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	332827	25.00	ppb	0.00
55) Chlorobenzene-D5 (IS)	9.15	117	234992	25.00	ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	114803	25.00	ppb	0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	4.78	111	72578	24.82	ppb	0.00
Spiked Amount 25.000			Recovery = 99.264%			
36) 1,2-DCA-D4(S)	5.13	65	58328	24.22	ppb	0.00
Spiked Amount 25.000			Recovery = 96.880%			
56) Toluene-D8(S)	7.35	98	295268	24.97	ppb	0.00
Spiked Amount 25.000			Recovery = 99.864%			
64) 4-Bromofluorobenzene(S)	10.74	95	100391	23.67	ppb	0.00
Spiked Amount 25.000			Recovery = 94.680%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

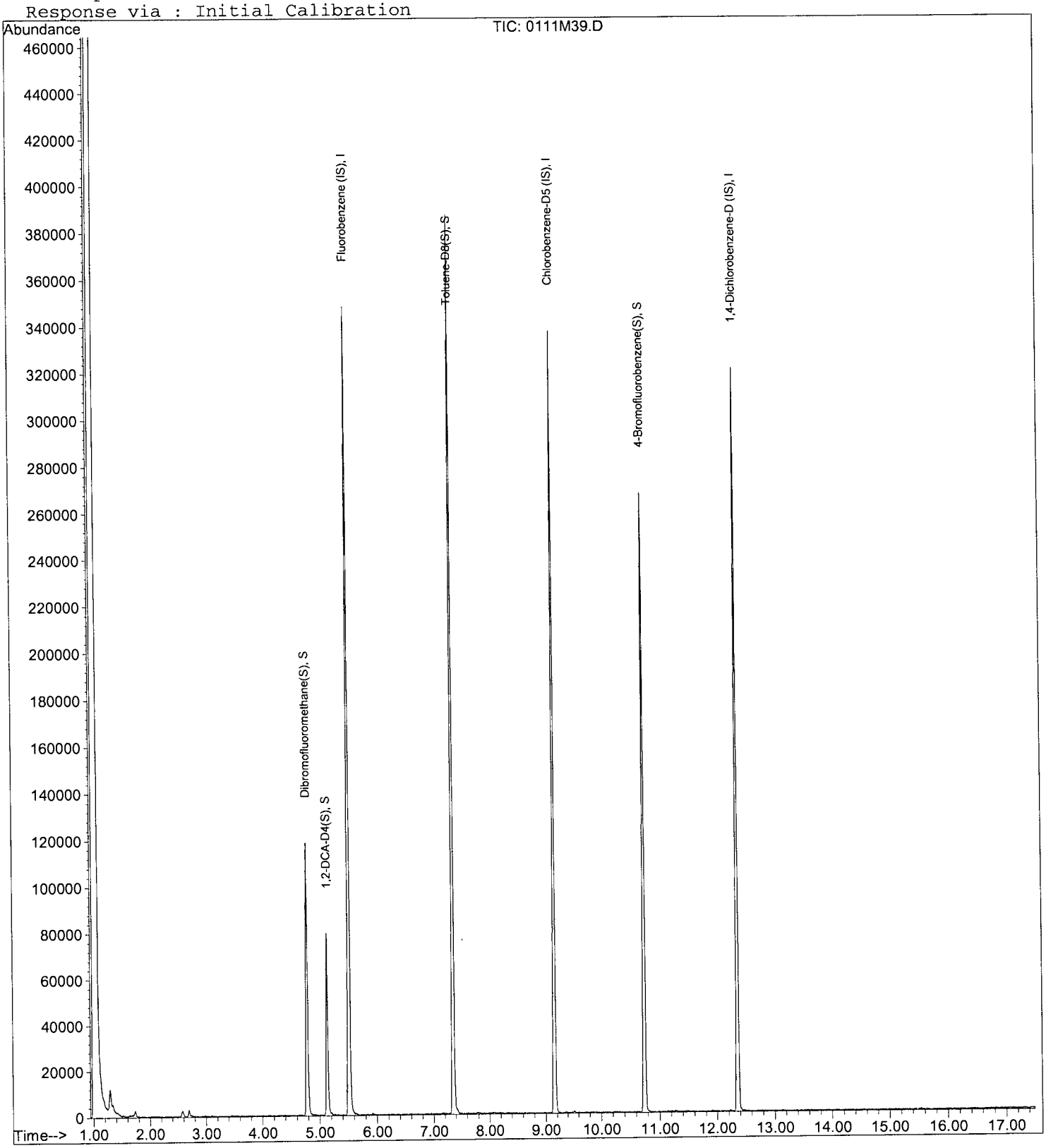
Quantitation Report

Data File : M:\MAX\DATA\M170111\0111M39.D
Acq On : 12 Jan 17 2:57
Sample : AZ48679W01
Misc : IS&S 10/20/16

Vial: 37
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 11:50 2017 Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81936

Sample ID: ERH193

APPL ID: AZ48680

Sample Collection Date: 01/06/17

QCG: #86BTO-170111AM-215412

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/12/17	01/12/17
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/12/17	01/12/17
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/12/17	01/12/17
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/12/17	01/12/17
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	95.0	81-118			%	01/12/17	01/12/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	95.8	85-114			%	01/12/17	01/12/17
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	98.3	80-119			%	01/12/17	01/12/17
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	101	89-112			%	01/12/17	01/12/17

Quant Method: MALLW.M
Run #: 0111M40
Instrument: Max
Sequence: M170111
Dilution Factor: 1
Initials: SV

Printed: 1/12/17 1:58:37 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0111M40.D
Acq On : 12 Jan 17 3:25
Sample : AZ48680W01
Misc : IS&S 10/20/16

Vial: 38
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 11:50 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:17:20 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	315927	25.00	ppb	0.00
55) Chlorobenzene-D5 (IS)	9.15	117	221106	25.00	ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	108514	25.00	ppb	0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	4.78	111	68190	24.56	ppb	0.00
Spiked Amount 25.000			Recovery = 98.252%			
36) 1,2-DCA-D4(S)	5.13	65	54299	23.75	ppb	0.00
Spiked Amount 25.000			Recovery = 95.016%			
56) Toluene-D8(S)	7.35	98	281232	25.27	ppb	0.00
Spiked Amount 25.000			Recovery = 101.092%			
64) 4-Bromofluorobenzene(S)	10.74	95	95582	23.95	ppb	0.00
Spiked Amount 25.000			Recovery = 95.808%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

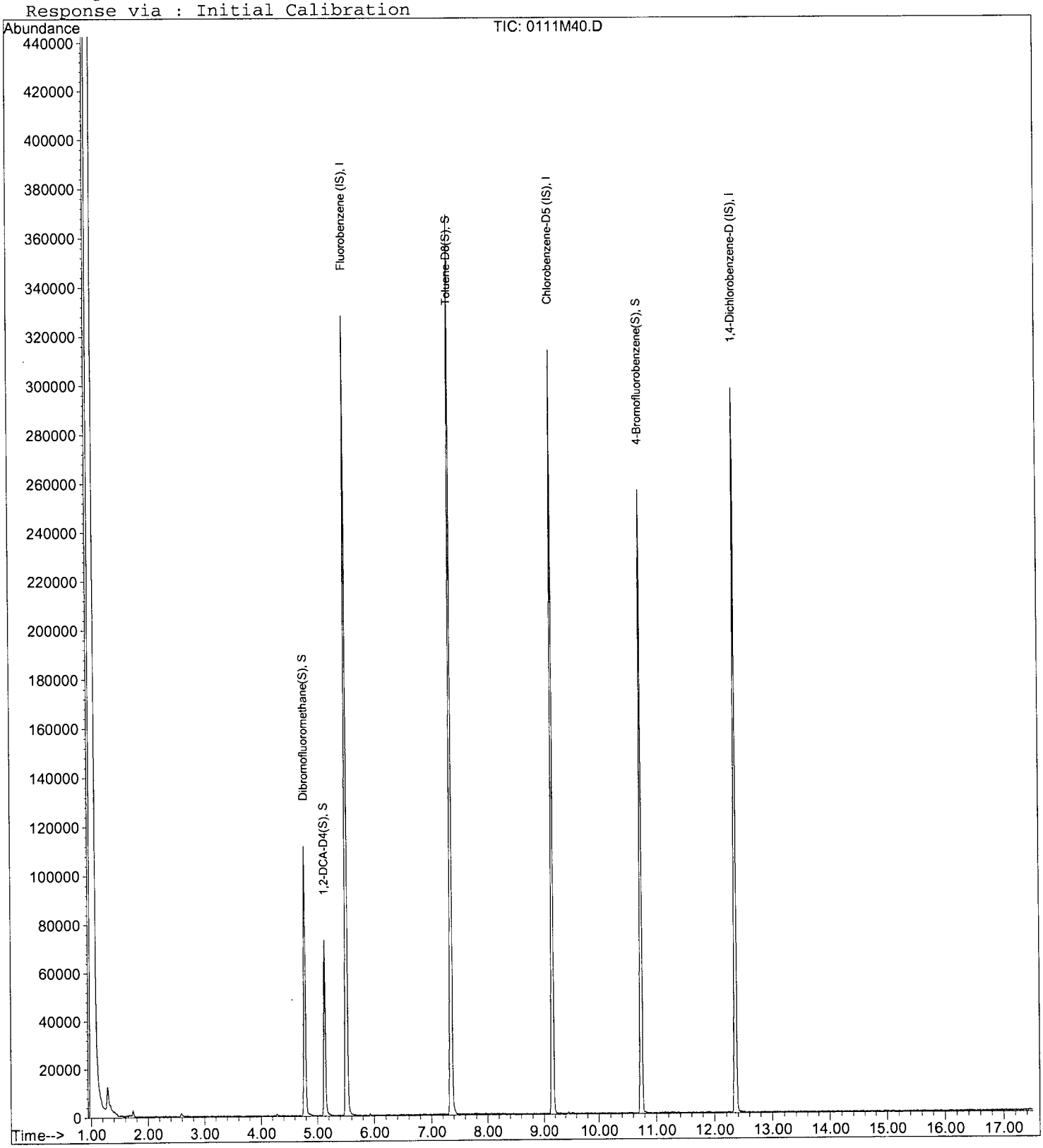
Quantitation Report

Data File : M:\MAX\DATA\M170111\0111M40.D
Acq On : 12 Jan 17 3:25
Sample : AZ48680W01
Misc : IS&S 10/20/16

Vial: 38
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 11:50 2017 Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration



ORGANICS
Calibration Data

APPL, INC.

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 1/11/17
Matrix: Instrument: Max Initials:

		Compound	0111M06.D	0111M07.D	0111M08.D	0111M09.D	0111M10.D	0111M11.D	0111M12.D	0111M13.D	0111M14.D		Avg	%RSD		
1	I	Fluorobenzene (IS)														
2	TM	Dichlorodifluoromethane		0.2811	0.2811	0.2717	0.3169	0.3125	0.3021	0.3269	0.2977		0.30	6.6	TM	
3	TM	Freon 114		0.3755	0.3629	0.3713	0.3812	0.3848	0.3881	0.4080	0.3765		0.38	3.5	TM	
4	TM**	Chloromethane		0.4918	0.4049	0.4079	0.4536	0.4410	0.4320	0.4553	0.4429		0.44	6.3	TM**	
5	TM*	Vinyl chloride		0.5605	0.5421	0.5261	0.6000	0.5967	0.5997	0.6188	0.6105		0.58	5.9	TM*	
6	TM	Bromomethane		0.3746	0.3445	0.2901	0.3035	0.2900	0.2544				0.31	14	TM	
7	TM	Chloroethane		0.3444	0.3230	0.2999	0.3485	0.3435	0.3467	0.3555	0.2409		0.33	12	TM	
8	TM	Dichlorofluoromethane		0.8251	0.7751	0.7604	0.8135	0.8063	0.8335	0.8623	0.7993		0.81	4.0	TM	
9	TM	Trichlorofluoromethane	0.7091	0.5923	0.6749	0.6292	0.6982	0.7327	0.7260	0.7372	0.6885		0.69	7.1	TM	
10	TM	Acrolein	0.0112	0.0114	0.0107	0.0110	0.0124	0.0122	0.0127	0.0129	0.0129		0.01	7.1	TM	
11	TML	Acetone	0.1916	0.1077	0.0831	0.0703	0.0651	0.0632	0.0618	0.0632	0.0559		0.08	51	TML	0.998
12	TM	Freon-113		0.3994	0.3917	0.3691	0.3653	0.3893	0.3874	0.4035	0.3697		0.38	3.8	TM	
13	TM*	1,1-DCE	0.6755	0.6530	0.6216	0.6264	0.6484	0.6594	0.6710	0.6743	0.6186		0.65	3.5	TM*	
14	TM	t-Butanol	0.0129	0.0093	0.0103	0.0106	0.0101	0.0107	0.0109	0.0114	0.0120		0.01	9.9	TM	
15	TM	Methyl Acetate	0.1856	0.1495	0.1590	0.1407	0.1415	0.1500	0.1593	0.1657	0.1632		0.16	8.9	TM	
16	TMQ	Iodomethane		0.1619	0.1599	0.2101	0.3738	0.4662	0.5158				0.31	50	TMQ	0.999
17	TM	Acrylonitrile			0.0501	0.0612	0.0724	0.0666	0.0729	0.0714	0.0720		0.07	13	TM	
18	TM	Methylene chloride		0.4372	0.3762	0.3773	0.4001	0.4005	0.4107	0.4124	0.3863		0.40	5.1	TM	
19	TM	Carbon disulfide	1.440	1.289	1.309	1.250	1.256	1.301	1.318	1.360	1.257		1.3	4.6	TM	
20	TM	Methyl t-butyl ether (MtBE)	0.7520	0.6463	0.6919	0.6681	0.6718	0.6848	0.7098	0.7123	0.6926		0.69	4.4	TM	
21	TM	Trans-1,2-DCE	0.4909	0.4944	0.4550	0.4627	0.4632	0.4789	0.4725	0.4809	0.4483		0.47	3.4	TM	
22	TM	Diisopropyl Ether	1.232	1.261	1.204	1.211	1.253	1.267	1.325	1.276	1.251		1.3	2.9	TM	
23	TM**	1,1-DCA	0.8137	0.8187	0.7999	0.7644	0.8004	0.8107	0.8303	0.7982	0.7841		0.80	2.4	TM**	
24	TM	Vinyl Acetate		0.2855	0.2685	0.2479	0.2338	0.2444	0.2702	0.2820	0.2671		0.26	7.0	TM	
25	TM	Ethyl tert Butyl Ether	0.8645	0.8049	0.8000	0.8080	0.8427	0.8481	0.8937	0.8706	0.8987		0.85	4.4	TM	
26	TM	MEK (2-Butanone)		0.0950	0.0705	0.0783	0.1005	0.0802	0.0964	0.0932	0.0839		0.09	12	TM	
27	TM	Cis-1,2-DCE	0.5917	0.5626	0.4752	0.5024	0.5011	0.5091	0.5117	0.4875	0.4742		0.51	7.7	TM	
28	TM	2,2-Dichloropropane	0.6648	0.5583	0.5579	0.5204	0.5563	0.5727	0.6088	0.6059	0.6189		0.58	7.4	TM	
29	TM*	Chloroform	0.8499	0.7857	0.7422	0.7085	0.7750	0.7850	0.7986	0.7624	0.7574		0.77	5.1	TM*	
30	TM	Bromochloromethane	0.2124	0.1996	0.1905	0.1782	0.1958	0.1992	0.1962	0.1884	0.1898		0.19	4.9	TM	
31	S	Dibromofluoromethane(S)	0.2337	0.2291	0.2010	0.2005	0.2193	0.2229	0.2284	0.2221	0.2202		0.22	5.3	S	
32	TM	1,1,1-TCA	0.7237	0.7696	0.7192	0.6841	0.7131	0.7376	0.7564	0.7334	0.7337		0.73	3.4	TM	
33	TM	Cyclohexane	0.4290	0.4403	0.3734	0.3710	0.3863	0.3988	0.4039	0.3900	0.3822		0.40	6.0	TM	
34	TM	1,1-Dichloropropene	0.7159	0.6731	0.6398	0.6090	0.6568	0.6667	0.6700	0.6497	0.6215		0.66	4.8	TM	
35	TM	2,2,4-Trimethylpentane	1.397	1.176	1.124	1.085	1.134	1.155	1.157	1.152	1.093		1.2	7.9	TM	

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 1/11/17
Matrix: Instrument: Max Initials:

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD		
36	S	1,2-DCA-D4(S)	0.2017	0.1939	0.1631	0.1713	0.1801	0.1717	0.1889	0.1796	0.1777		0.18	6.7	S	
37	TM	Carbon Tetrachloride	0.6034	0.6106	0.5976	0.5810	0.6019	0.6312	0.6507	0.6337	0.6375		0.62	3.7	TM	
38	TM	Tert Amyl Methyl Ether	0.6323	0.6924	0.7174	0.6726	0.7073	0.7182	0.7630	0.7451	0.7731		0.71	6.2	TM	
39	TM	1,2-DCA	0.4423	0.4432	0.4169	0.4096	0.4369	0.4270	0.4392	0.4281	0.4294		0.43	2.7	TM	
40	TM	Benzene	2.036	1.890	1.849	1.856	1.896	1.933	1.977	1.882	1.826		1.9	3.5	TM	
41	TM	TCE	0.6076	0.5806	0.5277	0.4734	0.5129	0.5190	0.5231	0.4994	0.4902		0.53	8.1	TM	
42	TM	2-Pentanone	0.1307	0.1268	0.1276	0.1344	0.1393	0.1419	0.1505	0.1481	0.1618		0.14	8.4	TM	
43	TM*	1,2-Dichloropropane		0.4471	0.4168	0.3981	0.4278	0.4394	0.4359	0.4149	0.4074		0.42	4.0	TM*	
44	TM	Bromodichloromethane		0.4623	0.4979	0.4604	0.5233	0.5078	0.5273	0.5061	0.5081		0.50	5.0	TM	
45	TM	Methyl Cyclohexane		0.6488	0.5983	0.5893	0.6083	0.6410	0.6397	0.6314	0.6015		0.62	3.7	TM	
46	TM	Dibromomethane		0.1669	0.1645	0.1457	0.1587	0.1669	0.1680	0.1593	0.1626		0.16	4.5	TM	
47	TM	MIBK (methyl isobutyl ketone)				0.2345	0.2289	0.2108	0.2071	0.1986	0.1971		0.21	7.3	TM	
48	TM	1-Bromo-2-chloroethane		0.3438	0.4061	0.3950	0.4172	0.4202	0.4433	0.4262	0.4400		0.41	7.7	TM	
49	TMQ	2-Chloroethyl vinyl ether				0.0101	0.0085	0.0114	0.0138	0.0149	0.0192		0.01	30	TMQ	1.000
50	TM	Cis-1,3-Dichloropropene		0.5403	0.5175	0.5039	0.5354	0.5626	0.6048	0.6015	0.6045		0.56	7.3	TM	
51	TM*	Toluene		2.138	2.104	2.082	2.177	2.199	2.260	2.192	2.116		2.2	2.7	TM*	
52	TM	Trans-1,3-Dichloropropene		0.3836	0.3396	0.3266	0.3687	0.3904	0.4218	0.4336	0.4522		0.39	11	TM	
53	TM	1,1,2-TCA		0.2257	0.1861	0.1911	0.2012	0.2055	0.2095	0.2007	0.1997		0.20	5.9	TM	
54	TM	2-Hexanone				0.0458	0.0610	0.0582	0.0635	0.0638	0.0683		0.06	13	TM	
55	I	Chlorobenzene-D5 (IS)														
56	S	Toluene-D8(S)	1.374	1.317	1.158	1.150	1.261	1.269	1.291	1.272	1.230		1.3	5.7	S	
57	TM	1,2-EDB		0.3231	0.2700	0.2919	0.3141	0.3186	0.3326	0.3121	0.3133		0.31	6.4	TM	
58	TM	Tetrachloroethene		0.7781	0.8093	0.7273	0.7229	0.7222	0.7071	0.6730	0.6419		0.72	7.4	TM	
59	TM	1-Chlorohexane		0.7695	0.7622	0.7565	0.8092	0.8106	0.8251	0.8130	0.7788		0.79	3.4	TM	
60	TM	1,1,1,2-Tetrachloroethane		0.6327	0.6131	0.5740	0.6217	0.6193	0.6433	0.6337	0.6212		0.62	3.4	TM	
61	TM	m&p-Xylene		1.308	1.332	1.294	1.361	1.359	1.353	1.314	1.265		1.3	2.6	TM	
62	TM	o-Xylene		1.255	1.220	1.181	1.258	1.237	1.274	1.232	1.168		1.2	3.0	TM	
63	TM	Styrene		1.777	1.830	1.756	1.987	1.975	2.016	1.973	1.912		1.9	5.4	TM	
64	S	4-Bromofluorobenzene(S)	0.4898	0.4586	0.4031	0.4034	0.4549	0.4598	0.4689	0.4698	0.4525		0.45	6.5	S	
65	TM	1,3-Dichloropropane		0.5773	0.5996	0.6072	0.6294	0.5855	0.6170	0.5916	0.5858		0.60	3.0	TM	
66	TM	Dibromochloromethane		0.3944	0.4592	0.4410	0.4727	0.4636	0.4812	0.4743	0.4690		0.46	6.1	TM	
67	TM**	Chlorobenzene		1.928	1.849	1.836	1.889	1.877	1.900	1.846	1.775		1.9	2.5	TM**	
68	TM*	Ethylbenzene		3.206	3.299	3.149	3.413	3.406	3.511	3.339	3.221		3.3	3.7	TM*	
69	TM**	Bromoform		0.2835	0.2722	0.2602	0.2862	0.2792	0.2874	0.2857	0.2918		0.28	3.6	TM**	
70	I	1,4-Dichlorobenzene-D (IS)														

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No: _____
Case No: _____ Initial Cal. Date: 1/11/17
Matrix: _____ Instrument: Max Initials: _____

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD		
71	TM	Isopropylbenzene		5.799	6.150	5.486	6.085	6.138	5.977	5.816	5.519		5.9	4.5	TM	
72	TM**	1,1,2,2-Tetrachloroethane		0.6334	0.6036	0.6021	0.6067	0.6142	0.6044	0.5822	0.5750		0.60	3.0	TM**	
73	TM	1,2,3-Trichloropropane		0.2218	0.2138	0.2224	0.2060	0.2001	0.2011	0.1924	0.1941		0.21	5.7	TM	
74	TM	t-1,4-Dichloro-2-Butene			0.1098	0.1120	0.1271	0.1232	0.1331	0.1377			0.12	9.0	TM	
75	TM	Bromobenzene		1.521	1.522	1.371	1.459	1.481	1.460	1.399	1.358		1.4	4.4	TM	
76	TM	n-Propylbenzene		6.260	6.750	6.041	6.827	6.789	6.654	6.481	6.185		6.5	4.7	TM	
77	TM	4-Ethyltoluene		5.504	5.874	5.406	6.024	5.906	5.831	5.652	5.416		5.7	4.2	TM	
78	TM	2-Chlorotoluene		4.180	4.067	3.769	4.011	4.017	3.977	3.852	3.671		3.9	4.2	TM	
79	TM	1,3,5-Trimethylbenzene		4.796	4.917	4.502	4.927	4.992	4.868	4.686	4.457		4.8	4.2	TM	
80	TM	4-Chlorotoluene		4.476	4.606	4.273	4.673	4.671	4.543	4.388	4.198		4.5	4.0	TM	
81	TM	Tert-Butylbenzene		4.286	4.327	4.001	4.375	4.376	4.225	4.088	3.869		4.2	4.5	TM	
82	TM	1,2,4-Trimethylbenzene		4.371	4.719	4.517	4.923	4.952	4.906	4.725	4.499		4.7	4.7	TM	
83	TM	Sec-Butylbenzene		5.712	5.799	5.404	5.863	5.883	5.672	5.546	5.247		5.6	4.0	TM	
84	TM	p-Isopropyltoluene		5.148	5.289	4.923	5.333	5.293	5.097	4.968	4.690		5.1	4.4	TM	
85	TM	Benzyl Chloride		0.5015	0.4550	0.4603	0.5531	0.5931	0.6188				0.53	13	TM	
86	TM	1,3-DCB		2.579	2.833	2.676	2.893	2.882	2.823	2.723	2.602		2.8	4.5	TM	
87	TM	1,4-DCB		2.669	2.802	2.564	2.737	2.757	2.728	2.601	2.486		2.7	4.1	TM	
88	TM	n-Butylbenzene		3.856	4.028	3.838	4.246	4.269	4.239	4.091	3.839		4.1	4.7	TM	
89	TM	1,2-DCB		2.216	2.293	2.124	2.465	2.350	2.361	2.270	2.189		2.3	4.8	TM	
90	TM	Hexachloroethane		0.5711	0.5990	0.5996	0.6863	0.7223	0.7519	0.7588	0.7541		0.68	12	TM	
91	TM	1,2-Dibromo-3-chloropropane			0.0762	0.0630	0.0755	0.0911	0.0917	0.0883	0.0923		0.08	14	TM	
92	TML	1,2,4-Trichlorobenzene		0.7844	0.8436	1.031	1.165	1.286	1.428	1.433	1.453		1.2	23	TML	1.000
93	TM	Hexachlorobutadiene		1.262	1.032	1.023	1.104	1.057	1.025	1.014	0.9306		1.1	9.1	TM	
94	TMQ	Naphthalene		0.3424	0.3912	0.6274	0.8698	1.104	1.429	1.578			0.91	54	TMQ	0.999
95	TML	1,2,3-Trichlorobenzene		0.3768	0.4306	0.6263	0.7550	0.8808	1.016	1.056	1.061		0.78	35	TML	1.000
96																
97																
98																
99																
100																
101																
102																
103																
104																
105																

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M06.D Vial: 4
Acq On : 11 Jan 17 11:24 Operator: PM,DG,SV,CMM
Sample : 0.3ug/L VOC STD 1/11/17A Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 10:51 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 10:43:31 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.51	96	320130	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.15	117	222100	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	114005	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	4.78	111	14961	5.24182 ppb		0.00
Spiked Amount 25.000			Recovery = 20.968%			
36) 1,2-DCA-D4(S)	5.13	65	12915	5.87485 ppb		0.00
Spiked Amount 25.000			Recovery = 23.500%			
56) Toluene-D8(S)	7.35	98	61030	5.41344 ppb		0.00
Spiked Amount 25.000			Recovery = 21.652%			
64) 4-Bromofluorobenzene(S)	10.74	95	21757	5.32633 ppb		0.00
Spiked Amount 25.000			Recovery = 21.304%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.18	85	1133	0.28314 ppb		94
3) Freon 114	1.29	85	1602	0.32514 ppb		98
4) Chloromethane	1.34	50	2094	0.37081 ppb		90
5) Vinyl chloride	1.42	62	2281	0.29854 ppb	#	78
6) Bromomethane	1.69	94	1624	0.43733 ppb		88
7) Chloroethane	1.79	64	1532	0.34828 ppb		90
8) Dichlorofluoromethane	1.98	67	3240	0.31379 ppb		100
9) Trichlorofluoromethane	2.03	101	2724	0.29032 ppb		87
10) Acrolein	2.41	56	1438	9.17828 ppb	#	83
11) Acetone	2.57	43	736	0.91005 ppb		93
12) Freon-113	2.53	101	1540	0.30892 ppb		89
13) 1,1-DCE	2.51	61	2595	0.30731 ppb		93
14) t-Butanol	3.14	59	1656	12.13701 ppb	#	85
15) Methyl Acetate	2.90	43	713	0.37112 ppb	#	52
17) Acrylonitrile	3.23	53	254	0.29800 ppb	#	79
18) Methylene chloride	2.98	84	1784	0.34790 ppb		91
19) Carbon disulfide	2.70	76	5531	0.33191 ppb		97
20) Methyl t-butyl ether (MtBE	3.28	73	2889	0.32945 ppb		95
21) Trans-1,2-DCE	3.26	96	1886	0.30753 ppb		91
22) Diisopropyl Ether	3.80	45	4734	0.29189 ppb	#	92
23) 1,1-DCA	3.67	63	3126	0.30111 ppb		91
25) Ethyl tert Butyl Ether	4.17	59	3321	0.30579 ppb		100
26) MEK (2-Butanone)	4.31	43	152	0.14809 ppb	#	52
27) Cis-1,2-DCE	4.27	96	2273	0.34864 ppb		98
28) 2,2-Dichloropropane	4.27	77	2554	0.34826 ppb		90
29) Chloroform	4.61	83	3265	0.32482 ppb		78
30) Bromochloromethane	4.52	128	816	0.31985 ppb		86
32) 1,1,1-TCA	4.80	97	2780	0.29434 ppb	#	90
33) Cyclohexane	4.86	41	1648	0.32274 ppb		76
34) 1,1-Dichloropropene	4.99	75	2750	0.32210 ppb		90
35) 2,2,4-Trimethylpentane	5.33	57	5365	0.36289 ppb		96
37) Carbon Tetrachloride	4.97	117	2318	0.28679 ppb		90
38) Tert Amyl Methyl Ether	5.36	73	2429	0.26411 ppb		97
39) 1,2-DCA	5.21	62	1699	0.31076 ppb		99
40) Benzene	5.20	78	7820	0.31598 ppb		95
41) TCE	5.93	95	2334	0.35121 ppb		85
42) 2-Pentanone	6.15	43	16737	9.20910 ppb		100
43) 1,2-Dichloropropane	6.16	63	1960	0.34838 ppb	#	85
44) Bromodichloromethane	6.49	83	1885	0.28989 ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M06.D Vial: 4
Acq On : 11 Jan 17 11:24 Operator: PM,DG,SV,CMM
Sample : 0.3ug/L VOC STD 1/11/17A Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 10:51 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 10:43:31 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
45)	Methyl Cyclohexane	6.15	83	2481	0.30228 ppb		100
46)	Dibromomethane	6.28	93	598	0.27977 ppb		90
47)	MIBK (methyl isobutyl ket	7.24	43	856	0.31707 ppb	#	81
48)	1-Bromo-2-chloroethane	6.84	63	1272	0.23640 ppb		100
50)	Cis-1,3-Dichloropropene	7.03	75	2230	0.30953 ppb	#	80
51)	Toluene	7.43	91	8812	0.31298 ppb		98
52)	Trans-1,3-Dichloropropene	7.71	75	1273	0.25466 ppb	#	76
53)	1,1,2-TCA	7.93	83	695	0.26409 ppb	#	70
57)	1,2-EDB	8.53	107	709	0.25049 ppb		90
58)	Tetrachloroethene	8.10	164	2151	0.33526 ppb		92
59)	1-Chlorohexane	9.22	91	2229	0.30951 ppb		95
60)	1,1,1,2-Tetrachloroethane	9.31	131	1895	0.34443 ppb		78
61)	m&p-Xylene	9.52	106	7491	0.62066 ppb		96
62)	o-Xylene	10.04	106	3353	0.30501 ppb		77
63)	Styrene	10.06	104	5458	0.31113 ppb		83
65)	1,3-Dichloropropane	8.13	76	1743	0.33511 ppb	#	76
66)	Dibromochloromethane	8.40	129	1395	0.33868 ppb		98
67)	Chlorobenzene	9.19	112	5761	0.34541 ppb		94
68)	Ethylbenzene	9.36	91	9580	0.31659 ppb		88
69)	Bromoform	10.27	173	632	0.25480 ppb		84
71)	Isopropylbenzene	10.56	105	8633	0.30842 ppb	#	88
72)	1,1,2,2-Tetrachloroethane	10.97	83	1062	0.37916 ppb	#	74
73)	1,2,3-Trichloropropane	11.01	110	311	0.34084 ppb	#	16
74)	t-1,4-Dichloro-2-Butene	11.05	53	91	0.16201 ppb	#	29
75)	Bromobenzene	10.93	156	2366	0.35040 ppb		95
76)	n-Propylbenzene	11.13	91	9842	0.31791 ppb		98
77)	4-Ethyltoluene	11.30	105	8210	0.30486 ppb		92
78)	2-Chlorotoluene	11.21	91	5896	0.32183 ppb		91
79)	1,3,5-Trimethylbenzene	11.39	105	6904	0.30328 ppb		95
80)	4-Chlorotoluene	11.37	91	6867	0.32240 ppb		94
81)	Tert-Butylbenzene	11.84	119	6232	0.31231 ppb	#	94
82)	1,2,4-Trimethylbenzene	11.91	105	6643	0.29416 ppb		94
83)	Sec-Butylbenzene	12.15	105	8575	0.31962 ppb		90
84)	p-Isopropyltoluene	12.37	119	7262	0.30084 ppb		92
85)	Benzyl Chloride	12.59	91	534	0.19744 ppb	#	61
86)	1,3-DCB	12.26	146	3905	0.29717 ppb		84
87)	1,4-DCB	12.39	146	4209	0.33479 ppb		92
88)	n-Butylbenzene	12.96	91	5811	0.29852 ppb		94
89)	1,2-DCB	12.90	146	3601	0.33608 ppb	#	89
90)	Hexachloroethane	13.26	117	1015	0.30817 ppb	#	66
92)	1,2,4-Trichlorobenzene	15.23	180	977	0.16663 ppb		78
93)	Hexachlorobutadiene	15.52	225	1642	0.34072 ppb		83
95)	1,2,3-Trichlorobenzene	15.92	180	363	0.09038 ppb	#	63

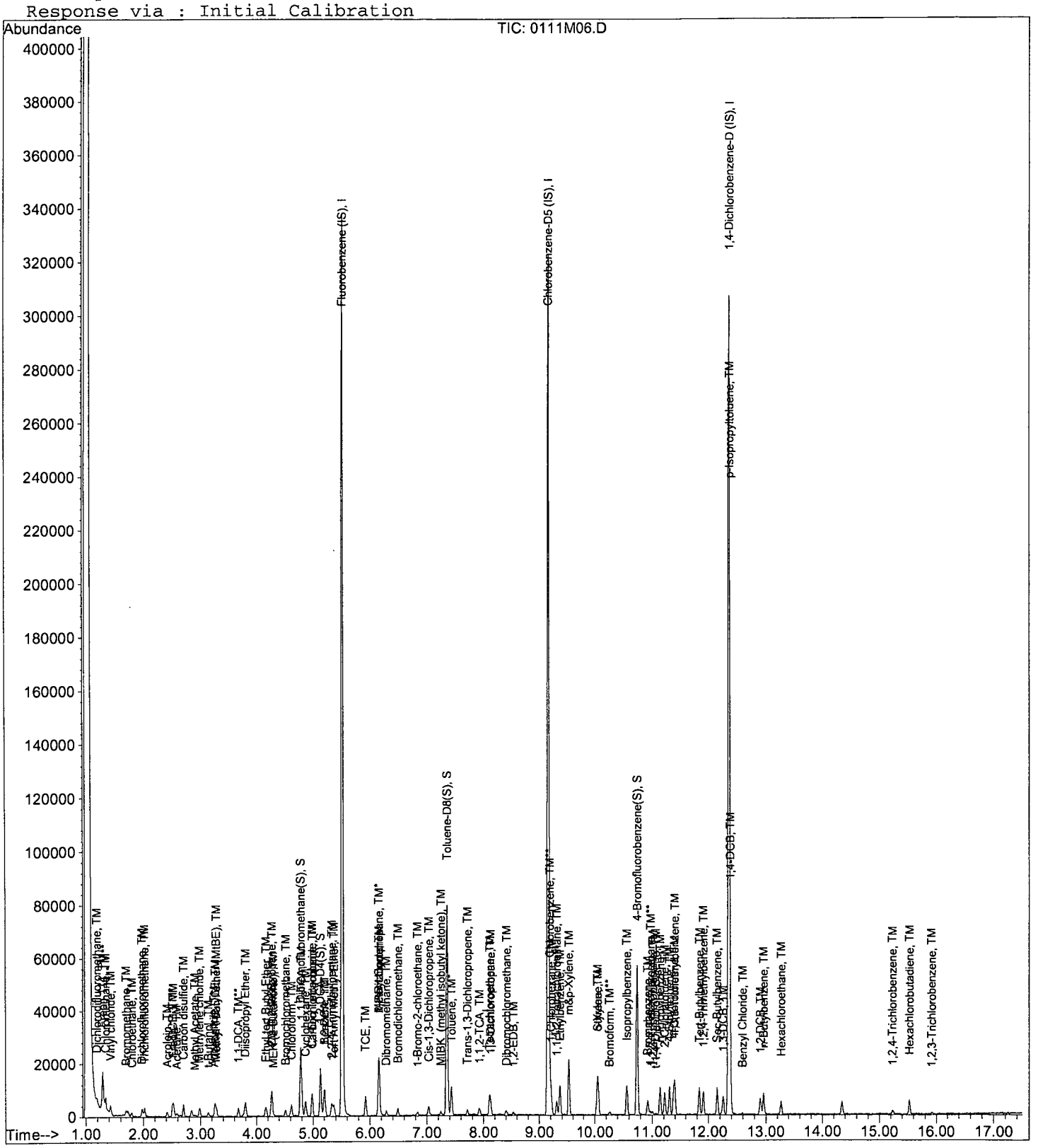
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\M170111\0111M06.D Vial: 4
Acq On : 11 Jan 17 11:24 Operator: PM,DG,SV,CMM
Sample : 0.3ug/L VOC STD 1/11/17A Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 10:51 2017 Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M07.D Vial: 5
Acq On : 11 Jan 17 11:52 Operator: PM,DG,SV,CMM
Sample : 0.5ug/L VOC STD 1/11/17B Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 10:51 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 10:43:31 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.51	96	338873	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.15	117	239828	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	123537	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	4.78	111	15524	5.13824 ppb		0.00
Spiked Amount 25.000			Recovery = 20.552%			
36) 1,2-DCA-D4(S)	5.13	65	13144	5.64832 ppb		0.00
Spiked Amount 25.000			Recovery = 22.592%			
56) Toluene-D8(S)	7.35	98	63193	5.19096 ppb		0.00
Spiked Amount 25.000			Recovery = 20.764%			
64) 4-Bromofluorobenzene(S)	10.74	95	21998	4.98725 ppb		0.00
Spiked Amount 25.000			Recovery = 19.948%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.18	85	1905	0.44973 ppb		100
3) Freon 114	1.29	85	2545	0.48796 ppb		93
4) Chloromethane	1.34	50	3333	0.55756 ppb		96
5) Vinyl chloride	1.42	62	3799	0.46971 ppb	#	86
6) Bromomethane	1.69	94	2539	0.64592 ppb		80
7) Chloroethane	1.79	64	2334	0.50125 ppb		91
8) Dichlorofluoromethane	1.98	67	5592	0.51162 ppb		95
9) Trichlorofluoromethane	2.02	101	4014	0.40414 ppb		86
10) Acrolein	2.41	56	3872	23.34680 ppb		89
11) Acetone	2.58	43	730	0.85271 ppb	#	45
12) Freon-113	2.53	101	2707	0.51299 ppb		90
13) 1,1-DCE	2.50	61	4426	0.49515 ppb	#	89
14) t-Butanol	3.14	59	3158	21.86516 ppb		90
15) Methyl Acetate	2.90	43	1013	0.49811 ppb	#	68
17) Acrylonitrile	3.23	53	263	0.29150 ppb	#	70
18) Methylene chloride	2.98	84	2963	0.54585 ppb		86
19) Carbon disulfide	2.69	76	8734	0.49513 ppb		98
20) Methyl t-butyl ether (MtBE	3.28	73	4380	0.47185 ppb		95
21) Trans-1,2-DCE	3.25	96	3351	0.51619 ppb		89
22) Diisopropyl Ether	3.79	45	8548	0.49791 ppb	#	88
23) 1,1-DCA	3.67	63	5549	0.50494 ppb		94
24) Vinyl Acetate	3.76	43	1935	0.53130 ppb	#	71
25) Ethyl tert Butyl Ether	4.17	59	5455	0.47451 ppb		98
26) MEK (2-Butanone)	4.31	43	644	0.59273 ppb	#	52
27) Cis-1,2-DCE	4.27	96	3813	0.55251 ppb		83
28) 2,2-Dichloropropane	4.27	77	3784	0.48745 ppb		90
29) Chloroform	4.61	83	5325	0.50047 ppb		99
30) Bromochloromethane	4.52	128	1353	0.50100 ppb		76
32) 1,1,1-TCA	4.80	97	5216	0.52172 ppb		95
33) Cyclohexane	4.86	41	2984	0.55205 ppb		85
34) 1,1-Dichloropropene	4.98	75	4562	0.50478 ppb		87
35) 2,2,4-Trimethylpentane	5.33	57	7968	0.50915 ppb		96
37) Carbon Tetrachloride	4.98	117	4138	0.48365 ppb		91
38) Tert Amyl Methyl Ether	5.37	73	4693	0.48205 ppb	#	80
39) 1,2-DCA	5.21	62	3004	0.51906 ppb		93
40) Benzene	5.20	78	12809	0.48894 ppb		95
41) TCE	5.92	95	3935	0.55937 ppb		97
42) 2-Pentanone	6.15	43	42966	22.33335 ppb		99
43) 1,2-Dichloropropane	6.16	63	3030	0.50877 ppb	#	85

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M07.D Vial: 5
Acq On : 11 Jan 17 11:52 Operator: PM,DG,SV,CMM
Sample : 0.5ug/L VOC STD 1/11/17B Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 10:51 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 10:43:31 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
44)	Bromodichloromethane	6.49	83	3133	0.45516 ppb		96
45)	Methyl Cyclohexane	6.15	83	4397	0.50609 ppb		89
46)	Dibromomethane	6.29	93	1131	0.49987 ppb		89
47)	MIBK (methyl isobutyl ket	7.23	43	1987	0.69529 ppb	#	78
48)	1-Bromo-2-chloroethane	6.84	63	2330	0.40908 ppb		98
50)	Cis-1,3-Dichloropropene	7.02	75	3662	0.48018 ppb		89
51)	Toluene	7.43	91	14489	0.48615 ppb		94
52)	Trans-1,3-Dichloropropene	7.71	75	2600	0.49136 ppb		87
53)	1,1,2-TCA	7.92	83	1530	0.54923 ppb		94
54)	2-Hexanone	8.29	58	206	0.26131 ppb	#	67
57)	1,2-EDB	8.53	107	1550	0.50714 ppb		84
58)	Tetrachloroethene	8.11	164	3732	0.53867 ppb		93
59)	1-Chlorohexane	9.21	91	3691	0.47463 ppb		96
60)	1,1,1,2-Tetrachloroethane	9.31	131	3035	0.51085 ppb		91
61)	m&p-Xylene	9.52	106	12549	0.96288 ppb		84
62)	o-Xylene	10.04	106	6018	0.50697 ppb		86
63)	Styrene	10.06	104	8522	0.44988 ppb		90
65)	1,3-Dichloropropane	8.13	76	2769	0.49302 ppb		95
66)	Dibromochloromethane	8.40	129	1892	0.42539 ppb	#	71
67)	Chlorobenzene	9.19	112	9248	0.51349 ppb		97
68)	Ethylbenzene	9.36	91	15380	0.47070 ppb		97
69)	Bromoform	10.27	173	1360	0.50778 ppb	#	77
71)	Isopropylbenzene	10.56	105	14328	0.47238 ppb	#	89
72)	1,1,2,2-Tetrachloroethane	10.97	83	1565	0.51563 ppb		85
73)	1,2,3-Trichloropropane	11.00	110	548	0.55425 ppb		88
74)	t-1,4-Dichloro-2-Butene	11.06	53	146	0.23987 ppb	#	56
75)	Bromobenzene	10.93	156	3757	0.51347 ppb		93
76)	n-Propylbenzene	11.13	91	15468	0.46108 ppb		99
77)	4-Ethyltoluene	11.30	105	13600	0.46603 ppb		97
78)	2-Chlorotoluene	11.22	91	10328	0.52026 ppb		85
79)	1,3,5-Trimethylbenzene	11.39	105	11850	0.48039 ppb		98
80)	4-Chlorotoluene	11.37	91	11060	0.47920 ppb		92
81)	Tert-Butylbenzene	11.84	119	10589	0.48971 ppb		95
82)	1,2,4-Trimethylbenzene	11.91	105	10800	0.44134 ppb		97
83)	Sec-Butylbenzene	12.15	105	14112	0.48541 ppb		98
84)	p-Isopropyltoluene	12.38	119	12719	0.48625 ppb		97
85)	Benzyl Chloride	12.60	91	1239	0.42276 ppb	#	88
86)	1,3-DCB	12.26	146	6372	0.44749 ppb		98
87)	1,4-DCB	12.39	146	6594	0.48403 ppb		93
88)	n-Butylbenzene	12.96	91	9528	0.45170 ppb		95
89)	1,2-DCB	12.90	146	5474	0.47146 ppb	#	85
90)	Hexachloroethane	13.26	117	1411	0.39535 ppb		92
91)	1,2-Dibromo-3-chloropropan	14.01	75	44	0.09779 ppb	#	6
92)	1,2,4-Trichlorobenzene	15.23	180	1938	0.30503 ppb		92
93)	Hexachlorobutadiene	15.53	225	3119	0.59726 ppb	#	81
94)	Naphthalene	15.57	128	846	0.15512 ppb	#	79
95)	1,2,3-Trichlorobenzene	15.92	180	931	0.21391 ppb	#	71

(#) = qualifier out of range (m) = manual integration

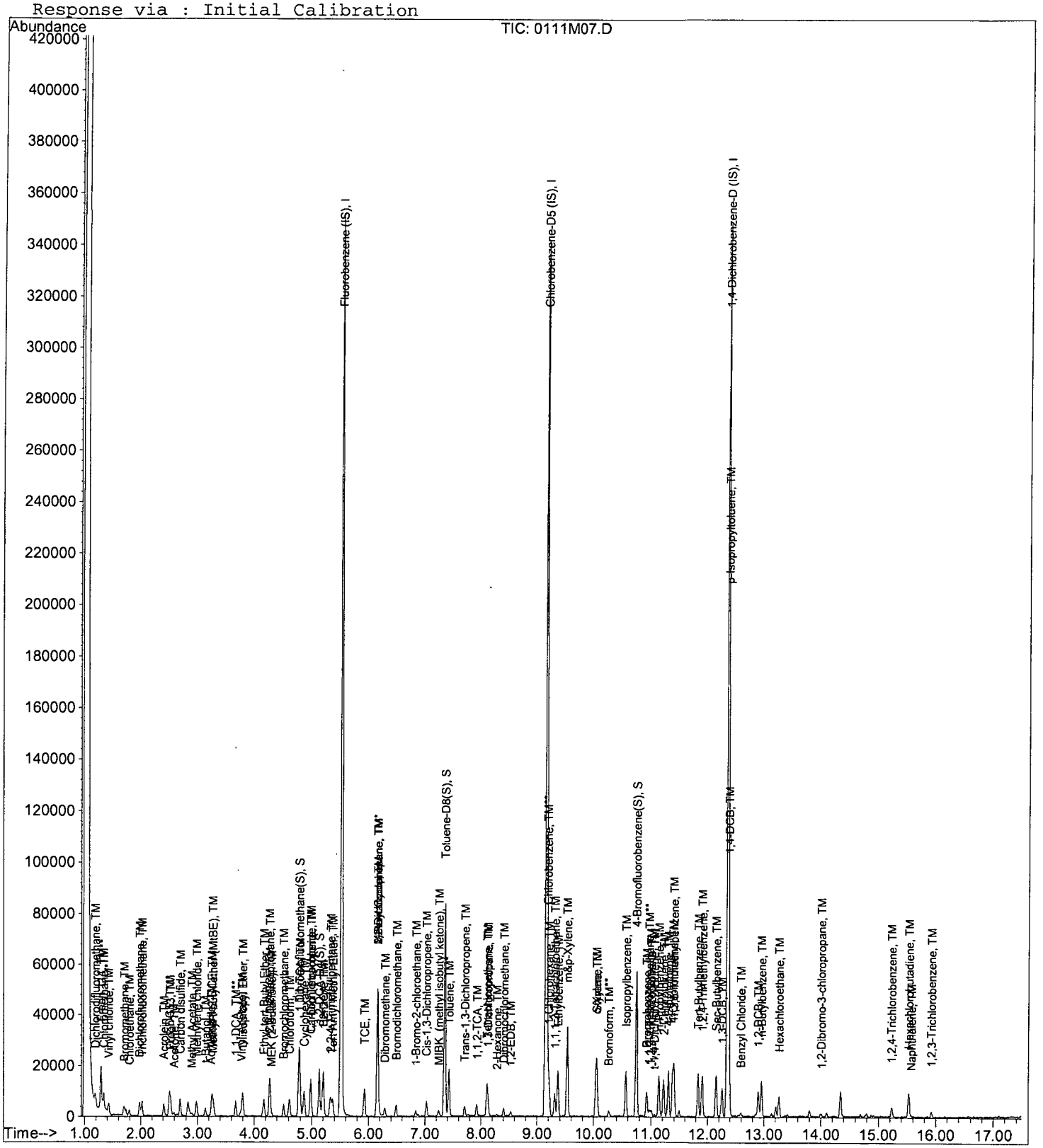
Quantitation Report

Data File : M:\MAX\DATA\M170111\0111M07.D
Acq On : 11 Jan 17 11:52
Sample : 0.5ug/L VOC STD 1/11/17B
Misc : IS&S 10/20/16

Vial: 5
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 10:51 2017 Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration



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Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M08.D Vial: 6
Acq On : 11 Jan 17 12:21 Operator: PM,DG,SV,CMM
Sample : 1.0ug/L VOC STD 1/11/17C Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 10:51 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 10:43:31 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.51	96	341843	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.15	117	237526	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	119495	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	4.78	111	27487	9.01879 ppb		0.00
Spiked Amount 25.000			Recovery = 36.076%			
36) 1,2-DCA-D4(S)	5.13	65	22300	9.49964 ppb		0.00
Spiked Amount 25.000			Recovery = 38.000%			
56) Toluene-D8(S)	7.35	98	110065	9.12886 ppb		0.00
Spiked Amount 25.000			Recovery = 36.516%			
64) 4-Bromofluorobenzene(S)	10.74	95	38301	8.76752 ppb		0.00
Spiked Amount 25.000			Recovery = 35.072%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.19	85	3843	0.89937 ppb		93
3) Freon 114	1.29	85	4962	0.94311 ppb		99
4) Chloromethane	1.34	50	5536	0.91805 ppb		97
5) Vinyl chloride	1.43	62	7412	0.90846 ppb		91
6) Bromomethane	1.69	94	4710	1.18780 ppb		94
7) Chloroethane	1.79	64	4416	0.94014 ppb	#	83
8) Dichlorofluoromethane	1.98	67	10598	0.96121 ppb		93
9) Trichlorofluoromethane	2.02	101	9229	0.92113 ppb		91
10) Acrolein	2.41	56	7336	43.84919 ppb		94
11) Acetone	2.56	43	1136	1.31542 ppb		97
12) Freon-113	2.53	101	5356	1.00617 ppb		90
13) 1,1-DCE	2.51	61	8500	0.94265 ppb		93
14) t-Butanol	3.14	59	7018	48.16863 ppb	#	80
15) Methyl Acetate	2.90	43	2174	1.05971 ppb		98
17) Acrylonitrile	3.22	53	685	0.75263 ppb	#	67
18) Methylene chloride	2.98	84	5144	0.93941 ppb		100
19) Carbon disulfide	2.70	76	17903	1.00611 ppb		98
20) Methyl t-butyl ether (MtBE	3.28	73	9461	1.01036 ppb		92
21) Trans-1,2-DCE	3.25	96	6222	0.95011 ppb		92
22) Diisopropyl Ether	3.80	45	16461	0.95050 ppb		98
23) 1,1-DCA	3.67	63	10938	0.98668 ppb		96
24) Vinyl Acetate	3.75	43	3672	0.99947 ppb		95
25) Ethyl tert Butyl Ether	4.17	59	10939	0.94327 ppb		96
26) MEK (2-Butanone)	4.30	43	964	0.87954 ppb	#	52
27) Cis-1,2-DCE	4.27	96	6498	0.93339 ppb		88
28) 2,2-Dichloropropane	4.27	77	7628	0.97409 ppb		91
29) Chloroform	4.61	83	10149	0.94556 ppb		89
30) Bromochloromethane	4.51	128	2605	0.95622 ppb		98
32) 1,1,1-TCA	4.80	97	9834	0.97508 ppb		96
33) Cyclohexane	4.87	41	5106	0.93642 ppb		95
34) 1,1-Dichloropropene	4.98	75	8748	0.95954 ppb		94
35) 2,2,4-Trimethylpentane	5.33	57	15369	0.97354 ppb		98
37) Carbon Tetrachloride	4.98	117	8171	0.94672 ppb		93
38) Tert Amyl Methyl Ether	5.37	73	9810	0.99890 ppb	#	97
39) 1,2-DCA	5.21	62	5700	0.97634 ppb	#	90
40) Benzene	5.20	78	25286	0.95682 ppb		97
41) TCE	5.92	95	7216	1.01687 ppb		94
42) 2-Pentanone	6.15	43	87224	44.94436 ppb		98
43) 1,2-Dichloropropane	6.16	63	5699	0.94862 ppb	#	87

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M08.D Vial: 6
Acq On : 11 Jan 17 12:21 Operator: PM,DG,SV,CMM
Sample : 1.0ug/L VOC STD 1/11/17C Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 10:51 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 10:43:31 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
44)	Bromodichloromethane	6.49	83	6808	0.98047	ppb		96
45)	Methyl Cyclohexane	6.15	83	8181	0.93345	ppb		96
46)	Dibromomethane	6.29	93	2249	0.98536	ppb		88
47)	MIBK (methyl isobutyl ket	7.24	43	3706	1.28553	ppb		95
48)	1-Bromo-2-chloroethane	6.83	63	5553	0.96647	ppb		98
50)	Cis-1,3-Dichloropropene	7.02	75	7076	0.91979	ppb		97
51)	Toluene	7.43	91	28763	0.95671	ppb		92
52)	Trans-1,3-Dichloropropene	7.71	75	4643	0.86984	ppb	#	82
53)	1,1,2-TCA	7.92	83	2545	0.90565	ppb		94
54)	2-Hexanone	8.29	58	608	0.76454	ppb	#	46
57)	1,2-EDB	8.53	107	2565	0.84736	ppb		92
58)	Tetrachloroethene	8.10	164	7689	1.12058	ppb		87
59)	1-Chlorohexane	9.21	91	7242	0.94029	ppb		99
60)	1,1,1,2-Tetrachloroethane	9.30	131	5825	0.98997	ppb		92
61)	m&p-Xylene	9.52	106	25320	1.96162	ppb		95
62)	o-Xylene	10.04	106	11587	0.98557	ppb		94
63)	Styrene	10.06	104	17391	0.92697	ppb		99
65)	1,3-Dichloropropane	8.13	76	5697	1.02419	ppb		99
66)	Dibromochloromethane	8.40	129	4363	0.99047	ppb		89
67)	Chlorobenzene	9.18	112	17569	0.98497	ppb		96
68)	Ethylbenzene	9.36	91	31347	0.96865	ppb		97
69)	Bromoform	10.27	173	2586	0.97488	ppb		81
71)	Isopropylbenzene	10.56	105	29398	1.00200	ppb		98
72)	1,1,2,2-Tetrachloroethane	10.97	83	2885	0.98270	ppb		88
73)	1,2,3-Trichloropropane	11.00	110	1022	1.06861	ppb	#	69
74)	t-1,4-Dichloro-2-Butene	11.06	53	525	0.89174	ppb		93
75)	Bromobenzene	10.92	156	7273	1.02763	ppb		95
76)	n-Propylbenzene	11.13	91	32266	0.99434	ppb		96
77)	4-Ethyltoluene	11.30	105	28078	0.99470	ppb		96
78)	2-Chlorotoluene	11.22	91	19439	1.01233	ppb		90
79)	1,3,5-Trimethylbenzene	11.40	105	23503	0.98502	ppb		97
80)	4-Chlorotoluene	11.37	91	22015	0.98611	ppb		98
81)	Tert-Butylbenzene	11.84	119	20684	0.98892	ppb		99
82)	1,2,4-Trimethylbenzene	11.91	105	22554	0.95284	ppb		97
83)	Sec-Butylbenzene	12.15	105	27717	0.98563	ppb		98
84)	p-Isopropyltoluene	12.37	119	25282	0.99923	ppb		98
85)	Benzyl Chloride	12.59	91	2175	0.76724	ppb	#	82
86)	1,3-DCB	12.26	146	13543	0.98326	ppb		97
87)	1,4-DCB	12.38	146	13391	1.01621	ppb		98
88)	n-Butylbenzene	12.95	91	19254	0.94365	ppb		96
89)	1,2-DCB	12.90	146	10961	0.97597	ppb		95
90)	Hexachloroethane	13.27	117	2863	0.82932	ppb		89
91)	1,2-Dibromo-3-chloropropan	14.02	75	364	0.83634	ppb		87
92)	1,2,4-Trichlorobenzene	15.22	180	4032	0.65609	ppb		88
93)	Hexachlorobutadiene	15.52	225	4931	0.97618	ppb		82
94)	Naphthalene	15.56	128	1870	0.35449	ppb	#	79
95)	1,2,3-Trichlorobenzene	15.92	180	2058	0.48885	ppb		84

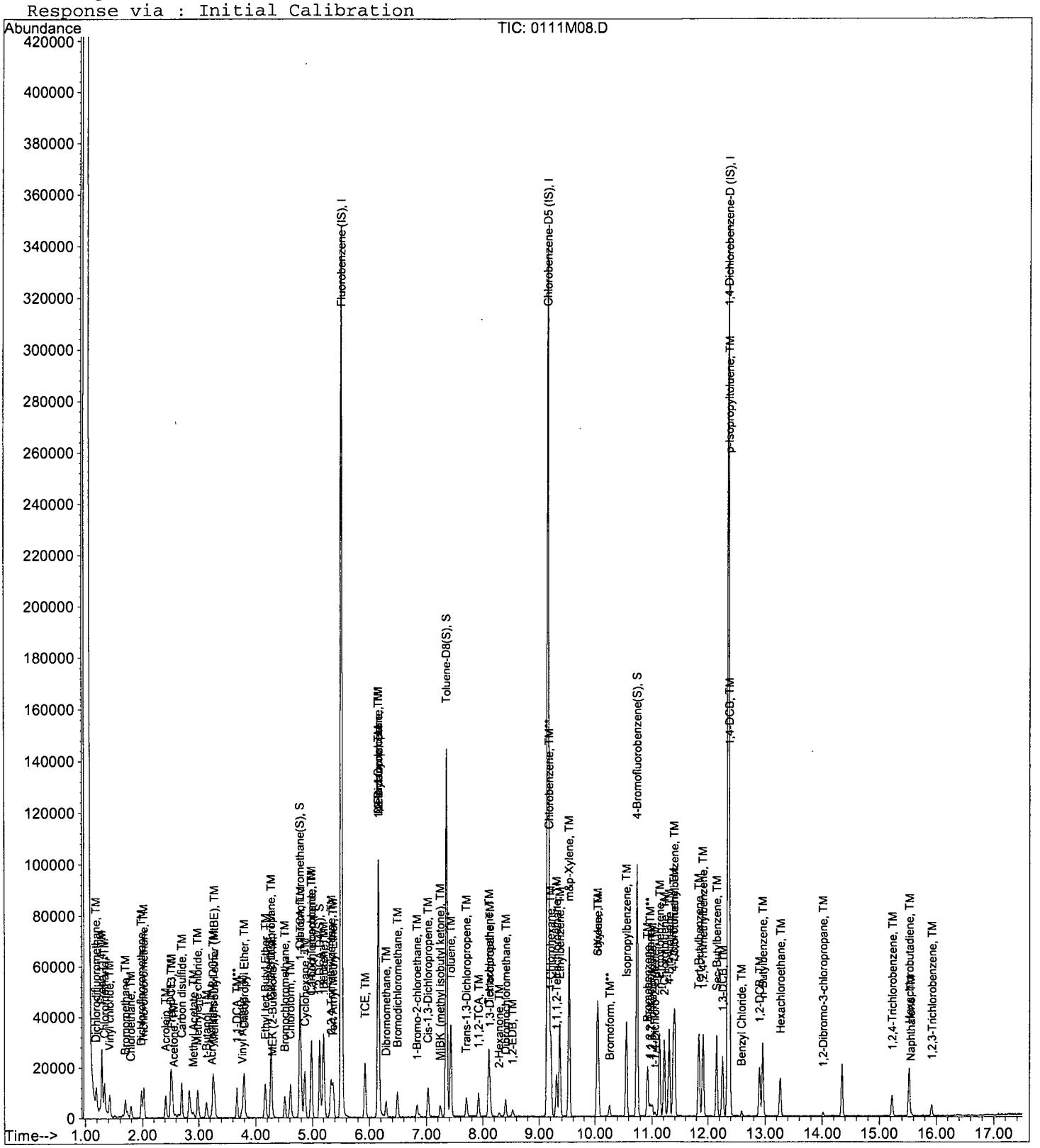
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\M170111\0111M08.D Vial: 6
Acq On : 11 Jan 17 12:21 Operator: PM,DG,SV,CMM
Sample : 1.0ug/L VOC STD 1/11/17C Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 10:51 2017 Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M09.D Vial: 7
Acq On : 11 Jan 17 12:49 Operator: PM,DG,SV,CMM
Sample : 2.0ug/L VOC STD 1/11/17D Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 10:51 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 10:43:31 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.51	96	351047	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.15	117	249761	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	131021	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	4.78	111	28151	8.99448 ppb		0.00
Spiked Amount 25.000			Recovery = 35.976%			
36) 1,2-DCA-D4(S)	5.13	65	24057	9.97941 ppb		0.00
Spiked Amount 25.000			Recovery = 39.916%			
56) Toluene-D8(S)	7.35	98	114893	9.06249 ppb		0.00
Spiked Amount 25.000			Recovery = 36.248%			
64) 4-Bromofluorobenzene(S)	10.74	95	40300	8.77320 ppb		0.00
Spiked Amount 25.000			Recovery = 35.092%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.19	85	7630	1.73882 ppb		90
3) Freon 114	1.29	85	10427	1.92987 ppb		97
4) Chloromethane	1.34	50	11455	1.84980 ppb		97
5) Vinyl chloride	1.43	62	14776	1.76355 ppb		100
6) Bromomethane	1.69	94	8147	2.00071 ppb		96
7) Chloroethane	1.79	64	8423	1.74619 ppb		97
8) Dichlorofluoromethane	1.98	67	21354	1.88597 ppb		97
9) Trichlorofluoromethane	2.02	101	17669	1.71727 ppb		90
10) Acrolein	2.41	56	11617	67.61728 ppb		98
11) Acetone	2.57	43	1973	2.22472 ppb		99
12) Freon-113	2.53	101	10367	1.89646 ppb		98
13) 1,1-DCE	2.50	61	17591	1.89970 ppb		95
14) t-Butanol	3.14	59	11112	74.26848 ppb	#	85
15) Methyl Acetate	2.89	43	3950	1.87493 ppb		99
17) Acrylonitrile	3.22	53	1718	1.83812 ppb	#	84
18) Methylene chloride	2.98	84	10597	1.88451 ppb		99
19) Carbon disulfide	2.70	76	35091	1.92033 ppb		99
20) Methyl t-butyl ether (MtBE	3.28	73	18762	1.95110 ppb	#	90
21) Trans-1,2-DCE	3.25	96	12994	1.93219 ppb		96
22) Diisopropyl Ether	3.79	45	34009	1.91228 ppb		99
23) 1,1-DCA	3.67	63	21468	1.88579 ppb		96
24) Vinyl Acetate	3.75	43	6962	1.84528 ppb		99
25) Ethyl tert Butyl Ether	4.17	59	22692	1.90542 ppb		94
26) MEK (2-Butanone)	4.30	43	2200	1.95462 ppb		99
27) Cis-1,2-DCE	4.27	96	14108	1.97337 ppb		97
28) 2,2-Dichloropropane	4.27	77	14615	1.81739 ppb		99
29) Chloroform	4.61	83	19896	1.80506 ppb		98
30) Bromochloromethane	4.51	128	5005	1.78903 ppb		82
32) 1,1,1-TCA	4.80	97	19213	1.85509 ppb		91
33) Cyclohexane	4.87	41	10418	1.86053 ppb		93
34) 1,1-Dichloropropene	4.98	75	17103	1.82678 ppb		97
35) 2,2,4-Trimethylpentane	5.33	57	30458	1.87875 ppb		97
37) Carbon Tetrachloride	4.98	117	16316	1.84087 ppb		99
38) Tert Amyl Methyl Ether	5.37	73	18889	1.87295 ppb	#	96
39) 1,2-DCA	5.21	62	11504	1.91883 ppb		100
40) Benzene	5.20	78	52125	1.92070 ppb		96
41) TCE	5.92	95	13295	1.82439 ppb		91
42) 2-Pentanone	6.15	43	141499	70.99929 ppb		97
43) 1,2-Dichloropropane	6.16	63	11180	1.81216 ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M09.D Vial: 7
Acq On : 11 Jan 17 12:49 Operator: PM,DG,SV,CMM
Sample : 2.0ug/L VOC STD 1/11/17D Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 10:51 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 10:43:31 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
44)	Bromodichloromethane	6.49	83	12930	1.81333 ppb		98
45)	Methyl Cyclohexane	6.15	83	16551	1.83895 ppb		96
46)	Dibromomethane	6.29	93	4091	1.74541 ppb		86
47)	MIBK (methyl isobutyl ket	7.24	43	6586	2.22464 ppb		96
48)	1-Bromo-2-chloroethane	6.84	63	11093	1.88006 ppb		93
50)	Cis-1,3-Dichloropropene	7.02	75	14150	1.79109 ppb		97
51)	Toluene	7.43	91	58480	1.89415 ppb		96
52)	Trans-1,3-Dichloropropene	7.71	75	9171	1.67309 ppb		99
53)	1,1,2-TCA	7.92	83	5368	1.86014 ppb		94
54)	2-Hexanone	8.28	58	1286	1.57470 ppb	#	95
57)	1,2-EDB	8.53	107	5832	1.83226 ppb		90
58)	Tetrachloroethene	8.11	164	14533	2.01426 ppb		88
59)	1-Chlorohexane	9.21	91	15115	1.86636 ppb		96
60)	1,1,1,2-Tetrachloroethane	9.30	131	11469	1.85369 ppb		100
61)	m&p-Xylene	9.52	106	51730	3.81135 ppb		98
62)	o-Xylene	10.04	106	23605	1.90945 ppb		98
63)	Styrene	10.06	104	35087	1.77858 ppb		98
65)	1,3-Dichloropropane	8.13	76	12132	2.07420 ppb		86
66)	Dibromochloromethane	8.40	129	8812	1.90247 ppb		98
67)	Chlorobenzene	9.19	112	36690	1.95618 ppb		95
68)	Ethylbenzene	9.36	91	62912	1.84881 ppb		100
69)	Bromoform	10.26	173	5199	1.86392 ppb		93
71)	Isopropylbenzene	10.56	105	57504	1.78755 ppb		98
72)	1,1,2,2-Tetrachloroethane	10.97	83	6311	1.96057 ppb		93
73)	1,2,3-Trichloropropane	11.01	110	2331	2.22290 ppb		89
74)	t-1,4-Dichloro-2-Butene	11.05	53	1174	1.81868 ppb		82
75)	Bromobenzene	10.92	156	14367	1.85139 ppb		97
76)	n-Propylbenzene	11.13	91	63325	1.77981 ppb		95
77)	4-Ethyltoluene	11.30	105	56662	1.83074 ppb		98
78)	2-Chlorotoluene	11.21	91	39505	1.87633 ppb		100
79)	1,3,5-Trimethylbenzene	11.39	105	47186	1.80361 ppb		98
80)	4-Chlorotoluene	11.37	91	44785	1.82956 ppb		95
81)	Tert-Butylbenzene	11.84	119	41934	1.82854 ppb		95
82)	1,2,4-Trimethylbenzene	11.91	105	47347	1.82430 ppb		97
83)	Sec-Butylbenzene	12.15	105	56638	1.83689 ppb		97
84)	p-Isopropyltoluene	12.38	119	51602	1.86007 ppb		97
85)	Benzyl Chloride	12.60	91	4825	1.55231 ppb		91
86)	1,3-DCB	12.26	146	28048	1.85722 ppb		98
87)	1,4-DCB	12.38	146	26875	1.86005 ppb		96
88)	n-Butylbenzene	12.96	91	40225	1.79803 ppb		91
89)	1,2-DCB	12.90	146	22266	1.80817 ppb	#	89
90)	Hexachloroethane	13.27	117	6285	1.66040 ppb		92
91)	1,2-Dibromo-3-chloropropan	14.01	75	660	1.38303 ppb		84
92)	1,2,4-Trichlorobenzene	15.23	180	10810	1.60427 ppb		90
93)	Hexachlorobutadiene	15.53	225	10726	1.93661 ppb		92
94)	Naphthalene	15.56	128	6576	1.13692 ppb		99
95)	1,2,3-Trichlorobenzene	15.92	180	6565	1.42224 ppb		84

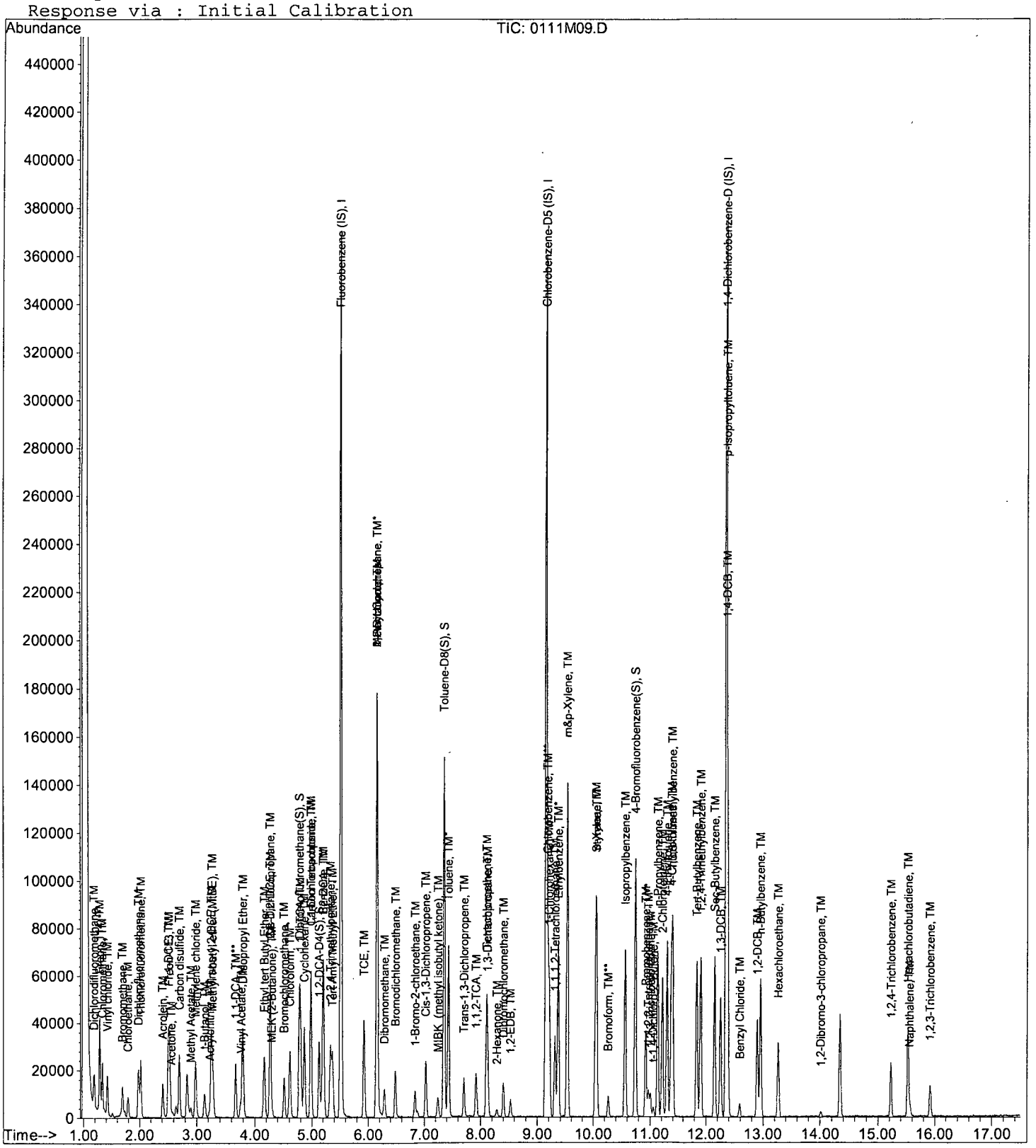
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\M170111\0111M09.D Vial: 7
Acq On : 11 Jan 17 12:49 Operator: PM,DG,SV,CMM
Sample : 2.0ug/L VOC STD 1/11/17D Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 10:51 2017 Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M10.D Vial: 8
Acq On : 11 Jan 17 13:17 Operator: PM,DG,SV,CMM
Sample : 5.0ug/L VOC STD 1/11/17E Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 10:51 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 10:43:31 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.51	96	341259	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.15	117	240539	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	127100	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	4.78	111	74853	24.60212 ppb		0.00
Spiked Amount 25.000			Recovery = 98.408%			
36) 1,2-DCA-D4(S)	5.13	65	61474	26.23228 ppb		0.00
Spiked Amount 25.000			Recovery = 104.928%			
56) Toluene-D8(S)	7.35	98	303378	24.84718 ppb		0.00
Spiked Amount 25.000			Recovery = 99.388%			
64) 4-Bromofluorobenzene(S)	10.74	95	109432	24.73641 ppb		0.00
Spiked Amount 25.000			Recovery = 98.944%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.19	85	21632	5.07118 ppb		94
3) Freon 114	1.29	85	26020	4.95400 ppb		96
4) Chloromethane	1.34	50	30960	5.14295 ppb		99
5) Vinyl chloride	1.43	62	40952	5.02791 ppb		99
6) Bromomethane	1.69	94	20714	5.23276 ppb		99
7) Chloroethane	1.79	64	23786	5.07257 ppb		100
8) Dichlorofluoromethane	1.98	67	55525	5.04458 ppb		100
9) Trichlorofluoromethane	2.03	101	47653	4.76430 ppb		96
10) Acrolein	2.41	56	16874	101.03292 ppb		100
11) Acetone	2.57	43	4441	5.15123 ppb		98
12) Freon-113	2.53	101	24933	4.69188 ppb		96
13) 1,1-DCE	2.51	61	44256	4.91641 ppb		99
14) t-Butanol	3.14	59	13813	94.96892 ppb		99
15) Methyl Acetate	2.90	43	9655	4.71435 ppb		100
17) Acrylonitrile	3.22	53	4938	5.43478 ppb	#	78
18) Methylene chloride	2.98	84	27309	4.99576 ppb		96
19) Carbon disulfide	2.70	76	85695	4.82409 ppb		99
20) Methyl t-butyl ether (MtBE	3.28	73	45854	4.90521 ppb		99
21) Trans-1,2-DCE	3.25	96	31612	4.83548 ppb		96
22) Diisopropyl Ether	3.79	45	85527	4.94700 ppb		96
23) 1,1-DCA	3.67	63	54632	4.93661 ppb		100
24) Vinyl Acetate	3.76	43	15954	4.34990 ppb		100
25) Ethyl tert Butyl Ether	4.17	59	57517	4.96816 ppb		100
26) MEK (2-Butanone)	4.31	43	6859	6.26875 ppb	#	84
27) Cis-1,2-DCE	4.27	96	34198	4.92069 ppb		99
28) 2,2-Dichloropropane	4.27	77	37967	4.85665 ppb		97
29) Chloroform	4.61	83	52893	4.93635 ppb		95
30) Bromochloromethane	4.51	128	13367	4.91506 ppb		94
32) 1,1,1-TCA	4.80	97	48668	4.83388 ppb		99
33) Cyclohexane	4.87	41	26367	4.84389 ppb		99
34) 1,1-Dichloropropene	4.98	75	44831	4.92578 ppb		96
35) 2,2,4-Trimethylpentane	5.33	57	77369	4.90927 ppb		99
37) Carbon Tetrachloride	4.98	117	41078	4.76760 ppb		96
38) Tert Amyl Methyl Ether	5.37	73	48275	4.92402 ppb		98
39) 1,2-DCA	5.21	62	29819	5.11638 ppb		99
40) Benzene	5.20	78	129428	4.90595 ppb		99
41) TCE	5.92	95	35005	4.94129 ppb		98
42) 2-Pentanone	6.15	43	190146	98.14518 ppb		100
43) 1,2-Dichloropropane	6.16	63	29200	4.86876 ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M10.D Vial: 8
Acq On : 11 Jan 17 13:17 Operator: PM,DG,SV,CMM
Sample : 5.0ug/L VOC STD 1/11/17E Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 10:51 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 10:43:31 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
44)	Bromodichloromethane	6.49	83	35716	5.15254	ppb		99
45)	Methyl Cyclohexane	6.15	83	41520	4.74552	ppb		97
46)	Dibromomethane	6.29	93	10829	4.75266	ppb		92
47)	MIBK (methyl isobutyl ket	7.24	43	15621	5.42785	ppb		96
48)	1-Bromo-2-chloroethane	6.84	63	28473	4.96407	ppb		94
50)	Cis-1,3-Dichloropropene	7.02	75	36539	4.75771	ppb		96
51)	Toluene	7.43	91	148584	4.95062	ppb		98
52)	Trans-1,3-Dichloropropene	7.71	75	25162	4.72202	ppb		96
53)	1,1,2-TCA	7.92	83	13729	4.89387	ppb		98
54)	2-Hexanone	8.29	58	4161	5.24127	ppb	#	65
57)	1,2-EDB	8.53	107	15113	4.93013	ppb		98
58)	Tetrachloroethene	8.10	164	34778	5.00499	ppb		98
59)	1-Chlorohexane	9.21	91	38929	4.99115	ppb		98
60)	1,1,1,2-Tetrachloroethane	9.31	131	29911	5.01975	ppb		98
61)	m&p-Xylene	9.52	106	130976	10.02000	ppb		96
62)	o-Xylene	10.04	106	60529	5.08401	ppb		97
63)	Styrene	10.06	104	95570	5.03024	ppb		100
65)	1,3-Dichloropropane	8.13	76	30277	5.37491	ppb		94
66)	Dibromochloromethane	8.40	129	22740	5.09769	ppb		100
67)	Chlorobenzene	9.19	112	90882	5.03128	ppb		95
68)	Ethylbenzene	9.36	91	164207	5.01060	ppb		98
69)	Bromoform	10.27	173	13767	5.12492	ppb		91
71)	Isopropylbenzene	10.56	105	154681	4.95669	ppb		96
72)	1,1,2,2-Tetrachloroethane	10.97	83	15423	4.93910	ppb		97
73)	1,2,3-Trichloropropane	11.00	110	5236	5.14722	ppb		92
74)	t-1,4-Dichloro-2-Butene	11.05	53	3230	5.15804	ppb		93
75)	Bromobenzene	10.92	156	37092	4.92729	ppb		96
76)	n-Propylbenzene	11.13	91	173538	5.02791	ppb		98
77)	4-Ethyltoluene	11.30	105	153120	5.09990	ppb		98
78)	2-Chlorotoluene	11.21	91	101953	4.99174	ppb		98
79)	1,3,5-Trimethylbenzene	11.39	105	125239	4.93475	ppb		98
80)	4-Chlorotoluene	11.37	91	118791	5.00258	ppb		99
81)	Tert-Butylbenzene	11.84	119	111218	4.99929	ppb		97
82)	1,2,4-Trimethylbenzene	11.91	105	125143	4.97056	ppb		100
83)	Sec-Butylbenzene	12.15	105	149034	4.98261	ppb		99
84)	p-Isopropyltoluene	12.37	119	135563	5.03733	ppb		99
85)	Benzyl Chloride	12.59	91	14060	4.66296	ppb		95
86)	1,3-DCB	12.26	146	73533	5.01925	ppb		95
87)	1,4-DCB	12.38	146	69572	4.96372	ppb		99
88)	n-Butylbenzene	12.95	91	107927	4.97308	ppb		99
89)	1,2-DCB	12.90	146	62667	5.24603	ppb		99
90)	Hexachloroethane	13.27	117	17446	4.75115	ppb		93
91)	1,2-Dibromo-3-chloropropan	14.01	75	1918	4.14317	ppb	#	74
92)	1,2,4-Trichlorobenzene	15.23	180	29608	4.52956	ppb		93
93)	Hexachlorobutadiene	15.53	225	28075	5.22540	ppb		94
94)	Naphthalene	15.56	128	22110	3.94050	ppb		99
95)	1,2,3-Trichlorobenzene	15.92	180	19191	4.28578	ppb		93

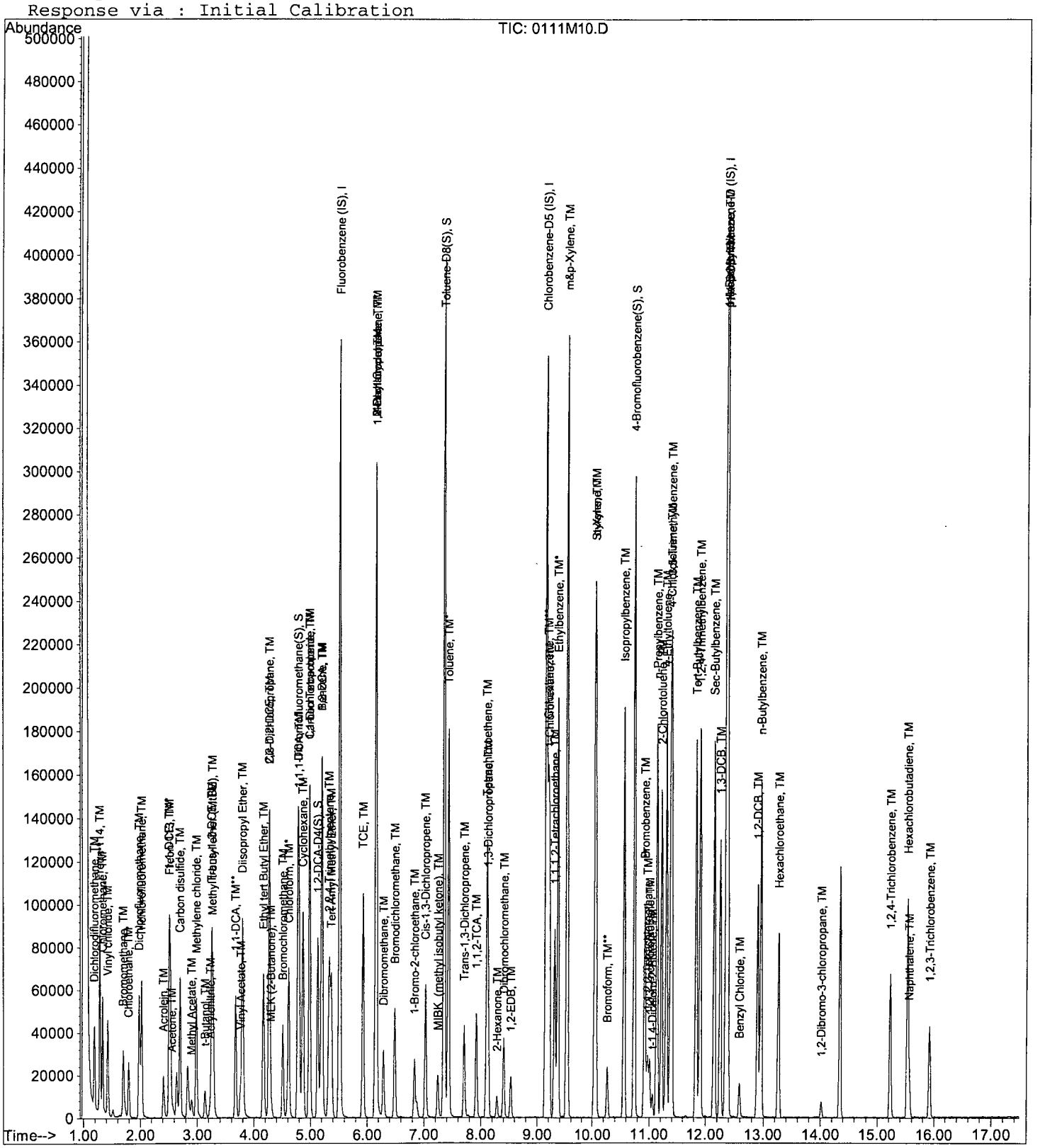
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\M170111\0111M10.D Vial: 8
Acq On : 11 Jan 17 13:17 Operator: PM,DG,SV,CMM
Sample : 5.0ug/L VOC STD 1/11/17E Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 10:51 2017 Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M11.D Vial: 9
Acq On : 11 Jan 17 13:46 Operator: PM,DG,SV,CMM
Sample : 10ug/L VOC STD 1/11/17F Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 10:51 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 10:43:31 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	337093	25.00000 ppb	0.00
55) Chlorobenzene-D5 (IS)	9.15	117	240952	25.00000 ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	127119	25.00000 ppb	0.00
System Monitoring Compounds					
31) Dibromofluoromethane(S)	4.78	111	75135	25.00000 ppb	0.00
Spiked Amount 25.000			Recovery = 100.000%		
36) 1,2-DCA-D4(S)	5.13	65	57871	25.00000 ppb	0.00
Spiked Amount 25.000			Recovery = 100.000%		
56) Toluene-D8(S)	7.35	98	305768	25.00000 ppb	0.00
Spiked Amount 25.000			Recovery = 100.000%		
64) 4-Bromofluorobenzene(S)	10.74	95	110788	25.00000 ppb	0.00
Spiked Amount 25.000			Recovery = 100.000%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.19	85	42136	10.00000 ppb	100
3) Freon 114	1.29	85	51882	10.00000 ppb	100
4) Chloromethane	1.34	50	59464	10.00000 ppb	100
5) Vinyl chloride	1.43	62	80455	10.00000 ppb	100
6) Bromomethane	1.69	94	39102	10.00000 ppb	100
7) Chloroethane	1.79	64	46319	10.00000 ppb	100
8) Dichlorofluoromethane	1.98	67	108725	10.00000 ppb	100
9) Trichlorofluoromethane	2.02	101	98800	10.00000 ppb	100
10) Acrolein	2.41	56	20622	125.00000 ppb	100
11) Acetone	2.56	43	8516	10.00000 ppb	100
12) Freon-113	2.53	101	52492	10.00000 ppb	100
13) 1,1-DCE	2.51	61	88918	10.00000 ppb	100
14) t-Butanol	3.14	59	17959	125.00000 ppb	100
15) Methyl Acetate	2.90	43	20230	10.00000 ppb	100
17) Acrylonitrile	3.22	53	8975	10.00000 ppb	100
18) Methylene chloride	2.98	84	53997	10.00000 ppb	100
19) Carbon disulfide	2.70	76	175471	10.00000 ppb	100
20) Methyl t-butyl ether (MtBE	3.28	73	92339	10.00000 ppb	100
21) Trans-1,2-DCE	3.25	96	64577	10.00000 ppb	100
22) Diisopropyl Ether	3.80	45	170776	10.00000 ppb	100
23) 1,1-DCA	3.67	63	109316	10.00000 ppb	100
24) Vinyl Acetate	3.75	43	32960	9.09768 ppb	100
25) Ethyl tert Butyl Ether	4.17	59	114358	10.00000 ppb	100
26) MEK (2-Butanone)	4.30	43	10808	10.00000 ppb	100
27) Cis-1,2-DCE	4.27	96	68650	10.00000 ppb	100
28) 2,2-Dichloropropane	4.27	77	77221	10.00000 ppb	100
29) Chloroform	4.61	83	105842	10.00000 ppb	100
30) Bromochloromethane	4.51	128	26864	10.00000 ppb	100
32) 1,1,1-TCA	4.80	97	99452	10.00000 ppb	100
33) Cyclohexane	4.86	41	53769	10.00000 ppb	100
34) 1,1-Dichloropropene	4.98	75	89902	10.00000 ppb	100
35) 2,2,4-Trimethylpentane	5.33	57	155674	10.00000 ppb	100
37) Carbon Tetrachloride	4.98	117	85109	10.00000 ppb	100
38) Tert Amyl Methyl Ether	5.37	73	96843	10.00000 ppb	100
39) 1,2-DCA	5.21	62	57570	10.00000 ppb	100
40) Benzene	5.20	78	260598	10.00000 ppb	100
41) TCE	5.92	95	69977	10.00000 ppb	100
42) 2-Pentanone	6.15	43	239218	125.00000 ppb	100
43) 1,2-Dichloropropane	6.16	63	59242	10.00000 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M11.D Vial: 9
Acq On : 11 Jan 17 13:46 Operator: PM,DG,SV,CMM
Sample : 10ug/L VOC STD 1/11/17F Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 10:51 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 10:43:31 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
44)	Bromodichloromethane	6.49	83	68471	10.00000	ppb	100
45)	Methyl Cyclohexane	6.15	83	86425	10.00000	ppb	100
46)	Dibromomethane	6.29	93	22507	10.00000	ppb	100
47)	MIBK (methyl isobutyl ket	7.24	43	28428	10.00000	ppb	100
48)	1-Bromo-2-chloroethane	6.84	63	56658	10.00000	ppb	100
50)	Cis-1,3-Dichloropropene	7.02	75	75862	10.00000	ppb	100
51)	Toluene	7.43	91	296468	10.00000	ppb	100
52)	Trans-1,3-Dichloropropene	7.71	75	52636	10.00000	ppb	100
53)	1,1,2-TCA	7.92	83	27711	10.00000	ppb	100
54)	2-Hexanone	8.28	58	7842	10.00000	ppb	100
57)	1,2-EDB	8.53	107	30707	10.00000	ppb	100
58)	Tetrachloroethene	8.10	164	69606	10.00000	ppb	100
59)	1-Chlorohexane	9.21	91	78130	10.00000	ppb	100
60)	1,1,1,2-Tetrachloroethane	9.31	131	59689	10.00000	ppb	100
61)	m&p-Xylene	9.52	106	261878	20.00000	ppb	100
62)	o-Xylene	10.04	106	119262	10.00000	ppb	100
63)	Styrene	10.06	104	190317	10.00000	ppb	100
65)	1,3-Dichloropropane	8.13	76	56427	10.00000	ppb	100
66)	Dibromochloromethane	8.40	129	44685	10.00000	ppb	100
67)	Chlorobenzene	9.19	112	180944	10.00000	ppb	100
68)	Ethylbenzene	9.36	91	328282	10.00000	ppb	100
69)	Bromoform	10.27	173	26909	10.00000	ppb	100
71)	Isopropylbenzene	10.56	105	312112	10.00000	ppb	100
72)	1,1,2,2-Tetrachloroethane	10.97	83	31231	10.00000	ppb	100
73)	1,2,3-Trichloropropane	11.00	110	10174	10.00000	ppb	100
74)	t-1,4-Dichloro-2-Butene	11.05	53	6263	10.00000	ppb	100
75)	Bromobenzene	10.92	156	75290	10.00000	ppb	100
76)	n-Propylbenzene	11.13	91	345201	10.00000	ppb	100
77)	4-Ethyltoluene	11.30	105	300286	10.00000	ppb	100
78)	2-Chlorotoluene	11.21	91	204274	10.00000	ppb	100
79)	1,3,5-Trimethylbenzene	11.40	105	253828	10.00000	ppb	100
80)	4-Chlorotoluene	11.37	91	237495	10.00000	ppb	100
81)	Tert-Butylbenzene	11.84	119	222501	10.00000	ppb	100
82)	1,2,4-Trimethylbenzene	11.91	105	251806	10.00000	ppb	100
83)	Sec-Butylbenzene	12.15	105	299153	10.00000	ppb	100
84)	p-Isopropyltoluene	12.37	119	269157	10.00000	ppb	100
85)	Benzyl Chloride	12.59	91	30157	10.00000	ppb	100
86)	1,3-DCB	12.26	146	146524	10.00000	ppb	100
87)	1,4-DCB	12.38	146	140182	10.00000	ppb	100
88)	n-Butylbenzene	12.95	91	217055	10.00000	ppb	100
89)	1,2-DCB	12.90	146	119474	10.00000	ppb	100
90)	Hexachloroethane	13.27	117	36725	10.00000	ppb	100
91)	1,2-Dibromo-3-chloropropan	14.01	75	4630	10.00000	ppb	100
92)	1,2,4-Trichlorobenzene	15.23	180	65376	10.00000	ppb	100
93)	Hexachlorobutadiene	15.53	225	53736	10.00000	ppb	100
94)	Naphthalene	15.56	128	56118	10.00000	ppb	100
95)	1,2,3-Trichlorobenzene	15.92	180	44785	10.00000	ppb	100

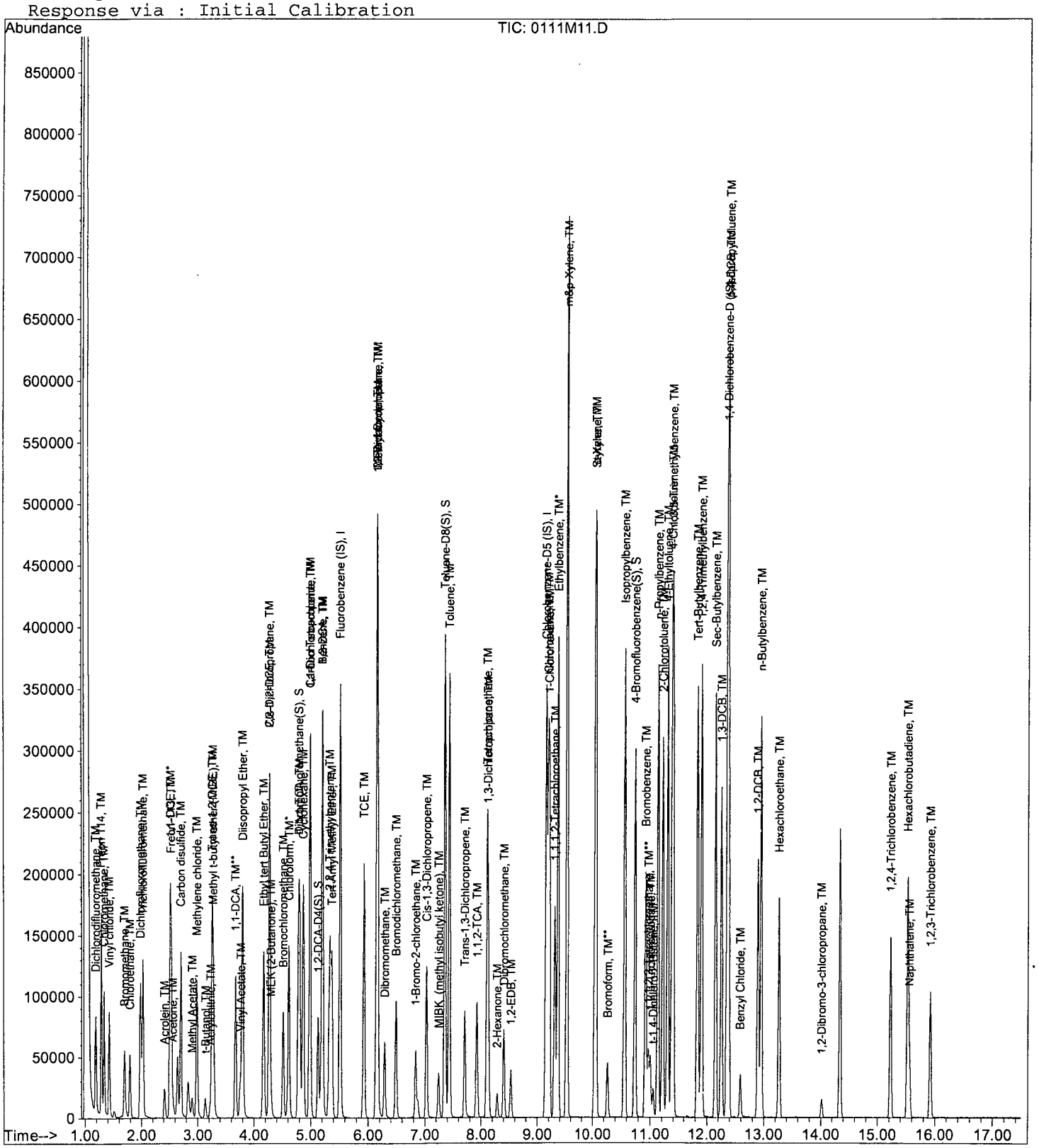
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\M170111\0111M11.D Vial: 9
Acq On : 11 Jan 17 13:46 Operator: PM,DG,SV,CMM
Sample : 10ug/L VOC STD 1/11/17F Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 10:51 2017 Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M12.D Vial: 10
Acq On : 11 Jan 17 14:14 Operator: PM,DG,SV,CMM
Sample : 20ug/L VOC STD 1/11/17G Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 10:51 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 10:43:31 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	335531	25.00000 ppb	0.00
55) Chlorobenzene-D5 (IS)	9.15	117	245289	25.00000 ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	132793	25.00000 ppb	0.00
System Monitoring Compounds					
31) Dibromofluoromethane(S)	4.78	111	153257	51.23127 ppb	0.00
Spiked Amount 25.000			Recovery	= 204.924%	
36) 1,2-DCA-D4(S)	5.13	65	126755	55.01248 ppb	0.00
Spiked Amount 25.000			Recovery	= 220.048%	
56) Toluene-D8(S)	7.35	98	633500	50.87999 ppb	0.00
Spiked Amount 25.000			Recovery	= 203.520%	
64) 4-Bromofluorobenzene(S)	10.74	95	230047	50.99368 ppb	0.00
Spiked Amount 25.000			Recovery	= 203.976%	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.19	85	81096	19.33585 ppb	98
3) Freon 114	1.29	85	104181	20.17386 ppb	100
4) Chloromethane	1.34	50	115965	19.59250 ppb	99
5) Vinyl chloride	1.42	62	160971	20.10072 ppb	99
6) Bromomethane	1.69	94	68280	17.54331 ppb	100
7) Chloroethane	1.79	64	93053	20.18312 ppb	99
8) Dichlorofluoromethane	1.98	67	223735	20.67386 ppb	99
9) Trichlorofluoromethane	2.02	101	194884	19.81693 ppb	97
10) Acrolein	2.41	56	25467	155.08654 ppb	94
11) Acetone	2.56	43	16592	19.57403 ppb	98
12) Freon-113	2.53	101	103999	19.90458 ppb	94
13) 1,1-DCE	2.51	61	180107	20.34970 ppb	99
14) t-Butanol	3.14	59	22008	153.89536 ppb	91
15) Methyl Acetate	2.90	43	42768	21.23930 ppb	100
17) Acrylonitrile	3.22	53	19572	21.90876 ppb	87
18) Methylene chloride	2.98	84	110229	20.50894 ppb	99
19) Carbon disulfide	2.70	76	353711	20.25164 ppb	99
20) Methyl t-butyl ether (MtBE	3.28	73	190531	20.72992 ppb	97
21) Trans-1,2-DCE	3.25	96	126832	19.73186 ppb	94
22) Diisopropyl Ether	3.79	45	355537	20.91583 ppb	98
23) 1,1-DCA	3.67	63	222873	20.48287 ppb	99
24) Vinyl Acetate	3.75	43	72529	20.11279 ppb	97
25) Ethyl tert Butyl Ether	4.17	59	239885	21.07432 ppb	98
26) MEK (2-Butanone)	4.30	43	25884	24.06042 ppb	98
27) Cis-1,2-DCE	4.27	96	137355	20.10116 ppb	93
28) 2,2-Dichloropropane	4.27	77	163418	21.26090 ppb	97
29) Chloroform	4.61	83	214361	20.34721 ppb	99
30) Bromochloromethane	4.51	128	52664	19.69519 ppb	94
32) 1,1,1-TCA	4.80	97	203031	20.51001 ppb	96
33) Cyclohexane	4.86	41	108404	20.25492 ppb	98
34) 1,1-Dichloropropene	4.98	75	179856	20.09892 ppb	97
35) 2,2,4-Trimethylpentane	5.33	57	310463	20.03599 ppb	100
37) Carbon Tetrachloride	4.98	117	174669	20.61852 ppb	98
38) Tert Amyl Methyl Ether	5.37	73	204805	21.24660 ppb	95
39) 1,2-DCA	5.21	62	117901	20.57493 ppb	100
40) Benzene	5.20	78	530631	20.45684 ppb	99
41) TCE	5.92	95	140408	20.15829 ppb	98
42) 2-Pentanone	6.15	43	303043	159.08803 ppb	99
43) 1,2-Dichloropropane	6.16	63	116997	19.84093 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M12.D Vial: 10
Acq On : 11 Jan 17 14:14 Operator: PM,DG,SV,CMM
Sample : 20ug/L VOC STD 1/11/17G Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 10:51 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 10:43:31 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
44)	Bromodichloromethane	6.49	83	141528	20.76600 ppb		100
45)	Methyl Cyclohexane	6.15	83	171701	19.95954 ppb		100
46)	Dibromomethane	6.29	93	45088	20.12614 ppb		95
47)	MIBK (methyl isobutyl ket	7.24	43	55602	19.64994 ppb		98
48)	1-Bromo-2-chloroethane	6.84	63	119004	21.10170 ppb		98
50)	Cis-1,3-Dichloropropene	7.02	75	162342	21.49927 ppb		98
51)	Toluene	7.43	91	606673	20.55862 ppb		99
52)	Trans-1,3-Dichloropropene	7.71	75	113215	21.60917 ppb		99
53)	1,1,2-TCA	7.92	83	56241	20.39003 ppb		97
54)	2-Hexanone	8.28	58	17043	21.83415 ppb		93
57)	1,2-EDB	8.53	107	65276	20.88183 ppb		91
58)	Tetrachloroethene	8.10	164	138747	19.58075 ppb		99
59)	1-Chlorohexane	9.21	91	161910	20.35674 ppb		99
60)	1,1,1,2-Tetrachloroethane	9.31	131	126234	20.77469 ppb		97
61)	m&p-Xylene	9.52	106	530996	39.83591 ppb		99
62)	o-Xylene	10.04	106	249932	20.58601 ppb		98
63)	Styrene	10.06	104	395659	20.42189 ppb		98
65)	1,3-Dichloropropane	8.13	76	121065	21.07580 ppb		95
66)	Dibromochloromethane	8.40	129	94429	20.75851 ppb		99
67)	Chlorobenzene	9.19	112	372828	20.24029 ppb		99
68)	Ethylbenzene	9.36	91	688961	20.61579 ppb		97
69)	Bromoform	10.27	173	56397	20.58785 ppb		95
71)	Isopropylbenzene	10.56	105	634924	19.47361 ppb		100
72)	1,1,2,2-Tetrachloroethane	10.97	83	64210	19.68122 ppb		99
73)	1,2,3-Trichloropropane	11.00	110	21365	20.10233 ppb		99
74)	t-1,4-Dichloro-2-Butene	11.05	53	14140	21.61236 ppb		95
75)	Bromobenzene	10.92	156	155102	19.72038 ppb		99
76)	n-Propylbenzene	11.13	91	706836	19.60117 ppb		98
77)	4-Ethyltoluene	11.30	105	619458	19.74750 ppb		99
78)	2-Chlorotoluene	11.21	91	422520	19.80019 ppb		99
79)	1,3,5-Trimethylbenzene	11.39	105	517176	19.50447 ppb		98
80)	4-Chlorotoluene	11.37	91	482647	19.45407 ppb		99
81)	Tert-Butylbenzene	11.84	119	448819	19.30966 ppb		100
82)	1,2,4-Trimethylbenzene	11.91	105	521159	19.81251 ppb		99
83)	Sec-Butylbenzene	12.15	105	602555	19.28140 ppb		99
84)	p-Isopropyltoluene	12.37	119	541451	19.25701 ppb		99
85)	Benzyl Chloride	12.59	91	65734	20.86590 ppb		98
86)	1,3-DCB	12.26	146	299849	19.58976 ppb		97
87)	1,4-DCB	12.39	146	289797	19.78960 ppb		99
88)	n-Butylbenzene	12.95	91	450287	19.85889 ppb		98
89)	1,2-DCB	12.90	146	250860	20.09987 ppb		98
90)	Hexachloroethane	13.27	117	79873	20.81965 ppb		96
91)	1,2-Dibromo-3-chloropropan	14.01	75	9742	20.14199 ppb	#	81
92)	1,2,4-Trichlorobenzene	15.23	180	151723	22.21613 ppb		92
93)	Hexachlorobutadiene	15.52	225	108899	19.39965 ppb		95
94)	Naphthalene	15.56	128	151823	25.89826 ppb		98
95)	1,2,3-Trichlorobenzene	15.92	180	107965	23.07734 ppb		98

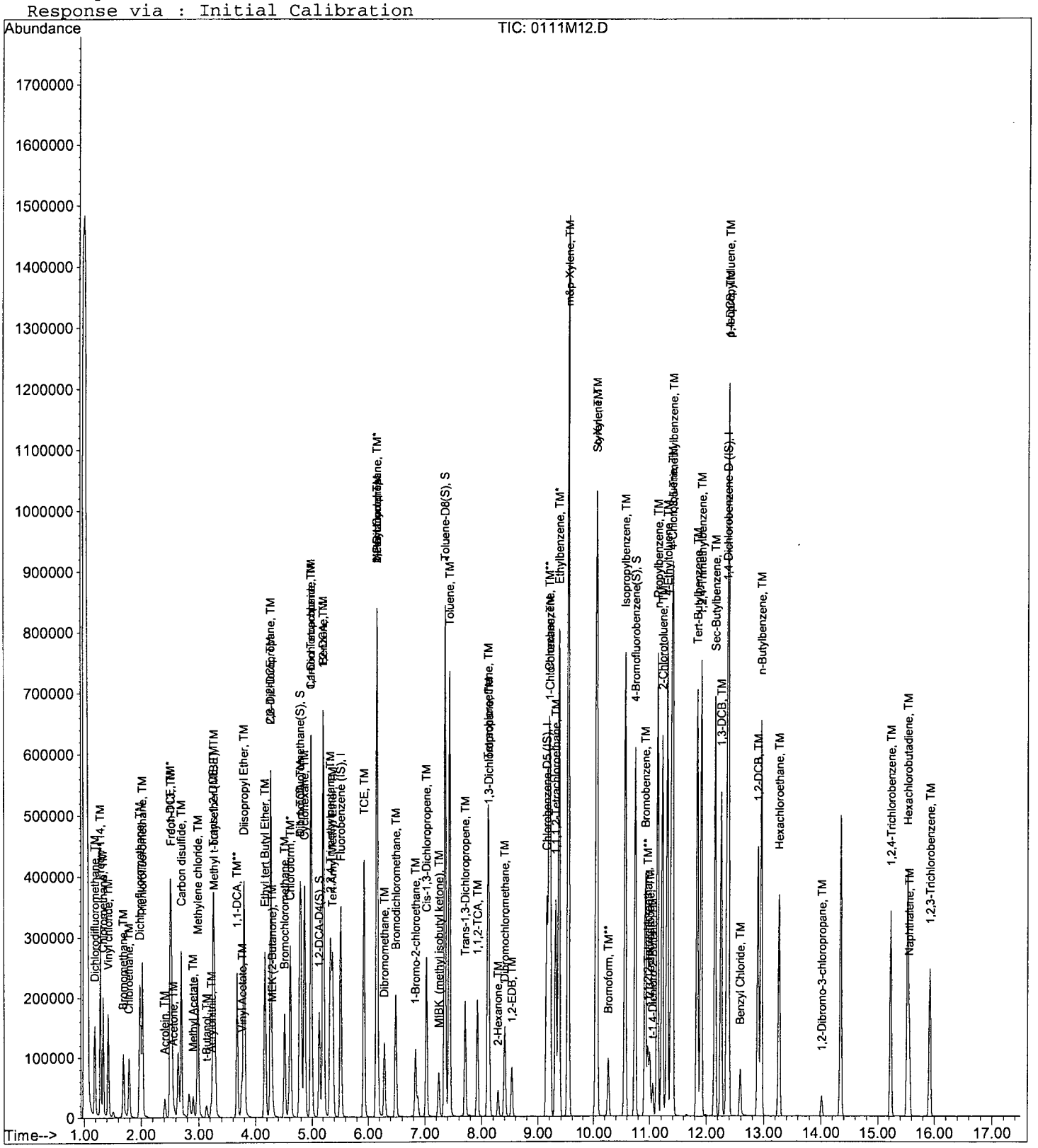
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\M170111\0111M12.D Vial: 10
Acq On : 11 Jan 17 14:14 Operator: PM,DG,SV,CMM
Sample : 20ug/L VOC STD 1/11/17G Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 10:51 2017 Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M13.D Vial: 11
Acq On : 11 Jan 17 14:42 Operator: PM,DG,SV,CMM
Sample : 40ug/L VOC STD 1/11/17H Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 10:51 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 10:43:31 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.51	96	347126	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.15	117	254484	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	138555	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	4.78	111	154211	49.82825 ppb		0.00
Spiked Amount 25.000			Recovery = 199.312%			
36) 1,2-DCA-D4(S)	5.13	65	124686	52.30694 ppb		0.00
Spiked Amount 25.000			Recovery = 209.228%			
56) Toluene-D8(S)	7.35	98	647545	50.12888 ppb		0.00
Spiked Amount 25.000			Recovery = 200.516%			
64) 4-Bromofluorobenzene(S)	10.74	95	239091	51.08349 ppb		0.00
Spiked Amount 25.000			Recovery = 204.332%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.19	85	181568	41.84548 ppb		97
3) Freon 114	1.29	85	226589	42.41160 ppb		100
4) Chloromethane	1.34	50	252885	41.29824 ppb		97
5) Vinyl chloride	1.43	62	343673	41.48155 ppb		99
6) Bromomethane	1.69	94	116733	28.99060 ppb		98
7) Chloroethane	1.78	64	197468	41.39998 ppb		99
8) Dichlorofluoromethane	1.98	67	478917	42.77534 ppb		100
9) Trichlorofluoromethane	2.02	101	409460	40.24548 ppb		98
10) Acrolein	2.41	56	31460	185.18275 ppb		94
11) Acetone	2.57	43	35094	40.01841 ppb		99
12) Freon-113	2.53	101	224130	41.46383 ppb		94
13) 1,1-DCE	2.50	61	374495	40.89959 ppb		99
14) t-Butanol	3.14	59	27752	187.57923 ppb		98
15) Methyl Acetate	2.90	43	92030	44.17699 ppb		98
17) Acrylonitrile	3.22	53	39649	42.90030 ppb	#	86
18) Methylene chloride	2.98	84	229044	41.19191 ppb		97
19) Carbon disulfide	2.70	76	755318	41.80104 ppb		99
20) Methyl t-butyl ether (MtBE	3.28	73	395627	41.60671 ppb		99
21) Trans-1,2-DCE	3.25	96	267111	40.16766 ppb		99
22) Diisopropyl Ether	3.80	45	708724	40.30073 ppb		99
23) 1,1-DCA	3.67	63	443306	39.38061 ppb		100
24) Vinyl Acetate	3.75	43	156627	41.98294 ppb		99
25) Ethyl tert Butyl Ether	4.17	59	483532	41.06022 ppb		99
26) MEK (2-Butanone)	4.30	43	51746	46.49369 ppb		98
27) Cis-1,2-DCE	4.27	96	270783	38.30394 ppb		96
28) 2,2-Dichloropropane	4.27	77	336521	42.31938 ppb		94
29) Chloroform	4.61	83	423425	38.84911 ppb		98
30) Bromochloromethane	4.51	128	104653	37.83063 ppb		98
32) 1,1,1-TCA	4.80	97	407356	39.77619 ppb		97
33) Cyclohexane	4.87	41	216589	39.11713 ppb		97
34) 1,1-Dichloropropene	4.98	75	360823	38.97512 ppb		97
35) 2,2,4-Trimethylpentane	5.33	57	640020	39.92455 ppb		99
37) Carbon Tetrachloride	4.98	117	351940	40.15649 ppb		100
38) Tert Amyl Methyl Ether	5.37	73	413856	41.49957 ppb		92
39) 1,2-DCA	5.21	62	237752	40.10426 ppb		98
40) Benzene	5.20	78	1045219	38.94922 ppb		99
41) TCE	5.92	95	277375	38.49236 ppb		97
42) 2-Pentanone	6.15	43	359851	182.60029 ppb		97
43) 1,2-Dichloropropane	6.16	63	230427	37.77167 ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M13.D Vial: 11
Acq On : 11 Jan 17 14:42 Operator: PM,DG,SV,CMM
Sample : 40ug/L VOC STD 1/11/17H Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 10:51 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 10:43:31 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
44)	Bromodichloromethane	6.49	83	281076	39.86389 ppb		100
45)	Methyl Cyclohexane	6.15	83	350667	39.40198 ppb		95
46)	Dibromomethane	6.29	93	88469	38.17122 ppb		92
47)	MIBK (methyl isobutyl ket	7.24	43	110292	37.67561 ppb		98
48)	1-Bromo-2-chloroethane	6.84	63	236735	40.57549 ppb		98
50)	Cis-1,3-Dichloropropene	7.02	75	334089	42.76618 ppb		97
51)	Toluene	7.43	91	1217538	39.88111 ppb		99
52)	Trans-1,3-Dichloropropene	7.71	75	240801	44.42608 ppb		98
53)	1,1,2-TCA	7.92	83	111478	39.06606 ppb		96
54)	2-Hexanone	8.28	58	35448	43.89626 ppb		87
57)	1,2-EDB	8.53	107	127078	39.18348 ppb		99
58)	Tetrachloroethene	8.10	164	274025	37.27465 ppb		99
59)	1-Chlorohexane	9.21	91	331042	40.11764 ppb		99
60)	1,1,1,2-Tetrachloroethane	9.31	131	258013	40.92770 ppb		98
61)	m&p-Xylene	9.52	106	1069889	77.36415 ppb		100
62)	o-Xylene	10.04	106	501819	39.83961 ppb		100
63)	Styrene	10.06	104	803217	39.95999 ppb		100
65)	1,3-Dichloropropane	8.13	76	240894	40.42119 ppb		97
66)	Dibromochloromethane	8.40	129	193142	40.92465 ppb		97
67)	Chlorobenzene	9.19	112	751815	39.34023 ppb		99
68)	Ethylbenzene	9.36	91	1359383	39.20711 ppb		98
69)	Bromoform	10.27	173	116337	40.93458 ppb		96
71)	Isopropylbenzene	10.56	105	1289235	37.89744 ppb		99
72)	1,1,2,2-Tetrachloroethane	10.97	83	129077	37.91851 ppb		99
73)	1,2,3-Trichloropropane	11.00	110	42657	38.46687 ppb		99
74)	t-1,4-Dichloro-2-Butene	11.05	53	30524	44.71439 ppb		100
75)	Bromobenzene	10.92	156	310073	37.78461 ppb		100
76)	n-Propylbenzene	11.13	91	1436818	38.18721 ppb		99
77)	4-Ethyltoluene	11.30	105	1252937	38.28092 ppb		100
78)	2-Chlorotoluene	11.22	91	853958	38.35409 ppb		99
79)	1,3,5-Trimethylbenzene	11.40	105	1038866	37.54986 ppb		99
80)	4-Chlorotoluene	11.37	91	972727	37.57723 ppb		100
81)	Tert-Butylbenzene	11.84	119	906361	37.37296 ppb		99
82)	1,2,4-Trimethylbenzene	11.91	105	1047512	38.16640 ppb		99
83)	Sec-Butylbenzene	12.15	105	1229493	37.70691 ppb		99
84)	p-Isopropyltoluene	12.38	119	1101388	37.54248 ppb		100
85)	Benzyl Chloride	12.59	91	155810	47.40187 ppb		97
86)	1,3-DCB	12.26	146	603623	37.79595 ppb		98
87)	1,4-DCB	12.39	146	576603	37.73748 ppb		99
88)	n-Butylbenzene	12.95	91	907002	38.33776 ppb		99
89)	1,2-DCB	12.90	146	503335	38.65200 ppb		97
90)	Hexachloroethane	13.27	117	168214	42.02315 ppb		99
91)	1,2-Dibromo-3-chloropropan	14.01	75	19576	38.79102 ppb	#	66
92)	1,2,4-Trichlorobenzene	15.23	180	317702	44.58511 ppb		95
93)	Hexachlorobutadiene	15.53	225	224793	38.38007 ppb		98
94)	Naphthalene	15.56	128	349849	57.19614 ppb		99
95)	1,2,3-Trichlorobenzene	15.92	180	234186	47.97518 ppb		99

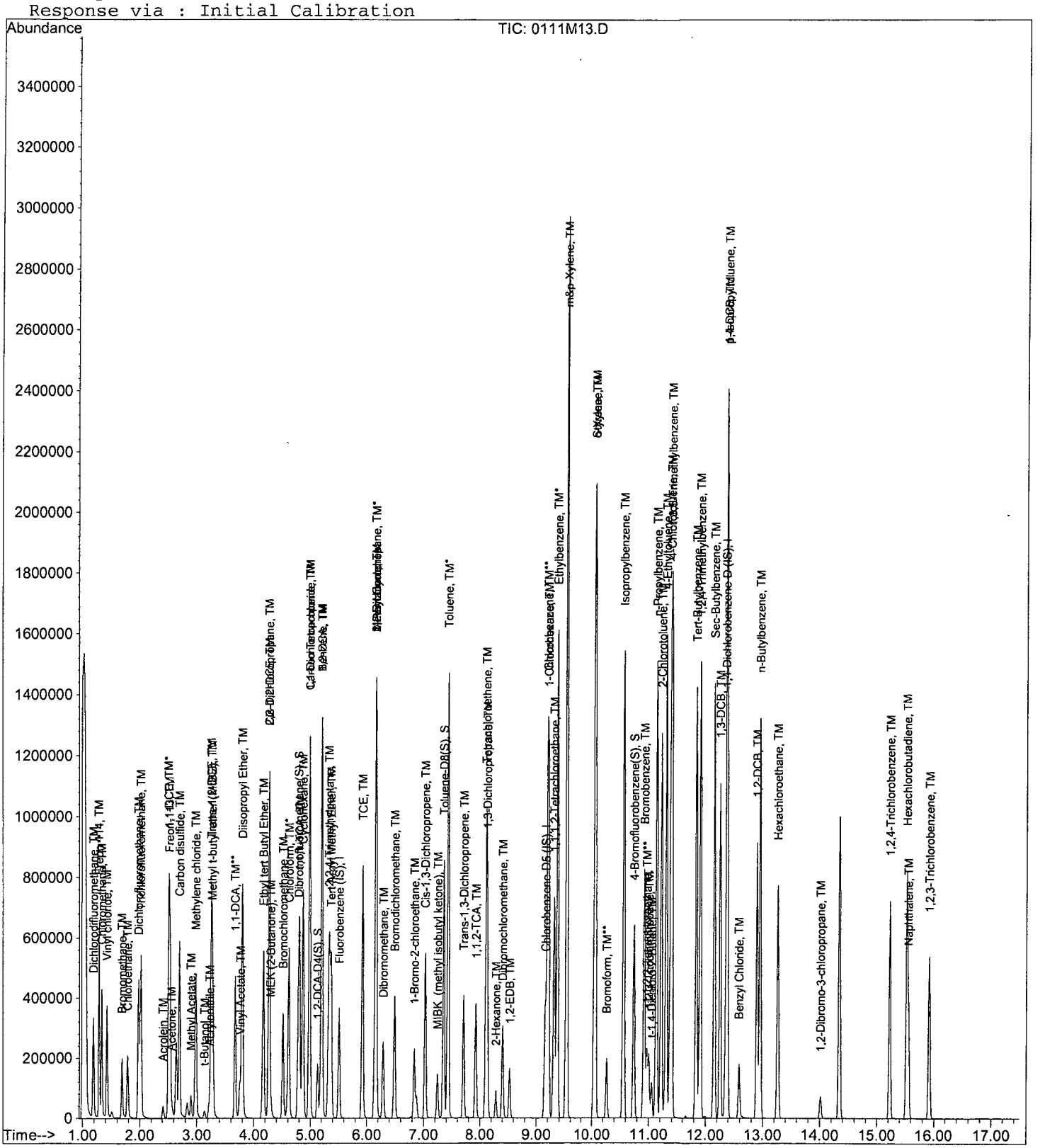
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\M170111\0111M13.D Vial: 11
Acq On : 11 Jan 17 14:42 Operator: PM,DG,SV,CMM
Sample : 40ug/L VOC STD 1/11/17H Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 10:51 2017 Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M14.D Vial: 12
Acq On : 11 Jan 17 15:10 Operator: PM,DG,SV,CMM
Sample : 100ug/L VOC STD 1/11/17I Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 10:51 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 10:43:31 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.51	96	347236	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.15	117	258306	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	143084	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	4.78	111	305828	98.78704 ppb		0.00
Spiked Amount 25.000			Recovery = 395.148%			
36) 1,2-DCA-D4(S)	5.13	65	246752	103.48197 ppb		0.00
Spiked Amount 25.000			Recovery = 413.928%			
56) Toluene-D8(S)	7.35	98	1271011	96.93784 ppb		0.00
Spiked Amount 25.000			Recovery = 387.752%			
64) 4-Bromofluorobenzene(S)	10.74	95	467571	98.42171 ppb		0.00
Spiked Amount 25.000			Recovery = 393.688%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.19	85	413504	95.26895 ppb		96
3) Freon 114	1.29	85	522997	97.86051 ppb		100
4) Chloromethane	1.33	50	615127	100.42357 ppb		98
5) Vinyl chloride	1.43	62	848015	102.32352 ppb		99
6) Bromomethane	1.68	94	252551	62.70109 ppb		99
7) Chloroethane	1.77	64	334545	70.11652 ppb		99
8) Dichlorofluoromethane	1.97	67	1110203	99.12837 ppb		99
9) Trichlorofluoromethane	2.01	101	956267	93.96091 ppb		98
10) Acrolein	2.41	56	35851	210.96261 ppb		97
11) Acetone	2.57	43	77649	88.51670 ppb		100
12) Freon-113	2.52	101	513455	94.95859 ppb		94
13) 1,1-DCE	2.50	61	859246	93.81080 ppb		99
14) t-Butanol	3.15	59	33263	224.75754 ppb		92
15) Methyl Acetate	2.90	43	226700	108.78791 ppb		99
17) Acrylonitrile	3.22	53	100052	108.22219 ppb		88
18) Methylene chloride	2.98	84	536599	96.47287 ppb		97
19) Carbon disulfide	2.69	76	1746339	96.61581 ppb		99
20) Methyl t-butyl ether (MtBE	3.28	73	962010	101.13918 ppb		99
21) Trans-1,2-DCE	3.25	96	622667	93.60585 ppb		98
22) Diisopropyl Ether	3.80	45	1737225	98.75389 ppb		99
23) 1,1-DCA	3.67	63	1089062	96.71501 ppb		100
24) Vinyl Acetate	3.75	43	370999	99.41259 ppb		99
25) Ethyl tert Butyl Ether	4.17	59	1248232	105.96288 ppb		100
26) MEK (2-Butanone)	4.30	43	116512	104.65267 ppb		97
27) Cis-1,2-DCE	4.27	96	658591	93.13228 ppb		95
28) 2,2-Dichloropropane	4.27	77	859555	108.05957 ppb		95
29) Chloroform	4.61	83	1051950	96.48550 ppb		99
30) Bromochloromethane	4.51	128	263607	95.26015 ppb		97
32) 1,1,1-TCA	4.80	97	1019044	99.47281 ppb		96
33) Cyclohexane	4.87	41	530797	95.83441 ppb		96
34) 1,1-Dichloropropene	4.98	75	863230	93.21422 ppb		99
35) 2,2,4-Trimethylpentane	5.33	57	1518150	94.67244 ppb		100
37) Carbon Tetrachloride	4.98	117	885410	100.99362 ppb		99
38) Tert Amyl Methyl Ether	5.37	73	1073831	107.64471 ppb	#	89
39) 1,2-DCA	5.21	62	596446	100.57728 ppb		99
40) Benzene	5.20	78	2536368	94.48572 ppb		100
41) TCE	5.92	95	680911	94.46263 ppb		97
42) 2-Pentanone	6.15	43	449494	228.01585 ppb		95
43) 1,2-Dichloropropane	6.16	63	565796	92.71610 ppb		100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M14.D Vial: 12
Acq On : 11 Jan 17 15:10 Operator: PM,DG,SV,CMM
Sample : 100ug/L VOC STD 1/11/17I Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 10:51 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 10:43:31 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
44)	Bromodichloromethane	6.49	83	705757	100.06300 ppb		100
45)	Methyl Cyclohexane	6.15	83	835409	93.83930 ppb		96
46)	Dibromomethane	6.29	93	225821	97.40286 ppb		90
47)	MIBK (methyl isobutyl ket	7.24	43	273827	93.50933 ppb		96
48)	1-Bromo-2-chloroethane	6.84	63	611146	104.71496 ppb		99
50)	Cis-1,3-Dichloropropene	7.03	75	839568	107.43767 ppb		98
51)	Toluene	7.43	91	2938764	96.23031 ppb		99
52)	Trans-1,3-Dichloropropene	7.71	75	628075	115.83868 ppb		97
53)	1,1,2-TCA	7.92	83	277344	97.16091 ppb		97
54)	2-Hexanone	8.28	58	94899	117.47888 ppb		87
57)	1,2-EDB	8.53	107	323699	98.33316 ppb		97
58)	Tetrachloroethene	8.11	164	663220	88.88060 ppb		98
59)	1-Chlorohexane	9.22	91	804655	96.07003 ppb		99
60)	1,1,1,2-Tetrachloroethane	9.31	131	641834	100.30543 ppb		98
61)	m&p-Xylene	9.53	106	2613075	186.15680 ppb		98
62)	o-Xylene	10.05	106	1206722	94.38461 ppb		99
63)	Styrene	10.06	104	1975903	96.84653 ppb		97
65)	1,3-Dichloropropane	8.13	76	605271	100.05964 ppb		96
66)	Dibromochloromethane	8.40	129	484543	101.15017 ppb		99
67)	Chlorobenzene	9.19	112	1834012	94.54837 ppb		98
68)	Ethylbenzene	9.36	91	3328116	94.56870 ppb		98
69)	Bromoform	10.27	173	301462	104.50355 ppb		95
71)	Isopropylbenzene	10.56	105	3158515	89.90666 ppb		99
72)	1,1,2,2-Tetrachloroethane	10.97	83	329111	93.62157 ppb		100
73)	1,2,3-Trichloropropane	11.00	110	111093	97.00952 ppb		97
74)	t-1,4-Dichloro-2-Butene	11.05	53	84948	120.50086 ppb		92
75)	Bromobenzene	10.92	156	777111	91.69912 ppb		99
76)	n-Propylbenzene	11.14	91	3539931	91.10499 ppb		99
77)	4-Ethyltoluene	11.30	105	3099516	91.70187 ppb		97
78)	2-Chlorotoluene	11.22	91	2101086	91.37978 ppb		99
79)	1,3,5-Trimethylbenzene	11.40	105	2550716	89.27749 ppb		99
80)	4-Chlorotoluene	11.37	91	2402557	89.87494 ppb		100
81)	Tert-Butylbenzene	11.84	119	2214404	88.41873 ppb		99
82)	1,2,4-Trimethylbenzene	11.91	105	2574756	90.84257 ppb		99
83)	Sec-Butylbenzene	12.15	105	3003124	89.18654 ppb		99
84)	p-Isopropyltoluene	12.38	119	2684319	88.60288 ppb		100
85)	Benzyl Chloride	12.59	91	487507	143.61907 ppb		96
86)	1,3-DCB	12.26	146	1489115	90.28984 ppb		98
87)	1,4-DCB	12.39	146	1422647	90.16216 ppb		98
88)	n-Butylbenzene	12.96	91	2197218	89.93376 ppb		99
89)	1,2-DCB	12.90	146	1252939	93.16996 ppb		98
90)	Hexachloroethane	13.27	117	431608	104.41120 ppb		98
91)	1,2-Dibromo-3-chloropropan	14.01	75	52813	101.33961 ppb	#	73
92)	1,2,4-Trichlorobenzene	15.23	180	831383	112.98016 ppb		94
93)	Hexachlorobutadiene	15.53	225	532593	88.05409 ppb		97
94)	Naphthalene	15.56	128	941540	149.05824 ppb		98
95)	1,2,3-Trichlorobenzene	15.92	180	607122	120.43779 ppb		99

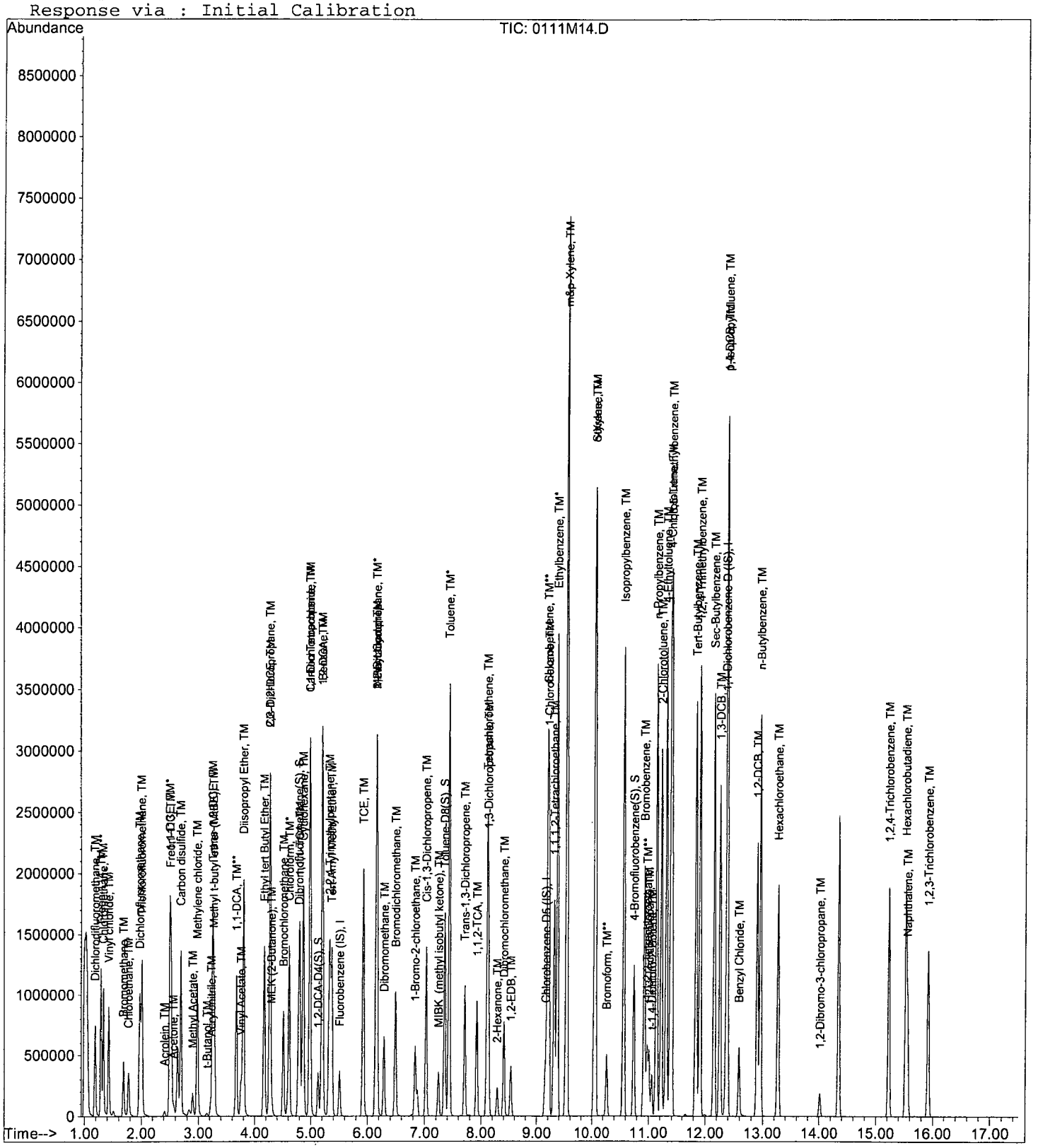
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\M170111\0111M14.D Vial: 12
Acq On : 11 Jan 17 15:10 Operator: PM,DG,SV,CMM
Sample : 100ug/L VOC STD 1/11/17I Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 10:51 2017 Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration



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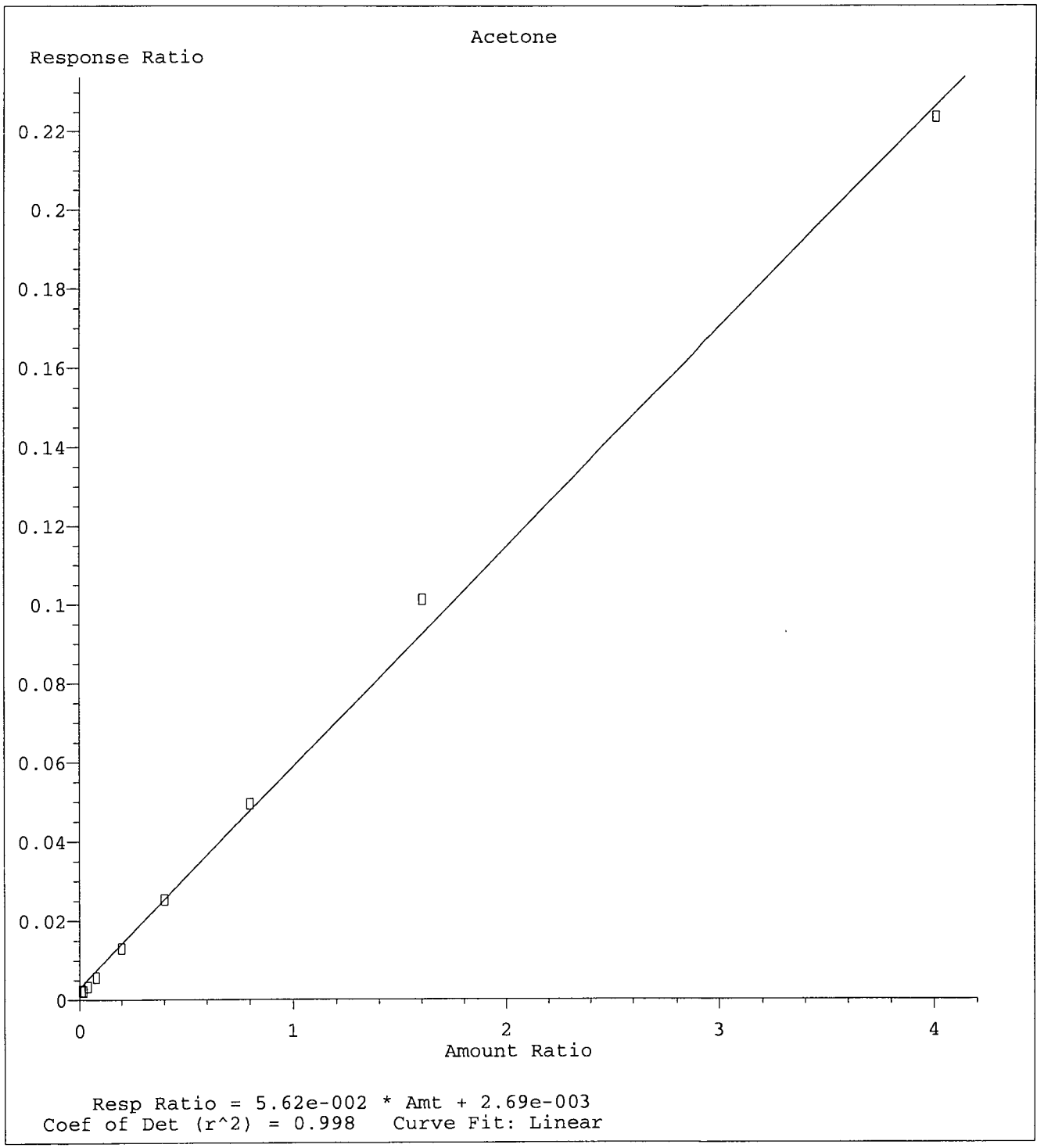
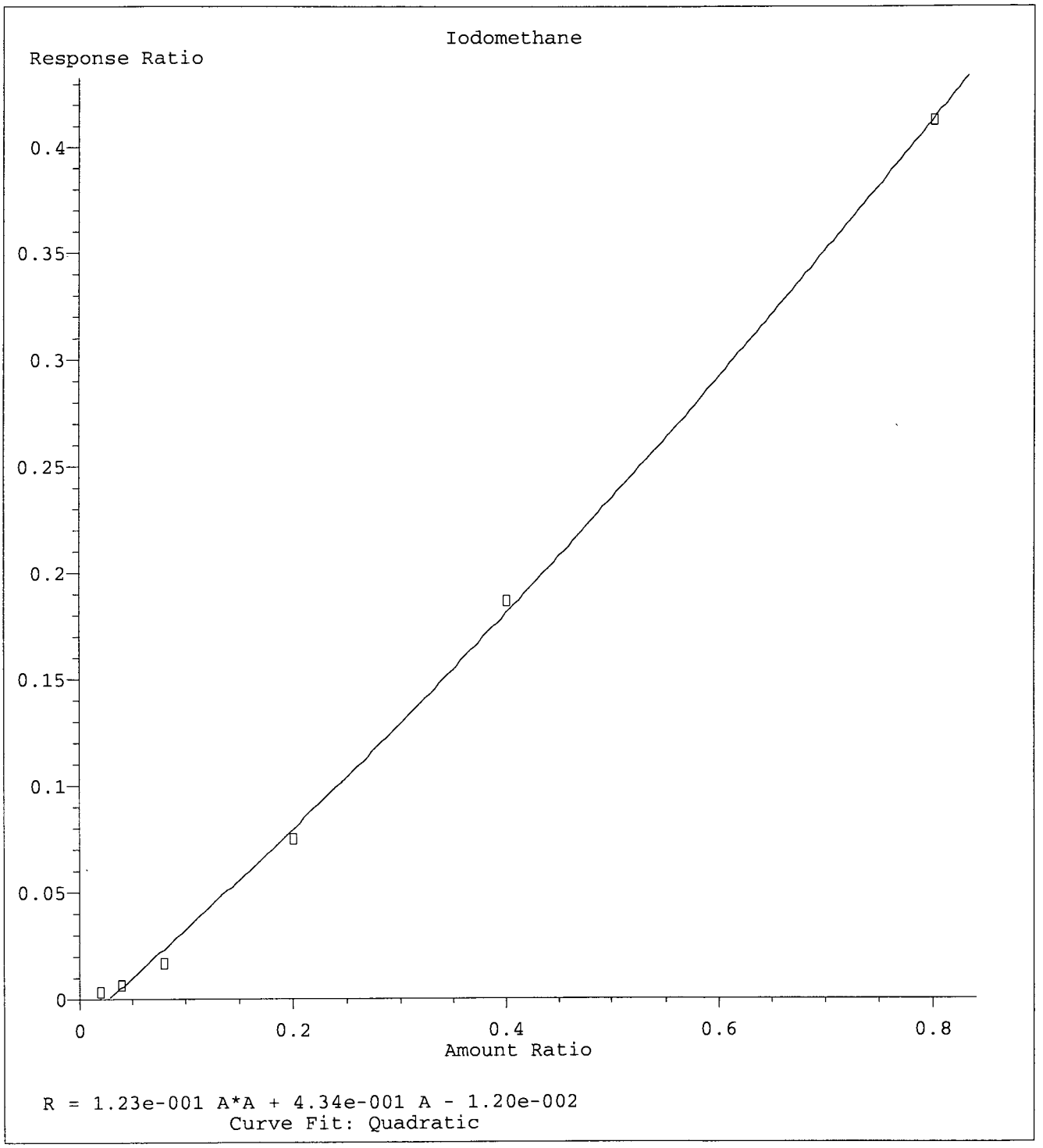
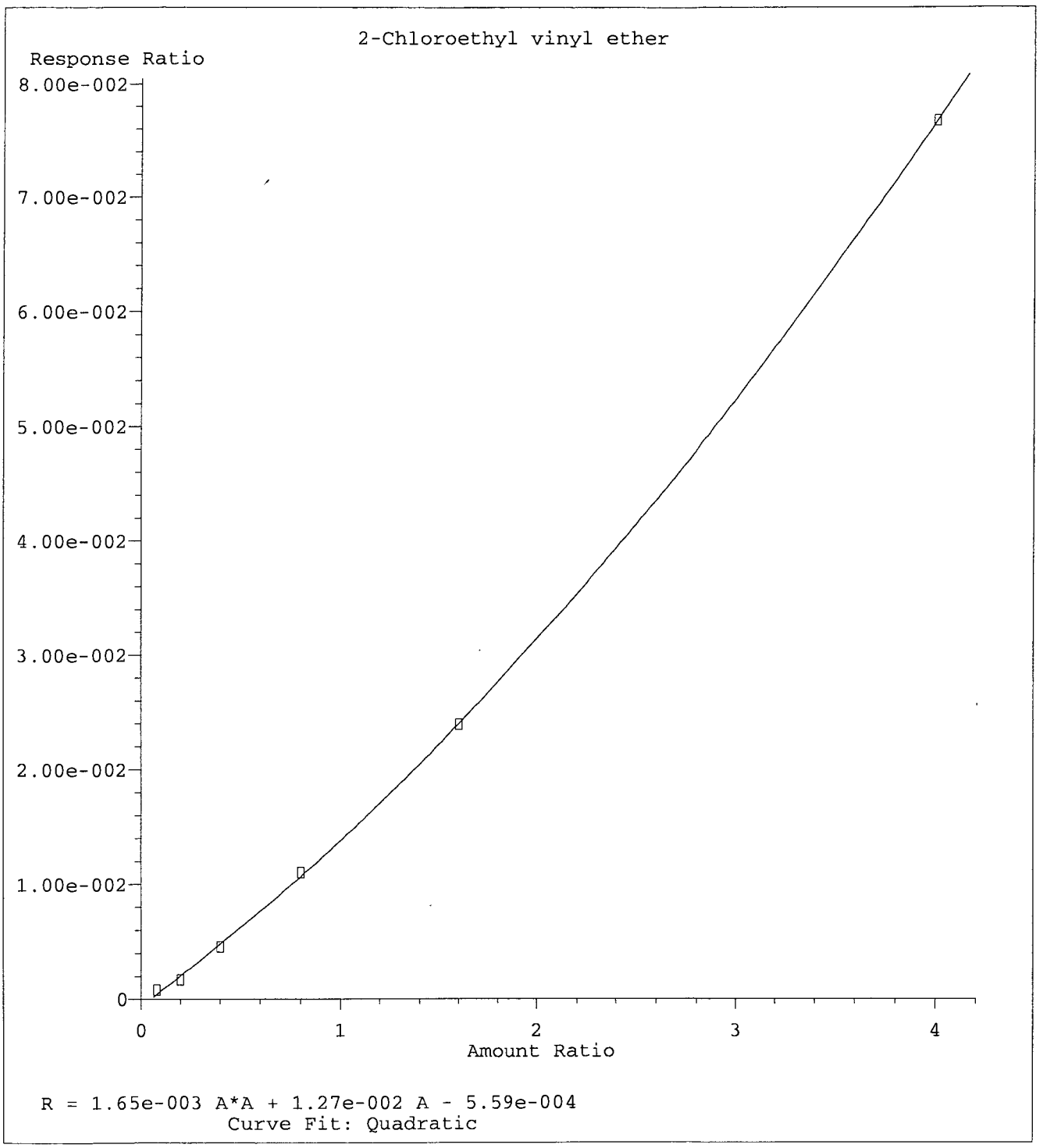


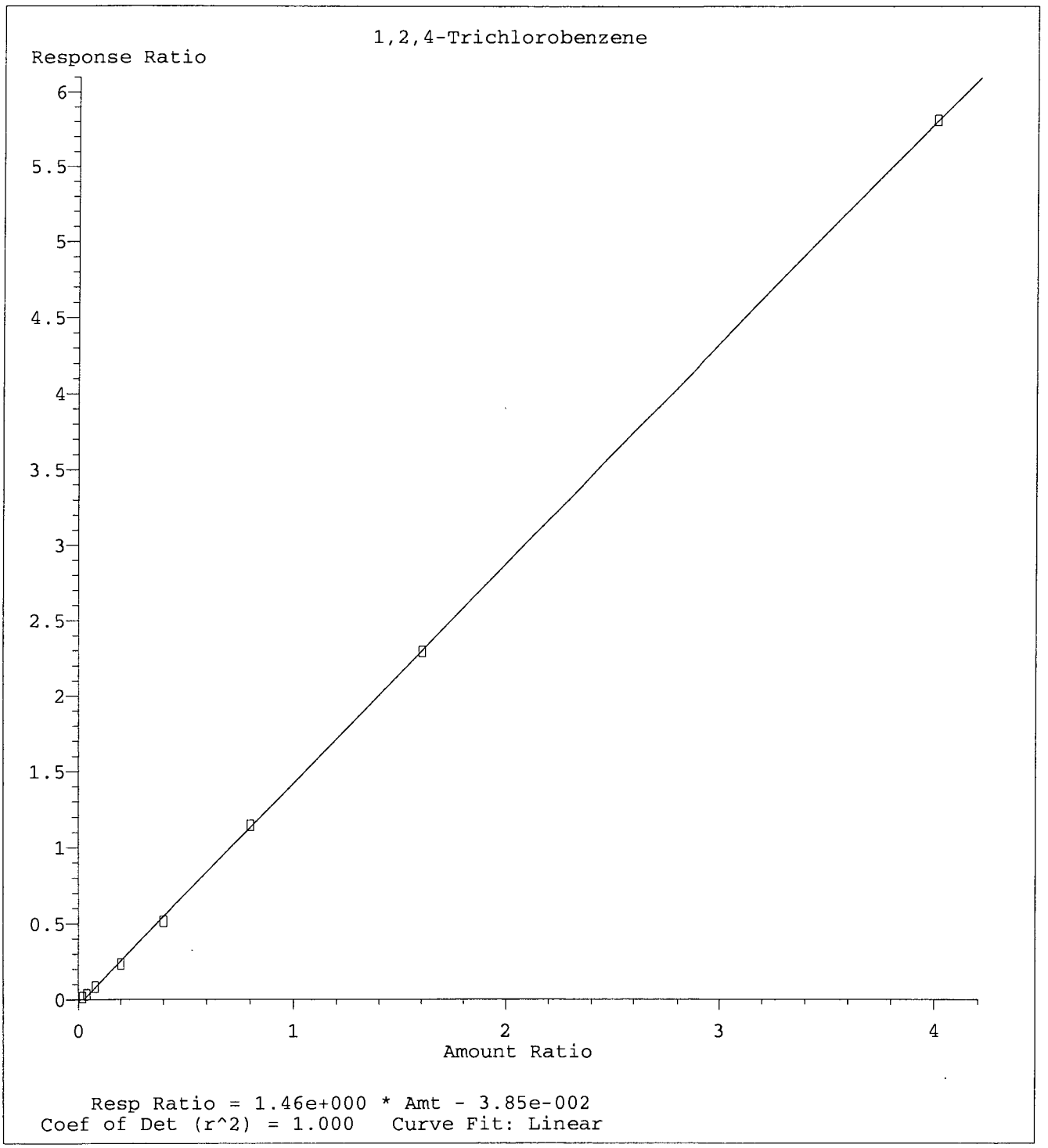
Method Name: M:\MAX\DATA\M170111\MALLW.M
Calibration Table Last Updated: Thu Jan 12 14:30:04 2017



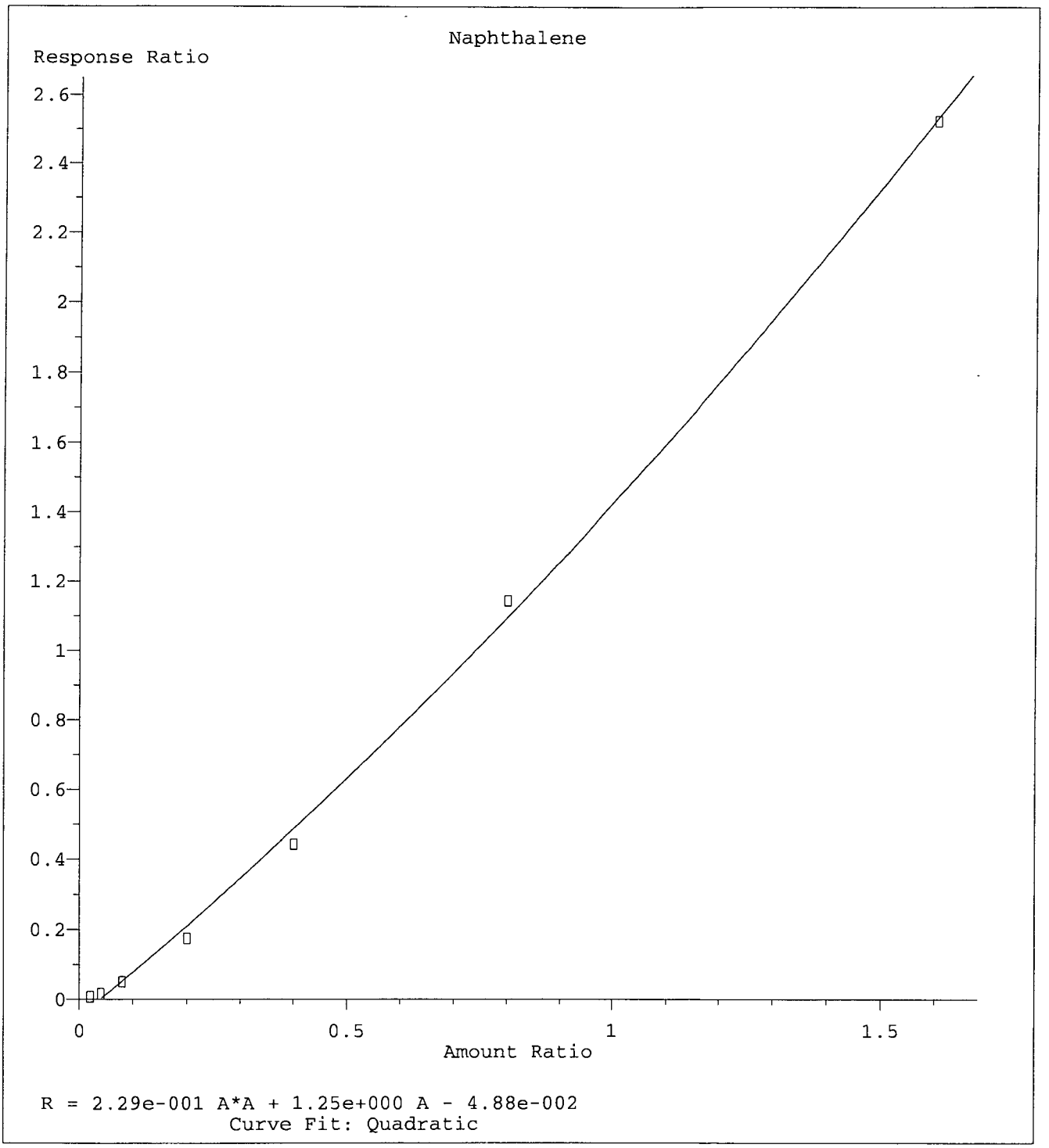
Method Name: M:\MAX\DATA\M170111\MALLW.M
Calibration Table Last Updated: Thu Jan 12 11:22:43 2017



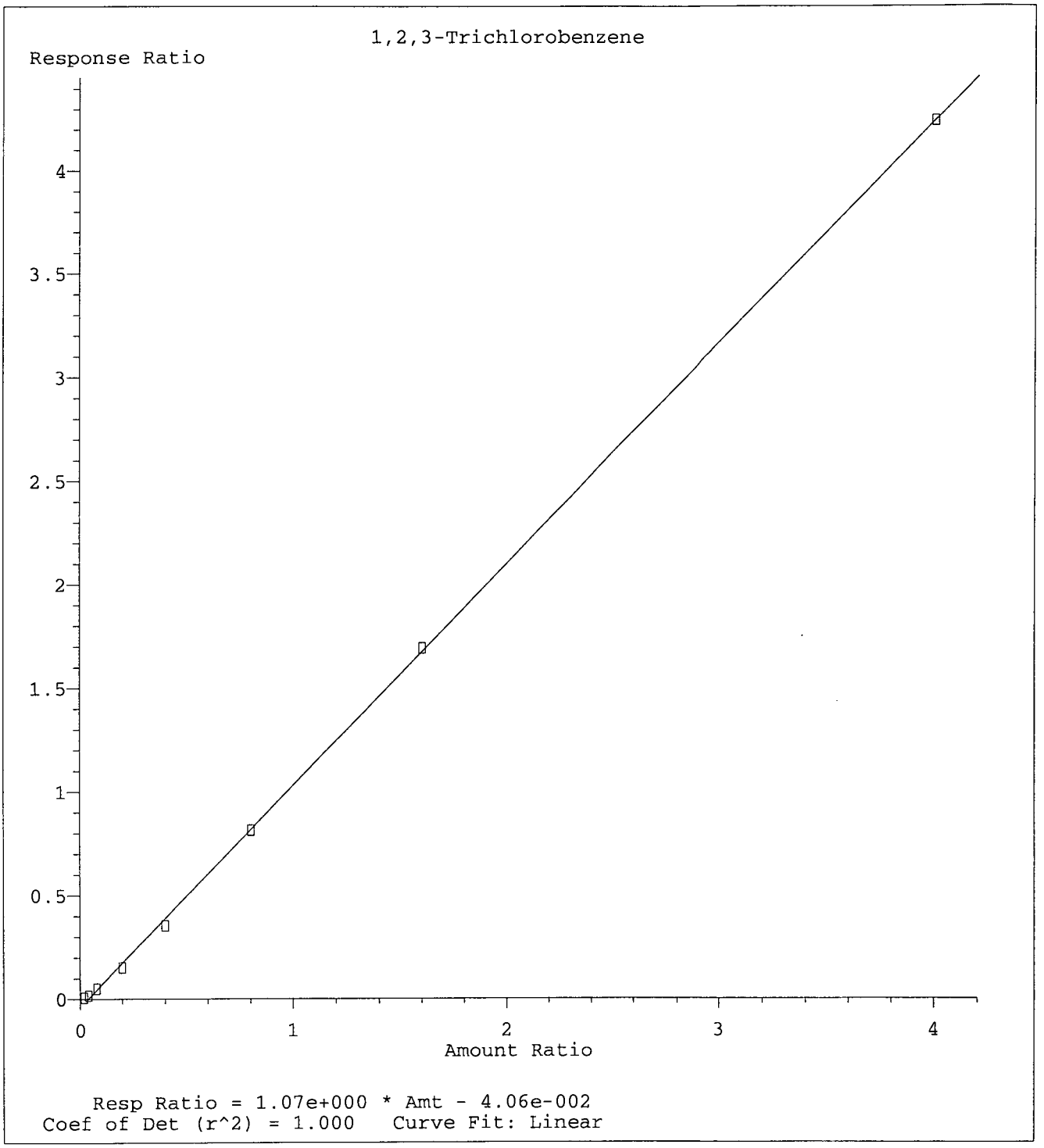
Method Name: M:\MAX\DATA\M170111\MALLW.M
Calibration Table Last Updated: Thu Jan 12 11:22:43 2017



Method Name: M:\MAX\DATA\M170111\MALLW.M
Calibration Table Last Updated: Thu Jan 12 11:22:43 2017



Method Name: M:\MAX\DATA\M170111\MALLW.M
Calibration Table Last Updated: Thu Jan 12 11:22:43 2017



Method Name: M:\MAX\DATA\M170111\MALLW.M
Calibration Table Last Updated: Thu Jan 12 11:22:43 2017

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 1/11/17
Instrument: Max
Initial Cal. Date: 1/11/17
Data File: 0111M19.D

		Compound	MEAN	CCRF	%D		%Drift	
1	TM	Dichlorodifluoromethane	0.2988	0.3153	5.6	TM		
2	TM	Freon 114	0.3810	0.4085	7.2	TM		
3	TM**	Chloromethane	0.4412	0.4133	6.3	TM**		
4	TM*	Vinyl chloride	0.5818	0.5781	0.63	TM*		
5	TM	Bromomethane	0.3095	0.2954	4.6	TM		
6	TM	Chloroethane	0.3253	0.3488	7.2	TM		
7	TM	Dichlorofluoromethane	0.8094	0.8437	4.2	TM		
8	TM	Trichlorofluoromethane	0.6876	0.7617	11	TM		
9	TM	Acrolein	0.0119	0.0199	67	TM		nt
10	TML	Acetone	0.0846	0.0521	38	TML	19	
11	TM	Freon-113	0.3844	0.4137	7.6	TM		
12	TM*	1,1-DCE	0.6498	0.7163	10	TM*		
13	TM	t-Butanol	0.0109	0.0087	20	TM		
14	TM	Methyl Acetate	0.1572	0.1398	11	TM		
15	TMQ	Iodomethane	0.3146	0.2686	15	TMQ	36	nt
16	TM	Acrylonitrile	0.0666	0.0618	7.2	TM		
17	TM	Methylene chloride	0.4001	0.4126	3.1	TM		
18	TM	Carbon disulfide	1.309	1.178	10	TM		
19	TM	Methyl t-butyl ether (MtBE)	0.6922	0.7117	2.8	TM		
20	TM	Trans-1,2-DCE	0.4719	0.5181	9.8	TM		
21	TM	Diisopropyl Ether	1.253	1.276	1.8	TM		
22	TM**	1,1-DCA	0.8023	0.8305	3.5	TM**		
23	TM	Vinyl Acetate	0.2624	0.2152	18	TM		
24	TM	Ethyl tert Butyl Ether	0.8479	0.8873	4.6	TM		
25	TM	MEK (2-Butanone)	0.0872	0.0830	4.9	TM		
26	TM	Cis-1,2-DCE	0.5128	0.5256	2.5	TM		
27	TM	2,2-Dichloropropane	0.5849	0.5651	3.4	TM		
28	TM*	Chloroform	0.7738	0.7870	1.7	TM*		
29	TM	Bromochloromethane	0.1945	0.1983	2.0	TM		
30	TM	1,1,1-TCA	0.7301	0.7767	6.4	TM		
31	TM	Cyclohexane	0.3972	0.4232	6.5	TM		
32	TM	1,1-Dichloropropene	0.6558	0.7045	7.4	TM		
33	TM	2,2,4-Trimethylpentane	1.163	1.162	0.15	TM		
34	TM	Carbon Tetrachloride	0.6164	0.6862	11	TM		
35	TM	Tert Amyl Methyl Ether	0.7135	0.7189	0.76	TM		
36	TM	1,2-DCA	0.4303	0.4265	0.87	TM		
37	TM	Benzene	1.905	2.020	6.0	TM		
38	TM	TCE	0.5260	0.5455	3.7	TM		
39	TM	2-Pentanone	0.1401	0.1349	3.7	TM		
40	TM*	1,2-Dichloropropane	0.4234	0.4305	1.7	TM*		
		Average			8.5			

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 1/11/17
Instrument: Max
Cal. Date: 1/11/17
Data File: 0111M19.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	Bromodichloromethane	0.4991	0.5183	3.8	TM	
42	TM	Methyl Cyclohexane	0.6198	0.6508	5.0	TM	
43	TM	Dibromomethane	0.1616	0.1652	2.3	TM	
44	TM	MIBK (methyl isobutyl ketone)	0.2128	0.1870	12	TM	
45	TM	1-Bromo-2-chloroethane	0.4115	0.3848	6.5	TM	
46	TMQ	2-Chloroethyl vinyl ether	0.0130	0.0131	0.77	TMQ	7.8
47	TM	Cis-1,3-Dichloropropene	0.5588	0.5696	1.9	TM	
48	TM*	Toluene	2.158	2.277	5.5	TM*	
49	TM	Trans-1,3-Dichloropropene	0.3895	0.3900	0.13	TM	
50	TM	1,1,2-TCA	0.2024	0.1979	2.3	TM	
51	TM	2-Hexanone	0.0601	0.0526	12	TM	
52	TM	1,2-EDB	0.3095	0.3246	4.9	TM	
53	TM	Tetrachloroethene	0.7227	0.7676	6.2	TM	
54	TM	1-Chlorohexane	0.7906	0.8575	8.5	TM	
55	TM	1,1,1,2-Tetrachloroethane	0.6199	0.6488	4.7	TM	
56	TM	m&p-Xylene	1.323	1.386	4.7	TM	
57	TM	o-Xylene	1.228	1.307	6.4	TM	
58	TM	Styrene	1.903	2.018	6.0	TM	
59	TM	1,3-Dichloropropane	0.5992	0.6063	1.2	TM	
60	TM	Dibromochloromethane	0.4569	0.4646	1.7	TM	
61	TM**	Chlorobenzene	1.863	1.976	6.1	TM**	
62	TM*	Ethylbenzene	3.318	3.552	7.0	TM*	
63	TM**	Bromoform	0.2808	0.2643	5.9	TM**	
64	TM	Isopropylbenzene	5.871	6.532	11	TM	
65	TM**	1,1,2,2-Tetrachloroethane	0.6027	0.5988	0.65	TM**	
66	TM	1,2,3-Trichloropropane	0.2065	0.2018	2.3	TM	
67	TM	t-1,4-Dichloro-2-Butene	0.1238	0.1170	5.5	TM	
68	TM	Bromobenzene	1.446	1.511	4.5	TM	
69	TM	n-Propylbenzene	6.499	7.053	8.5	TM	
70	TM	4-Ethyltoluene	5.702	6.133	7.6	TM	
71	TM	2-Chlorotoluene	3.943	4.170	5.8	TM	
72	TM	1,3,5-Trimethylbenzene	4.768	5.237	9.8	TM	
73	TM	4-Chlorotoluene	4.478	4.776	6.6	TM	
74	TM	Tert-Butylbenzene	4.193	4.546	8.4	TM	
75	TM	1,2,4-Trimethylbenzene	4.701	5.164	9.8	TM	
76	TM	Sec-Butylbenzene	5.641	6.165	9.3	TM	
77	TM	p-Isopropyltoluene	5.093	5.529	8.6	TM	
78	TM	Benzyl Chloride	0.5303	0.4219	20	TM	
79	TM	1,3-DCB	2.751	2.892	5.1	TM	
80	TM	1,4-DCB	2.668	2.802	5.0	TM	
		Average			6.1		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 1/11/17
Instrument: Max
Cal. Date: 1/11/17
Data File: 0111M19.D

		Compound	MEAN	CCRF	%D		%Drift	
81	TM	n-Butylbenzene	4.051	4.312	6.5	TM		
82	TM	1,2-DCB	2.284	2.370	3.8	TM		
83	TM	Hexachloroethane	0.6804	0.8760	29	TM		nt
84	TM	1,2-Dibromo-3-chloropropane	0.0826	0.0795	3.7	TM		
85	TML	1,2,4-Trichlorobenzene	1.178	1.249	6.0	TML	8.0	
86	TM	Hexachlorobutadiene	1.056	1.136	7.6	TM		
87	TMQ	Naphthalene	0.9060	1.006	11	TMQ	15	
88	TML	1,2,3-Trichlorobenzene	0.7754	0.8053	3.9	TML	15	
89								
90								
91								
92								
93								
94								
95								
96								
97								
98								
99								
100								
101								
102								
103								
104								
105								
106								
107								
108								
109								
110								
111								
112								
113								
114								
115								
116								
117								
118								
119								
120								
		Average			8.9			

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M19.D Vial: 17
Acq On : 11 Jan 17 17:32 Operator: PM,DG,SV,CMM
Sample : (SS)10ug/L VOC STD 1/11/17 Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 14:32 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.51	96	348322	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.15	117	244262	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	127954	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	4.78	111	73675	24.07032 ppb		0.00
Spiked Amount 25.000			Recovery = 96.280%			
36) 1,2-DCA-D4(S)	5.13	65	60430	23.97703 ppb		0.00
Spiked Amount 25.000			Recovery = 95.908%			
56) Toluene-D8(S)	7.35	98	306264	24.91311 ppb		0.00
Spiked Amount 25.000			Recovery = 99.652%			
64) 4-Bromofluorobenzene(S)	10.74	95	105257	23.87570 ppb		0.00
Spiked Amount 25.000			Recovery = 95.504%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.19	85	43936	10.55534 ppb		98
3) Freon 114	1.29	85	56922	10.72181 ppb		98
4) Chloromethane	1.34	50	57584	9.36817 ppb		96
5) Vinyl chloride	1.43	62	80551	9.93692 ppb		99
6) Bromomethane	1.70	94	41155	9.54360 ppb		95
7) Chloroethane	1.79	64	48599	10.72288 ppb		100
8) Dichlorofluoromethane	1.98	67	117553	10.42339 ppb		100
9) Trichlorofluoromethane	2.02	101	106131	11.07861 ppb		95
10) Acrolein	2.41	56	34707	208.51770 ppb		99
11) Acetone	2.56	43	7265	8.08774 ppb		88
12) Freon-113	2.53	101	57646	10.76214 ppb		95
13) 1,1-DCE	2.51	61	99796	11.02259 ppb		98
14) t-Butanol	3.14	59	15188	99.93711 ppb		94
15) Methyl Acetate	2.90	43	19483	8.89753 ppb		99
16) Iodomethane	2.64	142	37418	6.41582 ppb		96
17) Acrylonitrile	3.22	53	8617	9.27992 ppb		88
18) Methylene chloride	2.98	84	57486	10.31262 ppb		97
19) Carbon disulfide	2.70	76	164104	8.99923 ppb		99
20) Methyl t-butyl ether (MtBE	3.28	73	99157	10.28154 ppb		99
21) Trans-1,2-DCE	3.25	96	72186	10.97941 ppb		99
22) Diisopropyl Ether	3.80	45	177782	10.18134 ppb		99
23) 1,1-DCA	3.67	63	115714	10.35180 ppb		99
24) Vinyl Acetate	3.76	43	29987	8.20113 ppb		96
25) Ethyl tert Butyl Ether	4.17	59	123630	10.46486 ppb		97
26) MEK (2-Butanone)	4.30	43	11564	9.51275 ppb	#	85
27) Cis-1,2-DCE	4.27	96	73238	10.24997 ppb		96
28) 2,2-Dichloropropane	4.27	77	78741	9.66251 ppb		99
29) Chloroform	4.61	83	109651	10.17000 ppb		99
30) Bromochloromethane	4.51	128	27635	10.19897 ppb		98
32) 1,1,1-TCA	4.80	97	108220	10.63886 ppb		94
33) Cyclohexane	4.87	41	58959	10.65392 ppb		93
34) 1,1-Dichloropropene	4.98	75	98152	10.74144 ppb		98
35) 2,2,4-Trimethylpentane	5.33	57	161862	9.98537 ppb		99
37) Carbon Tetrachloride	4.98	117	95607	11.13271 ppb		99
38) Tert Amyl Methyl Ether	5.37	73	100167	10.07594 ppb		96
39) 1,2-DCA	5.21	62	59427	9.91255 ppb		94
40) Benzene	5.20	78	281412	10.60262 ppb		99
41) TCE	5.92	95	76009	10.37168 ppb		98
42) 2-Pentanone	6.15	43	234938	120.33914 ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M19.D Vial: 17
Acq On : 11 Jan 17 17:32 Operator: PM,DG,SV,CMM
Sample : (SS)10ug/L VOC STD 1/11/17 Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 14:32 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	1,2-Dichloropropane	6.16	63	59985	10.16823	ppb		100
44)	Bromodichloromethane	6.49	83	72215	10.38398	ppb		99
45)	Methyl Cyclohexane	6.15	83	90679	10.50100	ppb		97
46)	Dibromomethane	6.29	93	23022	10.22769	ppb		93
47)	MIBK (methyl isobutyl ket	7.24	43	26055	8.78579	ppb		98
48)	1-Bromo-2-chloroethane	6.84	63	53613	9.35145	ppb		99
49)	2-Chloroethyl vinyl ether	6.88	106	1821	10.78075	ppb	#	100
50)	Cis-1,3-Dichloropropene	7.03	75	79357	10.19262	ppb		99
51)	Toluene	7.43	91	317246	10.54910	ppb		99
52)	Trans-1,3-Dichloropropene	7.71	75	54344	10.01292	ppb		98
53)	1,1,2-TCA	7.92	83	27567	9.77307	ppb		97
54)	2-Hexanone	8.29	58	7329	8.75348	ppb		93
57)	1,2-EDB	8.53	107	31714	10.48848	ppb		91
58)	Tetrachloroethene	8.11	164	74995	10.62056	ppb		94
59)	1-Chlorohexane	9.21	91	83785	10.84633	ppb		100
60)	1,1,1,2-Tetrachloroethane	9.31	131	63394	10.46705	ppb		98
61)	m&p-Xylene	9.52	106	270746	20.94085	ppb		99
62)	o-Xylene	10.04	106	127670	10.63951	ppb		97
63)	Styrene	10.06	104	197185	10.60404	ppb		99
65)	1,3-Dichloropropane	8.13	76	59242	10.11976	ppb		98
66)	Dibromochloromethane	8.40	129	45393	10.16748	ppb		97
67)	Chlorobenzene	9.19	112	193057	10.60798	ppb		99
68)	Ethylbenzene	9.36	91	347028	10.70446	ppb		99
69)	Bromoform	10.27	173	25827	9.41469	ppb		100
71)	Isopropylbenzene	10.56	105	334318	11.12547	ppb		99
72)	1,1,2,2-Tetrachloroethane	10.97	83	30647	9.93486	ppb		95
73)	1,2,3-Trichloropropane	11.00	110	10328	9.77373	ppb		92
74)	t-1,4-Dichloro-2-Butene	11.05	53	5987	9.44786	ppb		99
75)	Bromobenzene	10.92	156	77354	10.45092	ppb		99
76)	n-Propylbenzene	11.13	91	360975	10.85299	ppb		99
77)	4-Ethyltoluene	11.30	105	313912	10.75730	ppb		98
78)	2-Chlorotoluene	11.22	91	213426	10.57548	ppb		99
79)	1,3,5-Trimethylbenzene	11.40	105	268054	10.98405	ppb		98
80)	4-Chlorotoluene	11.37	91	244450	10.66469	ppb		99
81)	Tert-Butylbenzene	11.84	119	232655	10.84007	ppb		98
82)	1,2,4-Trimethylbenzene	11.91	105	264301	10.98380	ppb		98
83)	Sec-Butylbenzene	12.15	105	315524	10.92921	ppb		100
84)	p-Isopropyltoluene	12.37	119	283003	10.85747	ppb		99
85)	Benzyl Chloride	12.59	91	21595	7.95644	ppb		97
86)	1,3-DCB	12.26	146	148033	10.51280	ppb		98
87)	1,4-DCB	12.39	146	143388	10.50118	ppb		98
88)	n-Butylbenzene	12.95	91	220695	10.64505	ppb		99
89)	1,2-DCB	12.90	146	121304	10.37859	ppb		96
90)	Hexachloroethane	13.27	117	44837	12.87579	ppb		97
91)	1,2-Dibromo-3-chloropropan	14.01	75	4068	9.62726	ppb	#	78
92)	1,2,4-Trichlorobenzene	15.23	180	63915	9.20488	ppb		95
93)	Hexachlorobutadiene	15.53	225	58147	10.75817	ppb		97
94)	Naphthalene	15.56	128	51472	8.50624	ppb		94
95)	1,2,3-Trichlorobenzene	15.92	180	41219	8.46489	ppb		99

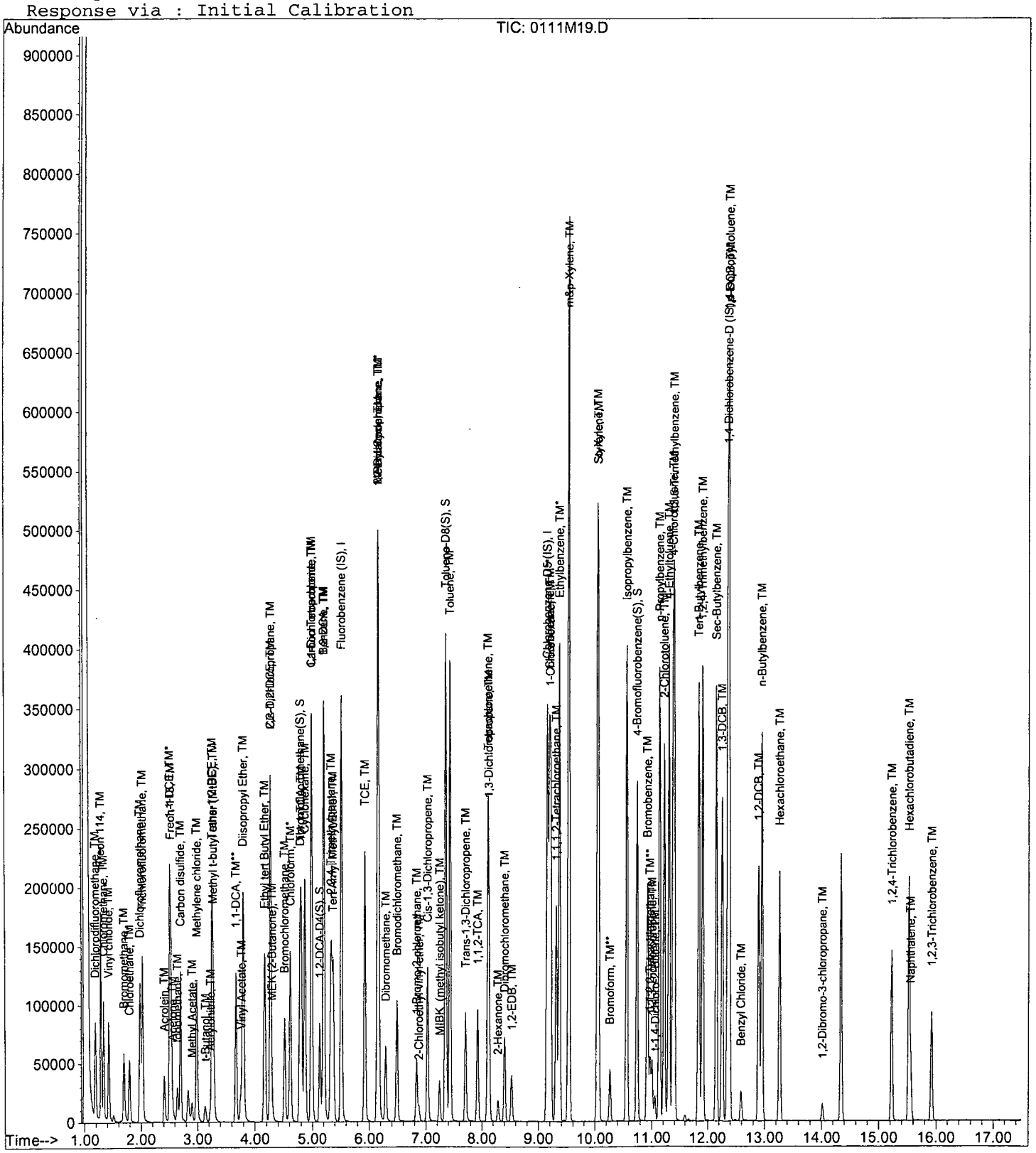
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\M170111\0111M19.D Vial: 17
Acq On : 11 Jan 17 17:32 Operator: PM,DG,SV,CMM
Sample : (SS)10ug/L VOC STD 1/11/17 Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 14:32 2017 Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration



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VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 1/12/17
Matrix: Instrument: Max
Initial Cal. Date: 1/11/17
Data File: 0111M41.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TM	Dichlorodifluoromethane	0.2988	0.2987	0.01	TM	
3	TM	Freon 114	0.3810	0.3959	3.9	TM	
4	TM**	Chloromethane	0.4412	0.4220	4.4	TM**	
5	TM*	Vinyl chloride	0.5818	0.5775	0.74	TM*	
6	TM	Bromomethane	0.3095	0.2933	5.2	TM	
7	TM	Chloroethane	0.3253	0.3336	2.6	TM	
8	TM	Dichlorofluoromethane	0.8094	0.8530	5.4	TM	
9	TM	Trichlorofluoromethane	0.6876	0.7194	4.6	TM	
10	TM	Acrolein	0.0119	0.0107	10	TM	
11	TML	Acetone	0.0713	0.0561	21	TML	13
12	TM	Freon-113	0.3844	0.4069	5.8	TM	
13	TM*	1,1-DCE	0.6498	0.6801	4.7	TM*	
14	TM	t-Butanol	0.0109	0.0090	18	TM	
15	TM	Methyl Acetate	0.1572	0.1497	4.8	TM	
16	TMQ	Iodomethane	0.3146	0.4242	35	TMQ	5.4
17	TM	Acrylonitrile	0.0666	0.0665	0.29	TM	
18	TM	Methylene chloride	0.4001	0.3996	0.13	TM	
19	TM	Carbon disulfide	1.309	1.336	2.1	TM	
20	TM	Methyl t-butyl ether (MtBE)	0.6922	0.6603	4.6	TM	
21	TM	Trans-1,2-DCE	0.4719	0.4865	3.1	TM	
22	TM	Diisopropyl Ether	1.253	1.290	3.0	TM	
23	TM**	1,1-DCA	0.8023	0.8346	4.0	TM**	
24	TM	Ethyl tert Butyl Ether	0.8479	0.8331	1.8	TM	
25	TM	MEK (2-Butanone)	0.0872	0.0933	6.9	TM	
26	TM	Cis-1,2-DCE	0.5128	0.5000	2.5	TM	
27	TM	2,2-Dichloropropane	0.5849	0.4654	20	TM	
28	TM*	Chloroform	0.7738	0.7945	2.7	TM*	
29	TM	Bromochloromethane	0.1945	0.1929	0.81	TM	
30	S	Dibromofluoromethane(S)	0.2197	0.2168	1.3	S	
31	TM	1,1,1-TCA	0.7301	0.7511	2.9	TM	
32	TM	Cyclohexane	0.3972	0.4254	7.1	TM	
33	TM	1,1-Dichloropropene	0.6558	0.6723	2.5	TM	
34	TM	2,2,4-Trimethylpentane	1.163	1.114	4.3	TM	
35	S	1,2-DCA-D4(S)	0.1809	0.1795	0.79	S	
36	TM	Carbon Tetrachloride	0.6164	0.6529	5.9	TM	
37	TM	Tert Amyl Methyl Ether	0.7135	0.7042	1.3	TM	
38	TM	1,2-DCA	0.4303	0.4487	4.3	TM	
39	TM	Benzene	1.905	1.993	4.6	TM	
40	TM	TCE	0.5260	0.5577	6.0	TM	
		Average			5.6		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 1/12/17
Matrix: 0 Instrument: Max
Cal. Date: 1/11/17
Data File: 0111M41.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	2-Pentanone	0.1401	0.1248	11	TM	
42	TM*	1,2-Dichloropropane	0.4234	0.4307	1.7	TM*	
43	TM	Bromodichloromethane	0.4991	0.5161	3.4	TM	
44	TM	Methyl Cyclohexane	0.6198	0.6505	5.0	TM	
45	TM	Dibromomethane	0.1616	0.1622	0.40	TM	
46	TM	MIBK (methyl isobutyl ketone)	0.2128	0.2027	4.8	TM	
47	TM	1-Bromo-2-chloroethane	0.4115	0.3729	9.4	TM	
48	TM	Cis-1,3-Dichloropropene	0.5588	0.5367	4.0	TM	
49	TM*	Toluene	2.158	2.270	5.2	TM*	
50	TM	Trans-1,3-Dichloropropene	0.3895	0.3650	6.3	TM	
51	TM	1,1,2-TCA	0.2024	0.2010	0.71	TM	
52	TM	2-Hexanone	0.0601	0.0579	3.6	TM	
53	I	Chlorobenzene-D5 (IS)	ISTD			I	
54	S	Toluene-D8(S)	1.258	1.286	2.2	S	
55	TM	1,2-EDB	0.3095	0.3167	2.3	TM	
56	TM	Tetrachloroethene	0.7227	0.7530	4.2	TM	
57	TM	1-Chlorohexane	0.7906	0.8326	5.3	TM	
58	TM	1,1,1,2-Tetrachloroethane	0.6199	0.6516	5.1	TM	
59	TM	m&p-Xylene	1.323	1.384	4.6	TM	
60	TM	o-Xylene	1.228	1.335	8.7	TM	
61	TM	Styrene	1.903	1.997	4.9	TM	
62	S	4-Bromofluorobenzene(S)	0.4512	0.4515	0.06	S	
63	TM	1,3-Dichloropropane	0.5992	0.6227	3.9	TM	
64	TM	Dibromochloromethane	0.4569	0.4662	2.0	TM	
65	TM**	Chlorobenzene	1.863	1.951	4.8	TM**	
66	TM*	Ethylbenzene	3.318	3.580	7.9	TM*	
67	TM**	Bromoform	0.2808	0.2755	1.9	TM**	
68	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
69	TM	Isopropylbenzene	5.871	6.435	9.6	TM	
70	TM**	1,1,2,2-Tetrachloroethane	0.6027	0.5643	6.4	TM**	
71	TM	1,2,3-Trichloropropane	0.2065	0.2144	3.8	TM	
72	TM	t-1,4-Dichloro-2-Butene	0.1238	0.1104	11	TM	
73	TM	Bromobenzene	1.446	1.503	3.9	TM	
74	TM	n-Propylbenzene	6.499	6.968	7.2	TM	
75	TM	4-Ethyltoluene	5.702	6.128	7.5	TM	
76	TM	2-Chlorotoluene	3.943	4.185	6.1	TM	
77	TM	1,3,5-Trimethylbenzene	4.768	5.235	9.8	TM	
78	TM	4-Chlorotoluene	4.478	4.842	8.1	TM	
79	TM	Tert-Butylbenzene	4.193	4.504	7.4	TM	
80	TM	1,2,4-Trimethylbenzene	4.701	5.034	7.1	TM	
		Average			5.3		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 1/12/17
Matrix: 0 Instrument: Max
Cal. Date: 1/11/17
Data File: 0111M41.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	Sec-Butylbenzene	5.641	6.015	6.6	TM	
82	TM	p-Isopropyltoluene	5.093	5.373	5.5	TM	
83	TM	Benzyl Chloride	0.5303	0.3345	37	TM	
84	TM	1,3-DCB	2.751	2.866	4.2	TM	
85	TM	1,4-DCB	2.668	2.746	2.9	TM	
86	TM	n-Butylbenzene	4.051	4.198	3.6	TM	
87	TM	1,2-DCB	2.284	2.376	4.0	TM	
88	TM	Hexachloroethane	0.6804	0.7064	3.8	TM	
89	TM	1,2-Dibromo-3-chloropropane	0.0826	0.0836	1.2	TM	
90	TML	1,2,4-Trichlorobenzene	1.178	1.192	1.2	TML	12
91	TM	Hexachlorobutadiene	1.056	1.075	1.8	TM	
92	TMQ	Naphthalene	0.9060	0.9577	5.7	TMQ	24
93	TML	1,2,3-Trichlorobenzene	0.7754	0.7416	4.4	TML	21
94							
95							
96							
97							
98							
99							
100							
101							
102							
103							
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114							
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116							
117							
118							
119							
120							
		Average			6.3		

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M41.D Vial: 39
Acq On : 12 Jan 17 3:53 Operator: PM,DG,SV,CMM
Sample : Ending CCV 8260 10ug/L 1/11/17 Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 11:20 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:17:20 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	327048	25.00000 ppb	0.00
55) Chlorobenzene-D5 (IS)	9.15	117	229844	25.00000 ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	121237	25.00000 ppb	0.00
System Monitoring Compounds					
31) Dibromofluoromethane(S)	4.78	111	70909	24.67360 ppb	0.00
Spiked Amount 25.000			Recovery = 98.696%		
36) 1,2-DCA-D4(S)	5.13	65	58695	24.80352 ppb	0.00
Spiked Amount 25.000			Recovery = 99.216%		
56) Toluene-D8(S)	7.35	98	295484	25.54398 ppb	0.00
Spiked Amount 25.000			Recovery = 102.176%		
64) 4-Bromofluorobenzene(S)	10.74	95	103774	25.01591 ppb	0.00
Spiked Amount 25.000			Recovery = 100.064%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.19	85	39080	9.99944 ppb	98
3) Freon 114	1.29	85	51786	10.38890 ppb	96
4) Chloromethane	1.34	50	55200	9.56448 ppb	99
5) Vinyl chloride	1.43	62	75547	9.92584 ppb	99
6) Bromomethane	1.69	94	38373	9.47730 ppb	95
7) Chloroethane	1.79	64	43644	10.25600 ppb	98
8) Dichlorofluoromethane	1.98	67	111590	10.53828 ppb	98
9) Trichlorofluoromethane	2.03	101	94113	10.46314 ppb	97
10) Acrolein	2.41	56	17542	112.24690 ppb	99
11) Acetone	2.57	43	7345	8.72398 ppb	99
12) Freon-113	2.53	101	53225	10.58314 ppb	97
13) 1,1-DCE	2.51	61	88974	10.46654 ppb	96
14) t-Butanol	3.14	59	14659	102.73063 ppb	98
15) Methyl Acetate	2.90	43	19579	9.52300 ppb	96
16) Iodomethane	2.64	142	55488	9.45699 ppb	99
17) Acrylonitrile	3.22	53	8693	9.97074 ppb	90
18) Methylene chloride	2.98	84	52271	9.98705 ppb	99
19) Carbon disulfide	2.70	76	174815	10.21020 ppb	99
20) Methyl t-butyl ether (MtBE	3.28	73	86374	9.53866 ppb	96
21) Trans-1,2-DCE	3.25	96	63643	10.30970 ppb	98
22) Diisopropyl Ether	3.80	45	168809	10.29632 ppb	97
23) 1,1-DCA	3.67	63	109187	10.40328 ppb	98
25) Ethyl tert Butyl Ether	4.17	59	108979	9.82476 ppb	98
26) MEK (2-Butanone)	4.30	43	12202	10.69051 ppb	98
27) Cis-1,2-DCE	4.27	96	65405	9.74914 ppb	97
28) 2,2-Dichloropropane	4.27	77	60877	7.95631 ppb	99
29) Chloroform	4.61	83	103930	10.26641 ppb	98
30) Bromochloromethane	4.51	128	25235	9.91904 ppb	99
32) 1,1,1-TCA	4.80	97	98258	10.28785 ppb	100
33) Cyclohexane	4.87	41	55645	10.70915 ppb	93
34) 1,1-Dichloropropene	4.98	75	87952	10.25129 ppb	98
35) 2,2,4-Trimethylpentane	5.33	57	145682	9.57182 ppb	98
37) Carbon Tetrachloride	4.98	117	85410	10.59227 ppb	99
38) Tert Amyl Methyl Ether	5.37	73	92117	9.86894 ppb	97
39) 1,2-DCA	5.21	62	58699	10.42801 ppb	99
40) Benzene	5.20	78	260759	10.46355 ppb	99
41) TCE	5.92	95	72964	10.60381 ppb	95
42) 2-Pentanone	6.15	43	204038	111.30998 ppb	99
43) 1,2-Dichloropropane	6.16	63	56349	10.17322 ppb	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M41.D Vial: 39
Acq On : 12 Jan 17 3:53 Operator: PM,DG,SV,CMM
Sample : Ending CCV 8260 10ug/L 1/11/17 Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 11:20 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:17:20 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
44)	Bromodichloromethane	6.49	83	67520	10.34042	ppb		98
45)	Methyl Cyclohexane	6.15	83	85101	10.49610	ppb		97
46)	Dibromomethane	6.29	93	21219	10.03989	ppb		90
47)	MIBK (methyl isobutyl ket	7.24	43	26513	9.52177	ppb		95
48)	1-Bromo-2-chloroethane	6.84	63	48783	9.06247	ppb		98
50)	Cis-1,3-Dichloropropene	7.03	75	70209	9.60424	ppb		98
51)	Toluene	7.43	91	296924	10.51559	ppb		99
52)	Trans-1,3-Dichloropropene	7.71	75	47743	9.36889	ppb		96
53)	1,1,2-TCA	7.92	83	26297	9.92927	ppb		96
54)	2-Hexanone	8.29	58	7576	9.63708	ppb		98
57)	1,2-EDB	8.53	107	29119	10.23436	ppb		97
58)	Tetrachloroethene	8.10	164	69233	10.41960	ppb		98
59)	1-Chlorohexane	9.21	91	76550	10.53136	ppb		100
60)	1,1,1,2-Tetrachloroethane	9.31	131	59902	10.51091	ppb		95
61)	m&p-Xylene	9.52	106	254416	20.91219	ppb		97
62)	o-Xylene	10.04	106	122725	10.86897	ppb		97
63)	Styrene	10.06	104	183630	10.49455	ppb		98
65)	1,3-Dichloropropane	8.13	76	57252	10.39331	ppb		95
66)	Dibromochloromethane	8.40	129	42861	10.20257	ppb		97
67)	Chlorobenzene	9.19	112	179386	10.47511	ppb		99
68)	Ethylbenzene	9.36	91	329093	10.78802	ppb		98
69)	Bromoform	10.27	173	25331	9.81312	ppb		96
71)	Isopropylbenzene	10.56	105	312084	10.96096	ppb		100
72)	1,1,2,2-Tetrachloroethane	10.97	83	27366	9.36276	ppb		97
73)	1,2,3-Trichloropropane	11.00	110	10397	10.38415	ppb		91
74)	t-1,4-Dichloro-2-Butene	11.05	53	5355	8.91872	ppb		92
75)	Bromobenzene	10.92	156	72900	10.39484	ppb		95
76)	n-Propylbenzene	11.13	91	337900	10.72208	ppb		99
77)	4-Ethyltoluene	11.30	105	297185	10.74833	ppb		96
78)	2-Chlorotoluene	11.21	91	202958	10.61396	ppb		99
79)	1,3,5-Trimethylbenzene	11.39	105	253864	10.97893	ppb		100
80)	4-Chlorotoluene	11.37	91	234811	10.81173	ppb		99
81)	Tert-Butylbenzene	11.84	119	218435	10.74140	ppb		98
82)	1,2,4-Trimethylbenzene	11.91	105	244113	10.70689	ppb		100
83)	Sec-Butylbenzene	12.15	105	291695	10.66360	ppb		99
84)	p-Isopropyltoluene	12.37	119	260559	10.55024	ppb		99
85)	Benzyl Chloride	12.59	91	16220	6.30718	ppb		95
86)	1,3-DCB	12.26	146	138980	10.41671	ppb		98
87)	1,4-DCB	12.38	146	133165	10.29281	ppb		97
88)	n-Butylbenzene	12.95	91	203584	10.36376	ppb		99
89)	1,2-DCB	12.90	146	115207	10.40305	ppb		97
90)	Hexachloroethane	13.27	117	34256	10.38228	ppb		95
91)	1,2-Dibromo-3-chloropropan	14.01	75	4052	10.12068	ppb	#	76
92)	1,2,4-Trichlorobenzene	15.23	180	57798	8.81514	ppb		92
93)	Hexachlorobutadiene	15.53	225	52121	10.17753	ppb		97
94)	Naphthalene	15.56	128	46445	7.55558	ppb		100
95)	1,2,3-Trichlorobenzene	15.92	180	35964	7.86991	ppb		98

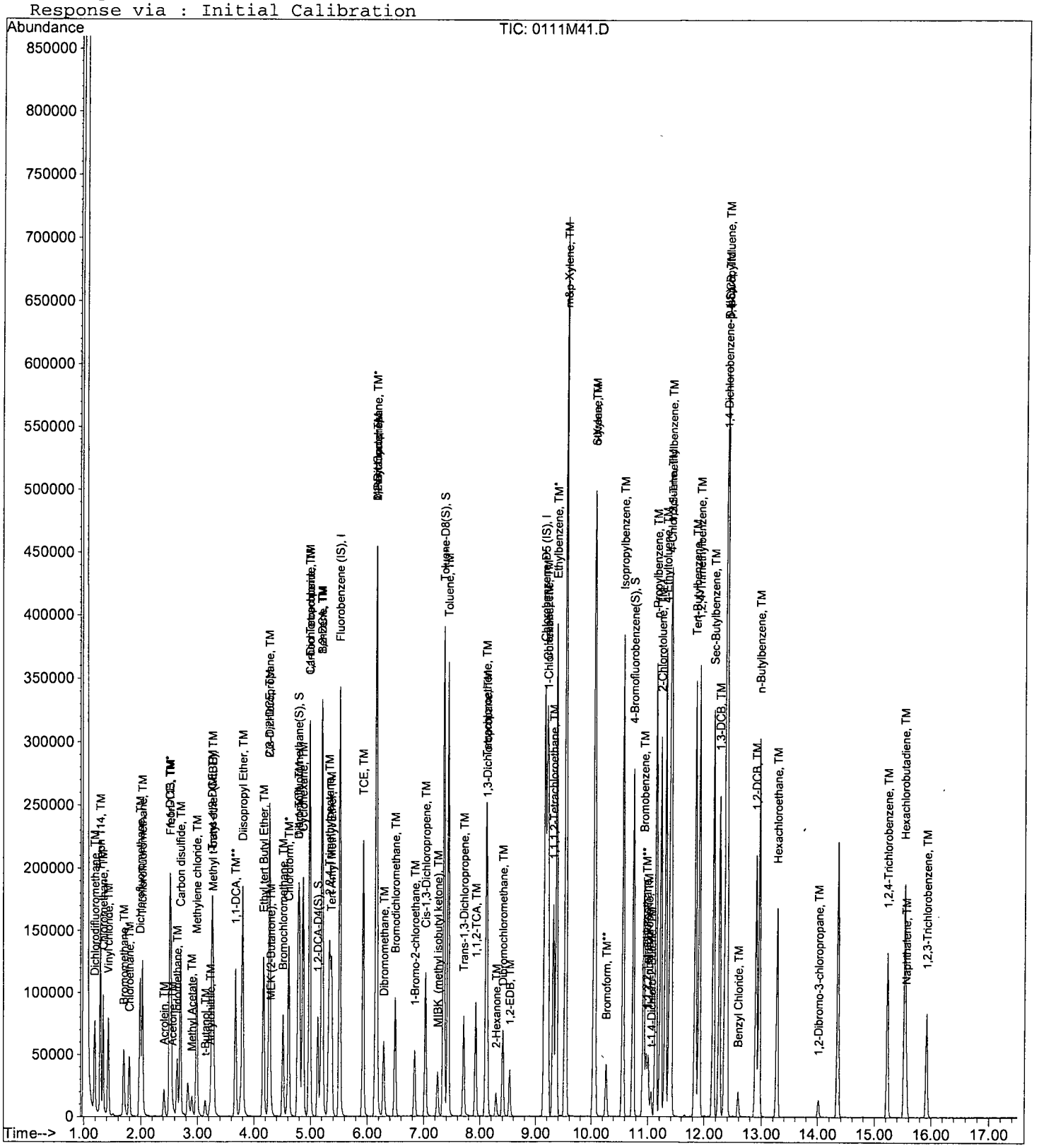
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\M170111\0111M41.D Vial: 39
Acq On : 12 Jan 17 3:53 Operator: PM,DG,SV,CMM
Sample : Ending CCV 8260 10ug/L 1/11/17 Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 11:20 2017 Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration



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ORGANICS
Raw Data

APPL, INC.

Method Blank

EPA 8260B BTEX WATER

Blank Name/QCG: **170111W-48676 - 215412**

Batch ID: #86BTO-170111AM

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	1/12/17	1/12/17
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	1/12/17	1/12/17
BLANK	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	1/12/17	1/12/17
BLANK	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	1/12/17	1/12/17
BLANK	SURROGATE: 1,2-DICHLOROET	93.9	81-118			%	1/12/17	1/12/17
BLANK	SURROGATE: 4-BROMOFLUOR	95.6	85-114			%	1/12/17	1/12/17
BLANK	SURROGATE: DIBROMOFLUOR	98.7	80-119			%	1/12/17	1/12/17
BLANK	SURROGATE: TOLUENE-D8 (S)	101	89-112			%	1/12/17	1/12/17

Quant Method: MALLW.M
Run #: 0111M35
Instrument: Max
Sequence: M170111
Initials: SV

GC SC-Blank-REG MDLs-DOD
Printed: 1/12/17 1:58:41 PM

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0111M35.D Vial: 33
Acq On : 12 Jan 17 1:04 Operator: PM,DG,SV,CMM
Sample : 170111A BLK-1WM Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 11:33 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:17:20 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	334296	25.00000 ppb	0.00
55) Chlorobenzene-D5 (IS)	9.15	117	234008	25.00000 ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	114014	25.00000 ppb	0.00
System Monitoring Compounds					
31) Dibromofluoromethane(S)	4.78	111	72476	24.67208 ppb	0.00
Spiked Amount 25.000			Recovery = 98.688%		
36) 1,2-DCA-D4(S)	5.13	65	56791	23.47859 ppb	0.00
Spiked Amount 25.000			Recovery = 93.916%		
56) Toluene-D8(S)	7.35	98	298688	25.36150 ppb	0.00
Spiked Amount 25.000			Recovery = 101.444%		
64) 4-Bromofluorobenzene(S)	10.74	95	100946	23.90118 ppb	0.00
Spiked Amount 25.000			Recovery = 95.604%		

Target Compounds Qvalue

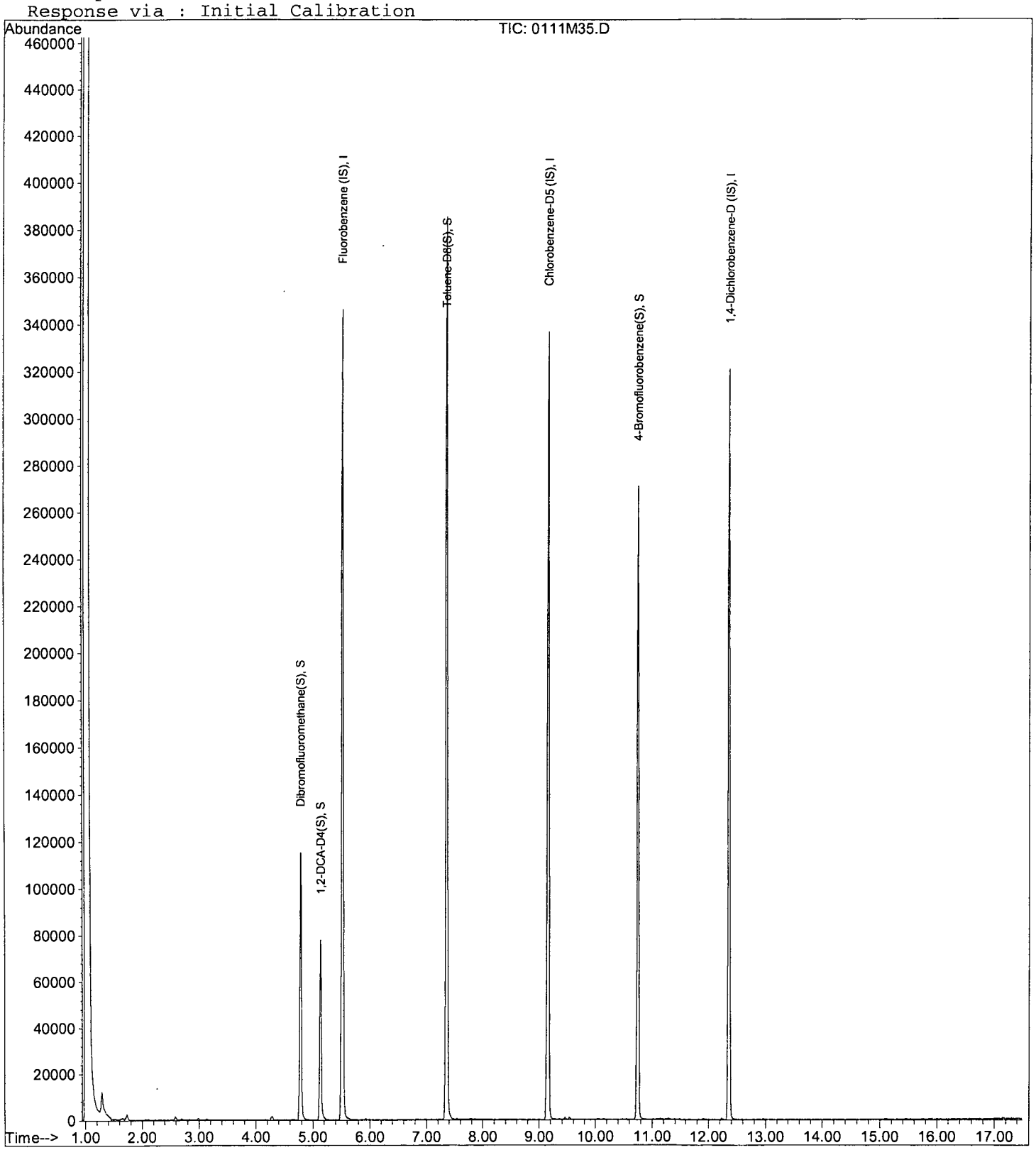
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\M170111\0111M35.D Vial: 33
Acq On : 12 Jan 17 1:04 Operator: PM,DG,SV,CMM
Sample : 170111A BLK-1WM Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 11:33 2017 Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration



Laboratory Control Spike Recovery
EPA 8260B BTEX WATER

APPL ID: **170111W-48676 LCS - 215412**
Batch ID: #86BTO-170111AM

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
BENZENE	10.00	10.5	105	79-120
ETHYLBENZENE	10.00	11.0	110	79-121
TOLUENE	10.00	10.4	104	80-121
XYLENES (TOTAL)	30.0	32.1	107	79-121
SURROGATE: 1,2-DICHLOROETHANE-	25.0	24.0	96.0	81-118
SURROGATE: 4-BROMOFLUOROBENZ	25.0	24.5	98.0	85-114
SURROGATE: DIBROMOFLUOROMETH	25.0	24.2	96.8	80-119
SURROGATE: TOLUENE-D8 (S)	25.0	25.0	100	89-112

Comments:

Primary	SPK
Quant Method :	MALLW.M
Extraction Date :	1/11/17
Analysis Date :	1/11/17
Instrument :	Max
Run :	0111M20
Initials :	SV

Printed: 1/12/17 1:58:45 PM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M20.D Vial: 18
Acq On : 11 Jan 17 18:00 Operator: PM,DG,SV,CMM
Sample : 170111A CCV/LCS-1WM 10ug/L Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 14:32 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	347505	25.00000 ppb	0.00
55) Chlorobenzene-D5 (IS)	9.15	117	239524	25.00000 ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	124682	25.00000 ppb	0.00
System Monitoring Compounds					
31) Dibromofluoromethane(S)	4.78	111	73965	24.22188 ppb	0.00
Spiked Amount 25.000			Recovery	= 96.888%	
36) 1,2-DCA-D4(S)	5.13	65	60241	23.95824 ppb	0.00
Spiked Amount 25.000			Recovery	= 95.832%	
56) Toluene-D8(S)	7.35	98	301774	25.03345 ppb	0.00
Spiked Amount 25.000			Recovery	= 100.132%	
64) 4-Bromofluorobenzene(S)	10.74	95	105928	24.50320 ppb	0.00
Spiked Amount 25.000			Recovery	= 98.012%	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.19	85	42336	10.19486 ppb	97
3) Freon 114	1.29	85	53777	10.15323 ppb	99
4) Chloromethane	1.34	50	61016	9.94985 ppb	98
5) Vinyl chloride	1.42	62	81310	10.05413 ppb	100
6) Bromomethane	1.69	94	42571	9.89517 ppb	98
7) Chloroethane	1.79	64	48313	10.68484 ppb	99
8) Dichlorofluoromethane	1.98	67	117165	10.41341 ppb	98
9) Trichlorofluoromethane	2.03	101	99579	10.41911 ppb	94
10) Acrolein	2.41	56	18132	109.19215 ppb	99
11) Acetone	2.57	43	8074	9.14597 ppb	96
12) Freon-113	2.53	101	54442	10.18787 ppb	93
13) 1,1-DCE	2.51	61	93066	10.30342 ppb	99
14) t-Butanol	3.14	59	15562	102.63877 ppb	98
15) Methyl Acetate	2.90	43	20776	9.51033 ppb	99
16) Iodomethane	2.64	142	59899	9.58528 ppb	96
17) Acrylonitrile	3.22	53	9817	10.59710 ppb	91
18) Methylene chloride	2.98	84	56325	10.12810 ppb	97
19) Carbon disulfide	2.70	76	182971	10.05746 ppb	99
20) Methyl t-butyl ether (MtBE	3.28	73	93625	9.73076 ppb	98
21) Trans-1,2-DCE	3.25	96	67564	10.30057 ppb	98
22) Diisopropyl Ether	3.79	45	176257	10.11773 ppb	97
23) 1,1-DCA	3.67	63	112815	10.11619 ppb	97
24) Vinyl Acetate	3.75	43	38854	10.65115 ppb	97
25) Ethyl tert Butyl Ether	4.17	59	121945	10.34650 ppb	97
26) MEK (2-Butanone)	4.31	43	11350	9.35866 ppb	95
27) Cis-1,2-DCE	4.27	96	70497	9.88955 ppb	92
28) 2,2-Dichloropropane	4.27	77	80186	9.86296 ppb	99
29) Chloroform	4.61	83	110145	10.23983 ppb	99
30) Bromochloromethane	4.51	128	26625	9.84932 ppb	96
32) 1,1,1-TCA	4.80	97	104972	10.34382 ppb	100
33) Cyclohexane	4.87	41	55920	10.12853 ppb	96
34) 1,1-Dichloropropene	4.98	75	95432	10.46832 ppb	99
35) 2,2,4-Trimethylpentane	5.33	57	157393	9.73250 ppb	100
37) Carbon Tetrachloride	4.98	117	90297	10.53912 ppb	99
38) Tert Amyl Methyl Ether	5.37	73	99521	10.03450 ppb	93
39) 1,2-DCA	5.21	62	60186	10.06275 ppb	94
40) Benzene	5.20	78	278116	10.50307 ppb	99
41) TCE	5.92	95	73692	10.07915 ppb	98
42) 2-Pentanone	6.15	43	214951	110.36032 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M20.D Vial: 18
Acq On : 11 Jan 17 18:00 Operator: PM,DG,SV,CMM
Sample : 170111A CCV/LCS-1WM 10ug/L Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 14:32 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	1,2-Dichloropropane	6.16	63	60050	10.20318	ppb		99
44)	Bromodichloromethane	6.49	83	72855	10.50063	ppb		96
45)	Methyl Cyclohexane	6.15	83	86977	10.09597	ppb		99
46)	Dibromomethane	6.29	93	22553	10.04289	ppb		100
47)	MIBK (methyl isobutyl ket	7.24	43	28056	9.48277	ppb		96
48)	1-Bromo-2-chloroethane	6.84	63	51034	8.92253	ppb		100
50)	Cis-1,3-Dichloropropene	7.02	75	77966	10.03750	ppb		97
51)	Toluene	7.43	91	313505	10.44921	ppb		99
52)	Trans-1,3-Dichloropropene	7.71	75	54554	10.07525	ppb		99
53)	1,1,2-TCA	7.92	83	27068	9.61873	ppb		98
54)	2-Hexanone	8.29	58	8119	9.71982	ppb		89
57)	1,2-EDB	8.53	107	31300	10.55632	ppb		98
58)	Tetrachloroethene	8.11	164	72199	10.42686	ppb		99
59)	1-Chlorohexane	9.21	91	81230	10.72358	ppb		98
60)	1,1,1,2-Tetrachloroethane	9.31	131	63950	10.76772	ppb		100
61)	m&p-Xylene	9.52	106	269515	21.25799	ppb		99
62)	o-Xylene	10.04	106	127242	10.81359	ppb		99
63)	Styrene	10.06	104	199532	10.94250	ppb		98
65)	1,3-Dichloropropane	8.13	76	58837	10.24939	ppb		96
66)	Dibromochloromethane	8.40	129	46624	10.64978	ppb		96
67)	Chlorobenzene	9.19	112	193338	10.83357	ppb		97
68)	Ethylbenzene	9.36	91	348473	10.96166	ppb		98
69)	Bromoform	10.27	173	27542	10.23845	ppb		99
71)	Isopropylbenzene	10.56	105	330210	11.27714	ppb		100
72)	1,1,2,2-Tetrachloroethane	10.97	83	31865	10.60078	ppb		99
73)	1,2,3-Trichloropropane	11.00	110	10855	10.54202	ppb		93
74)	t-1,4-Dichloro-2-Butene	11.05	53	6265	10.14602	ppb		90
75)	Bromobenzene	10.92	156	80691	11.18786	ppb		95
76)	n-Propylbenzene	11.13	91	362802	11.19417	ppb		99
77)	4-Ethyltoluene	11.30	105	318229	11.19142	ppb		98
78)	2-Chlorotoluene	11.21	91	216346	11.00149	ppb		100
79)	1,3,5-Trimethylbenzene	11.39	105	271763	11.42827	ppb		96
80)	4-Chlorotoluene	11.37	91	243288	10.89253	ppb		97
81)	Tert-Butylbenzene	11.84	119	232127	11.09930	ppb		99
82)	1,2,4-Trimethylbenzene	11.91	105	263048	11.21860	ppb		100
83)	Sec-Butylbenzene	12.15	105	311914	11.08770	ppb		98
84)	p-Isopropyltoluene	12.37	119	278930	10.98204	ppb		99
85)	Benzyl Chloride	12.59	91	26741	10.11098	ppb		100
86)	1,3-DCB	12.26	146	146195	10.65473	ppb		96
87)	1,4-DCB	12.38	146	144118	10.83163	ppb		99
88)	n-Butylbenzene	12.95	91	226481	11.21081	ppb		99
89)	1,2-DCB	12.90	146	122876	10.78898	ppb		97
90)	Hexachloroethane	13.27	117	38911	11.46726	ppb		97
91)	1,2-Dibromo-3-chloropropan	14.02	75	4495	10.91695	ppb	#	71
92)	1,2,4-Trichlorobenzene	15.23	180	67368	9.90298	ppb		97
93)	Hexachlorobutadiene	15.52	225	57995	11.01163	ppb		97
94)	Naphthalene	15.56	128	56136	9.35585	ppb		99
95)	1,2,3-Trichlorobenzene	15.92	180	43090	9.01233	ppb		99

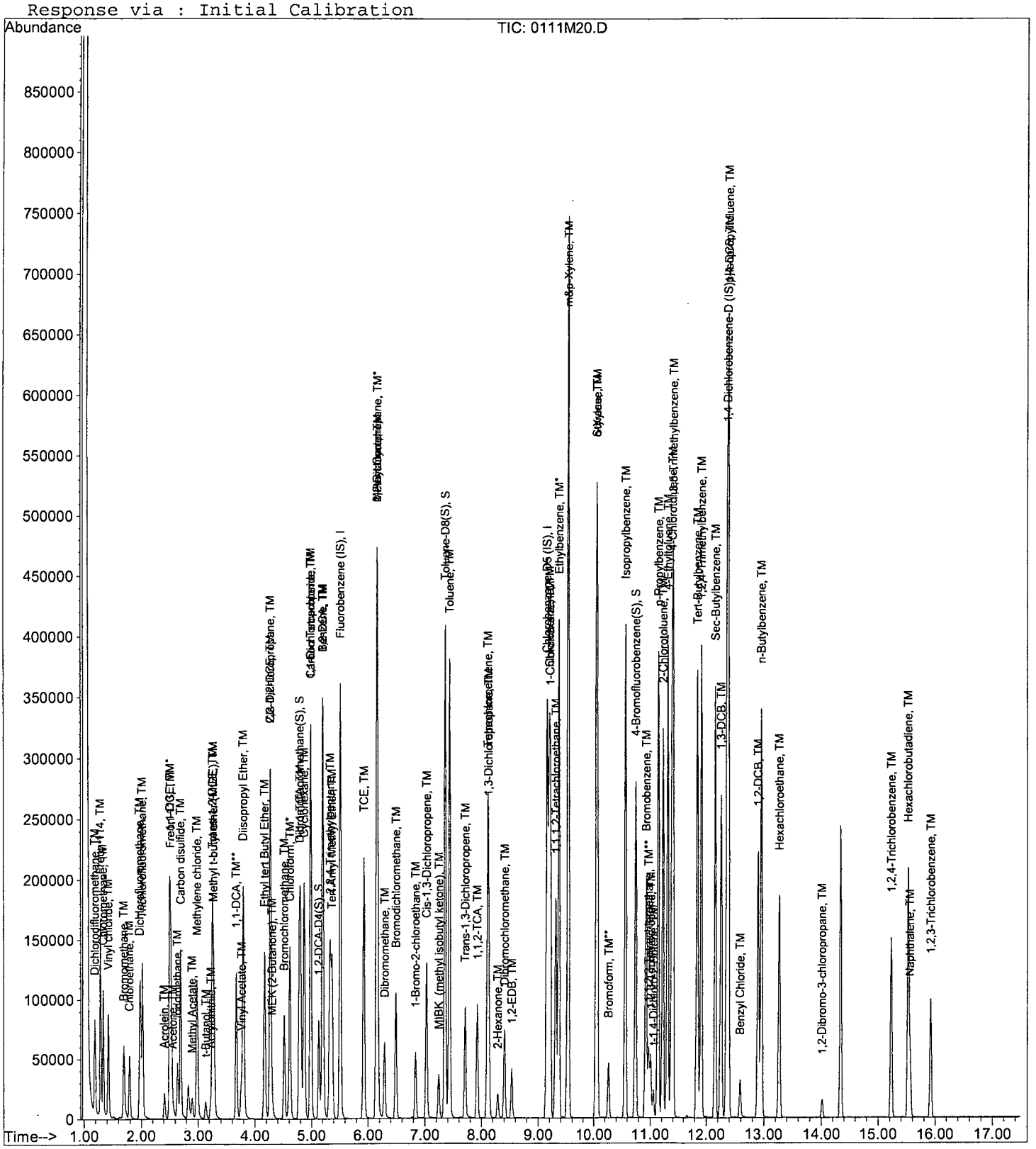
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\M170111\0111M20.D Vial: 18
Acq On : 11 Jan 17 18:00 Operator: PM,DG,SV,CMM
Sample : 170111A CCV/LCS-1WM 10ug/L Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 14:32 2017 Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration

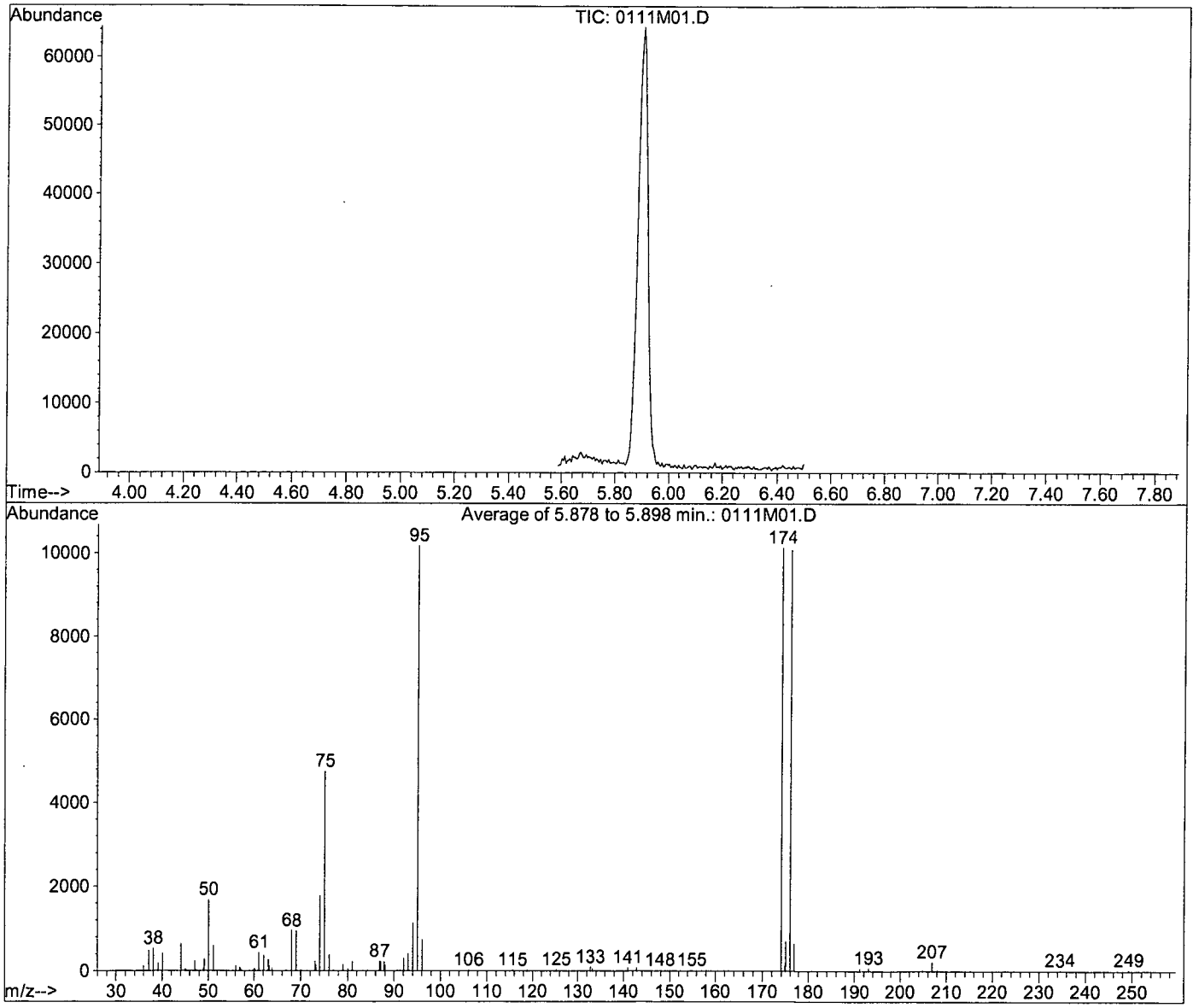


419

Data File : M:\MAX\DATA\M170111\0111M01.D
Acq On : 11 Jan 17 9:34
Sample : 5ng BFB STD 12/15/16
Misc : 2ul

Vial: 1
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B



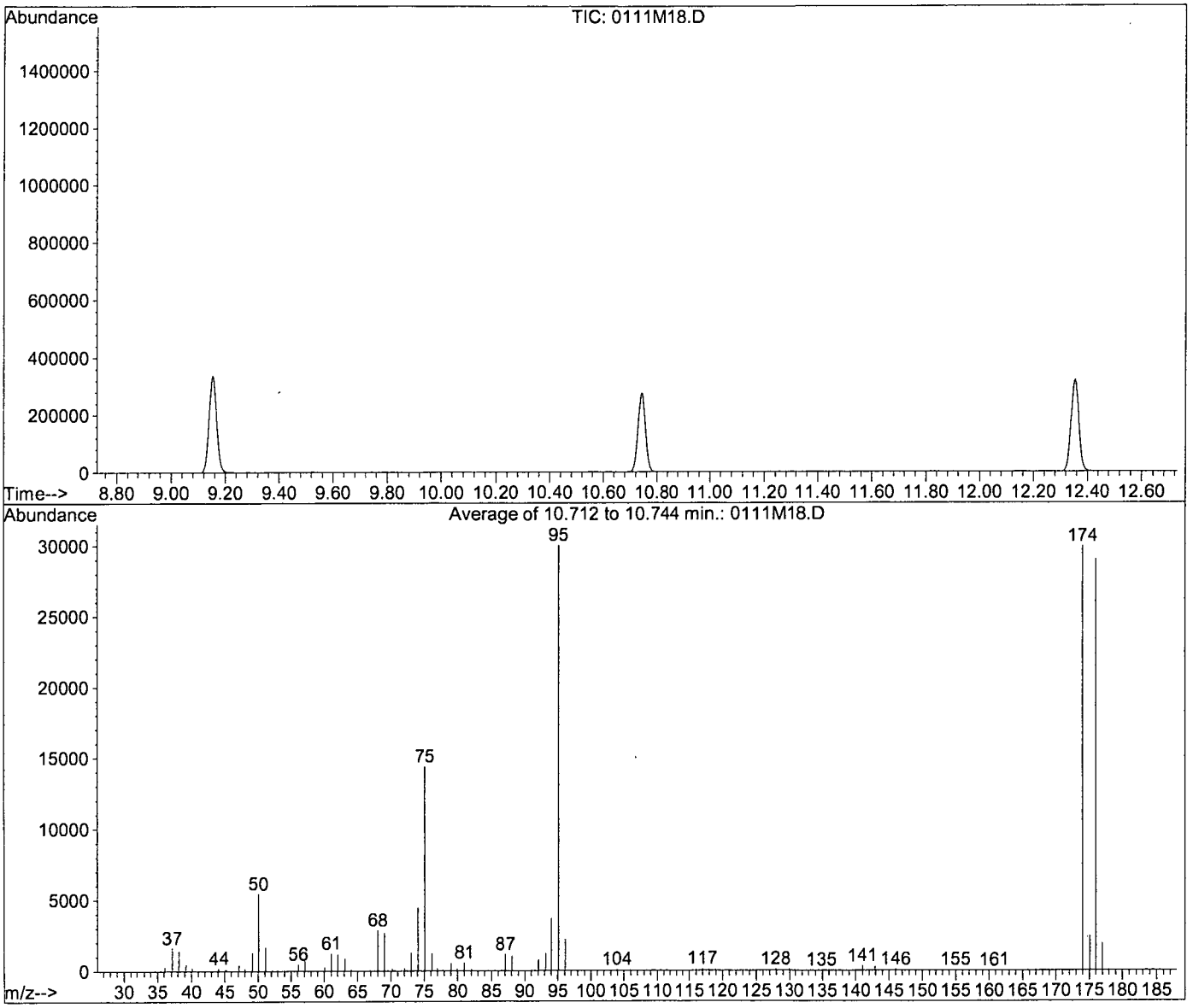
Spectrum Information: Average of 5.878 to 5.898 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.6	1689	PASS
75	95	30	60	46.7	4751	PASS
95	95	100	100	100.0	10181	PASS
96	95	5	9	7.3	739	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	99.6	10142	PASS
175	174	5	9	6.9	703	PASS
176	174	95	101	99.4	10084	PASS
177	176	5	9	6.5	654	PASS

Data File : M:\MAX\DATA\M170111\0111M18.D
Acq On : 11 Jan 17 17:03
Sample : 5ng BFB STD 12/15/16
Misc : IS&S 10/20/16

Vial: 16
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B



Spectrum Information: Average of 10.712 to 10.744 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.1	5431	PASS
75	95	30	60	47.9	14372	PASS
95	95	100	100	100.0	30012	PASS
96	95	5	9	7.3	2190	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	99.7	29918	PASS
175	174	5	9	8.0	2404	PASS
176	174	95	101	96.9	28994	PASS
177	176	5	9	6.5	1889	PASS

Volatile Standard Curve Preparation for 10mL Purge (8260 water)-MAX										
Exp Date:	01/12/17	5µg/mL	5µg/mL	5µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	250µg/mL	
		Vol Std #9	Vol Std #10	Vol Std #12	Vol Std #7	Vol Std #8	Vol Std #1	Vol Std #2	TBA	
		1/10/17L	01/10/17M	01/10/17N	01/10/17H	01/10/17J	01/10/17I	01/10/17K	01/10/17O	Final Vol
	Conc.	02/10/17	02/10/17	02/10/17	02/10/17	02/10/17	02/10/17	02/10/17	02/10/17	w/P&T H2O
Date/code	µg/L	ul	ul	ul	ul	ul	ul	ul	ul	mL
01/11/17A-DG	0.3	3	3	3	n/a	n/a	n/a	n/a	2	50
01/11/17B-DG	0.5	5	5	5	n/a	n/a	n/a	n/a	5	50
01/11/17C-DG	1	10	10	10	n/a	n/a	n/a	n/a	10	50
01/11/17D-DG	2	20	20	20	n/a	n/a	n/a	n/a	15	50
01/11/17E-DG	5	n/a	n/a	n/a	5	5	5	5	20	50
01/11/17F-DG	10	n/a	n/a	n/a	10	10	10	10	25	50
01/11/17G-DG	20	n/a	n/a	n/a	20	20	20	20	30	50
01/11/17H-DG	40	n/a	n/a	n/a	40	40	40	40	35	50
01/11/17I-DG	100	n/a	n/a	n/a	100	100	100	100	40	50

PRIMARY STANDARD

01/10/17H							
50ug/ml Vol Work Std #7							
Exp:02/10/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120016-03	Gas Mix	2000	279822-36644	01/10/17DG	02/19/19	100
02SI	020049-02	HEXACHLOROETHANE	1000	254167-36564	12/27/16C-CMM	12/28/17	200
02SI	020228-02	Benzyl Chloride	1000	279824-36569	12/27/16E-CMM	05/24/18	200
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	3500
01/10/17I							
50ug/ml Vol Work Std #1							
Exp:02/10/17					Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	020145-02-02	2-CEVE	2000	288264-37217	11/22/16C-CMM	09/19/19	50
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	1950
01/10/17J							
50ug/ml Vol Work Std #8							
Exp:02/10/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	122039-02	Volatile Mix, 20-29	2000	258033-37169	12/16/16C-CMM	08/17/17	100
02SI	120023-03	VOC'S-54 COMP	2000	271929-36581	12/16/16D-CMM	02/15/18	100
02SI	020232-02	Vinyl Acetate	2000	292241-37194	12/16/16E-CMM	02/01/17	100
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	3700
01/10/17K							
50ug/ml Vol Work Std #2							
Exp:02/10/17							
Supplier	ID #	ID	ug/ml				
02SI	121020-05	HSL'S-Ketone Solution	2000	258036-36073	01/10/17BDG	08/17/17	100
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	3900
		01/10/17L					
		5ug/ml Vol Work Std #9					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #7		**01/10/17H**	Exp:02/10/17	200	
		50ug/ml Vol Work Std #8		**01/10/17J**	Exp:02/10/17	200	
		J&T Brand		12/16/16	12/16/17	1600	
		01/10/17M					
		5ug/ml Vol Work Std #10					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #1		**01/10/17I**	Exp:02/10/17	200	
		J&T Brand		12/16/16	12/16/17	1800	
		01/10/17N					
		5ug/ml Vol Work Std #12					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #2		**01/10/17K**	Exp:02/10/17	200	
		J&T Brand		12/16/16	12/16/17	1800	
01/10/17O							
250ug/ml TBA/IBA/Acetonitrile/Cyclohexanone/Acrolein/2-P							
Exp:02/10/17			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
02SI	120166-01	Volatile Mix 4-3	2000	275544-36413	12/16/16F-CMM	03/28/18	500
02SI	020229-09-02	Acrolein	10000	294146-37313	01/10/17FDG	01/14/17	100
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	3400

SECONDARY SOURCE

01/10/17P							
50ug/ml VOC Std#4							
Exp:02/10/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120296-01-SS	Custom 8260 Solution	2000	279826-37381	01/10/17DG	06/01/19	50
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	1950
01/10/17Q							
50ug/ml VOC Std#5							
Exp:02/10/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120016-03-SS	8260 Gases(SS)	2000	279826-36675	12/16/16I-CMM	06/01/19	50
02SI	020145-02-02-SS	2-CEVE (SS)	2000	254171-35380	12/16/16J-CMM	06/21/17	50
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	1900
01/10/17R							

50ug/ml VOC Std#6							
Exp:02/10/17							
	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120023-03-SS	VOC'S 54 COMP.	2000	265897-35927	12/16/16K-CMM	11/29/17	50
02SI	020232-02-SS	Vinyl Acetate(SS)	2000	292243-37196	12/16/16L-CMM	02/01/17	50
02SI	020049-02-SS	HEXACHLOROETHANE (SS)	1000	295337-37383	01/10/17D-DG	12/19/18	100
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	1800
01/10/17S							
250ug/ml TBA/IBA/Acetonitrile/Acrolein/2-P							
Exp:02/10/17			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
02SI	120166-01-SS	VOC Mix 4-3 (SS)	2000	258040-37230	01/10/17EDG	08/22/18	250
02SI	020229-09-SS	Acrolein SOLUTION (SS)	10000	294146-37314	01/10/17GDG	01/14/17	50
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	1700
8260 water		spiked with		Total Vol			
CCV/LCS	10ug/L Vol Std	10uL of 50ug/ml Std #7		50mL P&T H2O			
Ending CCV		10uL of 50ug/ml Std #8					
		10uL of 50ug/ml Std #1					
		10uL of 50ug/ml Std #2					
		25uL of 250ug/ml Std TBA					
X4 ketones							
LCS	10ug/L Vol Std	10uL of 50ug/ml Std #7		50mL P&T H2O			
		10uL of 50ug/ml Std #8					
		10uL of 50ug/ml Std #1					
		40uL of 50ug/ml Std #2					
		25uL of 250ug/ml Std TBA					
8260 soil		spiked with		Total Vol			
CCV/LCS	50ug/Kg Vol Std	5uL of 50ug/ml Std #7		5mL P&T H2O			
Ending CCV		5uL of 50ug/ml Std #8					
		5uL of 50ug/ml Std #1					
		5uL of 50ug/ml Std #2					
		5uL of 250ug/ml Std TBA					
Matrix spikes are prepared with same standards as ccv (see above) into the sample.							
8260water		spiked with		Total Vol			
SS	10ug/L STD	10uL of 50ug/ml Std #4		50mL P&T H2O			
		10uL of 50ug/ml Std #5					
		10uL of 50ug/ml Std #6					
		25uL of 250ug/ml Std TBA					
8260 SOIL	50ug/Kg STD	5uL of 50ug/ml Std #4		Total Vol			
SS		5uL of 50ug/ml Std #5		5mL P&T H2O			
		5uL of 50ug/ml Std #6					
		5uL of 250ug/ml Std TBA					

Injection Log

Directory: M:\MAX\DATA\M170111\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0111M01.D	1	5ng BFB STD 12/15/16	2ul	11 Jan 17 9:34
2	4	0111M06.D	1	0.3ug/L VOC STD 1/11/17A	IS&S 10/20/16	11 Jan 17 11:24
3	5	0111M07.D	1	0.5ug/L VOC STD 1/11/17B	IS&S 10/20/16	11 Jan 17 11:52
4	6	0111M08.D	1	1.0ug/L VOC STD 1/11/17C	IS&S 10/20/16	11 Jan 17 12:21
5	7	0111M09.D	1	2.0ug/L VOC STD 1/11/17D	IS&S 10/20/16	11 Jan 17 12:49
6	8	0111M10.D	1	5.0ug/L VOC STD 1/11/17E	IS&S 10/20/16	11 Jan 17 13:17
7	9	0111M11.D	1	10ug/L VOC STD 1/11/17F	IS&S 10/20/16	11 Jan 17 13:46
8	10	0111M12.D	1	20ug/L VOC STD 1/11/17G	IS&S 10/20/16	11 Jan 17 14:14
9	11	0111M13.D	1	40ug/L VOC STD 1/11/17H	IS&S 10/20/16	11 Jan 17 14:42
10	12	0111M14.D	1	100ug/L VOC STD 1/11/17I	IS&S 10/20/16	11 Jan 17 15:10
11	16	0111M18.D	1	5ng BFB STD 12/15/16	IS&S 10/20/16	11 Jan 17 17:03
12	17	0111M19.D	1	(SS)10ug/L VOC STD 1/11/17	IS&S 10/20/16	11 Jan 17 17:32
13	18	0111M20.D	1	170111A CCV/LCS-1WM 10ug	IS&S 10/20/16	11 Jan 17 18:00
14	33	0111M35.D	1	170111A BLK-1WM	IS&S 10/20/16	12 Jan 17 1:04
15	34	0111M36.D	1	AZ48676W01	IS&S 10/20/16	12 Jan 17 1:32
16	35	0111M37.D	1	AZ48677W01	IS&S 10/20/16	12 Jan 17 2:00
17	36	0111M38.D	1	AZ48678W01	IS&S 10/20/16	12 Jan 17 2:28
18	37	0111M39.D	1	AZ48679W01	IS&S 10/20/16	12 Jan 17 2:57
19	38	0111M40.D	1	AZ48680W01	IS&S 10/20/16	12 Jan 17 3:25
20	39	0111M41.D	1	Ending CCV 8260 10ug/L 1/11/	IS&S 10/20/16	12 Jan 17 3:53

ORGANICS

APPL, INC.

ORGANICS
QC Summary

APPL, INC.

Method Blank
EPA 8260B GRO WATER

Blank Name/QCG: **170111W-48676 - 215420**
Batch ID: #GRO86-170111AM

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	1/12/17	1/12/17
BLANK	SURROGATE: 4-BROMOFLUOR	95.6	85-114			%	1/12/17	1/12/17

Quant Method: MGAS6111.
Run #: 0111M35
Instrument: Max
Sequence: M170111
Initials: SV

GC SC-Blank-REG MDLs-DOD
Printed: 1/12/17 1:59:37 PM

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81936

Case No: 81936 Date Analyzed: 1/11/17

Matrix: WATER Instrument: Max

APPL ID.	Client Sample No.	SURROGATE: 4-BROMOFLUOROBENZENE (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
170111AM-LCS	Lab Control Spike	85-114	98.4				
170111AM-BLK	Blank	85-114	95.6				
AZ48676	ERH166	85-114	97.1				
AZ48677	ERH165	85-114	96.3				
AZ48678	ERH191	85-114	98.7				
AZ48679	ERH192	85-114	94.7				
AZ48680	ERH193	85-114	95.8				

Comments: Batch: #GRO86-170111A

Laboratory Control Spike Recovery
EPA 8260B GRO WATER

APPL ID: **170111W-48676 LCS - 215420**
Batch ID: #GRO86-170111AM

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
GASOLINE RANGE ORGANICS	300	299	99.7	78-122
SURROGATE: 4-BROMOFLUOROBENZ	25.0	24.6	98.4	85-114

Comments: _____

Primary	SPK
Quant Method :	MGAS6111.M
Extraction Date :	1/11/17
Analysis Date :	1/11/17
Instrument :	Max
Run :	0111M32
Initials :	SV

Printed: 1/12/17 1:59:45 PM
APPL Standard LCS

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81936

Case No: 81936 Date Analyzed: 1/12/17

Matrix: WATER Instrument: Max

Blank ID: 170111AM-BLK Time Analyzed: 0104

APPL ID.	Client Sample No.	File ID.	Date Analyzed
170111AM-LCS	Lab Control Spike	0111M32	1/11/17 2339
170111AM-BLK	Blank	0111M35	1/12/17 0104
AZ48676	ERH166	0111M36	1/12/17 0132
AZ48677	ERH165	0111M37	1/12/17 0200
AZ48678	ERH191	0111M38	1/12/17 0228
AZ48679	ERH192	0111M39	1/12/17 0257
AZ48680	ERH193	0111M40	1/12/17 0325

Comments: Batch: #GRO86-170111A

Printed: 1/12/17 1:59:48 PM

Form 4, Blank Summary

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81936

Lab File ID (Standard): 0111M11.D Date Analyzed: 01/11/17

Instrument ID: Max Time Analyzed: 13:46

GC Column: ID: Heated Purge: (Y/N)

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	337093	5.51	240952	9.15	127119	12.35
	UPPER LIMIT	674186	6.01	481904	9.65	254238	12.85
	LOWER LIMIT	168547	5.01	120476	8.65	63560	11.85
	SAMPLE NO.						
01	170111A CCV/LCS-1WM	335208	5.51	231108	9.15	119048	12.35
02	170111A BLK-1WM	334296	5.51	234008	9.15	114014	12.35
03	AZ48676W01	321389	5.51	225633	9.16	107748	12.35
04	AZ48677W01	323122	5.51	222809	9.15	110527	12.35
05	AZ48678W01	326527	5.51	223291	9.15	112397	12.35
06	AZ48679W01	332827	5.51	234992	9.15	114803	12.35
07	AZ48680W01	315927	5.51	221106	9.15	108514	12.35
08	Ending CCV GAS 300ug	330565	5.51	230791	9.15	115645	12.35
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

ORGANICS
Sample Data

APPL, INC.

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81936

Sample ID: ERH166

APPL ID: AZ48676

Sample Collection Date: 01/09/17

QCG: #GRO86-170111AM-215420

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/12/17	01/12/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	97.1	85-114			%	01/12/17	01/12/17

Quant Method:	MGAS6111.M
Run #:	0111M36
Instrument:	Max
Sequence:	M170111
Dilution Factor:	1
Initials:	SV

Printed: 1/12/17 1:59:52 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0111M36.D
Acq On : 12 Jan 17 1:32
Sample : AZ48676W01
Misc : IS&S 10/20/16

Vial: 34
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:22 2017

Quant Results File: MGAS6111.RES

Quant Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 12:28:10 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	TIC	331488	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds

Qvalue

(#) = qualifier out of range (m) = manual integration
0111M36.D MGAS6111.M Thu Jan 12 13:26:54 2017

Quantitation Report

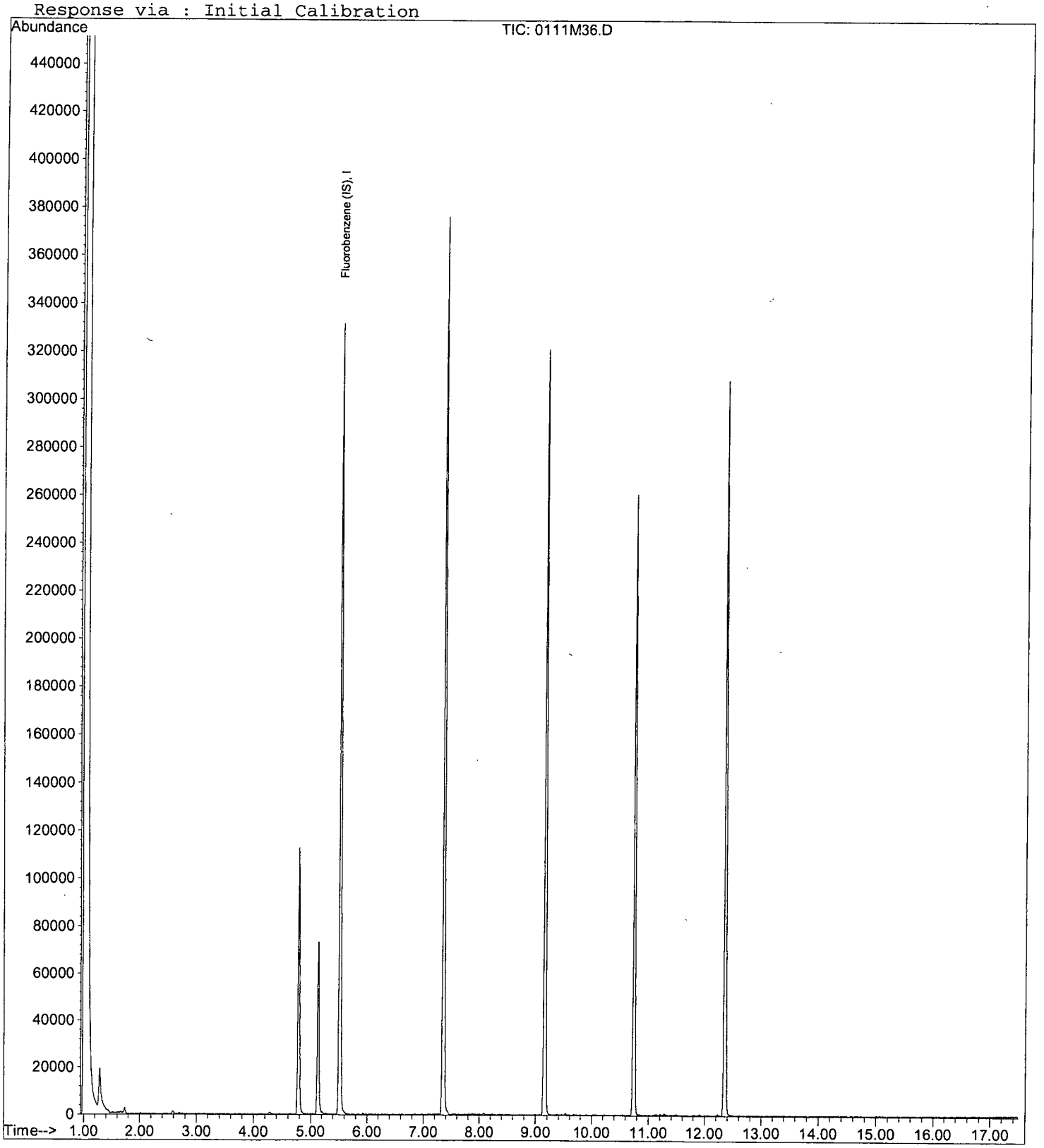
Data File : M:\MAX\DATA\M170111\0111M36.D
Acq On : 12 Jan 17 1:32
Sample : AZ48676W01
Misc : IS&S 10/20/16

Vial: 34
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:22 2017

Quant Results File: MGAS6111.RES

Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M36.D
Acq On : 12 Jan 17 1:32
Sample : AZ48676W01
Misc : IS&S 10/20/16

Vial: 34
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:36 2017 Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	321389	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.16	117	225633	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	107748	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.78	111	69446	24.59002 ppb	0.00
Spiked Amount 25.000			Recovery =	98.360%	
3) 1,2-DCA-D4(S)	5.13	65	54334	23.36493 ppb	0.00
Spiked Amount 25.000			Recovery =	93.460%	
5) Toluene-D8(S)	7.35	98	284846	25.08392 ppb	0.00
Spiked Amount 25.000			Recovery =	100.336%	
6) 4-Bromofluorobenzene(S)	10.74	95	98899	24.28568 ppb	0.00
Spiked Amount 25.000			Recovery =	97.144%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81936

Sample ID: ERH165

APPL ID: AZ48677

Sample Collection Date: 01/09/17

QCG: #GRO86-170111AM-215420

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/12/17	01/12/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	96.3	85-114			%	01/12/17	01/12/17

Quant Method:	MGAS6111.M
Run #:	0111M37
Instrument:	Max
Sequence:	M170111
Dilution Factor:	1
Initials:	SV

Printed: 1/12/17 1:59:53 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0111M37.D
Acq On : 12 Jan 17 2:00
Sample : AZ48677W01
Misc : IS&S 10/20/16

Vial: 35
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:22 2017 Quant Results File: MGAS6111.RES

Quant Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	TIC	331571	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0111M37.D MGAS6111.M Thu Jan 12 13:26:59 2017

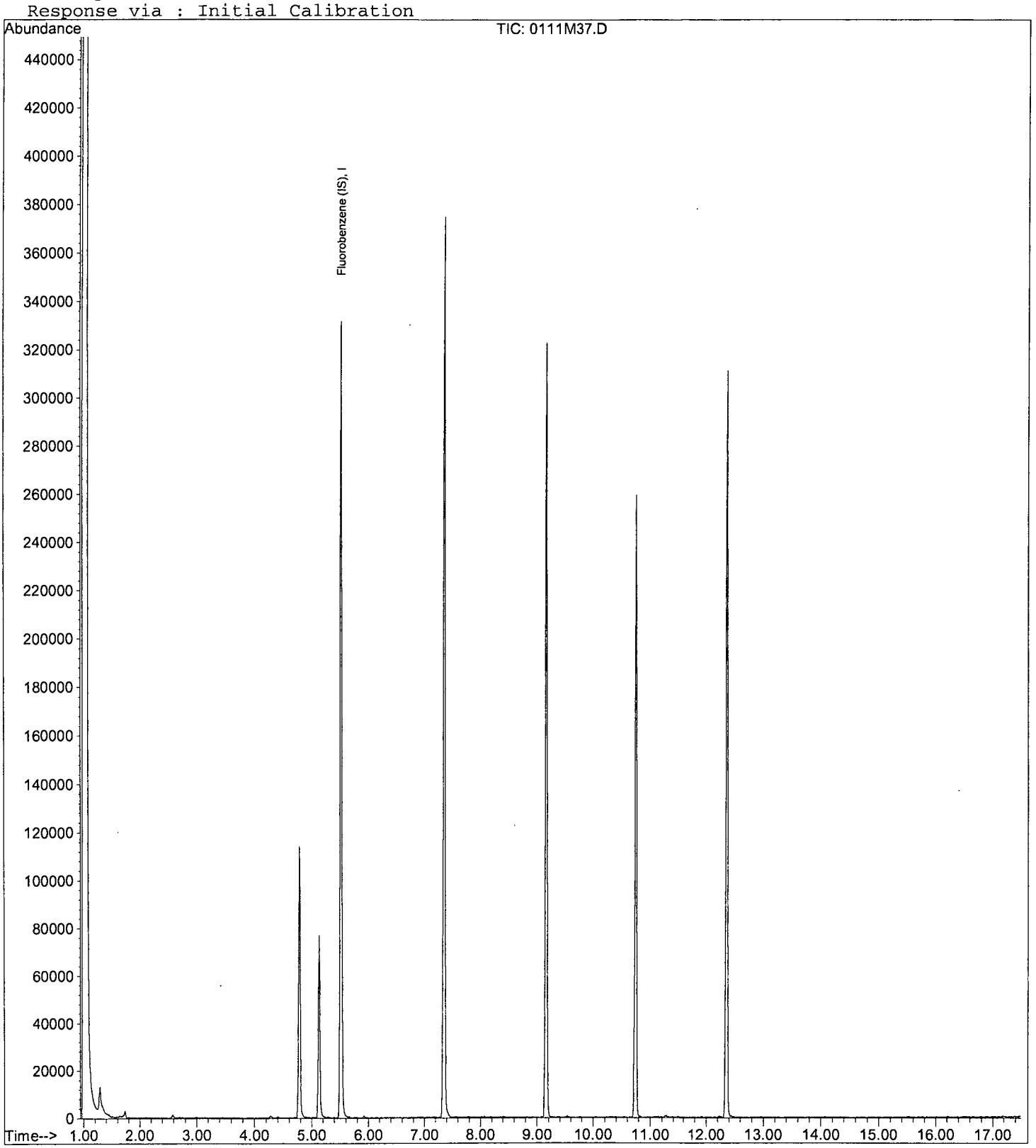
Quantitation Report

Data File : M:\MAX\DATA\M170111\0111M37.D
Acq On : 12 Jan 17 2:00
Sample : AZ48677W01
Misc : IS&S 10/20/16

Vial: 35
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:22 2017 Quant Results File: MGAS6111.RES

Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M37.D
Acq On : 12 Jan 17 2:00
Sample : AZ48677W01
Misc : IS&S 10/20/16

Vial: 35
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:36 2017 Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	323122	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.15	117	222809	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	110527	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.78	111	69623	24.52048 ppb	0.00
Spiked Amount 25.000			Recovery = 98.080%		
3) 1,2-DCA-D4(S)	5.13	65	55686	23.81789 ppb	0.00
Spiked Amount 25.000			Recovery = 95.272%		
5) Toluene-D8(S)	7.35	98	285394	25.45071 ppb	0.00
Spiked Amount 25.000			Recovery = 101.804%		
6) 4-Bromofluorobenzene(S)	10.74	95	96796	24.07053 ppb	0.00
Spiked Amount 25.000			Recovery = 96.284%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0111M37.D MSUR111.M Thu Jan 12 13:37:54 2017

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81936

Sample ID: ERH191

APPL ID: AZ48678

Sample Collection Date: 01/06/17

QCG: #GRO86-170111AM-215420

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/12/17	01/12/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	98.7	85-114			%	01/12/17	01/12/17

Quant Method:	MGAS6111.M
Run #:	0111M38
Instrument:	Max
Sequence:	M170111
Dilution Factor:	1
Initials:	SV

Printed: 1/12/17 1:59:53 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0111M38.D
Acq On : 12 Jan 17 2:28
Sample : AZ48678W01
Misc : IS&S 10/20/16

Vial: 36
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:22 2017

Quant Results File: MGAS6111.RES

Quant Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	TIC	336998	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds

Qvalue

(#) = qualifier out of range (m) = manual integration
0111M38.D MGAS6111.M Thu Jan 12 13:27:03 2017

Quantitation Report

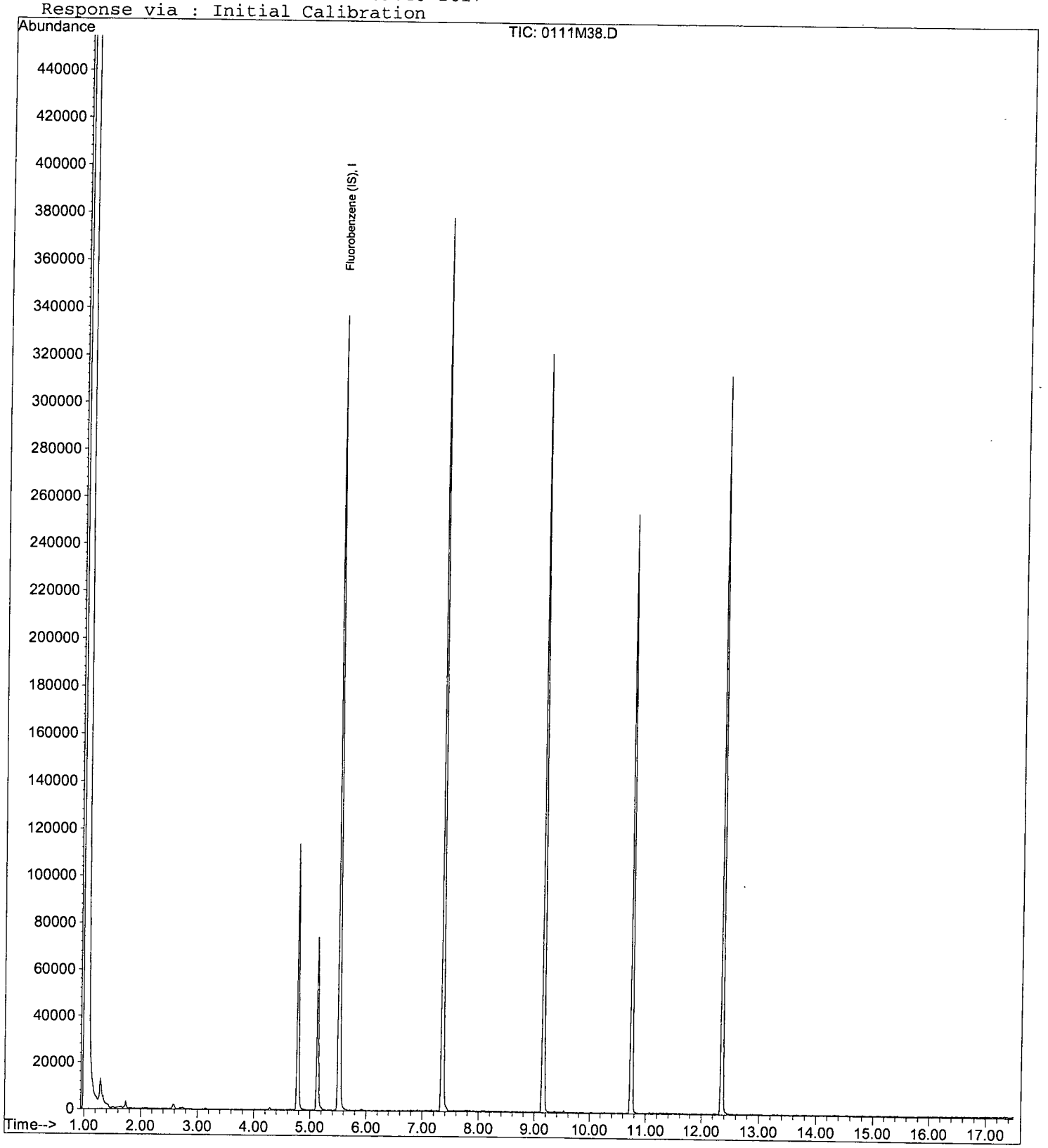
Data File : M:\MAX\DATA\M170111\0111M38.D
Acq On : 12 Jan 17 2:28
Sample : AZ48678W01
Misc : IS&S 10/20/16

Vial: 36
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:22 2017

Quant Results File: MGAS6111.RES

Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M38.D
Acq On : 12 Jan 17 2:28
Sample : AZ48678W01
Misc : IS&S 10/20/16

Vial: 36
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:36 2017

Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	326527	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.15	117	223291	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	112397	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.78	111	70772	24.66523 ppb	0.00
Spiked Amount 25.000			Recovery =	98.660%	
3) 1,2-DCA-D4(S)	5.13	65	54552	23.08954 ppb	0.00
Spiked Amount 25.000			Recovery =	92.360%	
5) Toluene-D8(S)	7.35	98	282813	25.16610 ppb	0.00
Spiked Amount 25.000			Recovery =	100.664%	
6) 4-Bromofluorobenzene(S)	10.74	95	99473	24.68283 ppb	0.00
Spiked Amount 25.000			Recovery =	98.732%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81936

Sample ID: ERH192

APPL ID: AZ48679

Sample Collection Date: 01/06/17

QCG: #GRO86-170111AM-215420

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/12/17	01/12/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	94.7	85-114			%	01/12/17	01/12/17

Quant Method:	MGAS6111.M
Run #:	0111M39
Instrument:	Max
Sequence:	M170111
Dilution Factor:	1
Initials:	SV

Printed: 1/12/17 1:59:53 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0111M39.D
Acq On : 12 Jan 17 2:57
Sample : AZ48679W01
Misc : IS&S 10/20/16

Vial: 37
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:23 2017 Quant Results File: MGAS6111.RES

Quant Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 12:28:10 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	TIC	348085	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0111M39.D MGAS6111.M Thu Jan 12 13:27:07 2017

Quantitation Report

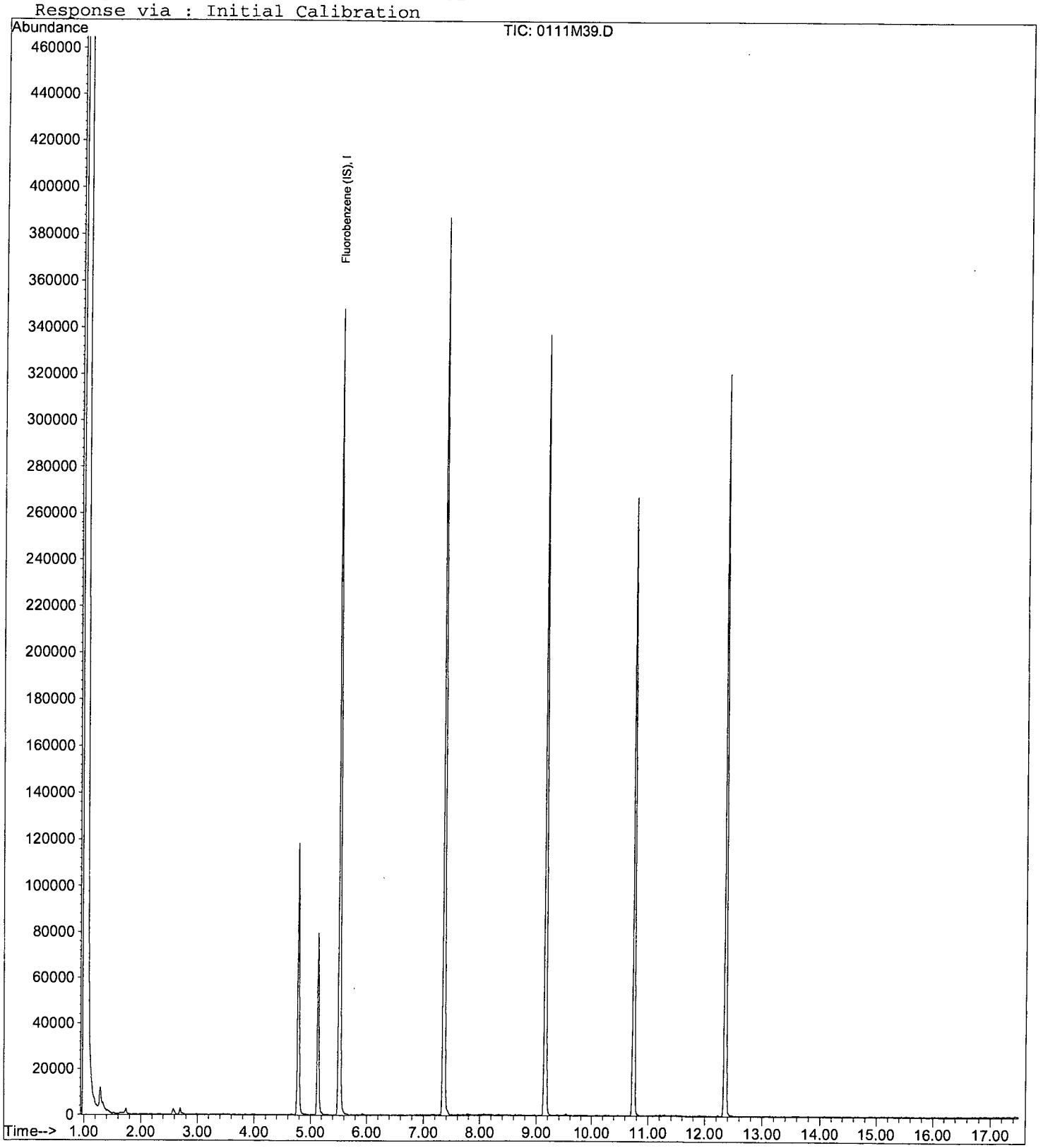
Data File : M:\MAX\DATA\M170111\0111M39.D
Acq On : 12 Jan 17 2:57
Sample : AZ48679W01
Misc : IS&S 10/20/16

Vial: 37
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:23 2017

Quant Results File: MGAS6111.RES

Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M39.D
Acq On : 12 Jan 17 2:57
Sample : AZ48679W01
Misc : IS&S 10/20/16

Vial: 37
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:36 2017

Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	332827	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.15	117	234992	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	114803	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.78	111	72578	24.81585 ppb	0.00
Spiked Amount 25.000			Recovery =	99.264%	
3) 1,2-DCA-D4(S)	5.13	65	58328	24.22045 ppb	0.00
Spiked Amount 25.000			Recovery =	96.880%	
5) Toluene-D8(S)	7.35	98	295268	24.96613 ppb	0.00
Spiked Amount 25.000			Recovery =	99.864%	
6) 4-Bromofluorobenzene(S)	10.74	95	100391	23.67024 ppb	0.00
Spiked Amount 25.000			Recovery =	94.680%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81936

Sample ID: ERH193

APPL ID: AZ48680

Sample Collection Date: 01/06/17

QCG: #GRO86-170111AM-215420

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/12/17	01/12/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	95.8	85-114			%	01/12/17	01/12/17

Quant Method:	MGAS6111.M
Run #:	0111M40
Instrument:	Max
Sequence:	M170111
Dilution Factor:	1
Initials:	SV

Printed: 1/12/17 1:59:53 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0111M40.D Vial: 38
Acq On : 12 Jan 17 3:25 Operator: PM,DG,SV,CMM
Sample : AZ48680W01 Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 13:23 2017 Quant Results File: MGAS6111.RES

Quant Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 12:28:10 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	TIC	327856	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

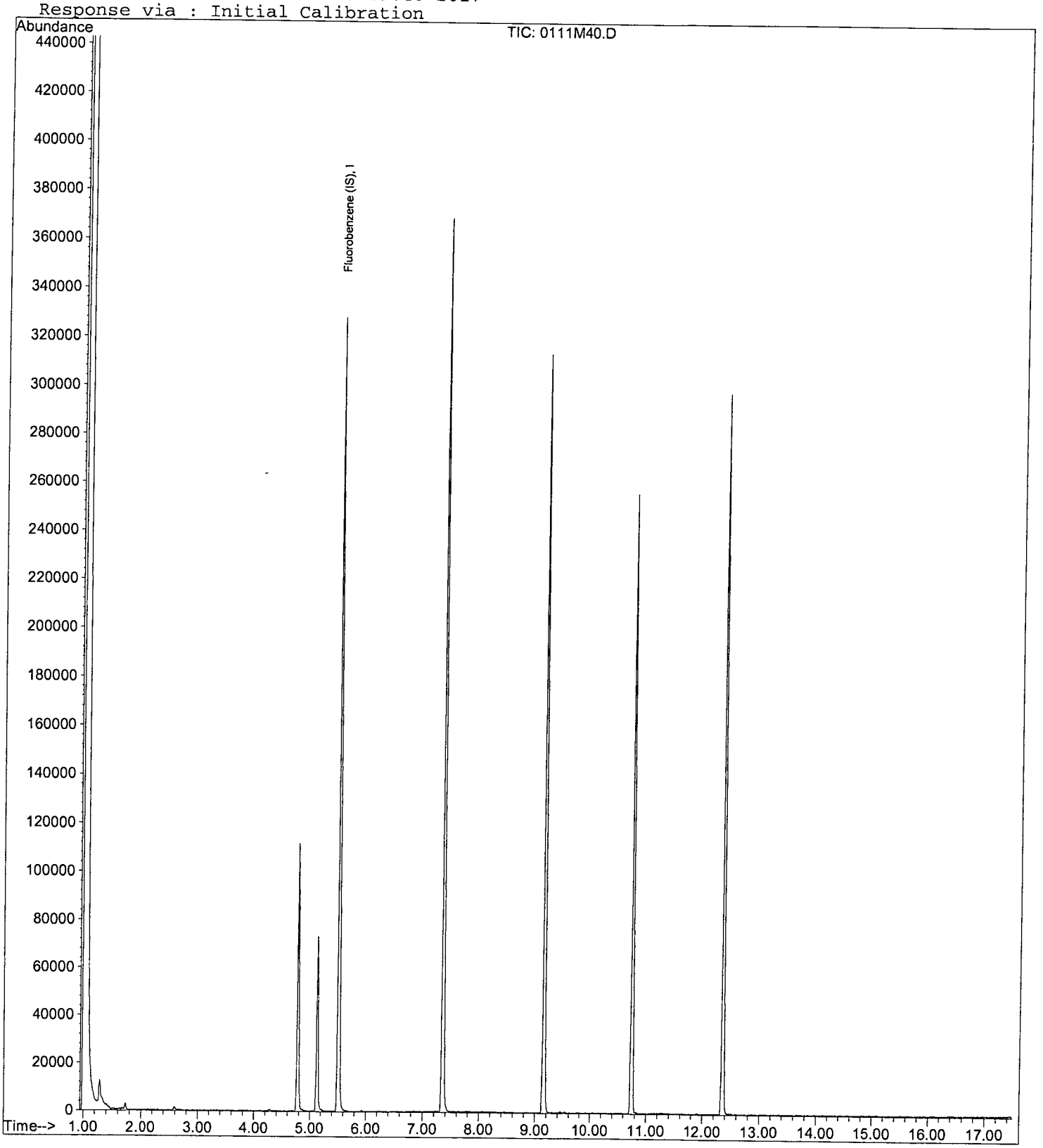
Data File : M:\MAX\DATA\M170111\0111M40.D
Acq On : 12 Jan 17 3:25
Sample : AZ48680W01
Misc : IS&S 10/20/16

Vial: 38
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:23 2017

Quant Results File: MGAS6111.RES

Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M40.D
Acq On : 12 Jan 17 3:25
Sample : AZ48680W01
Misc : IS&S 10/20/16

Vial: 38
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:36 2017 Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	315927	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.15	117	221106	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	108514	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.78	111	68190	24.56273 ppb	0.00
Spiked Amount 25.000			Recovery = 98.252%		
3) 1,2-DCA-D4(S)	5.13	65	54299	23.75357 ppb	0.00
Spiked Amount 25.000			Recovery = 95.016%		
5) Toluene-D8(S)	7.35	98	281232	25.27272 ppb	0.00
Spiked Amount 25.000			Recovery = 101.092%		
6) 4-Bromofluorobenzene(S)	10.74	95	95582	23.95171 ppb	0.00
Spiked Amount 25.000			Recovery = 95.808%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0111M40.D MSUR111.M Thu Jan 12 13:38:06 2017

ORGANICS
Calibration Data

APPL, INC.

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 1/11/17
Matrix: Instrument: Max
Initials:

		Compound	0111M06.D	0111M07.D	0111M08.D	0111M09.D	0111M10.D	0111M11.D	0111M12.D	0111M13.D	0111M14.D		Avg	%RSD		
1	I	Fluorobenzene (IS)														
2	S	Dibromofluoromethane(S)	0.2337	0.2291	0.2010	0.2005	0.2193	0.2229	0.2284	0.2221	0.2202		0.22	5.3	S	
3	S	1,2-DCA-D4(S)	0.2017	0.1939	0.1631	0.1713	0.1801	0.1717	0.1889	0.1796	0.1777		0.18	6.7	S	
4	I	Chlorobenzene-D5 (IS)														
5	S	Toluene-D8(S)	1.374	1.317	1.158	1.150	1.261	1.269	1.291	1.272	1.230		1.3	5.7	S	
6	S	4-Bromofluorobenzene(S)	0.4898	0.4586	0.4031	0.4034	0.4549	0.4598	0.4689	0.4698	0.4525		0.45	6.5	S	
7	I	1,4-Dichlorobenzene-D (IS)														
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Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M06.D Vial: 4
Acq On : 11 Jan 17 11:24 Operator: PM,DG,SV,CMM
Sample : 0.3ug/L VOC STD 1/11/17A Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 13:35 2017 Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	320130	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.15	117	222100	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	114005	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.78	111	14961	5.31835 ppb	0.00
Spiked Amount 25.000			Recovery =	21.272%	
3) 1,2-DCA-D4(S)	5.13	65	12915	5.57560 ppb	0.00
Spiked Amount 25.000			Recovery =	22.304%	
5) Toluene-D8(S)	7.35	98	61030	5.45987 ppb	0.00
Spiked Amount 25.000			Recovery =	21.840%	
6) 4-Bromofluorobenzene(S)	10.74	95	21757	5.42765 ppb	0.00
Spiked Amount 25.000			Recovery =	21.712%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

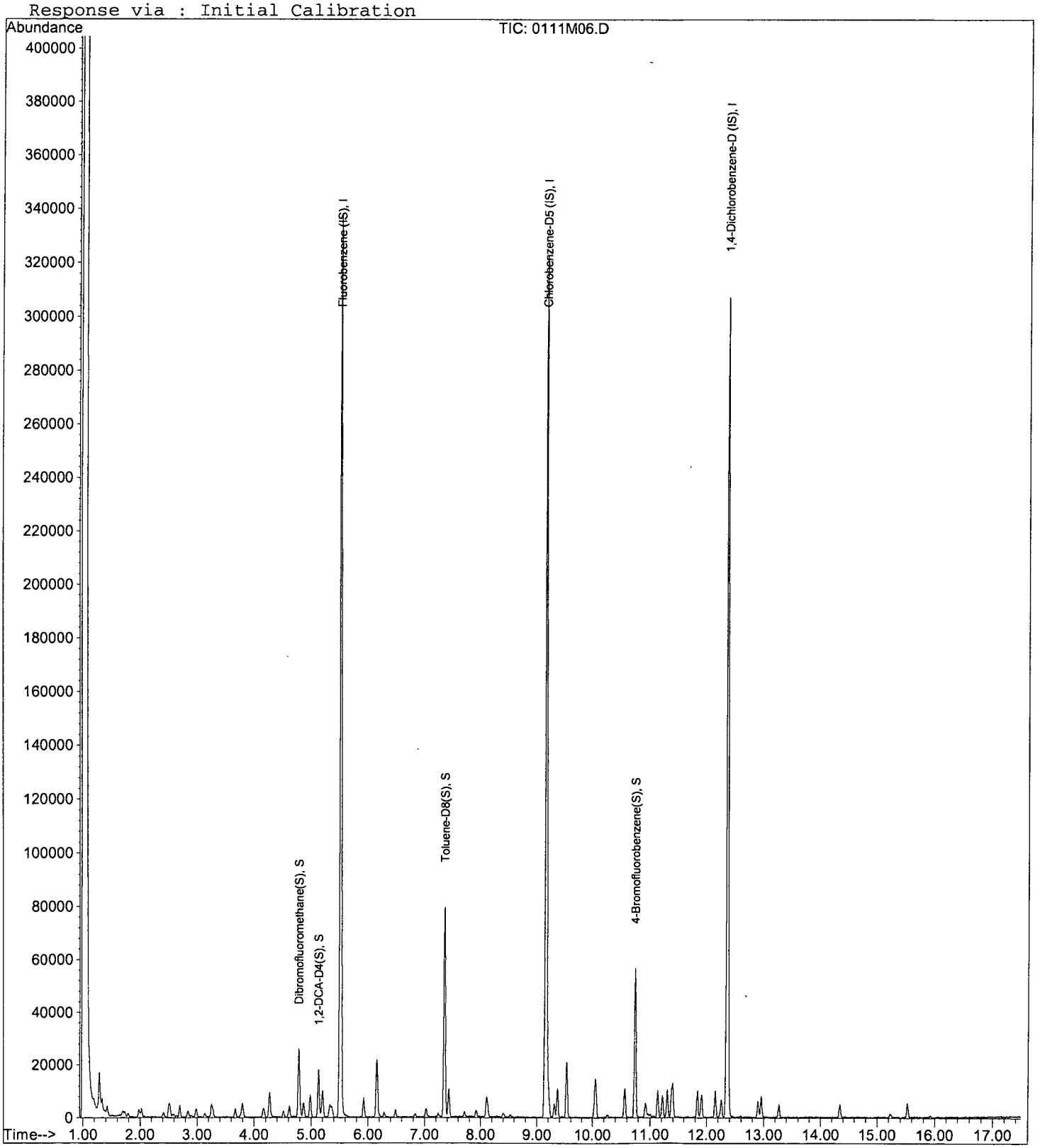
Quantitation Report

Data File : M:\MAX\DATA\M170111\0111M06.D
Acq On : 11 Jan 17 11:24
Sample : 0.3ug/L VOC STD 1/11/17A
Misc : IS&S 10/20/16

Vial: 4
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:35 2017 Quant Results File: MSUR111.RES

Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M07.D Vial: 5
Acq On : 11 Jan 17 11:52 Operator: PM,DG,SV,CMM
Sample : 0.5ug/L VOC STD 1/11/17B Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 13:35 2017 Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	338873	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.15	117	239828	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	123537	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.78	111	15524	5.21326 ppb	0.00
Spiked Amount 25.000			Recovery =	20.852%	
3) 1,2-DCA-D4(S)	5.13	65	13144	5.36061 ppb	0.00
Spiked Amount 25.000			Recovery =	21.444%	
5) Toluene-D8(S)	7.35	98	63193	5.23549 ppb	0.00
Spiked Amount 25.000			Recovery =	20.940%	
6) 4-Bromofluorobenzene(S)	10.74	95	21998	5.08211 ppb	0.00
Spiked Amount 25.000			Recovery =	20.328%	

Target Compounds Qvalue

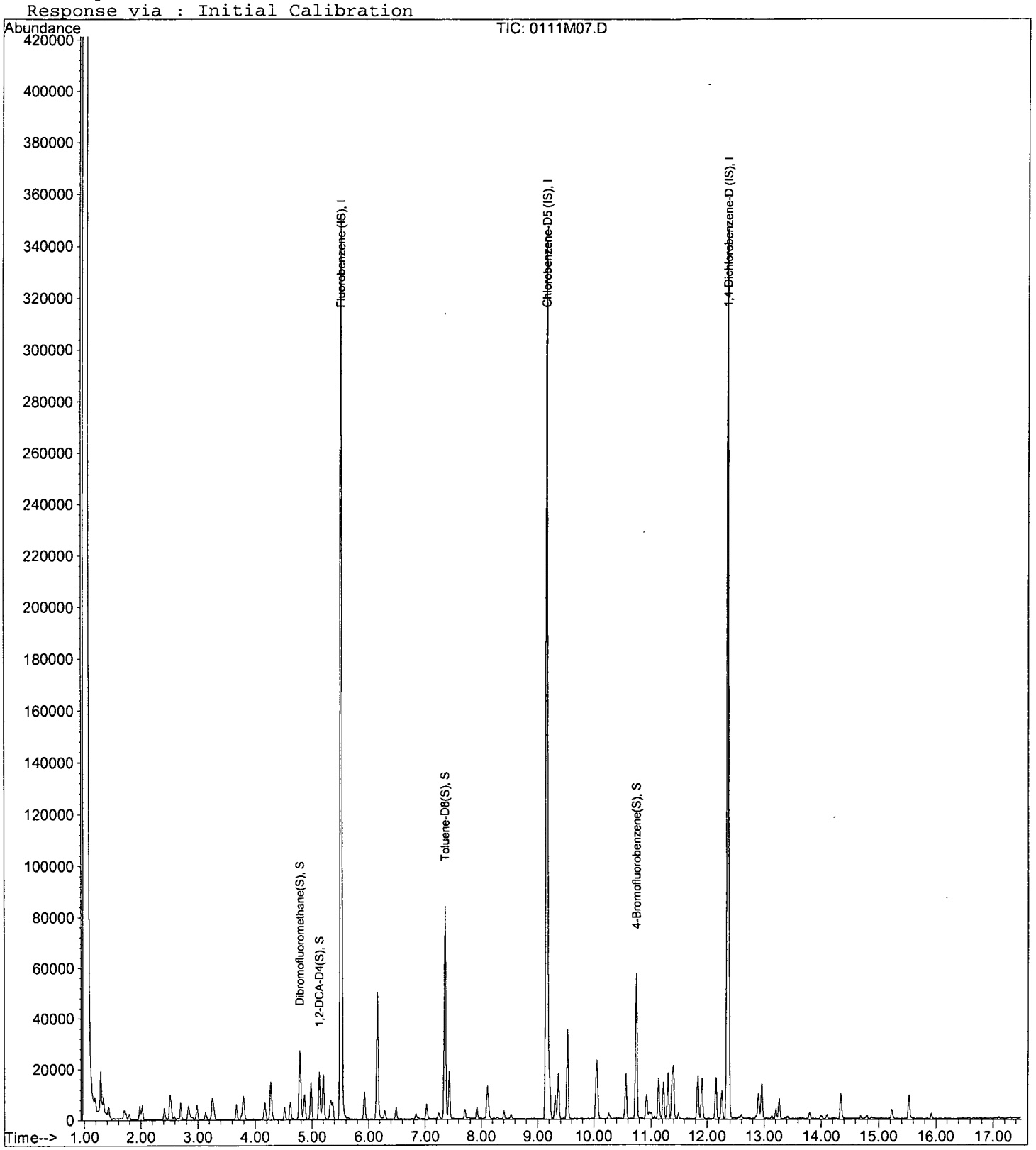
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\M170111\0111M07.D Vial: 5
Acq On : 11 Jan 17 11:52 Operator: PM,DG,SV,CMM
Sample : 0.5ug/L VOC STD 1/11/17B Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 13:35 2017 Quant Results File: MSUR111.RES

Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M08.D Vial: 6
Acq On : 11 Jan 17 12:21 Operator: PM,DG,SV,CMM
Sample : 1.0ug/L VOC STD 1/11/17C Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 13:35 2017 Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	341843	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.15	117	237526	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	119495	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.78	111	27487	9.15047 ppb	0.00
Spiked Amount 25.000			Recovery	= 36.600%	
3) 1,2-DCA-D4(S)	5.13	65	22300	9.01575 ppb	0.00
Spiked Amount 25.000			Recovery	= 36.064%	
5) Toluene-D8(S)	7.35	98	110065	9.20717 ppb	0.00
Spiked Amount 25.000			Recovery	= 36.828%	
6) 4-Bromofluorobenzene(S)	10.74	95	38301	8.93429 ppb	0.00
Spiked Amount 25.000			Recovery	= 35.736%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

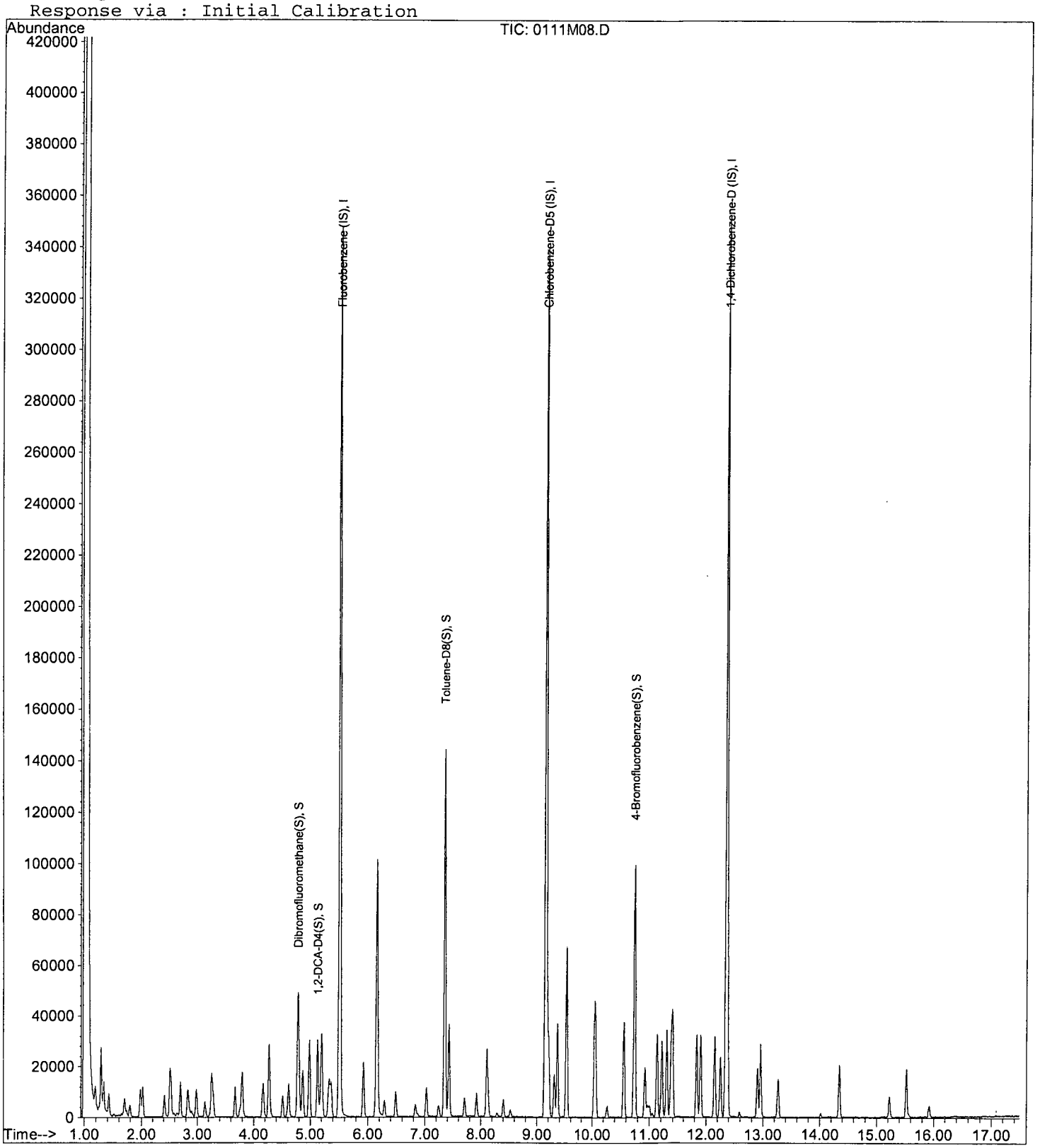
Quantitation Report

Data File : M:\MAX\DATA\M170111\0111M08.D
Acq On : 11 Jan 17 12:21
Sample : 1.0ug/L VOC STD 1/11/17C
Misc : IS&S 10/20/16

Vial: 6
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:35 2017 Quant Results File: MSUR111.RES

Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M09.D Vial: 7
Acq On : 11 Jan 17 12:49 Operator: PM,DG,SV,CMM
Sample : 2.0ug/L VOC STD 1/11/17D Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 13:35 2017 Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	351047	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.15	117	249761	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	131021	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.78	111	28151	9.12581 ppb	0.00
Spiked Amount 25.000			Recovery = 36.504%		
3) 1,2-DCA-D4(S)	5.13	65	24057	9.47109 ppb	0.00
Spiked Amount 25.000			Recovery = 37.884%		
5) Toluene-D8(S)	7.35	98	114893	9.14022 ppb	0.00
Spiked Amount 25.000			Recovery = 36.560%		
6) 4-Bromofluorobenzene(S)	10.74	95	40300	8.94008 ppb	0.00
Spiked Amount 25.000			Recovery = 35.760%		

Target Compounds Qvalue

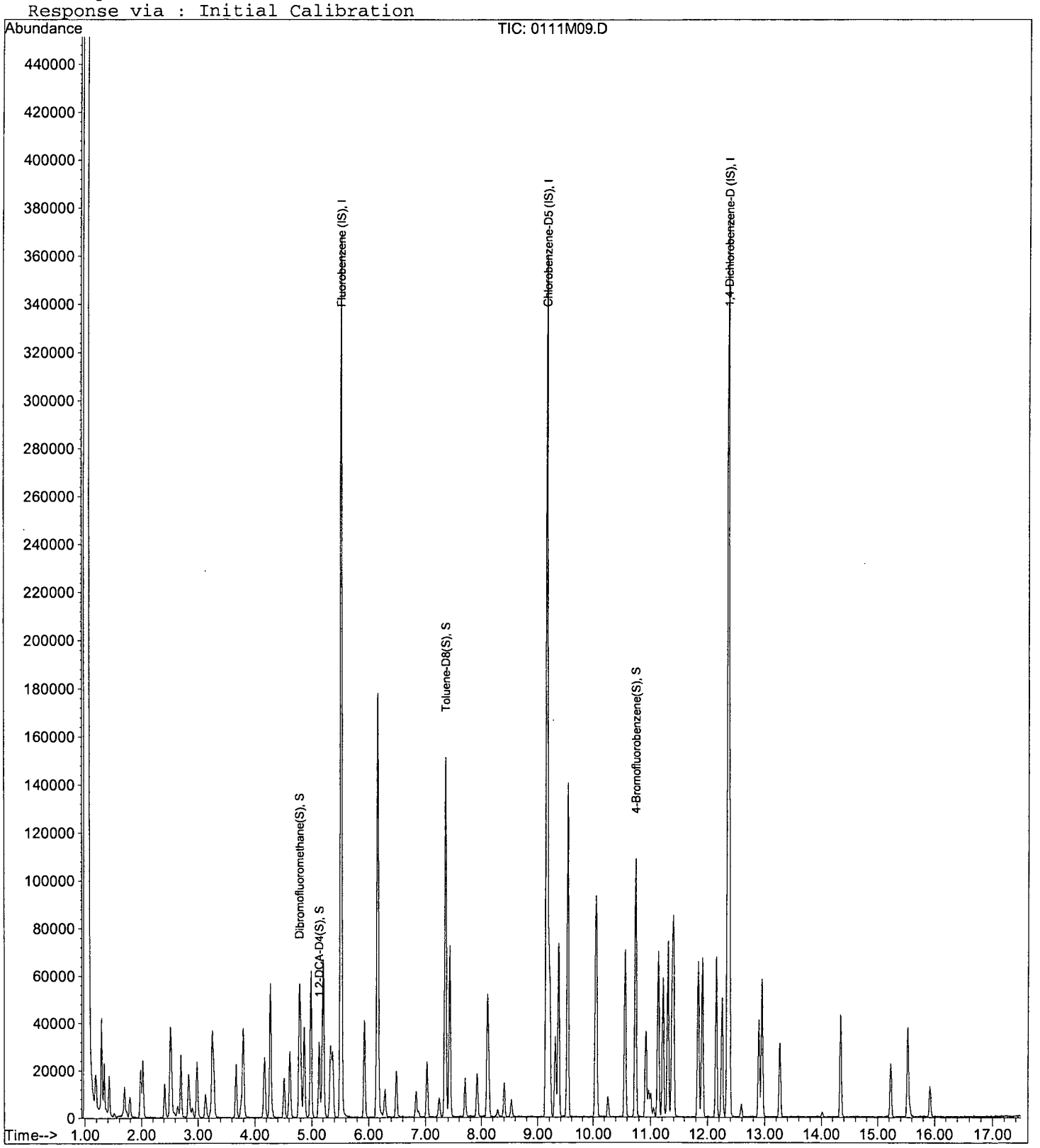
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\M170111\0111M09.D Vial: 7
Acq On : 11 Jan 17 12:49 Operator: PM,DG,SV,CMM
Sample : 2.0ug/L VOC STD 1/11/17D Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 13:35 2017 Quant Results File: MSUR111.RES

Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M10.D Vial: 8
Acq On : 11 Jan 17 13:17 Operator: PM,DG,SV,CMM
Sample : 5.0ug/L VOC STD 1/11/17E Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 13:35 2017 Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	341259	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.15	117	240539	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	127100	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.78	111	74853	24.96134 ppb	0.00
Spiked Amount 25.000			Recovery = 99.844%		
3) 1,2-DCA-D4(S)	5.13	65	61474	24.89609 ppb	0.00
Spiked Amount 25.000			Recovery = 99.584%		
5) Toluene-D8(S)	7.35	98	303378	25.06031 ppb	0.00
Spiked Amount 25.000			Recovery = 100.240%		
6) 4-Bromofluorobenzene(S)	10.74	95	109432	25.20692 ppb	0.00
Spiked Amount 25.000			Recovery = 100.828%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

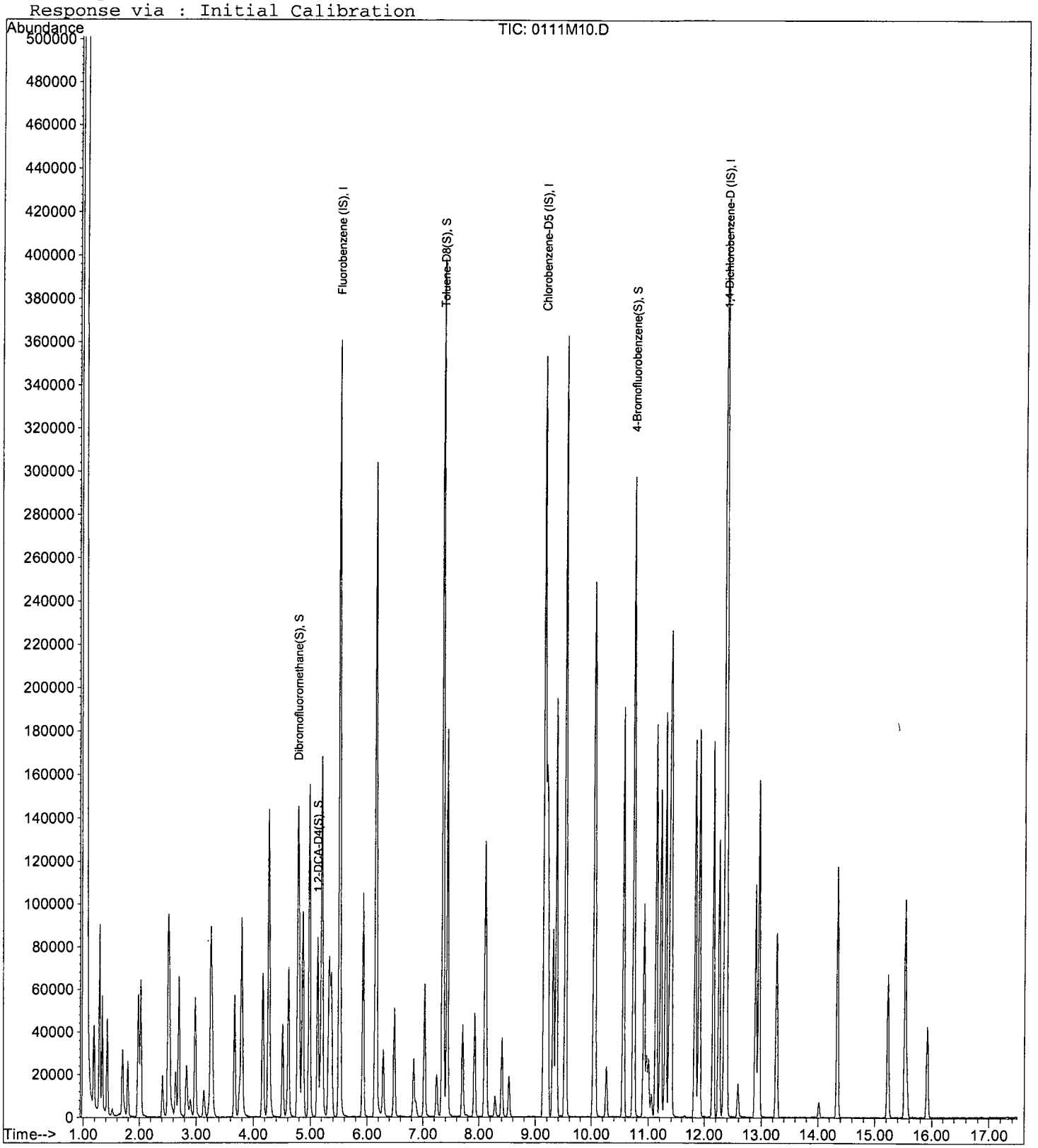
Quantitation Report

Data File : M:\MAX\DATA\M170111\0111M10.D
Acq On : 11 Jan 17 13:17
Sample : 5.0ug/L VOC STD 1/11/17E
Misc : IS&S 10/20/16

Vial: 8
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:35 2017 Quant Results File: MSUR111.RES

Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M11.D Vial: 9
Acq On : 11 Jan 17 13:46 Operator: PM,DG,SV,CMM
Sample : 10ug/L VOC STD 1/11/17F Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 13:35 2017 Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	337093	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.15	117	240952	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	127119	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.78	111	75135	25.36502 ppb	0.00
Spiked Amount 25.000			Recovery = 101.460%		
3) 1,2-DCA-D4(S)	5.13	65	57871	23.72657 ppb	0.00
Spiked Amount 25.000			Recovery = 94.908%		
5) Toluene-D8(S)	7.35	98	305768	25.21444 ppb	0.00
Spiked Amount 25.000			Recovery = 100.856%		
6) 4-Bromofluorobenzene(S)	10.74	95	110788	25.47553 ppb	0.00
Spiked Amount 25.000			Recovery = 101.904%		

Target Compounds Qvalue

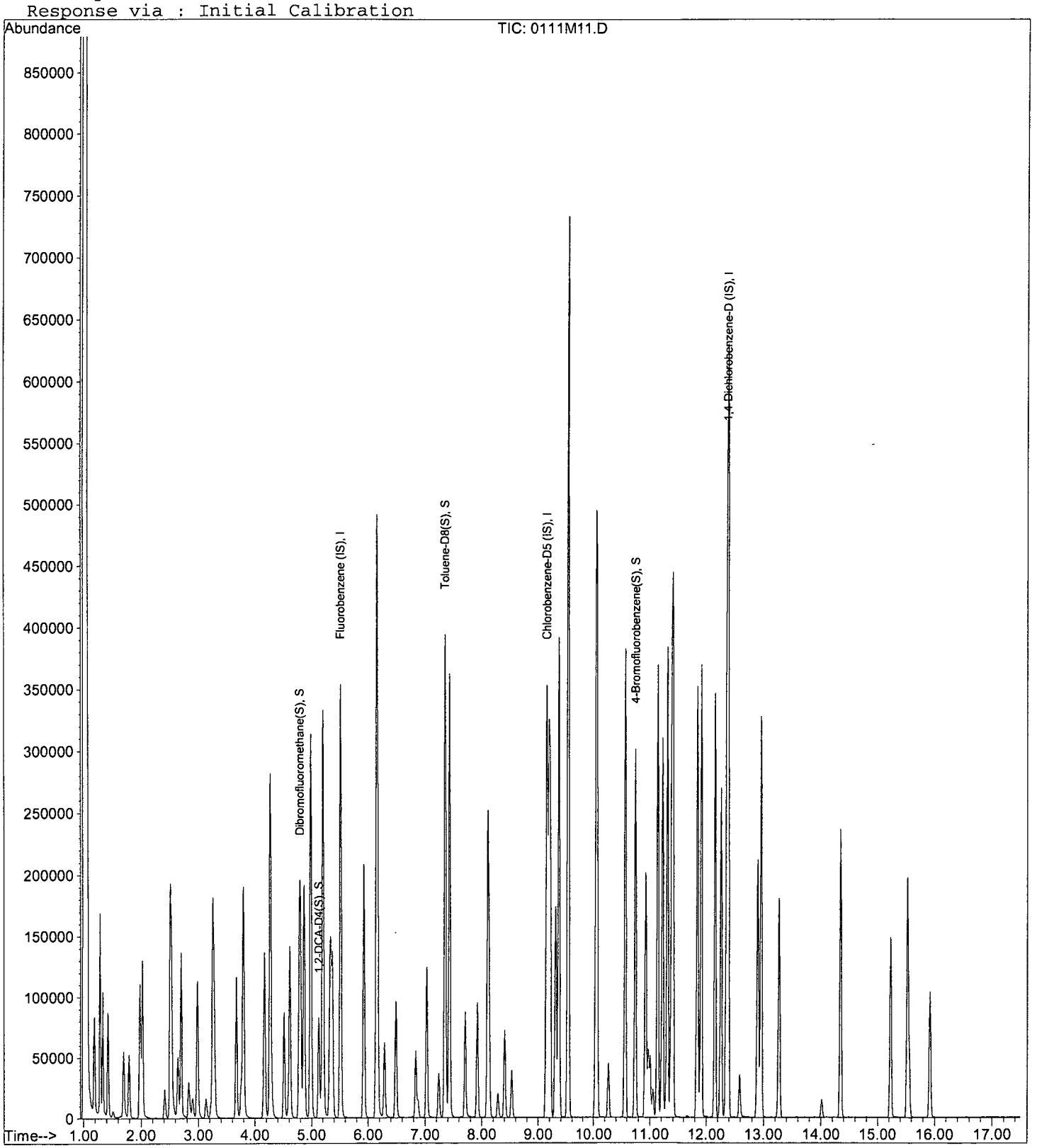
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\M170111\0111M11.D Vial: 9
Acq On : 11 Jan 17 13:46 Operator: PM,DG,SV,CMM
Sample : 10ug/L VOC STD 1/11/17F Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 13:35 2017 Quant Results File: MSUR111.RES

Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M12.D Vial: 10
Acq On : 11 Jan 17 14:14 Operator: PM,DG,SV,CMM
Sample : 20ug/L VOC STD 1/11/17G Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 13:35 2017 Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	335531	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.15	117	245289	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	132793	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.78	111	153257	51.97929 ppb	0.00
Spiked Amount 25.000			Recovery = 207.916%		
3) 1,2-DCA-D4(S)	5.13	65	126755	52.21030 ppb	0.00
Spiked Amount 25.000			Recovery = 208.840%		
5) Toluene-D8(S)	7.35	98	633500	51.31643 ppb	0.00
Spiked Amount 25.000			Recovery = 205.264%		
6) 4-Bromofluorobenzene(S)	10.74	95	230047	51.96363 ppb	0.00
Spiked Amount 25.000			Recovery = 207.856%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

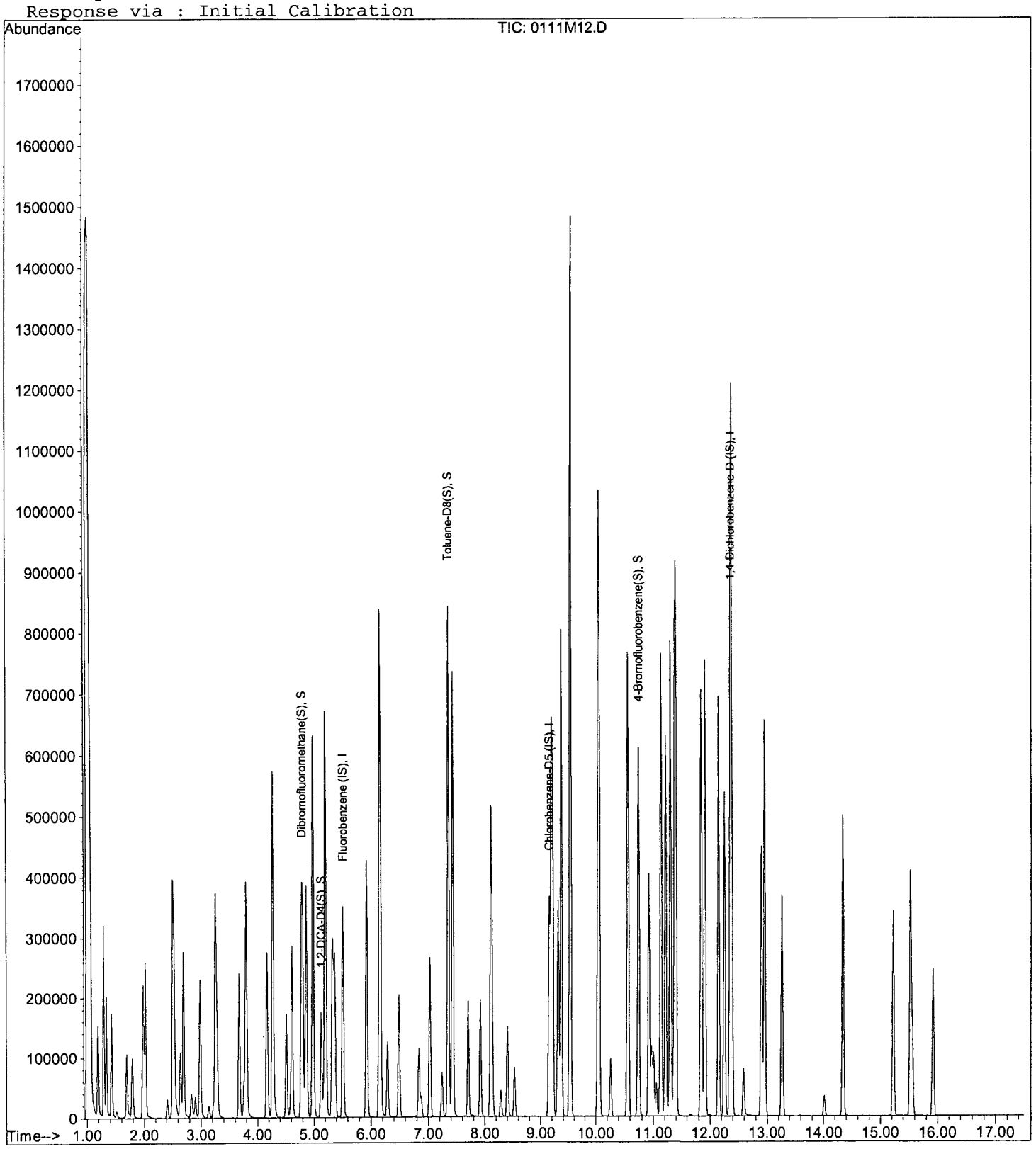
Quantitation Report

Data File : M:\MAX\DATA\M170111\0111M12.D
Acq On : 11 Jan 17 14:14
Sample : 20ug/L VOC STD 1/11/17G
Misc : IS&S 10/20/16

Vial: 10
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:35 2017 Quant Results File: MSUR111.RES

Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M13.D Vial: 11
Acq On : 11 Jan 17 14:42 Operator: PM,DG,SV,CMM
Sample : 40ug/L VOC STD 1/11/17H Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 13:35 2017 Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	347126	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.15	117	254484	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	138555	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.78	111	154211	50.55579 ppb	0.00
Spiked Amount 25.000			Recovery = 202.224%		
3) 1,2-DCA-D4(S)	5.13	65	124686	49.64258 ppb	0.00
Spiked Amount 25.000			Recovery = 198.572%		
5) Toluene-D8(S)	7.35	98	647545	50.55887 ppb	0.00
Spiked Amount 25.000			Recovery = 202.236%		
6) 4-Bromofluorobenzene(S)	10.74	95	239091	52.05515 ppb	0.00
Spiked Amount 25.000			Recovery = 208.220%		

Target Compounds Qvalue

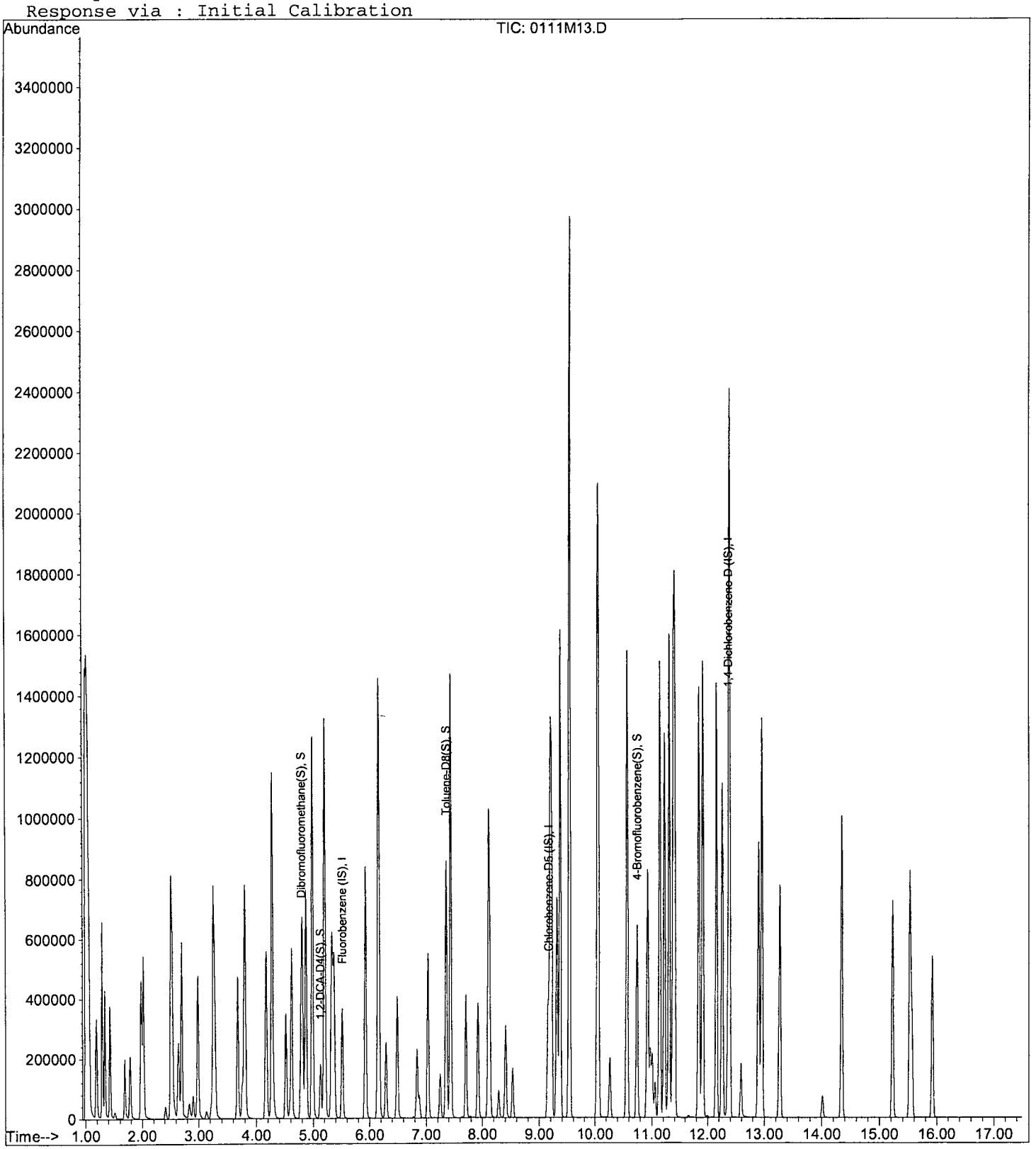
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\M170111\0111M13.D Vial: 11
Acq On : 11 Jan 17 14:42 Operator: PM,DG,SV,CMM
Sample : 40ug/L VOC STD 1/11/17H Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 13:35 2017 Quant Results File: MSUR111.RES

Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M14.D Vial: 12
Acq On : 11 Jan 17 15:10 Operator: PM,DG,SV,CMM
Sample : 100ug/L VOC STD 1/11/17I Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 13:36 2017 Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	347236	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.15	117	258306	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	143084	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.78	111	305828	100.22942 ppb	0.00
Spiked Amount 25.000			Recovery = 400.916%		
3) 1,2-DCA-D4(S)	5.13	65	246752	98.21090 ppb	0.00
Spiked Amount 25.000			Recovery = 392.844%		
5) Toluene-D8(S)	7.35	98	1271011	97.76934 ppb	0.00
Spiked Amount 25.000			Recovery = 391.076%		
6) 4-Bromofluorobenzene(S)	10.74	95	467571	100.29379 ppb	0.00
Spiked Amount 25.000			Recovery = 401.176%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

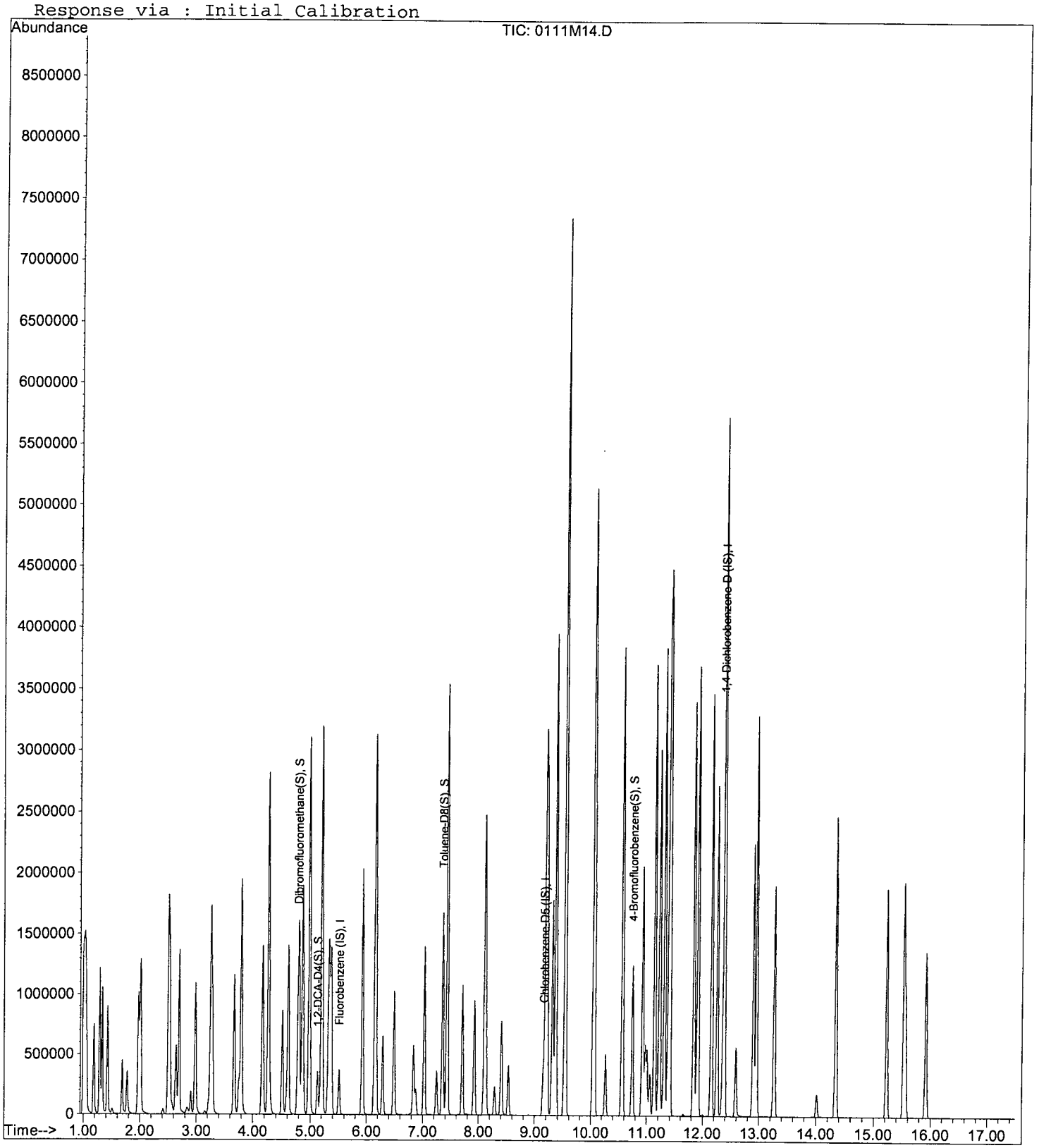
Data File : M:\MAX\DATA\M170111\0111M14.D
Acq On : 11 Jan 17 15:10
Sample : 100ug/L VOC STD 1/11/17I
Misc : IS&S 10/20/16

Vial: 12
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:36 2017

Quant Results File: MSUR111.RES

Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 1/11/17
Matrix: Instrument: Max

Initials:

		Compound	1	2	3	4	5	6	7				Avg	%RSD		
			0111M22.D	0111M23.D	0111M24.D	0111M25 D	0111M26.D	0111M27 D	0111M28.D							
1	I	Fluorobenzene (IS)														
2	TMHBL	Gasoline C6-C10	13.1	6.078	3.845	2.432	1.824	1.760	1.753				4.4	94	TMHBL	0.998
3																
4																
5																
6																
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Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0111M22.D
Acq On : 11 Jan 17 18:56
Sample : 20ug/L GAS STD 1/11/17
Misc : IS&S 10/20/16

Vial: 20
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 12:35 2017 Quant Results File: MGAS6111.RES

Quant Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 12:28:10 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	TIC	347960	25.00000 ppb	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
2) Gasoline C6-C10	7.35	TIC	3655169m	21.64320 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

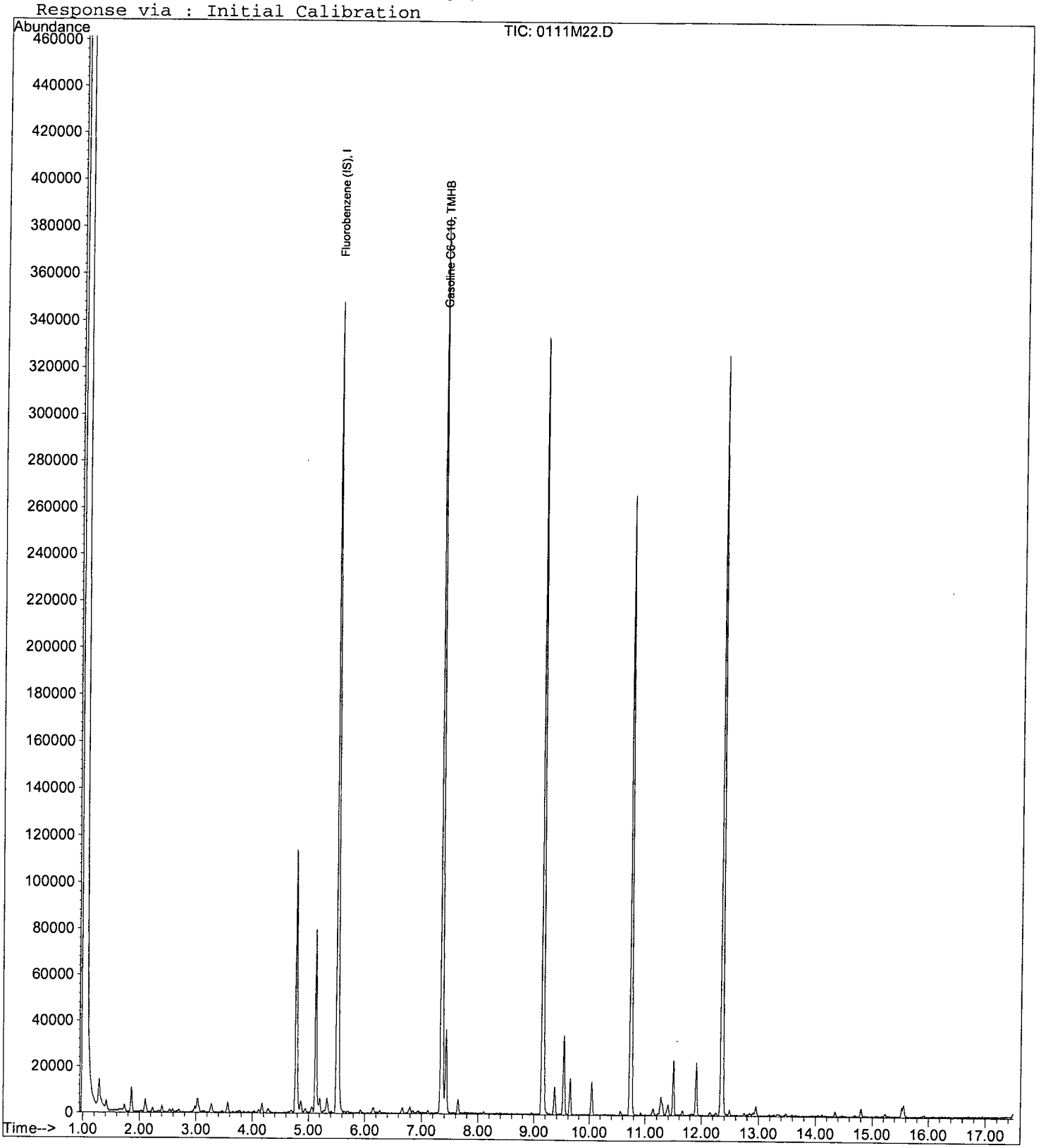
Data File : M:\MAX\DATA\M170111\0111M22.D
Acq On : 11 Jan 17 18:56
Sample : 20ug/L GAS STD 1/11/17
Misc : IS&S 10/20/16

Vial: 20
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 12:35 2017

Quant Results File: MGAS6111.RES

Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0111M23.D
Acq On : 11 Jan 17 19:24
Sample : 50ug/L GAS STD 1/11/17
Misc : IS&S 10/20/16

Vial: 21
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 12:37 2017 Quant Results File: MGAS6111.RES

Quant Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 12:28:10 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	TIC	356222	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.35	TIC	4329888m	50.44105	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

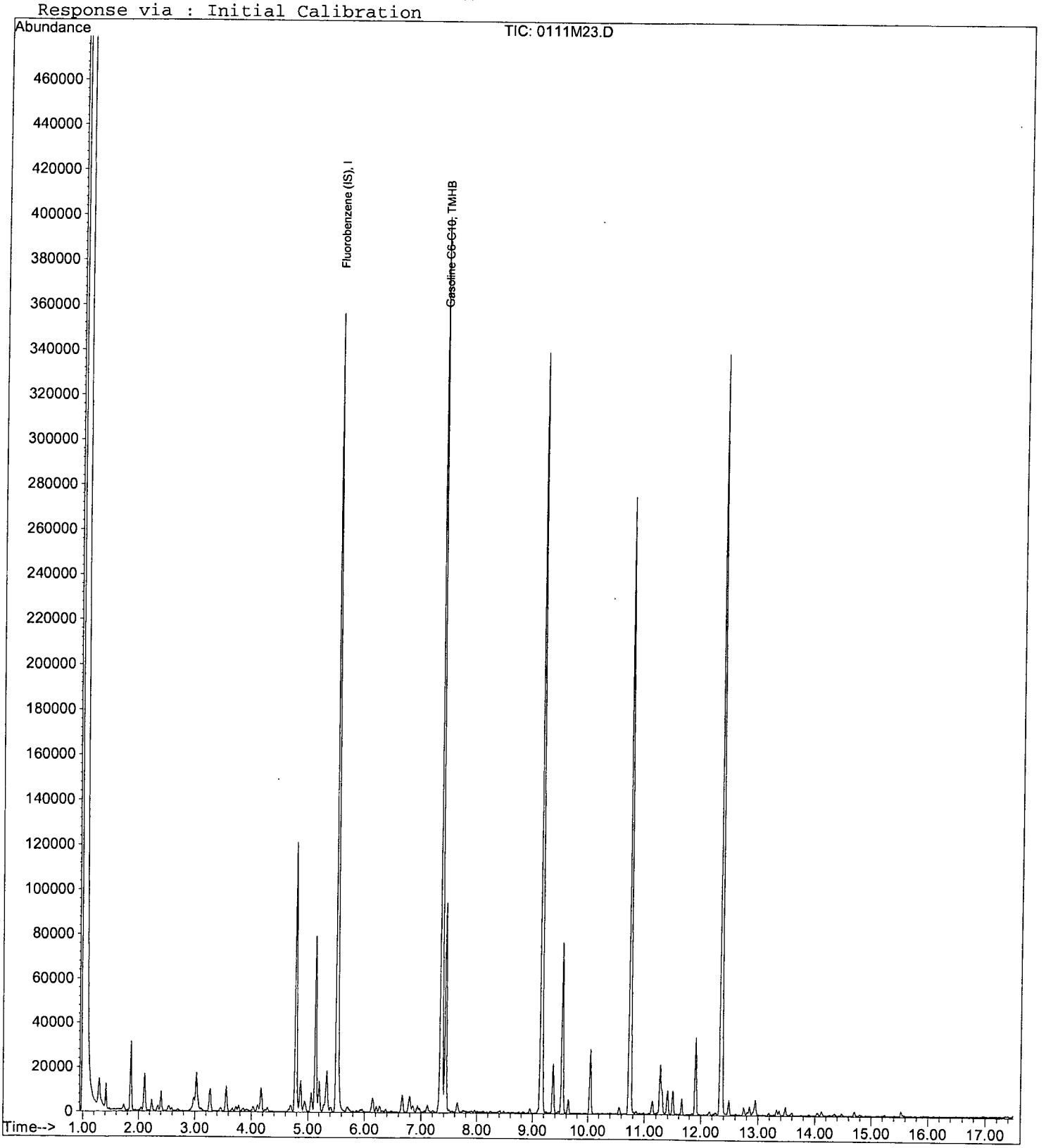
Data File : M:\MAX\DATA\M170111\0111M23.D
Acq On : 11 Jan 17 19:24
Sample : 50ug/L GAS STD 1/11/17
Misc : IS&S 10/20/16

Vial: 21
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 12:37 2017

Quant Results File: MGAS6111.RES

Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0111M24.D
Acq On : 11 Jan 17 19:53
Sample : 100ug/L GAS STD 1/11/17
Misc : IS&S 10/20/16

Vial: 22
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 12:37 2017 Quant Results File: MGAS6111.RES

Quant Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 12:28:10 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	TIC	348169	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.35	TIC	5338460m	105.89075	ppb	100

(#) = qualifier out of range (m) = manual integration
0111M24.D MGAS6111.M Thu Jan 12 13:25:39 2017

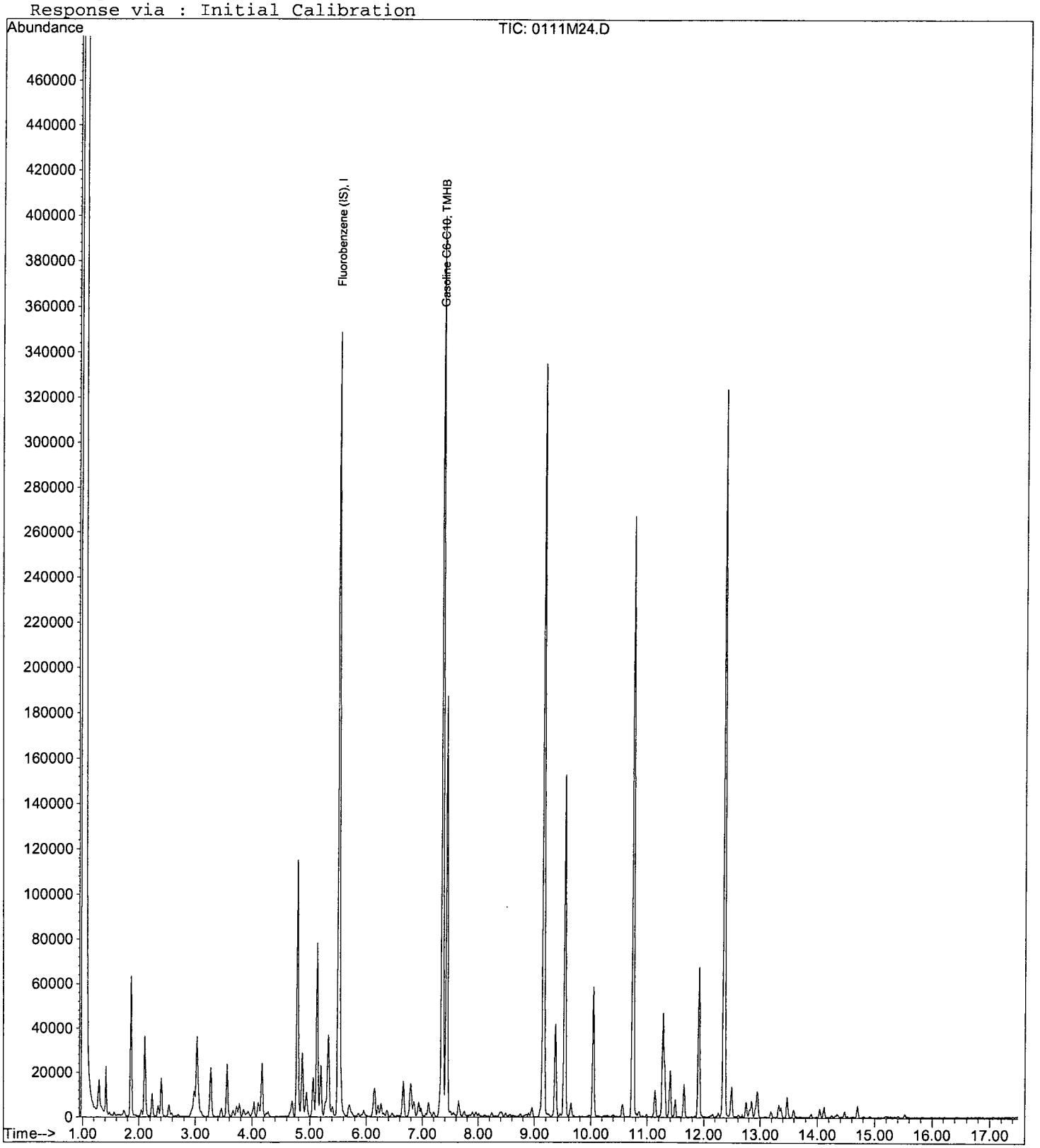
Quantitation Report

Data File : M:\MAX\DATA\M170111\0111M24.D
Acq On : 11 Jan 17 19:53
Sample : 100ug/L GAS STD 1/11/17
Misc : IS&S 10/20/16

Vial: 22
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 12:37 2017 Quant Results File: MGAS6111.RES

Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0111M25.D
Acq On : 11 Jan 17 20:21
Sample : 300ug/L GAS STD 1/11/17
Misc : IS&S 10/20/16

Vial: 23
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 12:38 2017 Quant Results File: MGAS6111.RES

Quant Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 12:28:10 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	TIC	335759	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.43	TIC	8964309m	304.20348	ppb	100

(#) = qualifier out of range (m) = manual integration
0111M25.D MGAS6111.M Thu Jan 12 13:25:43 2017 Page 1

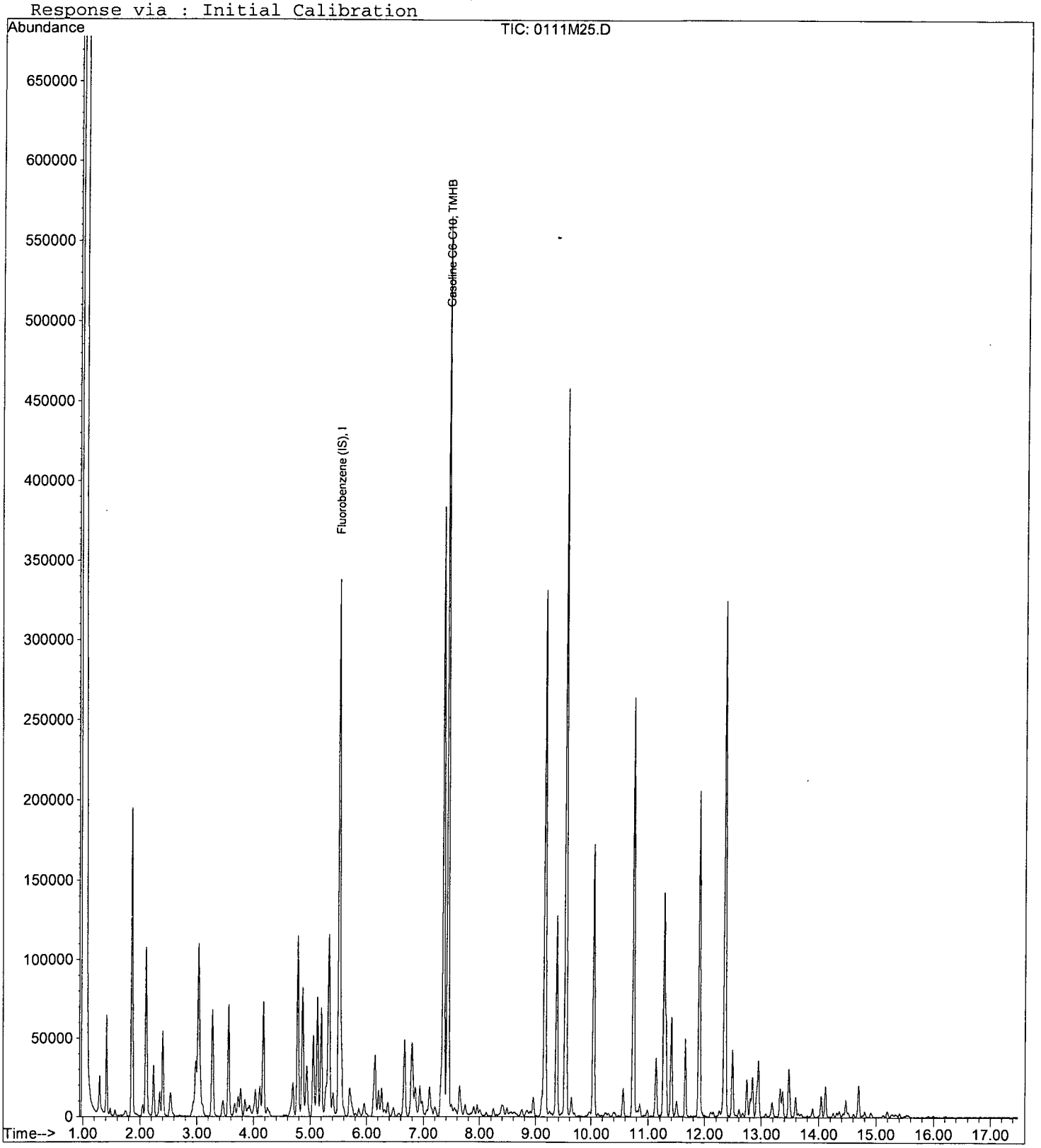
Quantitation Report

Data File : M:\MAX\DATA\M170111\0111M25.D
Acq On : 11 Jan 17 20:21
Sample : 300ug/L GAS STD 1/11/17
Misc : IS&S 10/20/16

Vial: 23
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 12:38 2017 Quant Results File: MGAS6111.RES

Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0111M26.D
Acq On : 11 Jan 17 20:49
Sample : 600ug/L GAS STD 1/11/17
Misc : IS&S 10/20/16

Vial: 24
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 12:39 2017 Quant Results File: MGAS6111.RES

Quant Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 12:28:10 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	TIC	344780	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.43	TIC	15091213m	602.08069	ppb	100

(#) = qualifier out of range (m) = manual integration
0111M26.D MGAS6111.M Thu Jan 12 13:25:46 2017

Quantitation Report

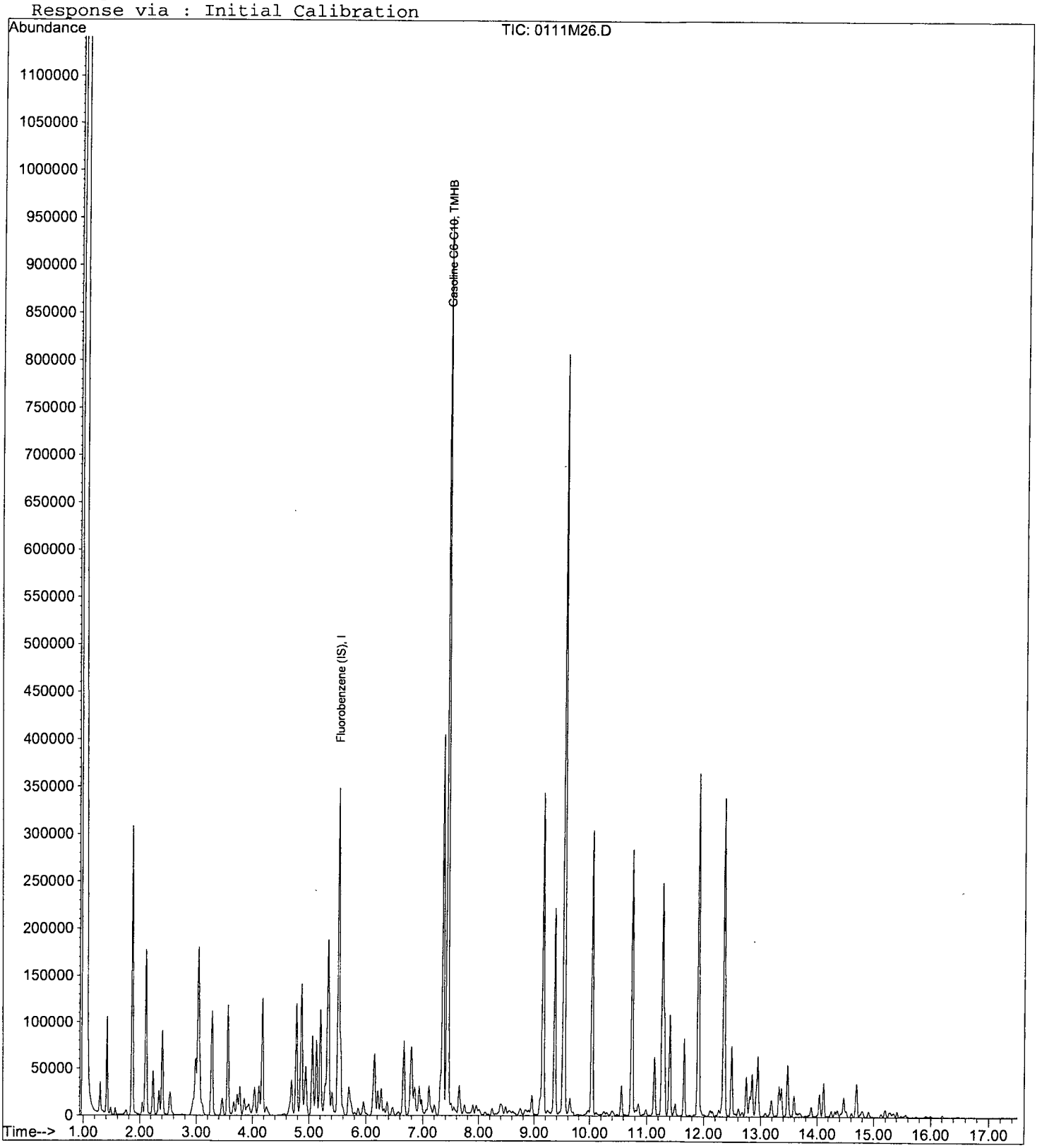
Data File : M:\MAX\DATA\M170111\0111M26.D
Acq On : 11 Jan 17 20:49
Sample : 600ug/L GAS STD 1/11/17
Misc : IS&S 10/20/16

Vial: 24
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 12:39 2017

Quant Results File: MGAS6111.RES

Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0111M27.D
Acq On : 11 Jan 17 21:17
Sample : 800ug/L GAS STD 1/11/17
Misc : IS&S 10/20/16

Vial: 25
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:08 2017 Quant Results File: MGAS6111.RES

Quant Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 12:28:10 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	TIC	348982	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.43	TIC	19651549m	820.89221	ppb	100

(#) = qualifier out of range (m) = manual integration
0111M27.D MGAS6111.M Thu Jan 12 13:25:50 2017 Page 1

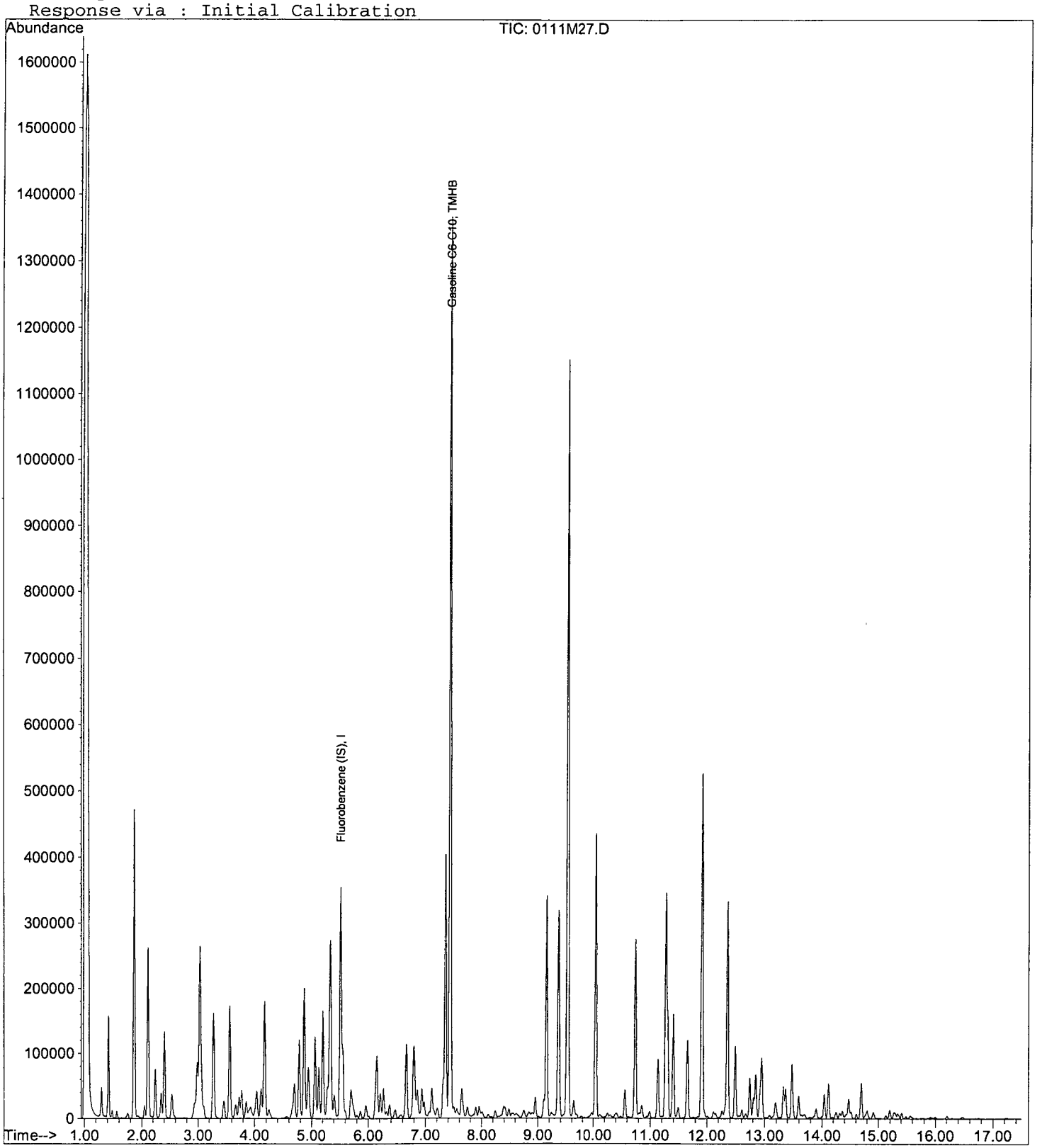
Quantitation Report

Data File : M:\MAX\DATA\M170111\0111M27.D
Acq On : 11 Jan 17 21:17
Sample : 800ug/L GAS STD 1/11/17
Misc : IS&S 10/20/16

Vial: 25
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:08 2017 Quant Results File: MGAS6111.RES

Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0111M28.D Vial: 26
Acq On : 11 Jan 17 21:46 Operator: PM,DG,SV,CMM
Sample : 1000ug/L GAS STD 1/11/17 Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 13:09 2017 Quant Results File: MGAS6111.RES

Quant Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 12:28:10 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	TIC	369516	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.43	TIC	25906480m	1061.64762	ppb	100

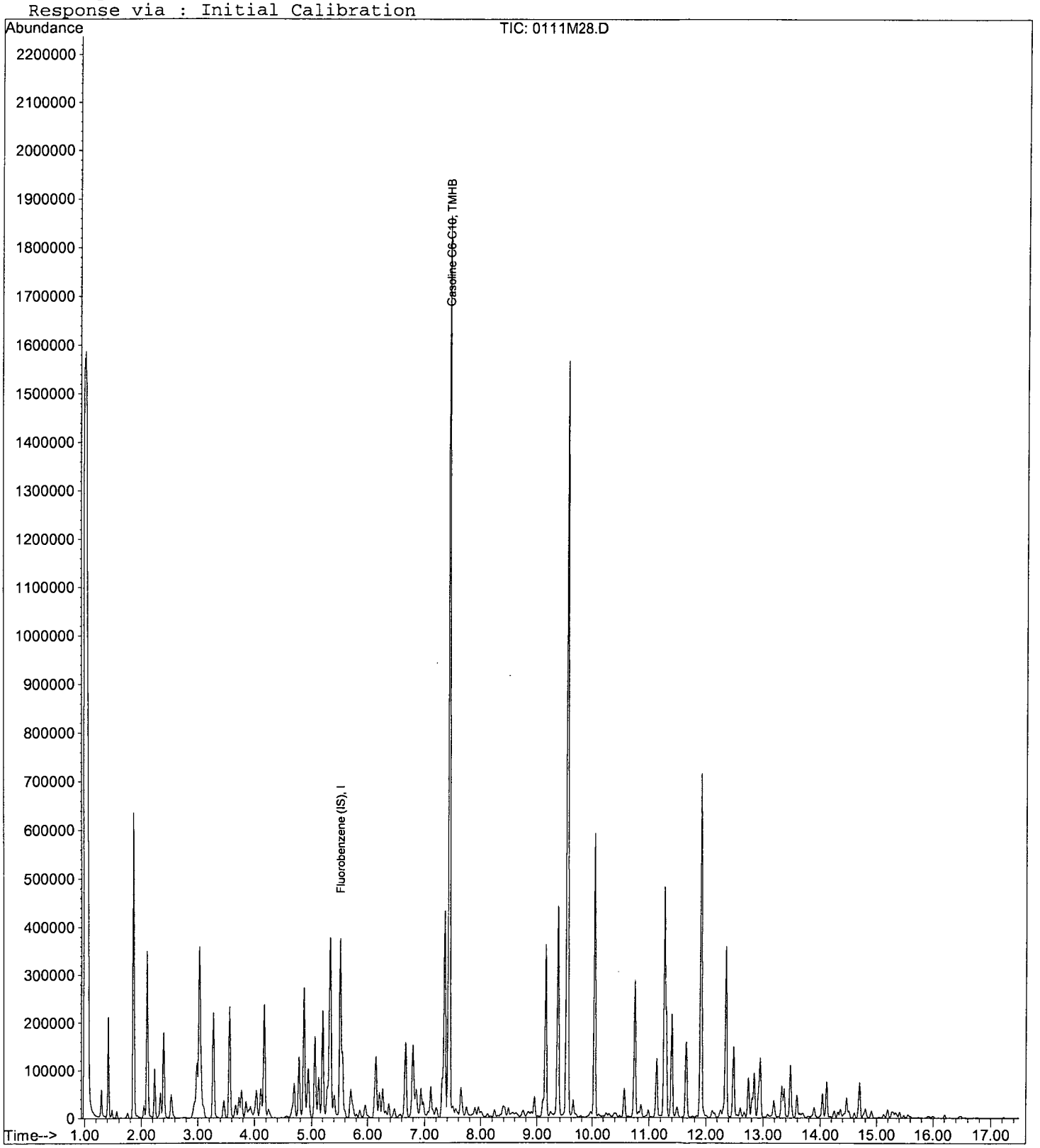
(#) = qualifier out of range (m) = manual integration
0111M28.D MGAS6111.M Thu Jan 12 13:25:54 2017 Page 1

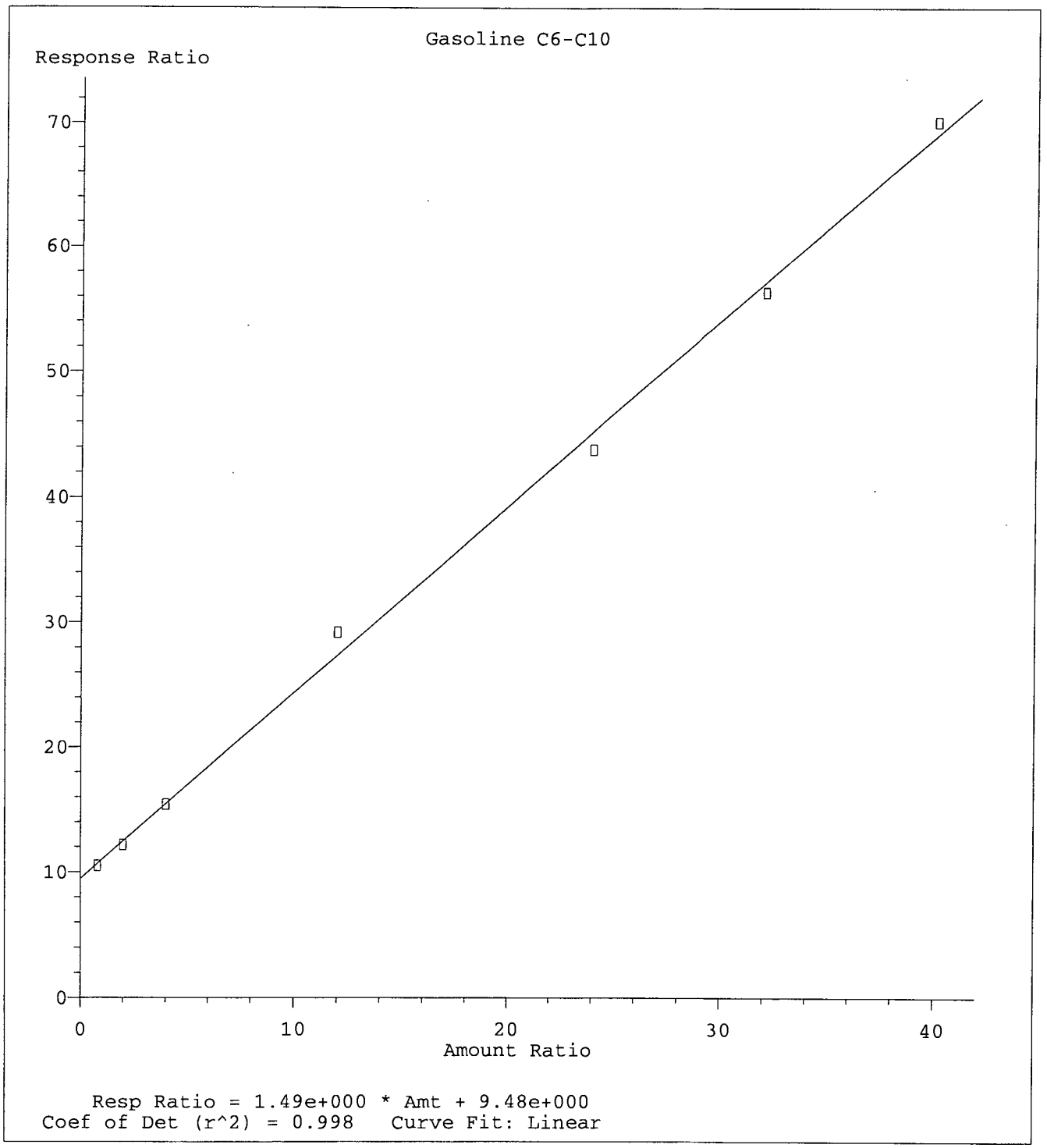
Quantitation Report

Data File : M:\MAX\DATA\M170111\0111M28.D Vial: 26
Acq On : 11 Jan 17 21:46 Operator: PM,DG,SV,CMM
Sample : 1000ug/L GAS STD 1/11/17 Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 13:09 2017 Quant Results File: MGAS6111.RES

Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration





Method Name: M:\MAX\DATA\M170111\MGAS6111.M
Calibration Table Last Updated: Thu Jan 12 13:09:40 2017

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 1/11/17
Instrument: Max
Initial Cal. Date: 1/11/17
Data File: 0111M31.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TMHB	Gasoline C6-C10	4.403	2.526	43	TMHBL	16
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
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17							
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28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			43.0		

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0111M31.D
Acq On : 11 Jan 17 23:11
Sample : (SS)300ug/L GAS STD 1/11/17
Misc : IS&S 10/20/16

Vial: 29
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:21 2017 Quant Results File: MGAS6111.RES

Quant Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	TIC	337548	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.43	TIC	10230204m	349.43485	ppb	100

(#) = qualifier out of range (m) = manual integration
0111M31.D MGAS6111.M Thu Jan 12 13:26:42 2017 Page 1

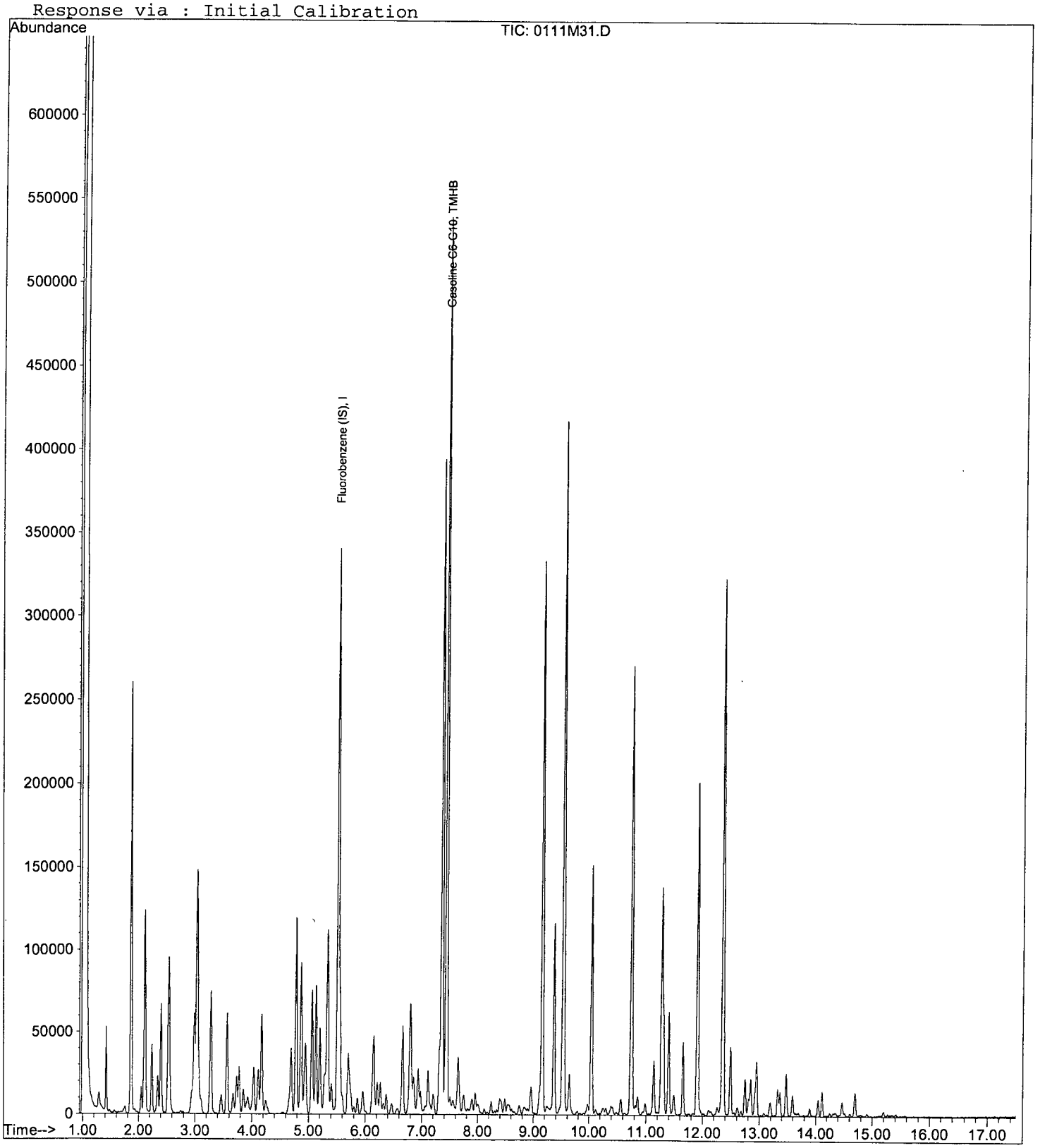
Quantitation Report

Data File : M:\MAX\DATA\M170111\0111M31.D
Acq On : 11 Jan 17 23:11
Sample : (SS)300ug/L GAS STD 1/11/17
Misc : IS&S 10/20/16

Vial: 29
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:21 2017 Quant Results File: MGAS6111.RES

Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 1/12/17
Instrument: Max
Initial Cal. Date: 1/11/17
Data File: 0111M42.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	4.403	2.339	47	TMHBL	4.0
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
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17							
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29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			47.0		

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0111M42.D
Acq On : 12 Jan 17 4:21
Sample : Ending CCV GAS 300ug/L 1/11/17
Misc : IS&S 10/20/16

Vial: 40
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:24 2017 Quant Results File: MGAS6111.RES

Quant Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	TIC	344003	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.43	TIC	9656630m	311.91049	ppb	100

(#) = qualifier out of range (m) = manual integration
0111M42.D MGAS6111.M Thu Jan 12 13:27:14 2017 Page 1

Quantitation Report

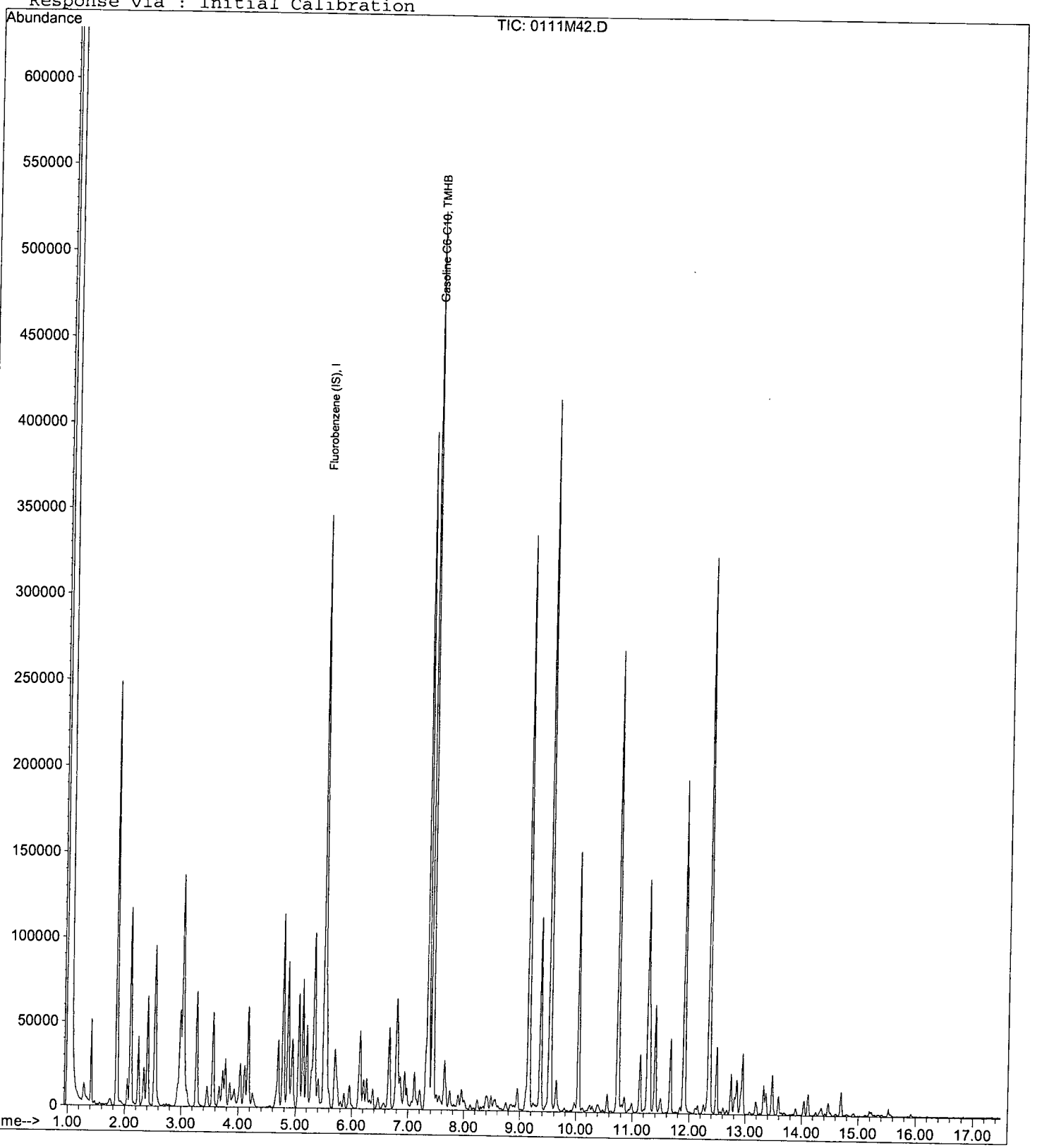
Data File : M:\MAX\DATA\M170111\0111M42.D
Acq On : 12 Jan 17 4:21
Sample : Ending CCV GAS 300ug/L 1/11/17
Misc : IS&S 10/20/16

Vial: 40
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:24 2017

Quant Results File: MGAS6111.RES

Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 1/12/17
Instrument: Max
Initial Cal. Date: 1/11/17
Data File: 0111M42.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	S	Dibromofluoromethane(S)	0.2197	0.2092	4.8	S	
3	S	1,2-DCA-D4(S)	0.1809	0.1690	6.6	S	
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	S	Toluene-D8(S)	1.258	1.265	0.51	S	
6	S	4-Bromofluorobenzene(S)	0.4512	0.4370	3.2	S	
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
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29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			3.8		

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M42.D
Acq On : 12 Jan 17 4:21
Sample : Ending CCV GAS 300ug/L 1/11/17
Misc : IS&S 10/20/16

Vial: 40
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:36 2017 Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	330565	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.15	117	230791	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	115645	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.78	111	69139	23.80175 ppb	0.00
Spiked Amount 25.000			Recovery =	95.208%	
3) 1,2-DCA-D4(S)	5.13	65	55850	23.35017 ppb	0.00
Spiked Amount 25.000			Recovery =	93.400%	
5) Toluene-D8(S)	7.35	98	291870	25.12803 ppb	0.00
Spiked Amount 25.000			Recovery =	100.512%	
6) 4-Bromofluorobenzene(S)	10.74	95	100851	24.21154 ppb	0.00
Spiked Amount 25.000			Recovery =	96.848%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0111M42.D MSUR111.M Thu Jan 12 13:38:10 2017

ORGANICS
Raw Data

APPL, INC.

Method Blank
EPA 8260B GRO WATER

Blank Name/QCG: **170111W-48676 - 215420**
Batch ID: #GRO86-170111AM

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	1/12/17	1/12/17
BLANK	SURROGATE: 4-BROMOFLUOR	95.6	85-114			%	1/12/17	1/12/17

Quant Method: MGAS6111.
Run #: 0111M35
Instrument: Max
Sequence: M170111
Initials: SV

GC SC-Blank-REG MDLs-DOD
Printed: 1/12/17 1:59:56 PM

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0111M35.D
Acq On : 12 Jan 17 1:04
Sample : 170111A BLK-1WM
Misc : IS&S 10/20/16

Vial: 33
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:22 2017 Quant Results File: MGAS6111.RES

Quant Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	TIC	346069	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

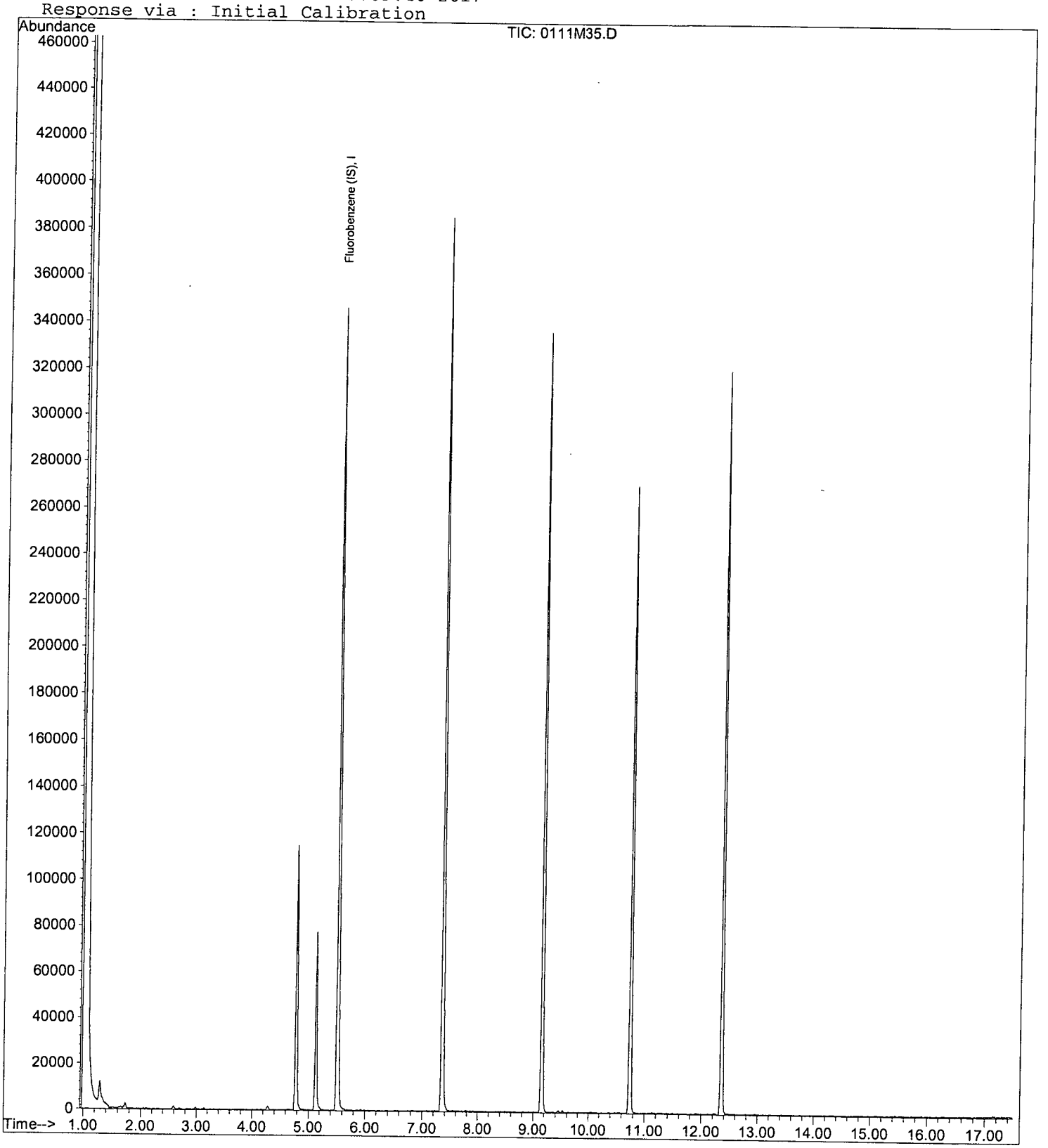
Data File : M:\MAX\DATA\M170111\0111M35.D
Acq On : 12 Jan 17 1:04
Sample : 170111A BLK-1WM
Misc : IS&S 10/20/16

Vial: 33
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:22 2017

Quant Results File: MGAS6111.RES

Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M35.D Vial: 33
Acq On : 12 Jan 17 1:04 Operator: PM,DG,SV,CMM
Sample : 170111A BLK-1WM Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 13:36 2017 Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	334296	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.15	117	234008	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	114014	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.78	111	72476	24.67208 ppb	0.00
Spiked Amount 25.000			Recovery = 98.688%		
3) 1,2-DCA-D4(S)	5.13	65	56791	23.47859 ppb	0.00
Spiked Amount 25.000			Recovery = 93.916%		
5) Toluene-D8(S)	7.35	98	298688	25.36150 ppb	0.00
Spiked Amount 25.000			Recovery = 101.444%		
6) 4-Bromofluorobenzene(S)	10.74	95	100946	23.90118 ppb	0.00
Spiked Amount 25.000			Recovery = 95.604%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Laboratory Control Spike Recovery
EPA 8260B GRO WATER

APPL ID: **170111W-48676 LCS - 215420**
Batch ID: #GRO86-170111AM

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
GASOLINE RANGE ORGANICS	300	299	99.7	78-122
SURROGATE: 4-BROMOFLUOROBENZ	25.0	24.6	98.4	85-114

Comments:

Primary	SPK
Quant Method :	MGAS6111.M
Extraction Date :	1/11/17
Analysis Date :	1/11/17
Instrument :	Max
Run :	0111M32
Initials :	SV

Printed: 1/12/17 2:00:00 PM
APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0111M32.D
Acq On : 11 Jan 17 23:39
Sample : 170111A CCV/LCS-1WM 300ug/L
Misc : IS&S 10/20/16

Vial: 30
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:21 2017 Quant Results File: MGAS6111.RES

Quant Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	TIC	347444	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.43	TIC	9484024m	298.90817	ppb	100

(#) = qualifier out of range (m) = manual integration
0111M32.D MGAS6111.M Thu Jan 12 13:26:46 2017

Quantitation Report

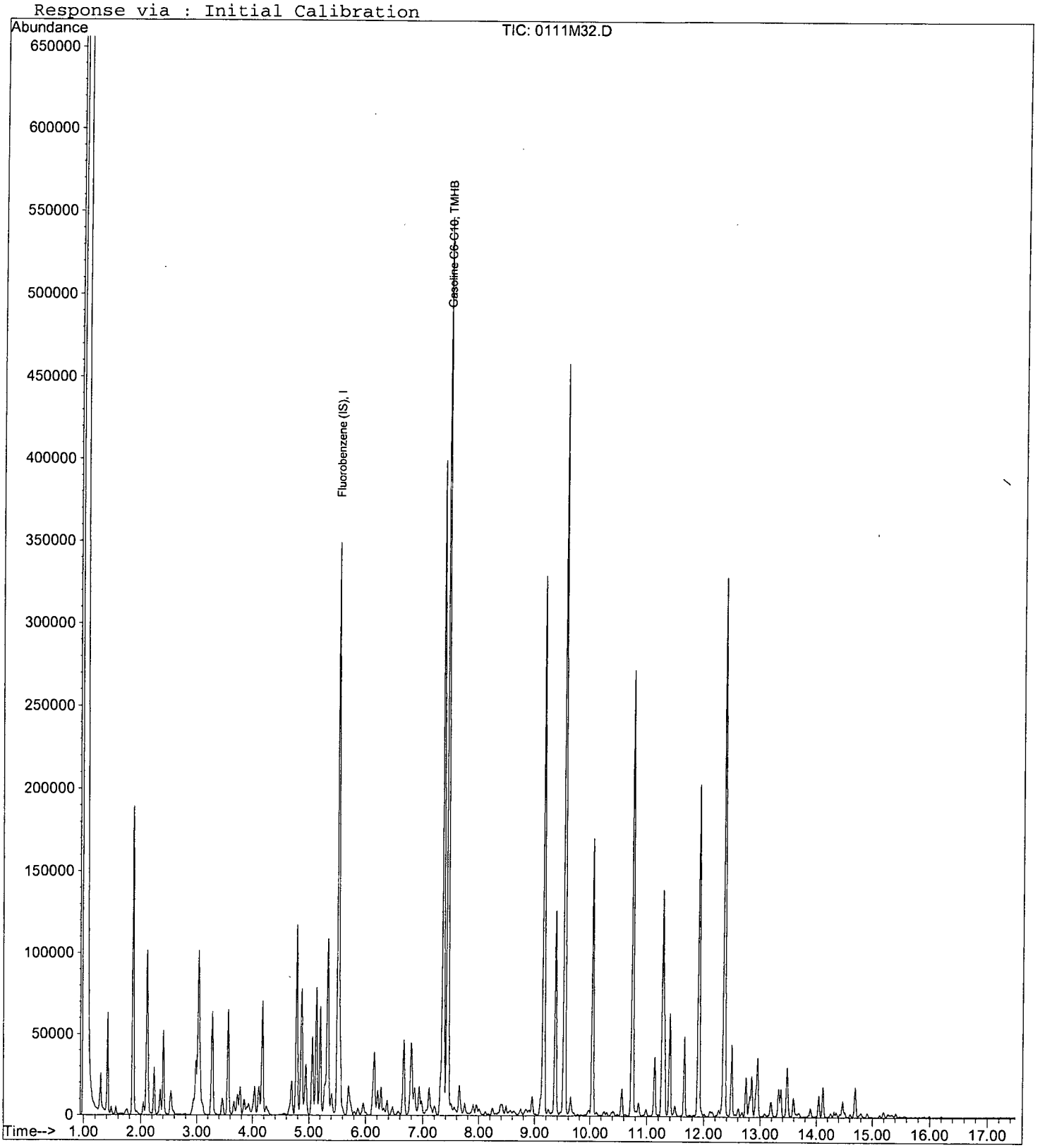
Data File : M:\MAX\DATA\M170111\0111M32.D
Acq On : 11 Jan 17 23:39
Sample : 170111A CCV/LCS-1WM 300ug/L
Misc : IS&S 10/20/16

Vial: 30
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:21 2017

Quant Results File: MGAS6111.RES

Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M32.D
Acq On : 11 Jan 17 23:39
Sample : 170111A CCV/LCS-1WM 300ug/L
Misc : IS&S 10/20/16

Vial: 30
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:36 2017 Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	335208	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.15	117	231108	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	119048	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.78	111	73138	24.82970 ppb	0.00
Spiked Amount 25.000			Recovery =	99.320%	
3) 1,2-DCA-D4(S)	5.13	65	57523	23.71652 ppb	0.00
Spiked Amount 25.000			Recovery =	94.868%	
5) Toluene-D8(S)	7.35	98	298803	25.68963 ppb	0.00
Spiked Amount 25.000			Recovery =	102.760%	
6) 4-Bromofluorobenzene(S)	10.74	95	102585	24.59404 ppb	0.00
Spiked Amount 25.000			Recovery =	98.376%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0111M32.D MSUR111.M Thu Jan 12 13:37:43 2017

Gasoline Curve Preparation for 100mL Purge (water)-MAX			
Exp Date:	01/12/17	2000ug/ml	
		12/4/16A	Final Volume
	Conc.	Exp.03/31/21	w/ P&T H2O
Date/code	µg/L	uL	mL
01/11/17V-DG	20	1	100
01/11/17W-DG	50	2.5	100
01/11/17X-DG	100	5	100
01/11/17Y-DG	300	15	100
01/11/17Z-DG	600	30	100
01/11/17AA-DG	800	40	100
01/11/17AB-DG	1000	50	100

Gasoline SECOND SOURCE preparation @300ppb-MAX			
Exp Date:	01/12/17	2000ug/ml	
		12/05/16B	Final Volume
	Conc.	Exp.05-04-18	w/ P&T H2O
Date/code	µg/L	uL	mL
01/11/17	300	15	100

PRIMARY STANDARD

01/10/17H							
50ug/ml Vol Work Std #7							
Exp:02/10/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120016-03	Gas Mix	2000	279822-36644	01/10/17DG	02/19/19	100
02SI	020049-02	HEXACHLOROETHANE	1000	254167-36564	12/27/16C-CMM	12/28/17	200
02SI	020228-02	Benzyl Chloride	1000	279824-36569	12/27/16E-CMM	05/24/18	200
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	3500
01/10/17I							
50ug/ml Vol Work Std #1							
Exp:02/10/17					Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	020145-02-02	2-CEVE	2000	288264-37217	11/22/16C-CMM	09/19/19	50
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	1950
01/10/17J							
50ug/ml Vol Work Std #8							
Exp:02/10/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	122039-02	Volatile Mix, 20-29	2000	258033-37169	12/16/16C-CMM	08/17/17	100
02SI	120023-03	VOC'S-54 COMP	2000	271929-36581	12/16/16D-CMM	02/15/18	100
02SI	020232-02	Vinyl Acetate	2000	292241-37194	12/16/16E-CMM	02/01/17	100
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	3700
01/10/17K							
50ug/ml Vol Work Std #2							
Exp:02/10/17							
Supplier	ID #	ID	ug/ml				
02SI	121020-05	HSL'S-Ketone Solution	2000	258036-36073	01/10/17BDG	08/17/17	100
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	3900
		01/10/17L					
		5ug/ml Vol Work Std #9					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #7		**01/10/17H**	Exp:02/10/17	200	
		50ug/ml Vol Work Std #8		**01/10/17J**	Exp:02/10/17	200	
		J&T Brand		12/16/16	12/16/17	1600	
		01/10/17M					
		5ug/ml Vol Work Std #10					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #1		**01/10/17I**	Exp:02/10/17	200	
		J&T Brand		12/16/16	12/16/17	1800	
		01/10/17N					
		5ug/ml Vol Work Std #12					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #2		**01/10/17K**	Exp:02/10/17	200	
		J&T Brand		12/16/16	12/16/17	1800	
01/10/17O							
250ug/ml TBA/IBA/Acetonitrile/Cyclohexanone/Acrolein/2-P							
Exp:02/10/17			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
02SI	120166-01	Volatile Mix 4-3	2000	275544-36413	12/16/16F-CMM	03/28/18	500
02SI	020229-09-02	Acrolein	10000	294146-37313	01/10/17FDG	01/14/17	100
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	3400

SECONDARY SOURCE

01/10/17P							
50ug/ml VOC Std#4							
Exp:02/10/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120296-01-SS	Custom 8260 Solution	2000	279826-37381	01/10/17DG	06/01/19	50
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	1950
01/10/17Q							
50ug/ml VOC Std#5							
Exp:02/10/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120016-03-SS	8260 Gases(SS)	2000	279826-36675	12/16/16I-CMM	06/01/19	50
02SI	020145-02-02-SS	2-CEVE (SS)	2000	254171-35380	12/16/16J-CMM	06/21/17	50
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	1900
01/10/17R							

50ug/ml VOC Std#6							
Exp:02/10/17							
	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120023-03-SS	VOC'S 54 COMP.	2000	265897-35927	12/16/16K-CMM	11/29/17	50
02SI	020232-02-SS	Vinyl Acetate(SS)	2000	292243-37196	12/16/16L-CMM	02/01/17	50
02SI	020049-02-SS	HEXACHLOROETHANE (SS)	1000	295337-37383	01/10/17D-DG	12/19/18	100
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	1800
01/10/17S							
250ug/ml TBA/IBA/Acetonitrile/Acrolein/2-P							
Exp:02/10/17			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
02SI	120166-01-SS	VOC Mix 4-3 (SS)	2000	258040-37230	01/10/17EDG	08/22/18	250
02SI	020229-09-SS	Acrolein SOLUTION (SS)	10000	294146-37314	01/10/17GDG	01/14/17	50
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	1700
8260 water		spiked with		Total Vol			
CCV/LCS	10ug/L Vol Std	10uL of 50ug/ml Std #7		50mL P&T H2O			
Ending CCV		10uL of 50ug/ml Std #8					
		10uL of 50ug/ml Std #1					
		10uL of 50ug/ml Std #2					
		25uL of 250ug/ml Std TBA					
X4 ketones							
LCS	10ug/L Vol Std	10uL of 50ug/ml Std #7		50mL P&T H2O			
		10uL of 50ug/ml Std #8					
		10uL of 50ug/ml Std #1					
		40uL of 50ug/ml Std #2					
		25uL of 250ug/ml Std TBA					
8260 soil		spiked with		Total Vol			
CCV/LCS	50ug/Kg Vol Std	5uL of 50ug/ml Std #7		5mL P&T H2O			
Ending CCV		5uL of 50ug/ml Std #8					
		5uL of 50ug/ml Std #1					
		5uL of 50ug/ml Std #2					
		5uL of 250ug/ml Std TBA					
Matrix spikes are prepared with same standards as ccv (see above) into the sample.							
8260water		spiked with		Total Vol			
SS	10ug/L STD	10uL of 50ug/ml Std #4		50mL P&T H2O			
		10uL of 50ug/ml Std #5					
		10uL of 50ug/ml Std #6					
		25uL of 250ug/ml Std TBA					
8260 SOIL	50ug/Kg STD	5uL of 50ug/ml Std #4		Total Vol			
SS		5uL of 50ug/ml Std #5		5mL P&T H2O			
		5uL of 50ug/ml Std #6					
		5uL of 250ug/ml Std TBA					

Injection Log

Directory: M:\MAX\DATA\M170111\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	4	0111M06.D	1	0.3ug/L VOC STD 1/11/17A	IS&S 10/20/16	11 Jan 17 11:24
2	5	0111M07.D	1	0.5ug/L VOC STD 1/11/17B	IS&S 10/20/16	11 Jan 17 11:52
3	6	0111M08.D	1	1.0ug/L VOC STD 1/11/17C	IS&S 10/20/16	11 Jan 17 12:21
4	7	0111M09.D	1	2.0ug/L VOC STD 1/11/17D	IS&S 10/20/16	11 Jan 17 12:49
5	8	0111M10.D	1	5.0ug/L VOC STD 1/11/17E	IS&S 10/20/16	11 Jan 17 13:17
6	9	0111M11.D	1	10ug/L VOC STD 1/11/17F	IS&S 10/20/16	11 Jan 17 13:46
7	10	0111M12.D	1	20ug/L VOC STD 1/11/17G	IS&S 10/20/16	11 Jan 17 14:14
8	11	0111M13.D	1	40ug/L VOC STD 1/11/17H	IS&S 10/20/16	11 Jan 17 14:42
9	12	0111M14.D	1	100ug/L VOC STD 1/11/17I	IS&S 10/20/16	11 Jan 17 15:10
10	20	0111M22.D	1	20ug/L GAS STD 1/11/17	IS&S 10/20/16	11 Jan 17 18:56
11	21	0111M23.D	1	50ug/L GAS STD 1/11/17	IS&S 10/20/16	11 Jan 17 19:24
12	22	0111M24.D	1	100ug/L GAS STD 1/11/17	IS&S 10/20/16	11 Jan 17 19:53
13	23	0111M25.D	1	300ug/L GAS STD 1/11/17	IS&S 10/20/16	11 Jan 17 20:21
14	24	0111M26.D	1	600ug/L GAS STD 1/11/17	IS&S 10/20/16	11 Jan 17 20:49
15	25	0111M27.D	1	800ug/L GAS STD 1/11/17	IS&S 10/20/16	11 Jan 17 21:17
16	26	0111M28.D	1	1000ug/L GAS STD 1/11/17	IS&S 10/20/16	11 Jan 17 21:46
17	29	0111M31.D	1	(SS)300ug/L GAS STD 1/11/17	IS&S 10/20/16	11 Jan 17 23:11
18	30	0111M32.D	1	170111A CCV/LCS-1WM 300u	IS&S 10/20/16	11 Jan 17 23:39
19	33	0111M35.D	1	170111A BLK-1WM	IS&S 10/20/16	12 Jan 17 1:04
20	34	0111M36.D	1	AZ48676W01	IS&S 10/20/16	12 Jan 17 1:32
21	35	0111M37.D	1	AZ48677W01	IS&S 10/20/16	12 Jan 17 2:00
22	36	0111M38.D	1	AZ48678W01	IS&S 10/20/16	12 Jan 17 2:28
23	37	0111M39.D	1	AZ48679W01	IS&S 10/20/16	12 Jan 17 2:57
24	38	0111M40.D	1	AZ48680W01	IS&S 10/20/16	12 Jan 17 3:25
25	40	0111M42.D	1	Ending CCV GAS 300ug/L 1/11	IS&S 10/20/16	12 Jan 17 4:21

ORGANICS

APPL, INC.

ORGANICS
QC Summary

APPL, INC.

Method Blank
METHANE

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **170116W-48866 - 215507**
Batch ID: #RSKME-170116A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/16/17	01/16/17

Quant Method: RSK0901.M
Run #: 17011604
Instrument: Rocky
Sequence: 160901
Initials: CMO

GC SC-Blank-REG MDLs-DOD
Printed: 01/21/17 12:28:59 PM

Laboratory Control Spike Recovery
METHANE

APPL ID: **170116W-48866 LCS - 215507**
Batch ID: #RSKME-170116A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
METHANE	1340	1000	74.9	72-125

Comments: _____

Primary	SPK
Quant Method :	RSK0901.M
Extraction Date :	01/16/17
Analysis Date :	01/16/17
Instrument :	Rocky
Run :	17011603
Initials :	CMO

Printed: 01/21/17 12:28:51 PM
APPL Standard LCS

RSK 175

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81936

Case No: 81936 Date Analyzed: 01/16/17

Matrix: WATER Instrument: Rocky

Blank ID: 170116A-BLK Time Analyzed: 1041

APPL ID.	Client Sample No.	File ID.	Date Analyzed
170116A-LCS	Lab Control Spike	17011603	01/16/17 1037
170116A-BLK	Blank	17011604	01/16/17 1041
AZ48676	ERH166	17011605	01/16/17 1050
AZ48677	ERH165	17011606	01/16/17 1054

Comments: Batch: #RSKME-170116A

Printed: 01/23/17 9:08:08 AM
Form 4, Blank Summary

ORGANICS
Sample Data

APPL, INC.

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH166
Sample Collection Date: 01/09/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81936
APPL ID: AZ48676
QCG: #RSKME-170116A-215507

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/16/17	01/16/17

Quant Method:	RSK0901.M
Run #:	17011605
Instrument:	Rocky
Sequence:	160901
Dilution Factor:	1
Initials:	CMO

Printed: 01/21/17 12:28:55 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\17011605.D Vial: 6
Acq On : 16 Jan 17 10:50 Operator: lac
Sample : AZ48676W05 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 16 10:53 2017 Quant Results File: RSK0901.RES

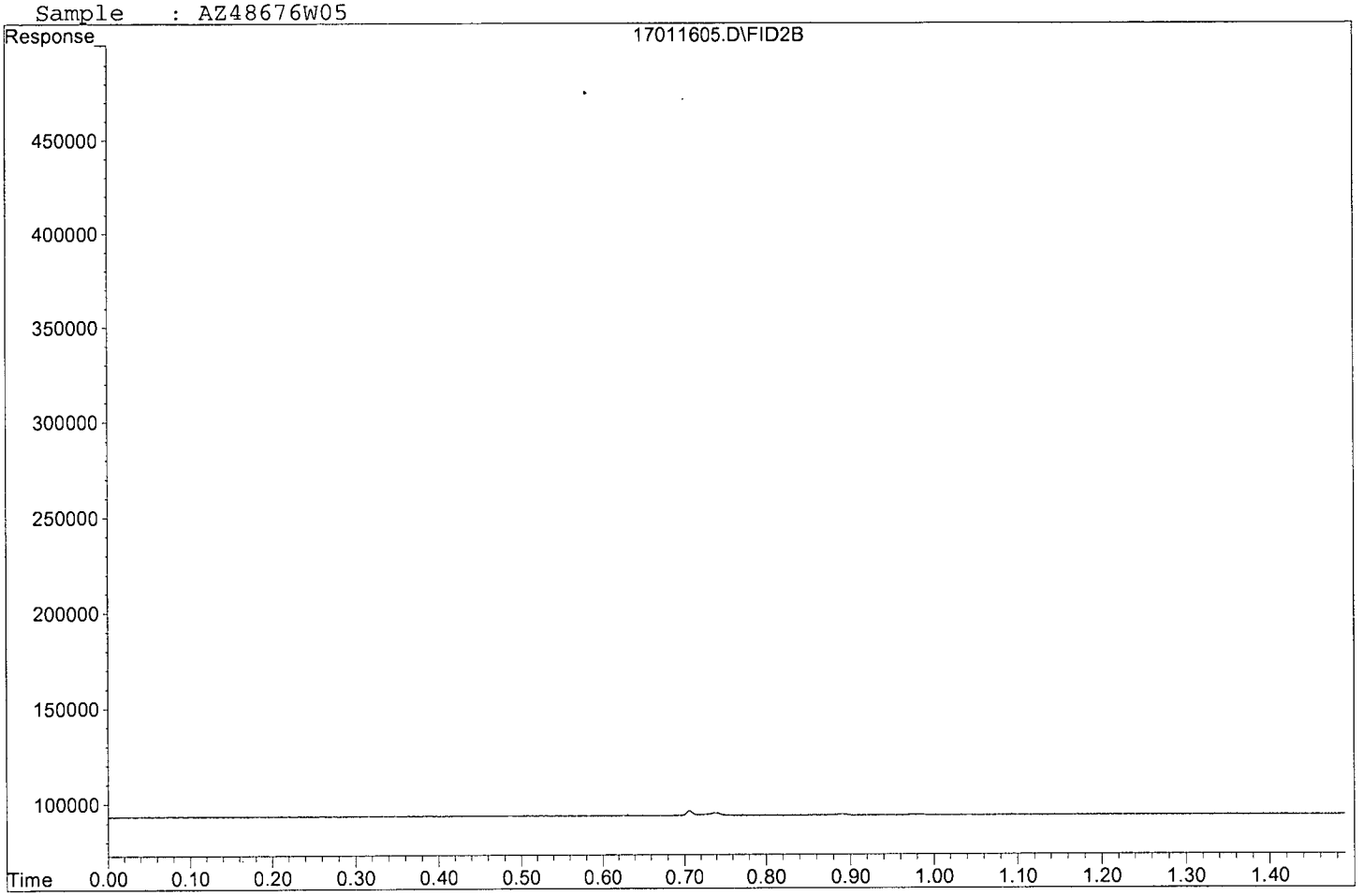
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 17 12:10:52 2017
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.74	1435	N.D.	ppb
2) ATM Ethane	0.89	717	N.D.	ppb
3) ATM Ethene	0.98	573	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\17011605.D
Sample : AZ48676W05



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH165
Sample Collection Date: 01/09/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81936
APPL ID: AZ48677
QCG: #RSKME-170116A-215507

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/16/17	01/16/17

Quant Method:	RSK0901.M
Run #:	17011606
Instrument:	Rocky
Sequence:	160901
Dilution Factor:	1
Initials:	CMO

Printed: 01/21/17 12:28:55 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\17011606.D Vial: 7
Acq On : 16 Jan 17 10:54 Operator: lac
Sample : AZ48677W05 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 16 10:58 2017 Quant Results File: RSK0901.RES

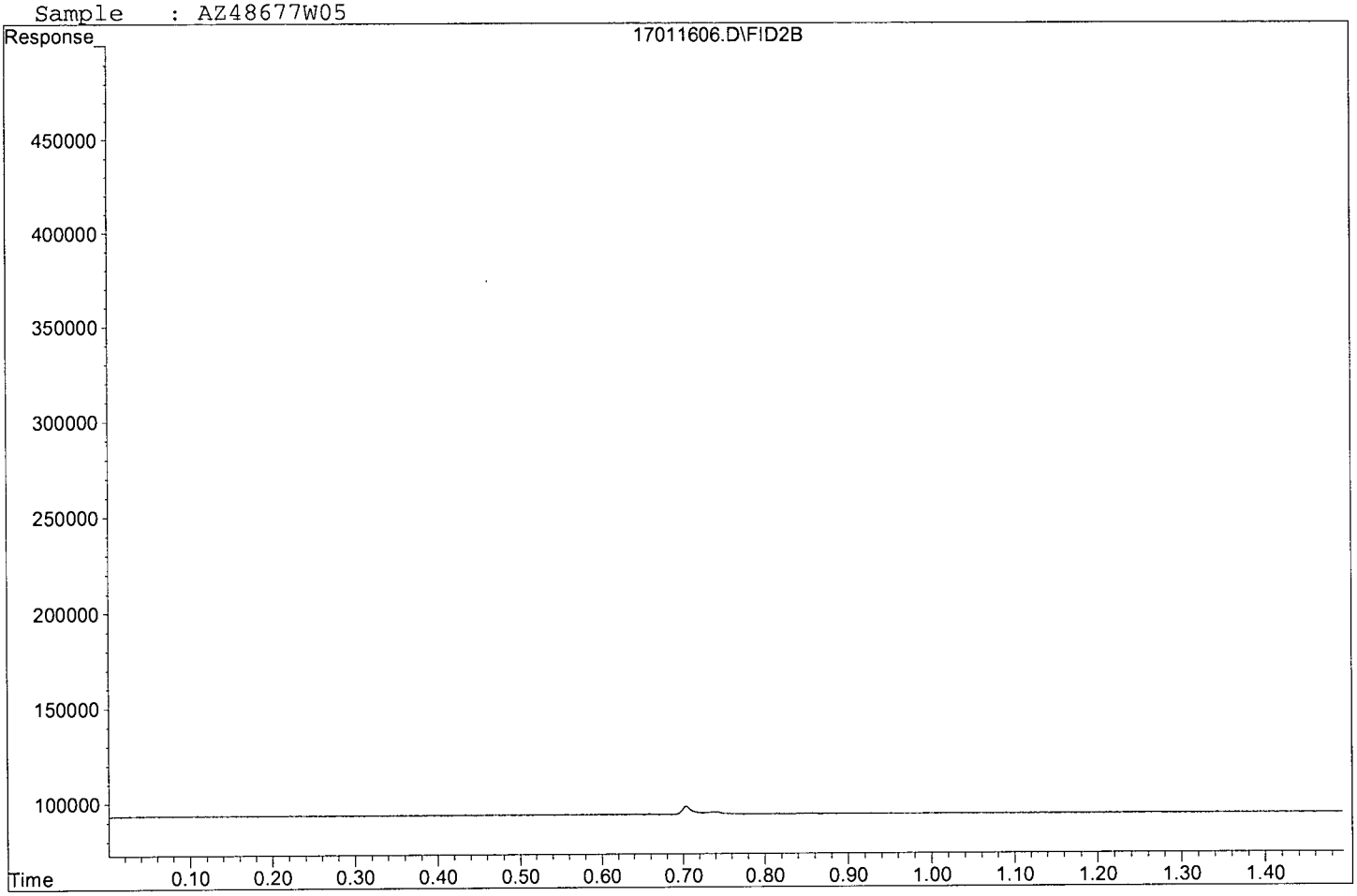
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 17 12:10:52 2017
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.74	1408	N.D.	ppb
2) ATM Ethane	0.89	346	N.D.	ppb
3) ATM Ethene	0.99	229	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\17011606.D
Sample : AZ48677W05



ORGANICS
Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:
SDG No:
Initial Cal. Date: 09/01/16
Instrument: 7890
Initials:

		Compound	1	2	3	4	5	6	7	8	9	10	Avg	%RSD		
			0901000.D	0901001.D	0901002.D	0901003.D	0901004.D	0901005.D	0901006.D	0901007.D	0901008.D	0901009.D				
1	ATM	Methane	7448	5672	3042	3435	1074	1006	1184	1314	1084	1089	2635	87	ATM	
2	ATM	Ethane	1509	1521	1416	2554	478	657	816	933	791	798	1147	54	ATM	
3	ATM	Ethene	1826	1525	1280	2301	444	570	693	733	628	626	1063	60	ATM	
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5.7170224

FORM61

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901000.D Vial: 1
Acq On : 1 Sep 16 11:38 Operator: lac
Sample : RSK Level 1 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

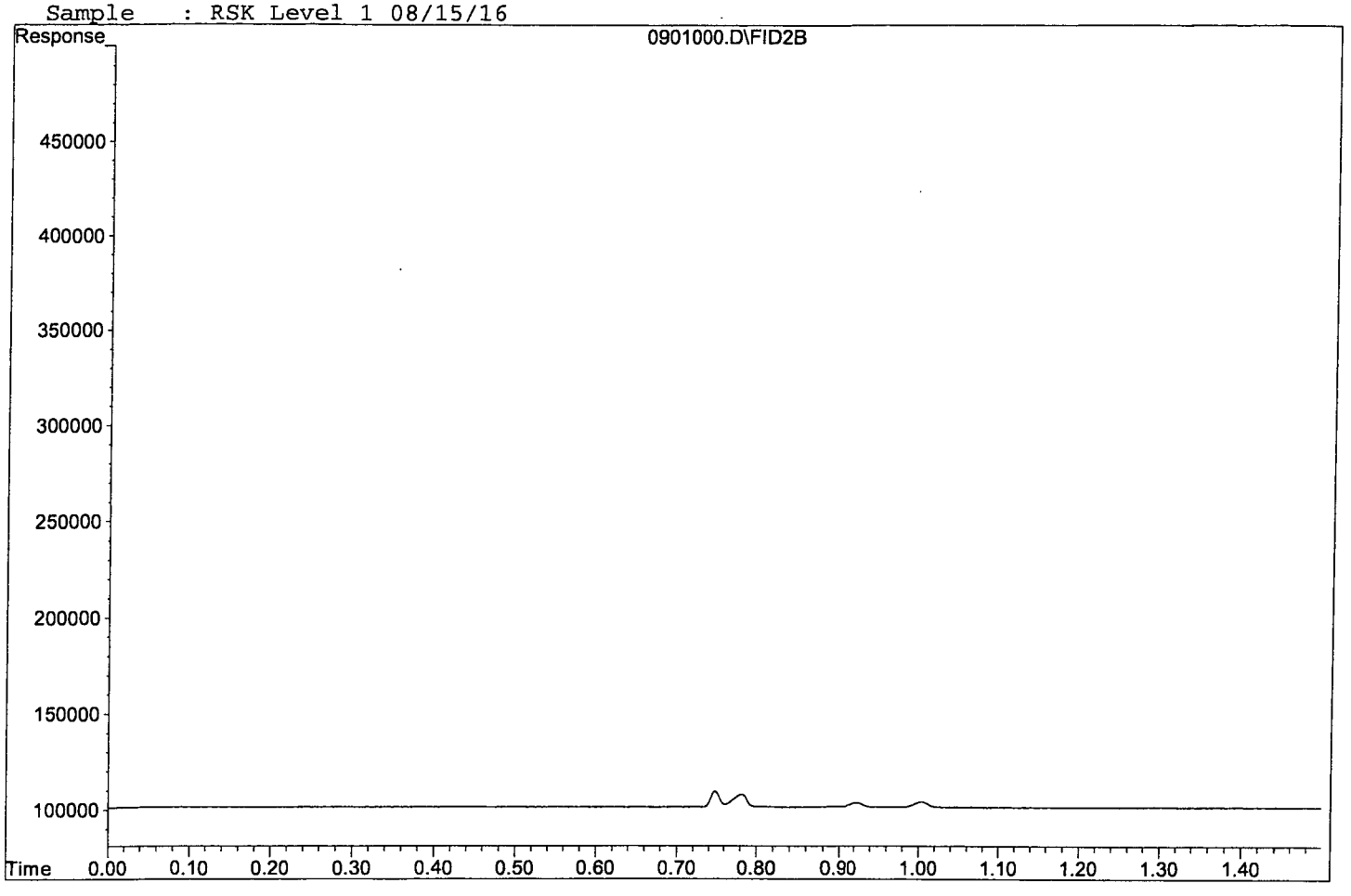
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.78	6703	N.D.	ppb
2) ATM Ethane	0.92	2566	N.D.	ppb
3) ATM Ethene	1.00	2922	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901000.D
Sample : RSK Level 1 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901001.D Vial: 2
Acq On : 1 Sep 16 11:41 Operator: lac
Sample : RSK Level 2 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

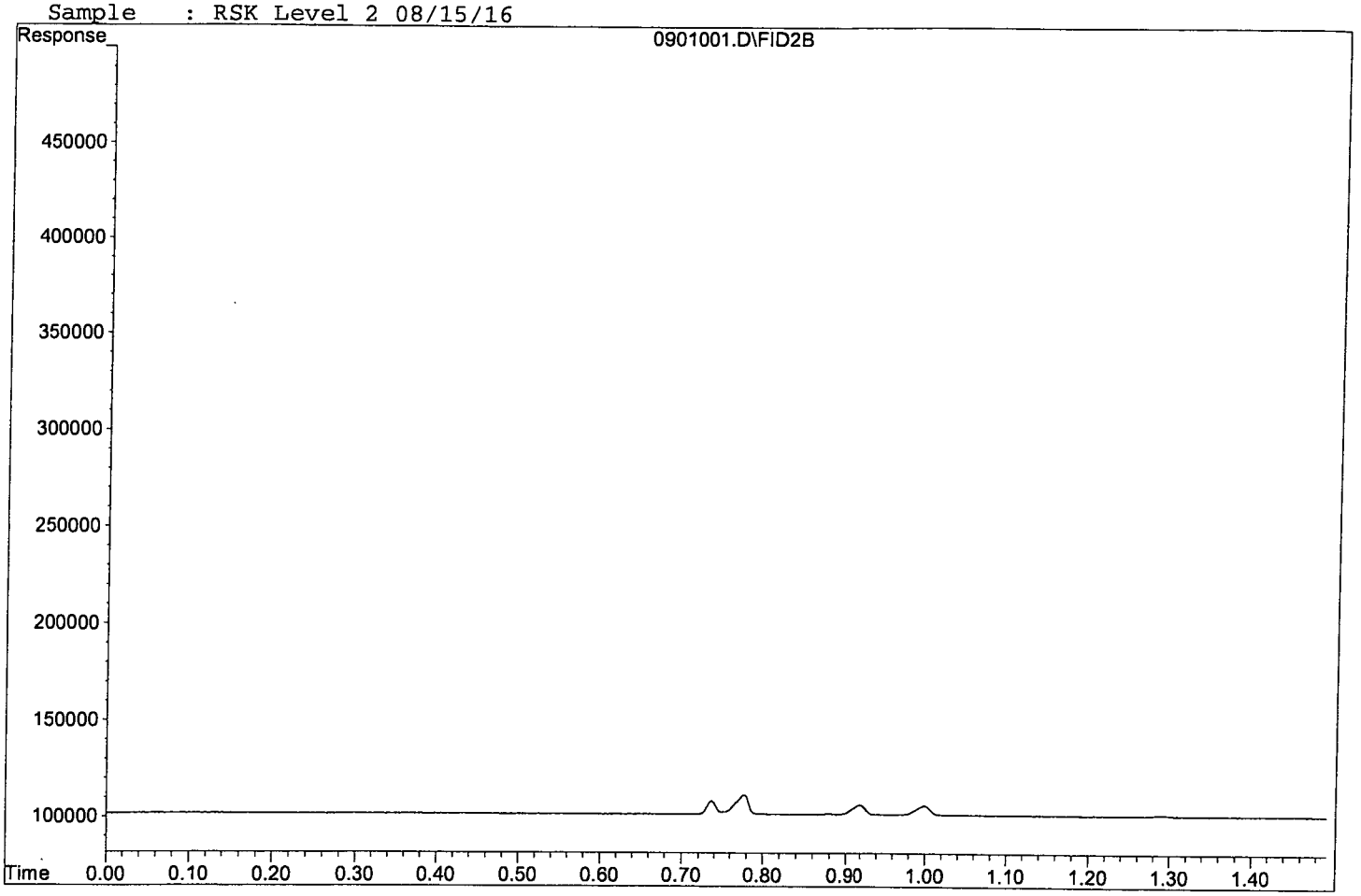
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.79	569	N.D.	ppb
2) ATM Ethane	0.94	352	N.D.	ppb
3) ATM Ethene	1.02	250	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901001.D
Sample : RSK Level 2 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901002.D Vial: 3
Acq On : 1 Sep 16 11:44 Operator: lac
Sample : RSK Level 3 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 14 13:31 2016 Quant Results File: RSK0901.RES

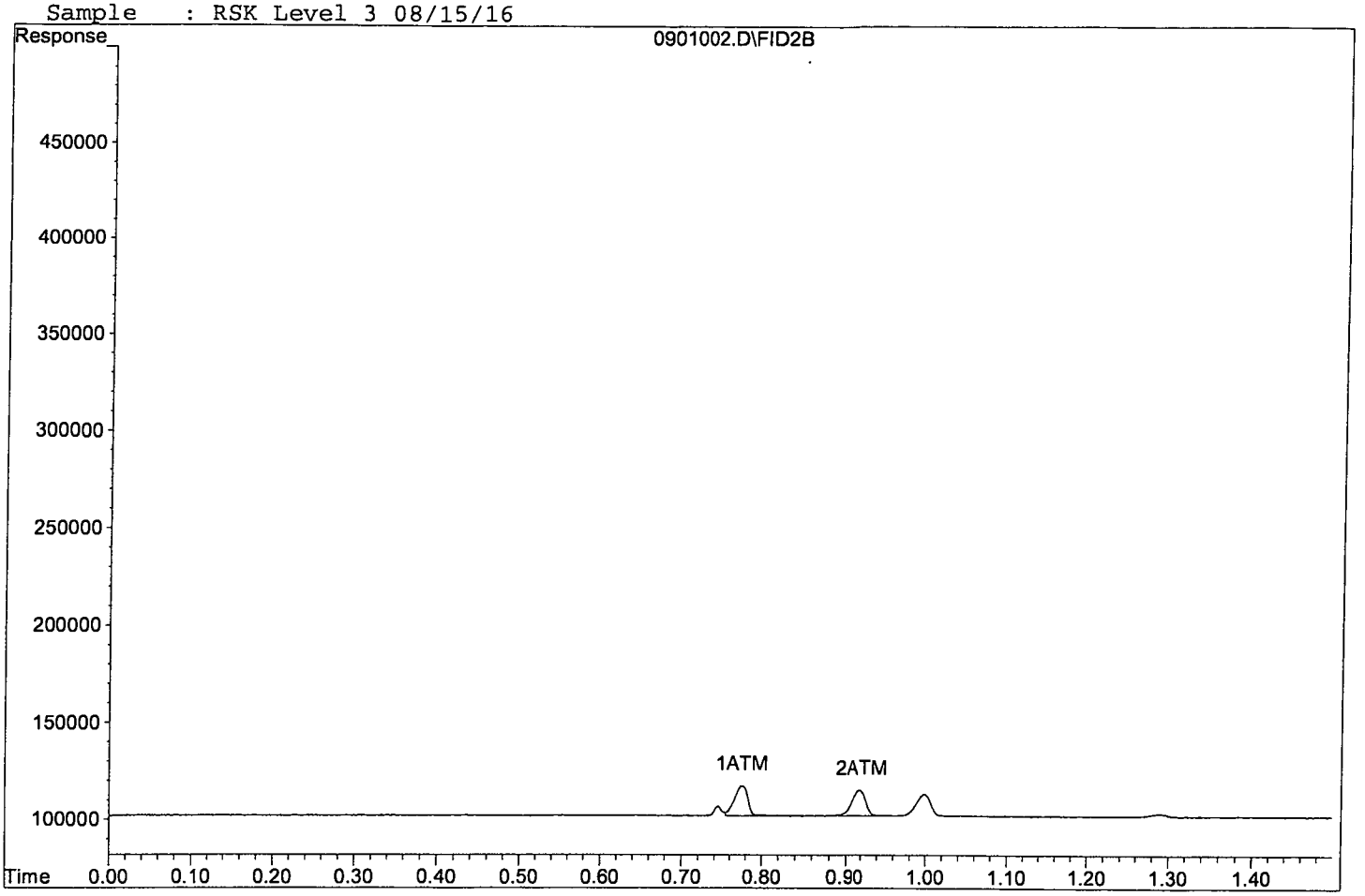
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.77	15515	1.054	ppb
2) ATM Ethane	0.92	13452	3.912	ppb
Target Compounds				
3) ATM Ethene	1.00	11390	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901002.D
Sample : RSK Level 3 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901003.D Vial: 4
Acq On : 1 Sep 16 11:46 Operator: lac
Sample : RSK Level 4 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

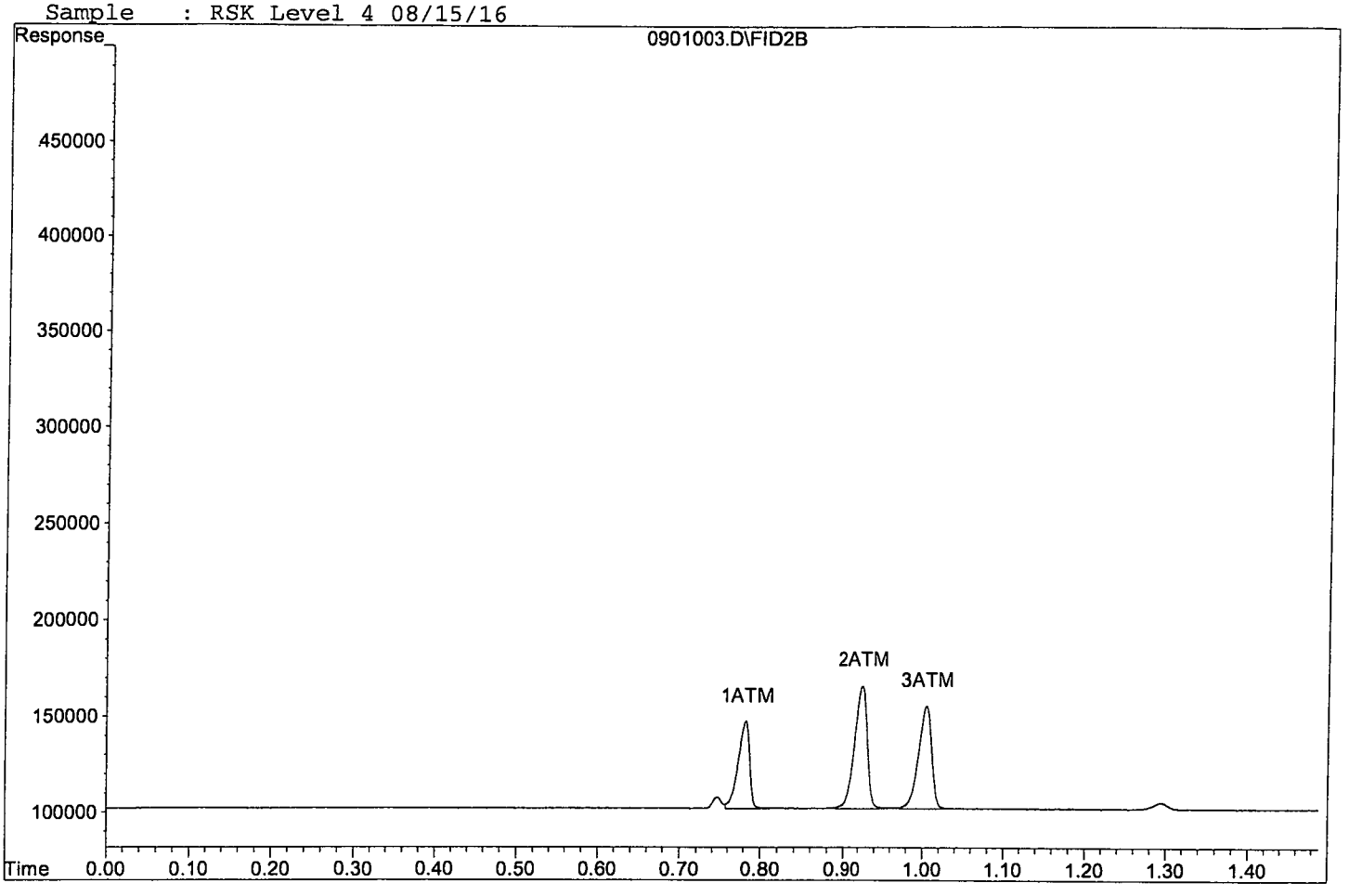
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.78	45792	29.006 ppb
2) ATM Ethane	0.92	63853	67.197 ppb
3) ATM Ethene	1.00	53608	66.354 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901003.D
Sample : RSK Level 4 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901004.D Vial: 5
Acq On : 1 Sep 16 11:48 Operator: lac
Sample : RSK Level 5 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

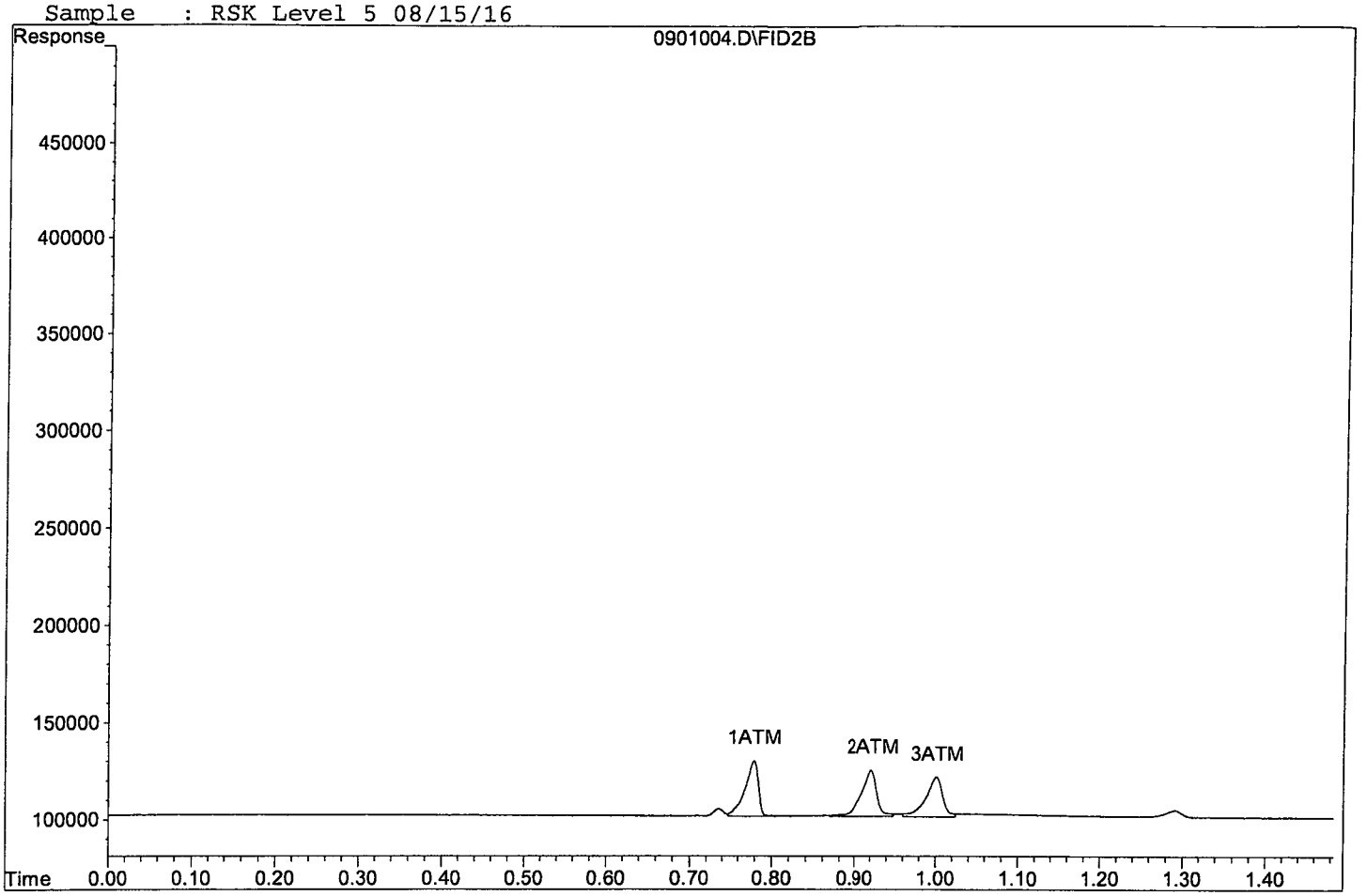
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.78	28664	13.193 ppb
2) ATM Ethane	0.92	23891	17.020 ppb
3) ATM Ethene	1.00	20700	13.631 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901004.D
Sample : RSK Level 5 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901005.D Vial: 6
Acq On : 1 Sep 16 11:50 Operator: lac
Sample : RSK Level 6 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

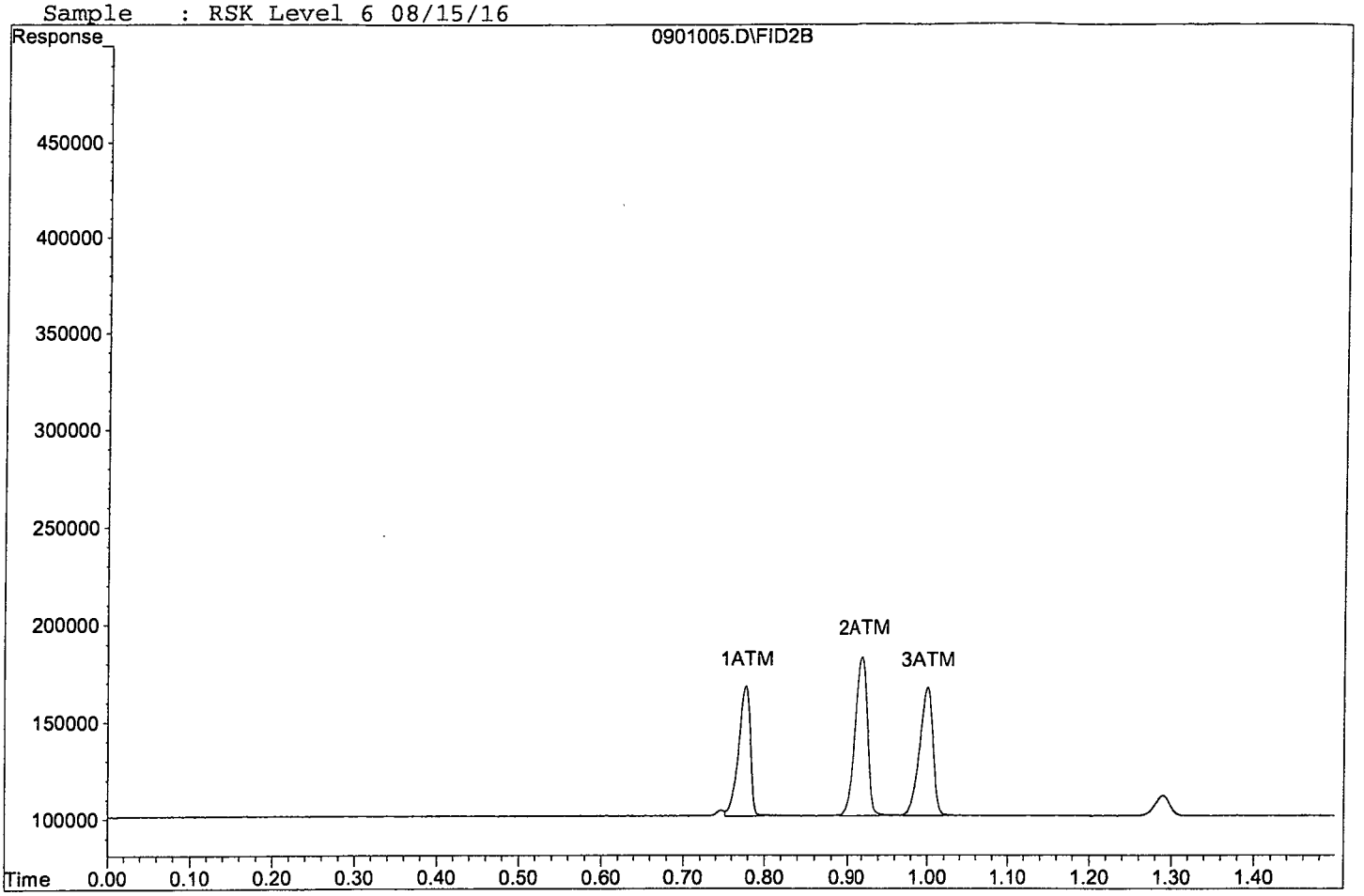
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.78	67137	48.712 ppb
2) ATM Ethane	0.92	82167	90.193 ppb
3) ATM Ethene	1.00	66348	86.764 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901005.D
Sample : RSK Level 6 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901006.D Vial: 7
Acq On : 1 Sep 16 11:52 Operator: lac
Sample : RSK Level 7 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

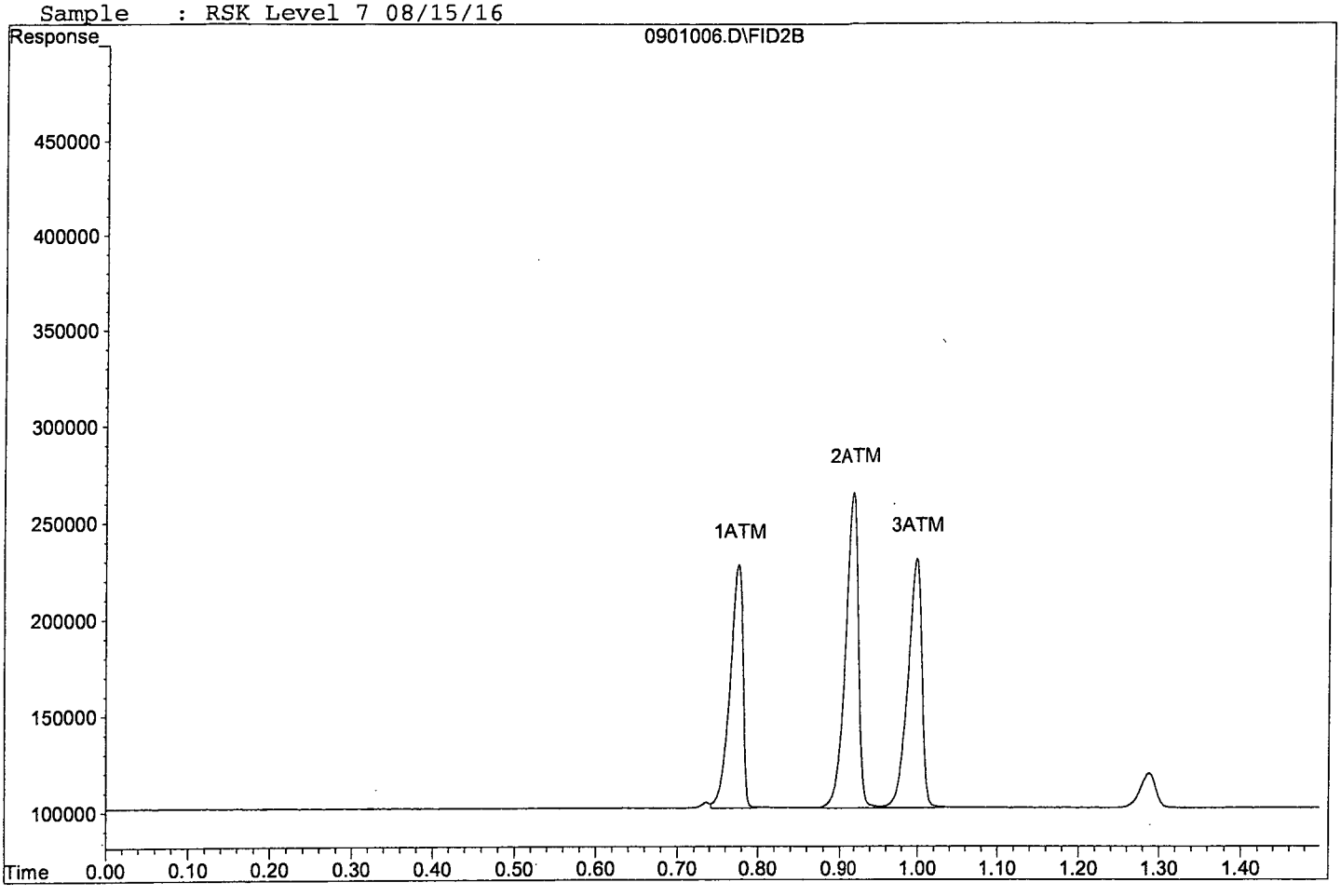
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.78	126422	103.446 ppb
2) ATM Ethane	0.92	163281	192.041 ppb
3) ATM Ethene	1.00	129200	187.460 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901006.D
Sample : RSK Level 7 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901007.D Vial: 8
Acq On : 1 Sep 16 11:55 Operator: lac
Sample : RSK Level 8 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

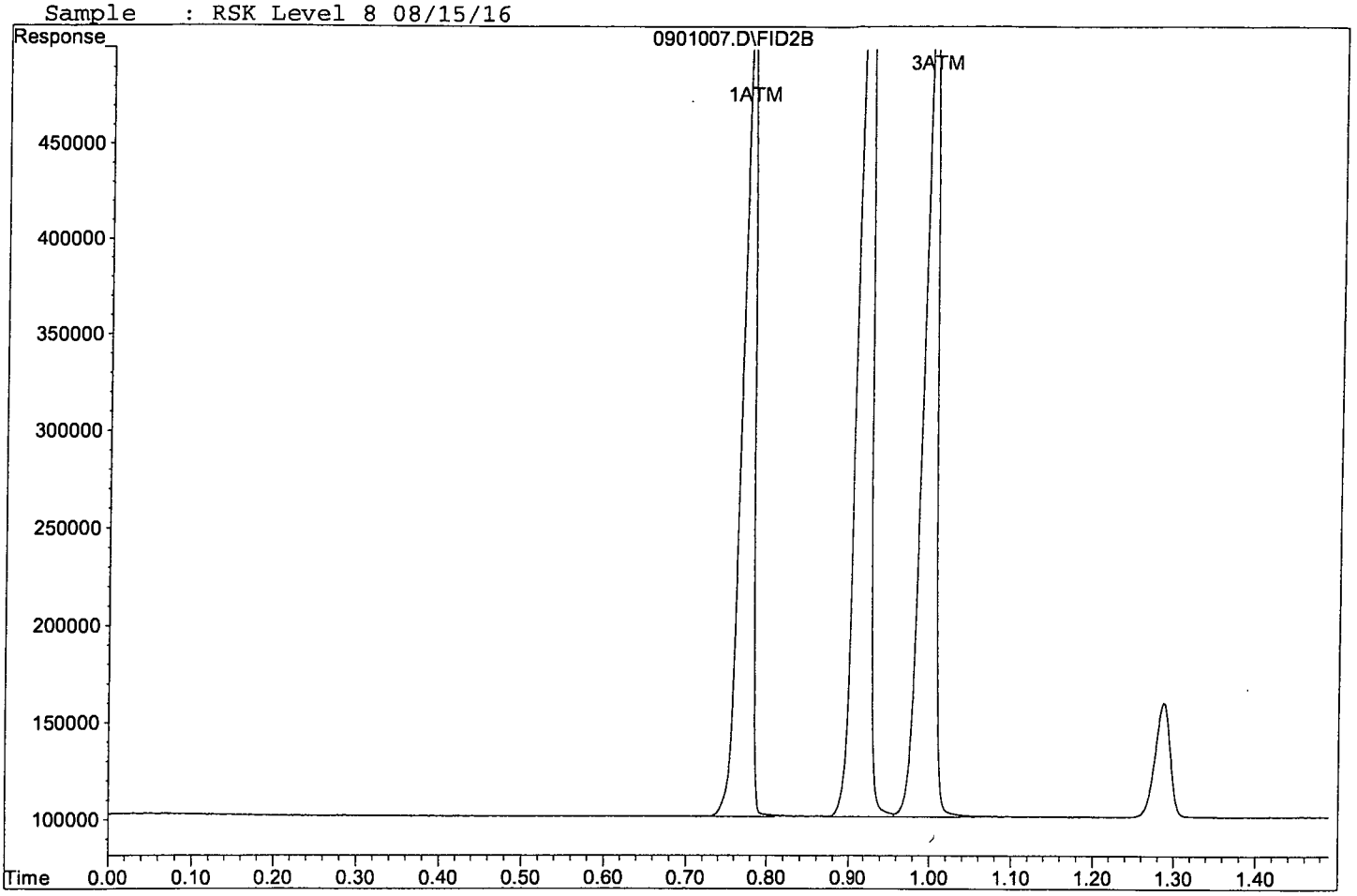
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.77	421052	375.455 ppb
2) ATM Ethane	0.92	559640	689.720 ppb
3) ATM Ethene	1.00	439383	684.403 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901007.D
Sample : RSK Level 8 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901008.D Vial: 9
Acq On : 1 Sep 16 11:57 Operator: lac
Sample : RSK Level 9 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

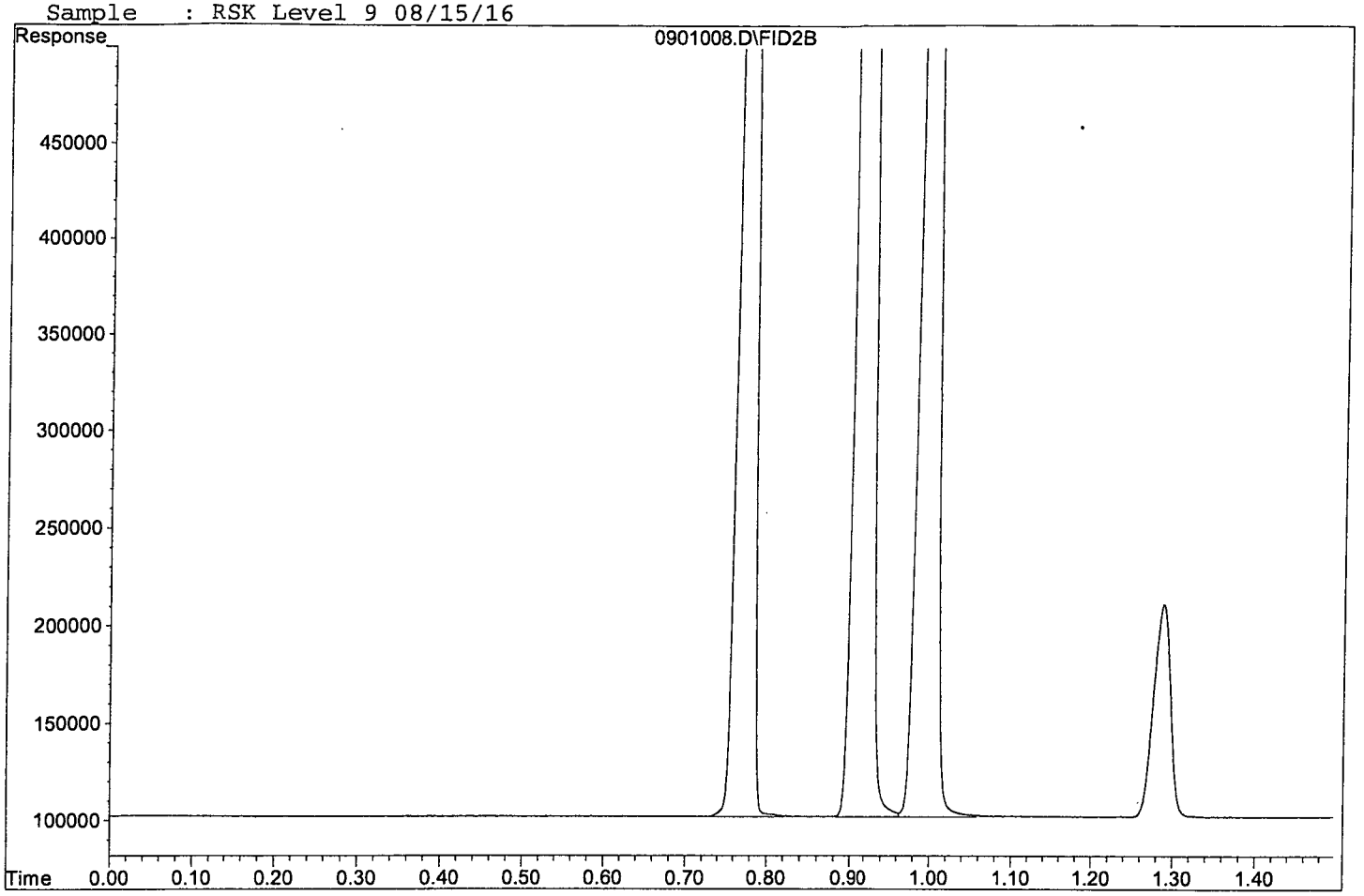
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.78	723824	654.982	ppb
2) ATM Ethane	0.92	989344	1229.268	ppb
3) ATM Ethene	1.00	783615	1235.897	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901008.D
Sample : RSK Level 9 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901009.D Vial: 10
Acq On : 1 Sep 16 11:59 Operator: lac
Sample : RSK Level 10 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

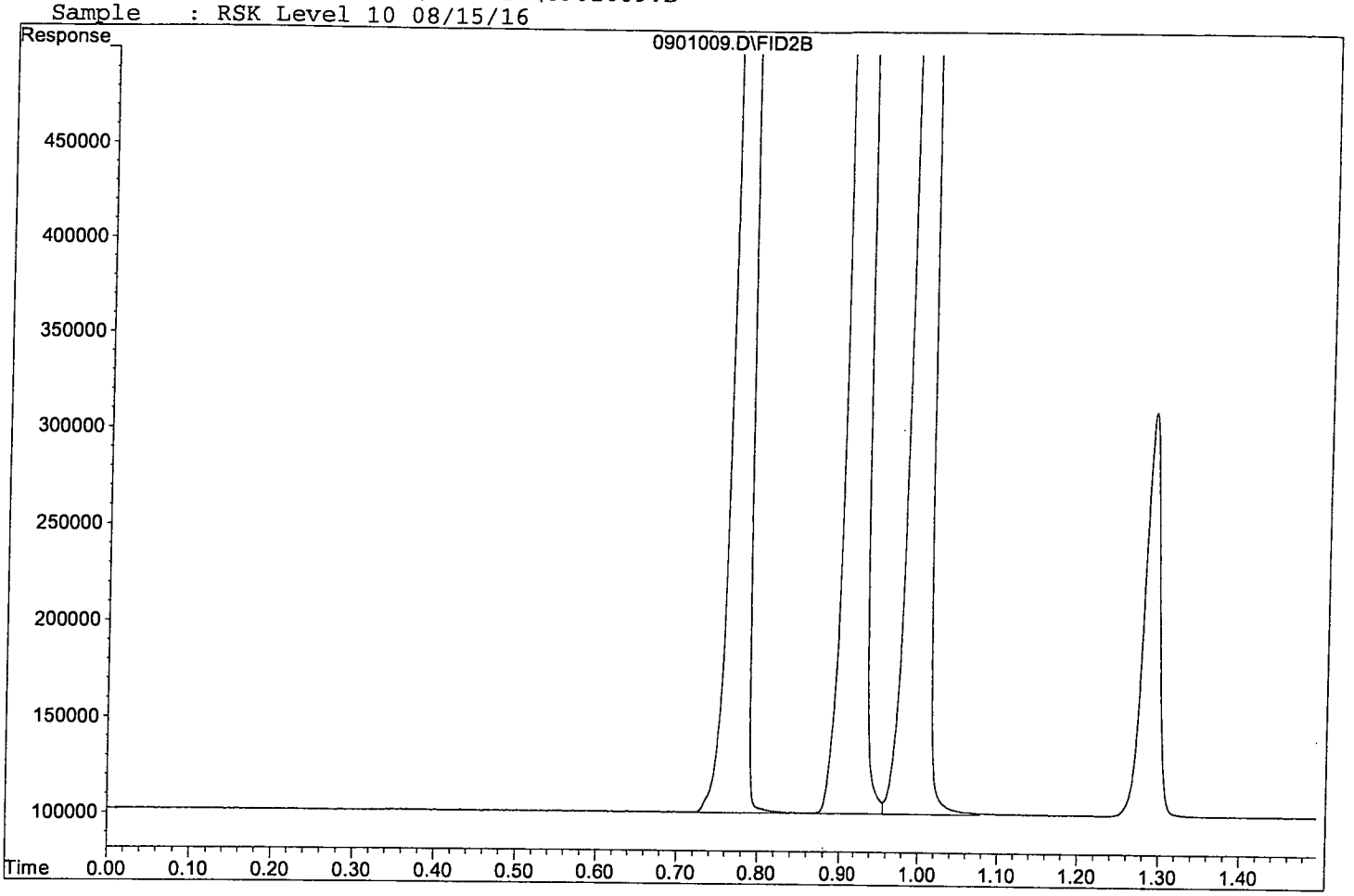
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

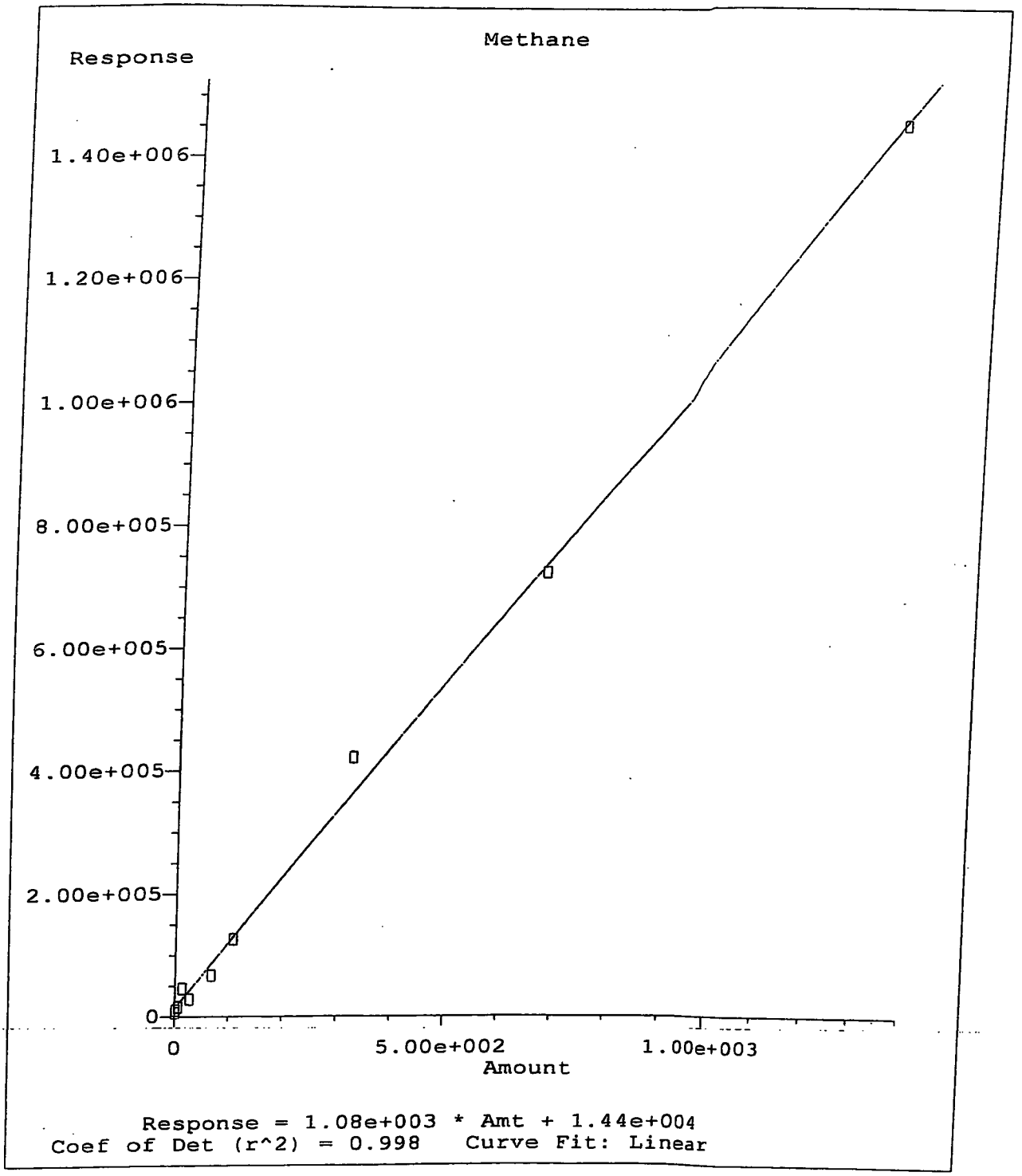
Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.78	1454283	1329.358	ppb
2) ATM Ethane	0.92	1994598	2491.490	ppb
3) ATM Ethene	1.00	1562244	2483.337	ppb

Target Compounds

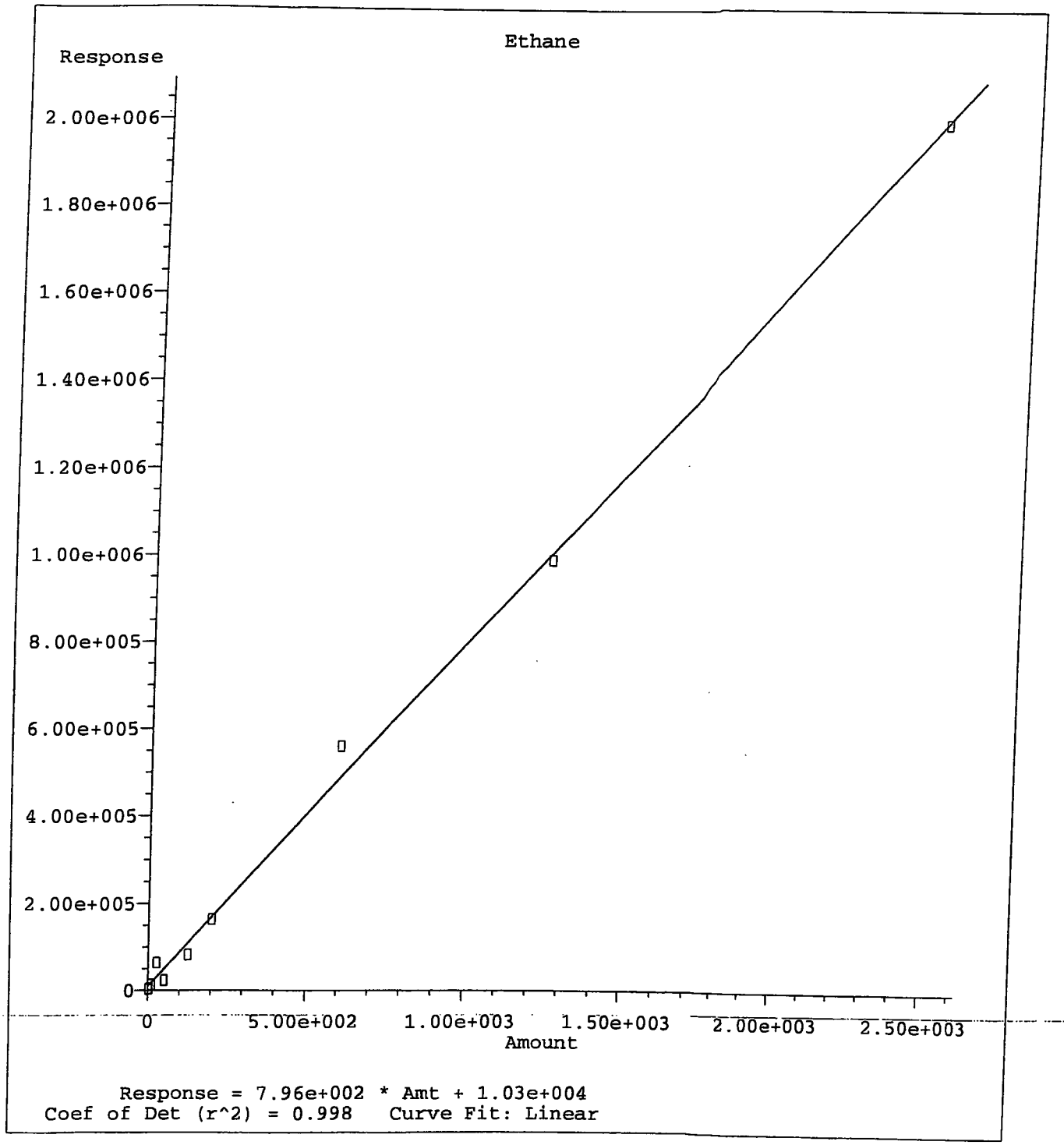
(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901009.D
Sample : RSK Level 10 08/15/16

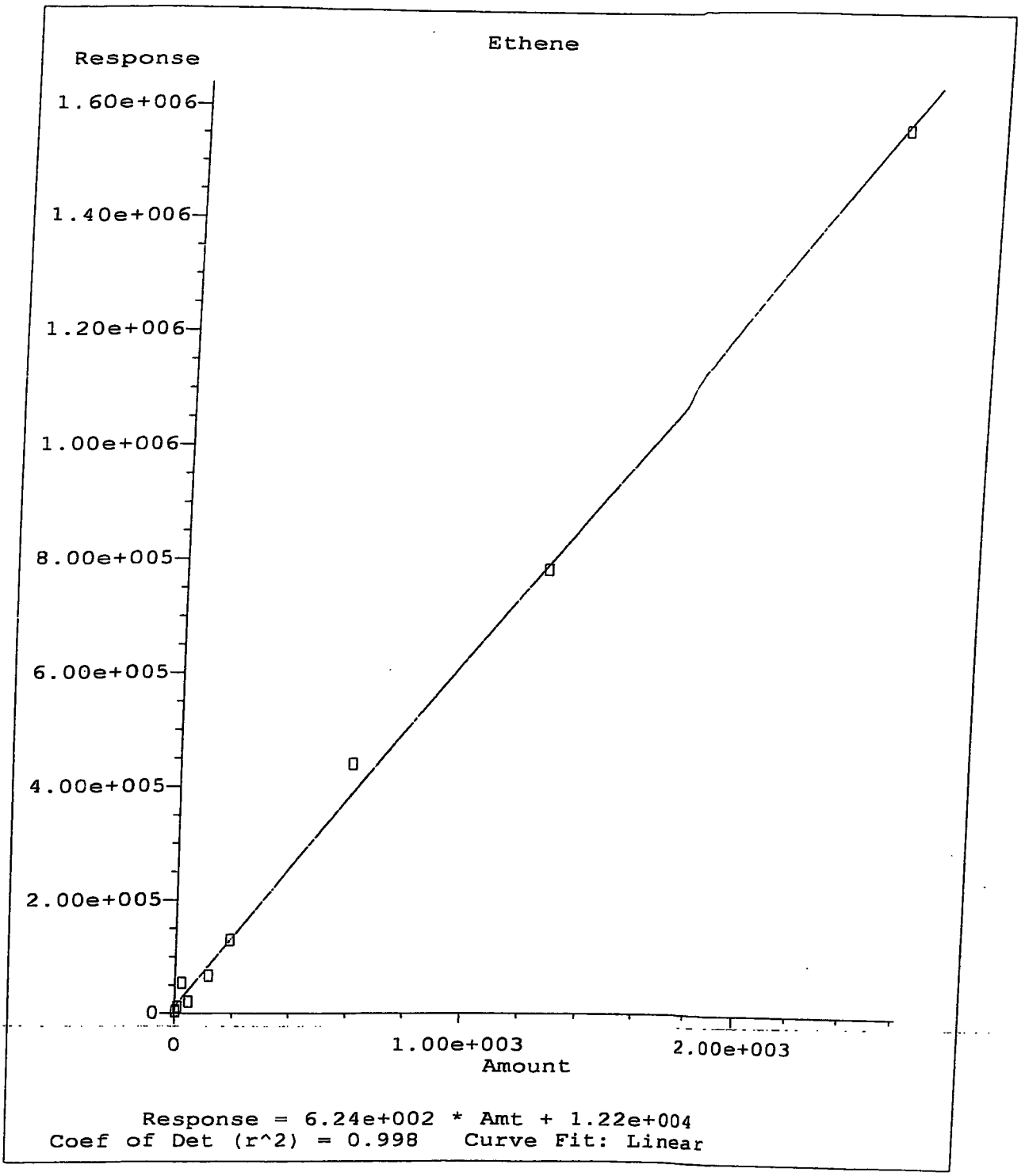




Method Name: G:\ROCKY\DATA\160901R\RSK0901.M
Calibration Table Last Updated: Fri Sep 02 15:25:38 2016



Method Name: G:\ROCKY\DATA\160901R\RSK0901.M
Calibration Table Last Updated: Thu Nov 10 08:49:51 2016



Method Name: G:\ROCKY\DATA\160901R\RSK0901.M
Calibration Table Last Updated: Fri Sep 02 15:25:38 2016

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 1 Sep 16 13:11
Instrument: 7890
Initial Cal. Date: 09/01/16
Data File: 0901018.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	2635	1090	59	ATML	19
2	ATML	Ethane	1147	964	16	ATML	11
3	ATML	Ethene	1063	853	20	ATML	20
4							
5							
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40							
		Average			31.7		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901018.D
Acq On : 1 Sep 16 13:11
Sample : (SS/LCS) RSK Level 6 09/01/16
Misc :
IntFile : autoint1.e
Quant Time: Sep 1 13:16 2016 Quant Results File: RSK0901.RES

Vial: 19
Operator: lac
Inst : 7890
Multiplr: 1.00

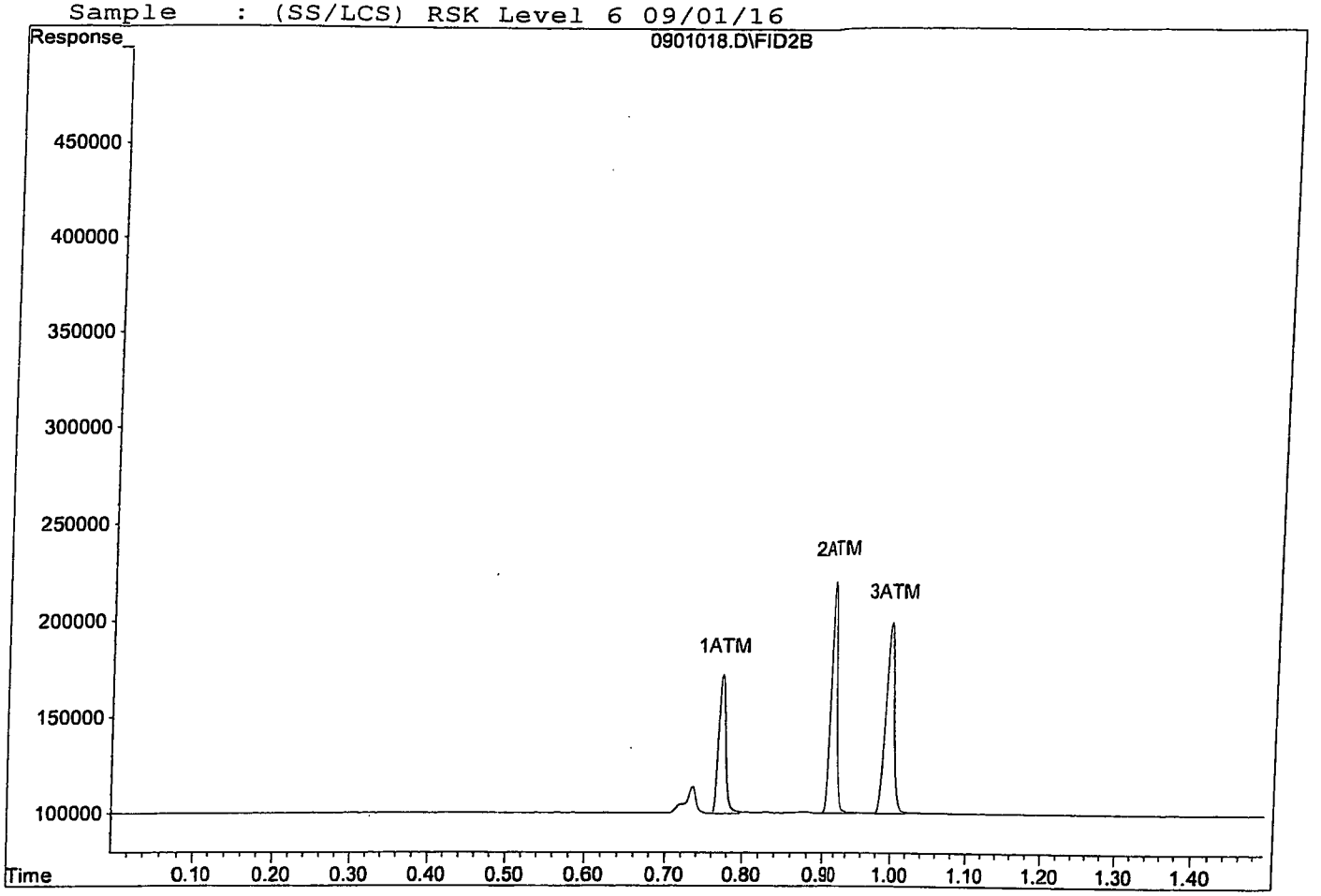
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Thu Sep 01 14:40:19 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.77	72750	53.894 ppb
2) ATM Ethane	0.91	120545	138.382 ppb
3) ATM Ethene	0.99	99349	139.636 ppb

(f)=RT Delta > 1/2 Window
(m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901018.D
Sample : (SS/LCS) RSK Level 6 09/01/16



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/16/17
Instrument: 7890
Initial Cal. Date: 09/01/17
Data File: 17011603.D

		Compound	MEAN	CCRF	%D	%Drift	
1	ATML	Methane	2635	823	69	ATML	25
2	ATML	Ethane	1147	647	44	ATML	19
3	ATML	Ethene	1063	475	55	ATML	25
4							
5							
6							
7							
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40							
		Average			56.0		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\17011603.D Vial: 4
Acq On : 16 Jan 17 10:37 Operator: lac
Sample : 170116A LCS/CCV RSK Level 10 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 16 10:39 2017 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 17 12:10:52 2017
Response via : Multiple Level Calibration

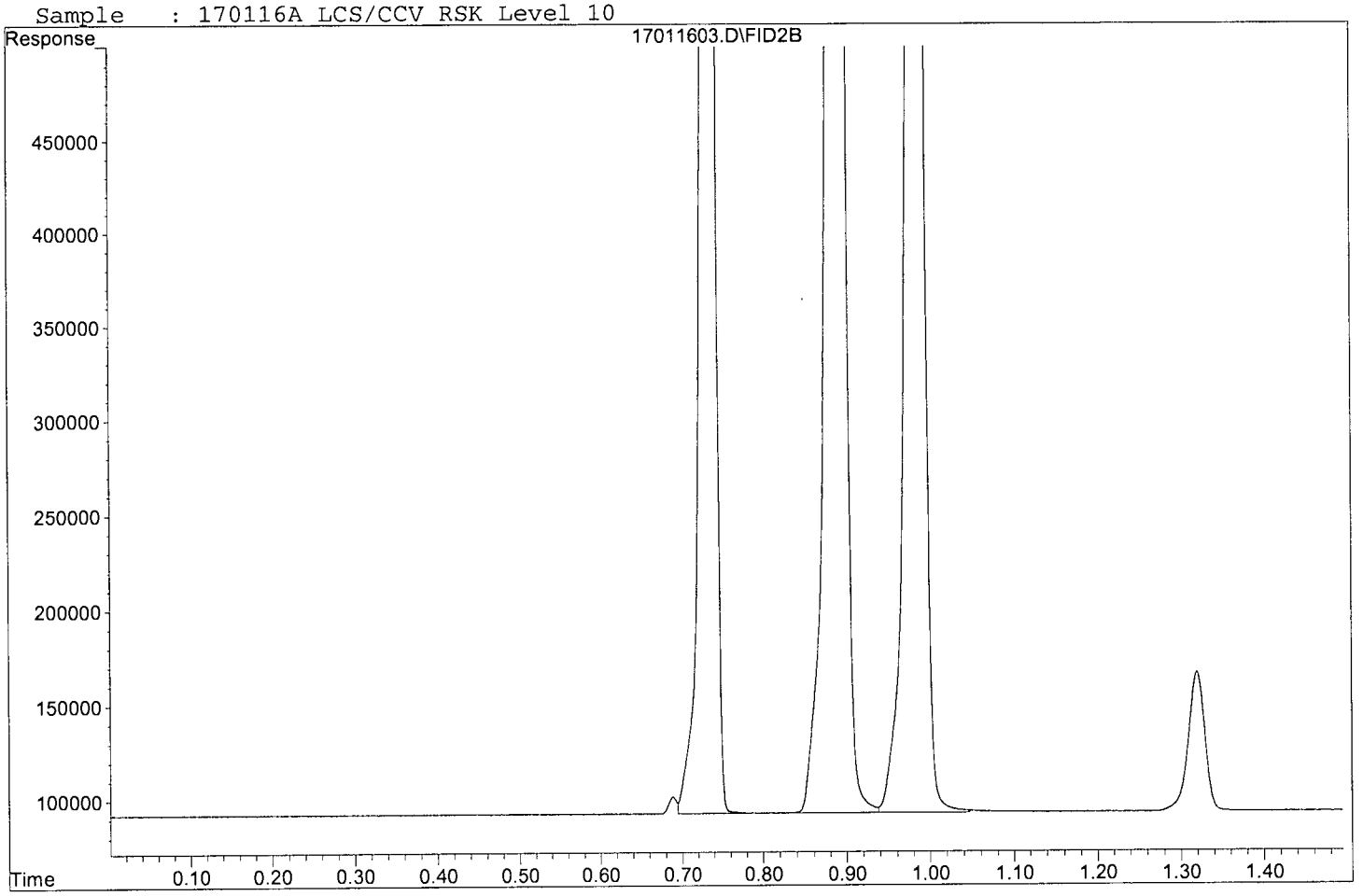
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.74	1098930	1001.288	ppb
2) ATM Ethane	0.89	1618482	2019.230	ppb
3) ATM Ethene	0.99	1186459	1881.292	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\17011603.D
Sample : 170116A LCS/CCV RSK Level 10



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/16/17
Instrument: 7890
Initial Cal. Date: 09/01/17
Data File: 17011643.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	2635	922	65	ATML	16
2	ATML	Ethane	1147	711	38	ATML	11
3	ATML	Ethene	1063	525	51	ATML	17
4							
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40							
		Average			51.3		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\17011643.D Vial: 44
Acq On : 16 Jan 17 13:52 Operator: lac
Sample : Ending CCV RSK Level 10 01/16/17 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 16 13:55 2017 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 17 12:10:52 2017
Response via : Multiple Level Calibration

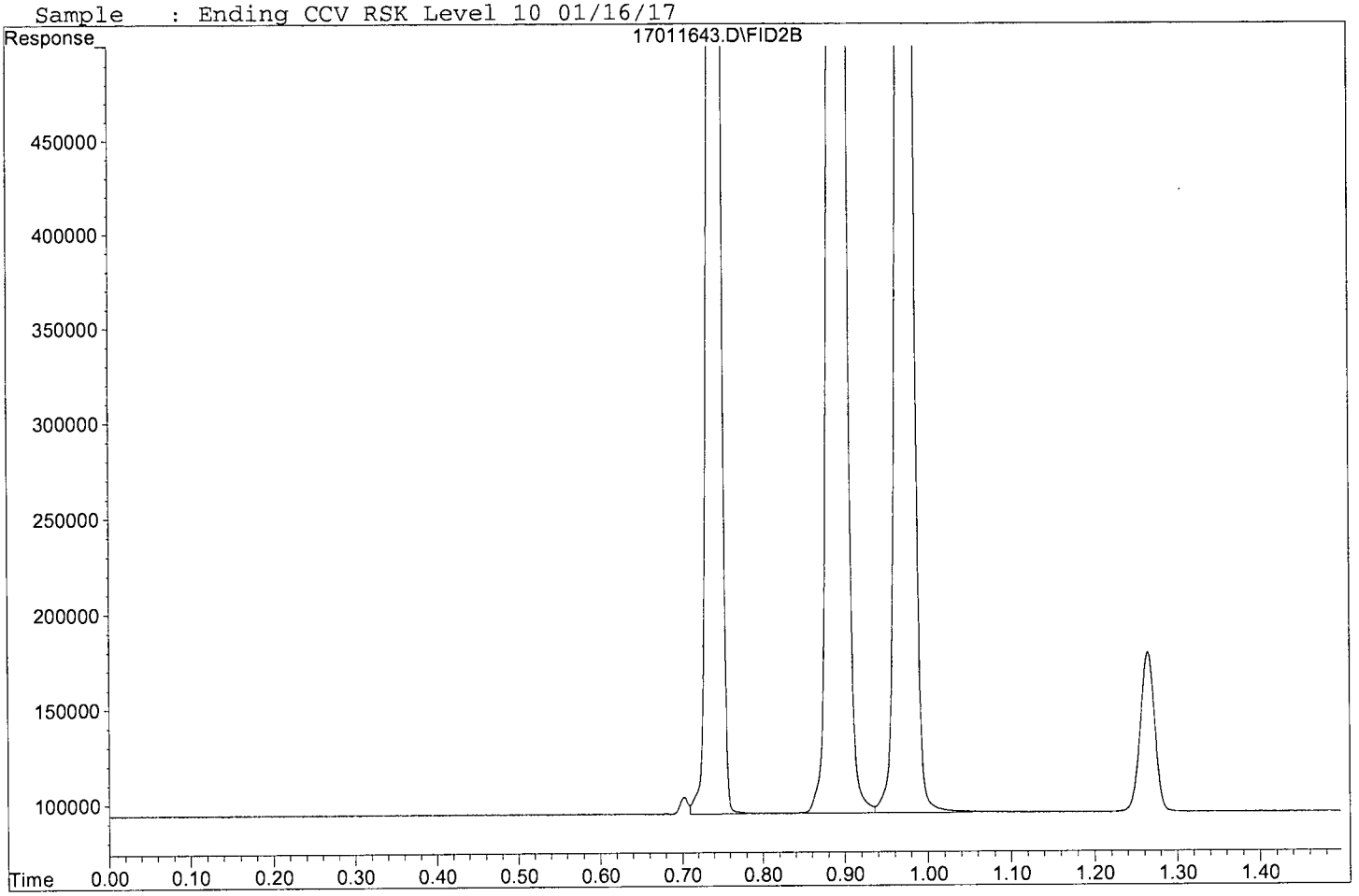
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.74	1230350	1122.618	ppb
2) ATM Ethane	0.89	1777519	2218.920	ppb
3) ATM Ethene	0.98	1311035	2080.876	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\17011643.D
Sample : Ending CCV RSK Level 10 01/16/17



ORGANICS
Raw Data

APPL, INC.

Method Blank
METHANE

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **170116W-48866 - 215507**
Batch ID: #RSKME-170116A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/16/17	01/16/17

Quant Method: RSK0901.M
Run #: 17011604
Instrument: Rocky
Sequence: 160901
Initials: CMO

GC SC-Blank-REG MDLs-DOD
Printed: 01/21/17 12:28:59 PM

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\17011604.D Vial: 5
Acq On : 16 Jan 17 10:41 Operator: lac
Sample : 170116A BLK-RSK Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 16 10:50 2017 Quant Results File: RSK0901.RES

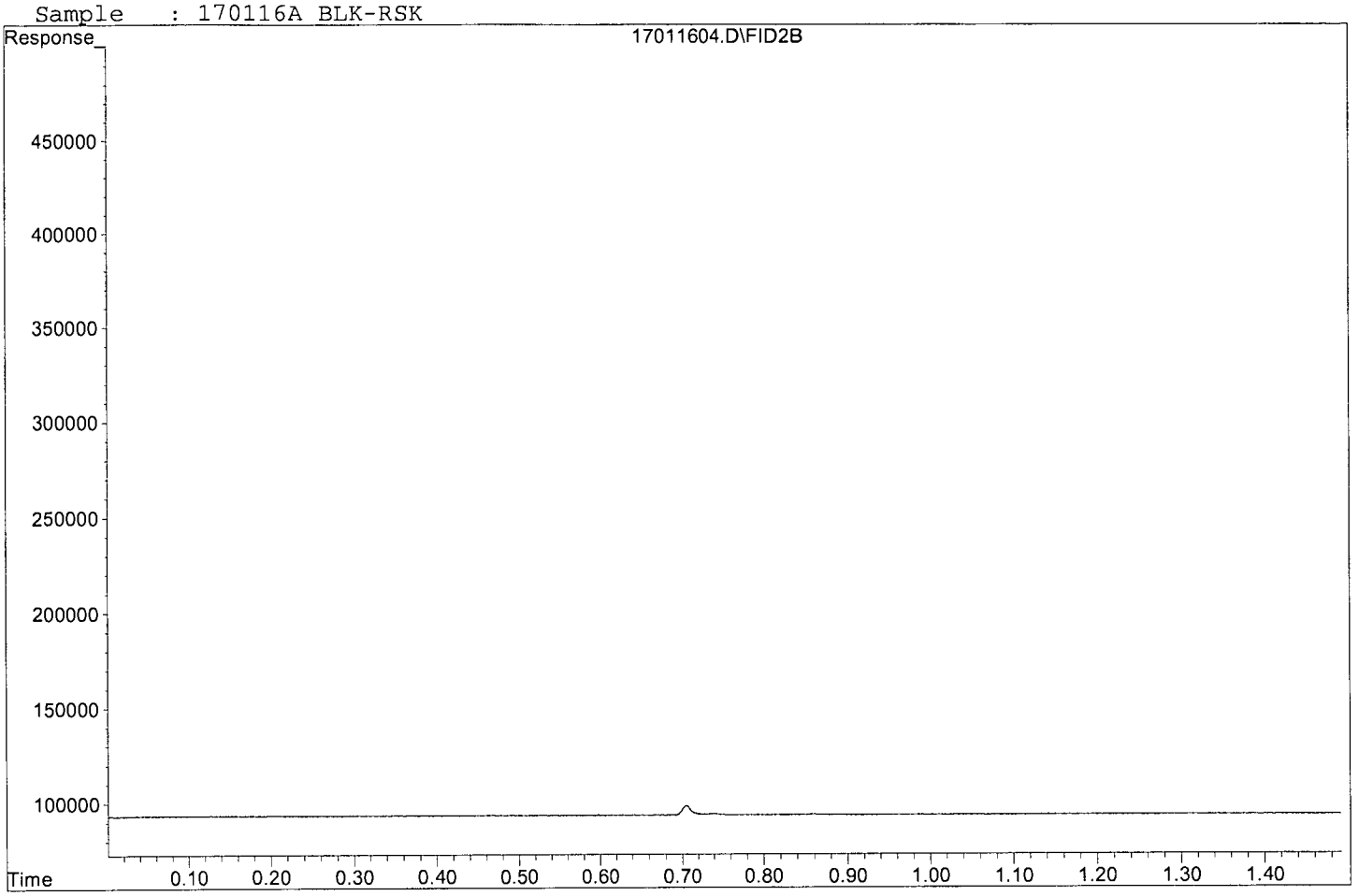
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 17 12:10:52 2017
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.74	815	N.D.	ppb
2) ATM Ethane	0.89	347	N.D.	ppb
3) ATM Ethene	0.99	341	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\17011604.D
Sample : 170116A BLK-RSK



Laboratory Control Spike Recovery
METHANE

APPL ID: **170116W-48866 LCS - 215507**
Batch ID: #RSKME-170116A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
METHANE	1340	1000	74.9	72-125

Comments: _____

Primary	SPK
Quant Method :	RSK0901.M
Extraction Date :	01/16/17
Analysis Date :	01/16/17
Instrument :	Rocky
Run :	17011603
Initials :	CMO

Printed: 01/21/17 12:28:51 PM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\17011603.D Vial: 4
Acq On : 16 Jan 17 10:37 Operator: lac
Sample : 170116A LCS/CCV RSK Level 10 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 16 10:39 2017 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 17 12:10:52 2017
Response via : Multiple Level Calibration

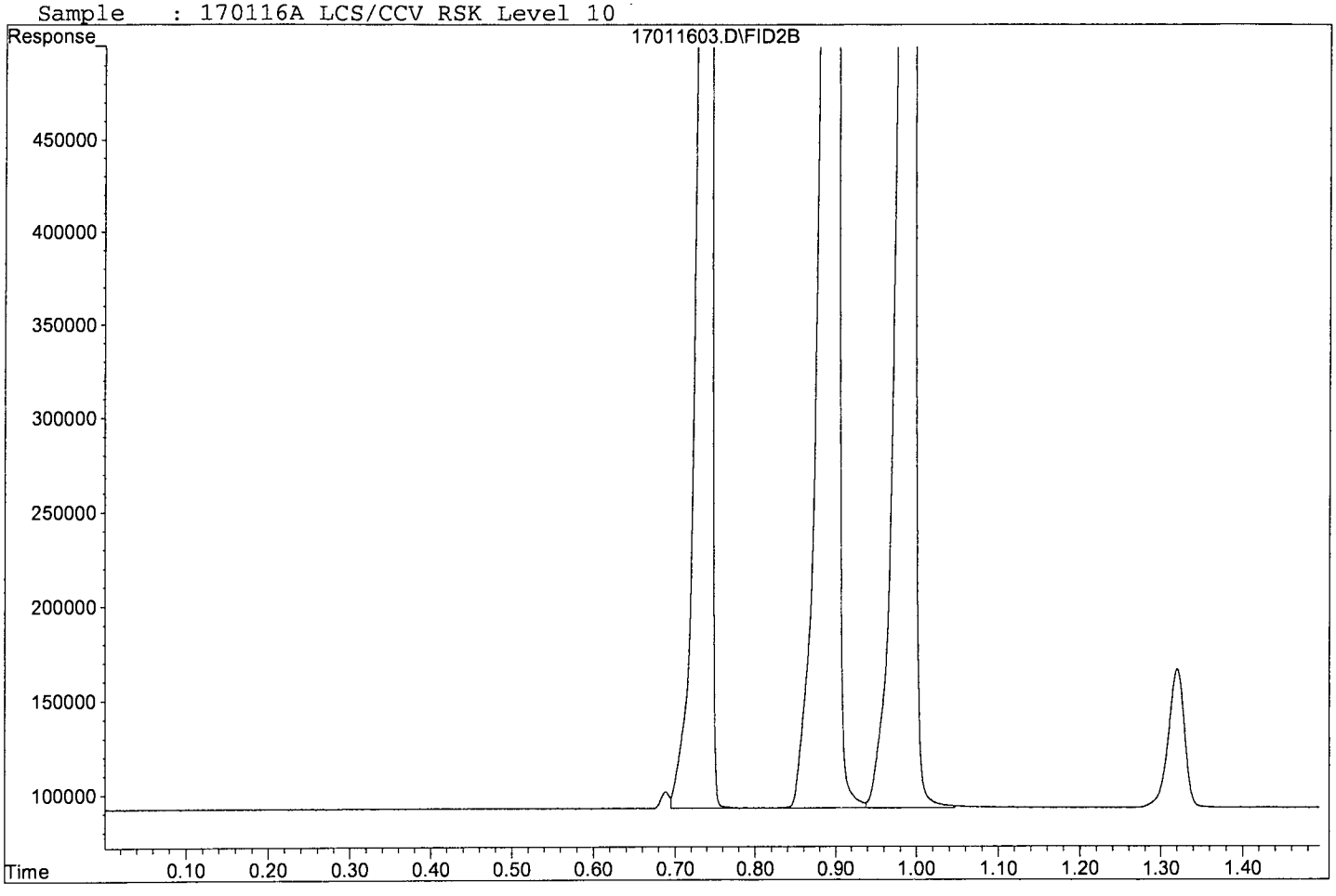
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.74	1098930	1001.288	ppb
2) ATM Ethane	0.89	1618482	2019.230	ppb
3) ATM Ethene	0.99	1186459	1881.292	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\17011603.D
Sample : 170116A LCS/CCV RSK Level 10



Primary Source Stock Standard 10,000ppmV **Manufacturer Exp date 7-8-2017** CM 8/15/16

RSK Gas Mix (Scott Specialty Gas) Cat.# 23452, Lot # 164PLU4SPC05L-34436

1% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

Intermediate Calibration Stock Standard 100ppmV **Expires 8/15/17** CM 8/15/16

Prepared in a 1 L Tedlar bag. Add 990mL Nitrogen and 10mL of 164PLU4SPC05L-34436 standard.

RSK Calibration Curve **Vial expiration date 9/28/16** CM 9/1/16

Analye	Conc Std 1 (ug/L)	Conc Std 2 (ug/L)	Conc Std 3 (ug/L)	Conc Std 4 (ug/L)	Conc Std 5 (ug/L)	Conc Std 6 (ug/L)	Conc Std 7 (ug/L)	Conc Std 8 (ug/L)	Conc Std 9 (ug/L)	Conc Std 10 (ug/L)
Methane (MW 16.	0.90	1.80	5.10	13.33	26.70	66.75	106.80	320.4	667.5	1335.0
Ethane (MW 30.0	1.70	3.40	9.50	25.00	50.00	125.00	200.00	600.0	1250.0	2500.0
Ethene (MW 28.0	1.60	3.20	8.90	23.30	46.60	116.50	186.40	599.2	1248.0	2496.0
Stock Source	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Primary Source Std #164PLU4SPC05L-34436	Primary Source Std #164PLU4SPC05L-34436	Primary Source Std #164PLU4SPC05L-34436	Primary Source Std #164PLU4SPC05L-34436
Stock Conc (ppr	100 ppmV	100 ppmV	100 ppmV	100 ppmV	100 ppmV	100 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV
Stock Aliquot (m	0.135 mL	0.270 mL	0.760 mL	2.0 mL	4.0 mL	10.0 mL	0.160 mL	0.480 mL	1.00 mL	2.00 mL
Final Volume P&T W	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL

Second Source Stock Standard 10,000ppmV **Manufacturer Exp Date 6-19-18** CM 8/15/16

RSK Gas Mix (Scott Specialty Gas) Cat.# 0104E40028`4, Lot # 170PLU5SPC06L-35410

1% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

Intermediate Second Source Standard 100ppmV **Expires 8/15/17** CM 8/15/16

Prepared in a 1 L Tedlar bag. Add 990mL Nitrogen and 10mL of lot# 170PLU5SPC06L-35410 standard.

Second Source / LCS - Level 6 **Expires 10/1/16** CM 9/1/16

10.0mL of Intermediate SS stock 8/15/16 into 10mL P&T water

final conc:66.7ppb Methane, 125.0ppb Ethane, and 116.5 ppb Ethene

CCV/LCS - Level 10 **Expires 02/16/17** CM 01/16/17

2.0mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water

final conc:1335.0ppb Methane,2500.0 ppb Ethane, and 2496.0 ppb Ethene

Injection Log

Directory: G:\ROCKY\DATA\160901R\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0901000.D	1	RSK Level 1 08/15/16	Methane 0.9, Ethane, 1.7 Etl	1 Sep 16 11:38
2	2	0901001.D	1	RSK Level 2 08/15/16		1 Sep 16 11:41
3	3	0901002.D	1	RSK Level 3 08/15/16	Methane 5.1, Ethane, 9.5 Etl	1 Sep 16 11:44
4	4	0901003.D	1	RSK Level 4 08/15/16		1 Sep 16 11:46
5	5	0901004.D	1	RSK Level 5 08/15/16		1 Sep 16 11:48
6	6	0901005.D	1	RSK Level 6 08/15/16		1 Sep 16 11:50
7	7	0901006.D	1	RSK Level 7 08/15/16		1 Sep 16 11:52
8	8	0901007.D	1	RSK Level 8 08/15/16		1 Sep 16 11:55
9	9	0901008.D	1	RSK Level 9 08/15/16		1 Sep 16 11:57
10	10	0901009.D	1	RSK Level 10 08/15/16		1 Sep 16 11:59
11	19	0901018.D	1	(SS/LCS) RSK Level 6 09/01/16		1 Sep 16 13:11
12	4	17011603.D	1	170116A LCS/CCV RSK Level 10		16 Jan 17 10:37
13	5	17011604.D	1	170116A BLK-RSK		16 Jan 17 10:41
14	6	17011605.D	1	AZ48676W05		16 Jan 17 10:50
15	7	17011606.D	1	AZ48677W05		16 Jan 17 10:54
16	44	17011643.D	1	Ending CCV RSK Level 10 01/16/17		16 Jan 17 13:52

INORGANIC ANALYSIS

APPL, INC.

INORGANIC ANALYSIS
QC Summary

APPL, INC.

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
SM 2320B	BICARBONATE AS	1.6 J	2.0	1.70	0.85	mg/L	01/16/17	01/16/17	#232W-170116A-AZ48866
SM 2320B	CARBONATE AS CA	1.70 U	2.0	1.70	0.85	mg/L	01/16/17	01/16/17	#232W-170116A-AZ48866
SM 2320B	TOTAL ALKALINITY	1.6 J	2.0	1.70	0.85	mg/L	01/16/17	01/16/17	#232W-170116A-AZ48866
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	01/11/17	01/11/17	#300W-170111A-AZ48676
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	01/11/17	01/11/17	#300W-170111A-AZ48676
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	01/11/17	01/11/17	#300W-170111A-AZ48676
SM3500Fe	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	01/10/17	01/10/17	#35FE-170110A-AZ48676

Wetlab SC-Blank-REG MDLs
Printed: 01/17/17 4:02:52 PM

Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	20.0	18.4	92.0	90-110	01/11/17	01/11/17	#300W-170111A-AZ48676
EPA 300.0	NITRATE	22.1	21.1	95.5	90-110	01/11/17	01/11/17	#300W-170111A-AZ48676
EPA 300.0	SULFATE	20.0	18.5	92.5	90-110	01/11/17	01/11/17	#300W-170111A-AZ48676
SM 2320B	BICARBONATE AS CACO3	250	248	99.2	90-110	01/16/17	01/16/17	#232W-170116A-AZ48866
SM 2320B	TOTAL ALKALINITY AS CACO3	250	248	99.2	90-110	01/16/17	01/16/17	#232W-170116A-AZ48866
SM3500Fe	FERROUS IRON	3.00	2.99	99.7	80-120	01/10/17	01/10/17	#35FE-170110A-AZ48676

Comments: _____

INORGANIC ANALYSIS
Sample Data

APPL, INC.

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH166

Sample Collection Date: 01/09/17

APPL ID: AZ48676

ARF: 81936

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date Analysis Date
EPA 300.0	NITRATE	2.4	0.5	0.18	0.04	mg/L	1	01/11/17 01/11/17
EPA 300.0	SULFATE	10.1	1.0	0.20	0.09	mg/L	1	01/11/17 01/11/17
EPA 300.0	CHLORIDE	81.9	2.0	0.40	0.16	mg/L	2	01/11/17 01/11/17
SM 2320B	BICARBONATE AS CACO3	78.7	2.0	1.70	0.85	mg/L	1	01/16/17 01/16/17
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	01/16/17 01/16/17
SM 2320B	TOTAL ALKALINITY AS CACO3	78.7	2.0	1.70	0.85	mg/L	1	01/16/17 01/16/17
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	01/10/17 01/10/17

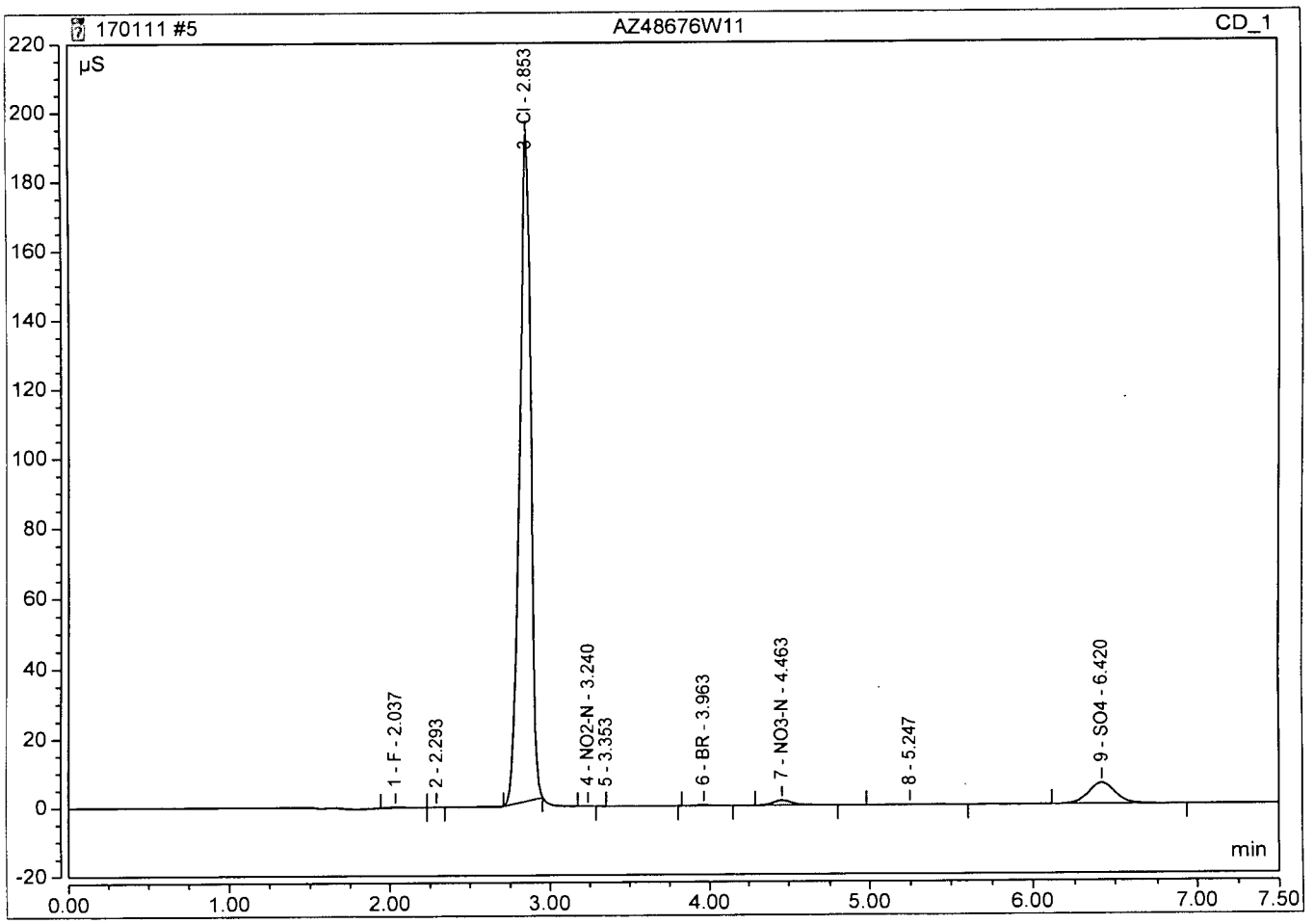
Printed: 01/18/17 10:47:34 AM

APPL-F1-SC-NoMC-REG MDLs

Peak Integration Report

Sample Name:	**AZ48676W11**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**11-Jan-2017 / 09:56**	*Run Time:*	**7.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.04	F	BMB	0.025	0.233	0.1491
3	2.85	Cl	BMB	15.422	191.508	85.4416
4	3.24	NO2-N	BMB	0.000	0.001	0.0217
6	3.96	BR	BMB	0.016	0.150	0.3837
7	4.46	NO3-N	BMB	0.183	1.429	0.5410
9	6.42	SO4	BMB	1.168	6.109	10.0552
TOTAL:				16.81	199.43	96.59

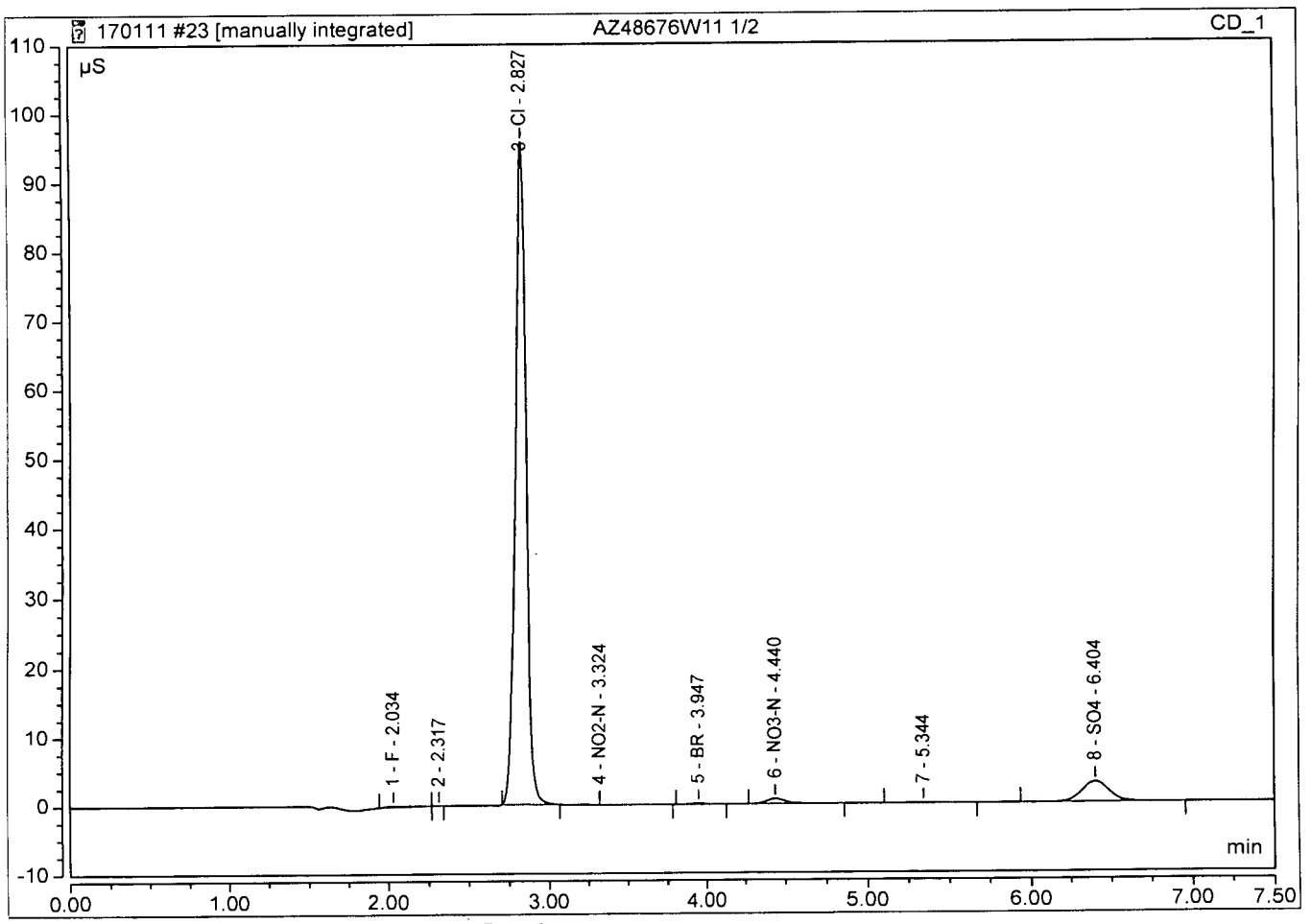


MI MM 1/18/17

Peak Integration Report PW

Sample Name:	**AZ48676W11 1/2**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**2.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**11-Jan-2017 / 17:26**	*Run Time:*	**7.50**

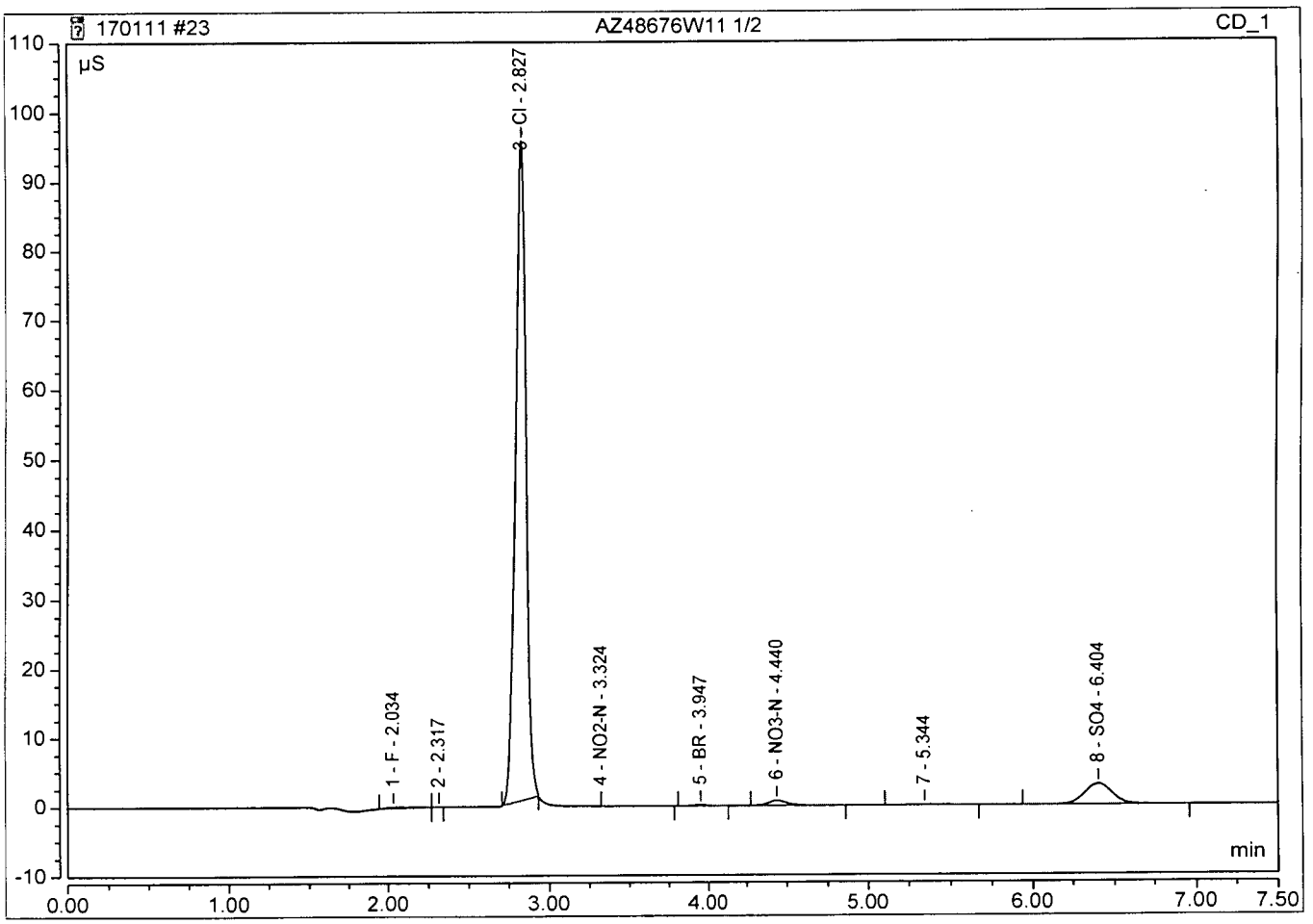
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.03	F	BMB	0.022	0.155	0.2694
3	2.83	Cl	BMB*	7.345	95.656	81.9242
4	3.32	NO2-N	BMB	0.001	0.000	0.0471
5	3.95	BR	BMB	0.008	0.076	0.5129
6	4.44	NO3-N	BMB	0.092	0.725	0.6375
8	6.40	SO4	BMB	0.570	2.949	10.3272
TOTAL:				8.04	99.56	93.72



Peak Integration Report

Sample Name:	**AZ48676W11 1/2**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**2.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**11-Jan-2017 / 17:26**	*Run Time:*	**7.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.03	F	BMB	0.022	0.155	0.2694
3	2.83	Cl	BMB	7.141	94.904	79.6816
4	3.32	NO2-N	BMB	0.001	0.000	0.0471
5	3.95	BR	BMB	0.008	0.076	0.5129
6	4.44	NO3-N	BMB	0.092	0.725	0.6375
8	6.40	SO4	BMB	0.570	2.949	10.3272
TOTAL:				7.83	98.81	91.48



INORGANIC ANALYSIS
Calibration Data

APPL, INC.

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No: 81936 SDG: 81936

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 05/20/16

Analyte	Calibration Verification									M
	True ICV	Found 12:41	%R(1)	True CCV1	Found 11:38	%R(1)	True CCV1	Found 11:45	%R(1)	
Ferrous Iron	3	3.01396	100	4	4.02298	101	4	3.99301	99.8	

(1) Control Limits: 90-110

ILM02.0

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 81936 SDG: 81936

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	ICB 05/20/16 12:42	C	CCB 01/10/17 11:39	C	CCB 01/10/17 11:46	C		C		C	
Ferrous Iron	1.000	U	1.000	U	1.000	U					

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract:

ARF No: SDG:

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 10/20/16

Analyte	Calibration Verification									M
	True ICV	Found 12:37	%R(1)	True	Found	%R(1)	True	Found	%R(1)	
bromide	12.5	11.8422	94.7							
chloride	20	18.2183	91.1							
fluoride	2.5	2.55939	102							
Nitrate(NO3)	22.1	20.0573	90.8							
Nitrate(NO3)-N	5	4.52905	90.6							
Nitrite(NO2)	9.98	9.81221	98.3							
Nitrite(NO2)-N	3.04	2.98733	98.3							
phosphate	15.3225	14.7130	96.0							
phosphate-p	5	4.80111	96.0							
sulfate	20	18.4058	92.0							

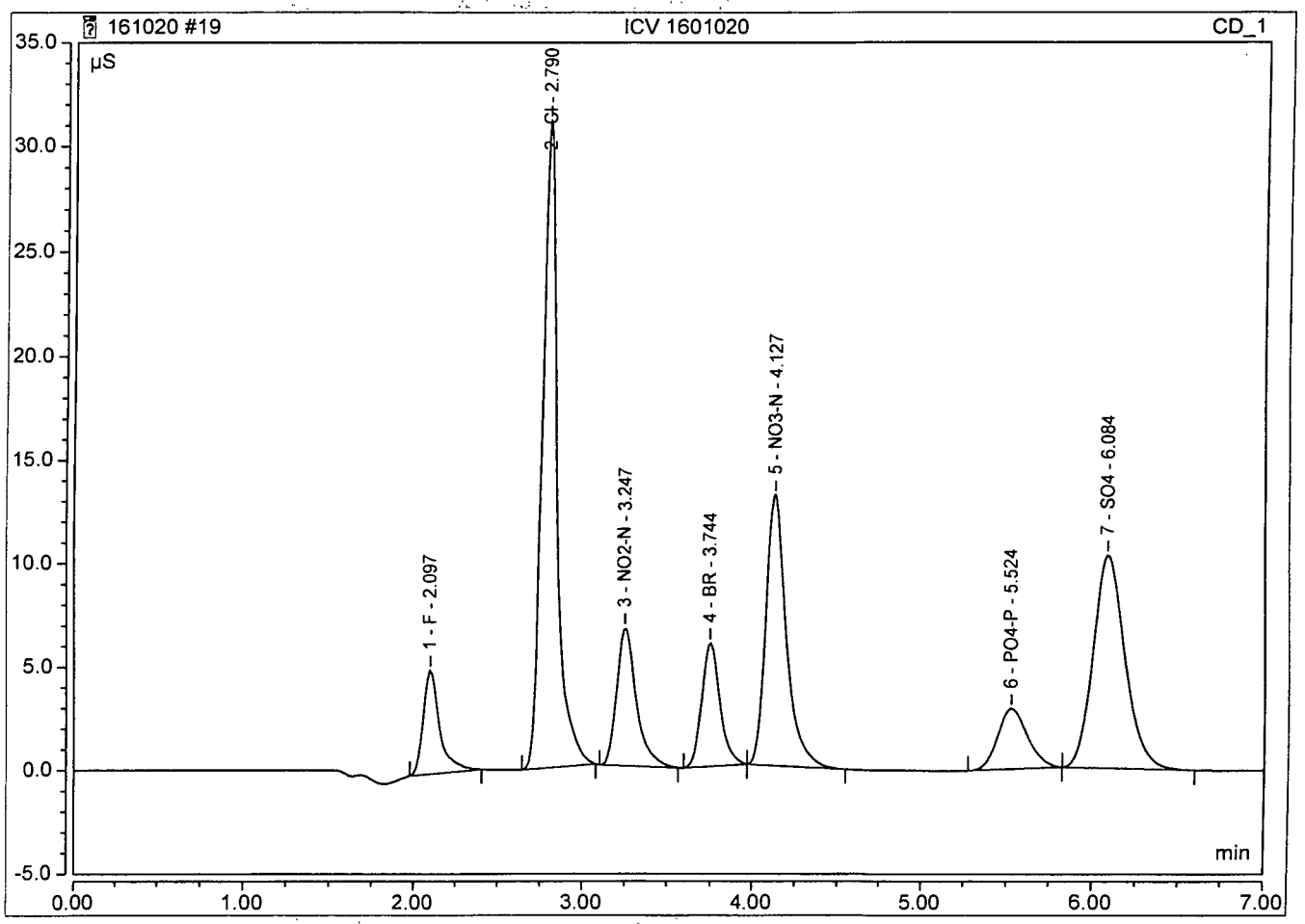
(1) Control Limits: 90-110

ILM02.0

Peak Integration Report

Sample Name:	**ICV 1601020**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:37**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB	0.568	5.018	2.5594
2	2.79	Cl	BMB	3.214	31.139	18.2184
3	3.25	NO2-N	BMB	0.894	6.653	2.9873
4	3.74	BR	BMB	0.739	5.970	11.8423
5	4.13	NO3-N	BMB	1.827	13.075	4.5291
6	5.52	PO4-P	BMB	0.590	2.913	4.8011
7	6.08	SO4	BMB	2.187	10.255	18.4058
		TOTAL:		10.02	75.02	63.34



Algorithm Check

y = .1816x - .0943

x = 18.22

y = Peak Area
x = Amount

MM 1/18/17

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: _____

ARF No.: _____ SDG: _____

Preparation Blank Matrix (soil/water): water

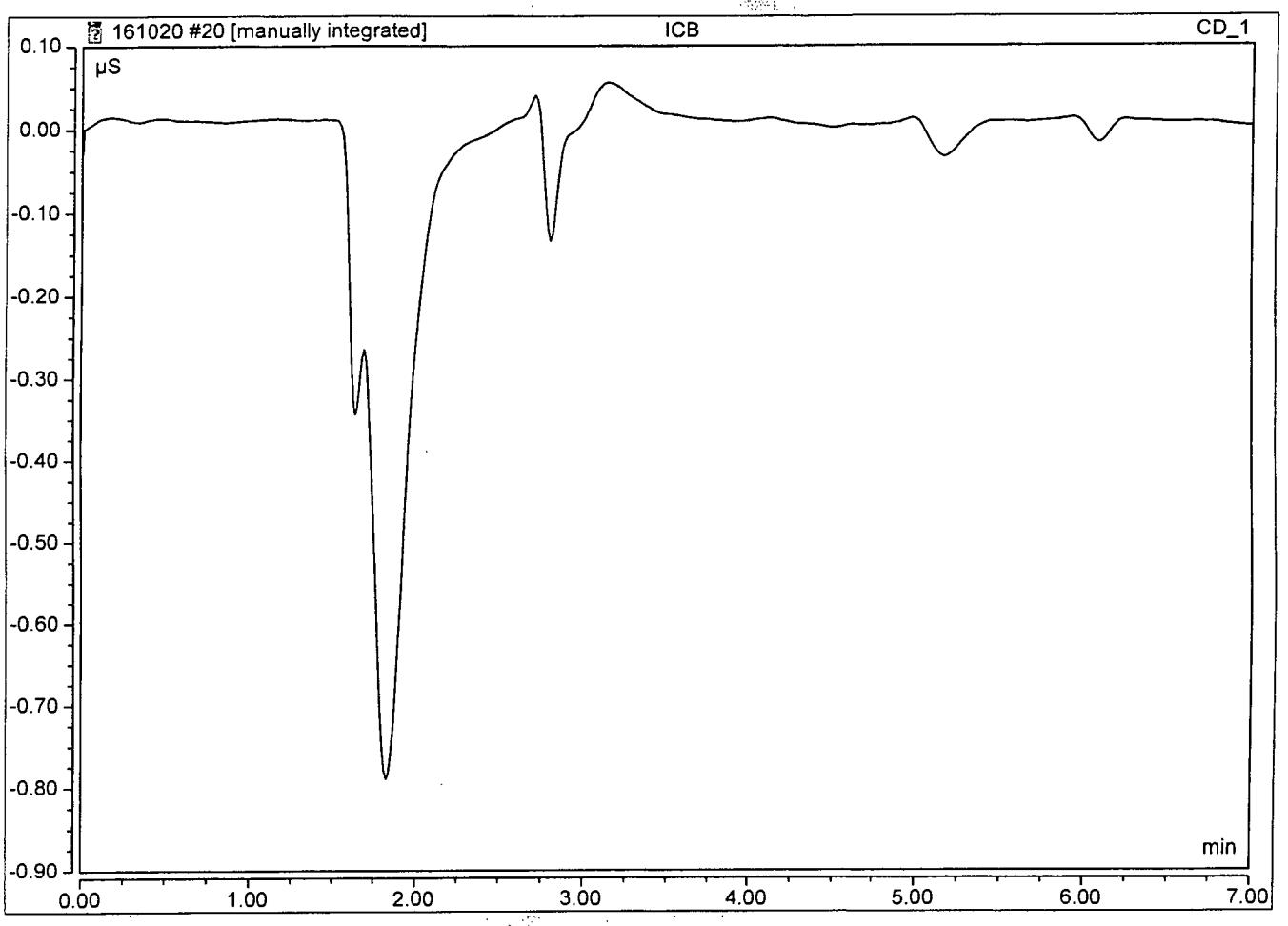
Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	ICB 10/20/16 12:50	C		C		C		C		C	
bromide	.500	U									
chloride	1.000	U									
fluoride	.100	U									
Nitrate(NO3)	.500	U									
Nitrate(NO3)-N	.200	U									
Nitrite(NO2)	.300	U									
Nitrite(NO2)-N	.100	U									
phosphate	.600	U									
phosphate-p	.200	U									
sulfate	1.000	U									

Peak Integration Report

Sample Name:	**ICB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:50**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
		TOTAL:		0.00	0.00	0.00



A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM
ARF No: 81936 SDG: 81936
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 01/11/17

Analyte	Calibration Verification									M
	True CCV1	Found 9:29	%R(1)	True CCV1	Found 15:38	%R(1)	True CCV1	Found 18:20	%R(1)	
chloride	25	24.5056	98.0	25	24.5174	98.1	25	24.5563	98.2	
Nitrite(NO2)	8.21	8.15796	99.4	8.21	8.27883	101	8.21	8.29197	101	
sulfate	25	23.798	95.2	25	23.8168	95.3	25	23.8438	95.4	

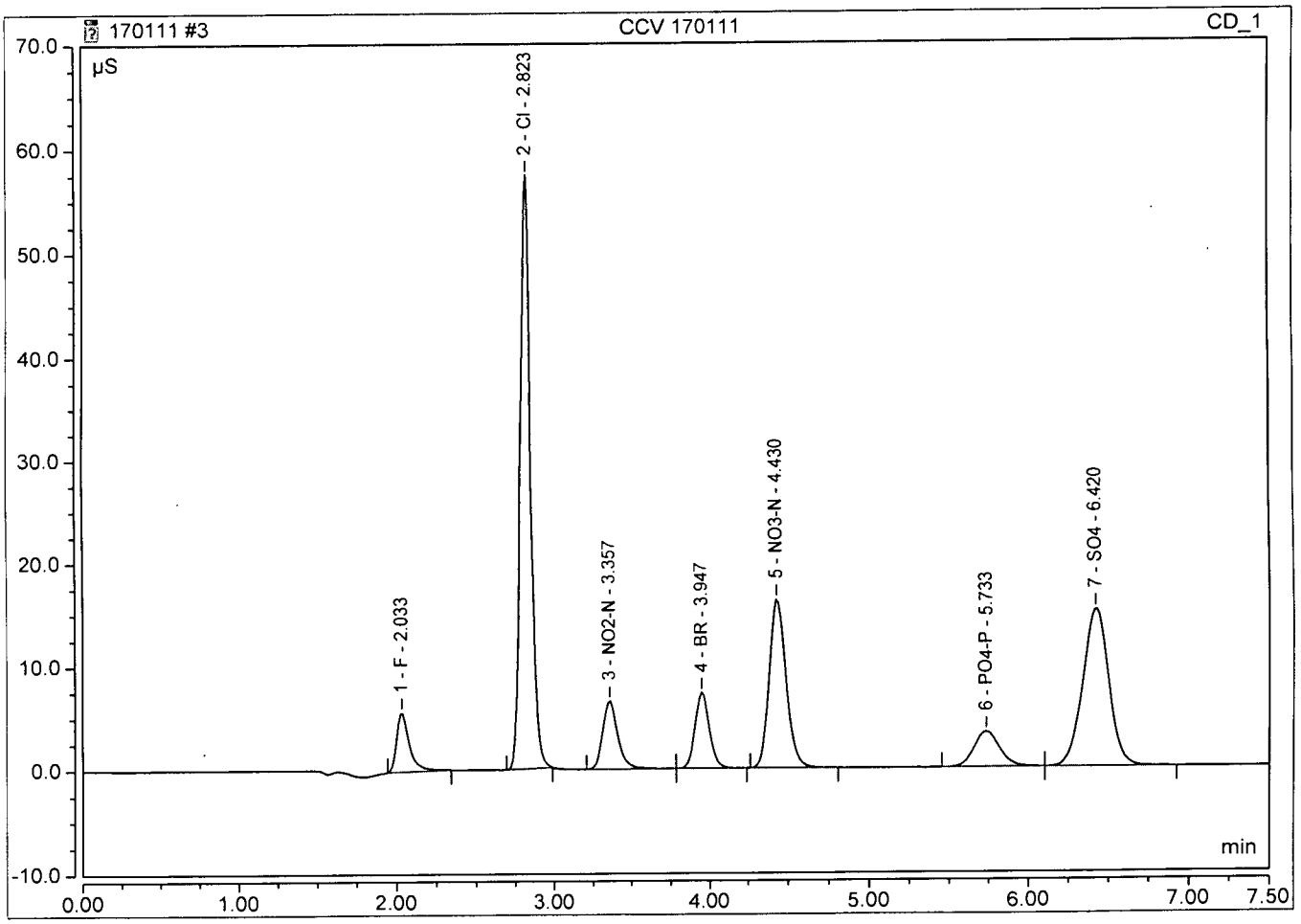
(1) Control Limits: 90-110

ILM02.0

Peak Integration Report

Sample Name:	**CCV 170111**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**11-Jan-2017 / 09:29**	*Run Time:*	**7.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.03	F	BMB	0.527	5.712	2.3773
2	2.82	Cl	BMB	4.356	57.336	24.5056
3	3.36	NO2-N	BMB	0.742	6.533	2.4836
4	3.95	BR	BMB	0.788	7.287	12.6202
5	4.43	NO3-N	BMB	1.971	16.214	4.8788
6	5.73	PO4-P	BMB	0.629	3.380	5.1156
7	6.42	SO4	BMB	2.846	15.117	23.7980
TOTAL:				11.86	111.58	75.78



Algorithm Check

$y = .1816x - .0943$ y = Peak Area

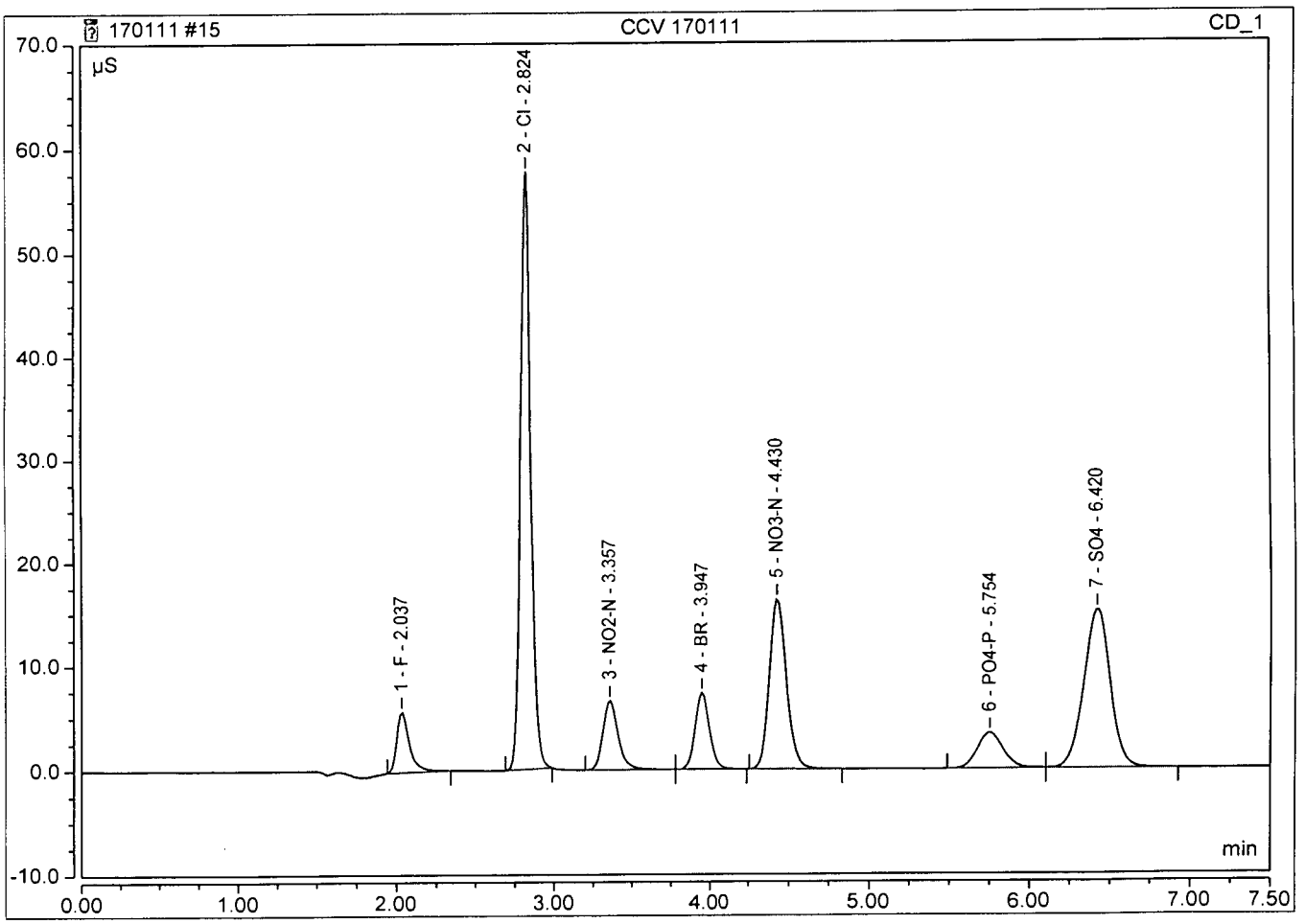
$x = \cancel{18.72}$ 24.51 ✓ x = Amount

MM 1/18/17

Peak Integration Report

Sample Name:	**CCV 170111**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**11-Jan-2017 / 15:38**	*Run Time:*	**7.50**

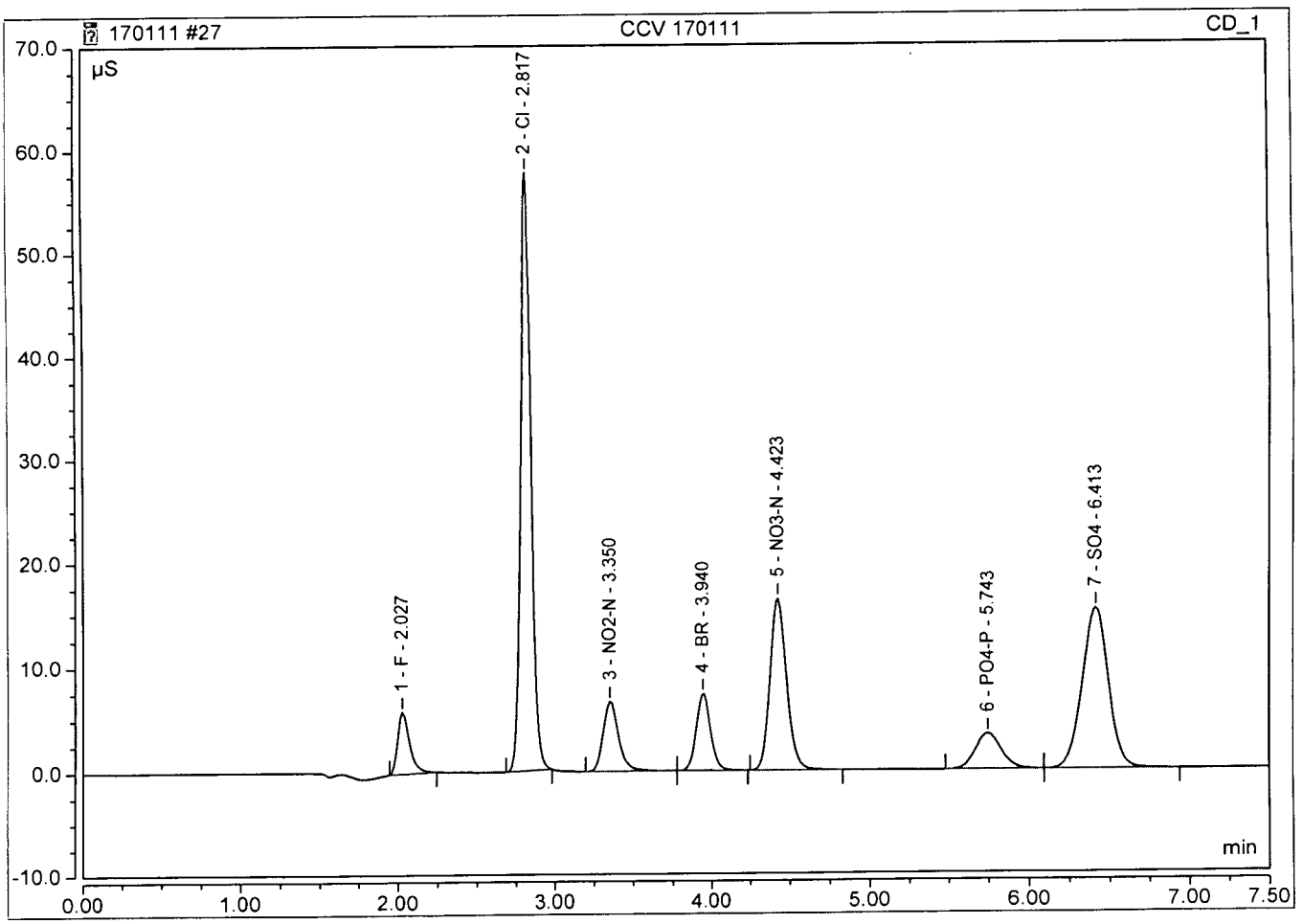
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.04	F	BMB	0.530	5.800	2.3916
2	2.82	Cl	BMB	4.358	57.632	24.5174
3	3.36	NO2-N	BMB	0.753	6.616	2.5205
4	3.95	BR	BMB	0.789	7.299	12.6296
5	4.43	NO3-N	BMB	1.975	16.278	4.8894
6	5.75	PO4-P	BMB	0.630	3.379	5.1250
7	6.42	SO4	BMB	2.848	15.134	23.8168
TOTAL:				11.88	112.14	75.89



Peak Integration Report

Sample Name:	**CCV 170111**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**11-Jan-2017 / 18:20**	*Run Time:*	**7.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.03	F	BMB	0.513	5.888	2.3167
2	2.82	Cl	BMB	4.365	57.687	24.5563
3	3.35	NO2-N	BMB	0.754	6.634	2.5245
4	3.94	BR	BMB	0.790	7.309	12.6466
5	4.42	NO3-N	BMB	1.978	16.288	4.8960
6	5.74	PO4-P	BMB	0.625	3.355	5.0828
7	6.41	SO4	BMB	2.851	15.152	23.8438
TOTAL:				11.88	112.31	75.87



A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 81936 SDG: 81936

Preparation Blank Matrix (soil/water): water

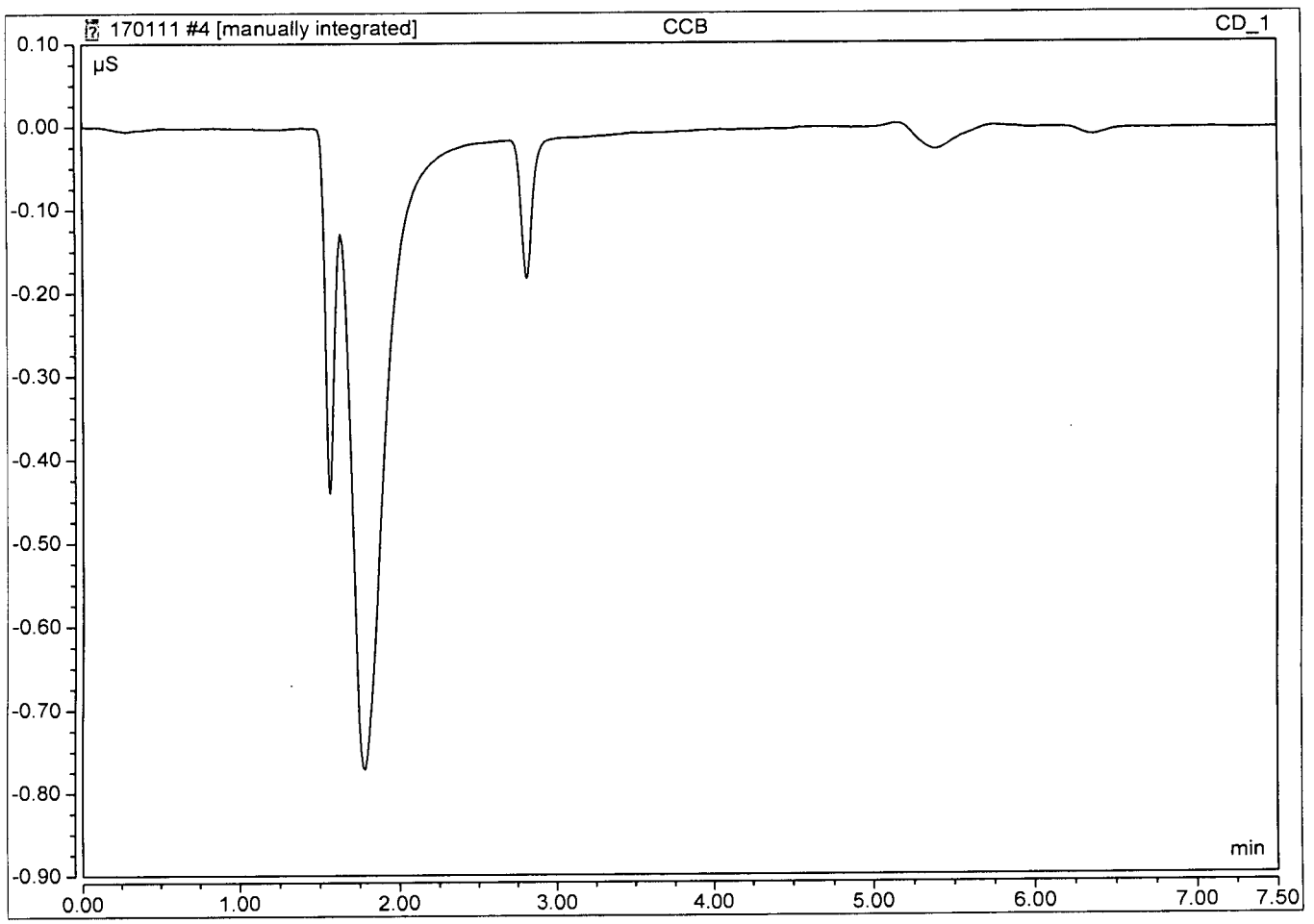
Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	CCB 01/11/17 09:42	C	CCB 01/11/17 15:51	C	CCB 01/11/17 18:34	C		C		C	
chloride	1.000	U	1.000	U	1.000	U					
Nitrite(NO2)	.300	U	.300	U	.300	U					
sulfate	1.000	U	1.000	U	1.000	U					

Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**11-Jan-2017 / 09:42**	*Run Time:*	**7.50**

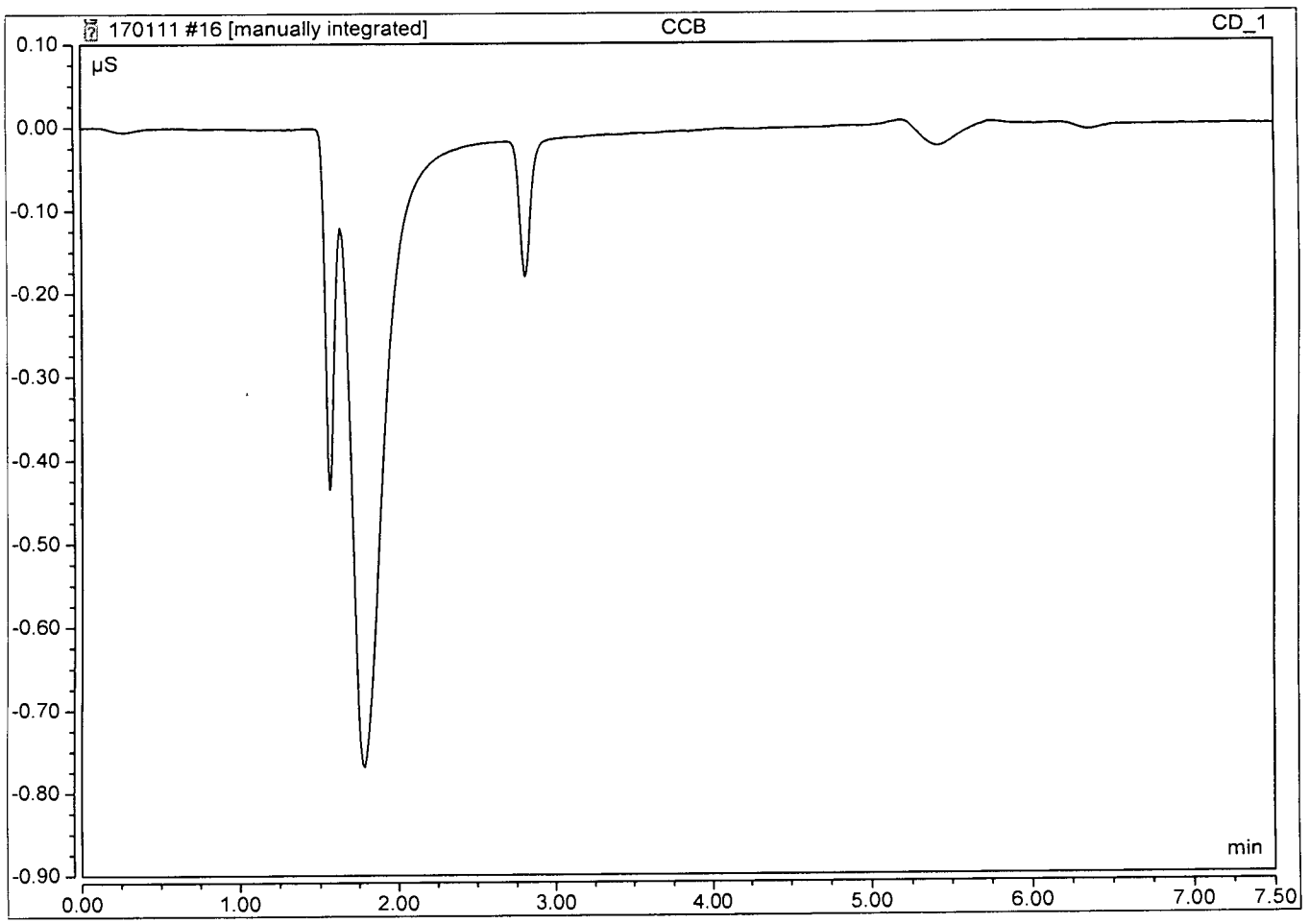
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
		TOTAL:		0.00	0.00	0.00



Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**11-Jan-2017 / 15:51**	*Run Time:*	**7.50**

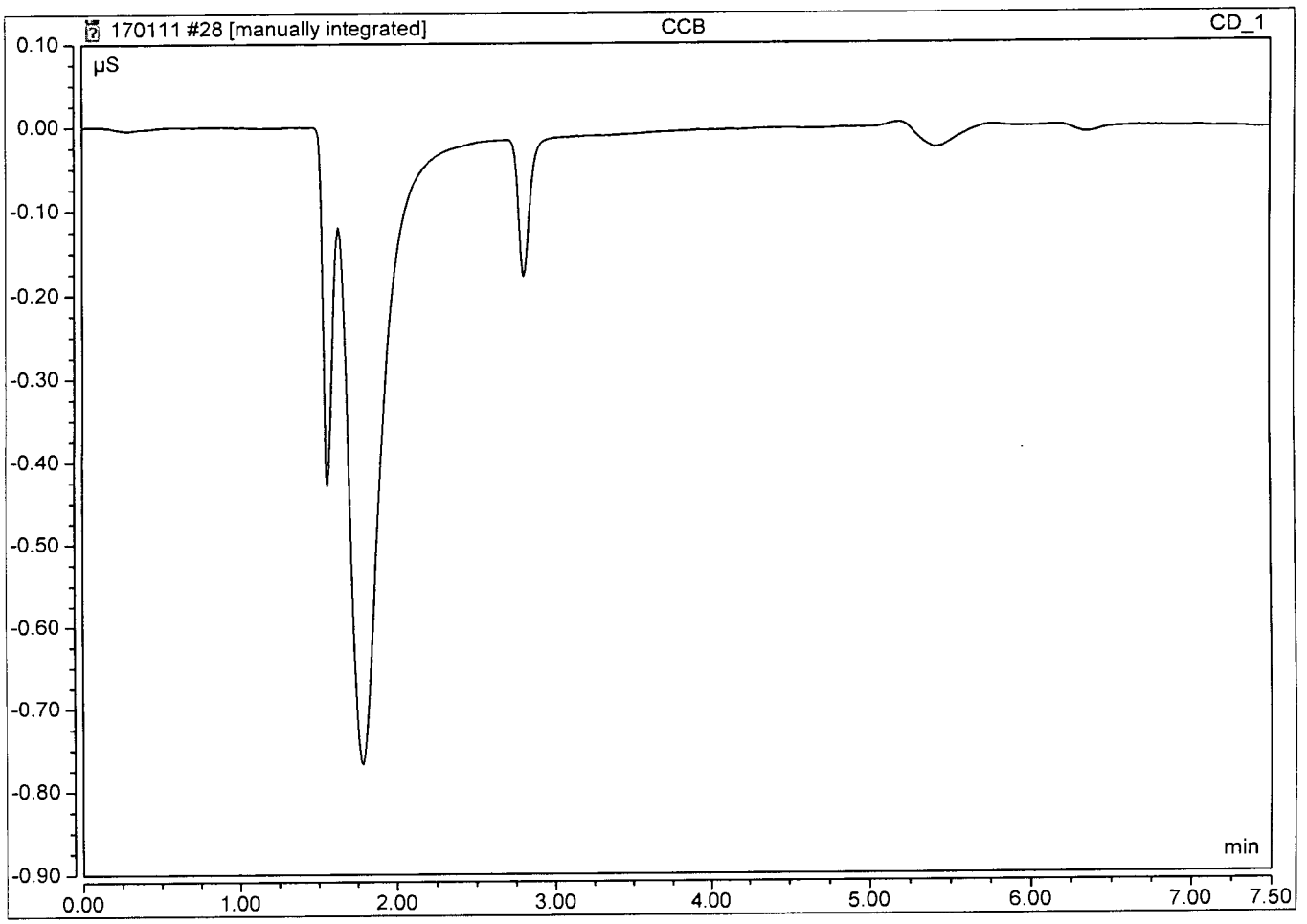
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
TOTAL:				0.00	0.00	0.00



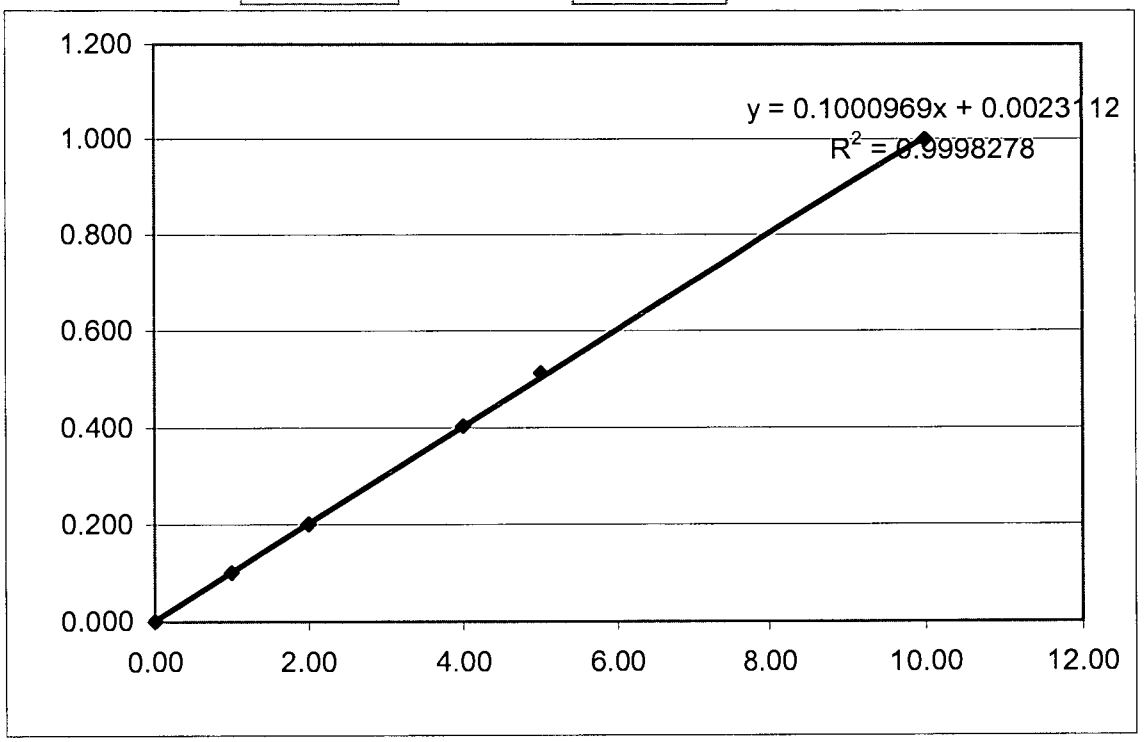
Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**11-Jan-2017 / 18:34**	*Run Time:*	**7.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
		TOTAL:		0.00	0.00	0.00



Ferrous Iron **170110A**



X	Y
0.00	0.000
1.00	0.101
2.00	0.201
4.00	0.403
5.00	0.512
10.00	0.999

Algorithm Check

reading (y)= 0.302 01/10/17 11:40

dilution= 1

result (x)= 2.99 ✓

MM 1/18/17

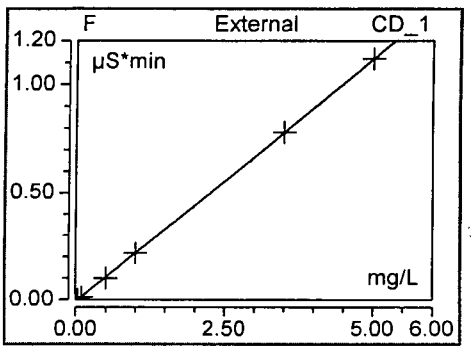
Calibration Batch Report

Sequence:	**161020**	*Injection Volume:*	**25.00**
Instrument Method:	**Program 1**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:24**	*Run Time:*	**7**

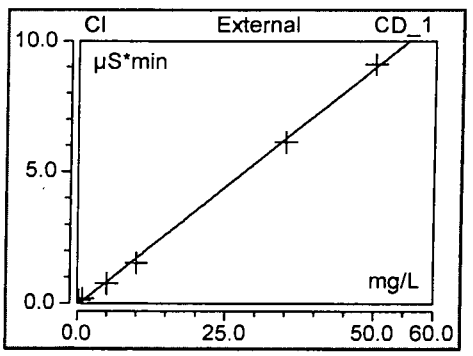
Calibration Summary

Peak Name	Eval.Type	Cal.Type	Points	Offset (C0)	Slope (C1)	Curve (C2)	Coeff.Det. %
F	Area	WithOffset,	6.000	-0.009	0.225	0.000	99.9840
Cl	Area	in, WithOffse	6.000	-0.094	0.182	0.000	99.8613
NO2-N	Area	in, WithOffse	6.000	-0.007	0.301	0.000	99.9917
BR	Area	in, WithOffse	6.000	-0.008	0.063	0.000	99.9802
NO3-N	Area	in, WithOffse	6.000	-0.039	0.412	0.000	99.9329
PO4-P	Area	in, WithOffse	6.000	-0.008	0.125	0.000	99.9563
SO4	Area	in, WithOffse	6.000	-0.060	0.122	0.000	99.9400
		AVERAGE:		-0.0322	0.2043	0.0000	99.9495

Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	F	F	F	F
ICAL 1 10/20/16	2.123	0.0012	0.022	0.044
ICAL 2 10/20/16	2.107	0.0123	0.139	0.093
ICAL 3 10/20/16	2.100	0.1000	0.922	0.483
ICAL 4 10/20/16	2.104	0.2174	1.958	1.004
ICAL 5 10/20/16	2.097	0.7826	6.953	3.513
ICAL 6 10/20/16	2.103	1.1183	9.996	5.004
Average	2.106			
Rel. Std. Dev.	0.443 %			

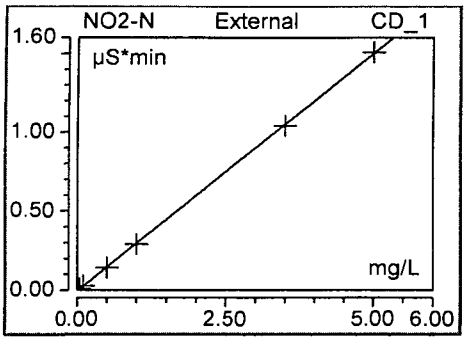


Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	Cl	Cl	Cl	Cl
ICAL 1 10/20/16	2.793	0.1132	1.052	1.143
ICAL 2 10/20/16	2.790	0.1861	1.743	1.544
ICAL 3 10/20/16	2.790	0.7617	7.117	4.714
ICAL 4 10/20/16	2.797	1.5419	14.708	9.010
ICAL 5 10/20/16	2.793	6.1288	59.398	34.268
ICAL 6 10/20/16	2.803	9.1171	87.978	50.723
Average	2.795			
Rel. Std. Dev.	0.179 %			

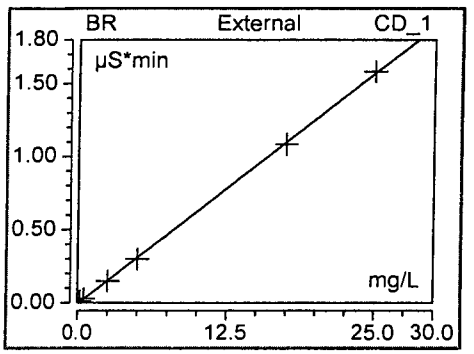


Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

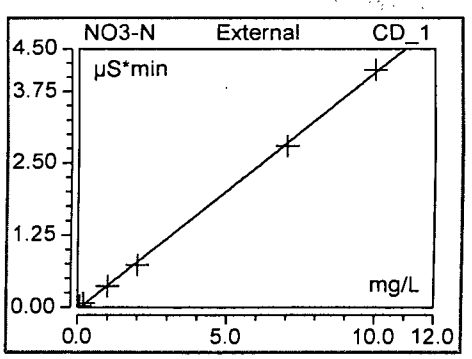
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	NO2-N	NO2-N	NO2-N	NO2-N
ICAL 1 10/20/16	3.250	0.0095	0.073	0.053
ICAL 2 10/20/16	3.247	0.0276	0.209	0.113
ICAL 3 10/20/16	3.250	0.1420	1.072	0.493
ICAL 4 10/20/16	3.254	0.2907	2.188	0.986
ICAL 5 10/20/16	3.250	1.0405	7.775	3.473
ICAL 6 10/20/16	3.257	1.5072	11.205	5.022
Average	3.251			
Rel. Std. Dev.	0.106 %			



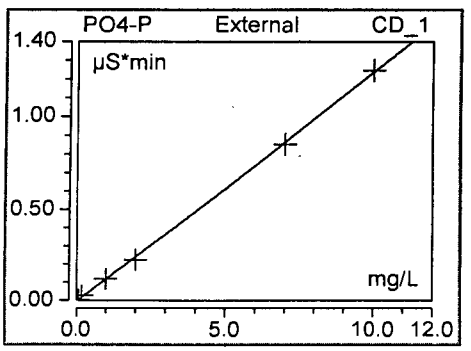
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	BR	BR	BR	BR
ICAL 1 10/20/16	3.757	0.0109	0.087	0.299
ICAL 2 10/20/16	3.753	0.0293	0.232	0.589
ICAL 3 10/20/16	3.750	0.1485	1.179	2.478
ICAL 4 10/20/16	3.754	0.2993	2.389	4.870
ICAL 5 10/20/16	3.743	1.0832	8.801	17.295
ICAL 6 10/20/16	3.747	1.5800	13.023	25.169
Average	3.751			
Rel. Std. Dev.	0.131 %			



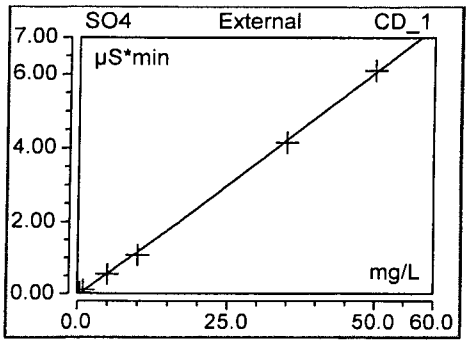
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	NO3-N	NO3-N	NO3-N	NO3-N
ICAL 1 10/20/16	4.143	0.0290	0.196	0.166
ICAL 2 10/20/16	4.140	0.0717	0.496	0.270
ICAL 3 10/20/16	4.137	0.3656	2.533	0.983
ICAL 4 10/20/16	4.140	0.7330	5.168	1.875
ICAL 5 10/20/16	4.123	2.7923	20.144	6.873
ICAL 6 10/20/16	4.123	4.1278	30.098	10.114
Average	4.135			
Rel. Std. Dev.	0.215 %			



Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	PO4-P	PO4-P	PO4-P	PO4-P
ICAL 1 10/20/16	5.540	0.0032	0.021	0.092
ICAL 2 10/20/16	5.540	0.0284	0.107	0.295
ICAL 3 10/20/16	5.537	0.1191	0.557	1.022
ICAL 4 10/20/16	5.537	0.2251	1.103	1.873
ICAL 5 10/20/16	5.520	0.8544	4.243	6.922
ICAL 6 10/20/16	5.523	1.2473	6.244	10.075
Average	5.533			
Rel. Std. Dev.	0.160 %			



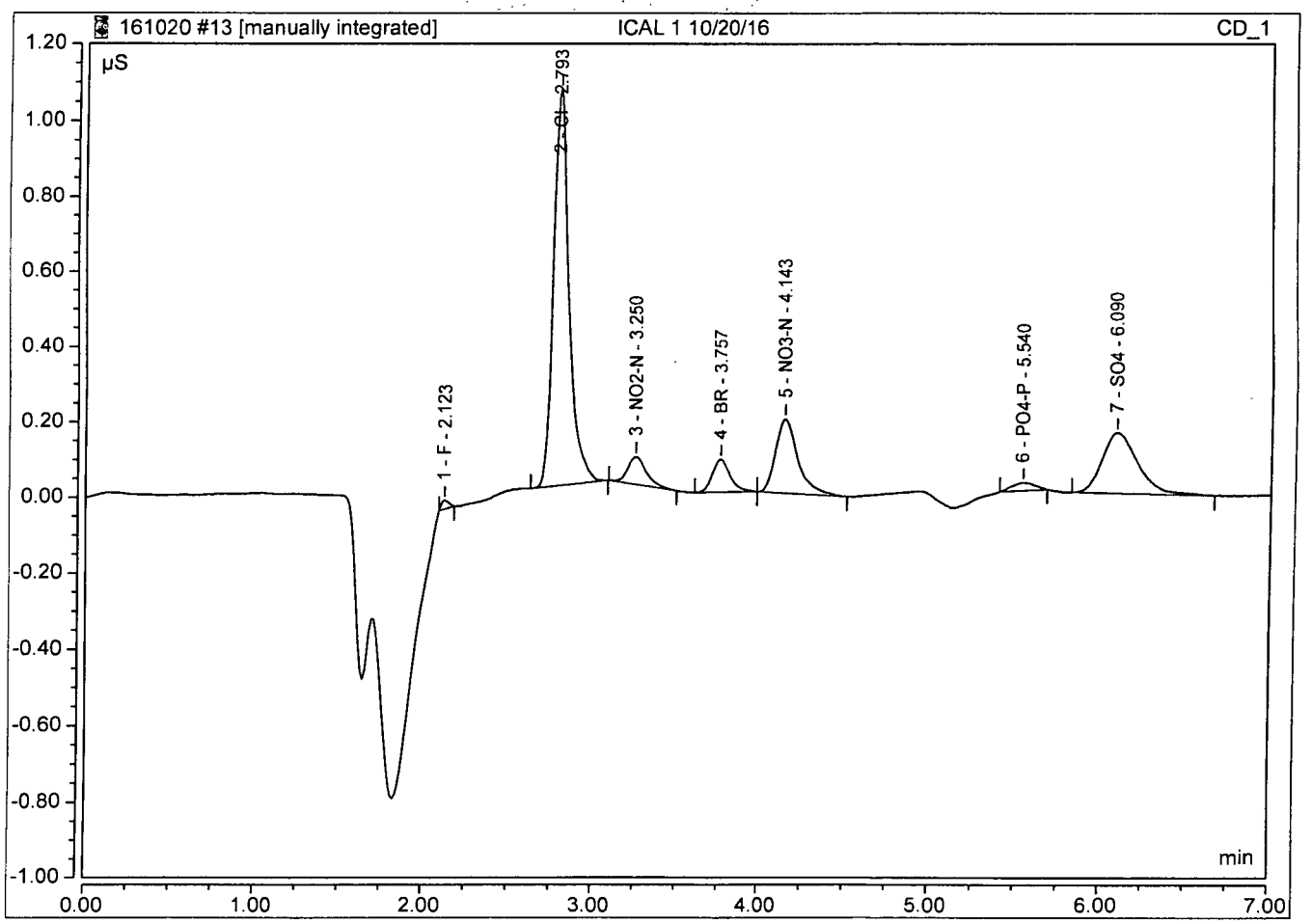
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	SO4	SO4	SO4	SO4
ICAL 1 10/20/16	6.090	0.0385	0.159	0.808
ICAL 2 10/20/16	6.093	0.1046	0.455	1.350
ICAL 3 10/20/16	6.097	0.5456	2.464	4.961
ICAL 4 10/20/16	6.100	1.0756	4.975	9.302
ICAL 5 10/20/16	6.097	4.1512	19.714	34.487
ICAL 6 10/20/16	6.110	6.1057	29.270	50.492
Average	6.098			
Rel. Std. Dev.	0.113 %			



Peak Integration Report

Sample Name:	**ICAL 1 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:19**	*Run Time:*	**7.00**

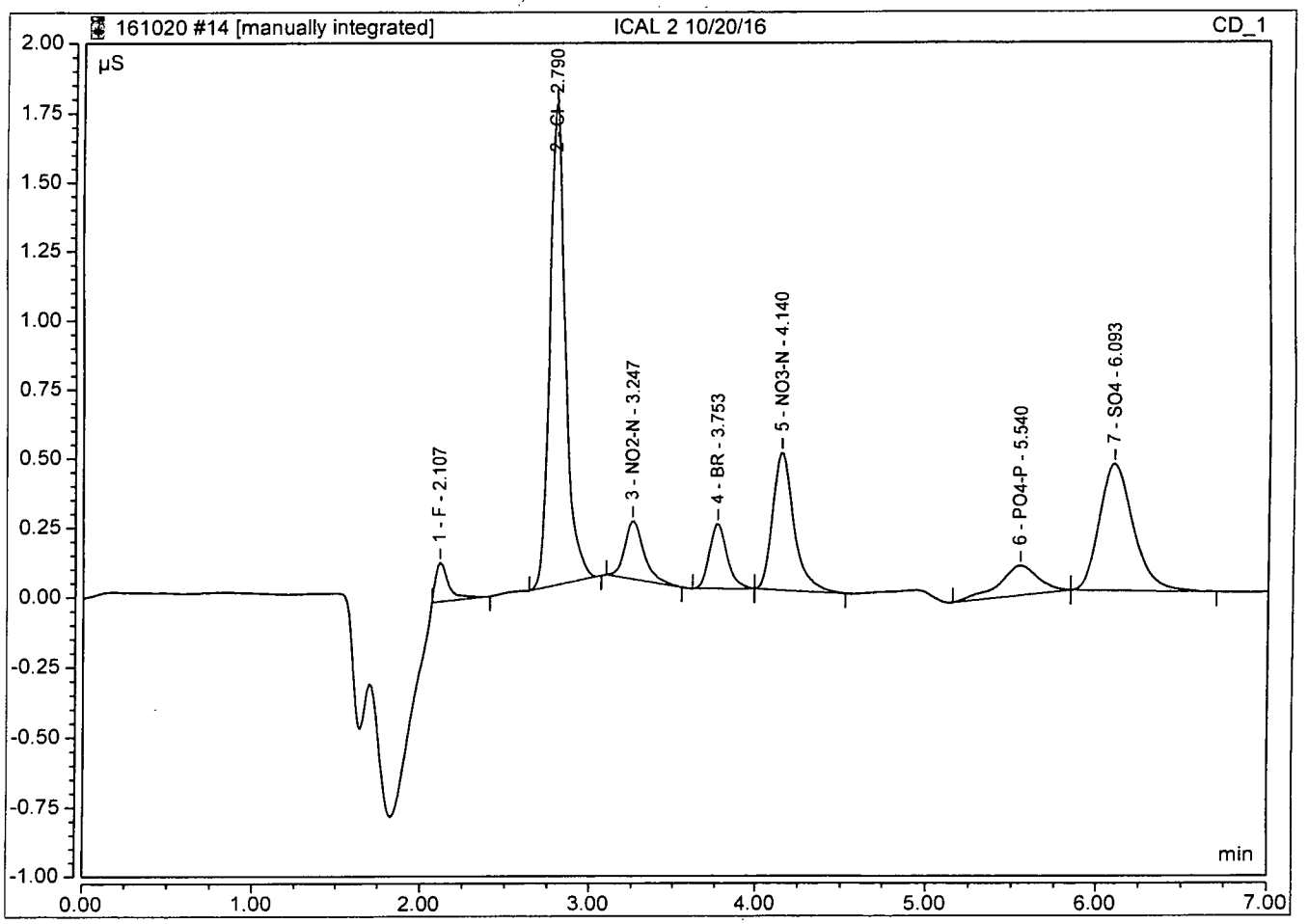
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.12	F	BMB*	0.001	0.022	0.0438
2	2.79	Cl	BMB	0.113	1.052	1.1427
3	3.25	NO2-N	BMB	0.009	0.073	0.0531
4	3.76	BR	BMB	0.011	0.087	0.2985
5	4.14	NO3-N	BMB	0.029	0.196	0.1660
6	5.54	PO4-P	BMB*	0.003	0.021	0.0923
7	6.09	SO4	BMB	0.038	0.159	0.8084
TOTAL:				0.21	1.61	2.60



Peak Integration Report

Sample Name:	**ICAL 2 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:32**	*Run Time:*	**7.00**

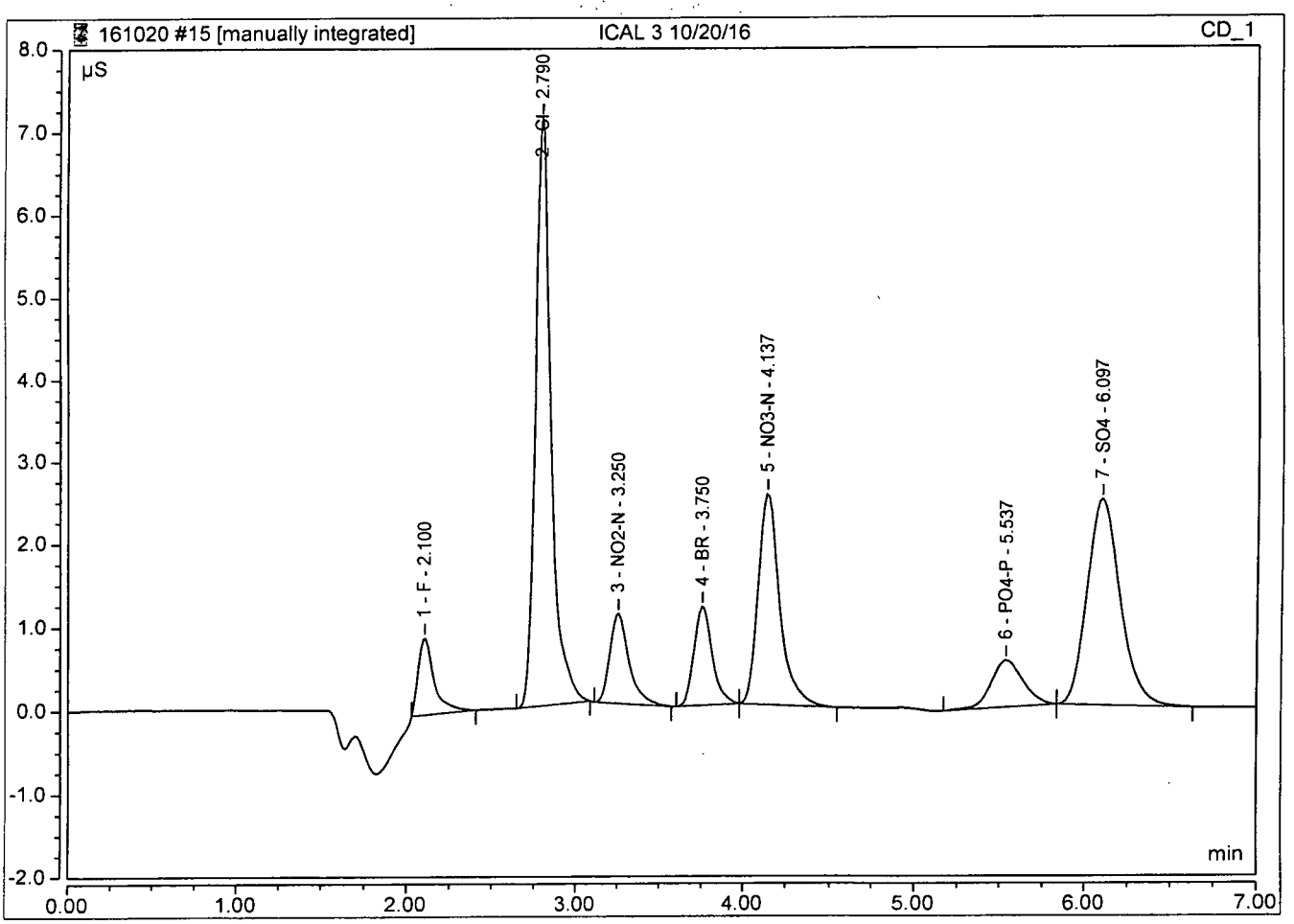
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.11	F	BMB*	0.012	0.139	0.0933
2	2.79	Cl	BMB	0.186	1.743	1.5439
3	3.25	NO2-N	BMB	0.028	0.209	0.1132
4	3.75	BR	BMB	0.029	0.232	0.5894
5	4.14	NO3-N	BMB	0.072	0.496	0.2699
6	5.54	PO4-P	BMB	0.028	0.107	0.2946
7	6.09	SO4	BMB	0.105	0.455	1.3496
TOTAL:				0.46	3.38	4.25



Peak Integration Report

Sample Name:	**ICAL 3 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:45**	*Run Time:*	**7.00**

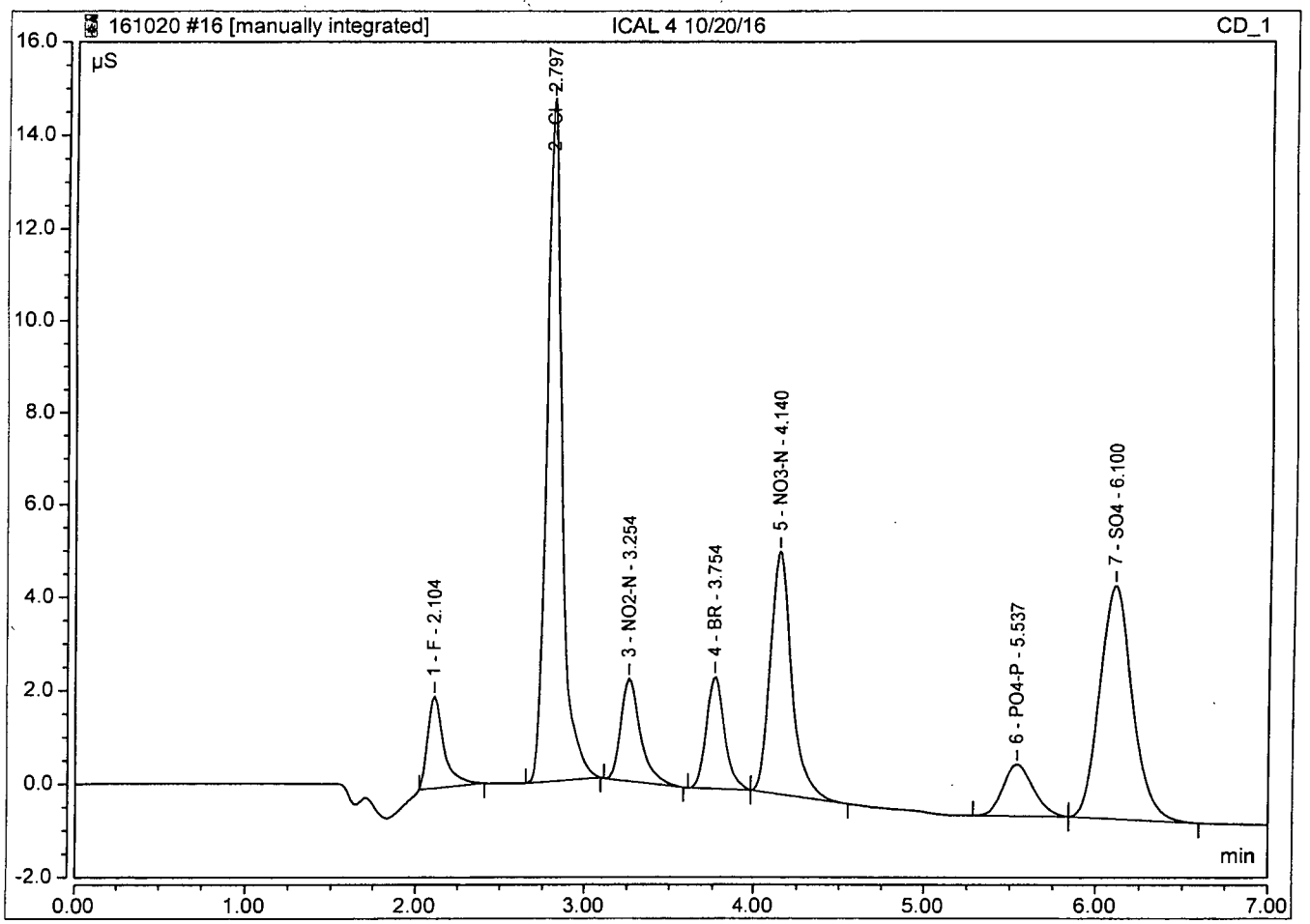
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB*	0.100	0.922	0.4827
2	2.79	Cl	BMB	0.762	7.117	4.7137
3	3.25	NO2-N	BMB	0.142	1.072	0.4926
4	3.75	BR	BMB	0.148	1.179	2.4784
5	4.14	NO3-N	BMB	0.366	2.533	0.9830
6	5.54	PO4-P	BMB	0.119	0.557	1.0221
7	6.10	SO4	BMB	0.546	2.464	4.9609
TOTAL:				2.18	15.84	15.13



Peak Integration Report

Sample Name:	**ICAL 4 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:58**	*Run Time:*	**7.00**

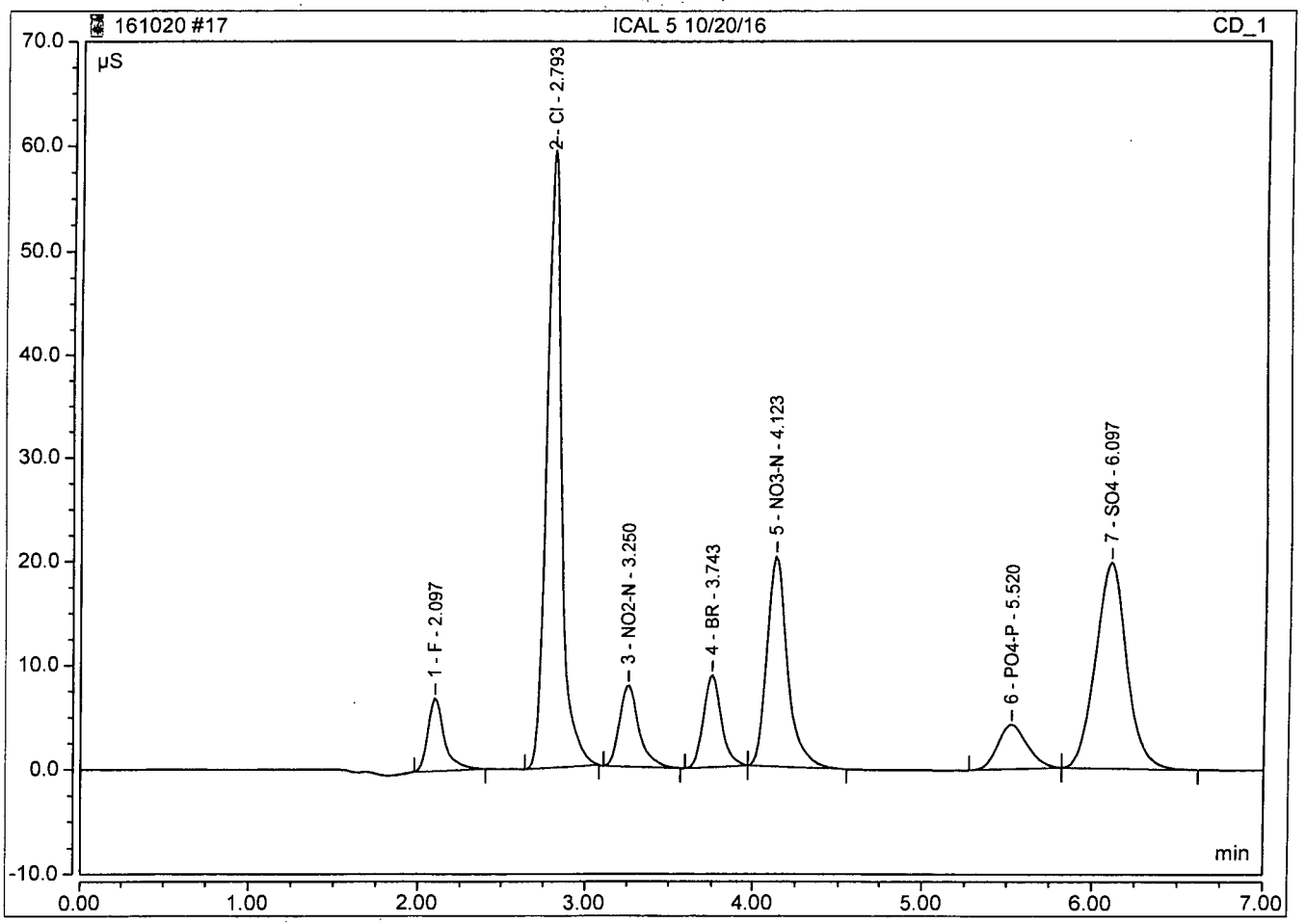
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB*	0.217	1.958	1.0036
2	2.80	Cl	BMB	1.542	14.708	9.0096
3	3.25	NO2-N	BMB	0.291	2.188	0.9859
4	3.75	BR	BMB	0.299	2.389	4.8695
5	4.14	NO3-N	BMB	0.733	5.168	1.8746
6	5.54	PO4-P	BMB	0.225	1.103	1.8731
7	6.10	SO4	BMB	1.076	4.975	9.3015
TOTAL:				4.38	32.49	28.92



Peak Integration Report

Sample Name:	ICAL 5 10/20/16	*Inj. Vol.:*	25.00
Injection Type:	Calibration Standard	*Dilution Factor:*	1.0000
Program:	Analytical Processing Method 161020 ND	*Operator:*	chemist_wetlab
Inj. Date / Time:	20-Oct-2016 / 12:11	*Run Time:*	7.00

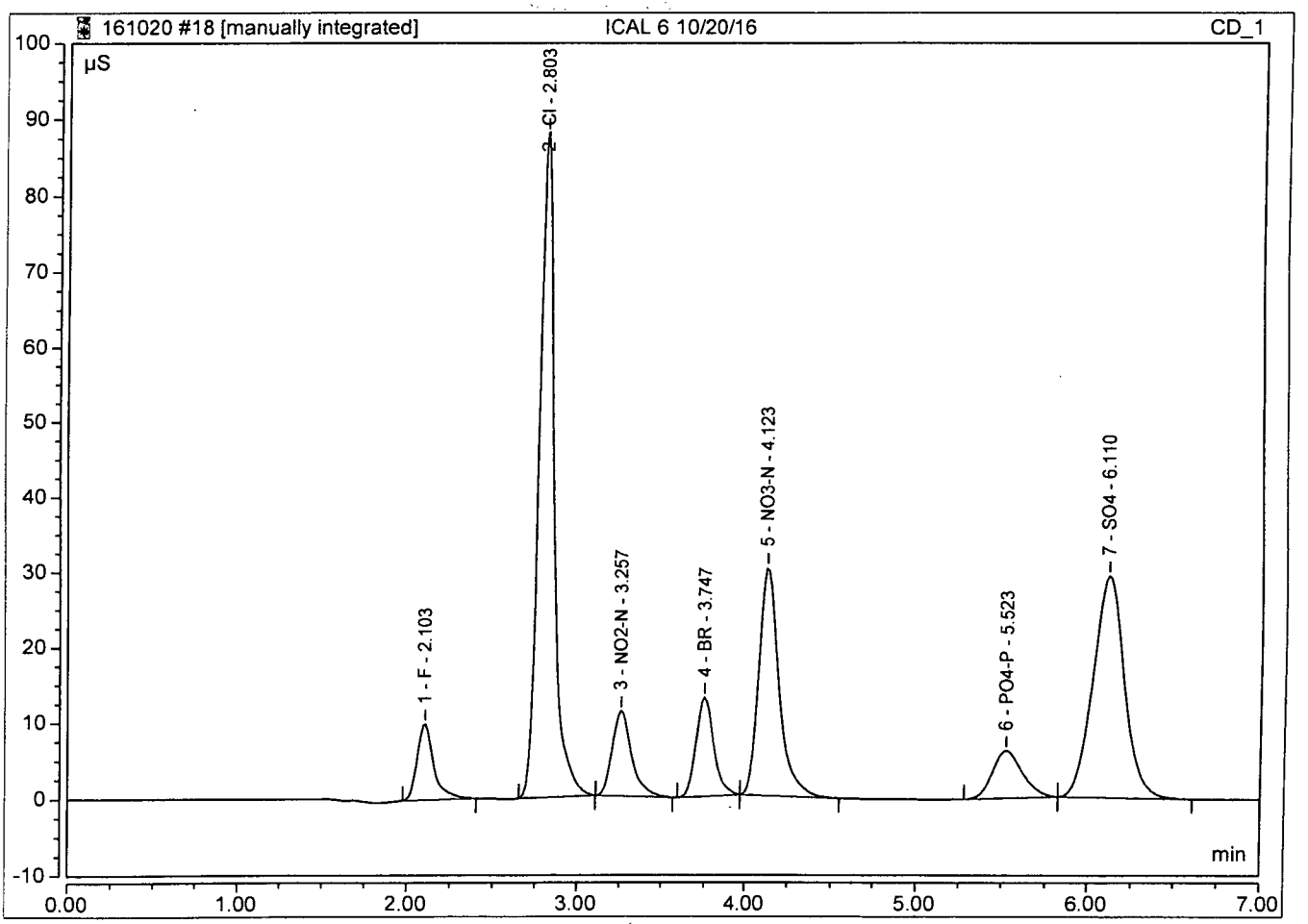
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB	0.783	6.953	3.5131
2	2.79	Cl	BMB	6.129	59.398	34.2675
3	3.25	NO2-N	BMB	1.040	7.775	3.4734
4	3.74	BR	BMB	1.083	8.801	17.2948
5	4.12	NO3-N	BMB	2.792	20.144	6.8727
6	5.52	PO4-P	BMB	0.854	4.243	6.9225
7	6.10	SO4	BMB	4.151	19.714	34.4871
TOTAL:				16.83	127.03	106.83



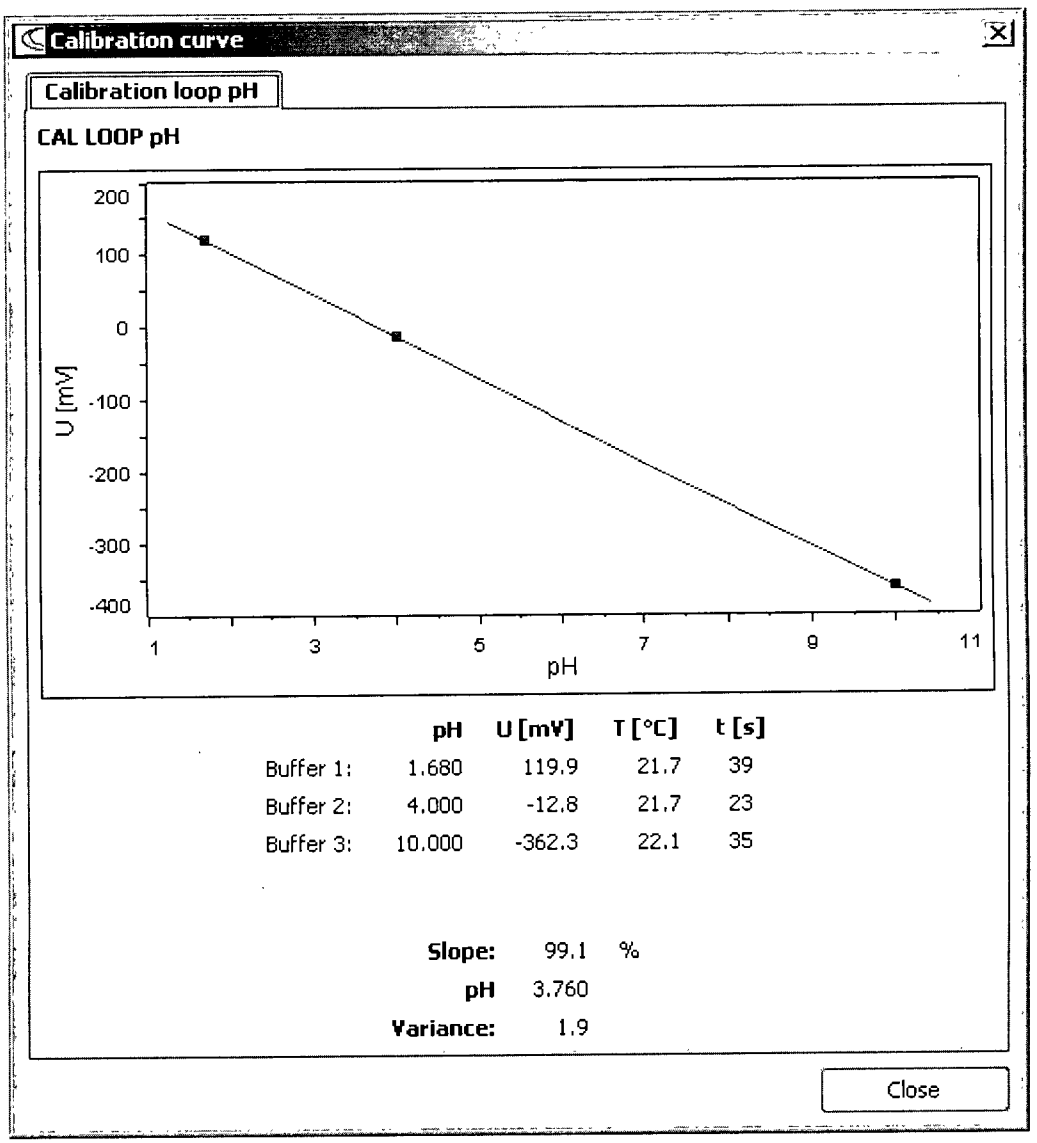
Peak Integration Report

Sample Name:	**ICAL 6 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:24**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB	1.118	9.996	5.0036
2	2.80	Cl	BMB*	9.117	87.978	50.7226
3	3.26	NO2-N	BMB	1.507	11.205	5.0218
4	3.75	BR	BMB	1.580	13.023	25.1693
5	4.12	NO3-N	BMB	4.128	30.098	10.1138
6	5.52	PO4-P	BMB	1.247	6.244	10.0755
7	6.11	SO4	BMB	6.106	29.270	50.4924
TOTAL:				24.80	187.81	156.60



Tiamo Calibration Curve
01/16/17



INORGANIC ANALYSIS
Raw Data

APPL, INC.

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
SM 2320B	BICARBONATE AS	1.6 J	2.0	1.70	0.85	mg/L	01/16/17	01/16/17	#232W-170116A-AZ48866
SM 2320B	CARBONATE AS CA	1.70 U	2.0	1.70	0.85	mg/L	01/16/17	01/16/17	#232W-170116A-AZ48866
SM 2320B	TOTAL ALKALINITY	1.6 J	2.0	1.70	0.85	mg/L	01/16/17	01/16/17	#232W-170116A-AZ48866
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	01/11/17	01/11/17	#300W-170111A-AZ48676
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	01/11/17	01/11/17	#300W-170111A-AZ48676
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	01/11/17	01/11/17	#300W-170111A-AZ48676
SM3500Fe	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	01/10/17	01/10/17	#35FE-170110A-AZ48676

Wetlab SC-Blank-REG MDLs
Printed: 01/17/17 4:02:52 PM

Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

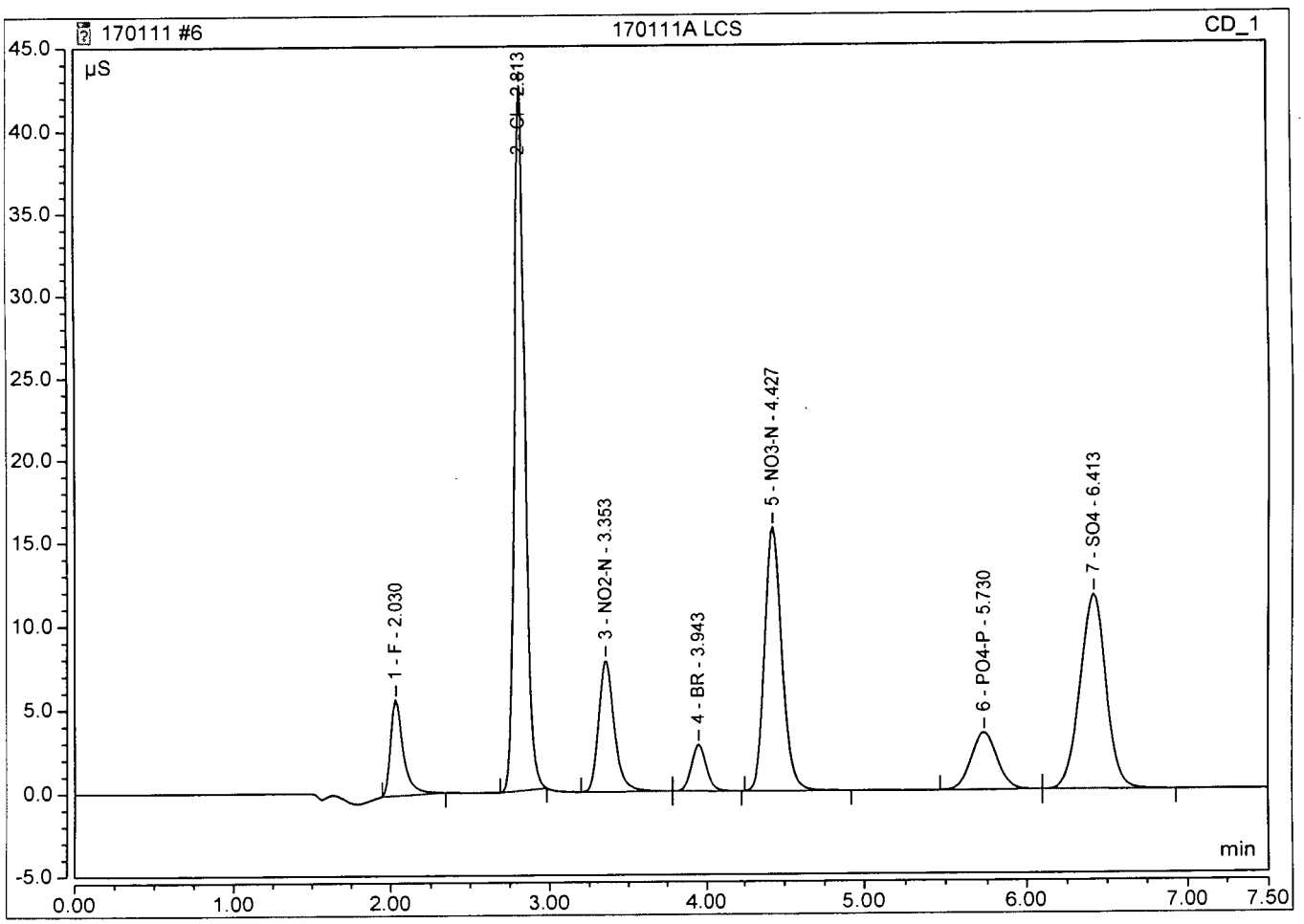
Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	20.0	18.4	92.0	90-110	01/11/17	01/11/17	#300W-170111A-AZ48676
EPA 300.0	NITRATE	22.1	21.1	95.5	90-110	01/11/17	01/11/17	#300W-170111A-AZ48676
EPA 300.0	SULFATE	20.0	18.5	92.5	90-110	01/11/17	01/11/17	#300W-170111A-AZ48676
SM 2320B	BICARBONATE AS CACO3	250	248	99.2	90-110	01/16/17	01/16/17	#232W-170116A-AZ48866
SM 2320B	TOTAL ALKALINITY AS CACO3	250	248	99.2	90-110	01/16/17	01/16/17	#232W-170116A-AZ48866
SM3500Fe	FERROUS IRON	3.00	2.99	99.7	80-120	01/10/17	01/10/17	#35FE-170110A-AZ48676

Comments: _____

Peak Integration Report

Sample Name:	**170111A LCS**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**11-Jan-2017 / 10:09**	*Run Time:*	**7.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.03	F	BMB	0.528	5.714	2.3831
2	2.81	Cl	BMB	3.245	42.526	18.3877
3	3.35	NO2-N	BMB	0.900	7.810	3.0070
4	3.94	BR	BMB	0.305	2.769	4.9641
5	4.43	NO3-N	BMB	1.924	15.690	4.7663
6	5.73	PO4-P	BMB	0.633	3.393	5.1437
7	6.41	SO4	BMB	2.194	11.542	18.4600
TOTAL:				9.73	89.44	57.11



SPECTROPHOTOMETRIC ANALYSIS (Ferrous Iron)

Method: SM3500Fe
Analyte: Ferrous Iron
Analyst: MM
Units: mg/L
QCG: 170110A
Notes:
Final Volume: 50mL

Instrument: GENESYS 10UV
Raw Spec: abs. @ 510nm
R-Squared: 0.99983
Reagent (lot#): COLORIZING REAGENT (12/09/16)
BUFFER (12/09/16)

Date	Time	APPL ID	25mL	Raw Result	SubSample Amt	Raw BLK	Calc Conc	Result	QC True	QC%
05/20/16	12:37	0 BB 5/20/16	1	0.000						
05/20/16	12:38	1	1	0.101						
05/20/16	12:39	2	1	0.201						
05/20/16	12:39	4	1	0.403						
05/20/16	12:40	5	1	0.512						
05/20/16	12:40	10	1	0.999						
05/20/16	12:41	160520A ICV 3.0	1	0.304	25mL		3.01	3.01	3.000	100.5%
05/20/16	12:42	160520A ICB	1	0.000	25mL		-0.02	-0.02		
01/10/17	11:38	CCV 4.0 170110	1	0.405	25mL		4.02	4.023	4.000	*100.57*
01/10/17	11:39	CCB 170110	1	0.001	25mL		-0.01	-0.013		
01/10/17	11:40	170110A LCS 3.0	1	0.302	25mL		2.99	2.994	3.000	*99.80*
01/10/17	11:41	170110A LCSD 3.0	1	0.301	25mL		2.98	2.984	3.000	*99.47*
01/10/17	11:42	AZ48676W08	1	0.006	25mL		0.04	0.037		
01/10/17	11:43	AZ48676W08 MS	1	0.307	25mL		3.04	3.044	3.000	*101.46*
01/10/17	11:44	AZ48676W08 MSD	1	0.303	25mL		3.00	3.004	3.00	*100.13*
01/10/17	11:45	CCV 4.0 170110	1	0.402	25mL		3.99	3.993	4.00	*99.83*
01/10/17	11:46	CCB 170110	1	0.001	25mL		-0.01	-0.013		

Metrohm 814/809 Titrando Data

Sample ID	Analysis Date/Time	Method	Titration Volume (to 8.3)	Titration Volume (total)	OH	CO3	HCO3	Total Alk	Unit	Sample Vol	N	Batch	Initials
AZ48676W07	2017-01-16 12:15:56 UTC-8	Alkalinity	0.000	1.830	0.00	0.00	78.69	78.69	mg/L	25 mL	0.0215	170116A	AH
170116A LCS	2017-01-16 12:03:40 UTC-8	Alkalinity	0.000	5.762	0.00	0.00	247.77	247.77	mg/L	25 mL	0.0215	170116A	AH
170116A Blk	2017-01-16 11:35:50 UTC-8	Alkalinity	0.000	0.036	0.00	0.00	1.55	1.55	mg/L	25 mL	0.0215	170116A	AH

Ferrous Iron Standard Prep

Stock Standard Prep:

Prep Date: 5/20/16
Exp Date: 5/20/17
Prep'd By: BB

CCV Stock (200 mg/L): 0.3502 g $Fe(NH_4)2(SO_4)_2*6H_2O$ EMD Lot #2013050298 up to 250 mL with DI

ICV Stock (200 mg/L): 0.3500 g $Fe(NH_4)2(SO_4)_2*6H_2O$ JT Baker Lot #0000068681 up to 250 mL with DI

QC Prep

Prep Date: 01/10/17
Exp Date: 01/11/17
Prep'd By: MM

CCV (4.0 mg/L): 0.500 mL of CCV Stock (prep: 5/20/16) into 25 mL DI then carried through sample prep procedure

LCS (3.0 mg/L): 0.375 mL of ICV Stock (prep: 5/20/16) into 25 mL DI then carried through sample prep procedure

MS/MSD (3.0 mg/L): 0.375 mL of ICV Stock (prep: 5/20/16) into 25 mL sample then carried through sample prep procedure

METHOD 300 / 9056		ANION STOCK					PW 10/20/16
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)	
O2SI	F-	1,000	1085520-36282	07/24/17	0.25	5	
O2SI*	Cl-	5,000	1069557-34558	01/08/17	0.5	50	
O2SI	NO2-N	1,000	1088548-36281	09/26/17	0.25	5	
Ultra Scientific	Br-	1,000	CL-3274-36926	08/31/20	1.25	25	
O2SI	NO3-N	1,000	1078397-35587	01/30/17	0.5	10	
O2SI	PO4-P	1,000	1072004-34911	09/03/16	0.5	10	
Ultra Scientific	SO4	5,000	CP-1469-36296	04/30/18	0.5	50	
Brought up with milipore water to Final Volume of:						50	

METHOD 300 / 9056		ANION ICV / LCS/MS/MSD				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
CPI	F-	1,000	16B115-36204	09/03/17	0.125	2.50
CPI	Cl-	1,000	16E065-36694	12/06/17	1.00	20.00
CPI	NO2-N	304	15J001-36257	09/24/17	0.50	3.04
CPI	Br-	1,000	15L093-36101	07/21/17	0.625	12.50
CPI	NO3-N	1,000	16E022-36783	12/30/17	0.25	5.00
CPI	PO4-P	1,000	15B116-36258	09/24/17	0.25	5.00
CPI	SO4	1,000	16E104-36693	12/06/17	1.00	20.00
Brought up with milipore water to Final Volume of:					50	

METHOD 300 / 9056		ANION CAL CURVE							
				ICAL #1	ICAL#2	ICAL #3	ICAL #4	ICAL #5	ICAL #6
ID#	mg/L	Prep Date	EXP. DATE	mL	mL	mL	mL	mL	mL
ANION STOCK	100	08/19/16	08/21/16	0.4	2	10	2	7	10
Brought up w/ Milipore Water to final volume of (mL):				50	100	100	10	10	na
Final Conc F (mg/L):				0.04	0.1	0.5	1	3.5	5
Final Conc Cl (mg/L):				0.4	1	5	10	35	50
Final Conc NO2-N (mg/L):				0.04	0.1	0.5	1	3.5	5
Final Conc Br (mg/L):				0.2	0.5	2.5	5	17.5	25
Final Conc NO3-N (mg/L):				0.08	0.2	1	2	7	10
Final Conc PO4-P (mg/L):				0.08	0.2	1	2	7	10
Final Conc SO4 (mg/L):				0.4	1	5	10	35	50

170111 PW

		CCV				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
O2SI	F-	1,000	1085520-36282	07/24/17	0.125	2.50
O2SI	Cl-	5,000	1069557-34558	01/08/17	0.25	25.0
O2SI	NO2-N	1,000	1088548-36281	09/26/17	0.125	2.5
Ultra Scientific	Br-	1,000	CL-3274-36926	08/31/20	0.625	12.50
O2SI	NO3-N	1,000	1078397-35587	01/30/17	0.25	5.0
O2SI	PO4-P	1,000	1072004-34911	09/03/16	0.25	5.0
Ultra Scientific	SO4	5,000	CP-1469-36296	04/30/18	0.25	25.0
Brought up with milipore water to Final Volume of:					50	

METHOD 300 / 9056		ICV LCS MS				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
CPI	F-	1,000	16B115-36204	09/03/17	0.125	2.50
CPI	Cl-	1,000	16E065-37395	06/27/18	1.00	20.00
CPI	NO2-N	304	15C058-35411	09/24/17	0.50	3.04
CPI	Br-	1,000	15L093-36101	07/21/17	0.63	12.50
CPI	NO3-N	1,000	16E022-36783	12/30/17	0.250	5.00
CPI	PO4-P	1,000	15B116-36258	09/24/17	0.25	5.00
CPI	SO4	1,000	16E104-36693	12/06/17	1.00	20.00
Final Volume of Sample: (mL)					50	

0.02N H_2SO_4 Titrant for Alkalinity

Dilute 600 mL 0.1N H_2SO_4 (prep 1/6/17)
To final volume 3L w/ DI water
Prep 1/6/17
Exp 1/6/18
AH 1/6/17

Inorganic Spiking Solution

7.0001g NaHCO3 BDH lot#1575C510
Final vol 1L w/DI water
Prep: 12/28/16
Exp: 05/28/17
AH

SM3500 Injection Log

Directory: I:\Spec Sheets\Ferrous Iron (Fe2)\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	10 Jan 2017	11:38	CCV 4.0 170110		170110A	1.
2	10 Jan 2017	11:39	CCB 170110		170110A	1.
3	10 Jan 2017	11:40	170110A LCS 3.0		170110A	1.
5	10 Jan 2017	11:42	AZ48676W08		170110A	1.
8	10 Jan 2017	11:45	CCV 4.0 170110		170110A	1.
9	10 Jan 2017	11:46	CCB 170110		170110A	1.
10	20 May 2016	12:37	0 BB 5/20/16		170110A	1.
11	20 May 2016	12:38	1		170110A	1.
13	20 May 2016	12:39	2		170110A	1.
12	20 May 2016	12:39	4		170110A	1.
15	20 May 2016	12:40	5		170110A	1.
14	20 May 2016	12:40	10		170110A	1.
16	20 May 2016	12:41	160520A ICV 3.0		170110A	1.
17	20 May 2016	12:42	160520A ICB		170110A	1.

300/9056A Injection Log

Directory: I:\Dionex\Charlie\Anions\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
14	20 Oct 2016	11:19	ICAL 1 10/20/16		161020	1.
15	20 Oct 2016	11:32	ICAL 2 10/20/16		161020	1.
16	20 Oct 2016	11:45	ICAL 3 10/20/16		161020	1.
17	20 Oct 2016	11:58	ICAL 4 10/20/16		161020	1.
18	20 Oct 2016	12:11	ICAL 5 10/20/16		161020	1.
19	20 Oct 2016	12:24	ICAL 6 10/20/16		161020	1.
20	20 Oct 2016	12:37	ICV 1601020		161020	1.
21	20 Oct 2016	12:50	ICB		161020	1.

300/9056A Injection Log

Directory: I:\Dionex\Charlie\Anions\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
3	11 Jan 2017	09:29	CCV 170111		170111	1.
4	11 Jan 2017	09:42	CCB		170111	1.
5	11 Jan 2017	09:56	AZ48676W11		170111	1.
6	11 Jan 2017	10:09	170111A LCS		170111	1.
15	11 Jan 2017	15:38	CCV 170111		170111	1.
16	11 Jan 2017	15:51	CCB		170111	1.
23	11 Jan 2017	17:26	AZ48676W11 1/2		170111	2.
27	11 Jan 2017	18:20	CCV 170111		170111	1.
28	11 Jan 2017	18:34	CCB		170111	1.

310/SM2320B Injection Log

Directory: I:\Tiamo\EXPORT\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	16 Jan 2017	11:35	170116A Blk		170116A_AL	1.
2	16 Jan 2017	12:03	170116A LCS		170116A_AL	1.
3	16 Jan 2017	12:15	AZ48676W07		170116A_AL	1.

908 North Temperance Ave. ∇ Clovis, CA 93611 ∇ Phone 559-275-2175 ∇ Fax 559-275-4422

Certification Number: CA1312
NELAP Certification number: CA00046
DoD-ELAP Certificate number: 4064.01

Data Validatable Report

January 26, 2017

AECOM
1001 Bishop Street, Suite 1600
Honolulu, Hawaii 96813

Attn: Margie Thach

Title: Report of Data: Case 81965

Project: 60481245 CIV0053 Red Hill Fuel Storage. HI

Contract #: Prime contract # for DoD: NAVY CLEAN N62742-12-D-1829, CTO 0053
Subcontract: 14S-16234-HI16

Dear Ms. Thach:

Twenty water samples were received January 12, 2017. Written results for the requested analyses are being provided on this January 26, 2017.

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

If you have any questions or require further information, please contact your APPL Project Manager, Libby Cheeseborough, libby@applinc.com, at your convenience. Thank you for choosing APPL, Inc.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. These test results meet all requirements of NELAC and DoD QSM. Release of the hard copy has been authorized by the Laboratory Manager or her designee, as verified by the following signature.

Paula McCartney

Paula McCartney, Laboratory Director
APPL, Inc.

PM/rp
Enclosure
cc: File

Number of pages in this report: 1168

Data Validation Package
for
60481245 CIV 0053 Red Hill Fuel Storage
APPL SDG 81965
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Raw Data	456
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QC Summary	594
Sample Data	618
Calibration Data	683
Raw Data	750
Method 8260B Gasoline	786
QC Summary	787
Sample Data	800
Calibration Data	881
Raw Data	952
Method RSK-175 Methane	986
QC Summary	987
Sample Data	993
Calibration Data	1039
Raw Data	1073

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QC Summary 1093

Sample Data 1100

Calibration Data 1123

Raw Data 1149

CASE NARRATIVE

Case Narrative

ARF: 81965

Project: 60481245 CIV0053 Red Hill Fuel Storage. HI

Sample Receipt Information:

Twenty water samples were received January 12, 2017, at 0.5°C, 0.5°C, 0.5°C, 1.0°C, 1.0°C, 1.0°C, 1.0°C, 1.5°C, 2.0°C, 2.0°C, 3.0°C, and 4.0°C. The sample group was assigned Analytical Request Form (ARF) number 81965. The sample numbers and requested analyses were compared to the chains of custody and email communications. Metals containers were received for six samples. A sample ID discrepancy was noted and reported to the client; a sample ID was revised, as requested. MS/MSD analyses were added, as requested. No other exception was encountered.

Sample Preparation and Analysis Information:

For the EPA 8011 analysis, the samples were extracted according to the method.

For the EPA 8015B analysis, the samples were extracted according to EPA method 3510C.

For the EPA 8270D SIM analysis, the samples were extracted according to EPA method 3510C.

For the EPA 8270D Phenol analysis, the samples were extracted according to EPA method 3510C.

For the APPL SOP ANA2MEE analysis, the samples were extracted according to EPA method 3535.

For the EPA 8260B BTEX, 1,2-DCA, and GRO analyses, the samples were purged according to EPA method 5030B.

For the RSK-175 analysis, the samples were allowed to equilibrate for 10 minutes at 40°C and a portion of the headspace was analyzed.

For the EPA 300.0, SM 2320B and 3500FeB analyses, the samples were prepared according to the methods.

Only the portion of the injection log relative to these samples is included. A full sequence log is available upon request.

Measurement uncertainty can be reported upon request.

Analytical Exceptions, Deviations and Abnormalities.

EPA 8270D SIM:

Manual integrations were performed in accordance with APPL's SOP. 1-Methylnaphthalene was manually integrated in two calibration standards. Before and after chromatograms are included in the package.

APPL SOP ANA2MEE:

Manual integrations were performed in accordance with APPL's SOP. 2-(2-Methoxyethoxy) ethanol was manually integrated in the LCS, MS, MSD. Before and after chromatograms are included in the package.

In the closing continuing calibration, one internal standard area recovered below the lower limit control; 2-(2-Methoxyethoxy) ethanol %D was acceptable in the closing CCV. IS recoveries were acceptable in the samples and other CCVs. Corrective action: Client was notified.

Inorganic Analyses:

Six samples were received more than 24 hours after collection and two samples were received more than 48 hours after collection; all samples were analyzed as soon as possible for ferrous iron and nitrate.

Alkalinity was detected above one-half the LOQ in the method blank. Corrective action: None, the sample contained greater than ten times the concentration detected in the method blank.

SDG	Received	Client ID	APPL ID	Collected Date	Collected Time	Matrix	Method	Method Description
81965	01/12/17	ERH161	AZ48866	01/09/17	10:30 AM	WATER	SM 2320B	Wetlab 2320B - Water
81965	01/12/17	ERH161	AZ48866	01/09/17	10:30 AM	WATER	EPA 300.0	Wetlab 300.0 - Water
81965	01/12/17	ERH161	AZ48866	01/09/17	10:30 AM	WATER	SM3500FeB	Ferrous Iron
81965	01/12/17	ERH161	AZ48866	01/09/17	10:30 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
81965	01/12/17	ERH161	AZ48866	01/09/17	10:30 AM	WATER	EPA 8270D	EPA 8270D WATER
81965	01/12/17	ERH161	AZ48866	01/09/17	10:30 AM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
81965	01/12/17	ERH161	AZ48866	01/09/17	10:30 AM	WATER	EPA 8015B-eLL	EPA 8015B TPH WATER
81965	01/12/17	ERH161	AZ48866	01/09/17	10:30 AM	WATER	EPA 8260-GAS	EPA 8260 with GAS
81965	01/12/17	ERH161	AZ48866	01/09/17	10:30 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
81965	01/12/17	ERH161	AZ48866	01/09/17	10:30 AM	WATER	RSK 175	METHANE BY RSK 175
81965	01/12/17	ERH161	AZ48866	01/09/17	10:30 AM	WATER	8270D-SIM	EPA 8270D SIM
81965	01/12/17	ERH162	AZ48867	01/09/17	10:30 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
81965	01/12/17	ERH162	AZ48867	01/09/17	10:30 AM	WATER	EPA 8270D	EPA 8270D WATER
81965	01/12/17	ERH162	AZ48867	01/09/17	10:30 AM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
81965	01/12/17	ERH162	AZ48867	01/09/17	10:30 AM	WATER	EPA 8015B-eLL	EPA 8015B TPH WATER
81965	01/12/17	ERH162	AZ48867	01/09/17	10:30 AM	WATER	EPA 8260-GAS	EPA 8260 with GAS
81965	01/12/17	ERH162	AZ48867	01/09/17	10:30 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
81965	01/12/17	ERH162	AZ48867	01/09/17	10:30 AM	WATER	8270D-SIM	EPA 8270D SIM
81965	01/12/17	ERH164	AZ48868	01/10/17	10:30 AM	WATER	SM 2320B	Wetlab 2320B - Water
81965	01/12/17	ERH164	AZ48868	01/10/17	10:30 AM	WATER	EPA 300.0	Wetlab 300.0 - Water
81965	01/12/17	ERH164	AZ48868	01/10/17	10:30 AM	WATER	SM3500FeB	Ferrous Iron
81965	01/12/17	ERH164	AZ48868	01/10/17	10:30 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
81965	01/12/17	ERH164	AZ48868	01/10/17	10:30 AM	WATER	EPA 8270D	EPA 8270D WATER
81965	01/12/17	ERH164	AZ48868	01/10/17	10:30 AM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
81965	01/12/17	ERH164	AZ48868	01/10/17	10:30 AM	WATER	EPA 8015B-eLL	EPA 8015B TPH WATER
81965	01/12/17	ERH164	AZ48868	01/10/17	10:30 AM	WATER	EPA 8260-GAS	EPA 8260 with GAS
81965	01/12/17	ERH164	AZ48868	01/10/17	10:30 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
81965	01/12/17	ERH164	AZ48868	01/10/17	10:30 AM	WATER	RSK 175	METHANE BY RSK 175
81965	01/12/17	ERH164	AZ48868	01/10/17	10:30 AM	WATER	8270D-SIM	EPA 8270D SIM
81965	01/12/17	ERH163	AZ48869	01/10/17	10:00 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
81965	01/12/17	ERH163	AZ48869	01/10/17	10:00 AM	WATER	EPA 8260-GAS	EPA 8260 with GAS
81965	01/12/17	ERH163	AZ48869	01/10/17	10:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
81965	01/12/17	ERH163	AZ48869	01/10/17	10:00 AM	WATER	RSK 175^2015	METHANE BY RSK 175
81965	01/12/17	ERH167	AZ48870	01/09/17	01:25 PM	WATER	EPA 8260B	EPA 8260B BTEX WATER
81965	01/12/17	ERH167	AZ48870	01/09/17	01:25 PM	WATER	EPA 8260-GAS	EPA 8260 with GAS
81965	01/12/17	ERH167	AZ48870	01/09/17	01:25 PM	WATER	EPA 8260B	EPA 8260B GRO WATER
81965	01/12/17	ERH167	AZ48870	01/09/17	01:25 PM	WATER	RSK 175	METHANE BY RSK 175
81965	01/12/17	ERH168	AZ48871	01/09/17	02:10 PM	WATER	SM 2320B	Wetlab 2320B - Water
81965	01/12/17	ERH168	AZ48871	01/09/17	02:10 PM	WATER	EPA 300.0	Wetlab 300.0 - Water
81965	01/12/17	ERH168	AZ48871	01/09/17	02:10 PM	WATER	SM3500FeB	Ferrous Iron
81965	01/12/17	ERH168	AZ48871	01/09/17	02:10 PM	WATER	EPA 8260B	EPA 8260B BTEX WATER
81965	01/12/17	ERH168	AZ48871	01/09/17	02:10 PM	WATER	EPA 8270D	EPA 8270D WATER

81965	01/12/17	ERH168	AZ48871	01/09/17	02:10 PM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
81965	01/12/17	ERH168	AZ48871	01/09/17	02:10 PM	WATER	EPA 8015B-eLL	EPA 8015B TPH WATER
81965	01/12/17	ERH168	AZ48871	01/09/17	02:10 PM	WATER	EPA 8260-GAS	EPA 8260 with GAS
81965	01/12/17	ERH168	AZ48871	01/09/17	02:10 PM	WATER	EPA 8260B	EPA 8260B GRO WATER
81965	01/12/17	ERH168	AZ48871	01/09/17	02:10 PM	WATER	RSK 175	METHANE BY RSK 175
81965	01/12/17	ERH168	AZ48871	01/09/17	02:10 PM	WATER	8270D-SIM	EPA 8270D SIM
81965	01/12/17	ERH169	AZ48872	01/11/17	10:00 AM	WATER	SM 2320B	Wetlab 2320B - Water
81965	01/12/17	ERH169	AZ48872	01/11/17	10:00 AM	WATER	EPA 300.0	Wetlab 300.0 - Water
81965	01/12/17	ERH169	AZ48872	01/11/17	10:00 AM	WATER	SM3500FeB	Ferrous Iron
81965	01/12/17	ERH169	AZ48872	01/11/17	10:00 AM	WATER	8011	EPA 8011
81965	01/12/17	ERH169	AZ48872	01/11/17	10:00 AM	WATER	EPA 8260B	EPA 8260B BTEX & 1,2-DCA WATER
81965	01/12/17	ERH169	AZ48872	01/11/17	10:00 AM	WATER	EPA 8270D	EPA 8270D WATER
81965	01/12/17	ERH169	AZ48872	01/11/17	10:00 AM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
81965	01/12/17	ERH169	AZ48872	01/11/17	10:00 AM	WATER	EPA 8015B-eLL	EPA 8015B TPH WATER
81965	01/12/17	ERH169	AZ48872	01/11/17	10:00 AM	WATER	EPA 8260-GAS	EPA 8260 with GAS
81965	01/12/17	ERH169	AZ48872	01/11/17	10:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
81965	01/12/17	ERH169	AZ48872	01/11/17	10:00 AM	WATER	RSK 175	METHANE BY RSK 175
81965	01/12/17	ERH169	AZ48872	01/11/17	10:00 AM	WATER	8270D-SIM	EPA 8270D SIM
81965	01/12/17	ERH170	AZ48873	01/11/17	10:00 AM	WATER	8011	EPA 8011
81965	01/12/17	ERH170	AZ48873	01/11/17	10:00 AM	WATER	EPA 8260B	EPA 8260B BTEX & 1,2-DCA WATER
81965	01/12/17	ERH170	AZ48873	01/11/17	10:00 AM	WATER	EPA 8270D	EPA 8270D WATER
81965	01/12/17	ERH170	AZ48873	01/11/17	10:00 AM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
81965	01/12/17	ERH170	AZ48873	01/11/17	10:00 AM	WATER	EPA 8015B-eLL	EPA 8015B TPH WATER
81965	01/12/17	ERH170	AZ48873	01/11/17	10:00 AM	WATER	EPA 8260-GAS	EPA 8260 with GAS
81965	01/12/17	ERH170	AZ48873	01/11/17	10:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
81965	01/12/17	ERH170	AZ48873	01/11/17	10:00 AM	WATER	RSK 175	METHANE BY RSK 175
81965	01/12/17	ERH170	AZ48873	01/11/17	10:00 AM	WATER	8270D-SIM	EPA 8270D SIM
81965	01/12/17	ERH177	AZ48874	01/11/17	08:30 AM	WATER	8011	EPA 8011
81965	01/12/17	ERH177	AZ48874	01/11/17	08:30 AM	WATER	EPA 8260B	EPA 8260B BTEX & 1,2-DCA WATER
81965	01/12/17	ERH177	AZ48874	01/11/17	08:30 AM	WATER	EPA 8260-GAS	EPA 8260 with GAS
81965	01/12/17	ERH177	AZ48874	01/11/17	08:30 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
81965	01/12/17	ERH177	AZ48874	01/11/17	08:30 AM	WATER	RSK 175	METHANE BY RSK 175
81965	01/12/17	ERH174	AZ48875	01/10/17	02:15 PM	WATER	SM 2320B	Wetlab 2320B - Water
81965	01/12/17	ERH174	AZ48875	01/10/17	02:15 PM	WATER	EPA 300.0	Wetlab 300.0 - Water
81965	01/12/17	ERH174	AZ48875	01/10/17	02:15 PM	WATER	SM3500FeB	Ferrous Iron
81965	01/12/17	ERH174	AZ48875	01/10/17	02:15 PM	WATER	EPA 8260B	EPA 8260B BTEX WATER
81965	01/12/17	ERH174	AZ48875	01/10/17	02:15 PM	WATER	EPA 8270D	EPA 8270D WATER
81965	01/12/17	ERH174	AZ48875	01/10/17	02:15 PM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
81965	01/12/17	ERH174	AZ48875	01/10/17	02:15 PM	WATER	EPA 8015B-eLL	EPA 8015B TPH WATER
81965	01/12/17	ERH174	AZ48875	01/10/17	02:15 PM	WATER	EPA 8260-GAS	EPA 8260 with GAS
81965	01/12/17	ERH174	AZ48875	01/10/17	02:15 PM	WATER	EPA 8260B	EPA 8260B GRO WATER
81965	01/12/17	ERH174	AZ48875	01/10/17	02:15 PM	WATER	RSK 175	METHANE BY RSK 175
81965	01/12/17	ERH174	AZ48875	01/10/17	02:15 PM	WATER	8270D-SIM	EPA 8270D SIM

81965	01/12/17	ERH175	AZ48876	01/10/07	09:30 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
81965	01/12/17	ERH175	AZ48876	01/10/07	09:30 AM	WATER	EPA 8260-GAS	EPA 8260 with GAS
81965	01/12/17	ERH175	AZ48876	01/10/07	09:30 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
81965	01/12/17	ERH175	AZ48876	01/10/07	09:30 AM	WATER	RSK 175	METHANE BY RSK 175
81965	01/12/17	ERH176	AZ48877	01/10/17	11:30 AM	WATER	SM 2320B	Wetlab 2320B - Water
81965	01/12/17	ERH176	AZ48877	01/10/17	11:30 AM	WATER	EPA 300.0	Wetlab 300.0 - Water
81965	01/12/17	ERH176	AZ48877	01/10/17	11:30 AM	WATER	SM3500FeB	Ferrous Iron
81965	01/12/17	ERH176	AZ48877	01/10/17	11:30 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
81965	01/12/17	ERH176	AZ48877	01/10/17	11:30 AM	WATER	EPA 8270D	EPA 8270D WATER
81965	01/12/17	ERH176	AZ48877	01/10/17	11:30 AM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
81965	01/12/17	ERH176	AZ48877	01/10/17	11:30 AM	WATER	EPA 8015B-eLL	EPA 8015B TPH WATER
81965	01/12/17	ERH176	AZ48877	01/10/17	11:30 AM	WATER	EPA 8260-GAS	EPA 8260 with GAS
81965	01/12/17	ERH176	AZ48877	01/10/17	11:30 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
81965	01/12/17	ERH176	AZ48877	01/10/17	11:30 AM	WATER	RSK 175	METHANE BY RSK 175
81965	01/12/17	ERH176	AZ48877	01/10/17	11:30 AM	WATER	8270D-SIM	EPA 8270D SIM
81965	01/12/17	ERH179	AZ48878	01/10/17	05:35 PM	WATER	SM 2320B	Wetlab 2320B - Water
81965	01/12/17	ERH179	AZ48878	01/10/17	05:35 PM	WATER	EPA 300.0	Wetlab 300.0 - Water
81965	01/12/17	ERH179	AZ48878	01/10/17	05:35 PM	WATER	SM3500FeB	Ferrous Iron
81965	01/12/17	ERH179	AZ48878	01/10/17	05:35 PM	WATER	EPA 8260B	EPA 8260B BTEX WATER
81965	01/12/17	ERH179	AZ48878	01/10/17	05:35 PM	WATER	EPA 8270D	EPA 8270D WATER
81965	01/12/17	ERH179	AZ48878	01/10/17	05:35 PM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
81965	01/12/17	ERH179	AZ48878	01/10/17	05:35 PM	WATER	EPA 8015B-eLL	EPA 8015B TPH WATER
81965	01/12/17	ERH179	AZ48878	01/10/17	05:35 PM	WATER	EPA 8260-GAS	EPA 8260 with GAS
81965	01/12/17	ERH179	AZ48878	01/10/17	05:35 PM	WATER	EPA 8260B	EPA 8260B GRO WATER
81965	01/12/17	ERH179	AZ48878	01/10/17	05:35 PM	WATER	RSK 175	METHANE BY RSK 175
81965	01/12/17	ERH179	AZ48878	01/10/17	05:35 PM	WATER	8270D-SIM	EPA 8270D SIM
81965	01/12/17	ERH197	AZ48879	01/09/17	03:45 PM	WATER	EPA 8260B	EPA 8260B BTEX WATER
81965	01/12/17	ERH197	AZ48879	01/09/17	03:45 PM	WATER	EPA 8260-GAS	EPA 8260 with GAS
81965	01/12/17	ERH197	AZ48879	01/09/17	03:45 PM	WATER	EPA 8260B	EPA 8260B GRO WATER
81965	01/12/17	ERH186	AZ48880	01/10/17	02:35 PM	WATER	EPA 8260B	EPA 8260B BTEX WATER
81965	01/12/17	ERH186	AZ48880	01/10/17	02:35 PM	WATER	EPA 8270D	EPA 8270D WATER
81965	01/12/17	ERH186	AZ48880	01/10/17	02:35 PM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
81965	01/12/17	ERH186	AZ48880	01/10/17	02:35 PM	WATER	EPA 8015B-eLL	EPA 8015B TPH WATER
81965	01/12/17	ERH186	AZ48880	01/10/17	02:35 PM	WATER	EPA 8260-GAS	EPA 8260 with GAS
81965	01/12/17	ERH186	AZ48880	01/10/17	02:35 PM	WATER	EPA 8260B	EPA 8260B GRO WATER
81965	01/12/17	ERH186	AZ48880	01/10/17	02:35 PM	WATER	8270D-SIM	EPA 8270D SIM
81965	01/12/17	ERH187	AZ48881	01/10/17	03:05 PM	WATER	EPA 8260B	EPA 8260B BTEX WATER
81965	01/12/17	ERH187	AZ48881	01/10/17	03:05 PM	WATER	EPA 8270D	EPA 8270D WATER
81965	01/12/17	ERH187	AZ48881	01/10/17	03:05 PM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
81965	01/12/17	ERH187	AZ48881	01/10/17	03:05 PM	WATER	EPA 8015B-eLL	EPA 8015B TPH WATER
81965	01/12/17	ERH187	AZ48881	01/10/17	03:05 PM	WATER	EPA 8260-GAS	EPA 8260 with GAS
81965	01/12/17	ERH187	AZ48881	01/10/17	03:05 PM	WATER	EPA 8260B	EPA 8260B GRO WATER
81965	01/12/17	ERH187	AZ48881	01/10/17	03:05 PM	WATER	8270D-SIM	EPA 8270D SIM

81965	01/12/17	ERH194	AZ48882	01/10/17	02:20 PM	WATER	EPA 8260B	EPA 8260B BTEX WATER
81965	01/12/17	ERH194	AZ48882	01/10/17	02:20 PM	WATER	EPA 8260-GAS	EPA 8260 with GAS
81965	01/12/17	ERH194	AZ48882	01/10/17	02:20 PM	WATER	EPA 8260B	EPA 8260B GRO WATER
81965	01/12/17	ERH194	AZ48882	01/10/17	02:20 PM	WATER	RSK 175	METHANE BY RSK 175
81965	01/12/17	ERH173	AZ48884	01/10/17	02:10 PM	WATER	EPA 8260B	EPA 8260B BTEX WATER
81965	01/12/17	ERH173	AZ48884	01/10/17	02:10 PM	WATER	EPA 8260-GAS	EPA 8260 with GAS
81965	01/12/17	ERH173	AZ48884	01/10/17	02:10 PM	WATER	EPA 8260B	EPA 8260B GRO WATER
81965	01/12/17	ERH173	AZ48884	01/10/17	02:10 PM	WATER	RSK 175	METHANE BY RSK 175
81965	01/12/17	ERH198	AZ48885	01/10/17	07:10 PM	WATER	EPA 8260B	EPA 8260B BTEX WATER
81965	01/12/17	ERH198	AZ48885	01/10/17	07:10 PM	WATER	EPA 8260-GAS	EPA 8260 with GAS
81965	01/12/17	ERH198	AZ48885	01/10/17	07:10 PM	WATER	EPA 8260B	EPA 8260B GRO WATER
81965	01/12/17	ERH196	AZ48886	01/09/17	10:00 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
81965	01/12/17	ERH196	AZ48886	01/09/17	10:00 AM	WATER	EPA 8260-GAS	EPA 8260 with GAS
81965	01/12/17	ERH196	AZ48886	01/09/17	10:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
81965	01/12/17	ERH196	AZ48886	01/09/17	10:00 AM	WATER	RSK 175	METHANE BY RSK 175

APPL Inc.
Abbreviations and Flags

FLAG	DESCRIPTION
#	Recovery or RPD outside control limits
*	Recovery or RPD outside control limits
B	Analyte detected in associated method blank
C1	Reason for correction: wrote incorrect response
C2	Reason for correction: calculated incorrectly
C3	Reason for correction: needs to be rechecked
C4	Reason for correction: data not usable
DO	Diluted out
E	Exceeds linear range
F	Estimated value
G1	Includes a wide range of hydrocarbons which does not match our gasoline standard
G10	Includes a match to hydrocarbon profiles within the range of mineral spirits
G11	Includes a match to hydrocarbon profiles within the range of JP-4
G12	Pattern does not match the gasoline standard; the carbon range for this sample is consistent with JP8
G13	Closely resembles the hydrocarbon profile of aviation gasoline
G14	Analyte concentration may be biased due to carry over
G2	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G3	Includes higher boiling hydrocarbons
G4	Includes dominant peak(s) not indicative of petroleum hydrocarbons
G5	Is mainly dominant peak(s) not indicative of petroleum hydrocarbons
G6	Contains recognizable contaminant peak(s) which has been removed from quantitation
G7	Is mainly a match to hydrocarbons within the range of gasoline
G8	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G9	Includes hydrocarbons within the range of kerosene
J	Estimated value
M	Matrix effect
MI1	Manual integration: integration does not follow baseline
MI2	Manual integration: non-target peak interference
MI3	Manual integration: to split a peak that was integrated as one peak by the computer.
MI4	Manual integration: to integrate a split peak
MI5	Manual integration: the whole peak or part of the peak was not integrated
MI6	Manual integration: computer integrated wrong peak
MI7	Manual integration: other – (See case narrative)
MDL	Method detection limit
ND	Not detected
NT	Non-target
Q	Acceptance criteria not met
T1 I	Includes wide range of hydrocarbons not indicative of diesel
T1 M	Is mainly wide range of hydrocarbons not necessarily indicative of diesel
T2 I	Includes lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T2 M	Is mainly lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T3 I	Includes higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T3 M	Is mainly higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T4 I	Includes dominant peak(s) not indicative of hydrocarbons
T4 M	Is mainly dominant peak(s) not indicative of hydrocarbons
T5	Contains recognizable contaminant peak(s) which has been removed from quantitation
T6	Is mainly a match to hydrocarbons within range of diesel fuel
T7	Closely resembles the boiling point hydrocarbon profile consistent with diesel fuel
T8	Includes a match to hydrocarbon profiles within range of diesel and kerosene fuel
T9 I	Includes non-diesel hydrocarbons within boiling point range of diesel fuel
T9 M	Is mainly non-diesel hydrocarbons within boiling point range of diesel fuel
U	Not detected
Y	Percent difference between primary and confirmation column > 40%

SAMPLE MANAGEMENT RECORDS

CHAIN OF CUSTODY,

ARF, CRF, AND

CLIENT COMMUNICATION

APPL - Analysis Request Form 81965

Client: AECOM
Address: 1001 Bishop Street, Suite 1600
Honolulu, HI 96813
Attn: Margie Thach
Phone: 808-356-5373 Fax: 808-523-8950
Job: 60481245 CIV0053 Red Hill Fuel Storage
PO #: 14S-16234-HI16, PO# 77265
Chain of Custody (Y/N): Y # 011017A-P
RAD Screen (Y/N): Y pH (Y/N): Y
Turn Around Type: ONE WEEK

Received by: SMA
Date Received: 01/12/17 Time: 09:45
Delivered by: FED EX
Shuttle Custody Seals (Y/N): Y Time Zone: -10
Chest Temp(s): SEE CRF
Color: VOA/E-BRN/R-ORNGYLW
Samples Chilled until Placed in Refrig/Freezer: Y
Project Manager: Libby Cheesebor
QC Report Type: DVP4DOD/EQUIS/HI
Due Date: 01/19/17

Comments:
1-week TAT for Form 1s; 21 day TAT for DVP; F1s, login to Margie.Thach@aecom.com
A: DOD QSM ver 5.0; DOD Forms (LOQ/LOD database/DL) Print ND as LOD w/U Qual.
8260: BTEX & TPH-G only; 8270 SIM: 1-methylnaphthalene, 2-methylnaphthalene & naphthalene only.
TPH D & O ; RSK: Methane only; 8011: EDB only;
$87DC53W5: report phenol only; $87DMEEW5: 2-MEE (LCS Spk 80ppb).
FR: HC to LDC, 2 labeled CDs to Margie Thach. Before FR is sent, the PM needs to review after Admin Review is complete.
EDD: AECOM EQuIS EDD 2.5.3 to Margie.Thach@aecom.com & jecklund@lab-data.com

Sample Distribution:
GC: 11-$87DC53W5, 11-$87DMEEW5, 11-$DOC53W5, 11-$SIMDOD5W, 3-$8011
Extractions: 11-_MWE2MEE, 11-_SEP004, 11-_SEP004S, 11-_SEP011LL, 3-_MWE012
VOA: 17-$86BTOTXDOD5W, 20-$GASBL, 20-$GRO86BW, 15-$RSKMETH, 3-$86BTOTXDCAW
Wetlab: 7-$232W(HCO3,CO3,ALK), 7-$300W(NO3,CL,SO4), 7-$35FE

Charges:

Invoice To:
ACCOUNTS PAYABLE
1001 Bishop Street, Ste 1600
USAPImaging@aecom.com
mary.basano@aecom.com

	Client ID	APPL ID	Sampled	Analyses Requested
1.	ERH161	AZ48866W MS/MSD	01/09/17 10:30	$232W(HCO3,CO3,ALK), $300W(NO3,CL,SO4), $35FE, $86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $RSKMETH, $SIMDOD5W -- 2-MEE 80ppb spk, no ms/msd rsk/wetlab
2.	ERH162	AZ48867W	01/09/17 10:30	$86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $SIMDOD5W -- 2-MEE-LCS 80ppb spike

Note: All times, excluding sample collection times, are Pacific Time Zone unless noted otherwise. Collection times are in: -10 UTC

3.	ERH164		AZ48868W	01/10/17 10:30	$232W(HCO3,CO3,ALK), $300W(NO3,CL,SO4), $35FE, $86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $RSKMETH, $SIMDOD5W -- 2-MEE-LCS 80ppb spike
4.	ERH163		AZ48869W	01/10/17 10:00	$86BTOTXDOD5W, $GASBL, $GRO86BW, $RSKMETH
5.	ERH167		AZ48870W	01/09/17 13:25	$86BTOTXDOD5W, $GASBL, $GRO86BW, $RSKMETH
6.	ERH168		AZ48871W	01/09/17 14:10	$232W(HCO3,CO3,ALK), $300W(NO3,CL,SO4), $35FE, $86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $RSKMETH, $SIMDOD5W -- 2-MEE-LCS 80ppb spike
7.	ERH169	MS/MSD	AZ48872W	01/11/17 10:00	$232W(HCO3,CO3,ALK), $300W(NO3,CL,SO4), $35FE, $8011, $86BTOTXDCAW, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $RSKMETH, $SIMDOD5W -- 2-MEE 80ppb spk, ms/msd for $8011/DCA
8.	ERH170		AZ48873W	01/11/17 10:00	$8011, $86BTOTXDCAW, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $RSKMETH, $SIMDOD5W -- 2-MEE-LCS 80ppb spike
9.	ERH177		AZ48874W	01/11/17 08:30	$8011, $86BTOTXDCAW, $GASBL, $GRO86BW, $RSKMETH
10.	ERH174		AZ48875W	01/10/17 14:15	$232W(HCO3,CO3,ALK), $300W(NO3,CL,SO4), $35FE, $86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $RSKMETH, $SIMDOD5W -- 2-MEE-LCS 80ppb spike
11.	ERH175		AZ48876W	01/10/07 09:30	$86BTOTXDOD5W, $GASBL, $GRO86BW, $RSKMETH
12.	ERH176		AZ48877W	01/10/17 11:30	$232W(HCO3,CO3,ALK), $300W(NO3,CL,SO4), $35FE, $86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $RSKMETH, $SIMDOD5W -- 2-MEE-LCS 80ppb spike

13. ERH179	AZ48878W 01/10/17 17:35		$232W(HCO3,CO3,ALK), $300W(NO3,CL,SO4), $35FE, $86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $RSKMETH, $SIMDOD5W -- 2-MEE-LCS 80ppb spike
14. ERH197	AZ48879W 01/09/17 15:45		$86BTOTXDOD5W, $GASBL, $GRO86BW
15. ERH186	AZ48880W 01/10/17 14:35		$86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $SIMDOD5W -- 2-MEE-LCS 80ppb spike
16. ERH187	AZ48881W 01/10/17 15:05		$86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $SIMDOD5W -- 2-MEE-LCS 80ppb spike
17. ERH194	AZ48882W 01/10/17 14:20		$86BTOTXDOD5W, $GASBL, $GRO86BW, $RSKMETH
18. ERH173	AZ48884W 01/10/17 14:10		$86BTOTXDOD5W, $GASBL, $GRO86BW, $RSKMETH
19. ERH198	AZ48885W 01/10/17 19:10		$86BTOTXDOD5W, $GASBL, $GRO86BW
20. ERH196	AZ48886W 01/09/17 10:00		$86BTOTXDOD5W, $GASBL, $GRO86BW, $RSKMETH

APPL Sample Receipt Form

ARF# **81965**

Sample	Container Type	Count	pH
AZ48866	3 PL 250mL	1	NA
	6 PL 500mL - HNO3	1	1.7
	13 VOAs - HCL	14	NA
	17 Amber Liter	18	NA
	38 250mL brn poly, HCl prsvd	1	1.7
AZ48867	13 VOAs - HCL	4	NA
	17 Amber Liter	6	NA
AZ48868	3 PL 250mL	1	NA
	6 PL 500mL - HNO3	1	1.7
	13 VOAs - HCL	6	NA
	17 Amber Liter	6	NA
	38 250mL brn poly, HCl prsvd	1	1.7
AZ48869	13 VOAs - HCL	5	NA
AZ48870	13 VOAs - HCL	5	NA
AZ48871	3 PL 250mL	1	NA
	6 PL 500mL - HNO3	1	1.7
	13 VOAs - HCL	6	NA
	17 Amber Liter	6	NA
	38 250mL brn poly, HCl prsvd	1	1.7
AZ48872	3 PL 250mL	1	NA
	6 PL 500mL - HNO3	1	1.7
	13 VOAs - HCL	12	NA
	15 VOAs - NP	9	NA
	17 Amber Liter	6	NA
	38 250mL brn poly, HCl prsvd	1	1.7
AZ48873	13 VOAs - HCL	4	NA
	15 VOAs - NP	3	NA
	17 Amber Liter	6	NA
AZ48874	13 VOAs - HCL	4	NA
	15 VOAs - NP	3	NA
AZ48875	3 PL 250mL	1	NA
	6 PL 500mL - HNO3	1	1.7
	13 VOAs - HCL	6	NA
	17 Amber Liter	6	NA
	38 250mL brn poly, HCl prsvd	1	1.7
AZ48876	13 VOAs - HCL	6	NA
AZ48877	3 PL 250mL	1	NA
	6 PL 500mL - HNO3	1	1.7
	13 VOAs - HCL	6	NA
	17 Amber Liter	6	NA
	38 250mL brn poly, HCl prsvd	1	1.7
AZ48878	3 PL 250mL	1	NA
	6 PL 500mL - HNO3	1	1.7
	13 VOAs - HCL	6	NA
	17 Amber Liter	6	NA
	38 250mL brn poly, HCl prsvd	1	1.7
AZ48879	13 VOAs - HCL	5	NA
AZ48880	13 VOAs - HCL	4	NA
	17 Amber Liter	6	NA
AZ48881	13 VOAs - HCL	4	NA
	17 Amber Liter	6	NA

Sample	Container Type	Count	pH
AZ48882	13 VOAs - HCL	5	NA
	15 VOAs - NP	3	NA
AZ48884	13 VOAs - HCL	5	NA
AZ48885	13 VOAs - HCL	5	NA
AZ48886	13 VOAs - HCL	5	NA

Libby Cheeseborough

From: Thach, Margie <Margie.Thach@aecom.com>
Sent: Friday, January 13, 2017 10:14 AM
To: Renee Patterson
Cc: 'Libby Cheeseborough'
Subject: RE: Red Hill COC81965 additional receiving notes

Thank you, Renee!
Hi Libby,
Please perform MS/MSD on ERH161 with the extra vials and liter bottles for BTEX, TPH-g/d/o, SIM, phenol, 2-MEE. No MS/MSD for the plastics and methane.
Please perform MS/MSD on EDB and DCA for ERH169.

Thank you,

Margie Pascua Thach
Environmental Scientist
Environment, West Region, Pacific District
Direct 808.356.5373
Margie.Thach@aecom.com

From: Renee Patterson [mailto:rpatterson@applinc.com]
Sent: Friday, January 13, 2017 6:42 AM
To: Thach, Margie
Cc: 'Libby Cheeseborough'
Subject: Red Hill COC81965 additional receiving notes

In addition to the ID discrepancy (ER177 on COC & ERH177 on labels) that Libby told you about yesterday, we also noted:

ERH161 has extra vials and liter bottles; are these for MS/MSD on BTEX, Gas, Methane, as well as SIM, phenol, D/O, 2-MEE? We did not receive extra volume for ferrous iron, alkalinity or anion MS/MSD.

ERH169 has extra vials; are these for MS/MSD on BTEX, 1,2-DCA, Gas, Methane, and EDB? We did not receive extra volume for SIM, phenol, D/O, 2-MEE, ferrous iron, alkalinity or anion MS/MSD.

Thank you for your help,

Renée Patterson

Agriculture & Priority Pollutants Laboratories, Inc.
WOSB. NELAP Accredited.

t. 559.275-2175 f. 559.275-4422
a. 908 N. Temperance Ave., Clovis, CA 93611

Website • Email

DoD accredited for ISM, Dioxins and PCB congeners.

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Renee Patterson

From: Renee Patterson [rpatterson@applinc.com]
Sent: Friday, January 13, 2017 8:42 AM
To: 'Thach, Margie'
Cc: 'Libby Cheeseborough'
Subject: Red Hill COC81965 additional receiving notes
Attachments: COC81965_20170112_1059.pdf

In addition to the ID discrepancy (ER177 on COC & ERH177 on labels) that Libby told you about yesterday, we also noted:

ERH161 has extra vials and liter bottles; are these for MS/MSD on BTEX, Gas, Methane, as well as SIM, phenol, D/O, 2-MEE? We did not receive extra volume for ferrous iron, alkalinity or anion MS/MSD.

ERH169 has extra vials; are these for MS/MSD on BTEX, 1,2-DCA, Gas, Methane, and EDB? We did not receive extra volume for SIM, phenol, D/O, 2-MEE, ferrous iron, alkalinity or anion MS/MSD.

Thank you for your help,

Renée Patterson

Agriculture & Priority Pollutants Laboratories, Inc.
WOSB. NELAP Accredited.

t. 559.275-2175 f. 559.275-4422
a. 908 N. Temperance Ave., Clovis, CA 93611

Website • Email

DoD accredited for ISM, Dioxins and PCB congeners.

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receiving

From: receiving <receiving@applinc.com>
Sent: Thursday, January 12, 2017 5:18 PM
To: Chue Moua; Diane Anderson; Libby Anderson; Paula Young; Renée Patterson
Subject: Receiving Notes For ARF 81965

Libby,

AECOM; Red Hill Fuel Storage

Sample was listed as ERH177 on containers, but on the COC listed as ER177.
Metals bottles were received for samples ERH161,ERH164,ERH168,ERH169, ERH174,ERH179, but no request for metals analysis was written on the COC.

81965

APPL LABS

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C.

4.0 1.5 3.0
5x1.0; 2x2.0 3x0.5

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number: CIV 53 / 60481245
Sampler (Print): TQ, AM, CB, KE
Purchase Order Number: 77265
Sampler (Signature): [signature] for TQ, AM, CB, KE

Date Shipped: 1/10/17
Carrier: Fedex
Tracking No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil		8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O WI SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate, Sulfate, Chloride	RSK175M Methane	Alk SM2320	
ERH161	RHMW2204-01	01/~~10~~ 09/17 MT	1030	HST	14	X				X	X										X		
				KS		1/10/17																	

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Kaela Shiigi	1/10/17	~~1006~~ 1100 KS					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					1/12/17	9:45	[signature]

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

APPL, Inc.
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Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C.

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number	Sampler (Print)
CIV 53 / 60481245	TQ, AM, CB, KE
Purchase Order Number	**Sampler (Signature)**
77265	MT for TQ, AM, CB, KE

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil	Matrix:	8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O w/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate,Sulfate,Chloride	RSK175M Methane	MK 1/12/17	
ERH1101	RHMW2254-01	01/09/17	1030	HST	~~18~~ 19	X				~~X~~	~~X~~			X	X		X	X	X	X	~~X~~	X	MS/MSD
										MT 1/10/17 see other COC											MT 1/10/17		
				KS		1/10/17																	

Shuttle Temperature:	Turnaround Requested: Check one: ☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other	Sample Disposal: ☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Koela Shirai AECOM	1/10/17	1100					
Relinquished by:	**Date**	**Time**	**Received by:**	**Relinquished by:**	**Date**	**Time**	**Received at lab by:**
					1/11/17	9145	

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

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Clovis, CA 93611

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C.O.C.

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number	Sampler (Print)	Purchase Order Number	Sampler (Signature)
CIV 53 / 60481245	TQ, AM, CB, KE	77265	MT for TQ, AM, CB, KE

Date Shipped: 1/10/17
Carrier: FedEX
Tracking No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil	8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O w/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate,Sulfate,Chloride	RSK175M Methane	
ERH162	RHMW2254-01	01/09/17	1030	HST	6	X			X	X			X	X		X	X				
ERH161	RHMW2254-01	01/09/17	1080	HST	2	X			SEE COC	SEE COC	1/10/17		X	X		X	X				
					KS			1/10/17													

Shuttle Temperature:	Turnaround Requested: Check one	Sample Disposal:
	☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other	☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Kaela Shitaji Aegan	1/10/17	1100					
Relinquished by:	**Date**	**Time**	**Received by:**	**Relinquished by:**	**Date**	**Time**	**Received at lab by:**
					1/12/17	9:45	

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

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908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
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C.O.C.

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number: CIV 53 / 60481245
Sampler (Print): TQ, AM, CB, KE
Purchase Order Number: 77265
Sampler (Signature): MT [signature] for TQ, AM, CB, KE

Date Shipped: 1/10/17
Carrier: Fedex
Tracking No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil		8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O W/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate, Sulfate, Chloride	RSK175M Methane	[illegible]	
ERH162	RHMW2254-01	01/09/17 MT	1030	HST	4	X				X	X										X MT 1/10/17		

KS 1/10/17

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Kaela Shiigi	1/10/17	1100					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					1/12/17	9:45	[signature]

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

APPL, Inc.
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Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422

C.O.C.

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number	Sampler (Print)
CIV 53 / 60481245	AM | CB | TQ | KE
Purchase Order Number	Sampler (Signature)
77265	Kaela Shigi for AM | CB | TQ | KE

Date Shipped: 1/10/17
Carrier: FedEx
Tracking No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil		8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O w/ SGT	8270D Phenol. TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate, Sulfate, Chloride	RSK175M Methane	Alk. SM2320B
ERH164	RHMW05	1/10/17	1030	HST	15	X				X	X			X	X		X	X	X	X	X	X
ERH163	Trip Blank	1/10/17	1000	HST	5	X				X	X										X	

AM 1/10/17

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Kaela Shigi, AECOM	1/10/17	1500					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					1/12/17	9:45	

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

APPL LABS

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

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C.O.C.

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: AECOM	Phone: 808-356-5373	Company Name: AECOM	Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813	Fax:
Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number	Sampler (Print)
CIV 53 / 60481245	TQ, AM, CB, KG
Purchase Order Number	Sampler (Signature)
77265	MT on for TQ, AM, CB, KG

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil	Matrix:	8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-DRO w/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate,Sulfate,Chloride	RSK175M Methane	All SM21-23rd
ERH167	Trip Blank	1/09/17	1325	HST	5	X				X	X										X	
				FS																		

Analysis Requested/Method Number

Date Shipped: 1/10/17
Carrier: FedEx
Tracking No.:
Comments:

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Kara Shiigi AECOM	1/10/17	1100					
Relinquished by:	**Date**	**Time**	**Received by:**	**Relinquished by:**	**Date**	**Time**	**Received at lab by:**
					1/12/17	9:45	

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

APPL LABS

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C.

Report to: PLEASE PRINT	Invoice to: PLEASE PRINT
Company Name: AECOM Phone: 808-356-5373	Company Name: AECOM Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813 Fax:	Address: 1001 Bishop St. Suite 1600 Honolulu, Hawaii 96813 Fax:
Attn: Margie Thach Email: margie.thach@aecom.com	Attn: Mary Basano Email: mary.basano@aecom.com

Project Name/Number: CIV 53 / 60481245
Sampler (Print): TQ, AM, CB, KE
Purchase Order Number: 77265
Sampler (Signature): MT [signature] for TQ, AM, KE, CB

Date Shipped: 1/10/17
Carrier: FedEx
Tracking No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil		8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O W/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate, Sulfate, Chloride	RSK175M Methane	Alk Sulfate
ERH168	RHMW06	1/09/17	1410	HST	15	X				X	X			X	X		X	X	X	X	X	X

KS 1/10/17

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Kaela Shiigi AECOM	1/10/17	1100					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					1/12/17	945	[signature]

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Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number	Sampler (Print)
CIV 53 / 60481245	AM/CB/TQ/KE
Purchase Order Number	Sampler (Signature)
77265	for AM/CB/TQ/KE

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil	Matrix:	8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O W SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate,Sulfate,Chloride	RSK175M Methane	Analysis Requested/Method Number: Other
GRH169	RHMW08	1/11/17	1000	HST	6	X								X	X		X	X	X	X		X
GRH170	RFSMW08 dup	1/11/17	1000	HST	2	X								X	X		X	X	~~X~~	~~X~~ KS 1/11/17		

Date Shipped: 1/11/17
Carrier: FedEx
Tracking No.:
Comments:

Shuttle Temperature:	Turnaround Requested: Check one: ☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other	Sample Disposal: ☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Kaela Shigi AECOM	1/11/17	1500					
Relinquished by:	**Date**	**Time**	**Received by:**	**Relinquished by:**	**Date**	**Time**	**Received at lab by:**
					1/12/17	9:45	

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Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number	Sampler (Print)	Purchase Order Number	Sampler (Signature)
CIV 53 / 60481245	AM | TQ | CB | KE	77265	for AM | TQ | CB | KE

Date Shipped: 1/11/17
Carrier: FedEx
Tracking No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil		8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O W/ SGT	8270D Phenol. TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate,Sulfate,Chloride	RSK175M Methane
ERH170	RHMW08 dup	1/11/17	1000	HST	~~3~~ 1 VA	X				X	X	X	X	X	X		X	X			X
ERH169	RHMW08	1/11/17	1000	HST	21	X				X	X	X	X								X
ER177	Trip	1/11/17	0830	HST	8	X				X	X	X	X								X

WT 1/11/17

Shuttle Temperature:	Turnaround Requested: Check one: ☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other	Sample Disposal: ☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	1/11/17	1500					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					1/12/17	9:45	

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

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Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number	Sampler (Print)	Date Shipped: 1/11/17
CIV 53 / 60481245	AM/CB/TQ/KE	Carrier: FedEx
Purchase Order Number	Sampler (Signature)	Tracking No.:
77265	Kaela Shiigi for AM/CB/TQ/KE	Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil		8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O w/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate, Sulfate, Chloride	RSK-175M Methane	AM: SM3500 Fe2+
ERHTM	RHMW02	1/10/17	1415	HST	9	X								X	X		X	X	X	X		X

MT 1/11/17

Shuttle Temperature:	Turnaround Requested: Check one: ☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other	Sample Disposal: ☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Kaela Shiigi AECOM	1/11/17	1500					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					1/12/17	9:45	

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

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C.O.C. _____

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Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number: CIV 53 / 60481245
Sampler (Print): TQ, AM, CB, KE
Purchase Order Number: 77265
Sampler (Signature): MT [signature] for TQ, AM, CB, KE

Date Shipped: 1/10/17
Carrier: Fedex
Tracking No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil	Matrix:	8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O w/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate, Sulfate, Chloride	RSK175M Methane	ATK SM2320B
ERH175	Trip Blank	1/10/17	0930	HST	5	X				X	X										X	
ERH176	~~RH~~ HDMW2253-03	1/10/17	1130	HST	15	X				X	X			X	X		X	X	X	X	X	X

MT 1/10/17

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other _____

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	1/10/17	1500					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					1/12/17	9:45	[signature]

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

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Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number: CIV 53 / 60481245
Sampler (Print): AM/CB/TQ/KE
Purchase Order Number: 77265
Sampler (Signature): Kaila [signature] for AM/CB/TQ/KE

Date Shipped: 1/11/17
Carrier: FedEx
Tracking No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil		8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O W/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate,Sulfate,Chloride	RSK175M Methane	Alk SM2320	
ERH 179	RHMW07	1/10/17	1735	HST	9	X								X	X		X	X	X	X		X	

MT 1/11/17

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Kaila Shiigi AECOM	1/11/17	1500					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					1/12/17	9:45	[signature]

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

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Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number	Sampler (Print)	Purchase Order Number	Sampler (Signature)
CIV 53 / 60481245	TQ, AM, CB, KE	77265	MT on behalf of TQ, AM, CB, KE

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil		8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O W/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate, Sulfate, Chloride	RSK175M Methane	AM SM3500
ERH 197	Tunnel Ambient	01/09/17	1545	HST	5	X				X	X											
				KS	1/10/17																	

Date Shipped: 1/10/17
Carrier: FedEx
Tracking No.:
Comments:

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Kaela Shiigi	1/10/17	1100					
Relinquished by:	**Date**	**Time**	**Received by:**	**Relinquished by:**	**Date**	**Time**	**Received at lab by:**
					1/10/17	9:45	

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Attn: Margie Thach
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Invoice to: PLEASE PRINT

Company Name: AECOM
Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600
Honolulu, Hawaii 96813
Fax:
Attn: Mary Basano
Email: mary.basano@aecom.com

Project Name/Number: CIV 53 / 60481245
Sampler (Print): CB/AM/TQ/KE
Purchase Order Number: 77265
Sampler (Signature): Kaela [signature] for CB/AM/TQ/KE

Date Shipped: 1/1/17
Carrier: FedEx
Tracking No.:
Comments:

Analysis Requested/Method Number

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil		8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O W/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate,Sulfate,Chloride	RSK175M Methane	Alk SM2320B
ERH186	Field Blank	1/10/17	1435	HST	6	X								X	X		X	X				
ERH187	Equip Blank	1/10/17	1505	HST	2	X								X	X		X	X				

MT 1/11/17

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Kaela Shigi AECOM	1/11/17	1500					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					1/12/17	945	[signature]

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Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number	Sampler (Print)
CIV 53 / 60481245	CB/AM/TQ/KE
Purchase Order Number	**Sampler (Signature)**
77265	for CB/AM/TQ/KE

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil	Matrix:	8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O wt SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate,Sulfate,Chloride	RSK175M Methane	Air SM25B
ERH 187	Equipment Blank	1/10/17	1505	HST	8	X				X	X			X	X		X	X				
ERH 186	Field Blank	1/10/17	1435	HST	4	X				X	X											
ERH 194	Trip Blank	1/10/17	1420	HST	8	X				X	X										X	
ERH 179	RHMW07	1/10/17	1735	HST	6	X				X	X										X	
ERH 174	RHMW02	1/10/17	1415	HST	6	X				X	X										X	
ERH 173	Trip Blank	1/10/17	1410	HST	5	X				X	X										X	
ERH 198	Ambient RHMW07	1/10/17	1910	HST	5	X				X	X											
	MT 1/11/17																					

Date Shipped: 1/11/17
Carrier: FedEx
Tracking No.:
Comments:

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	1/11/17	1500					
Relinquished by:	**Date**	**Time**	**Received by:**	**Relinquished by:**	**Date**	**Time**	**Received at lab by:**
					1/12/17	9:45	

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Attn: Margie Thach	Email: margie.thach@aecom.com	Attn: Mary Basano	Email: mary.basano@aecom.com

Project Name/Number	Sampler (Print)
CIV 53 / 60481245	TQ, AM, KE, CB
Purchase Order Number	**Sampler (Signature)**
77265	MT On behalf of TQ, AM, KE, CB

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil	Matrix:	8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O W/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate,Sulfate,Chloride	RSK175M Methane	Comments:
ERH196	Trip Blank	01/09/17	1000	HST	5	X				X	X										X	Alk, Sulfate

KS 1/10/17

Date Shipped: 1/10/17
Carrier: Jetex
Tracking No.:

Shuttle Temperature:	Turnaround Requested: Check one: ☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other	Sample Disposal: ☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Kaela Shilgi	1/10/17	1100					
Relinquished by:	**Date**	**Time**	**Received by:**	**Relinquished by:**	**Date**	**Time**	**Received at lab by:**

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

COOLER RECEIPT FORM **ARF: 81965**

1) Project: 60481245 CIV0053 Red Hill Fuel Storage Date Received: 01/12/17

2) Coolers: Number of Coolers: 13

3) YES Were custody seals present and intact?
How many? 26 Name/Date on seal? see below

4) YES Was there a shipping slip? Carrier name: FED EX

5) Type of packing in cooler: X bubble wrap __ popcorn __ foam X plastic bags
X wet ice __ dry ice __ no ice __ other

6) YES Were cooler temperatures acceptable?

7) Serial number of certified NIST thermometer use

8) Cooler temp(s): In °C

1: 1.0	2: 1.0	3: 1.0	4: 1.0	5: 1.0	6: 2.0
7: 2.0	8: 0.5	9: 0.5	10: 0.5	11: 3.0	12: 4.0, 1.5°

Chain of custody:

9) YES Was a chain of custody received? SM

10) YES Were the custody papers complete/signed in the appropriate places? 1/13/17

Sample Labels:

11) YES Were all sample labels complete (sample ID, date/time of sampling, etc.)?

12) YES Did all container labels agree with custody papers?

Sample Containers:

13) YES Were all containers sealed in separate bags?

14) YES Did all containers arrive in good condition:(unbroken, no leakage, no cracked/broken lids)?

15) YES Were correct containers and preservatives used for the tests indicated?

16) YES Was a sufficient amount of sample sent for tests indicated?

17) NA Were bubbles present in volatile samples?
If yes, the following were received with air bubbles:
Larger than a pea:
Smaller than a pea:

Preservation Hold time:

18) NO/Yes Was a sufficient amount of holding time remaining to analyze the samples?

19) hp 1-12-17 Yes Was the pH taken of all non-VOA preserved samples and written on the sample container?

20) Yes Was the pH of acid preserved non-VOA samples < 2?

21) NA Was the pH of sodium hydroxide preserved samples for Cyanide > 12 and Sulfide >9?

22) NO Were unpreserved VOA Vials received?

23) NA Are unpreserved VOA vials noted in the ADD TEST FIELD on the ARF?
pH strip lot number: 90b2031
Lab notified if pH was not adequate:

Notes/Deficiencies:

Sample Was listed as ERH177 on containers, but on the COC listed as ER177. Metals bottles were received for samples ERH161,ERH164,ERH168,ERH169, ERH174,ERH179, but no request for metals analysis was written on the COC. Ferrous iron rec'd passed hold time. hp 1-12-17

CUSTODY SEAL
APPL, Inc. (559) 275-2175
Initials MT Date 1/13/17

Personnel receiving samples: SM Second reviewer: Renée
Personnel labeling samples: sm
Project manager notified: Renée Date/Time of notification 1-12-17 + 1-13-17
Name of client notified: Margie Date/Time of notification 1-13-17

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank
EPA 8011

Blank Name/QCG: **170118W-48872 - 215614**
Batch ID: #8011-170118A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	EDB	0.020 U	0.02	0.020	0.010	ug/L	01/18/17	01/18/17
BLANK	SURROGATE: 1,3-DIBROMOPRO	97.5	70-132			%	01/18/17	01/18/17

Quant Method: 80111018.M
Run #: 1214202
Instrument: Herbie
Sequence: 161214
Initials: RHA

GC SC-Blank-REG MDLs-DOD
Printed: 01/19/17 10:53:06 AM

Laboratory Control Spike Recovery
EPA 8011

APPL ID: **170118W-48872 LCS - 215614**
Batch ID: #8011-170118A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
EDB	0.250	0.247	98.8	60-140
SURROGATE: 1,3-DIBROMOPROPANE (	0.350	0.259	74.0	70-132

Comments: _____

Primary	SPK
Quant Method :	80111018.M
Extraction Date :	01/18/17
Analysis Date :	01/18/17
Instrument :	Herbie
Run :	1214204
Initials :	RHA

Printed: 01/19/17 10:53:00 AM
APPL Standard LCS

Matrix Spike Recoveries

EPA 8011

APPL ID: **170118W-48872 MS - 215614**
Batch ID: #8011-170118A
Sample ID: AZ48872
Client ID: ERH169

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
EDB	0.250	ND	0.267	0.251	107	100	60-140	6.2	25
SURROGATE: 1,3-DIBROMOPROPANE (	0.350	NA	0.279	0.266	79.7	76.0	70-132		

Comments: _____

Primary	SPK	DUP
Quant Method :	80111018.M	80111018.M
Extraction Date :	01/18/17	01/18/17
Analysis Date :	01/18/17	01/18/17
Instrument :	Herbie	Herbie
Run :	1214207	1214208
Initials :	RHA	

Printed: 01/19/17 11:25:42 AM
APPL MSD SCII

8011

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81965

Case No: 81965 Date Analyzed: 01/18/17

Matrix: WATER Instrument: Herbie

APPL ID.	Client Sample No.	SURROGATE: 1,3-DIBROMOPROPANE (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
170118A-BLK	Blank	70-132	97.5				
170118A-LCS	Lab Control Spike	70-132	74.0				
AZ48872-MS	Matrix Spike	70-132	79.7				
AZ48872-MSD	Matrix SpikeD	70-132	76.0				
AZ48872	ERH169	70-132	108				
AZ48873	ERH170	70-132	99.5				
AZ48874	ERH177	70-132	99.7				

Comments: Batch: #8011-170118A

Printed: 01/19/17 10:53:04 AM

Form 2 & 8, Surrogate Recovery Summary

8011

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81965

Case No: 81965 Date Analyzed: 01/18/17

Matrix: WATER Instrument: Herbie

Blank ID: 170118A-BLK Time Analyzed: 1449

APPL ID.	Client Sample No.	File ID.	Date Analyzed
170118A-BLK	Blank	1214202	01/18/17 1449
170118A-LCS	Lab Control Spike	1214204	01/18/17 1531
170118A-MS	Matrix Spike	1214207	01/18/17 1633
170118A-MSD	Matrix SpikeD	1214208	01/18/17 1654
AZ48872	ERH169	1214209	01/18/17 1714
AZ48873	ERH170	1214210	01/18/17 1735
AZ48874	ERH177	1214211	01/18/17 1756

Comments: Batch: #8011-170118A

Printed: 01/19/17 10:52:45 AM
Form 4, Blank Summary

ORGANICS

Sample Data

APPL, INC.

EPA 8011

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH169
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48872
QCG: #8011-170118A-215614

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8011	EDB	0.020 U	0.02	0.020	0.010	ug/L	01/18/17	01/18/17
8011	SURROGATE: 1,3-DIBROMOPROPANE	108	70-132			%	01/18/17	01/18/17

Quant Method: 80111018.M
Run #: 1214209
Instrument: Herbie
Sequence: 161214
Dilution Factor: 1
Initials: RHA

Printed: 01/19/17 10:52:42 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214209.D\ECD1A.CH Vial: 9
Signal #2 : G:\HERBIE\DATA\161214\1214209.D\ECD2B.CH
Acq On : 01-18-17 17:14:57 Operator: RH
Sample : AZ48872W16 2/34.75G Inst : Herbie
Misc : water Multiplr: 1.01
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Jan 19 10:26 2017 Quant Results File: 80111018.RES

Quant Method : G:\HERBIE\DATA\161011\80111018.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Jan 18 15:12:05 2017
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

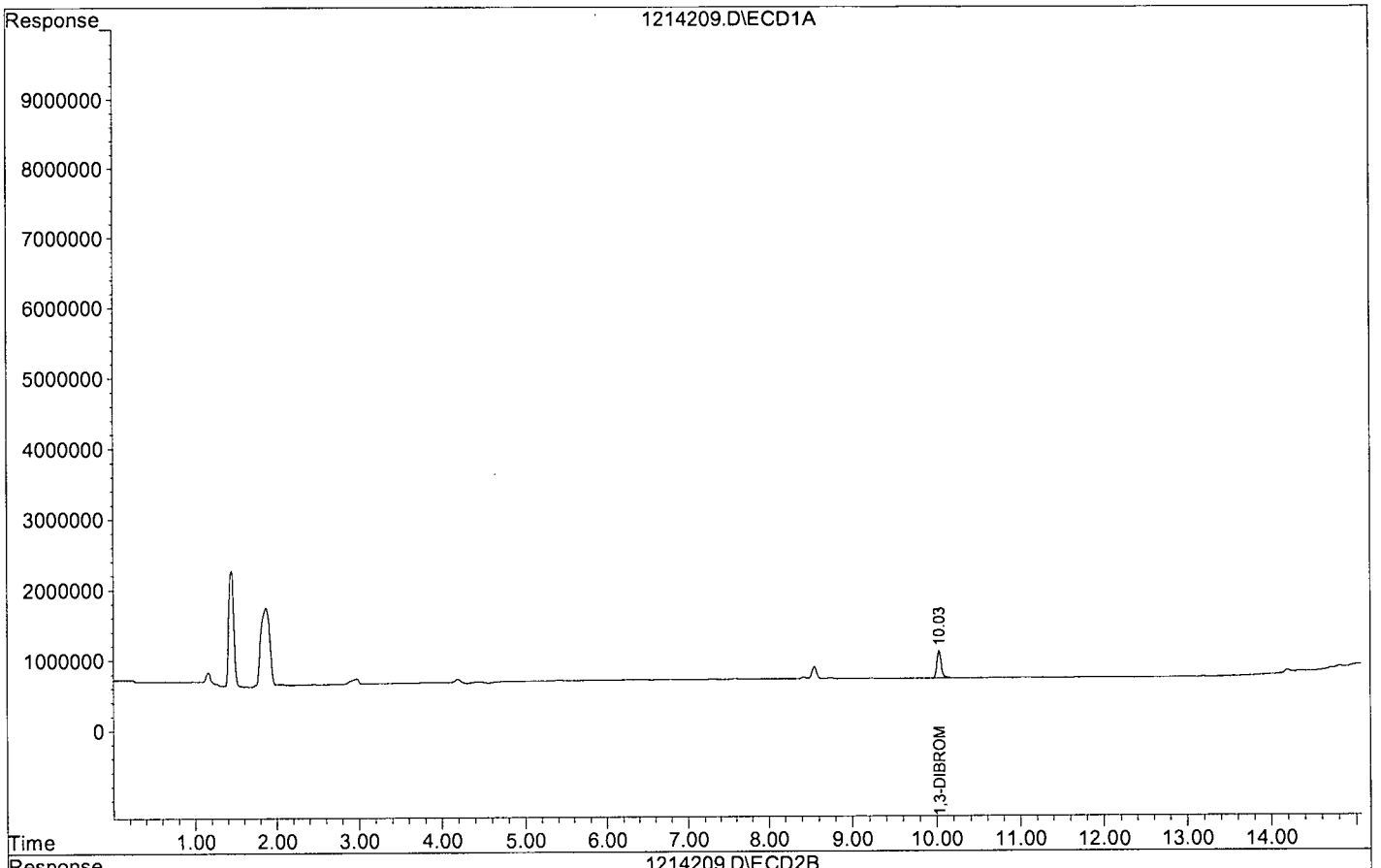
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.06	395797	684032	0.381	0.373
Spiked Amount	0.353			Recovery	=	108.08%	105.81%
	Target Compounds						
	Target Compounds						
1) TM	EDB	0.00	0.00	0	0	N.D. d	N.D. d
2) TM	1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4) TM	DBCP	0.00	0.00	0	0	N.D. d	N.D. d

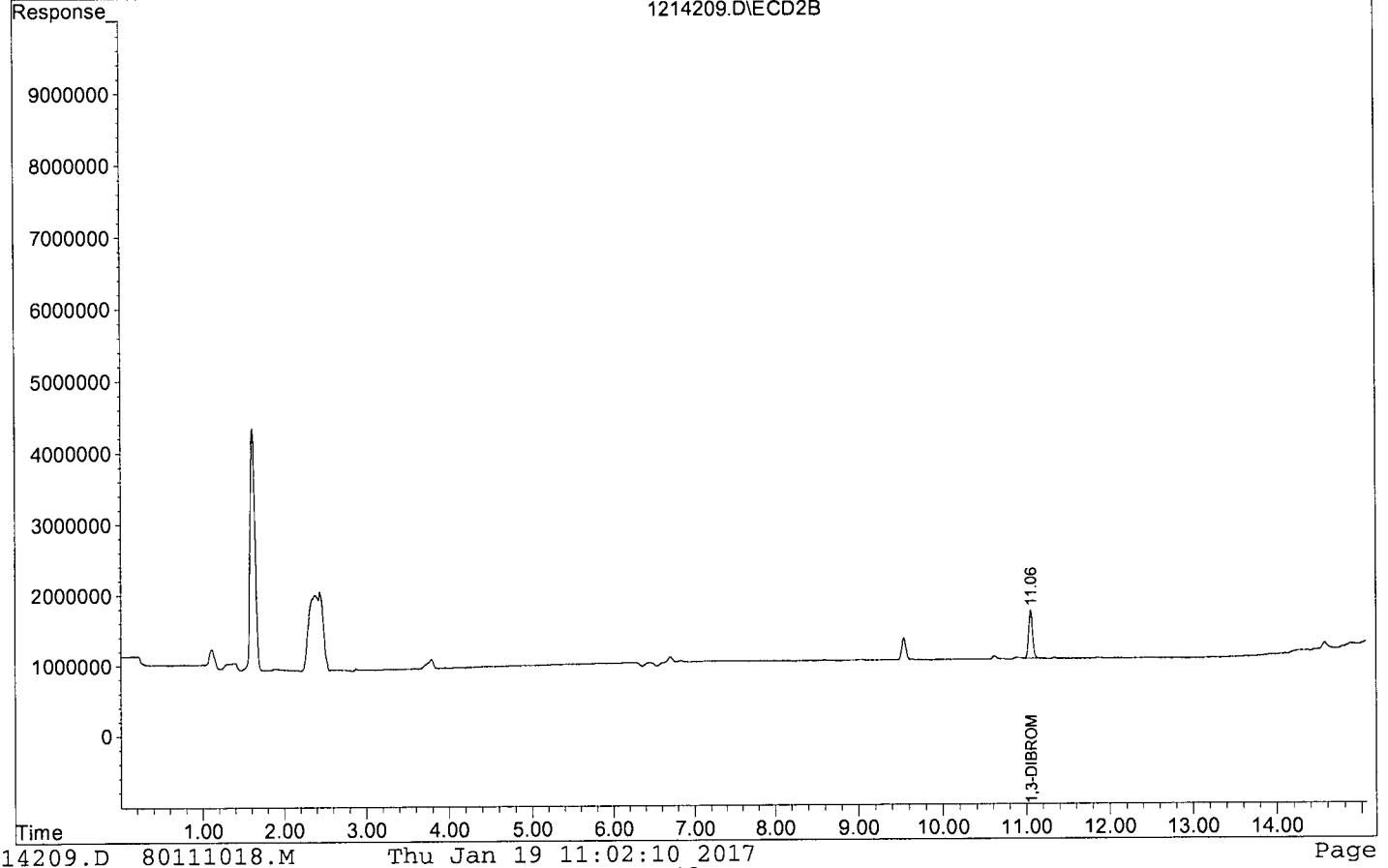
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\161214\1214209.D
Acq On : 01-18-17 17:14:57
Sample : AZ48872W16 2/34.75G
Misc : water
Quant Method : G:\HERBIE\DATA\161011\80111018.M

Vial: 9
Operator: RH
Inst : Herbie
Multiplr: 1.01





EPA 8011

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH170
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48873
QCG: #8011-170118A-215614

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8011	EDB	0.020 U	0.02	0.020	0.010	ug/L	01/18/17	01/18/17
8011	SURROGATE: 1,3-DIBROMOPROPANE	99.5	70-132			%	01/18/17	01/18/17

Quant Method:	80111018.M
Run #:	1214210
Instrument:	Herbie
Sequence:	161214
Dilution Factor:	1
Initials:	RHA

Printed: 01/19/17 10:52:42 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214210.D\ECD1A.CH Vial: 10
Signal #2 : G:\HERBIE\DATA\161214\1214210.D\ECD2B.CH
Acq On : 01-18-17 17:35:49 Operator: RH
Sample : AZ48873W05 2/34.64G Inst : Herbie
Misc : water Multiplr: 1.01
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Jan 19 10:26 2017 Quant Results File: 80111018.RES

Quant Method : G:\HERBIE\DATA\161011\80111018.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Jan 18 15:12:05 2017
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

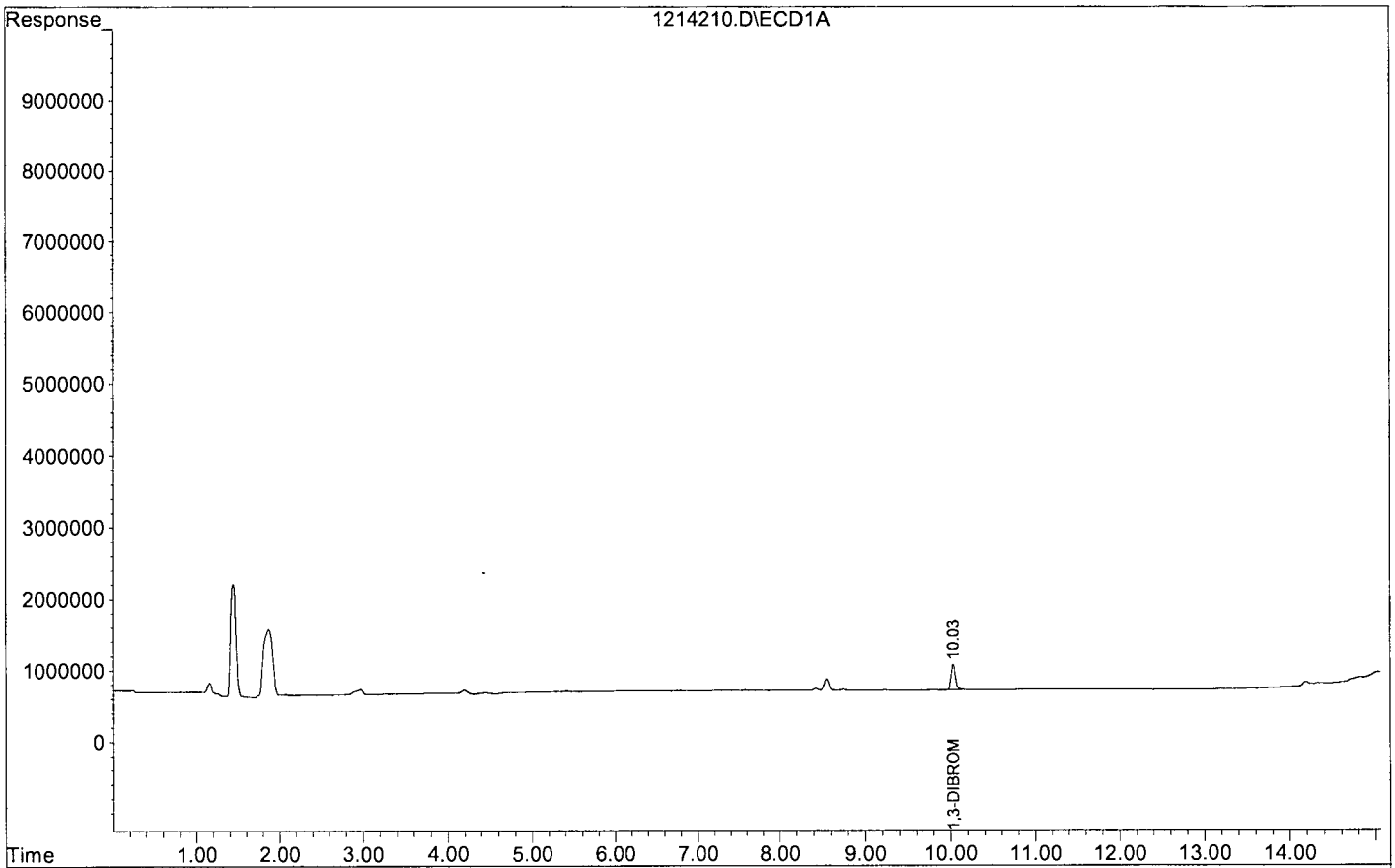
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	363848	635456	0.352	0.348
Spiked Amount	0.354			Recovery	=	99.54%	98.41%
	Target Compounds						
	Target Compounds						
1) TM	EDB	0.00	0.00	0	0	N.D. d	N.D. d
2) TM	1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4) TM	DBCP	0.00	0.00	0	0	N.D. d	N.D. d

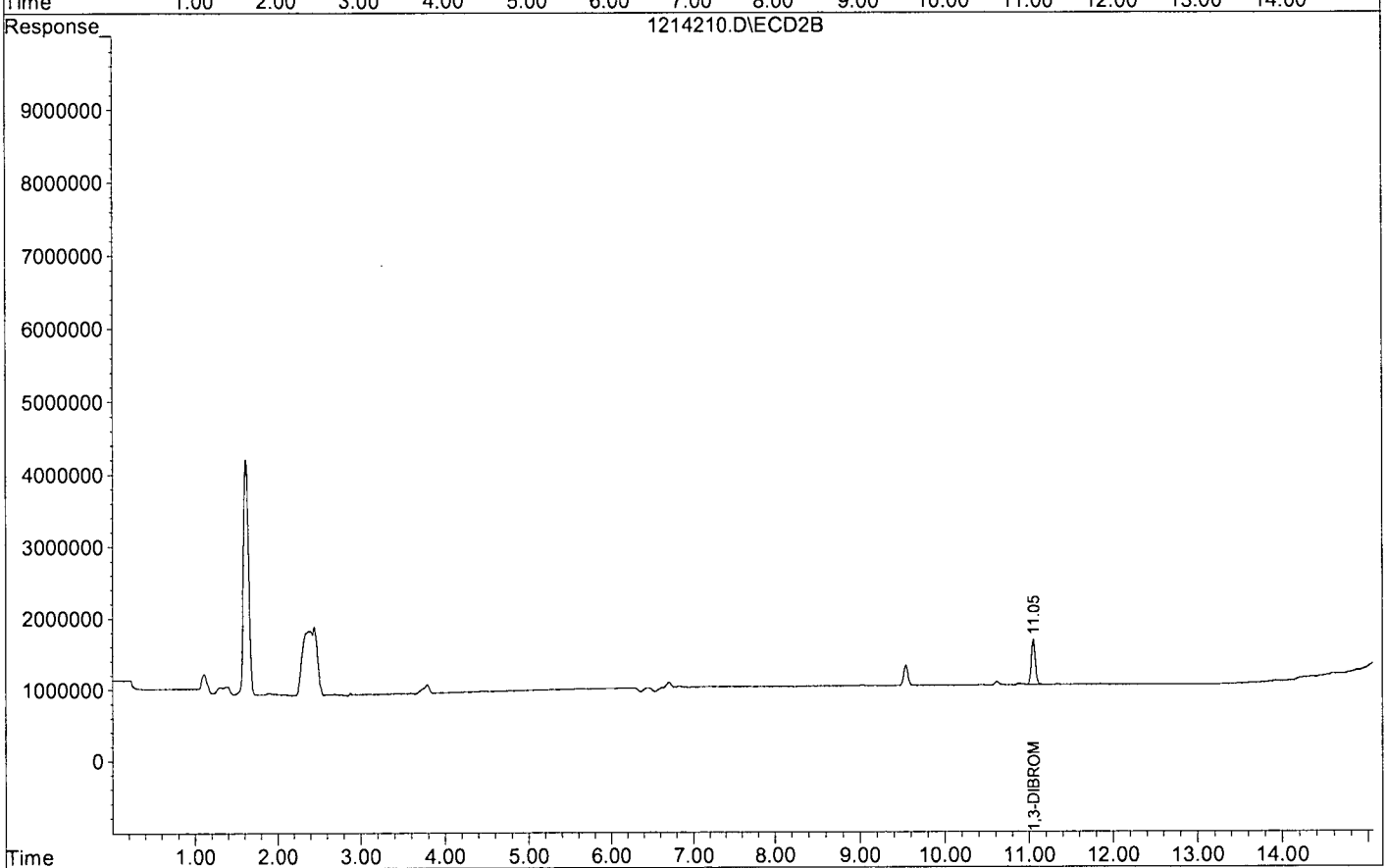
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\161214\1214210.D
Acq On : 01-18-17 17:35:49
Sample : AZ48873W05 2/34.64G
Misc : water
Quant Method : G:\HERBIE\DATA\161011\80111018.M

Vial: 10
Operator: RH
Inst : Herbie
Multiplr: 1.01





EPA 8011

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH177

Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965

APPL ID: AZ48874

QCG: #8011-170118A-215614

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8011	EDB	0.020 U	0.02	0.020	0.010	ug/L	01/18/17	01/18/17
8011	SURROGATE: 1,3-DIBROMOPROPANE	99.7	70-132			%	01/18/17	01/18/17

Quant Method: 80111018.M
Run #: 1214211
Instrument: Herbie
Sequence: 161214
Dilution Factor: 1
Initials: RHA

Printed: 01/19/17 10:52:42 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214211.D\ECD1A.CH Vial: 11
Signal #2 : G:\HERBIE\DATA\161214\1214211.D\ECD2B.CH
Acq On : 01-18-17 17:56:35 Operator: RH
Sample : AZ48874W05 2/34.13G Inst : Herbie
Misc : water Multiplr: 1.03
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Jan 19 10:27 2017 Quant Results File: 80111018.RES

Quant Method : G:\HERBIE\DATA\161011\80111018.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Jan 18 15:12:05 2017
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

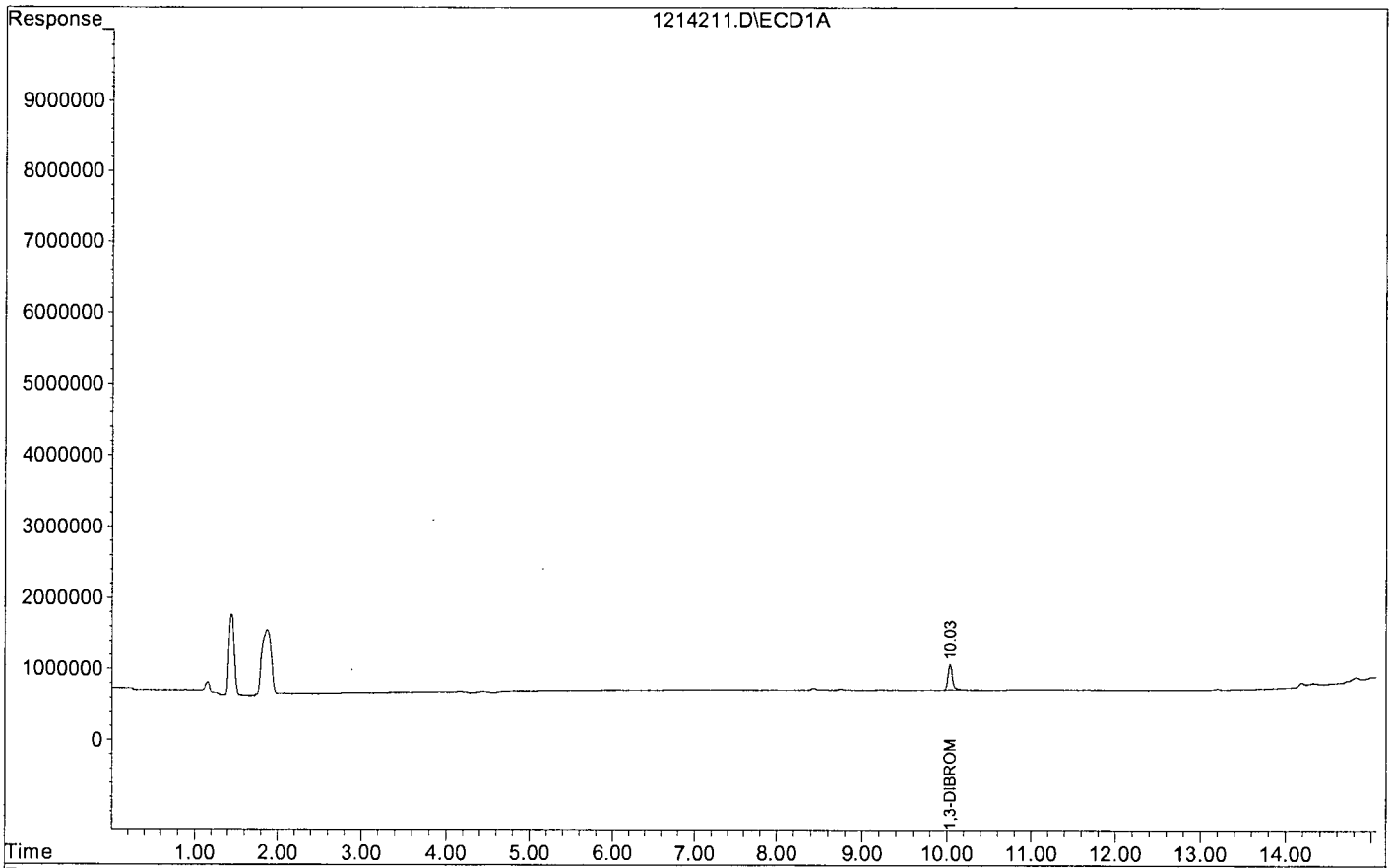
Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

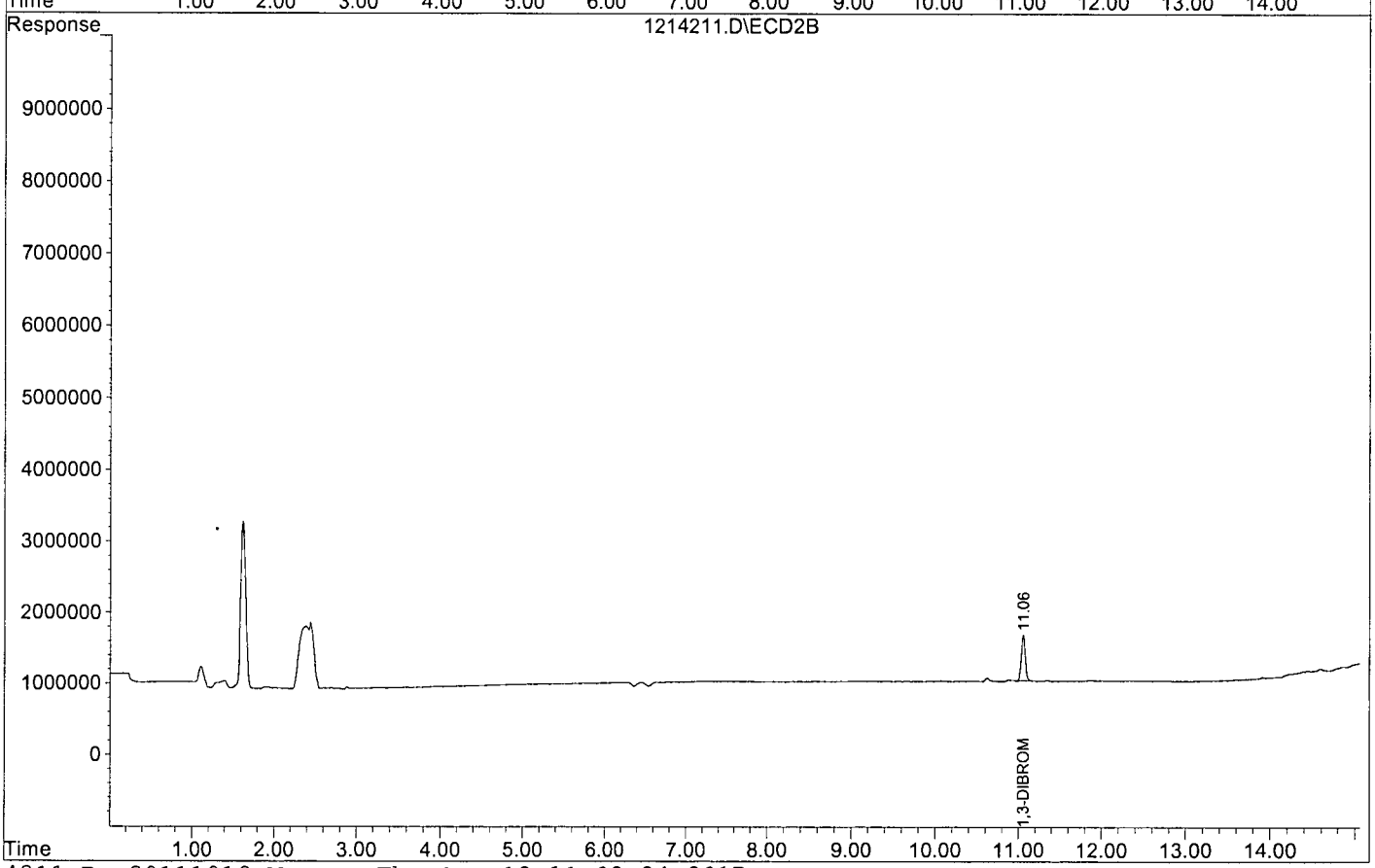
Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
3) S 1,3-DIBROMOPROPA	10.03	11.06	364819	645717	0.358	0.359
Spiked Amount 0.359			Recovery =		99.74%	100.02%
Target Compounds						
Target Compounds						
1) TM EDB	0.00	0.00	0	0	N.D. d	N.D. d
2) TM 1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4) TM DBCP	0.00	0.00	0	0	N.D. d	N.D. d

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\161214\1214211.D Vial: 11
Acq On : 01-18-17 17:56:35 Operator: RH
Sample : AZ48874W05 2/34.13G Inst : Herbie
Misc : water Multiplr: 1.03
Quant Method : G:\HERBIE\DATA\161011\80111018.M





ORGANICS

Calibration Data

APPL, INC.

DBCP/EDB/1,2,3-TCP Analysis by
504 8011 0301

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/18/17
Matrix: Instrument: Herbie Initials:

1214195.D 1214196.D 1214197.D 1214198.D 1214199.D 1214200.D

		Compound	1	2	3	4	5	6					Avg	%RSD		
1	TM	EDB	726825	789590	706260	626511	571733	598013					669822	13	TM	
2	TM	1,2,3-TCP	190850	177625	162674	147739	135175	141380					159240	14	TM	
3	S	1,3-DIBROMOPROPANE(S)	512925	628695	566514	505788	456819	464842					522597	12	S	
4	TM	DBCP	2001150	1999380	1889890	1755496	1648399	1712096					1834402	8.2	TM	
5		Signal #2											0	0		
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7																
8																
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DBCP/EDB/1,2,3-TCP Analysis by
504 8011 0301

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/18/17
Matrix: Instrument: Herbie Initials:

			1214195.D	1214196.D	1214197.D	1214198.D	1214199.D	1214200.D								
		Compound	1	2	3	4	5	6					Avg	%RSD		
36	TM	EDB #2	1609300	1680260	1572462	1481528	1386279	1448969					1529800	7.2	TM	
37	TM	1,2,3-TCP #2	248300	305375	282372	260407	249081	260363					267650	8.3	TM	
38	S	1,3-DIBROMOPROPANE(S) #2	889225	1050190	955444	914611	854801	871046					922553	7.8	S	
39	TM	DBCP #2	4348975	4910105	4597966	4456386	4488127	4709163					4585120	4.4	TM	
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0.7899659

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214195.D\ECD1A.CH Vial: 95
Signal #2 : G:\HERBIE\DATA\161214\1214195.D\ECD2B.CH
Acq On : 01-18-17 12:24:48 Operator: RH
Sample : 8011 1 1/18/17 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Jan 18 15:12 2017 Quant Results File: 80111018.RES

Quant Method : G:\HERBIE\DATA\161011\80111018.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Jan 18 15:12:05 2017
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	System Monitoring Compounds							
3)	S 1,3-DIBROMOPROPA	10.03	11.05	20517	35569	0.013	0.018	#
	Spiked Amount 0.350			Recovery =		3.71%	5.14%	
	Target Compounds							
1)	TM EDB	5.78	7.23	29073	64372	0.021	0.019	
2)	TM 1,2,3-TCP	9.26	10.46	7634	9932	0.017	0.018	
4)	TM DBCP	13.37	14.10	80046	173959	0.016	0.020	#

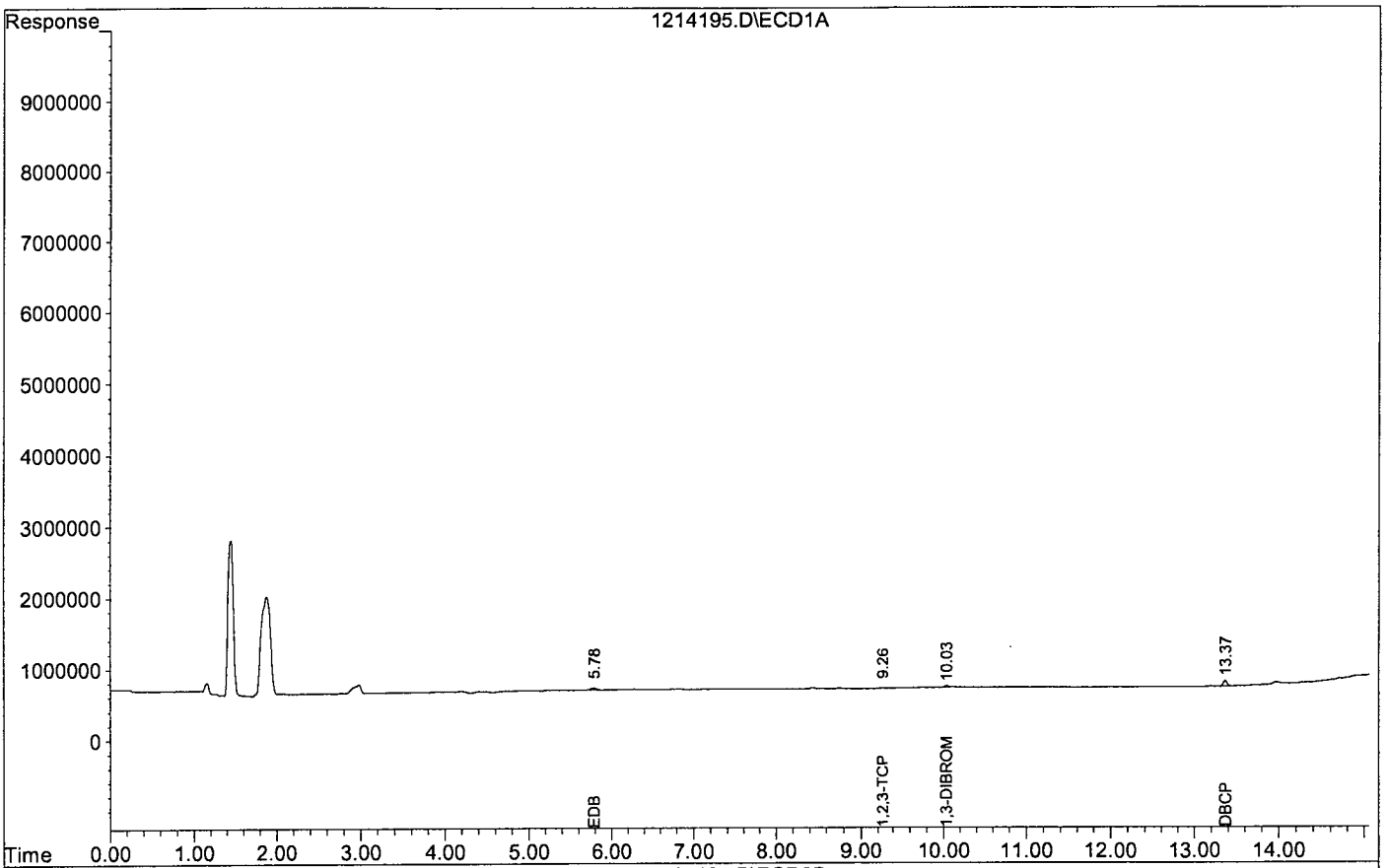
Target Compounds

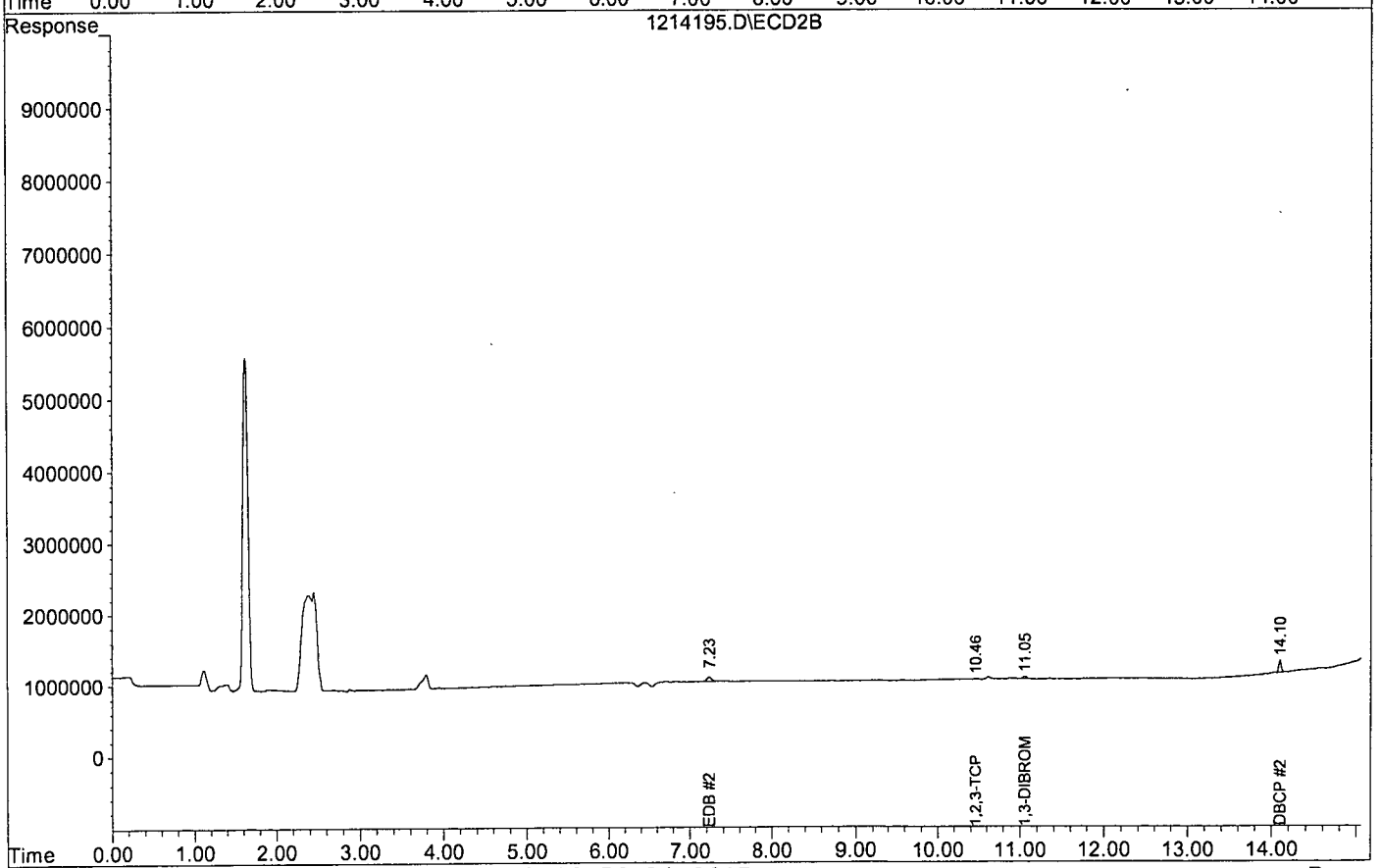
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214195.D
Acq On : 01-18-17 12:24:48
Sample : 8011 1 1/18/17
Misc :
Quant Method : G:\HERBIE\DATA\161011\80111018.M

Vial: 95
Operator: RH
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214196.D\ECD1A.CH Vial: 96
Signal #2 : G:\HERBIE\DATA\161214\1214196.D\ECD2B.CH
Acq On : 01-18-17 12:45:29 Operator: RH
Sample : 8011 2 1/18/17 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Jan 18 15:12 2017 Quant Results File: 80111018.RES

Quant Method : G:\HERBIE\DATA\161011\80111018.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Jan 18 15:12:05 2017
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	System Monitoring Compounds							
3)	S 1,3-DIBROMOPROPA	10.03	11.06	125739	210038	0.081	0.104	#
	Spiked Amount 0.350			Recovery =		23.14%	29.71%	
	Target Compounds							
1)	TM EDB	5.78	7.23	157918	336052	0.113	0.101	
2)	TM 1,2,3-TCP	9.26	10.46	35525	61075	0.081	0.109	#
4)	TM DBCP	13.37	14.10	399876	982021	0.080	0.115	#

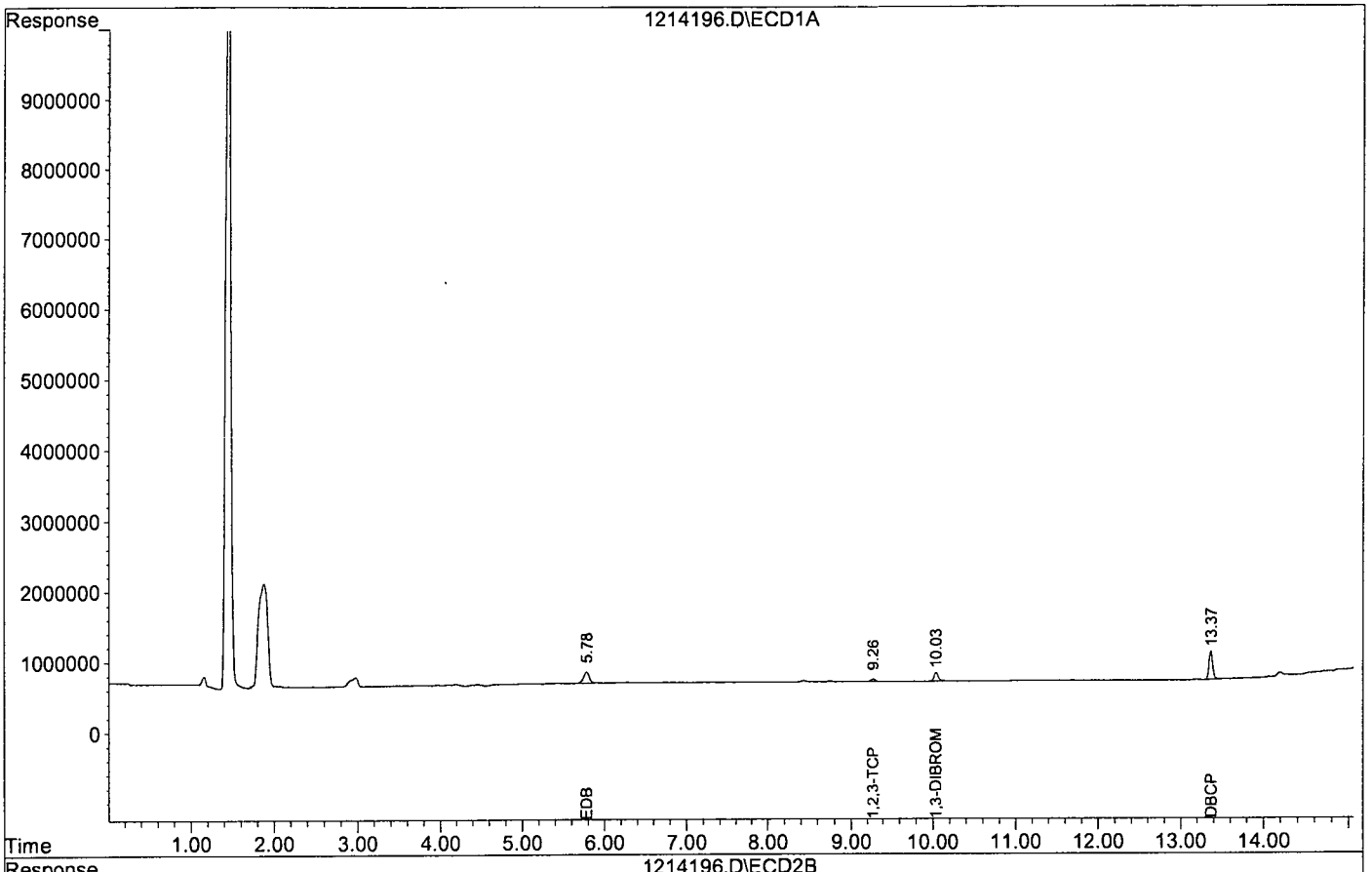
Target Compounds

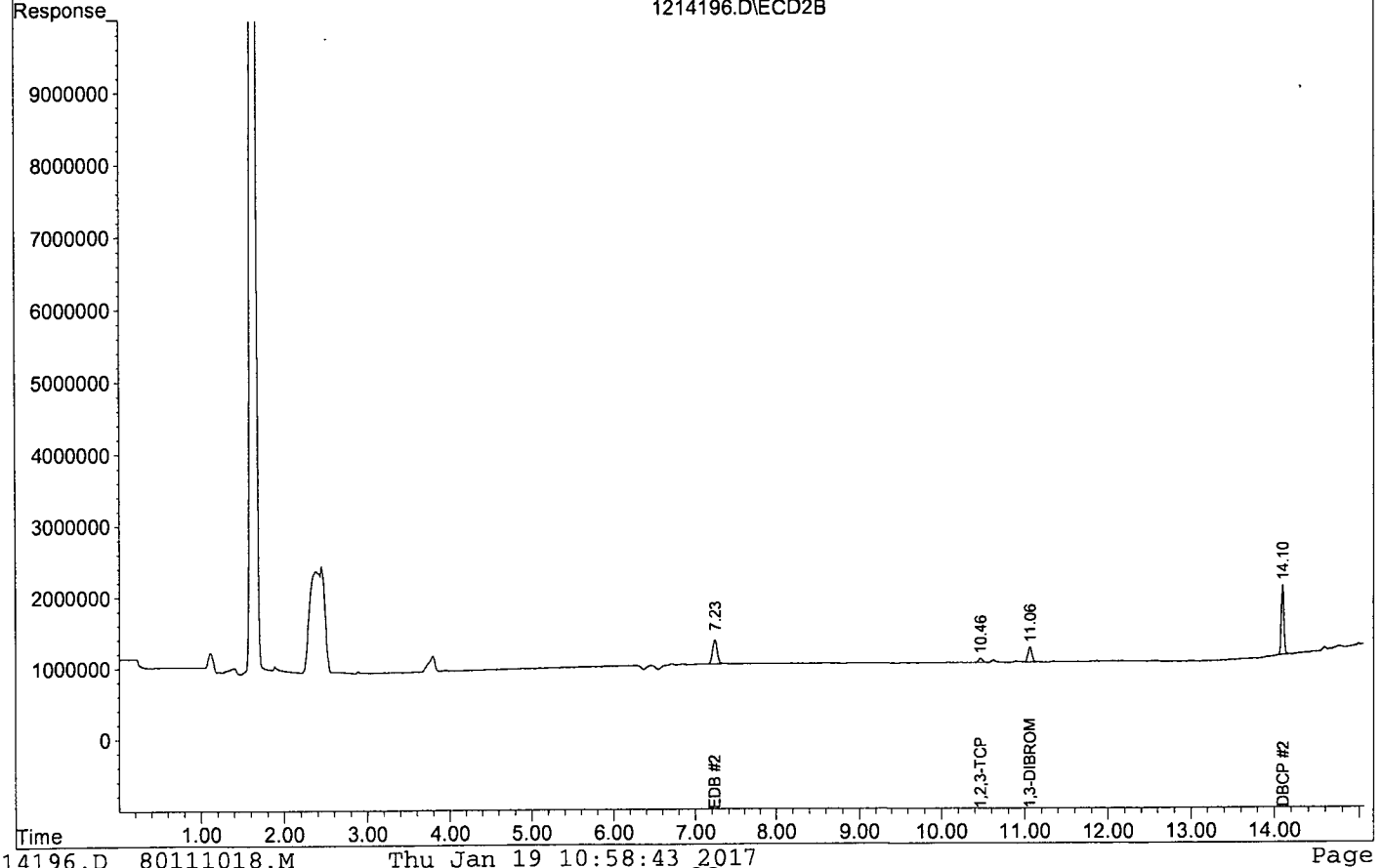
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214196.D
Acq On : 01-18-17 12:45:29
Sample : 8011 2 1/18/17
Misc :
Quant Method : G:\HERBIE\DATA\161011\80111018.M

Vial: 96
Operator: RH
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214197.D\ECD1A.CH Vial: 97
Signal #2 : G:\HERBIE\DATA\161214\1214197.D\ECD2B.CH
Acq On : 01-18-17 13:06:11 Operator: RH
Sample : 8011 3 1/18/17 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Jan 18 15:12 2017 Quant Results File: 80111018.RES

Quant Method : G:\HERBIE\DATA\161011\80111018.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Jan 18 15:12:05 2017
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	System Monitoring Compounds							
3) S	1,3-DIBROMOPROPA	10.03	11.05	283257	477722	0.183	0.237	#
Spiked Amount	0.350			Recovery	=	52.29%	67.71%	
	Target Compounds							
1) TM	EDB	5.78	7.23	353130	786231	0.253	0.237	
2) TM	1,2,3-TCP	9.26	10.46	81337	141186	0.186	0.252	#
4) TM	DBCP	13.36	14.10	944945	2298983	0.189	0.268	#

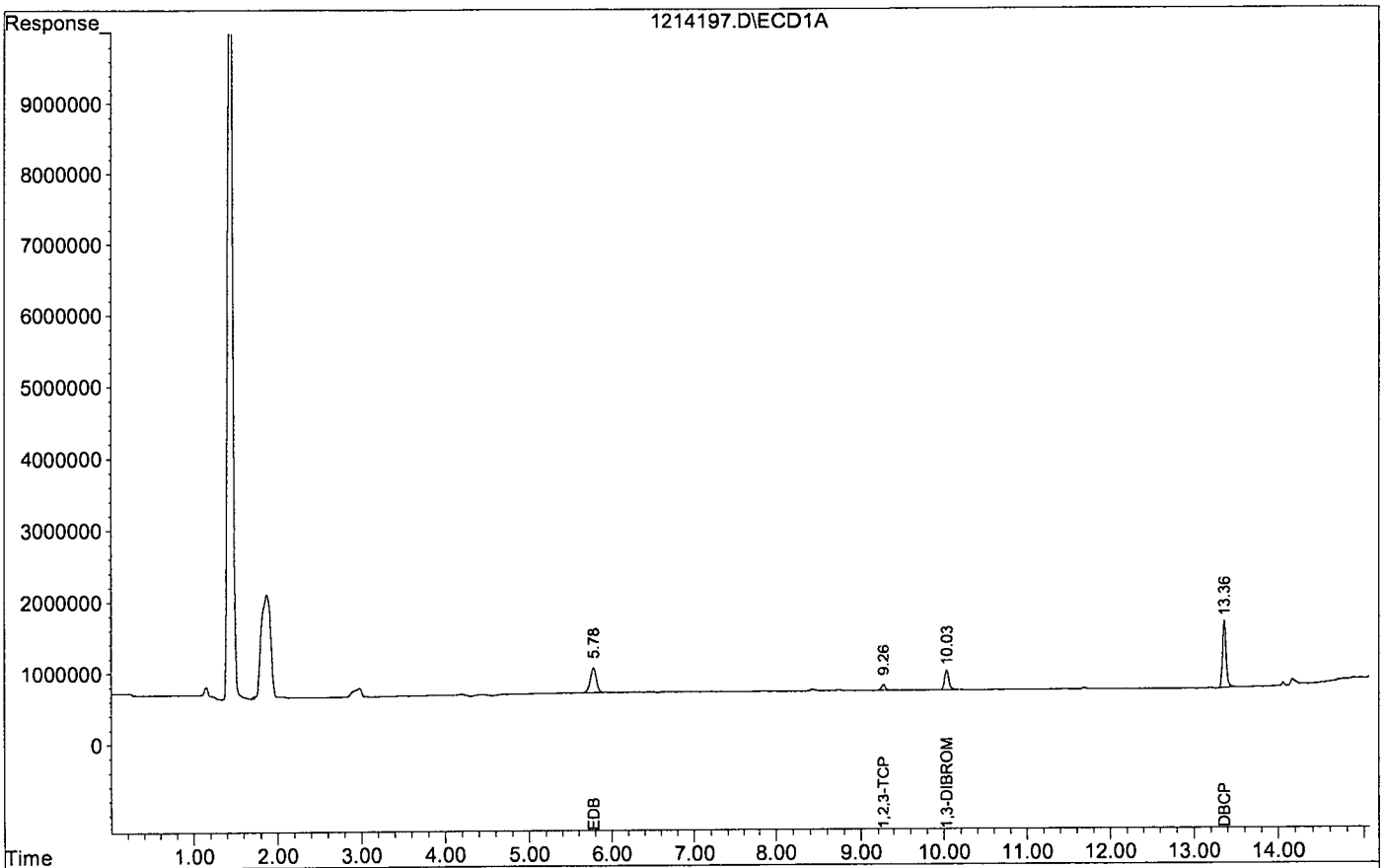
Target Compounds

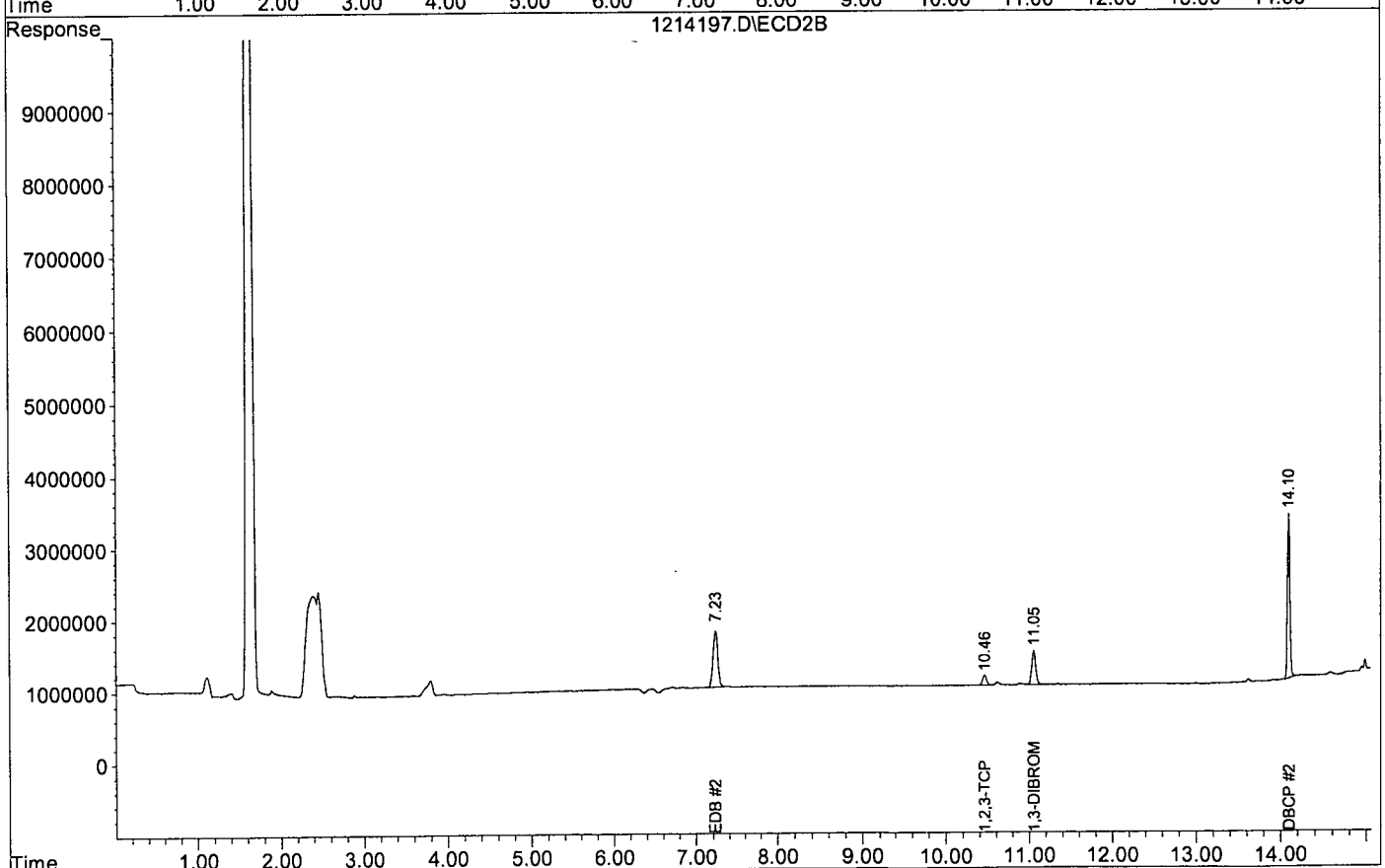
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214197.D
Acq On : 01-18-17 13:06:11
Sample : 8011 3 1/18/17
Misc :
Quant Method : G:\HERBIE\DATA\161011\80111018.M

Vial: 97
Operator: RH
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214198.D\ECD1A.CH Vial: 98
Signal #2 : G:\HERBIE\DATA\161214\1214198.D\ECD2B.CH
Acq On : 01-18-17 13:26:58 Operator: RH
Sample : 8011 4 1/18/17 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Jan 18 15:12 2017 Quant Results File: 80111018.RES

Quant Method : G:\HERBIE\DATA\161011\80111018.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Jan 18 15:12:05 2017
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	System Monitoring Compounds							
3)	S 1,3-DIBROMOPROPA	10.03	11.06	505788	914611	0.327	0.454	#
	Spiked Amount 0.350			Recovery	=	93.43%	129.71%	
	Target Compounds							
1)	TM EDB	5.78	7.23	626511	1481528	0.448	0.446	
2)	TM 1,2,3-TCP	9.26	10.46	147739	260407	0.337	0.465	#
4)	TM DBCP	13.36	14.10	1755496	4456386	0.351	0.520	#

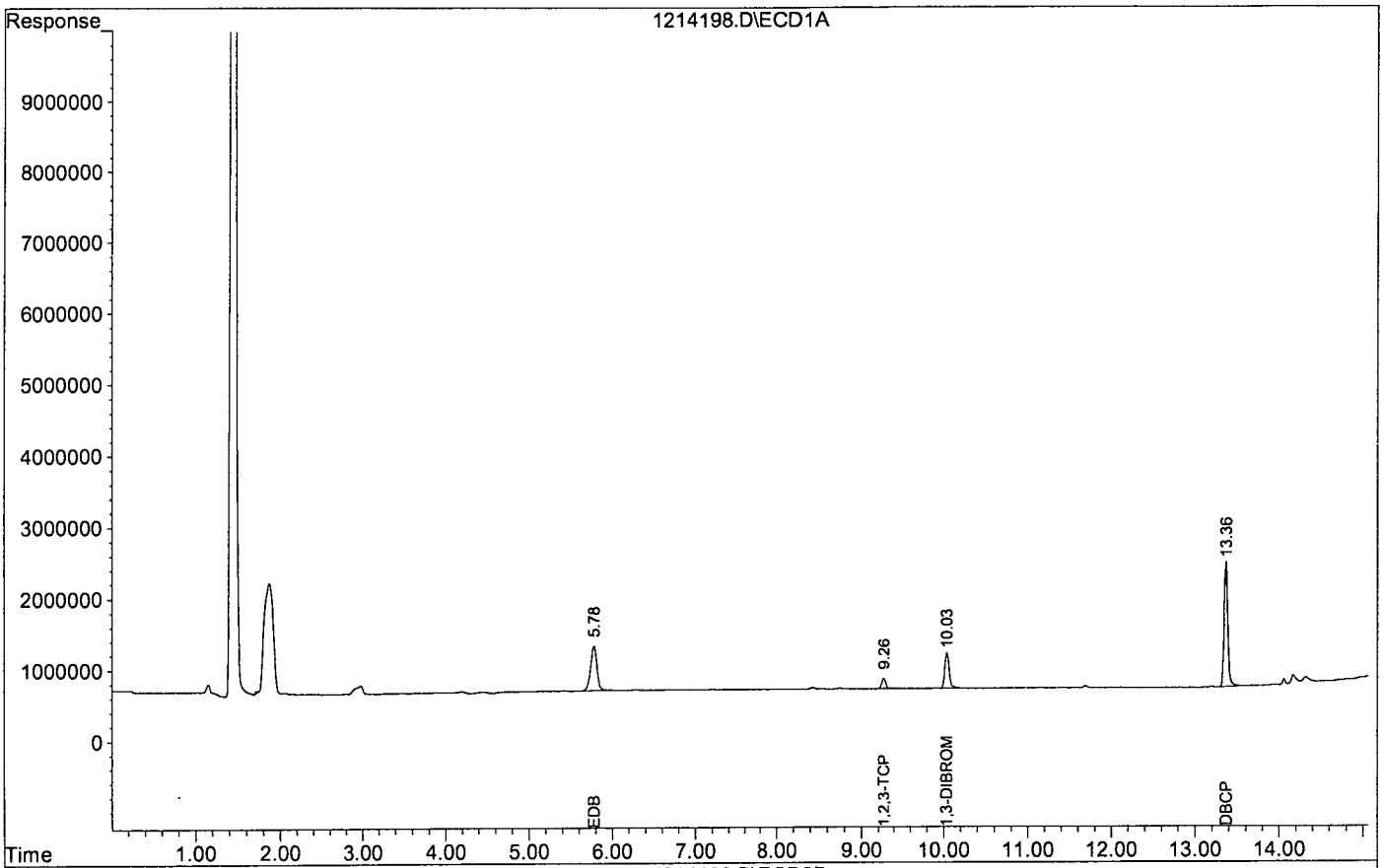
Target Compounds

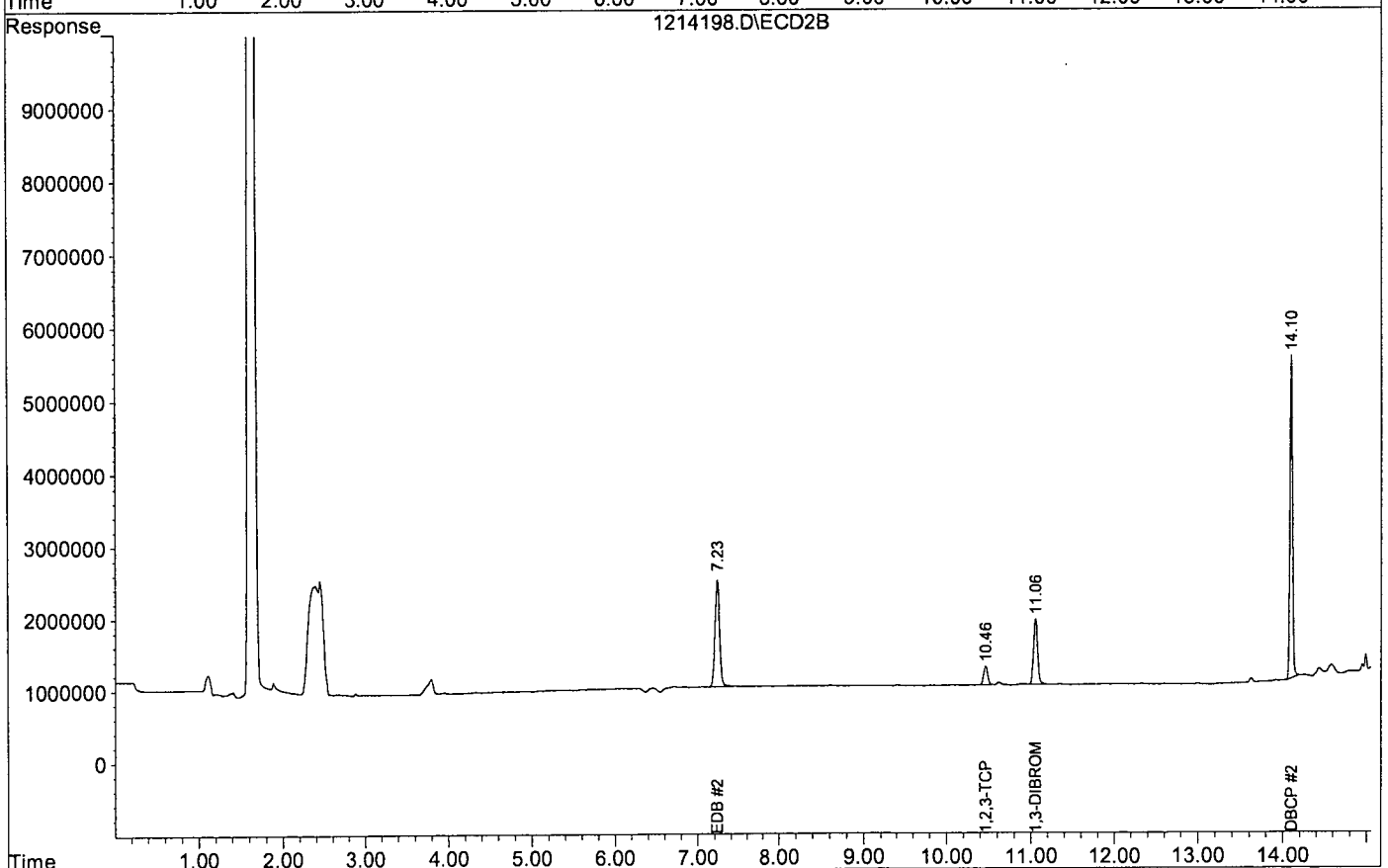
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214198.D
Acq On : 01-18-17 13:26:58
Sample : 8011 4 1/18/17
Misc :
Quant Method : G:\HERBIE\DATA\161011\80111018.M

Vial: 98
Operator: RH
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214199.D\ECD1A.CH Vial: 99
Signal #2 : G:\HERBIE\DATA\161214\1214199.D\ECD2B.CH
Acq On : 01-18-17 13:47:42 Operator: RH
Sample : 8011 5 1/18/17 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Jan 18 15:12 2017 Quant Results File: 80111018.RES

Quant Method : G:\HERBIE\DATA\161011\80111018.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Jan 18 15:12:05 2017
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	System Monitoring Compounds							
3) S	1,3-DIBROMOPROPA	10.03	11.06	685228	1282201	0.443	0.636	#
Spiked Amount	0.350			Recovery	=	126.57%	181.71%	
	Target Compounds							
1) TM	EDB	5.78	7.23	857600	2079418	0.614	0.626	
2) TM	1,2,3-TCP	9.27	10.46	202763	373621	0.463	0.667	#
4) TM	DBCP	13.36	14.10	2472599	6732190	0.494	0.785	#

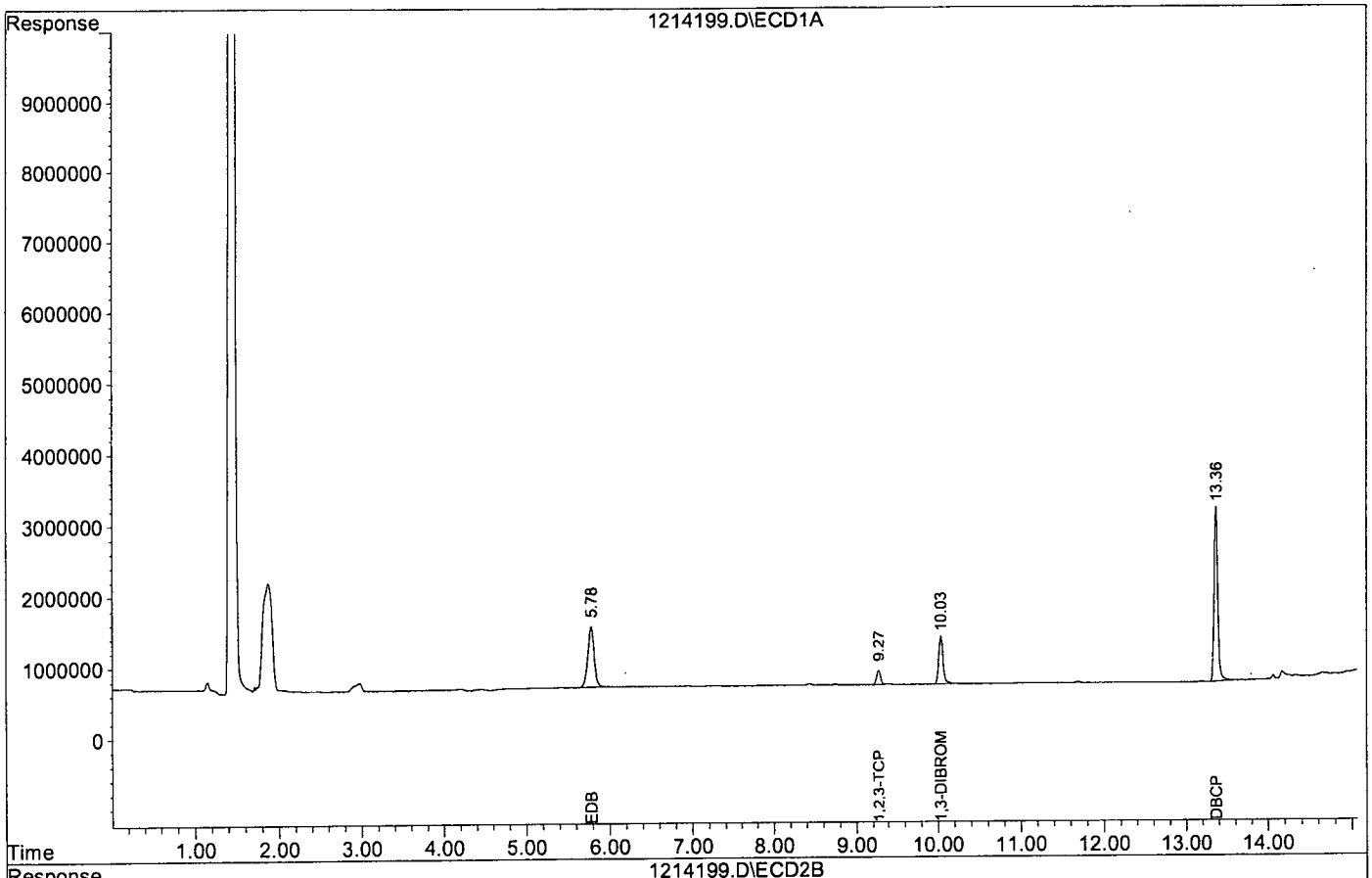
Target Compounds

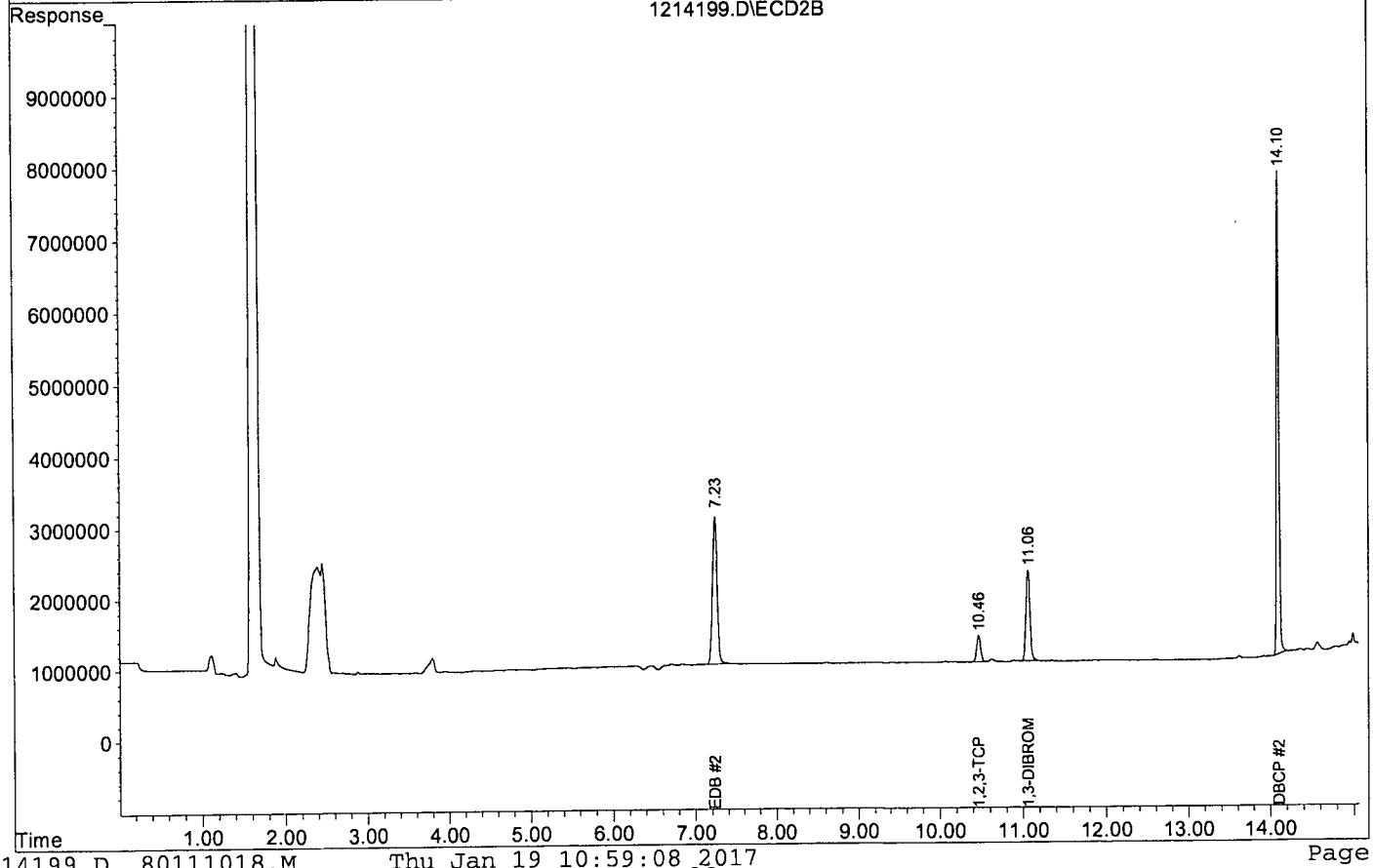
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214199.D
Acq On : 01-18-17 13:47:42
Sample : 8011 5 1/18/17
Misc :
Quant Method : G:\HERBIE\DATA\161011\80111018.M

Vial: 99
Operator: RH
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214200.D\ECD1A.CH Vial: 100
Signal #2 : G:\HERBIE\DATA\161214\1214200.D\ECD2B.CH
Acq On : 01-18-17 14:08:28 Operator: RH
Sample : 8011 6 1/18/17 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Jan 18 15:12 2017 Quant Results File: 80111018.RES

Quant Method : G:\HERBIE\DATA\161011\80111018.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Jan 18 15:12:05 2017
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	System Monitoring Compounds							
3) S	1,3-DIBROMOPROPA	10.03	11.06	929683	1742091	0.601	0.864	#
	Spiked Amount 0.350			Recovery	=	171.71%	246.86%	
	Target Compounds							
1) TM	EDB	5.78	7.23	1196026	2897937	0.856	0.872	
2) TM	1,2,3-TCP	9.26	10.46	282759	520726	0.646	0.930	#
4) TM	DBCP	13.36	14.10	3424192	9418326	0.684	1.098	#

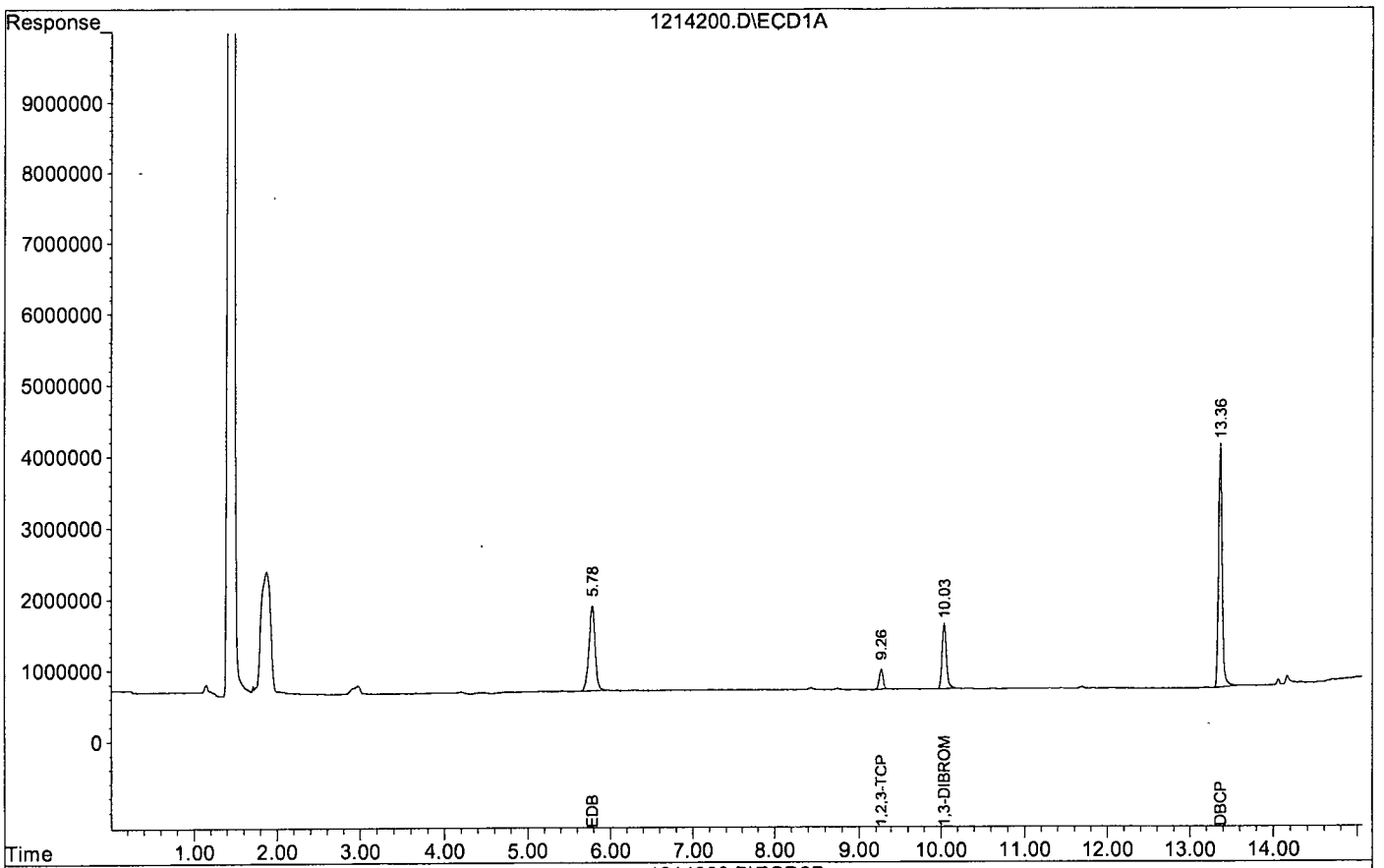
Target Compounds

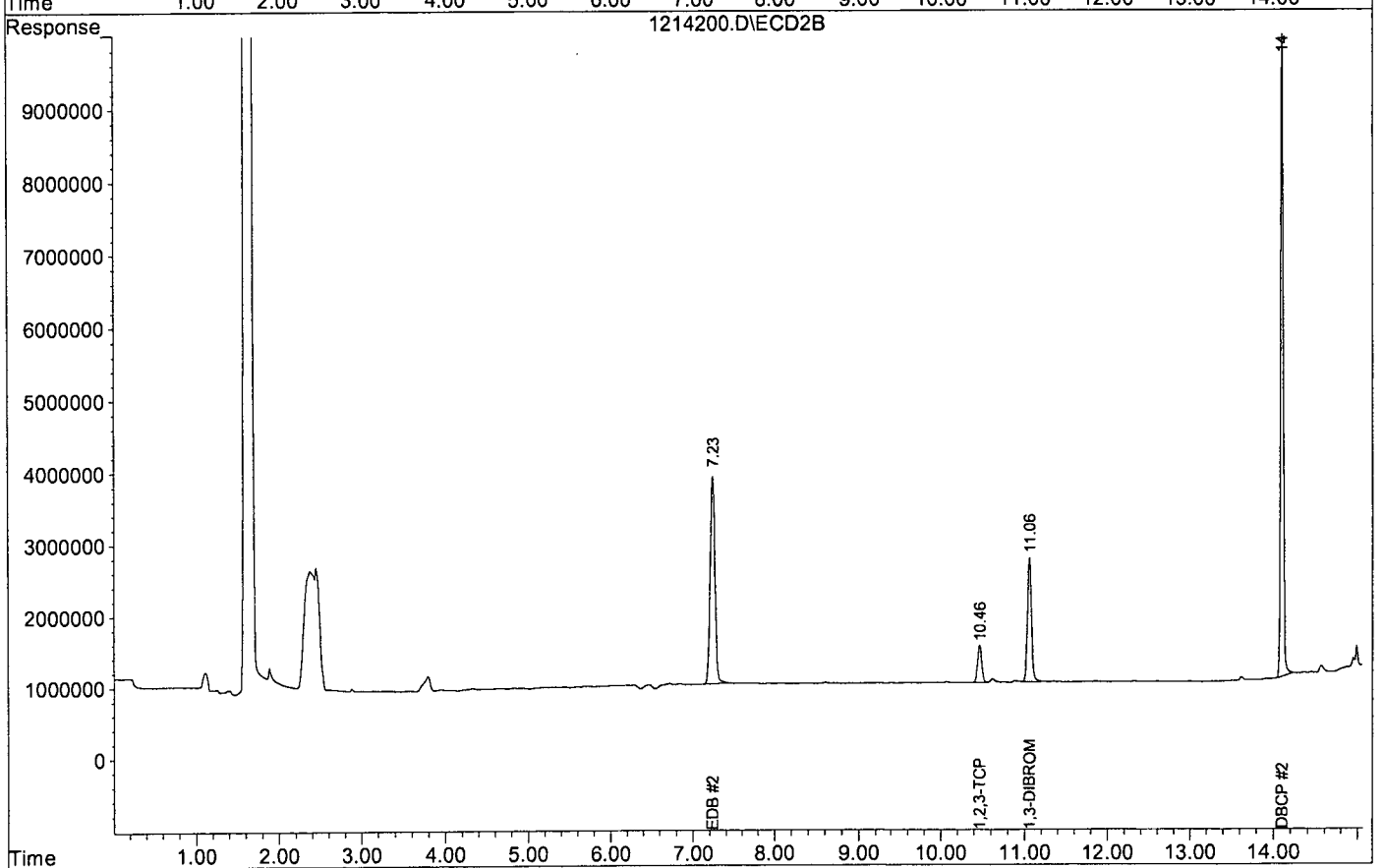
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214200.D
Acq On : 01-18-17 14:08:28
Sample : 8011 6 1/18/17
Misc :
Quant Method : G:\HERBIE\DATA\161011\80111018.M

Vial: 100
Operator: RH
Inst : Herbie
Multiplr: 1.00





DBCP/EDB/1,2,3-TCP Analysis by
504 8011 0301

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/18/17
Instrument: Herbie
Initial Cal. Date: 01/18/17
Data File: 1214203.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TM	EDB	669822	661975	1.2	TM	
2	TM	1,2,3-TCP	159240	154750	2.8	TM	
3	TM	DBCP	1834400	1703110	7.2	TM	
4							
5							
6							
7							
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9							
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37							
38							
39							
40							
		Average			3.7		

DBCP/EDB/1,2,3-TCP Analysis by
504 8011 0301

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/18/17
Instrument: Herbie
Cal. Date: 01/18/17
Data File: 1214203.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	EDB	1529800	1427360	6.7	TM	
42	TM	1,2,3-TCP	267650	247350	7.6	TM	
43	TM	DBCP	4585120	4042250	12	TM	
44							
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78							
79							
80							
		Average			8.8		

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214203.D\ECD1A.CH Vial: 3
Signal #2 : G:\HERBIE\DATA\161214\1214203.D\ECD2B.CH
Acq On : 01-18-17 15:10:44 Operator: RH
Sample : 170118A LCS-1 2/35.15G Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Jan 18 16:39 2017 Quant Results File: 80111018.RES

Quant Method : G:\HERBIE\DATA\161011\80111018.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Jan 18 15:12:05 2017
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
3) S 1,3-DIBROMOPROPA	10.03	11.05	360438	623148	0.343	0.336
Spiked Amount 0.349			Recovery =		98.42%	96.41%
Target Compounds						
1) TM EDB	5.78	7.23	132395	285472	0.098	0.093
2) TM 1,2,3-TCP	9.26	10.46	30950	49470	0.097	0.092
4) TM DBCP	13.36	14.10	340621	808450	0.092	0.088
Target Compounds						

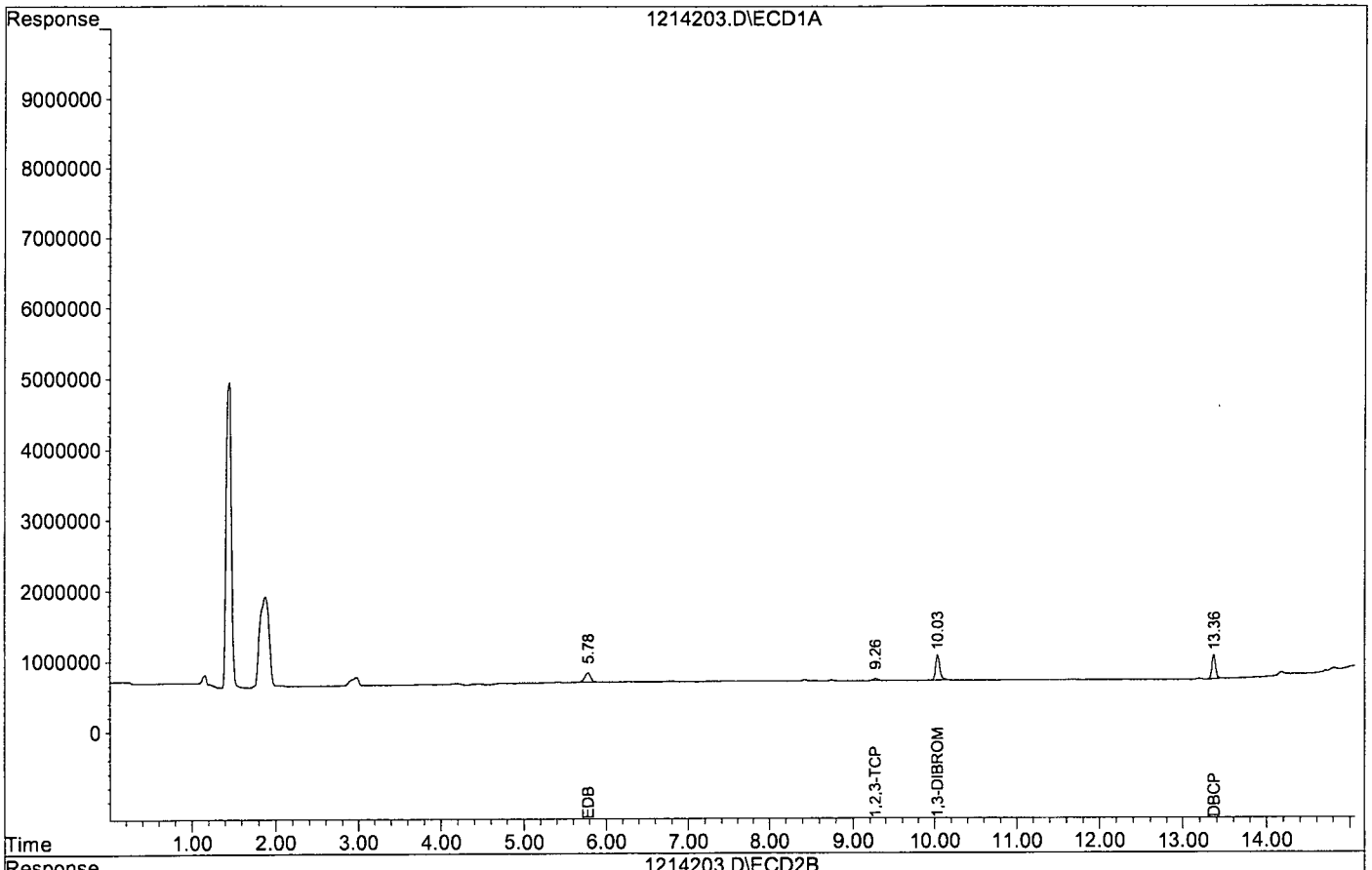
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
1214203.D 80111018.M Thu Jan 19 11:49:17 2017

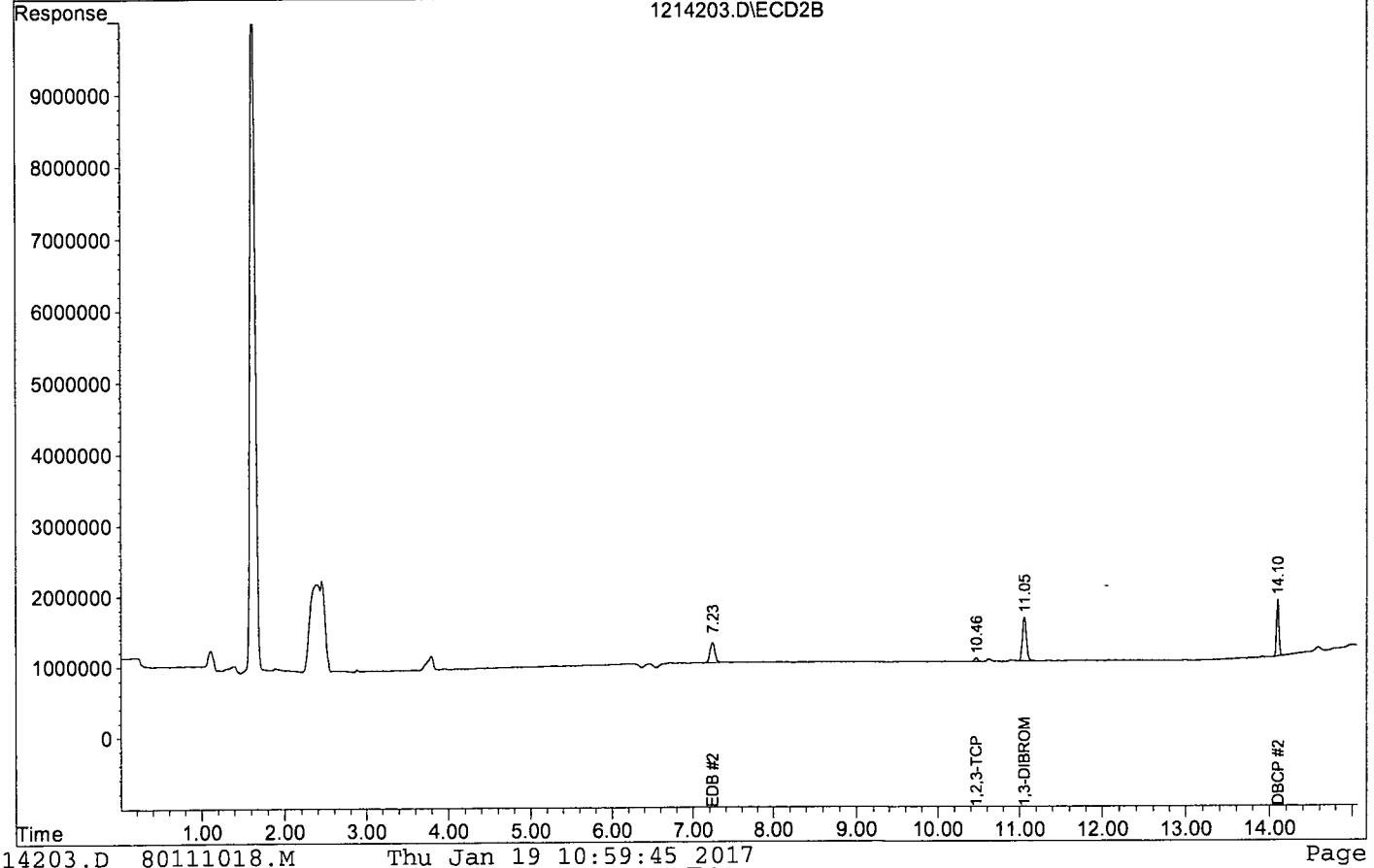
Algorithum check = $\frac{132395 * 1}{669822 * 2} = 0.0988$

RH 1/19/17.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214203.D Vial: 3
Acq On : 01-18-17 15:10:44 Operator: RH
Sample : 170118A LCS-1 2/35.15G Inst : Herbie
Misc : water Multiplr: 1.00
Quant Method : G:\HERBIE\DATA\161011\80111018.M





DBCP/EDB/1,2,3-TCP Analysis by
504 8011 0301

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/18/17
Instrument: Herbie
Initial Cal. Date: 01/18/17
Data File: 1214217.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	EDB	669822	683194	2.0	TM	
2	TM	1,2,3-TCP	159240	160862	1.0	TM	
3	S	1,3-DIBROMOPROPANE(S)	522597	564228	8.0	S	
4	TM	DBCP	1834400	1883890	2.7	TM	
5							
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33							
34							
35							
36							
37							
38							
39							
40							
		Average			3.4		

DBCP/EDB/1,2,3-TCP Analysis by
504 8011 0301

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/18/17
Instrument: Herbie
Cal. Date: 01/18/17
Data File: 1214217.D

		Compound	MEAN	CCRF	%D	%Drift	
41	TM	EDB	1529800	1564880	2.3	TM	
42	TM	1,2,3-TCP	267650	290052	8.4	TM	
43	S	1,3-DIBROMOPROPANE(S)	922553	962552	4.3	S	
44	TM	DBCP	4585120	4629910	0.98	TM	
45							
46							
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79							
80							
		Average			4.0		

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214217.D\ECD1A.CH Vial: 17
Signal #2 : G:\HERBIE\DATA\161214\1214217.D\ECD2B.CH
Acq On : 01-18-17 20:01:22 Operator: RH
Sample : 8011 3 1/18/17 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Jan 19 10:23 2017 Quant Results File: 80111018.RES

Quant Method : G:\HERBIE\DATA\161011\80111018.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Jan 18 15:12:05 2017
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	282114	481276	0.270	0.261
Spiked Amount	0.350			Recovery	=	77.14%	74.57%
	Target Compounds						
1) TM	EDB	5.78	7.23	341597	782442	0.255	0.256
2) TM	1,2,3-TCP	9.26	10.46	80431	145026	0.253	0.271
4) TM	DBCP	13.36	14.10	941946	2314956	0.257	0.252

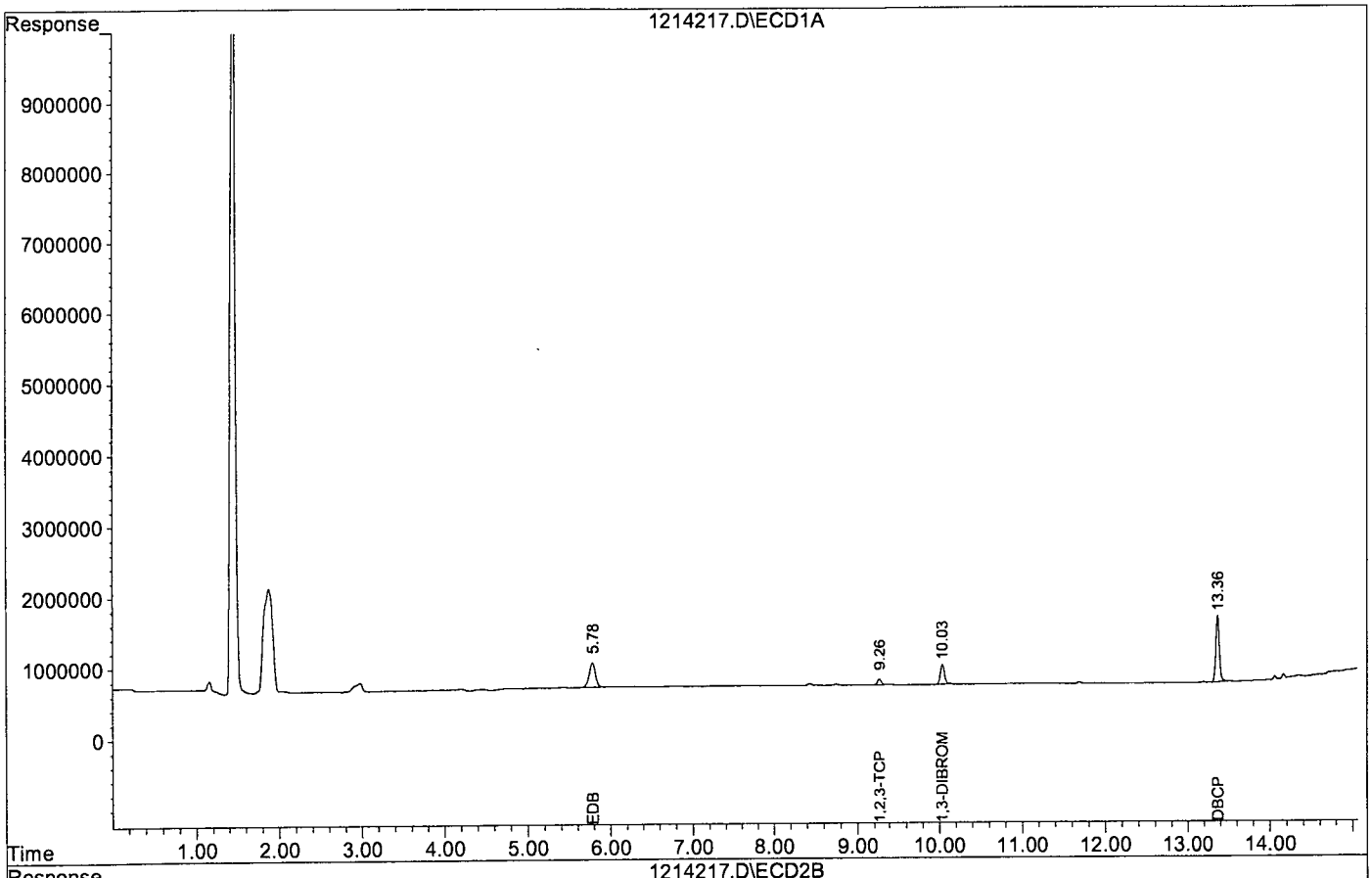
Target Compounds

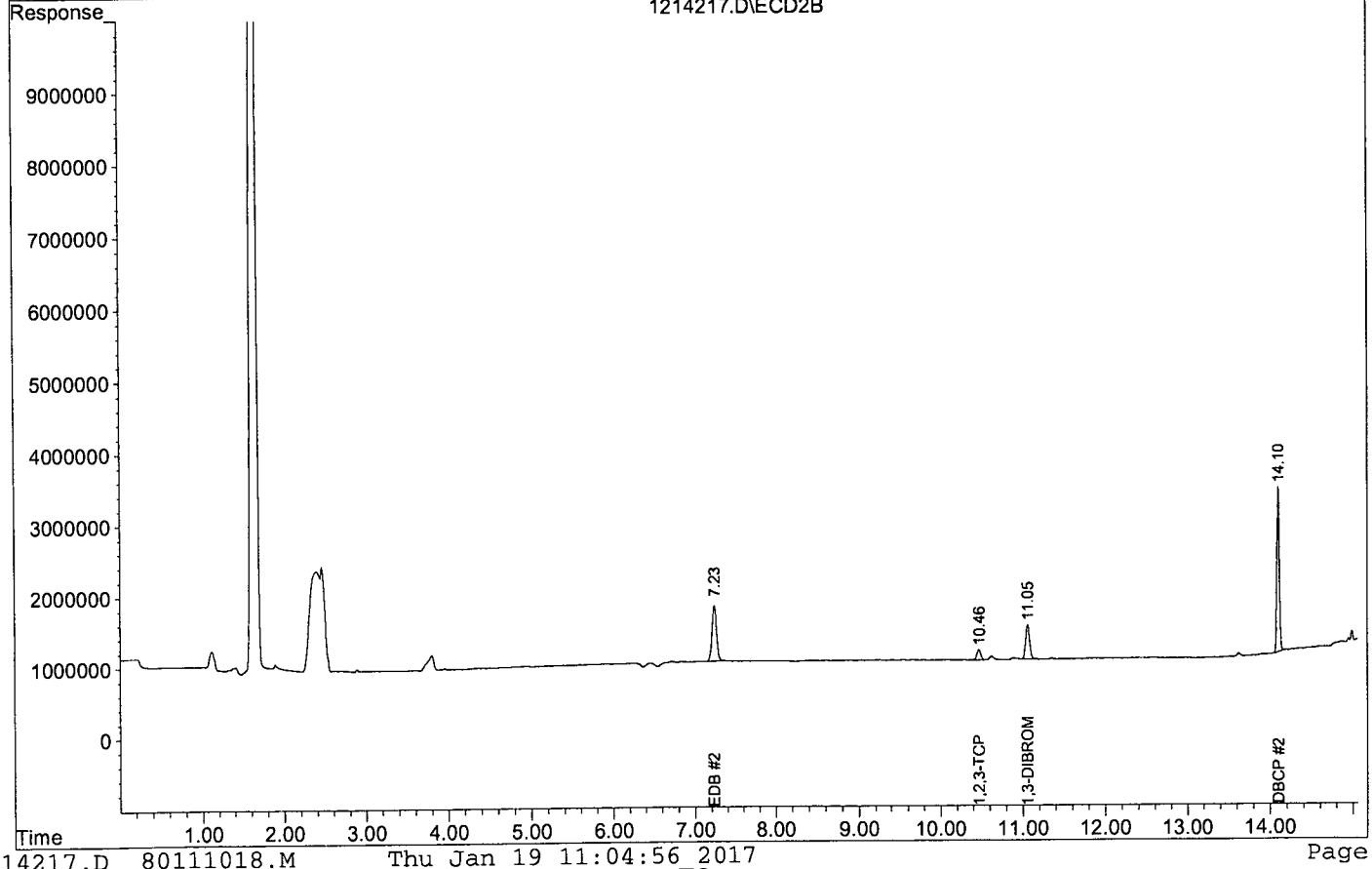
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214217.D
Acq On : 01-18-17 20:01:22
Sample : 8011 3 1/18/17
Misc :
Quant Method : G:\HERBIE\DATA\161011\80111018.M

Vial: 17
Operator: RH
Inst : Herbie
Multiplr: 1.00





ORGANICS

Raw Data

APPL, INC.

Method Blank
EPA 8011

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **170118W-48872 - 215614**
Batch ID: #8011-170118A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	EDB	0.020 U	0.02	0.020	0.010	ug/L	01/18/17	01/18/17
BLANK	SURROGATE: 1,3-DIBROMOPRO	97.5	70-132			%	01/18/17	01/18/17

Quant Method: 80111018.M
Run #: 1214202
Instrument: Herbie
Sequence: 161214
Initials: RHA

GC SC-Blank-REG MDLs-DOD
Printed: 01/19/17 11:25:49 AM

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214202.D\ECD1A.CH Vial: 2
Signal #2 : G:\HERBIE\DATA\161214\1214202.D\ECD2B.CH
Acq On : 01-18-17 14:49:54 Operator: RH
Sample : 170118A BLK 2/33.75G Inst : Herbie
Misc : water Multiplr: 1.04
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Jan 18 15:17 2017 Quant Results File: 80111018.RES

Quant Method : G:\HERBIE\DATA\161011\80111018.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Jan 18 15:12:05 2017
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

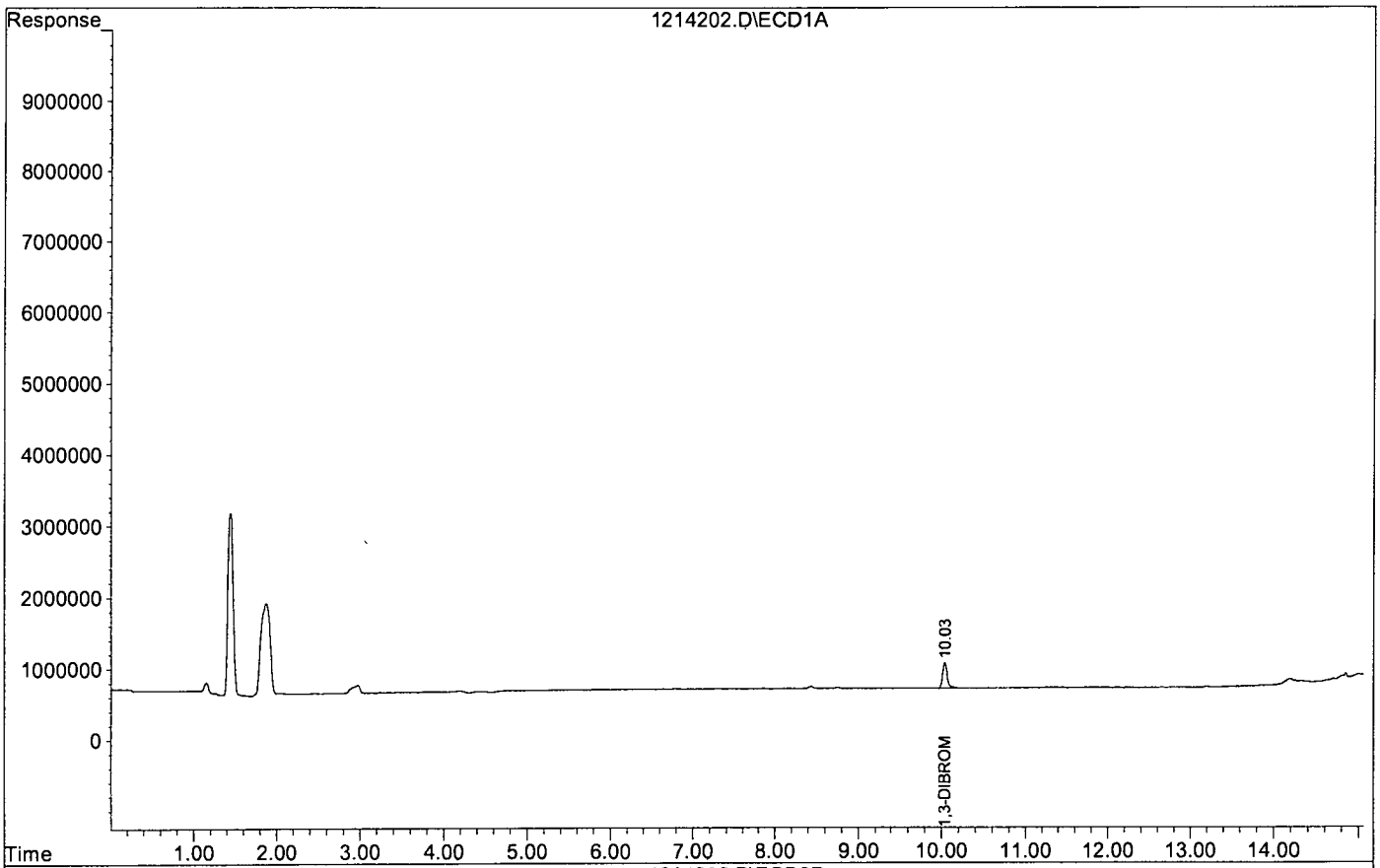
Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

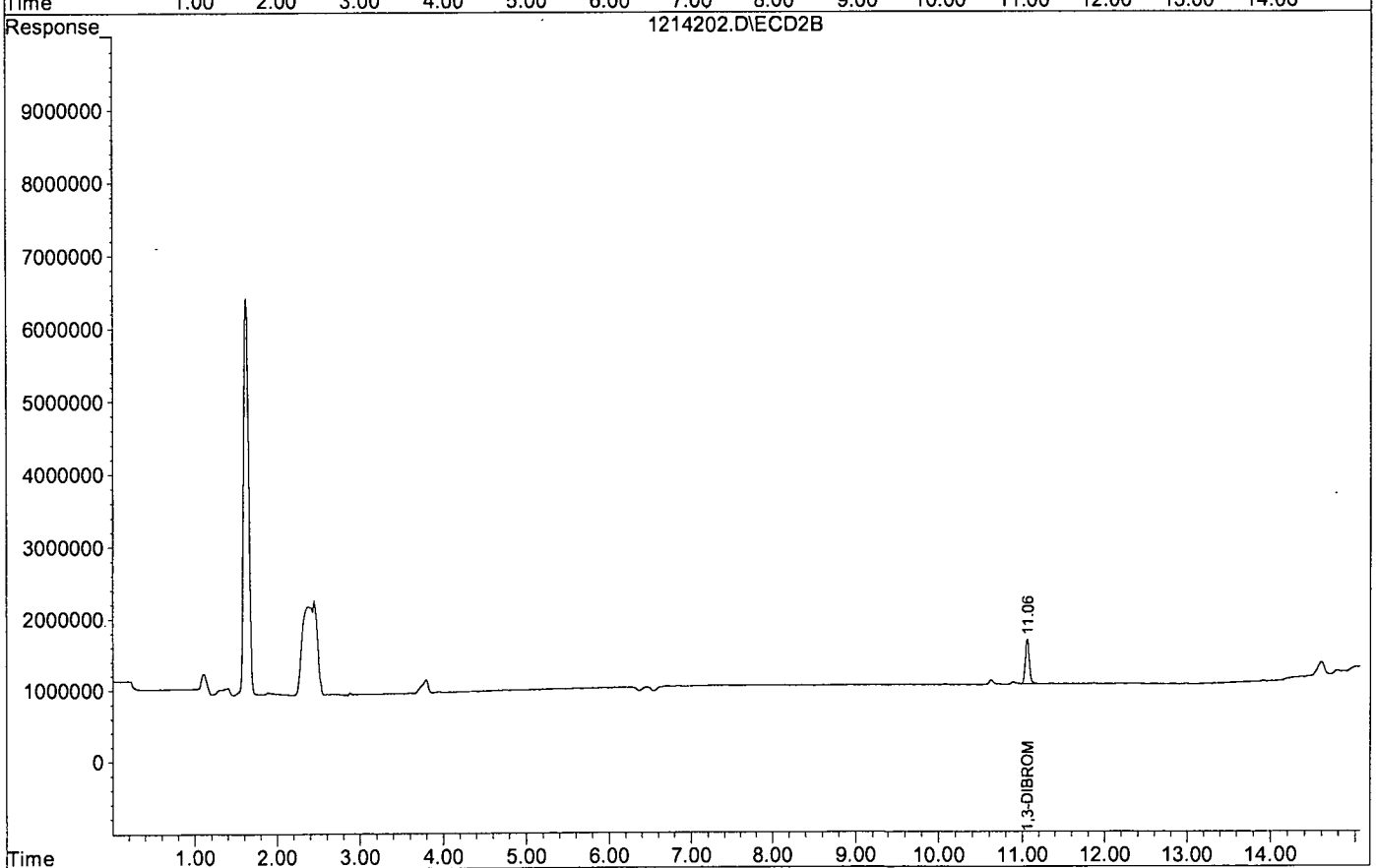
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.06	356869	628874	0.354	0.353
Spiked Amount	0.363			Recovery	=	97.53%	97.26%
	Target Compounds						
	Target Compounds						
1) TM	EDB	0.00	0.00	0	0	N.D. d	N.D. d
2) TM	1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4) TM	DBCP	0.00	0.00	0	0	N.D. d	N.D. d

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\161214\1214202.D Vial: 2
Acq On : 01-18-17 14:49:54 Operator: RH
Sample : 170118A BLK 2/33.75G Inst : Herbie
Misc : water Multiplr: 1.04
Quant Method : G:\HERBIE\DATA\161011\80111018.M





Laboratory Control Spike Recovery
EPA 8011

APPL ID: **170118W-48872 LCS - 215614**
Batch ID: #8011-170118A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
EDB	0.250	0.247	98.8	60-140
SURROGATE: 1,3-DIBROMOPROPANE (	0.350	0.259	74.0	70-132

Comments: _____

Primary	SPK
Quant Method :	80111018.M
Extraction Date :	01/18/17
Analysis Date :	01/18/17
Instrument :	Herbie
Run :	1214204
Initials :	RHA

Printed: 01/19/17 11:25:45 AM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214204.D\ECD1A.CH Vial: 4
Signal #2 : G:\HERBIE\DATA\161214\1214204.D\ECD2B.CH
Acq On : 01-18-17 15:31:28 Operator: RH
Sample : 170118A LCS-2 2/35.29G Inst : Herbie
Misc : water Multiplr: 0.99
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Jan 18 16:39 2017 Quant Results File: 80111018.RES

Quant Method : G:\HERBIE\DATA\161011\80111018.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Jan 18 15:12:05 2017
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	272612	461341	0.259	0.248
Spiked Amount	0.347			Recovery	=	74.61%	71.44%
	Target Compounds						
1) TM	EDB	5.78	7.23	334009	746998	0.247	0.242
2) TM	1,2,3-TCP	9.26	10.46	78181	137048	0.243	0.254
4) TM	DBCP	13.36	14.10	887632	2195482	0.240	0.237

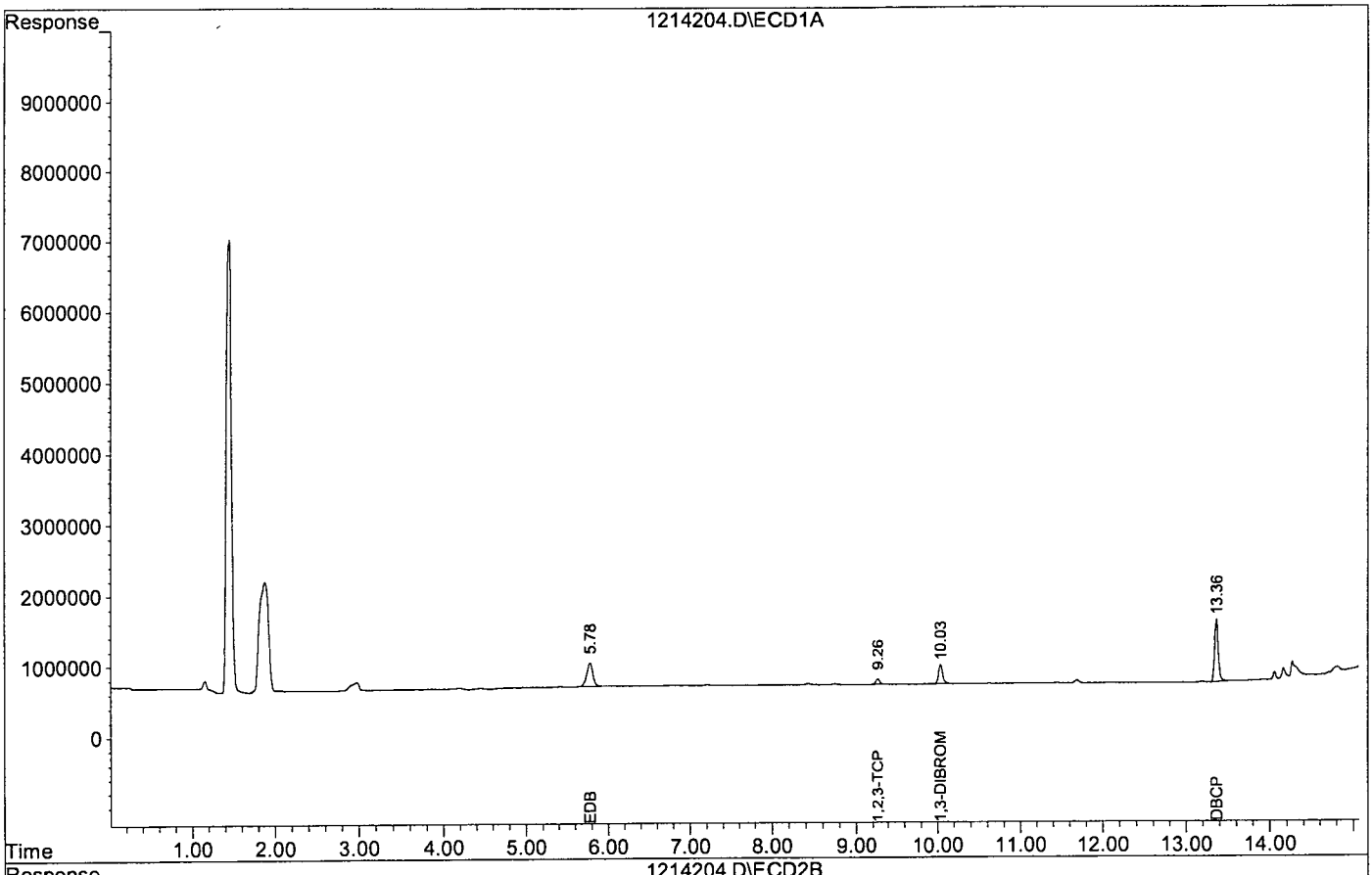
Target Compounds

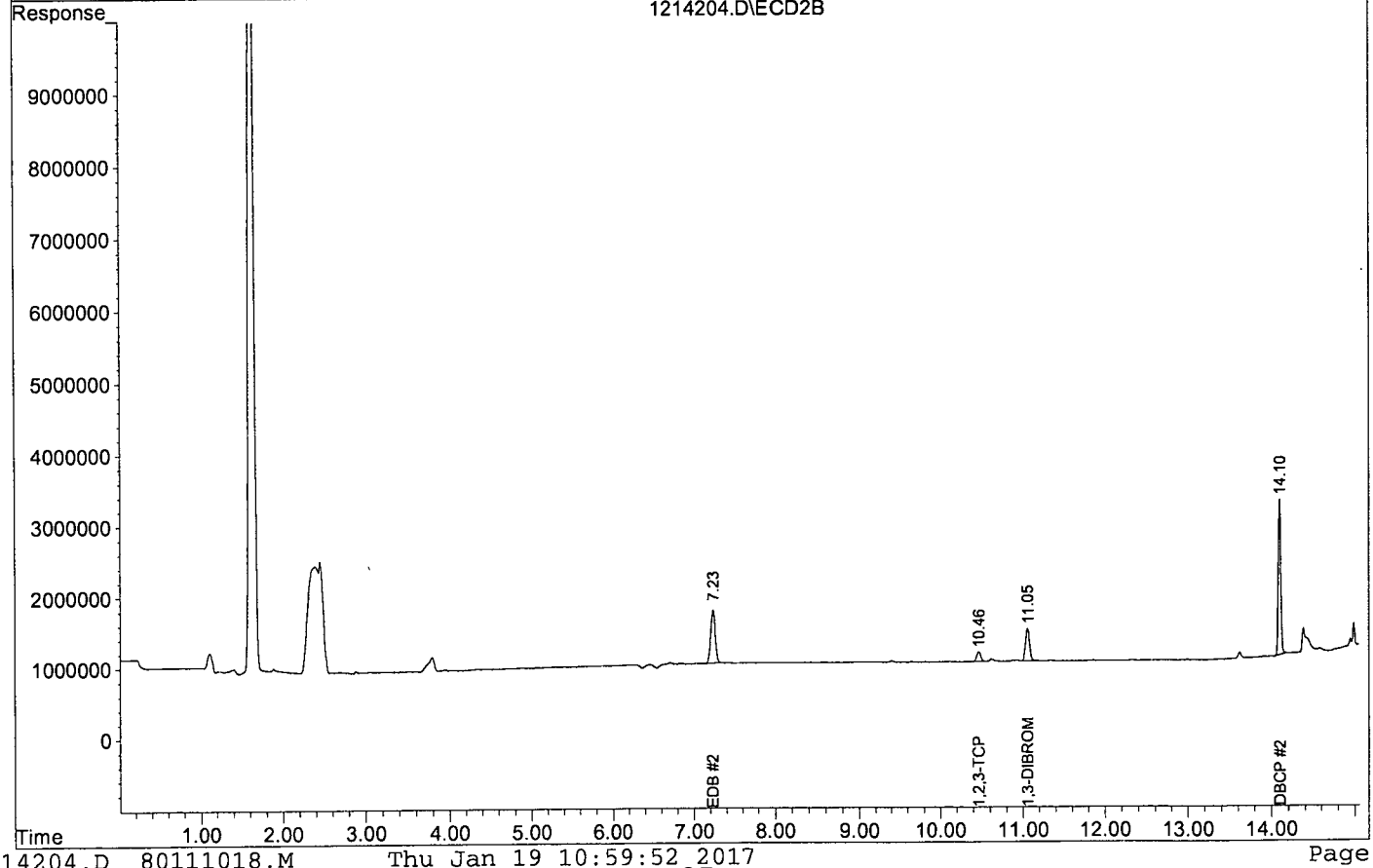
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214204.D
Acq On : 01-18-17 15:31:28
Sample : 170118A LCS-2 2/35.29G
Misc : water
Quant Method : G:\HERBIE\DATA\161011\80111018.M

Vial: 4
Operator: RH
Inst : Herbie
Multiplr: 0.99





Matrix Spike Recoveries

EPA 8011

APPL ID: **170118W-48872 MS - 215614**
Batch ID: #8011-170118A
Sample ID: AZ48872
Client ID: ERH169

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
EDB	0.250	ND	0.267	0.251	107	100	60-140	6.2	25
SURROGATE: 1,3-DIBROMOPROPANE (	0.350	NA	0.279	0.266	79.7	76.0	70-132		

Comments: _____

Primary	SPK	DUP
Quant Method :	80111018.M	80111018.M
Extraction Date :	01/18/17	01/18/17
Analysis Date :	01/18/17	01/18/17
Instrument :	Herbie	Herbie
Run :	1214207	1214208
Initials :	RHA	

Printed: 01/19/17 11:25:42 AM
APPL MSD SCII

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214207.D\ECD1A.CH Vial: 7
Signal #2 : G:\HERBIE\DATA\161214\1214207.D\ECD2B.CH
Acq On : 01-18-17 16:33:33 Operator: RH
Sample : AZ48872W14 MS-2 2/34.61G Inst : Herbie
Misc : water Multiplr: 1.01
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Jan 19 10:23 2017 Quant Results File: 80111018.RES

Quant Method : G:\HERBIE\DATA\161011\80111018.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Jan 18 15:12:05 2017
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	288734	498155	0.279	0.273
Spiked Amount	0.354			Recovery	=	78.83%	77.13%
	Target Compounds						
1) TM	EDB	5.78	7.23	354205	795946	0.267	0.263
2) TM	1,2,3-TCP	9.26	10.46	82360	144482	0.262	0.273
4) TM	DBCP	13.36	14.10	938491	2370302	0.259	0.261

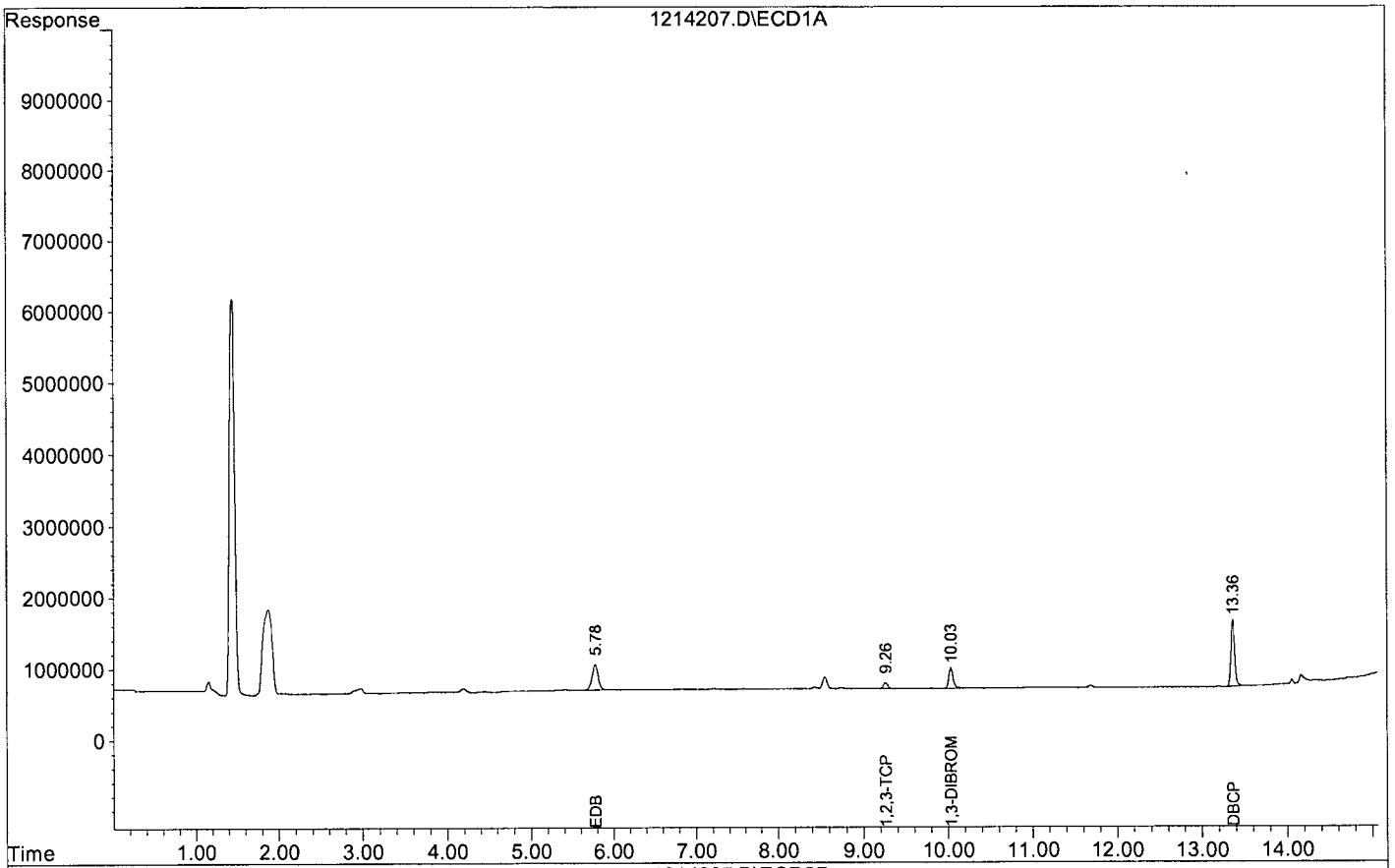
Target Compounds

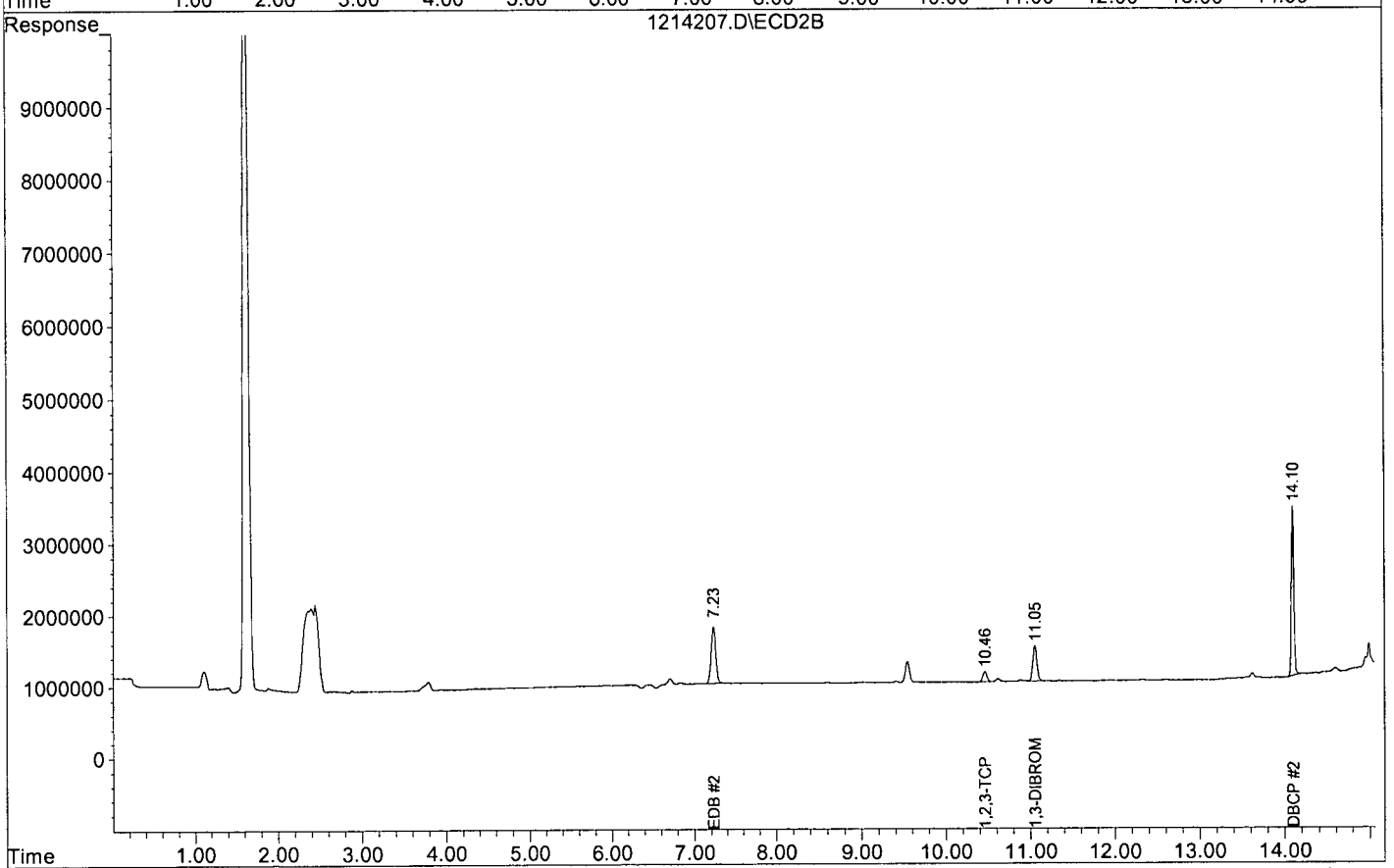
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214207.D
Acq On : 01-18-17 16:33:33
Sample : AZ48872W14 MS-2 2/34.61G
Misc : water
Quant Method : G:\HERBIE\DATA\161011\80111018.M

Vial: 7
Operator: RH
Inst : Herbie
Multiplr: 1.01





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214208.D\ECD1A.CH Vial: 8
Signal #2 : G:\HERBIE\DATA\161214\1214208.D\ECD2B.CH
Acq On : 01-18-17 16:54:14 Operator: RH
Sample : AZ48872W13 MSD-2 2/34.67G Inst : Herbie
Misc : water Multiplr: 1.01
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Jan 19 10:23 2017 Quant Results File: 80111018.RES

Quant Method : G:\HERBIE\DATA\161011\80111018.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Jan 18 15:12:05 2017
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	275409	471182	0.266	0.258
Spiked Amount	0.353			Recovery	=	75.28%	73.02%
	Target Compounds						
1) TM	EDB	5.78	7.23	333274	743941	0.251	0.245
2) TM	1,2,3-TCP	9.26	10.46	78463	135760	0.249	0.256
4) TM	DBCP	13.36	14.10	908053	2241715	0.250	0.247

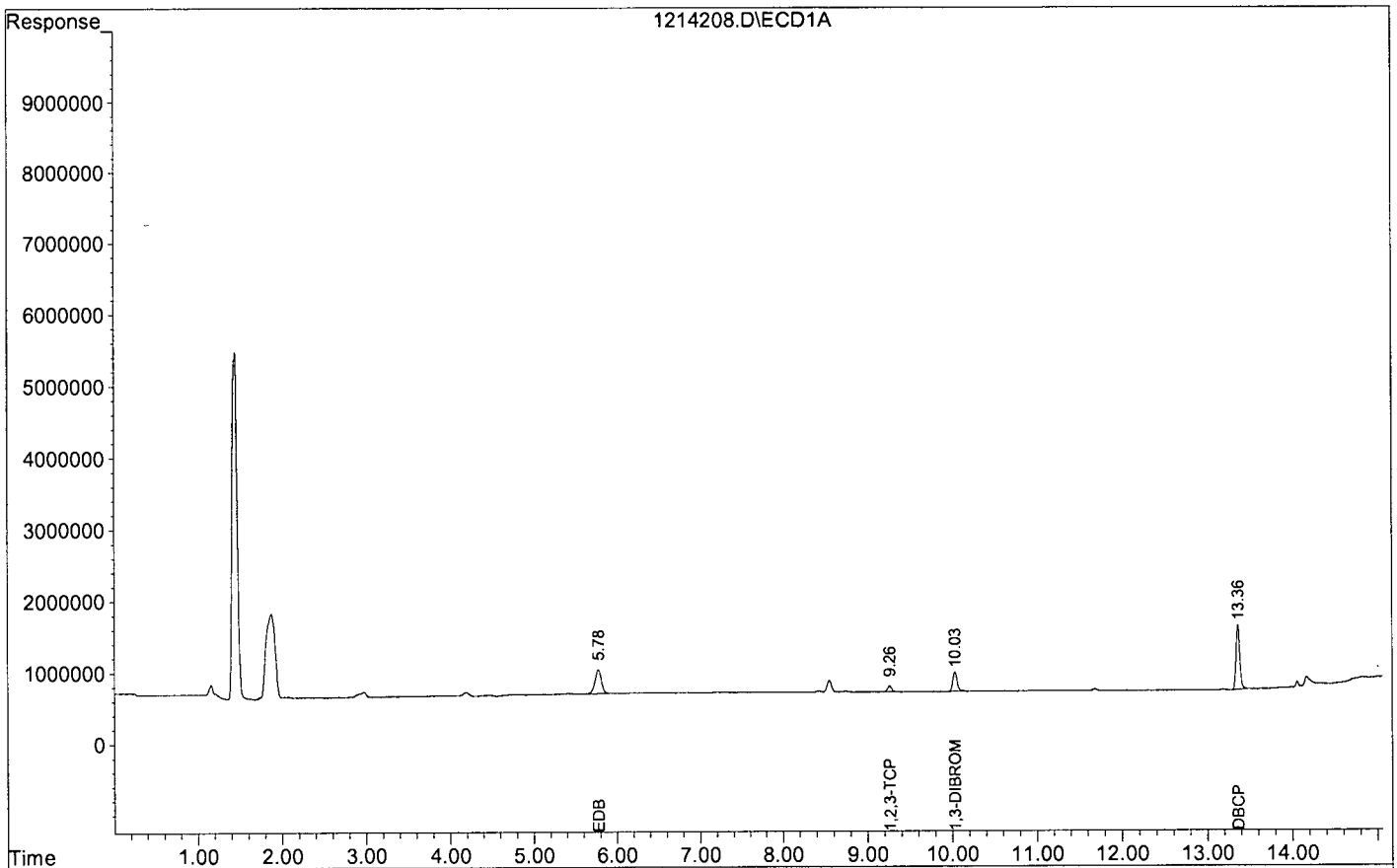
Target Compounds

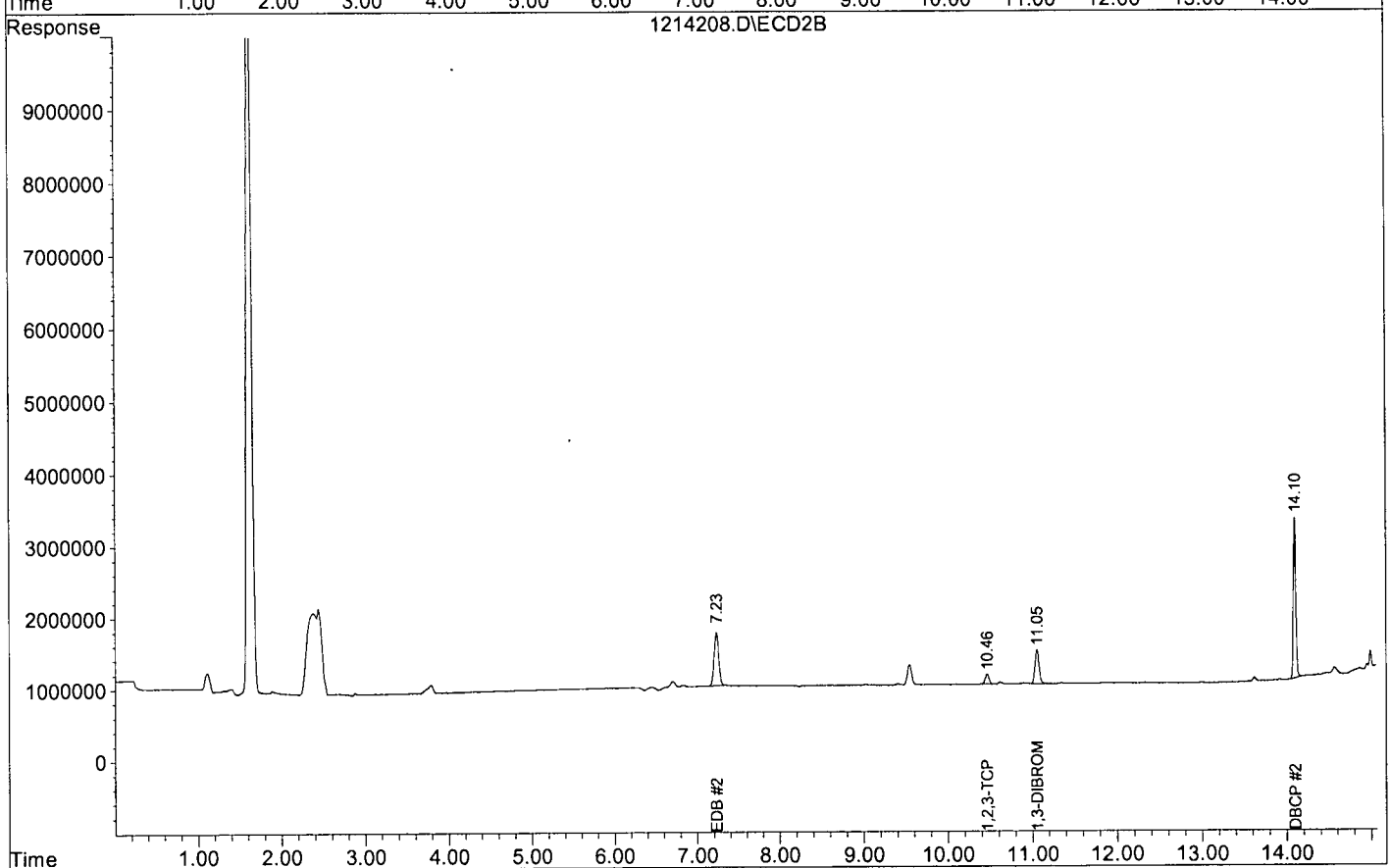
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214208.D
Acq On : 01-18-17 16:54:14
Sample : AZ48872W13 MSD-2 2/34.67G
Misc : water
Quant Method : G:\HERBIE\DATA\161011\80111018.M

Vial: 8
Operator: RH
Inst : Herbie
Multiplr: 1.01





		504/8011 SS STOCK				
Prep: 1/18/17 RH Ex: 1/18/18						
Compound	**Initial Conc.**	**Source**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
EDB	200ug/mL	Absolute	44uL	25mL	0.35ug/mL	Methanol
TCP		CAT 30096				010616A
DBCP		Lot 010615-37436				
		open 1/18/17				
		exp 1/18/18				

		504/8011 SS				
Prep: 1/18/17 RH Ex: 7/18/17						
Compound	**Initial Conc.**	**Source**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
EDB	0.35ug/mL	504/8011 SS STC	1000uL	10mL	0.035ug/mL	Methanol
TCP		prep. 1/18/17				010616A
DBCP		Exp: 1/18/18				

	504/8011 SURROGATE					
Prep: 1/18/17-R.H. Ex: 6/7/17						
Compound	**Initial Conc.**	**Source**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
1,3 DBP	100	1,3 DBP STOCK	35ul	10mL	0.35ug/mL	Methanol
		prep. 6/7/16				010616A
		exp. 6/7/17				

		504/8011 M STD					
Prep: 12/19/16 Exp: 04/19/17 RH							
Compound	**Initial Conc.**	**Source**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**	
EDB	0.35ug/mL	504/8011 M STD STK	1000uL	10mL	0.035ug/mL	Methanol	
TCP		prep.12/08/16				021915C	
DBCP		exp: 04/08/17					
1,3 DBP							

504/8011 M STD STOCK						
Prep: 12/08/16-R.H.		Exp: 04/08/17				
Compound	**Initial Conc.**	**Source**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
EDB	20ug/mL	504/DOHS STOCK	438uL	25mL	0.35ug/mL	Methanol
TCP		prep. 06/07/16				021915C
DBCP		exp: 06/07/17				
1,3 DBP	100ug/mL	1,3 DBP STOCK	88uL			
		prep.06/07/16				
		exp. 06/07/17				

1,3-DBP STOCK						
Compounds	**Init. Conc.**	**Stock SRC**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
1,3 DBP	1000ug/mL	Absolute	1000uL	10mL	100ug/mL	Methanol
	Cat:	71326				Lot # 021915C
	Lot:	031413-33900				
	Op:	06/07/16				
	Exp:	06/07/17		Prep: 6/7/16 Exp: 6/7/17 LH		

504 DOHS STOCK prep: 6/7/16 Exp: 6/7/17 LH						
Compounds	**Init. Conc.**	**Stock SRC**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
EDB	1000ug/mL	O2SI	500uL	25mL	20ug/mL	Methanol
TCP	Cat:	130271-08				Lot # 021915C
DBCP	Lot:	270815-36134				
	Op:	06/07/16				
	Exp:	06/07/17				

_MWE012

Organic Extraction Worksheet

Method	EPA Method 8011 DBCP/EDB	Extraction Set	170118A	Extraction Method	MWE012	Units	mL

Spiked ID 1	504.1 SS 1-18-17 exp 7-18-17		Surrogate ID 1	504.1 Surrogate 1-18-17 exp 6-7-17	
Spiked ID 2	504.1 M. STD 12-19-16 exp 4-8-17		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	01/18/17 10:00	
Spiked ID 8			Ext. End Time:	01/18/17 11:20	
			GC Requires Extract By:	01/19/17 0:00	

pH1			Water Bath Temp Criteria	
pH2				
pH3				

Spiked By: KY **Date** 01/18/17 **Witnessed By:** JR **Date** 01/18/17

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	170118A Blk				0.035	1 equip	33.75g	2	7	01/18/17 10:00	
2	170118A LCS-1		0.1	1	0.035	1 equip	35.15g	2	7	01/18/17 10:00	
3	170118A LCS-2		0.250	2	NA	NA equip	35.29g	2	7	01/18/17 10:00	
4	AZ48872 MS-1	AZ48872W18	0.1	1	0.035	1 equip	34.50g	2	7	01/18/17 10:00	81965 RUSH 1 WEEK
5	AZ48872 MSD-1	AZ48872W15	0.1	1	0.035	1 equip	34.61g	2	7	01/18/17 10:00	81965 RUSH 1 WEEK
6	AZ48872 MS-2	AZ48872W14	0.250	2	NA	NA equip	34.61g	2	7	01/18/17 10:00	81965 RUSH 1 WEEK
7	AZ48872 MSD-2	AZ48872W13	0.250	2	NA	NA equip	34.67g	2	7	01/18/17 10:00	81965 RUSH 1 WEEK
8	AZ48872	AZ48872W16			0.035	1 equip	34.75g	2	7	01/18/17 10:00	81965 RUSH 1 WEEK
9	AZ48873	AZ48873W05			0.035	1 equip	34.64g	2	7	01/18/17 10:00	81965 RUSH 1 WEEK
10	AZ48874	AZ48874W05			0.035	1 equip	34.13g	2	7	01/18/17 10:00	81965 RUSH 1 WEEK
11	AZ48916	AZ48916W07			0.035	1 equip	34.69g	2	7	01/18/17 10:00	81971 RUSH 1 WEEK
12	AZ48917	AZ48917W08			0.035	1 equip	34.88g	2	7	01/18/17 10:00	81971 RUSH 1 WEEK
13	AZ48918	AZ48918W08			0.035	1 equip	34.26g	2	7	01/18/17 10:00	81971 RUSH 1 WEEK
14	AZ48920	AZ48920W07			0.035	1 equip	34.59g	2	7	01/18/17 10:00	81971 RUSH 1 WEEK
15	M STD 1		0.020	2	NA	NA equip	35.19g	2	7	01/18/17 10:00	
16	M STD 2		0.1	2	NA	NA equip	35.44g	2	7	01/18/17 10:00	

Solvent and Lot#	
NaCL	16B100011
Sod. Thiosulfate	24050
GC2 Hexane	DN636

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	RH
Date	1/18/17
Time	1:00
Refrigerator	Hobert

	Technician's Initials
Scanned By	JR
Sample Preparation	KY
Extraction	KY
Concentration	-------

Modified	01/18/17 11:30:13 AM

Reviewed By: [signature] **Date** 1/18/17

Organic Extraction Worksheet

Method	EPA Method 8011 DBCP/EDB	Extraction Set	170118A	Extraction Method	MWE012	Units	mL

Spiked ID 1	504.1 SS 1-18-17 exp 7-18-17		Surrogate ID 1	504.1 Surrogate 1-18-17 exp 6-7-17	
Spiked ID 2	504.1 M. STD 12-19-16 exp 4-8-17		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	01/18/17 10:00	
Spiked ID 8			Ext. End Time:	01/18/17 11:20	
			GC Requires Extract By:	**01/19/17 0:00**	

pH1			Water Bath Temp Criteria	
pH2				
pH3				

Spiked By: KY **Date** 01/18/17 **Witnessed By:** JR **Date** 01/18/17

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
17	M STD 3		0.250	2	NA	NA equip	35.49g	2	7	01/18/17 10:00	
18	M STD 4		0.5	2	NA	NA equip	35.42g	2	7	01/18/17 10:00	
19	M STD 5		0.750	2	NA	NA equip	35.42g	2	7	01/18/17 10:00	
20	M STD 6		1	2	NA	NA equip	35.08g	2	7	01/18/17 10:00	

KY 1/18/17

Solvent and Lot#	
NaCL	16B100011
Sod. Thiosulfate	24050
GC2 Hexane	DN636

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	RH
Date	
Time	
Refrigerator	

	Technician's Initials
Scanned By	JR
Sample Preparation	KY
Extraction	KY
Concentration	------

Modified	01/18/17 11:30:13 AM

Reviewed By: KY **Date** 1/18/17

Injection Log

Directory: G:\HERBIE\DATA\161214\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	95	1214195.D	1	8011 1 1/18/17		01-18-17 12:24:48
2	96	1214196.D	1	8011 2 1/18/17		01-18-17 12:45:29
3	97	1214197.D	1	8011 3 1/18/17		01-18-17 13:06:11
4	98	1214198.D	1	8011 4 1/18/17		01-18-17 13:26:58
5	99	1214199.D	1	8011 5 1/18/17		01-18-17 13:47:42
6	100	1214200.D	1	8011 6 1/18/17		01-18-17 14:08:28
7	2	1214202.D	1.03704	170118A BLK 2/33.75G	water	01-18-17 14:49:54
8	3	1214203.D	0.99573	170118A LCS-1 2/35.15G	water	01-18-17 15:10:44
9	4	1214204.D	0.991782	170118A LCS-2 2/35.29G	water	01-18-17 15:31:28
10	7	1214207.D	1.01127	AZ48872W14 MS-2 2/34.61G	water	01-18-17 16:33:33
11	8	1214208.D	1.00952	AZ48872W13 MSD-2 2/34.67G	water	01-18-17 16:54:14
12	9	1214209.D	1.00719	AZ48872W16 2/34.75G	water	01-18-17 17:14:57
13	10	1214210.D	1.01039	AZ48873W05 2/34.64G	water	01-18-17 17:35:49
14	11	1214211.D	1.02549	AZ48874W05 2/34.13G	water	01-18-17 17:56:35
15	17	1214217.D	1	8011 3 1/18/17		01-18-17 20:01:22

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank

EPA 8015B TPH WATER

Blank Name/QCG: **170116W-48866 - 215613**

Batch ID: #DOC53-170116A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	01/16/17	01/18/17
BLANK	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	01/16/17	01/18/17
BLANK	SURROGATE: OCTACOSANE (S)	104	60-142			%	01/16/17	01/18/17
BLANK	SURROGATE: ORTHO-TERPHEN	82.3	56-125			%	01/16/17	01/18/17

Quant Method:DOC1103.M
Run #:118004
Instrument:Apollo
Sequence:170118
Initials:DPO

GC SC-Blank-REG MDLs-DOD
Printed: 01/19/17 10:24:16 AM

Laboratory Control Spike Recovery
EPA 8015B TPH WATER

APPL ID: **170116W-48866 LCS - 215613**
Batch ID: #DOC53-170116A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
DIESEL (C10-C24)	1330	1080	81.0	36-132
OIL (C24-C40)	1330	1090	81.8	41-113
SURROGATE: OCTACOSANE (S)	40.0	40.3	101	60-142
SURROGATE: ORTHO-TERPHENYL (S)	40.0	39.5	98.8	56-125

Comments: _____

Primary	SPK
Quant Method :	DOC1103.M
Extraction Date :	01/16/17
Analysis Date :	01/18/17
Instrument :	Apollo
Run :	118005
Initials :	DPO

Printed: 01/19/17 10:24:10 AM
APPL Standard LCS

Matrix Spike Recoveries

EPA 8015B TPH WATER

APPL ID: **170116W-48866 MS - 215613**
Batch ID: #DOC53-170116A
Sample ID: AZ48866
Client ID: ERH161

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
DIESEL (C10-C24)	1330	ND	1120	1120	84.0	84.0	36-132	0.0	30
OIL (C24-C40)	1330	ND	1190	1160	89.3	87.0	41-113	2.6	30
SURROGATE: OCTACOSANE (S)	40.0	NA	40.0	40.1	100	100	60-142		
SURROGATE: ORTHO-TERPHENYL (S)	40.0	NA	39.8	39.6	99.5	99.0	56-125		

Comments: _____

Primary	SPK	DUP
Quant Method :	DOC1103.M	DOC1103.M
Extraction Date :	01/16/17	01/16/17
Analysis Date :	01/18/17	01/18/17
Instrument :	Apollo	Apollo
Run :	118008	118011
Initials :	DPO	

Printed: 01/19/17 10:24:08 AM
APPL MSD SCII

EPA 8015B-eLL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81965

Case No: 81965 Date Analyzed: 01/18/17

Matrix: WATER Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: OCTACOSANE (S)			SURROGATE: ORTHO-TERPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
170116A-BLK	Blank	60-142	104		56-125	82.3	
170116A-LCS	Lab Control Spike	60-142	101		56-125	98.8	
AZ48866	ERH161	60-142	103		56-125	81.7	
AZ48866-MS	Matrix Spike	60-142	100		56-125	99.5	
AZ48866-MSD	Matrix SpikeD	60-142	100		56-125	99.0	
AZ48867	ERH162	60-142	107		56-125	85.5	
AZ48868	ERH164	60-142	99.6		56-125	78.3	
AZ48871	ERH168	60-142	97.9		56-125	76.7	
AZ48872	ERH169	60-142	104		56-125	82.2	
AZ48873	ERH170	60-142	93.9		56-125	73.2	
AZ48875	ERH174	60-142	98.2		56-125	85.0	
AZ48877	ERH176	60-142	98.8		56-125	79.3	
AZ48878	ERH179	60-142	99.2		56-125	78.7	
AZ48880	ERH186	60-142	93.9		56-125	74.6	
AZ48881	ERH187	60-142	95.1		56-125	75.8	

Comments: Batch: #DOC53-170116A

EPA 8015B-eL

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81965

Case No: 81965 Date Analyzed: 01/18/17

Matrix: WATER Instrument: Apollo

Blank ID: 170116A-BLK Time Analyzed: 1743

APPL ID.	Client Sample No.	File ID.	Date Analyzed
170116A-BLK	Blank	118004	01/18/17 1743
170116A-LCS	Lab Control Spike	118005	01/18/17 1804
AZ48866	ERH161	118007	01/18/17 1845
170116A-MS	Matrix Spike	118008	01/18/17 1905
170116A-MSD	Matrix SpikeD	118011	01/18/17 2007
AZ48867	ERH162	118012	01/18/17 2027
AZ48868	ERH164	118013	01/18/17 2048
AZ48871	ERH168	118014	01/18/17 2108
AZ48872	ERH169	118015	01/18/17 2129
AZ48873	ERH170	118016	01/18/17 2149
AZ48875	ERH174	118017	01/18/17 2210
AZ48877	ERH176	118018	01/18/17 2230
AZ48878	ERH179	118019	01/18/17 2251
AZ48880	ERH186	118020	01/18/17 2311
AZ48881	ERH187	118023	01/19/17 0013

Comments: Batch: #DOC53-170116A

Printed: 01/19/17 10:24:04 AM

Form 4, Blank Summary

ORGANICS

Sample Data

APPL, INC.

EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH161
Sample Collection Date: 01/09/17

ARF: 81965
APPL ID: AZ48866
QCG: #DOC53-170116A-215613

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	01/16/17	01/18/17
EPA 8015B-eL	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	01/16/17	01/18/17
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	103	60-142			%	01/16/17	01/18/17
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	81.7	56-125			%	01/16/17	01/18/17

Quant Method: DOC1103.M
Run #: 118007
Instrument: Apollo
Sequence: 170118
Dilution Factor: 1
Initials: DPO

Printed: 01/19/17 10:23:56 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\170118\118007.D Vial: 7
Acq On : 1-18-17 18:45:11 Operator: DP
Sample : AZ48866W21 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Jan 19 10:12 2017 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\170118\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

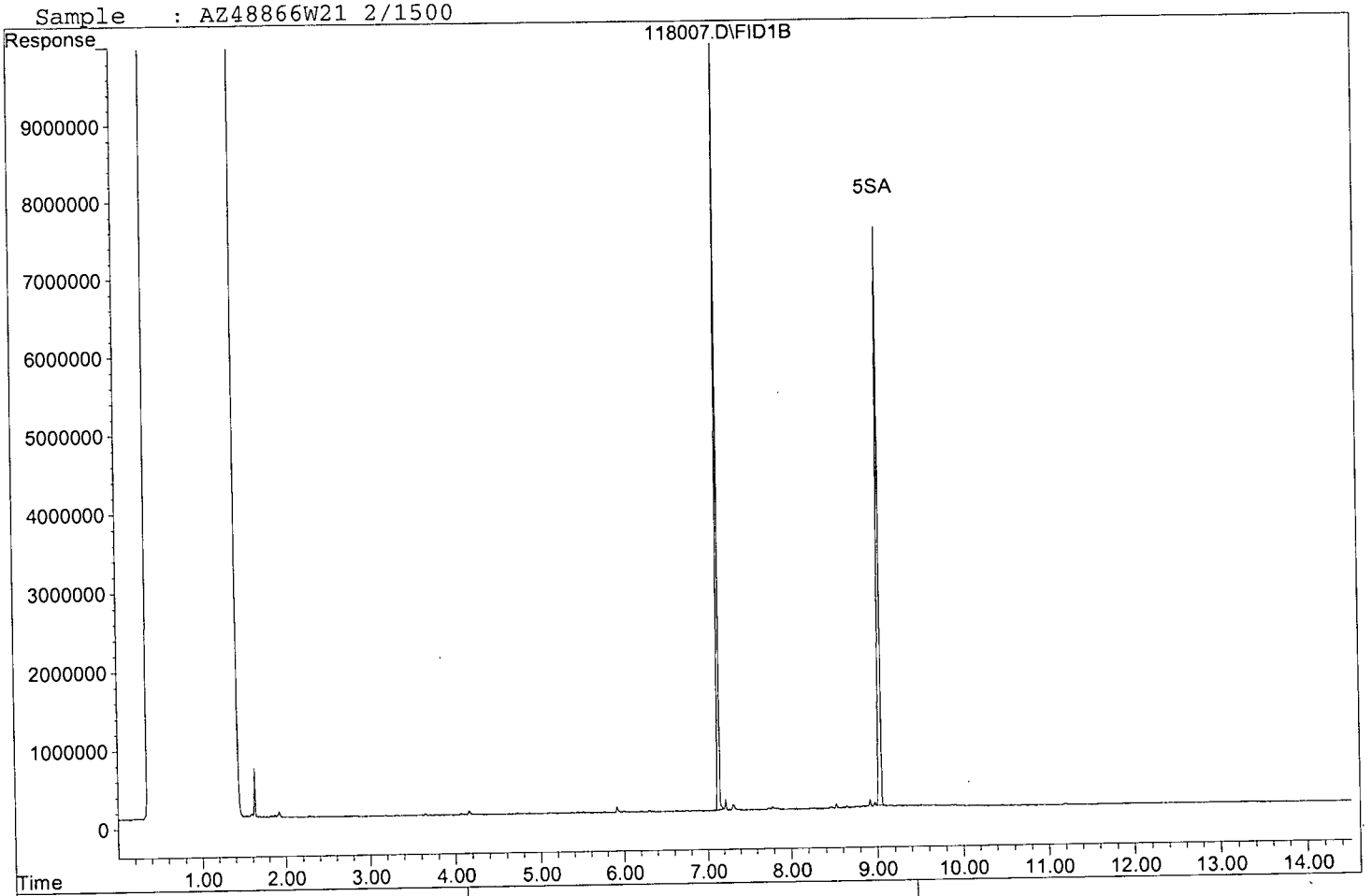
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

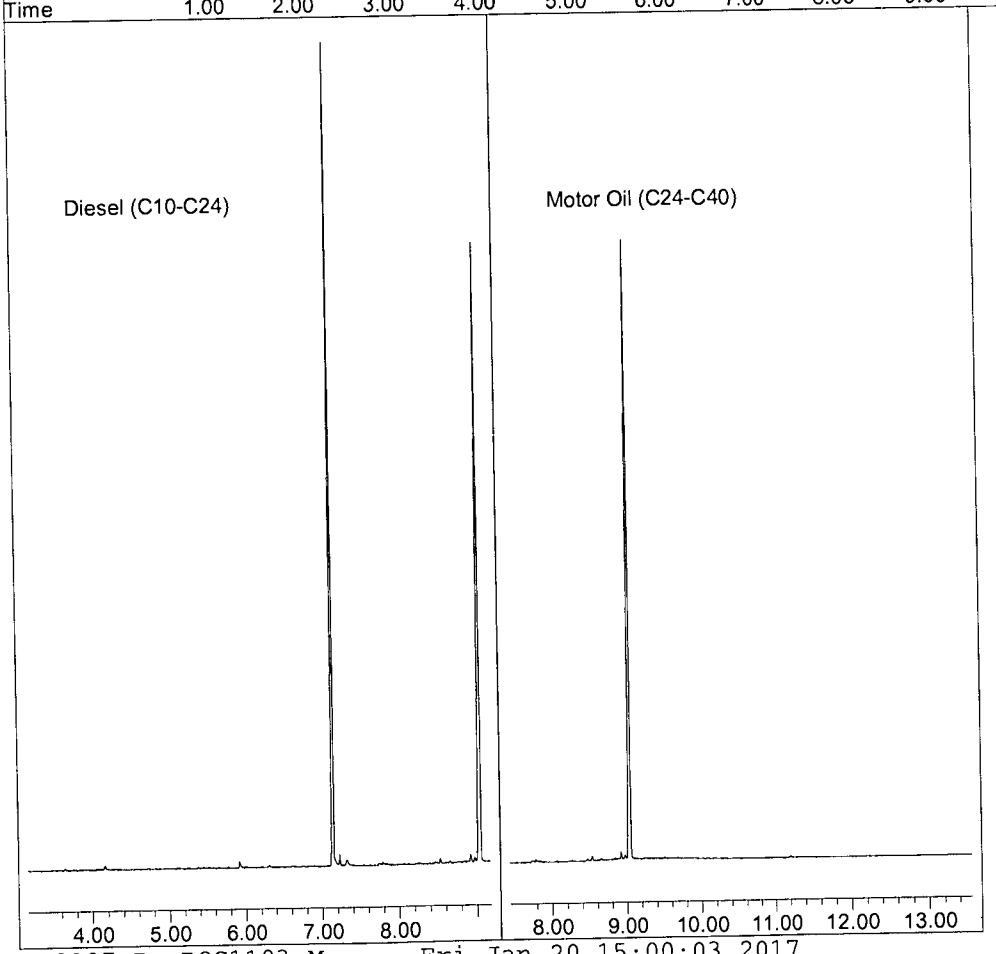
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.14	114352725	32.688	ppb
Surrogate Spike 40.000	Recovery =		81.72%	
5) SA Octacosane(S)	9.04	108037428	41.161	ppb
Surrogate Spike 40.000	Recovery =		102.90%	
Target Compounds				

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\170118\118007.D
Sample : AZ48866W21 2/1500





118007.D DOC1103.M Fri Jan 20 15:00:03 2017

EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH162
Sample Collection Date: 01/09/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48867
QCG: #DOC53-170116A-215613

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	01/16/17	01/18/17
EPA 8015B-eL	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	01/16/17	01/18/17
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	107	60-142			%	01/16/17	01/18/17
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	85.5	56-125			%	01/16/17	01/18/17

Quant Method: DOC1103.M
Run #: 118012
Instrument: Apollo
Sequence: 170118
Dilution Factor: 1
Initials: DPO

Printed: 01/19/17 10:23:56 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\170118\118012.D Vial: 12
Acq On : 1-18-17 20:27:45 Operator: DP
Sample : AZ48867W10 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Jan 19 10:12 2017 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\170118\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

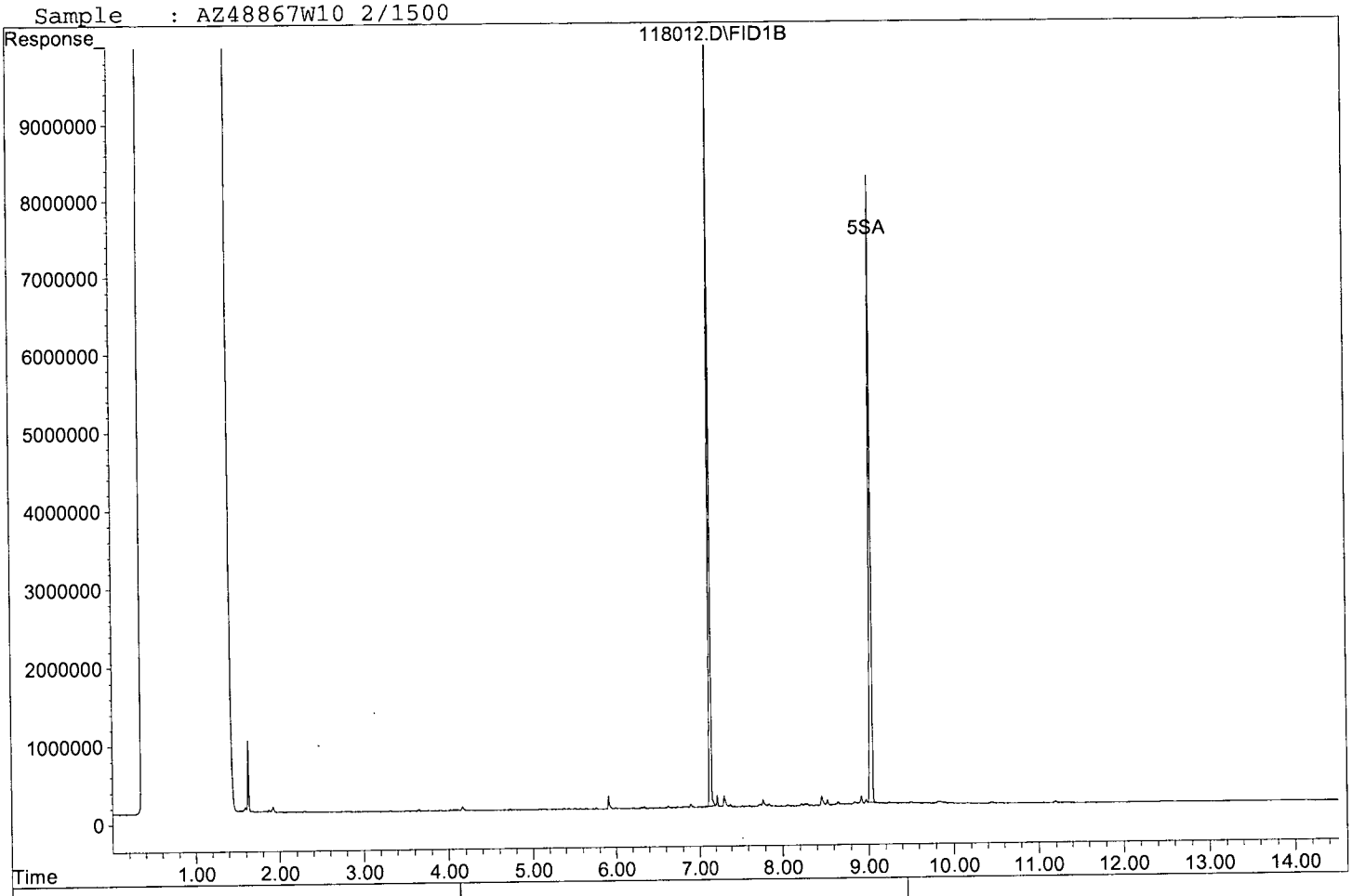
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

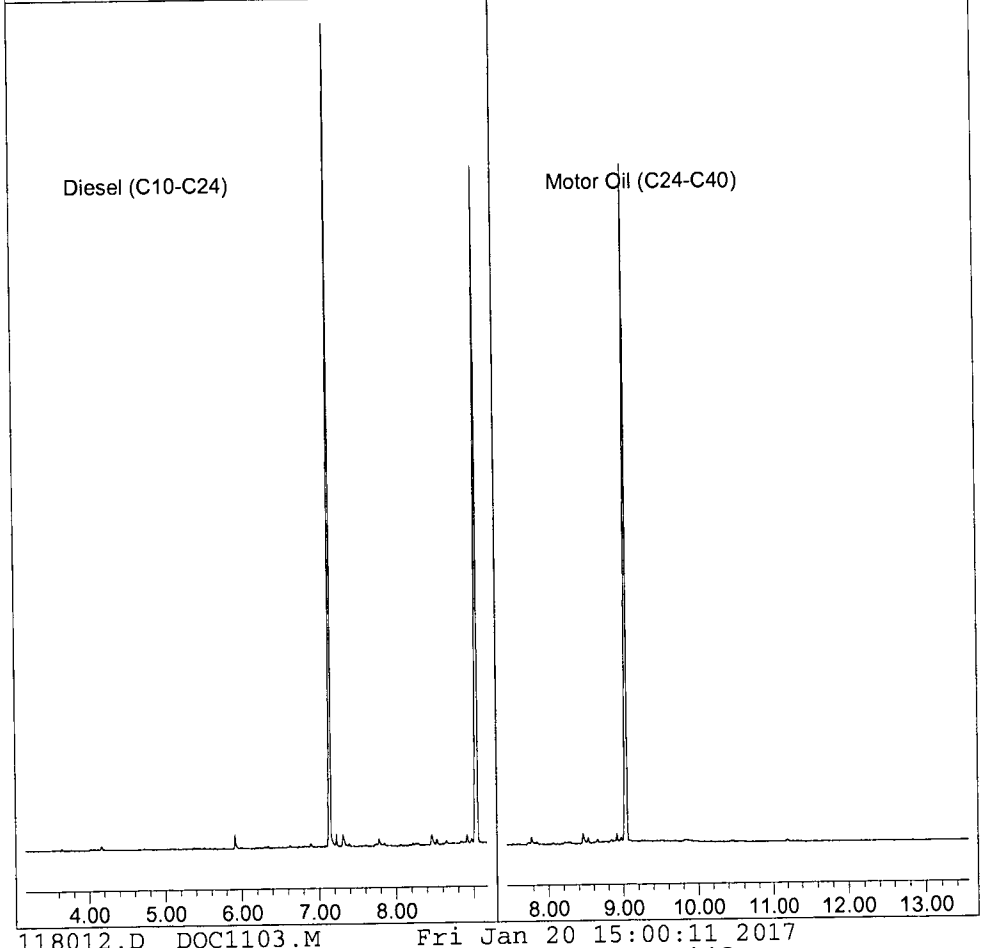
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.14	119657063	34.204	ppb
Surrogate Spike 40.000		Recovery =	85.51%	
5) SA Octacosane(S)	9.04	112657868	42.921	ppb
Surrogate Spike 40.000		Recovery =	107.30%	
Target Compounds				

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\170118\118012.D
Sample : AZ48867W10 2/1500





118012.D DOC1103.M Fri Jan 20 15:00:11 2017

EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH164
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48868
QCG: #DOC53-170116A-215613

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	01/16/17	01/18/17
EPA 8015B-eL	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	01/16/17	01/18/17
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	99.6	60-142			%	01/16/17	01/18/17
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	78.3	56-125			%	01/16/17	01/18/17

Quant Method: DOC1103.M
Run #: 118013
Instrument: Apollo
Sequence: 170118
Dilution Factor: 1
Initials: DPO

Printed: 01/19/17 10:23:56 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\170118\118013.D
Acq On : 1-18-17 20:48:17
Sample : AZ48868W12 2/1500
Misc : Water
IntFile : events.e
Quant Time: Jan 19 10:13 2017 Quant Results File: DOC1103.RES

Vial: 13
Operator: DP
Inst : Apollo
Multiplr: 1.33

Method : G:\APOLLO\DATA\170118\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

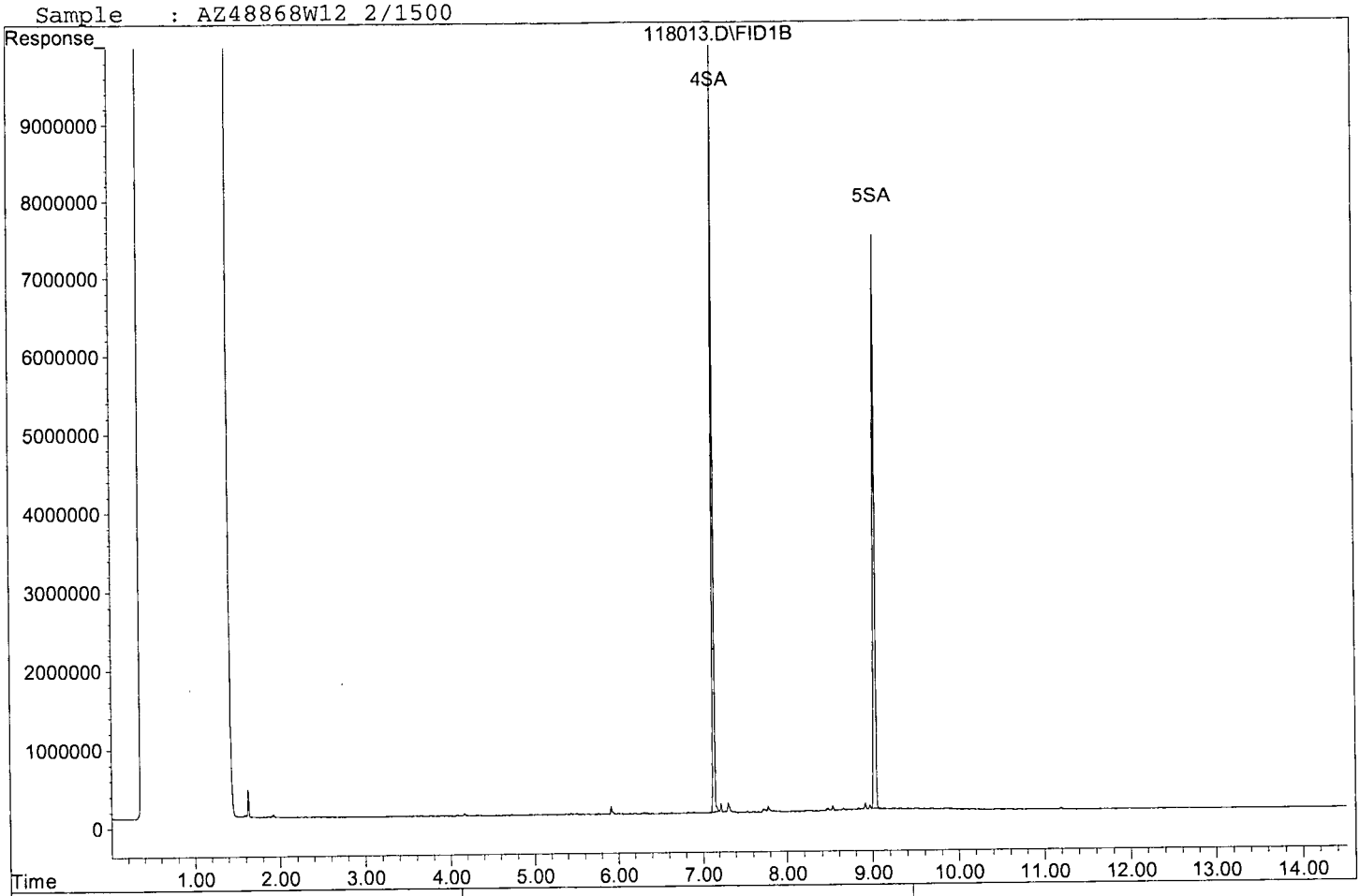
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

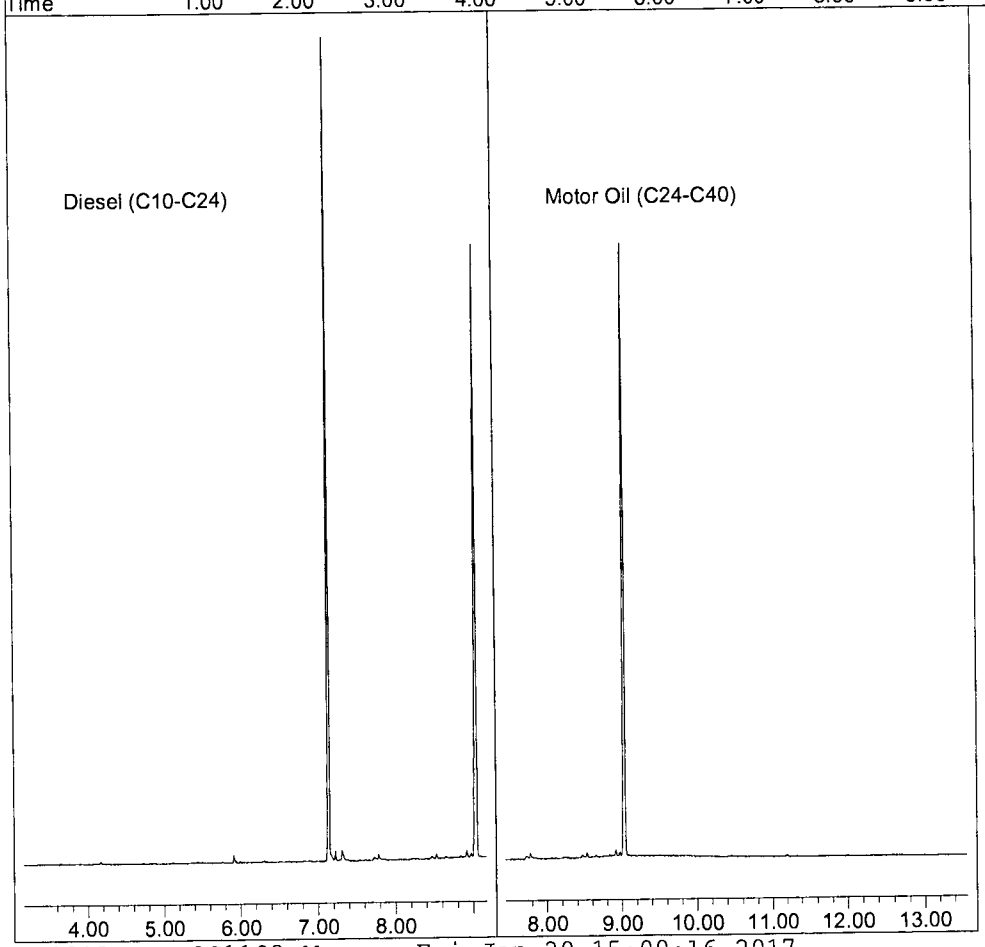
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.14	109540649	31.312	ppb
Surrogate Spike 40.000	Recovery =		78.28%	
5) SA Octacosane(S)	9.04	104563698	39.837	ppb
Surrogate Spike 40.000	Recovery =		99.59%	
Target Compounds				

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\170118\118013.D
Sample : AZ48868W12 2/1500





EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH168
Sample Collection Date: 01/09/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48871
QCG: #DOC53-170116A-215613

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	01/16/17	01/18/17
EPA 8015B-eL	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	01/16/17	01/18/17
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	97.9	60-142			%	01/16/17	01/18/17
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	76.7	56-125			%	01/16/17	01/18/17

Quant Method: DOC1103.M
Run #: 118014
Instrument: Apollo
Sequence: 170118
Dilution Factor: 1
Initials: DPO

Printed: 01/19/17 10:23:56 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\170118\118014.D
Acq On : 1-18-17 21:08:48
Sample : AZ48871W10 2/1500
Misc : Water
IntFile : events.e
Quant Time: Jan 19 10:13 2017 Quant Results File: DOC1103.RES

Vial: 14
Operator: DP
Inst : Apollo
Multiplr: 1.33

Method : G:\APOLLO\DATA\170118\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

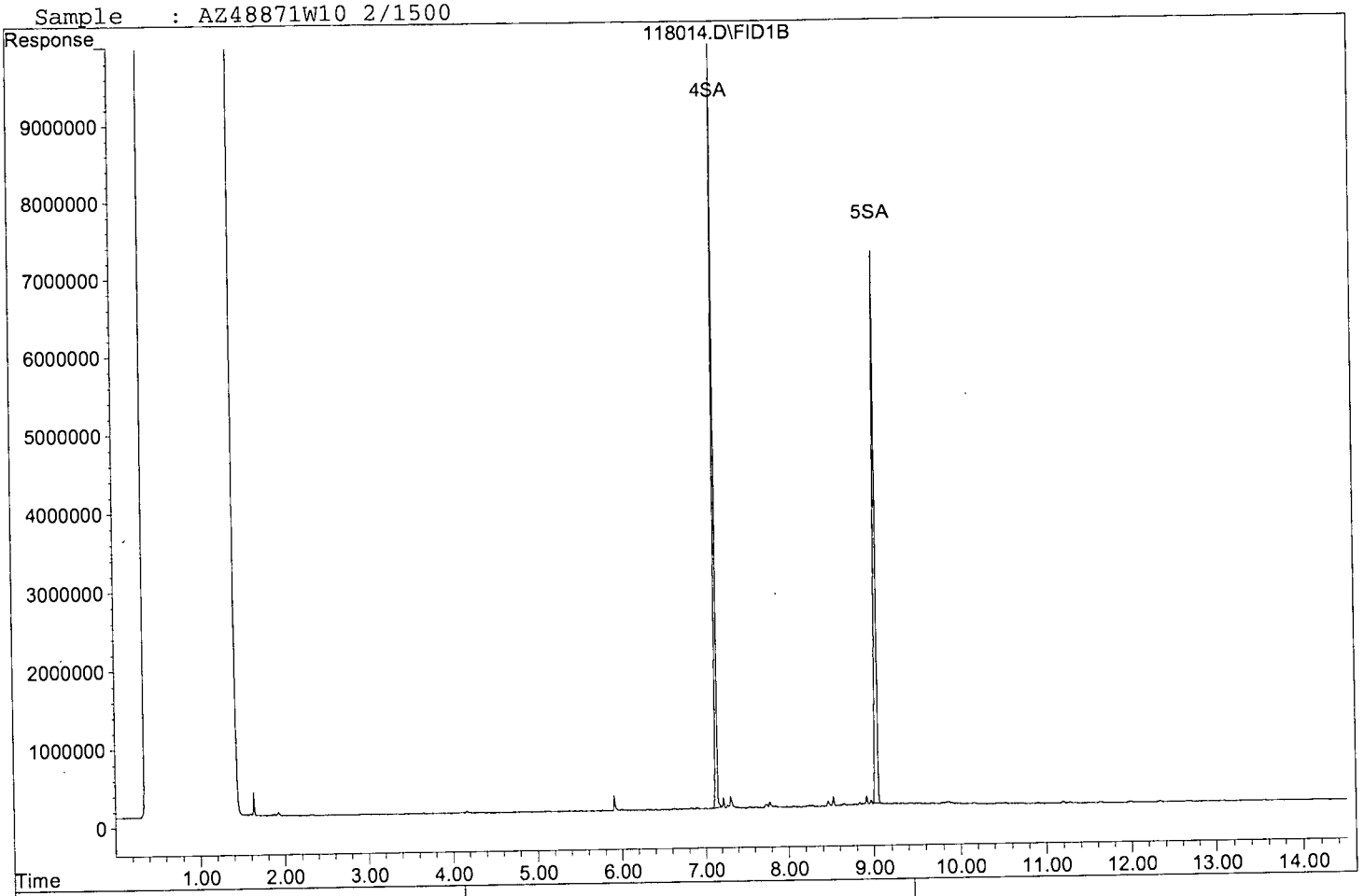
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

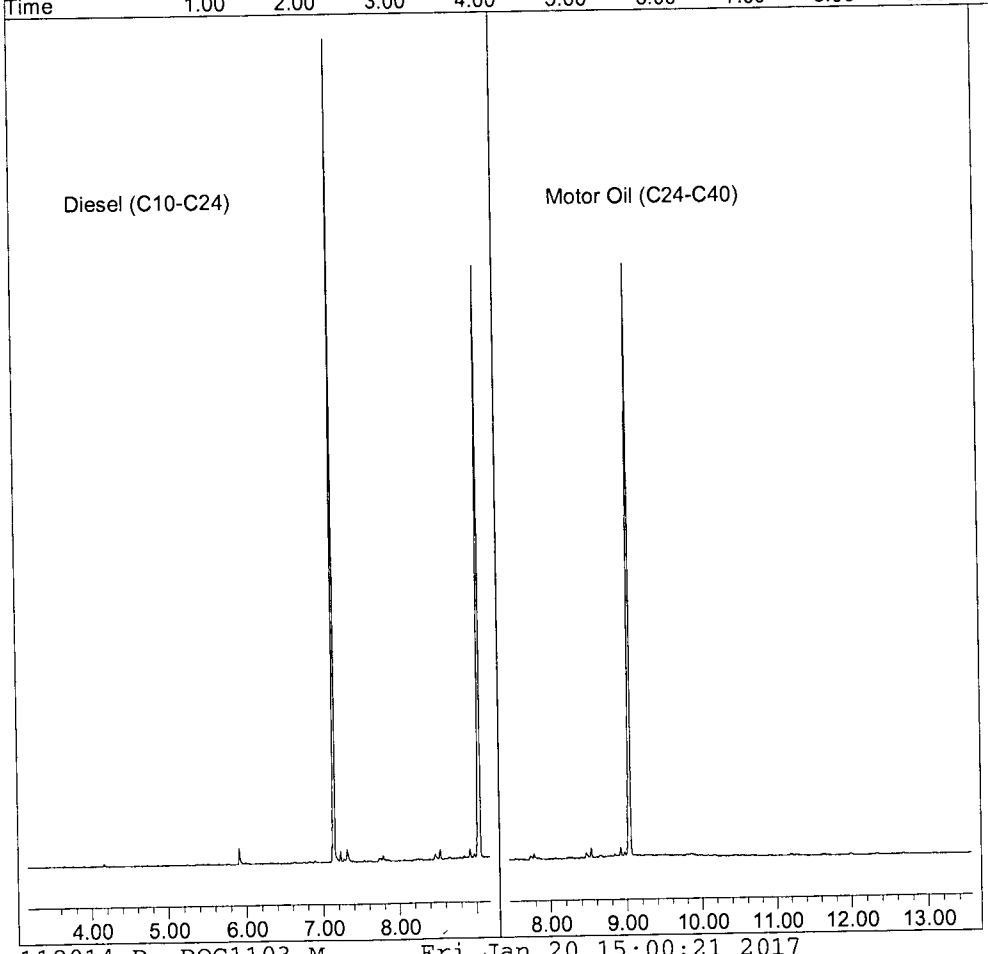
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.14	107380887	30.695 ppb
Surrogate Spike 40.000	Recovery =		76.74%
5) SA Octacosane(S)	9.04	102729795	39.139 ppb
Surrogate Spike 40.000	Recovery =		97.85%
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\170118\118014.D
Sample : AZ48871W10 2/1500





118014.D DOC1103.M Fri Jan 20 15:00:21 2017

EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH169
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48872
QCG: #DOC53-170116A-215613

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	28 ++J	40.0	25.00	13.07	ug/L	01/16/17	01/18/17
EPA 8015B-eL	OIL (C24-C40)	29 J	40.0	40.00	5.54	ug/L	01/16/17	01/18/17
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	104	60-142			%	01/16/17	01/18/17
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	82.2	56-125			%	01/16/17	01/18/17

J = Estimated value.
++(T3I) The analyst has noted that the chromatogram of this sample includes higher boiling hydrocarbons.

Quant Method:	DOC1103.M
Run #:	118015
Instrument:	Apollo
Sequence:	170118
Dilution Factor:	1
Initials:	DPO

Printed: 01/19/17 10:23:56 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\170118\118015.D
Acq On : 1-18-17 21:29:19
Sample : AZ48872W24 2/1500
Misc : Water
IntFile : events.e
Quant Time: Jan 19 10:14 2017 Quant Results File: DOC1103.RES

Vial: 15
Operator: DP
Inst : Apollo
Multiplr: 1.33

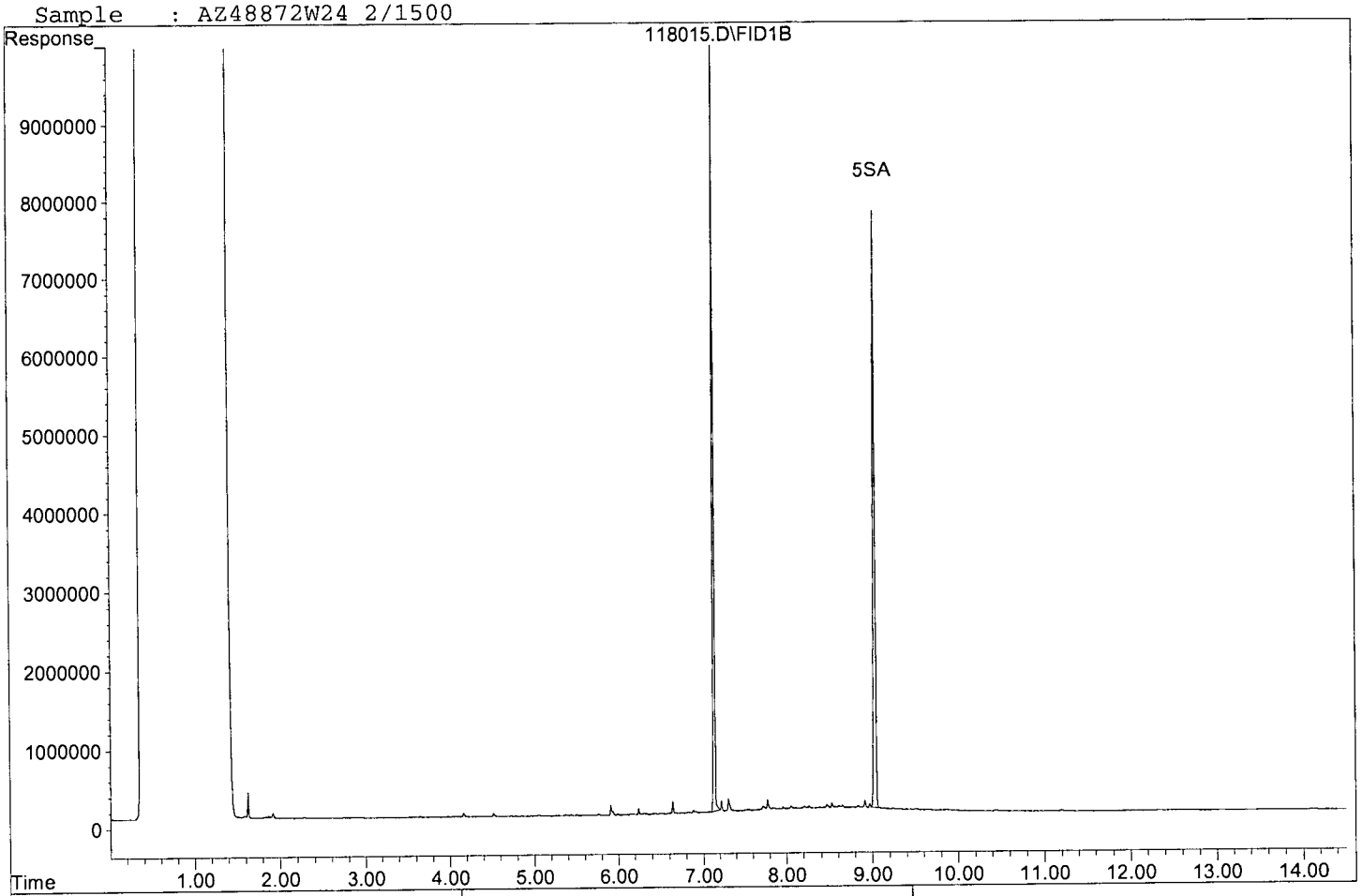
Method : G:\APOLLO\DATA\170118\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

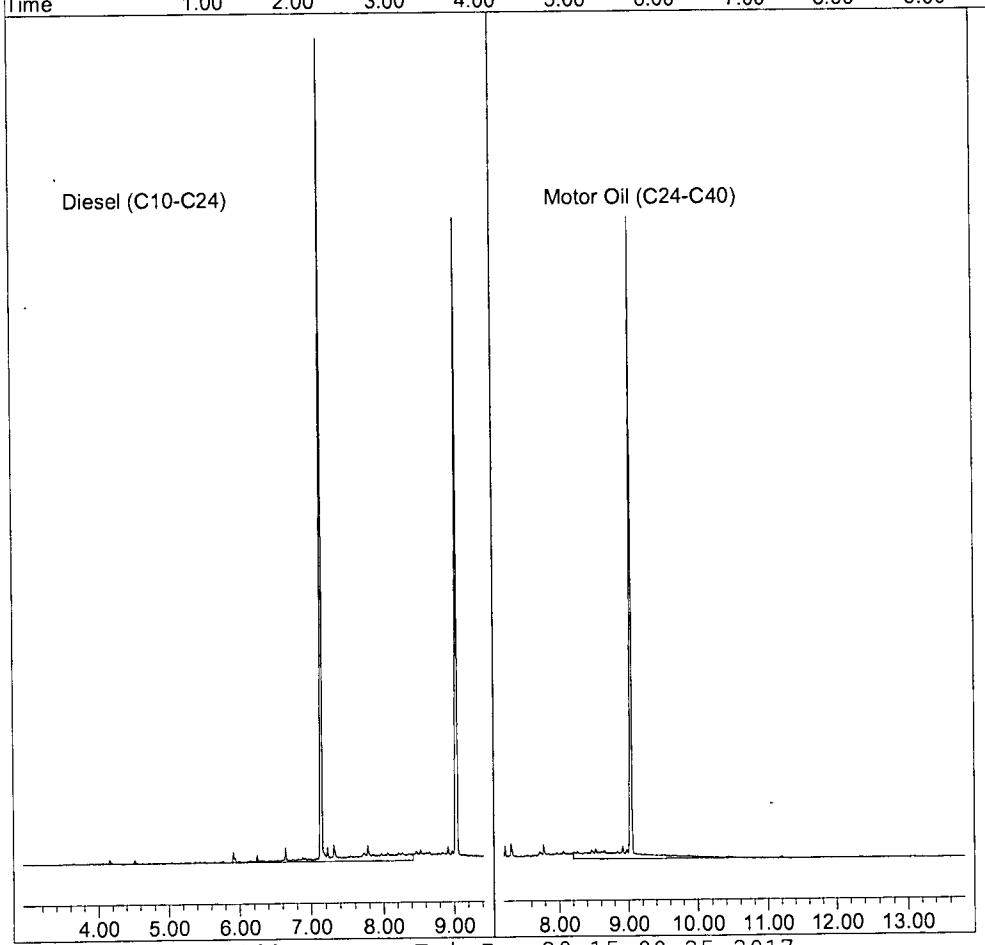
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.14	114967356	32.863 ppb
Surrogate Spike 40.000	Recovery =		82.16%
5) SA Octacosane(S)	9.04	108764501	41.438 ppb
Surrogate Spike 40.000	Recovery =		103.60%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	72547260	28.003 ppb
2) HBTM Motor Oil (C24-C40)	10.50	61200145	29.292 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\170118\118015.D
Sample : AZ48872W24 2/1500





EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH170
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48873
QCG: #DOC53-170116A-215613

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	23 ++J	40.0	25.00	13.07	ug/L	01/16/17	01/18/17
EPA 8015B-eL	OIL (C24-C40)	27 J	40.0	40.00	5.54	ug/L	01/16/17	01/18/17
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	93.9	60-142			%	01/16/17	01/18/17
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	73.2	56-125			%	01/16/17	01/18/17

J = Estimated value.
++(T3I) The analyst has noted that the chromatogram of this sample includes higher boiling hydrocarbons.

Quant Method:	DOC1103.M
Run #:	118016
Instrument:	Apollo
Sequence:	170118
Dilution Factor:	1
Initials:	DPO

Printed: 01/19/17 10:23:56 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\170118\118016.D
Acq On : 1-18-17 21:49:53
Sample : AZ48873W12 2/1500
Misc : Water
IntFile : events.e
Quant Time: Jan 19 10:14 2017 Quant Results File: DOC1103.RES

Vial: 16
Operator: DP
Inst : Apollo
Multiplr: 1.33

Method : G:\APOLLO\DATA\170118\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

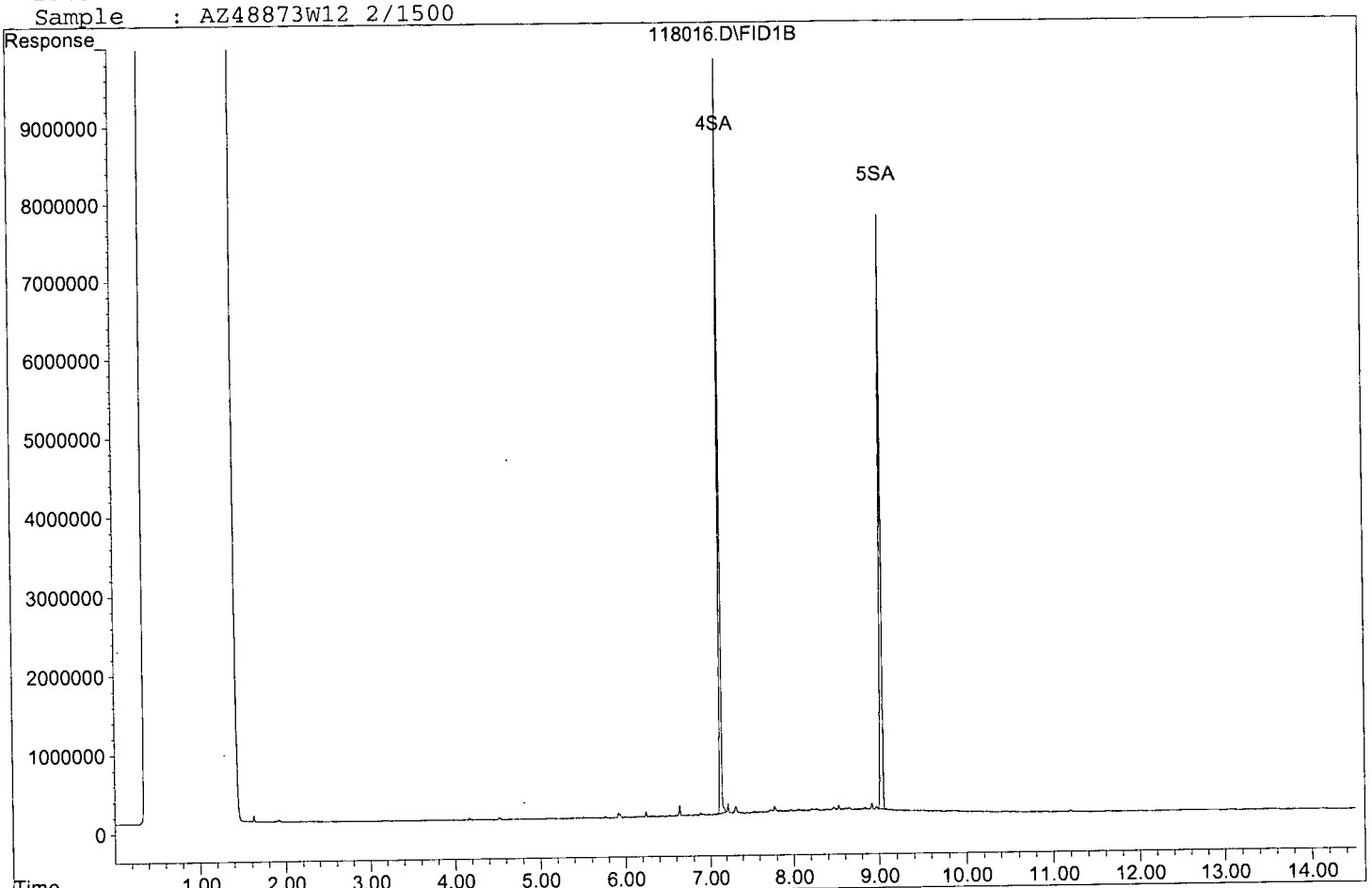
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

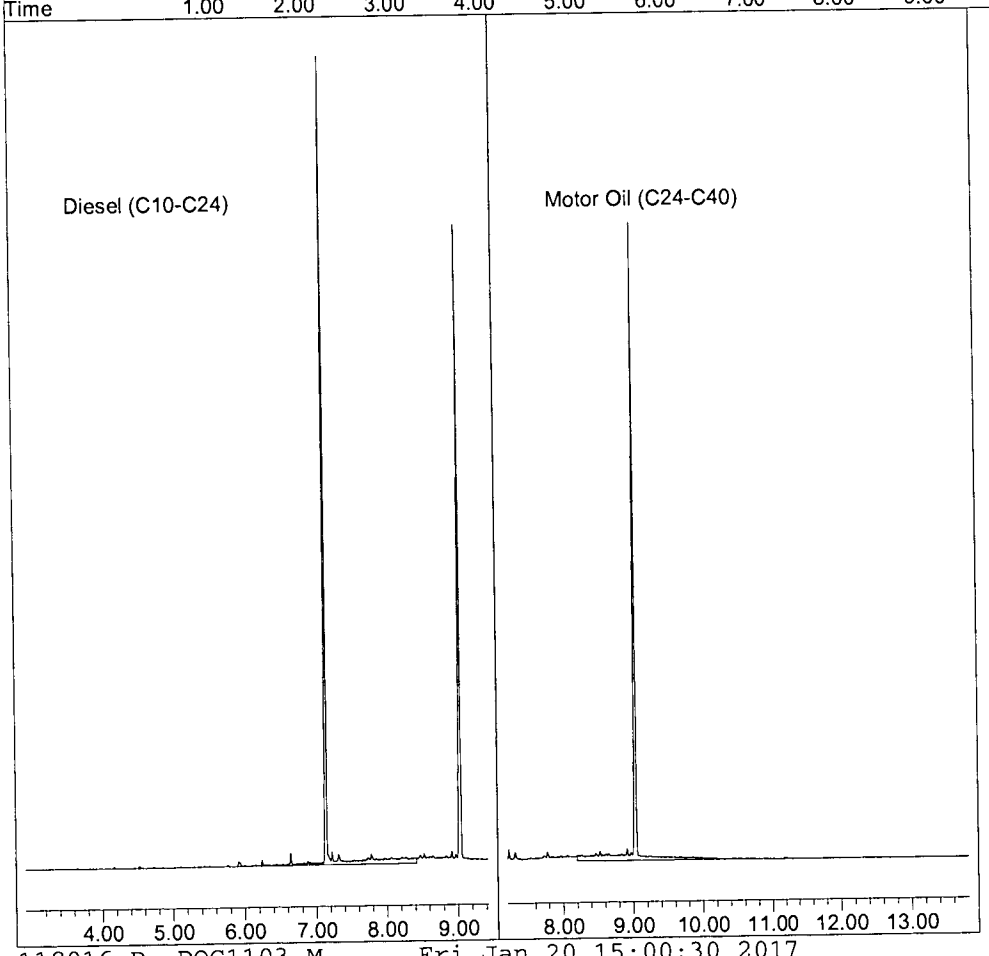
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.14	102495410	29.298 ppb
Surrogate Spike 40.000	Recovery =		73.24%
5) SA Octacosane(S)	9.04	98599372	37.565 ppb
Surrogate Spike 40.000	Recovery =		93.91%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	58561582	22.605 ppb
2) HBTM Motor Oil (C24-C40)	10.50	56026151	26.816 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\170118\118016.D
Sample : AZ48873W12 2/1500





118016.D DOC1103.M Fri Jan 20 15:00:30 2017

EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH174
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48875
QCG: #DOC53-170116A-215613

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	1400 ++	40.0	13.07	ug/L	01/16/17	01/18/17
EPA 8015B-eL	OIL (C24-C40)	42	40.0	5.54	ug/L	01/16/17	01/18/17
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	98.2	60-142		%	01/16/17	01/18/17
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (	85.0	56-125		%	01/16/17	01/18/17

++(T6) The analyst has noted that the chromatogram of this sample is mainly a match to hydrocarbons within the range of diesel fuel.

Quant Method:	DOC1103.M
Run #:	118017
Instrument:	Apollo
Sequence:	170118
Dilution Factor:	1
Initials:	DPO

Printed: 01/19/17 12:14:21 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\170118\118017.D
Acq On : 1-18-17 22:10:23
Sample : AZ48875W10 2/1500
Misc : Water
IntFile : events.e
Quant Time: Jan 19 12:03 2017 Quant Results File: DOC1103.RES

Vial: 17
Operator: DP
Inst : Apollo
Multiplr: 1.33

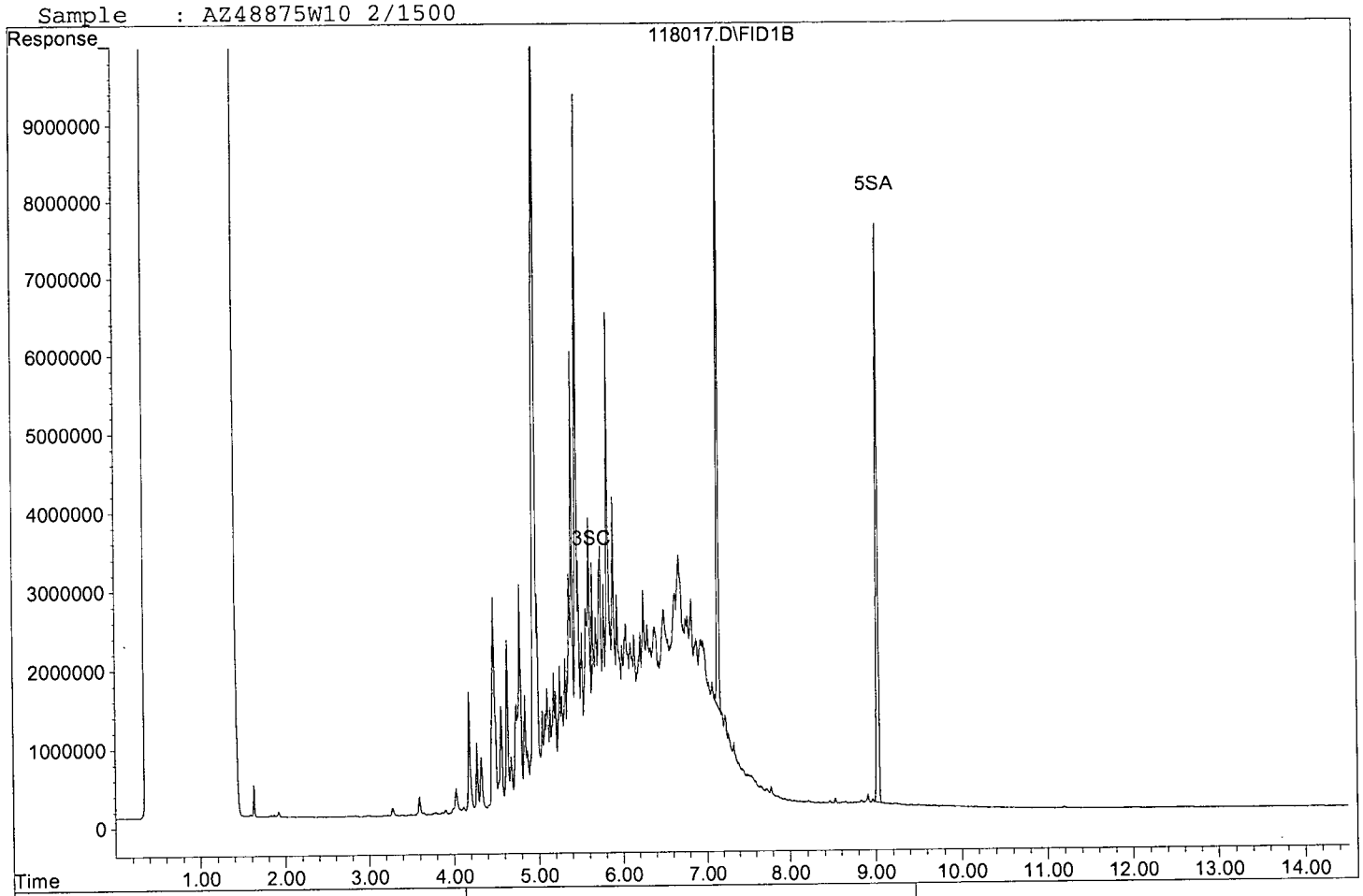
Method : G:\APOLLO\DATA\170118\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

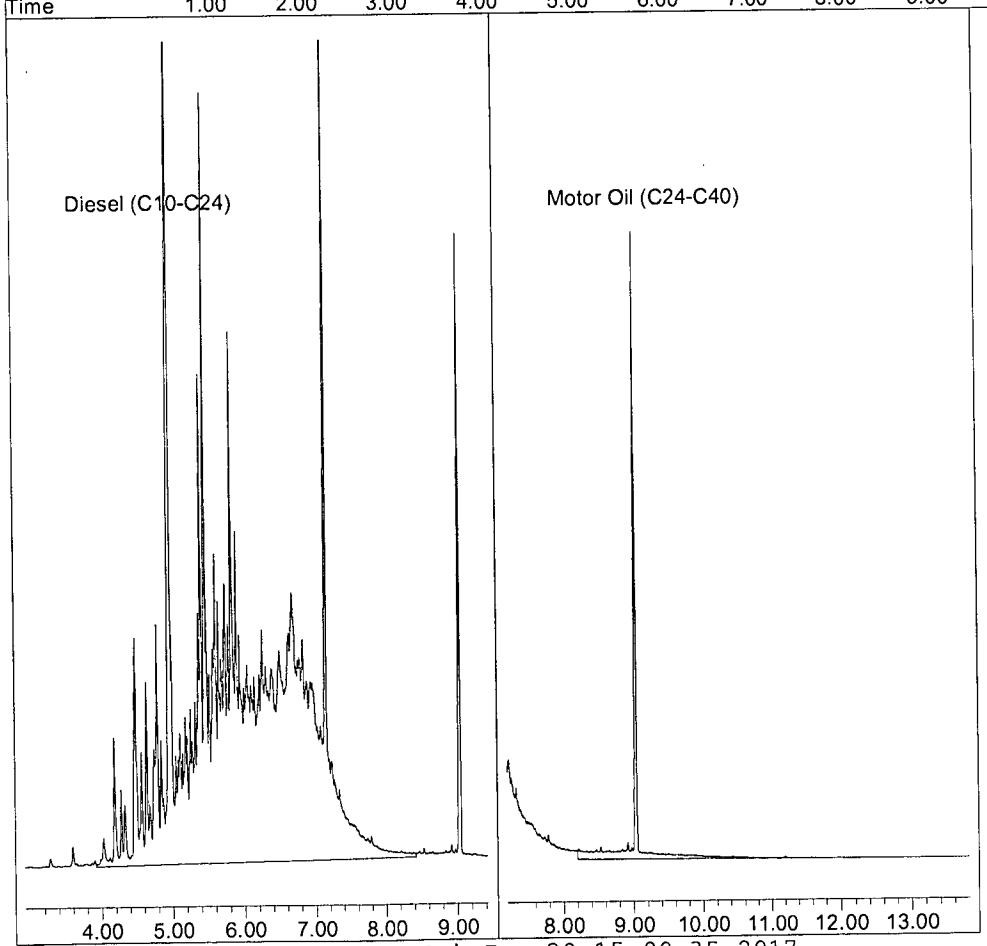
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SC Decanoic Acid(S)	5.64	9576881	10.439 ppb
Surrogate Spike 64.000	Recovery =		16.31%
4) SA Ortho-Terphenyl(S)	7.15	118980544	34.010 ppb
Surrogate Spike 40.000	Recovery =		85.02%
5) SA Octacosane(S)	9.04	103103691	39.281 ppb
Surrogate Spike 40.000	Recovery =		98.20%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	3595802752	1387.965 ppb
2) HBTM Motor Oil (C24-C40)	10.50	88405059	42.313 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\170118\118017.D
Sample : AZ48875W10 2/1500





EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH176
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48877
QCG: #DOC53-170116A-215613

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	01/16/17	01/18/17
EPA 8015B-eL	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	01/16/17	01/18/17
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	98.8	60-142			%	01/16/17	01/18/17
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	79.3	56-125			%	01/16/17	01/18/17

Quant Method: DOC1103.M
Run #: 118018
Instrument: Apollo
Sequence: 170118
Dilution Factor: 1
Initials: DPO

Printed: 01/19/17 10:23:56 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\170118\118018.D
Acq On : 1-18-17 22:30:55
Sample : AZ48877W10 2/1500
Misc : Water
IntFile : events.e
Quant Time: Jan 19 10:15 2017 Quant Results File: DOC1103.RES

Vial: 18
Operator: DP
Inst : Apollo
Multiplr: 1.33

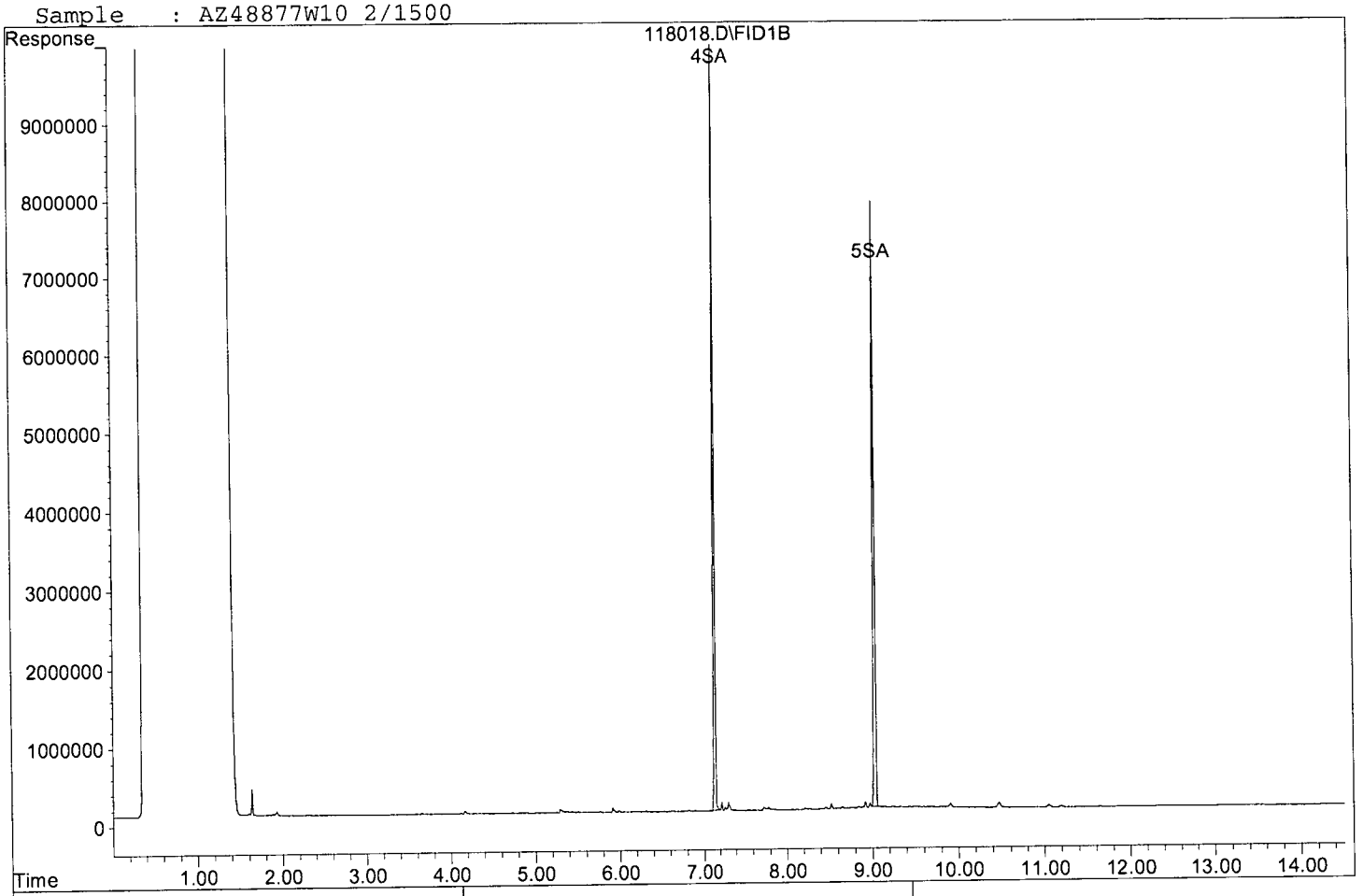
Method : G:\APOLLO\DATA\170118\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

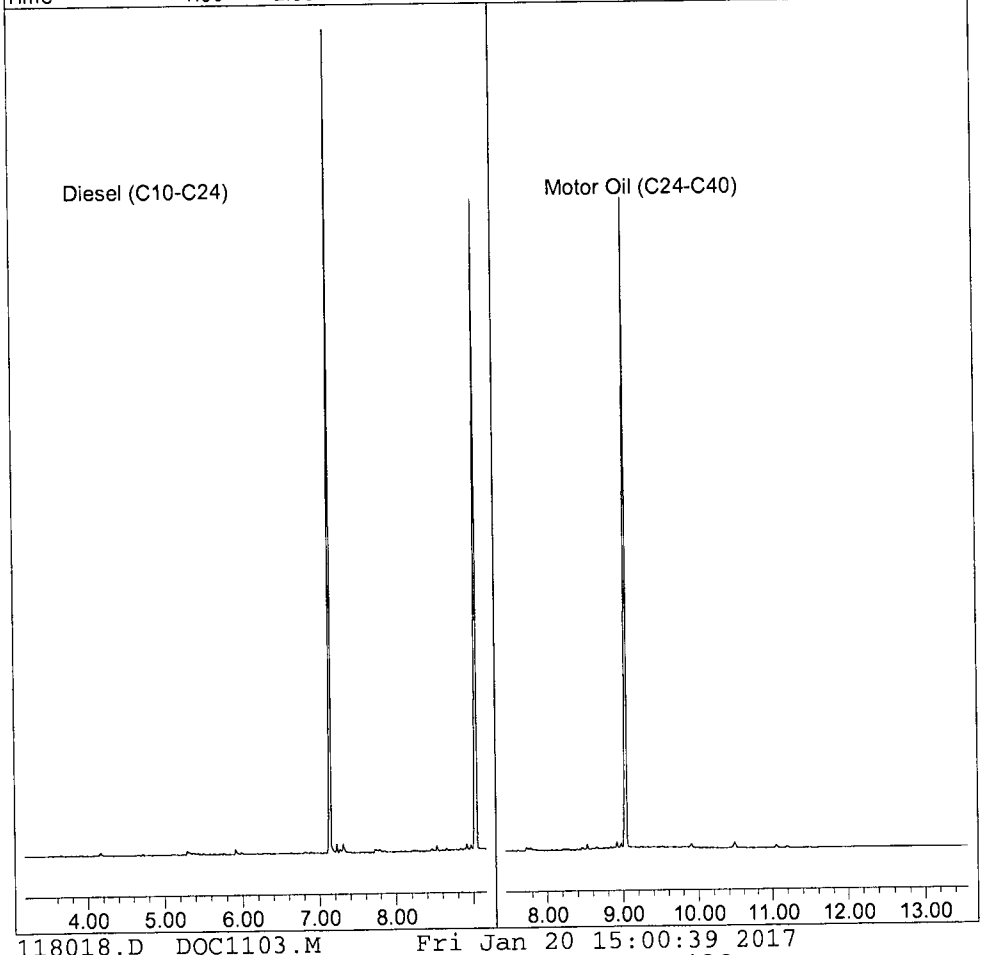
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.14	111026129	31.737 ppb
Surrogate Spike 40.000	Recovery	=	79.34%
5) SA Octacosane(S)	9.04	103720002	39.516 ppb
Surrogate Spike 40.000	Recovery	=	98.79%
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\170118\118018.D
Sample : AZ48877W10 2/1500





EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH179
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48878
QCG: #DOC53-170116A-215613

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	01/16/17	01/18/17
EPA 8015B-eL	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	01/16/17	01/18/17
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	99.2	60-142			%	01/16/17	01/18/17
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	78.7	56-125			%	01/16/17	01/18/17

Quant Method: DOC1103.M
Run #: 118019
Instrument: Apollo
Sequence: 170118
Dilution Factor: 1
Initials: DPO

Printed: 01/19/17 10:23:56 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\170118\118019.D Vial: 19
Acq On : 1-18-17 22:51:27 Operator: DP
Sample : AZ48878W11 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Jan 19 10:16 2017 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\170118\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

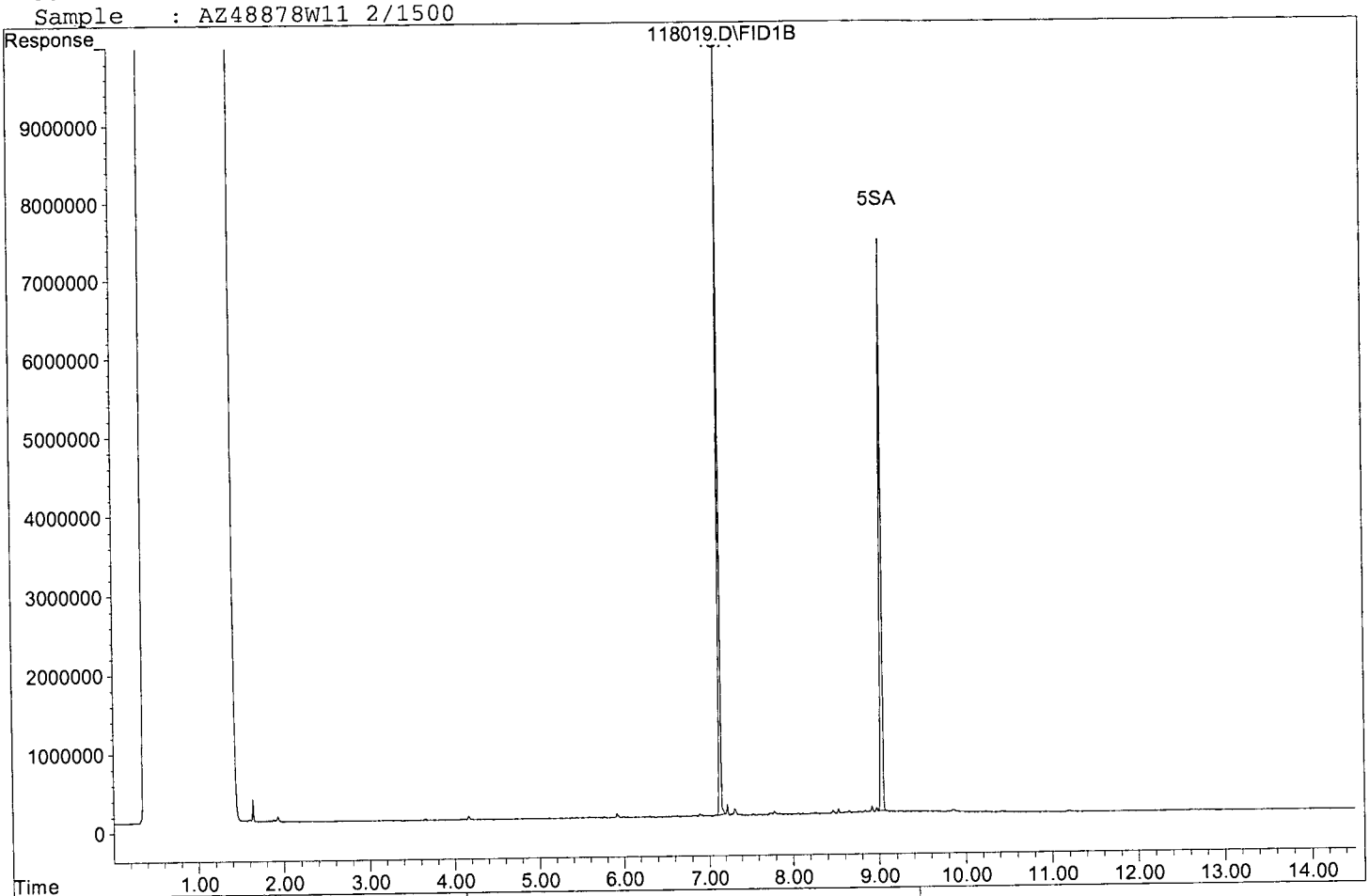
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

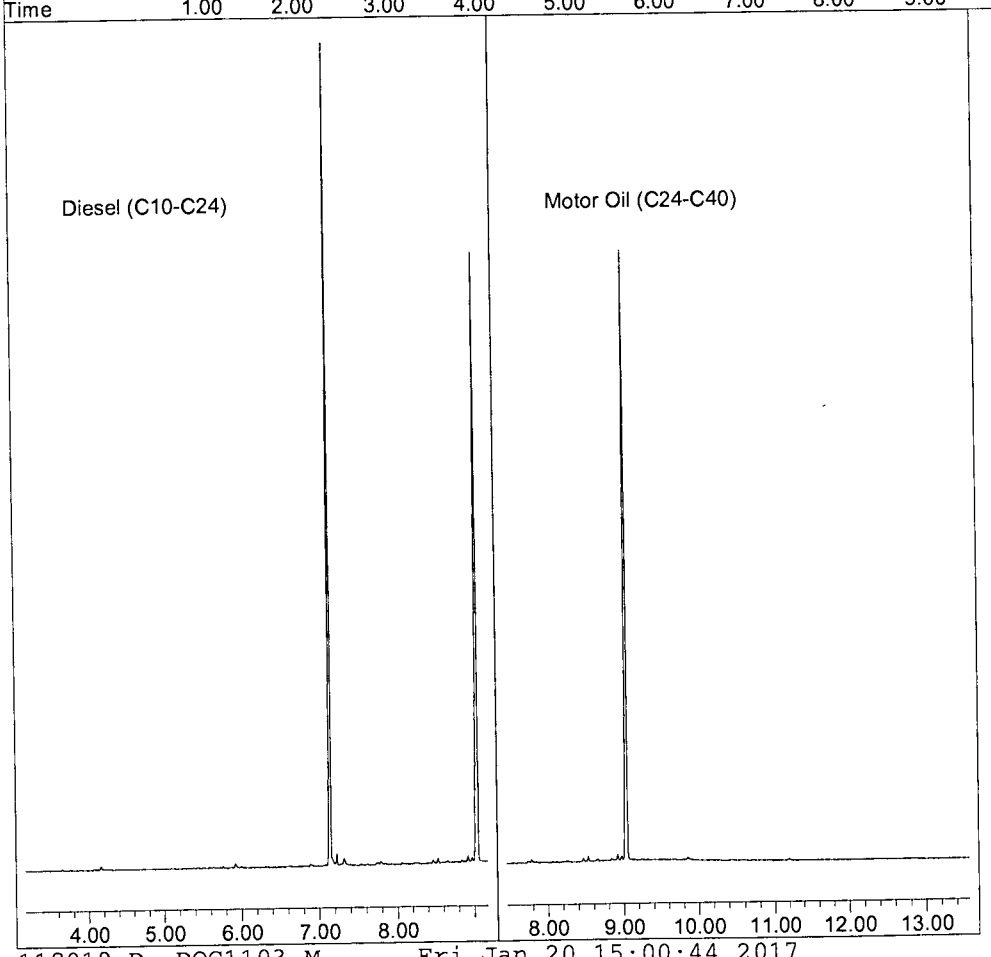
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.14	110094458	31.470 ppb
Surrogate Spike 40.000	Recovery =		78.68%
5) SA Octacosane(S)	9.04	104130900	39.672 ppb
Surrogate Spike 40.000	Recovery =		99.18%
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\170118\118019.D
Sample : AZ48878W11 2/1500





118019.D DOC1103.M Fri Jan 20 15:00:44 2017

EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH186
Sample Collection Date: 01/10/17

ARF: 81965
APPL ID: AZ48880
QCG: #DOC53-170116A-215613

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	01/16/17	01/18/17
EPA 8015B-eL	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	01/16/17	01/18/17
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	93.9	60-142			%	01/16/17	01/18/17
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	74.6	56-125			%	01/16/17	01/18/17

Quant Method: DOC1103.M
Run #: 118020
Instrument: Apollo
Sequence: 170118
Dilution Factor: 1
Initials: DPO

Printed: 01/19/17 10:23:56 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\170118\118020.D Vial: 20
Acq On : 1-18-17 23:11:58 Operator: DP
Sample : AZ48880W07 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Jan 19 10:16 2017 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\170118\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

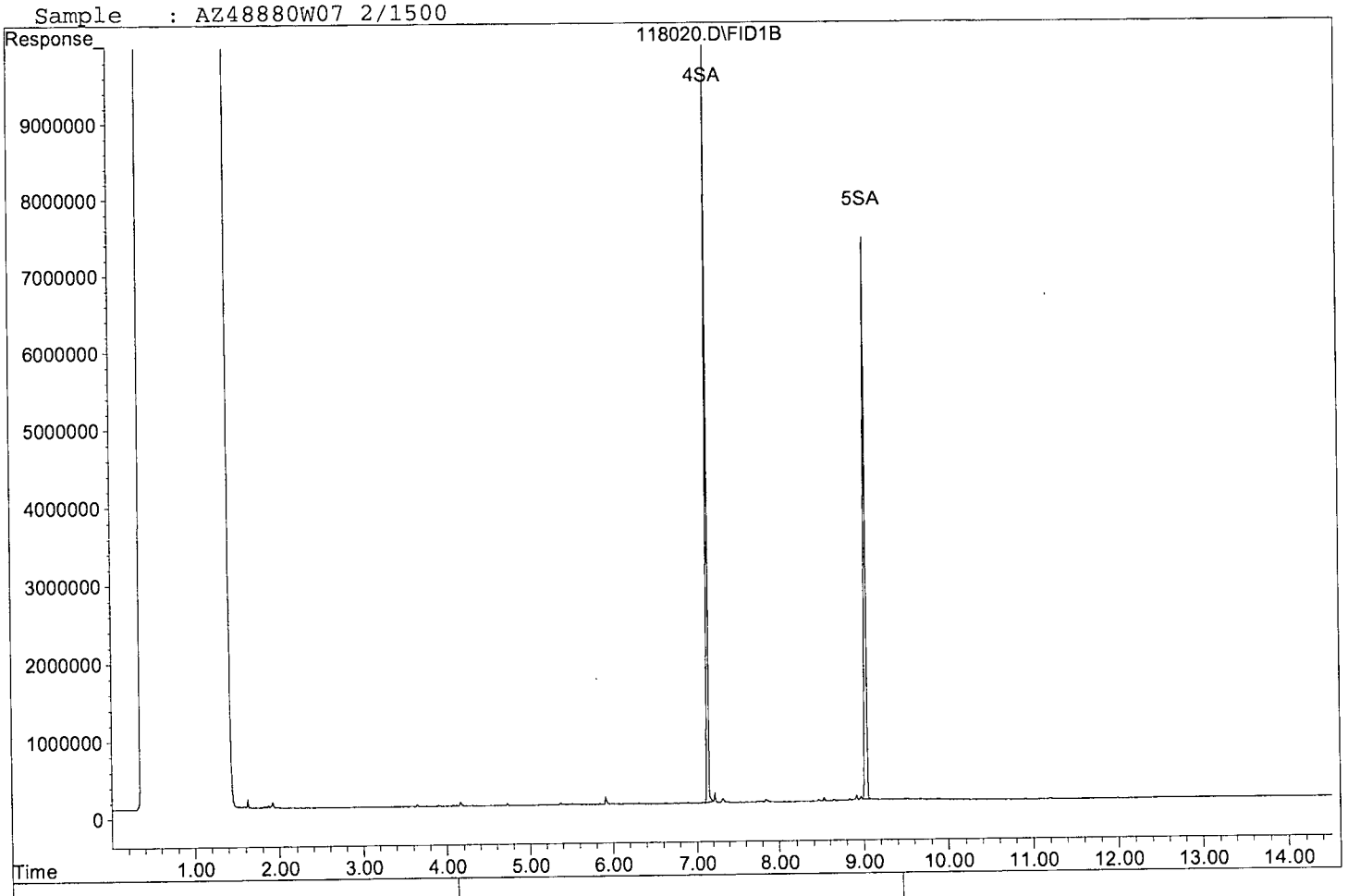
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

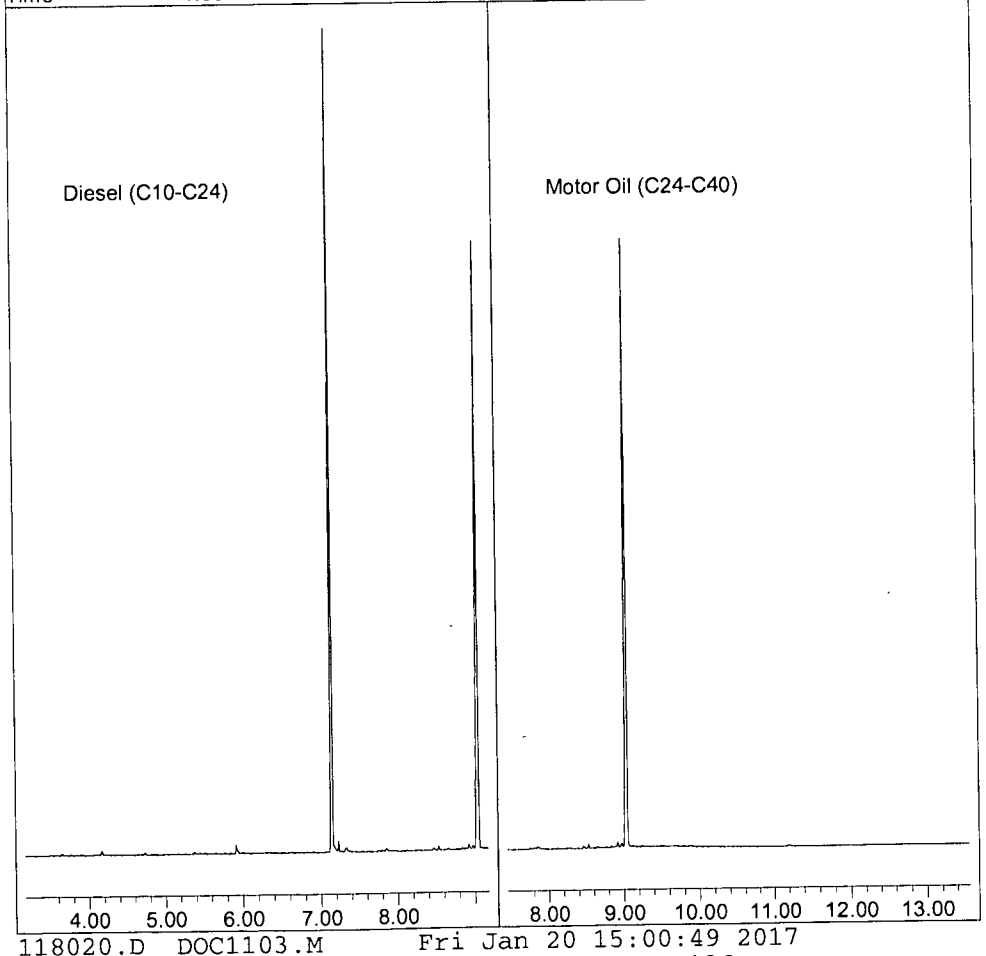
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.14	104447889	29.856	ppb
Surrogate Spike 40.000	Recovery =		74.64%	
5) SA Octacosane(S)	9.04	98557866	37.549	ppb
Surrogate Spike 40.000	Recovery =		93.87%	
Target Compounds				

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\170118\118020.D
Sample : AZ48880W07 2/1500





118020.D DOC1103.M Fri Jan 20 15:00:49 2017

EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH187
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48881
QCG: #DOC53-170116A-215613

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	01/16/17	01/19/17
EPA 8015B-eL	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	01/16/17	01/19/17
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	95.1	60-142			%	01/16/17	01/19/17
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	75.8	56-125			%	01/16/17	01/19/17

Quant Method: DOC1103.M
Run #: 118023
Instrument: Apollo
Sequence: 170118
Dilution Factor: 1
Initials: DPO

Printed: 01/19/17 10:23:56 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\170118\118023.D
Acq On : 1-19-17 0:13:28
Sample : AZ48881W05 2/1500
Misc : Water
IntFile : events.e
Quant Time: Jan 19 10:16 2017 Quant Results File: DOC1103.RES

Vial: 23
Operator: DP
Inst : Apollo
Multiplr: 1.33

Method : G:\APOLLO\DATA\170118\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

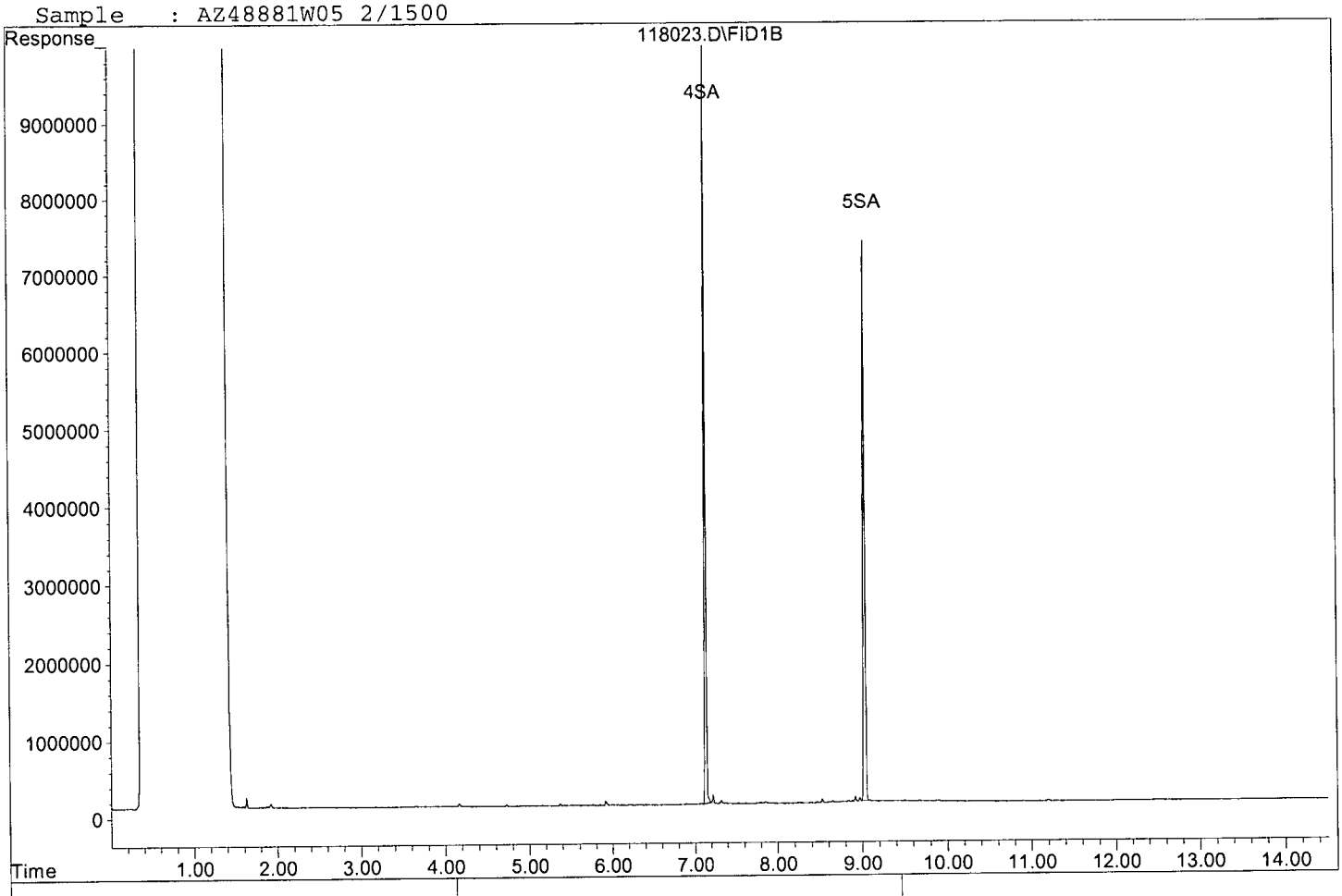
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

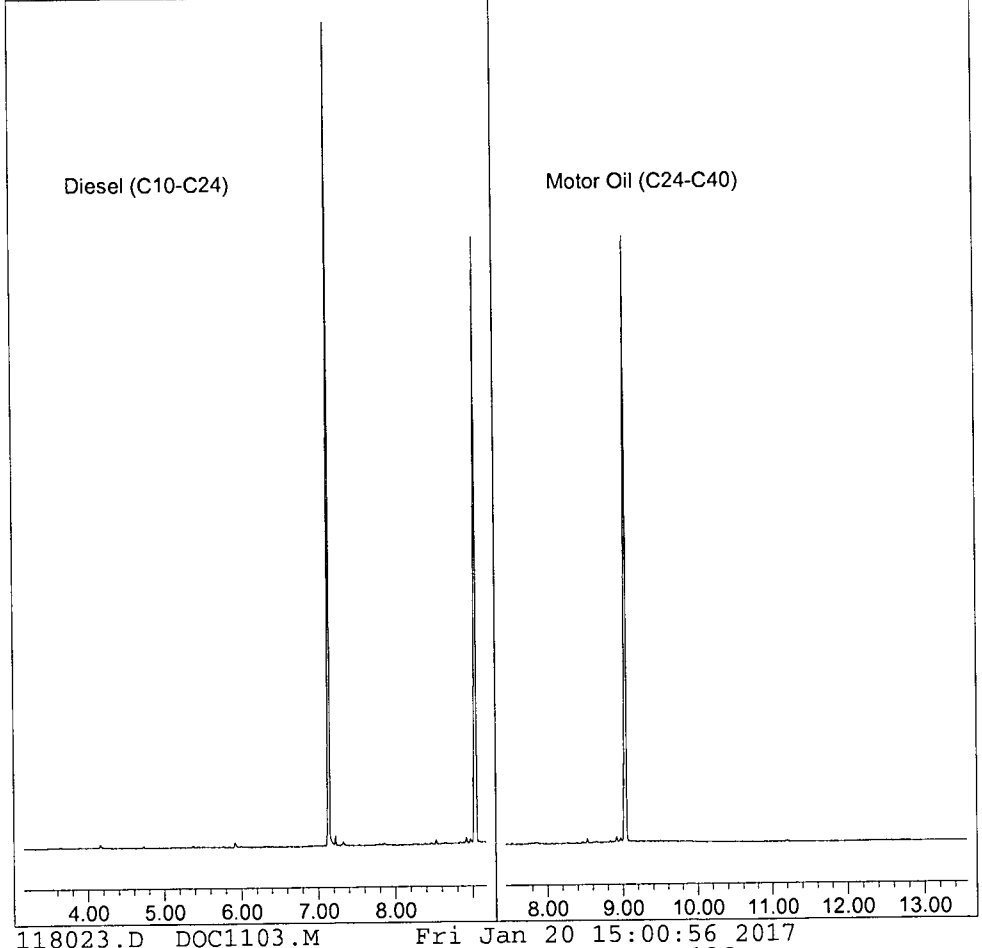
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.14	106000313	30.300	ppb
Surrogate Spike 40.000	Recovery	=	75.75%	
5) SA Octacosane(S)	9.04	99825602	38.032	ppb
Surrogate Spike 40.000	Recovery	=	95.08%	
Target Compounds				

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\170118\118023.D
Sample : AZ48881W05 2/1500





118023.D DOC1103.M Fri Jan 20 15:00:56 2017

ORGANICS

Calibration Data

APPL, INC.

TPH Extractables
DOC1103

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 11/03/16
Matrix: Instrument: Apollo
Initials:

			1	2	3	4	5	6					Avg	%RSD		
Diesel:			1103004.D	1103011.D	1103006.D	1103007.D	1103008.D	1103009.D								
Motor Oil:			1028002.D	1028003.D	1028004.D	1028005.D	1028006.D	1028007.D								
1	HATM	Diesel (C10-C24)	1713970	2056602	1625582	1697733	1643335	1625559					1727130	9.6	HATM	
2	HBTM	Motor Oil (C24-C40)	1562690	1603769	1282978	1340015	1321969	1245819					1392873	11	HBTM	
3	SC	Decanoic Acid(S)	436509	643644	711658	659596	590571	627574					611592	15	SC	
4	SA	Ortho-Terphenyl(S)		2687660	2255130	2296757	2215766	2205848					2332232	8.7	SA	
5	SA	Octacosane(S)	1736016	2067699	1697441	1704564	1657038	1636278					1749839	9.1	SA	
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1.5347542

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161103\1103004.D Vial: 4
Acq On : 11-3-16 9:45:14 Operator: DP
Sample : DIESEL 10ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

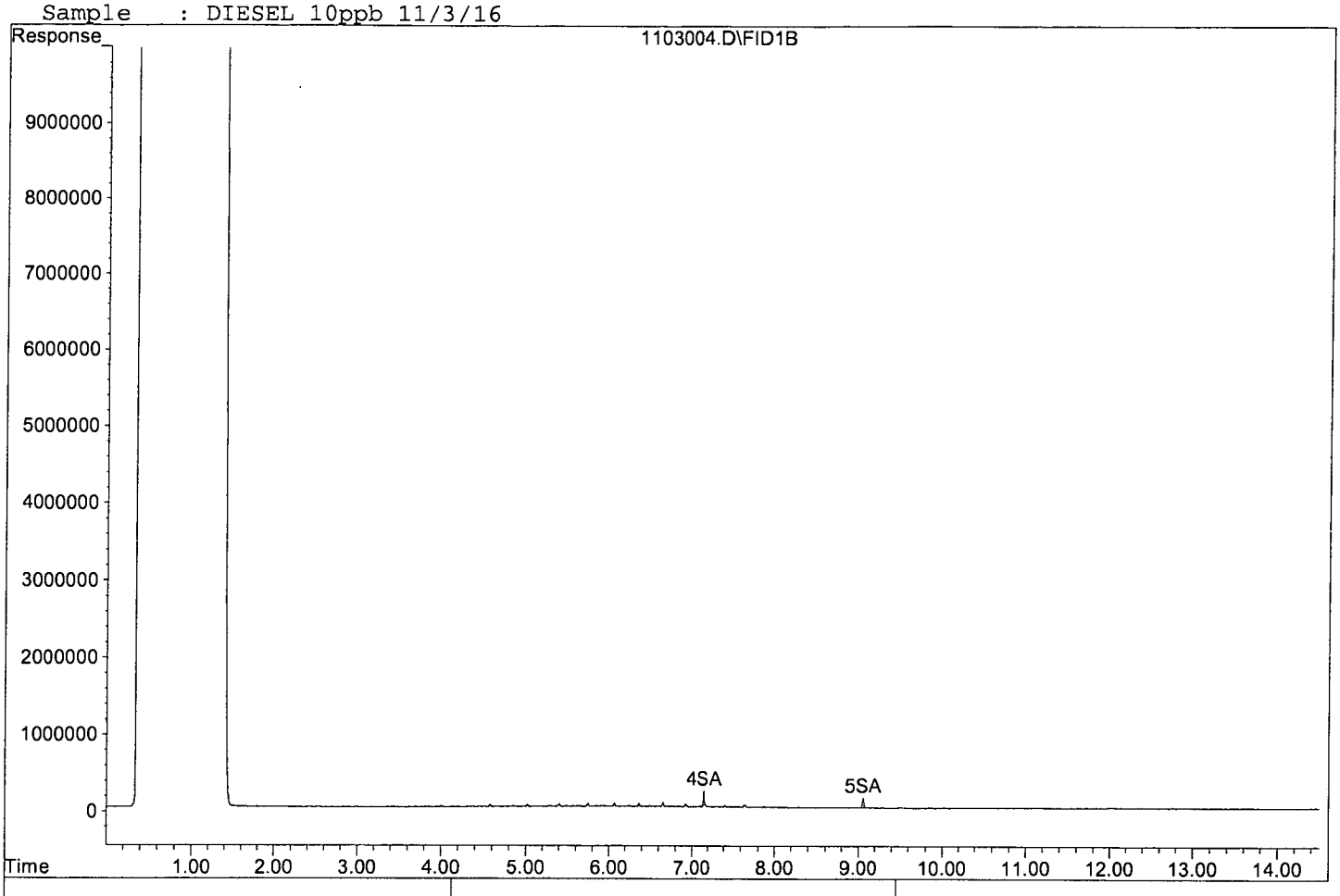
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

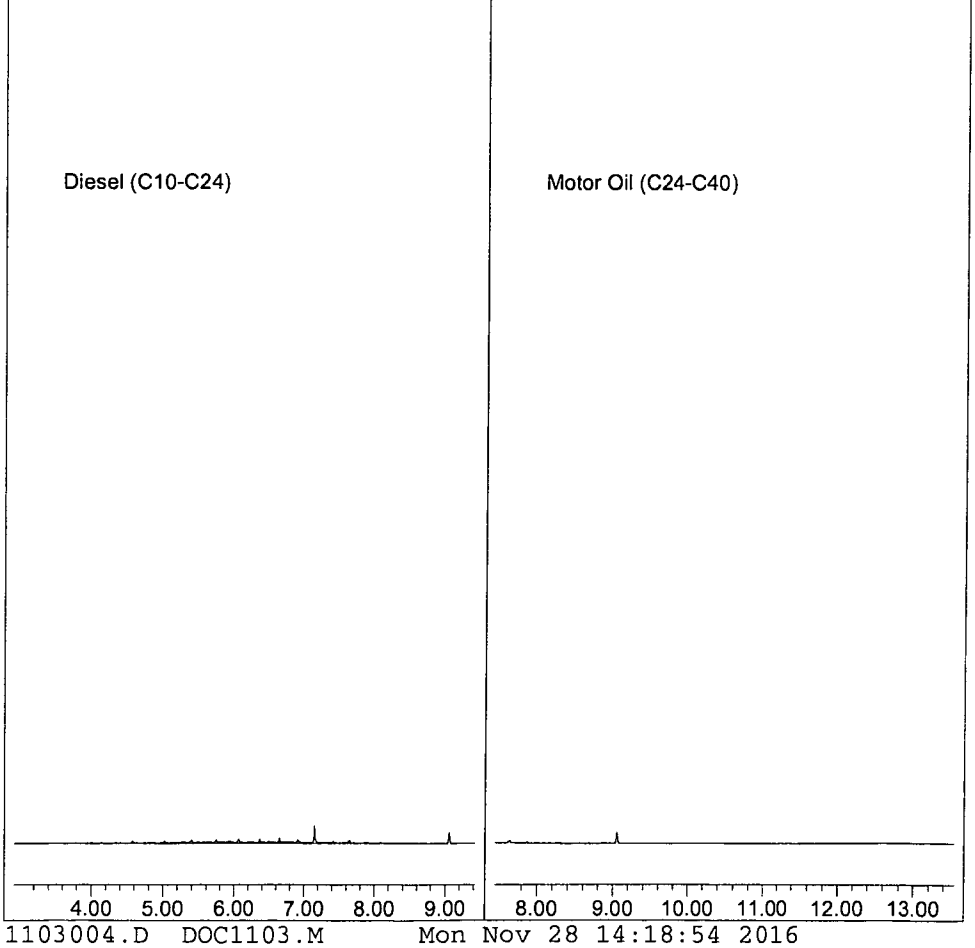
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.15	1320666	0.233 ppb
Surrogate Spike 30.000	Recovery =		0.78%
5) SA Octacosane(S)	9.06	1736016	0.492 ppb
Surrogate Spike 30.000	Recovery =		1.64%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	34279391	10.218 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103004.D
Sample : DIESEL 10ppb 11/3/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161103\1103011.D Vial: 11
Acq On : 11-3-16 12:56:47 Operator: DP
Sample : DIESEL 100ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

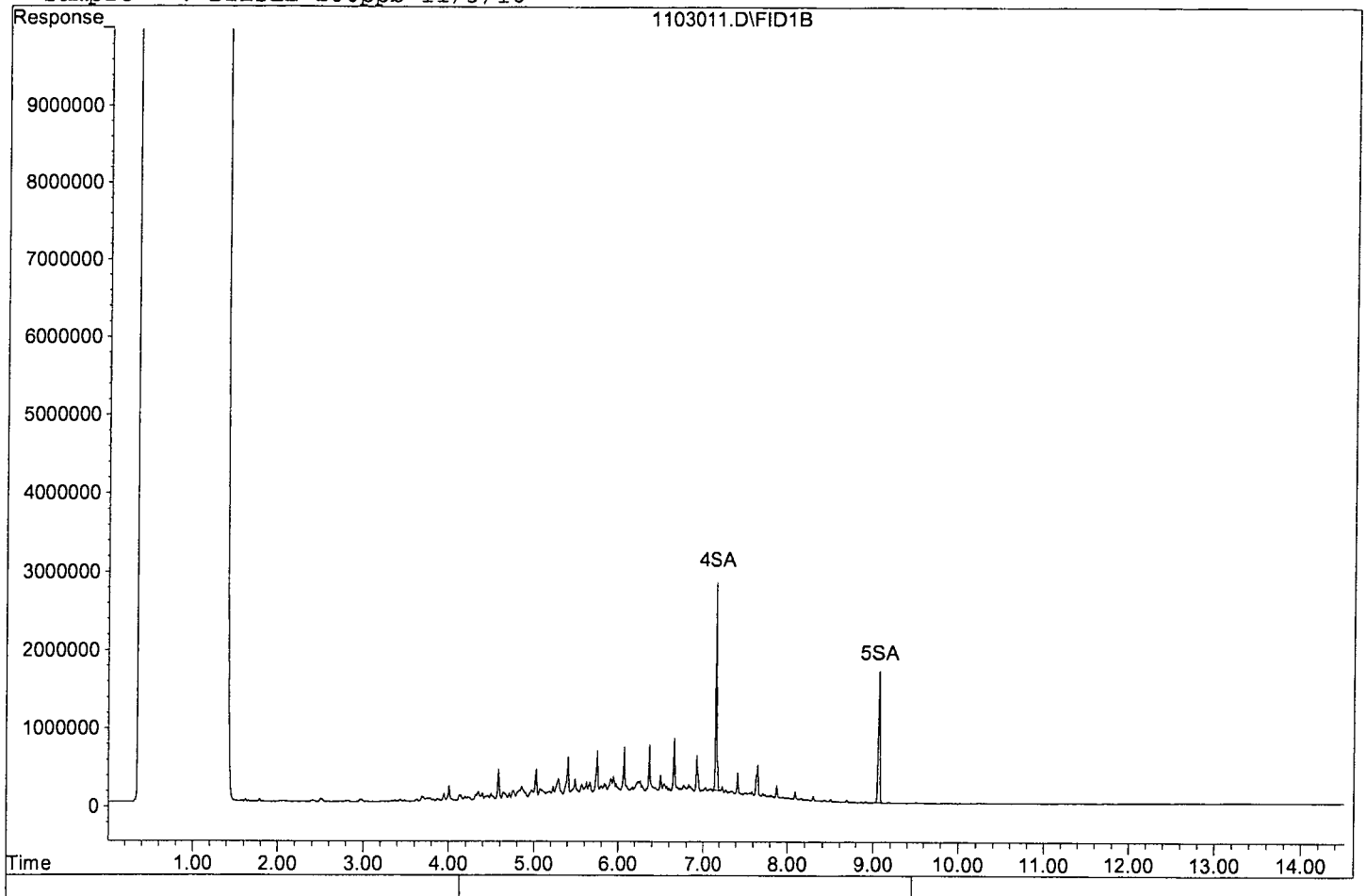
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

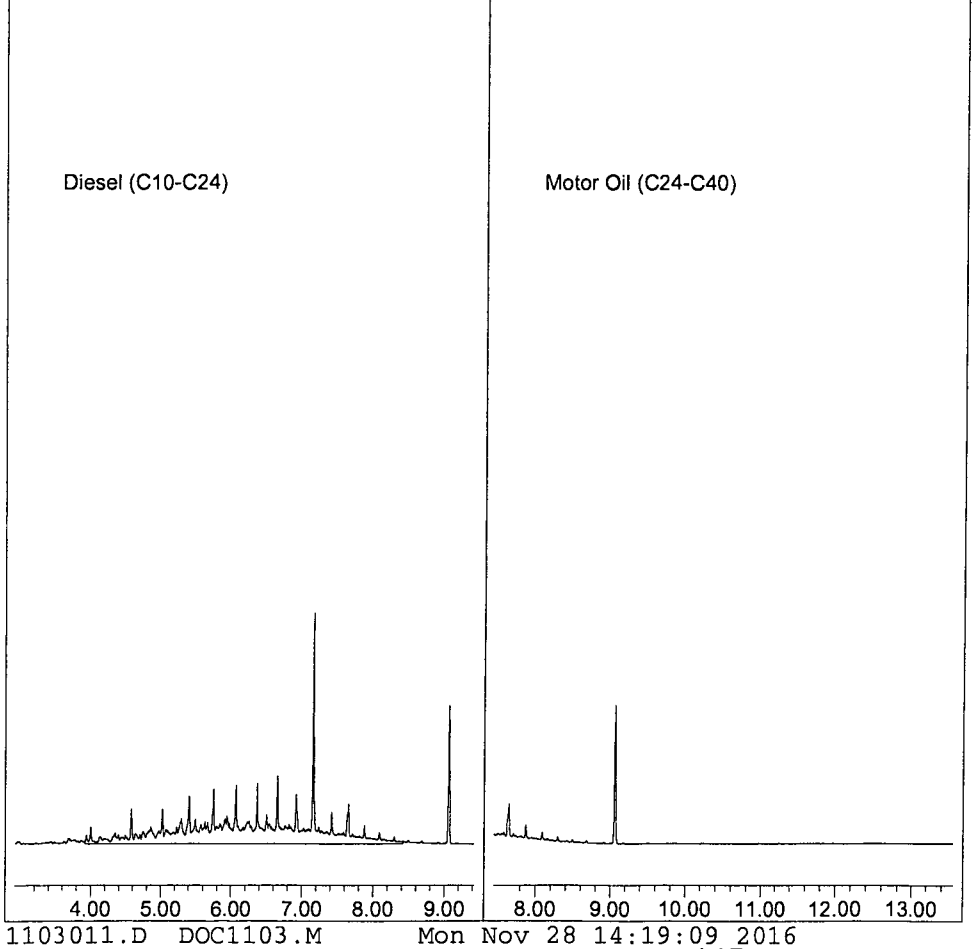
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.16	26876603	4.740 ppb
Surrogate Spike 30.000	Recovery =		15.80%
5) SA Octacosane(S)	9.06	20676993	5.864 ppb
Surrogate Spike 30.000	Recovery =		19.55%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	411320381	122.610 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103011.D
Sample : DIESEL 100ppb 11/3/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103006.D Vial: 6
Acq On : 11-3-16 10:26:16 Operator: DP
Sample : DIESEL 400ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

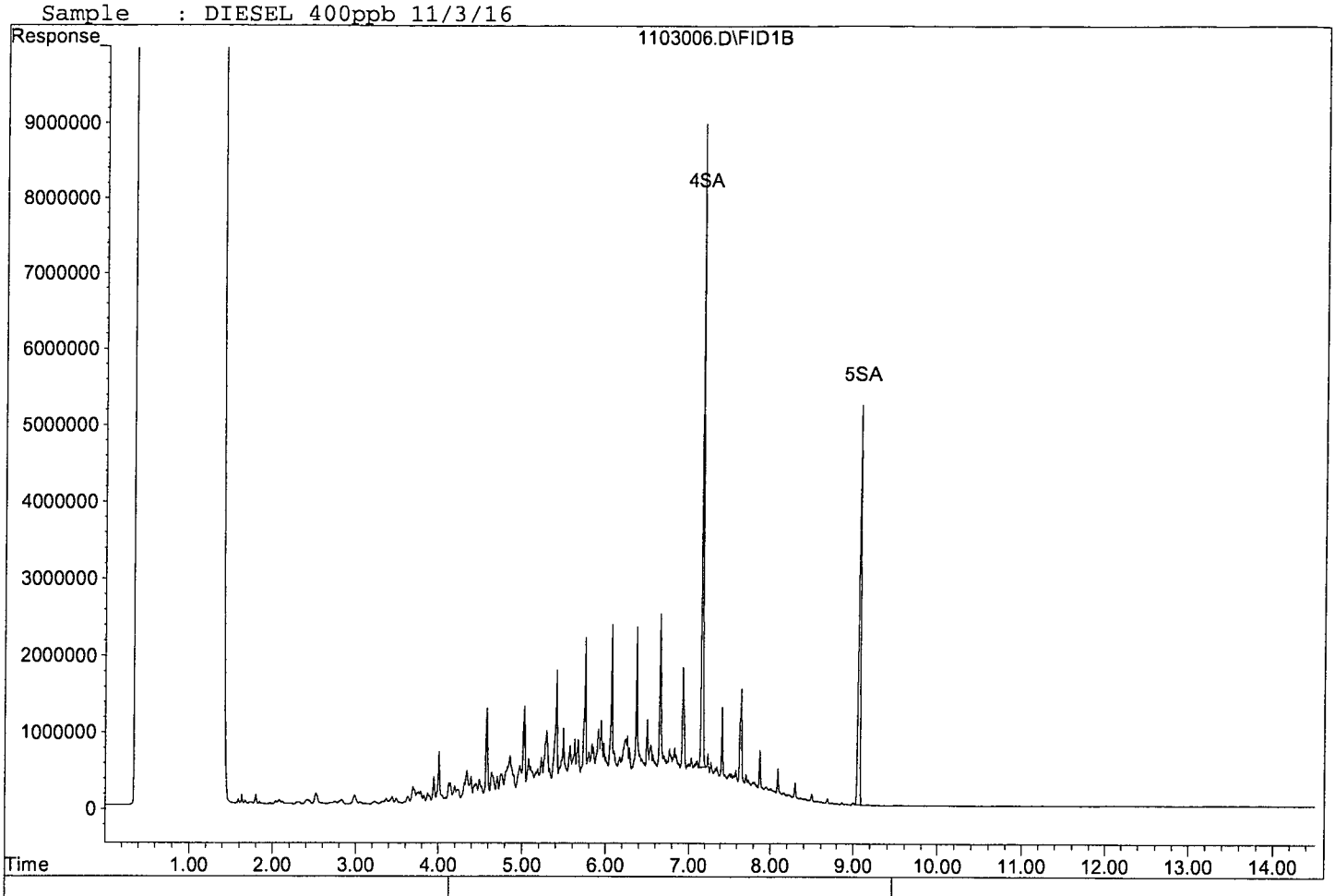
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

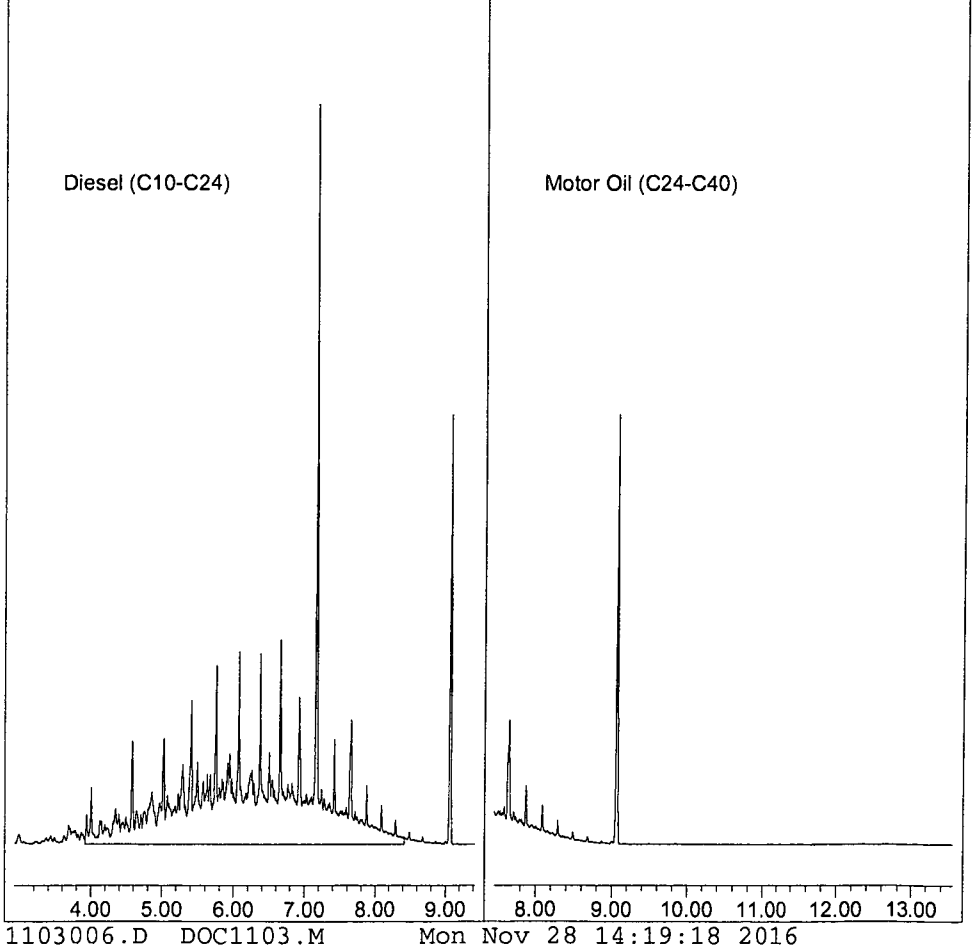
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.16	90205209	15.909 ppb
Surrogate Spike 30.000	Recovery =		53.03%
5) SA Octacosane(S)	9.07	67897660	19.256 ppb
Surrogate Spike 30.000	Recovery =		64.19%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	1300465223	387.653 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103006.D
Sample : DIESEL 400ppb 11/3/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103007.D Vial: 7
Acq On : 11-3-16 10:46:56 Operator: DP
Sample : DIESEL 600ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

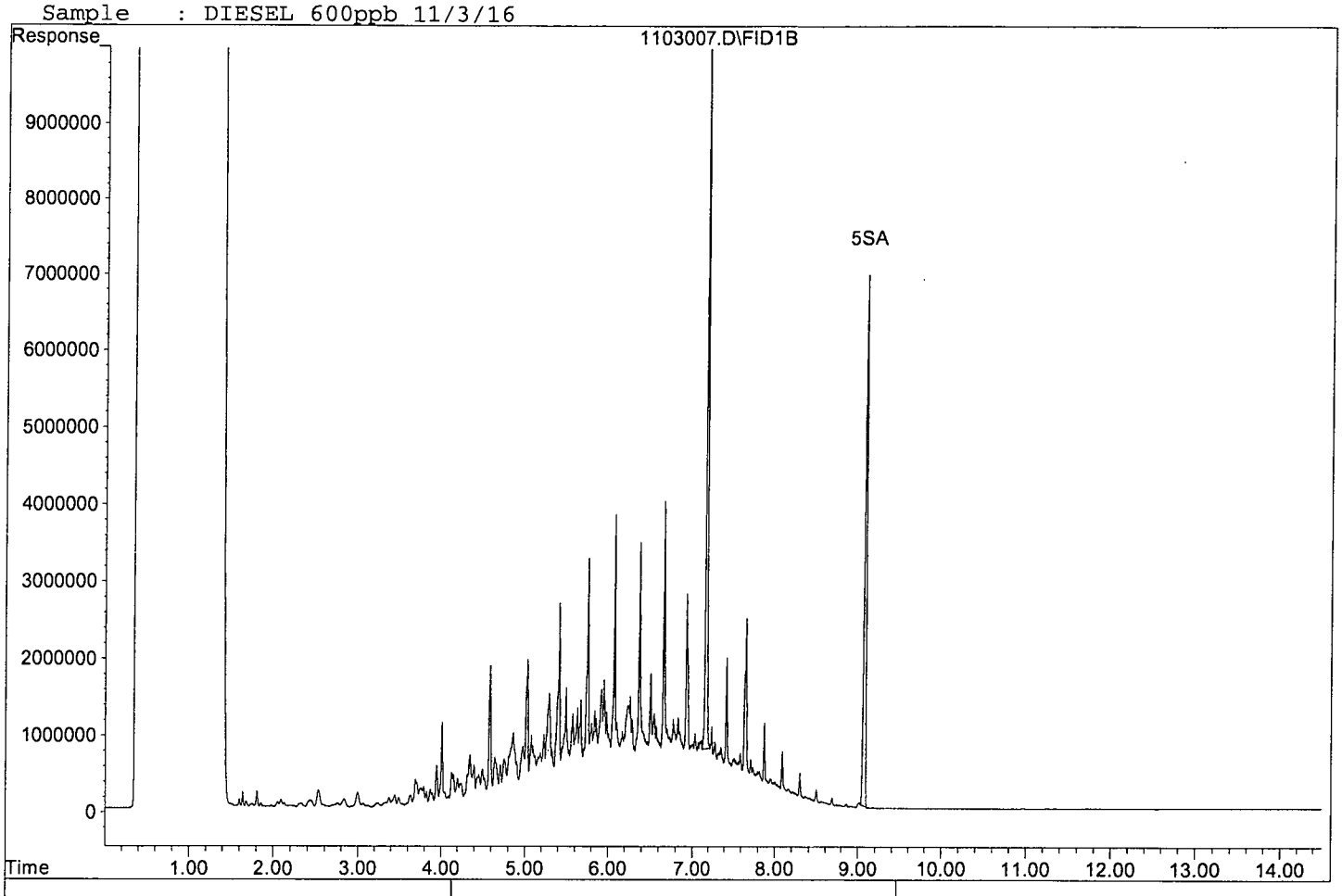
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

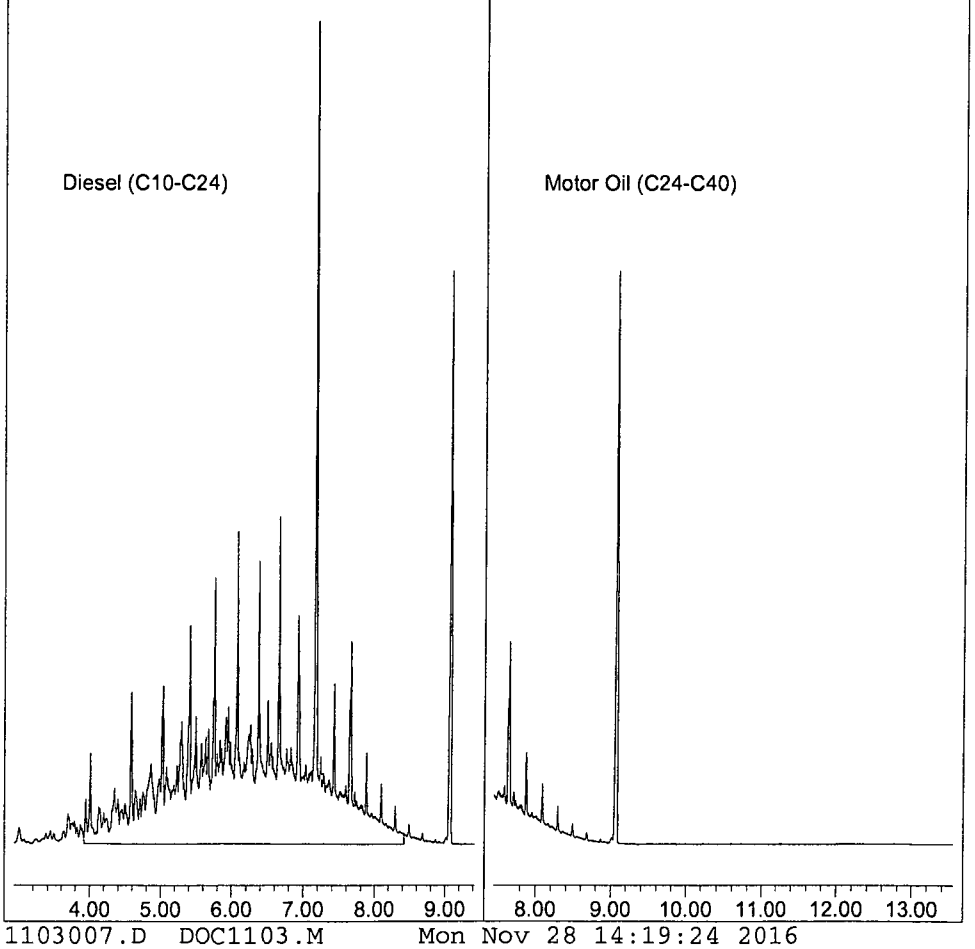
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.17	137805437	24.304 ppb
Surrogate Spike 30.000	Recovery =		81.01%
5) SA Octacosane(S)	9.07	102273844	29.005 ppb
Surrogate Spike 30.000	Recovery =		96.68%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	2037280173	607.288 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103007.D
Sample : DIESEL 600ppb 11/3/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103008.D Vial: 8
Acq On : 11-3-16 11:07:39 Operator: DP
Sample : DIESEL 800ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

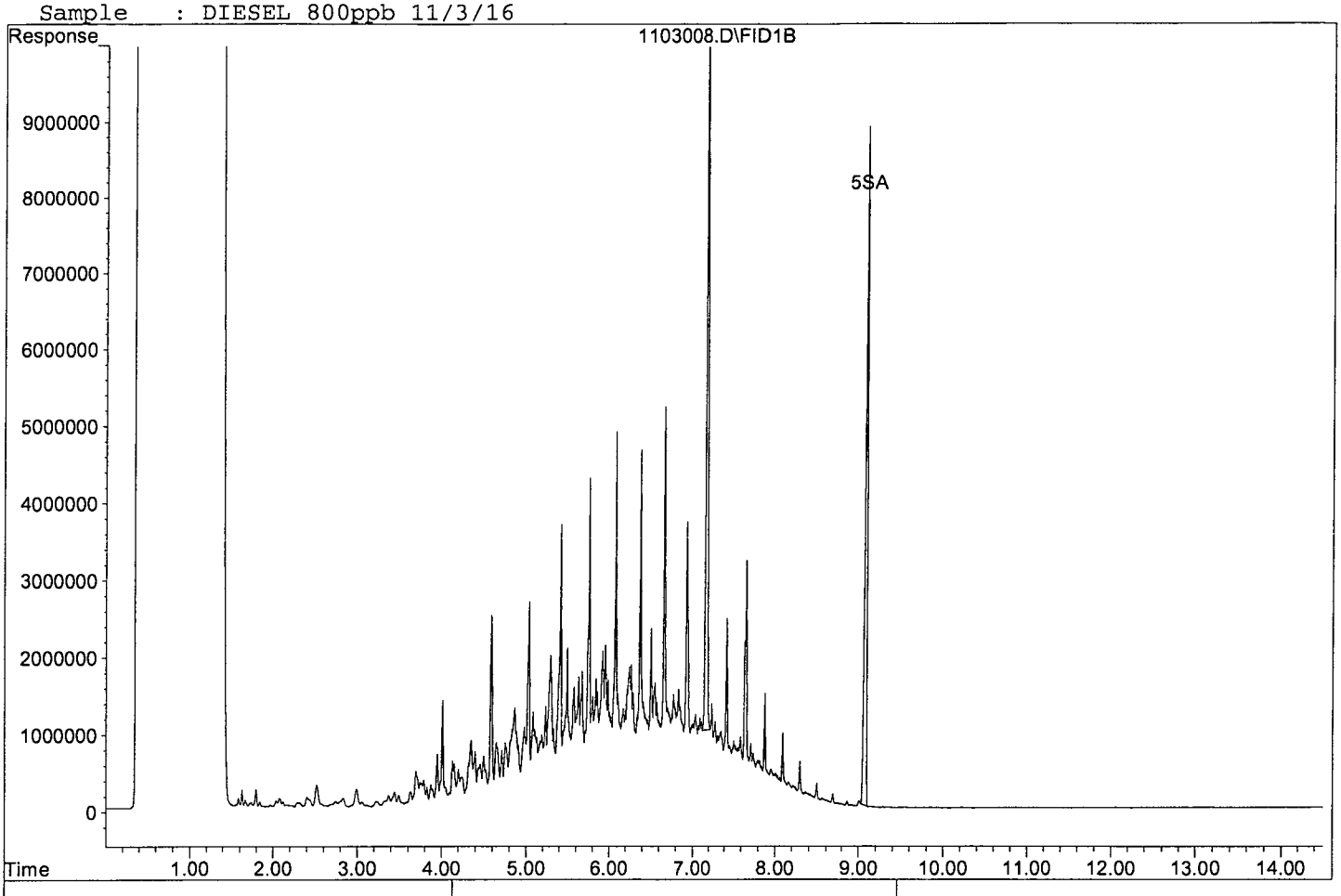
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

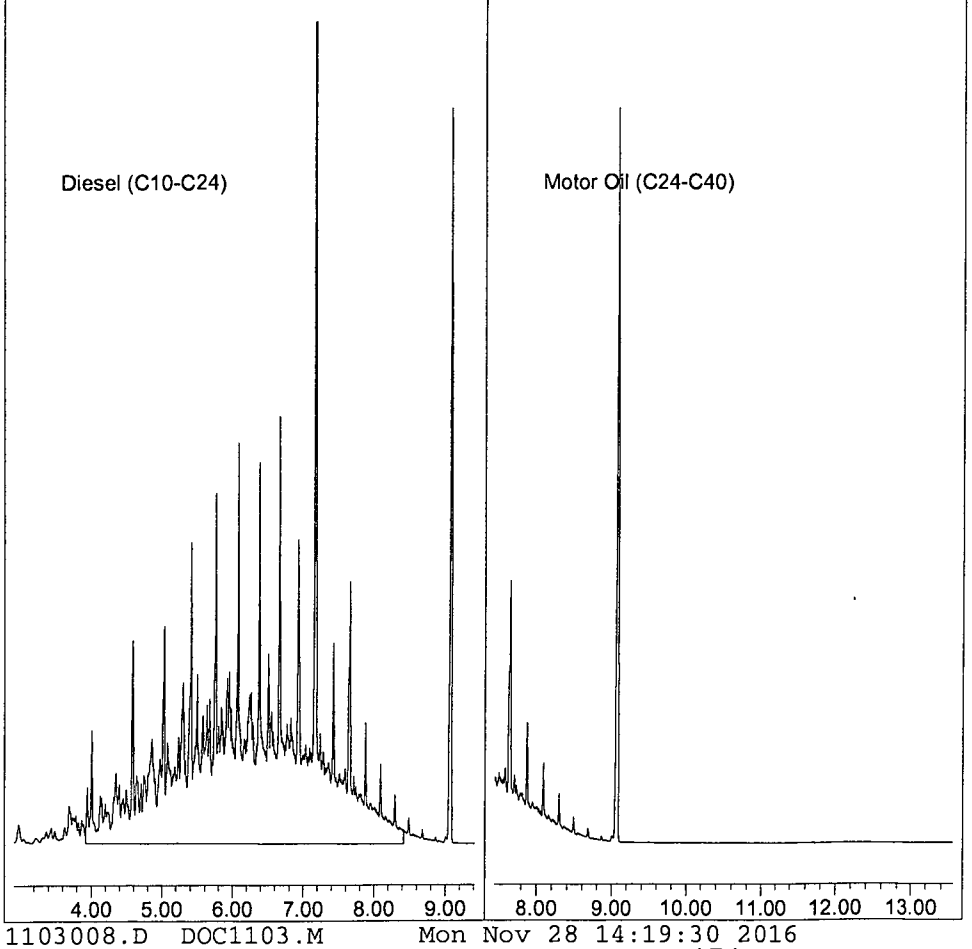
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.17	177261246	31.263	ppb
Surrogate Spike 30.000		Recovery =	104.21%	
5) SA Octacosane(S)	9.08	132563050	37.596	ppb
Surrogate Spike 30.000		Recovery =	125.32%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	2629335633	783.773	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103008.D
Sample : DIESEL 800ppb 11/3/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103009.D Vial: 9
Acq On : 11-3-16 11:28:31 Operator: DP
Sample : DIESEL 1000ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

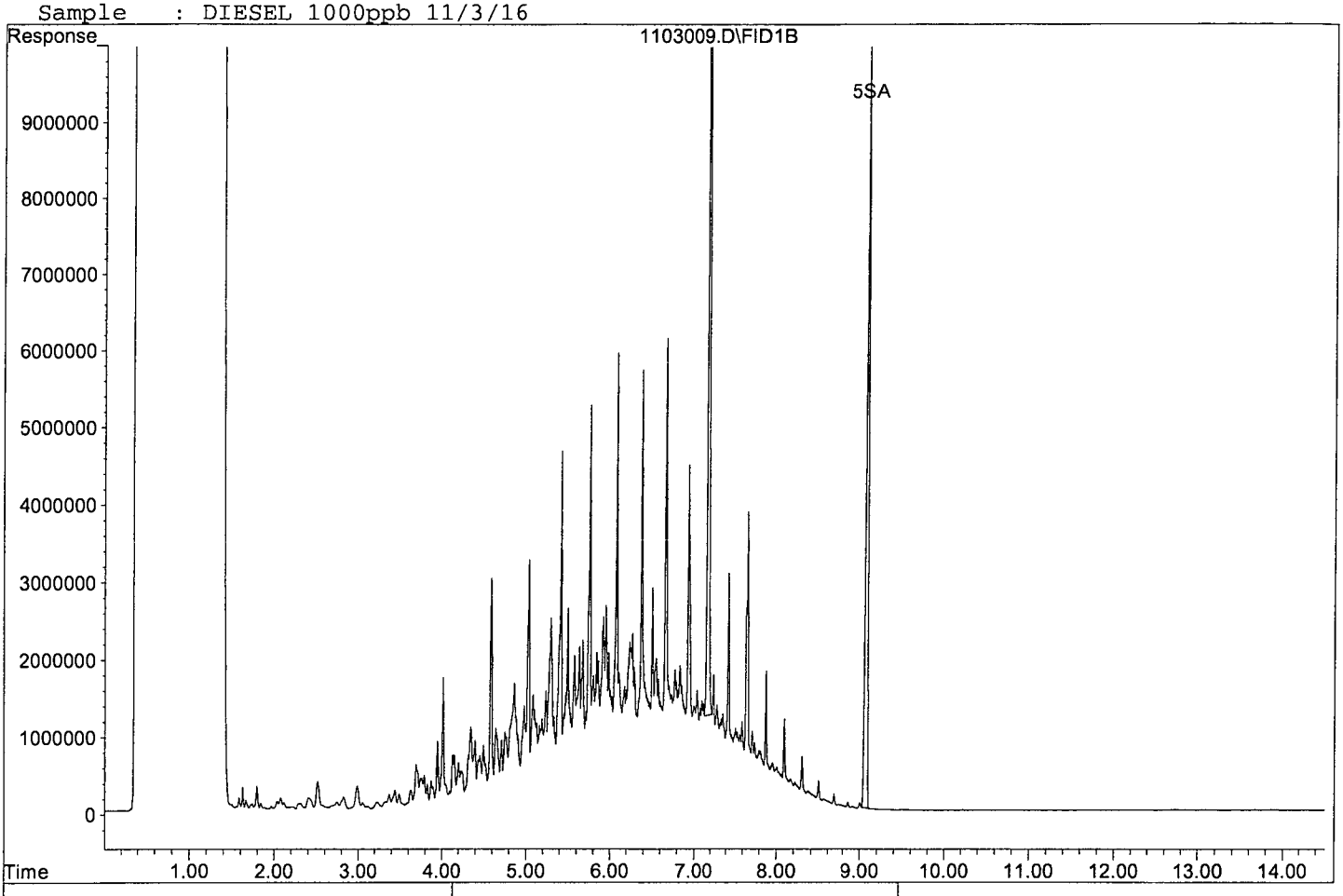
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

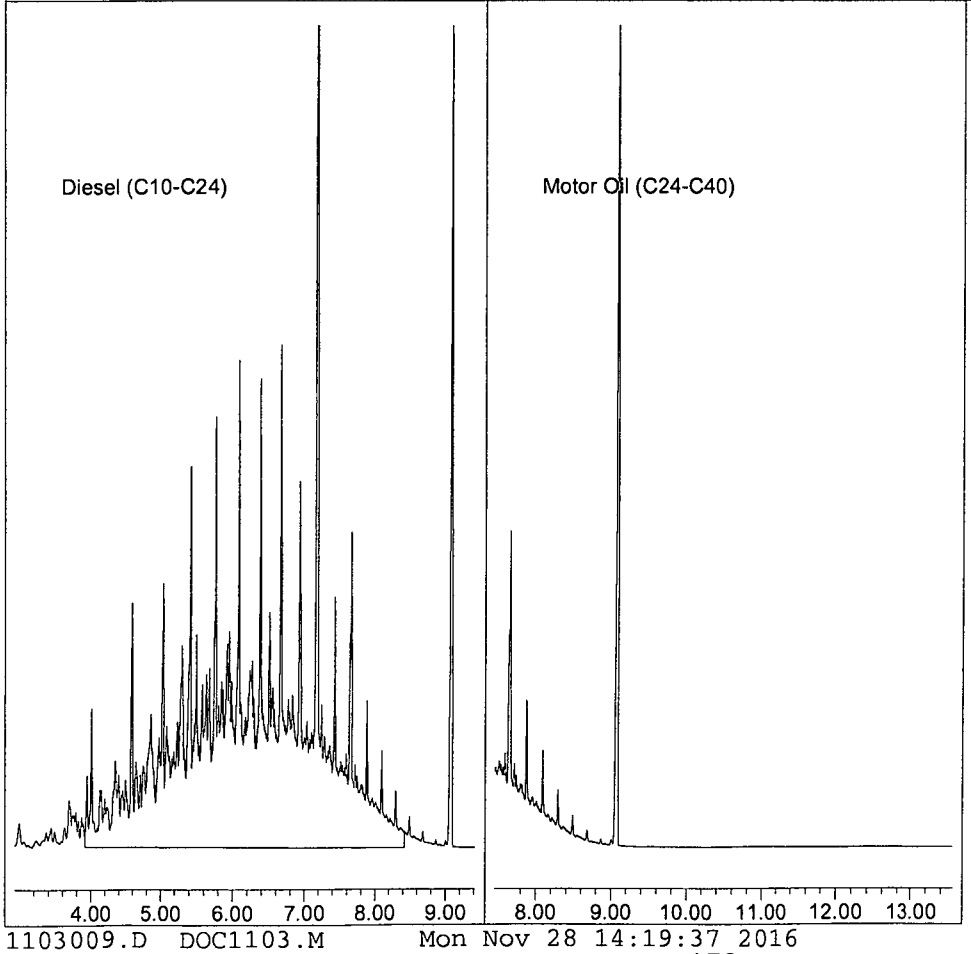
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.18	220584770	38.903 ppb
Surrogate Spike 30.000		Recovery =	129.68%
5) SA Octacosane(S)	9.08	163627822	46.406 ppb
Surrogate Spike 30.000		Recovery =	154.69%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	3251118324	969.119 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103009.D
Sample : DIESEL 1000ppb 11/3/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028002.D Vial: 2
Acq On : 10-28-16 9:07:30 Operator: DP
Sample : MO 20ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:24 2016 Quant Results File: DOC1103.RES

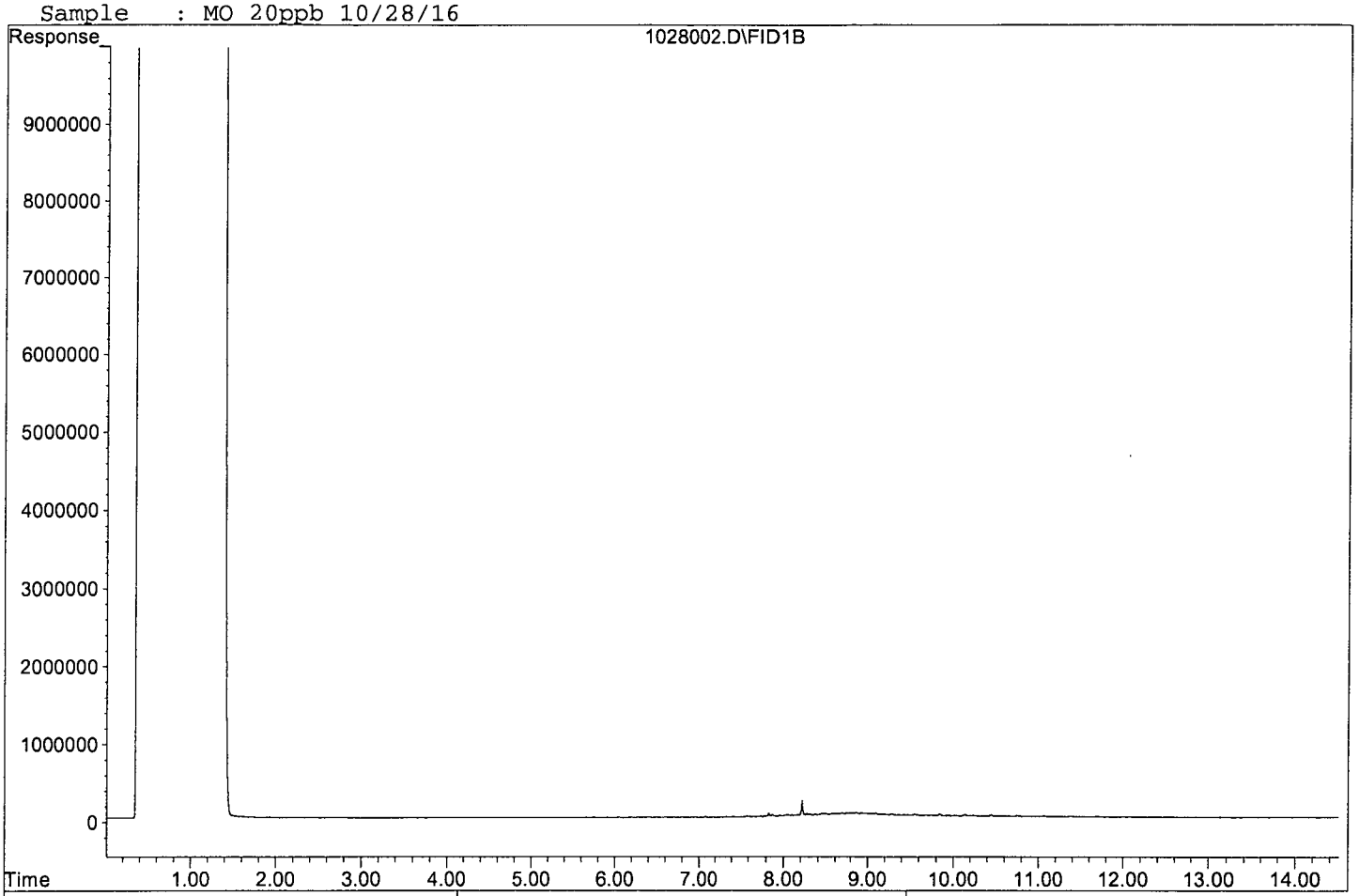
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

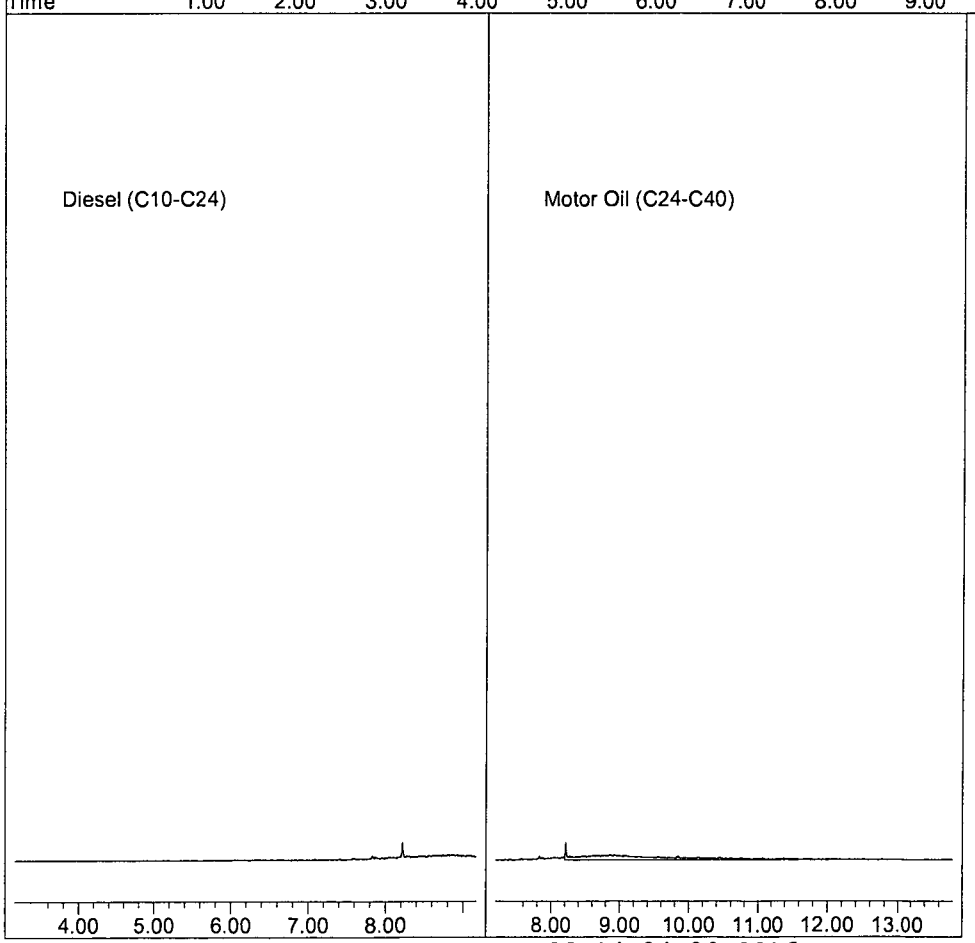
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	62507592	22.438 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028002.D
Sample : MO 20ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028003.D Vial: 3
Acq On : 10-28-16 9:28:13 Operator: DP
Sample : MO 50ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:24 2016 Quant Results File: DOC1103.RES

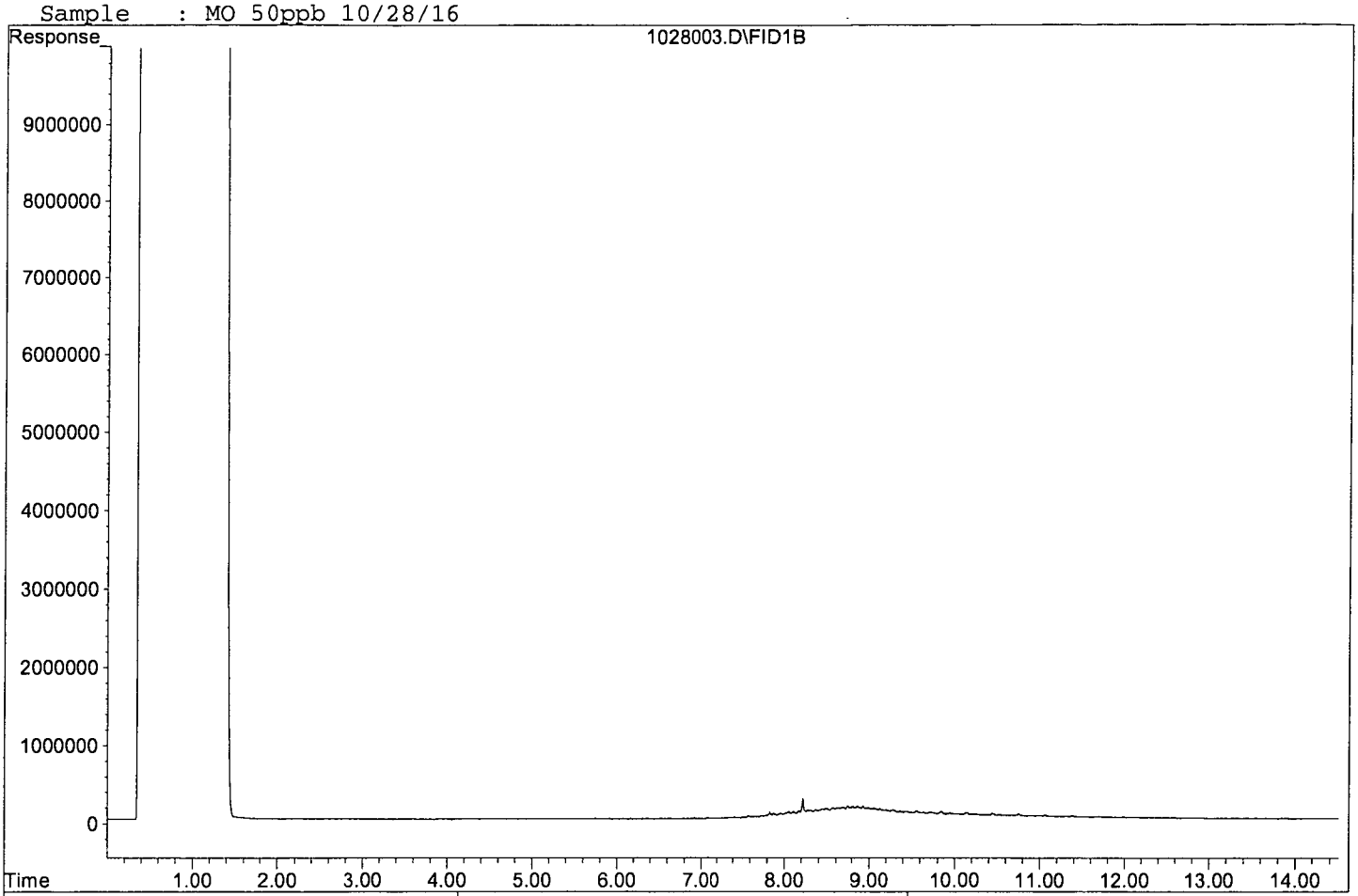
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

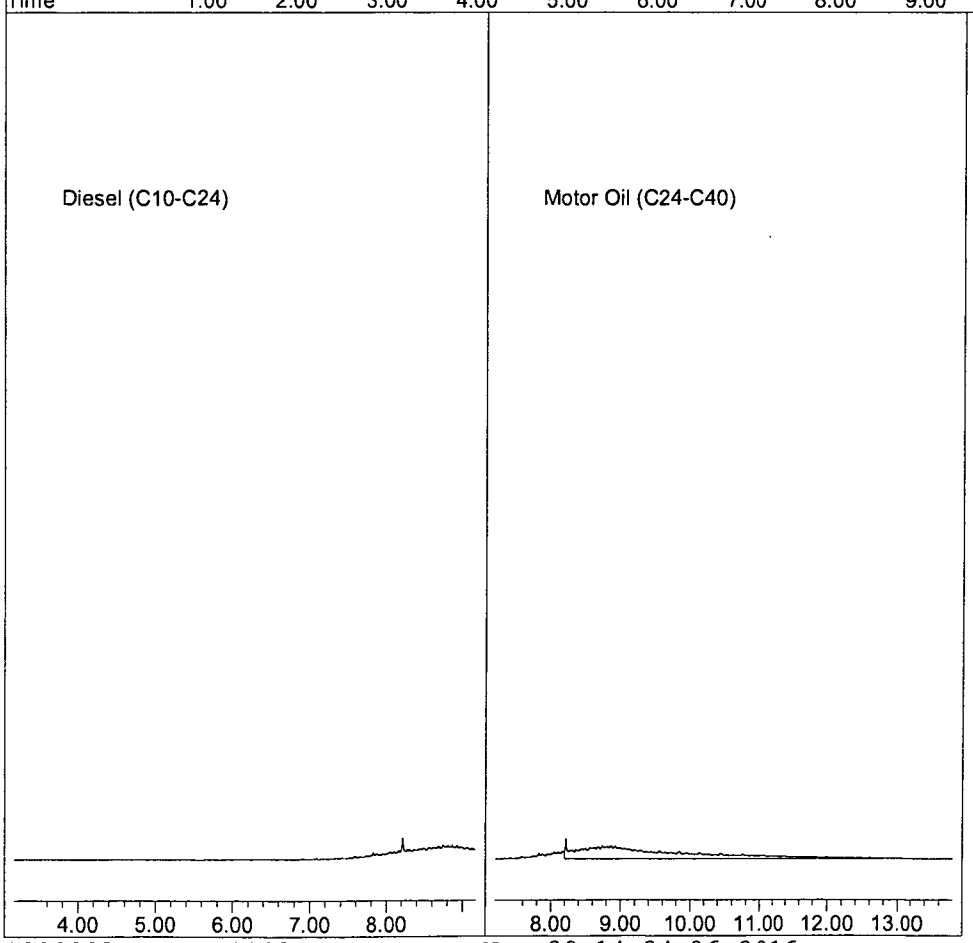
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	160376925	57.571 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028003.D
Sample : MO 50ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028004.D Vial: 4
Acq On : 10-28-16 9:49:06 Operator: DP
Sample : MO 250ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:24 2016 Quant Results File: DOC1103.RES

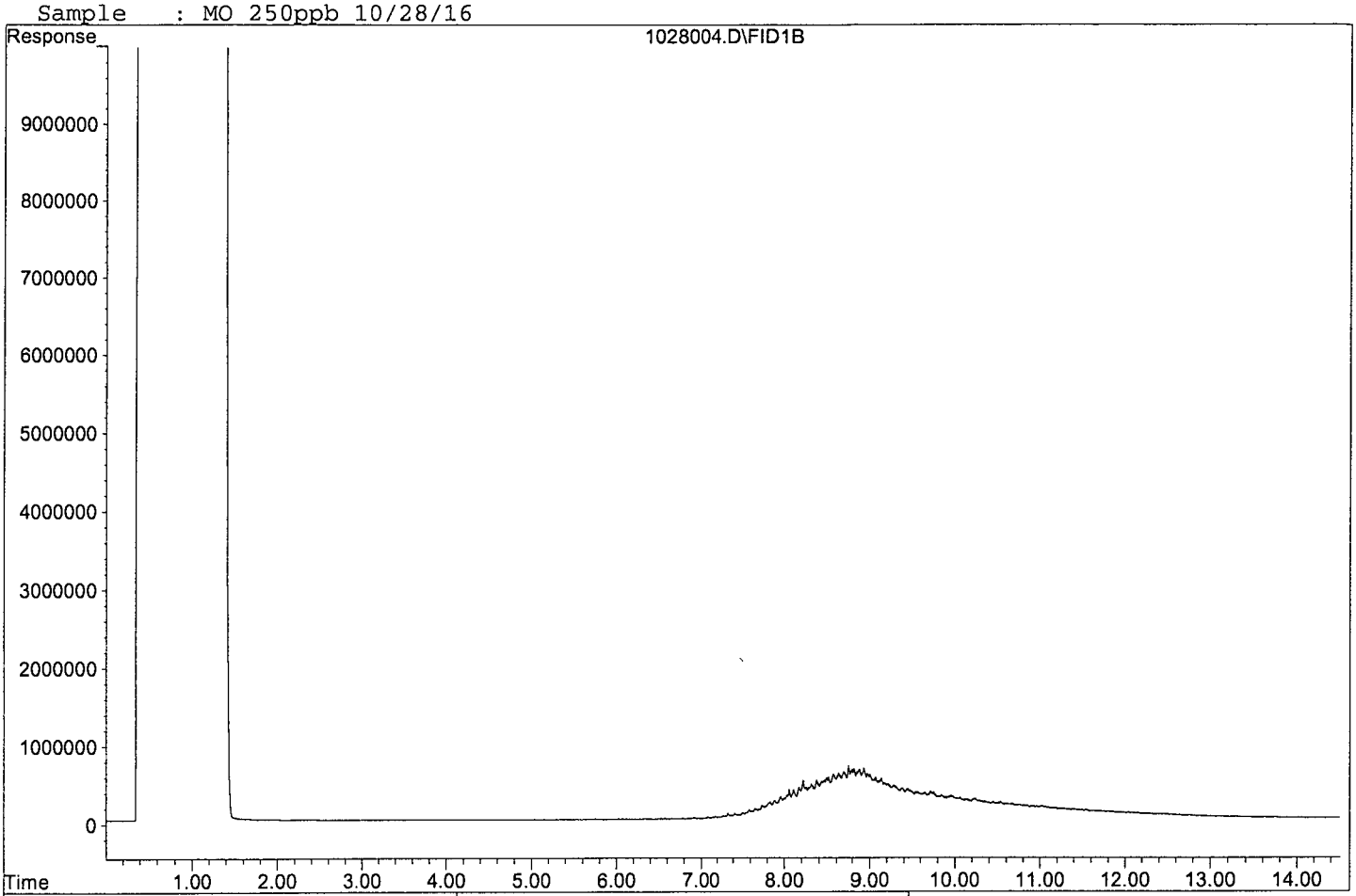
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

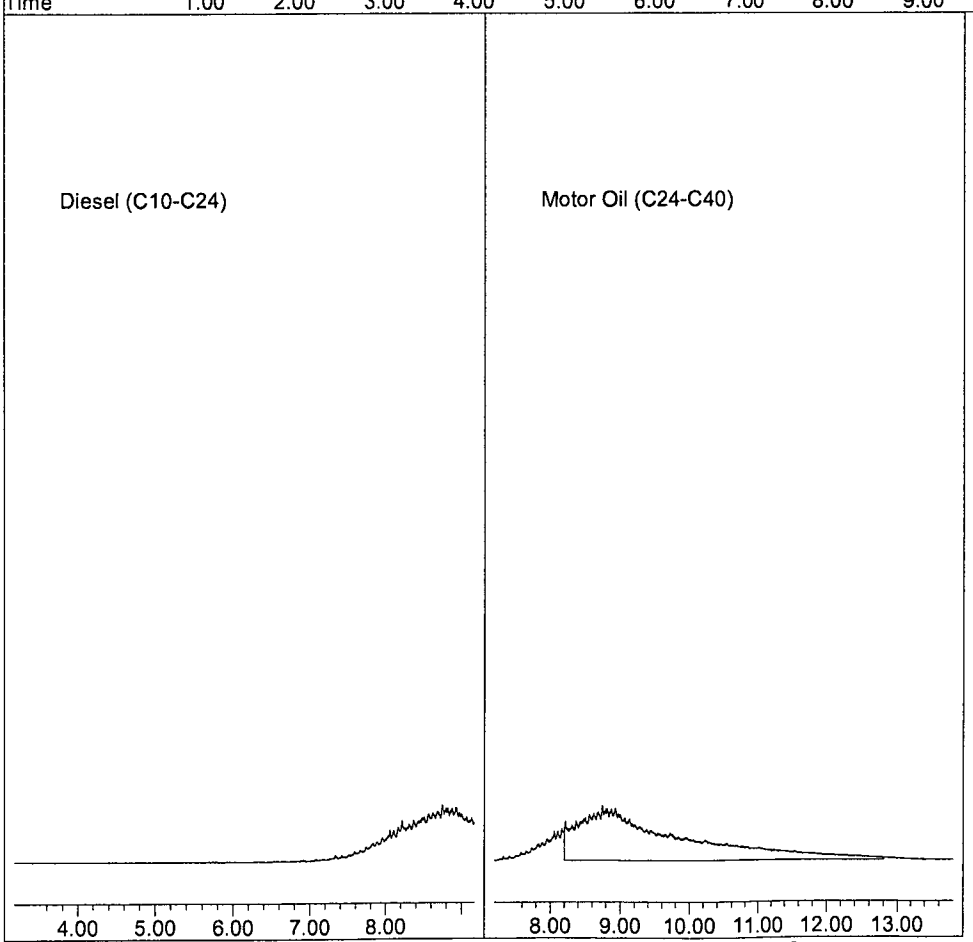
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	641488837	230.275 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028004.D
Sample : MO 250ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028005.D Vial: 5
Acq On : 10-28-16 10:09:58 Operator: DP
Sample : MO 1000ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:25 2016 Quant Results File: DOC1103.RES

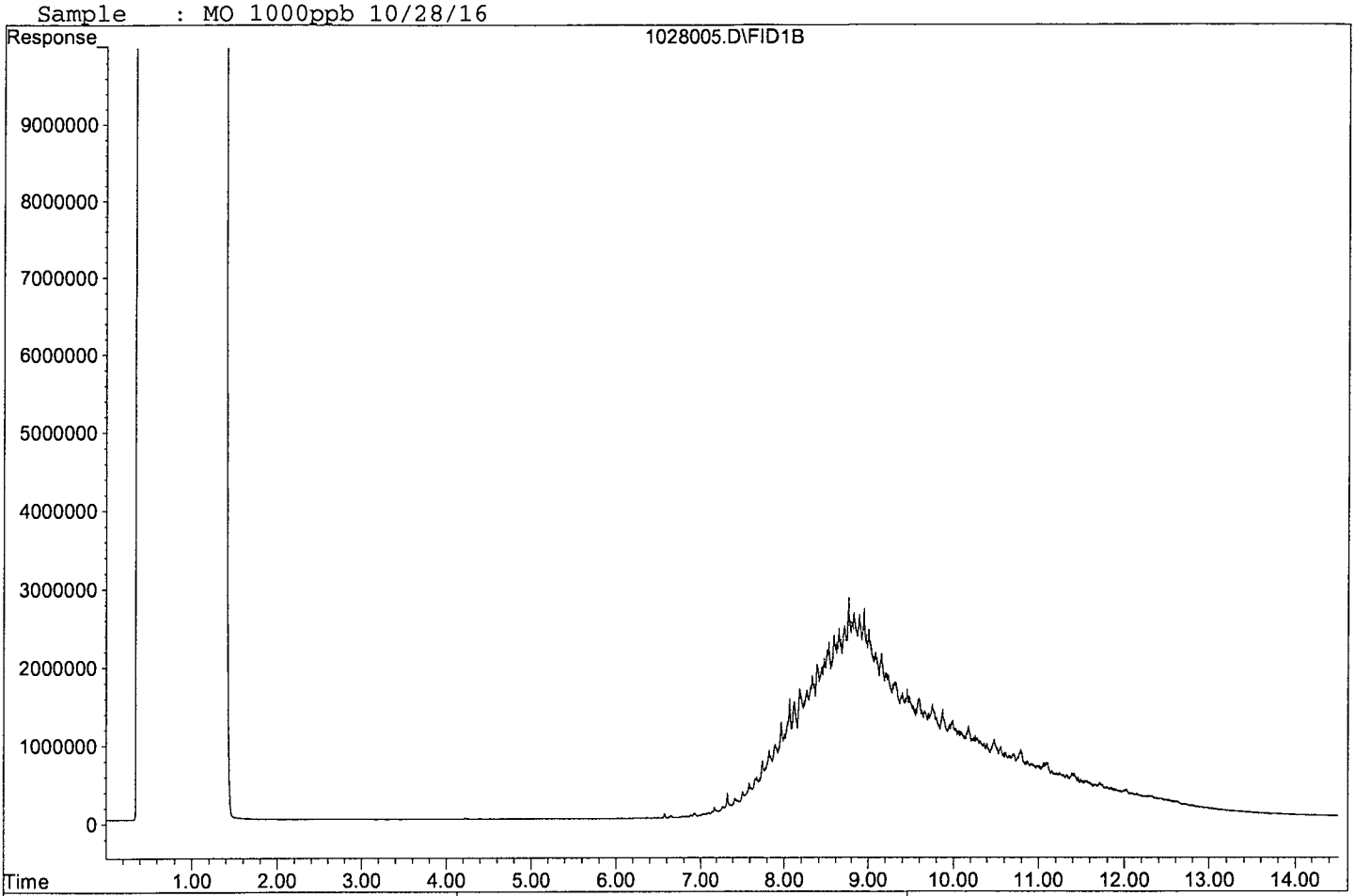
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

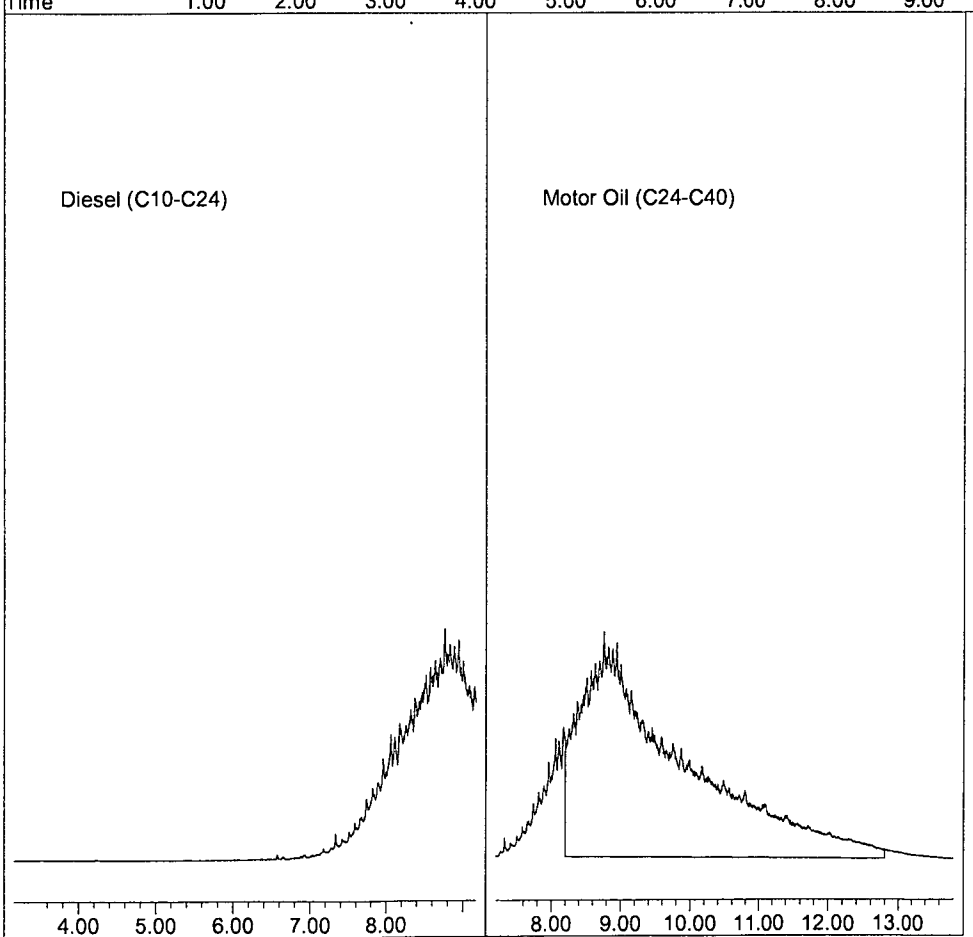
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	2680029704	962.051 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028005.D
Sample : MO 1000ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028006.D Vial: 6
Acq On : 10-28-16 10:30:51 Operator: DP
Sample : MO 1500ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:25 2016 Quant Results File: DOC1103.RES

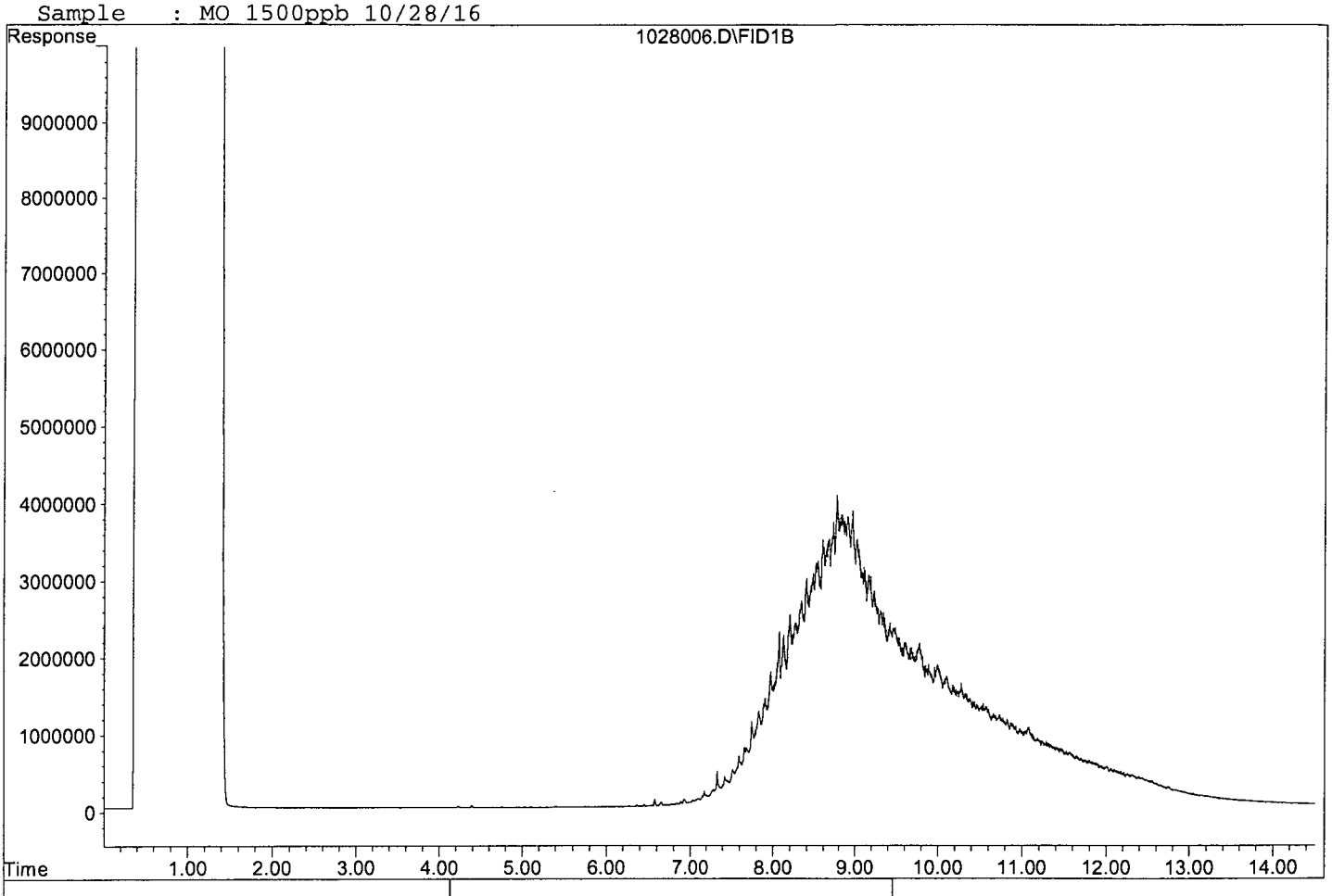
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

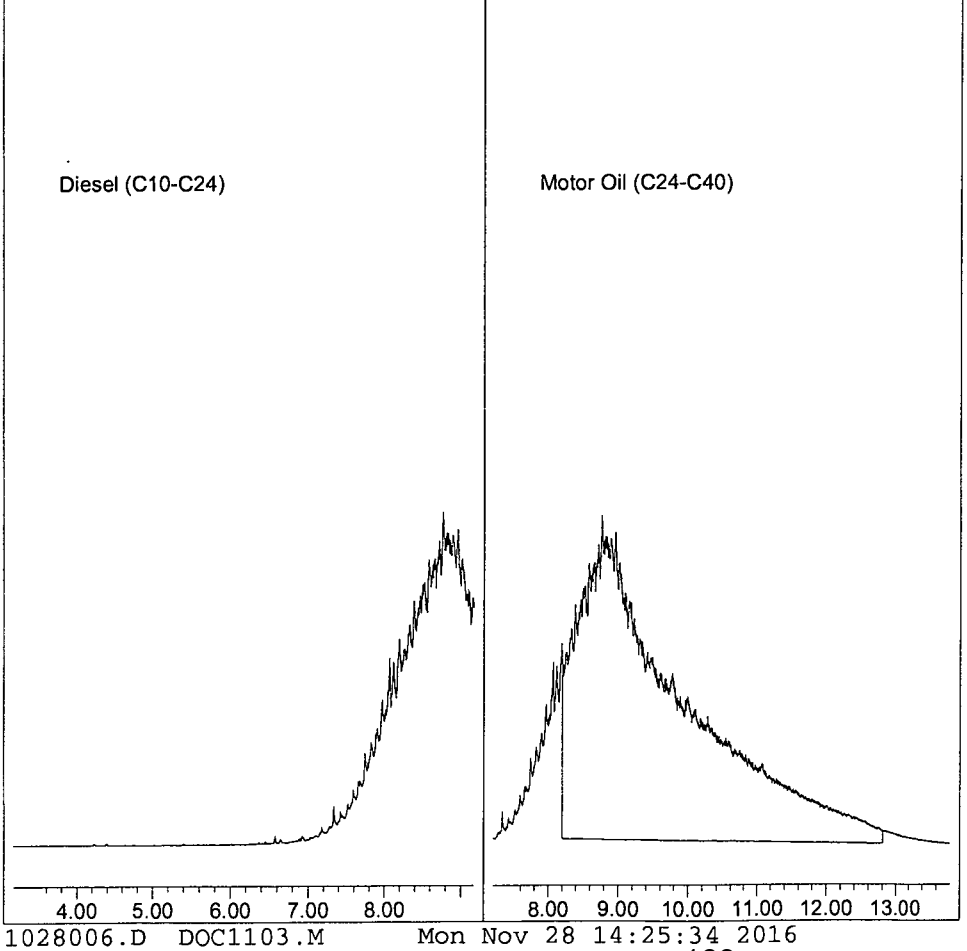
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
Target Compounds				
2) HBTM Motor Oil (C24-C40)	10.50	3965906010	1423.642	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028006.D
Sample : MO 1500ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028007.D Vial: 7
Acq On : 10-28-16 10:51:50 Operator: DP
Sample : MO 2000ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:25 2016 Quant Results File: DOC1103.RES

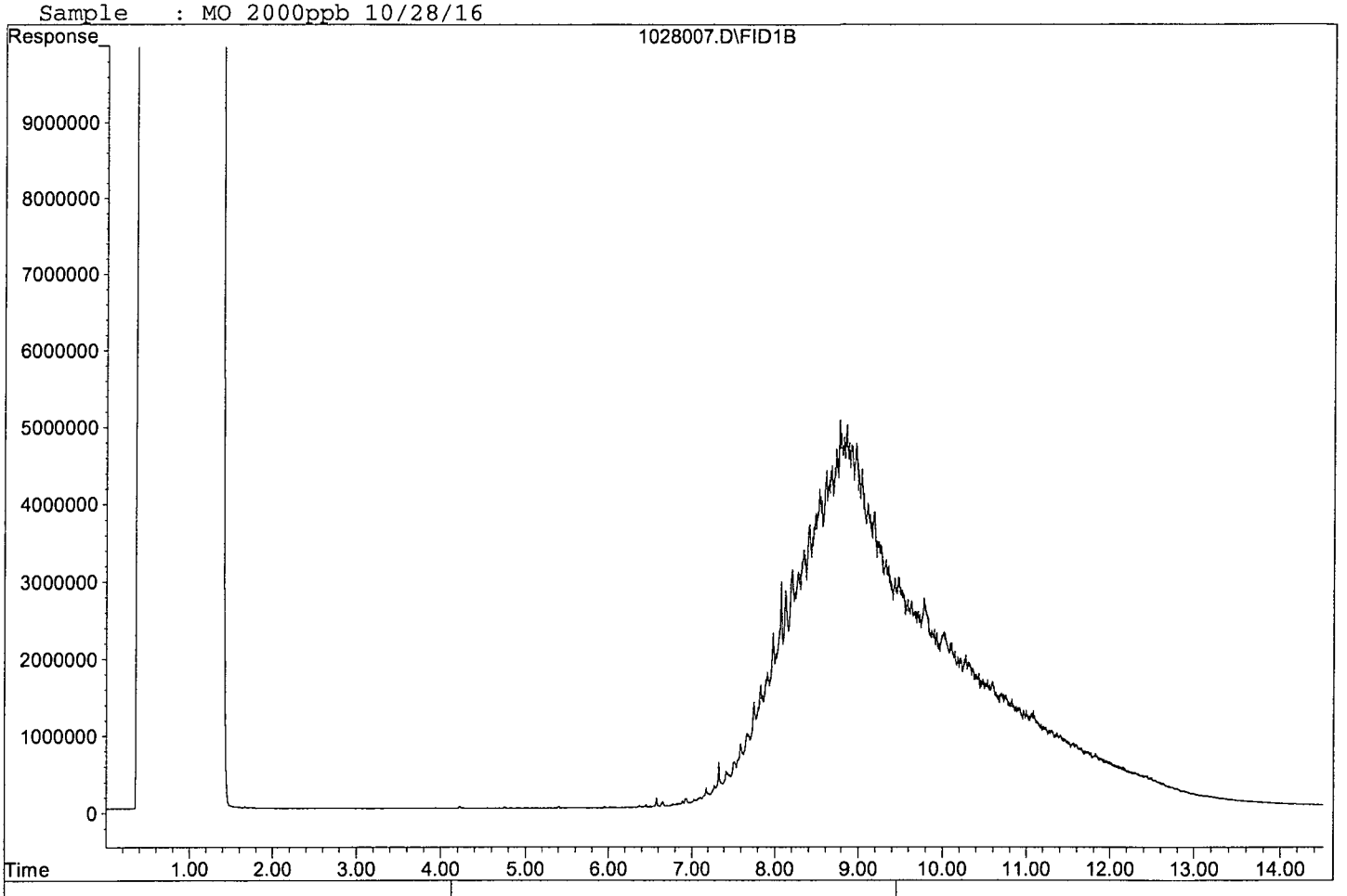
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

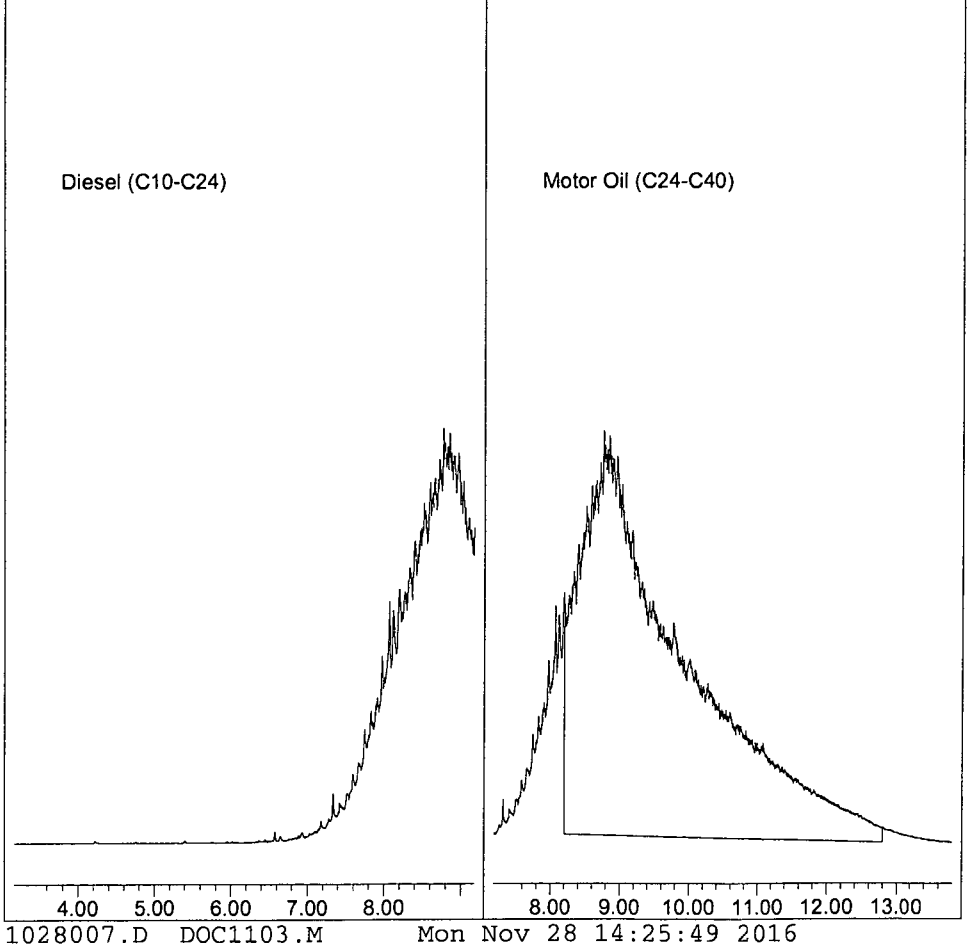
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
Target Compounds				
2) HBTM Motor Oil (C24-C40)	10.50	4983276169	1788.848	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028007.D
Sample : MO 2000ppb 10/28/16





TPH Extractables
DOC1103

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/03/16
Instrument: Apollo
Initial Cal. Date: 11/03/16
Data File: 1103012.D (Diesel) 1028008.D (Motor Oil)

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C24)	1727130	1667670	3.4	HATM	
2	HBTM	Motor Oil (C24-C40)	1392870	1239910	11	HBTM	
3							
4							
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35							
36							
37							
38							
39							
40							
		Average			7.2		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103012.D Vial: 12
Acq On : 11-3-16 13:25:11 Operator: DP
Sample : DIESEL-SS 400ppb 8/1/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 15:21 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

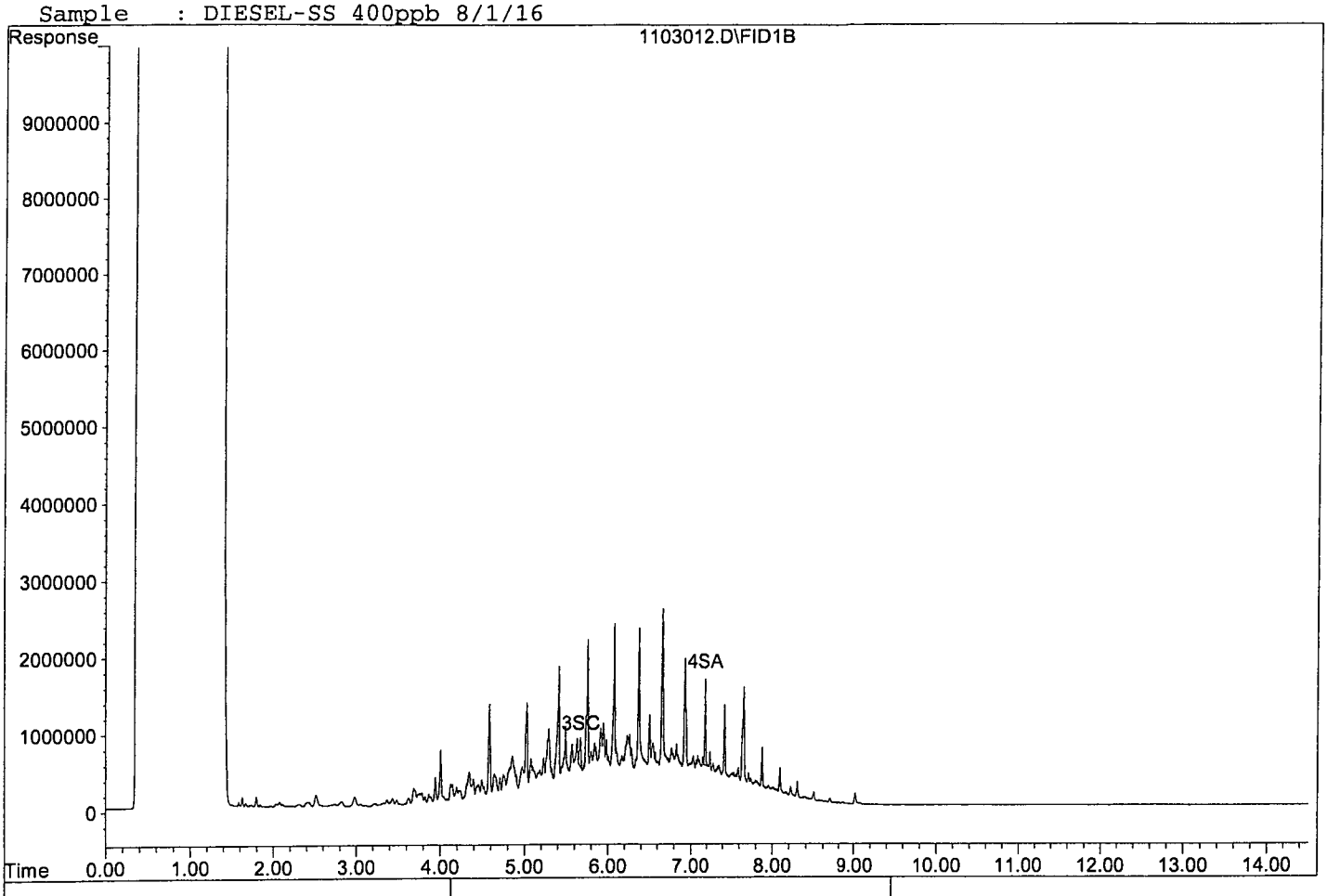
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SC Decanoic Acid(S)	5.67	4681185	3.827 ppb
Surrogate Spike 48.000	Recovery =		7.97%
4) SA Ortho-Terphenyl(S)	7.18	9886456	2.120 ppb
Surrogate Spike 30.000	Recovery =		7.07%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	1345831567	389.615 ppb
2) HBTM Motor Oil (C24-C40)	10.50	43170153	15.497 ppb

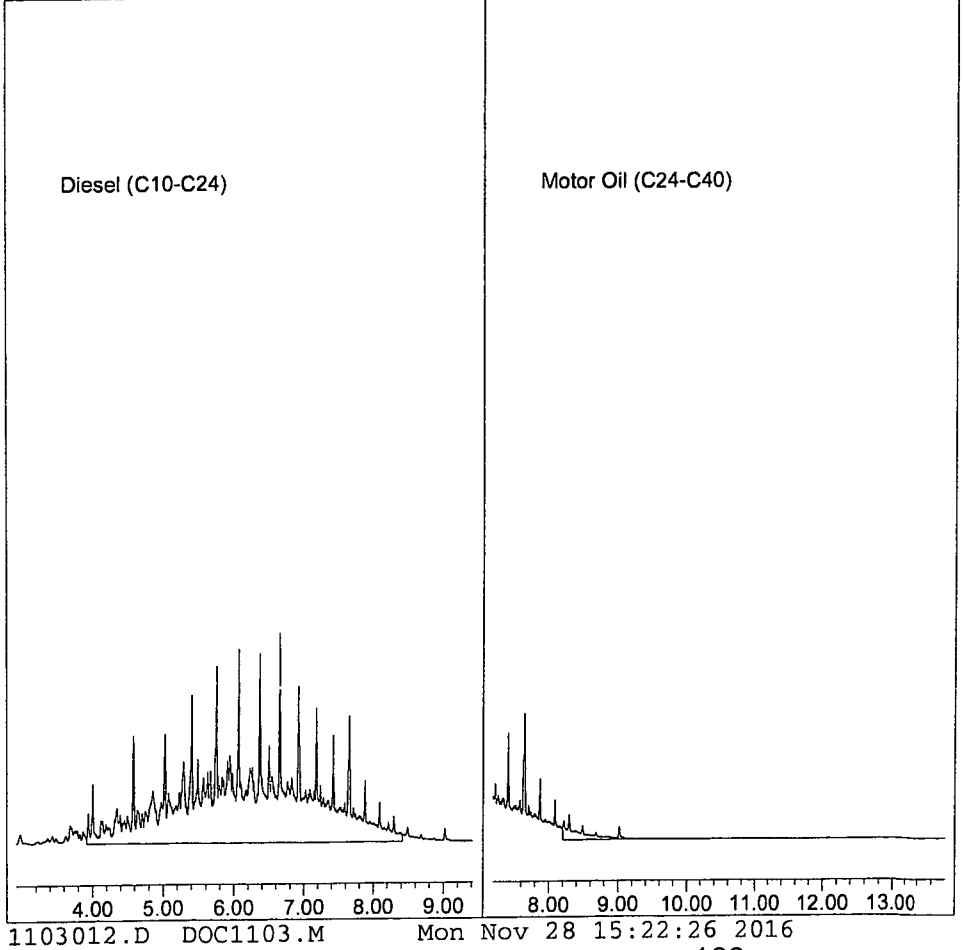
algorithm check: $\frac{1345831567 \times 1}{1727130 \times 2} = 389.6150165$

D.P. 11/28/16

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103012.D
Sample : DIESEL-SS 400ppb 8/1/16





1103012.D DOC1103.M Mon Nov 28 15:22:26 2016

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161028\1028008.D Vial: 8
Acq On : 10-28-16 11:12:44 Operator: DP
Sample : MO SS 1000ppb 7/6/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 15:22 2016 Quant Results File: DOC1103.RES

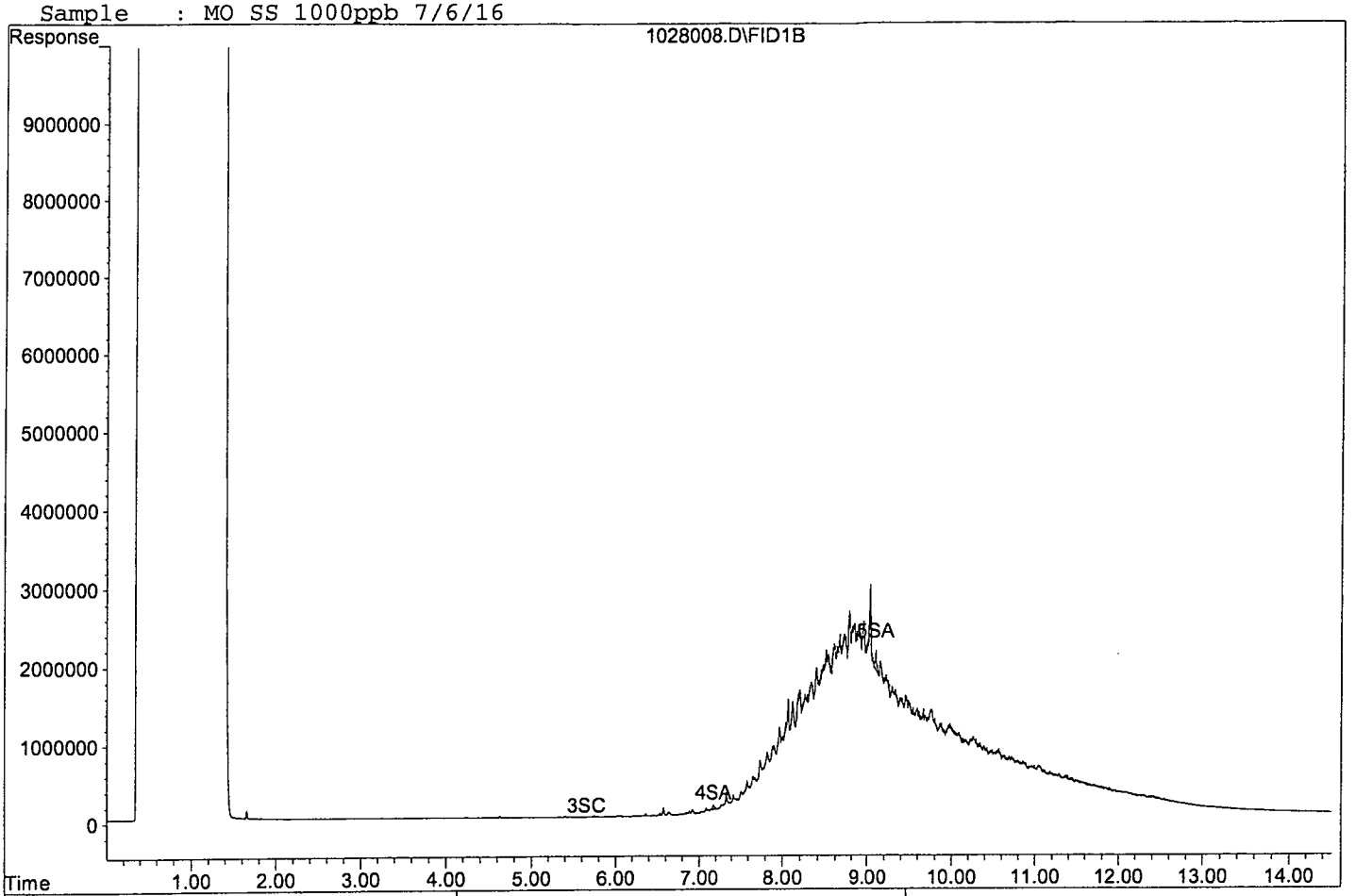
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

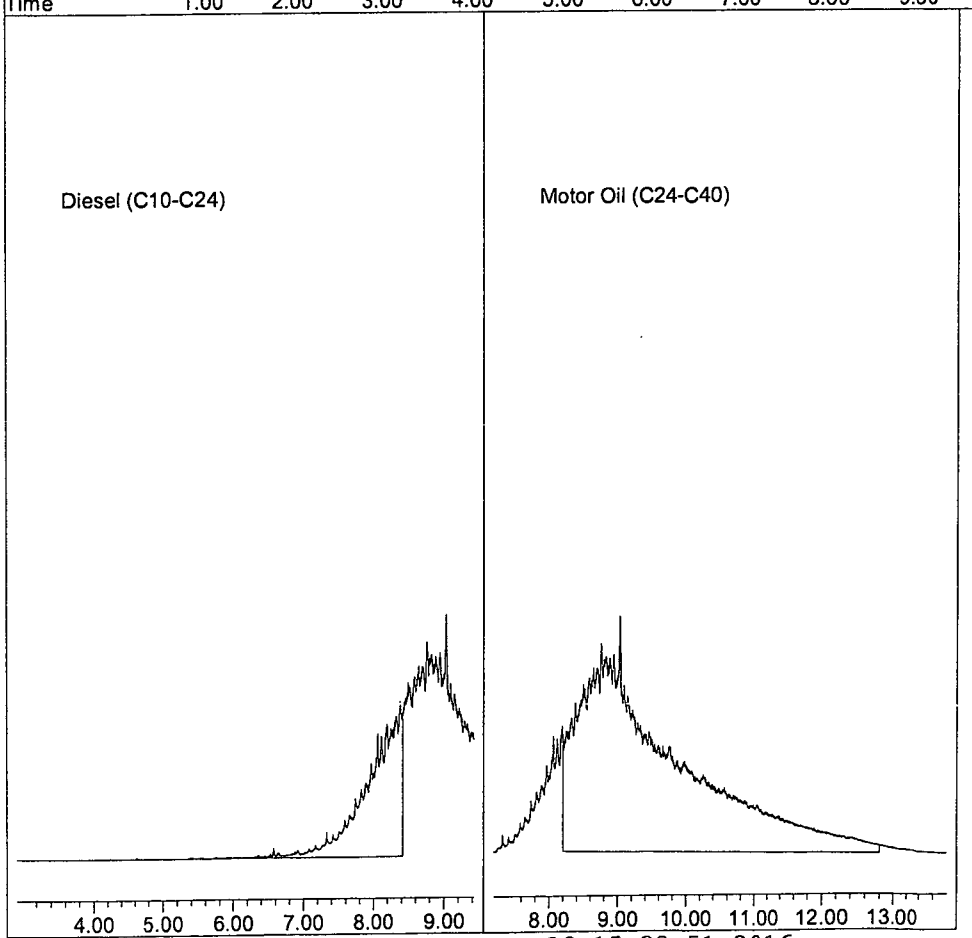
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SC Decanoic Acid(S)	5.65	6816	0.006 ppb
Surrogate Spike 48.000	Recovery =		0.01%
4) SA Ortho-Terphenyl(S)	7.17	747984	0.160 ppb
Surrogate Spike 30.000	Recovery =		0.53%
5) SA Octacosane(S)	9.09	2492290	0.712 ppb
Surrogate Spike 30.000	Recovery =		2.37%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	603419098	174.688 ppb
2) HBTM Motor Oil (C24-C40)	10.50	2511616588	901.596 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028008.D
Sample : MO SS 1000ppb 7/6/16





TPH Extractables
DOC1103

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/18/17
Instrument: Apollo
Initial Cal. Date: 10/19/16
Data File: 118002-3.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1727130	1690890	2.1	HATM	
2	HBTM	Motor Oil (C24-C40)	1392870	1240180	11	HBTM	
3							
4							
5							
6							
7							
8							
9							
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38							
39							
40							
		Average			6.6		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\170118\118002.D Vial: 2
Acq On : 1-18-17 17:03:03 Operator: DP
Sample : CCV: MO 1000 ppb 1/12/17 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Jan 18 17:25 2017 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\170118\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

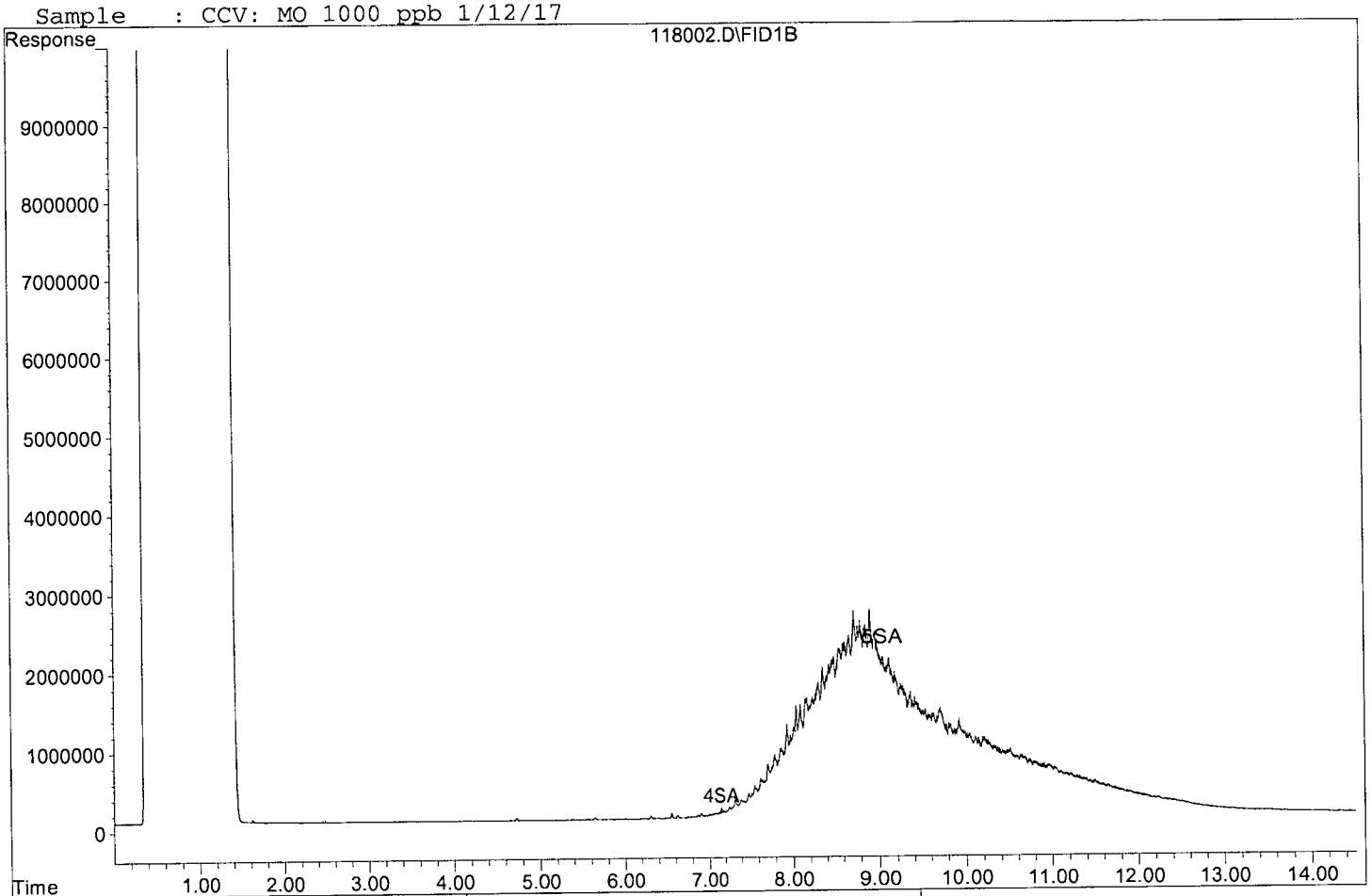
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

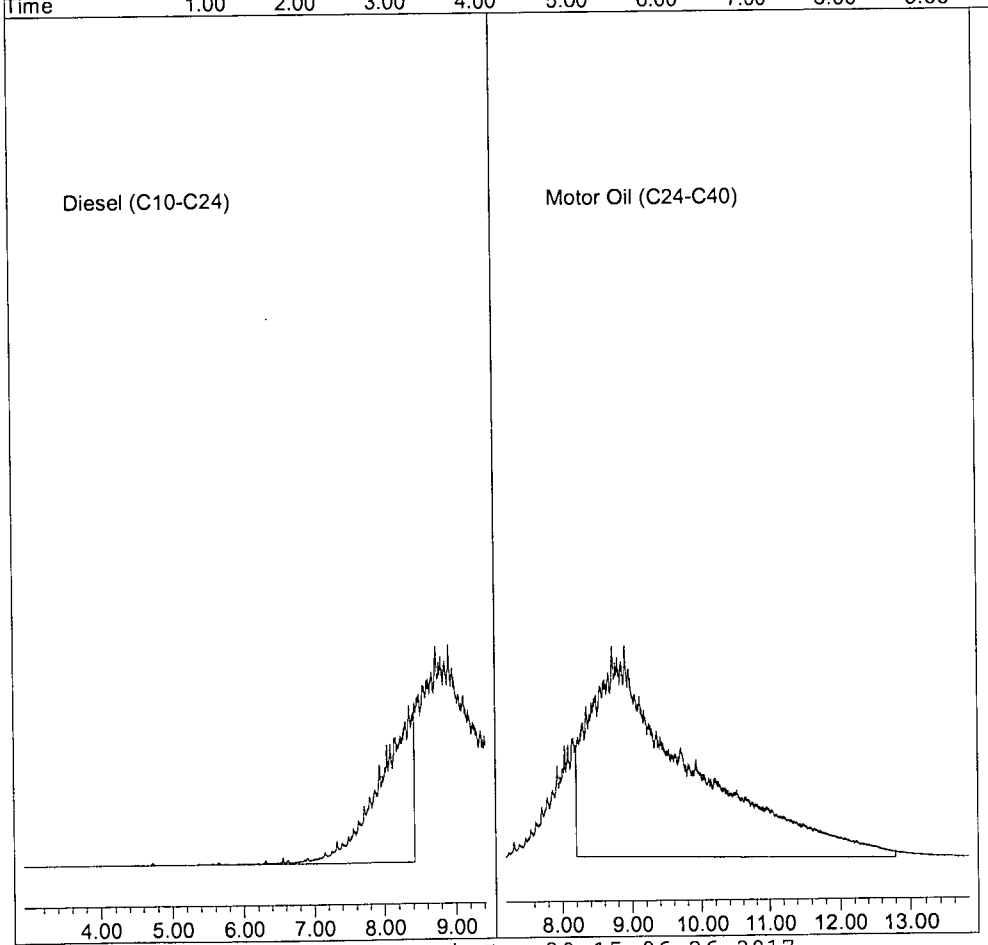
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.15	839715	0.180	ppb
Surrogate Spike 30.000	Recovery	=	0.60%	
5) SA Octacosane(S)	9.04	714626	0.204	ppb
Surrogate Spike 30.000	Recovery	=	0.68%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	616061959	178.348	ppb
2) HBTM Motor Oil (C24-C40)	10.50	2480357761	890.375	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\170118\118002.D
Sample : CCV: MO 1000 ppb 1/12/17





118002.D DOC1103.M Fri Jan 20 15:06:26 2017

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\170118\118003.D Vial: 3
Acq On : 1-18-17 17:23:19 Operator: DP
Sample : CCV: Diesel 400 ppb 1/12/17 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jan 19 10:08 2017 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\170118\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

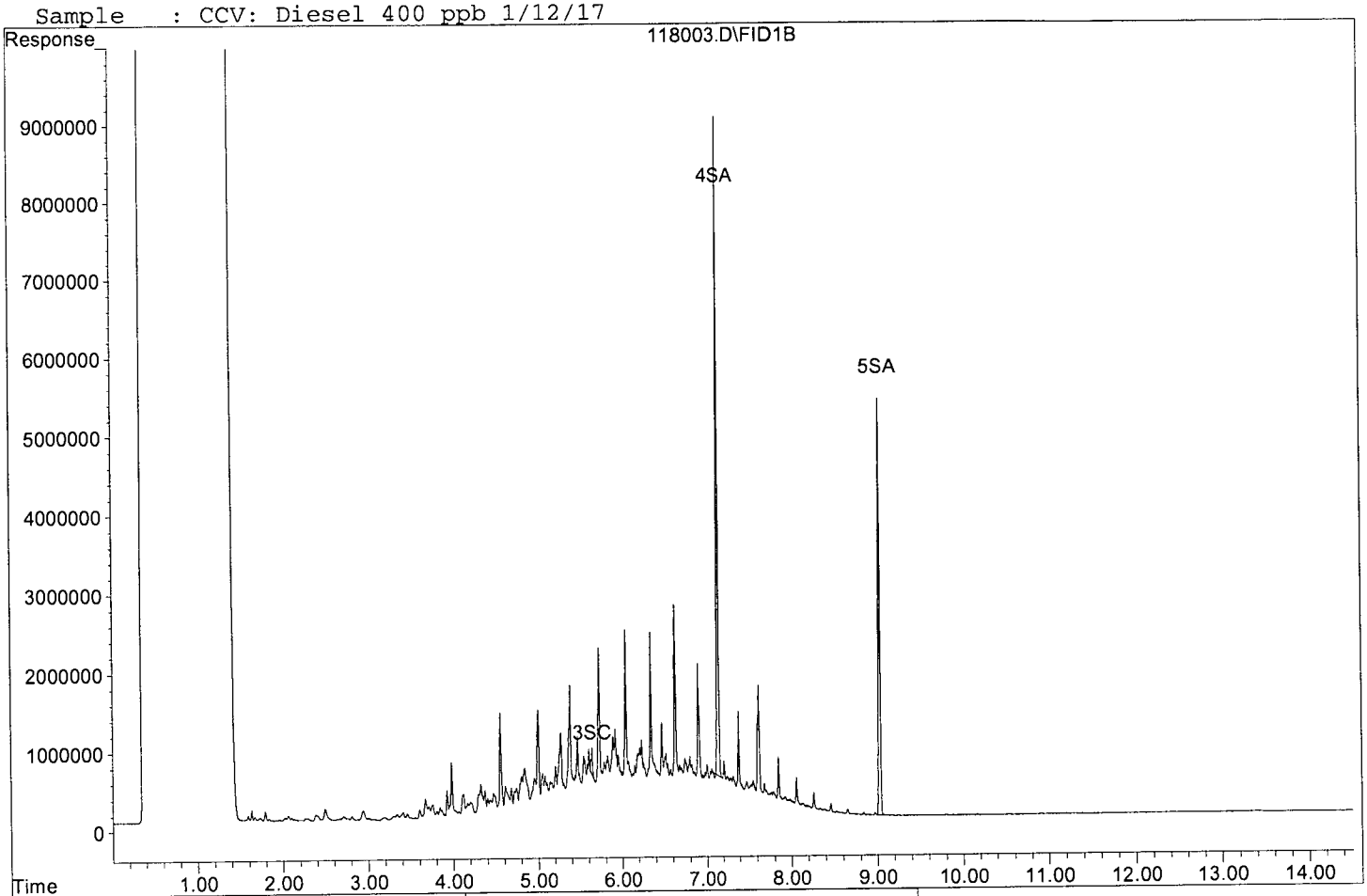
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

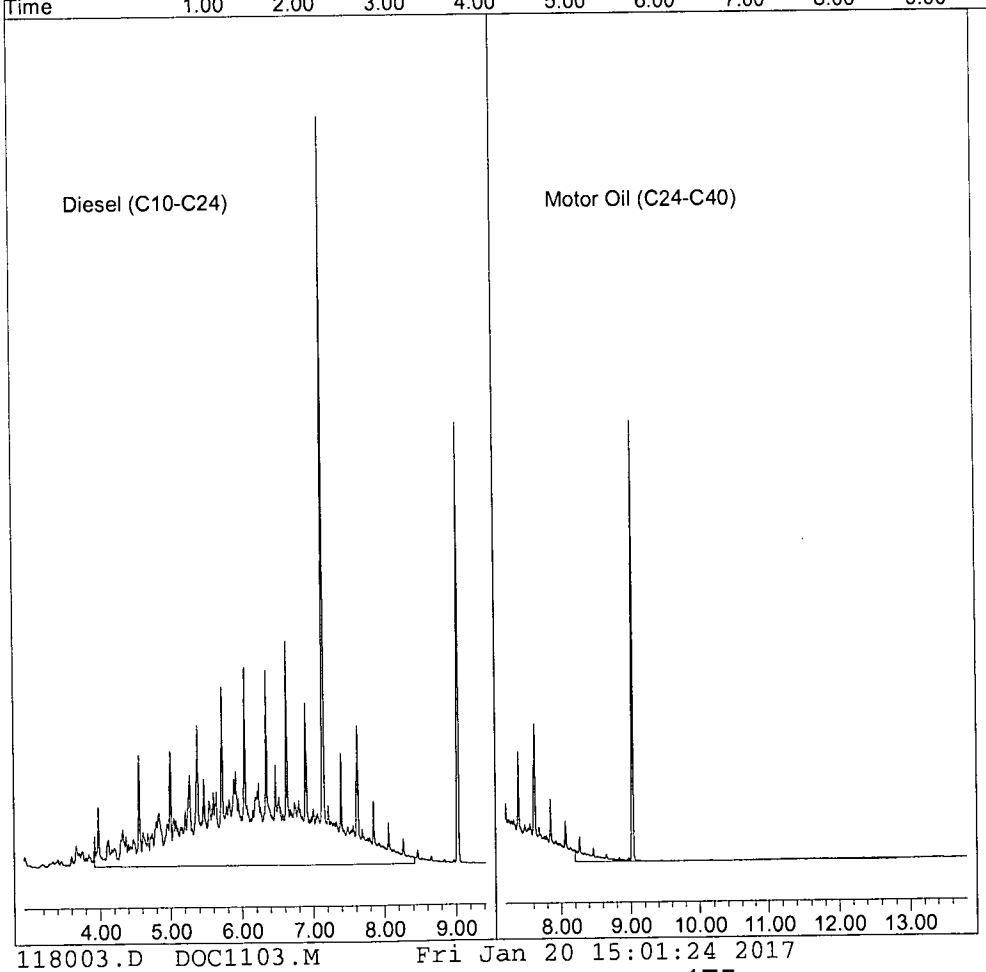
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SC Decanoic Acid(S)	5.64	3680445	3.009	ppb
Surrogate Spike 48.000	Recovery =		6.27%	
4) SA Ortho-Terphenyl(S)	7.14	89551036	19.199	ppb
Surrogate Spike 30.000	Recovery =		64.00%	
5) SA Octacosane(S)	9.03	67643122	19.328	ppb
Surrogate Spike 30.000	Recovery =		64.43%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	1352708558	391.606	ppb
2) HBTM Motor Oil (C24-C40)	10.50	41098206	14.753	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\170118\118003.D
Sample : CCV: Diesel 400 ppb 1/12/17





118003.D DOC1103.M Fri Jan 20 15:01:24 2017

TPH Extractables
DOC1103

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/18/17
Instrument: Apollo
Initial Cal. Date: 10/19/16
Data File: 118021-22.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1727130	1677120	2.9	HATM	
2	HBTM	Motor Oil (C24-C40)	1392870	1250970	10	HBTM	
3							
4							
5							
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36							
37							
38							
39							
40							
		Average			6.5		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\170118\118021.D Vial: 21
Acq On : 1-18-17 23:32:28 Operator: DP
Sample : CCV: Diesel 400 ppb 1/12/17 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jan 19 10:16 2017 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\170118\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

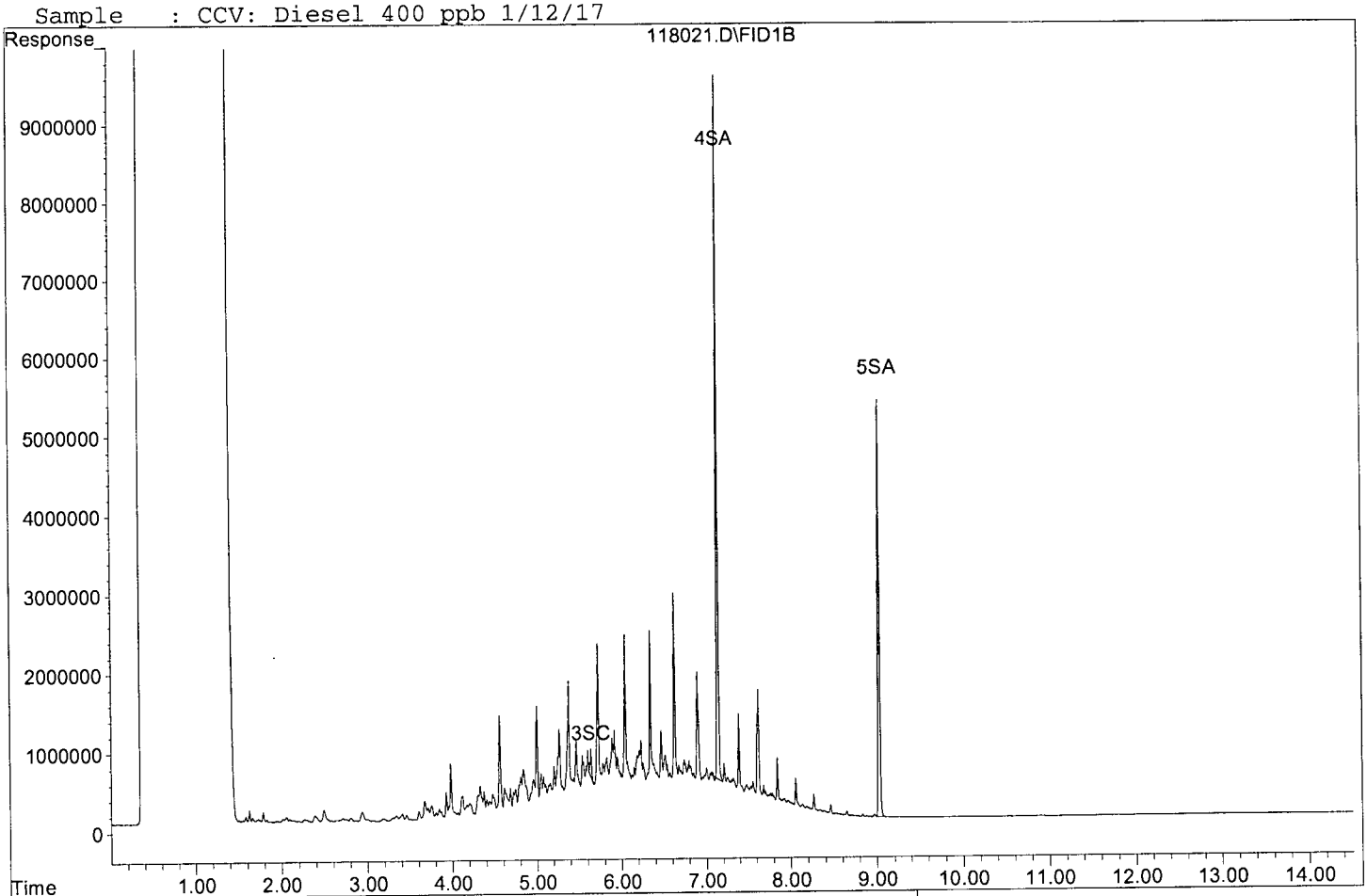
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

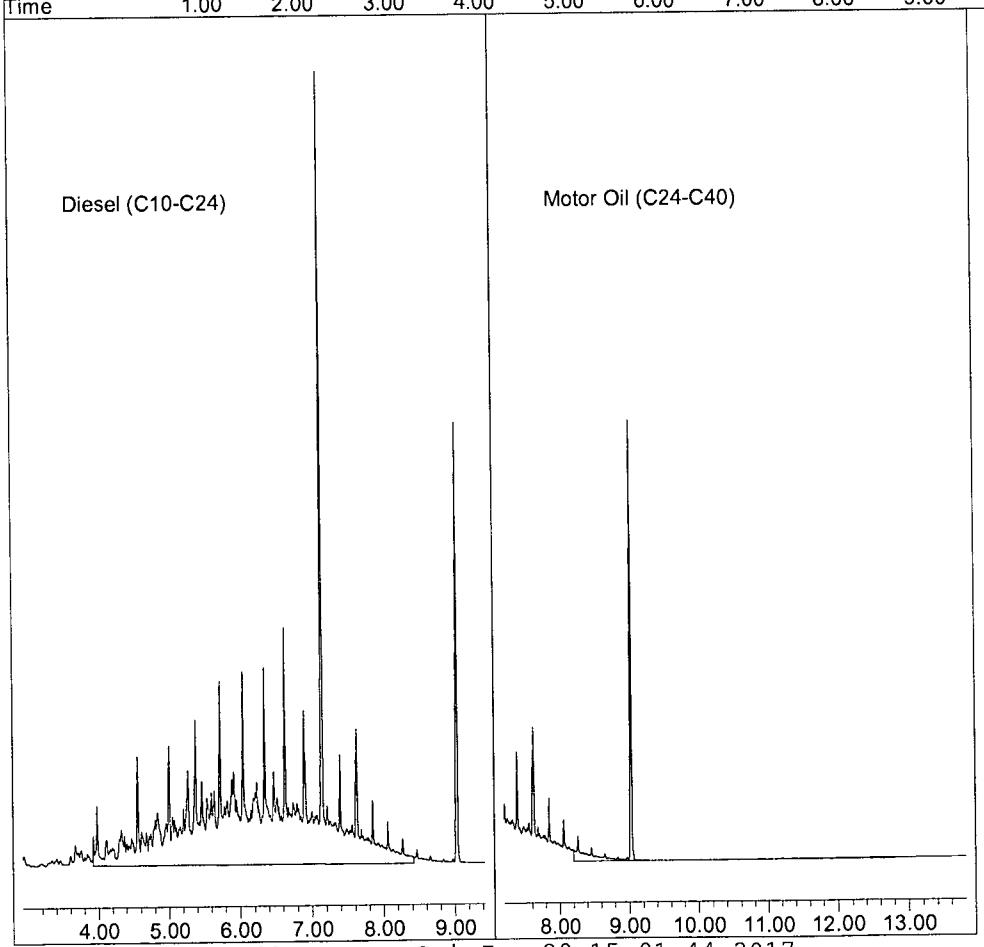
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SC Decanoic Acid(S)	5.64	3915854	3.201 ppb
Surrogate Spike 48.000	Recovery =		6.67%
4) SA Ortho-Terphenyl(S)	7.14	90327517	19.365 ppb
Surrogate Spike 30.000	Recovery =		64.55%
5) SA Octacosane(S)	9.03	67916258	19.406 ppb
Surrogate Spike 30.000	Recovery =		64.69%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	1341692349	388.417 ppb
2) HBTM Motor Oil (C24-C40)	10.50	38455612	13.804 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\170118\118021.D
Sample : CCV: Diesel 400 ppb 1/12/17





118021.D DOC1103.M Fri Jan 20 15:01:44 2017

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\170118\118022.D Vial: 22
Acq On : 1-18-17 23:52:58 Operator: DP
Sample : CCV: MO 1000 ppb 1/12/17 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Jan 19 10:09 2017 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\170118\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

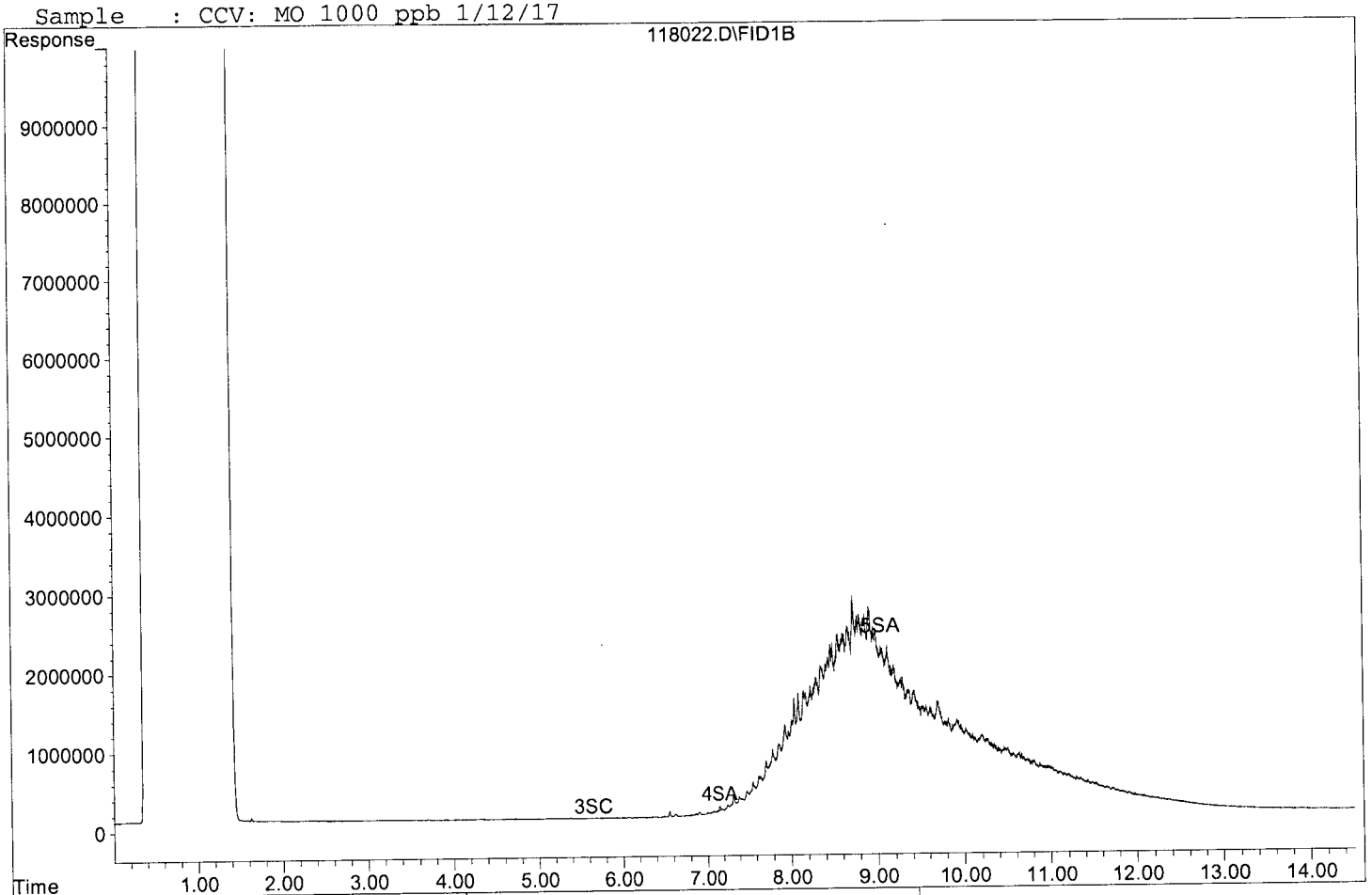
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

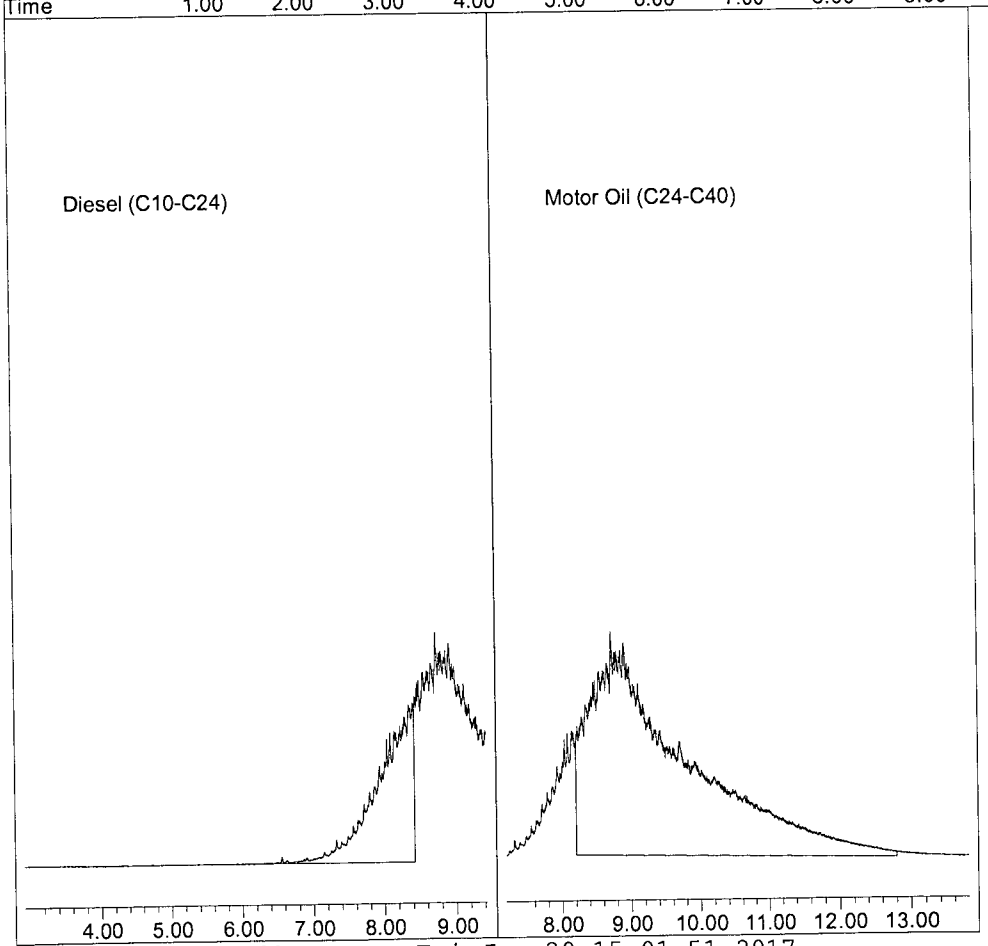
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SC Decanoic Acid(S)	5.64	6826	0.006 ppb
Surrogate Spike 48.000	Recovery	=	0.01%
4) SA Ortho-Terphenyl(S)	7.15	573167	0.123 ppb
Surrogate Spike 30.000	Recovery	=	0.41%
5) SA Octacosane(S)	9.04	455777	0.130 ppb
Surrogate Spike 30.000	Recovery	=	0.43%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	639572445	185.155 ppb
2) HBTM Motor Oil (C24-C40)	10.50	2501930937	898.119 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\170118\118022.D
Sample : CCV: MO 1000 ppb 1/12/17





118022.D DOC1103.M Fri Jan 20 15:01:51 2017

TPH Extractables
DOC1103

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/19/17
Instrument: Apollo
Initial Cal. Date: 10/19/16
Data File: 118028-29.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1727130	1701180	1.5	HATM	
2	HBTM	Motor Oil (C24-C40)	1392870	1231310	12	HBTM	
3							
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37							
38							
39							
40							
		Average			6.8		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\170118\118028.D Vial: 28
Acq On : 1-19-17 1:56:09 Operator: DP
Sample : CCV: Diesel 400 ppb 1/12/17 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jan 19 10:10 2017 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\170118\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

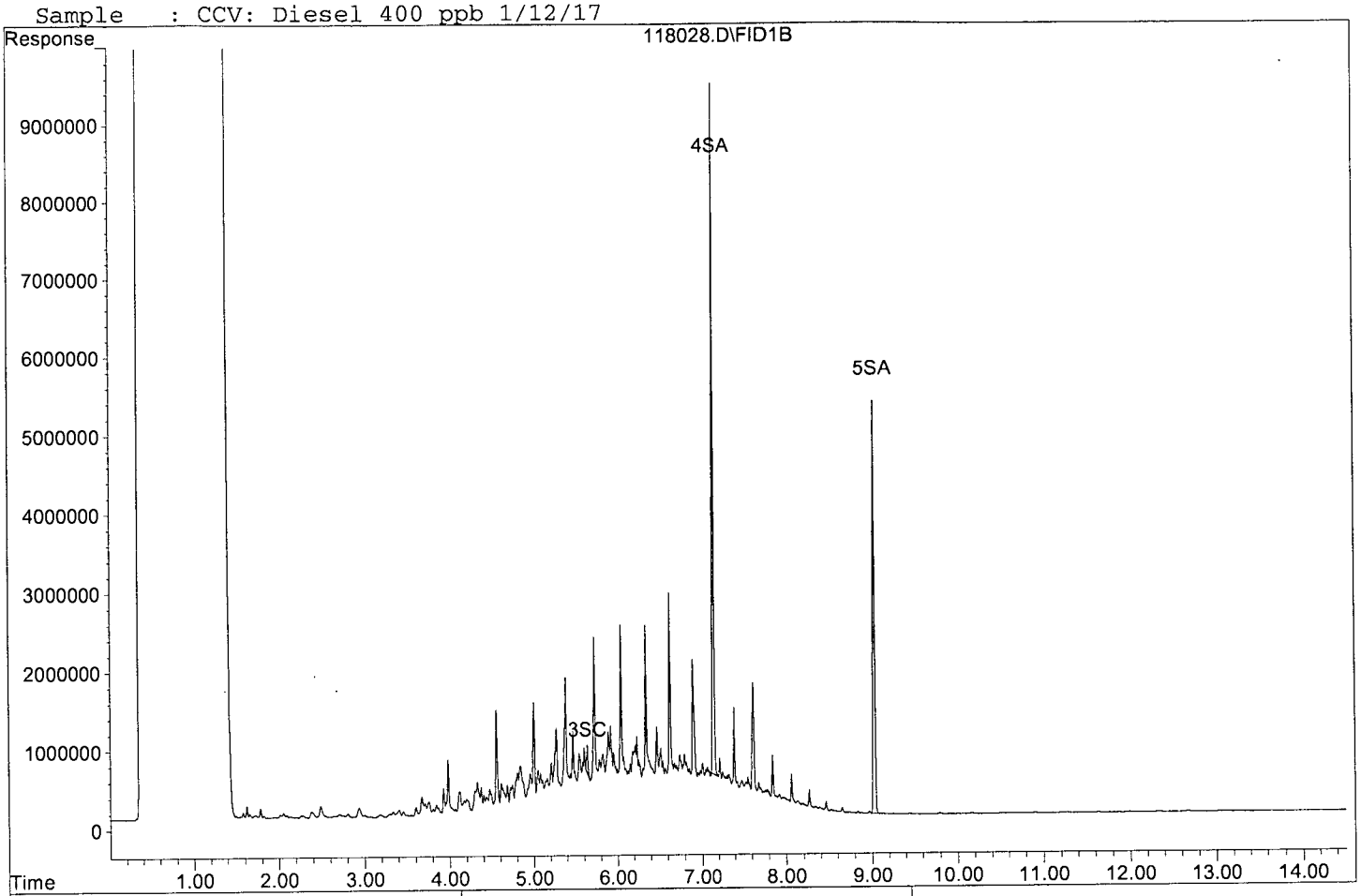
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

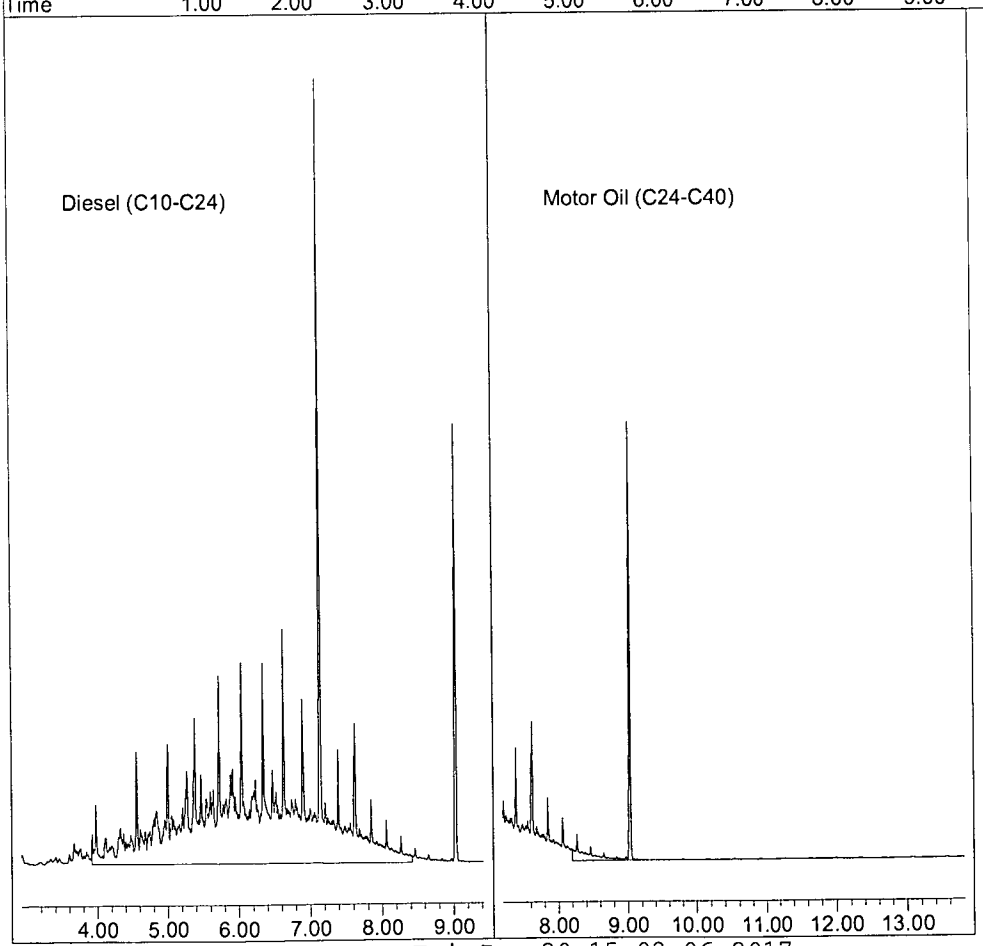
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SC Decanoic Acid(S)	5.64	4096017	3.349 ppb
Surrogate Spike 48.000	Recovery =		6.98%
4) SA Ortho-Terphenyl(S)	7.14	91011372	19.512 ppb
Surrogate Spike 30.000	Recovery =		65.04%
5) SA Octacosane(S)	9.03	68615039	19.606 ppb
Surrogate Spike 30.000	Recovery =		65.35%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	1360947532	393.991 ppb
2) HBTM Motor Oil (C24-C40)	10.50	39180487	14.065 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\170118\118028.D
Sample : CCV: Diesel 400 ppb 1/12/17





118028.D DOC1103.M Fri Jan 20 15:02:06 2017

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\170118\118029.D Vial: 29
Acq On : 1-19-17 2:16:40 Operator: DP
Sample : CCV: MO 1000 ppb 1/12/17 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Jan 19 10:10 2017 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\170118\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

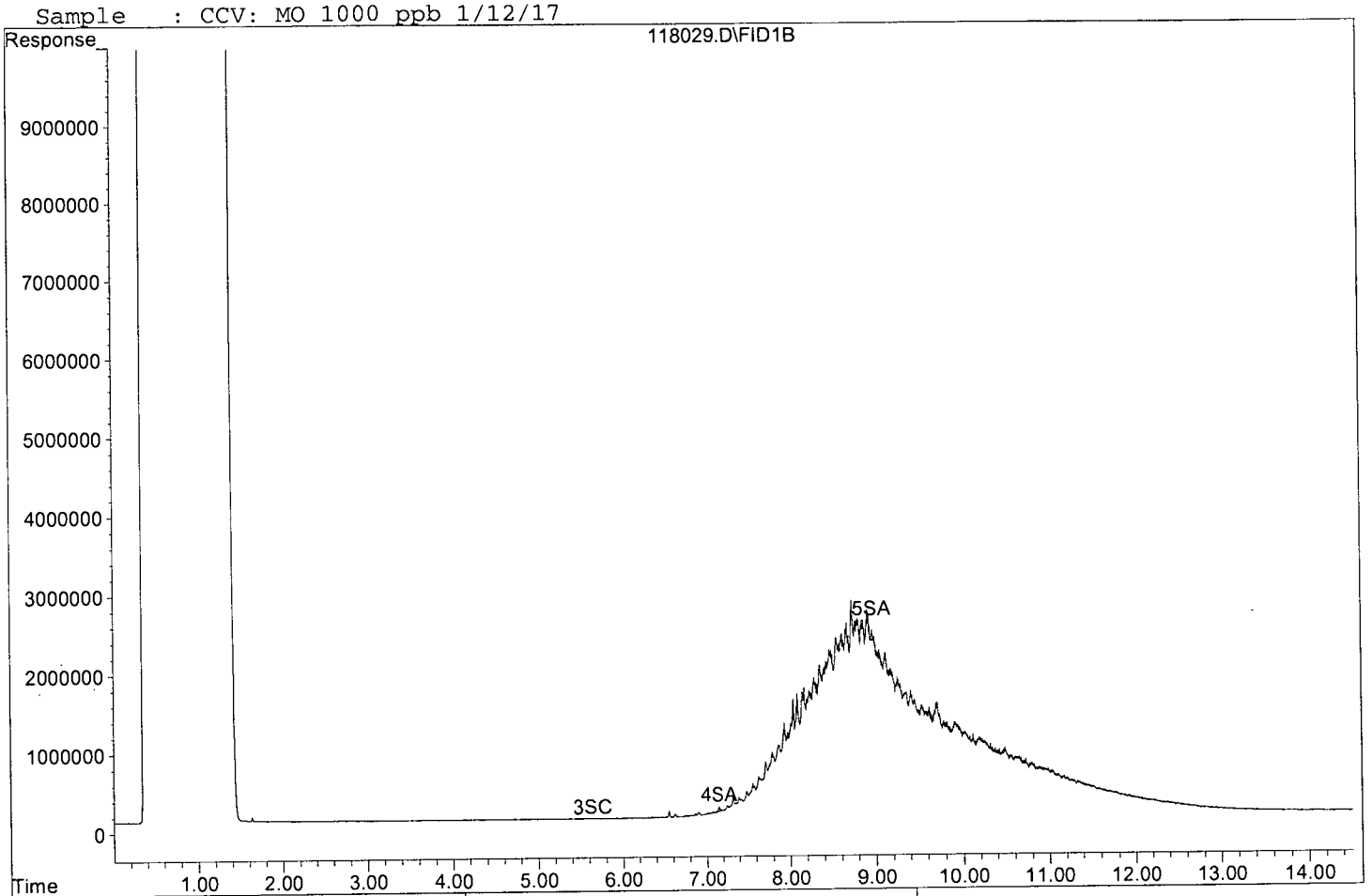
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

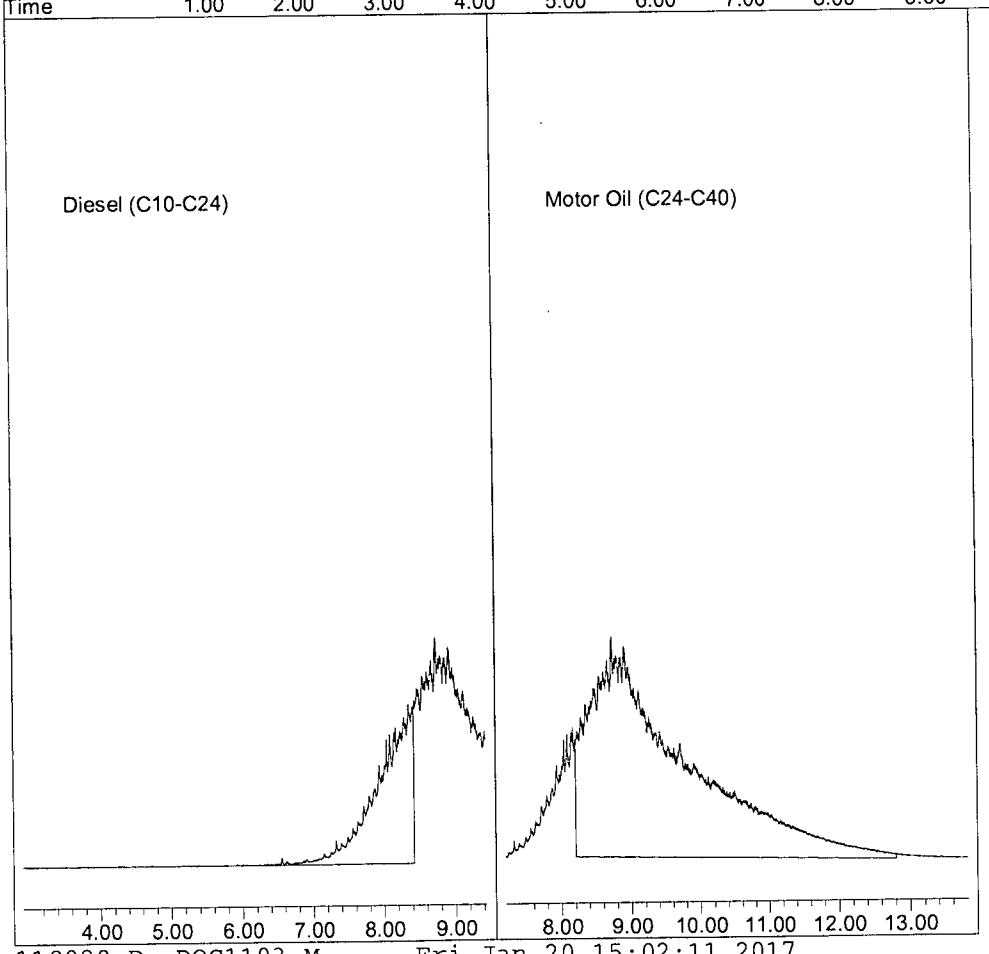
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SC Decanoic Acid(S)	5.64	17584	0.014	ppb
Surrogate Spike 48.000	Recovery	=	0.03%	
4) SA Ortho-Terphenyl(S)	7.15	813861	0.174	ppb
Surrogate Spike 30.000	Recovery	=	0.58%	
5) SA Octacosane(S)	8.96	1132244	0.324	ppb
Surrogate Spike 30.000	Recovery	=	1.08%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	633474527	183.389	ppb
2) HBTM Motor Oil (C24-C40)	10.50	2462616254	884.006	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\170118\118029.D
Sample : CCV: MO 1000 ppb 1/12/17





118029.D DOC1103.M Fri Jan 20 15:02:11 2017

ORGANICS

Raw Data

APPL, INC.

Method Blank
EPA 8015B TPH WATER

Blank Name/QCG: **170116W-48866 - 215613**
Batch ID: #DOC53-170116A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	01/16/17	01/18/17
BLANK	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	01/16/17	01/18/17
BLANK	SURROGATE: OCTACOSANE (S)	104	60-142			%	01/16/17	01/18/17
BLANK	SURROGATE: ORTHO-TERPHEN	82.3	56-125			%	01/16/17	01/18/17

Quant Method:DOC1103.M
Run #:118004
Instrument:Apollo
Sequence:170118
Initials:DPO

GC SC-Blank-REG MDLs-DOD
Printed: 01/19/17 10:24:16 AM

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\170118\118004.D Vial: 4
Acq On : 1-18-17 17:43:45 Operator: DP
Sample : 170116A BLK 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Jan 19 10:11 2017 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\170118\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

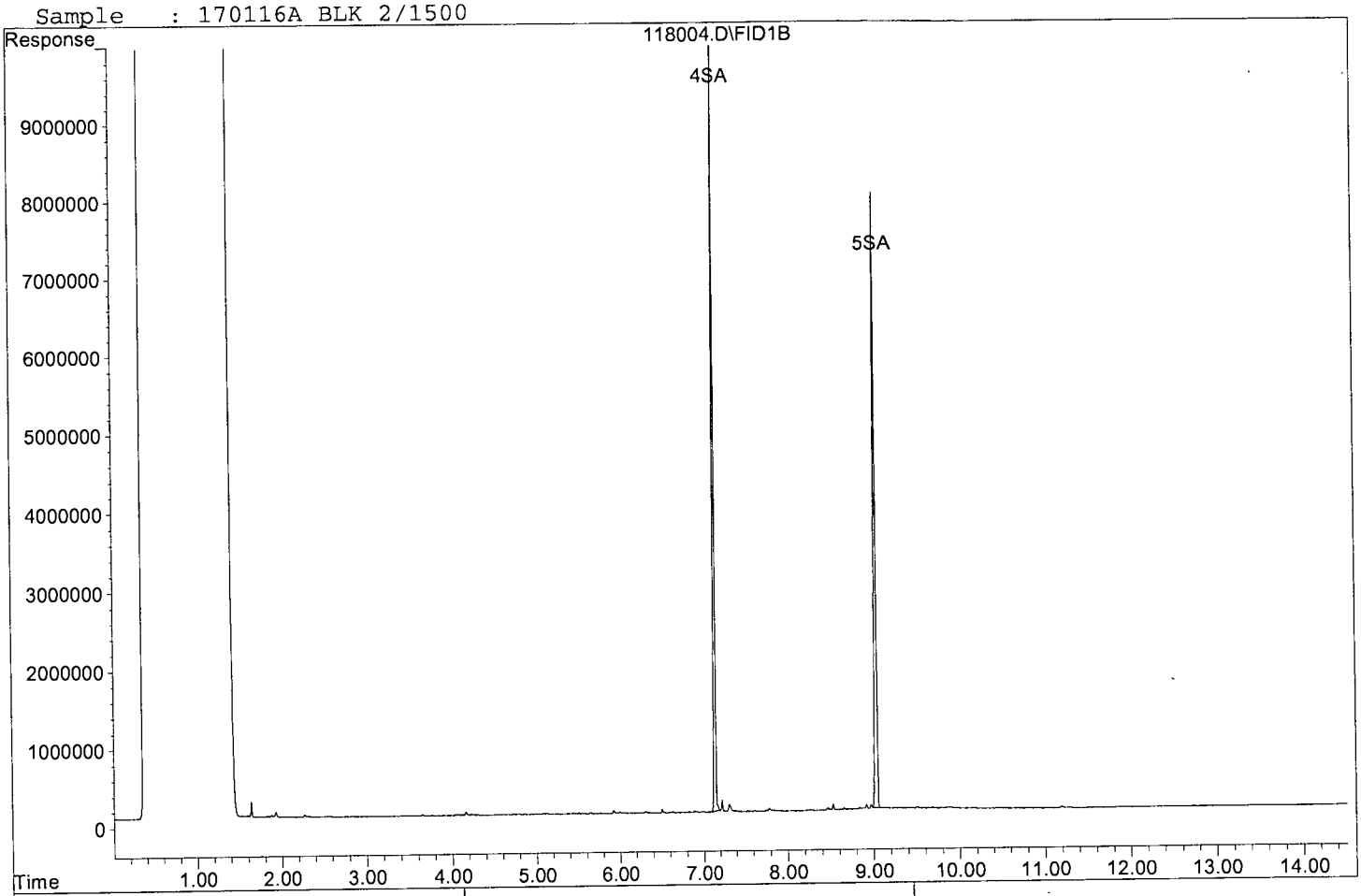
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

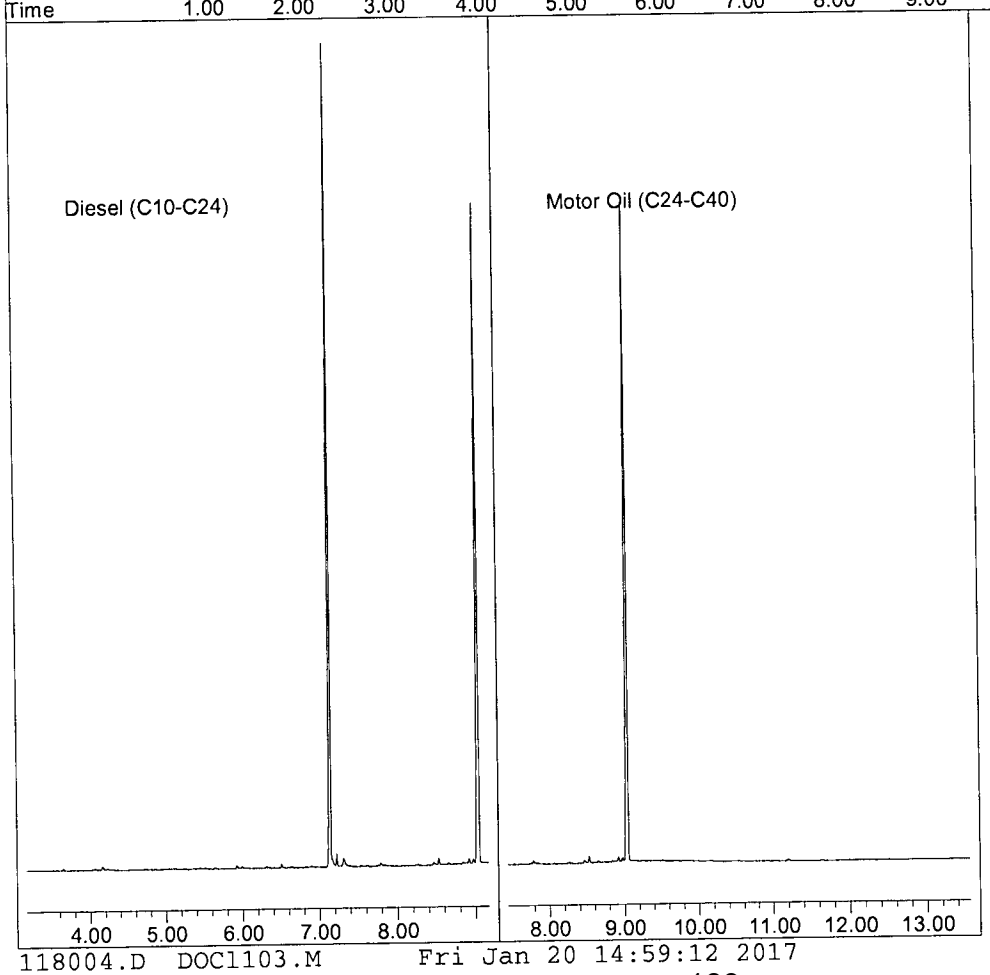
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.14	115202212	32.930	ppb
Surrogate Spike 40.000	Recovery =		82.33%	
5) SA Octacosane(S)	9.04	108845816	41.469	ppb
Surrogate Spike 40.000	Recovery =		103.67%	
Target Compounds				

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\170118\118004.D
Sample : 170116A BLK 2/1500





118004.D DOC1103.M Fri Jan 20 14:59:12 2017

Laboratory Control Spike Recovery
EPA 8015B TPH WATER

APPL ID: **170116W-48866 LCS - 215613**
Batch ID: #DOC53-170116A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
DIESEL (C10-C24)	1330	1080	81.0	36-132
OIL (C24-C40)	1330	1090	81.8	41-113
SURROGATE: OCTACOSANE (S)	40.0	40.3	101	60-142
SURROGATE: ORTHO-TERPHENYL (S)	40.0	39.5	98.8	56-125

Comments: _____

Primary	SPK
Quant Method :	DOC1103.M
Extraction Date :	01/16/17
Analysis Date :	01/18/17
Instrument :	Apollo
Run :	118005
Initials :	DPO

Printed: 01/19/17 10:24:10 AM
APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\170118\118005.D Vial: 5
Acq On : 1-18-17 18:04:15 Operator: DP
Sample : 170116A LCS-1 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Jan 19 10:11 2017 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\170118\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

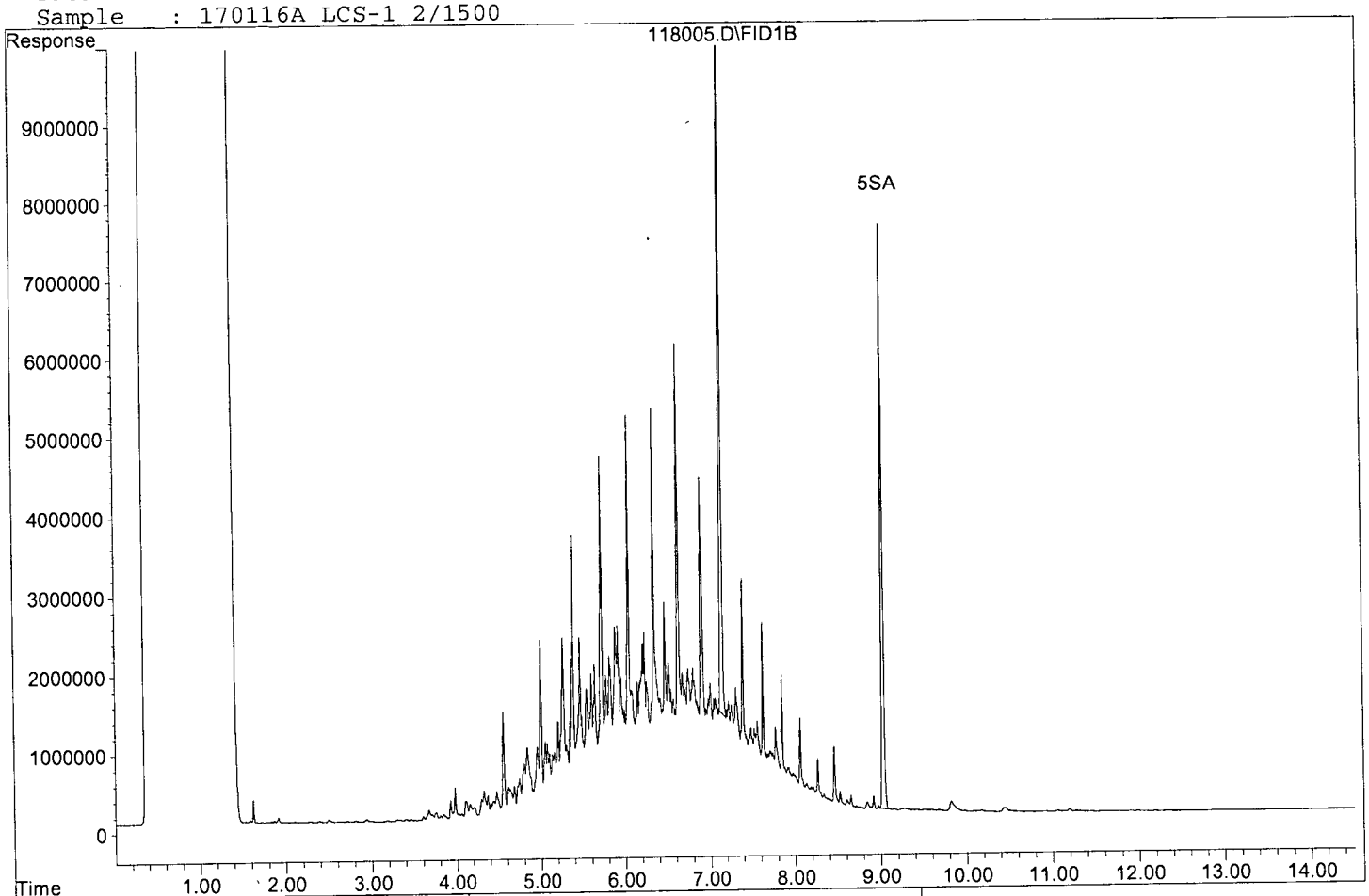
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

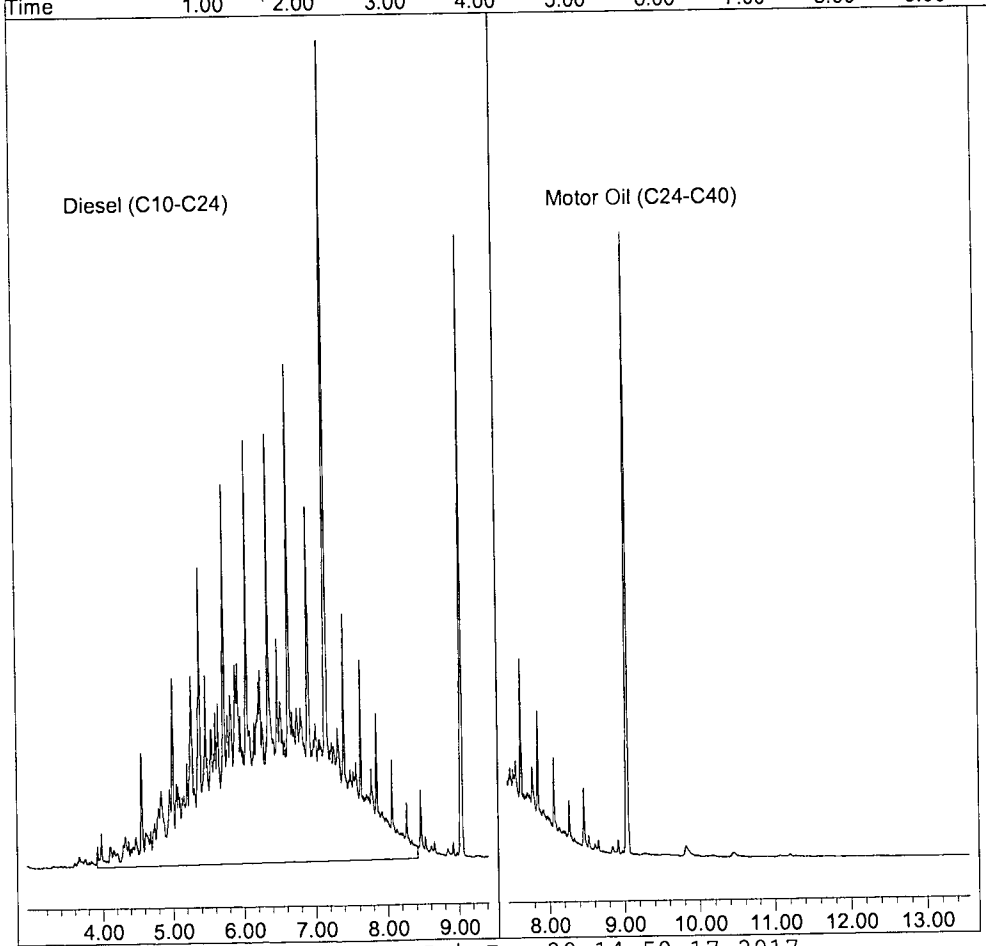
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.15	138035684	39.457 ppb
Surrogate Spike 40.000	Recovery =		98.64%
5) SA Octacosane(S)	9.04	105889431	40.342 ppb
Surrogate Spike 40.000	Recovery =		100.86%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	2804902129	1082.681 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\170118\118005.D
Sample : 170116A LCS-1 2/1500





118005.D DOC1103.M Fri Jan 20 14:59:17 2017

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\170118\118006.D
Acq On : 1-18-17 18:24:42
Sample : 170116A LCS-2 2/1500
Misc : Water
IntFile : events.e
Quant Time: Jan 19 10:11 2017 Quant Results File: DOC1103.RES

Vial: 6
Operator: DP
Inst : Apollo
Multiplr: 1.33

Method : G:\APOLLO\DATA\170118\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

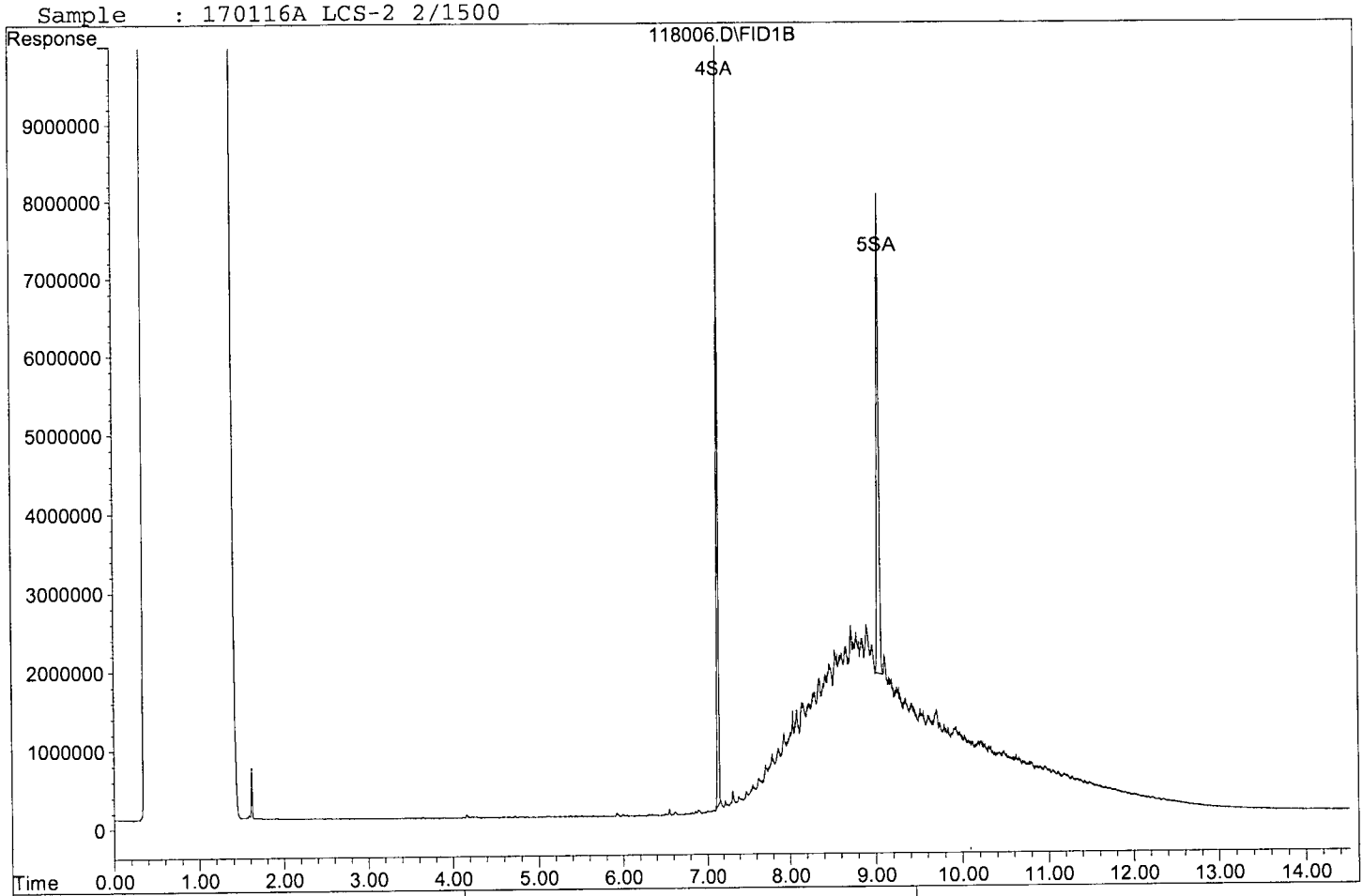
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

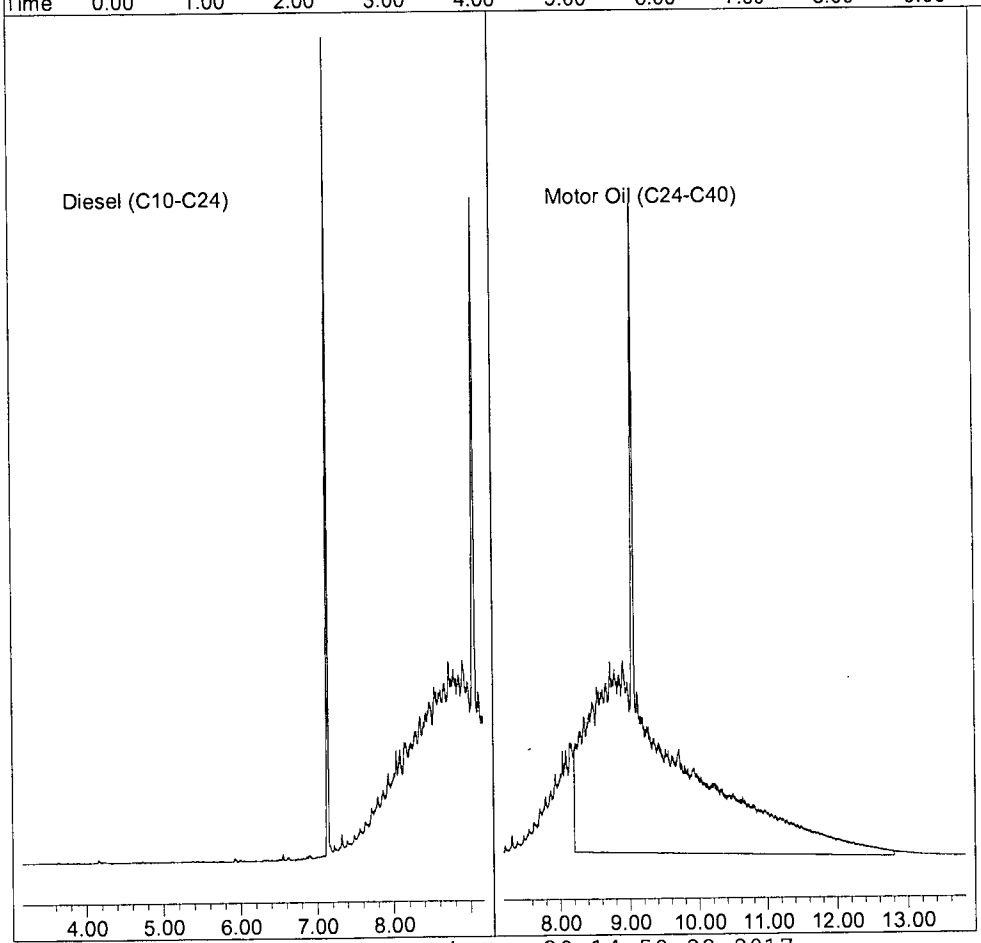
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.14	108377978	30.980 ppb
Surrogate Spike 40.000	Recovery =		77.45%
5) SA Octacosane(S)	9.05	102192278	38.934 ppb
Surrogate Spike 40.000	Recovery =		97.33%
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	2272069911	1087.471 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\170118\118006.D
Sample : 170116A LCS-2 2/1500





118006.D DOC1103.M Fri Jan 20 14:59:22 2017

Matrix Spike Recoveries
EPA 8015B TPH WATER

APPL ID: **170116W-48866 MS - 215613**
Batch ID: #DOC53-170116A
Sample ID: AZ48866
Client ID: ERH161

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
DIESEL (C10-C24)	1330	ND	1120	1120	84.0	84.0	36-132	0.0	30
OIL (C24-C40)	1330	ND	1190	1160	89.3	87.0	41-113	2.6	30
SURROGATE: OCTACOSANE (S)	40.0	NA	40.0	40.1	100	100	60-142		
SURROGATE: ORTHO-TERPHENYL (S)	40.0	NA	39.8	39.6	99.5	99.0	56-125		

Comments: _____

Primary	SPK	DUP
Quant Method :	DOC1103.M	DOC1103.M
Extraction Date :	01/16/17	01/16/17
Analysis Date :	01/18/17	01/18/17
Instrument :	Apollo	Apollo
Run :	118008	118011
Initials :	DPO	

Printed: 01/19/17 10:24:08 AM
APPL MSD SCII

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\170118\118008.D Vial: 8
Acq On : 1-18-17 19:05:43 Operator: DP
Sample : AZ48866W20 MS-1 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Jan 19 10:12 2017 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\170118\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

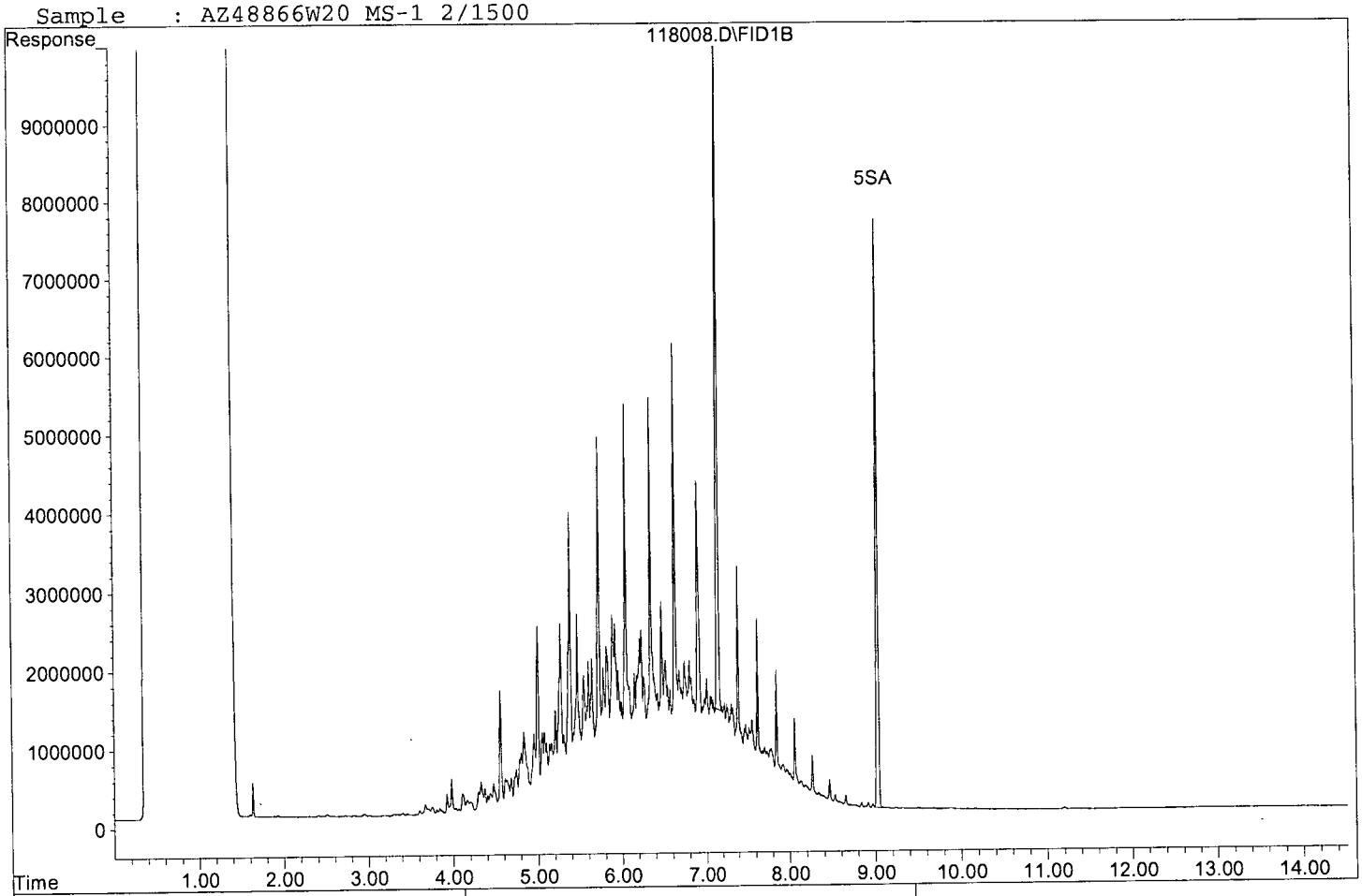
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

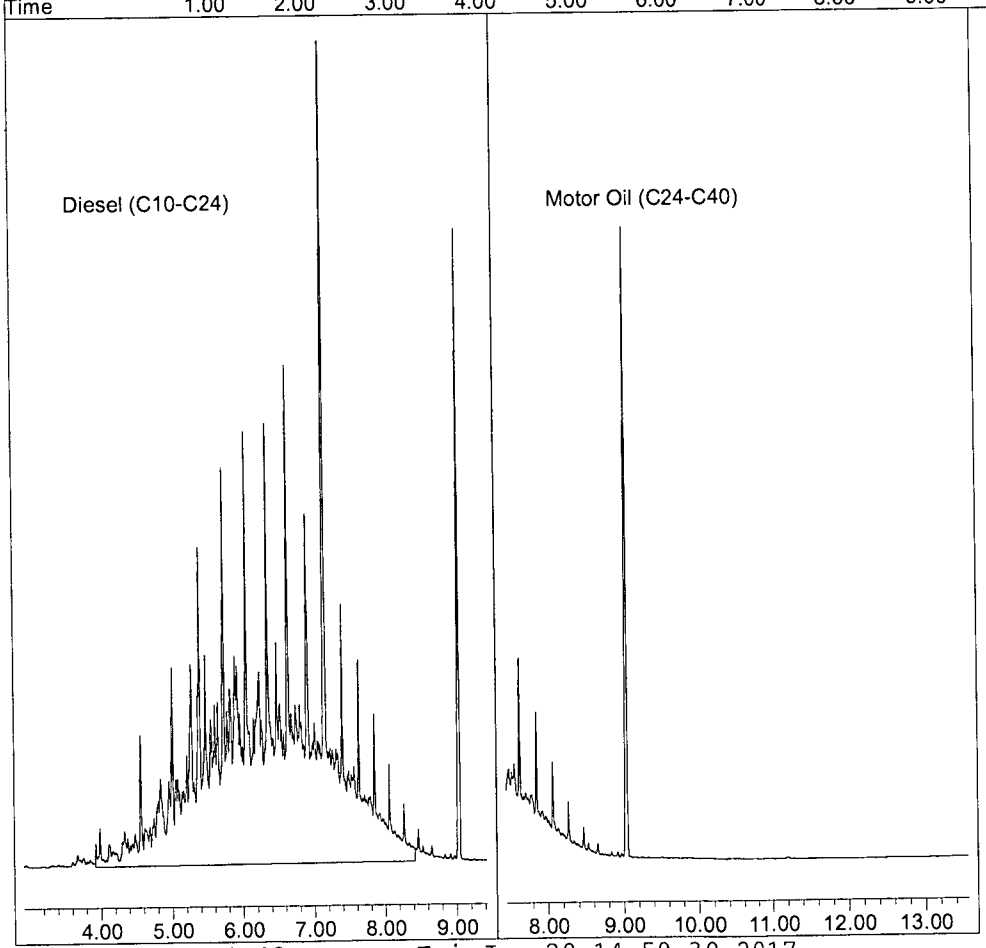
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.15	139128172	39.770 ppb
Surrogate Spike 40.000	Recovery =		99.43%
5) SA Octacosane(S)	9.04	105034820	40.017 ppb
Surrogate Spike 40.000	Recovery =		100.04%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	2894279570	1117.180 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\170118\118008.D
Sample : AZ48866W20 MS-1 2/1500





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\170118\118009.D Vial: 9
Acq On : 1-18-17 19:26:12 Operator: DP
Sample : AZ48866W34 MSD-1 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Jan 19 10:12 2017 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\170118\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

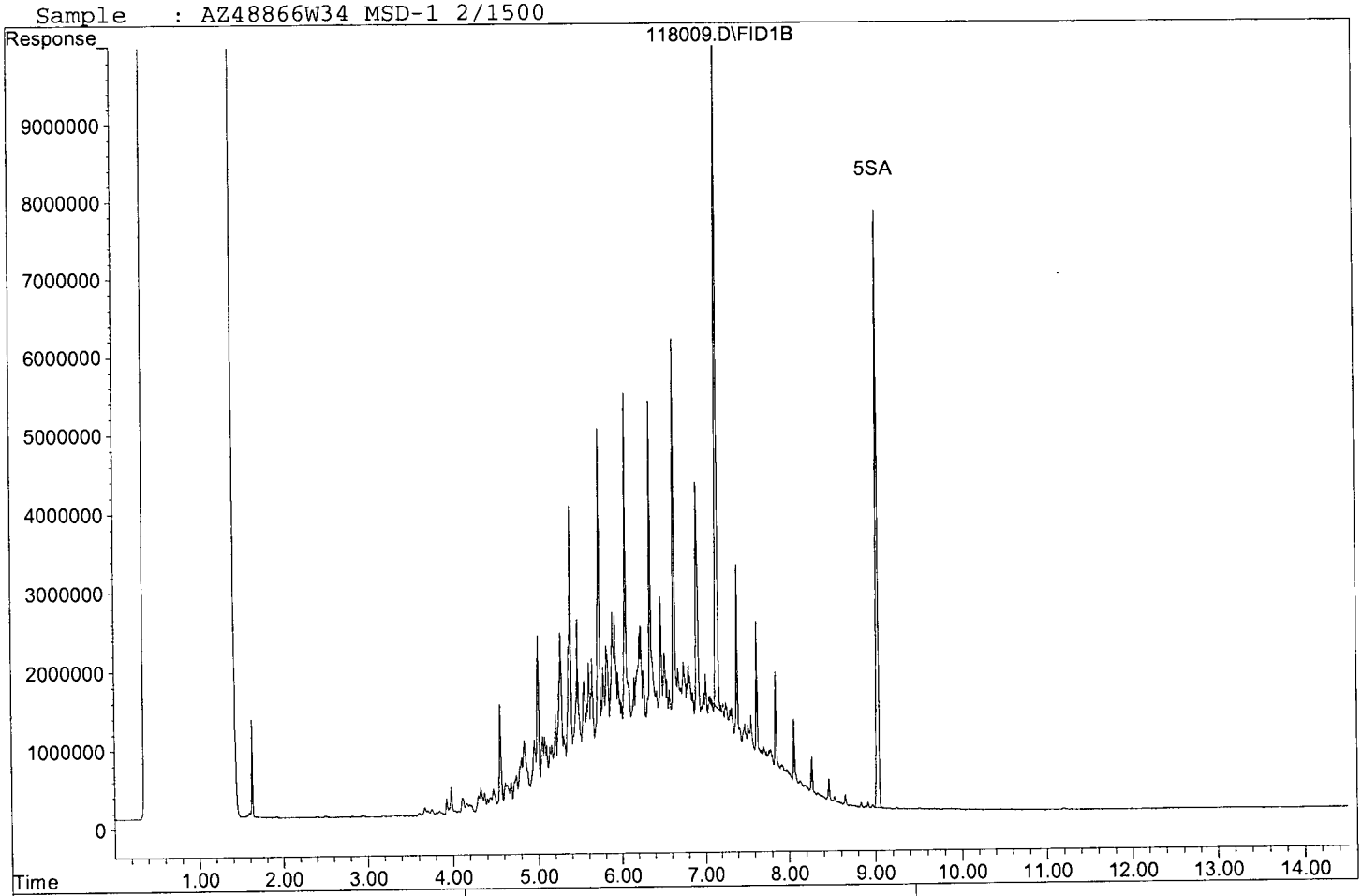
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

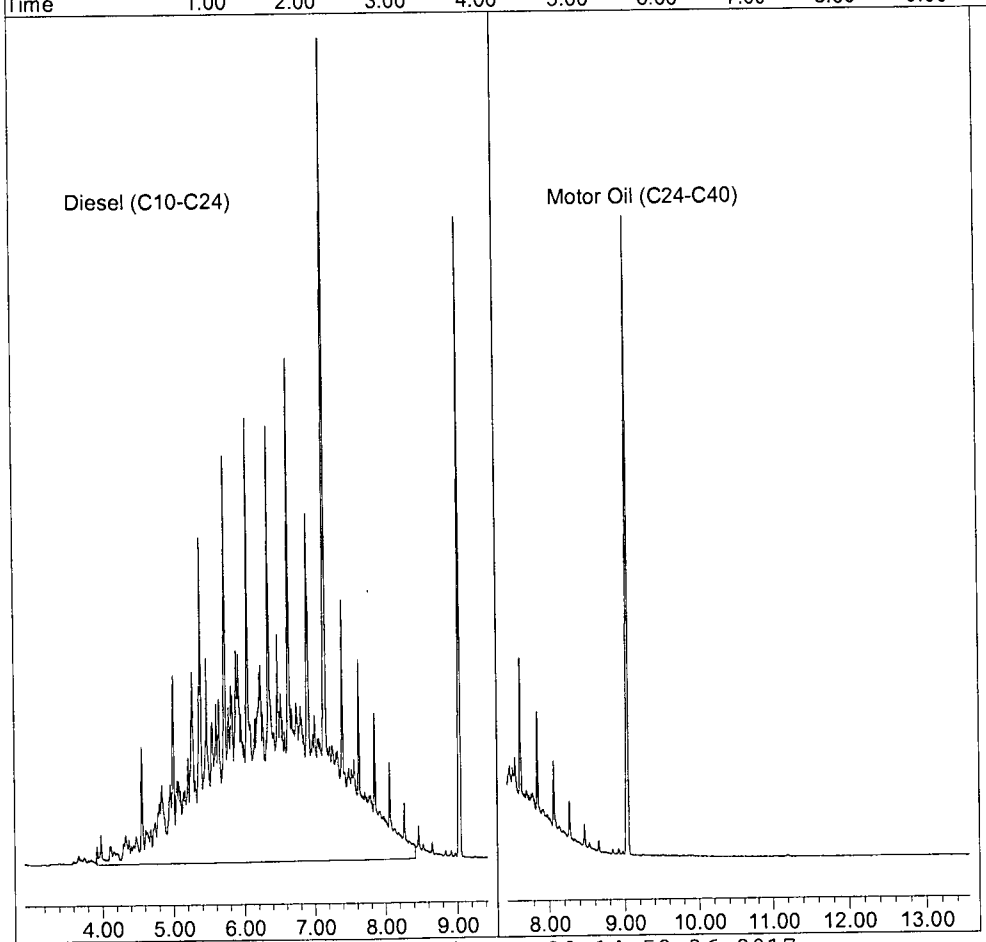
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.15	138657747	39.635 ppb
Surrogate Spike 40.000	Recovery =		99.09%
5) SA Octacosane(S)	9.04	105270466	40.107 ppb
Surrogate Spike 40.000	Recovery =		100.27%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	2890611600	1115.764 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\170118\118009.D
Sample : AZ48866W34 MSD-1 2/1500





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\170118\118010.D Vial: 10
Acq On : 1-18-17 19:46:46 Operator: DP
Sample : AZ48866W31 MS-2 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Jan 19 10:12 2017 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\170118\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

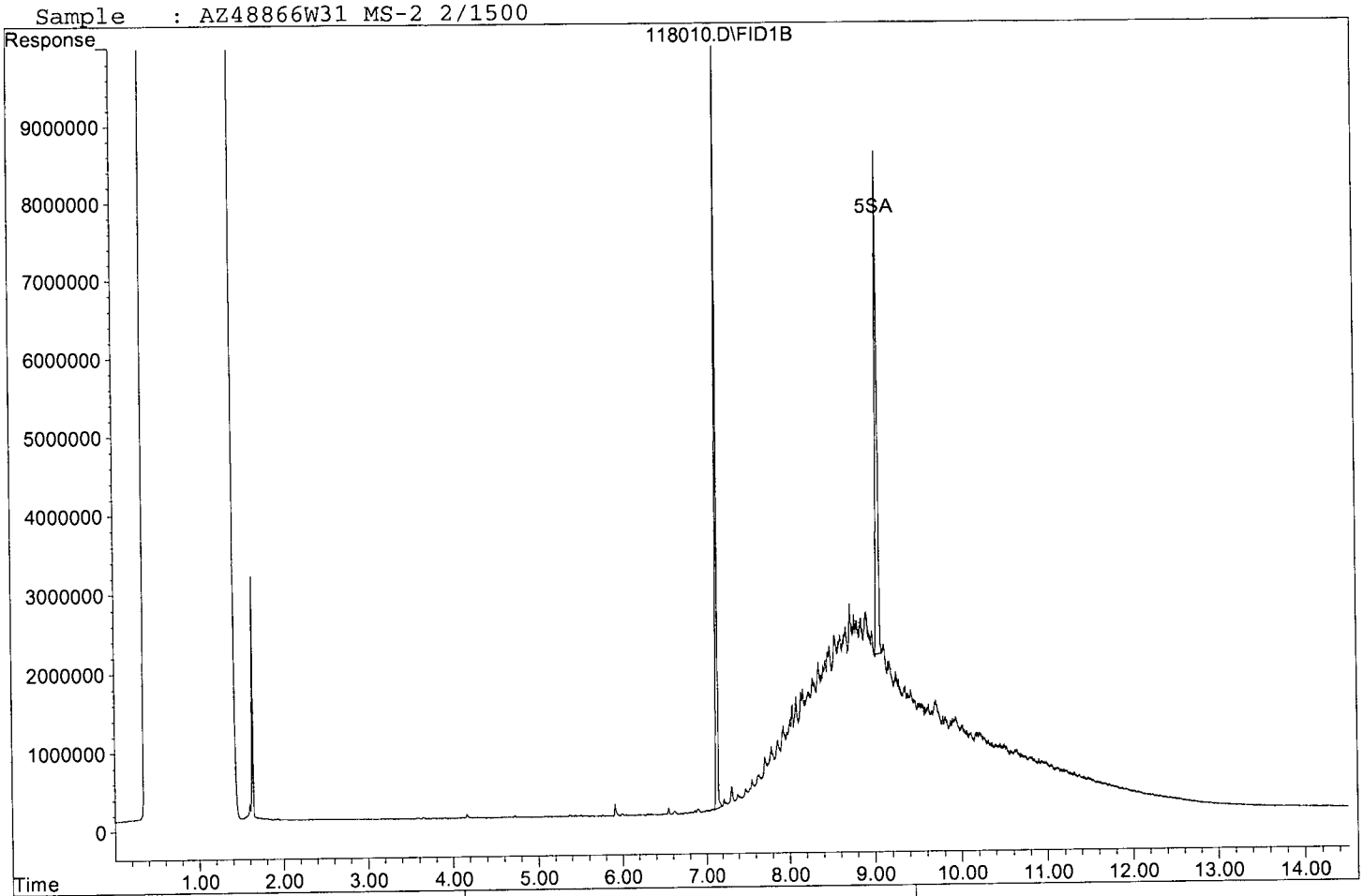
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

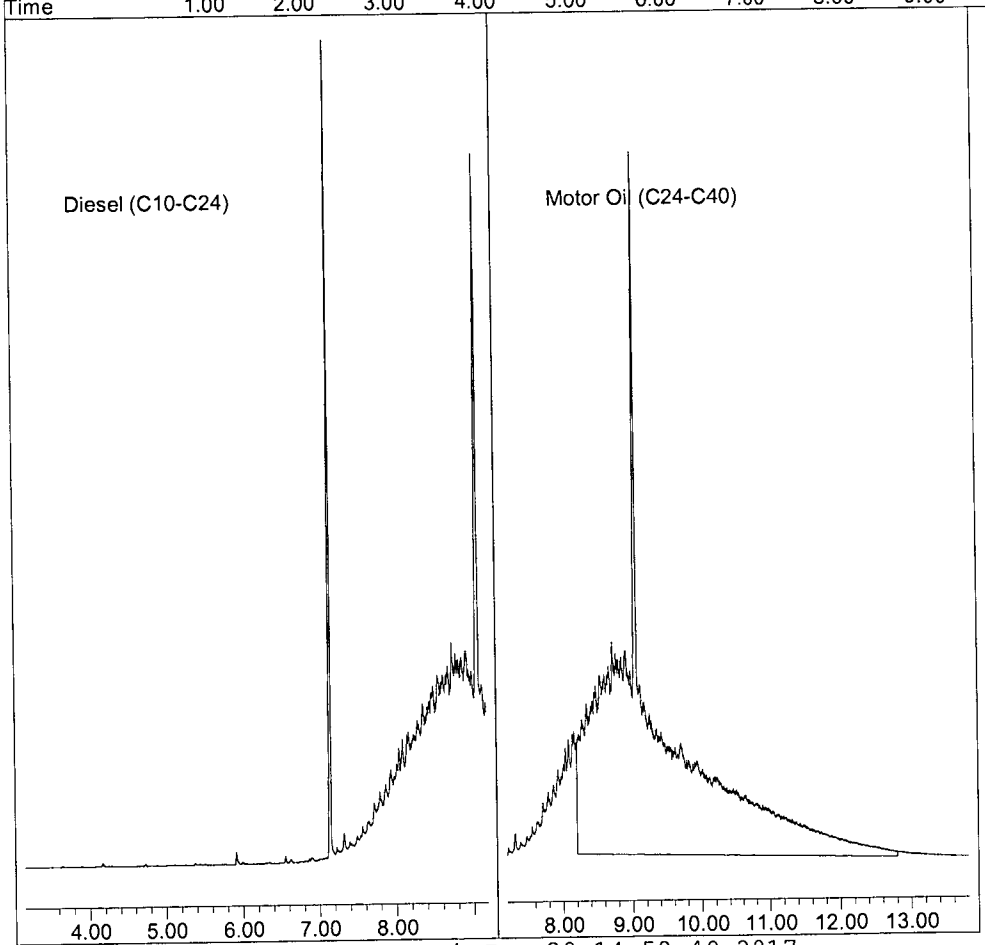
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.14	116793571	33.385 ppb
Surrogate Spike 40.000	Recovery	=	83.46%
5) SA Octacosane(S)	9.06	103823858	39.555 ppb
Surrogate Spike 40.000	Recovery	=	98.89%
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	2480157316	1187.067 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\170118\118010.D
Sample : AZ48866W31 MS-2 2/1500





118010.D DOC1103.M Fri Jan 20 14:59:40 2017

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\170118\118011.D
Acq On : 1-18-17 20:07:13
Sample : AZ48866W26 MSD-2 2/1500
Misc : Water
IntFile : events.e
Quant Time: Jan 19 10:12 2017 Quant Results File: DOC1103.RES

Vial: 11
Operator: DP
Inst : Apollo
Multiplr: 1.33

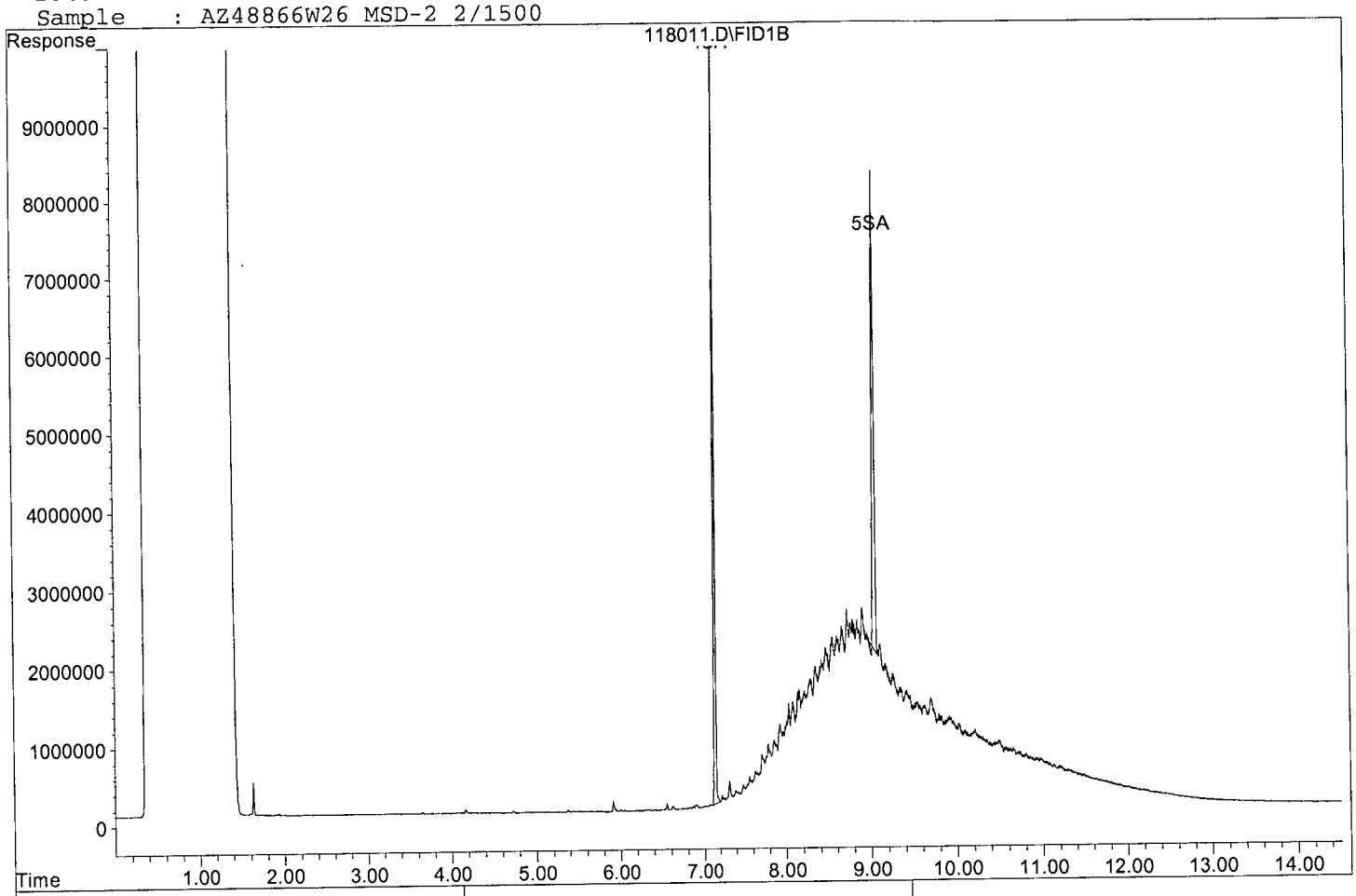
Method : G:\APOLLO\DATA\170118\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

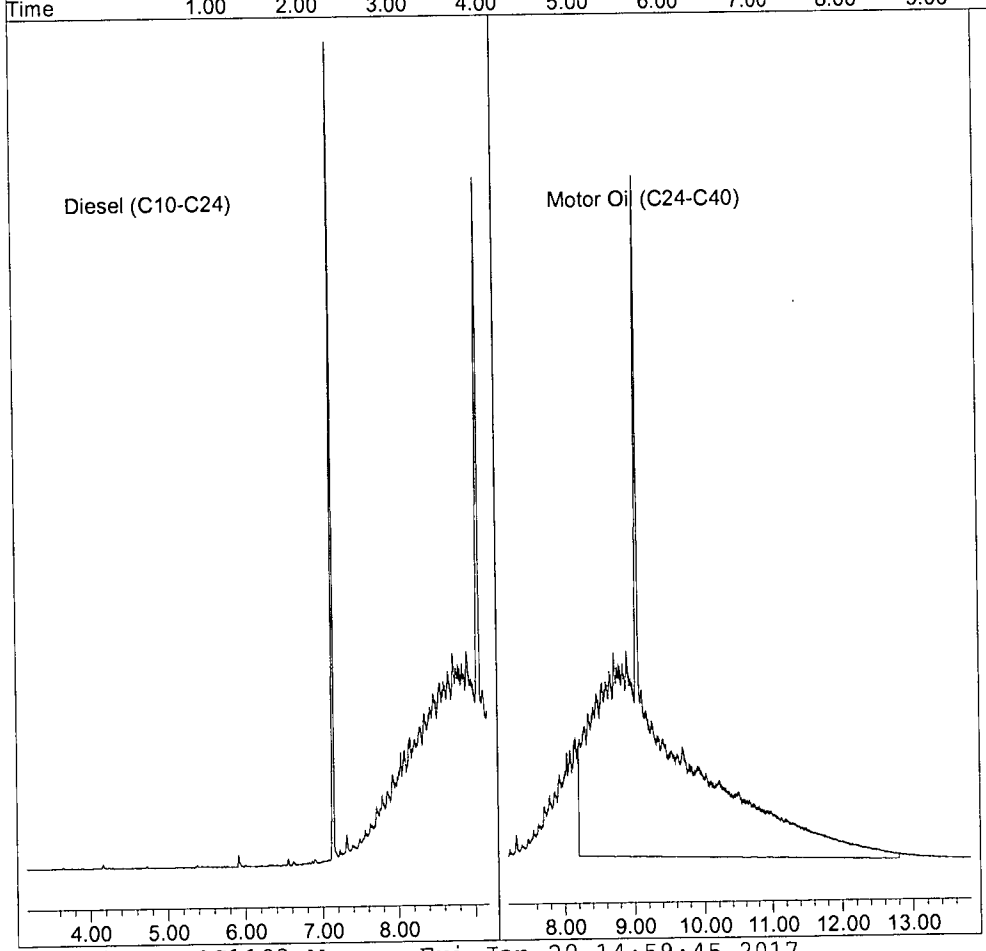
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.14	115027226	32.880 ppb
Surrogate Spike 40.000	Recovery =		82.20%
5) SA Octacosane(S)	9.06	98575004	37.556 ppb
Surrogate Spike 40.000	Recovery =		93.89%
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	2413703609	1155.261 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\170118\118011.D
Sample : AZ48866W26 MSD-2 2/1500





DIESEL CURVE		prep:11/03/16-D.P.		ex:6/03/17						
STD	**[µg/mL]**	**LOT #**	**DATE**	**EXP. DATE**	**µL**	**µL**	**µL**	**µL**	**µL**	**µL**
DIESEL	1000	237562-37104	11/03/16	06/03/17	10	10	40	60	80	100
MC	N/A	56098			990	90	60	40	20	NA
				Final VOL.	1000	100	100	100	100	100
				ppm	10	100	400	600	800	1000

MOTOR OIL CURVE		prep: 10/28/16-D.P.		ex:4/26/17						
STD	**[µg/mL]**	**LOT #**	**DATE**	**EXP. DATE**	**µL**	**µL**	**µL**	**µL**	**µL**	**µL**
MOTOR OIL	2000		10/26/16	04/26/17	10	25	125	500	750	200
MC	N/A	56098			990	975	875	500	250	NA
				Final VOL.	1000	1000	1000	1000	1000	200
				ppm	20	50	250	1000	1500	2000

Prep: 11/03/16-D.P. Exp: 6/03/17						
DIESEL CAL STD.						
STD.	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT / LOT#
DIESEL FUEL #2	50,000 ug/mL	O2SI CAT#011598-03 LOT#237562-37104 OP: 11/03/06 EXP: 11/03/17	500 µL	25 mL	1000ug/mL	MC LOT# 56098
O-TERPHENYL OCTACOSANE	600 ug/mL	O2SI CAT#110316-05 LOT#266278-37107 OP: 10/27/16 EXP: 10/27/17	2080 µL		50ug/mL	

Prep: 10/26/16 -D.P. Ex: 4/26/17						
MOTOR OIL CAL STD						
STD.	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT / LOT#
MOTOR OIL	50,000 ug/mL	O2SI CAT#116390-02 LOT#239390-36901 OP:10/26/16 EXP:10/26/17	1mL	25mL	2000ug/mL	MC LOT# 56098

DIESEL SECOND SOURCE prep: 08/01/16-D.P. ex: 07/6/17						
standard	initial conc.	SOURCE DATE	ALIQUOT	FINAL VOL.	FINAL CONC.	SOLVENT LOT
DIESEL SECOND SOURCE	50,000 ug/mL	O2SI CAT#011598-03-SS LOT#244813-34634 OP: 08/28/15 Exp 03/14/19	200uL	10mL	1000ug/mL	MC #56061

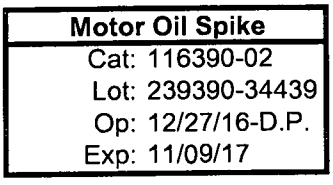
MOTOR OIL SECOND SOURCE prep: 07/6/16-L.H. ex: 07/6/17						
standard	initial conc.	SOURCE DATE	ALIQUOT	FINAL VOL.	FINAL CONC.	SOLVENT LOT
MOTOR OIL SECOND SOURCE	50,000 ug/mL	O2SI CAT#116390-02-SS LOT#244814-34637 OP: 07/06/16 Exp 07/06/17	200uL	10mL	1000ug/mL	MC #56061

DIESEL CCV 400ug/ml						
Prep: 1/12/17-D.P. Ex: 4/12/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
DIESEL STD.	1000 µg/mL	Diesel Std.	2000µL	5mL	400 µg/ml	MC
	PREP:	11/03/16				56098
	Exp:	06/03/17				

MOTOR OIL CCV 1000ppm						
Prep: 1/12/17-D.P. Ex: 4/12/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
MO STD.	2000 µg/mL	MO Std.	2500µL	5mL	1000 µg/ml	MC
	PREP:	10/26/16				56098
	Exp:	04/26/17				

Diesel Spike
Cat: 011598-03
Lot: 280763-37351
Op: 12/27/2016-D.P.
Exp: 12/27/17

THC Surrogate
Cat: 110316-05
Lot: 266278-37113
Op: 12/27/16-D.P.
Exp: 12/27/17


Motor Oil Spike
Cat: 116390-02
Lot: 239390-34439
Op: 12/27/16-D.P.
Exp: 11/09/17

_SEP011LL

Organic Extraction Worksheet

Method	THC Sep Fun Ext 3510C (LOW LEVEL)	Extraction Set	170116A	Extraction Method	SEP011LL	Units	mL

Spiked ID 1	Diesel Spike 12-27-16 exp 12-27-17		Surrogate ID 1	THC Surrogate 12-27-16 exp 12-27-17	
Spiked ID 2	Motor Oil Spike 12-27-16 exp 12-27-17		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	01/16/17 11:45	
Spiked ID 8			Ext. End Time:	01/18/17 14:00	
			GC Requires Extract By:	**01/19/17 0:00**	

pH1			Water Bath Temp Criteria	35,35,35 °
pH2				
pH3				

Spiked By: KY **Date** 01/16/17 **Witnessed By:** CFM **Date** 01/16/17

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	170116A Blk				0.1	1 equip	1500 E-WB1	2	7	01/16/17 11:45	
2	170116A LCS-1		0.040	1	0.1	1 equip	1500 E-WB2	2	7	01/16/17 11:45	
3	170116A LCS-2		0.040	2	0.1	1 equip	1500 E-WB3	2	7	01/16/17 11:45	
4	170116A LCS-3		0.040		0.1	1 equip	1500 E-WB2	2	7	01/16/17 11:45	
5	AZ48866 MS-1	AZ48866W20	0.040	1	0.1	1 equip	1500 E-WB2	2	7	01/16/17 11:45	81965
6	AZ48866 MSD-1	AZ48866W34	0.040	1	0.1	1 equip	1500 E-WB3	2	7	01/16/17 11:45	81965
7	AZ48866 MS-2	AZ48866W31	0.040	2	0.1	1 equip	1500 E-WB1	2	7	01/16/17 11:45	81965
8	AZ48866 MSD-2	AZ48866W26	0.040	2	0.1	1 equip	1500 E-WB3	2	7	01/16/17 11:45	81965
9	AZ48866	AZ48866W21			0.1	1 equip	1500 E-WB1	2	7	01/16/17 11:45	81965
10	AZ48867	AZ48867W10			0.1	1 equip	1500 E-WB3	2	7	01/16/17 11:45	81965
11	AZ48868	AZ48868W12			0.1	1 equip	1500 E-WB1	2	7	01/16/17 11:45	81965
12	AZ48871	AZ48871W10			0.1	1 equip	1500 E-WB2	2	7	01/16/17 11:45	81965
13	AZ48872	AZ48872W24			0.1	1 equip	1500 E-WB3	2	7	01/16/17 11:45	81965
14	AZ48873	AZ48873W12			0.1	1 equip	1500 E-WB1	2	7	01/16/17 11:45	81965
15	AZ48875	AZ48875W10			0.1	1 equip	1500 E-WB2	2	7	01/16/17 11:45	81965
16	AZ48877	AZ48877W10			0.1	1 equip	1500 E-WB3	2	7	01/16/17 11:45	81965

Solvent and Lot#	
MC	56153
Na2SO4	16C255214
ph-indicator strips	HC 574756
Filter Paper	400112

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	RH
Date	1/18/17
Time	4:20
Refrigerator	Hobert

	Technician's Initials
Scanned By	KY
Sample Preparation	KY,JR
Extraction	KY,JR,DL
Concentration	DL

Modified	01/18/17 2:28:28 PM

Reviewed By: RMY 214 **Date** 1/18/17

Organic Extraction Worksheet

Method	THC Sep Fun Ext 3510C (LOW LEVEL)	Extraction Set	170116A	Extraction Method	SEP011LL	Units	mL

Spiked ID 1	Diesel Spike 12-27-16 exp 12-27-17		Surrogate ID 1	THC Surrogate 12-27-16 exp 12-27-17	
Spiked ID 2	Motor Oil Spike 12-27-16 exp 12-27-17		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	01/16/17 11:45	
Spiked ID 8			Ext. End Time:	01/18/17 14:00	
			GC Requires Extract By:	**01/19/17** 0:00	

pH1			Water Bath Temp Criteria	35,35,35 °
pH2				
pH3				

Spiked By: KY **Date** 01/16/17 **Witnessed By:** CFM **Date** 01/16/17

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
17	AZ48878	AZ48878W11			0.1	1	1500	2	7	01/16/17 11:45	81965
						equip	E-WB1				
18	AZ48880	AZ48880W07			0.1	1	1500	2	7	01/16/17 11:45	81965
						equip	E-WB2				
19	AZ48881	AZ48881W05			0.1	1	1500	2	7	01/16/17 11:45	81965
						equip	E-WB3				
20	AZ48915	AZ48915W13			0.1	1	1500	2	7	01/16/17 11:45	81971
						equip	E-WB1				
21	AZ48916	AZ48916W13			0.1	1	1500	2	7	01/16/17 11:45	81971
						equip	E-WB2				
22	AZ48921	AZ48921W12			0.1	1	1500	2	7	01/16/17 11:45	81971
						equip	E-WB3				
23	AZ48925	AZ48925W09			0.1	1	1500	2	7	01/16/17 11:45	81971
						equip	E-WB1				

KY 1/18/17

Solvent and Lot#	
MC	56153
Na2SO4	16C255214
ph-indicator strips	HC 574756
Filter Paper	400112

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	
Date	
Time	
Refrigerator	

	Technician's Initials
Scanned By	KY
Sample Preparation	KY,JR
Extraction	KY,JR,DL
Concentration	DL

Modified	01/18/17 2:28:28 PM

Reviewed By: KY **Date** 1/18/17

Injection Log

Directory: G:\APOLLO\DATA\161028\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	1028002.D	1	MO 20ppb 10/28/16	Mix(B)	10-28-16 9:07:30
2	3	1028003.D	1	MO 50ppb 10/28/16	Mix(B)	10-28-16 9:28:13
3	4	1028004.D	1	MO 250ppb 10/28/16	Mix(B)	10-28-16 9:49:06
4	5	1028005.D	1	MO 1000ppb 10/28/16	Mix(B)	10-28-16 10:09:58
5	6	1028006.D	1	MO 1500ppb 10/28/16	Mix(B)	10-28-16 10:30:51
6	7	1028007.D	1	MO 2000ppb 10/28/16	Mix(B)	10-28-16 10:51:50
7	8	1028008.D	1	MO SS 1000ppb 7/6/16	Mix(B)	10-28-16 11:12:44
8	4	1103004.D	1	DIESEL 10ppb 11/3/16	Mix(A)	11-3-16 9:45:14
9	6	1103006.D	1	DIESEL 400ppb 11/3/16	Mix(A)	11-3-16 10:26:16
10	7	1103007.D	1	DIESEL 600ppb 11/3/16	Mix(A)	11-3-16 10:46:56
11	8	1103008.D	1	DIESEL 800ppb 11/3/16	Mix(A)	11-3-16 11:07:39
12	9	1103009.D	1	DIESEL 1000ppb 11/3/16	Mix(A)	11-3-16 11:28:31
13	11	1103011.D	1	DIESEL 100ppb 11/3/16	Mix(A)	11-3-16 12:56:47
14	12	1103012.D	1	DIESEL-SS 400ppb 8/1/16	Mix(A)	11-3-16 13:25:11
15	2	118002.D	1	CCV: MO 1000 ppb 1/12/17	Mix(B)	1-18-17 17:03:03
16	3	118003.D	1	CCV: Diesel 400 ppb 1/12/17	Mix(A)	1-18-17 17:23:19
17	4	118004.D	1.33333	170116A BLK 2/1500	Water	1-18-17 17:43:45
18	5	118005.D	1.33333	170116A LCS-1 2/1500	Water	1-18-17 18:04:15
19	6	118006.D	1.33333	170116A LCS-2 2/1500	Water	1-18-17 18:24:42
20	7	118007.D	1.33333	AZ48866W21 2/1500	Water	1-18-17 18:45:11
21	8	118008.D	1.33333	AZ48866W20 MS-1 2/1500	Water	1-18-17 19:05:43
22	9	118009.D	1.33333	AZ48866W34 MSD-1 2/1500	Water	1-18-17 19:26:12
23	10	118010.D	1.33333	AZ48866W31 MS-2 2/1500	Water	1-18-17 19:46:46
24	11	118011.D	1.33333	AZ48866W26 MSD-2 2/1500	Water	1-18-17 20:07:13
25	12	118012.D	1.33333	AZ48867W10 2/1500	Water	1-18-17 20:27:45
26	13	118013.D	1.33333	AZ48868W12 2/1500	Water	1-18-17 20:48:17
27	14	118014.D	1.33333	AZ48871W10 2/1500	Water	1-18-17 21:08:48
28	15	118015.D	1.33333	AZ48872W24 2/1500	Water	1-18-17 21:29:19
29	16	118016.D	1.33333	AZ48873W12 2/1500	Water	1-18-17 21:49:53
30	17	118017.D	1.33333	AZ48875W10 2/1500	Water	1-18-17 22:10:23
31	18	118018.D	1.33333	AZ48877W10 2/1500	Water	1-18-17 22:30:55
32	19	118019.D	1.33333	AZ48878W11 2/1500	Water	1-18-17 22:51:27
33	20	118020.D	1.33333	AZ48880W07 2/1500	Water	1-18-17 23:11:58
34	21	118021.D	1	CCV: Diesel 400 ppb 1/12/17	Mix(A)	1-18-17 23:32:28
35	22	118022.D	1	CCV: MO 1000 ppb 1/12/17	Mix(B)	1-18-17 23:52:58
36	23	118023.D	1.33333	AZ48881W05 2/1500	Water	1-19-17 0:13:28
37	28	118028.D	1	CCV: Diesel 400 ppb 1/12/17	Mix(A)	1-19-17 1:56:09
38	29	118029.D	1	CCV: MO 1000 ppb 1/12/17	Mix(B)	1-19-17 2:16:40

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank
EPA 8270D SIM

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **170116W-48866 - 215630**
Batch ID: #SIMDO-170116A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/16/17	01/18/17
BLANK	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/16/17	01/18/17
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	01/16/17	01/18/17
BLANK	SURROGATE: 2-FLUORBIPHENY	56.1	53-106			%	01/16/17	01/18/17
BLANK	SURROGATE: NITROBENZENE-	67.3	55-111			%	01/16/17	01/18/17
BLANK	SURROGATE: TERPHENYL-D14 (	86.3	58-132			%	01/16/17	01/18/17

Quant Method: L0116PR.M
Run #: 0116L023
Instrument: Linus
Sequence: L170116
Initials: RHA

GC SC-Blank-REG MDLs-DOD
Printed: 01/19/17 3:12:32 PM

Laboratory Control Spike Recovery
EPA 8270D SIM

APPL ID: **170116W-48866 LCS - 215630**
Batch ID: #SIMDO-170116A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1-METHYLNAPHTHALENE	5.00	2.77	55.4	41-115
2-METHYLNAPHTHALENE	5.00	2.04	40.8	39-114
NAPHTHALENE	5.00	2.86	57.2	43-114
SURROGATE: 2-FLUORBIPHENYL (S)	5.00	3.85	77.0	53-106
SURROGATE: NITROBENZENE-D5 (S)	5.00	4.35	87.0	55-111
SURROGATE: TERPHENYL-D14 (S)	5.00	5.52	110	58-132

Comments: _____

Primary	SPK
Quant Method :	L0116PR.M
Extraction Date :	01/16/17
Analysis Date :	01/19/17
Instrument :	Linus
Run :	0116L059
Initials :	RHA

Printed: 01/19/17 4:47:11 PM
APPL Standard LCS

Matrix Spike Recoveries

EPA 8270D SIM

APPL ID: **170116W-48866 MS - 215630**
Batch ID: #SIMDO-170116A
Sample ID: AZ48866
Client ID: ERH161

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
1-METHYLNAPHTHALENE	5.00	ND	2.70	2.96	54.0	59.2	41-115	9.2	20
2-METHYLNAPHTHALENE	5.00	ND	1.97	2.33	39.4	46.6	39-114	16.7	20
NAPHTHALENE	5.00	ND	2.70	2.79	54.0	55.8	43-114	3.3	20
SURROGATE: 2-FLUORBIPHENYL (S)	5.00	NA	3.31	2.77	66.2	55.4	53-106		
SURROGATE: NITROBENZENE-D5 (S)	5.00	NA	3.66	3.15	73.2	63.0	55-111		
SURROGATE: TERPHENYL-D14 (S)	5.00	NA	4.70	4.12	94.0	82.4	58-132		

Comments: _____

Primary	SPK	DUP
Quant Method :	L0116PR.M	L0116PR.M
Extraction Date :	01/16/17	01/16/17
Analysis Date :	01/19/17	01/19/17
Instrument :	Linus	Linus
Run :	0116L060	0116L048
Initials :	RHA	

Printed: 01/19/17 4:47:08 PM
APPL MSD SCII

8270D-SIM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81965

Case No: 81965 Date Analyzed: 01/18/17

Matrix: WATER Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: 2-FLUORBIPHENYL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
170116A-BLK	Blank	53-106	56.1		55-111	67.3	
AZ48873	ERH170	53-106	54.6		55-111	65.2	
AZ48875	ERH174	53-106	67.5		55-111	86.2	
AZ48877	ERH176	53-106	71.7		55-111	76.9	
AZ48878	ERH179	53-106	63.9		55-111	71.1	
AZ48880	ERH186	53-106	77.9		55-111	70.6	
AZ48881	ERH187	53-106	72.9		55-111	72.6	
AZ48866-MSD	Matrix SpikeD	53-106	55.4		55-111	63.0	
AZ48866	ERH161	53-106	66.0		55-111	77.8	
AZ48867	ERH162	53-106	61.2		55-111	67.3	
AZ48868	ERH164	53-106	60.6		55-111	71.9	
AZ48872	ERH169	53-106	57.5		55-111	70.3	
AZ48871	ERH168	53-106	61.9		55-111	73.7	
170116A-LCS	Lab Control Spike	53-106	77.0		55-111	87.0	
AZ48866-MS	Matrix Spike	53-106	66.2		55-111	73.2	

Comments: Batch: #SIMDO-170116A

8270D-SIM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81965

Case No: 81965 Date Analyzed: 01/18/17

Matrix: WATER Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: TERPHENYL-D14 (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
170116A-BLK	Blank	58-132	86.3				
AZ48873	ERH170	58-132	87.9				
AZ48875	ERH174	58-132	91.9				
AZ48877	ERH176	58-132	91.4				
AZ48878	ERH179	58-132	95.1				
AZ48880	ERH186	58-132	88.8				
AZ48881	ERH187	58-132	86.5				
AZ48866-MSD	Matrix SpikeD	58-132	82.4				
AZ48866	ERH161	58-132	91.8				
AZ48867	ERH162	58-132	88.5				
AZ48868	ERH164	58-132	90.3				
AZ48872	ERH169	58-132	92.3				
AZ48871	ERH168	58-132	93.7				
170116A-LCS	Lab Control Spike	58-132	110				
AZ48866-MS	Matrix Spike	58-132	94.0				

Comments: Batch: #SIMDO-170116A

8270D-SIM

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81965

Case No: 81965 Date Analyzed: 01/18/17

Matrix: WATER Instrument: Linus

Blank ID: 170116A-BLK Time Analyzed: 1254

APPL ID.	Client Sample No.	File ID.	Date Analyzed
170116A-BLK	Blank	0116L023	01/18/17 1254
AZ48873	ERH170	0116L032	01/18/17 1706
AZ48875	ERH174	0116L033	01/18/17 1734
AZ48877	ERH176	0116L034	01/18/17 1802
AZ48878	ERH179	0116L035	01/18/17 1829
AZ48880	ERH186	0116L036	01/18/17 1857
AZ48881	ERH187	0116L037	01/18/17 1925
170116A-MSD	Matrix SpikeD	0116L048	01/19/17 1003
AZ48866	ERH161	0116L049	01/19/17 1031
AZ48867	ERH162	0116L050	01/19/17 1058
AZ48868	ERH164	0116L051	01/19/17 1125
AZ48872	ERH169	0116L053	01/19/17 1221
AZ48871	ERH168	0116L055	01/19/17 1317
170116A-LCS	Lab Control Spike	0116L059	01/19/17 1528
170116A-MS	Matrix Spike	0116L060	01/19/17 1616

Comments: Batch: #SIMDO-170116A

Printed: 01/19/17 4:49:56 PM
Form 4, Blank Summary

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81965
Matrix: Water
ID: SV Tune 11/15/16

SDG No: 81965
Date Analyzed: 01/16/17
Instrument: Linus
Time Analyzed: 17:36

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.1 SIM 1/13/17	0116L003.D	01/16/17 17:54
2		0.2 SIM 1/13/17	0116L004.D	01/16/17 18:22
3		0.5 SIM 1/13/17	0116L005.D	01/16/17 18:50
4		1.0 SIM 1/13/17	0116L006.D	01/16/17 19:17
5		5.0 SIM 1/13/17	0116L007.D	01/16/17 19:45
6		10 SIM 1/13/17	0116L008.D	01/16/17 20:13
7		50 SIM 1/13/17	0116L009.D	01/16/17 20:41
8		100 SIM 1/13/17	0116L010.D	01/16/17 21:09
9		SS SIM 1/13/17	0116L011.D	01/16/17 21:37
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	30 - 60% of mass 198	50.8
68	0 - 2% of mass 69	0.0
69	100 - 100% of mass 69	100.0
70	0 - 2% of mass 69	0.3
127	40 - 60% of mass 198	54.5
197	0 - 1% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.7
275	10 - 30% of mass 198	21.5
365	1 - 100% of mass 198	2.7
441	0.01 - 100% of mass 443	91.6
442	40 - 150% of mass 198	58.4
443	17 - 23% of mass 442	18.4

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81965
Matrix: Water
ID: SV Tune 12/15/16

SDG No: 81965
Date Analyzed: 01/18/17
Instrument: Linus
Time Analyzed: 11:58

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		5.0 SIM 1/13/17	0116L022.D	01/18/17 12:15
2	Blank	170116A BLK 1/1000	0116L023.D	01/18/17 12:54
3	ERH170	AZ48873W10 1/1070	0116L032.D	01/18/17 17:06
4	ERH174	AZ48875W13 1/1070	0116L033.D	01/18/17 17:34
5	ERH176	AZ48877W12 1/1070	0116L034.D	01/18/17 18:02
6	ERH179	AZ48878W12 1/1070	0116L035.D	01/18/17 18:29
7	ERH186	AZ48880W08 1/1070	0116L036.D	01/18/17 18:57
8	ERH187	AZ48881W09 1/1070	0116L037.D	01/18/17 19:25
9		SIM 5 1/13/17	0116L043.D	01/18/17 22:01
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	30 - 60% of mass 198	44.7
68	0 - 2% of mass 69	0.0
69	100 - 100% of mass 69	100.0
70	0 - 2% of mass 69	0.6
127	40 - 60% of mass 198	52.2
197	0 - 1% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.3
275	10 - 30% of mass 198	20.6
365	1 - 100% of mass 198	2.2
441	0.01 - 100% of mass 443	77.7
442	40 - 150% of mass 198	56.6
443	17 - 23% of mass 442	20.9

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81965
Matrix: Water
ID: SV Tune 12/15/16

SDG No: 81965
Date Analyzed: 01/19/17
Instrument: Linus
Time Analyzed: 8:47

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		SIM 5 1/13/17	0116L046.D	01/19/17 9:07
2		AZ48866W18 MSD-1 1/1	0116L048.D	01/19/17 10:03
3	ERH161	AZ48866W17 1/1070	0116L049.D	01/19/17 10:31
4	ERH162	AZ48867W09 1/1070	0116L050.D	01/19/17 10:58
5	ERH164	AZ48868W14 1/1070	0116L051.D	01/19/17 11:25
6	ERH169	AZ48872W29 1/1070	0116L053.D	01/19/17 12:21
7	ERH168	AZ48871W09 1/1070	0116L055.D	01/19/17 13:17
8	Lab Control Spike	170116A LCS-1 1/1000	0116L059.D	01/19/17 15:28
9		AZ48866W33 MS-1 1/10	0116L060.D	01/19/17 16:16
10		SIM 5 1/13/17	0116L061.D	01/19/17 16:44
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	30 - 60% of mass 198	48.3
68	0 - 2% of mass 69	0.0
69	100 - 100% of mass 69	100.0
70	0 - 2% of mass 69	0.5
127	40 - 60% of mass 198	53.2
197	0 - 1% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.2
275	10 - 30% of mass 198	21.4
365	1 - 100% of mass 198	2.4
441	0.01 - 100% of mass 443	83.5
442	40 - 150% of mass 198	57.0
443	17 - 23% of mass 442	20.2

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 81965

Lab File ID (Standard): 0116L007.D Date Analyzed: 01/16/17

Instrument ID: Linus Time Analyzed: 19:45

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Napthalene-D8(IS)		Acenaphthene-D10(IS)		Phenanthrene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	20107	5.87	10094	7.91	19784	9.66
	UPPER LIMIT	40214	6.37	20188	8.41	39568	10.16
	LOWER LIMIT	10054	5.37	5047	7.41	9892	9.16
	SAMPLE NO.						
01	5.0 SIM 1/13/17	22963	5.87	11532	7.91	22755	9.66
02	170116A BLK 1/1000	23020	5.88	11859	7.92	23108	9.67
03	AZ48873W10 1/1070	20950	5.88	10528	7.92	20312	9.67
04	AZ48875W13 1/1070	16088	5.86	8092	7.91	14835	9.66
05	AZ48877W12 1/1070	18254	5.88	9496	7.91	18469	9.67
06	AZ48878W12 1/1070	18657	5.88	9599	7.92	18429	9.67
07	AZ48880W08 1/1070	19578	5.88	10059	7.92	19174	9.68
08	AZ48881W09 1/1070	19763	5.88	10192	7.92	19196	9.68
09	SIM 5 1/13/17	21009	5.87	10596	7.91	20753	9.66
10	SIM 5 1/13/17	22693	5.87	11406	7.91	22167	9.66
11	AZ48866W18 MSD-1 1/	18695	5.87	9455	7.91	18615	9.66
12	AZ48866W17 1/1070	19034	5.88	9776	7.92	18720	9.68
13	AZ48867W09 1/1070	18568	5.88	9479	7.92	17741	9.68
14	AZ48868W14 1/1070	18401	5.88	9427	7.92	17789	9.68
15	AZ48872W29 1/1070	18921	5.88	9683	7.92	18451	9.68
16	AZ48871W09 1/1070	18324	5.88	9513	7.92	18022	9.68
17	170116A LCS-1 1/1000	19126	5.87	9610	7.91	18883	9.67
18	AZ48866W33 MS-1 1/1(	17102	5.88	8826	7.91	17036	9.67
19	SIM 5 1/13/17	22429	5.87	11327	7.91	22178	9.66
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 81965

Lab File ID (Standard): 0116L007.D Date Analyzed: 01/16/17

Instrument ID: Linus Time Analyzed: 19:45

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Chrysene-D12(IS)		Perylene-D12(IS)			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	24551	12.81	20981	15.33		
	UPPER LIMIT	49102	13.31	41962	15.83		
	LOWER LIMIT	12276	12.31	10491	14.83		
	SAMPLE NO.						
01	5.0 SIM 1/13/17	27025	12.81	22532	15.33		
02	170116A BLK 1/1000	26998	12.83	22213	15.36		
03	AZ48873W10 1/1070	24688	12.82	20543	15.35		
04	AZ48875W13 1/1070	19314	12.82	16958	15.35		
05	AZ48877W12 1/1070	22204	12.83	19252	15.36		
06	AZ48878W12 1/1070	22693	12.83	19497	15.36		
07	AZ48880W08 1/1070	23823	12.83	20342	15.36		
08	AZ48881W09 1/1070	23734	12.83	20544	15.36		
09	SIM 5 1/13/17	25060	12.81	21261	15.33		
10	SIM 5 1/13/17	26307	12.81	22173	15.33		
11	AZ48866W18 MSD-1 1/	22416	12.81	18642	15.33		
12	AZ48866W17 1/1070	22668	12.83	19176	15.36		
13	AZ48867W09 1/1070	21765	12.83	18138	15.36		
14	AZ48868W14 1/1070	21470	12.84	17803	15.36		
15	AZ48872W29 1/1070	22547	12.82	18889	15.35		
16	AZ48871W09 1/1070	22149	12.84	18264	15.36		
17	170116A LCS-1 1/1000	23088	12.81	19125	15.34		
18	AZ48866W33 MS-1 1/1(	20849	12.82	17430	15.34		
19	SIM 5 1/13/17	26676	12.81	22431	15.33		
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

ORGANICS

Sample Data

APPL, INC.

EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH161
Sample Collection Date: 01/09/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48866
QCG: #SIMDO-170116A-215630

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/16/17	01/19/17
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/16/17	01/19/17
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	01/16/17	01/19/17
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	66.0	53-106			%	01/16/17	01/19/17
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	77.8	55-111			%	01/16/17	01/19/17
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	91.8	58-132			%	01/16/17	01/19/17

Quant Method: L0116PR.M
Run #: 0116L049
Instrument: Linus
Sequence: L170116
Dilution Factor: 1
Initials: RHA

Printed: 01/19/17 3:12:26 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L049.D Vial: 49
Acq On : 19 Jan 17 10:31 Operator: MA
Sample : AZ48866W17 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Jan 20 16:41 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	19034	2.50000 ppb	0.01
6) Acenaphthene-D10(IS)	7.92	164	9776	2.50000 ppb	0.01
11) Phenanthrene-D10(IS)	9.68	188	18720	2.50000 ppb	0.02
15) Chrysene-D12(IS)	12.83	240	22668	2.50000 ppb	0.02
21) Perylene-D12(IS)	15.36	264	19176	2.50000 ppb	0.03
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.05	82	11825	3.63466 ppb	0.00
Spiked Amount 4.673			Recovery	= 77.789%	
7) Surrogate Recovery (FBP)	7.13	172	20271	3.08355 ppb	0.00
Spiked Amount 4.673			Recovery	= 65.998%	
17) Surrogate Recovery (TPH)	11.52	244	32283	4.28997 ppb	-0.01
Spiked Amount 4.673			Recovery	= 91.806%	

Target Compounds Qvalue

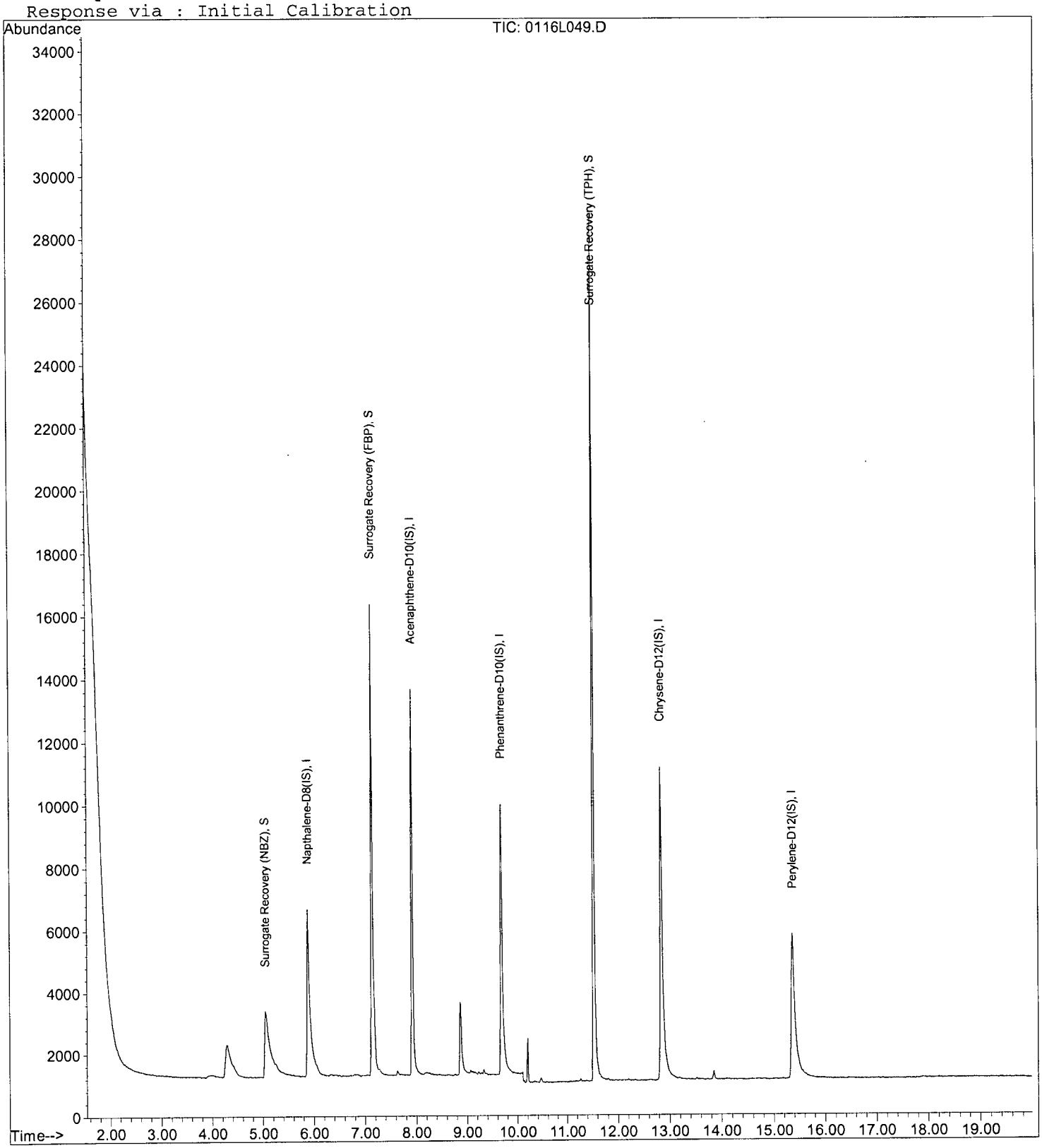
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L049.D Vial: 49
Acq On : 19 Jan 17 10:31 Operator: MA
Sample : AZ48866W17 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Jan 20 16:41 2017 Quant Results File: L0116PR.RES

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH162
Sample Collection Date: 01/09/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48867
QCG: #SIMDO-170116A-215630

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/16/17	01/19/17
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/16/17	01/19/17
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	01/16/17	01/19/17
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	61.2	53-106			%	01/16/17	01/19/17
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	67.3	55-111			%	01/16/17	01/19/17
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	88.5	58-132			%	01/16/17	01/19/17

Quant Method: L0116PR.M
Run #: 0116L050
Instrument: Linus
Sequence: L170116
Dilution Factor: 1
Initials: RHA

Printed: 01/19/17 3:12:26 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L050.D Vial: 50
Acq On : 19 Jan 17 10:58 Operator: MA
Sample : AZ48867W09 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Jan 20 16:43 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	18568	2.50000	ppb	0.01
6) Acenaphthene-D10(IS)	7.92	164	9479	2.50000	ppb	0.01
11) Phenanthrene-D10(IS)	9.68	188	17741	2.50000	ppb	0.02
15) Chrysene-D12(IS)	12.83	240	21765	2.50000	ppb	0.02
21) Perylene-D12(IS)	15.36	264	18138	2.50000	ppb	0.03
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.06	82	9905	3.14620	ppb	0.01
Spiked Amount 4.673			Recovery	= 67.324%		
7) Surrogate Recovery (FBP)	7.13	172	18226	2.85934	ppb	0.00
Spiked Amount 4.673			Recovery	= 61.183%		
17) Surrogate Recovery (TPH)	11.52	244	29891	4.13690	ppb	-0.01
Spiked Amount 4.673			Recovery	= 88.532%		

Target Compounds	Qvalue

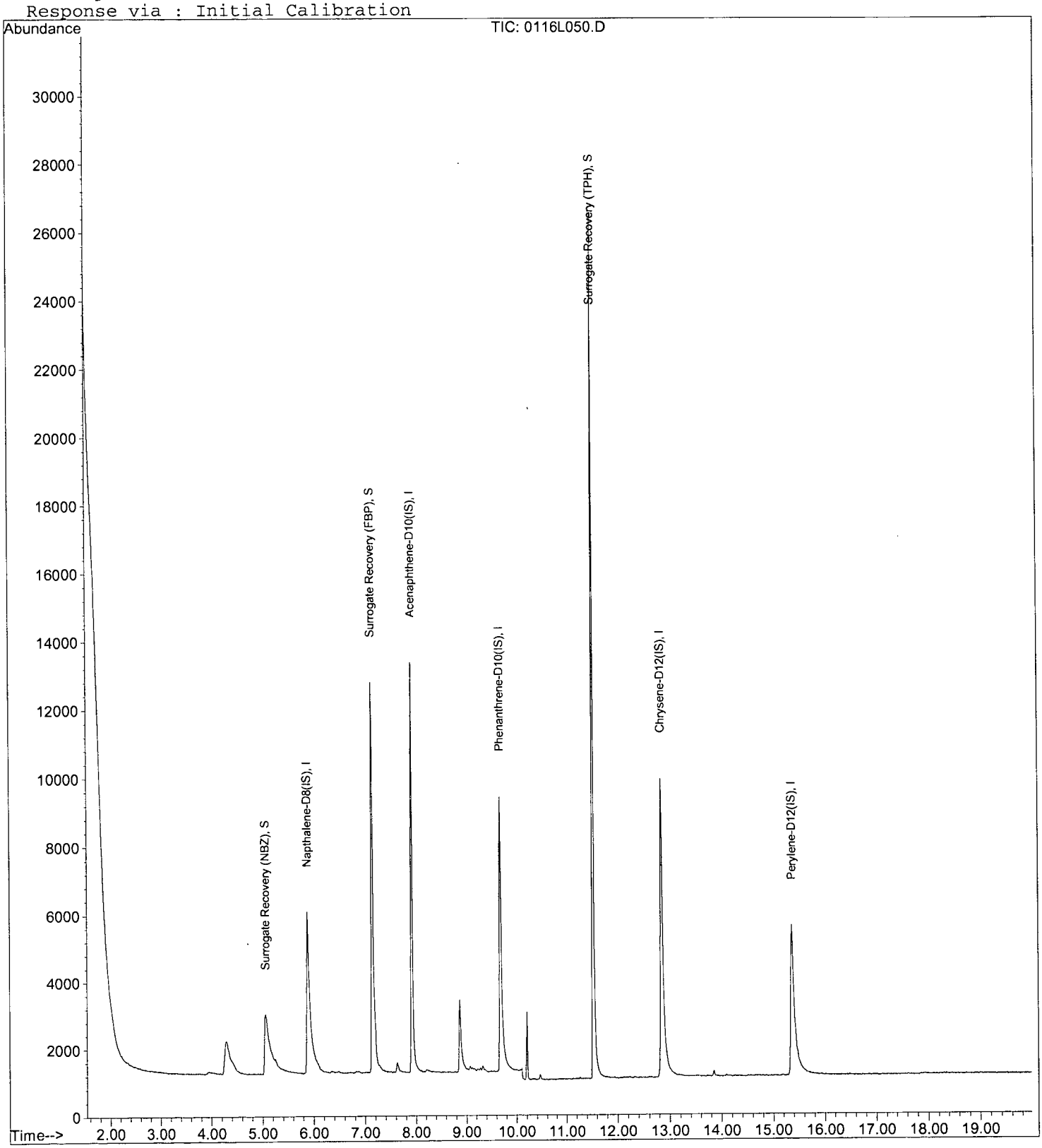
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L050.D Vial: 50
Acq On : 19 Jan 17 10:58 Operator: MA
Sample : AZ48867W09 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Jan 20 16:43 2017 Quant Results File: L0116PR.RES

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH164
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48868
QCG: #SIMDO-170116A-215630

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/16/17	01/19/17
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/16/17	01/19/17
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	01/16/17	01/19/17
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	60.6	53-106			%	01/16/17	01/19/17
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	71.9	55-111			%	01/16/17	01/19/17
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	90.3	58-132			%	01/16/17	01/19/17

Quant Method: L0116PR.M
Run #: 0116L051
Instrument: Linus
Sequence: L170116
Dilution Factor: 1
Initials: RHA

Printed: 01/19/17 3:12:26 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L051.D Vial: 51
Acq On : 19 Jan 17 11:25 Operator: MA
Sample : AZ48868W14 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Jan 20 16:44 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	18401	2.50000	ppb	0.01
6) Acenaphthene-D10(IS)	7.92	164	9427	2.50000	ppb	0.01
11) Phenanthrene-D10(IS)	9.68	188	17789	2.50000	ppb	0.02
15) Chrysene-D12(IS)	12.84	240	21470	2.50000	ppb	0.03
21) Perylene-D12(IS)	15.36	264	17803	2.50000	ppb	0.03
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.05	82	10524	3.36025	ppb	0.00
Spiked Amount 4.673			Recovery = 71.904%			
7) Surrogate Recovery (FBP)	7.13	172	17967	2.83426	ppb	0.00
Spiked Amount 4.673			Recovery = 60.648%			
17) Surrogate Recovery (TPH)	11.52	244	30079	4.22012	ppb	-0.01
Spiked Amount 4.673			Recovery = 90.308%			

Target Compounds Qvalue

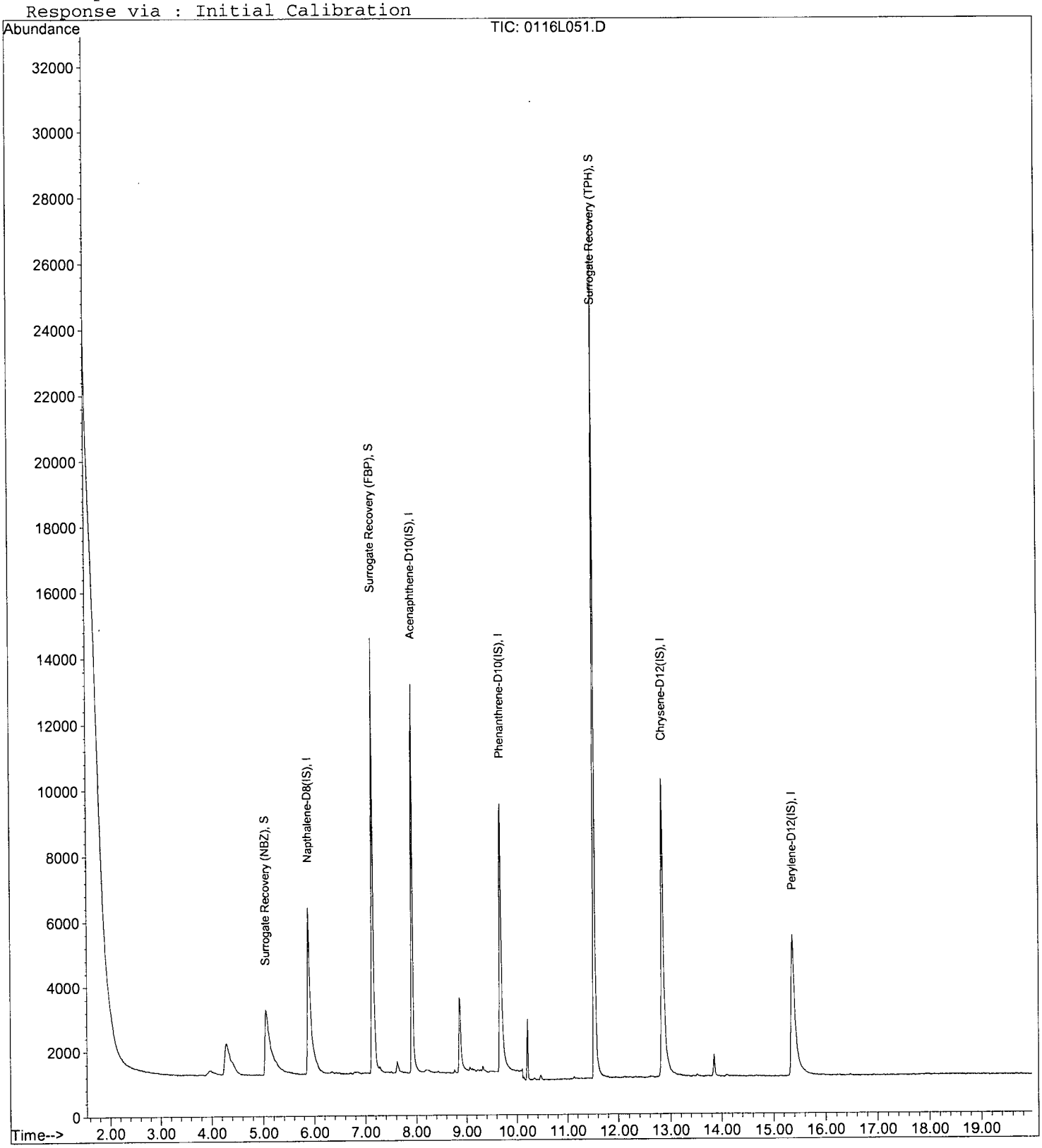
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L051.D Vial: 51
Acq On : 19 Jan 17 11:25 Operator: MA
Sample : AZ48868W14 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Jan 20 16:44 2017 Quant Results File: L0116PR.RES

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH168
Sample Collection Date: 01/09/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48871
QCG: #SIMDO-170116A-215630

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/16/17	01/19/17
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/16/17	01/19/17
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	01/16/17	01/19/17
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	61.9	53-106			%	01/16/17	01/19/17
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	73.7	55-111			%	01/16/17	01/19/17
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	93.7	58-132			%	01/16/17	01/19/17

Quant Method: L0116PR.M
Run #: 0116L055
Instrument: Linus
Sequence: L170116
Dilution Factor: 1
Initials: RHA

Printed: 01/19/17 3:12:26 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L055.D Vial: 55
Acq On : 19 Jan 17 13:17 Operator: MA
Sample : AZ48871W09 1/1070 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 20 16:45 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	18324	2.50000	ppb	0.01
6) Acenaphthene-D10(IS)	7.92	164	9513	2.50000	ppb	0.01
11) Phenanthrene-D10(IS)	9.68	188	18022	2.50000	ppb	0.02
15) Chrysene-D12(IS)	12.84	240	22149	2.50000	ppb	0.03
21) Perylene-D12(IS)	15.36	264	18264	2.50000	ppb	0.03
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.06	82	10017	3.44510	ppb	0.01
Spiked Amount 4.673			Recovery = 73.723%			
7) Surrogate Recovery (FBP)	7.13	172	17292	2.89234	ppb	0.00
Spiked Amount 4.673			Recovery = 61.889%			
17) Surrogate Recovery (TPH)	11.52	244	30075	4.37652	ppb	-0.01
Spiked Amount 4.673			Recovery = 93.668%			

Target Compounds Qvalue

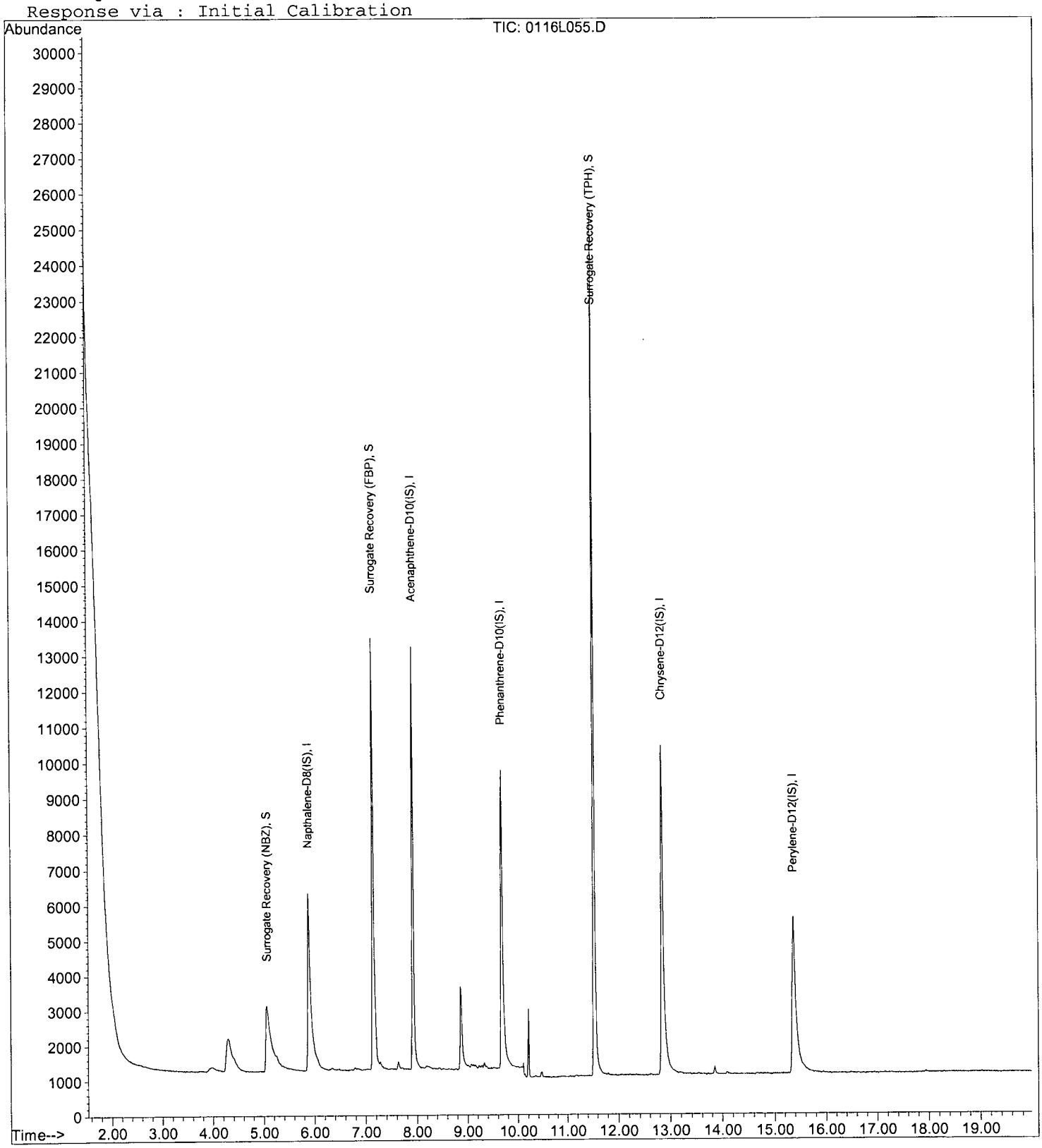
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L055.D Vial: 55
Acq On : 19 Jan 17 13:17 Operator: MA
Sample : AZ48871W09 1/1070 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 20 16:45 2017 Quant Results File: L0116PR.RES

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH169
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48872
QCG: #SIMDO-170116A-215630

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/16/17	01/19/17
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/16/17	01/19/17
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	01/16/17	01/19/17
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	57.5	53-106			%	01/16/17	01/19/17
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	70.3	55-111			%	01/16/17	01/19/17
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	92.3	58-132			%	01/16/17	01/19/17

Quant Method: L0116PR.M
Run #: 0116L053
Instrument: Linus
Sequence: L170116
Dilution Factor: 1
Initials: RHA

Printed: 01/19/17 3:12:26 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L053.D Vial: 53
Acq On : 19 Jan 17 12:21 Operator: MA
Sample : AZ48872W29 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Jan 20 16:45 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	18921	2.50000	ppb	0.01
6) Acenaphthene-D10(IS)	7.92	164	9683	2.50000	ppb	0.01
11) Phenanthrene-D10(IS)	9.68	188	18451	2.50000	ppb	0.02
15) Chrysene-D12(IS)	12.82	240	22547	2.50000	ppb	0.01
21) Perylene-D12(IS)	15.35	264	18889	2.50000	ppb	0.02
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.06	82	10569	3.28605	ppb	0.01
Spiked Amount 4.673			Recovery = 70.320%			
7) Surrogate Recovery (FBP)	7.13	172	17501	2.68776	ppb	0.00
Spiked Amount 4.673			Recovery = 57.523%			
17) Surrogate Recovery (TPH)	11.52	244	32288	4.31366	ppb	-0.01
Spiked Amount 4.673			Recovery = 92.320%			

Target Compounds Qvalue

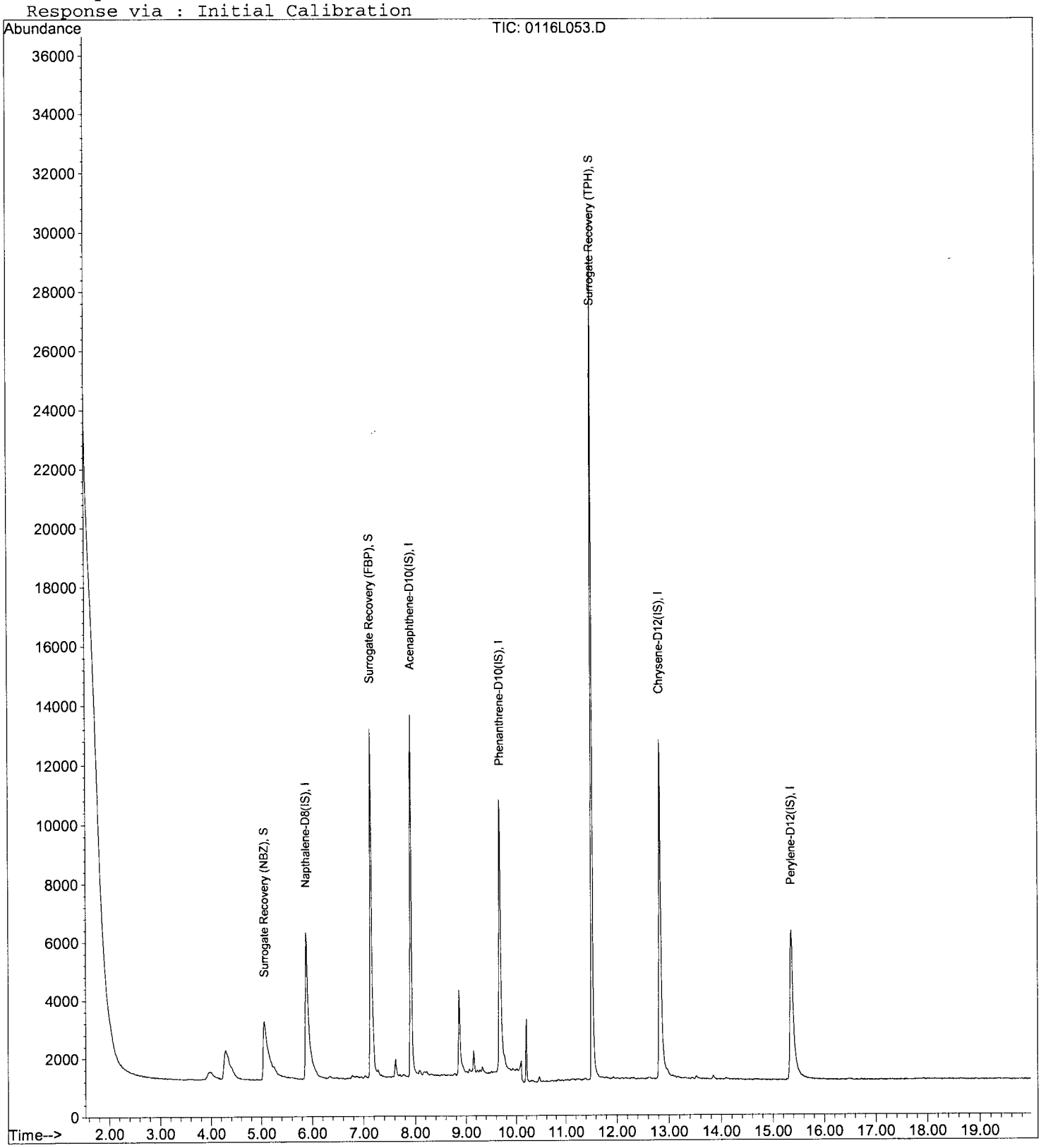
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L053.D Vial: 53
Acq On : 19 Jan 17 12:21 Operator: MA
Sample : AZ48872W29 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Jan 20 16:45 2017 Quant Results File: L0116PR.RES

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH170
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48873
QCG: #SIMDO-170116A-215630

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/16/17	01/18/17
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/16/17	01/18/17
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	01/16/17	01/18/17
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	54.6	53-106			%	01/16/17	01/18/17
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	65.2	55-111			%	01/16/17	01/18/17
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	87.9	58-132			%	01/16/17	01/18/17

Quant Method: L0116PR.M
Run #: 0116L032
Instrument: Linus
Sequence: L170116
Dilution Factor: 1
Initials: RHA

Printed: 01/19/17 3:12:26 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L032.D Vial: 32
Acq On : 18 Jan 17 17:06 Operator: MA
Sample : AZ48873W10 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Jan 19 8:58 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	20950	2.50000	ppb	0.01
6) Acenaphthene-D10(IS)	7.92	164	10528	2.50000	ppb	0.01
11) Phenanthrene-D10(IS)	9.67	188	20312	2.50000	ppb	0.01
15) Chrysene-D12(IS)	12.82	240	24688	2.50000	ppb	0.01
21) Perylene-D12(IS)	15.35	264	20543	2.50000	ppb	0.02
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.05	82	10800	3.04646	ppb	0.00
Spiked Amount 4.673			Recovery = 65.184%			
7) Surrogate Recovery (FBP)	7.15	172	18068	2.55213	ppb	0.01
Spiked Amount 4.673			Recovery = 54.613%			
17) Surrogate Recovery (TPH)	11.52	244	33655	4.10637	ppb	-0.01
Spiked Amount 4.673			Recovery = 87.868%			
Target Compounds						Qvalue

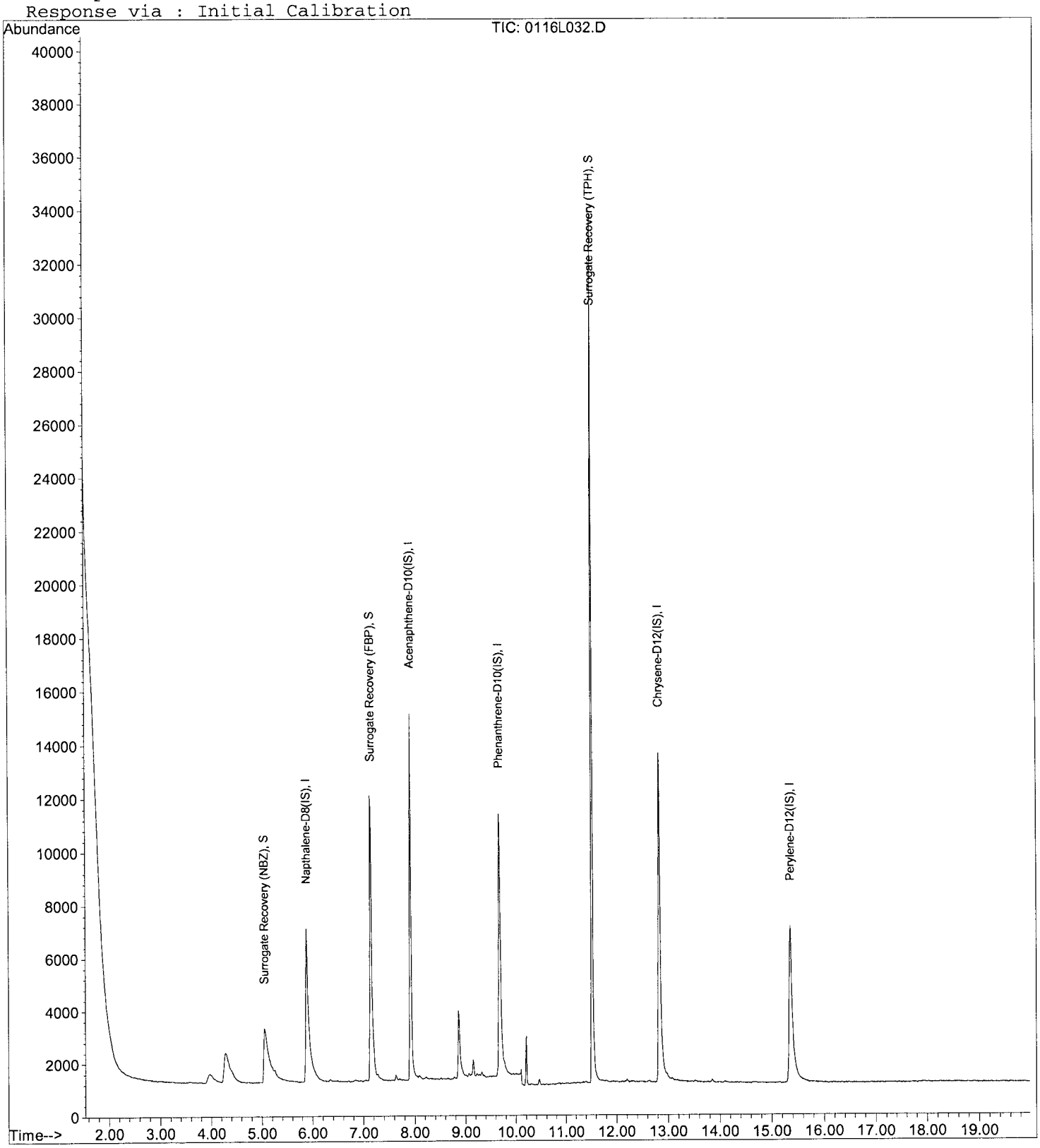
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L032.D Vial: 32
Acq On : 18 Jan 17 17:06 Operator: MA
Sample : AZ48873W10 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Jan 19 8:58 2017 Quant Results File: L0116PR.RES

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH174
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48875
QCG: #SIMDO-170116A-215630

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	25	0.2	0.10	0.06	ug/L	01/16/17	01/18/17
8270D-SIM	2-METHYLNAPHTHALENE	11	0.2	0.10	0.06	ug/L	01/16/17	01/18/17
8270D-SIM	NAPHTHALENE	69	0.2	0.10	0.05	ug/L	01/16/17	01/18/17
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	67.5	53-106			%	01/16/17	01/18/17
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	86.2	55-111			%	01/16/17	01/18/17
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	91.9	58-132			%	01/16/17	01/18/17

Quant Method: L0116PR.M
Run #: 0116L033
Instrument: Linus
Sequence: L170116
Dilution Factor: 1
Initials: RHA

Printed: 01/19/17 3:12:26 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L033.D Vial: 33
Acq On : 18 Jan 17 17:34 Operator: MA
Sample : AZ48875W13 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Jan 20 16:49 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.86	136	16088	2.50000	ppb	-0.01
6) Acenaphthene-D10(IS)	7.91	164	8092	2.50000	ppb	0.00
11) Phenanthrene-D10(IS)	9.66	188	14835	2.50000	ppb	0.00
15) Chrysene-D12(IS)	12.82	240	19314	2.50000	ppb	0.00
21) Perylene-D12(IS)	15.35	264	16958	2.50000	ppb	0.02
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.03	82	11126	4.02580	ppb	-0.01
Spiked Amount 4.673			Recovery = 86.156%			
7) Surrogate Recovery (FBP)	7.12	172	17155	3.15263	ppb	-0.01
Spiked Amount 4.673			Recovery = 67.474%			
17) Surrogate Recovery (TPH)	11.51	244	27545	4.29600	ppb	-0.02
Spiked Amount 4.673			Recovery = 91.934%			
Target Compounds						Qvalue
3) Naphthalene	5.88	128	484604	68.84121	ppb	98
4) 2-Methylnaphthalene	6.70	142	47821	11.28932	ppb	98
5) 1-Methylnaphthalene	6.81	142	119509	25.30478	ppb	98

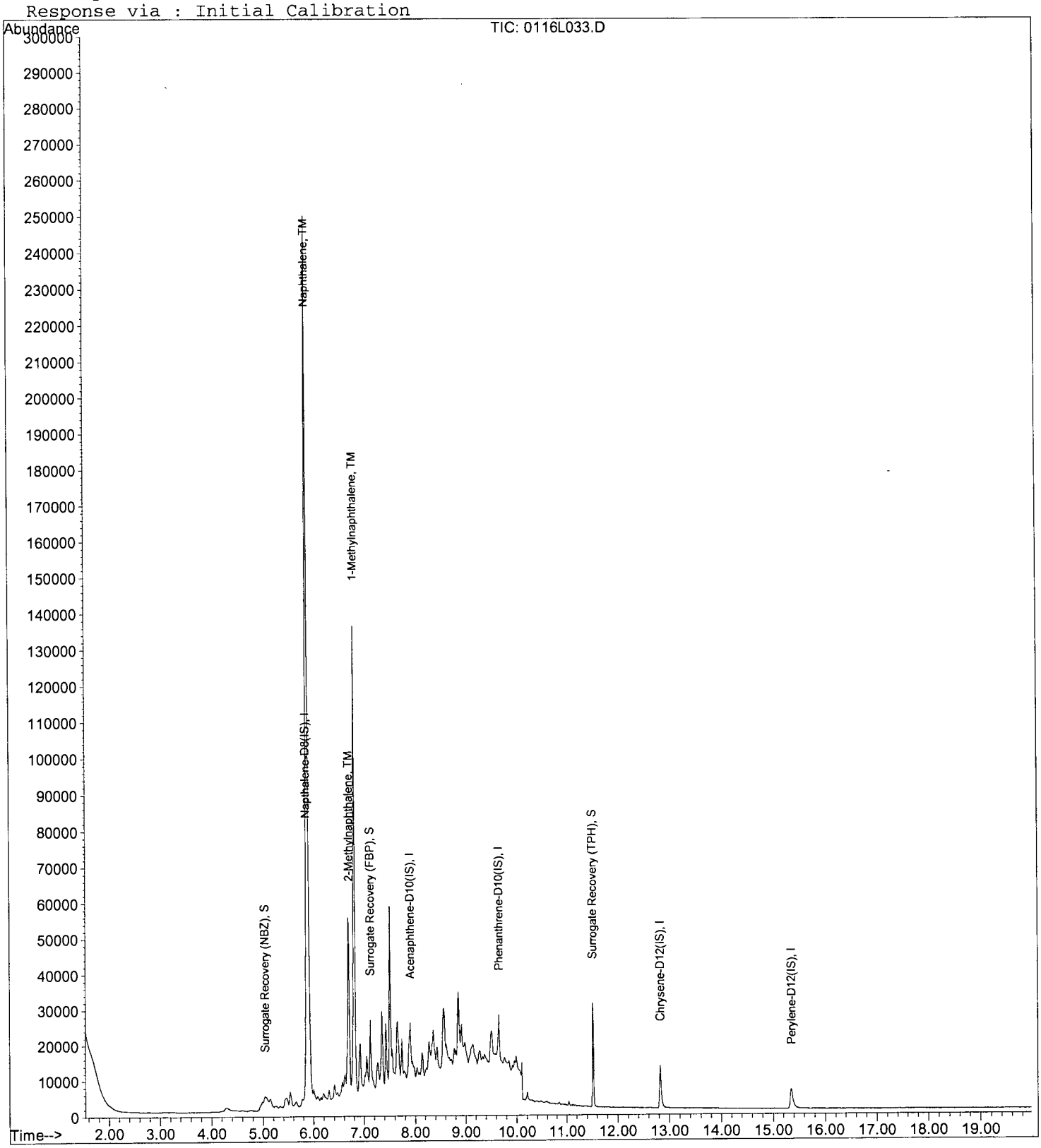
(#) = qualifier out of range (m) = manual integration

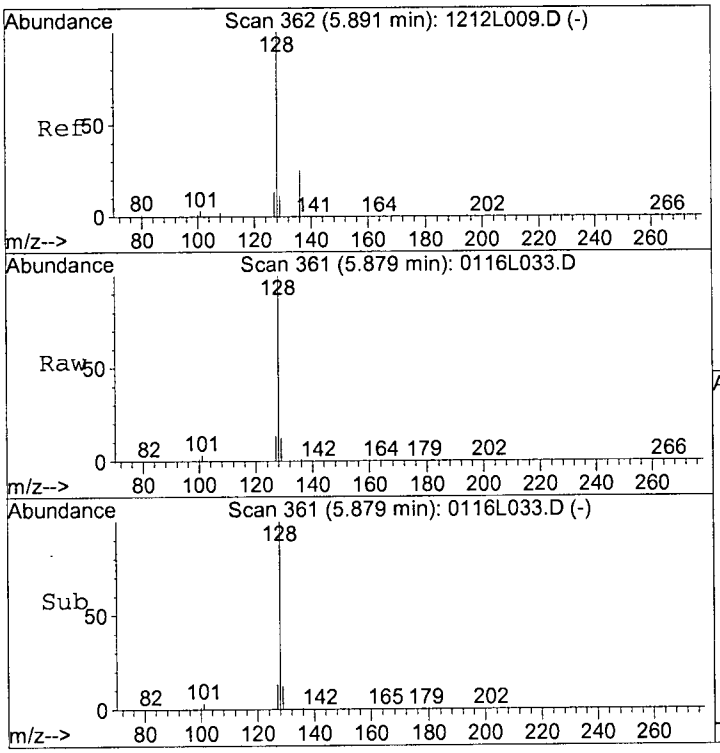
Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L033.D Vial: 33
Acq On : 18 Jan 17 17:34 Operator: MA
Sample : AZ48875W13 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Jan 20 16:49 2017 Quant Results File: L0116PR.RES

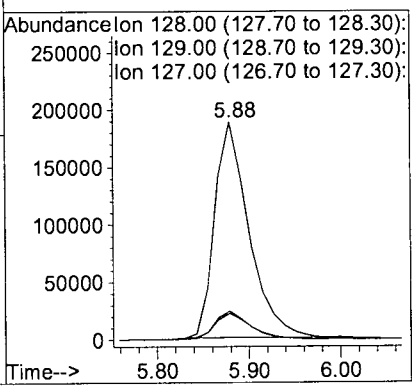
Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration

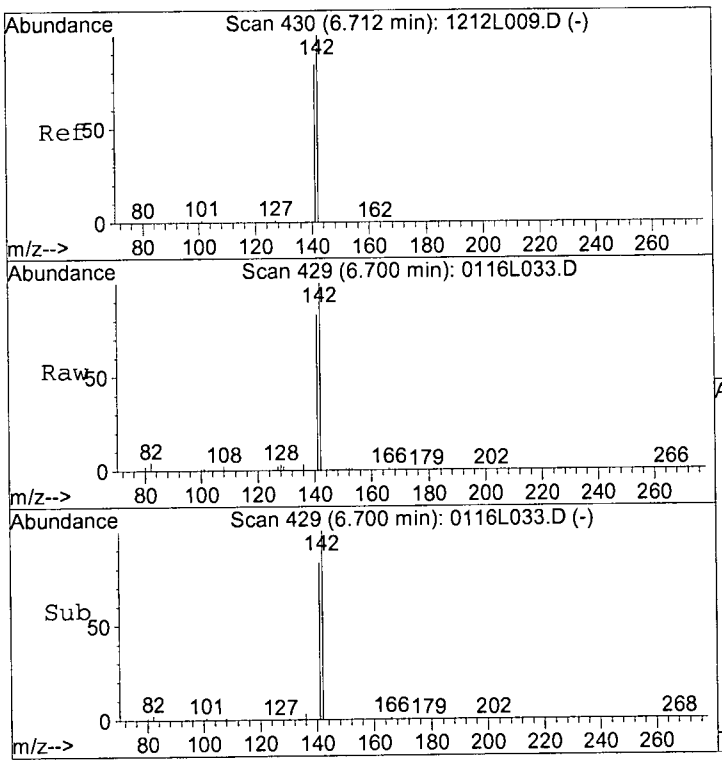




#3
Naphthalene
Concen: 68.84121 ppb
RT: 5.88 min Scan# 361
Delta R.T. -0.01 min
Lab File: 0116L033.D
Acq: 18 Jan 17 17:34

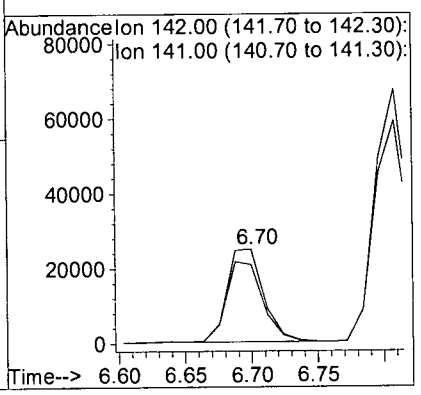
Tgt Ion:128	Resp:	484604	
Ion	Ratio	Lower	Upper
128	100		
129	11.8	7.6	14.2
127	13.1	8.8	16.4

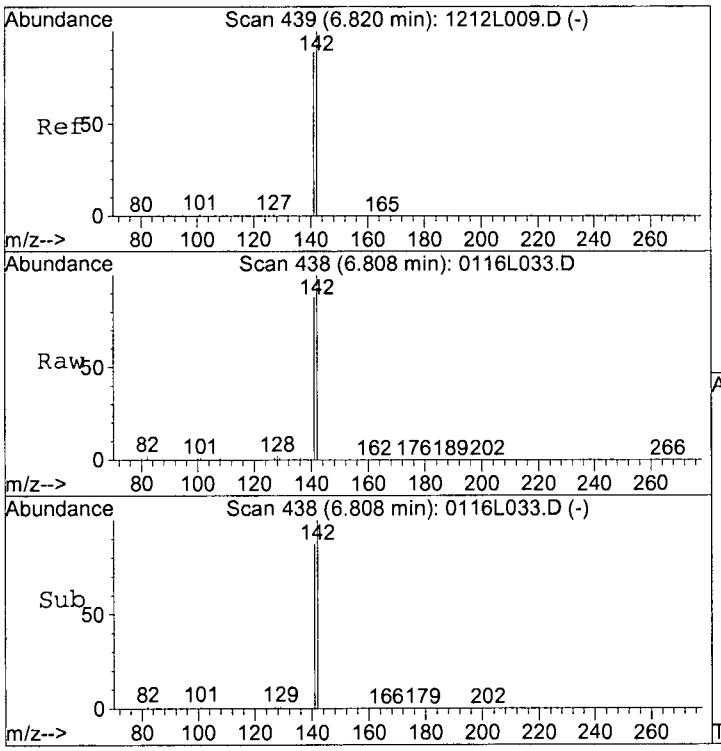




#4
2-Methylnaphthalene
Concen: 11.28932 ppb
RT: 6.70 min Scan# 429
Delta R.T. -0.01 min
Lab File: 0116L033.D
Acq: 18 Jan 17 17:34

Tgt Ion:142	Resp:	47821	
Ion	Ratio	Lower	Upper
142	100		
141	83.0	59.4	110.4

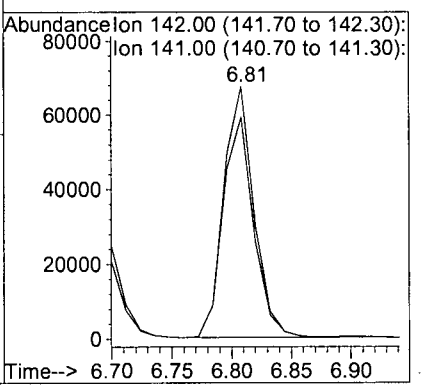




#5
1-Methylnaphthalene
Concen: 25.30478 ppb
RT: 6.81 min Scan# 438
Delta R.T. -0.01 min
Lab File: 0116L033.D
Acq: 18 Jan 17 17:34

Tgt Ion:142 Resp: 119509

Ion	Ratio	Lower	Upper
142	100		
141	87.5	60.2	111.8



EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH176
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48877
QCG: #SIMDO-170116A-215630

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/16/17	01/18/17
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/16/17	01/18/17
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	01/16/17	01/18/17
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	71.7	53-106			%	01/16/17	01/18/17
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	76.9	55-111			%	01/16/17	01/18/17
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	91.4	58-132			%	01/16/17	01/18/17

Quant Method: L0116PR.M
Run #: 0116L034
Instrument: Linus
Sequence: L170116
Dilution Factor: 1
Initials: RHA

Printed: 01/19/17 3:12:26 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L034.D Vial: 34
Acq On : 18 Jan 17 18:02 Operator: MA
Sample : AZ48877W12 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Jan 20 16:50 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	18254	2.50000 ppb	0.01
6) Acenaphthene-D10(IS)	7.91	164	9496	2.50000 ppb	0.00
11) Phenanthrene-D10(IS)	9.67	188	18469	2.50000 ppb	0.01
15) Chrysene-D12(IS)	12.83	240	22204	2.50000 ppb	0.02
21) Perylene-D12(IS)	15.36	264	19252	2.50000 ppb	0.03
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.05	82	11199	3.59157 ppb	0.00
Spiked Amount 4.673			Recovery	= 76.869%	
7) Surrogate Recovery (FBP)	7.13	172	21392	3.35003 ppb	0.00
Spiked Amount 4.673			Recovery	= 71.690%	
17) Surrogate Recovery (TPH)	11.52	244	31468	4.26906 ppb	-0.01
Spiked Amount 4.673			Recovery	= 91.357%	
Target Compounds					Qvalue

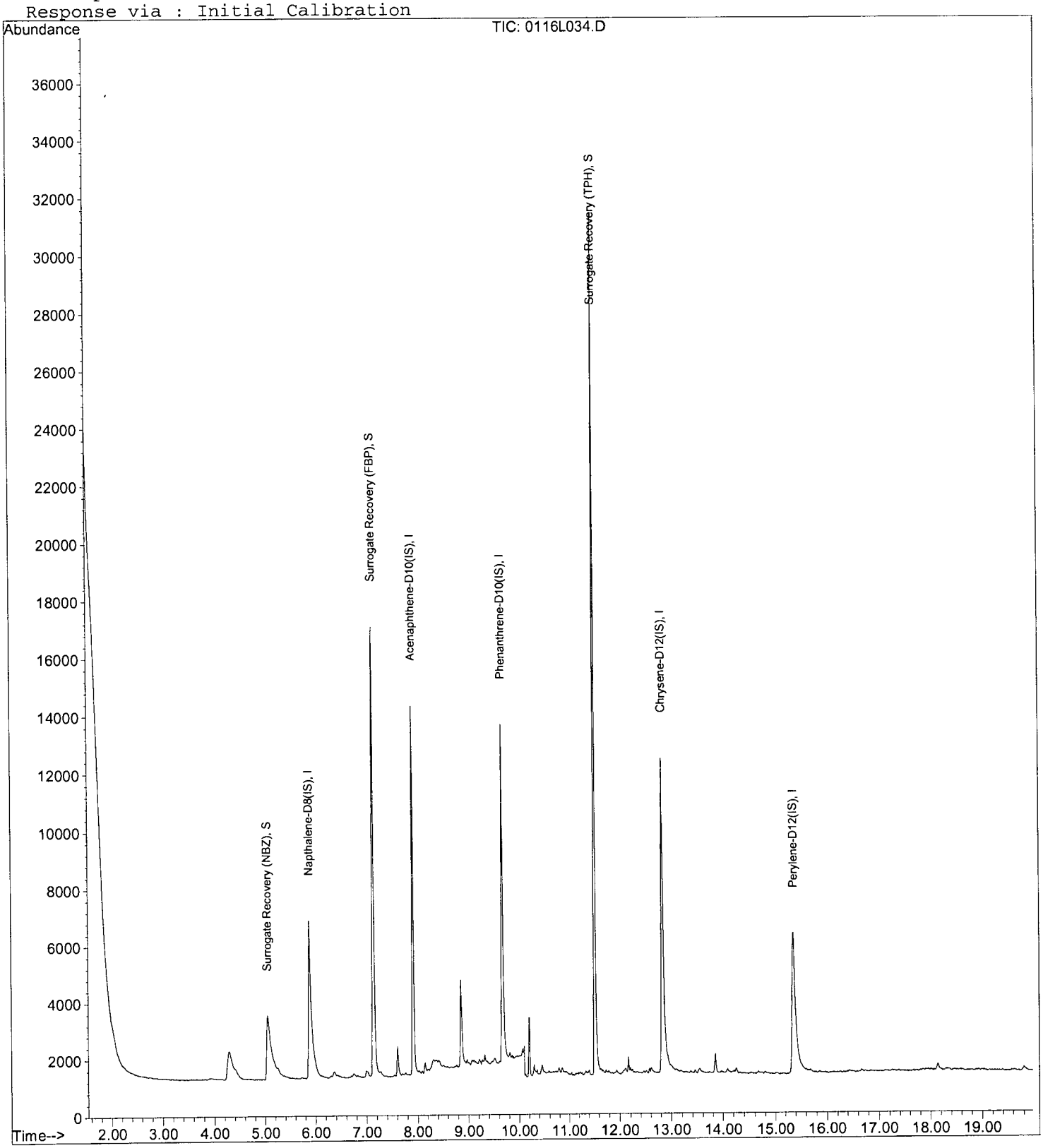
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L034.D Vial: 34
Acq On : 18 Jan 17 18:02 Operator: MA
Sample : AZ48877W12 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Jan 20 16:50 2017 Quant Results File: L0116PR.RES

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH179
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48878
QCG: #SIMDO-170116A-215630

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/16/17	01/18/17
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/16/17	01/18/17
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	01/16/17	01/18/17
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	63.9	53-106			%	01/16/17	01/18/17
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	71.1	55-111			%	01/16/17	01/18/17
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	95.1	58-132			%	01/16/17	01/18/17

Quant Method: L0116PR.M
Run #: 0116L035
Instrument: Linus
Sequence: L170116
Dilution Factor: 1
Initials: RHA

Printed: 01/19/17 3:12:26 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L035.D Vial: 35
Acq On : 18 Jan 17 18:29 Operator: MA
Sample : AZ48878W12 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Jan 20 16:51 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	18657	2.50000 ppb	0.01
6) Acenaphthene-D10(IS)	7.92	164	9599	2.50000 ppb	0.01
11) Phenanthrene-D10(IS)	9.67	188	18429	2.50000 ppb	0.01
15) Chrysene-D12(IS)	12.83	240	22693	2.50000 ppb	0.02
21) Perylene-D12(IS)	15.36	264	19497	2.50000 ppb	0.03
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.05	82	10549	3.32406 ppb	0.00
Spiked Amount 4.673			Recovery	= 71.134%	
7) Surrogate Recovery (FBP)	7.13	172	19262	2.98410 ppb	0.00
Spiked Amount 4.673			Recovery	= 63.858%	
17) Surrogate Recovery (TPH)	11.52	244	33484	4.44467 ppb	-0.01
Spiked Amount 4.673			Recovery	= 95.123%	
Target Compounds					Qvalue

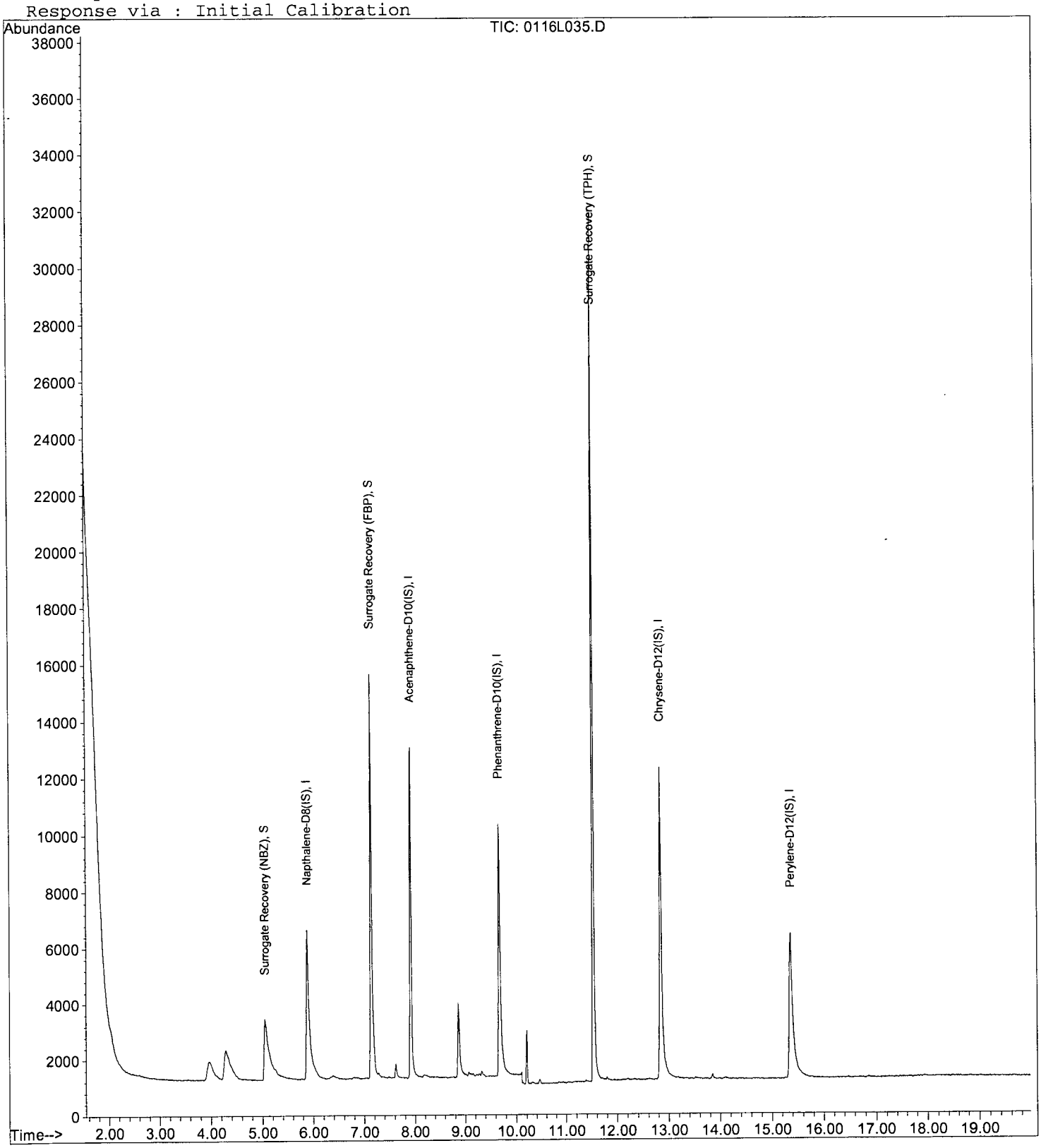
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L035.D Vial: 35
Acq On : 18 Jan 17 18:29 Operator: MA
Sample : AZ48878W12 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Jan 20 16:51 2017 Quant Results File: L0116PR.RES

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH186
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48880
QCG: #SIMDO-170116A-215630

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/16/17	01/18/17
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/16/17	01/18/17
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	01/16/17	01/18/17
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	77.9	53-106			%	01/16/17	01/18/17
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	70.6	55-111			%	01/16/17	01/18/17
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	88.8	58-132			%	01/16/17	01/18/17

Quant Method: L0116PR.M
Run #: 0116L036
Instrument: Linus
Sequence: L170116
Dilution Factor: 1
Initials: RHA

Printed: 01/19/17 3:12:26 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L036.D Vial: 36
Acq On : 18 Jan 17 18:57 Operator: MA
Sample : AZ48880W08 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Jan 20 16:51 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	19578	2.50000	ppb	0.01
6) Acenaphthene-D10(IS)	7.92	164	10059	2.50000	ppb	0.01
11) Phenanthrene-D10(IS)	9.68	188	19174	2.50000	ppb	0.02
15) Chrysene-D12(IS)	12.83	240	23823	2.50000	ppb	0.02
21) Perylene-D12(IS)	15.36	264	20342	2.50000	ppb	0.03
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.05	82	10989	3.30112	ppb	0.00
Spiked Amount 4.673			Recovery = 70.641%			
7) Surrogate Recovery (FBP)	7.13	172	24625	3.64048	ppb	0.00
Spiked Amount 4.673			Recovery = 77.896%			
17) Surrogate Recovery (TPH)	11.52	244	32812	4.14888	ppb	-0.01
Spiked Amount 4.673			Recovery = 88.789%			

Target Compounds Qvalue

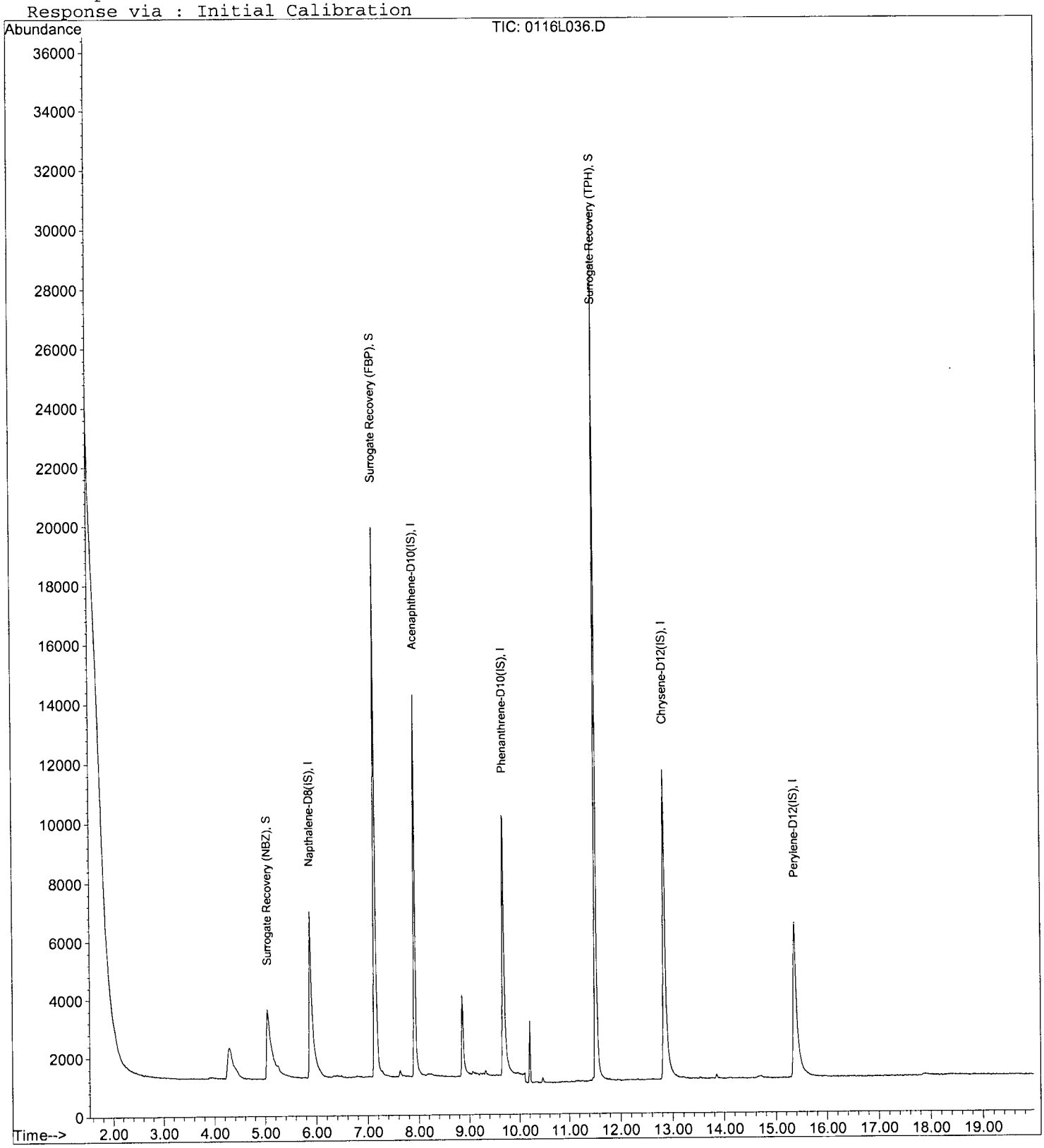
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L036.D Vial: 36
Acq On : 18 Jan 17 18:57 Operator: MA
Sample : AZ48880W08 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Jan 20 16:51 2017 Quant Results File: L0116PR.RES

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH187
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48881
QCG: #SIMDO-170116A-215630

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/16/17	01/18/17
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/16/17	01/18/17
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	01/16/17	01/18/17
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	72.9	53-106			%	01/16/17	01/18/17
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	72.6	55-111			%	01/16/17	01/18/17
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	86.5	58-132			%	01/16/17	01/18/17

Quant Method: L0116PR.M
Run #: 0116L037
Instrument: Linus
Sequence: L170116
Dilution Factor: 1
Initials: RHA

Printed: 01/19/17 3:12:26 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L037.D Vial: 37
Acq On : 18 Jan 17 19:25 Operator: MA
Sample : AZ48881W09 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Jan 20 16:52 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	19763	2.50000 ppb	0.01
6) Acenaphthene-D10(IS)	7.92	164	10192	2.50000 ppb	0.01
11) Phenanthrene-D10(IS)	9.68	188	19196	2.50000 ppb	0.02
15) Chrysene-D12(IS)	12.83	240	23734	2.50000 ppb	0.02
21) Perylene-D12(IS)	15.36	264	20544	2.50000 ppb	0.03
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.05	82	11421	3.39348 ppb	0.00
Spiked Amount 4.673			Recovery	= 72.610%	
7) Surrogate Recovery (FBP)	7.13	172	23349	3.40680 ppb	0.00
Spiked Amount 4.673			Recovery	= 72.910%	
17) Surrogate Recovery (TPH)	11.52	244	31852	4.04259 ppb	-0.01
Spiked Amount 4.673			Recovery	= 86.520%	

Target Compounds Qvalue

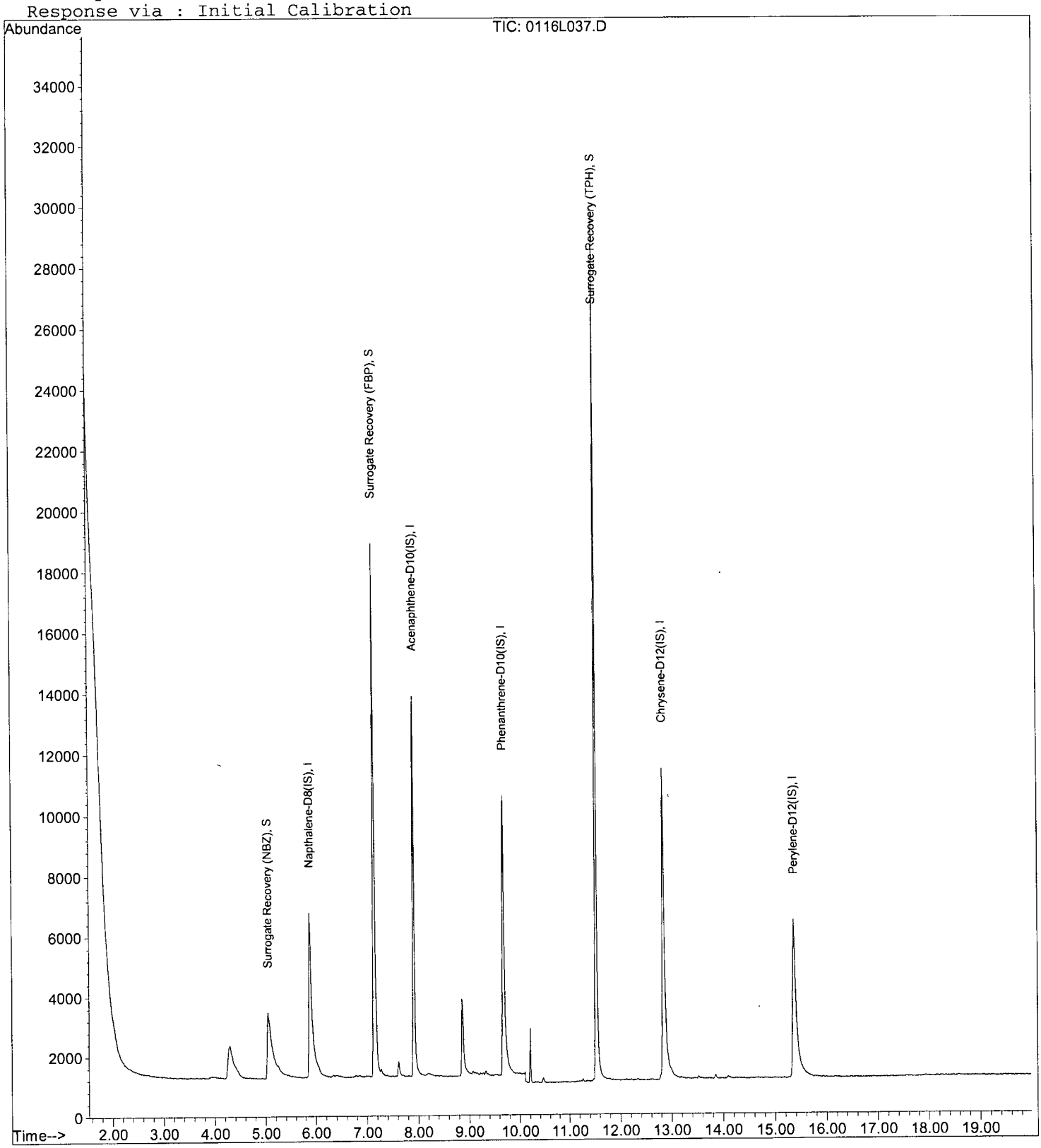
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L037.D Vial: 37
Acq On : 18 Jan 17 19:25 Operator: MA
Sample : AZ48881W09 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Jan 20 16:52 2017 Quant Results File: L0116PR.RES

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



ORGANICS

Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/16/17
Matrix: Instrument: Linus
Initials:

		Compound	0116L003.D 0.1	0116L004.D 0.2	0116L005.D 0.5	0116L006.D 1	0116L007.D 5	0116L008.D 10	0116L009.D 50	0116L010.D 100			Avg	%RSD		
1	I	Napthalene-D8(IS)														
2	SL	Surrogate Recovery (NBZ)			0.0634	0.1193	0.3785	0.4286	0.4160	0.4184			0.30	55	SL	1.000
3	TM	Naphthalene	0.8641	0.8899	1.014	1.051	1.158	1.210	1.029	0.9625			1.0	12	TM	
4	TML	2-Methylnaphthalene	0.3844	0.3669	0.4696	0.5130	0.6848	0.7310	0.6163	0.5795			0.54	25	TML	0.999
5	TM	1-Methylnaphthalene	0.7503	0.7307	0.7345	0.7190	0.7025	0.7267	0.5843	0.5392			0.69	11	TM	
6	I	Acenaphthene-D10(IS)														
7	S	Surrogate Recovery (FBP)	1.431	1.366	1.559	1.629	1.721	1.833	1.537	1.494			1.6	9.7	S	
8	TM	Acenaphthylene	1.711	1.804	2.071	2.040	2.374	2.524	2.074	1.954			2.1	13	TM	
9	*TM	Acenaphthene	1.304	1.189	1.320	1.273	1.380	1.447	1.178	1.116			1.3	8.7	*TM	
10	TM	Fluorene	1.306	1.197	1.381	1.381	1.572	1.633	1.348	1.260			1.4	11	TM	
11	I	Phenanthrene-D10(IS)														
12	TM	Phenanthrene	1.005	0.9837	1.024	1.013	1.160	1.211	1.017	0.9340			1.0	8.9	TM	
13	TM	Anthracene	0.9050	0.8051	0.9610	0.9801	1.146	1.221	0.9880	0.8505			0.98	14	TM	
14	*TM	Fluoranthene	1.590	1.496	1.677	1.650	1.885	1.985	1.642	1.517			1.7	10	*TM	
15	I	Chrysene-D12(IS)														
16	TM	Pyrene	1.302	1.242	1.401	1.393	1.588	1.653	1.426	1.337			1.4	9.8	TM	
17	S	Surrogate Recovery (TPH)	0.7624	0.6994	0.8025	0.7619	0.8194	0.8577	0.7659	0.7360			0.78	6.4	S	
18	TML	Benz (a) anthracene	0.7445	0.4548	0.7894	0.7434	1.193	1.413	1.267	1.247			0.98	35	TML	1.000
19	TML	Chrysene	1.637	1.740	1.624	1.629	1.469	1.388	1.150	1.066			1.5	17	TML	0.998
20	TML	Indeno (1,2,3-cd) pyrene	0.2668	0.6438	0.8971	0.9645	1.142	1.226	1.097	1.068			0.91	35	TML	1.000
21	I	Perylene-D12(IS)														
22	TML	Benzo (b) fluoranthene	0.9696	0.8802	0.9868	0.9448	1.242	1.523	1.342	1.315			1.2	20	TML	1.000
23	TM	Benzo (k) fluoranthene	1.264	1.256	1.534	1.451	1.496	1.396	1.144	1.072			1.3	13	TM	
24	*TML	Benzo (a) pyrene	0.7195	0.9626	1.096	1.058	1.321	1.393	1.203	1.142			1.1	19	*TML	0.999
25	TML	Dibenz (a,h) anthracene	0.7096	0.8215	0.9390	0.8766	1.104	1.161	1.001	0.9674			0.95	16	TML	0.999
26	TML	Benzo (g,h,i) perylene	0.7140	0.7693	0.9214	0.9032	1.082	1.157	1.000	0.9251			0.93	16	TML	0.998
27																
28																
29																
30																
31																
32																
33																
34																
35																

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L003.D Vial: 3
Acq On : 16 Jan 17 17:54 Operator: MA
Sample : 0.1 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:25 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 16 16:54:35 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	21525	2.50000	ppb		0.01
6) Acenaphthene-D10(IS)	7.92	164	10869	2.50000	ppb		0.01
11) Phenanthrene-D10(IS)	9.68	188	20774	2.50000	ppb		0.02
15) Chrysene-D12(IS)	12.83	240	26428	2.50000	ppb		0.02
21) Perylene-D12(IS)	15.35	264	22690	2.50000	ppb		0.02
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.03	82	4	0.16995	ppb		0.01
Spiked Amount 5.000			Recovery = 3.400%				
7) Surrogate Recovery (FBP)	7.19	172	311	-0.10609	ppb		0.07
Spiked Amount 5.000			Recovery = -2.120%				
17) Surrogate Recovery (TPH)	11.56	244	403	-0.07361	ppb		0.04
Spiked Amount 5.000			Recovery = -1.480%				
Target Compounds							Qvalue
3) Naphthalene	5.89	128	744	0.08568	ppb		99
4) 2-Methylnaphthalene	6.82	142	331	0.06268	ppb		91
5) 1-Methylnaphthalene	6.89	142	646m	0.11019	ppb		90
8) Acenaphthylene	7.79	152	744	0.08811	ppb		92
9) Acenaphthene	7.95	154	567	0.11078	ppb		98
10) Fluorene	8.63	166	568	0.09586	ppb		99
12) Phenanthrene	9.70	178	835	0.09352	ppb		97
13) Anthracene	9.81	178	752	0.09290	ppb	#	94
14) Fluoranthene	11.15	202	1321	0.10645	ppb		97
16) Pyrene	11.41	202	1376	0.10495	ppb		98
18) Benz (a) anthracene	12.83	228	787	0.06978	ppb		89
19) Chrysene	12.87	228	1730	0.13595	ppb		95
20) Indeno (1,2,3-cd) pyrene	17.75	276	282	0.02295	ppb	#	87
22) Benzo (b) fluoranthene	14.61	252	880	0.09035	ppb		99
23) Benzo (k) fluoranthene	14.66	252	1147m	0.11183	ppb		97
24) Benzo (a) pyrene	15.26	252	653	0.06499	ppb	#	90
25) Dibenz (a,h) anthracene	17.76	278	644	0.06824	ppb		94
26) Benzo (g,h,i) perylene	18.29	276	648	0.07004	ppb		96

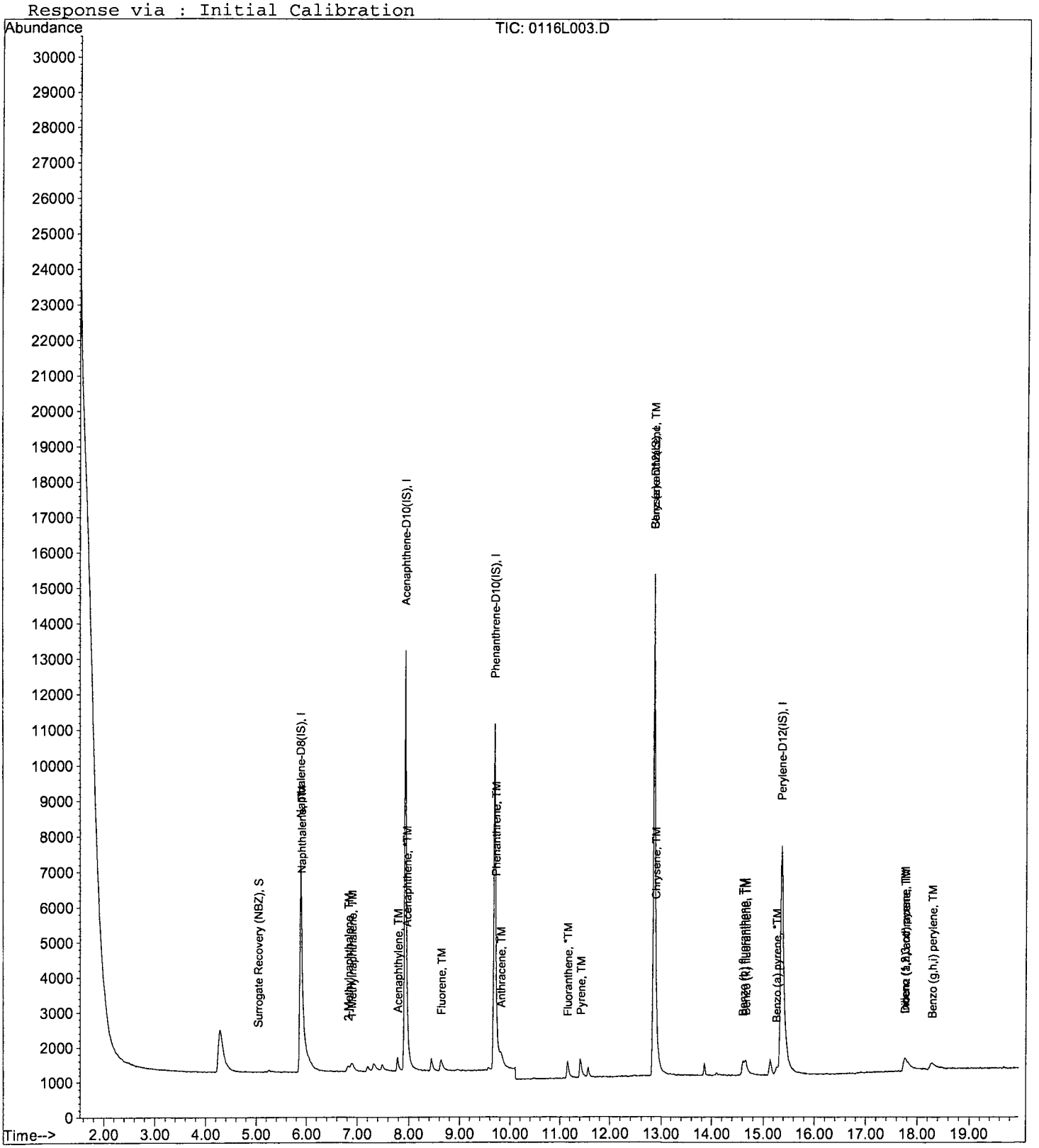
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L003.D Vial: 3
Acq On : 16 Jan 17 17:54 Operator: MA
Sample : 0.1 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:25 2017 Quant Results File: L0116PR.RES

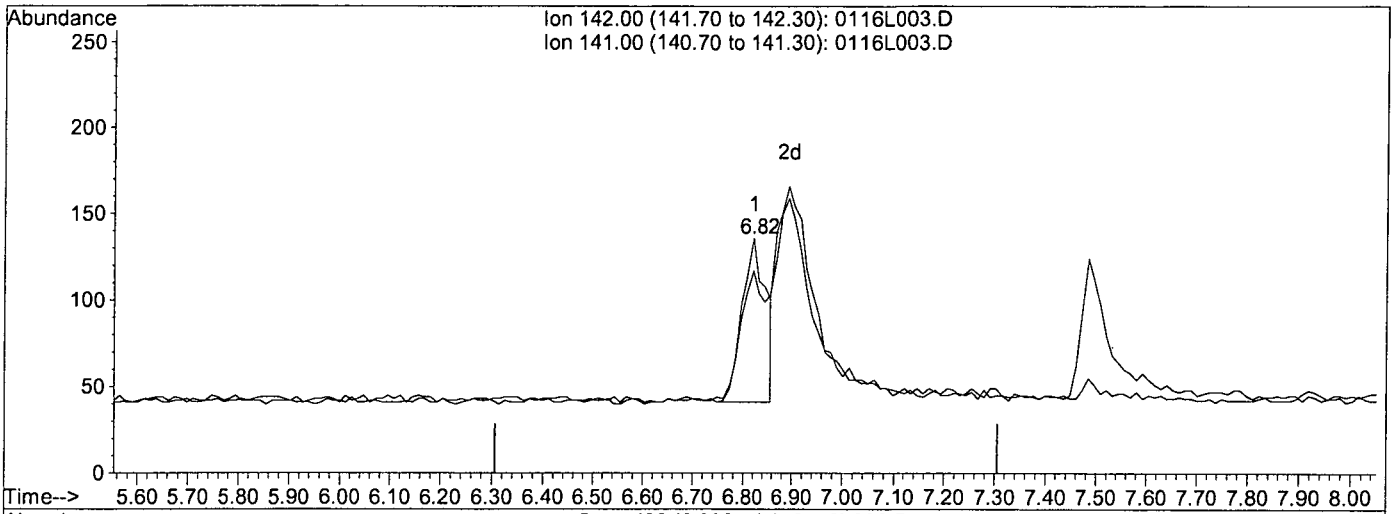
Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration

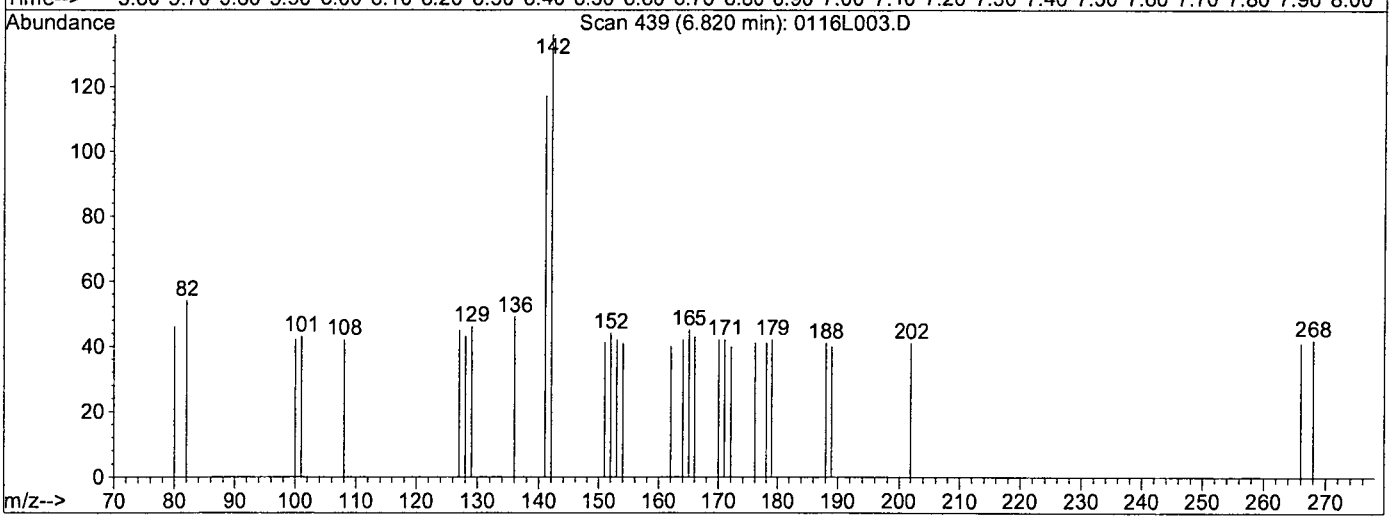


Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L003.D Vial: 3
Acq On : 16 Jan 17 17:54 Operator: MA
Sample : 0.1 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 8:55 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 10:31:40 2017
Response via : Multiple Level Calibration





TIC: 0116L003.D

(5) 1-Methylnaphthalene (TM)

6.82min 0.0565ppb

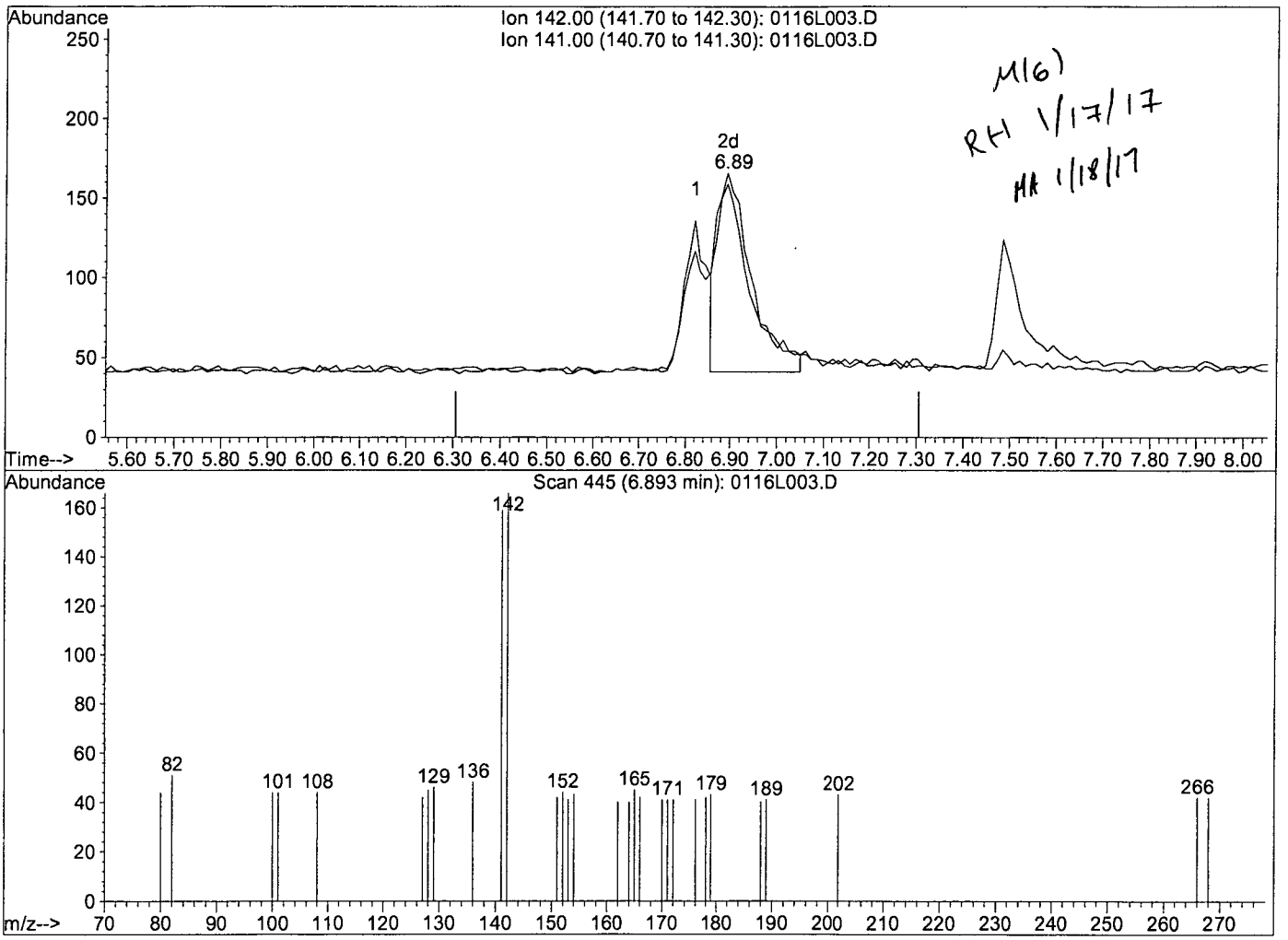
response 331

Ion	Exp%	Act%
142.00	100	100
141.00	86.00	76.84
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L003.D Vial: 3
Acq On : 16 Jan 17 17:54 Operator: MA
Sample : 0.1 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 10:55 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 10:31:40 2017
Response via : Multiple Level Calibration



TIC: 0116L003.D

(5) 1-Methylnaphthalene (TM)

6.89min 0.1102ppb m

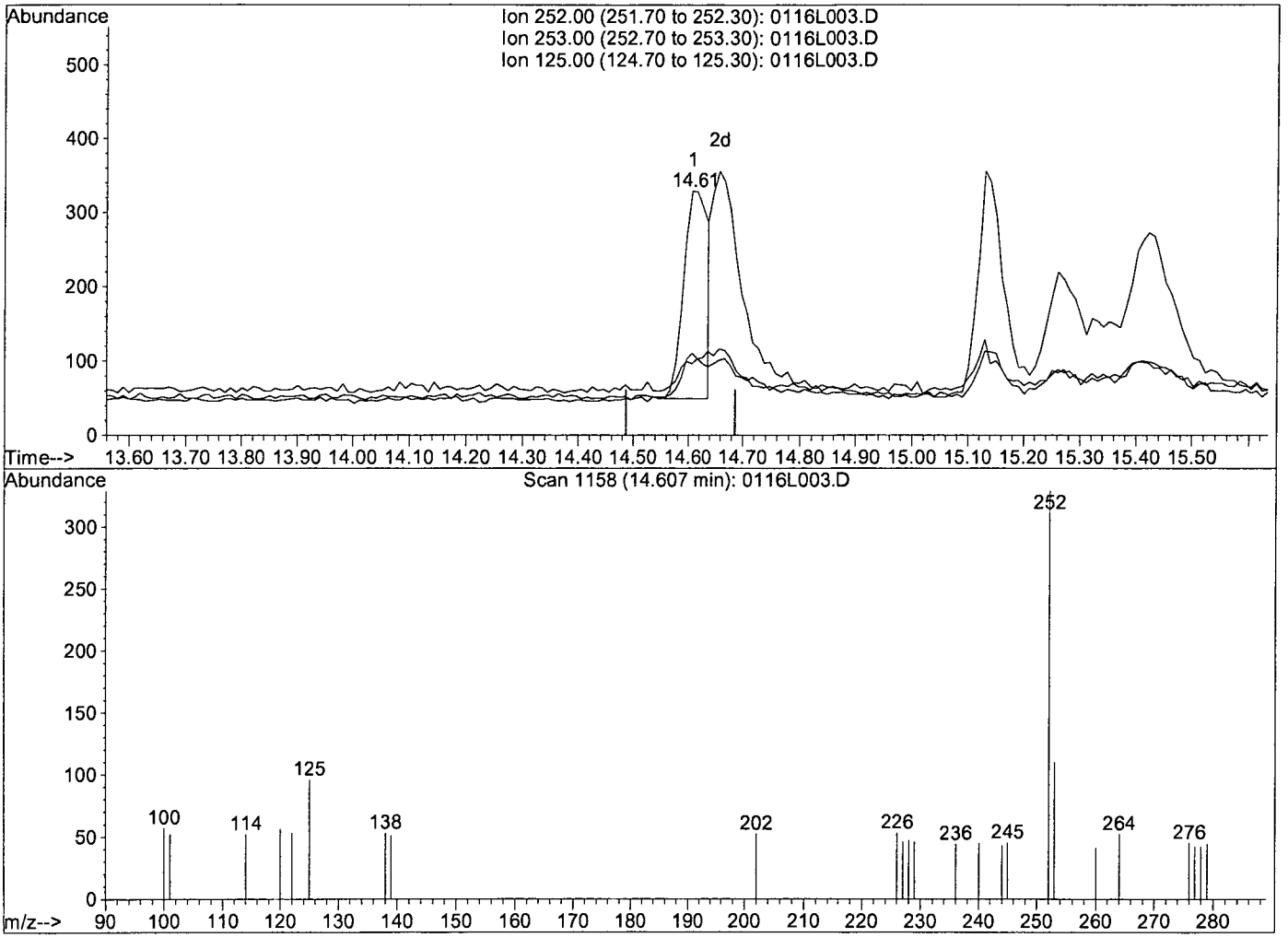
response 646

Ion	Exp%	Act%
142.00	100	100
141.00	86.00	95.78
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L003.D Vial: 3
Acq On : 16 Jan 17 17:54 Operator: MA
Sample : 0.1 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 10:55 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:21:29 2017
Response via : Multiple Level Calibration



TIC: 0116L003.D

(23) Benzo (k) fluoranthene (TM)

14.61min 0.0858ppb

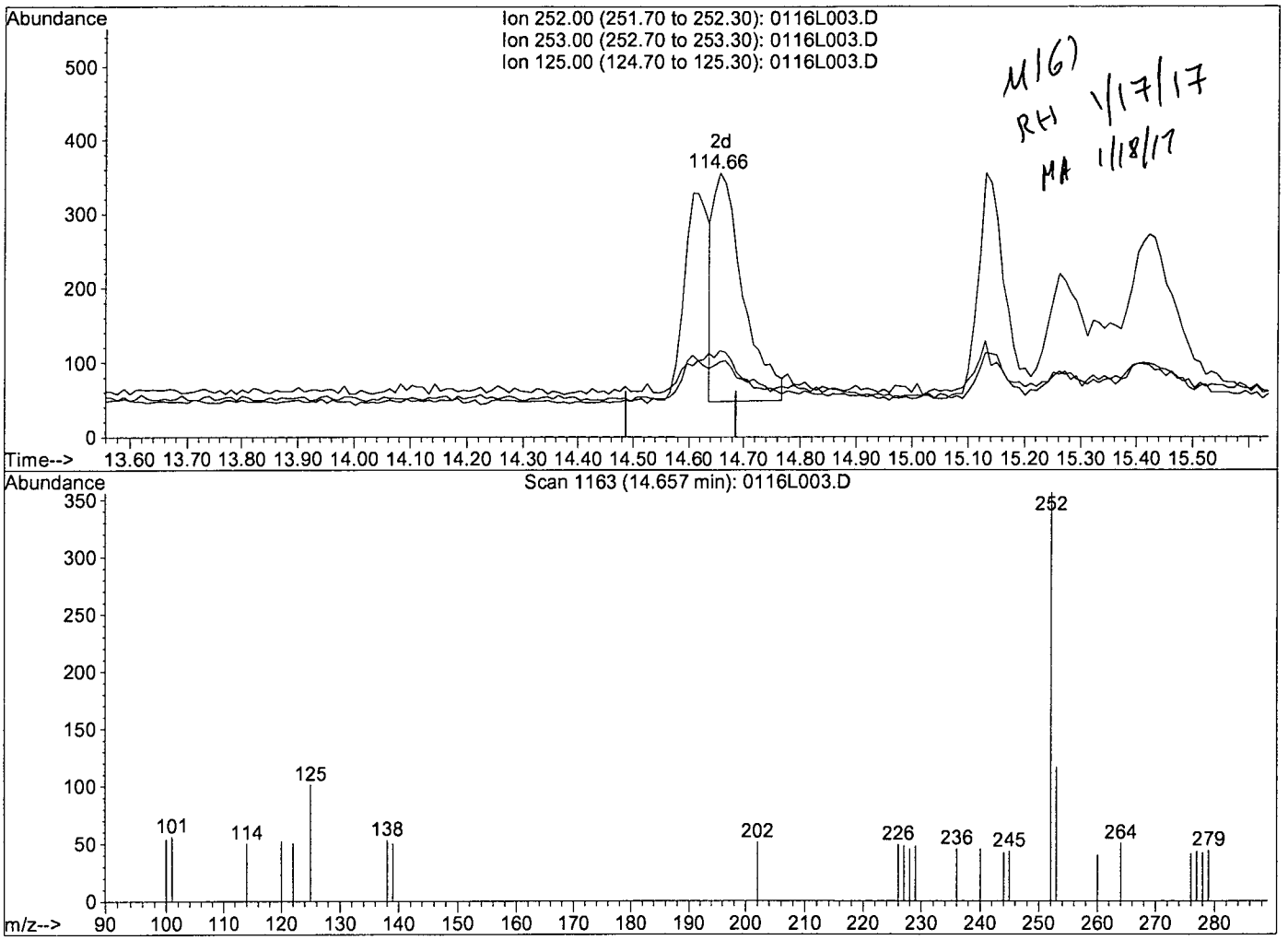
response 880

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	21.07
125.00	10.50	12.50
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L003.D Vial: 3
Acq On : 16 Jan 17 17:54 Operator: MA
Sample : 0.1 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 11:25 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:21:29 2017
Response via : Multiple Level Calibration



TIC: 0116L003.D

(23) Benzo (k) fluoranthene (TM)

14.66min 0.1118ppb m

response 1147

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	32.58#
125.00	10.50	28.37#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L004.D Vial: 4
Acq On : 16 Jan 17 18:22 Operator: MA
Sample : 0.2 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 10:59 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 16 16:54:35 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.88	136	20031	2.50000	ppb		0.02
6) Acenaphthene-D10(IS)	7.92	164	10246	2.50000	ppb		0.01
11) Phenanthrene-D10(IS)	9.68	188	19657	2.50000	ppb		0.02
15) Chrysene-D12(IS)	12.83	240	24737	2.50000	ppb		0.02
21) Perylene-D12(IS)	15.35	264	21530	2.50000	ppb		0.02
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.03	82	7	0.17124	ppb		0.01
Spiked Amount 5.000			Recovery = 3.420%				
7) Surrogate Recovery (FBP)	7.19	172	560	-0.05903	ppb		0.07
Spiked Amount 5.000			Recovery = -1.180%				
17) Surrogate Recovery (TPH)	11.56	244	692	-0.03190	ppb		0.04
Spiked Amount 5.000			Recovery = -0.640%				
Target Compounds							Qvalue
3) Naphthalene	5.90	128	1426	0.17647	ppb		98
4) 2-Methylnaphthalene	6.81	142	588	0.11965	ppb		97
5) 1-Methylnaphthalene	6.88	142	1171m	0.21465	ppb		95
8) Acenaphthylene	7.77	152	1479	0.18581	ppb		99
9) Acenaphthene	7.95	154	975	0.20208	ppb		97
10) Fluorene	8.62	166	981	0.17563	ppb		87
12) Phenanthrene	9.70	178	1547	0.18310	ppb		96
13) Anthracene	9.81	178	1266	0.16528	ppb		97
14) Fluoranthene	11.14	202	2352	0.20030	ppb		97
16) Pyrene	11.40	202	2458	0.20029	ppb		99
18) Benz (a) anthracene	12.83	228	900m	0.08525	ppb		0
19) Chrysene	12.87	228	3443m	0.28906	ppb		96
20) Indeno (1,2,3-cd) pyrene	17.74	276	1274	0.11075	ppb	#	85
22) Benzo (b) fluoranthene	14.60	252	1516	0.16404	ppb		98
23) Benzo (k) fluoranthene	14.66	252	2164m	0.22235	ppb		97
24) Benzo (a) pyrene	15.26	252	1658	0.17390	ppb		92
25) Dibenz (a,h) anthracene	17.75	278	1415	0.15801	ppb		97
26) Benzo (g,h,i) perylene	18.27	276	1325	0.15094	ppb		98

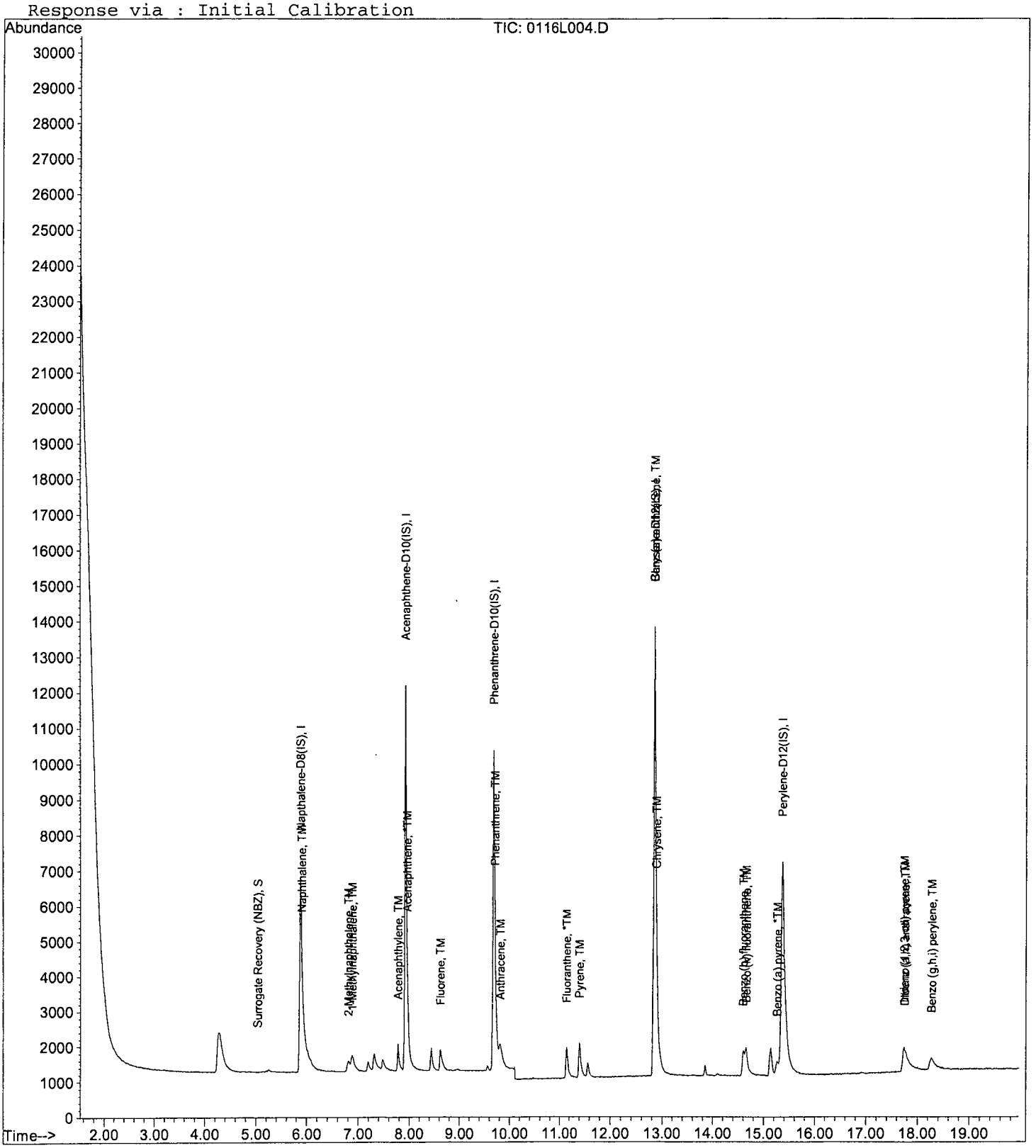
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L004.D Vial: 4
Acq On : 16 Jan 17 18:22 Operator: MA
Sample : 0.2 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 10:59 2017 Quant Results File: L0116PR.RES

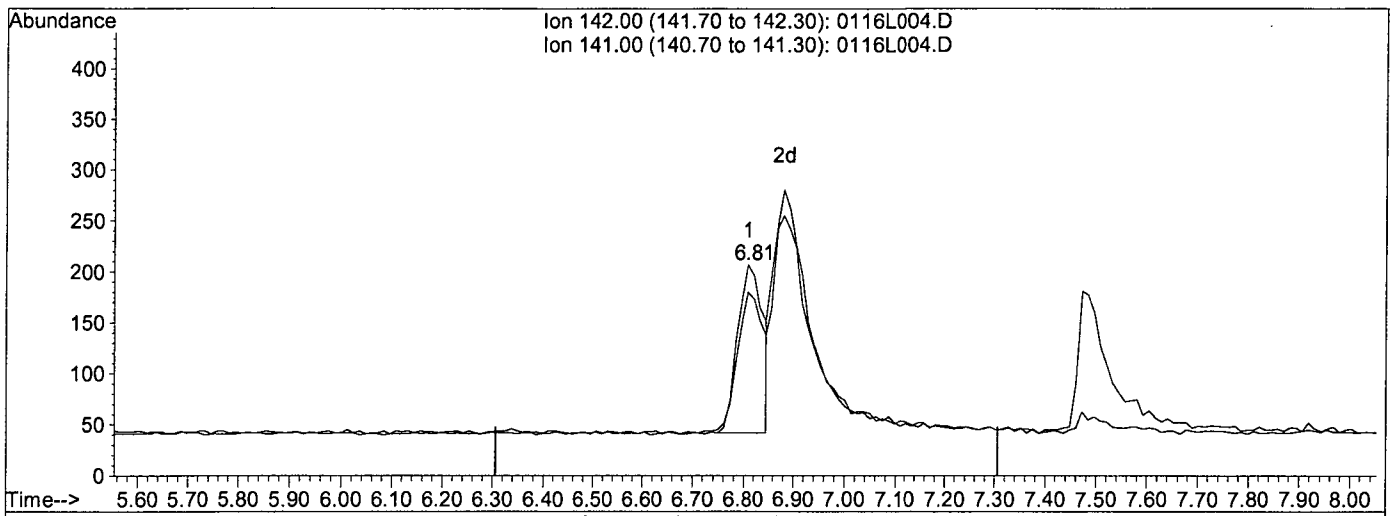
Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration

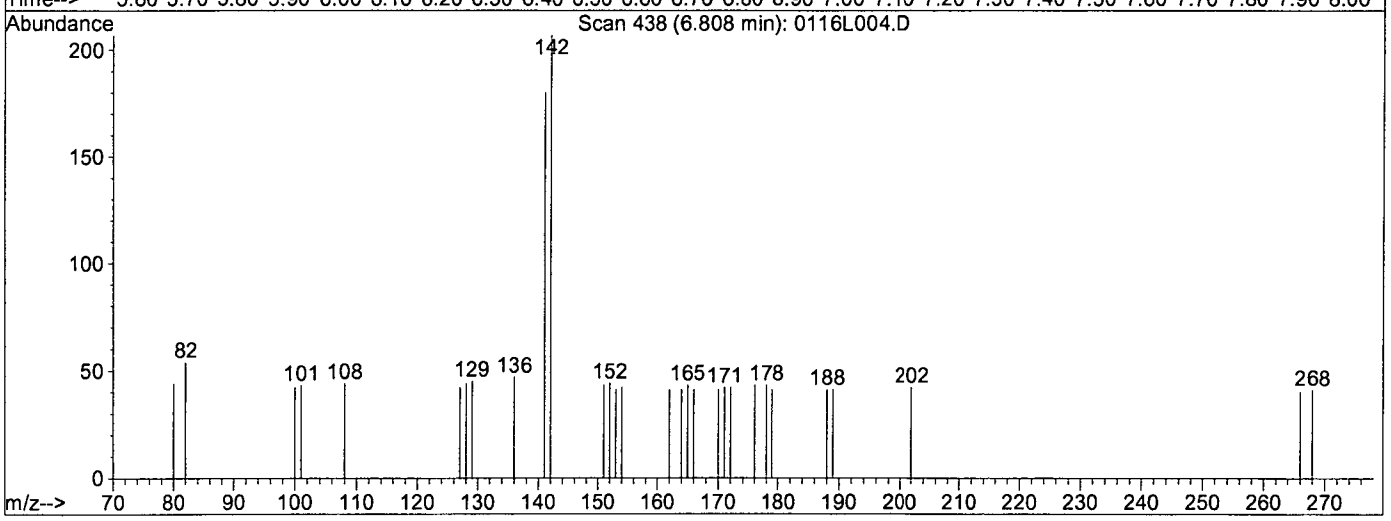


Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L004.D Vial: 4
Acq On : 16 Jan 17 18:22 Operator: MA
Sample : 0.2 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 8:55 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 10:31:40 2017
Response via : Multiple Level Calibration





TIC: 0116L004.D

(5) 1-Methylnaphthalene (TM)

6.81min 0.1078ppb

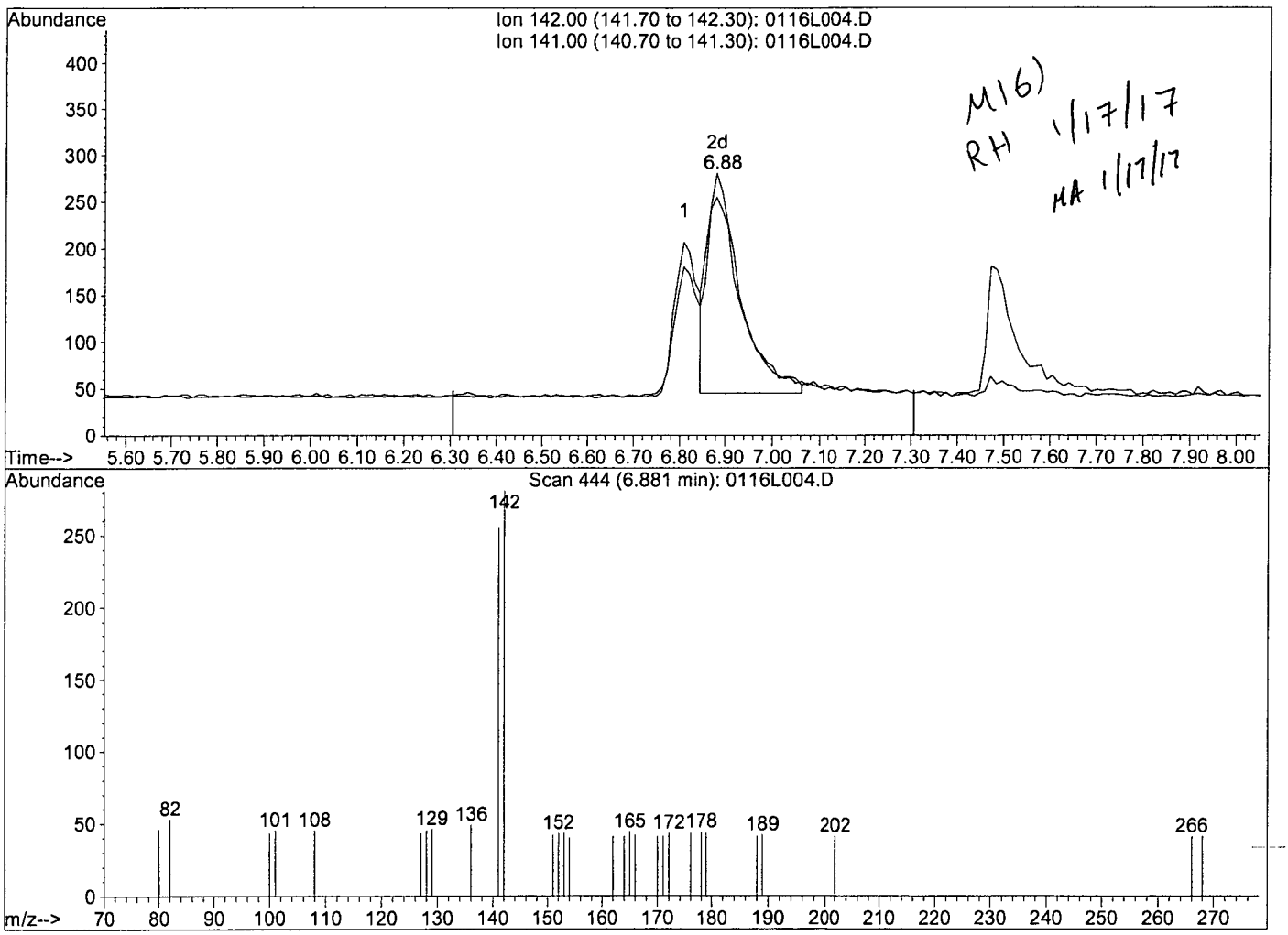
response 588

Ion	Exp%	Act%
142.00	100	100
141.00	86.00	81.82
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L004.D Vial: 4
Acq On : 16 Jan 17 18:22 Operator: MA
Sample : 0.2 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 10:58 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 10:31:40 2017
Response via : Multiple Level Calibration



M16) RH 1/17/17 MA 1/17/17

TIC: 0116L004.D

(5) 1-Methylnaphthalene (TM)

6.88min 0.2146ppb m

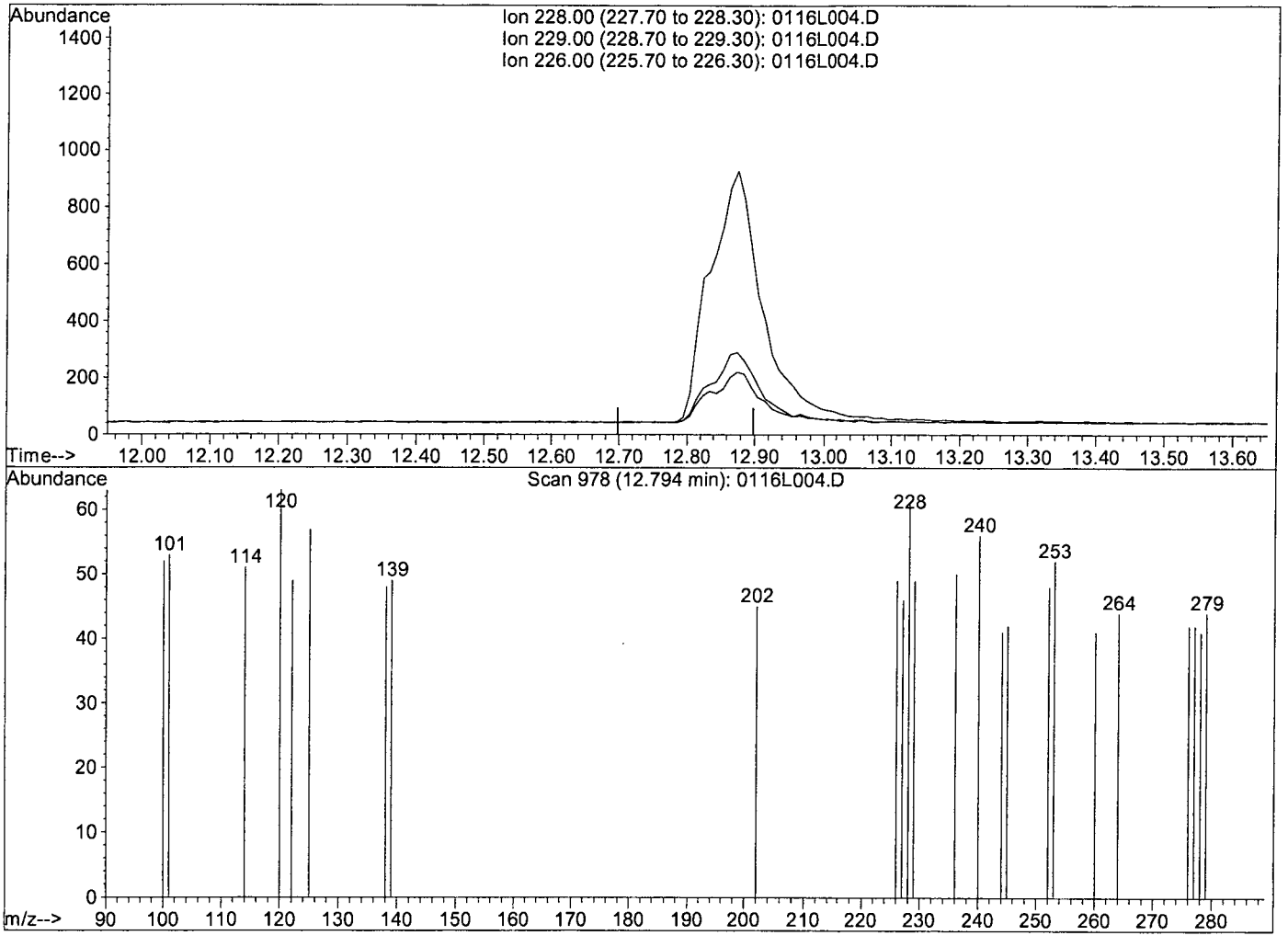
response 1171

Ion	Exp%	Act%
142.00	100	100
141.00	86.00	90.75
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L004.D Vial: 4
Acq On : 16 Jan 17 18:22 Operator: MA
Sample : 0.2 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 8:55 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 10:31:40 2017
Response via : Multiple Level Calibration



TIC: 0116L004.D

(18) Benz (a) anthracene (TM)

12.80min 0.0000ppb

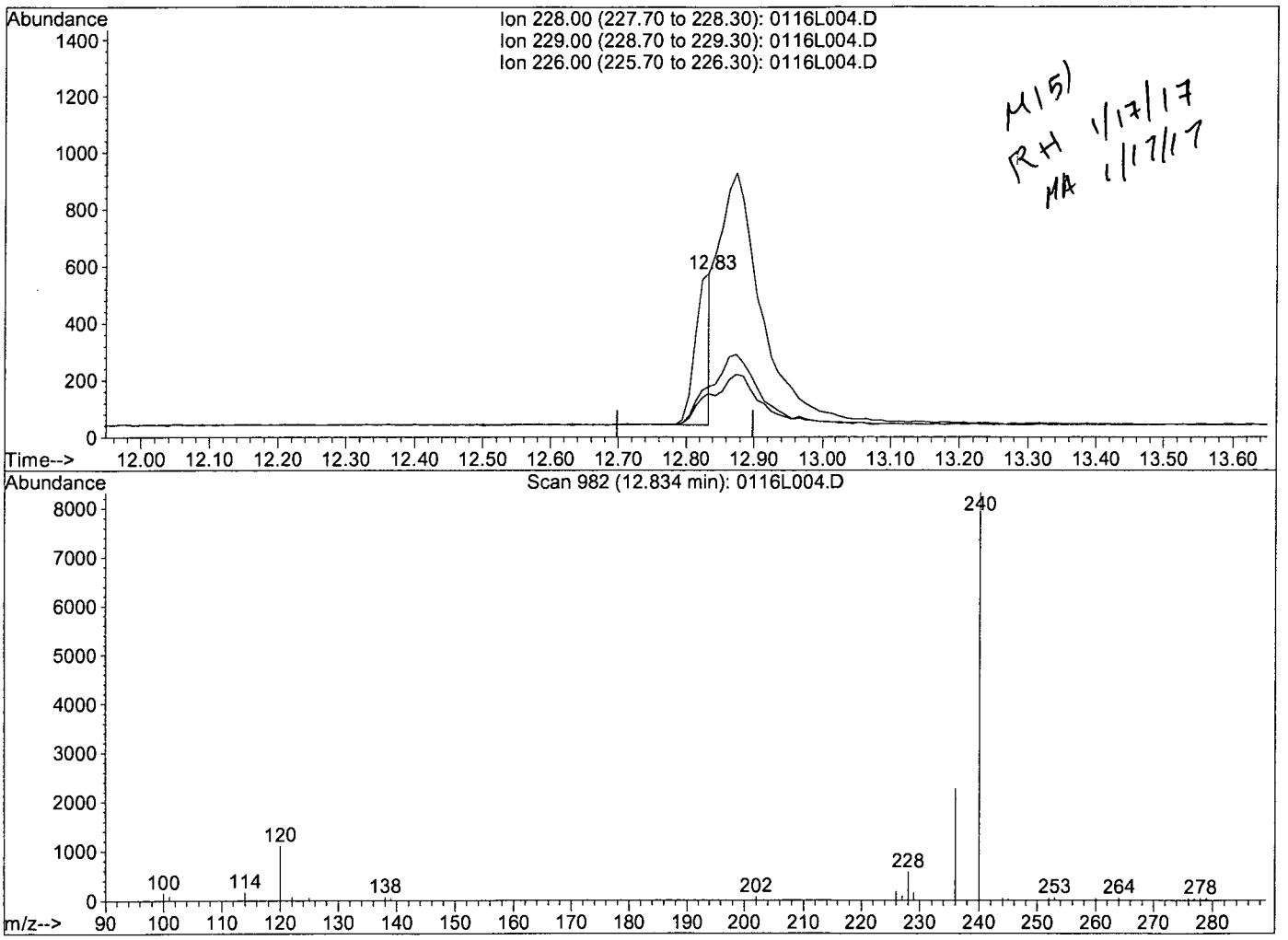
response 0

Ion	Exp%	Act%
228.00	100	0.00
229.00	21.30	0.00#
226.00	27.20	0.00#
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L004.D Vial: 4
Acq On : 16 Jan 17 18:22 Operator: MA
Sample : 0.2 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 10:58 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 10:31:40 2017
Response via : Multiple Level Calibration



M15) 1/17/17
RH 1/17/17
MA 1/17/17

TIC: 0116L004.D

(18) Benz (a) anthracene (TM)

12.83min 0.0853ppb m

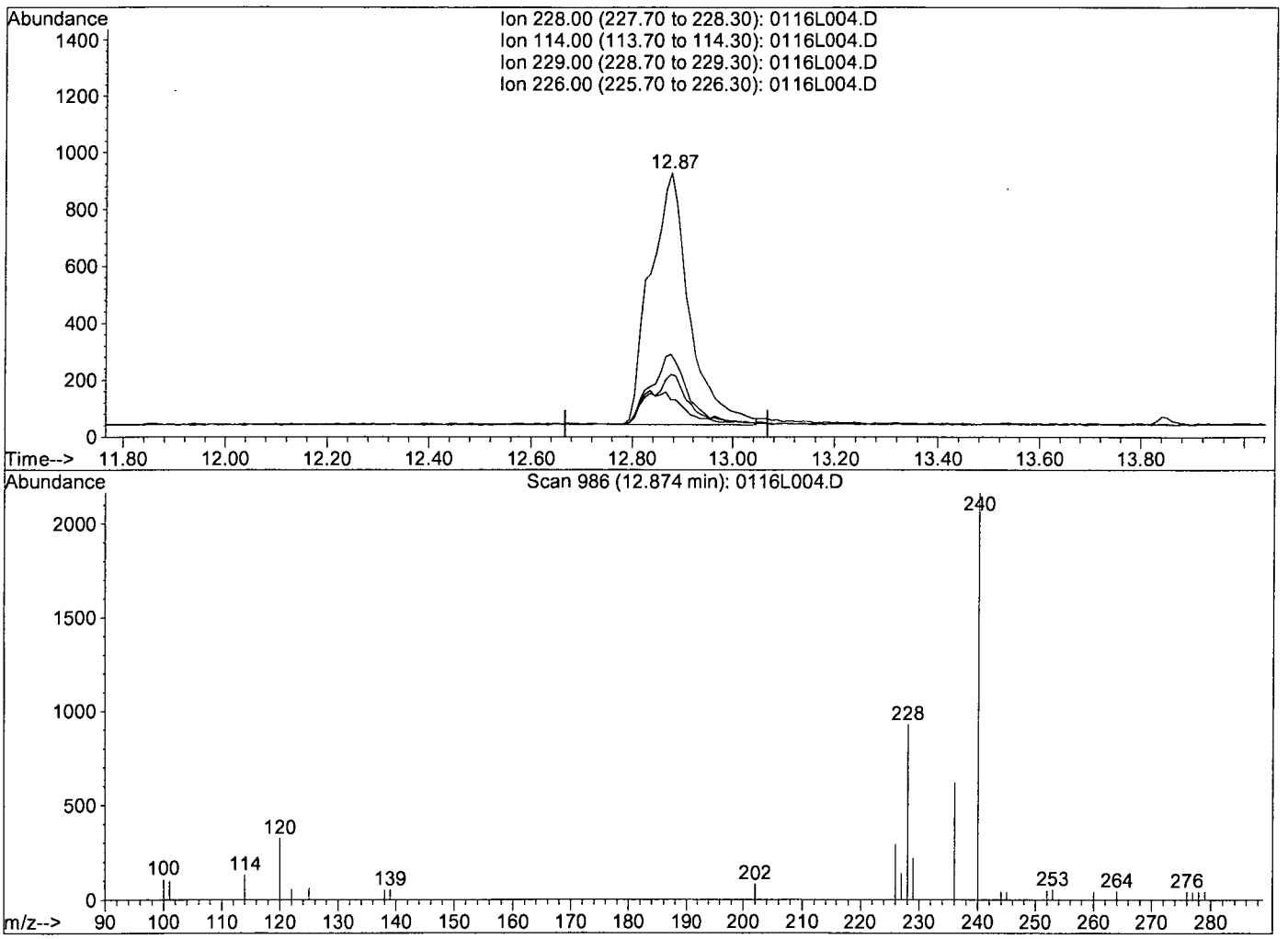
response 900

Ion	Exp%	Act%
228.00	100	100
229.00	21.30	26.66
226.00	27.20	30.84
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L004.D Vial: 4
Acq On : 16 Jan 17 18:22 Operator: MA
Sample : 0.2 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 10:58 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 10:31:40 2017
Response via : Multiple Level Calibration



TIC: 0116L004.D

(19) Chrysene (TM)

12.87min 0.3997ppb

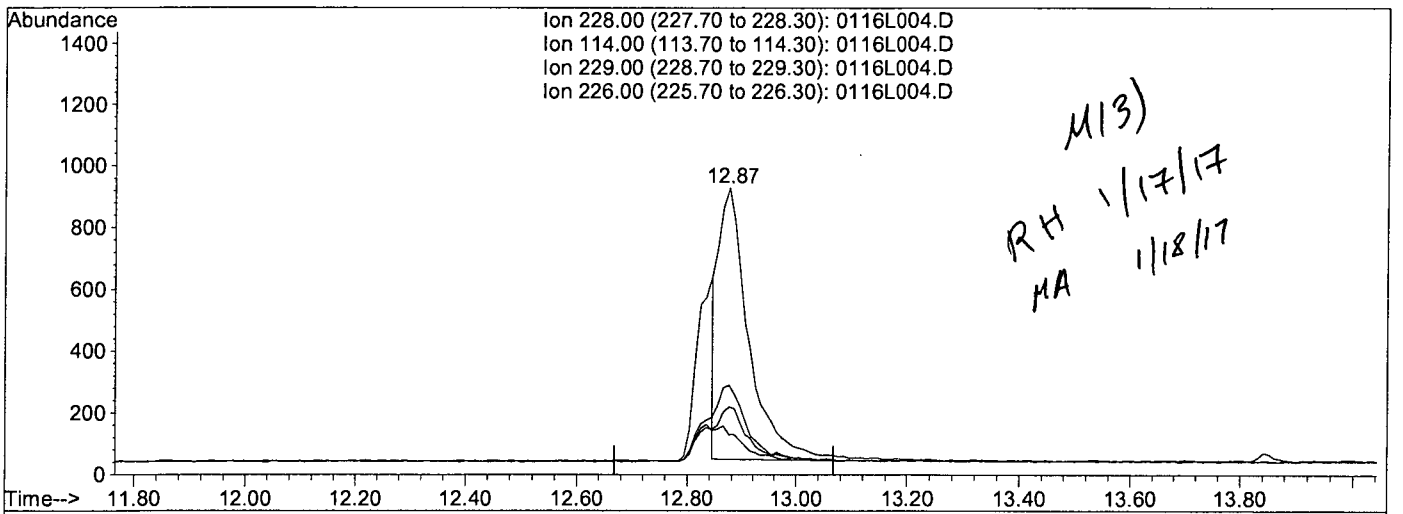
response 4761

Ion	Exp%	Act%
228.00	100	100
114.00	12.90	9.71
229.00	21.00	19.86
226.00	29.70	27.77

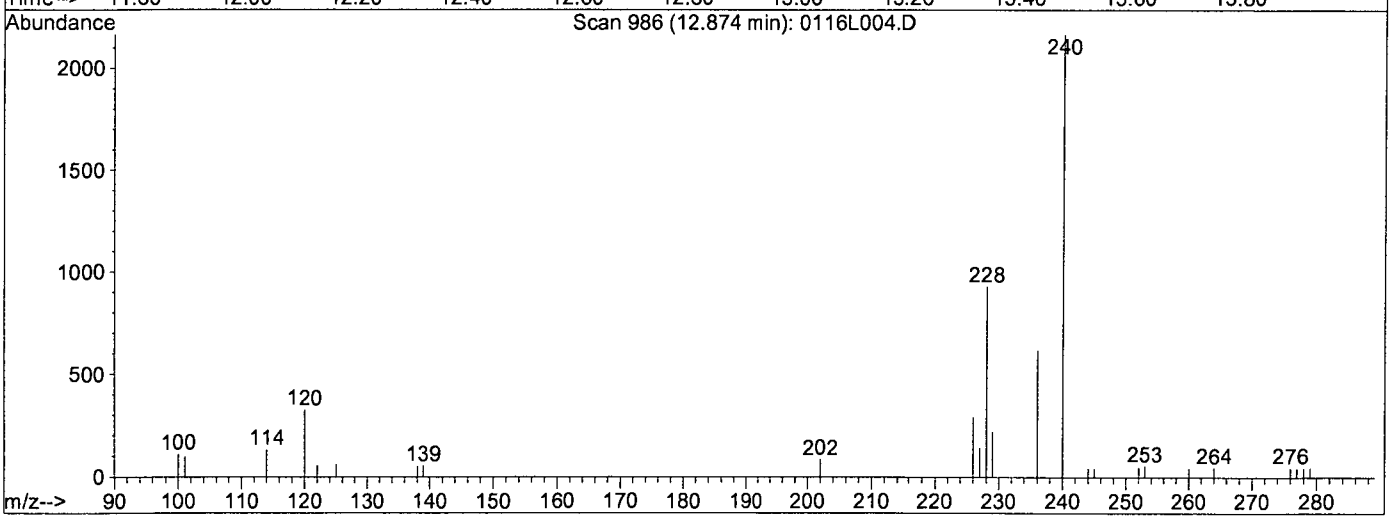
Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L004.D Vial: 4
Acq On : 16 Jan 17 18:22 Operator: MA
Sample : 0.2 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 10:58 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 10:31:40 2017
Response via : Multiple Level Calibration



M13)
RH 1/17/17
MA 1/18/17



TIC: 0116L004.D

(19) Chrysene (TM)

12.87min 0.2891ppb m

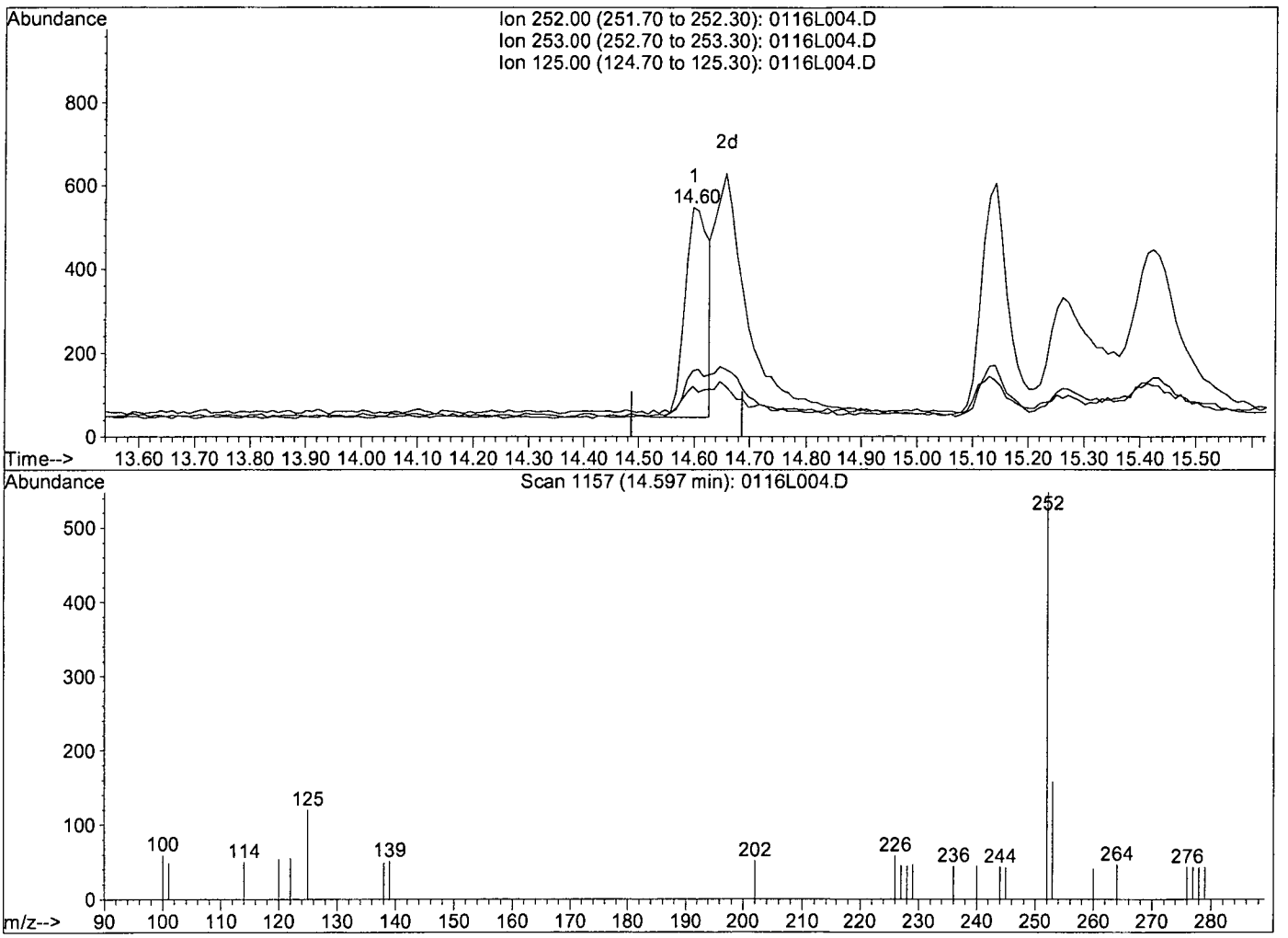
response 3443

Ion	Exp%	Act%
228.00	100	100
114.00	12.90	14.01
229.00	21.00	23.71
226.00	29.70	31.36

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L004.D Vial: 4
Acq On : 16 Jan 17 18:22 Operator: MA
Sample : 0.2 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 10:58 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 10:31:40 2017
Response via : Multiple Level Calibration



TIC: 0116L004.D

(23) Benzo (k) fluoranthene (TM)

14.60min 0.1558ppb

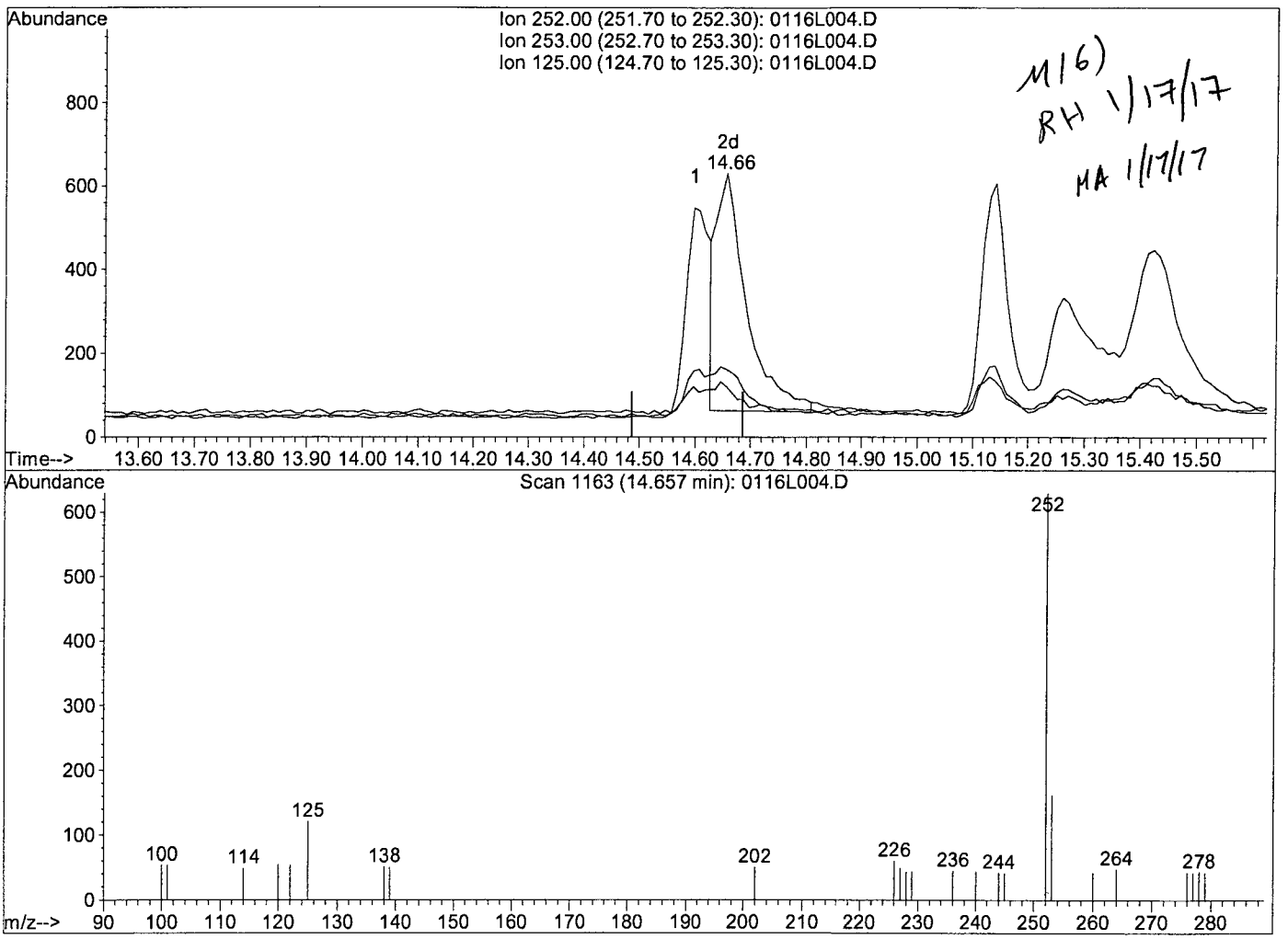
response 1516

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	20.92
125.00	10.50	12.75
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L004.D Vial: 4
Acq On : 16 Jan 17 18:22 Operator: MA
Sample : 0.2 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 10:59 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 10:31:40 2017
Response via : Multiple Level Calibration



TIC: 0116L004.D

(23) Benzo (k) fluoranthene (TM)

14.66min 0.2224ppb m

response 2164

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	25.71
125.00	10.50	19.21#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L005.D Vial: 5
Acq On : 16 Jan 17 18:50 Operator: MA
Sample : 0.5 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:27 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 16 16:54:35 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.88	136	19570	2.50000	ppb		0.02
6) Acenaphthene-D10(IS)	7.92	164	9925	2.50000	ppb		0.01
11) Phenanthrene-D10(IS)	9.68	188	19203	2.50000	ppb		0.02
15) Chrysene-D12(IS)	12.83	240	24062	2.50000	ppb		0.02
21) Perylene-D12(IS)	15.35	264	20718	2.50000	ppb		0.02
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.14	82	124	0.21870	ppb		0.12
Spiked Amount 5.000			Recovery = 4.380%				
7) Surrogate Recovery (FBP)	7.17	172	1547	0.12388	ppb		0.05
Spiked Amount 5.000			Recovery = 2.480%				
17) Surrogate Recovery (TPH)	11.55	244	1931	0.13946	ppb		0.03
Spiked Amount 5.000			Recovery = 2.780%				
Target Compounds							Qvalue
3) Naphthalene	5.90	128	3969	0.50274	ppb		99
4) 2-Methylnaphthalene	6.78	142	1838	0.38281	ppb		97
5) 1-Methylnaphthalene	6.86	142	2875	0.53941	ppb		92
8) Acenaphthylene	7.77	152	4111	0.53318	ppb		96
9) Acenaphthene	7.95	154	2620	0.56059	ppb		98
10) Fluorene	8.61	166	2742	0.50677	ppb		96
12) Phenanthrene	9.70	178	3933	0.47651	ppb		99
13) Anthracene	9.80	178	3691	0.49327	ppb		99
14) Fluoranthene	11.12	202	6441	0.56149	ppb		99
16) Pyrene	11.39	202	6742	0.56479	ppb		99
18) Benz (a) anthracene	12.83	228	3799	0.36995	ppb		97
19) Chrysene	12.87	228	7816	0.67461	ppb		95
20) Indeno (1,2,3-cd) pyrene	17.70	276	4317	0.38580	ppb	#	93
22) Benzo (b) fluoranthene	14.59	252	4089	0.45980	ppb		99
23) Benzo (k) fluoranthene	14.64	252	6355m	0.67857	ppb		99
24) Benzo (a) pyrene	15.25	252	4540	0.49484	ppb		97
25) Dibenz (a,h) anthracene	17.71	278	3891	0.45154	ppb		96
26) Benzo (g,h,i) perylene	18.23	276	3818	0.45197	ppb		99

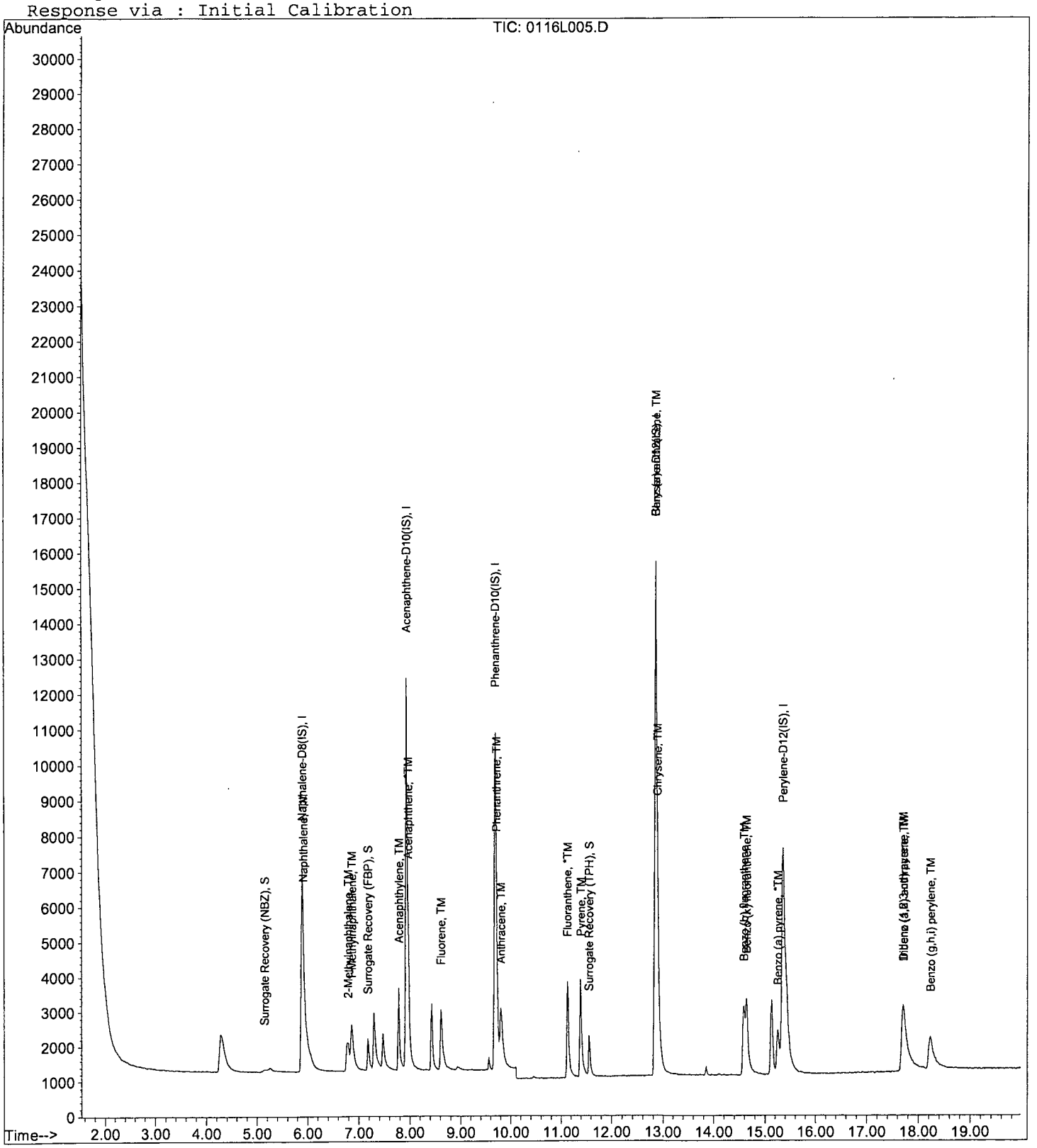
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L005.D Vial: 5
Acq On : 16 Jan 17 18:50 Operator: MA
Sample : 0.5 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:27 2017 Quant Results File: L0116PR.RES

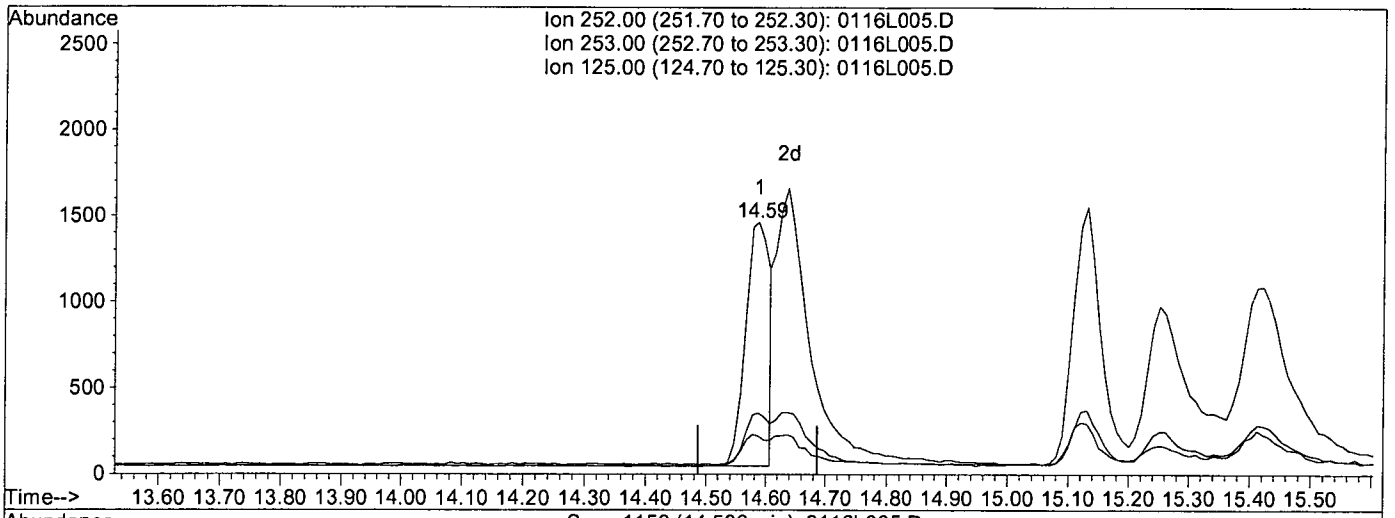
Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration

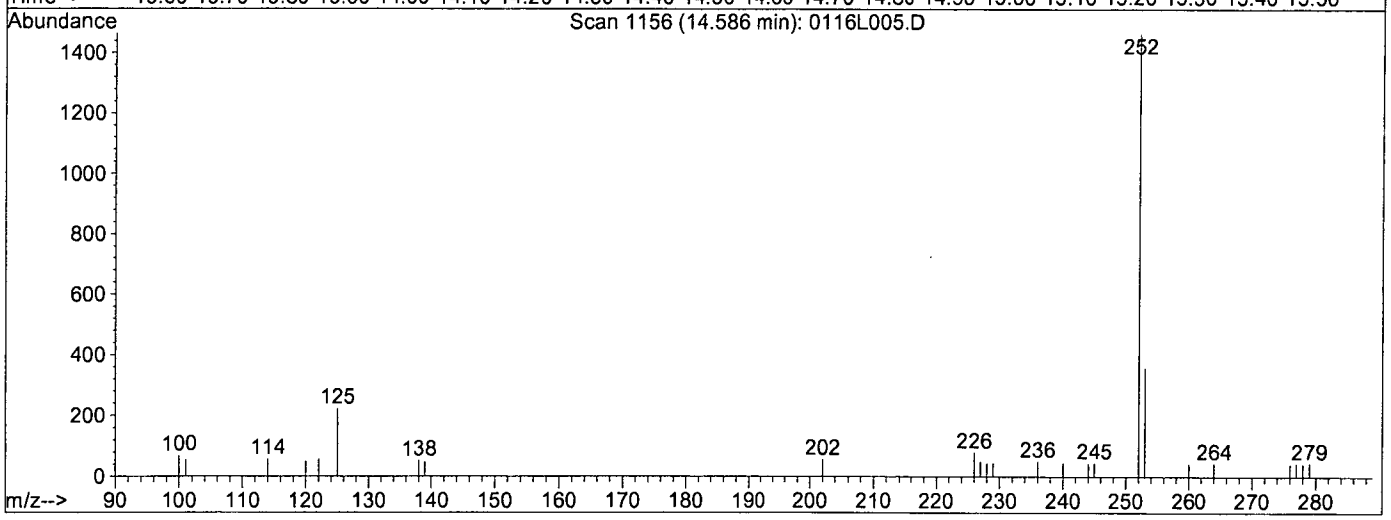


Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L005.D Vial: 5
Acq On : 16 Jan 17 18:50 Operator: MA
Sample : 0.5 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 8:55 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:24:14 2017
Response via : Multiple Level Calibration





TIC: 0116L005.D

(23) Benzo (k) fluoranthene (TM)

14.59min 0.4366ppb

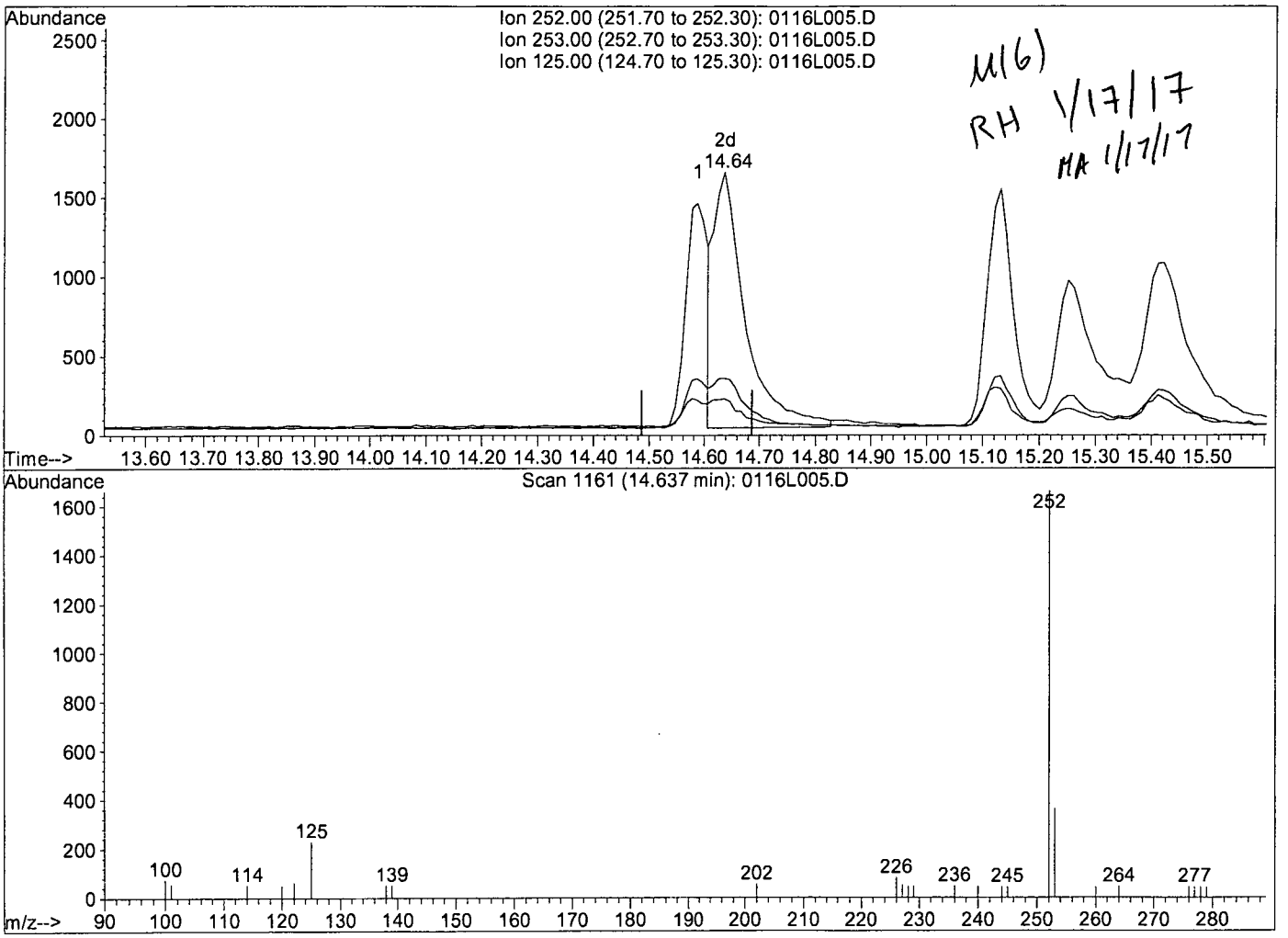
response 4089

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	21.68
125.00	10.50	11.58
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L005.D Vial: 5
Acq On : 16 Jan 17 18:50 Operator: MA
Sample : 0.5 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 11:27 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:24:14 2017
Response via : Multiple Level Calibration



M(6)
RH 1/17/17
MA 1/17/17

TIC: 0116L005.D

(23) Benzo (k) fluoranthene (TM)

14.64min 0.6786ppb m

response 6355

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	21.59
125.00	10.50	13.77#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L006.D Vial: 6
Acq On : 16 Jan 17 19:17 Operator: MA
Sample : 1.0 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:28 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 16 16:54:35 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.88	136	19747	2.50000	ppb		0.02
6) Acenaphthene-D10(IS)	7.92	164	10027	2.50000	ppb		0.01
11) Phenanthrene-D10(IS)	9.67	188	19409	2.50000	ppb		0.01
15) Chrysene-D12(IS)	12.82	240	24216	2.50000	ppb		0.01
21) Perylene-D12(IS)	15.34	264	20959	2.50000	ppb		0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.16	82	471	0.35756	ppb		0.13
Spiked Amount 5.000			Recovery =	7.160%			
7) Surrogate Recovery (FBP)	7.16	172	3266	0.43084	ppb		0.04
Spiked Amount 5.000			Recovery =	8.620%			
17) Surrogate Recovery (TPH)	11.55	244	3690	0.37588	ppb		0.03
Spiked Amount 5.000			Recovery =	7.520%			
Target Compounds							Qvalue
3) Naphthalene	5.90	128	8302	1.04216	ppb		99
4) 2-Methylnaphthalene	6.75	142	4052	0.83636	ppb		99
5) 1-Methylnaphthalene	6.84	142	5679	1.05594	ppb		95
8) Acenaphthylene	7.76	152	8184	1.05063	ppb		98
9) Acenaphthene	7.95	154	5107	1.08160	ppb		99
10) Fluorene	8.59	166	5539	1.01330	ppb		100
12) Phenanthrene	9.70	178	7863	0.94254	ppb		100
13) Anthracene	9.79	178	7609	1.00608	ppb		99
14) Fluoranthene	11.11	202	12811	1.10494	ppb		97
16) Pyrene	11.37	202	13493	1.12315	ppb		98
18) Benz (a) anthracene	12.82	228	7201	0.69677	ppb		97
19) Chrysene	12.86	228	15776	1.35299	ppb		96
20) Indeno (1,2,3-cd) pyrene	17.66	276	9343	0.82965	ppb	#	90
22) Benzo (b) fluoranthene	14.57	252	7921	0.88046	ppb		98
23) Benzo (k) fluoranthene	14.62	252	12165m	1.28401	ppb		96
24) Benzo (a) pyrene	15.24	252	8874	0.95610	ppb		98
25) Dibenz (a,h) anthracene	17.69	278	7349	0.84302	ppb		98
26) Benzo (g,h,i) perylene	18.19	276	7572	0.88605	ppb		99

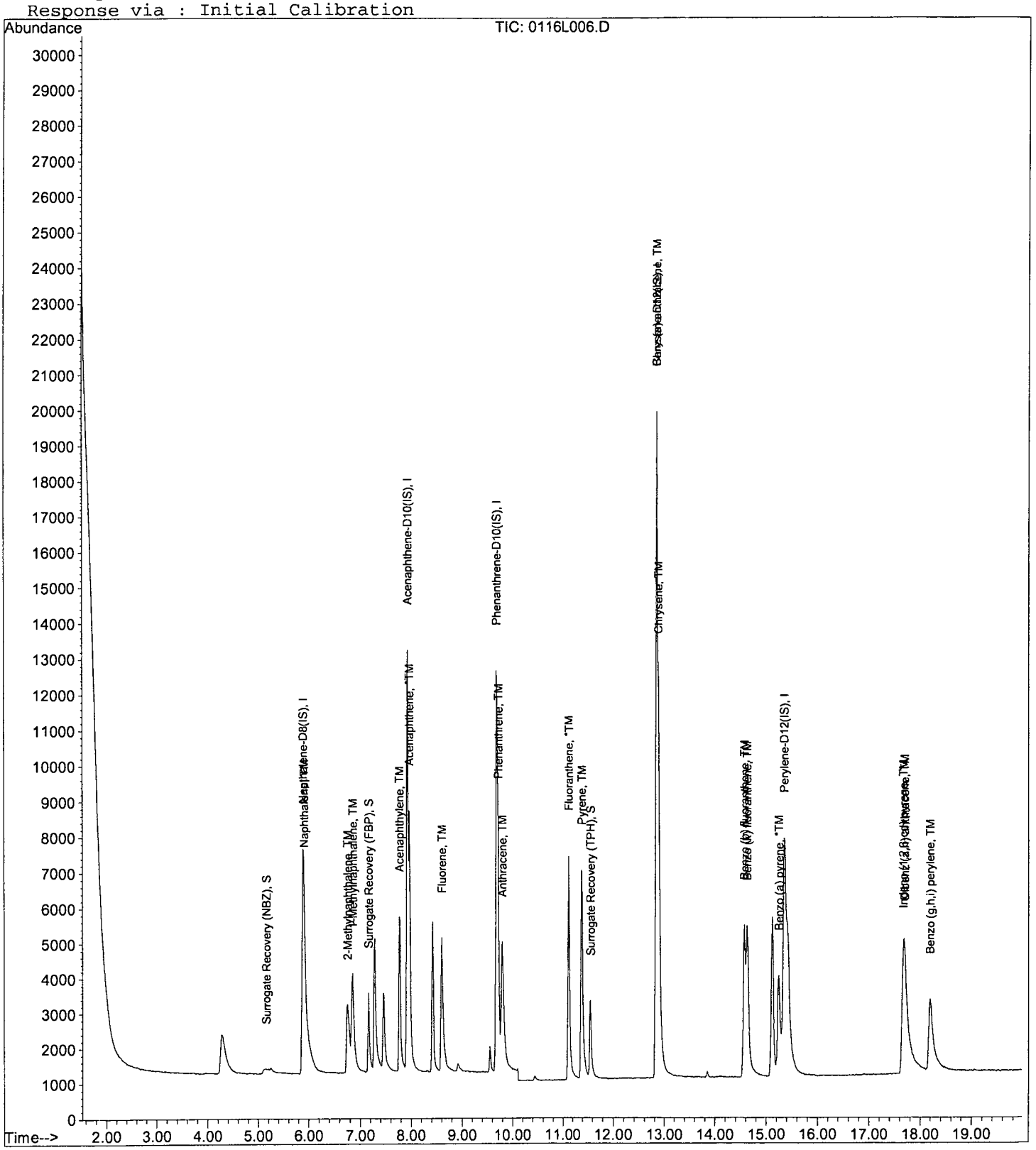
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L006.D Vial: 6
Acq On : 16 Jan 17 19:17 Operator: MA
Sample : 1.0 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:28 2017 Quant Results File: L0116PR.RES

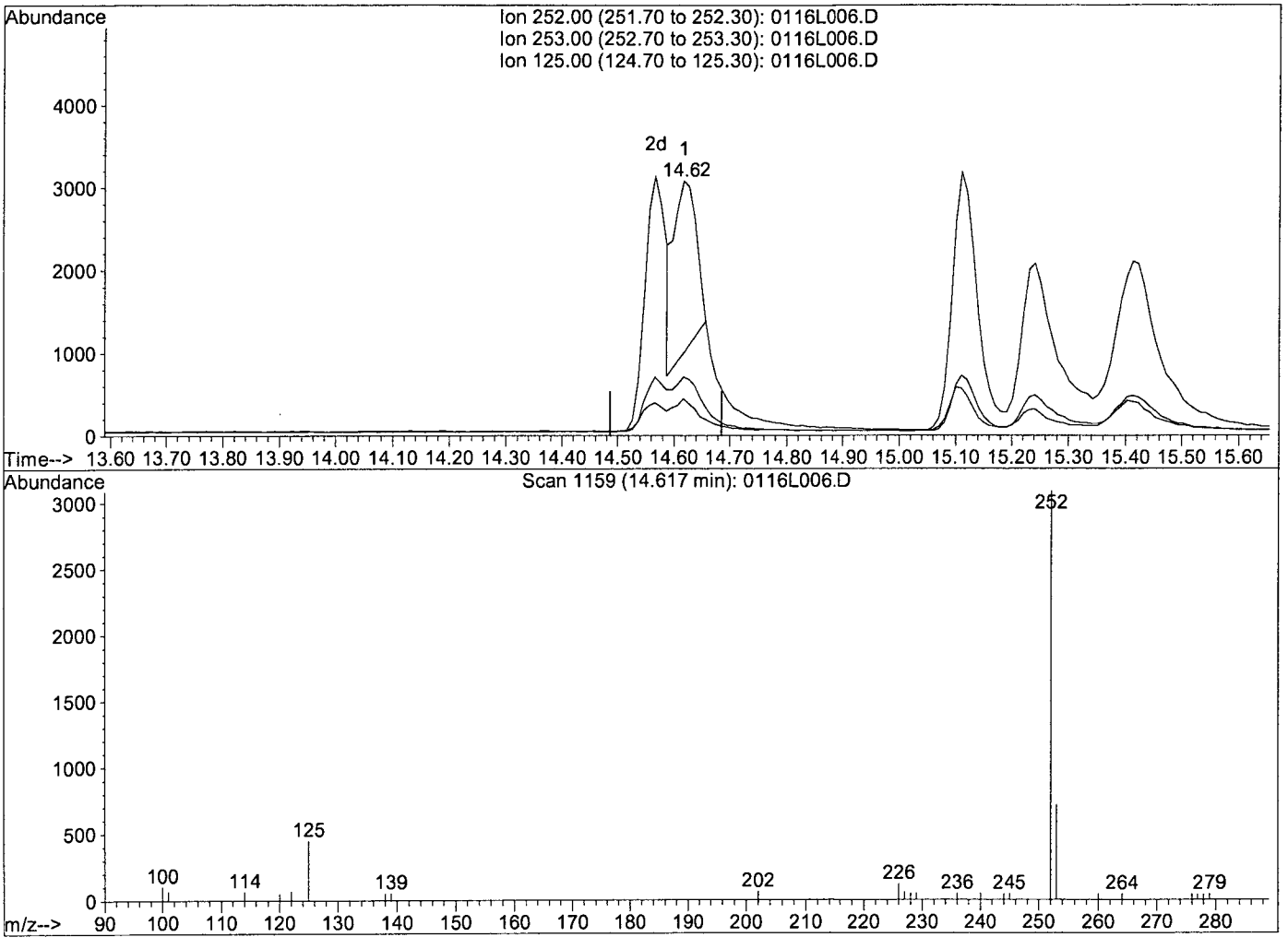
Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L006.D Vial: 6
Acq On : 16 Jan 17 19:17 Operator: MA
Sample : 1.0 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 8:55 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:24:14 2017
Response via : Multiple Level Calibration



TIC: 0116L006.D

(23) Benzo (k) fluoranthene (TM)

14.62min 0.6271ppb

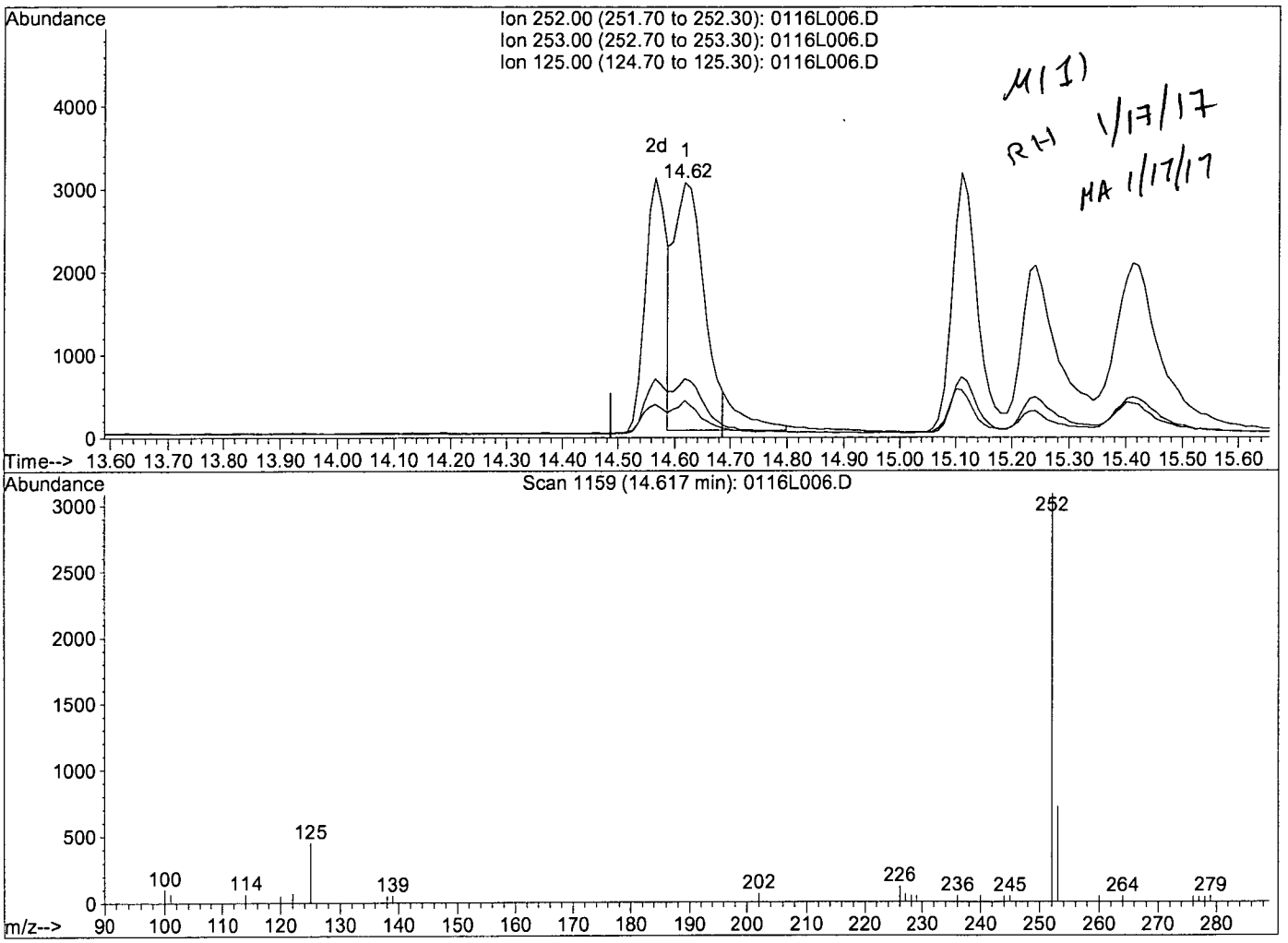
response 5941

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	21.68
125.00	10.50	14.69#
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L006.D Vial: 6
Acq On : 16 Jan 17 19:17 Operator: MA
Sample : 1.0 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 11:28 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:24:14 2017
Response via : Multiple Level Calibration



TIC: 0116L006.D

(23) Benzo (k) fluoranthene (TM)

14.62min 1.2840ppb m

response 12165

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	23.13
125.00	10.50	14.54#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L007.D Vial: 7
Acq On : 16 Jan 17 19:45 Operator: MA
Sample : 5.0 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:28 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 16 16:54:35 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	20107	2.50000	ppb		0.01
6) Acenaphthene-D10(IS)	7.91	164	10094	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.66	188	19784	2.50000	ppb		0.00
15) Chrysene-D12(IS)	12.81	240	24551	2.50000	ppb		0.00
21) Perylene-D12(IS)	15.33	264	20981	2.50000	ppb		0.00
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.05	82	7610	3.16889	ppb		0.02
Spiked Amount 5.000			Recovery = 63.380%				
7) Surrogate Recovery (FBP)	7.13	172	17369	2.95189	ppb		0.01
Spiked Amount 5.000			Recovery = 59.040%				
17) Surrogate Recovery (TPH)	11.53	244	20116	2.56211	ppb		0.01
Spiked Amount 5.000			Recovery = 51.240%				
Target Compounds							Qvalue
3) Naphthalene	5.89	128	46569	5.74121	ppb		100
4) 2-Methylnaphthalene	6.71	142	27540	5.58266	ppb		98
5) 1-Methylnaphthalene	6.82	142	28249	5.15851	ppb		98
8) Acenaphthylene	7.75	152	47918	6.11071	ppb		98
9) Acenaphthene	7.94	154	27862	5.86167	ppb		98
10) Fluorene	8.56	166	31743	5.76847	ppb		96
12) Phenanthrene	9.69	178	45906	5.39847	ppb		99
13) Anthracene	9.75	178	45335	5.88066	ppb		99
14) Fluoranthene	11.08	202	74570	6.30969	ppb		99
16) Pyrene	11.35	202	77989	6.40318	ppb		99
18) Benz (a) anthracene	12.80	228	58564	5.58935	ppb		97
19) Chrysene	12.85	228	72146	6.10300	ppb		96
20) Indeno (1,2,3-cd) pyrene	17.60	276	56056	4.90983	ppb	#	93
22) Benzo (b) fluoranthene	14.54	252	52100	5.78511	ppb		99
23) Benzo (k) fluoranthene	14.59	252	62778m	6.61924	ppb		99
24) Benzo (a) pyrene	15.21	252	55446	5.96758	ppb		98
25) Dibenz (a,h) anthracene	17.63	278	46320	5.30790	ppb		98
26) Benzo (g,h,i) perylene	18.13	276	45396	5.30653	ppb		99

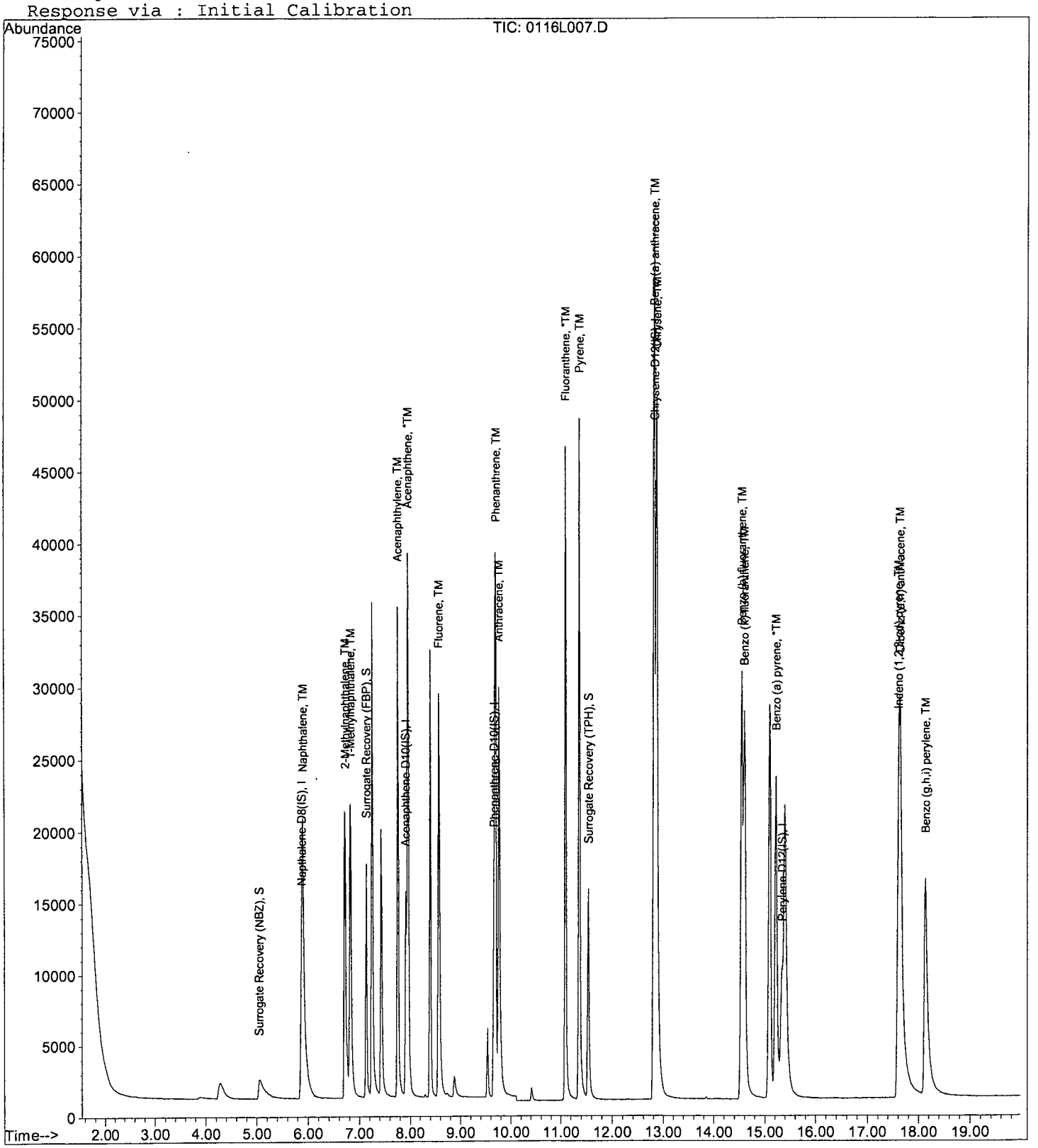
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L007.D Vial: 7
Acq On : 16 Jan 17 19:45 Operator: MA
Sample : 5.0 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:28 2017 Quant Results File: L0116PR.RES

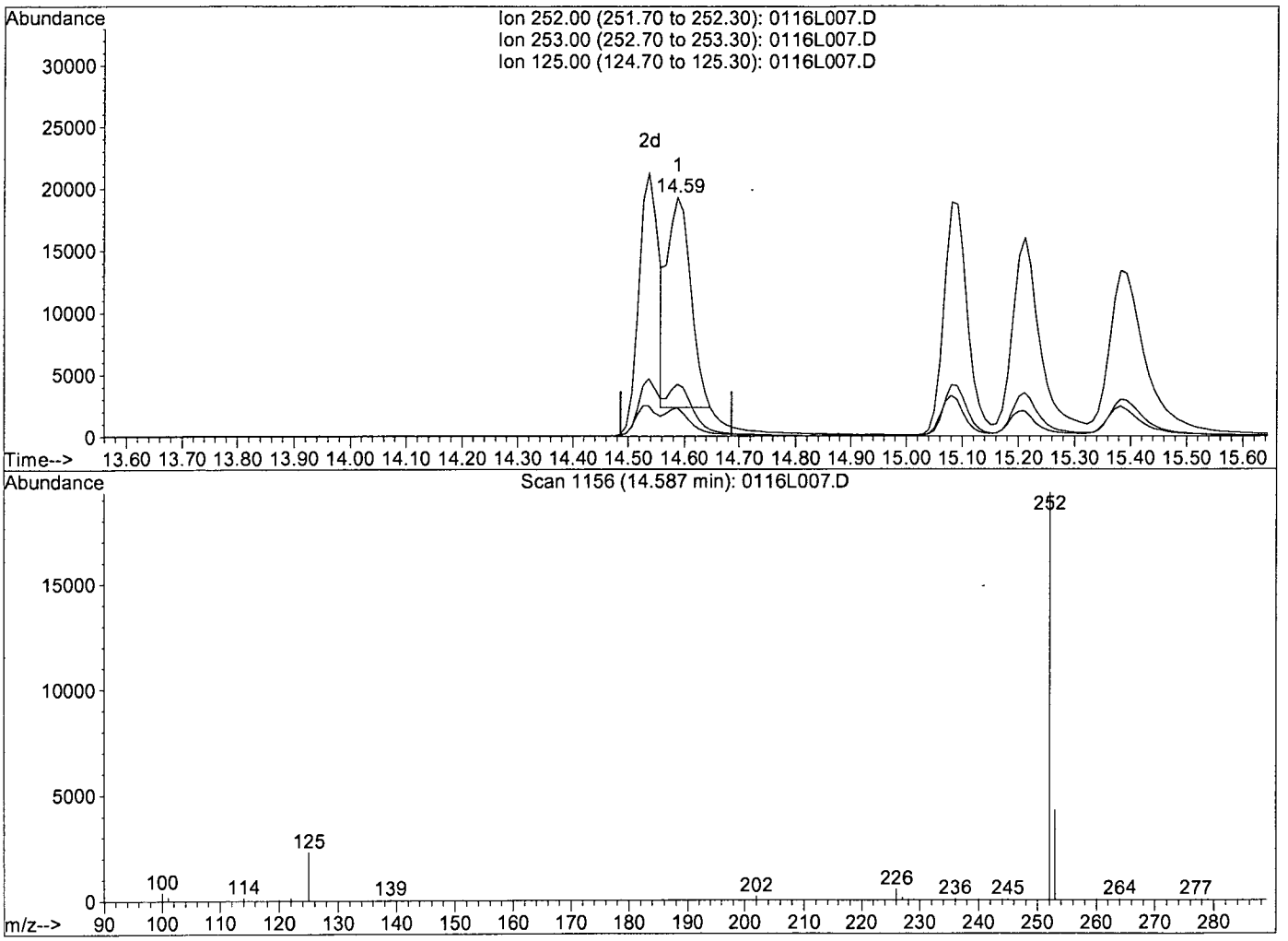
Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L007.D Vial: 7
Acq On : 16 Jan 17 19:45 Operator: MA
Sample : 5.0 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 8:36 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:24:14 2017
Response via : Multiple Level Calibration



TIC: 0116L007.D

(23) Benzo (k) fluoranthene (TM)

14.59min 5.2440ppb

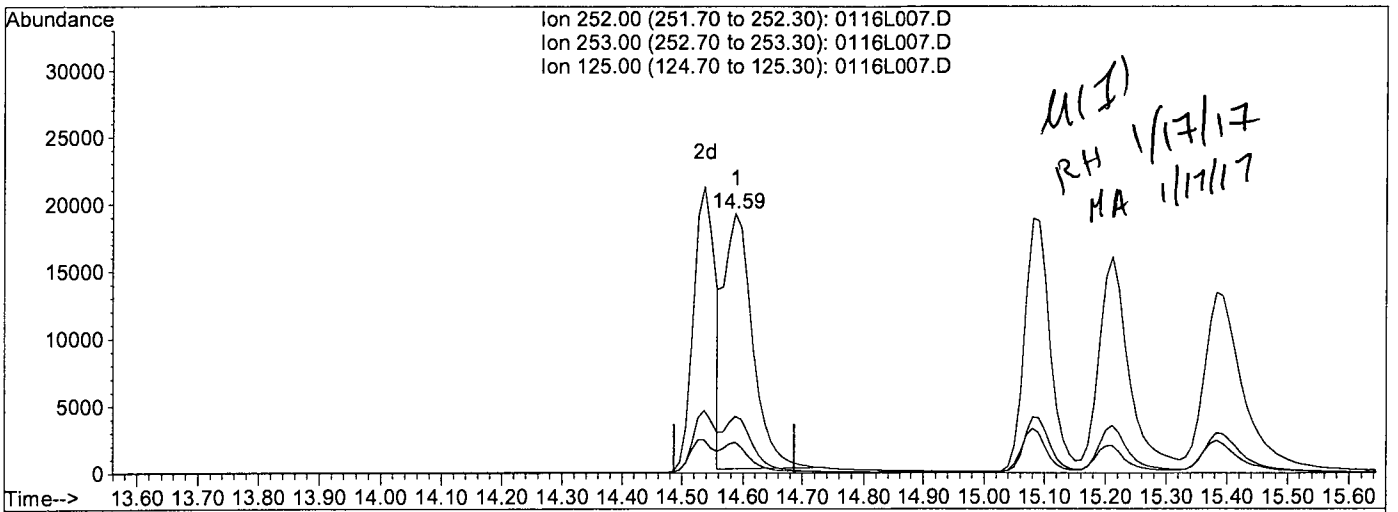
response 49735

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	21.70
125.00	10.50	11.95
0.00	0.00	0.00

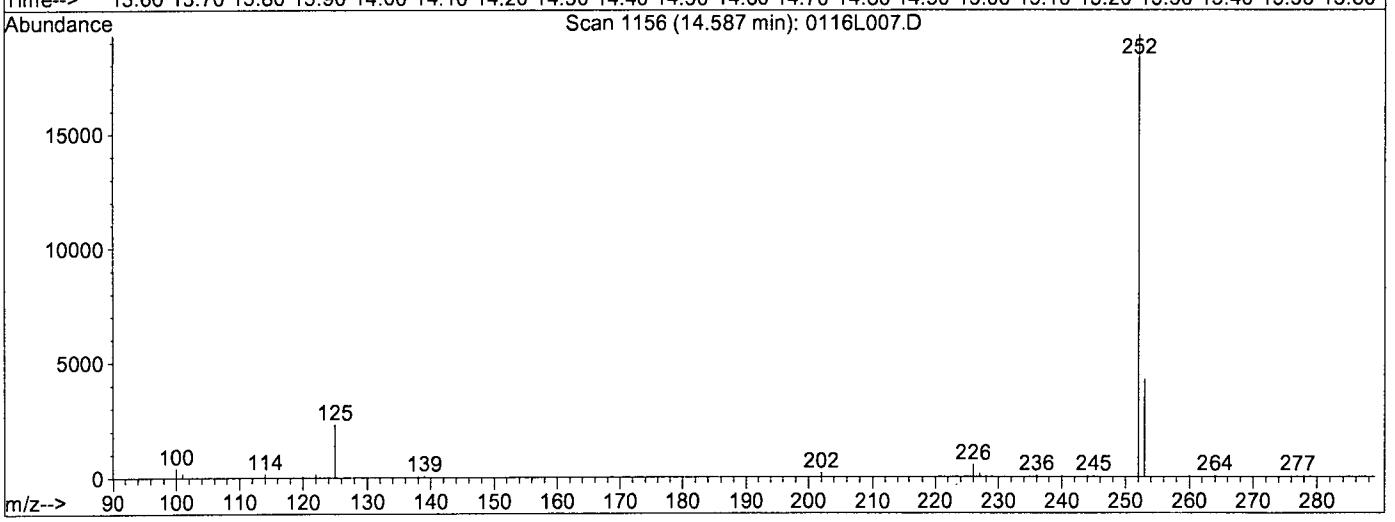
Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L007.D Vial: 7
Acq On : 16 Jan 17 19:45 Operator: MA
Sample : 5.0 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 11:28 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:24:14 2017
Response via : Multiple Level Calibration



M(I) 1/17/17
RH 1/17/17
MA 1/17/17



TIC: 0116L007.D

(23) Benzo (k) fluoranthene (TM)

14.59min 6.6192ppb m

response 62778

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	21.93
125.00	10.50	11.88
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L008.D Vial: 8
Acq On : 16 Jan 17 20:13 Operator: MA
Sample : 10 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:29 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 16 16:54:35 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.86	136	19673	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	7.91	164	9750	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.66	188	19102	2.50000 ppb		0.00
15) Chrysene-D12(IS)	12.81	240	23707	2.50000 ppb		0.00
21) Perylene-D12(IS)	15.32	264	20339	2.50000 ppb		0.00
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.03	82	16864	6.96418 ppb		0.01
Spiked Amount 5.000			Recovery	= 139.280%		
7) Surrogate Recovery (FBP)	7.12	172	35736	6.46599 ppb		0.00
Spiked Amount 5.000			Recovery	= 129.320%		
17) Surrogate Recovery (TPH)	11.52	244	40668	5.49931 ppb		0.00
Spiked Amount 5.000			Recovery	= 109.980%		
Target Compounds						Qvalue
3) Naphthalene	5.88	128	95242	12.00083 ppb		99
4) 2-Methylnaphthalene	6.70	142	57524	11.91799 ppb		99
5) 1-Methylnaphthalene	6.81	142	57182	10.67228 ppb		97
8) Acenaphthylene	7.75	152	98439	12.99626 ppb		97
9) Acenaphthene	7.94	154	56437	12.29227 ppb		99
10) Fluorene	8.56	166	63672	11.97898 ppb		99
12) Phenanthrene	9.68	178	92495	11.26561 ppb		99
13) Anthracene	9.75	178	93269	12.53040 ppb		99
14) Fluoranthene	11.08	202	151671	13.29173 ppb		97
16) Pyrene	11.35	202	156778	13.33030 ppb		97
18) Benz (a) anthracene	12.79	228	133958	13.24012 ppb		97
19) Chrysene	12.84	228	131592	11.52798 ppb		96
20) Indeno (1,2,3-cd) pyrene	17.60	276	116290	10.54822 ppb	#	93
22) Benzo (b) fluoranthene	14.53	252	123922	14.19447 ppb		99
23) Benzo (k) fluoranthene	14.58	252	113592m	12.35506 ppb		98
24) Benzo (a) pyrene	15.20	252	113349	12.58469 ppb		97
25) Dibenz (a,h) anthracene	17.63	278	94486	11.16909 ppb		99
26) Benzo (g,h,i) perylene	18.12	276	94164	11.35467 ppb		99

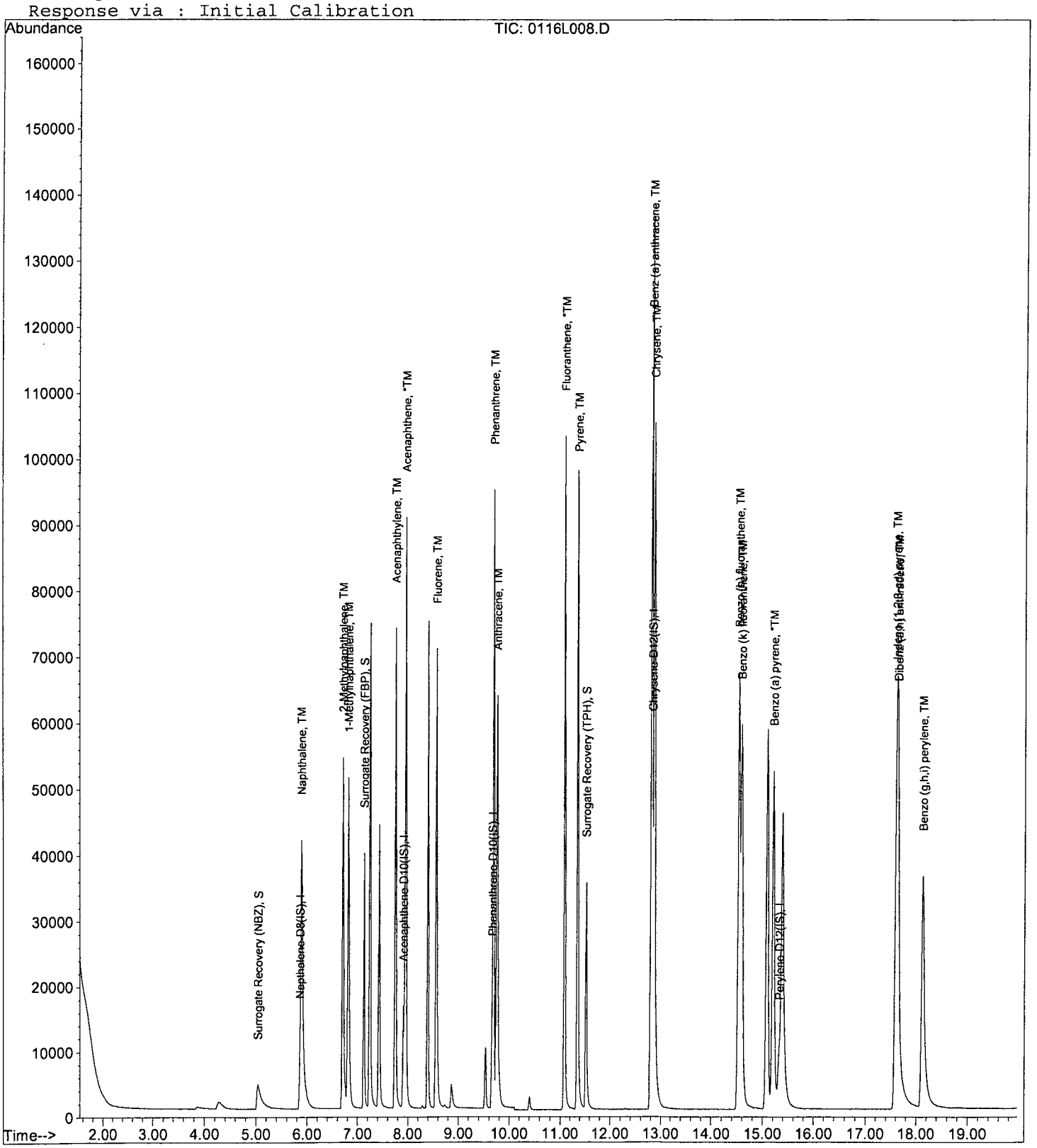
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L008.D Vial: 8
Acq On : 16 Jan 17 20:13 Operator: MA
Sample : 10 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:29 2017 Quant Results File: L0116PR.RES

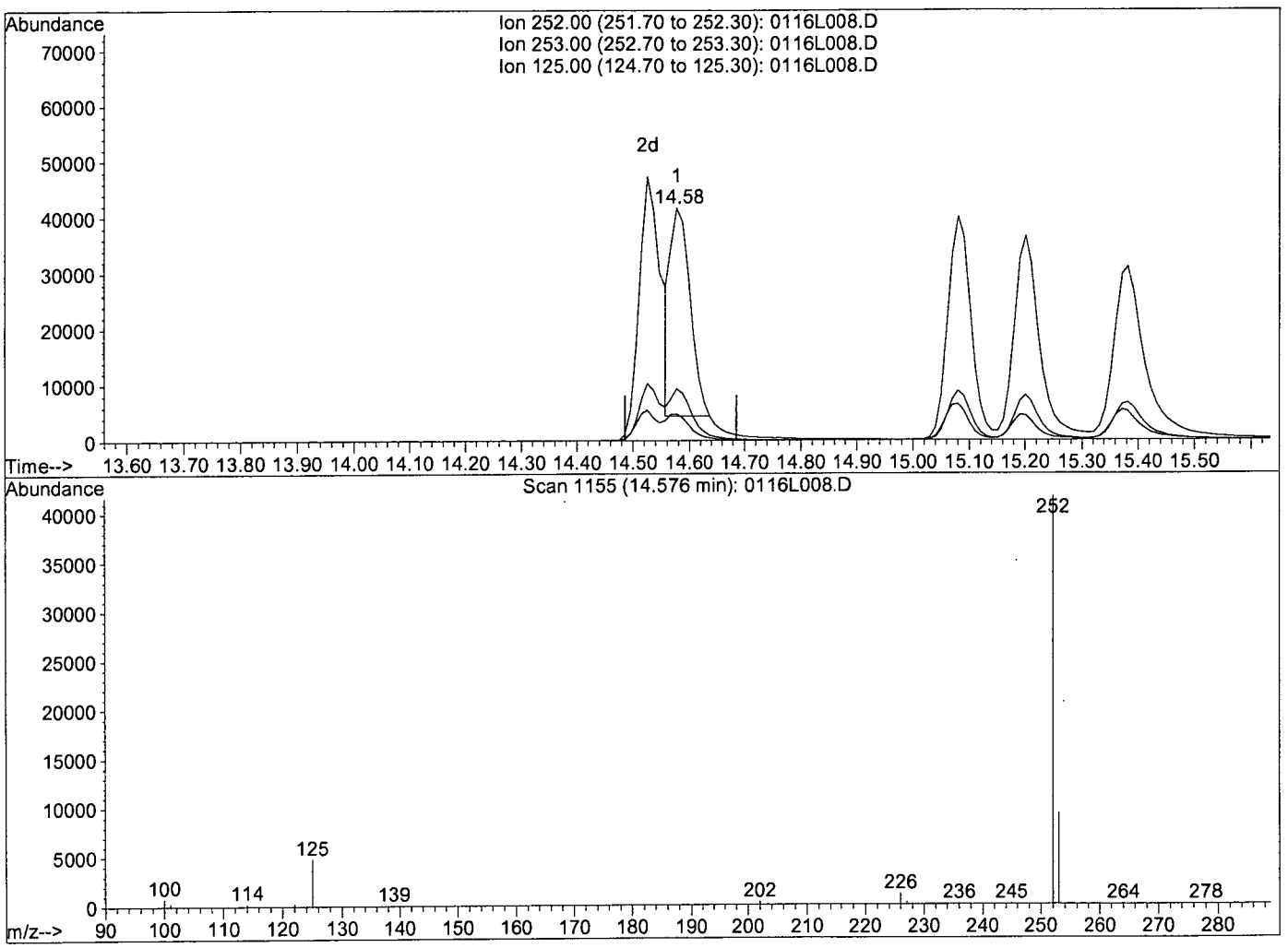
Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L008.D Vial: 8
Acq On : 16 Jan 17 20:13 Operator: MA
Sample : 10 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 8:55 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:24:14 2017
Response via : Multiple Level Calibration



TIC: 0116L008.D

(23) Benzo (k) fluoranthene (TM)

14.58min 10.0109ppb

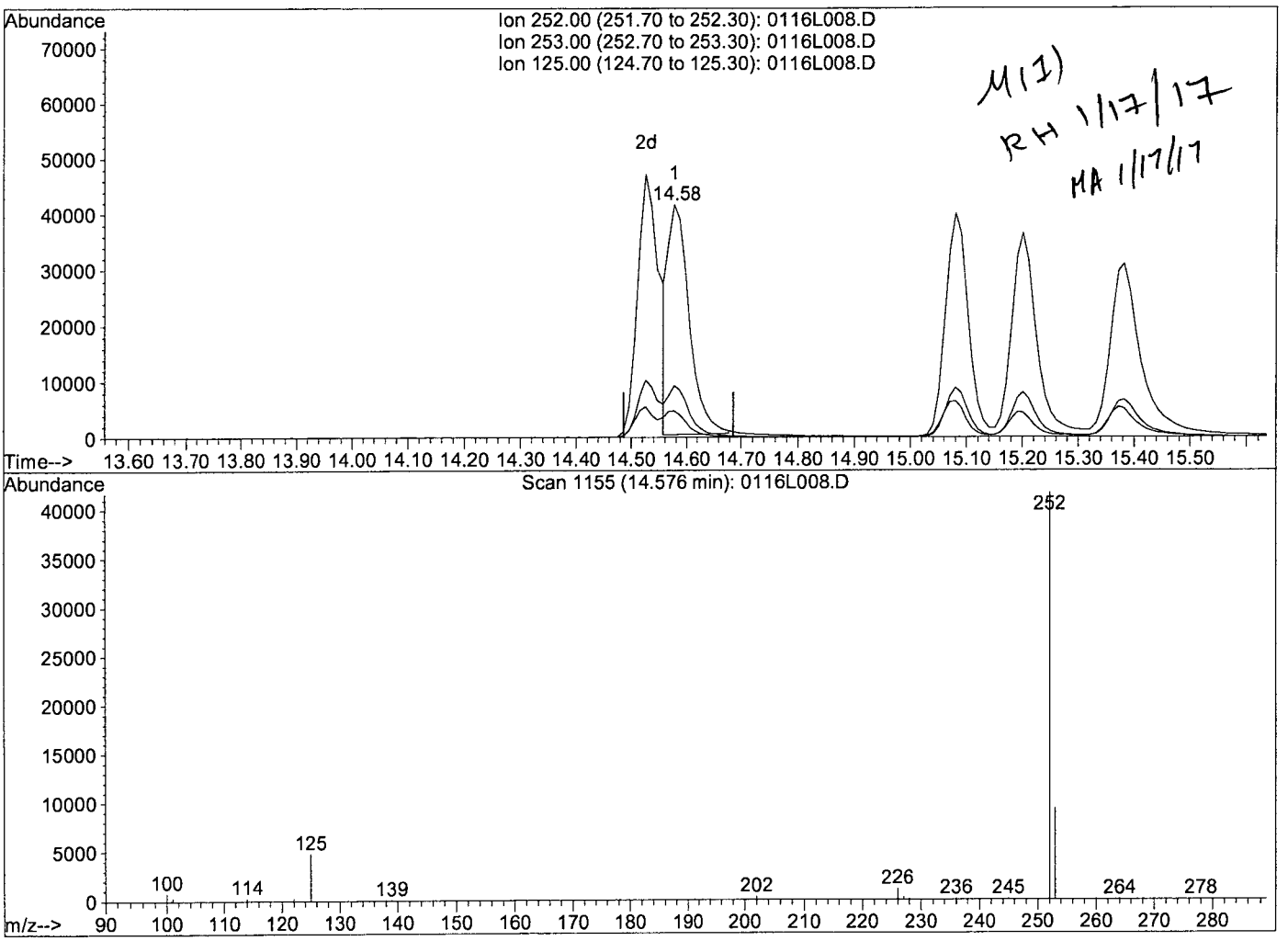
response 92040

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	22.27
125.00	10.50	11.57
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L008.D Vial: 8
Acq On : 16 Jan 17 20:13 Operator: MA
Sample : 10 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 11:29 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:24:14 2017
Response via : Multiple Level Calibration



TIC: 0116L008.D

(23) Benzo (k) fluoranthene (TM)

14.58min 12.3551ppb m

response 113592

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	22.24
125.00	10.50	11.48
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L009.D Vial: 9
Acq On : 16 Jan 17 20:41 Operator: MA
Sample : 50 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:30 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 16 16:54:35 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.86	136	19918	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.91	164	9670	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.66	188	18783	2.50000	ppb		0.00
15) Chrysene-D12(IS)	12.81	240	22284	2.50000	ppb		0.00
21) Perylene-D12(IS)	15.32	264	19749	2.50000	ppb		-0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.01	82	82852	33.14475	ppb		-0.01
Spiked Amount 5.000			Recovery = 662.900%				
7) Surrogate Recovery (FBP)	7.12	172	148664	27.62556	ppb		0.00
Spiked Amount 5.000			Recovery = 552.520%				
17) Surrogate Recovery (TPH)	11.52	244	170664	24.97985	ppb		0.00
Spiked Amount 5.000			Recovery = 499.600%				
Target Compounds							Qvalue
3) Naphthalene	5.88	128	409822	51.00385	ppb		100
4) 2-Methylnaphthalene	6.69	142	245527	50.24327	ppb		98
5) 1-Methylnaphthalene	6.81	142	232751	42.90565	ppb		98
8) Acenaphthylene	7.75	152	401113	53.39446	ppb		98
9) Acenaphthene	7.94	154	227796	50.02559	ppb		99
10) Fluorene	8.56	166	260628	49.43910	ppb		99
12) Phenanthrene	9.68	178	382140	47.33397	ppb		99
13) Anthracene	9.74	178	371152	50.70997	ppb		98
14) Fluoranthene	11.08	202	616975	54.98703	ppb		97
16) Pyrene	11.34	202	635650	57.49849	ppb		97
18) Benz (a) anthracene	12.79	228	564611	59.36852	ppb		98
19) Chrysene	12.84	228	512414	47.75604	ppb		98
20) Indeno (1,2,3-cd) pyrene	17.63	276	488779	47.16639	ppb	#	89
22) Benzo (b) fluoranthene	14.54	252	530069	62.52987	ppb		99
23) Benzo (k) fluoranthene	14.60	252	451672m	50.59468	ppb		100
24) Benzo (a) pyrene	15.22	252	475288	54.34582	ppb		97
25) Dibenz (a,h) anthracene	17.66	278	395543	48.15359	ppb		97
26) Benzo (g,h,i) perylene	18.14	276	395011	49.05500	ppb		97

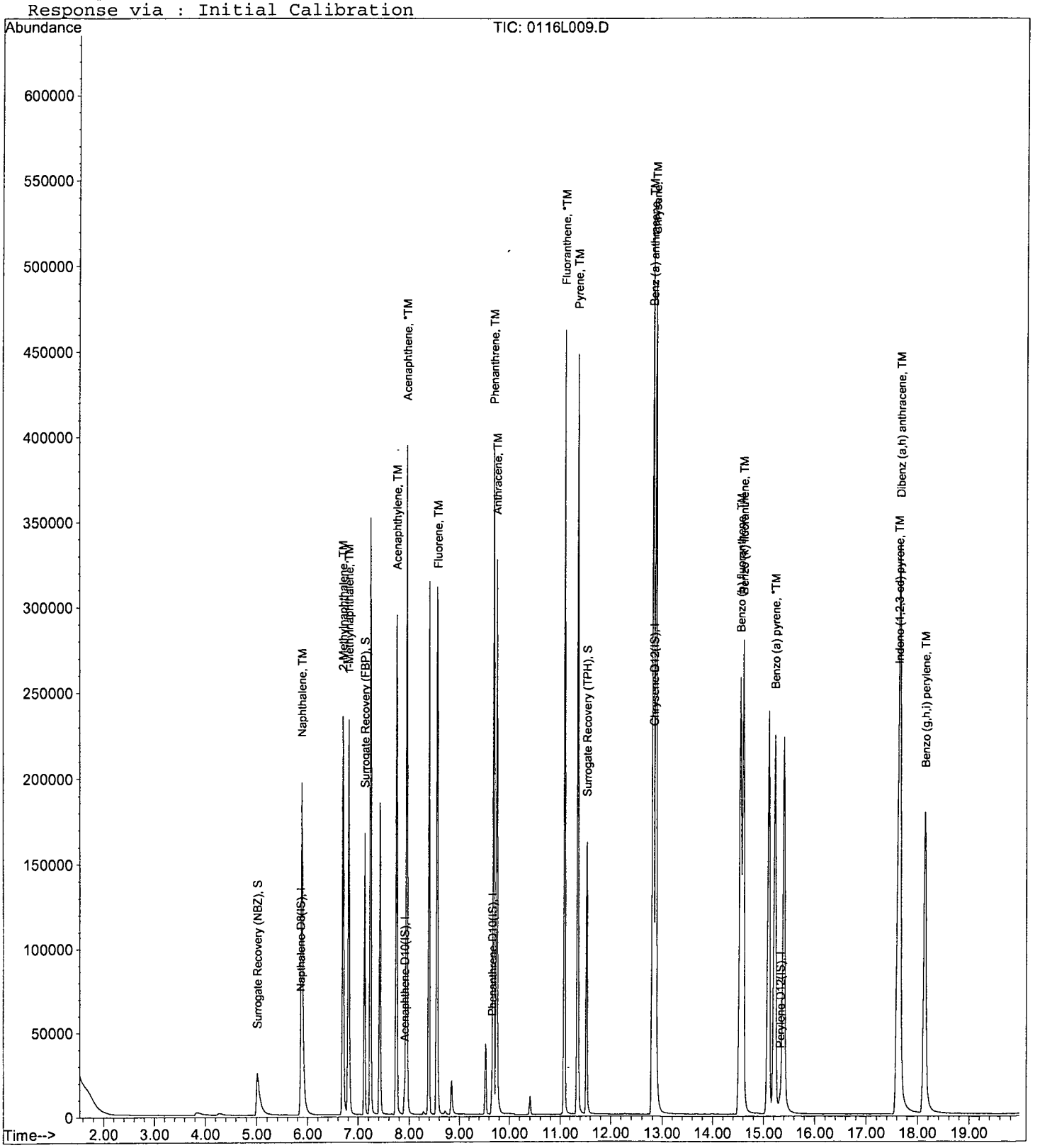
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L009.D Vial: 9
Acq On : 16 Jan 17 20:41 Operator: MA
Sample : 50 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:30 2017 Quant Results File: L0116PR.RES

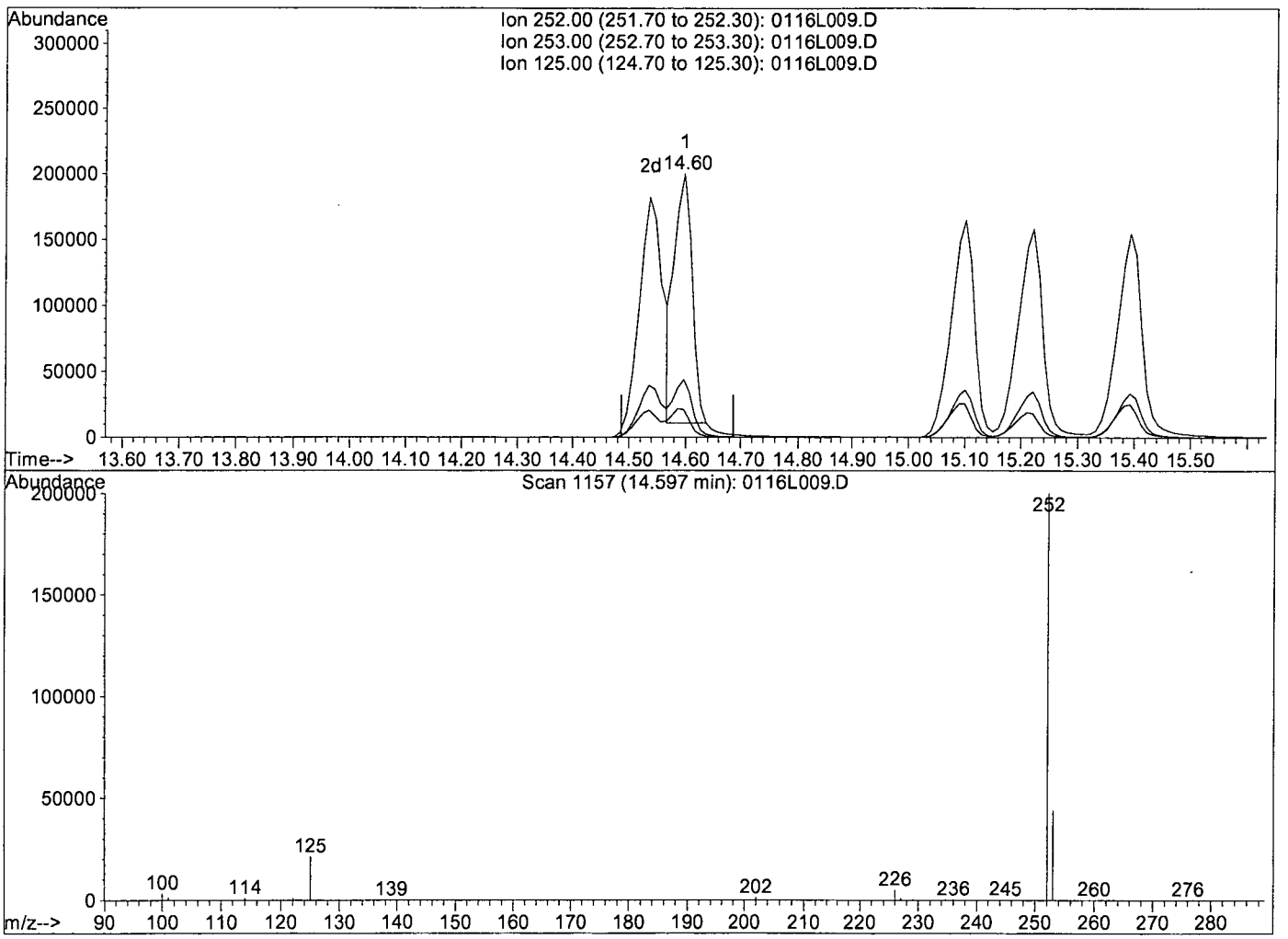
Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L009.D Vial: 9
Acq On : 16 Jan 17 20:41 Operator: MA
Sample : 50 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 8:55 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:24:14 2017
Response via : Multiple Level Calibration



TIC: 0116L009.D

(23) Benzo (k) fluoranthene (TM)

14.60min 46.0973ppb

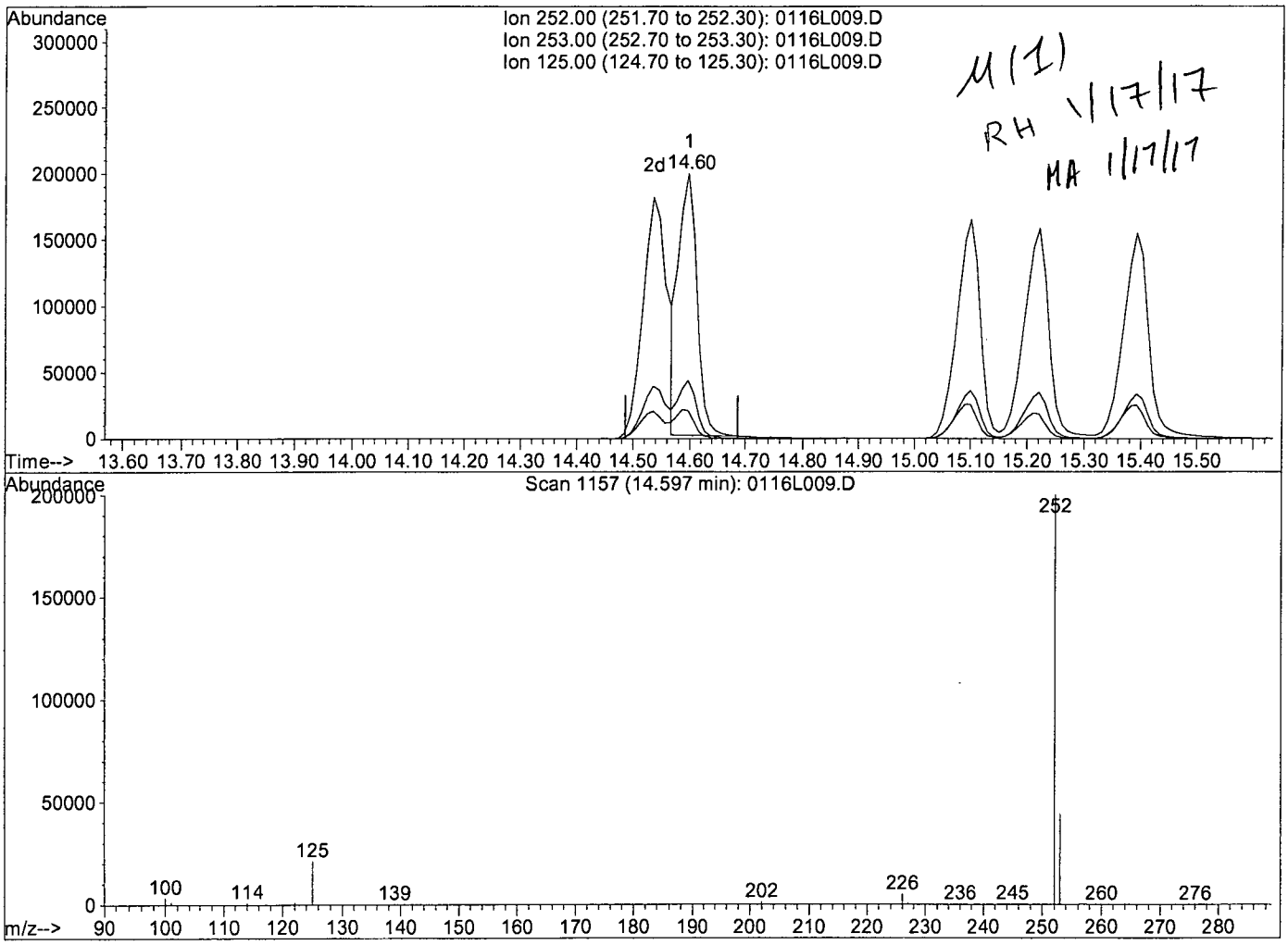
response 411523

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	21.96
125.00	10.50	10.59
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L009.D Vial: 9
Acq On : 16 Jan 17 20:41 Operator: MA
Sample : 50 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 11:30 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:24:14 2017
Response via : Multiple Level Calibration



M(1)
RH 1/17/17
MA 1/17/17

TIC: 0116L009.D

(23) Benzo (k) fluoranthene (TM)

14.60min 50.5947ppb m

response 451672

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	21.94
125.00	10.50	10.53
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L010.D Vial: 10
Acq On : 16 Jan 17 21:09 Operator: MA
Sample : 100 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:30 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 16 16:54:35 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.86	136	18975	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.91	164	9121	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.66	188	18054	2.50000	ppb		0.00
15) Chrysene-D12(IS)	12.82	240	20947	2.50000	ppb		0.01
21) Perylene-D12(IS)	15.34	264	18966	2.50000	ppb		0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.00	82	158793	66.51129	ppb		-0.03
Spiked Amount 5.000			Recovery	= 1330.220%			
7) Surrogate Recovery (FBP)	7.12	172	272565	53.84709	ppb		0.00
Spiked Amount 5.000			Recovery	= 1076.940%			
17) Surrogate Recovery (TPH)	11.52	244	308342	48.12618	ppb		0.00
Spiked Amount 5.000			Recovery	= 962.520%			
Target Compounds							Qvalue
3) Naphthalene	5.88	128	730521	95.43428	ppb		99
4) 2-Methylnaphthalene	6.70	142	439807	94.47235	ppb		98
5) 1-Methylnaphthalene	6.81	142	409217	79.18456	ppb		98
8) Acenaphthylene	7.75	152	713052	100.63167	ppb		98
9) Acenaphthene	7.94	154	407011	94.76246	ppb		99
10) Fluorene	8.56	166	459815	92.47335	ppb		99
12) Phenanthrene	9.69	178	674498	86.92059	ppb		99
13) Anthracene	9.75	178	614227	87.30960	ppb		98
14) Fluoranthene	11.08	202	1095355	101.56384	ppb		100
16) Pyrene	11.35	202	1120001	107.77750	ppb		98
18) Benz (a) anthracene	12.80	228	1044565	116.84595	ppb		98
19) Chrysene	12.86	228	893174	88.55533	ppb	#	96
20) Indeno (1,2,3-cd) pyrene	17.68	276	894908	91.86916	ppb	#	83
22) Benzo (b) fluoranthene	14.56	252	997372	122.51286	ppb		98
23) Benzo (k) fluoranthene	14.62	252	812892m	94.81650	ppb		99
24) Benzo (a) pyrene	15.25	252	866328	103.14804	ppb		97
25) Dibenz (a,h) anthracene	17.70	278	733907	93.03478	ppb		97
26) Benzo (g,h,i) perylene	18.17	276	701789	90.75071	ppb		99

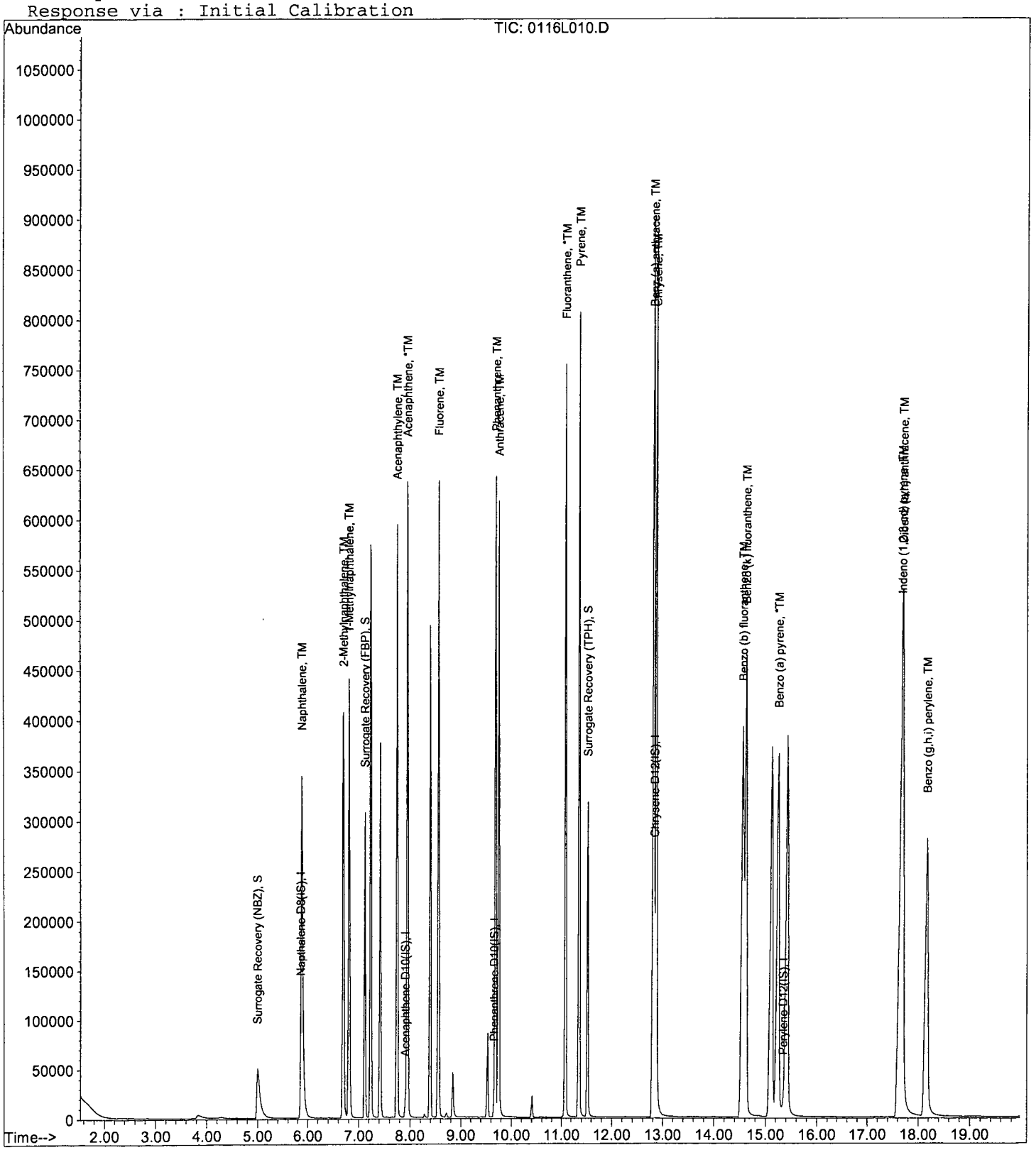
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L010.D Vial: 10
Acq On : 16 Jan 17 21:09 Operator: MA
Sample : 100 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:30 2017 Quant Results File: L0116PR.RES

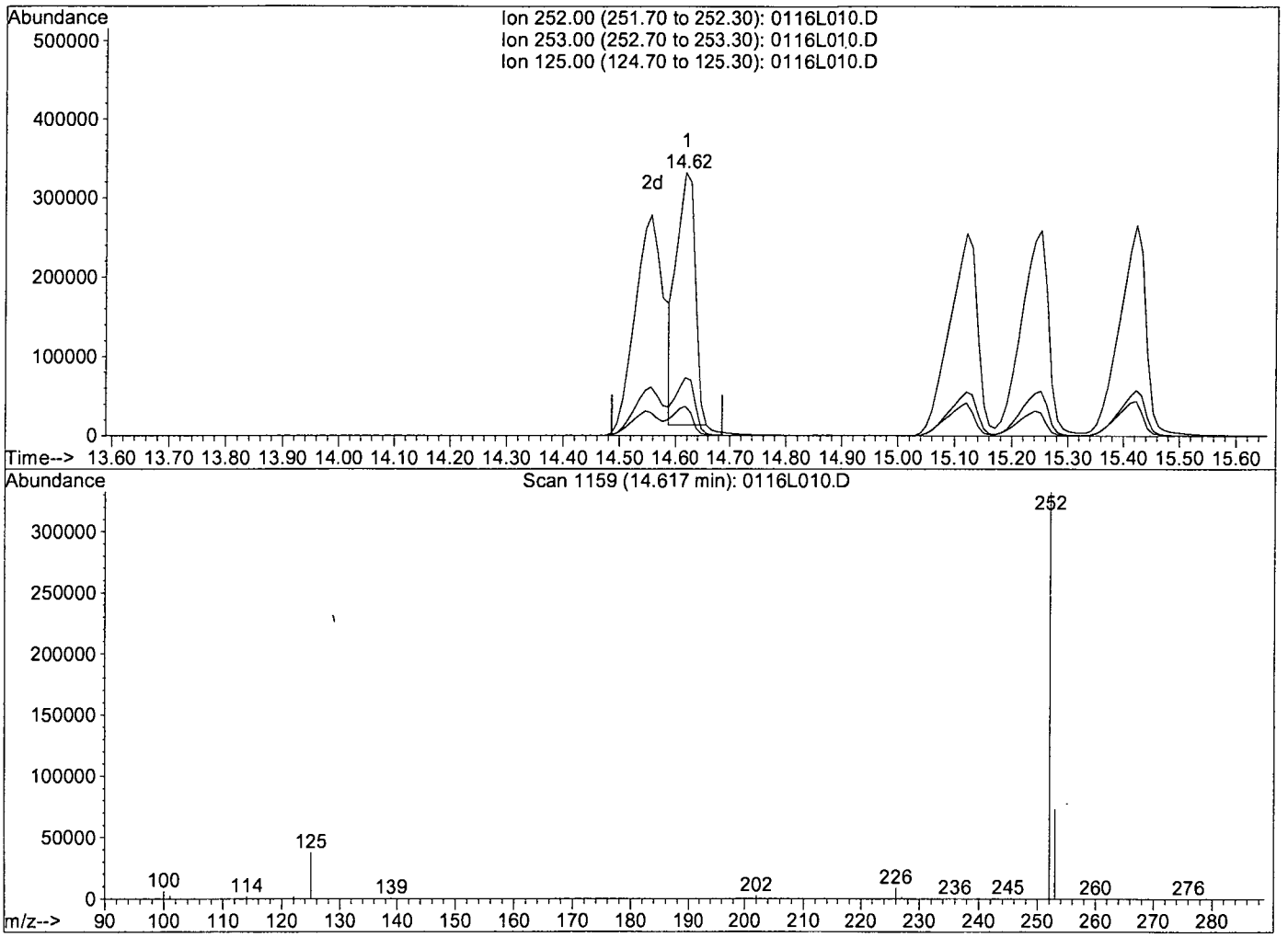
Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L010.D Vial: 10
Acq On : 16 Jan 17 21:09 Operator: MA
Sample : 100 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 8:55 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:24:14 2017
Response via : Multiple Level Calibration



TIC: 0116L010.D

(23) Benzo (k) fluoranthene (TM)

14.62min 88.5922ppb

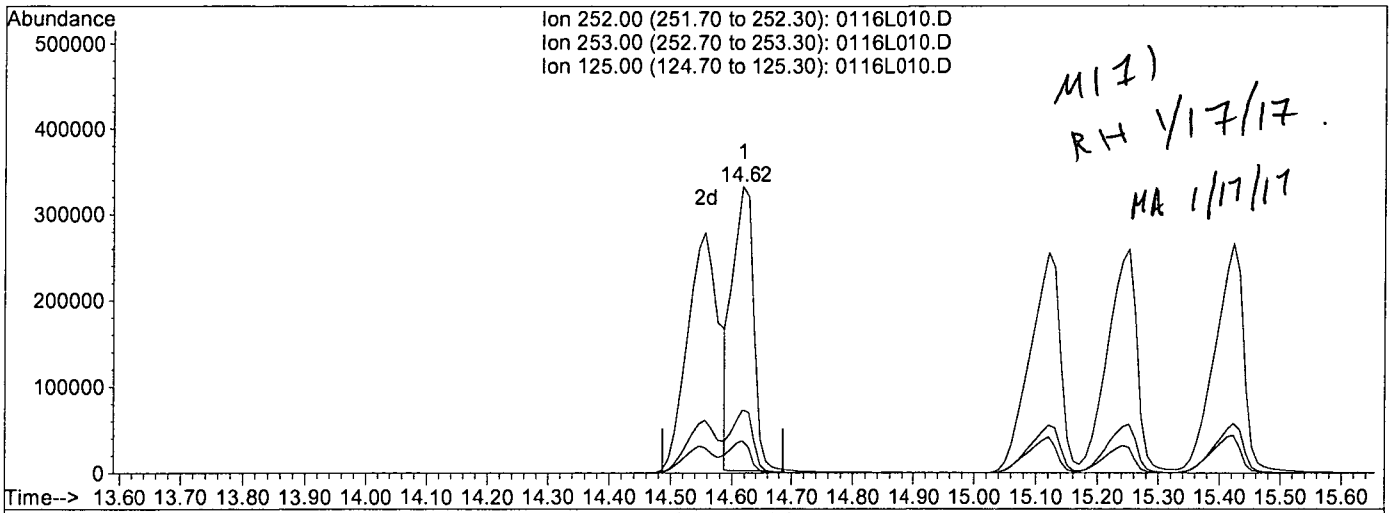
response 759529

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	21.98
125.00	10.50	11.38
0.00	0.00	0.00

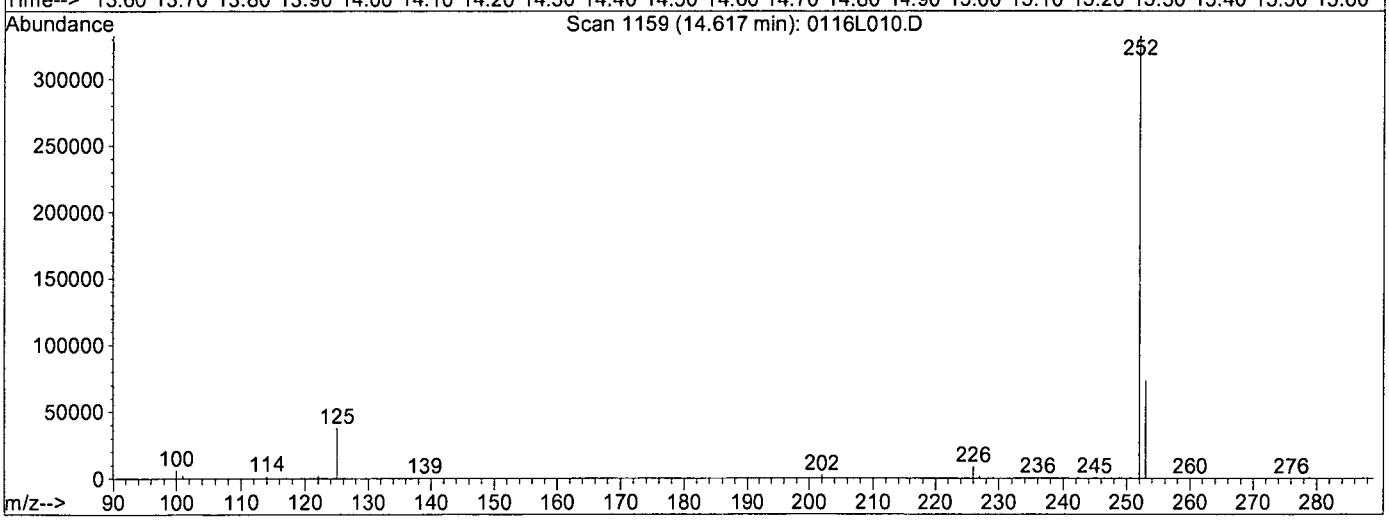
Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L010.D Vial: 10
Acq On : 16 Jan 17 21:09 Operator: MA
Sample : 100 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 11:30 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:24:14 2017
Response via : Multiple Level Calibration



M1 1)
RH 1/17/17.
MA 1/17/17



TIC: 0116L010.D

(23) Benzo (k) fluoranthene (TM)

14.62min 94.8165ppb m

response 812892

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	21.98
125.00	10.50	11.26
0.00	0.00	0.00

Form 7

Second Source Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/16/17
Matrix: Instrument: Linus
Initial Cal. Date: 01/16/17
Data File: 0116L011.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TM	Naphthalene	1.022	0.9836	3.8	TM	
2	TML	2-Methylnaphthalene	0.5432	0.5784	6.5	TML	2.1
3	TM	1-Methylnaphthalene	0.6859	0.5604	18	TM	
4	TM	Acenaphthylene	2.069	1.926	6.9	TM	
5	*TM	Acenaphthene	1.276	1.098	14	*TM	
6	TM	Fluorene	1.385	1.249	9.8	TM	
7	TM	Phenanthrene	1.043	0.9324	11	TM	
8	TM	Anthracene	0.9820	0.9045	7.9	TM	
9	*TM	Fluoranthene	1.680	1.533	8.8	*TM	
10	TM	Pyrene	1.418	1.291	8.9	TM	
11	TML	Benz (a) anthracene	0.9814	1.180	20	TML	5.8
12	TML	Chrysene	1.463	1.015	31	TML	7.4
13	TML	Indeno (1,2,3-cd) pyrene	0.9131	0.9928	8.7	TML	7.9
14	TML	Benzo (b) fluoranthene	1.150	1.130	1.8	TML	15
15	TM	Benzo (k) fluoranthene	1.327	1.064	20	TM	
16	*TML	Benzo (a) pyrene	1.112	1.089	2.0	*TML	6.2
17	TML	Dibenz (a,h) anthracene	0.9476	0.9060	4.4	TML	7.5
18	TML	Benzo (g,h,i) perylene	0.9340	0.8963	4.0	TML	5.4
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			10.4		

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L011.D Vial: 11
Acq On : 16 Jan 17 21:37 Operator: MA
Sample : SS SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:35 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.86	136	19517	2.50000	ppb		-0.01
6) Acenaphthene-D10(IS)	7.91	164	9558	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.66	188	18678	2.50000	ppb		0.00
15) Chrysene-D12(IS)	12.81	240	22555	2.50000	ppb		0.00
21) Perylene-D12(IS)	15.32	264	19722	2.50000	ppb		-0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	0.00	82	0d	0.19140	ppb		
Spiked Amount 5.000			Recovery	=	3.820%		
7) Surrogate Recovery (FBP)	0.00	172	0d	0.00000	ppb		
Spiked Amount 5.000			Recovery	=	0.000%		
17) Surrogate Recovery (TPH)	0.00	244	0d	0.00000	ppb		
Spiked Amount 5.000			Recovery	=	0.000%		
Target Compounds							Qvalue
3) Naphthalene	5.88	128	383936	48.10529	ppb		100
4) 2-Methylnaphthalene	6.69	142	225784	48.93929	ppb		99
5) 1-Methylnaphthalene	6.81	142	218736	40.85026	ppb		99
8) Acenaphthylene	7.74	152	368117	46.53342	ppb		98
9) Acenaphthene	7.94	154	209918	43.03203	ppb		99
10) Fluorene	8.55	166	238752	45.09477	ppb		97
12) Phenanthrene	9.68	178	348307	44.67952	ppb		99
13) Anthracene	9.74	178	337869	46.05103	ppb		98
14) Fluoranthene	11.08	202	572698	45.62279	ppb		94
16) Pyrene	11.34	202	582500	45.53918	ppb		98
18) Benz (a) anthracene	12.79	228	532295	47.09967	ppb		98
19) Chrysene	12.84	228	457835	46.28938	ppb		97
20) Indeno (1,2,3-cd) pyrene	17.61	276	447861	46.05623	ppb	#	93
22) Benzo (b) fluoranthene	14.54	252	445574	42.66550	ppb		99
23) Benzo (k) fluoranthene	14.59	252	419522	40.08913	ppb		99
24) Benzo (a) pyrene	15.21	252	429676	46.87839	ppb		99
25) Dibenz (a,h) anthracene	17.65	278	357363	46.22858	ppb		97
26) Benzo (g,h,i) perylene	18.13	276	353532	47.29936	ppb		99

Algorithum check = $\frac{383936 * 1 * 2.5}{1 * 19517 * 1.022} = \frac{959840}{19946.374}$

$= 48.121$ ←

RH 1/18/17

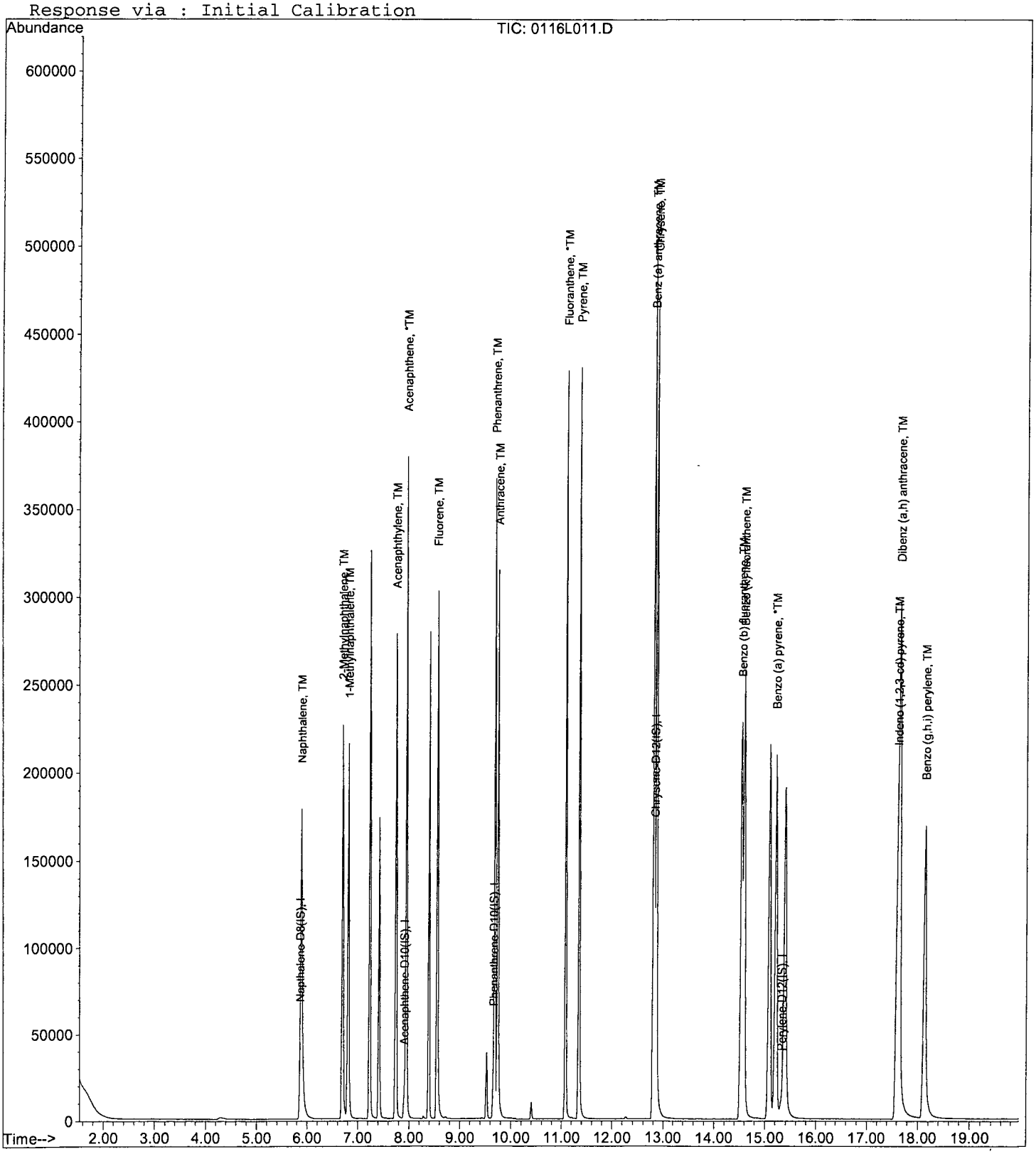
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L011.D Vial: 11
Acq On : 16 Jan 17 21:37 Operator: MA
Sample : SS SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:35 2017 Quant Results File: L0116PR.RES

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/18/17
Matrix: Instrument: Linus
Initial Cal. Date: 01/16/17
Data File: 0116L022.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	SL	Surrogate Recovery (NBZ)	0.3040	0.3606	19	SL	6.5
3	TM	Naphthalene	1.022	1.185	16	TM	
4	TML	2-Methylnaphthalene	0.5432	0.6892	27	TML	4.9
5	TM	1-Methylnaphthalene	0.6859	0.7304	6.5	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	S	Surrogate Recovery (FBP)	1.571	1.739	11	S	
8	TM	Acenaphthylene	2.069	2.385	15	TM	
9	*TM	Acenaphthene	1.276	1.399	9.6	*TM	
10	TM	Fluorene	1.385	1.578	14	TM	
11	I	Phenanthrene-D10(IS)	ISTD			I	
12	TM	Phenanthrene	1.043	1.197	15	TM	
13	TM	Anthracene	0.9820	1.125	15	TM	
14	*TM	Fluoranthene	1.680	1.825	8.6	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.418	1.615	14	TM	
17	S	Surrogate Recovery (TPH)	0.7756	0.8112	4.6	S	
18	TML	Benz (a) anthracene	0.9814	1.222	24	TML	4.0
19	TML	Chrysene	1.463	1.460	0.18	TML	14
20	TML	Indeno (1,2,3-cd) pyrene	0.9131	1.128	23	TML	0.67
21	I	Perylene-D12(IS)	ISTD			I	
22	TML	Benzo (b) fluoranthene	1.150	1.247	8.4	TML	8.8
23	TM	Benzo (k) fluoranthene	1.327	1.154	13	TM	
24	*TML	Benzo (a) pyrene	1.112	1.348	21	*TML	5.8
25	TML	Dibenz (a,h) anthracene	0.9476	1.051	11	TML	1.3
26	TML	Benzo (g,h,i) perylene	0.9340	1.071	15	TML	0.21
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			13.9		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L022.D Vial: 10
Acq On : 18 Jan 17 12:15 Operator: MA
Sample : 5.0 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 18 12:43 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	22963	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.91	164	11532	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.66	188	22755	2.50000	ppb		0.00
15) Chrysene-D12(IS)	12.81	240	27025	2.50000	ppb		0.00
21) Perylene-D12(IS)	15.33	264	22532	2.50000	ppb		0.00
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.06	82	8281	2.33782	ppb		0.01
Spiked Amount 5.000			Recovery = 46.760%				
7) Surrogate Recovery (FBP)	7.13	172	20054	2.76705	ppb		0.00
Spiked Amount 5.000			Recovery = 55.340%				
17) Surrogate Recovery (TPH)	11.52	244	21922	2.61452	ppb		-0.01
Spiked Amount 5.000			Recovery = 52.300%				
Target Compounds							Qvalue
3) Naphthalene	5.89	128	54426	5.79595	ppb		99
4) 2-Methylnaphthalene	6.70	142	31653	5.24445	ppb		99
5) 1-Methylnaphthalene	6.81	142	33544	5.32444	ppb		96
8) Acenaphthylene	7.75	152	55005	5.76293	ppb		97
9) Acenaphthene	7.94	154	32262	5.48145	ppb		98
10) Fluorene	8.56	166	36397	5.69780	ppb		98
12) Phenanthrene	9.68	178	54469	5.73521	ppb		99
13) Anthracene	9.75	178	51178	5.72569	ppb		98
14) Fluoranthene	11.08	202	83042	5.43010	ppb		100
16) Pyrene	11.35	202	87300	5.69614	ppb		100
18) Benz (a) anthracene	12.80	228	66024	4.80170	ppb		96
19) Chrysene	12.85	228	78921	5.67637	ppb		96
20) Indeno (1,2,3-cd) pyrene	17.60	276	60946	4.96640	ppb	#	89
22) Benzo (b) fluoranthene	14.54	252	56204	4.56122	ppb		99
23) Benzo (k) fluoranthene	14.59	252	51991	4.34862	ppb		99
24) Benzo (a) pyrene	15.21	252	60748	5.29044	ppb		98
25) Dibenz (a,h) anthracene	17.63	278	47369	4.93258	ppb		97
26) Benzo (g,h,i) perylene	18.13	276	48272	5.01043	ppb		99

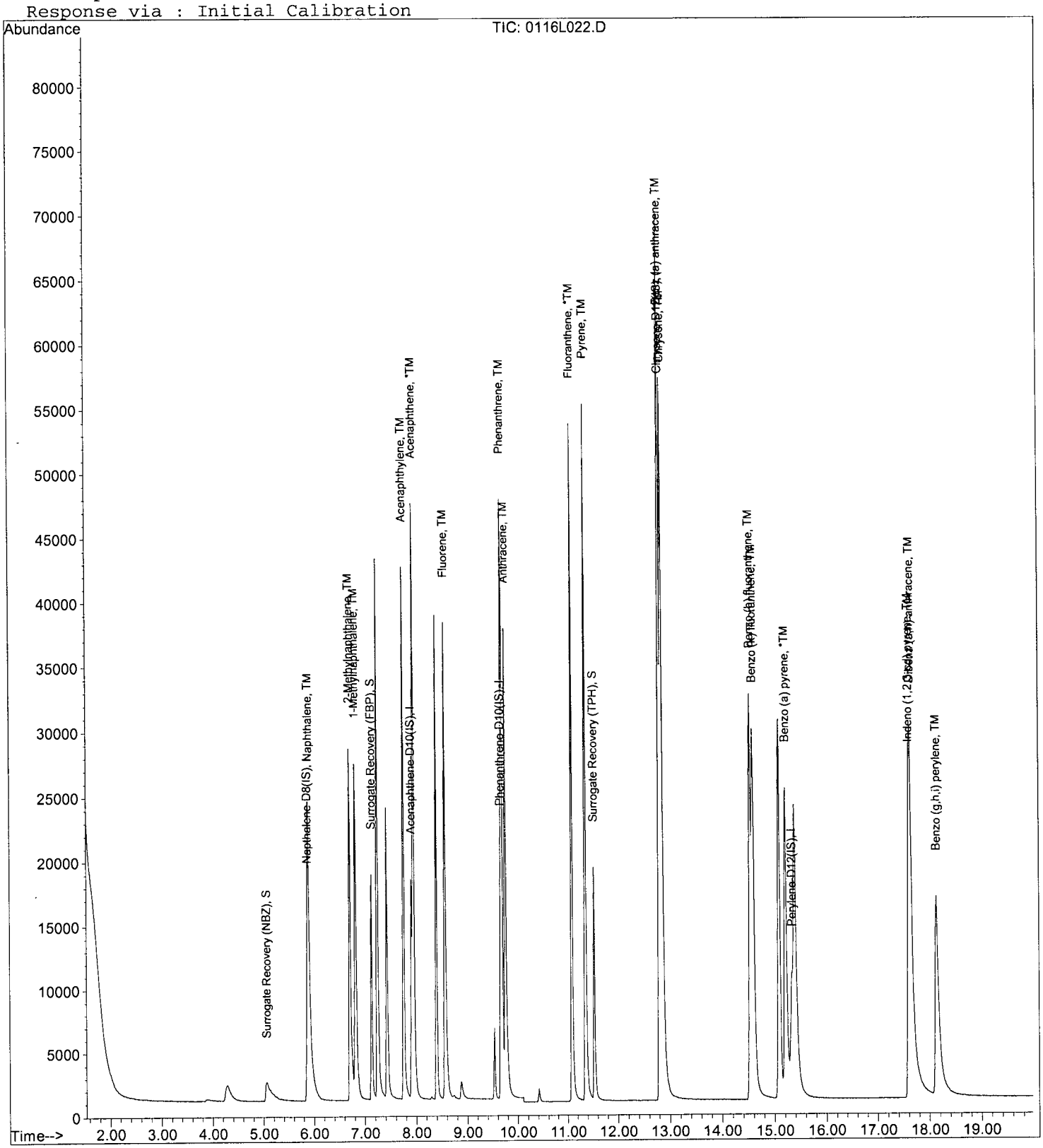
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L022.D Vial: 10
Acq On : 18 Jan 17 12:15 Operator: MA
Sample : 5.0 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 18 12:43 2017 Quant Results File: L0116PR.RES

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/18/17
Instrument: Linus
Initial Cal. Date: 01/16/17
Data File: 0116L043.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	SL	Surrogate Recovery (NBZ)	0.3040	0.3722	22	SL	3.7
3	TM	Naphthalene	1.022	1.172	15	TM	
4	TML	2-Methylnaphthalene	0.5432	0.6852	26	TML	4.2
5	TM	1-Methylnaphthalene	0.6859	0.7243	5.6	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	S	Surrogate Recovery (FBP)	1.571	1.691	7.6	S	
8	TM	Acenaphthylene	2.069	2.372	15	TM	
9	*TM	Acenaphthene	1.276	1.393	9.2	*TM	
10	TM	Fluorene	1.385	1.565	13	TM	
11	I	Phenanthrene-D10(IS)	ISTD			I	
12	TM	Phenanthrene	1.043	1.163	11	TM	
13	TM	Anthracene	0.9820	1.132	15	TM	
14	*TM	Fluoranthene	1.680	1.883	12	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.418	1.625	15	TM	
17	S	Surrogate Recovery (TPH)	0.7756	0.8064	4.0	S	
18	TML	Benz (a) anthracene	0.9814	1.212	24	TML	4.7
19	TML	Chrysene	1.463	1.494	2.1	TML	17
20	TML	Indeno (1,2,3-cd) pyrene	0.9131	1.173	28	TML	3.6
21	I	Perylene-D12(IS)	ISTD			I	
22	TML	Benzo (b) fluoranthene	1.150	1.234	7.3	TML	9.8
23	TM	Benzo (k) fluoranthene	1.327	1.213	8.6	TM	
24	*TML	Benzo (a) pyrene	1.112	1.355	22	*TML	6.4
25	TML	Dibenz (a,h) anthracene	0.9476	1.125	19	TML	6.3
26	TML	Benzo (g,h,i) perylene	0.9340	1.104	18	TML	3.8
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			14.3		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L043.D Vial: 43
Acq On : 18 Jan 17 22:01 Operator: MA
Sample : SIM 5 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 19 9:26 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	21009	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	7.91	164	10596	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.66	188	20753	2.50000 ppb		0.00
15) Chrysene-D12(IS)	12.81	240	25060	2.50000 ppb		0.00
21) Perylene-D12(IS)	15.33	264	21261	2.50000 ppb		0.00
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.06	82	7820	2.40685 ppb		0.01
Spiked Amount 5.000			Recovery	= 48.140%		
7) Surrogate Recovery (FBP)	7.13	172	17914	2.69012 ppb		0.00
Spiked Amount 5.000			Recovery	= 53.800%		
17) Surrogate Recovery (TPH)	11.53	244	20208	2.59908 ppb		0.00
Spiked Amount 5.000			Recovery	= 51.980%		
Target Compounds						Qvalue
3) Naphthalene	5.89	128	49263	5.73406 ppb		99
4) 2-Methylnaphthalene	6.70	142	28791	5.21005 ppb		98
5) 1-Methylnaphthalene	6.82	142	30432	5.27974 ppb		98
8) Acenaphthylene	7.75	152	50275	5.73266 ppb		98
9) Acenaphthene	7.94	154	29527	5.45992 ppb		98
10) Fluorene	8.56	166	33160	5.64961 ppb		97
12) Phenanthrene	9.69	178	48281	5.57406 ppb		100
13) Anthracene	9.75	178	47001	5.76564 ppb		99
14) Fluoranthene	11.09	202	78155	5.60354 ppb		96
16) Pyrene	11.35	202	81427	5.72954 ppb		98
18) Benz (a) anthracene	12.80	228	60769	4.76545 ppb		97
19) Chrysene	12.85	228	74874	5.83410 ppb		96
20) Indeno (1,2,3-cd) pyrene	17.61	276	58790	5.17837 ppb	#	91
22) Benzo (b) fluoranthene	14.54	252	52464	4.51043 ppb		99
23) Benzo (k) fluoranthene	14.59	252	51563	4.57064 ppb		98
24) Benzo (a) pyrene	15.21	252	57611	5.32012 ppb		98
25) Dibenz (a,h) anthracene	17.64	278	47851	5.31504 ppb		100
26) Benzo (g,h,i) perylene	18.13	276	46959	5.18812 ppb		98

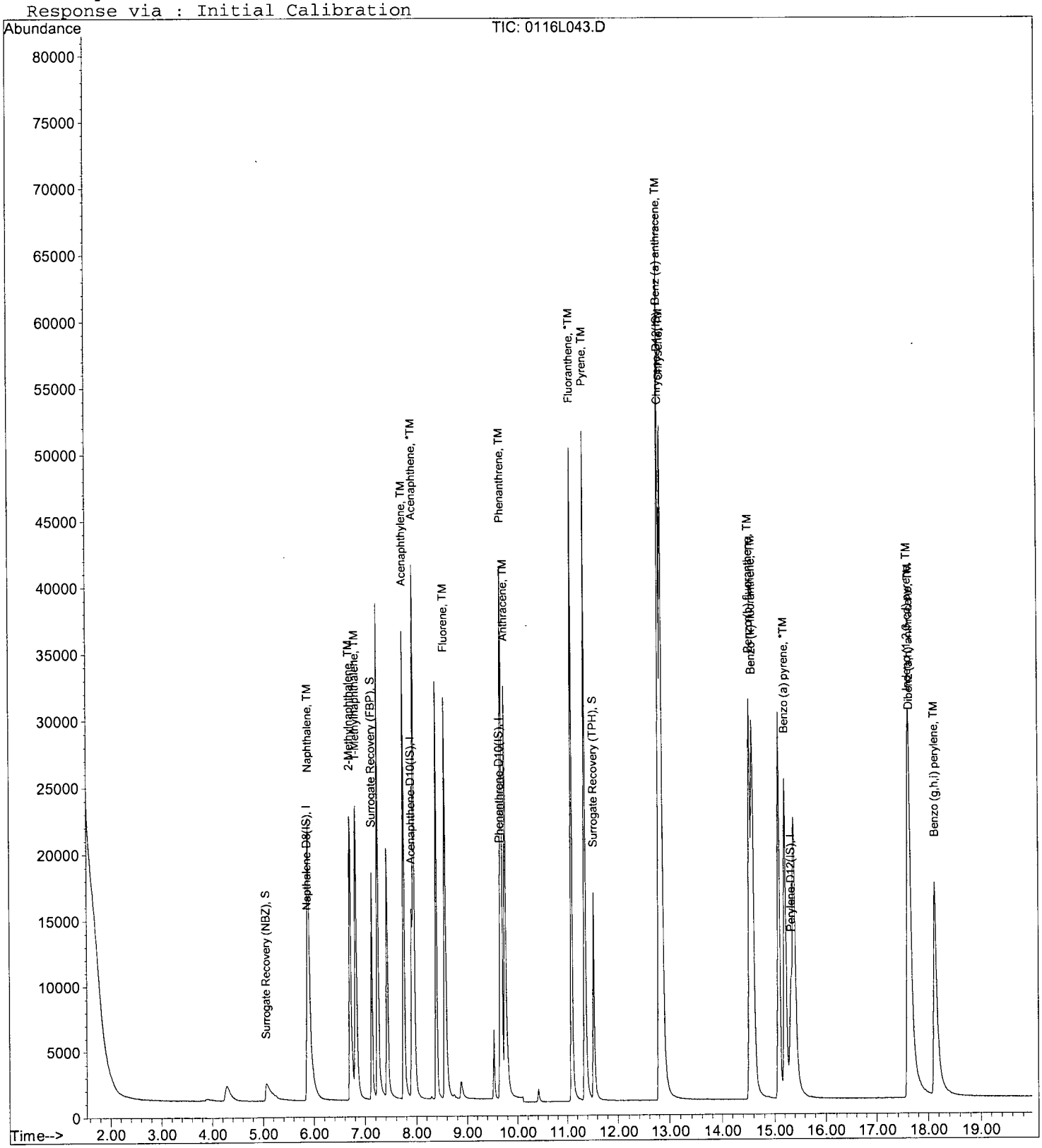
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L043.D Vial: 43
Acq On : 18 Jan 17 22:01 Operator: MA
Sample : SIM 5 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 19 9:26 2017 Quant Results File: L0116PR.RES

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/19/17
Instrument: Linus
Initial Cal. Date: 01/16/17
Data File: 0116L046.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	SL	Surrogate Recovery (NBZ)	0.3040	0.3450	13	SL	10
3	TM	Naphthalene	1.022	1.065	4.2	TM	
4	TML	2-Methylnaphthalene	0.5432	0.6152	13	TML	7.8
5	TM	1-Methylnaphthalene	0.6859	0.6762	1.4	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	S	Surrogate Recovery (FBP)	1.571	1.596	1.6	S	
8	TM	Acenaphthylene	2.069	2.132	3.0	TM	
9	*TM	Acenaphthene	1.276	1.273	0.20	*TM	
10	TM	Fluorene	1.385	1.458	5.3	TM	
11	I	Phenanthrene-D10(IS)	ISTD			I	
12	TM	Phenanthrene	1.043	1.079	3.4	TM	
13	TM	Anthracene	0.9820	1.044	6.3	TM	
14	*TM	Fluoranthene	1.680	1.700	1.2	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.418	1.504	6.1	TM	
17	S	Surrogate Recovery (TPH)	0.7756	0.7820	0.82	S	
18	TML	Benz (a) anthracene	0.9814	1.093	11	TML	14
19	TML	Chrysene	1.463	1.382	5.5	TML	6.3
20	TML	Indeno (1,2,3-cd) pyrene	0.9131	1.026	12	TML	10
21	I	Perylene-D12(IS)	ISTD			I	
22	TML	Benzo (b) fluoranthene	1.150	1.279	11	TML	6.4
23	TM	Benzo (k) fluoranthene	1.327	1.271	4.2	TM	
24	*TML	Benzo (a) pyrene	1.112	1.223	10.0	*TML	5.1
25	TML	Dibenz (a,h) anthracene	0.9476	0.9871	4.2	TML	8.0
26	TML	Benzo (g,h,i) perylene	0.9340	0.9834	5.3	TML	9.2
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			5.8		

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L046.D
Acq On : 19 Jan 17 9:07
Sample : SIM 5 1/13/17
Misc : water

Vial: 46
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Jan 19 9:29 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	22693	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.91	164	11406	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.66	188	22167	2.50000	ppb		0.00
15) Chrysene-D12(IS)	12.81	240	26307	2.50000	ppb		0.00
21) Perylene-D12(IS)	15.33	264	22173	2.50000	ppb		0.00
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.06	82	7828	2.24454	ppb		0.01
Spiked Amount 5.000			Recovery = 44.900%				
7) Surrogate Recovery (FBP)	7.13	172	18203	2.53940	ppb		0.00
Spiked Amount 5.000			Recovery = 50.780%				
17) Surrogate Recovery (TPH)	11.53	244	20572	2.52048	ppb		0.00
Spiked Amount 5.000			Recovery = 50.400%				
Target Compounds							Qvalue
3) Naphthalene	5.89	128	48326	5.20758	ppb		100
4) 2-Methylnaphthalene	6.70	142	27922	4.60978	ppb		99
5) 1-Methylnaphthalene	6.81	142	30692	4.92970	ppb		96
8) Acenaphthylene	7.75	152	48639	5.15226	ppb		98
9) Acenaphthene	7.94	154	29050	4.99025	ppb		99
10) Fluorene	8.56	166	33270	5.26581	ppb		98
12) Phenanthrene	9.69	178	47830	5.16976	ppb		99
13) Anthracene	9.75	178	46273	5.31425	ppb		99
14) Fluoranthene	11.09	202	75354	5.05808	ppb		97
16) Pyrene	11.35	202	79158	5.30586	ppb		99
18) Benz (a) anthracene	12.80	228	57484	4.28599	ppb		97
19) Chrysene	12.85	228	72731	5.31274	ppb		97
20) Indeno (1,2,3-cd) pyrene	17.61	276	53994	4.49317	ppb	#	89
22) Benzo (b) fluoranthene	14.54	252	56721	4.68200	ppb		100
23) Benzo (k) fluoranthene	14.59	252	56358m	4.79020	ppb		98
24) Benzo (a) pyrene	15.21	252	54229	4.74505	ppb		99
25) Dibenz (a,h) anthracene	17.64	278	43774	4.60233	ppb		98
26) Benzo (g,h,i) perylene	18.13	276	43608	4.53979	ppb		98

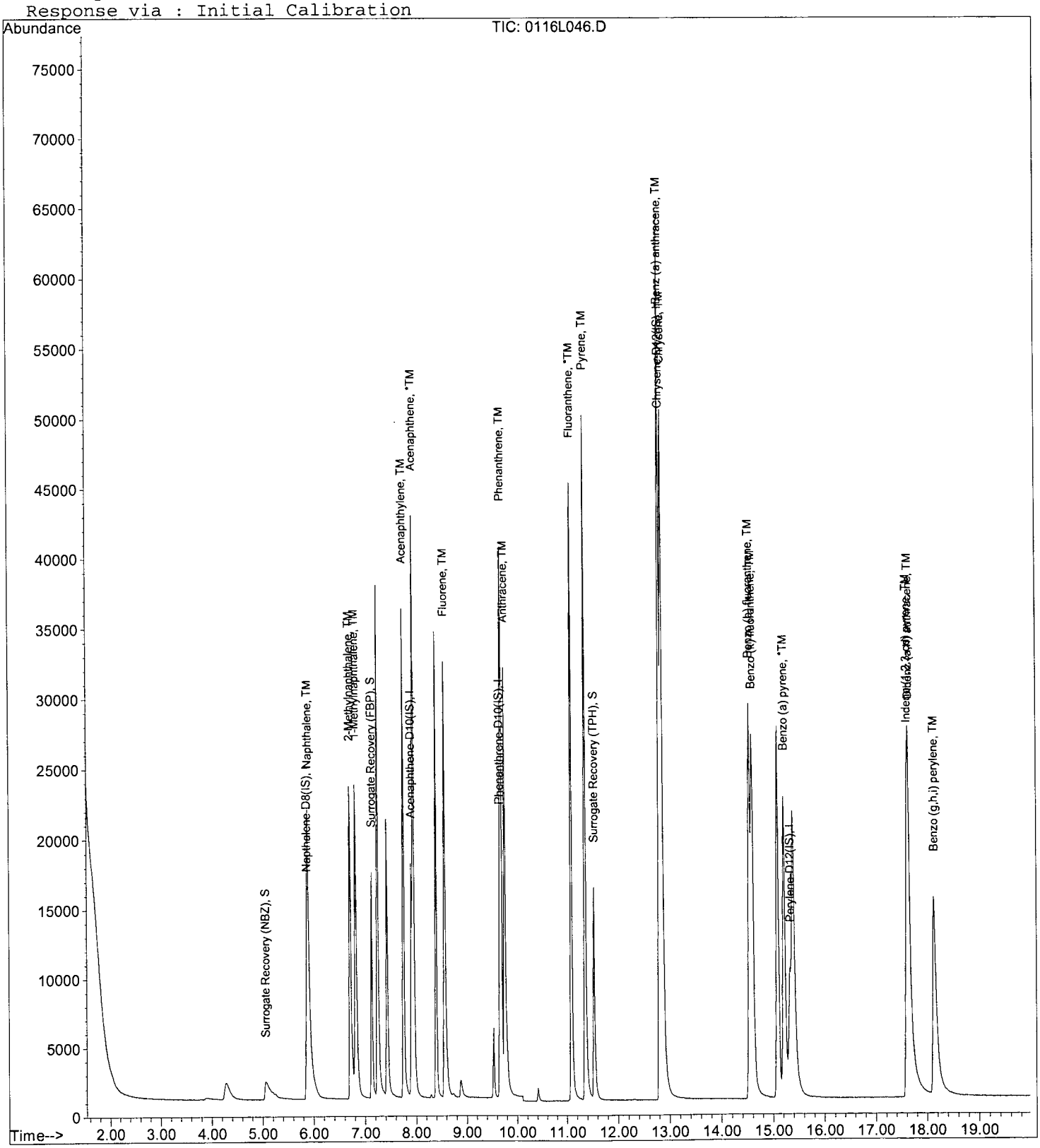
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L046.D Vial: 46
Acq On : 19 Jan 17 9:07 Operator: MA
Sample : SIM 5 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 19 9:29 2017 Quant Results File: L0116PR.RES

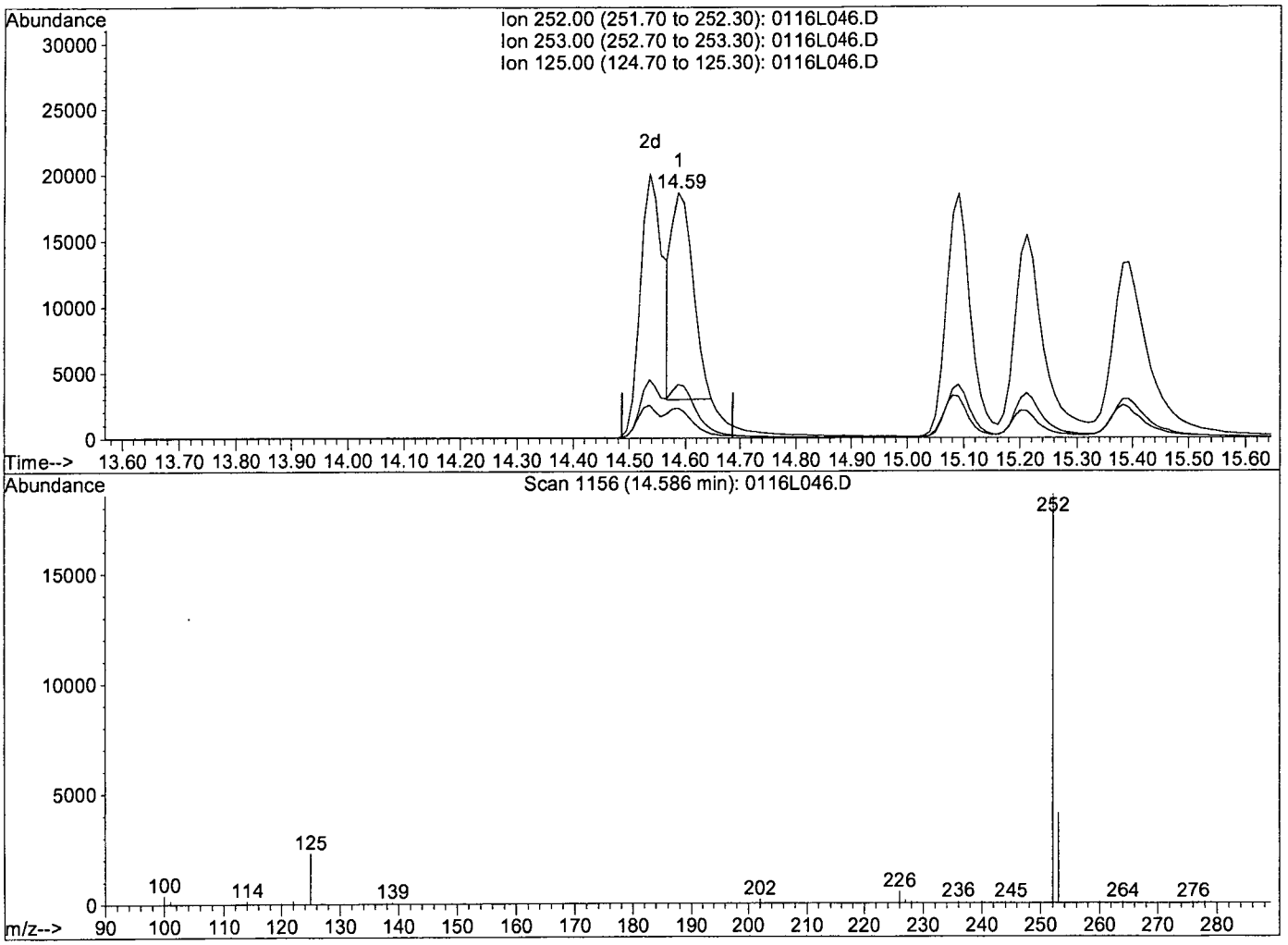
Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L046.D Vial: 46
Acq On : 19 Jan 17 9:07 Operator: MA
Sample : SIM 5 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 19 9:28 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Multiple Level Calibration



TIC: 0116L046.D

(23) Benzo (k) fluoranthene (TM)

14.59min 3.5108ppb

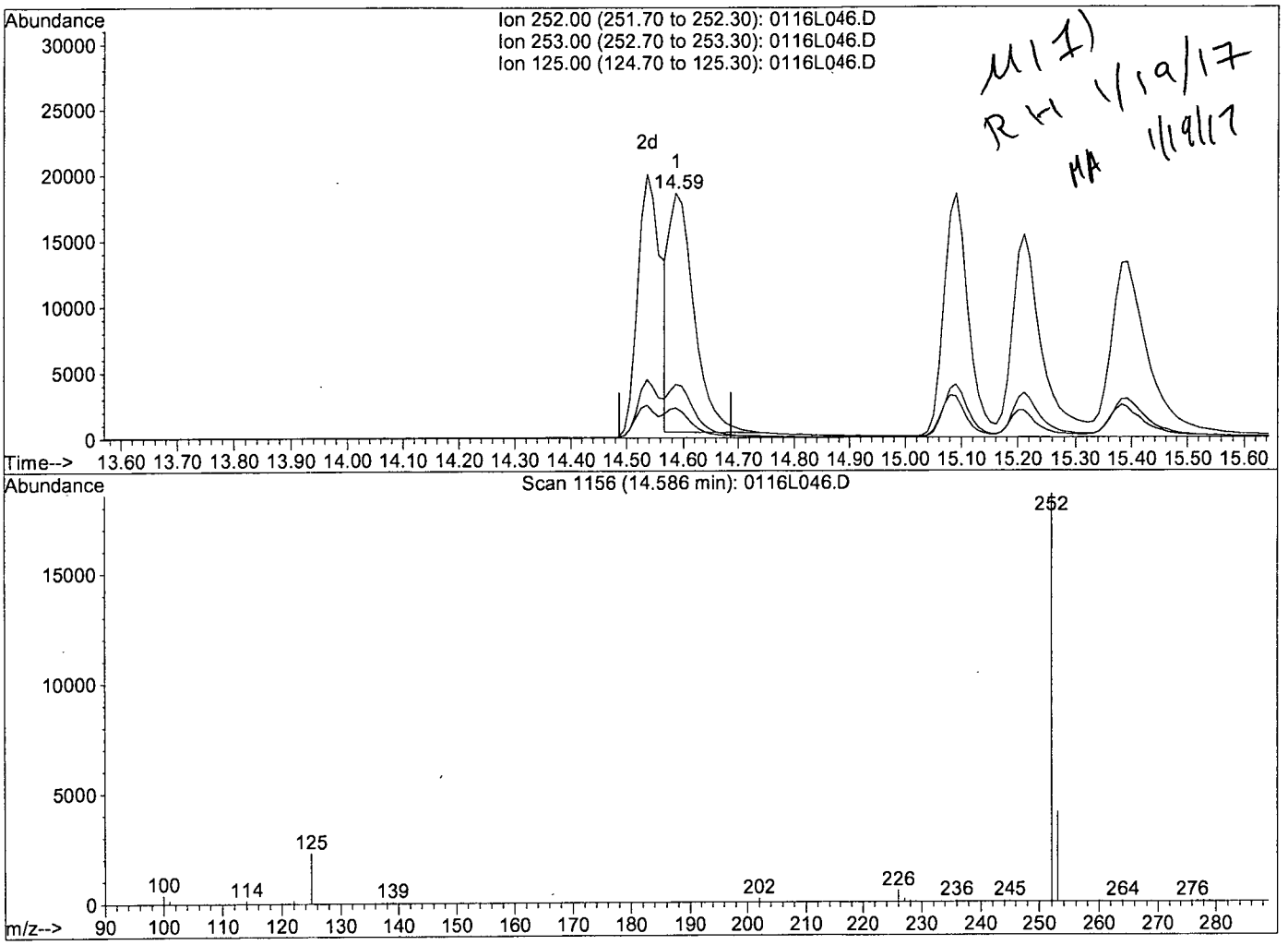
response 41306

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	21.61
125.00	10.50	12.45
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L046.D Vial: 46
Acq On : 19 Jan 17 9:07 Operator: MA
Sample : SIM 5 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 19 9:29 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Multiple Level Calibration



TIC: 0116L046.D

(23) Benzo (k) fluoranthene (TM)

14.59min 4.7902ppb m

response 56358

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	21.91
125.00	10.50	12.26
0.00	0.00	0.00

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/19/17
Instrument: Linus
Initial Cal. Date: 01/16/17
Data File: 0116L061.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	SL	Surrogate Recovery (NBZ)	0.3040	0.3624	19	SL	6.1
3	TM	Naphthalene	1.022	1.186	16	TM	
4	TML	2-Methylnaphthalene	0.5432	0.6935	28	TML	5.6
5	TM	1-Methylnaphthalene	0.6859	0.7209	5.1	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	S	Surrogate Recovery (FBP)	1.571	1.701	8.2	S	
8	TM	Acenaphthylene	2.069	2.376	15	TM	
9	*TM	Acenaphthene	1.276	1.392	9.1	*TM	
10	TM	Fluorene	1.385	1.599	15	TM	
11	I	Phenanthrene-D10(IS)	ISTD			I	
12	TM	Phenanthrene	1.043	1.166	12	TM	
13	TM	Anthracene	0.9820	1.136	16	TM	
14	*TM	Fluoranthene	1.680	1.894	13	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.418	1.647	16	TM	
17	S	Surrogate Recovery (TPH)	0.7756	0.8221	6.0	S	
18	TML	Benz (a) anthracene	0.9814	1.198	22	TML	5.8
19	TML	Chrysene	1.463	1.517	3.7	TML	19
20	TML	Indeno (1,2,3-cd) pyrene	0.9131	1.161	27	TML	2.5
21	I	Perylene-D12(IS)	ISTD			I	
22	TML	Benzo (b) fluoranthene	1.150	1.248	8.5	TML	8.7
23	TM	Benzo (k) fluoranthene	1.327	1.187	11	TM	
24	*TML	Benzo (a) pyrene	1.112	1.367	23	*TML	7.5
25	TML	Dibenz (a,h) anthracene	0.9476	1.124	19	TML	6.2
26	TML	Benzo (g,h,i) perylene	0.9340	1.107	19	TML	4.1
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			14.8		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L061.D Vial: 61
Acq On : 19 Jan 17 16:44 Operator: MA
Sample : SIM 5 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 20 14:59 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	22429	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	7.91	164	11327	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.66	188	22178	2.50000 ppb		0.00
15) Chrysene-D12(IS)	12.81	240	26676	2.50000 ppb		0.00
21) Perylene-D12(IS)	15.33	264	22431	2.50000 ppb		0.00
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.06	82	8129	2.34858 ppb		0.01
Spiked Amount 5.000			Recovery	= 46.980%		
7) Surrogate Recovery (FBP)	7.13	172	19264	2.70616 ppb		0.00
Spiked Amount 5.000			Recovery	= 54.120%		
17) Surrogate Recovery (TPH)	11.53	244	21931	2.64981 ppb		0.00
Spiked Amount 5.000			Recovery	= 53.000%		
Target Compounds						Qvalue
3) Naphthalene	5.89	128	53196	5.79984 ppb		100
4) 2-Methylnaphthalene	6.71	142	31110	5.28136 ppb		100
5) 1-Methylnaphthalene	6.82	142	32336	5.25489 ppb		98
8) Acenaphthylene	7.75	152	53828	5.74169 ppb		98
9) Acenaphthene	7.94	154	31542	5.45611 ppb		96
10) Fluorene	8.57	166	36215	5.77191 ppb		98
12) Phenanthrene	9.69	178	51702	5.58549 ppb		100
13) Anthracene	9.75	178	50410	5.78650 ppb		98
14) Fluoranthene	11.09	202	83999	5.63558 ppb		97
16) Pyrene	11.35	202	87853	5.80722 ppb		98
18) Benz (a) anthracene	12.80	228	63942	4.70956 ppb		97
19) Chrysene	12.85	228	80961	5.94437 ppb		97
20) Indeno (1,2,3-cd) pyrene	17.60	276	61947	5.12288 ppb	#	89
22) Benzo (b) fluoranthene	14.54	252	56002	4.56544 ppb		99
23) Benzo (k) fluoranthene	14.59	252	53248	4.47381 ppb		98
24) Benzo (a) pyrene	15.21	252	61321	5.37253 ppb		99
25) Dibenz (a,h) anthracene	17.64	278	50447	5.31076 ppb		98
26) Benzo (g,h,i) perylene	18.14	276	49666	5.20279 ppb		100

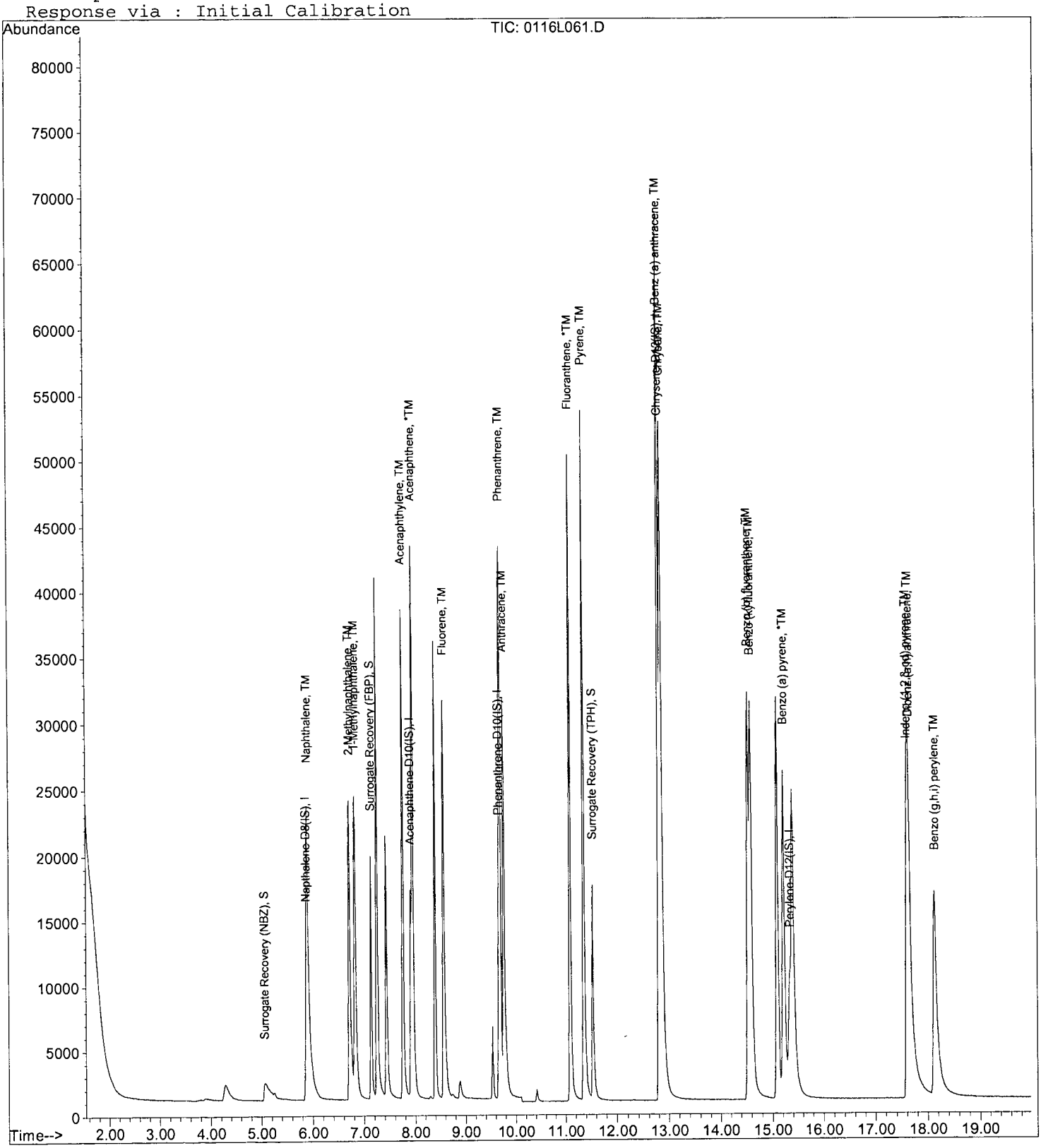
(#) = qualifier out of range (m) = manual integration
0116L061.D L0116PR.M Fri Jan 20 15:48:56 2017

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L061.D Vial: 61
Acq On : 19 Jan 17 16:44 Operator: MA
Sample : SIM 5 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 20 14:59 2017 Quant Results File: L0116PR.RES

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



ORGANICS

Raw Data

APPL, INC.

Method Blank
EPA 8270D SIM

Blank Name/QCG: **170116W-48866 - 215630**
Batch ID: #SIMDO-170116A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/16/17	01/18/17
BLANK	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/16/17	01/18/17
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	01/16/17	01/18/17
BLANK	SURROGATE: 2-FLUORBIPHENY	56.1	53-106			%	01/16/17	01/18/17
BLANK	SURROGATE: NITROBENZENE-	67.3	55-111			%	01/16/17	01/18/17
BLANK	SURROGATE: TERPHENYL-D14 (	86.3	58-132			%	01/16/17	01/18/17

Quant Method: L0116PR.M
Run #: 0116L023
Instrument: Linus
Sequence: L170116
Initials: RHA

GC SC-Blank-REG MDLs-DOD
Printed: 01/19/17 3:12:32 PM

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L023.D Vial: 23
Acq On : 18 Jan 17 12:54 Operator: MA
Sample : 170116A BLK 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 19 12:38 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	23020	2.50000 ppb	0.01
6) Acenaphthene-D10(IS)	7.92	164	11859	2.50000 ppb	0.01
11) Phenanthrene-D10(IS)	9.67	188	23108	2.50000 ppb	0.01
15) Chrysene-D12(IS)	12.83	240	26998	2.50000 ppb	0.02
21) Perylene-D12(IS)	15.36	264	22213	2.50000 ppb	0.03
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.05	82	12268	3.36336 ppb	0.00
Spiked Amount 5.000			Recovery	= 67.260%	
7) Surrogate Recovery (FBP)	7.13	172	20902	2.80454 ppb	0.00
Spiked Amount 5.000			Recovery	= 56.100%	
17) Surrogate Recovery (TPH)	11.52	244	36152	4.31597 ppb	-0.01
Spiked Amount 5.000			Recovery	= 86.320%	

Target Compounds Qvalue

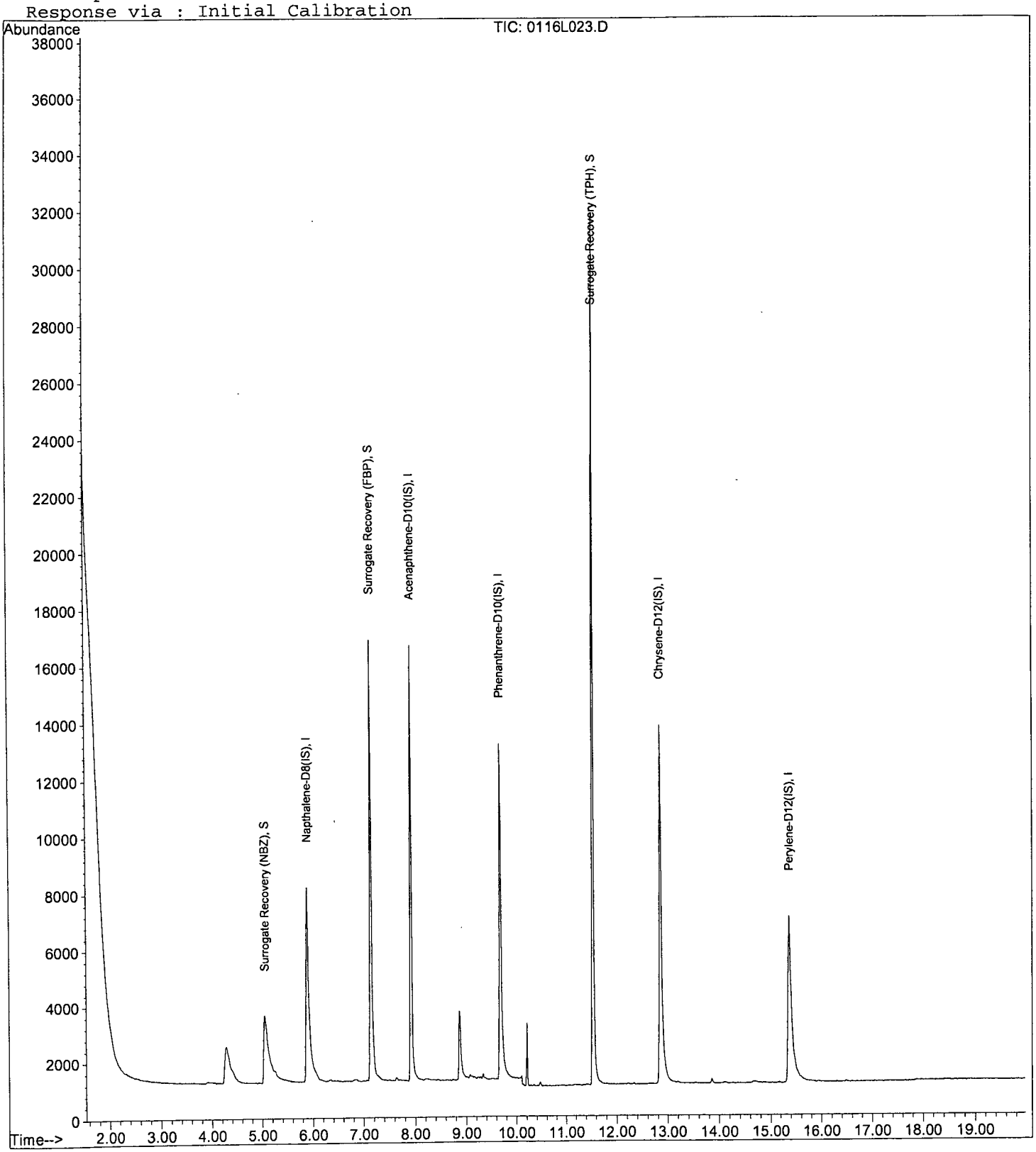
(#) = qualifier out of range (m) = manual integration
0116L023.D L0116PR.M Thu Jan 19 12:38:46 2017 Page 1

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L023.D Vial: 23
Acq On : 18 Jan 17 12:54 Operator: MA
Sample : 170116A BLK 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 19 12:38 2017 Quant Results File: L0116PR.RES

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



Laboratory Control Spike Recovery
EPA 8270D SIM

APPL ID: **170116W-48866 LCS - 215630**
Batch ID: #SIMDO-170116A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1-METHYLNAPHTHALENE	5.00	2.77	55.4	41-115
2-METHYLNAPHTHALENE	5.00	2.04	40.8	39-114
NAPHTHALENE	5.00	2.86	57.2	43-114
SURROGATE: 2-FLUORBIPHENYL (S)	5.00	3.85	77.0	53-106
SURROGATE: NITROBENZENE-D5 (S)	5.00	4.35	87.0	55-111
SURROGATE: TERPHENYL-D14 (S)	5.00	5.52	110	58-132

Comments: _____

Primary	SPK
Quant Method :	L0116PR.M
Extraction Date :	01/16/17
Analysis Date :	01/19/17
Instrument :	Linus
Run :	0116L059
Initials :	RHA

Printed: 01/19/17 4:47:11 PM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L059.D Vial: 59
Acq On : 19 Jan 17 15:28 Operator: MA
Sample : 170116A LCS-1 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 19 16:01 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	19126	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.91	164	9610	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.67	188	18883	2.50000	ppb		0.01
15) Chrysene-D12(IS)	12.81	240	23088	2.50000	ppb		0.00
21) Perylene-D12(IS)	15.34	264	19125	2.50000	ppb		0.00
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.05	82	13357	4.34806	ppb		0.00
Spiked Amount 5.000			Recovery	= 86.960%			
7) Surrogate Recovery (FBP)	7.13	172	23254	3.85031	ppb		0.00
Spiked Amount 5.000			Recovery	= 77.000%			
17) Surrogate Recovery (TPH)	11.52	244	39531	5.51860	ppb		-0.01
Spiked Amount 5.000			Recovery	= 110.380%			
Target Compounds							Qvalue
3) Naphthalene	5.89	128	22357	2.85849	ppb		99
4) 2-Methylnaphthalene	6.71	142	12090	2.04431	ppb		99
5) 1-Methylnaphthalene	6.82	142	14541	2.77114	ppb		98
8) Acenaphthylene	7.75	152	29150	3.66489	ppb		98
9) Acenaphthene	7.95	154	16047	3.27175	ppb		98
10) Fluorene	8.57	166	24233	4.55229	ppb		99
12) Phenanthrene	9.69	178	42338	5.37200	ppb		100
13) Anthracene	9.76	178	41865	5.64419	ppb		99
14) Fluoranthene	11.09	202	76470	6.02569	ppb		98
16) Pyrene	11.35	202	78474	5.99338	ppb		96
18) Benz (a) anthracene	12.80	228	64059	5.46443	ppb		97
19) Chrysene	12.85	228	70038	5.94098	ppb		97
20) Indeno (1,2,3-cd) pyrene	17.61	276	54261	5.18820	ppb	#	87
22) Benzo (b) fluoranthene	14.55	252	54736	5.25816	ppb		99
23) Benzo (k) fluoranthene	14.60	252	48804	4.80924	ppb		98
24) Benzo (a) pyrene	15.22	252	52741	5.42468	ppb		99
25) Dibenz (a,h) anthracene	17.64	278	46108	5.72813	ppb		96
26) Benzo (g,h,i) perylene	18.14	276	45499	5.64452	ppb		98

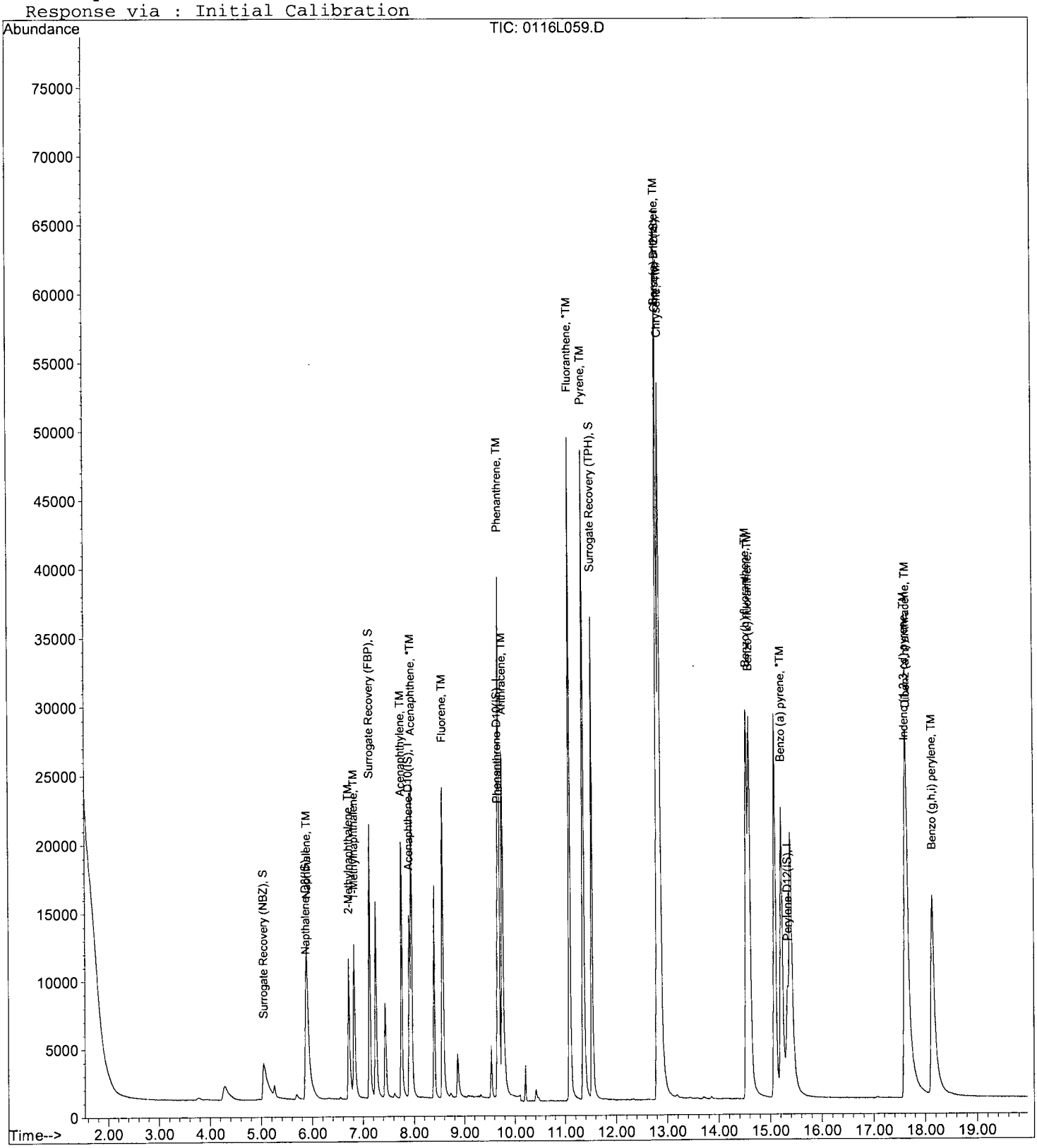
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L059.D Vial: 59
Acq On : 19 Jan 17 15:28 Operator: MA
Sample : 170116A LCS-1 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 19 16:01 2017 Quant Results File: L0116PR.RES

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



Matrix Spike Recoveries

EPA 8270D SIM

APPL ID: **170116W-48866 MS - 215630**
Batch ID: #SIMDO-170116A
Sample ID: AZ48866
Client ID: ERH161

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
1-METHYLNAPHTHALENE	5.00	ND	2.70	2.96	54.0	59.2	41-115	9.2	20
2-METHYLNAPHTHALENE	5.00	ND	1.97	2.33	39.4	46.6	39-114	16.7	20
NAPHTHALENE	5.00	ND	2.70	2.79	54.0	55.8	43-114	3.3	20
SURROGATE: 2-FLUORBIPHENYL (S)	5.00	NA	3.31	2.77	66.2	55.4	53-106		
SURROGATE: NITROBENZENE-D5 (S)	5.00	NA	3.66	3.15	73.2	63.0	55-111		
SURROGATE: TERPHENYL-D14 (S)	5.00	NA	4.70	4.12	94.0	82.4	58-132		

Comments: _____

Primary	SPK	DUP
Quant Method :	L0116PR.M	L0116PR.M
Extraction Date :	01/16/17	01/16/17
Analysis Date :	01/19/17	01/19/17
Instrument :	Linus	Linus
Run :	0116L060	0116L048
Initials :	RHA	

Printed: 01/19/17 4:47:08 PM
APPL MSD SCII

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L060.D Vial: 60
Acq On : 19 Jan 17 16:16 Operator: MA
Sample : AZ48866W33 MS-1 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Jan 19 16:37 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	17102	2.50000 ppb	0.01
6) Acenaphthene-D10(IS)	7.91	164	8826	2.50000 ppb	0.00
11) Phenanthrene-D10(IS)	9.67	188	17036	2.50000 ppb	0.01
15) Chrysene-D12(IS)	12.82	240	20849	2.50000 ppb	0.00
21) Perylene-D12(IS)	15.34	264	17430	2.50000 ppb	0.00
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.05	82	10712	3.66305 ppb	0.00
Spiked Amount 4.673			Recovery	= 78.388%	
7) Surrogate Recovery (FBP)	7.13	172	19636	3.30846 ppb	0.00
Spiked Amount 4.673			Recovery	= 70.791%	
17) Surrogate Recovery (TPH)	11.53	244	32535	4.70066 ppb	0.00
Spiked Amount 4.673			Recovery	= 100.601%	
Target Compounds					Qvalue
3) Naphthalene	5.90	128	20180	2.69673 ppb	99
4) 2-Methylnaphthalene	6.71	142	11048	1.96620 ppb	97
5) 1-Methylnaphthalene	6.82	142	13558	2.70055 ppb	97
8) Acenaphthylene	7.76	152	28108	3.59607 ppb	97
9) Acenaphthene	7.95	154	14974	3.10670 ppb	98
10) Fluorene	8.57	166	21930	4.19215 ppb	98
12) Phenanthrene	9.69	178	35629	4.68305 ppb	100
13) Anthracene	9.76	178	35353	4.93737 ppb	99
14) Fluoranthene	11.09	202	63005	5.14292 ppb	99
16) Pyrene	11.36	202	64827	5.12411 ppb	100
18) Benz (a) anthracene	12.80	228	49931	4.39754 ppb	98
19) Chrysene	12.85	228	59997	5.21196 ppb	97
20) Indeno (1,2,3-cd) pyrene	17.61	276	43597	4.28349 ppb #	87
22) Benzo (b) fluoranthene	14.55	252	42594	4.17301 ppb	99
23) Benzo (k) fluoranthene	14.60	252	38949	3.93584 ppb	98
24) Benzo (a) pyrene	15.22	252	44352	4.63589 ppb	98
25) Dibenz (a,h) anthracene	17.64	278	37280	4.69793 ppb	96
26) Benzo (g,h,i) perylene	18.14	276	37591	4.71848 ppb	97

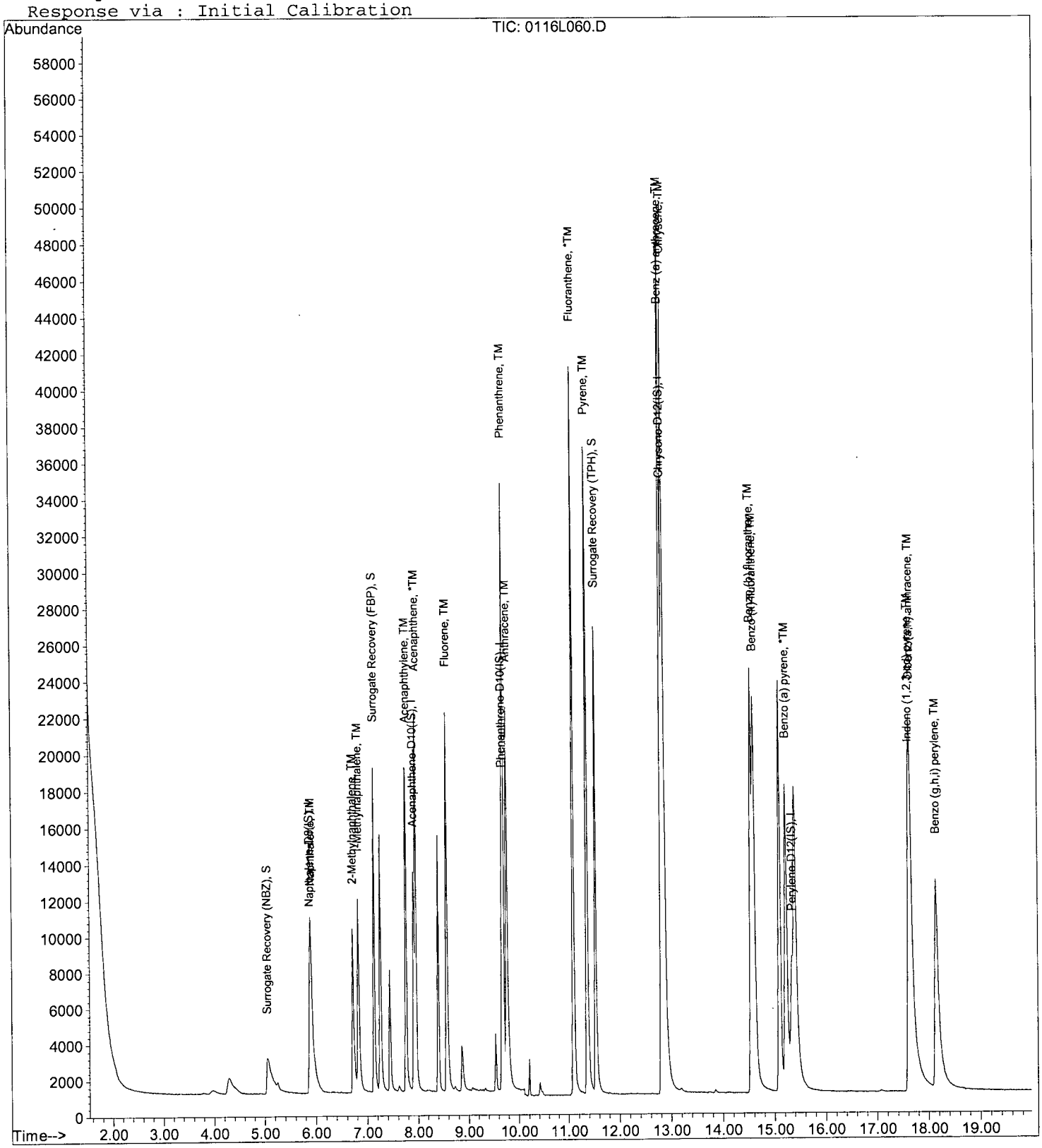
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L060.D Vial: 60
Acq On : 19 Jan 17 16:16 Operator: MA
Sample : AZ48866W33 MS-1 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Jan 19 16:37 2017 Quant Results File: L0116PR.RES

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L048.D Vial: 48
Acq On : 19 Jan 17 10:03 Operator: MA
Sample : AZ48866W18 MSD-1 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Jan 19 11:52 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	18695	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.91	164	9455	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.66	188	18615	2.50000	ppb		0.00
15) Chrysene-D12(IS)	12.81	240	22416	2.50000	ppb		0.00
21) Perylene-D12(IS)	15.33	264	18642	2.50000	ppb		0.00
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.06	82	9978	3.14777	ppb		0.01
Spiked Amount 4.673			Recovery = 67.367%				
7) Surrogate Recovery (FBP)	7.13	172	17630	2.77286	ppb		0.00
Spiked Amount 4.673			Recovery = 59.342%				
17) Surrogate Recovery (TPH)	11.52	244	30632	4.11634	ppb		-0.01
Spiked Amount 4.673			Recovery = 88.082%				
Target Compounds							Qvalue
3) Naphthalene	5.89	128	22859	2.79444	ppb		100
4) 2-Methylnaphthalene	6.71	142	13777	2.33059	ppb		99
5) 1-Methylnaphthalene	6.82	142	16227	2.95676	ppb		97
8) Acenaphthylene	7.75	152	29415	3.51293	ppb		98
9) Acenaphthene	7.94	154	16508	3.19711	ppb		97
10) Fluorene	8.56	166	22090	3.94182	ppb		97
12) Phenanthrene	9.69	178	35727	4.29760	ppb		99
13) Anthracene	9.75	178	33442	4.27432	ppb		98
14) Fluoranthene	11.09	202	59958	4.47906	ppb		96
16) Pyrene	11.35	202	63091	4.63829	ppb		98
18) Benz (a) anthracene	12.80	228	45537	3.71847	ppb		97
19) Chrysene	12.85	228	60832	4.85395	ppb		97
20) Indeno (1,2,3-cd) pyrene	17.61	276	42196	3.82821	ppb	#	90
22) Benzo (b) fluoranthene	14.54	252	45844	4.20040	ppb		100
23) Benzo (k) fluoranthene	14.59	252	33961	3.20868	ppb		97
24) Benzo (a) pyrene	15.21	252	43296	4.18375	ppb		98
25) Dibenz (a,h) anthracene	17.64	278	36492	4.26103	ppb		98
26) Benzo (g,h,i) perylene	18.14	276	36223	4.18362	ppb		99

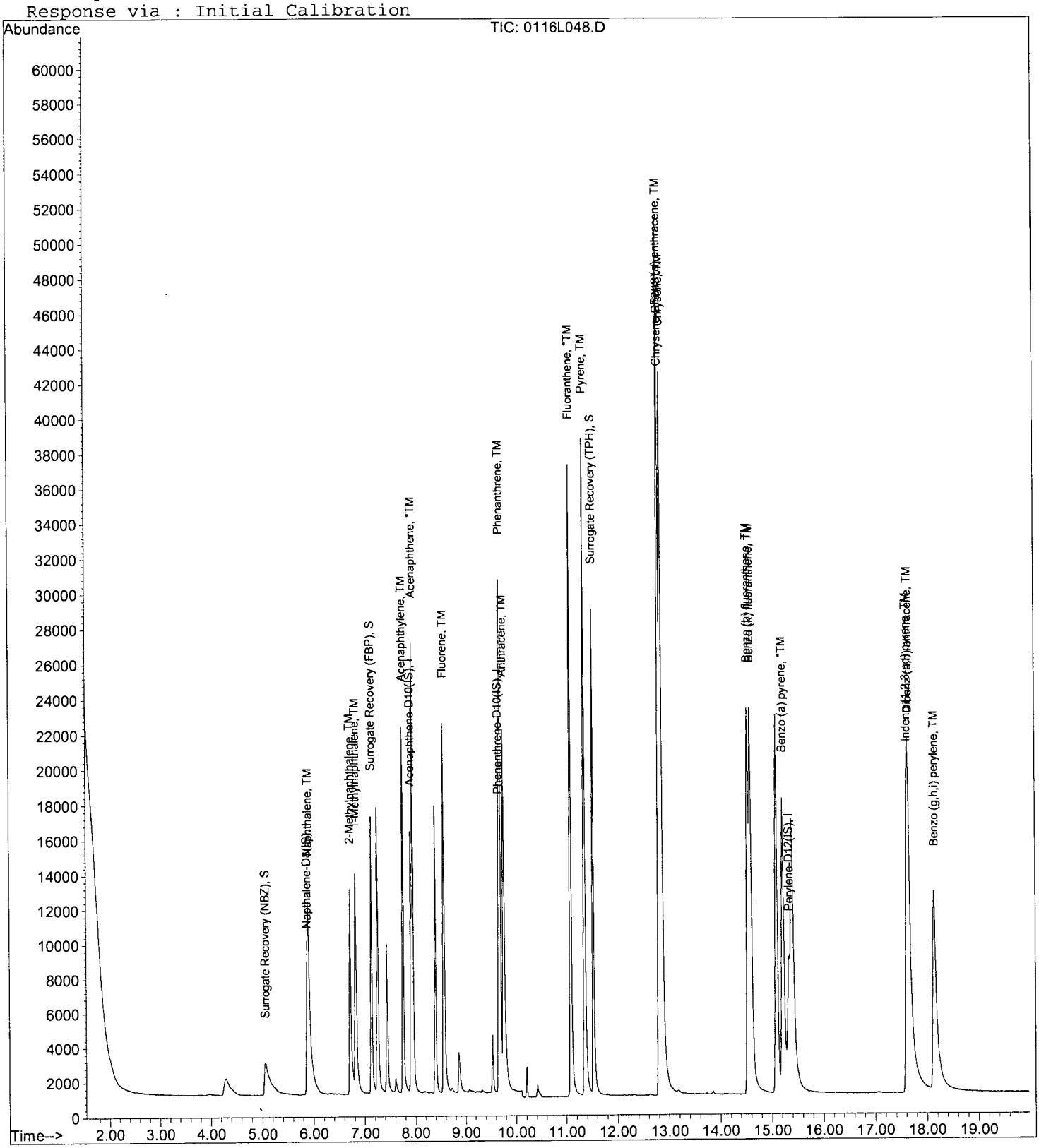
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L048.D Vial: 48
Acq On : 19 Jan 17 10:03 Operator: MA
Sample : AZ48866W18 MSD-1 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Jan 19 11:52 2017 Quant Results File: L0116PR.RES

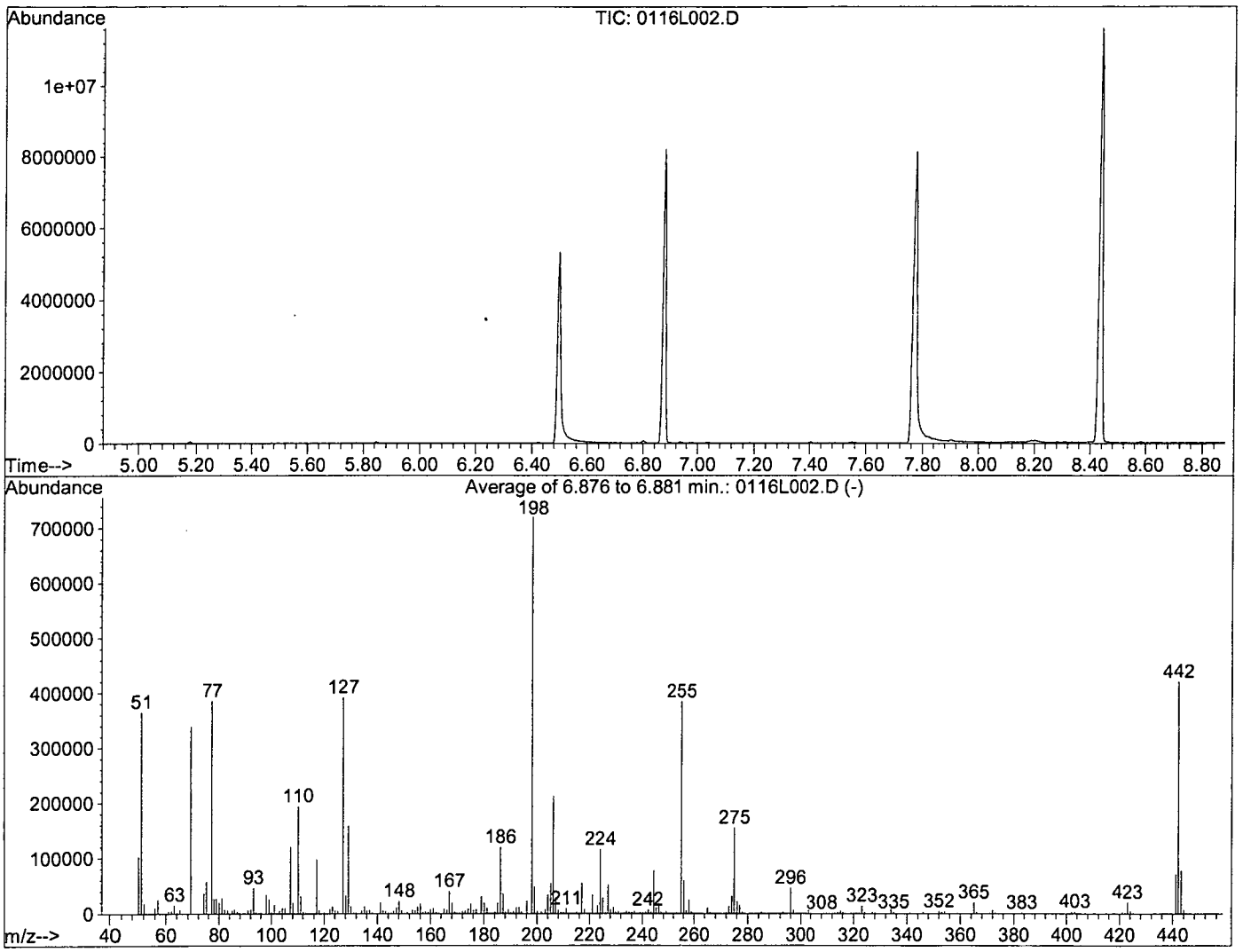
Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



DFTPP

Data File : M:\LINUS\DATA\L170116\0116L002.D Vial: 2
Acq On : 16 Jan 17 17:36 Operator: MA
Sample : SV Tune 11/15/16 Inst : Linus
Misc : water Multiplr: 1.00

Method : M:\LINUS\DATA\L161026\DFTPP2.M (Chemstation Integrator)
Title :



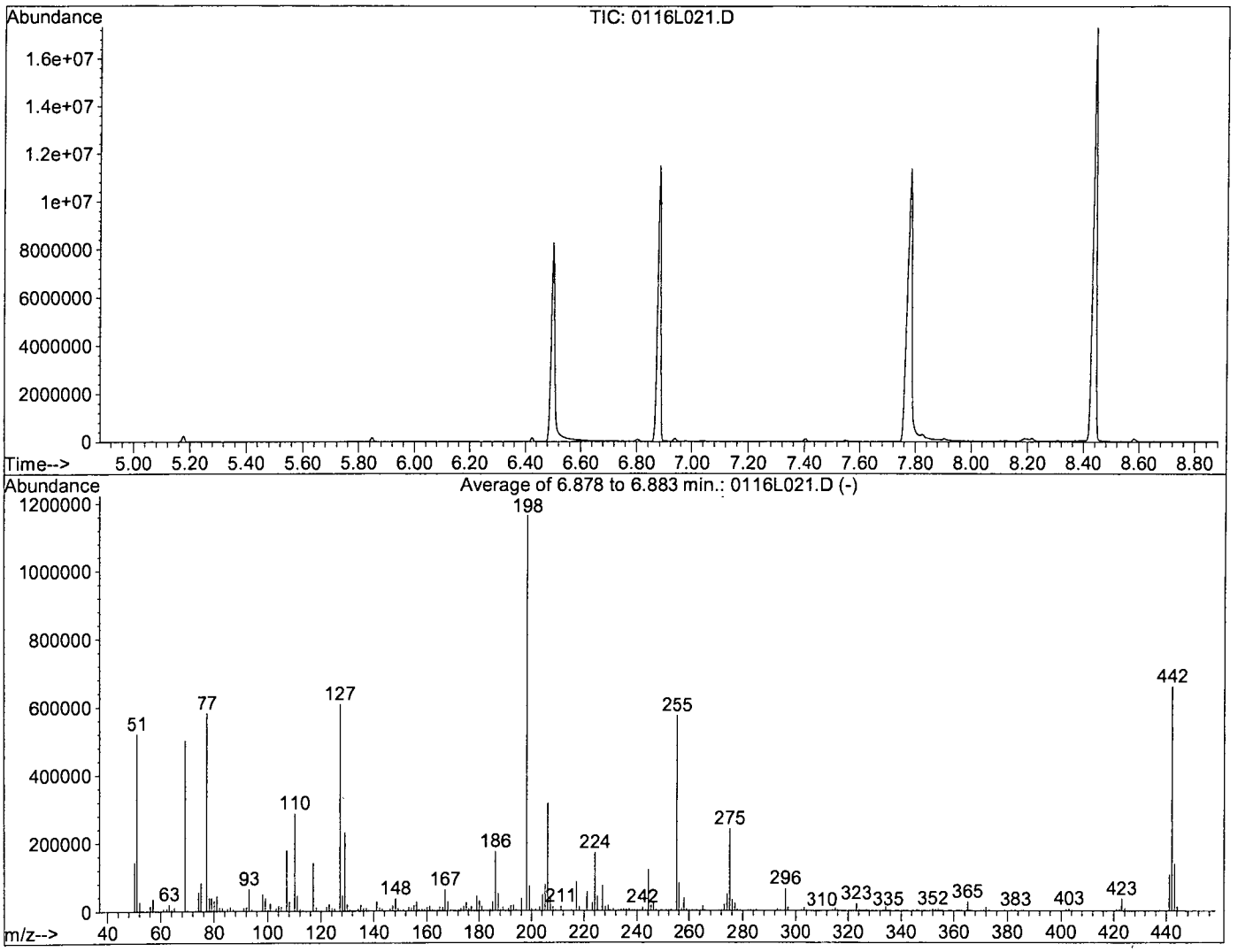
Spectrum Information: Average of 6.876 to 6.881 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	50.8	365889	PASS
68	69	0.00	2	0.0	0	PASS
69	69	100	100	100.0	339490	PASS
70	69	0.00	2	0.3	1019	PASS
127	198	40	60	54.5	392491	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	720555	PASS
199	198	5	9	6.7	48024	PASS
275	198	10	30	21.5	154683	PASS
365	198	1	100	2.7	19688	PASS
441	443	0.01	100	91.6	70885	PASS
442	198	40	150	58.4	420715	PASS
443	442	17	23	18.4	77376	PASS

0116L002.D DFTPP2.M Tue Jan 17 15:18:57 2017

Data File : M:\LINUS\DATA\L170116\0116L021.D Vial: 9
Acq On : 18 Jan 17 11:58 Operator: MA
Sample : SV Tune 12/15/16 Inst : Linus
Misc : water Multiplr: 1.00

Method : M:\LINUS\DATA\L161026\DFTPP2.M (Chemstation Integrator)
Title :

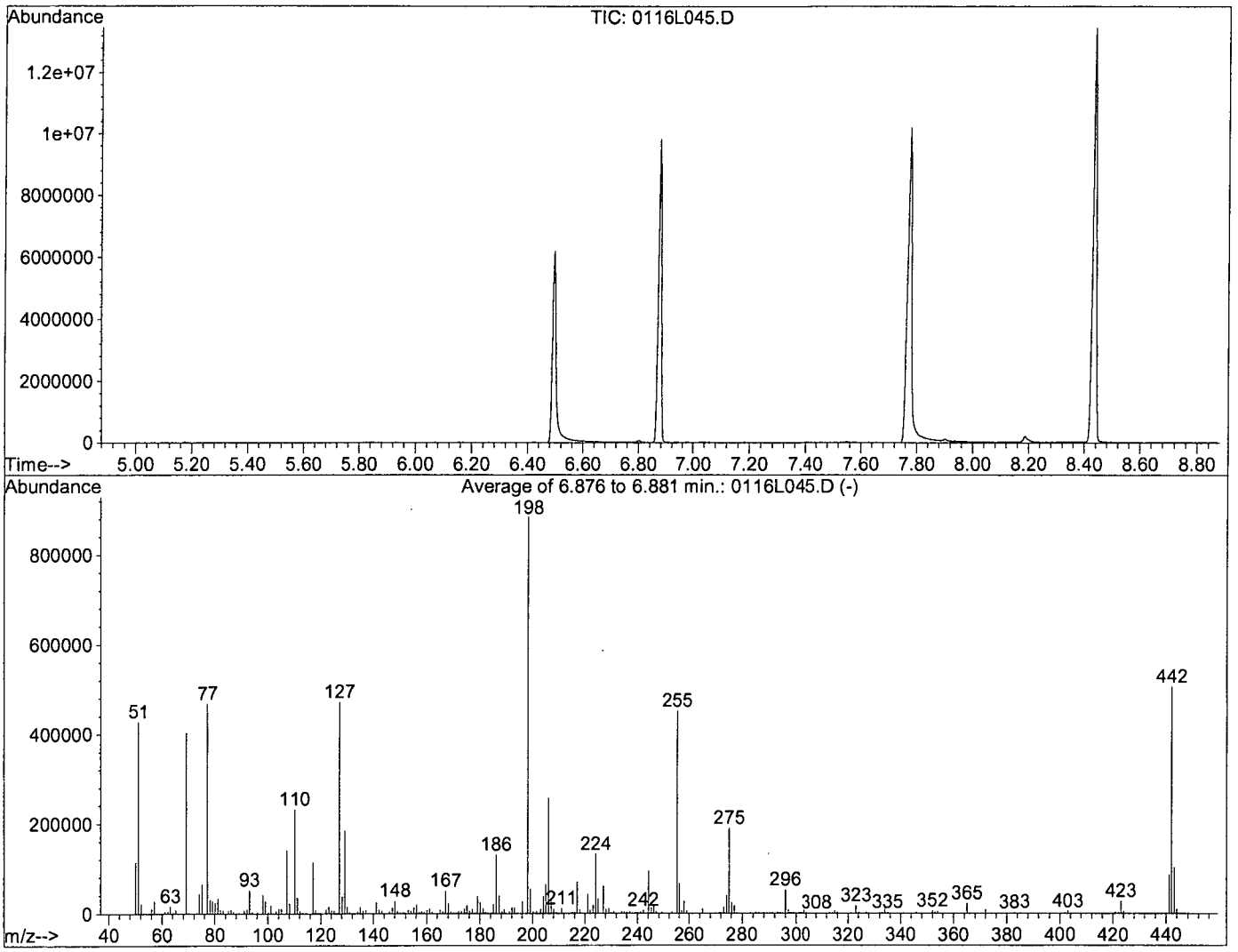


Spectrum Information: Average of 6.878 to 6.883 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	44.7	520804	PASS
68	69	0.00	2	0.0	0	PASS
69	69	100	100	100.0	501355	PASS
70	69	0.00	2	0.6	3186	PASS
127	198	40	60	52.2	608196	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	1165077	PASS
199	198	5	9	6.3	72971	PASS
275	198	10	30	20.6	240192	PASS
365	198	1	100	2.2	25589	PASS
441	443	0.01	100	77.7	106920	PASS
442	198	40	150	56.6	659563	PASS
443	442	17	23	20.9	137589	PASS

Data File : M:\LINUS\DATA\L170116\0116L045.D Vial: 45
Acq On : 19 Jan 17 8:47 Operator: MA
Sample : SV Tune 12/15/16 Inst : Linus
Misc : water Multiplr: 1.00

Method : M:\LINUS\DATA\L161026\DFTPP2.M (Chemstation Integrator)
Title :



Spectrum Information: Average of 6.876 to 6.881 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	48.3	427727	PASS
68	69	0.00	2	0.0	0	PASS
69	69	100	100	100.0	404373	PASS
70	69	0.00	2	0.5	2140	PASS
127	198	40	60	53.2	471829	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	886165	PASS
199	198	5	9	6.2	54979	PASS
275	198	10	30	21.4	189371	PASS
365	198	1	100	2.4	21640	PASS
441	443	0.01	100	83.5	85152	PASS
442	198	40	150	57.0	504704	PASS
443	442	17	23	20.2	101987	PASS

8270 PAH SIM Standard Curve

PREP DATE:	01/13/17 RH										
8270 PAH SIM STANDARD CURVE											
Exp.DATE:	**04/13/17**					**0.1**	**0.2**	**0.5**	**1**	**5**	**10**
		Conc.		Date							
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL	µL	µL	µL
O2si	8270 PAH SIM Stock	200	278353-36992	9/12/16	9/12/17	0	0	0	0	5	5
	5.0ug/mL	5		9/12/16	7/29/17	0	0	10	20	0	0
	1.0ug/mL	1		9/12/16	7/29/17	10	20	0	0	0	0
O2SI	BNA SURR.	100/200		1/12/17	3/08/17	0	0	0	0	5	5
EM Science	Methylene Chloride		56061			90	80	90	80	190	90
Supelco	SV Internal Standard	2000	XA14020V-36768	10/10/16	10/10/17	2	2	2	2	4	2
				Final Vol.		102	102	102	102	204	102

50	**100**
µL	µL
25	50
0	0
0	0
25	50
50	0
2	2
102	102

8270 PAH SIM 2ND SRC

8270 PAH SIM 2ND SRC			Prep: 09/06/16 Exp 01/12/17 RH		
Supplier	**Standard**	**Conc.**	**Prep**	**Exp**	**µL**
O2SI	8270 2ND SRC	VARIOUS	06/03/16	01/21/17	25
	Methylene Chloride				75
o2si	8V Internal Standar	2000	10/10/16	10/10/17	2
LOT#	XA10079V-35507			Final Vol.	102

8270 SIM PAH Internal Standard						
PREP DATE:	10/10/16 RH.					
8270 SIM PAH Internal Standard Mix 125ug/ml						
Exp.DATE:	10/10/17					
		Conc.		Date	Exp.	125
Supplier	ID #	µg/mL	Lot #	Code	Date	µL
Supelco	SV Internal	2000	XA14020V-36768	10/10/16	10/10/17	350
EM Science	Methylene Chloride		56061			5250
				Final Vol.		5600

Semivolatile (SV) Tuning Solution -G.A.						
PREP DATE:	11/15/16	RH				
Semivolatile (SV) Tune Solution 50ug/ml						
Exp:	8/26/17					
		Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
Ultra Scient	Semivolatile GC	1000	N081628-37012	08/23/16	8/23/17	200
EM Science	Methylene Chloride		55098			3800
				Final Vol.		4000

SIM SPIKE	
CAT:	110780-01
Lot:	291544-37
OP: 12/22/16 -R.H.	
EX: 12/22/17	

PAH SIM STD prep: 09/12/16-R.H.						
Exp:	9/12/17					
		Conc.				
Supplier	ID #	mg/L	Lot #	Open Date	Exp.Date	µL
o2si	110780-01	200	278353-36992	6/22/16	6/22/17	1000
				Fin Vol.		1000

8270 Surrog Mix 100/200ppm						
Prep: 12/08/16 -RH Ex: 3/08/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
8270 Acid Surrog Mix	10000 ug/ml	Restek Cat# 33029 Lot# A0118884-36875 Op: 11/15/16 EX: 11/15/17	2.0 mL	100 mL	200 ug/mL	MC
8270 B/N surrog Mix	5000 µg/mL	Restek Cat# 31086 Lot# A0119223-36871 Op: 11/15/16 EX: 11/15/17	2.0 mL	100 mL	100 ug/mL	MC

8270 PAH SIM CCV (2)

PREP DATE:	01/13/17 RH					
8270 PAH SIM STANDARD CURVE						
Exp.DATE:	**4/13/17**					**5**
		Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
O2si	8270 PAH SIM Stock	200	278353-36992	9/12/16	9/12/17	5
	5.0ug/mL	5		9/12/16	7/29/17	0
	1.0ug/mL	1		9/12/16	7/29/17	0
O2SI	BNA SURR.	100/200		1/12/17	3/8/17	5
EM Science	Methylene Chloride		56061			190
Supelco	SV Internal Standard	2000	XA14020V-36768	10/10/16	10/10/17	4
				Final Vol.		204

Organic Extraction Worksheet

Method	SIM Separatory Funnel Extra 3510C	Extraction Set	170116A	Extraction Method	SEP004S	Units	mL

Spiked ID 1	PAH SIM Spike 12-22-16 exp 12-22-17		Surrogate ID 1	8270 Surrogate 1-12-17 exp 7-12-17	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	01/16/17 15:25	
Spiked ID 8			Ext. End Time:	01/17/17 16:45	
			GC Requires Extract By:	01/19/17 0:00	

pH1	2	01/16/17 3:40:00 PM	Water Bath Temp Criteria	75,75,76 °
pH2	14	01/16/17 5:30:00 PM		
pH3				

Spiked By: KY **Date** 01/16/17 **Witnessed By:** CFM **Date** 01/16/17

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	170116A Blk				0.050	1 equip	1000 e-wb6	1	2/1	01/16/17 15:25	
2	170116A LCS-1		0.0250	1	0.050	1 equip	1000 E-WB5	1	2/1	01/16/17 15:25	
3	AZ48866 MS-1	AZ48866W33	0.0250	1	0.050	1 equip	1070 E-WB5	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
4	AZ48866 MSD-1	AZ48866W18	0.0250	1	0.050	1 equip	1070 E-WB5	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
5	AZ48866	AZ48866W17			0.050	1 equip	1070 E-WB5	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
6	AZ48867	AZ48867W09			0.050	1 equip	1070 E-WB5	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
7	AZ48868	AZ48868W14			0.050	1 equip	1070 E-WB5	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
8	AZ48871	AZ48871W09			0.050	1 equip	1070 E-WB5	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
9	AZ48872	AZ48872W29			0.050	1 equip	1070 E-WB5	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
10	AZ48873	AZ48873W10			0.050	1 equip	1070 E-WB7	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
11	AZ48875	AZ48875W13			0.050	1 equip	1070 E-WB7	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
12	AZ48877	AZ48877W12			0.050	1 equip	1070 E-WB7	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
13	AZ48878	AZ48878W12			0.050	1 equip	1070 E-WB7	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
14	AZ48880	AZ48880W08			0.050	1 equip	1070 E-WB7	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
15	AZ48881	AZ48881W09			0.050	1 equip	1070 E-WB7	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
16	AZ48915	AZ48915W10			0.050	1 equip	1070 E-WB7	1	2/1	01/16/17 15:25	81971 Rush 1 week

Solvent and Lot#	
1+1 SULFURIC ACID	12-5-16
PH STRIP	HC 574756
MC	56153
A. Na2SO4	1-3-17
10N NaOH	12-19-16
B. Na2SO4	16C255214
FILTER PAPER	400112

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	HA
Date	1/18/17
Time	10:00
Refrigerator	6C-C

	Technician's Initials
Scanned By	KY
Sample Preparation	KY,DL,JR
Extraction	KY,DL,JR
Concentration	KY

Modified	01/18/17 8:49:09 AM

Reviewed By: [signature] **Date** 1/18/17

Organic Extraction Worksheet

Method	SIM Separatory Funnel Extra 3510C	Extraction Set	170116A	Extraction Method	SEP004S	Units	mL

Spiked ID 1	PAH SIM Spike 12-22-16 exp 12-22-17		Surrogate ID 1	8270 Surrogate 1-12-17 exp 7-12-17	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	01/16/17 15:25	
Spiked ID 8			Ext. End Time:	01/17/17 16:45	
			GC Requires Extract By:	01/19/17 0:00	

pH1	2	01/16/17 3:40:00 PM	Water Bath Temp Criteria	75,75,76 °
pH2	14	01/16/17 5:30:00 PM		
pH3				

Spiked By: KY **Date** 01/16/17 **Witnessed By:** CFM **Date** 01/16/17

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
17	AZ48916	AZ48916W12			0.050	1	1070	1	2/1	01/16/17 15:25	81971 Rush 1 week
						equip	E-WB7				
18	AZ48921	AZ48921W09			0.050	1	1070	1	2/1	01/16/17 15:25	81971 Rush 1 week
						equip	E-WB7				
19	AZ48925	AZ48925W11			0.050	1	1070	1	2/1	01/16/17 15:25	81971 Rush 1 week
						equip	E-WB7				

jkr 1/18/17

Solvent and Lot#	
1+1 SULFURIC ACID	12-5-16
PH STRIP	HC 574756
MC	56153
A. Na2SO4	1-3-17
10N NaOH	12-19-16
B. Na2SO4	16C255214
FILTER PAPER	400112

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	
Date	
Time	
Refrigerator	

	Technician's Initials
Scanned By	KY
Sample Preparation	KY,DL,JR
Extraction	KY,DL,JR
Concentration	KY

Modified	01/18/17 8:49:09 AM

Reviewed By: Ky **Date** 1/18/17

Injection Log

Directory: M:\LINUS\DATA\L170116\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	0116L002.D	1	SV Tune 11/15/16	water	16 Jan 17 17:36
2	3	0116L003.D	1	0.1 SIM 1/13/17	water	16 Jan 17 17:54
3	4	0116L004.D	1	0.2 SIM 1/13/17	water	16 Jan 17 18:22
4	5	0116L005.D	1	0.5 SIM 1/13/17	water	16 Jan 17 18:50
5	6	0116L006.D	1	1.0 SIM 1/13/17	water	16 Jan 17 19:17
6	7	0116L007.D	1	5.0 SIM 1/13/17	water	16 Jan 17 19:45
7	8	0116L008.D	1	10 SIM 1/13/17	water	16 Jan 17 20:13
8	9	0116L009.D	1	50 SIM 1/13/17	water	16 Jan 17 20:41
9	10	0116L010.D	1	100 SIM 1/13/17	water	16 Jan 17 21:09
10	11	0116L011.D	1	SS SIM 1/13/17	water	16 Jan 17 21:37
11	9	0116L021.D	1	SV Tune 12/15/16	water	18 Jan 17 11:58
12	10	0116L022.D	1	5.0 SIM 1/13/17	water	18 Jan 17 12:15
13	23	0116L023.D	1	170116A BLK 1/1000	water	18 Jan 17 12:54
14	32	0116L032.D	0.93458	AZ48873W10 1/1070	water	18 Jan 17 17:06
15	33	0116L033.D	0.93458	AZ48875W13 1/1070	water	18 Jan 17 17:34
16	34	0116L034.D	0.93458	AZ48877W12 1/1070	water	18 Jan 17 18:02
17	35	0116L035.D	0.93458	AZ48878W12 1/1070	water	18 Jan 17 18:29
18	36	0116L036.D	0.93458	AZ48880W08 1/1070	water	18 Jan 17 18:57
19	37	0116L037.D	0.93458	AZ48881W09 1/1070	water	18 Jan 17 19:25
20	43	0116L043.D	1	SIM 5 1/13/17	water	18 Jan 17 22:01
21	45	0116L045.D	1	SV Tune 12/15/16	water	19 Jan 17 8:47
22	46	0116L046.D	1	SIM 5 1/13/17	water	19 Jan 17 9:07
23	48	0116L048.D	0.934579	AZ48866W18 MSD-1 1/1070	water	19 Jan 17 10:03
24	49	0116L049.D	0.934579	AZ48866W17 1/1070	water	19 Jan 17 10:31
25	50	0116L050.D	0.934579	AZ48867W09 1/1070	water	19 Jan 17 10:58
26	51	0116L051.D	0.934579	AZ48868W14 1/1070	water	19 Jan 17 11:25
27	53	0116L053.D	0.934579	AZ48872W29 1/1070	water	19 Jan 17 12:21
28	55	0116L055.D	1	AZ48871W09 1/1070	water	19 Jan 17 13:17
29	59	0116L059.D	1	170116A LCS-1 1/1000	water	19 Jan 17 15:28
30	60	0116L060.D	0.934579	AZ48866W33 MS-1 1/1070	water	19 Jan 17 16:16
31	61	0116L061.D	1	SIM 5 1/13/17	water	19 Jan 17 16:44

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank
EPA 8270D WATER

Blank Name/QCG: **170116W-48866 - 215607**
Batch ID: #87DC5-170116A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/16/17	01/18/17
BLANK	SURROGATE: 2,4,6-TRIBROMOP	55.9	43-140			%	01/16/17	01/18/17
BLANK	SURROGATE: 2-FLUORBIPHENY	54.2	44-119			%	01/16/17	01/18/17
BLANK	SURROGATE: 2-FLUOROPHENO	28.0	19-119			%	01/16/17	01/18/17
BLANK	SURROGATE: NITROBENZENE-	60.1	44-120			%	01/16/17	01/18/17
BLANK	SURROGATE: PHENOL-D6 (S)	15.9	10-115			%	01/16/17	01/18/17
BLANK	SURROGATE: TERPHENYL-D14 (	63.0	50-134			%	01/16/17	01/18/17

Quant Method: Y1207.M
Run #: 1207Y323
Instrument: Yoda
Sequence: Y161207
Initials: MA

GC SC-Blank-REG MDLs-DOD
Printed: 01/19/17 9:03:14 AM

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81965

Case No: 81965 Date Analyzed: 01/18/17

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2,4,6-TRIBROMOPHENOL (S)			SURROGATE: 2-FLUORBIPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
170116A-BLK	Blank	43-140	55.9		44-119	54.2	
170116A-LCS	Lab Control Spike	43-140	67.0		44-119	65.9	
AZ48866-MS	Matrix Spike	43-140	61.1		44-119	60.0	
AZ48866	ERH161	43-140	57.8		44-119	57.7	
AZ48867	ERH162	43-140	62.4		44-119	64.9	
AZ48868	ERH164	43-140	56.2		44-119	57.0	
AZ48871	ERH168	43-140	56.4		44-119	55.4	
AZ48872	ERH169	43-140	51.4		44-119	53.8	
AZ48873	ERH170	43-140	58.7		44-119	59.2	
AZ48875	ERH174	43-140	71.5		44-119	67.6	
AZ48877	ERH176	43-140	54.6		44-119	55.0	
AZ48878	ERH179	43-140	49.6		44-119	51.4	
AZ48880	ERH186	43-140	55.5		44-119	56.6	
AZ48881	ERH187	43-140	57.4		44-119	60.8	
AZ48866-MSD	Matrix SpikeD	43-140	49.3		44-119	46.1	

Comments: Batch: #87DC5-170116A

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81965

Case No: 81965 Date Analyzed: 01/18/17

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2-FLUOROPHENOL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
170116A-BLK	Blank	19-119	28.0		44-120	60.1	
170116A-LCS	Lab Control Spike	19-119	35.8		44-120	71.3	
AZ48866-MS	Matrix Spike	19-119	34.0		44-120	63.7	
AZ48866	ERH161	19-119	31.2		44-120	61.8	
AZ48867	ERH162	19-119	32.6		44-120	71.9	
AZ48868	ERH164	19-119	33.5		44-120	60.0	
AZ48871	ERH168	19-119	30.3		44-120	63.1	
AZ48872	ERH169	19-119	26.6		44-120	58.9	
AZ48873	ERH170	19-119	29.2		44-120	60.7	
AZ48875	ERH174	19-119	34.6		44-120	73.3	
AZ48877	ERH176	19-119	27.1		44-120	56.9	
AZ48878	ERH179	19-119	24.9		44-120	53.4	
AZ48880	ERH186	19-119	28.3		44-120	61.6	
AZ48881	ERH187	19-119	27.3		44-120	62.7	
AZ48866-MSD	Matrix SpikeD	19-119	23.4		44-120	46.1	

Comments: Batch: #87DC5-170116A

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81965

Case No: 81965 Date Analyzed: 01/18/17

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: PHENOL-D6 (S)			SURROGATE: TERPHENYL-D14 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
170116A-BLK	Blank	10-115	15.9		50-134	63.0	
170116A-LCS	Lab Control Spike	10-115	21.9		50-134	69.5	
AZ48866-MS	Matrix Spike	10-115	19.5		50-134	63.3	
AZ48866	ERH161	10-115	19.1		50-134	58.7	
AZ48867	ERH162	10-115	19.2		50-134	67.9	
AZ48868	ERH164	10-115	19.1		50-134	59.2	
AZ48871	ERH168	10-115	17.2		50-134	61.8	
AZ48872	ERH169	10-115	15.4		50-134	53.7	
AZ48873	ERH170	10-115	17.0		50-134	60.9	
AZ48875	ERH174	10-115	21.1		50-134	68.8	
AZ48877	ERH176	10-115	16.5		50-134	58.4	
AZ48878	ERH179	10-115	15.5		50-134	53.7	
AZ48880	ERH186	10-115	16.9		50-134	59.1	
AZ48881	ERH187	10-115	16.0		50-134	60.1	
AZ48866-MSD	Matrix SpikeD	10-115	15.8		50-134	53.5	

Comments: Batch: #87DC5-170116A

Laboratory Control Spike Recovery
EPA 8270D WATER

APPL ID: **170116W-48866 LCS - 215607**
Batch ID: #87DC5-170116A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
PHENOL	50.0	13.8	27.6	10-115
SURROGATE: 2,4,6-TRIBROMOPHENOL	200	134	67.0	43-140
SURROGATE: 2-FLUORBIPHENYL (S)	100	65.9	65.9	44-119
SURROGATE: 2-FLUOROPHENOL (S)	200	71.5	35.8	19-119
SURROGATE: NITROBENZENE-D5 (S)	100	71.3	71.3	44-120
SURROGATE: PHENOL-D6 (S)	200	43.9	21.9	10-115
SURROGATE: TERPHENYL-D14 (S)	100	69.5	69.5	50-134

Comments: _____

Primary	SPK
Quant Method :	Y1207.M
Extraction Date :	01/16/17
Analysis Date :	01/18/17
Instrument :	Yoda
Run :	1207Y324
Initials :	MA

Printed: 01/19/17 9:03:17 AM
APPL Standard LCS

Matrix Spike Recoveries

EPA 8270D WATER

APPL ID: **170116W-48866 MS - 215607**
Batch ID: #87DC5-170116A
Sample ID: AZ48866
Client ID: ERH161

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
PHENOL	47.6	ND	11.7	12.3	24.6	25.8	10-115	5.0	20
SURROGATE: 2,4,6-TRIBROMOPHENOL	190	NA	116	93.6	61.1	49.3	43-140		
SURROGATE: 2-FLUORBIPHENYL (S)	95.2	NA	57.1	43.9	60.0	46.1	44-119		
SURROGATE: 2-FLUOROPHENOL (S)	190	NA	64.6	44.5	34.0	23.4	19-119		
SURROGATE: NITROBENZENE-D5 (S)	95.2	NA	60.6	43.9	63.7	46.1	44-120		
SURROGATE: PHENOL-D6 (S)	190	NA	37.0	30.1	19.5	15.8	10-115		
SURROGATE: TERPHENYL-D14 (S)	95.2	NA	60.3	50.9	63.3	53.5	50-134		

Comments: _____

Primary	SPK	DUP
Quant Method :	Y1207.M	Y1207.M
Extraction Date :	01/16/17	01/16/17
Analysis Date :	01/18/17	01/20/17
Instrument :	Yoda	Yoda
Run :	1207Y325	1207Y347
Initials :	MA	

Printed: 01/23/17 5:38:15 PM
APPL MSD SCII

EPA 8270D

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81965

Case No: 81965 Date Analyzed: 01/18/17

Matrix: WATER Instrument: Yoda

Blank ID: 170116A-BLK Time Analyzed: 1021

APPL ID.	Client Sample No.	File ID.	Date Analyzed
170116A-BLK	Blank	1207Y323	01/18/17 1021
170116A-LCS	Lab Control Spike	1207Y324	01/18/17 1051
170116A-MS	Matrix Spike	1207Y325	01/18/17 1121
AZ48866	ERH161	1207Y327	01/18/17 1221
AZ48867	ERH162	1207Y328	01/18/17 1251
AZ48868	ERH164	1207Y329	01/18/17 1321
AZ48871	ERH168	1207Y330	01/18/17 1351
AZ48872	ERH169	1207Y331	01/18/17 1422
AZ48873	ERH170	1207Y332	01/18/17 1452
AZ48875	ERH174	1207Y333	01/18/17 1522
AZ48877	ERH176	1207Y334	01/18/17 1552
AZ48878	ERH179	1207Y335	01/18/17 1622
AZ48880	ERH186	1207Y336	01/18/17 1652
AZ48881	ERH187	1207Y337	01/18/17 1722
170116A-MSD	Matrix SpikeD	1207Y347	01/20/17 0912

Comments: Batch: #87DC5-170116A

Printed: 01/23/17 5:24:46 PM

Form 4, Blank Summary

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81965 RH 1/24/17
Matrix: water
ID: SV Tune 10/19/16

SDG No: 81965 RH 1/24/17
Date Analyzed: 12/07/16
Instrument: Yoda
Time Analyzed: 9:00

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		5ug/ml SVOC 12/06/16	1207Y004.D	12/07/16 10:01
2		10ug/ml SVOC 12/06/1	1207Y005.D	12/07/16 10:32
3		20ug/ml SVOC 12/06/1	1207Y006.D	12/07/16 11:02
4		40ug/ml SVOC 12/06/1	1207Y007.D	12/07/16 11:32
5		50ug/ml SVOC 12/06/1	1207Y008.D	12/07/16 12:02
6		60ug/ml SVOC 12/06/1	1207Y009.D	12/07/16 12:32
7		80ug/ml SVOC 12/06/1	1207Y010.D	12/07/16 13:02
8		100ug/ml SVOC 12/06/	1207Y011.D	12/07/16 13:32
9		2ND SRC SVOC 12/06/1	1207Y012.D	12/07/16 14:01
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	46.7
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.7
127	40 - 60% of mass 198	56.0
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 197.95	100.0
199	5 - 9% of mass 198	6.9
275	10 - 30% of mass 198	24.0
365	1 - 100% of mass 198	3.1
441	0.01 - 100% of mass 443	86.4
442	50 - 150% of mass 197.95	90.6
443	17 - 23% of mass 442	20.1

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81965
Matrix: Water
ID: SV Tune 10/19/16

SDG No: 81965
Date Analyzed: 01/18/17
Instrument: Yoda
Time Analyzed: 9:34

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		50ug/ml SVOC 12/06/1	1207Y322.D	01/18/17 9:51
2	Blank	170116A BLK 1/1000	1207Y323.D	01/18/17 10:21
3	Lab Control Spike	170116A LCS-1 1/1000	1207Y324.D	01/18/17 10:51
4		AZ48866W22 MS-1 1/10	1207Y325.D	01/18/17 11:21
5	ERH161	AZ48866W19 1/1050	1207Y327.D	01/18/17 12:21
6	ERH162	AZ48867W05 1/1070	1207Y328.D	01/18/17 12:51
7	ERH164	AZ48868W11 1/1070	1207Y329.D	01/18/17 13:21
8	ERH168	AZ48871W13 1/1070	1207Y330.D	01/18/17 13:51
9	ERH169	AZ48872W28 1/1070	1207Y331.D	01/18/17 14:22
10	ERH170	AZ48873W13 1/1070	1207Y332.D	01/18/17 14:52
11	ERH174	AZ48875W11 1/1070	1207Y333.D	01/18/17 15:22
12	ERH176	AZ48877W14 1/1070	1207Y334.D	01/18/17 15:52
13	ERH179	AZ48878W14 1/1070	1207Y335.D	01/18/17 16:22
14	ERH186	AZ48880W10 1/1070	1207Y336.D	01/18/17 16:52
15	ERH187	AZ48881W07 1/1070	1207Y337.D	01/18/17 17:22
16		50ug/ml SVOC 12/06/1	1207Y343.D	01/18/17 20:07
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	49.3
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.3
127	40 - 60% of mass 198	57.1
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 197.95	100.0
199	5 - 9% of mass 198	6.7
275	10 - 30% of mass 198	24.0
365	1 - 100% of mass 198	3.8
441	0.01 - 100% of mass 443	90.9
442	50 - 150% of mass 197.95	99.3
443	17 - 23% of mass 442	18.2

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: Water
ID: SV Tune 10/19/16

SDG No:
Date Analyzed: 01/20/17
Instrument: Yoda
Time Analyzed: 8:15

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		50ug/ml SVOC 12/06/1	1207Y346.D	01/20/17 8:32
2		AZ48866W27 MSD-1 1/1	1207Y347.D	01/20/17 9:12
3		50ug/ml SVOC 12/06/1	1207Y348.D	01/20/17 9:42
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	48.1
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.6
127	40 - 60% of mass 198	57.5
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 197.95	100.0
199	5 - 9% of mass 198	6.7
275	10 - 30% of mass 198	23.3
365	1 - 100% of mass 198	3.0
441	0.01 - 100% of mass 443	84.1
442	50 - 150% of mass 197.95	94.2
443	17 - 23% of mass 442	19.1

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81965

Lab File ID (Standard): 1207Y008.D Date Analyzed: 7 Dec 16 12:02

Instrument ID: Yoda Time Analyzed: 7 Dec 16 12:02

GC Column: ID: Heated Purge: (Y/N)

		1,4-dichlorobenzene-D4(IS)		Napthalene-D8(IS)		Acenaphthene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	195270	4.87	816895	6.30	475200	8.31
	UPPER LIMIT	390540	5.37	1633790	6.80	950400	8.81
	LOWER LIMIT	97635	4.37	408448	5.80	237600	7.81
	SAMPLE NO.						
01	50ug/ml SVOC 12/06/16	172673	4.86	734012	6.29	439505	8.30
02	170116A BLK 1/1000	182902	4.86	778724	6.28	473403	8.30
03	170116A LCS-1 1/1000	186036	4.86	781993	6.29	478032	8.31
04	AZ48866W22 MS-1 1/1	176198	4.86	797330	6.29	479955	8.30
05	AZ48866W19 1/1050	167668	4.86	754062	6.29	445031	8.30
06	AZ48867W05 1/1070	171018	4.86	685419	6.29	422216	8.30
07	AZ48868W11 1/1070	161503	4.86	743611	6.29	439168	8.30
08	AZ48871W13 1/1070	180291	4.86	775293	6.29	472851	8.30
09	AZ48872W28 1/1070	180796	4.86	756365	6.29	458189	8.30
10	AZ48873W13 1/1070	187925	4.86	836811	6.29	490024	8.30
11	AZ48875W11 1/1070	156309	4.86	656583	6.29	424539	8.30
12	AZ48877W14 1/1070	184271	4.86	798395	6.29	466935	8.30
13	AZ48878W14 1/1070	188030	4.86	814245	6.29	483079	8.30
14	AZ48880W10 1/1070	178515	4.86	808691	6.29	479163	8.30
15	AZ48881W07 1/1070	184152	4.86	787754	6.29	454738	8.30
16	50ug/ml SVOC 12/06/16	175309	4.87	725071	6.29	446031	8.30
17	50ug/ml SVOC 12/06/16	179592	4.86	781103	6.29	460499	8.30
18	AZ48866W27 MSD-1 1/	193002	4.86	834675	6.29	500155	8.30
19	50ug/ml SVOC 12/06/16	196827	4.86	825659	6.29	488711	8.31
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81965

Lab File ID (Standard): 1207Y008.D Date Analyzed: 7 Dec 16 12:02

Instrument ID: Yoda Time Analyzed: 7 Dec 16 12:02

GC Column: ID: Heated Purge: (Y/N)

		Phenanthrene-D10(IS)		Chrysene-D12(IS)		Perylene-D12(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	975541	10.03	853105	13.10	871056	14.75
	UPPER LIMIT	1951082	10.53	1706210	13.60	1742112	15.25
	LOWER LIMIT	487771	9.53	426553	12.60	435528	14.25
	SAMPLE NO.						
01	50ug/ml SVOC 12/06/16	815236	10.02	801078	13.11	831799	14.75
02	170116A BLK 1/1000	848343	10.03	801392	13.10	823061	14.74
03	170116A LCS-1 1/1000	873294	10.02	868088	13.10	912966	14.75
04	AZ48866W22 MS-1 1/1(	877572	10.03	859061	13.11	858833	14.75
05	AZ48866W19 1/1050	804923	10.02	860291	13.10	831977	14.75
06	AZ48867W05 1/1070	785526	10.02	788068	13.10	806590	14.74
07	AZ48868W11 1/1070	858749	10.02	815145	13.10	864638	14.74
08	AZ48871W13 1/1070	864667	10.02	823009	13.10	856545	14.74
09	AZ48872W28 1/1070	825940	10.03	855558	13.10	847470	14.74
10	AZ48873W13 1/1070	919274	10.03	900011	13.10	903912	14.74
11	AZ48875W11 1/1070	813139	10.02	832873	13.10	857953	14.74
12	AZ48877W14 1/1070	843472	10.02	839586	13.10	841247	14.74
13	AZ48878W14 1/1070	891676	10.02	858198	13.10	816942	14.74
14	AZ48880W10 1/1070	893143	10.03	892701	13.10	904976	14.74
15	AZ48881W07 1/1070	880434	10.03	860214	13.10	862509	14.74
16	50ug/ml SVOC 12/06/16	873838	10.03	832155	13.11	868174	14.75
17	50ug/ml SVOC 12/06/16	847010	10.02	809889	13.10	824465	14.75
18	AZ48866W27 MSD-1 1/	917920	10.02	917874	13.11	987114	14.75
19	50ug/ml SVOC 12/06/16	892549	10.02	866782	13.11	905963	14.75
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

ORGANICS

Sample Data

APPL, INC.

EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH161
Sample Collection Date: 01/09/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48866
QCG: #87DC5-170116A-215607

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	57.8	43-140			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	57.7	44-119			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	31.2	19-119			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	61.8	44-120			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: PHENOL-D6 (S)	19.1	10-115			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	58.7	50-134			%	01/16/17	01/18/17

Quant Method: Y1207.M
Run #: 1207Y327
Instrument: Yoda
Sequence: Y161207
Dilution Factor: 1
Initials: MA

Printed: 01/19/17 9:03:42 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y327.D Vial: 27
Acq On : 18 Jan 17 12:21 Operator: MA
Sample : AZ48866W19 1/1050 Inst : Yoda
Misc : water Multiplr: 0.95

Quant Time: Jan 18 16:53 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	167668	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.29	136	754062	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.30	164	445031	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.02	188	804923	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.10	240	860291	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.75	264	831977	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.34	112	343749	59.35502 ppb	0.00
Spiked Amount 190.476			Recovery =	31.161%	
5) Phenol-D6 (S)	4.51	99	277520	36.30648 ppb	0.00
Spiked Amount 190.476			Recovery =	19.061%	
21) Nitrobenzene-D5(S)	5.49	82	472437	58.86540 ppb	0.00
Spiked Amount 95.238			Recovery =	61.808%	
45) 2-Fluorobiphenyl(S)	7.53	172	810121	54.99512 ppb	0.00
Spiked Amount 95.238			Recovery =	57.745%	
63) 2,4,6-Tribromophenol(S)	9.22	330	258081	110.15149 ppb	0.00
Spiked Amount 190.476			Recovery =	57.829%	
81) Terphenyl-D14(S)	11.89	244	1142105	55.91491 ppb	0.00
Spiked Amount 95.238			Recovery =	58.711%	

Target Compounds Qvalue

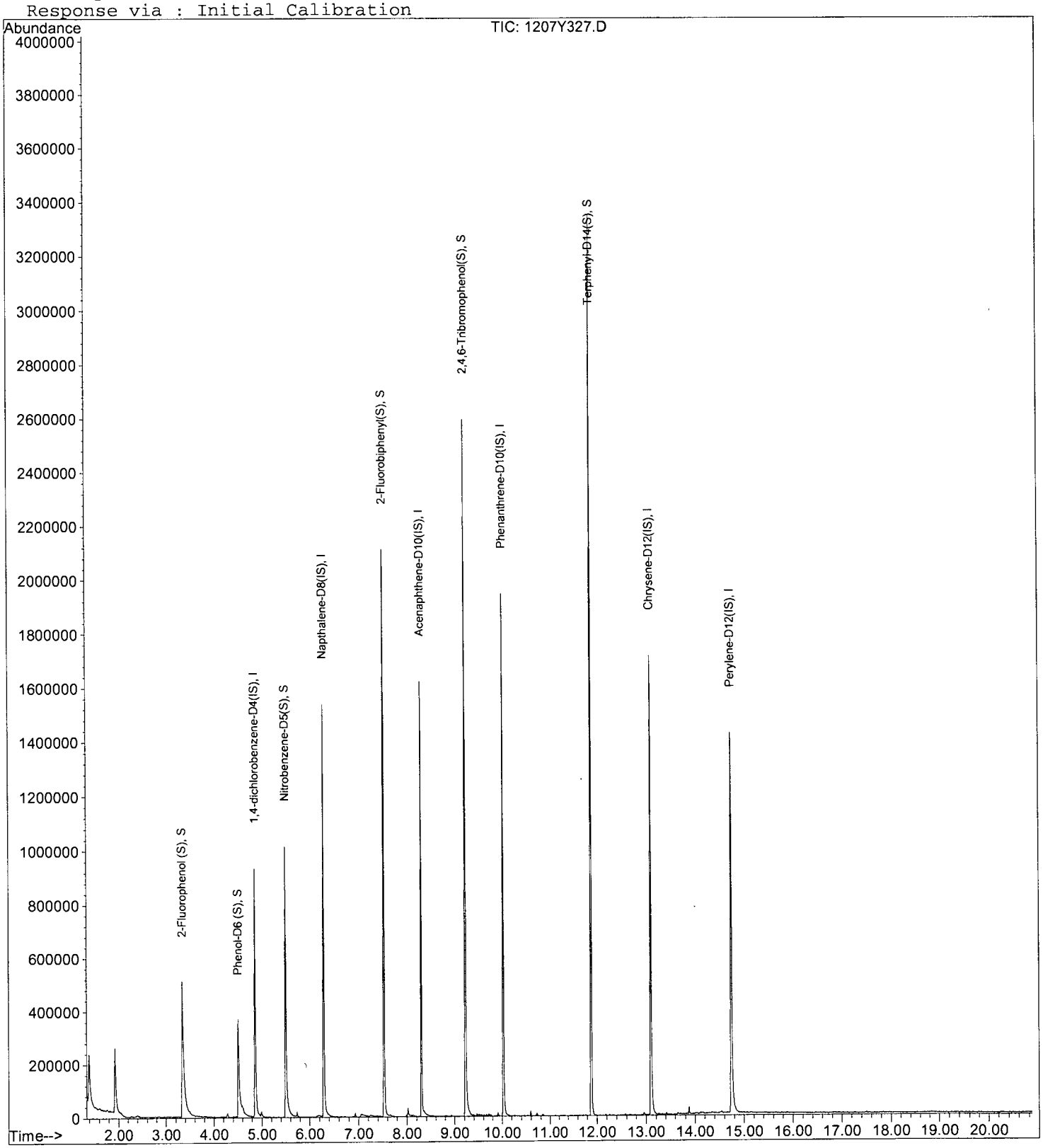
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y327.D Vial: 27
Acq On : 18 Jan 17 12:21 Operator: MA
Sample : AZ48866W19 1/1050 Inst : Yoda
Misc : water Multiplr: 0.95

Quant Time: Jan 18 16:53 2017 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration



EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH162
Sample Collection Date: 01/09/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48867
QCG: #87DC5-170116A-215607

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	62.4	43-140			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	64.9	44-119			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	32.6	19-119			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	71.9	44-120			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: PHENOL-D6 (S)	19.2	10-115			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	67.9	50-134			%	01/16/17	01/18/17

Quant Method: Y1207.M
Run #: 1207Y328
Instrument: Yoda
Sequence: Y161207
Dilution Factor: 1
Initials: MA

Printed: 01/19/17 9:03:42 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y328.D Vial: 28
Acq On : 18 Jan 17 12:51 Operator: MA
Sample : AZ48867W05 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Jan 18 16:53 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	171018	40.00000	ppb	0.00
20) Napthalene-D8(IS)	6.29	136	685419	40.00000	ppb	0.00
40) Acenaphthene-D10(IS)	8.30	164	422216	40.00000	ppb	0.00
64) Phenanthrene-D10(IS)	10.02	188	785526	40.00000	ppb	0.00
78) Chrysene-D12(IS)	13.10	240	788068	40.00000	ppb	0.00
88) Perylene-D12(IS)	14.74	264	806590	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.34	112	366590	60.89901	ppb	0.00
Spiked Amount 186.916			Recovery = 32.581%			
5) Phenol-D6 (S)	4.51	99	285587	35.94528	ppb	0.00
Spiked Amount 186.916			Recovery = 19.231%			
21) Nitrobenzene-D5(S)	5.49	82	499372	67.17329	ppb	0.00
Spiked Amount 93.458			Recovery = 71.875%			
45) 2-Fluorobiphenyl(S)	7.54	172	863635	60.64086	ppb	0.00
Spiked Amount 93.458			Recovery = 64.886%			
63) 2,4,6-Tribromophenol(S)	9.23	330	264278	116.66920	ppb	0.00
Spiked Amount 186.916			Recovery = 62.418%			
81) Terphenyl-D14(S)	11.89	244	1210827	63.50248	ppb	0.00
Spiked Amount 93.458			Recovery = 67.947%			

Target Compounds Qvalue

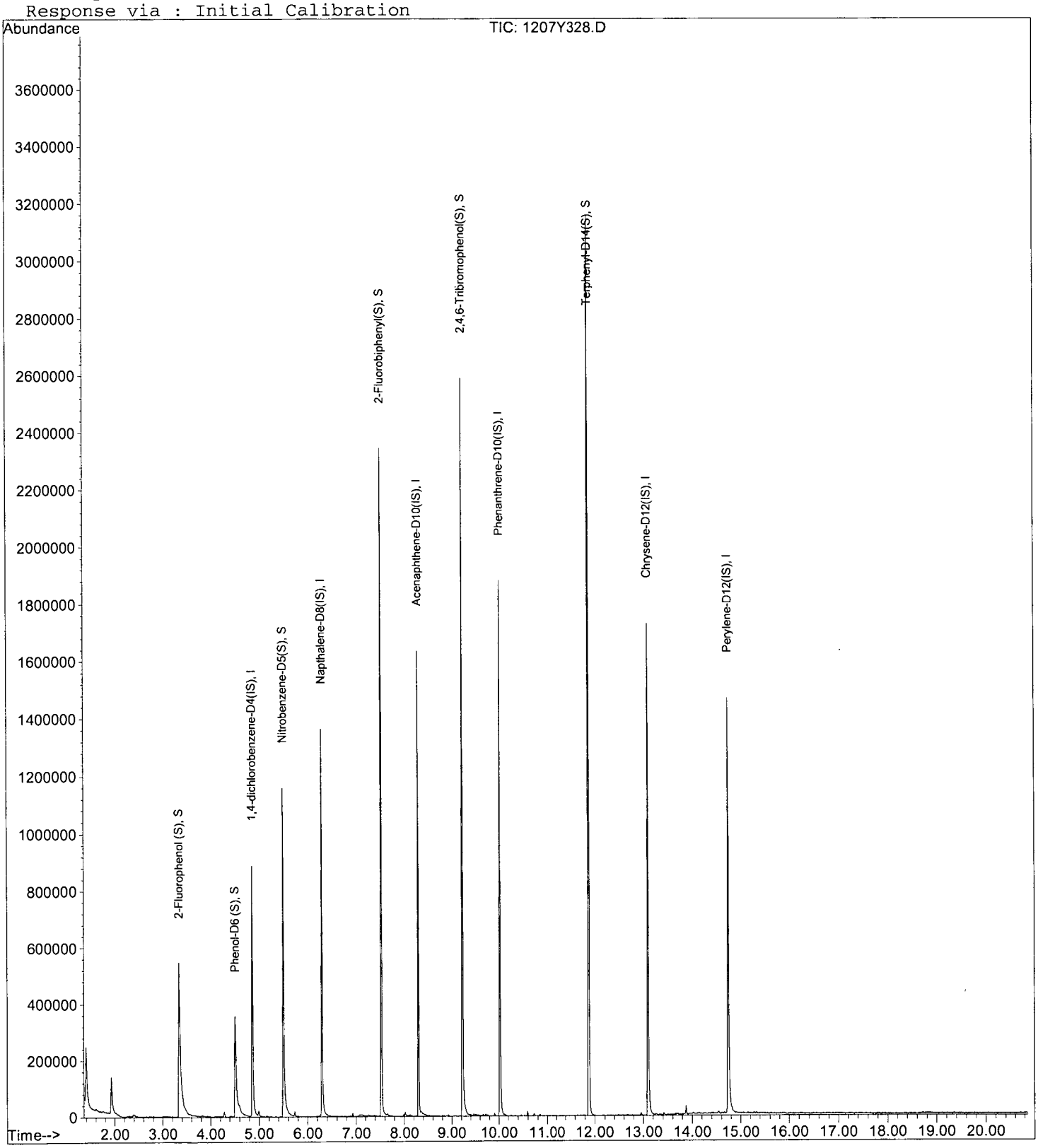
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y328.D Vial: 28
Acq On : 18 Jan 17 12:51 Operator: MA
Sample : AZ48867W05 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Jan 18 16:53 2017 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration



EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH164
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48868
QCG: #87DC5-170116A-215607

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	56.2	43-140			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	57.0	44-119			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	33.5	19-119			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	60.0	44-120			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: PHENOL-D6 (S)	19.1	10-115			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	59.2	50-134			%	01/16/17	01/18/17

Quant Method: Y1207.M
Run #: 1207Y329
Instrument: Yoda
Sequence: Y161207
Dilution Factor: 1
Initials: MA

Printed: 01/19/17 9:03:42 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y329.D Vial: 29
Acq On : 18 Jan 17 13:21 Operator: MA
Sample : AZ48868W11 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Jan 18 16:54 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	161503	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.29	136	743611	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.30	164	439168	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.02	188	858749	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.10	240	815145	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.74	264	864638	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.34	112	356311	62.67872 ppb	0.00
Spiked Amount 186.916			Recovery =	33.533%	
5) Phenol-D6 (S)	4.51	99	267246	35.61852 ppb	0.00
Spiked Amount 186.916			Recovery =	19.056%	
21) Nitrobenzene-D5(S)	5.49	82	452339	56.08501 ppb	0.00
Spiked Amount 93.458			Recovery =	60.011%	
45) 2-Fluorobiphenyl(S)	7.53	172	789575	53.30065 ppb	0.00
Spiked Amount 93.458			Recovery =	57.032%	
63) 2,4,6-Tribromophenol(S)	9.22	330	247368	104.98874 ppb	0.00
Spiked Amount 186.916			Recovery =	56.169%	
81) Terphenyl-D14(S)	11.89	244	1090423	55.28820 ppb	0.00
Spiked Amount 93.458			Recovery =	59.158%	

Target Compounds Qvalue

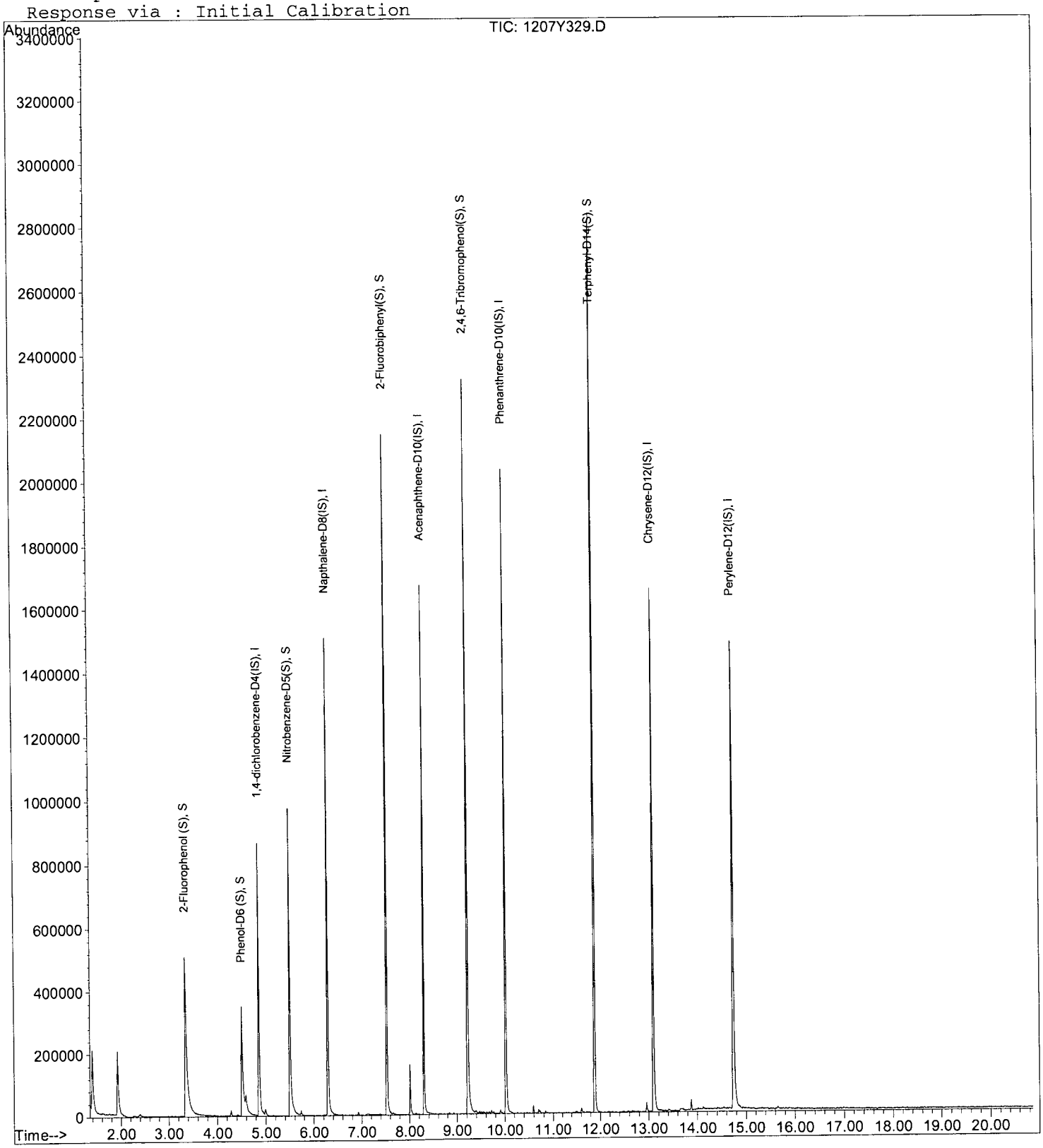
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y329.D Vial: 29
Acq On : 18 Jan 17 13:21 Operator: MA
Sample : AZ48868W11 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Jan 18 16:54 2017 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration



EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH168
Sample Collection Date: 01/09/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48871
QCG: #87DC5-170116A-215607

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	56.4	43-140			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	55.4	44-119			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	30.3	19-119			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	63.1	44-120			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: PHENOL-D6 (S)	17.2	10-115			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	61.8	50-134			%	01/16/17	01/18/17

Quant Method: Y1207.M
Run #: 1207Y330
Instrument: Yoda
Sequence: Y161207
Dilution Factor: 1
Initials: MA

Printed: 01/19/17 9:03:42 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y330.D Vial: 30
Acq On : 18 Jan 17 13:51 Operator: MA
Sample : AZ48871W13 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Jan 18 16:54 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	180291	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.29	136	775293	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.30	164	472851	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.02	188	864667	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.10	240	823009	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.74	264	856545	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.34	112	359458	56.64291 ppb	0.00
Spiked Amount 186.916			Recovery =	30.304%	
5) Phenol-D6 (S)	4.51	99	268768	32.08846 ppb	0.00
Spiked Amount 186.916			Recovery =	17.167%	
21) Nitrobenzene-D5(S)	5.49	82	495667	58.94578 ppb	0.00
Spiked Amount 93.458			Recovery =	63.072%	
45) 2-Fluorobiphenyl(S)	7.53	172	825644	51.76525 ppb	0.00
Spiked Amount 93.458			Recovery =	55.389%	
63) 2,4,6-Tribromophenol(S)	9.23	330	267613	105.49036 ppb	0.00
Spiked Amount 186.916			Recovery =	56.437%	
81) Terphenyl-D14(S)	11.89	244	1149900	57.74678 ppb	0.00
Spiked Amount 93.458			Recovery =	61.789%	

Target Compounds Qvalue

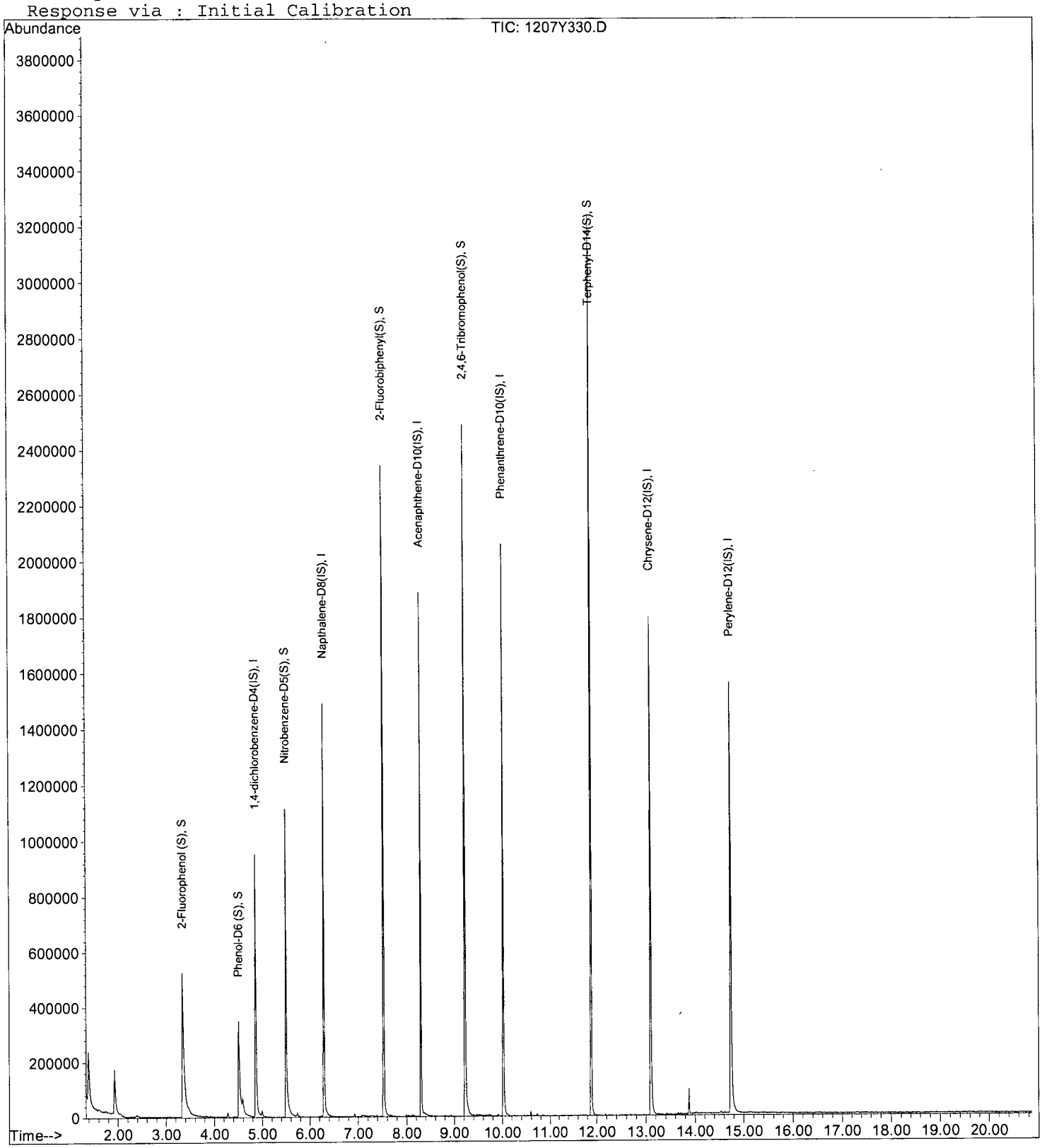
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y330.D Vial: 30
Acq On : 18 Jan 17 13:51 Operator: MA
Sample : AZ48871W13 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Jan 18 16:54 2017 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration



EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH169
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48872
QCG: #87DC5-170116A-215607

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	51.4	43-140			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	53.8	44-119			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	26.6	19-119			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	58.9	44-120			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: PHENOL-D6 (S)	15.4	10-115			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	53.7	50-134			%	01/16/17	01/18/17

Quant Method: Y1207.M
Run #: 1207Y331
Instrument: Yoda
Sequence: Y161207
Dilution Factor: 1
Initials: MA

Printed: 01/19/17 9:03:42 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y331.D Vial: 31
Acq On : 18 Jan 17 14:22 Operator: MA
Sample : AZ48872W28 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Jan 18 16:55 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	180796	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.29	136	756365	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.30	164	458189	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	825940	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.10	240	855558	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.74	264	847470	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.34	112	315970	49.65106 ppb	0.00
Spiked Amount 186.916			Recovery = 26.563%		
5) Phenol-D6 (S)	4.50	99	241128	28.70808 ppb	0.00
Spiked Amount 186.916			Recovery = 15.359%		
21) Nitrobenzene-D5(S)	5.50	82	451929	55.08931 ppb	0.00
Spiked Amount 93.458			Recovery = 58.945%		
45) 2-Fluorobiphenyl(S)	7.53	172	777325	50.29535 ppb	0.00
Spiked Amount 93.458			Recovery = 53.816%		
63) 2,4,6-Tribromophenol(S)	9.23	330	235986	96.00005 ppb	0.00
Spiked Amount 186.916			Recovery = 51.360%		
81) Terphenyl-D14(S)	11.88	244	1038431	50.16496 ppb	0.00
Spiked Amount 93.458			Recovery = 53.677%		
Target Compounds					Qvalue

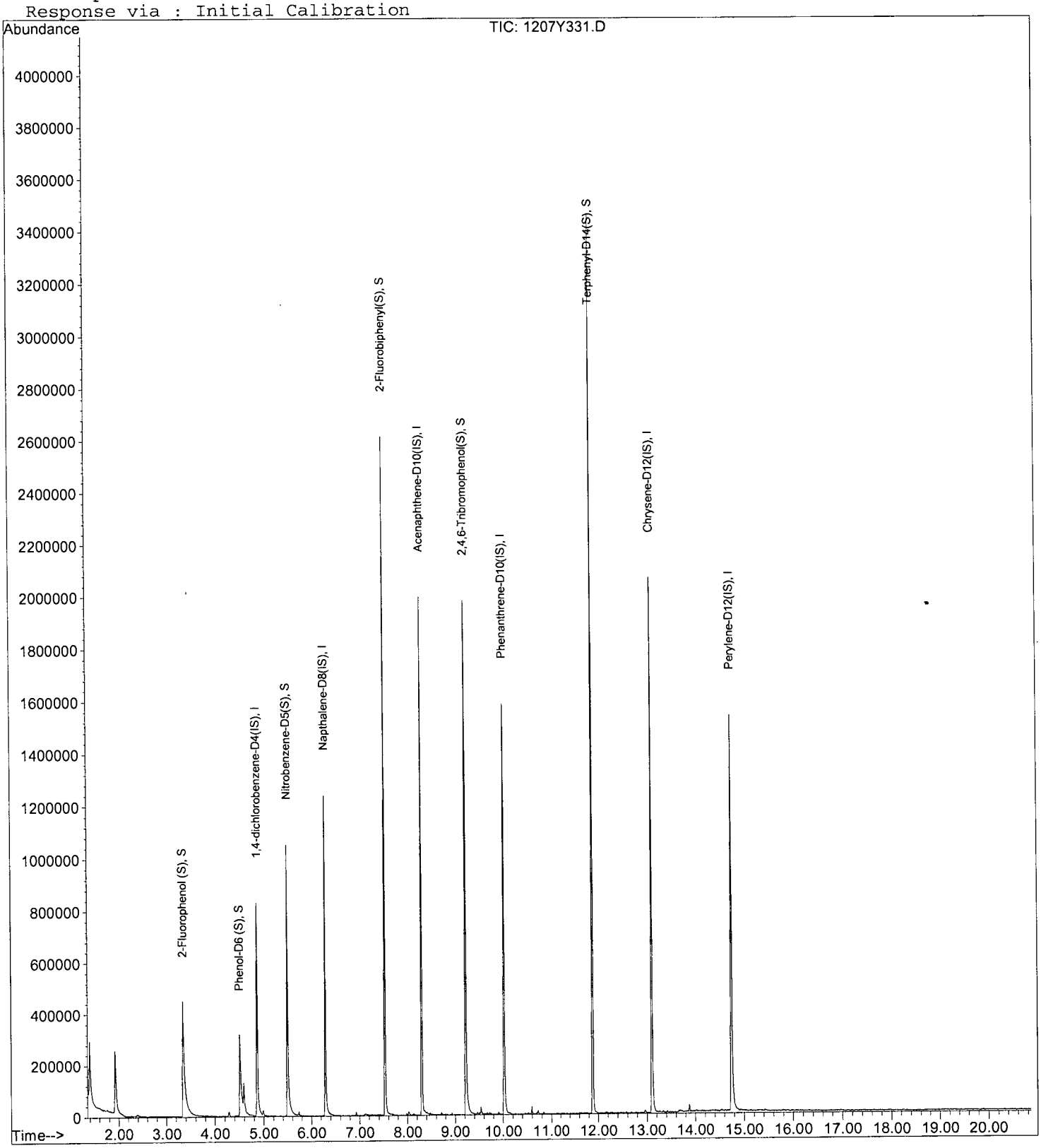
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y331.D Vial: 31
Acq On : 18 Jan 17 14:22 Operator: MA
Sample : AZ48872W28 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Jan 18 16:55 2017 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration



EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH170
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48873
QCG: #87DC5-170116A-215607

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	58.7	43-140			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	59.2	44-119			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	29.2	19-119			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	60.7	44-120			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: PHENOL-D6 (S)	17.0	10-115			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	60.9	50-134			%	01/16/17	01/18/17

Quant Method: Y1207.M
Run #: 1207Y332
Instrument: Yoda
Sequence: Y161207
Dilution Factor: 1
Initials: MA

Printed: 01/19/17 9:03:42 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y332.D Vial: 32
Acq On : 18 Jan 17 14:52 Operator: MA
Sample : AZ48873W13 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Jan 18 16:56 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	187925	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.29	136	836811	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.30	164	490024	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	919274	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.10	240	900011	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.74	264	903912	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.34	112	361172	54.60105 ppb	0.00
Spiked Amount 186.916			Recovery =	29.212%	
5) Phenol-D6 (S)	4.51	99	277276	31.75945 ppb	0.00
Spiked Amount 186.916			Recovery =	16.991%	
21) Nitrobenzene-D5(S)	5.50	82	515208	56.76541 ppb	0.00
Spiked Amount 93.458			Recovery =	60.739%	
45) 2-Fluorobiphenyl(S)	7.53	172	914131	55.30456 ppb	0.00
Spiked Amount 93.458			Recovery =	59.176%	
63) 2,4,6-Tribromophenol(S)	9.23	330	288606	109.77865 ppb	0.00
Spiked Amount 186.916			Recovery =	58.732%	
81) Terphenyl-D14(S)	11.88	244	1238893	56.89293 ppb	0.00
Spiked Amount 93.458			Recovery =	60.876%	

Target Compounds Qvalue

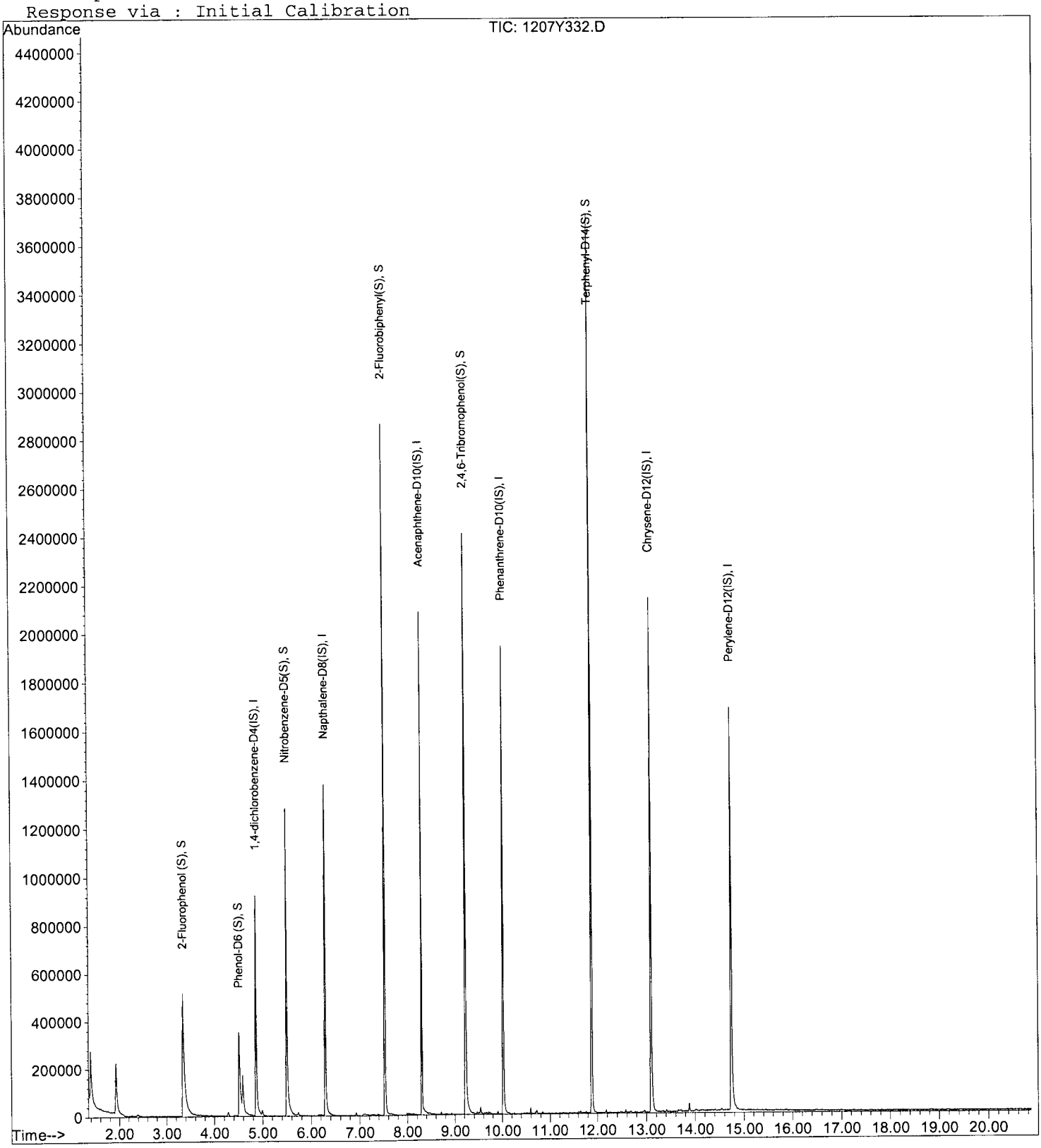
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y332.D Vial: 32
Acq On : 18 Jan 17 14:52 Operator: MA
Sample : AZ48873W13 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Jan 18 16:56 2017 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration



EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH174
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48875
QCG: #87DC5-170116A-215607

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	71.5	43-140			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	67.6	44-119			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	34.6	19-119			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	73.3	44-120			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: PHENOL-D6 (S)	21.1	10-115			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	68.8	50-134			%	01/16/17	01/18/17

Quant Method: Y1207.M
Run #: 1207Y333
Instrument: Yoda
Sequence: Y161207
Dilution Factor: 1
Initials: MA

Printed: 01/19/17 9:03:42 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y333.D Vial: 33
Acq On : 18 Jan 17 15:22 Operator: MA
Sample : AZ48875W11 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Jan 18 16:56 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	156309	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.29	136	656583	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.30	164	424539	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.02	188	813139	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.10	240	832873	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.74	264	857953	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.34	112	356287	64.75711 ppb	0.00
Spiked Amount 186.916			Recovery =	34.645%	
5) Phenol-D6 (S)	4.51	99	286093	39.39749 ppb	0.00
Spiked Amount 186.916			Recovery =	21.077%	
21) Nitrobenzene-D5(S)	5.49	82	487957	68.52049 ppb	0.00
Spiked Amount 93.458			Recovery =	73.316%	
45) 2-Fluorobiphenyl(S)	7.54	172	904972	63.19568 ppb	0.00
Spiked Amount 93.458			Recovery =	67.620%	
63) 2,4,6-Tribromophenol(S)	9.23	330	304363	133.63006 ppb	0.00
Spiked Amount 186.916			Recovery =	71.492%	
81) Terphenyl-D14(S)	11.89	244	1295439	64.28512 ppb	0.00
Spiked Amount 93.458			Recovery =	68.785%	

Target Compounds Qvalue

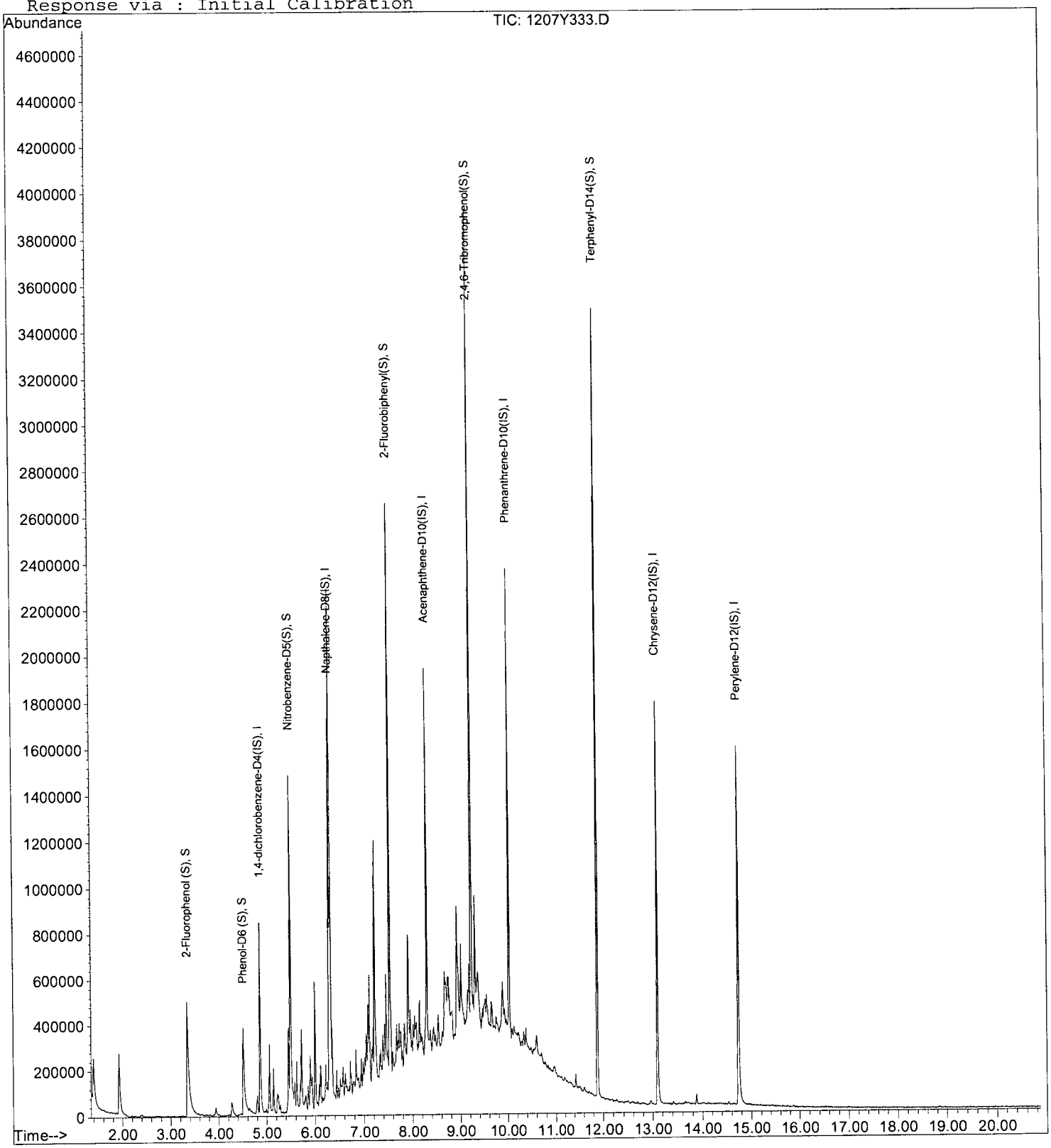
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y333.D Vial: 33
Acq On : 18 Jan 17 15:22 Operator: MA
Sample : AZ48875W11 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Jan 18 16:56 2017 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration



EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH176
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48877
QCG: #87DC5-170116A-215607

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	54.6	43-140			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	55.0	44-119			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	27.1	19-119			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	56.9	44-120			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: PHENOL-D6 (S)	16.5	10-115			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	58.4	50-134			%	01/16/17	01/18/17

Quant Method: Y1207.M
Run #: 1207Y334
Instrument: Yoda
Sequence: Y161207
Dilution Factor: 1
Initials: MA

Printed: 01/19/17 9:03:42 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y334.D
Acq On : 18 Jan 17 15:52
Sample : AZ48877W14 1/1070
Misc : water

Vial: 34
Operator: MA
Inst : Yoda
Multiplr: 0.93

Quant Time: Jan 18 16:57 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	184271	40.00000	ppb	0.00
20) Napthalene-D8(IS)	6.29	136	798395	40.00000	ppb	0.00
40) Acenaphthene-D10(IS)	8.30	164	466935	40.00000	ppb	0.00
64) Phenanthrene-D10(IS)	10.02	188	843472	40.00000	ppb	0.00
78) Chrysene-D12(IS)	13.10	240	839586	40.00000	ppb	0.00
88) Perylene-D12(IS)	14.74	264	841247	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.34	112	329142	50.74553	ppb	0.00
Spiked Amount 186.916			Recovery = 27.149%			
5) Phenol-D6 (S)	4.51	99	264094	30.84941	ppb	0.00
Spiked Amount 186.916			Recovery = 16.504%			
21) Nitrobenzene-D5(S)	5.49	82	460702	53.20235	ppb	0.00
Spiked Amount 93.458			Recovery = 56.926%			
45) 2-Fluorobiphenyl(S)	7.54	172	809310	51.38405	ppb	0.00
Spiked Amount 93.458			Recovery = 54.981%			
63) 2,4,6-Tribromophenol(S)	9.22	330	255470	101.97962	ppb	0.00
Spiked Amount 186.916			Recovery = 54.559%			
81) Terphenyl-D14(S)	11.89	244	1108789	54.58283	ppb	0.00
Spiked Amount 93.458			Recovery = 58.404%			

Target Compounds Qvalue

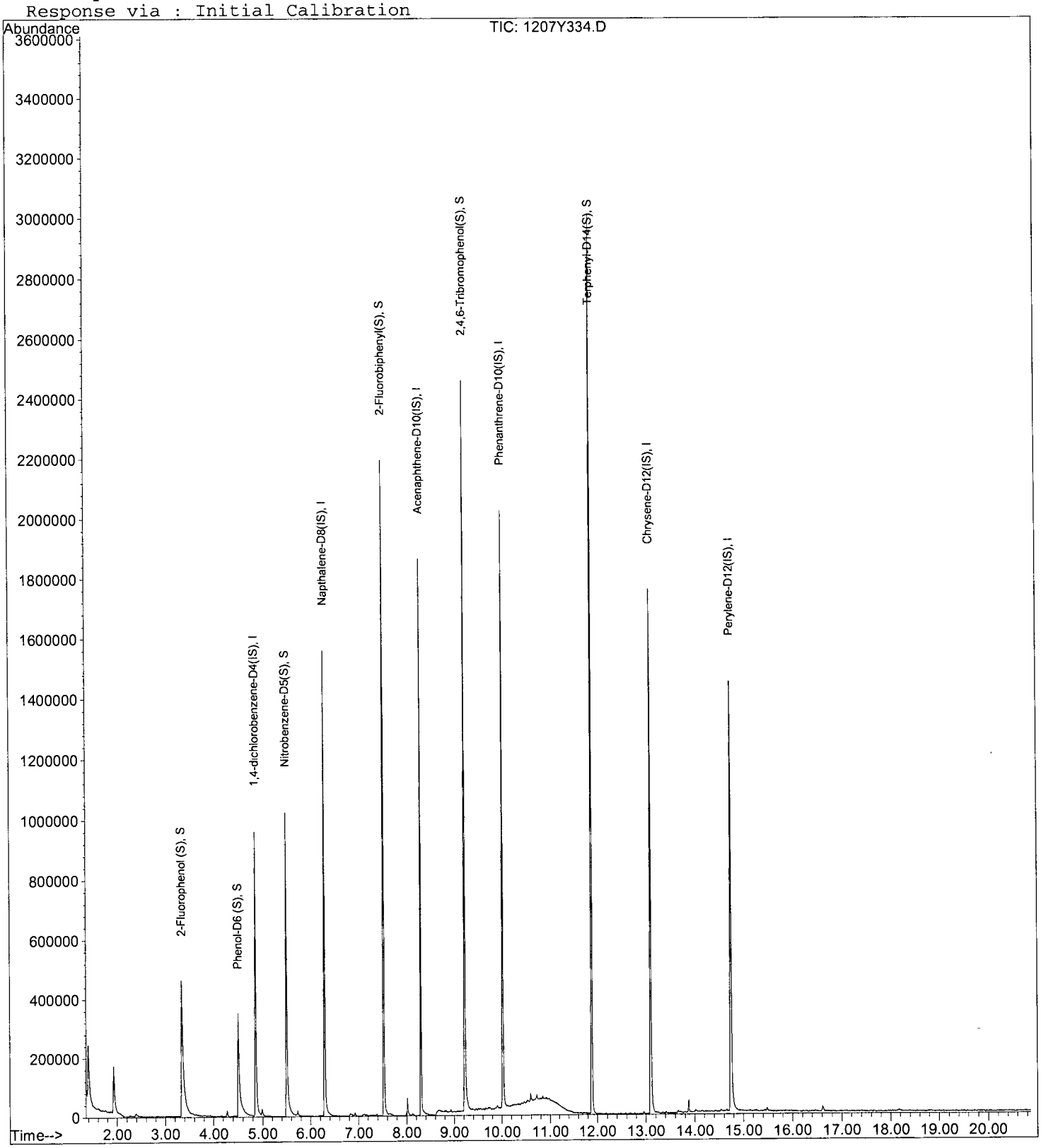
(#) = qualifier out of range (m) = manual integration
1207Y334.D Y1207.M Thu Jan 19 08:09:42 2017

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y334.D Vial: 34
Acq On : 18 Jan 17 15:52 Operator: MA
Sample : AZ48877W14 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Jan 18 16:57 2017 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration



EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH179
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48878
QCG: #87DC5-170116A-215607

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	49.6	43-140			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	51.4	44-119			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	24.9	19-119			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	53.4	44-120			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: PHENOL-D6 (S)	15.5	10-115			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	53.7	50-134			%	01/16/17	01/18/17

Quant Method: Y1207.M
Run #: 1207Y335
Instrument: Yoda
Sequence: Y161207
Dilution Factor: 1
Initials: MA

Printed: 01/19/17 9:03:42 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y335.D Vial: 35
Acq On : 18 Jan 17 16:22 Operator: MA
Sample : AZ48878W14 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Jan 18 16:58 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	188030	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.29	136	814245	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.30	164	483079	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.02	188	891676	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.10	240	858198	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.74	264	816942	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.34	112	307447	46.45309 ppb	0.00
Spiked Amount 186.916			Recovery	= 24.852%	
5) Phenol-D6 (S)	4.51	99	252457	28.90051 ppb	0.00
Spiked Amount 186.916			Recovery	= 15.462%	
21) Nitrobenzene-D5(S)	5.49	82	440558	49.88576 ppb	0.00
Spiked Amount 93.458			Recovery	= 53.378%	
45) 2-Fluorobiphenyl(S)	7.53	172	782545	48.02429 ppb	0.00
Spiked Amount 93.458			Recovery	= 51.386%	
63) 2,4,6-Tribromophenol(S)	9.23	330	240219	92.68706 ppb	0.00
Spiked Amount 186.916			Recovery	= 49.588%	
81) Terphenyl-D14(S)	11.88	244	1042350	50.19938 ppb	0.00
Spiked Amount 93.458			Recovery	= 53.713%	

Target Compounds Qvalue

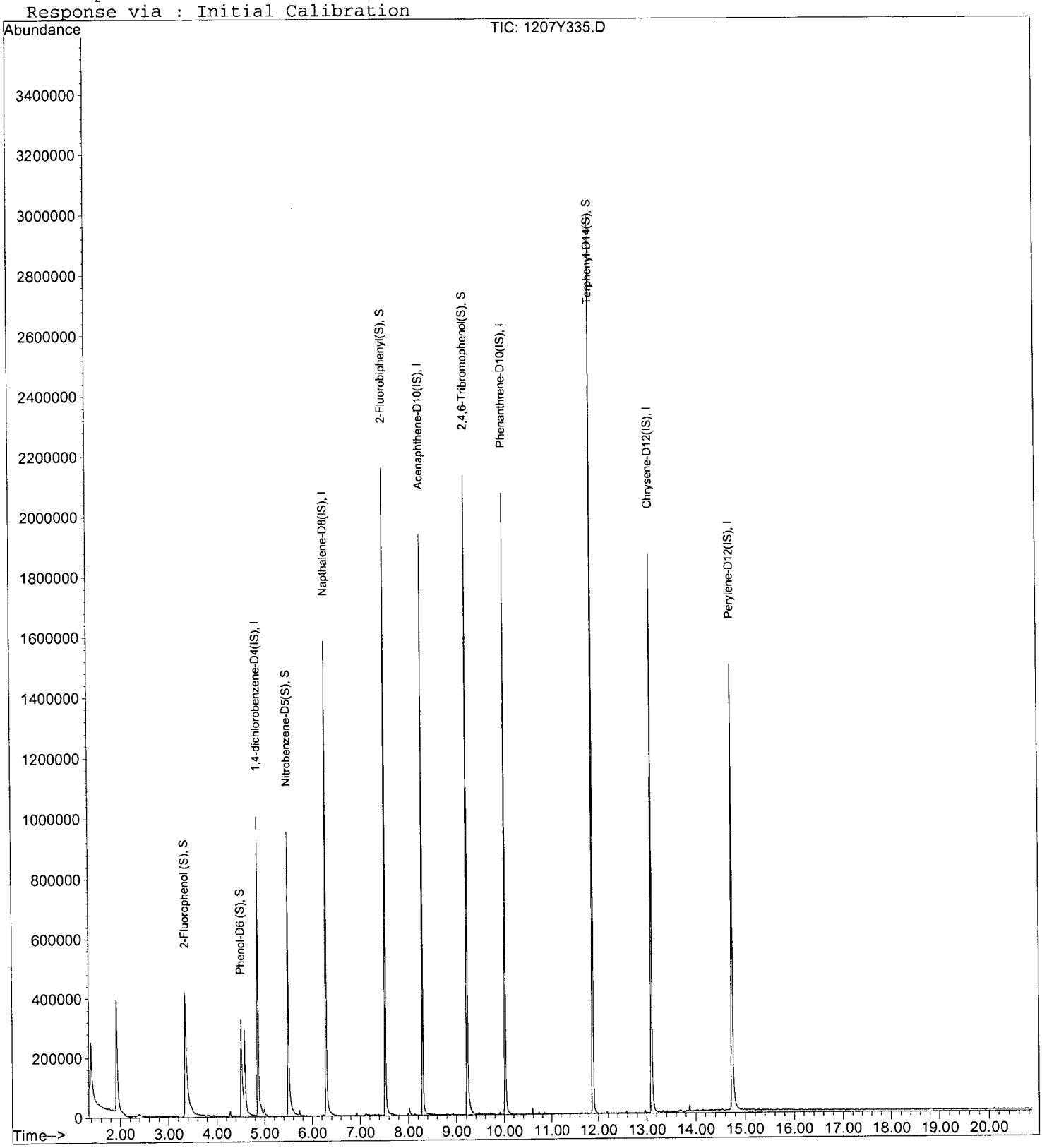
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y335.D Vial: 35
Acq On : 18 Jan 17 16:22 Operator: MA
Sample : AZ48878W14 1/1070 Inst : Yoda
Misc : water Multiplr: 0.93

Quant Time: Jan 18 16:58 2017 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration



EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH186
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48880
QCG: #87DC5-170116A-215607

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	55.5	43-140			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	56.6	44-119			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	28.3	19-119			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	61.6	44-120			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: PHENOL-D6 (S)	16.9	10-115			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	59.1	50-134			%	01/16/17	01/18/17

Quant Method: Y1207.M
Run #: 1207Y336
Instrument: Yoda
Sequence: Y161207
Dilution Factor: 1
Initials: MA

Printed: 01/19/17 9:03:42 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y336.D
Acq On : 18 Jan 17 16:52
Sample : AZ48880W10 1/1070
Misc : water

Vial: 36
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 8:04 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	178515	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.29	136	808691	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.30	164	479163	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	893143	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.10	240	892701	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.74	264	904976	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.34	112	331833	56.50675 ppb	0.00
Spiked Amount 200.000			Recovery =	28.254%	
5) Phenol-D6 (S)	4.51	99	261778	33.77441 ppb	0.00
Spiked Amount 200.000			Recovery =	16.887%	
21) Nitrobenzene-D5(S)	5.50	82	505159	61.62516 ppb	0.00
Spiked Amount 100.000			Recovery =	61.625%	
45) 2-Fluorobiphenyl(S)	7.53	172	854524	56.57112 ppb	0.00
Spiked Amount 100.000			Recovery =	56.571%	
63) 2,4,6-Tribromophenol(S)	9.23	330	266809	111.05320 ppb	0.00
Spiked Amount 200.000			Recovery =	55.527%	
81) Terphenyl-D14(S)	11.88	244	1193473	59.12387 ppb	0.00
Spiked Amount 100.000			Recovery =	59.124%	

Target Compounds Qvalue

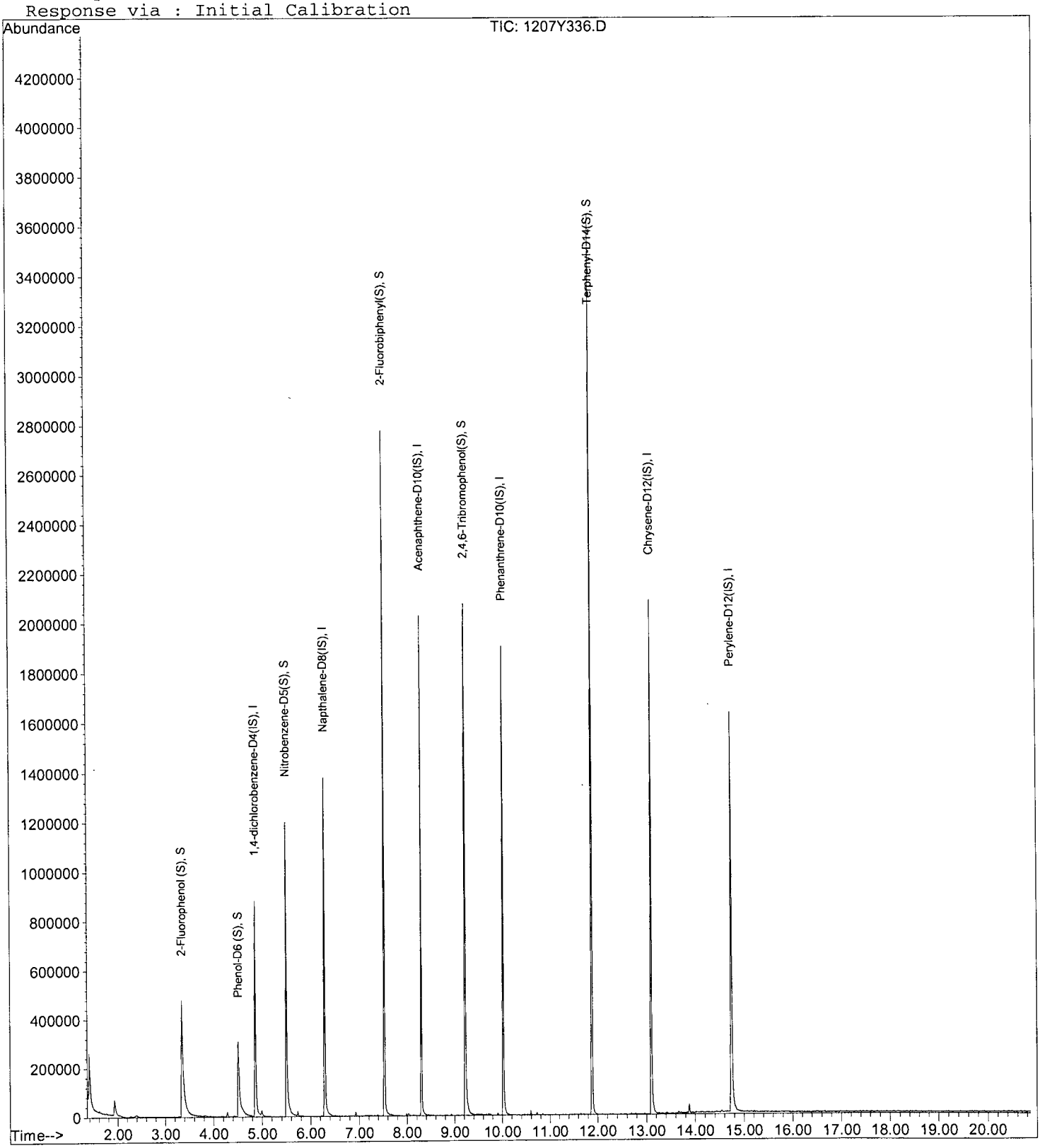
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y336.D Vial: 36
Acq On : 18 Jan 17 16:52 Operator: MA
Sample : AZ48880W10 1/1070 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 19 8:04 2017 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration



EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH187
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48881
QCG: #87DC5-170116A-215607

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	57.4	43-140			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	60.8	44-119			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	27.3	19-119			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	62.7	44-120			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: PHENOL-D6 (S)	16.0	10-115			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	60.1	50-134			%	01/16/17	01/18/17

Quant Method: Y1207.M
Run #: 1207Y337
Instrument: Yoda
Sequence: Y161207
Dilution Factor: 1
Initials: MA

Printed: 01/19/17 9:03:42 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y337.D Vial: 37
Acq On : 18 Jan 17 17:22 Operator: MA
Sample : AZ48881W07 1/1070 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 19 8:04 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	184152	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.29	136	787754	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.30	164	454738	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	880434	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.10	240	860214	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.74	264	862509	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.34	112	330777	54.60272 ppb	0.00
Spiked Amount 200.000			Recovery =	27.302%	
5) Phenol-D6 (S)	4.51	99	256537	32.08506 ppb	0.00
Spiked Amount 200.000			Recovery =	16.043%	
21) Nitrobenzene-D5(S)	5.49	82	500877	62.72678 ppb	0.00
Spiked Amount 100.000			Recovery =	62.727%	
45) 2-Fluorobiphenyl(S)	7.53	172	871529	60.79591 ppb	0.00
Spiked Amount 100.000			Recovery =	60.796%	
63) 2,4,6-Tribromophenol(S)	9.23	330	261974	114.89756 ppb	0.00
Spiked Amount 200.000			Recovery =	57.449%	
81) Terphenyl-D14(S)	11.88	244	1169851	60.14234 ppb	0.00
Spiked Amount 100.000			Recovery =	60.142%	

Target Compounds Qvalue

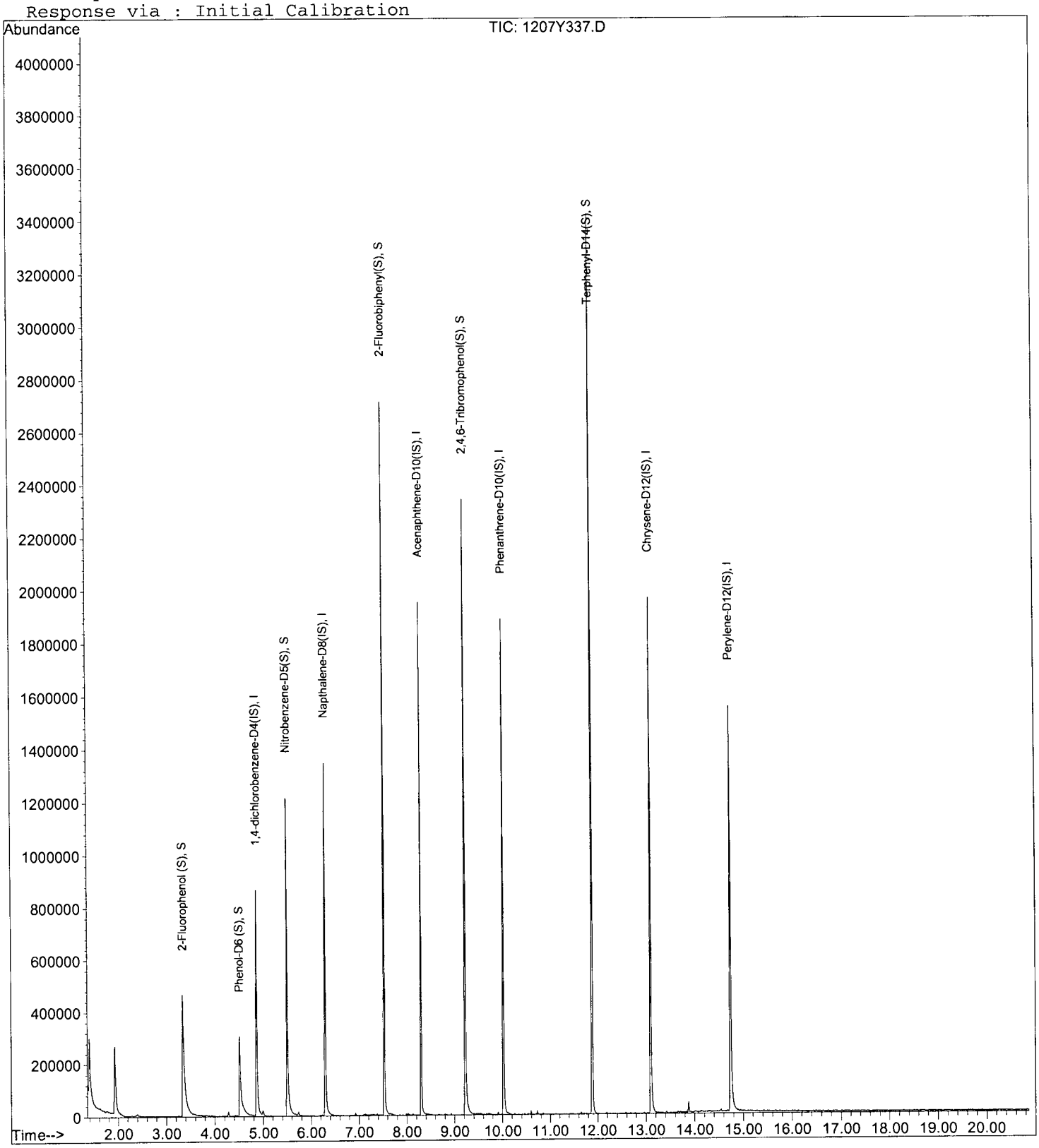
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y337.D Vial: 37
Acq On : 18 Jan 17 17:22 Operator: MA
Sample : AZ48881W07 1/1070 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 19 8:04 2017 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration



ORGANICS

Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Initial Cal. Date: 12/07/16

Matrix: Instrument: Yoda

Initials:

		Compound	1207Y004.D 5	1207Y005.D 10	1207Y006.D 20	1207Y007 D 40	1207Y008.D 50	1207Y009.D 60	1207Y010.D 80	1207Y011.D 100			Avg	%RSD		
1	I	1,4-dichlorobenzene-D4(IS)														
2	TM	n-Nitrosodimethylamine	0.7148	0.8188	0.8173	0.8076	0.8521	0.7243	0.8231	0.7956			0.79	6.2	TM	
3	TM	Pyridine	1.581	1.725	1.660	1.936	2.046	1.751	1.878	1.777			1.8	8.5	TM	
4	S	2-Fluorophenol (S)	1.066	1.299	1.267	1.425	1.424	1.318	1.385	1.343			1.3	8.8	S	
5	S	Phenol-D6 (S)	1.822	1.785	1.823	1.762	1.706	1.655	1.706	1.635			1.7	4.2	S	
6	*TM	Phenol	1.948	1.915	2.075	2.002	1.967	1.942	2.023	1.918			2.0	2.8	*TM	
7	TM	Aniline	1.776	1.833	1.896	1.887	1.869	1.829	1.983	1.872			1.9	3.2	TM	
8	TM	Bis (2-chloroethyl) ether	0.8418	0.7909	0.9135	0.8982	0.8478	0.8563	0.9089	0.8610			0.86	4.7	TM	
9	TM	2-Chlorophenol	1.635	1.632	1.616	1.577	1.518	1.543	1.572	1.517			1.6	3.1	TM	
10	TM	1,3-DCB	1.660	1.666	1.674	1.664	1.624	1.596	1.569	1.586			1.6	2.6	TM	
11	*TM	1,4-DCB	1.785	1.781	1.664	1.660	1.668	1.607	1.666	1.605			1.7	4.1	*TM	
12	TM	Benzyl alcohol	0.7838	0.8402	0.9167	0.8614	0.9167	0.8803	0.8909	0.8835			0.87	5.0	TM	
13	TM	1,2-DCB	1.611	1.557	1.581	1.484	1.593	1.492	1.515	1.463			1.5	3.6	TM	
14	TM	2-Methylphenol	1.082	1.139	1.181	1.118	1.137	1.110	1.083	1.109			1.1	2.9	TM	
15	TM	Bis (2-chloroisopropyl) ether	1.873	1.751	1.831	1.685	1.738	1.688	1.621	1.595			1.7	5.6	TM	
16	TM	Acetophenone	2.043	2.072	2.030	2.015	2.091	2.047	2.025	2.028			2.0	1.3	TM	
17	TM	3&4-Methylphenol	1.558	1.530	1.459	1.440	1.525	1.448	1.459	1.455			1.5	3.1	TM	
18	**TM	n-Nitrosodi-n-propylamine	1.068	1.045	1.056	1.027	1.076	1.038	1.050	1.060			1.1	1.5	**TM	
19	TM	Hexachloroethane	0.6682	0.7054	0.6470	0.6617	0.6824	0.6779	0.6684	0.6594			0.67	2.6	TM	
20	I	Napthalene-D8(IS)														
21	S	Nitrobenzene-D5(S)	0.4047	0.4332	0.3921	0.4003	0.4125	0.3872	0.3742	0.4394			0.41	5.5	S	
22	TM	Nitrobenzene	0.4054	0.4067	0.3889	0.4048	0.4175	0.3984	0.3936	0.4509			0.41	4.7	TM	
23	TM	Isophorone	0.6691	0.6862	0.6315	0.6698	0.6921	0.6667	0.6337	0.7606			0.68	6.0	TM	
24	*TM	2-Nitrophenol	0.1845	0.1935	0.1942	0.2063	0.2096	0.2079	0.2003	0.2337			0.20	7.3	*TM	
25	TM	2,4-Dimethylphenol	0.3139	0.3382	0.3012	0.3156	0.3171	0.3192	0.3290	0.3503			0.32	4.8	TM	
26	TML	Benzoic acid	0.0808	0.1551	0.2077	0.2553	0.2737	0.2314	0.2577	0.2655			0.22	31	TML	0.997
27	TM	Bis (2-chloroethoxy) methane	0.3810	0.3848	0.3681	0.3830	0.3880	0.3802	0.3949	0.4047			0.39	2.8	TM	
28	*TM	2,4-Dichlorophenol	0.2878	0.3066	0.3011	0.3098	0.3185	0.3087	0.3182	0.3126			0.31	3.2	*TM	
29	TM	1,2,4-Trichlorobenzene	0.3408	0.3409	0.3112	0.3403	0.3441	0.3301	0.3350	0.3367			0.33	3.1	TM	
30	TM	3,4-Dimethylphenol	0.5455	0.4964	0.4910	0.4802	0.5023	0.4740	0.4772	0.4907			0.49	4.6	TM	
31	TM	Naphthalene	1.044	1.055	1.078	1.053	1.069	1.024	1.025	1.045			1.0	1.8	TM	
32	TM	4-Chloroaniline	0.3632	0.4265	0.4327	0.4002	0.3874	0.3691	0.3641	0.3626			0.39	7.4	TM	
33	TM	2,6-Dichlorophenol	0.3045	0.3311	0.3196	0.2860	0.2901	0.2795	0.2735	0.2922			0.30	6.7	TM	
34	TM	Hexachloropropene	0.2445	0.2667	0.2704	0.2771	0.2732	0.2621	0.2668	0.2819			0.27	4.2	TM	
35	*TM	Hexachlorobutadiene	0.2289	0.2214	0.2210	0.2112	0.2149	0.2010	0.1986	0.2098			0.21	4.9	*TM	

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/07/16
Matrix: Instrument: Yoda Initials:

		Compound	5	10	20	40	50	60	80	100			Avg	%RSD		
36	TM	Caprolactum	0.1439	0.1548	0.1512	0.1546	0.1563	0.1592	0.1531	0.1616			0.15	3.5	TM	
37	*TM	4-Chloro-3-methylphenol	0.3364	0.3339	0.3371	0.3445	0.3342	0.3451	0.3311	0.3589			0.34	2.7	*TM	
38	TM	2-Methylnaphthalene	0.7065	0.6994	0.6918	0.6907	0.6745	0.6786	0.6440	0.6992			0.69	2.9	TM	
39	TM	1-Methylnaphthalene	0.7218	0.7325	0.6455	0.6679	0.6461	0.6599	0.6404	0.6966			0.68	5.3	TM	
40	I	Acenaphthene-D10(IS)														
41	**TMQ	Hexachlorocyclopentadiene	0.0352	0.0821	0.1454	0.1986	0.2357	0.2346	0.2693	0.2817			0.19	48	**TMQ	0.999
42	TM	1,2,4,5-Tetrachlorobenzene	0.5396	0.5929	0.5621	0.5192	0.5592	0.5294	0.5151	0.5315			0.54	4.8	TM	
43	*TM	2,4,6-Trichlorophenol	0.3344	0.3592	0.3491	0.3486	0.3682	0.3537	0.3343	0.3590			0.35	3.4	*TM	
44	TM	2,4,5-Trichlorophenol	0.3919	0.4003	0.4163	0.3688	0.3812	0.3816	0.3456	0.3771			0.38	5.5	TM	
45	S	2-Fluorobiphenyl(S)	1.278	1.499	1.336	1.200	1.255	1.168	1.148	1.204			1.3	9.0	S	
46	TM	1,1'-Biphenyl	1.579	1.616	1.598	1.463	1.490	1.434	1.358	1.453			1.5	6.1	TM	
47	TM	2-Chloronaphthalene	1.172	1.197	1.217	1.145	1.225	1.131	1.043	1.138			1.2	5.1	TM	
48	TM	2-Nitroaniline	0.3683	0.3867	0.3740	0.4057	0.4480	0.3960	0.3888	0.4178			0.40	6.5	TM	
49	TM	Dimethyl phthalate	1.403	1.430	1.345	1.384	1.539	1.344	1.277	1.410			1.4	5.5	TM	
50	TM	2,6-DNT	0.2902	0.3118	0.2967	0.3089	0.3396	0.3115	0.2967	0.3576			0.31	7.4	TM	
51	TM	Acenaphthylene	1.893	2.056	1.776	1.750	1.868	1.798	1.649	1.814			1.8	6.5	TM	
52	TM	3-Nitroaniline	0.3015	0.3535	0.3595	0.3549	0.3535	0.3405	0.3322	0.3482			0.34	5.5	TM	
53	*TM	Acenaphthene	1.206	1.354	1.171	1.111	1.135	1.077	1.054	1.138			1.2	8.1	*TM	
54	**TMQ	2,4-Dinitrophenol		0.0853	0.1314	0.1627	0.1649	0.1601	0.2070	0.2035			0.16	26	**TMQ	0.996
55	**TML	4-Nitrophenol	0.0179	0.2323	0.2452	0.2706	0.3006	0.2760	0.2907	0.3183			0.24	39	**TML	0.997
56	TM	Dibenzofuran	1.728	1.704	1.645	1.541	1.704	1.568	1.548	1.676			1.6	4.6	TM	
57	TM	2,4-DNT	0.3927	0.4369	0.4320	0.4428	0.4994	0.4500	0.4285	0.4667			0.44	7.0	TM	
58	TM	2,3,4,6-Tetrachlorophenol	0.2780	0.2939	0.2952	0.3210	0.3494	0.3145	0.2996	0.3397			0.31	7.8	TM	
59	TM	Diethyl phthalate	1.443	1.475	1.388	1.441	1.458	1.389	1.333	1.529			1.4	4.2	TM	
60	TM	4-Chlorophenyl phenyl ether	0.6635	0.6948	0.6104	0.6191	0.6447	0.5999	0.5965	0.6860			0.64	6.1	TM	
61	TM	Fluorene	1.411	1.429	1.285	1.274	1.358	1.224	1.221	1.393			1.3	6.3	TM	
62	TM	4-Nitroaniline	0.3060	0.3370	0.3011	0.3170	0.3477	0.3210	0.3358	0.3338			0.32	5.0	TM	
63	S	2,4,6-Tribromophenol(S)	0.1946	0.2125	0.1908	0.1921	0.2053	0.1876	0.1977	0.2239			0.20	6.2	S	
64	I	Phenanthrene-D10(IS)														
65	TM	4,6-Dinitro-2-methylphenol		0.1149	0.1515	0.1421	0.1500	0.1692	0.1636	0.1489			0.15	12	TM	
66	TM	Diphenyl amine	0.6122	0.5551	0.6348	0.5246	0.5612	0.5921	0.5417	0.5432			0.57	6.7	TM	
67	*TM	n-Nitrosodiphenylamine	0.6122	0.5551	0.6348	0.5246	0.5612	0.5921	0.5417	0.5432			0.57	6.7	*TM	
68	TM	1,2-Diphenylhydrazine	0.7947	0.7385	0.8154	0.7273	0.7623	0.9632	0.8905	0.8768			0.82	10	TM	
69	TM	4-Bromophenyl phenyl ether	0.2256	0.2010	0.2098	0.2179	0.1993	0.2279	0.1871	0.1888			0.21	7.6	TM	
70	TM	Hexachlorobenzene	0.2229	0.2118	0.2232	0.2136	0.2018	0.2342	0.2007	0.1953			0.21	6.3	TM	

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/07/16
Matrix: Instrument: Yoda
Initials:

		Compound	5	10	20	40	50	60	80	100			Avg	%RSD		
71	TM	Atrazine	0.2136	0.1976	0.2108	0.2007	0.2168	0.2165	0.1968	0.1967			0.21	4.4	TM	
72	*TML	Pentachlorophenol		0.0652	0.0888	0.0985	0.0970	0.0990	0.1107	0.1114			0.10	16	*TML	0.998
73	TM	Phenanthrene	1.144	1.128	1.146	1.069	1.069	1.062	1.009	1.014			1.1	5.0	TM	
74	TM	Anthracene	1.227	1.144	1.172	1.109	1.085	1.077	1.032	1.040			1.1	6.0	TM	
75	TM	Carbazol	1.068	1.073	1.153	0.9493	1.043	0.9621	0.9114	0.8832			1.0	9.2	TM	
76	TM	Di-n-butylphthalate	1.394	1.275	1.537	1.286	1.230	1.259	1.180	1.174			1.3	9.3	TM	
77	*TM	Fluoranthene	1.281	1.183	1.301	1.152	1.091	1.169	1.169	1.164			1.2	5.8	*TM	
78	I	Chrysene-D12(IS)														
79	TM	Benzidine	0.3957	0.4105	0.4699	0.4668	0.4739	0.4589	0.4621	0.4870			0.45	7.1	TM	
80	TM	Pyrene	1.421	1.287	1.412	1.333	1.431	1.352	1.245	1.372			1.4	4.9	TM	
81	S	Terphenyl-D14(S)	0.9641	0.9527	1.005	0.8842	0.8995	0.8347	0.8470	0.8492			0.90	6.9	S	
82	TM	Butyl benzylphthalate	0.6615	0.6073	0.6728	0.6922	0.6888	0.6250	0.6287	0.6373			0.65	4.8	TM	
83	TM	3,3'-Dichlorobenzidine	0.3845	0.4505	0.4988	0.4470	0.4416	0.4002	0.3899	0.4057			0.43	9.1	TM	
84	TM	Benz (a) anthracene	1.241	1.281	1.288	1.263	1.262	1.195	1.209	1.251			1.2	2.6	TM	
85	TM	Bis (2-ethylhexyl) phthalate	0.9437	0.8855	0.9320	0.8960	0.9347	0.9382	0.8781	0.9008			0.91	2.9	TM	
86	TM	Chrysene	1.291	1.177	1.223	1.163	1.206	1.256	1.142	1.247			1.2	4.2	TM	
87	*TM	Di-n-octylphthalate	1.601	1.536	1.745	1.580	1.838	1.525	1.513	1.572			1.6	7.2	*TM	
88	I	Perylene-D12(IS)														
89	TM	Benzo (b) fluoranthene	1.137	1.363	1.356	1.287	1.201	1.033	1.428	1.200			1.3	11	TM	
90	TM	Benzo (k) fluoranthene	1.302	1.071	1.186	1.172	1.214	1.184	1.211	1.174			1.2	5.4	TM	
91	*TM	Benzo (a) pyrene	1.164	1.037	1.248	1.228	1.224	1.129	1.192	1.122			1.2	6.0	*TM	
92	TM	Indeno (1,2,3-cd) pyrene	1.367	1.331	1.391	1.324	1.346	1.095	1.395	1.099			1.3	9.6	TM	
93	TM	Dibenz (a,h) anthracene	1.172	1.113	1.158	1.132	1.148	0.9093	1.186	0.9080			1.1	11	TM	
94	TM	Benzo (g,h,i) perylene	1.161	1.064	1.406	1.271	1.253	0.8838	1.091				1.2	15	TM	
95																
96																
97																
98																
99																
100																
101																
102																
103																
104																
105																

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y004.D Vial: 4
Acq On : 7 Dec 16 10:01 Operator: MA
Sample : 5ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	195458	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.29	136	827060	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.30	164	490768	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.03	188	877101	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.10	240	839105	40.00000 ppb		0.00
88) Perylene-D12(IS)	14.74	264	900919	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.38	112	52072	8.41676 ppb		0.03
Spiked Amount 200.000			Recovery =	4.209%		
5) Phenol-D6 (S)	4.51	99	89036	10.40389 ppb		0.00
Spiked Amount 200.000			Recovery =	5.202%		
21) Nitrobenzene-D5(S)	5.51	82	41840	4.84860 ppb		0.00
Spiked Amount 100.000			Recovery =	4.849%		
45) 2-Fluorobiphenyl(S)	7.54	172	78403	5.03098 ppb		0.00
Spiked Amount 100.000			Recovery =	5.031%		
63) 2,4,6-Tribromophenol(S)	9.23	330	23872	9.90525 ppb		0.00
Spiked Amount 200.000			Recovery =	4.953%		
81) Terphenyl-D14(S)	11.88	244	101120	5.31648 ppb		0.00
Spiked Amount 100.000			Recovery =	5.316%		
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.77	42	17464	3.81097 ppb		99
3) Pyridine	1.79	79	38617	3.94469 ppb		99
6) Phenol	4.53	94	47601	4.90399 ppb		95
7) Aniline	4.53	66	43393	4.54015 ppb		90
8) Bis (2-chloroethyl) ether	4.60	63	20566	4.71391 ppb		92
9) 2-Chlorophenol	4.65	128	39939	5.30721 ppb		95
10) 1,3-DCB	4.80	146	40566	4.97403 ppb		98
11) 1,4-DCB	4.88	146	43609	5.21809 ppb		96
12) Benzyl alcohol	5.07	108	19149	4.54883 ppb		90
13) 1,2-DCB	5.06	146	39360	5.05389 ppb		97
14) 2-Methylphenol	5.20	107	26445	4.63400 ppb		97
15) Bis (2-chloroisopropyl) et	5.18	45	45768	5.23802 ppb	#	53
16) Acetophenone	5.34	105	49921	4.69337 ppb		98
17) 3&4-Methylphenol	5.38	107	76111	10.08177 ppb		91
18) n-Nitrosodi-n-propylamine	5.33	70	26103	4.73122 ppb		90
19) Hexachloroethane	5.42	117	16326	4.71012 ppb	#	68
22) Nitrobenzene	5.53	77	41914	4.74777 ppb		98
23) Isophorone	5.78	82	69169	4.75245 ppb		93
24) 2-Nitrophenol	5.90	139	19072	4.53756 ppb		95
25) 2,4-Dimethylphenol	5.95	122	32456	4.95367 ppb		91
26) Benzoic acid	6.13	105	8358	6.59749 ppb		89
27) Bis (2-chloroethoxy) metha	6.04	93	39384	5.06082 ppb		97
28) 2,4-Dichlorophenol	6.19	162	29754	4.71459 ppb		94
29) 1,2,4-Trichlorobenzene	6.24	180	35230	5.05372 ppb		98
30) 3,4-Dimethylphenol	6.29	107	56394	5.39745 ppb		81
31) Naphthalene	6.31	128	107955	4.95797 ppb		100
32) 4-Chloroaniline	6.42	127	37545	4.85948 ppb		96
33) 2,6-Dichlorophenol	6.42	162	31478	5.16618 ppb		97
34) Hexachloropropene	6.42	213	25276	4.55752 ppb		98
35) Hexachlorobutadiene	6.46	225	23664	5.32227 ppb		92
36) Caprolactum	6.79	55	14872	4.52289 ppb		92
37) 4-Chloro-3-methylphenol	6.99	107	34775	4.82802 ppb		87

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y161207\1207Y004.D Vial: 4
Acq On : 7 Dec 16 10:01 Operator: MA
Sample : 5ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38) 2-Methylnaphthalene	7.11	142	73035	5.02428	ppb		98
39) 1-Methylnaphthalene	7.22	142	74622	5.35196	ppb		98
41) Hexachlorocyclopentadiene	7.29	237	2162	7.14608	ppb	#	91
42) 1,2,4,5-Tetrachlorobenzene	7.31	216	33104	4.95861	ppb		93
43) 2,4,6-Trichlorophenol	7.46	196	20513	4.63043	ppb		92
44) 2,4,5-Trichlorophenol	7.53	196	24042	5.12505	ppb		88
46) 1,1'-Biphenyl	7.65	154	96876	5.20831	ppb		97
47) 2-Chloronaphthalene	7.67	162	71906	4.90703	ppb		97
48) 2-Nitroaniline	7.82	65	22595	4.34279	ppb		78
49) Dimethyl phthalate	8.01	163	86082	4.79845	ppb		99
50) 2,6-DNT	8.10	165	17800	4.45834	ppb		80
51) Acenaphthylene	8.14	152	116157	5.09910	ppb		99
52) 3-Nitroaniline	8.31	138	18493	4.47392	ppb	#	34
53) Acenaphthene	8.34	154	74001	5.30414	ppb		97
54) 2,4-Dinitrophenol	8.51	184	1898	8.26475	ppb	#	71
55) 4-Nitrophenol	8.54	65	1096	7.02827	ppb	#	38
56) Dibenzofuran	8.54	168	105976	5.20957	ppb		89
57) 2,4-DNT	8.58	165	24091	4.26865	ppb		83
58) 2,3,4,6-Tetrachlorophenol	8.72	232	17055	4.67205	ppb		95
59) Diethyl phthalate	8.83	149	88512	4.85963	ppb		98
60) 4-Chlorophenyl phenyl ethe	8.95	204	40703	4.91663	ppb	#	76
61) Fluorene	8.94	166	86563	5.16554	ppb		96
62) 4-Nitroaniline	9.01	138	18769	4.76703	ppb		93
65) 4,6-Dinitro-2-methylphenol	9.05	198	8901	2.88665	ppb	#	85
66) Diphenyl amine	9.09	169	134244	11.16496	ppb		99
67) n-Nitrosodiphenylamine	9.09	169	134244	11.16496	ppb		99
68) 1,2-Diphenylhydrazine	9.13	77	87129	4.57707	ppb		99
69) 4-Bromophenyl phenyl ether	9.52	248	24730	5.36824	ppb	#	83
70) Hexachlorobenzene	9.59	284	24441	4.98065	ppb	#	74
71) Atrazine	9.72	200	11708	2.43094	ppb		95
72) Pentachlorophenol	9.84	266	6437	7.80595	ppb		92
73) Phenanthrene	10.05	178	125410	5.18209	ppb		98
74) Anthracene	10.12	178	134548	5.34573	ppb		98
75) Carbazol	10.32	167	117070	5.23894	ppb		99
76) Di-n-butylphthalate	10.72	149	152801	5.10773	ppb		100
77) Fluoranthene	11.44	202	140468	5.31106	ppb	#	97
79) Benzidine	11.62	184	41503	4.47439	ppb	#	89
80) Pyrene	11.70	202	149080	5.33068	ppb		99
82) Butyl benzylphthalate	12.46	149	69384	4.95412	ppb		100
83) 3,3'-Dichlorobenzidine	13.07	252	40328	4.68957	ppb	#	98
84) Benz (a) anthracene	13.09	228	130185	4.90624	ppb		99
85) Bis (2-ethylhexyl) phthala	13.13	149	98983	5.00821	ppb		99
86) Chrysene	13.14	228	135366	5.30692	ppb		94
87) Di-n-octylphthalate	13.84	149	167938	4.79507	ppb		99
89) Benzo (b) fluoranthene	14.29	252	127992	4.23678	ppb		95
90) Benzo (k) fluoranthene	14.32	252	146637	5.07643	ppb		97
91) Benzo (a) pyrene	14.68	252	131139	4.60945	ppb		94
92) Indeno (1,2,3-cd) pyrene	16.29	276	153935	4.75506	ppb	#	88
93) Dibenz (a,h) anthracene	16.31	278	131937	4.79035	ppb		96
94) Benzo (g,h,i) perylene	16.76	276	130754	4.77536	ppb		95

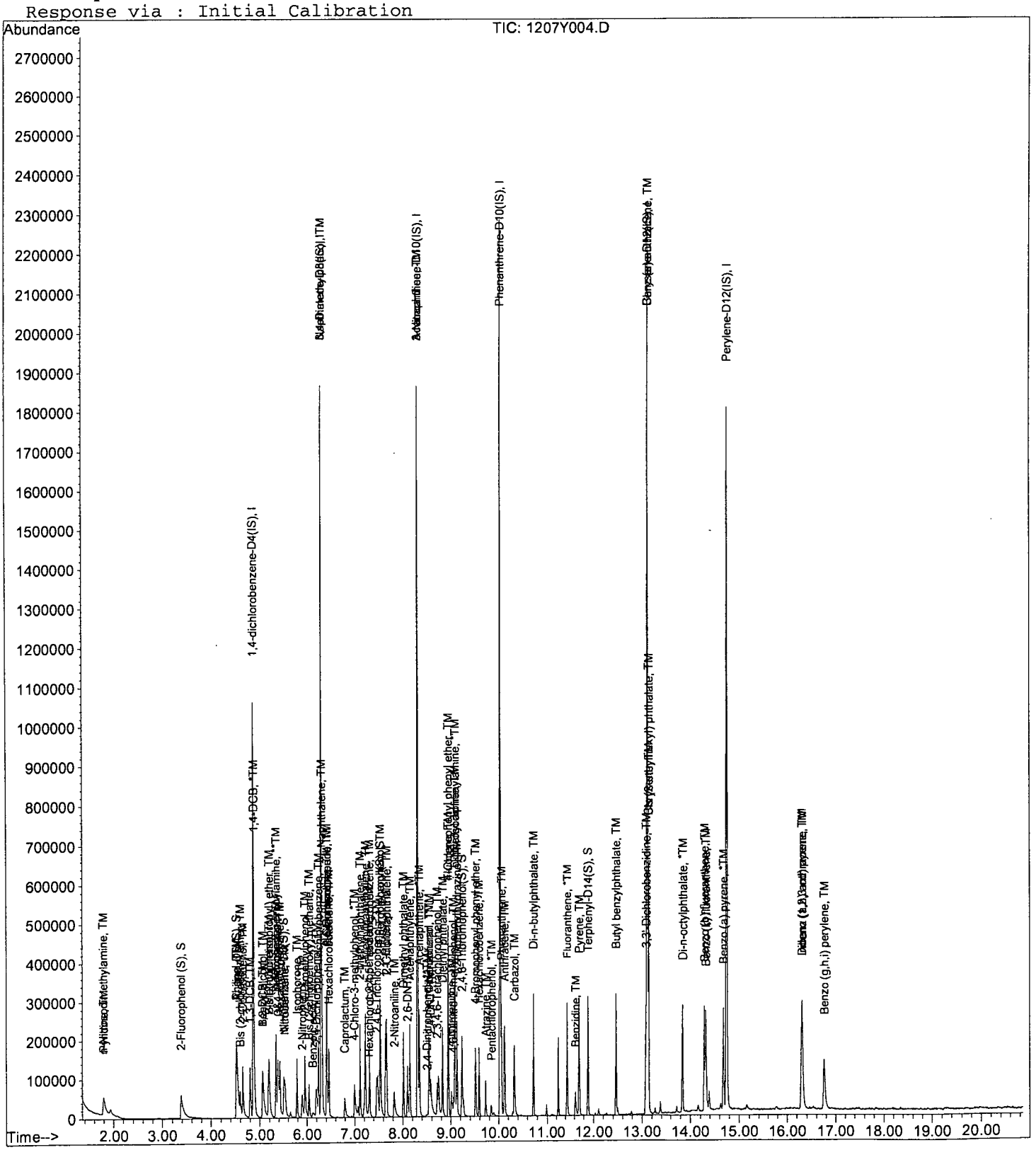
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y004.D Vial: 4
Acq On : 7 Dec 16 10:01 Operator: MA
Sample : 5ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y005.D Vial: 5
Acq On : 7 Dec 16 10:32 Operator: MA
Sample : 10ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	199996	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.29	136	835678	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	491315	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.02	188	976841	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.11	240	927503	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.75	264	990341	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.37	112	129921	20.52354 ppb	0.02
Spiked Amount 200.000			Recovery =	10.262%	
5) Phenol-D6 (S)	4.51	99	178462	20.38018 ppb	0.00
Spiked Amount 200.000			Recovery =	10.190%	
21) Nitrobenzene-D5(S)	5.50	82	90507	10.38019 ppb	0.00
Spiked Amount 100.000			Recovery =	10.380%	
45) 2-Fluorobiphenyl(S)	7.54	172	184156	11.80380 ppb	0.00
Spiked Amount 100.000			Recovery =	11.804%	
63) 2,4,6-Tribromophenol(S)	9.23	330	52209	21.63904 ppb	0.00
Spiked Amount 200.000			Recovery =	10.820%	
81) Terphenyl-D14(S)	11.89	244	220919	10.50802 ppb	0.00
Spiked Amount 100.000			Recovery =	10.508%	
Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.76	42	40937	8.73052 ppb	87
3) Pyridine	1.78	79	86226	8.60805 ppb	94
6) Phenol	4.53	94	95766	9.64222 ppb	94
7) Aniline	4.52	66	91627	9.36928 ppb #	79
8) Bis (2-chloroethyl) ether	4.59	63	39545	8.85840 ppb	97
9) 2-Chlorophenol	4.65	128	81615	10.59915 ppb	96
10) 1,3-DCB	4.80	146	83321	9.98465 ppb	99
11) 1,4-DCB	4.89	146	89069	10.41583 ppb	97
12) Benzyl alcohol	5.06	108	42008	9.75255 ppb	93
13) 1,2-DCB	5.06	146	77858	9.77026 ppb	96
14) 2-Methylphenol	5.20	107	56924	9.74855 ppb	92
15) Bis (2-chloroisopropyl) et	5.19	45	87550	9.79249 ppb	84
16) Acetophenone	5.33	105	103596	9.51867 ppb	98
17) 3&4-Methylphenol	5.36	107	152989	19.80531 ppb	96
18) n-Nitrosodi-n-propylamine	5.33	70	52236	9.25304 ppb	95
19) Hexachloroethane	5.42	117	35267	9.94382 ppb	92
22) Nitrobenzene	5.53	77	84968	9.52541 ppb	90
23) Isophorone	5.79	82	143360	9.74837 ppb	96
24) 2-Nitrophenol	5.89	139	40432	9.52028 ppb	93
25) 2,4-Dimethylphenol	5.95	122	70653	10.67236 ppb	94
26) Benzoic acid	6.11	105	32406	10.34814 ppb	90
27) Bis (2-chloroethoxy) metha	6.04	93	80395	10.22417 ppb	98
28) 2,4-Dichlorophenol	6.18	162	64057	10.04530 ppb	97
29) 1,2,4-Trichlorobenzene	6.24	180	71216	10.11054 ppb	95
30) 3,4-Dimethylphenol	6.29	107	103715	9.82416 ppb	98
31) Naphthalene	6.32	128	220486	10.02167 ppb	99
32) 4-Chloroaniline	6.40	127	89109	11.41451 ppb	99
33) 2,6-Dichlorophenol	6.41	162	69177	11.23627 ppb	98
34) Hexachloropropene	6.41	213	55717	9.94274 ppb	97
35) Hexachlorobutadiene	6.46	225	46253	10.29548 ppb	97
36) Caprolactum	6.79	55	32338	9.73326 ppb	96
37) 4-Chloro-3-methylphenol	6.99	107	69749	9.58380 ppb	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y005.D Vial: 5
Acq On : 7 Dec 16 10:32 Operator: MA
Sample : 10ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38) 2-Methylnaphthalene	7.11	142	146114	9.94793	ppb		99
39) 1-Methylnaphthalene	7.22	142	153034	10.86256	ppb		99
41) Hexachlorocyclopentadiene	7.28	237	10085	10.30509	ppb		83
42) 1,2,4,5-Tetrachlorobenzene	7.31	216	72826	10.89639	ppb		96
43) 2,4,6-Trichlorophenol	7.46	196	44123	9.94887	ppb		99
44) 2,4,5-Trichlorophenol	7.53	196	49164	10.46865	ppb		96
46) 1,1'-Biphenyl	7.65	154	198489	10.65941	ppb	#	96
47) 2-Chloronaphthalene	7.66	162	146978	10.01894	ppb		94
48) 2-Nitroaniline	7.81	65	47494	9.11824	ppb		90
49) Dimethyl phthalate	8.02	163	175672	9.78154	ppb	#	97
50) 2,6-DNT	8.09	165	38304	9.58326	ppb	#	73
51) Acenaphthylene	8.14	152	252596	11.07621	ppb		99
52) 3-Nitroaniline	8.30	138	43416	10.49172	ppb	#	91
53) Acenaphthene	8.34	154	166258	11.90354	ppb		96
54) 2,4-Dinitrophenol	8.46	184	10475	11.87415	ppb	#	60
55) 4-Nitrophenol	8.57	65	28528	13.90485	ppb		75
56) Dibenzofuran	8.55	168	209346	10.27958	ppb		88
57) 2,4-DNT	8.57	165	53666	9.49842	ppb		97
58) 2,3,4,6-Tetrachlorophenol	8.71	232	36099	9.87795	ppb		95
59) Diethyl phthalate	8.83	149	181223	9.93873	ppb		99
60) 4-Chlorophenyl phenyl ethe	8.95	204	85344	10.29746	ppb		87
61) Fluorene	8.95	166	175510	10.46168	ppb		97
62) 4-Nitroaniline	9.00	138	41396	10.50223	ppb		90
65) 4,6-Dinitro-2-methylphenol	9.05	198	28069	8.17351	ppb	#	74
66) Diphenyl amine	9.09	169	271128	20.24708	ppb		99
67) n-Nitrosodiphenylamine	9.09	169	271128	20.24708	ppb		99
68) 1,2-Diphenylhydrazine	9.13	77	180355	8.50705	ppb	#	91
69) 4-Bromophenyl phenyl ether	9.51	248	49097	9.56948	ppb		92
70) Hexachlorobenzene	9.59	284	51734	9.46606	ppb		86
71) Atrazine	9.73	200	24123	4.49726	ppb		94
72) Pentachlorophenol	9.84	266	15917	12.48338	ppb		97
73) Phenanthrene	10.05	178	275480	10.22088	ppb		98
74) Anthracene	10.12	178	279374	9.96647	ppb		100
75) Carbazol	10.32	167	261994	10.52724	ppb		98
76) Di-n-butylphthalate	10.72	149	311416	9.34691	ppb		97
77) Fluoranthene	11.43	202	289008	9.81159	ppb	#	97
79) Benzidine	11.62	184	95179	9.28318	ppb		97
80) Pyrene	11.69	202	298339	9.65105	ppb		98
82) Butyl benzylphthalate	12.46	149	140818	9.09633	ppb		87
83) 3,3'-Dichlorobenzidine	13.07	252	104450	10.98842	ppb	#	93
84) Benz (a) anthracene	13.09	228	297055	10.12805	ppb		97
85) Bis (2-ethylhexyl) phthala	13.12	149	205324	9.39859	ppb	#	98
86) Chrysene	13.13	228	272893	9.67890	ppb		99
87) Di-n-octylphthalate	13.84	149	356276	9.20309	ppb	#	91
89) Benzo (b) fluoranthene	14.28	252	337345	10.15848	ppb	#	97
90) Benzo (k) fluoranthene	14.31	252	265091	8.34854	ppb		98
91) Benzo (a) pyrene	14.67	252	256785	8.21085	ppb	#	97
92) Indeno (1,2,3-cd) pyrene	16.30	276	329541	9.26038	ppb		96
93) Dibenz (a,h) anthracene	16.31	278	275683	9.10566	ppb		98
94) Benzo (g,h,i) perylene	16.74	276	263509	8.75484	ppb		98

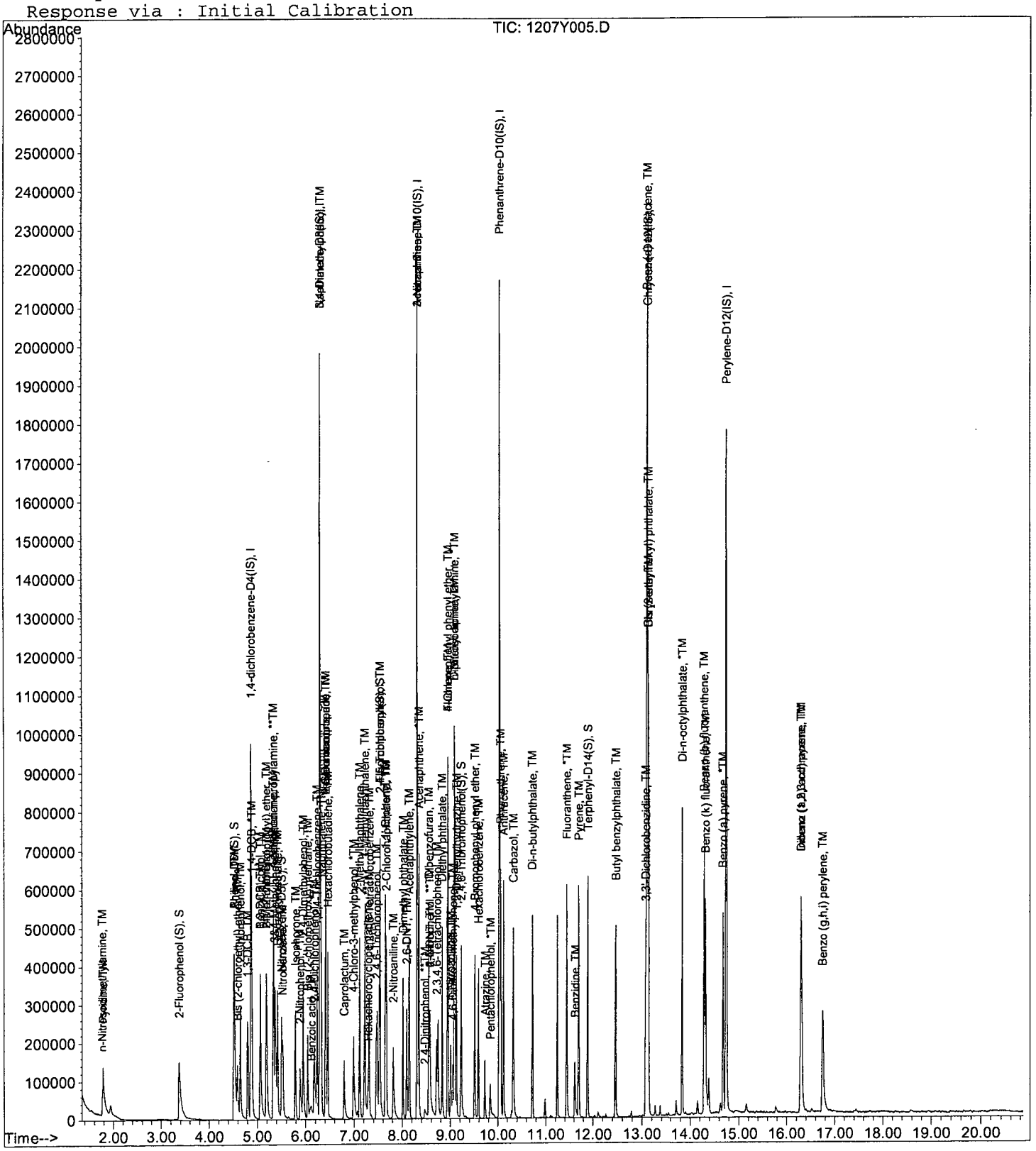
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y005.D Vial: 5
Acq On : 7 Dec 16 10:32 Operator: MA
Sample : 10ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y006.D Vial: 6
Acq On : 7 Dec 16 11:02 Operator: MA
Sample : 20ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	213922	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.30	136	877521	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	527221	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	919632	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.10	240	874733	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.75	264	909225	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.36	112	271002	40.02316 ppb	0.00
Spiked Amount 200.000			Recovery =	20.012%	
5) Phenol-D6 (S)	4.50	99	390048	41.64340 ppb	0.00
Spiked Amount 200.000			Recovery =	20.822%	
21) Nitrobenzene-D5(S)	5.50	82	172033	18.78955 ppb	0.00
Spiked Amount 100.000			Recovery =	18.790%	
45) 2-Fluorobiphenyl(S)	7.53	172	352090	21.03087 ppb	0.00
Spiked Amount 100.000			Recovery =	21.031%	
63) 2,4,6-Tribromophenol(S)	9.23	330	100581	38.84865 ppb	0.00
Spiked Amount 200.000			Recovery =	19.425%	
81) Terphenyl-D14(S)	11.89	244	439341	22.15795 ppb	0.00
Spiked Amount 100.000			Recovery =	22.158%	
Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.76	42	87421	17.43034 ppb	92
3) Pyridine	1.77	79	177528	16.56912 ppb	97
6) Phenol	4.52	94	221931	20.89054 ppb	96
7) Aniline	4.52	66	202813	19.38850 ppb	86
8) Bis (2-chloroethyl) ether	4.58	63	97711	20.46317 ppb	93
9) 2-Chlorophenol	4.65	128	172852	20.98656 ppb	99
10) 1,3-DCB	4.80	146	179050	20.05944 ppb	100
11) 1,4-DCB	4.89	146	178026	19.46331 ppb	97
12) Benzyl alcohol	5.06	108	98047	21.28071 ppb	97
13) 1,2-DCB	5.06	146	169067	19.83480 ppb	97
14) 2-Methylphenol	5.19	107	126350	20.22952 ppb	97
15) Bis (2-chloroisopropyl) et	5.19	45	195850	20.47984 ppb	93
16) Acetophenone	5.33	105	217146	18.65310 ppb	96
17) 3&4-Methylphenol	5.36	107	312061	37.76824 ppb	99
18) n-Nitrosodi-n-propylamine	5.33	70	112913	18.69926 ppb	99
19) Hexachloroethane	5.42	117	69201	18.24159 ppb	91
22) Nitrobenzene	5.52	77	170617	18.21513 ppb	98
23) Isophorone	5.79	82	277084	17.94308 ppb	99
24) 2-Nitrophenol	5.88	139	85225	19.11054 ppb	95
25) 2,4-Dimethylphenol	5.95	122	132147	19.00942 ppb	99
26) Benzoic acid	6.09	105	91123	19.04059 ppb	95
27) Bis (2-chloroethoxy) metha	6.04	93	161526	19.56243 ppb	97
28) 2,4-Dichlorophenol	6.17	162	132126	19.73177 ppb	98
29) 1,2,4-Trichlorobenzene	6.24	180	136552	18.46189 ppb	97
30) 3,4-Dimethylphenol	6.29	107	215414	19.43164 ppb	99
31) Naphthalene	6.32	128	472793	20.46500 ppb	100
32) 4-Chloroaniline	6.40	127	189841	23.15833 ppb	96
33) 2,6-Dichlorophenol	6.40	162	140216	21.68899 ppb	97
34) Hexachloropropene	6.41	213	118650	20.16357 ppb	99
35) Hexachlorobutadiene	6.46	225	96965	20.55433 ppb	96
36) Caprolactum	6.80	55	66358	19.02041 ppb	94
37) 4-Chloro-3-methylphenol	6.99	107	147903	19.35345 ppb	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y006.D Vial: 6
Acq On : 7 Dec 16 11:02 Operator: MA
Sample : 20ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38) 2-Methylnaphthalene	7.11	142	303522	19.67943	ppb		99
39) 1-Methylnaphthalene	7.22	142	283238	19.14597	ppb		99
41) Hexachlorocyclopentadiene	7.29	237	38317	19.84270	ppb		95
42) 1,2,4,5-Tetrachlorobenzene	7.31	216	148167	20.65927	ppb		98
43) 2,4,6-Trichlorophenol	7.46	196	92029	19.33751	ppb		97
44) 2,4,5-Trichlorophenol	7.52	196	109748	21.77747	ppb		97
46) 1,1'-Biphenyl	7.65	154	421333	21.08577	ppb	#	98
47) 2-Chloronaphthalene	7.66	162	320827	20.38017	ppb		97
48) 2-Nitroaniline	7.81	65	98585	17.63805	ppb		95
49) Dimethyl phthalate	8.02	163	354455	18.39218	ppb		99
50) 2,6-DNT	8.09	165	78220	18.23703	ppb	#	70
51) Acenaphthylene	8.15	152	468200	19.13214	ppb		100
52) 3-Nitroaniline	8.29	138	94776	21.34336	ppb		82
53) Acenaphthene	8.34	154	308667	20.59449	ppb		98
54) 2,4-Dinitrophenol	8.44	184	34650	21.05674	ppb		92
55) 4-Nitrophenol	8.55	65	64643	21.85482	ppb		87
56) Dibenzofuran	8.55	168	433602	19.84127	ppb		95
57) 2,4-DNT	8.57	165	113885	18.78390	ppb	#	69
58) 2,3,4,6-Tetrachlorophenol	8.71	232	77826	19.84558	ppb		96
59) Diethyl phthalate	8.83	149	365822	18.69626	ppb		94
60) 4-Chlorophenyl phenyl ethe	8.95	204	160915	18.09343	ppb		95
61) Fluorene	8.95	166	338778	18.81837	ppb		100
62) 4-Nitroaniline	9.00	138	79383	18.76799	ppb		95
65) 4,6-Dinitro-2-methylphenol	9.05	198	69659	21.54609	ppb	#	85
66) Diphenyl amine	9.09	169	583796	46.30830	ppb		100
67) n-Nitrosodiphenylamine	9.09	169	583796	46.30830	ppb		100
68) 1,2-Diphenylhydrazine	9.13	77	374925	18.78473	ppb	#	91
69) 4-Bromophenyl phenyl ether	9.51	248	96477	19.97408	ppb		93
70) Hexachlorobenzene	9.59	284	102637	19.94834	ppb		87
71) Atrazine	9.73	200	48458	9.59604	ppb		94
72) Pentachlorophenol	9.84	266	40851	26.44051	ppb		95
73) Phenanthrene	10.05	178	526900	20.76520	ppb		98
74) Anthracene	10.12	178	538899	20.42079	ppb		99
75) Carbazol	10.32	167	530270	22.63237	ppb		97
76) Di-n-butylphthalate	10.73	149	706599	22.52735	ppb		99
77) Fluoranthene	11.43	202	598343	21.57691	ppb	#	97
79) Benzidine	11.61	184	205525	21.25496	ppb		99
80) Pyrene	11.69	202	617378	21.17657	ppb		99
82) Butyl benzylphthalate	12.46	149	294257	20.15461	ppb		91
83) 3,3'-Dichlorobenzidine	13.07	252	218137	24.33302	ppb	#	95
84) Benz (a) anthracene	13.09	228	563481	20.37081	ppb		100
85) Bis (2-ethylhexyl) phthala	13.12	149	407629	19.78463	ppb	#	96
86) Chrysene	13.13	228	535016	20.12056	ppb		99
87) Di-n-octylphthalate	13.84	149	763144	20.90228	ppb	#	92
89) Benzo (b) fluoranthene	14.28	252	616293	20.21412	ppb	#	98
90) Benzo (k) fluoranthene	14.31	252	538976	18.48836	ppb		98
91) Benzo (a) pyrene	14.67	252	567407	19.76179	ppb		98
92) Indeno (1,2,3-cd) pyrene	16.29	276	632150	19.34875	ppb		97
93) Dibenz (a,h) anthracene	16.31	278	526382	18.93720	ppb		98
94) Benzo (g,h,i) perylene	16.74	276	639018	23.12486	ppb		97

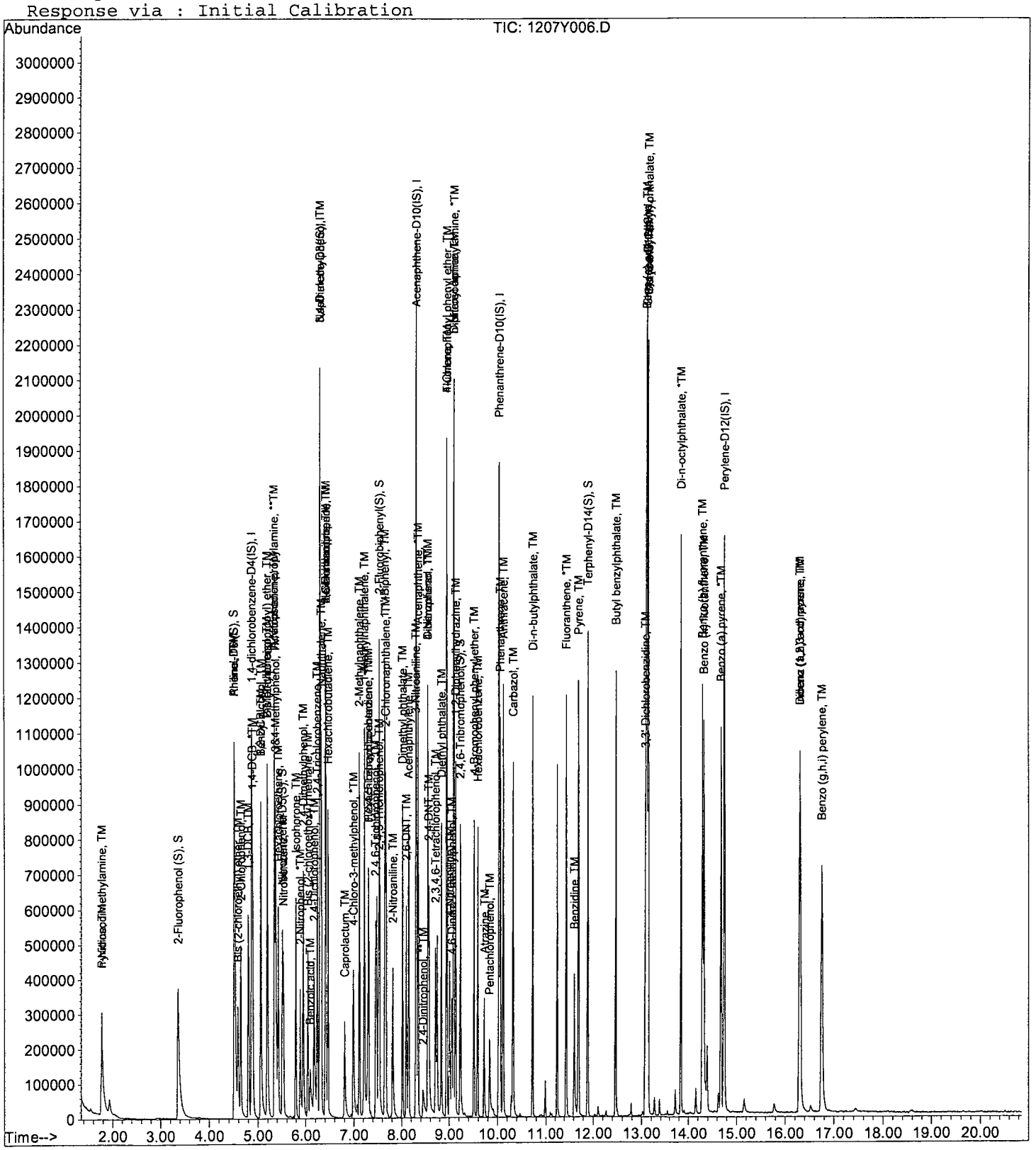
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y006.D Vial: 6
Acq On : 7 Dec 16 11:02 Operator: MA
Sample : 20ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y007.D Vial: 7
Acq On : 7 Dec 16 11:32 Operator: MA
Sample : 40ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	200058	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.30	136	812959	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.31	164	497677	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.03	188	928405	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.11	240	850533	40.00000 ppb		0.00
88) Perylene-D12(IS)	14.75	264	888701	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.35	112	570340	90.06835 ppb		0.00
Spiked Amount 200.000			Recovery =	45.034%		
5) Phenol-D6 (S)	4.50	99	704877	80.47129 ppb		0.00
Spiked Amount 200.000			Recovery =	40.236%		
21) Nitrobenzene-D5(S)	5.50	82	325441	38.36770 ppb		0.00
Spiked Amount 100.000			Recovery =	38.368%		
45) 2-Fluorobiphenyl(S)	7.54	172	597194	37.78888 ppb		0.00
Spiked Amount 100.000			Recovery =	37.789%		
63) 2,4,6-Tribromophenol(S)	9.23	330	191228	78.24500 ppb		0.00
Spiked Amount 200.000			Recovery =	39.123%		
81) Terphenyl-D14(S)	11.89	244	752070	39.00950 ppb		0.00
Spiked Amount 100.000			Recovery =	39.009%		
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.75	42	161566	34.44606 ppb		97
3) Pyridine	1.76	79	387358	38.65847 ppb		98
6) Phenol	4.52	94	400577	40.31969 ppb		93
7) Aniline	4.51	66	377482	38.58729 ppb	#	75
8) Bis (2-chloroethyl) ether	4.59	63	179689	40.23931 ppb		98
9) 2-Chlorophenol	4.64	128	315428	40.95120 ppb		91
10) 1,3-DCB	4.80	146	332809	39.86933 ppb		99
11) 1,4-DCB	4.89	146	332016	38.81430 ppb		99
12) Benzyl alcohol	5.05	108	172333	39.99630 ppb		92
13) 1,2-DCB	5.06	146	296826	37.23663 ppb		100
14) 2-Methylphenol	5.19	107	223633	38.28652 ppb		95
15) Bis (2-chloroisopropyl) et	5.19	45	337003	37.68221 ppb		98
16) Acetophenone	5.34	105	403185	37.03421 ppb		99
17) 3&4-Methylphenol	5.36	107	576124	74.55945 ppb		97
18) n-Nitrosodi-n-propylamine	5.34	70	205499	36.39064 ppb		92
19) Hexachloroethane	5.42	117	132371	37.31150 ppb		93
22) Nitrobenzene	5.52	77	329118	37.92717 ppb		95
23) Isophorone	5.79	82	544538	38.06296 ppb		95
24) 2-Nitrophenol	5.88	139	167729	40.59784 ppb		97
25) 2,4-Dimethylphenol	5.95	122	256596	39.84284 ppb		99
26) Benzoic acid	6.12	105	207583	40.37949 ppb		96
27) Bis (2-chloroethoxy) metha	6.04	93	311390	40.70745 ppb		99
28) 2,4-Dichlorophenol	6.16	162	251852	40.59868 ppb		93
29) 1,2,4-Trichlorobenzene	6.24	180	276620	40.36924 ppb		98
30) 3,4-Dimethylphenol	6.28	107	390385	38.01171 ppb		99
31) Naphthalene	6.32	128	855871	39.98876 ppb		99
32) 4-Chloroaniline	6.40	127	325340	42.83942 ppb		96
33) 2,6-Dichlorophenol	6.40	162	232500	38.81983 ppb		95
34) Hexachloropropene	6.42	213	225297	41.32796 ppb		97
35) Hexachlorobutadiene	6.46	225	171693	39.28527 ppb		94
36) Caprolactum	6.82	55	125688	38.88743 ppb		97
37) 4-Chloro-3-methylphenol	6.98	107	280036	39.55342 ppb		87

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y007.D Vial: 7
Acq On : 7 Dec 16 11:32 Operator: MA
Sample : 40ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.11	142	561485	39.29610	ppb		100
39)	1-Methylnaphthalene	7.22	142	542998	39.61986	ppb		98
41)	Hexachlorocyclopentadiene	7.29	237	98846	39.78650	ppb		94
42)	1,2,4,5-Tetrachlorobenzene	7.31	216	258378	38.16490	ppb		97
43)	2,4,6-Trichlorophenol	7.45	196	173513	38.62362	ppb		100
44)	2,4,5-Trichlorophenol	7.51	196	183541	38.58238	ppb	#	88
46)	1,1'-Biphenyl	7.65	154	728113	38.60182	ppb	#	97
47)	2-Chloronaphthalene	7.67	162	569966	38.35579	ppb		98
48)	2-Nitroaniline	7.81	65	201923	38.27108	ppb		97
49)	Dimethyl phthalate	8.02	163	688771	37.86099	ppb		99
50)	2,6-DNT	8.10	165	153741	37.97267	ppb		91
51)	Acenaphthylene	8.15	152	870855	37.69841	ppb		100
52)	3-Nitroaniline	8.29	138	176613	42.13394	ppb		87
53)	Acenaphthene	8.34	154	553092	39.09340	ppb		100
54)	2,4-Dinitrophenol	8.45	184	80953	41.10463	ppb		83
55)	4-Nitrophenol	8.54	65	134675	40.08311	ppb		98
56)	Dibenzofuran	8.55	168	766792	37.17071	ppb		98
57)	2,4-DNT	8.58	165	220382	38.50708	ppb		97
58)	2,3,4,6-Tetrachlorophenol	8.71	232	159761	43.15738	ppb		96
59)	Diethyl phthalate	8.84	149	717251	38.83302	ppb		98
60)	4-Chlorophenyl phenyl ethe	8.95	204	308111	36.70089	ppb		96
61)	Fluorene	8.95	166	633972	37.30629	ppb		100
62)	4-Nitroaniline	9.01	138	157741	39.50755	ppb		89
65)	4,6-Dinitro-2-methylphenol	9.05	198	131972	40.43428	ppb	#	84
66)	Diphenyl amine	9.10	169	974102	76.53830	ppb		99
67)	n-Nitrosodiphenylamine	9.10	169	974102	76.53830	ppb		99
68)	1,2-Diphenylhydrazine	9.13	77	675207	33.50998	ppb		95
69)	4-Bromophenyl phenyl ether	9.51	248	202318	41.49103	ppb		94
70)	Hexachlorobenzene	9.59	284	198345	38.18569	ppb		91
71)	Atrazine	9.73	200	93179	18.27769	ppb		100
72)	Pentachlorophenol	9.83	266	91407	50.75984	ppb		95
73)	Phenanthrene	10.06	178	992611	38.74928	ppb		99
74)	Anthracene	10.12	178	1029607	38.64677	ppb		99
75)	Carbazol	10.32	167	881300	37.25919	ppb		99
76)	Di-n-butylphthalate	10.73	149	1193622	37.69472	ppb		99
77)	Fluoranthene	11.43	202	1069844	38.21520	ppb	#	96
79)	Benzidine	11.61	184	397025	42.22773	ppb		99
80)	Pyrene	11.70	202	1133899	40.00029	ppb		99
82)	Butyl benzylphthalate	12.47	149	588724	41.47093	ppb		93
83)	3,3'-Dichlorobenzidine	13.08	252	380229	43.62107	ppb		97
84)	Benz (a) anthracene	13.10	228	1074534	39.95154	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.13	149	762045	38.03889	ppb		98
86)	Chrysene	13.13	228	989386	38.26692	ppb		100
87)	Di-n-octylphthalate	13.84	149	1343797	37.85342	ppb	#	87
89)	Benzo (b) fluoranthene	14.28	252	1144127	38.39349	ppb	#	98
90)	Benzo (k) fluoranthene	14.32	252	1041436	36.54915	ppb		99
91)	Benzo (a) pyrene	14.68	252	1090904	38.87173	ppb		98
92)	Indeno (1,2,3-cd) pyrene	16.30	276	1176312	36.83588	ppb		98
93)	Dibenz (a,h) anthracene	16.32	278	1006185	37.03465	ppb		99
94)	Benzo (g,h,i) perylene	16.75	276	1129852	41.83148	ppb		97

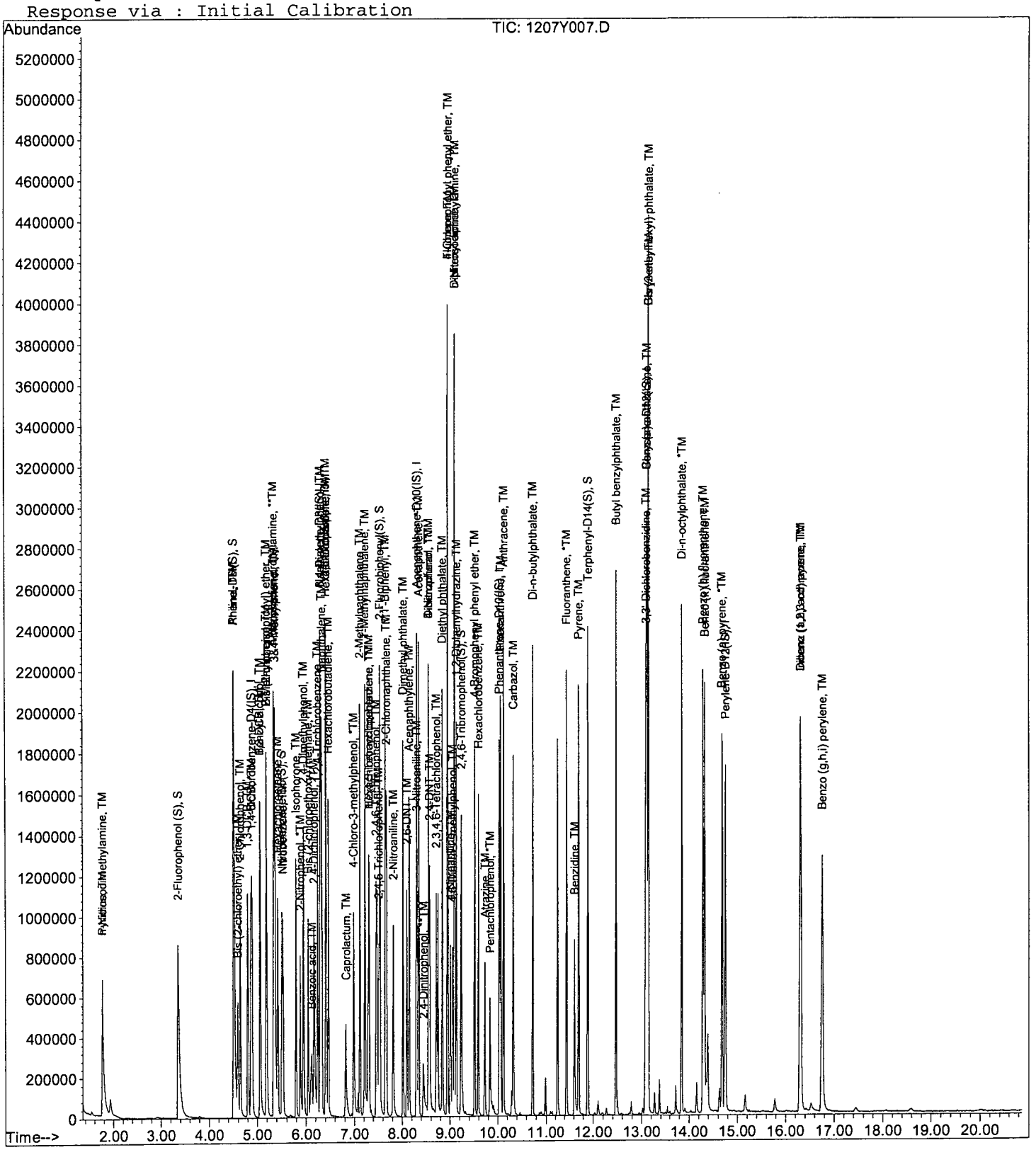
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y007.D Vial: 7
Acq On : 7 Dec 16 11:32 Operator: MA
Sample : 40ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y008.D Vial: 8
Acq On : 7 Dec 16 12:02 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	195270	40.00000	ppb	0.00
20) Napthalene-D8(IS)	6.30	136	816895	40.00000	ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	475200	40.00000	ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	975541	40.00000	ppb	0.00
78) Chrysene-D12(IS)	13.10	240	853105	40.00000	ppb	0.00
88) Perylene-D12(IS)	14.75	264	871056	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.35	112	695029	112.45058	ppb	0.00
Spiked Amount 200.000			Recovery =	56.226%		
5) Phenol-D6 (S)	4.51	99	832830	97.41019	ppb	0.00
Spiked Amount 200.000			Recovery =	48.705%		
21) Nitrobenzene-D5(S)	5.50	82	421258	49.42470	ppb	0.00
Spiked Amount 100.000			Recovery =	49.425%		
45) 2-Fluorobiphenyl(S)	7.53	172	745324	49.39294	ppb	0.00
Spiked Amount 100.000			Recovery =	49.393%		
63) 2,4,6-Tribromophenol(S)	9.23	330	243923	104.52712	ppb	0.00
Spiked Amount 200.000			Recovery =	52.263%		
81) Terphenyl-D14(S)	11.89	244	959232	49.60488	ppb	0.00
Spiked Amount 100.000			Recovery =	49.605%		
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.75	42	207992	45.43145	ppb	100
3) Pyridine	1.76	79	499289	51.05103	ppb	100
6) Phenol	4.52	94	480106	49.50952	ppb	100
7) Aniline	4.52	66	456200	47.77753	ppb	100
8) Bis (2-chloroethyl) ether	4.59	63	206942	47.47862	ppb	100
9) 2-Chlorophenol	4.65	128	370436	49.27197	ppb	100
10) 1,3-DCB	4.80	146	396306	48.64015	ppb	100
11) 1,4-DCB	4.89	146	407144	48.76421	ppb	100
12) Benzyl alcohol	5.06	108	223746	53.20189	ppb	100
13) 1,2-DCB	5.06	146	388817	49.97284	ppb	100
14) 2-Methylphenol	5.19	107	277560	48.68411	ppb	100
15) Bis (2-chloroisopropyl) et	5.19	45	424279	48.60428	ppb	100
16) Acetophenone	5.33	105	510342	48.02645	ppb	100
17) 3&4-Methylphenol	5.36	107	744509	98.71362	ppb	100
18) n-Nitrosodi-n-propylamine	5.34	70	262564	47.63603	ppb	100
19) Hexachloroethane	5.42	117	166560	48.09955	ppb	100
22) Nitrobenzene	5.52	77	426332	48.89327	ppb	100
23) Isophorone	5.80	82	706760	49.16418	ppb	100
24) 2-Nitrophenol	5.88	139	213979	51.54284	ppb	100
25) 2,4-Dimethylphenol	5.95	122	323836	50.04122	ppb	100
26) Benzoic acid	6.13	105	279445	53.40557	ppb	100
27) Bis (2-chloroethoxy) metha	6.04	93	396181	51.54248	ppb	100
28) 2,4-Dichlorophenol	6.17	162	325223	52.17353	ppb	100
29) 1,2,4-Trichlorobenzene	6.24	180	351337	51.02621	ppb	100
30) 3,4-Dimethylphenol	6.29	107	512874	49.69783	ppb	100
31) Naphthalene	6.32	128	1091949	50.77318	ppb	100
32) 4-Chloroaniline	6.40	127	395557	51.83434	ppb	100
33) 2,6-Dichlorophenol	6.41	162	296250	49.22564	ppb	100
34) Hexachloropropene	6.42	213	279000	50.93252	ppb	100
35) Hexachlorobutadiene	6.46	225	219413	49.96224	ppb	100
36) Caprolactum	6.83	55	159640	49.15407	ppb	100
37) 4-Chloro-3-methylphenol	6.99	107	341306	47.97517	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y008.D Vial: 8
Acq On : 7 Dec 16 12:02 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38)	2-Methylnaphthalene	7.11	142	688780	47.97270	ppb	100
39)	1-Methylnaphthalene	7.22	142	659731	47.90535	ppb	100
41)	Hexachlorocyclopentadiene	7.29	237	140004	52.99808	ppb	100
42)	1,2,4,5-Tetrachlorobenzene	7.31	216	332171	51.38560	ppb	100
43)	2,4,6-Trichlorophenol	7.46	196	218731	50.99205	ppb	100
44)	2,4,5-Trichlorophenol	7.52	196	226443	49.85239	ppb	100
46)	1,1'-Biphenyl	7.66	154	885084	49.14334	ppb	100
47)	2-Chloronaphthalene	7.67	162	727438	51.26833	ppb	100
48)	2-Nitroaniline	7.81	65	266093	52.81891	ppb	100
49)	Dimethyl phthalate	8.02	163	914001	52.61807	ppb	100
50)	2,6-DNT	8.10	165	201713	52.17789	ppb	100
51)	Acenaphthylene	8.15	152	1109739	50.31172	ppb	100
52)	3-Nitroaniline	8.30	138	209961	52.45890	ppb	100
53)	Acenaphthene	8.34	154	674472	49.92765	ppb	100
54)	2,4-Dinitrophenol	8.44	184	97936	50.08681	ppb	100
55)	4-Nitrophenol	8.54	65	178570	53.03676	ppb	100
56)	Dibenzofuran	8.55	168	1012092	51.38241	ppb	100
57)	2,4-DNT	8.57	165	296625	54.28044	ppb	100
58)	2,3,4,6-Tetrachlorophenol	8.71	232	207535	58.71469	ppb	100
59)	Diethyl phthalate	8.83	149	866198	49.11547	ppb	100
60)	4-Chlorophenyl phenyl ethe	8.95	204	382969	47.77538	ppb	100
61)	Fluorene	8.95	166	806446	49.70024	ppb	100
62)	4-Nitroaniline	9.01	138	206542	54.17700	ppb	100
65)	4,6-Dinitro-2-methylphenol	9.06	198	182950	53.34482	ppb	100
66)	Diphenyl amine	9.10	169	1368741	102.34994	ppb	100
67)	n-Nitrosodiphenylamine	9.10	169	1368741	102.34994	ppb	100
68)	1,2-Diphenylhydrazine	9.13	77	929548	43.90369	ppb	100
69)	4-Bromophenyl phenyl ether	9.51	248	243072	47.44020	ppb	100
70)	Hexachlorobenzene	9.59	284	246139	45.09743	ppb	100
71)	Atrazine	9.73	200	132213	24.68138	ppb	100
72)	Pentachlorophenol	9.84	266	118335	60.26116	ppb	100
73)	Phenanthrene	10.06	178	1304097	48.44918	ppb	100
74)	Anthracene	10.12	178	1323292	47.27041	ppb	100
75)	Carbazol	10.32	167	1272051	51.18068	ppb	100
76)	Di-n-butylphthalate	10.73	149	1500155	45.08600	ppb	100
77)	Fluoranthene	11.44	202	1330020	45.21326	ppb	100
79)	Benzidine	11.61	184	505375	53.58983	ppb	100
80)	Pyrene	11.70	202	1525772	53.66203	ppb	100
82)	Butyl benzylphthalate	12.46	149	734576	51.58904	ppb	100
83)	3,3'-Dichlorobenzidine	13.08	252	470879	53.85786	ppb	100
84)	Benz (a) anthracene	13.10	228	1345568	49.87784	ppb	100
85)	Bis (2-ethylhexyl) phthala	13.13	149	996708	49.60253	ppb	100
86)	Chrysene	13.14	228	1285778	49.58067	ppb	100
87)	Di-n-octylphthalate	13.85	149	1959719	55.03689	ppb	100
89)	Benzo (b) fluoranthene	14.29	252	1307332	44.75884	ppb	100
90)	Benzo (k) fluoranthene	14.32	252	1321701	47.32466	ppb	100
91)	Benzo (a) pyrene	14.68	252	1333161	48.46626	ppb	100
92)	Indeno (1,2,3-cd) pyrene	16.30	276	1465032	46.80640	ppb	100
93)	Dibenz (a,h) anthracene	16.32	278	1249734	46.93076	ppb	100
94)	Benzo (g,h,i) perylene	16.76	276	1364184	51.53048	ppb	100

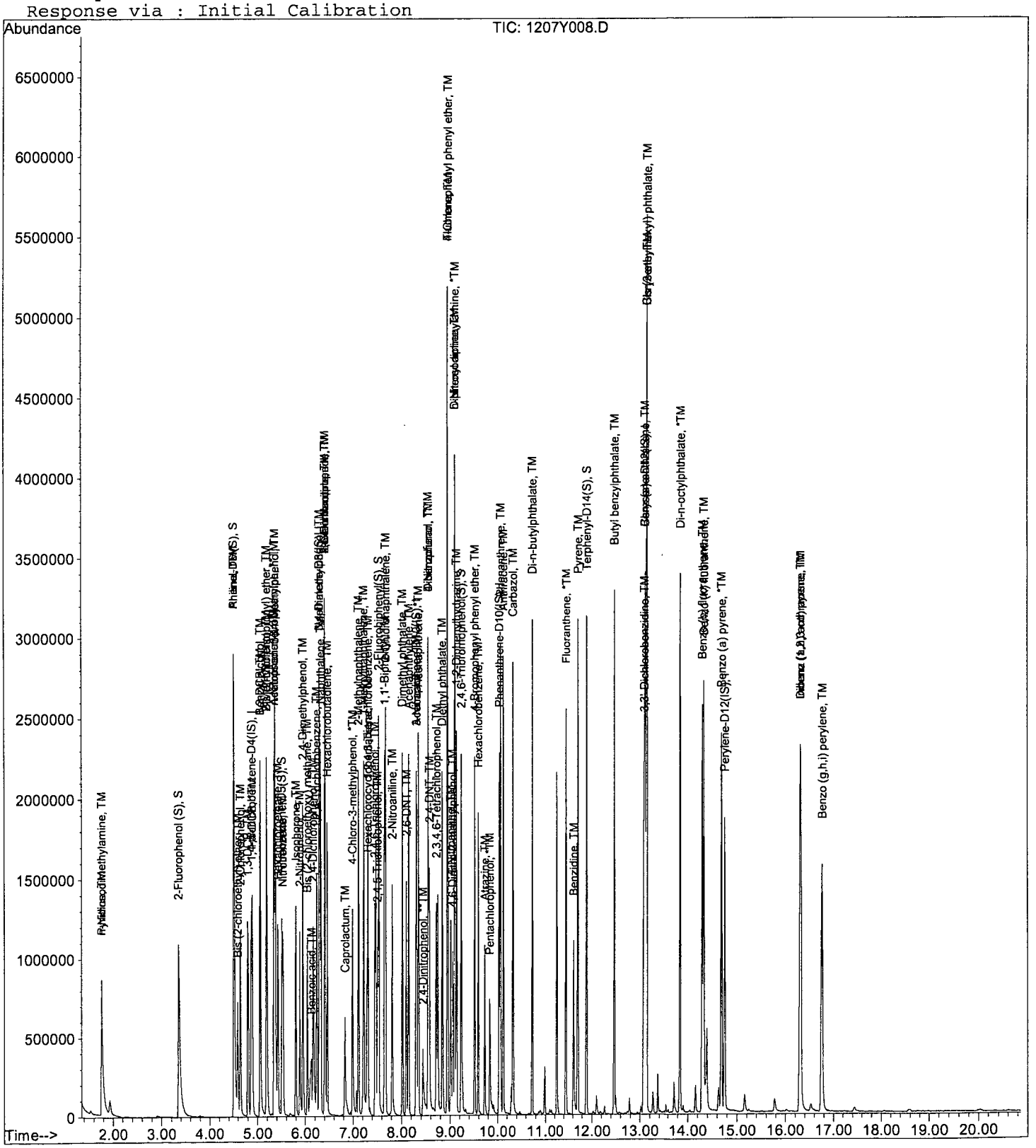
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y008.D Vial: 8
Acq On : 7 Dec 16 12:02 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y009.D Vial: 9
Acq On : 7 Dec 16 12:32 Operator: MA
Sample : 60ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	218783	40.00000	ppb	0.00
20) Napthalene-D8(IS)	6.30	136	928479	40.00000	ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	561569	40.00000	ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	933722	40.00000	ppb	0.00
78) Chrysene-D12(IS)	13.11	240	884630	40.00000	ppb	0.00
88) Perylene-D12(IS)	14.75	264	1042796	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.35	112	865007	124.91090	ppb	0.00
Spiked Amount 200.000			Recovery =	62.456%		
5) Phenol-D6 (S)	4.51	99	1086222	113.39361	ppb	0.00
Spiked Amount 200.000			Recovery =	56.697%		
21) Nitrobenzene-D5(S)	5.50	82	539284	55.66825	ppb	0.00
Spiked Amount 100.000			Recovery =	55.668%		
45) 2-Fluorobiphenyl(S)	7.54	172	984076	55.18508	ppb	0.00
Spiked Amount 100.000			Recovery =	55.185%		
63) 2,4,6-Tribromophenol(S)	9.23	330	315998	114.58661	ppb	0.00
Spiked Amount 200.000			Recovery =	57.293%		
81) Terphenyl-D14(S)	11.89	244	1107571	55.23485	ppb	0.00
Spiked Amount 100.000			Recovery =	55.235%		
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.75	42	237687	46.33801	ppb	95
3) Pyridine	1.76	79	574794	52.45498	ppb	95
6) Phenol	4.52	94	637429	58.66854	ppb	94
7) Aniline	4.52	66	600249	56.10761	ppb	94
8) Bis (2-chloroethyl) ether	4.59	63	281001	57.54124	ppb	99
9) 2-Chlorophenol	4.65	128	506460	60.12483	ppb	98
10) 1,3-DCB	4.80	146	523668	57.36438	ppb	99
11) 1,4-DCB	4.89	146	527245	56.36215	ppb	97
12) Benzyl alcohol	5.06	108	288893	61.30992	ppb	96
13) 1,2-DCB	5.06	146	489566	56.15934	ppb	98
14) 2-Methylphenol	5.19	107	364148	57.00727	ppb	99
15) Bis (2-chloroisopropyl) et	5.19	45	554052	56.64941	ppb	96
16) Acetophenone	5.34	105	671773	56.42397	ppb	98
17) 3&4-Methylphenol	5.36	107	950588	112.49194	ppb	98
18) n-Nitrosodi-n-propylamine	5.35	70	340579	55.14933	ppb	98
19) Hexachloroethane	5.42	117	222476	57.34234	ppb	96
22) Nitrobenzene	5.52	77	554825	55.98238	ppb	98
23) Isophorone	5.80	82	928565	56.83073	ppb	99
24) 2-Nitrophenol	5.88	139	289592	61.37308	ppb	94
25) 2,4-Dimethylphenol	5.95	122	444516	60.43441	ppb	98
26) Benzoic acid	6.13	105	322257	54.17674	ppb	95
27) Bis (2-chloroethoxy) metha	6.04	93	529470	60.60482	ppb	99
28) 2,4-Dichlorophenol	6.16	162	429913	60.67973	ppb	96
29) 1,2,4-Trichlorobenzene	6.24	180	459705	58.74120	ppb	95
30) 3,4-Dimethylphenol	6.29	107	660163	56.28233	ppb	98
31) Naphthalene	6.32	128	1425995	58.33701	ppb	99
32) 4-Chloroaniline	6.40	127	513997	59.26021	ppb	98
33) 2,6-Dichlorophenol	6.41	162	389211	56.90000	ppb	98
34) Hexachloropropene	6.42	213	365095	58.63961	ppb	98
35) Hexachlorobutadiene	6.46	225	279947	56.08536	ppb	99
36) Caprolactum	6.84	55	221717	60.06354	ppb	98
37) 4-Chloro-3-methylphenol	6.99	107	480600	59.43613	ppb	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y009.D Vial: 9
Acq On : 7 Dec 16 12:32 Operator: MA
Sample : 60ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
38)	2-Methylnaphthalene	7.11	142	945068	57.91231 ppb	98
39)	1-Methylnaphthalene	7.22	142	919036	58.71429 ppb	98
41)	Hexachlorocyclopentadiene	7.29	237	197642	60.29517 ppb	98
42)	1,2,4,5-Tetrachlorobenzene	7.31	216	445973	58.37966 ppb	99
43)	2,4,6-Trichlorophenol	7.46	196	297908	58.76890 ppb	98
44)	2,4,5-Trichlorophenol	7.52	196	321422	59.87920 ppb	94
46)	1,1'-Biphenyl	7.66	154	1207599	56.73829 ppb	98
47)	2-Chloronaphthalene	7.68	162	953118	56.84250 ppb	99
48)	2-Nitroaniline	7.81	65	333570	56.02944 ppb	97
49)	Dimethyl phthalate	8.02	163	1131837	55.13729 ppb	99
50)	2,6-DNT	8.10	165	262428	57.44286 ppb	99
51)	Acenaphthylene	8.15	152	1514599	58.10577 ppb	100
52)	3-Nitroaniline	8.30	138	286828	60.64227 ppb	100
53)	Acenaphthene	8.34	154	907464	56.84338 ppb	99
54)	2,4-Dinitrophenol	8.44	184	134887	57.13945 ppb	90
55)	4-Nitrophenol	8.54	65	232448	57.73526 ppb	99
56)	Dibenzofuran	8.55	168	1321081	56.75410 ppb	99
57)	2,4-DNT	8.58	165	379083	58.70069 ppb	99
58)	2,3,4,6-Tetrachlorophenol	8.71	232	264908	63.41964 ppb	97
59)	Diethyl phthalate	8.84	149	1169813	56.12946 ppb	95
60)	4-Chlorophenyl phenyl ethe	8.95	204	505362	53.34779 ppb	99
61)	Fluorene	8.95	166	1031075	53.77083 ppb	100
62)	4-Nitroaniline	9.01	138	270386	60.01559 ppb	96
65)	4,6-Dinitro-2-methylphenol	9.06	198	237031	72.20927 ppb	96
66)	Diphenyl amine	9.10	169	1658613	129.58040 ppb	99
67)	n-Nitrosodiphenylamine	9.10	169	1658613	129.58040 ppb	99
68)	1,2-Diphenylhydrazine	9.13	77	1349001	66.56860 ppb	99
69)	4-Bromophenyl phenyl ether	9.51	248	319227	65.09373 ppb	95
70)	Hexachlorobenzene	9.59	284	327981	62.78386 ppb	97
71)	Atrazine	9.73	200	151588	29.56569 ppb	96
72)	Pentachlorophenol	9.84	266	138587	71.04943 ppb	96
73)	Phenanthrene	10.06	178	1487228	57.72740 ppb	99
74)	Anthracene	10.12	178	1508389	56.29567 ppb	98
75)	Carbazol	10.32	167	1347464	56.64305 ppb	100
76)	Di-n-butylphthalate	10.73	149	1763308	55.36837 ppb	100
77)	Fluoranthene	11.44	202	1636819	58.13481 ppb	100
79)	Benzidine	11.61	184	608980	62.27482 ppb	98
80)	Pyrene	11.70	202	1793793	60.84019 ppb	99
82)	Butyl benzylphthalate	12.47	149	829390	56.17205 ppb	99
83)	3,3'-Dichlorobenzidine	13.08	252	531065	58.57715 ppb	98
84)	Benz (a) anthracene	13.10	228	1585364	56.67243 ppb	100
85)	Bis (2-ethylhexyl) phthala	13.13	149	1244971	59.74973 ppb	99
86)	Chrysene	13.14	228	1666038	61.95439 ppb	99
87)	Di-n-octylphthalate	13.85	149	2024092	54.81901 ppb	99
89)	Benzo (b) fluoranthene	14.29	252	1616583	46.23147 ppb	100
90)	Benzo (k) fluoranthene	14.32	252	1852486	55.40589 ppb	99
91)	Benzo (a) pyrene	14.68	252	1766595	53.64641 ppb	99
92)	Indeno (1,2,3-cd) pyrene	16.31	276	1712128	45.69210 ppb	98
93)	Dibenz (a,h) anthracene	16.32	278	1422360	44.61658 ppb	99
94)	Benzo (g,h,i) perylene	16.76	276	1382485	43.62128 ppb	99

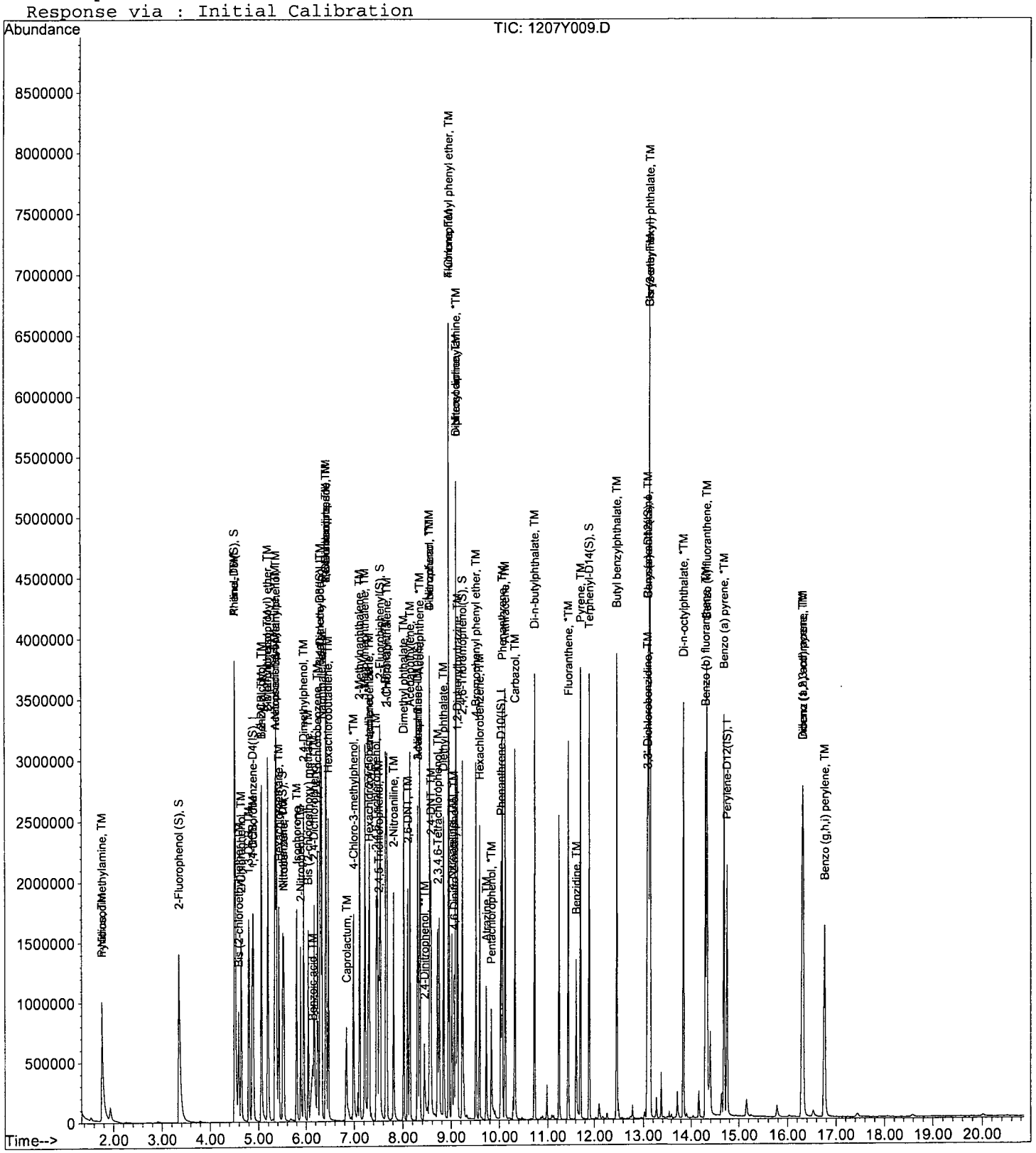
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y009.D Vial: 9
Acq On : 7 Dec 16 12:32 Operator: MA
Sample : 60ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



420

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y010.D Vial: 10
Acq On : 7 Dec 16 13:02 Operator: MA
Sample : 80ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	195710	40.00000	ppb	0.00
20) Napthalene-D8(IS)	6.30	136	859926	40.00000	ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	527101	40.00000	ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	1005123	40.00000	ppb	0.00
78) Chrysene-D12(IS)	13.11	240	912863	40.00000	ppb	0.00
88) Perylene-D12(IS)	14.75	264	909856	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.35	112	1083940	174.97924	ppb	0.00
Spiked Amount 200.000			Recovery =	87.490%		
5) Phenol-D6 (S)	4.51	99	1335540	155.85741	ppb	0.00
Spiked Amount 200.000			Recovery =	77.929%		
21) Nitrobenzene-D5(S)	5.51	82	643499	71.72142	ppb	0.00
Spiked Amount 100.000			Recovery =	71.721%		
45) 2-Fluorobiphenyl(S)	7.54	172	1210171	72.30179	ppb	0.00
Spiked Amount 100.000			Recovery =	72.302%		
63) 2,4,6-Tribromophenol(S)	9.24	330	416825	161.03215	ppb	0.00
Spiked Amount 200.000			Recovery =	80.516%		
81) Terphenyl-D14(S)	11.89	244	1546385	74.73349	ppb	0.00
Spiked Amount 100.000			Recovery =	74.733%		
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.75	42	322164	70.21171	ppb	97
3) Pyridine	1.76	79	734964	74.97926	ppb	96
6) Phenol	4.53	94	791696	81.45777	ppb	83
7) Aniline	4.52	66	776371	81.12603	ppb	97
8) Bis (2-chloroethyl) ether	4.59	63	355760	81.43836	ppb	95
9) 2-Chlorophenol	4.65	128	615384	81.66867	ppb	98
10) 1,3-DCB	4.81	146	614066	75.19723	ppb	98
11) 1,4-DCB	4.89	146	652039	77.92005	ppb	98
12) Benzyl alcohol	5.06	108	348718	82.73108	ppb	90
13) 1,2-DCB	5.06	146	592989	76.04278	ppb	98
14) 2-Methylphenol	5.20	107	423761	74.16070	ppb	97
15) Bis (2-chloroisopropyl) et	5.19	45	634640	72.53922	ppb	96
16) Acetophenone	5.34	105	792534	74.41484	ppb	97
17) 3&4-Methylphenol	5.37	107	1142368	151.12477	ppb	98
18) n-Nitrosodi-n-propylamine	5.35	70	410995	74.39769	ppb	97
19) Hexachloroethane	5.42	117	261628	75.38363	ppb	97
22) Nitrobenzene	5.53	77	676884	73.74296	ppb	93
23) Isophorone	5.80	82	1089807	72.01642	ppb	95
24) 2-Nitrophenol	5.88	139	344463	78.82155	ppb	97
25) 2,4-Dimethylphenol	5.95	122	565844	83.06243	ppb	98
26) Benzoic acid	6.15	105	443247	81.69217	ppb	95
27) Bis (2-chloroethoxy) metha	6.05	93	679127	83.93205	ppb	98
28) 2,4-Dichlorophenol	6.17	162	547229	83.39561	ppb	100
29) 1,2,4-Trichlorobenzene	6.24	180	576211	79.49798	ppb	99
30) 3,4-Dimethylphenol	6.29	107	820634	75.54077	ppb	99
31) Naphthalene	6.33	128	1762100	77.83370	ppb	99
32) 4-Chloroaniline	6.41	127	626144	77.94493	ppb	93
33) 2,6-Dichlorophenol	6.41	162	470298	74.23545	ppb	98
34) Hexachloropropene	6.42	213	458828	79.56940	ppb	98
35) Hexachlorobutadiene	6.47	225	341554	73.88292	ppb	97
36) Caprolactum	6.85	55	263295	77.01327	ppb	97
37) 4-Chloro-3-methylphenol	6.99	107	569393	76.03086	ppb	86

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y010.D Vial: 10
Acq On : 7 Dec 16 13:02 Operator: MA
Sample : 80ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

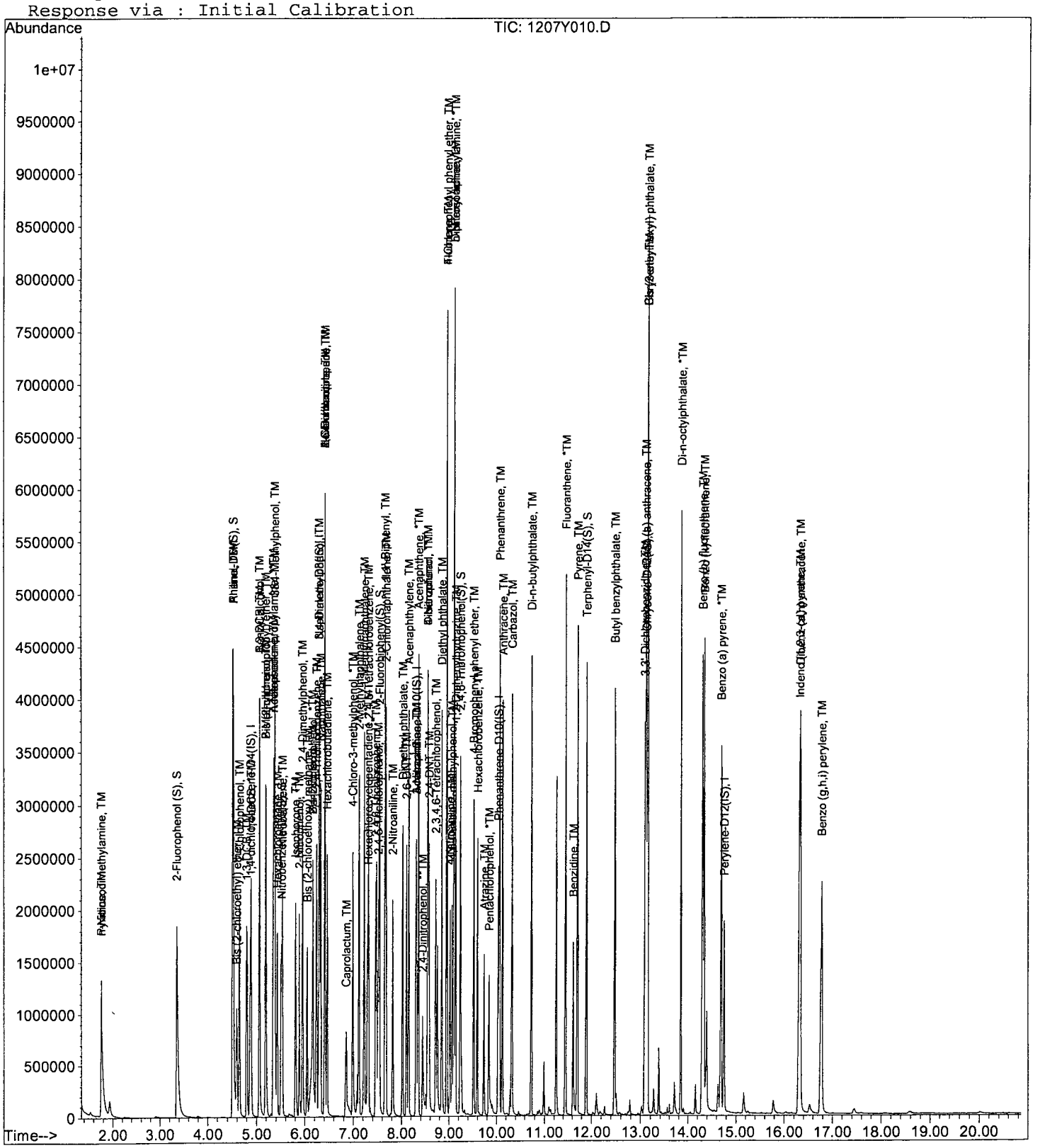
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	2-Methylnaphthalene	7.12	142	1107600	73.28275 ppb		99
39)	1-Methylnaphthalene	7.23	142	1101455	75.97821 ppb		100
41)	Hexachlorocyclopentadiene	7.29	237	283877	81.78811 ppb		98
42)	1,2,4,5-Tetrachlorobenzene	7.31	216	543057	75.73693 ppb		97
43)	2,4,6-Trichlorophenol	7.46	196	352380	74.06038 ppb		96
44)	2,4,5-Trichlorophenol	7.52	196	364305	72.30607 ppb		98
46)	1,1'-Biphenyl	7.66	154	1431535	71.65801 ppb		99
47)	2-Chloronaphthalene	7.67	162	1099952	69.88911 ppb		96
48)	2-Nitroaniline	7.81	65	409925	73.35725 ppb		87
49)	Dimethyl phthalate	8.03	163	1345976	69.85672 ppb		98
50)	2,6-DNT	8.10	165	312732	72.93022 ppb	#	73
51)	Acenaphthylene	8.15	152	1738197	71.04441 ppb		100
52)	3-Nitroaniline	8.30	138	350245	78.89239 ppb		86
53)	Acenaphthene	8.35	154	1111537	74.17946 ppb		99
54)	2,4-Dinitrophenol	8.44	184	218209	93.07907 ppb		96
55)	4-Nitrophenol	8.54	65	306442	78.35915 ppb		97
56)	Dibenzofuran	8.55	168	1632194	74.70485 ppb		94
57)	2,4-DNT	8.57	165	451681	74.51608 ppb	#	80
58)	2,3,4,6-Tetrachlorophenol	8.71	232	315865	80.56372 ppb		96
59)	Diethyl phthalate	8.84	149	1405142	71.82968 ppb		99
60)	4-Chlorophenyl phenyl ethe	8.96	204	628797	70.71859 ppb		81
61)	Fluorene	8.95	166	1287251	71.52024 ppb		98
62)	4-Nitroaniline	9.02	138	354043	83.72308 ppb		96
65)	4,6-Dinitro-2-methylphenol	9.06	198	328902	93.07921 ppb	#	68
66)	Diphenyl amine	9.10	169	2177827	158.05783 ppb		99
67)	n-Nitrosodiphenylamine	9.10	169	2177827	158.05783 ppb		99
68)	1,2-Diphenylhydrazine	9.14	77	1790205	82.06506 ppb	#	89
69)	4-Bromophenyl phenyl ether	9.52	248	376085	71.24001 ppb	#	81
70)	Hexachlorobenzene	9.60	284	403389	71.73345 ppb	#	79
71)	Atrazine	9.73	200	197787	35.83598 ppb		99
72)	Pentachlorophenol	9.84	266	222525	97.90203 ppb		97
73)	Phenanthrene	10.06	178	2029194	73.16888 ppb		99
74)	Anthracene	10.12	178	2073870	71.90210 ppb		99
75)	Carbazol	10.32	167	1832065	71.54326 ppb		97
76)	Di-n-butylphthalate	10.73	149	2372548	69.20651 ppb		99
77)	Fluoranthene	11.44	202	2349024	77.50352 ppb		99
79)	Benzidine	11.61	184	843755	83.61455 ppb		99
80)	Pyrene	11.70	202	2273483	74.72502 ppb		99
82)	Butyl benzylphthalate	12.46	149	1147875	75.33766 ppb		93
83)	3,3'-Dichlorobenzidine	13.08	252	711820	76.08636 ppb		99
84)	Benz (a) anthracene	13.10	228	2207148	76.45930 ppb		99
85)	Bis (2-ethylhexyl) phthala	13.13	149	1603119	74.55873 ppb		98
86)	Chrysene	13.14	228	2085134	75.14105 ppb		99
87)	Di-n-octylphthalate	13.85	149	2762190	72.49541 ppb		96
89)	Benzo (b) fluoranthene	14.29	252	2598169	85.15963 ppb		98
90)	Benzo (k) fluoranthene	14.33	252	2204360	75.56317 ppb		98
91)	Benzo (a) pyrene	14.69	252	2169513	75.50794 ppb		99
92)	Indeno (1,2,3-cd) pyrene	16.31	276	2538105	77.63207 ppb		98
93)	Dibenz (a,h) anthracene	16.34	278	2157371	77.56008 ppb		98
94)	Benzo (g,h,i) perylene	16.77	276	1984638	71.77049 ppb		100

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y161207\1207Y010.D Vial: 10
Acq On : 7 Dec 16 13:02 Operator: MA
Sample : 80ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y011.D Vial: 11
Acq On : 7 Dec 16 13:32 Operator: MA
Sample : 100ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	214746	40.00000	ppb		0.00
20) Napthalene-D8(IS)	6.30	136	801273	40.00000	ppb		0.00
40) Acenaphthene-D10(IS)	8.31	164	479807	40.00000	ppb		0.00
64) Phenanthrene-D10(IS)	10.03	188	1038349	40.00000	ppb		0.00
78) Chrysene-D12(IS)	13.11	240	897961	40.00000	ppb		0.00
88) Perylene-D12(IS)	14.76	264	1012967	40.00000	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol (S)	3.36	112	1442400	212.20467	ppb		0.00
Spiked Amount 200.000			Recovery = 106.103%				
5) Phenol-D6 (S)	4.52	99	1755614	186.71857	ppb		0.00
Spiked Amount 200.000			Recovery = 93.360%				
21) Nitrobenzene-D5(S)	5.51	82	880245	105.28952	ppb		0.00
Spiked Amount 100.000			Recovery = 105.290%				
45) 2-Fluorobiphenyl(S)	7.54	172	1444098	94.78208	ppb		0.00
Spiked Amount 100.000			Recovery = 94.782%				
63) 2,4,6-Tribromophenol(S)	9.24	330	537159	227.97590	ppb		0.00
Spiked Amount 200.000			Recovery = 113.988%				
81) Terphenyl-D14(S)	11.90	244	1906266	93.65464	ppb		0.00
Spiked Amount 100.000			Recovery = 93.655%				
Target Compounds							Qvalue
2) n-Nitrosodimethylamine	1.75	42	427152	84.84044	ppb		98
3) Pyridine	1.76	79	954145	88.71098	ppb		96
6) Phenol	4.53	94	1029962	96.57911	ppb		91
7) Aniline	4.53	66	1005037	95.71079	ppb	#	76
8) Bis (2-chloroethyl) ether	4.59	63	462246	96.43463	ppb		99
9) 2-Chlorophenol	4.65	128	814431	98.50346	ppb		96
10) 1,3-DCB	4.81	146	851310	95.00850	ppb		98
11) 1,4-DCB	4.89	146	861705	93.84739	ppb		99
12) Benzyl alcohol	5.06	108	474310	102.55209	ppb		89
13) 1,2-DCB	5.06	146	785684	91.82209	ppb		98
14) 2-Methylphenol	5.20	107	595539	94.98412	ppb		96
15) Bis (2-chloroisopropyl) et	5.19	45	856467	89.21626	ppb		85
16) Acetophenone	5.34	105	1088689	93.16085	ppb		99
17) 3&4-Methylphenol	5.38	107	1562005	188.32154	ppb		92
18) n-Nitrosodi-n-propylamine	5.35	70	569115	93.88817	ppb		99
19) Hexachloroethane	5.43	117	354007	92.95925	ppb	#	76
22) Nitrobenzene	5.53	77	903147	105.59548	ppb		97
23) Isophorone	5.81	82	1523574	108.05033	ppb		96
24) 2-Nitrophenol	5.88	139	468219	114.98256	ppb		95
25) 2,4-Dimethylphenol	5.96	122	701715	110.54758	ppb		99
26) Benzoic acid	6.17	105	531913	109.09798	ppb		91
27) Bis (2-chloroethoxy) metha	6.05	93	810611	107.51520	ppb		99
28) 2,4-Dichlorophenol	6.17	162	626111	102.40142	ppb		99
29) 1,2,4-Trichlorobenzene	6.24	180	674426	99.85951	ppb		99
30) 3,4-Dimethylphenol	6.29	107	982967	97.10719	ppb		97
31) Naphthalene	6.33	128	2092381	99.18785	ppb		100
32) 4-Chloroaniline	6.41	127	726261	97.02573	ppb		97
33) 2,6-Dichlorophenol	6.41	162	585319	99.15426	ppb		97
34) Hexachloropropene	6.42	213	564663	105.09113	ppb		99
35) Hexachlorobutadiene	6.47	225	420352	97.58395	ppb		96
36) Caprolactum	6.87	55	323697	101.61135	ppb		95
37) 4-Chloro-3-methylphenol	6.99	107	718886	103.01925	ppb		84

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y011.D Vial: 11
Acq On : 7 Dec 16 13:32 Operator: MA
Sample : 100ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.12	142	1400630	99.45413	ppb		98
39)	1-Methylnaphthalene	7.23	142	1395356	103.29704	ppb		99
41)	Hexachlorocyclopentadiene	7.29	237	337941	98.72624	ppb		99
42)	1,2,4,5-Tetrachlorobenzene	7.31	216	637512	97.67376	ppb		98
43)	2,4,6-Trichlorophenol	7.46	196	430600	99.42051	ppb		98
44)	2,4,5-Trichlorophenol	7.52	196	452384	98.63798	ppb		89
46)	1,1'-Biphenyl	7.66	154	1743421	95.87212	ppb		98
47)	2-Chloronaphthalene	7.67	162	1364913	95.27260	ppb		95
48)	2-Nitroaniline	7.82	65	501195	98.53093	ppb		96
49)	Dimethyl phthalate	8.03	163	1691646	96.45119	ppb		99
50)	2,6-DNT	8.11	165	428985	109.90174	ppb		96
51)	Acenaphthylene	8.15	152	2176158	97.71215	ppb		100
52)	3-Nitroaniline	8.31	138	417728	103.36750	ppb	#	99
53)	Acenaphthene	8.35	154	1365612	100.11850	ppb		99
54)	2,4-Dinitrophenol	8.44	184	244053	112.65730	ppb		86
55)	4-Nitrophenol	8.54	65	381862	104.77768	ppb		94
56)	Dibenzofuran	8.56	168	2009957	101.06274	ppb		97
57)	2,4-DNT	8.58	165	559804	101.45686	ppb		98
58)	2,3,4,6-Tetrachlorophenol	8.71	232	407530	114.18916	ppb		93
59)	Diethyl phthalate	8.85	149	1833935	102.98996	ppb		97
60)	4-Chlorophenyl phenyl ethe	8.96	204	822846	101.66441	ppb		81
61)	Fluorene	8.96	166	1670986	101.99193	ppb		98
62)	4-Nitroaniline	9.03	138	400399	104.01822	ppb		94
65)	4,6-Dinitro-2-methylphenol	9.07	198	386581	105.90161	ppb	#	83
66)	Diphenyl amine	9.11	169	2820080	198.12073	ppb		100
67)	n-Nitrosodiphenylamine	9.11	169	2820080	198.12073	ppb		100
68)	1,2-Diphenylhydrazine	9.14	77	2276128	101.00156	ppb		96
69)	4-Bromophenyl phenyl ether	9.52	248	489978	89.84427	ppb		91
70)	Hexachlorobenzene	9.60	284	507014	87.27573	ppb		86
71)	Atrazine	9.73	200	255247	44.76701	ppb		97
72)	Pentachlorophenol	9.84	266	289057	117.11640	ppb		96
73)	Phenanthrene	10.06	178	2631951	91.86635	ppb		99
74)	Anthracene	10.12	178	2699734	90.60598	ppb		100
75)	Carbazol	10.33	167	2292694	86.66621	ppb		99
76)	Di-n-butylphthalate	10.74	149	3048385	86.07511	ppb		99
77)	Fluoranthene	11.44	202	3022326	96.52752	ppb	#	98
79)	Benzidine	11.62	184	1093324	110.14442	ppb		98
80)	Pyrene	11.71	202	3079365	102.89248	ppb		99
82)	Butyl benzylphthalate	12.47	149	1430703	95.45863	ppb		88
83)	3,3'-Dichlorobenzidine	13.08	252	910729	98.96324	ppb	#	97
84)	Benz (a) anthracene	13.10	228	2808833	98.91745	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.13	149	2022285	95.61439	ppb		96
86)	Chrysene	13.14	228	2799507	102.55881	ppb		98
87)	Di-n-octylphthalate	13.85	149	3529346	94.16713	ppb	#	93
89)	Benzo (b) fluoranthene	14.30	252	3038345	89.45009	ppb		99
90)	Benzo (k) fluoranthene	14.33	252	2973702	91.55930	ppb		100
91)	Benzo (a) pyrene	14.69	252	2841755	88.83710	ppb		97
92)	Indeno (1,2,3-cd) pyrene	16.31	276	2782713	76.44997	ppb		95
93)	Dibenz (a,h) anthracene	16.34	278	2299501	74.25478	ppb		97
94)	Benzo (g,h,i) perylene	16.78	276	2235653	72.61835	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

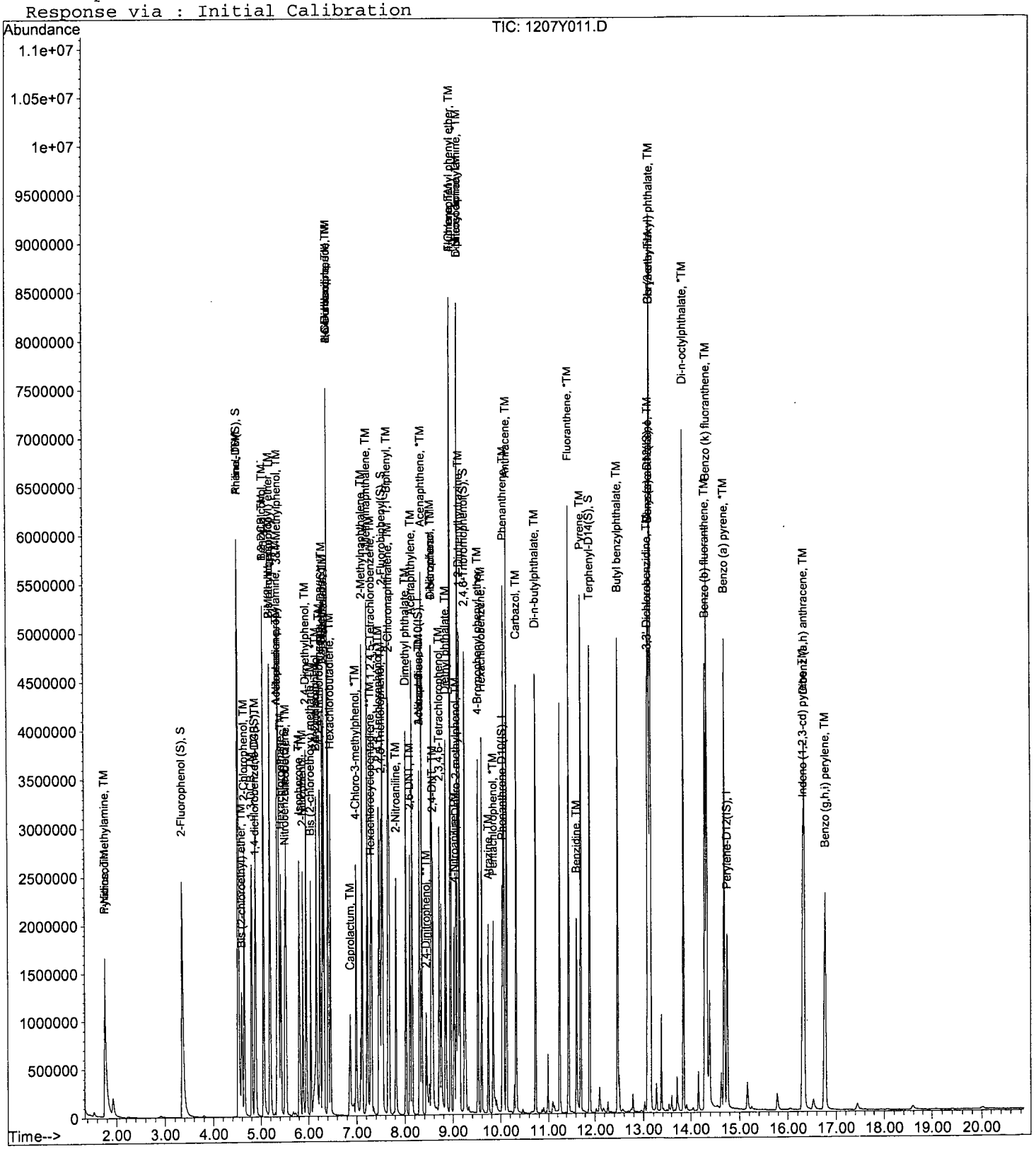
Data File : M:\YODA\DATA\Y161207\1207Y011.D
Acq On : 7 Dec 16 13:32
Sample : 100ug/ml SVOC 12/06/16
Misc :

Vial: 11
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 7 13:58 2016

Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Form 7

Second Source Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Date Analyzed: 7 Dec 16 14:01

Matrix: Instrument: Yoda

Initial Cal. Date: 12/07/16

Data File: 1207Y012.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	n-Nitrosodimethylamine	0.7942	0.8605	8.3	TM	
2	TM	Pyridine	1.794	2.065	15	TM	
3	*TM	Phenol	1.974	1.961	0.64	*TM	
4	TM	Aniline	1.868	1.717	8.1	TM	
5	TM	Bis (2-chloroethyl) ether	0.8648	0.9372	8.4	TM	
6	TM	2-Chlorophenol	1.576	1.492	5.4	TM	
7	TM	1,3-DCB	1.630	1.713	5.1	TM	
8	*TM	1,4-DCB	1.679	1.836	9.3	*TM	
9	TM	Benzyl alcohol	0.8717	0.9544	9.5	TM	
10	TM	1,2-DCB	1.537	1.648	7.2	TM	
11	TM	2-Methylphenol	1.120	1.183	5.6	TM	
12	TM	Bis (2-chloroisopropyl) ether	1.723	1.964	14	TM	
13	TM	Acetophenone	2.044	2.282	12	TM	
14	TM	3&4-Methylphenol	1.484	1.588	7.0	TM	
15	**TM	n-Nitrosodi-n-propylamine	1.052	1.111	5.6	**TM	
16	TM	Hexachloroethane	0.6713	0.7583	13	TM	
17	TM	Nitrobenzene	0.4083	0.4146	1.5	TM	
18	TM	Isophorone	0.6762	0.7401	9.5	TM	
19	*TM	2-Nitrophenol	0.2038	0.1897	6.9	*TM	
20	TM	2,4-Dimethylphenol	0.3231	0.2928	9.4	TM	
21	TML	Benzoic acid	0.2159	0.3029	40	TML	19
22	TM	Bis (2-chloroethoxy) methane	0.3856	0.3755	2.6	TM	
23	*TM	2,4-Dichlorophenol	0.3079	0.3092	0.41	*TM	
24	TM	1,2,4-Trichlorobenzene	0.3349	0.3788	13	TM	
25	TM	3,4-Dimethylphenol	0.4947	0.4722	4.5	TM	
26	TM	Naphthalene	1.049	1.030	1.9	TM	
27	TM	4-Chloroaniline	0.3882	0.3699	4.7	TM	
28	TM	2,6-Dichlorophenol	0.2970	0.2844	4.3	TM	
29	TM	Hexachloropropene	0.2678	0.2625	2.0	TM	
30	*TM	Hexachlorobutadiene	0.2134	0.2282	7.0	*TM	
31	TM	Caprolactum	0.1543	0.1430	7.3	TM	
32	*TM	4-Chloro-3-methylphenol	0.3401	0.3273	3.8	*TM	
33	TM	2-Methylnaphthalene	0.6856	0.6921	0.95	TM	
34	TM	1-Methylnaphthalene	0.6763	0.6628	2.0	TM	
35	**TMQ	Hexachlorocyclopentadiene	0.1853	0.2606	41	**TMQ	12
36	TM	1,2,4,5-Tetrachlorobenzene	0.5436	0.5813	6.9	TM	
37	*TM	2,4,6-Trichlorophenol	0.3508	0.3628	3.4	*TM	
38	TM	2,4,5-Trichlorophenol	0.3829	0.4030	5.3	TM	
39	TM	1,1'-Biphenyl	1.499	1.521	1.5	TM	
40	TM	2-Chloronaphthalene	1.159	1.302	12	TM	
		Average			8.2		

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 7 Dec 16 14:01
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y012.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	2-Nitroaniline	0.3982	0.4094	2.8	TM	
42	TM	Dimethyl phthalate	1.391	1.370	1.6	TM	
43	TM	2,6-DNT	0.3141	0.3323	5.8	TM	
44	TM	Acenaphthylene	1.826	1.754	3.9	TM	
45	TM	3-Nitroaniline	0.3430	0.3329	2.9	TM	
46	*TM	Acenaphthene	1.156	1.094	5.3	*TM	
47	**TMQ	2,4-Dinitrophenol	0.1593	0.1353	15	**TMQ	15
48	**TML	4-Nitrophenol	0.2439	0.2731	12	**TML	5.3
49	TM	Dibenzofuran	1.639	1.588	3.1	TM	
50	TM	2,4-DNT	0.4436	0.4519	1.9	TM	
51	TM	2,3,4,6-Tetrachlorophenol	0.3114	0.3085	0.94	TM	
52	TM	Diethyl phthalate	1.432	1.360	5.0	TM	
53	TM	4-Chlorophenyl phenyl ether	0.6394	0.6265	2.0	TM	
54	TM	Fluorene	1.324	1.241	6.3	TM	
55	TM	4-Nitroaniline	0.3249	0.3379	4.0	TM	
56	TM	4,6-Dinitro-2-methylphenol	0.1486	0.1339	9.9	TM	
57	TM	Diphenyl amine	0.5706	0.5203	8.8	TM	
58	*TM	n-Nitrosodiphenylamine	0.5706	0.5203	8.8	*TM	
59	TM	1,2-Diphenylhydrazine	0.8211	0.7495	8.7	TM	
60	TM	4-Bromophenyl phenyl ether	0.2072	0.2226	7.4	TM	
61	TM	Hexachlorobenzene	0.2130	0.2500	17	TM	
62	TM	Atrazine	0.2062	0.2070	0.41	TM	
63	*TML	Pentachlorophenol	0.0958	0.0912	4.8	*TML	9.9
64	TM	Phenanthrene	1.080	1.064	1.5	TM	
65	TM	Anthracene	1.111	1.042	6.2	TM	
66	TM	Carbazol	1.005	0.8998	11	TM	
67	TM	Di-n-butylphthalate	1.292	1.202	6.9	TM	
68	*TM	Fluoranthene	1.189	1.119	5.8	*TM	
69	TM	Benzidine	0.4531	0.5340	18	TM	
70	TM	Pyrene	1.357	1.408	3.8	TM	
71	TM	Butyl benzylphthalate	0.6517	0.6327	2.9	TM	
72	TM	3,3'-Dichlorobenzidine	0.4273	0.4953	16	TM	
73	TM	Benz (a) anthracene	1.249	1.200	3.9	TM	
74	TM	Bis (2-ethylhexyl) phthalate	0.9136	0.9271	1.5	TM	
75	TM	Chrysene	1.213	1.146	5.5	TM	
76	*TM	Di-n-octylphthalate	1.614	1.629	0.92	*TM	
77	TM	Benzo (b) fluoranthene	1.250	1.211	3.2	TM	
78	TM	Benzo (k) fluoranthene	1.189	1.125	5.4	TM	
79	*TM	Benzo (a) pyrene	1.168	1.100	5.9	*TM	
80	TM	Indeno (1,2,3-cd) pyrene	1.293	1.302	0.66	TM	
		Average			5.9		

0
0

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 7 Dec 16 14:01
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y012.D

		Compound	MEAN	CCRF	%D	%Drift	
81	TM	Dibenz (a,h) anthracene	1.091	1.084	0.59	TM	
82	TM	Benzo (g,h,i) perylene	1.161	1.030	11	TM	
83							
84							
85							
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89							
90							
91							
92							
93							
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118							
119							
120							
		Average			5.8		

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y012.D Vial: 12
Acq On : 7 Dec 16 14:01 Operator: MA
Sample : 2ND SRC SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 14:56 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	191057	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.30	136	871568	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	523606	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	1016944	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.11	240	899173	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.75	264	937926	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	0.00	112	0	0.00000 ppb	
Spiked Amount 200.000			Recovery =	0.000%	
5) Phenol-D6 (S)	0.00	99	0	0.00000 ppb	
Spiked Amount 200.000			Recovery =	0.000%	
21) Nitrobenzene-D5(S)	5.42	82	51167	5.79164 ppb	-0.08
Spiked Amount 100.000			Recovery =	5.792%	
45) 2-Fluorobiphenyl(S)	7.54	172	1678	0.10166 ppb	0.00
Spiked Amount 100.000			Recovery =	0.102%	
63) 2,4,6-Tribromophenol(S)	0.00	330	0	0.00000 ppb	
Spiked Amount 200.000			Recovery =	0.000%	
81) Terphenyl-D14(S)	11.90	244	2267	0.11150 ppb	0.01
Spiked Amount 100.000			Recovery =	0.111%	

Algorithm = $\frac{1121605 \times 1 \times 40}{871568 \times 1.049} = 49.07$ HA 12/8/16

Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.75	42	205505	54.17418 ppb	99
3) Pyridine	1.76	79	493077	57.53832 ppb	100
6) Phenol	4.52	94	468384	49.67907 ppb	97
7) Aniline	4.52	66	410130	45.96281 ppb	94
8) Bis (2-chloroethyl) ether	4.58	63	223817	54.18477 ppb	97
9) 2-Chlorophenol	4.65	128	356278	47.32243 ppb	98
10) 1,3-DCB	4.80	146	409122	52.55606 ppb	98
11) 1,4-DCB	4.89	146	438492	54.66182 ppb	100
12) Benzyl alcohol	5.05	108	227935	54.74642 ppb	89
13) 1,2-DCB	5.06	146	393642	53.62112 ppb	98
14) 2-Methylphenol	5.19	107	282490	52.81375 ppb	99
15) Bis (2-chloroisopropyl) et	5.19	45	468942	56.98498 ppb	99
16) Acetophenone	5.34	105	544879	55.81351 ppb	99
17) 3&4-Methylphenol	5.36	107	758574	107.00501 ppb	99
18) n-Nitrosodi-n-propylamine	5.35	70	265350	52.78586 ppb	98
19) Hexachloroethane	5.42	117	181096	56.48025 ppb	95
22) Nitrobenzene	5.52	77	451653	50.77125 ppb	99
23) Isophorone	5.79	82	806347	54.72642 ppb	92
24) 2-Nitrophenol	5.88	139	206638	46.54256 ppb	97
25) 2,4-Dimethylphenol	5.95	122	319047	45.32287 ppb	99
26) Benzoic acid	6.13	105	329992	59.40511 ppb	98
27) Bis (2-chloroethoxy) metha	6.04	93	409113	48.69541 ppb	99
28) 2,4-Dichlorophenol	6.16	162	336842	50.20680 ppb	95
29) 1,2,4-Trichlorobenzene	6.24	180	412682	56.55773 ppb	97
30) 3,4-Dimethylphenol	6.29	107	514459	47.73195 ppb	99
31) Naphthalene	6.32	128	1121605	49.06908 ppb	99
32) 4-Chloroaniline	6.40	127	402969	47.64010 ppb	98
33) 2,6-Dichlorophenol	6.41	162	309823	47.86782 ppb	99
34) Hexachloropropene	6.42	213	285981	49.00147 ppb	99
35) Hexachlorobutadiene	6.46	225	248647	53.48708 ppb	98
36) Caprolactum	6.83	55	155831	46.33822 ppb	95
37) 4-Chloro-3-methylphenol	6.98	107	356630	48.12038 ppb	86

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y012.D Vial: 12
Acq On : 7 Dec 16 14:01 Operator: MA
Sample : 2ND SRC SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 14:56 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

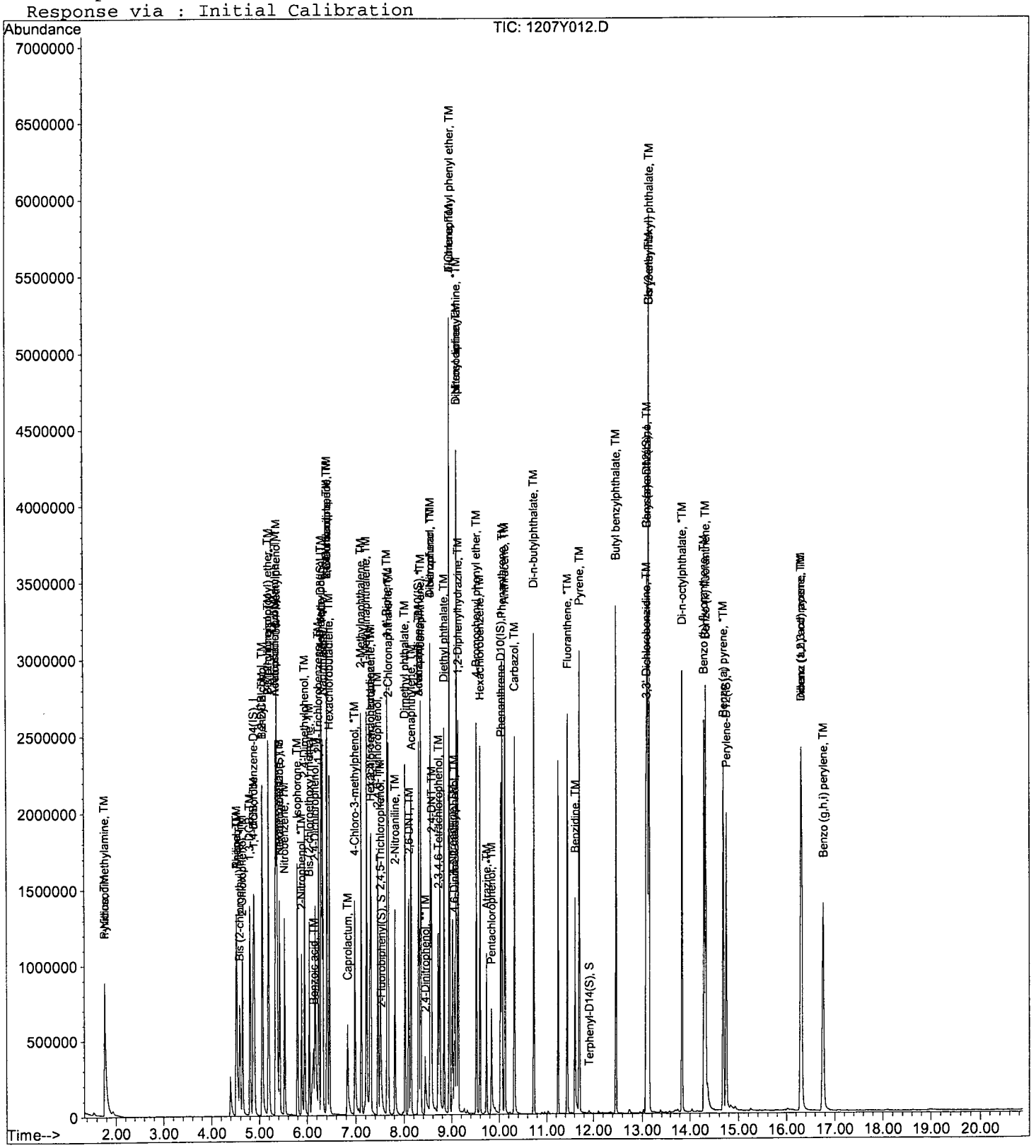
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.11	142	754038	50.47743	ppb		99
39)	1-Methylnaphthalene	7.22	142	722080	48.99775	ppb		100
41)	Hexachlorocyclopentadiene	7.29	237	170588	55.81613	ppb		99
42)	1,2,4,5-Tetrachlorobenzene	7.31	216	380472	53.46579	ppb		99
43)	2,4,6-Trichlorophenol	7.45	196	237475	51.71288	ppb		98
44)	2,4,5-Trichlorophenol	7.51	196	263784	52.63506	ppb		91
46)	1,1'-Biphenyl	7.65	154	995419	50.73149	ppb	#	98
47)	2-Chloronaphthalene	7.68	162	852397	56.20556	ppb		98
48)	2-Nitroaniline	7.81	65	267928	51.40520	ppb		97
49)	Dimethyl phthalate	8.02	163	896431	49.21645	ppb		100
50)	2,6-DNT	8.10	165	217507	52.89516	ppb		97
51)	Acenaphthylene	8.15	152	1148034	48.03874	ppb		99
52)	3-Nitroaniline	8.30	138	217900	48.53466	ppb		96
53)	Acenaphthene	8.34	154	716245	47.33371	ppb		98
54)	2,4-Dinitrophenol	8.44	184	88575	42.42116	ppb		93
55)	4-Nitrophenol	8.54	65	178738	47.34341	ppb		99
56)	Dibenzofuran	8.55	168	1039530	48.44636	ppb		100
57)	2,4-DNT	8.58	165	295792	50.93595	ppb		96
58)	2,3,4,6-Tetrachlorophenol	8.71	232	201912	49.52960	ppb		97
59)	Diethyl phthalate	8.84	149	890442	47.50284	ppb		99
60)	4-Chlorophenyl phenyl ethe	8.95	204	410071	48.99615	ppb		97
61)	Fluorene	8.95	166	811998	46.83909	ppb		99
62)	4-Nitroaniline	9.01	138	221182	52.00204	ppb		99
65)	4,6-Dinitro-2-methylphenol	9.05	198	170147	45.02904	ppb	#	63
66)	Diphenyl amine	9.10	169	1322713	91.17623	ppb		99
67)	n-Nitrosodiphenylamine	9.10	169	1322713	91.17623	ppb		99
68)	1,2-Diphenylhydrazine	9.13	77	952702	45.63842	ppb		98
69)	4-Bromophenyl phenyl ether	9.51	248	282914	53.71191	ppb		98
70)	Hexachlorobenzene	9.59	284	317774	58.69445	ppb		95
71)	Atrazine	9.73	200	131578	25.10242	ppb		95
72)	Pentachlorophenol	9.84	266	115962	45.03845	ppb		95
73)	Phenanthrene	10.06	178	1351927	49.22811	ppb		100
74)	Anthracene	10.12	178	1325118	46.92467	ppb		99
75)	Carbazol	10.32	167	1143768	44.74849	ppb		100
76)	Di-n-butylphthalate	10.73	149	1528545	46.53939	ppb		100
77)	Fluoranthene	11.44	202	1422850	47.07737	ppb		100
79)	Benzidine	11.61	184	600230m	58.92898	ppb		99
80)	Pyrene	11.70	202	1583034	51.91299	ppb		98
82)	Butyl benzylphthalate	12.47	149	711172	48.54397	ppb		99
83)	3,3'-Dichlorobenzidine	13.08	252	556753	57.96756	ppb		98
84)	Benz (a) anthracene	13.10	228	1348312	48.02891	ppb		100
85)	Bis (2-ethylhexyl) phthala	13.13	149	1042054	50.73897	ppb		97
86)	Chrysene	13.13	228	1288110	47.23790	ppb		98
87)	Di-n-octylphthalate	13.85	149	1830661	50.46239	ppb		99
89)	Benzo (b) fluoranthene	14.29	252	1419865	48.42384	ppb		99
90)	Benzo (k) fluoranthene	14.32	252	1318653	47.28739	ppb		99
91)	Benzo (a) pyrene	14.68	252	1289082	47.06095	ppb		99
92)	Indeno (1,2,3-cd) pyrene	16.30	276	1526262	50.33221	ppb		99
93)	Dibenz (a,h) anthracene	16.32	278	1271230	49.70488	ppb		99
94)	Benzo (g,h,i) perylene	16.76	276	1208044	44.36041	ppb		99

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y161207\1207Y012.D Vial: 12
Acq On : 7 Dec 16 14:01 Operator: MA
Sample : 2ND SRC SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 14:56 2016 Quant Results File: Y1207.RES

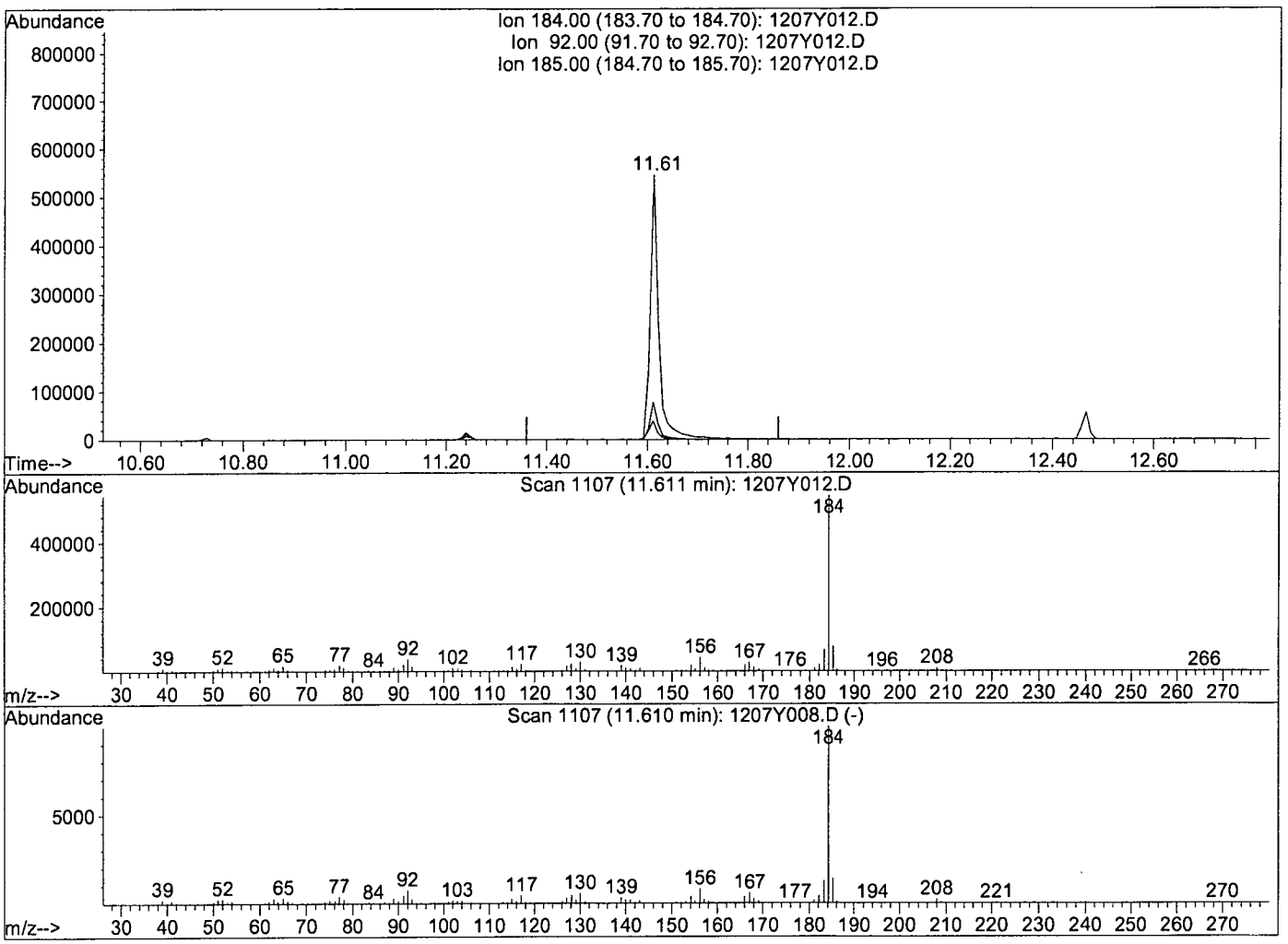
Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y012.D Vial: 12
Acq On : 7 Dec 16 14:01 Operator: MA
Sample : 2ND SRC SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Dec 7 14:46 2016 Quant Results File: temp.res

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Multiple Level Calibration



TIC: 1207Y012.D

(79) Benzidine (TM)

11.61min 62.5480ppb

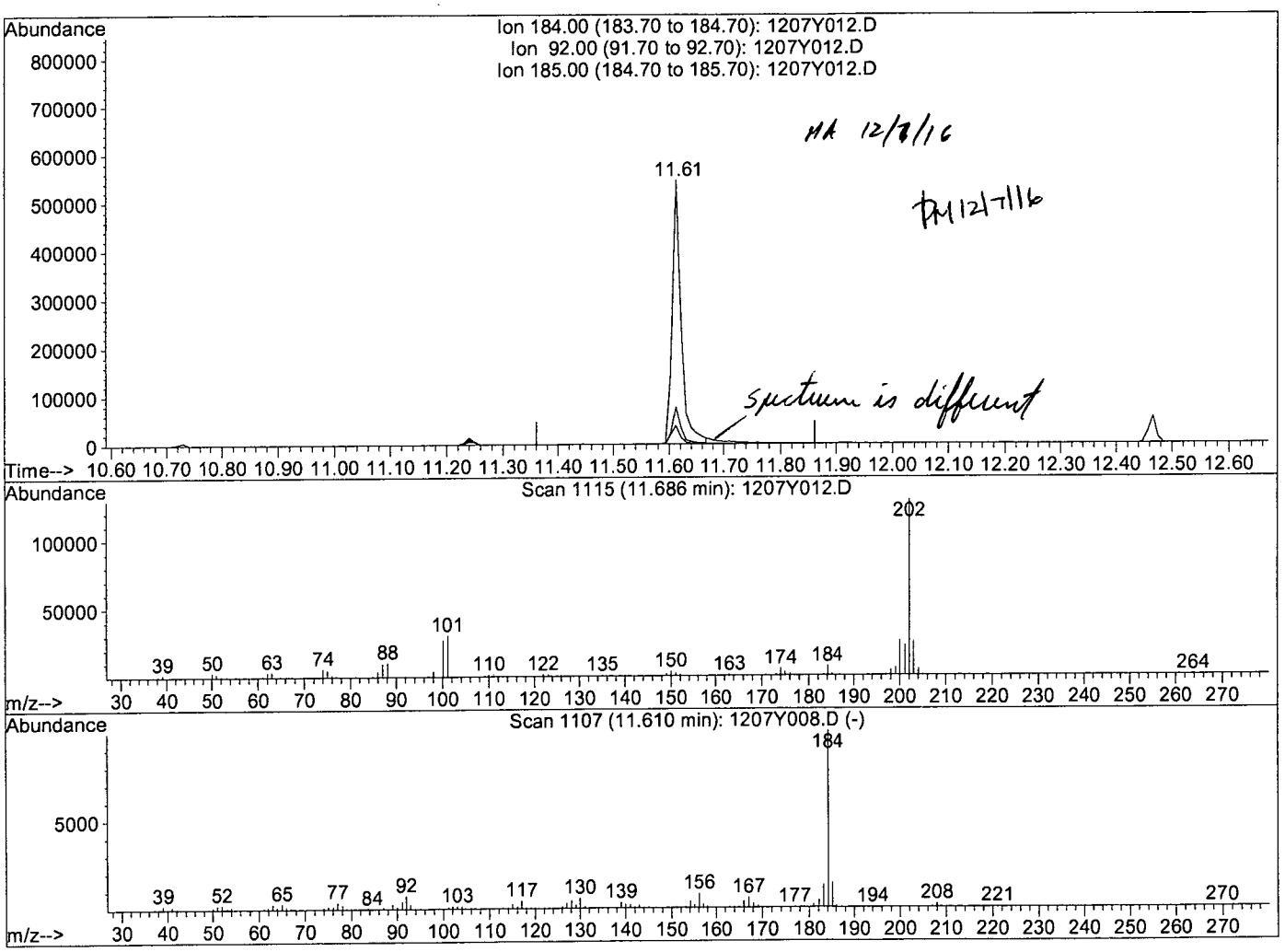
response 637092

Ion	Exp%	Act%
184.00	100	100
92.00	7.20	7.03
185.00	13.80	14.19
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y012.D Vial: 12
Acq On : 7 Dec 16 14:01 Operator: MA
Sample : 2ND SRC SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Dec 7 14:56 2016 Quant Results File: temp.res

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Multiple Level Calibration



TIC: 1207Y012.D

(79) Benzidine (TM)

11.61min 58.9290ppb m

response 600230

Ion	Exp%	Act%
184.00	100	100
92.00	7.20	7.03
185.00	13.80	14.19
0.00	0.00	0.00

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Date Analyzed: 01/18/17

Matrix: Instrument: Yoda

Initial Cal. Date: 12/07/16

Data File: 1207Y322.D

		Compound	MEAN	CCRF	%D		%Drift	
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I		
2	TM	n-Nitrosodimethylamine	0.7942	1.059	33	TM		*NT
3	TM	Pyridine	1.794	2.149	20	TM		
4	S	2-Fluorophenol (S)	1.316	1.332	1.3	S		
5	S	Phenol-D6 (S)	1.737	1.744	0.41	S		
6	*TM	Phenol	1.974	2.000	1.3	*TM		
7	TM	Aniline	1.868	1.875	0.34	TM		
8	TM	Bis (2-chloroethyl) ether	0.8648	0.9545	10	TM		
9	TM	2-Chlorophenol	1.576	1.532	2.8	TM		
10	TM	1,3-DCB	1.630	1.585	2.8	TM		
11	*TM	1,4-DCB	1.679	1.630	2.9	*TM		
12	TM	Benzyl alcohol	0.8717	0.8961	2.8	TM		
13	TM	1,2-DCB	1.537	1.510	1.8	TM		
14	TM	2-Methylphenol	1.120	1.132	1.1	TM		
15	TM	Bis (2-chloroisopropyl) ether	1.723	2.092	21	TM		*NT
16	TM	Acetophenone	2.044	2.028	0.78	TM		
17	TM	3&4-Methylphenol	1.484	1.511	1.8	TM		
18	**TM	n-Nitrosodi-n-propylamine	1.052	1.097	4.2	**TM		
19	TM	Hexachloroethane	0.6713	0.6846	2.0	TM		
20	I	Napthalene-D8(IS)	ISTD			I		
21	S	Nitrobenzene-D5(S)	0.4055	0.4029	0.63	S		
22	TM	Nitrobenzene	0.4083	0.4063	0.49	TM		
23	TM	Isophorone	0.6762	0.6765	0.04	TM		
24	*TM	2-Nitrophenol	0.2038	0.1968	3.4	*TM		
25	TM	2,4-Dimethylphenol	0.3231	0.3088	4.4	TM		
26	TML	Benzoic acid	0.2159	0.2381	10	TML	4.9	
27	TM	Bis (2-chloroethoxy) methane	0.3856	0.3774	2.1	TM		
28	*TM	2,4-Dichlorophenol	0.3079	0.2920	5.2	*TM		
29	TM	1,2,4-Trichlorobenzene	0.3349	0.3266	2.5	TM		
30	TM	3,4-Dimethylphenol	0.4947	0.4509	8.8	TM		
31	TM	Naphthalene	1.049	1.025	2.3	TM		
32	TM	4-Chloroaniline	0.3882	0.3667	5.5	TM		
33	TM	2,6-Dichlorophenol	0.2970	0.2671	10	TM		
34	TM	Hexachloropropene	0.2678	0.2407	10	TM		
35	*TM	Hexachlorobutadiene	0.2134	0.1921	10.0	*TM		
36	TM	Caprolactum	0.1543	0.1742	13	TM		
37	*TM	4-Chloro-3-methylphenol	0.3401	0.3296	3.1	*TM		
38	TM	2-Methylnaphthalene	0.6856	0.6974	1.7	TM		
39	TM	1-Methylnaphthalene	0.6763	0.6818	0.80	TM		
40	I	Acenaphthene-D10(IS)	ISTD			I		
		Average			5.5			

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/18/17
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y322.D

		Compound	MEAN	CCRF	%D	%Drift	
41	**TMQ	Hexachlorocyclopentadiene	0.1853	0.1887	1.8	**TMQ	13
42	TM	1,2,4,5-Tetrachlorobenzene	0.5436	0.5333	1.9	TM	
43	*TM	2,4,6-Trichlorophenol	0.3508	0.3353	4.4	*TM	
44	TM	2,4,5-Trichlorophenol	0.3829	0.3559	7.1	TM	
45	S	2-Fluorobiphenyl(S)	1.261	1.232	2.3	S	
46	TM	1,1'-Biphenyl	1.499	1.465	2.3	TM	
47	TM	2-Chloronaphthalene	1.159	1.138	1.7	TM	
48	TM	2-Nitroaniline	0.3982	0.4079	2.4	TM	
49	TM	Dimethyl phthalate	1.391	1.344	3.4	TM	
50	TM	2,6-DNT	0.3141	0.3101	1.3	TM	
51	TM	Acenaphthylene	1.826	1.798	1.5	TM	
52	TM	3-Nitroaniline	0.3430	0.3317	3.3	TM	
53	*TM	Acenaphthene	1.156	1.095	5.2	*TM	
54	**TMQ	2,4-Dinitrophenol	0.1593	0.1739	9.2	**TMQ	3.2
55	**TML	4-Nitrophenol	0.2439	0.2474	1.4	**TML	13
56	TM	Dibenzofuran	1.639	1.584	3.4	TM	
57	TM	2,4-DNT	0.4436	0.4315	2.7	TM	
58	TM	2,3,4,6-Tetrachlorophenol	0.3114	0.2918	6.3	TM	
59	TM	Diethyl phthalate	1.432	1.362	4.9	TM	
60	TM	4-Chlorophenyl phenyl ether	0.6394	0.5912	7.5	TM	
61	TM	Fluorene	1.324	1.191	10	TM	
62	TM	4-Nitroaniline	0.3249	0.3218	0.96	TM	
63	S	2,4,6-Tribromophenol(S)	0.2006	0.1752	13	S	
64	I	Phenanthrene-D10(IS)	ISTD			I	
65	TM	4,6-Dinitro-2-methylphenol	0.1486	0.1428	3.9	TM	
66	TM	Diphenyl amine	0.5706	0.5303	7.1	TM	
67	*TM	n-Nitrosodiphenylamine	0.5706	0.5303	7.1	*TM	
68	TM	1,2-Diphenylhydrazine	0.8211	0.7973	2.9	TM	
69	TM	4-Bromophenyl phenyl ether	0.2072	0.1971	4.9	TM	
70	TM	Hexachlorobenzene	0.2130	0.2029	4.7	TM	
71	TM	Atrazine	0.2062	0.1974	4.3	TM	
72	*TML	Pentachlorophenol	0.0958	0.0940	1.8	*TML	7.5
73	TM	Phenanthrene	1.080	1.050	2.8	TM	
74	TM	Anthracene	1.111	1.094	1.5	TM	
75	TM	Carbazol	1.005	0.9935	1.2	TM	
76	TM	Di-n-butylphthalate	1.292	1.258	2.7	TM	
77	*TM	Fluoranthene	1.189	1.163	2.2	*TM	
78	I	Chrysene-D12(IS)	ISTD			I	
79	TM	Benzidine	0.4531	0.4417	2.5	TM	
80	TM	Pyrene	1.357	1.225	9.7	TM	
		Average			4.1		

0
0

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/18/17
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y322.D

		Compound	MEAN	CCRF	%D	%Drift	
81	S	Terphenyl-D14(S)	0.9045	0.8268	8.6	S	
82	TM	Butyl benzylphthalate	0.6517	0.5868	10.0	TM	
83	TM	3,3'-Dichlorobenzidine	0.4273	0.4172	2.3	TM	
84	TM	Benz (a) anthracene	1.249	1.167	6.6	TM	
85	TM	Bis (2-ethylhexyl) phthalate	0.9136	0.8254	9.7	TM	
86	TM	Chrysene	1.213	1.104	9.0	TM	
87	*TM	Di-n-octylphthalate	1.614	1.481	8.2	*TM	
88	I	Perylene-D12(IS)	ISTD			I	
89	TM	Benzo (b) fluoranthene	1.250	1.148	8.2	TM	
90	TM	Benzo (k) fluoranthene	1.189	1.080	9.2	TM	
91	*TM	Benzo (a) pyrene	1.168	1.083	7.3	*TM	
92	TM	Indeno (1,2,3-cd) pyrene	1.293	1.178	8.9	TM	
93	TM	Dibenz (a,h) anthracene	1.091	1.020	6.4	TM	
94	TM	Benzo (g,h,i) perylene	1.161	0.9988	14	TM	
95							
96							
97							
98							
99							
100							
101							
102							
103							
104							
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110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			8.3		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y322.D Vial: 22
Acq On : 18 Jan 17 9:51 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 18 10:08 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	172673	40.00000	ppb		0.00
20) Napthalene-D8(IS)	6.29	136	734012	40.00000	ppb		0.00
40) Acenaphthene-D10(IS)	8.30	164	439505	40.00000	ppb		0.00
64) Phenanthrene-D10(IS)	10.02	188	815236	40.00000	ppb		0.00
78) Chrysene-D12(IS)	13.11	240	801078	40.00000	ppb		0.00
88) Perylene-D12(IS)	14.75	264	831799	40.00000	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol (S)	3.34	112	575164	101.25645	ppb		0.00
Spiked Amount 200.000			Recovery = 50.628%				
5) Phenol-D6 (S)	4.50	99	752800	100.41173	ppb		0.00
Spiked Amount 200.000			Recovery = 50.206%				
21) Nitrobenzene-D5(S)	5.49	82	369665	49.68413	ppb		0.00
Spiked Amount 100.000			Recovery = 49.684%				
45) 2-Fluorobiphenyl(S)	7.53	172	676830	48.85056	ppb		0.00
Spiked Amount 100.000			Recovery = 48.851%				
63) 2,4,6-Tribromophenol(S)	9.22	330	192454	87.33272	ppb		0.00
Spiked Amount 200.000			Recovery = 43.667%				
81) Terphenyl-D14(S)	11.88	244	827918	45.70554	ppb		0.00
Spiked Amount 100.000			Recovery = 45.706%				
Target Compounds							Qvalue
2) n-Nitrosodimethylamine	1.74	42	228636	66.68883	ppb		97
3) Pyridine	1.75	79	463897	59.89664	ppb		99
6) Phenol	4.51	94	431726	50.66618	ppb		98
7) Aniline	4.51	66	404608	50.17160	ppb		98
8) Bis (2-chloroethyl) ether	4.58	63	206031	55.18934	ppb		91
9) 2-Chlorophenol	4.64	128	330657	48.59530	ppb		98
10) 1,3-DCB	4.79	146	342080	48.62238	ppb		99
11) 1,4-DCB	4.88	146	351926	48.54140	ppb		99
12) Benzyl alcohol	5.05	108	193407	51.39908	ppb		96
13) 1,2-DCB	5.05	146	325909	49.12124	ppb		99
14) 2-Methylphenol	5.19	107	244273	50.53100	ppb		93
15) Bis (2-chloroisopropyl) et	5.18	45	451471	60.70292	ppb	#	78
16) Acetophenone	5.33	105	437721	49.61067	ppb		92
17) 3&4-Methylphenol	5.36	107	652432	101.83099	ppb		100
18) n-Nitrosodi-n-propylamine	5.33	70	236692	52.09794	ppb		90
19) Hexachloroethane	5.41	117	147767	50.99220	ppb		94
22) Nitrobenzene	5.52	77	372764	49.75596	ppb		92
23) Isophorone	5.79	82	620658	50.01791	ppb		97
24) 2-Nitrophenol	5.87	139	180604	48.30205	ppb		95
25) 2,4-Dimethylphenol	5.94	122	283353	47.79569	ppb		95
26) Benzoic acid	6.13	105	218490	47.54450	ppb		89
27) Bis (2-chloroethoxy) metha	6.03	93	346245	48.93577	ppb		99
28) 2,4-Dichlorophenol	6.16	162	267959	47.42450	ppb		98
29) 1,2,4-Trichlorobenzene	6.24	180	299622	48.75827	ppb		99
30) 3,4-Dimethylphenol	6.28	107	413720	45.57882	ppb		96
31) Naphthalene	6.31	128	940637	48.86391	ppb		100
32) 4-Chloroaniline	6.40	127	336481	47.23454	ppb		93
33) 2,6-Dichlorophenol	6.40	162	245101	44.96485	ppb		99
34) Hexachloropropene	6.41	213	220867	44.93667	ppb		99
35) Hexachlorobutadiene	6.45	225	176264	45.02227	ppb		99
36) Caprolactum	6.83	55	159820	56.43061	ppb		96
37) 4-Chloro-3-methylphenol	6.98	107	302377	48.44601	ppb		90

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y322.D Vial: 22
Acq On : 18 Jan 17 9:51 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 18 10:08 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.11	142	639919	50.86594	ppb		99
39)	1-Methylnaphthalene	7.22	142	625550	50.40238	ppb		98
41)	Hexachlorocyclopentadiene	7.28	237	103669	43.67647	ppb		95
42)	1,2,4,5-Tetrachlorobenzene	7.30	216	292959	49.04570	ppb		99
43)	2,4,6-Trichlorophenol	7.45	196	184188	47.78405	ppb		99
44)	2,4,5-Trichlorophenol	7.51	196	195502	46.47492	ppb	#	88
46)	1,1'-Biphenyl	7.65	154	804931	48.87324	ppb		98
47)	2-Chloronaphthalene	7.67	162	625415	49.12996	ppb		99
48)	2-Nitroaniline	7.80	65	224066	51.21600	ppb		87
49)	Dimethyl phthalate	8.01	163	738469	48.30215	ppb		100
50)	2,6-DNT	8.09	165	170340	49.35147	ppb		84
51)	Acenaphthylene	8.14	152	987889	49.24769	ppb		99
52)	3-Nitroaniline	8.29	138	182210	48.35126	ppb		92
53)	Acenaphthene	8.34	154	601790	47.37996	ppb		98
54)	2,4-Dinitrophenol	8.44	184	95541	51.59576	ppb		91
55)	4-Nitrophenol	8.55	65	135891	43.33838	ppb		97
56)	Dibenzofuran	8.54	168	870202	48.31534	ppb		92
57)	2,4-DNT	8.57	165	237080	48.63777	ppb	#	76
58)	2,3,4,6-Tetrachlorophenol	8.70	232	160310	46.84941	ppb		94
59)	Diethyl phthalate	8.83	149	748273	47.55704	ppb		99
60)	4-Chlorophenyl phenyl ethe	8.94	204	324794	46.23296	ppb		99
61)	Fluorene	8.94	166	654532	44.98059	ppb		99
62)	4-Nitroaniline	9.01	138	176786	49.51757	ppb		92
65)	4,6-Dinitro-2-methylphenol	9.05	198	145476	48.02567	ppb	#	73
66)	Diphenyl amine	9.09	169	1080886	92.94148	ppb		99
67)	n-Nitrosodiphenylamine	9.09	169	1080886	92.94148	ppb		99
68)	1,2-Diphenylhydrazine	9.12	77	812470	48.55059	ppb		95
69)	4-Bromophenyl phenyl ether	9.50	248	200867	47.57058	ppb		99
70)	Hexachlorobenzene	9.59	284	206734	47.63260	ppb	#	77
71)	Atrazine	9.73	200	100570	23.93395	ppb		99
72)	Pentachlorophenol	9.83	266	95809	46.23614	ppb		95
73)	Phenanthrene	10.05	178	1070146	48.60900	ppb		99
74)	Anthracene	10.12	178	1115260	49.26477	ppb		99
75)	Carbazol	10.31	167	1012458	49.41186	ppb		100
76)	Di-n-butylphthalate	10.72	149	1281551	48.67344	ppb		99
77)	Fluoranthene	11.43	202	1184976	48.90759	ppb	#	97
79)	Benzidine	11.61	184	442325	48.74400	ppb		98
80)	Pyrene	11.69	202	1226868	45.15980	ppb		99
82)	Butyl benzylphthalate	12.46	149	587627	45.02263	ppb		91
83)	3,3'-Dichlorobenzidine	13.07	252	417809	48.82798	ppb	#	96
84)	Benz (a) anthracene	13.09	228	1168477	46.71979	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.12	149	826477	45.17006	ppb		99
86)	Chrysene	13.13	228	1105626	45.51079	ppb		99
87)	Di-n-octylphthalate	13.84	149	1483040	45.88611	ppb	#	94
89)	Benzo (b) fluoranthene	14.28	252	1193841	45.91016	ppb	#	97
90)	Benzo (k) fluoranthene	14.32	252	1122719	45.39793	ppb		99
91)	Benzo (a) pyrene	14.67	252	1126366	46.36709	ppb	#	96
92)	Indeno (1,2,3-cd) pyrene	16.31	276	1224707	45.54066	ppb	#	94
93)	Dibenz (a,h) anthracene	16.32	278	1061032	46.77928	ppb		100
94)	Benzo (g,h,i) perylene	16.75	276	1038536	43.00160	ppb		96

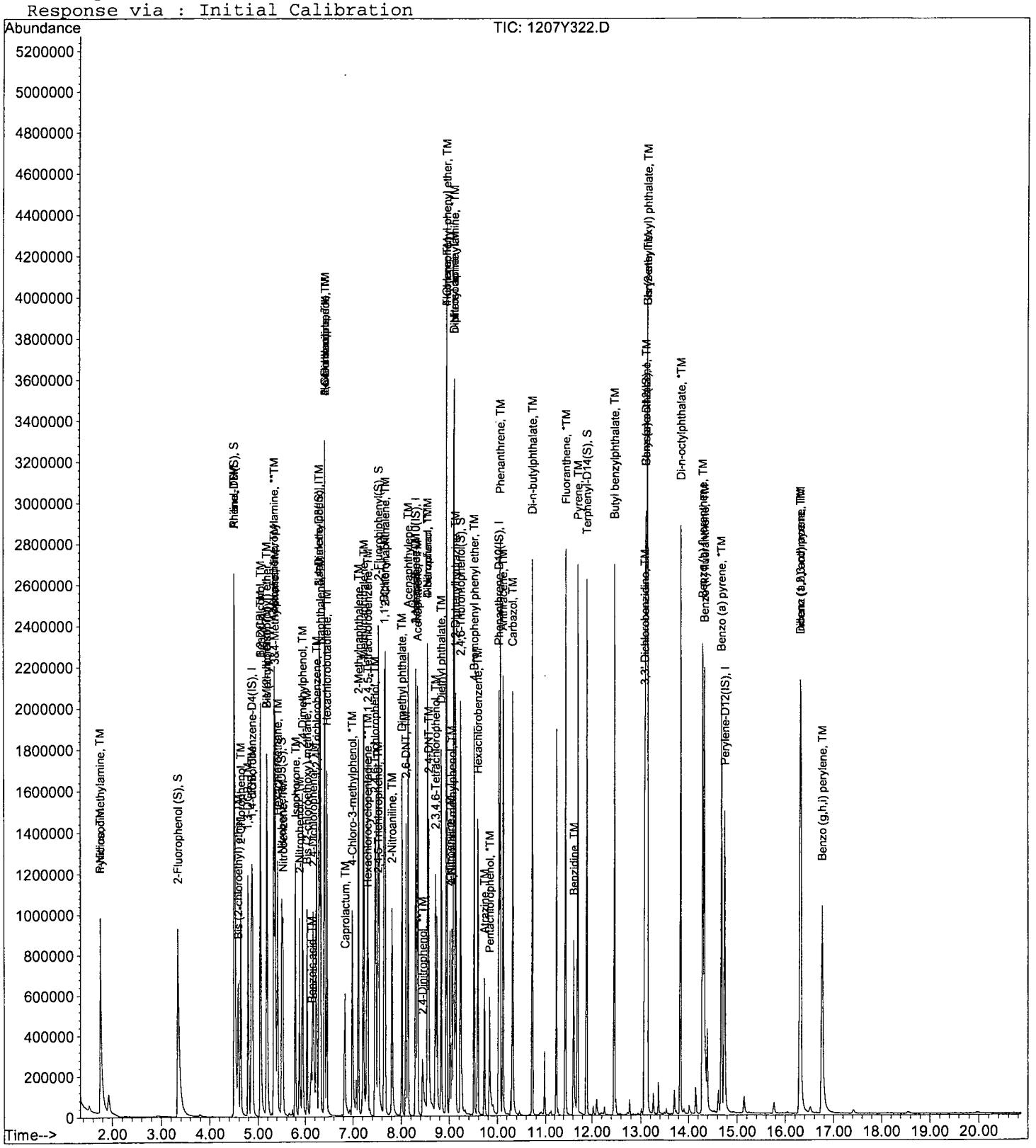
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y322.D Vial: 22
Acq On : 18 Jan 17 9:51 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 18 10:08 2017 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Date Analyzed: 01/18/17

Matrix: Instrument: Yoda

Initial Cal. Date: 12/07/16

Data File: 1207Y343.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	n-Nitrosodimethylamine	0.7942	0.9432	19	TM	
3	TM	Pyridine	1.794	1.815	1.2	TM	
4	S	2-Fluorophenol (S)	1.316	1.317	0.07	S	
5	S	Phenol-D6 (S)	1.737	1.726	0.64	S	
6	*TM	Phenol	1.974	2.007	1.7	*TM	
7	TM	Aniline	1.868	1.928	3.2	TM	
8	TM	Bis (2-chloroethyl) ether	0.8648	0.9331	7.9	TM	
9	TM	2-Chlorophenol	1.576	1.502	4.7	TM	
10	TM	1,3-DCB	1.630	1.578	3.2	TM	
11	*TM	1,4-DCB	1.679	1.617	3.7	*TM	
12	TM	Benzyl alcohol	0.8717	0.8921	2.3	TM	
13	TM	1,2-DCB	1.537	1.486	3.3	TM	
14	TM	2-Methylphenol	1.120	1.112	0.69	TM	
15	TM	Bis (2-chloroisopropyl) ether	1.723	2.109	22	TM	
16	TM	Acetophenone	2.044	2.008	1.7	TM	
17	TM	3&4-Methylphenol	1.484	1.481	0.21	TM	
18	**TM	n-Nitrosodi-n-propylamine	1.052	1.128	7.2	**TM	
19	TM	Hexachloroethane	0.6713	0.6818	1.6	TM	
20	I	Napthalene-D8(IS)	ISTD			I	
21	S	Nitrobenzene-D5(S)	0.4055	0.4177	3.0	S	
22	TM	Nitrobenzene	0.4083	0.4293	5.2	TM	
23	TM	Isophorone	0.6762	0.6925	2.4	TM	
24	*TM	2-Nitrophenol	0.2038	0.2043	0.26	*TM	
25	TM	2,4-Dimethylphenol	0.3231	0.3155	2.4	TM	
26	TML	Benzoic acid	0.2159	0.2451	14	TML	2.4
27	TM	Bis (2-chloroethoxy) methane	0.3856	0.3864	0.22	TM	
28	*TM	2,4-Dichlorophenol	0.3079	0.2949	4.2	*TM	
29	TM	1,2,4-Trichlorobenzene	0.3349	0.3248	3.0	TM	
30	TM	3,4-Dimethylphenol	0.4947	0.4611	6.8	TM	
31	TM	Naphthalene	1.049	1.018	3.0	TM	
32	TM	4-Chloroaniline	0.3882	0.3586	7.6	TM	
33	TM	2,6-Dichlorophenol	0.2970	0.2721	8.4	TM	
34	TM	Hexachloropropene	0.2678	0.2368	12	TM	
35	*TM	Hexachlorobutadiene	0.2134	0.1950	8.6	*TM	
36	TM	Caprolactum	0.1543	0.1745	13	TM	
37	*TM	4-Chloro-3-methylphenol	0.3401	0.3307	2.8	*TM	
38	TM	2-Methylnaphthalene	0.6856	0.6921	0.95	TM	
39	TM	1-Methylnaphthalene	0.6763	0.6704	0.88	TM	
40	I	Acenaphthene-D10(IS)	ISTD			I	
		Average			4.9		

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/18/17
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y343.D

		Compound	MEAN	CCRF	%D		%Drift
41	**TMQ	Hexachlorocyclopentadiene	0.1853	0.1713	7.6	**TMQ	19
42	TM	1,2,4,5-Tetrachlorobenzene	0.5436	0.5056	7.0	TM	
43	*TM	2,4,6-Trichlorophenol	0.3508	0.3310	5.6	*TM	
44	TM	2,4,5-Trichlorophenol	0.3829	0.3521	8.0	TM	
45	S	2-Fluorobiphenyl(S)	1.261	1.191	5.6	S	
46	TM	1,1'-Biphenyl	1.499	1.396	6.8	TM	
47	TM	2-Chloronaphthalene	1.159	1.105	4.6	TM	
48	TM	2-Nitroaniline	0.3982	0.4099	3.0	TM	
49	TM	Dimethyl phthalate	1.391	1.287	7.5	TM	
50	TM	2,6-DNT	0.3141	0.2947	6.2	TM	
51	TM	Acenaphthylene	1.826	1.701	6.8	TM	
52	TM	3-Nitroaniline	0.3430	0.3242	5.5	TM	
53	*TM	Acenaphthene	1.156	1.053	8.9	*TM	
54	**TMQ	2,4-Dinitrophenol	0.1593	0.1524	4.3	**TMQ	6.9
55	**TML	4-Nitrophenol	0.2439	0.2460	0.83	**TML	14
56	TM	Dibenzofuran	1.639	1.524	7.1	TM	
57	TM	2,4-DNT	0.4436	0.4201	5.3	TM	
58	TM	2,3,4,6-Tetrachlorophenol	0.3114	0.2878	7.6	TM	
59	TM	Diethyl phthalate	1.432	1.329	7.2	TM	
60	TM	4-Chlorophenyl phenyl ether	0.6394	0.6015	5.9	TM	
61	TM	Fluorene	1.324	1.240	6.3	TM	
62	TM	4-Nitroaniline	0.3249	0.3276	0.81	TM	
63	S	2,4,6-Tribromophenol(S)	0.2006	0.1796	10	S	
64	I	Phenanthrene-D10(IS)	ISTD			I	
65	TM	4,6-Dinitro-2-methylphenol	0.1486	0.1355	8.8	TM	
66	TM	Diphenyl amine	0.5706	0.5125	10	TM	
67	*TM	n-Nitrosodiphenylamine	0.5706	0.5125	10	*TM	
68	TM	1,2-Diphenylhydrazine	0.8211	0.7778	5.3	TM	
69	TM	4-Bromophenyl phenyl ether	0.2072	0.1962	5.3	TM	
70	TM	Hexachlorobenzene	0.2130	0.2020	5.1	TM	
71	TM	Atrazine	0.2062	0.1936	6.1	TM	
72	*TML	Pentachlorophenol	0.0958	0.0877	8.5	*TML	13
73	TM	Phenanthrene	1.080	1.046	3.2	TM	
74	TM	Anthracene	1.111	1.076	3.2	TM	
75	TM	Carbazol	1.005	0.9641	4.1	TM	
76	TM	Di-n-butylphthalate	1.292	1.248	3.4	TM	
77	*TM	Fluoranthene	1.189	1.130	5.0	*TM	
78	I	Chrysene-D12(IS)	ISTD			I	
79	TM	Benzidine	0.4531	0.4385	3.2	TM	
80	TM	Pyrene	1.357	1.241	8.5	TM	
		Average			6.0		

0
0

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/18/17
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y343.D

		Compound	MEAN	CCRF	%D	%Drift	
81	S	Terphenyl-D14(S)	0.9045	0.8538	5.6	S	
82	TM	Butyl benzylphthalate	0.6517	0.6106	6.3	TM	
83	TM	3,3'-Dichlorobenzidine	0.4273	0.4101	4.0	TM	
84	TM	Benz (a) anthracene	1.249	1.201	3.8	TM	
85	TM	Bis (2-ethylhexyl) phthalate	0.9136	0.8283	9.3	TM	
86	TM	Chrysene	1.213	1.115	8.1	TM	
87	*TM	Di-n-octylphthalate	1.614	1.468	9.0	*TM	
88	I	Perylene-D12(IS)	ISTD			I	
89	TM	Benzo (b) fluoranthene	1.250	1.159	7.3	TM	
90	TM	Benzo (k) fluoranthene	1.189	1.070	10	TM	
91	*TM	Benzo (a) pyrene	1.168	1.088	6.8	*TM	
92	TM	Indeno (1,2,3-cd) pyrene	1.293	1.163	10	TM	
93	TM	Dibenz (a,h) anthracene	1.091	0.9982	8.5	TM	
94	TM	Benzo (g,h,i) perylene	1.161	0.9806	16	TM	
95							
96							
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			8.1		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y343.D Vial: 43
Acq On : 18 Jan 17 20:07 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 19 8:01 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	175309	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.29	136	725071	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.30	164	446031	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.03	188	873838	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.11	240	832155	40.00000 ppb		0.00
88) Perylene-D12(IS)	14.75	264	868174	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.34	112	577077	100.06564 ppb		0.00
Spiked Amount 200.000			Recovery =	50.033%		
5) Phenol-D6 (S)	4.50	99	756288	99.36016 ppb		0.00
Spiked Amount 200.000			Recovery =	49.680%		
21) Nitrobenzene-D5(S)	5.50	82	378569	51.50828 ppb		0.00
Spiked Amount 100.000			Recovery =	51.508%		
45) 2-Fluorobiphenyl(S)	7.53	172	663962	47.22065 ppb		0.00
Spiked Amount 100.000			Recovery =	47.221%		
63) 2,4,6-Tribromophenol(S)	9.23	330	200217	89.52612 ppb		0.00
Spiked Amount 200.000			Recovery =	44.763%		
81) Terphenyl-D14(S)	11.88	244	888143	47.19923 ppb		0.00
Spiked Amount 100.000			Recovery =	47.199%		
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.75	42	206690	59.38109 ppb		97
3) Pyridine	1.76	79	397789	50.58875 ppb		97
6) Phenol	4.51	94	439841	50.84238 ppb		97
7) Aniline	4.51	66	422404	51.59074 ppb		97
8) Bis (2-chloroethyl) ether	4.59	63	204475	53.94896 ppb		94
9) 2-Chlorophenol	4.64	128	329040	47.63053 ppb		97
10) 1,3-DCB	4.79	146	345846	48.41852 ppb		99
11) 1,4-DCB	4.88	146	354277	48.13092 ppb		99
12) Benzyl alcohol	5.05	108	195498	51.17357 ppb		98
13) 1,2-DCB	5.05	146	325660	48.34568 ppb		96
14) 2-Methylphenol	5.19	107	243691	49.65262 ppb		92
15) Bis (2-chloroisopropyl) et	5.18	45	462113	61.19954 ppb	#	79
16) Acetophenone	5.33	105	440086	49.12873 ppb		93
17) 3&4-Methylphenol	5.36	107	649088	99.78574 ppb		95
18) n-Nitrosodi-n-propylamine	5.34	70	247246	53.60268 ppb		94
19) Hexachloroethane	5.41	117	149410	50.78392 ppb		95
22) Nitrobenzene	5.52	77	389087	52.57514 ppb		92
23) Isophorone	5.79	82	627601	51.20112 ppb		98
24) 2-Nitrophenol	5.88	139	185150	50.12848 ppb		98
25) 2,4-Dimethylphenol	5.94	122	285924	48.82409 ppb		97
26) Benzoic acid	6.14	105	222164	48.82467 ppb		95
27) Bis (2-chloroethoxy) metha	6.03	93	350249	50.11208 ppb		99
28) 2,4-Dichlorophenol	6.16	162	267252	47.88263 ppb		98
29) 1,2,4-Trichlorobenzene	6.23	180	294342	48.48969 ppb		99
30) 3,4-Dimethylphenol	6.29	107	417921	46.60939 ppb		97
31) Naphthalene	6.31	128	922721	48.52428 ppb		99
32) 4-Chloroaniline	6.40	127	325046	46.19198 ppb		99
33) 2,6-Dichlorophenol	6.41	162	246638	45.80477 ppb		98
34) Hexachloropropene	6.41	213	214615	44.20310 ppb		99
35) Hexachlorobutadiene	6.45	225	176768	45.70777 ppb		96
36) Caprolactum	6.83	55	158179	56.53991 ppb		93
37) 4-Chloro-3-methylphenol	6.98	107	299737	48.61522 ppb		94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y343.D Vial: 43
Acq On : 18 Jan 17 20:07 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 19 8:01 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

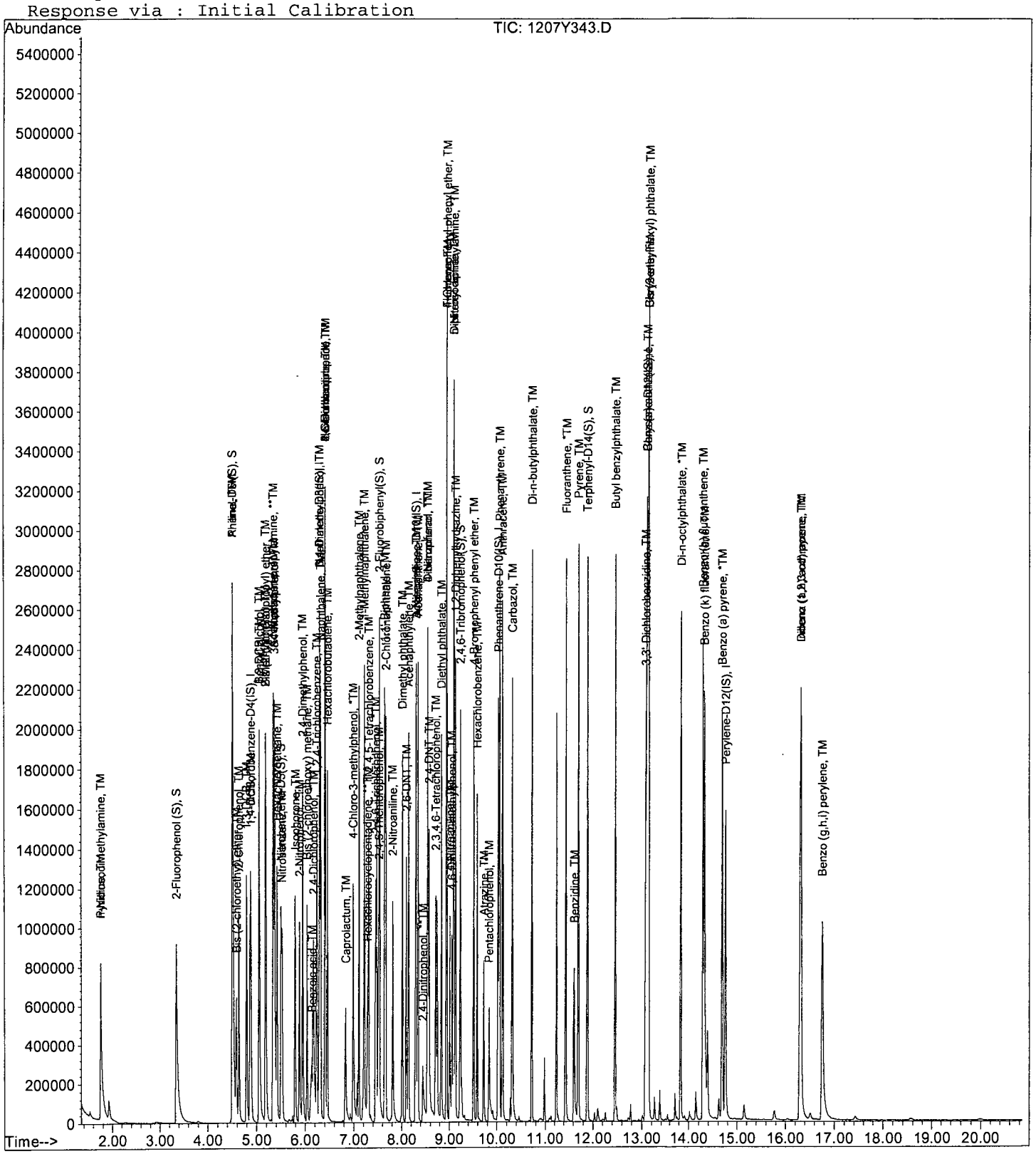
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.10	142	627256	50.47421	ppb		97
39)	1-Methylnaphthalene	7.21	142	607611	49.56068	ppb		98
41)	Hexachlorocyclopentadiene	7.28	237	95489	40.58551	ppb		98
42)	1,2,4,5-Tetrachlorobenzene	7.31	216	281919	46.50688	ppb		99
43)	2,4,6-Trichlorophenol	7.46	196	184560	47.18000	ppb		99
44)	2,4,5-Trichlorophenol	7.51	196	196324	45.98748	ppb		92
46)	1,1'-Biphenyl	7.64	154	778599	46.58275	ppb	#	97
47)	2-Chloronaphthalene	7.67	162	616286	47.70448	ppb		98
48)	2-Nitroaniline	7.81	65	228558	51.47839	ppb		86
49)	Dimethyl phthalate	8.01	163	717767	46.26116	ppb		99
50)	2,6-DNT	8.10	165	164289	46.90193	ppb		90
51)	Acenaphthylene	8.14	152	948358	46.58529	ppb		99
52)	3-Nitroaniline	8.29	138	180769	47.26703	ppb		88
53)	Acenaphthene	8.34	154	586907	45.53211	ppb		98
54)	2,4-Dinitrophenol	8.44	184	84980	46.55279	ppb		89
55)	4-Nitrophenol	8.55	65	137135	43.12239	ppb		93
56)	Dibenzofuran	8.54	168	849428	46.47188	ppb		94
57)	2,4-DNT	8.57	165	234197	47.34334	ppb	#	78
58)	2,3,4,6-Tetrachlorophenol	8.71	232	160442	46.20195	ppb		96
59)	Diethyl phthalate	8.83	149	741200	46.41827	ppb		99
60)	4-Chlorophenyl phenyl ethe	8.94	204	335339	47.03558	ppb		96
61)	Fluorene	8.94	166	691590	46.83189	ppb		98
62)	4-Nitroaniline	9.01	138	182624	50.40435	ppb		92
65)	4,6-Dinitro-2-methylphenol	9.05	198	147984	45.57737	ppb	#	76
66)	Diphenyl amine	9.09	169	1119572	89.81195	ppb		98
67)	n-Nitrosodiphenylamine	9.09	169	1119572	89.81195	ppb		98
68)	1,2-Diphenylhydrazine	9.13	77	849586	47.36384	ppb		96
69)	4-Bromophenyl phenyl ether	9.51	248	214260	47.33947	ppb		96
70)	Hexachlorobenzene	9.58	284	220644	47.42823	ppb		99
71)	Atrazine	9.72	200	105712	23.47052	ppb		96
72)	Pentachlorophenol	9.83	266	95773	43.51972	ppb		96
73)	Phenanthrene	10.05	178	1142273	48.40564	ppb		99
74)	Anthracene	10.11	178	1174823	48.41559	ppb		99
75)	Carbazol	10.31	167	1053065	47.94703	ppb		100
76)	Di-n-butylphthalate	10.72	149	1362916	48.29228	ppb		99
77)	Fluoranthene	11.44	202	1233939	47.51304	ppb	#	97
79)	Benzidine	11.61	184	456142	48.38941	ppb		99
80)	Pyrene	11.70	202	1290779	45.73795	ppb		100
82)	Butyl benzylphthalate	12.46	149	635098	46.84254	ppb		95
83)	3,3'-Dichlorobenzidine	13.07	252	426605	47.99406	ppb	#	97
84)	Benz (a) anthracene	13.09	228	1249504	48.09379	ppb		98
85)	Bis (2-ethylhexyl) phthala	13.13	149	861617	45.33198	ppb		99
86)	Chrysene	13.14	228	1159702	45.95398	ppb		99
87)	Di-n-octylphthalate	13.84	149	1527488	45.49637	ppb		96
89)	Benzo (b) fluoranthene	14.29	252	1258066	46.35295	ppb	#	98
90)	Benzo (k) fluoranthene	14.32	252	1161358	44.99277	ppb		98
91)	Benzo (a) pyrene	14.69	252	1181117	46.58380	ppb		99
92)	Indeno (1,2,3-cd) pyrene	16.30	276	1262052	44.96307	ppb		94
93)	Dibenz (a,h) anthracene	16.32	278	1083234	45.75715	ppb		99
94)	Benzo (g,h,i) perylene	16.77	276	1064189	42.21759	ppb		97

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y161207\1207Y343.D Vial: 43
Acq On : 18 Jan 17 20:07 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 19 8:01 2017 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Date Analyzed: 01/20/17

Matrix: Instrument: Yoda

Initial Cal. Date: 12/07/16

Data File: 1207Y346.D

		Compound	MEAN	CCRF	%D		%Drift	
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I		
2	TM	n-Nitrosodimethylamine	0.7942	1.096	38	TM		*NT
3	TM	Pyridine	1.794	2.131	19	TM		
4	S	2-Fluorophenol (S)	1.316	1.350	2.6	S		
5	S	Phenol-D6 (S)	1.737	1.756	1.1	S		
6	*TM	Phenol	1.974	1.999	1.3	*TM		
7	TM	Aniline	1.868	1.893	1.3	TM		
8	TM	Bis (2-chloroethyl) ether	0.8648	0.9301	7.6	TM		
9	TM	2-Chlorophenol	1.576	1.531	2.9	TM		
10	TM	1,3-DCB	1.630	1.572	3.6	TM		
11	*TM	1,4-DCB	1.679	1.629	3.0	*TM		
12	TM	Benzyl alcohol	0.8717	0.8953	2.7	TM		
13	TM	1,2-DCB	1.537	1.489	3.1	TM		
14	TM	2-Methylphenol	1.120	1.133	1.2	TM		
15	TM	Bis (2-chloroisopropyl) ether	1.723	2.123	23	TM		*NT
16	TM	Acetophenone	2.044	2.058	0.67	TM		
17	TM	3&4-Methylphenol	1.484	1.501	1.1	TM		
18	**TM	n-Nitrosodi-n-propylamine	1.052	1.121	6.5	**TM		
19	TM	Hexachloroethane	0.6713	0.6610	1.5	TM		
20	I	Napthalene-D8(IS)	ISTD			I		
21	S	Nitrobenzene-D5(S)	0.4055	0.3964	2.2	S		
22	TM	Nitrobenzene	0.4083	0.4035	1.2	TM		
23	TM	Isophorone	0.6762	0.6803	0.61	TM		
24	*TM	2-Nitrophenol	0.2038	0.1949	4.4	*TM		
25	TM	2,4-Dimethylphenol	0.3231	0.3100	4.0	TM		
26	TML	Benzoic acid	0.2159	0.2323	7.6	TML	7.1	
27	TM	Bis (2-chloroethoxy) methane	0.3856	0.3875	0.49	TM		
28	*TM	2,4-Dichlorophenol	0.3079	0.2920	5.2	*TM		
29	TM	1,2,4-Trichlorobenzene	0.3349	0.3215	4.0	TM		
30	TM	3,4-Dimethylphenol	0.4947	0.4499	9.0	TM		
31	TM	Naphthalene	1.049	1.017	3.1	TM		
32	TM	4-Chloroaniline	0.3882	0.3683	5.1	TM		
33	TM	2,6-Dichlorophenol	0.2970	0.2589	13	TM		
34	TM	Hexachloropropene	0.2678	0.2371	11	TM		
35	*TM	Hexachlorobutadiene	0.2134	0.1866	13	*TM		
36	TM	Caprolactum	0.1543	0.1737	13	TM		
37	*TM	4-Chloro-3-methylphenol	0.3401	0.3260	4.2	*TM		
38	TM	2-Methylnaphthalene	0.6856	0.6882	0.38	TM		
39	TM	1-Methylnaphthalene	0.6763	0.6590	2.6	TM		
40	I	Acenaphthene-D10(IS)	ISTD			I		
		Average			6.1			

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/20/17
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y346.D

		Compound	MEAN	CCRF	%D		%Drift
41	**TMQ	Hexachlorocyclopentadiene	0.1853	0.1781	3.9	**TMQ	16
42	TM	1,2,4,5-Tetrachlorobenzene	0.5436	0.5181	4.7	TM	
43	*TM	2,4,6-Trichlorophenol	0.3508	0.3408	2.9	*TM	
44	TM	2,4,5-Trichlorophenol	0.3829	0.3556	7.1	TM	
45	S	2-Fluorobiphenyl(S)	1.261	1.213	3.8	S	
46	TM	1,1'-Biphenyl	1.499	1.445	3.6	TM	
47	TM	2-Chloronaphthalene	1.159	1.127	2.7	TM	
48	TM	2-Nitroaniline	0.3982	0.4135	3.9	TM	
49	TM	Dimethyl phthalate	1.391	1.337	3.9	TM	
50	TM	2,6-DNT	0.3141	0.3050	2.9	TM	
51	TM	Acenaphthylene	1.826	1.792	1.8	TM	
52	TM	3-Nitroaniline	0.3430	0.3355	2.2	TM	
53	*TM	Acenaphthene	1.156	1.108	4.2	*TM	
54	**TMQ	2,4-Dinitrophenol	0.1593	0.1577	0.96	**TMQ	4.4
55	**TML	4-Nitrophenol	0.2439	0.2429	0.43	**TML	15
56	TM	Dibenzofuran	1.639	1.550	5.4	TM	
57	TM	2,4-DNT	0.4436	0.4313	2.8	TM	
58	TM	2,3,4,6-Tetrachlorophenol	0.3114	0.2979	4.3	TM	
59	TM	Diethyl phthalate	1.432	1.373	4.1	TM	
60	TM	4-Chlorophenyl phenyl ether	0.6394	0.5892	7.8	TM	
61	TM	Fluorene	1.324	1.206	8.9	TM	
62	TM	4-Nitroaniline	0.3249	0.3213	1.1	TM	
63	S	2,4,6-Tribromophenol(S)	0.2006	0.1772	12	S	
64	I	Phenanthrene-D10(IS)	ISTD			I	
65	TM	4,6-Dinitro-2-methylphenol	0.1486	0.1377	7.4	TM	
66	TM	Diphenyl amine	0.5706	0.5311	6.9	TM	
67	*TM	n-Nitrosodiphenylamine	0.5706	0.5311	6.9	*TM	
68	TM	1,2-Diphenylhydrazine	0.8211	0.9763	19	TM	
69	TM	4-Bromophenyl phenyl ether	0.2072	0.2025	2.3	TM	
70	TM	Hexachlorobenzene	0.2130	0.2044	4.0	TM	
71	TM	Atrazine	0.2062	0.1907	7.5	TM	
72	*TML	Pentachlorophenol	0.0958	0.0982	2.5	*TML	3.9
73	TM	Phenanthrene	1.080	1.040	3.7	TM	
74	TM	Anthracene	1.111	1.093	1.6	TM	
75	TM	Carbazol	1.005	0.9997	0.56	TM	
76	TM	Di-n-butylphthalate	1.292	1.266	2.0	TM	
77	*TM	Fluoranthene	1.189	1.103	7.2	*TM	
78	I	Chrysene-D12(IS)	ISTD			I	
79	TM	Benzidine	0.4531	0.4161	8.2	TM	
80	TM	Pyrene	1.357	1.212	11	TM	
		Average			4.9		

0
0

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/20/17
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y346.D

		Compound	MEAN	CCRF	%D		%Drift
81	S	Terphenyl-D14(S)	0.9045	0.8183	9.5	S	
82	TM	Butyl benzylphthalate	0.6517	0.5885	9.7	TM	
83	TM	3,3'-Dichlorobenzidine	0.4273	0.4158	2.7	TM	
84	TM	Benz (a) anthracene	1.249	1.154	7.6	TM	
85	TM	Bis (2-ethylhexyl) phthalate	0.9136	0.7991	13	TM	
86	TM	Chrysene	1.213	1.101	9.2	TM	
87	*TM	Di-n-octylphthalate	1.614	1.451	10	*TM	
88	I	Perylene-D12(IS)	ISTD			I	
89	TM	Benzo (b) fluoranthene	1.250	1.154	7.7	TM	
90	TM	Benzo (k) fluoranthene	1.189	1.143	3.9	TM	
91	*TM	Benzo (a) pyrene	1.168	1.106	5.3	*TM	
92	TM	Indeno (1,2,3-cd) pyrene	1.293	1.182	8.6	TM	
93	TM	Dibenz (a,h) anthracene	1.091	1.023	6.2	TM	
94	TM	Benzo (g,h,i) perylene	1.161	1.012	13	TM	
95							
96							
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			8.2		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y346.D Vial: 46
Acq On : 20 Jan 17 8:32 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 20 8:47 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	179592	40.00000	ppb		0.00
20) Napthalene-D8(IS)	6.29	136	781103	40.00000	ppb		0.00
40) Acenaphthene-D10(IS)	8.30	164	460499	40.00000	ppb		0.00
64) Phenanthrene-D10(IS)	10.02	188	847010	40.00000	ppb		0.00
78) Chrysene-D12(IS)	13.10	240	809889	40.00000	ppb		0.00
88) Perylene-D12(IS)	14.75	264	824465	40.00000	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol (S)	3.34	112	606344	102.63312	ppb		0.00
Spiked Amount 200.000			Recovery = 51.317%				
5) Phenol-D6 (S)	4.50	99	788431	101.11277	ppb		0.00
Spiked Amount 200.000			Recovery = 50.557%				
21) Nitrobenzene-D5(S)	5.49	82	387017	48.88035	ppb		0.00
Spiked Amount 100.000			Recovery = 48.880%				
45) 2-Fluorobiphenyl(S)	7.53	172	698228	48.09749	ppb		0.00
Spiked Amount 100.000			Recovery = 48.097%				
63) 2,4,6-Tribromophenol(S)	9.23	330	204045	88.37128	ppb		0.00
Spiked Amount 200.000			Recovery = 44.186%				
81) Terphenyl-D14(S)	11.89	244	828397	45.23445	ppb		0.00
Spiked Amount 100.000			Recovery = 45.234%				
Target Compounds							Qvalue
2) n-Nitrosodimethylamine	1.74	42	246130	69.02565	ppb		99
3) Pyridine	1.75	79	478351	59.38340	ppb		99
6) Phenol	4.51	94	448834	50.64460	ppb		98
7) Aniline	4.51	66	424908	50.65891	ppb		97
8) Bis (2-chloroethyl) ether	4.58	63	208807	53.77806	ppb		96
9) 2-Chlorophenol	4.64	128	343581	48.54932	ppb		99
10) 1,3-DCB	4.79	146	352861	48.22249	ppb		99
11) 1,4-DCB	4.88	146	365614	48.48654	ppb		98
12) Benzyl alcohol	5.05	108	200993	51.35723	ppb		99
13) 1,2-DCB	5.05	146	334201	48.43042	ppb		100
14) 2-Methylphenol	5.19	107	254396	50.59763	ppb		92
15) Bis (2-chloroisopropyl) et	5.18	45	476643	61.61840	ppb	#	78
16) Acetophenone	5.33	105	461916	50.33594	ppb		94
17) 3&4-Methylphenol	5.36	107	673868	101.12464	ppb		97
18) n-Nitrosodi-n-propylamine	5.33	70	251688	53.26439	ppb		91
19) Hexachloroethane	5.41	117	148382	49.23172	ppb		96
22) Nitrobenzene	5.52	77	393969	49.41605	ppb		94
23) Isophorone	5.79	82	664275	50.30556	ppb		97
24) 2-Nitrophenol	5.87	139	190277	47.82107	ppb		97
25) 2,4-Dimethylphenol	5.94	122	302711	47.98262	ppb		99
26) Benzoic acid	6.14	105	226798	46.47359	ppb		89
27) Bis (2-chloroethoxy) metha	6.03	93	378302	50.24309	ppb		98
28) 2,4-Dichlorophenol	6.16	162	285069	47.41102	ppb		99
29) 1,2,4-Trichlorobenzene	6.24	180	313902	48.00246	ppb		99
30) 3,4-Dimethylphenol	6.28	107	439265	45.47556	ppb		95
31) Naphthalene	6.31	128	992511	48.45028	ppb		99
32) 4-Chloroaniline	6.40	127	359624	47.43978	ppb		91
33) 2,6-Dichlorophenol	6.40	162	252739	43.57077	ppb		95
34) Hexachloropropene	6.41	213	231454	44.25166	ppb		99
35) Hexachlorobutadiene	6.45	225	182165	43.72437	ppb		98
36) Caprolactum	6.83	55	169550	56.25696	ppb		94
37) 4-Chloro-3-methylphenol	6.98	107	318286	47.92053	ppb		83

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y346.D Vial: 46
Acq On : 20 Jan 17 8:32 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 20 8:47 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.11	142	671953	50.19215	ppb		98
39)	1-Methylnaphthalene	7.22	142	643412	48.71615	ppb		96
41)	Hexachlorocyclopentadiene	7.28	237	102547	41.81311	ppb		98
42)	1,2,4,5-Tetrachlorobenzene	7.30	216	298241	47.65369	ppb		97
43)	2,4,6-Trichlorophenol	7.45	196	196146	48.56643	ppb		99
44)	2,4,5-Trichlorophenol	7.51	196	204716	46.44665	ppb	#	88
46)	1,1'-Biphenyl	7.65	154	831951	48.21091	ppb	#	98
47)	2-Chloronaphthalene	7.66	162	648625	48.63030	ppb		100
48)	2-Nitroaniline	7.80	65	238031	51.92761	ppb		84
49)	Dimethyl phthalate	8.02	163	769818	48.05708	ppb		99
50)	2,6-DNT	8.09	165	175583	48.55133	ppb	#	77
51)	Acenaphthylene	8.14	152	1031674	49.08573	ppb		98
52)	3-Nitroaniline	8.29	138	193134	48.91358	ppb		86
53)	Acenaphthene	8.34	154	637686	47.91723	ppb		100
54)	2,4-Dinitrophenol	8.44	184	90793	47.81423	ppb		91
55)	4-Nitrophenol	8.55	65	139810	42.64297	ppb		93
56)	Dibenzofuran	8.54	168	892477	47.29302	ppb		94
57)	2,4-DNT	8.57	165	248273	48.61199	ppb	#	69
58)	2,3,4,6-Tetrachlorophenol	8.70	232	171466	47.82518	ppb		94
59)	Diethyl phthalate	8.83	149	790135	47.92820	ppb		97
60)	4-Chlorophenyl phenyl ethe	8.94	204	339174	46.07882	ppb		98
61)	Fluorene	8.94	166	694384	45.54378	ppb		99
62)	4-Nitroaniline	9.01	138	184943	49.44068	ppb		93
65)	4,6-Dinitro-2-methylphenol	9.05	198	145745	46.30955	ppb	#	67
66)	Diphenyl amine	9.09	169	1124515	93.06572	ppb		99
67)	n-Nitrosodiphenylamine	9.09	169	1124515	93.06572	ppb		99
68)	1,2-Diphenylhydrazine	9.12	77	1033635	59.44964	ppb		93
69)	4-Bromophenyl phenyl ether	9.50	248	214365	48.86282	ppb		98
70)	Hexachlorobenzene	9.59	284	216457	48.00195	ppb	#	77
71)	Atrazine	9.73	200	100953	23.12384	ppb		97
72)	Pentachlorophenol	9.83	266	103976	48.03054	ppb		96
73)	Phenanthrene	10.05	178	1101116	48.13950	ppb		99
74)	Anthracene	10.12	178	1157035	49.19282	ppb		100
75)	Carbazol	10.31	167	1058435	49.71794	ppb		100
76)	Di-n-butylphthalate	10.72	149	1340295	48.99496	ppb		99
77)	Fluoranthene	11.43	202	1168026	46.39958	ppb	#	97
79)	Benzidine	11.61	184	421291	45.92098	ppb		99
80)	Pyrene	11.69	202	1227414	44.68838	ppb		99
82)	Butyl benzylphthalate	12.45	149	595790	45.15144	ppb		86
83)	3,3'-Dichlorobenzidine	13.07	252	420922	48.65661	ppb	#	97
84)	Benz (a) anthracene	13.10	228	1168477	46.21152	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.12	149	808943	43.73077	ppb		97
86)	Chrysene	13.13	228	1114564	45.37957	ppb		99
87)	Di-n-octylphthalate	13.84	149	1468463	44.94079	ppb	#	90
89)	Benzo (b) fluoranthene	14.29	252	1189368	46.14501	ppb		100
90)	Benzo (k) fluoranthene	14.32	252	1178224	48.06612	ppb		99
91)	Benzo (a) pyrene	14.68	252	1139811	47.33794	ppb		97
92)	Indeno (1,2,3-cd) pyrene	16.31	276	1217976	45.69324	ppb		96
93)	Dibenz (a,h) anthracene	16.32	278	1054027	46.88382	ppb		99
94)	Benzo (g,h,i) perylene	16.76	276	1042715	43.55869	ppb		98

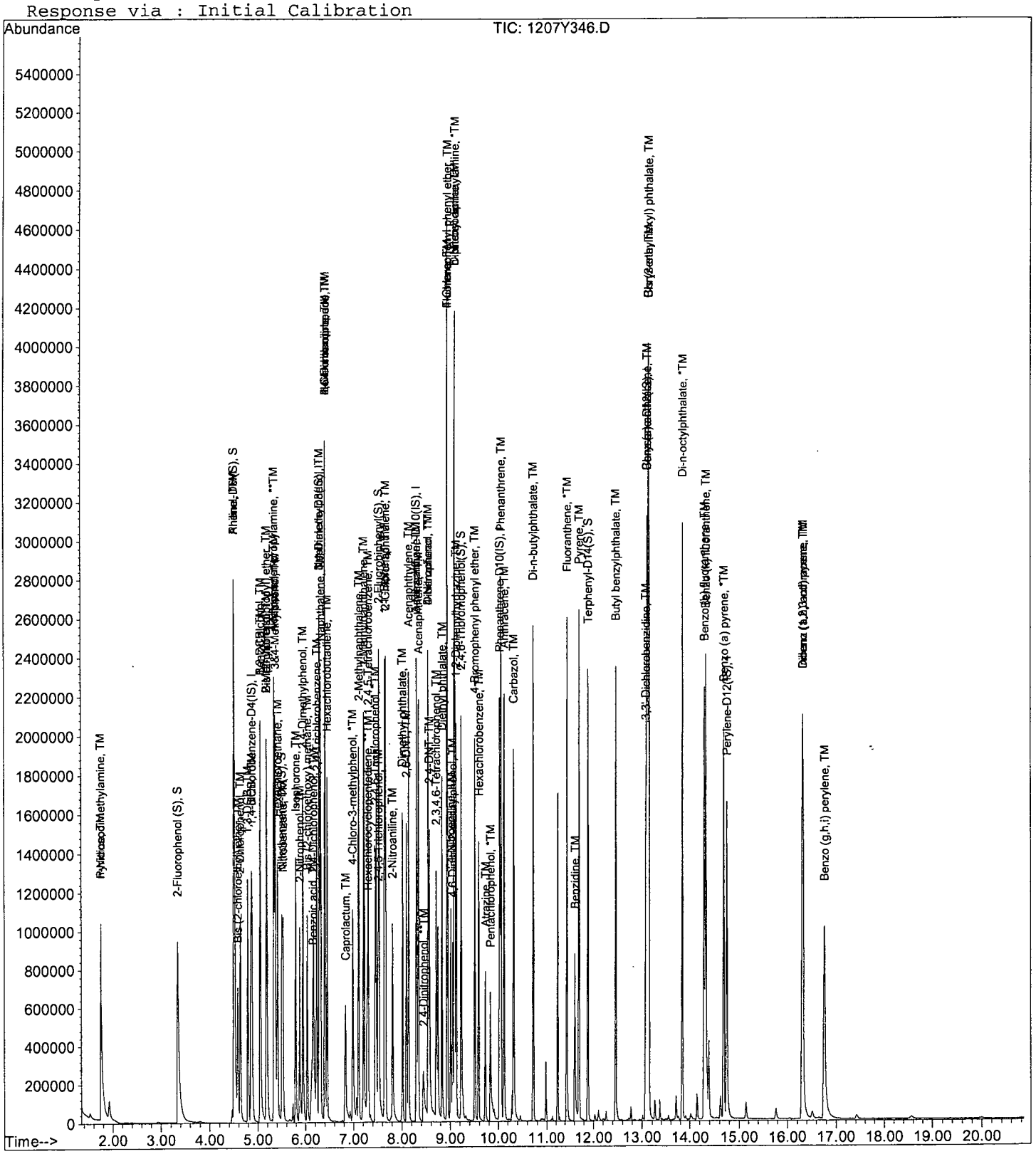
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y346.D Vial: 46
Acq On : 20 Jan 17 8:32 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 20 8:47 2017 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/20/17
Instrument: Yoda
Initial Cal. Date: 12/07/16
Data File: 1207Y348.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	n-Nitrosodimethylamine	0.7942	1.069	35	TM	
3	TM	Pyridine	1.794	2.166	21	TM	
4	S	2-Fluorophenol (S)	1.316	1.329	0.96	S	
5	S	Phenol-D6 (S)	1.737	1.713	1.4	S	
6	*TM	Phenol	1.974	1.986	0.59	*TM	
7	TM	Aniline	1.868	1.881	0.70	TM	
8	TM	Bis (2-chloroethyl) ether	0.8648	0.9224	6.7	TM	
9	TM	2-Chlorophenol	1.576	1.523	3.4	TM	
10	TM	1,3-DCB	1.630	1.571	3.6	TM	
11	*TM	1,4-DCB	1.679	1.586	5.5	*TM	
12	TM	Benzyl alcohol	0.8717	0.8665	0.59	TM	
13	TM	1,2-DCB	1.537	1.489	3.2	TM	
14	TM	2-Methylphenol	1.120	1.094	2.3	TM	
15	TM	Bis (2-chloroisopropyl) ether	1.723	2.078	21	TM	
16	TM	Acetophenone	2.044	2.002	2.0	TM	
17	TM	3&4-Methylphenol	1.484	1.458	1.8	TM	
18	**TM	n-Nitrosodi-n-propylamine	1.052	1.093	3.9	**TM	
19	TM	Hexachloroethane	0.6713	0.6664	0.73	TM	
20	I	Napthalene-D8(IS)	ISTD			I	
21	S	Nitrobenzene-D5(S)	0.4055	0.4173	2.9	S	
22	TM	Nitrobenzene	0.4083	0.4110	0.66	TM	
23	TM	Isophorone	0.6762	0.6890	1.9	TM	
24	*TM	2-Nitrophenol	0.2038	0.2036	0.07	*TM	
25	TM	2,4-Dimethylphenol	0.3231	0.3120	3.4	TM	
26	TML	Benzoic acid	0.2159	0.2426	12	TML	3.3
27	TM	Bis (2-chloroethoxy) methane	0.3856	0.3860	0.10	TM	
28	*TM	2,4-Dichlorophenol	0.3079	0.2960	3.9	*TM	
29	TM	1,2,4-Trichlorobenzene	0.3349	0.3222	3.8	TM	
30	TM	3,4-Dimethylphenol	0.4947	0.4501	9.0	TM	
31	TM	Naphthalene	1.049	1.043	0.61	TM	
32	TM	4-Chloroaniline	0.3882	0.3658	5.8	TM	
33	TM	2,6-Dichlorophenol	0.2970	0.2575	13	TM	
34	TM	Hexachloropropene	0.2678	0.2367	12	TM	
35	*TM	Hexachlorobutadiene	0.2134	0.1906	11	*TM	
36	TM	Caprolactum	0.1543	0.1727	12	TM	
37	*TM	4-Chloro-3-methylphenol	0.3401	0.3270	3.9	*TM	
38	TM	2-Methylnaphthalene	0.6856	0.6843	0.18	TM	
39	TM	1-Methylnaphthalene	0.6763	0.6539	3.3	TM	
40	I	Acenaphthene-D10(IS)	ISTD			I	
		Average			5.8		

0
0

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/20/17
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y348.D

		Compound	MEAN	CCRF	%D	%Drift	
41	**TMQ	Hexachlorocyclopentadiene	0.1853	0.1939	4.6	**TMQ	11
42	TM	1,2,4,5-Tetrachlorobenzene	0.5436	0.5109	6.0	TM	
43	*TM	2,4,6-Trichlorophenol	0.3508	0.3383	3.6	*TM	
44	TM	2,4,5-Trichlorophenol	0.3829	0.3598	6.0	TM	
45	S	2-Fluorobiphenyl(S)	1.261	1.210	4.0	S	
46	TM	1,1'-Biphenyl	1.499	1.430	4.6	TM	
47	TM	2-Chloronaphthalene	1.159	1.107	4.4	TM	
48	TM	2-Nitroaniline	0.3982	0.4086	2.6	TM	
49	TM	Dimethyl phthalate	1.391	1.349	3.1	TM	
50	TM	2,6-DNT	0.3141	0.3046	3.0	TM	
51	TM	Acenaphthylene	1.826	1.752	4.0	TM	
52	TM	3-Nitroaniline	0.3430	0.3320	3.2	TM	
53	*TM	Acenaphthene	1.156	1.080	6.6	*TM	
54	**TMQ	2,4-Dinitrophenol	0.1593	0.1709	7.3	**TMQ	1.8
55	**TML	4-Nitrophenol	0.2439	0.2574	5.5	**TML	10
56	TM	Dibenzofuran	1.639	1.540	6.0	TM	
57	TM	2,4-DNT	0.4436	0.4346	2.0	TM	
58	TM	2,3,4,6-Tetrachlorophenol	0.3114	0.3038	2.4	TM	
59	TM	Diethyl phthalate	1.432	1.350	5.7	TM	
60	TM	4-Chlorophenyl phenyl ether	0.6394	0.5869	8.2	TM	
61	TM	Fluorene	1.324	1.209	8.7	TM	
62	TM	4-Nitroaniline	0.3249	0.3269	0.61	TM	
63	S	2,4,6-Tribromophenol(S)	0.2006	0.1792	11	S	
64	I	Phenanthrene-D10(IS)	ISTD			I	
65	TM	4,6-Dinitro-2-methylphenol	0.1486	0.1449	2.5	TM	
66	TM	Diphenyl amine	0.5706	0.5258	7.9	TM	
67	*TM	n-Nitrosodiphenylamine	0.5706	0.5258	7.9	*TM	
68	TM	1,2-Diphenylhydrazine	0.8211	0.9669	18	TM	
69	TM	4-Bromophenyl phenyl ether	0.2072	0.2014	2.8	TM	
70	TM	Hexachlorobenzene	0.2130	0.2070	2.8	TM	
71	TM	Atrazine	0.2062	0.1943	5.8	TM	
72	*TML	Pentachlorophenol	0.0958	0.0907	5.3	*TML	10
73	TM	Phenanthrene	1.080	1.037	4.0	TM	
74	TM	Anthracene	1.111	1.087	2.2	TM	
75	TM	Carbazol	1.005	0.9749	3.0	TM	
76	TM	Di-n-butylphthalate	1.292	1.261	2.4	TM	
77	*TM	Fluoranthene	1.189	1.153	3.0	*TM	
78	I	Chrysene-D12(IS)	ISTD			I	
79	TM	Benzidine	0.4531	0.4464	1.5	TM	
80	TM	Pyrene	1.357	1.242	8.5	TM	
		Average			5.0		

0
0

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/20/17
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y348.D

		Compound	MEAN	CCRF	%D	%Drift	
81	S	Terphenyl-D14(S)	0.9045	0.8537	5.6	S	
82	TM	Butyl benzylphthalate	0.6517	0.5990	8.1	TM	
83	TM	3,3'-Dichlorobenzidine	0.4273	0.4339	1.5	TM	
84	TM	Benz (a) anthracene	1.249	1.184	5.2	TM	
85	TM	Bis (2-ethylhexyl) phthalate	0.9136	0.8280	9.4	TM	
86	TM	Chrysene	1.213	1.134	6.5	TM	
87	*TM	Di-n-octylphthalate	1.614	1.457	9.7	*TM	
88	I	Perylene-D12(IS)	ISTD			I	
89	TM	Benzo (b) fluoranthene	1.250	1.092	13	TM	
90	TM	Benzo (k) fluoranthene	1.189	1.138	4.3	TM	
91	*TM	Benzo (a) pyrene	1.168	1.053	9.9	*TM	
92	TM	Indeno (1,2,3-cd) pyrene	1.293	1.150	11	TM	
93	TM	Dibenz (a,h) anthracene	1.091	0.9825	9.9	TM	
94	TM	Benzo (g,h,i) perylene	1.161	0.9561	18	TM	
95							
96							
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			8.6		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y348.D Vial: 48
Acq On : 20 Jan 17 9:42 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 20 10:20 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	196827	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.29	136	825659	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.31	164	488711	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.02	188	892549	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.11	240	866782	40.00000 ppb		0.00
88) Perylene-D12(IS)	14.75	264	905963	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.34	112	653722	100.96338 ppb		0.00
Spiked Amount 200.000			Recovery =	50.482%		
5) Phenol-D6 (S)	4.50	99	842804	98.62141 ppb		0.00
Spiked Amount 200.000			Recovery =	49.311%		
21) Nitrobenzene-D5(S)	5.50	82	430715	51.46380 ppb		0.00
Spiked Amount 100.000			Recovery =	51.464%		
45) 2-Fluorobiphenyl(S)	7.54	172	739312	47.98765 ppb		0.00
Spiked Amount 100.000			Recovery =	47.988%		
63) 2,4,6-Tribromophenol(S)	9.23	330	218884	89.32557 ppb		0.00
Spiked Amount 200.000			Recovery =	44.663%		
81) Terphenyl-D14(S)	11.89	244	924946	47.19139 ppb		0.00
Spiked Amount 100.000			Recovery =	47.191%		
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.74	42	262957	67.28728 ppb		100
3) Pyridine	1.75	79	532832	60.35468 ppb		100
6) Phenol	4.52	94	488524	50.29625 ppb		80
7) Aniline	4.51	66	462862	50.35178 ppb		94
8) Bis (2-chloroethyl) ether	4.58	63	226936	53.32929 ppb		94
9) 2-Chlorophenol	4.64	128	374726	48.31368 ppb		96
10) 1,3-DCB	4.79	146	386608	48.20800 ppb		98
11) 1,4-DCB	4.88	146	390294	47.22724 ppb		99
12) Benzyl alcohol	5.05	108	213195	49.70499 ppb		95
13) 1,2-DCB	5.05	146	366227	48.42427 ppb		98
14) 2-Methylphenol	5.19	107	269093	48.83426 ppb		95
15) Bis (2-chloroisopropyl) et	5.18	45	511202	60.29927 ppb	#	74
16) Acetophenone	5.34	105	492568	48.97604 ppb		98
17) 3&4-Methylphenol	5.36	107	717228	98.20683 ppb		96
18) n-Nitrosodi-n-propylamine	5.34	70	269034	51.94981 ppb		83
19) Hexachloroethane	5.41	117	163946	49.63258 ppb		99
22) Nitrobenzene	5.52	77	424147	50.33035 ppb		93
23) Isophorone	5.79	82	711106	50.94599 ppb		95
24) 2-Nitrophenol	5.87	139	210140	49.96310 ppb		92
25) 2,4-Dimethylphenol	5.94	122	321988	48.28398 ppb		98
26) Benzoic acid	6.14	105	250369	48.36056 ppb		92
27) Bis (2-chloroethoxy) metha	6.04	93	398350	50.05070 ppb		98
28) 2,4-Dichlorophenol	6.16	162	305460	48.06082 ppb		98
29) 1,2,4-Trichlorobenzene	6.24	180	332523	48.10594 ppb		99
30) 3,4-Dimethylphenol	6.28	107	464556	45.49850 ppb		99
31) Naphthalene	6.31	128	1076123	49.69703 ppb		100
32) 4-Chloroaniline	6.40	127	377579	47.12045 ppb		97
33) 2,6-Dichlorophenol	6.40	162	265739	43.33969 ppb		97
34) Hexachloropropene	6.41	213	244268	44.18136 ppb		98
35) Hexachlorobutadiene	6.45	225	196686	44.66216 ppb		97
36) Caprolactum	6.84	55	178190	55.93317 ppb		99
37) 4-Chloro-3-methylphenol	6.98	107	337480	48.06841 ppb		84

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y348.D Vial: 48
Acq On : 20 Jan 17 9:42 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 20 10:20 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.11	142	706275	49.90894	ppb		99
39)	1-Methylnaphthalene	7.22	142	674917	48.34391	ppb		99
41)	Hexachlorocyclopentadiene	7.28	237	118431	44.58033	ppb		100
42)	1,2,4,5-Tetrachlorobenzene	7.30	216	312100	46.98936	ppb		97
43)	2,4,6-Trichlorophenol	7.45	196	206672	48.21864	ppb		97
44)	2,4,5-Trichlorophenol	7.51	196	219819	46.99421	ppb	#	87
46)	1,1'-Biphenyl	7.65	154	873378	47.68990	ppb	#	98
47)	2-Chloronaphthalene	7.67	162	676366	47.78280	ppb		98
48)	2-Nitroaniline	7.80	65	249625	51.31325	ppb		83
49)	Dimethyl phthalate	8.02	163	823895	48.46384	ppb		99
50)	2,6-DNT	8.09	165	186060	48.47839	ppb	#	69
51)	Acenaphthylene	8.14	152	1070513	47.99338	ppb		99
52)	3-Nitroaniline	8.29	138	202794	48.39521	ppb		85
53)	Acenaphthene	8.34	154	659530	46.69775	ppb		99
54)	2,4-Dinitrophenol	8.44	184	104429	50.91043	ppb		92
55)	4-Nitrophenol	8.55	65	157258	44.90586	ppb		99
56)	Dibenzofuran	8.54	168	940796	46.97557	ppb		96
57)	2,4-DNT	8.57	165	265465	48.97763	ppb		94
58)	2,3,4,6-Tetrachlorophenol	8.70	232	185602	48.77956	ppb		91
59)	Diethyl phthalate	8.83	149	824815	47.14363	ppb		96
60)	4-Chlorophenyl phenyl ethe	8.95	204	358520	45.89536	ppb	#	79
61)	Fluorene	8.94	166	738735	45.65566	ppb		98
62)	4-Nitroaniline	9.01	138	199697	50.30309	ppb		95
65)	4,6-Dinitro-2-methylphenol	9.05	198	161620	48.73360	ppb	#	54
66)	Diphenyl amine	9.09	169	1173153	92.13733	ppb		99
67)	n-Nitrosodiphenylamine	9.09	169	1173153	92.13733	ppb		99
68)	1,2-Diphenylhydrazine	9.12	77	1078722	58.87732	ppb		92
69)	4-Bromophenyl phenyl ether	9.51	248	224726	48.61099	ppb	#	81
70)	Hexachlorobenzene	9.59	284	230975	48.60810	ppb	#	79
71)	Atrazine	9.73	200	108385	23.55952	ppb		99
72)	Pentachlorophenol	9.84	266	101234	44.82976	ppb		98
73)	Phenanthrene	10.05	178	1156737	47.99097	ppb		99
74)	Anthracene	10.12	178	1212548	48.92272	ppb		99
75)	Carbazol	10.32	167	1087719	48.48665	ppb		98
76)	Di-n-butylphthalate	10.72	149	1406623	48.79611	ppb		99
77)	Fluoranthene	11.43	202	1286343	48.49253	ppb	#	97
79)	Benzidine	11.61	184	483666	49.25952	ppb		98
80)	Pyrene	11.69	202	1345576	45.77490	ppb		98
82)	Butyl benzylphthalate	12.46	149	649011	45.95641	ppb		91
83)	3,3'-Dichlorobenzidine	13.08	252	470101	50.77466	ppb		96
84)	Benz (a) anthracene	13.10	228	1282581	47.39478	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.12	149	897069	45.31173	ppb		96
86)	Chrysene	13.13	228	1228660	46.74151	ppb		99
87)	Di-n-octylphthalate	13.84	149	1578620	45.14097	ppb	#	89
89)	Benzo (b) fluoranthene	14.29	252	1236108	43.64421	ppb		98
90)	Benzo (k) fluoranthene	14.32	252	1288423	47.83342	ppb		99
91)	Benzo (a) pyrene	14.68	252	1192416	45.06777	ppb	#	96
92)	Indeno (1,2,3-cd) pyrene	16.31	276	1302229	44.45928	ppb		96
93)	Dibenz (a,h) anthracene	16.33	278	1112686	45.04075	ppb		98
94)	Benzo (g,h,i) perylene	16.76	276	1082772	41.16309	ppb		97

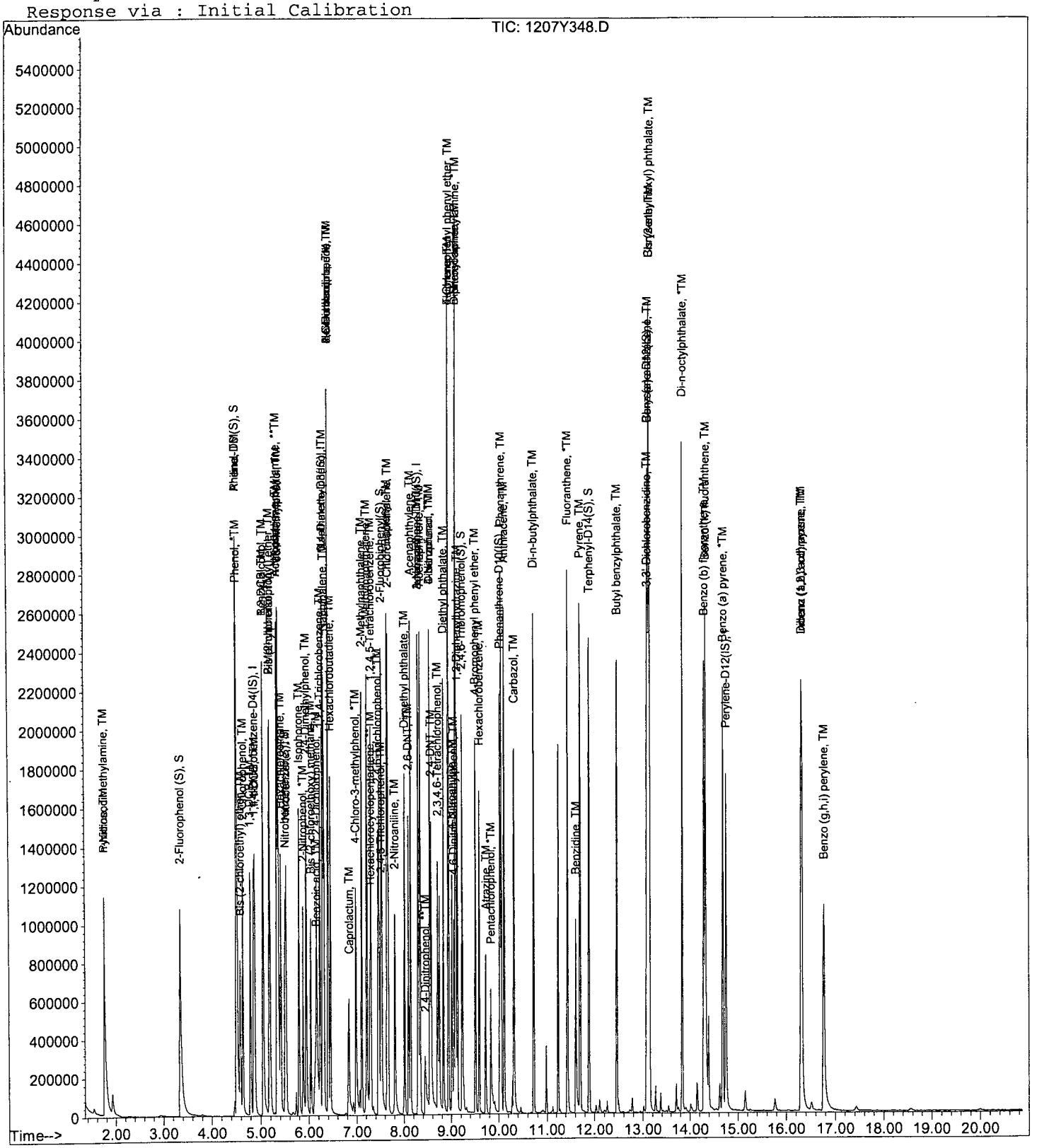
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y348.D Vial: 48
Acq On : 20 Jan 17 9:42 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 20 10:20 2017 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration



458

ORGANICS

Raw Data

APPL, INC.

Method Blank
EPA 8270D WATER

Blank Name/QCG: **170116W-48866 - 215607**
Batch ID: #87DC5-170116A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/16/17	01/18/17
BLANK	SURROGATE: 2,4,6-TRIBROMOP	55.9	43-140			%	01/16/17	01/18/17
BLANK	SURROGATE: 2-FLUORBIPHENY	54.2	44-119			%	01/16/17	01/18/17
BLANK	SURROGATE: 2-FLUOROPHENO	28.0	19-119			%	01/16/17	01/18/17
BLANK	SURROGATE: NITROBENZENE-	60.1	44-120			%	01/16/17	01/18/17
BLANK	SURROGATE: PHENOL-D6 (S)	15.9	10-115			%	01/16/17	01/18/17
BLANK	SURROGATE: TERPHENYL-D14 (	63.0	50-134			%	01/16/17	01/18/17

Quant Method:Y1207.M
Run #:1207Y323
Instrument:Yoda
Sequence:Y161207
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 01/19/17 9:03:48 AM

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y323.D Vial: 23
Acq On : 18 Jan 17 10:21 Operator: MA
Sample : 170116A BLK 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 18 16:52 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	182902	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.28	136	778724	40.00000 ppb	-0.02
40) Acenaphthene-D10(IS)	8.30	164	473403	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	848343	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.10	240	801392	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.74	264	823061	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.34	112	337409	56.07815 ppb	0.00
Spiked Amount 200.000			Recovery =	28.039%	
5) Phenol-D6 (S)	4.50	99	253106	31.87229 ppb	0.00
Spiked Amount 200.000			Recovery =	15.936%	
21) Nitrobenzene-D5(S)	5.50	82	474620	60.12776 ppb	0.00
Spiked Amount 100.000			Recovery =	60.128%	
45) 2-Fluorobiphenyl(S)	7.53	172	809351	54.23251 ppb	0.00
Spiked Amount 100.000			Recovery =	54.233%	
63) 2,4,6-Tribromophenol(S)	9.23	330	265412	111.81587 ppb	0.00
Spiked Amount 200.000			Recovery =	55.908%	
81) Terphenyl-D14(S)	11.88	244	1141626	62.99921 ppb	0.00
Spiked Amount 100.000			Recovery =	62.999%	

Target Compounds Qvalue

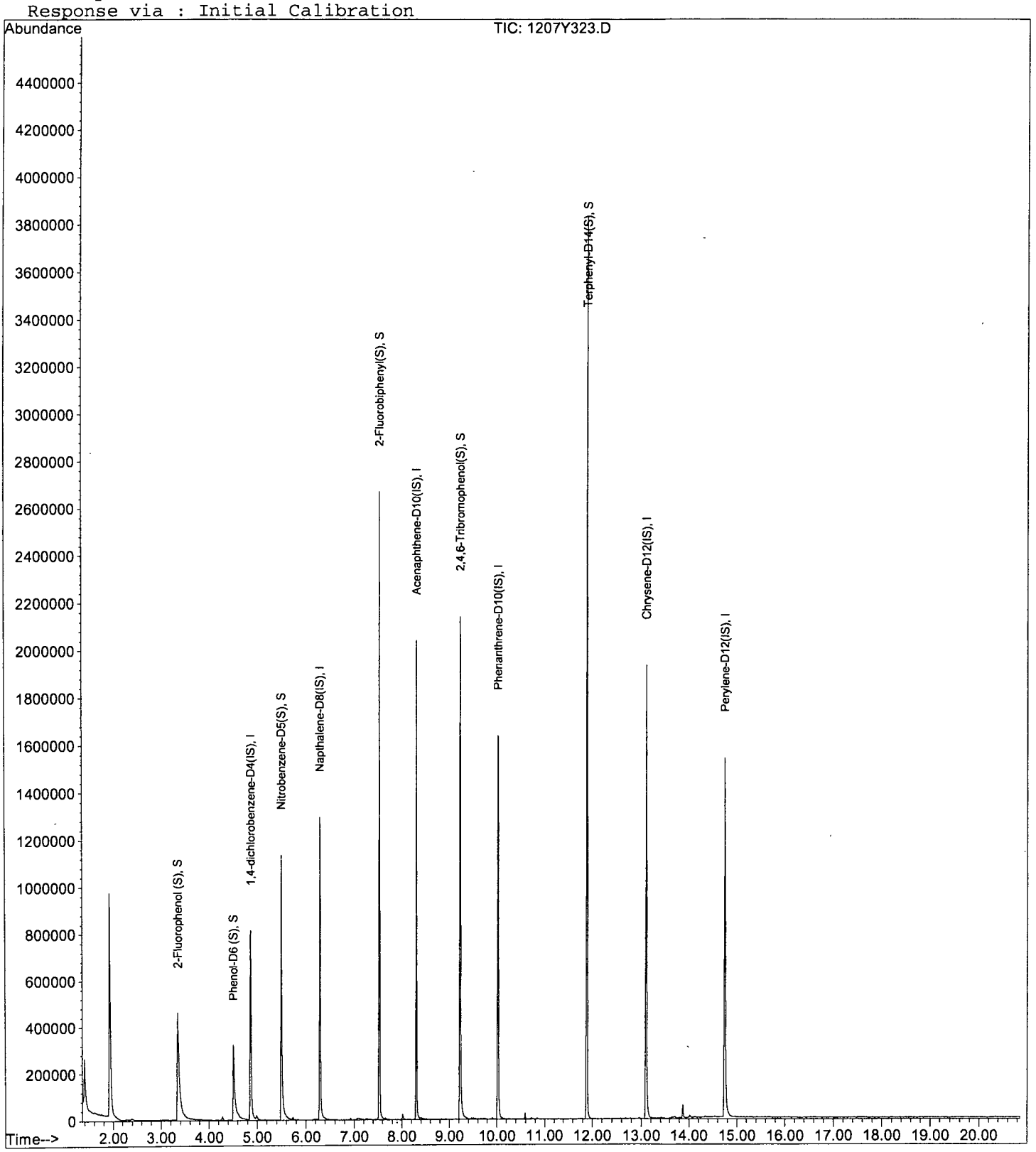
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y323.D Vial: 23
Acq On : 18 Jan 17 10:21 Operator: MA
Sample : 170116A BLK 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 18 16:52 2017 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration



Laboratory Control Spike Recovery
EPA 8270D WATER

APPL ID: **170116W-48866 LCS - 215607**
Batch ID: #87DC5-170116A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
PHENOL	50.0	13.8	27.6	10-115
SURROGATE: 2,4,6-TRIBROMOPHENOL	200	134	67.0	43-140
SURROGATE: 2-FLUORBIPHENYL (S)	100	65.9	65.9	44-119
SURROGATE: 2-FLUOROPHENOL (S)	200	71.5	35.8	19-119
SURROGATE: NITROBENZENE-D5 (S)	100	71.3	71.3	44-120
SURROGATE: PHENOL-D6 (S)	200	43.9	21.9	10-115
SURROGATE: TERPHENYL-D14 (S)	100	69.5	69.5	50-134

Comments: _____

Primary	SPK
Quant Method :	Y1207.M
Extraction Date :	01/16/17
Analysis Date :	01/18/17
Instrument :	Yoda
Run :	1207Y324
Initials :	MA

Printed: 01/19/17 9:03:49 AM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y324.D Vial: 24
Acq On : 18 Jan 17 10:51 Operator: MA
Sample : 170116A LCS-1 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 18 12:05 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	186036	40.00000	ppb		0.00
20) Napthalene-D8(IS)	6.29	136	781993	40.00000	ppb		0.00
40) Acenaphthene-D10(IS)	8.31	164	478032	40.00000	ppb		0.00
64) Phenanthrene-D10(IS)	10.02	188	873294	40.00000	ppb		0.00
78) Chrysene-D12(IS)	13.10	240	868088	40.00000	ppb		0.00
88) Perylene-D12(IS)	14.75	264	912966	40.00000	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol (S)	3.34	112	437518	71.49149	ppb		0.00
Spiked Amount 200.000			Recovery = 35.746%				
5) Phenol-D6 (S)	4.50	99	354740	43.91799	ppb		0.00
Spiked Amount 200.000			Recovery = 21.959%				
21) Nitrobenzene-D5(S)	5.50	82	564908	71.26682	ppb		0.00
Spiked Amount 100.000			Recovery = 71.267%				
45) 2-Fluorobiphenyl(S)	7.53	172	993596	65.93358	ppb		0.00
Spiked Amount 100.000			Recovery = 65.934%				
63) 2,4,6-Tribromophenol(S)	9.23	330	321283	134.04316	ppb		0.00
Spiked Amount 200.000			Recovery = 67.022%				
81) Terphenyl-D14(S)	11.89	244	1364847	69.53068	ppb		0.00
Spiked Amount 100.000			Recovery = 69.531%				
Target Compounds							Qvalue
2) n-Nitrosodimethylamine	1.75	42	106169	28.74310	ppb		95
3) Pyridine	1.76	79	216919	25.99597	ppb		92
6) Phenol	4.52	94	126572	13.78717	ppb	#	72
7) Aniline	4.50	66	219121	25.21941	ppb	#	29
8) Bis (2-chloroethyl) ether	4.58	63	176219	43.81298	ppb		95
9) 2-Chlorophenol	4.64	128	260965	35.59805	ppb		96
10) 1,3-DCB	4.80	146	209477	27.63582	ppb		97
11) 1,4-DCB	4.88	146	226717	29.02502	ppb		98
12) Benzyl alcohol	5.05	108	148264	36.57180	ppb		98
13) 1,2-DCB	5.05	146	219420	30.69564	ppb		98
14) 2-Methylphenol	5.19	107	172203	33.06363	ppb		95
15) Bis (2-chloroisopropyl) et	5.18	45	389442	48.60153	ppb	#	62
16) Acetophenone	5.33	105	382915	40.28168	ppb		90
17) 3&4-Methylphenol	5.36	107	403254	58.41856	ppb		99
18) n-Nitrosodi-n-propylamine	5.33	70	218712	44.68246	ppb		95
19) Hexachloroethane	5.41	117	82922	26.55972	ppb		93
22) Nitrobenzene	5.52	77	326273	40.87827	ppb		96
23) Isophorone	5.79	82	574016	43.42077	ppb		97
24) 2-Nitrophenol	5.87	139	160094	40.18959	ppb		92
25) 2,4-Dimethylphenol	5.94	122	210979	33.40415	ppb		97
26) Benzoic acid	6.11	105	49290	13.16785	ppb		95
27) Bis (2-chloroethoxy) metha	6.04	93	322806	42.82376	ppb		99
28) 2,4-Dichlorophenol	6.16	162	237254	39.41380	ppb		96
29) 1,2,4-Trichlorobenzene	6.24	180	212022	32.38589	ppb		98
30) 3,4-Dimethylphenol	6.28	107	345862	35.76512	ppb		95
31) Naphthalene	6.32	128	777654	37.91865	ppb		99
32) 4-Chloroaniline	6.40	127	342719	45.15830	ppb		92
33) 2,6-Dichlorophenol	6.40	162	226483	38.99994	ppb		97
34) Hexachloropropene	6.41	213	131876	25.18466	ppb		99
35) Hexachlorobutadiene	6.46	225	105971	25.40687	ppb		97
36) Caprolactum	6.81	55	38597	12.79197	ppb	#	84
37) 4-Chloro-3-methylphenol	6.98	107	261795	39.37050	ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y324.D Vial: 24
Acq On : 18 Jan 17 10:51 Operator: MA
Sample : 170116A LCS-1 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 18 12:05 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.11	142	517906	38.64144	ppb		97
39)	1-Methylnaphthalene	7.22	142	521996	39.47812	ppb		98
41)	Hexachlorocyclopentadiene	7.28	237	40032	20.55644	ppb		97
42)	1,2,4,5-Tetrachlorobenzene	7.30	216	235814	36.29698	ppb		95
43)	2,4,6-Trichlorophenol	7.45	196	176110	42.00611	ppb		98
44)	2,4,5-Trichlorophenol	7.51	196	185376	40.51612	ppb		93
46)	1,1'-Biphenyl	7.65	154	709495	39.60670	ppb	#	99
47)	2-Chloronaphthalene	7.66	162	534806	38.62613	ppb		99
48)	2-Nitroaniline	7.80	65	220545	46.34830	ppb		85
49)	Dimethyl phthalate	8.02	163	788331	47.40779	ppb		98
50)	2,6-DNT	8.09	165	161194	42.93774	ppb	#	73
51)	Acenaphthylene	8.14	152	893583	40.95618	ppb		100
52)	3-Nitroaniline	8.29	138	173365	42.29644	ppb		85
53)	Acenaphthene	8.34	154	560768	40.59194	ppb		100
54)	2,4-Dinitrophenol	8.44	184	75242	40.09657	ppb	#	53
55)	4-Nitrophenol	8.57	65	41368	15.61794	ppb	#	6
56)	Dibenzofuran	8.54	168	815530	41.63051	ppb		90
57)	2,4-DNT	8.57	165	232935	43.93599	ppb	#	70
58)	2,3,4,6-Tetrachlorophenol	8.70	232	153181	41.15809	ppb		94
59)	Diethyl phthalate	8.83	149	737625	43.10198	ppb		99
60)	4-Chlorophenyl phenyl ethe	8.95	204	312805	40.93777	ppb	#	77
61)	Fluorene	8.94	166	652256	41.21157	ppb		97
62)	4-Nitroaniline	9.01	138	173600	44.70623	ppb		95
65)	4,6-Dinitro-2-methylphenol	9.05	198	139313	42.93353	ppb	#	68
66)	Diphenyl amine	9.09	169	976602	78.39172	ppb		100
67)	n-Nitrosodiphenylamine	9.09	169	976602	78.39172	ppb		100
68)	1,2-Diphenylhydrazine	9.12	77	918265	51.22454	ppb		92
69)	4-Bromophenyl phenyl ether	9.51	248	197359	43.63246	ppb	#	78
70)	Hexachlorobenzene	9.59	284	205549	44.21103	ppb	#	80
71)	Atrazine	9.73	200	101557	22.56206	ppb		96
72)	Pentachlorophenol	9.83	266	85409	39.47406	ppb		98
73)	Phenanthrene	10.05	178	1044252	44.27941	ppb		99
74)	Anthracene	10.12	178	1100087	45.36389	ppb		99
75)	Carbazol	10.32	167	995349	45.34740	ppb		97
76)	Di-n-butylphthalate	10.72	149	1282578	45.47397	ppb		99
77)	Fluoranthene	11.43	202	1173547	45.21579	ppb	#	96
79)	Benzidine	11.61	184	268023	27.25604	ppb		98
80)	Pyrene	11.69	202	1239854	42.11490	ppb		99
82)	Butyl benzylphthalate	12.45	149	589714	41.69477	ppb		87
83)	3,3'-Dichlorobenzidine	13.07	252	422449	45.55922	ppb	#	98
84)	Benz (a) anthracene	13.09	228	1148146	42.36322	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.12	149	806665	40.68405	ppb		97
86)	Chrysene	13.13	228	1121072	42.58441	ppb		99
87)	Di-n-octylphthalate	13.84	149	1434209	40.94981	ppb	#	93
89)	Benzo (b) fluoranthene	14.28	252	1151283	40.33743	ppb	#	97
90)	Benzo (k) fluoranthene	14.32	252	1170008	43.10400	ppb		100
91)	Benzo (a) pyrene	14.68	252	1106494	41.49953	ppb		99
92)	Indeno (1,2,3-cd) pyrene	16.31	276	1204392	40.80363	ppb	#	92
93)	Dibenz (a,h) anthracene	16.32	278	1047866	42.09152	ppb		98
94)	Benzo (g,h,i) perylene	16.76	276	1029832	38.85019	ppb		98

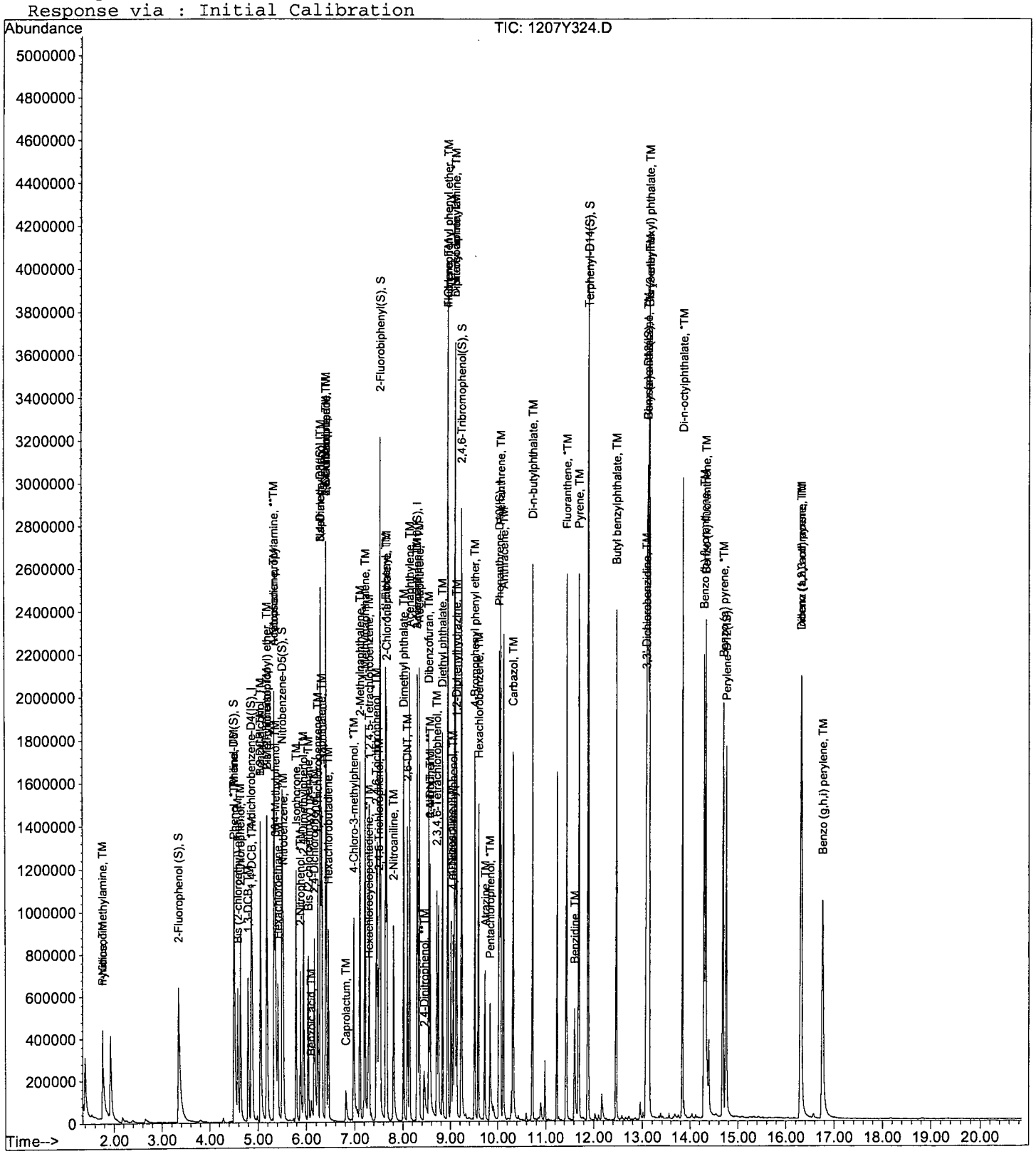
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y324.D Vial: 24
Acq On : 18 Jan 17 10:51 Operator: MA
Sample : 170116A LCS-1 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 18 12:05 2017 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration



Matrix Spike Recoveries

EPA 8270D WATER

APPL ID: **170116W-48866 MS - 215607**
Batch ID: #87DC5-170116A
Sample ID: AZ48866
Client ID: ERH161

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
PHENOL	47.6	ND	11.7	12.3	24.6	25.8	10-115	5.0	20
SURROGATE: 2,4,6-TRIBROMOPHENOL	190	NA	116	93.6	61.1	49.3	43-140		
SURROGATE: 2-FLUORBIPHENYL (S)	95.2	NA	57.1	43.9	60.0	46.1	44-119		
SURROGATE: 2-FLUOROPHENOL (S)	190	NA	64.6	44.5	34.0	23.4	19-119		
SURROGATE: NITROBENZENE-D5 (S)	95.2	NA	60.6	43.9	63.7	46.1	44-120		
SURROGATE: PHENOL-D6 (S)	190	NA	37.0	30.1	19.5	15.8	10-115		
SURROGATE: TERPHENYL-D14 (S)	95.2	NA	60.3	50.9	63.3	53.5	50-134		

Comments: _____

Primary	SPK	DUP
Quant Method :	Y1207.M	Y1207.M
Extraction Date :	01/16/17	01/16/17
Analysis Date :	01/18/17	01/20/17
Instrument :	Yoda	Yoda
Run :	1207Y325	1207Y347
Initials :	MA	

Printed: 01/23/17 5:38:14 PM
APPL MSD SCII

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y325.D Vial: 25
Acq On : 18 Jan 17 11:21 Operator: MA
Sample : AZ48866W22 MS-1 1/1050 Inst : Yoda
Misc : water Multiplr: 0.95

Quant Time: Jan 18 12:06 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	176198	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.29	136	797330	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.30	164	479955	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.03	188	877572	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.11	240	859061	40.00000 ppb		0.00
88) Perylene-D12(IS)	14.75	264	858833	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.34	112	392866	64.55199 ppb		0.00
Spiked Amount 190.476			Recovery = 33.890%			
5) Phenol-D6 (S)	4.50	99	297525	37.03928 ppb		0.00
Spiked Amount 190.476			Recovery = 19.445%			
21) Nitrobenzene-D5(S)	5.50	82	514258	60.59911 ppb		0.00
Spiked Amount 95.238			Recovery = 63.629%			
45) 2-Fluorobiphenyl(S)	7.53	172	907774	57.14020 ppb		0.00
Spiked Amount 95.238			Recovery = 59.997%			
63) 2,4,6-Tribromophenol(S)	9.24	330	292158	115.62237 ppb		0.00
Spiked Amount 190.476			Recovery = 60.702%			
81) Terphenyl-D14(S)	11.88	244	1229855	60.29717 ppb		0.00
Spiked Amount 95.238			Recovery = 63.312%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.75	42	95116	25.89383 ppb		88
3) Pyridine	1.76	79	177407	21.37892 ppb		99
6) Phenol	4.52	94	106442	11.65889 ppb	#	75
7) Aniline	4.50	66	195073	22.57641 ppb	#	22
8) Bis (2-chloroethyl) ether	4.58	63	150671	37.66921 ppb		83
9) 2-Chlorophenol	4.64	128	226331	31.04522 ppb		97
10) 1,3-DCB	4.79	146	197849	26.24681 ppb		98
11) 1,4-DCB	4.88	146	211795	27.26534 ppb		99
12) Benzyl alcohol	5.05	108	128075	31.76740 ppb		96
13) 1,2-DCB	5.05	146	204658	28.78962 ppb		99
14) 2-Methylphenol	5.19	107	147070	28.39492 ppb		96
15) Bis (2-chloroisopropyl) et	5.18	45	353036	44.30298 ppb	#	68
16) Acetophenone	5.33	105	331998	35.11943 ppb		96
17) 3&4-Methylphenol	5.36	107	344279	50.15213 ppb		93
18) n-Nitrosodi-n-propylamine	5.34	70	189662	38.96292 ppb		96
19) Hexachloroethane	5.41	117	76738	24.71559 ppb		94
22) Nitrobenzene	5.52	77	284392	33.28161 ppb		92
23) Isophorone	5.78	82	493561	34.87304 ppb		92
24) 2-Nitrophenol	5.88	139	142982	33.52705 ppb		96
25) 2,4-Dimethylphenol	5.94	122	185889	27.49099 ppb		98
26) Benzoic acid	6.10	105	44261	11.49154 ppb		99
27) Bis (2-chloroethoxy) metha	6.03	93	284703	35.27855 ppb		99
28) 2,4-Dichlorophenol	6.16	162	218056	33.83594 ppb		98
29) 1,2,4-Trichlorobenzene	6.24	180	200878	28.66043 ppb		99
30) 3,4-Dimethylphenol	6.28	107	304469	29.40867 ppb		92
31) Naphthalene	6.31	128	705046	32.11141 ppb		99
32) 4-Chloroaniline	6.40	127	314673	38.72883 ppb		98
33) 2,6-Dichlorophenol	6.40	162	197763	31.80892 ppb		98
34) Hexachloropropene	6.41	213	127567	22.75538 ppb		99
35) Hexachlorobutadiene	6.45	225	102511	22.95673 ppb		97
36) Caprolactum	6.81	55	35251	10.91267 ppb		95
37) 4-Chloro-3-methylphenol	6.98	107	235283	33.05031 ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y325.D Vial: 25
Acq On : 18 Jan 17 11:21 Operator: MA
Sample : AZ48866W22 MS-1 1/1050 Inst : Yoda
Misc : water Multiplr: 0.95

Quant Time: Jan 18 12:06 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.10	142	463958	32.33378	ppb		98
39)	1-Methylnaphthalene	7.21	142	464736	32.83001	ppb		99
41)	Hexachlorocyclopentadiene	7.29	237	35411	17.99580	ppb		98
42)	1,2,4,5-Tetrachlorobenzene	7.31	216	218898	31.96023	ppb		99
43)	2,4,6-Trichlorophenol	7.45	196	154317	34.91479	ppb		98
44)	2,4,5-Trichlorophenol	7.51	196	164919	34.19103	ppb		95
46)	1,1'-Biphenyl	7.64	154	638758	33.82384	ppb	#	95
47)	2-Chloronaphthalene	7.67	162	480937	32.94886	ppb		97
48)	2-Nitroaniline	7.81	65	194402	38.75292	ppb		86
49)	Dimethyl phthalate	8.01	163	664697	37.91682	ppb		98
50)	2,6-DNT	8.09	165	142919	36.11166	ppb		94
51)	Acenaphthylene	8.14	152	790765	34.37947	ppb		99
52)	3-Nitroaniline	8.29	138	165205	38.23251	ppb		97
53)	Acenaphthene	8.34	154	490600	33.68614	ppb		98
54)	2,4-Dinitrophenol	8.45	184	65502	34.16096	ppb	#	75
55)	4-Nitrophenol	8.57	65	16960	8.80316	ppb	#	9
56)	Dibenzofuran	8.54	168	713137	34.53122	ppb		87
57)	2,4-DNT	8.57	165	203451	36.40094	ppb		87
58)	2,3,4,6-Tetrachlorophenol	8.71	232	130572	33.27879	ppb		98
59)	Diethyl phthalate	8.83	149	637842	35.35427	ppb		99
60)	4-Chlorophenyl phenyl ethe	8.94	204	274191	34.03854	ppb		97
61)	Fluorene	8.94	166	560639	33.60095	ppb		99
62)	4-Nitroaniline	9.00	138	158381	38.68909	ppb		92
65)	4,6-Dinitro-2-methylphenol	9.05	198	122688	35.83402	ppb		90
66)	Diphenyl amine	9.09	169	869541	66.15019	ppb		99
67)	n-Nitrosodiphenylamine	9.09	169	869541	66.15019	ppb		99
68)	1,2-Diphenylhydrazine	9.13	77	687505	36.34748	ppb		98
69)	4-Bromophenyl phenyl ether	9.51	248	172360	36.11417	ppb		96
70)	Hexachlorobenzene	9.58	284	180901	36.87607	ppb		96
71)	Atrazine	9.72	200	89662	18.87842	ppb		97
72)	Pentachlorophenol	9.83	266	68803	31.25963	ppb		97
73)	Phenanthrene	10.05	178	923332	37.10589	ppb		98
74)	Anthracene	10.11	178	963343	37.64893	ppb		99
75)	Carbazol	10.31	167	861147	37.18286	ppb		100
76)	Di-n-butylphthalate	10.72	149	1114029	37.43381	ppb		100
77)	Fluoranthene	11.44	202	1053009	38.45122	ppb		98
79)	Benzidine	11.61	184	212202	20.76781	ppb		100
80)	Pyrene	11.70	202	1098553	35.91177	ppb		99
82)	Butyl benzylphthalate	12.46	149	507094	34.50477	ppb		94
83)	3,3'-Dichlorobenzidine	13.07	252	377487	39.17910	ppb	#	97
84)	Benz (a) anthracene	13.09	228	1006093	35.72567	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.13	149	739559	35.89667	ppb		99
86)	Chrysene	13.14	228	960384	35.10852	ppb		98
87)	Di-n-octylphthalate	13.83	149	1261035	34.65110	ppb	#	82
89)	Benzo (b) fluoranthene	14.29	252	1073174	38.06737	ppb		98
90)	Benzo (k) fluoranthene	14.31	252	889587	33.17980	ppb		98
91)	Benzo (a) pyrene	14.68	252	922050	35.01106	ppb	#	96
92)	Indeno (1,2,3-cd) pyrene	16.30	276	1017702	34.90665	ppb		96
93)	Dibenz (a,h) anthracene	16.31	278	874076	35.54632	ppb		97
94)	Benzo (g,h,i) perylene	16.76	276	832146	31.78213	ppb		94

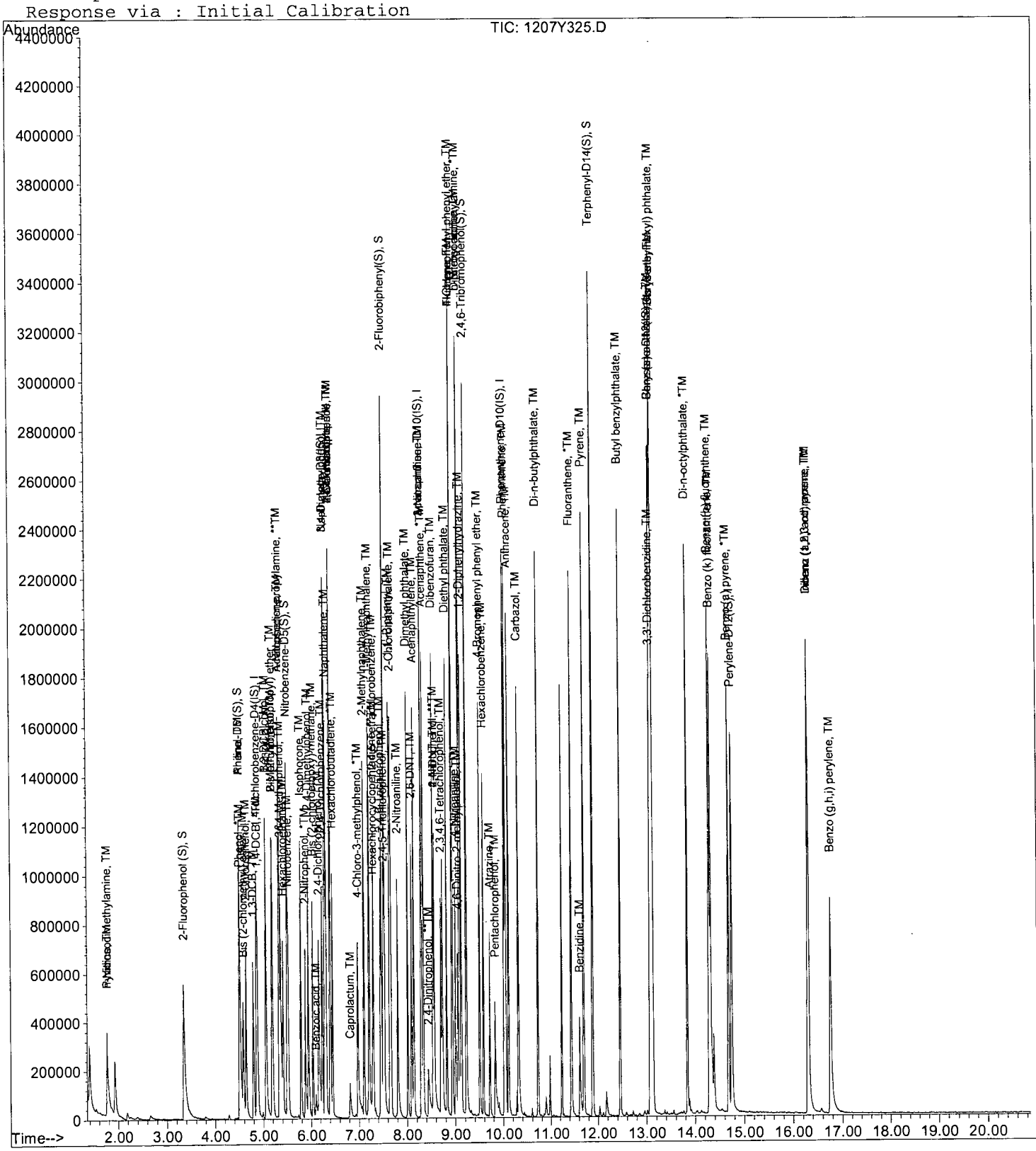
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y325.D Vial: 25
Acq On : 18 Jan 17 11:21 Operator: MA
Sample : AZ48866W22 MS-1 1/1050 Inst : Yoda
Misc : water Multiplr: 0.95

Quant Time: Jan 18 12:06 2017 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y347.D Vial: 47
Acq On : 20 Jan 17 9:12 Operator: MA
Sample : AZ48866W27 MSD-1 1/1050 Inst : Yoda
Misc : water Multiplr: 0.95

Quant Time: Jan 20 9:29 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	193002	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.29	136	834675	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.30	164	500155	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.02	188	917920	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.11	240	917874	40.00000 ppb		0.00
88) Perylene-D12(IS)	14.75	264	987114	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.34	112	296822	44.52464 ppb		0.00
Spiked Amount 190.476			Recovery =	23.376%		
5) Phenol-D6 (S)	4.50	99	264902	30.10672 ppb		0.00
Spiked Amount 190.476			Recovery =	15.806%		
21) Nitrobenzene-D5(S)	5.49	82	390175	43.92030 ppb		0.00
Spiked Amount 95.238			Recovery =	46.116%		
45) 2-Fluorobiphenyl(S)	7.53	172	726213	43.86559 ppb		0.00
Spiked Amount 95.238			Recovery =	46.059%		
63) 2,4,6-Tribromophenol(S)	9.22	330	246347	93.55506 ppb		0.00
Spiked Amount 190.476			Recovery =	49.116%		
81) Terphenyl-D14(S)	11.89	244	1109339	50.90357 ppb		0.00
Spiked Amount 95.238			Recovery =	53.449%		
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.75	42	86778	21.56709 ppb		95
3) Pyridine	1.76	79	164625	18.11132 ppb		94
6) Phenol	4.52	94	123365	12.33603 ppb	#	72
7) Aniline	4.50	66	173148	18.29424 ppb	#	22
8) Bis (2-chloroethyl) ether	4.57	63	134864	30.78166 ppb		88
9) 2-Chlorophenol	4.64	128	209836	26.27664 ppb		98
10) 1,3-DCB	4.79	146	172484	20.88963 ppb		99
11) 1,4-DCB	4.88	146	180330	21.19348 ppb		99
12) Benzyl alcohol	5.05	108	121242	27.45425 ppb		97
13) 1,2-DCB	5.05	146	169882	21.81693 ppb		97
14) 2-Methylphenol	5.19	107	137802	24.28909 ppb		93
15) Bis (2-chloroisopropyl) et	5.18	45	317005	36.31777 ppb	#	67
16) Acetophenone	5.33	105	306482	29.59757 ppb		97
17) 3&4-Methylphenol	5.35	107	324569	43.16434 ppb		95
18) n-Nitrosodi-n-propylamine	5.33	70	175456	32.90626 ppb		99
19) Hexachloroethane	5.41	117	65528	19.26755 ppb		94
22) Nitrobenzene	5.52	77	258315	28.87734 ppb		91
23) Isophorone	5.78	82	477722	32.24371 ppb		92
24) 2-Nitrophenol	5.87	139	125754	28.16803 ppb		91
25) 2,4-Dimethylphenol	5.94	122	164403	23.22561 ppb		99
26) Benzoic acid	6.10	105	36951	9.92294 ppb		90
27) Bis (2-chloroethoxy) metha	6.03	93	264144	31.26656 ppb		99
28) 2,4-Dichlorophenol	6.16	162	193381	28.66452 ppb		98
29) 1,2,4-Trichlorobenzene	6.24	180	170963	23.30093 ppb		98
30) 3,4-Dimethylphenol	6.28	107	278280	25.67645 ppb		94
31) Naphthalene	6.31	128	610188	26.54766 ppb		99
32) 4-Chloroaniline	6.39	127	291953	34.32484 ppb		99
33) 2,6-Dichlorophenol	6.40	162	183994	28.27016 ppb		98
34) Hexachloropropene	6.41	213	103780	17.68399 ppb		97
35) Hexachlorobutadiene	6.45	225	85377	18.26422 ppb		96
36) Caprolactum	6.81	55	33994	10.05269 ppb		83
37) 4-Chloro-3-methylphenol	6.98	107	218640	29.33833 ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y347.D Vial: 47
Acq On : 20 Jan 17 9:12 Operator: MA
Sample : AZ48866W27 MSD-1 1/1050 Inst : Yoda
Misc : water Multiplr: 0.95

Quant Time: Jan 20 9:29 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38) 2-Methylnaphthalene	7.11	142	427291	28.44607 ppb		98
39) 1-Methylnaphthalene	7.21	142	422127	28.48581 ppb		97
41) Hexachlorocyclopentadiene	7.28	237	25009	14.13479 ppb		97
42) 1,2,4,5-Tetrachlorobenzene	7.30	216	190642	26.71053 ppb		97
43) 2,4,6-Trichlorophenol	7.45	196	147386	31.99984 ppb		99
44) 2,4,5-Trichlorophenol	7.51	196	155461	30.92850 ppb		94
46) 1,1'-Biphenyl	7.65	154	599367	30.45617 ppb		97
47) 2-Chloronaphthalene	7.66	162	442801	29.11097 ppb		99
48) 2-Nitroaniline	7.80	65	177251	33.90692 ppb		88
49) Dimethyl phthalate	8.01	163	657969	36.01717 ppb		100
50) 2,6-DNT	8.09	165	137038	33.22725 ppb		86
51) Acenaphthylene	8.14	152	750245	31.30046 ppb		99
52) 3-Nitroaniline	8.29	138	153989	34.19756 ppb		94
53) Acenaphthene	8.33	154	469758	30.95236 ppb		99
54) 2,4-Dinitrophenol	8.44	184	61073	31.32642 ppb		87
55) 4-Nitrophenol	8.57	65	12525	7.58253 ppb	#	4
56) Dibenzofuran	8.54	168	682917	31.73239 ppb		91
57) 2,4-DNT	8.57	165	193385	33.20255 ppb	#	74
58) 2,3,4,6-Tetrachlorophenol	8.70	232	126716	30.99166 ppb		94
59) Diethyl phthalate	8.83	149	620973	33.02915 ppb		99
60) 4-Chlorophenyl phenyl ethe	8.94	204	271530	32.34681 ppb		96
61) Fluorene	8.94	166	552921	31.80001 ppb		98
62) 4-Nitroaniline	9.00	138	145721	34.15887 ppb	#	88
65) 4,6-Dinitro-2-methylphenol	9.05	198	111841	31.23003 ppb	#	85
66) Diphenyl amine	9.09	169	838672	60.99736 ppb		99
67) n-Nitrosodiphenylamine	9.09	169	838672	60.99736 ppb		99
68) 1,2-Diphenylhydrazine	9.12	77	659735	33.34617 ppb		96
69) 4-Bromophenyl phenyl ether	9.50	248	164671	32.98650 ppb		97
70) Hexachlorobenzene	9.59	284	171943	33.50936 ppb	#	72
71) Atrazine	9.73	200	86310	17.37386 ppb		94
72) Pentachlorophenol	9.83	266	72652	31.50354 ppb		95
73) Phenanthrene	10.05	178	900553	34.59969 ppb		99
74) Anthracene	10.12	178	934717	34.92446 ppb		99
75) Carbazol	10.31	167	839399	34.65069 ppb		98
76) Di-n-butylphthalate	10.72	149	1061193	34.09100 ppb		99
77) Fluoranthene	11.43	202	988230	34.49960 ppb	#	96
79) Benzidine	11.62	184	181943	16.66547 ppb		98
80) Pyrene	11.69	202	1059555	32.41755 ppb		99
82) Butyl benzylphthalate	12.46	149	493418	31.42292 ppb		84
83) 3,3'-Dichlorobenzidine	13.07	252	365884	35.54159 ppb	#	97
84) Benz (a) anthracene	13.10	228	990811	32.92866 ppb		99
85) Bis (2-ethylhexyl) phthala	13.12	149	683296	31.04068 ppb		98
86) Chrysene	13.13	228	988036	33.80503 ppb		99
87) Di-n-octylphthalate	13.84	149	1234747	31.75476 ppb	#	91
89) Benzo (b) fluoranthene	14.29	252	996559	30.75581 ppb		99
90) Benzo (k) fluoranthene	14.32	252	1043874	33.87465 ppb		99
91) Benzo (a) pyrene	14.68	252	964366	31.85914 ppb	#	96
92) Indeno (1,2,3-cd) pyrene	16.31	276	1077616	32.15829 ppb		95
93) Dibenz (a,h) anthracene	16.32	278	923834	32.68743 ppb		97
94) Benzo (g,h,i) perylene	16.76	276	907581	30.15853 ppb		96

(#) = qualifier out of range (m) = manual integration

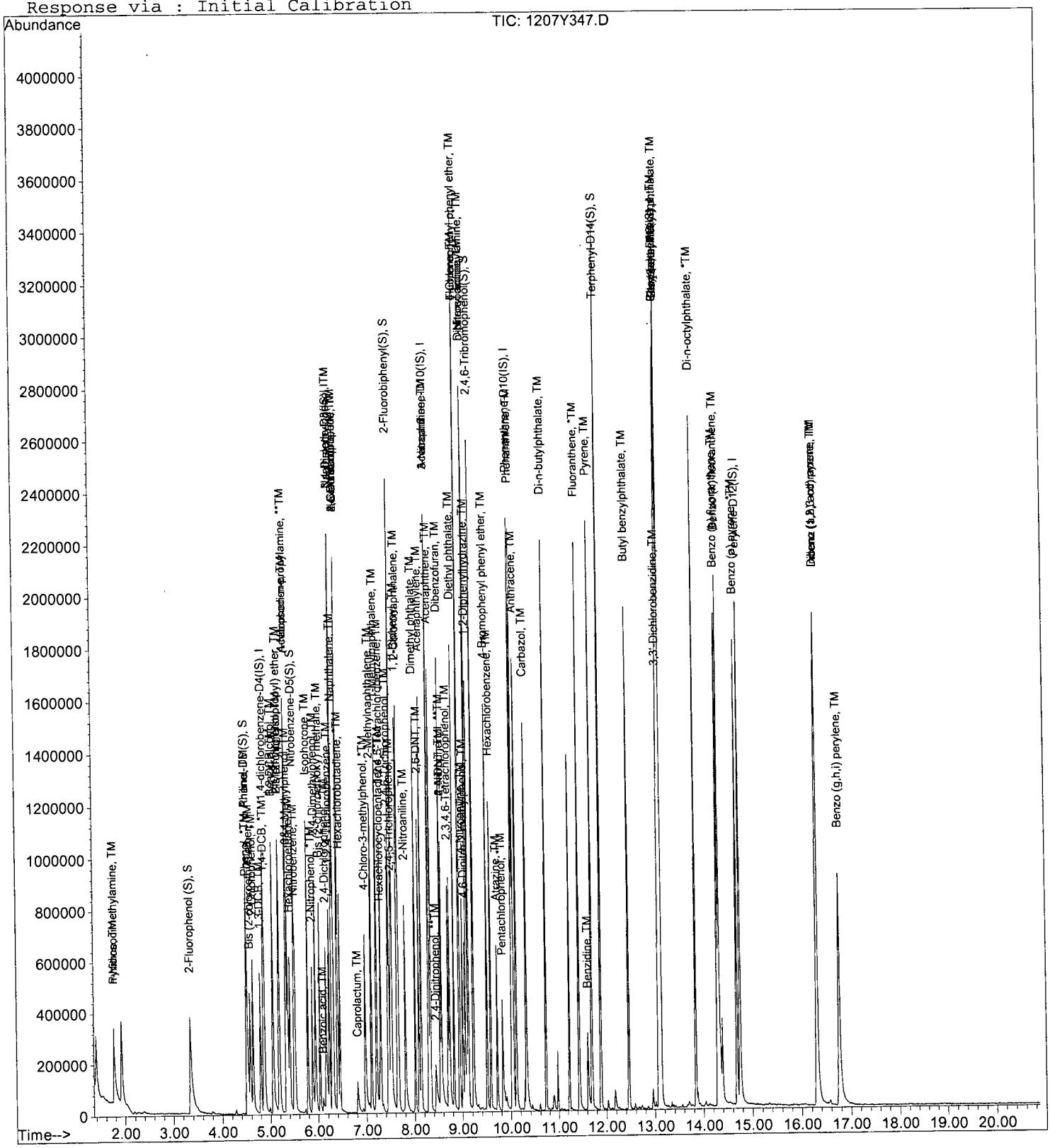
Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y347.D
Acq On : 20 Jan 17 9:12
Sample : AZ48866W27 MSD-1 1/1050
Misc : water

Vial: 47
Operator: MA
Inst : Yoda
Multiplr: 0.95

Quant Time: Jan 20 9:29 2017 Quant Results File: Y1207.RES

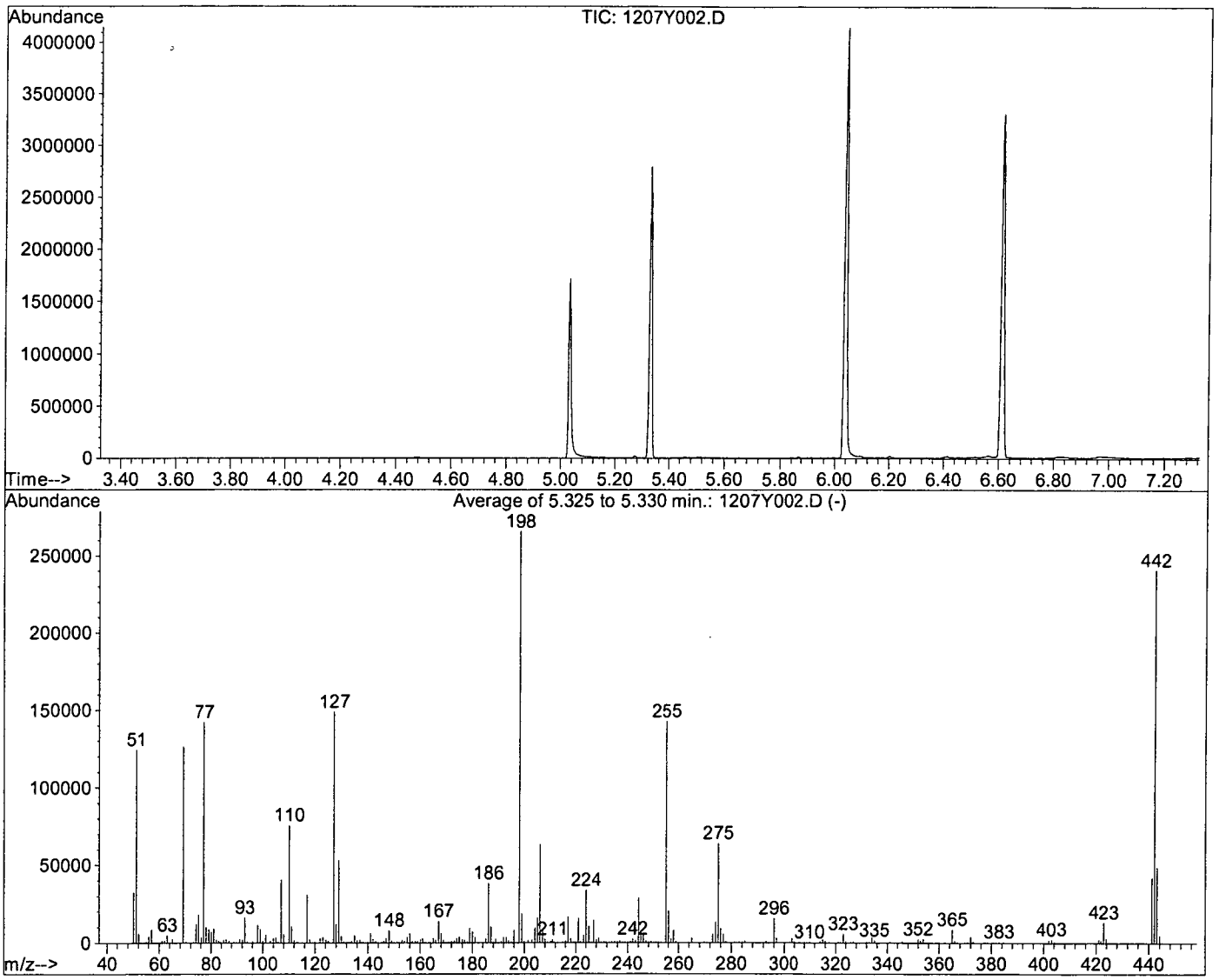
Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration



DFTPP

Data File : M:\YODA\DATA\Y161207\1207Y002.D Vial: 2
Acq On : 7 Dec 16 9:00 Operator: MA
Sample : SV Tune 10/19/16 Inst : Yoda
Misc : Multiplr: 1.00

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 696, 697, 698; Background Corrected with Scan 689

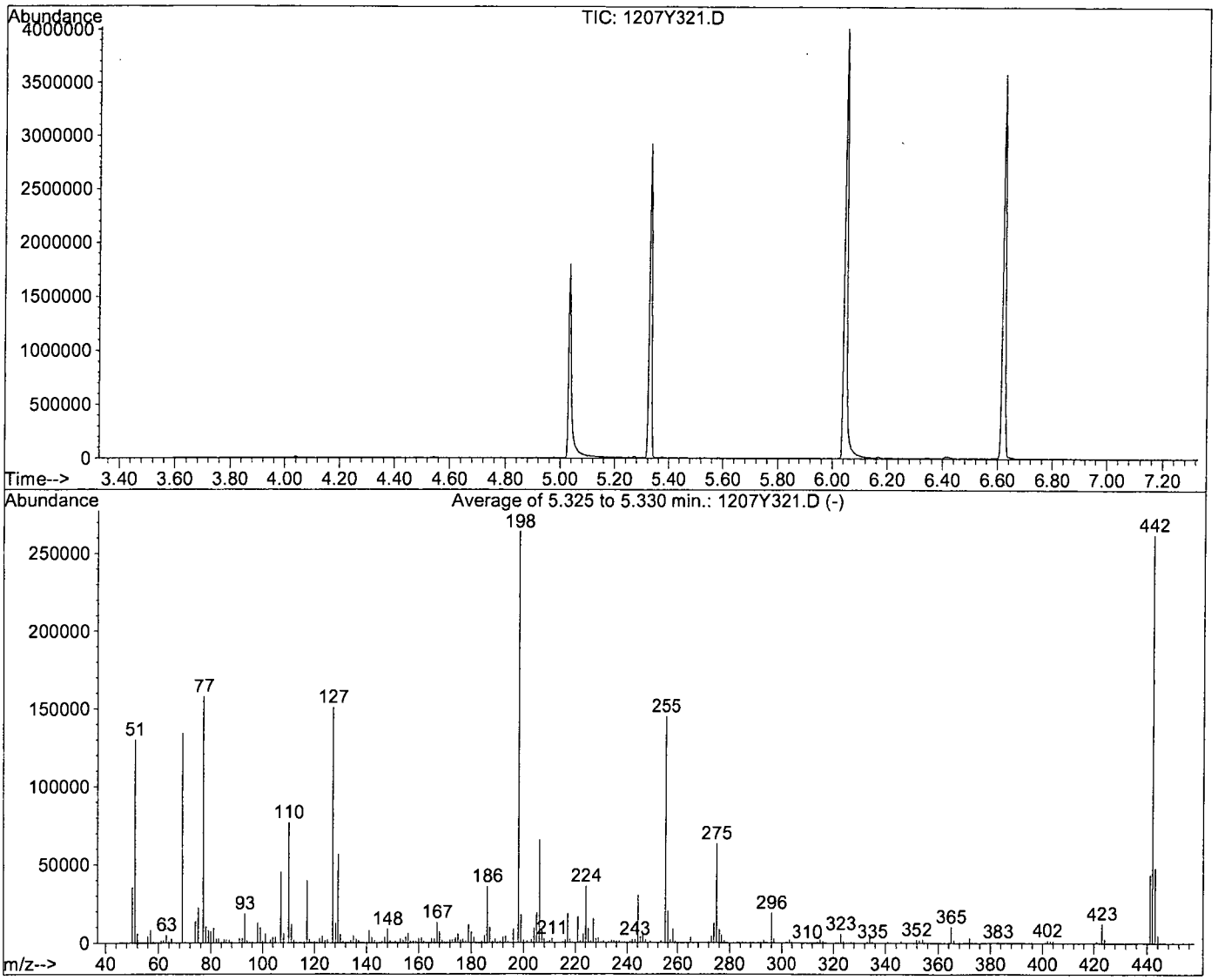
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	46.7	124269	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.7	911	PASS
127	198	40	60	56.0	148757	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	265856	PASS
199	198	5	9	6.9	18432	PASS
275	198	10	30	24.0	63789	PASS
365	198	1	100	3.1	8331	PASS
441	443	0.01	100	86.4	41829	PASS
442	198	50	150	90.6	240747	PASS
443	442	17	23	20.1	48427	PASS

1207Y002.D Y1207.M Wed Dec 07 15:01:22 2016

DFTPP

Data File : M:\YODA\DATA\Y161207\1207Y321.D Vial: 21
Acq On : 18 Jan 17 9:34 Operator: MA
Sample : SV Tune 10/19/16 Inst : Yoda
Misc : water Multiplr: 1.00

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C



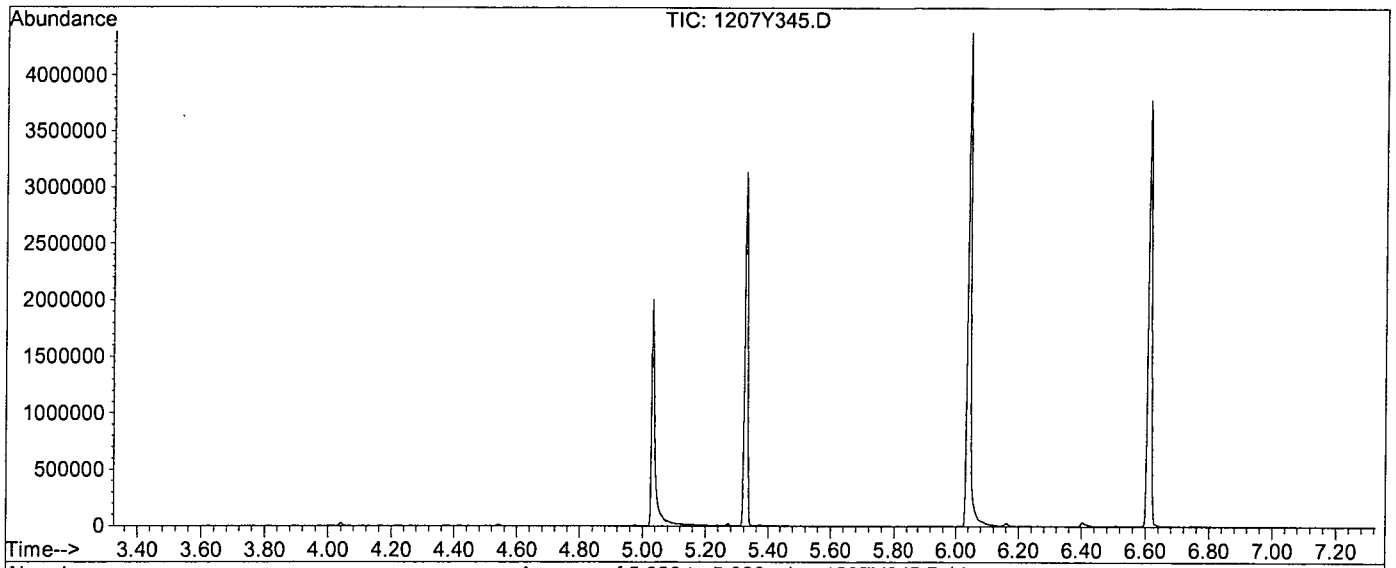
AutoFind: Scans 696, 697, 698; Background Corrected with Scan 688

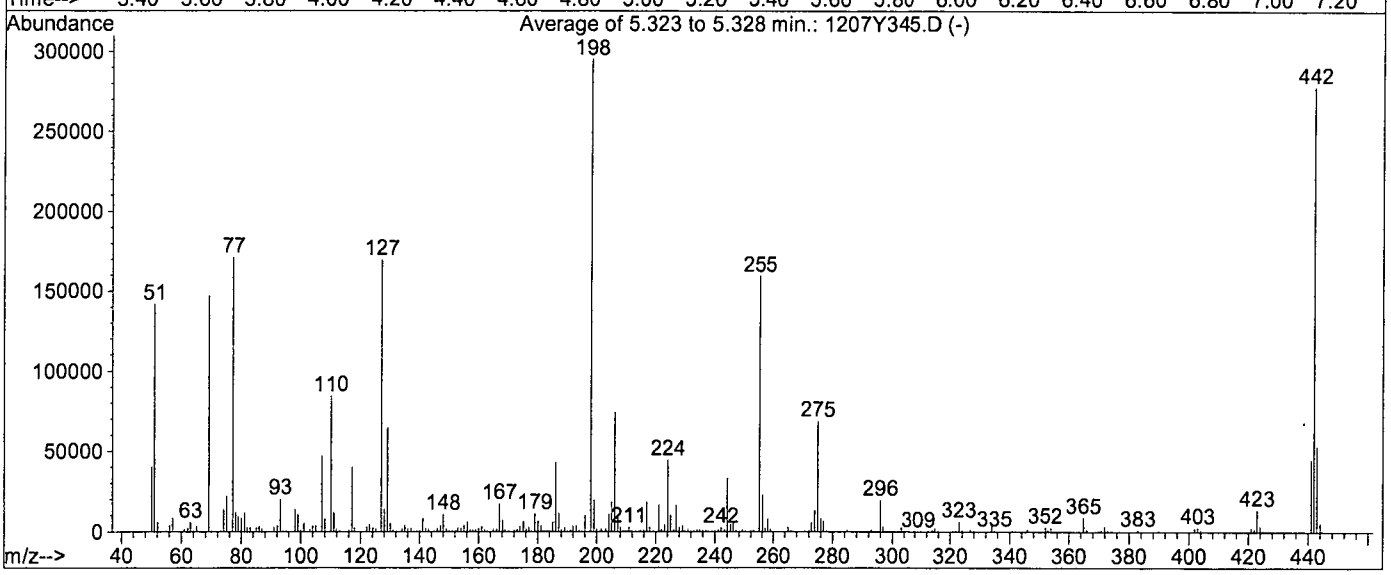
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	49.3	130222	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.3	395	PASS
127	198	40	60	57.1	150912	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	264341	PASS
199	198	5	9	6.7	17747	PASS
275	198	10	30	24.0	63437	PASS
365	198	1	100	3.8	10107	PASS
441	443	0.01	100	90.9	43472	PASS
442	198	50	150	99.3	262549	PASS
443	442	17	23	18.2	47832	PASS

1207Y321.D Y1207.M Thu Jan 19 08:24:41 2017

Data File : M:\YODA\DATA\Y161207\1207Y345.D Vial: 45
Acq On : 20 Jan 17 8:15 Operator: MA
Sample : SV Tune 10/19/16 Inst : Yoda
Misc : water Multiplr: 1.00

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C





AutoFind: Scans 694, 695, 696; Background Corrected with Scan 687

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	48.1	141906	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.6	826	PASS
127	198	40	60	57.5	169664	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	295232	PASS
199	198	5	9	6.7	19696	PASS
275	198	10	30	23.3	68656	PASS
365	198	1	100	3.0	8869	PASS
441	443	0.01	100	84.1	44747	PASS
442	198	50	150	94.2	278016	PASS
443	442	17	23	19.1	53221	PASS

SV Internal Stanard Stock Prep: 10/19/16 RH EXP: 10/19/17						
		Conc.				
Supplier	ID #	µg/mL	Lot #	Open Date	Exp.Date	µL
Supleco	CRM48902	2000	XA14020V-36611	10/19/16	10/19/17	1000
					fin vol.	1000

8270 Full Scan Standard Curve

PREP DATE:	12/06/16 RH							
8270 Standard Curve								
Exp:	2/11/17					**5**	**10**	**20**
		Conc.		Date				
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL
Absolute	8270 Stock	200	VAR	11/15/16	11/15/16	5	5	10
o2si	8270 BN:A	200/400	277272-36400	6/20/16	12/20/16	5	5	10
EM Science	Methylene Chloride		56098			190	90	80
Supelco	SV Internal	2000	A14020V-3661	12/06/16	12/16/16	4	2	2
				Final Vol.		204	102	102

8270 Full Scan Second Source (SS)

PREP DATE:	12/06/16 RH					
Exp:	1/18/17	Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
o2si	8270 Stock S	200	VAR	07/08/16	07/08/17	25
EM Science	Methylene Chloride		56098			75
Supelco	SV Internal	2000	A14020V-3661	12/06/16	12/06/16	2
				Final Vol.		102

40	**50**	**60**	**80**	**100**
µL	µL	µL	µL	µL
20	50	30	40	50
20	50	30	40	50
60	100	40	20	0
2	4	2	2	2
102	204	102	102	102

8270 SVOC Stock 10mL						
8270 Stock/Spike Standard						
prep:	11/15/2016 RH					
Exp:	11/15/17					
		Conc.				
Supplier	ID #	µg/mL	Lot #	Open Date	Exp.Date	µL
Absolute	10001	2000	053014-37136	11/15/16	11/15/17	1000
Absolute	10002	2000	062216-37144	11/15/16	11/15/17	1000
Absolute	10004	2000	012516-37147	11/15/16	11/15/17	1000
Absolute	10005	2000	110314-36848	11/15/16	11/15/17	1000
Absolute	10006	2000	022416-36850	11/15/16	11/15/17	1000
Absolute	10007	2000	020515-36853	11/15/16	11/15/17	1000
Absolute	10018	2000	030216-37081	11/15/16	11/15/17	1000
Absolute	70023	1000	042716-36858	11/15/16	11/15/17	1000
Absolute	82705	2000	012516-36862	11/15/16	11/15/17	1000
Absolute	94552	2000	042016-36488	11/15/16	11/15/17	1000
				Final Vol.		10000

8270 Surrog Mix 100/200ppm						
Prep: 11/15/16 -RH Ex: 2/15/17						
STANDARD	**INITIAL CONC.**	**SOURCE DATE**	**ALIQUOT**	**FINAL VOL**	**FINAL CONC.**	**SOLVENT /LOT#**
8270 Acid Surrog Mix	10000 ug/ml	Restek Cat# 33029 Lot# A0118884-36875 Op: 11/15/16 EX: 11/15/17	2.0 mL	100 mL	200 ug/mL	MC
8270 B/N surrog Mix	5000 µg/mL	Restek Cat# 31086 Lot# A0119223-36871 Op: 11/15/16 EX: 11/15/17	2.0 mL	100 mL	100 ug/mL	MC

8270 Acid Surrog Stock 5000ppm						
Prep: 06/20/16 -LH Ex: 06/20/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
8270 Acid Surrog Mix	10,000 µg/mL	Restek Cat# 33029 Lot# A0115509-36718	10mL	20mL	5000 µg/ml	Acetone
	PREP:	06/20/16				
	Exp:	06/20/17				

8270 Surrog Mix 200/400ppm						
Prep: 06/20/16 -LH Ex: 12/20/16						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
8270 Acid Surrog Mix	5000 µg/mL	06/20/16	8.0mL	100 mL	400 µg/mL	MC
8270 B/N surrog Mix	5000 µg/mL	Restek Cat# 31086 Lot# A0119223-36720	4.0 mL	100 mL	200 ug/mL	MC
	PREP:	06/20/16				
	Exp:	12/20/16				

8270 Full Scan Second Source Stock						
	7/8/16 GA					
8270 Second Source Stock						
Exp:	07/08/17					
		Conc.		Date	Exp.	
Supplier	ID #	µg/mL	Lot #	Code	Date	µL
o2si	116070-02	2000	234696-35233	07/08/16	07/08/17	1000
o2si	110391-01	2000	252133-35880	07/08/16	07/08/17	1000
o2si	010337-01	1000	259144-35881	07/08/16	07/08/17	1000
o2si	110396-01	2000	252136-35882	07/08/16	07/08/17	1000
o2si	110397-01	2000	263077-35835	07/08/16	01/08/17	1000
o2si	110393-01	2000	252141-35248	07/08/16	07/08/17	1000
o2si	110394-01	2000	252143-35884	07/08/16	07/08/17	1000
o2si	**110395-01**	2000	252146-35885	07/08/16	07/08/17	1000
o2si	110392-01	2000	243259-35886	07/08/16	07/08/17	1000
Absolute	10006	2000	091115-35856	07/08/16	07/08/17	1000
				Final Vol.		10000

_SEP004

Organic Extraction Worksheet

Method	625/8270 Separatory Funnel Extra 3510C	Extraction Set	170116A	Extraction Method	SEP004	Units	mL

Spiked ID 1	8270T Spike 12-8-16 exp 12-8-17		Surrogate ID 1	8270 Surrogate 1-12-17 exp 7-12-17	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	01/16/17 15:25	
Spiked ID 8			Ext. End Time:	01/17/17 16:45	
			GC Requires Extract By:	**01/19/17 0:00**	

pH1	2	01/16/17 3:40:00 PM	Water Bath Temp Criteria	75,76 °C
pH2	14	01/16/17 5:30:00 PM		
pH3				

Spiked By: KY **Date** 01/16/17 **Witnessed By:** CFM **Date** 01/16/17 5:54:43 PM

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	170116A Blk				1	1 equip	1000 e-wb7	1	2/1	01/16/17 15:25	
2	170116A LCS-1		0.250	1	1	1 equip	1000 E-WB7	1	2/1	01/16/17 15:25	
3	AZ48866 MS-1	AZ48866W22	0.250	1	1	1 equip	1050 E-WB7	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
4	AZ48866 MSD-1	AZ48866W27	0.250	1	1	1 equip	1050 E-WB7	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
5	AZ48866	AZ48866W19			1	1 equip	1050 E-WB7	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
6	AZ48867	AZ48867W05			1	1 equip	1070 E-WB7	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
7	AZ48868	AZ48868W11			1	1 equip	1070 E-WB7	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
8	AZ48871	AZ48871W13			1	1 equip	1070 E-WB7	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
9	AZ48872	AZ48872W28			1	1 equip	1070 E-WB7	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
10	AZ48873	AZ48873W13			1	1 equip	1070 E-WB7	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
11	AZ48875	AZ48875W11			1	1 equip	1070 E-WB6	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
12	AZ48877	AZ48877W14			1	1 equip	1070 E-WB6	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
13	AZ48878	AZ48878W14			1	1 equip	1070 E-WB6	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
14	AZ48880	AZ48880W10			1	1 equip	1070 E-WB6	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
15	AZ48881	AZ48881W07			1	1 equip	1070 E-WB6	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
16	AZ48915	AZ48915W12			1	1 equip	1070 E-WB6	1	2/1	01/16/17 15:25	81971 Rush 1 week

Solvent and Lot#	
MC	56153
1+1 Sulfuric Acid	12-5-16
Acidified Na2SO4	1-3-17
B.Na2SO4	16C255214
10N NaOH	12-19-16
ph strips	HC 574756
Filter Paper	400112

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	MA
Date 1/18/17	10:00
Time	10:00
Refrigerator	6C-C

	Technician's Initials
Scanned By	KY
Sample Preparation	KY,DL,JR
Extraction	KY,DL,JR
Concentration	KY

Modified	01/18/17 8:47:32 AM

Reviewed By: KY **Date** 1/18/17

Organic Extraction Worksheet

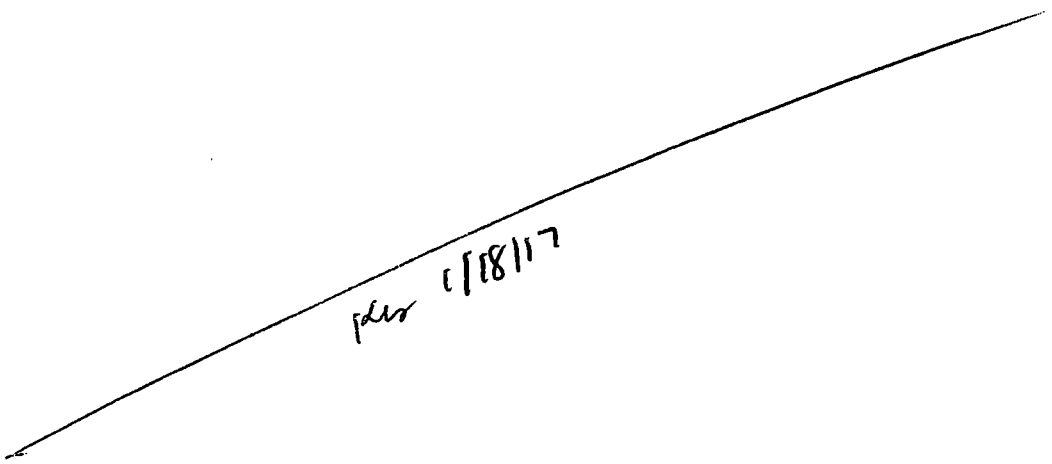
Method	625/8270 Separatory Funnel Extra 3510C	Extraction Set	170116A	Extraction Method	SEP004	Units	mL

Spiked ID 1	8270T Spike 12-8-16 exp 12-8-17		Surrogate ID 1	8270 Surrogate 1-12-17 exp 7-12-17
Spiked ID 2			Surrogate ID 2	
Spiked ID 3			Surrogate ID 3	
Spiked ID 4			Surrogate ID 4	
Spiked ID 5			Surrogate ID 5	
Spiked ID 6			Sufficient Vol for Matrix QC:	YES
Spiked ID 7			Ext. Start Time:	01/16/17 15:25
Spiked ID 8			Ext. End Time:	01/17/17 16:45
			GC Requires Extract By:	**01/19/17 0:00**

pH1	2	01/16/17 3:40:00 PM	Water Bath Temp Criteria	75,76 °C
pH2	14	01/16/17 5:30:00 PM		
pH3				

Spiked By: KY **Date** 01/16/17 **Witnessed By:** CFM **Date** 01/16/17 5:54:43 PM

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
17	AZ48916	AZ48916W14			1	1	1070	1	2/1	01/16/17 15:25	81971 Rush 1 week
						equip	E-WB6				
18	AZ48921	AZ48921W11			1	1	1070	1	2/1	01/16/17 15:25	81971 Rush 1 week
						equip	E-WB6				
19	AZ48925	AZ48925W14			1	1	1070	1	2/1	01/16/17 15:25	81971 Rush 1 week
						equip	E-WB6				



Solvent and Lot#	
MC	56153
1+1 Sulfuric Acid	12-5-16
Acidified Na2SO4	1-3-17
B.Na2SO4	16C255214
10N NaOH	12-19-16
ph strips	HC 574756
Filter Paper	400112

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	
Date	
Time	
Refrigerator	

	Technician's Initials
Scanned By	KY
Sample Preparation	KY,DL,JR
Extraction	KY,DL,JR
Concentration	KY

Modified	01/18/17 8:47:32 AM

Reviewed By: [signature] **Date** 1/18/17

Injection Log

Directory: M:\YODA\DATA\Y161207\

Vial	FileName	Multiplier	SampleName	Misc Info	Injected
2	1207Y002.D	1	SV Tune 10/19/16		7 Dec 16 9:00
4	1207Y004.D	1	5ug/ml SVOC 12/06/16		7 Dec 16 10:01
5	1207Y005.D	1	10ug/ml SVOC 12/06/16		7 Dec 16 10:32
6	1207Y006.D	1	20ug/ml SVOC 12/06/16		7 Dec 16 11:02
7	1207Y007.D	1	40ug/ml SVOC 12/06/16		7 Dec 16 11:32
8	1207Y008.D	1	50ug/ml SVOC 12/06/16		7 Dec 16 12:02
9	1207Y009.D	1	60ug/ml SVOC 12/06/16		7 Dec 16 12:32
10	1207Y010.D	1	80ug/ml SVOC 12/06/16		7 Dec 16 13:02
11	1207Y011.D	1	100ug/ml SVOC 12/06/16		7 Dec 16 13:32
12	1207Y012.D	1	2ND SRC SVOC 12/06/16		7 Dec 16 14:01
21	1207Y321.D	1	SV Tune 10/19/16	water	18 Jan 17 9:34
22	1207Y322.D	1	50ug/ml SVOC 12/06/16	water	18 Jan 17 9:51
23	1207Y323.D	1	170116A BLK 1/1000	water	18 Jan 17 10:21
24	1207Y324.D	1	170116A LCS-1 1/1000	water	18 Jan 17 10:51
25	1207Y325.D	0.952381	AZ48866W22 MS-1 1/1050	water	18 Jan 17 11:21
27	1207Y327.D	0.952381	AZ48866W19 1/1050	water	18 Jan 17 12:21
28	1207Y328.D	0.934579	AZ48867W05 1/1070	water	18 Jan 17 12:51
29	1207Y329.D	0.934579	AZ48868W11 1/1070	water	18 Jan 17 13:21
30	1207Y330.D	0.934579	AZ48871W13 1/1070	water	18 Jan 17 13:51
31	1207Y331.D	0.934579	AZ48872W28 1/1070	water	18 Jan 17 14:22
32	1207Y332.D	0.934579	AZ48873W13 1/1070	water	18 Jan 17 14:52
33	1207Y333.D	0.934579	AZ48875W11 1/1070	water	18 Jan 17 15:22
34	1207Y334.D	0.934579	AZ48877W14 1/1070	water	18 Jan 17 15:52
35	1207Y335.D	0.934579	AZ48878W14 1/1070	water	18 Jan 17 16:22
36	1207Y336.D	1	AZ48880W10 1/1070	water	18 Jan 17 16:52
37	1207Y337.D	1	AZ48881W07 1/1070	water	18 Jan 17 17:22
43	1207Y343.D	1	50ug/ml SVOC 12/06/16	water	18 Jan 17 20:07
45	1207Y345.D	1	SV Tune 10/19/16	water	20 Jan 17 8:15
46	1207Y346.D	1	50ug/ml SVOC 12/06/16	water	20 Jan 17 8:32
47	1207Y347.D	0.952381	AZ48866W27 MSD-1 1/1050	water	20 Jan 17 9:12
48	1207Y348.D	1	50ug/ml SVOC 12/06/16	water	20 Jan 17 9:42

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank

EPA 8270D MODIFIED WATER

Blank Name/QCG: **170113W-48866 - 215649**

Batch ID: #87DME-170113A1

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2-(2-METHOXYETHOXY)-ETHAN	80.0 U	100	80.0	40.0	ug/L	01/13/17	01/16/17

Quant Method:Y0GLYCOL.
Run #:1220Y055
Instrument:Yoda
Sequence:Y161220G
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 01/20/17 11:27:13 AM

Laboratory Control Spike Recovery
EPA 8270D MODIFIED WATER

APPL ID: **170113W-48866 LCS - 215649**
Batch ID: #87DME-170113A1

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
2-(2-METHOXYETHOXY)-ETHANOL	80.0	79.7	99.6	30-130

Comments: _____

Primary	SPK
Quant Method :	Y0GLYCOL.M
Extraction Date :	01/13/17
Analysis Date :	01/16/17
Instrument :	Yoda
Run :	1220Y053
Initials :	MA

Printed: 01/20/17 11:27:13 AM
APPL Standard LCS

Matrix Spike Recoveries

EPA 8270D MODIFIED WATER

APPL ID: **170118W-48866 MS - 215649**
Batch ID: #87DME-170113A1
Sample ID: AZ48866
Client ID: ERH161

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
2-(2-METHOXYETHOXY)-ETHANOL	80.0	ND	92.6	86.4	116	108	30-130	6.9	20

Comments: _____

Primary	SPK	DUP
Quant Method :	Y0GLYCOL.M	Y0GLYCOL.M
Extraction Date :	01/18/17	01/18/17
Analysis Date :	01/19/17	01/19/17
Instrument :	Yoda	Yoda
Run :	1220Y079	1220Y080
Initials :	MA	

Printed: 01/20/17 11:27:15 AM
APPL MSD SCII

EPA 8270D

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81965

Case No: 81965 Date Analyzed: 01/16/17

Matrix: WATER Instrument: Yoda

Blank ID: 170113A1-BLK Time Analyzed: 1650

APPL ID.	Client Sample No.	File ID.	Date Analyzed
170113A1-LCS	Lab Control Spike	1220Y053	01/16/17 1549
170113A1-BLK	Blank	1220Y055	01/16/17 1650
AZ48866	ERH161	1220Y059	01/16/17 1850
AZ48867	ERH162	1220Y060	01/16/17 1920
AZ48868	ERH164	1220Y061	01/16/17 1950
AZ48871	ERH168	1220Y062	01/16/17 2020
AZ48872	ERH169	1220Y063	01/16/17 2050
AZ48873	ERH170	1220Y064	01/16/17 2120
AZ48875	ERH174	1220Y065	01/16/17 2150
AZ48877	ERH176	1220Y066	01/16/17 2220
AZ48878	ERH179	1220Y067	01/16/17 2250
AZ48880	ERH186	1220Y068	01/16/17 2321
AZ48881	ERH187	1220Y069	01/16/17 2351
170113A1-MS	Matrix Spike	1220Y079	01/19/17 1126
170113A1-MSD	Matrix SpikeD	1220Y080	01/19/17 1156

Comments: Batch: #87DME-170113A1

Printed: 01/20/17 11:27:16 AM

Form 4, Blank Summary

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: ~~1220Y002.D~~ 81965
Matrix: Water hp1-26-17
ID: SV Tune 11/15/16

SDG No: hp1-26-17 ~~Yoda~~ 81965
Date Analyzed: 12/20/16
Instrument: Yoda
Time Analyzed: 9:12

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		50ug/ml DEG 11/22/16	1220Y003.D	12/20/16 9:32
2		100ug/ml DEG 11/22/1	1220Y004.D	12/20/16 10:02
3		200ug/ml DEG 11/22/1	1220Y005.D	12/20/16 11:27
4		400ug/ml DEG 11/22/1	1220Y006.D	12/20/16 11:57
5		500ug/ml DEG 11/22/1	1220Y007.D	12/20/16 12:27
6		600ug/ml DEG 11/22/1	1220Y008.D	12/20/16 12:57
7		800ug/ml DEG 11/22/1	1220Y009.D	12/20/16 13:28
8		1000ug/ml DEG 11/22/	1220Y010.D	12/20/16 13:58
9		SS2 DEG 11/22/16	1220Y011.D	12/20/16 15:01
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	44.4
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.0
127	40 - 60% of mass 198	53.6
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 197.95	100.0
199	5 - 9% of mass 198	6.3
275	10 - 30% of mass 198	21.8
365	1 - 100% of mass 198	3.0
441	0.01 - 100% of mass 443	85.0
442	50 - 150% of mass 197.95	98.0
443	17 - 23% of mass 442	19.1

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81965
Matrix: Water
ID: SV Tune 11/15/16

SDG No: 81965
Date Analyzed: 01/16/17
Instrument: Yoda
Time Analyzed: 14:30

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		500ug/ml DEG 11/22/1	1220Y052.D	01/16/17 15:17
2	Lab Control Spike	170113A LCS-1 2/500	1220Y053.D	01/16/17 15:49
3	Blank	170113A BLK 2/500	1220Y055.D	01/16/17 16:50
4	ERH161	AZ48866W28 2/500	1220Y059.D	01/16/17 18:50
5	ERH162	AZ48867W06 2/500	1220Y060.D	01/16/17 19:20
6	ERH164	AZ48868W12 2/500	1220Y061.D	01/16/17 19:50
7	ERH168	AZ48871W11 2/500	1220Y062.D	01/16/17 20:20
8	ERH169	AZ48872W24 2/500	1220Y063.D	01/16/17 20:50
9	ERH170	AZ48873W09 2/500	1220Y064.D	01/16/17 21:20
10	ERH174	AZ48875W09 2/500	1220Y065.D	01/16/17 21:50
11	ERH176	AZ48877W10 2/500	1220Y066.D	01/16/17 22:20
12	ERH179	AZ48878W11 2/500	1220Y067.D	01/16/17 22:50
13	ERH186	AZ48880W06 2/500	1220Y068.D	01/16/17 23:21
14	ERH187	AZ48881W06 2/500	1220Y069.D	01/16/17 23:51
15		500ug/ml DEG 11/22/1	1220Y071.D	01/17/17 0:51
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	48.7
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.6
127	40 - 60% of mass 198	56.6
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 197.95	100.0
199	5 - 9% of mass 198	6.7
275	10 - 30% of mass 198	24.9
365	1 - 100% of mass 198	3.4
441	0.01 - 100% of mass 443	84.7
442	50 - 150% of mass 197.95	95.2
443	17 - 23% of mass 442	19.5

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: ~~1220Y073.D~~ 81965
Matrix: Water np1-26-17
ID: SV Tune 11/15/16

np1-26-17
SDG No: ~~Yoda~~ 81965
Date Analyzed: 01/19/17
Instrument: Yoda
Time Analyzed: 8:31

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		500ug/ml DEG 11/22/1	1220Y074.D	01/19/17 8:48
2		AZ48866W25 MS-1 2/50	1220Y079.D	01/19/17 11:26
3		AZ48866W25 MSD-1 2/5	1220Y080.D	01/19/17 11:56
4		500ug/ml DEG 11/22/1	1220Y090.D	01/19/17 16:43
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	50.4
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.6
127	40 - 60% of mass 198	58.7
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 197.95	100.0
199	5 - 9% of mass 198	6.9
275	10 - 30% of mass 198	23.9
365	1 - 100% of mass 198	4.0
441	0.01 - 100% of mass 443	94.8
442	50 - 150% of mass 197.95	90.6
443	17 - 23% of mass 442	18.8

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81965

Lab File ID (Standard): 1220Y007.D Date Analyzed: 12/20/16

Instrument ID: Yoda Time Analyzed: 12:27

GC Column: ID: Heated Purge: (Y/N)

		1,4-dichlorobenzene-D4(IS)		Napthalene-D8(IS)		Acenaphthene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	220710	4.87	916121	6.29	479952	8.31
	UPPER LIMIT	441420	5.37	1832242	6.79	959904	8.81
	LOWER LIMIT	110355	4.37	458061	5.79	239976	7.81
	SAMPLE NO.						
01	500ug/ml DEG 11/22/16	156199	4.87	717794	6.29	399525	8.30
02	170113A LCS-1 2/500	184441	4.87	759894	6.29	434184	8.31
03	170113A BLK 2/500	178877	4.89	770079	6.30	418516	8.31
04	AZ48866W28 2/500	181168	4.88	790017	6.29	437285	8.30
05	AZ48867W06 2/500	181504	4.87	804358	6.29	457916	8.30
06	AZ48868W12 2/500	183956	4.88	818756	6.29	471292	8.30
07	AZ48871W11 2/500	178886	4.89	798388	6.29	462665	8.30
08	AZ48872W24 2/500	186275	4.88	814067	6.29	460689	8.30
09	AZ48873W09 2/500	178344	4.89	779275	6.29	445950	8.30
10	AZ48875W09 2/500	177209	4.88	776237	6.29	454103	8.30
11	AZ48877W10 2/500	164262	4.88	710324	6.29	413191	8.30
12	AZ48878W11 2/500	180054	4.86	821661	6.29	464177	8.30
13	AZ48880W06 2/500	167435	4.85	765473	6.29	439906	8.30
14	AZ48881W06 2/500	182712	4.88	820148	6.29	465670	8.30
15	500ug/ml DEG 11/22/16	139035	4.87	662704	6.29	376399	8.30
16	500ug/ml DEG 11/22/16	125616	4.86	658356	6.29	384519	8.30
17	AZ48866W25 MS-1 2/5(	138924	4.88	607635	6.29	349131	8.30
18	AZ48866W25 MSD-1 2/	134323	4.88	613764	6.29	355298	8.30
19	500ug/ml DEG 11/22/16	94325 *	4.88	464214	6.29	269042	8.30
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 81965

Lab File ID (Standard): 1220Y007.D Date Analyzed: 12/20/16

Instrument ID: Yoda Time Analyzed: 12:27

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Phenanthrene-D10(IS)		Chrysene-D12(IS)		Perylene-D12(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	893005	10.02	850646	13.11	931322	14.75
	UPPER LIMIT	1786010	10.52	1701292	13.61	1862644	15.25
	LOWER LIMIT	446503	9.52	425323	12.61	465661	14.25
	SAMPLE NO.						
01	500ug/ml DEG 11/22/16	726618	10.03	674115	13.10	624829	14.74
02	170113A LCS-1 2/500	913539	10.02	867376	13.10	991645	14.75
03	170113A BLK 2/500	740058	10.02	694848	13.10	715567	14.75
04	AZ48866W28 2/500	777624	10.03	730698	13.10	933099	14.74
05	AZ48867W06 2/500	842692	10.02	801783	13.10	905536	14.75
06	AZ48868W12 2/500	873298	10.02	840974	13.10	818925	14.75
07	AZ48871W11 2/500	845929	10.02	818108	13.10	900680	14.75
08	AZ48872W24 2/500	869695	10.02	831012	13.10	725678	14.74
09	AZ48873W09 2/500	820072	10.02	794438	13.10	904936	14.75
10	AZ48875W09 2/500	828060	10.02	784330	13.10	604319	14.74
11	AZ48877W10 2/500	774327	10.02	707099	13.10	570086	14.74
12	AZ48878W11 2/500	843242	10.03	784352	13.10	940973	14.74
13	AZ48880W06 2/500	819201	10.03	762238	13.10	852438	14.74
14	AZ48881W06 2/500	876703	10.03	814843	13.10	750506	14.74
15	500ug/ml DEG 11/22/16	699842	10.03	672779	13.10	576980	14.74
16	500ug/ml DEG 11/22/16	693160	10.02	616710	13.10	552797	14.74
17	AZ48866W25 MS-1 2/5(	662095	10.03	648638	13.10	906712	14.74
18	AZ48866W25 MSD-1 2/	683575	10.03	607351	13.10	807184	14.74
19	500ug/ml DEG 11/22/16	509149	10.02	467422	13.10	384363 *	14.75
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

ORGANICS

Sample Data

APPL, INC.

EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH161
Sample Collection Date: 01/09/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48866
QCG: #87DME-170113A1-215649

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	01/13/17	01/16/17

Quant Method: Y0GLYCOL.M
Run #: 1220Y059
Instrument: Yoda
Sequence: Y161220G
Dilution Factor: 1
Initials: MA

Printed: 01/20/17 11:27:17 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y059.D Vial: 59
Acq On : 16 Jan 17 18:50 Operator: MA
Sample : AZ48866W28 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 8:28 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 17 08:26:13 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.88	152	181168	40.00000	ppb	0.01
3) Napthalene-D8(IS)	6.29	136	790017	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	437285	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	777624	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	730698	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.74	264	933099	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

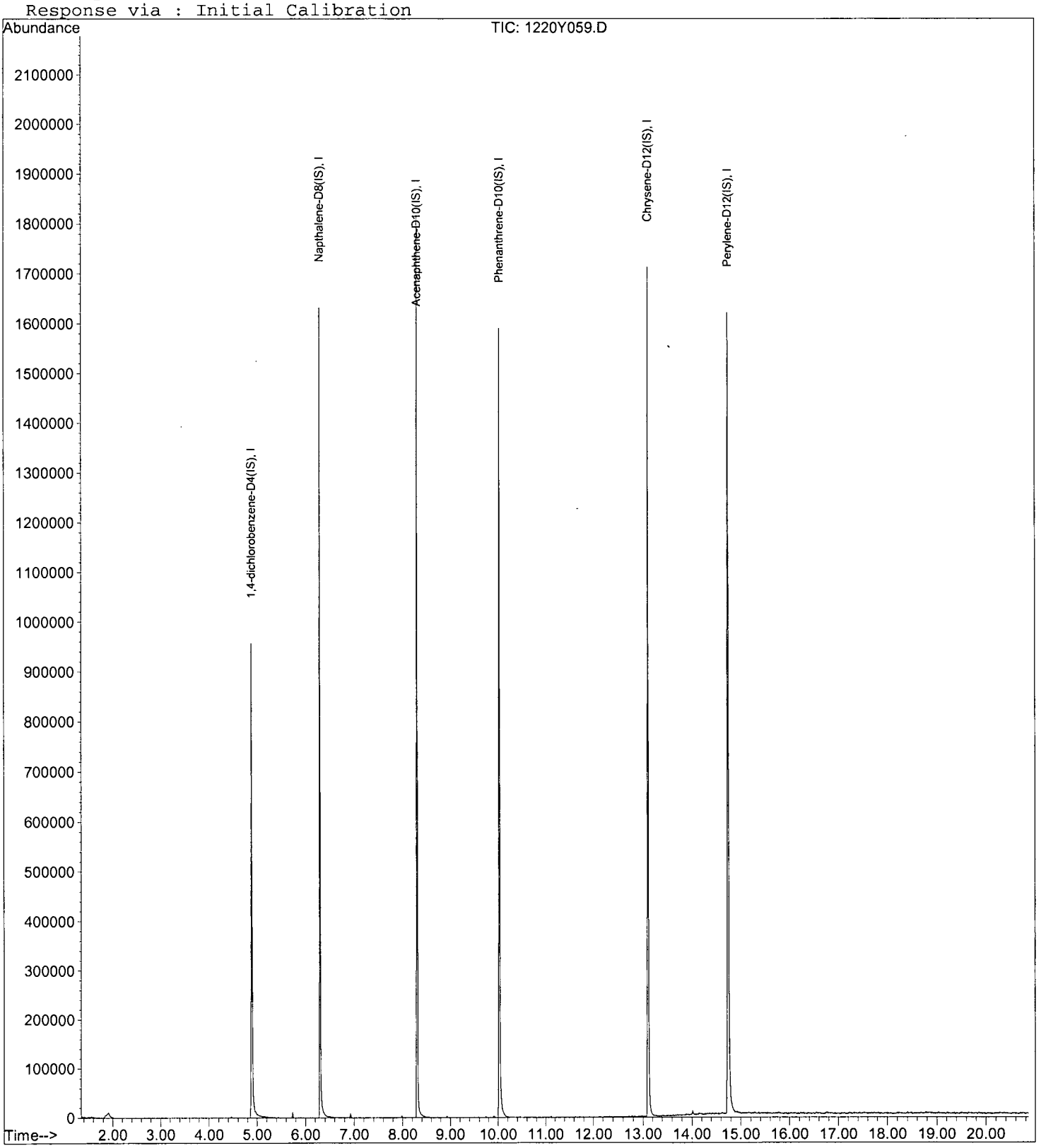
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y059.D Vial: 59
Acq On : 16 Jan 17 18:50 Operator: MA
Sample : AZ48866W28 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 8:28 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 17 08:26:13 2017
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH162
Sample Collection Date: 01/09/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48867
QCG: #87DME-170113A1-215649

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	01/13/17	01/16/17

Quant Method: Y0GLYCOL.M
Run #: 1220Y060
Instrument: Yoda
Sequence: Y161220G
Dilution Factor: 1
Initials: MA

Printed: 01/20/17 11:27:17 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y060.D Vial: 60
Acq On : 16 Jan 17 19:20 Operator: MA
Sample : AZ48867W06 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 8:28 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 17 08:26:13 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	181504	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	804358	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	457916	40.00000	ppb	-0.01
5) Phenanthrene-D10(IS)	10.02	188	842692	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	801783	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.75	264	905536	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

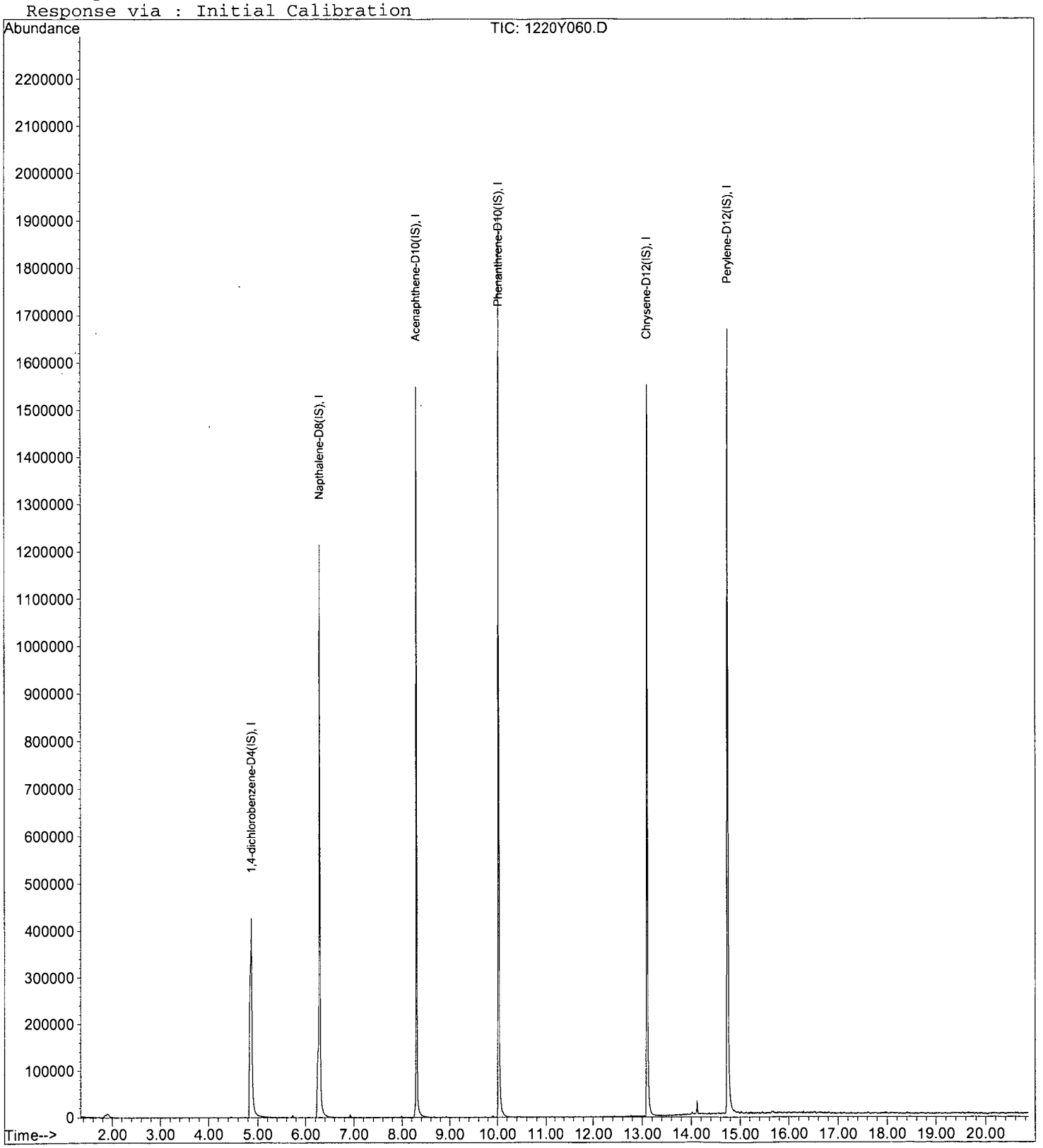
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y060.D Vial: 60
Acq On : 16 Jan 17 19:20 Operator: MA
Sample : AZ48867W06 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 8:28 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 17 08:26:13 2017
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH164
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48868
QCG: #87DME-170113A1-215649

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	01/13/17	01/16/17

Quant Method: Y0GLYCOL.M
Run #: 1220Y061
Instrument: Yoda
Sequence: Y161220G
Dilution Factor: 1
Initials: MA

Printed: 01/20/17 11:27:17 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y061.D Vial: 61
Acq On : 16 Jan 17 19:50 Operator: MA
Sample : AZ48868W12 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 8:28 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 17 08:26:13 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.88	152	183956	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	818756	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	471292	40.00000	ppb	-0.01
5) Phenanthrene-D10(IS)	10.02	188	873298	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	840974	40.00000	ppb	-0.01
7) Perylene-D12(IS)	14.75	264	818925	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

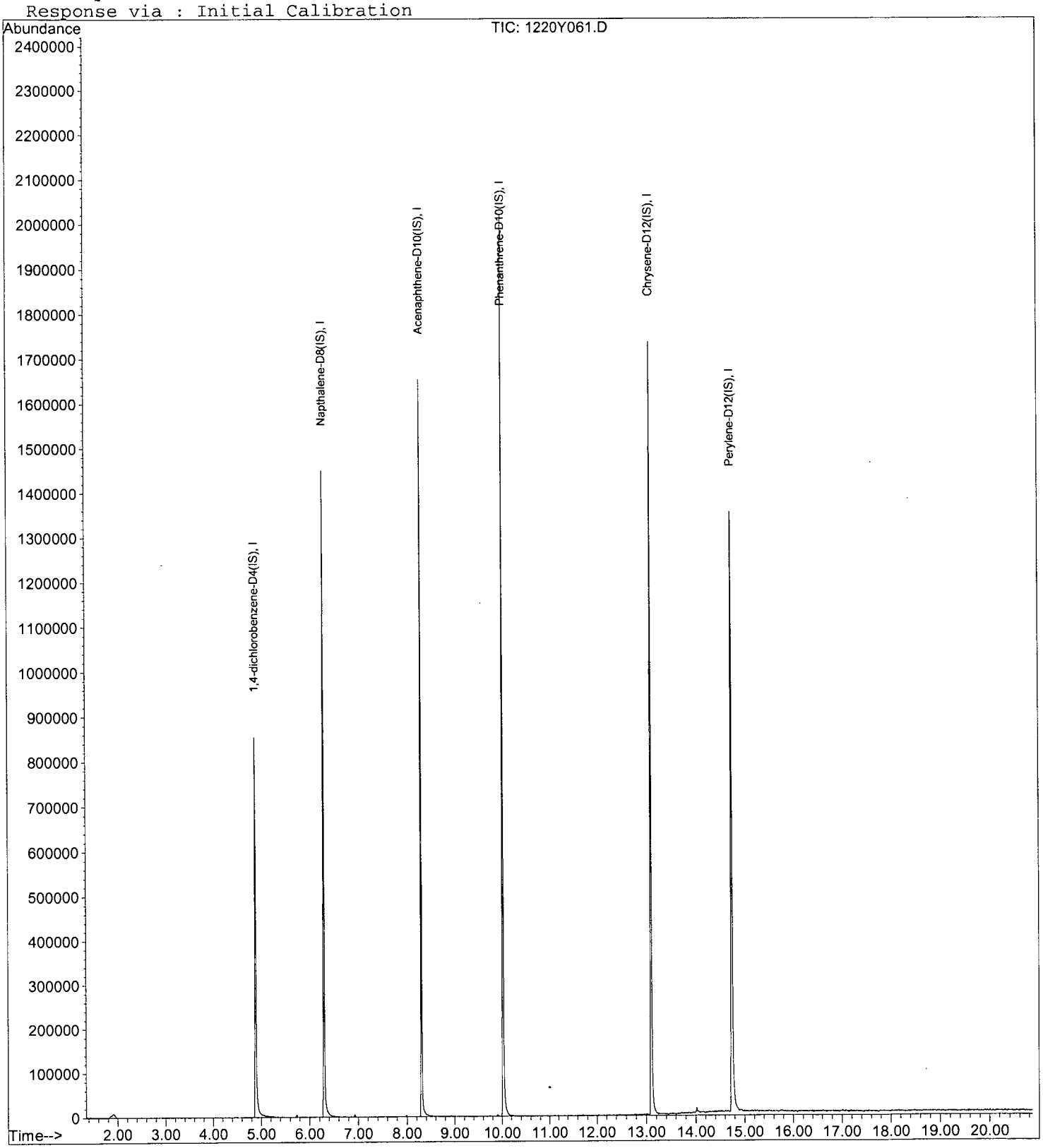
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y061.D Vial: 61
Acq On : 16 Jan 17 19:50 Operator: MA
Sample : AZ48868W12 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 8:28 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 17 08:26:13 2017
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH168
Sample Collection Date: 01/09/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48871
QCG: #87DME-170113A1-215649

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	01/13/17	01/16/17

Quant Method: Y0GLYCOL.M
Run #: 1220Y062
Instrument: Yoda
Sequence: Y161220G
Dilution Factor: 1
Initials: MA

Printed: 01/20/17 11:27:17 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y062.D Vial: 62
Acq On : 16 Jan 17 20:20 Operator: MA
Sample : AZ48871W11 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 8:28 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 17 08:26:13 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.89	152	178886	40.00000	ppb	0.02
3) Napthalene-D8(IS)	6.29	136	798388	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	462665	40.00000	ppb	-0.01
5) Phenanthrene-D10(IS)	10.02	188	845929	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	818108	40.00000	ppb	-0.01
7) Perylene-D12(IS)	14.75	264	900680	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

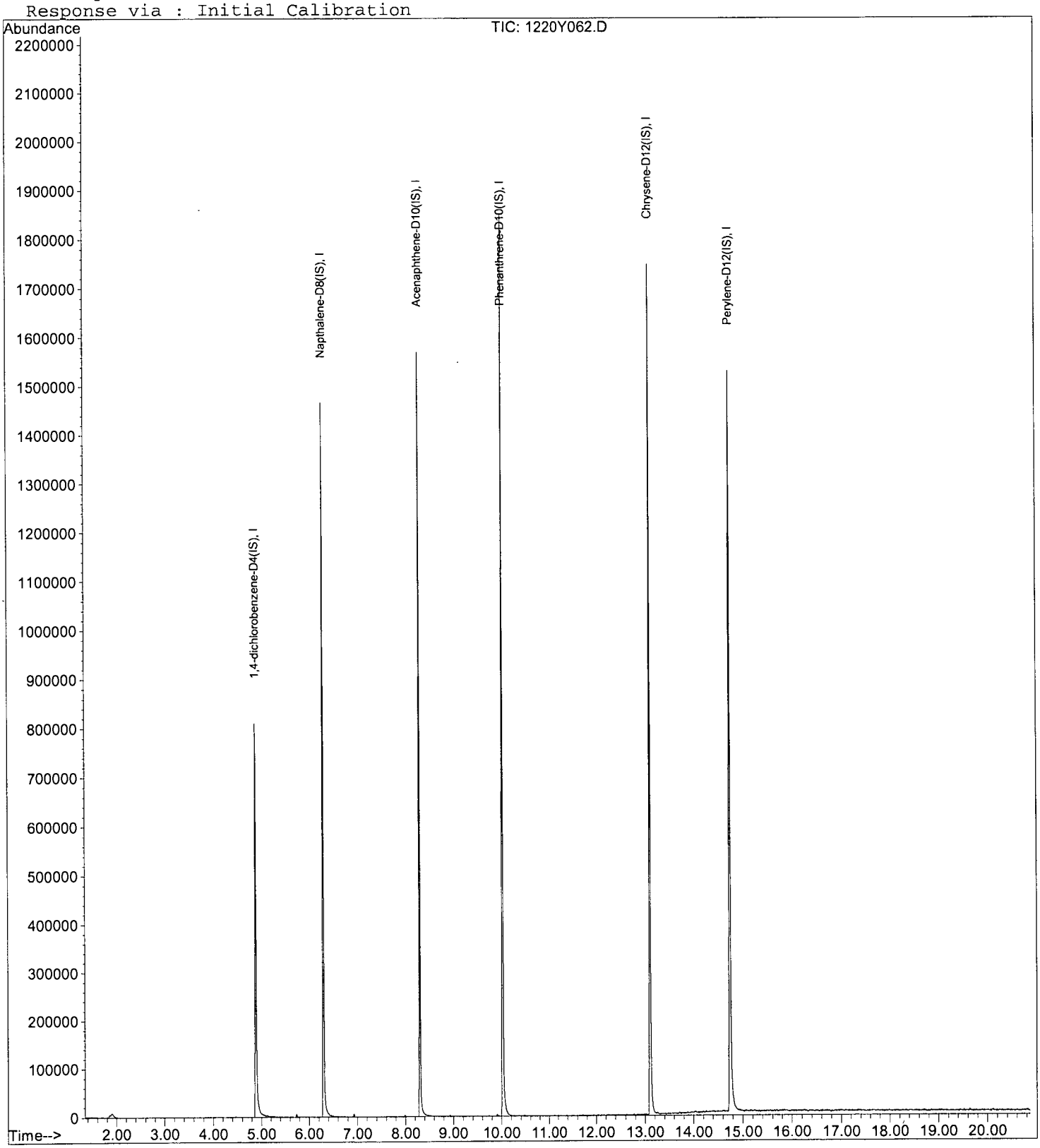
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y062.D Vial: 62
Acq On : 16 Jan 17 20:20 Operator: MA
Sample : AZ48871W11 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 8:28 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 17 08:26:13 2017
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH169
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48872
QCG: #87DME-170113A1-215649

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	01/13/17	01/16/17

Quant Method:	Y0GLYCOL.M
Run #:	1220Y063
Instrument:	Yoda
Sequence:	Y161220G
Dilution Factor:	1
Initials:	MA

Printed: 01/20/17 11:27:17 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y063.D Vial: 63
Acq On : 16 Jan 17 20:50 Operator: MA
Sample : AZ48872W24 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 8:28 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 17 08:26:13 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.88	152	186275	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	814067	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	460689	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	869695	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	831012	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.74	264	725678	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

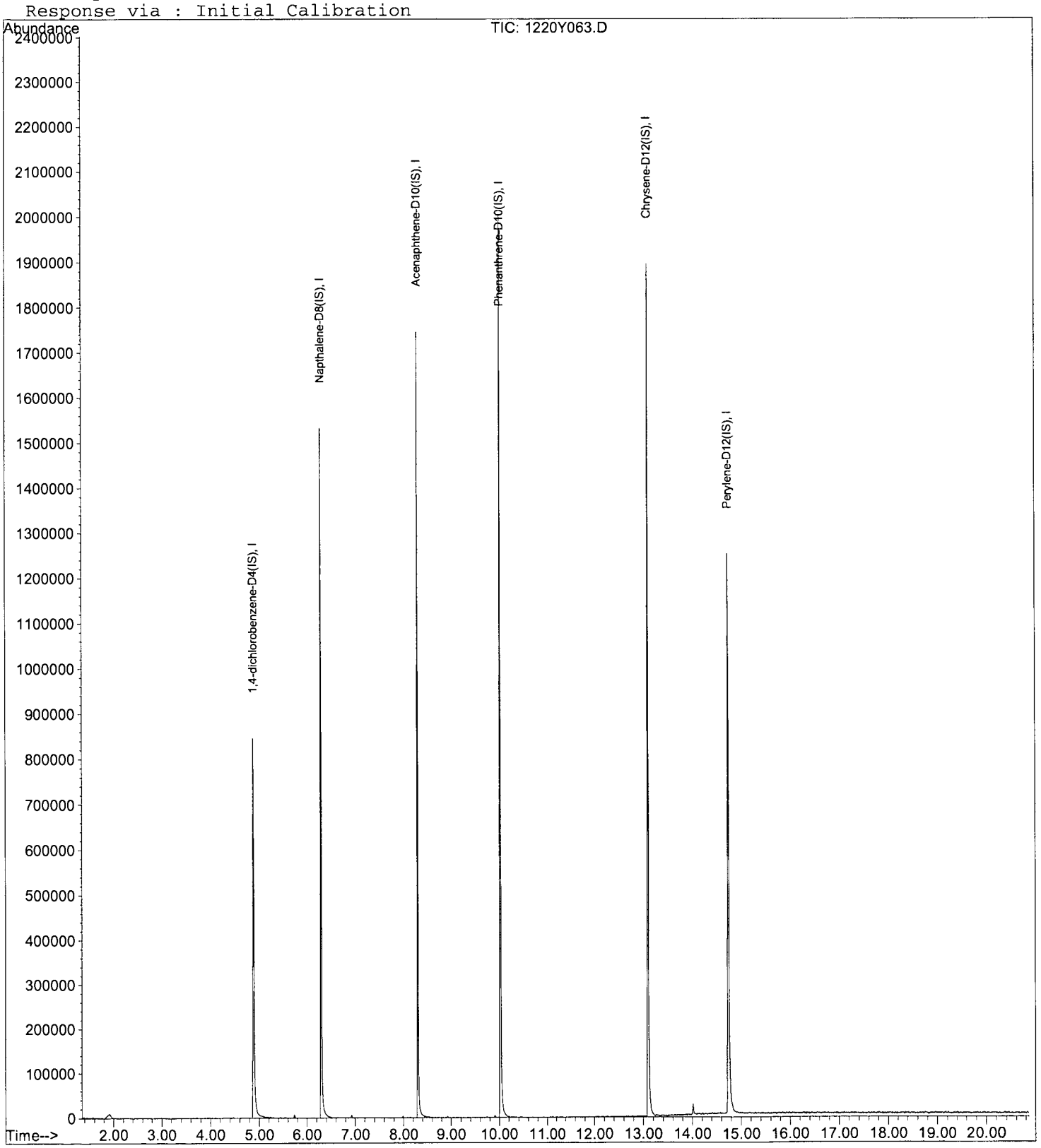
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y063.D Vial: 63
Acq On : 16 Jan 17 20:50 Operator: MA
Sample : AZ48872W24 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 8:28 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 17 08:26:13 2017
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH170
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48873
QCG: #87DME-170113A1-215649

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	01/13/17	01/16/17

Quant Method:	Y0GLYCOL.M
Run #:	1220Y064
Instrument:	Yoda
Sequence:	Y161220G
Dilution Factor:	1
Initials:	MA

Printed: 01/20/17 11:27:17 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y064.D Vial: 64
Acq On : 16 Jan 17 21:20 Operator: MA
Sample : AZ48873W09 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 8:28 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 17 08:26:13 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.89	152	178344	40.00000	ppb	0.02
3) Napthalene-D8(IS)	6.29	136	779275	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	445950	40.00000	ppb	-0.01
5) Phenanthrene-D10(IS)	10.02	188	820072	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	794438	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.75	264	904936	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

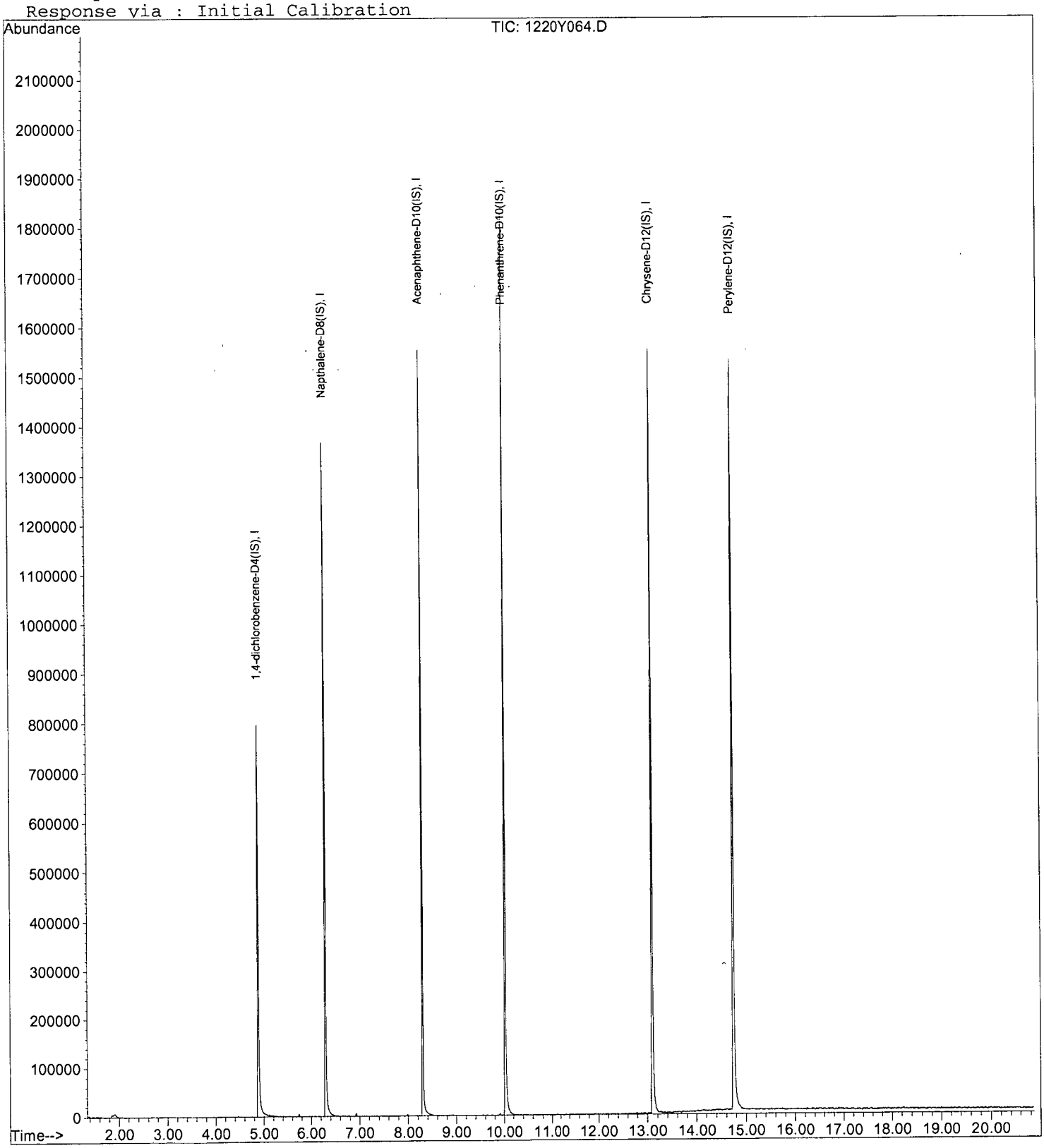
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y064.D Vial: 64
Acq On : 16 Jan 17 21:20 Operator: MA
Sample : AZ48873W09 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 8:28 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 17 08:26:13 2017
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH174
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48875
QCG: #87DME-170113A1-215649

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	01/13/17	01/16/17

Quant Method: Y0GLYCOL.M
Run #: 1220Y065
Instrument: Yoda
Sequence: Y161220G
Dilution Factor: 1
Initials: MA

Printed: 01/20/17 11:27:17 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y065.D Vial: 65
Acq On : 16 Jan 17 21:50 Operator: MA
Sample : AZ48875W09 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 8:28 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 17 08:26:13 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.88	152	177209	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	776237	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	454103	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	828060	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	784330	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.74	264	604319	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

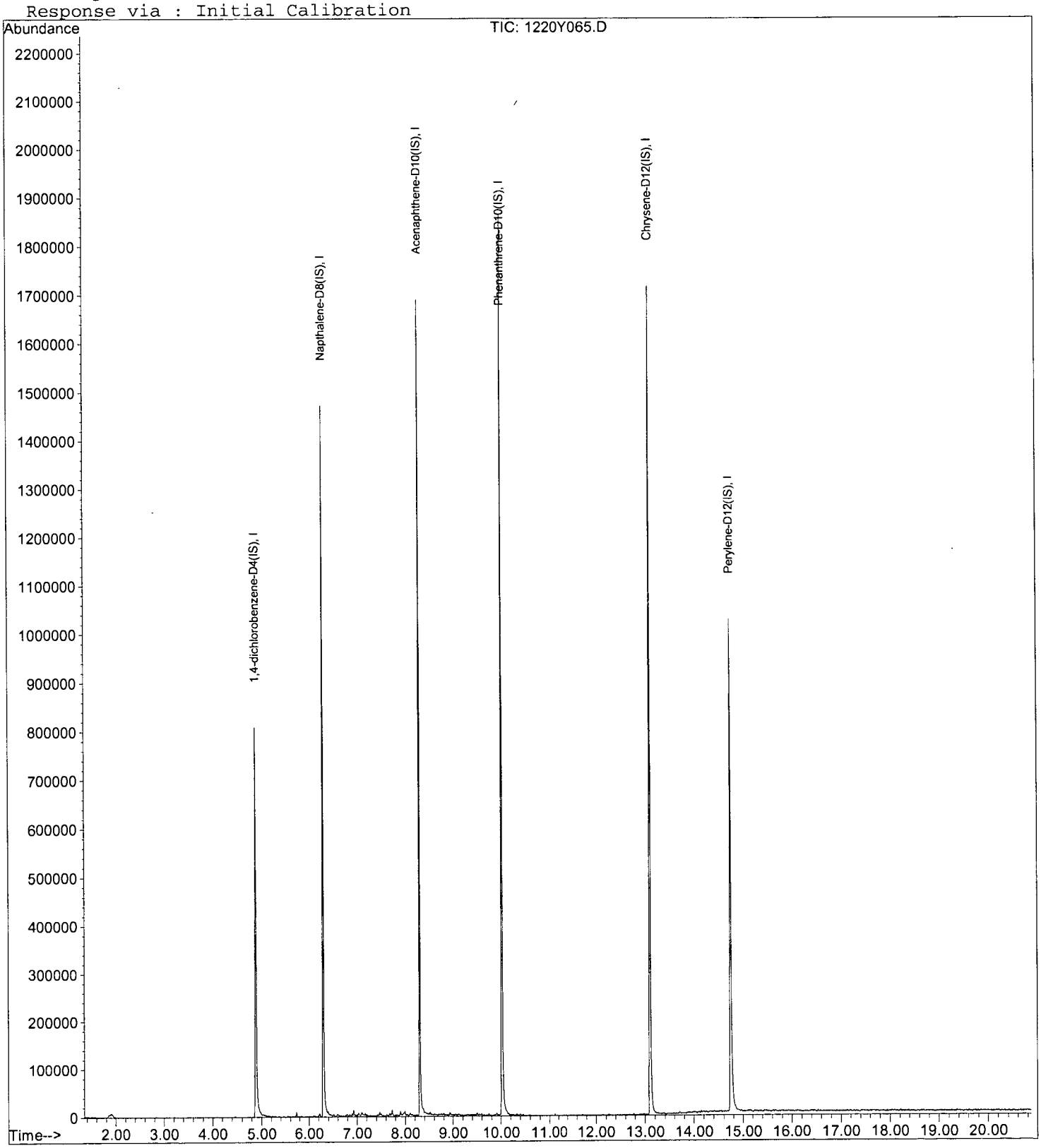
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y065.D Vial: 65
Acq On : 16 Jan 17 21:50 Operator: MA
Sample : AZ48875W09 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 8:28 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 17 08:26:13 2017
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH176
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48877
QCG: #87DME-170113A1-215649

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	01/13/17	01/16/17

Quant Method:	Y0GLYCOL.M
Run #:	1220Y066
Instrument:	Yoda
Sequence:	Y161220G
Dilution Factor:	1
Initials:	MA

Printed: 01/20/17 11:27:17 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y066.D Vial: 66
Acq On : 16 Jan 17 22:20 Operator: MA
Sample : AZ48877W10 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 8:28 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 17 08:26:13 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.88	152	164262	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	710324	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	413191	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	774327	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	707099	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.74	264	570086	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

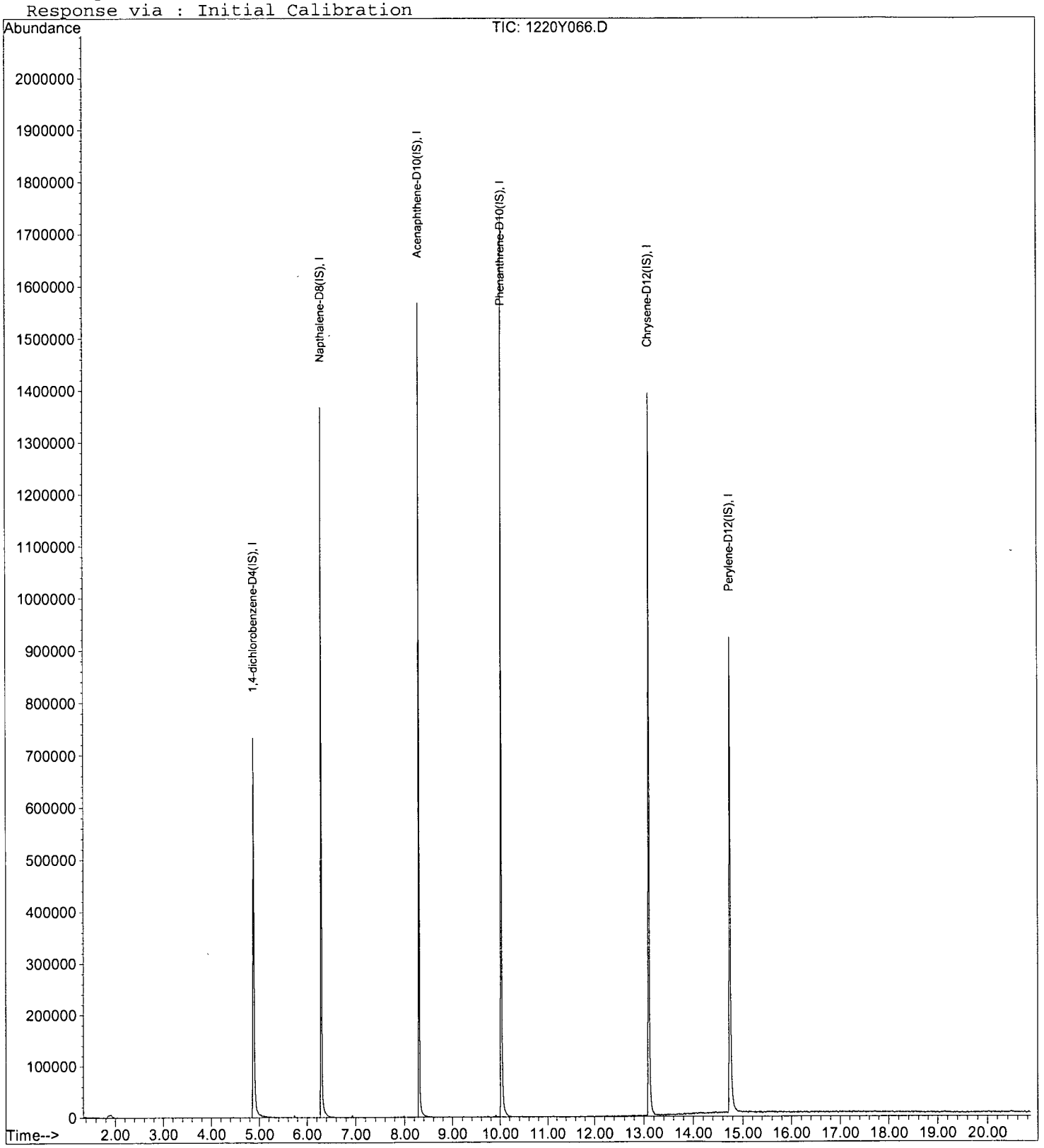
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y066.D Vial: 66
Acq On : 16 Jan 17 22:20 Operator: MA
Sample : AZ48877W10 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 8:28 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 17 08:26:13 2017
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH179
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48878
QCG: #87DME-170113A1-215649

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	01/13/17	01/16/17

Quant Method: Y0GLYCOL.M
Run #: 1220Y067
Instrument: Yoda
Sequence: Y161220G
Dilution Factor: 1
Initials: MA

Printed: 01/20/17 11:27:17 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y067.D Vial: 67
Acq On : 16 Jan 17 22:50 Operator: MA
Sample : AZ48878W11 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 8:28 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 17 08:26:13 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	180054	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	821661	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	464177	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	843242	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	784352	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.74	264	940973	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

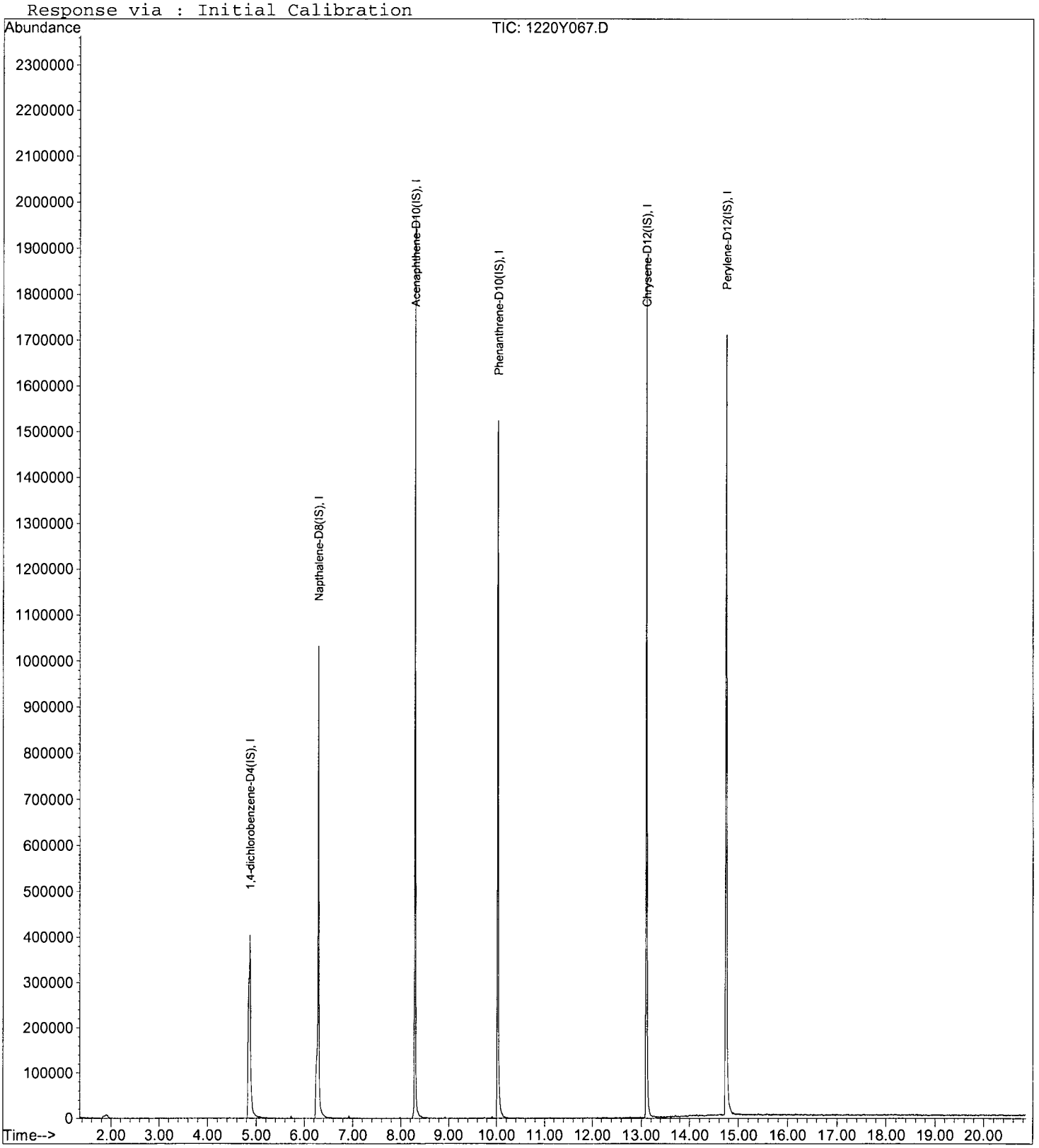
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y067.D Vial: 67
Acq On : 16 Jan 17 22:50 Operator: MA
Sample : AZ48878W11 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 8:28 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 17 08:26:13 2017
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH186
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48880
QCG: #87DME-170113A1-215649

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	01/13/17	01/16/17

Quant Method: Y0GLYCOL.M
Run #: 1220Y068
Instrument: Yoda
Sequence: Y161220G
Dilution Factor: 1
Initials: MA

Printed: 01/20/17 11:27:17 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y068.D Vial: 68
Acq On : 16 Jan 17 23:21 Operator: MA
Sample : AZ48880W06 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 8:28 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 17 08:26:13 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.85	152	167435	40.00000 ppb	-0.02
3) Napthalene-D8(IS)	6.29	136	765473	40.00000 ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	439906	40.00000 ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	819201	40.00000 ppb	0.00
6) Chrysene-D12(IS)	13.10	240	762238	40.00000 ppb	0.00
7) Perylene-D12(IS)	14.74	264	852438	40.00000 ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

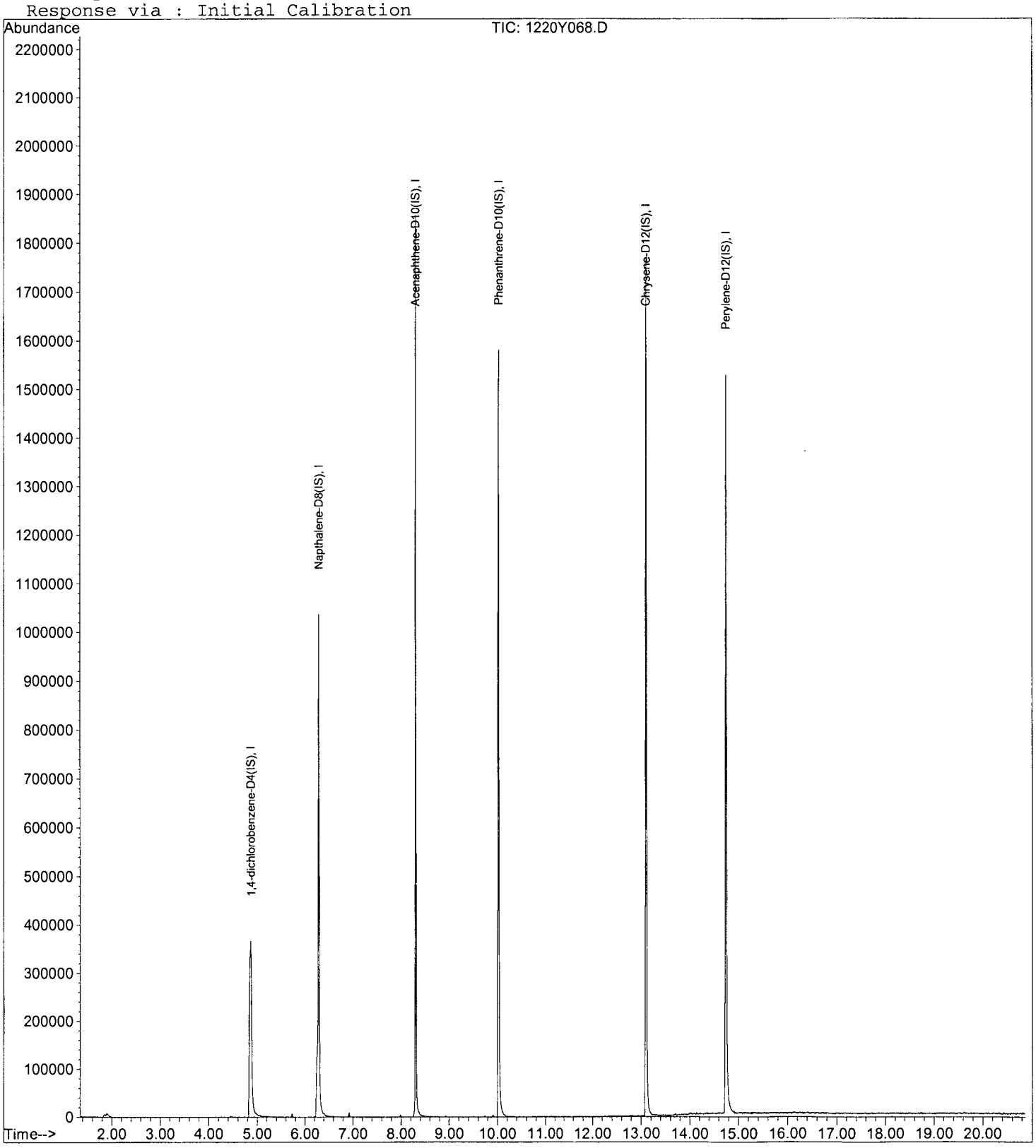
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y068.D Vial: 68
Acq On : 16 Jan 17 23:21 Operator: MA
Sample : AZ48880W06 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 8:28 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 17 08:26:13 2017
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH187
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48881
QCG: #87DME-170113A1-215649

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	01/13/17	01/16/17

Quant Method: Y0GLYCOL.M
Run #: 1220Y069
Instrument: Yoda
Sequence: Y161220G
Dilution Factor: 1
Initials: MA

Printed: 01/20/17 11:27:17 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y069.D Vial: 69
Acq On : 16 Jan 17 23:51 Operator: MA
Sample : AZ48881W06 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 8:28 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 17 08:26:13 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.88	152	182712	40.00000	ppb	0.01
3) Napthalene-D8(IS)	6.29	136	820148	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	465670	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	876703	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	814843	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.74	264	750506	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

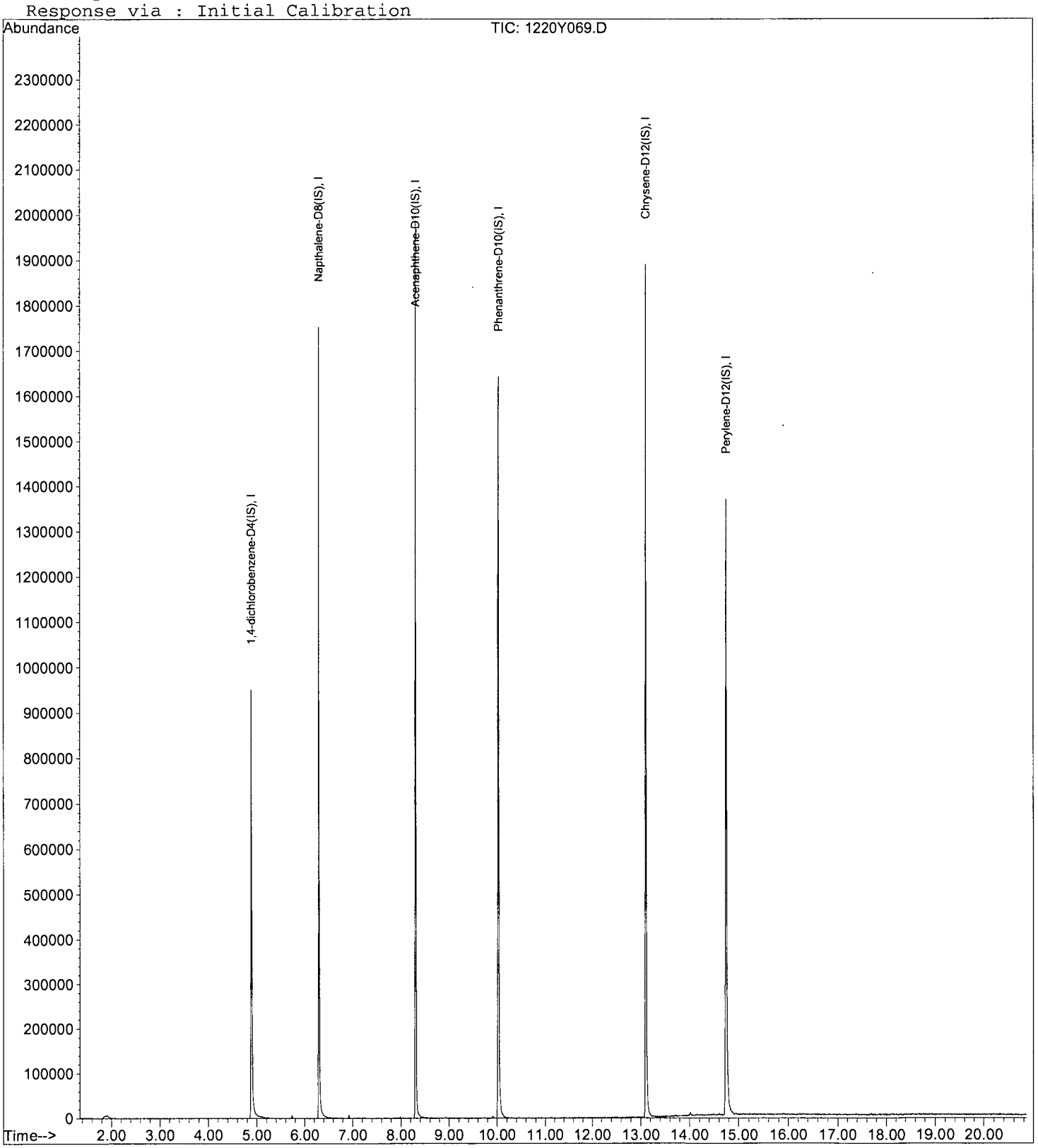
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y069.D Vial: 69
Acq On : 16 Jan 17 23:51 Operator: MA
Sample : AZ48881W06 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 8:28 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 17 08:26:13 2017
Response via : Initial Calibration



ORGANICS

Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/20/16
Matrix: Instrument: Yoda
Initials:

		Compound	1	2	3	4	5	6	7	8			Avg	%RSD		
			1220Y003.D	1220Y004.D	1220Y005.D	1220Y006.D	1220Y007.D	1220Y008.D	1220Y009.D	1220Y010.D						
1	I	1,4-dichlorobenzene-D4(IS)														
2	TM	2-(2-Methoxyethoxy)ethanol	0.1800	0.1823	0.2140	0.2253	0.2267	0.2342	0.2268	0.2261			0.21	9.9	TM	
3	I	Napthalene-D8(IS)														
4	I	Acenaphthene-D10(IS)														
5	I	Phenanthrene-D10(IS)														
6	I	Chrysene-D12(IS)														
7	I	Perylene-D12(IS)														
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Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y003.D Vial: 3
Acq On : 20 Dec 16 9:32 Operator: MA
Sample : 50ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:24 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:24:33 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	235296	40.00	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	1020104	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	566383	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	1039128	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	951820	40.00	ppb	0.00
7) Perylene-D12(IS)	14.74	264	863918	40.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.12	45	52929	41.96	ppb	95

(#) = qualifier out of range (m) = manual integration

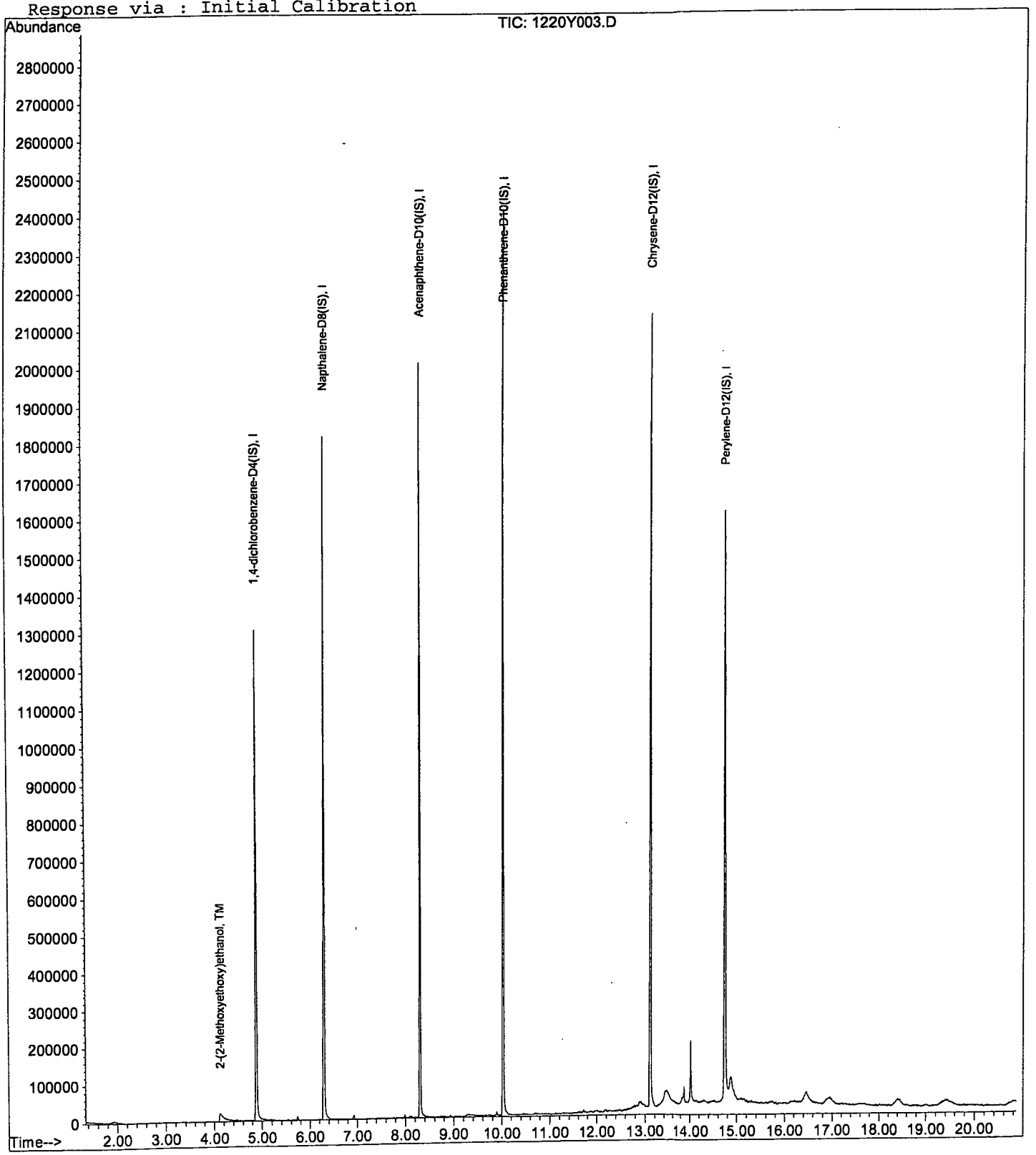
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y003.D
Acq On : 20 Dec 16 9:32
Sample : 50ug/ml DEG 12/20/16
Misc :

Vial: 3
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:24 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:24:33 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y004.D
Acq On : 20 Dec 16 10:02
Sample : 100ug/ml DEG 12/20/16
Misc :

Vial: 4
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:28 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:27:52 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	236538	40.00	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	1021117	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	569209	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	1067696	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	1009921	40.00	ppb	0.00
7) Perylene-D12(IS)	14.74	264	992895	40.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.09	45	107826	85.04	ppb	92

(#) = qualifier out of range (m) = manual integration
1220Y004.D Y0GLYCOL.M Thu Jan 19 15:28:11 2017 Page 1

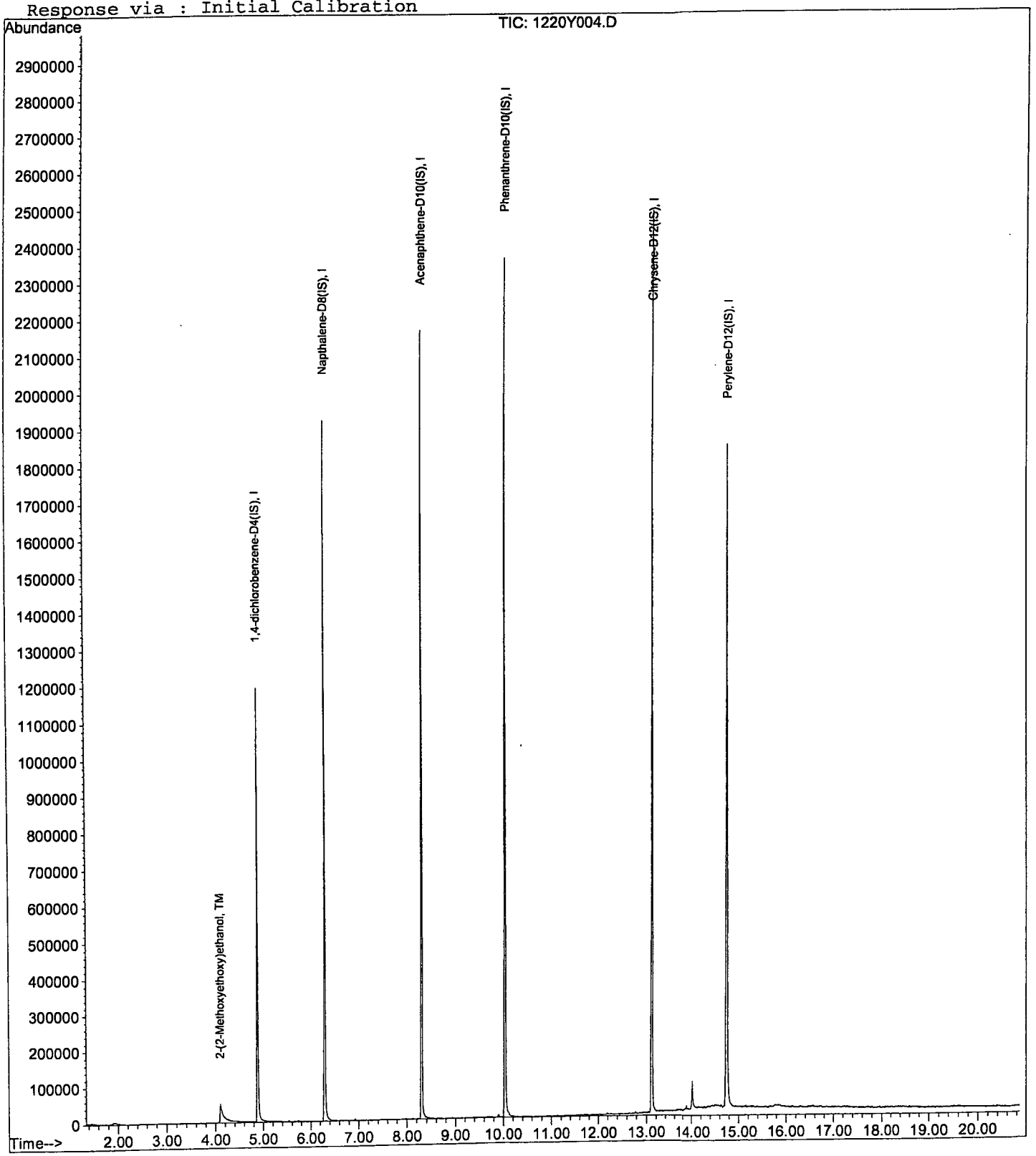
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y004.D
Acq On : 20 Dec 16 10:02
Sample : 100ug/ml DEG 12/20/16
Misc :

Vial: 4
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:28 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:27:52 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y005.D Vial: 5
Acq On : 20 Dec 16 11:27 Operator: MA
Sample : 200ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:31 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:27:52 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	219199	40.00	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	935952	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	541303	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	969145	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.11	240	850962	40.00	ppb	0.00
7) Perylene-D12(IS)	14.75	264	955898	40.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.06	45	234542	199.60	ppb	99

(#) = qualifier out of range (m) = manual integration
1220Y005.D Y0GLYCOL.M Thu Jan 19 15:31:38 2017 Page 1

Quantitation Report

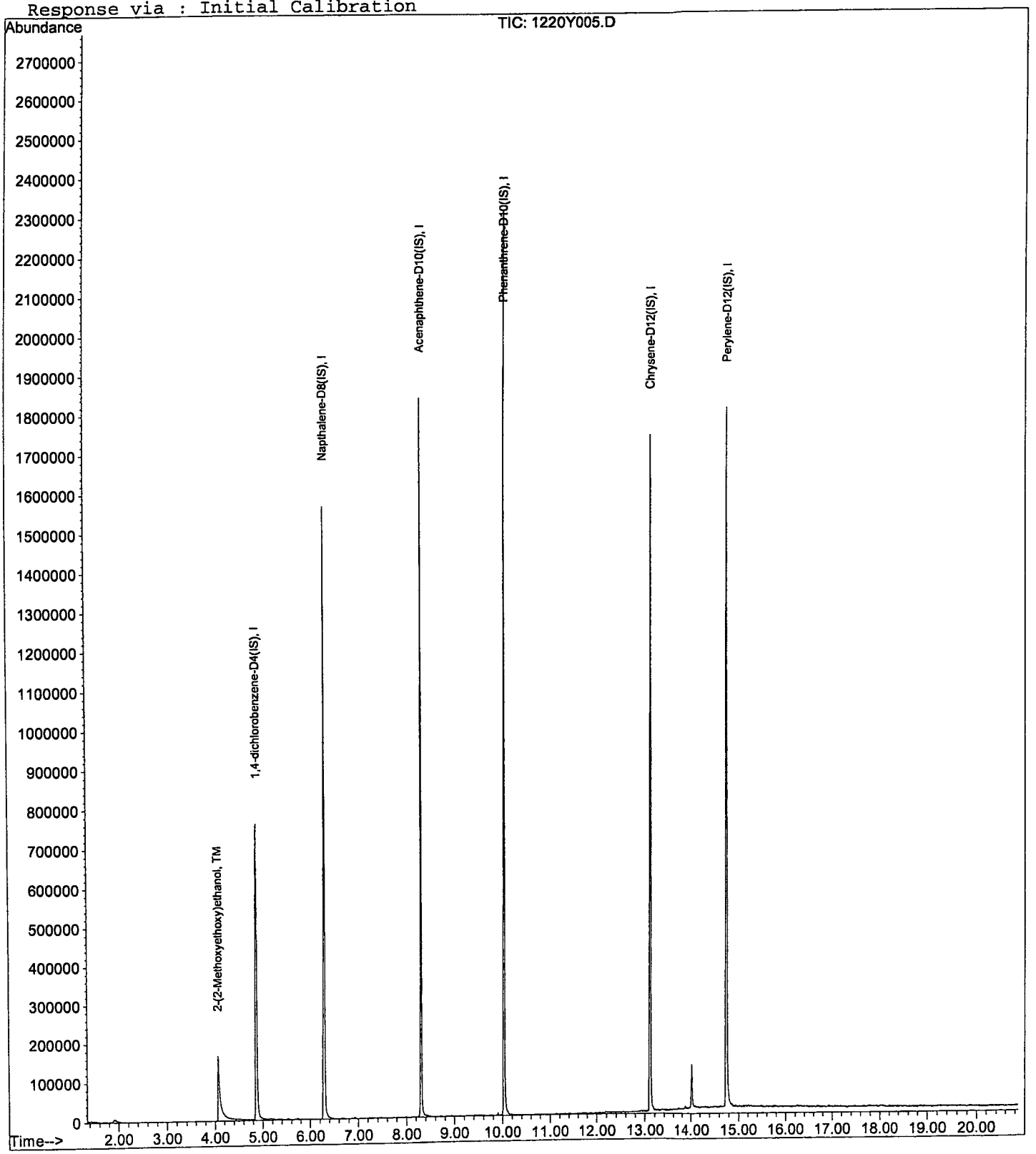
Data File : M:\YODA\DATA\Y161220G\1220Y005.D
Acq On : 20 Dec 16 11:27
Sample : 200ug/ml DEG 12/20/16
Misc :

Vial: 5
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:31 2017

Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:27:52 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y006.D Vial: 6
Acq On : 20 Dec 16 11:57 Operator: MA
Sample : 400ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:31 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:27:52 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	219938	40.00	ppb	-0.02
3) Napthalene-D8(IS)	6.29	136	934708	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	524564	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	930250	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	927639	40.00	ppb	0.00
7) Perylene-D12(IS)	14.74	264	801484	40.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.07	45	495610	420.36	ppb	98

(#) = qualifier out of range (m) = manual integration
1220Y006.D Y0GLYCOL.M Thu Jan 19 15:32:08 2017 Page 1

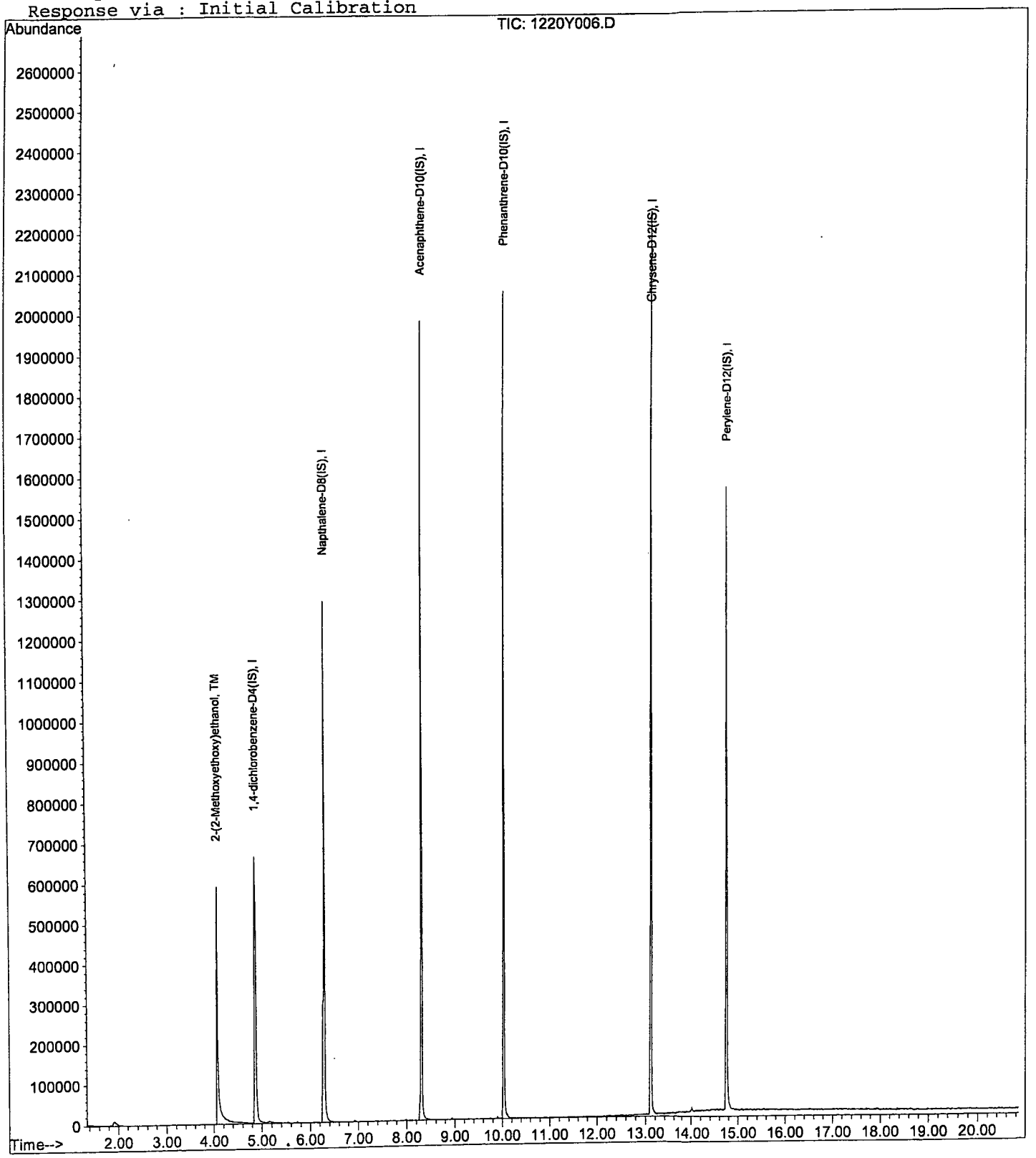
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y006.D
Acq On : 20 Dec 16 11:57
Sample : 400ug/ml DEG 12/20/16
Misc :

Vial: 6
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:31 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:27:52 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y007.D
Acq On : 20 Dec 16 12:27
Sample : 500ug/ml DEG 12/20/16
Misc :

Vial: 7
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:34 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:34:38 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	220710	40.00	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	916121	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	479952	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	893005	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.11	240	850646	40.00	ppb	0.00
7) Perylene-D12(IS)	14.75	264	931322	40.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.07	45	625337	528.53	ppb	100

(#) = qualifier out of range (m) = manual integration
1220Y007.D Y0GLYCOL.M Thu Jan 19 15:34:55 2017 Page 1

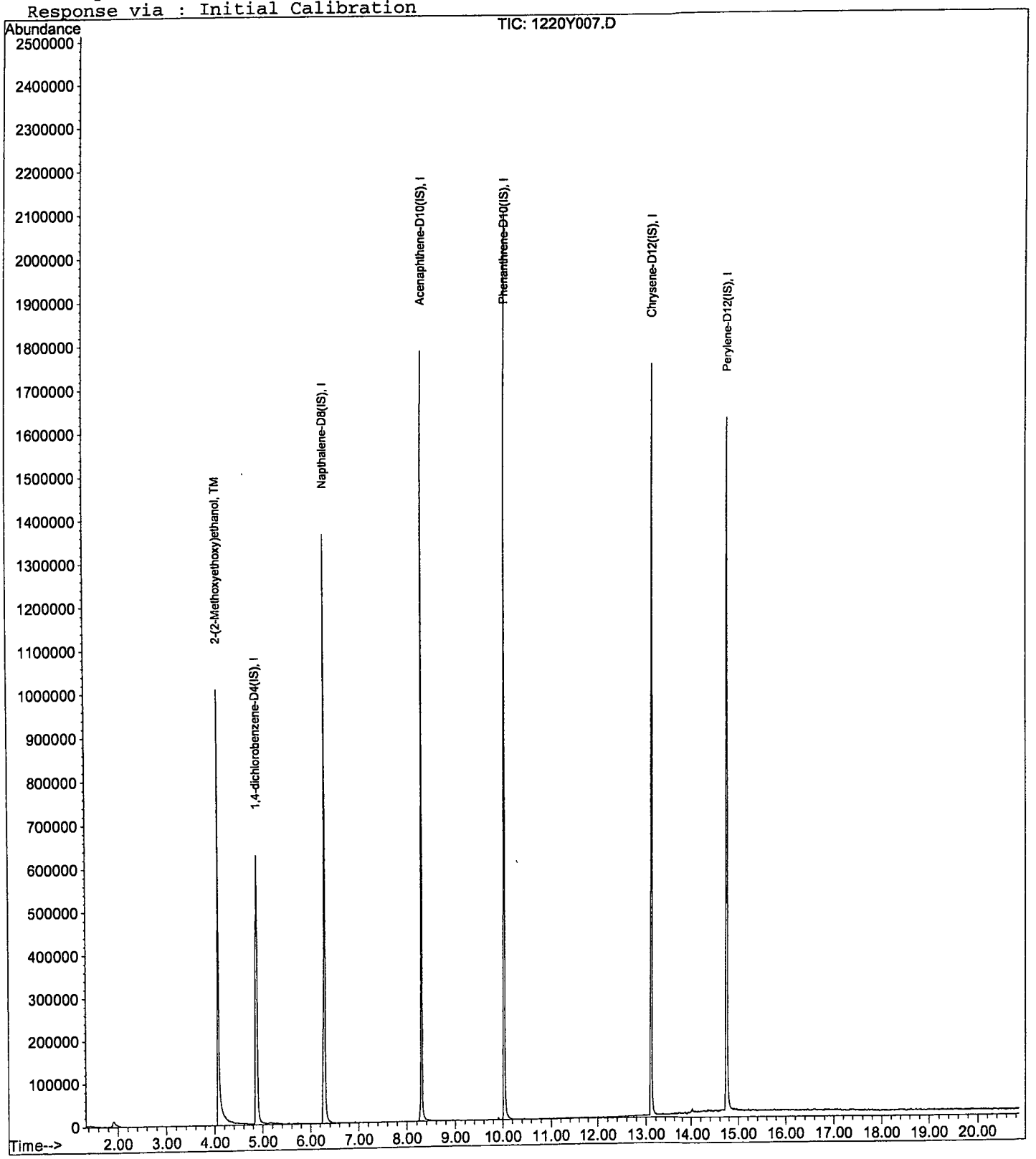
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y007.D
Acq On : 20 Dec 16 12:27
Sample : 500ug/ml DEG 12/20/16
Misc :

Vial: 7
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:34 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:34:38 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y008.D Vial: 8
Acq On : 20 Dec 16 12:57 Operator: MA
Sample : 600ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:35 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:35:45 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.88	152	218598	40.00	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	918286	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	502491	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	904865	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.11	240	875224	40.00	ppb	0.00
7) Perylene-D12(IS)	14.75	264	907883	40.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.08	45	767935	655.33	ppb	99

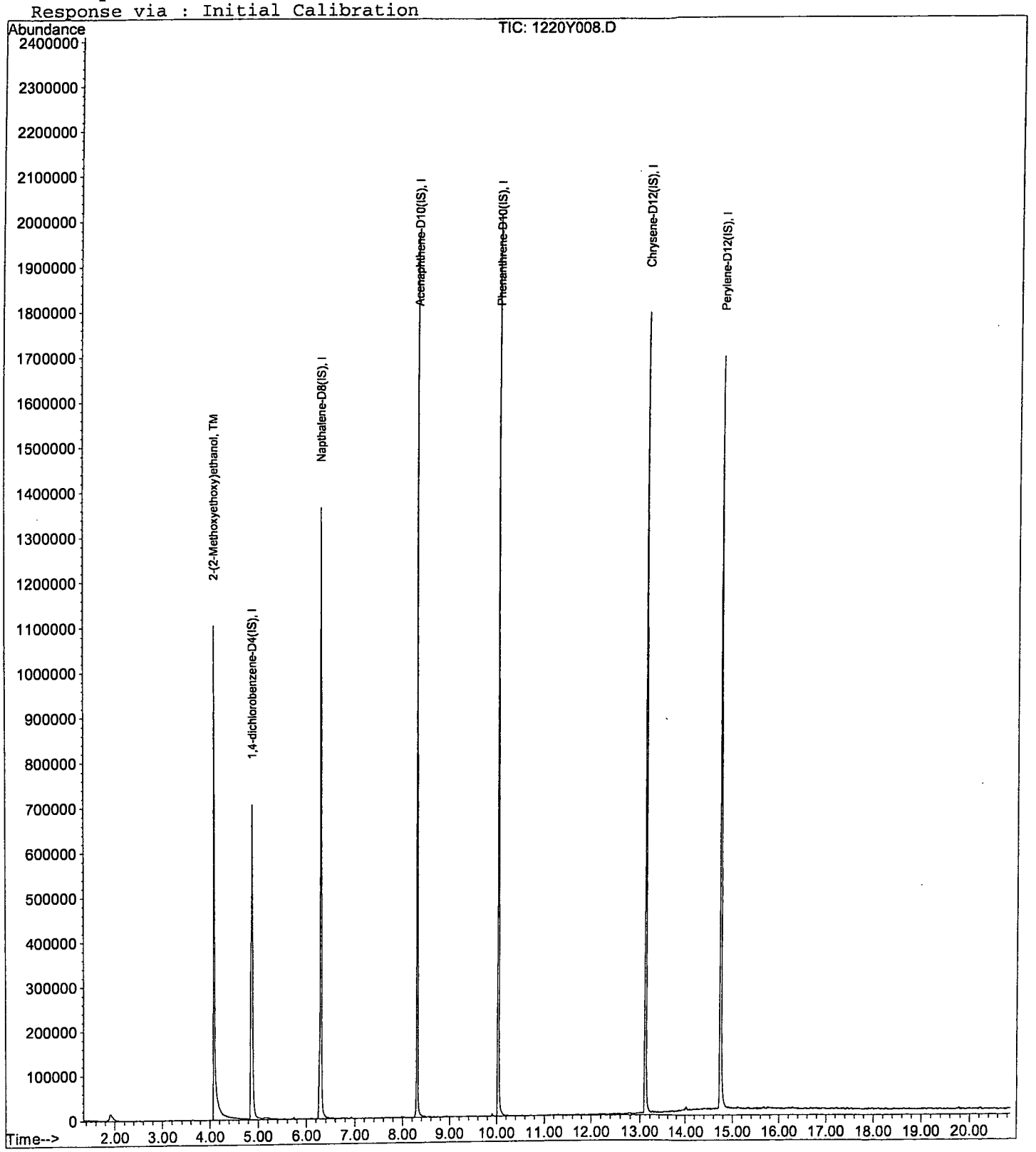
(#) = qualifier out of range (m) = manual integration
1220Y008.D Y0GLYCOL.M Thu Jan 19 15:36:02 2017 Page 1

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y008.D Vial: 8
Acq On : 20 Dec 16 12:57 Operator: MA
Sample : 600ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:35 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:35:45 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y009.D Vial: 9
Acq On : 20 Dec 16 13:28 Operator: MA
Sample : 800ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:36 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:35:45 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.88	152	224351	40.00	ppb	0.01
3) Napthalene-D8(IS)	6.29	136	955028	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	537186	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	1003381	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	910308	40.00	ppb	0.00
7) Perylene-D12(IS)	14.75	264	853883	40.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.09	45	1017711	846.21	ppb	98

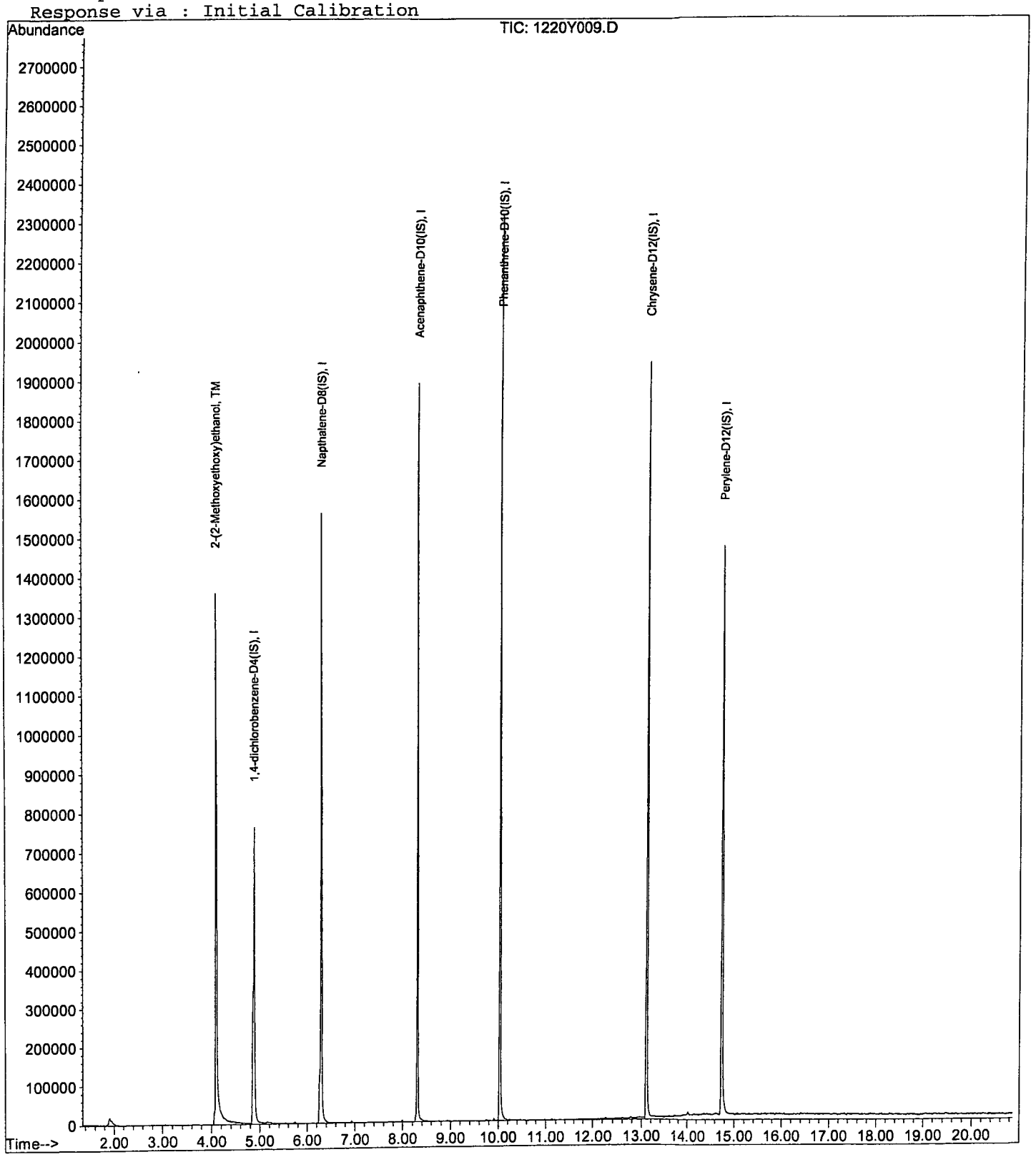
(#) = qualifier out of range (m) = manual integration
1220Y009.D Y0GLYCOL.M Thu Jan 19 15:36:33 2017 Page 1

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y009.D Vial: 9
Acq On : 20 Dec 16 13:28 Operator: MA
Sample : 800ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:36 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:35:45 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y010.D Vial: 10
Acq On : 20 Dec 16 13:58 Operator: MA
Sample : 1000ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:37 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:35:45 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	283148	40.00 ppb	0.00
3) Napthalene-D8(IS)	6.29	136	1210963	40.00 ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	689185	40.00 ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	1234610	40.00 ppb	0.00
6) Chrysene-D12(IS)	13.11	240	1201158	40.00 ppb	0.00
7) Perylene-D12(IS)	14.75	264	1162204	40.00 ppb	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.12	45	1600487	1054.44 ppb	99

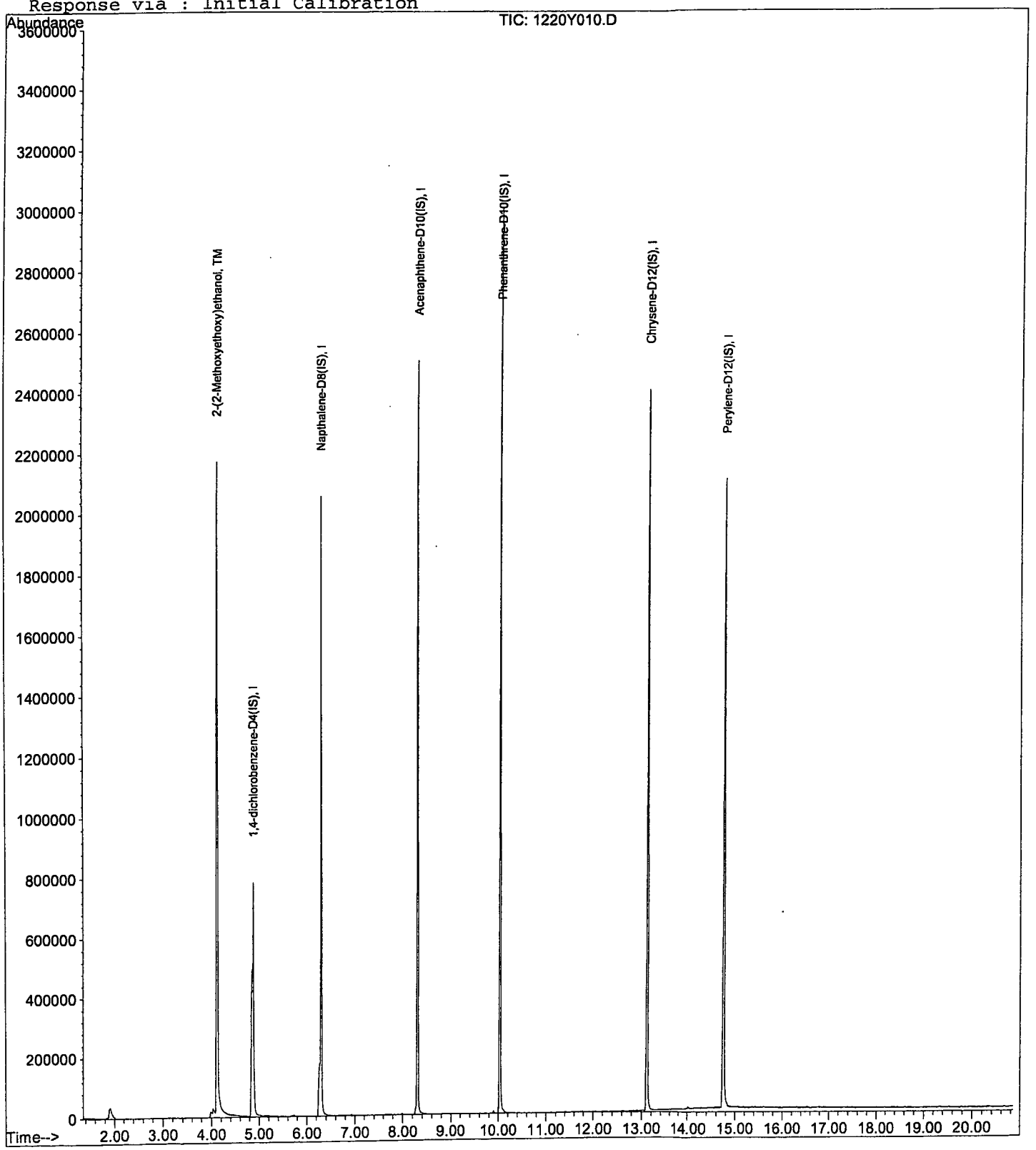
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y010.D Vial: 10
Acq On : 20 Dec 16 13:58 Operator: MA
Sample : 1000ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:37 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:35:45 2017
Response via : Initial Calibration



Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/20/16
Instrument: Yoda
Initial Cal. Date: 12/20/16
Data File: 1220Y011.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	2-(2-Methoxyethoxy)ethanol	0.2144	0.2388	11	TM	
2							
3							
4							
5							
6							
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35							
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37							
38							
39							
40							
		Average			11.0		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y011.D Vial: 11
Acq On : 20 Dec 16 15:01 Operator: MA
Sample : SS2 DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 15:16 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Dec 20 14:47:54 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.88	152	226449	40.00000 ppb	0.00
3) Napthalene-D8(IS)	6.29	136	946039	40.00000 ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	498527	40.00000 ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	939012	40.00000 ppb	0.00
6) Chrysene-D12(IS)	13.11	240	865583	40.00000 ppb	0.00
7) Perylene-D12(IS)	14.75	264	853444	40.00000 ppb	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.08	45	676019	556.89065 ppb	99

Algorithm = $\frac{676019 \times 40 \times 1}{226449 \times 0.2144} = 556.9$ MA 12/29/16

(#) = qualifier out of range (m) = manual integration
1220Y011.D Y0GLYCOL.M Wed Dec 21 12:44:47 2016

Quantitation Report

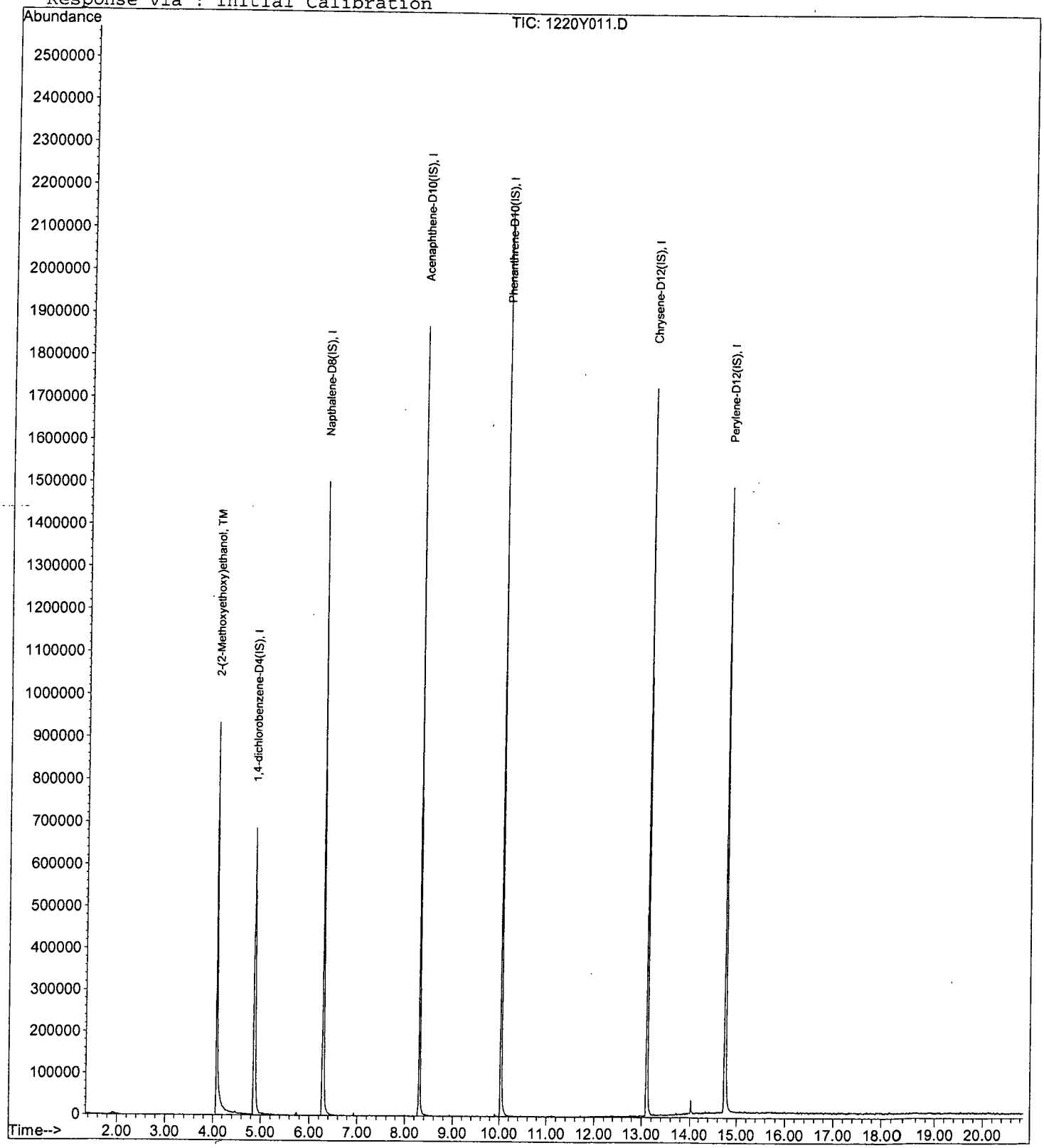
Data File : M:\YODA\DATA\Y161220G\1220Y011.D
Acq On : 20 Dec 16 15:01
Sample : SS2 DEG 12/20/16
Misc :

Vial: 11
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 20 15:16 2016

Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 21 10:52:52 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/16/17
Instrument: Yoda
Initial Cal. Date: 12/20/16
Data File: 1220Y052.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	2-(2-Methoxyethoxy)ethanol	0.2144	0.2184	1.9	TM	
3	I	Napthalene-D8(IS)	ISTD			I	
4	I	Acenaphthene-D10(IS)	ISTD			I	
5	I	Phenanthrene-D10(IS)	ISTD			I	
6	I	Chrysene-D12(IS)	ISTD			I	
7	I	Perylene-D12(IS)	ISTD			I	
8							
9							
10							
11							
12							
13							
14							
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36							
37							
38							
39							
40							
		Average			1.9		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y052.D Vial: 52
Acq On : 16 Jan 17 15:17 Operator: MA
Sample : 500ug/ml DEG 11/22/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 20 8:19 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 20 08:19:39 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	156199	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	717794	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	399525	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	726618	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	674115	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.74	264	624829	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.06	45	426417	509.25780	ppb	100

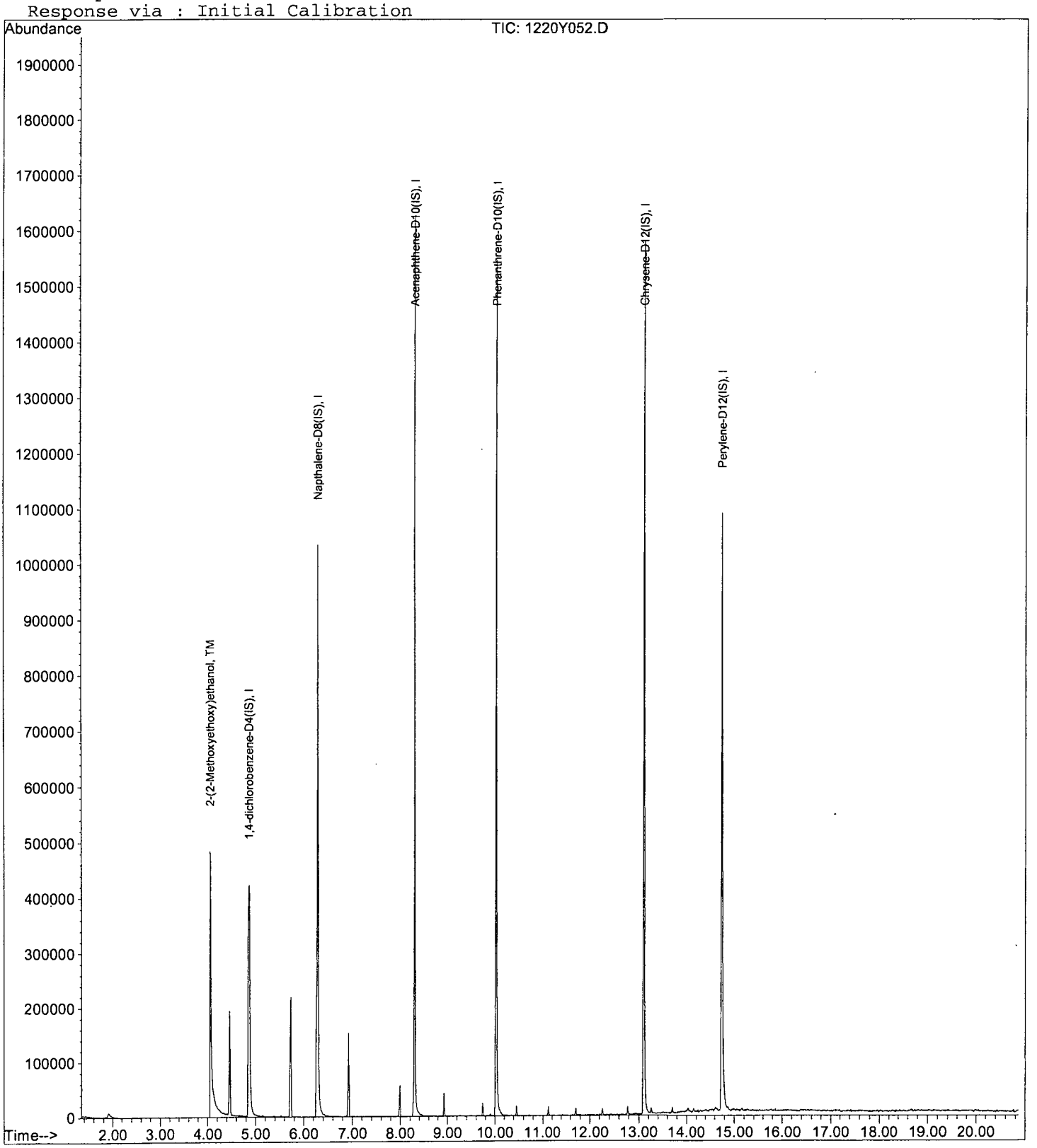
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y052.D Vial: 52
Acq On : 16 Jan 17 15:17 Operator: MA
Sample : 500ug/ml DEG 11/22/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 20 8:19 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 20 08:19:39 2017
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/17/17
Instrument: Yoda
Initial Cal. Date: 12/20/16
Data File: 1220Y071.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	2-(2-Methoxyethoxy)ethanol	0.2144	0.1904	11	TM	
3	I	Napthalene-D8(IS)	ISTD			I	
4	I	Acenaphthene-D10(IS)	ISTD			I	
5	I	Phenanthrene-D10(IS)	ISTD			I	
6	I	Chrysene-D12(IS)	ISTD			I	
7	I	Perylene-D12(IS)	ISTD			I	
8							
9							
10							
11							
12							
13							
14							
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16							
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37							
38							
39							
40							
		Average			11.0		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y071.D Vial: 71
Acq On : 17 Jan 17 00:51 Operator: MA
Sample : 500ug/ml DEG 11/22/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 8:26 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 17 08:26:13 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	139035	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	662704	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	376399	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	699842	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	672779	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.74	264	576980	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.08	45	330916	443.99191	ppb	100

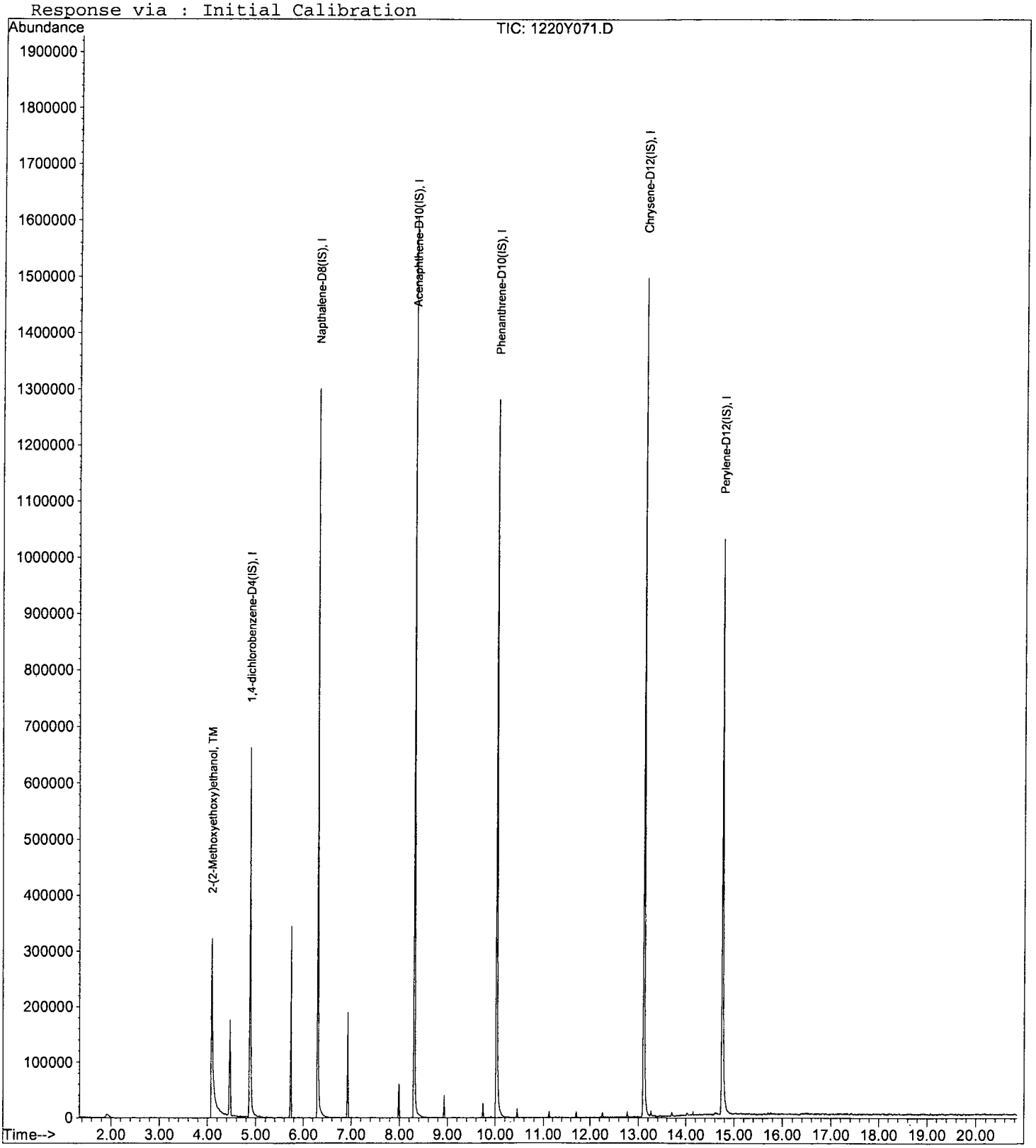
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y071.D Vial: 71
Acq On : 17 Jan 17 00:51 Operator: MA
Sample : 500ug/ml DEG 11/22/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 8:26 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 17 08:26:13 2017
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Date Analyzed: 01/19/17

Matrix: Instrument: Yoda

Initial Cal. Date: 12/20/16

Data File: 1220Y074.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	2-(2-Methoxyethoxy)ethanol	0.2144	0.2423	13	TM	
3	I	Napthalene-D8(IS)	ISTD			I	
4	I	Acenaphthene-D10(IS)	ISTD			I	
5	I	Phenanthrene-D10(IS)	ISTD			I	
6	I	Chrysene-D12(IS)	ISTD			I	
7	I	Perylene-D12(IS)	ISTD			I	
8							
9							
10							
11							
12							
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37							
38							
39							
40							
		Average			13.0		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y074.D Vial: 74
Acq On : 19 Jan 17 8:48 Operator: MA
Sample : 500ug/ml DEG 11/22/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 20 8:51 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 20 08:25:34 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	125616	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	658356	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	384519	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	693160	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	616710	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.74	264	552797	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.06	45	380421	564.93821	ppb	97

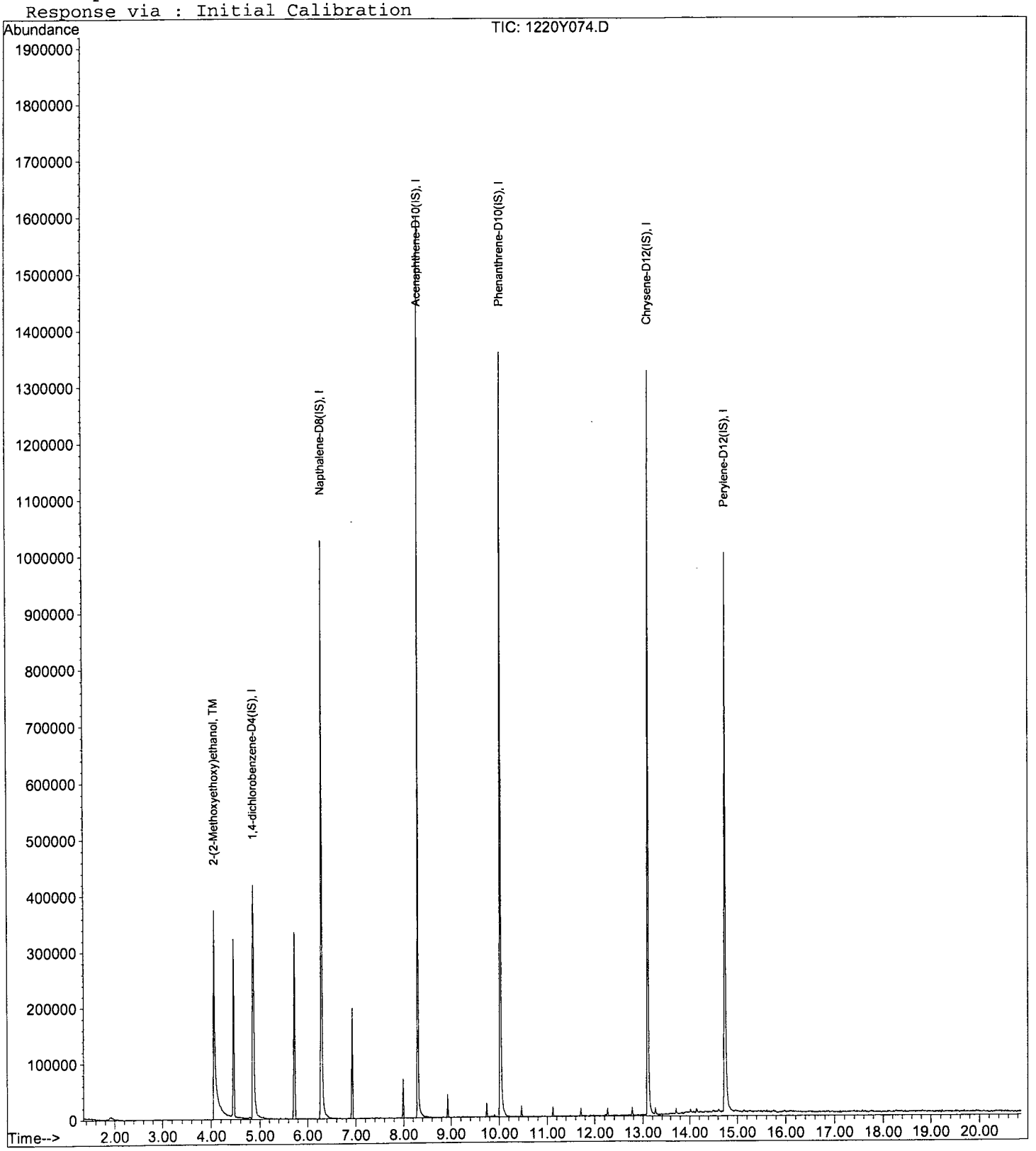
(#) = qualifier out of range (m) = manual integration
1220Y074.D Y0GLYCOL.M Fri Jan 20 08:52:06 2017 Page 1

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y074.D Vial: 74
Acq On : 19 Jan 17 8:48 Operator: MA
Sample : 500ug/ml DEG 11/22/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 20 8:51 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 20 08:25:34 2017
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/19/17
Instrument: Yoda
Initial Cal. Date: 12/20/16
Data File: 1220Y090.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	2-(2-Methoxyethoxy)ethanol	0.2144	0.1797	16	TM	
3	I	Napthalene-D8(IS)	ISTD			I	
4	I	Acenaphthene-D10(IS)	ISTD			I	
5	I	Phenanthrene-D10(IS)	ISTD			I	
6	I	Chrysene-D12(IS)	ISTD			I	
7	I	Perylene-D12(IS)	ISTD			I	
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			16.0		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y090.D Vial: 90
Acq On : 19 Jan 17 16:43 Operator: MA
Sample : 500ug/ml DEG 11/22/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 20 8:52 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 20 08:25:34 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.88	152	94325	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	464214	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	269042	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	509149	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	467422	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.75	264	384363	40.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.08	45	211842	418.95433	ppb	96

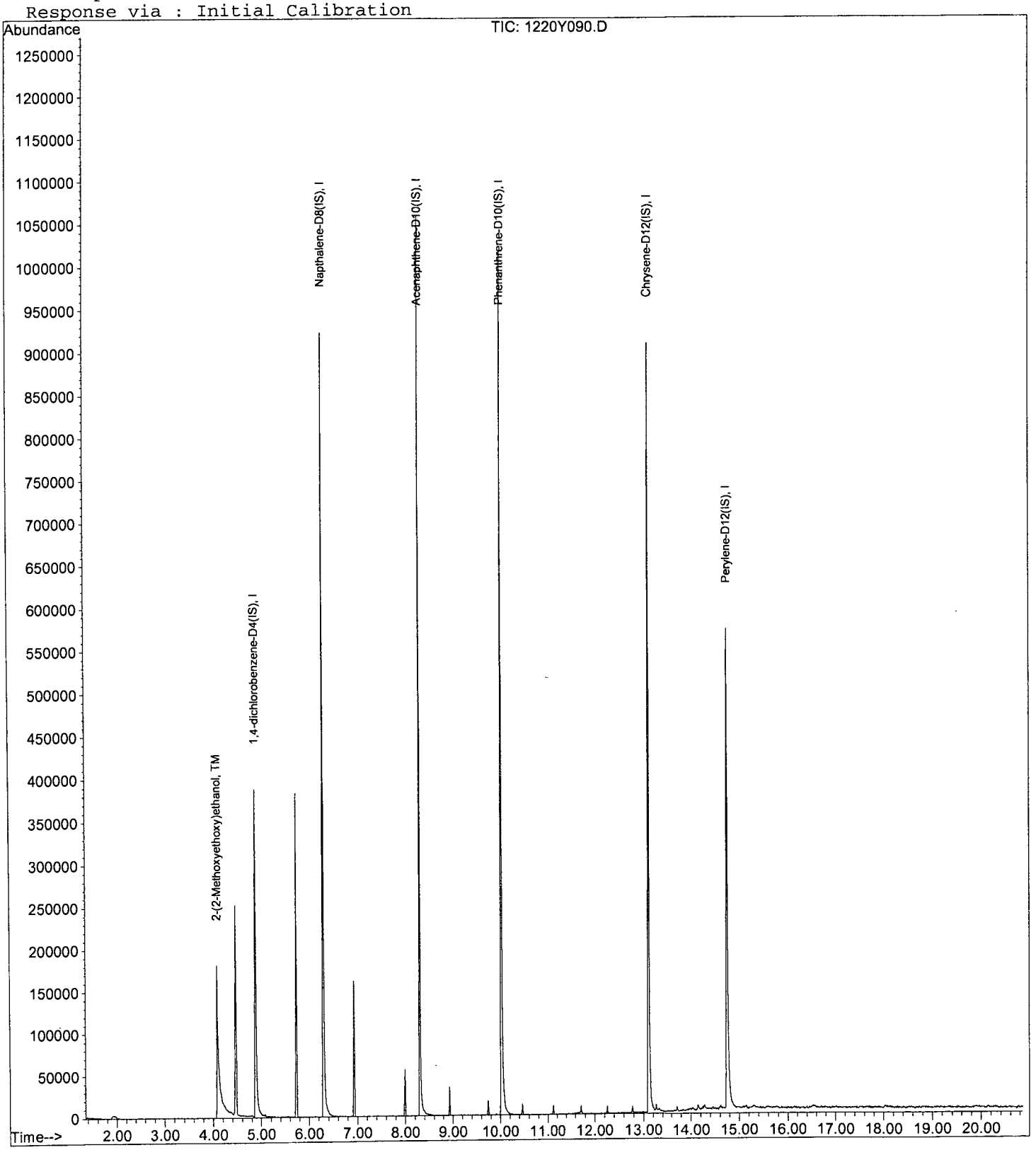
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y090.D Vial: 90
Acq On : 19 Jan 17 16:43 Operator: MA
Sample : 500ug/ml DEG 11/22/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 20 8:52 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 20 08:25:34 2017
Response via : Initial Calibration



ORGANICS

Raw Data

APPL, INC.

Method Blank

EPA 8270D MODIFIED WATER

Blank Name/QCG: **170113W-48866 - 215649**

Batch ID: #87DME-170113A1

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2-(2-METHOXYETHOXY)-ETHAN	80.0 U	100	80.0	40.0	ug/L	01/13/17	01/16/17

Quant Method:Y0GLYCOL.
Run #:1220Y055
Instrument:Yoda
Sequence:Y161220G
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 01/20/17 11:27:18 AM

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y055.D Vial: 55
Acq On : 16 Jan 17 16:50 Operator: MA
Sample : 170113A BLK 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 8:28 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 17 08:26:13 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.89	152	178877	40.00000	ppb	0.02
3) Napthalene-D8(IS)	6.30	136	770079	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	418516	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	740058	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	694848	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.75	264	715567	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

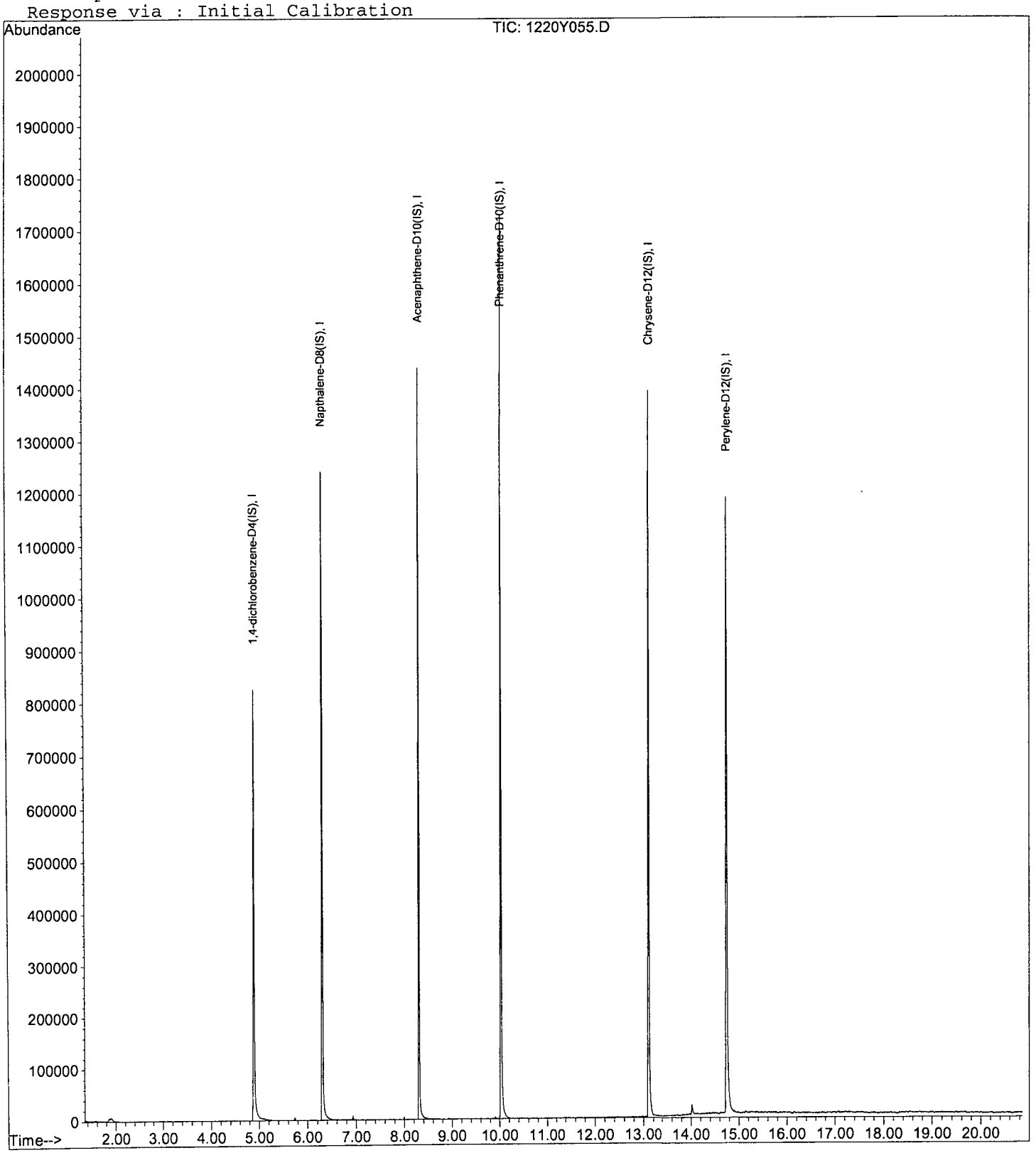
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y055.D Vial: 55
Acq On : 16 Jan 17 16:50 Operator: MA
Sample : 170113A BLK 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 17 8:28 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 17 08:26:13 2017
Response via : Initial Calibration



Laboratory Control Spike Recovery
EPA 8270D MODIFIED WATER

APPL ID: **170113W-48866 LCS - 215649**
Batch ID: #87DME-170113A1

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
2-(2-METHOXYETHOXY)-ETHANOL	80.0	79.7	99.6	30-130

Comments: _____

Primary	SPK
Quant Method :	Y0GLYCOL.M
Extraction Date :	01/13/17
Analysis Date :	01/16/17
Instrument :	Yoda
Run :	1220Y053
Initials :	MA

Printed: 01/20/17 11:27:19 AM
APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y053.D Vial: 53
Acq On : 16 Jan 17 15:49 Operator: MA
Sample : 170113A LCS-1 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 20 8:24 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 20 08:22:52 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	184441	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	759894	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	434184	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	913539	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	867376	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.75	264	991645	40.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.19	45	78833m	79.73188	ppb	100

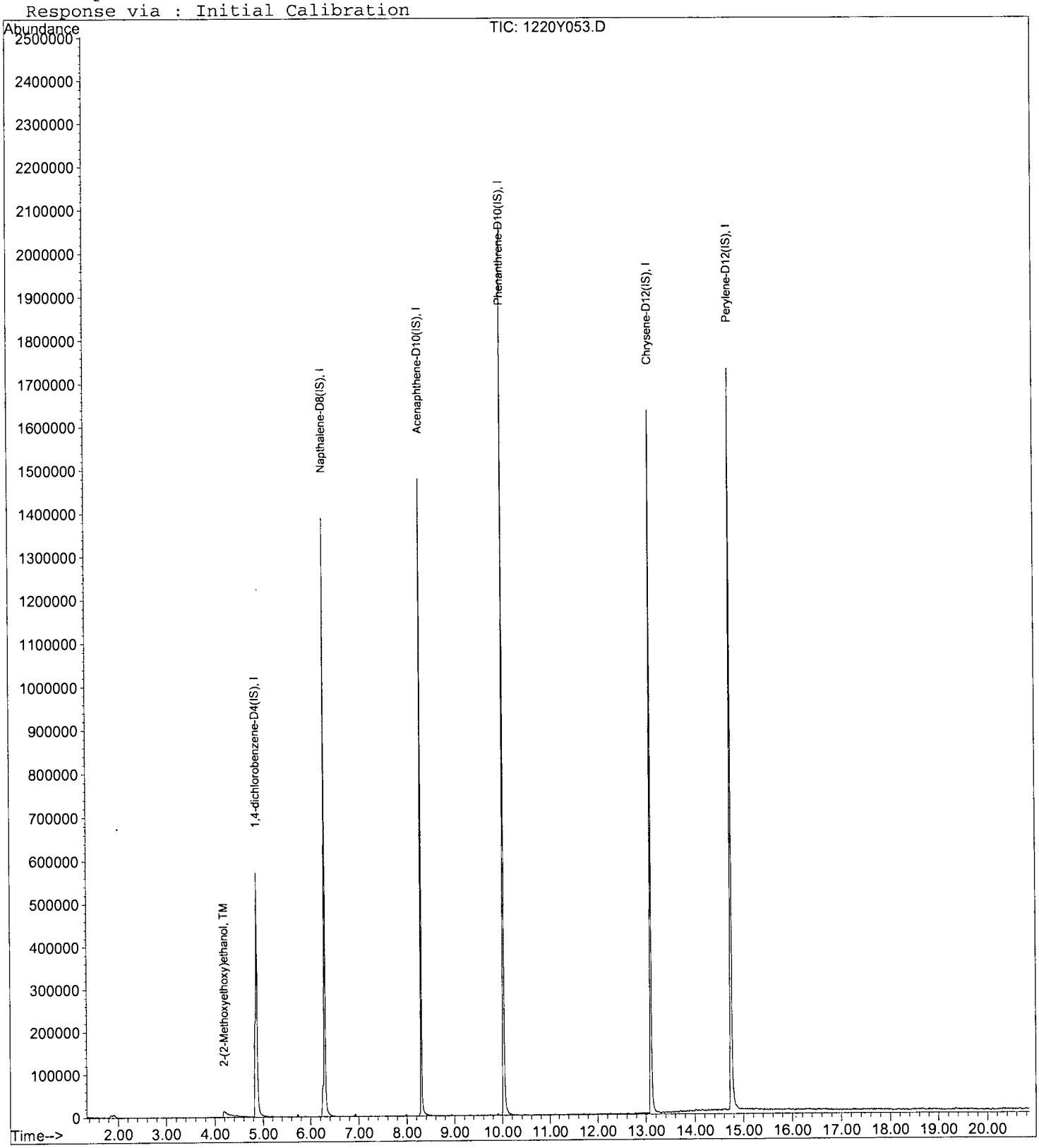
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y053.D Vial: 53
Acq On : 16 Jan 17 15:49 Operator: MA
Sample : 170113A LCS-1 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 20 8:24 2017 Quant Results File: Y0GLYCOL.RES

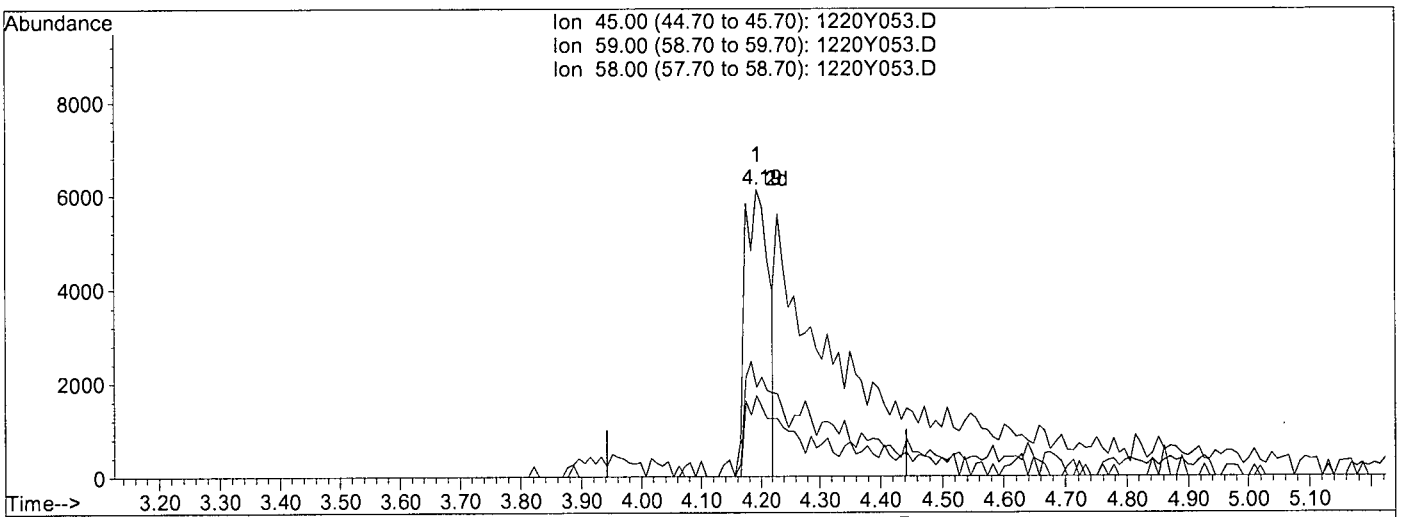
Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 20 08:22:52 2017
Response via : Initial Calibration

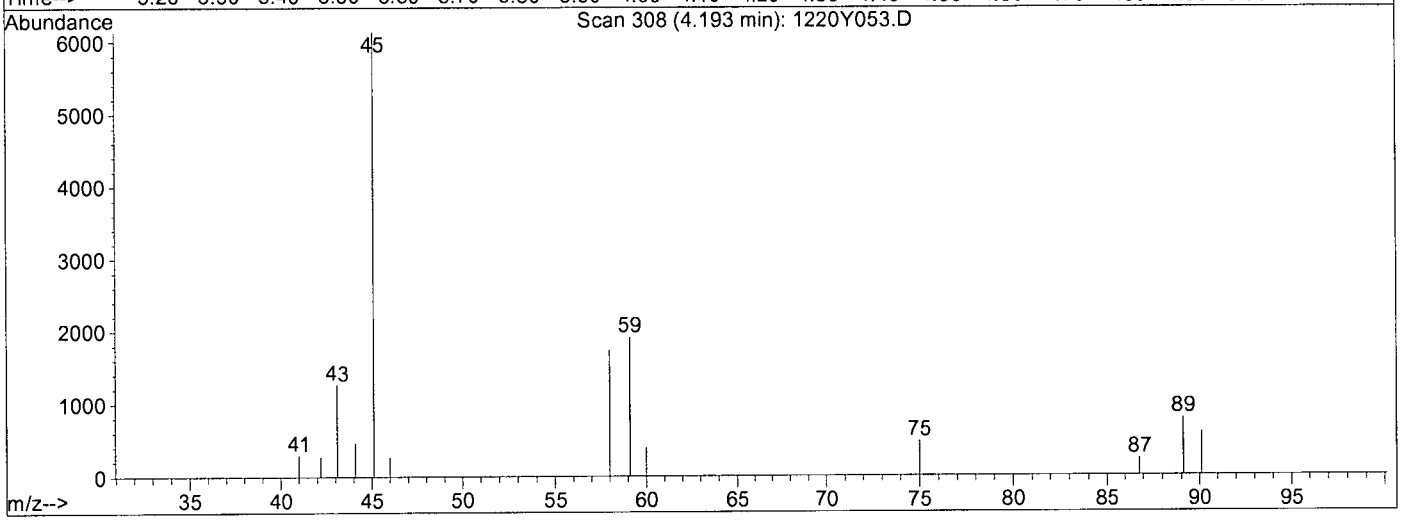


Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y053.D Vial: 53
Acq On : 16 Jan 17 15:49 Operator: MA
Sample : 170113A LCS-1 2/500 Inst : Yoda
Misc : water Multiplr: 1.00
Quant Time: Jan 20 8:23 2017 Quant Results File: temp.res

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 20 08:22:52 2017
Response via : Multiple Level Calibration





TIC: 1220Y053.D

(2) 2-(2-Methoxyethoxy)ethanol (TM)

4.19min 18.2730ppb

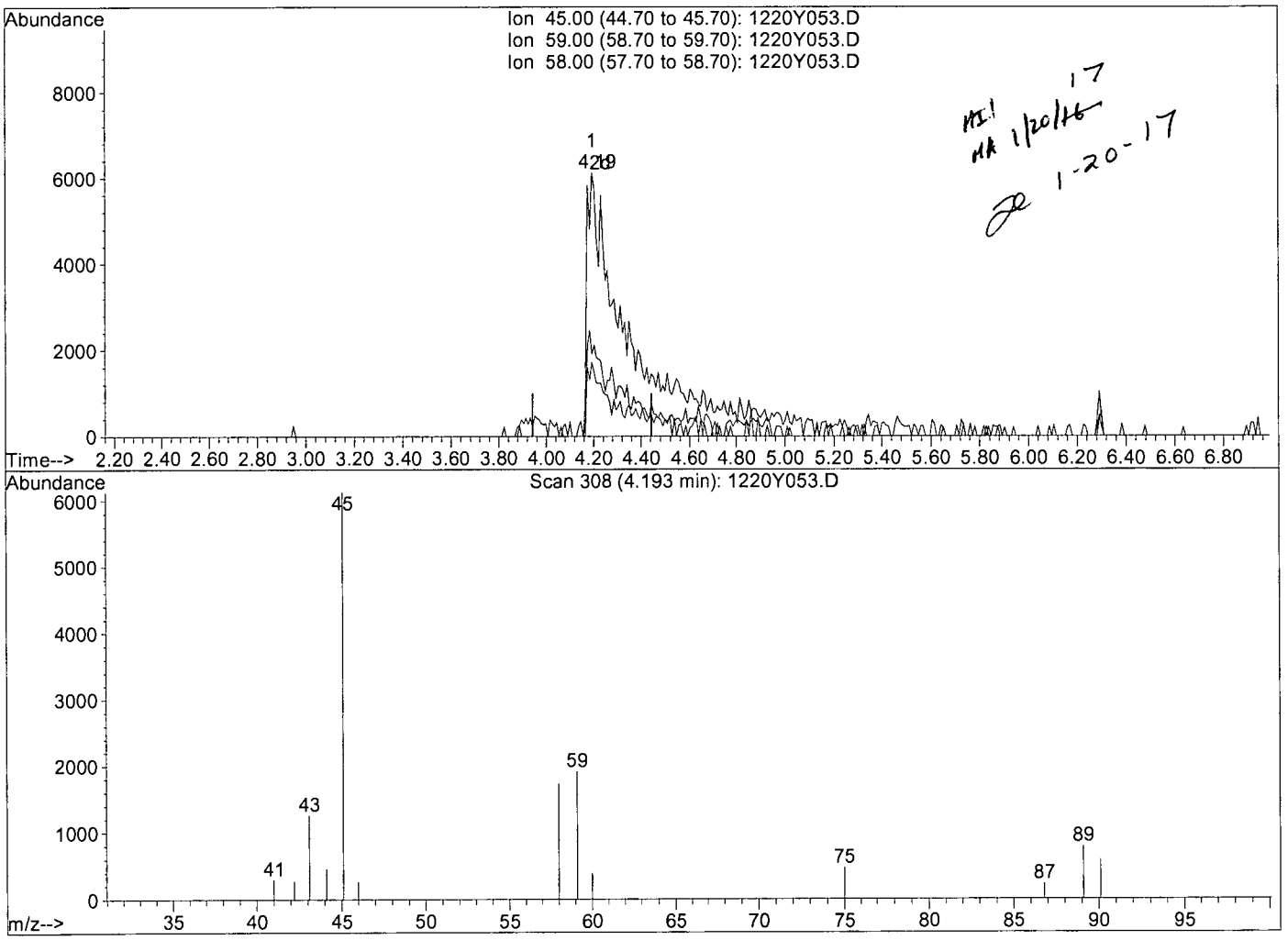
response 18067

Ion	Exp%	Act%
45.00	100	100
59.00	31.20	31.16
58.00	28.30	28.25
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y053.D Vial: 53
Acq On : 16 Jan 17 15:49 Operator: MA
Sample : 170113A LCS-1 2/500 Inst : Yoda
Misc : water Multiplr: 1.00
Quant Time: Jan 20 8:24 2017 Quant Results File: temp.res

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 20 08:22:52 2017
Response via : Multiple Level Calibration



TIC: 1220Y053.D

(2) 2-(2-Methoxyethoxy)ethanol (TM)

4.19min 79.7319ppb m

response 78833

Ion	Exp%	Act%
45.00	100	100
59.00	31.20	31.16
58.00	28.30	28.25
0.00	0.00	0.00

1220Y053.D Y0GLYCOL.M Fri Jan 20 08:24:44 2017

Matrix Spike Recoveries

EPA 8270D MODIFIED WATER

APPL ID: **170118W-48866 MS - 215649**
Batch ID: #87DME-170113A1
Sample ID: AZ48866
Client ID: ERH161

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
2-(2-METHOXYETHOXY)-ETHANOL	80.0	ND	92.6	86.4	116	108	30-130	6.9	20

Comments: _____

Primary	SPK	DUP
Quant Method :	Y0GLYCOL.M	Y0GLYCOL.M
Extraction Date :	01/18/17	01/18/17
Analysis Date :	01/19/17	01/19/17
Instrument :	Yoda	Yoda
Run :	1220Y079	1220Y080
Initials :	MA	

Printed: 01/20/17 11:27:20 AM
APPL MSD SCII

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y079.D Vial: 79
Acq On : 19 Jan 17 11:26 Operator: MA
Sample : AZ48866W25 MS-1 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 20 8:55 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 20 08:53:44 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.88	152	138924	40.00000	ppb	0.01
3) Napthalene-D8(IS)	6.29	136	607635	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	349131	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	662095	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	648638	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.74	264	906712	40.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.23	45	68971m	92.61273	ppb	83

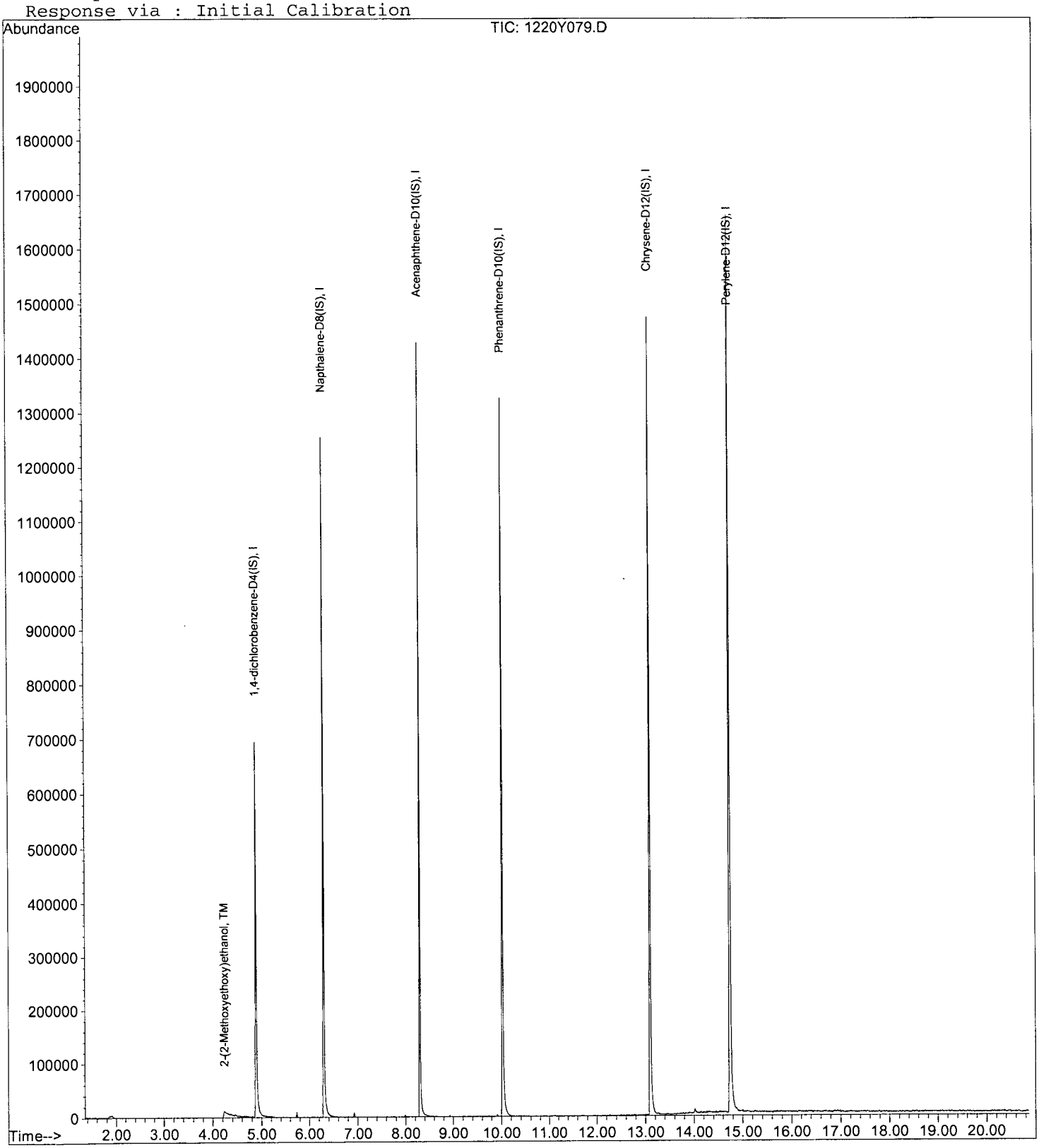
(#) = qualifier out of range (m) = manual integration
1220Y079.D Y0GLYCOL.M Fri Jan 20 11:22:58 2017 Page 1

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y079.D Vial: 79
Acq On : 19 Jan 17 11:26 Operator: MA
Sample : AZ48866W25 MS-1 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 20 8:55 2017 Quant Results File: Y0GLYCOL.RES

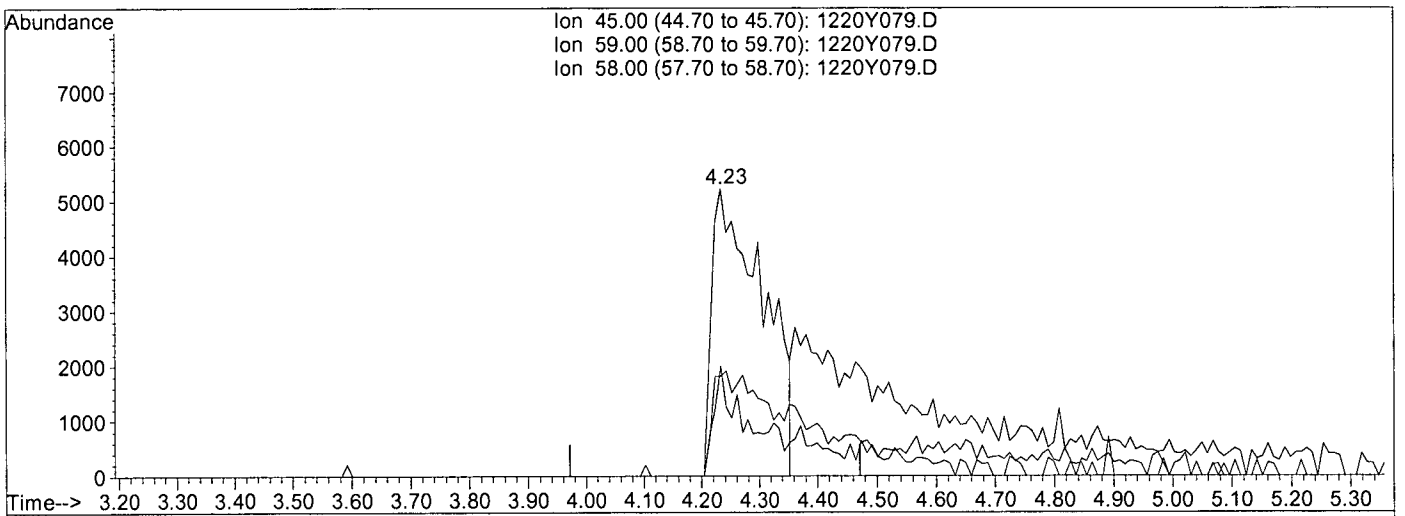
Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 20 08:53:44 2017
Response via : Initial Calibration

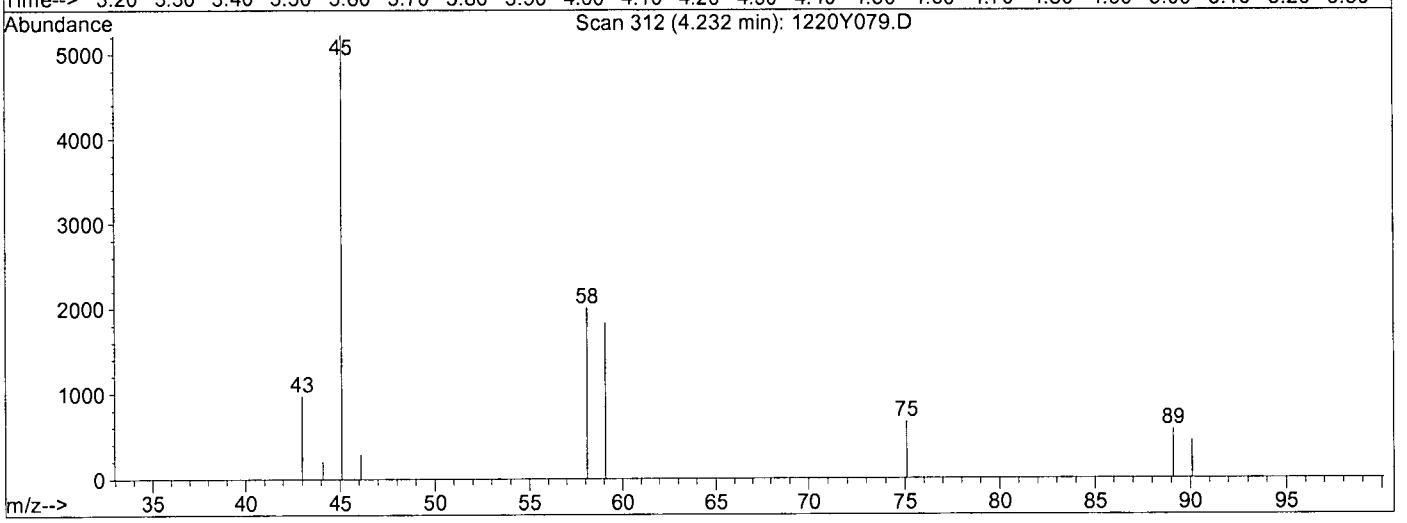


Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y079.D Vial: 79
Acq On : 19 Jan 17 11:26 Operator: MA
Sample : AZ48866W25 MS-1 2/500 Inst : Yoda
Misc : water Multiplr: 1.00
Quant Time: Jan 20 8:54 2017 Quant Results File: temp.res

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 20 08:53:44 2017
Response via : Multiple Level Calibration





TIC: 1220Y079.D

(2) 2-(2-Methoxyethoxy)ethanol (TM)

4.23min 42.9904ppb

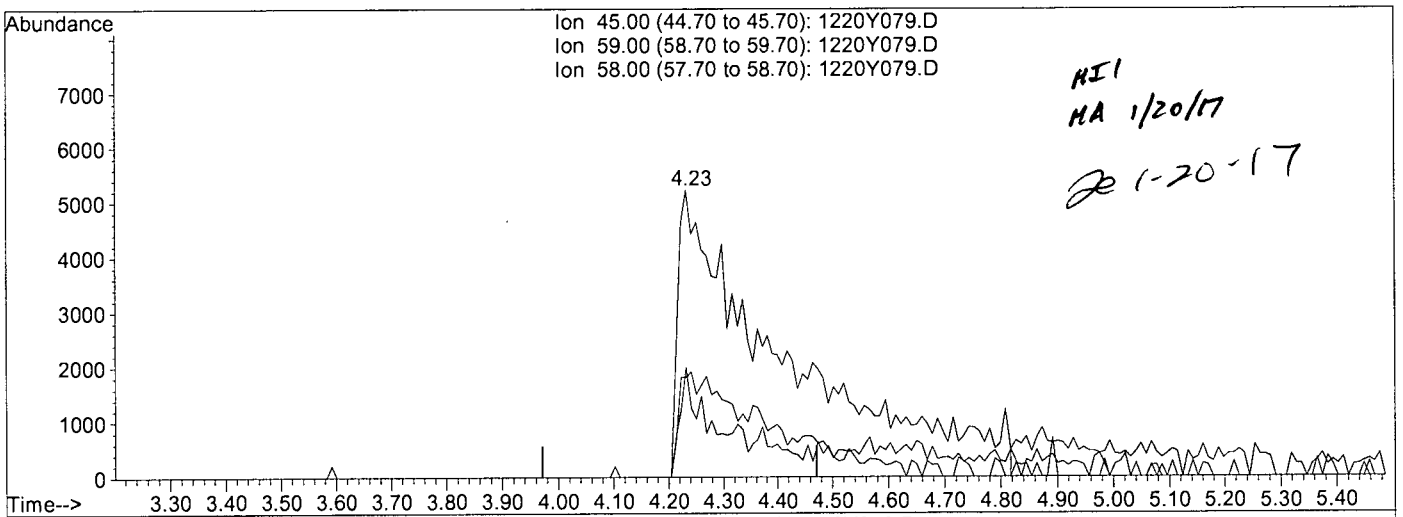
response 32016

Ion	Exp%	Act%
45.00	100	100
59.00	38.70	34.86
58.00	20.70	38.22#
0.00	0.00	0.00

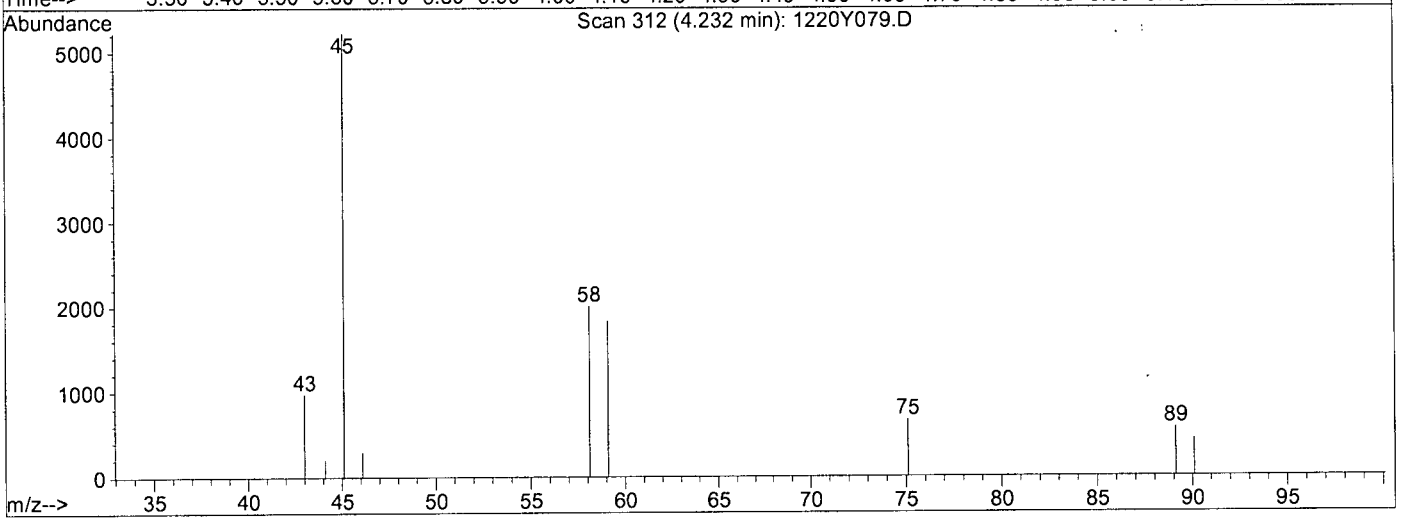
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y079.D Vial: 79
Acq On : 19 Jan 17 11:26 Operator: MA
Sample : AZ48866W25 MS-1 2/500 Inst : Yoda
Misc : water Multiplr: 1.00
Quant Time: Jan 20 8:55 2017 Quant Results File: temp.res

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 20 08:53:44 2017
Response via : Multiple Level Calibration



RI1
MA 1/20/17
JE 1-20-17



TIC: 1220Y079.D

(2) 2-(2-Methoxyethoxy)ethanol (TM)

4.23min 92.6127ppb m

response 68971

Ion	Exp%	Act%
45.00	100	100
59.00	38.70	34.86
58.00	20.70	38.22#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y080.D Vial: 80
Acq On : 19 Jan 17 11:56 Operator: MA
Sample : AZ48866W25 MSD-1 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 20 8:55 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 20 08:53:44 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.88	152	134323	40.00000	ppb	0.01
3) Napthalene-D8(IS)	6.29	136	613764	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	355298	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	683575	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	607351	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.74	264	807184	40.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.26	45	62231m	86.42469	ppb	96

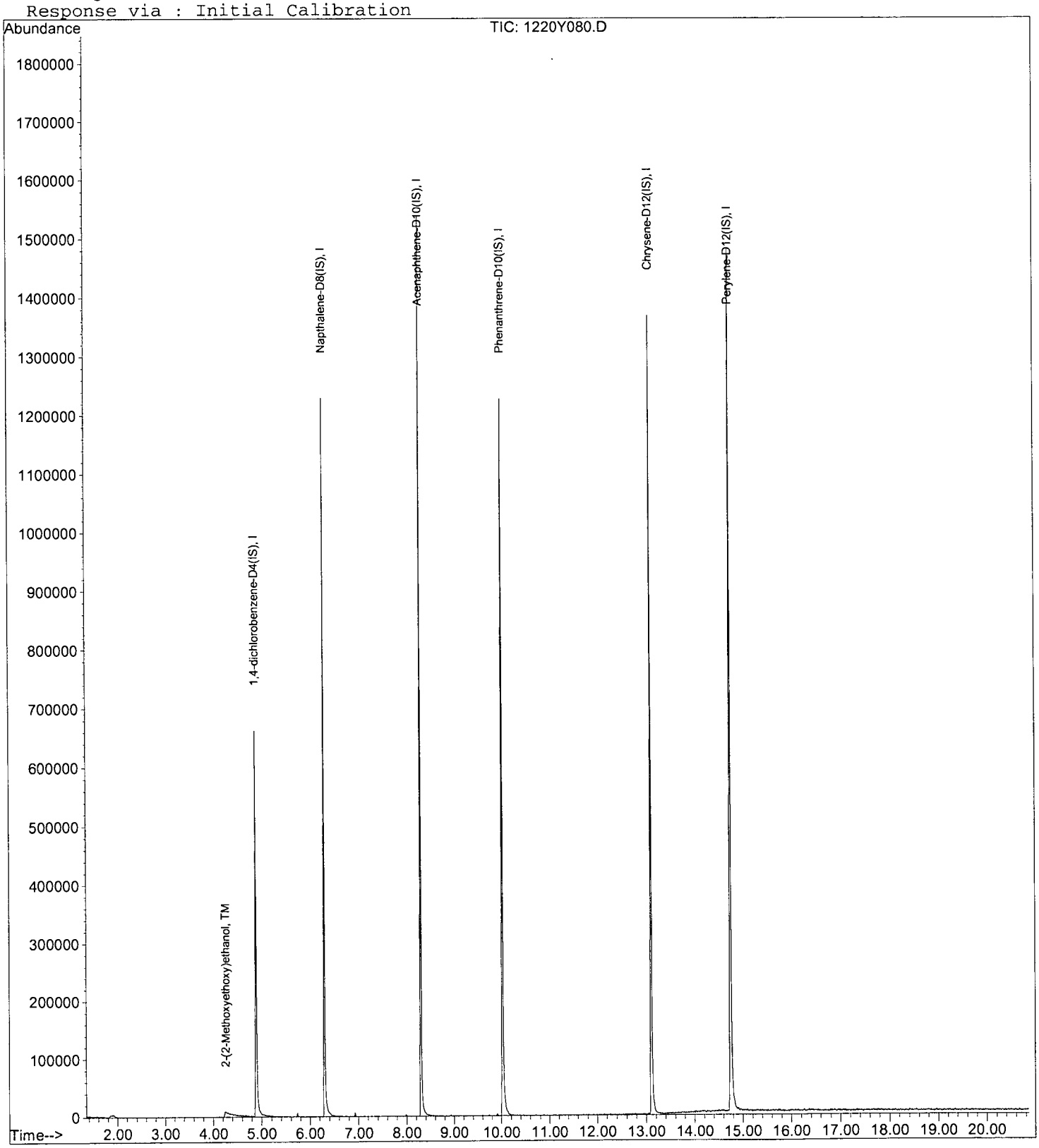
(#) = qualifier out of range (m) = manual integration
1220Y080.D Y0GLYCOL.M Fri Jan 20 11:23:02 2017 Page 1

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y080.D Vial: 80
Acq On : 19 Jan 17 11:56 Operator: MA
Sample : AZ48866W25 MSD-1 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 20 8:55 2017 Quant Results File: Y0GLYCOL.RES

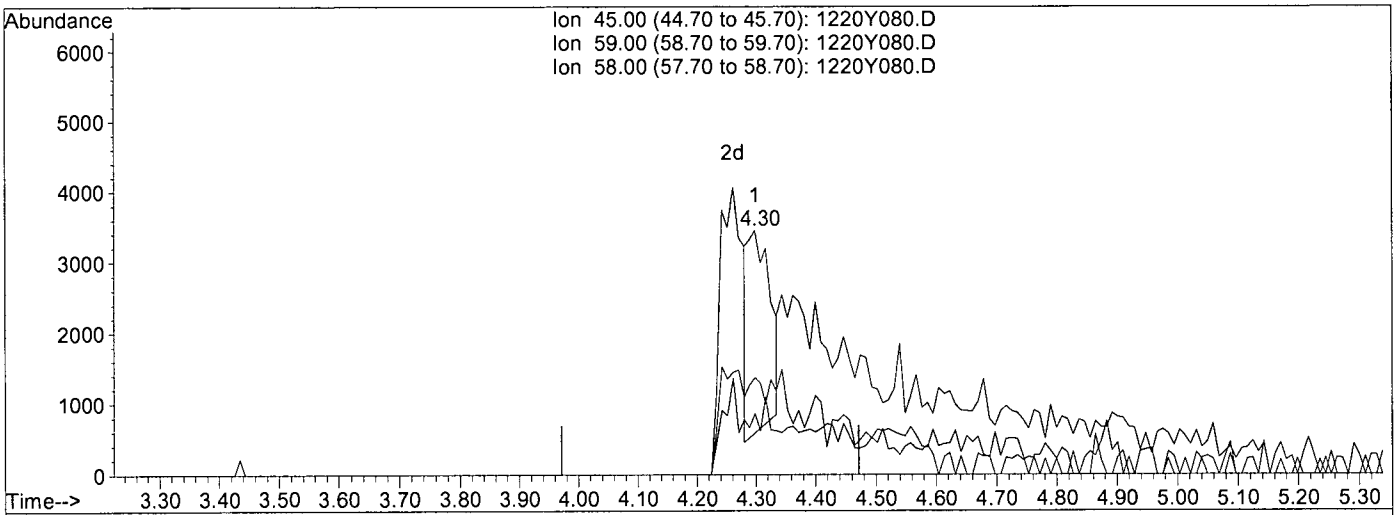
Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 20 08:53:44 2017
Response via : Initial Calibration

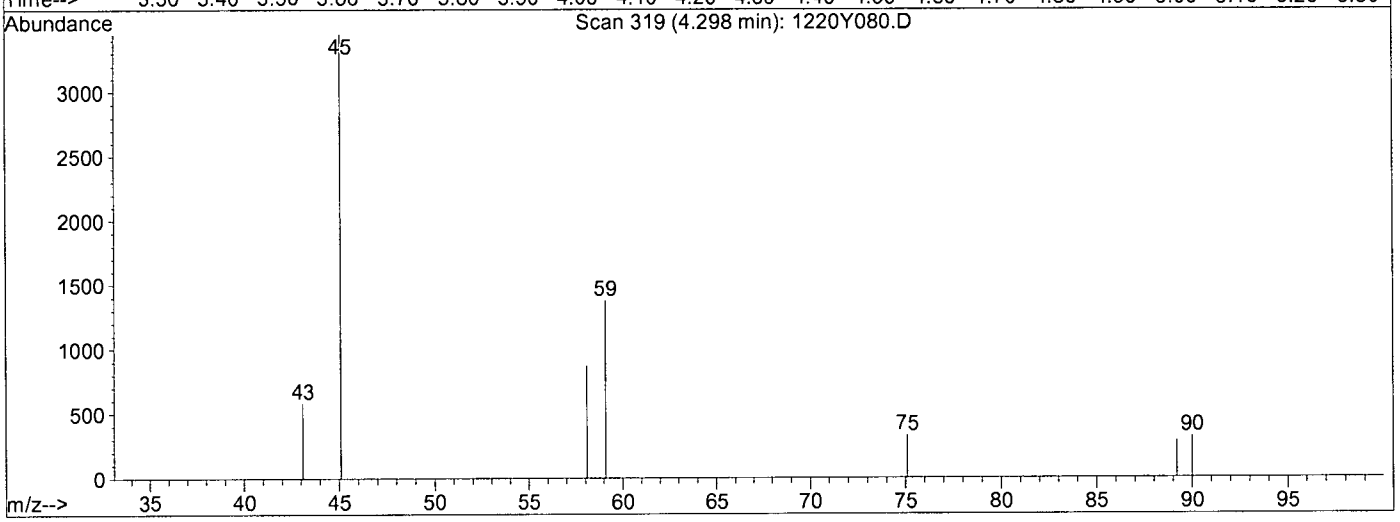


Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y080.D Vial: 80
Acq On : 19 Jan 17 11:56 Operator: MA
Sample : AZ48866W25 MSD-1 2/500 Inst : Yoda
Misc : water Multiplr: 1.00
Quant Time: Jan 20 8:54 2017 Quant Results File: temp.res

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 20 08:53:44 2017
Response via : Multiple Level Calibration





TIC: 1220Y080.D

(2) 2-(2-Methoxyethoxy)ethanol (TM)

4.30min 10.6047ppb

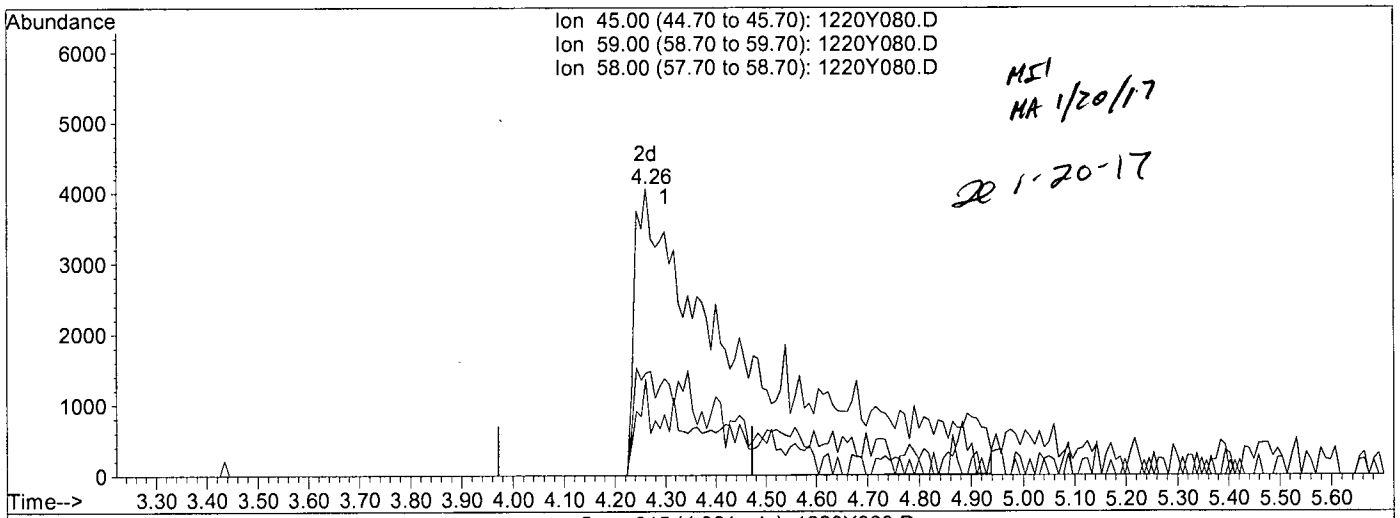
response 7636

Ion	Exp%	Act%
45.00	100	100
59.00	38.70	39.81
58.00	20.70	25.02
0.00	0.00	0.00

Quantitation Report

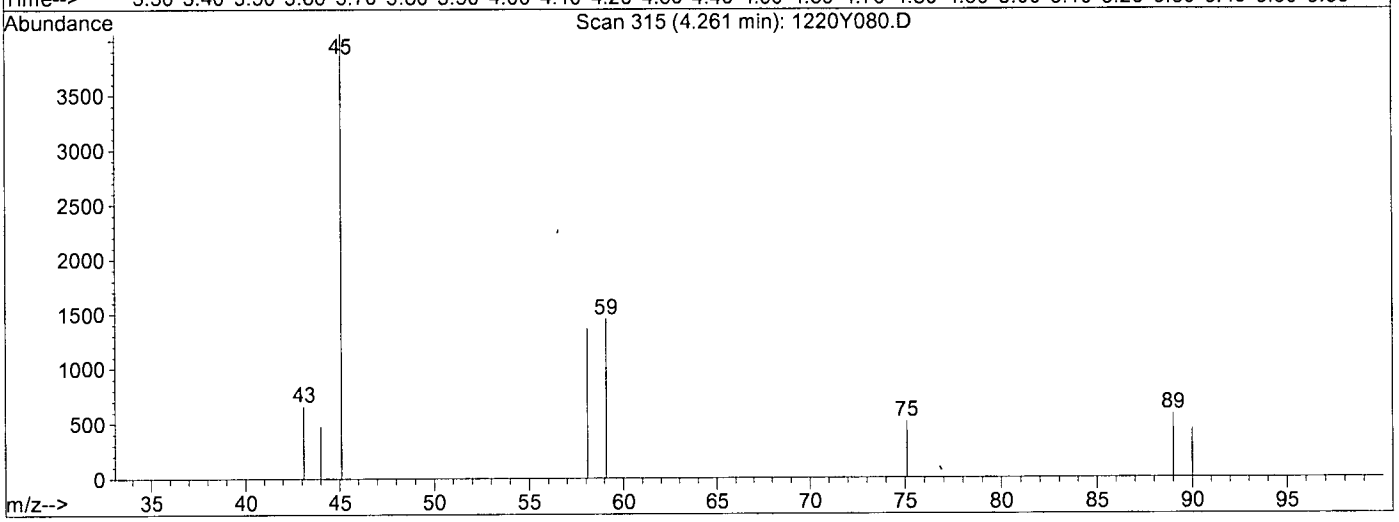
Data File : M:\YODA\DATA\Y161220G\1220Y080.D Vial: 80
Acq On : 19 Jan 17 11:56 Operator: MA
Sample : AZ48866W25 MSD-1 2/500 Inst : Yoda
Misc : water Multiplr: 1.00
Quant Time: Jan 20 8:55 2017 Quant Results File: temp.res

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 20 08:53:44 2017
Response via : Multiple Level Calibration



MSI
MA 1/20/17

DC 1-20-17



TIC: 1220Y080.D

(2) 2-(2-Methoxyethoxy)ethanol (TM)

4.26min 86.4247ppb m

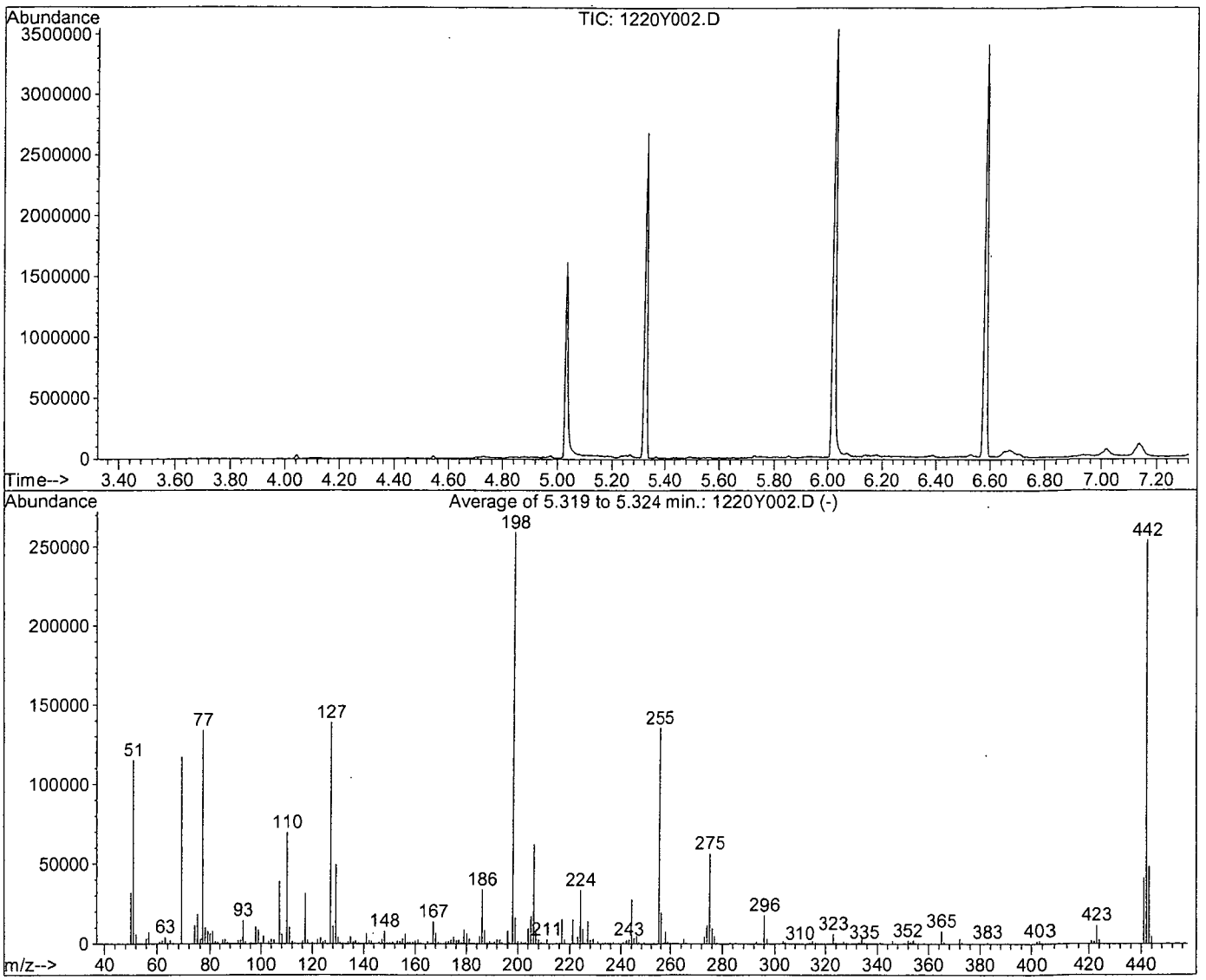
response 62231

Ion	Exp%	Act%
45.00	100	100
59.00	38.70	35.67
58.00	20.70	33.60#
0.00	0.00	0.00

DFTPP

Data File : M:\YODA\DATA\Y161220G\1220Y002.D Vial: 2
Acq On : 20 Dec 16 9:12 Operator: MA
Sample : SV Tune 11/15/16 Inst : Yoda
Misc : Multiplr: 1.00

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C

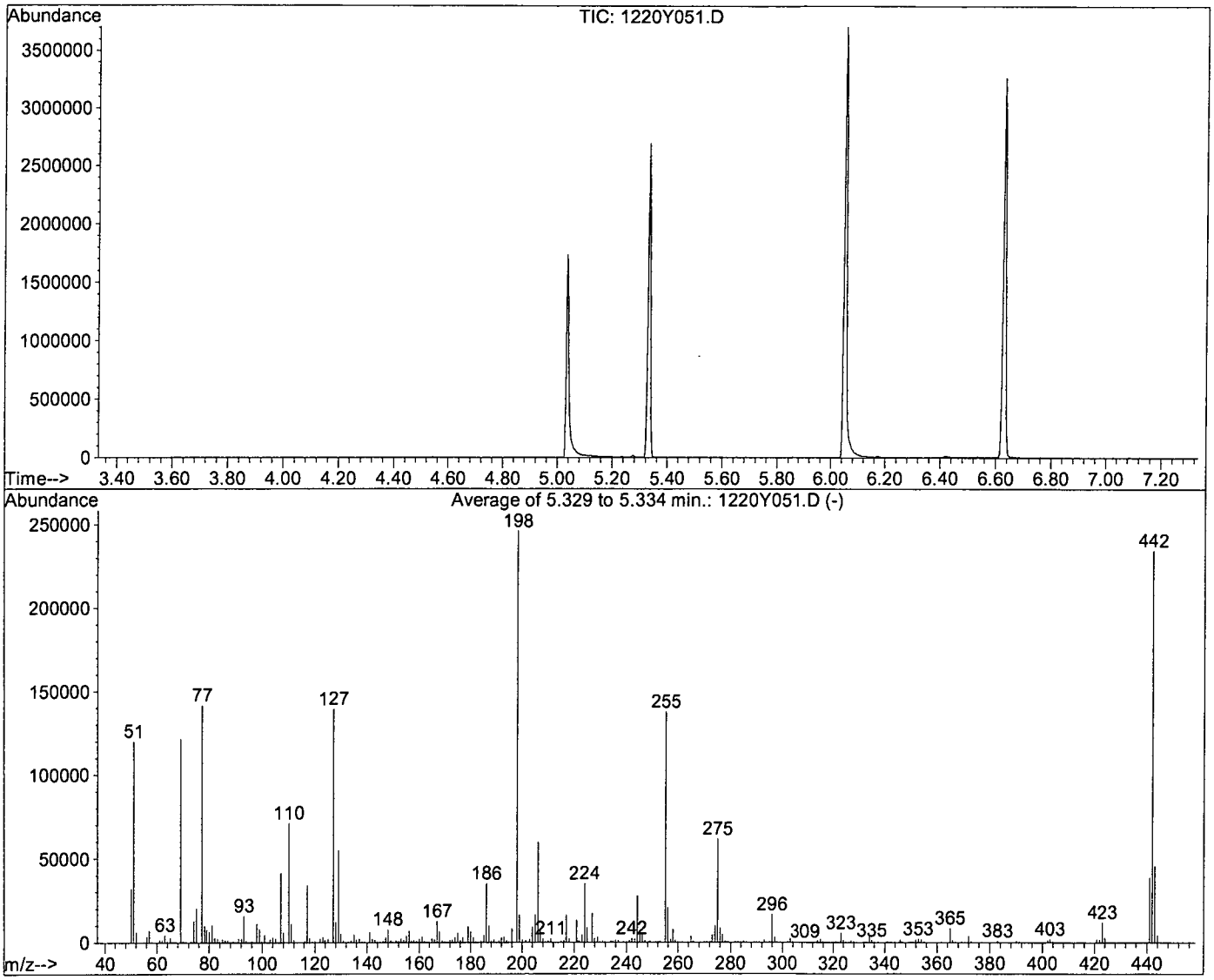


AutoFind: Scans 694, 695, 696; Background Corrected with Scan 686

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	44.4	115264	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.0	0	PASS
127	198	40	60	53.6	139077	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	259413	PASS
199	198	5	9	6.3	16297	PASS
275	198	10	30	21.8	56493	PASS
365	198	1	100	3.0	7796	PASS
441	443	0.01	100	85.0	41237	PASS
442	198	50	150	98.0	254272	PASS
443	442	17	23	19.1	48539	PASS

Data File : M:\YODA\DATA\Y161220G\1220Y051.D Vial: 51
Acq On : 16 Jan 17 14:30 Operator: MA
Sample : SV Tune 11/15/16 Inst : Yoda
Misc : water Multiplr: 1.00

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C



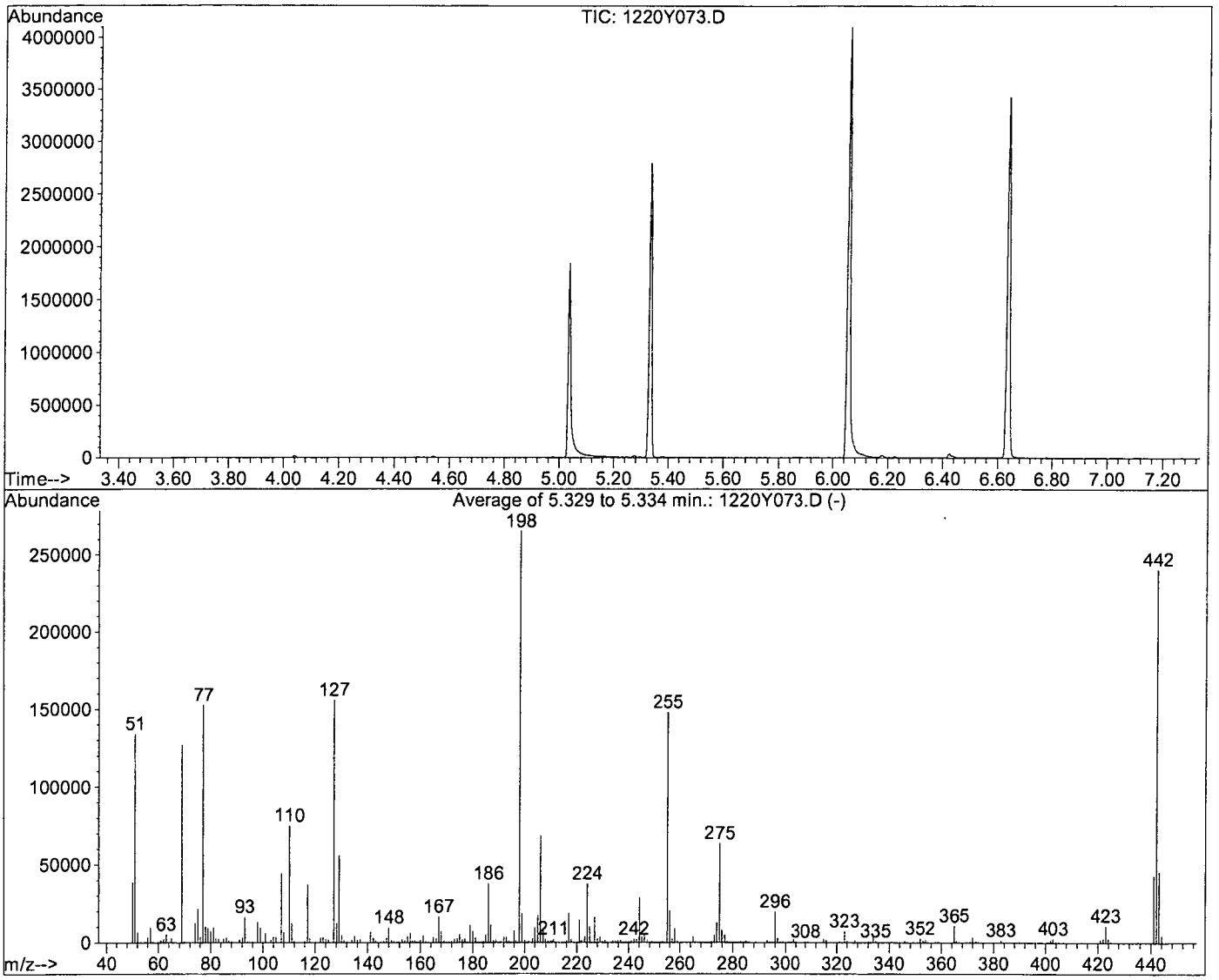
AutoFind: Scans 698, 699, 700; Background Corrected with Scan 691

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	48.7	119997	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.6	737	PASS
127	198	40	60	56.6	139435	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	246187	PASS
199	198	5	9	6.7	16441	PASS
275	198	10	30	24.9	61371	PASS
365	198	1	100	3.4	8460	PASS
441	443	0.01	100	84.7	38637	PASS
442	198	50	150	95.2	234389	PASS
443	442	17	23	19.5	45613	PASS

1220Y051.D Y0GLYCOL.M Mon Jan 16 14:41:02 2017

Data File : M:\YODA\DATA\Y161220G\1220Y073.D Vial: 73
Acq On : 19 Jan 17 8:31 Operator: MA
Sample : SV Tune 11/15/16 Inst : Yoda
Misc : water Multiplr: 1.00

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 698, 699, 700; Background Corrected with Scan 689

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	50.4	133885	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.6	747	PASS
127	198	40	60	58.7	155797	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	265387	PASS
199	198	5	9	6.9	18439	PASS
275	198	10	30	23.9	63421	PASS
365	198	1	100	4.0	10541	PASS
441	443	0.01	100	94.8	42952	PASS
442	198	50	150	90.6	240469	PASS
443	442	17	23	18.8	45328	PASS

GED Curve

PREP DATE:	21/20/16 RH											
8270 Standard Curve												
Exp:	2/11/17					**50**	**100**	**200**	**400**	**500**	**600**	**800**
		Conc.		Date								
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL	µL	µL	µL	µL
	GED MSTD Stc	2000	VAR	*12/19/16	11/18/17	5	5	10	20	50	30	40
EM Science	Methanol		010616			195	95	90	80	150	70	60
Supelco	SV Internal	2000	A14020V-3660	11/09/16	11/09/17	4	2	2	2	4	2	2
				Final Vol.		204	102	102	102	204	102	102

GED Second Source (SS)

PREP DATE:	12/20/16 RH					**500**
Exp:	1/18/17	Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
	GED MSS Stoc	2000	VAR	12/19/16	10/27/17	50
EM Science	Methanol		010616			150
Supelco	SV Internal	2000	A14020V-3660	11/09/16	11/09/17	4
				Final Vol.		204

→ MSS extracted on 12/19/16 using HEE Stock 9/27/17
MA 12/29/16

* Method Std. extracted on 12/19/16 using Std 11/18/16
MA 12/29/16

1000
μL
50
50
2
102

Diethylene Glycol						
Prep: 11/18/16 -GA Ex: 11/18/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
Diethylene glycol monomethyl ether	2000 ug/ml	AcuuStandard Cat# S-72273 Lot# 216101007-37091 and 37092 Op: 11/18/16 EX: 11/1817	2.0 mL	4 ml	1000 ug/ml	Methanol Lot# 010616A

Methoxyethoxyethanol-Neat (MEE) Stock: 9/27/16-R.H. ex: 09/27/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
MEE	Neat 99.5%	HEM SERVIC	0.1154g	10 mL	11540 ug/ml	MC
		Cat: N-12404-1G				
		Lot: 5259000-37082				
		OP: 09/27/16				
		EXP: 09/27/17				

0.087ml were spiked in 500ml of water and extracted on 10/27/16. Final concentration is 2000ug/ml

_MWE2MEE

Organic Extraction Worksheet

Method	Solid Phase Extraction of 2MEE in Water	Extraction Set	170113A	Extraction Method	MWE2MEE	Units	mL

Spiked ID 1	Diethylene Glycol 11/18/16 exp 11/18/17		Surrogate ID 1		
Spiked ID 2	MEE 11540ug/mL 9-27-16		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	01/13/17 9:25	
Spiked ID 8			Ext. End Time:	01/13/17 15:30	
			GC Requires Extract By:		

pH1			Water Bath Temp Criteria	
pH2				
pH3				

Spiked By: DL **Date** 01/13/17 **Witnessed By:** CFM **Date** 01/13/17

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	170113A Blk				NA	NA equip	500	2	7	01/13/17 9:25	
2	170113A LCS-1		0.040	1	NA	NA equip	500	2	7	01/13/17 9:25	
3	170113A LCSD-1		0.040	1	NA	NA equip	500	2	7	01/13/17 9:25	
4	AZ48676	AZ48676W13			NA	NA equip	500	2	7	01/13/17 9:25	81936
5	AZ48678	AZ48678W09			NA	NA equip	500	2	7	01/13/17 9:25	81936
6	AZ48679	AZ48679W09			NA	NA equip	500	2	7	01/13/17 9:25	81936
7	AZ48866	AZ48866W28			NA	NA equip	500	2	7	01/13/17 9:25	81965
8	AZ48867	AZ48867W06			NA	NA equip	500	2	7	01/13/17 9:25	81965
9	AZ48868	AZ48868W12			NA	NA equip	500	2	7	01/13/17 9:25	81965
10	AZ48871	AZ48871W11			NA	NA equip	500	2	7	01/13/17 9:25	81965
11	AZ48872	AZ48872W24			NA	NA equip	500	2	7	01/13/17 9:25	81965
12	AZ48873	AZ48873W09			NA	NA equip	500	2	7	01/13/17 9:25	81965
13	AZ48875	AZ48875W09			NA	NA equip	500	2	7	01/13/17 9:25	81965
14	AZ48877	AZ48877W10			NA	NA equip	500	2	7	01/13/17 9:25	81965
15	AZ48878	AZ48878W11			NA	NA equip	500	2	7	01/13/17 9:25	81965
16	AZ48880	AZ48880W06			NA	NA equip	500	2	7	01/13/17 9:25	81965

Solvent and Lot#	
ENVI-Carb Plus 400MG/1ML	.
Reverible Tube Lot:	8088704
PH Strip	HC 574756
Di Water	1-13-17
Dichloromethane	56153
Methanol	060316C

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	RH
Date	1/16/17
Time	2:00
Refrigerator	GC-C

	Technician's Initials
Scanned By	DL
Sample Preparation	CFM
Extraction	CFM
Concentration	----------

Modified	01/13/17 9:10:19 AM

Reviewed By: [signature] **Date** 1/16/17

_MWE2MEE

Organic Extraction Worksheet

Method	Solid Phase Extraction of 2MEE in Water	Extraction Set	170113A	Extraction Method	MWE2MEE	Units	mL

Spiked ID 1	Diethylene Glycol 11/18/16 exp 11/18/17		Surrogate ID 1		
Spiked ID 2	MEE 11540ug/mL 9-27-16		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	01/13/17 9:25	
Spiked ID 8			Ext. End Time:	01/13/17 15:30	
			GC Requires Extract By:		

pH1			Water Bath Temp Criteria	
pH2				
pH3				

Spiked By: DL **Date** 01/13/17 **Witnessed By:** CFM **Date** 01/13/17

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
17	AZ48881	AZ48881W06			NA	NA equip	500	2	7	01/13/17 9:25	81965
18	SS		0.0870	2	NA	NA equip	500	2	7	01/13/17 9:25	

KY 1/16/17

Solvent and Lot#	
ENVI-Carb Plus 400MG/1ML	.
Reverible Tube Lot:	8088704
PH Strip	HC 574756
Di Water	1-13-17
Dichloromethane	56153
Methanol	060316C

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	
Date	
Time	
Refrigerator	

	Technician's Initials
Scanned By	DL
Sample Preparation	CFM
Extraction	CFM
Concentration	----------

Modified	01/13/17 9:10:19 AM

Reviewed By: KY **Date** 1/16/17

01/16/17 10:07:11 AM Ext_ID 590 53782

_MWE2MEE

Organic Extraction Worksheet

Method	Solid Phase Extraction of 2MEE in Water	Extraction Set	170118A	Extraction Method	MWE2MEE	Units	mL

Spiked ID 1	Diethylene Glycol 11/18/16 exp 11/18/17		Surrogate ID 1		
Spiked ID 2	MEE 11540ug/mL 9-27-16		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	01/18/17 8:50	
Spiked ID 8			Ext. End Time:	01/18/17 14:20	
			GC Requires Extract By:	01/20/17 0:00	

pH1			Water Bath Temp Criteria	
pH2				
pH3				

Spiked By: DL **Date** 01/18/17 **Witnessed By:** CFM **Date** 01/18/17

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	170118A Blk				NA	NA equip	500	2	7	01/18/17 8:50	
2	170118A LCS-1		0.040	1	NA	NA equip	500	2	7	01/18/17 8:50	
3	170118A LCSD-1		0.040	1	NA	NA equip	500	2	7	01/18/17 8:50	
4	AZ48866 MS-1	AZ48866W25	0.040	1	NA	NA equip	500	2	7	01/18/17 8:50	81965
5	AZ48866 MSD-1	AZ48866W25	0.040	1	NA	NA equip	500	2	7	01/18/17 8:50	81965
6	AZ48915	AZ48915W11			NA	NA equip	500	2	7	01/18/17 8:50	81971 RUSH 1 WEEK
7	AZ48916	AZ48916W17			NA	NA equip	500	2	7	01/18/17 8:50	81971 RUSH 1 WEEK
8	AZ48921	AZ48921W10			NA	NA equip	500	2	7	01/18/17 8:50	81971 RUSH 1 WEEK
9	AZ48925	AZ48925W10			NA	NA equip	500	2	7	01/18/17 8:50	81971 RUSH 1 WEEK
10	SS		0.0870	2	NA	NA equip	500	2	7	01/18/17 8:50	

KY 1/18/17

Solvent and Lot#	
ENVI-Carb Plus 400MG/1ML	.
Reverible Tube Lot:	8088704
PH Strip	HC 574756
Di Water	1-18-17
Dichloromethane	56153
Methanol	060316C

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	RH
Date	1/18/17
Time	4:20
Refrigerator	GC-C

	Technician's Initials
Scanned By	CFM
Sample Preparation	CFM
Extraction	CFM
Concentration	----------

Modified	01/18/17 12:37:27 PM

Reviewed By: KY **Date** 1/18/17

Injection Log

Directory: M:\YODA\DATA\Y161220G\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	1220Y002.D	1	SV Tune 11/15/16		20 Dec 16 9:12
2	3	1220Y003.D	1	50ug/ml DEG 12/20/16		20 Dec 16 9:32
3	4	1220Y004.D	1	100ug/ml DEG 12/20/16		20 Dec 16 10:02
4	5	1220Y005.D	1	200ug/ml DEG 12/20/16		20 Dec 16 11:27
5	6	1220Y006.D	1	400ug/ml DEG 12/20/16		20 Dec 16 11:57
6	7	1220Y007.D	1	500ug/ml DEG 12/20/16		20 Dec 16 12:27
7	8	1220Y008.D	1	600ug/ml DEG 12/20/16		20 Dec 16 12:57
8	9	1220Y009.D	1	800ug/ml DEG 12/20/16		20 Dec 16 13:28
9	10	1220Y010.D	1	1000ug/ml DEG 12/20/16		20 Dec 16 13:58
10	11	1220Y011.D	1	SS2 DEG 12/20/16		20 Dec 16 15:01
11	51	1220Y051.D	1	SV Tune 11/15/16	water	16 Jan 17 14:30
12	52	1220Y052.D	1	500ug/ml DEG 11/22/16	water	16 Jan 17 15:17
13	53	1220Y053.D	1	170113A LCS-1 2/500	water	16 Jan 17 15:49
14	55	1220Y055.D	1	170113A BLK 2/500	water	16 Jan 17 16:50
15	59	1220Y059.D	1	AZ48866W28 2/500	water	16 Jan 17 18:50
16	60	1220Y060.D	1	AZ48867W06 2/500	water	16 Jan 17 19:20
17	61	1220Y061.D	1	AZ48868W12 2/500	water	16 Jan 17 19:50
18	62	1220Y062.D	1	AZ48871W11 2/500	water	16 Jan 17 20:20
19	63	1220Y063.D	1	AZ48872W24 2/500	water	16 Jan 17 20:50
20	64	1220Y064.D	1	AZ48873W09 2/500	water	16 Jan 17 21:20
21	65	1220Y065.D	1	AZ48875W09 2/500	water	16 Jan 17 21:50
22	66	1220Y066.D	1	AZ48877W10 2/500	water	16 Jan 17 22:20
23	67	1220Y067.D	1	AZ48878W11 2/500	water	16 Jan 17 22:50
24	68	1220Y068.D	1	AZ48880W06 2/500	water	16 Jan 17 23:21
25	69	1220Y069.D	1	AZ48881W06 2/500	water	16 Jan 17 23:51
26	71	1220Y071.D	1	500ug/ml DEG 11/22/16	water	17 Jan 17 00:51
27	73	1220Y073.D	1	SV Tune 11/15/16	water	19 Jan 17 8:31
28	74	1220Y074.D	1	500ug/ml DEG 11/22/16	water	19 Jan 17 8:48
29	79	1220Y079.D	1	AZ48866W25 MS-1 2/500	water	19 Jan 17 11:26
30	80	1220Y080.D	1	AZ48866W25 MSD-1 2/500	water	19 Jan 17 11:56
31	90	1220Y090.D	1	500ug/ml DEG 11/22/16	water	19 Jan 17 16:43

EPA METHOD 8260B
Volatile Organic Compounds

APPL, INC.

EPA METHOD 8260B
Volatile Organic Compounds
QC Summary

APPL, INC.

Method Blank

EPA 8260B BTEX & 1,2-DCA WATER

Blank Name/QCG: **170113W-48872 - 215495**

Batch ID: #86BTO-170113AL1

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	01/13/17	01/13/17
BLANK	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/13/17	01/13/17
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/13/17	01/13/17
BLANK	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/13/17	01/13/17
BLANK	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/13/17	01/13/17
BLANK	SURROGATE: 1,2-DICHLOROET	97.5	81-118			%	01/13/17	01/13/17
BLANK	SURROGATE: 4-BROMOFLUORO	98.5	85-114			%	01/13/17	01/13/17
BLANK	SURROGATE: DIBROMOFLUOR	98.8	80-119			%	01/13/17	01/13/17
BLANK	SURROGATE: TOLUENE-D8 (S)	101	89-112			%	01/13/17	01/13/17

Quant Method: LALLW.M
Run #: 0113L12
Instrument: Loki
Sequence: 170111
Initials: ARO

GC SC-Blank-REG MDLs-DOD
Printed: 01/17/17 8:21:53 AM

Method Blank

EPA 8260B BTEX & 1,2-DCA WATER

Blank Name/QCG: **170113W-48873 - 215498**

Batch ID: #86BTO-170113BL

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	01/14/17	01/14/17
BLANK	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/14/17	01/14/17
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/14/17	01/14/17
BLANK	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/14/17	01/14/17
BLANK	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/14/17	01/14/17
BLANK	SURROGATE: 1,2-DICHLOROET	97.5	81-118			%	01/14/17	01/14/17
BLANK	SURROGATE: 4-BROMOFLUORO	97.7	85-114			%	01/14/17	01/14/17
BLANK	SURROGATE: DIBROMOFLUOR	100	80-119			%	01/14/17	01/14/17
BLANK	SURROGATE: TOLUENE-D8 (S)	98.9	89-112			%	01/14/17	01/14/17

Quant Method: LALLW.M
Run #: 0113L42
Instrument: Loki
Sequence: 170111
Initials: ARO

GC SC-Blank-REG MDLs-DOD
Printed: 01/17/17 8:21:53 AM

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81965

Case No: 81965 Date Analyzed: 01/13/17

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: 1,2-DICHLOROETHANE-D4 (S)			SURROGATE: 4-BROMOFLUOROBENZENE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
170113AL-LCS	Lab Control Spike	81-118	96.0		85-114	106	
170113AL-BLK	Blank	81-118	97.5		85-114	98.5	
AZ48866	ERH161	81-118	100		85-114	98.7	
AZ48867	ERH162	81-118	100		85-114	96.8	
AZ48868	ERH164	81-118	96.1		85-114	98.7	
AZ48869	ERH163	81-118	96.8		85-114	95.4	
AZ48870	ERH167	81-118	98.9		85-114	94.5	
AZ48871	ERH168	81-118	99.4		85-114	93.6	
AZ48866-MS	Matrix Spike	81-118	95.6		85-114	108	
AZ48866-MSD	Matrix SpikeD	81-118	90.4		85-114	104	

Comments: Batch: #86BTO-170113AL

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81965

Case No: 81965 Date Analyzed: 01/13/17

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: DIBROMOFLUOROMETHANE (S)			SURROGATE: TOLUENE-D8 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
170113AL-LCS	Lab Control Spike	80-119	98.4		89-112	102	
170113AL-BLK	Blank	80-119	98.8		89-112	101	
AZ48866	ERH161	80-119	102		89-112	100	
AZ48867	ERH162	80-119	99.6		89-112	98.8	
AZ48868	ERH164	80-119	97.5		89-112	101	
AZ48869	ERH163	80-119	98.7		89-112	98.1	
AZ48870	ERH167	80-119	102		89-112	99.3	
AZ48871	ERH168	80-119	98.4		89-112	95.6	
AZ48866-MS	Matrix Spike	80-119	99.2		89-112	100	
AZ48866-MSD	Matrix SpikeD	80-119	94.8		89-112	99.6	

Comments: Batch: #86BTO-170113AL

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81965

Case No: 81965 Date Analyzed: 01/13/17

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: 1,2-DICHLOROETHANE-D4 (S)			SURROGATE: 4-BROMOFLUOROBENZENE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
170113AL1-LCS	Lab Control Spike	81-118	96.0		85-114	106	
170113AL1-BLK	Blank	81-118	97.5		85-114	98.5	
AZ48872	ERH169	81-118	98.3		85-114	97.1	
AZ48872-MS	Matrix Spike	81-118	96.4		85-114	98.8	
AZ48872-MSD	Matrix SpikeD	81-118	94.0		85-114	102	

Comments: Batch: #86BTO-170113AL

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81965

Case No: 81965 Date Analyzed: 01/13/17

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: DIBROMOFLUOROMETHANE (S)			SURROGATE: TOLUENE-D8 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
170113AL1-LCS	Lab Control Spike	80-119	98.4		89-112	102	
170113AL1-BLK	Blank	80-119	98.8		89-112	101	
AZ48872	ERH169	80-119	101		89-112	101	
AZ48872-MS	Matrix Spike	80-119	98.0		89-112	97.6	
AZ48872-MSD	Matrix SpikeD	80-119	98.0		89-112	97.6	

Comments: Batch: #86BTO-170113AL

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81965

Case No: 81965 Date Analyzed: 01/13/17

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: 1,2-DICHLOROETHANE-D4 (S)			SURROGATE: 4-BROMOFLUOROBENZENE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
170113BL-LCS	Lab Control Spike	81-118	97.2		85-114	105	
170113BL-BLK	Blank	81-118	97.5		85-114	97.7	
AZ48873	ERH170	81-118	97.7		85-114	96.7	
AZ48874	ERH177	81-118	95.6		85-114	94.8	

Comments: Batch: #86BTO-170113BL

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81965

Case No: 81965 Date Analyzed: 01/13/17

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: DIBROMOFLUOROMETHANE (S)			SURROGATE: TOLUENE-D8 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
170113BL-LCS	Lab Control Spike	80-119	96.4		89-112	100	
170113BL-BLK	Blank	80-119	100		89-112	98.9	
AZ48873	ERH170	80-119	101		89-112	98.9	
AZ48874	ERH177	80-119	101		89-112	97.0	

Comments: Batch: #86BTO-170113BL

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81965

Case No: 81965 Date Analyzed: 01/13/17

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: 1,2-DICHLOROETHANE-D4 (S)			SURROGATE: 4-BROMOFLUOROBENZENE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
170113BL1-LCS	Lab Control Spike	81-118	97.2		85-114	105	
170113BL1-BLK	Blank	81-118	97.5		85-114	97.7	
AZ48875	ERH174	81-118	95.5		85-114	101	
AZ48876	ERH175	81-118	95.5		85-114	97.9	
AZ48877	ERH176	81-118	97.5		85-114	99.0	
AZ48878	ERH179	81-118	100		85-114	98.1	
AZ48879	ERH197	81-118	98.3		85-114	97.8	
AZ48880	ERH186	81-118	96.3		85-114	94.6	
AZ48881	ERH187	81-118	100		85-114	95.5	
AZ48882	ERH194	81-118	99.8		85-114	96.7	
AZ48884	ERH173	81-118	98.6		85-114	94.4	
AZ48885	ERH198	81-118	96.5		85-114	96.6	
AZ48886	ERH196	81-118	97.9		85-114	94.8	

Comments: Batch: #86BTO-170113BL

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81965

Case No: 81965 Date Analyzed: 01/13/17

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: DIBROMOFLUOROMETHANE (S)			SURROGATE: TOLUENE-D8 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
170113BL1-LCS	Lab Control Spike	80-119	96.4		89-112	100	
170113BL1-BLK	Blank	80-119	100		89-112	98.9	
AZ48875	ERH174	80-119	98.7		89-112	100	
AZ48876	ERH175	80-119	98.3		89-112	102	
AZ48877	ERH176	80-119	101		89-112	99.1	
AZ48878	ERH179	80-119	101		89-112	98.4	
AZ48879	ERH197	80-119	101		89-112	97.8	
AZ48880	ERH186	80-119	100		89-112	100	
AZ48881	ERH187	80-119	102		89-112	98.7	
AZ48882	ERH194	80-119	105		89-112	98.2	
AZ48884	ERH173	80-119	101		89-112	96.8	
AZ48885	ERH198	80-119	101		89-112	99.0	
AZ48886	ERH196	80-119	102		89-112	96.1	

Comments: Batch: #86BTO-170113BL

Laboratory Control Spike Recovery
EPA 8260B BTEX & 1,2-DCA WATER

APPL ID: **170113W-48872 LCS - 215495**
Batch ID: #86BTO-170113AL1

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1,2-DICHLOROETHANE	10.00	9.82	98.2	73-128
BENZENE	10.00	9.98	99.8	79-120
ETHYLBENZENE	10.00	10.7	107	79-121
TOLUENE	10.00	10.3	103	80-121
XYLENES (TOTAL)	30.0	32.0	107	79-121
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	24.0	96.0	81-118
SURROGATE: 4-BROMOFLUOROBENZE	25.0	26.6	106	85-114
SURROGATE: DIBROMOFLUOROMETH	25.0	24.6	98.4	80-119
SURROGATE: TOLUENE-D8 (S)	25.0	25.4	102	89-112

Comments: _____

Primary	SPK
Quant Method :	LALLW.M
Extraction Date :	01/13/17
Analysis Date :	01/13/17
Instrument :	Loki
Run :	0113L05
Initials :	ARO

Printed: 01/17/17 8:22:06 AM
APPL Standard LCS

Laboratory Control Spike Recovery
EPA 8260B BTEX & 1,2-DCA WATER

APPL ID: **170113W-48873 LCS - 215498**
Batch ID: #86BTO-170113BL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1,2-DICHLOROETHANE	10.00	9.40	94.0	73-128
BENZENE	10.00	9.67	96.7	79-120
ETHYLBENZENE	10.00	10.1	101	79-121
TOLUENE	10.00	9.94	99.4	80-121
XYLENES (TOTAL)	30.0	31.1	104	79-121
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	24.3	97.2	81-118
SURROGATE: 4-BROMOFLUOROBENZE	25.0	26.2	105	85-114
SURROGATE: DIBROMOFLUOROMETH	25.0	24.1	96.4	80-119
SURROGATE: TOLUENE-D8 (S)	25.0	25.0	100	89-112

Comments: _____

Primary	SPK
Quant Method :	LALLW.M
Extraction Date :	01/13/17
Analysis Date :	01/13/17
Instrument :	Loki
Run :	0113L35
Initials :	ARO

Printed: 01/17/17 8:22:06 AM
APPL Standard LCS

Matrix Spike Recoveries

EPA 8260B BTEX WATER

APPL ID: **170116W-48866 MS - 215494**
Batch ID: #86BTO-170113AL
Sample ID: AZ48866
Client ID: ERH161

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
BENZENE	10.00	ND	10.1	9.75	101	97.5	79-120	3.5	20
ETHYLBENZENE	10.00	ND	11.3	10.7	113	107	79-121	5.5	20
TOLUENE	10.00	ND	10.8	10.3	108	103	80-121	4.7	20
XYLENES (TOTAL)	30.0	ND	33.6	33.1	112	110	79-121	1.5	20
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	NA	23.9	22.6	95.6	90.4	81-118		
SURROGATE: 4-BROMOFLUOROBENZE	25.0	NA	26.9	25.9	108	104	85-114		
SURROGATE: DIBROMOFLUOROMETH	25.0	NA	24.8	23.7	99.2	94.8	80-119		
SURROGATE: TOLUENE-D8 (S)	25.0	NA	25.0	24.9	100	99.6	89-112		

Comments: _____

Primary	SPK	DUP
Quant Method :	LALLW.M	LALLW.M
Extraction Date :	01/16/17	01/16/17
Analysis Date :	01/16/17	01/16/17
Instrument :	Loki	Loki
Run :	0116L10	0116L11
Initials :	ARO	

Printed: 01/26/17 10:57:13 AM
APPL MSD SCII

Matrix Spike Recoveries

EPA 8260B BTEX & 1,2-DCA WATER

APPL ID: **170116W-48872 MS - 215495**
Batch ID: #86BTO-170113AL1
Sample ID: AZ48872
Client ID: ERH169

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
1,2-DICHLOROETHANE	10.00	ND	9.84	9.55	98.4	95.5	73-128	3.0	20
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	NA	24.1	23.5	96.4	94.0	81-118		
SURROGATE: 4-BROMOFLUOROBENZE	25.0	NA	24.7	25.4	98.8	102	85-114		
SURROGATE: DIBROMOFLUOROMETH	25.0	NA	24.5	24.5	98.0	98.0	80-119		
SURROGATE: TOLUENE-D8 (S)	25.0	NA	24.4	24.4	97.6	97.6	89-112		

Comments: _____

Primary	SPK	DUP
Quant Method :	LALLW.M	LALLW.M
Extraction Date :	01/16/17	01/16/17
Analysis Date :	01/16/17	01/16/17
Instrument :	Loki	Loki
Run :	0116L12	0116L13
Initials :	ARO	

Printed: 01/26/17 10:57:13 AM
APPL MSD SCII

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81965

Case No: 81965 Date Analyzed: 01/13/17

Matrix: WATER Instrument: Loki

Blank ID: 170113AL-BLK Time Analyzed: 1315

APPL ID.	Client Sample No.	File ID.	Date Analyzed
170113AL-LCS	Lab Control Spike	0113L05	01/13/17 0959
170113AL-BLK	Blank	0113L12	01/13/17 1315
AZ48866	ERH161	0113L15	01/13/17 1438
AZ48867	ERH162	0113L16	01/13/17 1506
AZ48868	ERH164	0113L17	01/13/17 1534
AZ48869	ERH163	0113L18	01/13/17 1602
AZ48870	ERH167	0113L19	01/13/17 1630
AZ48871	ERH168	0113L20	01/13/17 1658
170113AL-MS	Matrix Spike	0116L10	01/16/17 1229
170113AL-MSD	Matrix SpikeD	0116L11	01/16/17 1257

Comments: Batch: #86BTO-170113AL

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81965

Case No: 81965 Date Analyzed: 01/13/17

Matrix: WATER Instrument: Loki

Blank ID: 170113AL1-BLK Time Analyzed: 1314

APPL ID.	Client Sample No.	File ID.	Date Analyzed
170113AL1-LCS	Lab Control Spike	0113L05	01/13/17 0958
170113AL1-BLK	Blank	0113L12	01/13/17 1314
AZ48872	ERH169	0113L21	01/13/17 1726
170113AL1-MS	Matrix Spike	0116L12	01/16/17 1325
170113AL1-MSD	Matrix SpikeD	0116L13	01/16/17 1353

Comments: Batch: #86BTO-170113AL

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Form 4, Blank Summary

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc.
Case No: 81965
Matrix: WATER
Blank ID: 170113BL-BLK

SDG No: 81965
Date Analyzed: 01/14/17
Instrument: Loki
Time Analyzed: 0314

APPL ID.	Client Sample No.	File ID.	Date Analyzed
170113BL-LCS	Lab Control Spike	0113L35	01/13/17 2358
170113BL-BLK	Blank	0113L42	01/14/17 0314
AZ48873	ERH170	0113L43	01/14/17 0342
AZ48874	ERH177	0113L44	01/14/17 0410

Comments: Batch: #86BTO-170113BL

Printed: 01/17/17 8:22:13 AM
Form 4, Blank Summary

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81965

Case No: 81965 Date Analyzed: 01/14/17

Matrix: WATER Instrument: Loki

Blank ID: 170113BL1-BLK Time Analyzed: 0315

APPL ID.	Client Sample No.	File ID.	Date Analyzed
170113BL1-LCS	Lab Control Spike	0113L35	01/13/17 2359
170113BL1-BLK	Blank	0113L42	01/14/17 0315
AZ48875	ERH174	0113L45	01/14/17 0438
AZ48876	ERH175	0113L46	01/14/17 0506
AZ48877	ERH176	0113L47	01/14/17 0534
AZ48878	ERH179	0113L48	01/14/17 0602
AZ48879	ERH197	0113L49	01/14/17 0630
AZ48880	ERH186	0113L50	01/14/17 0658
AZ48881	ERH187	0113L51	01/14/17 0726
AZ48882	ERH194	0113L52	01/14/17 0754
AZ48884	ERH173	0113L53	01/14/17 0822
AZ48885	ERH198	0113L54	01/14/17 0850
AZ48886	ERH196	0113L55	01/14/17 0918

Comments: Batch: #86BTO-170113BL

Printed: 01/17/17 8:22:13 AM
Form 4, Blank Summary

Form 5
Tune Summary

np1-26-17
Lab Name: APPL Inc. SDG No: ~~Loki~~ 81965
Case No: ~~0111L03.D~~ 81965 Date Analyzed: 01/11/17
Matrix: Water np1-26-17 Instrument: Loki
ID: 5ng- BFB STD 12-15-16 Time Analyzed: 11:00

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.3ug/L VOC STD 1/11	0111L05.D	01/11/17 11:56
2		0.5ug/L VOC STD 1/11	0111L06.D	01/11/17 12:24
3		1.0ug/L VOC STD 1/11	0111L07.D	01/11/17 12:52
4		2.0ug/L VOC STD 1/11	0111L08.D	01/11/17 13:20
5		5.0ug/L VOC STD 1/11	0111L09.D	01/11/17 13:48
6		10ug/L VOC STD 1/11/	0111L10.D	01/11/17 14:16
7		20ug/L VOC STD 1/11/	0111L11.D	01/11/17 14:44
8		40ug/L VOC STD 1/11/	0111L12.D	01/11/17 15:12
9		100ug/L VOC STD 1/11	0111L13.D	01/11/17 15:41
10		(SS)10ug/L VOC STD 1	0111L18.D	01/11/17 18:01
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	20.5
75	30 - 60% of mass 95	52.7
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	6.6
173	0 - 2% of mass 174	0.0
174	50 - 100% of mass 95	86.1
175	5 - 9% of mass 174	7.6
176	95 - 101% of mass 174	96.4
177	5 - 9% of mass 176	6.7

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81965
Matrix: Water
ID: 5ng- BFB STD 12-15-16

SDG No: 81965
Date Analyzed: 01/13/17
Instrument: Loki
Time Analyzed: 9:30

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1	Lab Control Spike	170113A CCV/LCS-1WL	0113L05.D	01/13/17 9:58
2	Blank	170113A BLK-1WL	0113L12.D	01/13/17 13:14
3	ERH161	AZ48866W01	0113L15.D	01/13/17 14:38
4	ERH162	AZ48867W01	0113L16.D	01/13/17 15:06
5	ERH164	AZ48868W01	0113L17.D	01/13/17 15:34
6	ERH163	AZ48869W01	0113L18.D	01/13/17 16:02
7	ERH167	AZ48870W01	0113L19.D	01/13/17 16:30
8	ERH168	AZ48871W01	0113L20.D	01/13/17 16:58
9	ERH169	AZ48872W01	0113L21.D	01/13/17 17:26
10		Ending CCV 8260 10ug	0113L29.D	01/13/17 21:10
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	19.5
75	30 - 60% of mass 95	52.4
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	7.0
173	0 - 2% of mass 174	0.0
174	50 - 100% of mass 95	87.0
175	5 - 9% of mass 174	7.2
176	95 - 101% of mass 174	95.6
177	5 - 9% of mass 176	7.1

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81965
Matrix: Water
ID: 5ng- BFB STD 12-15-16

SDG No: 81965
Date Analyzed: 01/13/17
Instrument: Loki
Time Analyzed: 23:30

	Client Sample No.	APPL ID.	File ID.	Date Analyzed	
1	Lab Control Spike	170113B CCV/LCS-1WL	0113L35.D	01/13/17 23:58	
2	Blank	170113B BLK-1WL	0113L42.D	01/14/17 3:14	
3	ERH170	AZ48873W01	0113L43.D	01/14/17 3:42	
4	ERH177	AZ48874W01	0113L44.D	01/14/17 4:10	
5	ERH174	AZ48875W01	0113L45.D	01/14/17 4:38	
6	ERH175	AZ48876W01	0113L46.D	01/14/17 5:06	
7	ERH176	AZ48877W01	0113L47.D	01/14/17 5:34	
8	ERH179	AZ48878W01	0113L48.D	01/14/17 6:02	
9	ERH197	AZ48879W01	0113L49.D	01/14/17 6:30	
10	ERH186	AZ48880W02	0113L50.D	01/14/17 6:58	
11	ERH187	AZ48881W01	0113L51.D	01/14/17 7:26	
12	ERH194	AZ48882W01	0113L52.D	01/14/17 7:54	
13	ERH173	AZ48884W01	0113L53.D	01/14/17 8:22	
14	ERH198	AZ48885W01	0113L54.D	01/14/17 8:50	
15	ERH196	AZ48886W01	0113L55.D	01/14/17 9:18	
16		Ending CCV 8260 10ug	0113L60.D	01/14/17 11:38	*
17					
18					
19					
20					
21					
22					

m/e		
50	15 - 40% of mass 95	20.0
75	30 - 60% of mass 95	54.1
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	7.1
173	0 - 2% of mass 174	0.0
174	50 - 100% of mass 95	88.7
175	5 - 9% of mass 174	8.1
176	95 - 101% of mass 174	96.0
177	5 - 9% of mass 176	6.0

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 81965

Lab File ID (Standard): 0113L55.D Date Analyzed: 01/14/17

Instrument ID: Loki Time Analyzed: 9:18

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	300352	5.38	289408	8.70	142720	11.03
	UPPER LIMIT	600704	5.88	578816	9.20	285440	11.53
	LOWER LIMIT	150176	4.88	144704	8.20	71360	10.53
	SAMPLE NO.						
01	(SS)10ug/L VOC STD 1/	358080	5.38	335808	8.70	179776	11.03
02	170113A CCV/LCS-1WL	355840	5.38	323904	8.70	173696	11.03
03	170113A BLK-1WL	331456	5.38	302080	8.70	154432	11.03
04	AZ48866W01	328768	5.38	304064	8.70	154368	11.03
05	AZ48867W01	327552	5.38	305152	8.70	150592	11.03
06	AZ48868W01	333184	5.38	296768	8.70	153728	11.03
07	AZ48869W01	323840	5.38	300096	8.70	149824	11.03
08	AZ48870W01	320768	5.38	298176	8.70	157696	11.03
09	AZ48871W01	321856	5.38	308864	8.70	151936	11.03
10	AZ48872W01	318592	5.38	288448	8.70	148224	11.03
11	Ending CCV 8260 10ug/	348352	5.38	315712	8.70	170560	11.03
12	170113B CCV/LCS-1WL	338752	5.38	312576	8.70	162496	11.03
13	170113B BLK-1WL	326912	5.38	302016	8.70	145664	11.03
14	AZ48873W01	315712	5.38	297792	8.70	147840	11.03
15	AZ48874W01	306816	5.38	291840	8.70	141632	11.03
16	AZ48875W01	312960	5.38	286272	8.70	156864	11.03
17	AZ48876W01	330880	5.38	299712	8.70	150848	11.03
18	AZ48877W01	319616	5.38	294464	8.70	149568	11.03
19	AZ48878W01	319296	5.38	300800	8.70	148992	11.03
20	AZ48879W01	311616	5.38	298496	8.70	148288	11.03
21	AZ48880W02	308416	5.38	285824	8.70	141952	11.03
22	AZ48881W01	301632	5.38	286848	8.70	147392	11.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 81965

Lab File ID (Standard): 0113L55.D Date Analyzed: 01/14/17

Instrument ID: Loki Time Analyzed: 9:18

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	300352	5.3815	289408	8.6997	142720	11.031
	UPPER LIMIT	600704	5.8815	578816	9.1997	285440	11.531
	LOWER LIMIT	150176	4.8815	144704	8.1997	71360	10.531
	SAMPLE NO.						
23	AZ48882W01	310016	5.38	294976	8.70	142464	11.03
24	AZ48884W01	318912	5.38	303552	8.70	149504	11.03
25	AZ48885W01	313856	5.38	292480	8.70	149760	11.03
26	AZ48886W01	300352	5.38	289408	8.70	142720	11.03
27	Ending CCV 8260 10ug/	320384	5.38	315200	8.70	164672	11.03
28	AZ48866W234 MS-1WL	329088	5.38	303808	8.70	175552	11.03
29	AZ48866W234 MSD-1W	340416	5.38	308864	8.70	174080	11.03
30	AZ48872W234 MS-1WL	335936	5.38	319680	8.70	175744	11.03
31	AZ48872W234 MSD-1W	344512	5.38	320384	8.70	180032	11.03
32							
33							
34							
35							
36							
37							
38							
39							
40							
41							
42							
43							
44							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

EPA METHOD 8260B
Volatile Organic Compounds
Sample Data

APPL, INC.

EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH161
Sample Collection Date: 01/09/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48866
QCG: #86BTO-170113AL-215494

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/13/17	01/13/17
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/13/17	01/13/17
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/13/17	01/13/17
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/13/17	01/13/17
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	100	81-118			%	01/13/17	01/13/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	98.7	85-114			%	01/13/17	01/13/17
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	102	80-119			%	01/13/17	01/13/17
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	100	89-112			%	01/13/17	01/13/17

Quant Method: LALLW.M
Run #: 0113L15
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/17/17 8:22:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L15.D Vial: 12
Acq On : 13 Jan 17 14:38 Operator: PM,DG,SV,CMM
Sample : AZ48866W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 8:49 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	328768	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	304064	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	154368	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	187931	25.62	ppb	0.00
Spiked Amount 25.000			Recovery = 102.464%			
37) 1,2-DCA-D4(S)	4.92	65	199225	25.04	ppb	0.00
Spiked Amount 25.000			Recovery = 100.160%			
57) Toluene-D8(S)	7.22	98	611037	25.11	ppb	0.00
Spiked Amount 25.000			Recovery = 100.420%			
65) 4-Bromofluorobenzene(S)	9.89	95	208322	24.67	ppb	0.00
Spiked Amount 25.000			Recovery = 98.664%			

Target Compounds Qvalue

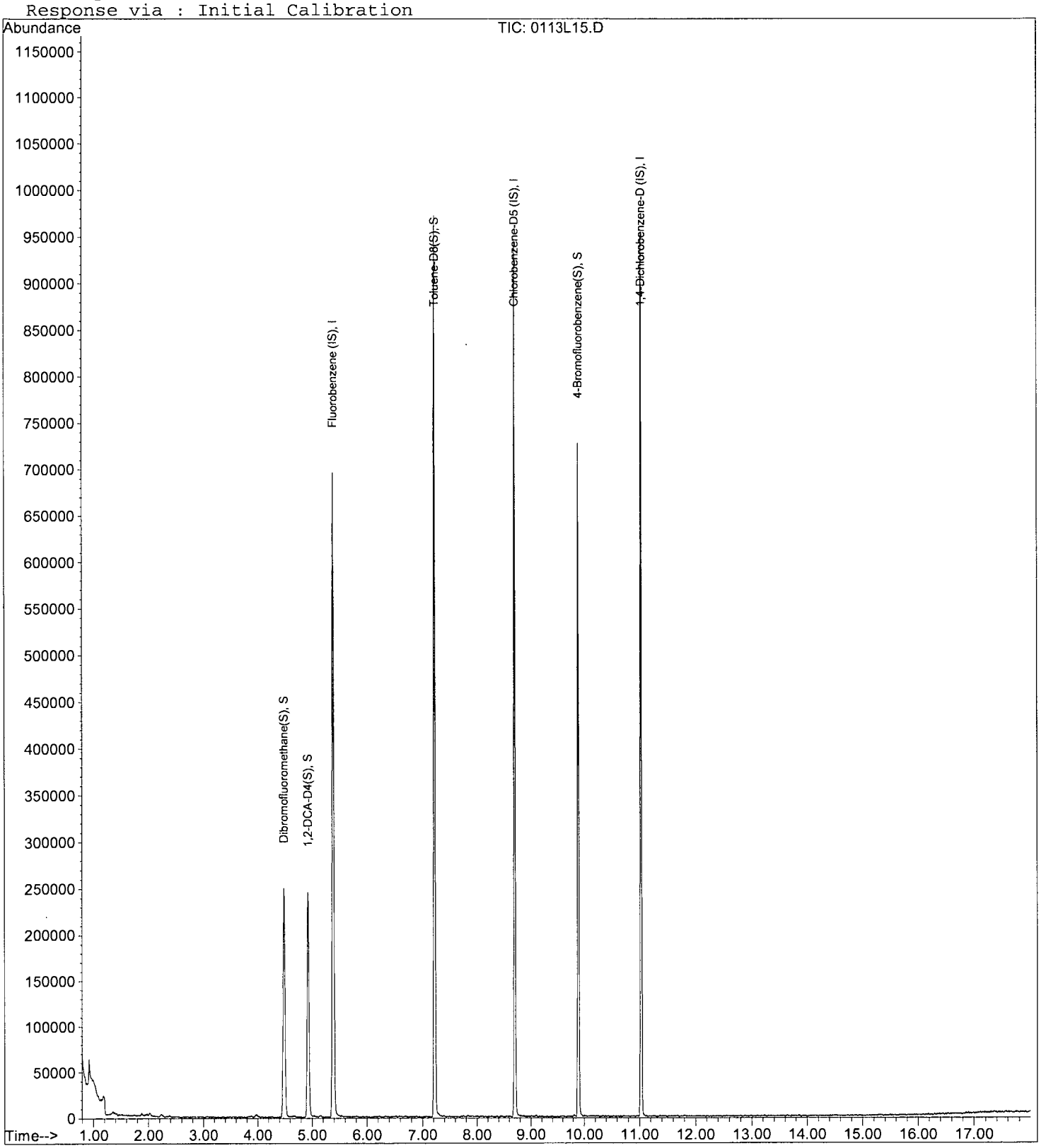
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L15.D Vial: 12
Acq On : 13 Jan 17 14:38 Operator: PM,DG,SV,CMM
Sample : AZ48866W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 8:49 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH162
Sample Collection Date: 01/09/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48867
QCG: #86BTO-170113AL-215494

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/13/17	01/13/17
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/13/17	01/13/17
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/13/17	01/13/17
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/13/17	01/13/17
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	100	81-118			%	01/13/17	01/13/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	96.8	85-114			%	01/13/17	01/13/17
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	99.6	80-119			%	01/13/17	01/13/17
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	98.8	89-112			%	01/13/17	01/13/17

Quant Method: LALLW.M
Run #: 0113L16
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/17/17 8:22:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L16.D Vial: 13
Acq On : 13 Jan 17 15:06 Operator: PM,DG,SV,CMM
Sample : AZ48867W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 8:52 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	327552	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	305152	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	150592	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	182044	24.91	ppb	0.00
Spiked Amount 25.000			Recovery =	99.624%		
37) 1,2-DCA-D4(S)	4.92	65	198543	25.05	ppb	0.00
Spiked Amount 25.000			Recovery =	100.188%		
57) Toluene-D8(S)	7.22	98	603395	24.70	ppb	0.00
Spiked Amount 25.000			Recovery =	98.812%		
65) 4-Bromofluorobenzene(S)	9.89	95	205061	24.19	ppb	0.00
Spiked Amount 25.000			Recovery =	96.776%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

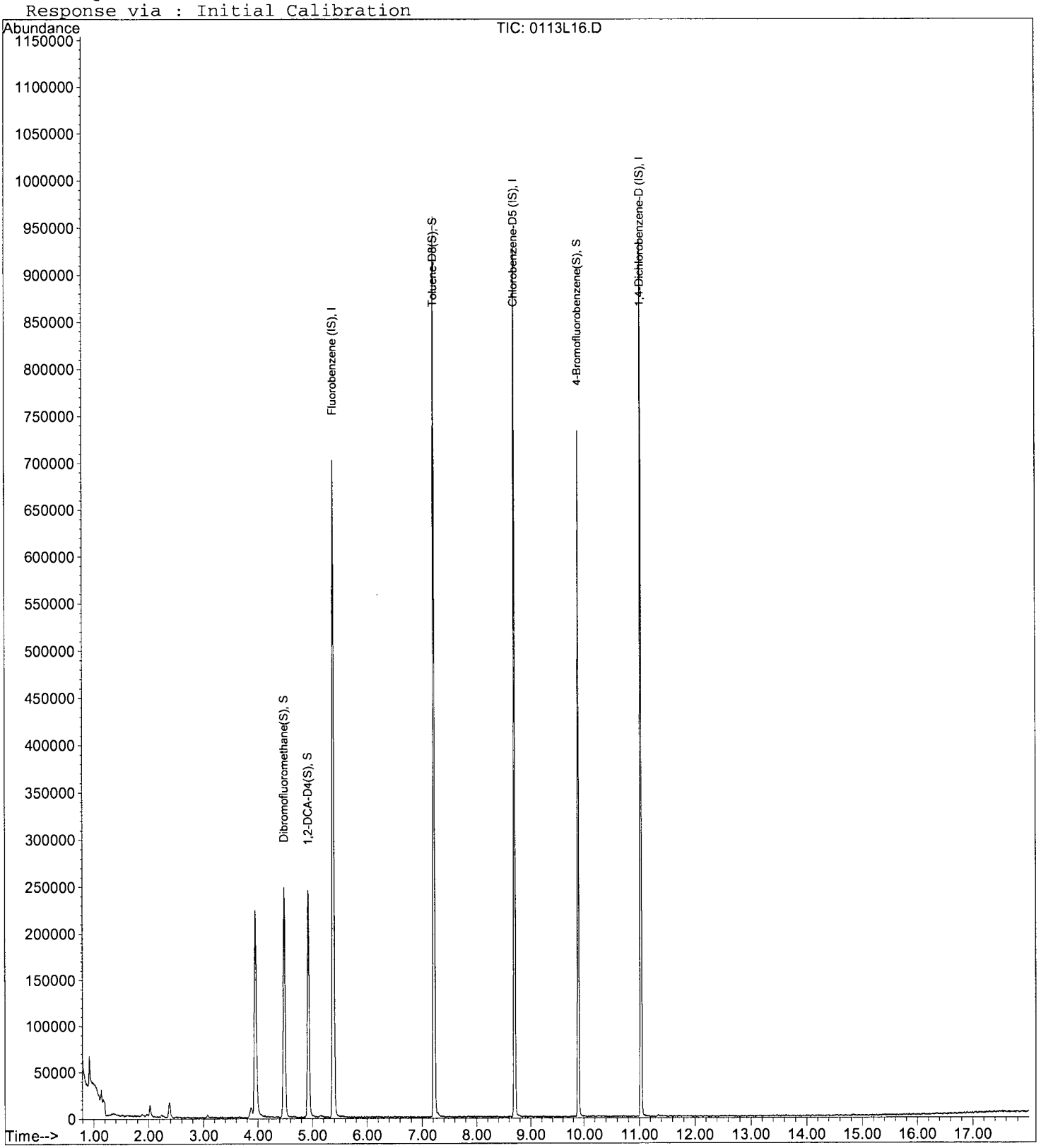
Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L16.D
Acq On : 13 Jan 17 15:06
Sample : AZ48867W01
Misc : W IS&S 1/3/17, 01/11/17

Vial: 13
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 8:52 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH164
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48868
QCG: #86BTO-170113AL-215494

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/13/17	01/13/17
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/13/17	01/13/17
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/13/17	01/13/17
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/13/17	01/13/17
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	96.1	81-118			%	01/13/17	01/13/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	98.7	85-114			%	01/13/17	01/13/17
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	97.5	80-119			%	01/13/17	01/13/17
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	101	89-112			%	01/13/17	01/13/17

Quant Method: LALLW.M
Run #: 0113L17
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/17/17 8:22:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L17.D Vial: 14
Acq On : 13 Jan 17 15:34 Operator: PM,DG,SV,CMM
Sample : AZ48868W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 8:57 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	333184	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	296768	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	153728	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	181284	24.38	ppb	0.00
Spiked Amount 25.000			Recovery =	97.528%		
37) 1,2-DCA-D4(S)	4.92	65	193743	24.03	ppb	0.00
Spiked Amount 25.000			Recovery =	96.112%		
57) Toluene-D8(S)	7.22	98	597865	25.17	ppb	0.00
Spiked Amount 25.000			Recovery =	100.672%		
65) 4-Bromofluorobenzene(S)	9.89	95	203427	24.68	ppb	0.00
Spiked Amount 25.000			Recovery =	98.716%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

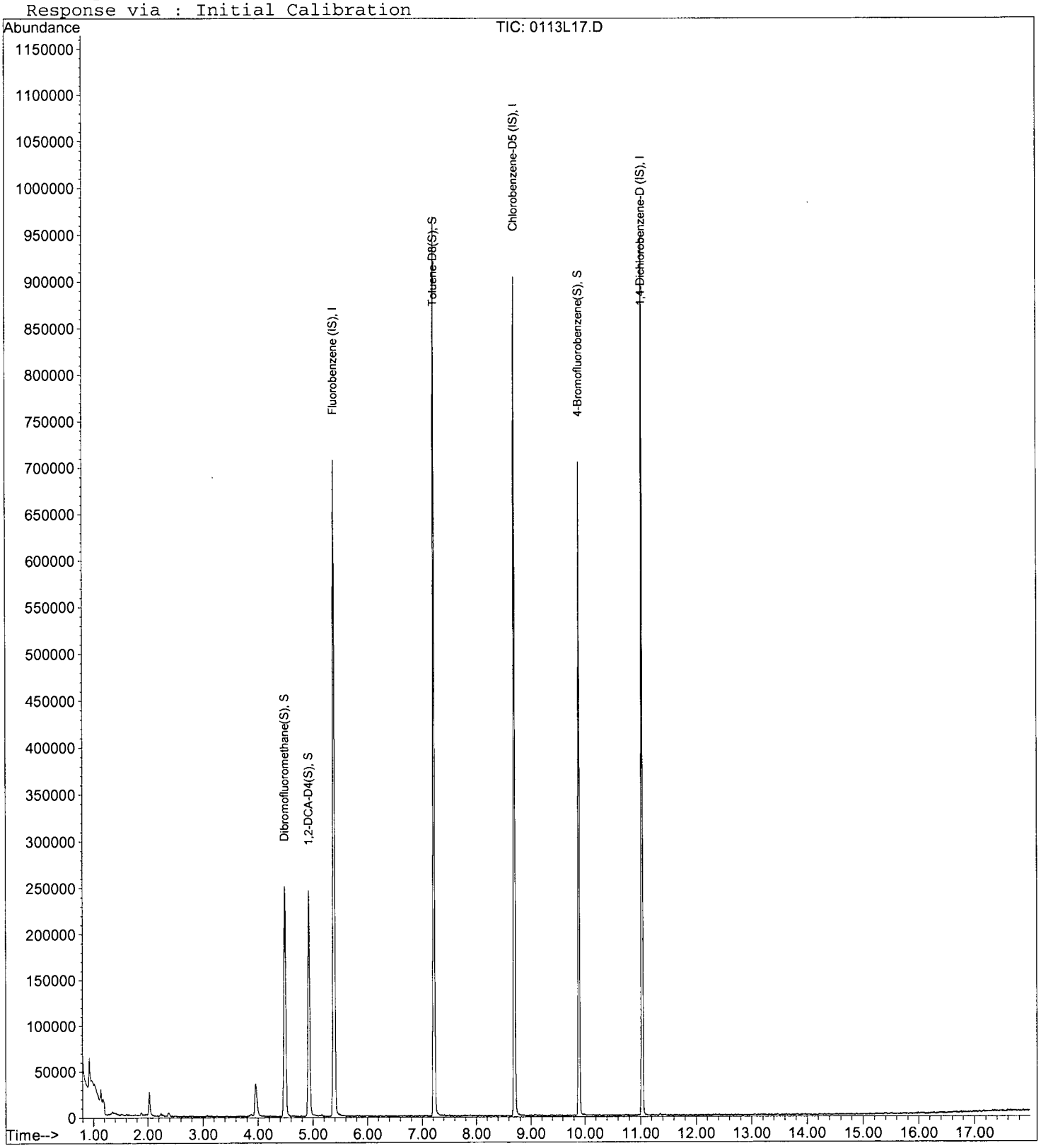
Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L17.D
Acq On : 13 Jan 17 15:34
Sample : AZ48868W01
Misc : W IS&S 1/3/17, 01/11/17

Vial: 14
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 8:57 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH163
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48869
QCG: #86BTO-170113AL-215494

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/13/17	01/13/17
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/13/17	01/13/17
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/13/17	01/13/17
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/13/17	01/13/17
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	96.8	81-118			%	01/13/17	01/13/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	95.4	85-114			%	01/13/17	01/13/17
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	98.7	80-119			%	01/13/17	01/13/17
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	98.1	89-112			%	01/13/17	01/13/17

Quant Method: LALLW.M
Run #: 0113L18
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/17/17 8:22:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L18.D Vial: 15
Acq On : 13 Jan 17 16:02 Operator: PM,DG,SV,CMM
Sample : AZ48869W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 8:58 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	323840	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	300096	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	149824	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	178248	24.67	ppb	0.00
Spiked Amount 25.000			Recovery = 98.664%			
37) 1,2-DCA-D4(S)	4.92	65	189736	24.21	ppb	0.00
Spiked Amount 25.000			Recovery = 96.840%			
57) Toluene-D8(S)	7.22	98	589328	24.53	ppb	0.00
Spiked Amount 25.000			Recovery = 98.132%			
65) 4-Bromofluorobenzene(S)	9.89	95	198870	23.86	ppb	0.00
Spiked Amount 25.000			Recovery = 95.432%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

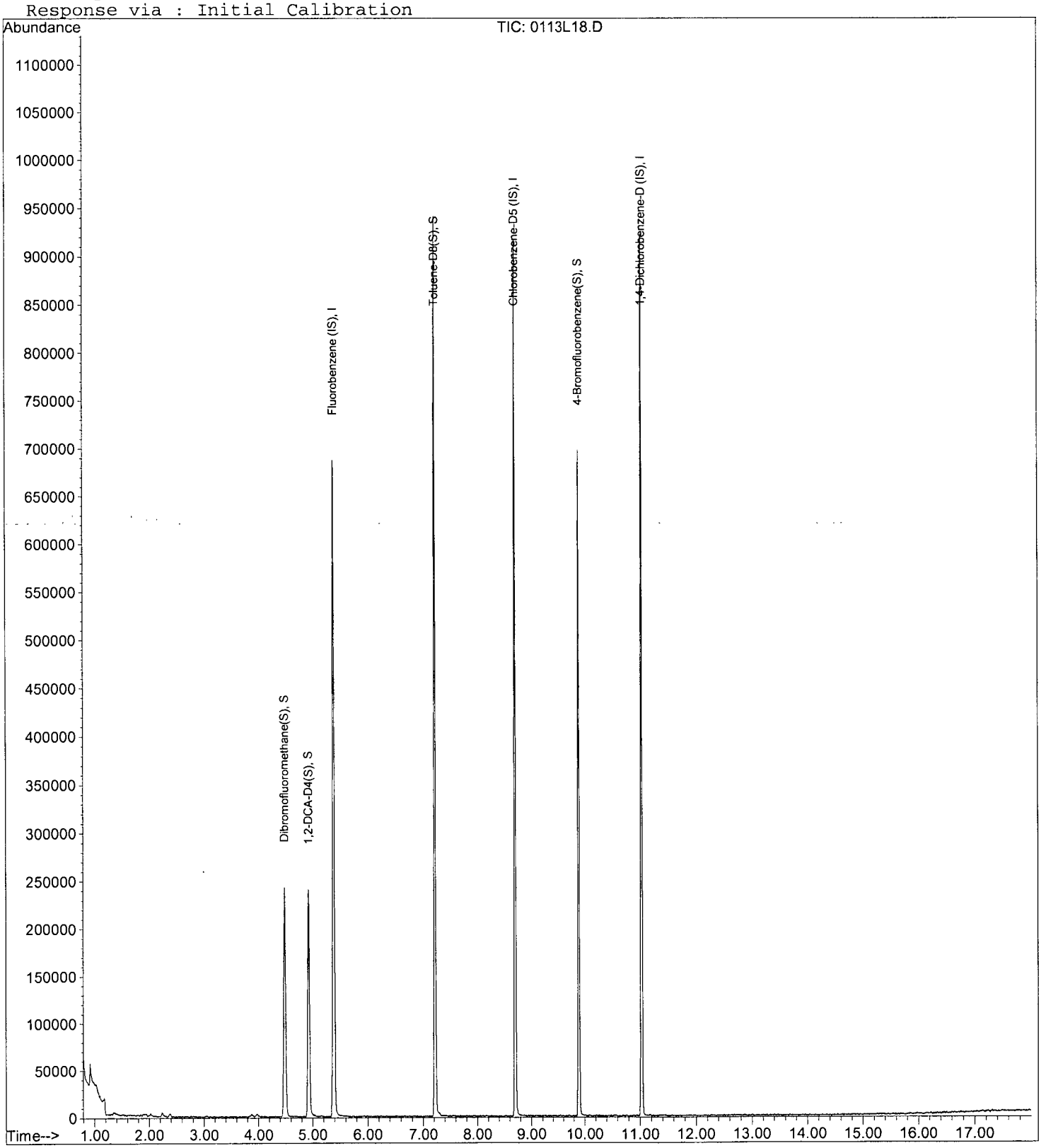
Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L18.D
Acq On : 13 Jan 17 16:02
Sample : AZ48869W01
Misc : W IS&S 1/3/17, 01/11/17

Vial: 15
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 8:58 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH167
Sample Collection Date: 01/09/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48870
QCG: #86BTO-170113AL-215494

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/13/17	01/13/17
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/13/17	01/13/17
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/13/17	01/13/17
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/13/17	01/13/17
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	98.9	81-118			%	01/13/17	01/13/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	94.5	85-114			%	01/13/17	01/13/17
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	102	80-119			%	01/13/17	01/13/17
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	99.3	89-112			%	01/13/17	01/13/17

Quant Method: LALLW.M
Run #: 0113L19
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/17/17 8:22:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L19.D Vial: 16
Acq On : 13 Jan 17 16:30 Operator: PM,DG,SV,CMM
Sample : AZ48870W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 8:59 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	320768	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	298176	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	157696	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	182194	25.45	ppb	0.00
Spiked Amount 25.000			Recovery = 101.812%			
37) 1,2-DCA-D4(S)	4.93	65	191912	24.72	ppb	0.00
Spiked Amount 25.000			Recovery = 98.888%			
57) Toluene-D8(S)	7.22	98	592763	24.84	ppb	0.00
Spiked Amount 25.000			Recovery = 99.340%			
65) 4-Bromofluorobenzene(S)	9.89	95	195601	23.62	ppb	0.00
Spiked Amount 25.000			Recovery = 94.468%			

Target Compounds Qvalue

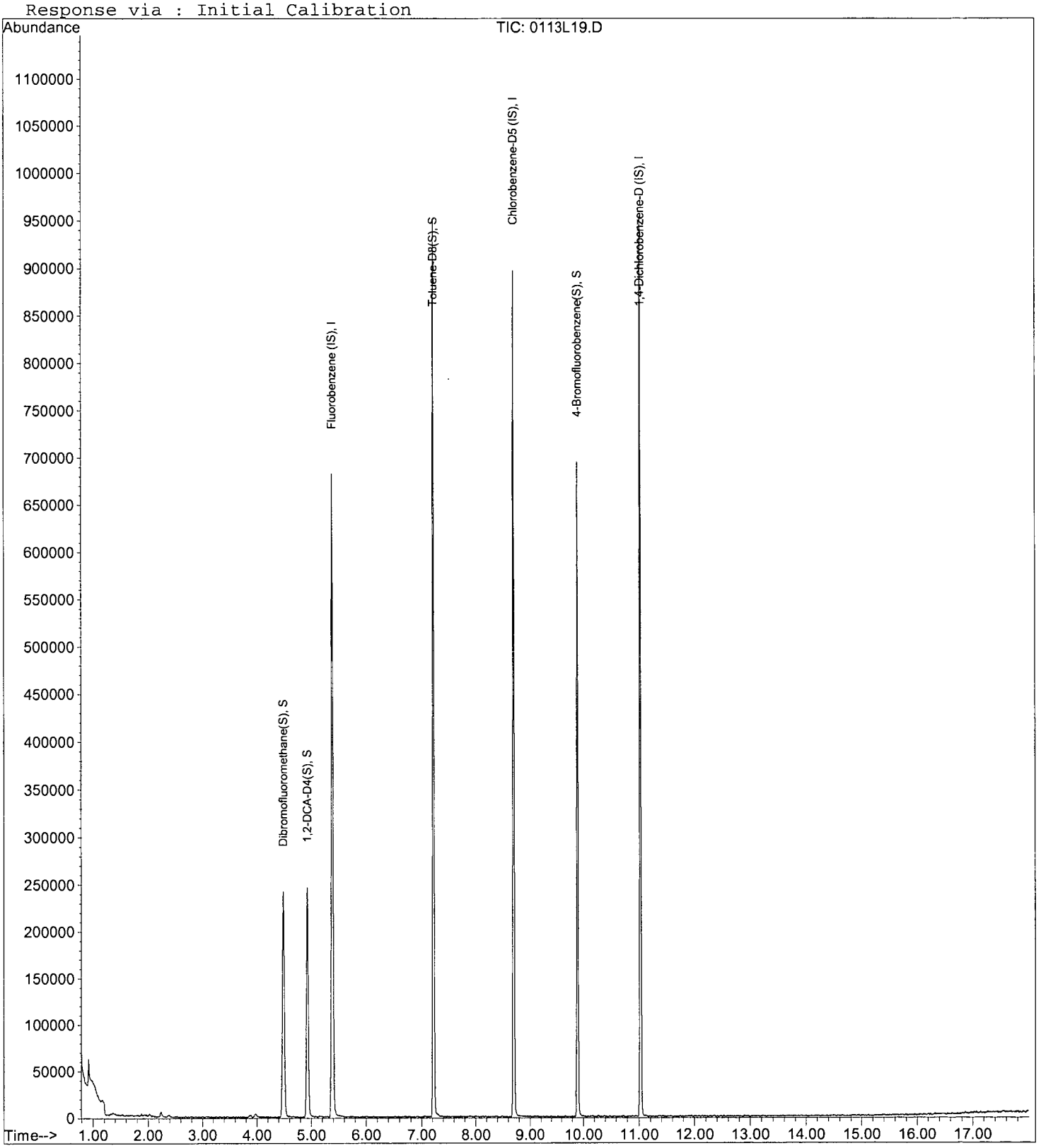
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L19.D Vial: 16
Acq On : 13 Jan 17 16:30 Operator: PM,DG,SV,CMM
Sample : AZ48870W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 8:59 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH168
Sample Collection Date: 01/09/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48871
QCG: #86BTO-170113AL-215494

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/13/17	01/13/17
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/13/17	01/13/17
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/13/17	01/13/17
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/13/17	01/13/17
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	99.4	81-118			%	01/13/17	01/13/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	93.6	85-114			%	01/13/17	01/13/17
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	98.4	80-119			%	01/13/17	01/13/17
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	95.6	89-112			%	01/13/17	01/13/17

Quant Method: LALLW.M
Run #: 0113L20
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/17/17 8:22:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L20.D Vial: 17
Acq On : 13 Jan 17 16:58 Operator: PM,DG,SV,CMM
Sample : AZ48871W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 9:04 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	321856	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	308864	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	151936	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	176755	24.61	ppb	0.00
Spiked Amount 25.000			Recovery =	98.440%		
37) 1,2-DCA-D4(S)	4.92	65	193493	24.84	ppb	0.00
Spiked Amount 25.000			Recovery =	99.368%		
57) Toluene-D8(S)	7.22	98	590668	23.89	ppb	0.00
Spiked Amount 25.000			Recovery =	95.564%		
65) 4-Bromofluorobenzene(S)	9.89	95	200817	23.41	ppb	0.00
Spiked Amount 25.000			Recovery =	93.632%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

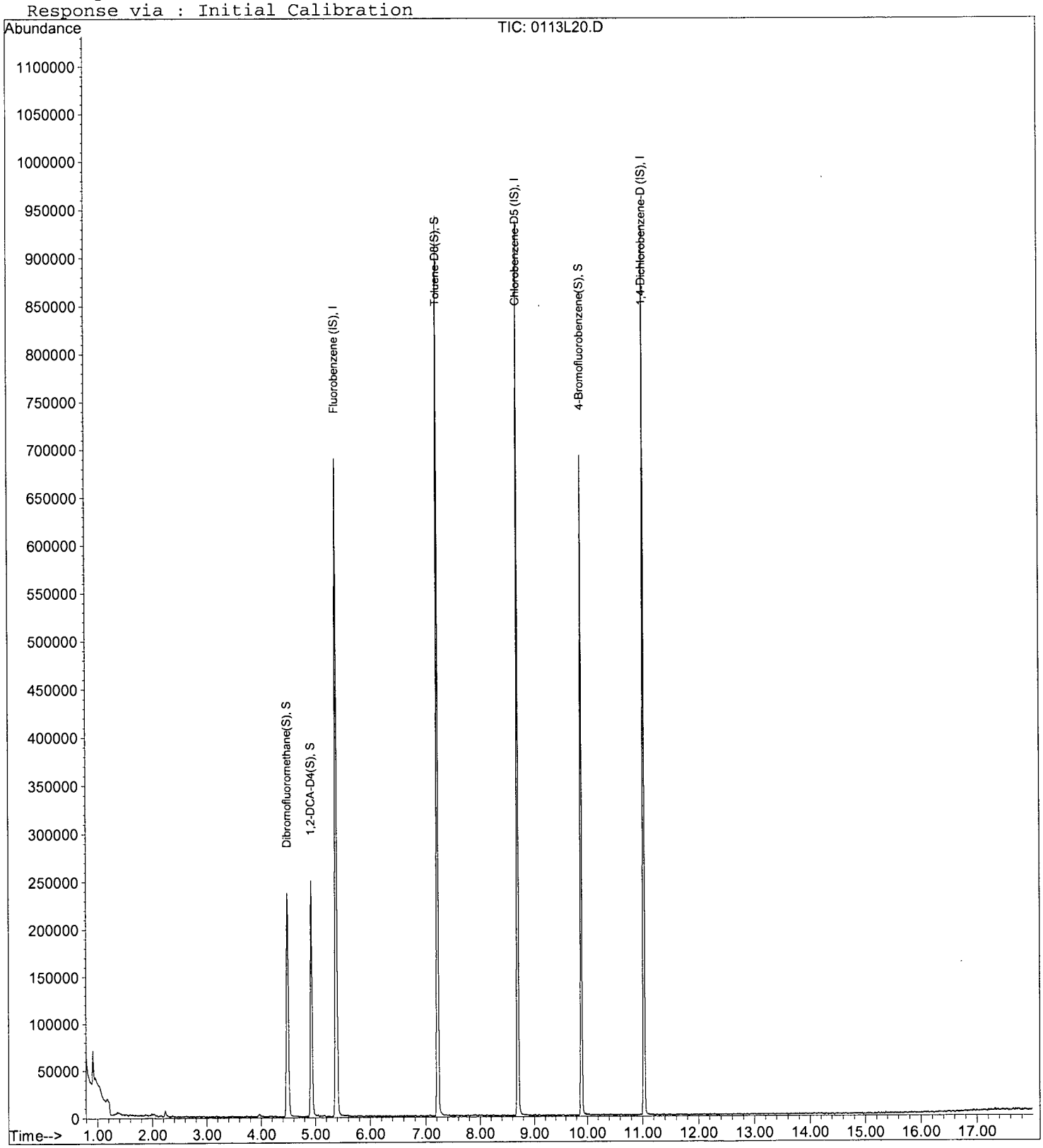
Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L20.D
Acq On : 13 Jan 17 16:58
Sample : AZ48871W01
Misc : W IS&S 1/3/17, 01/11/17

Vial: 17
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 9:04 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



EPA 8260B BTEX & 1,2-DCA WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH169
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48872
QCG: #86BTO-170113AL1-215495

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	01/13/17	01/13/17
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/13/17	01/13/17
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/13/17	01/13/17
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/13/17	01/13/17
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/13/17	01/13/17
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	98.3	81-118			%	01/13/17	01/13/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	97.1	85-114			%	01/13/17	01/13/17
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	101	80-119			%	01/13/17	01/13/17
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	101	89-112			%	01/13/17	01/13/17

Quant Method: LALLW.M
Run #: 0113L21
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/17/17 8:22:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L21.D Vial: 18
Acq On : 13 Jan 17 17:26 Operator: PM,DG,SV,CMM
Sample : AZ48872W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 9:06 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	318592	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	288448	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	148224	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	178999	25.18	ppb	0.00
Spiked Amount 25.000			Recovery = 100.712%			
37) 1,2-DCA-D4(S)	4.92	65	189471	24.57	ppb	0.00
Spiked Amount 25.000			Recovery = 98.296%			
57) Toluene-D8(S)	7.22	98	581065	25.17	ppb	0.00
Spiked Amount 25.000			Recovery = 100.664%			
65) 4-Bromofluorobenzene(S)	9.89	95	194525	24.28	ppb	0.00
Spiked Amount 25.000			Recovery = 97.120%			

Target Compounds Qvalue

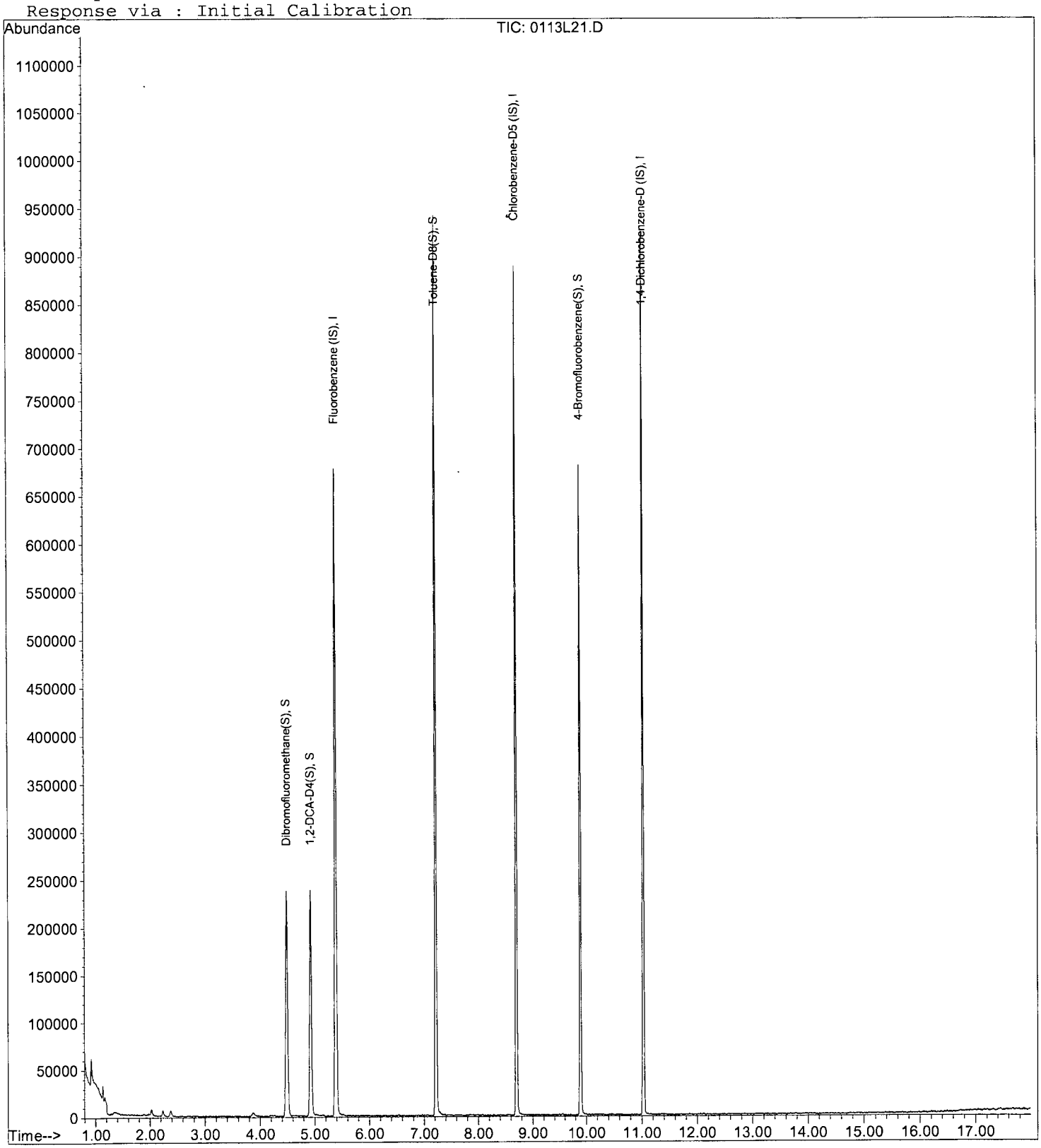
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L21.D Vial: 18
Acq On : 13 Jan 17 17:26 Operator: PM,DG,SV,CMM
Sample : AZ48872W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 9:06 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



EPA 8260B BTEX & 1,2-DCA WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH170
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48873
QCG: #86BTO-170113BL-215498

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	01/14/17	01/14/17
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/14/17	01/14/17
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/14/17	01/14/17
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/14/17	01/14/17
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	97.7	81-118			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	96.7	85-114			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	101	80-119			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	98.9	89-112			%	01/14/17	01/14/17

Quant Method: LALLW.M
Run #: 0113L43
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/17/17 8:22:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L43.D
Acq On : 14 Jan 17 3:42
Sample : AZ48873W01
Misc : W IS&S 1/3/17, 01/11/17

Vial: 40
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 9:39 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	315712	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	297792	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	147840	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	178684	25.36	ppb	0.00
Spiked Amount 25.000			Recovery = 101.452%			
37) 1,2-DCA-D4(S)	4.92	65	186597	24.42	ppb	0.00
Spiked Amount 25.000			Recovery = 97.688%			
57) Toluene-D8(S)	7.22	98	589483	24.73	ppb	0.00
Spiked Amount 25.000			Recovery = 98.920%			
65) 4-Bromofluorobenzene(S)	9.89	95	199963	24.18	ppb	0.00
Spiked Amount 25.000			Recovery = 96.700%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

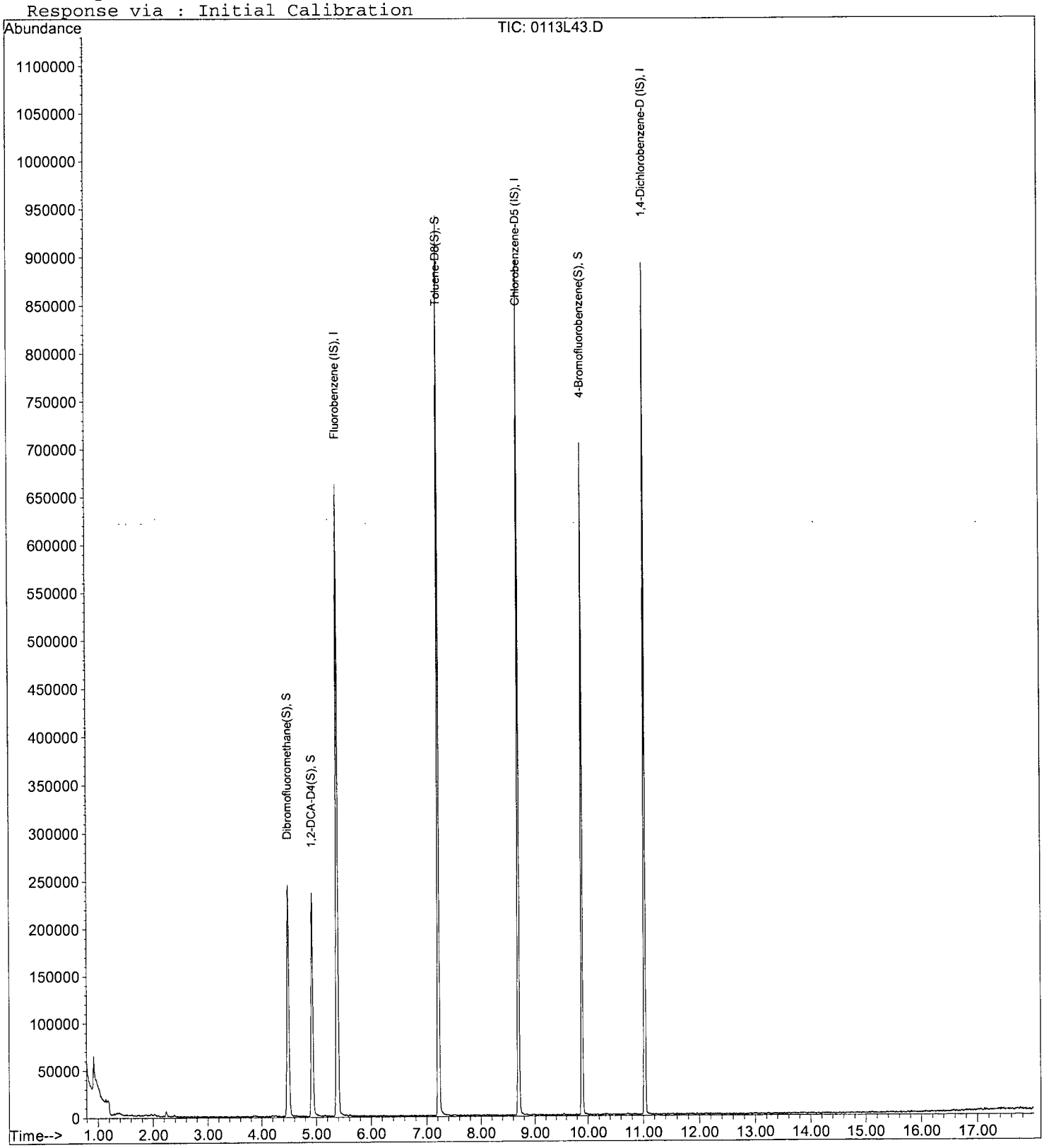
Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L43.D
Acq On : 14 Jan 17 3:42
Sample : AZ48873W01
Misc : W IS&S 1/3/17, 01/11/17

Vial: 40
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 9:39 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



EPA 8260B BTEX & 1,2-DCA WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH177
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48874
QCG: #86BTO-170113BL-215498

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	01/14/17	01/14/17
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/14/17	01/14/17
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/14/17	01/14/17
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/14/17	01/14/17
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	95.6	81-118			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	94.8	85-114			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	101	80-119			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	97.0	89-112			%	01/14/17	01/14/17

Quant Method: LALLW.M
Run #: 0113L44
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/17/17 8:22:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L44.D Vial: 41
Acq On : 14 Jan 17 4:10 Operator: PM,DG,SV,CMM
Sample : AZ48874W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 9:41 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	306816	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	291840	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	141632	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	173124	25.29	ppb	0.00
Spiked Amount 25.000			Recovery = 101.144%			
37) 1,2-DCA-D4(S)	4.92	65	177544	23.91	ppb	0.00
Spiked Amount 25.000			Recovery = 95.644%			
57) Toluene-D8(S)	7.22	98	566254	24.24	ppb	0.00
Spiked Amount 25.000			Recovery = 96.960%			
65) 4-Bromofluorobenzene(S)	9.89	95	192027	23.69	ppb	0.00
Spiked Amount 25.000			Recovery = 94.756%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

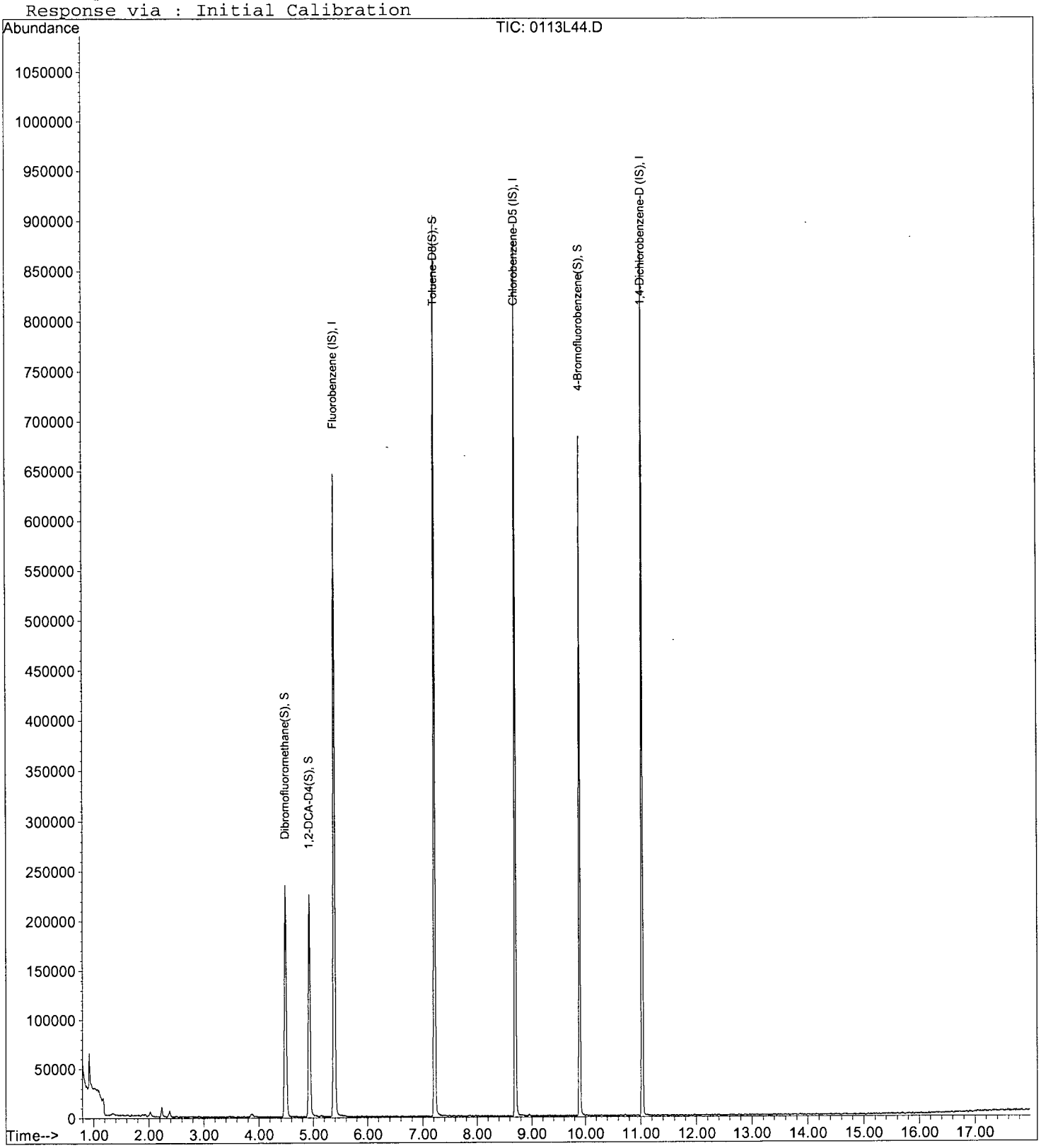
Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L44.D
Acq On : 14 Jan 17 4:10
Sample : AZ48874W01
Misc : W IS&S 1/3/17, 01/11/17

Vial: 41
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 9:41 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH174
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48875
QCG: #86BTO-170113BL1-215499

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/14/17	01/14/17
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/14/17	01/14/17
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/14/17	01/14/17
EPA 8260B	XYLENES (TOTAL)	0.26 J	2.0	0.30	0.19	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	95.5	81-118			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	101	85-114			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	98.7	80-119			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	100	89-112			%	01/14/17	01/14/17

J = Estimated value.

Quant Method: LALLW.M
Run #: 0113L45
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/17/17 8:22:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L45.D
Acq On : 14 Jan 17 4:38
Sample : AZ48875W01
Misc : W IS&S 1/3/17, 01/11/17

Vial: 42
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 9:45 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	312960	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	286272	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	156864	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	172366	24.68	ppb	0.00
Spiked Amount 25.000			Recovery = 98.724%			
37) 1,2-DCA-D4(S)	4.92	65	180764	23.87	ppb	0.00
Spiked Amount 25.000			Recovery = 95.468%			
57) Toluene-D8(S)	7.22	98	575369	25.11	ppb	0.00
Spiked Amount 25.000			Recovery = 100.436%			
65) 4-Bromofluorobenzene(S)	9.89	95	201638	25.36	ppb	0.00
Spiked Amount 25.000			Recovery = 101.436%			
Target Compounds						Qvalue
63) o-Xylene	9.38	106	2373	0.26	ppb	87
95) Naphthalene	13.22	128	1210905	146.43	ppb	98

(#) = qualifier out of range (m) = manual integration

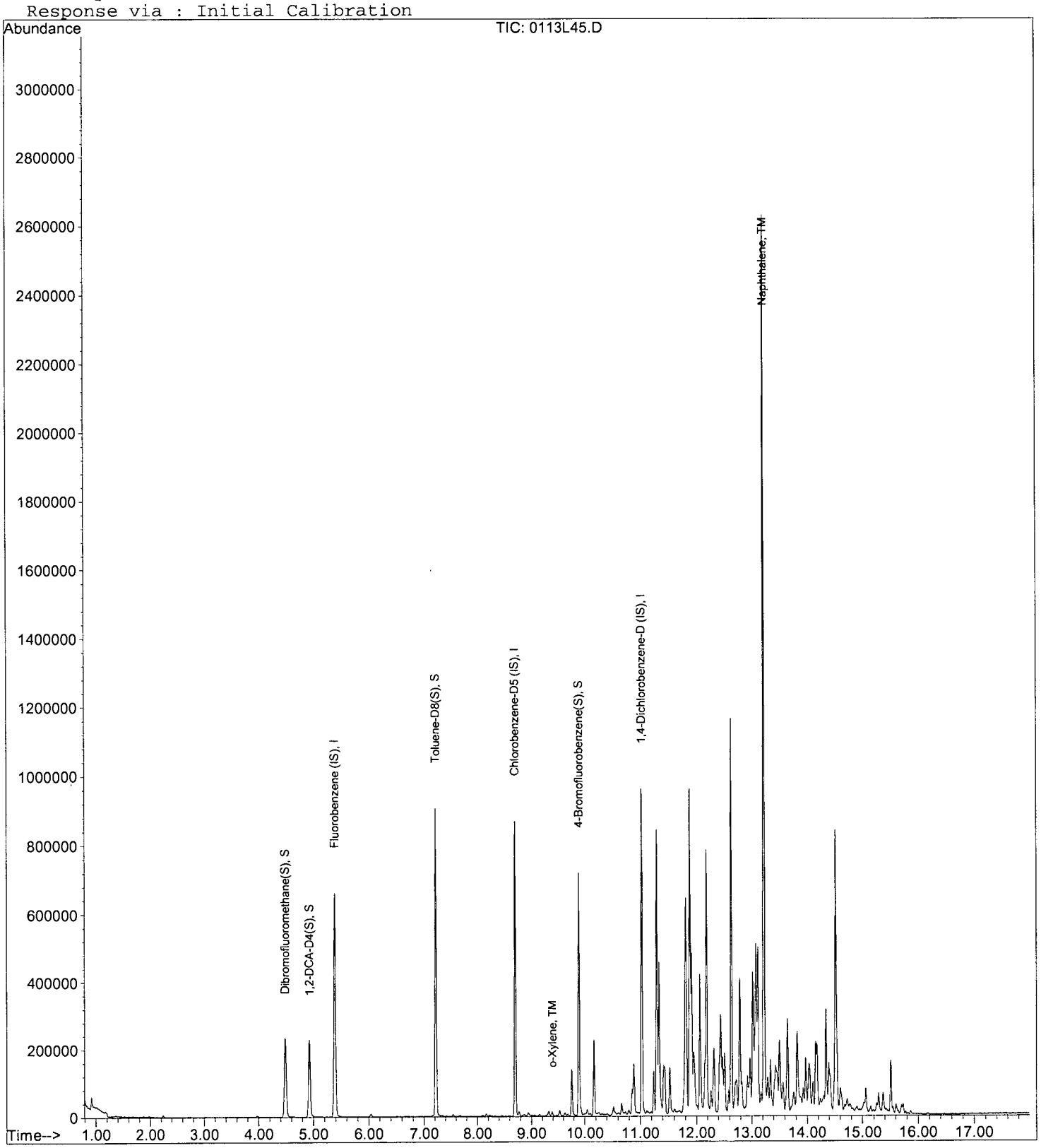
Quantitation Report

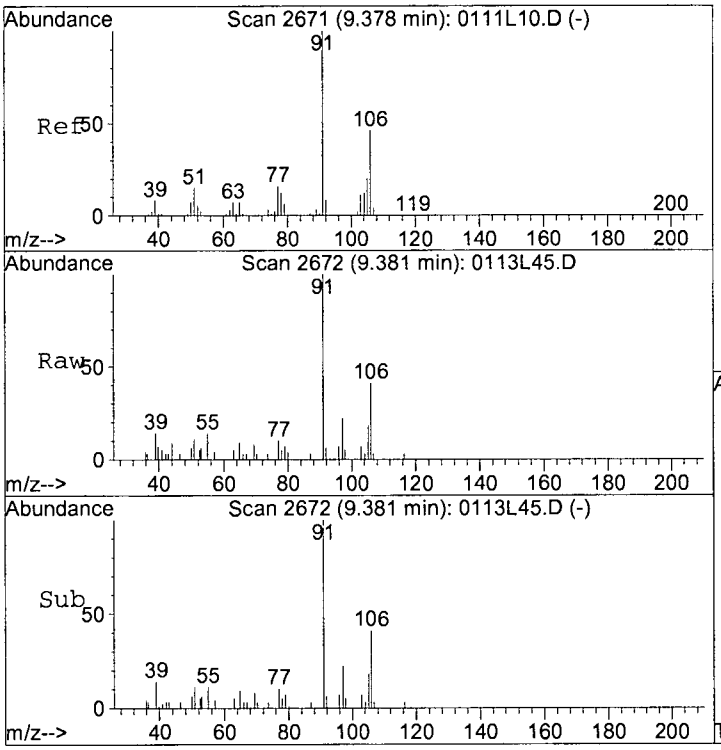
Data File : M:\LOKI\DATA\170111\0113L45.D
Acq On : 14 Jan 17 4:38
Sample : AZ48875W01
Misc : W IS&S 1/3/17, 01/11/17

Vial: 42
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 9:45 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration

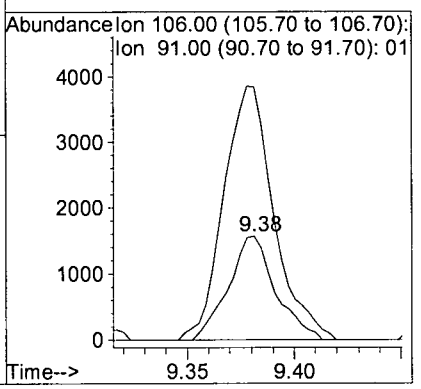


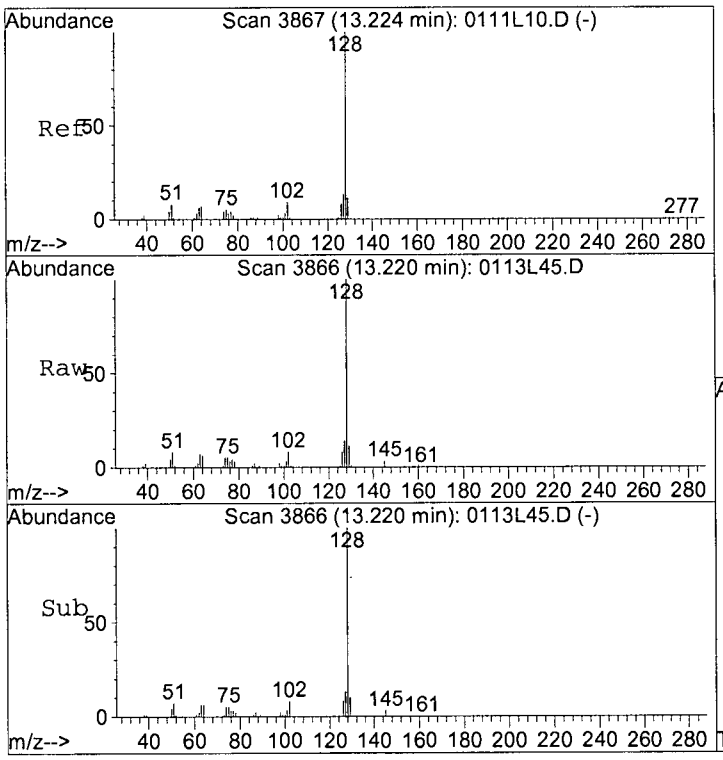


#63
o-Xylene
Concen: 0.26 ppb
RT: 9.38 min Scan# 2672
Delta R.T. 0.00 min
Lab File: 0113L45.D
Acq: 14 Jan 17 4:38

Tgt Ion:106 Resp: 2373

Ion	Ratio	Lower	Upper
106	100		
91	238.7	152.3	282.7

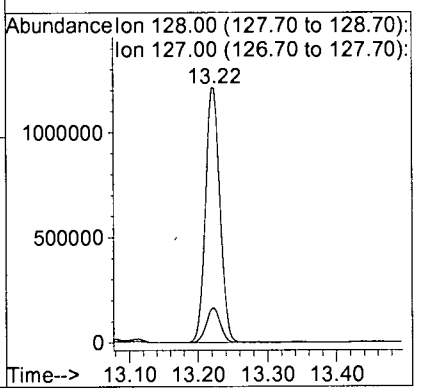




#95
Naphthalene
Concen: 146.43 ppb
RT: 13.22 min Scan# 3866
Delta R.T. -0.00 min
Lab File: 0113L45.D
Acq: 14 Jan 17 4:38

Tgt Ion:128 Resp: 1210905

Ion	Ratio	Lower	Upper
128	100		
127	13.5	9.0	16.8



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH175
Sample Collection Date: 01/10/07

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48876
QCG: #86BTO-170113BL1-215499

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/14/17	01/14/17
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/14/17	01/14/17
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/14/17	01/14/17
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	95.5	81-118			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	97.9	85-114			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	98.3	80-119			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	102	89-112			%	01/14/17	01/14/17

Quant Method: LALLW.M
Run #: 0113L46
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/17/17 8:22:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L46.D Vial: 43
Acq On : 14 Jan 17 5:06 Operator: PM,DG,SV,CMM
Sample : AZ48876W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 9:47 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	330880	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	299712	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	150848	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	181477	24.58	ppb	0.00
Spiked Amount 25.000			Recovery =	98.312%		
37) 1,2-DCA-D4(S)	4.92	65	191217	23.88	ppb	0.00
Spiked Amount 25.000			Recovery =	95.520%		
57) Toluene-D8(S)	7.22	98	611813	25.50	ppb	0.00
Spiked Amount 25.000			Recovery =	102.008%		
65) 4-Bromofluorobenzene(S)	9.89	95	203659	24.46	ppb	0.00
Spiked Amount 25.000			Recovery =	97.856%		
Target Compounds						Qvalue
95) Naphthalene	13.22	128	38888	4.89	ppb	97

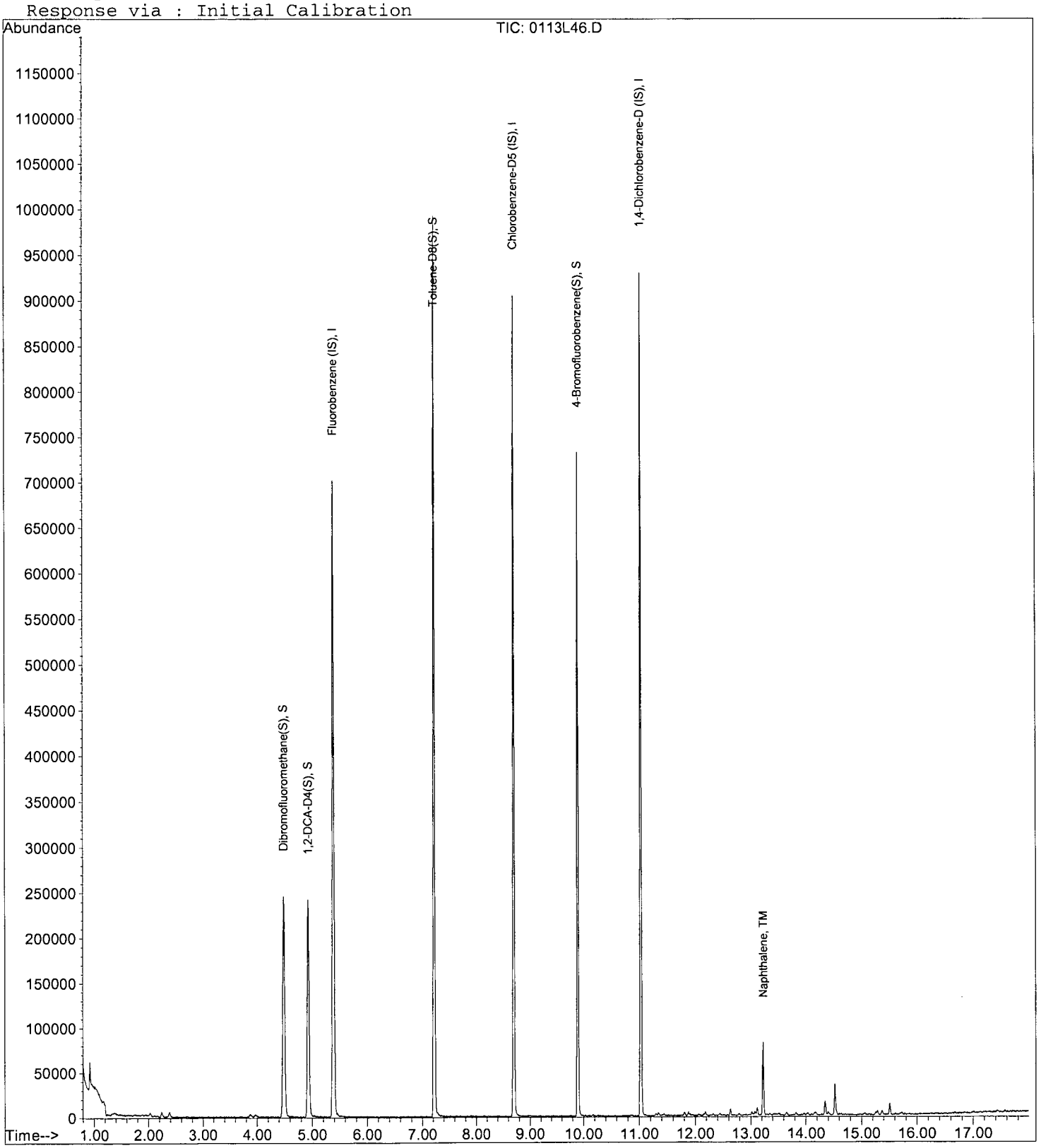
(#) = qualifier out of range (m) = manual integration

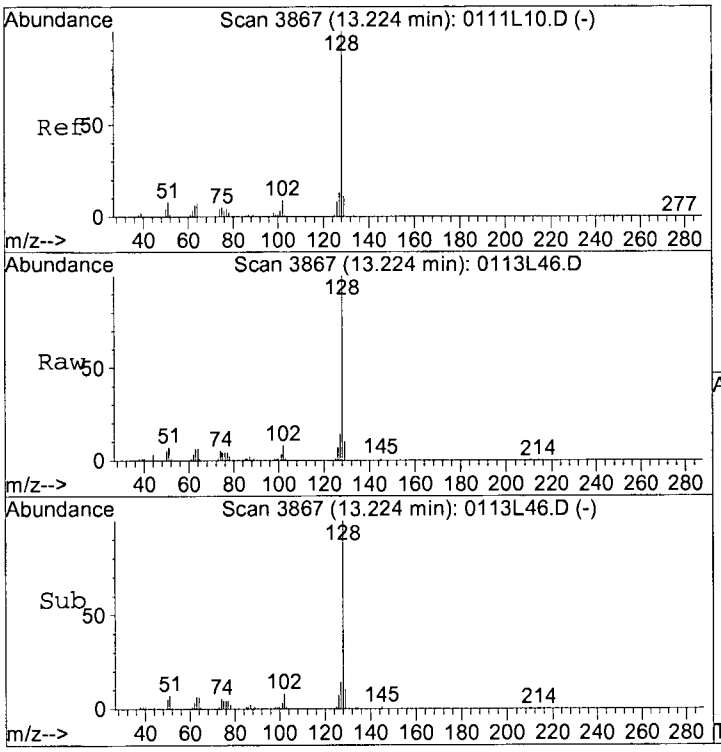
Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L46.D Vial: 43
Acq On : 14 Jan 17 5:06 Operator: PM,DG,SV,CMM
Sample : AZ48876W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 9:47 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration

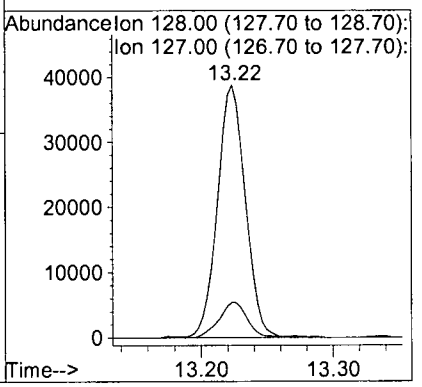




#95
Naphthalene
Concen: 4.89 ppb
RT: 13.22 min Scan# 3867
Delta R.T. 0.00 min
Lab File: 0113L46.D
Acq: 14 Jan 17 5:06

Tgt Ion:128 Resp: 38888

Ion	Ratio	Lower	Upper
128	100		
127	14.1	9.0	16.8



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH176
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48877
QCG: #86BTO-170113BL1-215499

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/14/17	01/14/17
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/14/17	01/14/17
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/14/17	01/14/17
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	97.5	81-118			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	99.0	85-114			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	101	80-119			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	99.1	89-112			%	01/14/17	01/14/17

Quant Method: LALLW.M
Run #: 0113L47
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/17/17 8:22:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L47.D Vial: 44
Acq On : 14 Jan 17 5:34 Operator: PM,DG,SV,CMM
Sample : AZ48877W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 9:48 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	319616	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	294464	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	149568	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	180111	25.25	ppb	0.00
Spiked Amount 25.000			Recovery =	101.012%		
37) 1,2-DCA-D4(S)	4.92	65	188545	24.38	ppb	0.00
Spiked Amount 25.000			Recovery =	97.504%		
57) Toluene-D8(S)	7.22	98	584210	24.79	ppb	0.00
Spiked Amount 25.000			Recovery =	99.140%		
65) 4-Bromofluorobenzene(S)	9.89	95	202355	24.74	ppb	0.00
Spiked Amount 25.000			Recovery =	98.964%		

Target Compounds Qvalue

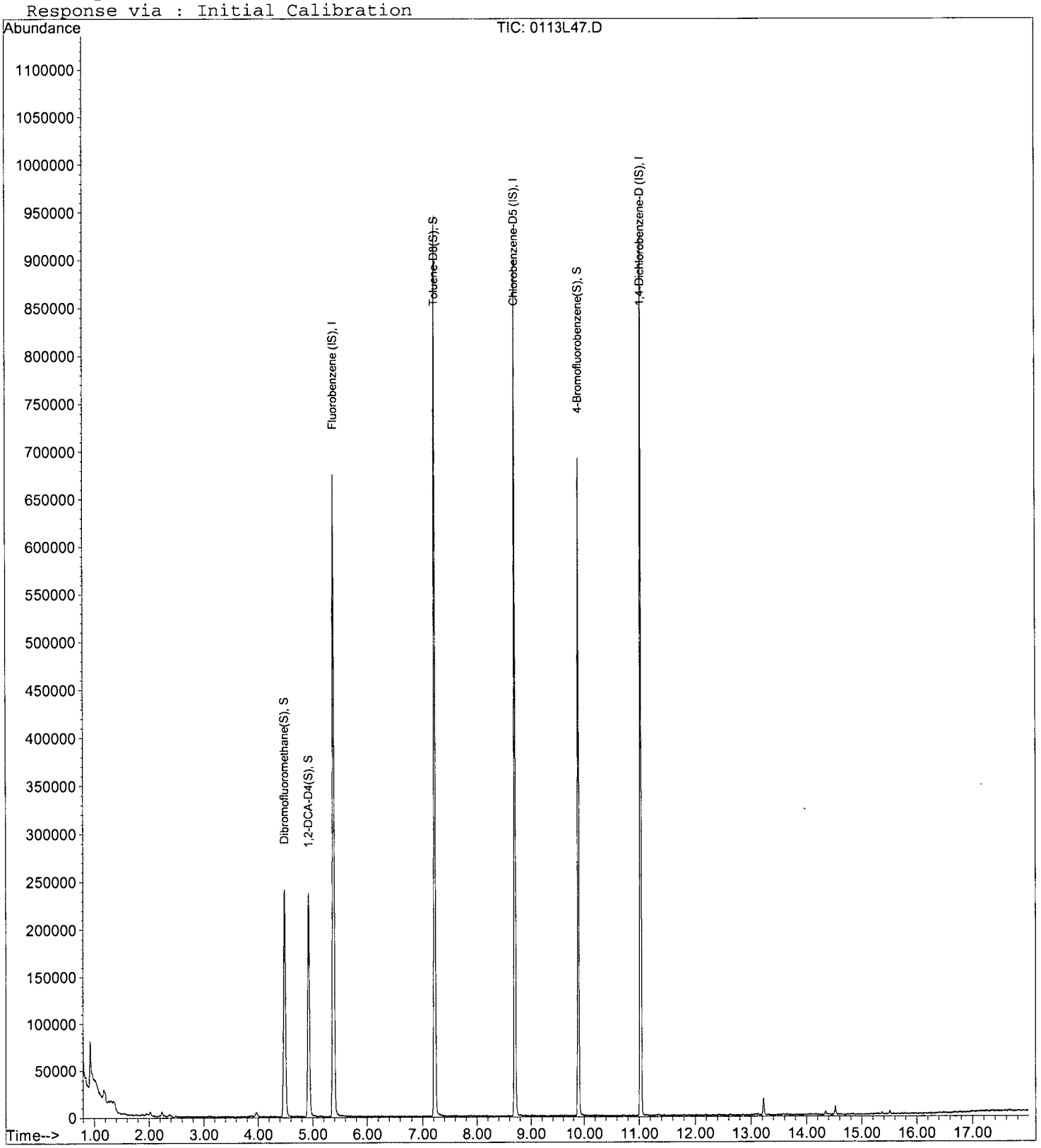
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L47.D Vial: 44
Acq On : 14 Jan 17 5:34 Operator: PM,DG,SV,CMM
Sample : AZ48877W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 9:48 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH179
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48878
QCG: #86BTO-170113BL1-215499

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/14/17	01/14/17
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/14/17	01/14/17
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/14/17	01/14/17
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	100	81-118			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	98.1	85-114			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	101	80-119			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	98.4	89-112			%	01/14/17	01/14/17

Quant Method: LALLW.M
Run #: 0113L48
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/17/17 8:22:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L48.D
Acq On : 14 Jan 17 6:02
Sample : AZ48878W01
Misc : W IS&S 1/3/17, 01/11/17

Vial: 45
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 9:49 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	319296	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	300800	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	148992	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	180342	25.31	ppb	0.00
Spiked Amount 25.000			Recovery =	101.244%		
37) 1,2-DCA-D4(S)	4.93	65	193747	25.07	ppb	0.00
Spiked Amount 25.000			Recovery =	100.296%		
57) Toluene-D8(S)	7.22	98	592365	24.60	ppb	0.00
Spiked Amount 25.000			Recovery =	98.408%		
65) 4-Bromofluorobenzene(S)	9.89	95	204937	24.53	ppb	0.00
Spiked Amount 25.000			Recovery =	98.116%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

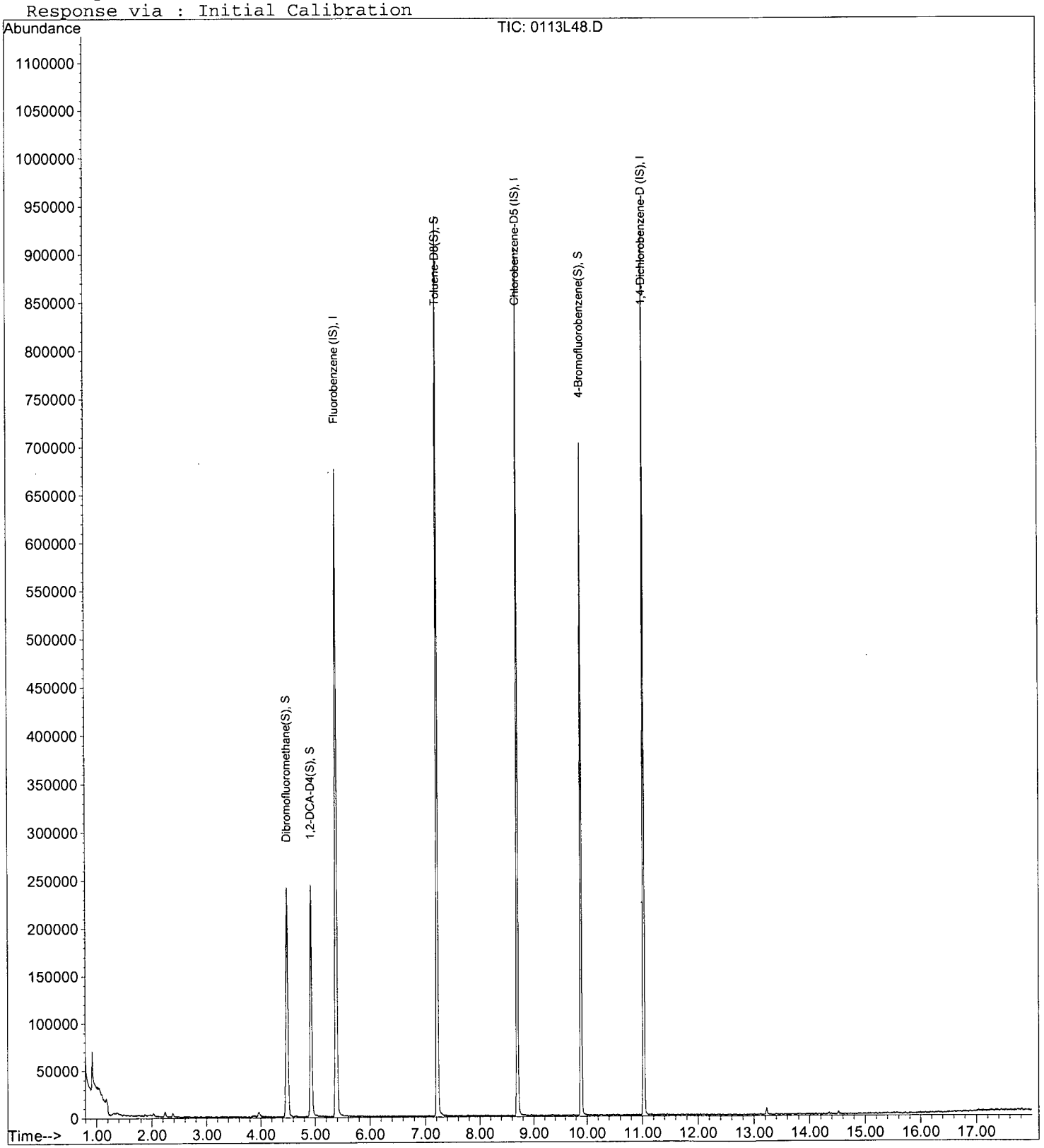
Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L48.D
Acq On : 14 Jan 17 6:02
Sample : AZ48878W01
Misc : W IS&S 1/3/17, 01/11/17

Vial: 45
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 9:49 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH197
Sample Collection Date: 01/09/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48879
QCG: #86BTO-170113BL1-215499

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/14/17	01/14/17
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/14/17	01/14/17
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/14/17	01/14/17
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	98.3	81-118			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	97.8	85-114			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	101	80-119			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	97.8	89-112			%	01/14/17	01/14/17

Quant Method: LALLW.M
Run #: 0113L49
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/17/17 8:22:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L49.D Vial: 46
Acq On : 14 Jan 17 6:30 Operator: PM,DG,SV,CMM
Sample : AZ48879W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 9:50 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	311616	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	298496	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	148288	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	176371	25.36	ppb	0.00
Spiked Amount 25.000			Recovery =	101.452%		
37) 1,2-DCA-D4(S)	4.93	65	185387	24.58	ppb	0.00
Spiked Amount 25.000			Recovery =	98.332%		
57) Toluene-D8(S)	7.22	98	584489	24.46	ppb	0.00
Spiked Amount 25.000			Recovery =	97.848%		
65) 4-Bromofluorobenzene(S)	9.89	95	202684	24.45	ppb	0.00
Spiked Amount 25.000			Recovery =	97.784%		

Target Compounds Qvalue

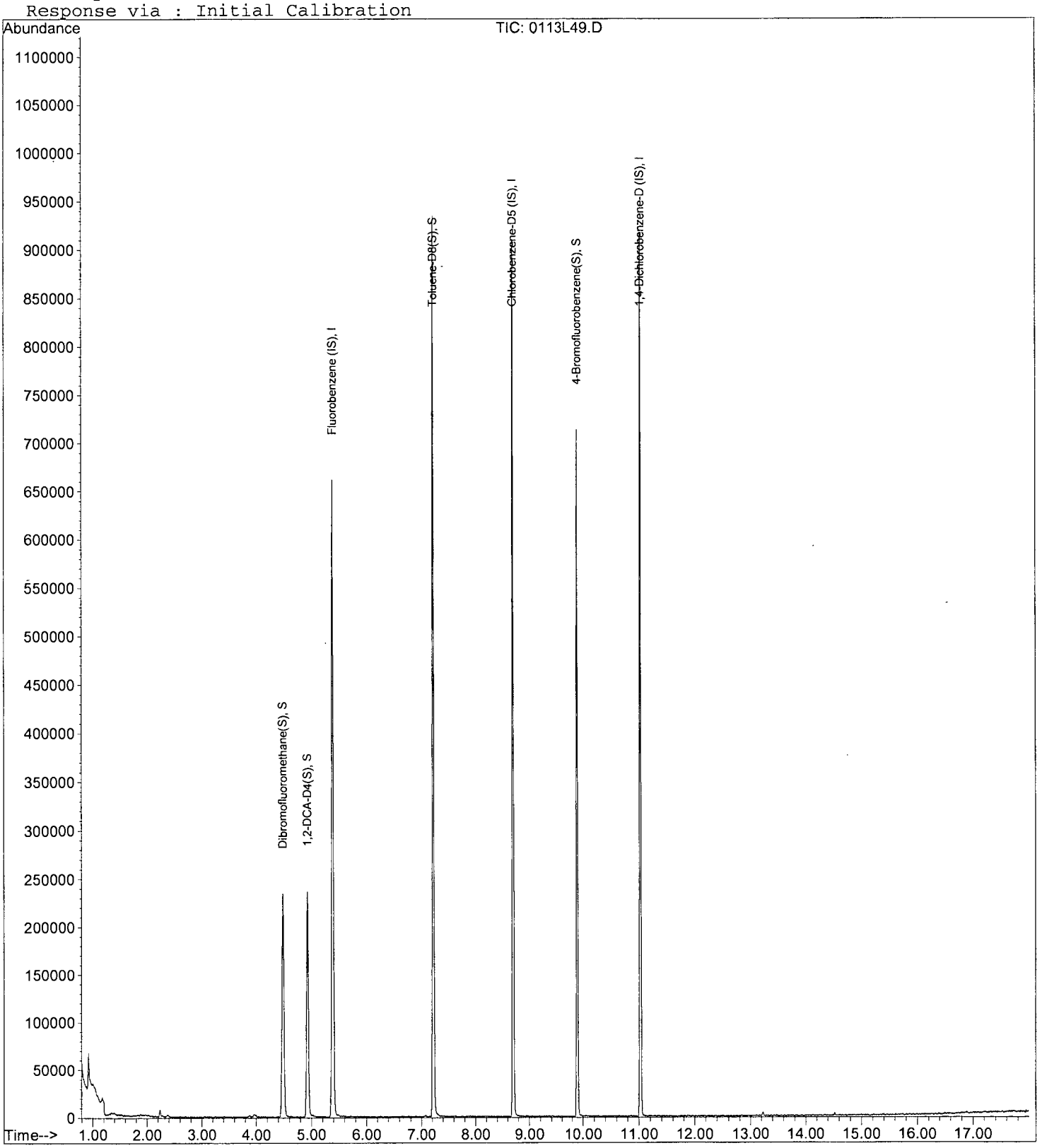
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L49.D Vial: 46
Acq On : 14 Jan 17 6:30 Operator: PM,DG,SV,CMM
Sample : AZ48879W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 9:50 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH186
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48880
QCG: #86BTO-170113BL1-215499

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/14/17	01/14/17
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/14/17	01/14/17
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/14/17	01/14/17
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	96.3	81-118			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	94.6	85-114			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	100	80-119			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	100	89-112			%	01/14/17	01/14/17

Quant Method: LALLW.M
Run #: 0113L50
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/17/17 8:22:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L50.D Vial: 47
Acq On : 14 Jan 17 6:58 Operator: PM,DG,SV,CMM
Sample : AZ48880W02 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 9:52 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	308416	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	285824	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	141952	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	172139	25.01	ppb	0.00
Spiked Amount 25.000			Recovery =	100.048%		
37) 1,2-DCA-D4(S)	4.93	65	179608	24.06	ppb	0.00
Spiked Amount 25.000			Recovery =	96.256%		
57) Toluene-D8(S)	7.22	98	571997	25.00	ppb	0.00
Spiked Amount 25.000			Recovery =	100.004%		
65) 4-Bromofluorobenzene(S)	9.89	95	187845	23.66	ppb	0.00
Spiked Amount 25.000			Recovery =	94.644%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

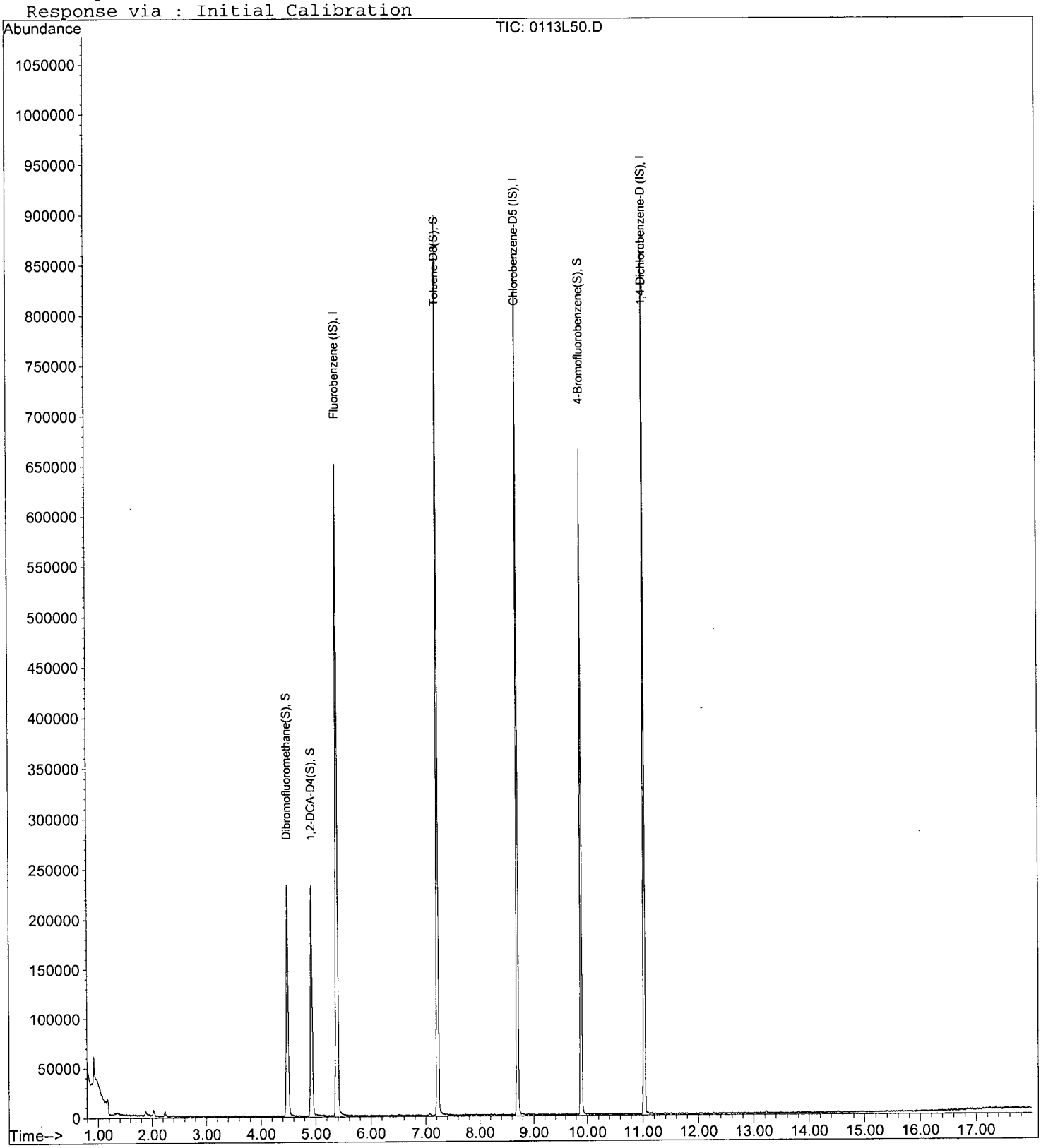
Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L50.D
Acq On : 14 Jan 17 6:58
Sample : AZ48880W02
Misc : W IS&S 1/3/17, 01/11/17

Vial: 47
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 9:52 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH187
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48881
QCG: #86BTO-170113BL1-215499

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/14/17	01/14/17
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/14/17	01/14/17
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/14/17	01/14/17
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	100	81-118			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	95.5	85-114			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	102	80-119			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	98.7	89-112			%	01/14/17	01/14/17

Quant Method: LALLW.M
Run #: 0113L51
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/17/17 8:22:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L51.D Vial: 48
Acq On : 14 Jan 17 7:26 Operator: PM,DG,SV,CMM
Sample : AZ48881W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 9:53 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	301632	25.00 ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	286848	25.00 ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	147392	25.00 ppb	0.00
System Monitoring Compounds					
32) Dibromofluoromethane(S)	4.48	111	171832	25.53 ppb	0.00
Spiked Amount 25.000			Recovery =	102.116%	
37) 1,2-DCA-D4(S)	4.92	65	183100	25.08 ppb	0.00
Spiked Amount 25.000			Recovery =	100.332%	
57) Toluene-D8(S)	7.22	98	566313	24.66 ppb	0.00
Spiked Amount 25.000			Recovery =	98.656%	
65) 4-Bromofluorobenzene(S)	9.89	95	190187	23.87 ppb	0.00
Spiked Amount 25.000			Recovery =	95.484%	
Target Compounds					Qvalue
11) Acetone	2.03	43	3330140	2554.92 ppb #	44
15) Acetonitrile	2.03	41	1372761	2177.55 ppb #	24
16) Methyl Acetate	2.03	43	3434758	950.98 ppb #	58

(#) = qualifier out of range (m) = manual integration

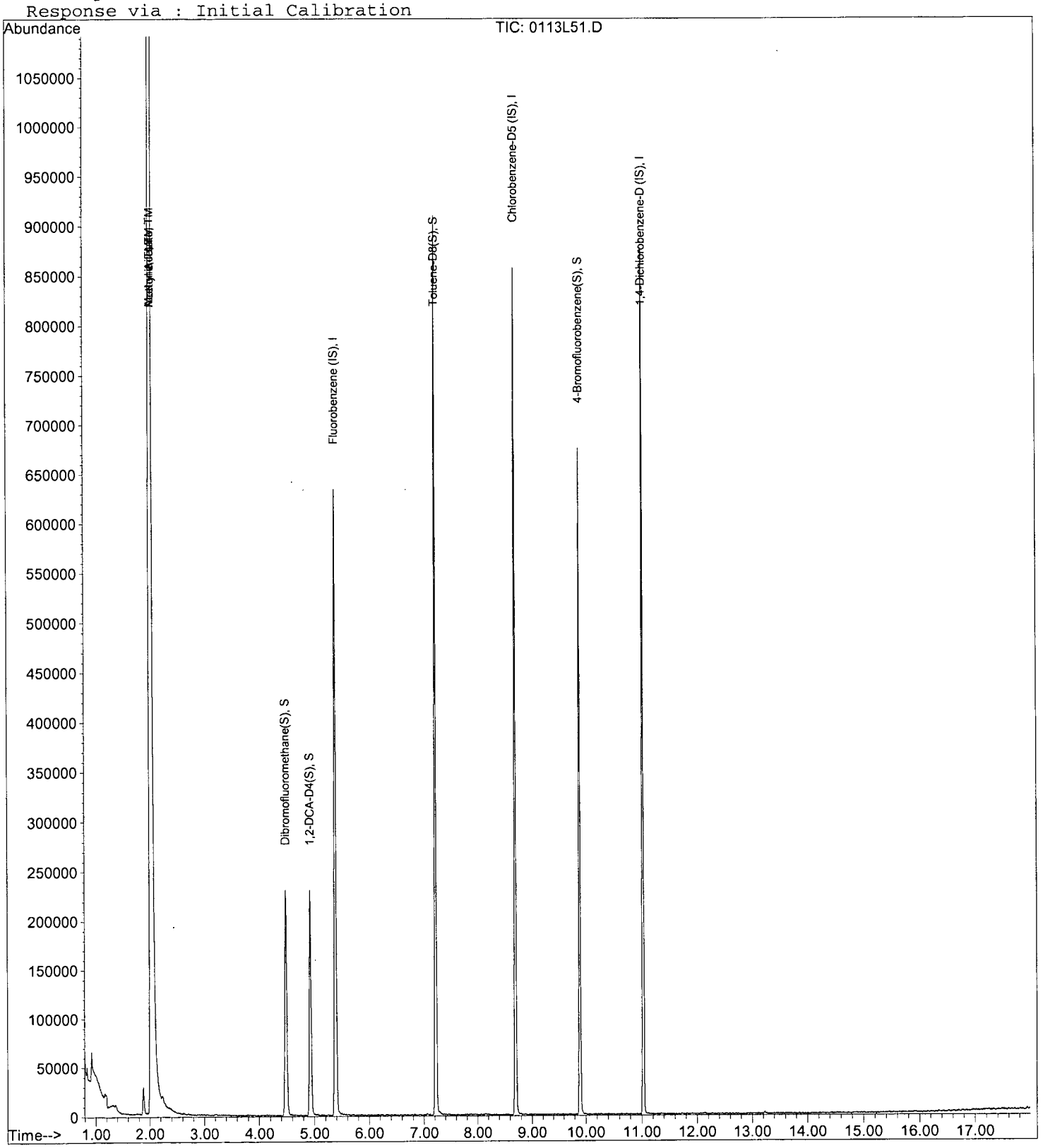
Quantitation Report

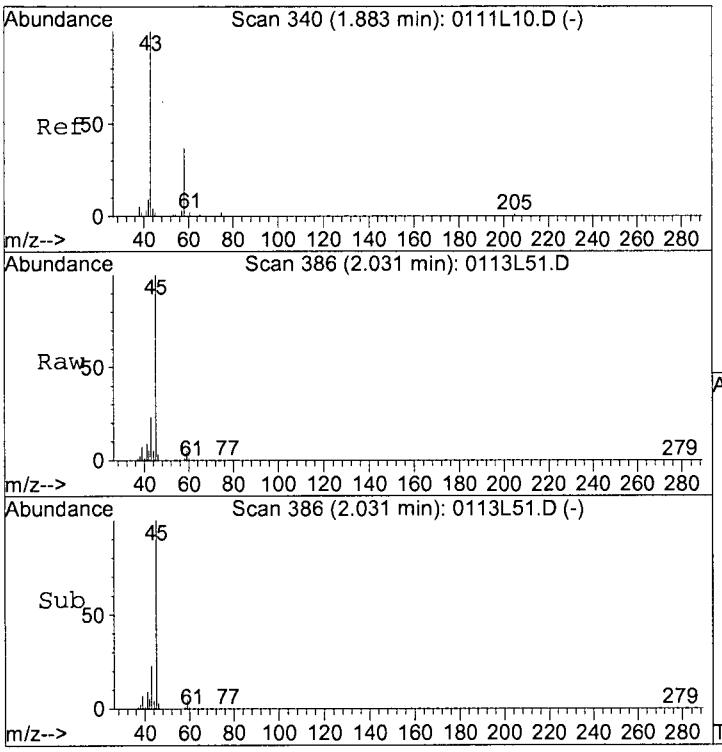
Data File : M:\LOKI\DATA\170111\0113L51.D
Acq On : 14 Jan 17 7:26
Sample : AZ48881W01
Misc : W IS&S 1/3/17, 01/11/17

Vial: 48
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 9:53 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration

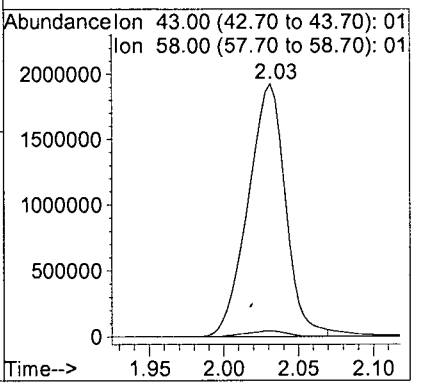


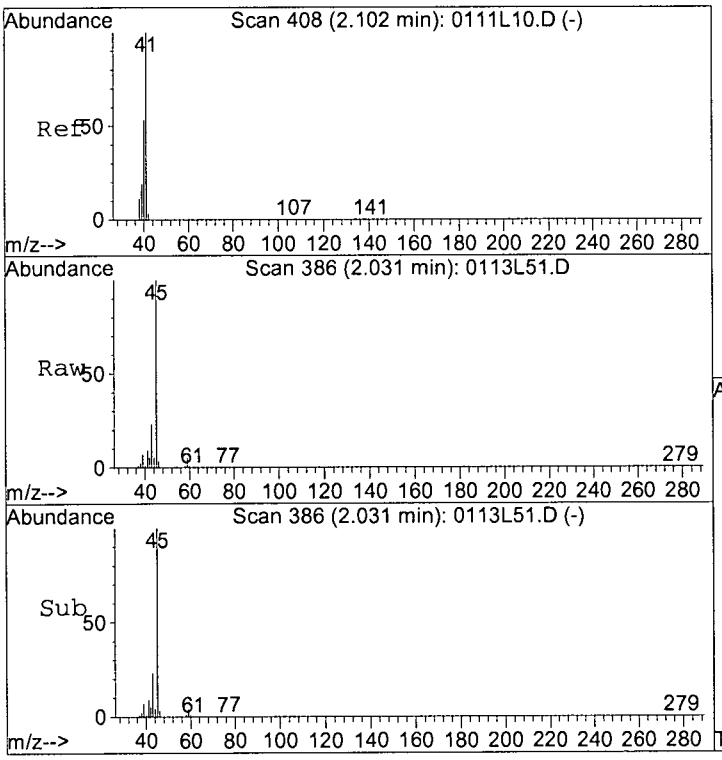


#11
Acetone
Concen: 2554.92 ppb
RT: 2.03 min Scan# 386
Delta R.T. 0.15 min
Lab File: 0113L51.D
Acq: 14 Jan 17 7:26

Tgt Ion: 43 Resp: 3330140

Ion	Ratio	Lower	Upper
43	100		
58	2.3	24.6	45.6#

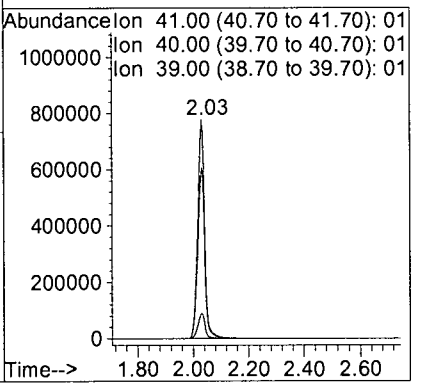


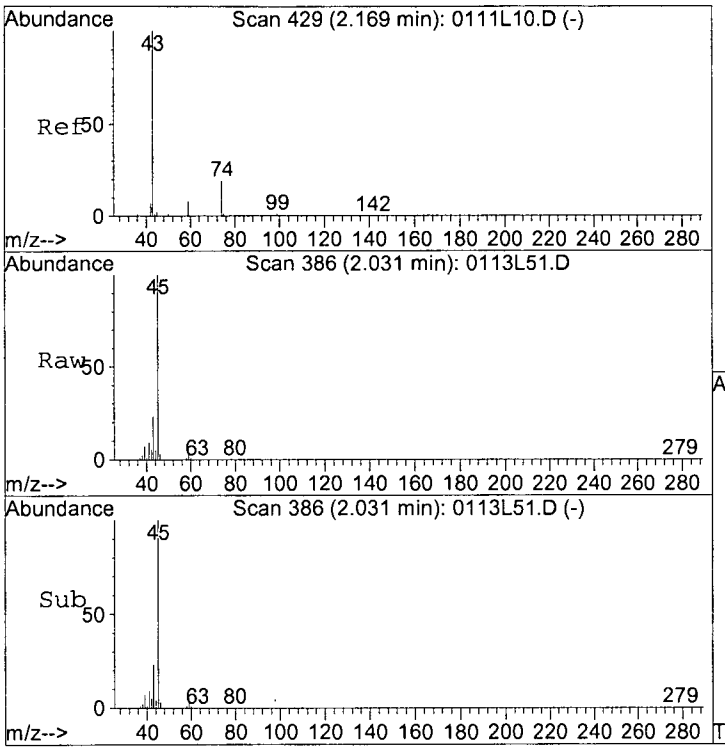


#15
Acetonitrile
Concen: 2177.55 ppb
RT: 2.03 min Scan# 386
Delta R.T. -0.07 min
Lab File: 0113L51.D
Acq: 14 Jan 17 7:26

Tgt Ion: 41 Resp: 1372761

Ion	Ratio	Lower	Upper
41	100		
40	12.2	39.5	59.3#
39	78.9	15.3	22.9#

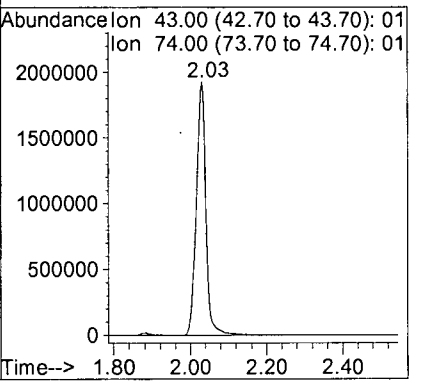




#16
Methyl Acetate
Concen: 950.98 ppb
RT: 2.03 min Scan# 386
Delta R.T. -0.14 min
Lab File: 0113L51.D
Acq: 14 Jan 17 7:26

Tgt Ion: 43 Resp: 3434758

Ion	Ratio	Lower	Upper
43	100		
74	0.0	13.2	24.6#



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH194
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48882
QCG: #86BTO-170113BL1-215499

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/14/17	01/14/17
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/14/17	01/14/17
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/14/17	01/14/17
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	99.8	81-118			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	96.7	85-114			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	105	80-119			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	98.2	89-112			%	01/14/17	01/14/17

Quant Method: LALLW.M
Run #: 0113L52
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/17/17 8:22:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L52.D Vial: 49
Acq On : 14 Jan 17 7:54 Operator: PM,DG,SV,CMM
Sample : AZ48882W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 9:56 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	310016	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	294976	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	142464	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	182410	26.37	ppb	0.00
Spiked Amount 25.000			Recovery =	105.468%		
37) 1,2-DCA-D4(S)	4.92	65	187212	24.95	ppb	0.00
Spiked Amount 25.000			Recovery =	99.812%		
57) Toluene-D8(S)	7.22	98	579544	24.54	ppb	0.00
Spiked Amount 25.000			Recovery =	98.180%		
65) 4-Bromofluorobenzene(S)	9.89	95	198005	24.17	ppb	0.00
Spiked Amount 25.000			Recovery =	96.668%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

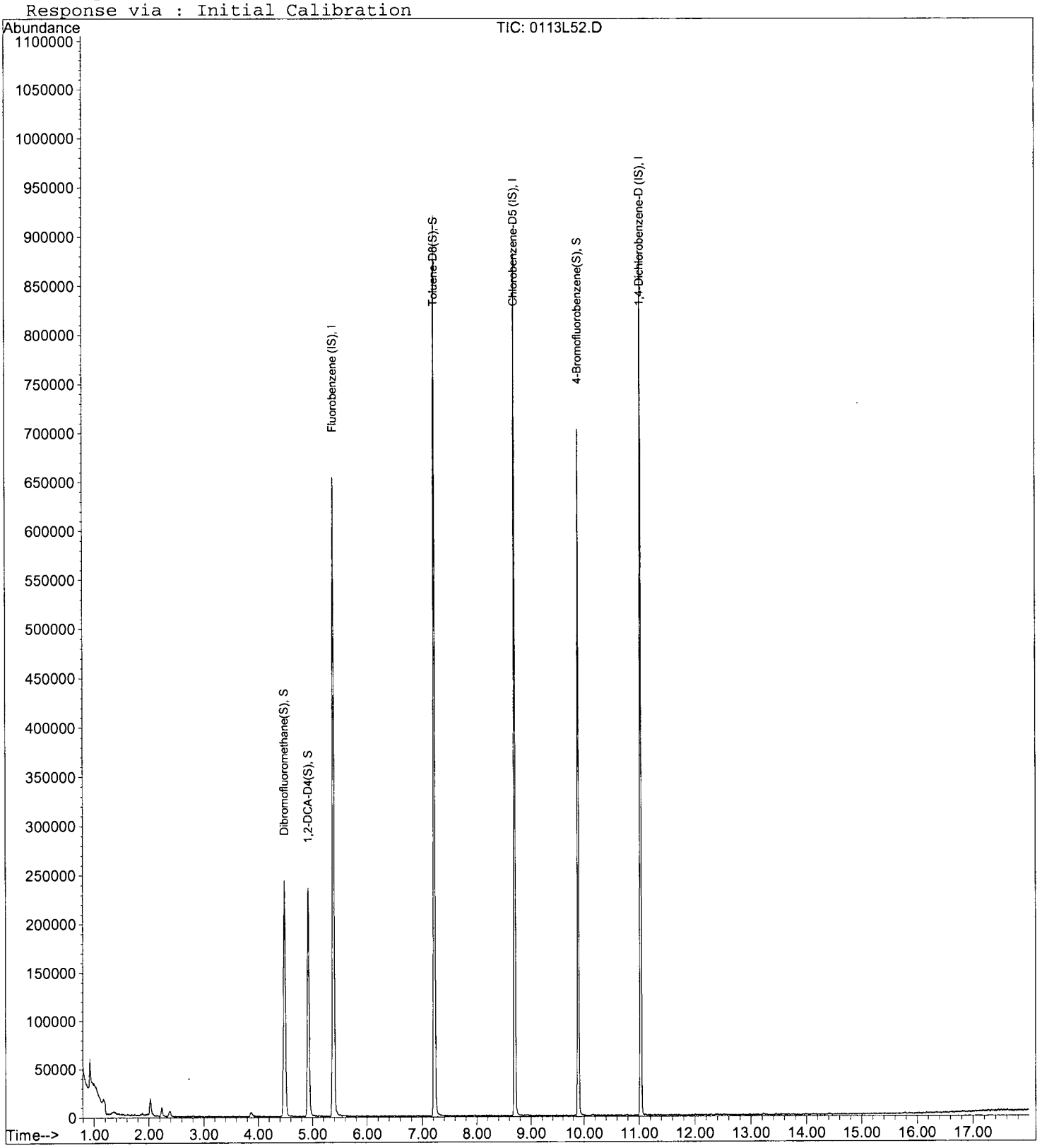
Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L52.D
Acq On : 14 Jan 17 7:54
Sample : AZ48882W01
Misc : W IS&S 1/3/17, 01/11/17

Vial: 49
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 9:56 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH173
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48884
QCG: #86BTO-170113BL1-215499

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/14/17	01/14/17
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/14/17	01/14/17
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/14/17	01/14/17
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	98.6	81-118			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	94.4	85-114			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	101	80-119			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	96.8	89-112			%	01/14/17	01/14/17

Quant Method: LALLW.M
Run #: 0113L53
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/17/17 8:22:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L53.D
Acq On : 14 Jan 17 8:22
Sample : AZ48884W01
Misc : W IS&S 1/3/17, 01/11/17

Vial: 50
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 9:57 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	318912	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	303552	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	149504	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	180264	25.33	ppb	0.00
Spiked Amount 25.000			Recovery = 101.320%			
37) 1,2-DCA-D4(S)	4.92	65	190170	24.64	ppb	0.00
Spiked Amount 25.000			Recovery = 98.560%			
57) Toluene-D8(S)	7.22	98	588143	24.21	ppb	0.00
Spiked Amount 25.000			Recovery = 96.820%			
65) 4-Bromofluorobenzene(S)	9.89	95	198929	23.59	ppb	0.00
Spiked Amount 25.000			Recovery = 94.376%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

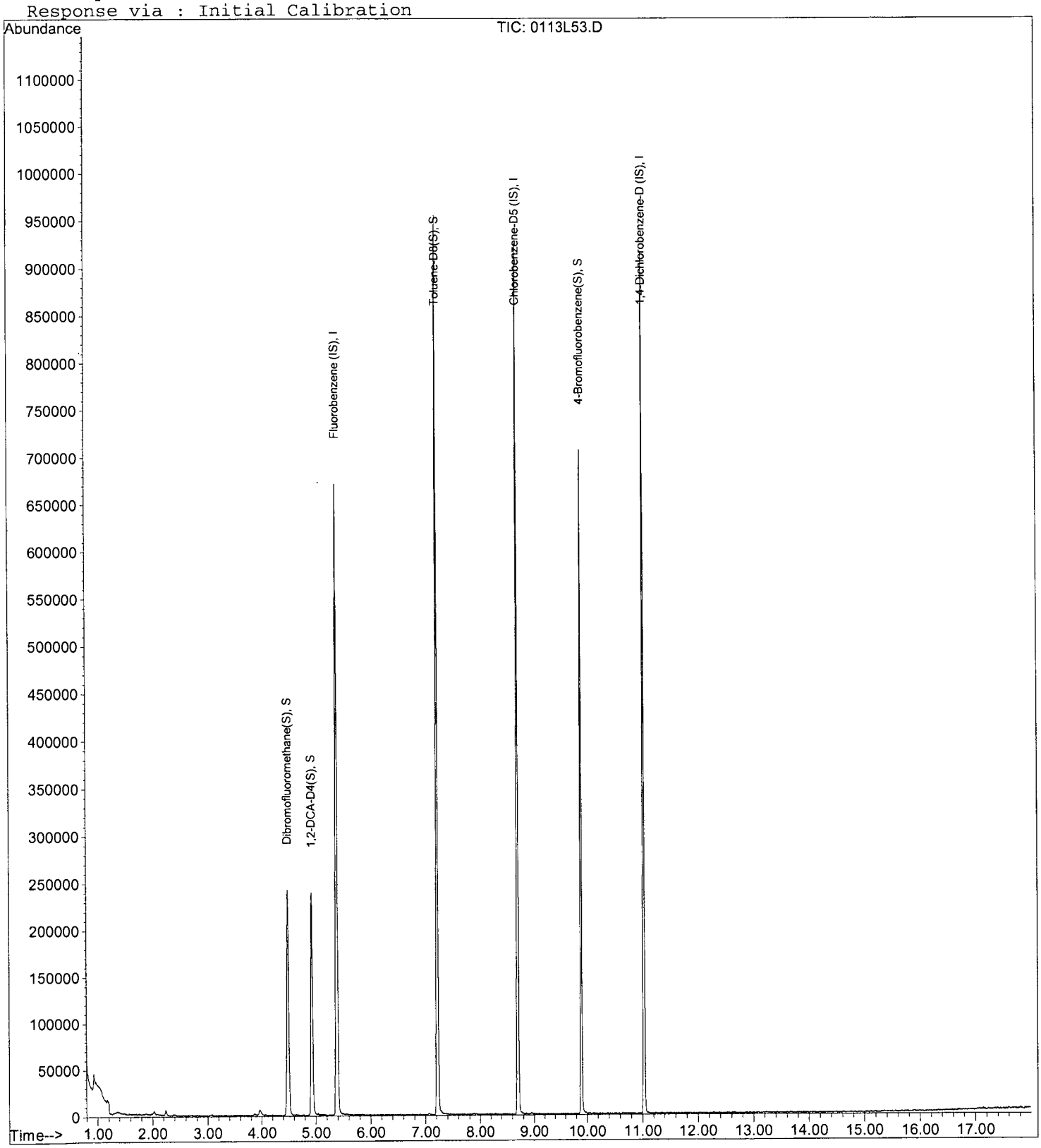
Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L53.D
Acq On : 14 Jan 17 8:22
Sample : AZ48884W01
Misc : W IS&S 1/3/17, 01/11/17

Vial: 50
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 9:57 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH198
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48885
QCG: #86BTO-170113BL1-215499

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/14/17	01/14/17
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/14/17	01/14/17
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/14/17	01/14/17
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	96.5	81-118			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	96.6	85-114			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	101	80-119			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	99.0	89-112			%	01/14/17	01/14/17

Quant Method: LALLW.M
Run #: 0113L54
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/17/17 8:22:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L54.D Vial: 51
Acq On : 14 Jan 17 8:50 Operator: PM,DG,SV,CMM
Sample : AZ48885W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 9:58 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	313856	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	292480	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	149760	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	176646	25.22	ppb	0.00
Spiked Amount 25.000			Recovery = 100.888%			
37) 1,2-DCA-D4(S)	4.92	65	183200	24.12	ppb	0.00
Spiked Amount 25.000			Recovery = 96.480%			
57) Toluene-D8(S)	7.22	98	579280	24.74	ppb	0.00
Spiked Amount 25.000			Recovery = 98.972%			
65) 4-Bromofluorobenzene(S)	9.89	95	196183	24.15	ppb	0.00
Spiked Amount 25.000			Recovery = 96.596%			

Target Compounds Qvalue

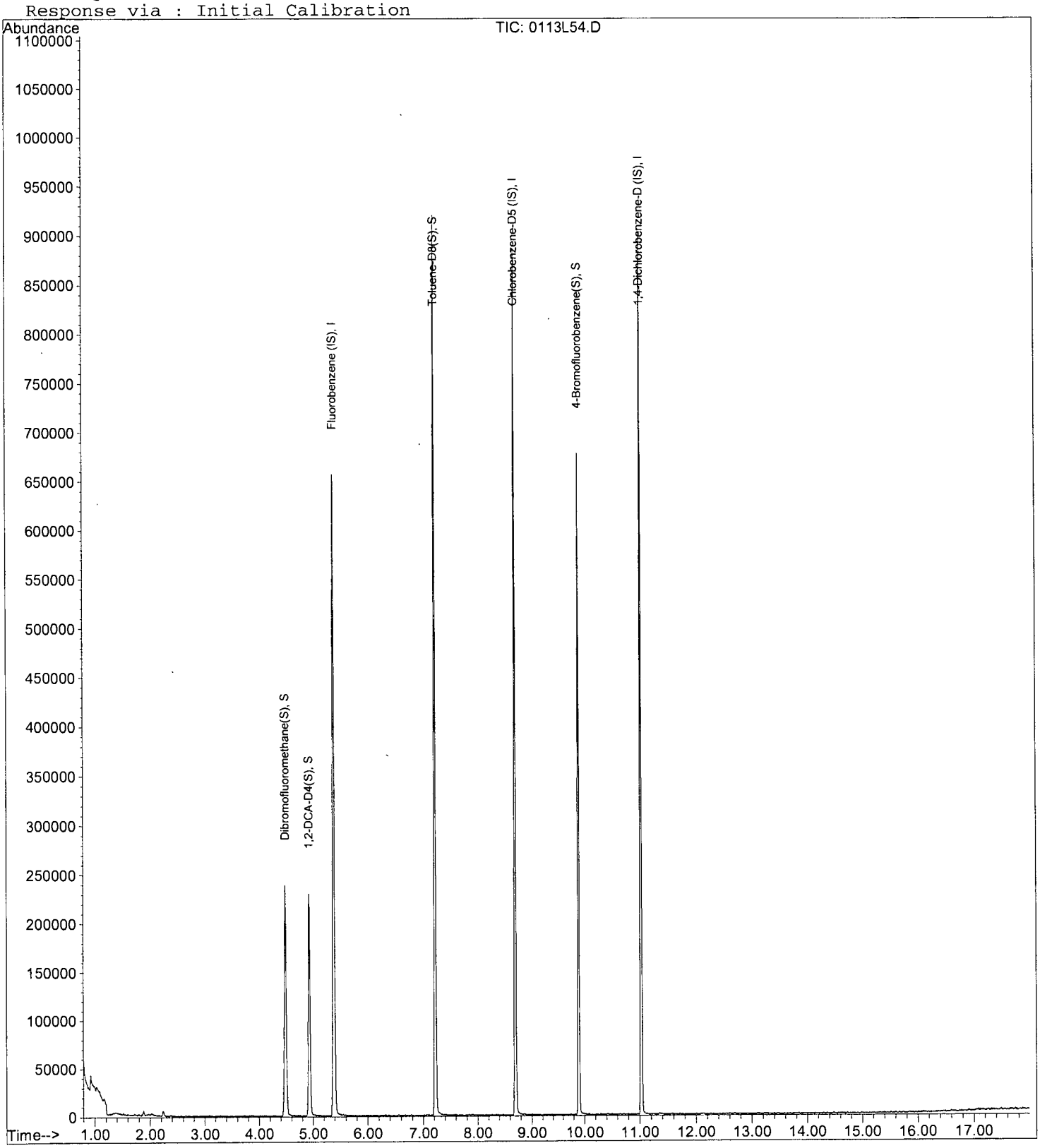
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L54.D Vial: 51
Acq On : 14 Jan 17 8:50 Operator: PM,DG,SV,CMM
Sample : AZ48885W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 9:58 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH196
Sample Collection Date: 01/09/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48886
QCG: #86BTO-170113BL1-215499

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/14/17	01/14/17
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/14/17	01/14/17
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/14/17	01/14/17
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	97.9	81-118			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	94.8	85-114			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	102	80-119			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	96.1	89-112			%	01/14/17	01/14/17

Quant Method: LALLW.M
Run #: 0113L55
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/17/17 8:22:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L55.D Vial: 52
Acq On : 14 Jan 17 9:18 Operator: PM,DG,SV,CMM
Sample : AZ48886W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 9:59 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	300352	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	289408	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	142720	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	171361	25.57	ppb	0.00
Spiked Amount 25.000			Recovery =	102.268%		
37) 1,2-DCA-D4(S)	4.92	65	177921	24.48	ppb	0.00
Spiked Amount 25.000			Recovery =	97.912%		
57) Toluene-D8(S)	7.22	98	556378	24.02	ppb	0.00
Spiked Amount 25.000			Recovery =	96.068%		
65) 4-Bromofluorobenzene(S)	9.89	95	190414	23.69	ppb	0.00
Spiked Amount 25.000			Recovery =	94.752%		

Target Compounds Qvalue

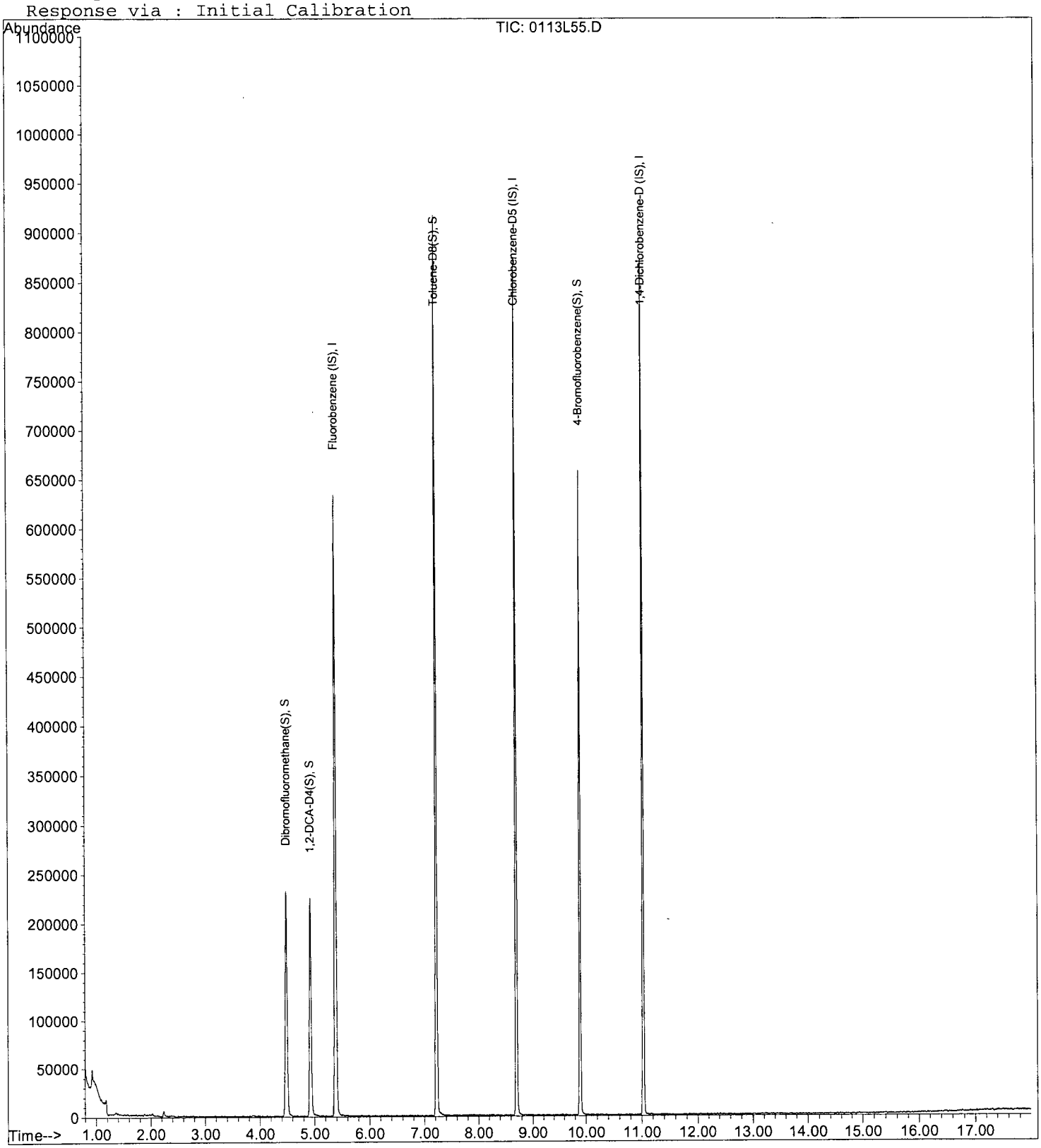
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L55.D Vial: 52
Acq On : 14 Jan 17 9:18 Operator: PM,DG,SV,CMM
Sample : AZ48886W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 9:59 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



EPA METHOD 8260B
Volatile Organic Compounds
Calibration Data

APPL, INC.

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 1/11/17
Matrix: Instrument: Loki
Initials:

		Compound	0111L05.D 1	0111L06.D 2	0111L07.D 3	0111L08.D 4	0111L09.D 5	0111L10.D 6	0111L11.D 7	0111L12.D 8	0111L13.D 9		Avg	%RSD		
1	I	Fluorobenzene (IS)														
2	TM	Dichlorodifluoromethane		0.5780	0.5427	0.6484	0.5648	0.5867	0.5936	0.5704	0.5370		0.58	6.0	TM	
3	TM	Freon 114		0.4853	0.4274	0.4308	0.3849	0.3723	0.3969	0.3786	0.3789		0.41	9.5	TM	
4	TM**	Chloromethane		1.104	0.9112	0.8387	0.8051	0.8146	0.7592	0.7406	0.7145		0.84	15	TM**	
5	TM*	Vinyl chloride	0.7680	0.7070	0.7126	0.6943	0.6917	0.6780	0.6700	0.6585	0.6623		0.69	4.9	TM*	
6	TM	Bromomethane		0.4903	0.4428	0.4693	0.4297	0.4421	0.5609				0.47	10	TM	
7	TM	Chloroethane		0.4979	0.4276	0.4131	0.3863	0.3764	0.3521	0.3552	0.3480		0.39	13	TM	
8	TM	Dichlorofluoromethane		1.199	1.104	1.119	1.049	1.054	1.036	1.010	1.012		1.1	6.0	TM	
9	TM	Trichlorofluoromethane	0.7436	0.7677	0.7388	0.7754	0.7470	0.7384	0.7256	0.7124	0.7199		0.74	2.8	TM	
10	TM	Acrolein		0.0251	0.0223	0.0235	0.0244	0.0250	0.0240	0.0256	0.0238		0.02	4.3	TM	
11	TML	Acetone			0.2917	0.1748	0.1584	0.1311	0.1228	0.1112	0.1101		0.16	41	TML	1.000
12	TM	Freon-113		0.4451	0.4862	0.4295	0.3982	0.3945	0.4029	0.3850	0.3869		0.42	8.5	TM	
13	TM*	1,1-DCE	0.5181	0.4251	0.4548	0.4849	0.4037	0.4157	0.4139	0.4115	0.4088		0.44	9.2	TM*	
14	TM	t-Butanol	0.0153	0.0135	0.0133	0.0139	0.0134	0.0142	0.0142	0.0118	0.0102		0.01	11	TM	
15	TM	Acetonitrile	0.0589	0.0551	0.0502	0.0491	0.0487	0.0524	0.0480	0.0555			0.05	7.5	TM	
16	TML	Methyl Acetate		0.4952	0.4524	0.3750	0.3311	0.3295	0.3154	0.3144	0.2997		0.36	20	TML	1.000
17	TM	Iodomethane		0.2362	0.2304	0.2426	0.2434	0.2492	0.2860	0.2841			0.25	8.9	TM	
18	TM	Acrylonitrile		0.1448	0.1191	0.1183	0.1163	0.1170	0.1096	0.1084	0.1067		0.12	10	TM	
19	TM	Methylene chloride		0.6219	0.5786	0.5945	0.5505	0.5295	0.4990	0.4935	0.4953		0.55	9.0	TM	
20	TM	Carbon disulfide		1.573	1.539	1.501	1.374	1.392	1.343	1.346	1.354		1.4	6.6	TM	
21	TM	Methyl t-butyl ether (MtBE)	1.108	1.112	1.134	1.045	1.035	1.055	1.062	1.061	1.051		1.1	3.2	TM	
22	TM	Trans-1,2-DCE		0.5727	0.4582	0.4610	0.4427	0.4421	0.4420	0.4348	0.4390		0.46	9.9	TM	
23	TM	Diisopropyl Ether		1.499	1.517	1.444	1.468	1.494	1.505	1.519	1.564		1.5	2.4	TM	
24	TM**	1,1-DCA	0.9757	1.016	0.9642	0.9797	0.9121	0.8905	0.8934	0.8627	0.8726		0.93	5.9	TM**	
25	TM	Vinyl Acetate		0.3985	0.3854	0.3481	0.3236	0.3205	0.3255	0.3157	0.3115		0.34	9.8	TM	
26	TM	Ethyl tert Butyl Ether	1.163	1.170	1.078	1.091	1.102	1.138	1.139	1.179	1.225		1.1	4.1	TM	
27	TML	MEK (2-Butanone)		0.1080	0.1438	0.1998	0.1648	0.1695	0.1583	0.1517	0.1507		0.16	17	TML	1.000
28	TM	Cis-1,2-DCE		0.5835	0.5593	0.5275	0.5169	0.5050	0.5187	0.4984	0.5054		0.53	5.6	TM	
29	TM	2,2-Dichloropropane		0.2924	0.2370	0.2183	0.2100	0.2124	0.2178	0.2096	0.2196		0.23	12	TM	
30	TM*	Chloroform	0.9917	0.9626	0.9621	0.9529	0.8686	0.8811	0.8892	0.8535	0.8587		0.91	5.8	TM*	
31	TML	Bromochloromethane		0.1219	0.2513	0.2476	0.2304	0.2258	0.2296	0.2209	0.2181		0.22	19	TML	1.000
32	S	Dibromofluoromethane(S)	0.6530	0.6270	0.5081	0.5434	0.5556	0.5547	0.5421	0.5409	0.4961		0.56	9.2	S	
33	TM	1,1,1-TCA	0.8896	0.8006	0.7284	0.7024	0.6791	0.6809	0.6721	0.6681	0.6731		0.72	11	TM	
34	TM	Cyclohexane		0.3792	0.4074	0.4038	0.3392	0.3421	0.3533	0.3510	0.3603		0.37	7.3	TM	
35	TM	1,1-Dichloropropene	0.7539	0.6780	0.6294	0.6320	0.5714	0.5738	0.6104	0.6045	0.6127		0.63	9.0	TM	

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Initial Cal. Date: 1/11/17
Instrument: Loki

Initials:

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD		
36	TM	2,2,4-Trimethylpentane	1.243	1.187	1.238	1.210	1.143	1.170	1.262	1.256	1.293		1.2	4.0	TM	
37	S	1,2-DCA-D4(S)	0.7467	0.6553	0.5616	0.5765	0.6001	0.6054	0.6028	0.5703	0.5265		0.61	11	S	
38	TM	Carbon Tetrachloride		0.5594	0.5508	0.5406	0.5282	0.5480	0.5339	0.5294	0.5325		0.54	2.1	TM	
39	TM	Tert Amyl Methyl Ether	1.095	0.9615	0.9888	0.9108	0.9465	1.015	1.020	1.028	1.051		1.0	5.6	TM	
40	TM	1,2-DCA		0.7097	0.6694	0.6715	0.6273	0.6526	0.6387	0.6140	0.5964		0.65	5.6	TM	
41	TM	Benzene	1.950	1.902	1.961	1.901	1.878	1.871	1.876	1.832	1.848		1.9	2.3	TM	
42	TM	TCE		0.2532	0.2809	0.2701	0.2359	0.2441	0.2483	0.2459	0.2561		0.25	5.8	TM	
43	TM	2-Pentanone		0.2321	0.2408	0.2497	0.2477	0.2641	0.2607	0.2611	0.2540		0.25	4.4	TM	
44	TM*	1,2-Dichloropropane	0.5660	0.5987	0.5869	0.6029	0.5201	0.5385	0.5342	0.5266	0.5337		0.56	5.9	TM*	
45	TM	Bromodichloromethane	0.7519	0.6802	0.6472	0.7177	0.6610	0.6506	0.6460	0.6392	0.6464		0.67	5.8	TM	
46	TM	Methyl Cyclohexane		0.6006	0.5907	0.6018	0.5691	0.5736	0.6045	0.6111	0.6377		0.60	3.6	TM	
47	TM	Dibromomethane		0.3047	0.2555	0.2954	0.2736	0.2864	0.2903	0.2748	0.2713		0.28	5.6	TM	
48	TM	2-Chloroethyl vinyl ether													TM	
49	TML	MIBK (methyl isobutyl ketone)		0.7000	0.5427	0.4486	0.4490	0.3817	0.3749	0.3345	0.3286		0.44	28	TML	0.999
50	TM	1-Bromo-2-chloroethane		0.3614	0.3442	0.3810	0.3856	0.3828	0.3621	0.3646	0.3641		0.37	3.8	TM	
51	TM	Cis-1,3-Dichloropropene	0.7810	0.7318	0.6693	0.6964	0.6956	0.7011	0.7189	0.7289	0.7646		0.72	4.9	TM	
52	TM*	Toluene		2.031	1.884	1.953	1.889	1.966	1.993	1.962	2.002		2.0	2.6	TM*	
53	TM	Trans-1,3-Dichloropropene		0.6427	0.6415	0.6061	0.6038	0.6008	0.6222	0.6182	0.6541		0.62	3.2	TM	
54	TM	1,1,2-TCA	0.3741	0.3437	0.3852	0.3496	0.3535	0.3480	0.3437	0.3306	0.3312		0.35	5.2	TM	
55	TM	2-Hexanone		0.0951	0.0967	0.0869	0.1076	0.1143	0.1104	0.1181			0.10	11	TM	
56	I	Chlorobenzene-D5 (IS)														
57	S	Toluene-D8(S)	2.174	2.024	1.807	1.915	2.040	2.108	2.066	1.980	1.895		2.0	5.7	S	
58	TM	1,2-EDB		0.3485	0.3963	0.4180	0.3995	0.4168	0.4008	0.3796	0.3859		0.39	5.7	TM	
59	TM	Tetrachloroethene		0.6135	0.5243	0.5537	0.5068	0.5245	0.4988	0.4722	0.4823		0.52	8.6	TM	
60	TM	1-Chlorohexane		0.5469	0.5431	0.5451	0.5354	0.5977	0.5845	0.5849	0.6217		0.57	5.5	TM	
61	TM	1,1,1,2-Tetrachloroethane	0.5361	0.5182	0.5021	0.4818	0.5065	0.5178	0.4967	0.4652	0.4853		0.50	4.3	TM	
62	TM	m&p-Xylene		0.8718	0.9649	1.022	1.107	1.202	1.229	1.139	1.261		1.1	12	TM	
63	TM	o-Xylene		0.7247	0.6768	0.8282	0.7740	0.8407	0.8388	0.8286	0.8787		0.80	8.5	TM	
64	TML	Styrene		0.6722	0.7313	0.7555	0.8585	0.9556	1.006	0.9893			0.85	16	TML	1.000
65	S	4-Bromofluorobenzene(S)	0.7539	0.6191	0.6040	0.6530	0.7308	0.7539	0.7422	0.7049	0.6878		0.69	8.3	S	
66	TM	1,3-Dichloropropane	0.7726	0.7777	0.7813	0.7605	0.7633	0.7774	0.7459	0.7042	0.7098		0.75	3.9	TM	
67	TM	Dibromochloromethane	0.4817	0.4858	0.4626	0.4830	0.4909	0.4827	0.4855	0.4599	0.4768		0.48	2.2	TM	
68	TM**	Chlorobenzene	1.460	1.382	1.426	1.416	1.404	1.413	1.349	1.302	1.355		1.4	3.4	TM**	
69	TM*	Ethylbenzene	2.187	1.994	2.118	2.263	2.266	2.427	2.413	2.312	2.389		2.3	6.4	TM*	
70	TM**	Bromoform	0.2946	0.3304	0.2695	0.2787	0.2826	0.2975	0.2864	0.2719	0.2818		0.29	6.4	TM**	

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 1/11/17
Matrix: Instrument: Loki
Initials:

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD		
71	I	1,4-Dichlorobenzene-D (IS)														
72	TM	Isopropylbenzene	3.986	3.421	3.583	3.774	3.621	3.793	3.845	4.090	4.100		3.8	6.1	TM	
73	TM**	1,1,2,2-Tetrachloroethane	1.089	1.069	1.048	1.045	0.9964	0.9806	0.9631	0.9152	0.9112		1.0	6.5	TM**	
74	TM	1,2,3-Trichloropropane		0.2119	0.1957	0.2031	0.1737	0.1836	0.1634	0.1736	0.1573		0.18	11	TM	
75	TM	t-1,4-Dichloro-2-Butene		0.2701	0.2688	0.2662	0.2239	0.2206	0.2385	0.2382	0.2347		0.25	8.3	TM	
76	TM	Bromobenzene	1.094	1.188	1.097	1.060	1.037	1.005	1.034	1.046	1.027		1.1	5.2	TM	
77	TM	n-Propylbenzene	4.345	4.299	4.575	4.549	4.533	4.771	4.838	5.157	5.044		4.7	6.3	TM	
78	TM	4-Ethyltoluene	3.555	3.223	3.231	3.443	3.665	3.885	3.923	4.144	4.092		3.7	9.4	TM	
79	TM	2-Chlorotoluene	2.675	2.907	2.690	2.837	2.901	3.031	2.977	3.040	2.999		2.9	4.7	TM	
80	TM	1,3,5-Trimethylbenzene	3.134	2.772	2.878	3.058	3.244	3.424	3.379	3.537	3.468		3.2	8.4	TM	
81	TM	4-Chlorotoluene	3.334	3.104	3.064	3.269	3.325	3.522	3.485	3.531	3.510		3.3	5.3	TM	
82	TM	Tert-Butylbenzene	2.672	2.350	2.506	2.625	2.512	2.639	2.650	2.814	2.829		2.6	5.8	TM	
83	TM	1,2,4-Trimethylbenzene		2.719	2.812	3.017	3.101	3.321	3.414	3.533	3.542		3.2	10	TM	
84	TM	Sec-Butylbenzene	3.564	3.773	3.554	3.765	3.723	4.024	4.111	4.282	4.277		3.9	7.3	TM	
85	TM	p-Isopropyltoluene	3.230	2.949	3.086	3.079	3.079	3.324	3.354	3.520	3.593		3.2	6.7	TM	
86	TM	Benzyl Chloride	1.029	1.077	0.9916	0.9383	0.9848	0.9995	1.055	1.122	1.273		1.1	9.4	TM	
87	TM	1,3-DCB	2.080	1.855	1.943	2.019	1.998	1.978	1.931	1.967	1.967		2.0	3.2	TM	
88	TM	1,4-DCB	2.146	2.296	2.134	2.079	2.071	1.999	1.998	1.985	2.015		2.1	4.8	TM	
89	TM	n-Butylbenzene	2.867	2.703	2.943	2.935	2.812	3.001	3.145	3.373	3.461		3.0	8.4	TM	
90	TM	1,2-DCB		2.037	1.875	1.884	1.801	1.873	1.800	1.823	1.874		1.9	4.0	TM	
91	TM	Hexachloroethane		0.6467	0.6552	0.7291	0.6534	0.6736	0.6705	0.6796	0.7059		0.68	4.2	TM	
92	TM	1,2-Dibromo-3-chloropropane		0.1389	0.1403	0.1470	0.1567	0.1496	0.1456	0.1513	0.1571		0.15	4.5	TM	
93	TM	1,2,4-Trichlorobenzene	1.270	1.127	1.101	1.179	1.155	1.124	1.157	1.243	1.317		1.2	6.2	TM	
94	TM	Hexachlorobutadiene		0.6964	0.6565	0.6273	0.5893	0.5692	0.5576	0.5651	0.6004		0.61	8.1	TM	
95	TM	Naphthalene		1.288	1.107	1.156	1.194	1.275	1.383	1.563	1.577		1.3	13	TM	
96	TM	1,2,3-Trichlorobenzene		0.8254	0.6579	0.6272	0.7056	0.7141	0.7342	0.7974	0.8066		0.73	9.8	TM	
97																
98																
99																
100																
101																
102																
103																
104																
105																

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L05.D Vial: 4
Acq On : 11 Jan 17 11:56 Operator: PM,DG,SV,CMM
Sample : 0.3ug/L VOC STD 1/11/17J Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 12 7:32 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:31:44 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	332160	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	315712	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	150016	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	43382	5.86941 ppb		0.00
Spiked Amount 25.000			Recovery = 23.476%			
37) 1,2-DCA-D4(S)	4.93	65	49605	6.20257 ppb		0.00
Spiked Amount 25.000			Recovery = 24.812%			
57) Toluene-D8(S)	7.22	98	137262	5.52922 ppb		0.00
Spiked Amount 25.000			Recovery = 22.116%			
65) 4-Bromofluorobenzene(S)	9.89	95	47603	5.49833 ppb		0.00
Spiked Amount 25.000			Recovery = 21.992%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.86	85	2874	0.37725 ppb		99
3) Freon 114	0.93	85	1678	0.28852 ppb		90
4) Chloromethane	0.96	50	4186	-0.44043 ppb		98
5) Vinyl chloride	1.03	62	3061	0.31916 ppb		98
6) Bromomethane	1.23	94	1977	-0.27235 ppb		93
7) Chloroethane	1.29	64	1946	0.37450 ppb		93
8) Dichlorofluoromethane	1.43	67	5233	0.34477 ppb		97
9) Trichlorofluoromethane	1.46	101	2964	0.29543 ppb		82
10) Acrolein	1.76	56	2790	5.15509 ppb	#	85
11) Acetone	1.88	43	3161	-0.18037 ppb		97
12) Freon-113	1.85	101	1847	0.31435 ppb	#	82
13) 1,1-DCE	1.83	96	2065	0.36532 ppb		89
14) t-Butanol	2.40	59	2028	10.88266 ppb		95
15) Acetonitrile	2.11	41	7829	11.21753 ppb	#	95
16) Methyl Acetate	2.17	43	1830	0.39731 ppb		91
17) Iodomethane	1.93	142	1253	0.35618 ppb	#	84
18) Acrylonitrile	2.47	52	701	-0.14527 ppb	#	59
19) Methylene chloride	2.23	84	2567	0.35913 ppb		84
20) Carbon disulfide	1.98	76	7038	0.36162 ppb		97
21) Methyl t-butyl ether (MtBE	2.52	73	4416	0.31245 ppb	#	91
22) Trans-1,2-DCE	2.50	96	2390	0.40785 ppb		92
23) Diisopropyl Ether	3.10	45	6877	0.34845 ppb		94
24) 1,1-DCA	2.95	63	3889	0.32915 ppb	#	89
25) Vinyl Acetate	3.08	43	1652	0.36591 ppb	#	95
26) Ethyl tert Butyl Ether	3.58	59	4635	0.30699 ppb		97
27) MEK (2-Butanone)	3.84	43	1820	0.12525 ppb	#	59
28) Cis-1,2-DCE	3.72	96	2851	0.41938 ppb		72
29) 2,2-Dichloropropane	3.69	77	1267	0.43237 ppb	#	73
30) Chloroform	4.26	83	3953	0.32721 ppb		92
31) Bromochloromethane	4.09	128	1230	-0.21668 ppb	#	57
33) 1,1,1-TCA	4.47	97	3546	0.38627 ppb		88
34) Cyclohexane	4.53	41	1883	0.37290 ppb	#	70
35) 1,1-Dichloropropene	4.74	75	3005	0.38972 ppb	#	81
36) 2,2,4-Trimethylpentane	5.15	57	4954	0.29575 ppb		91
38) Carbon Tetrachloride	4.72	119	2703	0.37910 ppb	#	67
39) Tert Amyl Methyl Ether	5.22	73	4364	0.33009 ppb		96
40) 1,2-DCA	5.04	62	2983	0.33856 ppb		93
41) Benzene	4.99	78	7774	0.31434 ppb		93
42) TCE	5.84	95	1466	0.43741 ppb	#	74

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L05.D Vial: 4
Acq On : 11 Jan 17 11:56 Operator: PM,DG,SV,CMM
Sample : 0.3ug/L VOC STD 1/11/17J Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 12 7:32 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:31:44 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43) 2-Pentanone	6.13	43	32712	9.51315 ppb		99
44) 1,2-Dichloropropane	6.09	63	2256	0.30058 ppb	#	90
45) Bromodichloromethane	6.45	83	2997	0.35020 ppb	#	85
46) Methyl Cyclohexane	6.04	83	2833	0.35186 ppb		97
47) Dibromomethane	6.23	93	1505	0.39844 ppb	#	73
48) 2-Chloroethyl vinyl ether	6.50	43	369	0.71717 ppb	#	100
49) MIBK (methyl isobutyl ket	7.16	43	2834	-0.15917 ppb	#	85
50) 1-Bromo-2-chloroethane	6.75	63	1995	0.39010 ppb		87
51) Cis-1,3-Dichloropropene	6.96	75	3113	0.33198 ppb		88
52) Toluene	7.29	91	8231	0.32546 ppb		84
53) Trans-1,3-Dichloropropene	7.57	75	3210	0.40687 ppb		84
54) 1,1,2-TCA	7.74	83	1491	0.32805 ppb		84
55) 2-Hexanone	8.06	43	377	0.24624 ppb	#	90
58) 1,2-EDB	8.21	107	1961	0.39163 ppb	#	75
59) Tetrachloroethene	7.86	166	2356	0.38081 ppb		90
60) 1-Chlorohexane	8.76	91	2008	0.27682 ppb		90
61) 1,1,1,2-Tetrachloroethane	8.83	131	2031	0.32799 ppb	#	67
62) m&p-Xylene	8.99	91	7457	0.55879 ppb		94
63) o-Xylene	9.38	106	2963	0.30338 ppb		78
64) Styrene	9.40	104	2534	0.72228 ppb		94
66) 1,3-Dichloropropane	7.91	76	2927	0.30787 ppb		93
67) Dibromochloromethane	8.12	129	1825	0.31087 ppb		98
68) Chlorobenzene	8.73	112	5531	0.32457 ppb		93
69) Ethylbenzene	8.87	91	8285	0.29343 ppb		95
70) Bromoform	9.55	173	1116	0.31972 ppb	#	72
72) Isopropylbenzene	9.76	105	7175	0.32559 ppb	#	86
73) 1,1,2,2-Tetrachloroethane	10.07	83	1960	0.30483 ppb	#	81
74) 1,2,3-Trichloropropane	10.09	110	444	0.41089 ppb		90
75) t-1,4-Dichloro-2-Butene	10.13	53	414	0.27575 ppb	#	33
76) Bromobenzene	10.02	156	1970	0.31540 ppb		76
77) n-Propylbenzene	10.17	91	7822	0.28595 ppb		97
78) 4-Ethyltoluene	10.29	105	6400	0.28125 ppb		100
79) 2-Chlorotoluene	10.23	91	4816	0.27988 ppb		92
80) 1,3,5-Trimethylbenzene	10.36	105	5642	0.29265 ppb		86
81) 4-Chlorotoluene	10.34	91	6002	0.30393 ppb		97
82) Tert-Butylbenzene	10.67	119	4811	0.32009 ppb		95
83) 1,2,4-Trimethylbenzene	10.72	105	5091	0.26988 ppb		87
84) Sec-Butylbenzene	10.88	105	6415	0.28034 ppb	#	84
85) p-Isopropyltoluene	11.04	119	5815	0.30198 ppb	#	76
86) Benzyl Chloride	11.20	91	1853	0.29212 ppb	#	72
87) 1,3-DCB	10.96	146	3745	0.32151 ppb		94
88) 1,4-DCB	11.05	146	3863	0.32114 ppb	#	54
89) n-Butylbenzene	11.45	91	5162	0.28533 ppb		96
90) 1,2-DCB	11.41	146	4420	0.39927 ppb		79
91) Hexachloroethane	11.66	117	1582	0.35449 ppb		77
92) 1,2-Dibromo-3-chloropropan	12.18	157	226	0.25524 ppb	#	82
93) 1,2,4-Trichlorobenzene	13.00	180	2287	0.34455 ppb		91
94) Hexachlorobutadiene	13.19	225	1477	0.43647 ppb	#	67
95) Naphthalene	13.22	128	1953	0.63002 ppb		99
96) 1,2,3-Trichlorobenzene	13.47	180	1590	0.39076 ppb		80

(#) = qualifier out of range (m) = manual integration

Quantitation Report

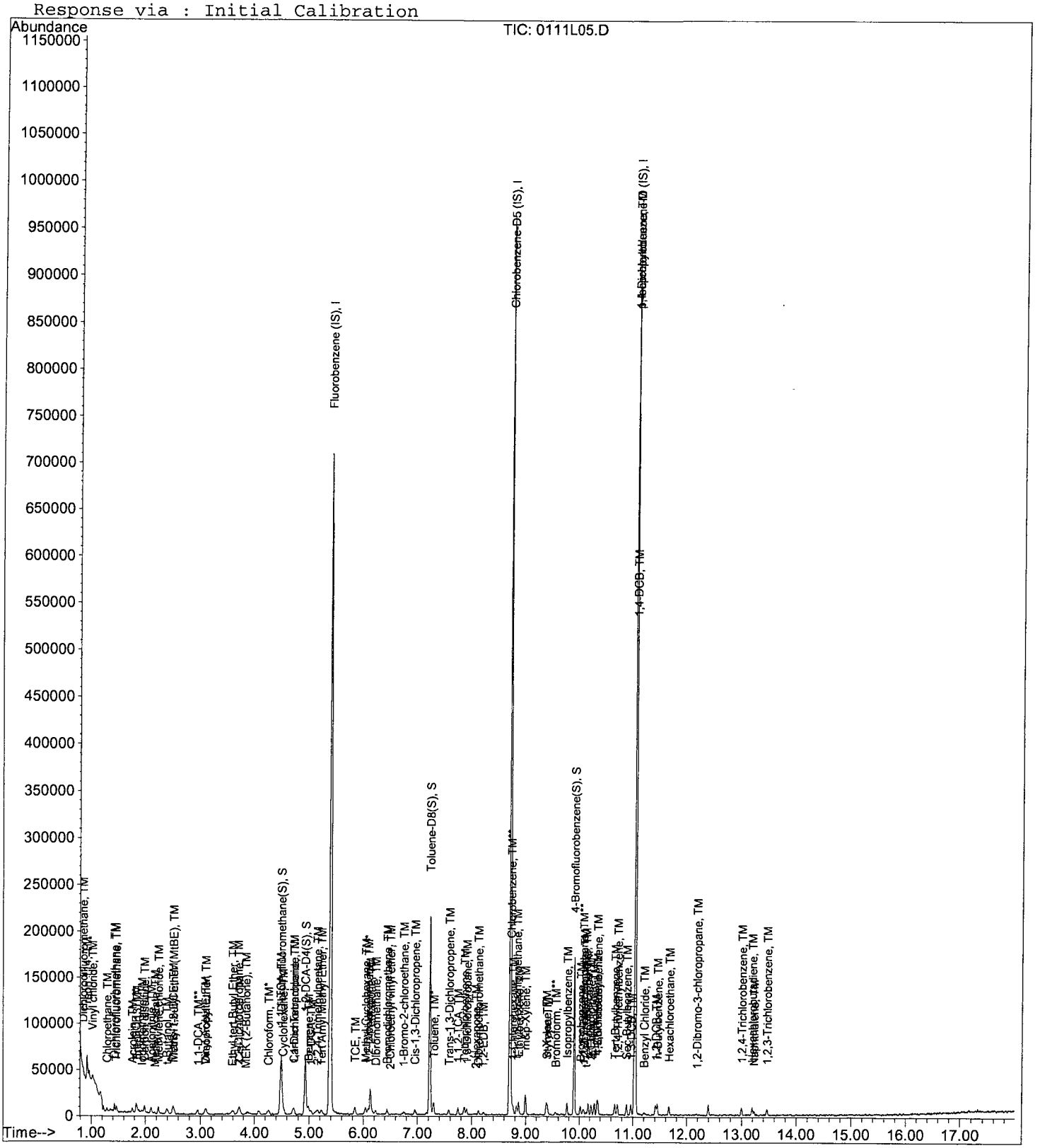
Data File : M:\LOKI\DATA\170111\0111L05.D
Acq On : 11 Jan 17 11:56
Sample : 0.3ug/L VOC STD 1/11/17J
Misc : W IS&S 1/3/17, 01/11/17

Vial: 4
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 12 7:32 2017

Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L06.D Vial: 5
Acq On : 11 Jan 17 12:24 Operator: PM,DG,SV,CMM
Sample : 0.5ug/L VOC STD 1/11/17K Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 12 7:32 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:31:44 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	353664	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	327936	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	160896	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	44351	5.63566 ppb		0.00
Spiked Amount 25.000			Recovery = 22.544%			
37) 1,2-DCA-D4(S)	4.93	65	46349	5.44306 ppb		0.00
Spiked Amount 25.000			Recovery = 21.772%			
57) Toluene-D8(S)	7.22	98	132753	5.14825 ppb		0.00
Spiked Amount 25.000			Recovery = 20.592%			
65) 4-Bromofluorobenzene(S)	9.89	95	44663	4.96646 ppb		0.00
Spiked Amount 25.000			Recovery = 19.864%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	4088	0.50398 ppb		96
3) Freon 114	0.93	85	3433	0.55440 ppb		83
4) Chloromethane	0.96	50	7806	-0.10811 ppb		93
5) Vinyl chloride	1.02	62	5001	0.48973 ppb		94
6) Bromomethane	1.22	94	3468	0.13058 ppb		95
7) Chloroethane	1.29	64	3522	0.63659 ppb		91
8) Dichlorofluoromethane	1.43	67	8483	0.52490 ppb		98
9) Trichlorofluoromethane	1.46	101	5430	0.50832 ppb		89
10) Acrolein	1.76	56	8874	15.39955 ppb	#	91
11) Acetone	1.88	43	3851	0.12524 ppb		96
12) Freon-113	1.84	101	3148	0.50320 ppb		89
13) 1,1-DCE	1.83	96	3007	0.49963 ppb	#	56
14) t-Butanol	2.40	59	4763	24.00513 ppb		100
15) Acetonitrile	2.11	41	19489	26.22630 ppb		90
16) Methyl Acetate	2.17	43	3503	0.71430 ppb	#	79
17) Iodomethane	1.93	142	1671	0.44612 ppb	#	89
19) Methylene chloride	2.23	84	4399	0.57802 ppb		99
20) Carbon disulfide	1.98	76	11125	0.53686 ppb		100
21) Methyl t-butyl ether (MtBE	2.52	73	7864	0.52258 ppb		92
22) Trans-1,2-DCE	2.50	96	4051	0.64926 ppb		87
23) Diisopropyl Ether	3.10	45	10604	0.50462 ppb		96
24) 1,1-DCA	2.95	63	7185	0.57114 ppb		97
25) Vinyl Acetate	3.10	43	2819	0.58643 ppb	#	95
26) Ethyl tert Butyl Ether	3.59	59	8278	0.51493 ppb		95
27) MEK (2-Butanone)	3.81	43	764	-0.42490 ppb	#	59
28) Cis-1,2-DCE	3.74	96	4127	0.57017 ppb	#	85
29) 2,2-Dichloropropane	3.70	77	2068	0.66280 ppb		95
30) Chloroform	4.26	83	6809	0.52934 ppb		89
31) Bromochloromethane	4.08	128	862	-0.37251 ppb		98
33) 1,1,1-TCA	4.47	97	5663	0.57938 ppb		88
34) Cyclohexane	4.54	41	2682	0.49884 ppb		81
35) 1,1-Dichloropropene	4.73	75	4796	0.58418 ppb	#	85
36) 2,2,4-Trimethylpentane	5.15	57	8394	0.47065 ppb	#	68
38) Carbon Tetrachloride	4.70	119	3957	0.52123 ppb		85
39) Tert Amyl Methyl Ether	5.23	73	6801	0.48315 ppb		92
40) 1,2-DCA	5.03	62	5020	0.53511 ppb	#	77
41) Benzene	4.99	78	13456	0.51101 ppb	#	88
42) TCE	5.83	95	1791	0.50189 ppb		86
43) 2-Pentanone	6.12	43	82083	22.41956 ppb		94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L06.D
Acq On : 11 Jan 17 12:24
Sample : 0.5ug/L VOC STD 1/11/17K
Misc : W IS&S 1/3/17, 01/11/17

Vial: 5
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 12 7:32 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:31:44 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
44) 1,2-Dichloropropane	6.09	63	4235	0.52995 ppb	#	91
45) Bromodichloromethane	6.44	83	4811	0.52799 ppb	#	75
46) Methyl Cyclohexane	6.04	83	4248	0.49553 ppb		96
47) Dibromomethane	6.22	93	2155	0.53583 ppb		77
48) 2-Chloroethyl vinyl ether	6.46	43	1196	2.18315 ppb		100
49) MIBK (methyl isobutyl ket	7.16	43	4951	0.24317 ppb		95
50) 1-Bromo-2-chloroethane	6.75	63	2556	0.46941 ppb		98
51) Cis-1,3-Dichloropropene	6.95	75	5176	0.51842 ppb		87
52) Toluene	7.29	91	14363	0.53339 ppb		91
53) Trans-1,3-Dichloropropene	7.57	75	4546	0.54118 ppb		99
54) 1,1,2-TCA	7.74	83	2431	0.50235 ppb		96
55) 2-Hexanone	8.06	43	673	0.41285 ppb	#	30
58) 1,2-EDB	8.21	107	2286	0.43952 ppb	#	77
59) Tetrachloroethene	7.86	166	4024	0.62618 ppb		96
60) 1-Chlorohexane	8.76	91	3587	0.47607 ppb		88
61) 1,1,1,2-Tetrachloroethane	8.83	131	3399	0.52845 ppb		86
62) m&p-Xylene	9.00	91	11436	0.82502 ppb		92
63) o-Xylene	9.38	106	4753	0.46851 ppb		97
64) Styrene	9.40	104	4409	0.85842 ppb		99
66) 1,3-Dichloropropane	7.91	76	5101	0.51654 ppb		100
67) Dibromochloromethane	8.12	129	3186	0.52247 ppb		89
68) Chlorobenzene	8.73	112	9065	0.51212 ppb		87
69) Ethylbenzene	8.87	91	13075	0.44581 ppb		97
70) Bromoform	9.55	173	2167	0.59768 ppb		100
72) Isopropylbenzene	9.76	105	11007	0.46570 ppb		100
73) 1,1,2,2-Tetrachloroethane	10.07	83	3441	0.49897 ppb	#	78
74) 1,2,3-Trichloropropane	10.09	110	682	0.58847 ppb		90
75) t-1,4-Dichloro-2-Butene	10.13	53	869	0.53967 ppb		99
76) Bromobenzene	10.02	156	3822	0.57053 ppb		90
77) n-Propylbenzene	10.17	91	13834	0.47154 ppb		98
78) 4-Ethyltoluene	10.28	105	10370	0.42490 ppb		97
79) 2-Chlorotoluene	10.22	91	9354	0.50685 ppb		95
80) 1,3,5-Trimethylbenzene	10.36	105	8921	0.43144 ppb		99
81) 4-Chlorotoluene	10.34	91	9990	0.47167 ppb		97
82) Tert-Butylbenzene	10.66	119	7562	0.46910 ppb		93
83) 1,2,4-Trimethylbenzene	10.72	105	8750	0.43248 ppb		99
84) Sec-Butylbenzene	10.88	105	12141	0.49469 ppb		98
85) p-Isopropyltoluene	11.04	119	9491	0.45954 ppb	#	90
86) Benzyl Chloride	11.20	91	3467	0.50960 ppb	#	89
87) 1,3-DCB	10.96	146	5968	0.47771 ppb		94
88) 1,4-DCB	11.05	146	7387	0.57256 ppb		89
89) n-Butylbenzene	11.44	91	8699	0.44832 ppb	#	84
90) 1,2-DCB	11.41	146	6556	0.55217 ppb		94
91) Hexachloroethane	11.65	117	2081	0.43478 ppb		85
92) 1,2-Dibromo-3-chloropropan	12.17	157	447	0.47069 ppb		92
93) 1,2,4-Trichlorobenzene	13.00	180	3628	0.50962 ppb		86
94) Hexachlorobutadiene	13.19	225	2241	0.61746 ppb	#	77
95) Naphthalene	13.23	128	4146	0.87167 ppb	#	88
96) 1,2,3-Trichlorobenzene	13.47	180	2656	0.60860 ppb		83

(#) = qualifier out of range (m) = manual integration

Quantitation Report

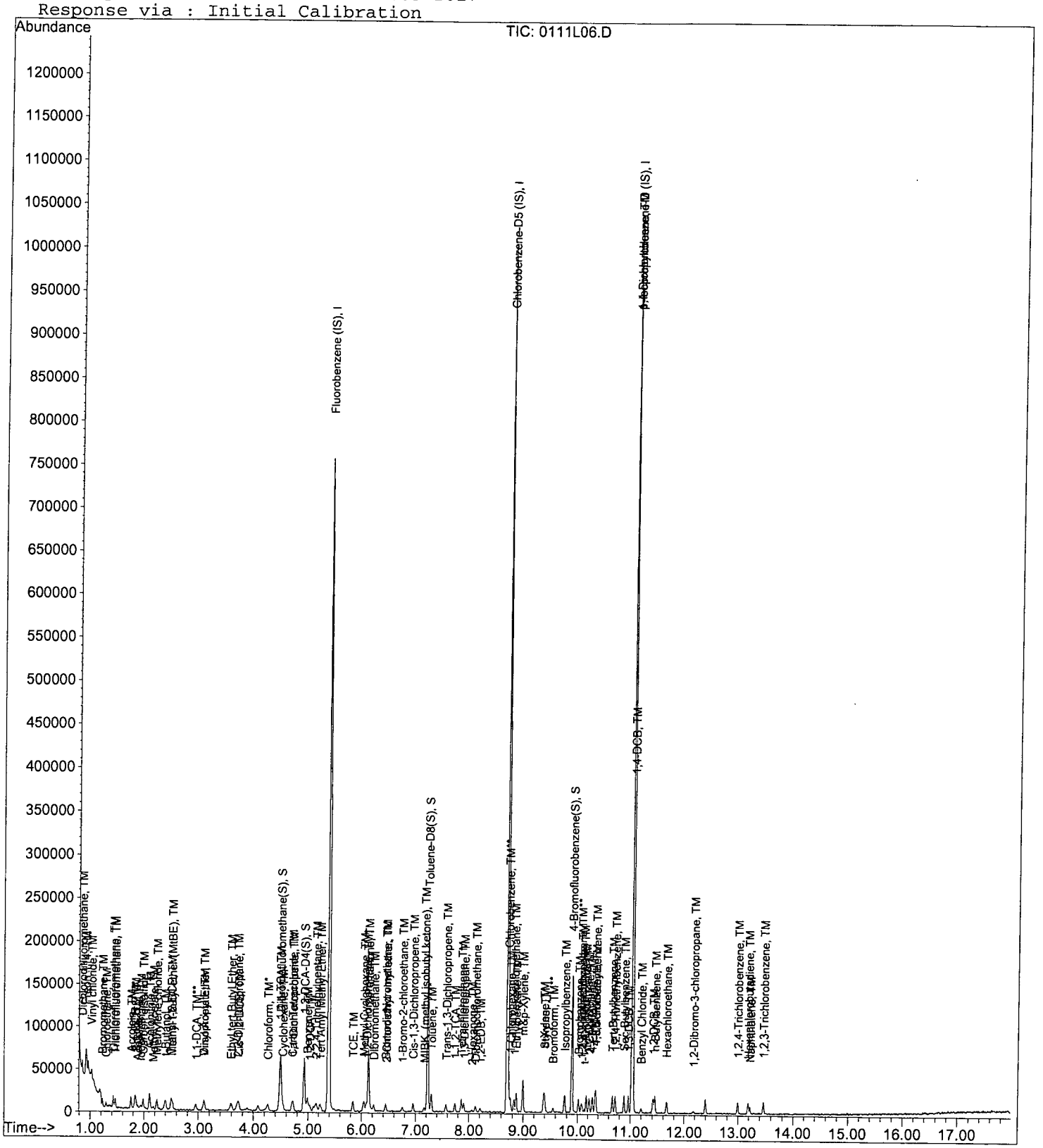
Data File : M:\LOKI\DATA\170111\0111L06.D
Acq On : 11 Jan 17 12:24
Sample : 0.5ug/L VOC STD 1/11/17K
Misc : W IS&S 1/3/17, 01/11/17

Vial: 5
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 12 7:32 2017

Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



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Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L07.D Vial: 6
Acq On : 11 Jan 17 12:52 Operator: PM,DG,SV,CMM
Sample : 1.0ug/L VOC STD 1/11/17L Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 12 7:32 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:31:44 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	346432	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	315072	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	160704	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	70403	9.13284 ppb		0.00
Spiked Amount 25.000			Recovery = 36.532%			
37) 1,2-DCA-D4(S)	4.93	65	77817	9.32933 ppb		0.00
Spiked Amount 25.000			Recovery = 37.316%			
57) Toluene-D8(S)	7.22	98	227758	9.19324 ppb		0.00
Spiked Amount 25.000			Recovery = 36.772%			
65) 4-Bromofluorobenzene(S)	9.89	95	76119	8.80990 ppb		0.00
Spiked Amount 25.000			Recovery = 35.240%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	7520	0.94643 ppb		95
3) Freon 114	0.93	85	5923	0.97648 ppb		98
4) Chloromethane	0.96	50	12627	0.39642 ppb		97
5) Vinyl chloride	1.03	62	9874	0.98711 ppb		90
6) Bromomethane	1.22	94	6136	0.88603 ppb		87
7) Chloroethane	1.29	64	5926	1.09346 ppb		91
8) Dichlorofluoromethane	1.43	67	15302	0.96661 ppb		99
9) Trichlorofluoromethane	1.46	101	10238	0.97842 ppb		99
10) Acrolein	1.76	56	15460	27.38868 ppb	#	97
11) Acetone	1.88	43	4042	0.29864 ppb		90
12) Freon-113	1.85	101	6737	1.09938 ppb		92
13) 1,1-DCE	1.83	96	6302	1.06897 ppb		100
14) t-Butanol	2.39	59	9183	47.24773 ppb	#	89
15) Acetonitrile	2.10	41	34804	47.81339 ppb		94
16) Methyl Acetate	2.17	43	6269	1.30500 ppb		98
17) Iodomethane	1.93	142	3193	0.87025 ppb		98
18) Acrylonitrile	2.47	52	1651	0.46648 ppb		83
19) Methylene chloride	2.24	84	8018	1.07554 ppb		93
20) Carbon disulfide	1.98	76	21327	1.05066 ppb		93
21) Methyl t-butyl ether (MtBE	2.53	73	15709	1.06569 ppb		96
22) Trans-1,2-DCE	2.49	96	6349	1.03881 ppb		88
23) Diisopropyl Ether	3.10	45	21020	1.02117 ppb		95
24) 1,1-DCA	2.95	63	13361	1.08424 ppb		97
25) Vinyl Acetate	3.10	43	5341	1.13428 ppb	#	95
26) Ethyl tert Butyl Ether	3.59	59	14932	0.94823 ppb		90
27) MEK (2-Butanone)	3.82	43	1993	0.17061 ppb	#	72
28) Cis-1,2-DCE	3.73	96	7750	1.09307 ppb		92
29) 2,2-Dichloropropane	3.71	77	3284	1.07450 ppb		98
30) Chloroform	4.26	83	13332	1.05809 ppb		99
31) Bromochloromethane	4.08	128	3483	0.56522 ppb		74
33) 1,1,1-TCA	4.47	97	10094	1.05427 ppb		96
34) Cyclohexane	4.53	41	5645	1.07186 ppb		86
35) 1,1-Dichloropropene	4.72	75	8722	1.08457 ppb		94
36) 2,2,4-Trimethylpentane	5.15	57	17149	0.98161 ppb	#	57
38) Carbon Tetrachloride	4.70	119	7632	1.02631 ppb	#	90
39) Tert Amyl Methyl Ether	5.22	73	13702	0.99372 ppb	#	97
40) 1,2-DCA	5.03	62	9276	1.00943 ppb		95
41) Benzene	4.99	78	27174	1.05350 ppb		99
42) TCE	5.84	95	3893	1.11371 ppb		91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L07.D
Acq On : 11 Jan 17 12:52
Sample : 1.0ug/L VOC STD 1/11/17L
Misc : W IS&S 1/3/17, 01/11/17

Vial: 6
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 12 7:32 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:31:44 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43) 2-Pentanone	6.12	43	166814	46.51353 ppb		99
44) 1,2-Dichloropropane	6.09	63	8133	1.03897 ppb		99
45) Bromodichloromethane	6.44	83	8968	1.00475 ppb		92
46) Methyl Cyclohexane	6.04	83	8186	0.97483 ppb		96
47) Dibromomethane	6.22	93	3540	0.89859 ppb	#	71
48) 2-Chloroethyl vinyl ether	6.52	43	1896	3.53317 ppb		100
49) MIBK (methyl isobutyl ket	7.16	43	7521	0.81062 ppb	#	93
50) 1-Bromo-2-chloroethane	6.75	63	4770	0.89431 ppb		90
51) Cis-1,3-Dichloropropene	6.95	75	9275	0.94836 ppb		91
52) Toluene	7.29	91	26108	0.98981 ppb		94
53) Trans-1,3-Dichloropropene	7.56	75	8890	1.08040 ppb		97
54) 1,1,2-TCA	7.74	83	5338	1.12609 ppb		85
55) 2-Hexanone	8.06	43	1340	0.83918 ppb		94
58) 1,2-EDB	8.21	107	4995	0.99958 ppb		86
59) Tetrachloroethene	7.86	166	6608	1.07026 ppb		97
60) 1-Chlorohexane	8.76	91	6845	0.94556 ppb		84
61) 1,1,1,2-Tetrachloroethane	8.83	131	6328	1.02400 ppb		96
62) m&p-Xylene	9.00	91	24320	1.82613 ppb		99
63) o-Xylene	9.38	106	8530	0.87515 ppb		99
64) Styrene	9.40	104	9217	1.25565 ppb		97
66) 1,3-Dichloropropane	7.90	76	9847	1.03784 ppb		100
67) Dibromochloromethane	8.12	129	5830	0.99509 ppb		94
68) Chlorobenzene	8.73	112	17975	1.05695 ppb		98
69) Ethylbenzene	8.87	91	26692	0.94726 ppb		95
70) Bromoform	9.55	173	3396	0.97489 ppb		80
72) Isopropylbenzene	9.76	105	23032	0.97564 ppb		91
73) 1,1,2,2-Tetrachloroethane	10.07	83	6734	0.97765 ppb	#	90
74) 1,2,3-Trichloropropane	10.09	110	1258	1.08677 ppb	#	62
75) t-1,4-Dichloro-2-Butene	10.13	53	1728	1.07442 ppb		99
76) Bromobenzene	10.02	156	7051	1.05379 ppb		85
77) n-Propylbenzene	10.17	91	29411	1.00369 ppb		92
78) 4-Ethyltoluene	10.29	105	20769	0.85200 ppb		90
79) 2-Chlorotoluene	10.23	91	17291	0.93804 ppb		96
80) 1,3,5-Trimethylbenzene	10.36	105	18500	0.89577 ppb		93
81) 4-Chlorotoluene	10.34	91	19699	0.93119 ppb		93
82) Tert-Butylbenzene	10.66	119	16109	1.00050 ppb		97
83) 1,2,4-Trimethylbenzene	10.72	105	18076	0.89449 ppb		99
84) Sec-Butylbenzene	10.88	105	22846	0.93198 ppb		99
85) p-Isopropyltoluene	11.04	119	19839	0.96173 ppb		90
86) Benzyl Chloride	11.20	91	6374	0.93800 ppb		97
87) 1,3-DCB	10.96	146	12488	1.00081 ppb		95
88) 1,4-DCB	11.05	146	13719	1.06463 ppb		90
89) n-Butylbenzene	11.44	91	18916	0.97605 ppb		97
90) 1,2-DCB	11.41	146	12054	1.01645 ppb		95
91) Hexachloroethane	11.66	117	4212	0.88105 ppb	#	65
92) 1,2-Dibromo-3-chloropropan	12.18	157	902	0.95093 ppb	#	86
93) 1,2,4-Trichlorobenzene	13.00	180	7079	0.99556 ppb		97
94) Hexachlorobutadiene	13.19	225	4220	1.16412 ppb		91
95) Naphthalene	13.22	128	7119	1.22244 ppb		99
96) 1,2,3-Trichlorobenzene	13.46	180	4229	0.97020 ppb		92

(#) = qualifier out of range (m) = manual integration

Quantitation Report

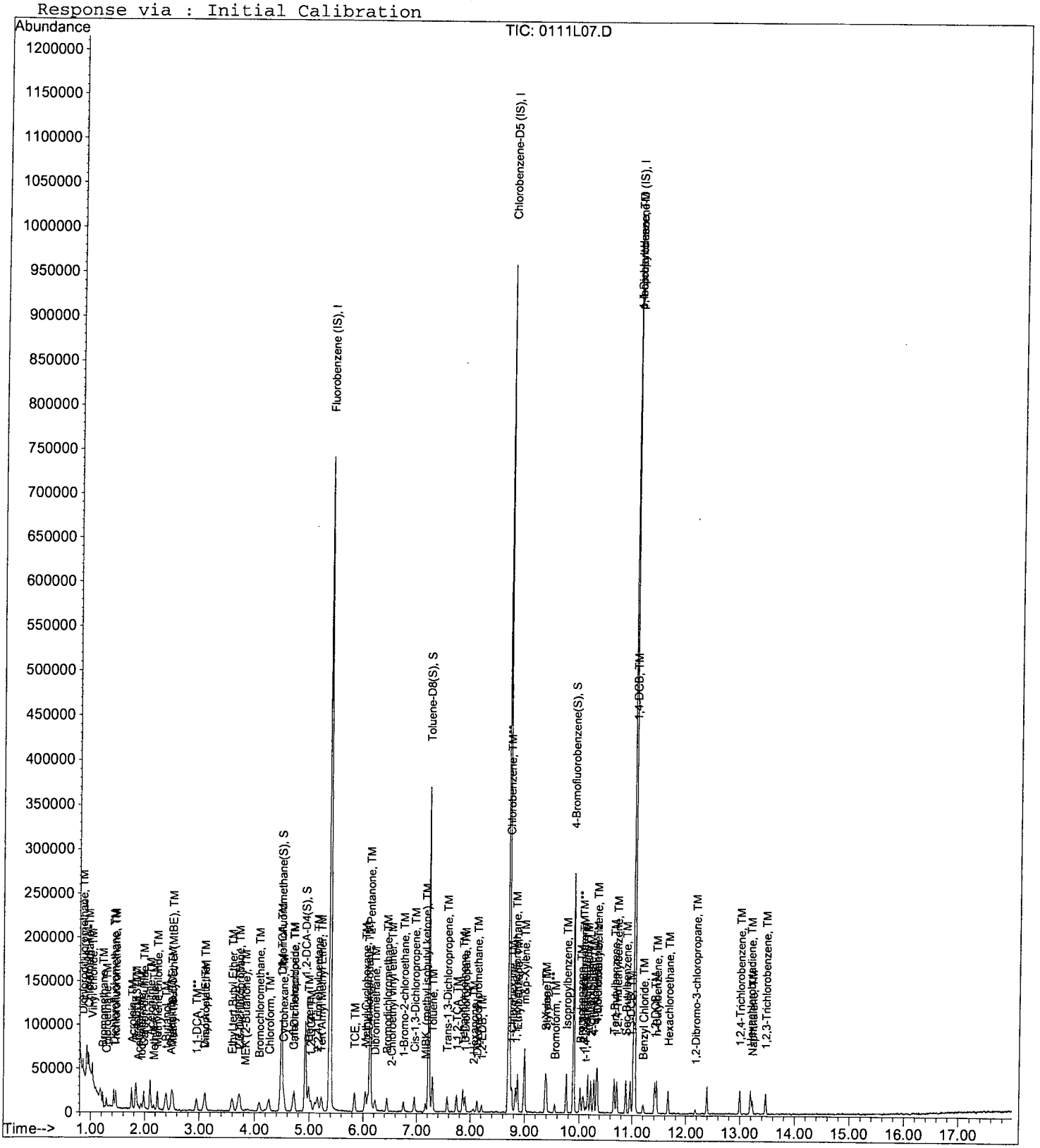
Data File : M:\LOKI\DATA\170111\0111L07.D
Acq On : 11 Jan 17 12:52
Sample : 1.0ug/L VOC STD 1/11/17L
Misc : W IS&S 1/3/17, 01/11/17

Vial: 6
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 12 7:32 2017

Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L08.D
Acq On : 11 Jan 17 13:20
Sample : 2.0ug/L VOC STD 1/11/17M
Misc : W IS&S 1/3/17, 01/11/17

Vial: 7
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 12 7:32 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:31:44 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	345600	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	314496	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	161216	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	75123	9.76859 ppb		0.00
Spiked Amount 25.000			Recovery = 39.076%			
37) 1,2-DCA-D4(S)	4.93	65	79701	9.57820 ppb		0.00
Spiked Amount 25.000			Recovery = 38.312%			
57) Toluene-D8(S)	7.22	98	240936	9.74297 ppb		0.00
Spiked Amount 25.000			Recovery = 38.972%			
65) 4-Bromofluorobenzene(S)	9.89	95	82145	9.52476 ppb		0.00
Spiked Amount 25.000			Recovery = 38.100%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	17928	2.26177 ppb		99
3) Freon 114	0.93	85	11910	1.96823 ppb		100
4) Chloromethane	0.96	50	23189	1.47201 ppb		99
5) Vinyl chloride	1.03	62	19197	1.92376 ppb		99
6) Bromomethane	1.22	94	12975	2.49761 ppb		96
7) Chloroethane	1.29	64	11420	2.11228 ppb		93
8) Dichlorofluoromethane	1.43	67	30951	1.95984 ppb		93
9) Trichlorofluoromethane	1.46	101	21439	2.05381 ppb		100
10) Acrolein	1.76	56	24398	43.32714 ppb	#	97
11) Acetone	1.88	43	4832	0.81394 ppb		83
12) Freon-113	1.84	101	11874	1.94233 ppb		90
13) 1,1-DCE	1.83	96	13406	2.27946 ppb		99
14) t-Butanol	2.40	59	14372	74.12383 ppb		97
15) Acetonitrile	2.10	41	50909	70.10665 ppb		97
16) Methyl Acetate	2.17	43	10369	2.16368 ppb		97
17) Iodomethane	1.93	142	6708	1.83265 ppb		94
18) Acrylonitrile	2.48	52	3272	1.54975 ppb		96
19) Methylene chloride	2.24	84	16438	2.21032 ppb		88
20) Carbon disulfide	1.98	76	41498	2.04930 ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	28905	1.96562 ppb		95
22) Trans-1,2-DCE	2.50	96	12745	2.09032 ppb		98
23) Diisopropyl Ether	3.10	45	39919	1.94397 ppb		97
24) 1,1-DCA	2.95	63	27086	2.20332 ppb		98
25) Vinyl Acetate	3.10	43	9624	2.04879 ppb	#	94
26) Ethyl tert Butyl Ether	3.59	59	30172	1.92064 ppb		99
27) MEK (2-Butanone)	3.82	43	5523	1.86596 ppb	#	64
28) Cis-1,2-DCE	3.72	96	14583	2.06175 ppb		99
29) 2,2-Dichloropropane	3.70	77	6036	1.97970 ppb		98
30) Chloroform	4.26	83	26345	2.09590 ppb		97
31) Bromochloromethane	4.08	128	6846	1.76623 ppb		88
33) 1,1,1-TCA	4.47	97	19421	2.03331 ppb		92
34) Cyclohexane	4.53	41	11164	2.12490 ppb		70
35) 1,1-Dichloropropene	4.73	75	17474	2.17810 ppb		88
36) 2,2,4-Trimethylpentane	5.15	57	33448	1.91918 ppb		94
38) Carbon Tetrachloride	4.71	119	14947	2.01483 ppb		93
39) Tert Amyl Methyl Ether	5.22	73	25183	1.83075 ppb		97
40) 1,2-DCA	5.03	62	18567	2.02535 ppb		97
41) Benzene	4.99	78	52558	2.04251 ppb		97
42) TCE	5.84	95	7467	2.14131 ppb		91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L08.D
Acq On : 11 Jan 17 13:20
Sample : 2.0ug/L VOC STD 1/11/17M
Misc : W IS&S 1/3/17, 01/11/17

Vial: 7
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 12 7:32 2017

Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:31:44 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43) 2-Pentanone	6.12	43	258879	72.35822 ppb		99
44) 1,2-Dichloropropane	6.09	63	16669	2.13455 ppb		99
45) Bromodichloromethane	6.44	83	19844	2.22862 ppb		96
46) Methyl Cyclohexane	6.04	83	16639	1.98623 ppb		93
47) Dibromomethane	6.22	93	8167	2.07809 ppb		98
48) 2-Chloroethyl vinyl ether	6.54	43	1481	2.76647 ppb		100
49) MIBK (methyl isobutyl ket	7.16	43	12403	1.85404 ppb		96
50) 1-Bromo-2-chloroethane	6.75	63	10533	1.97954 ppb		95
51) Cis-1,3-Dichloropropene	6.95	75	19254	1.97344 ppb		93
52) Toluene	7.29	91	54000	2.05218 ppb		98
53) Trans-1,3-Dichloropropene	7.56	75	16757	2.04138 ppb		87
54) 1,1,2-TCA	7.74	83	9666	2.04402 ppb		88
55) 2-Hexanone	8.05	43	2402	1.50789 ppb		94
58) 1,2-EDB	8.21	107	10517	2.10848 ppb	#	78
59) Tetrachloroethene	7.86	166	13931	2.26045 ppb		95
60) 1-Chlorohexane	8.76	91	13714	1.89791 ppb		97
61) 1,1,1,2-Tetrachloroethane	8.83	131	12121	1.96502 ppb		100
62) m&p-Xylene	8.99	91	51448	3.87018 ppb		98
63) o-Xylene	9.38	106	20836	2.14162 ppb		88
64) Styrene	9.40	104	19008	2.03925 ppb		97
66) 1,3-Dichloropropane	7.90	76	19135	2.02046 ppb		99
67) Dibromochloromethane	8.12	129	12152	2.07795 ppb		90
68) Chlorobenzene	8.73	112	35630	2.09891 ppb		99
69) Ethylbenzene	8.87	91	56929	2.02403 ppb		97
70) Bromoform	9.55	173	7013	2.01690 ppb		96
72) Isopropylbenzene	9.76	105	48668	2.05503 ppb		97
73) 1,1,2,2-Tetrachloroethane	10.07	83	13474	1.94995 ppb	#	96
74) 1,2,3-Trichloropropane	10.09	110	2619	2.25534 ppb		91
75) t-1,4-Dichloro-2-Butene	10.13	53	3433	2.12776 ppb	#	77
76) Bromobenzene	10.01	156	13667	2.03609 ppb		97
77) n-Propylbenzene	10.17	91	58665	1.99566 ppb		97
78) 4-Ethyltoluene	10.29	105	44403	1.81574 ppb		99
79) 2-Chlorotoluene	10.23	91	36584	1.97838 ppb		96
80) 1,3,5-Trimethylbenzene	10.36	105	39446	1.90391 ppb		98
81) 4-Chlorotoluene	10.34	91	42166	1.98689 ppb		95
82) Tert-Butylbenzene	10.67	119	33860	2.09630 ppb		98
83) 1,2,4-Trimethylbenzene	10.72	105	38914	1.91954 ppb		99
84) Sec-Butylbenzene	10.88	105	48553	1.97439 ppb		100
85) p-Isopropyltoluene	11.04	119	39707	1.91875 ppb		93
86) Benzyl Chloride	11.19	91	12101	1.77514 ppb	#	92
87) 1,3-DCB	10.96	146	26038	2.08010 ppb		94
88) 1,4-DCB	11.05	146	26816	2.07438 ppb		89
89) n-Butylbenzene	11.44	91	37859	1.94728 ppb		100
90) 1,2-DCB	11.41	146	24298	2.04242 ppb		95
91) Hexachloroethane	11.66	117	9403	1.96064 ppb		88
92) 1,2-Dibromo-3-chloropropan	12.18	157	1896	1.99251 ppb	#	75
93) 1,2,4-Trichlorobenzene	13.00	180	15206	2.13171 ppb		91
94) Hexachlorobutadiene	13.19	225	8090	2.22460 ppb		93
95) Naphthalene	13.22	128	14909	2.13198 ppb		97
96) 1,2,3-Trichlorobenzene	13.46	180	8089	1.84985 ppb		85

(#) = qualifier out of range (m) = manual integration

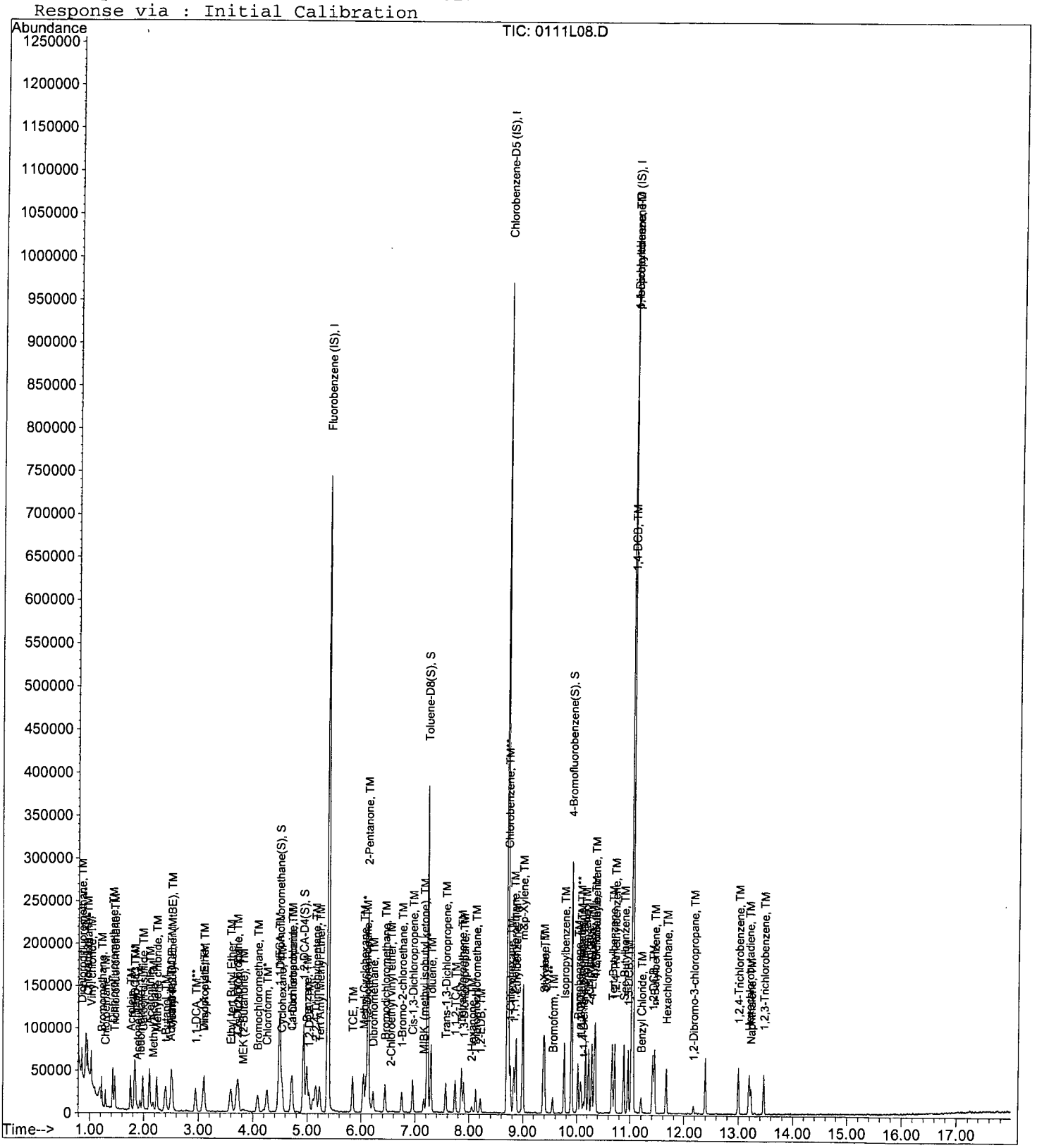
Quantitation Report

Data File : M:\LOKI\DATA\170111\0111L08.D
Acq On : 11 Jan 17 13:20
Sample : 2.0ug/L VOC STD 1/11/17M
Misc : W IS&S 1/3/17, 01/11/17

Vial: 7
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 12 7:32 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



0111L08.D LALLW.M Thu Jan 12 08:03:14 2017 Page 3

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Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L09.D Vial: 8
Acq On : 11 Jan 17 13:48 Operator: PM,DG,SV,CMM
Sample : 5.0ug/L VOC STD 1/11/17N Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 12 7:32 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:31:44 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	355200	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	319360	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	174144	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	197346	24.96824 ppb		0.00
Spiked Amount 25.000			Recovery = 99.872%			
37) 1,2-DCA-D4(S)	4.93	65	213172	24.92591 ppb		0.00
Spiked Amount 25.000			Recovery = 99.704%			
57) Toluene-D8(S)	7.22	98	651549	25.94605 ppb		0.00
Spiked Amount 25.000			Recovery = 103.784%			
65) 4-Bromofluorobenzene(S)	9.89	95	233382	26.64862 ppb		0.00
Spiked Amount 25.000			Recovery = 106.596%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.86	85	40120	4.92468 ppb		95
3) Freon 114	0.93	85	27346	4.39703 ppb		99
4) Chloromethane	0.96	50	57196	4.76823 ppb		95
5) Vinyl chloride	1.03	62	49141	4.79139 ppb		97
6) Bromomethane	1.22	94	30528	5.53763 ppb		97
7) Chloroethane	1.29	64	27441	4.93840 ppb		98
8) Dichlorofluoromethane	1.43	67	74521	4.59120 ppb		97
9) Trichlorofluoromethane	1.46	101	53069	4.94649 ppb		98
10) Acrolein	1.76	56	34649	59.86835 ppb	#	96
11) Acetone	1.88	43	11251	4.75415 ppb		86
12) Freon-113	1.84	101	28288	4.50224 ppb		90
13) 1,1-DCE	1.83	96	28678	4.74440 ppb		96
14) t-Butanol	2.40	59	18976	95.22393 ppb		98
15) Acetonitrile	2.10	41	69135	92.63250 ppb		95
16) Methyl Acetate	2.17	43	23523	4.77583 ppb		99
17) Iodomethane	1.93	142	17288	4.59550 ppb		95
18) Acrylonitrile	2.47	52	8260	4.72614 ppb		98
19) Methylene chloride	2.24	84	39105	5.11609 ppb		99
20) Carbon disulfide	1.98	76	97575	4.68832 ppb		100
21) Methyl t-butyl ether (MtBE	2.52	73	73555	4.86676 ppb		99
22) Trans-1,2-DCE	2.50	96	31448	5.01842 ppb		98
23) Diisopropyl Ether	3.10	45	104308	4.94229 ppb		95
24) 1,1-DCA	2.95	63	64798	5.12855 ppb		98
25) Vinyl Acetate	3.10	43	22992	4.76232 ppb	#	97
26) Ethyl tert Butyl Ether	3.59	59	78290	4.84896 ppb		94
27) MEK (2-Butanone)	3.81	43	11710	4.68156 ppb		93
28) Cis-1,2-DCE	3.73	96	36719	5.05104 ppb		92
29) 2,2-Dichloropropane	3.70	77	14918	4.76059 ppb		100
30) Chloroform	4.26	83	61706	4.77639 ppb		96
31) Bromochloromethane	4.08	128	16368	5.00075 ppb		93
33) 1,1,1-TCA	4.47	97	48242	4.91425 ppb		100
34) Cyclohexane	4.53	41	24094	4.46199 ppb		93
35) 1,1-Dichloropropene	4.72	75	40591	4.92284 ppb		97
36) 2,2,4-Trimethylpentane	5.15	57	81207	4.53357 ppb		93
38) Carbon Tetrachloride	4.70	119	37521	4.92107 ppb		97
39) Tert Amyl Methyl Ether	5.22	73	67242	4.75624 ppb		96
40) 1,2-DCA	5.03	62	44565	4.72990 ppb		100
41) Benzene	4.99	78	133407	5.04436 ppb		98
42) TCE	5.84	95	16760	4.67635 ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L09.D Vial: 8
Acq On : 11 Jan 17 13:48 Operator: PM,DG,SV,CMM
Sample : 5.0ug/L VOC STD 1/11/17N Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 12 7:32 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:31:44 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43) 2-Pentanone	6.12	43	351885	95.69573 ppb		100
44) 1,2-Dichloropropane	6.09	63	36950	4.60376 ppb	#	94
45) Bromodichloromethane	6.44	83	46956	5.13097 ppb		95
46) Methyl Cyclohexane	6.04	83	40430	4.69576 ppb		90
47) Dibromomethane	6.22	93	19435	4.81156 ppb		98
48) 2-Chloroethyl vinyl ether	6.55	43	2610	4.74364 ppb		100
49) MIBK (methyl isobutyl ket	7.16	43	31899	5.82194 ppb		93
50) 1-Bromo-2-chloroethane	6.75	63	27392	5.00883 ppb		96
51) Cis-1,3-Dichloropropene	6.95	75	49416	4.92802 ppb		96
52) Toluene	7.29	91	134172	4.96116 ppb		99
53) Trans-1,3-Dichloropropene	7.56	75	42891	5.08388 ppb		96
54) 1,1,2-TCA	7.74	83	25111	5.16658 ppb		99
55) 2-Hexanone	8.05	43	7641	4.66710 ppb		94
58) 1,2-EDB	8.21	107	25520	5.03840 ppb		98
59) Tetrachloroethene	7.86	166	32368	5.17205 ppb		96
60) 1-Chlorohexane	8.76	91	34196	4.66037 ppb		88
61) 1,1,1,2-Tetrachloroethane	8.83	131	32348	5.16428 ppb		97
62) m&p-Xylene	8.99	91	141440	10.47779 ppb		99
63) o-Xylene	9.38	106	49439	5.00418 ppb		96
64) Styrene	9.40	104	54832	4.83468 ppb		96
66) 1,3-Dichloropropane	7.90	76	48751	5.06920 ppb		98
67) Dibromochloromethane	8.12	129	31355	5.27993 ppb		100
68) Chlorobenzene	8.73	112	89670	5.20188 ppb		98
69) Ethylbenzene	8.87	91	144757	5.06824 ppb		100
70) Bromoform	9.55	173	18051	5.11231 ppb		93
72) Isopropylbenzene	9.76	105	126111	4.92978 ppb		96
73) 1,1,2,2-Tetrachloroethane	10.07	83	34704	4.64950 ppb		96
74) 1,2,3-Trichloropropane	10.09	110	6051	4.82395 ppb		96
75) t-1,4-Dichloro-2-Butene	10.13	53	7797	4.47380 ppb		99
76) Bromobenzene	10.02	156	36132	4.98328 ppb		98
77) n-Propylbenzene	10.17	91	157870	4.97171 ppb		98
78) 4-Ethyltoluene	10.29	105	127631	4.83166 ppb		97
79) 2-Chlorotoluene	10.23	91	101045	5.05863 ppb		98
80) 1,3,5-Trimethylbenzene	10.36	105	112976	5.04811 ppb		100
81) 4-Chlorotoluene	10.34	91	115818	5.05228 ppb		96
82) Tert-Butylbenzene	10.67	119	87489	5.01442 ppb		99
83) 1,2,4-Trimethylbenzene	10.72	105	108010	4.93235 ppb		97
84) Sec-Butylbenzene	10.89	105	129662	4.88122 ppb		98
85) p-Isopropyltoluene	11.04	119	107222	4.79661 ppb		99
86) Benzyl Chloride	11.19	91	34300	4.65806 ppb		95
87) 1,3-DCB	10.96	146	69585	5.14626 ppb		97
88) 1,4-DCB	11.05	146	72146	5.16661 ppb		98
89) n-Butylbenzene	11.44	91	97946	4.66386 ppb		100
90) 1,2-DCB	11.41	146	62731	4.88152 ppb		98
91) Hexachloroethane	11.66	117	22758	4.39303 ppb		92
92) 1,2-Dibromo-3-chloropropan	12.18	157	5456	5.30807 ppb	#	66
93) 1,2,4-Trichlorobenzene	13.00	180	40234	5.22163 ppb		86
94) Hexachlorobutadiene	13.19	225	20523	5.22449 ppb		92
95) Naphthalene	13.22	128	41576	4.87195 ppb		99
96) 1,2,3-Trichlorobenzene	13.46	180	24576	5.20298 ppb		98

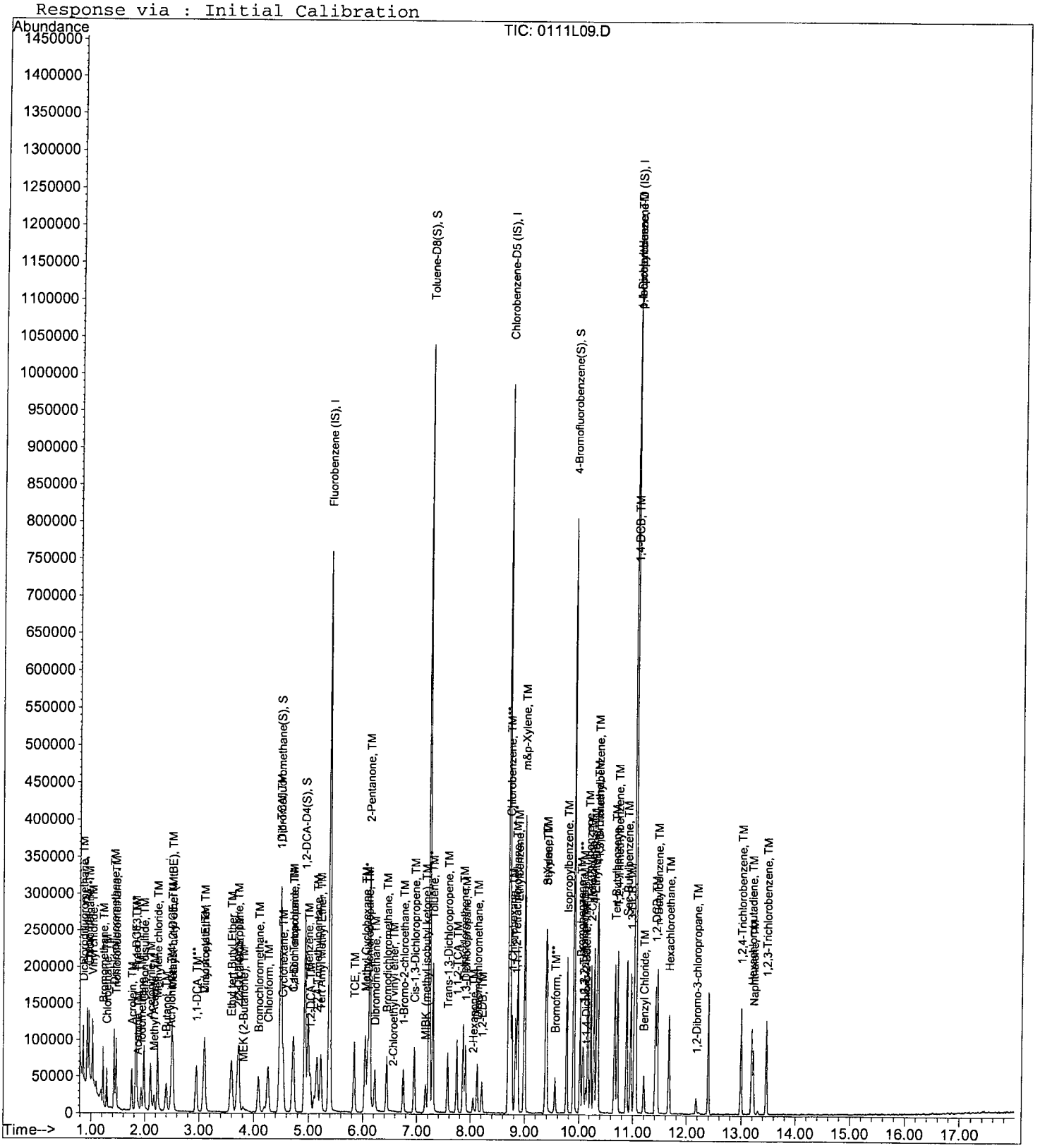
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\170111\0111L09.D Vial: 8
Acq On : 11 Jan 17 13:48 Operator: PM,DG,SV,CMM
Sample : 5.0ug/L VOC STD 1/11/17N Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 12 7:32 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



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Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L10.D
Acq On : 11 Jan 17 14:16
Sample : 10ug/L VOC STD 1/11/17O
Misc : W IS&S 1/3/17, 01/11/17

Vial: 9
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 12 7:32 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:31:44 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	363392	25.00000 ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	319296	25.00000 ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	176960	25.00000 ppb	0.00
System Monitoring Compounds					
32) Dibromofluoromethane(S)	4.48	111	201567	24.92738 ppb	0.00
Spiked Amount 25.000			Recovery = 99.708%		
37) 1,2-DCA-D4(S)	4.92	65	219993	25.14359 ppb	0.00
Spiked Amount 25.000			Recovery = 100.576%		
57) Toluene-D8(S)	7.22	98	673119	26.81039 ppb	0.00
Spiked Amount 25.000			Recovery = 107.240%		
65) 4-Bromofluorobenzene(S)	9.89	95	240729	27.49304 ppb	0.00
Spiked Amount 25.000			Recovery = 109.972%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.85	85	85280	10.23202 ppb	100
3) Freon 114	0.93	85	54109	8.50418 ppb	100
4) Chloromethane	0.96	50	118413	10.55268 ppb	100
5) Vinyl chloride	1.03	62	98545	9.39182 ppb	100
6) Bromomethane	1.22	94	64264	9.75324 ppb	100
7) Chloroethane	1.29	64	54716	9.62495 ppb	100
8) Dichlorofluoromethane	1.43	67	153233	9.22778 ppb	100
9) Trichlorofluoromethane	1.46	101	107330	9.77857 ppb	100
10) Acrolein	1.76	56	45388	76.65584 ppb	100
11) Acetone	1.88	43	19053	9.37629 ppb	100
12) Freon-113	1.84	101	57336	8.91973 ppb	100
13) 1,1-DCE	1.83	96	60428	9.77166 ppb	100
14) t-Butanol	2.40	59	25744	126.27432 ppb	100
15) Acetonitrile	2.10	41	95241	124.73460 ppb	100
16) Methyl Acetate	2.17	43	47900	9.50581 ppb	100
17) Iodomethane	1.93	142	36216	9.40993 ppb	100
18) Acrylonitrile	2.47	52	17006	10.15036 ppb	100
19) Methylene chloride	2.24	84	76970	9.84295 ppb	100
20) Carbon disulfide	1.98	76	202349	9.50336 ppb	100
21) Methyl t-butyl ether (MtBE	2.52	73	153363	9.91850 ppb	100
22) Trans-1,2-DCE	2.50	96	64262	10.02365 ppb	100
23) Diisopropyl Ether	3.10	45	217144	10.05671 ppb	100
24) 1,1-DCA	2.95	63	129445	10.01418 ppb	100
25) Vinyl Acetate	3.10	43	46592	9.43301 ppb	100
26) Ethyl tert Butyl Ether	3.59	59	165377	10.01186 ppb	100
27) MEK (2-Butanone)	3.80	43	24643	10.45758 ppb	100
28) Cis-1,2-DCE	3.73	96	73412	9.87085 ppb	100
29) 2,2-Dichloropropane	3.70	77	30872	9.62970 ppb	100
30) Chloroform	4.25	83	128078	9.69046 ppb	100
31) Bromochloromethane	4.08	128	32825	10.44844 ppb	100
33) 1,1,1-TCA	4.47	97	98978	9.85527 ppb	100
34) Cyclohexane	4.53	41	49724	9.00085 ppb	100
35) 1,1-Dichloropropene	4.72	75	83401	9.88678 ppb	100
36) 2,2,4-Trimethylpentane	5.16	57	170020	9.27778 ppb	100
38) Carbon Tetrachloride	4.71	119	79649	10.21088 ppb	100
39) Tert Amyl Methyl Ether	5.22	73	147512	10.19877 ppb	100
40) 1,2-DCA	5.03	62	94856	9.84058 ppb	100
41) Benzene	4.99	78	271936	10.05059 ppb	100
42) TCE	5.84	95	35488	9.67860 ppb	100

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\170111\0111L10.D Vial: 9
Acq On : 11 Jan 17 14:16 Operator: PM,DG,SV,CMM
Sample : 10ug/L VOC STD 1/11/17O Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 12 7:32 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:31:44 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
43)	2-Pentanone	6.12	43	479809	127.54334	ppb	100
44)	1,2-Dichloropropane	6.09	63	78269	9.53203	ppb	100
45)	Bromodichloromethane	6.44	83	94567	10.10056	ppb	100
46)	Methyl Cyclohexane	6.04	83	83375	9.46533	ppb	100
47)	Dibromomethane	6.22	93	41631	10.07433	ppb	100
48)	2-Chloroethyl vinyl ether	6.48	43	5536	9.83478	ppb	100
49)	MIBK (methyl isobutyl ket	7.16	43	55479	10.44824	ppb	100
50)	1-Bromo-2-chloroethane	6.75	63	55648	9.94626	ppb	100
51)	Cis-1,3-Dichloropropene	6.95	75	101913	9.93418	ppb	100
52)	Toluene	7.29	91	285827	10.33052	ppb	100
53)	Trans-1,3-Dichloropropene	7.56	75	87325	10.11732	ppb	100
54)	1,1,2-TCA	7.74	83	50583	10.17282	ppb	100
55)	2-Hexanone	8.04	43	16616	9.92022	ppb	100
58)	1,2-EDB	8.21	107	53229	10.51107	ppb	100
59)	Tetrachloroethene	7.86	166	66988	10.70608	ppb	100
60)	1-Chlorohexane	8.76	91	76337	10.40561	ppb	100
61)	1,1,1,2-Tetrachloroethane	8.83	131	66129	10.55945	ppb	100
62)	m&p-Xylene	8.99	91	307040	22.74989	ppb	100
63)	o-Xylene	9.38	106	107370	10.87009	ppb	100
64)	Styrene	9.40	104	122048	10.12503	ppb	100
66)	1,3-Dichloropropane	7.90	76	99285	10.32587	ppb	100
67)	Dibromochloromethane	8.12	129	61649	10.38328	ppb	100
68)	Chlorobenzene	8.73	112	180498	10.47305	ppb	100
69)	Ethylbenzene	8.87	91	310012	10.85633	ppb	100
70)	Bromoform	9.55	173	37990	10.76148	ppb	100
72)	Isopropylbenzene	9.76	105	268466	10.32755	ppb	100
73)	1,1,2,2-Tetrachloroethane	10.07	83	69411	9.15141	ppb	100
74)	1,2,3-Trichloropropane	10.09	110	12996	10.19573	ppb	100
75)	t-1,4-Dichloro-2-Butene	10.13	53	15613	8.81594	ppb	100
76)	Bromobenzene	10.02	156	71134	9.65459	ppb	100
77)	n-Propylbenzene	10.17	91	337698	10.46569	ppb	100
78)	4-Ethyltoluene	10.29	105	274972	10.24381	ppb	100
79)	2-Chlorotoluene	10.23	91	214568	10.57100	ppb	100
80)	1,3,5-Trimethylbenzene	10.36	105	242367	10.65735	ppb	100
81)	4-Chlorotoluene	10.34	91	249321	10.70295	ppb	100
82)	Tert-Butylbenzene	10.67	119	186764	10.53400	ppb	100
83)	1,2,4-Trimethylbenzene	10.72	105	235082	10.56435	ppb	100
84)	Sec-Butylbenzene	10.88	105	284811	10.55130	ppb	100
85)	p-Isopropyltoluene	11.04	119	235291	10.35832	ppb	100
86)	Benzyl Chloride	11.20	91	70750	9.45521	ppb	100
87)	1,3-DCB	10.96	146	140028	10.19117	ppb	100
88)	1,4-DCB	11.05	146	141497	9.97181	ppb	100
89)	n-Butylbenzene	11.44	91	212409	9.95325	ppb	100
90)	1,2-DCB	11.41	146	132574	10.15231	ppb	100
91)	Hexachloroethane	11.66	117	47682	9.05771	ppb	100
92)	1,2-Dibromo-3-chloropropan	12.18	157	10590	10.13892	ppb	100
93)	1,2,4-Trichlorobenzene	13.00	180	79580	10.16367	ppb	100
94)	Hexachlorobutadiene	13.19	225	40293	10.09406	ppb	100
95)	Naphthalene	13.22	128	90224	9.86889	ppb	100
96)	1,2,3-Trichlorobenzene	13.46	180	50544	10.53037	ppb	100

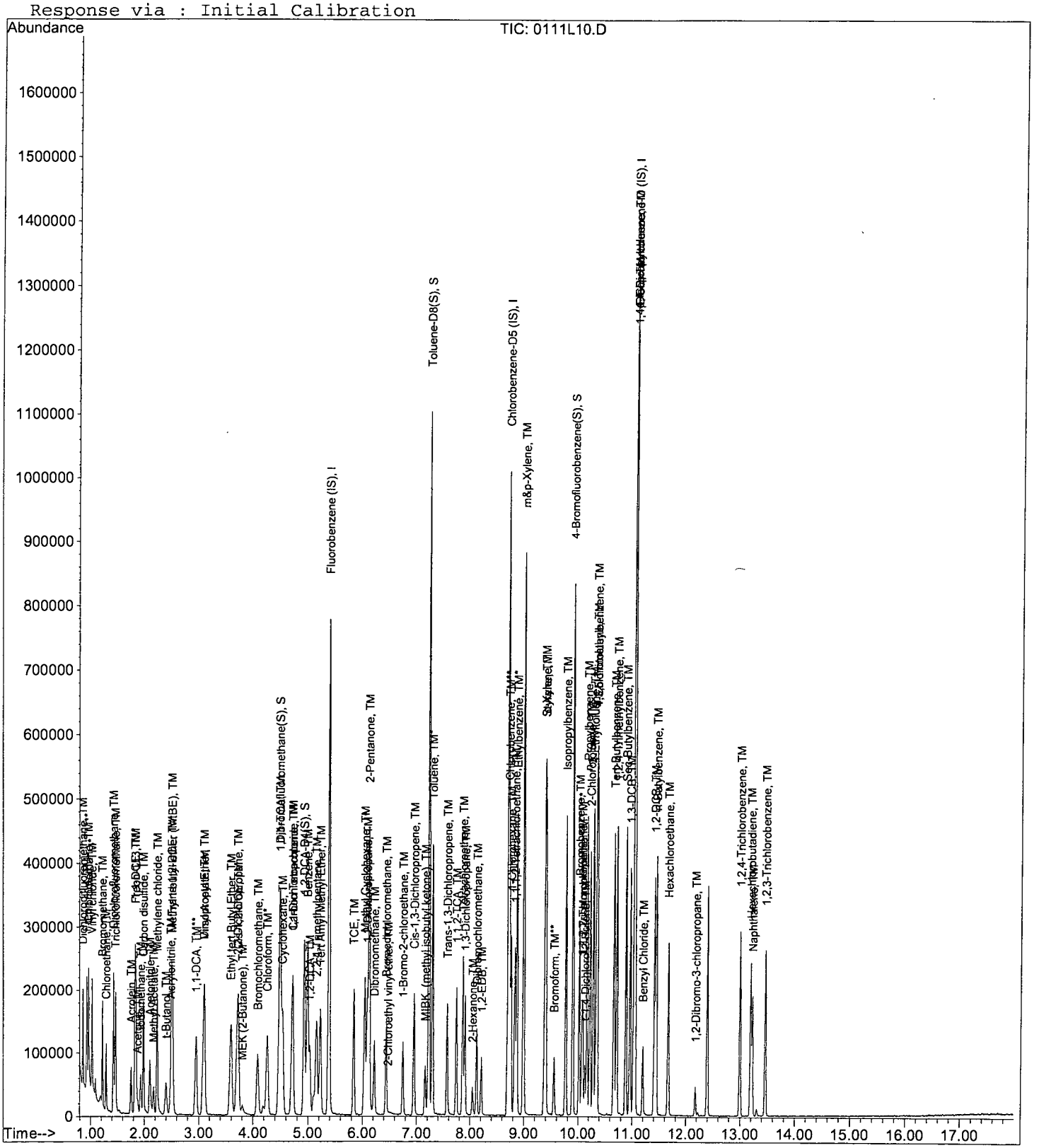
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\170111\0111L10.D Vial: 9
Acq On : 11 Jan 17 14:16 Operator: PM,DG,SV,CMM
Sample : 10ug/L VOC STD 1/11/17O Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 12 7:32 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



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Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L11.D
Acq On : 11 Jan 17 14:44
Sample : 20ug/L VOC STD 1/11/17P
Misc : W IS&S 1/3/17, 01/11/17

Vial: 10
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 12 7:32 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:31:44 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	374528	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	339392	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	187776	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	406045	48.72170 ppb		0.00
Spiked Amount 25.000			Recovery = 194.888%			
37) 1,2-DCA-D4(S)	4.92	65	451511	50.07003 ppb		0.00
Spiked Amount 25.000			Recovery = 200.280%			
57) Toluene-D8(S)	7.22	98	1402444	52.55193 ppb		0.00
Spiked Amount 25.000			Recovery = 210.208%			
65) 4-Bromofluorobenzene(S)	9.89	95	503786	54.12929 ppb		0.00
Spiked Amount 25.000			Recovery = 216.516%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	177856	20.70493 ppb		98
3) Freon 114	0.93	85	118921	18.13480 ppb		97
4) Chloromethane	0.96	50	227486	20.43287 ppb		99
5) Vinyl chloride	1.02	62	200733	18.56201 ppb		100
6) Bromomethane	1.21	94	168064	18.37340 ppb		98
7) Chloroethane	1.29	64	105499	18.00627 ppb		99
8) Dichlorofluoromethane	1.42	67	310428	18.13831 ppb		99
9) Trichlorofluoromethane	1.46	101	217420	19.21962 ppb		96
10) Acrolein	1.76	56	53927	88.36932 ppb	#	98
11) Acetone	1.88	43	36787	19.57360 ppb		96
12) Freon-113	1.84	101	120732	18.22376 ppb		96
13) 1,1-DCE	1.83	96	124020	19.45867 ppb		98
14) t-Butanol	2.40	59	31968	152.14075 ppb		96
15) Acetonitrile	2.11	41	107955	137.18190 ppb		94
16) Methyl Acetate	2.17	43	94499	18.19583 ppb		92
17) Iodomethane	1.93	142	85696	21.60417 ppb		97
18) Acrylonitrile	2.48	52	32831	19.56455 ppb		95
19) Methylene chloride	2.23	84	149513	18.55127 ppb		100
20) Carbon disulfide	1.98	76	402250	18.33004 ppb		100
21) Methyl t-butyl ether (MtBE	2.52	73	318206	19.96756 ppb		99
22) Trans-1,2-DCE	2.50	96	132428	20.04207 ppb		98
23) Diisopropyl Ether	3.10	45	450801	20.25741 ppb		99
24) 1,1-DCA	2.95	63	267684	20.09295 ppb		99
25) Vinyl Acetate	3.10	43	97517	19.15625 ppb		99
26) Ethyl tert Butyl Ether	3.59	59	341138	20.03830 ppb		96
27) MEK (2-Butanone)	3.80	43	47425	20.20607 ppb	#	87
28) Cis-1,2-DCE	3.73	96	155407	20.27444 ppb		97
29) 2,2-Dichloropropane	3.70	77	65256	19.74965 ppb		99
30) Chloroform	4.25	83	266417	19.55793 ppb		99
31) Bromochloromethane	4.08	128	68792	21.94098 ppb		97
33) 1,1,1-TCA	4.47	97	201386	19.45585 ppb		99
34) Cyclohexane	4.53	41	105863	18.59314 ppb		93
35) 1,1-Dichloropropene	4.72	75	182889	21.03596 ppb		98
36) 2,2,4-Trimethylpentane	5.15	57	378066	20.01718 ppb		92
38) Carbon Tetrachloride	4.70	119	159980	19.89938 ppb		96
39) Tert Amyl Methyl Ether	5.22	73	305555	20.49751 ppb		96
40) 1,2-DCA	5.03	62	191378	19.26367 ppb		97
41) Benzene	4.99	78	562029	20.15461 ppb		99
42) TCE	5.84	95	74408	19.68982 ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L11.D Vial: 10
Acq On : 11 Jan 17 14:44 Operator: PM,DG,SV,CMM
Sample : 20ug/L VOC STD 1/11/17P Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 12 7:32 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:31:44 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
43) 2-Pentanone	6.12	43	585738	151.07197 ppb	98
44) 1,2-Dichloropropane	6.09	63	160064	18.91387 ppb	100
45) Bromodichloromethane	6.44	83	193555	20.05863 ppb	99
46) Methyl Cyclohexane	6.04	83	181108	19.94935 ppb	96
47) Dibromomethane	6.22	93	86994	20.42582 ppb	93
48) 2-Chloroethyl vinyl ether	6.52	43	10172	17.53340 ppb	100
49) MIBK (methyl isobutyl ket	7.16	43	112328	21.28461 ppb	97
50) 1-Bromo-2-chloroethane	6.75	63	108504	18.81686 ppb	99
51) Cis-1,3-Dichloropropene	6.95	75	215397	20.37197 ppb	95
52) Toluene	7.29	91	597076	20.93822 ppb	100
53) Trans-1,3-Dichloropropene	7.56	75	186429	20.95711 ppb	99
54) 1,1,2-TCA	7.74	83	102975	20.09369 ppb	97
55) 2-Hexanone	8.04	43	33080	19.16247 ppb	98
58) 1,2-EDB	8.20	107	108820	20.21619 ppb	96
59) Tetrachloroethene	7.86	166	135438	20.36414 ppb	97
60) 1-Chlorohexane	8.76	91	158699	20.35159 ppb	98
61) 1,1,1,2-Tetrachloroethane	8.83	131	134873	20.26125 ppb	96
62) m&p-Xylene	8.99	91	667260	46.51267 ppb	99
63) o-Xylene	9.38	106	227742	21.69128 ppb	90
64) Styrene	9.40	104	273088	20.73846 ppb	99
66) 1,3-Dichloropropane	7.90	76	202529	19.81628 ppb	97
67) Dibromochloromethane	8.12	129	131822	20.88758 ppb	98
68) Chlorobenzene	8.73	112	366315	19.99619 ppb	96
69) Ethylbenzene	8.87	91	655240	21.58723 ppb	99
70) Bromoform	9.55	173	77762	20.72345 ppb	98
72) Isopropylbenzene	9.76	105	577636	20.94099 ppb	100
73) 1,1,2,2-Tetrachloroethane	10.07	83	144672	17.97543 ppb	100
74) 1,2,3-Trichloropropane	10.09	110	24552	18.15225 ppb	92
75) t-1,4-Dichloro-2-Butene	10.12	53	35828	19.06512 ppb	97
76) Bromobenzene	10.01	156	155334	19.86818 ppb	92
77) n-Propylbenzene	10.17	91	726811	21.22736 ppb	98
78) 4-Ethyltoluene	10.28	105	589311	20.68963 ppb	98
79) 2-Chlorotoluene	10.23	91	447186	20.76225 ppb	99
80) 1,3,5-Trimethylbenzene	10.36	105	507522	21.03127 ppb	98
81) 4-Chlorotoluene	10.34	91	523594	21.18235 ppb	96
82) Tert-Butylbenzene	10.66	119	398124	21.16185 ppb	99
83) 1,2,4-Trimethylbenzene	10.72	105	512899	21.72153 ppb	100
84) Sec-Butylbenzene	10.88	105	617538	21.55997 ppb	98
85) p-Isopropyltoluene	11.04	119	503838	20.90306 ppb	99
86) Benzyl Chloride	11.19	91	158455	19.95655 ppb	99
87) 1,3-DCB	10.96	146	290015	19.89137 ppb	99
88) 1,4-DCB	11.05	146	300158	19.93479 ppb	98
89) n-Butylbenzene	11.44	91	472478	20.86454 ppb	99
90) 1,2-DCB	11.41	146	270362	19.51135 ppb	99
91) Hexachloroethane	11.66	117	100720	18.03078 ppb	93
92) 1,2-Dibromo-3-chloropropan	12.18	157	21877	19.73870 ppb	94
93) 1,2,4-Trichlorobenzene	13.00	180	173781	20.91626 ppb	93
94) Hexachlorobutadiene	13.19	225	83757	19.77390 ppb	86
95) Naphthalene	13.22	128	207808	20.52253 ppb	99
96) 1,2,3-Trichlorobenzene	13.46	180	110296	21.65554 ppb	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

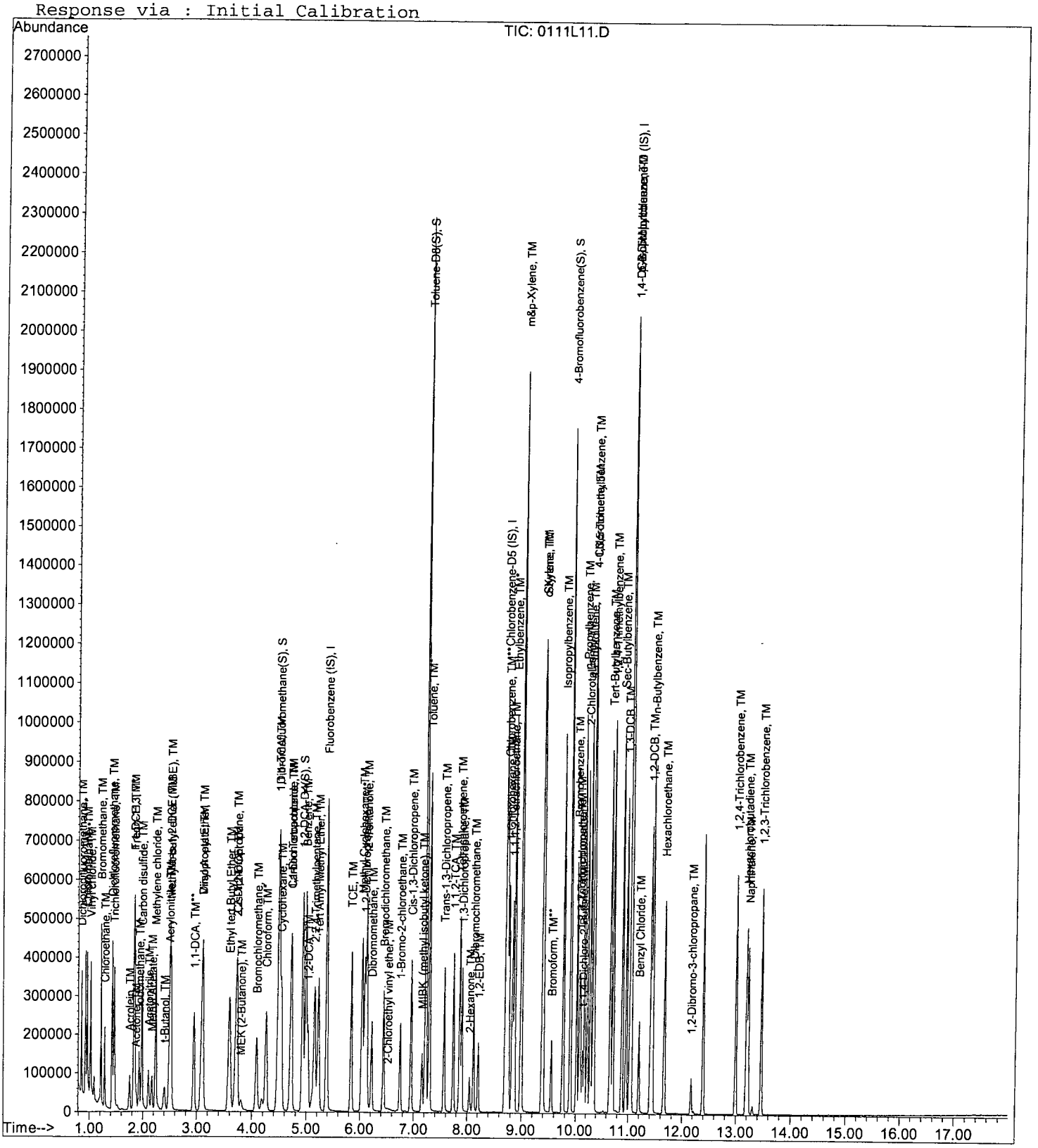
Data File : M:\LOKI\DATA\170111\0111L11.D
Acq On : 11 Jan 17 14:44
Sample : 20ug/L VOC STD 1/11/17P
Misc : W IS&S 1/3/17, 01/11/17

Vial: 10
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 12 7:32 2017

Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L12.D
Acq On : 11 Jan 17 15:12
Sample : 40ug/L VOC STD 1/11/17Q
Misc : W IS&S 1/3/17, 01/11/17

Vial: 11
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 12 7:32 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:31:44 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	394368	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	367744	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	189824	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	426658	48.61953 ppb		0.00
Spiked Amount 25.000			Recovery = 194.480%			
37) 1,2-DCA-D4(S)	4.92	65	449789	47.36973 ppb		0.00
Spiked Amount 25.000			Recovery = 189.480%			
57) Toluene-D8(S)	7.22	98	1456385	50.36575 ppb		0.00
Spiked Amount 25.000			Recovery = 201.464%			
65) 4-Bromofluorobenzene(S)	9.89	95	518450	51.41018 ppb		0.00
Spiked Amount 25.000			Recovery = 205.640%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	359936	39.79360 ppb		94
3) Freon 114	0.93	85	238907	34.59917 ppb		92
4) Chloromethane	0.96	50	467331	40.70351 ppb		99
5) Vinyl chloride	1.02	62	415498	36.48865 ppb		99
6) Bromomethane	1.21	94	414208	30.90921 ppb		98
7) Chloroethane	1.28	64	224121	36.32792 ppb		100
8) Dichlorofluoromethane	1.42	67	637549	35.37791 ppb		100
9) Trichlorofluoromethane	1.46	101	449513	37.73724 ppb		97
10) Acrolein	1.76	56	70592	109.85842 ppb	#	97
11) Acetone	1.88	43	70156	37.31593 ppb		95
12) Freon-113	1.84	101	242944	34.82605 ppb		93
13) 1,1-DCE	1.83	96	259656	38.69032 ppb		96
14) t-Butanol	2.41	59	32456	146.69243 ppb		99
15) Acetonitrile	2.52	41	153270	184.96683 ppb	#	43
16) Methyl Acetate	2.17	43	198380	36.27649 ppb		92
17) Iodomethane	1.93	142	179264	42.91932 ppb		98
18) Acrylonitrile	2.47	52	68429	39.34504 ppb		98
19) Methylene chloride	2.23	84	311408	36.69502 ppb		98
20) Carbon disulfide	1.98	76	849382	36.75810 ppb		100
21) Methyl t-butyl ether (MtBE	2.52	73	669620	39.90502 ppb		99
22) Trans-1,2-DCE	2.49	96	274326	39.42869 ppb		98
23) Diisopropyl Ether	3.10	45	958184	40.89127 ppb		99
24) 1,1-DCA	2.95	63	544381	38.80672 ppb		98
25) Vinyl Acetate	3.10	43	199232	37.16824 ppb		99
26) Ethyl tert Butyl Ether	3.59	59	743662	41.48479 ppb		99
27) MEK (2-Butanone)	3.79	43	95702	39.44137 ppb	#	82
28) Cis-1,2-DCE	3.72	96	314514	38.96736 ppb		97
29) 2,2-Dichloropropane	3.70	77	132224	38.00423 ppb		98
30) Chloroform	4.25	83	538567	37.54769 ppb		97
31) Bromochloromethane	4.08	128	139411	42.84961 ppb		100
33) 1,1,1-TCA	4.47	97	421547	38.67671 ppb		99
34) Cyclohexane	4.53	41	221500	36.94578 ppb		98
35) 1,1-Dichloropropene	4.72	75	381440	41.66617 ppb		99
36) 2,2,4-Trimethylpentane	5.15	57	792517	39.84983 ppb		89
38) Carbon Tetrachloride	4.70	119	334052	39.46122 ppb		96
39) Tert Amyl Methyl Ether	5.22	73	648771	41.33193 ppb		96
40) 1,2-DCA	5.03	62	387403	37.03332 ppb		98
41) Benzene	4.99	78	1156284	39.37884 ppb		99
42) TCE	5.84	95	155136	38.98677 ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L12.D Vial: 11
Acq On : 11 Jan 17 15:12 Operator: PM,DG,SV,CMM
Sample : 40ug/L VOC STD 1/11/17Q Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 12 7:32 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:31:44 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43)	2-Pentanone	6.12	43	720700	176.52964	ppb	100
44)	1,2-Dichloropropane	6.09	63	332282	37.28860	ppb	99
45)	Bromodichloromethane	6.44	83	403309	39.69331	ppb	98
46)	Methyl Cyclohexane	6.04	83	385593	40.33694	ppb	94
47)	Dibromomethane	6.22	93	173377	38.66023	ppb	98
48)	2-Chloroethyl vinyl ether	6.49	43	18124	29.66856	ppb	100
49)	MIBK (methyl isobutyl ket	7.16	43	211044	38.59540	ppb	96
50)	1-Bromo-2-chloroethane	6.75	63	230080	37.89333	ppb	99
51)	Cis-1,3-Dichloropropene	6.95	75	459934	41.31156	ppb	97
52)	Toluene	7.29	91	1237947	41.22824	ppb	100
53)	Trans-1,3-Dichloropropene	7.56	75	390064	41.64247	ppb	99
54)	1,1,2-TCA	7.74	83	208610	38.65855	ppb	98
55)	2-Hexanone	8.04	43	74521	40.99655	ppb	99
58)	1,2-EDB	8.20	107	223349	38.29400	ppb	100
59)	Tetrachloroethene	7.86	166	277827	38.55280	ppb	96
60)	1-Chlorohexane	8.76	91	344162	40.73269	ppb	98
61)	1,1,1,2-Tetrachloroethane	8.83	131	273733	37.95109	ppb	94
62)	m&p-Xylene	8.99	91	1340736	86.25325	ppb	100
63)	o-Xylene	9.38	106	487547	42.85628	ppb	96
64)	Styrene	9.40	104	582080	40.29204	ppb	97
66)	1,3-Dichloropropane	7.90	76	414365	37.41743	ppb	99
67)	Dibromochloromethane	8.12	129	270585	39.56944	ppb	98
68)	Chlorobenzene	8.73	112	766168	38.59868	ppb	98
69)	Ethylbenzene	8.87	91	1360108	41.35479	ppb	98
70)	Bromoform	9.55	173	159988	39.34940	ppb	99
72)	Isopropylbenzene	9.76	105	1242205	44.54768	ppb	99
73)	1,1,2,2-Tetrachloroethane	10.07	83	277954	34.16305	ppb	99
74)	1,2,3-Trichloropropane	10.09	110	52728	38.56328	ppb	95
75)	t-1,4-Dichloro-2-Butene	10.13	53	72333	38.07523	ppb	91
76)	Bromobenzene	10.01	156	317746	40.20319	ppb	92
77)	n-Propylbenzene	10.17	91	1566203	45.24926	ppb	99
78)	4-Ethyltoluene	10.29	105	1258509	43.70725	ppb	99
79)	2-Chlorotoluene	10.23	91	923390	42.40922	ppb	99
80)	1,3,5-Trimethylbenzene	10.36	105	1074266	44.03637	ppb	100
81)	4-Chlorotoluene	10.34	91	1072538	42.92212	ppb	98
82)	Tert-Butylbenzene	10.67	119	854794	44.94545	ppb	98
83)	1,2,4-Trimethylbenzene	10.72	105	1072992	44.95148	ppb	99
84)	Sec-Butylbenzene	10.88	105	1300429	44.91175	ppb	100
85)	p-Isopropyltoluene	11.04	119	1069120	43.87675	ppb	100
86)	Benzyl Chloride	11.19	91	340853	42.46544	ppb	97
87)	1,3-DCB	10.96	146	597554	40.54248	ppb	99
88)	1,4-DCB	11.05	146	602782	39.60144	ppb	98
89)	n-Butylbenzene	11.44	91	1024455	44.75164	ppb	99
90)	1,2-DCB	11.41	146	553735	39.53053	ppb	97
91)	Hexachloroethane	11.66	117	206415	36.55350	ppb	93
92)	1,2-Dibromo-3-chloropropan	12.18	157	45954	41.01503	ppb	87
93)	1,2,4-Trichlorobenzene	13.00	180	377494	44.94493	ppb	95
94)	Hexachlorobutadiene	13.19	225	171637	40.08401	ppb	90
95)	Naphthalene	13.22	128	474688	43.81402	ppb	98
96)	1,2,3-Trichlorobenzene	13.46	180	242176	47.03588	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

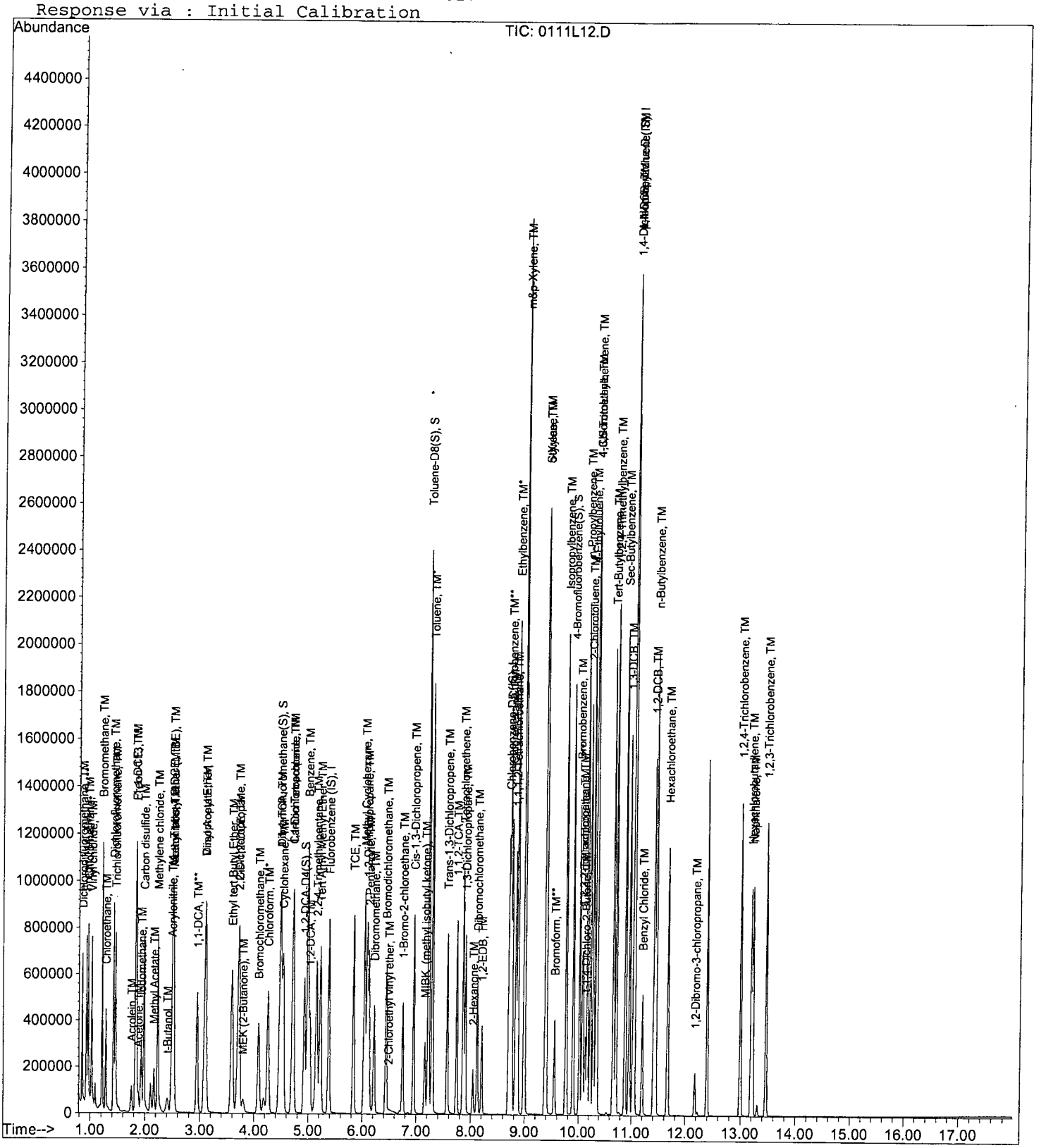
Data File : M:\LOKI\DATA\170111\0111L12.D
Acq On : 11 Jan 17 15:12
Sample : 40ug/L VOC STD 1/11/17Q
Misc : W IS&S 1/3/17, 01/11/17

Vial: 11
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 12 7:32 2017

Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L13.D Vial: 12
Acq On : 11 Jan 17 15:41 Operator: PM,DG,SV,CMM
Sample : 100ug/L VOC STD 1/11/17R Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 12 7:32 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:31:44 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	402176	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	375168	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	202240	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	798040	89.17458 ppb		0.00
Spiked Amount 25.000			Recovery = 356.700%			
37) 1,2-DCA-D4(S)	4.92	65	846915	87.46161 ppb		0.00
Spiked Amount 25.000			Recovery = 349.848%			
57) Toluene-D8(S)	7.22	98	2844404	96.42069 ppb		0.00
Spiked Amount 25.000			Recovery = 385.684%			
65) 4-Bromofluorobenzene(S)	9.89	95	1032194	100.32828 ppb		0.00
Spiked Amount 25.000			Recovery = 401.312%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	863936	93.66020 ppb		95
3) Freon 114	0.93	85	609558	86.56401 ppb		96
4) Chloromethane	0.96	50	1149344	99.40789 ppb		100
5) Vinyl chloride	1.02	62	1065421	91.74779 ppb		100
6) Bromomethane	1.21	94	1038930	51.66207 ppb		99
7) Chloroethane	1.28	64	559820	88.97990 ppb		98
8) Dichlorofluoromethane	1.42	67	1627372	88.55049 ppb		100
9) Trichlorofluoromethane	1.46	101	1158133	95.33927 ppb		97
10) Acrolein	1.76	56	76424	116.62540 ppb	#	98
11) Acetone	1.88	43	177125	95.77716 ppb		96
12) Freon-113	1.84	101	622470	87.49879 ppb		94
13) 1,1-DCE	1.83	96	657599	96.08390 ppb		97
14) t-Butanol	2.43	59	32728	145.04998 ppb	#	91
15) Acetonitrile	2.52	41	375231	444.03880 ppb	#	40
16) Methyl Acetate	2.17	43	482202	86.46531 ppb		92
17) Iodomethane	1.93	142	485952	114.08765 ppb		100
18) Acrylonitrile	2.48	52	171683	97.71929 ppb		100
19) Methylene chloride	2.23	84	796801	92.06885 ppb		100
20) Carbon disulfide	1.98	76	2177596	92.40868 ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	1691247	98.83066 ppb		99
22) Trans-1,2-DCE	2.49	96	706177	99.52781 ppb		97
23) Diisopropyl Ether	3.10	45	2516019	105.28854 ppb		98
24) 1,1-DCA	2.94	63	1403736	98.12393 ppb		100
25) Vinyl Acetate	3.10	43	501185	91.68461 ppb		99
26) Ethyl tert Butyl Ether	3.59	59	1971358	107.83614 ppb		99
27) MEK (2-Butanone)	3.79	43	242422	99.13082 ppb	#	87
28) Cis-1,2-DCE	3.72	96	812973	98.76945 ppb		99
29) 2,2-Dichloropropane	3.70	77	353216	99.55143 ppb		99
30) Chloroform	4.25	83	1381366	94.43605 ppb		100
31) Bromochloromethane	4.08	128	350818	106.72169 ppb		94
33) 1,1,1-TCA	4.47	97	1082771	97.41495 ppb		98
34) Cyclohexane	4.53	41	579568	94.79405 ppb		98
35) 1,1-Dichloropropene	4.72	75	985656	105.57673 ppb		99
36) 2,2,4-Trimethylpentane	5.15	57	2080377	102.57593 ppb		86
38) Carbon Tetrachloride	4.70	119	856664	99.23217 ppb		97
39) Tert Amyl Methyl Ether	5.22	73	1689984	105.57531 ppb		94
40) 1,2-DCA	5.03	62	959457	89.93749 ppb		98
41) Benzene	4.98	78	2972111	99.25421 ppb		100
42) TCE	5.84	95	412032	101.53626 ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L13.D Vial: 12
Acq On : 11 Jan 17 15:41 Operator: PM,DG,SV,CMM
Sample : 100ug/L VOC STD 1/11/17R Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 12 7:32 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:31:44 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43)	2-Pentanone	6.12	43	817185	196.27682 ppb		99
44)	1,2-Dichloropropane	6.09	63	858534	94.47399 ppb		99
45)	Bromodichloromethane	6.44	83	1039919	100.36089 ppb		99
46)	Methyl Cyclohexane	6.04	83	1025944	105.24052 ppb		95
47)	Dibromomethane	6.22	93	436391	95.41886 ppb		100
48)	2-Chloroethyl vinyl ether	6.47	43	665	1.06746 ppb		100
49)	MIBK (methyl isobutyl ket	7.16	43	528539	95.92762 ppb		97
50)	1-Bromo-2-chloroethane	6.75	63	585664	94.58407 ppb		99
51)	Cis-1,3-Dichloropropene	6.95	75	1230049	108.33879 ppb		96
52)	Toluene	7.29	91	3221219	105.19584 ppb		99
53)	Trans-1,3-Dichloropropene	7.56	75	1052228	110.15290 ppb		99
54)	1,1,2-TCA	7.74	83	532875	96.83253 ppb		95
55)	2-Hexanone	8.04	43	204011	110.05448 ppb		98
58)	1,2-EDB	8.20	107	579063	97.31781 ppb		99
59)	Tetrachloroethene	7.86	166	723719	98.43992 ppb		97
60)	1-Chlorohexane	8.76	91	932970	108.23499 ppb		96
61)	1,1,1,2-Tetrachloroethane	8.83	131	728267	98.97092 ppb		97
62)	m&p-Xylene	8.99	91	3784706	238.66249 ppb		100
63)	o-Xylene	9.38	106	1318662	113.61908 ppb		97
64)	Styrene	9.40	104	1593856	107.26804 ppb		98
66)	1,3-Dichloropropane	7.90	76	1065178	94.28290 ppb		99
67)	Dibromochloromethane	8.12	129	715563	102.57084 ppb		99
68)	Chlorobenzene	8.73	112	2034039	100.44482 ppb		99
69)	Ethylbenzene	8.87	91	3585363	106.85759 ppb		99
70)	Bromoform	9.55	173	422892	101.95300 ppb		98
72)	Isopropylbenzene	9.76	105	3316350	111.62880 ppb		100
73)	1,1,2,2-Tetrachloroethane	10.07	83	737154	85.04055 ppb		98
74)	1,2,3-Trichloropropane	10.09	110	127280	87.37292 ppb		95
75)	t-1,4-Dichloro-2-Butene	10.13	53	189887	93.81781 ppb		88
76)	Bromobenzene	10.01	156	830618	98.64291 ppb		95
77)	n-Propylbenzene	10.17	91	4080065	110.64062 ppb		99
78)	4-Ethyltoluene	10.29	105	3310152	107.90193 ppb		99
79)	2-Chlorotoluene	10.23	91	2425825	104.57277 ppb		99
80)	1,3,5-Trimethylbenzene	10.36	105	2805803	107.95454 ppb		99
81)	4-Chlorotoluene	10.34	91	2839143	106.64482 ppb		97
82)	Tert-Butylbenzene	10.66	119	2288850	112.96026 ppb		99
83)	1,2,4-Trimethylbenzene	10.72	105	2865001	112.65653 ppb		100
84)	Sec-Butylbenzene	10.89	105	3459913	112.15603 ppb		100
85)	p-Isopropyltoluene	11.04	119	2906917	111.97593 ppb		99
86)	Benzyl Chloride	11.19	91	1029758	120.41698 ppb		97
87)	1,3-DCB	10.96	146	1590999	101.31811 ppb		99
88)	1,4-DCB	11.05	146	1629672	100.49281 ppb		99
89)	n-Butylbenzene	11.44	91	2800206	114.81276 ppb		98
90)	1,2-DCB	11.41	146	1516030	101.58335 ppb		98
91)	Hexachloroethane	11.66	117	571028	94.91376 ppb		92
92)	1,2-Dibromo-3-chloropropan	12.18	157	127078	106.45698 ppb	#	84
93)	1,2,4-Trichlorobenzene	13.00	180	1065313	119.05070 ppb		97
94)	Hexachlorobutadiene	13.19	225	485716	106.46987 ppb		90
95)	Naphthalene	13.22	128	1275904	99.22375 ppb		99
96)	1,2,3-Trichlorobenzene	13.46	180	652544	118.95756 ppb		97

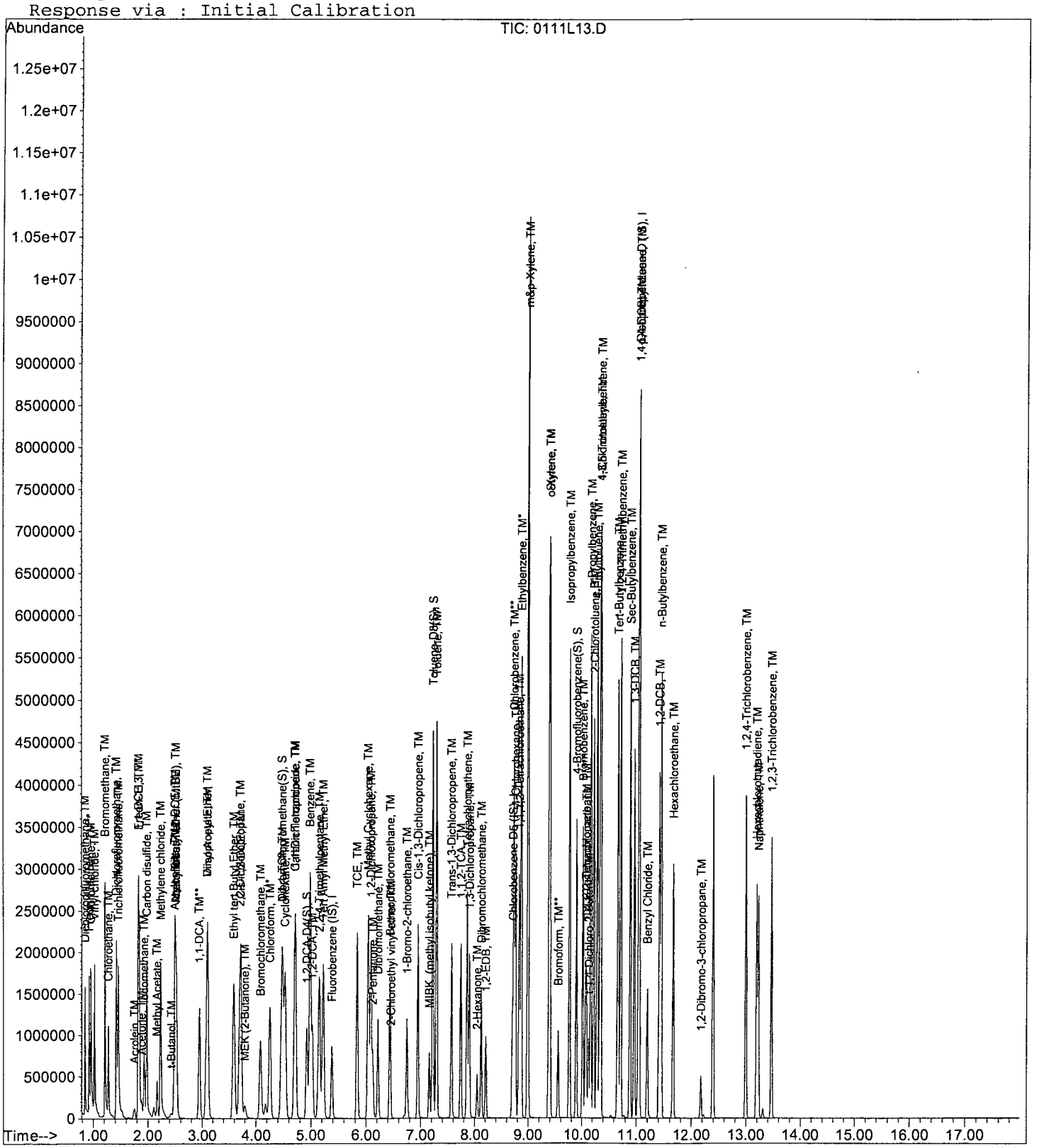
(#) = qualifier out of range (m) = manual integration

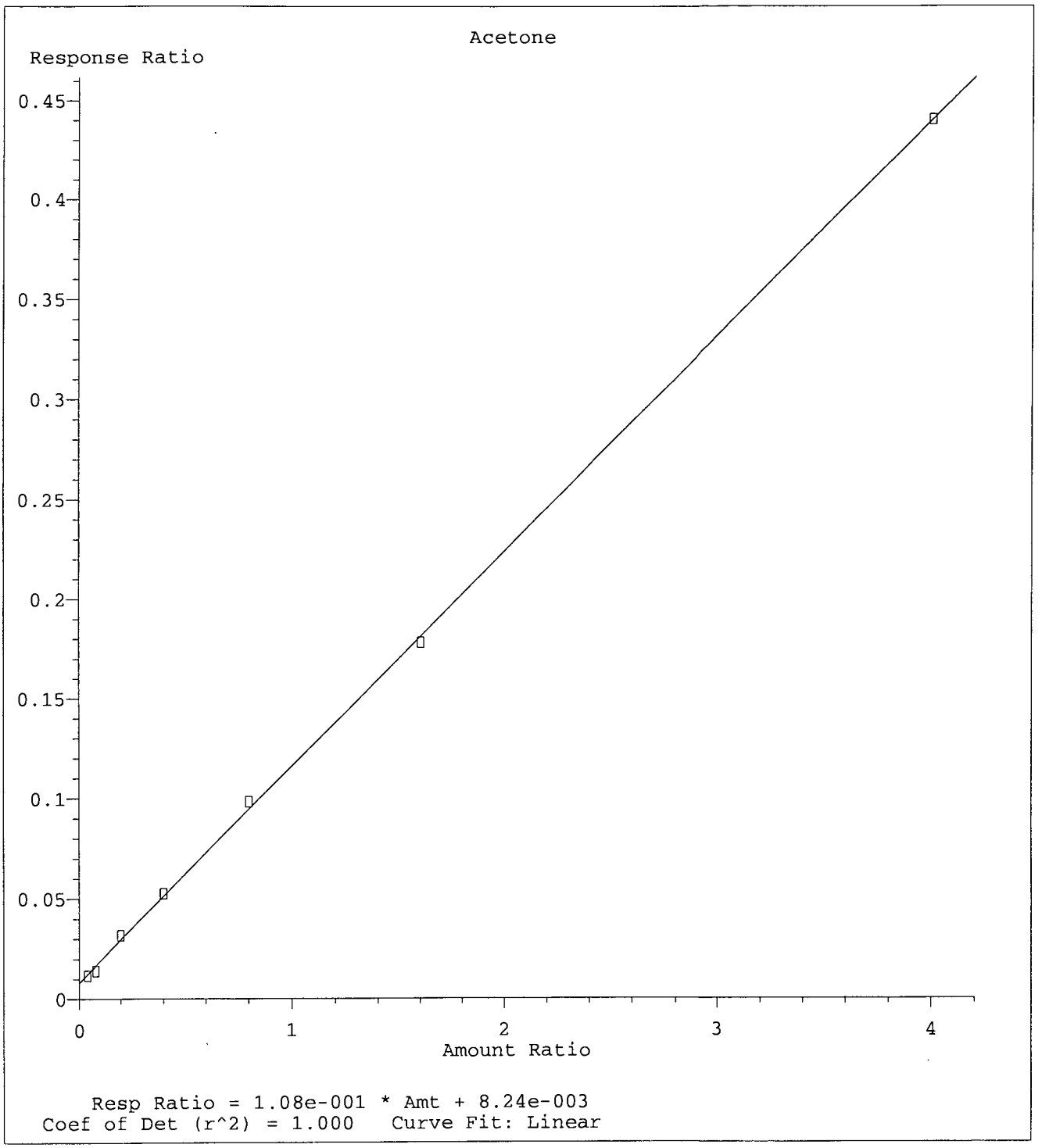
Quantitation Report

Data File : M:\LOKI\DATA\170111\0111L13.D Vial: 12
Acq On : 11 Jan 17 15:41 Operator: PM,DG,SV,CMM
Sample : 100ug/L VOC STD 1/11/17R Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

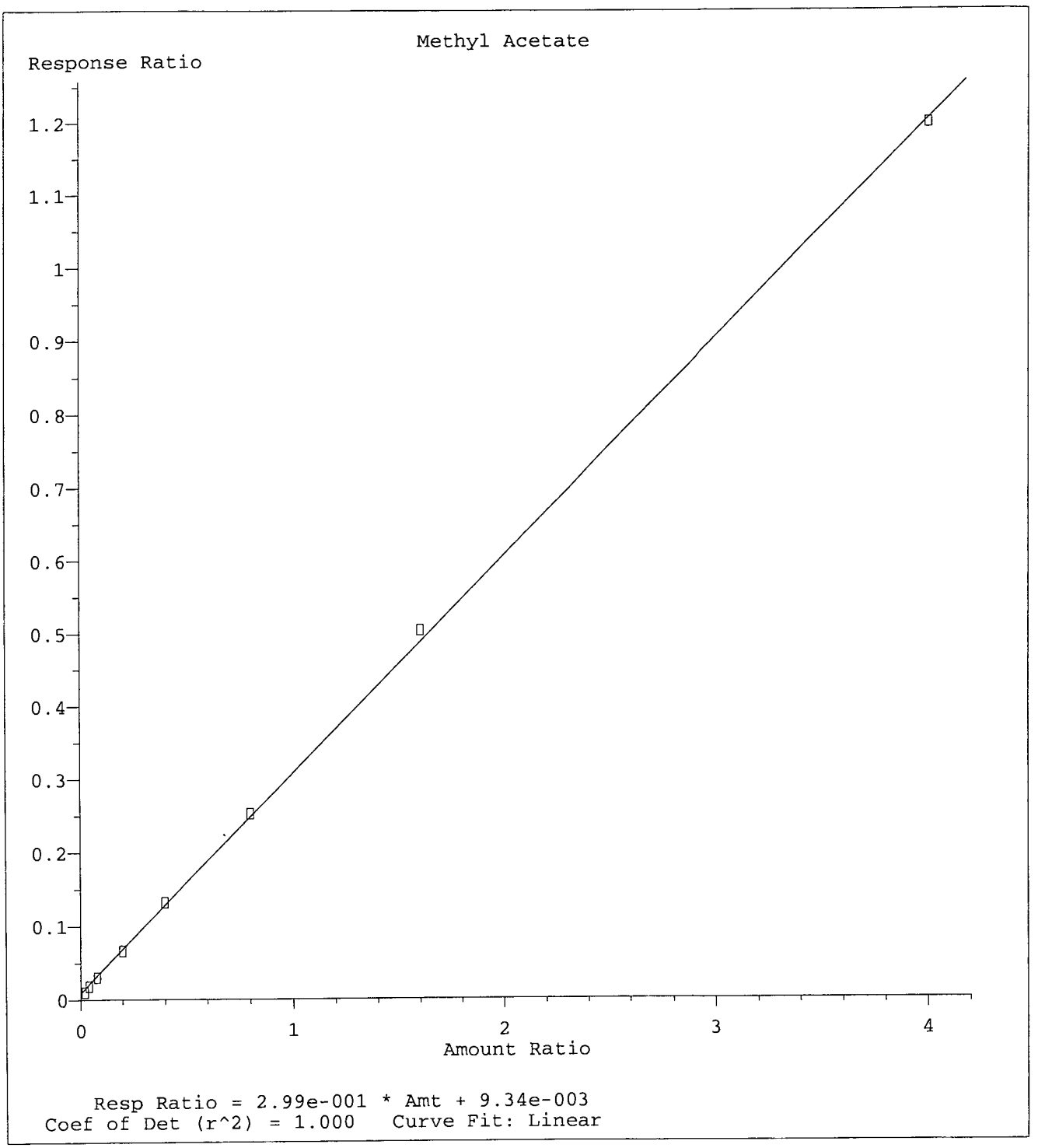
Quant Time: Jan 12 7:32 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration

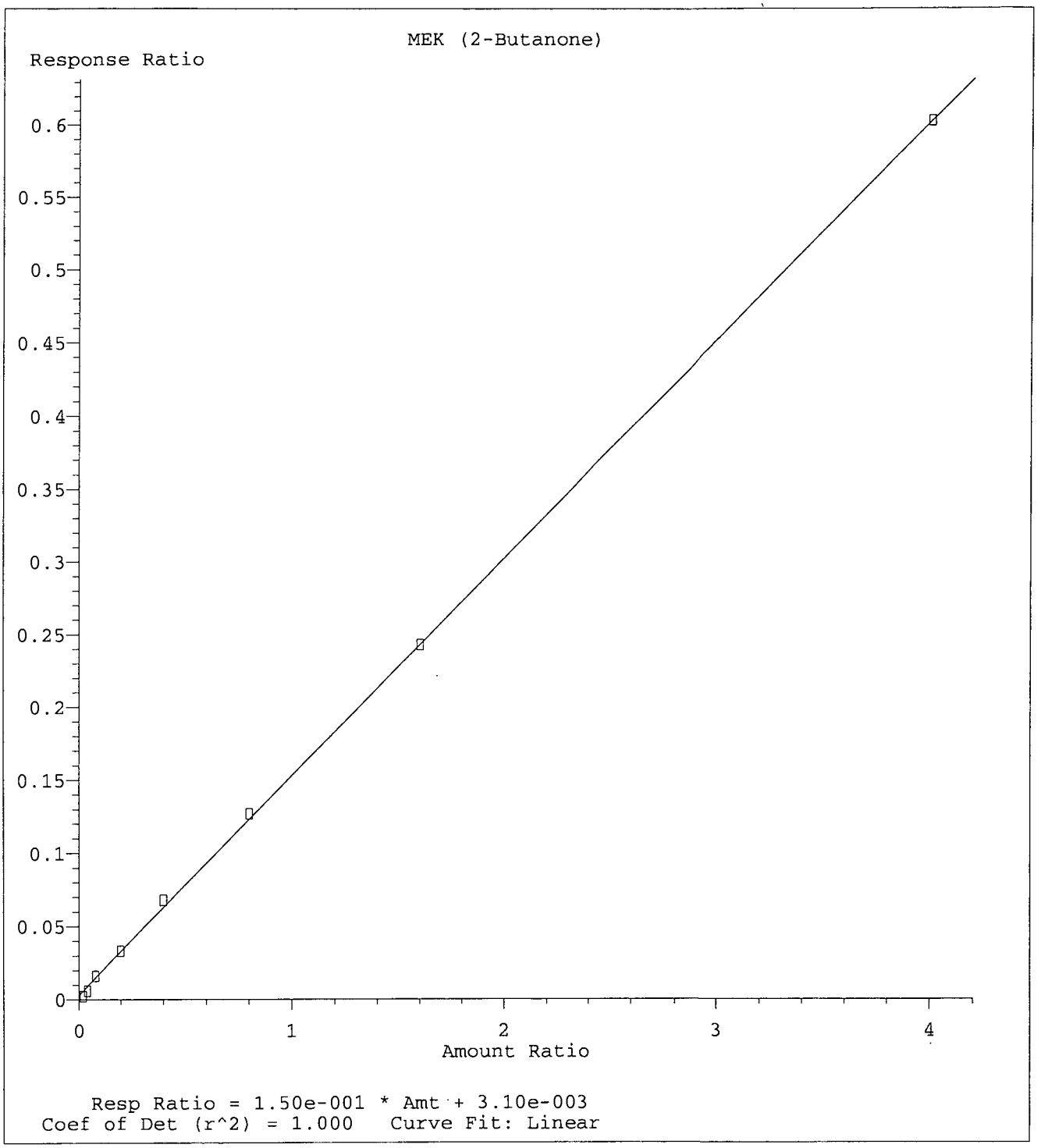




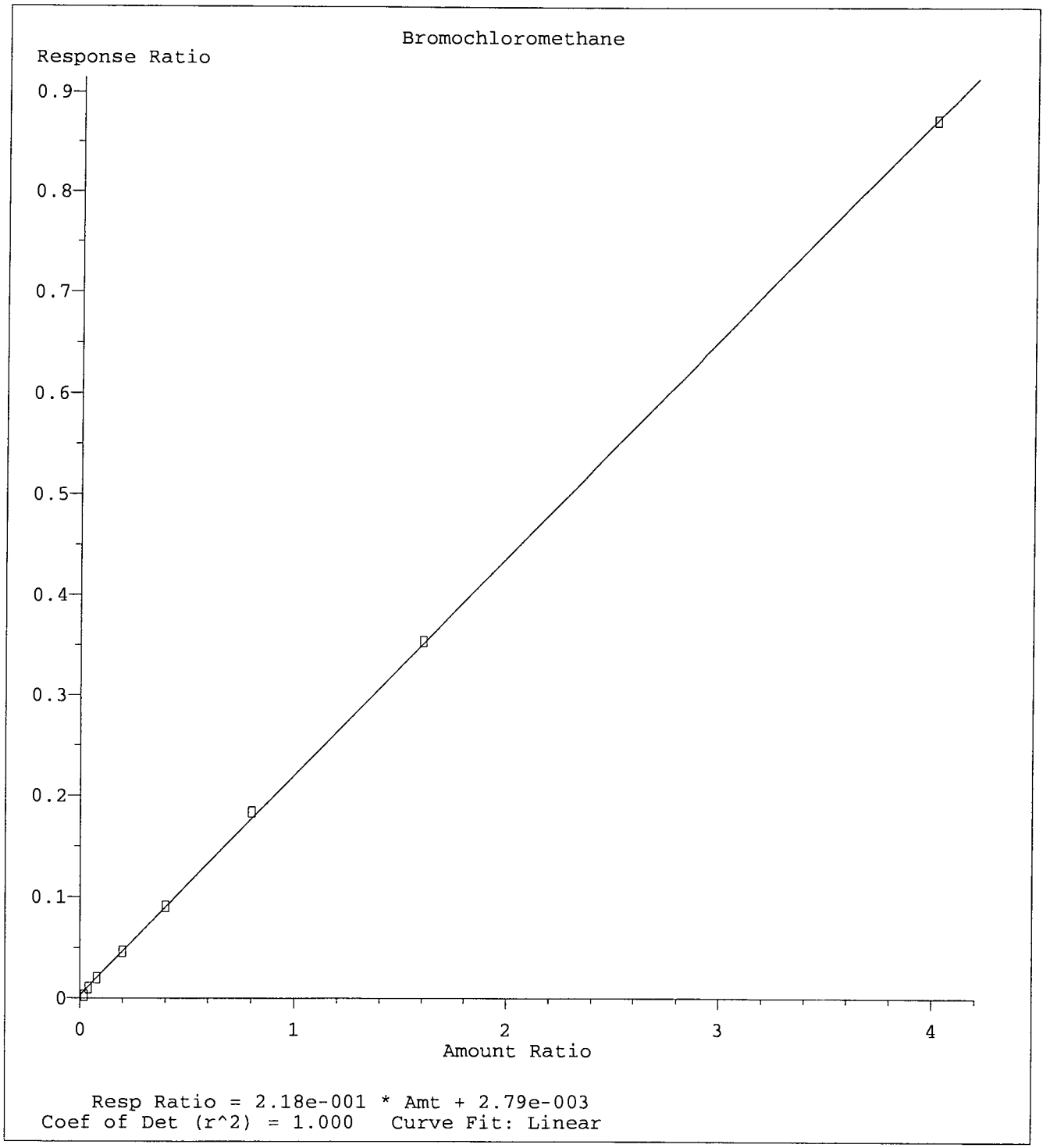
Method Name: M:\LOKI\DATA\170111\LALLW.M
Calibration Table Last Updated: Thu Jan 12 07:59:03 2017



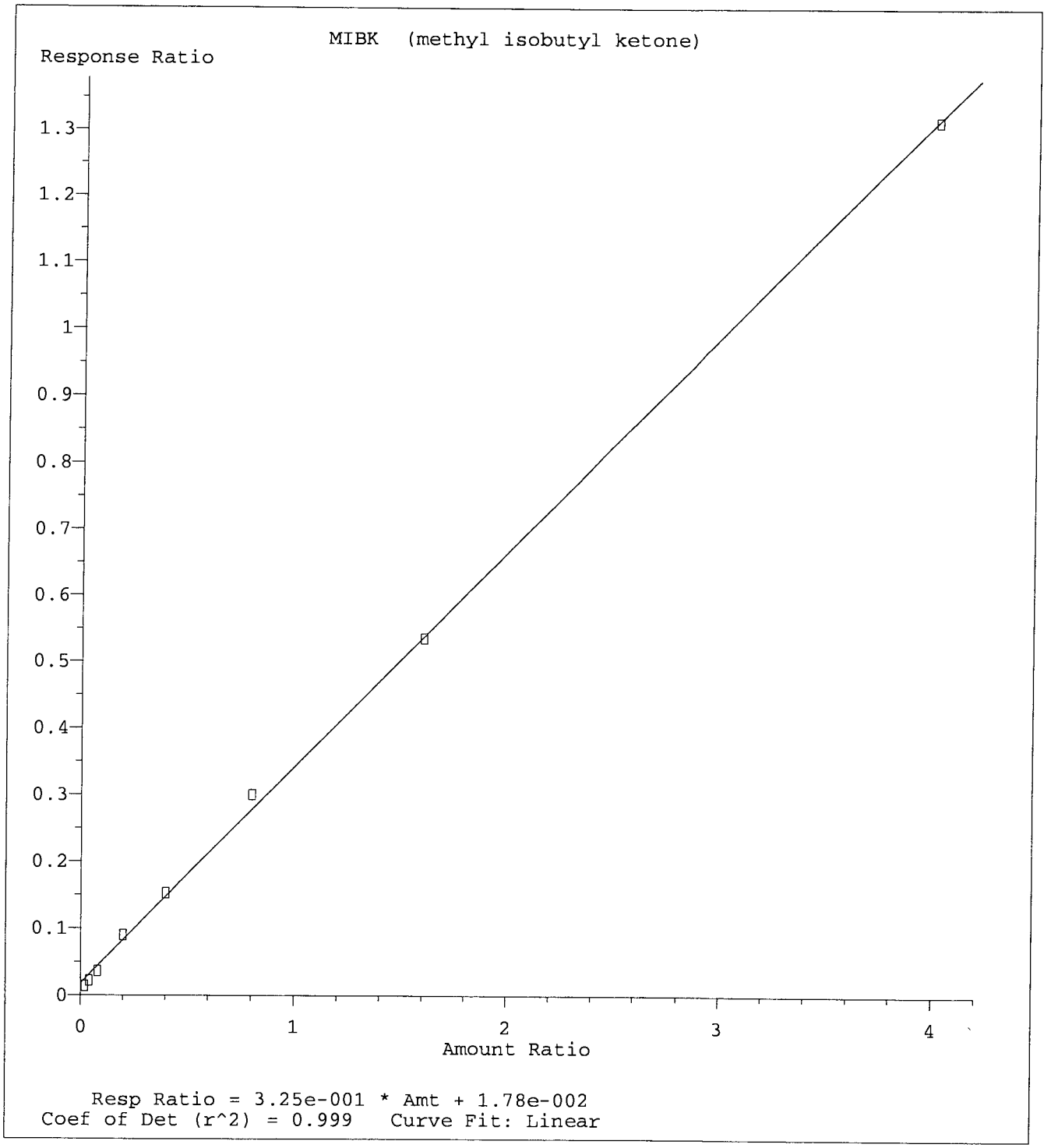
Method Name: M:\LOKI\DATA\170111\LALLW.M
Calibration Table Last Updated: Thu Jan 12 07:59:03 2017



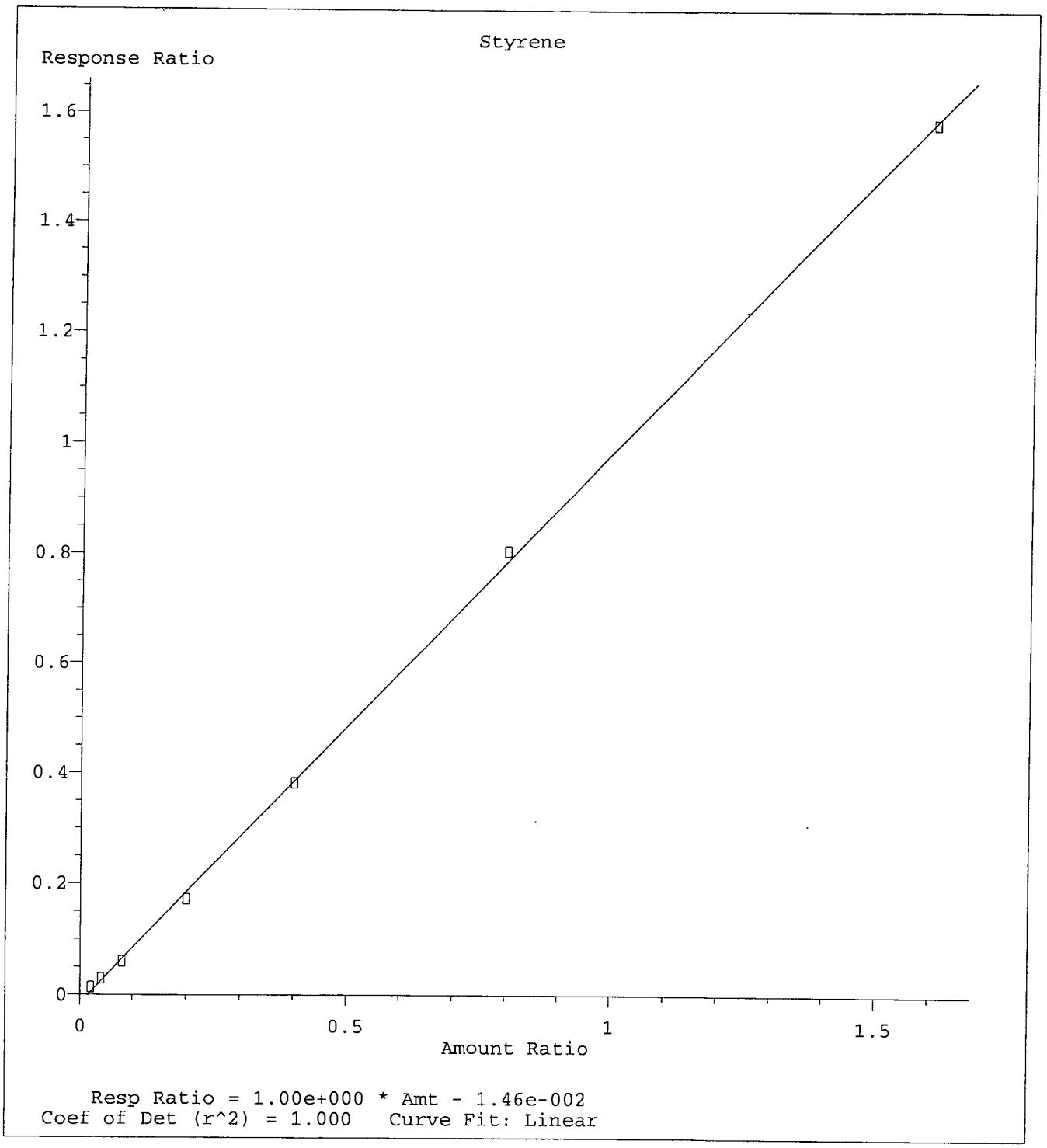
Method Name: M:\LOKI\DATA\170111\LALLW.M
Calibration Table Last Updated: Thu Jan 12 07:59:03 2017



Method Name: M:\LOKI\DATA\170111\LALLW.M
Calibration Table Last Updated: Thu Jan 12 07:59:03 2017



Method Name: M:\LOKI\DATA\170111\LALLW.M
Calibration Table Last Updated: Thu Jan 12 07:59:03 2017



Method Name: M:\LOKI\DATA\170111\LALLW.M
Calibration Table Last Updated: Thu Jan 12 07:59:03 2017

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 1/11/17
Instrument: Loki
Initial Cal. Date: 1/11/17
Data File: 0111L18.D

		Compound	MEAN	CCRF	%D		%Drift	
1	TM	Dichlorodifluoromethane	0.5777	0.6051	4.7	TM		
2	TM	Freon 114	0.4069	0.4064	0.11	TM		
3	TM**	Chloromethane	0.8360	0.7753	7.3	TM**		
4	TM*	Vinyl chloride	0.6936	0.6880	0.81	TM*		
5	TM	Bromomethane	0.4725	0.4239	10	TM		
6	TM	Chloroethane	0.3946	0.3801	3.7	TM		
7	TM	Dichlorofluoromethane	1.073	1.117	4.1	TM		
8	TM	Trichlorofluoromethane	0.7410	0.8312	12	TM		
9	TM	Acrolein	0.0242	0.0426	76	TM		nt
10	TML	Acetone	0.1571	0.1138	28	TML	14	
11	TM	Freon-113	0.4160	0.4317	3.8	TM		
12	TM*	1,1-DCE	0.4374	0.4628	5.8	TM*		
13	TM	t-Butanol	0.0133	0.0130	2.4	TM		
14	TM	Acetonitrile	0.0523	0.0483	7.6	TM		
15	TML	Methyl Acetate	0.3641	0.3340	8.3	TML	3.9	
16	TM	Iodomethane	0.2531	0.1918	24	TM		nt
17	TM	Acrylonitrile	0.1175	0.1087	7.5	TM		
18	TM	Methylene chloride	0.5454	0.5604	2.7	TM		
19	TM	Carbon disulfide	1.428	1.304	8.7	TM		
20	TM	Methyl t-butyl ether (MtBE)	1.074	1.158	7.8	TM		
21	TM	Trans-1,2-DCE	0.4615	0.5060	9.6	TM		
22	TM	Diisopropyl Ether	1.501	1.577	5.0	TM		
23	TM**	1,1-DCA	0.9296	0.9603	3.3	TM**		
24	TM	Vinyl Acetate	0.3411	0.3558	4.3	TM		
25	TM	Ethyl tert Butyl Ether	1.143	1.257	10	TM		
26	TML	MEK (2-Butanone)	0.1558	0.1401	10	TML	12	
27	TM	Cis-1,2-DCE	0.5268	0.5626	6.8	TM		
28	TM	2,2-Dichloropropane	0.2271	0.2229	1.9	TM		
29	TM*	Chloroform	0.9134	0.9141	0.08	TM*		
30	TML	Bromochloromethane	0.2182	0.2467	13	TML	10	
31	TM	1,1,1-TCA	0.7216	0.7571	4.9	TM		
32	TM	Cyclohexane	0.3670	0.3770	2.7	TM		
33	TM	1,1-Dichloropropene	0.6296	0.6499	3.2	TM		
34	TM	2,2,4-Trimethylpentane	1.222	1.284	5.1	TM		
35	TM	Carbon Tetrachloride	0.5403	0.5934	9.8	TM		
36	TM	Tert Amyl Methyl Ether	1.002	1.038	3.7	TM		
37	TM	1,2-DCA	0.6475	0.6635	2.5	TM		
38	TM	Benzene	1.891	2.043	8.0	TM		
39	TM	TCE	0.2543	0.2722	7.0	TM		
40	TM	2-Pentanone	0.2512	0.2558	1.8	TM		
		Average			8.5			

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 1/11/17
Instrument: Loki
Cal. Date: 1/11/17
Data File: 0111L18.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM*	1,2-Dichloropropane	0.5564	0.5757	3.5	TM*	
42	TM	Bromodichloromethane	0.6711	0.6957	3.7	TM	
43	TM	Methyl Cyclohexane	0.5986	0.6354	6.1	TM	
44	TM	Dibromomethane	0.2815	0.3007	6.8	TM	
45	TM	2-Chloroethyl vinyl ether	0.0000	0.0004	0.00	TM	
46	TML	MIBK (methyl isobutyl ketone)	0.4450	0.3562	20	TML	4.1
47	TM	1-Bromo-2-chloroethane	0.3682	0.3703	0.55	TM	
48	TM	Cis-1,3-Dichloropropene	0.7208	0.7584	5.2	TM	
49	TM*	Toluene	1.960	2.147	9.5	TM*	
50	TM	Trans-1,3-Dichloropropene	0.6237	0.6293	0.90	TM	
51	TM	1,1,2-TCA	0.3511	0.3532	0.62	TM	
52	TM	2-Hexanone	0.1042	0.0860	17	TM	
53	TM	1,2-EDB	0.3932	0.4123	4.9	TM	
54	TM	Tetrachloroethene	0.5220	0.5021	3.8	TM	
55	TM	1-Chlorohexane	0.5699	0.5857	2.8	TM	
56	TM	1,1,1,2-Tetrachloroethane	0.5011	0.5031	0.41	TM	
57	TM	m&p-Xylene	1.100	1.206	9.7	TM	
58	TM	o-Xylene	0.7988	0.8619	7.9	TM	
59	TML	Styrene	0.8526	0.9699	14	TML	0.42
60	TM	1,3-Dichloropropane	0.7548	0.7680	1.8	TM	
61	TM	Dibromochloromethane	0.4788	0.4804	0.35	TM	
62	TM**	Chlorobenzene	1.390	1.392	0.17	TM**	
63	TM*	Ethylbenzene	2.263	2.465	8.9	TM*	
64	TM**	Bromoform	0.2882	0.2701	6.2	TM**	
65	TM	Isopropylbenzene	3.801	4.018	5.7	TM	
66	TM**	1,1,2,2-Tetrachloroethane	1.002	0.9809	2.1	TM**	
67	TM	1,2,3-Trichloropropane	0.1828	0.1661	9.1	TM	
68	TM	t-1,4-Dichloro-2-Butene	0.2451	0.2224	9.3	TM	
69	TM	Bromobenzene	1.065	1.099	3.1	TM	
70	TM	n-Propylbenzene	4.679	5.110	9.2	TM	
71	TM	4-Ethyltoluene	3.684	4.087	11	TM	
72	TM	2-Chlorotoluene	2.895	3.131	8.1	TM	
73	TM	1,3,5-Trimethylbenzene	3.211	3.623	13	TM	
74	TM	4-Chlorotoluene	3.350	3.659	9.2	TM	
75	TM	Tert-Butylbenzene	2.622	2.806	7.0	TM	
76	TM	1,2,4-Trimethylbenzene	3.182	3.614	14	TM	
77	TM	Sec-Butylbenzene	3.897	4.320	11	TM	
78	TM	p-Isopropyltoluene	3.246	3.505	8.0	TM	
79	TM	Benzyl Chloride	1.052	0.7628	28	TM	nt
80	TM	1,3-DCB	1.971	2.107	6.9	TM	
		Average			7.2		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 1/11/17
Instrument: Loki
Cal. Date: 1/11/17
Data File: 0111L18.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	1,4-DCB	2.080	2.167	4.2	TM	
82	TM	n-Butylbenzene	3.027	3.132	3.5	TM	
83	TM	1,2-DCB	1.871	1.904	1.8	TM	
84	TM	Hexachloroethane	0.6768	0.8062	19	TM	
85	TM	1,2-Dibromo-3-chloropropane	0.1483	0.1553	4.7	TM	
86	TM	1,2,4-Trichlorobenzene	1.186	1.187	0.08	TM	
87	TM	Hexachlorobutadiene	0.6077	0.6041	0.60	TM	
88	TM	Naphthalene	1.318	1.257	4.6	TM	
89	TM	1,2,3-Trichlorobenzene	0.7335	0.7556	3.0	TM	
90							
91							
92							
93							
94							
95							
96							
97							
98							
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111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			4.6		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L18.D
Acq On : 11 Jan 17 18:01
Sample : (SS)10ug/L VOC STD 1/11/17
Misc : W IS&S 1/3/17, 01/11/17

Vial: 17
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 12 8:08 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	358080	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	335808	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	179776	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	189029	23.65645 ppb		0.00
Spiked Amount 25.000			Recovery = 94.624%			
37) 1,2-DCA-D4(S)	4.93	65	206169	23.79138 ppb		0.00
Spiked Amount 25.000			Recovery = 95.164%			
57) Toluene-D8(S)	7.22	98	653397	24.30783 ppb		0.00
Spiked Amount 25.000			Recovery = 97.232%			
65) 4-Bromofluorobenzene(S)	9.89	95	233651	25.05008 ppb		0.00
Spiked Amount 25.000			Recovery = 100.200%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	86664	10.47365 ppb		94
3) Freon 114	0.93	85	58215	9.98873 ppb		99
4) Chloromethane	0.96	50	111048	9.27447 ppb		99
5) Vinyl chloride	1.03	62	98537	9.91879 ppb		99
6) Bromomethane	1.22	94	60712	8.97036 ppb		99
7) Chloroethane	1.29	64	54441	9.63283 ppb		99
8) Dichlorofluoromethane	1.43	67	159997	10.41018 ppb		98
9) Trichlorofluoromethane	1.46	101	119052	11.21718 ppb		98
10) Acrolein	1.75	56	76258	219.97361 ppb	#	95
11) Acetone	1.88	43	16305	8.63685 ppb		97
12) Freon-113	1.84	101	61835	10.37691 ppb		93
13) 1,1-DCE	1.83	96	66281	10.57998 ppb		94
14) t-Butanol	2.40	59	23208	122.00454 ppb		99
15) Acetonitrile	2.10	41	86429	115.48605 ppb		100
16) Methyl Acetate	2.17	43	47843	10.38652 ppb		92
17) Iodomethane	1.93	142	27472	7.57718 ppb		100
18) Acrylonitrile	2.47	52	15572	9.25001 ppb		94
19) Methylene chloride	2.24	84	80261	10.27494 ppb		97
20) Carbon disulfide	1.98	76	186743	9.13276 ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	165811	10.78120 ppb		99
22) Trans-1,2-DCE	2.50	96	72474	10.96299 ppb		96
23) Diisopropyl Ether	3.10	45	225849	10.50401 ppb		99
24) 1,1-DCA	2.95	63	137550	10.33015 ppb		98
25) Vinyl Acetate	3.10	43	50968	10.43142 ppb		100
26) Ethyl tert Butyl Ether	3.59	59	180078	11.00237 ppb		99
27) MEK (2-Butanone)	3.80	43	20066	8.81499 ppb	#	78
28) Cis-1,2-DCE	3.73	96	80586	10.67957 ppb		96
29) 2,2-Dichloropropane	3.70	77	31928	9.81466 ppb		97
30) Chloroform	4.25	83	130934	10.00825 ppb		99
31) Bromochloromethane	4.08	128	35341	11.00272 ppb		99
33) 1,1,1-TCA	4.47	97	108439	10.49177 ppb		100
34) Cyclohexane	4.53	41	53994	10.27092 ppb		94
35) 1,1-Dichloropropene	4.72	75	93083	10.32251 ppb		97
36) 2,2,4-Trimethylpentane	5.15	57	183917	10.50518 ppb		94
38) Carbon Tetrachloride	4.71	119	84994	10.98180 ppb		99
39) Tert Amyl Methyl Ether	5.22	73	148742	10.36641 ppb		99
40) 1,2-DCA	5.03	62	95029	10.24719 ppb		97
41) Benzene	4.99	78	292616	10.80340 ppb		99
42) TCE	5.84	95	38984	10.70175 ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L18.D
Acq On : 11 Jan 17 18:01
Sample : (SS)10ug/L VOC STD 1/11/17
Misc : W IS&S 1/3/17, 01/11/17

Vial: 17
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 12 8:08 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43) 2-Pentanone	6.12	43	457946	127.25327 ppb		99
44) 1,2-Dichloropropane	6.09	63	82464	10.34748 ppb		99
45) Bromodichloromethane	6.44	83	99643	10.36580 ppb		100
46) Methyl Cyclohexane	6.04	83	91007	10.61375 ppb		97
47) Dibromomethane	6.22	93	43068	10.68212 ppb		97
49) MIBK (methyl isobutyl ket	7.16	43	51013	9.58765 ppb		93
50) 1-Bromo-2-chloroethane	6.75	63	53032	10.05505 ppb		98
51) Cis-1,3-Dichloropropene	6.95	75	108623	10.52052 ppb		97
52) Toluene	7.29	91	307469	10.95237 ppb		97
53) Trans-1,3-Dichloropropene	7.56	75	90131	10.08980 ppb		98
54) 1,1,2-TCA	7.74	83	50596	10.06211 ppb		98
55) 2-Hexanone	8.05	43	12317	8.25608 ppb	#	92
58) 1,2-EDB	8.20	107	55382	10.48632 ppb		93
59) Tetrachloroethene	7.86	166	67450	9.61946 ppb		93
60) 1-Chlorohexane	8.76	91	78667	10.27619 ppb		96
61) 1,1,1,2-Tetrachloroethane	8.83	131	67584	10.04128 ppb		98
62) m&p-Xylene	8.99	91	324032	21.93665 ppb		100
63) o-Xylene	9.38	106	115779	10.79033 ppb		100
64) Styrene	9.40	104	130280	10.04233 ppb		99
66) 1,3-Dichloropropane	7.90	76	103161	10.17555 ppb		96
67) Dibromochloromethane	8.12	129	64534	10.03497 ppb		99
68) Chlorobenzene	8.73	112	186999	10.01684 ppb		97
69) Ethylbenzene	8.87	91	331073	10.89059 ppb		97
70) Bromoform	9.55	173	36287	9.37522 ppb		97
72) Isopropylbenzene	9.76	105	288960	10.57113 ppb		98
73) 1,1,2,2-Tetrachloroethane	10.07	83	70534	9.79023 ppb		98
74) 1,2,3-Trichloropropane	10.09	110	11943	9.08526 ppb		81
75) t-1,4-Dichloro-2-Butene	10.13	53	15994	9.07413 ppb		97
76) Bromobenzene	10.02	156	79005	10.31284 ppb		92
77) n-Propylbenzene	10.17	91	367440	10.92066 ppb		99
78) 4-Ethyltoluene	10.29	105	293928	11.09399 ppb		99
79) 2-Chlorotoluene	10.23	91	225148	10.81424 ppb		99
80) 1,3,5-Trimethylbenzene	10.36	105	260515	11.28410 ppb		99
81) 4-Chlorotoluene	10.34	91	263133	10.92418 ppb		96
82) Tert-Butylbenzene	10.67	119	201773	10.70119 ppb		99
83) 1,2,4-Trimethylbenzene	10.72	105	259916	11.35751 ppb		99
84) Sec-Butylbenzene	10.88	105	310626	11.08508 ppb		100
85) p-Isopropyltoluene	11.04	119	252038	10.79730 ppb		99
86) Benzyl Chloride	11.20	91	54852	7.24854 ppb		94
87) 1,3-DCB	10.96	146	151487	10.68894 ppb		98
88) 1,4-DCB	11.05	146	155844	10.41776 ppb		99
89) n-Butylbenzene	11.44	91	225189	10.34581 ppb		98
90) 1,2-DCB	11.41	146	136949	10.17903 ppb		99
91) Hexachloroethane	11.66	117	57971	11.91208 ppb		92
92) 1,2-Dibromo-3-chloropropan	12.18	157	11170	10.47309 ppb		92
93) 1,2,4-Trichlorobenzene	13.00	180	85358	10.00828 ppb		94
94) Hexachlorobutadiene	13.19	225	43441	9.94043 ppb		96
95) Naphthalene	13.22	128	90424	9.54088 ppb		99
96) 1,2,3-Trichlorobenzene	13.46	180	54336	10.30073 ppb		100

(#) = qualifier out of range (m) = manual integration

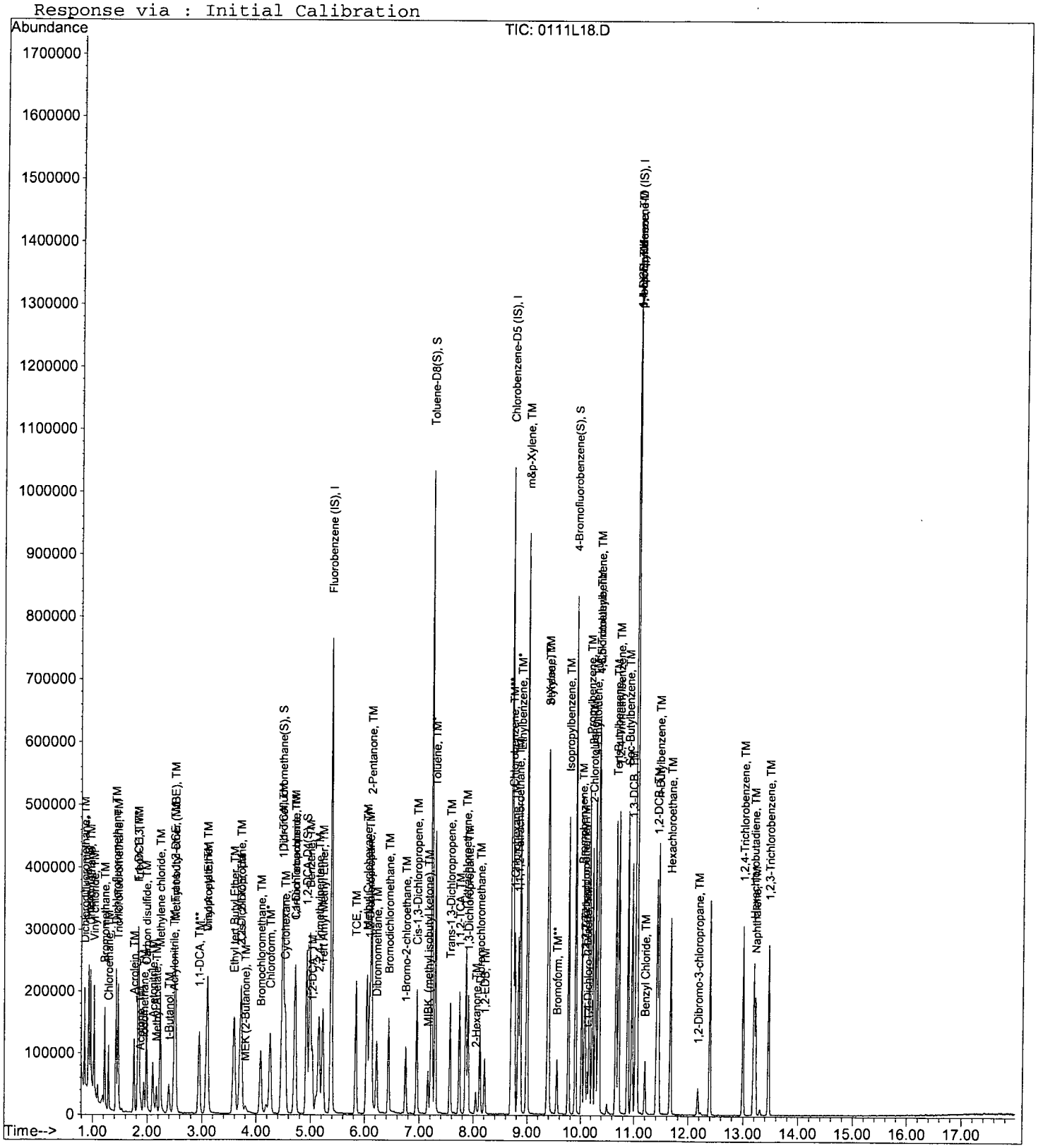
Quantitation Report

Data File : M:\LOKI\DATA\170111\0111L18.D
Acq On : 11 Jan 17 18:01
Sample : (SS)10ug/L VOC STD 1/11/17
Misc : W IS&S 1/3/17, 01/11/17

Vial: 17
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 12 8:08 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/13/17
Matrix: Instrument: Loki
Initial Cal. Date: 01/11/17
Data File: 0113L05.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	TM	Dichlorodifluoromethane	0.5777	0.6028	4.3	TM	
3	TM	Freon 114	0.4069	0.3941	3.1	TM	
4	TM**	Chloromethane	0.8360	0.7780	6.9	TM**	
5	TM*	Vinyl chloride	0.6936	0.6643	4.2	TM*	
6	TM	Bromomethane	0.4725	0.4303	8.9	TM	
7	TM	Chloroethane	0.3946	0.3759	4.7	TM	
8	TM	Dichlorofluoromethane	1.073	1.037	3.3	TM	
9	TM	Trichlorofluoromethane	0.7410	0.7691	3.8	TM	
10	TM	Acrolein	0.0242	0.0225	6.9	TM	
11	TML	Acetone	0.1571	0.1188	24	TML	9.0
12	TM	Freon-113	0.4160	0.4078	2.0	TM	
13	TM*	1,1-DCE	0.4374	0.4298	1.7	TM*	
14	TM	t-Butanol	0.0133	0.0119	11	TM	
15	TM	Acetonitrile	0.0523	0.0419	20	TM	
16	TML	Methyl Acetate	0.3641	0.2882	21	TML	11
17	TM	Iodomethane	0.2531	0.2978	18	TM	
18	TM	Acrylonitrile	0.1175	0.0993	16	TM	
19	TM	Methylene chloride	0.5454	0.5360	1.7	TM	
20	TM	Carbon disulfide	1.428	1.361	4.6	TM	
21	TM	Methyl t-butyl ether (MtBE)	1.074	1.015	5.5	TM	
22	TM	Trans-1,2-DCE	0.4615	0.4554	1.3	TM	
23	TM	Diisopropyl Ether	1.501	1.427	4.9	TM	
24	TM**	1,1-DCA	0.9296	0.8875	4.5	TM**	
25	TM	Vinyl Acetate	0.3411	0.3259	4.5	TM	
26	TM	Ethyl tert Butyl Ether	1.143	1.115	2.4	TM	
27	TML	MEK (2-Butanone)	0.1558	0.1471	5.6	TML	7.2
28	TM	Cis-1,2-DCE	0.5268	0.5012	4.9	TM	
29	TM	2,2-Dichloropropane	0.2271	0.2412	6.2	TM	
30	TM*	Chloroform	0.9134	0.8904	2.5	TM*	
31	TML	Bromochloromethane	0.2182	0.2333	6.9	TML	3.8
32	S	Dibromofluoromethane(S)	0.5579	0.5497	1.5	S	
33	TM	1,1,1-TCA	0.7216	0.6915	4.2	TM	
34	TM	Cyclohexane	0.3670	0.3558	3.1	TM	
35	TM	1,1-Dichloropropene	0.6296	0.6111	2.9	TM	
36	TM	2,2,4-Trimethylpentane	1.222	1.365	12	TM	
37	S	1,2-DCA-D4(S)	0.6050	0.5804	4.1	S	
38	TM	Carbon Tetrachloride	0.5403	0.5522	2.2	TM	
39	TM	Tert Amyl Methyl Ether	1.002	0.9452	5.6	TM	
40	TM	1,2-DCA	0.6475	0.6361	1.8	TM	
		Average			6.5		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/13/17
Instrument: Loki
Cal. Date: 01/11/17
Data File: 0113L05.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	Benzene	1.891	1.887	0.19	TM	
42	TM	TCE	0.2543	0.2566	0.91	TM	
43	TM	2-Pentanone	0.2512	0.2242	11	TM	
44	TM*	1,2-Dichloropropane	0.5564	0.5454	2.0	TM*	
45	TM	Bromodichloromethane	0.6711	0.6444	4.0	TM	
46	TM	Methyl Cyclohexane	0.5986	0.6273	4.8	TM	
47	TM	Dibromomethane	0.2815	0.2656	5.7	TM	
48	TM	2-Chloroethyl vinyl ether	0.0000	0.0200	0.00	TM	
49	TML	MIBK (methyl isobutyl ketone)	0.4450	0.3312	26	TML	12
50	TM	1-Bromo-2-chloroethane	0.3682	0.3476	5.6	TM	
51	TM	Cis-1,3-Dichloropropene	0.7208	0.7024	2.6	TM	
52	TM*	Toluene	1.960	2.009	2.5	TM*	
53	TM	Trans-1,3-Dichloropropene	0.6237	0.5847	6.3	TM	
54	TM	1,1,2-TCA	0.3511	0.3339	4.9	TM	
55	TM	2-Hexanone	0.1042	0.0885	15	TM	
56	I	Chlorobenzene-D5 (IS)	ISTD			I	
57	S	Toluene-D8(S)	2.001	2.035	1.7	S	
58	TM	1,2-EDB	0.3932	0.3642	7.4	TM	
59	TM	Tetrachloroethene	0.5220	0.5348	2.4	TM	
60	TM	1-Chlorohexane	0.5699	0.6160	8.1	TM	
61	TM	1,1,1,2-Tetrachloroethane	0.5011	0.4906	2.1	TM	
62	TM	m&p-Xylene	1.100	1.178	7.1	TM	
63	TM	o-Xylene	0.7988	0.8438	5.6	TM	
64	TML	Styrene	0.8526	0.9519	12	TML	1.4
65	S	4-Bromofluorobenzene(S)	0.6944	0.7385	6.3	S	
66	TM	1,3-Dichloropropane	0.7548	0.7086	6.1	TM	
67	TM	Dibromochloromethane	0.4788	0.4538	5.2	TM	
68	TM**	Chlorobenzene	1.390	1.406	1.2	TM**	
69	TM*	Ethylbenzene	2.263	2.411	6.5	TM*	
70	TM**	Bromoform	0.2882	0.2624	8.9	TM**	
71	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
72	TM	Isopropylbenzene	3.801	3.970	4.4	TM	
73	TM**	1,1,2,2-Tetrachloroethane	1.002	0.8884	11	TM**	
74	TM	1,2,3-Trichloropropane	0.1828	0.1610	12	TM	
75	TM	t-1,4-Dichloro-2-Butene	0.2451	0.2076	15	TM	
76	TM	Bromobenzene	1.065	1.066	0.10	TM	
77	TM	n-Propylbenzene	4.679	5.046	7.8	TM	
78	TM	4-Ethyltoluene	3.684	4.139	12	TM	
79	TM	2-Chlorotoluene	2.895	3.064	5.8	TM	
80	TM	1,3,5-Trimethylbenzene	3.211	3.599	12	TM	
		Average			6.6		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/13/17
Instrument: Loki
Cal. Date: 01/11/17
Data File: 0113L05.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	4-Chlorotoluene	3.350	3.614	7.9	TM	
82	TM	Tert-Butylbenzene	2.622	2.830	7.9	TM	
83	TM	1,2,4-Trimethylbenzene	3.182	3.467	8.9	TM	
84	TM	Sec-Butylbenzene	3.897	4.233	8.6	TM	
85	TM	p-Isopropyltoluene	3.246	3.477	7.1	TM	
86	TM	Benzyl Chloride	1.052	1.029	2.2	TM	
87	TM	1,3-DCB	1.971	2.048	3.9	TM	
88	TM	1,4-DCB	2.080	2.085	0.22	TM	
89	TM	n-Butylbenzene	3.027	3.315	9.5	TM	
90	TM	1,2-DCB	1.871	1.876	0.29	TM	
91	TM	Hexachloroethane	0.6768	0.6851	1.2	TM	
92	TM	1,2-Dibromo-3-chloropropane	0.1483	0.1348	9.1	TM	
93	TM	1,2,4-Trichlorobenzene	1.186	1.175	0.94	TM	
94	TM	Hexachlorobutadiene	0.6077	0.6410	5.5	TM	
95	TM	Naphthalene	1.318	1.148	13	TM	
96	TM	1,2,3-Trichlorobenzene	0.7335	0.6871	6.3	TM	
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			5.8		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L05.D Vial: 2
Acq On : 13 Jan 17 9:58 Operator: PM,DG,SV,CMM
Sample : 170113A CCV/LCS-1WL 10ug/L Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 13 12:57 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	355840	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	323904	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	173696	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.48	111	195610	24.63	ppb		0.00
Spiked Amount 25.000			Recovery = 98.536%				
37) 1,2-DCA-D4(S)	4.92	65	206542	23.98	ppb		0.00
Spiked Amount 25.000			Recovery = 95.936%				
57) Toluene-D8(S)	7.22	98	659250	25.43	ppb		0.00
Spiked Amount 25.000			Recovery = 101.708%				
65) 4-Bromofluorobenzene(S)	9.89	95	239187	26.59	ppb		0.00
Spiked Amount 25.000			Recovery = 106.344%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.85	85	85800	10.43	ppb		96
3) Freon 114	0.93	85	56096	9.69	ppb		92
4) Chloromethane	0.96	50	110736	9.31	ppb		100
5) Vinyl chloride	1.03	62	94551	9.58	ppb		96
6) Bromomethane	1.22	94	61240	9.11	ppb		94
7) Chloroethane	1.29	64	53500	9.53	ppb		96
8) Dichlorofluoromethane	1.43	67	147642	9.67	ppb		100
9) Trichlorofluoromethane	1.46	101	109475	10.38	ppb		98
10) Acrolein	1.75	56	40081	116.35	ppb	#	96
11) Acetone	1.88	43	16908	9.10	ppb		88
12) Freon-113	1.84	101	58048	9.80	ppb		90
13) 1,1-DCE	1.83	96	61170	9.83	ppb		97
14) t-Butanol	2.39	59	21120	111.73	ppb		94
15) Acetonitrile	2.10	41	74614	100.33	ppb		94
16) Methyl Acetate	2.17	43	41028	8.86	ppb		96
17) Iodomethane	1.93	142	42392	11.77	ppb		98
18) Acrylonitrile	2.47	52	14136	8.45	ppb		92
19) Methylene chloride	2.23	84	76299	9.83	ppb		100
20) Carbon disulfide	1.98	76	193767	9.54	ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	144419	9.45	ppb		99
22) Trans-1,2-DCE	2.50	96	64819	9.87	ppb		98
23) Diisopropyl Ether	3.10	45	203171	9.51	ppb		96
24) 1,1-DCA	2.94	63	126329	9.55	ppb		99
25) Vinyl Acetate	3.10	43	46384	9.55	ppb		100
26) Ethyl tert Butyl Ether	3.59	59	158670	9.76	ppb		99
27) MEK (2-Butanone)	3.80	43	20938	9.28	ppb		89
28) Cis-1,2-DCE	3.73	96	71335	9.51	ppb		96
29) 2,2-Dichloropropane	3.70	77	34336	10.62	ppb		100
30) Chloroform	4.25	83	126736	9.75	ppb		97
31) Bromochloromethane	4.08	128	33204	10.38	ppb		98
33) 1,1,1-TCA	4.47	97	98419	9.58	ppb		93
34) Cyclohexane	4.53	41	50636	9.69	ppb		98
35) 1,1-Dichloropropene	4.72	75	86979	9.71	ppb		99
36) 2,2,4-Trimethylpentane	5.15	57	194299	11.17	ppb		92
38) Carbon Tetrachloride	4.70	119	78595	10.22	ppb		93
39) Tert Amyl Methyl Ether	5.22	73	134541	9.44	ppb		98
40) 1,2-DCA	5.03	62	90533	9.82	ppb		100
41) Benzene	4.99	78	268640	9.98	ppb		99
42) TCE	5.84	95	36528	10.09	ppb		96

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\170111\0113L05.D
Acq On : 13 Jan 17 9:58
Sample : 170113A CCV/LCS-1WL 10ug/L
Misc : W IS&S 1/3/17, 01/11/17

Vial: 2
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 12:57 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
43) 2-Pentanone	6.12	43	398882	111.54	ppb	98
44) 1,2-Dichloropropane	6.09	63	77624	9.80	ppb	100
45) Bromodichloromethane	6.44	83	91728	9.60	ppb	98
46) Methyl Cyclohexane	6.04	83	89290	10.48	ppb	98
47) Dibromomethane	6.22	93	37798	9.43	ppb	95
49) MIBK (methyl isobutyl ket	7.16	43	47144	8.82	ppb	94
50) 1-Bromo-2-chloroethane	6.75	63	49480	9.44	ppb	96
51) Cis-1,3-Dichloropropene	6.95	75	99977	9.74	ppb	95
52) Toluene	7.29	91	286000	10.25	ppb	99
53) Trans-1,3-Dichloropropene	7.56	75	83218	9.37	ppb	99
54) 1,1,2-TCA	7.74	83	47528	9.51	ppb	98
55) 2-Hexanone	8.04	43	12598	8.50	ppb	92
58) 1,2-EDB	8.20	107	47192	9.26	ppb	99
59) Tetrachloroethene	7.86	166	69288	10.24	ppb	98
60) 1-Chlorohexane	8.76	91	79813	10.81	ppb	98
61) 1,1,1,2-Tetrachloroethane	8.83	131	63559	9.79	ppb	96
62) m&p-Xylene	8.99	91	305257	21.43	ppb	100
63) o-Xylene	9.38	106	109329	10.56	ppb	96
64) Styrene	9.40	104	123336	9.86	ppb	96
66) 1,3-Dichloropropane	7.90	76	91805	9.39	ppb	100
67) Dibromochloromethane	8.12	129	58800	9.48	ppb	99
68) Chlorobenzene	8.73	112	182171	10.12	ppb	99
69) Ethylbenzene	8.87	91	312350	10.65	ppb	98
70) Bromoform	9.55	173	34000	9.11	ppb	100
72) Isopropylbenzene	9.76	105	275836	10.44	ppb	98
73) 1,1,2,2-Tetrachloroethane	10.07	83	61723	8.87	ppb	99
74) 1,2,3-Trichloropropane	10.09	110	11189	8.81	ppb	96
75) t-1,4-Dichloro-2-Butene	10.12	53	14421	8.47	ppb	100
76) Bromobenzene	10.01	156	74092	10.01	ppb	88
77) n-Propylbenzene	10.17	91	350578	10.78	ppb	100
78) 4-Ethyltoluene	10.29	105	287540	11.23	ppb	100
79) 2-Chlorotoluene	10.23	91	212911	10.58	ppb	99
80) 1,3,5-Trimethylbenzene	10.36	105	250072	11.21	ppb	100
81) 4-Chlorotoluene	10.34	91	251097	10.79	ppb	96
82) Tert-Butylbenzene	10.66	119	196623	10.79	ppb	99
83) 1,2,4-Trimethylbenzene	10.72	105	240894	10.89	ppb	100
84) Sec-Butylbenzene	10.88	105	294092	10.86	ppb	97
85) p-Isopropyltoluene	11.04	119	241554	10.71	ppb	99
86) Benzyl Chloride	11.19	91	71520	9.78	ppb	97
87) 1,3-DCB	10.96	146	142301	10.39	ppb	98
88) 1,4-DCB	11.05	146	144850	10.02	ppb	99
89) n-Butylbenzene	11.44	91	230330	10.95	ppb	99
90) 1,2-DCB	11.41	146	130371	10.03	ppb	98
91) Hexachloroethane	11.66	117	47599	10.12	ppb	94
92) 1,2-Dibromo-3-chloropropan	12.18	157	9363	9.09	ppb	86
93) 1,2,4-Trichlorobenzene	13.00	180	81629	9.91	ppb	94
94) Hexachlorobutadiene	13.19	225	44536	10.55	ppb	84
95) Naphthalene	13.22	128	79784	8.71	ppb	99
96) 1,2,3-Trichlorobenzene	13.46	180	47736	9.37	ppb	99

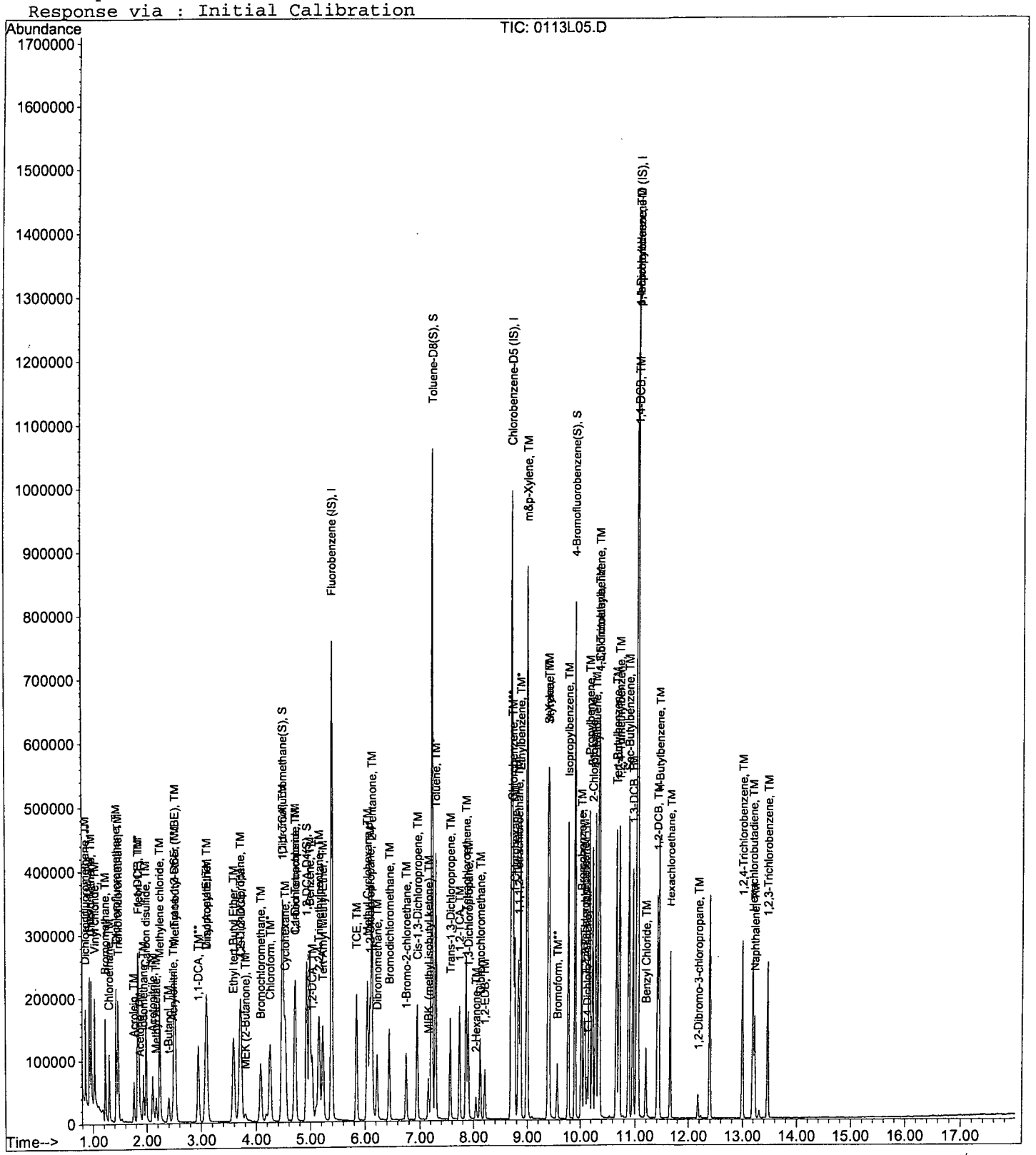
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L05.D Vial: 2
Acq On : 13 Jan 17 9:58 Operator: PM,DG,SV,CMM
Sample : 170113A CCV/LCS-1WL 10ug/L Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 13 12:57 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



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VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/13/17
Instrument: Loki
Initial Cal. Date: 01/11/17
Data File: 0113L29.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	TM	Dichlorodifluoromethane	0.5777	0.5214	9.8	TM	
3	TM	Freon 114	0.4069	0.3651	10	TM	
4	TM**	Chloromethane	0.8360	0.7156	14	TM**	
5	TM*	Vinyl chloride	0.6936	0.6195	11	TM*	
6	TM	Bromomethane	0.4725	0.3821	19	TM	
7	TM	Chloroethane	0.3946	0.3343	15	TM	
8	TM	Dichlorofluoromethane	1.073	1.013	5.6	TM	
9	TM	Trichlorofluoromethane	0.7410	0.7335	1.0	TM	
10	TM	Acrolein	0.0242	0.0205	15	TM	
11	TML	Acetone	0.1571	0.1192	24	TML	8.7
12	TM	Freon-113	0.4160	0.3888	6.6	TM	
13	TM*	1,1-DCE	0.4374	0.3991	8.8	TM*	
14	TM	t-Butanol	0.0133	0.0114	14	TM	
15	TM	Acetonitrile	0.0523	0.0409	22	TM	
16	TML	Methyl Acetate	0.3641	0.2739	25	TML	16
17	TM	Iodomethane	0.2531	0.2961	17	TM	
18	TM	Acrylonitrile	0.1175	0.0914	22	TM	
19	TM	Methylene chloride	0.5454	0.5232	4.1	TM	
20	TM	Carbon disulfide	1.428	1.281	10	TM	
21	TM	Methyl t-butyl ether (MtBE)	1.074	0.9643	10	TM	
22	TM	Trans-1,2-DCE	0.4615	0.4448	3.6	TM	
23	TM	Diisopropyl Ether	1.501	1.376	8.3	TM	
24	TM**	1,1-DCA	0.9296	0.8683	6.6	TM**	
25	TM	Vinyl Acetate	0.3411	0.2999	12	TM	
26	TM	Ethyl tert Butyl Ether	1.143	1.046	8.4	TM	
27	TML	MEK (2-Butanone)	0.1558	0.1277	18	TML	20
28	TM	Cis-1,2-DCE	0.5268	0.5145	2.3	TM	
29	TM	2,2-Dichloropropane	0.2271	0.2111	7.1	TM	
30	TM*	Chloroform	0.9134	0.8646	5.3	TM*	
31	TML	Bromochloromethane	0.2182	0.2323	6.4	TML	3.4
32	S	Dibromofluoromethane(S)	0.5579	0.5326	4.5	S	
33	TM	1,1,1-TCA	0.7216	0.6822	5.5	TM	
34	TM	Cyclohexane	0.3670	0.3329	9.3	TM	
35	TM	1,1-Dichloropropene	0.6296	0.5695	9.5	TM	
36	TM	2,2,4-Trimethylpentane	1.222	1.118	8.5	TM	
37	S	1,2-DCA-D4(S)	0.6050	0.5801	4.1	S	
38	TM	Carbon Tetrachloride	0.5403	0.5377	0.48	TM	
39	TM	Tert Amyl Methyl Ether	1.002	0.9158	8.6	TM	
40	TM	1,2-DCA	0.6475	0.6214	4.0	TM	
		Average			10.2		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/13/17
Matrix: 0 Instrument: Loki
Cal. Date: 01/11/17
Data File: 0113L29.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	Benzene	1.891	1.811	4.3	TM	
42	TM	TCE	0.2543	0.2528	0.58	TM	
43	TM	2-Pentanone	0.2512	0.2152	14	TM	
44	TM*	1,2-Dichloropropane	0.5564	0.5011	9.9	TM*	
45	TM	Bromodichloromethane	0.6711	0.6216	7.4	TM	
46	TM	Methyl Cyclohexane	0.5986	0.5652	5.6	TM	
47	TM	Dibromomethane	0.2815	0.2623	6.8	TM	
48	TM	2-Chloroethyl vinyl ether	0.0000	0.0011	0.00	TM	
49	TML	MIBK (methyl isobutyl ketone)	0.4450	0.3059	31	TML	20
50	TM	1-Bromo-2-chloroethane	0.3682	0.3366	8.6	TM	
51	TM	Cis-1,3-Dichloropropene	0.7208	0.6616	8.2	TM	
52	TM*	Toluene	1.960	1.946	0.71	TM*	
53	TM	Trans-1,3-Dichloropropene	0.6237	0.5560	11	TM	
54	TM	1,1,2-TCA	0.3511	0.3291	6.2	TM	
55	TM	2-Hexanone	0.1042	0.0795	24	TM	
56	I	Chlorobenzene-D5 (IS)	ISTD			I	
57	S	Toluene-D8(S)	2.001	2.002	0.05	S	
58	TM	1,2-EDB	0.3932	0.3709	5.7	TM	
59	TM	Tetrachloroethene	0.5220	0.4938	5.4	TM	
60	TM	1-Chlorohexane	0.5699	0.5478	3.9	TM	
61	TM	1,1,1,2-Tetrachloroethane	0.5011	0.4812	4.0	TM	
62	TM	m&p-Xylene	1.100	1.131	2.8	TM	
63	TM	o-Xylene	0.7988	0.8213	2.8	TM	
64	TML	Styrene	0.8526	0.9290	9.0	TML	3.7
65	S	4-Bromofluorobenzene(S)	0.6944	0.7142	2.8	S	
66	TM	1,3-Dichloropropane	0.7548	0.7154	5.2	TM	
67	TM	Dibromochloromethane	0.4788	0.4534	5.3	TM	
68	TM**	Chlorobenzene	1.390	1.372	1.3	TM**	
69	TM*	Ethylbenzene	2.263	2.342	3.5	TM*	
70	TM**	Bromoform	0.2882	0.2588	10	TM**	
71	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
72	TM	Isopropylbenzene	3.801	3.762	1.0	TM	
73	TM**	1,1,2,2-Tetrachloroethane	1.002	0.8714	13	TM**	
74	TM	1,2,3-Trichloropropane	0.1828	0.1579	14	TM	
75	TM	t-1,4-Dichloro-2-Butene	0.2451	0.1914	22	TM	
76	TM	Bromobenzene	1.065	1.018	4.5	TM	
77	TM	n-Propylbenzene	4.679	4.767	1.9	TM	
78	TM	4-Ethyltoluene	3.684	3.950	7.2	TM	
79	TM	2-Chlorotoluene	2.895	2.932	1.3	TM	
80	TM	1,3,5-Trimethylbenzene	3.211	3.386	5.5	TM	
		Average			7.1		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/13/17
Instrument: Loki
Cal. Date: 01/11/17
Data File: 0113L29.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	4-Chlorotoluene	3.350	3.439	2.7	TM	
82	TM	Tert-Butylbenzene	2.622	2.673	2.0	TM	
83	TM	1,2,4-Trimethylbenzene	3.182	3.306	3.9	TM	
84	TM	Sec-Butylbenzene	3.897	3.979	2.1	TM	
85	TM	p-Isopropyltoluene	3.246	3.259	0.39	TM	
86	TM	Benzyl Chloride	1.052	0.8445	20	TM	
87	TM	1,3-DCB	1.971	1.992	1.1	TM	
88	TM	1,4-DCB	2.080	2.010	3.4	TM	
89	TM	n-Butylbenzene	3.027	2.972	1.8	TM	
90	TM	1,2-DCB	1.871	1.862	0.47	TM	
91	TM	Hexachloroethane	0.6768	0.6613	2.3	TM	
92	TM	1,2-Dibromo-3-chloropropane	0.1483	0.1341	9.6	TM	
93	TM	1,2,4-Trichlorobenzene	1.186	1.122	5.4	TM	
94	TM	Hexachlorobutadiene	0.6077	0.5817	4.3	TM	
95	TM	Naphthalene	1.318	1.044	21	TM	
96	TM	1,2,3-Trichlorobenzene	0.7335	0.6575	10	TM	
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			5.7		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L29.D Vial: 26
Acq On : 13 Jan 17 21:10 Operator: PM,DG,SV,CMM
Sample : Ending CCV 8260 10ug/L 1/13/17 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 8:53 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	348352	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	315712	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	170560	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.48	111	185529	23.87	ppb		0.00
Spiked Amount 25.000			Recovery = 95.468%				
37) 1,2-DCA-D4(S)	4.93	65	202089	23.97	ppb		0.00
Spiked Amount 25.000			Recovery = 95.888%				
57) Toluene-D8(S)	7.22	98	632121	25.01	ppb		0.00
Spiked Amount 25.000			Recovery = 100.052%				
65) 4-Bromofluorobenzene(S)	9.89	95	225466	25.71	ppb		0.00
Spiked Amount 25.000			Recovery = 102.844%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.85	85	72648	9.02	ppb		94
3) Freon 114	0.93	85	50871	8.97	ppb		100
4) Chloromethane	0.96	50	99710	8.56	ppb		98
5) Vinyl chloride	1.03	62	86323	8.93	ppb		99
6) Bromomethane	1.22	94	53248	8.09	ppb		97
7) Chloroethane	1.29	64	46584	8.47	ppb		98
8) Dichlorofluoromethane	1.43	67	141219	9.44	ppb		100
9) Trichlorofluoromethane	1.46	101	102204	9.90	ppb		99
10) Acrolein	1.75	56	35786	106.11	ppb		95
11) Acetone	1.88	43	16605	9.13	ppb		97
12) Freon-113	1.84	101	54170	9.34	ppb		91
13) 1,1-DCE	1.83	96	55606	9.12	ppb		96
14) t-Butanol	2.39	59	19872	107.38	ppb		96
15) Acetonitrile	2.10	41	71201	97.80	ppb		91
16) Methyl Acetate	2.17	43	38159	8.37	ppb	#	86
17) Iodomethane	1.93	142	41256	11.70	ppb		97
18) Acrylonitrile	2.47	52	12731	7.77	ppb		93
19) Methylene chloride	2.23	84	72910	9.59	ppb		96
20) Carbon disulfide	1.98	76	178544	8.98	ppb		100
21) Methyl t-butyl ether (MtBE	2.52	73	134366	8.98	ppb		99
22) Trans-1,2-DCE	2.50	96	61979	9.64	ppb		98
23) Diisopropyl Ether	3.10	45	191719	9.17	ppb		99
24) 1,1-DCA	2.95	63	120996	9.34	ppb		98
25) Vinyl Acetate	3.10	43	41784	8.79	ppb		99
26) Ethyl tert Butyl Ether	3.59	59	145779	9.16	ppb		99
27) MEK (2-Butanone)	3.80	43	17798	7.99	ppb	#	72
28) Cis-1,2-DCE	3.72	96	71686	9.77	ppb		90
29) 2,2-Dichloropropane	3.70	77	29416	9.29	ppb		98
30) Chloroform	4.25	83	120478	9.47	ppb		92
31) Bromochloromethane	4.08	128	32362	10.34	ppb		89
33) 1,1,1-TCA	4.47	97	95062	9.45	ppb		96
34) Cyclohexane	4.53	41	46380	9.07	ppb		95
35) 1,1-Dichloropropene	4.72	75	79353	9.05	ppb		99
36) 2,2,4-Trimethylpentane	5.16	57	155800	9.15	ppb		96
38) Carbon Tetrachloride	4.70	119	74930	9.95	ppb		97
39) Tert Amyl Methyl Ether	5.22	73	127613	9.14	ppb		98
40) 1,2-DCA	5.03	62	86583	9.60	ppb		98
41) Benzene	4.98	78	252291	9.57	ppb		100
42) TCE	5.84	95	35232	9.94	ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L29.D Vial: 26
Acq On : 13 Jan 17 21:10 Operator: PM,DG,SV,CMM
Sample : Ending CCV 8260 10ug/L 1/13/17 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 8:53 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
43)	2-Pentanone	6.12	43	374902	107.09	ppb	97
44)	1,2-Dichloropropane	6.09	63	69822	9.01	ppb	97
45)	Bromodichloromethane	6.44	83	86620	9.26	ppb	97
46)	Methyl Cyclohexane	6.04	83	78761	9.44	ppb	92
47)	Dibromomethane	6.22	93	36547	9.32	ppb	95
49)	MIBK (methyl isobutyl ket	7.16	43	42630	8.04	ppb	98
50)	1-Bromo-2-chloroethane	6.75	63	46904	9.14	ppb	98
51)	Cis-1,3-Dichloropropene	6.95	75	92185	9.18	ppb	94
52)	Toluene	7.29	91	271162	9.93	ppb	99
53)	Trans-1,3-Dichloropropene	7.56	75	77472	8.91	ppb	97
54)	1,1,2-TCA	7.74	83	45861	9.38	ppb	95
55)	2-Hexanone	8.05	43	11079	7.63	ppb	96
58)	1,2-EDB	8.21	107	46838	9.43	ppb	96
59)	Tetrachloroethene	7.86	166	62358	9.46	ppb	97
60)	1-Chlorohexane	8.76	91	69178	9.61	ppb	97
61)	1,1,1,2-Tetrachloroethane	8.83	131	60762	9.60	ppb	97
62)	m&p-Xylene	8.99	91	285632	20.57	ppb	100
63)	o-Xylene	9.38	106	103721	10.28	ppb	98
64)	Styrene	9.40	104	117320	9.63	ppb	96
66)	1,3-Dichloropropane	7.90	76	90346	9.48	ppb	94
67)	Dibromochloromethane	8.12	129	57260	9.47	ppb	100
68)	Chlorobenzene	8.73	112	173311	9.87	ppb	97
69)	Ethylbenzene	8.87	91	295767	10.35	ppb	96
70)	Bromoform	9.55	173	32679	8.98	ppb	99
72)	Isopropylbenzene	9.76	105	256657	9.90	ppb	100
73)	1,1,2,2-Tetrachloroethane	10.07	83	59452	8.70	ppb	97
74)	1,2,3-Trichloropropane	10.09	110	10774	8.64	ppb	95
75)	t-1,4-Dichloro-2-Butene	10.12	53	13057	7.81	ppb	84
76)	Bromobenzene	10.01	156	69419	9.55	ppb	99
77)	n-Propylbenzene	10.17	91	325239	10.19	ppb	99
78)	4-Ethyltoluene	10.29	105	269512	10.72	ppb	97
79)	2-Chlorotoluene	10.22	91	200007	10.13	ppb	99
80)	1,3,5-Trimethylbenzene	10.36	105	230978	10.55	ppb	98
81)	4-Chlorotoluene	10.34	91	234635	10.27	ppb	96
82)	Tert-Butylbenzene	10.66	119	182377	10.20	ppb	99
83)	1,2,4-Trimethylbenzene	10.72	105	225522	10.39	ppb	97
84)	Sec-Butylbenzene	10.88	105	271486	10.21	ppb	99
85)	p-Isopropyltoluene	11.04	119	222322	10.04	ppb	99
86)	Benzyl Chloride	11.19	91	57614	8.02	ppb	99
87)	1,3-DCB	10.96	146	135878	10.11	ppb	96
88)	1,4-DCB	11.05	146	137147	9.66	ppb	96
89)	n-Butylbenzene	11.44	91	202771	9.82	ppb	97
90)	1,2-DCB	11.41	146	127048	9.95	ppb	98
91)	Hexachloroethane	11.66	117	45117	9.77	ppb	99
92)	1,2-Dibromo-3-chloropropan	12.18	157	9148	9.04	ppb	94
93)	1,2,4-Trichlorobenzene	13.00	180	76568	9.46	ppb	95
94)	Hexachlorobutadiene	13.19	225	39685	9.57	ppb	92
95)	Naphthalene	13.22	128	71248	7.92	ppb	100
96)	1,2,3-Trichlorobenzene	13.46	180	44856	8.96	ppb	93

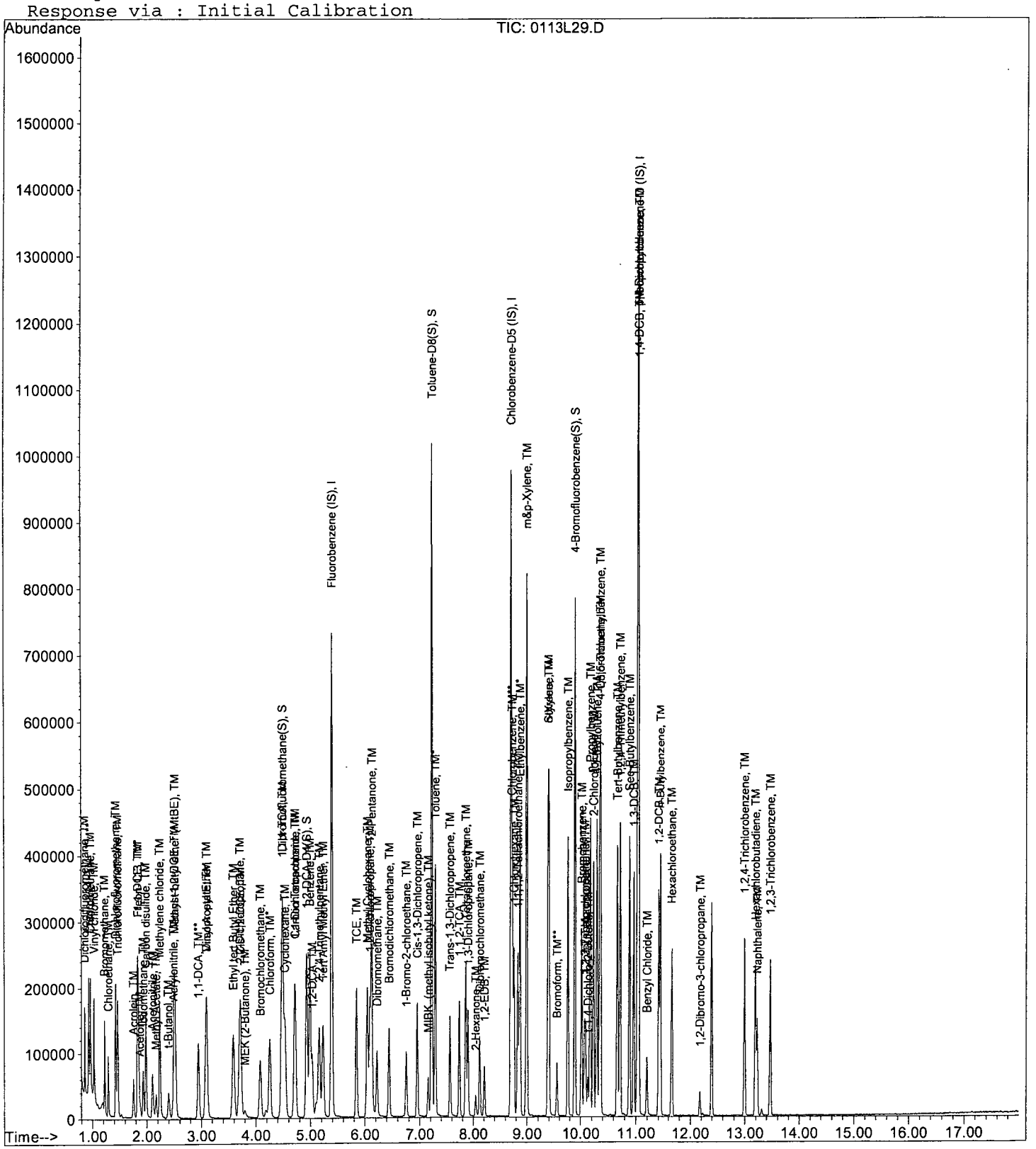
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L29.D Vial: 26
Acq On : 13 Jan 17 21:10 Operator: PM,DG,SV,CMM
Sample : Ending CCV 8260 10ug/L 1/13/17 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 8:53 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



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VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/13/17
Instrument: Loki
Initial Cal. Date: 01/11/17
Data File: 0113L35.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	TM	Dichlorodifluoromethane	0.5777	0.5727	0.87	TM	
3	TM	Freon 114	0.4069	0.3622	11	TM	
4	TM**	Chloromethane	0.8360	0.7503	10	TM**	
5	TM*	Vinyl chloride	0.6936	0.6454	6.9	TM*	
6	TM	Bromomethane	0.4725	0.3995	15	TM	
7	TM	Chloroethane	0.3946	0.3669	7.0	TM	
8	TM	Dichlorofluoromethane	1.073	1.010	5.9	TM	
9	TM	Trichlorofluoromethane	0.7410	0.7451	0.55	TM	
10	TM	Acrolein	0.0242	0.0209	14	TM	
11	TML	Acetone	0.1571	0.1240	21	TML	4.2
12	TM	Freon-113	0.4160	0.4044	2.8	TM	
13	TM*	1,1-DCE	0.4374	0.4120	5.8	TM*	
14	TM	t-Butanol	0.0133	0.0113	15	TM	
15	TM	Acetonitrile	0.0523	0.0435	17	TM	
16	TML	Methyl Acetate	0.3641	0.2920	20	TML	10
17	TM	Iodomethane	0.2531	0.2884	14	TM	
18	TM	Acrylonitrile	0.1175	0.0985	16	TM	
19	TM	Methylene chloride	0.5454	0.5267	3.4	TM	
20	TM	Carbon disulfide	1.428	1.270	11	TM	
21	TM	Methyl t-butyl ether (MtBE)	1.074	0.9763	9.1	TM	
22	TM	Trans-1,2-DCE	0.4615	0.4455	3.5	TM	
23	TM	Diisopropyl Ether	1.501	1.352	9.9	TM	
24	TM**	1,1-DCA	0.9296	0.8815	5.2	TM**	
25	TM	Vinyl Acetate	0.3411	0.2929	14	TM	
26	TM	Ethyl tert Butyl Ether	1.143	1.064	6.9	TM	
27	TML	MEK (2-Butanone)	0.1558	0.1341	14	TML	16
28	TM	Cis-1,2-DCE	0.5268	0.5225	0.82	TM	
29	TM	2,2-Dichloropropane	0.2271	0.2091	7.9	TM	
30	TM*	Chloroform	0.9134	0.8798	3.7	TM*	
31	TML	Bromochloromethane	0.2182	0.2333	6.9	TML	3.8
32	S	Dibromofluoromethane(S)	0.5579	0.5378	3.6	S	
33	TM	1,1,1-TCA	0.7216	0.6926	4.0	TM	
34	TM	Cyclohexane	0.3670	0.3377	8.0	TM	
35	TM	1,1-Dichloropropene	0.6296	0.5760	8.5	TM	
36	TM	2,2,4-Trimethylpentane	1.222	1.146	6.3	TM	
37	S	1,2-DCA-D4(S)	0.6050	0.5886	2.7	S	
38	TM	Carbon Tetrachloride	0.5403	0.5484	1.5	TM	
39	TM	Tert Amyl Methyl Ether	1.002	0.9392	6.2	TM	
40	TM	1,2-DCA	0.6475	0.6088	6.0	TM	
		Average			8.4		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/13/17
Instrument: Loki
Cal. Date: 01/11/17
Data File: 0113L35.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	Benzene	1.891	1.828	3.3	TM	
42	TM	TCE	0.2543	0.2591	1.9	TM	
43	TM	2-Pentanone	0.2512	0.2194	13	TM	
44	TM*	1,2-Dichloropropane	0.5564	0.5149	7.5	TM*	
45	TM	Bromodichloromethane	0.6711	0.6331	5.7	TM	
46	TM	Methyl Cyclohexane	0.5986	0.5828	2.6	TM	
47	TM	Dibromomethane	0.2815	0.2741	2.6	TM	
48	TM	2-Chloroethyl vinyl ether	0.0000	0.0127	0.00	TM	
49	TML	MIBK (methyl isobutyl ketone)	0.4450	0.3255	27	TML	14
50	TM	1-Bromo-2-chloroethane	0.3682	0.3299	10	TM	
51	TM	Cis-1,3-Dichloropropene	0.7208	0.6640	7.9	TM	
52	TM*	Toluene	1.960	1.948	0.59	TM*	
53	TM	Trans-1,3-Dichloropropene	0.6237	0.5618	9.9	TM	
54	TM	1,1,2-TCA	0.3511	0.3197	8.9	TM	
55	TM	2-Hexanone	0.1042	0.0867	17	TM	
56	I	Chlorobenzene-D5 (IS)	ISTD			I	
57	S	Toluene-D8(S)	2.001	2.003	0.08	S	
58	TM	1,2-EDB	0.3932	0.3539	10.0	TM	
59	TM	Tetrachloroethene	0.5220	0.4987	4.5	TM	
60	TM	1-Chlorohexane	0.5699	0.5696	0.06	TM	
61	TM	1,1,1,2-Tetrachloroethane	0.5011	0.4686	6.5	TM	
62	TM	m&p-Xylene	1.100	1.154	5.0	TM	
63	TM	o-Xylene	0.7988	0.8103	1.4	TM	
64	TML	Styrene	0.8526	0.9005	5.6	TML	6.5
65	S	4-Bromofluorobenzene(S)	0.6944	0.7265	4.6	S	
66	TM	1,3-Dichloropropane	0.7548	0.6783	10	TM	
67	TM	Dibromochloromethane	0.4788	0.4545	5.1	TM	
68	TM**	Chlorobenzene	1.390	1.317	5.2	TM**	
69	TM*	Ethylbenzene	2.263	2.287	1.0	TM*	
70	TM**	Bromoform	0.2882	0.2745	4.7	TM**	
71	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
72	TM	Isopropylbenzene	3.801	3.979	4.7	TM	
73	TM**	1,1,2,2-Tetrachloroethane	1.002	0.9066	9.5	TM**	
74	TM	1,2,3-Trichloropropane	0.1828	0.1767	3.3	TM	
75	TM	t-1,4-Dichloro-2-Butene	0.2451	0.1863	24	TM	* NC
76	TM	Bromobenzene	1.065	1.072	0.59	TM	
77	TM	n-Propylbenzene	4.679	4.883	4.4	TM	
78	TM	4-Ethyltoluene	3.684	4.003	8.7	TM	
79	TM	2-Chlorotoluene	2.895	3.089	6.7	TM	
80	TM	1,3,5-Trimethylbenzene	3.211	3.548	11	TM	
		Average			6.7		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/13/17
Instrument: Loki
Cal. Date: 01/11/17
Data File: 0113L35.D

		Compound	MEAN	CCRF	%D	%Drift		
81	TM	4-Chlorotoluene	3.350	3.591	7.2	TM		
82	TM	Tert-Butylbenzene	2.622	2.782	6.1	TM		
83	TM	1,2,4-Trimethylbenzene	3.182	3.498	9.9	TM		
84	TM	Sec-Butylbenzene	3.897	4.186	7.4	TM		
85	TM	p-Isopropyltoluene	3.246	3.464	6.7	TM		
86	TM	Benzyl Chloride	1.052	0.8216	22	TM		* NT
87	TM	1,3-DCB	1.971	2.053	4.2	TM		
88	TM	1,4-DCB	2.080	2.048	1.5	TM		
89	TM	n-Butylbenzene	3.027	3.140	3.7	TM		
90	TM	1,2-DCB	1.871	1.870	0.07	TM		
91	TM	Hexachloroethane	0.6768	0.7102	4.9	TM		
92	TM	1,2-Dibromo-3-chloropropane	0.1483	0.1377	7.1	TM		
93	TM	1,2,4-Trichlorobenzene	1.186	1.111	6.3	TM		
94	TM	Hexachlorobutadiene	0.6077	0.5822	4.2	TM		
95	TM	Naphthalene	1.318	1.153	12	TM		
96	TM	1,2,3-Trichlorobenzene	0.7335	0.7034	4.1	TM		
97								
98								
99								
100								
101								
102								
103								
104								
105								
106								
107								
108								
109								
110								
111								
112								
113								
114								
115								
116								
117								
118								
119								
120								
		Average			6.7			

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L35.D
Acq On : 13 Jan 17 23:58
Sample : 170113B CCV/LCS-1WL 10ug/L
Misc : W IS&S 1/3/17, 01/11/17

Vial: 32
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 9:24 2017

Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	338752	25.00 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	312576	25.00 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	162496	25.00 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	182178	24.10 ppb		0.00
Spiked Amount 25.000			Recovery =	96.400%		
37) 1,2-DCA-D4(S)	4.92	65	199393	24.32 ppb		0.00
Spiked Amount 25.000			Recovery =	97.288%		
57) Toluene-D8(S)	7.22	98	626008	25.02 ppb		0.00
Spiked Amount 25.000			Recovery =	100.080%		
65) 4-Bromofluorobenzene(S)	9.89	95	227083	26.16 ppb		0.00
Spiked Amount 25.000			Recovery =	104.620%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	77600	9.91 ppb		95
3) Freon 114	0.93	85	49081	8.90 ppb		95
4) Chloromethane	0.96	50	101663	8.98 ppb		99
5) Vinyl chloride	1.03	62	87450	9.31 ppb		98
6) Bromomethane	1.22	94	54136	8.46 ppb		97
7) Chloroethane	1.29	64	49719	9.30 ppb		98
8) Dichlorofluoromethane	1.43	67	136878	9.41 ppb		100
9) Trichlorofluoromethane	1.46	101	100960	10.06 ppb		94
10) Acrolein	1.75	56	35325	107.71 ppb	#	99
11) Acetone	1.88	43	16802	9.58 ppb		97
12) Freon-113	1.84	101	54797	9.72 ppb		96
13) 1,1-DCE	1.83	96	55824	9.42 ppb		98
14) t-Butanol	2.40	59	19056	105.89 ppb		97
15) Acetonitrile	2.10	41	73745	104.16 ppb		96
16) Methyl Acetate	2.17	43	39561	8.98 ppb		91
17) Iodomethane	1.93	142	39080	11.39 ppb		99
18) Acrylonitrile	2.48	52	13347	8.38 ppb		96
19) Methylene chloride	2.23	84	71363	9.66 ppb		100
20) Carbon disulfide	1.98	76	172153	8.90 ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	132289	9.09 ppb		99
22) Trans-1,2-DCE	2.50	96	60371	9.65 ppb		95
23) Diisopropyl Ether	3.10	45	183196	9.01 ppb		96
24) 1,1-DCA	2.94	63	119446	9.48 ppb		98
25) Vinyl Acetate	3.10	43	39688	8.59 ppb		99
26) Ethyl tert Butyl Ether	3.59	59	144144	9.31 ppb		98
27) MEK (2-Butanone)	3.81	43	18175	8.42 ppb	#	87
28) Cis-1,2-DCE	3.73	96	70803	9.92 ppb		91
29) 2,2-Dichloropropane	3.70	77	28336	9.21 ppb		98
30) Chloroform	4.25	83	119213	9.63 ppb		98
31) Bromochloromethane	4.08	128	31609	10.38 ppb		98
33) 1,1,1-TCA	4.47	97	93853	9.60 ppb		95
34) Cyclohexane	4.53	41	45757	9.20 ppb		96
35) 1,1-Dichloropropene	4.72	75	78043	9.15 ppb		98
36) 2,2,4-Trimethylpentane	5.15	57	155269	9.37 ppb		95
38) Carbon Tetrachloride	4.70	119	74310	10.15 ppb		97
39) Tert Amyl Methyl Ether	5.22	73	127259	9.38 ppb		99
40) 1,2-DCA	5.03	62	82490	9.40 ppb		100
41) Benzene	4.99	78	247735	9.67 ppb		98
42) TCE	5.84	95	35104	10.19 ppb		96

(#) = qualifier out of range (m) = manual integration
0113L35.D LALLW.M Tue Jan 17 14:30:17 2017

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L35.D
Acq On : 13 Jan 17 23:58
Sample : 170113B CCV/LCS-1WL 10ug/L
Misc : W IS&S 1/3/17, 01/11/17

Vial: 32
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 9:24 2017

Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43) 2-Pentanone	6.12	43	371545	109.14 ppb		96
44) 1,2-Dichloropropane	6.09	63	69767	9.25 ppb		99
45) Bromodichloromethane	6.44	83	85787	9.43 ppb		96
46) Methyl Cyclohexane	6.04	83	78976	9.74 ppb		93
47) Dibromomethane	6.22	93	37138	9.74 ppb		95
49) MIBK (methyl isobutyl ket	7.16	43	44105	8.64 ppb		98
50) 1-Bromo-2-chloroethane	6.75	63	44696	8.96 ppb		97
51) Cis-1,3-Dichloropropene	6.95	75	89974	9.21 ppb		95
52) Toluene	7.29	91	264018	9.94 ppb		98
53) Trans-1,3-Dichloropropene	7.56	75	76123	9.01 ppb		99
54) 1,1,2-TCA	7.74	83	43313	9.11 ppb		98
55) 2-Hexanone	8.04	43	11743	8.32 ppb	#	94
58) 1,2-EDB	8.20	107	44251	9.00 ppb		92
59) Tetrachloroethene	7.86	166	62350	9.55 ppb		97
60) 1-Chlorohexane	8.76	91	71214	9.99 ppb		96
61) 1,1,1,2-Tetrachloroethane	8.83	131	58587	9.35 ppb		87
62) m&p-Xylene	8.99	91	288630	20.99 ppb		98
63) o-Xylene	9.38	106	101308	10.14 ppb		99
64) Styrene	9.40	104	112592	9.35 ppb		99
66) 1,3-Dichloropropane	7.90	76	84808	8.99 ppb		98
67) Dibromochloromethane	8.12	129	56826	9.49 ppb		97
68) Chlorobenzene	8.73	112	164713	9.48 ppb		97
69) Ethylbenzene	8.87	91	285887	10.10 ppb		100
70) Bromoform	9.55	173	34319	9.53 ppb		99
72) Isopropylbenzene	9.76	105	258636	10.47 ppb		97
73) 1,1,2,2-Tetrachloroethane	10.07	83	58925	9.05 ppb		98
74) 1,2,3-Trichloropropane	10.09	110	11484	9.67 ppb		96
75) t-1,4-Dichloro-2-Butene	10.12	53	12110	7.60 ppb		83
76) Bromobenzene	10.01	156	69651	10.06 ppb		94
77) n-Propylbenzene	10.17	91	317373	10.44 ppb		99
78) 4-Ethyltoluene	10.29	105	260198	10.87 ppb		99
79) 2-Chlorotoluene	10.23	91	200769	10.67 ppb		100
80) 1,3,5-Trimethylbenzene	10.36	105	230595	11.05 ppb		99
81) 4-Chlorotoluene	10.34	91	233438	10.72 ppb		97
82) Tert-Butylbenzene	10.66	119	180849	10.61 ppb		98
83) 1,2,4-Trimethylbenzene	10.72	105	227372	10.99 ppb		98
84) Sec-Butylbenzene	10.88	105	272101	10.74 ppb		98
85) p-Isopropyltoluene	11.04	119	225183	10.67 ppb		97
86) Benzyl Chloride	11.19	91	53405	7.81 ppb		97
87) 1,3-DCB	10.96	146	133458	10.42 ppb		98
88) 1,4-DCB	11.05	146	133123	9.85 ppb		95
89) n-Butylbenzene	11.44	91	204069	10.37 ppb		99
90) 1,2-DCB	11.41	146	121528	9.99 ppb		99
91) Hexachloroethane	11.66	117	46161	10.49 ppb		90
92) 1,2-Dibromo-3-chloropropan	12.18	157	8951	9.29 ppb	#	78
93) 1,2,4-Trichlorobenzene	13.00	180	72245	9.37 ppb		98
94) Hexachlorobutadiene	13.19	225	37845	9.58 ppb		94
95) Naphthalene	13.22	128	74968	8.75 ppb		99
96) 1,2,3-Trichlorobenzene	13.46	180	45720	9.59 ppb		91

(#) = qualifier out of range (m) = manual integration
0113L35.D LALLW.M Tue Jan 17 14:30:17 2017

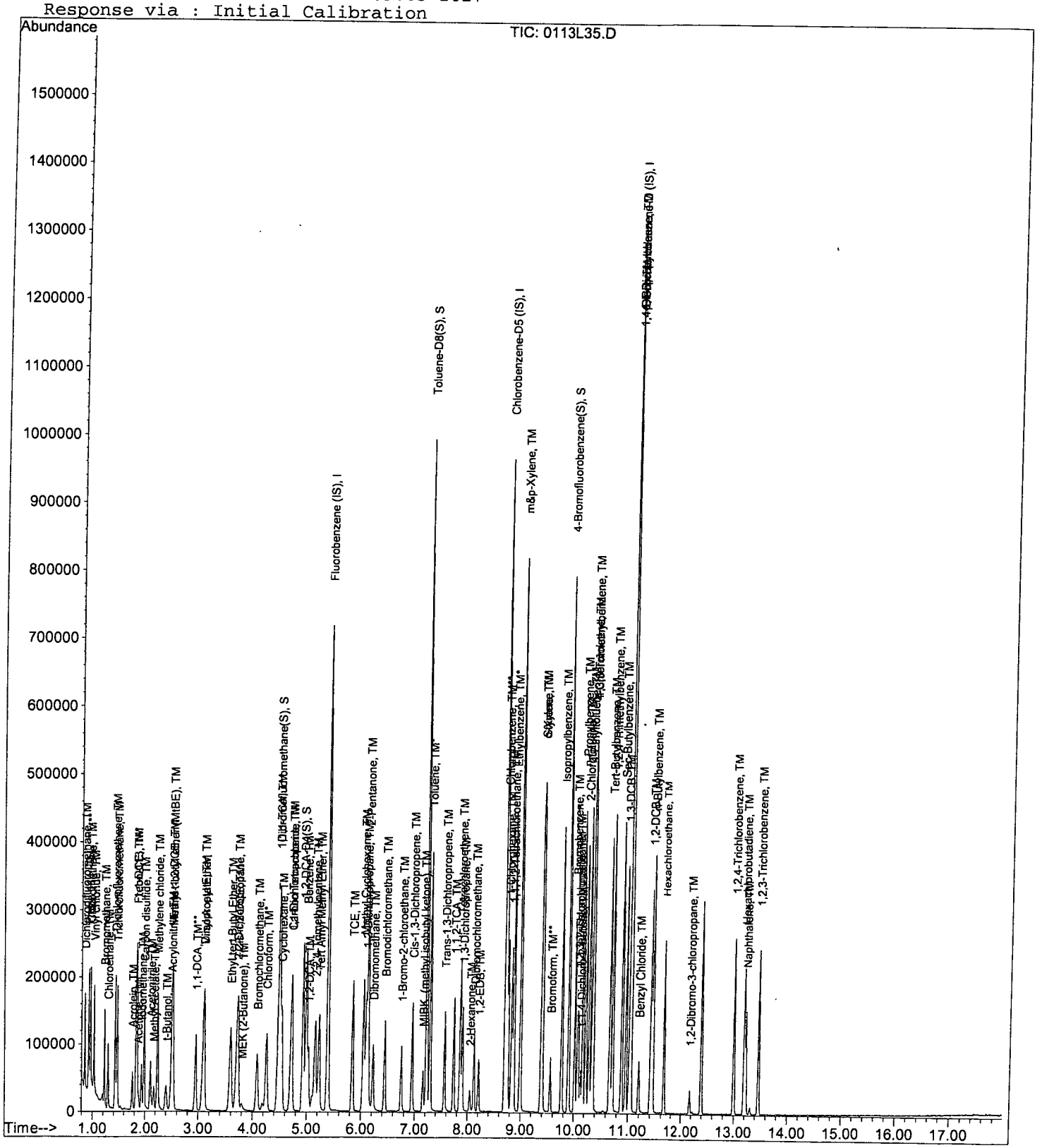
Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L35.D
Acq On : 13 Jan 17 23:58
Sample : 170113B CCV/LCS-1WL 10ug/L
Misc : W IS&S 1/3/17, 01/11/17

Vial: 32
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 9:24 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



743

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/14/17
Instrument: Loki
Initial Cal. Date: 01/11/17
Data File: 0113L60.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	TM	Dichlorodifluoromethane	0.5777	0.6065	5.0	TM	
3	TM	Freon 114	0.4069	0.3687	9.4	TM	
4	TM**	Chloromethane	0.8360	0.7138	15	TM**	
5	TM*	Vinyl chloride	0.6936	0.6796	2.0	TM*	
6	TM	Bromomethane	0.4725	0.4237	10	TM	
7	TM	Chloroethane	0.3946	0.3624	8.2	TM	
8	TM	Dichlorofluoromethane	1.073	1.031	3.9	TM	
9	TM	Trichlorofluoromethane	0.7410	0.8274	12	TM	
10	TM	Acrolein	0.0242	0.0221	8.9	TM	
11	TML	Acetone	0.1571	0.1272	19	TML	1.3
12	TM	Freon-113	0.4160	0.4120	0.96	TM	
13	TM*	1,1-DCE	0.4374	0.4205	3.9	TM*	
14	TM	t-Butanol	0.0133	0.0123	7.5	TM	
15	TM	Acetonitrile	0.0523	0.0456	13	TM	
16	TML	Methyl Acetate	0.3641	0.2798	23	TML	14
17	TM	Iodomethane	0.2531	0.2964	17	TM	
18	TM	Acrylonitrile	0.1175	0.1078	8.3	TM	
19	TM	Methylene chloride	0.5454	0.5441	0.23	TM	
20	TM	Carbon disulfide	1.428	1.341	6.1	TM	
21	TM	Methyl t-butyl ether (MtBE)	1.074	1.049	2.3	TM	
22	TM	Trans-1,2-DCE	0.4615	0.4569	1.00	TM	
23	TM	Diisopropyl Ether	1.501	1.425	5.1	TM	
24	TM**	1,1-DCA	0.9296	0.8945	3.8	TM**	
25	TM	Vinyl Acetate	0.3411	0.2920	14	TM	
26	TM	Ethyl tert Butyl Ether	1.143	1.084	5.1	TM	
27	TML	MEK (2-Butanone)	0.1558	0.1452	6.8	TML	8.4
28	TM	Cis-1,2-DCE	0.5268	0.5330	1.2	TM	
29	TM	2,2-Dichloropropane	0.2271	0.1770	22	TM	
30	TM*	Chloroform	0.9134	0.8989	1.6	TM*	
31	TML	Bromochloromethane	0.2182	0.2423	11	TML	8.0
32	S	Dibromofluoromethane(S)	0.5579	0.5702	2.2	S	
33	TM	1,1,1-TCA	0.7216	0.7223	0.09	TM	
34	TM	Cyclohexane	0.3670	0.3370	8.2	TM	
35	TM	1,1-Dichloropropene	0.6296	0.5994	4.8	TM	
36	TM	2,2,4-Trimethylpentane	1.222	1.103	9.8	TM	
37	S	1,2-DCA-D4(S)	0.6050	0.5963	1.4	S	
38	TM	Carbon Tetrachloride	0.5403	0.5695	5.4	TM	
39	TM	Tert Amyl Methyl Ether	1.002	0.9800	2.2	TM	
40	TM	1,2-DCA	0.6475	0.6460	0.22	TM	
		Average			7.2		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/14/17
Instrument: Loki
Cal. Date: 01/11/17
Data File: 0113L60.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	Benzene	1.891	1.878	0.69	TM	
42	TM	TCE	0.2543	0.2832	11	TM	
43	TM	2-Pentanone	0.2512	0.2215	12	TM	
44	TM*	1,2-Dichloropropane	0.5564	0.5243	5.8	TM*	
45	TM	Bromodichloromethane	0.6711	0.6712	0.02	TM	
46	TM	Methyl Cyclohexane	0.5986	0.6113	2.1	TM	
47	TM	Dibromomethane	0.2815	0.2888	2.6	TM	
48	TM	2-Chloroethyl vinyl ether	0.0000	0.0048	0.00	TM	
49	TML	MIBK (methyl isobutyl ketone)	0.4450	0.3322	25	TML	11
50	TM	1-Bromo-2-chloroethane	0.3682	0.3446	6.4	TM	
51	TM	Cis-1,3-Dichloropropene	0.7208	0.6725	6.7	TM	
52	TM*	Toluene	1.960	2.025	3.3	TM*	
53	TM	Trans-1,3-Dichloropropene	0.6237	0.5793	7.1	TM	
54	TM	1,1,2-TCA	0.3511	0.3342	4.8	TM	
55	TM	2-Hexanone	0.1042	0.0899	14	TM	
56	I	Chlorobenzene-D5 (IS)	ISTD			I	
57	S	Toluene-D8(S)	2.001	1.938	3.2	S	
58	TM	1,2-EDB	0.3932	0.3660	6.9	TM	
59	TM	Tetrachloroethene	0.5220	0.4905	6.0	TM	
60	TM	1-Chlorohexane	0.5699	0.5500	3.5	TM	
61	TM	1,1,1,2-Tetrachloroethane	0.5011	0.4687	6.5	TM	
62	TM	m&p-Xylene	1.100	1.105	0.45	TM	
63	TM	o-Xylene	0.7988	0.7808	2.3	TM	
64	TML	Styrene	0.8526	0.8971	5.2	TML	6.8
65	S	4-Bromofluorobenzene(S)	0.6944	0.7039	1.4	S	
66	TM	1,3-Dichloropropane	0.7548	0.6736	11	TM	
67	TM	Dibromochloromethane	0.4788	0.4626	3.4	TM	
68	TM**	Chlorobenzene	1.390	1.319	5.1	TM**	
69	TM*	Ethylbenzene	2.263	2.260	0.13	TM*	
70	TM**	Bromoform	0.2882	0.2782	3.4	TM**	
71	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
72	TM	Isopropylbenzene	3.801	3.846	1.2	TM	
73	TM**	1,1,2,2-Tetrachloroethane	1.002	0.8181	18	TM**	
74	TM	1,2,3-Trichloropropane	0.1828	0.1701	7.0	TM	
75	TM	t-1,4-Dichloro-2-Butene	0.2451	0.1900	22	TM	
76	TM	Bromobenzene	1.065	1.060	0.54	TM	
77	TM	n-Propylbenzene	4.679	4.740	1.3	TM	
78	TM	4-Ethyltoluene	3.684	3.854	4.6	TM	
79	TM	2-Chlorotoluene	2.895	3.024	4.4	TM	
80	TM	1,3,5-Trimethylbenzene	3.211	3.384	5.4	TM	
		Average			5.9		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/14/17
Instrument: Loki
Cal. Date: 01/11/17
Data File: 0113L60.D

		Compound	MEAN	CCRF	%D	%Drift	
81	TM	4-Chlorotoluene	3.350	3.440	2.7	TM	
82	TM	Tert-Butylbenzene	2.622	2.720	3.7	TM	
83	TM	1,2,4-Trimethylbenzene	3.182	3.361	5.6	TM	
84	TM	Sec-Butylbenzene	3.897	4.085	4.8	TM	
85	TM	p-Isopropyltoluene	3.246	3.260	0.43	TM	
86	TM	Benzyl Chloride	1.052	0.6174	41	TM	
87	TM	1,3-DCB	1.971	2.038	3.4	TM	
88	TM	1,4-DCB	2.080	2.015	3.1	TM	
89	TM	n-Butylbenzene	3.027	2.910	3.9	TM	
90	TM	1,2-DCB	1.871	1.875	0.22	TM	
91	TM	Hexachloroethane	0.6768	0.6859	1.4	TM	
92	TM	1,2-Dibromo-3-chloropropane	0.1483	0.1327	11	TM	
93	TM	1,2,4-Trichlorobenzene	1.186	1.165	1.8	TM	
94	TM	Hexachlorobutadiene	0.6077	0.5877	3.3	TM	
95	TM	Naphthalene	1.318	1.209	8.3	TM	
96	TM	1,2,3-Trichlorobenzene	0.7335	0.7186	2.0	TM	
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			6.0		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L60.D
Acq On : 14 Jan 17 11:38
Sample : Ending CCV 8260 10ug/L 1/13/17
Misc : W IS&S 1/3/17, 01/11/17

Vial: 57
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 9:34 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	320384	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	315200	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	164672	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.48	111	182698	25.55	ppb		0.00
Spiked Amount 25.000			Recovery = 102.216%				
37) 1,2-DCA-D4(S)	4.93	65	191033	24.64	ppb		0.00
Spiked Amount 25.000			Recovery = 98.552%				
57) Toluene-D8(S)	7.22	98	610715	24.21	ppb		0.00
Spiked Amount 25.000			Recovery = 96.820%				
65) 4-Bromofluorobenzene(S)	9.89	95	221868	25.34	ppb		0.00
Spiked Amount 25.000			Recovery = 101.368%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.85	85	77728	10.50	ppb		94
3) Freon 114	0.93	85	47255	9.06	ppb		93
4) Chloromethane	0.96	50	91477	8.54	ppb		98
5) Vinyl chloride	1.02	62	87094	9.80	ppb		98
6) Bromomethane	1.22	94	54296	8.97	ppb		100
7) Chloroethane	1.29	64	46445	9.18	ppb		96
8) Dichlorofluoromethane	1.42	67	132101	9.61	ppb		98
9) Trichlorofluoromethane	1.46	101	106038	11.17	ppb		98
10) Acrolein	1.75	56	35335	113.92	ppb	#	100
11) Acetone	1.88	43	16299	9.87	ppb		100
12) Freon-113	1.84	101	52805	9.90	ppb		95
13) 1,1-DCE	1.83	96	53888	9.61	ppb		97
14) t-Butanol	2.39	59	19680	115.63	ppb		93
15) Acetonitrile	2.10	41	73025	109.06	ppb		95
16) Methyl Acetate	2.17	43	35854	8.57	ppb	#	86
17) Iodomethane	1.93	142	37984	11.71	ppb		98
18) Acrylonitrile	2.47	52	13813	9.17	ppb		95
19) Methylene chloride	2.23	84	69726	9.98	ppb		100
20) Carbon disulfide	1.98	76	171796	9.39	ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	134398	9.77	ppb		98
22) Trans-1,2-DCE	2.50	96	58558	9.90	ppb		96
23) Diisopropyl Ether	3.10	45	182606	9.49	ppb		99
24) 1,1-DCA	2.95	63	114629	9.62	ppb		98
25) Vinyl Acetate	3.10	43	37424	8.56	ppb	#	98
26) Ethyl tert Butyl Ether	3.59	59	138956	9.49	ppb		97
27) MEK (2-Butanone)	3.80	43	18610	9.16	ppb	#	74
28) Cis-1,2-DCE	3.73	96	68310	10.12	ppb		92
29) 2,2-Dichloropropane	3.70	77	22680	7.79	ppb		99
30) Chloroform	4.25	83	115198	9.84	ppb		100
31) Bromochloromethane	4.09	128	31051	10.80	ppb		99
33) 1,1,1-TCA	4.47	97	92561	10.01	ppb		100
34) Cyclohexane	4.53	41	43185	9.18	ppb		89
35) 1,1-Dichloropropene	4.72	75	76821	9.52	ppb		100
36) 2,2,4-Trimethylpentane	5.15	57	141368	9.02	ppb		97
38) Carbon Tetrachloride	4.70	119	72985	10.54	ppb		94
39) Tert Amyl Methyl Ether	5.22	73	125588	9.78	ppb		97
40) 1,2-DCA	5.02	62	82791	9.98	ppb		100
41) Benzene	4.98	78	240673	9.93	ppb		99
42) TCE	5.84	95	36288	11.13	ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L60.D
Acq On : 14 Jan 17 11:38
Sample : Ending CCV 8260 10ug/L 1/13/17
Misc : W IS&S 1/3/17, 01/11/17

Vial: 57
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 9:34 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43) 2-Pentanone	6.12	43	354765	110.18	ppb		95
44) 1,2-Dichloropropane	6.08	63	67191	9.42	ppb		99
45) Bromodichloromethane	6.44	83	86023	10.00	ppb		95
46) Methyl Cyclohexane	6.04	83	78336	10.21	ppb		90
47) Dibromomethane	6.22	93	37011	10.26	ppb		98
49) MIBK (methyl isobutyl ket	7.15	43	42574	8.85	ppb		96
50) 1-Bromo-2-chloroethane	6.75	63	44168	9.36	ppb		99
51) Cis-1,3-Dichloropropene	6.95	75	86181	9.33	ppb		94
52) Toluene	7.29	91	259520	10.33	ppb		98
53) Trans-1,3-Dichloropropene	7.56	75	74235	9.29	ppb		99
54) 1,1,2-TCA	7.74	83	42830	9.52	ppb		95
55) 2-Hexanone	8.04	43	11518	8.63	ppb		95
58) 1,2-EDB	8.20	107	46141	9.31	ppb		99
59) Tetrachloroethene	7.85	166	61848	9.40	ppb		98
60) 1-Chlorohexane	8.76	91	69347	9.65	ppb		95
61) 1,1,1,2-Tetrachloroethane	8.83	131	59093	9.35	ppb		91
62) m&p-Xylene	8.99	91	278540	20.09	ppb		98
63) o-Xylene	9.38	106	98447	9.77	ppb		97
64) Styrene	9.40	104	113104	9.32	ppb		97
66) 1,3-Dichloropropane	7.90	76	84923	8.92	ppb		97
67) Dibromochloromethane	8.12	129	58330	9.66	ppb		97
68) Chlorobenzene	8.73	112	166245	9.49	ppb		100
69) Ethylbenzene	8.87	91	284985	9.99	ppb		98
70) Bromoform	9.55	173	35077	9.66	ppb		99
72) Isopropylbenzene	9.76	105	253334	10.12	ppb		98
73) 1,1,2,2-Tetrachloroethane	10.07	83	53887	8.17	ppb		94
74) 1,2,3-Trichloropropane	10.09	110	11203	9.30	ppb		95
75) t-1,4-Dichloro-2-Butene	10.12	53	12514	7.75	ppb		94
76) Bromobenzene	10.02	156	69793	9.95	ppb		92
77) n-Propylbenzene	10.17	91	312203	10.13	ppb		97
78) 4-Ethyltoluene	10.28	105	253886	10.46	ppb		99
79) 2-Chlorotoluene	10.22	91	199168	10.44	ppb		99
80) 1,3,5-Trimethylbenzene	10.36	105	222932	10.54	ppb		97
81) 4-Chlorotoluene	10.34	91	226621	10.27	ppb		98
82) Tert-Butylbenzene	10.66	119	179180	10.37	ppb		98
83) 1,2,4-Trimethylbenzene	10.72	105	221381	10.56	ppb		99
84) Sec-Butylbenzene	10.88	105	269053	10.48	ppb		99
85) p-Isopropyltoluene	11.04	119	214725	10.04	ppb		98
86) Benzyl Chloride	11.19	91	40670	5.87	ppb		96
87) 1,3-DCB	10.96	146	134219	10.34	ppb		98
88) 1,4-DCB	11.05	146	132741	9.69	ppb		98
89) n-Butylbenzene	11.44	91	191648	9.61	ppb		99
90) 1,2-DCB	11.41	146	123503	10.02	ppb		97
91) Hexachloroethane	11.66	117	45180	10.14	ppb		95
92) 1,2-Dibromo-3-chloropropan	12.17	157	8739	8.95	ppb	#	86
93) 1,2,4-Trichlorobenzene	13.00	180	76710	9.82	ppb		92
94) Hexachlorobutadiene	13.19	225	38711	9.67	ppb		86
95) Naphthalene	13.22	128	79648	9.17	ppb		99
96) 1,2,3-Trichlorobenzene	13.46	180	47336	9.80	ppb		97

(#) = qualifier out of range (m) = manual integration
0113L60.D LALLW.M Tue Jan 17 14:30:24 2017

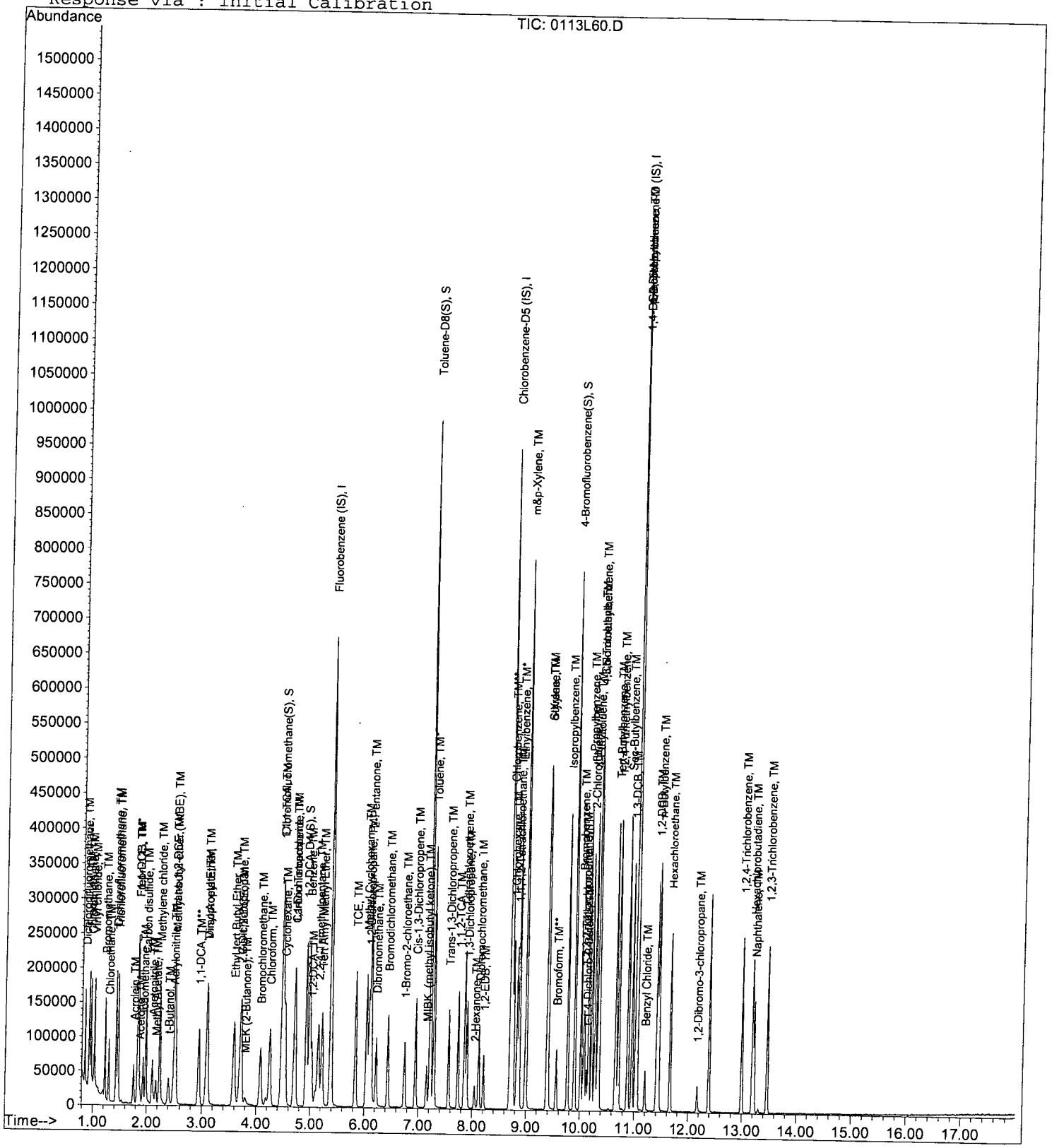
Data File : M:\LOKI\DATA\170111\0113L60.D
Acq On : 14 Jan 17 11:38
Sample : Ending CCV 8260 10ug/L 1/13/17
Misc : W IS&S 1/3/17, 01/11/17

Vial: 57
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 9:34 2017

Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



EPA METHOD 8260B
Volatile Organic Compounds
Raw Data

APPL, INC.

Method Blank

EPA 8260B BTEX & 1,2-DCA WATER

Blank Name/QCG: **170113W-48872 - 215495**

Batch ID: #86BTO-170113AL1

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	01/13/17	01/13/17
BLANK	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/13/17	01/13/17
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/13/17	01/13/17
BLANK	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/13/17	01/13/17
BLANK	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/13/17	01/13/17
BLANK	SURROGATE: 1,2-DICHLOROET	97.5	81-118			%	01/13/17	01/13/17
BLANK	SURROGATE: 4-BROMOFLUORO	98.5	85-114			%	01/13/17	01/13/17
BLANK	SURROGATE: DIBROMOFLUOR	98.8	80-119			%	01/13/17	01/13/17
BLANK	SURROGATE: TOLUENE-D8 (S)	101	89-112			%	01/13/17	01/13/17

Quant Method: LALLW.M
Run #: 0113L12
Instrument: Loki
Sequence: 170111
Initials: ARO

GC SC-Blank-REG MDLs-DOD
Printed: 01/17/17 8:21:53 AM

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L12.D Vial: 9
Acq On : 13 Jan 17 13:14 Operator: PM,DG,SV,CMM
Sample : 170113A BLK-1WL Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 8:26 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	331456	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	302080	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	154432	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	182631	24.69	ppb	0.00
Spiked Amount 25.000			Recovery =	98.768%		
37) 1,2-DCA-D4(S)	4.92	65	195500	24.37	ppb	0.00
Spiked Amount 25.000			Recovery =	97.488%		
57) Toluene-D8(S)	7.22	98	607886	25.14	ppb	0.00
Spiked Amount 25.000			Recovery =	100.560%		
65) 4-Bromofluorobenzene(S)	9.89	95	206660	24.63	ppb	0.00
Spiked Amount 25.000			Recovery =	98.520%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0113L12.D LALLW.M Tue Jan 17 14:30:11 2017 Page 1

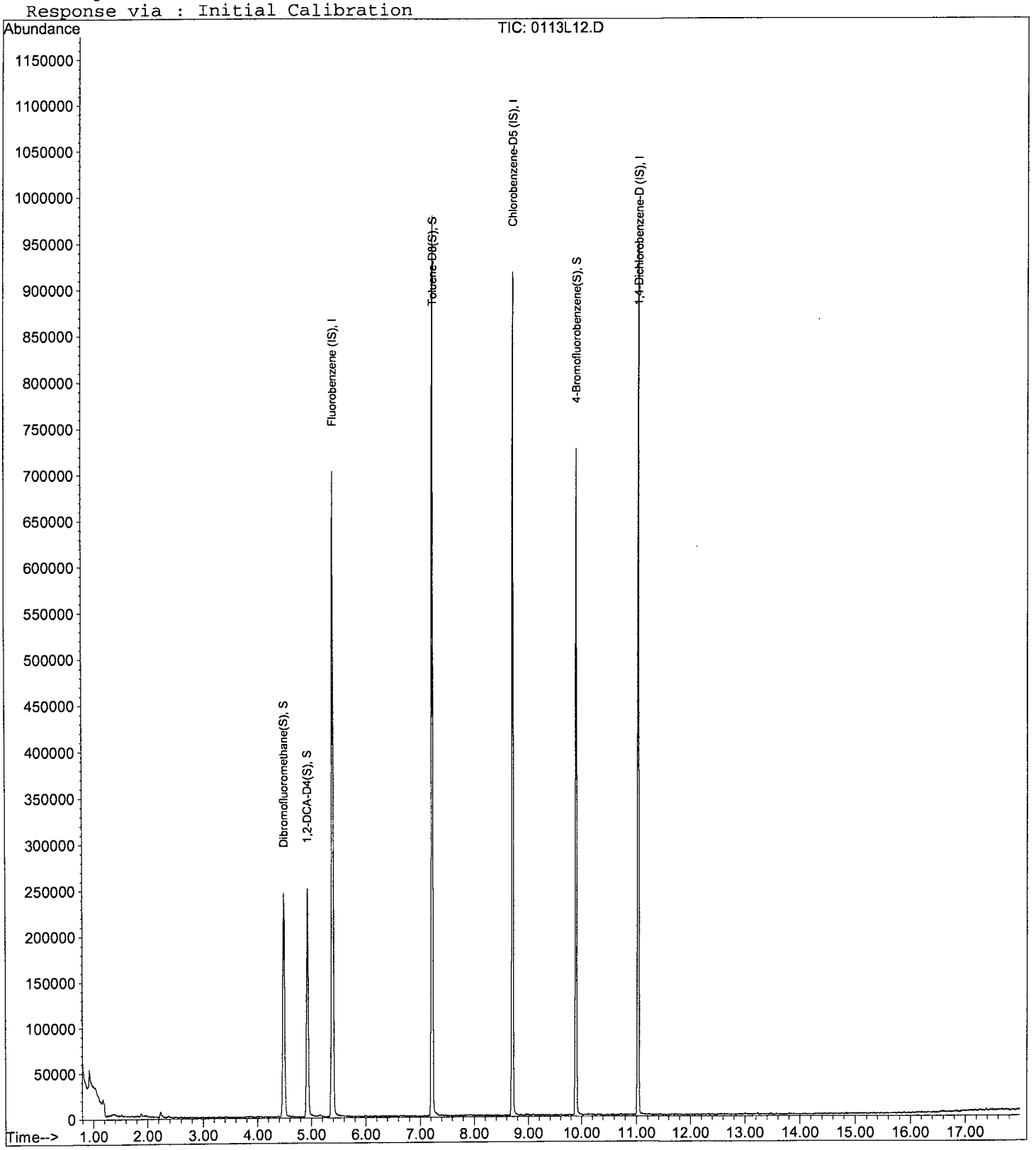
Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L12.D
Acq On : 13 Jan 17 13:14
Sample : 170113A BLK-1WL
Misc : W IS&S 1/3/17, 01/11/17

Vial: 9
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 8:26 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



Method Blank

EPA 8260B BTEX & 1,2-DCA WATER

Blank Name/QCG: **170113W-48873 - 215498**

Batch ID: #86BTO-170113BL

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	01/14/17	01/14/17
BLANK	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/14/17	01/14/17
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/14/17	01/14/17
BLANK	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/14/17	01/14/17
BLANK	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/14/17	01/14/17
BLANK	SURROGATE: 1,2-DICHLOROET	97.5	81-118			%	01/14/17	01/14/17
BLANK	SURROGATE: 4-BROMOFLUORO	97.7	85-114			%	01/14/17	01/14/17
BLANK	SURROGATE: DIBROMOFLUOR	100	80-119			%	01/14/17	01/14/17
BLANK	SURROGATE: TOLUENE-D8 (S)	98.9	89-112			%	01/14/17	01/14/17

Quant Method: LALLW.M
Run #: 0113L42
Instrument: Loki
Sequence: 170111
Initials: ARO

GC SC-Blank-REG MDLs-DOD
Printed: 01/17/17 8:21:53 AM

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L42.D
Acq On : 14 Jan 17 3:14
Sample : 170113B BLK-1WL
Misc : W IS&S 1/3/17, 01/11/17

Vial: 39
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 9:30 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	326912	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	302016	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	145664	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	182433	25.01	ppb	0.00
Spiked Amount 25.000			Recovery =	100.032%		
37) 1,2-DCA-D4(S)	4.93	65	192811	24.37	ppb	0.00
Spiked Amount 25.000			Recovery =	97.484%		
57) Toluene-D8(S)	7.22	98	597855	24.73	ppb	0.00
Spiked Amount 25.000			Recovery =	98.920%		
65) 4-Bromofluorobenzene(S)	9.89	95	204904	24.43	ppb	0.00
Spiked Amount 25.000			Recovery =	97.704%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

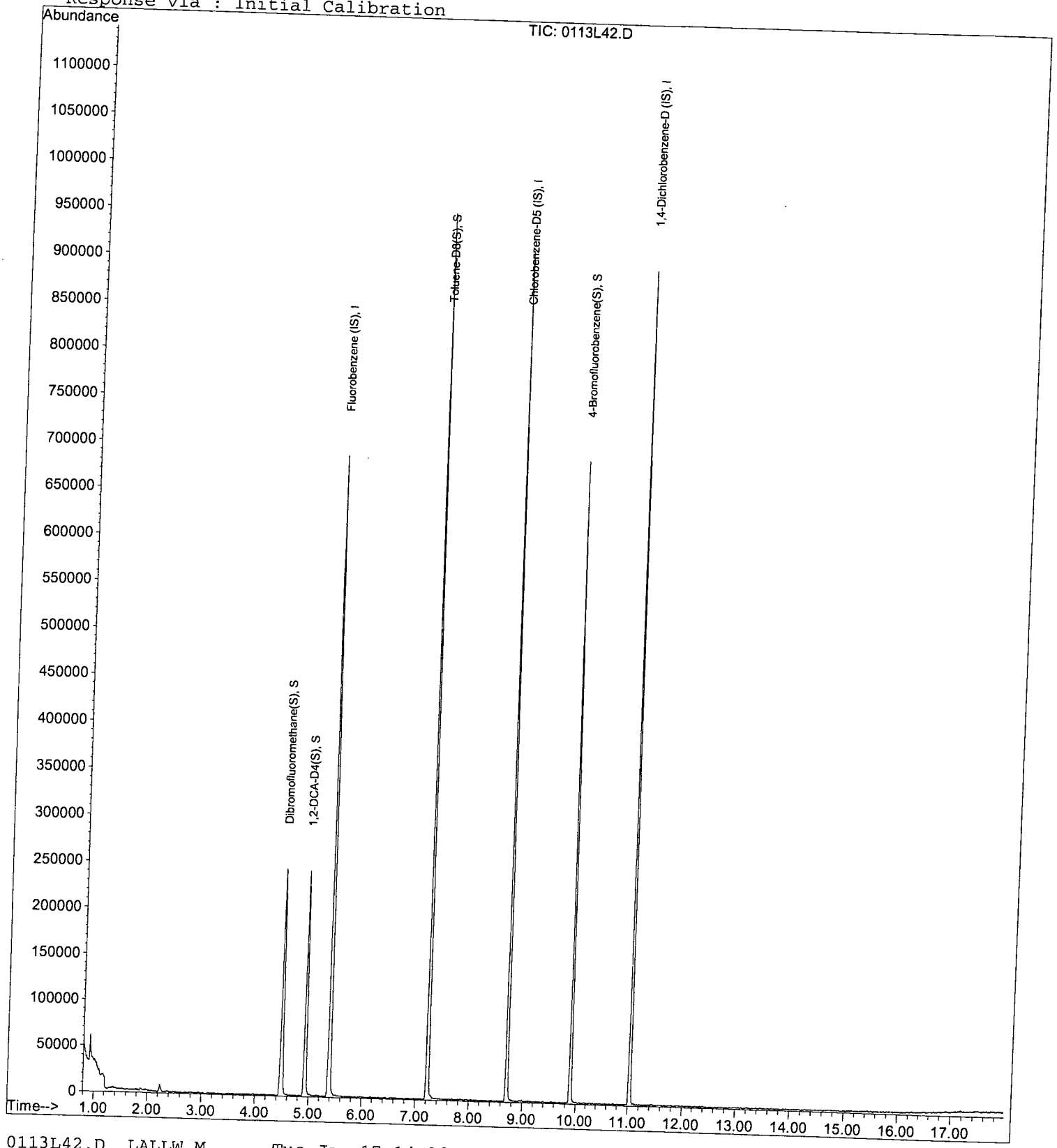
Data File : M:\LOKI\DATA\170111\0113L42.D
Acq On : 14 Jan 17 3:14
Sample : 170113B BLK-1WL
Misc : W IS&S 1/3/17, 01/11/17

Vial: 39
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 9:30 2017

Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



Laboratory Control Spike Recovery
EPA 8260B BTEX & 1,2-DCA WATER

APPL ID: **170113W-48872 LCS - 215495**
Batch ID: #86BTO-170113AL1

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1,2-DICHLOROETHANE	10.00	9.82	98.2	73-128
BENZENE	10.00	9.98	99.8	79-120
ETHYLBENZENE	10.00	10.7	107	79-121
TOLUENE	10.00	10.3	103	80-121
XYLENES (TOTAL)	30.0	32.0	107	79-121
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	24.0	96.0	81-118
SURROGATE: 4-BROMOFLUOROBENZE	25.0	26.6	106	85-114
SURROGATE: DIBROMOFLUOROMETH	25.0	24.6	98.4	80-119
SURROGATE: TOLUENE-D8 (S)	25.0	25.4	102	89-112

Comments: _____

Primary	SPK
Quant Method :	LALLW.M
Extraction Date :	01/13/17
Analysis Date :	01/13/17
Instrument :	Loki
Run :	0113L05
Initials :	ARO

Printed: 01/17/17 8:22:06 AM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L05.D Vial: 2
Acq On : 13 Jan 17 9:58 Operator: PM,DG,SV,CMM
Sample : 170113A CCV/LCS-1WL 10ug/L Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 13 12:57 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	355840	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	323904	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	173696	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.48	111	195610	24.63	ppb		0.00
Spiked Amount 25.000			Recovery = 98.536%				
37) 1,2-DCA-D4(S)	4.92	65	206542	23.98	ppb		0.00
Spiked Amount 25.000			Recovery = 95.936%				
57) Toluene-D8(S)	7.22	98	659250	25.43	ppb		0.00
Spiked Amount 25.000			Recovery = 101.708%				
65) 4-Bromofluorobenzene(S)	9.89	95	239187	26.59	ppb		0.00
Spiked Amount 25.000			Recovery = 106.344%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.85	85	85800	10.43	ppb		96
3) Freon 114	0.93	85	56096	9.69	ppb		92
4) Chloromethane	0.96	50	110736	9.31	ppb		100
5) Vinyl chloride	1.03	62	94551	9.58	ppb		96
6) Bromomethane	1.22	94	61240	9.11	ppb		94
7) Chloroethane	1.29	64	53500	9.53	ppb		96
8) Dichlorofluoromethane	1.43	67	147642	9.67	ppb		100
9) Trichlorofluoromethane	1.46	101	109475	10.38	ppb		98
10) Acrolein	1.75	56	40081	116.35	ppb	#	96
11) Acetone	1.88	43	16908	9.10	ppb		88
12) Freon-113	1.84	101	58048	9.80	ppb		90
13) 1,1-DCE	1.83	96	61170	9.83	ppb		97
14) t-Butanol	2.39	59	21120	111.73	ppb		94
15) Acetonitrile	2.10	41	74614	100.33	ppb		94
16) Methyl Acetate	2.17	43	41028	8.86	ppb		96
17) Iodomethane	1.93	142	42392	11.77	ppb		98
18) Acrylonitrile	2.47	52	14136	8.45	ppb		92
19) Methylene chloride	2.23	84	76299	9.83	ppb		100
20) Carbon disulfide	1.98	76	193767	9.54	ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	144419	9.45	ppb		99
22) Trans-1,2-DCE	2.50	96	64819	9.87	ppb		98
23) Diisopropyl Ether	3.10	45	203171	9.51	ppb		96
24) 1,1-DCA	2.94	63	126329	9.55	ppb		99
25) Vinyl Acetate	3.10	43	46384	9.55	ppb		100
26) Ethyl tert Butyl Ether	3.59	59	158670	9.76	ppb		99
27) MEK (2-Butanone)	3.80	43	20938	9.28	ppb		89
28) Cis-1,2-DCE	3.73	96	71335	9.51	ppb		96
29) 2,2-Dichloropropane	3.70	77	34336	10.62	ppb		100
30) Chloroform	4.25	83	126736	9.75	ppb		97
31) Bromochloromethane	4.08	128	33204	10.38	ppb		98
33) 1,1,1-TCA	4.47	97	98419	9.58	ppb		93
34) Cyclohexane	4.53	41	50636	9.69	ppb		98
35) 1,1-Dichloropropene	4.72	75	86979	9.71	ppb		99
36) 2,2,4-Trimethylpentane	5.15	57	194299	11.17	ppb		92
38) Carbon Tetrachloride	4.70	119	78595	10.22	ppb		93
39) Tert Amyl Methyl Ether	5.22	73	134541	9.44	ppb		98
40) 1,2-DCA	5.03	62	90533	9.82	ppb		100
41) Benzene	4.99	78	268640	9.98	ppb		99
42) TCE	5.84	95	36528	10.09	ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L05.D
Acq On : 13 Jan 17 9:58
Sample : 170113A CCV/LCS-1WL 10ug/L
Misc : W IS&S 1/3/17, 01/11/17

Vial: 2
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 12:57 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
43)	2-Pentanone	6.12	43	398882	111.54	ppb	98
44)	1,2-Dichloropropane	6.09	63	77624	9.80	ppb	100
45)	Bromodichloromethane	6.44	83	91728	9.60	ppb	98
46)	Methyl Cyclohexane	6.04	83	89290	10.48	ppb	98
47)	Dibromomethane	6.22	93	37798	9.43	ppb	95
49)	MIBK (methyl isobutyl ket	7.16	43	47144	8.82	ppb	94
50)	1-Bromo-2-chloroethane	6.75	63	49480	9.44	ppb	96
51)	Cis-1,3-Dichloropropene	6.95	75	99977	9.74	ppb	95
52)	Toluene	7.29	91	286000	10.25	ppb	99
53)	Trans-1,3-Dichloropropene	7.56	75	83218	9.37	ppb	99
54)	1,1,2-TCA	7.74	83	47528	9.51	ppb	98
55)	2-Hexanone	8.04	43	12598	8.50	ppb	92
58)	1,2-EDB	8.20	107	47192	9.26	ppb	99
59)	Tetrachloroethene	7.86	166	69288	10.24	ppb	98
60)	1-Chlorohexane	8.76	91	79813	10.81	ppb	98
61)	1,1,1,2-Tetrachloroethane	8.83	131	63559	9.79	ppb	96
62)	m&p-Xylene	8.99	91	305257	21.43	ppb	100
63)	o-Xylene	9.38	106	109329	10.56	ppb	96
64)	Styrene	9.40	104	123336	9.86	ppb	96
66)	1,3-Dichloropropane	7.90	76	91805	9.39	ppb	100
67)	Dibromochloromethane	8.12	129	58800	9.48	ppb	99
68)	Chlorobenzene	8.73	112	182171	10.12	ppb	99
69)	Ethylbenzene	8.87	91	312350	10.65	ppb	98
70)	Bromoform	9.55	173	34000	9.11	ppb	100
72)	Isopropylbenzene	9.76	105	275836	10.44	ppb	98
73)	1,1,2,2-Tetrachloroethane	10.07	83	61723	8.87	ppb	99
74)	1,2,3-Trichloropropane	10.09	110	11189	8.81	ppb	96
75)	t-1,4-Dichloro-2-Butene	10.12	53	14421	8.47	ppb	100
76)	Bromobenzene	10.01	156	74092	10.01	ppb	88
77)	n-Propylbenzene	10.17	91	350578	10.78	ppb	100
78)	4-Ethyltoluene	10.29	105	287540	11.23	ppb	100
79)	2-Chlorotoluene	10.23	91	212911	10.58	ppb	99
80)	1,3,5-Trimethylbenzene	10.36	105	250072	11.21	ppb	100
81)	4-Chlorotoluene	10.34	91	251097	10.79	ppb	96
82)	Tert-Butylbenzene	10.66	119	196623	10.79	ppb	99
83)	1,2,4-Trimethylbenzene	10.72	105	240894	10.89	ppb	100
84)	Sec-Butylbenzene	10.88	105	294092	10.86	ppb	97
85)	p-Isopropyltoluene	11.04	119	241554	10.71	ppb	99
86)	Benzyl Chloride	11.19	91	71520	9.78	ppb	97
87)	1,3-DCB	10.96	146	142301	10.39	ppb	98
88)	1,4-DCB	11.05	146	144850	10.02	ppb	99
89)	n-Butylbenzene	11.44	91	230330	10.95	ppb	99
90)	1,2-DCB	11.41	146	130371	10.03	ppb	98
91)	Hexachloroethane	11.66	117	47599	10.12	ppb	94
92)	1,2-Dibromo-3-chloropropan	12.18	157	9363	9.09	ppb	86
93)	1,2,4-Trichlorobenzene	13.00	180	81629	9.91	ppb	94
94)	Hexachlorobutadiene	13.19	225	44536	10.55	ppb	84
95)	Naphthalene	13.22	128	79784	8.71	ppb	99
96)	1,2,3-Trichlorobenzene	13.46	180	47736	9.37	ppb	99

(#) = qualifier out of range (m) = manual integration

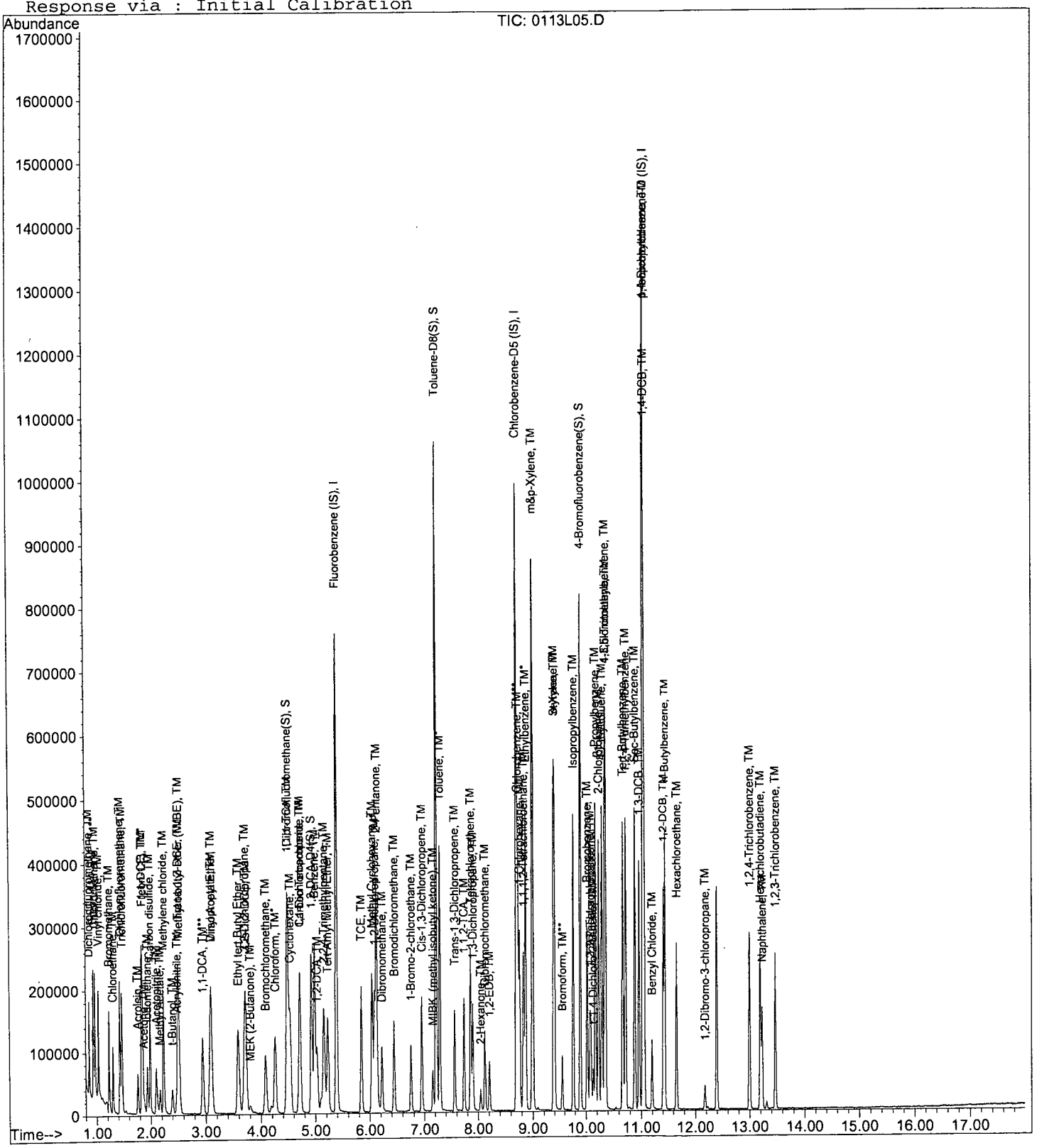
Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L05.D
Acq On : 13 Jan 17 9:58
Sample : 170113A CCV/LCS-1WL 10ug/L
Misc : W IS&S 1/3/17, 01/11/17

Vial: 2
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 12:57 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



760

Laboratory Control Spike Recovery
EPA 8260B BTEX & 1,2-DCA WATER

APPL ID: **170113W-48873 LCS - 215498**
Batch ID: #86BTO-170113BL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1,2-DICHLOROETHANE	10.00	9.40	94.0	73-128
BENZENE	10.00	9.67	96.7	79-120
ETHYLBENZENE	10.00	10.1	101	79-121
TOLUENE	10.00	9.94	99.4	80-121
XYLENES (TOTAL)	30.0	31.1	104	79-121
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	24.3	97.2	81-118
SURROGATE: 4-BROMOFLUOROBENZE	25.0	26.2	105	85-114
SURROGATE: DIBROMOFLUOROMETH	25.0	24.1	96.4	80-119
SURROGATE: TOLUENE-D8 (S)	25.0	25.0	100	89-112

Comments: _____

Primary	SPK
Quant Method :	LALLW.M
Extraction Date :	01/13/17
Analysis Date :	01/13/17
Instrument :	Loki
Run :	0113L35
Initials :	ARO

Printed: 01/17/17 8:22:06 AM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L35.D
Acq On : 13 Jan 17 23:58
Sample : 170113B CCV/LCS-1WL 10ug/L
Misc : W IS&S 1/3/17, 01/11/17

Vial: 32
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 9:24 2017

Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	338752	25.00 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	312576	25.00 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	162496	25.00 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	182178	24.10 ppb		0.00
Spiked Amount 25.000			Recovery =	96.400%		
37) 1,2-DCA-D4(S)	4.92	65	199393	24.32 ppb		0.00
Spiked Amount 25.000			Recovery =	97.288%		
57) Toluene-D8(S)	7.22	98	626008	25.02 ppb		0.00
Spiked Amount 25.000			Recovery =	100.080%		
65) 4-Bromofluorobenzene(S)	9.89	95	227083	26.16 ppb		0.00
Spiked Amount 25.000			Recovery =	104.620%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	77600	9.91 ppb		95
3) Freon 114	0.93	85	49081	8.90 ppb		95
4) Chloromethane	0.96	50	101663	8.98 ppb		99
5) Vinyl chloride	1.03	62	87450	9.31 ppb		98
6) Bromomethane	1.22	94	54136	8.46 ppb		97
7) Chloroethane	1.29	64	49719	9.30 ppb		98
8) Dichlorofluoromethane	1.43	67	136878	9.41 ppb		100
9) Trichlorofluoromethane	1.46	101	100960	10.06 ppb		94
10) Acrolein	1.75	56	35325	107.71 ppb	#	99
11) Acetone	1.88	43	16802	9.58 ppb		97
12) Freon-113	1.84	101	54797	9.72 ppb		96
13) 1,1-DCE	1.83	96	55824	9.42 ppb		98
14) t-Butanol	2.40	59	19056	105.89 ppb		97
15) Acetonitrile	2.10	41	73745	104.16 ppb		96
16) Methyl Acetate	2.17	43	39561	8.98 ppb		91
17) Iodomethane	1.93	142	39080	11.39 ppb		99
18) Acrylonitrile	2.48	52	13347	8.38 ppb		96
19) Methylene chloride	2.23	84	71363	9.66 ppb		100
20) Carbon disulfide	1.98	76	172153	8.90 ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	132289	9.09 ppb		99
22) Trans-1,2-DCE	2.50	96	60371	9.65 ppb		95
23) Diisopropyl Ether	3.10	45	183196	9.01 ppb		96
24) 1,1-DCA	2.94	63	119446	9.48 ppb		98
25) Vinyl Acetate	3.10	43	39688	8.59 ppb		99
26) Ethyl tert Butyl Ether	3.59	59	144144	9.31 ppb		98
27) MEK (2-Butanone)	3.81	43	18175	8.42 ppb	#	87
28) Cis-1,2-DCE	3.73	96	70803	9.92 ppb		91
29) 2,2-Dichloropropane	3.70	77	28336	9.21 ppb		98
30) Chloroform	4.25	83	119213	9.63 ppb		98
31) Bromochloromethane	4.08	128	31609	10.38 ppb		98
33) 1,1,1-TCA	4.47	97	93853	9.60 ppb		95
34) Cyclohexane	4.53	41	45757	9.20 ppb		96
35) 1,1-Dichloropropene	4.72	75	78043	9.15 ppb		98
36) 2,2,4-Trimethylpentane	5.15	57	155269	9.37 ppb		95
38) Carbon Tetrachloride	4.70	119	74310	10.15 ppb		97
39) Tert Amyl Methyl Ether	5.22	73	127259	9.38 ppb		99
40) 1,2-DCA	5.03	62	82490	9.40 ppb		100
41) Benzene	4.99	78	247735	9.67 ppb		98
42) TCE	5.84	95	35104	10.19 ppb		96

(#) = qualifier out of range (m) = manual integration
0113L35.D LALLW.M Tue Jan 17 14:30:17 2017

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L35.D
Acq On : 13 Jan 17 23:58
Sample : 170113B CCV/LCS-1WL 10ug/L
Misc : W IS&S 1/3/17, 01/11/17

Vial: 32
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 9:24 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43) 2-Pentanone	6.12	43	371545	109.14	ppb		96
44) 1,2-Dichloropropane	6.09	63	69767	9.25	ppb		99
45) Bromodichloromethane	6.44	83	85787	9.43	ppb		96
46) Methyl Cyclohexane	6.04	83	78976	9.74	ppb		93
47) Dibromomethane	6.22	93	37138	9.74	ppb		95
49) MIBK (methyl isobutyl ket	7.16	43	44105	8.64	ppb		98
50) 1-Bromo-2-chloroethane	6.75	63	44696	8.96	ppb		97
51) Cis-1,3-Dichloropropene	6.95	75	89974	9.21	ppb		95
52) Toluene	7.29	91	264018	9.94	ppb		98
53) Trans-1,3-Dichloropropene	7.56	75	76123	9.01	ppb		99
54) 1,1,2-TCA	7.74	83	43313	9.11	ppb		98
55) 2-Hexanone	8.04	43	11743	8.32	ppb	#	94
58) 1,2-EDB	8.20	107	44251	9.00	ppb		92
59) Tetrachloroethene	7.86	166	62350	9.55	ppb		97
60) 1-Chlorohexane	8.76	91	71214	9.99	ppb		96
61) 1,1,1,2-Tetrachloroethane	8.83	131	58587	9.35	ppb		87
62) m&p-Xylene	8.99	91	288630	20.99	ppb		98
63) o-Xylene	9.38	106	101308	10.14	ppb		99
64) Styrene	9.40	104	112592	9.35	ppb		99
66) 1,3-Dichloropropane	7.90	76	84808	8.99	ppb		98
67) Dibromochloromethane	8.12	129	56826	9.49	ppb		97
68) Chlorobenzene	8.73	112	164713	9.48	ppb		97
69) Ethylbenzene	8.87	91	285887	10.10	ppb		100
70) Bromoform	9.55	173	34319	9.53	ppb		99
72) Isopropylbenzene	9.76	105	258636	10.47	ppb		97
73) 1,1,2,2-Tetrachloroethane	10.07	83	58925	9.05	ppb		98
74) 1,2,3-Trichloropropane	10.09	110	11484	9.67	ppb		96
75) t-1,4-Dichloro-2-Butene	10.12	53	12110	7.60	ppb		83
76) Bromobenzene	10.01	156	69651	10.06	ppb		94
77) n-Propylbenzene	10.17	91	317373	10.44	ppb		99
78) 4-Ethyltoluene	10.29	105	260198	10.87	ppb		99
79) 2-Chlorotoluene	10.23	91	200769	10.67	ppb		100
80) 1,3,5-Trimethylbenzene	10.36	105	230595	11.05	ppb		99
81) 4-Chlorotoluene	10.34	91	233438	10.72	ppb		97
82) Tert-Butylbenzene	10.66	119	180849	10.61	ppb		98
83) 1,2,4-Trimethylbenzene	10.72	105	227372	10.99	ppb		98
84) Sec-Butylbenzene	10.88	105	272101	10.74	ppb		98
85) p-Isopropyltoluene	11.04	119	225183	10.67	ppb		97
86) Benzyl Chloride	11.19	91	53405	7.81	ppb		97
87) 1,3-DCB	10.96	146	133458	10.42	ppb		98
88) 1,4-DCB	11.05	146	133123	9.85	ppb		95
89) n-Butylbenzene	11.44	91	204069	10.37	ppb		99
90) 1,2-DCB	11.41	146	121528	9.99	ppb		99
91) Hexachloroethane	11.66	117	46161	10.49	ppb		90
92) 1,2-Dibromo-3-chloropropan	12.18	157	8951	9.29	ppb	#	78
93) 1,2,4-Trichlorobenzene	13.00	180	72245	9.37	ppb		98
94) Hexachlorobutadiene	13.19	225	37845	9.58	ppb		94
95) Naphthalene	13.22	128	74968	8.75	ppb		99
96) 1,2,3-Trichlorobenzene	13.46	180	45720	9.59	ppb		91

(#) = qualifier out of range (m) = manual integration
0113L35.D LALLW.M Tue Jan 17 14:30:17 2017

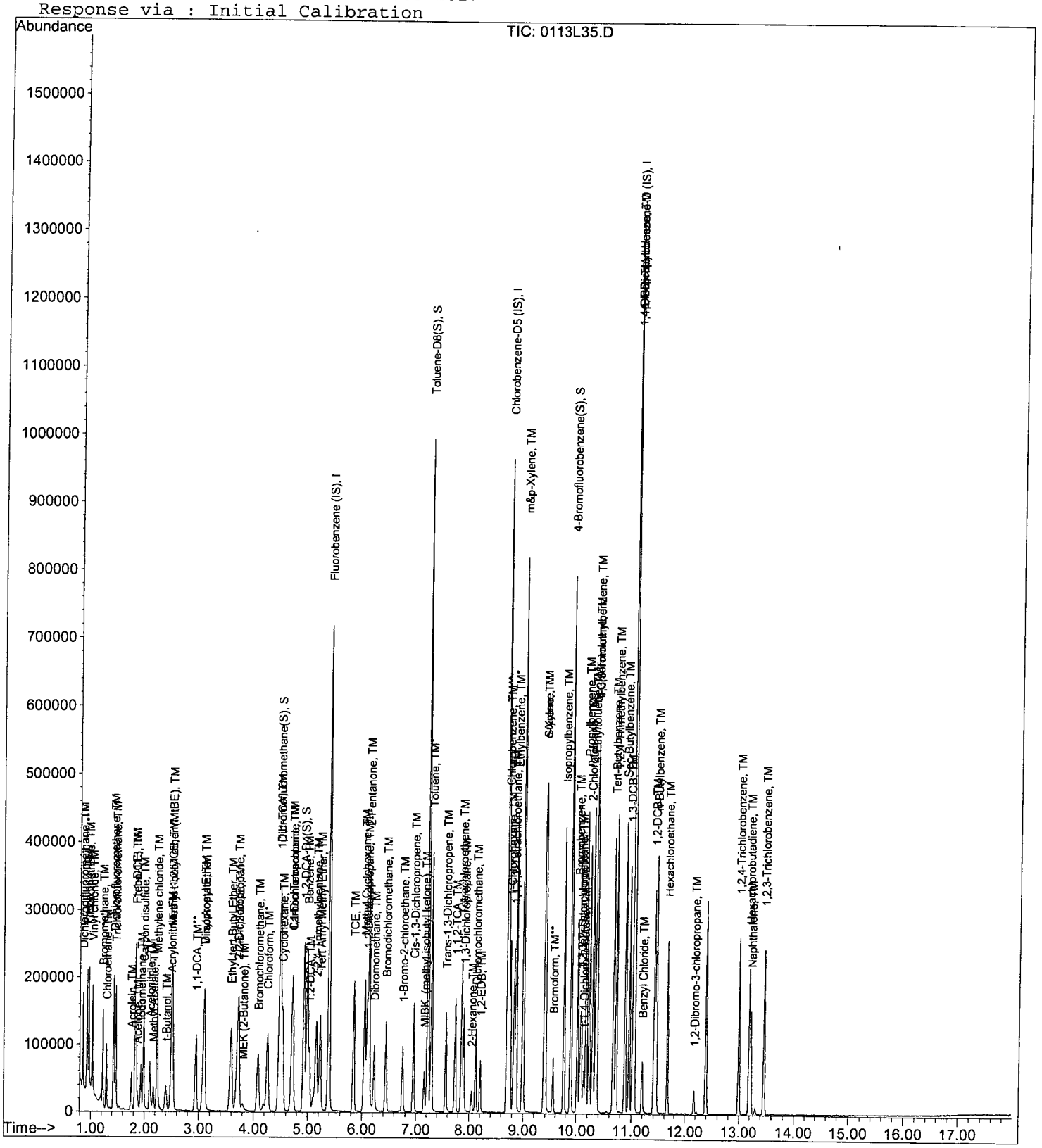
Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L35.D
Acq On : 13 Jan 17 23:58
Sample : 170113B CCV/LCS-1WL 10ug/L
Misc : W IS&S 1/3/17, 01/11/17

Vial: 32
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 9:24 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



764

Matrix Spike Recoveries

EPA 8260B BTEX WATER

APPL ID: **170116W-48866 MS - 215494**
Batch ID: #86BTO-170113AL
Sample ID: AZ48866
Client ID: ERH161

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
BENZENE	10.00	ND	10.1	9.75	101	97.5	79-120	3.5	20
ETHYLBENZENE	10.00	ND	11.3	10.7	113	107	79-121	5.5	20
TOLUENE	10.00	ND	10.8	10.3	108	103	80-121	4.7	20
XYLENES (TOTAL)	30.0	ND	33.6	33.1	112	110	79-121	1.5	20
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	NA	23.9	22.6	95.6	90.4	81-118		
SURROGATE: 4-BROMOFLUOROBENZE	25.0	NA	26.9	25.9	108	104	85-114		
SURROGATE: DIBROMOFLUOROMETH	25.0	NA	24.8	23.7	99.2	94.8	80-119		
SURROGATE: TOLUENE-D8 (S)	25.0	NA	25.0	24.9	100	99.6	89-112		

Comments: _____

Primary	SPK	DUP
Quant Method :	LALLW.M	LALLW.M
Extraction Date :	01/16/17	01/16/17
Analysis Date :	01/16/17	01/16/17
Instrument :	Loki	Loki
Run :	0116L10	0116L11
Initials :	ARO	

Printed: 01/26/17 10:57:13 AM
APPL MSD SCII

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0116L10.D Vial: 10
Acq On : 16 Jan 17 12:29 Operator: PM,DG,SV,CMM
Sample : AZ48866W234 MS-1WL 10ug/L Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 17 7:00 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	329088	25.00000	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	303808	25.00000	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	175552	25.00000	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.48	111	182118	24.79945	ppb		0.00
Spiked Amount 25.000			Recovery = 99.196%				
37) 1,2-DCA-D4(S)	4.93	65	190702	23.94526	ppb		0.00
Spiked Amount 25.000			Recovery = 95.780%				
57) Toluene-D8(S)	7.22	98	608323	25.01469	ppb		0.00
Spiked Amount 25.000			Recovery = 100.060%				
65) 4-Bromofluorobenzene(S)	9.89	95	226871	26.88514	ppb		0.00
Spiked Amount 25.000			Recovery = 107.540%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.85	85	72656	9.55430	ppb		91
3) Freon 114	0.93	85	52393	9.78176	ppb		97
4) Chloromethane	0.96	50	92674	8.42179	ppb		98
5) Vinyl chloride	1.02	62	80257	8.79043	ppb		98
6) Bromomethane	1.22	94	57032	9.16900	ppb		99
7) Chloroethane	1.29	64	46326	8.91910	ppb		98
8) Dichlorofluoromethane	1.42	67	141598	10.02470	ppb		100
9) Trichlorofluoromethane	1.46	101	103580	10.61918	ppb		99
10) Acrolein	1.75	56	35257	110.66201	ppb		94
11) Acetone	1.88	43	14725	8.45397	ppb		91
12) Freon-113	1.84	101	58046	10.59923	ppb		94
13) 1,1-DCE	1.83	96	57330	9.95739	ppb		99
14) t-Butanol	2.39	59	20720	118.52120	ppb		99
15) Acetonitrile	2.10	41	68731	99.92881	ppb		92
16) Methyl Acetate	2.17	43	38218	8.92579	ppb	#	87
17) Iodomethane	1.93	142	40744	12.22783	ppb		94
18) Acrylonitrile	2.47	52	14152	9.14711	ppb		99
19) Methylene chloride	2.23	84	71842	10.00740	ppb		100
20) Carbon disulfide	1.98	76	184022	9.79255	ppb		100
21) Methyl t-butyl ether (MtBE	2.52	73	137806	9.74967	ppb		97
22) Trans-1,2-DCE	2.50	96	62541	10.29389	ppb		97
23) Diisopropyl Ether	3.10	45	189550	9.59244	ppb		94
24) 1,1-DCA	2.94	63	120690	9.86246	ppb		98
25) Vinyl Acetate	3.09	43	42456	9.45481	ppb	#	90
26) Ethyl tert Butyl Ether	3.59	59	148531	9.87440	ppb		96
27) MEK (2-Butanone)	3.81	43	17276	8.22531	ppb	#	70
28) Cis-1,2-DCE	3.72	96	73562	10.60756	ppb		89
29) 2,2-Dichloropropane	3.70	77	33680	11.26533	ppb		99
30) Chloroform	4.25	83	121289	10.08777	ppb		96
31) Bromochloromethane	4.08	128	31834	10.77764	ppb		96
33) 1,1,1-TCA	4.47	97	100973	10.63008	ppb		95
34) Cyclohexane	4.53	41	45350	9.38662	ppb		88
35) 1,1-Dichloropropene	4.72	75	83393	10.06265	ppb		95
36) 2,2,4-Trimethylpentane	5.15	57	167947	10.43811	ppb		94
38) Carbon Tetrachloride	4.70	119	80508	11.31859	ppb		98
39) Tert Amyl Methyl Ether	5.22	73	134031	10.16408	ppb		96
40) 1,2-DCA	5.03	62	87317	10.24508	ppb		99
41) Benzene	4.98	78	252094	10.12728	ppb		99
42) TCE	5.84	95	34352	10.26098	ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0116L10.D
Acq On : 16 Jan 17 12:29
Sample : AZ48866W234 MS-1WL 10ug/L
Misc : W IS&S 1/3/17, 01/11/17

Vial: 10
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 17 7:00 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43) 2-Pentanone	6.12	43	346041	104.62856	ppb		96
44) 1,2-Dichloropropane	6.09	63	70763	9.66149	ppb	#	95
45) Bromodichloromethane	6.44	83	91866	10.39869	ppb		95
46) Methyl Cyclohexane	6.04	83	82897	10.51964	ppb		90
47) Dibromomethane	6.22	93	38150	10.29593	ppb		95
49) MIBK (methyl isobutyl ket	7.16	43	41039	8.22195	ppb		95
50) 1-Bromo-2-chloroethane	6.75	63	47176	9.73274	ppb		100
51) Cis-1,3-Dichloropropene	6.95	75	95788	10.09473	ppb		97
52) Toluene	7.29	91	279141	10.81928	ppb		99
53) Trans-1,3-Dichloropropene	7.56	75	81432	9.91908	ppb		95
54) 1,1,2-TCA	7.74	83	45637	9.87548	ppb		94
55) 2-Hexanone	8.04	43	12418	9.05709	ppb		98
58) 1,2-EDB	8.20	107	48511	10.15282	ppb		95
59) Tetrachloroethene	7.86	166	68392	10.78117	ppb		99
60) 1-Chlorohexane	8.76	91	77090	11.13087	ppb		94
61) 1,1,1,2-Tetrachloroethane	8.83	131	63590	10.44301	ppb		94
62) m&p-Xylene	8.99	91	302310	22.62178	ppb		98
63) o-Xylene	9.38	106	106387	10.95937	ppb		96
64) Styrene	9.40	104	120672	10.27281	ppb		99
66) 1,3-Dichloropropane	7.90	76	87246	9.51217	ppb		98
67) Dibromochloromethane	8.12	129	60446	10.38931	ppb		98
68) Chlorobenzene	8.73	112	179388	10.62128	ppb		99
69) Ethylbenzene	8.87	91	311375	11.32148	ppb		97
70) Bromoform	9.55	173	37843	10.80707	ppb		100
72) Isopropylbenzene	9.76	105	281778	10.55642	ppb		99
73) 1,1,2,2-Tetrachloroethane	10.07	83	65160	9.26193	ppb		97
74) 1,2,3-Trichloropropane	10.09	110	11590	9.02887	ppb		95
75) t-1,4-Dichloro-2-Butene	10.12	53	14917	8.66673	ppb		85
76) Bromobenzene	10.01	156	75709	10.12038	ppb		98
77) n-Propylbenzene	10.17	91	336348	10.23710	ppb		100
78) 4-Ethyltoluene	10.29	105	291287	11.25884	ppb		100
79) 2-Chlorotoluene	10.22	91	211849	10.42030	ppb		100
80) 1,3,5-Trimethylbenzene	10.36	105	245393	10.88485	ppb		98
81) 4-Chlorotoluene	10.34	91	246646	10.48608	ppb		97
82) Tert-Butylbenzene	10.66	119	199034	10.80991	ppb		96
83) 1,2,4-Trimethylbenzene	10.72	105	242038	10.83078	ppb		98
84) Sec-Butylbenzene	10.88	105	298312	10.90178	ppb		100
85) p-Isopropyltoluene	11.04	119	243726	10.69245	ppb		98
86) Benzyl Chloride	11.19	91	70553	9.54772	ppb		97
87) 1,3-DCB	10.96	146	145977	10.54799	ppb		99
88) 1,4-DCB	11.05	146	148107	10.13878	ppb		98
89) n-Butylbenzene	11.44	91	222766	10.48075	ppb		99
90) 1,2-DCB	11.41	146	133933	10.19439	ppb		98
91) Hexachloroethane	11.66	117	47958	10.09169	ppb		95
92) 1,2-Dibromo-3-chloropropan	12.18	157	9664	9.27907	ppb	#	88
93) 1,2,4-Trichlorobenzene	13.00	180	86395	10.37360	ppb		93
94) Hexachlorobutadiene	13.19	225	48427	11.34799	ppb		91
95) Naphthalene	13.22	128	84840	9.16709	ppb		100
96) 1,2,3-Trichlorobenzene	13.46	180	53064	10.30164	ppb		99

(#) = qualifier out of range (m) = manual integration

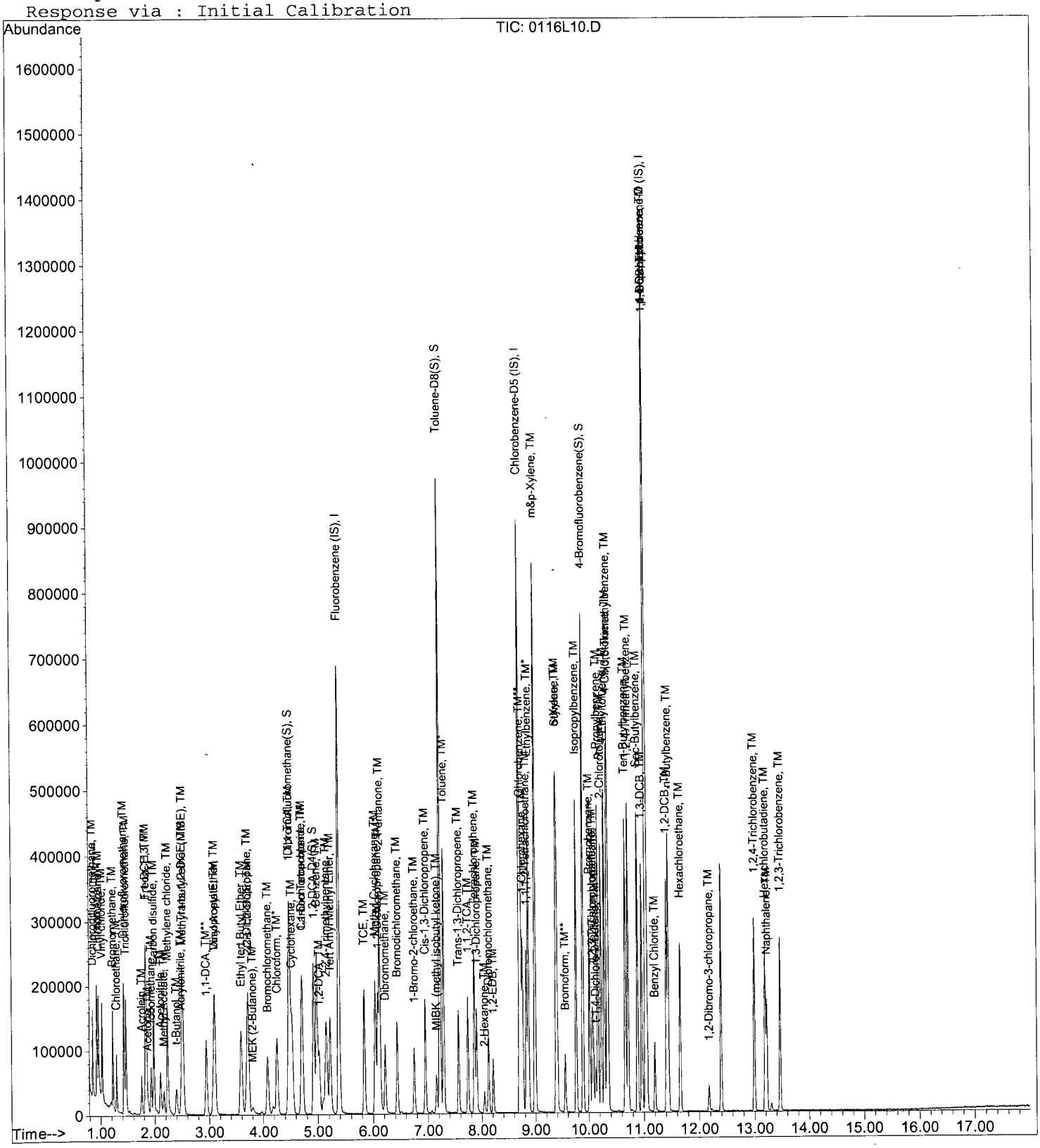
Quantitation Report

Data File : M:\LOKI\DATA\170111\0116L10.D
Acq On : 16 Jan 17 12:29
Sample : AZ48866W234 MS-1WL 10ug/L
Misc : W IS&S 1/3/17, 01/11/17

Vial: 10
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 17 7:00 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0116L11.D Vial: 11
Acq On : 16 Jan 17 12:57 Operator: PM,DG,SV,CMM
Sample : AZ48866W234 MSD-1WL 10ug/L Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 17 7:00 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	340416	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	308864	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	174080	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	180381	23.74554 ppb		0.00
Spiked Amount 25.000			Recovery = 94.984%			
37) 1,2-DCA-D4(S)	4.93	65	186034	22.58181 ppb		0.00
Spiked Amount 25.000			Recovery = 90.328%			
57) Toluene-D8(S)	7.22	98	616683	24.94335 ppb		0.00
Spiked Amount 25.000			Recovery = 99.772%			
65) 4-Bromofluorobenzene(S)	9.89	95	222620	25.94953 ppb		0.00
Spiked Amount 25.000			Recovery = 103.800%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	72256	9.18552 ppb		92
3) Freon 114	0.93	85	52222	9.42539 ppb		93
4) Chloromethane	0.96	50	88757	7.79742 ppb		99
5) Vinyl chloride	1.02	62	81635	8.64382 ppb		100
6) Bromomethane	1.22	94	54448	8.46228 ppb		98
7) Chloroethane	1.29	64	45075	8.38946 ppb		97
8) Dichlorofluoromethane	1.42	67	141214	9.66483 ppb		98
9) Trichlorofluoromethane	1.46	101	104310	10.33816 ppb		98
10) Acrolein	1.75	56	35477	107.64706 ppb	#	98
11) Acetone	1.88	43	13605	7.34720 ppb		100
12) Freon-113	1.84	101	56336	9.94466 ppb		91
13) 1,1-DCE	1.83	96	57018	9.57366 ppb		98
14) t-Butanol	2.39	59	20312	112.32103 ppb		99
15) Acetonitrile	2.10	41	67753	95.22888 ppb		98
16) Methyl Acetate	2.17	43	36838	8.26395 ppb	#	86
17) Iodomethane	1.93	142	43240	12.54508 ppb		96
18) Acrylonitrile	2.48	52	14109	8.81585 ppb		99
19) Methylene chloride	2.23	84	71365	9.61015 ppb		99
20) Carbon disulfide	1.98	76	185519	9.54369 ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	135162	9.24439 ppb		98
22) Trans-1,2-DCE	2.50	96	64855	10.31954 ppb		88
23) Diisopropyl Ether	3.10	45	188012	9.19799 ppb		92
24) 1,1-DCA	2.94	63	121442	9.59368 ppb		98
25) Vinyl Acetate	3.09	43	42520	9.15396 ppb		98
26) Ethyl tert Butyl Ether	3.59	59	148508	9.54433 ppb		98
27) MEK (2-Butanone)	3.81	43	16011	7.31561 ppb	#	81
28) Cis-1,2-DCE	3.73	96	72671	10.13037 ppb		90
29) 2,2-Dichloropropane	3.70	77	32880	10.63177 ppb		97
30) Chloroform	4.25	83	121522	9.77082 ppb		98
31) Bromochloromethane	4.08	128	32518	10.63886 ppb		98
33) 1,1,1-TCA	4.47	97	97949	9.96858 ppb		99
34) Cyclohexane	4.53	41	44924	8.98902 ppb		96
35) 1,1-Dichloropropene	4.72	75	83654	9.75825 ppb		99
36) 2,2,4-Trimethylpentane	5.15	57	170679	10.25491 ppb		93
38) Carbon Tetrachloride	4.70	119	78098	10.61440 ppb		96
39) Tert Amyl Methyl Ether	5.22	73	129647	9.50446 ppb		94
40) 1,2-DCA	5.03	62	85047	9.64667 ppb		98
41) Benzene	4.99	78	250983	9.74713 ppb		99
42) TCE	5.84	95	33760	9.74858 ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0116L11.D Vial: 11
Acq On : 16 Jan 17 12:57 Operator: PM,DG,SV,CMM
Sample : AZ48866W234 MSD-1WL 10ug/L Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 17 7:00 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
43) 2-Pentanone	6.12	43	333889	97.59485 ppb	95
44) 1,2-Dichloropropane	6.09	63	70467	9.30092 ppb	100
45) Bromodichloromethane	6.44	83	87771	9.60455 ppb	96
46) Methyl Cyclohexane	6.04	83	84619	10.38083 ppb	92
47) Dibromomethane	6.22	93	36559	9.53822 ppb	97
49) MIBK (methyl isobutyl ket	7.16	43	40877	7.86620 ppb	95
50) 1-Bromo-2-chloroethane	6.75	63	45808	9.13603 ppb	99
51) Cis-1,3-Dichloropropene	6.95	75	96668	9.84846 ppb	93
52) Toluene	7.29	91	275224	10.31248 ppb	100
53) Trans-1,3-Dichloropropene	7.56	75	80430	9.47102 ppb	99
54) 1,1,2-TCA	7.74	83	45747	9.56986 ppb	98
55) 2-Hexanone	8.04	43	11789	8.31220 ppb	98
58) 1,2-EDB	8.20	107	49395	10.16860 ppb	94
59) Tetrachloroethene	7.86	166	66568	10.32186 ppb	96
60) 1-Chlorohexane	8.76	91	77143	10.95619 ppb	95
61) 1,1,1,2-Tetrachloroethane	8.83	131	63924	10.32602 ppb	97
62) m&p-Xylene	8.99	91	302016	22.22983 ppb	99
63) o-Xylene	9.38	106	107403	10.88291 ppb	98
64) Styrene	9.40	104	114496	9.61175 ppb	96
66) 1,3-Dichloropropane	7.90	76	88523	9.49341 ppb	95
67) Dibromochloromethane	8.12	129	58617	9.91003 ppb	99
68) Chlorobenzene	8.73	112	177502	10.33757 ppb	97
69) Ethylbenzene	8.87	91	298313	10.66900 ppb	99
70) Bromoform	9.55	173	35347	9.92903 ppb	100
72) Isopropylbenzene	9.76	105	275611	10.41269 ppb	98
73) 1,1,2,2-Tetrachloroethane	10.07	83	63104	9.04553 ppb	97
74) 1,2,3-Trichloropropane	10.09	110	11406	8.96066 ppb	91
75) t-1,4-Dichloro-2-Butene	10.13	53	14521	8.50800 ppb	81
76) Bromobenzene	10.01	156	73947	9.96843 ppb	89
77) n-Propylbenzene	10.17	91	338752	10.39745 ppb	98
78) 4-Ethyltoluene	10.29	105	287962	11.22444 ppb	98
79) 2-Chlorotoluene	10.22	91	209121	10.37310 ppb	97
80) 1,3,5-Trimethylbenzene	10.35	105	246084	11.00780 ppb	100
81) 4-Chlorotoluene	10.34	91	243866	10.45556 ppb	96
82) Tert-Butylbenzene	10.66	119	194221	10.63771 ppb	98
83) 1,2,4-Trimethylbenzene	10.71	105	240912	10.87155 ppb	99
84) Sec-Butylbenzene	10.88	105	290809	10.71745 ppb	97
85) p-Isopropyltoluene	11.04	119	245626	10.86692 ppb	99
86) Benzyl Chloride	11.19	91	66100	9.02075 ppb	95
87) 1,3-DCB	10.96	146	145360	10.59222 ppb	96
88) 1,4-DCB	11.05	146	147694	10.19600 ppb	98
89) n-Butylbenzene	11.44	91	222009	10.53346 ppb	98
90) 1,2-DCB	11.41	146	135644	10.41192 ppb	97
91) Hexachloroethane	11.66	117	46976	9.96864 ppb	95
92) 1,2-Dibromo-3-chloropropan	12.18	157	9362	9.06511 ppb	89
93) 1,2,4-Trichlorobenzene	13.00	180	87589	10.60590 ppb	95
94) Hexachlorobutadiene	13.19	225	44850	10.59865 ppb	97
95) Naphthalene	13.22	128	87528	9.53750 ppb	99
96) 1,2,3-Trichlorobenzene	13.46	180	54536	10.67693 ppb	98

(#) = qualifier out of range (m) = manual integration

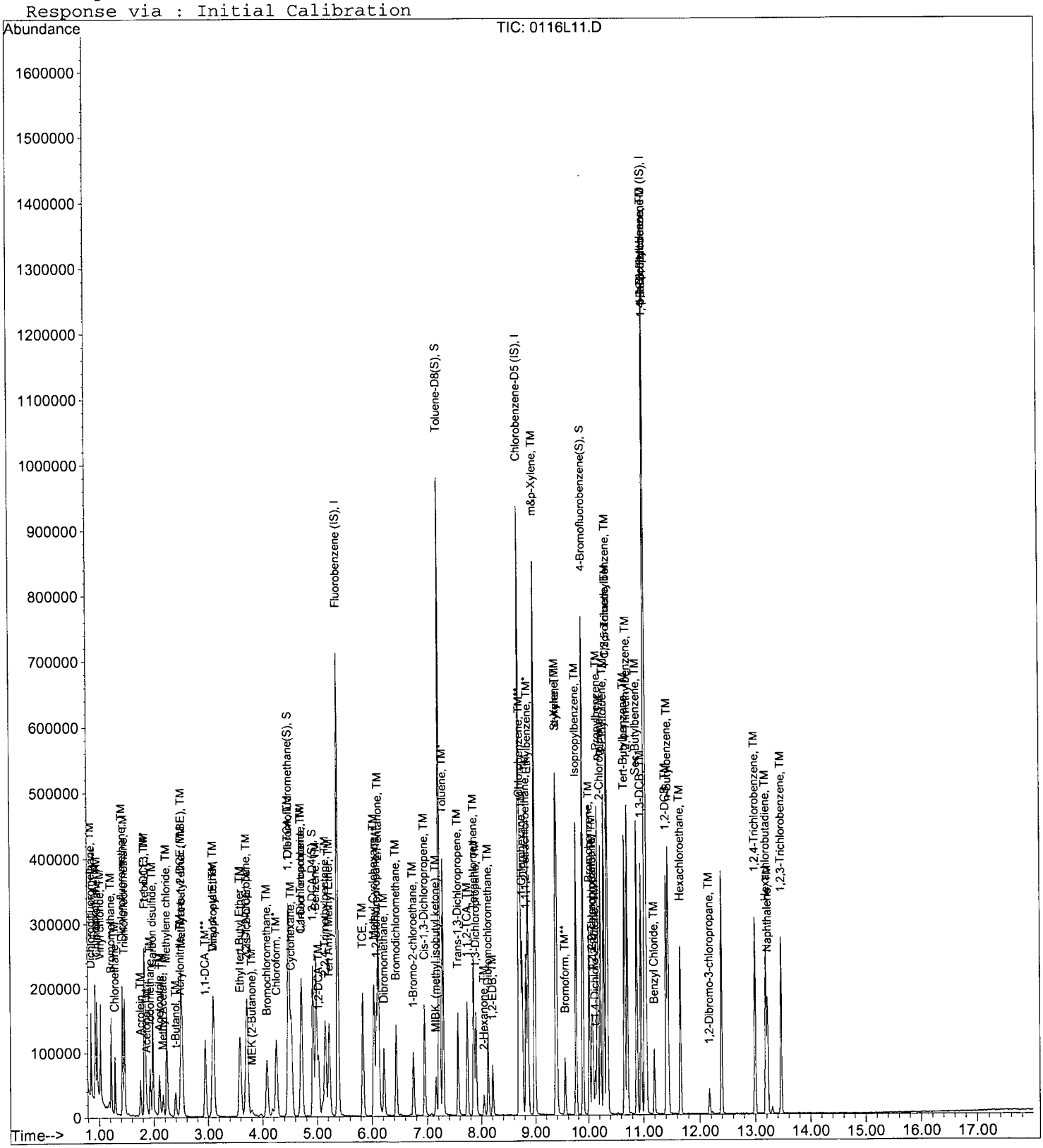
Quantitation Report

Data File : M:\LOKI\DATA\170111\0116L11.D
Acq On : 16 Jan 17 12:57
Sample : AZ48866W234 MSD-1WL 10ug/L
Misc : W IS&S 1/3/17, 01/11/17

Vial: 11
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 17 7:00 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



Matrix Spike Recoveries

EPA 8260B BTEX & 1,2-DCA WATER

APPL ID: **170116W-48872 MS - 215495**
Batch ID: #86BTO-170113AL1
Sample ID: AZ48872
Client ID: ERH169

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
1,2-DICHLOROETHANE	10.00	ND	9.84	9.55	98.4	95.5	73-128	3.0	20
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	NA	24.1	23.5	96.4	94.0	81-118		
SURROGATE: 4-BROMOFLUOROBENZE	25.0	NA	24.7	25.4	98.8	102	85-114		
SURROGATE: DIBROMOFLUOROMETH	25.0	NA	24.5	24.5	98.0	98.0	80-119		
SURROGATE: TOLUENE-D8 (S)	25.0	NA	24.4	24.4	97.6	97.6	89-112		

Comments: _____

Primary	SPK	DUP
Quant Method :	LALLW.M	LALLW.M
Extraction Date :	01/16/17	01/16/17
Analysis Date :	01/16/17	01/16/17
Instrument :	Loki	Loki
Run :	0116L12	0116L13
Initials :	ARO	

Printed: 01/26/17 10:57:13 AM
APPL MSD SCII

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0116L12.D Vial: 12
Acq On : 16 Jan 17 13:25 Operator: PM,DG,SV,CMM
Sample : AZ48872W234 MS-1WL 10ug/L Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 17 7:00 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	335936	25.00000	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	319680	25.00000	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	175744	25.00000	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.48	111	183498	24.47800	ppb		0.00
Spiked Amount 25.000			Recovery = 97.912%				
37) 1,2-DCA-D4(S)	4.93	65	195602	24.05986	ppb		0.00
Spiked Amount 25.000			Recovery = 96.240%				
57) Toluene-D8(S)	7.22	98	624420	24.40178	ppb		0.00
Spiked Amount 25.000			Recovery = 97.608%				
65) 4-Bromofluorobenzene(S)	9.89	95	219593	24.73065	ppb		0.00
Spiked Amount 25.000			Recovery = 98.924%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.85	85	73504	9.46878	ppb		95
3) Freon 114	0.93	85	55410	10.13415	ppb		91
4) Chloromethane	0.96	50	92072	8.19652	ppb		100
5) Vinyl chloride	1.02	62	83413	8.94986	ppb		98
6) Bromomethane	1.22	94	56520	8.90145	ppb		98
7) Chloroethane	1.29	64	47672	8.99114	ppb		97
8) Dichlorofluoromethane	1.42	67	141395	9.80627	ppb		95
9) Trichlorofluoromethane	1.46	101	103989	10.44379	ppb		97
10) Acrolein	1.75	56	34019	104.59965	ppb	#	99
11) Acetone	1.88	43	14434	8.04213	ppb		99
12) Freon-113	1.84	101	59817	10.69995	ppb		91
13) 1,1-DCE	1.83	96	58351	9.92813	ppb		95
14) t-Butanol	2.39	59	20568	115.25343	ppb		100
15) Acetonitrile	2.10	41	65007	92.58778	ppb		95
16) Methyl Acetate	2.17	43	39727	9.10336	ppb		89
17) Iodomethane	1.93	142	43696	12.84644	ppb		97
18) Acrylonitrile	2.47	52	13577	8.59657	ppb		99
19) Methylene chloride	2.24	84	78931	10.77075	ppb		99
20) Carbon disulfide	1.98	76	184882	9.63776	ppb		100
21) Methyl t-butyl ether (MtBE	2.52	73	142472	9.87431	ppb		99
22) Trans-1,2-DCE	2.50	96	64960	10.47409	ppb		91
23) Diisopropyl Ether	3.10	45	193357	9.58563	ppb		97
24) 1,1-DCA	2.95	63	121548	9.73010	ppb		97
25) Vinyl Acetate	3.09	43	43712	9.53608	ppb	#	95
26) Ethyl tert Butyl Ether	3.59	59	148250	9.65481	ppb		97
27) MEK (2-Butanone)	3.80	43	17466	8.14129	ppb	#	70
28) Cis-1,2-DCE	3.72	96	72591	10.25417	ppb		92
29) 2,2-Dichloropropane	3.70	77	32424	10.62414	ppb		99
30) Chloroform	4.25	83	126699	10.32292	ppb		98
31) Bromochloromethane	4.08	128	32237	10.68904	ppb		98
33) 1,1,1-TCA	4.47	97	99559	10.26756	ppb		98
34) Cyclohexane	4.53	41	48058	9.74436	ppb		93
35) 1,1-Dichloropropene	4.72	75	85707	10.13106	ppb		99
36) 2,2,4-Trimethylpentane	5.15	57	175956	10.71296	ppb		93
38) Carbon Tetrachloride	4.70	119	82209	11.32213	ppb		95
39) Tert Amyl Methyl Ether	5.22	73	138069	10.25686	ppb		95
40) 1,2-DCA	5.03	62	85585	9.83716	ppb		99
41) Benzene	4.99	78	259383	10.20769	ppb		99
42) TCE	5.84	95	36408	10.65342	ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0116L12.D
Acq On : 16 Jan 17 13:25
Sample : AZ48872W234 MS-1WL 10ug/L
Misc : W IS&S 1/3/17, 01/11/17

Vial: 12
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 17 7:00 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	2-Pentanone	6.12	43	330536	97.90322	ppb		95
44)	1,2-Dichloropropane	6.09	63	70067	9.37146	ppb		98
45)	Bromodichloromethane	6.44	83	88290	9.79019	ppb		95
46)	Methyl Cyclohexane	6.04	83	87469	10.87356	ppb		91
47)	Dibromomethane	6.22	93	37489	9.91129	ppb		92
49)	MIBK (methyl isobutyl ket	7.15	43	41604	8.15579	ppb		96
50)	1-Bromo-2-chloroethane	6.75	63	47040	9.50686	ppb		99
51)	Cis-1,3-Dichloropropene	6.95	75	97649	10.08107	ppb		95
52)	Toluene	7.29	91	282899	10.74142	ppb		99
53)	Trans-1,3-Dichloropropene	7.56	75	83700	9.98751	ppb		97
54)	1,1,2-TCA	7.74	83	45473	9.63940	ppb		95
55)	2-Hexanone	8.04	43	12839	9.17326	ppb		97
58)	1,2-EDB	8.20	107	49571	9.85957	ppb		99
59)	Tetrachloroethene	7.86	166	69309	10.38326	ppb		99
60)	1-Chlorohexane	8.76	91	78429	10.76197	ppb		96
61)	1,1,1,2-Tetrachloroethane	8.83	131	64271	10.03081	ppb		94
62)	m&p-Xylene	8.99	91	293641	20.88212	ppb		99
63)	o-Xylene	9.38	106	108949	10.66606	ppb		96
64)	Styrene	9.40	104	118776	9.63286	ppb		97
66)	1,3-Dichloropropane	7.90	76	89672	9.29127	ppb		97
67)	Dibromochloromethane	8.12	129	59965	9.79492	ppb		99
68)	Chlorobenzene	8.73	112	181009	10.18515	ppb		97
69)	Ethylbenzene	8.87	91	308748	10.66860	ppb		99
70)	Bromoform	9.55	173	37598	10.20401	ppb		96
72)	Isopropylbenzene	9.76	105	281594	10.53800	ppb		98
73)	1,1,2,2-Tetrachloroethane	10.07	83	64047	9.09378	ppb		98
74)	1,2,3-Trichloropropane	10.09	110	12356	9.61508	ppb		96
75)	t-1,4-Dichloro-2-Butene	10.12	53	14730	8.54874	ppb		81
76)	Bromobenzene	10.01	156	76201	10.17502	ppb		94
77)	n-Propylbenzene	10.17	91	348519	10.59595	ppb		99
78)	4-Ethyltoluene	10.28	105	282075	10.89087	ppb		100
79)	2-Chlorotoluene	10.22	91	209117	10.27469	ppb		95
80)	1,3,5-Trimethylbenzene	10.35	105	247571	10.96946	ppb		97
81)	4-Chlorotoluene	10.34	91	250511	10.63877	ppb		92
82)	Tert-Butylbenzene	10.66	119	202008	10.95945	ppb		96
83)	1,2,4-Trimethylbenzene	10.72	105	242439	10.83687	ppb		99
84)	Sec-Butylbenzene	10.88	105	299966	10.95025	ppb		97
85)	p-Isopropyltoluene	11.04	119	245579	10.76197	ppb		99
86)	Benzyl Chloride	11.19	91	69760	9.43009	ppb		99
87)	1,3-DCB	10.96	146	149869	10.81739	ppb		98
88)	1,4-DCB	11.05	146	148453	10.15136	ppb		98
89)	n-Butylbenzene	11.44	91	223034	10.48189	ppb		99
90)	1,2-DCB	11.41	146	136234	10.35820	ppb		96
91)	Hexachloroethane	11.66	117	47080	9.89611	ppb		95
92)	1,2-Dibromo-3-chloropropan	12.18	157	10073	9.66121	ppb	#	83
93)	1,2,4-Trichlorobenzene	13.00	180	87981	10.55250	ppb		95
94)	Hexachlorobutadiene	13.19	225	45684	10.69352	ppb		93
95)	Naphthalene	13.22	128	86864	9.37553	ppb		95
96)	1,2,3-Trichlorobenzene	13.46	180	54824	10.63169	ppb		99

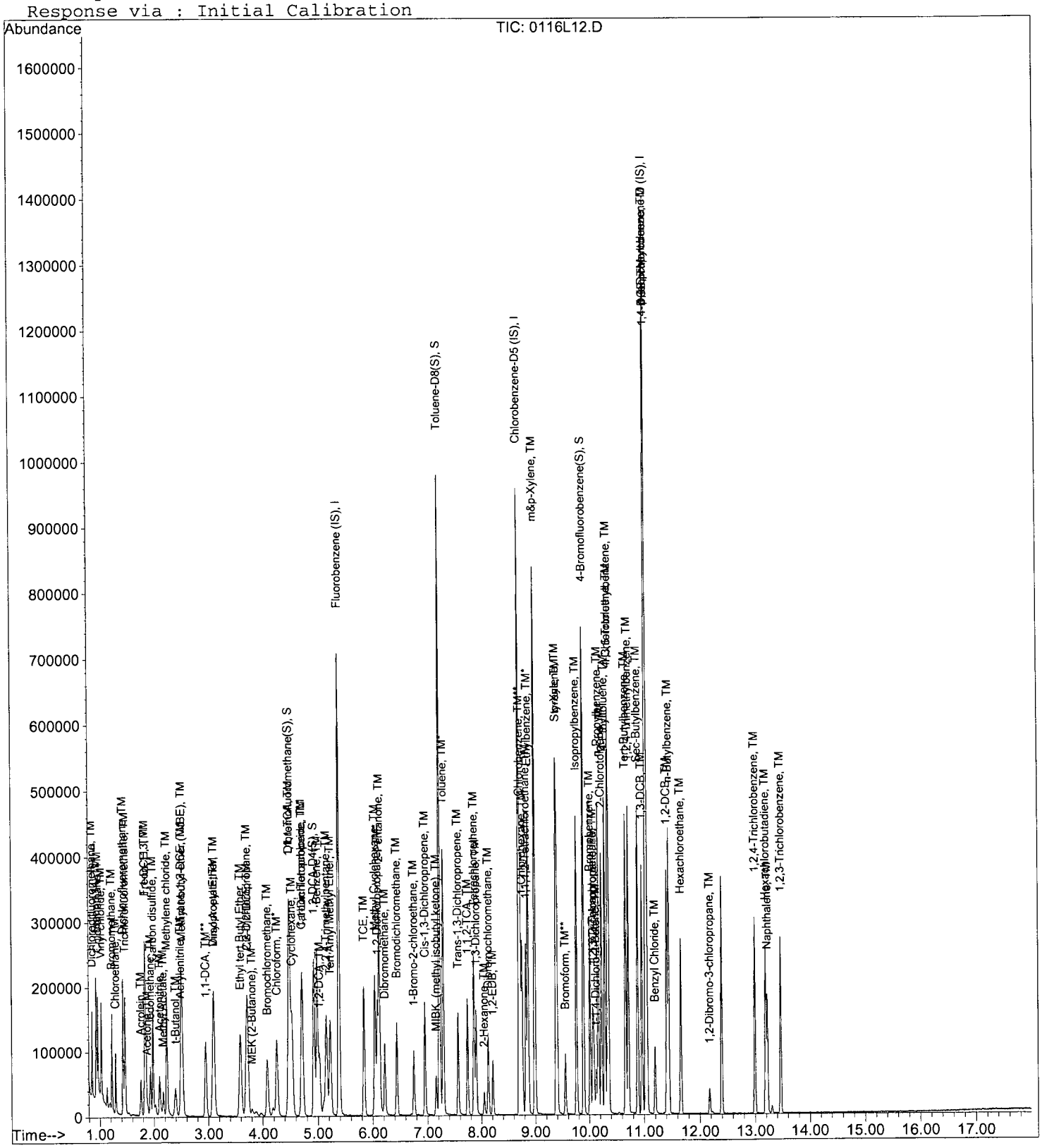
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\170111\0116L12.D Vial: 12
Acq On : 16 Jan 17 13:25 Operator: PM,DG,SV,CMM
Sample : AZ48872W234 MS-1WL 10ug/L Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 17 7:00 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



775

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0116L13.D Vial: 13
Acq On : 16 Jan 17 13:53 Operator: PM,DG,SV,CMM
Sample : AZ48872W234 MSD-1WL 10ug/L Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 17 7:00 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	344512	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	320384	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	180032	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	188446	24.51228 ppb		0.00
Spiked Amount 25.000			Recovery =	98.048%		
37) 1,2-DCA-D4(S)	4.93	65	195917	23.49871 ppb		0.00
Spiked Amount 25.000			Recovery =	93.996%		
57) Toluene-D8(S)	7.22	98	626282	24.42076 ppb		0.00
Spiked Amount 25.000			Recovery =	97.684%		
65) 4-Bromofluorobenzene(S)	9.89	95	225775	25.37100 ppb		0.00
Spiked Amount 25.000			Recovery =	101.484%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	73760	9.26523 ppb		93
3) Freon 114	0.93	85	54845	9.78111 ppb		99
4) Chloromethane	0.96	50	89857	7.80020 ppb		97
5) Vinyl chloride	1.02	62	80872	8.46122 ppb		98
6) Bromomethane	1.22	94	55648	8.54595 ppb		100
7) Chloroethane	1.29	64	45873	8.43647 ppb		98
8) Dichlorofluoromethane	1.42	67	140920	9.53004 ppb		99
9) Trichlorofluoromethane	1.46	101	100832	9.87464 ppb		94
10) Acrolein	1.75	56	34222	102.60447 ppb	#	99
11) Acetone	1.88	43	14067	7.54772 ppb		95
12) Freon-113	1.84	101	57754	10.07376 ppb		85
13) 1,1-DCE	1.83	96	58575	9.71815 ppb		98
14) t-Butanol	2.39	59	20880	114.08919 ppb		99
15) Acetonitrile	2.10	41	66314	92.09816 ppb		97
16) Methyl Acetate	2.17	43	40401	9.02083 ppb	#	81
17) Iodomethane	1.93	142	41712	11.95788 ppb		98
18) Acrylonitrile	2.47	52	13607	8.40110 ppb		94
19) Methylene chloride	2.23	84	80129	10.66203 ppb		97
20) Carbon disulfide	1.98	76	184766	9.39195 ppb		100
21) Methyl t-butyl ether (MtBE	2.52	73	140707	9.50922 ppb		99
22) Trans-1,2-DCE	2.50	96	63224	9.94041 ppb		98
23) Diisopropyl Ether	3.10	45	193639	9.36064 ppb		96
24) 1,1-DCA	2.95	63	119677	9.34184 ppb		97
25) Vinyl Acetate	3.10	43	43144	9.17787 ppb		100
26) Ethyl tert Butyl Ether	3.59	59	155695	9.88726 ppb		99
27) MEK (2-Butanone)	3.80	43	18606	8.47679 ppb	#	75
28) Cis-1,2-DCE	3.72	96	70060	9.65028 ppb		95
29) 2,2-Dichloropropane	3.70	77	31952	10.20887 ppb		97
30) Chloroform	4.25	83	122032	9.69517 ppb		96
31) Bromochloromethane	4.08	128	32483	10.49690 ppb		89
33) 1,1,1-TCA	4.47	97	97275	9.78228 ppb		98
34) Cyclohexane	4.53	41	46829	9.25880 ppb		94
35) 1,1-Dichloropropene	4.72	75	84856	9.78077 ppb		98
36) 2,2,4-Trimethylpentane	5.16	57	173548	10.30332 ppb		92
38) Carbon Tetrachloride	4.70	119	81726	10.97543 ppb		96
39) Tert Amyl Methyl Ether	5.22	73	136480	9.88643 ppb		94
40) 1,2-DCA	5.03	62	85231	9.55260 ppb		98
41) Benzene	4.99	78	253399	9.72396 ppb		99
42) TCE	5.84	95	35984	10.26724 ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0116L13.D
Acq On : 16 Jan 17 13:53
Sample : AZ48872W234 MSD-1WL 10ug/L
Misc : W IS&S 1/3/17, 01/11/17

Vial: 13
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 17 7:00 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

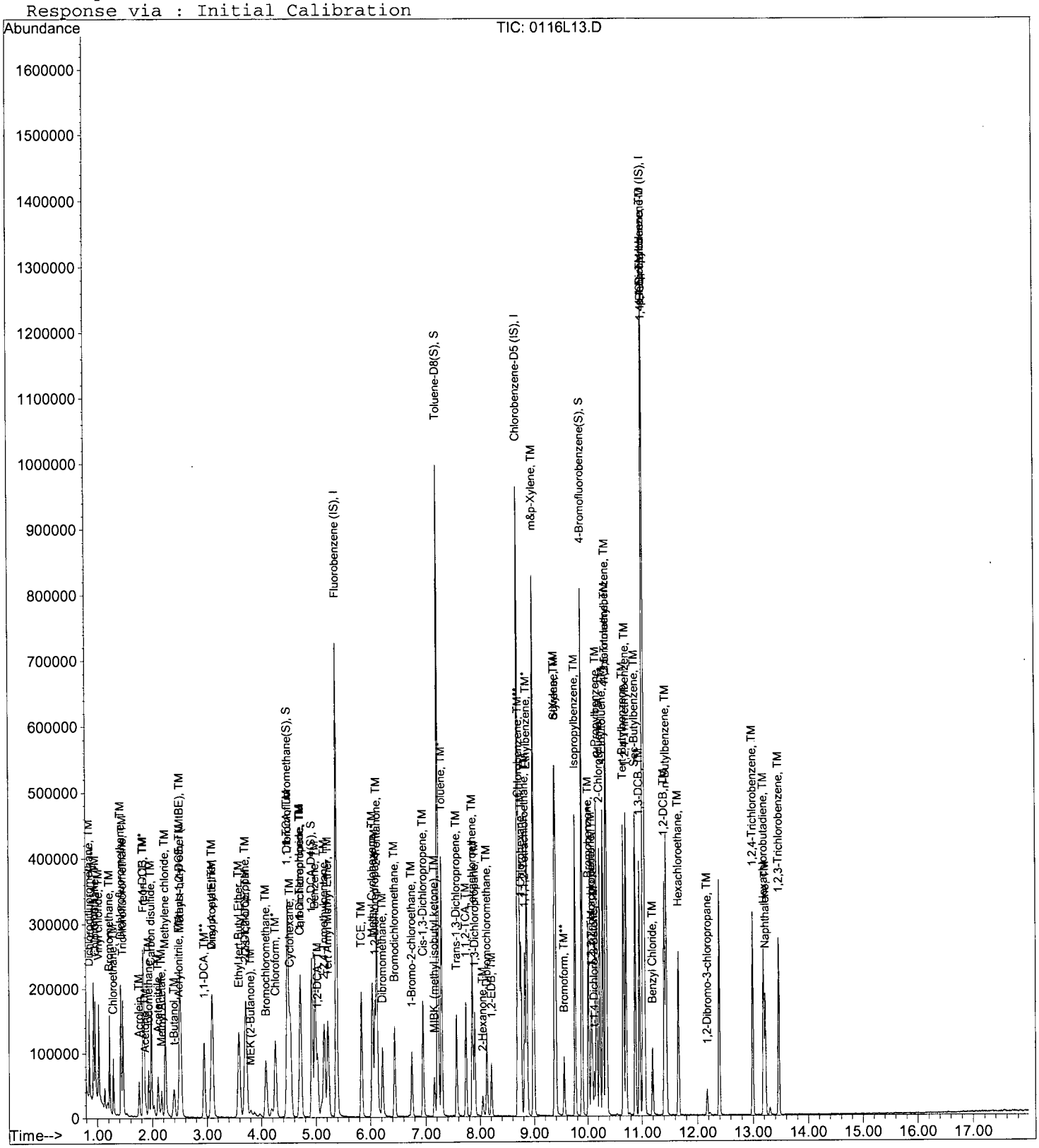
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	2-Pentanone	6.12	43	325579	94.03440	ppb		95
44)	1,2-Dichloropropane	6.09	63	72587	9.46683	ppb		99
45)	Bromodichloromethane	6.44	83	87835	9.49728	ppb		98
46)	Methyl Cyclohexane	6.04	83	88375	10.71271	ppb		87
47)	Dibromomethane	6.22	93	36787	9.48359	ppb		92
49)	MIBK (methyl isobutyl ket	7.16	43	39152	7.37131	ppb	#	96
50)	1-Bromo-2-chloroethane	6.75	63	45200	8.90759	ppb		99
51)	Cis-1,3-Dichloropropene	6.95	75	100253	10.09226	ppb		92
52)	Toluene	7.29	91	272157	10.07632	ppb		99
53)	Trans-1,3-Dichloropropene	7.56	75	82656	9.61742	ppb		99
54)	1,1,2-TCA	7.74	83	45489	9.40275	ppb		96
55)	2-Hexanone	8.04	43	11218	7.81556	ppb	#	96
58)	1,2-EDB	8.21	107	49561	9.83592	ppb		98
59)	Tetrachloroethene	7.86	166	67103	10.03069	ppb		98
60)	1-Chlorohexane	8.76	91	73764	10.09960	ppb		97
61)	1,1,1,2-Tetrachloroethane	8.83	131	64188	9.99584	ppb		93
62)	m&p-Xylene	8.99	91	290048	20.58128	ppb		98
63)	o-Xylene	9.38	106	109043	10.65180	ppb		98
64)	Styrene	9.40	104	122336	9.88970	ppb		99
66)	1,3-Dichloropropane	7.90	76	88242	9.12301	ppb		100
67)	Dibromochloromethane	8.12	129	59534	9.70315	ppb		99
68)	Chlorobenzene	8.73	112	177635	9.97334	ppb		98
69)	Ethylbenzene	8.87	91	304413	10.49569	ppb		100
70)	Bromoform	9.55	173	38054	10.30507	ppb		97
72)	Isopropylbenzene	9.76	105	276754	10.11020	ppb		100
73)	1,1,2,2-Tetrachloroethane	10.07	83	64412	8.92778	ppb		98
74)	1,2,3-Trichloropropane	10.09	110	12897	9.79704	ppb		95
75)	t-1,4-Dichloro-2-Butene	10.12	53	15141	8.57797	ppb		95
76)	Bromobenzene	10.02	156	74428	9.70157	ppb		92
77)	n-Propylbenzene	10.17	91	337729	10.02334	ppb		97
78)	4-Ethyltoluene	10.29	105	279082	10.51866	ppb		100
79)	2-Chlorotoluene	10.22	91	209840	10.06464	ppb		99
80)	1,3,5-Trimethylbenzene	10.36	105	244293	10.56641	ppb		99
81)	4-Chlorotoluene	10.34	91	248258	10.29197	ppb		98
82)	Tert-Butylbenzene	10.67	119	194735	10.31324	ppb		99
83)	1,2,4-Trimethylbenzene	10.72	105	242661	10.58844	ppb		100
84)	Sec-Butylbenzene	10.88	105	292319	10.41694	ppb		97
85)	p-Isopropyltoluene	11.04	119	244369	10.45388	ppb		98
86)	Benzyl Chloride	11.19	91	68335	9.01744	ppb		97
87)	1,3-DCB	10.96	146	147552	10.39649	ppb		97
88)	1,4-DCB	11.05	146	148489	9.91198	ppb		99
89)	n-Butylbenzene	11.44	91	222486	10.20709	ppb		99
90)	1,2-DCB	11.41	146	136148	10.10511	ppb		96
91)	Hexachloroethane	11.66	117	46096	9.45850	ppb		98
92)	1,2-Dibromo-3-chloropropan	12.18	157	10174	9.52566	ppb		98
93)	1,2,4-Trichlorobenzene	13.00	180	86097	10.08057	ppb		95
94)	Hexachlorobutadiene	13.19	225	47020	10.74410	ppb		91
95)	Naphthalene	13.22	128	92200	9.71444	ppb		100
96)	1,2,3-Trichlorobenzene	13.46	180	52256	9.89233	ppb		93

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\170111\0116L13.D Vial: 13
Acq On : 16 Jan 17 13:53 Operator: PM,DG,SV,CMM
Sample : AZ48872W234 MSD-1WL 10ug/L Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 17 7:00 2017 Quant Results File: LALLW.RES

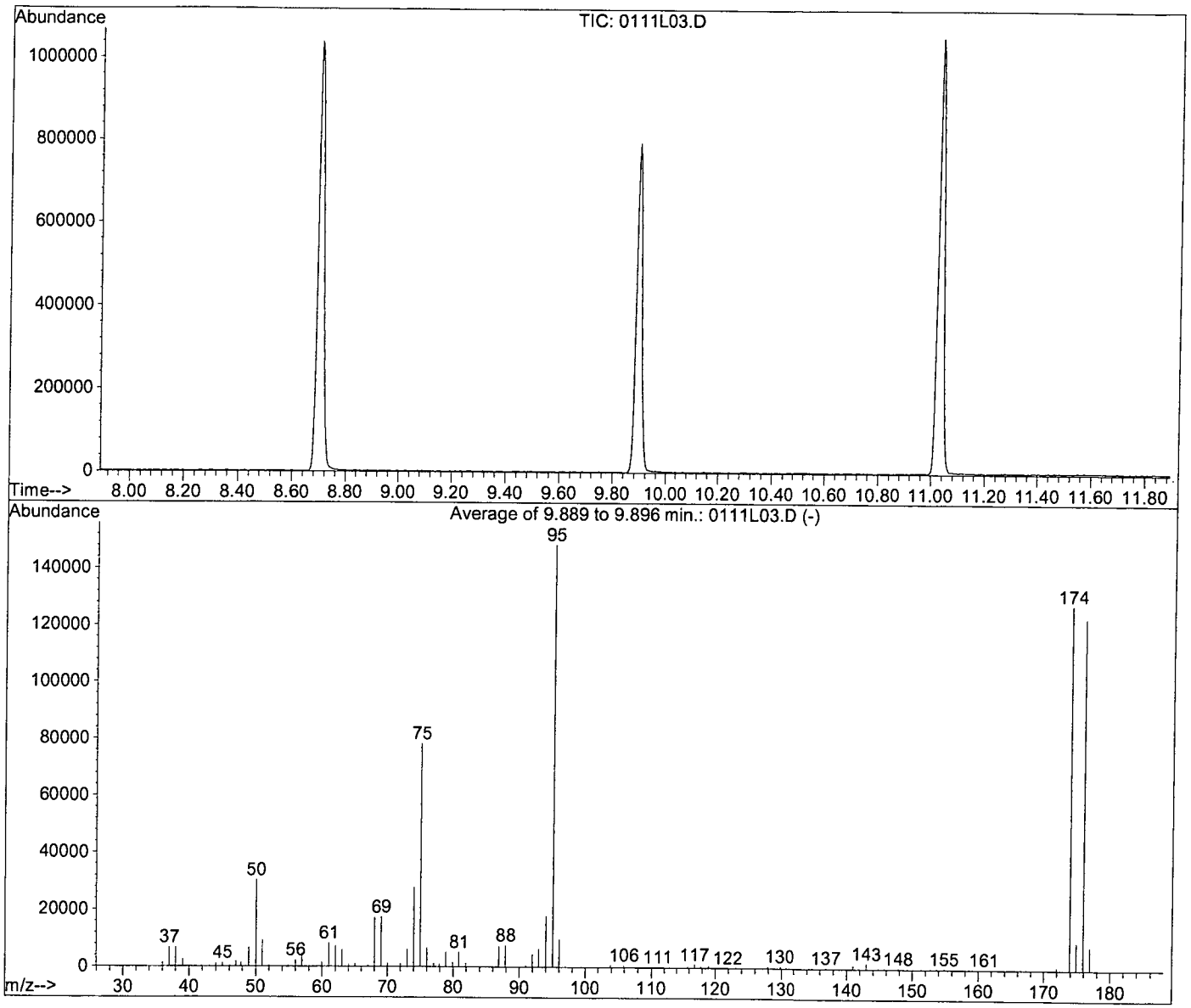
Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



Data File : M:\LOKI\DATA\170111\0111L03.D
Acq On : 11 Jan 17 11:00
Sample : 5ng- BFB STD 12-15-16
Misc : W IS&S 1/3/17, 01/11/17

Vial: 2
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B



AutoFind: Scans 2830, 2831, 2832; Background Corrected with Scan 2817

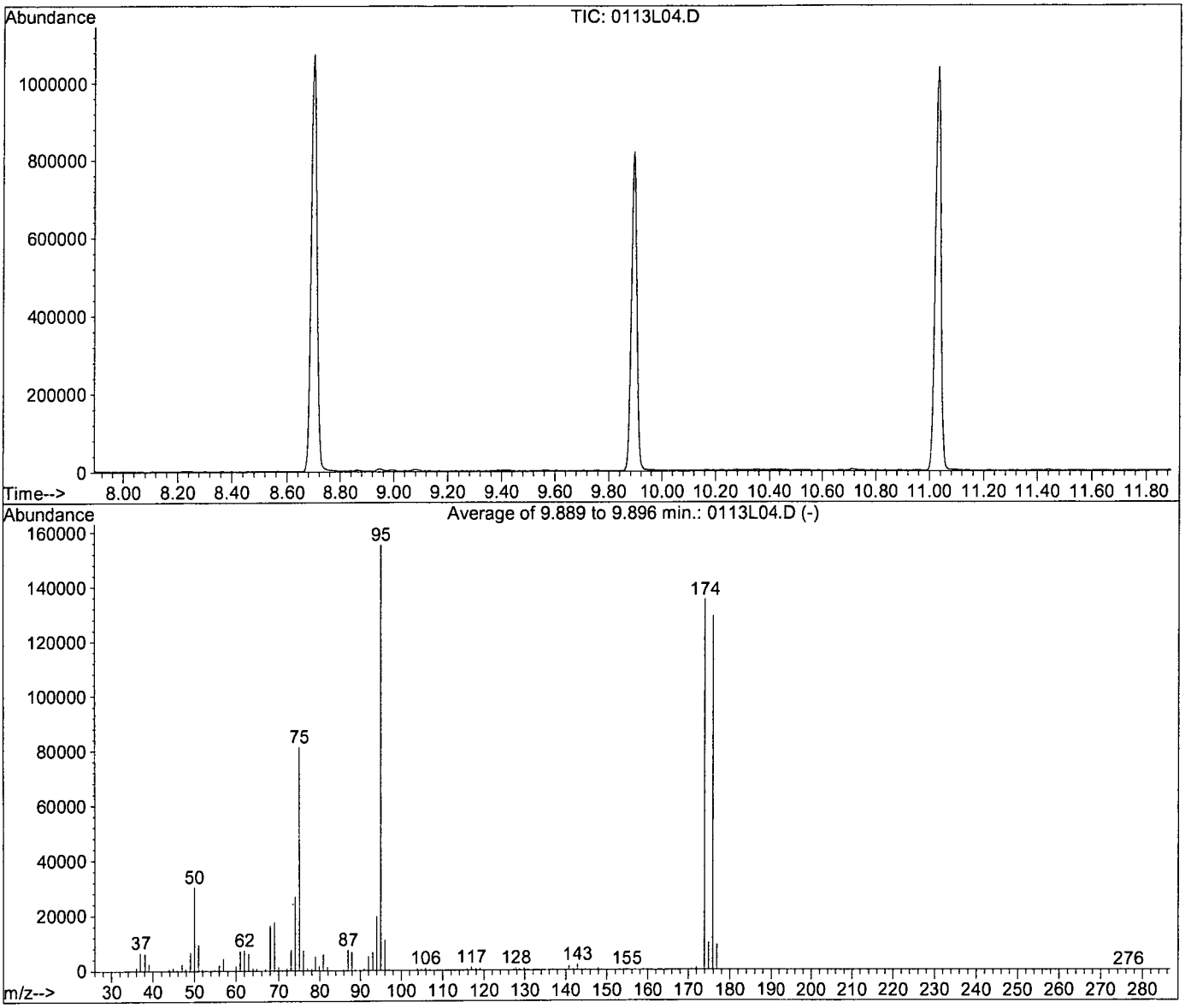
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.5	30349	PASS
75	95	30	60	52.7	78197	PASS
95	95	100	100	100.0	148352	PASS
96	95	5	9	6.6	9747	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	86.1	127757	PASS
175	174	5	9	7.6	9742	PASS
176	174	95	101	96.4	123096	PASS
177	176	5	9	6.7	8227	PASS

0111L03.D LALLW.M Thu Jan 12 08:02:27 2017

Data File : M:\LOKI\DATA\170111\0113L04.D
Acq On : 13 Jan 17 9:30
Sample : 5ng- BFB STD 12-15-16
Misc : W IS&S 1/3/17, 01/11/17

Vial: 1
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B



Spectrum Information: Average of 9.889 to 9.896 min.

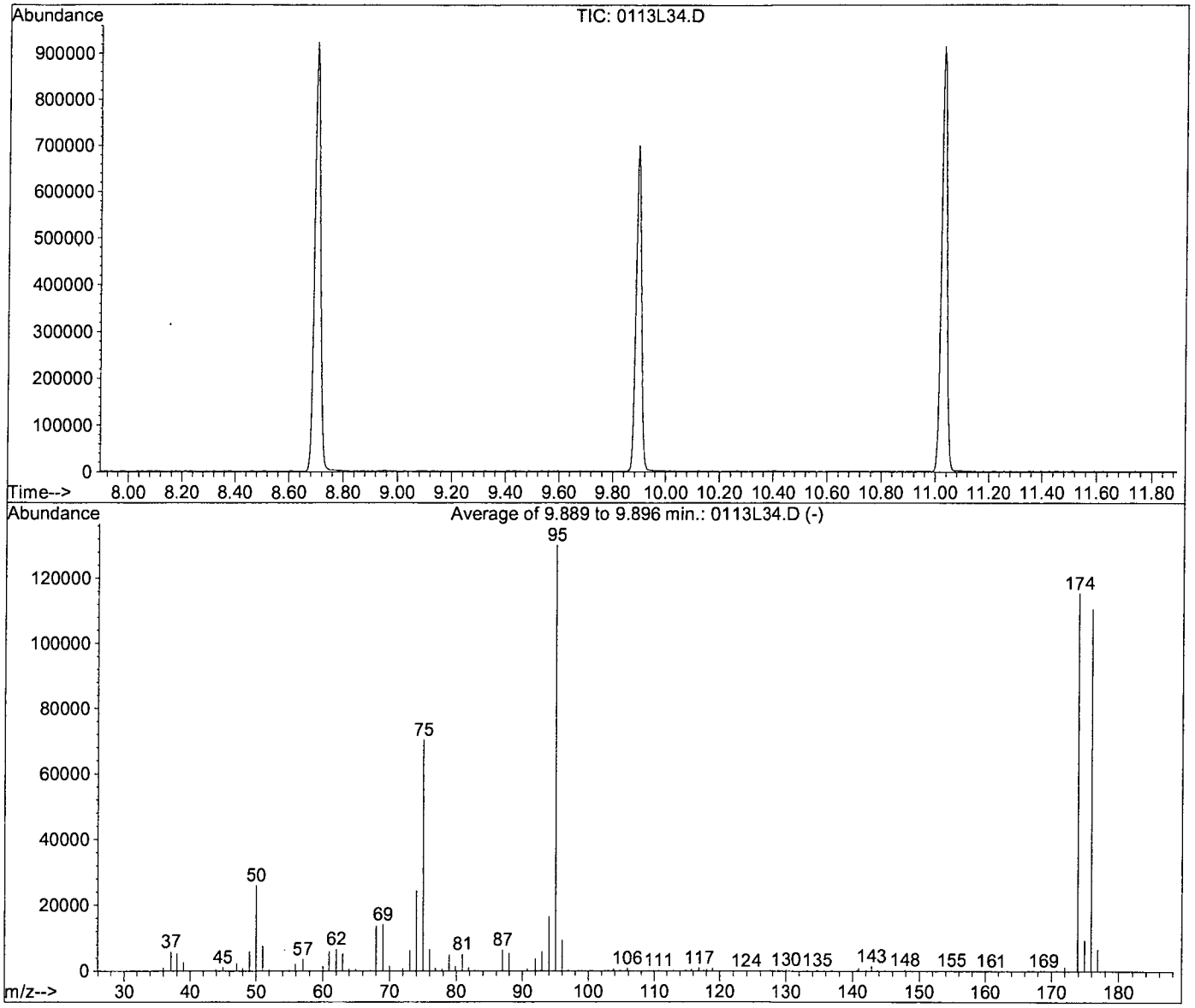
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.5	30293	PASS
75	95	30	60	52.4	81347	PASS
95	95	100	100	100.0	155328	PASS
96	95	5	9	7.0	10874	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	87.0	135093	PASS
175	174	5	9	7.2	9712	PASS
176	174	95	101	95.6	129107	PASS
177	176	5	9	7.1	9113	PASS

0113L04.D LALLW.M Thu Jan 19 09:00:55 2017

Data File : M:\LOKI\DATA\170111\0113L34.D
Acq On : 13 Jan 17 23:30
Sample : 5ng- BFB STD 12-15-16
Misc : W IS&S 1/3/17, 01/11/17

Vial: 31
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B



Spectrum Information: Average of 9.889 to 9.896 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.0	26000	PASS
75	95	30	60	54.1	70485	PASS
95	95	100	100	100.0	130232	PASS
96	95	5	9	7.1	9225	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	88.7	115528	PASS
175	174	5	9	8.1	9406	PASS
176	174	95	101	96.0	110875	PASS
177	176	5	9	6.0	6676	PASS

Volatile Standard Curve Preparation for 10mL Purge (8260 water)-LOKI										
Exp Date:	01/12/17	5µg/mL	5µg/mL	5µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	250µg/mL	
		Vol Std #9	Vol Std #10	Vol Std #12	Vol Std #7	Vol Std #8	Vol Std #1	Vol Std #2	TBA	
		1/10/17L	01/10/17M	01/10/17N	01/10/17H	01/10/17J	01/10/17I	01/10/17K	01/10/17O	Final Vol
	Conc.	02/10/17	02/10/17	02/10/17	02/10/17	02/10/17	02/10/17	02/10/17	02/10/17	w/P&T H2O
Date/code	µg/L	ul	ul	ul	ul	ul	ul	ul	ul	mL
01/11/17J-DG	0.3	3	3	3	n/a	n/a	n/a	n/a	2	50
01/11/17K-DG	0.5	5	5	5	n/a	n/a	n/a	n/a	5	50
01/11/17L-DG	1	10	10	10	n/a	n/a	n/a	n/a	10	50
01/11/17M-DG	2	20	20	20	n/a	n/a	n/a	n/a	15	50
01/11/17N-DG	5	n/a	n/a	n/a	5	5	5	5	20	50
01/11/17O-DG	10	n/a	n/a	n/a	10	10	10	10	25	50
01/11/17P-DG	20	n/a	n/a	n/a	20	20	20	20	30	50
01/11/17Q-DG	40	n/a	n/a	n/a	40	40	40	40	35	50
01/11/17R-DG	100	n/a	n/a	n/a	100	100	100	100	40	50

PRIMARY STANDARD

01/10/17H							
50ug/ml Vol Work Std #7							
Exp:02/10/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120016-03	Gas Mix	2000	279822-36644	01/10/17DG	02/19/19	100
02SI	020049-02	HEXACHLOROETHANE	1000	254167-36564	12/27/16C-CMM	12/28/17	200
02SI	020228-02	Benzyl Chloride	1000	279824-36569	12/27/16E-CMM	05/24/18	200
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	3500
01/10/17I							
50ug/ml Vol Work Std #1							
Exp:02/10/17					Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	020145-02-02	2-CEVE	2000	288264-37217	11/22/16C-CMM	09/19/19	50
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	1950
01/10/17J							
50ug/ml Vol Work Std #8							
Exp:02/10/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	122039-02	Volatile Mix, 20-29	2000	258033-37169	12/16/16C-CMM	08/17/17	100
02SI	120023-03	VOC'S-54 COMP	2000	271929-36581	12/16/16D-CMM	02/15/18	100
02SI	020232-02	Vinyl Acetate	2000	292241-37194	12/16/16E-CMM	02/01/17	100
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	3700
01/10/17K							
50ug/ml Vol Work Std #2							
Exp:02/10/17							
Supplier	ID #	ID	ug/ml				
02SI	121020-05	HSL'S-Ketone Solution	2000	258036-36073	01/10/17BDG	08/17/17	100
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	3900
		01/10/17L					
		5ug/ml Vol Work Std #9					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #7		**01/10/17H**	Exp:02/10/17	200	
		50ug/ml Vol Work Std #8		**01/10/17J**	Exp:02/10/17	200	
		J&T Brand		12/16/16	12/16/17	1600	
		01/10/17M					
		5ug/ml Vol Work Std #10					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #1		**01/10/17I**	Exp:02/10/17	200	
		J&T Brand		12/16/16	12/16/17	1800	
		01/10/17N					
		5ug/ml Vol Work Std #12					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #2		**01/10/17K**	Exp:02/10/17	200	
		J&T Brand		12/16/16	12/16/17	1800	
01/10/17O							
250ug/ml TBA/IBA/Acetonitrile/Cyclohexanone/Acrolein/2-P							
Exp:02/10/17			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
02SI	120166-01	Volatile Mix 4-3	2000	275544-36413	12/16/16F-CMM	03/28/18	500
02SI	020229-09-02	Acrolein	10000	294146-37313	01/10/17FDG	01/14/17	100
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	3400

SECONDARY SOURCE

01/10/17P							
50ug/ml VOC Std#4							
Exp:02/10/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120296-01-SS	Custom 8260 Solution	2000	279826-37381	01/10/17DG	06/01/19	50
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	1950
01/10/17Q							
50ug/ml VOC Std#5							
Exp:02/10/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120016-03-SS	8260 Gases(SS)	2000	279826-36675	12/16/16I-CMM	06/01/19	50
02SI	020145-02-02-SS	2-CEVE (SS)	2000	254171-35380	12/16/16J-CMM	06/21/17	50
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	1900
01/10/17R							

50ug/ml VOC Std#6							
Exp:02/10/17							
	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120023-03-SS	VOC'S 54 COMP.	2000	265897-35927	12/16/16K-CMM	11/29/17	50
02SI	020232-02-SS	Vinyl Acetate(SS)	2000	292243-37196	12/16/16L-CMM	02/01/17	50
02SI	020049-02-SS	HEXACHLOROETHANE (SS)	1000	295337-37383	01/10/17D-DG	12/19/18	100
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	1800
01/10/17S							
250ug/ml TBA/IBA/Acetonitrile/Acrolein/2-P							
Exp:02/10/17			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
02SI	120166-01-SS	VOC Mix 4-3 (SS)	2000	258040-37230	01/10/17EDG	08/22/18	250
02SI	020229-09-SS	Acrolein SOLUTION (SS)	10000	294146-37314	01/10/17GDG	01/14/17	50
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	1700
8260 water		spiked with		Total Vol			
CCV/LCS	10ug/L Vol Std	10uL of 50ug/ml Std #7		50mL P&T H2O			
Ending CCV		10uL of 50ug/ml Std #8					
		10uL of 50ug/ml Std #1					
		10uL of 50ug/ml Std #2					
		25uL of 250ug/ml Std TBA					
X4 ketones							
LCS	10ug/L Vol Std	10uL of 50ug/ml Std #7		50mL P&T H2O			
		10uL of 50ug/ml Std #8					
		10uL of 50ug/ml Std #1					
		40uL of 50ug/ml Std #2					
		25uL of 250ug/ml Std TBA					
8260 soil		spiked with		Total Vol			
CCV/LCS	50ug/Kg Vol Std	5uL of 50ug/ml Std #7		5mL P&T H2O			
Ending CCV		5uL of 50ug/ml Std #8					
		5uL of 50ug/ml Std #1					
		5uL of 50ug/ml Std #2					
		5uL of 250ug/ml Std TBA					
Matrix spikes are prepared with same standards as ccv (see above) into the sample.							
8260water		spiked with		Total Vol			
SS	10ug/L STD	10uL of 50ug/ml Std #4		50mL P&T H2O			
		10uL of 50ug/ml Std #5					
		10uL of 50ug/ml Std #6					
		25uL of 250ug/ml Std TBA					
8260 SOIL	50ug/Kg STD	5uL of 50ug/ml Std #4		Total Vol			
SS		5uL of 50ug/ml Std #5		5mL P&T H2O			
		5uL of 50ug/ml Std #6					
		5uL of 250ug/ml Std TBA					

Injection Log

Directory: M:\LOKI\DATA\170111\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	0111L03.D	1	5ng- BFB STD 12-15-16	W IS&S 1/3/17, 01/11/17	11 Jan 17 11:00
2	4	0111L05.D	1	0.3ug/L VOC STD 1/11/17J	W IS&S 1/3/17, 01/11/17	11 Jan 17 11:56
3	5	0111L06.D	1	0.5ug/L VOC STD 1/11/17K	W IS&S 1/3/17, 01/11/17	11 Jan 17 12:24
4	6	0111L07.D	1	1.0ug/L VOC STD 1/11/17L	W IS&S 1/3/17, 01/11/17	11 Jan 17 12:52
5	7	0111L08.D	1	2.0ug/L VOC STD 1/11/17M	W IS&S 1/3/17, 01/11/17	11 Jan 17 13:20
6	8	0111L09.D	1	5.0ug/L VOC STD 1/11/17N	W IS&S 1/3/17, 01/11/17	11 Jan 17 13:48
7	9	0111L10.D	1	10ug/L VOC STD 1/11/17O	W IS&S 1/3/17, 01/11/17	11 Jan 17 14:16
8	10	0111L11.D	1	20ug/L VOC STD 1/11/17P	W IS&S 1/3/17, 01/11/17	11 Jan 17 14:44
9	11	0111L12.D	1	40ug/L VOC STD 1/11/17Q	W IS&S 1/3/17, 01/11/17	11 Jan 17 15:12
10	12	0111L13.D	1	100ug/L VOC STD 1/11/17R	W IS&S 1/3/17, 01/11/17	11 Jan 17 15:41
11	17	0111L18.D	1	(SS)10ug/L VOC STD 1/11/17	W IS&S 1/3/17, 01/11/17	11 Jan 17 18:01
12	1	0113L04.D	1	5ng- BFB STD 12-15-16	W IS&S 1/3/17, 01/11/17	13 Jan 17 9:30
13	2	0113L05.D	1	170113A CCV/LCS-1WL 10ug/L	W IS&S 1/3/17, 01/11/17	13 Jan 17 9:58
14	9	0113L12.D	1	170113A BLK-1WL	W IS&S 1/3/17, 01/11/17	13 Jan 17 13:14
15	12	0113L15.D	1	AZ48866W01	W IS&S 1/3/17, 01/11/17	13 Jan 17 14:38
16	13	0113L16.D	1	AZ48867W01	W IS&S 1/3/17, 01/11/17	13 Jan 17 15:06
17	14	0113L17.D	1	AZ48868W01	W IS&S 1/3/17, 01/11/17	13 Jan 17 15:34
18	15	0113L18.D	1	AZ48869W01	W IS&S 1/3/17, 01/11/17	13 Jan 17 16:02
19	16	0113L19.D	1	AZ48870W01	W IS&S 1/3/17, 01/11/17	13 Jan 17 16:30
20	17	0113L20.D	1	AZ48871W01	W IS&S 1/3/17, 01/11/17	13 Jan 17 16:58
21	18	0113L21.D	1	AZ48872W01	W IS&S 1/3/17, 01/11/17	13 Jan 17 17:26
22	26	0113L29.D	1	Ending CCV 8260 10ug/L 1/13/17	W IS&S 1/3/17, 01/11/17	13 Jan 17 21:10
23	31	0113L34.D	1	5ng- BFB STD 12-15-16	W IS&S 1/3/17, 01/11/17	13 Jan 17 23:30
24	32	0113L35.D	1	170113B CCV/LCS-1WL 10ug/L	W IS&S 1/3/17, 01/11/17	13 Jan 17 23:58
25	39	0113L42.D	1	170113B BLK-1WL	W IS&S 1/3/17, 01/11/17	14 Jan 17 3:14
26	40	0113L43.D	1	AZ48873W01	W IS&S 1/3/17, 01/11/17	14 Jan 17 3:42
27	41	0113L44.D	1	AZ48874W01	W IS&S 1/3/17, 01/11/17	14 Jan 17 4:10
28	42	0113L45.D	1	AZ48875W01	W IS&S 1/3/17, 01/11/17	14 Jan 17 4:38
29	43	0113L46.D	1	AZ48876W01	W IS&S 1/3/17, 01/11/17	14 Jan 17 5:06
30	44	0113L47.D	1	AZ48877W01	W IS&S 1/3/17, 01/11/17	14 Jan 17 5:34
31	45	0113L48.D	1	AZ48878W01	W IS&S 1/3/17, 01/11/17	14 Jan 17 6:02
32	46	0113L49.D	1	AZ48879W01	W IS&S 1/3/17, 01/11/17	14 Jan 17 6:30
33	47	0113L50.D	1	AZ48880W02	W IS&S 1/3/17, 01/11/17	14 Jan 17 6:58
34	48	0113L51.D	1	AZ48881W01	W IS&S 1/3/17, 01/11/17	14 Jan 17 7:26
35	49	0113L52.D	1	AZ48882W01	W IS&S 1/3/17, 01/11/17	14 Jan 17 7:54
36	50	0113L53.D	1	AZ48884W01	W IS&S 1/3/17, 01/11/17	14 Jan 17 8:22
37	51	0113L54.D	1	AZ48885W01	W IS&S 1/3/17, 01/11/17	14 Jan 17 8:50
38	52	0113L55.D	1	AZ48886W01	W IS&S 1/3/17, 01/11/17	14 Jan 17 9:18
39	57	0113L60.D	1	Ending CCV 8260 10ug/L 1/13/17	W IS&S 1/3/17, 01/11/17	14 Jan 17 11:38
40	10	0116L10.D	1	AZ48866W234 MS-1WL 10ug/L	W IS&S 1/3/17, 01/11/17	16 Jan 17 12:29
41	11	0116L11.D	1	AZ48866W234 MSD-1WL 10ug/L	W IS&S 1/3/17, 01/11/17	16 Jan 17 12:57
42	12	0116L12.D	1	AZ48872W234 MS-1WL 10ug/L	W IS&S 1/3/17, 01/11/17	16 Jan 17 13:25
43	13	0116L13.D	1	AZ48872W234 MSD-1WL 10ug/L	W IS&S 1/3/17, 01/11/17	16 Jan 17 13:53

ORGANICS

APPL, INC.

ORGANICS
QC Summary

APPL, INC.

Method Blank

EPA 8260B GRO WATER

Blank Name/QCG: **170113W-48866 - 215504**

Batch ID: #GRO86-170113AL

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/13/17	01/16/17
BLANK	SURROGATE: 4-BROMOFLUORO	98.5	85-114			%	01/13/17	01/16/17

Quant Method: LGAS6112.M
Run #: 0113L12
Instrument: Loki
Sequence: 170111
Initials: ARO

GC SC-Blank-REG MDLs-DOD
Printed: 01/17/17 8:21:53 AM

Method Blank

EPA 8260B GRO WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **170113W-48873 - 215505**
Batch ID: #GRO86-170113BL

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/14/17	01/14/17
BLANK	SURROGATE: 4-BROMOFLUORO	97.7	85-114			%	01/14/17	01/14/17

Quant Method: LGAS6112.M
Run #: 0113L42
Instrument: Loki
Sequence: 170111
Initials: ARO

GC SC-Blank-REG MDLs-DOD
Printed: 01/17/17 8:21:53 AM

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81965

Case No: 81965 Date Analyzed: 01/16/17

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: 4-BROMOFLUOROBENZENE (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
170113AL-LCS	Lab Control Spike	85-114	99.6				
170113AL-BLK	Blank	85-114	98.5				
AZ48866	ERH161	85-114	98.7				
AZ48867	ERH162	85-114	96.8				
AZ48868	ERH164	85-114	98.7				
AZ48869	ERH163	85-114	95.4				
AZ48870	ERH167	85-114	94.5				
AZ48871	ERH168	85-114	93.6				
AZ48872	ERH169	85-114	97.1				
AZ48872-MS	Matrix Spike	85-114	96.8				
AZ48872-MSD	Matrix SpikeD	85-114	101				
AZ48866-MS	Matrix Spike	85-114	98.0				
AZ48866-MSD	Matrix SpikeD	85-114	96.8				

Comments: Batch: #GRO86-170113AL

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81965

Case No: 81965 Date Analyzed: 01/14/17

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: 4-BROMOFLUOROBENZENE (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
170113BL-LCS	Lab Control Spike	85-114	98.8				
170113BL-BLK	Blank	85-114	97.7				
AZ48873	ERH170	85-114	96.7				
AZ48874	ERH177	85-114	94.8				
AZ48875	ERH174	85-114	101				
AZ48876	ERH175	85-114	97.9				
AZ48877	ERH176	85-114	99.0				
AZ48878	ERH179	85-114	98.1				
AZ48879	ERH197	85-114	97.8				
AZ48880	ERH186	85-114	94.6				
AZ48881	ERH187	85-114	95.5				
AZ48882	ERH194	85-114	96.7				
AZ48884	ERH173	85-114	94.4				
AZ48885	ERH198	85-114	96.6				
AZ48886	ERH196	85-114	94.8				

Comments: Batch: #GRO86-170113BL

Laboratory Control Spike Recovery
EPA 8260B GRO WATER

APPL ID: **170113W-48866 LCS - 215504**
Batch ID: #GRO86-170113AL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
GASOLINE RANGE ORGANICS	300	301	100	78-122
SURROGATE: 4-BROMOFLUOROBENZE	25.0	24.9	99.6	85-114

Comments: _____

Primary	SPK
Quant Method :	LGAS6112.M
Extraction Date :	01/13/17
Analysis Date :	01/16/17
Instrument :	Loki
Run :	0113L08
Initials :	ARO

Printed: 01/17/17 8:22:06 AM
APPL Standard LCS

Laboratory Control Spike Recovery
EPA 8260B GRO WATER

APPL ID: **170114W-48873 LCS - 215505**
Batch ID: #GRO86-170113BL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
GASOLINE RANGE ORGANICS	300	293	97.7	78-122
SURROGATE: 4-BROMOFLUOROBENZE	25.0	24.7	98.8	85-114

Comments: _____

Primary	SPK
Quant Method :	LGAS6112.M
Extraction Date :	01/14/17
Analysis Date :	01/14/17
Instrument :	Loki
Run :	0113L38
Initials :	ARO

Printed: 01/17/17 8:22:06 AM
APPL Standard LCS

Matrix Spike Recoveries
EPA 8260B GRO WATER

APPL ID: **170116W-48866 MS - 215504**
Batch ID: #GRO86-170113AL
Sample ID: AZ48866
Client ID: ERH161

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
GASOLINE RANGE ORGANICS	300	ND	273	274	91.0	91.3	78-122	0.37	20
SURROGATE: 4-BROMOFLUOROBENZE	25.0	NA	24.5	24.2	98.0	96.8	85-114		

Comments: _____

Primary	SPK	DUP
Quant Method :	LGAS6112.M	LGAS6112.M
Extraction Date :	01/16/17	01/16/17
Analysis Date :	01/16/17	01/16/17
Instrument :	Loki	Loki
Run :	0116L16	0116L17
Initials :	ARO	

Printed: 01/17/17 8:22:11 AM
APPL MSD SCII

Matrix Spike Recoveries

EPA 8260B GRO WATER

APPL ID: **170116W-48872 MS - 215504**
Batch ID: #GRO86-170113AL
Sample ID: AZ48872
Client ID: ERH169

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
GASOLINE RANGE ORGANICS	300	ND	299	291	99.7	97.0	78-122	2.7	20
SURROGATE: 4-BROMOFLUOROBENZE	25.0	NA	24.2	25.2	96.8	101	85-114		

Comments: _____

Primary	SPK	DUP
Quant Method :	LGAS6112.M	LGAS6112.M
Extraction Date :	01/16/17	01/16/17
Analysis Date :	01/16/17	01/16/17
Instrument :	Loki	Loki
Run :	0116L14	0116L15
Initials :	ARO	

Printed: 01/17/17 8:22:11 AM
APPL MSD SCII

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc.
Case No: 81965
Matrix: WATER
Blank ID: 170113AL-BLK

SDG No: 81965
Date Analyzed: 01/16/17
Instrument: Loki
Time Analyzed: 1314

APPL ID.	Client Sample No.	File ID.	Date Analyzed
170113AL-LCS	Lab Control Spike	0113L08	01/16/17 1314
170113AL-BLK	Blank	0113L12	01/16/17 1314
AZ48866	ERH161	0113L15	01/13/17 1438
AZ48867	ERH162	0113L16	01/13/17 1506
AZ48868	ERH164	0113L17	01/13/17 1534
AZ48869	ERH163	0113L18	01/13/17 1602
AZ48870	ERH167	0113L19	01/13/17 1630
AZ48871	ERH168	0113L20	01/13/17 1658
AZ48872	ERH169	0113L21	01/13/17 1726
170113AL-MS	Matrix Spike	0116L14	01/16/17 1421
170113AL-MSD	Matrix SpikeD	0116L15	01/16/17 1450
170113AL-MS	Matrix Spike	0116L16	01/16/17 1518
170113AL-MSD	Matrix SpikeD	0116L17	01/16/17 1546

Comments: Batch: #GRO86-170113AL

Printed: 01/17/17 8:22:13 AM
Form 4, Blank Summary

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc.
Case No: 81965
Matrix: WATER
Blank ID: 170113BL-BLK

SDG No: 81965
Date Analyzed: 01/14/17
Instrument: Loki
Time Analyzed: 0314

APPL ID.	Client Sample No.	File ID.	Date Analyzed
170113BL-LCS	Lab Control Spike	0113L38	01/14/17 0122
170113BL-BLK	Blank	0113L42	01/14/17 0314
AZ48873	ERH170	0113L43	01/14/17 0342
AZ48874	ERH177	0113L44	01/14/17 0410
AZ48875	ERH174	0113L45	01/14/17 0438
AZ48876	ERH175	0113L46	01/14/17 0506
AZ48877	ERH176	0113L47	01/14/17 0534
AZ48878	ERH179	0113L48	01/14/17 0602
AZ48879	ERH197	0113L49	01/14/17 0630
AZ48880	ERH186	0113L50	01/14/17 0658
AZ48881	ERH187	0113L51	01/14/17 0726
AZ48882	ERH194	0113L52	01/14/17 0754
AZ48884	ERH173	0113L53	01/14/17 0822
AZ48885	ERH198	0113L54	01/14/17 0850
AZ48886	ERH196	0113L55	01/14/17 0918

Comments: Batch: #GRO86-170113BL

Printed: 01/17/17 8:22:13 AM
Form 4, Blank Summary

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 81965

Lab File ID (Standard): 0111L10.D Date Analyzed: 01/11/17

Instrument ID: Loki Time Analyzed: 14:16

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	363392	5.38	319296	8.70	176960	11.03
	UPPER LIMIT	726784	5.88	638592	9.20	353920	11.53
	LOWER LIMIT	181696	4.88	159648	8.20	88480	10.53
	SAMPLE NO.						
01	170113A CCV/LCS-1WL	368256	5.38	336768	8.70	174016	11.03
02	170113A BLK-1WL	331456	5.38	302080	8.70	154432	11.03
03	AZ48866W01	328768	5.38	304064	8.70	154368	11.03
04	AZ48867W01	327552	5.38	305152	8.70	150592	11.03
05	AZ48868W01	333184	5.38	296768	8.70	153728	11.03
06	AZ48869W01	323840	5.38	300096	8.70	149824	11.03
07	AZ48870W01	320768	5.38	298176	8.70	157696	11.03
08	AZ48871W01	321856	5.38	308864	8.70	151936	11.03
09	AZ48872W01	318592	5.38	288448	8.70	148224	11.03
10	Ending CCV Gas 300ug	328512	5.38	307008	8.70	155328	11.03
11	170113B CCV/LCS-1WL	338560	5.38	319680	8.70	166464	11.03
12	170113B BLK-1WL	326912	5.38	302016	8.70	145664	11.03
13	AZ48873W01	315712	5.38	297792	8.70	147840	11.03
14	AZ48874W01	306816	5.38	291840	8.70	141632	11.03
15	AZ48875W01	312960	5.38	286272	8.70	156864	11.03
16	AZ48876W01	330880	5.38	299712	8.70	150848	11.03
17	AZ48877W01	319616	5.38	294464	8.70	149568	11.03
18	AZ48878W01	319296	5.38	300800	8.70	148992	11.03
19	AZ48879W01	311616	5.38	298496	8.70	148288	11.03
20	AZ48880W02	308416	5.38	285824	8.70	141952	11.03
21	AZ48881W01	301632	5.38	286848	8.70	147392	11.03
22	AZ48882W01	310016	5.38	294976	8.70	142464	11.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 81965

Lab File ID (Standard): 0111L10.D Date Analyzed: 01/11/17

Instrument ID: Loki Time Analyzed: 14:16

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	363392	5.3815	319296	8.7029	176960	11.028
	UPPER LIMIT	726784	5.8815	638592	9.2029	353920	11.528
	LOWER LIMIT	181696	4.8815	159648	8.2029	88480	10.528
	SAMPLE NO.						
23	AZ48884W01	318912	5.38	303552	8.70	149504	11.03
24	AZ48885W01	313856	5.38	292480	8.70	149760	11.03
25	AZ48886W01	300352	5.38	289408	8.70	142720	11.03
26	Ending CCV GAS 300ug	319936	5.38	296064	8.70	154560	11.03
27	AZ48872W456 MS-1WL	339712	5.38	313536	8.70	164160	11.03
28	AZ48872W456 MSD-1W	339456	5.38	311744	8.70	166464	11.03
29	AZ48866W456 MS-1WL	340096	5.38	313408	8.70	165056	11.03
30	AZ48866W456 MSD-1W	327936	5.38	312064	8.70	169344	11.03
31	Ending CCV GAS 300ug	324736	5.38	308480	8.70	164608	11.03
32							
33							
34							
35							
36							
37							
38							
39							
40							
41							
42							
43							
44							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

ORGANICS
Sample Data

APPL, INC.

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH161
Sample Collection Date: 01/09/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48866
QCG: #GRO86-170113AL-215504

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/13/17	01/13/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	98.7	85-114			%	01/13/17	01/13/17

Quant Method: LGAS6112.M
Run #: 0113L15
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/17/17 8:22:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L15.D Vial: 12
Acq On : 13 Jan 17 14:38 Operator: PM,DG,SV,CMM
Sample : AZ48866W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 11:09 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	695598	25.00 ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	941617	25.00 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	951831	25.00 ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0113L15.D LGAS6112.M Tue Jan 17 13:54:59 2017 Page 1

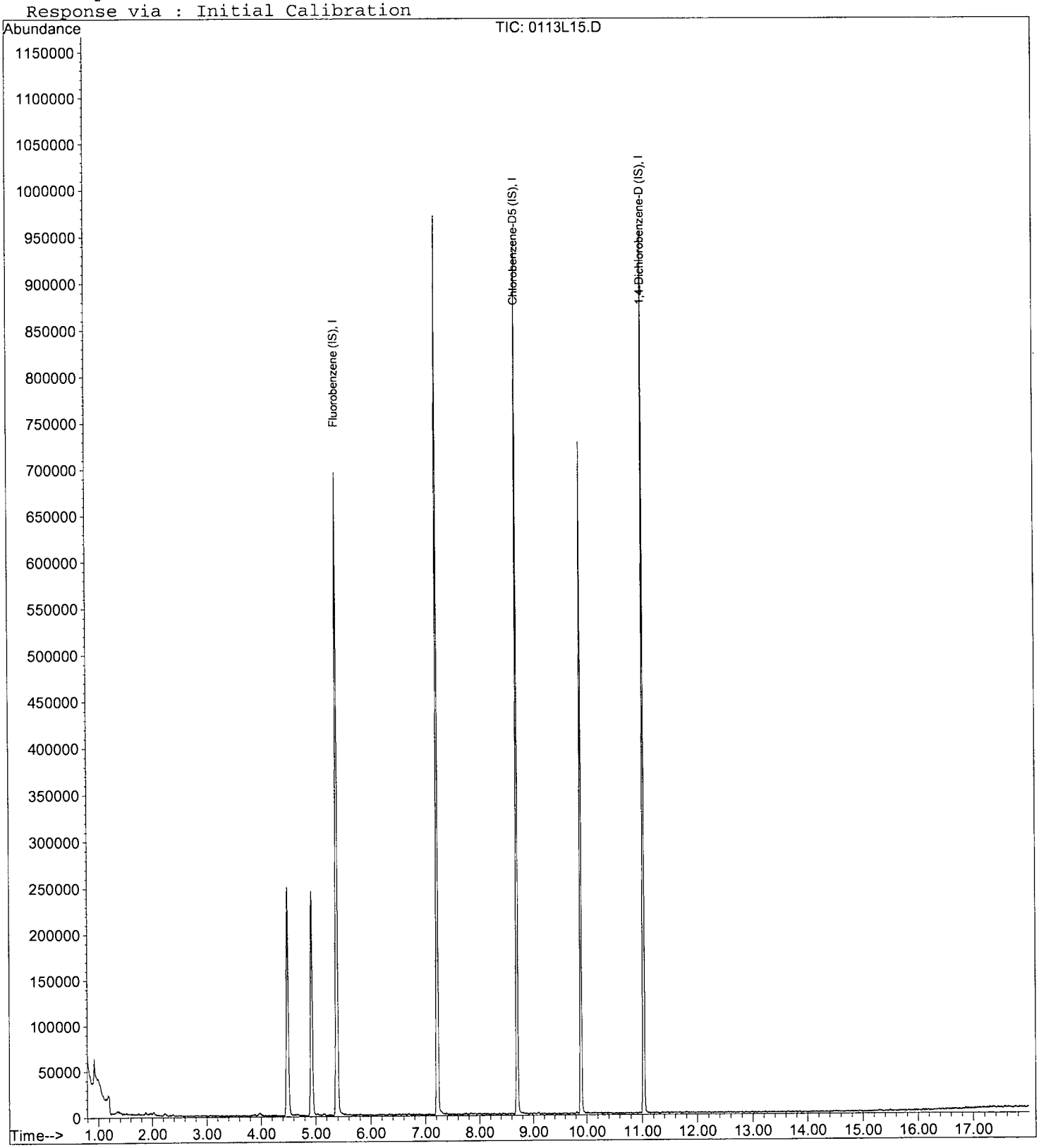
Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L15.D
Acq On : 13 Jan 17 14:38
Sample : AZ48866W01
Misc : W IS&S 1/3/17, 01/11/17

Vial: 12
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 11:09 2017 Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L15.D Vial: 12
Acq On : 13 Jan 17 14:38 Operator: PM,DG,SV,CMM
Sample : AZ48866W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 13:55 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	328768	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	304064	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	154368	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.49	111	187931	25.62	ppb	0.00
Spiked Amount 25.000			Recovery = 102.464%			
3) 1,2-DCA-D4(S)	4.92	65	199225	25.04	ppb	0.00
Spiked Amount 25.000			Recovery = 100.160%			
5) Toluene-D8(S)	7.22	98	611037	25.11	ppb	0.00
Spiked Amount 25.000			Recovery = 100.420%			
6) 4-Bromofluorobenzene(S)	9.89	95	208322	24.67	ppb	0.00
Spiked Amount 25.000			Recovery = 98.664%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH162
Sample Collection Date: 01/09/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48867
QCG: #GRO86-170113AL-215504

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/13/17	01/13/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	96.8	85-114			%	01/13/17	01/13/17

Quant Method: LGAS6112.M
Run #: 0113L16
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/17/17 8:22:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L16.D Vial: 13
Acq On : 13 Jan 17 15:06 Operator: PM,DG,SV,CMM
Sample : AZ48867W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 11:11 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	702084	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	927059	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	933943	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0113L16.D LGAS6112.M Tue Jan 17 13:55:01 2017 Page 1

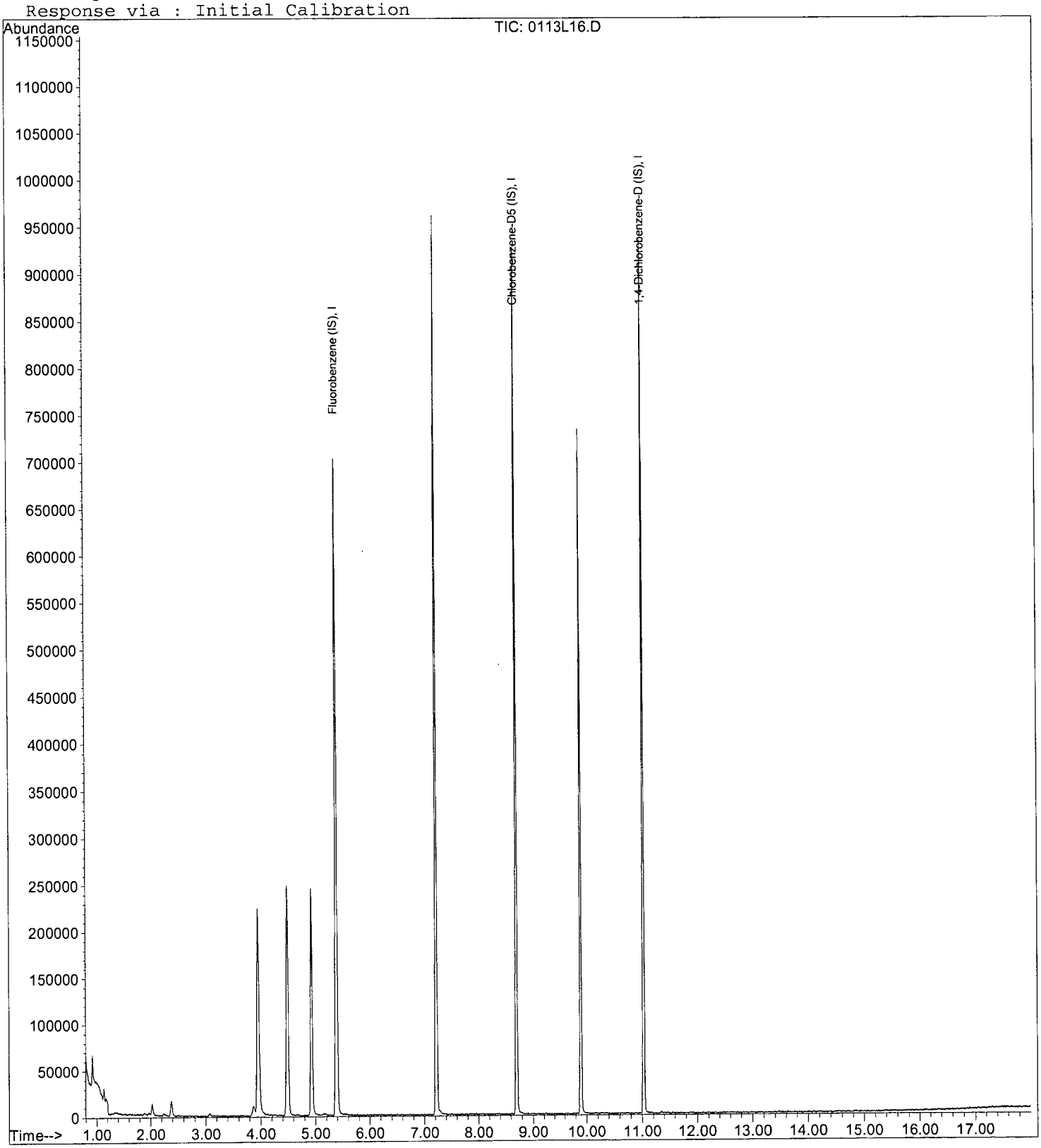
Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L16.D
Acq On : 13 Jan 17 15:06
Sample : AZ48867W01
Misc : W IS&S 1/3/17, 01/11/17

Vial: 13
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 11:11 2017 Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L16.D Vial: 13
Acq On : 13 Jan 17 15:06 Operator: PM,DG,SV,CMM
Sample : AZ48867W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 13:55 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	327552	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	305152	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	150592	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	182044	24.91	ppb	0.00
Spiked Amount 25.000			Recovery = 99.624%			
3) 1,2-DCA-D4(S)	4.92	65	198543	25.05	ppb	0.00
Spiked Amount 25.000			Recovery = 100.188%			
5) Toluene-D8(S)	7.22	98	603395	24.70	ppb	0.00
Spiked Amount 25.000			Recovery = 98.812%			
6) 4-Bromofluorobenzene(S)	9.89	95	205061	24.19	ppb	0.00
Spiked Amount 25.000			Recovery = 96.776%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH164
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48868
QCG: #GRO86-170113AL-215504

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/13/17	01/13/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	98.7	85-114			%	01/13/17	01/13/17

Quant Method: LGAS6112.M
Run #: 0113L17
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/17/17 8:22:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L17.D Vial: 14
Acq On : 13 Jan 17 15:34 Operator: PM,DG,SV,CMM
Sample : AZ48868W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 11:11 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	706812	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	903582	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	945508	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0113L17.D LGAS6112.M Tue Jan 17 13:55:03 2017 Page 1

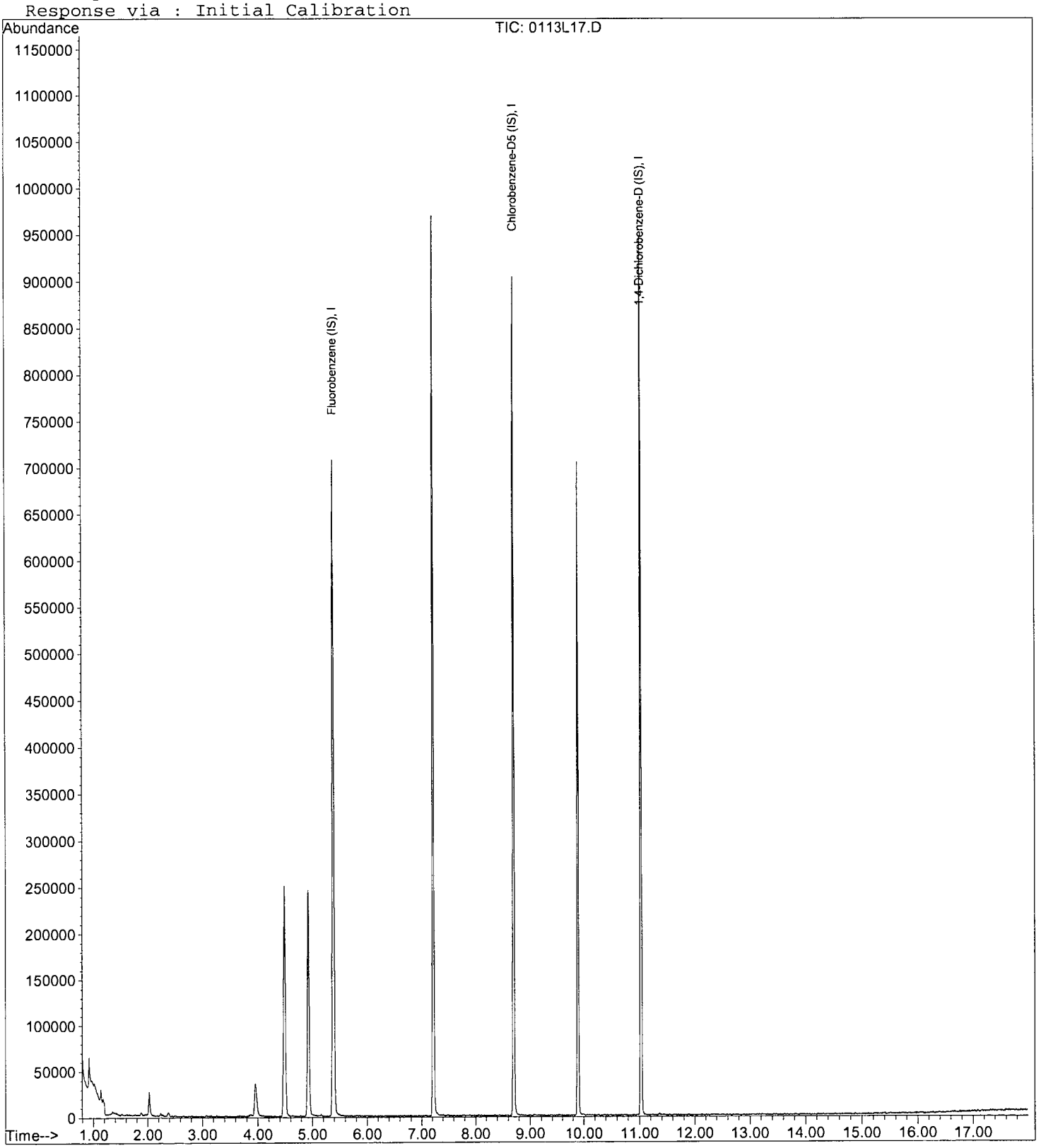
Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L17.D
Acq On : 13 Jan 17 15:34
Sample : AZ48868W01
Misc : W IS&S 1/3/17, 01/11/17

Vial: 14
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 11:11 2017 Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L17.D Vial: 14
Acq On : 13 Jan 17 15:34 Operator: PM,DG,SV,CMM
Sample : AZ48868W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 13:55 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	333184	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	296768	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	153728	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	181284	24.38	ppb	0.00
Spiked Amount 25.000			Recovery = 97.528%			
3) 1,2-DCA-D4(S)	4.92	65	193743	24.03	ppb	0.00
Spiked Amount 25.000			Recovery = 96.112%			
5) Toluene-D8(S)	7.22	98	597865	25.17	ppb	0.00
Spiked Amount 25.000			Recovery = 100.672%			
6) 4-Bromofluorobenzene(S)	9.89	95	203427	24.68	ppb	0.00
Spiked Amount 25.000			Recovery = 98.716%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH163
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48869
QCG: #GRO86-170113AL-215504

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/13/17	01/13/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	95.4	85-114			%	01/13/17	01/13/17

Quant Method: LGAS6112.M
Run #: 0113L18
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/17/17 8:22:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L18.D Vial: 15
Acq On : 13 Jan 17 16:02 Operator: PM,DG,SV,CMM
Sample : AZ48869W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 11:11 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	686616	25.00 ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	915885	25.00 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	921738	25.00 ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

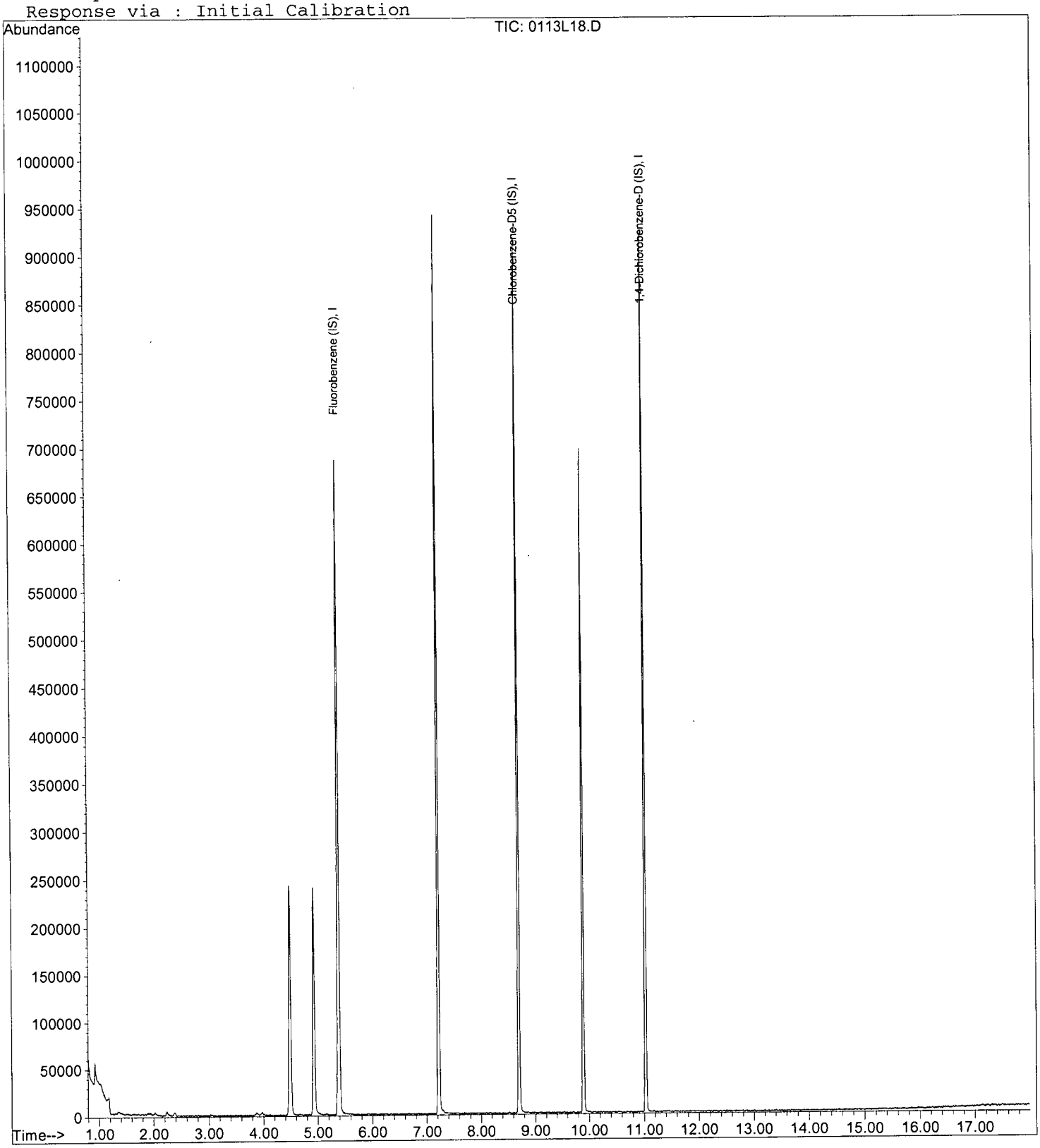
Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L18.D
Acq On : 13 Jan 17 16:02
Sample : AZ48869W01
Misc : W IS&S 1/3/17, 01/11/17

Vial: 15
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 11:11 2017 Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L18.D Vial: 15
Acq On : 13 Jan 17 16:02 Operator: PM,DG,SV,CMM
Sample : AZ48869W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 13:55 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	323840	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	300096	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	149824	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.49	111	178248	24.67	ppb	0.00
Spiked Amount 25.000			Recovery = 98.664%			
3) 1,2-DCA-D4(S)	4.92	65	189736	24.21	ppb	0.00
Spiked Amount 25.000			Recovery = 96.840%			
5) Toluene-D8(S)	7.22	98	589328	24.53	ppb	0.00
Spiked Amount 25.000			Recovery = 98.132%			
6) 4-Bromofluorobenzene(S)	9.89	95	198870	23.86	ppb	0.00
Spiked Amount 25.000			Recovery = 95.432%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH167
Sample Collection Date: 01/09/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48870
QCG: #GRO86-170113AL-215504

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/13/17	01/13/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	94.5	85-114			%	01/13/17	01/13/17

Quant Method: LGAS6112.M
Run #: 0113L19
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/17/17 8:22:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L19.D Vial: 16
Acq On : 13 Jan 17 16:30 Operator: PM,DG,SV,CMM
Sample : AZ48870W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 11:12 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	682050	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	896721	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	954180	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

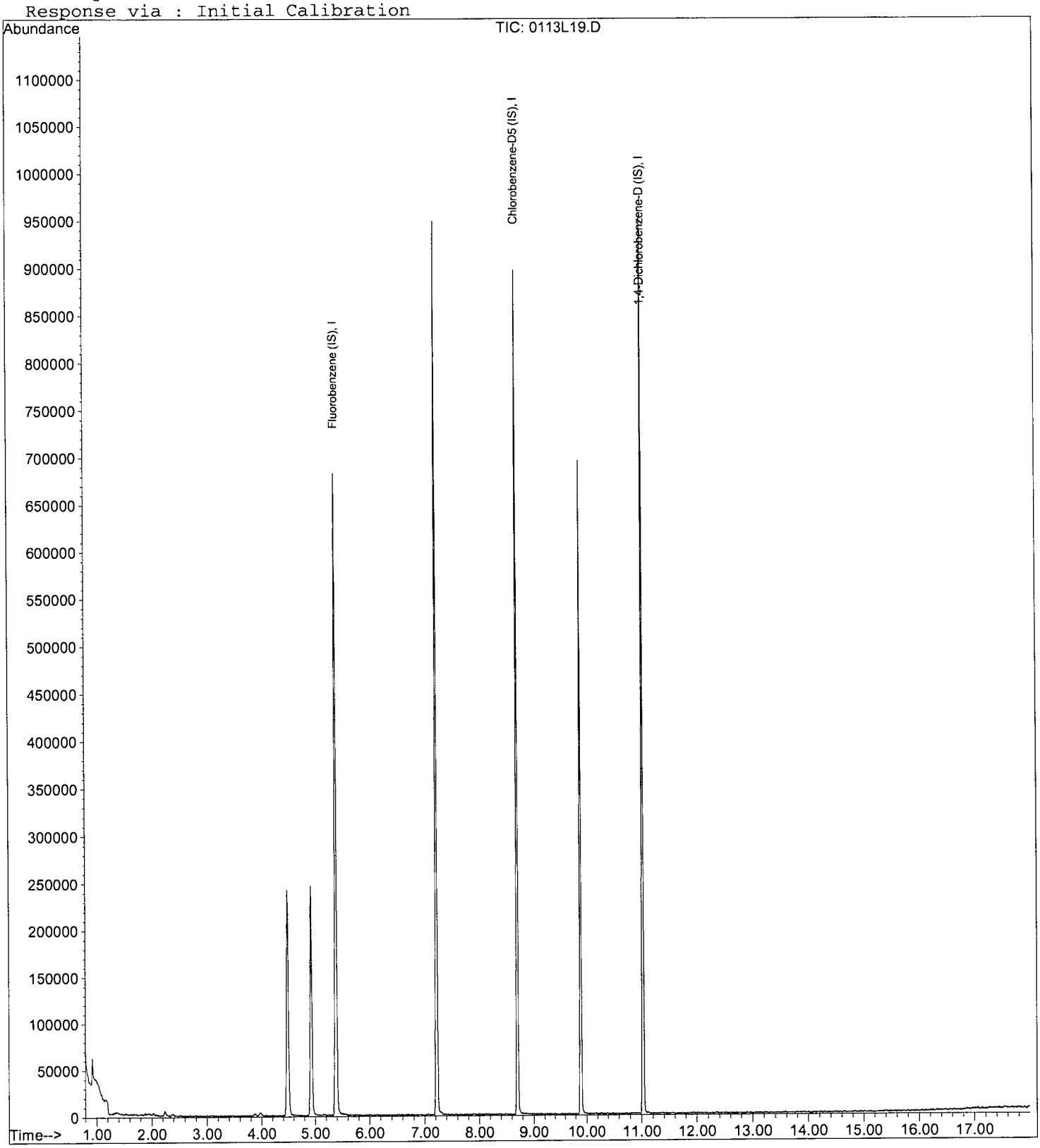
Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L19.D
Acq On : 13 Jan 17 16:30
Sample : AZ48870W01
Misc : W IS&S 1/3/17, 01/11/17

Vial: 16
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 11:12 2017 Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L19.D Vial: 16
Acq On : 13 Jan 17 16:30 Operator: PM,DG,SV,CMM
Sample : AZ48870W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 13:55 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	320768	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	298176	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	157696	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.49	111	182194	25.45	ppb	0.00
Spiked Amount 25.000			Recovery = 101.812%			
3) 1,2-DCA-D4(S)	4.93	65	191912	24.72	ppb	0.00
Spiked Amount 25.000			Recovery = 98.888%			
5) Toluene-D8(S)	7.22	98	592763	24.84	ppb	0.00
Spiked Amount 25.000			Recovery = 99.340%			
6) 4-Bromofluorobenzene(S)	9.89	95	195601	23.62	ppb	0.00
Spiked Amount 25.000			Recovery = 94.468%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH168
Sample Collection Date: 01/09/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48871
QCG: #GRO86-170113AL-215504

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/13/17	01/13/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	93.6	85-114			%	01/13/17	01/13/17

Quant Method: LGAS6112.M
Run #: 0113L20
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/17/17 8:22:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L20.D Vial: 17
Acq On : 13 Jan 17 16:58 Operator: PM,DG,SV,CMM
Sample : AZ48871W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 11:12 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	689381	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	937429	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	931579	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

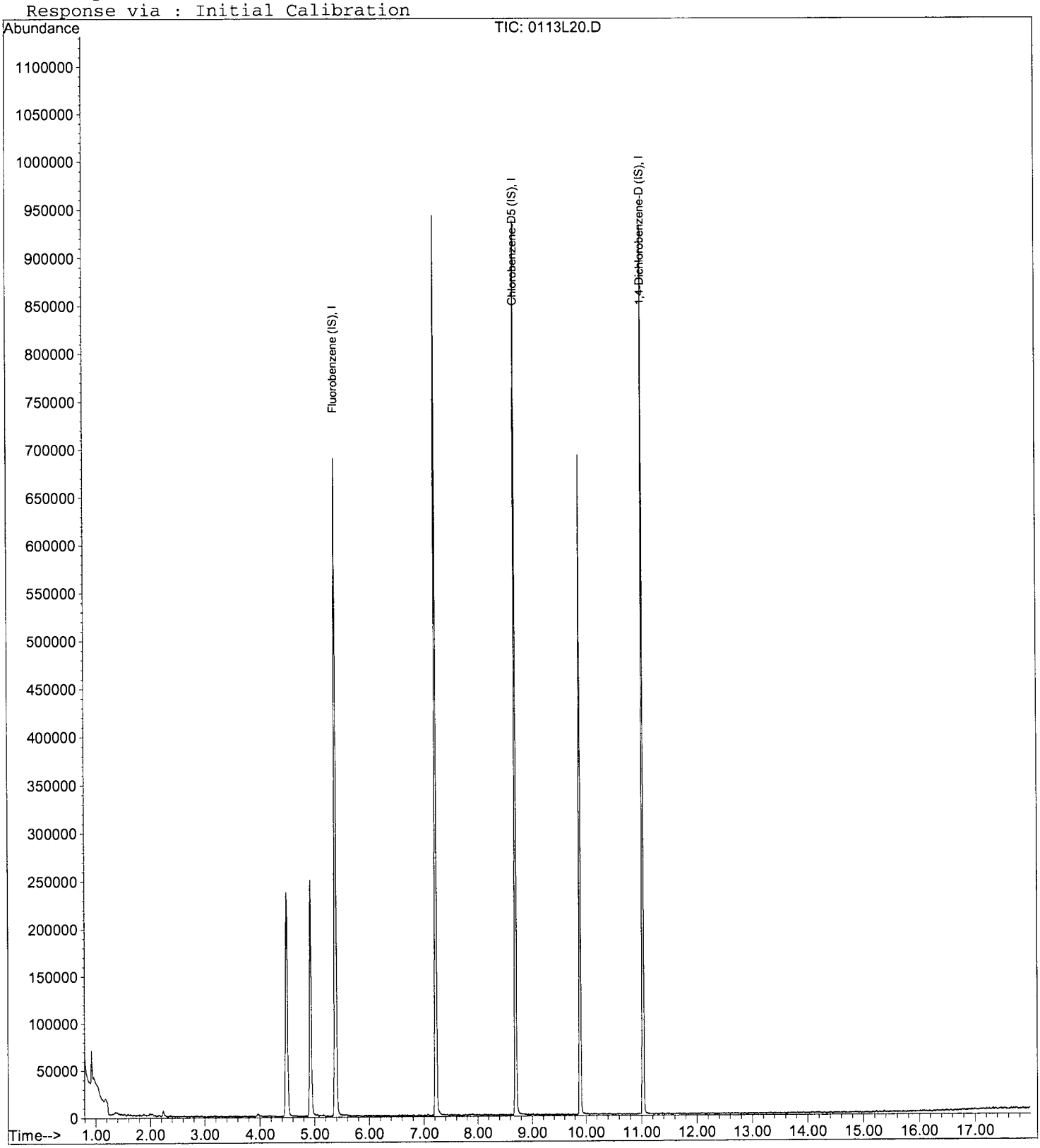
Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L20.D
Acq On : 13 Jan 17 16:58
Sample : AZ48871W01
Misc : W IS&S 1/3/17, 01/11/17

Vial: 17
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 11:12 2017 Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L20.D Vial: 17
Acq On : 13 Jan 17 16:58 Operator: PM,DG,SV,CMM
Sample : AZ48871W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 13:55 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	321856	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	308864	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	151936	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	176755	24.61	ppb	0.00
Spiked Amount 25.000			Recovery =	98.440%		
3) 1,2-DCA-D4(S)	4.92	65	193493	24.84	ppb	0.00
Spiked Amount 25.000			Recovery =	99.368%		
5) Toluene-D8(S)	7.22	98	590668	23.89	ppb	0.00
Spiked Amount 25.000			Recovery =	95.564%		
6) 4-Bromofluorobenzene(S)	9.89	95	200817	23.41	ppb	0.00
Spiked Amount 25.000			Recovery =	93.632%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH169
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48872
QCG: #GRO86-170113AL-215504

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/13/17	01/13/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	97.1	85-114			%	01/13/17	01/13/17

Quant Method: LGAS6112.M
Run #: 0113L21
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/17/17 8:22:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L21.D Vial: 18
Acq On : 13 Jan 17 17:26 Operator: PM,DG,SV,CMM
Sample : AZ48872W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 11:12 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	677934	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	888988	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	924956	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

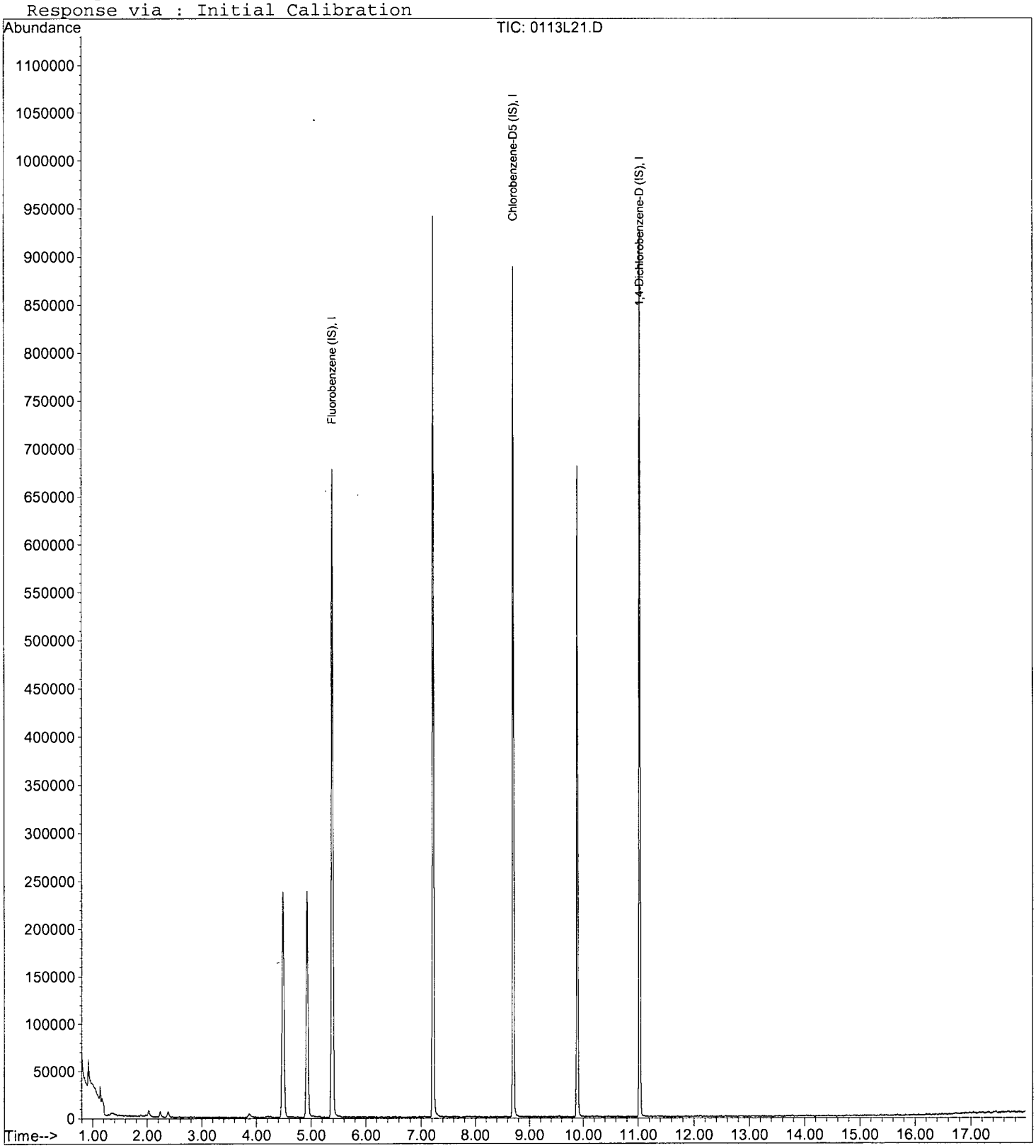
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L21.D Vial: 18
Acq On : 13 Jan 17 17:26 Operator: PM,DG,SV,CMM
Sample : AZ48872W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 11:12 2017 Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L21.D Vial: 18
Acq On : 13 Jan 17 17:26 Operator: PM,DG,SV,CMM
Sample : AZ48872W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 13:55 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	318592	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	288448	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	148224	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	178999	25.18	ppb	0.00
Spiked Amount 25.000			Recovery =	100.712%		
3) 1,2-DCA-D4(S)	4.92	65	189471	24.57	ppb	0.00
Spiked Amount 25.000			Recovery =	98.296%		
5) Toluene-D8(S)	7.22	98	581065	25.17	ppb	0.00
Spiked Amount 25.000			Recovery =	100.664%		
6) 4-Bromofluorobenzene(S)	9.89	95	194525	24.28	ppb	0.00
Spiked Amount 25.000			Recovery =	97.120%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH170
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48873
QCG: #GRO86-170113BL-215505

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	96.7	85-114			%	01/14/17	01/14/17

Quant Method: LGAS6112.M
Run #: 0113L43
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/17/17 8:22:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L43.D Vial: 40
Acq On : 14 Jan 17 3:42 Operator: PM,DG,SV,CMM
Sample : AZ48873W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 11:15 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	662139	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	895196	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	892079	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

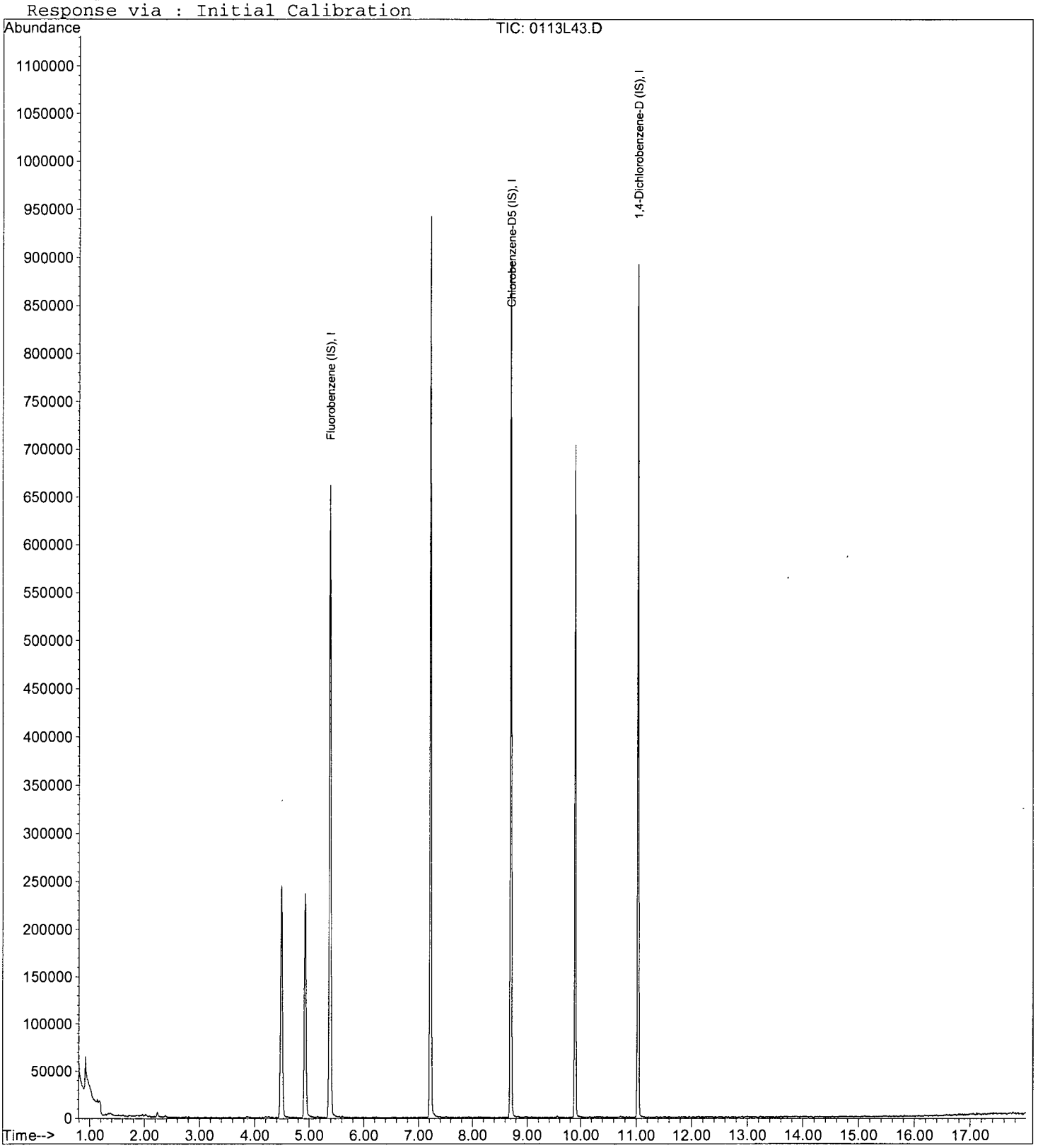
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L43.D Vial: 40
Acq On : 14 Jan 17 3:42 Operator: PM,DG,SV,CMM
Sample : AZ48873W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 11:15 2017 Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L43.D Vial: 40
Acq On : 14 Jan 17 3:42 Operator: PM,DG,SV,CMM
Sample : AZ48873W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 13:55 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	315712	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	297792	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	147840	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	178684	25.36	ppb	0.00
Spiked Amount 25.000			Recovery = 101.452%			
3) 1,2-DCA-D4(S)	4.92	65	186597	24.42	ppb	0.00
Spiked Amount 25.000			Recovery = 97.688%			
5) Toluene-D8(S)	7.22	98	589483	24.73	ppb	0.00
Spiked Amount 25.000			Recovery = 98.920%			
6) 4-Bromofluorobenzene(S)	9.89	95	199963	24.18	ppb	0.00
Spiked Amount 25.000			Recovery = 96.700%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH177
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48874
QCG: #GRO86-170113BL-215505

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	94.8	85-114			%	01/14/17	01/14/17

Quant Method: LGAS6112.M
Run #: 0113L44
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/17/17 8:22:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L44.D Vial: 41
Acq On : 14 Jan 17 4:10 Operator: PM,DG,SV,CMM
Sample : AZ48874W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 11:15 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	645994	25.00 ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	879422	25.00 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	868579	25.00 ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0113L44.D LGAS6112.M Tue Jan 17 13:55:29 2017 Page 1

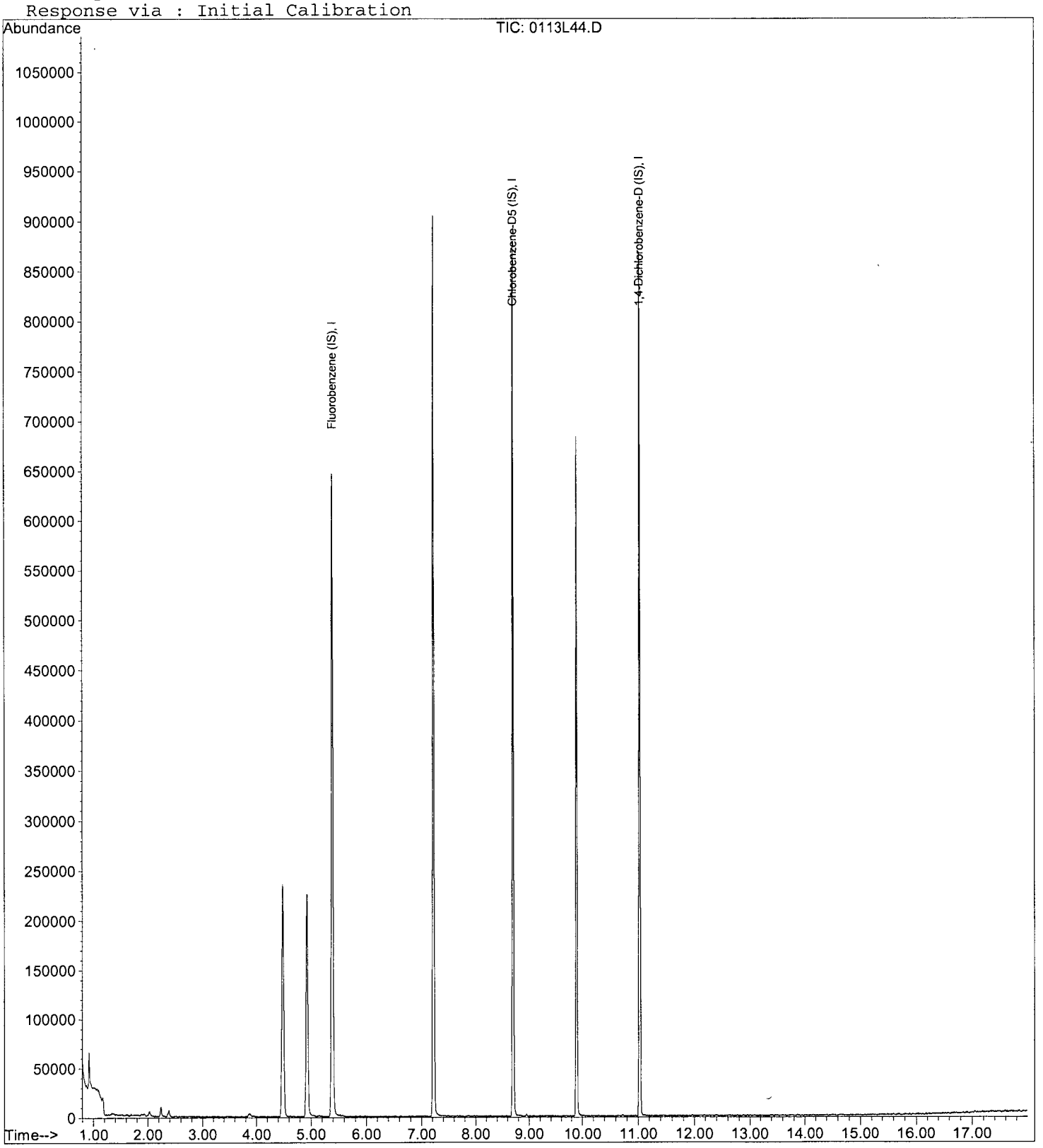
Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L44.D
Acq On : 14 Jan 17 4:10
Sample : AZ48874W01
Misc : W IS&S 1/3/17, 01/11/17

Vial: 41
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 11:15 2017 Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L44.D Vial: 41
Acq On : 14 Jan 17 4:10 Operator: PM,DG,SV,CMM
Sample : AZ48874W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 13:55 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	306816	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	291840	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	141632	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	173124	25.29	ppb	0.00
Spiked Amount 25.000			Recovery =	101.144%		
3) 1,2-DCA-D4(S)	4.92	65	177544	23.91	ppb	0.00
Spiked Amount 25.000			Recovery =	95.644%		
5) Toluene-D8(S)	7.22	98	566254	24.24	ppb	0.00
Spiked Amount 25.000			Recovery =	96.960%		
6) 4-Bromofluorobenzene(S)	9.89	95	192027	23.69	ppb	0.00
Spiked Amount 25.000			Recovery =	94.756%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH174
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48875
QCG: #GRO86-170113BL-215505

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	63 ++	20	18.0	8.6	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	101	85-114			%	01/14/17	01/14/17

++(G3) The analyst has noted that the chromatogram of this sample includes higher boiling hydrocarbons.

Quant Method: LGAS6112.M
Run #: 0113L45
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/17/17 8:22:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L45.D Vial: 42
Acq On : 14 Jan 17 4:38 Operator: PM,DG,SV,CMM
Sample : AZ48875W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 12:28 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	660653	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	867772	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	951925	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	7790170m	63.05	ppb	100

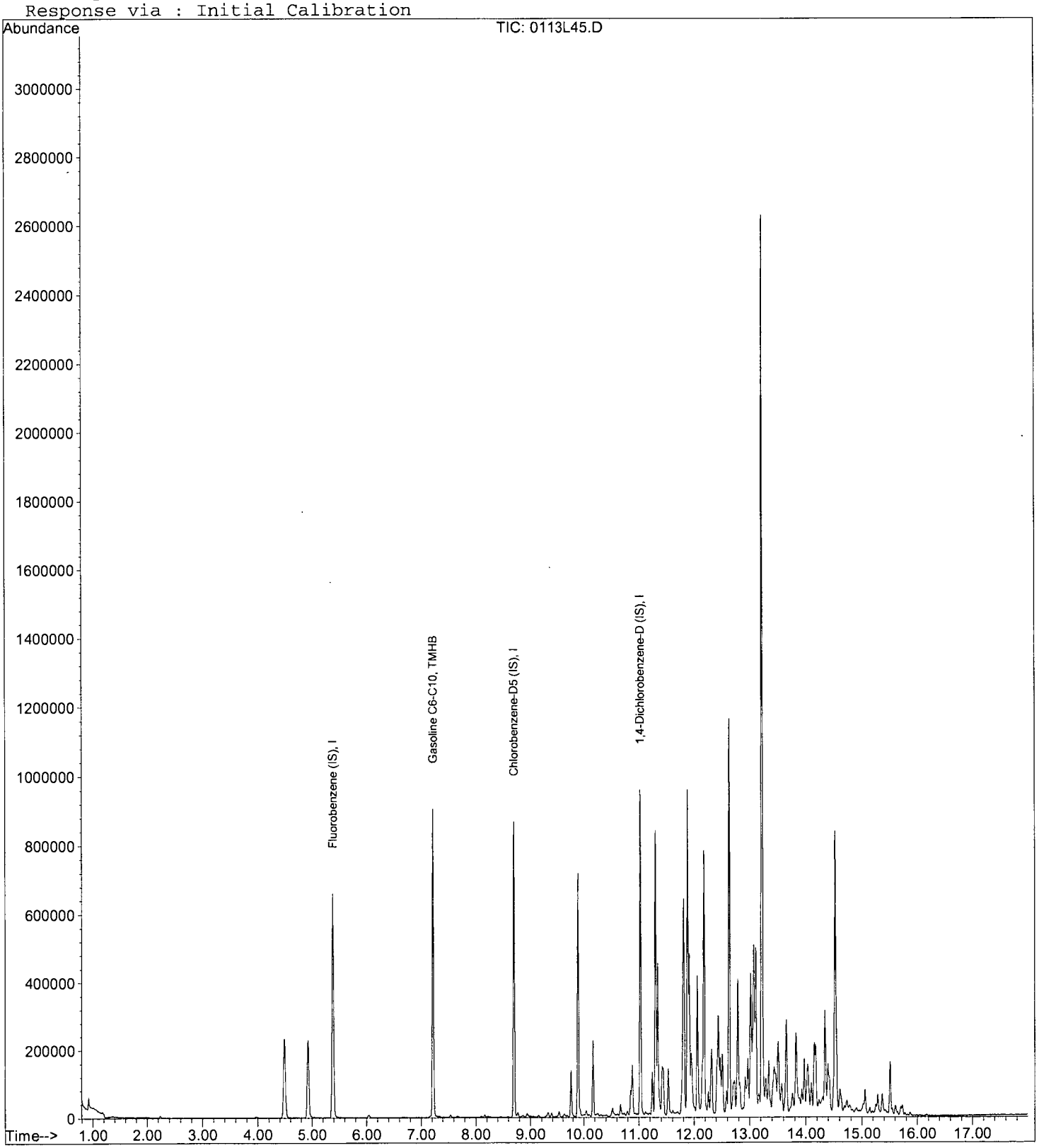
(#) = qualifier out of range (m) = manual integration
0113L45.D LGAS6112.M Tue Jan 17 13:55:31 2017 Page 1

Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L45.D Vial: 42
Acq On : 14 Jan 17 4:38 Operator: PM,DG,SV,CMM
Sample : AZ48875W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 12:28 2017 Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L45.D Vial: 42
Acq On : 14 Jan 17 4:38 Operator: PM,DG,SV,CMM
Sample : AZ48875W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 13:55 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	312960	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	286272	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	156864	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	172366	24.68	ppb	0.00
Spiked Amount 25.000			Recovery = 98.724%			
3) 1,2-DCA-D4(S)	4.92	65	180764	23.87	ppb	0.00
Spiked Amount 25.000			Recovery = 95.468%			
5) Toluene-D8(S)	7.22	98	575369	25.11	ppb	0.00
Spiked Amount 25.000			Recovery = 100.436%			
6) 4-Bromofluorobenzene(S)	9.89	95	201638	25.36	ppb	0.00
Spiked Amount 25.000			Recovery = 101.436%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH175
Sample Collection Date: 01/10/07

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48876
QCG: #GRO86-170113BL-215505

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	97.9	85-114			%	01/14/17	01/14/17

Quant Method: LGAS6112.M
Run #: 0113L46
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/17/17 8:22:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L46.D Vial: 43
Acq On : 14 Jan 17 5:06 Operator: PM,DG,SV,CMM
Sample : AZ48876W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 11:16 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	701614	25.00 ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	905129	25.00 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	929597	25.00 ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

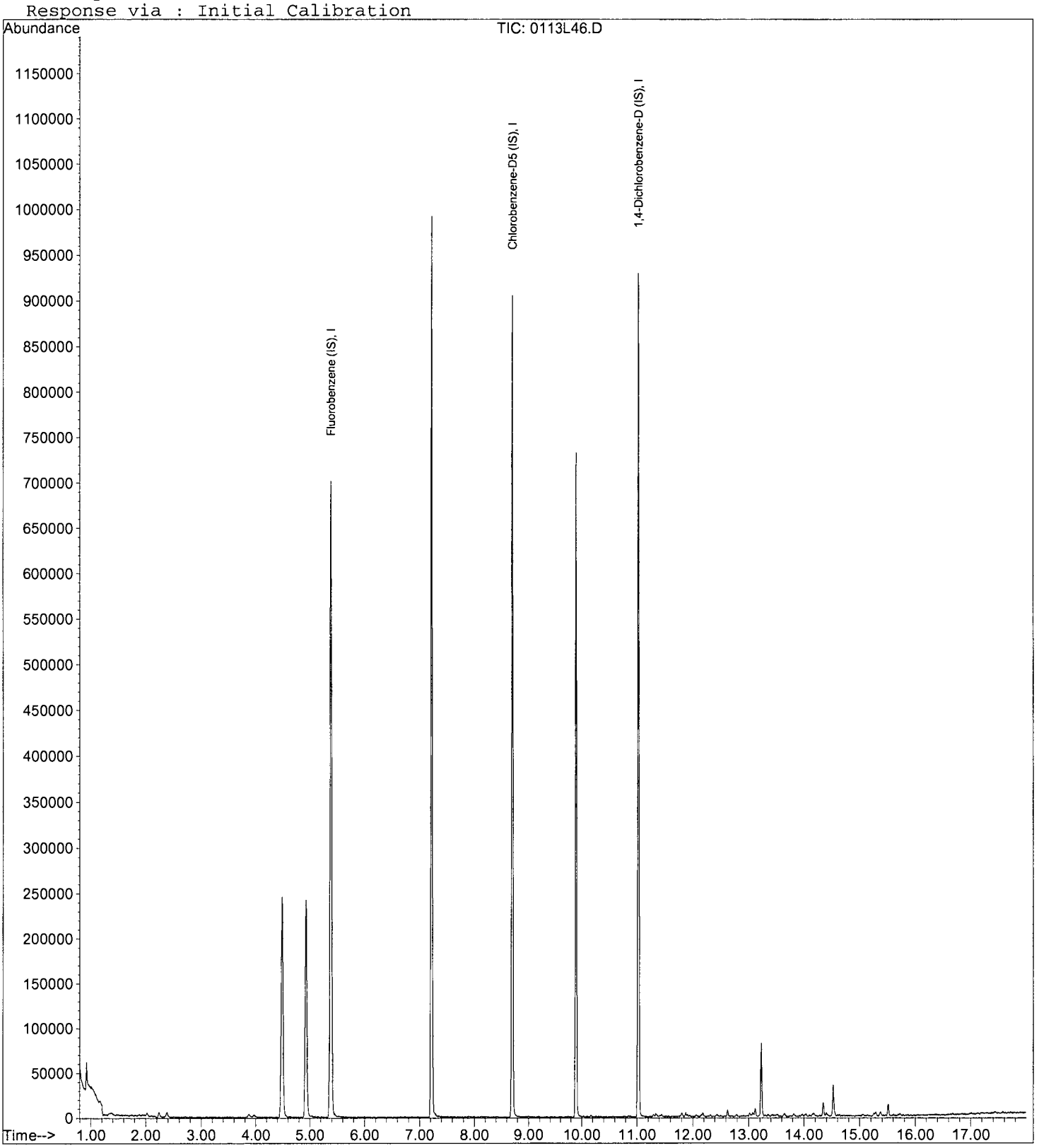
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L46.D Vial: 43
Acq On : 14 Jan 17 5:06 Operator: PM,DG,SV,CMM
Sample : AZ48876W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 11:16 2017 Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L46.D Vial: 43
Acq On : 14 Jan 17 5:06 Operator: PM,DG,SV,CMM
Sample : AZ48876W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 13:56 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	330880	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	299712	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	150848	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	181477	24.58	ppb	0.00
Spiked Amount 25.000			Recovery =	98.312%		
3) 1,2-DCA-D4(S)	4.92	65	191217	23.88	ppb	0.00
Spiked Amount 25.000			Recovery =	95.520%		
5) Toluene-D8(S)	7.22	98	611813	25.50	ppb	0.00
Spiked Amount 25.000			Recovery =	102.008%		
6) 4-Bromofluorobenzene(S)	9.89	95	203659	24.46	ppb	0.00
Spiked Amount 25.000			Recovery =	97.856%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH176
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48877
QCG: #GRO86-170113BL-215505

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	99.0	85-114			%	01/14/17	01/14/17

Quant Method: LGAS6112.M
Run #: 0113L47
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/17/17 8:22:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L47.D Vial: 44
Acq On : 14 Jan 17 5:34 Operator: PM,DG,SV,CMM
Sample : AZ48877W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 11:16 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	675198	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	898598	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	922956	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

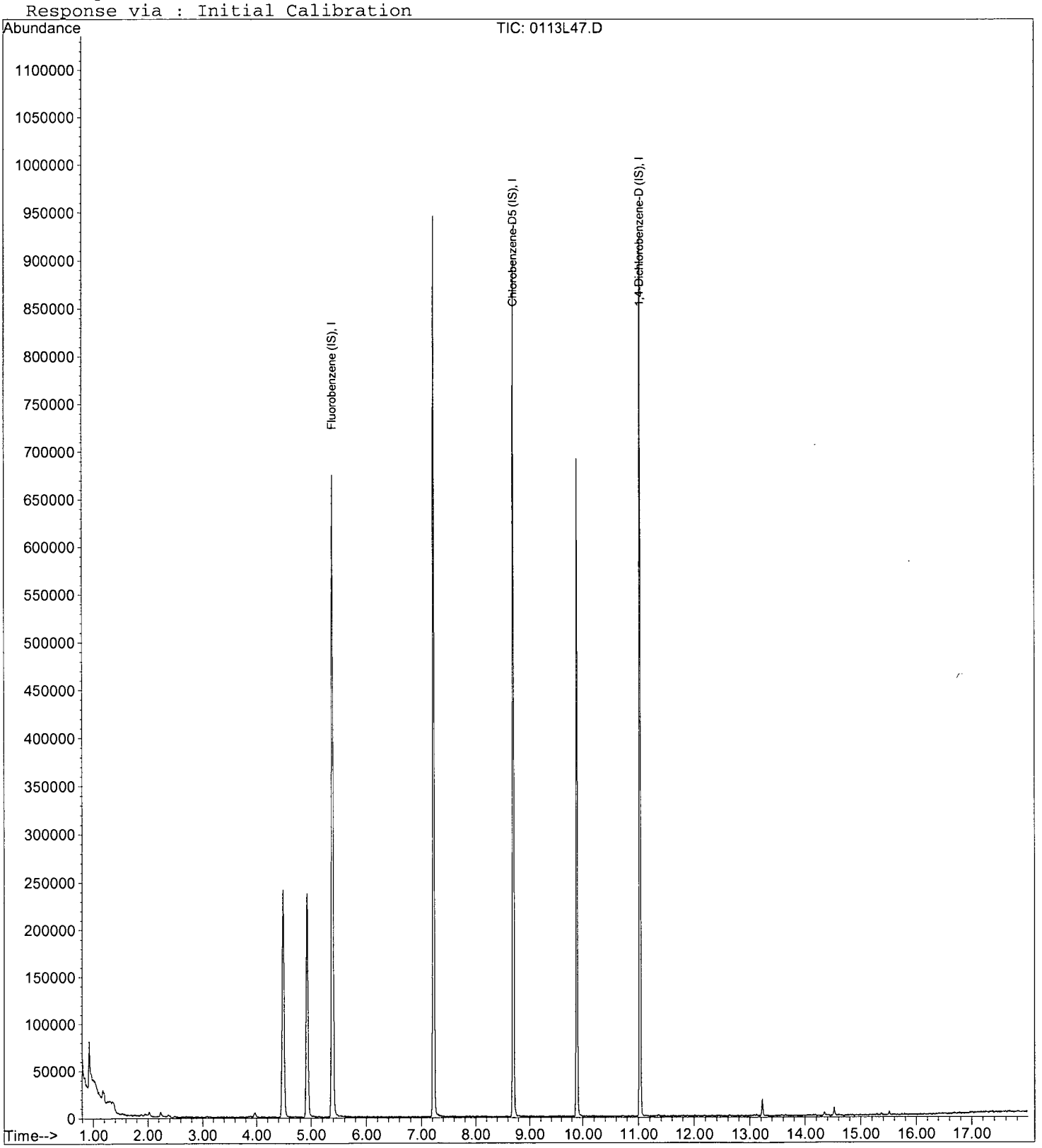
(#) = qualifier out of range (m) = manual integration
0113L47.D LGAS6112.M Tue Jan 17 13:55:35 2017 Page 1

Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L47.D Vial: 44
Acq On : 14 Jan 17 5:34 Operator: PM,DG,SV,CMM
Sample : AZ48877W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 11:16 2017 Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L47.D Vial: 44
Acq On : 14 Jan 17 5:34 Operator: PM,DG,SV,CMM
Sample : AZ48877W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 13:56 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	319616	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	294464	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	149568	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	180111	25.25	ppb	0.00
Spiked Amount 25.000			Recovery = 101.012%			
3) 1,2-DCA-D4(S)	4.92	65	188545	24.38	ppb	0.00
Spiked Amount 25.000			Recovery = 97.504%			
5) Toluene-D8(S)	7.22	98	584210	24.79	ppb	0.00
Spiked Amount 25.000			Recovery = 99.140%			
6) 4-Bromofluorobenzene(S)	9.89	95	202355	24.74	ppb	0.00
Spiked Amount 25.000			Recovery = 98.964%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH179
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48878
QCG: #GRO86-170113BL-215505

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	98.1	85-114			%	01/14/17	01/14/17

Quant Method: LGAS6112.M
Run #: 0113L48
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/17/17 8:22:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L48.D Vial: 45
Acq On : 14 Jan 17 6:02 Operator: PM,DG,SV,CMM
Sample : AZ48878W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 11:16 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	676532	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	903184	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	921014	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

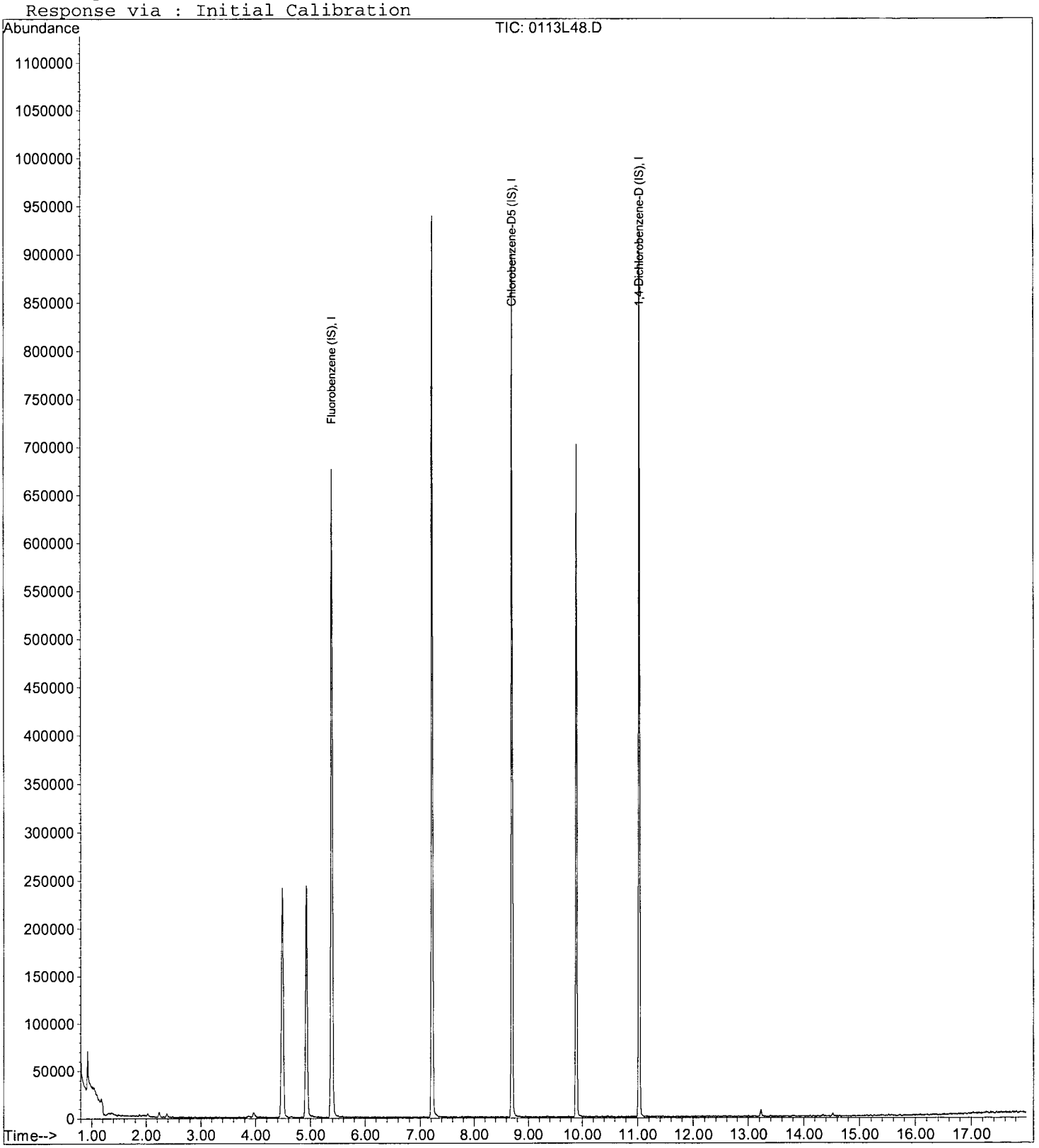
Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L48.D
Acq On : 14 Jan 17 6:02
Sample : AZ48878W01
Misc : W IS&S 1/3/17, 01/11/17

Vial: 45
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 11:16 2017 Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L48.D Vial: 45
Acq On : 14 Jan 17 6:02 Operator: PM,DG,SV,CMM
Sample : AZ48878W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 13:56 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	319296	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	300800	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	148992	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	180342	25.31	ppb	0.00
Spiked Amount 25.000			Recovery = 101.244%			
3) 1,2-DCA-D4(S)	4.93	65	193747	25.07	ppb	0.00
Spiked Amount 25.000			Recovery = 100.296%			
5) Toluene-D8(S)	7.22	98	592365	24.60	ppb	0.00
Spiked Amount 25.000			Recovery = 98.408%			
6) 4-Bromofluorobenzene(S)	9.89	95	204937	24.53	ppb	0.00
Spiked Amount 25.000			Recovery = 98.116%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH197
Sample Collection Date: 01/09/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48879
QCG: #GRO86-170113BL-215505

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	97.8	85-114			%	01/14/17	01/14/17

Quant Method: LGAS6112.M
Run #: 0113L49
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/17/17 8:22:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L49.D Vial: 46
Acq On : 14 Jan 17 6:30 Operator: PM,DG,SV,CMM
Sample : AZ48879W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 11:16 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	661276	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	908343	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	916931	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

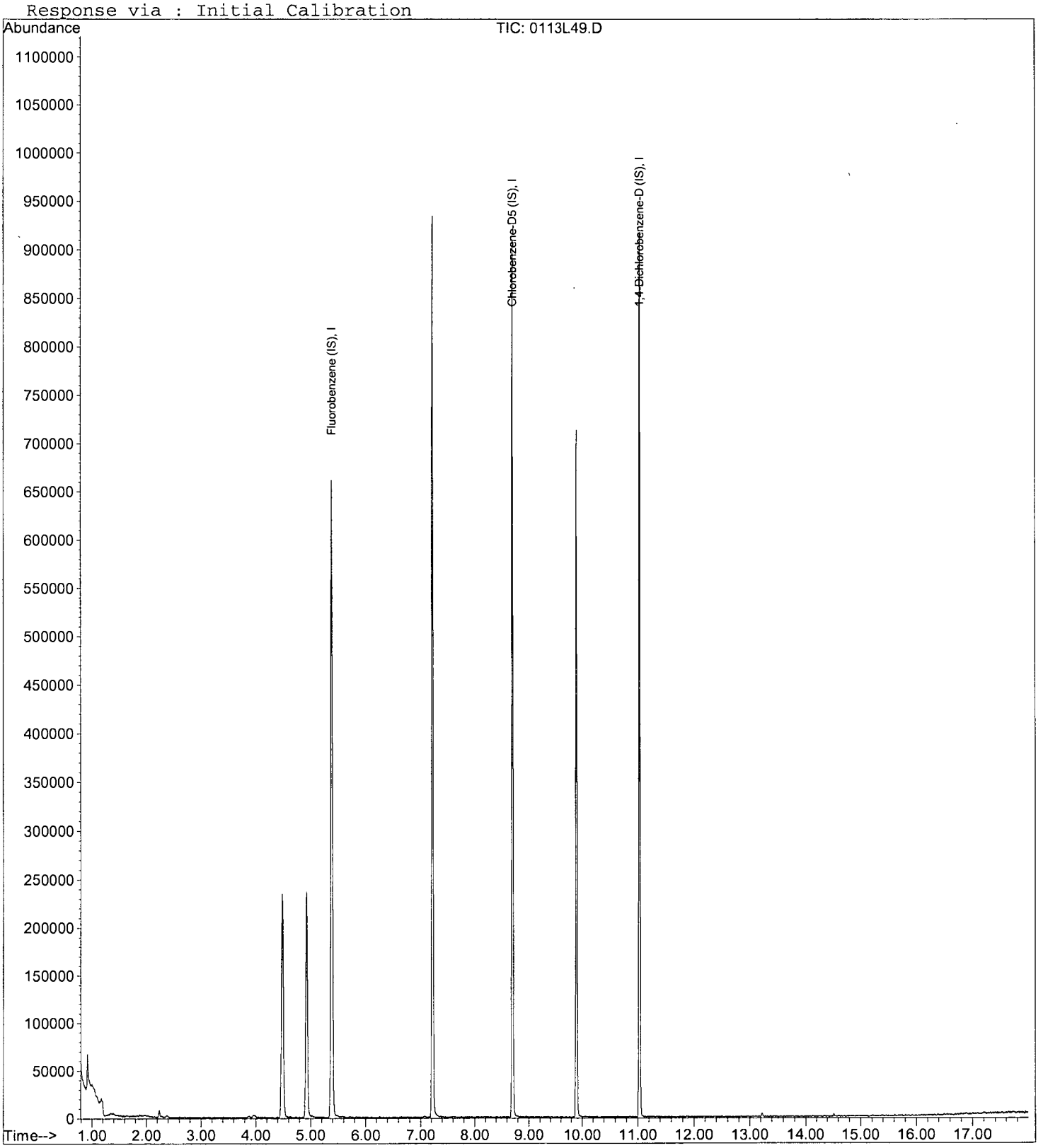
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L49.D Vial: 46
Acq On : 14 Jan 17 6:30 Operator: PM,DG,SV,CMM
Sample : AZ48879W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 11:16 2017 Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L49.D Vial: 46
Acq On : 14 Jan 17 6:30 Operator: PM,DG,SV,CMM
Sample : AZ48879W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 13:56 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	311616	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	298496	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	148288	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	176371	25.36	ppb	0.00
Spiked Amount 25.000			Recovery =	101.452%		
3) 1,2-DCA-D4(S)	4.93	65	185387	24.58	ppb	0.00
Spiked Amount 25.000			Recovery =	98.332%		
5) Toluene-D8(S)	7.22	98	584489	24.46	ppb	0.00
Spiked Amount 25.000			Recovery =	97.848%		
6) 4-Bromofluorobenzene(S)	9.89	95	202684	24.45	ppb	0.00
Spiked Amount 25.000			Recovery =	97.784%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH186
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48880
QCG: #GRO86-170113BL-215505

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	94.6	85-114			%	01/14/17	01/14/17

Quant Method: LGAS6112.M
Run #: 0113L50
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/17/17 8:22:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L50.D
Acq On : 14 Jan 17 6:58
Sample : AZ48880W02
Misc : W IS&S 1/3/17, 01/11/17

Vial: 47
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 11:16 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	651127	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	857170	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	861338	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

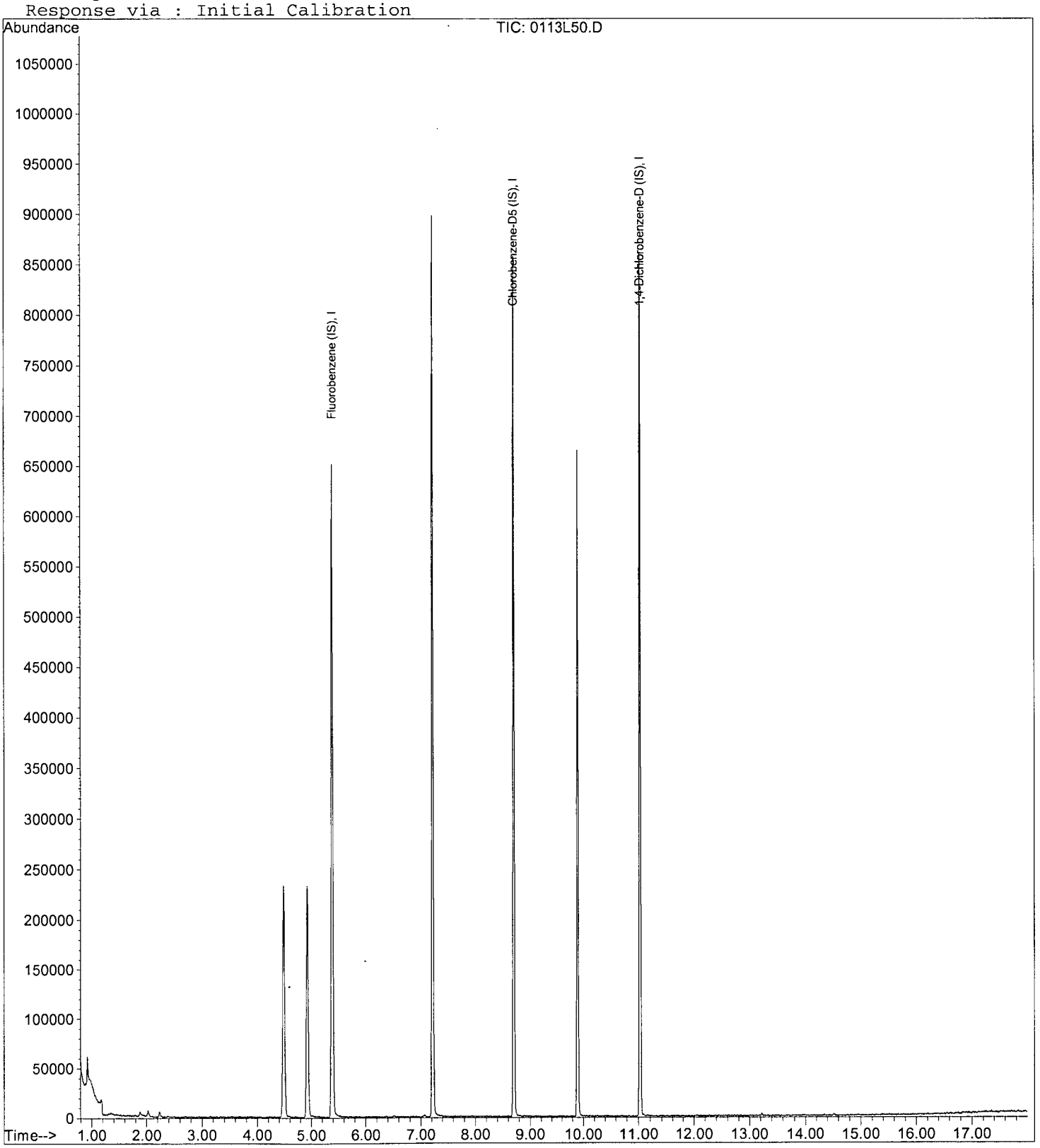
(#) = qualifier out of range (m) = manual integration
0113L50.D LGAS6112.M Tue Jan 17 13:55:41 2017

Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L50.D Vial: 47
Acq On : 14 Jan 17 6:58 Operator: PM,DG,SV,CMM
Sample : AZ48880W02 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 11:16 2017 Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L50.D Vial: 47
Acq On : 14 Jan 17 6:58 Operator: PM,DG,SV,CMM
Sample : AZ48880W02 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 13:56 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	308416	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	285824	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	141952	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	172139	25.01	ppb	0.00
Spiked Amount 25.000			Recovery =	100.048%		
3) 1,2-DCA-D4(S)	4.93	65	179608	24.06	ppb	0.00
Spiked Amount 25.000			Recovery =	96.256%		
5) Toluene-D8(S)	7.22	98	571997	25.00	ppb	0.00
Spiked Amount 25.000			Recovery =	100.004%		
6) 4-Bromofluorobenzene(S)	9.89	95	187845	23.66	ppb	0.00
Spiked Amount 25.000			Recovery =	94.644%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH187
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48881
QCG: #GRO86-170113BL-215505

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	95.5	85-114			%	01/14/17	01/14/17

Quant Method: LGAS6112.M
Run #: 0113L51
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/17/17 8:22:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L51.D
Acq On : 14 Jan 17 7:26
Sample : AZ48881W01
Misc : W IS&S 1/3/17, 01/11/17

Vial: 48
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 11:17 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	633972	25.00 ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	857036	25.00 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	876494	25.00 ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0113L51.D LGAS6112.M Tue Jan 17 13:55:43 2017

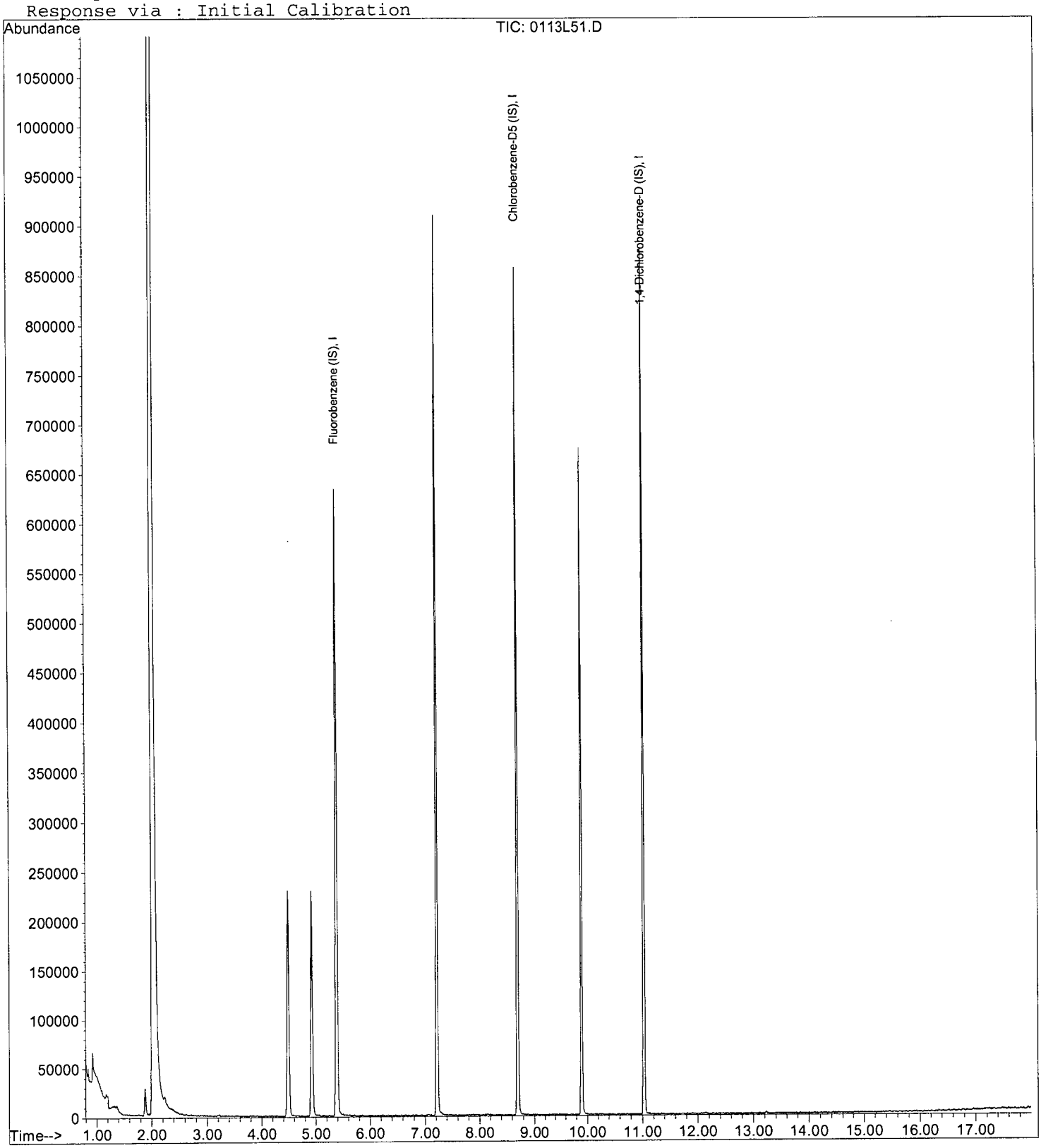
Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L51.D
Acq On : 14 Jan 17 7:26
Sample : AZ48881W01
Misc : W IS&S 1/3/17, 01/11/17

Vial: 48
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 11:17 2017 Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L51.D Vial: 48
Acq On : 14 Jan 17 7:26 Operator: PM,DG,SV,CMM
Sample : AZ48881W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 13:56 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	301632	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	286848	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	147392	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	171832	25.53	ppb	0.00
Spiked Amount 25.000			Recovery =	102.116%		
3) 1,2-DCA-D4(S)	4.92	65	183100	25.08	ppb	0.00
Spiked Amount 25.000			Recovery =	100.332%		
5) Toluene-D8(S)	7.22	98	566313	24.66	ppb	0.00
Spiked Amount 25.000			Recovery =	98.656%		
6) 4-Bromofluorobenzene(S)	9.89	95	190187	23.87	ppb	0.00
Spiked Amount 25.000			Recovery =	95.484%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH194
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48882
QCG: #GRO86-170113BL-215505

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	96.7	85-114			%	01/14/17	01/14/17

Quant Method: LGAS6112.M
Run #: 0113L52
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/17/17 8:22:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L52.D
Acq On : 14 Jan 17 7:54
Sample : AZ48882W01
Misc : W IS&S 1/3/17, 01/11/17

Vial: 49
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 11:17 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	653988	25.00 ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	882220	25.00 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	881230	25.00 ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0113L52.D LGAS6112.M Tue Jan 17 13:55:45 2017

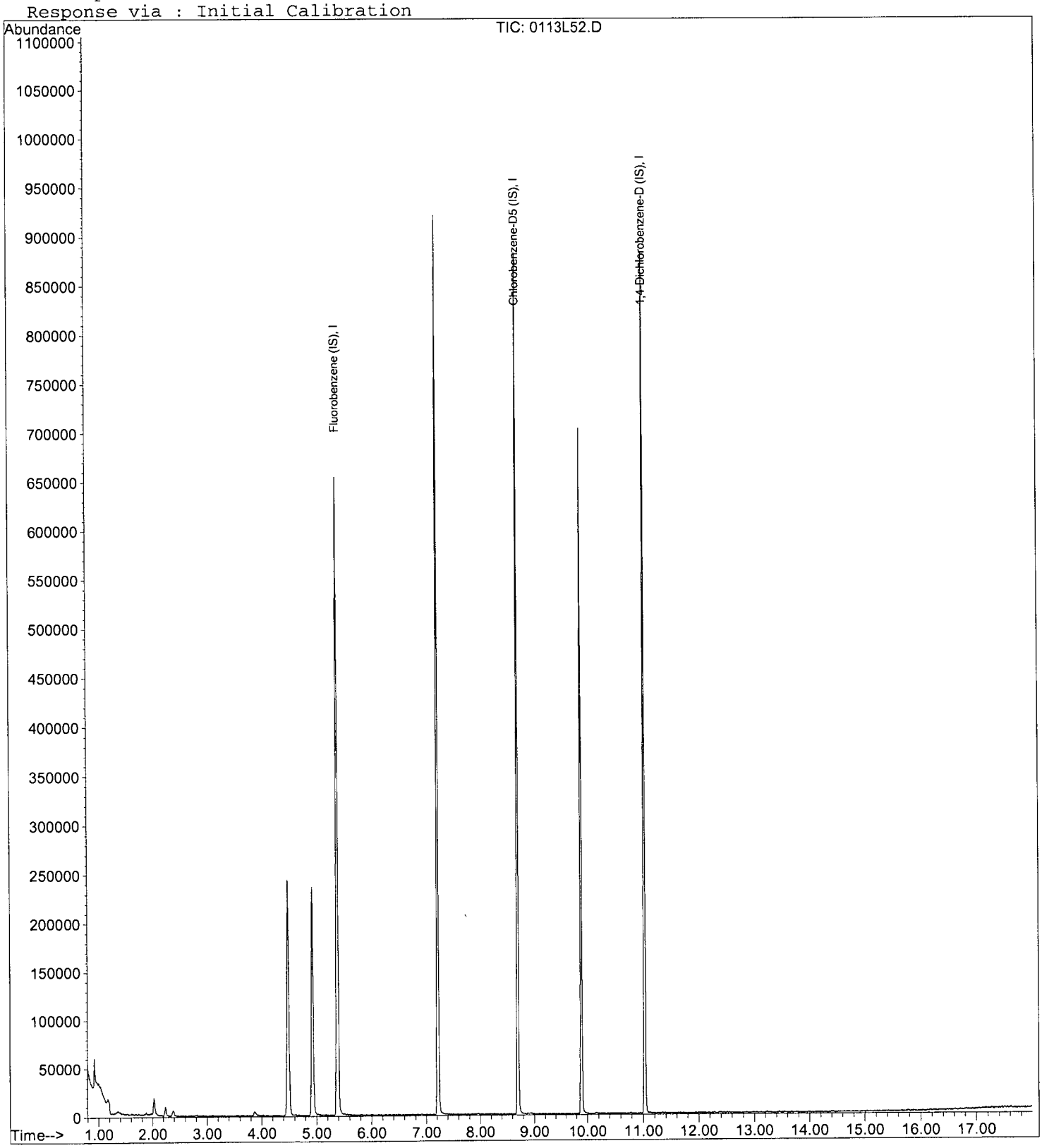
Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L52.D
Acq On : 14 Jan 17 7:54
Sample : AZ48882W01
Misc : W IS&S 1/3/17, 01/11/17

Vial: 49
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 11:17 2017 Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L52.D Vial: 49
Acq On : 14 Jan 17 7:54 Operator: PM,DG,SV,CMM
Sample : AZ48882W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 13:56 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	310016	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	294976	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	142464	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	182410	26.37	ppb	0.00
Spiked Amount 25.000			Recovery = 105.468%			
3) 1,2-DCA-D4(S)	4.92	65	187212	24.95	ppb	0.00
Spiked Amount 25.000			Recovery = 99.812%			
5) Toluene-D8(S)	7.22	98	579544	24.54	ppb	0.00
Spiked Amount 25.000			Recovery = 98.180%			
6) 4-Bromofluorobenzene(S)	9.89	95	198005	24.17	ppb	0.00
Spiked Amount 25.000			Recovery = 96.668%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH173
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48884
QCG: #GRO86-170113BL-215505

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	94.4	85-114			%	01/14/17	01/14/17

Quant Method: LGAS6112.M
Run #: 0113L53
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/17/17 8:22:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L53.D Vial: 50
Acq On : 14 Jan 17 8:22 Operator: PM,DG,SV,CMM
Sample : AZ48884W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 11:17 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	671099	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	925032	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	914774	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

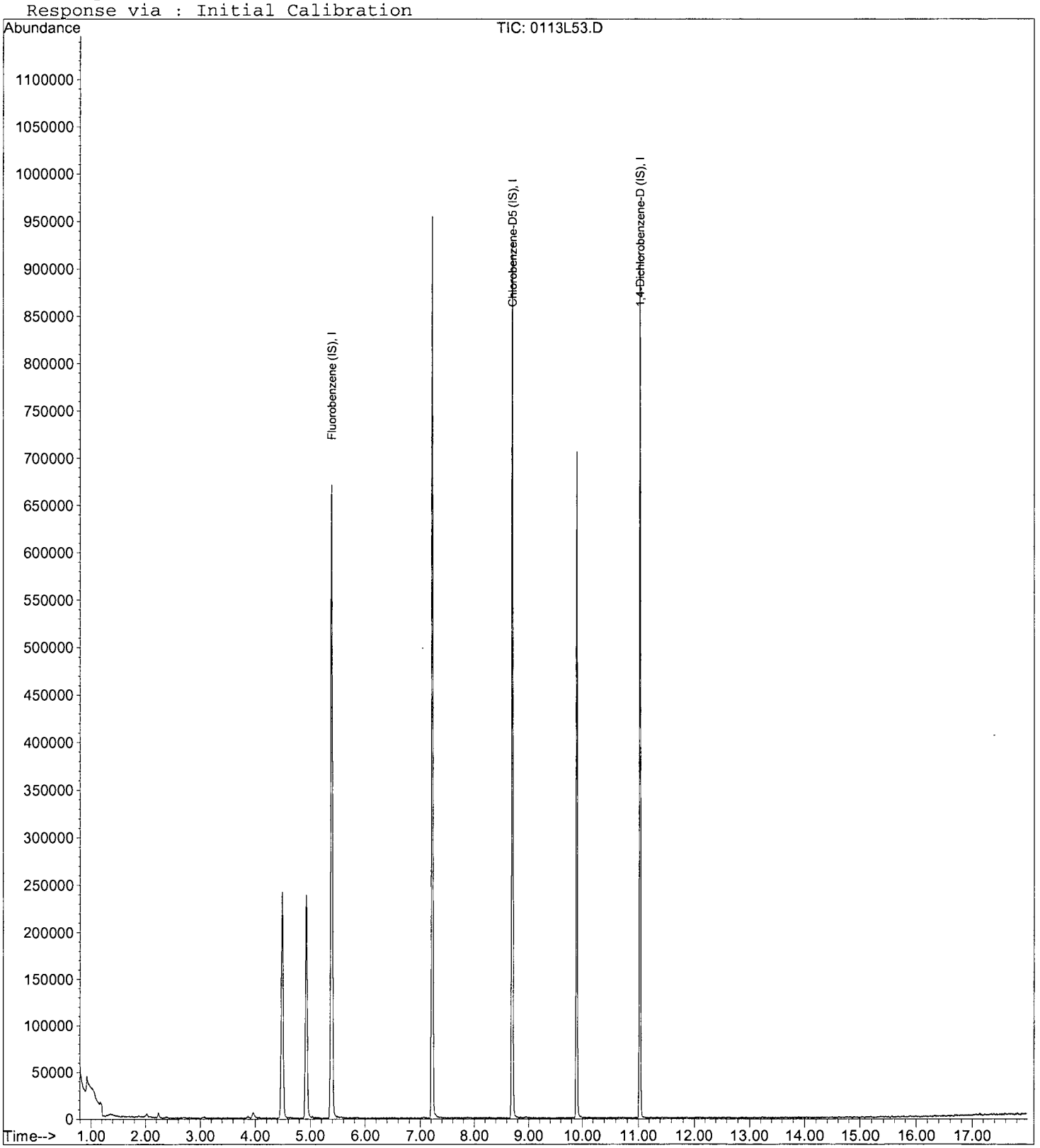
Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L53.D
Acq On : 14 Jan 17 8:22
Sample : AZ48884W01
Misc : W IS&S 1/3/17, 01/11/17

Vial: 50
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 11:17 2017 Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L53.D Vial: 50
Acq On : 14 Jan 17 8:22 Operator: PM,DG,SV,CMM
Sample : AZ48884W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 13:56 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	318912	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	303552	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	149504	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	180264	25.33	ppb	0.00
Spiked Amount 25.000			Recovery = 101.320%			
3) 1,2-DCA-D4(S)	4.92	65	190170	24.64	ppb	0.00
Spiked Amount 25.000			Recovery = 98.560%			
5) Toluene-D8(S)	7.22	98	588143	24.21	ppb	0.00
Spiked Amount 25.000			Recovery = 96.820%			
6) 4-Bromofluorobenzene(S)	9.89	95	198929	23.59	ppb	0.00
Spiked Amount 25.000			Recovery = 94.376%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH198
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48885
QCG: #GRO86-170113BL-215505

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	96.6	85-114			%	01/14/17	01/14/17

Quant Method: LGAS6112.M
Run #: 0113L54
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/17/17 8:22:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L54.D
Acq On : 14 Jan 17 8:50
Sample : AZ48885W01
Misc : W IS&S 1/3/17, 01/11/17

Vial: 51
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 11:17 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	655633	25.00 ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	883583	25.00 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	901439	25.00 ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0113L54.D LGAS6112.M Tue Jan 17 13:55:49 2017 Page 1

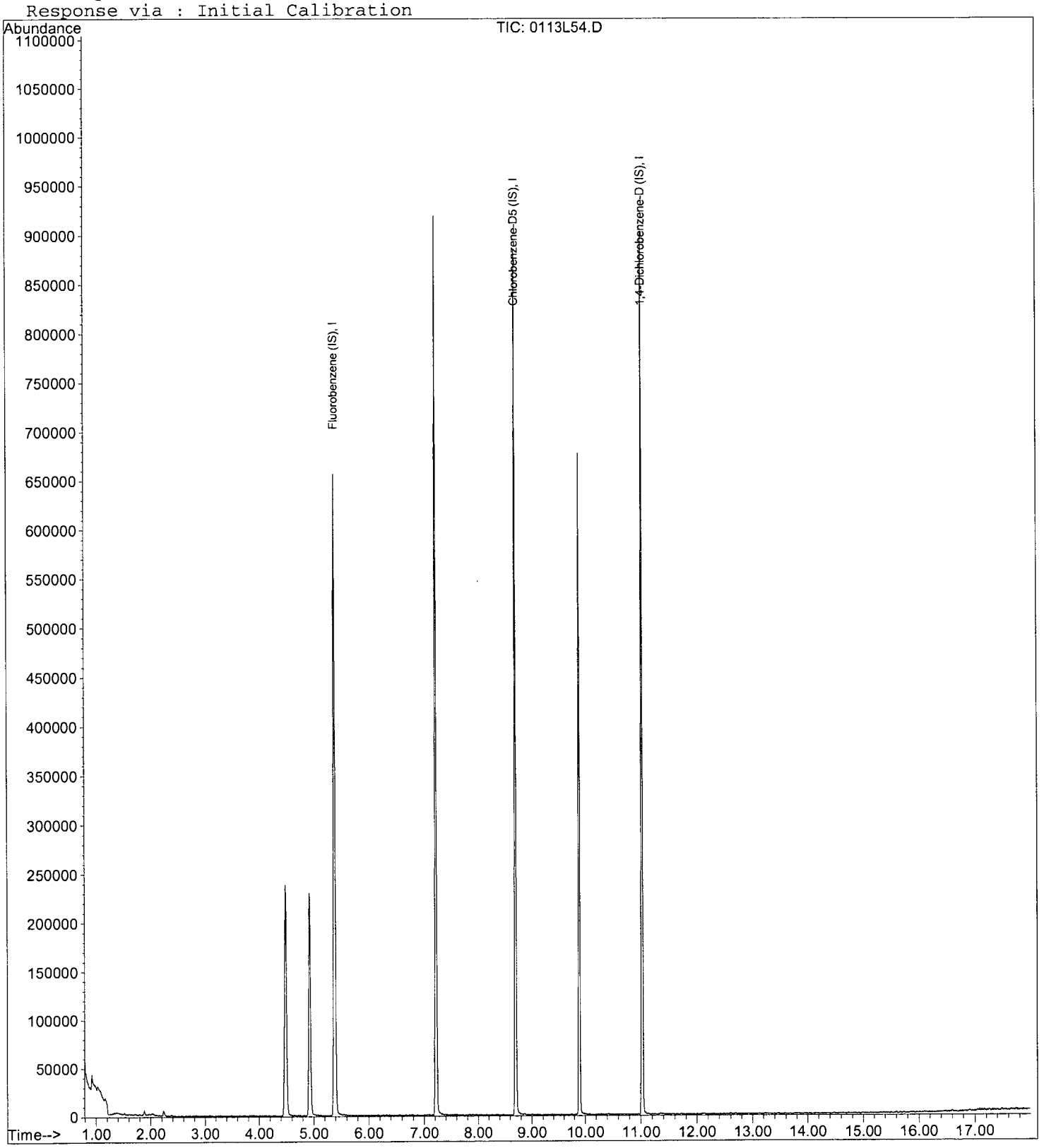
Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L54.D
Acq On : 14 Jan 17 8:50
Sample : AZ48885W01
Misc : W IS&S 1/3/17, 01/11/17

Vial: 51
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 11:17 2017 Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L54.D Vial: 51
Acq On : 14 Jan 17 8:50 Operator: PM,DG,SV,CMM
Sample : AZ48885W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 13:56 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	313856	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	292480	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	149760	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	176646	25.22	ppb	0.00
Spiked Amount 25.000			Recovery = 100.888%			
3) 1,2-DCA-D4(S)	4.92	65	183200	24.12	ppb	0.00
Spiked Amount 25.000			Recovery = 96.480%			
5) Toluene-D8(S)	7.22	98	579280	24.74	ppb	0.00
Spiked Amount 25.000			Recovery = 98.972%			
6) 4-Bromofluorobenzene(S)	9.89	95	196183	24.15	ppb	0.00
Spiked Amount 25.000			Recovery = 96.596%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH196
Sample Collection Date: 01/09/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48886
QCG: #GRO86-170113BL-215505

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	94.8	85-114			%	01/14/17	01/14/17

Quant Method: LGAS6112.M
Run #: 0113L55
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/17/17 8:22:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L55.D
Acq On : 14 Jan 17 9:18
Sample : AZ48886W01
Misc : W IS&S 1/3/17, 01/11/17

Vial: 52
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 11:18 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	633148	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	874171	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	871203	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0113L55.D LGAS6112.M Tue Jan 17 13:55:51 2017

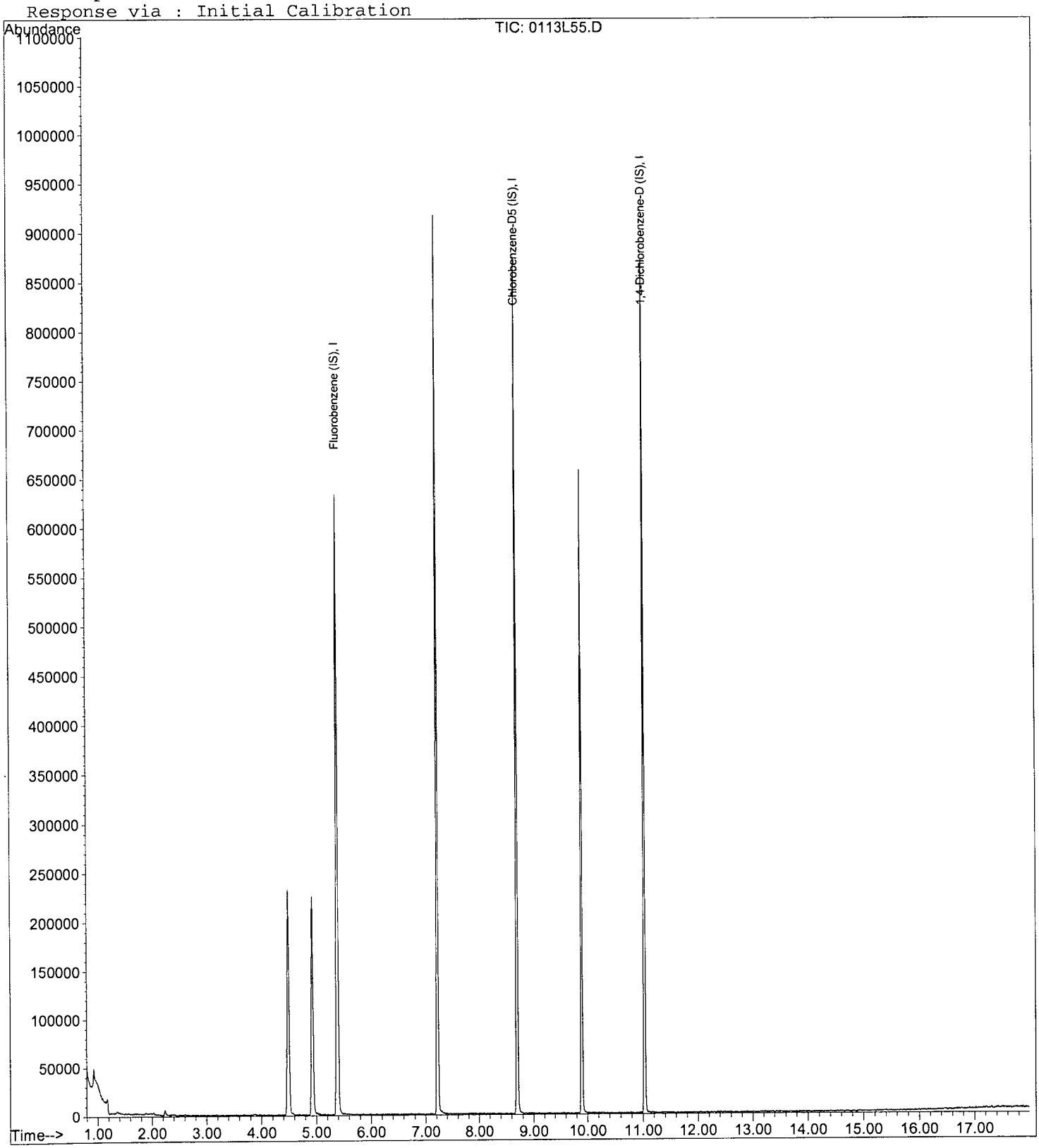
Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L55.D
Acq On : 14 Jan 17 9:18
Sample : AZ48886W01
Misc : W IS&S 1/3/17, 01/11/17

Vial: 52
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 11:18 2017 Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L55.D Vial: 52
Acq On : 14 Jan 17 9:18 Operator: PM,DG,SV,CMM
Sample : AZ48886W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 13:56 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	300352	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	289408	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	142720	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	171361	25.57	ppb	0.00
Spiked Amount 25.000			Recovery = 102.268%			
3) 1,2-DCA-D4(S)	4.92	65	177921	24.48	ppb	0.00
Spiked Amount 25.000			Recovery = 97.912%			
5) Toluene-D8(S)	7.22	98	556378	24.02	ppb	0.00
Spiked Amount 25.000			Recovery = 96.068%			
6) 4-Bromofluorobenzene(S)	9.89	95	190414	23.69	ppb	0.00
Spiked Amount 25.000			Recovery = 94.752%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

ORGANICS
Calibration Data

APPL, INC.

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 1/11/17
Matrix: Instrument: Loki
Initials:

		Compound	0111L05.D	0111L06.D	0111L07.D	0111L08.D	0111L09.D	0111L10.D	0111L11.D	0111L12.D	0111L13.D		Avg	%RSD		
			1	2	3	4	5	6	7	8	9					
1	I	Fluorobenzene (IS)														
2	S	Dibromofluoromethane(S)	0.6530	0.6270	0.5081	0.5434	0.5556	0.5547	0.5421	0.5409	0.4961		0.56	9.2	S	
3	S	1,2-DCA-D4(S)	0.7467	0.6553	0.5616	0.5765	0.6001	0.6054	0.6028	0.5703	0.5265		0.61	11	S	
4	I	Chlorobenzene-D5 (IS)														
5	S	Toluene-D8(S)	2.174	2.024	1.807	1.915	2.040	2.108	2.066	1.980	1.895		2.0	5.7	S	
6	S	4-Bromofluorobenzene(S)	0.7539	0.6191	0.6040	0.6530	0.7308	0.7539	0.7422	0.7049	0.6878		0.69	8.3	S	
7	I	1,4-Dichlorobenzene-D (IS)														
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Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L05.D Vial: 4
Acq On : 11 Jan 17 11:56 Operator: PM,DG,SV,CMM
Sample : 0.3ug/L VOC STD 1/11/17J Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 13 10:26 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	332160	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	315712	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	150016	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.49	111	43382	5.85280 ppb	0.00
Spiked Amount 25.000			Recovery	= 23.412%	
3) 1,2-DCA-D4(S)	4.93	65	49605	6.17098 ppb	0.00
Spiked Amount 25.000			Recovery	= 24.684%	
5) Toluene-D8(S)	7.22	98	137262	5.43149 ppb	0.00
Spiked Amount 25.000			Recovery	= 21.724%	
6) 4-Bromofluorobenzene(S)	9.89	95	47603	5.42845 ppb	0.00
Spiked Amount 25.000			Recovery	= 21.712%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

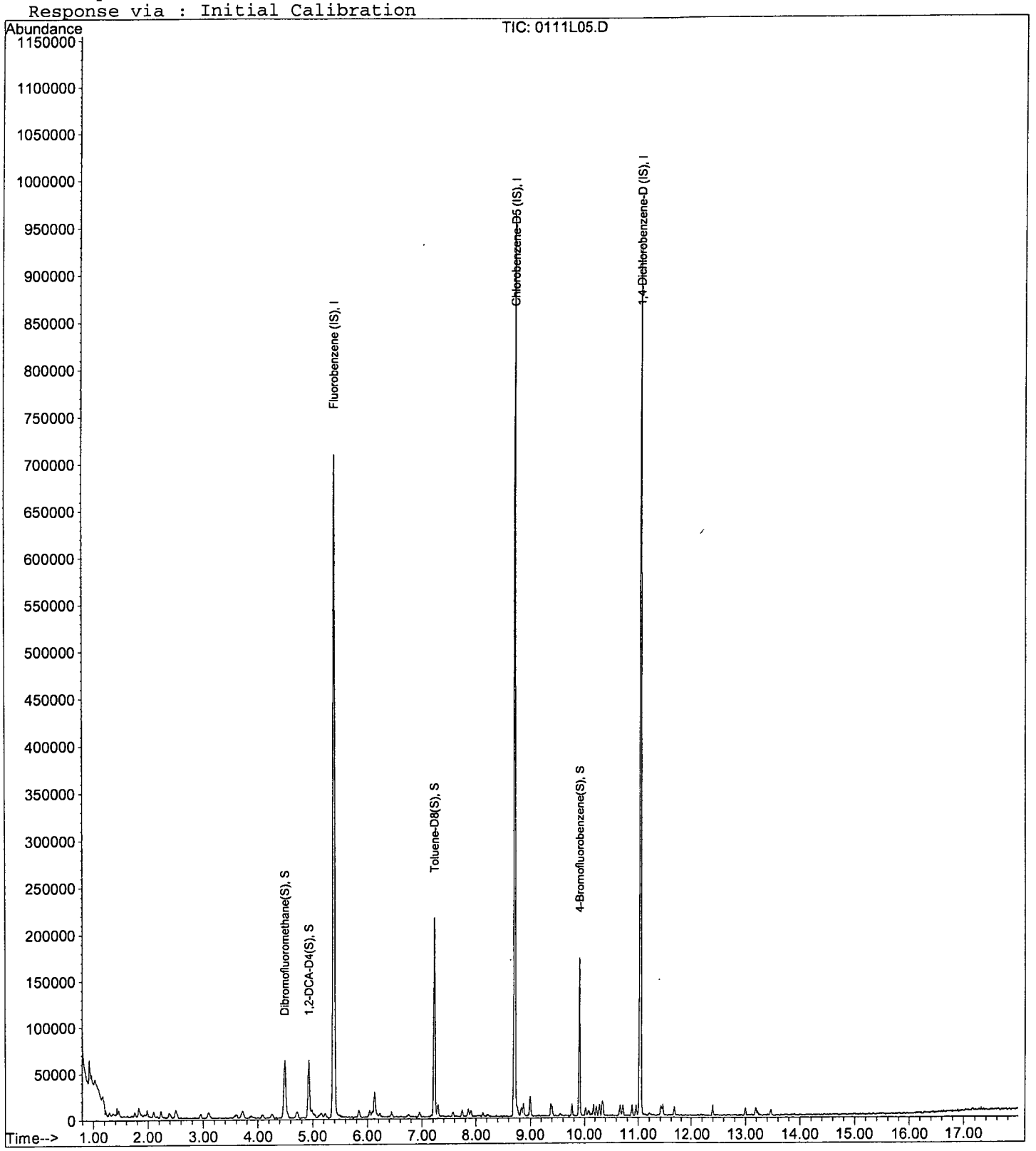
Quantitation Report

Data File : M:\LOKI\DATA\170111\0111L05.D
Acq On : 11 Jan 17 11:56
Sample : 0.3ug/L VOC STD 1/11/17J
Misc : W IS&S 1/3/17, 01/11/17

Vial: 4
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 10:26 2017 Quant Results File: LSUR111.RES

Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L06.D Vial: 5
Acq On : 11 Jan 17 12:24 Operator: PM,DG,SV,CMM
Sample : 0.5ug/L VOC STD 1/11/17K Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 13 10:26 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	353664	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	327936	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	160896	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.48	111	44351	5.61971 ppb	0.00
Spiked Amount 25.000			Recovery	= 22.480%	
3) 1,2-DCA-D4(S)	4.93	65	46349	5.41534 ppb	0.00
Spiked Amount 25.000			Recovery	= 21.660%	
5) Toluene-D8(S)	7.22	98	132753	5.05726 ppb	0.00
Spiked Amount 25.000			Recovery	= 20.228%	
6) 4-Bromofluorobenzene(S)	9.89	95	44663	4.90333 ppb	0.00
Spiked Amount 25.000			Recovery	= 19.612%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0111L06.D LSUR111.M Fri Jan 13 10:27:24 2017 Page 1

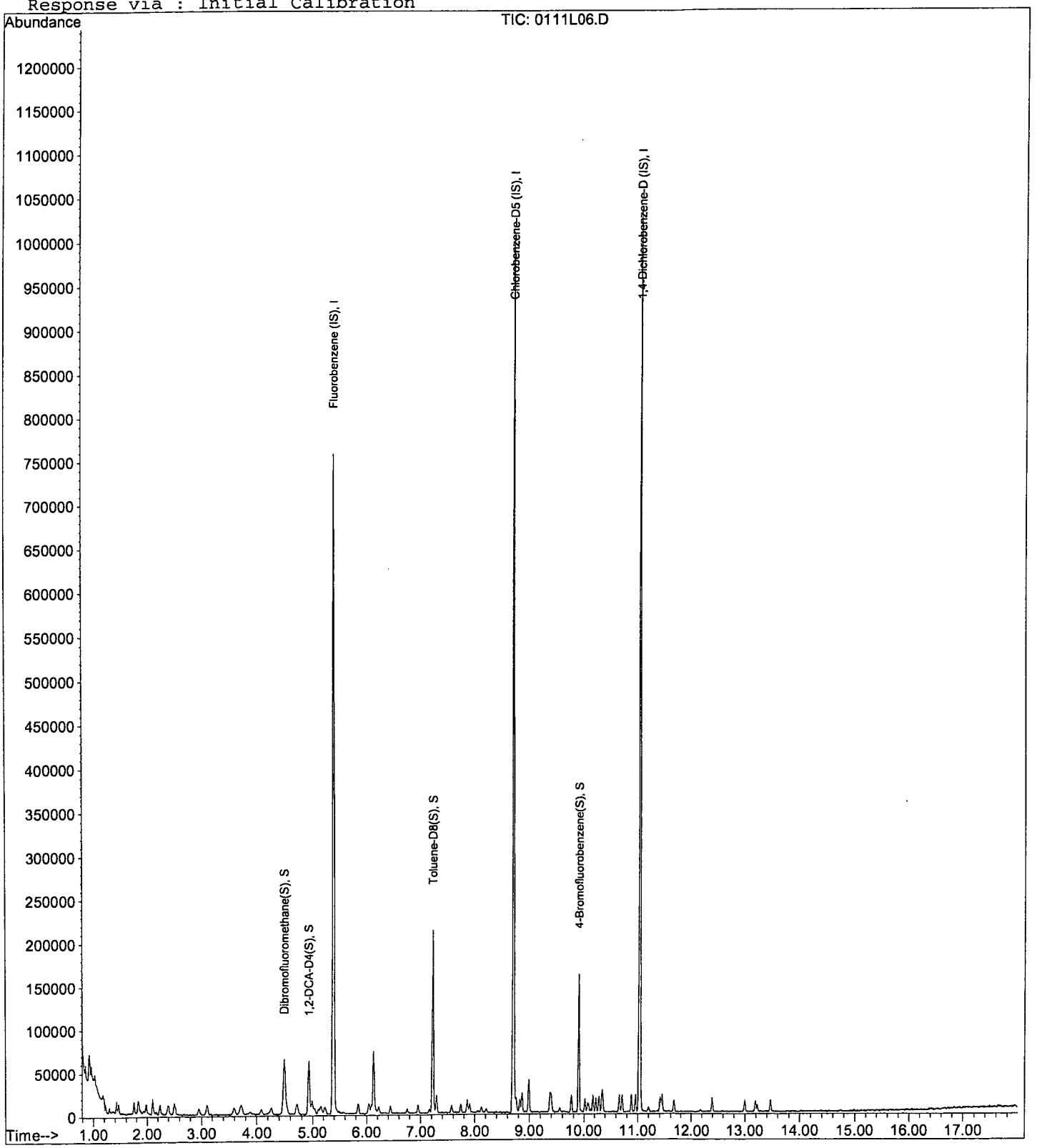
Quantitation Report

Data File : M:\LOKI\DATA\170111\0111L06.D
Acq On : 11 Jan 17 12:24
Sample : 0.5ug/L VOC STD 1/11/17K
Misc : W IS&S 1/3/17, 01/11/17

Vial: 5
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 10:26 2017 Quant Results File: LSUR111.RES

Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L07.D
Acq On : 11 Jan 17 12:52
Sample : 1.0ug/L VOC STD 1/11/17L
Misc : W IS&S 1/3/17, 01/11/17

Vial: 6
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 10:26 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	346432	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	315072	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	160704	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.49	111	70403	9.10698 ppb	0.00
Spiked Amount 25.000			Recovery	= 36.428%	
3) 1,2-DCA-D4(S)	4.93	65	77817	9.28181 ppb	0.00
Spiked Amount 25.000			Recovery	= 37.128%	
5) Toluene-D8(S)	7.22	98	227758	9.03075 ppb	0.00
Spiked Amount 25.000			Recovery	= 36.124%	
6) 4-Bromofluorobenzene(S)	9.89	95	76119	8.69793 ppb	0.00
Spiked Amount 25.000			Recovery	= 34.792%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

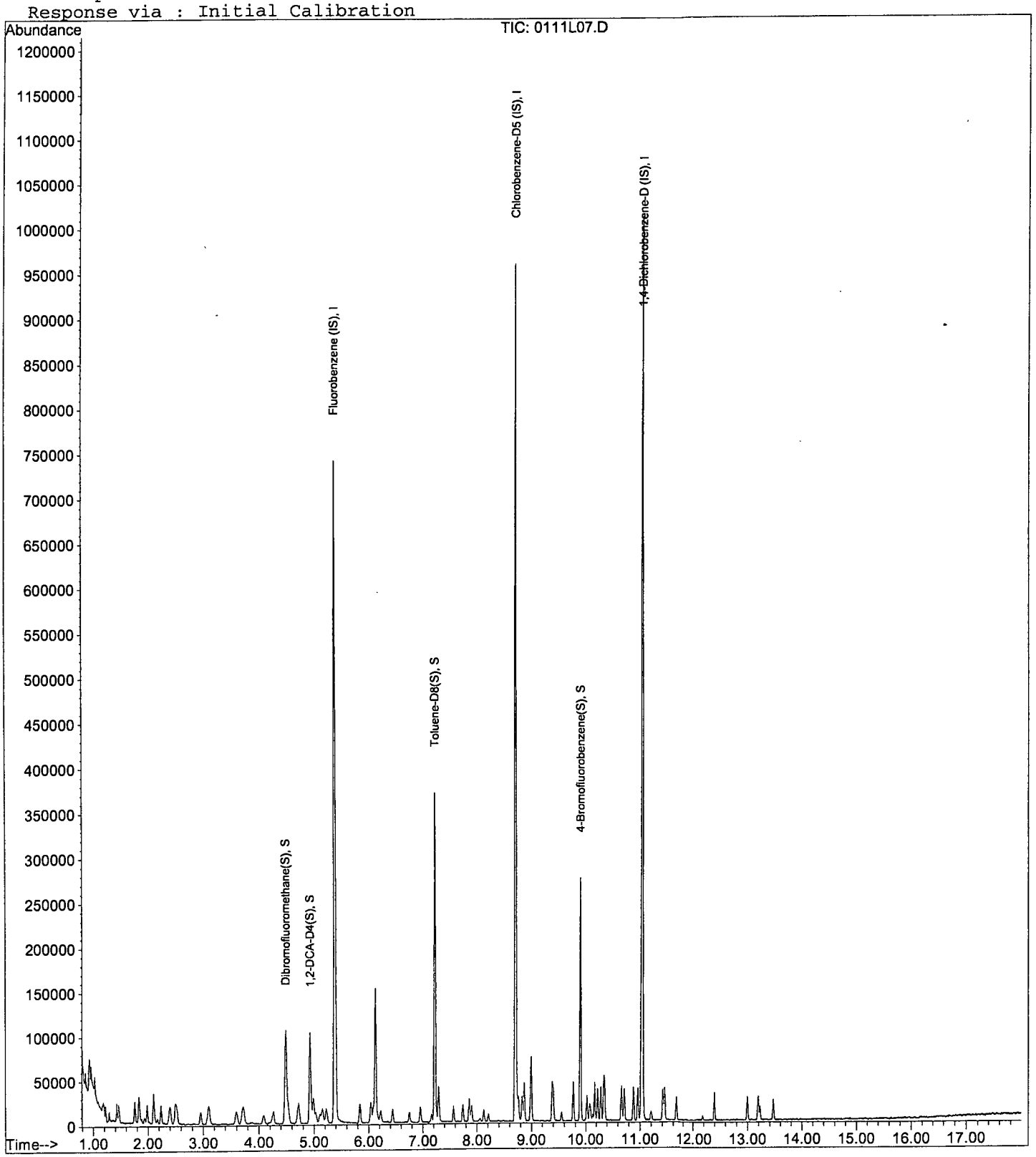
Quantitation Report

Data File : M:\LOKI\DATA\170111\0111L07.D
Acq On : 11 Jan 17 12:52
Sample : 1.0ug/L VOC STD 1/11/17L
Misc : W IS&S 1/3/17, 01/11/17

Vial: 6
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 10:26 2017 Quant Results File: LSUR111.RES

Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L08.D Vial: 7
Acq On : 11 Jan 17 13:20 Operator: PM,DG,SV,CMM
Sample : 2.0ug/L VOC STD 1/11/17M Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 13 10:26 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	345600	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	314496	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	161216	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.48	111	75123	9.74093 ppb	0.00
Spiked Amount 25.000			Recovery	= 38.964%	
3) 1,2-DCA-D4(S)	4.93	65	79701	9.52942 ppb	0.00
Spiked Amount 25.000			Recovery	= 38.116%	
5) Toluene-D8(S)	7.22	98	240936	9.57076 ppb	0.00
Spiked Amount 25.000			Recovery	= 38.284%	
6) 4-Bromofluorobenzene(S)	9.89	95	82145	9.40370 ppb	0.00
Spiked Amount 25.000			Recovery	= 37.616%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0111L08.D LSUR111.M Fri Jan 13 10:27:32 2017 Page 1

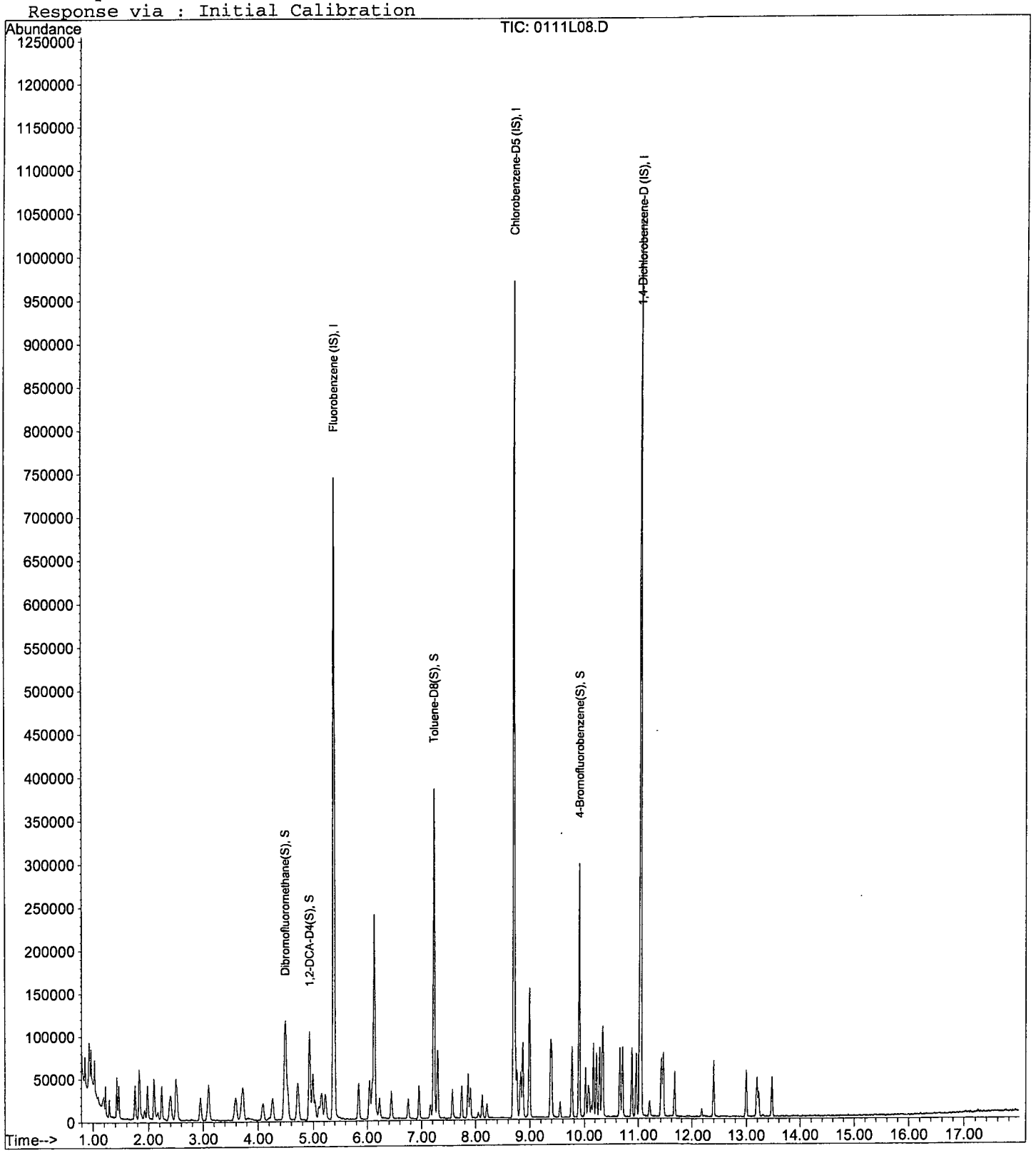
Quantitation Report

Data File : M:\LOKI\DATA\170111\0111L08.D
Acq On : 11 Jan 17 13:20
Sample : 2.0ug/L VOC STD 1/11/17M
Misc : W IS&S 1/3/17, 01/11/17

Vial: 7
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 10:26 2017 Quant Results File: LSUR111.RES

Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L09.D Vial: 8
Acq On : 11 Jan 17 13:48 Operator: PM,DG,SV,CMM
Sample : 5.0ug/L VOC STD 1/11/17N Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 13 10:26 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	355200	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	319360	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	174144	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.49	111	197346	24.89755 ppb	0.00
Spiked Amount 25.000			Recovery = 99.592%		
3) 1,2-DCA-D4(S)	4.93	65	213172	24.79896 ppb	0.00
Spiked Amount 25.000			Recovery = 99.196%		
5) Toluene-D8(S)	7.22	98	651549	25.48747 ppb	0.00
Spiked Amount 25.000			Recovery = 101.948%		
6) 4-Bromofluorobenzene(S)	9.89	95	233382	26.30991 ppb	0.00
Spiked Amount 25.000			Recovery = 105.240%		

Target Compounds Qvalue

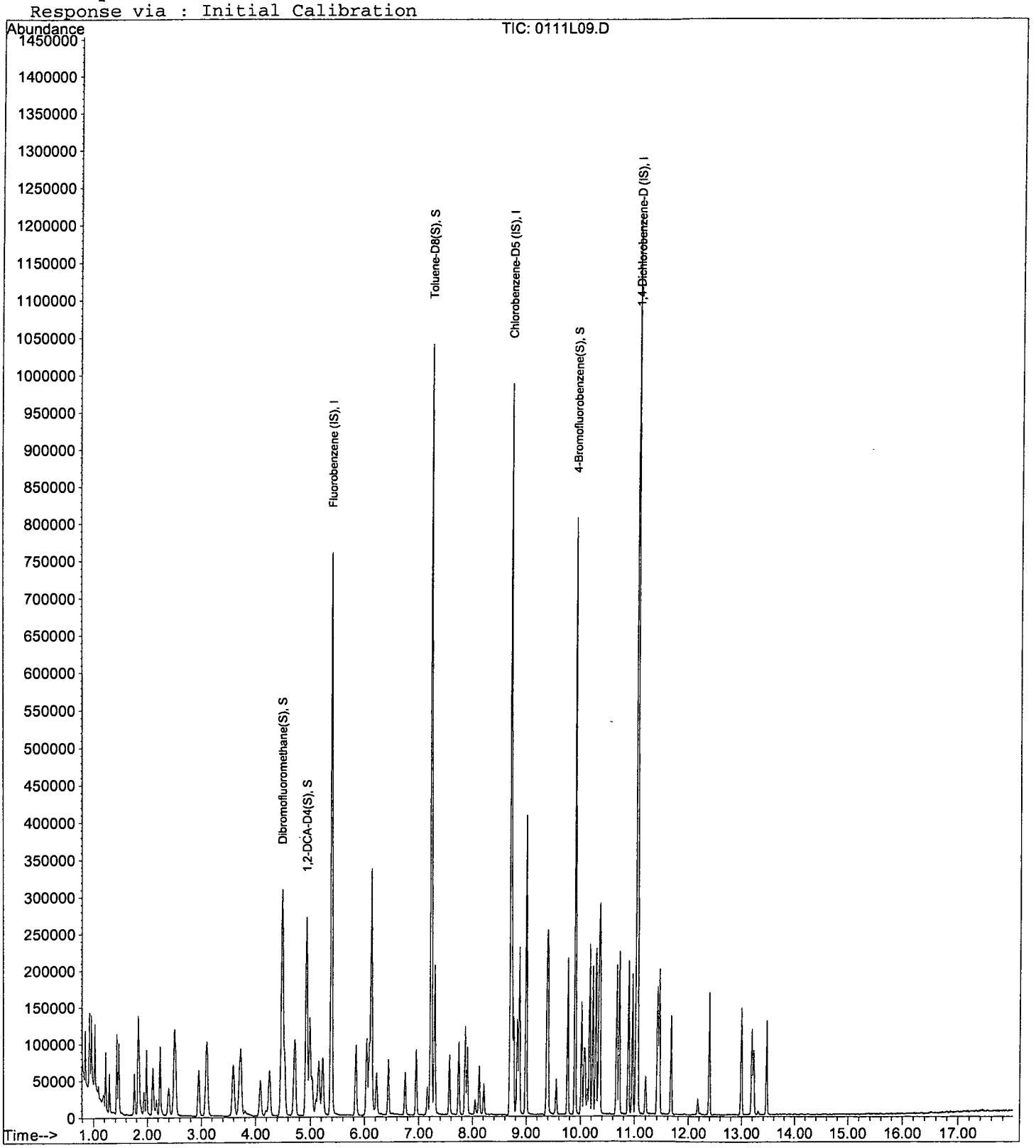
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\170111\0111L09.D Vial: 8
Acq On : 11 Jan 17 13:48 Operator: PM,DG,SV,CMM
Sample : 5.0ug/L VOC STD 1/11/17N Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 13 10:26 2017 Quant Results File: LSUR111.RES

Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L10.D
Acq On : 11 Jan 17 14:16
Sample : 10ug/L VOC STD 1/11/17O
Misc : W IS&S 1/3/17, 01/11/17

Vial: 9
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 10:26 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	363392	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	319296	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	176960	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.48	111	201567	24.85680 ppb	0.00
Spiked Amount 25.000			Recovery = 99.428%		
3) 1,2-DCA-D4(S)	4.92	65	219993	25.01554 ppb	0.00
Spiked Amount 25.000			Recovery = 100.064%		
5) Toluene-D8(S)	7.22	98	673119	26.33652 ppb	0.00
Spiked Amount 25.000			Recovery = 105.348%		
6) 4-Bromofluorobenzene(S)	9.89	95	240729	27.14360 ppb	0.00
Spiked Amount 25.000			Recovery = 108.576%		

Target Compounds Qvalue

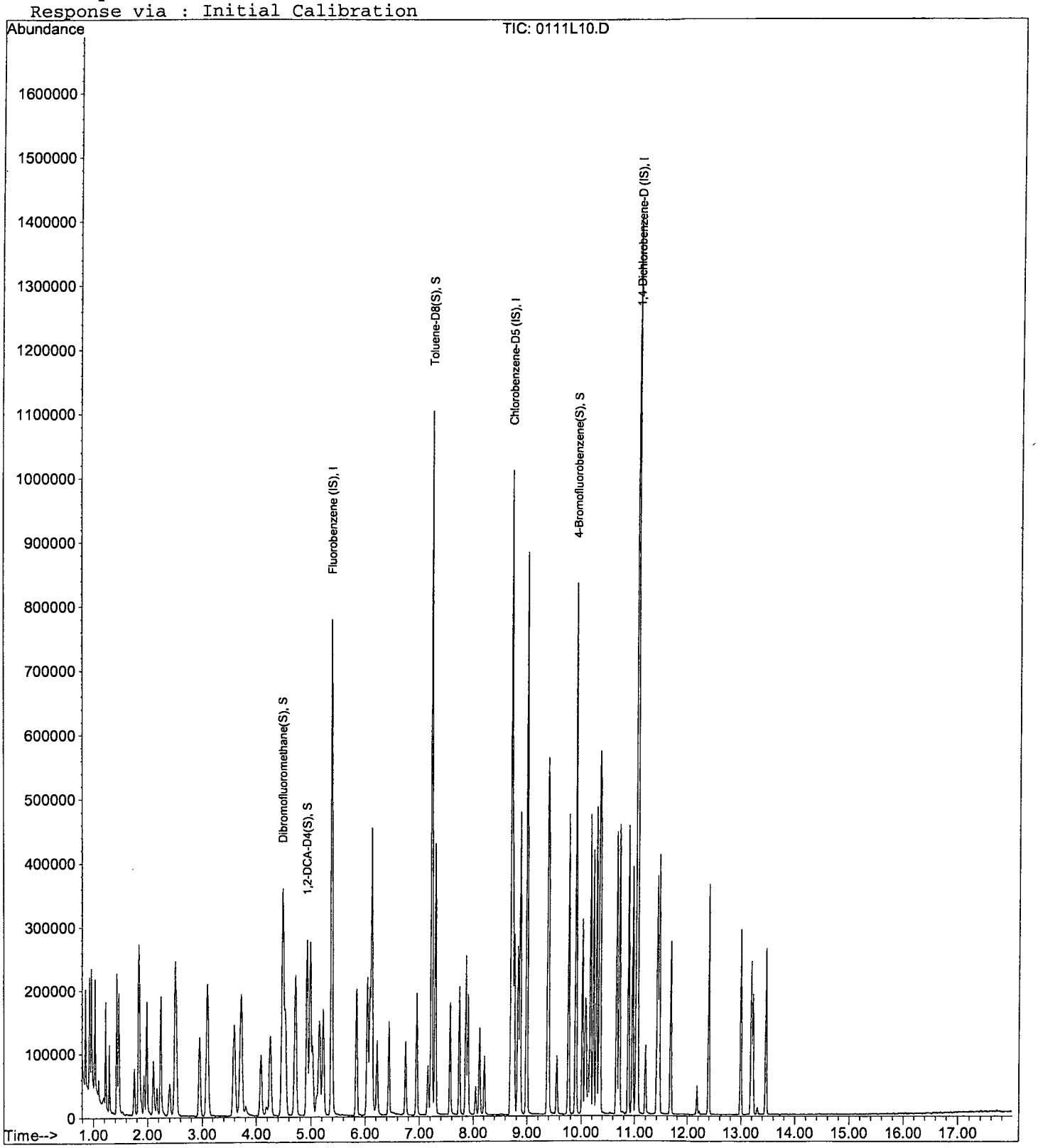
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\170111\0111L10.D Vial: 9
Acq On : 11 Jan 17 14:16 Operator: PM,DG,SV,CMM
Sample : 10ug/L VOC STD 1/11/17O Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 13 10:26 2017 Quant Results File: LSUR111.RES

Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L11.D Vial: 10
Acq On : 11 Jan 17 14:44 Operator: PM,DG,SV,CMM
Sample : 20ug/L VOC STD 1/11/17P Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 13 10:26 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	374528	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	339392	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	187776	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.48	111	406045	48.58376 ppb	0.00
Spiked Amount 25.000			Recovery = 194.336%		
3) 1,2-DCA-D4(S)	4.92	65	451511	49.81503 ppb	0.00
Spiked Amount 25.000			Recovery = 199.260%		
5) Toluene-D8(S)	7.22	98	1402444	51.62309 ppb	0.00
Spiked Amount 25.000			Recovery = 206.492%		
6) 4-Bromofluorobenzene(S)	9.89	95	503786	53.44130 ppb	0.00
Spiked Amount 25.000			Recovery = 213.764%		

Target Compounds Qvalue

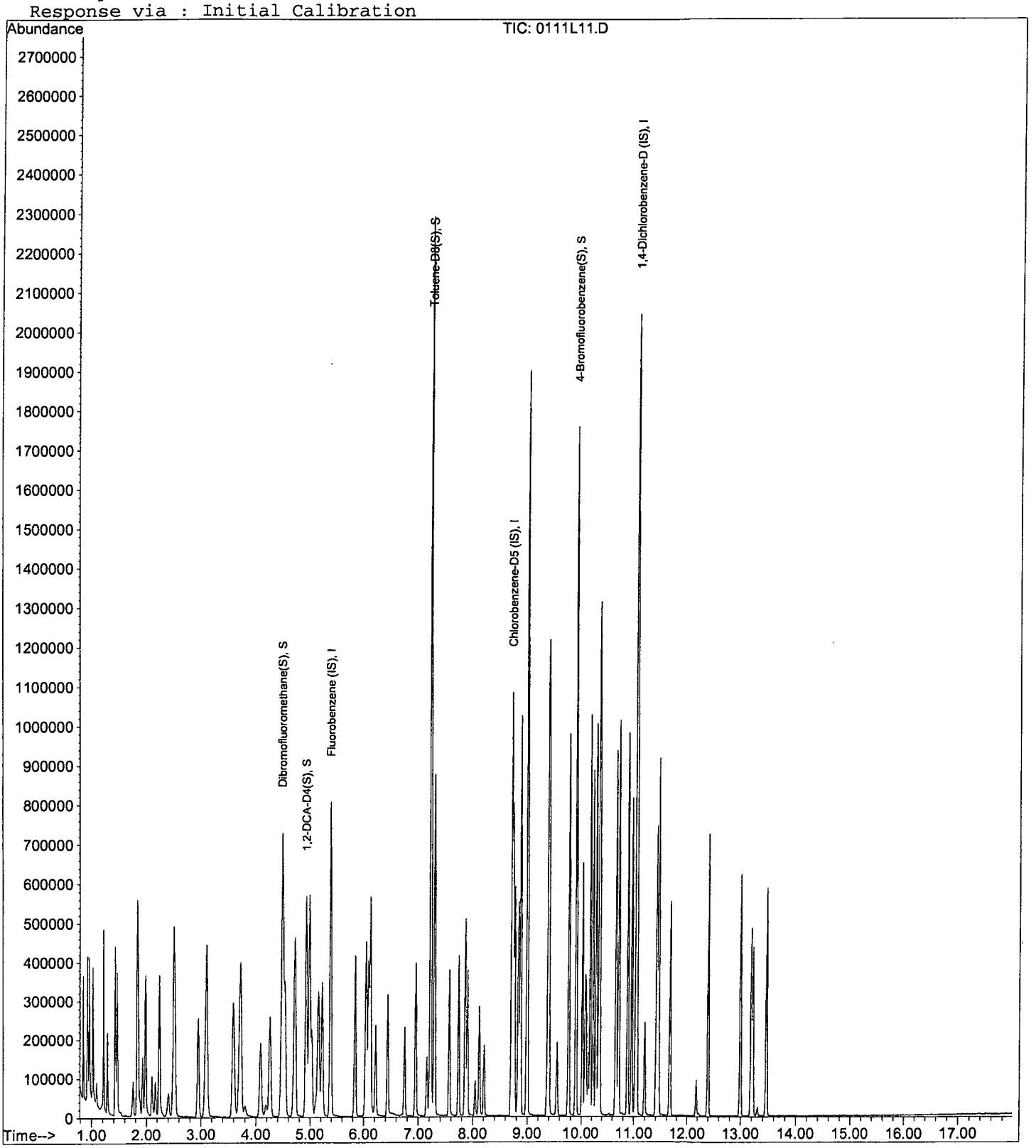
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\170111\0111L11.D Vial: 10
Acq On : 11 Jan 17 14:44 Operator: PM,DG,SV,CMM
Sample : 20ug/L VOC STD 1/11/17P Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 13 10:26 2017 Quant Results File: LSUR111.RES

Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L12.D Vial: 11
Acq On : 11 Jan 17 15:12 Operator: PM,DG,SV,CMM
Sample : 40ug/L VOC STD 1/11/17Q Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 13 10:26 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	394368	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	367744	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	189824	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.48	111	426658	48.48188 ppb	0.00
Spiked Amount 25.000			Recovery	= 193.928%	
3) 1,2-DCA-D4(S)	4.92	65	449789	47.12848 ppb	0.00
Spiked Amount 25.000			Recovery	= 188.512%	
5) Toluene-D8(S)	7.22	98	1456385	49.47556 ppb	0.00
Spiked Amount 25.000			Recovery	= 197.904%	
6) 4-Bromofluorobenzene(S)	9.89	95	518450	50.75675 ppb	0.00
Spiked Amount 25.000			Recovery	= 203.028%	

Target Compounds Qvalue

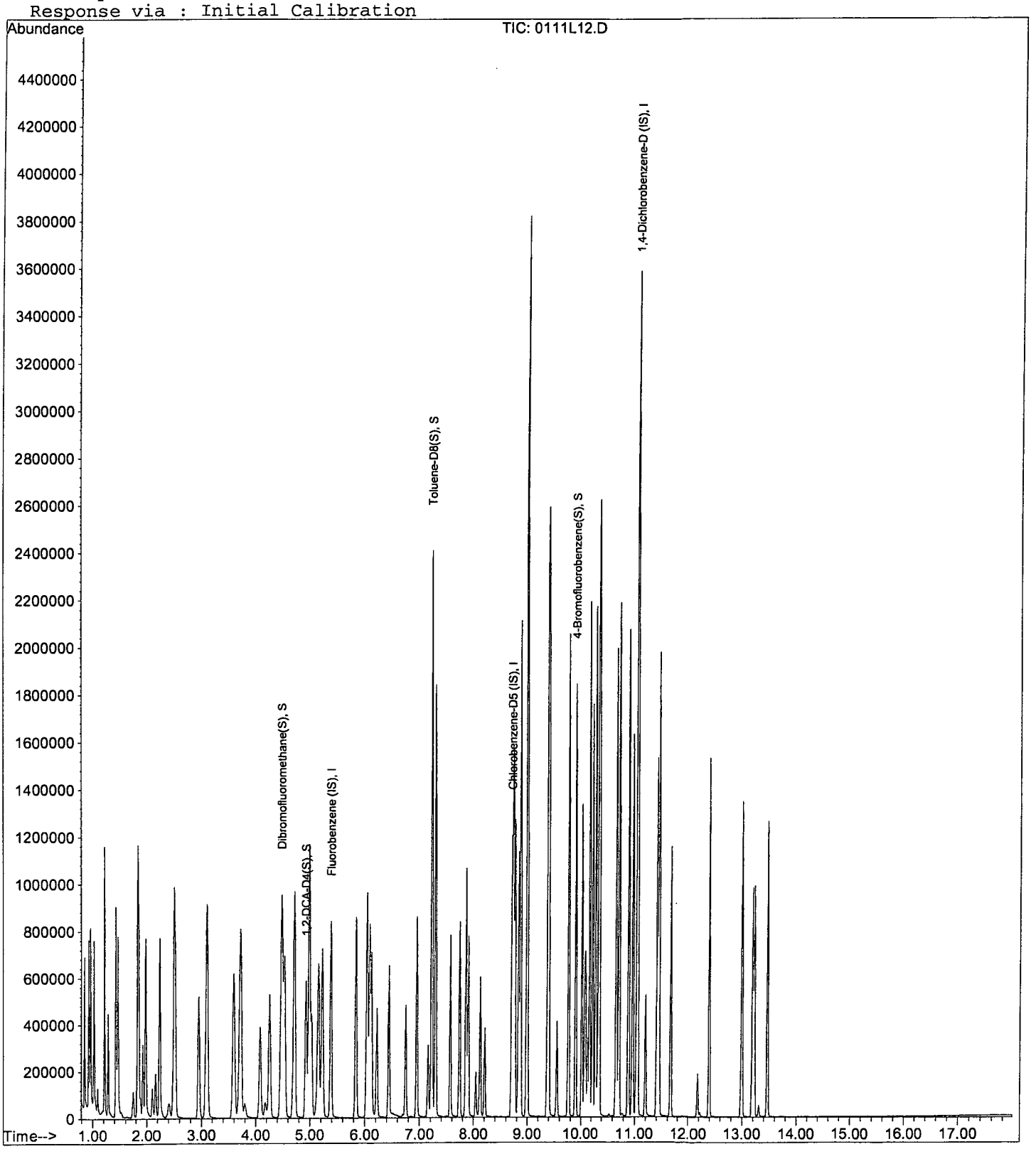
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\170111\0111L12.D Vial: 11
Acq On : 11 Jan 17 15:12 Operator: PM,DG,SV,CMM
Sample : 40ug/L VOC STD 1/11/17Q Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 13 10:26 2017 Quant Results File: LSUR111.RES

Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L13.D Vial: 12
Acq On : 11 Jan 17 15:41 Operator: PM,DG,SV,CMM
Sample : 100ug/L VOC STD 1/11/17R Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 13 10:26 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	402176	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	375168	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	202240	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.48	111	798040	88.92210 ppb	0.00
Spiked Amount 25.000			Recovery	= 355.688%	
3) 1,2-DCA-D4(S)	4.92	65	846915	87.01617 ppb	0.00
Spiked Amount 25.000			Recovery	= 348.064%	
5) Toluene-D8(S)	7.22	98	2844404	94.71649 ppb	0.00
Spiked Amount 25.000			Recovery	= 378.864%	
6) 4-Bromofluorobenzene(S)	9.89	95	1032194	99.05311 ppb	0.00
Spiked Amount 25.000			Recovery	= 396.212%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

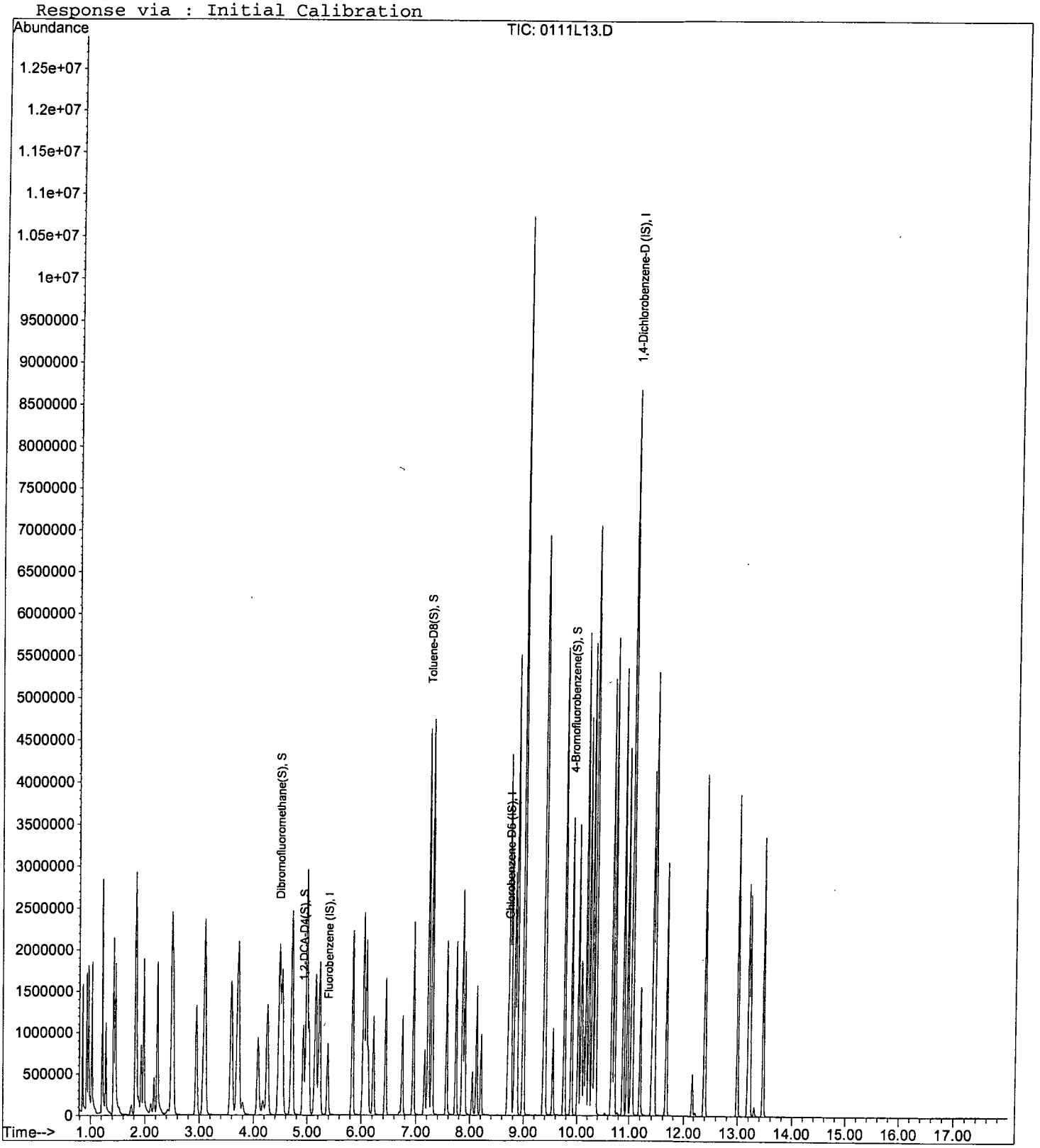
Data File : M:\LOKI\DATA\170111\0111L13.D
Acq On : 11 Jan 17 15:41
Sample : 100ug/L VOC STD 1/11/17R
Misc : W IS&S 1/3/17, 01/11/17

Vial: 12
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 10:26 2017

Quant Results File: LSUR111.RES

Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Initial Cal. Date: 1/12/17
Instrument: Loki

Initials:

		Compound	1	2	3	4	5	6	7				Avg	%RSD		
			0112L12.D	0112L13.D	0112L14.D	0112L15.D	0112L16.D	0112L17.D	0112L18.D							
1	I	Fluorobenzene (IS)														
2	TMHBL	Gasoline C6-C10	12.8	5.668	3.302	1.642	1.211	1.107	1.065				3.8	112	TMHBL	1.000
3	I	Chlorobenzene-D5 (IS)														
4	I	1,4-Dichlorobenzene-D (IS)														
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Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0112L12.D
Acq On : 12 Jan 17 15:56
Sample : 20ug/L GAS STD 1/12/17G
Misc : W IS&S 1/3/17, 01/11/17

Vial: 11
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 7:37 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:20:05 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	737604	25.00000 ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	996211	25.00000 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	984189	25.00000 ppb	0.00

System Monitoring Compounds

Target Compounds					Qvalue
2) Gasoline C6-C10	7.22	TIC	7544140m	23.01848 ppb	100

(#) = qualifier out of range (m) = manual integration
0112L12.D LGAS6112.M Fri Jan 13 09:21:15 2017

Quantitation Report

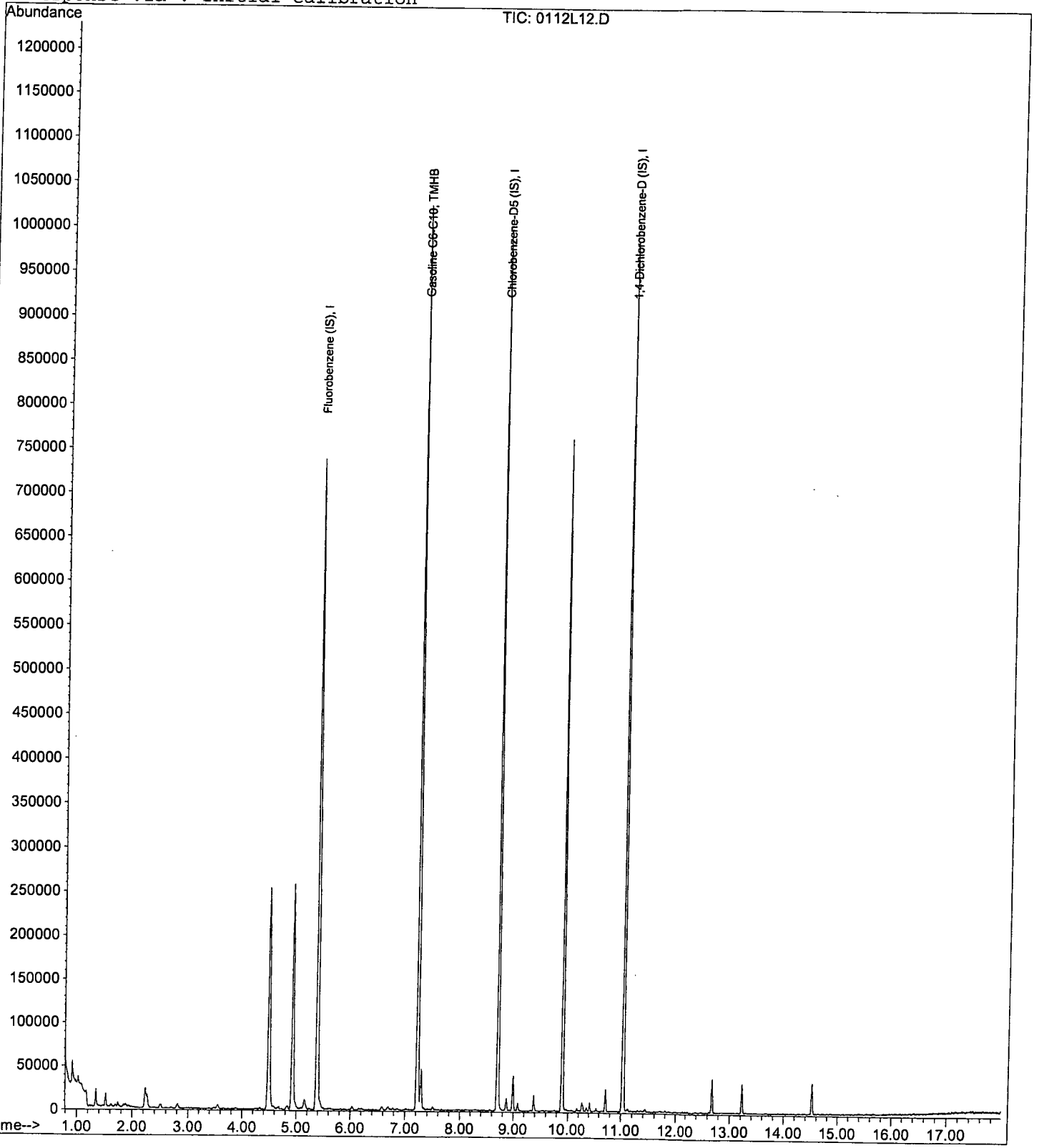
Data File : M:\LOKI\DATA\170111\0112L12.D
Acq On : 12 Jan 17 15:56
Sample : 20ug/L GAS STD 1/12/17G
Misc : W IS&S 1/3/17, 01/11/17

Vial: 11
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 7:37 2017

Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0112L13.D
Acq On : 12 Jan 17 16:24
Sample : 50ug/L GAS STD 1/12/17G
Misc : W IS&S 1/3/17, 01/11/17

Vial: 12
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 7:38 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:20:05 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	724516	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	977270	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	976892	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	8212424m	54.72880	ppb	100

(#) = qualifier out of range (m) = manual integration
0112L13.D LGAS6112.M Fri Jan 13 09:21:19 2017

Quantitation Report

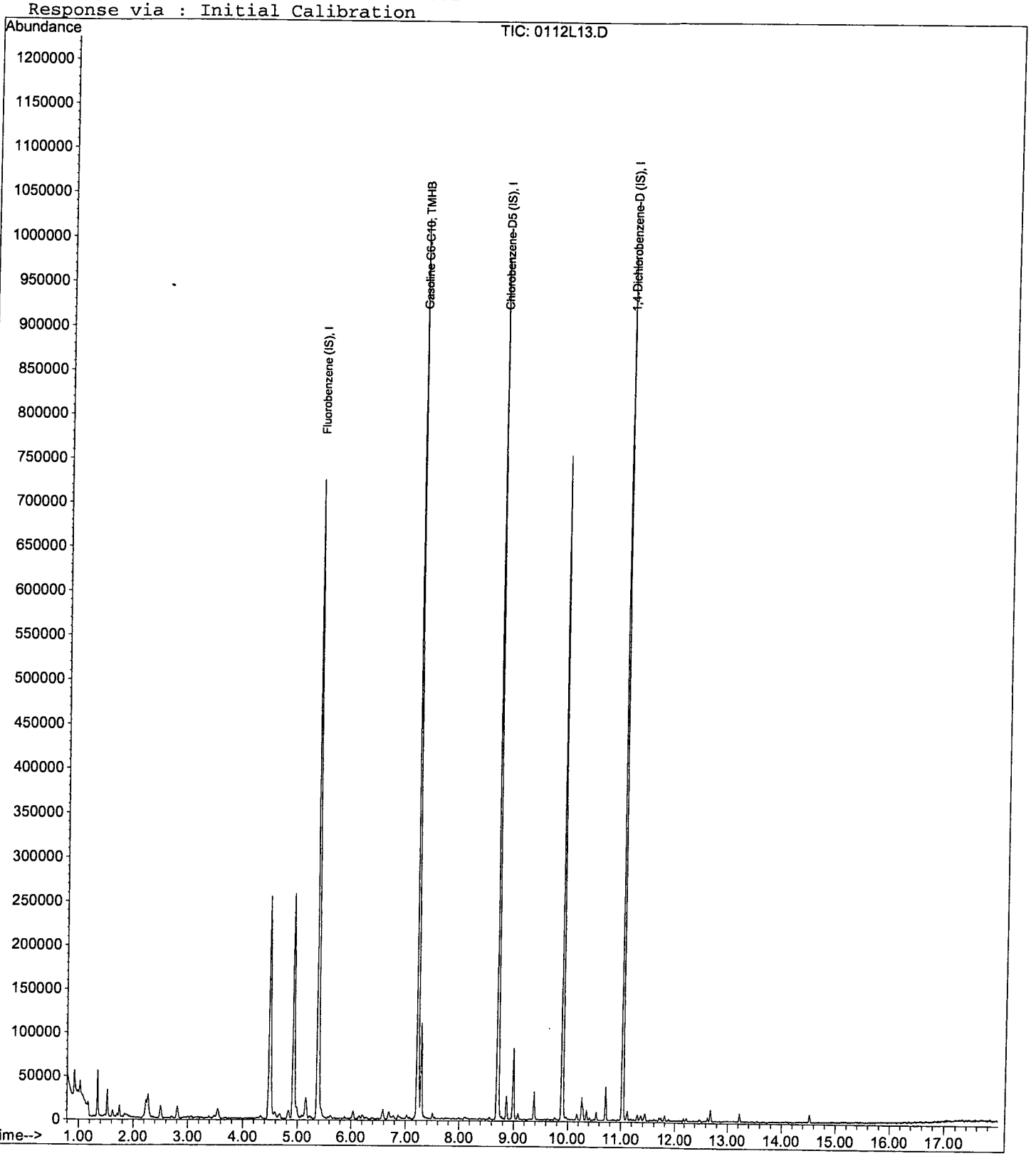
Data File : M:\LOKI\DATA\170111\0112L13.D
Acq On : 12 Jan 17 16:24
Sample : 50ug/L GAS STD 1/12/17G
Misc : W IS&S 1/3/17, 01/11/17

Vial: 12
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 7:38 2017

Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0112L14.D
Acq On : 12 Jan 17 16:52
Sample : 100ug/L GAS STD 1/12/17G
Misc : W IS&S 1/3/17, 01/11/17

Vial: 13
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 7:40 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:20:05 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	716612	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	995083	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	982076	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	9466306m	108.42457	ppb	100

(#) = qualifier out of range (m) = manual integration
0112L14.D LGAS6112.M Fri Jan 13 09:21:23 2017

Quantitation Report

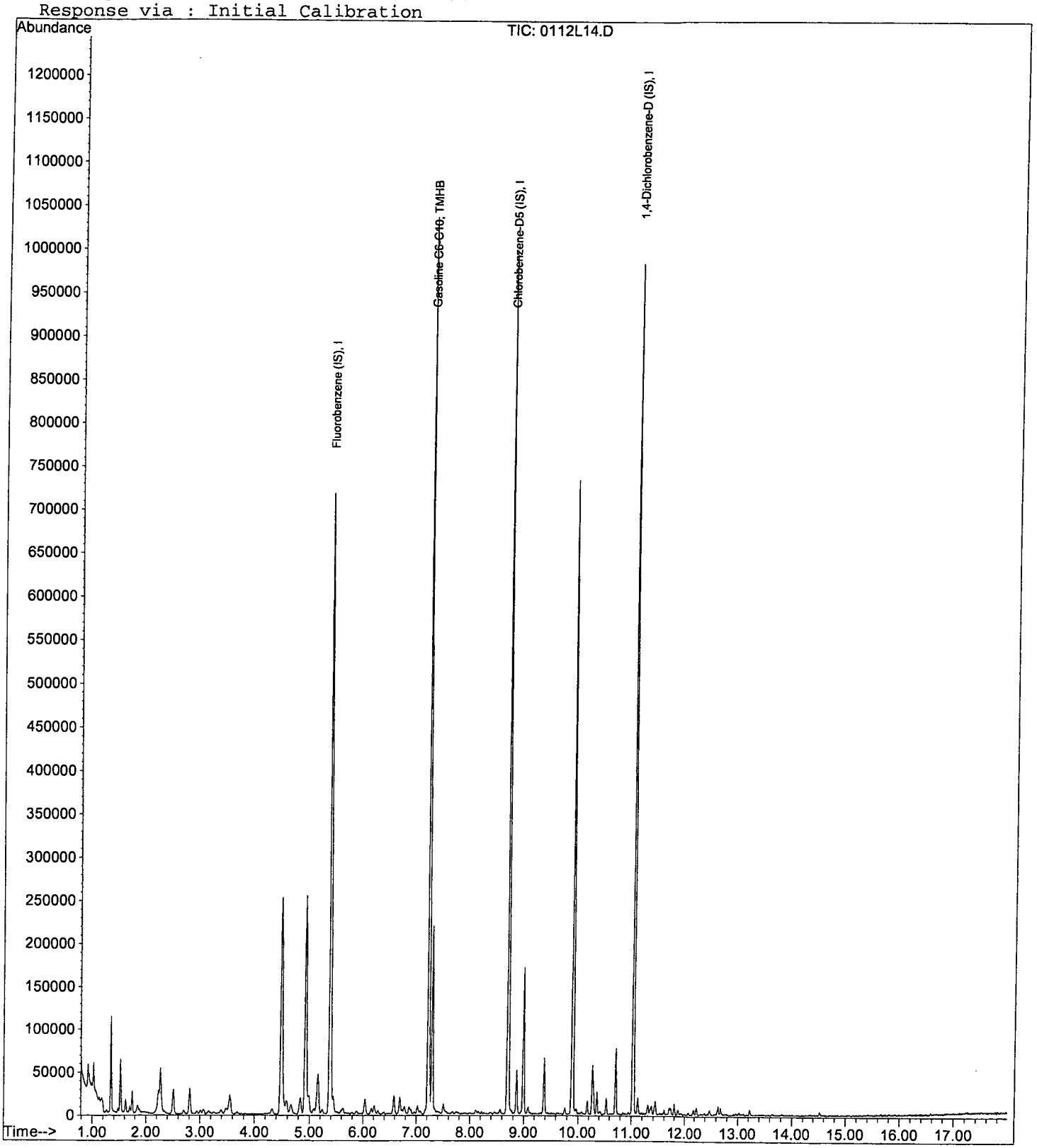
Data File : M:\LOKI\DATA\170111\0112L14.D
Acq On : 12 Jan 17 16:52
Sample : 100ug/L GAS STD 1/12/17G
Misc : W IS&S 1/3/17, 01/11/17

Vial: 13
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 7:40 2017

Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0112L15.D
Acq On : 12 Jan 17 17:20
Sample : 300ug/L GAS STD 1/12/17G
Misc : W IS&S 1/3/17, 01/11/17

Vial: 14
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 7:48 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:20:05 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	768104	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1009992	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1031553	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	15137027m	294.51356	ppb	100

(#) = qualifier out of range (m) = manual integration
0112L15.D LGAS6112.M Fri Jan 13 09:21:26 2017

Quantitation Report

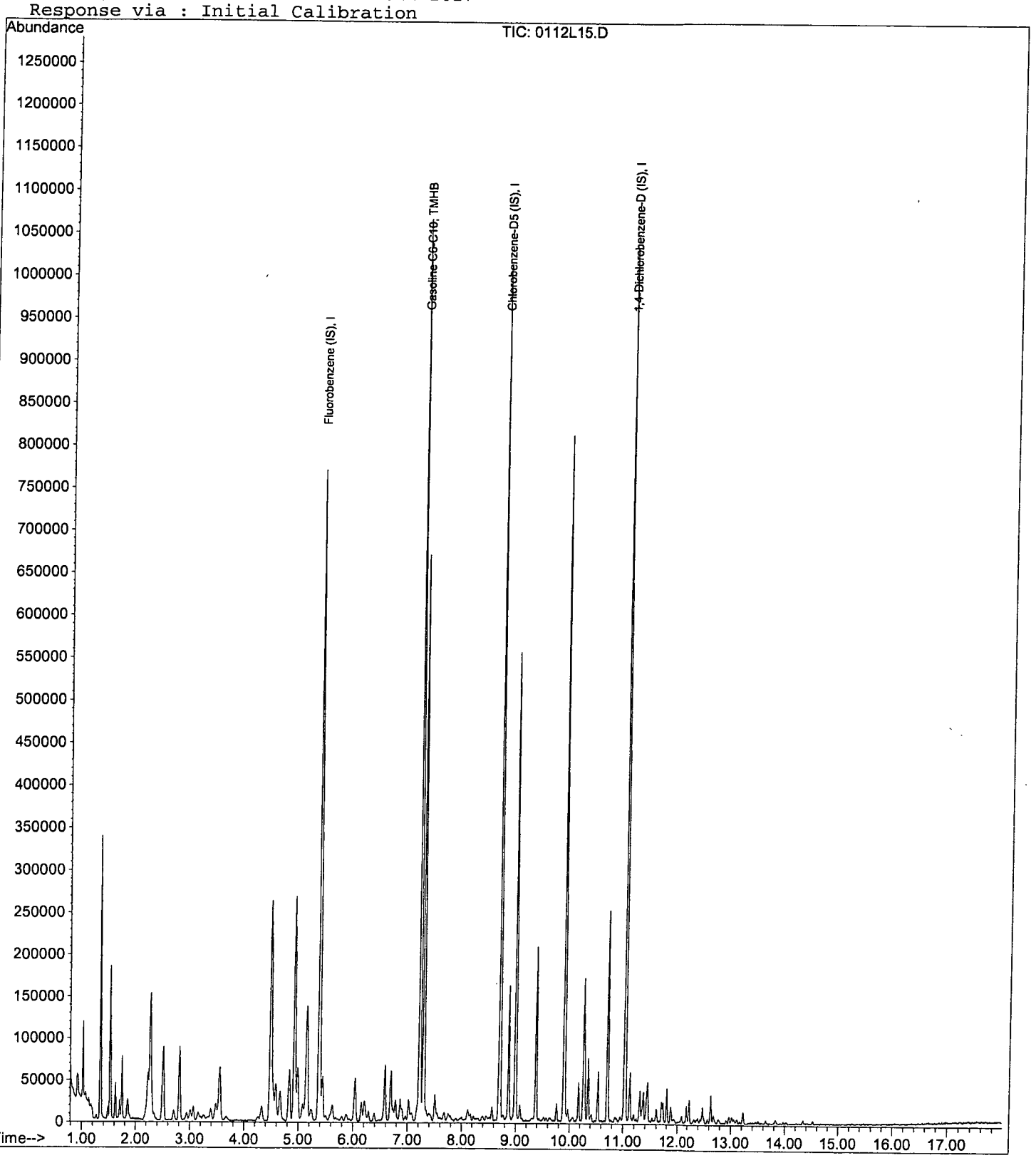
Data File : M:\LOKI\DATA\170111\0112L15.D
Acq On : 12 Jan 17 17:20
Sample : 300ug/L GAS STD 1/12/17G
Misc : W IS&S 1/3/17, 01/11/17

Vial: 14
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 7:48 2017

Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0112L16.D
Acq On : 12 Jan 17 17:48
Sample : 600ug/L GAS STD 1/12/17G
Misc : W IS&S 1/3/17, 01/11/17

Vial: 15
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 7:49 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:20:05 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	759958	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	993191	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1059117	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.29	TIC	22083566m	562.36618	ppb	100

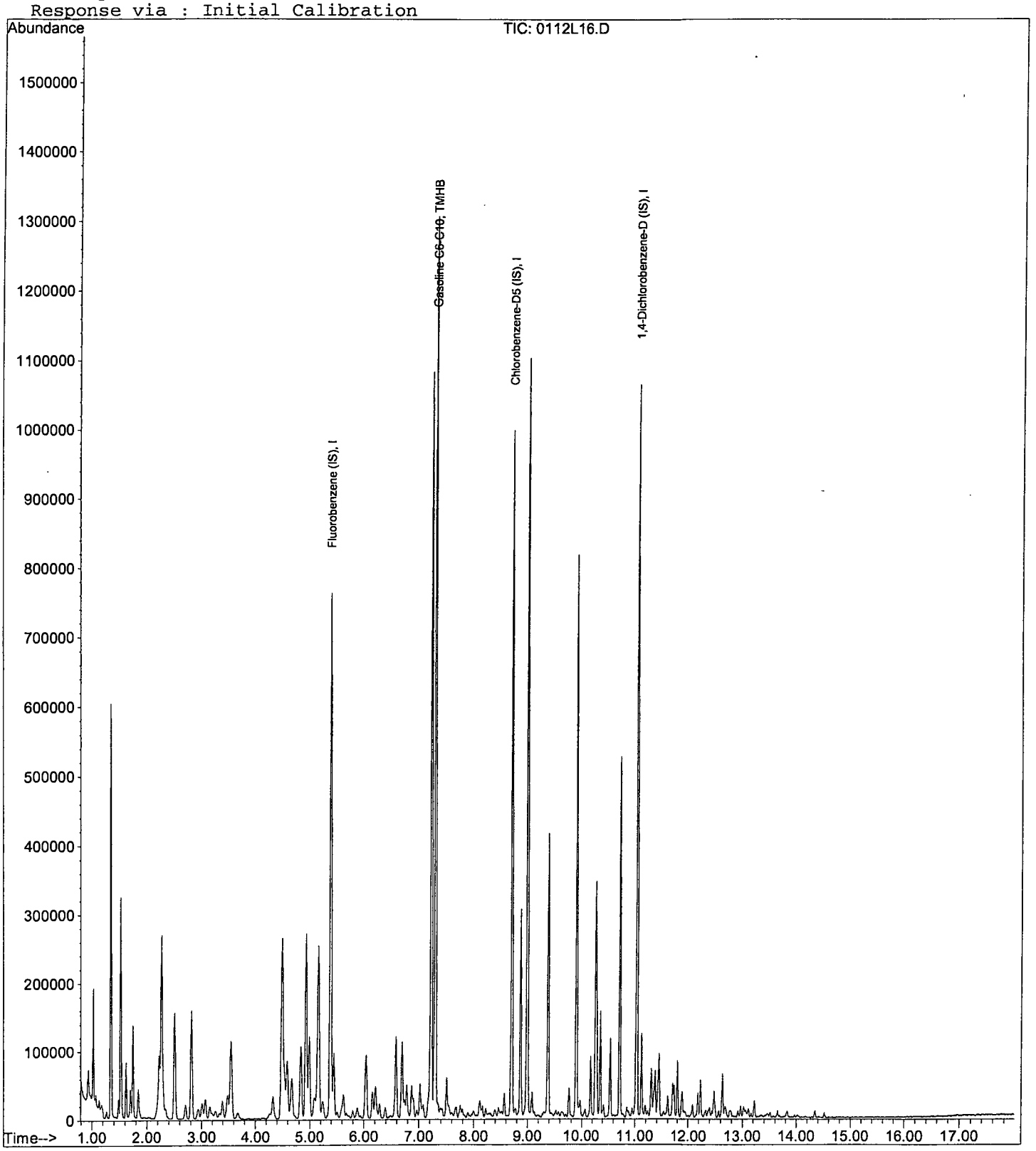
(#) = qualifier out of range (m) = manual integration
0112L16.D LGAS6112.M Fri Jan 13 09:21:30 2017 Page 1

Quantitation Report

Data File : M:\LOKI\DATA\170111\0112L16.D Vial: 15
Acq On : 12 Jan 17 17:48 Operator: PM,DG,SV,CMM
Sample : 600ug/L GAS STD 1/12/17G Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 13 7:49 2017 Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0112L17.D
Acq On : 12 Jan 17 18:16
Sample : 800ug/L GAS STD 1/12/17G
Misc : W IS&S 1/3/17, 01/11/17

Vial: 16
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 7:44 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:20:05 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	771040	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1044616	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1086612	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.29	TIC	27320479m	744.93682	ppb	100

(#) = qualifier out of range (m) = manual integration
0112L17.D LGAS6112.M Fri Jan 13 09:21:34 2017

Quantitation Report

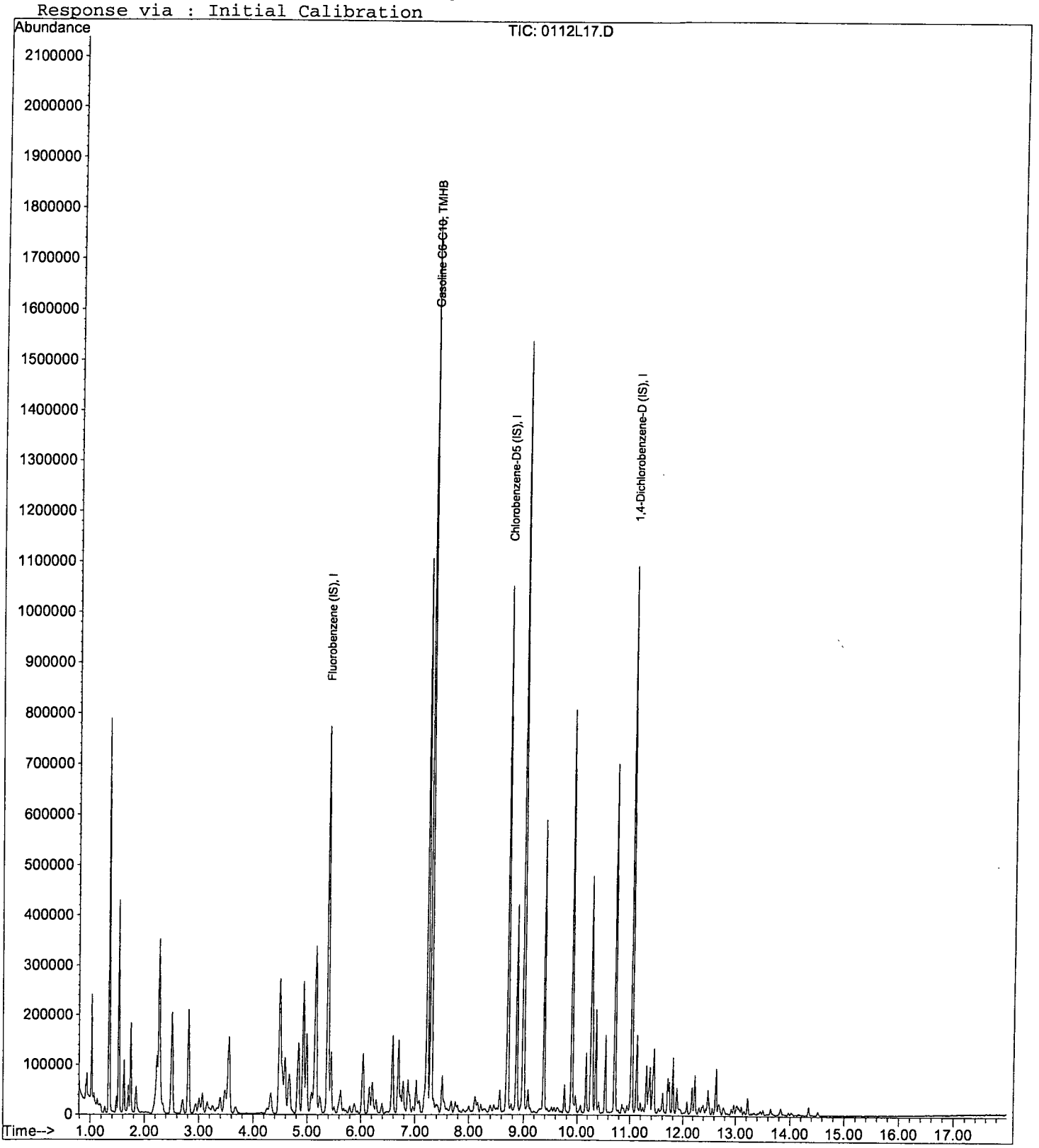
Data File : M:\LOKI\DATA\170111\0112L17.D
Acq On : 12 Jan 17 18:16
Sample : 800ug/L GAS STD 1/12/17G
Misc : W IS&S 1/3/17, 01/11/17

Vial: 16
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 7:44 2017

Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0112L18.D Vial: 17
Acq On : 12 Jan 17 18:44 Operator: PM,DG,SV,CMM
Sample : 1000ug/L GAS STD 1/12/17G Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 13 7:45 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:20:05 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	776642	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1036191	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1108873	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.29	TIC	33075714m	949.86127	ppb	100

(#) = qualifier out of range (m) = manual integration
0112L18.D LGAS6112.M Fri Jan 13 09:21:38 2017 Page 1

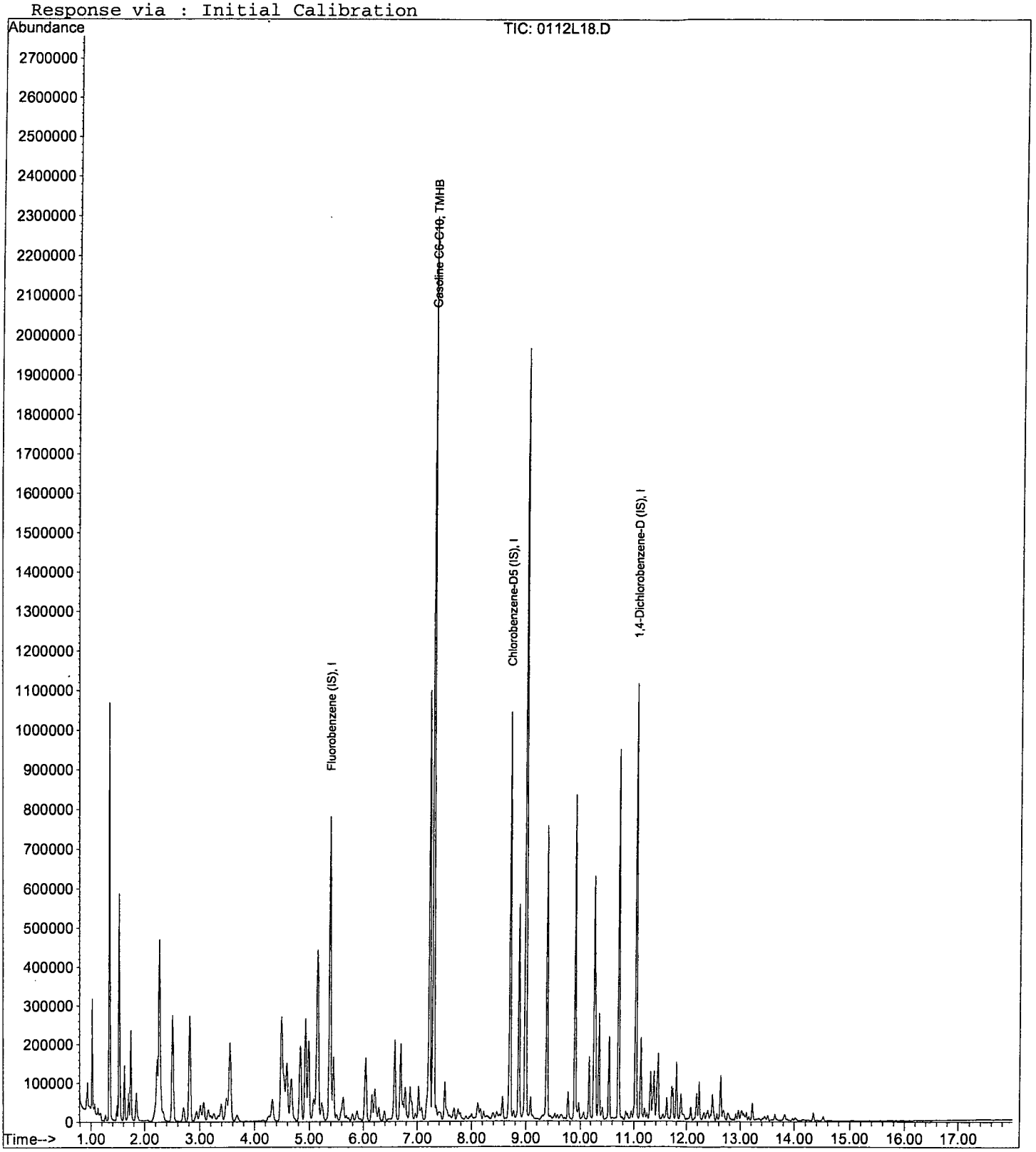
Quantitation Report

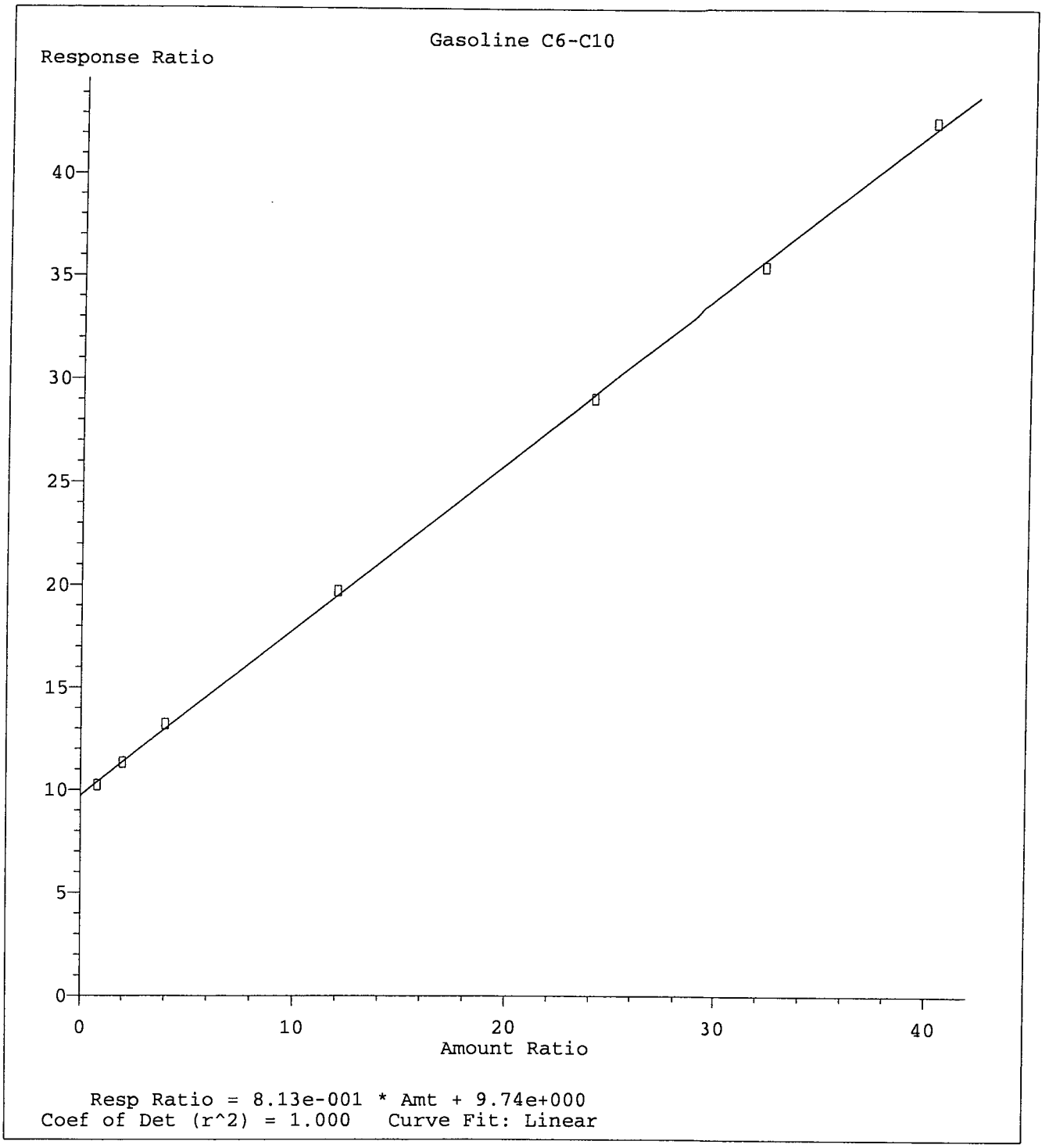
Data File : M:\LOKI\DATA\170111\0112L18.D
Acq On : 12 Jan 17 18:44
Sample : 1000ug/L GAS STD 1/12/17G
Misc : W IS&S 1/3/17, 01/11/17

Vial: 17
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 7:45 2017 Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration





Method Name: M:\LOKI\DATA\170111\LGAS6112.M
Calibration Table Last Updated: Fri Jan 13 07:50:11 2017

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 1/12/17
Instrument: Loki
Initial Cal. Date: 1/12/17
Data File: 0112L21.D

		Compound	MEAN	CCRF	%D		%Drift
1	TMHB	Gasoline C6-C10	3.826	1.648	57	TMHBL	2.8
2							
3							
4							
5							
6							
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39							
40							
		Average			57.0		

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0112L21.D
Acq On : 12 Jan 17 20:08
Sample : (SS)300ug/L GAS STD 1/12/17G
Misc : W IS&S 1/3/17, 01/11/17

Vial: 20
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 7:51 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	783598	25.00000 ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1042383	25.00000 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1090665	25.00000 ppb	0.00

System Monitoring Compounds

Target Compounds					Qvalue
2) Gasoline C6-C10	7.22	TIC	15492164m	308.28315 ppb	100

(#) = qualifier out of range (m) = manual integration
0112L21.D LGAS6112.M Fri Jan 13 09:22:41 2017 Page 1

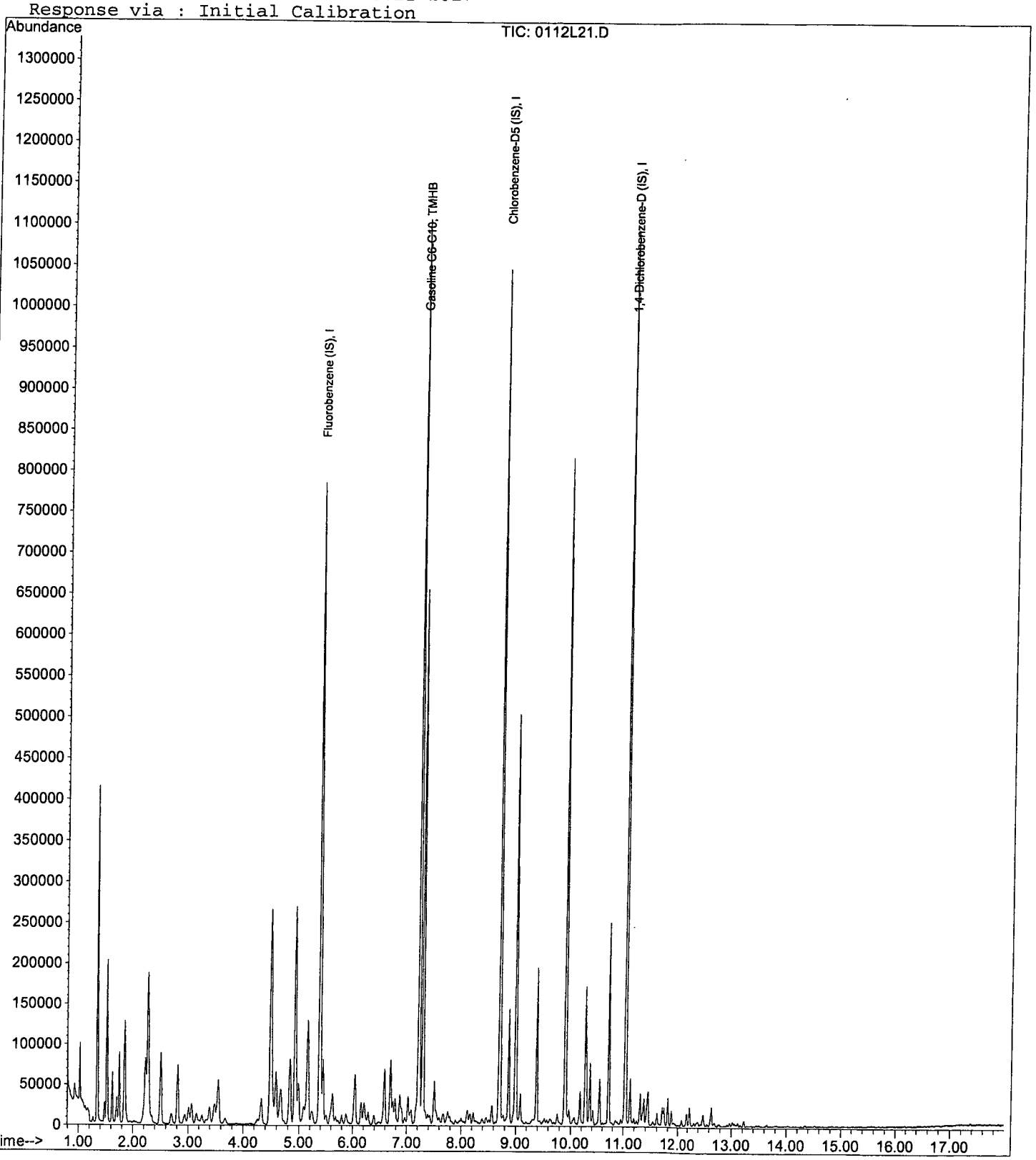
Quantitation Report

Data File : M:\LOKI\DATA\170111\0112L21.D
Acq On : 12 Jan 17 20:08
Sample : (SS)300ug/L GAS STD 1/12/17G
Misc : W IS&S 1/3/17, 01/11/17

Vial: 20
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 7:51 2017 Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/13/17
Instrument: Loki
Initial Cal. Date: 01/11/17
Data File: 0113L08.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	3.826	1.626	57	TMHBL	0.17
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
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39							
40							
		Average			57.0		

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L08.D Vial: 5
Acq On : 13 Jan 17 11:22 Operator: PM,DG,SV,CMM
Sample : 170113A CCV/LCS-1WL 300ug/L Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 13 12:17 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	781563	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1036927	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1087848	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	15254482m	300.52	ppb	100

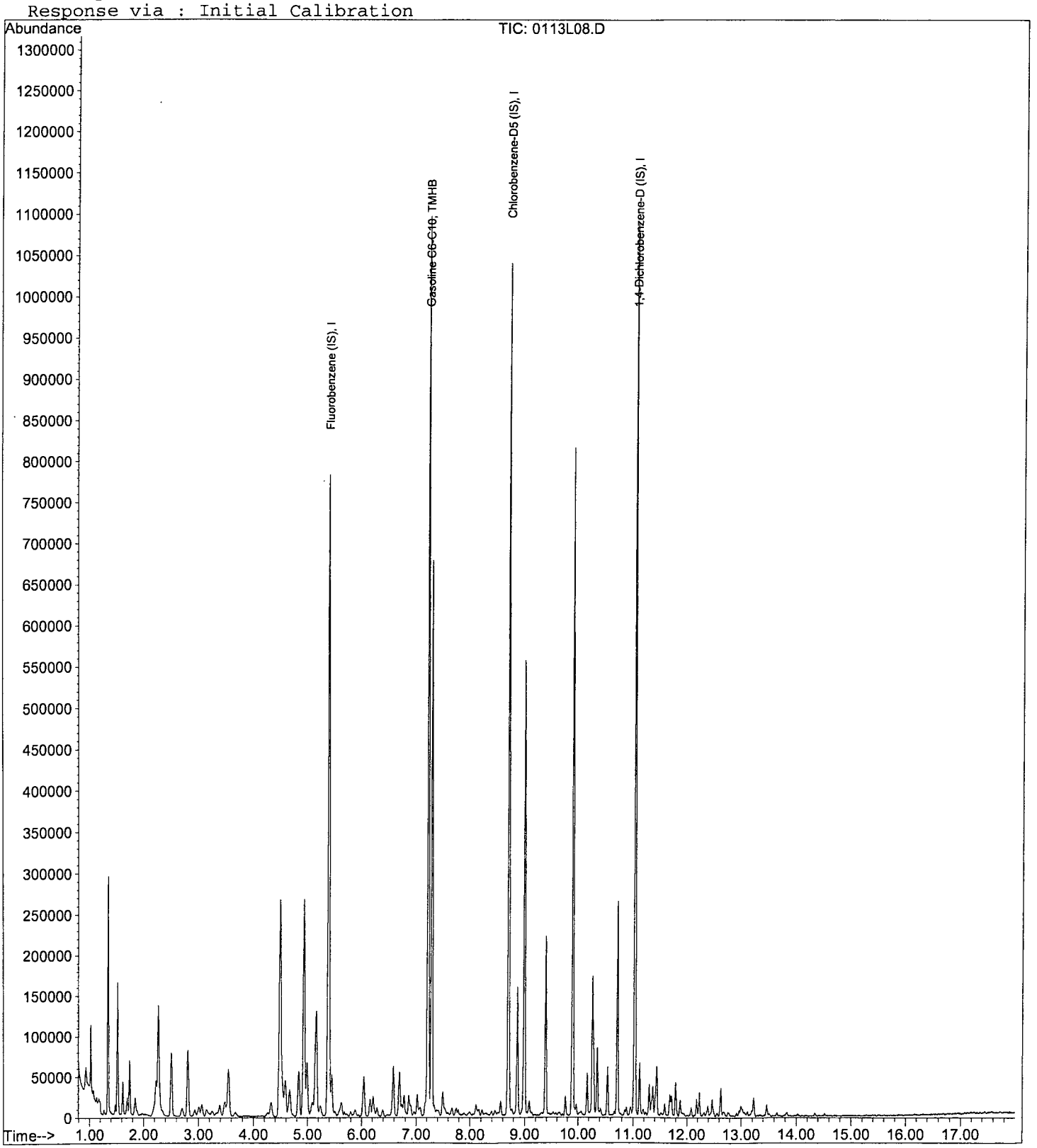
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L08.D Vial: 5
Acq On : 13 Jan 17 11:22 Operator: PM,DG,SV,CMM
Sample : 170113A CCV/LCS-1WL 300ug/L Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 13 12:17 2017 Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/13/17
Instrument: Loki
Initial Cal. Date: 01/11/17
Data File: 0113L08.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	S	Dibromofluoromethane(S)	0.5579	0.5370	3.7	S	
3	S	1,2-DCA-D4(S)	0.6050	0.5833	3.6	S	
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	S	Toluene-D8(S)	2.001	2.029	1.4	S	
6	S	4-Bromofluorobenzene(S)	0.6944	0.6916	0.41	S	
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
8							
9							
10							
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39							
40							
		Average			2.3		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L08.D Vial: 5
Acq On : 13 Jan 17 11:22 Operator: PM,DG,SV,CMM
Sample : 170113A CCV/LCS-1WL 300ug/L Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 13:55 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	368256	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	336768	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	174016	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	197742	24.06	ppb	0.00
Spiked Amount 25.000			Recovery = 96.252%			
3) 1,2-DCA-D4(S)	4.92	65	214809	24.10	ppb	0.00
Spiked Amount 25.000			Recovery = 96.412%			
5) Toluene-D8(S)	7.22	98	683329	25.35	ppb	0.00
Spiked Amount 25.000			Recovery = 101.396%			
6) 4-Bromofluorobenzene(S)	9.89	95	232899	24.90	ppb	0.00
Spiked Amount 25.000			Recovery = 99.592%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/13/17
Matrix: Instrument: Loki
Initial Cal. Date: 01/11/17
Data File: 0113L30.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	3.826	1.609	58	TMHBL	2.0
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
5							
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7							
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40							
		Average			58.0		

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L30.D Vial: 27
Acq On : 13 Jan 17 21:38 Operator: PM,DG,SV,CMM
Sample : Ending CCV Gas 300ug/L 1/13/17 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 13:58 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	698248	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	949238	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	981793	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	13477900m	293.90	ppb	100

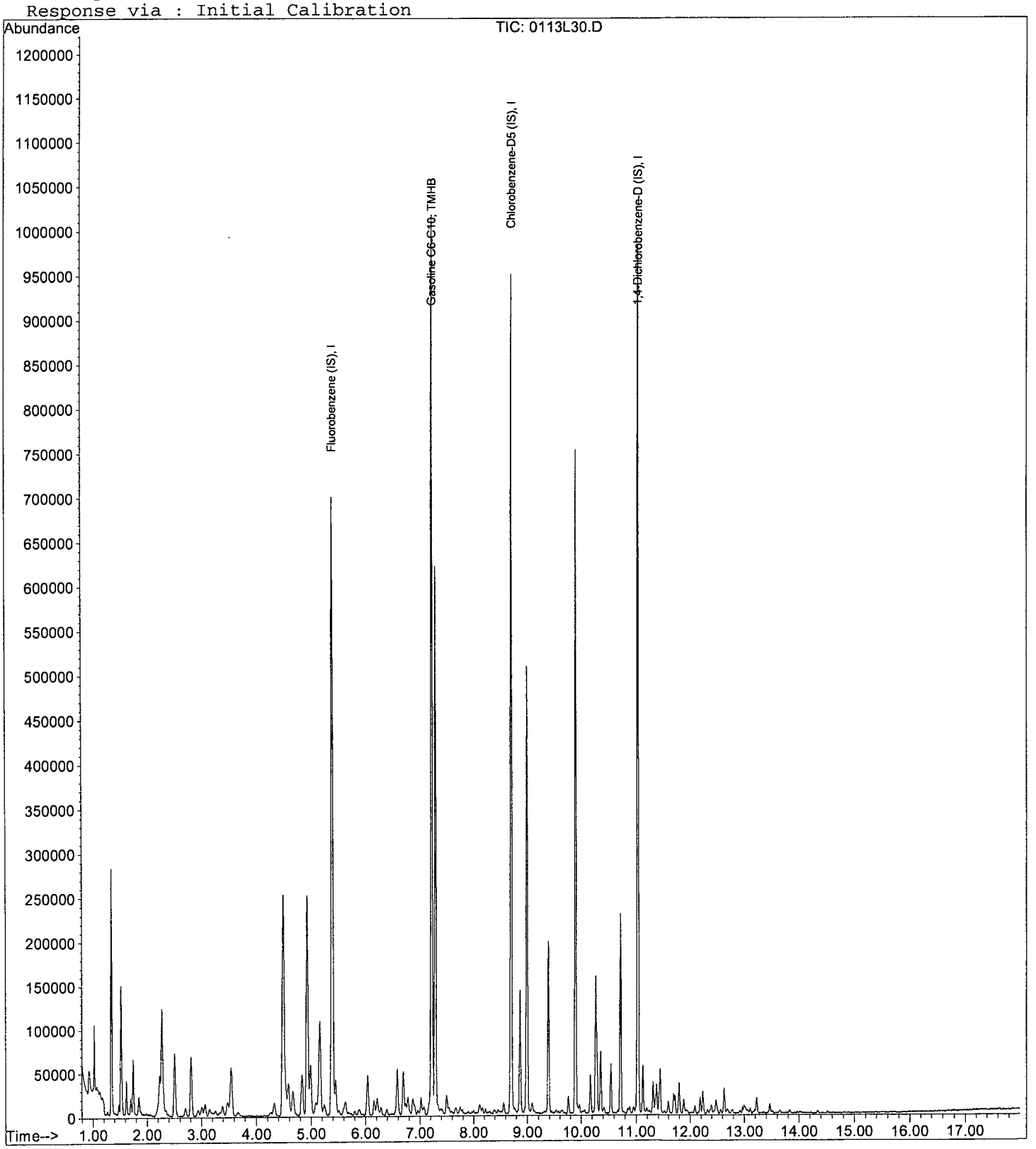
(#) = qualifier out of range (m) = manual integration
0113L30.D LGAS6112.M Tue Jan 17 13:42:53 2017 Page 1

Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L30.D Vial: 27
Acq On : 13 Jan 17 21:38 Operator: PM,DG,SV,CMM
Sample : Ending CCV Gas 300ug/L 1/13/17 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 13:58 2017 Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/13/17
Instrument: Loki
Initial Cal. Date: 01/11/17
Data File: 0113L30.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	S	Dibromofluoromethane(S)	0.5579	0.5680	1.8	S	
3	S	1,2-DCA-D4(S)	0.6050	0.6014	0.60	S	
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	S	Toluene-D8(S)	2.001	2.056	2.7	S	
6	S	4-Bromofluorobenzene(S)	0.6944	0.7028	1.2	S	
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
8							
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39							
40							
		Average			1.6		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L30.D Vial: 27
Acq On : 13 Jan 17 21:38 Operator: PM,DG,SV,CMM
Sample : Ending CCV Gas 300ug/L 1/13/17 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 13:50 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	328512	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	307008	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	155328	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	186605	25.46	ppb	0.00
Spiked Amount 25.000			Recovery =	101.820%		
3) 1,2-DCA-D4(S)	4.92	65	197556	24.85	ppb	0.00
Spiked Amount 25.000			Recovery =	99.396%		
5) Toluene-D8(S)	7.22	98	631120	25.68	ppb	0.00
Spiked Amount 25.000			Recovery =	102.728%		
6) 4-Bromofluorobenzene(S)	9.89	95	215760	25.30	ppb	0.00
Spiked Amount 25.000			Recovery =	101.208%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/14/17
Instrument: Loki
Initial Cal. Date: 01/11/17
Data File: 0113L38.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	3.826	1.606	58	TMHBL	2.3
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
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40							
		Average			58.0		

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L38.D
Acq On : 14 Jan 17 1:22
Sample : 170113B CCV/LCS-1WL 300ug/L
Misc : W IS&S 1/3/17, 01/11/17

Vial: 35
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 13:59 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	720131	25.00 ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	970828	25.00 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1030606	25.00 ppb	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
2) Gasoline C6-C10	7.22	TIC	13880852m	293.07 ppb	100

(#) = qualifier out of range (m) = manual integration
0113L38.D LGAS6112.M Tue Jan 17 13:42:55 2017 Page 1

Quantitation Report

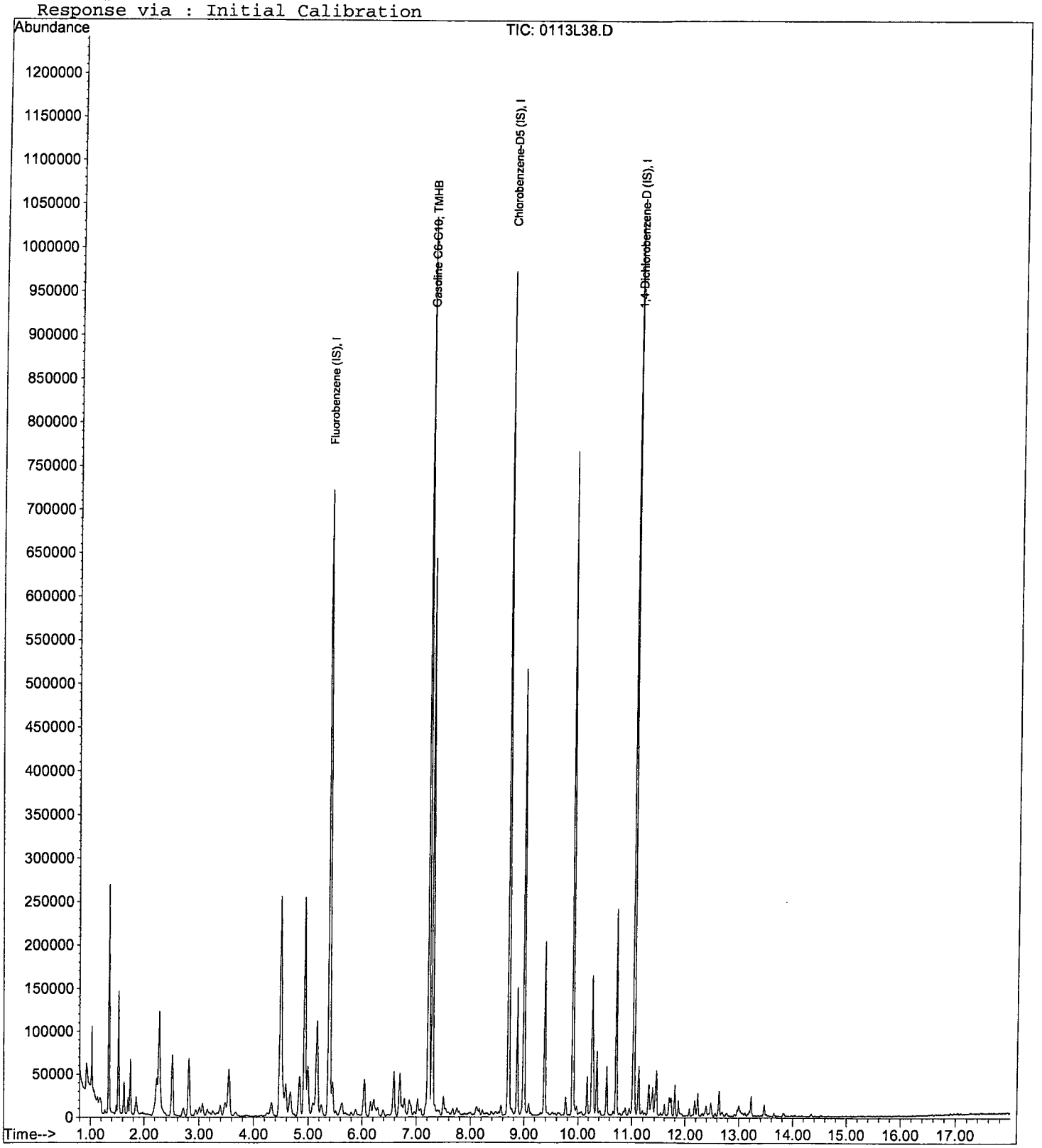
Data File : M:\LOKI\DATA\170111\0113L38.D
Acq On : 14 Jan 17 1:22
Sample : 170113B CCV/LCS-1WL 300ug/L
Misc : W IS&S 1/3/17, 01/11/17

Vial: 35
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 13:59 2017

Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/14/17
Instrument: Loki
Initial Cal. Date: 01/11/17
Data File: 0113L38.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	S	Dibromofluoromethane(S)	0.5579	0.5545	0.61	S	
3	S	1,2-DCA-D4(S)	0.6050	0.5969	1.3	S	
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	S	Toluene-D8(S)	2.001	2.004	0.16	S	
6	S	4-Bromofluorobenzene(S)	0.6944	0.6849	1.4	S	
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
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		Average			0.9		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L38.D
Acq On : 14 Jan 17 1:22
Sample : 170113B CCV/LCS-1WL 300ug/L
Misc : W IS&S 1/3/17, 01/11/17

Vial: 35
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 13:55 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	338560	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	319680	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	166464	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	187730	24.85	ppb	0.00
Spiked Amount 25.000			Recovery = 99.392%			
3) 1,2-DCA-D4(S)	4.92	65	202073	24.66	ppb	0.00
Spiked Amount 25.000			Recovery = 98.652%			
5) Toluene-D8(S)	7.22	98	640750	25.04	ppb	0.00
Spiked Amount 25.000			Recovery = 100.160%			
6) 4-Bromofluorobenzene(S)	9.89	95	218943	24.66	ppb	0.00
Spiked Amount 25.000			Recovery = 98.628%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/14/17
Instrument: Loki
Initial Cal. Date: 01/11/17
Data File: 0113L61.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	3.826	1.570	59	TMHBL	6.8
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
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		Average			59.0		

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L61.D Vial: 58
Acq On : 14 Jan 17 12:06 Operator: PM,DG,SV,CMM
Sample : Ending CCV GAS 300ug/L 1/13/17 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 14:00 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	674036	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	897305	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	951508	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	12698616m	279.67	ppb	100

(#) = qualifier out of range (m) = manual integration
0113L61.D LGAS6112.M Tue Jan 17 13:42:59 2017 Page 1

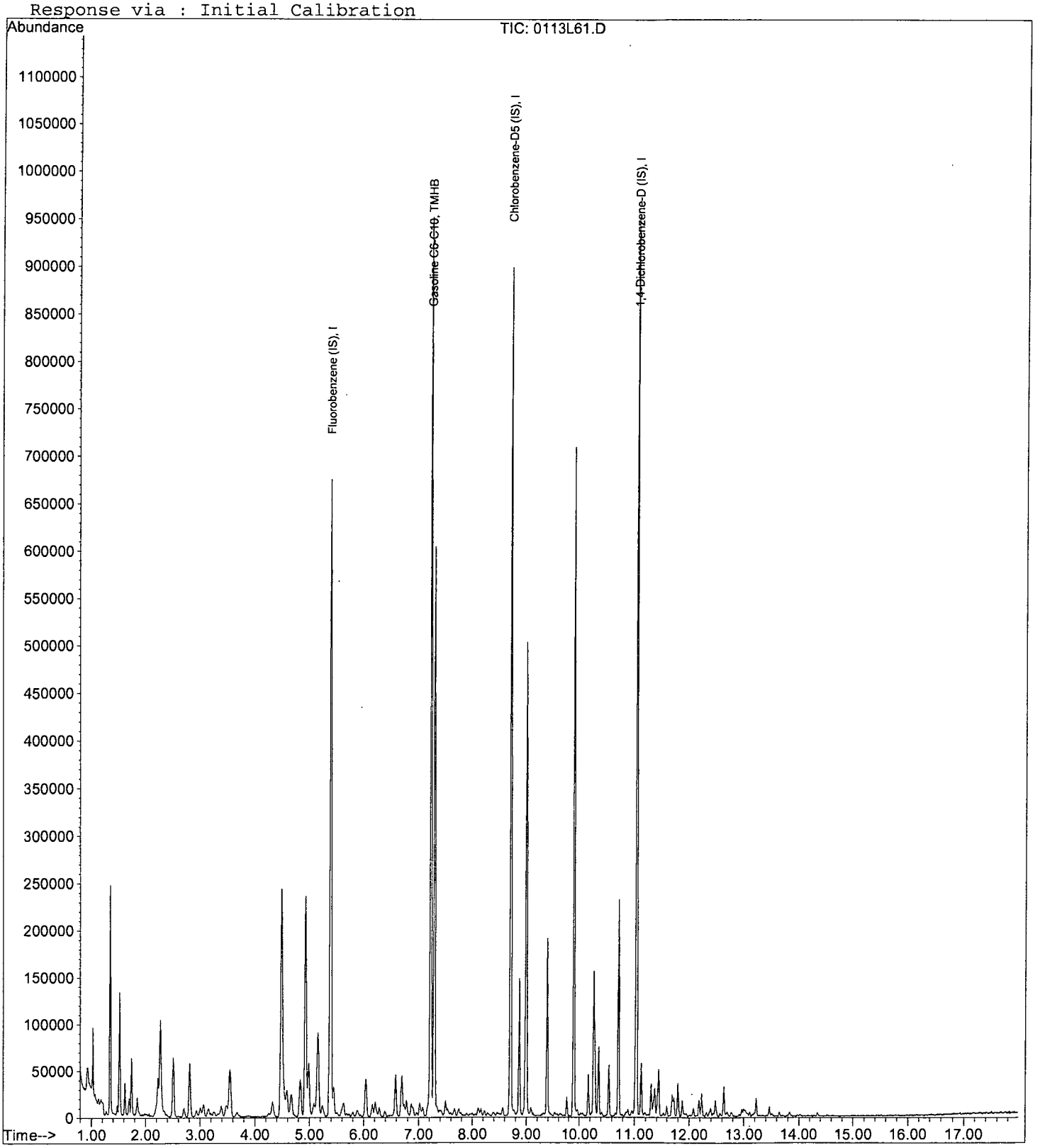
Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L61.D
Acq On : 14 Jan 17 12:06
Sample : Ending CCV GAS 300ug/L 1/13/17
Misc : W IS&S 1/3/17, 01/11/17

Vial: 58
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 14:00 2017 Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/14/17
Instrument: Loki
Initial Cal. Date: 01/11/17
Data File: 0113L61.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	S	Dibromofluoromethane(S)	0.5579	0.5552	0.47	S	
3	S	1,2-DCA-D4(S)	0.6050	0.5819	3.8	S	
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	S	Toluene-D8(S)	2.001	2.006	0.26	S	
6	S	4-Bromofluorobenzene(S)	0.6944	0.6839	1.5	S	
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
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40							
		Average			1.5		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L61.D Vial: 58
Acq On : 14 Jan 17 12:06 Operator: PM,DG,SV,CMM
Sample : Ending CCV GAS 300ug/L 1/13/17 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 13:56 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	319936	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	296064	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	154560	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	177638	24.88	ppb	0.00
Spiked Amount 25.000			Recovery =	99.524%		
3) 1,2-DCA-D4(S)	4.92	65	186173	24.05	ppb	0.00
Spiked Amount 25.000			Recovery =	96.180%		
5) Toluene-D8(S)	7.22	98	594025	25.07	ppb	0.00
Spiked Amount 25.000			Recovery =	100.264%		
6) 4-Bromofluorobenzene(S)	9.89	95	202476	24.62	ppb	0.00
Spiked Amount 25.000			Recovery =	98.488%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0113L61.D LSUR111.M Tue Jan 17 13:49:20 2017 Page 1

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 1/16/17
Matrix: Instrument: Loki
Initial Cal. Date: 1/11/17
Data File: 0116L02.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TM	Dichlorodifluoromethane	0.5777	0.6022	4.2	TM	
3	TM	Freon 114	0.4069	0.4015	1.3	TM	
4	TM**	Chloromethane	0.8360	0.7503	10	TM**	
5	TM*	Vinyl chloride	0.6936	0.6630	4.4	TM*	
6	TM	Bromomethane	0.4725	0.4639	1.8	TM	
7	TM	Chloroethane	0.3946	0.3911	0.87	TM	
8	TM	Dichlorofluoromethane	1.073	1.076	0.32	TM	
9	TM	Trichlorofluoromethane	0.7410	0.8179	10	TM	
10	TM	Acrolein	0.0242	0.0222	8.2	TM	
11	TML	Acetone	0.1571	0.1187	24	TML	9.2
12	TM	Freon-113	0.4160	0.4434	6.6	TM	
13	TM*	1,1-DCE	0.4374	0.4406	0.74	TM*	
14	TM	t-Butanol	0.0133	0.0118	12	TM	
15	TM	Acetonitrile	0.0523	0.0443	15	TM	
16	TML	Methyl Acetate	0.3641	0.3041	16	TML	6.1
17	TM	Iodomethane	0.2531	0.3386	34	TM	nt
18	TM	Acrylonitrile	0.1175	0.1051	11	TM	
19	TM	Methylene chloride	0.5454	0.5505	0.94	TM	
20	TM	Carbon disulfide	1.428	1.452	1.7	TM	
21	TM	Methyl t-butyl ether (MtBE)	1.074	1.022	4.8	TM	
22	TM	Trans-1,2-DCE	0.4615	0.4953	7.3	TM	
23	TM	Diisopropyl Ether	1.501	1.454	3.2	TM	
24	TM**	1,1-DCA	0.9296	0.9218	0.85	TM**	
25	TM	Vinyl Acetate	0.3411	0.3148	7.7	TM	
26	TM	Ethyl tert Butyl Ether	1.143	1.113	2.6	TM	
27	TML	MEK (2-Butanone)	0.1558	0.1507	3.3	TML	4.8
28	TM	Cis-1,2-DCE	0.5268	0.5449	3.4	TM	
29	TM	2,2-Dichloropropane	0.2271	0.2640	16	TM	
30	TM*	Chloroform	0.9134	0.9456	3.5	TM*	
31	TML	Bromochloromethane	0.2182	0.2515	15	TML	12
32	S	Dibromofluoromethane(S)	0.5579	0.5627	0.86	S	
33	TM	1,1,1-TCA	0.7216	0.7436	3.0	TM	
34	TM	Cyclohexane	0.3670	0.3448	6.1	TM	
35	TM	1,1-Dichloropropene	0.6296	0.6333	0.59	TM	
36	TM	2,2,4-Trimethylpentane	1.222	1.357	11	TM	
37	S	1,2-DCA-D4(S)	0.6050	0.5637	6.8	S	
38	TM	Carbon Tetrachloride	0.5403	0.6041	12	TM	
39	TM	Tert Amyl Methyl Ether	1.002	0.9669	3.5	TM	
40	TM	1,2-DCA	0.6475	0.6409	1.0	TM	
		Average			7.1		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 1/16/17
Instrument: Loki
Cal. Date: 1/11/17
Data File: 0116L02.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	Benzene	1.891	1.954	3.3	TM	
42	TM	TCE	0.2543	0.2545	0.06	TM	
43	TM	2-Pentanone	0.2512	0.2186	13	TM	
44	TM*	1,2-Dichloropropane	0.5564	0.5456	1.9	TM*	
45	TM	Bromodichloromethane	0.6711	0.6797	1.3	TM	
46	TM	Methyl Cyclohexane	0.5986	0.6274	4.8	TM	
47	TM	Dibromomethane	0.2815	0.2859	1.6	TM	
48	TM	2-Chloroethyl vinyl ether	0.0000	0.0320	0.00	TM	
49	TML	MIBK (methyl isobutyl ketone)	0.4450	0.3275	26	TML	13
50	TM	1-Bromo-2-chloroethane	0.3682	0.3603	2.2	TM	
51	TM	Cis-1,3-Dichloropropene	0.7208	0.7326	1.6	TM	
52	TM*	Toluene	1.960	2.070	5.6	TM*	
53	TM	Trans-1,3-Dichloropropene	0.6237	0.6224	0.20	TM	
54	TM	1,1,2-TCA	0.3511	0.3401	3.1	TM	
55	TM	2-Hexanone	0.1042	0.0887	15	TM	
56	I	Chlorobenzene-D5 (IS)	ISTD			I	
57	S	Toluene-D8(S)	2.001	1.954	2.3	S	
58	TM	1,2-EDB	0.3932	0.3745	4.8	TM	
59	TM	Tetrachloroethene	0.5220	0.5316	1.8	TM	
60	TM	1-Chlorohexane	0.5699	0.5984	5.0	TM	
61	TM	1,1,1,2-Tetrachloroethane	0.5011	0.5095	1.7	TM	
62	TM	m&p-Xylene	1.100	1.222	11	TM	
63	TM	o-Xylene	0.7988	0.8707	9.0	TM	
64	TML	Styrene	0.8526	0.9509	12	TML	1.5
65	S	4-Bromofluorobenzene(S)	0.6944	0.7149	2.9	S	
66	TM	1,3-Dichloropropane	0.7548	0.6998	7.3	TM	
67	TM	Dibromochloromethane	0.4788	0.4748	0.82	TM	
68	TM**	Chlorobenzene	1.390	1.433	3.1	TM**	
69	TM*	Ethylbenzene	2.263	2.375	4.9	TM*	
70	TM**	Bromoform	0.2882	0.2910	0.98	TM**	
71	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
72	TM	Isopropylbenzene	3.801	4.227	11	TM	
73	TM**	1,1,2,2-Tetrachloroethane	1.002	0.9514	5.0	TM**	
74	TM	1,2,3-Trichloropropane	0.1828	0.1735	5.1	TM	
75	TM	t-1,4-Dichloro-2-Butene	0.2451	0.2190	11	TM	
76	TM	Bromobenzene	1.065	1.141	7.1	TM	
77	TM	n-Propylbenzene	4.679	5.374	15	TM	
78	TM	4-Ethyltoluene	3.684	4.307	17	TM	
79	TM	2-Chlorotoluene	2.895	3.198	10	TM	
80	TM	1,3,5-Trimethylbenzene	3.211	3.711	16	TM	
		Average			6.4		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 1/16/17
Instrument: Loki
Cal. Date: 1/11/17
Data File: 0116L02.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	4-Chlorotoluene	3.350	3.818	14	TM	
82	TM	Tert-Butylbenzene	2.622	2.993	14	TM	
83	TM	1,2,4-Trimethylbenzene	3.182	3.649	15	TM	
84	TM	Sec-Butylbenzene	3.897	4.495	15	TM	
85	TM	p-Isopropyltoluene	3.246	3.757	16	TM	
86	TM	Benzyl Chloride	1.052	1.078	2.4	TM	
87	TM	1,3-DCB	1.971	2.244	14	TM	
88	TM	1,4-DCB	2.080	2.218	6.6	TM	
89	TM	n-Butylbenzene	3.027	3.361	11	TM	
90	TM	1,2-DCB	1.871	2.026	8.3	TM	
91	TM	Hexachloroethane	0.6768	0.7742	14	TM	
92	TM	1,2-Dibromo-3-chloropropane	0.1483	0.1344	9.4	TM	
93	TM	1,2,4-Trichlorobenzene	1.186	1.299	9.6	TM	
94	TM	Hexachlorobutadiene	0.6077	0.7056	16	TM	
95	TM	Naphthalene	1.318	1.281	2.8	TM	
96	TM	1,2,3-Trichlorobenzene	0.7335	0.7453	1.6	TM	
97							
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		Average			10.6		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0116L02.D
Acq On : 16 Jan 17 8:45
Sample : 170116A CCV/LCS 10ug/L
Misc : W IS&S 1/3/17, 01/11/17

Vial: 2
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 17 7:00 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	344640	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	323328	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	167808	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	193926	25.21573 ppb		0.00
Spiked Amount 25.000			Recovery	= 100.864%		
37) 1,2-DCA-D4(S)	4.92	65	194268	23.29227 ppb		0.00
Spiked Amount 25.000			Recovery	= 93.168%		
57) Toluene-D8(S)	7.22	98	631839	24.41311 ppb		0.00
Spiked Amount 25.000			Recovery	= 97.652%		
65) 4-Bromofluorobenzene(S)	9.89	95	231135	25.73682 ppb		0.00
Spiked Amount 25.000			Recovery	= 102.948%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	83016	10.42403 ppb		92
3) Freon 114	0.93	85	55350	9.86751 ppb		97
4) Chloromethane	0.96	50	103440	8.97597 ppb		98
5) Vinyl chloride	1.02	62	91399	9.55906 ppb		97
6) Bromomethane	1.22	94	63952	9.81756 ppb		98
7) Chloroethane	1.29	64	53920	9.91271 ppb		99
8) Dichlorofluoromethane	1.42	67	148401	10.03223 ppb		99
9) Trichlorofluoromethane	1.46	101	112752	11.03788 ppb		97
10) Acrolein	1.75	56	38296	114.77650 ppb	#	95
11) Acetone	1.88	43	16357	9.08303 ppb		94
12) Freon-113	1.84	101	61123	10.65744 ppb		90
13) 1,1-DCE	1.83	96	60743	10.07410 ppb		95
14) t-Butanol	2.40	59	20248	110.59482 ppb		100
15) Acetonitrile	2.10	41	76401	106.06777 ppb		95
16) Methyl Acetate	2.17	43	41927	9.38728 ppb		88
17) Iodomethane	1.93	142	46680	13.37713 ppb		98
18) Acrylonitrile	2.47	52	14486	8.94048 ppb		97
19) Methylene chloride	2.23	84	75891	10.09437 ppb		98
20) Carbon disulfide	1.98	76	200190	10.17219 ppb		100
21) Methyl t-butyl ether (MtBE	2.52	73	140883	9.51758 ppb		99
22) Trans-1,2-DCE	2.49	96	68276	10.73073 ppb		90
23) Diisopropyl Ether	3.10	45	200392	9.68349 ppb		94
24) 1,1-DCA	2.94	63	127072	9.91540 ppb		99
25) Vinyl Acetate	3.08	43	43400	9.22890 ppb	#	93
26) Ethyl tert Butyl Ether	3.58	59	153491	9.74367 ppb		97
27) MEK (2-Butanone)	3.80	43	20781	9.52436 ppb	#	86
28) Cis-1,2-DCE	3.72	96	75120	10.34342 ppb		99
29) 2,2-Dichloropropane	3.70	77	36400	11.62571 ppb		99
30) Chloroform	4.25	83	130357	10.35272 ppb		100
31) Bromochloromethane	4.08	128	34666	11.21959 ppb		98
33) 1,1,1-TCA	4.47	97	102504	10.30430 ppb		95
34) Cyclohexane	4.52	41	47527	9.39331 ppb		92
35) 1,1-Dichloropropene	4.72	75	87298	10.05851 ppb		99
36) 2,2,4-Trimethylpentane	5.15	57	187139	11.10607 ppb	#	85
38) Carbon Tetrachloride	4.70	119	83284	11.18050 ppb		98
39) Tert Amyl Methyl Ether	5.22	73	133292	9.65191 ppb		95
40) 1,2-DCA	5.03	62	88353	9.89884 ppb		100
41) Benzene	4.98	78	269328	10.33138 ppb		98
42) TCE	5.84	95	35080	10.00559 ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0116L02.D Vial: 2
Acq On : 16 Jan 17 8:45 Operator: PM,DG,SV,CMM
Sample : 170116A CCV/LCS 10ug/L Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 17 7:00 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	2-Pentanone	6.12	43	376768	108.77850	ppb		96
44)	1,2-Dichloropropane	6.09	63	75217	9.80619	ppb		100
45)	Bromodichloromethane	6.44	83	93702	10.12790	ppb		100
46)	Methyl Cyclohexane	6.04	83	86489	10.48020	ppb		96
47)	Dibromomethane	6.22	93	39408	10.15551	ppb		97
49)	MIBK (methyl isobutyl ket	7.16	43	45150	8.70656	ppb		98
50)	1-Bromo-2-chloroethane	6.75	63	49664	9.78368	ppb		100
51)	Cis-1,3-Dichloropropene	6.95	75	100994	10.16308	ppb		92
52)	Toluene	7.29	91	285327	10.56000	ppb		100
53)	Trans-1,3-Dichloropropene	7.56	75	85800	9.97953	ppb		96
54)	1,1,2-TCA	7.74	83	46880	9.68668	ppb		95
55)	2-Hexanone	8.04	43	12224	8.51327	ppb	#	93
58)	1,2-EDB	8.20	107	48431	9.52414	ppb		97
59)	Tetrachloroethene	7.86	166	68757	10.18435	ppb		98
60)	1-Chlorohexane	8.76	91	77390	10.49958	ppb		99
61)	1,1,1,2-Tetrachloroethane	8.83	131	65898	10.16869	ppb		95
62)	m&p-Xylene	8.99	91	316123	22.22727	ppb		100
63)	o-Xylene	9.38	106	112608	10.89989	ppb		100
64)	Styrene	9.39	104	122976	9.85235	ppb		95
66)	1,3-Dichloropropane	7.90	76	90509	9.27218	ppb		94
67)	Dibromochloromethane	8.12	129	61412	9.91810	ppb		99
68)	Chlorobenzene	8.73	112	185294	10.30862	ppb		98
69)	Ethylbenzene	8.86	91	307176	10.49452	ppb		100
70)	Bromoform	9.55	173	37633	10.09827	ppb		98
72)	Isopropylbenzene	9.76	105	283735	11.12028	ppb		97
73)	1,1,2,2-Tetrachloroethane	10.07	83	63858	9.49574	ppb		99
74)	1,2,3-Trichloropropane	10.09	110	11644	9.48954	ppb		92
75)	t-1,4-Dichloro-2-Butene	10.13	53	14700	8.93479	ppb		91
76)	Bromobenzene	10.01	156	76617	10.71440	ppb		93
77)	n-Propylbenzene	10.17	91	360710	11.48523	ppb		100
78)	4-Ethyltoluene	10.28	105	289089	11.68954	ppb		100
79)	2-Chlorotoluene	10.22	91	214638	11.04469	ppb		97
80)	1,3,5-Trimethylbenzene	10.36	105	249061	11.55737	ppb		98
81)	4-Chlorotoluene	10.34	91	256268	11.39795	ppb		98
82)	Tert-Butylbenzene	10.66	119	200927	11.41632	ppb		97
83)	1,2,4-Trimethylbenzene	10.71	105	244909	11.46500	ppb		100
84)	Sec-Butylbenzene	10.88	105	301697	11.53429	ppb		96
85)	p-Isopropyltoluene	11.04	119	252176	11.57370	ppb		97
86)	Benzyl Chloride	11.19	91	72330	10.23990	ppb		95
87)	1,3-DCB	10.96	146	150599	11.38415	ppb		97
88)	1,4-DCB	11.05	146	148861	10.66066	ppb		99
89)	n-Butylbenzene	11.44	91	225612	11.10449	ppb		97
90)	1,2-DCB	11.41	146	135989	10.82855	ppb		98
91)	Hexachloroethane	11.65	117	51967	11.43994	ppb		92
92)	1,2-Dibromo-3-chloropropan	12.17	157	9023	9.06341	ppb	#	81
93)	1,2,4-Trichlorobenzene	13.00	180	87219	10.95583	ppb		96
94)	Hexachlorobutadiene	13.19	225	47363	11.61084	ppb		91
95)	Naphthalene	13.22	128	86008	9.72216	ppb		99
96)	1,2,3-Trichlorobenzene	13.46	180	50024	10.15963	ppb		94

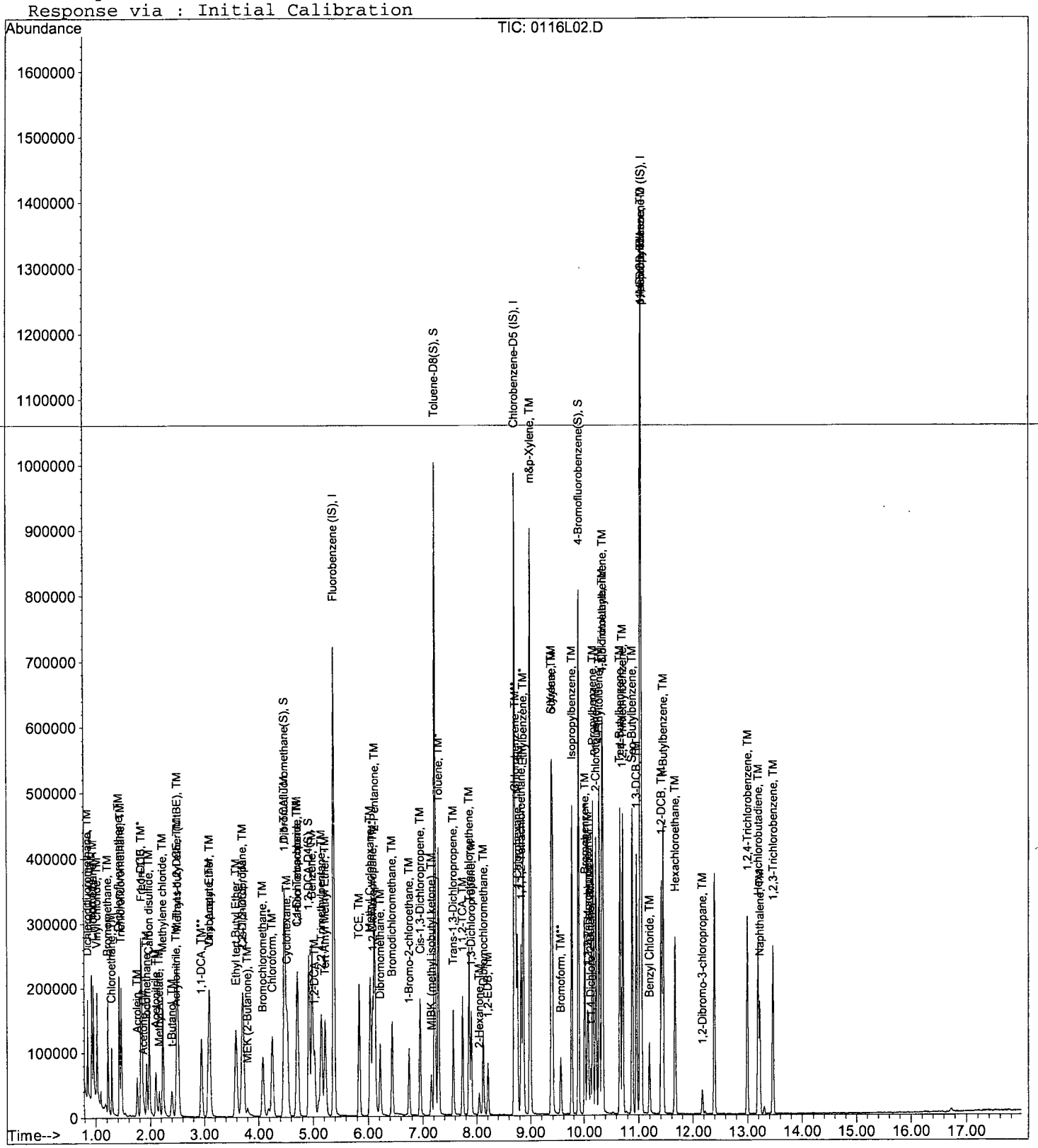
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\170111\0116L02.D Vial: 2
Acq On : 16 Jan 17 8:45 Operator: PM,DG,SV,CMM
Sample : 170116A CCV/LCS 10ug/L Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 17 7:00 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 1/16/17
Matrix: Instrument: Loki
Initial Cal. Date: 1/11/17
Data File: 0116L18.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	TM	Dichlorodifluoromethane	0.5777	0.5417	6.2	TM	
3	TM	Freon 114	0.4069	0.3435	16	TM	
4	TM**	Chloromethane	0.8360	0.6658	20	TM**	
5	TM*	Vinyl chloride	0.6936	0.5912	15	TM*	
6	TM	Bromomethane	0.4725	0.4212	11	TM	
7	TM	Chloroethane	0.3946	0.3288	17	TM	
8	TM	Dichlorofluoromethane	1.073	0.9740	9.2	TM	
9	TM	Trichlorofluoromethane	0.7410	0.7467	0.78	TM	
10	TM	Acrolein	0.0242	0.0220	9.0	TM	
11	TML	Acetone	0.1571	0.1216	23	TML	6.4
12	TM	Freon-113	0.4160	0.3901	6.2	TM	
13	TM*	1,1-DCE	0.4374	0.4001	8.5	TM*	
14	TM	t-Butanol	0.0133	0.0119	11	TM	
15	TM	Acetonitrile	0.0523	0.0414	21	TM	
16	TML	Methyl Acetate	0.3641	0.2797	23	TML	14
17	TM	Iodomethane	0.2531	0.3015	19	TM	
18	TM	Acrylonitrile	0.1175	0.1011	14	TM	
19	TM	Methylene chloride	0.5454	0.5177	5.1	TM	
20	TM	Carbon disulfide	1.428	1.248	13	TM	
21	TM	Methyl t-butyl ether (MtBE)	1.074	1.037	3.4	TM	
22	TM	Trans-1,2-DCE	0.4615	0.4455	3.5	TM	
23	TM	Diisopropyl Ether	1.501	1.354	9.8	TM	
24	TM**	1,1-DCA	0.9296	0.8452	9.1	TM**	
25	TM	Vinyl Acetate	0.3411	0.2930	14	TM	
26	TM	Ethyl tert Butyl Ether	1.143	1.112	2.7	TM	
27	TML	MEK (2-Butanone)	0.1558	0.1417	9.0	TML	11
28	TM	Cis-1,2-DCE	0.5268	0.5192	1.4	TM	
29	TM	2,2-Dichloropropane	0.2271	0.2120	6.7	TM	
30	TM*	Chloroform	0.9134	0.8671	5.1	TM*	
31	TML	Bromochloromethane	0.2182	0.2339	7.2	TML	4.1
32	S	Dibromofluoromethane(S)	0.5579	0.5377	3.6	S	
33	TM	1,1,1-TCA	0.7216	0.6806	5.7	TM	
34	TM	Cyclohexane	0.3670	0.3189	13	TM	
35	TM	1,1-Dichloropropene	0.6296	0.5719	9.2	TM	
36	TM	2,2,4-Trimethylpentane	1.222	1.103	9.8	TM	
37	S	1,2-DCA-D4(S)	0.6050	0.5693	5.9	S	
38	TM	Carbon Tetrachloride	0.5403	0.5477	1.4	TM	
39	TM	Tert Amyl Methyl Ether	1.002	0.9704	3.1	TM	
40	TM	1,2-DCA	0.6475	0.6213	4.0	TM	
		Average			9.6		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 1/16/17
Instrument: Loki
Cal. Date: 1/11/17
Data File: 0116L18.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	Benzene	1.891	1.827	3.4	TM	
42	TM	TCE	0.2543	0.2503	1.6	TM	
43	TM	2-Pentanone	0.2512	0.2146	15	TM	
44	TM*	1,2-Dichloropropane	0.5564	0.4882	12	TM*	
45	TM	Bromodichloromethane	0.6711	0.6129	8.7	TM	
46	TM	Methyl Cyclohexane	0.5986	0.5689	5.0	TM	
47	TM	Dibromomethane	0.2815	0.2705	3.9	TM	
48	TM	2-Chloroethyl vinyl ether	0.0000	0.0013	0.00	TM	
49	TML	MIBK (methyl isobutyl ketone)	0.4450	0.3263	27	TML	13
50	TM	1-Bromo-2-chloroethane	0.3682	0.3527	4.2	TM	
51	TM	Cis-1,3-Dichloropropene	0.7208	0.6840	5.1	TM	
52	TM*	Toluene	1.960	1.937	1.1	TM*	
53	TM	Trans-1,3-Dichloropropene	0.6237	0.5763	7.6	TM	
54	TM	1,1,2-TCA	0.3511	0.3267	6.9	TM	
55	TM	2-Hexanone	0.1042	0.0999	4.1	TM	
56	I	Chlorobenzene-D5 (IS)	ISTD			I	
57	S	Toluene-D8(S)	2.001	1.988	0.66	S	
58	TM	1,2-EDB	0.3932	0.3817	2.9	TM	
59	TM	Tetrachloroethene	0.5220	0.5014	4.0	TM	
60	TM	1-Chlorohexane	0.5699	0.5550	2.6	TM	
61	TM	1,1,1,2-Tetrachloroethane	0.5011	0.4852	3.2	TM	
62	TM	m&p-Xylene	1.100	1.127	2.5	TM	
63	TM	o-Xylene	0.7988	0.8239	3.1	TM	
64	TML	Styrene	0.8526	0.9029	5.9	TML	6.3
65	S	4-Bromofluorobenzene(S)	0.6944	0.7078	1.9	S	
66	TM	1,3-Dichloropropane	0.7548	0.6916	8.4	TM	
67	TM	Dibromochloromethane	0.4788	0.4687	2.1	TM	
68	TM**	Chlorobenzene	1.390	1.365	1.8	TM**	
69	TM*	Ethylbenzene	2.263	2.294	1.4	TM*	
70	TM**	Bromoform	0.2882	0.2896	0.50	TM**	
71	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
72	TM	Isopropylbenzene	3.801	3.836	0.92	TM	
73	TM**	1,1,2,2-Tetrachloroethane	1.002	0.9104	9.1	TM**	
74	TM	1,2,3-Trichloropropane	0.1828	0.1665	8.9	TM	
75	TM	t-1,4-Dichloro-2-Butene	0.2451	0.1833	25	TM	
76	TM	Bromobenzene	1.065	1.074	0.85	TM	
77	TM	n-Propylbenzene	4.679	4.643	0.77	TM	
78	TM	4-Ethyltoluene	3.684	3.810	3.4	TM	
79	TM	2-Chlorotoluene	2.895	2.847	1.7	TM	
80	TM	1,3,5-Trimethylbenzene	3.211	3.378	5.2	TM	
		Average			5.3		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 1/16/17
Matrix: 0 Instrument: Loki
Cal. Date: 1/11/17
Data File: 0116L18.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	4-Chlorotoluene	3.350	3.450	3.0	TM	
82	TM	Tert-Butylbenzene	2.622	2.661	1.5	TM	
83	TM	1,2,4-Trimethylbenzene	3.182	3.344	5.1	TM	
84	TM	Sec-Butylbenzene	3.897	3.970	1.9	TM	
85	TM	p-Isopropyltoluene	3.246	3.264	0.55	TM	
86	TM	Benzyl Chloride	1.052	0.8735	17	TM	
87	TM	1,3-DCB	1.971	2.013	2.2	TM	
88	TM	1,4-DCB	2.080	2.036	2.1	TM	
89	TM	n-Butylbenzene	3.027	2.903	4.1	TM	
90	TM	1,2-DCB	1.871	1.856	0.77	TM	
91	TM	Hexachloroethane	0.6768	0.6879	1.6	TM	
92	TM	1,2-Dibromo-3-chloropropane	0.1483	0.1575	6.2	TM	
93	TM	1,2,4-Trichlorobenzene	1.186	1.188	0.13	TM	
94	TM	Hexachlorobutadiene	0.6077	0.5895	3.0	TM	
95	TM	Naphthalene	1.318	1.248	5.3	TM	
96	TM	1,2,3-Trichlorobenzene	0.7335	0.7231	1.4	TM	
97							
98							
99							
100							
101							
102							
103							
104							
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113							
114							
115							
116							
117							
118							
119							
120							
		Average			3.5		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0116L18.D Vial: 18
Acq On : 16 Jan 17 16:14 Operator: PM,DG,SV,CMM
Sample : Ending CCV 8260 10ug/L 01/16/17 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 17 7:01 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	334848	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	308480	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	167552	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	180060	24.09743 ppb		0.00
Spiked Amount 25.000			Recovery = 96.388%			
37) 1,2-DCA-D4(S)	4.92	65	190628	23.52422 ppb		0.00
Spiked Amount 25.000			Recovery = 94.096%			
57) Toluene-D8(S)	7.22	98	613247	24.83525 ppb		0.00
Spiked Amount 25.000			Recovery = 99.340%			
65) 4-Bromofluorobenzene(S)	9.89	95	218329	25.48103 ppb		0.00
Spiked Amount 25.000			Recovery = 101.924%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	72552	9.37651 ppb		99
~~3) Freon 114~~	~~0.93~~	~~85~~	~~46014~~	~~8.44302 ppb~~		~~90~~
4) Chloromethane	0.96	50	89173	7.96424 ppb		98
5) Vinyl chloride	1.02	62	79187	8.52404 ppb		99
6) Bromomethane	1.22	94	56416	8.91394 ppb		98
7) Chloroethane	1.29	64	44042	8.33350 ppb		92
8) Dichlorofluoromethane	1.43	67	130453	9.07680 ppb		98
9) Trichlorofluoromethane	1.46	101	100018	10.07761 ppb		95
10) Acrolein	1.75	56	36870	113.73409 ppb	#	98
11) Acetone	1.88	43	16287	9.35604 ppb		96
12) Freon-113	1.84	101	52245	9.37586 ppb		89
13) 1,1-DCE	1.83	96	53585	9.14684 ppb		99
14) t-Butanol	2.39	59	19880	111.76016 ppb		98
15) Acetonitrile	2.10	41	69306	99.03147 ppb		93
16) Methyl Acetate	2.17	43	37463	8.57036 ppb	#	86
17) Iodomethane	1.93	142	40376	11.90894 ppb		98
18) Acrylonitrile	2.47	52	13543	8.60291 ppb		87
19) Methylene chloride	2.23	84	69335	9.49204 ppb		99
20) Carbon disulfide	1.98	76	167188	8.74370 ppb		98
21) Methyl t-butyl ether (MtBE	2.52	73	138959	9.66212 ppb		98
22) Trans-1,2-DCE	2.50	96	59666	9.65175 ppb		94
23) Diisopropyl Ether	3.10	45	181346	9.01940 ppb		95
24) 1,1-DCA	2.95	63	113204	9.09160 ppb		98
25) Vinyl Acetate	3.09	43	39240	8.58830 ppb		99
26) Ethyl tert Butyl Ether	3.59	59	148933	9.73080 ppb		98
27) MEK (2-Butanone)	3.80	43	18985	8.92483 ppb	#	67
28) Cis-1,2-DCE	3.72	96	69542	9.85539 ppb		94
29) 2,2-Dichloropropane	3.70	77	28392	9.33323 ppb		99
30) Chloroform	4.25	83	116136	9.49304 ppb		100
31) Bromochloromethane	4.08	128	31323	10.41165 ppb		99
33) 1,1,1-TCA	4.47	97	91156	9.43150 ppb		100
34) Cyclohexane	4.53	41	42709	8.68792 ppb		97
35) 1,1-Dichloropropene	4.72	75	76606	9.08469 ppb		98
36) 2,2,4-Trimethylpentane	5.15	57	147668	9.01987 ppb		96
38) Carbon Tetrachloride	4.71	119	73362	10.13652 ppb		96
39) Tert Amyl Methyl Ether	5.22	73	129973	9.68680 ppb		95
40) 1,2-DCA	5.03	62	83215	9.59583 ppb		97
41) Benzene	4.99	78	244685	9.66056 ppb		97
42) TCE	5.84	95	33528	9.84257 ppb		96

(#) = qualifier out of range (m) = manual integration
0116L18.D LALLW.M Tue Jan 17 07:14:03 2017

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0116L18.D Vial: 18
Acq On : 16 Jan 17 16:14 Operator: PM,DG,SV,CMM
Sample : Ending CCV 8260 10ug/L 01/16/17 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 17 7:01 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	2-Pentanone	6.12	43	359298	106.76818	ppb		94
44)	1,2-Dichloropropane	6.09	63	65395	8.77500	ppb		98
45)	Bromodichloromethane	6.44	83	82090	9.13227	ppb	#	99
46)	Methyl Cyclohexane	6.04	83	76201	9.50358	ppb		92
47)	Dibromomethane	6.22	93	36233	9.61036	ppb		91
49)	MIBK (methyl isobutyl ket	7.16	43	43706	8.66953	ppb		95
50)	1-Bromo-2-chloroethane	6.75	63	47240	9.57830	ppb		98
51)	Cis-1,3-Dichloropropene	6.95	75	91615	9.48887	ppb		90
52)	Toluene	7.29	91	259504	9.88515	ppb		99
53)	Trans-1,3-Dichloropropene	7.56	75	77184	9.23992	ppb		94
54)	1,1,2-TCA	7.74	83	43761	9.30663	ppb		93
55)	2-Hexanone	8.04	43	13377	9.58871	ppb		98
58)	1,2-EDB	8.20	107	47094	9.70698	ppb		94
59)	Tetrachloroethene	7.86	166	61864	9.60441	ppb		98
60)	1-Chlorohexane	8.76	91	68482	9.73823	ppb		91
61)	1,1,1,2-Tetrachloroethane	8.83	131	59867	9.68270	ppb		98
62)	m&p-Xylene	8.99	91	278080	20.49350	ppb		100
63)	o-Xylene	9.38	106	101660	10.31381	ppb		100
64)	Styrene	9.40	104	111416	9.37417	ppb		100
66)	1,3-Dichloropropane	7.90	76	85340	9.16345	ppb		99
67)	Dibromochloromethane	8.12	129	57829	9.78897	ppb		100
68)	Chlorobenzene	8.73	112	168464	9.82342	ppb		97
69)	Ethylbenzene	8.87	91	283036	10.13522	ppb		99
70)	Bromoform	9.55	173	35732	10.04967	ppb		99
72)	Isopropylbenzene	9.76	105	257116	10.09241	ppb		98
73)	1,1,2,2-Tetrachloroethane	10.07	83	61017	9.08714	ppb		96
74)	1,2,3-Trichloropropane	10.09	110	11156	9.10573	ppb		97
75)	t-1,4-Dichloro-2-Butene	10.13	53	12287	7.47956	ppb		98
76)	Bromobenzene	10.01	156	72006	10.08496	ppb		90
77)	n-Propylbenzene	10.17	91	311170	9.92298	ppb		99
78)	4-Ethyltoluene	10.28	105	255362	10.34154	ppb		99
79)	2-Chlorotoluene	10.22	91	190779	9.83197	ppb		99
80)	1,3,5-Trimethylbenzene	10.36	105	226374	10.52066	ppb		100
81)	4-Chlorotoluene	10.34	91	231188	10.29819	ppb		99
82)	Tert-Butylbenzene	10.66	119	178366	10.14993	ppb		98
83)	1,2,4-Trimethylbenzene	10.72	105	224106	10.50717	ppb		99
84)	Sec-Butylbenzene	10.88	105	266096	10.18876	ppb		98
85)	p-Isopropyltoluene	11.04	119	218741	10.05452	ppb		98
86)	Benzyl Chloride	11.19	91	58542	8.30057	ppb		98
87)	1,3-DCB	10.96	146	134943	10.21626	ppb		98
88)	1,4-DCB	11.05	146	136456	9.78721	ppb		96
89)	n-Butylbenzene	11.44	91	194536	9.58958	ppb		97
90)	1,2-DCB	11.41	146	124423	9.92271	ppb		98
91)	Hexachloroethane	11.66	117	46103	10.16455	ppb		92
92)	1,2-Dibromo-3-chloropropan	12.17	157	10557	10.62048	ppb		97
93)	1,2,4-Trichlorobenzene	13.00	180	79593	10.01318	ppb		94
94)	Hexachlorobutadiene	13.19	225	39507	9.69977	ppb		92
95)	Naphthalene	13.22	128	83656	9.47074	ppb		100
96)	1,2,3-Trichlorobenzene	13.46	180	48464	9.85784	ppb		94

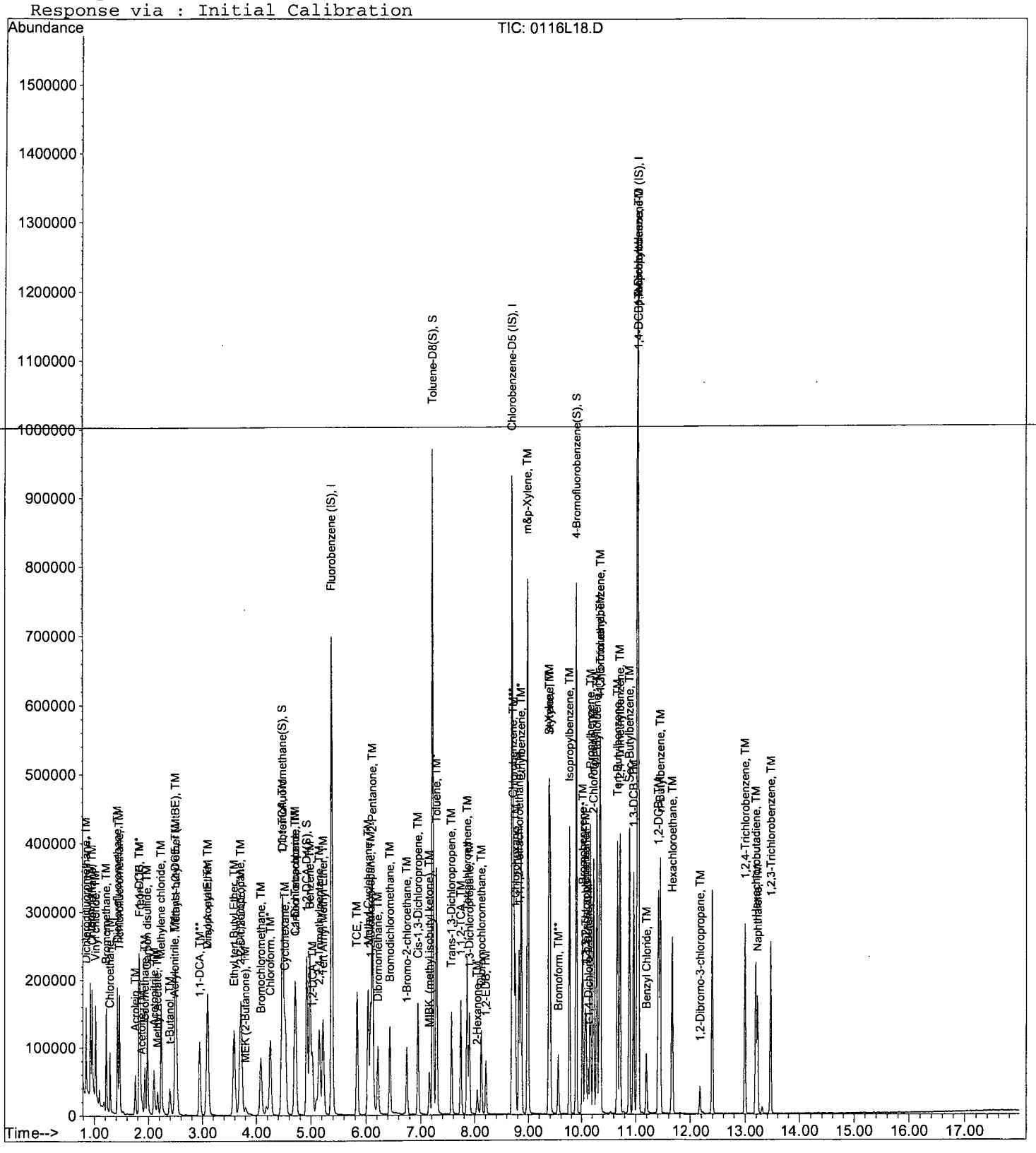
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\170111\0116L18.D Vial: 18
Acq On : 16 Jan 17 16:14 Operator: PM,DG,SV,CMM
Sample : Ending CCV 8260 10ug/L 01/16/17 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 17 7:01 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



ORGANICS
Raw Data

APPL, INC.

Method Blank
EPA 8260B GRO WATER

Blank Name/QCG: **170113W-48866 - 215504**
Batch ID: #GRO86-170113AL

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/13/17	01/16/17
BLANK	SURROGATE: 4-BROMOFLUORO	98.5	85-114			%	01/13/17	01/16/17

Quant Method: LGAS6112.M
Run #: 0113L12
Instrument: Loki
Sequence: 170111
Initials: ARO

GC SC-Blank-REG MDLs-DOD
Printed: 01/17/17 8:21:53 AM

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L12.D Vial: 9
Acq On : 13 Jan 17 13:14 Operator: PM,DG,SV,CMM
Sample : 170113A BLK-1WL Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 11:02 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	701876	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	917445	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	949790	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0113L12.D LGAS6112.M Tue Jan 17 13:42:51 2017 Page 1

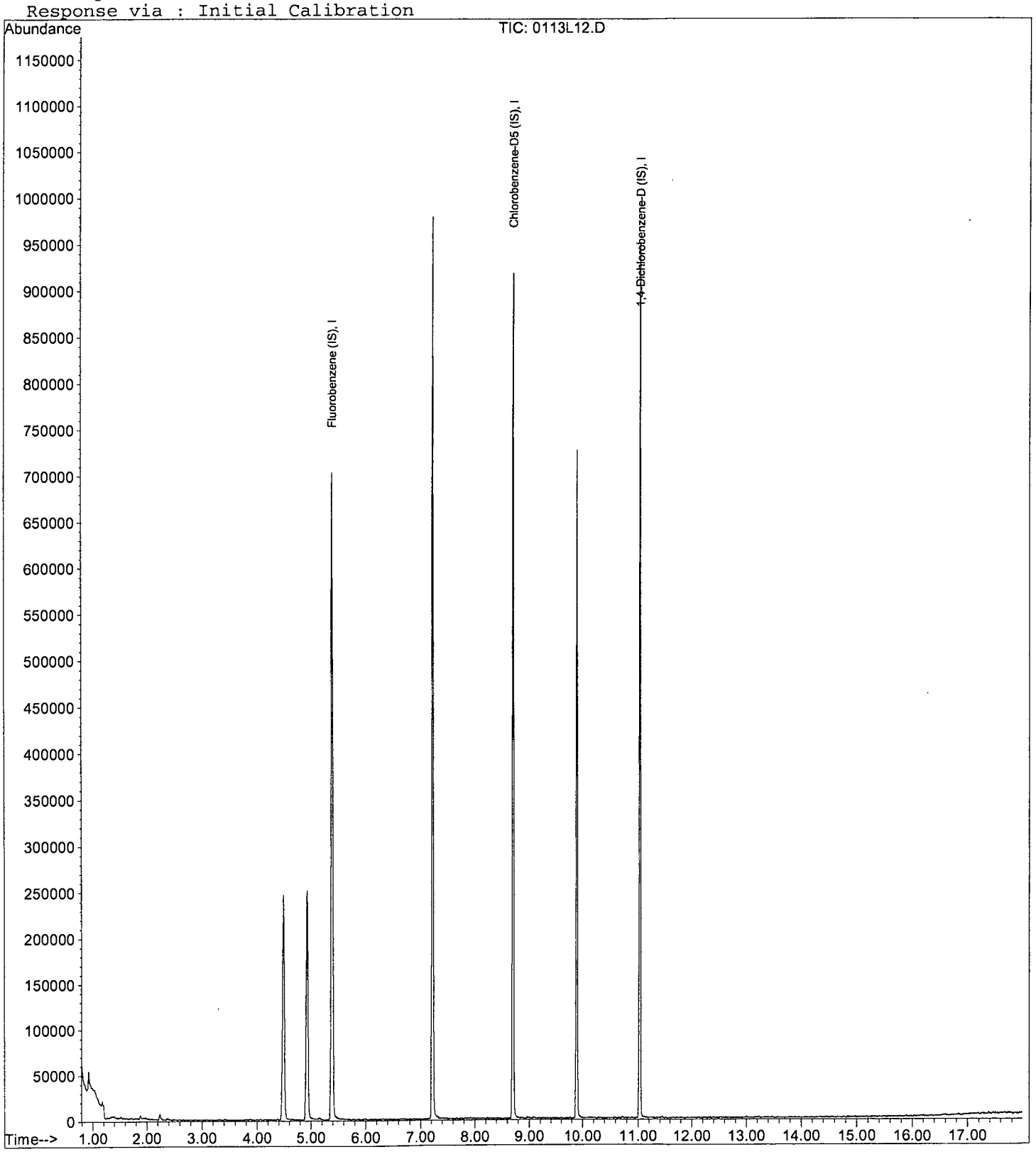
Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L12.D
Acq On : 13 Jan 17 13:14
Sample : 170113A BLK-1WL
Misc : W IS&S 1/3/17, 01/11/17

Vial: 9
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 11:02 2017 Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L12.D Vial: 9
Acq On : 13 Jan 17 13:14 Operator: PM,DG,SV,CMM
Sample : 170113A BLK-1WL Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 13:55 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	331456	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	302080	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	154432	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	182631	24.69	ppb	0.00
Spiked Amount 25.000			Recovery =	98.768%		
3) 1,2-DCA-D4(S)	4.92	65	195500	24.37	ppb	0.00
Spiked Amount 25.000			Recovery =	97.488%		
5) Toluene-D8(S)	7.22	98	607886	25.14	ppb	0.00
Spiked Amount 25.000			Recovery =	100.560%		
6) 4-Bromofluorobenzene(S)	9.89	95	206660	24.63	ppb	0.00
Spiked Amount 25.000			Recovery =	98.520%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Method Blank
EPA 8260B GRO WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **170113W-48873 - 215505**
Batch ID: #GRO86-170113BL

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/14/17	01/14/17
BLANK	SURROGATE: 4-BROMOFLUORO	97.7	85-114			%	01/14/17	01/14/17

Quant Method: LGAS6112.M
Run #: 0113L42
Instrument: Loki
Sequence: 170111
Initials: ARO

GC SC-Blank-REG MDLs-DOD
Printed: 01/17/17 8:21:53 AM

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L42.D Vial: 39
Acq On : 14 Jan 17 3:14 Operator: PM,DG,SV,CMM
Sample : 170113B BLK-1WL Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 11:22 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	688699	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	913982	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	896204	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0113L42.D LGAS6112.M Tue Jan 17 13:42:57 2017 Page 1

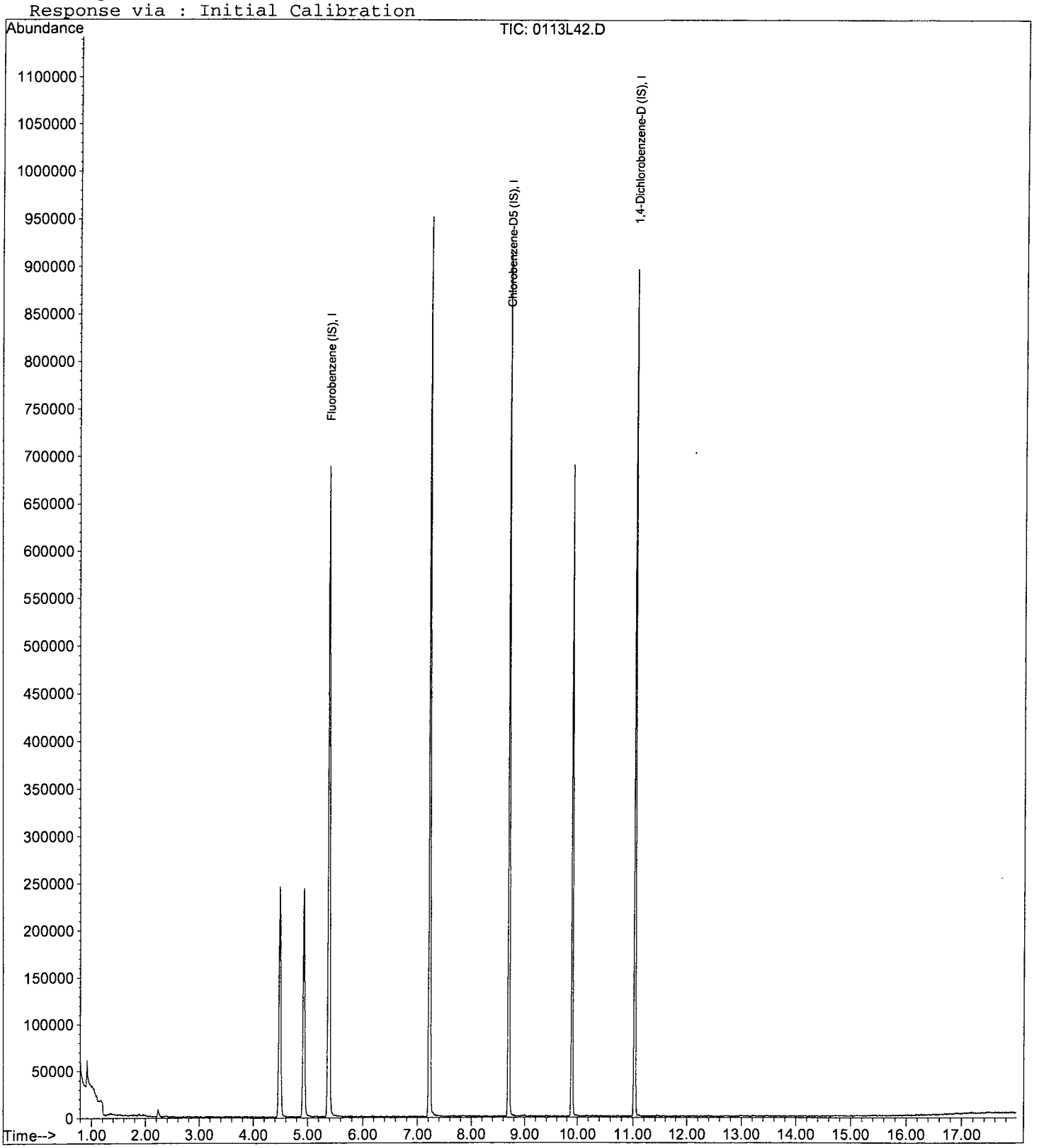
Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L42.D
Acq On : 14 Jan 17 3:14
Sample : 170113B BLK-1WL
Misc : W IS&S 1/3/17, 01/11/17

Vial: 39
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 11:22 2017 Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L42.D Vial: 39
Acq On : 14 Jan 17 3:14 Operator: PM,DG,SV,CMM
Sample : 170113B BLK-1WL Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 13:55 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	326912	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	302016	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	145664	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	182433	25.01	ppb	0.00
Spiked Amount 25.000			Recovery = 100.032%			
3) 1,2-DCA-D4(S)	4.93	65	192811	24.37	ppb	0.00
Spiked Amount 25.000			Recovery = 97.484%			
5) Toluene-D8(S)	7.22	98	597855	24.73	ppb	0.00
Spiked Amount 25.000			Recovery = 98.920%			
6) 4-Bromofluorobenzene(S)	9.89	95	204904	24.43	ppb	0.00
Spiked Amount 25.000			Recovery = 97.704%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Laboratory Control Spike Recovery
EPA 8260B GRO WATER

APPL ID: **170113W-48866 LCS - 215504**
Batch ID: #GRO86-170113AL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
GASOLINE RANGE ORGANICS	300	301	100	78-122
SURROGATE: 4-BROMOFLUOROBENZE	25.0	24.9	99.6	85-114

Comments: _____

Primary	SPK
Quant Method :	LGAS6112.M
Extraction Date :	01/13/17
Analysis Date :	01/16/17
Instrument :	Loki
Run :	0113L08
Initials :	ARO

Printed: 01/17/17 8:22:06 AM
APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L08.D Vial: 5
Acq On : 13 Jan 17 11:22 Operator: PM,DG,SV,CMM
Sample : 170113A CCV/LCS-1WL 300ug/L Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 13 12:17 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	781563	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1036927	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1087848	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	15254482m	300.52	ppb	100

(#) = qualifier out of range (m) = manual integration
0113L08.D LGAS6112.M Tue Jan 17 13:42:49 2017 Page 1

Quantitation Report

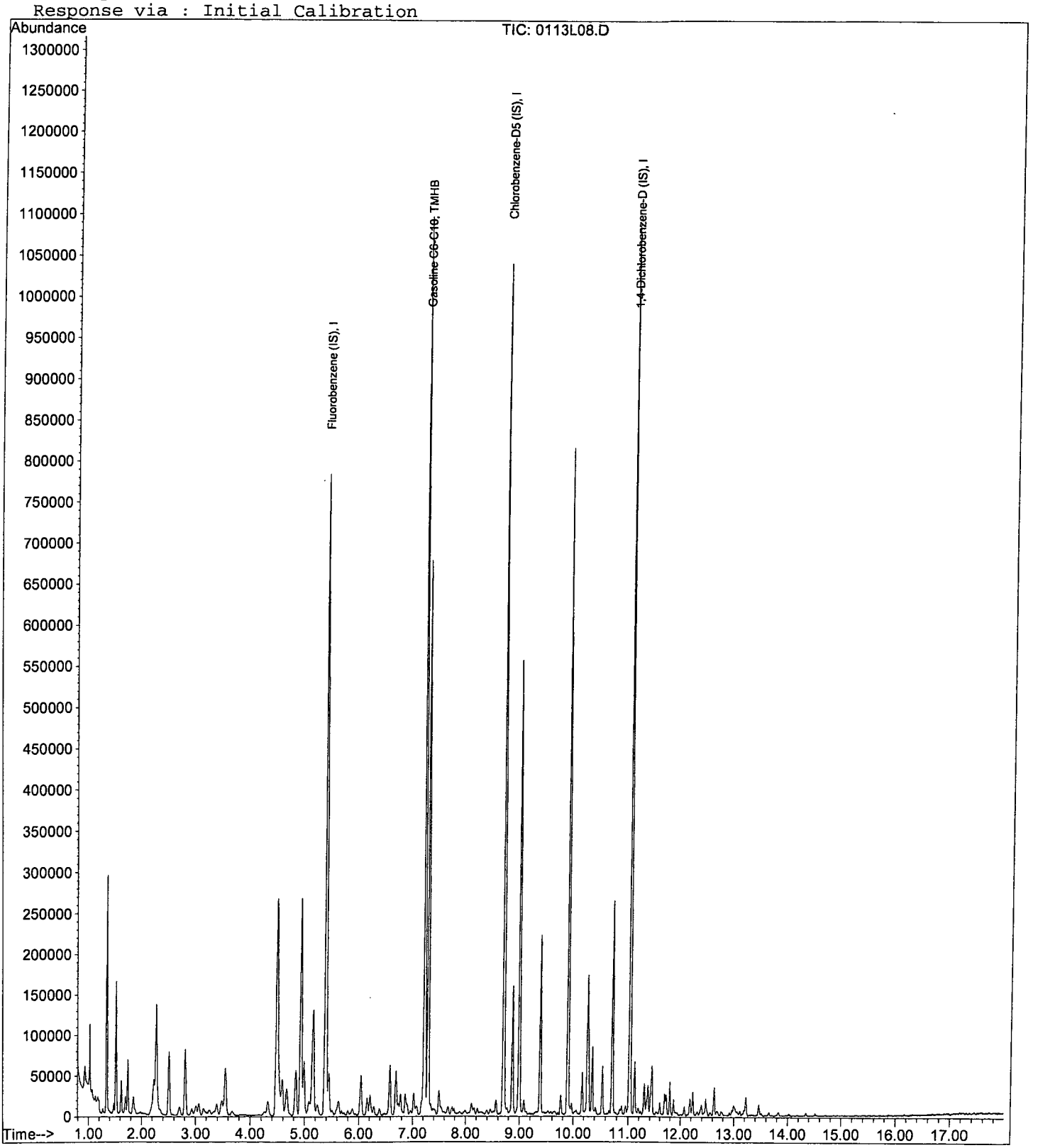
Data File : M:\LOKI\DATA\170111\0113L08.D
Acq On : 13 Jan 17 11:22
Sample : 170113A CCV/LCS-1WL 300ug/L
Misc : W IS&S 1/3/17, 01/11/17

Vial: 5
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 12:17 2017

Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L08.D Vial: 5
Acq On : 13 Jan 17 11:22 Operator: PM,DG,SV,CMM
Sample : 170113A CCV/LCS-1WL 300ug/L Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 13:55 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	368256	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	336768	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	174016	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	197742	24.06	ppb	0.00
Spiked Amount 25.000			Recovery = 96.252%			
3) 1,2-DCA-D4(S)	4.92	65	214809	24.10	ppb	0.00
Spiked Amount 25.000			Recovery = 96.412%			
5) Toluene-D8(S)	7.22	98	683329	25.35	ppb	0.00
Spiked Amount 25.000			Recovery = 101.396%			
6) 4-Bromofluorobenzene(S)	9.89	95	232899	24.90	ppb	0.00
Spiked Amount 25.000			Recovery = 99.592%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Laboratory Control Spike Recovery
EPA 8260B GRO WATER

APPL ID: **170114W-48873 LCS - 215505**
Batch ID: #GRO86-170113BL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
GASOLINE RANGE ORGANICS	300	293	97.7	78-122
SURROGATE: 4-BROMOFLUOROBENZE	25.0	24.7	98.8	85-114

Comments: _____

Primary	SPK
Quant Method :	LGAS6112.M
Extraction Date :	01/14/17
Analysis Date :	01/14/17
Instrument :	Loki
Run :	0113L38
Initials :	ARO

Printed: 01/17/17 8:22:06 AM
APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L38.D Vial: 35
Acq On : 14 Jan 17 1:22 Operator: PM,DG,SV,CMM
Sample : 170113B CCV/LCS-1WL 300ug/L Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 13:59 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	720131	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	970828	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1030606	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	13880852m	293.07	ppb	100

(#) = qualifier out of range (m) = manual integration
0113L38.D LGAS6112.M Tue Jan 17 13:42:55 2017 Page 1

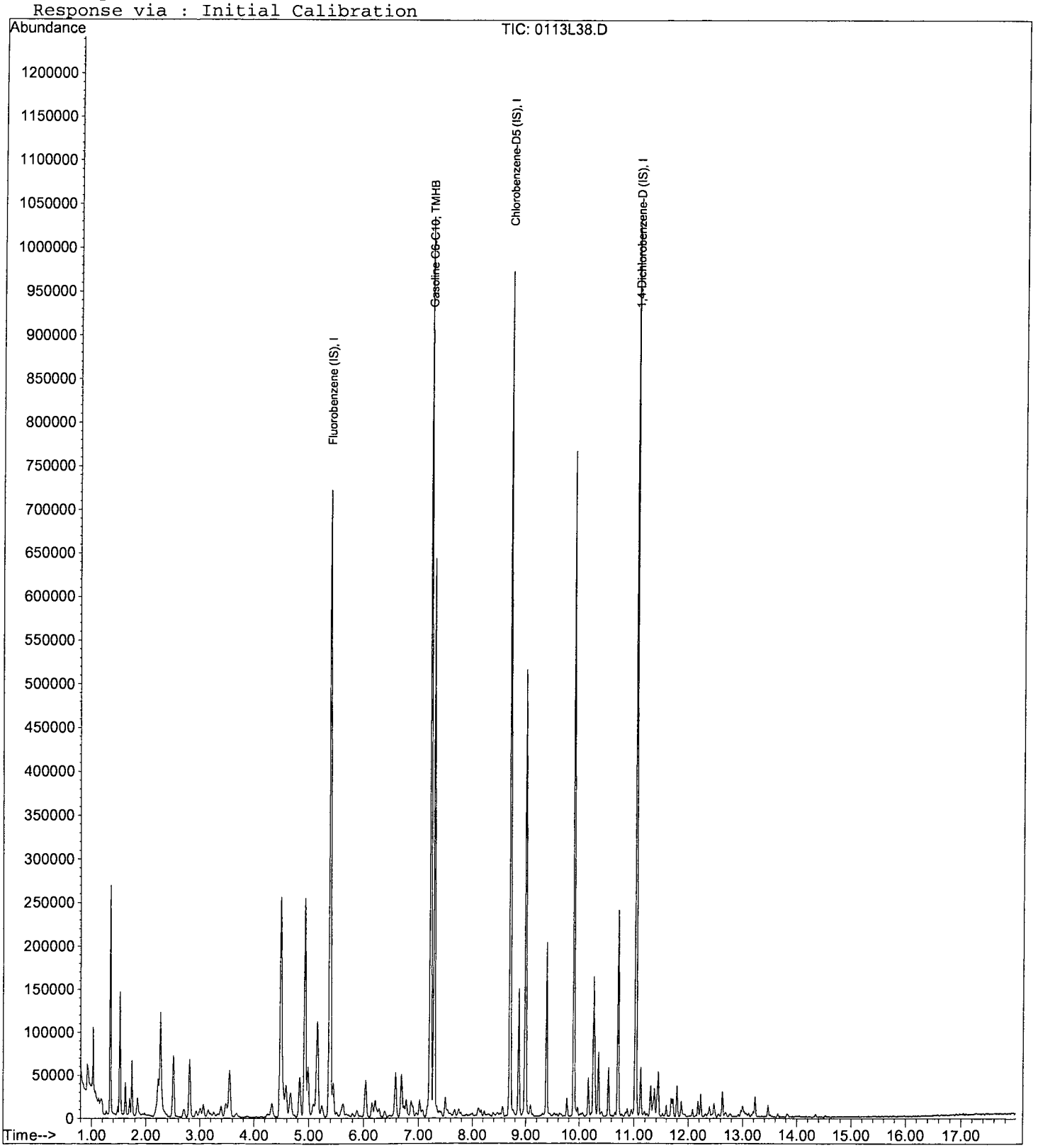
Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L38.D
Acq On : 14 Jan 17 1:22
Sample : 170113B CCV/LCS-1WL 300ug/L
Misc : W IS&S 1/3/17, 01/11/17

Vial: 35
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 13:59 2017 Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L38.D Vial: 35
Acq On : 14 Jan 17 1:22 Operator: PM,DG,SV,CMM
Sample : 170113B CCV/LCS-1WL 300ug/L Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 13:55 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	338560	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	319680	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	166464	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	187730	24.85	ppb	0.00
Spiked Amount 25.000			Recovery = 99.392%			
3) 1,2-DCA-D4(S)	4.92	65	202073	24.66	ppb	0.00
Spiked Amount 25.000			Recovery = 98.652%			
5) Toluene-D8(S)	7.22	98	640750	25.04	ppb	0.00
Spiked Amount 25.000			Recovery = 100.160%			
6) 4-Bromofluorobenzene(S)	9.89	95	218943	24.66	ppb	0.00
Spiked Amount 25.000			Recovery = 98.628%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Matrix Spike Recoveries
EPA 8260B GRO WATER

APPL ID: **170116W-48872 MS - 215504**
Batch ID: #GRO86-170113AL
Sample ID: AZ48872
Client ID: ERH169

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
GASOLINE RANGE ORGANICS	300	ND	299	291	99.7	97.0	78-122	2.7	20
SURROGATE: 4-BROMOFLUOROBENZE	25.0	NA	24.2	25.2	96.8	101	85-114		

Comments: _____

Primary	SPK	DUP
Quant Method :	LGAS6112.M	LGAS6112.M
Extraction Date :	01/16/17	01/16/17
Analysis Date :	01/16/17	01/16/17
Instrument :	Loki	Loki
Run :	0116L14	0116L15
Initials :	ARO	

Printed: 01/17/17 8:22:11 AM
APPL MSD SCII

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0116L14.D Vial: 14
Acq On : 16 Jan 17 14:21 Operator: PM,DG,SV,CMM
Sample : AZ48872W456 MS-1WL 300ug/L Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 17 7:25 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	705864	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	944595	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1000645	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	13751763m	299.41974	ppb	100

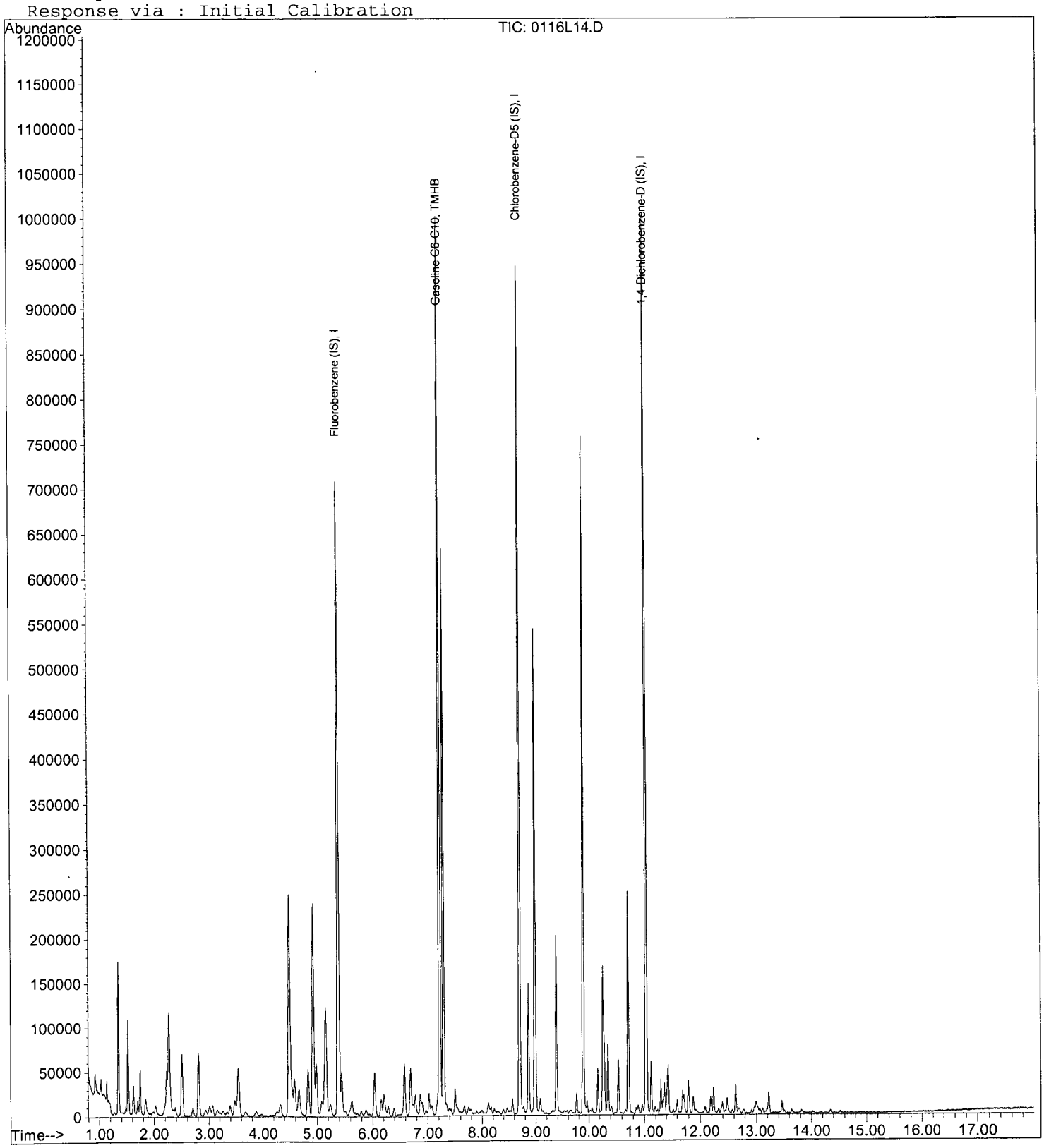
(#) = qualifier out of range (m) = manual integration
0116L14.D LGAS6112.M Tue Jan 17 07:28:18 2017 Page 1

Quantitation Report

Data File : M:\LOKI\DATA\170111\0116L14.D Vial: 14
Acq On : 16 Jan 17 14:21 Operator: PM,DG,SV,CMM
Sample : AZ48872W456 MS-1WL 300ug/L Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 17 7:25 2017 Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0116L14.D Vial: 14
Acq On : 16 Jan 17 14:21 Operator: PM,DG,SV,CMM
Sample : AZ48872W456 MS-1WL 300ug/L Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 17 7:30 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	339712	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	313536	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	164160	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.48	111	181497	23.94196 ppb	0.00
Spiked Amount 25.000			Recovery =	95.768%	
3) 1,2-DCA-D4(S)	4.92	65	194337	23.63855 ppb	0.00
Spiked Amount 25.000			Recovery =	94.556%	
5) Toluene-D8(S)	7.22	98	626792	24.97446 ppb	0.00
Spiked Amount 25.000			Recovery =	99.896%	
6) 4-Bromofluorobenzene(S)	9.89	95	210999	24.22844 ppb	0.00
Spiked Amount 25.000			Recovery =	96.912%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0116L15.D Vial: 15
Acq On : 16 Jan 17 14:50 Operator: PM,DG,SV,CMM
Sample : AZ48872W456 MSD-1WL 300ug/L Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 17 7:25 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	708608	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	931080	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1015423	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	13615840m	291.20548	ppb	100

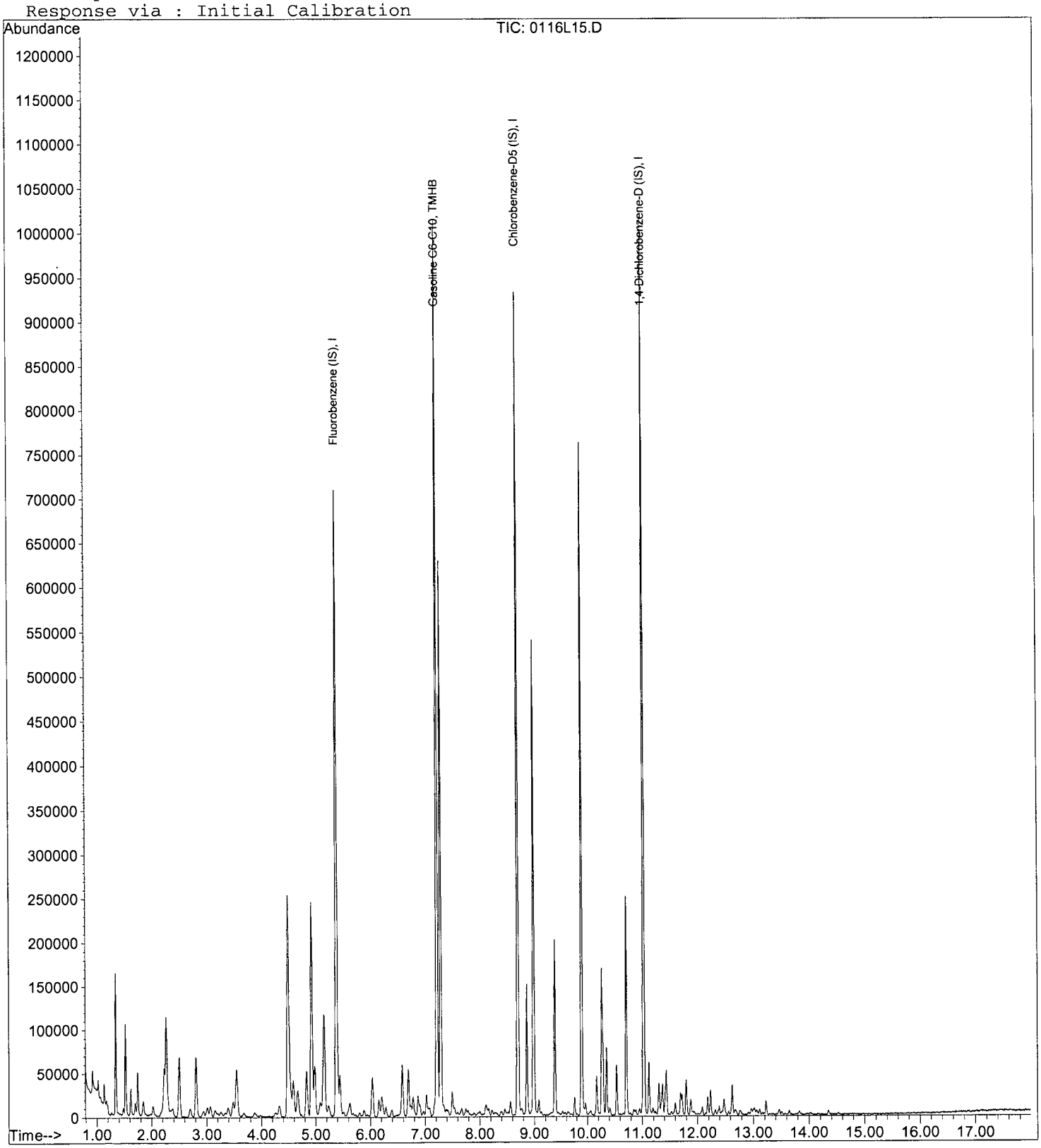
(#) = qualifier out of range (m) = manual integration
0116L15.D LGAS6112.M Tue Jan 17 07:28:22 2017 Page 1

Quantitation Report

Data File : M:\LOKI\DATA\170111\0116L15.D Vial: 15
Acq On : 16 Jan 17 14:50 Operator: PM,DG,SV,CMM
Sample : AZ48872W456 MSD-1WL 300ug/L Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 17 7:25 2017 Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0116L15.D Vial: 15
Acq On : 16 Jan 17 14:50 Operator: PM,DG,SV,CMM
Sample : AZ48872W456 MSD-1WL 300ug/L Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 17 7:30 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	339456	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	311744	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	166464	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.48	111	183481	24.22193 ppb	0.00
Spiked Amount 25.000			Recovery =	96.888%	
3) 1,2-DCA-D4(S)	4.92	65	194642	23.69351 ppb	0.00
Spiked Amount 25.000			Recovery =	94.776%	
5) Toluene-D8(S)	7.22	98	629587	25.23003 ppb	0.00
Spiked Amount 25.000			Recovery =	100.920%	
6) 4-Bromofluorobenzene(S)	9.89	95	218152	25.19380 ppb	0.00
Spiked Amount 25.000			Recovery =	100.776%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Matrix Spike Recoveries

EPA 8260B GRO WATER

APPL ID: **170116W-48866 MS - 215504**
Batch ID: #GRO86-170113AL
Sample ID: AZ48866
Client ID: ERH161

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
GASOLINE RANGE ORGANICS	300	ND	273	274	91.0	91.3	78-122	0.37	20
SURROGATE: 4-BROMOFLUOROBENZE	25.0	NA	24.5	24.2	98.0	96.8	85-114		

Comments: _____

Primary	SPK	DUP
Quant Method :	LGAS6112.M	LGAS6112.M
Extraction Date :	01/16/17	01/16/17
Analysis Date :	01/16/17	01/16/17
Instrument :	Loki	Loki
Run :	0116L16	0116L17
Initials :	ARO	

Printed: 01/17/17 8:22:11 AM
APPL MSD SCII

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0116L16.D Vial: 16
Acq On : 16 Jan 17 15:18 Operator: PM,DG,SV,CMM
Sample : AZ48866W456 MS-1WL 300ug/L Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 17 7:25 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	709689	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	940754	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1002121	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	13225337m	273.39403	ppb	100

(#) = qualifier out of range (m) = manual integration

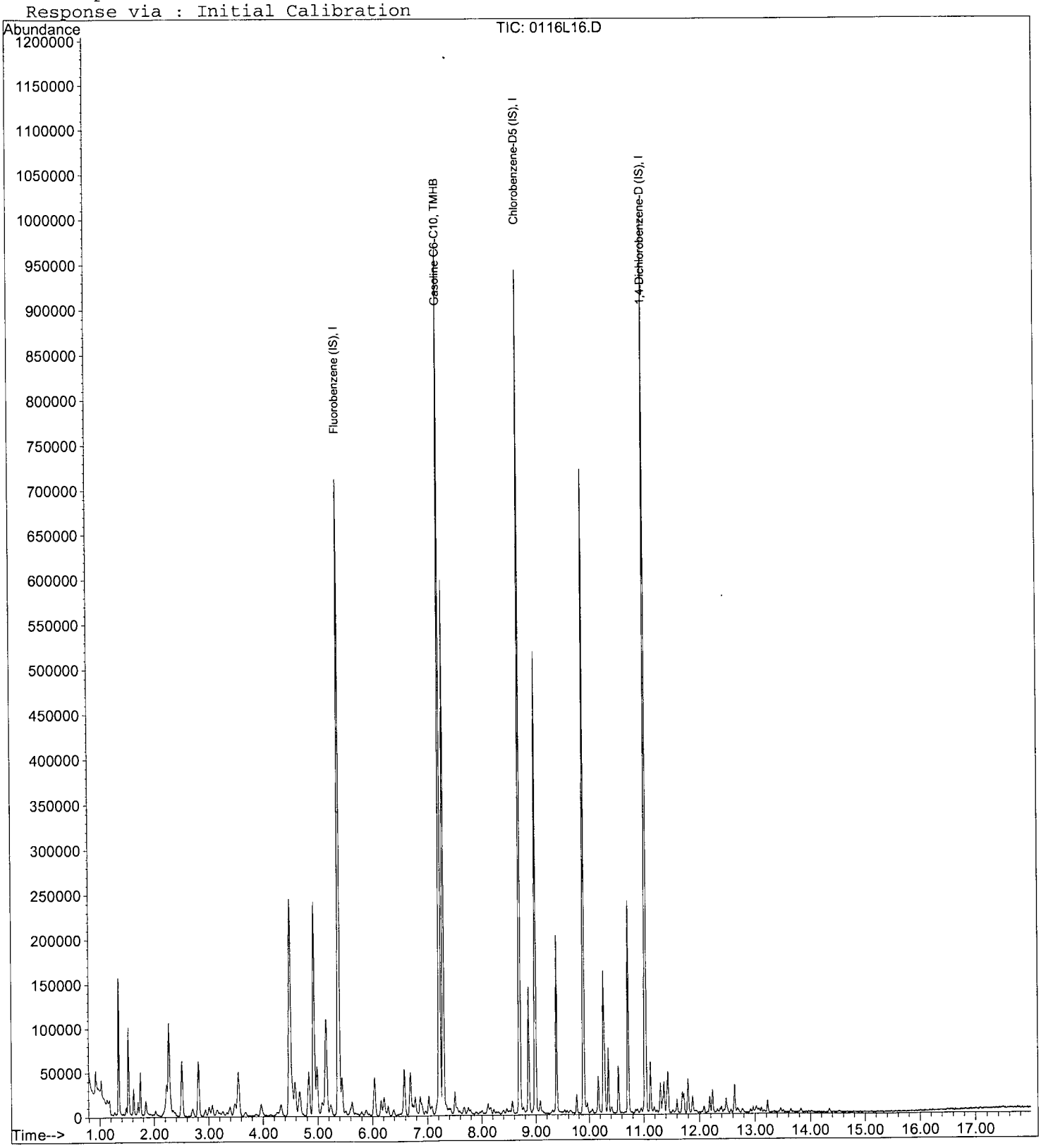
Quantitation Report

Data File : M:\LOKI\DATA\170111\0116L16.D
Acq On : 16 Jan 17 15:18
Sample : AZ48866W456 MS-1WL 300ug/L
Misc : W IS&S 1/3/17, 01/11/17

Vial: 16
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 17 7:25 2017 Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0116L16.D Vial: 16
Acq On : 16 Jan 17 15:18 Operator: PM,DG,SV,CMM
Sample : AZ48866W456 MS-1WL 300ug/L Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 17 7:30 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	340096	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	313408	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	165056	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.49	111	177007	23.32331 ppb	0.00
Spiked Amount 25.000			Recovery =	93.292%	
3) 1,2-DCA-D4(S)	4.92	65	190912	23.19573 ppb	0.00
Spiked Amount 25.000			Recovery =	92.784%	
5) Toluene-D8(S)	7.22	98	616379	24.56959 ppb	0.00
Spiked Amount 25.000			Recovery =	98.280%	
6) 4-Bromofluorobenzene(S)	9.89	95	213232	24.49485 ppb	0.00
Spiked Amount 25.000			Recovery =	97.980%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0116L17.D Vial: 17
Acq On : 16 Jan 17 15:46 Operator: PM,DG,SV,CMM
Sample : AZ48866W456 MSD-1WL 300ug/L Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 17 7:26 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	687200	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	932815	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1011102	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	12818085m	273.92355	ppb	100

(#) = qualifier out of range (m) = manual integration
0116L17.D LGAS6112.M Tue Jan 17 07:28:30 2017 Page 1

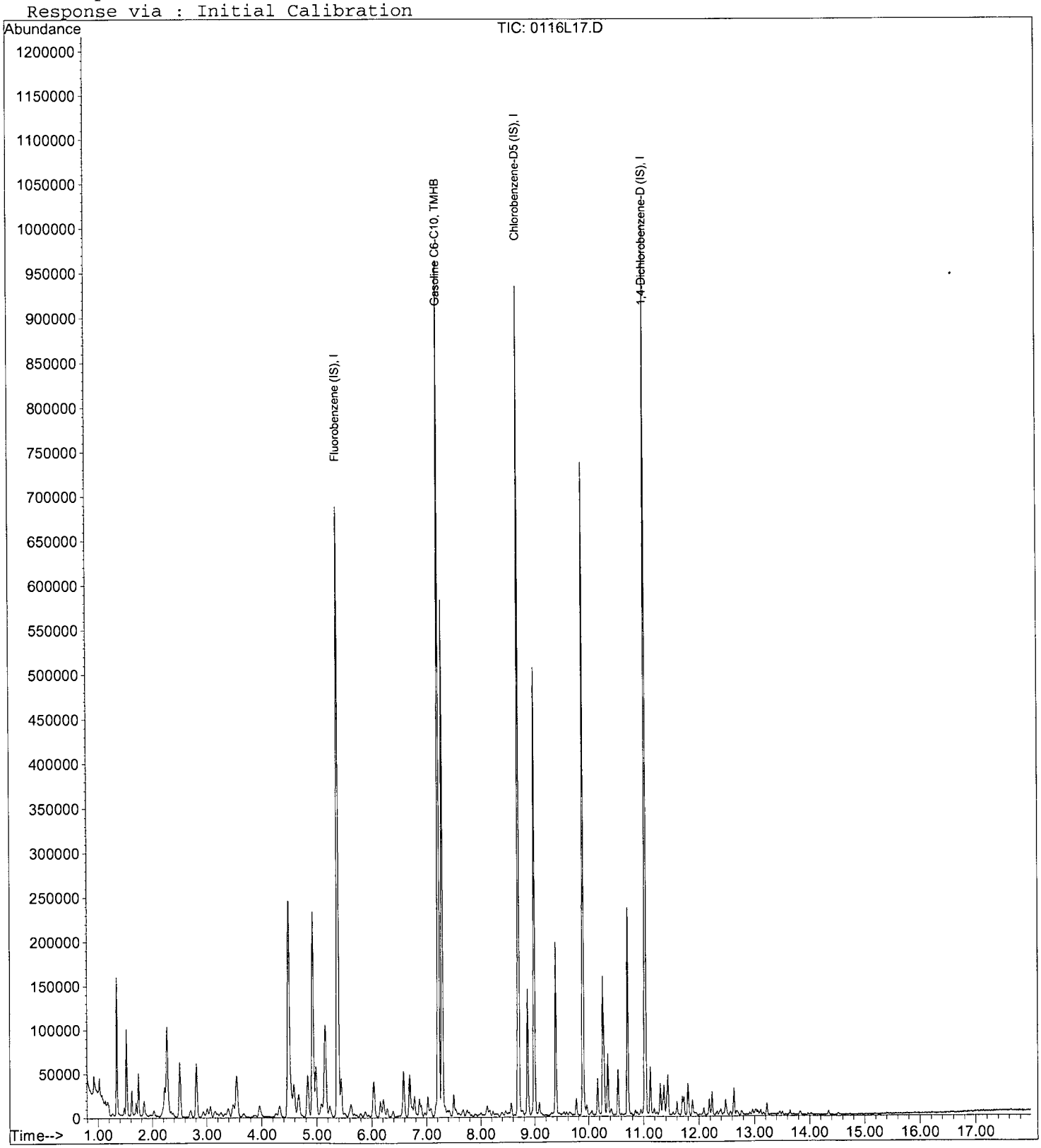
Quantitation Report

Data File : M:\LOKI\DATA\170111\0116L17.D
Acq On : 16 Jan 17 15:46
Sample : AZ48866W456 MSD-1WL 300ug/L
Misc : W IS&S 1/3/17, 01/11/17

Vial: 17
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 17 7:26 2017 Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0116L17.D Vial: 17
Acq On : 16 Jan 17 15:46 Operator: PM,DG,SV,CMM
Sample : AZ48866W456 MSD-1WL 300ug/L Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 17 7:30 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	327936	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	312064	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	169344	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.48	111	179427	24.51884 ppb	0.00
Spiked Amount 25.000			Recovery =	98.076%	
3) 1,2-DCA-D4(S)	4.92	65	187445	23.61898 ppb	0.00
Spiked Amount 25.000			Recovery =	94.476%	
5) Toluene-D8(S)	7.22	98	612687	24.52760 ppb	0.00
Spiked Amount 25.000			Recovery =	98.112%	
6) 4-Bromofluorobenzene(S)	9.89	95	210091	24.23797 ppb	0.00
Spiked Amount 25.000			Recovery =	96.952%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Gasoline Curve Preparation for 100mL Purge (water)-LOKI			
Exp Date:	01/13/17	2000ug/ml	
		12/4/16A	Final Volume
	Conc.	Exp.03/31/21	w/ P&T H2O
Date/code	µg/L	uL	mL
01/12/17G-DG	20	1	100
01/12/17H-DG	50	2.5	100
01/12/17I-DG	100	5	100
01/12/17J-DG	300	15	100
01/12/17K-DG	600	30	100
01/12/17L-DG	800	40	100
01/12/17M-DG	1000	50	100

Gasoline SECOND SOURCE preparation @300ppb-MAX			
Exp Date:	01/13/17	2000ug/ml	
		12/05/16B	Final Volume
	Conc.	Exp.05-04-18	w/ P&T H2O
Date/code	µg/L	uL	mL
12/11/16	300	15	100

PRIMARY STANDARD

01/10/17H							
50ug/ml Vol Work Std #7							
Exp:02/10/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120016-03	Gas Mix	2000	279822-36644	01/10/17DG	02/19/19	100
02SI	020049-02	HEXACHLOROETHANE	1000	254167-36564	12/27/16C-CMM	12/28/17	200
02SI	020228-02	Benzyl Chloride	1000	279824-36569	12/27/16E-CMM	05/24/18	200
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	3500
01/10/17I							
50ug/ml Vol Work Std #1							
Exp:02/10/17					Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	020145-02-02	2-CEVE	2000	288264-37217	11/22/16C-CMM	09/19/19	50
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	1950
01/10/17J							
50ug/ml Vol Work Std #8							
Exp:02/10/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	122039-02	Volatile Mix, 20-29	2000	258033-37169	12/16/16C-CMM	08/17/17	100
02SI	120023-03	VOC'S-54 COMP	2000	271929-36581	12/16/16D-CMM	02/15/18	100
02SI	020232-02	Vinyl Acetate	2000	292241-37194	12/16/16E-CMM	02/01/17	100
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	3700
01/10/17K							
50ug/ml Vol Work Std #2							
Exp:02/10/17							
Supplier	ID #	ID	ug/ml				
02SI	121020-05	HSL'S-Ketone Solution	2000	258036-36073	01/10/17BDG	08/17/17	100
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	3900
		01/10/17L					
		5ug/ml Vol Work Std #9					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #7		**01/10/17H**	Exp:02/10/17	200	
		50ug/ml Vol Work Std #8		**01/10/17J**	Exp:02/10/17	200	
		J&T Brand		12/16/16	12/16/17	1600	
		01/10/17M					
		5ug/ml Vol Work Std #10					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #1		**01/10/17I**	Exp:02/10/17	200	
		J&T Brand		12/16/16	12/16/17	1800	
		01/10/17N					
		5ug/ml Vol Work Std #12					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #2		**01/10/17K**	Exp:02/10/17	200	
		J&T Brand		12/16/16	12/16/17	1800	
01/10/17O							
250ug/ml TBA/IBA/Acetonitrile/Cyclohexanone/Acrolein/2-P							
Exp:02/10/17			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
02SI	120166-01	Volatile Mix 4-3	2000	275544-36413	12/16/16F-CMM	03/28/18	500
02SI	020229-09-02	Acrolein	10000	294146-37313	01/10/17FDG	01/14/17	100
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	3400

SECONDARY SOURCE

01/10/17P							
50ug/ml VOC Std#4							
Exp:02/10/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120296-01-SS	Custom 8260 Solution	2000	279826-37381	01/10/17DG	06/01/19	50
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	1950
01/10/17Q							
50ug/ml VOC Std#5							
Exp:02/10/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120016-03-SS	8260 Gases(SS)	2000	279826-36675	12/16/16I-CMM	06/01/19	50
02SI	020145-02-02-SS	2-CEVE (SS)	2000	254171-35380	12/16/16J-CMM	06/21/17	50
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	1900
01/10/17R							

50ug/ml VOC Std#6							
Exp:02/10/17							
	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120023-03-SS	VOC'S 54 COMP.	2000	265897-35927	12/16/16K-CMM	11/29/17	50
02SI	020232-02-SS	Vinyl Acetate(SS)	2000	292243-37196	12/16/16L-CMM	02/01/17	50
02SI	020049-02-SS	HEXACHLOROETHANE (SS)	1000	295337-37383	01/10/17D-DG	12/19/18	100
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	1800
01/10/17S							
250ug/ml TBA/IBA/Acetonitrile/Acrolein/2-P							
Exp:02/10/17			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
02SI	120166-01-SS	VOC Mix 4-3 (SS)	2000	258040-37230	01/10/17EDG	08/22/18	250
02SI	020229-09-SS	Acrolein SOLUTION (SS)	10000	294146-37314	01/10/17GDG	01/14/17	50
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	1700
8260 water		spiked with		Total Vol			
CCV/LCS	10ug/L Vol Std	10uL of 50ug/ml Std #7		50mL P&T H2O			
Ending CCV		10uL of 50ug/ml Std #8					
		10uL of 50ug/ml Std #1					
		10uL of 50ug/ml Std #2					
		25uL of 250ug/ml Std TBA					
X4 ketones							
LCS	10ug/L Vol Std	10uL of 50ug/ml Std #7		50mL P&T H2O			
		10uL of 50ug/ml Std #8					
		10uL of 50ug/ml Std #1					
		40uL of 50ug/ml Std #2					
		25uL of 250ug/ml Std TBA					
8260 soil		spiked with		Total Vol			
CCV/LCS	50ug/Kg Vol Std	5uL of 50ug/ml Std #7		5mL P&T H2O			
Ending CCV		5uL of 50ug/ml Std #8					
		5uL of 50ug/ml Std #1					
		5uL of 50ug/ml Std #2					
		5uL of 250ug/ml Std TBA					
Matrix spikes are prepared with same standards as ccv (see above) into the sample.							
8260water		spiked with		Total Vol			
SS	10ug/L STD	10uL of 50ug/ml Std #4		50mL P&T H2O			
		10uL of 50ug/ml Std #5					
		10uL of 50ug/ml Std #6					
		25uL of 250ug/ml Std TBA					
8260 SOIL	50ug/Kg STD	5uL of 50ug/ml Std #4		Total Vol			
SS		5uL of 50ug/ml Std #5		5mL P&T H2O			
		5uL of 50ug/ml Std #6					
		5uL of 250ug/ml Std TBA					

ORGANICS

APPL, INC.

ORGANICS
QC Summary

APPL, INC.

Method Blank
METHANE

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **170116W-48866 - 215507**
Batch ID: #RSKME-170116A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/16/17	01/16/17

Quant Method: RSK0901.M
Run #: 17011604
Instrument: Rocky
Sequence: 160901
Initials: CMO

GC SC-Blank-REG MDLs-DOD
Printed: 01/22/17 9:56:54 AM

Laboratory Control Spike Recovery
METHANE

APPL ID: **170116W-48866 LCS - 215507**
Batch ID: #RSKME-170116A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
METHANE	1340	1000	74.9	72-125

Comments: _____

Primary	SPK
Quant Method :	RSK0901.M
Extraction Date :	01/16/17
Analysis Date :	01/16/17
Instrument :	Rocky
Run :	17011603
Initials :	CMO

Printed: 01/22/17 9:56:39 AM
APPL Standard LCS

Matrix Spike Recoveries

METHANE

APPL ID: **170116W-48866 MS - 215507**
Batch ID: #RSKME-170116A
Sample ID: AZ48866
Client ID: ERH161

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
METHANE	1340	ND	1060	1050	79.4	78.7	72-125	0.95	30

Comments: _____

Primary	SPK	DUP
Quant Method :	RSK0901.M	RSK0901.M
Extraction Date :	01/16/17	01/16/17
Analysis Date :	01/16/17	01/16/17
Instrument :	Rocky	Rocky
Run :	17011608	17011609
Initials :	CMO	

Printed: 01/22/17 9:56:26 AM
APPL MSD SCII

Matrix Spike Recoveries

METHANE

APPL ID: **170116W-48872 MS - 215507**
Batch ID: #RSKME-170116A
Sample ID: AZ48872
Client ID: ERH169

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
METHANE	1340	ND	956	1100	71.6	82.4	72-125	14.0	30

Comments: _____

Primary	SPK	DUP
Quant Method :	RSK0901.M	RSK0901.M
Extraction Date :	01/16/17	01/16/17
Analysis Date :	01/16/17	01/16/17
Instrument :	Rocky	Rocky
Run :	17011615	17011616
Initials :	CMO	

Printed: 01/22/17 9:56:26 AM
APPL MSD SCII

RSK 175

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81965

Case No: 81965 Date Analyzed: 01/16/17

Matrix: WATER Instrument: Rocky

Blank ID: 170116A-BLK Time Analyzed: 1041

APPL ID.	Client Sample No.	File ID.	Date Analyzed
170116A-LCS	Lab Control Spike	17011603	01/16/17 1037
170116A-BLK	Blank	17011604	01/16/17 1041
AZ48866	ERH161	17011607	01/16/17 1059
170116A-MS	Matrix Spike	17011608	01/16/17 1103
170116A-MSD	Matrix SpikeD	17011609	01/16/17 1107
AZ48868	ERH164	17011610	01/16/17 1111
AZ48869	ERH163	17011611	01/16/17 1115
AZ48870	ERH167	17011612	01/16/17 1118
AZ48871	ERH168	17011613	01/16/17 1121
AZ48872	ERH169	17011614	01/16/17 1127
170116A-MS	Matrix Spike	17011615	01/16/17 1130
170116A-MSD	Matrix SpikeD	17011616	01/16/17 1133
AZ48873	ERH170	17011617	01/16/17 1137
AZ48874	ERH177	17011618	01/16/17 1140
AZ48875	ERH174	17011619	01/16/17 1144
AZ48875	ERH174	17011620	01/16/17 1147
AZ48876	ERH175	17011621	01/16/17 1213
AZ48877	ERH176	17011622	01/16/17 1216
AZ48878	ERH179	17011623	01/16/17 1221
AZ48882	ERH194	17011624	01/16/17 1240
AZ48884	ERH173	17011625	01/16/17 1243
AZ48886	ERH196	17011626	01/16/17 1247

Comments: Batch: #RSKME-170116A

ORGANICS
Sample Data

APPL, INC.

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH161
Sample Collection Date: 01/09/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48866
QCG: #RSKME-170116A-215507

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/16/17	01/16/17

Quant Method:	RSK0901.M
Run #:	17011607
Instrument:	Rocky
Sequence:	160901
Dilution Factor:	1
Initials:	CMO

Printed: 01/22/17 9:56:48 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\17011607.D Vial: 8
Acq On : 16 Jan 17 10:59 Operator: lac
Sample : AZ48866W12 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 22 9:49 2017 Quant Results File: RSK0901.RES

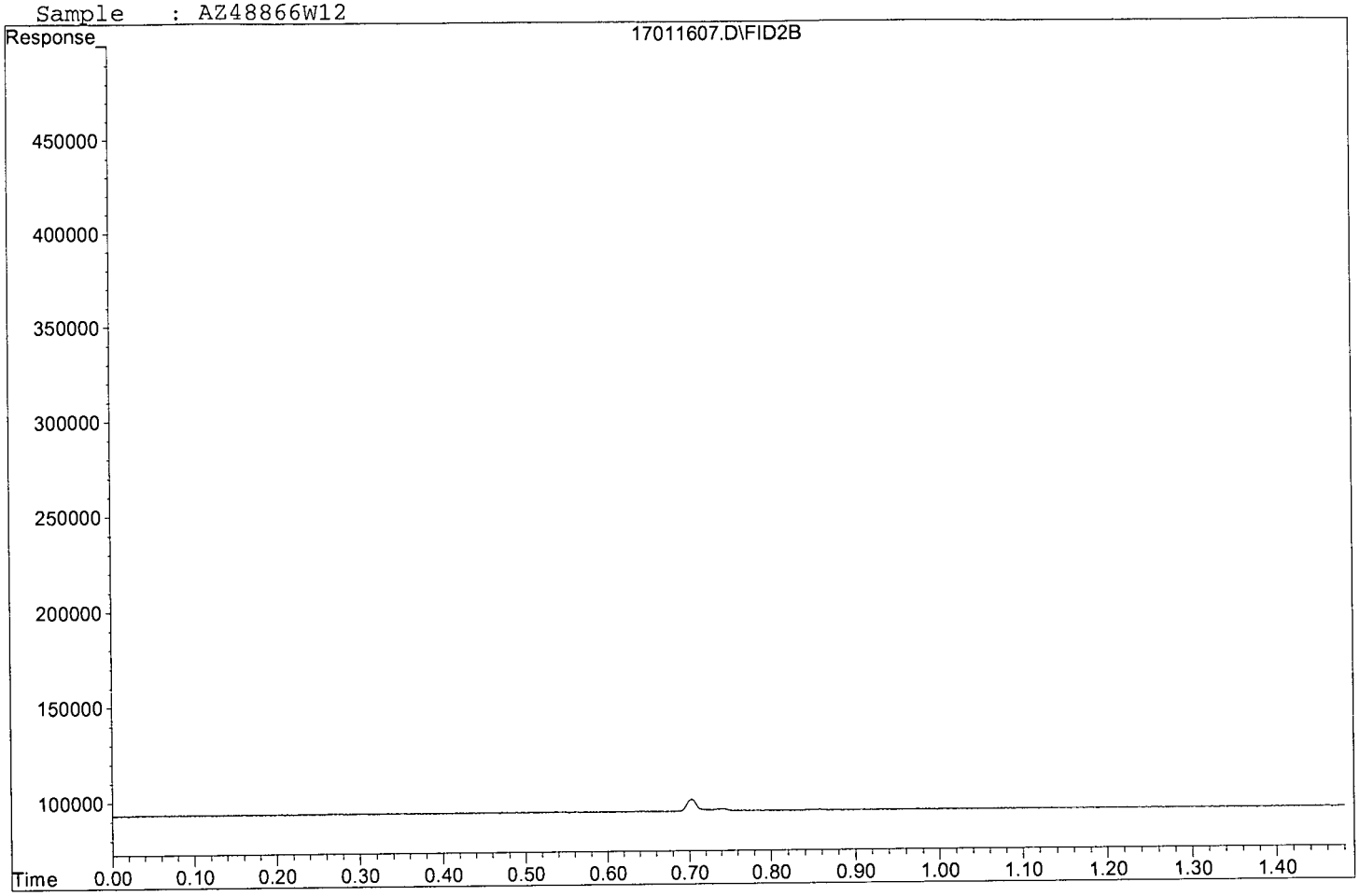
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 17 12:10:52 2017
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.80	276	N.D.	ppb
2) ATM Ethane	0.96	300	N.D.	ppb
3) ATM Ethene	1.04	217	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\17011607.D
Sample : AZ48866W12



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH164
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48868
QCG: #RSKME-170116A-215507

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/16/17	01/16/17

Quant Method: RSK0901.M
Run #: 17011610
Instrument: Rocky
Sequence: 160901
Dilution Factor: 1
Initials: CMO

Printed: 01/22/17 9:56:48 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\17011610.D Vial: 11
Acq On : 16 Jan 17 11:11 Operator: lac
Sample : AZ48868W05 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 22 9:49 2017 Quant Results File: RSK0901.RES

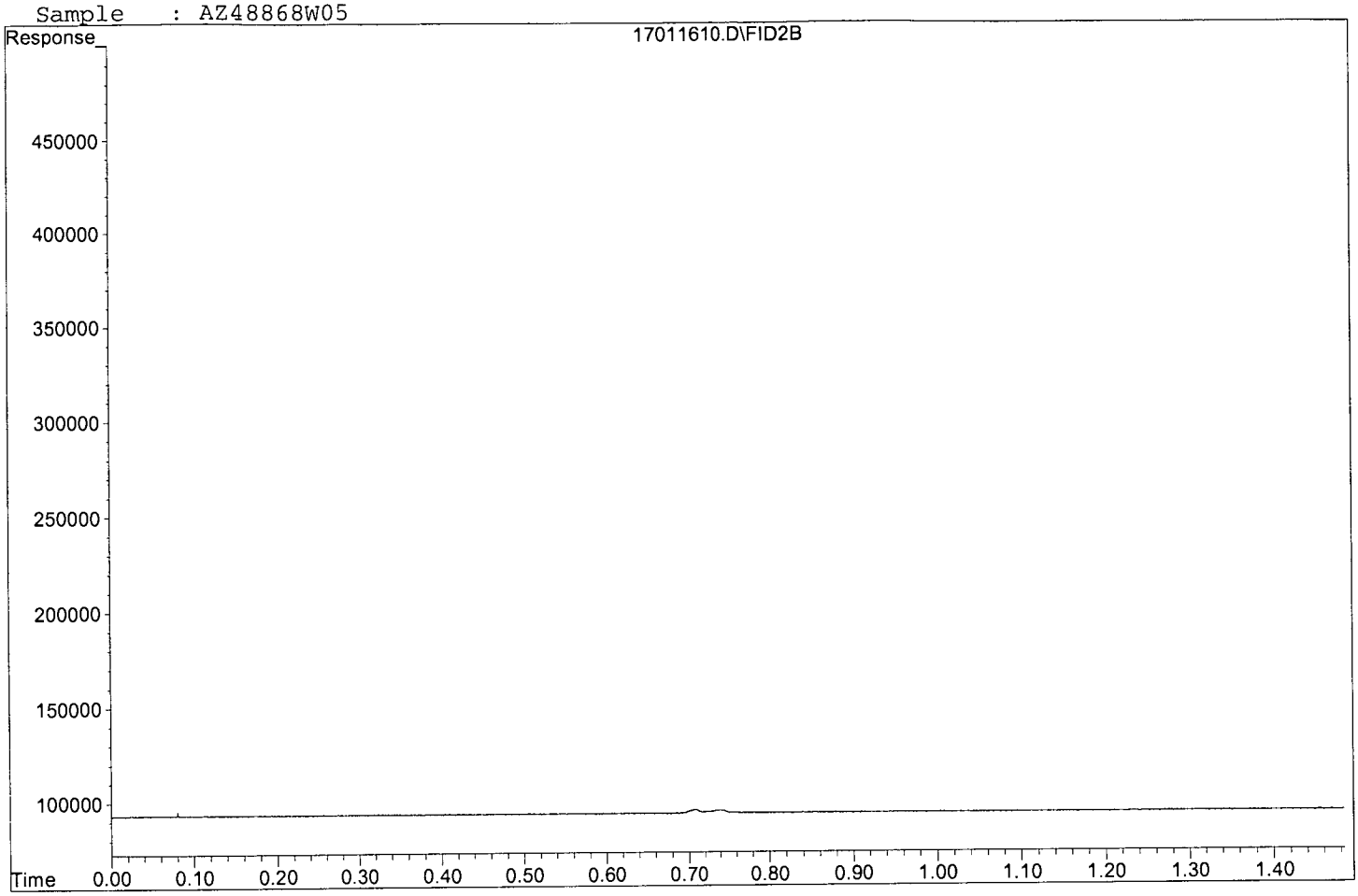
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 17 12:10:52 2017
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.80	243	N.D.	ppb
2) ATM Ethane	0.95	249	N.D.	ppb
3) ATM Ethene	1.04	238	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\17011610.D
Sample : AZ48868W05



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH163
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48869
QCG: #RSKME-170116A-215507

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/16/17	01/16/17

Quant Method:	RSK0901.M
Run #:	17011611
Instrument:	Rocky
Sequence:	160901
Dilution Factor:	1
Initials:	CMO

Printed: 01/22/17 9:56:48 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\17011611.D Vial: 12
Acq On : 16 Jan 17 11:15 Operator: lac
Sample : AZ48869W05 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 22 9:49 2017 Quant Results File: RSK0901.RES

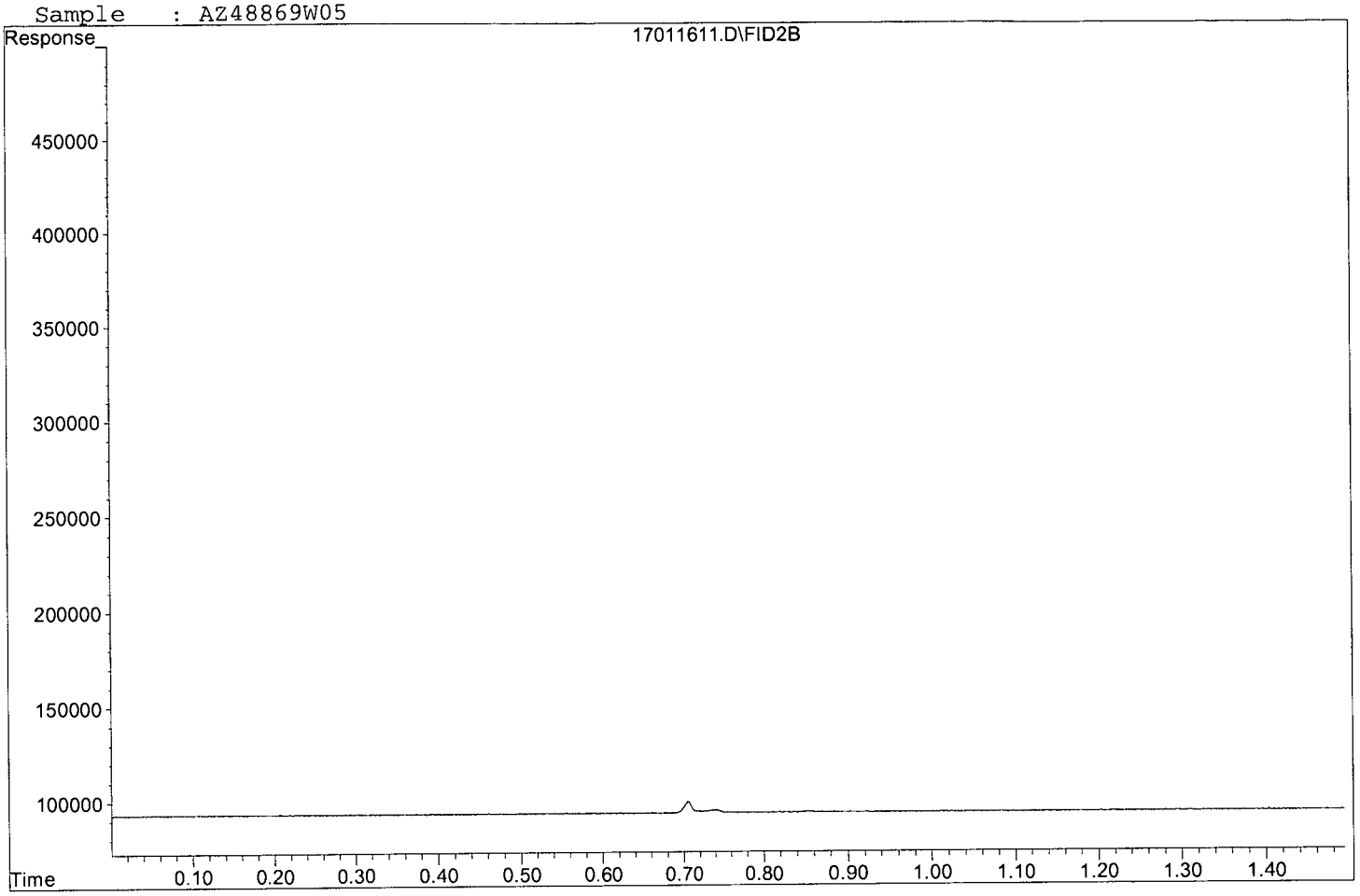
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 17 12:10:52 2017
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.80	252	N.D.	ppb
2) ATM Ethane	0.95	244	N.D.	ppb
3) ATM Ethene	1.04	258	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\17011611.D
Sample : AZ48869W05



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH167
Sample Collection Date: 01/09/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48870
QCG: #RSKME-170116A-215507

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/16/17	01/16/17

Quant Method:	RSK0901.M
Run #:	17011612
Instrument:	Rocky
Sequence:	160901
Dilution Factor:	1
Initials:	CMO

Printed: 01/22/17 9:56:48 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\17011612.D Vial: 13
Acq On : 16 Jan 17 11:18 Operator: lac
Sample : AZ48870W05 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 22 9:49 2017 Quant Results File: RSK0901.RES

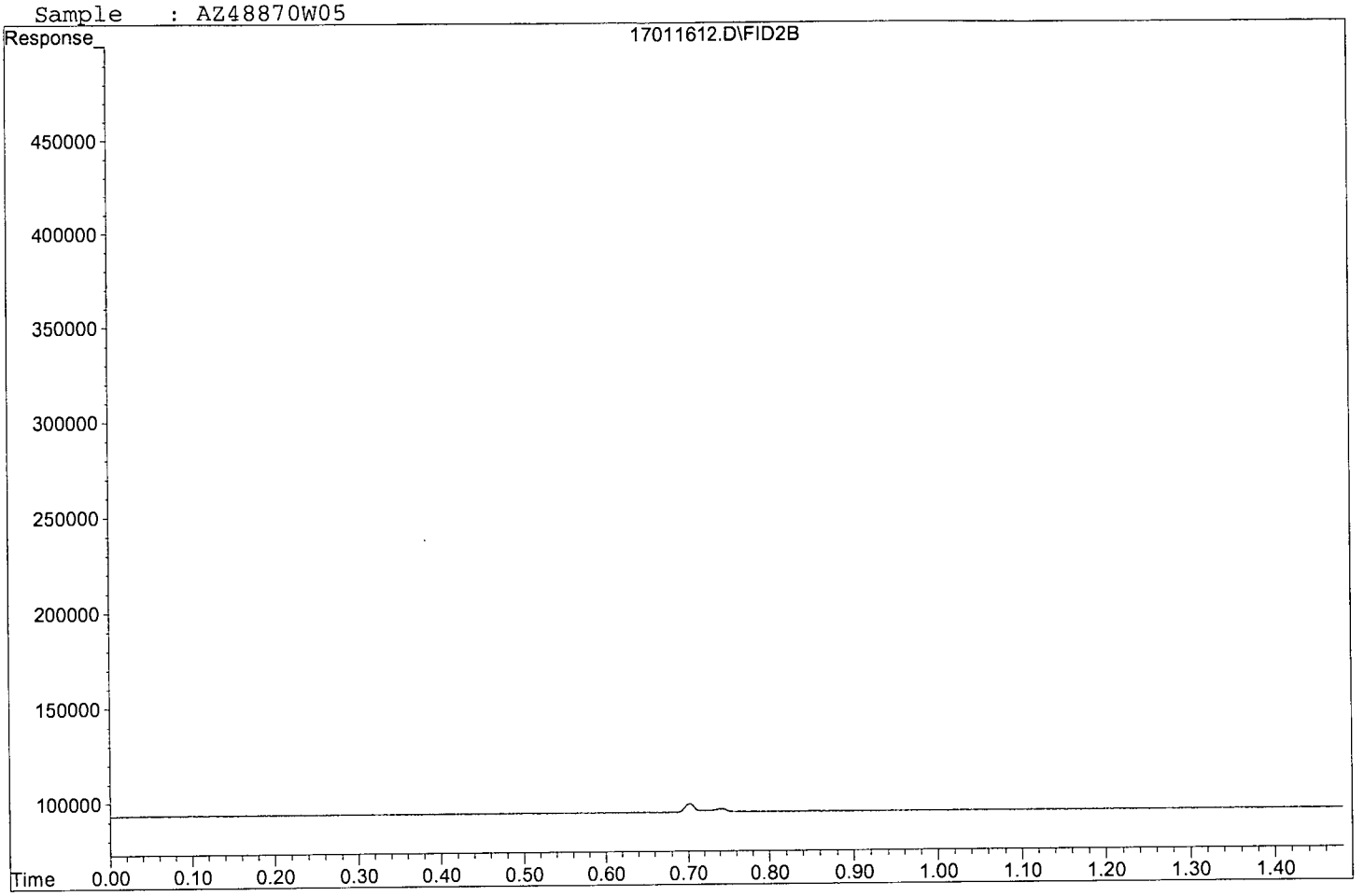
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 17 12:10:52 2017
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.80	136	N.D.	ppb
2) ATM Ethane	0.96	160	N.D.	ppb
3) ATM Ethene	1.04	231	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\17011612.D
Sample : AZ48870W05



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH168
Sample Collection Date: 01/09/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48871
QCG: #RSKME-170116A-215507

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/16/17	01/16/17

Quant Method:	RSK0901.M
Run #:	17011613
Instrument:	Rocky
Sequence:	160901
Dilution Factor:	1
Initials:	CMO

Printed: 01/22/17 9:56:48 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\17011613.D Vial: 14
Acq On : 16 Jan 17 11:21 Operator: lac
Sample : AZ48871W05 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 22 9:49 2017 Quant Results File: RSK0901.RES

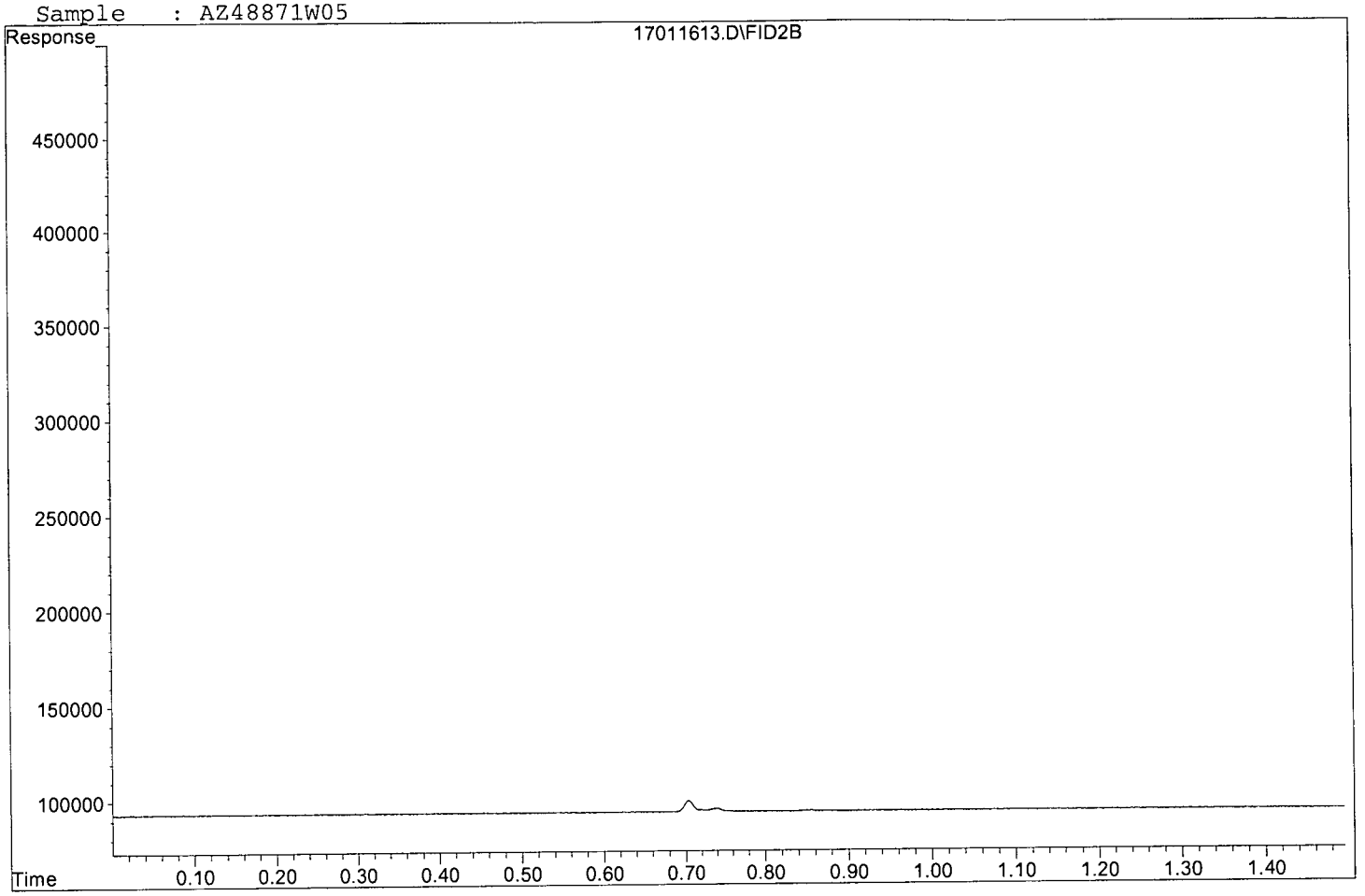
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 17 12:10:52 2017
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.80	275	N.D.	ppb
2) ATM Ethane	0.96	284	N.D.	ppb
3) ATM Ethene	1.04	304	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\17011613.D
Sample : AZ48871W05



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH169
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48872
QCG: #RSKME-170116A-215507

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/16/17	01/16/17

Quant Method:	RSK0901.M
Run #:	17011614
Instrument:	Rocky
Sequence:	160901
Dilution Factor:	1
Initials:	CMO

Printed: 01/22/17 9:56:48 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\17011614.D Vial: 15
Acq On : 16 Jan 17 11:27 Operator: lac
Sample : AZ48872W10 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 22 9:49 2017 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 17 12:10:52 2017
Response via : Multiple Level Calibration

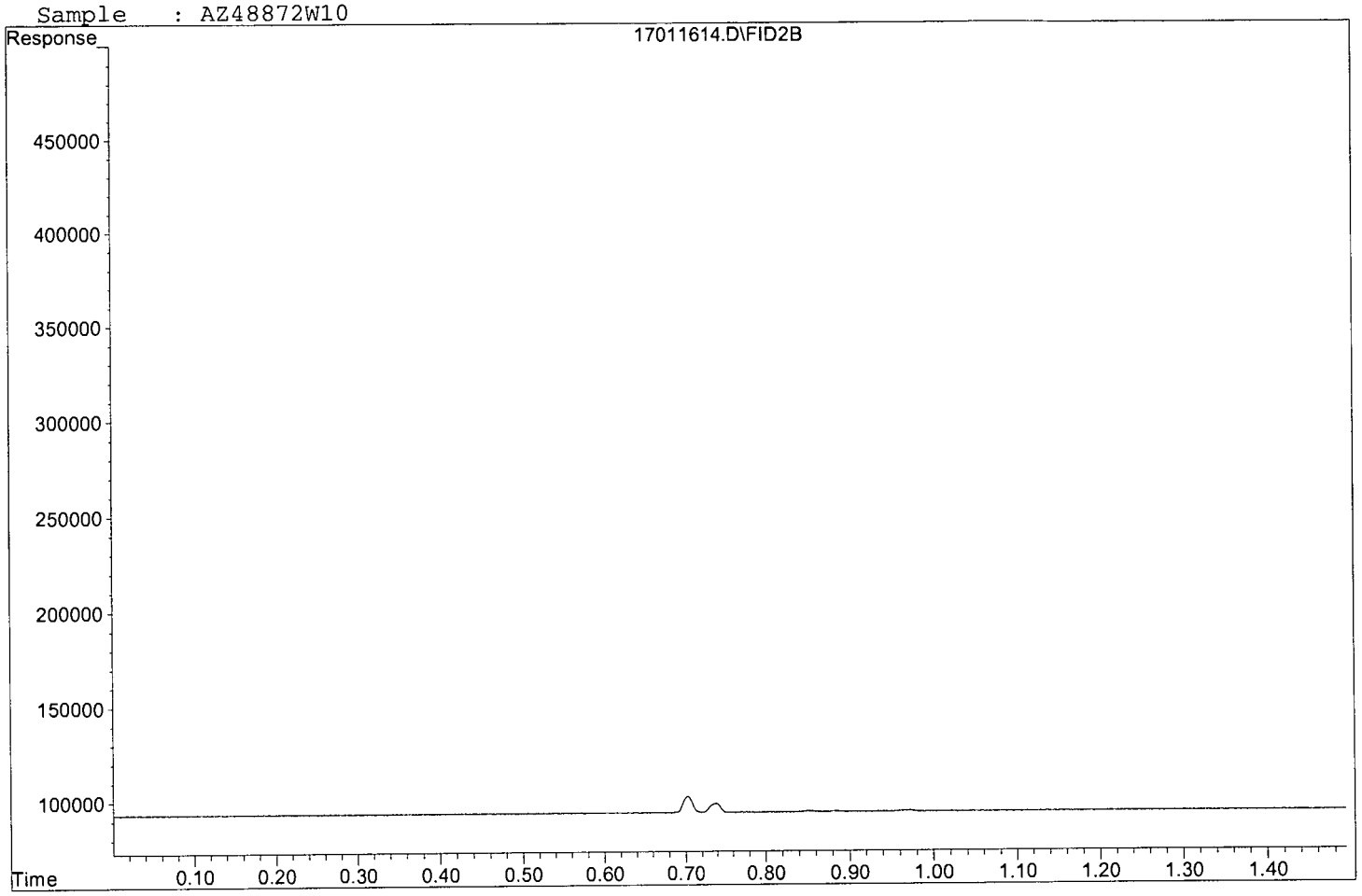
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.80	241	N.D.	ppb
2) ATM Ethane	0.95	254	N.D.	ppb
3) ATM Ethene	1.04	293	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\ROCKY\DATA\160901R\17011614.D
Sample : AZ48872W10



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH170
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48873
QCG: #RSKME-170116A-215507

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/16/17	01/16/17

Quant Method: RSK0901.M
Run #: 17011617
Instrument: Rocky
Sequence: 160901
Dilution Factor: 1
Initials: CMO

Printed: 01/22/17 9:56:48 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\17011617.D Vial: 18
Acq On : 16 Jan 17 11:37 Operator: lac
Sample : AZ48873W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 22 9:49 2017 Quant Results File: RSK0901.RES

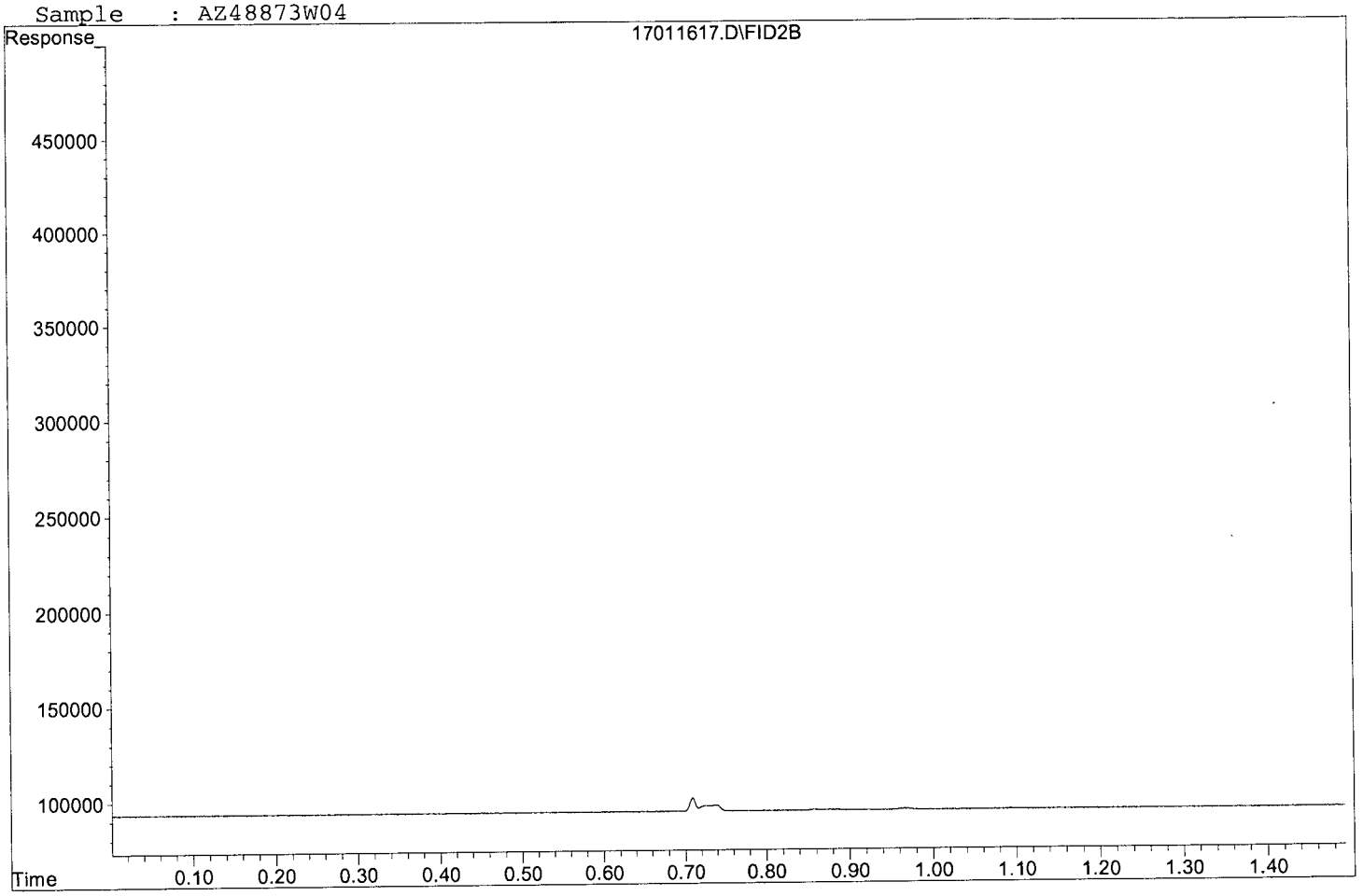
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 17 12:10:52 2017
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.80	191	N.D.	ppb
2) ATM Ethane	0.96	779	N.D.	ppb
3) ATM Ethene	1.04	219	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\17011617.D
Sample : AZ48873W04



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH177
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48874
QCG: #RSKME-170116A-215507

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/16/17	01/16/17

Quant Method: RSK0901.M
Run #: 17011618
Instrument: Rocky
Sequence: 160901
Dilution Factor: 1
Initials: CMO

Printed: 01/22/17 9:56:48 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\17011618.D Vial: 19
Acq On : 16 Jan 17 11:40 Operator: lac
Sample : AZ48874W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 22 9:49 2017 Quant Results File: RSK0901.RES

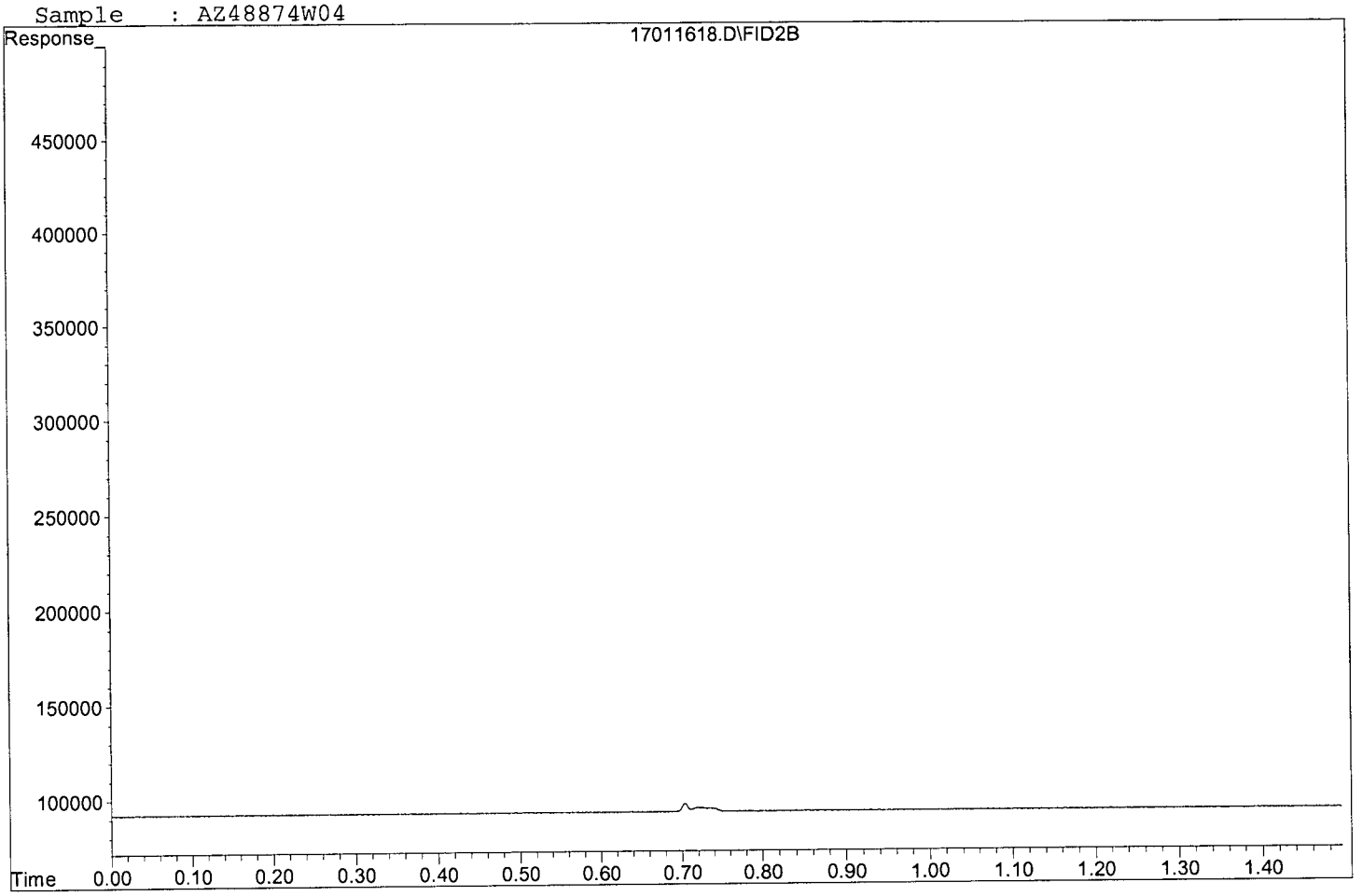
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 17 12:10:52 2017
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.79	135	N.D.	ppb
2) ATM Ethane	0.96	255	N.D.	ppb
3) ATM Ethene	1.04	363	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\17011618.D
Sample : AZ48874W04



METHANE - Dilution

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH174
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48875
QCG: #RSKME-170116A-215507

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	21000	250.0	50.00	12.50	ug/L	01/16/17	01/16/17

Quant Method: RSK0901.M
Run #: 17011620
Instrument: Rocky
Sequence: 160901
Dilution Factor: 50
Initials: CMO

Printed: 01/22/17 9:56:48 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\17011620.D Vial: 21
Acq On : 16 Jan 17 11:47 Operator: lac
Sample : AZ48875W05 DF50 Inst : 7890
Misc : Multiplr: 50.00
IntFile : autoint1.e
Quant Time: Jan 26 11:56 2017 Quant Results File: RSK0901.RES

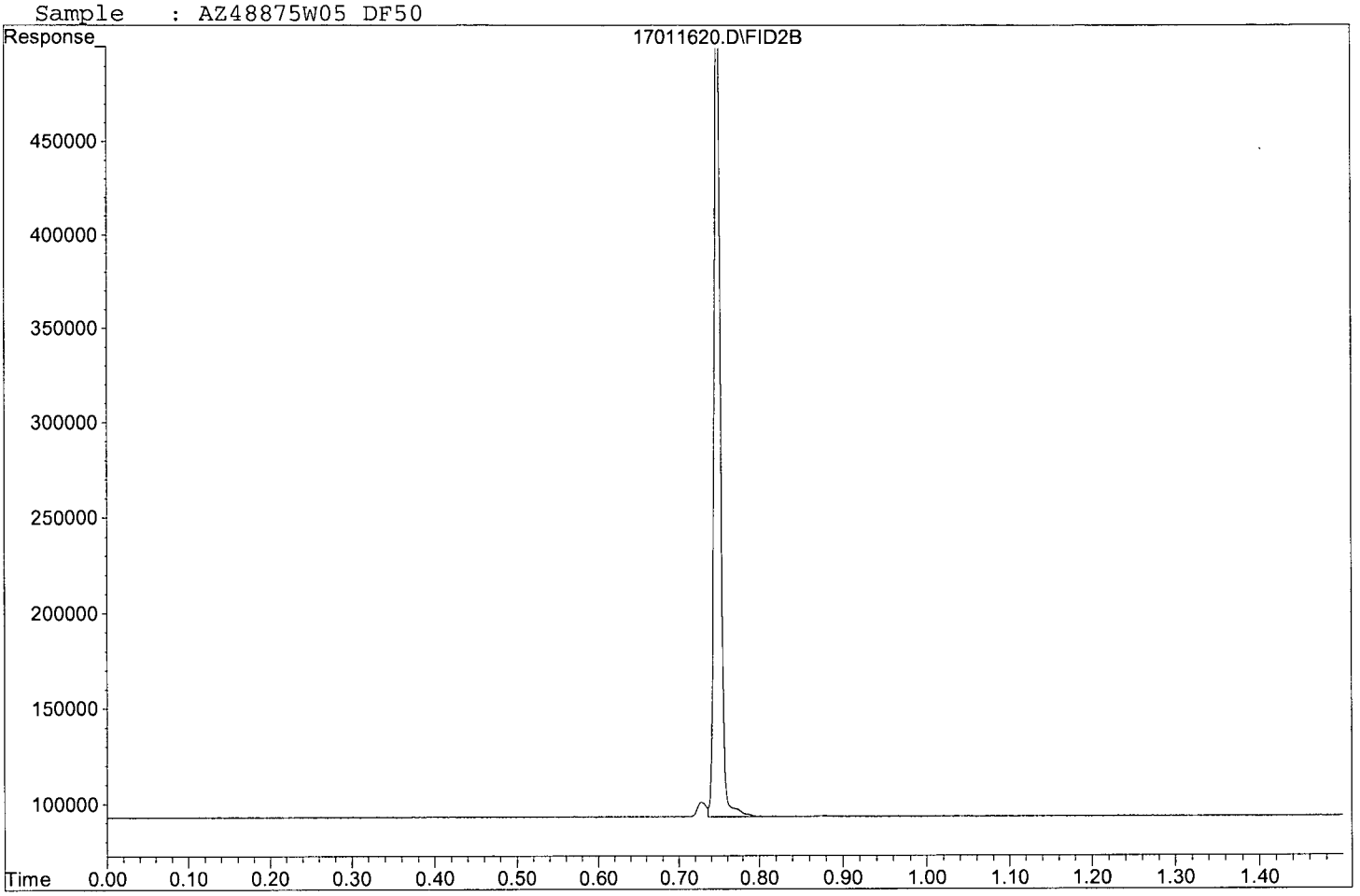
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Thu Jan 26 11:56:31 2017
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.75	467973	20938.684	ppb
Target Compounds				
2) ATM Ethane	0.88	582	N.D.	ppb
3) ATM Ethene	0.97	392	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\17011620.D
Sample : AZ48875W05 DF50



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH175
Sample Collection Date: 01/10/07

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48876
QCG: #RSKME-170116A-215507

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/16/17	01/16/17

Quant Method: RSK0901.M
Run #: 17011621
Instrument: Rocky
Sequence: 160901
Dilution Factor: 1
Initials: CMO

Printed: 01/22/17 9:56:48 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\17011621.D Vial: 22
Acq On : 16 Jan 17 12:13 Operator: lac
Sample : AZ48876W05 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 22 9:49 2017 Quant Results File: RSK0901.RES

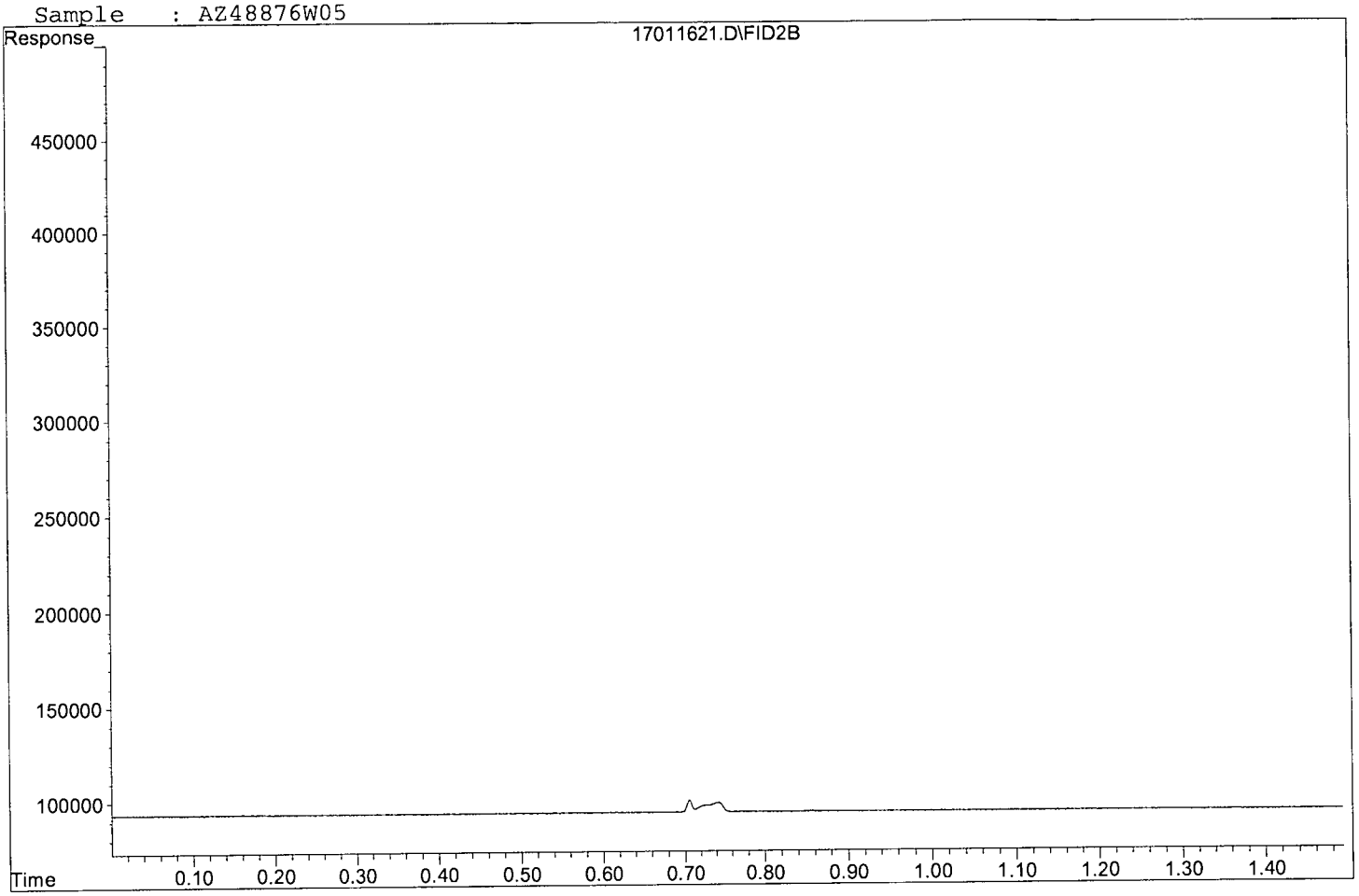
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 17 12:10:52 2017
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.81	252	N.D.	ppb
2) ATM Ethane	0.96	184	N.D.	ppb
3) ATM Ethene	1.03	167	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\17011621.D
Sample : AZ48876W05



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH176
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48877
QCG: #RSKME-170116A-215507

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/16/17	01/16/17

Quant Method:	RSK0901.M
Run #:	17011622
Instrument:	Rocky
Sequence:	160901
Dilution Factor:	1
Initials:	CMO

Printed: 01/22/17 9:56:48 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\17011622.D Vial: 23
Acq On : 16 Jan 17 12:16 Operator: lac
Sample : AZ48877W05 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 22 9:50 2017 Quant Results File: RSK0901.RES

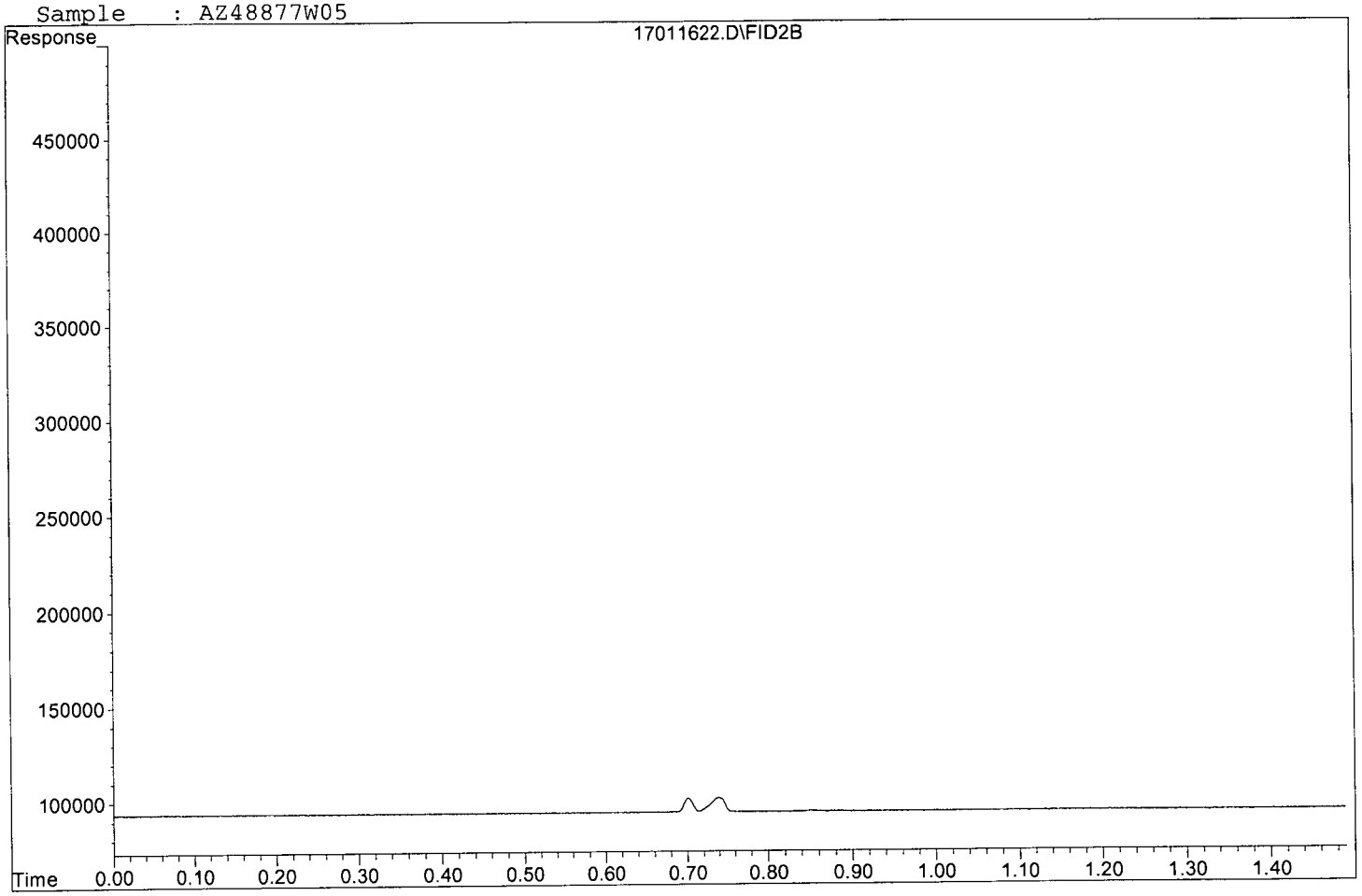
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 17 12:10:52 2017
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.79	303	N.D.	ppb
2) ATM Ethane	0.95	226	N.D.	ppb
3) ATM Ethene	1.04	110	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\17011622.D
Sample : AZ48877W05



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH179
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48878
QCG: #RSKME-170116A-215507

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/16/17	01/16/17

Quant Method: RSK0901.M
Run #: 17011623
Instrument: Rocky
Sequence: 160901
Dilution Factor: 1
Initials: CMO

Printed: 01/22/17 9:56:48 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\17011623.D Vial: 24
Acq On : 16 Jan 17 12:21 Operator: 1ac
Sample : AZ48878W05 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 22 9:50 2017 Quant Results File: RSK0901.RES

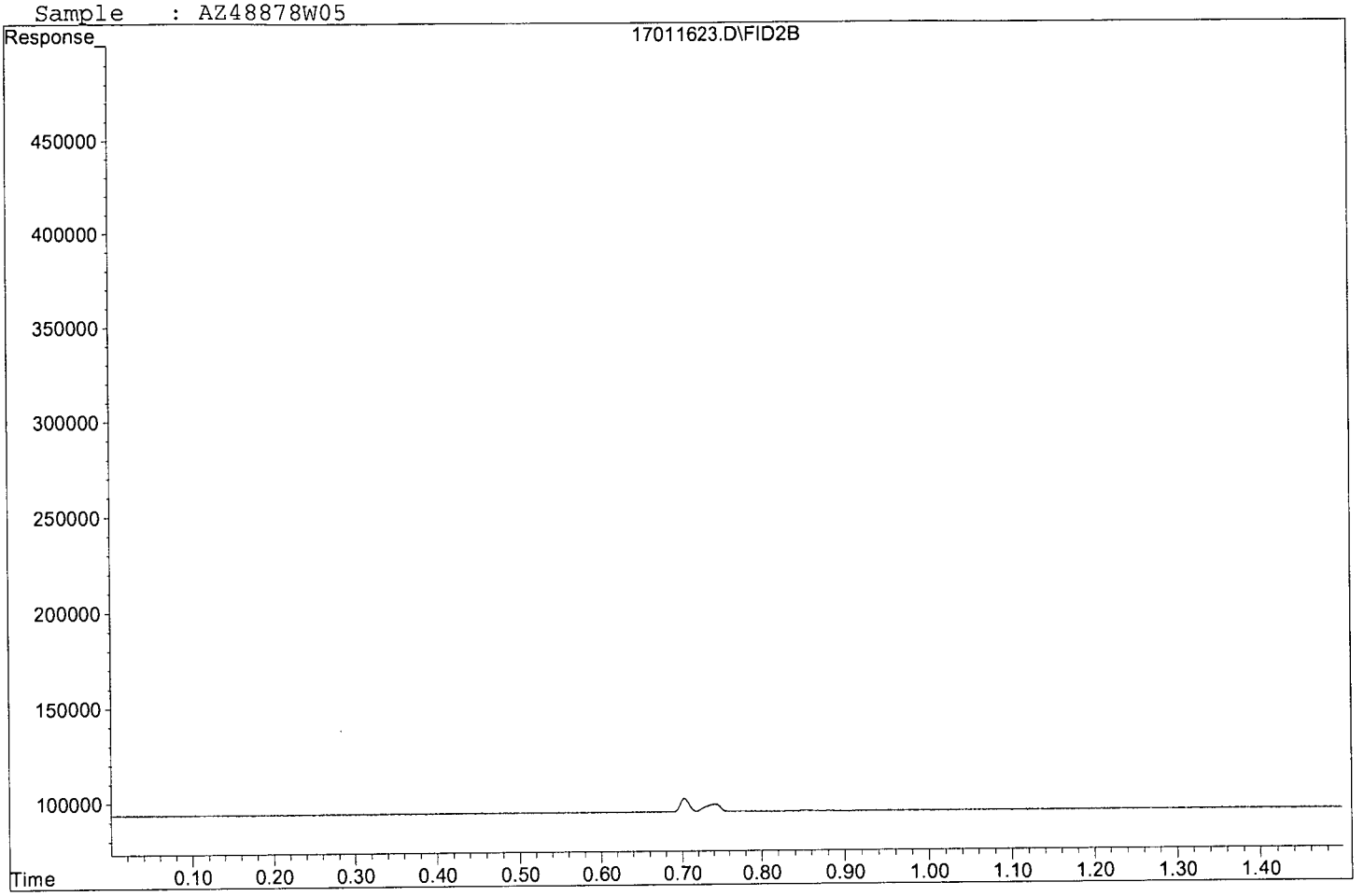
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 17 12:10:52 2017
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.79	400	N.D.	ppb
2) ATM Ethane	0.95	232	N.D.	ppb
3) ATM Ethene	1.05	251	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\17011623.D
Sample : AZ48878W05



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH194
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48882
QCG: #RSKME-170116A-215507

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/16/17	01/16/17

Quant Method: RSK0901.M
Run #: 17011624
Instrument: Rocky
Sequence: 160901
Dilution Factor: 1
Initials: CMO

Printed: 01/22/17 9:56:48 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\17011624.D Vial: 25
Acq On : 16 Jan 17 12:40 Operator: lac
Sample : AZ48882W05 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 22 9:50 2017 Quant Results File: RSK0901.RES

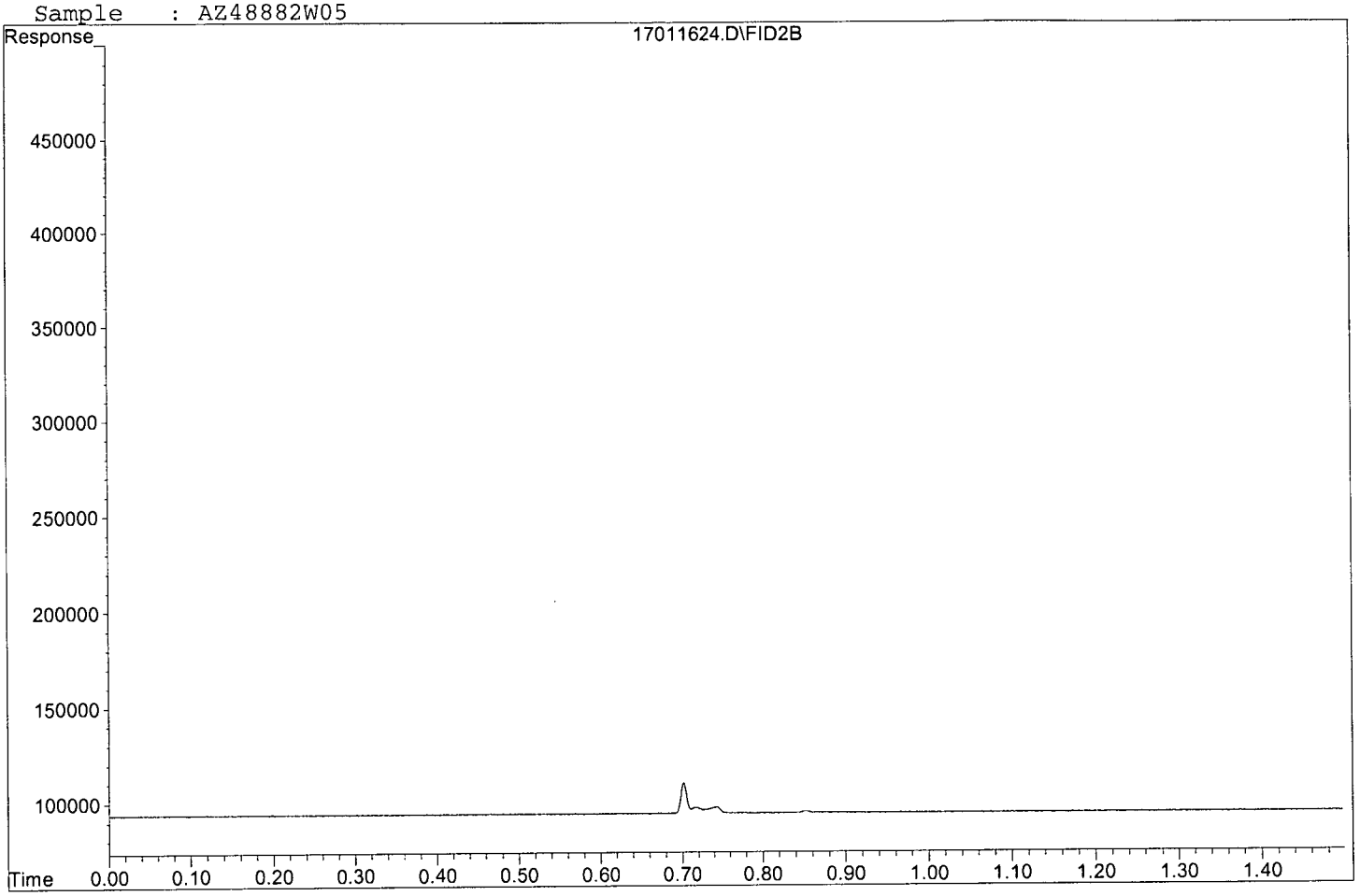
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 17 12:10:52 2017
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.80	383	N.D.	ppb
2) ATM Ethane	0.95	324	N.D.	ppb
3) ATM Ethene	1.04	276	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\17011624.D
Sample : AZ48882W05



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH173
Sample Collection Date: 01/10/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48884
QCG: #RSKME-170116A-215507

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/16/17	01/16/17

Quant Method:	RSK0901.M
Run #:	17011625
Instrument:	Rocky
Sequence:	160901
Dilution Factor:	1
Initials:	CMO

Printed: 01/22/17 9:56:48 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\17011625.D Vial: 26
Acq On : 16 Jan 17 12:43 Operator: lac
Sample : AZ48884W05 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 22 9:50 2017 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 17 12:10:52 2017
Response via : Multiple Level Calibration

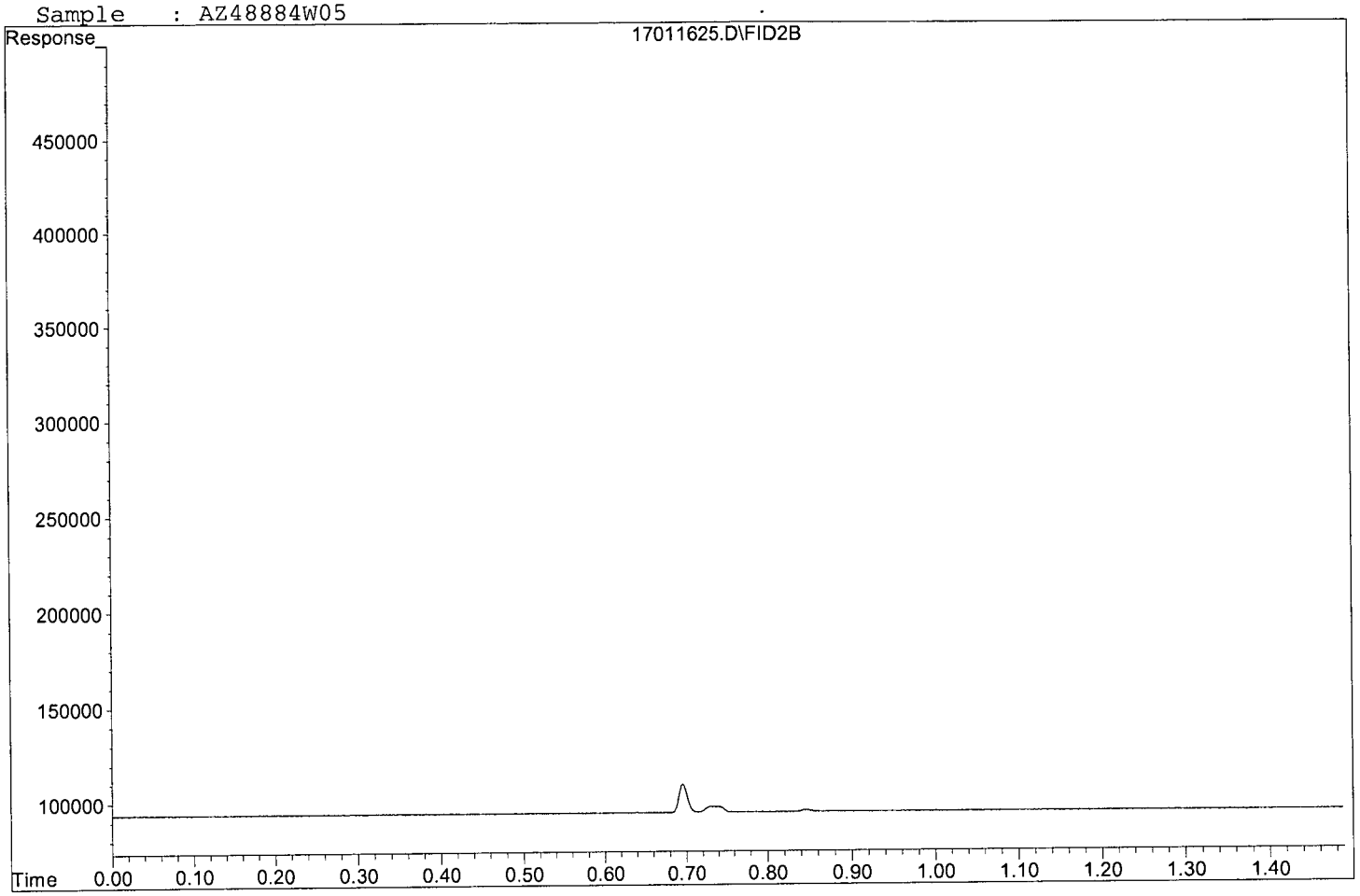
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.79	271	N.D.	ppb
2) ATM Ethane	0.96	311	N.D.	ppb
3) ATM Ethene	1.04	266	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\ROCKY\DATA\160901R\17011625.D
Sample : AZ48884W05



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH196
Sample Collection Date: 01/09/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81965
APPL ID: AZ48886
QCG: #RSKME-170116A-215507

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/16/17	01/16/17

Quant Method:	RSK0901.M
Run #:	17011626
Instrument:	Rocky
Sequence:	160901
Dilution Factor:	1
Initials:	CMO

Printed: 01/22/17 9:56:48 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\17011626.D Vial: 27
Acq On : 16 Jan 17 12:47 Operator: lac
Sample : AZ48886W05 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 22 9:50 2017 Quant Results File: RSK0901.RES

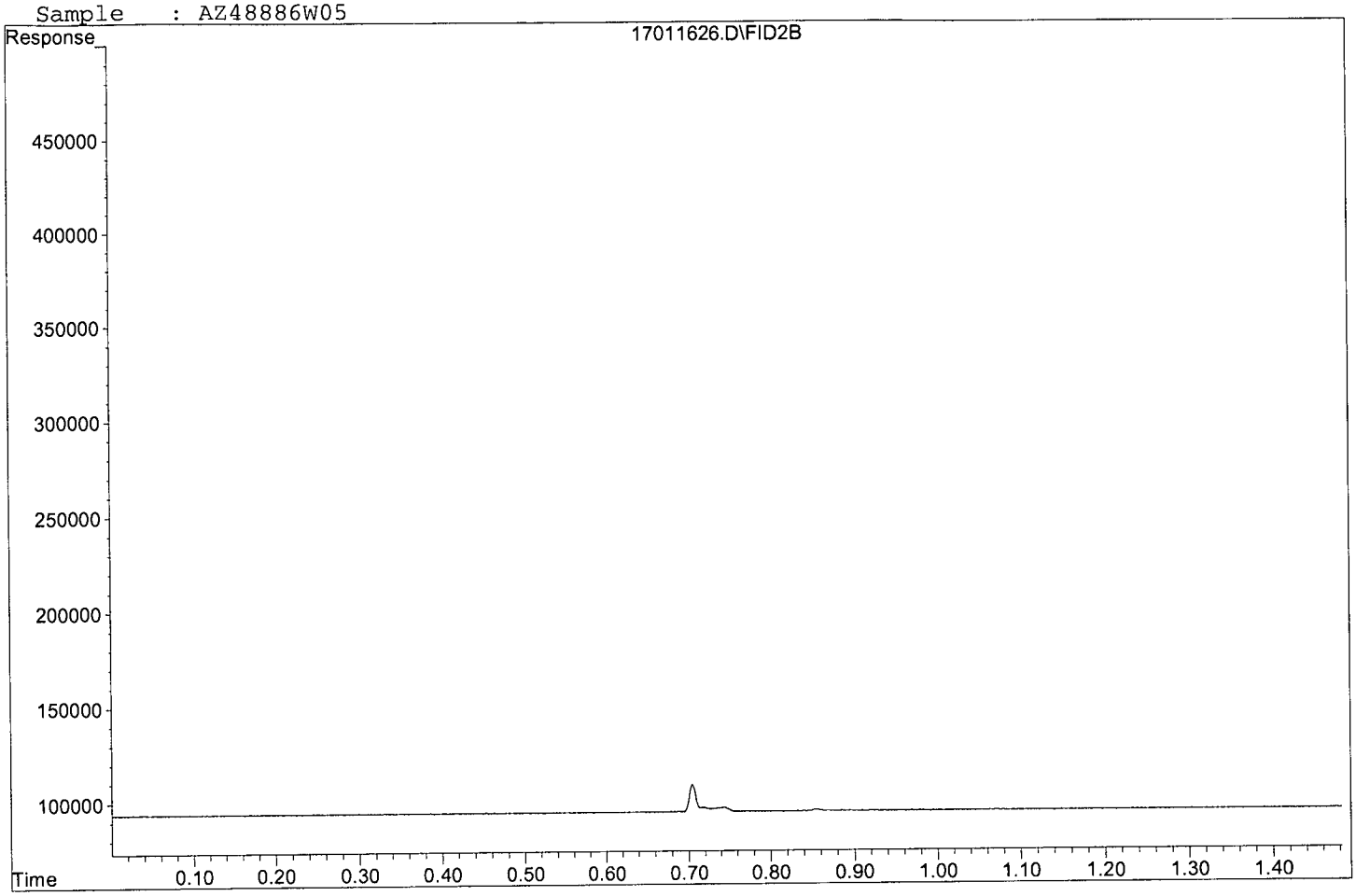
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 17 12:10:52 2017
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.79	293	N.D.	ppb
2) ATM Ethane	0.95	322	N.D.	ppb
3) ATM Ethene	1.05	298	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\17011626.D
Sample : AZ48886W05



ORGANICS
Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:
SDG No:
Initial Cal. Date: 09/01/16
Instrument: 7890
Initials:

		Compound	1	2	3	4	5	6	7	8	9	10	Avg	%RSD		
			0901000.D	0901001.D	0901002.D	0901003.D	0901004.D	0901005.D	0901006.D	0901007.D	0901008.D	0901009.D				
1	ATM	Methane	7448	5672	3042	3435	1074	1006	1184	1314	1084	1089	2635	87	ATM	
2	ATM	Ethane	1509	1521	1416	2554	478	657	816	933	791	798	1147	54	ATM	
3	ATM	Ethene	1826	1525	1280	2301	444	570	693	733	628	626	1063	60	ATM	
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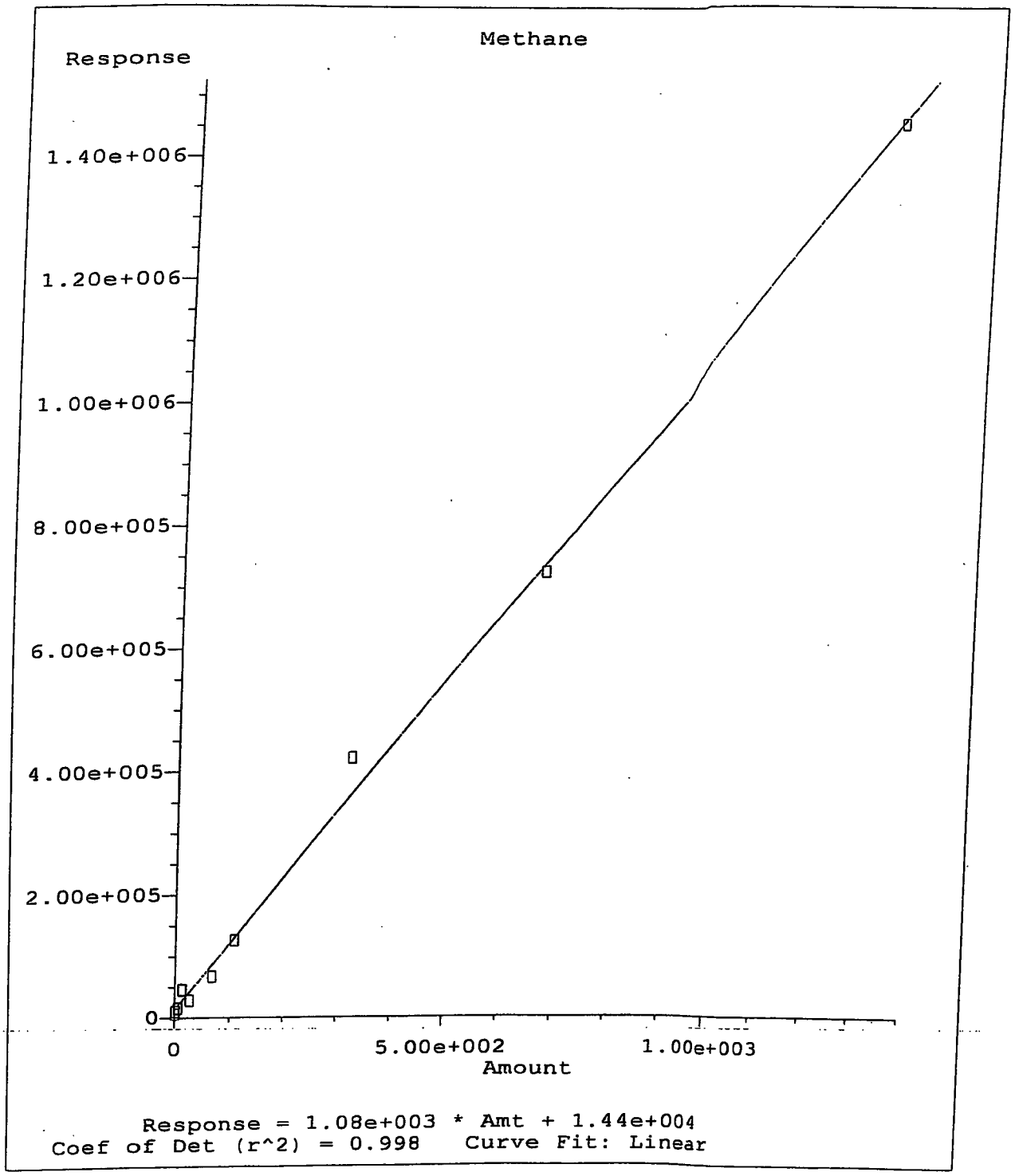
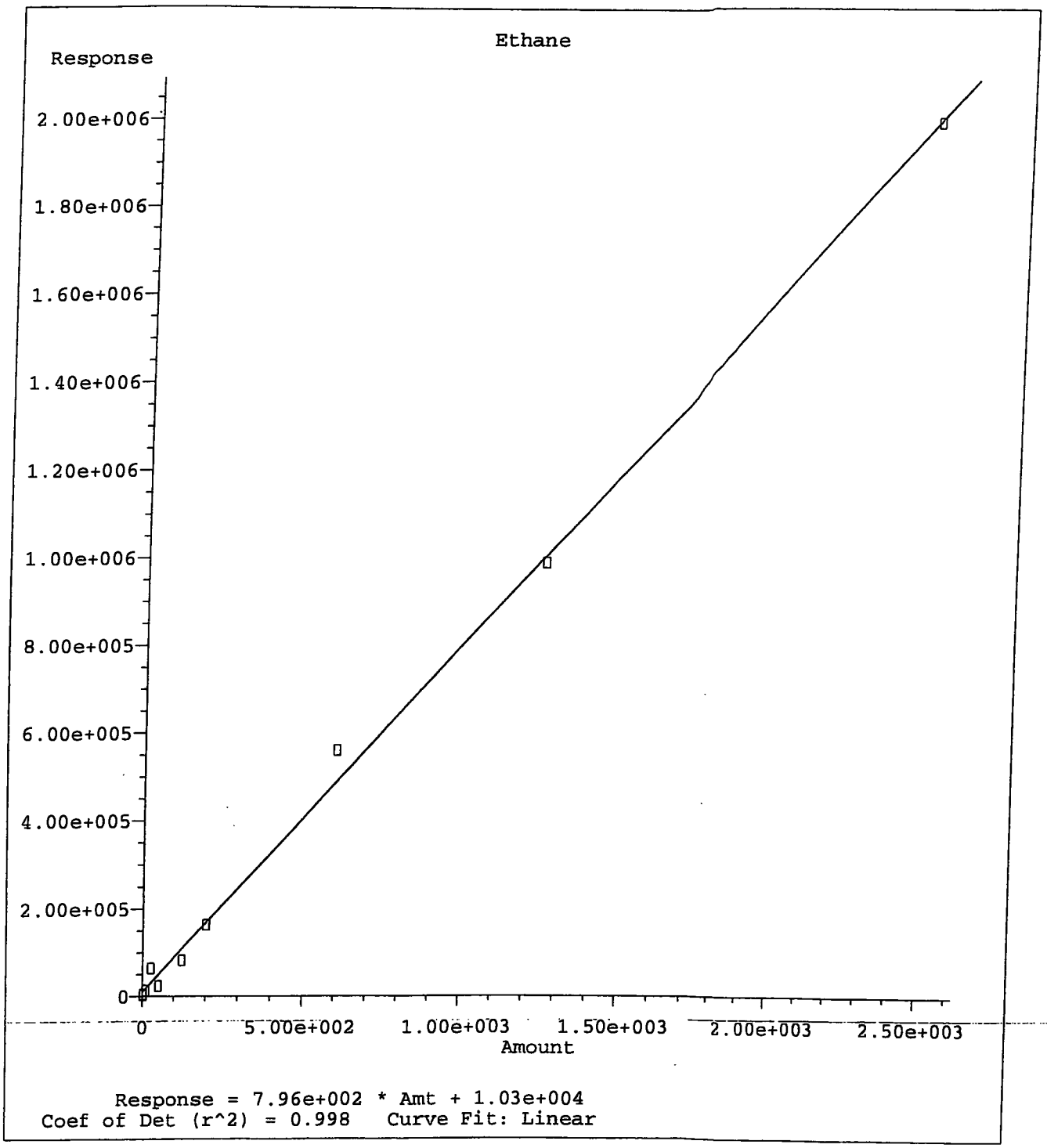
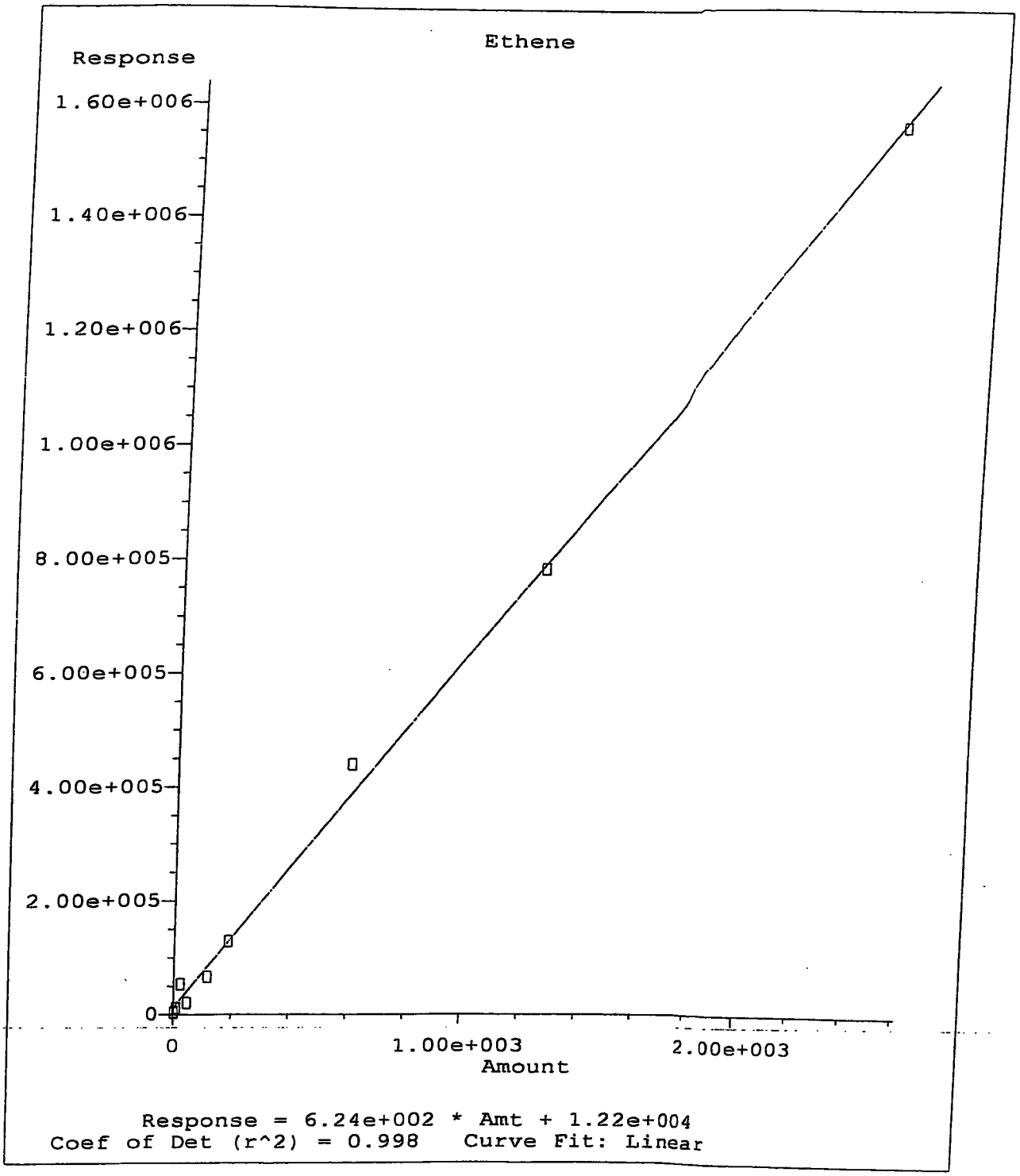
FORM61



Method Name: G:\ROCKY\DATA\160901R\RSK0901.M
Calibration Table Last Updated: Fri Sep 02 15:25:38 2016



Method Name: G:\ROCKY\DATA\160901R\RSK0901.M
Calibration Table Last Updated: Thu Nov 10 08:49:51 2016



Method Name: G:\ROCKY\DATA\160901R\RSK0901.M
Calibration Table Last Updated: Fri Sep 02 15:25:38 2016

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901000.D Vial: 1
Acq On : 1 Sep 16 11:38 Operator: lac
Sample : RSK Level 1 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

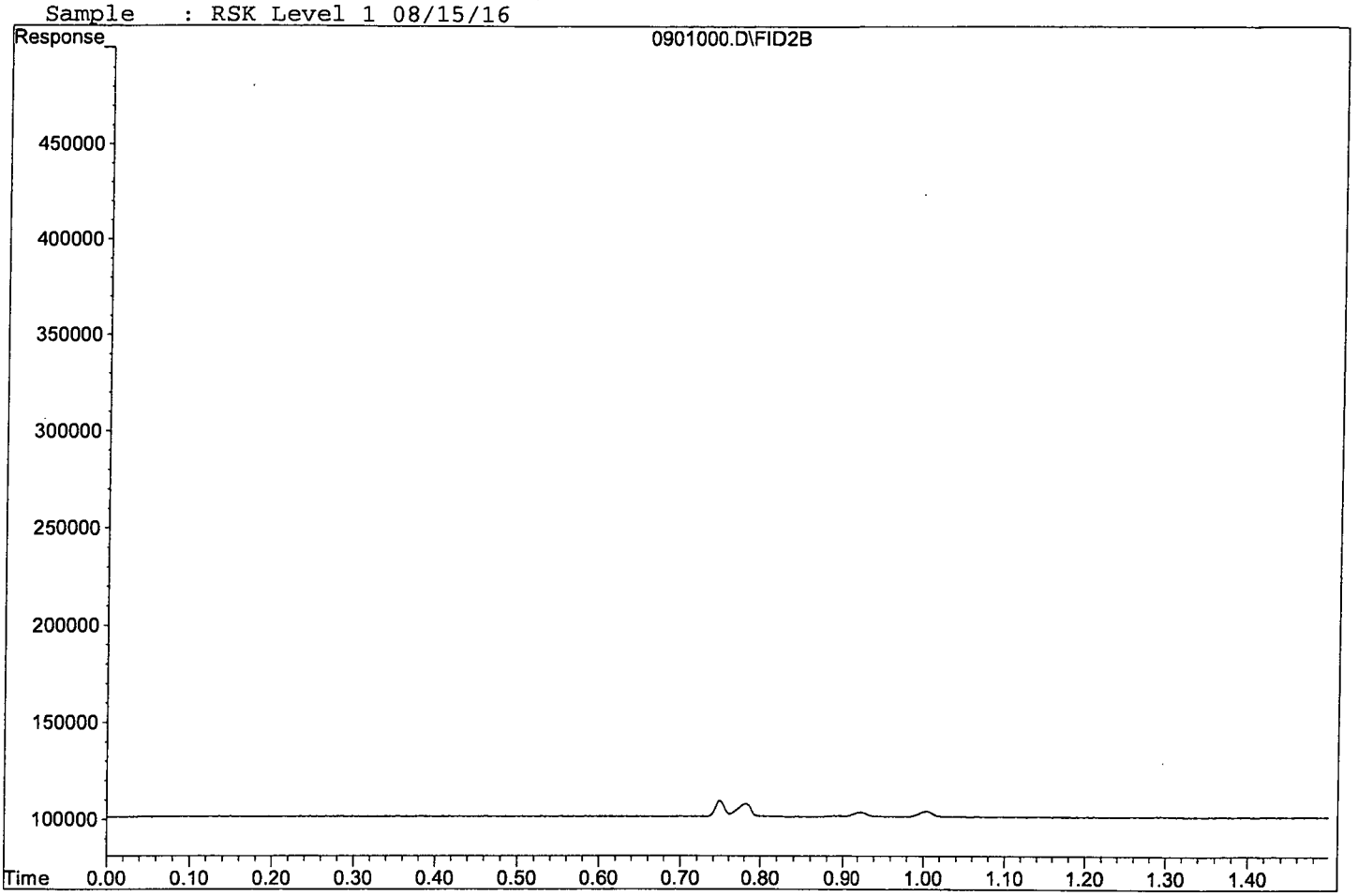
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.78	6703	N.D.	ppb
2) ATM Ethane	0.92	2566	N.D.	ppb
3) ATM Ethene	1.00	2922	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901000.D
Sample : RSK Level 1 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901001.D Vial: 2
Acq On : 1 Sep 16 11:41 Operator: lac
Sample : RSK Level 2 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 26 12:10 2017 Quant Results File: RSK0901.RES

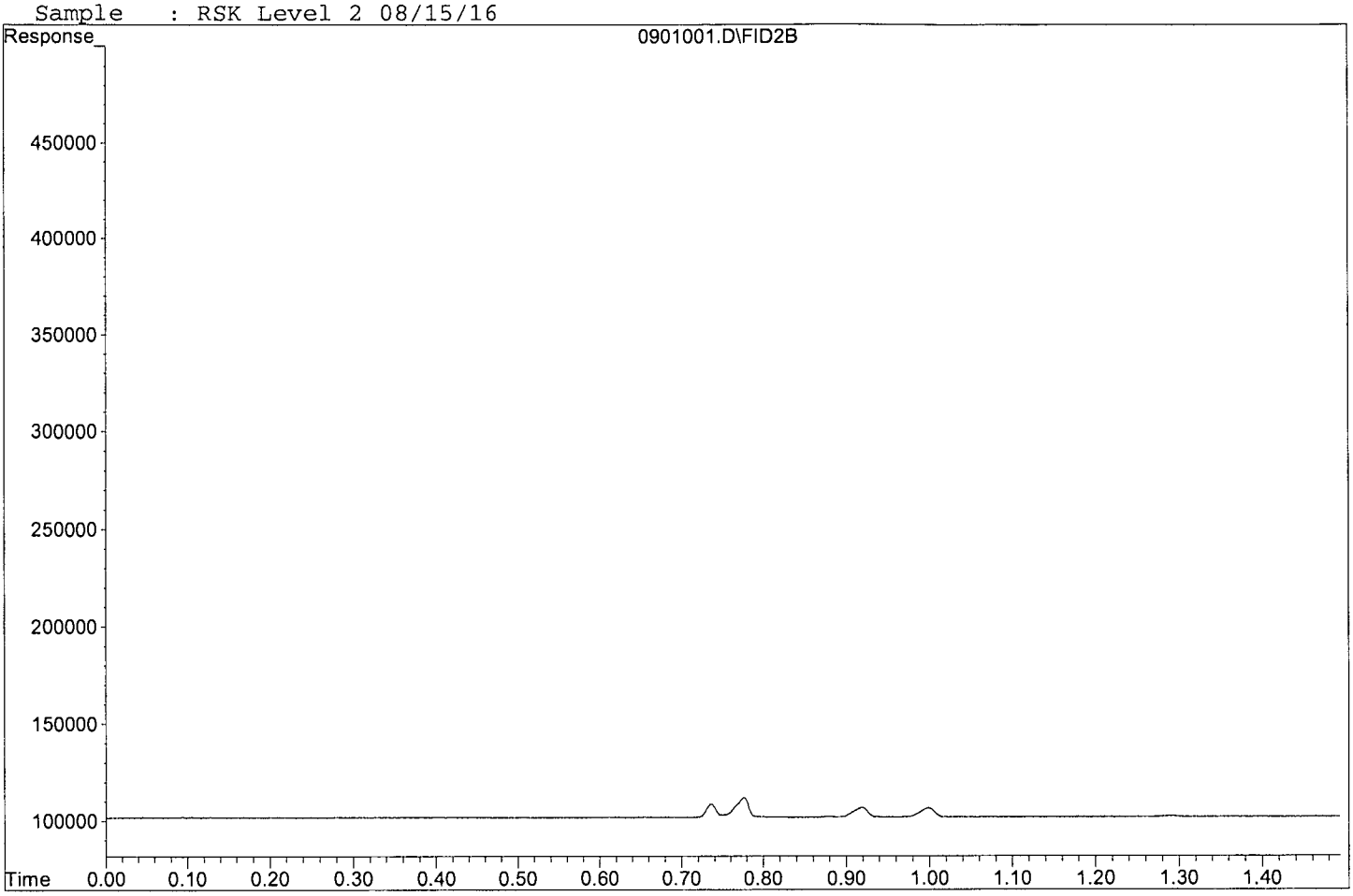
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Thu Jan 26 12:09:39 2017
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.78	10209	N.D.	ppb
2) ATM Ethane	0.92	5171	N.D.	ppb
3) ATM Ethene	1.00	4881	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901001.D
Sample : RSK Level 2 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901002.D Vial: 3
Acq On : 1 Sep 16 11:44 Operator: lac
Sample : RSK Level 3 08/15/16 Inst : 7890
Misc : Methane 5.1, Ethane, 9.5 Ethene 8.9 ug/L Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 26 12:12 2017 Quant Results File: RSK0901.RES

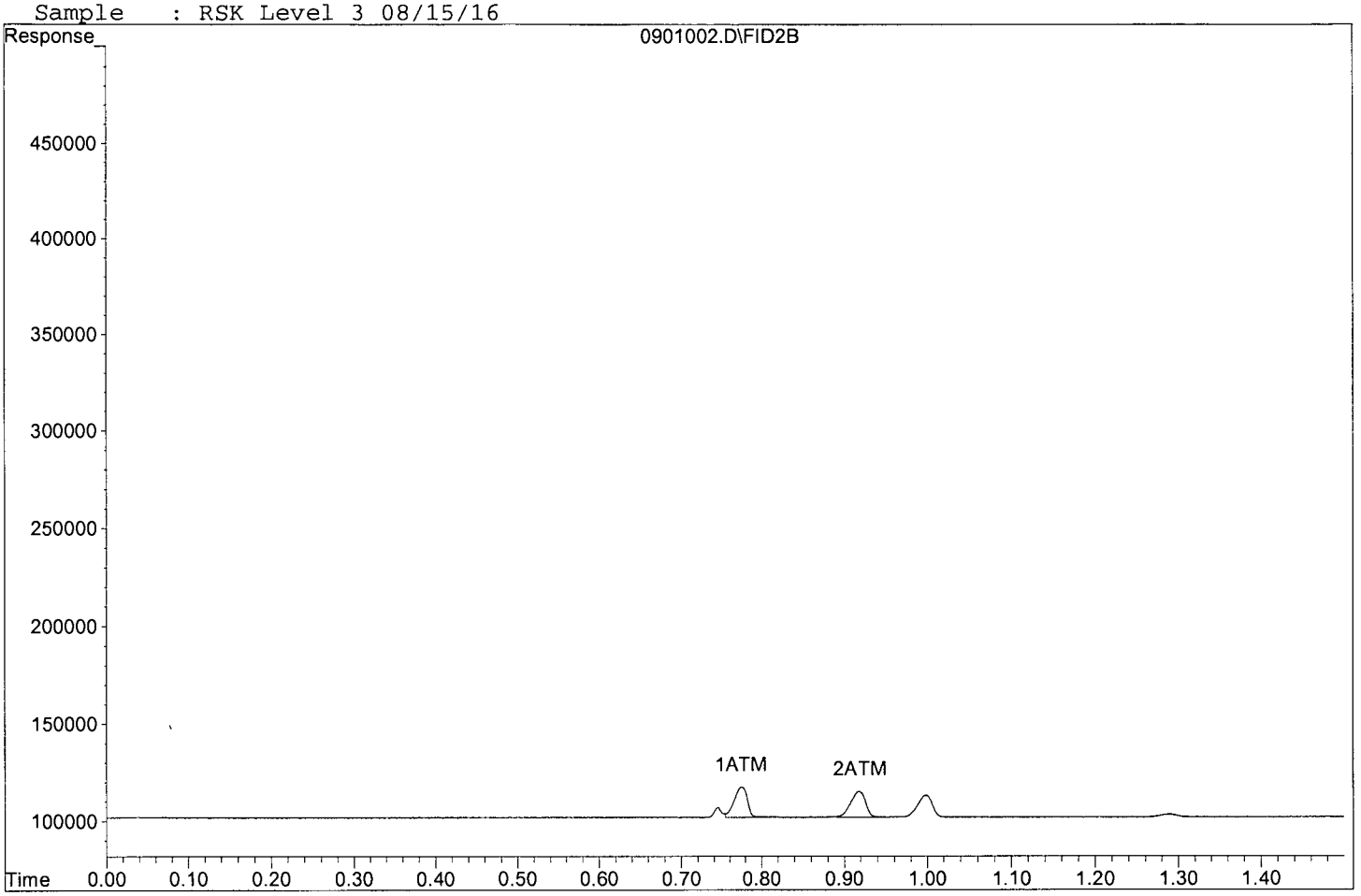
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Thu Jan 26 12:11:56 2017
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.77	15515	1.054	ppb
2) ATM Ethane	0.92	13452	3.912	ppb
Target Compounds				
3) ATM Ethene	1.00	11390	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901002.D
Sample : RSK Level 3 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901003.D Vial: 4
Acq On : 1 Sep 16 11:46 Operator: lac
Sample : RSK Level 4 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

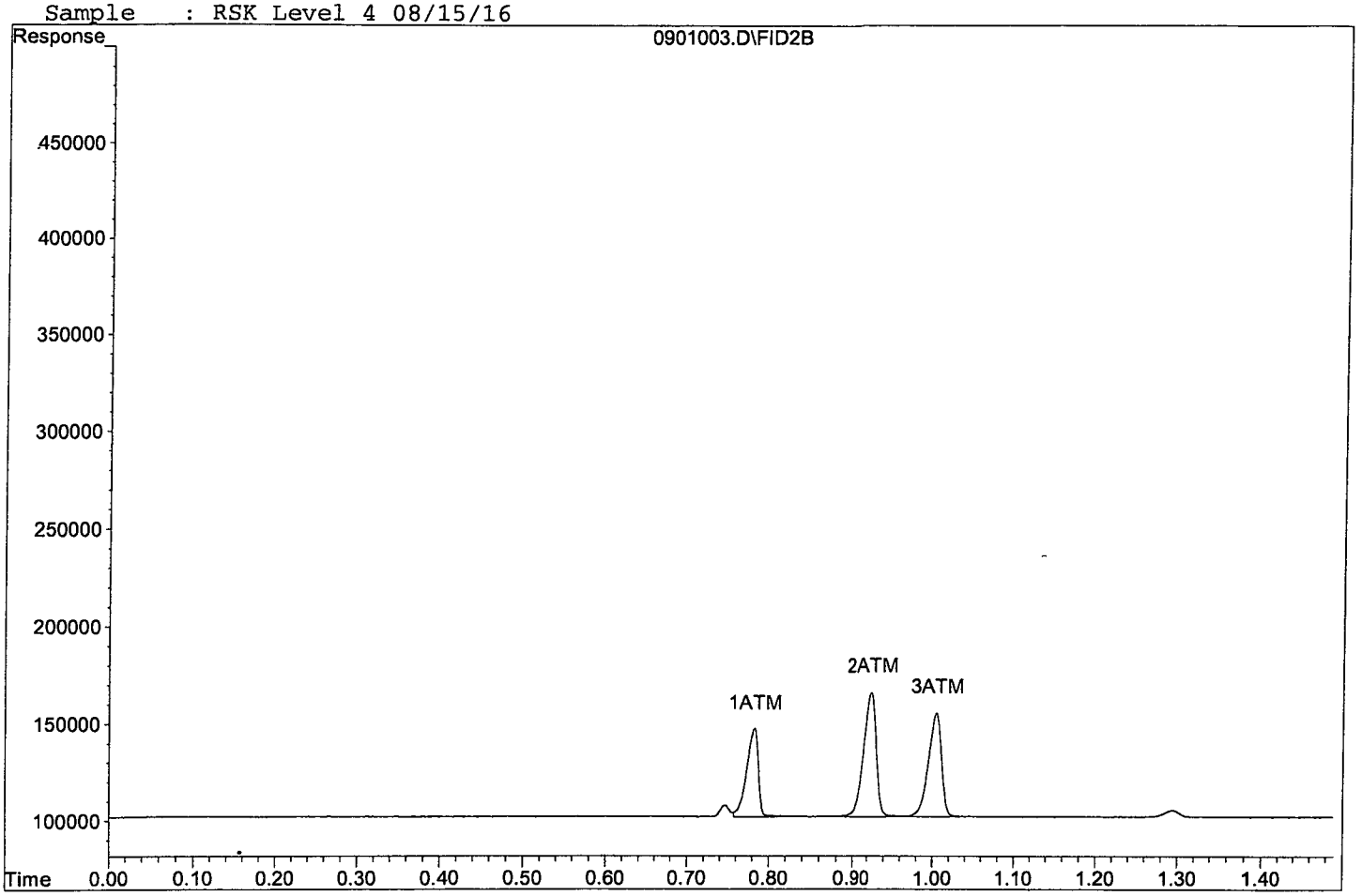
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.78	45792	29.006 ppb
2) ATM Ethane	0.92	63853	67.197 ppb
3) ATM Ethene	1.00	53608	66.354 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901003.D
Sample : RSK Level 4 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901004.D Vial: 5
Acq On : 1 Sep 16 11:48 Operator: lac
Sample : RSK Level 5 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

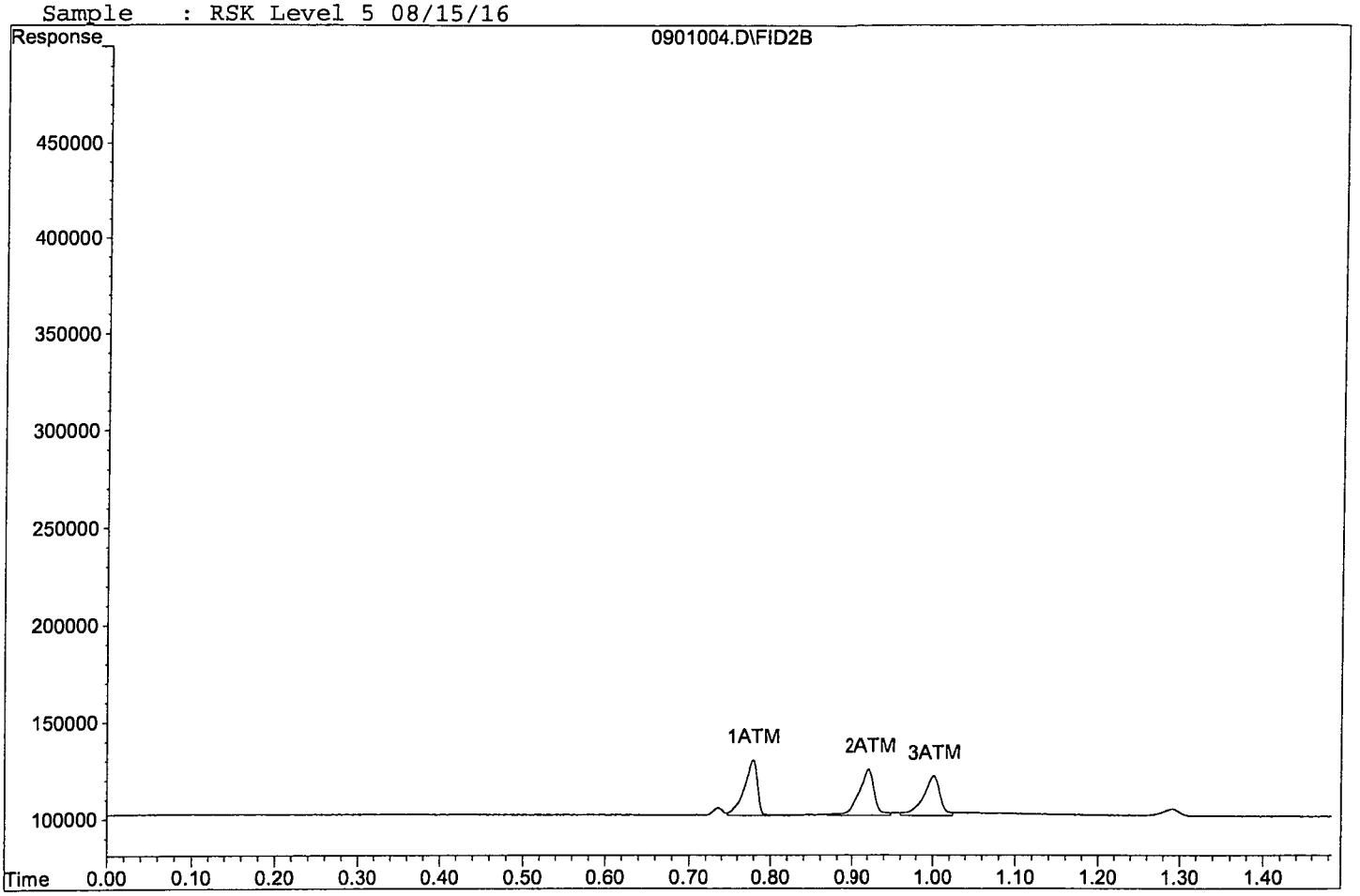
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.78	28664	13.193 ppb
2) ATM Ethane	0.92	23891	17.020 ppb
3) ATM Ethene	1.00	20700	13.631 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901004.D
Sample : RSK Level 5 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901005.D Vial: 6
Acq On : 1 Sep 16 11:50 Operator: lac
Sample : RSK Level 6 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

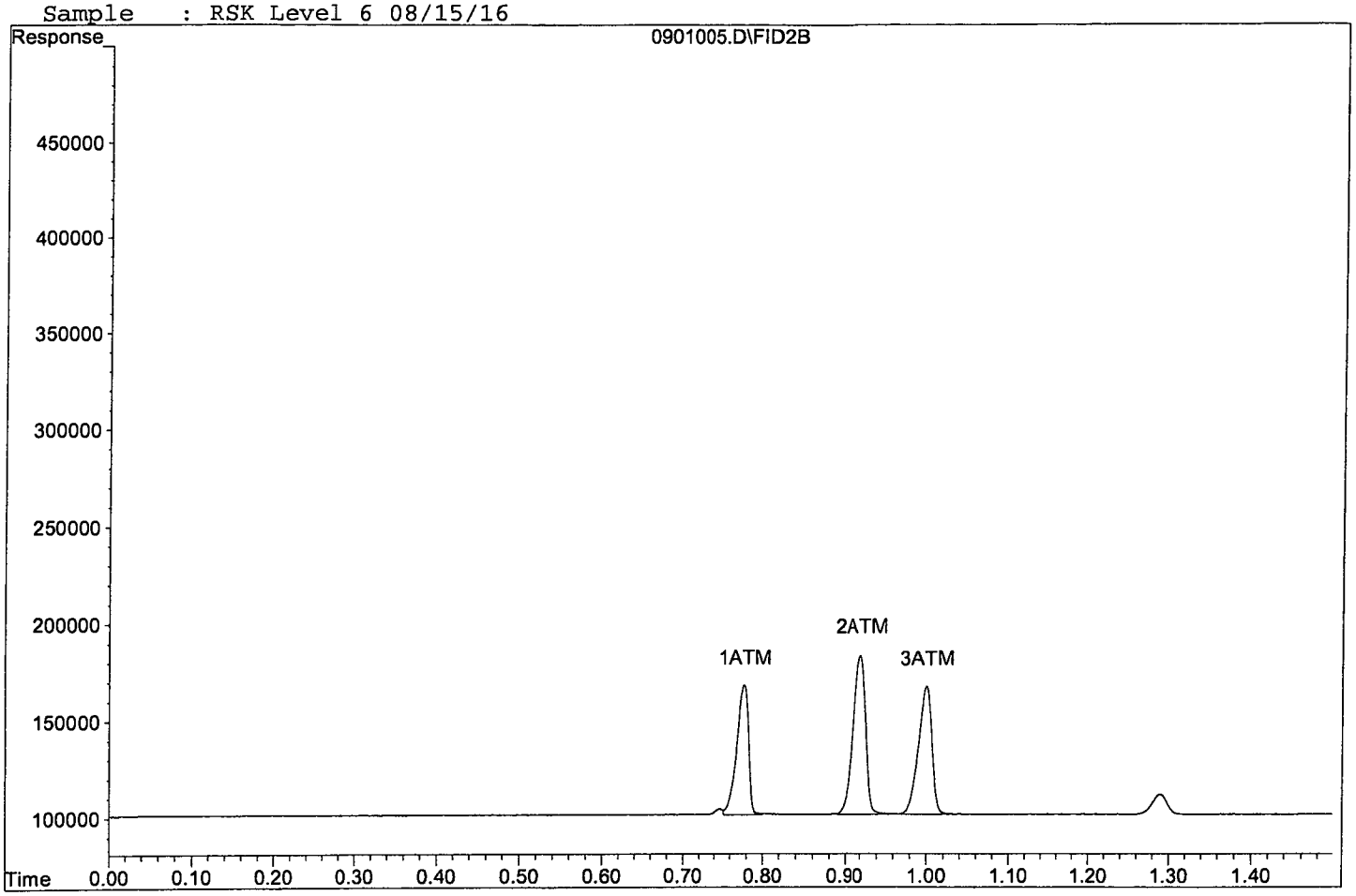
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.78	67137	48.712 ppb
2) ATM Ethane	0.92	82167	90.193 ppb
3) ATM Ethene	1.00	66348	86.764 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901005.D
Sample : RSK Level 6 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901006.D Vial: 7
Acq On : 1 Sep 16 11:52 Operator: lac
Sample : RSK Level 7 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

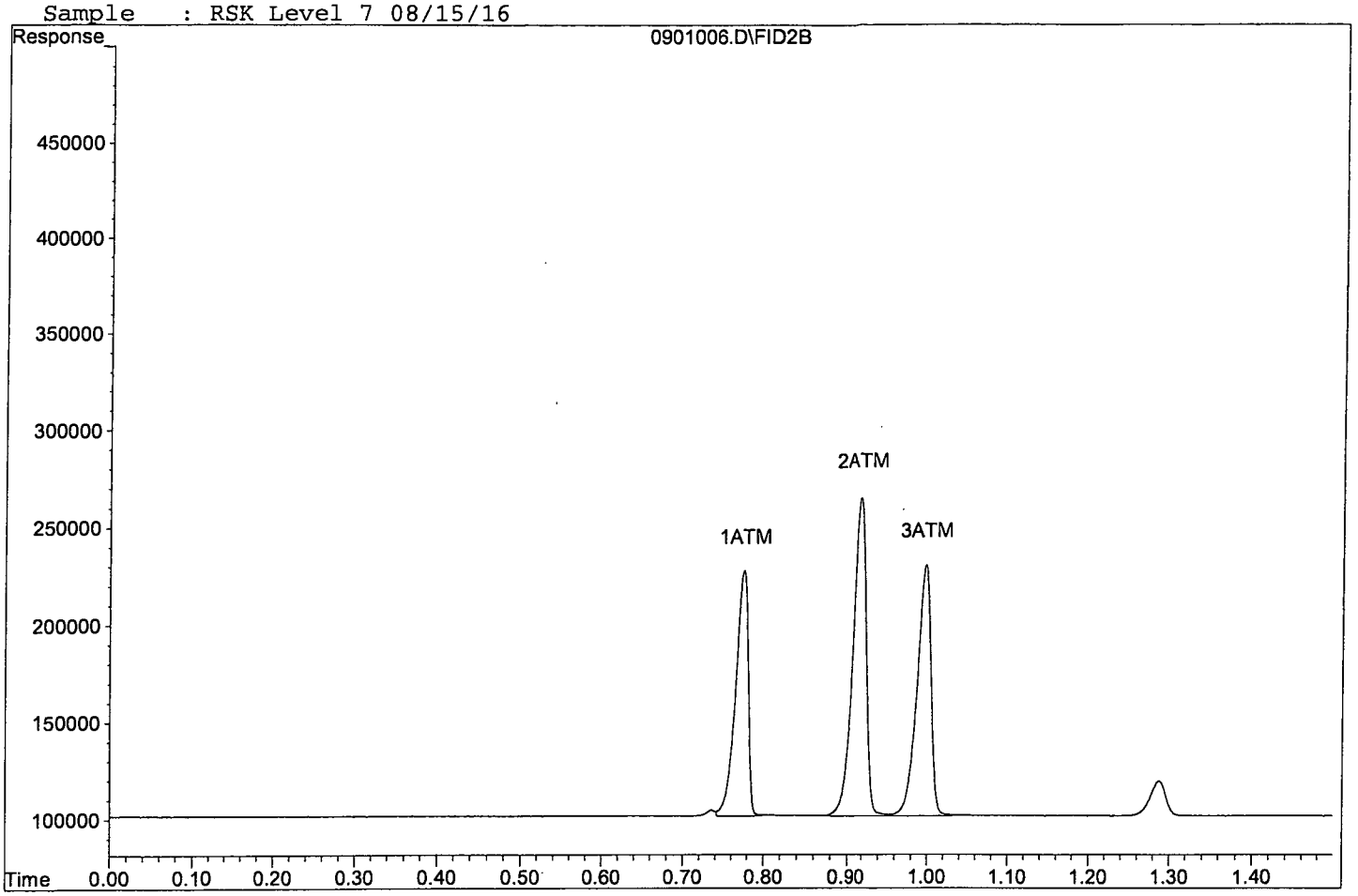
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.78	126422	103.446 ppb
2) ATM Ethane	0.92	163281	192.041 ppb
3) ATM Ethene	1.00	129200	187.460 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901006.D
Sample : RSK Level 7 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901007.D Vial: 8
Acq On : 1 Sep 16 11:55 Operator: lac
Sample : RSK Level 8 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

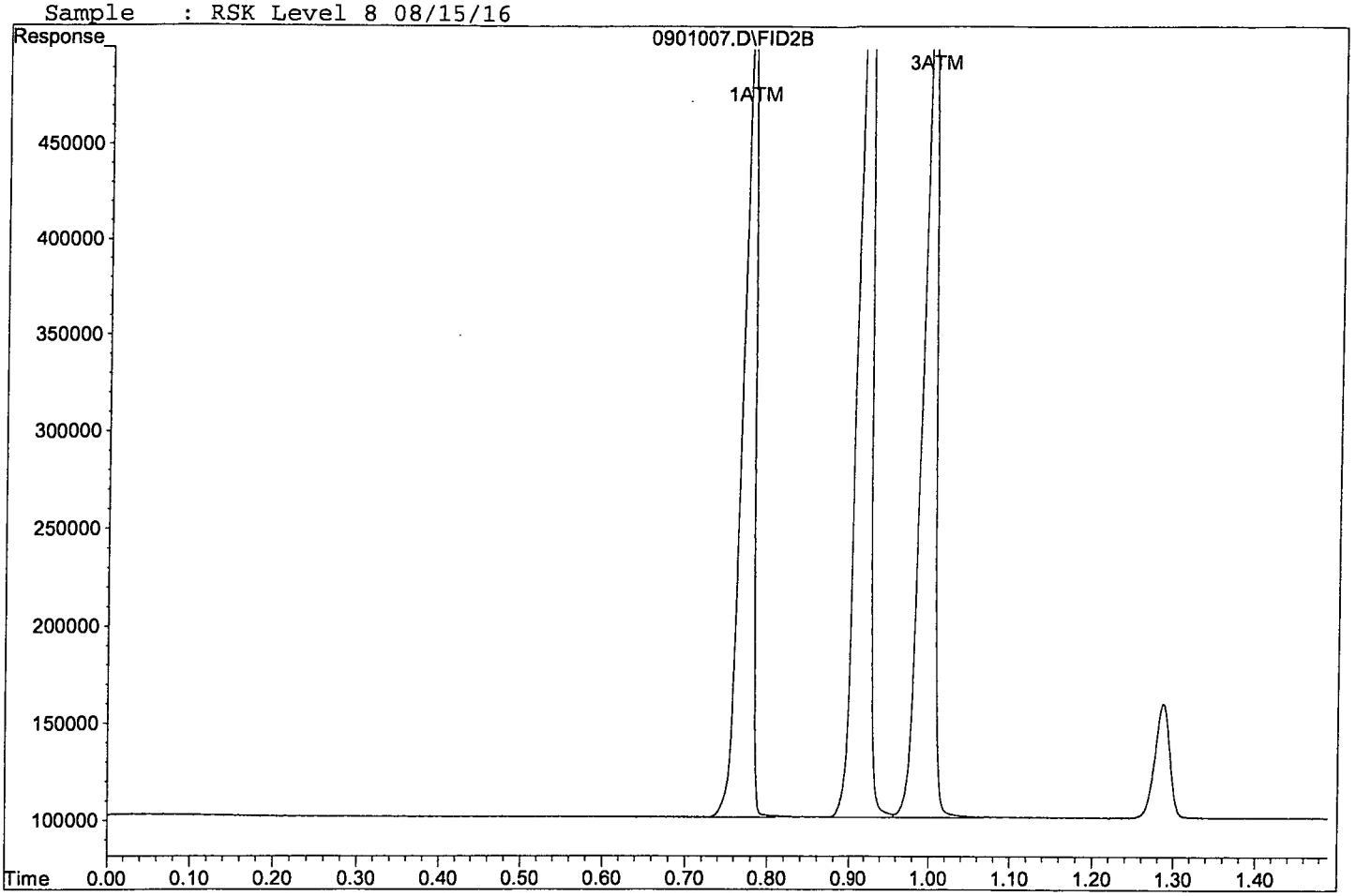
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.77	421052	375.455 ppb
2) ATM Ethane	0.92	559640	689.720 ppb
3) ATM Ethene	1.00	439383	684.403 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901007.D
Sample : RSK Level 8 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901008.D Vial: 9
Acq On : 1 Sep 16 11:57 Operator: lac
Sample : RSK Level 9 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

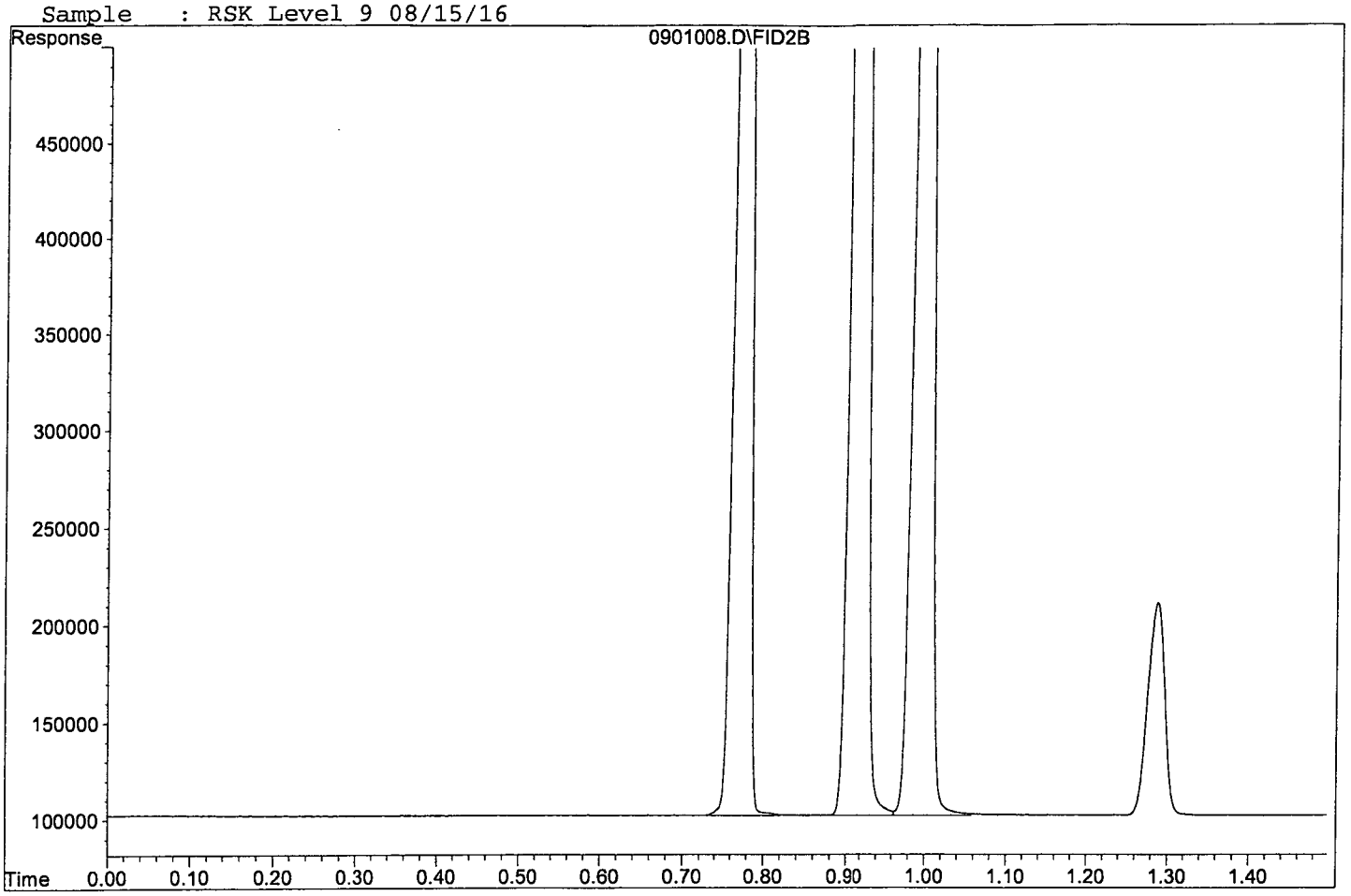
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.78	723824	654.982	ppb
2) ATM Ethane	0.92	989344	1229.268	ppb
3) ATM Ethene	1.00	783615	1235.897	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901008.D
Sample : RSK Level 9 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901009.D Vial: 10
Acq On : 1 Sep 16 11:59 Operator: lac
Sample : RSK Level 10 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

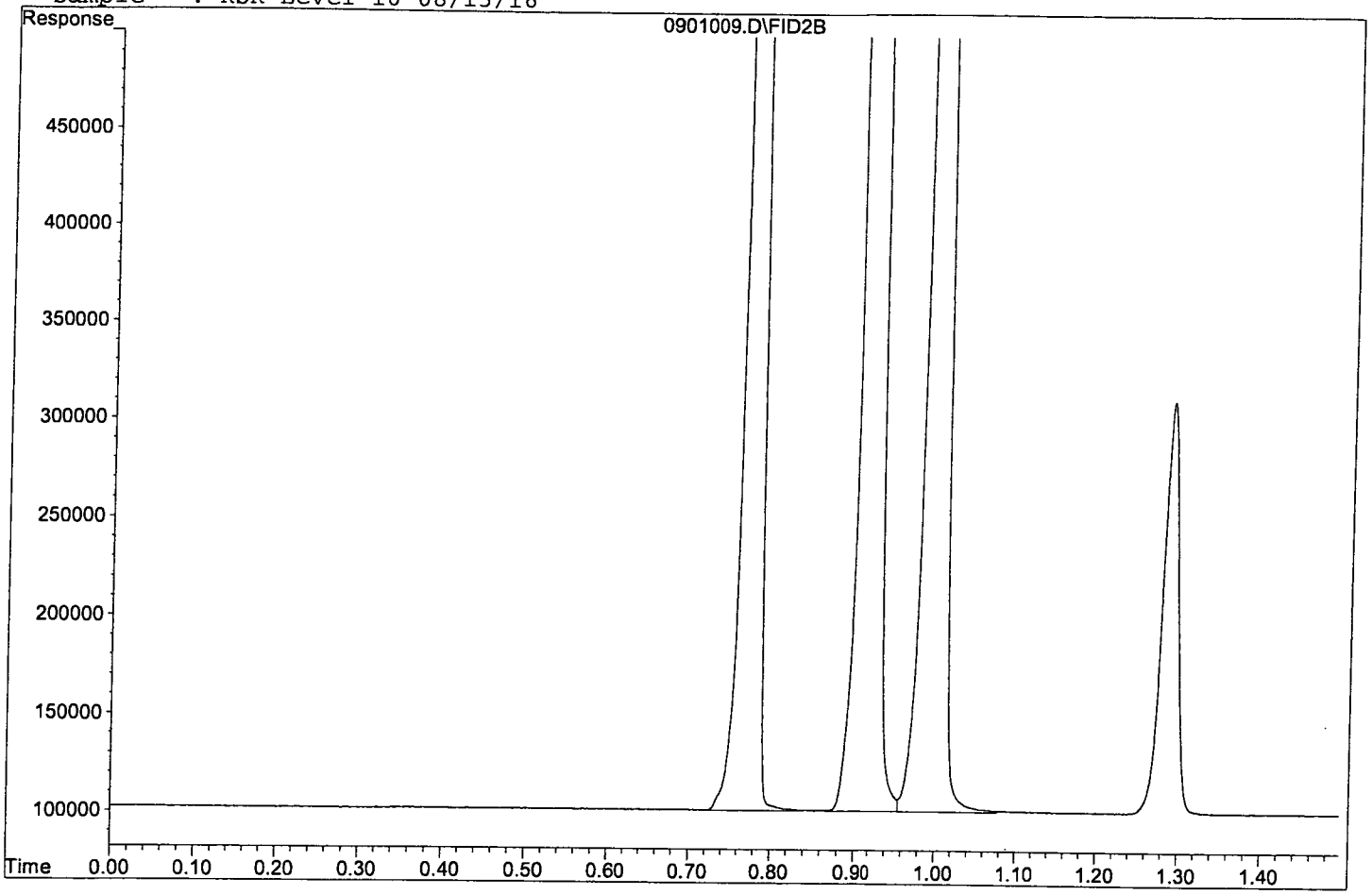
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.78	1454283	1329.358	ppb
2) ATM Ethane	0.92	1994598	2491.490	ppb
3) ATM Ethene	1.00	1562244	2483.337	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901009.D
Sample : RSK Level 10 08/15/16



Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 1 Sep 16 13:11
Instrument: 7890
Initial Cal. Date: 09/01/16
Data File: 0901018.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	2635	1090	59	ATML	19
2	ATML	Ethane	1147	964	16	ATML	11
3	ATML	Ethene	1063	853	20	ATML	20
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
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28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			31.7		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901018.D
Acq On : 1 Sep 16 13:11
Sample : (SS/LCS) RSK Level 6 09/01/16
Misc :
IntFile : autoint1.e
Quant Time: Sep 1 13:16 2016 Quant Results File: RSK0901.RES

Vial: 19
Operator: lac
Inst : 7890
Multiplr: 1.00

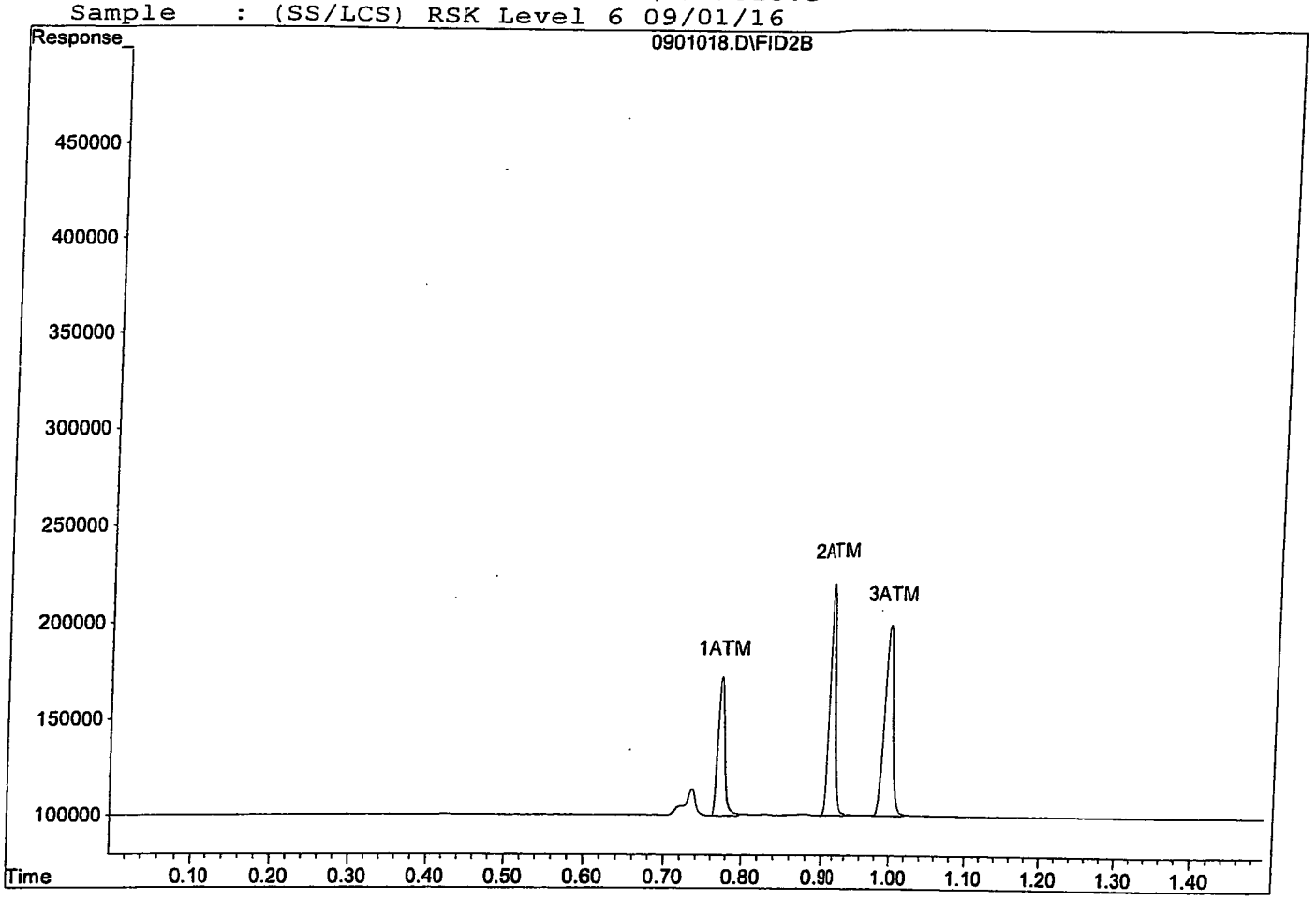
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Thu Sep 01 14:40:19 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.77	72750	53.894 ppb
2) ATM Ethane	0.91	120545	138.382 ppb
3) ATM Ethene	0.99	99349	139.636 ppb

Quantitation Report

Data File: G:\ROCKY\DATA\160901R\0901018.D
Sample : (SS/LCS) RSK Level 6 09/01/16



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/16/17
Instrument: 7890
Initial Cal. Date: 09/01/17
Data File: 17011603.D

		Compound	MEAN	CCRF	%D	%Drift	
1	ATML	Methane	2635	823	69	ATML	25
2	ATML	Ethane	1147	647	44	ATML	19
3	ATML	Ethene	1063	475	55	ATML	25
4							
5							
6							
7							
8							
9							
10							
11							
12							
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14							
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29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			56.0		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\17011603.D Vial: 4
Acq On : 16 Jan 17 10:37 Operator: lac
Sample : 170116A LCS/CCV RSK Level 10 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 16 10:39 2017 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 17 12:10:52 2017
Response via : Multiple Level Calibration

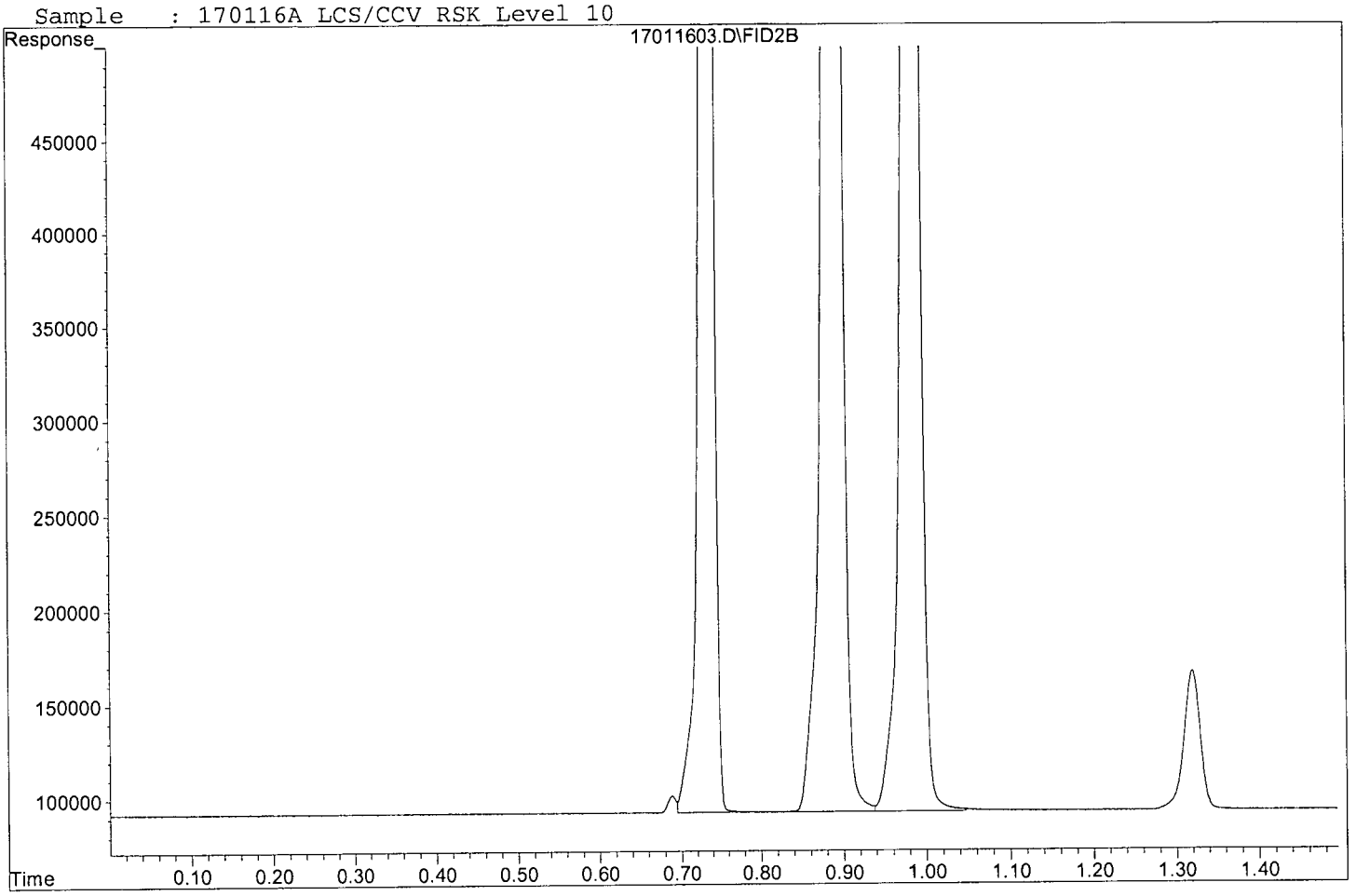
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.74	1098930	1001.288	ppb
2) ATM Ethane	0.89	1618482	2019.230	ppb
3) ATM Ethene	0.99	1186459	1881.292	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\17011603.D
Sample : 170116A LCS/CCV RSK Level 10



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/16/17
Instrument: 7890
Initial Cal. Date: 09/01/17
Data File: 17011643.D

		Compound	MEAN	CCRF	%D	%Drift	
1	ATML	Methane	2635	922	65	ATML	16
2	ATML	Ethane	1147	711	38	ATML	11
3	ATML	Ethene	1063	525	51	ATML	17
4							
5							
6							
7							
8							
9							
10							
11							
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29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			51.3		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\17011643.D Vial: 44
Acq On : 16 Jan 17 13:52 Operator: lac
Sample : Ending CCV RSK Level 10 01/16/17 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 16 13:55 2017 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 17 12:10:52 2017
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

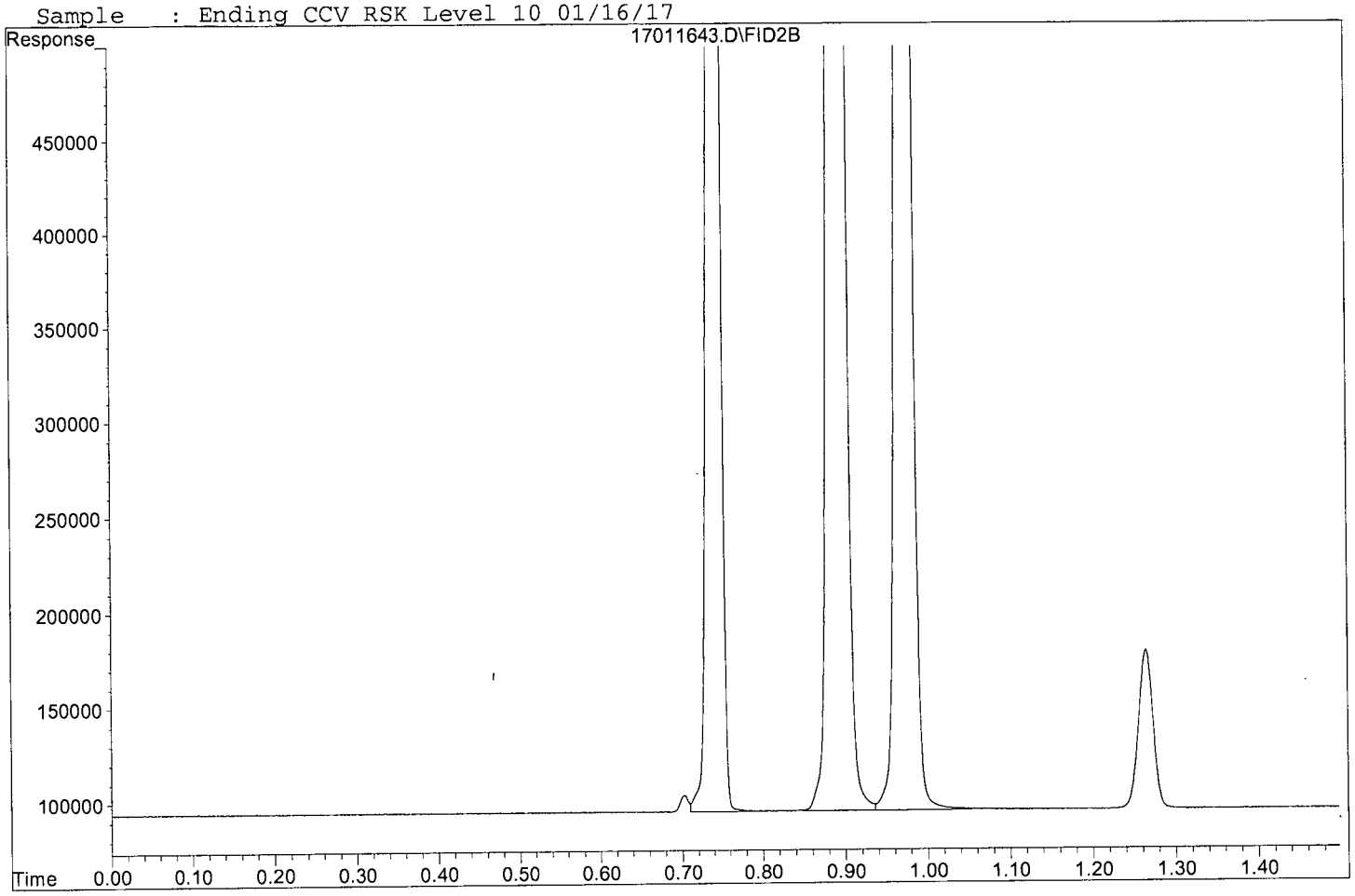
Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.74	1230350	1122.618	ppb
2) ATM Ethane	0.89	1777519	2218.920	ppb
3) ATM Ethene	0.98	1311035	2080.876	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\ROCKY\DATA\160901R\17011643.D
Sample : Ending CCV RSK Level 10 01/16/17



ORGANICS
Raw Data

APPL, INC.

Method Blank
METHANE

Blank Name/QCG: **170116W-48866 - 215507**
Batch ID: #RSKME-170116A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/16/17	01/16/17

Quant Method: RSK0901.M
Run #: 17011604
Instrument: Rocky
Sequence: 160901
Initials: CMO

GC SC-Blank-REG MDLs-DOD
Printed: 01/22/17 10:19:12 AM

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\17011604.D Vial: 5
Acq On : 16 Jan 17 10:41 Operator: lac
Sample : 170116A BLK-RSK Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 16 10:50 2017 Quant Results File: RSK0901.RES

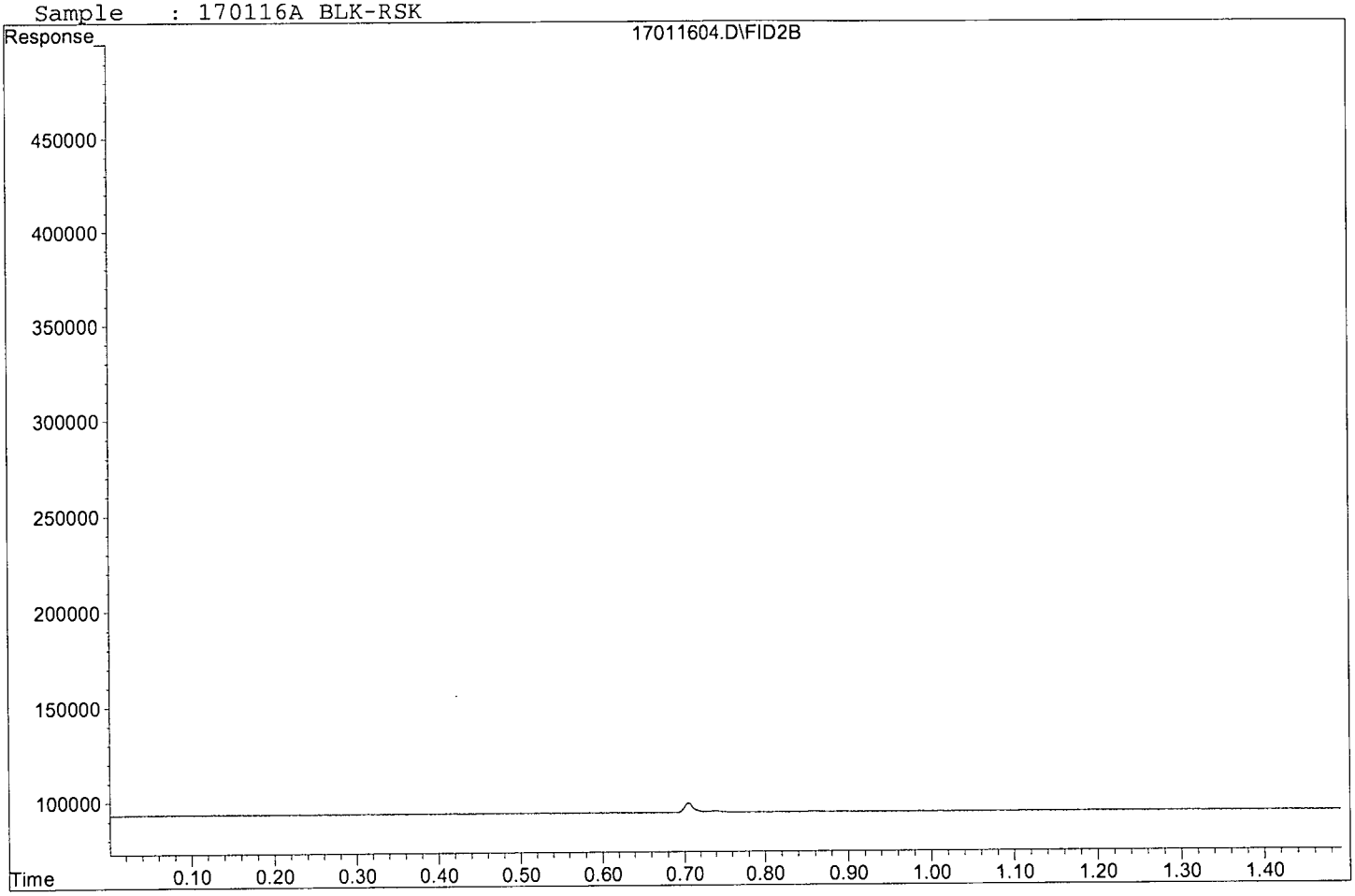
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 17 12:10:52 2017
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.74	815	N.D.	ppb
2) ATM Ethane	0.89	347	N.D.	ppb
3) ATM Ethene	0.99	341	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\17011604.D
Sample : 170116A BLK-RSK



Laboratory Control Spike Recovery
METHANE

APPL ID: **170116W-48866 LCS - 215507**
Batch ID: #RSKME-170116A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
METHANE	1340	1000	74.9	72-125

Comments: _____

Primary	SPK
Quant Method :	RSK0901.M
Extraction Date :	01/16/17
Analysis Date :	01/16/17
Instrument :	Rocky
Run :	17011603
Initials :	CMO

Printed: 01/22/17 10:19:04 AM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\17011603.D Vial: 4
Acq On : 16 Jan 17 10:37 Operator: lac
Sample : 170116A LCS/CCV RSK Level 10 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 16 10:39 2017 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 17 12:10:52 2017
Response via : Multiple Level Calibration

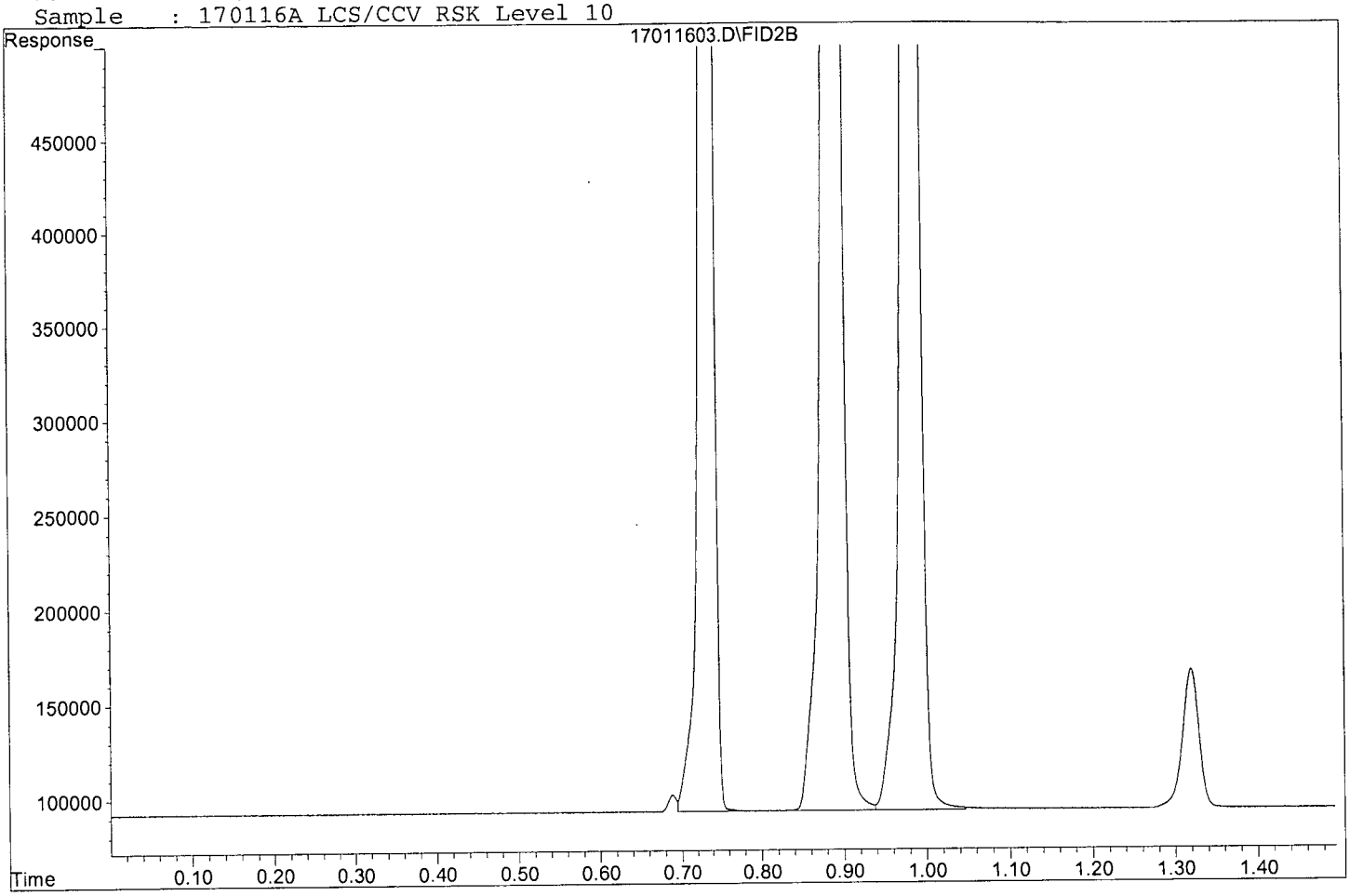
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.74	1098930	1001.288	ppb
2) ATM Ethane	0.89	1618482	2019.230	ppb
3) ATM Ethene	0.99	1186459	1881.292	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\17011603.D
Sample : 170116A LCS/CCV RSK Level 10



Matrix Spike Recoveries

METHANE

APPL ID: **170116W-48866 MS - 215507**
Batch ID: #RSKME-170116A
Sample ID: AZ48866
Client ID: ERH161

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
METHANE	1340	ND	1060	1050	79.4	78.7	72-125	0.95	30

Comments: _____

Primary	SPK	DUP
Quant Method :	RSK0901.M	RSK0901.M
Extraction Date :	01/16/17	01/16/17
Analysis Date :	01/16/17	01/16/17
Instrument :	Rocky	Rocky
Run :	17011608	17011609
Initials :	CMO	

Printed: 01/22/17 10:18:58 AM
APPL MSD SCII

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\17011608.D Vial: 9
Acq On : 16 Jan 17 11:03 Operator: lac
Sample : AZ48866W13 MS Level 10 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 26 11:54 2017 Quant Results File: RSK0901.RES

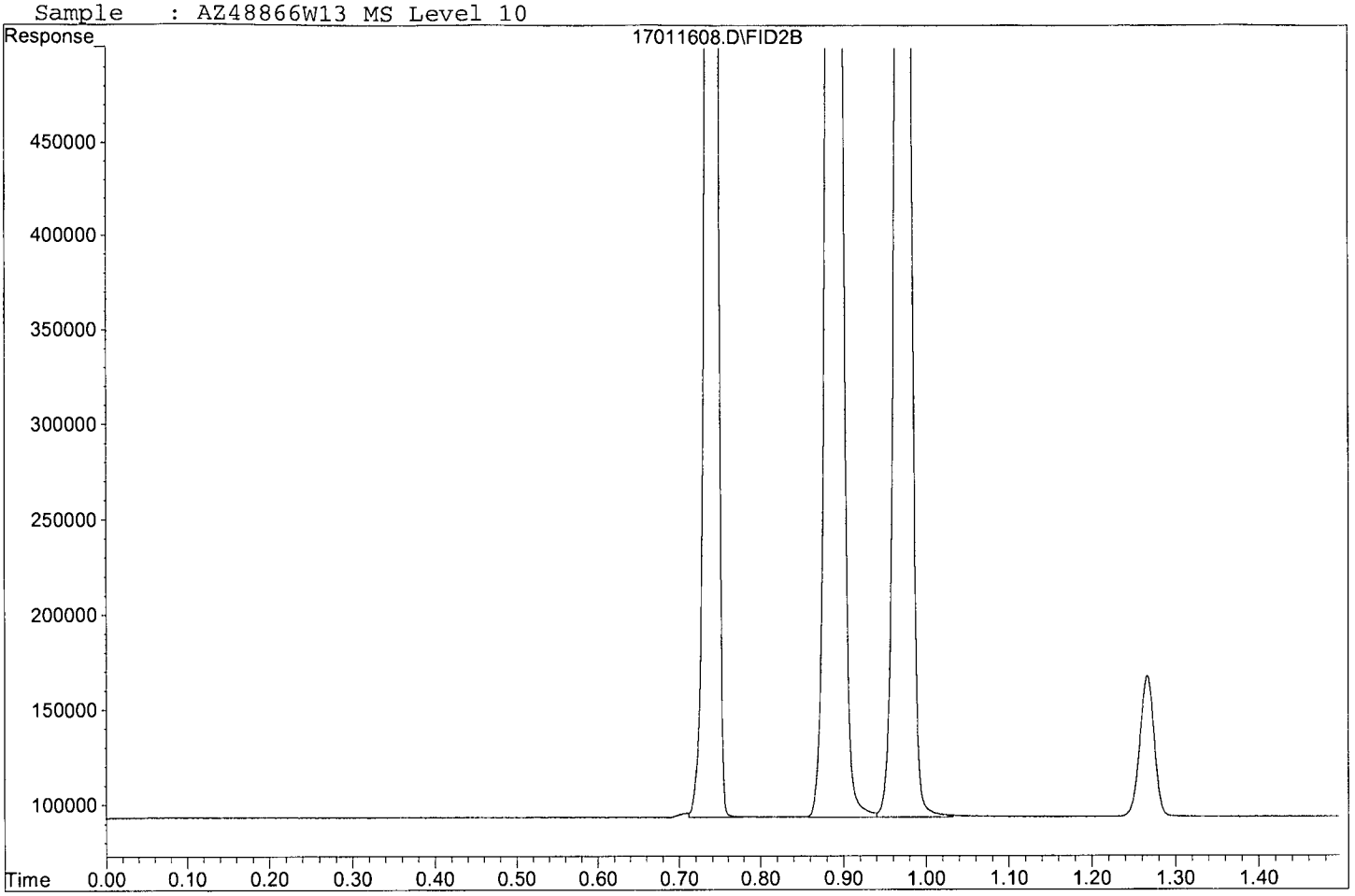
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Thu Jan 26 11:51:18 2017
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.74	1157198	1055.083	ppb
2) ATM Ethane	0.89	1704717	2127.509	ppb
3) ATM Ethene	0.97	1187536	1883.018	ppb

Target Compounds

Data File: G:\ROCKY\DATA\160901R\17011608.D
Sample : AZ48866W13 MS Level 10



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\17011609.D Vial: 10
Acq On : 16 Jan 17 11:07 Operator: lac
Sample : AZ48866W14 MSD Level 10 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 26 11:54 2017 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Thu Jan 26 11:51:18 2017
Response via : Multiple Level Calibration

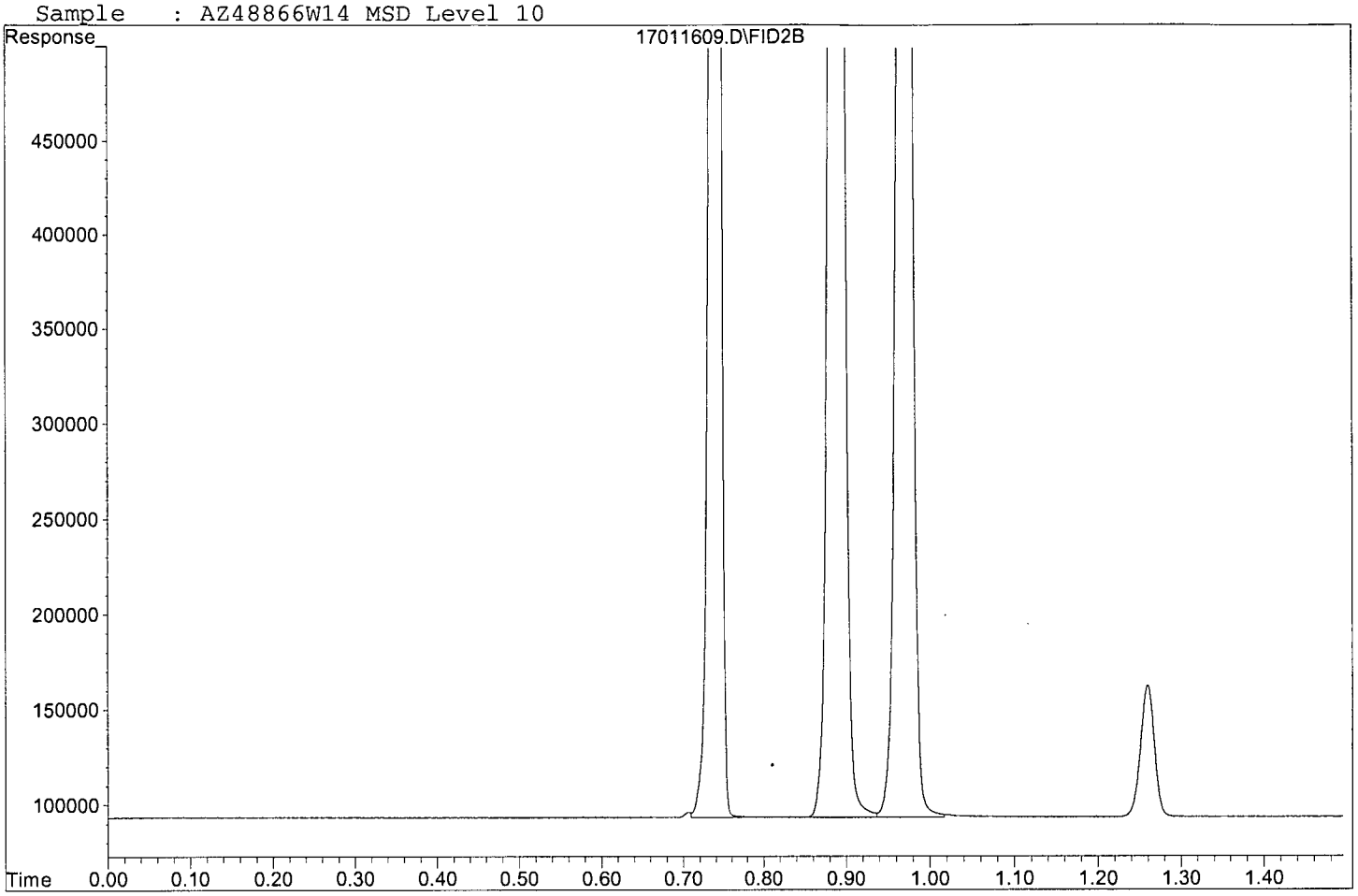
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.74	1148779	1047.310	ppb
2) ATM Ethane	0.89	1706113	2129.261	ppb
3) ATM Ethene	0.97	1170976	1856.487	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\17011609.D
Sample : AZ48866W14 MSD Level 10



Matrix Spike Recoveries

METHANE

APPL ID: **170116W-48872 MS - 215507**
Batch ID: #RSKME-170116A
Sample ID: AZ48872
Client ID: ERH169

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
METHANE	1340	ND	956	1100	71.6	82.4	72-125	14.0	30

Comments: _____

Primary	SPK	DUP
Quant Method :	RSK0901.M	RSK0901.M
Extraction Date :	01/16/17	01/16/17
Analysis Date :	01/16/17	01/16/17
Instrument :	Rocky	Rocky
Run :	17011615	17011616
Initials :	CMO	

Printed: 01/22/17 10:18:58 AM
APPL MSD SCII

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\17011615.D Vial: 16
Acq On : 16 Jan 17 11:30 Operator: lac
Sample : AZ48872W11 MS Level 10 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 26 11:51 2017 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Thu Jan 26 11:51:18 2017
Response via : Multiple Level Calibration

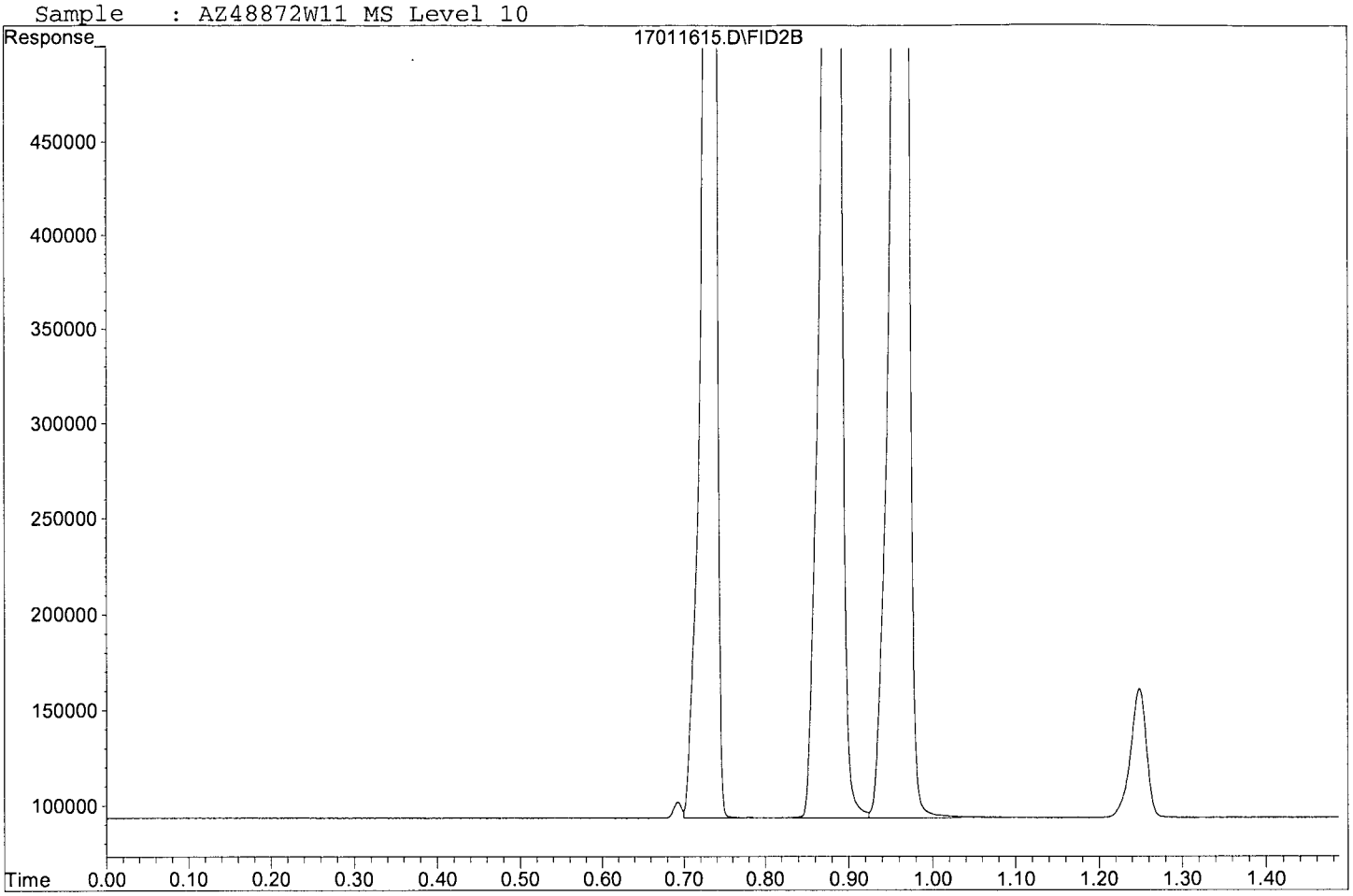
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.73	1049757	955.891	ppb
2) ATM Ethane	0.88	1544992	1926.954	ppb
3) ATM Ethene	0.96	1084868	1718.534	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\17011615.D
Sample : AZ48872W11 MS Level 10



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\17011616.D Vial: 17
Acq On : 16 Jan 17 11:33 Operator: lac
Sample : AZ48872W12 MSD Level 10 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 26 11:52 2017 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Thu Jan 26 11:51:18 2017
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

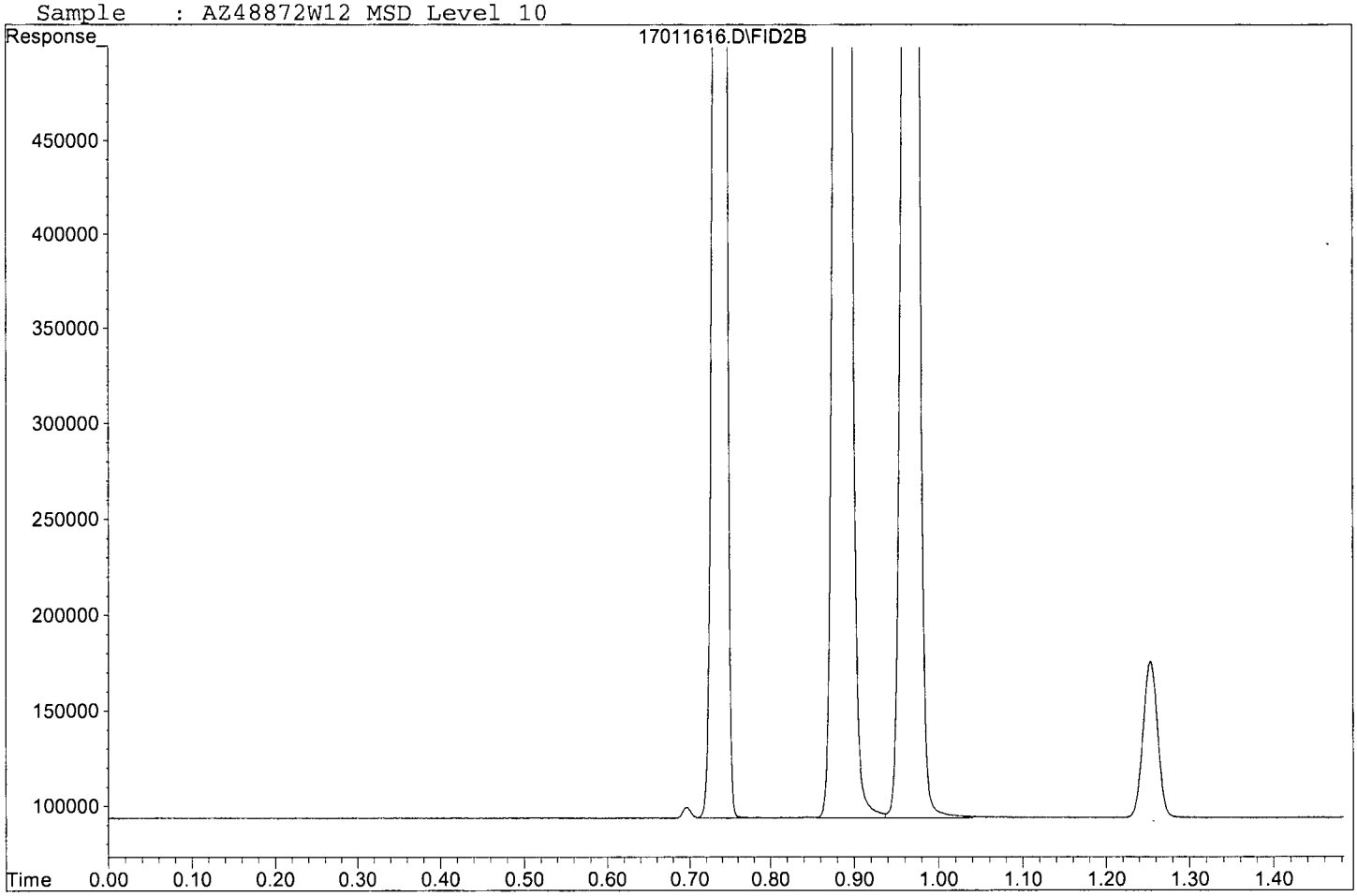
Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.74	1204220	1098.494	ppb
2) ATM Ethane	0.89	1861950	2324.933	ppb
3) ATM Ethene	0.97	1291445	2049.491	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\ROCKY\DATA\160901R\17011616.D
Sample : AZ48872W12 MSD Level 10



Primary Source Stock Standard 10,000ppmV Manufacturer Exp date 7-8-2017 CM 8/15/16

RSK Gas Mix (Scott Specialty Gas) Cat.# 23452, Lot # 164PLU4SPC05L-34436

1% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

Intermediate Calibration Stock Standard 100ppmV **Expires 8/15/17** CM 8/15/16

Prepared in a 1 L Tedlar bag. Add 990mL Nitrogen and 10mL of 164PLU4SPC05L-34436 standard.

RSK Calibration Curve **Vial expiration date 9/28/16** CM 9/1/16

Analye	Conc Std 1 (ug/L)	Conc Std 2 (ug/L)	Conc Std 3 (ug/L)	Conc Std 4 (ug/L)	Conc Std 5 (ug/L)	Conc Std 6 (ug/L)	Conc Std 7 (ug/L)	Conc Std 8 (ug/L)	Conc Std 9 (ug/L)	Conc Std 10 (ug/L)
Methane (MW 16.	0.90	1.80	5.10	13.33	26.70	66.75	106.80	320.4	667.5	1335.0
Ethane (MW 30.0	1.70	3.40	9.50	25.00	50.00	125.00	200.00	600.0	1250.0	2500.0
Ethene (MW 28.0	1.60	3.20	8.90	23.30	46.60	116.50	186.40	599.2	1248.0	2496.0
Stock Source	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Primary Source Std #164PLU4SPC05L-34436	Primary Source Std #164PLU4SPC05L-34436	Primary Source Std #164PLU4SPC05L-34436	Primary Source Std #164PLU4SPC05L-34436
Stock Conc (ppr	100 ppmV	100 ppmV	100 ppmV	100 ppmV	100 ppmV	100 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV
Stock Aliquot (m	0.135 mL	0.270 mL	0.760 mL	2.0 mL	4.0 mL	10.0 mL	0.160 mL	0.480 mL	1.00 mL	2.00 mL
Final Volume P&T W	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL

Second Source Stock Standard 10,000ppmV Manufacturer Exp Date 6-19-18 CM 8/15/16

RSK Gas Mix (Scott Specialty Gas) Cat.# 0104E40028`4, Lot # 170PLU5SPC06L-35410

1% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

Intermediate Second Source Standard 100ppmV **Expires 8/15/17** CM 8/15/16

Prepared in a 1 L Tedlar bag. Add 990mL Nitrogen and 10mL of lot# 170PLU5SPC06L-35410 standard.

Second Source / LCS - Level 6 **Expires 10/1/16** CM 9/1/16

10.0mL of Intermediate SS stock 8/15/16 into 10mL P&T water

final conc:66.7ppb Methane, 125.0ppb Ethane, and 116.5 ppb Ethene

CCV/LCS - Level 10 **Expires 02/16/17** CMM 01/16/17

2.0mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water

final conc:1335.0ppb Methane,2500.0 ppb Ethane, and 2496.0 ppb Ethene

AZ48866W13/W14 MS/MSD Level 10 **Expires 02/16/17** CMM 01/16/17

2.0mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water

final conc:1335.0ppb Methane,2500.0 ppb Ethane, and 2496.0 ppb Ethene

AZ48872W11/W12 MS/MSD Level 10 **Expires 02/16/17** CMM 01/16/17

2.0mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water

final conc:1335.0ppb Methane,2500.0 ppb Ethane, and 2496.0 ppb Ethene

Injection Log

Directory: G:\ROCKY\DATA\160901R\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0901000.D	1	RSK Level 1 08/15/16	Methane 0.9, Ethane, 1.7 Etl	1 Sep 16 11:38
2	2	0901001.D	1	RSK Level 2 08/15/16		1 Sep 16 11:41
3	3	0901002.D	1	RSK Level 3 08/15/16	Methane 5.1, Ethane, 9.5 Etl	1 Sep 16 11:44
4	4	0901003.D	1	RSK Level 4 08/15/16		1 Sep 16 11:46
5	5	0901004.D	1	RSK Level 5 08/15/16		1 Sep 16 11:48
6	6	0901005.D	1	RSK Level 6 08/15/16		1 Sep 16 11:50
7	7	0901006.D	1	RSK Level 7 08/15/16		1 Sep 16 11:52
8	8	0901007.D	1	RSK Level 8 08/15/16		1 Sep 16 11:55
9	9	0901008.D	1	RSK Level 9 08/15/16		1 Sep 16 11:57
10	10	0901009.D	1	RSK Level 10 08/15/16		1 Sep 16 11:59
11	19	0901018.D	1	(SS/LCS) RSK Level 6 09/01/16		1 Sep 16 13:11
12	4	17011603.D	1	170116A LCS/CCV RSK Level 10		16 Jan 17 10:37
13	5	17011604.D	1	170116A BLK-RSK		16 Jan 17 10:41
14	8	17011607.D	1	AZ48866W12		16 Jan 17 10:59
15	9	17011608.D	1	AZ48866W13 MS Level 10		16 Jan 17 11:03
16	10	17011609.D	1	AZ48866W14 MSD Level 10		16 Jan 17 11:07
17	11	17011610.D	1	AZ48868W05		16 Jan 17 11:11
18	12	17011611.D	1	AZ48869W05		16 Jan 17 11:15
19	13	17011612.D	1	AZ48870W05		16 Jan 17 11:18
20	14	17011613.D	1	AZ48871W05		16 Jan 17 11:21
21	15	17011614.D	1	AZ48872W10		16 Jan 17 11:27
22	16	17011615.D	1	AZ48872W11 MS Level 10		16 Jan 17 11:30
23	17	17011616.D	1	AZ48872W12 MSD Level 10		16 Jan 17 11:33
24	18	17011617.D	1	AZ48873W04		16 Jan 17 11:37
25	19	17011618.D	1	AZ48874W04		16 Jan 17 11:40
26	21	17011620.D	50	AZ48875W05 DF50		16 Jan 17 11:47
27	22	17011621.D	1	AZ48876W05		16 Jan 17 12:13
28	23	17011622.D	1	AZ48877W05		16 Jan 17 12:16
29	24	17011623.D	1	AZ48878W05		16 Jan 17 12:21
30	25	17011624.D	1	AZ48882W05		16 Jan 17 12:40
31	26	17011625.D	1	AZ48884W05		16 Jan 17 12:43
32	27	17011626.D	1	AZ48886W05		16 Jan 17 12:47
33	44	17011643.D	1	Ending CCV RSK Level 10 01/16/17		16 Jan 17 13:52

INORGANIC ANALYSIS

APPL, INC.

INORGANIC ANALYSIS
QC Summary

APPL, INC.

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
SM 2320B	BICARBONATE AS	1.6 J	2.0	1.70	0.85	mg/L	01/16/17	01/16/17	#232W-170116A-AZ48866
SM 2320B	CARBONATE AS CA	1.70 U	2.0	1.70	0.85	mg/L	01/16/17	01/16/17	#232W-170116A-AZ48866
SM 2320B	TOTAL ALKALINITY	1.6 J	2.0	1.70	0.85	mg/L	01/16/17	01/16/17	#232W-170116A-AZ48866
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	01/12/17	01/12/17	#300W-170112A-AZ48875
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	01/12/17	01/12/17	#300W-170112A-AZ48875
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	01/12/17	01/12/17	#300W-170112A-AZ48875
SM3500Fe	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	01/12/17	01/12/17	#35FE-170112A-AZ48878

Wetlab SC-Blank-REG MDLs
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Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	20.0	18.4	92.0	90-110	01/12/17	01/12/17	#300W-170112A-AZ48875
EPA 300.0	NITRATE	22.1	21.1	95.5	90-110	01/12/17	01/12/17	#300W-170112A-AZ48875
EPA 300.0	SULFATE	20.0	18.5	92.5	90-110	01/12/17	01/12/17	#300W-170112A-AZ48875

Comments: _____

Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
SM 2320B	BICARBONATE AS CACO3	250	248	99.2	90-110	01/16/17	01/16/17	#232W-170116A-AZ48866
SM 2320B	TOTAL ALKALINITY AS CACO3	250	248	99.2	90-110	01/16/17	01/16/17	#232W-170116A-AZ48866

Comments: _____

Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
SM3500Fe	FERROUS IRON	4.00	3.91	97.8	80-120	01/12/17	01/12/17	#35FE-170112A-AZ48878

Comments: _____

Matrix Spike Recoveries

WETLAB

APPL ID: **170116W-48866 MS - 215511**

Sample ID: AZ48866

Client ID: ERH161

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	Matrix Res mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
SM 2320B	BICARBONATE AS CA	250	62.5	306	310	97.4	99.0	1.3	20	90-110	01/16/17	01/16/17	01/16/17	01/16/17	215511	AZ48866
SM 2320B	TOTAL ALKALINITY AS	250	62.5	306	310	97.4	99.0	1.3	20	90-110	01/16/17	01/16/17	01/16/17	01/16/17	215511	AZ48866

Comments: _____

Matrix Spike Recoveries

WETLAB

APPL ID: **170116W-48872 MS - 215511**

Sample ID: AZ48872

Client ID: ERH169

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	Matrix Res mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
SM 2320B	BICARBONATE AS CA	250	72.4	315	317	97.0	97.8	0.63	20	90-110	01/16/17	01/16/17	01/16/17	01/16/17	215511	AZ48872
SM 2320B	TOTAL ALKALINITY AS	250	72.4	315	317	97.0	97.8	0.63	20	90-110	01/16/17	01/16/17	01/16/17	01/16/17	215511	AZ48872

Comments: _____

INORGANIC ANALYSIS
Sample Data

APPL, INC.

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH161

Sample Collection Date: 01/09/17

APPL ID: AZ48866

ARF: 81965

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date Analysis Date
EPA 300.0	NITRATE	2.5	0.5	0.18	0.04	mg/L	1	01/12/17 01/12/17
EPA 300.0	SULFATE	14.3	1.0	0.20	0.09	mg/L	1	01/12/17 01/12/17
EPA 300.0	CHLORIDE	85.8	5.0	1.00	0.40	mg/L	5	01/12/17 01/12/17
SM 2320B	BICARBONATE AS CACO3	62.5	2.0	1.70	0.85	mg/L	1	01/16/17 01/16/17
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	01/16/17 01/16/17
SM 2320B	TOTAL ALKALINITY AS CACO3	62.5	2.0	1.70	0.85	mg/L	1	01/16/17 01/16/17
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	01/12/17 01/12/17

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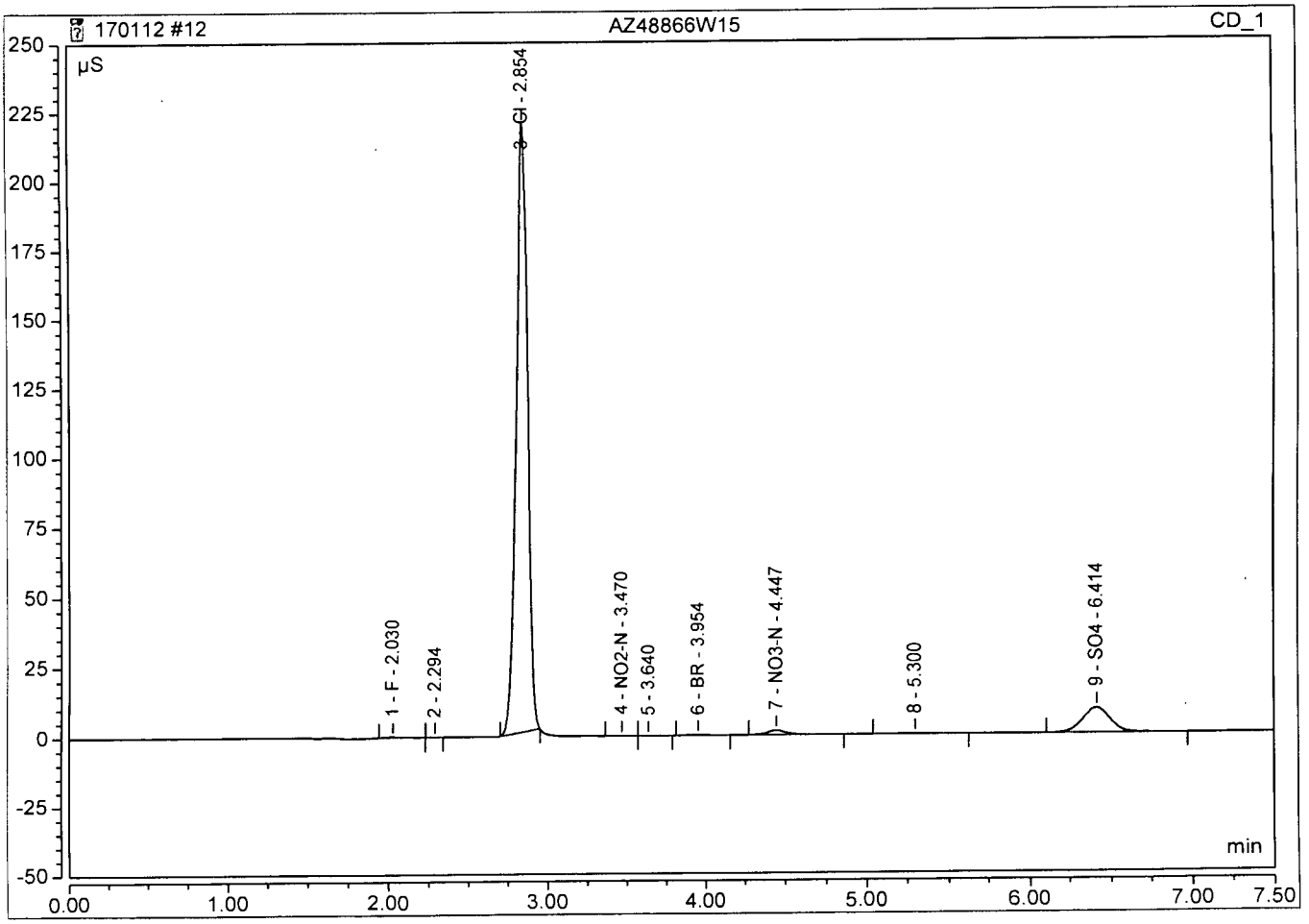
APPL-F1-SC-NoMC-REG MDLs

Peak Integration Report

Sample Name:	**AZ48866W15**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Jan-2017 / 16:40**	*Run Time:*	**7.50**

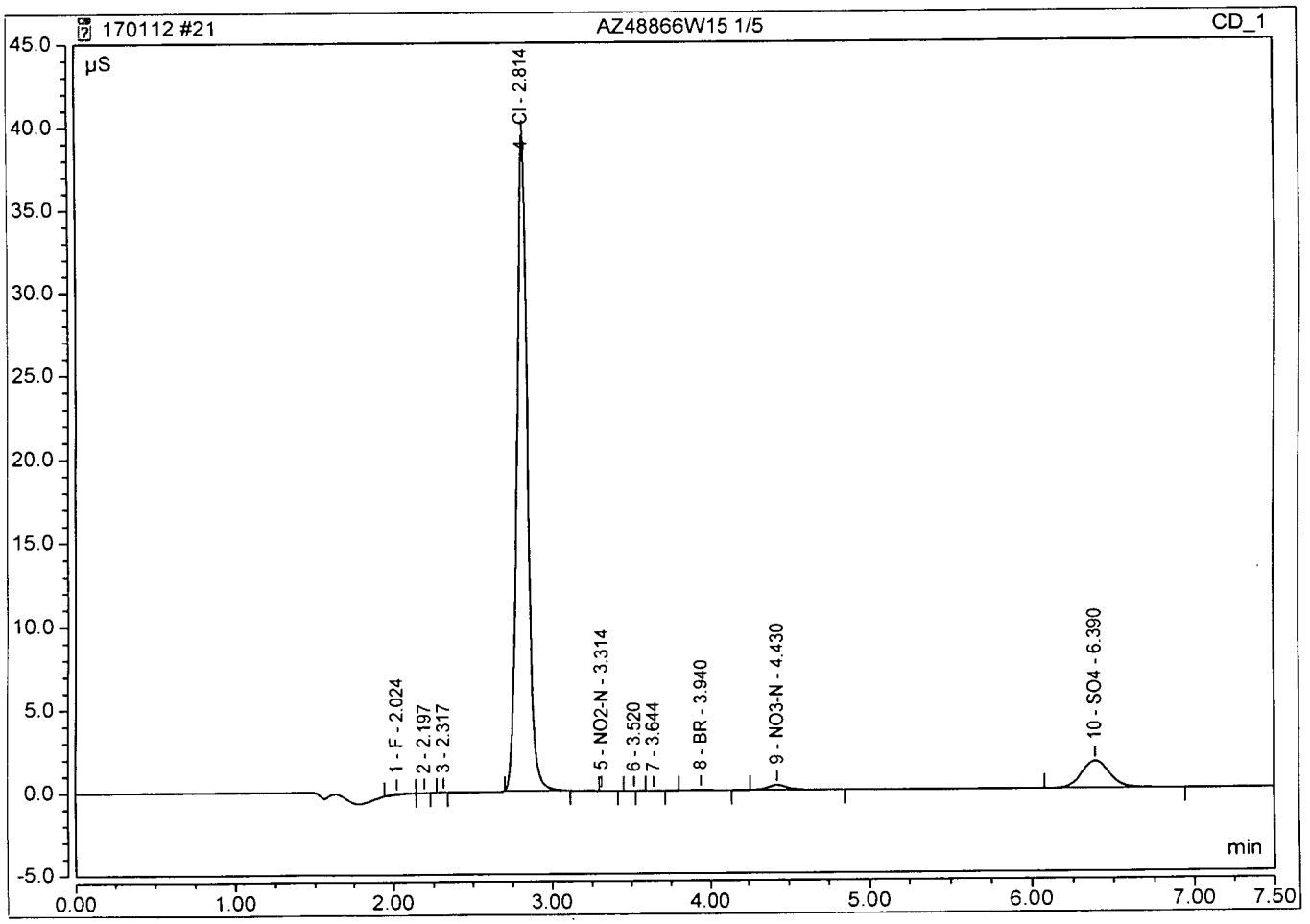
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.03	F	BMB	0.026	0.246	0.1530
3	2.85	Cl	BMB	17.885	218.687	99.0033
4	3.47	NO2-N	BMB	0.000	0.003	0.0228
6	3.95	BR	BMB	0.019	0.174	0.4255
7	4.45	NO3-N	BMB	0.193	1.521	0.5650
9	6.41	SO4	BMB	1.688	8.912	14.3185
TOTAL:				19.81	229.54	114.49



Peak Integration Report

Sample Name:	**AZ48866W15 1/5**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**5.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Jan-2017 / 18:42**	*Run Time:*	**7.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.02	F	BMB	0.010	0.090	0.4132
4	2.81	Cl	BMB	3.022	39.417	85.7929
5	3.31	NO2-N	BMB	0.000	0.000	0.1088
8	3.94	BR	BMB	0.004	0.035	0.9322
9	4.43	NO3-N	BMB	0.037	0.292	0.9333
10	6.39	SO4	BMB	0.319	1.626	15.5479
TOTAL:				3.39	41.46	103.73



Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH164

Sample Collection Date: 01/10/17

APPL ID: AZ48868

ARF: 81965

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date Analysis Date
EPA 300.0	NITRATE	4.2	0.5	0.18	0.04	mg/L	1	01/12/17 01/12/17
EPA 300.0	SULFATE	47.5	1.0	0.20	0.09	mg/L	1	01/12/17 01/12/17
EPA 300.0	CHLORIDE	154	5.0	1.00	0.40	mg/L	5	01/12/17 01/12/17
SM 2320B	BICARBONATE AS CACO3	105	2.0	1.70	0.85	mg/L	1	01/16/17 01/16/17
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	01/16/17 01/16/17
SM 2320B	TOTAL ALKALINITY AS CACO3	105	2.0	1.70	0.85	mg/L	1	01/16/17 01/16/17
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	01/12/17 01/12/17

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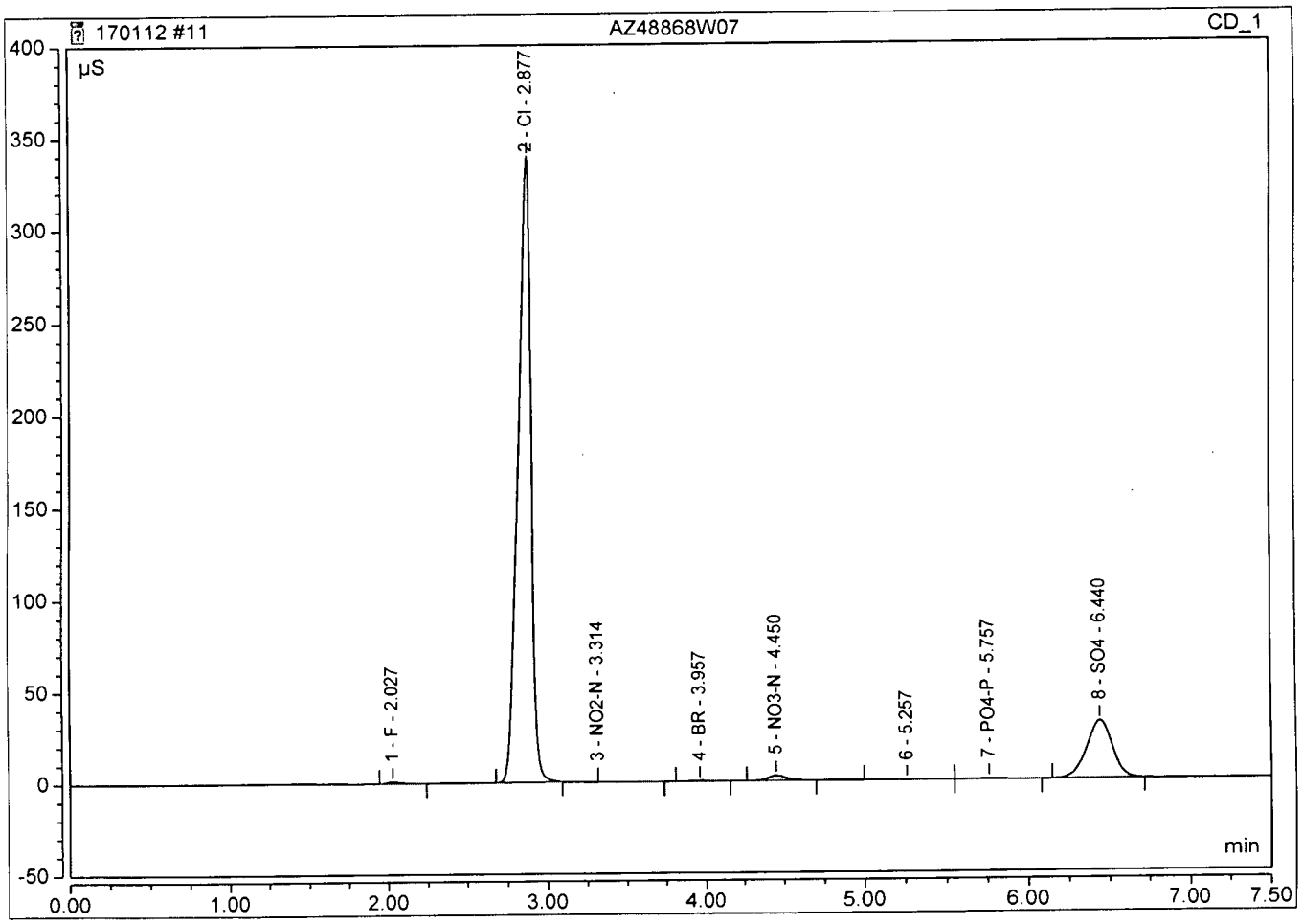
APPL-F1-SC-NoMC-REG MDLs

Peak Integration Report

Sample Name:	**AZ48868W07**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Jan-2017 / 16:27**	*Run Time:*	**7.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.03	F	BMB	0.081	0.930	0.3983
2	2.88	Cl	BMB	31.652	338.942	174.8111
3	3.31	NO2-N	BMB	0.003	0.000	0.0299
4	3.96	BR	BMB	0.032	0.288	0.6249
5	4.45	NO3-N	BMB	0.349	2.734	0.9418
7	5.76	PO4-P	BMB	0.056	0.309	0.5175
8	6.44	SO4	BMB	5.740	31.337	47.4964
TOTAL:				37.91	374.54	224.82

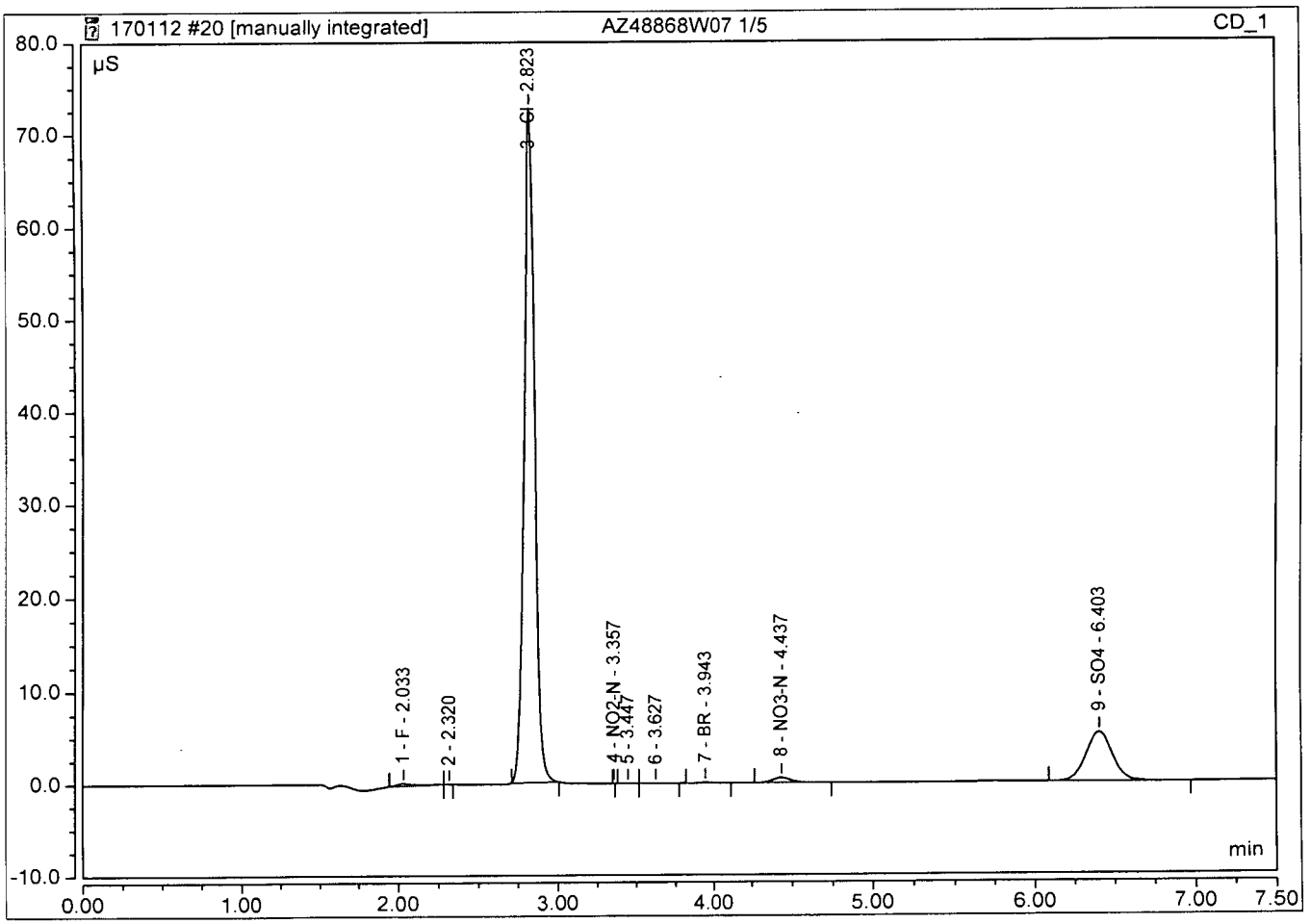


Peak Integration Report

MI mm 1/18/17
PW

Sample Name:	**AZ48868W07 1/5**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**5.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Jan-2017 / 18:29**	*Run Time:*	**7.50**

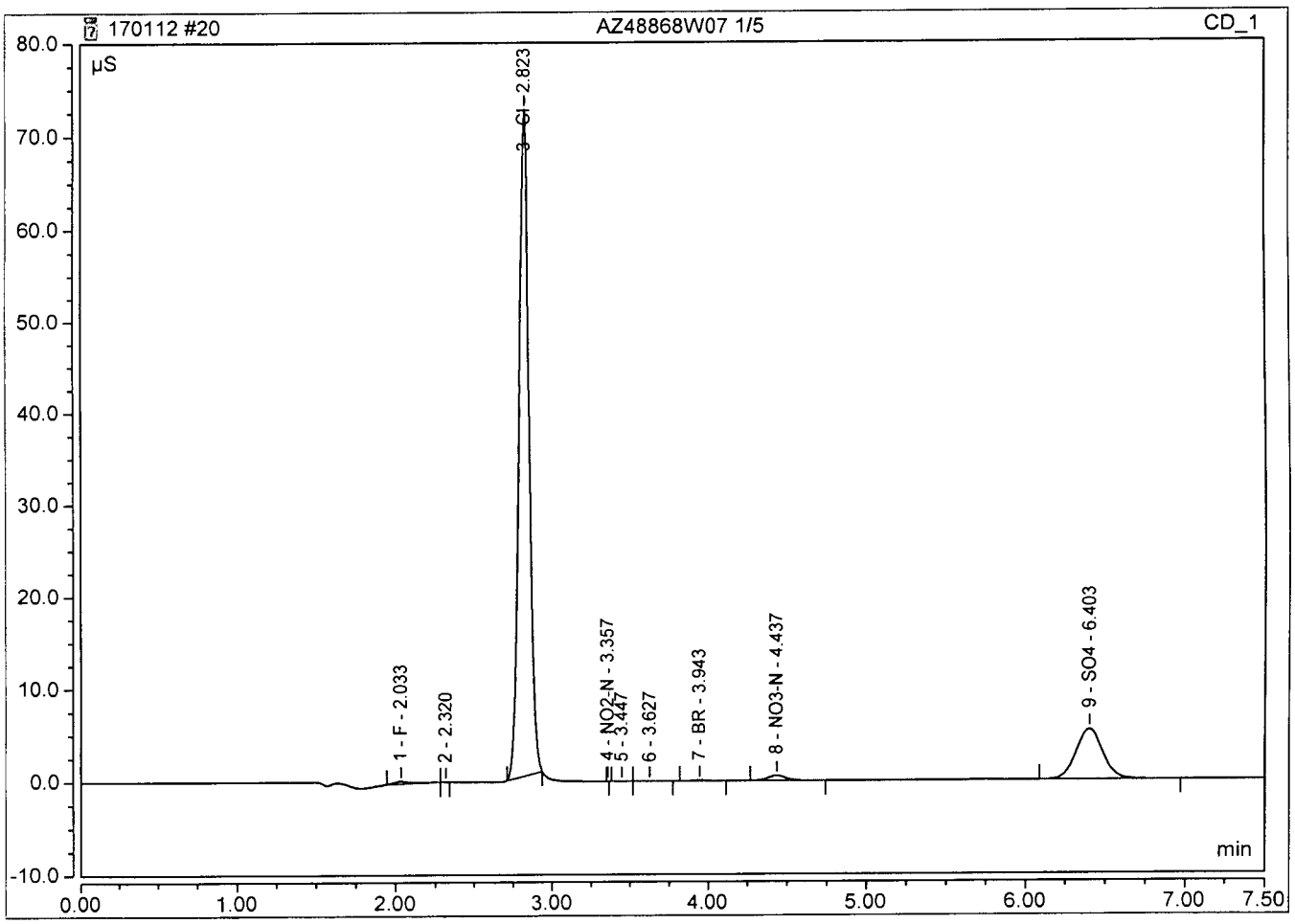
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.03	F	BMB	0.032	0.261	0.9134
3	2.82	Cl	BMB*	5.513	72.656	154.3840
4	3.36	NO2-N	BMB	0.000	0.000	0.1079
7	3.94	BR	BMB	0.006	0.058	1.1300
8	4.44	NO3-N	BMB	0.069	0.544	1.3119
9	6.40	SO4	BMB	1.034	5.376	44.8227
TOTAL:				6.65	78.90	202.67



Peak Integration Report

Sample Name:	**AZ48868W07 1/5**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**5.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Jan-2017 / 18:29**	*Run Time:*	**7.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.03	F	BMB	0.032	0.261	0.9134
3	2.82	Cl	BMB	5.386	72.190	150.8847
4	3.36	NO2-N	BMB	0.000	0.000	0.1079
7	3.94	BR	BMB	0.006	0.058	1.1300
8	4.44	NO3-N	BMB	0.069	0.544	1.3119
9	6.40	SO4	BMB	1.034	5.376	44.8227
TOTAL:				6.53	78.43	199.17



Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH168

Sample Collection Date: 01/09/17

APPL ID: AZ48871

ARF: 81965

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date Analysis Date
EPA 300.0	NITRATE	3.5	1.0	0.36	0.08	mg/L	2	01/12/17 01/12/17
EPA 300.0	SULFATE	85.8	2.0	0.40	0.18	mg/L	2	01/12/17 01/12/17
EPA 300.0	CHLORIDE	368	20.0	4.00	1.60	mg/L	20	01/12/17 01/12/17
SM 2320B	BICARBONATE AS CACO3	114	2.0	1.70	0.85	mg/L	1	01/16/17 01/16/17
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	01/16/17 01/16/17
SM 2320B	TOTAL ALKALINITY AS CACO3	114	2.0	1.70	0.85	mg/L	1	01/16/17 01/16/17
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	01/12/17 01/12/17

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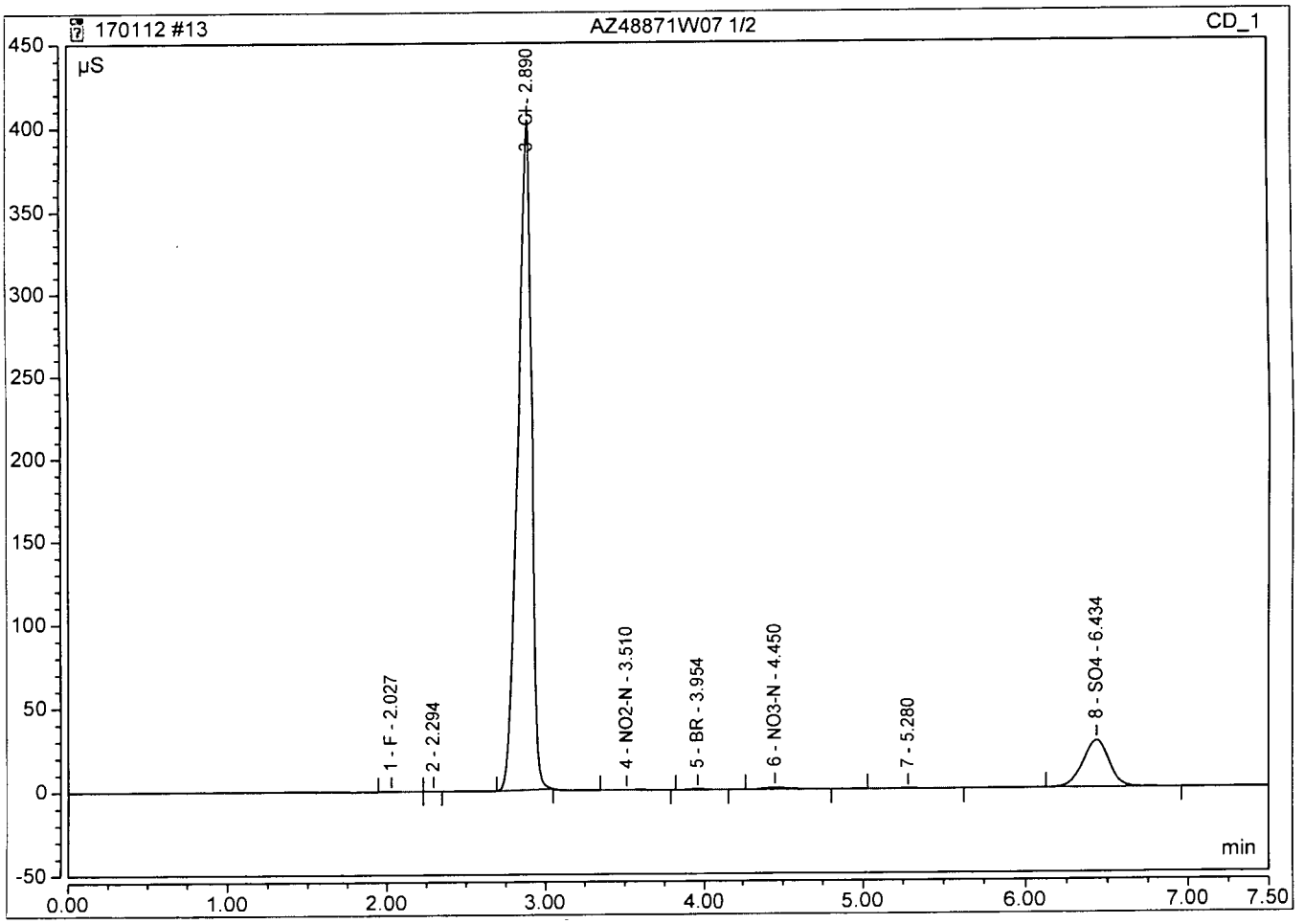
APPL-F1-SC-NoMC-REG MDLs

Peak Integration Report

Sample Name:	**AZ48871W07 1/2**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**2.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Jan-2017 / 16:54**	*Run Time:*	**7.50**

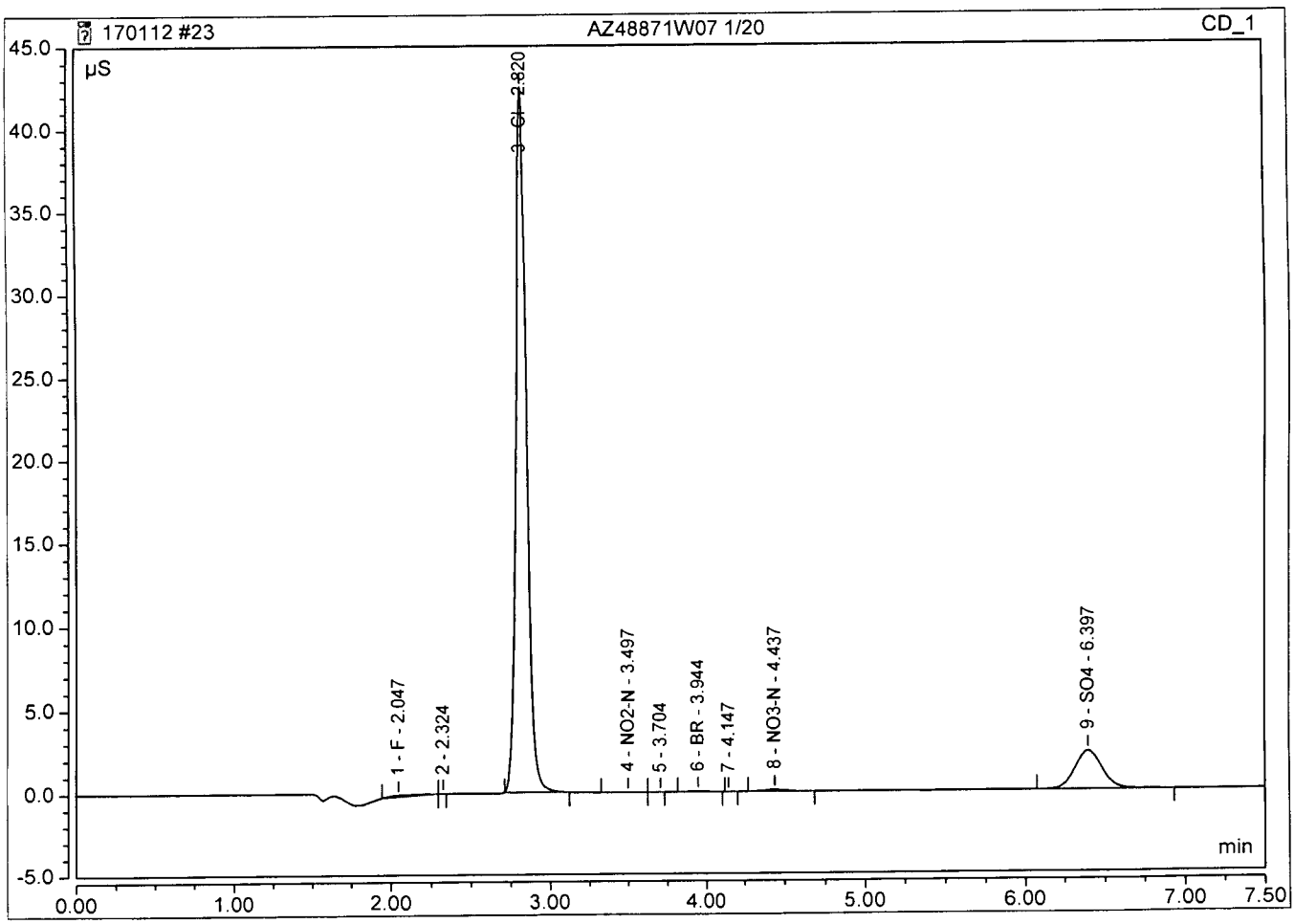
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.03	F	BMB	0.013	0.131	0.1966
3	2.89	Cl	BMB	40.099	403.159	442.6454
4	3.51	NO2-N	BMB	0.003	0.012	0.0608
5	3.95	BR	BMB	0.035	0.320	1.3722
6	4.45	NO3-N	BMB	0.124	0.963	0.7931
8	6.43	SO4	BMB	5.180	27.881	85.8226
TOTAL:				45.45	432.46	530.89



Peak Integration Report

Sample Name:	**AZ48871W07 1/20**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**20.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Jan-2017 / 19:09**	*Run Time:*	**7.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.05	F	BMB	0.021	0.100	2.6419
3	2.82	Cl	BMB	3.248	42.480	368.0616
4	3.50	NO2-N	BMB	0.000	0.001	0.4397
6	3.94	BR	BMB	0.003	0.033	3.5948
8	4.44	NO3-N	BMB	0.012	0.092	2.4773
9	6.40	SO4	BMB	0.454	2.316	84.1658
TOTAL:				3.74	45.02	461.38



Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH169

APPL ID: AZ48872

Sample Collection Date: 01/11/17

ARF: 81965

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date Analysis Date
EPA 300.0	NITRATE	2.1	0.5	0.18	0.04	mg/L	1	01/12/17 01/12/17
EPA 300.0	CHLORIDE	169	5.0	1.00	0.40	mg/L	5	01/12/17 01/12/17
EPA 300.0	SULFATE	76.0	5.0	1.00	0.45	mg/L	5	01/12/17 01/12/17
SM 2320B	BICARBONATE AS CACO3	72.4	2.0	1.70	0.85	mg/L	1	01/16/17 01/16/17
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	01/16/17 01/16/17
SM 2320B	TOTAL ALKALINITY AS CACO3	72.4	2.0	1.70	0.85	mg/L	1	01/16/17 01/16/17
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	01/12/17 01/12/17

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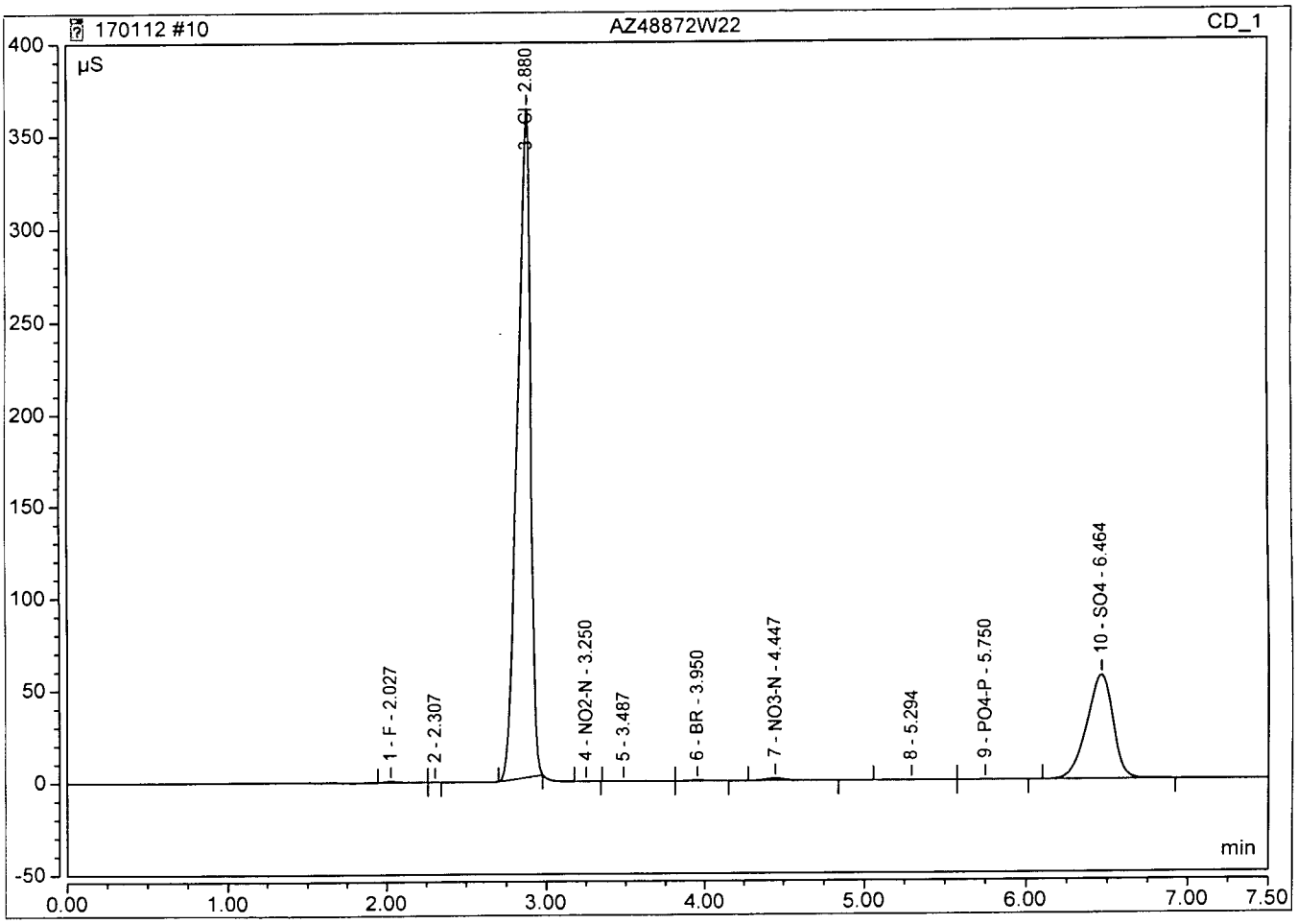
APPL-F1-SC-NoMC-REG MDLs

Peak Integration Report

Sample Name:	**AZ48872W22**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Jan-2017 / 16:13**	*Run Time:*	**7.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.03	F	BMB	0.056	0.610	0.2890
3	2.88	Cl	BMB	34.045	361.486	187.9876
4	3.25	NO2-N	BMB	0.000	0.004	0.0226
6	3.95	BR	BMB	0.034	0.306	0.6569
7	4.45	NO3-N	BMB	0.158	1.231	0.4789
9	5.75	PO4-P	BMB	0.012	0.069	0.1640
10	6.46	SO4	BMB	10.443	56.071	86.0080
TOTAL:				44.75	419.78	275.61

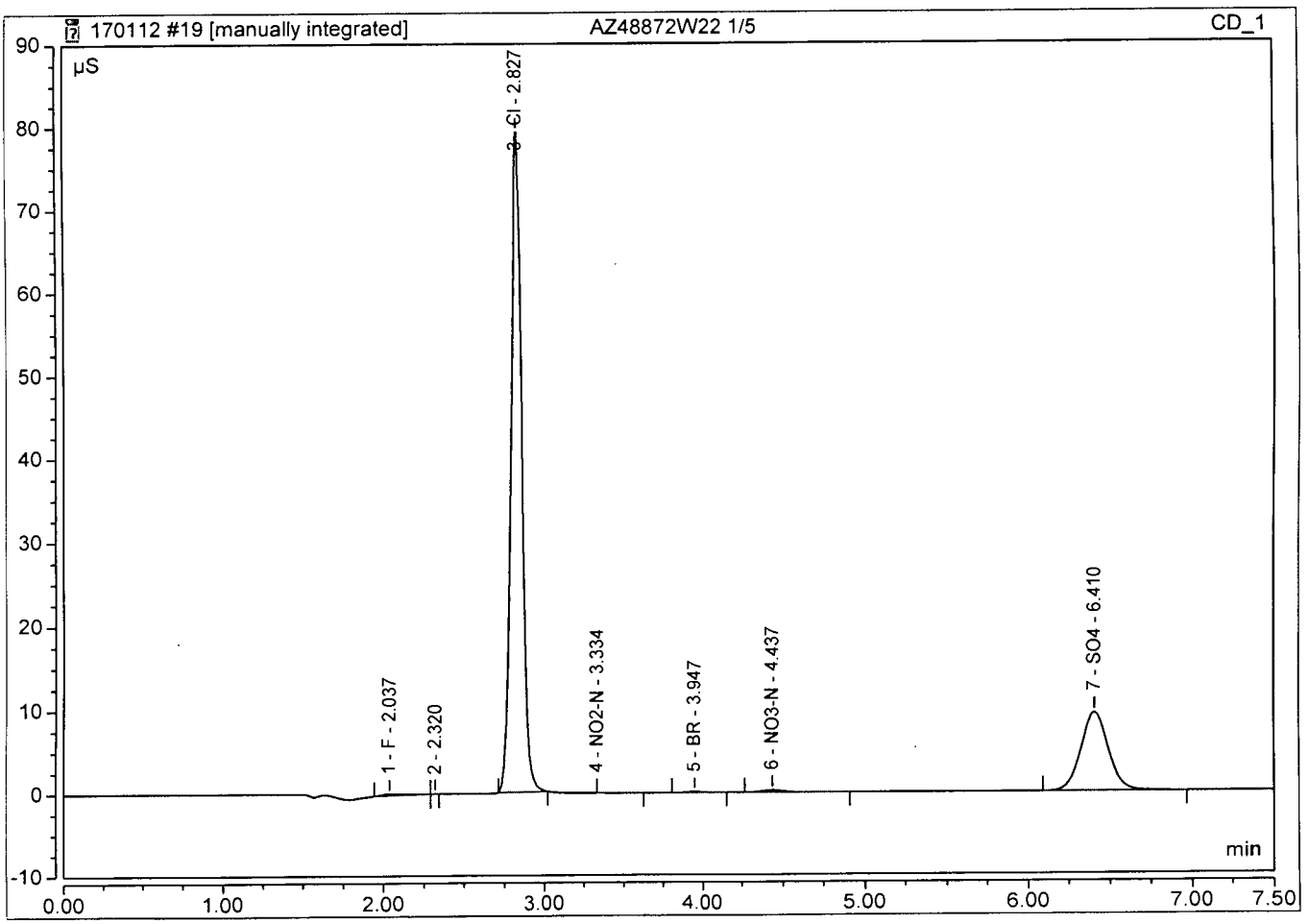


MI MM 1/18/17
PW

Peak Integration Report

Sample Name:	**AZ48872W22 1/5**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**5.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Jan-2017 / 18:15**	*Run Time:*	**7.50**

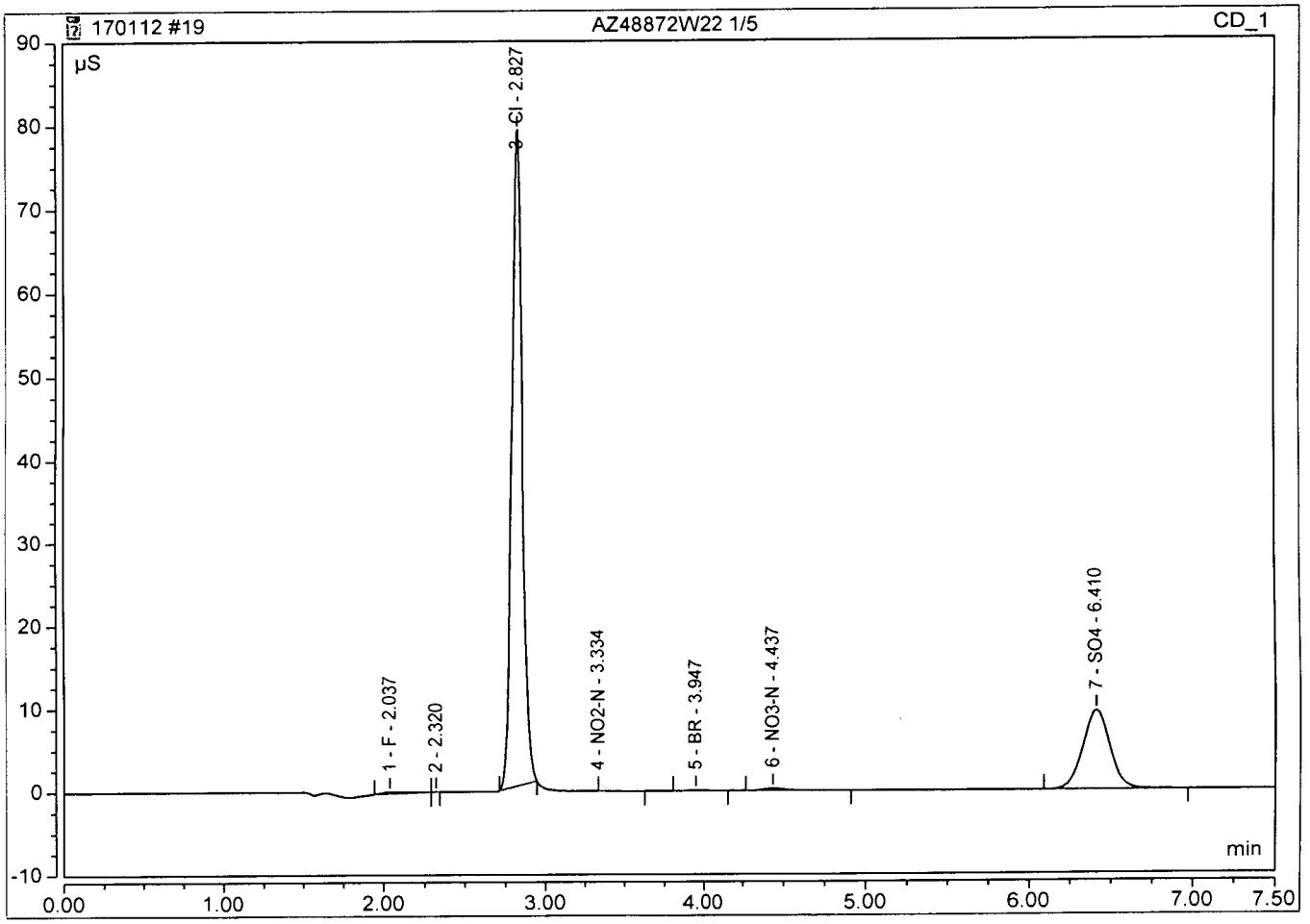
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.04	F	BMB	0.028	0.200	0.8242
3	2.83	Cl	BMB*	6.047	79.159	169.0738
4	3.33	NO2-N	BMB	0.000	0.000	0.1103
5	3.95	BR	BMB	0.007	0.062	1.1739
6	4.44	NO3-N	BMB	0.031	0.244	0.8600
7	6.41	SO4	BMB	1.797	9.386	76.0349
TOTAL:				7.91	89.05	248.08



Peak Integration Report

Sample Name:	**AZ48872W22 1/5**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**5.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Jan-2017 / 18:15**	*Run Time:*	**7.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.04	F	BMB	0.028	0.200	0.8242
3	2.83	Cl	BMB	5.899	78.644	165.0211
4	3.33	NO2-N	BMB	0.000	0.000	0.1103
5	3.95	BR	BMB	0.007	0.062	1.1739
6	4.44	NO3-N	BMB	0.031	0.244	0.8600
7	6.41	SO4	BMB	1.797	9.386	76.0349
TOTAL:				7.76	88.54	244.02



Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH174

Sample Collection Date: 01/10/17

APPL ID: AZ48875

ARF: 81965

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date Analysis Date
EPA 300.0	CHLORIDE	39.4	1.0	0.20	0.08	mg/L	1	01/12/17 01/12/17
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	1	01/12/17 01/12/17
EPA 300.0	SULFATE	0.79 J	1.0	0.20	0.09	mg/L	1	01/12/17 01/12/17
SM 2320B	BICARBONATE AS CACO3	211	2.0	1.70	0.85	mg/L	1	01/16/17 01/16/17
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	01/16/17 01/16/17
SM 2320B	TOTAL ALKALINITY AS CACO3	211	2.0	1.70	0.85	mg/L	1	01/16/17 01/16/17
SM3500FeB	FERROUS IRON	3.0	1.0	0.32	0.16	mg/L	1	01/12/17 01/12/17

J = Estimated value.

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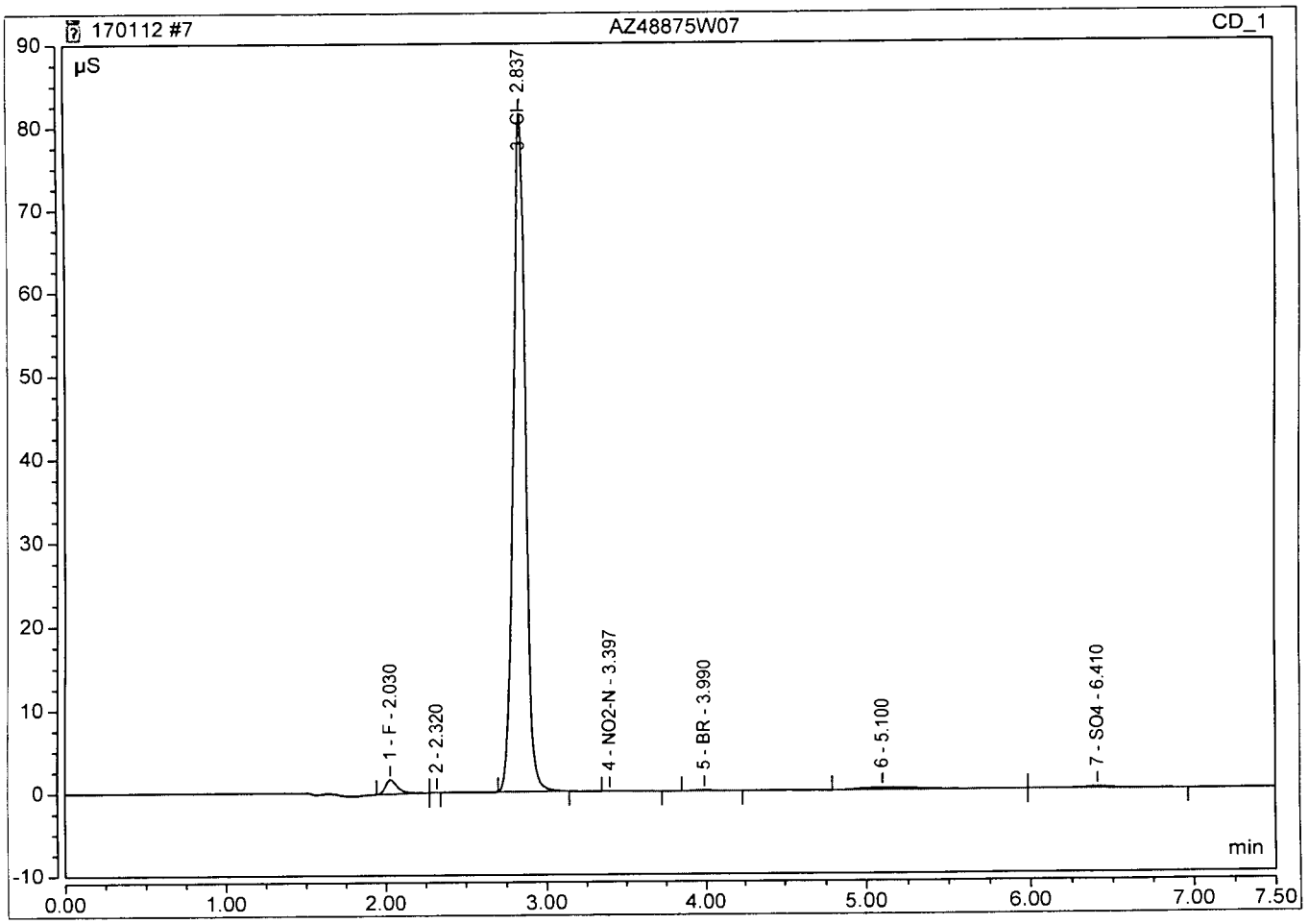
APPL-F1-SC-NoMC-REG MDLs

Peak Integration Report

Sample Name:	**AZ48875W07**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Jan-2017 / 15:33**	*Run Time:*	**7.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.03	F	BMB	0.153	1.722	0.7157
3	2.84	Cl	BMB	7.057	81.443	39.3795
4	3.40	NO2-N	BMB	0.001	0.002	0.0242
5	3.99	BR	BMB	0.009	0.080	0.2656
7	6.41	SO4	BMB	0.036	0.171	0.7887
TOTAL:				7.26	83.42	41.17



Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH176

Sample Collection Date: 01/10/17

APPL ID: AZ48877

ARF: 81965

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date Analysis Date
EPA 300.0	NITRATE	1.1	0.5	0.18	0.04	mg/L	1	01/12/17 01/12/17
EPA 300.0	SULFATE	26.6	1.0	0.20	0.09	mg/L	1	01/12/17 01/12/17
EPA 300.0	CHLORIDE	86.3	5.0	1.00	0.40	mg/L	5	01/12/17 01/12/17
SM 2320B	BICARBONATE AS CACO3	52.7	2.0	1.70	0.85	mg/L	1	01/16/17 01/16/17
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	01/16/17 01/16/17
SM 2320B	TOTAL ALKALINITY AS CACO3	52.7	2.0	1.70	0.85	mg/L	1	01/16/17 01/16/17
SM3500FeB	FERROUS IRON	3.5	1.0	0.32	0.16	mg/L	1	01/12/17 01/12/17

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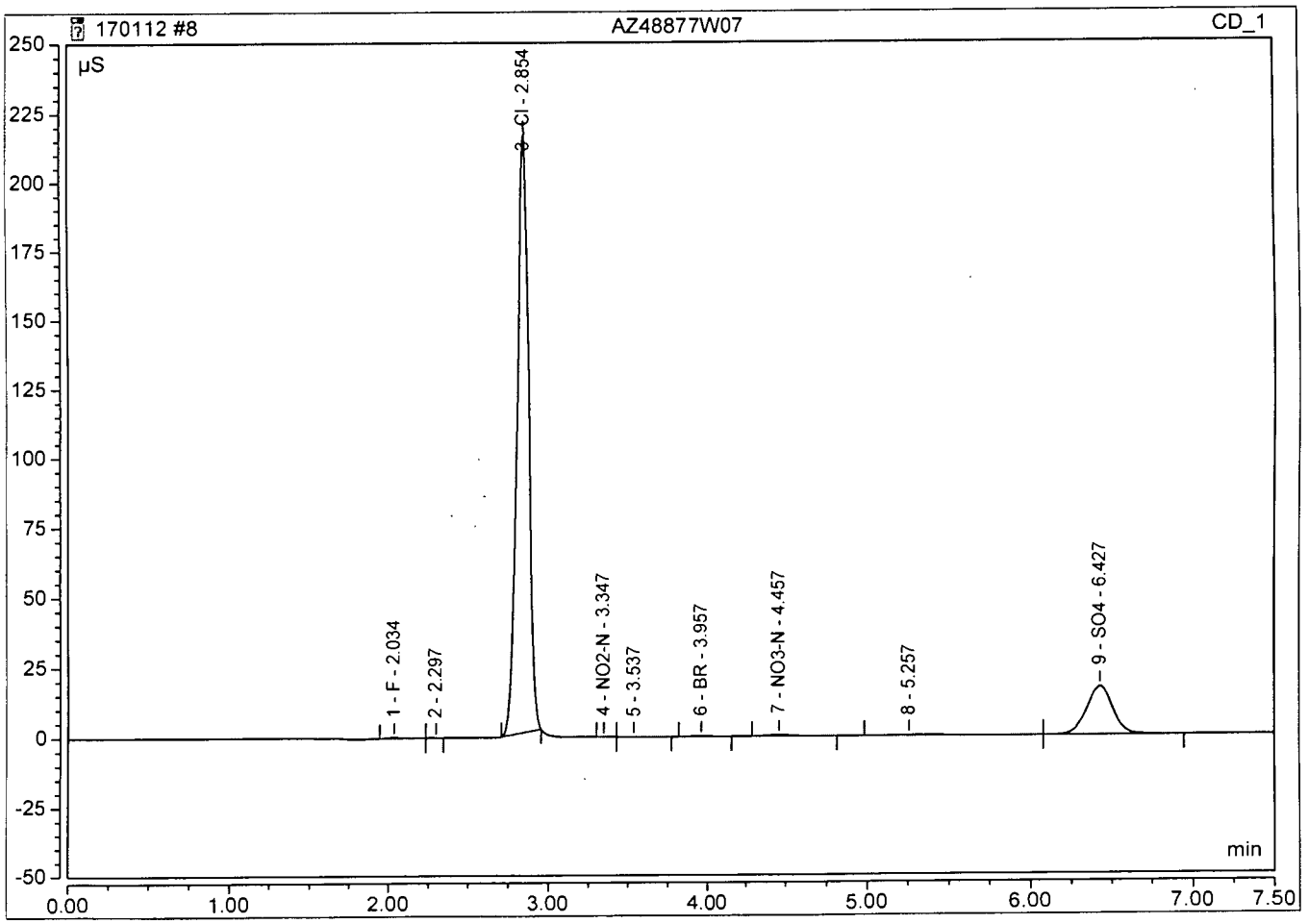
APPL-F1-SC-NoMC-REG MDLs

Peak Integration Report

Sample Name:	**AZ48877W07**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Jan-2017 / 15:46**	*Run Time:*	**7.50**

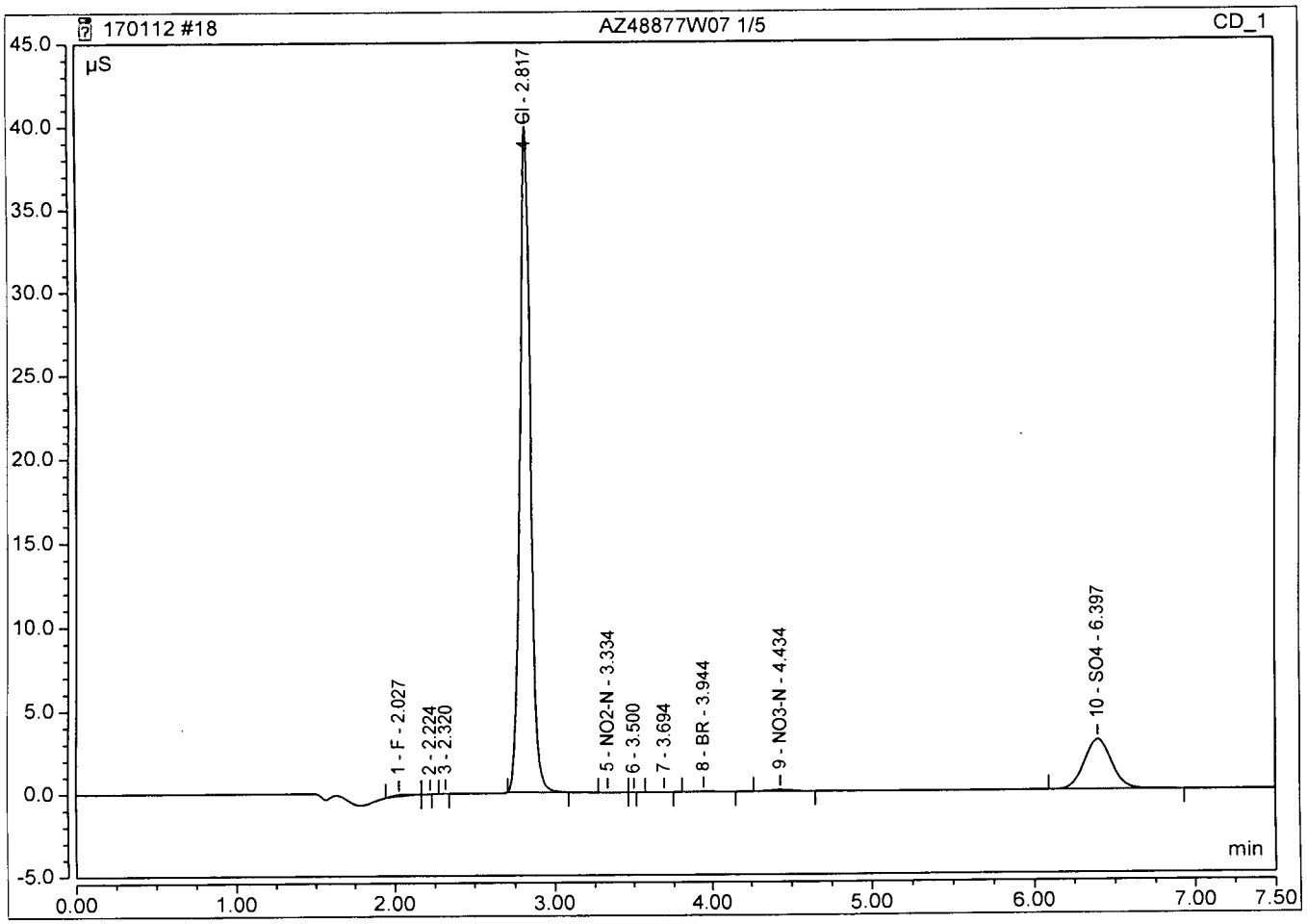
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.03	F	BMB	0.029	0.273	0.1657
3	2.85	Cl	BMB	17.694	215.179	97.9525
4	3.35	NO2-N	BMB	0.000	0.003	0.0222
6	3.96	BR	BMB	0.016	0.148	0.3814
7	4.46	NO3-N	BMB	0.059	0.462	0.2394
9	6.43	SO4	BMB	3.188	17.116	26.6029
TOTAL:				20.99	233.18	125.36



Peak Integration Report

Sample Name:	**AZ48877W07 1/5**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**5.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Jan-2017 / 18:02**	*Run Time:*	**7.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.03	F	BMB	0.013	0.106	0.4732
4	2.82	Cl	BMB	3.040	39.874	86.2934
5	3.33	NO2-N	BMB	0.000	0.002	0.1100
8	3.94	BR	BMB	0.003	0.030	0.8945
9	4.43	NO3-N	BMB	0.011	0.088	0.6133
10	6.40	SO4	BMB	0.588	3.031	26.5475
TOTAL:				3.66	43.13	114.93



Wet Lab Analysis

AECOM
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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH179

Sample Collection Date: 01/10/17

APPL ID: AZ48878

ARF: 81965

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date Analysis Date
EPA 300.0	NITRATE	4.0	1.0	0.36	0.08	mg/L	2	01/12/17 01/12/17
EPA 300.0	SULFATE	63.7	2.0	0.40	0.18	mg/L	2	01/12/17 01/12/17
EPA 300.0	CHLORIDE	361	20.0	4.00	1.60	mg/L	20	01/12/17 01/12/17
SM 2320B	BICARBONATE AS CACO3	120	2.0	1.70	0.85	mg/L	1	01/16/17 01/16/17
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	01/16/17 01/16/17
SM 2320B	TOTAL ALKALINITY AS CACO3	120	2.0	1.70	0.85	mg/L	1	01/16/17 01/16/17
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	01/12/17 01/12/17

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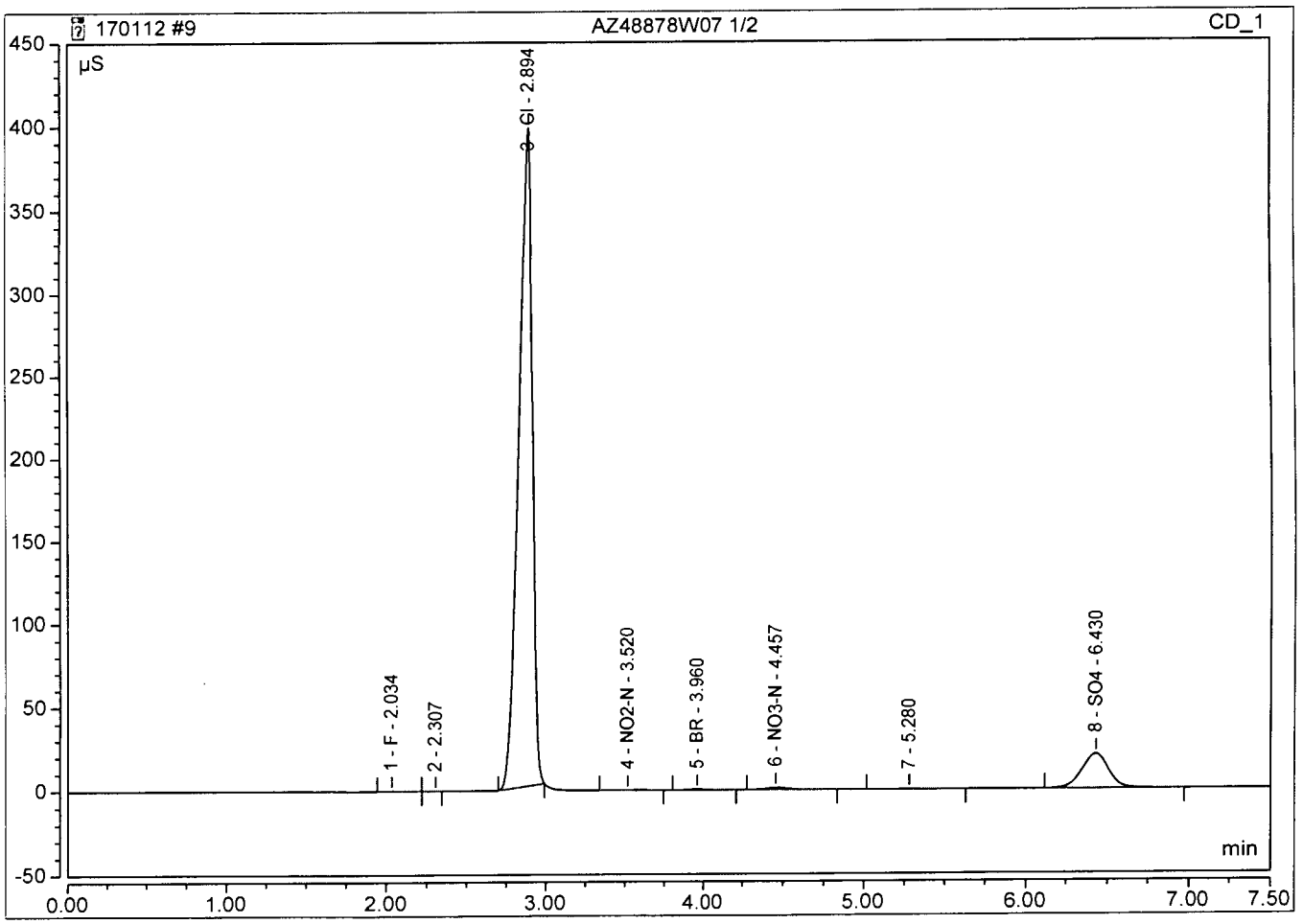
APPL-F1-SC-NoMC-REG MDLs

Peak Integration Report

Sample Name:	**AZ48878W07 1/2**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**2.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Jan-2017 / 16:00**	*Run Time:*	**7.50**

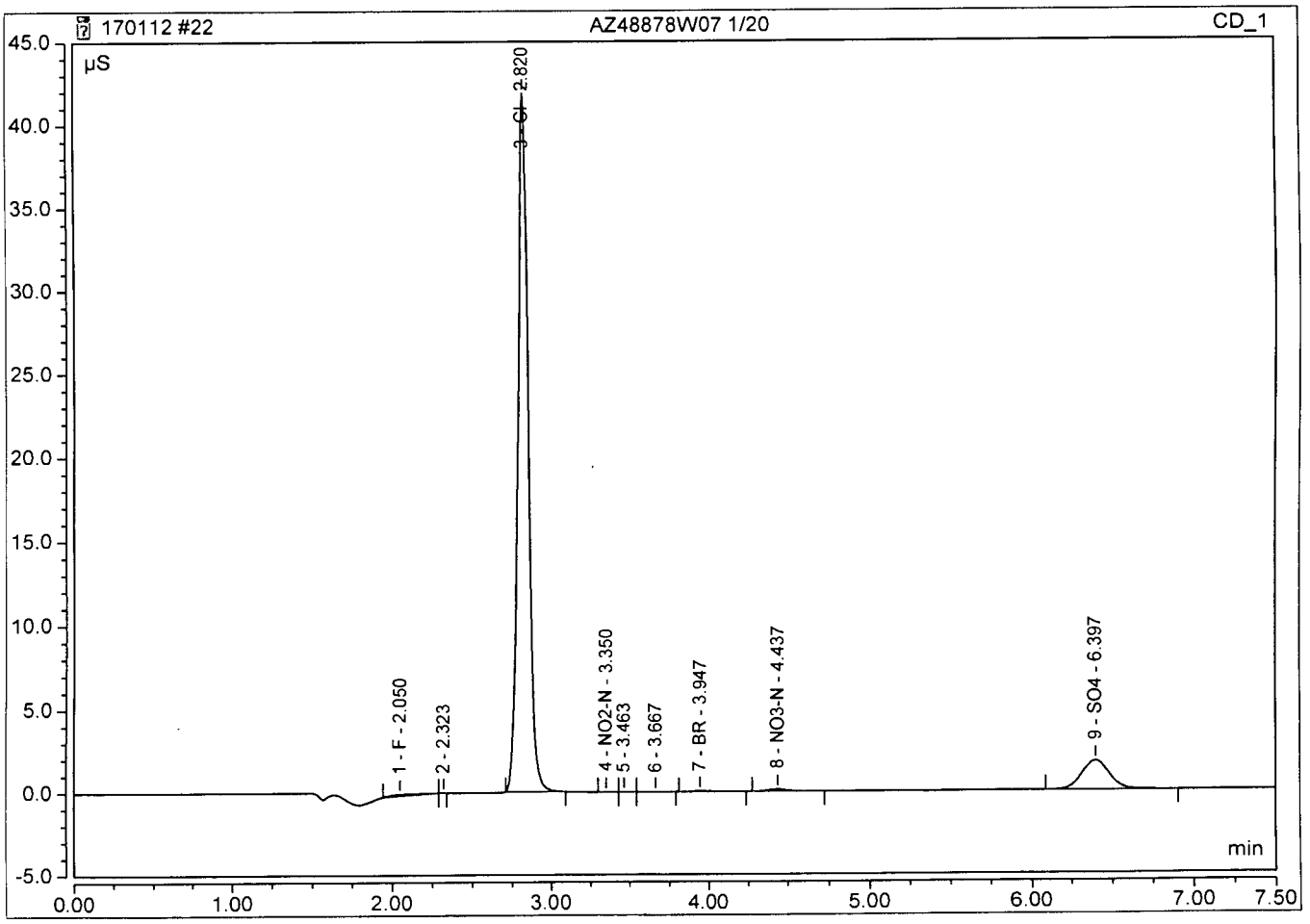
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.03	F	BMB	0.012	0.108	0.1842
3	2.89	Cl	BMB	38.758	395.867	427.8812
4	3.52	NO2-N	BMB	0.002	0.010	0.0571
5	3.96	BR	BMB	0.035	0.321	1.3742
6	4.46	NO3-N	BMB	0.146	1.138	0.9026
8	6.43	SO4	BMB	3.827	20.470	63.6670
TOTAL:				42.78	417.91	494.07



Peak Integration Report

Sample Name:	**AZ48878W07 1/20**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**20.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Jan-2017 / 18:56**	*Run Time:*	**7.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.05	F	BMB	0.021	0.100	2.6431
3	2.82	Cl	BMB	3.183	41.832	360.8916
4	3.35	NO2-N	BMB	0.000	0.001	0.4349
7	3.95	BR	BMB	0.004	0.034	3.7049
8	4.44	NO3-N	BMB	0.014	0.111	2.6058
9	6.40	SO4	BMB	0.342	1.753	65.9536
TOTAL:				3.56	43.83	436.23



INORGANIC ANALYSIS
Calibration Data

APPL, INC.

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No: 81965 SDG: 81965

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 05/20/16

Analyte	Calibration Verification									M
	True ICV	Found 12:41	%R(1)	True CCV1	Found 16:17	%R(1)	True CCV1	Found 16:29	%R(1)	
Ferrous Iron	3	3.01396	100	4	3.76323	94.1	4	3.91309	97.8	

(1) Control Limits: 90-110

ILM02.0

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 81965 SDG: 81965

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	ICB 05/20/16 12:42	C	CCB 01/12/17 16:18	C	CCB 01/12/17 16:30	C		C		C	
Ferrous Iron	1.000	U	1.000	U	1.000	U					

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract:

ARF No: SDG:

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 10/20/16

Analyte	Calibration Verification									M
	True ICV	Found 12:37	%R(1)	True	Found	%R(1)	True	Found	%R(1)	
bromide	12.5	11.8422	94.7							
chloride	20	18.2183	91.1							
fluoride	2.5	2.55939	102							
Nitrate(NO3)	22.1	20.0573	90.8							
Nitrate(NO3)-N	5	4.52905	90.6							
Nitrite(NO2)	9.98	9.81221	98.3							
Nitrite(NO2)-N	3.04	2.98733	98.3							
phosphate	15.3225	14.7130	96.0							
phosphate-p	5	4.80111	96.0							
sulfate	20	18.4058	92.0							

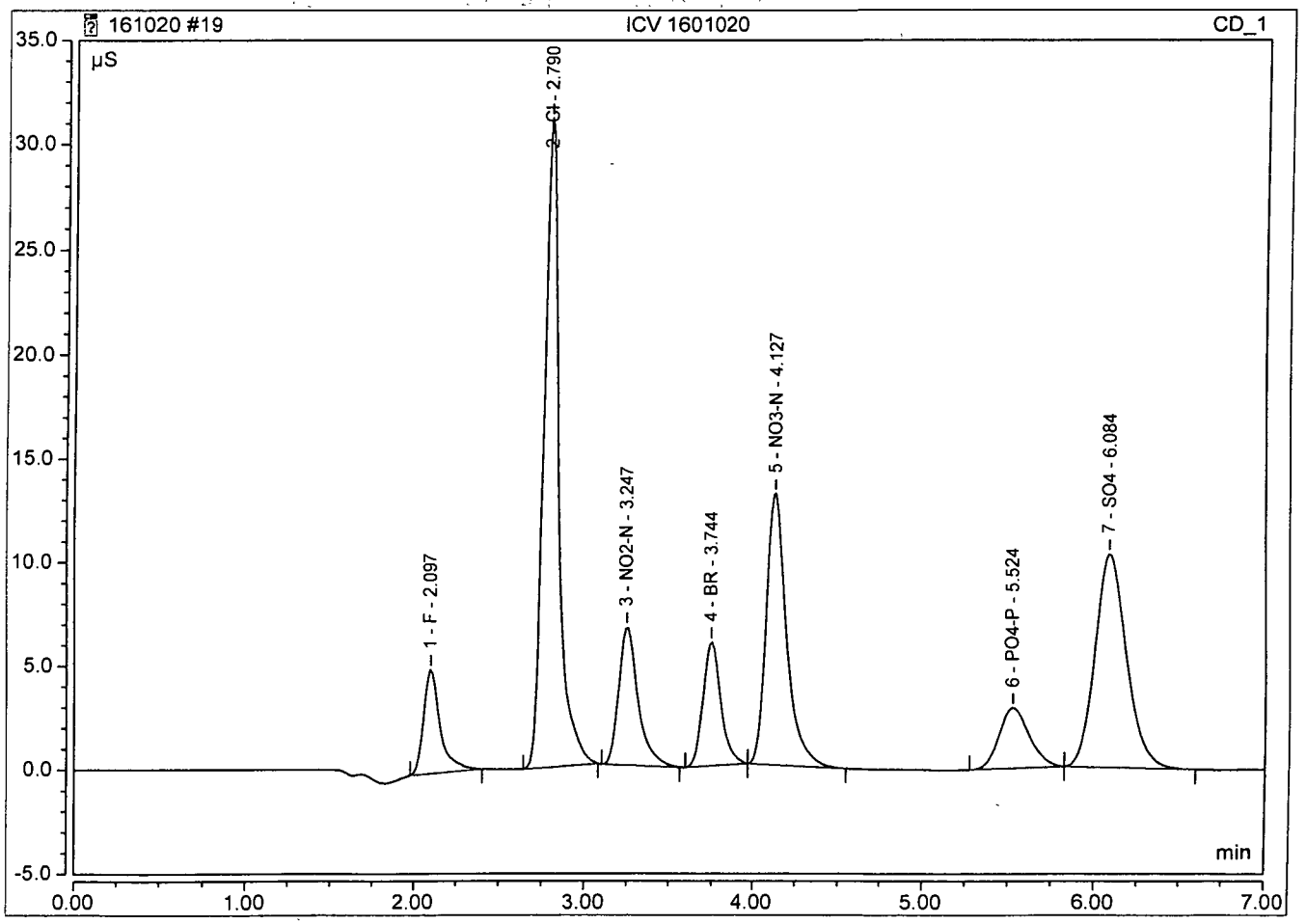
(1) Control Limits: 90-110

ILM02.0

Peak Integration Report

Sample Name:	**ICV 1601020**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:37**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB	0.568	5.018	2.5594
2	2.79	Cl	BMB	3.214	31.139	18.2184
3	3.25	NO2-N	BMB	0.894	6.653	2.9873
4	3.74	BR	BMB	0.739	5.970	11.8423
5	4.13	NO3-N	BMB	1.827	13.075	4.5291
6	5.52	PO4-P	BMB	0.590	2.913	4.8011
7	6.08	SO4	BMB	2.187	10.255	18.4058
		TOTAL:		10.02	75.02	63.34



Algorithm Check

y = .8186x - .0943

x = 18.22 ✓

y = Peak Area
x = Amt

mm 1/18/17

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: _____

ARF No.: _____ SDG: _____

Preparation Blank Matrix (soil/water): water

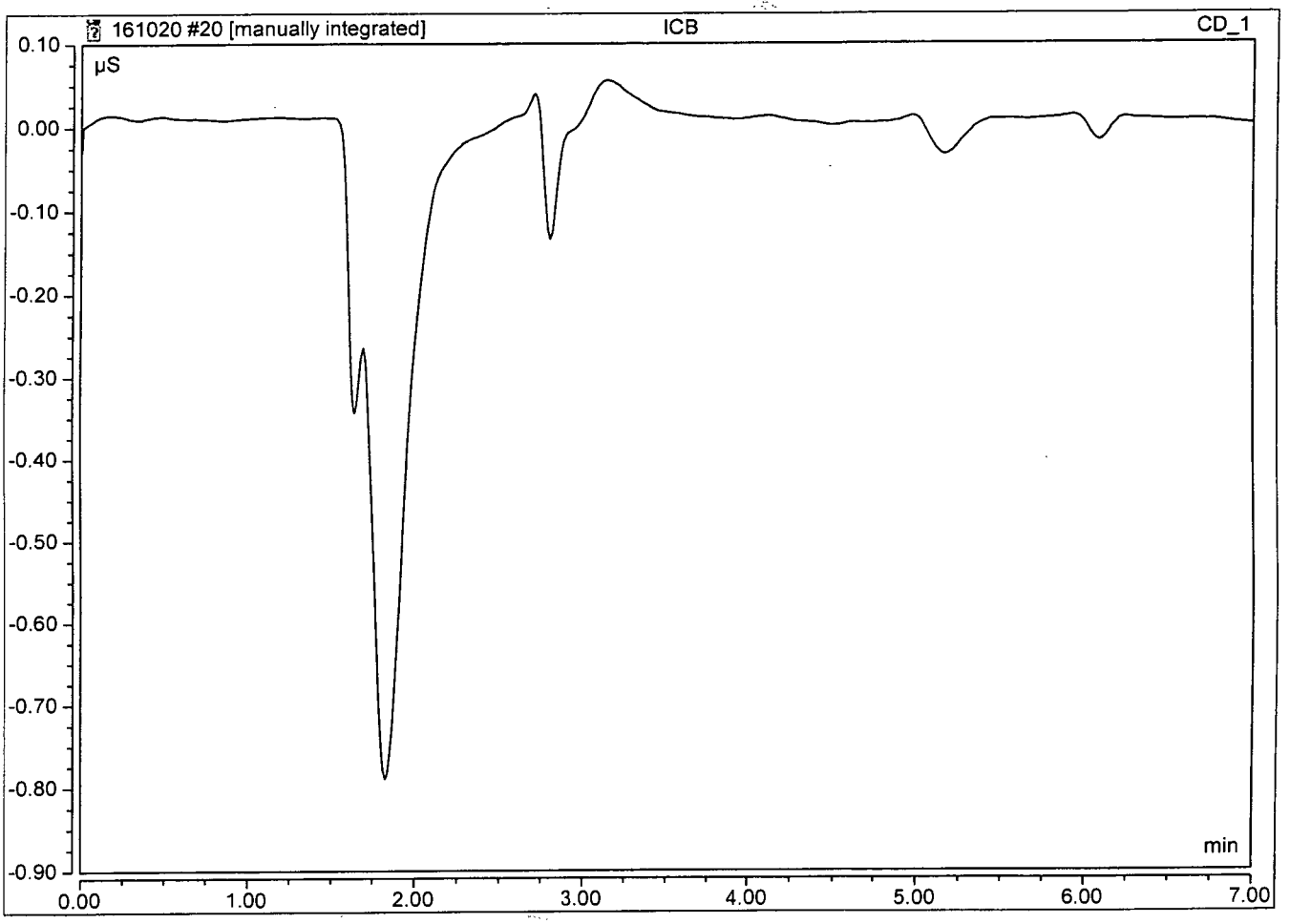
Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	ICB 10/20/16 12:50	C		C		C		C		C	
bromide	.500	U									
chloride	1.000	U									
fluoride	.100	U									
Nitrate(NO3)	.500	U									
Nitrate(NO3)-N	.200	U									
Nitrite(NO2)	.300	U									
Nitrite(NO2)-N	.100	U									
phosphate	.600	U									
phosphate-p	.200	U									
sulfate	1.000	U									

Peak Integration Report

Sample Name:	**ICB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:50**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
		TOTAL:		0.00	0.00	0.00



A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM
ARF No: 81965 SDG: 81965
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 01/12/17

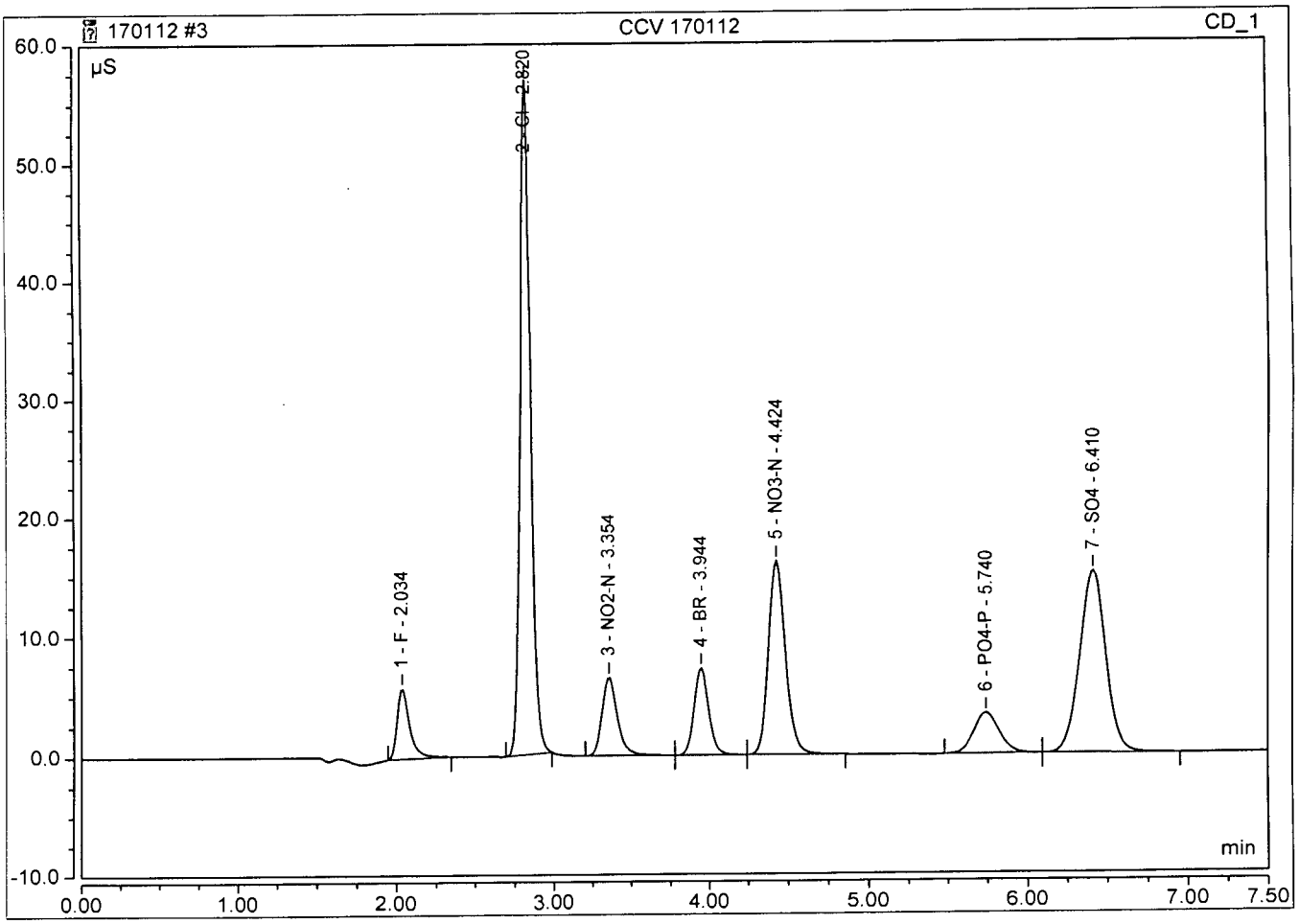
Analyte	Calibration Verification									M
	True CCV1	Found 13:07	%R(1)	True CCV1	Found 17:21	%R(1)	True CCV1	Found 19:23	%R(1)	
chloride	25	24.3485	97.4	25	24.4235	97.7	25	24.5937	98.4	
Nitrate(NO3)	22.1	21.6062	97.8	22.1	21.6682	98.0	22.1	21.6841	98.1	
sulfate	25	23.7816	95.1	25	23.845	95.4	25	23.8691	95.5	

(1) Control Limits: 90-110

Peak Integration Report

Sample Name:	**CCV 170112**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Jan-2017 / 13:07**	*Run Time:*	**7.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.03	F	BMB	0.533	5.865	2.4064
2	2.82	Cl	BMB	4.327	56.837	24.3485
3	3.35	NO2-N	BMB	0.744	6.505	2.4907
4	3.94	BR	BMB	0.786	7.220	12.5873
5	4.42	NO3-N	BMB	1.971	16.092	4.8788
6	5.74	PO4-P	BMB	0.626	3.351	5.0887
7	6.41	SO4	BMB	2.844	15.061	23.7816
		TOTAL:		11.83	110.93	75.58



Algorithm Check

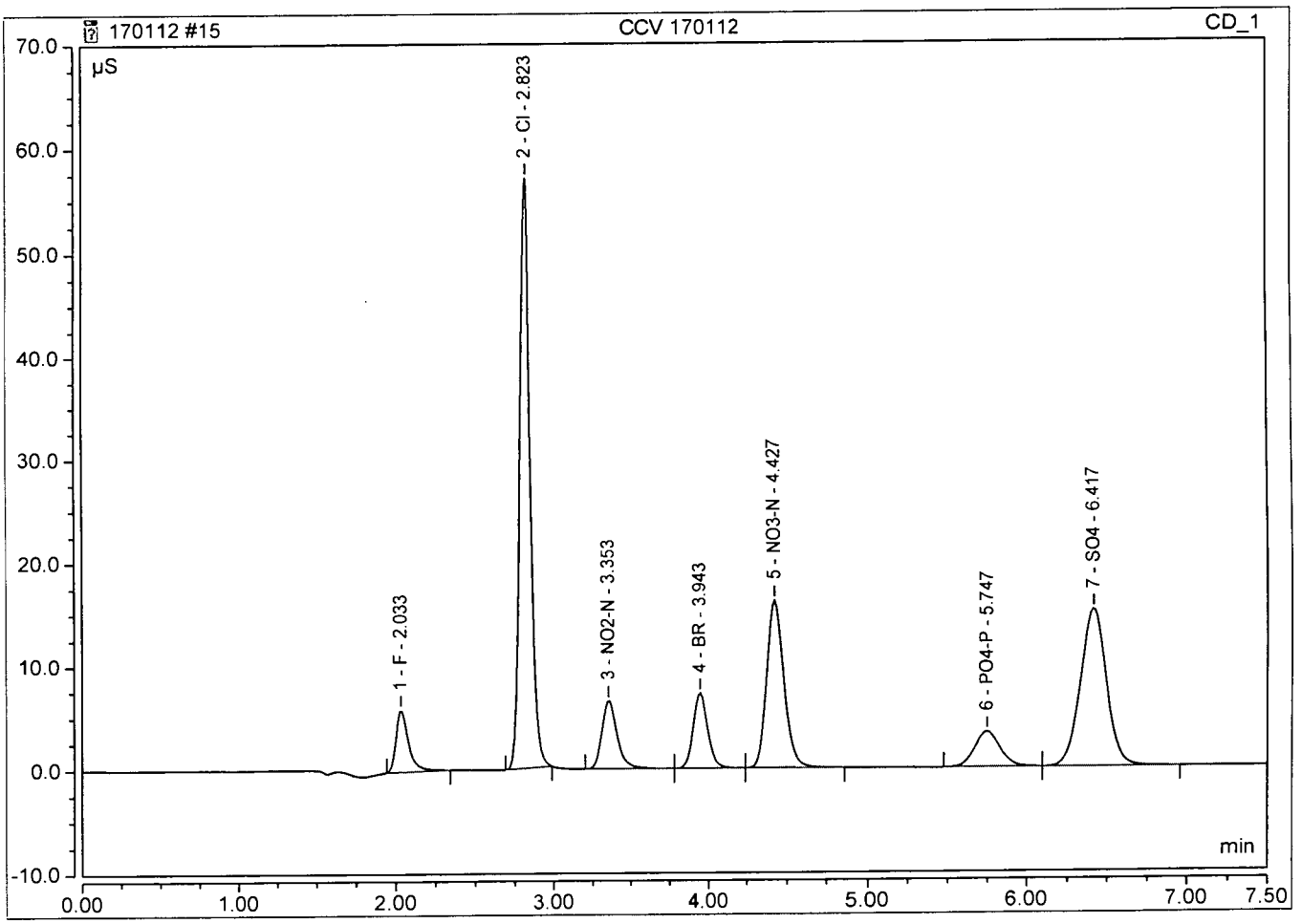
y = Peak Area
X = Amount

y = .1816X - .0943
X = 24.35✓ MM 1/18/17

Peak Integration Report

Sample Name:	**CCV 170112**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Jan-2017 / 17:21**	*Run Time:*	**7.50**

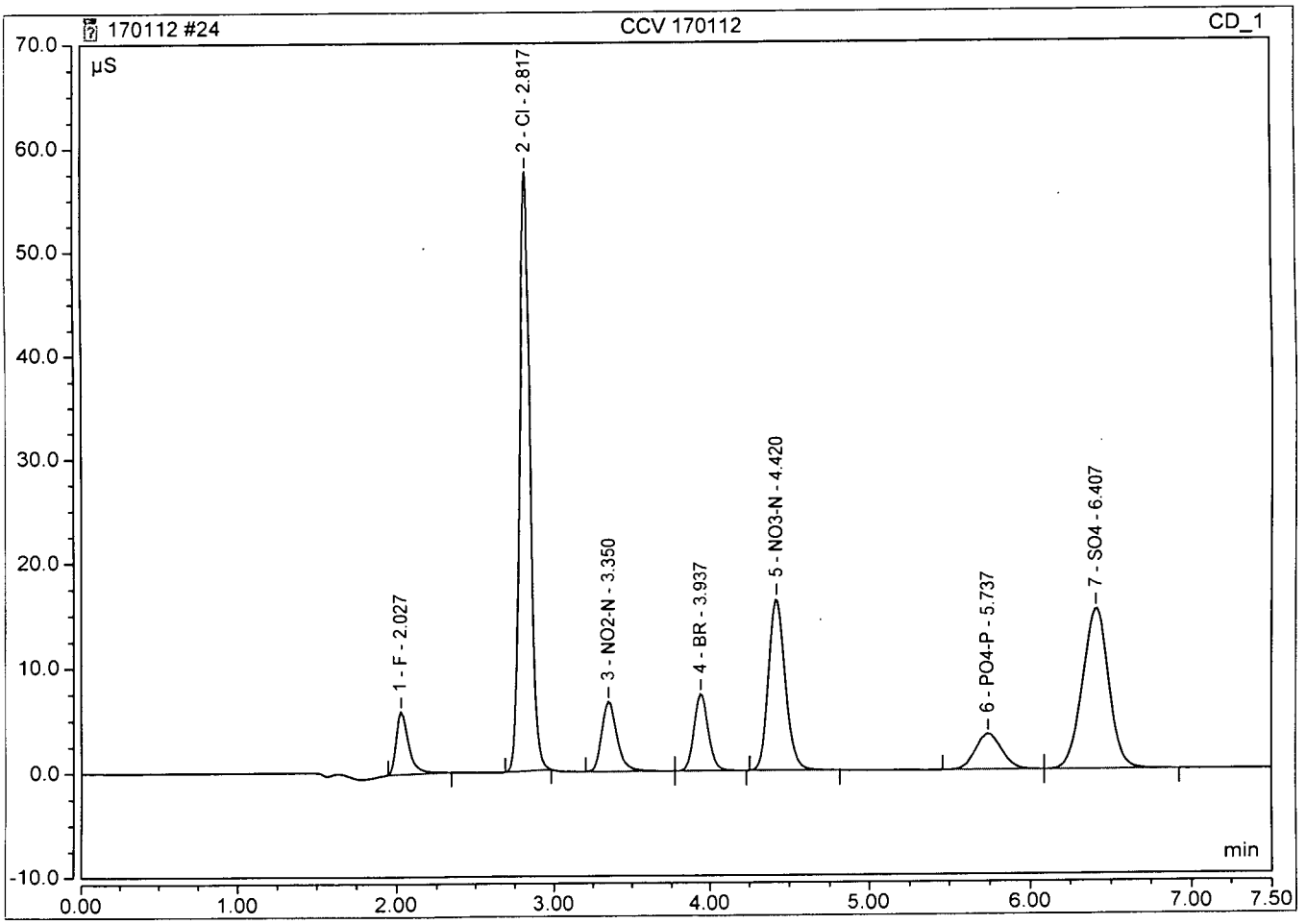
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.03	F	BMB	0.537	5.958	2.4233
2	2.82	Cl	BMB	4.341	56.977	24.4235
3	3.35	NO2-N	BMB	0.751	6.550	2.5137
4	3.94	BR	BMB	0.788	7.234	12.6139
5	4.43	NO3-N	BMB	1.977	16.123	4.8928
6	5.75	PO4-P	BMB	0.631	3.375	5.1266
7	6.42	SO4	BMB	2.852	15.083	23.8450
TOTAL:				11.88	111.30	75.84



Peak Integration Report

Sample Name:	**CCV 170112**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Jan-2017 / 19:23**	*Run Time:*	**7.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.03	F	BMB	0.531	5.943	2.3965
2	2.82	Cl	BMB	4.372	57.597	24.5937
3	3.35	NO2-N	BMB	0.754	6.612	2.5217
4	3.94	BR	BMB	0.790	7.300	12.6486
5	4.42	NO3-N	BMB	1.978	16.259	4.8964
6	5.74	PO4-P	BMB	0.630	3.383	5.1251
7	6.41	SO4	BMB	2.855	15.153	23.8691
TOTAL:				11.91	112.25	76.05



A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 81965 SDG: 81965

Preparation Blank Matrix (soil/water): water

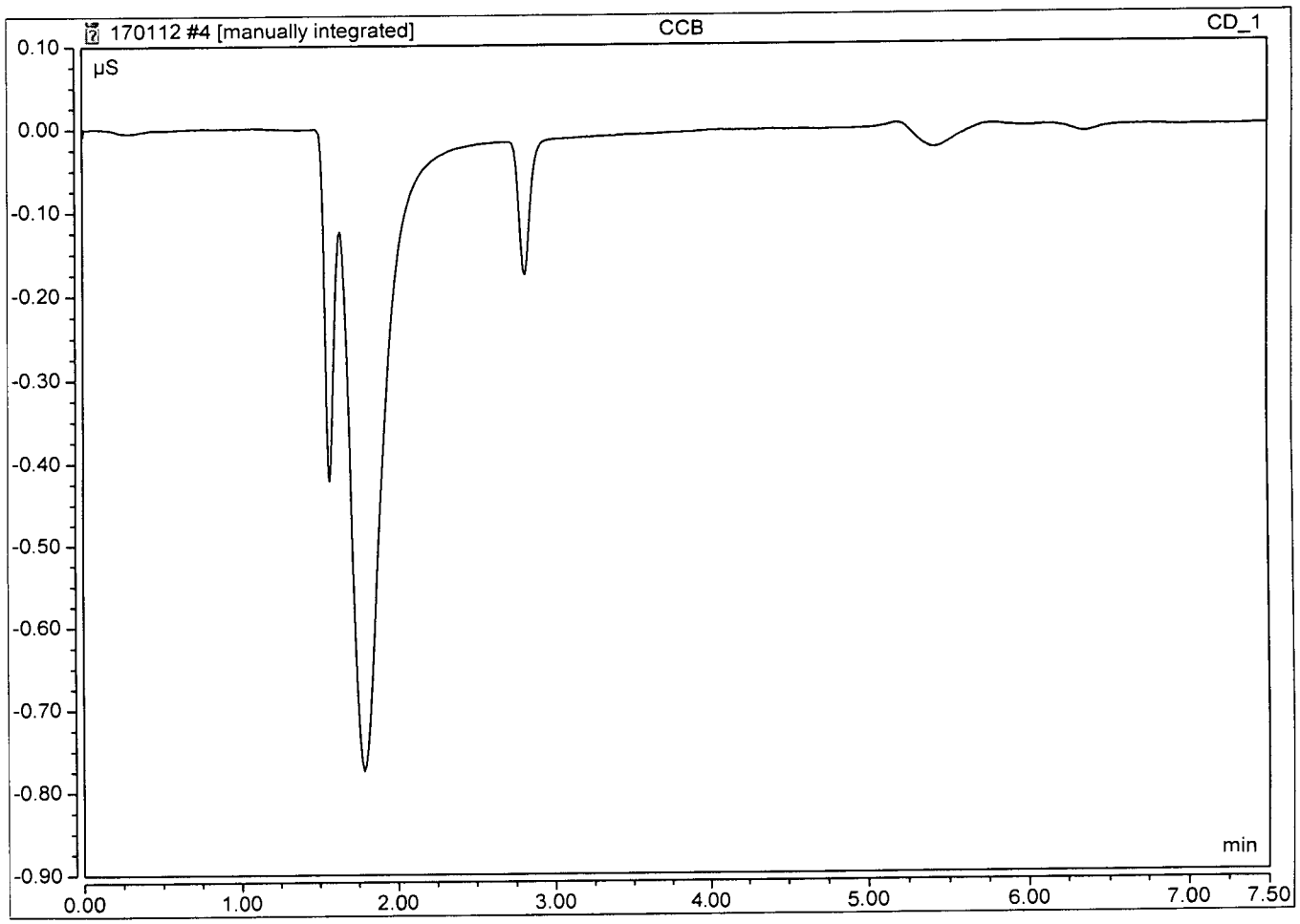
Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	CCB 01/12/17 13:21	C	CCB 01/12/17 17:35	C	CCB 01/12/17 19:36	C		C		C	
chloride	1.000	U	1.000	U	1.000	U					
Nitrate(NO3)	.500	U	.500	U	.500	U					
sulfate	1.000	U	1.000	U	1.000	U					

Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Jan-2017 / 13:21**	*Run Time:*	**7.50**

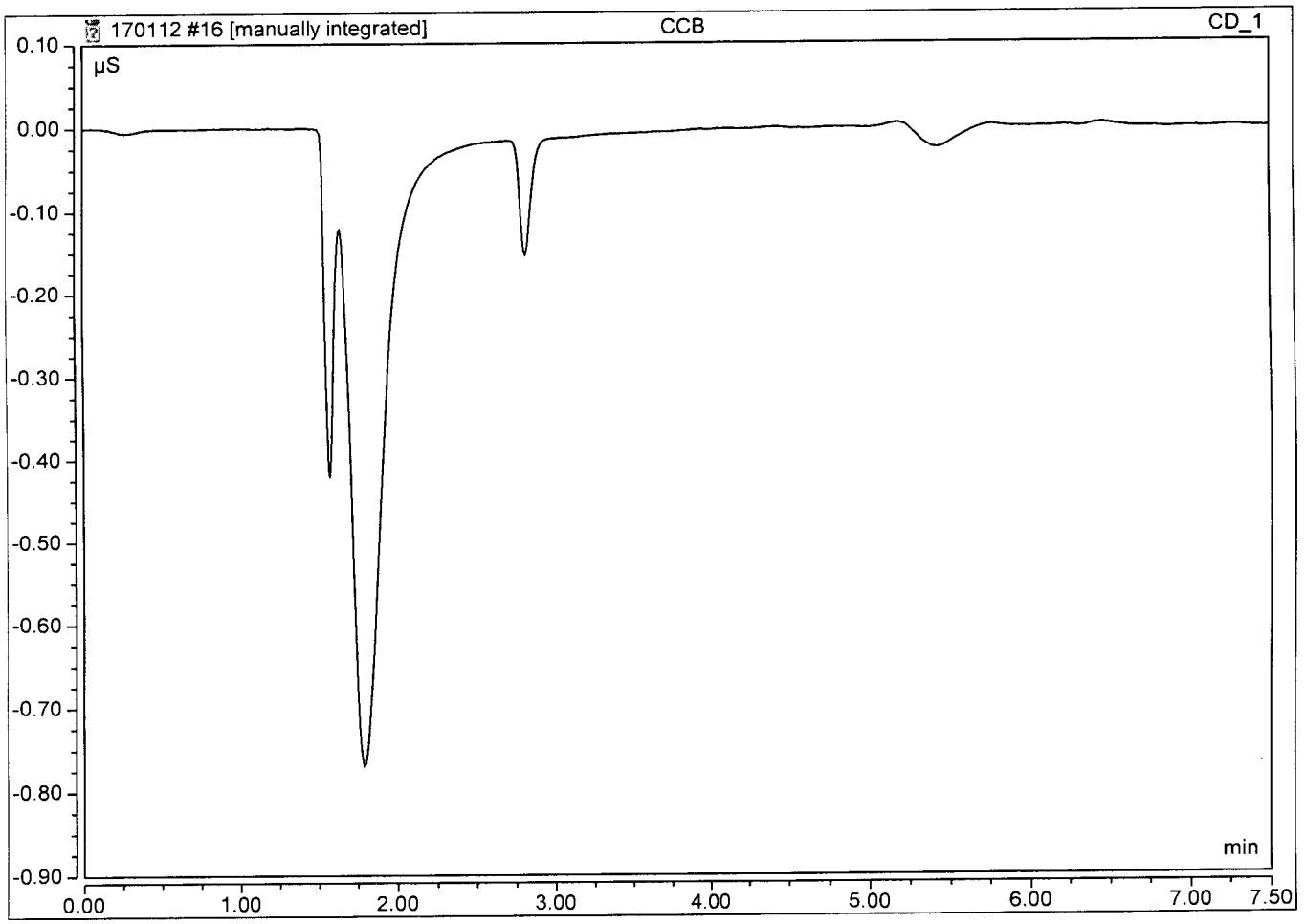
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
TOTAL:				0.00	0.00	0.00



Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Jan-2017 / 17:35**	*Run Time:*	**7.50**

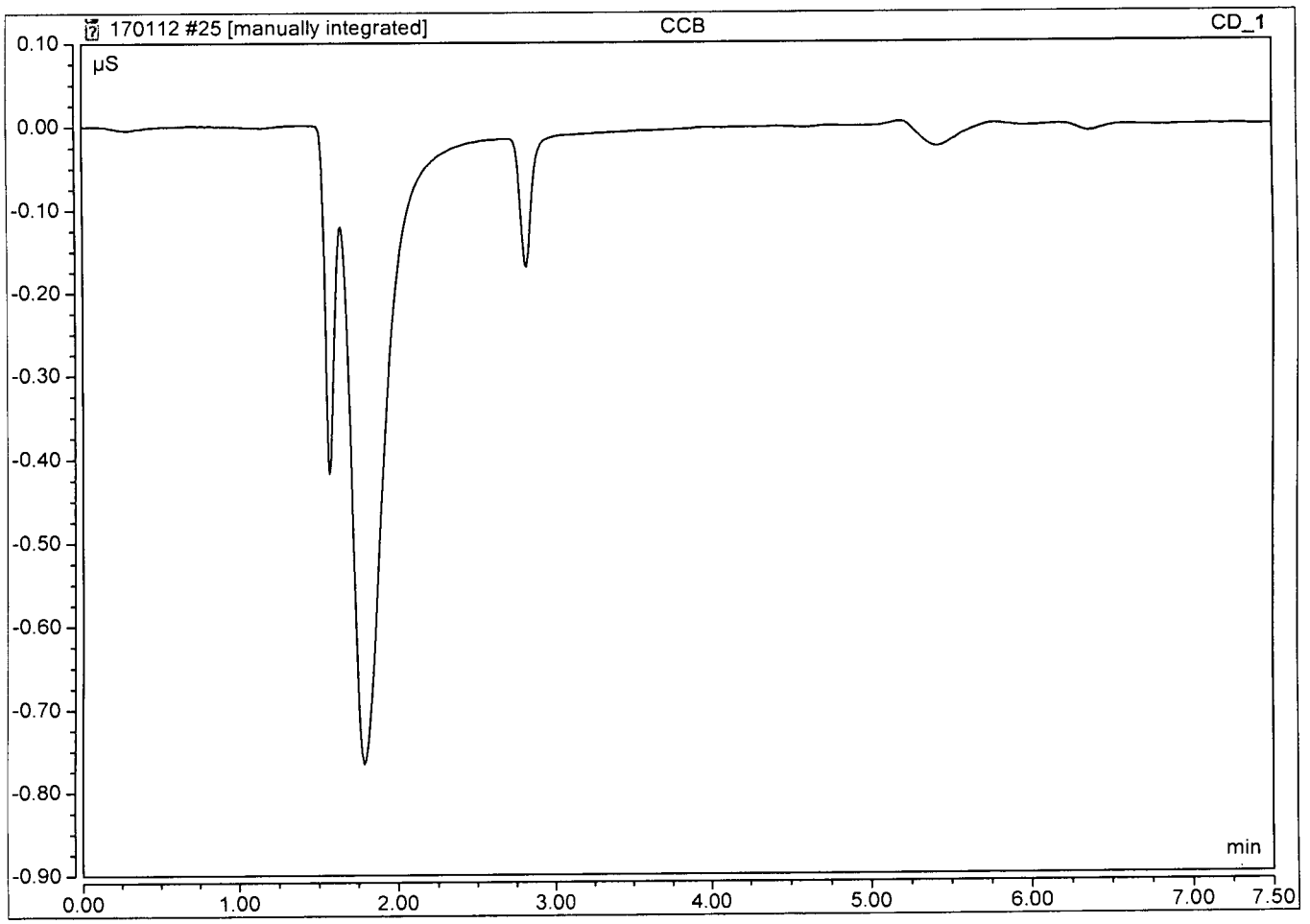
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
TOTAL:				0.00	0.00	0.00



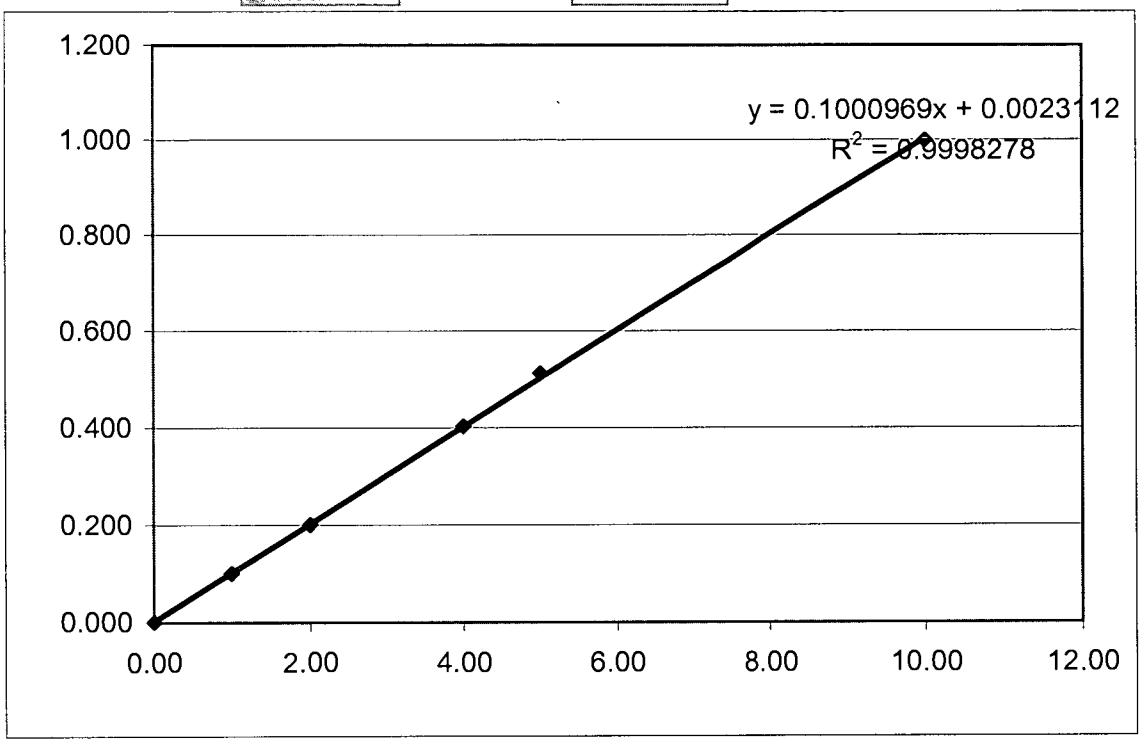
Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Jan-2017 / 19:36**	*Run Time:*	**7.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
		TOTAL:		0.00	0.00	0.00



Ferrous Iron **170112A**



X	Y
0.00	0.000
1.00	0.101
2.00	0.201
4.00	0.403
5.00	0.512
10.00	0.999

Algorithm Check

reading (y)= 0.394 01/12/17 16:19

dilution= 1

result (x)= 3.91 ✓

mm 1/18/17

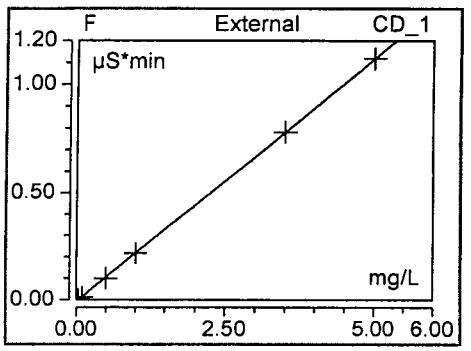
Calibration Batch Report

Sequence:	**161020**	*Injection Volume:*	**25.00**
Instrument Method:	**Program 1**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:24**	*Run Time:*	**7**

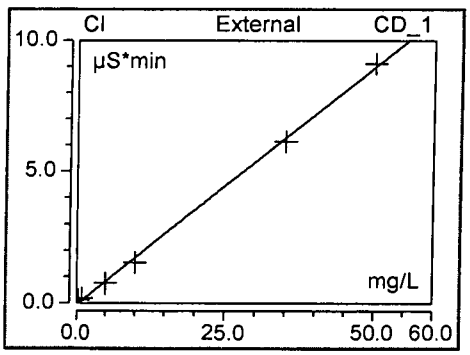
Calibration Summary

Peak Name	Eval.Type	Cal.Type	Points	Offset (C0)	Slope (C1)	Curve (C2)	Coeff.Det. %
F	Area	WithOffset,	6.000	-0.009	0.225	0.000	99.9840
Cl	Area	in, WithOffse	6.000	-0.094	0.182	0.000	99.8613
NO2-N	Area	in, WithOffse	6.000	-0.007	0.301	0.000	99.9917
BR	Area	in, WithOffse	6.000	-0.008	0.063	0.000	99.9802
NO3-N	Area	in, WithOffse	6.000	-0.039	0.412	0.000	99.9329
PO4-P	Area	in, WithOffse	6.000	-0.008	0.125	0.000	99.9563
SO4	Area	in, WithOffse	6.000	-0.060	0.122	0.000	99.9400
		AVERAGE:		-0.0322	0.2043	0.0000	99.9495

Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	F	F	F	F
ICAL 1 10/20/16	2.123	0.0012	0.022	0.044
ICAL 2 10/20/16	2.107	0.0123	0.139	0.093
ICAL 3 10/20/16	2.100	0.1000	0.922	0.483
ICAL 4 10/20/16	2.104	0.2174	1.958	1.004
ICAL 5 10/20/16	2.097	0.7826	6.953	3.513
ICAL 6 10/20/16	2.103	1.1183	9.996	5.004
Average	2.106			
Rel. Std. Dev.	0.443 %			

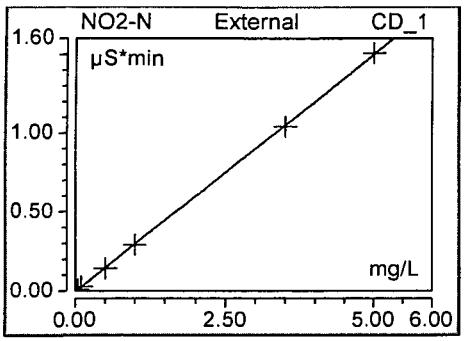


Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	Cl	Cl	Cl	Cl
ICAL 1 10/20/16	2.793	0.1132	1.052	1.143
ICAL 2 10/20/16	2.790	0.1861	1.743	1.544
ICAL 3 10/20/16	2.790	0.7617	7.117	4.714
ICAL 4 10/20/16	2.797	1.5419	14.708	9.010
ICAL 5 10/20/16	2.793	6.1288	59.398	34.268
ICAL 6 10/20/16	2.803	9.1171	87.978	50.723
Average	2.795			
Rel. Std. Dev.	0.179 %			

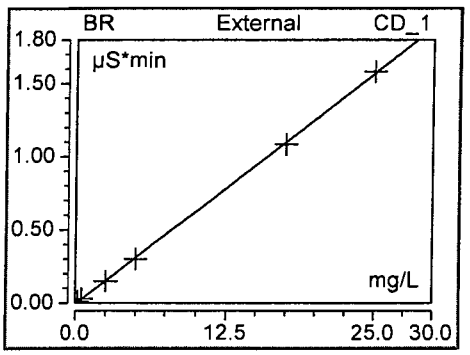


Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

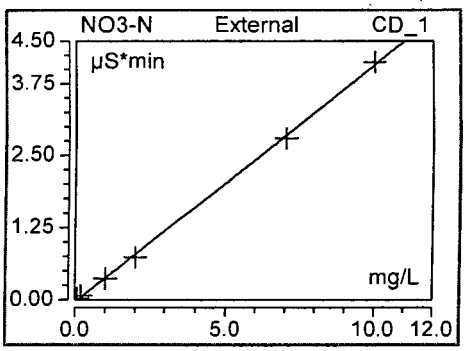
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	NO2-N	NO2-N	NO2-N	NO2-N
ICAL 1 10/20/16	3.250	0.0095	0.073	0.053
ICAL 2 10/20/16	3.247	0.0276	0.209	0.113
ICAL 3 10/20/16	3.250	0.1420	1.072	0.493
ICAL 4 10/20/16	3.254	0.2907	2.188	0.986
ICAL 5 10/20/16	3.250	1.0405	7.775	3.473
ICAL 6 10/20/16	3.257	1.5072	11.205	5.022
Average	3.251			
Rel. Std. Dev.	0.106 %			



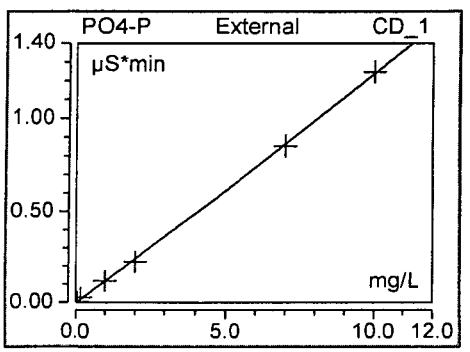
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	BR	BR	BR	BR
ICAL 1 10/20/16	3.757	0.0109	0.087	0.299
ICAL 2 10/20/16	3.753	0.0293	0.232	0.589
ICAL 3 10/20/16	3.750	0.1485	1.179	2.478
ICAL 4 10/20/16	3.754	0.2993	2.389	4.870
ICAL 5 10/20/16	3.743	1.0832	8.801	17.295
ICAL 6 10/20/16	3.747	1.5800	13.023	25.169
Average	3.751			
Rel. Std. Dev.	0.131 %			



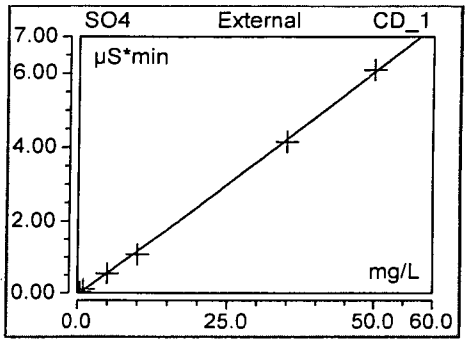
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	NO3-N	NO3-N	NO3-N	NO3-N
ICAL 1 10/20/16	4.143	0.0290	0.196	0.166
ICAL 2 10/20/16	4.140	0.0717	0.496	0.270
ICAL 3 10/20/16	4.137	0.3656	2.533	0.983
ICAL 4 10/20/16	4.140	0.7330	5.168	1.875
ICAL 5 10/20/16	4.123	2.7923	20.144	6.873
ICAL 6 10/20/16	4.123	4.1278	30.098	10.114
Average	4.135			
Rel. Std. Dev.	0.215 %			



Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	PO4-P	PO4-P	PO4-P	PO4-P
ICAL 1 10/20/16	5.540	0.0032	0.021	0.092
ICAL 2 10/20/16	5.540	0.0284	0.107	0.295
ICAL 3 10/20/16	5.537	0.1191	0.557	1.022
ICAL 4 10/20/16	5.537	0.2251	1.103	1.873
ICAL 5 10/20/16	5.520	0.8544	4.243	6.922
ICAL 6 10/20/16	5.523	1.2473	6.244	10.075
Average	5.533			
Rel. Std. Dev.	0.160 %			



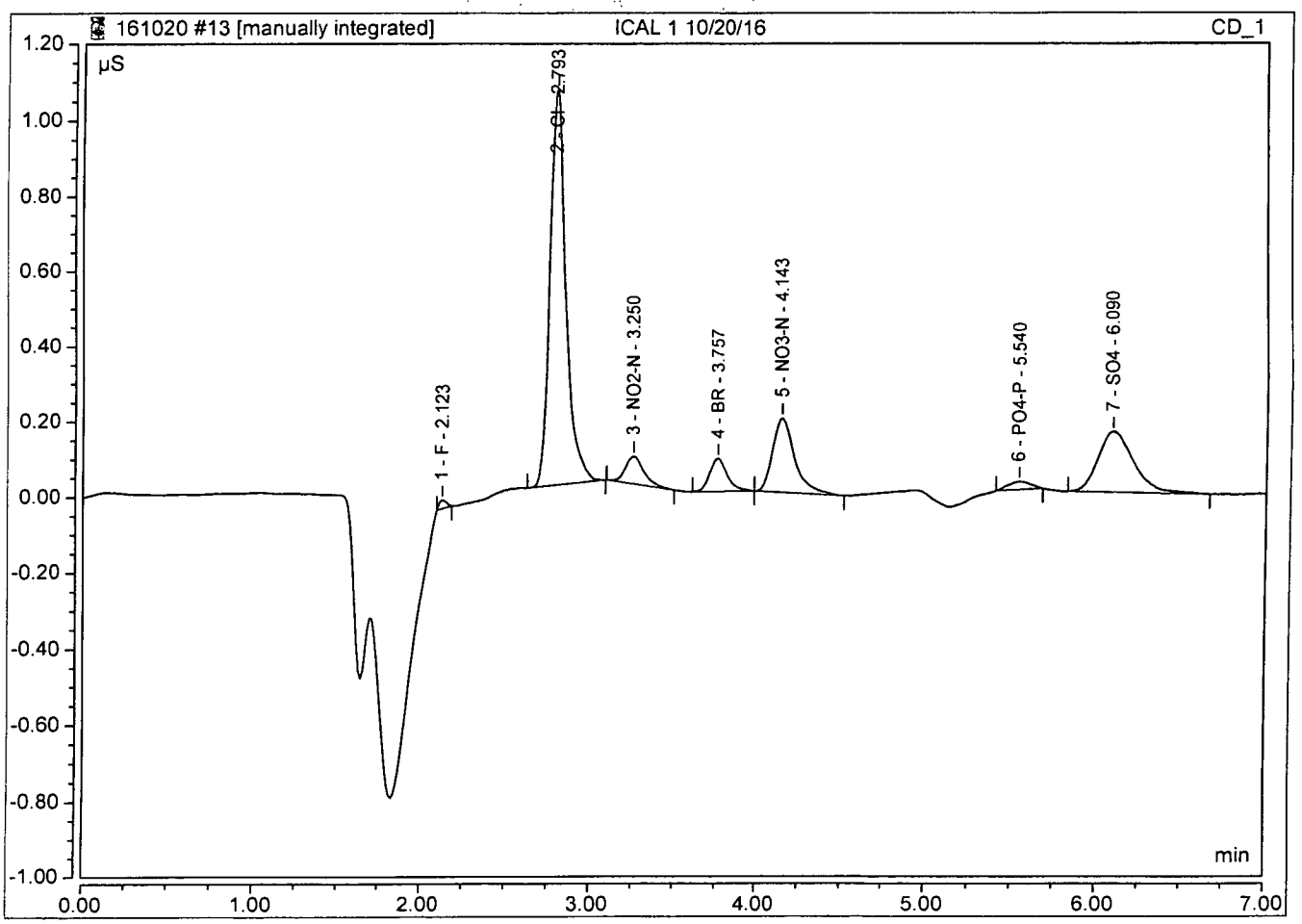
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	SO4	SO4	SO4	SO4
ICAL 1 10/20/16	6.090	0.0385	0.159	0.808
ICAL 2 10/20/16	6.093	0.1046	0.455	1.350
ICAL 3 10/20/16	6.097	0.5456	2.464	4.961
ICAL 4 10/20/16	6.100	1.0756	4.975	9.302
ICAL 5 10/20/16	6.097	4.1512	19.714	34.487
ICAL 6 10/20/16	6.110	6.1057	29.270	50.492
Average	6.098			
Rel. Std. Dev.	0.113 %			



Peak Integration Report

Sample Name:	**ICAL 1 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:19**	*Run Time:*	**7.00**

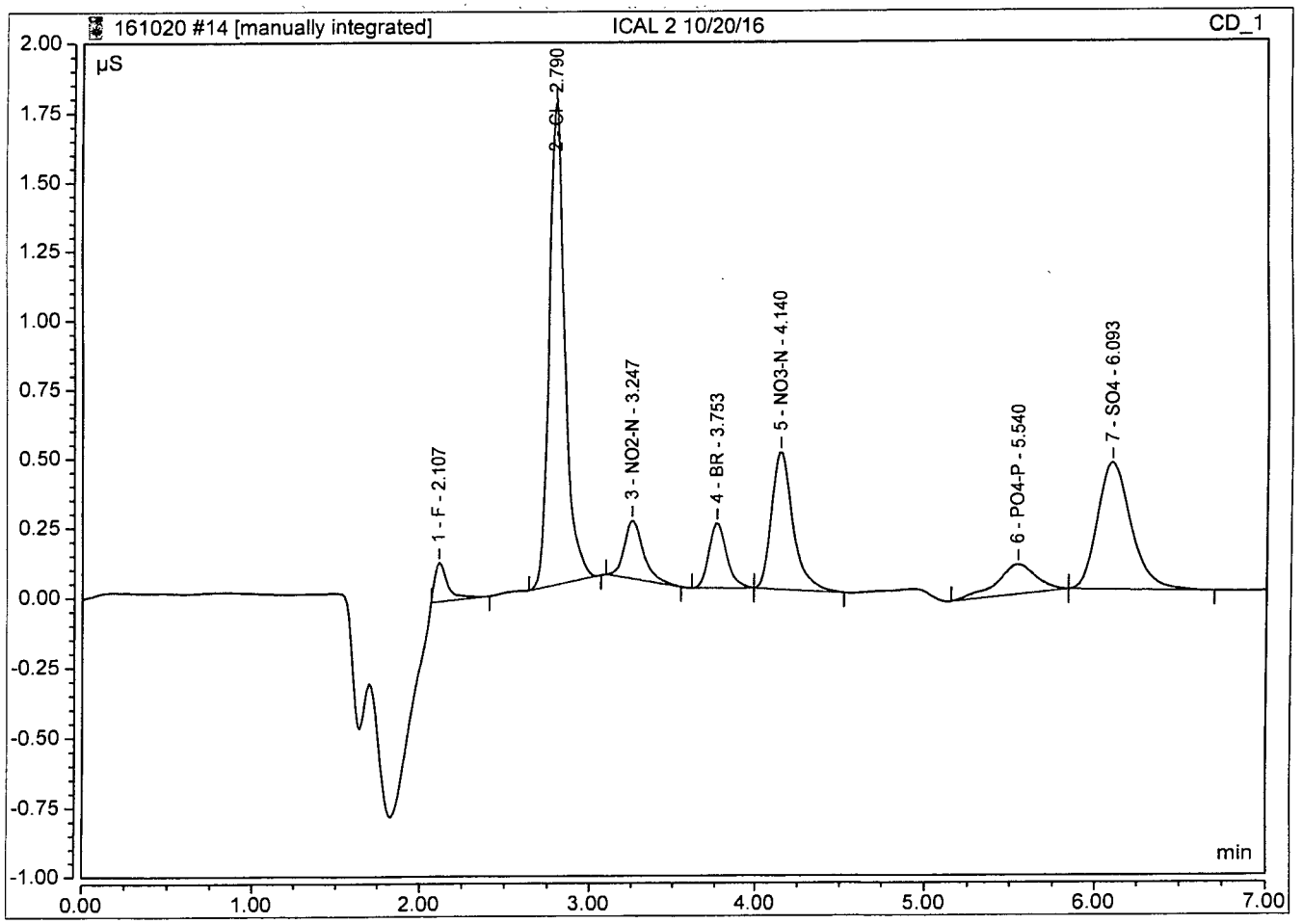
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.12	F	BMB*	0.001	0.022	0.0438
2	2.79	Cl	BMB	0.113	1.052	1.1427
3	3.25	NO2-N	BMB	0.009	0.073	0.0531
4	3.76	BR	BMB	0.011	0.087	0.2985
5	4.14	NO3-N	BMB	0.029	0.196	0.1660
6	5.54	PO4-P	BMB*	0.003	0.021	0.0923
7	6.09	SO4	BMB	0.038	0.159	0.8084
TOTAL:				0.21	1.61	2.60



Peak Integration Report

Sample Name:	**ICAL 2 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:32**	*Run Time:*	**7.00**

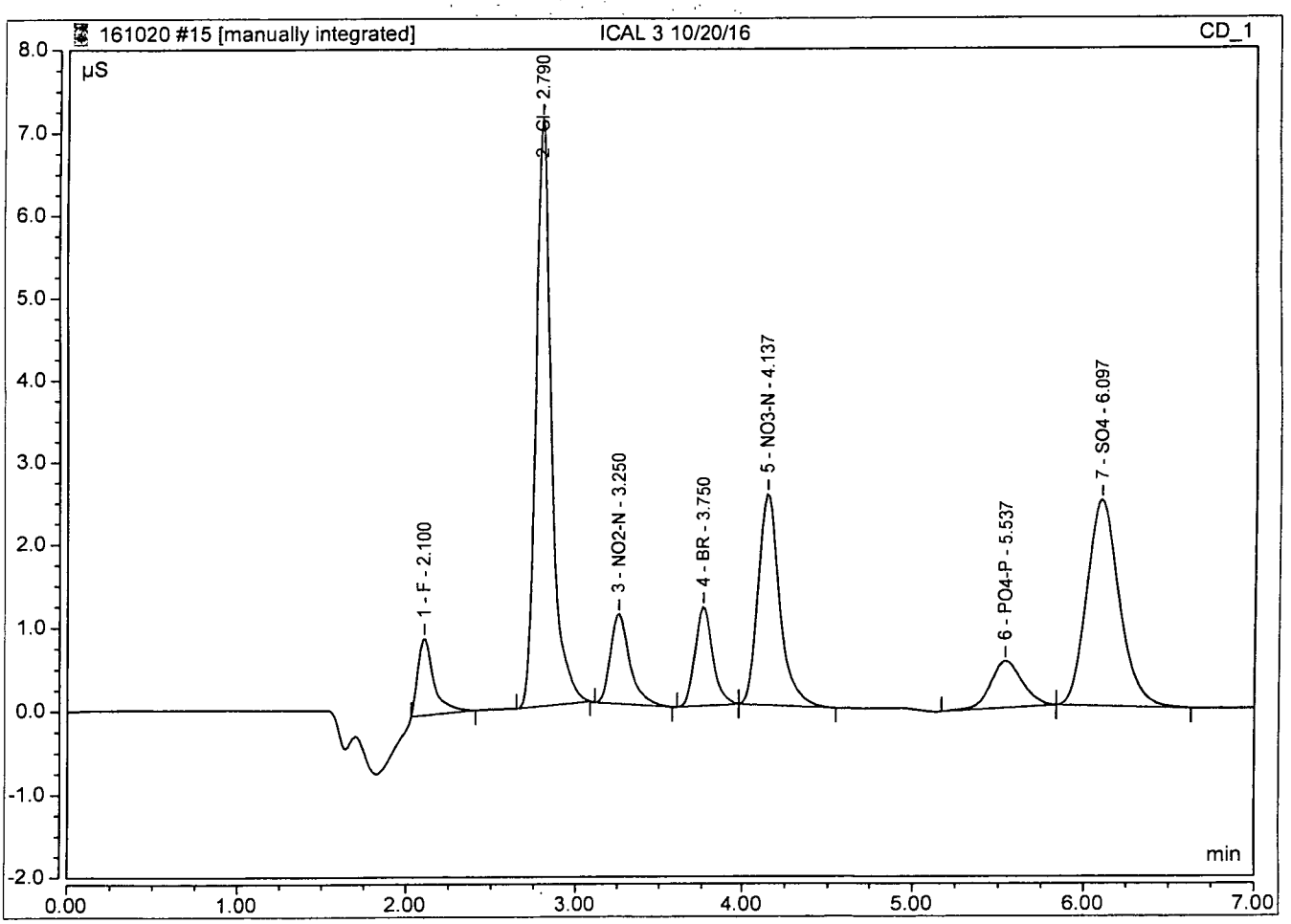
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.11	F	BMB*	0.012	0.139	0.0933
2	2.79	Cl	BMB	0.186	1.743	1.5439
3	3.25	NO2-N	BMB	0.028	0.209	0.1132
4	3.75	BR	BMB	0.029	0.232	0.5894
5	4.14	NO3-N	BMB	0.072	0.496	0.2699
6	5.54	PO4-P	BMB	0.028	0.107	0.2946
7	6.09	SO4	BMB	0.105	0.455	1.3496
TOTAL:				0.46	3.38	4.25



Peak Integration Report

Sample Name:	**ICAL 3 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:45**	*Run Time:*	**7.00**

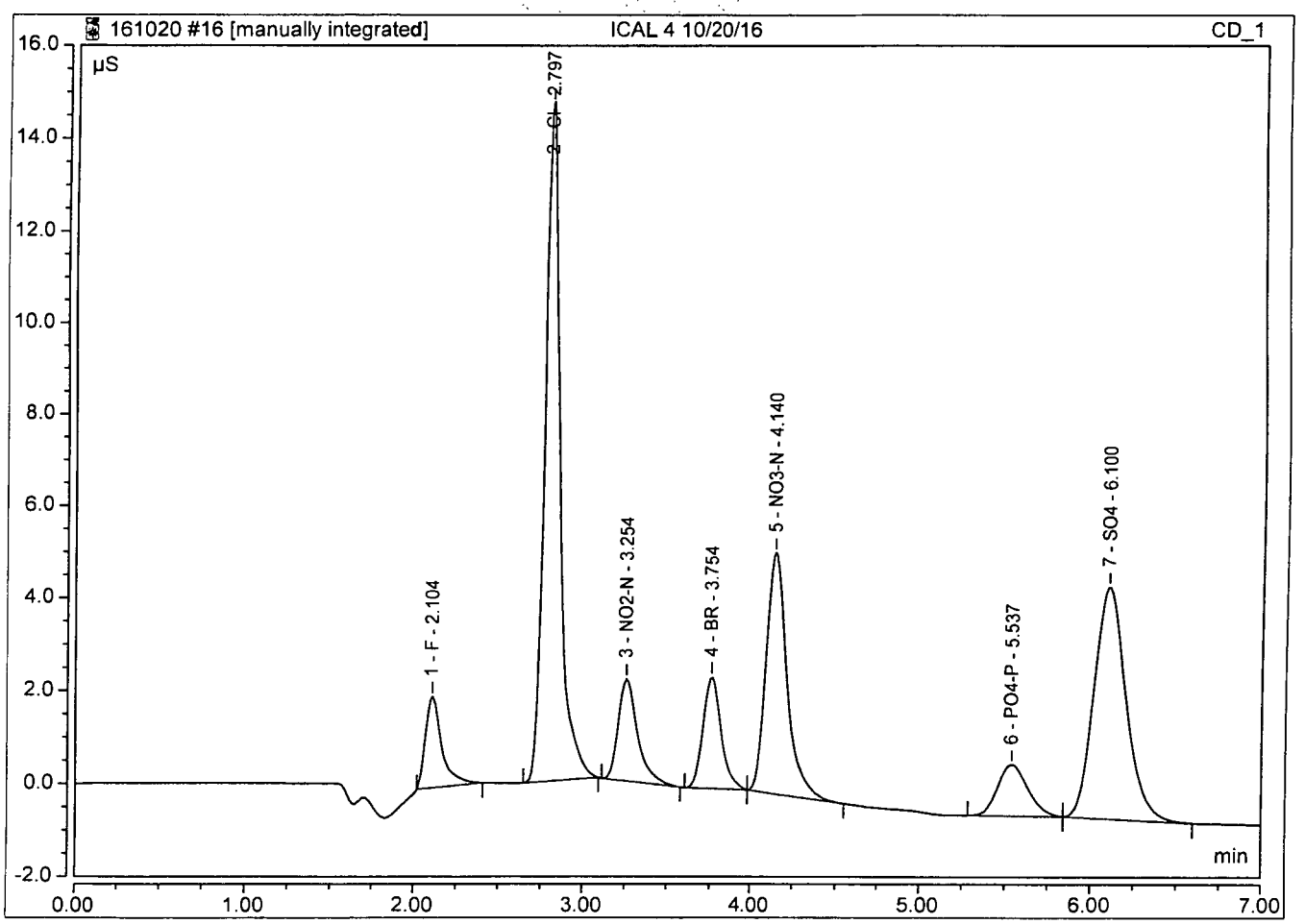
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB*	0.100	0.922	0.4827
2	2.79	Cl	BMB	0.762	7.117	4.7137
3	3.25	NO2-N	BMB	0.142	1.072	0.4926
4	3.75	BR	BMB	0.148	1.179	2.4784
5	4.14	NO3-N	BMB	0.366	2.533	0.9830
6	5.54	PO4-P	BMB	0.119	0.557	1.0221
7	6.10	SO4	BMB	0.546	2.464	4.9609
TOTAL:				2.18	15.84	15.13



Peak Integration Report

Sample Name:	**ICAL 4 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:58**	*Run Time:*	**7.00**

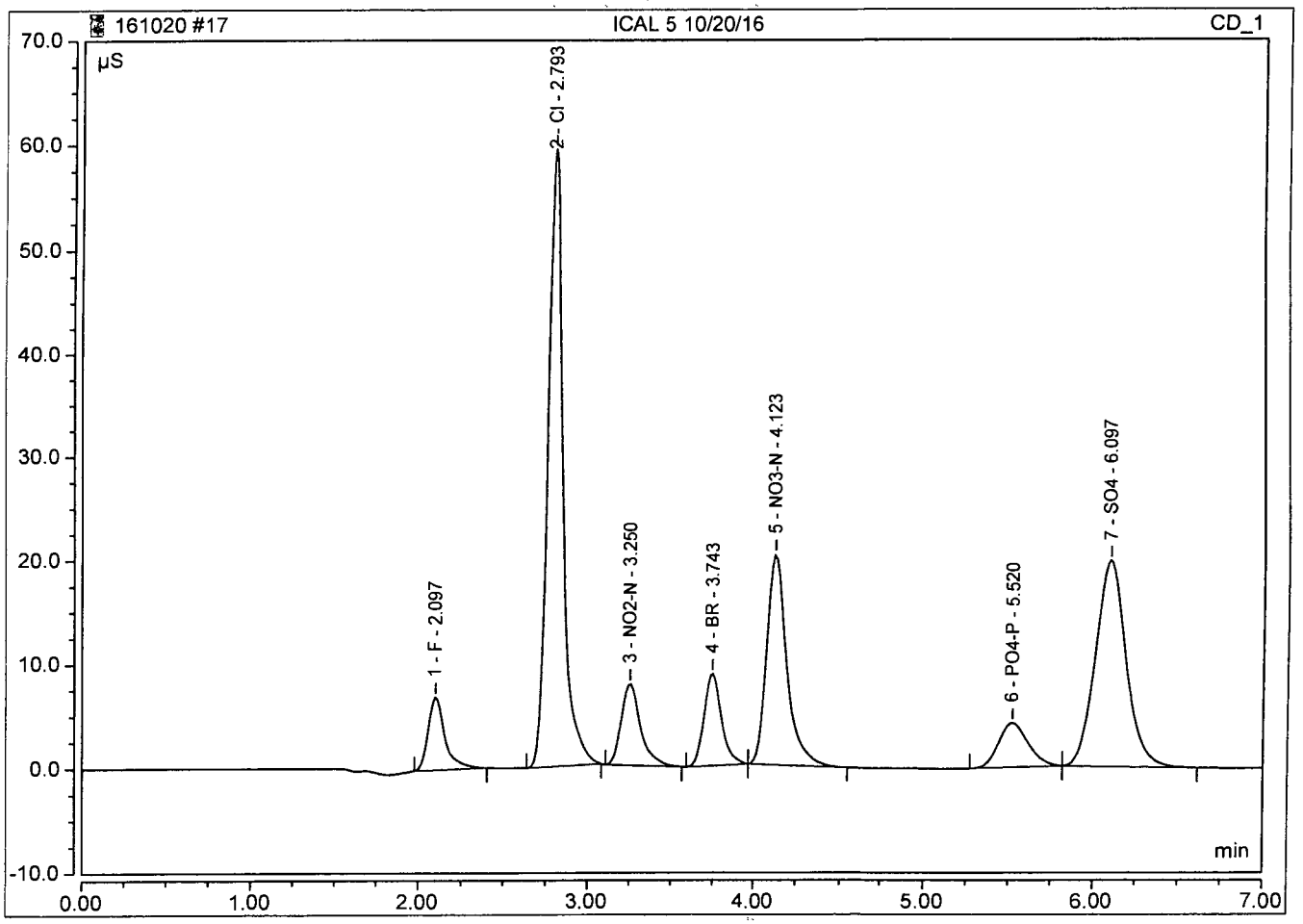
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB*	0.217	1.958	1.0036
2	2.80	Cl	BMB	1.542	14.708	9.0096
3	3.25	NO2-N	BMB	0.291	2.188	0.9859
4	3.75	BR	BMB	0.299	2.389	4.8695
5	4.14	NO3-N	BMB	0.733	5.168	1.8746
6	5.54	PO4-P	BMB	0.225	1.103	1.8731
7	6.10	SO4	BMB	1.076	4.975	9.3015
TOTAL:				4.38	32.49	28.92



Peak Integration Report

Sample Name:	**ICAL 5 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:11**	*Run Time:*	**7.00**

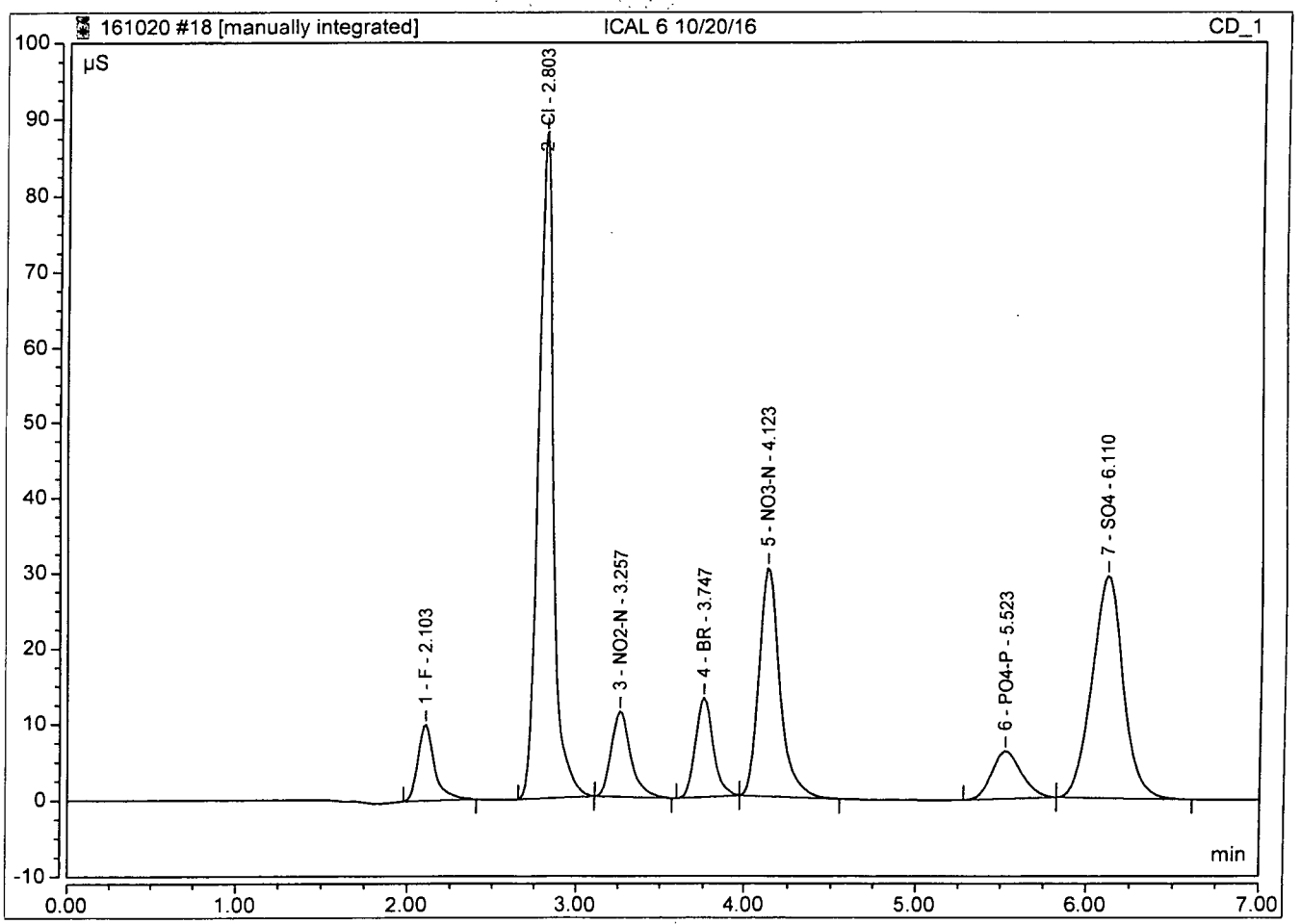
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB	0.783	6.953	3.5131
2	2.79	Cl	BMB	6.129	59.398	34.2675
3	3.25	NO2-N	BMB	1.040	7.775	3.4734
4	3.74	BR	BMB	1.083	8.801	17.2948
5	4.12	NO3-N	BMB	2.792	20.144	6.8727
6	5.52	PO4-P	BMB	0.854	4.243	6.9225
7	6.10	SO4	BMB	4.151	19.714	34.4871
TOTAL:				16.83	127.03	106.83



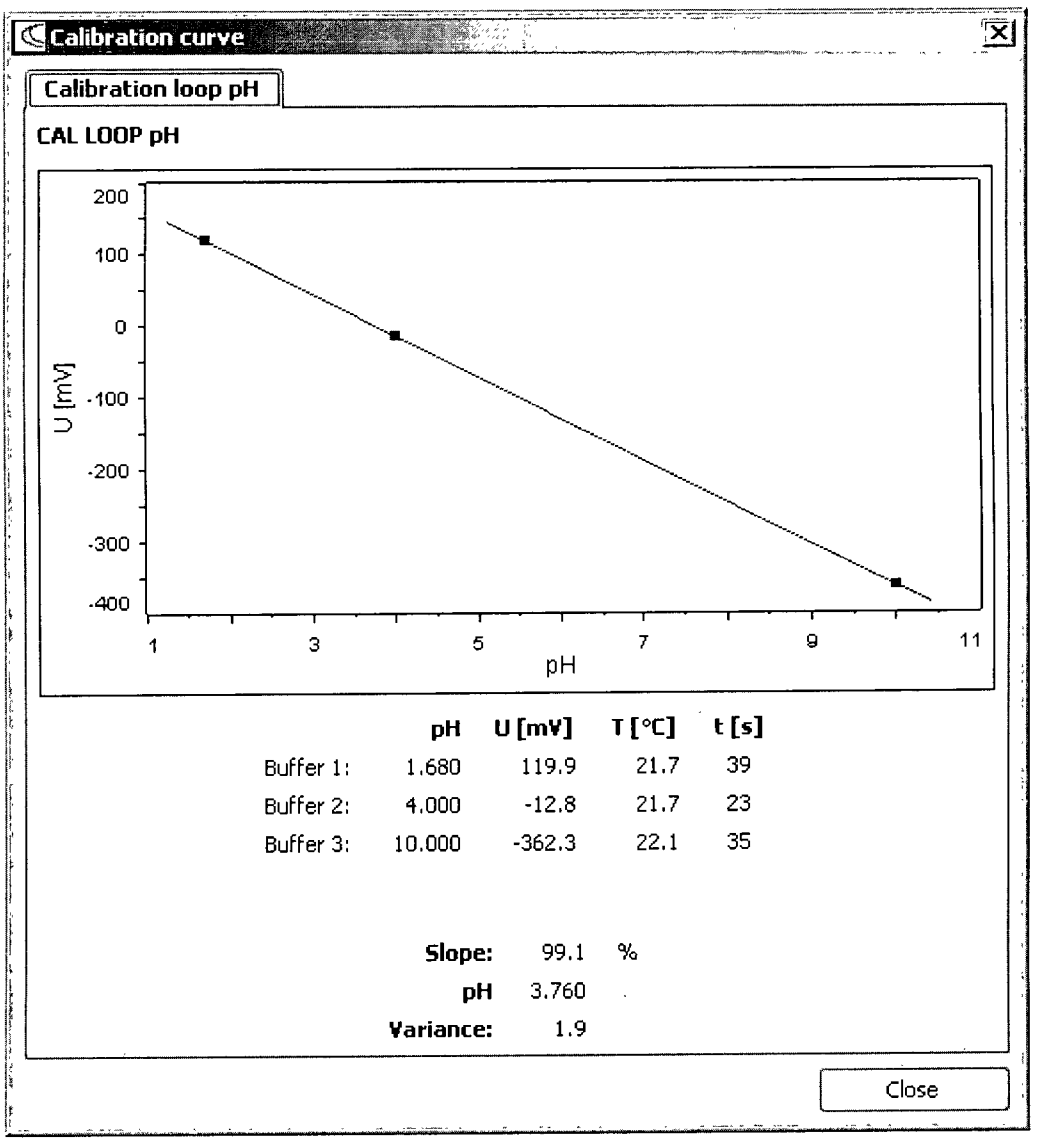
Peak Integration Report

Sample Name:	**ICAL 6 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:24**	*Run Time:*	**7.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB	1.118	9.996	5.0036
2	2.80	Cl	BMB*	9.117	87.978	50.7226
3	3.26	NO2-N	BMB	1.507	11.205	5.0218
4	3.75	BR	BMB	1.580	13.023	25.1693
5	4.12	NO3-N	BMB	4.128	30.098	10.1138
6	5.52	PO4-P	BMB	1.247	6.244	10.0755
7	6.11	SO4	BMB	6.106	29.270	50.4924
TOTAL:				24.80	187.81	156.60



Tiamo Calibration Curve
01/16/17



INORGANIC ANALYSIS
Raw Data

APPL, INC.

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
SM 2320B	BICARBONATE AS	1.6 J	2.0	1.70	0.85	mg/L	01/16/17	01/16/17	#232W-170116A-AZ48866
SM 2320B	CARBONATE AS CA	1.70 U	2.0	1.70	0.85	mg/L	01/16/17	01/16/17	#232W-170116A-AZ48866
SM 2320B	TOTAL ALKALINITY	1.6 J	2.0	1.70	0.85	mg/L	01/16/17	01/16/17	#232W-170116A-AZ48866
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	01/12/17	01/12/17	#300W-170112A-AZ48875
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	01/12/17	01/12/17	#300W-170112A-AZ48875
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	01/12/17	01/12/17	#300W-170112A-AZ48875
SM3500Fe	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	01/12/17	01/12/17	#35FE-170112A-AZ48878

Wetlab SC-Blank-REG MDLs
Printed: 01/17/17 4:21:28 PM

Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
SM3500Fe	FERROUS IRON	4.00	3.91	97.8	80-120	01/12/17	01/12/17	#35FE-170112A-AZ48878

Comments: _____

Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

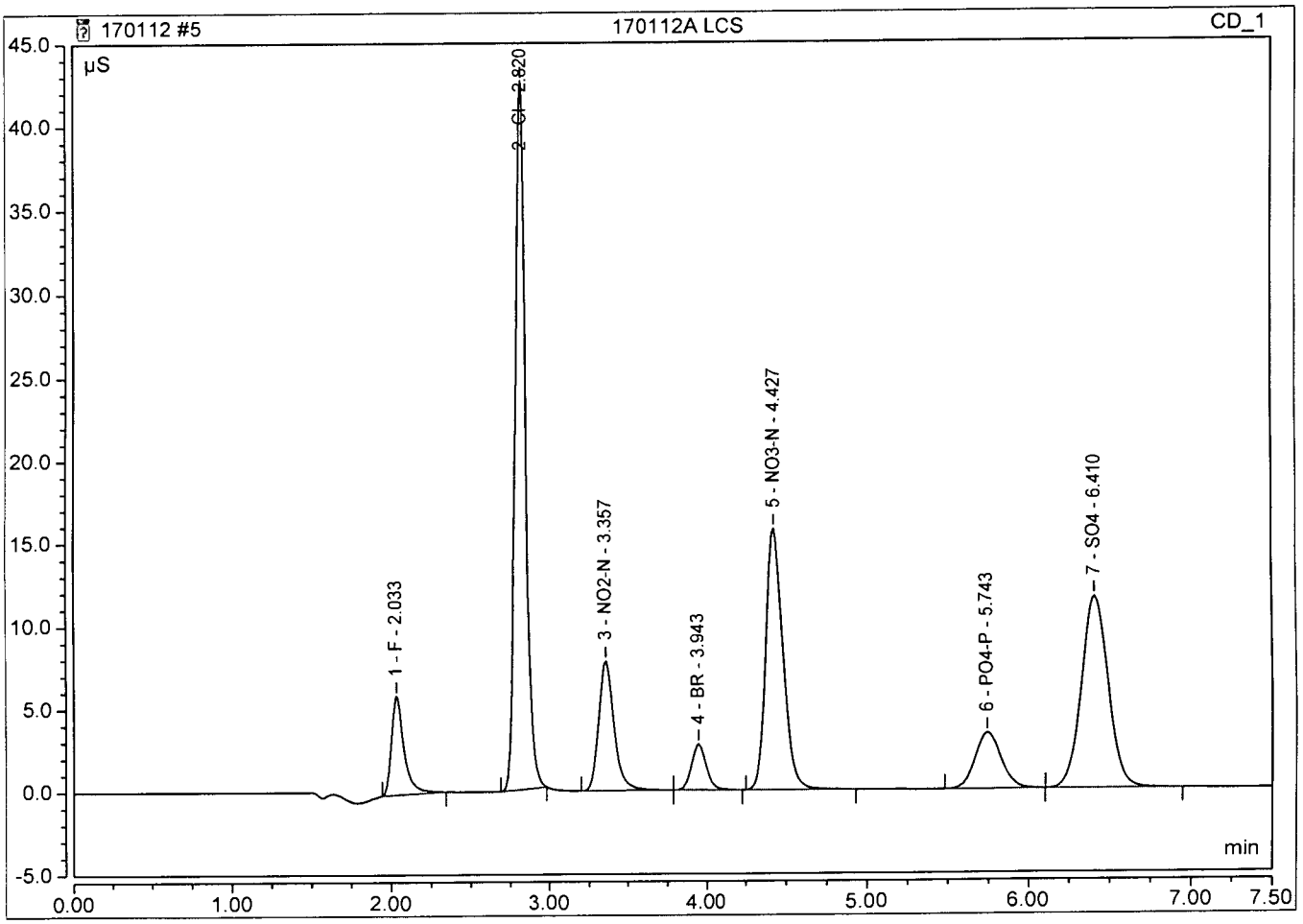
Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	20.0	18.4	92.0	90-110	01/12/17	01/12/17	#300W-170112A-AZ48875
EPA 300.0	NITRATE	22.1	21.1	95.5	90-110	01/12/17	01/12/17	#300W-170112A-AZ48875
EPA 300.0	SULFATE	20.0	18.5	92.5	90-110	01/12/17	01/12/17	#300W-170112A-AZ48875

Comments: _____

Peak Integration Report

Sample Name:	**170112A LCS**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Jan-2017 / 13:34**	*Run Time:*	**7.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.03	F	BMB	0.540	5.937	2.4342
2	2.82	Cl	BMB	3.248	42.569	18.4028
3	3.36	NO2-N	BMB	0.902	7.824	3.0129
4	3.94	BR	BMB	0.305	2.764	4.9630
5	4.43	NO3-N	BMB	1.925	15.692	4.7671
6	5.74	PO4-P	BMB	0.631	3.377	5.1336
7	6.41	SO4	BMB	2.193	11.541	18.4523
TOTAL:				9.74	89.70	57.17



Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
SM 2320B	BICARBONATE AS CACO3	250	248	99.2	90-110	01/16/17	01/16/17	#232W-170116A-AZ48866
SM 2320B	TOTAL ALKALINITY AS CACO3	250	248	99.2	90-110	01/16/17	01/16/17	#232W-170116A-AZ48866

Comments: _____

Matrix Spike Recoveries

WETLAB

APPL ID: **170116W-48866 MS - 215511**

Sample ID: AZ48866

Client ID: ERH161

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	Matrix Res mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
SM 2320B	BICARBONATE AS CA	250	62.5	306	310	97.4	99.0	1.3	20	90-110	01/16/17	01/16/17	01/16/17	01/16/17	215511	AZ48866
SM 2320B	TOTAL ALKALINITY AS	250	62.5	306	310	97.4	99.0	1.3	20	90-110	01/16/17	01/16/17	01/16/17	01/16/17	215511	AZ48866

Comments: _____

Matrix Spike Recoveries

WETLAB

APPL ID: **170116W-48872 MS - 215511**

Sample ID: AZ48872

Client ID: ERH169

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	Matrix Res mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
SM 2320B	BICARBONATE AS CA	250	72.4	315	317	97.0	97.8	0.63	20	90-110	01/16/17	01/16/17	01/16/17	01/16/17	215511	AZ48872
SM 2320B	TOTAL ALKALINITY AS	250	72.4	315	317	97.0	97.8	0.63	20	90-110	01/16/17	01/16/17	01/16/17	01/16/17	215511	AZ48872

Comments: _____

SPECTROPHOTOMETRIC ANALYSIS (Ferrous Iron)

Method: SM3500Fe
Analyte: Ferrous Iron
Analyst: MM
Units: mg/L
QCG: 170112A
Notes:
Final Volume: 50mL

Instrument: GENESYS 10UV
Raw Spec: abs. @ 510nm
R-Squared: 0.99983
Reagent (lot#): COLORIZING REAGENT (12/09/16)
BUFFER (12/09/16)

Date	Time	APPL ID	25mL	Raw Result	SubSample Amt	Raw BLK	Calc Conc	Result	QC True	QC%
05/20/16	12:37	0 BB 5/20/16	1	0.000						
05/20/16	12:38	1	1	0.101						
05/20/16	12:39	2	1	0.201						
05/20/16	12:39	4	1	0.403						
05/20/16	12:40	5	1	0.512						
05/20/16	12:40	10	1	0.999						
05/20/16	12:41	160520A ICV 3.0	1	0.304	25mL		3.01	3.01	3.000	100.5%
05/20/16	12:42	160520A ICB	1	0.000	25mL		-0.02	-0.02		
01/12/17	16:17	CCV 4.0 170112	1	0.379	25mL		3.76	3.763	4.000	*94.08*
01/12/17	16:18	CCB 170112	1	0.001	25mL		-0.01	-0.013		
01/12/17	16:19	170112A LCS 4.0	1	0.394	25mL		3.91	3.913	4.000	*97.83*
01/12/17	16:20	170112A LCSD 4.0	1	0.406	25mL		4.03	4.033	4.000	*100.82*
01/12/17	16:21	AZ48866W16	1	0.016	25mL		0.14	0.137		
01/12/17	16:22	AZ48868W08	1	0.004	25mL		0.02	0.017		
01/12/17	16:23	AZ48871W08	1	0.005	25mL		0.03	0.027		
01/12/17	16:24	AZ48872W23	1	0.007	25mL		0.05	0.047		
01/12/17	16:25	AZ48875W08	1	0.307	25mL		3.04	3.044		
01/12/17	16:26	AZ48877W08	1	0.350	25mL		3.47	3.474		
01/12/17	16:27	AZ48878W08	1	0.006	25mL		0.04	0.037		
01/12/17	16:28	AZ48878W08 MS	1	0.405	25mL		4.02	4.023	4.00	*100.57*
01/12/17	16:29	CCV 4.0 170112	1	0.394	25mL		3.91	3.913	4.00	*97.83*
01/12/17	16:30	CCB 170112	1	-0.001	25mL		-0.03	-0.033		

Metrohm 814/809 Titrando Data

Sample ID	Analysis Date/Time	Method	Titration Volume (to 8.3)	Titration Volume (total)	OH	CO3	HCO3	Total Alk	Unit	Sample Vol	N	Batch	Initials
AZ48878W07	2017-01-16 14:00:03 UTC-8	Alkalinity	0.000	2.794	0.00	0.00	120.14	120.14	mg/L	25 mL	0.0215	170116A	AH
AZ48877W07	2017-01-16 13:55:07 UTC-8	Alkalinity	0.000	1.226	0.00	0.00	52.72	52.72	mg/L	25 mL	0.0215	170116A	AH
AZ48875W07	2017-01-16 13:43:38 UTC-8	Alkalinity	0.000	4.910	0.00	0.00	211.13	211.13	mg/L	25 mL	0.0215	170116A	AH
AZ48872W22 MSD	2017-01-16 13:28:37 UTC-8	Alkalinity	0.000	7.374	0.00	0.00	317.08	317.08	mg/L	25 mL	0.0215	170116A	AH
AZ48872W22 MS	2017-01-16 13:13:42 UTC-8	Alkalinity	0.000	7.320	0.00	0.00	314.76	314.76	mg/L	25 mL	0.0215	170116A	AH
AZ48872W22	2017-01-16 13:08:47 UTC-8	Alkalinity	0.000	1.684	0.00	0.00	72.41	72.41	mg/L	25 mL	0.0215	170116A	AH
AZ48871W07	2017-01-16 13:01:35 UTC-8	Alkalinity	0.000	2.646	0.00	0.00	113.78	113.78	mg/L	25 mL	0.0215	170116A	AH
AZ48868W07	2017-01-16 12:55:37 UTC-8	Alkalinity	0.000	2.444	0.00	0.00	105.09	105.09	mg/L	25 mL	0.0215	170116A	AH
AZ48866W15 MSD	2017-01-16 12:41:01 UTC-8	Alkalinity	0.000	7.198	0.00	0.00	309.51	309.51	mg/L	25 mL	0.0215	170116A	AH
AZ48866W15 MS	2017-01-16 12:26:17 UTC-8	Alkalinity	0.000	7.120	0.00	0.00	306.16	306.16	mg/L	25 mL	0.0215	170116A	AH
AZ48866W15	2017-01-16 12:21:24 UTC-8	Alkalinity	0.000	1.454	0.00	0.00	62.52	62.52	mg/L	25 mL	0.0215	170116A	AH
170116A LCS	2017-01-16 12:03:40 UTC-8	Alkalinity	0.000	5.762	0.00	0.00	247.77	247.77	mg/L	25 mL	0.0215	170116A	AH
170116A Blk	2017-01-16 11:35:50 UTC-8	Alkalinity	0.000	0.036	0.00	0.00	1.55	1.55	mg/L	25 mL	0.0215	170116A	AH

Ferrous Iron Standard Prep

Stock Standard Prep:

Prep Date: 5/20/16
Exp Date: 5/20/17
Prep'd By: BB

CCV Stock (200 mg/L): 0.3502 g $Fe(NH_4)2(SO_4)_2*6H_2O$ EMD Lot #2013050298 up to 250 mL with DI

ICV Stock (200 mg/L): 0.3500 g $Fe(NH_4)2(SO_4)_2*6H_2O$ JT Baker Lot #0000068681 up to 250 mL with DI

QC Prep

Prep Date: 01/12/17
Exp Date: 01/13/17
Prep'd By: MM

CCV (4.0 mg/L): 0.500 mL of CCV Stock (prep: 5/20/16) into 25 mL DI then carried through sample prep procedure

LCS (4.0 mg/L): 0.500 mL of ICV Stock (prep: 5/20/16) into 25 mL DI then carried through sample prep procedure

MS/MSD (4.0 mg/L): 0.500 mL of ICV Stock (prep: 5/20/16) into 25 mL sample then carried through sample prep procedure

METHOD 300 / 9056		ANION STOCK					PW 10/20/16
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)	
O2SI	F-	1,000	1085520-36282	07/24/17	0.25	5	
O2SI*	Cl-	5,000	1069557-34558	01/08/17	0.5	50	
O2SI	NO2-N	1,000	1088548-36281	09/26/17	0.25	5	
Ultra Scientific	Br-	1,000	CL-3274-36926	08/31/20	1.25	25	
O2SI	NO3-N	1,000	1078397-35587	01/30/17	0.5	10	
O2SI	PO4-P	1,000	1072004-34911	09/03/16	0.5	10	
Ultra Scientific	SO4	5,000	CP-1469-36296	04/30/18	0.5	50	
Brought up with milipore water to Final Volume of:						50	

METHOD 300 / 9056		ANION ICV / LCS/MS/MSD				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
CPI	F-	1,000	16B115-36204	09/03/17	0.125	2.50
CPI	Cl-	1,000	16E065-36694	12/06/17	1.00	20.00
CPI	NO2-N	304	15J001-36257	09/24/17	0.50	3.04
CPI	Br-	1,000	15L093-36101	07/21/17	0.625	12.50
CPI	NO3-N	1,000	16E022-36783	12/30/17	0.25	5.00
CPI	PO4-P	1,000	15B116-36258	09/24/17	0.25	5.00
CPI	SO4	1,000	16E104-36693	12/06/17	1.00	20.00
Brought up with milipore water to Final Volume of:					50	

METHOD 300 / 9056			ANION CAL CURVE						
				ICAL #1	ICAL#2	ICAL #3	ICAL #4	ICAL #5	ICAL #6
ID#	mg/L	Prep Date	EXP. DATE	mL	mL	mL	mL	mL	mL
ANION STOCK	100	08/19/16	08/21/16	0.4	2	10	2	7	10
Brought up w/ Milipore Water to final volume of (mL):				50	100	100	10	10	na
Final Conc F (mg/L):				0.04	0.1	0.5	1	3.5	5
Final Conc Cl (mg/L):				0.4	1	5	10	35	50
Final Conc NO2-N (mg/L):				0.04	0.1	0.5	1	3.5	5
Final Conc Br (mg/L):				0.2	0.5	2.5	5	17.5	25
Final Conc NO3-N (mg/L):				0.08	0.2	1	2	7	10
Final Conc PO4-P (mg/L):				0.08	0.2	1	2	7	10
Final Conc SO4 (mg/L):				0.4	1	5	10	35	50

170112 PW

		CCV				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
O2SI	F-	1,000	1085520-36282	07/24/17	0.125	2.50
O2SI	Cl-	5,000	1069557-34558	01/08/17	0.25	25.0
O2SI	NO2-N	1,000	1088548-36281	09/26/17	0.125	2.5
Ultra Scientific	Br-	1,000	CL-3274-36926	08/31/20	0.625	12.50
O2SI	NO3-N	1,000	1078397-35587	01/30/17	0.25	5.0
O2SI	PO4-P	1,000	1072004-34911	09/03/16	0.25	5.0
Ultra Scientific	SO4	5,000	CP-1469-36296	04/30/18	0.25	25.0
Brought up with milipore water to Final Volume of:					50	

METHOD 300 / 9056		ICV LCS MS				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
CPI	F-	1,000	16B115-36204	09/03/17	0.125	2.50
CPI	Cl-	1,000	16E065-37395	06/27/18	1.00	20.00
CPI	NO2-N	304	15C058-35411	09/24/17	0.50	3.04
CPI	Br-	1,000	15L093-36101	07/21/17	0.63	12.50
CPI	NO3-N	1,000	16E022-36783	12/30/17	0.250	5.00
CPI	PO4-P	1,000	15B116-36258	09/24/17	0.25	5.00
CPI	SO4	1,000	16E104-36693	12/06/17	1.00	20.00
Final Volume of Sample: (mL)					50	

0.02N H2SO4 Titrant for Alkalinity

Dilute 600 mL 0.1N H2SO4 (prep 1/6/17)
To final volume 3L w/ DI water
Prep 1/6/17
Exp 1/6/18
AH 1/6/17

Inorganic Spiking Solution

7.0001g NaHCO3 BDH lot#1575C510
Final vol 1L w/DI water
Prep: 12/28/16
Exp: 05/28/17
AH

SM3500 Injection Log

Directory: I:\Spec Sheets\Ferrous Iron (Fe2)\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	12 Jan 2017	16:17	CCV 4.0 170112		170112A	1.
2	12 Jan 2017	16:18	CCB 170112		170112A	1.
3	12 Jan 2017	16:19	170112A LCS 4.0		170112A	1.
5	12 Jan 2017	16:21	AZ48866W16		170112A	1.
6	12 Jan 2017	16:22	AZ48868W08		170112A	1.
7	12 Jan 2017	16:23	AZ48871W08		170112A	1.
8	12 Jan 2017	16:24	AZ48872W23		170112A	1.
9	12 Jan 2017	16:25	AZ48875W08		170112A	1.
10	12 Jan 2017	16:26	AZ48877W08		170112A	1.
11	12 Jan 2017	16:27	AZ48878W08		170112A	1.
13	12 Jan 2017	16:29	CCV 4.0 170112		170112A	1.
14	12 Jan 2017	16:30	CCB 170112		170112A	1.
15	20 May 2016	12:37	0 BB 5/20/16		170112A	1.
16	20 May 2016	12:38	1		170112A	1.
17	20 May 2016	12:39	4		170112A	1.
18	20 May 2016	12:39	2		170112A	1.
19	20 May 2016	12:40	5		170112A	1.
20	20 May 2016	12:40	10		170112A	1.
21	20 May 2016	12:41	160520A ICV 3.0		170112A	1.
22	20 May 2016	12:42	160520A ICB		170112A	1.

300/9056A Injection Log

Directory: I:\Dionex\Charlie\Anions\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
14	20 Oct 2016	11:19	ICAL 1 10/20/16		161020	1.
15	20 Oct 2016	11:32	ICAL 2 10/20/16		161020	1.
16	20 Oct 2016	11:45	ICAL 3 10/20/16		161020	1.
17	20 Oct 2016	11:58	ICAL 4 10/20/16		161020	1.
18	20 Oct 2016	12:11	ICAL 5 10/20/16		161020	1.
19	20 Oct 2016	12:24	ICAL 6 10/20/16		161020	1.
20	20 Oct 2016	12:37	ICV 1601020		161020	1.
21	20 Oct 2016	12:50	ICB		161020	1.

300/9056A Injection Log

Directory: I:\Dionex\Charlie\Anions\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
3	12 Jan 2017	13:07	CCV 170112		170112	1.
4	12 Jan 2017	13:21	CCB		170112	1.
5	12 Jan 2017	13:34	170112A LCS		170112	1.
7	12 Jan 2017	15:33	AZ48875W07		170112	1.
8	12 Jan 2017	15:46	AZ48877W07		170112	1.
9	12 Jan 2017	16:00	AZ48878W07 1/2		170112	2.
10	12 Jan 2017	16:13	AZ48872W22		170112	1.
11	12 Jan 2017	16:27	AZ48868W07		170112	1.
12	12 Jan 2017	16:40	AZ48866W15		170112	1.
13	12 Jan 2017	16:54	AZ48871W07 1/2		170112	2.
15	12 Jan 2017	17:21	CCV 170112		170112	1.
16	12 Jan 2017	17:35	CCB		170112	1.
18	12 Jan 2017	18:02	AZ48877W07 1/5		170112	5.
19	12 Jan 2017	18:15	AZ48872W22 1/5		170112	5.
20	12 Jan 2017	18:29	AZ48868W07 1/5		170112	5.
21	12 Jan 2017	18:42	AZ48866W15 1/5		170112	5.
22	12 Jan 2017	18:56	AZ48878W07 1/20		170112	20.
23	12 Jan 2017	19:09	AZ48871W07 1/20		170112	20.
24	12 Jan 2017	19:23	CCV 170112		170112	1.
25	12 Jan 2017	19:36	CCB		170112	1.

310/SM2320B Injection Log

Directory: I:\Tiamo\EXPORT\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	16 Jan 2017	11:35	170116A Blk		170116A_AL	1.
2	16 Jan 2017	12:03	170116A LCS		170116A_AL	1.
4	16 Jan 2017	12:21	AZ48866W15		170116A_AL	1.
5	16 Jan 2017	12:26	AZ48866W15 MS		170116A_AL	1.
6	16 Jan 2017	12:41	AZ48866W15 MSD		170116A_AL	1.
7	16 Jan 2017	12:55	AZ48868W07		170116A_AL	1.
8	16 Jan 2017	13:01	AZ48871W07		170116A_AL	1.
9	16 Jan 2017	13:08	AZ48872W22		170116A_AL	1.
10	16 Jan 2017	13:13	AZ48872W22 MS		170116A_AL	1.
11	16 Jan 2017	13:28	AZ48872W22 MSD		170116A_AL	1.
12	16 Jan 2017	13:43	AZ48875W07		170116A_AL	1.
13	16 Jan 2017	13:55	AZ48877W07		170116A_AL	1.
14	16 Jan 2017	14:00	AZ48878W07		170116A_AL	1.

908 North Temperance Ave. ∇ Clovis, CA 93611 ∇ Phone 559-275-2175 ∇ Fax 559-275-4422

Certification Number: CA1312
NELAP Certification number: CA00046
DoD-ELAP Certificate number: 4064.01

Data Validatable Report

January 27, 2017

AECOM
1001 Bishop Street, Suite 1600
Honolulu, Hawaii 96813

Attn: Margie Thach

Title: Report of Data: Case 81971

Project: 60481245 CIV0053 Red Hill Fuel Storage. HI

Contract #: Prime contract # for DoD: NAVY CLEAN N62742-12-D-1829, CTO 0053
Subcontract: 14S-16234-HI16

Dear Ms. Thach:

Thirteen water samples were received January 13, 2017. Written results for the requested analyses are being provided on this January 27, 2017.

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

If you have any questions or require further information, please contact your APPL Project Manager, Libby Cheeseborough, libby@applinc.com, at your convenience. Thank you for choosing APPL, Inc.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. These test results meet all requirements of NELAC and DoD QSM. Release of the hard copy has been authorized by the Laboratory Manager or her designee, as verified by the following signature.

Paula McCartney

Paula McCartney, Laboratory Director
APPL, Inc.

PM/rp
Enclosure
cc: File

Number of pages in this report: 1004

Data Validation Package

for

60481245 CIV 0053 Red Hill Fuel Storage

APPL SDG 81971

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Sample Data 938

Calibration Data 950

Raw Data 983

CASE NARRATIVE

Case Narrative

ARF: 81971

Project: 60481245 CIV0053 Red Hill Fuel Storage. HI

Sample Receipt Information:

Thirteen water samples were received January 13, 2017, at 1.0°C, 3.0°C, 3.0°C, 3.0°C, and 4.0°C. The sample group was assigned Analytical Request Form (ARF) number 81971.

Sample Preparation and Analysis Information:

For the EPA 8011 analysis, the samples were extracted according to the method.

For the EPA 8015B analysis, the samples were extracted according to EPA method 3510C.

For the EPA 8270D SIM analysis, the samples were extracted according to EPA method 3510C.

For the EPA 8270D Phenol analysis, the samples were extracted according to EPA method 3510C.

For the APPL SOP ANA2MEE analysis, the samples were extracted according to EPA method 3535.

For the EPA 8260B BTEX, 1,2-DCA, and GRO analyses, the samples were purged according to EPA method 5030B.

For the RSK-175 analysis, the samples were allowed to equilibrate for 10 minutes at 40°C and a portion of the headspace was analyzed.

For the EPA 300.0, SM 2320B and 3500FeB analyses, the samples were prepared according to the methods.

Only the portion of the injection log relative to these samples is included. A full sequence log is available upon request. Measurement uncertainty can be reported upon request.

Analytical Exceptions, Deviations and Abnormalities.

EPA 8270D SIM:

Manual integrations were performed in accordance with APPL's SOP. 1-Methylnaphthalene was manually integrated in two calibration standard.. Before and after chromatograms are included in the package.

APPL SOP ANA2MEE:

In the closing continuing calibration, two internal standard areas recovered below the lower limit; 2-(2-Methoxyethoxy) ethanol %D was acceptable in the closing CCV. IS recoveries were acceptable in the samples and other CCVs. Corrective action: Client was notified.

Inorganic Analyses:

The samples were received more than 24 hours after collection. They were analyzed for ferrous iron as soon as possible on the day received.

In the 170116A method blank, alkalinity was detected above one-half the LOQ. Corrective action: None, the concentration of alkalinity in the samples exceed the blank concentration by ten-fold or more.

SDG	Received	Client ID	APPL ID	Collected Date	Collected Time	Matrix	Method	Method Description
81971	01/13/17	ERH171	AZ48914	01/11/17	12:00 PM	WATER	EPA 8260-GAS	EPA 8260 with GAS
81971	01/13/17	ERH171	AZ48914	01/11/17	12:00 PM	WATER	EPA 8260B	EPA 8260B BTEX WATER
81971	01/13/17	ERH171	AZ48914	01/11/17	12:00 PM	WATER	EPA 8260B	EPA 8260B GRO WATER
81971	01/13/17	ERH171	AZ48914	01/11/17	12:00 PM	WATER	RSK 175	METHANE BY RSK 175
81971	01/13/17	ERH172	AZ48915	01/11/17	12:05 PM	WATER	8270D-SIM	EPA 8270D SIM
81971	01/13/17	ERH172	AZ48915	01/11/17	12:05 PM	WATER	EPA 300.0	Wetlab 300.0 - Water
81971	01/13/17	ERH172	AZ48915	01/11/17	12:05 PM	WATER	EPA 8015B-eLL	EPA 8015B TPH WATER
81971	01/13/17	ERH172	AZ48915	01/11/17	12:05 PM	WATER	EPA 8260-GAS	EPA 8260 with GAS
81971	01/13/17	ERH172	AZ48915	01/11/17	12:05 PM	WATER	EPA 8260B	EPA 8260B BTEX WATER
81971	01/13/17	ERH172	AZ48915	01/11/17	12:05 PM	WATER	EPA 8260B	EPA 8260B GRO WATER
81971	01/13/17	ERH172	AZ48915	01/11/17	12:05 PM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
81971	01/13/17	ERH172	AZ48915	01/11/17	12:05 PM	WATER	EPA 8270D	EPA 8270D WATER
81971	01/13/17	ERH172	AZ48915	01/11/17	12:05 PM	WATER	RSK 175	METHANE BY RSK 175
81971	01/13/17	ERH172	AZ48915	01/11/17	12:05 PM	WATER	SM 2320B	Wetlab 2320B - Water
81971	01/13/17	ERH172	AZ48915	01/11/17	12:05 PM	WATER	SM3500FeB	Ferrous Iron
81971	01/13/17	ERH178	AZ48916	01/11/17	04:05 PM	WATER	8011	EPA 8011
81971	01/13/17	ERH178	AZ48916	01/11/17	04:05 PM	WATER	8270D-SIM	EPA 8270D SIM
81971	01/13/17	ERH178	AZ48916	01/11/17	04:05 PM	WATER	EPA 300.0	Wetlab 300.0 - Water
81971	01/13/17	ERH178	AZ48916	01/11/17	04:05 PM	WATER	EPA 8015B-eLL	EPA 8015B TPH WATER
81971	01/13/17	ERH178	AZ48916	01/11/17	04:05 PM	WATER	EPA 8260-GAS	EPA 8260 with GAS
81971	01/13/17	ERH178	AZ48916	01/11/17	04:05 PM	WATER	EPA 8260B	EPA 8260B BTEX & 1,2-DCA WATER
81971	01/13/17	ERH178	AZ48916	01/11/17	04:05 PM	WATER	EPA 8260B	EPA 8260B GRO WATER
81971	01/13/17	ERH178	AZ48916	01/11/17	04:05 PM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
81971	01/13/17	ERH178	AZ48916	01/11/17	04:05 PM	WATER	EPA 8270D	EPA 8270D WATER
81971	01/13/17	ERH178	AZ48916	01/11/17	04:05 PM	WATER	RSK 175	METHANE BY RSK 175
81971	01/13/17	ERH178	AZ48916	01/11/17	04:05 PM	WATER	SM 2320B	Wetlab 2320B - Water
81971	01/13/17	ERH178	AZ48916	01/11/17	04:05 PM	WATER	SM3500FeB	Ferrous Iron
81971	01/13/17	ERH185	AZ48917	01/11/17	01:40 PM	WATER	8011	EPA 8011
81971	01/13/17	ERH185	AZ48917	01/11/17	01:40 PM	WATER	EPA 8260-GAS	EPA 8260 with GAS
81971	01/13/17	ERH185	AZ48917	01/11/17	01:40 PM	WATER	EPA 8260B	EPA 8260B BTEX & 1,2-DCA WATER
81971	01/13/17	ERH185	AZ48917	01/11/17	01:40 PM	WATER	EPA 8260B	EPA 8260B GRO WATER
81971	01/13/17	ERH185	AZ48917	01/11/17	01:40 PM	WATER	RSK 175	METHANE BY RSK 175
81971	01/13/17	ERH199	AZ48918	01/11/17	02:00 PM	WATER	8011	EPA 8011
81971	01/13/17	ERH199	AZ48918	01/11/17	02:00 PM	WATER	EPA 8260-GAS	EPA 8260 with GAS
81971	01/13/17	ERH199	AZ48918	01/11/17	02:00 PM	WATER	EPA 8260B	EPA 8260B BTEX & 1,2-DCA WATER
81971	01/13/17	ERH199	AZ48918	01/11/17	02:00 PM	WATER	EPA 8260B	EPA 8260B GRO WATER
81971	01/13/17	ERH200	AZ48919	01/11/17	01:40 PM	WATER	EPA 8260-GAS	EPA 8260 with GAS
81971	01/13/17	ERH200	AZ48919	01/11/17	01:40 PM	WATER	EPA 8260B	EPA 8260B BTEX WATER
81971	01/13/17	ERH200	AZ48919	01/11/17	01:40 PM	WATER	EPA 8260B	EPA 8260B GRO WATER

81971	01/13/17	ERH201	AZ48920	01/11/17	05:10 PM	WATER	8011	EPA 8011
81971	01/13/17	ERH201	AZ48920	01/11/17	05:10 PM	WATER	EPA 8260-GAS	EPA 8260 with GAS
81971	01/13/17	ERH201	AZ48920	01/11/17	05:10 PM	WATER	EPA 8260B	EPA 8260B BTEX & 1,2-DCA WATER
81971	01/13/17	ERH201	AZ48920	01/11/17	05:10 PM	WATER	EPA 8260B	EPA 8260B GRO WATER
81971	01/13/17	ERH181	AZ48921	01/12/17	10:15 AM	WATER	8270D-SIM	EPA 8270D SIM
81971	01/13/17	ERH181	AZ48921	01/12/17	10:15 AM	WATER	EPA 300.0	Wetlab 300.0 - Water
81971	01/13/17	ERH181	AZ48921	01/12/17	10:15 AM	WATER	EPA 8015B-eLL	EPA 8015B TPH WATER
81971	01/13/17	ERH181	AZ48921	01/12/17	10:15 AM	WATER	EPA 8260-GAS	EPA 8260 with GAS
81971	01/13/17	ERH181	AZ48921	01/12/17	10:15 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
81971	01/13/17	ERH181	AZ48921	01/12/17	10:15 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
81971	01/13/17	ERH181	AZ48921	01/12/17	10:15 AM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
81971	01/13/17	ERH181	AZ48921	01/12/17	10:15 AM	WATER	EPA 8270D	EPA 8270D WATER
81971	01/13/17	ERH181	AZ48921	01/12/17	10:15 AM	WATER	RSK 175	METHANE BY RSK 175
81971	01/13/17	ERH181	AZ48921	01/12/17	10:15 AM	WATER	SM 2320B	Wetlab 2320B - Water
81971	01/13/17	ERH181	AZ48921	01/12/17	10:15 AM	WATER	SM3500FeB	Ferrous Iron
81971	01/13/17	ERH203	AZ48922	01/12/17	11:15 AM	WATER	EPA 8260-GAS	EPA 8260 with GAS
81971	01/13/17	ERH203	AZ48922	01/12/17	11:15 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
81971	01/13/17	ERH203	AZ48922	01/12/17	11:15 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
81971	01/13/17	ERH180	AZ48923	01/12/17	09:45 AM	WATER	EPA 8260-GAS	EPA 8260 with GAS
81971	01/13/17	ERH180	AZ48923	01/12/17	09:45 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
81971	01/13/17	ERH180	AZ48923	01/12/17	09:45 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
81971	01/13/17	ERH180	AZ48923	01/12/17	09:45 AM	WATER	RSK 175	METHANE BY RSK 175
81971	01/13/17	ERH183	AZ48924	01/12/17	08:00 AM	WATER	EPA 8260-GAS	EPA 8260 with GAS
81971	01/13/17	ERH183	AZ48924	01/12/17	08:00 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
81971	01/13/17	ERH183	AZ48924	01/12/17	08:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
81971	01/13/17	ERH183	AZ48924	01/12/17	08:00 AM	WATER	RSK 175	METHANE BY RSK 175
81971	01/13/17	ERH184	AZ48925	01/12/17	10:05 AM	WATER	8270D-SIM	EPA 8270D SIM
81971	01/13/17	ERH184	AZ48925	01/12/17	10:05 AM	WATER	EPA 300.0	Wetlab 300.0 - Water
81971	01/13/17	ERH184	AZ48925	01/12/17	10:05 AM	WATER	EPA 8015B-eLL	EPA 8015B TPH WATER
81971	01/13/17	ERH184	AZ48925	01/12/17	10:05 AM	WATER	EPA 8260-GAS	EPA 8260 with GAS
81971	01/13/17	ERH184	AZ48925	01/12/17	10:05 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
81971	01/13/17	ERH184	AZ48925	01/12/17	10:05 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
81971	01/13/17	ERH184	AZ48925	01/12/17	10:05 AM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
81971	01/13/17	ERH184	AZ48925	01/12/17	10:05 AM	WATER	EPA 8270D	EPA 8270D WATER
81971	01/13/17	ERH184	AZ48925	01/12/17	10:05 AM	WATER	RSK 175	METHANE BY RSK 175
81971	01/13/17	ERH184	AZ48925	01/12/17	10:05 AM	WATER	SM 2320B	Wetlab 2320B - Water
81971	01/13/17	ERH184	AZ48925	01/12/17	10:05 AM	WATER	SM3500FeB	Ferrous Iron
81971	01/13/17	ERH202	AZ48926	01/12/17	10:30 AM	WATER	EPA 8260-GAS	EPA 8260 with GAS
81971	01/13/17	ERH202	AZ48926	01/12/17	10:30 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
81971	01/13/17	ERH202	AZ48926	01/12/17	10:30 AM	WATER	EPA 8260B	EPA 8260B GRO WATER

APPL Inc.
Abbreviations and Flags

FLAG	DESCRIPTION
#	Recovery or RPD outside control limits
*	Recovery or RPD outside control limits
B	Analyte detected in associated method blank
C1	Reason for correction: wrote incorrect response
C2	Reason for correction: calculated incorrectly
C3	Reason for correction: needs to be rechecked
C4	Reason for correction: data not usable
DO	Diluted out
E	Exceeds linear range
F	Estimated value
G1	Includes a wide range of hydrocarbons which does not match our gasoline standard
G10	Includes a match to hydrocarbon profiles within the range of mineral spirits
G11	Includes a match to hydrocarbon profiles within the range of JP-4
G12	Pattern does not match the gasoline standard; the carbon range for this sample is consistent with JP8
G13	Closely resembles the hydrocarbon profile of aviation gasoline
G14	Analyte concentration may be biased due to carry over
G2	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G3	Includes higher boiling hydrocarbons
G4	Includes dominant peak(s) not indicative of petroleum hydrocarbons
G5	Is mainly dominant peak(s) not indicative of petroleum hydrocarbons
G6	Contains recognizable contaminant peak(s) which has been removed from quantitation
G7	Is mainly a match to hydrocarbons within the range of gasoline
G8	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G9	Includes hydrocarbons within the range of kerosene
J	Estimated value
M	Matrix effect
MI1	Manual integration: integration does not follow baseline
MI2	Manual integration: non-target peak interference
MI3	Manual integration: to split a peak that was integrated as one peak by the computer.
MI4	Manual integration: to integrate a split peak
MI5	Manual integration: the whole peak or part of the peak was not integrated
MI6	Manual integration: computer integrated wrong peak
MI7	Manual integration: other – (See case narrative)
MDL	Method detection limit
ND	Not detected
NT	Non-target
Q	Acceptance criteria not met
T1 I	Includes wide range of hydrocarbons not indicative of diesel
T1 M	Is mainly wide range of hydrocarbons not necessarily indicative of diesel
T2 I	Includes lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T2 M	Is mainly lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T3 I	Includes higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T3 M	Is mainly higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T4 I	Includes dominant peak(s) not indicative of hydrocarbons
T4 M	Is mainly dominant peak(s) not indicative of hydrocarbons
T5	Contains recognizable contaminant peak(s) which has been removed from quantitation
T6	Is mainly a match to hydrocarbons within range of diesel fuel
T7	Closely resembles the boiling point hydrocarbon profile consistent with diesel fuel
T8	Includes a match to hydrocarbon profiles within range of diesel and kerosene fuel
T9 I	Includes non-diesel hydrocarbons within boiling point range of diesel fuel
T9 M	Is mainly non-diesel hydrocarbons within boiling point range of diesel fuel
U	Not detected
Y	Percent difference between primary and confirmation column > 40%

SAMPLE MANAGEMENT RECORDS

CHAIN OF CUSTODY,

ARF, CRF, AND

CLIENT COMMUNICATION

APPL - Analysis Request Form 81971

Client: **AECOM**
Address: **1001 Bishop Street, Suite 1600**
Honolulu, HI 96813
Attn: **Margie Thach**
Phone: **808-356-5373** Fax: **808-523-8950**
Job: **60481245 CIV0053 Red Hill Fuel Storage**
PO #: **14S-16234-HI16, PO# 77265**
Chain of Custody (Y/N): **Y** # **011217a-d**
RAD Screen (Y/N): **Y** pH (Y/N): **Y**
Turn Around Type: **ONE WEEK**

Received by: **CM**
Date Received: **01/13/17** Time: **11:15**
Delivered by: **FED EX**
Shuttle Custody Seals (Y/N): **Y** Time Zone: **-10**
Chest Temp(s): **2X3.0° 1.0° 4.0°C**
Color: **VOA/A-GRN**
Samples Chilled until Placed in Refrig/Freezer: **Y**
Project Manager: **Libby Cheesebor**
QC Report Type: **DVP4DOD/EQUIS/HI**
Due Date: **01/20/17**

Comments:
1-week TAT for Form 1s; 21 day TAT for DVP; F1s, login to Margie.Thach@aecom.com
A: DOD QSM ver 5.0; DOD Forms (LOQ/LOD database/DL) Print ND as LOD w/U Qual.
8260: BTEX & TPH-G only; 8270 SIM: 1-methylnaphthalene, 2-methylnaphthalene & naphthalene only.
TPH D & O ; RSK: Methane only; 8011: EDB only;
$87DC53W5: report phenol only; $87DMEEW5: 2-MEE (LCS Spk 80ppb).
FR: HC to LDC, 2 labeled CDs to Margie Thach. Before FR is sent, the PM needs to review after Admin Review is complete.
EDD: AECOM EQuIS EDD 2.5.3 to Margie.Thach@aecom.com & jecklund@lab-data.com

Sample Distribution:
GC: 4-$87DC53W5, 4-$87DMEEW5, 4-$DOC53W5, 4-$SIMDOD5W, 4-$8011
Extractions: 4-_MWE2MEE, 4-_SEP004, 4-_SEP004S, 4-_SEP011LL, 4-_MWE012
VOA: 9-$86BTOTXDOD5W, 13-$GASBL, 13-$GRO86BW, 8-$RSKMETH, 4-$86BTOTXDCAW
Wetlab: 4-$232W(HCO3,CO3,ALK), 4-$300W(NO3,CL,SO4), 4-$35FE

Charges:

Invoice To:
ACCOUNTS PAYABLE
1001 Bishop Street, Ste 1600
USAPImaging@aecom.com
mary.basano@aecom.com

	Client ID	APPL ID	Sampled	Analyses Requested
1.	ERH171	AZ48914W	01/11/17 12:00	$86BTOTXDOD5W, $GASBL, $GRO86BW, $RSKMETH
2.	ERH172	AZ48915W	01/11/17 12:05	$232W(HCO3,CO3,ALK), $300W(NO3,CL,SO4), $35FE, $86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $RSKMETH, $SIMDOD5W -- 2-MEE-LCS 80ppb spike

Note: All times, excluding sample collection times, are Pacific Time Zone unless noted otherwise. Collection times are in: -10 UTC

3. ERH178	AZ48916W 01/11/17 16:05		$232W(HCO3,CO3,ALK), $300W(NO3,CL,SO4), $35FE, $8011, $86BTOTXDCAW, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $RSKMETH, $SIMDOD5W -- 2-MEE-LCS 80ppb spike
4. ERH185	AZ48917W 01/11/17 13:40		$8011, $86BTOTXDCAW, $GASBL, $GRO86BW, $RSKMETH
5. ERH199	AZ48918W 01/11/17 14:00		$8011, $86BTOTXDCAW, $GASBL, $GRO86BW -- all vials are unpreserved
6. ERH200	AZ48919W 01/11/17 13:40		$86BTOTXDOD5W, $GASBL, $GRO86BW
7. ERH201	AZ48920W 01/11/17 17:10		$8011, $86BTOTXDCAW, $GASBL, $GRO86BW -- all vials are unpreserved
8. ERH181	AZ48921W 01/12/17 10:15		$232W(HCO3,CO3,ALK), $300W(NO3,CL,SO4), $35FE, $86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $RSKMETH, $SIMDOD5W -- 2-MEE-LCS 80ppb spike
9. ERH203	AZ48922W 01/12/17 11:15		$86BTOTXDOD5W, $GASBL, $GRO86BW
10. ERH180	AZ48923W 01/12/17 09:45		$86BTOTXDOD5W, $GASBL, $GRO86BW, $RSKMETH
11. ERH183	AZ48924W 01/12/17 08:00		$86BTOTXDOD5W, $GASBL, $GRO86BW, $RSKMETH
12. ERH184	AZ48925W 01/12/17 10:05		$232W(HCO3,CO3,ALK), $300W(NO3,CL,SO4), $35FE, $86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5, $GASBL, $GRO86BW, $RSKMETH, $SIMDOD5W -- 2-MEE-LCS 80ppb spike
13. ERH202	AZ48926W 01/12/17 10:30		$86BTOTXDOD5W, $GASBL, $GRO86BW -- all vials are unpreserved

APPL Sample Receipt Form

ARF# **81971**

Sample	Container Type	Count	p
AZ48914	13 VOAs - HCL	5	NA
AZ48915	3 PL 250mL	1	NA
	6 PL 500mL - HNO3	1	1.7
	13 VOAs - HCL	6	NA
	17 Amber Liter	6	NA
	38 250mL brn poly, HCl prsvd	1	1.7
AZ48916	3 PL 250mL	1	NA
	6 PL 500mL - HNO3	1	1.7
	13 VOAs - HCL	6	NA
	15 VOAs - NP	3	NA
	17 Amber Liter	6	NA
	38 250mL brn poly, HCl prsvd	1	1.7
AZ48917	13 VOAs - HCL	5	NA
	15 VOAs - NP	3	NA
AZ48918	15 VOAs - NP	8	NA
AZ48919	13 VOAs - HCL	5	NA
AZ48920	15 VOAs - NP	7	NA
AZ48921	3 PL 250mL	1	NA
	6 PL 500mL - HNO3	1	1.7
	13 VOAs - HCL	6	NA
	17 Amber Liter	6	NA
	38 250mL brn poly, HCl prsvd	1	1.7
AZ48922	13 VOAs - HCL	5	NA
AZ48923	13 VOAs - HCL	5	NA
AZ48924	13 VOAs - HCL	5	NA
AZ48925	3 PL 250mL	1	NA
	6 PL 500mL - HNO3	1	1.7
	13 VOAs - HCL	6	NA
	17 Amber Liter	6	NA
	38 250mL brn poly, HCl prsvd	1	1.7
AZ48926	15 VOAs - NP	5	NA

Sample	Container Type	Count	p

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C. 011217a

Report to: PLEASE PRINT

Company Name: AECOM Phone: 808-356-5373
Address: 1001 Bishop St. Suite 1600
Honolulu, Hawaii 96813 Fax:
Attn: Margie Thach Email: margie.thach@aecom.com

Invoice to: PLEASE PRINT

Company Name: AECOM Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600
Honolulu, Hawaii 96813 Fax:
Attn: Mary Basano Email: mary.basano@aecom.com

Project Name/Number: CIV 53 / 60481245
Purchase Order Number: 77265
Sampler (Print): AM, TR, KE, CB
Sampler (Signature): MT for AM, TR, KE, CB

Date Shipped: 1/12/17
Carrier: FedEx
Tracking No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil		8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O w/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate,Sulfate,Chloride	RSK175M Methane
ERH171	Trip	1/11/17	1200	HST	5	X				X	X										X
ERH172	RHMW01	1/11/17	1225	HST	6	X				X	X										X
ERH178	RHMW09	1/11/17	1605	HST	13	X				X	X	X	X	X	X		X	X			X
ERH185	Trip	1/11/17	1340	HST	8	X				X	X	X	X								X
ERH199	RHMW08 Ambient	1/11/17	1400	HST	8	X				X	X	X	X								
ERH200	RHMW01 Ambient	1/11/17	1340	HST	5	X				X	X										
ERH201	RHMW09 Ambient	1/11/17	1710	HST	7	X				X	X	X	X								
	MT 1/12/17																				

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	1/12/17	1500	MT 1/12/17				
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					1/13/17	1115	

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422

C.O.C. 011217b

Report to: PLEASE PRINT

Company Name: AECOM Phone: 808-356-5373

Address: 1001 Bishop St. Suite 1600
Honolulu, Hawaii 96813 Fax:

Attn: Margie Thach Email: margie.thach@aecom.com

Invoice to: PLEASE PRINT

Company Name: AECOM Phone: 808-356-7249

Address: 1001 Bishop St. Suite 1600
Honolulu, Hawaii 96813 Fax:

Attn: Mary Basano Email: mary.basano@aecom.com

Project Name/Number: CIV 53 / 60481245

Purchase Order Number: 77265

Sampler (Print): AM, CB, KE, TQ

Sampler (Signature): MT for AM, CB, KE, TQ

Date Shipped: 1/12/17

Carrier: Fedex

Tracking No.:

Comments: All SM3500

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil	8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O w/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate, Sulfate, Chloride	RSK175M Methane
ERH181	RHMW03	1/12/17	1015	HST	15	X			X	X			X	X		X	X	X	X	X
ERH203	RHMW03 Ambient	1/12/17	1115	HST	5	X			X	X										
ERH180	Trip	1/12/17	0945	HST	5	X			X	X										X

MT 1/12/17

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	1/12/17	1600					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					1/13/17	11:15	

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

2230, 1.0, 4.0 8/9/71

APPL LABS

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422

C.O.C. 011217c

Report to: PLEASE PRINT

Company Name: AECOM Phone: 808-356-5373
Address: 1001 Bishop St. Suite 1600
Honolulu, Hawaii 96813 Fax:
Attn: Margie Thach Email: margie.thach@aecom.com

Invoice to: PLEASE PRINT

Company Name: AECOM Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600
Honolulu, Hawaii 96813 Fax:
Attn: Mary Basano Email: mary.basano@aecom.com

Project Name/Number: CIV 53 / 60481245
Purchase Order Number: 77265
Sampler (Print): AM, CO, TQ, KE
Sampler (Signature): MT on for AM, CO, TQ, KE

Date Shipped: 1/12/17
Carrier: Fedex
Tracking No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil		8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O w SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate, Sulfate, Chloride	RSK175M Methane	
ERH183	Trip	1/12/17	0800	HST	5	X				X	X			~~X~~	~~X~~	MT 1/12/17					X	
ERH184	~~BW01~~ OWDFMW01	1/12/17	1005	HST	15	X				X	X			X	X		X	X	X	X	X	X
ERH202	OWDFMW01 Ambient	1/12/17	1030	HST	5	X				X	X											

MT 1/12/17

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	1/12/17	1500					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					1/13/17	11:15	

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

APPL LABS

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

ELECTRONIC CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C. 011217a

Report to: PLEASE PRINT

Company Name: AECOM Phone: 808-356-5373
Address: 1001 Bishop St. Suite 1600
Honolulu, Hawaii 96813 Fax:
Attn: Margie Thach Email: margie.thach@aecom.com

Invoice to: PLEASE PRINT

Company Name: AECOM Phone: 808-356-7249
Address: 1001 Bishop St. Suite 1600
Honolulu, Hawaii 96813 Fax:
Attn: Mary Basano Email: mary.basano@aecom.com

Project Name/Number: CIV 53 / 60481245
Purchase Order Number: 77265
Sampler (Print): AM, TQ, CB, KE
Sampler (Signature): MT for AM, TQ, CB, KE
Date Shipped: 01/12/17
Carrier: FedEx
Tracking No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil		8260C BTEX	8260C TPH-G	8260C DCA	8011 EDB	8270D SIM PAHs	8015C TPH-D/O	3630C/8015C TPH-D/O w/ SGT	8270D Phenol, TICs	2-(2-methoxyethoxy)-ethanol	SM3500 Ferrous Iron	300.0 Nitrate, Sulfate, Chloride	RSK175M Methane	Analysis Requested/Method Number: 4VOC SVOC
ERH172	RHMW01	1/11/17	1205	HST	9	X								X	X		X	X	X	X	X	X
ERH178	RHMW09	1/11/17	1605	HST	5	X								X	X		X	X	X	X	X	X

KS 1/12/17

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Margie Thach AECOM	1/12/17	1500					
Relinquished by:	**Date**	**Time**	**Received by:**	**Relinquished by:**	**Date**	**Time**	**Received at lab by:**
					1/13/17	11:15	

Note: The first sampled date of the ARF will be used as the COC number unless indicated otherwise.

COOLER RECEIPT FORM

ARF: 81971

1) Project: 60481245 CIV0053 Red Hill Fuel Storage Date Received: 01/13/17

2) Coolers: Number of Coolers: 4

3) YES Were custody seals present and intact?
How many? 8 Name/Date on seal? See Below

4) YES Was there a shipping slip? Carrier name: FED EX

5) Type of packing in cooler: YL 1/13/17 X bubble wrap popcorn foam YL X plastic bags
YL 1/13/17 YL 1/13/17 X wet ice dry ice no ice 1/13/17 other

6) YES Were cooler temperatures acceptable?

7) Serial number of certified NIST thermometer use J5297

8) Cooler temp(s): In °C

1:	2:	3:	4:	5:	6:
3.0	3.0	1.0	4.0		

7:	8:	9:	10:	11:	12:

Chain of custody:

9) YES Was a chain of custody received?

10) YES Were the custody papers complete/signed in the appropriate places?

Sample Labels:

11) YES Were all sample labels complete (sample ID, date/time of sampling, etc.)?

12) YES Did all container labels agree with custody papers?

Sample Containers:

13) YES Were all containers sealed in separate bags?

14) YES Did all containers arrive in good condition:(unbroken, no leakage, no cracked/broken lids)?

15) YES Were correct containers and preservatives used for the tests indicated?

16) YES Was a sufficient amount of sample sent for tests indicated?

17) NA Were bubbles present in volatile samples?
If yes, the following were received with air bubbles:
Larger than a pea:
Smaller than a pea:

Preservation Hold time:

18) Yes Was a sufficient amount of holding time remaining to analyze the samples?

19) Yes Was the pH taken of all non-VOA preserved samples and written on the sample container?

20) Yes Was the pH of acid preserved non-VOA samples < 2?

21) NA Was the pH of sodium hydroxide preserved samples for Cyanide > 12 and Sulfide >9?

22) ~~YES NA~~ Were unpreserved VOA Vials received?

23) ~~yes No~~ Are unpreserved VOA vials noted in the ADD TEST FIELD on the ARF?

ip 1-13-17 pH strip lot number: 90B2031

Lab notified if pH was not adequate:

Notes/Deficiencies:

CUSTODY SEAL
APPL, Inc. (559) 275-2175
Initials MT Date 1/12/17

Personnel receiving samples: sm Second reviewer: YL
Personnel labeling samples: sm
Project manager notified: Date/Time of notification
Name of client notified: Date/Time of notification

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank
EPA 8011

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **170118W-48872 - 215614**
Batch ID: #8011-170118A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	EDB	0.020 U	0.02	0.020	0.010	ug/L	01/18/17	01/18/17
BLANK	SURROGATE: 1,3-DIBROMOPRO	97.5	70-132			%	01/18/17	01/18/17

Quant Method: 80111018.M
Run #: 1214202
Instrument: Herbie
Sequence: 161214
Initials: RHA

GC SC-Blank-REG MDLs-DOD
Printed: 01/19/17 12:18:47 PM

Laboratory Control Spike Recovery

EPA 8011

APPL ID: **170118W-48872 LCS - 215614**
Batch ID: #8011-170118A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
EDB	0.250	0.247	98.8	60-140
SURROGATE: 1,3-DIBROMOPROPANE (	0.350	0.259	74.0	70-132

Comments: _____

Primary	SPK
Quant Method :	80111018.M
Extraction Date :	01/18/17
Analysis Date :	01/18/17
Instrument :	Herbie
Run :	1214204
Initials :	RHA

Printed: 01/19/17 12:18:38 PM
APPL Standard LCS

8011

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81971

Case No: 81971 Date Analyzed: 01/18/17

Matrix: WATER Instrument: Herbie

APPL ID.	Client Sample No.	SURROGATE: 1,3-DIBROMOPROPANE (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
170118A-BLK	Blank	70-132	97.5				
170118A-LCS	Lab Control Spike	70-132	74.0				
AZ48916	ERH178	70-132	100.0				
AZ48917	ERH185	70-132	94.3				
AZ48918	ERH199	70-132	105				
AZ48920	ERH201	70-132	99.1				

Comments: Batch: #8011-170118A

8011

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81971

Case No: 81971 Date Analyzed: 01/18/17

Matrix: WATER Instrument: Herbie

Blank ID: 170118A-BLK Time Analyzed: 1449

APPL ID.	Client Sample No.	File ID.	Date Analyzed
170118A-BLK	Blank	1214202	01/18/17 1449
170118A-LCS	Lab Control Spike	1214204	01/18/17 1531
AZ48916	ERH178	1214212	01/18/17 1817
AZ48917	ERH185	1214213	01/18/17 1838
AZ48918	ERH199	1214214	01/18/17 1858
AZ48920	ERH201	1214215	01/18/17 1919

Comments: Batch: #8011-170118A

Printed: 01/19/17 12:18:34 PM

Form 4, Blank Summary

ORGANICS

Sample Data

APPL, INC.

EPA 8011

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH178
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48916
QCG: #8011-170118A-215614

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8011	EDB	0.020 U	0.02	0.020	0.010	ug/L	01/18/17	01/18/17
8011	SURROGATE: 1,3-DIBROMOPROPANE	100.0	70-132			%	01/18/17	01/18/17

Quant Method:	80111018.M
Run #:	1214212
Instrument:	Herbie
Sequence:	161214
Dilution Factor:	1
Initials:	RHA

Printed: 01/19/17 12:18:31 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214212.D\ECD1A.CH Vial: 12
Signal #2 : G:\HERBIE\DATA\161214\1214212.D\ECD2B.CH
Acq On : 01-18-17 18:17:21 Operator: RH
Sample : AZ48916W07 2/34.69G Inst : Herbie
Misc : water Multiplr: 1.01
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Jan 19 10:27 2017 Quant Results File: 80111018.RES

Quant Method : G:\HERBIE\DATA\161011\80111018.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Jan 18 15:12:05 2017
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

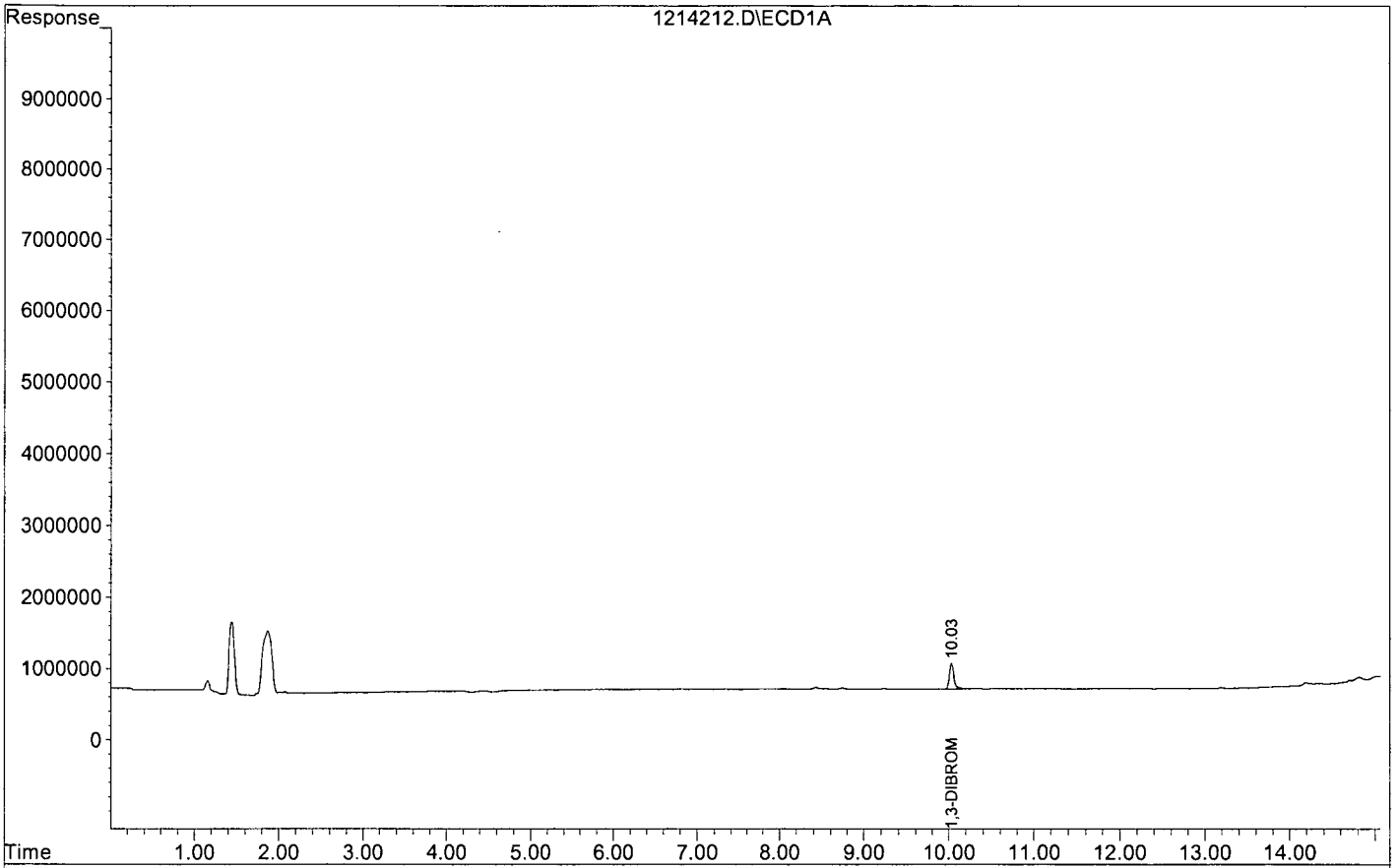
Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

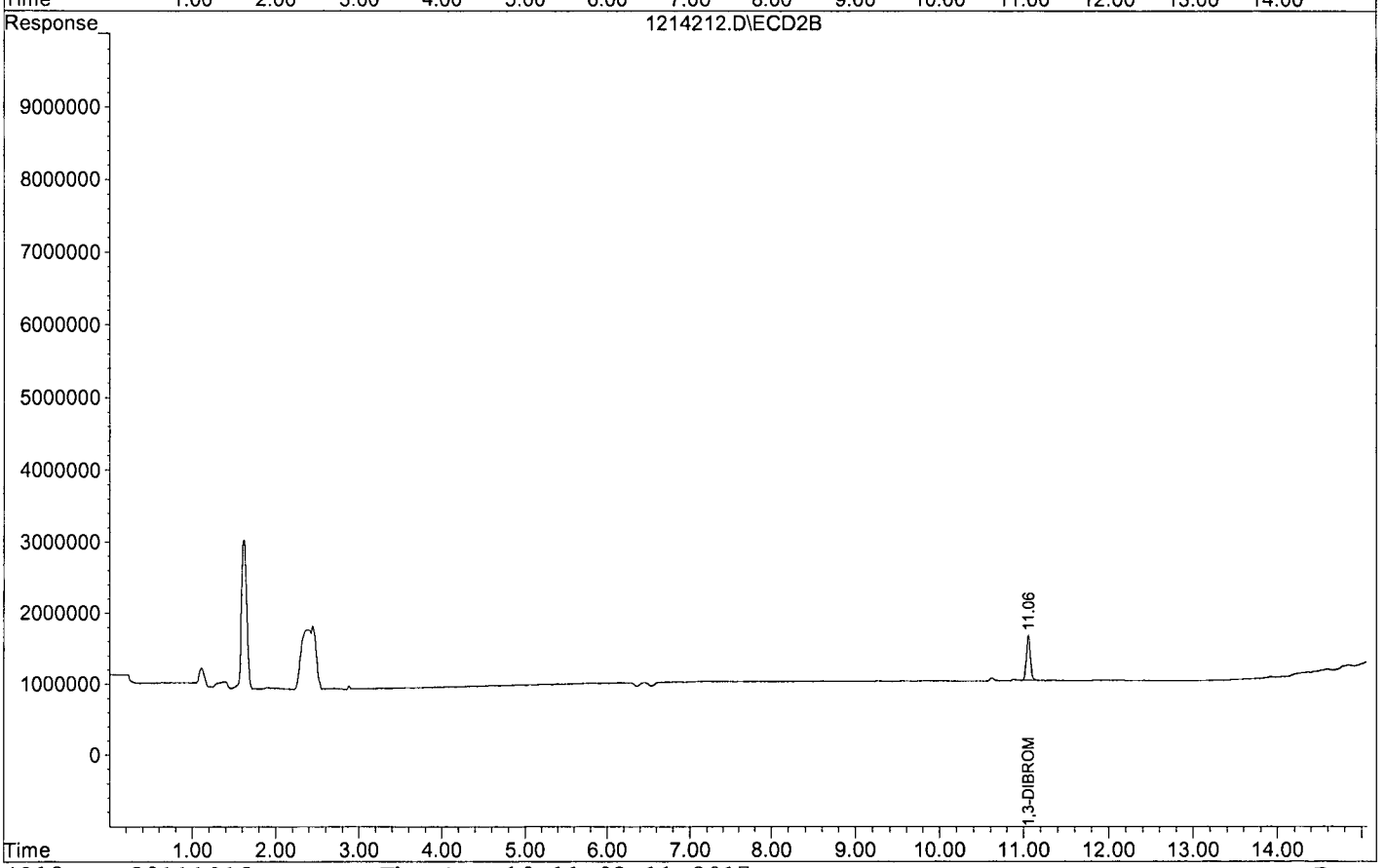
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.06	365258	640277	0.353	0.350
Spiked Amount	0.353			Recovery	=	99.96%	99.11%
	Target Compounds						
	Target Compounds						
1) TM	EDB	0.00	0.00	0	0	N.D. d	N.D. d
2) TM	1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4) TM	DBCP	0.00	0.00	0	0	N.D. d	N.D. d

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\161214\1214212.D Vial: 12
Acq On : 01-18-17 18:17:21 Operator: RH
Sample : AZ48916W07 2/34.69G Inst : Herbie
Misc : water Multiplr: 1.01
Quant Method : G:\HERBIE\DATA\161011\80111018.M





EPA 8011

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH185
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48917
QCG: #8011-170118A-215614

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8011	EDB	0.020 U	0.02	0.020	0.010	ug/L	01/18/17	01/18/17
8011	SURROGATE: 1,3-DIBROMOPROPANE	94.3	70-132			%	01/18/17	01/18/17

Quant Method:	80111018.M
Run #:	1214213
Instrument:	Herbie
Sequence:	161214
Dilution Factor:	1
Initials:	RHA

Printed: 01/19/17 12:18:31 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214213.D\ECD1A.CH Vial: 13
Signal #2 : G:\HERBIE\DATA\161214\1214213.D\ECD2B.CH
Acq On : 01-18-17 18:38:15 Operator: RH
Sample : AZ48917W08 2/34.88G Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Jan 19 10:29 2017 Quant Results File: 80111018.RES

Quant Method : G:\HERBIE\DATA\161011\80111018.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Jan 18 15:12:05 2017
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

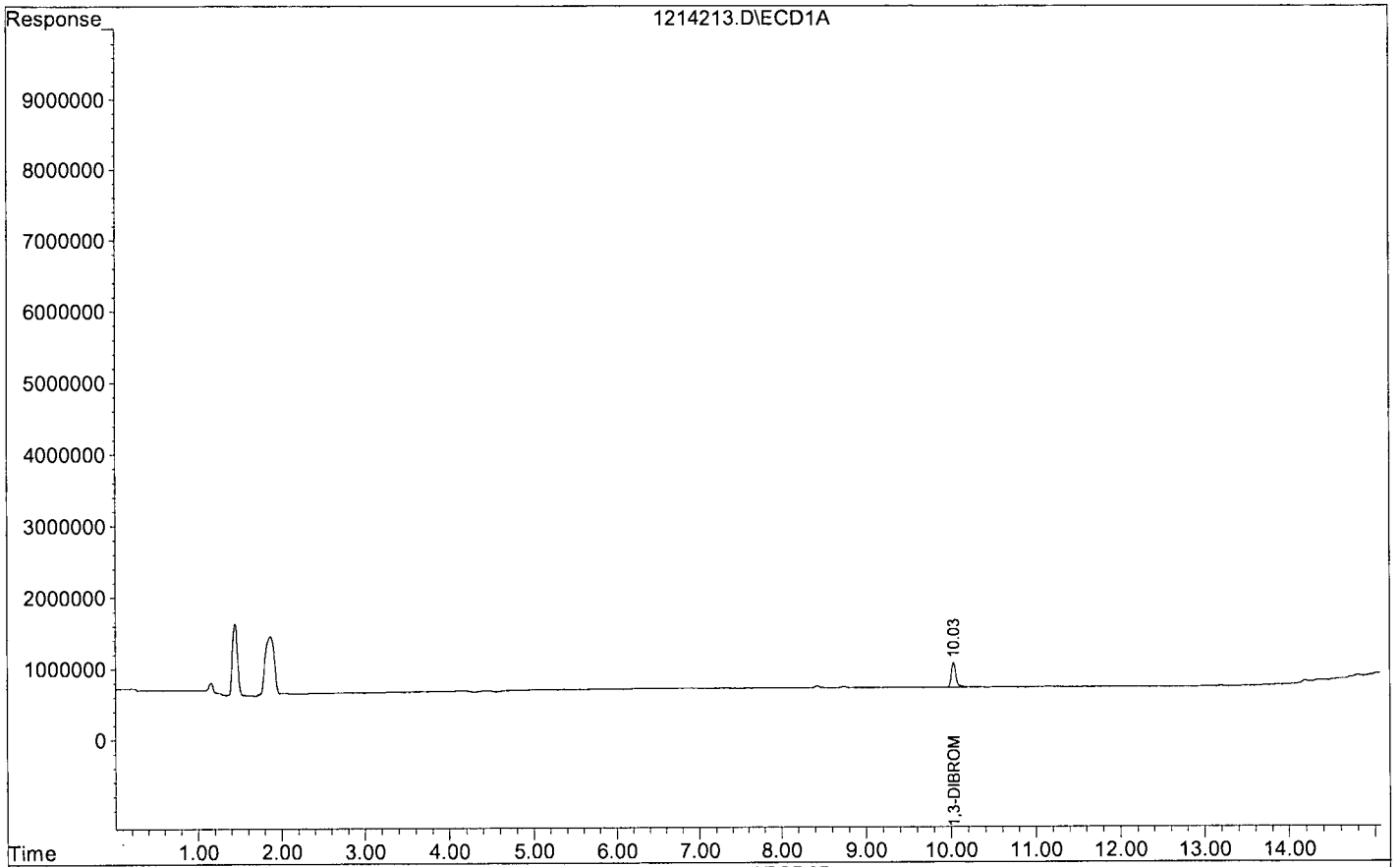
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.06	344526	601151	0.331	0.327
Spiked Amount	0.351			Recovery	=	94.25%	93.11%
	Target Compounds						
	Target Compounds						
1) TM	EDB	0.00	0.00	0	0	N.D. d	N.D. d
2) TM	1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4) TM	DBCP	0.00	0.00	0	0	N.D. d	N.D. d

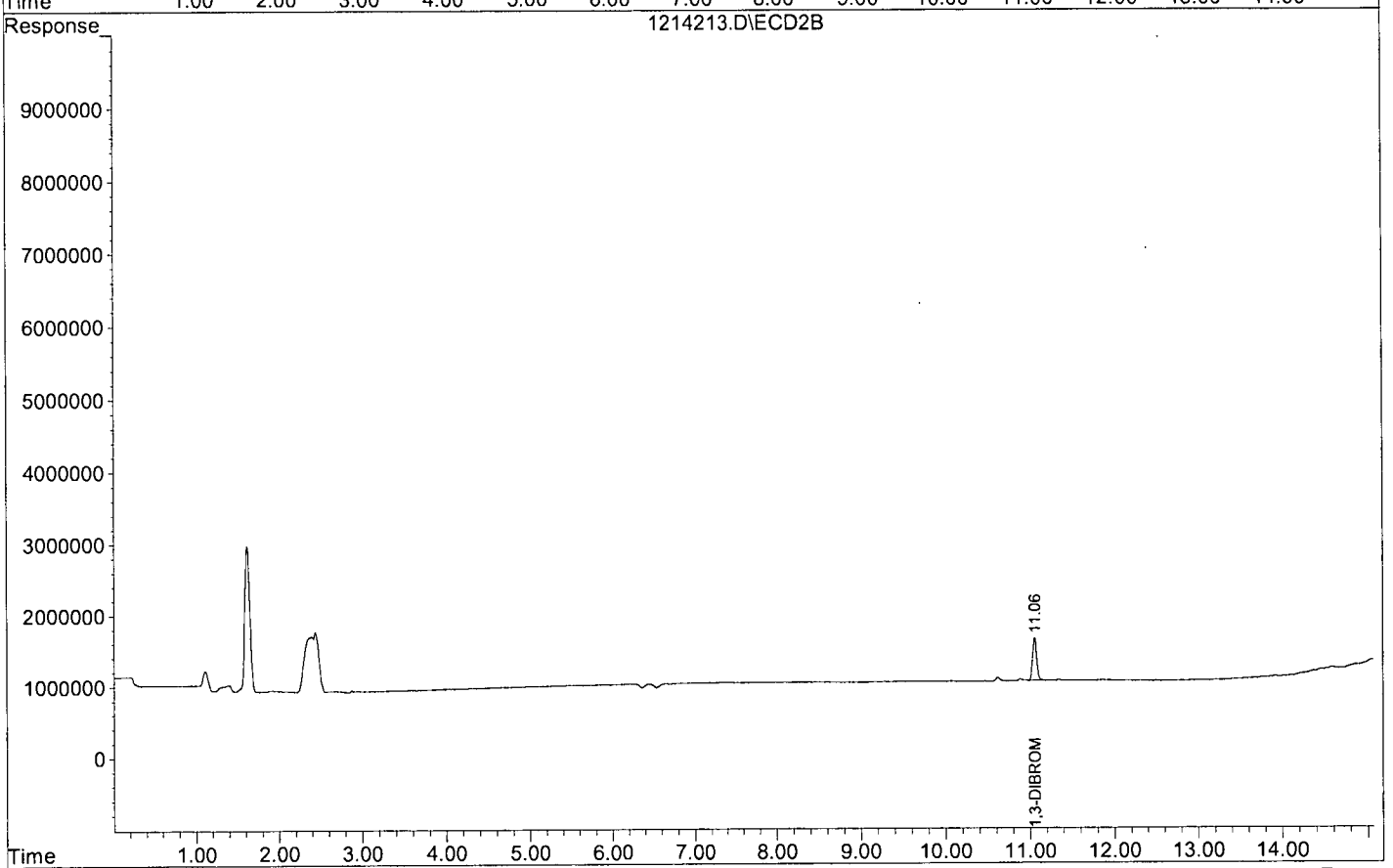
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\161214\1214213.D
Acq On : 01-18-17 18:38:15
Sample : AZ48917W08 2/34.88G
Misc : water
Quant Method : G:\HERBIE\DATA\161011\80111018.M

Vial: 13
Operator: RH
Inst : Herbie
Multiplr: 1.00





EPA 8011

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH199
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48918
QCG: #8011-170118A-215614

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8011	EDB	0.020 U	0.02	0.020	0.010	ug/L	01/18/17	01/18/17
8011	SURROGATE: 1,3-DIBROMOPROPANE	105	70-132			%	01/18/17	01/18/17

Quant Method: 80111018.M
Run #: 1214214
Instrument: Herbie
Sequence: 161214
Dilution Factor: 1
Initials: RHA

Printed: 01/19/17 12:18:31 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214214.D\ECD1A.CH Vial: 14
Signal #2 : G:\HERBIE\DATA\161214\1214214.D\ECD2B.CH
Acq On : 01-18-17 18:58:59 Operator: RH
Sample : AZ48918W08 2/34.26G Inst : Herbie
Misc : water Multiplr: 1.02
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Jan 19 10:29 2017 Quant Results File: 80111018.RES

Quant Method : G:\HERBIE\DATA\161011\80111018.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Jan 18 15:12:05 2017
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

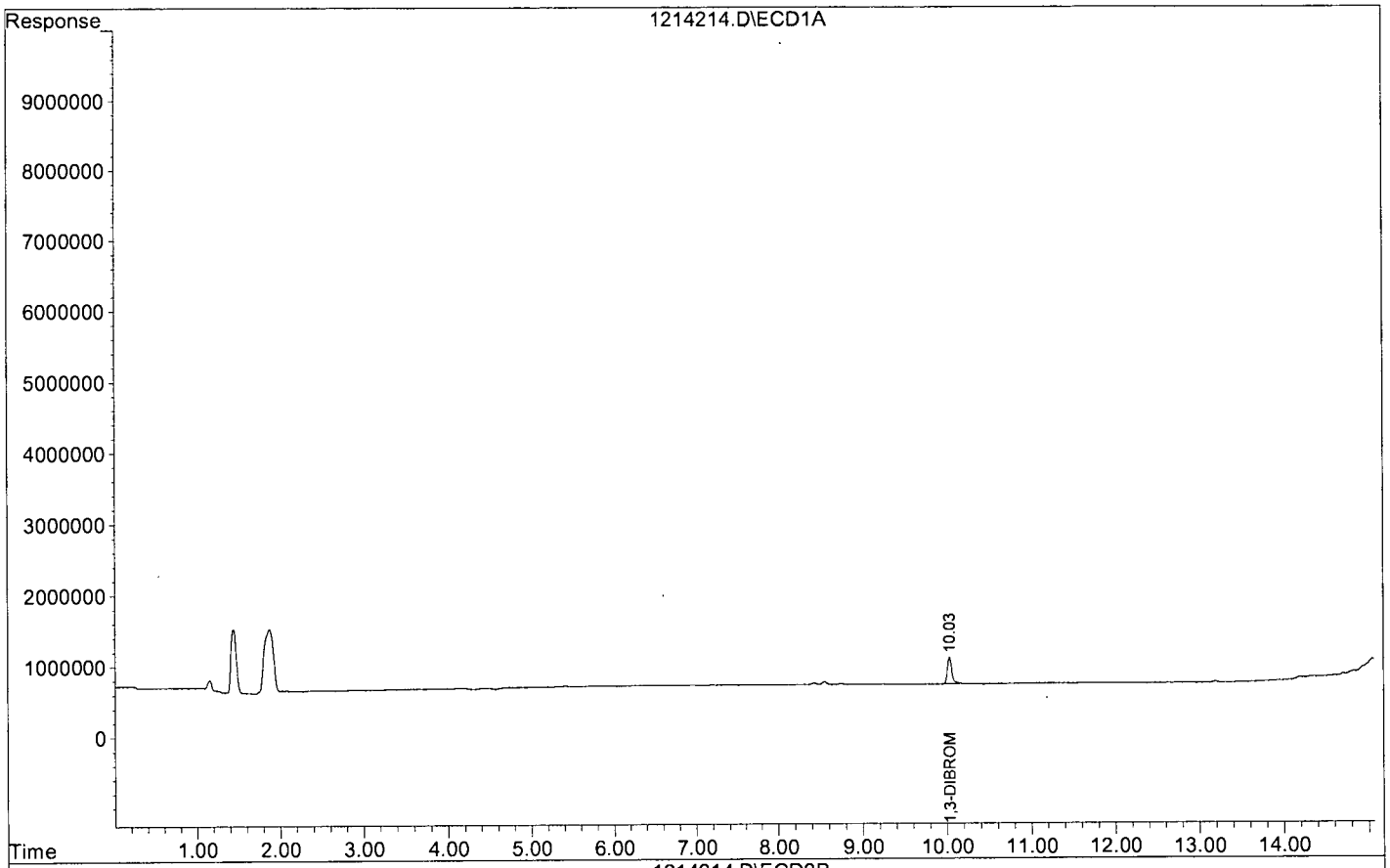
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	382947	673507	0.374	0.373
Spiked Amount	0.358			Recovery	=	104.60%	104.32%
	Target Compounds						
	Target Compounds						
1) TM	EDB	0.00	0.00	0	0	N.D.	N.D.
2) TM	1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4) TM	DBCP	0.00	0.00	0	0	N.D. d	N.D. d

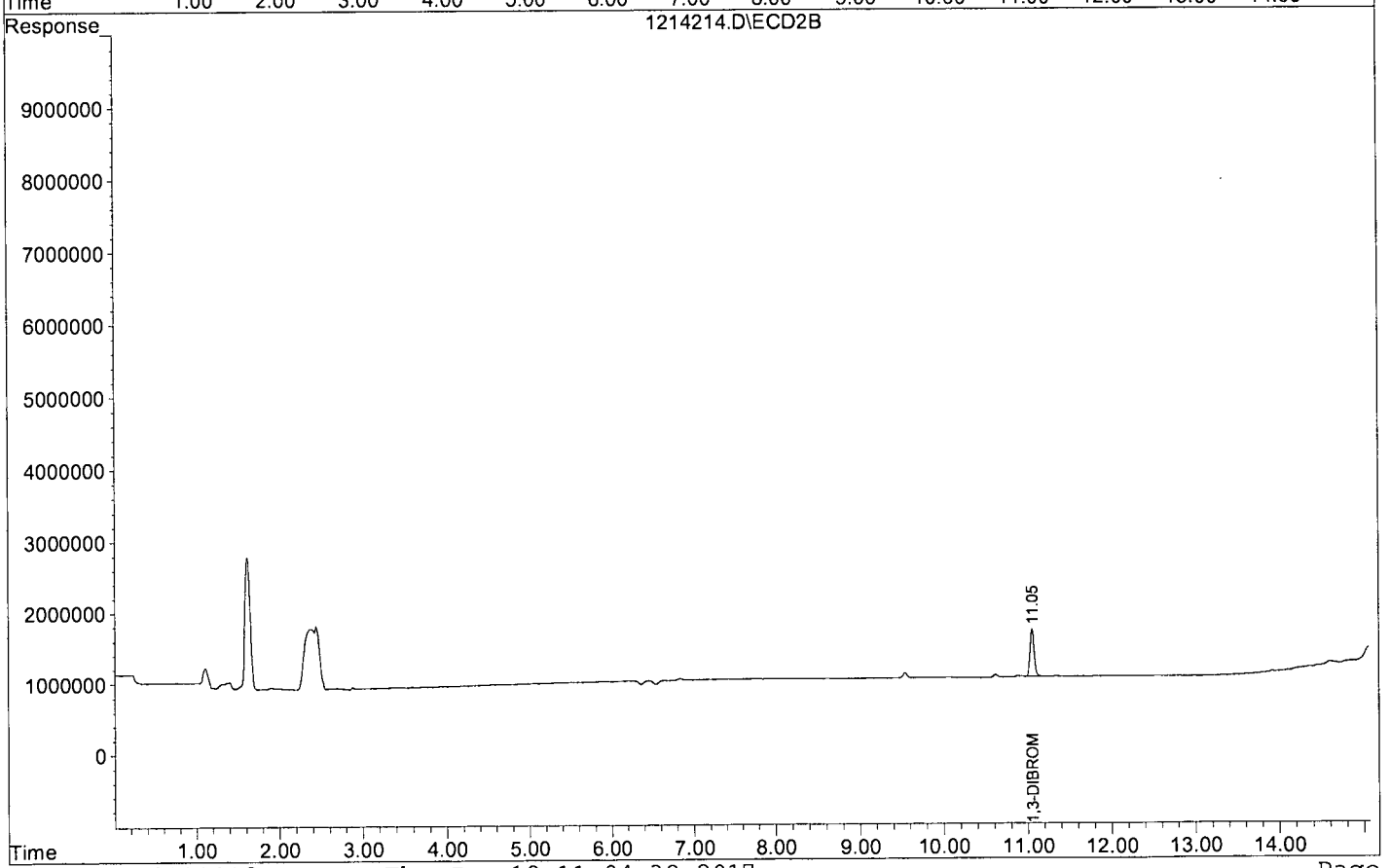
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\161214\1214214.D
Acq On : 01-18-17 18:58:59
Sample : AZ48918W08 2/34.26G
Misc : water
Quant Method : G:\HERBIE\DATA\161011\80111018.M

Vial: 14
Operator: RH
Inst : Herbie
Multiplr: 1.02





EPA 8011

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH201
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48920
QCG: #8011-170118A-215614

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8011	EDB	0.020 U	0.02	0.020	0.010	ug/L	01/18/17	01/18/17
8011	SURROGATE: 1,3-DIBROMOPROPANE	99.1	70-132			%	01/18/17	01/18/17

Quant Method: 80111018.M
Run #: 1214215
Instrument: Herbie
Sequence: 161214
Dilution Factor: 1
Initials: RHA

Printed: 01/19/17 12:18:31 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214215.D\ECD1A.CH Vial: 15
Signal #2 : G:\HERBIE\DATA\161214\1214215.D\ECD2B.CH
Acq On : 01-18-17 19:19:44 Operator: RH
Sample : AZ48920W07 2/34.59G Inst : Herbie
Misc : water Multiplr: 1.01
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Jan 19 10:30 2017 Quant Results File: 80111018.RES

Quant Method : G:\HERBIE\DATA\161011\80111018.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Jan 18 15:12:05 2017
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

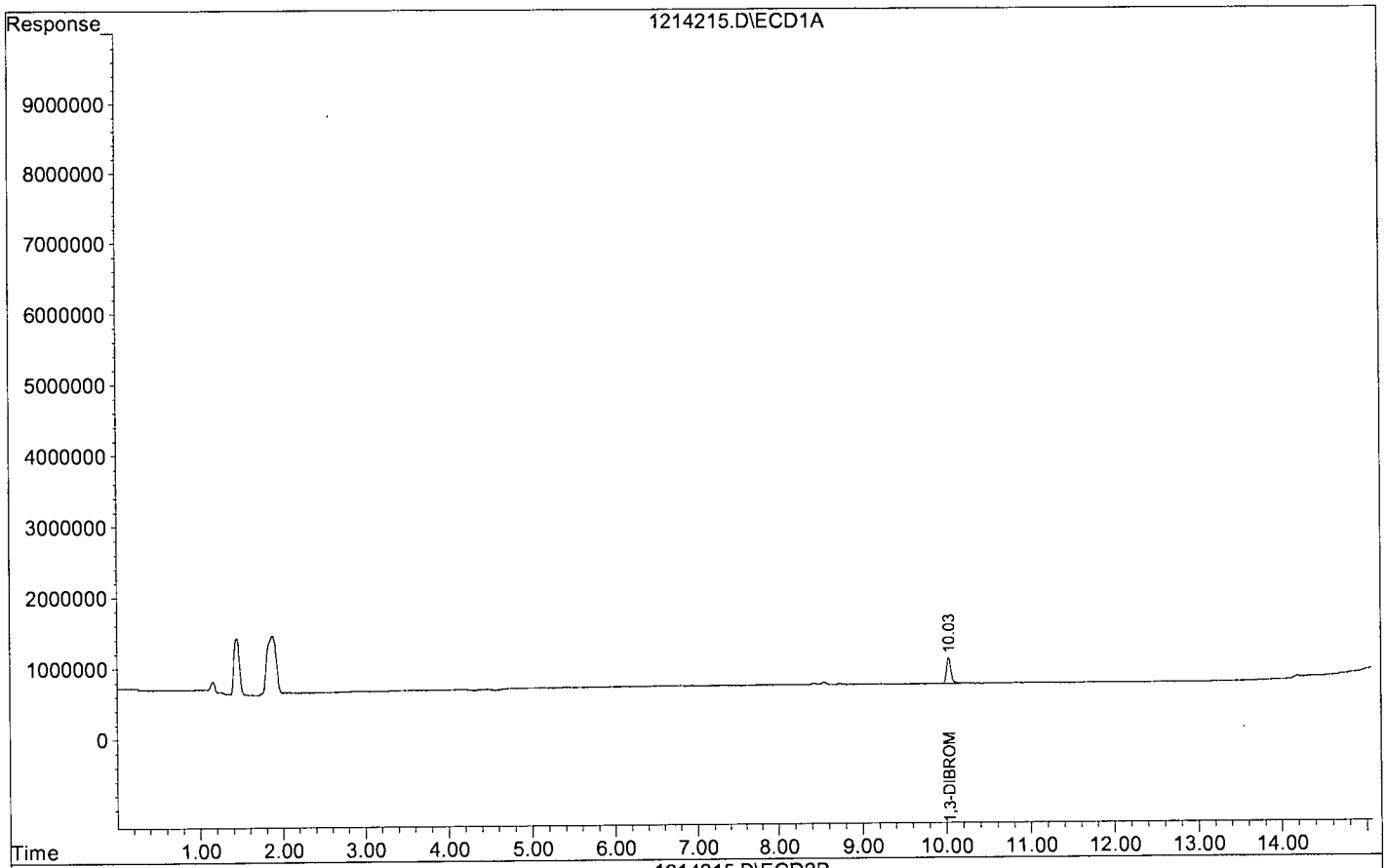
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.06	362838	634260	0.351	0.348
Spiked Amount	0.354			Recovery	=	99.11%	98.26%
	Target Compounds						
	Target Compounds						
1) TM	EDB	0.00	0.00	0	0	N.D. d	N.D. d
2) TM	1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4) TM	DBCP	0.00	0.00	0	0	N.D. d	N.D. d

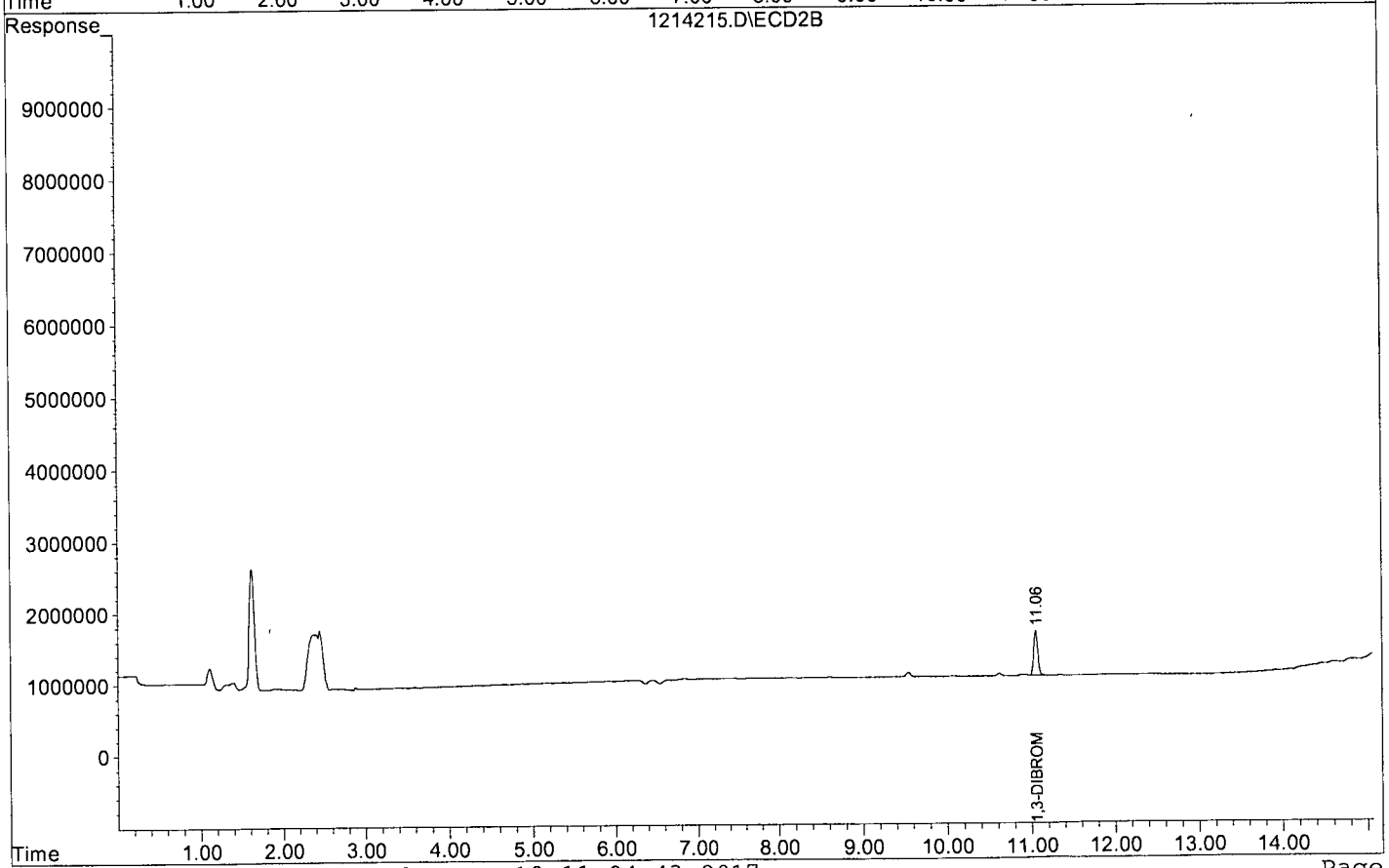
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\161214\1214215.D
Acq On : 01-18-17 19:19:44
Sample : AZ48920W07 2/34.59G
Misc : water
Quant Method : G:\HERBIE\DATA\161011\80111018.M

Vial: 15
Operator: RH
Inst : Herbie
Multiplr: 1.01





ORGANICS

Calibration Data

APPL, INC.

DBCP/EDB/1,2,3-TCP Analysis by
504 8011 0301

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/18/17
Matrix: Instrument: Herbie Initials:

1214195.D 1214196.D 1214197.D 1214198.D 1214199 D 1214200.D

		Compound	1	2	3	4	5	6					Avg	%RSD		
1	TM	EDB	726825	789590	706260	626511	571733	598013					669822	13	TM	
2	TM	1,2,3-TCP	190850	177625	162674	147739	135175	141380					159240	14	TM	
3	S	1,3-DIBROMOPROPANE(S)	512925	628695	566514	505788	456819	464842					522597	12	S	
4	TM	DBCP	2001150	1999380	1889890	1755496	1648399	1712096					1834402	8.2	TM	
5		Signal #2											0	0		
6																
7																
8																
9																
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1.342466

DBCP/EDB/1,2,3-TCP Analysis by
504 8011 0301

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:
SDG No:
Initial Cal. Date: 01/18/17
Instrument: Herbie
Initials:

			1214195.D	1214196.D	1214197.D	1214198.D	1214199.D	1214200.D								
		Compound	1	2	3	4	5	6					Avg	%RSD		
36	TM	EDB #2	1609300	1680260	1572462	1481528	1386279	1448969					1529800	7.2	TM	
37	TM	1,2,3-TCP #2	248300	305375	282372	260407	249081	260363					267650	8.3	TM	
38	S	1,3-DIBROMOPROPANE(S) #2	889225	1050190	955444	914611	854801	871046					922553	7.8	S	
39	TM	DBCP #2	4348975	4910105	4597966	4456386	4488127	4709163					4585120	4.4	TM	
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Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214195.D\ECD1A.CH Vial: 95
Signal #2 : G:\HERBIE\DATA\161214\1214195.D\ECD2B.CH
Acq On : 01-18-17 12:24:48 Operator: RH
Sample : 8011 1 1/18/17 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Jan 18 15:12 2017 Quant Results File: 80111018.RES

Quant Method : G:\HERBIE\DATA\161011\80111018.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Jan 18 15:12:05 2017
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

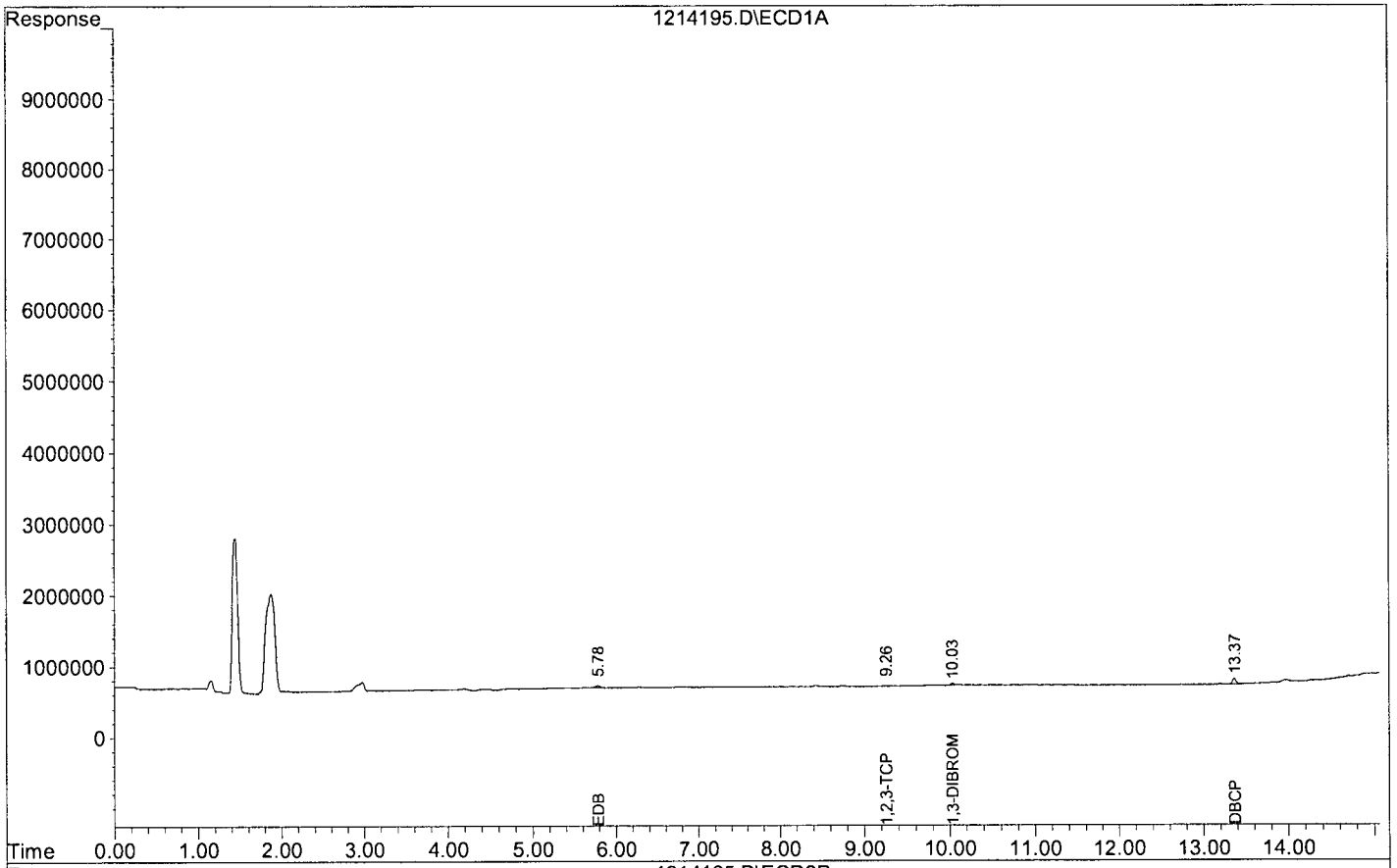
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	System Monitoring Compounds							
3) S	1,3-DIBROMOPROPA	10.03	11.05	20517	35569	0.013	0.018	#
Spiked Amount	0.350			Recovery	=	3.71%	5.14%	
	Target Compounds							
1) TM	EDB	5.78	7.23	29073	64372	0.021	0.019	
2) TM	1,2,3-TCP	9.26	10.46	7634	9932	0.017	0.018	
4) TM	DBCP	13.37	14.10	80046	173959	0.016	0.020	#

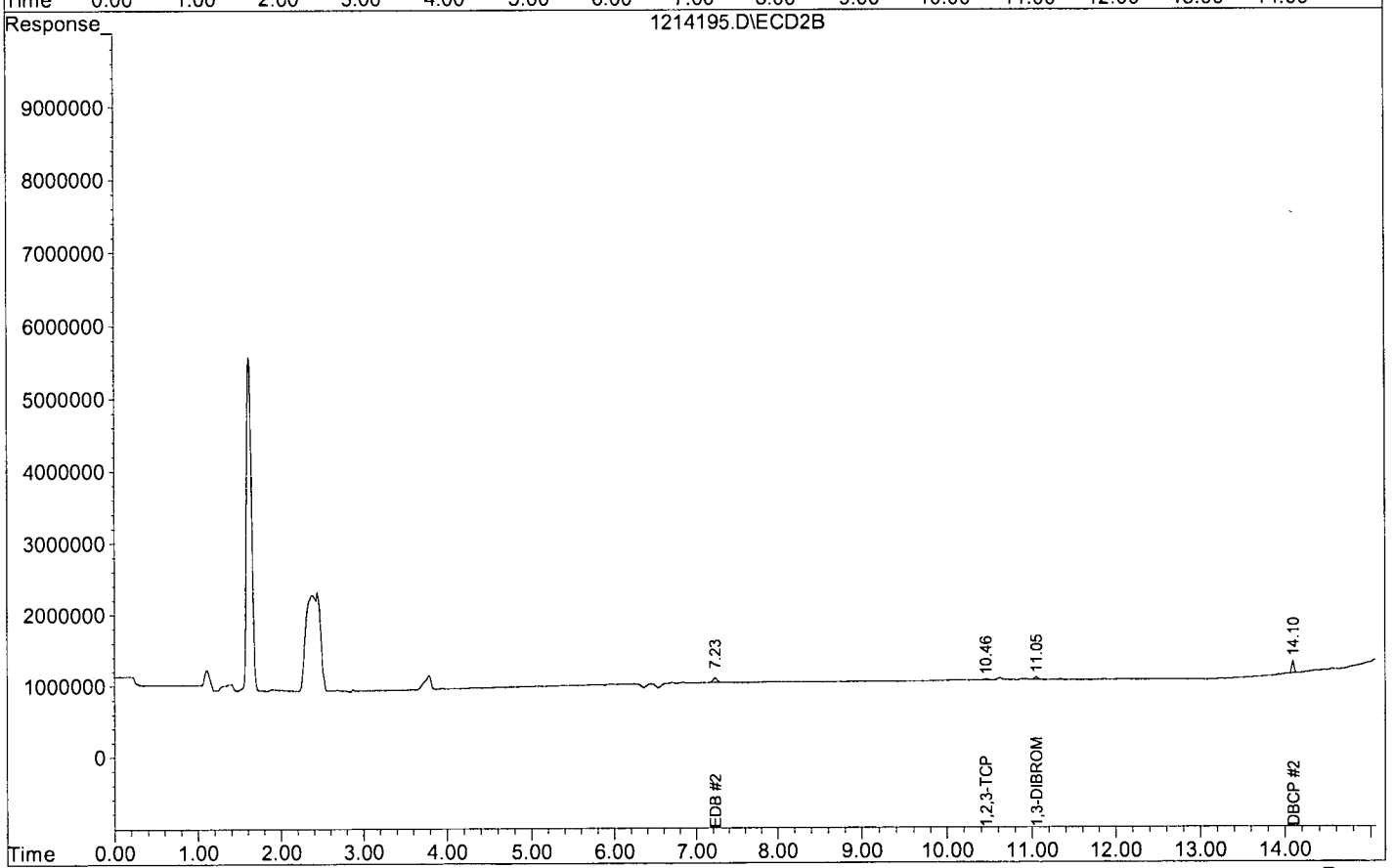
Target Compounds

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214195.D Vial: 95
Acq On : 01-18-17 12:24:48 Operator: RH
Sample : 8011 1 1/18/17 Inst : Herbie
Misc : Multiplr: 1.00
Quant Method : G:\HERBIE\DATA\161011\80111018.M





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214196.D\ECD1A.CH Vial: 96
Signal #2 : G:\HERBIE\DATA\161214\1214196.D\ECD2B.CH
Acq On : 01-18-17 12:45:29 Operator: RH
Sample : 8011 2 1/18/17 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Jan 18 15:12 2017 Quant Results File: 80111018.RES

Quant Method : G:\HERBIE\DATA\161011\80111018.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Jan 18 15:12:05 2017
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	System Monitoring Compounds							
3) S	1,3-DIBROMOPROPA	10.03	11.06	125739	210038	0.081	0.104	#
Spiked Amount	0.350			Recovery	=	23.14%	29.71%	
	Target Compounds							
1) TM	EDB	5.78	7.23	157918	336052	0.113	0.101	
2) TM	1,2,3-TCP	9.26	10.46	35525	61075	0.081	0.109	#
4) TM	DBCP	13.37	14.10	399876	982021	0.080	0.115	#

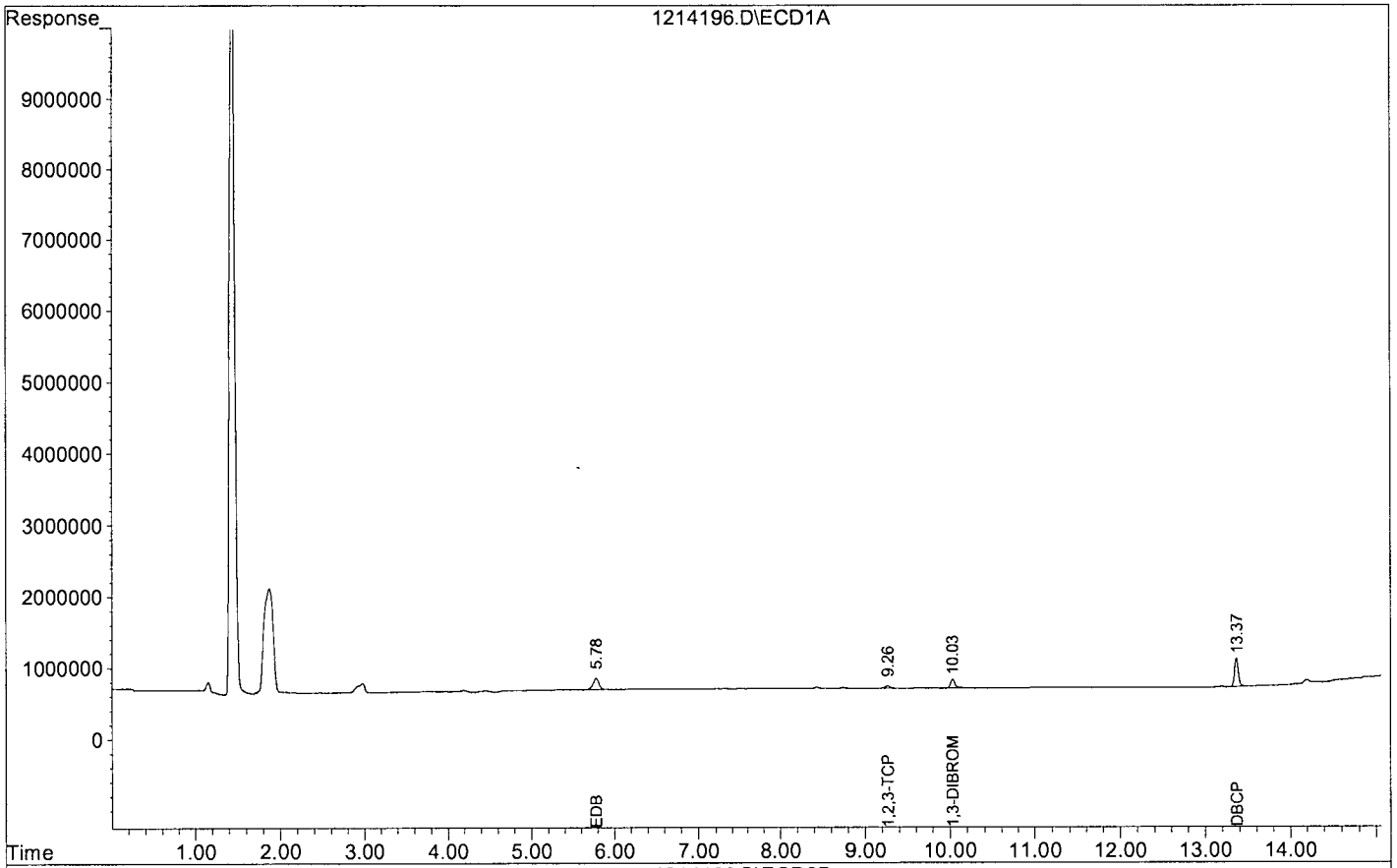
Target Compounds

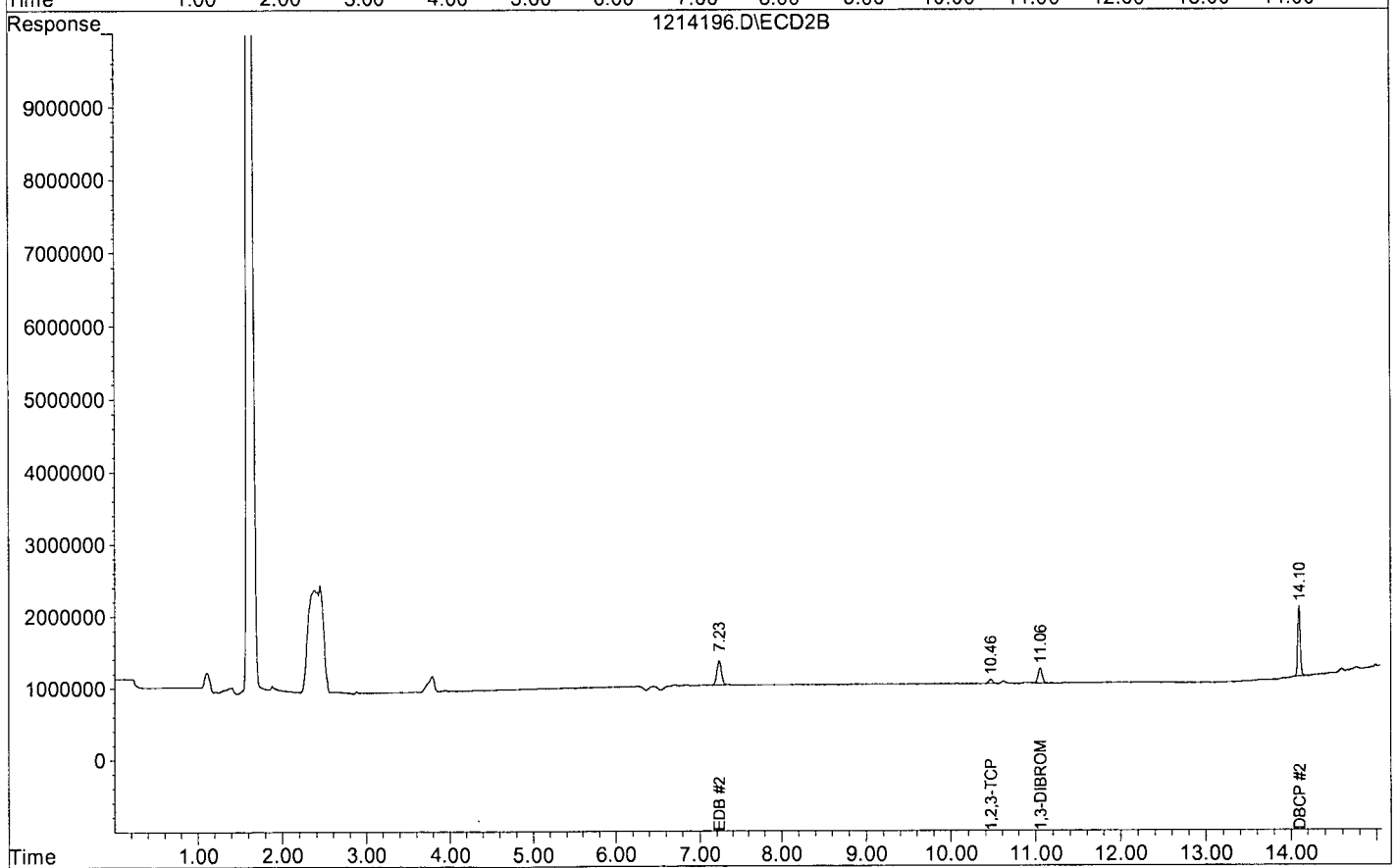
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214196.D
Acq On : 01-18-17 12:45:29
Sample : 8011 2 1/18/17
Misc :
Quant Method : G:\HERBIE\DATA\161011\80111018.M

Vial: 96
Operator: RH
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214197.D\ECD1A.CH Vial: 97
Signal #2 : G:\HERBIE\DATA\161214\1214197.D\ECD2B.CH
Acq On : 01-18-17 13:06:11 Operator: RH
Sample : 8011 3 1/18/17 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Jan 18 15:12 2017 Quant Results File: 80111018.RES

Quant Method : G:\HERBIE\DATA\161011\80111018.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Jan 18 15:12:05 2017
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	System Monitoring Compounds							
3) S	1,3-DIBROMOPROPA	10.03	11.05	283257	477722	0.183	0.237	#
Spiked Amount	0.350			Recovery	=	52.29%	67.71%	
	Target Compounds							
1) TM	EDB	5.78	7.23	353130	786231	0.253	0.237	
2) TM	1,2,3-TCP	9.26	10.46	81337	141186	0.186	0.252	#
4) TM	DBCP	13.36	14.10	944945	2298983	0.189	0.268	#

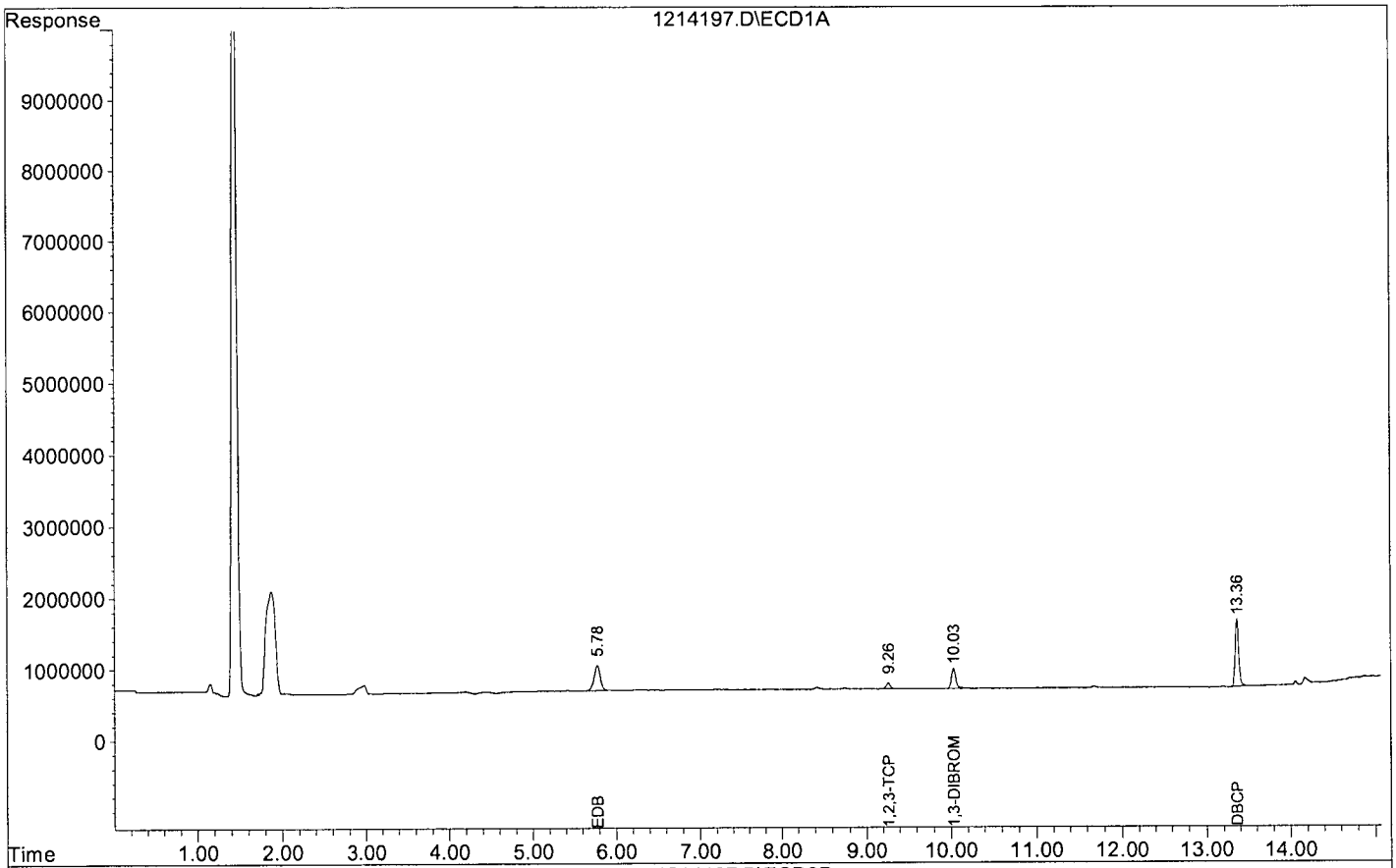
Target Compounds

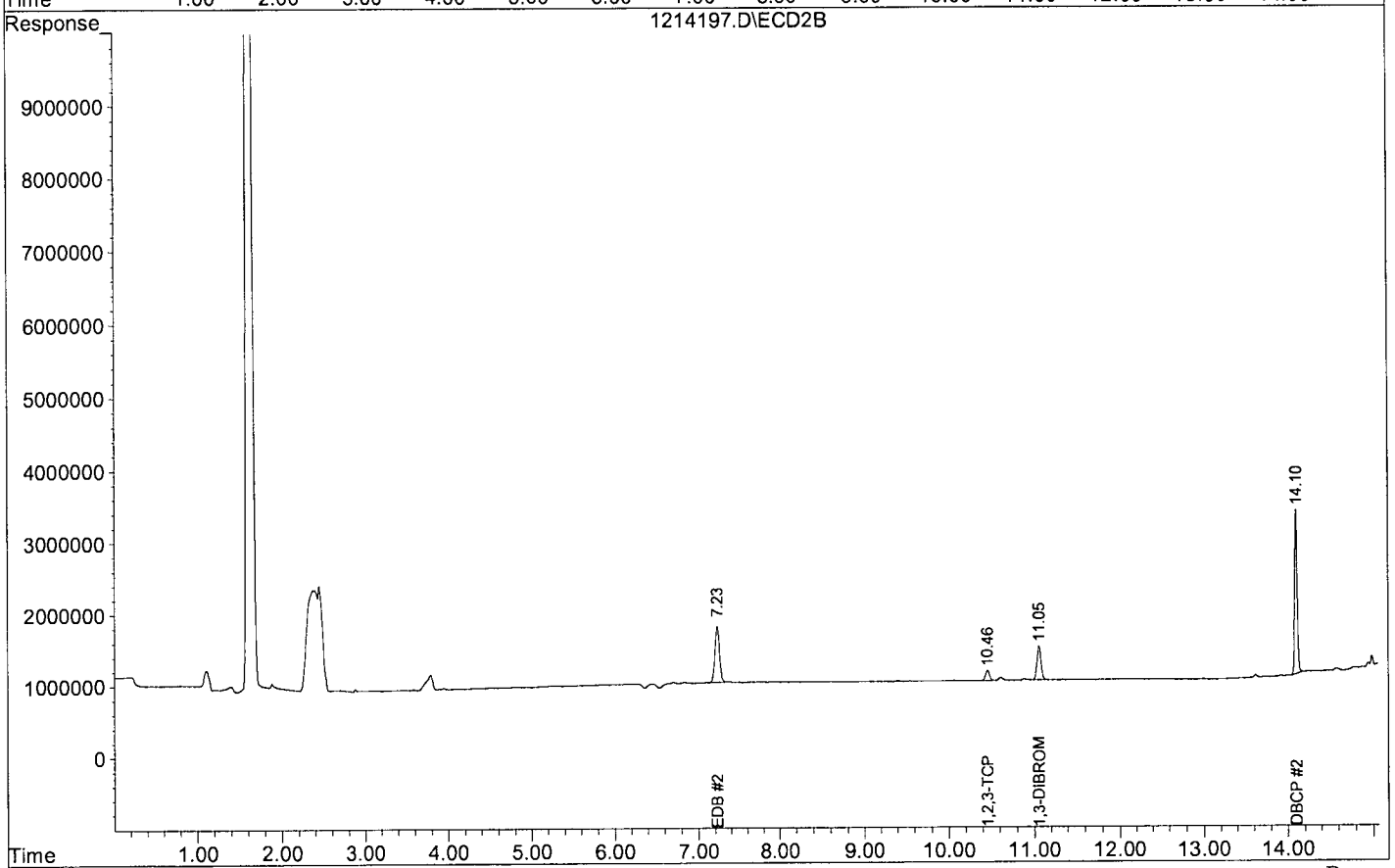
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214197.D
Acq On : 01-18-17 13:06:11
Sample : 8011 3 1/18/17
Misc :
Quant Method : G:\HERBIE\DATA\161011\80111018.M

Vial: 97
Operator: RH
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214198.D\ECD1A.CH Vial: 98
Signal #2 : G:\HERBIE\DATA\161214\1214198.D\ECD2B.CH
Acq On : 01-18-17 13:26:58 Operator: RH
Sample : 8011 4 1/18/17 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Jan 18 15:12 2017 Quant Results File: 80111018.RES

Quant Method : G:\HERBIE\DATA\161011\80111018.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Jan 18 15:12:05 2017
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	System Monitoring Compounds							
3) S	1,3-DIBROMOPROPA	10.03	11.06	505788	914611	0.327	0.454	#
Spiked Amount	0.350			Recovery	=	93.43%	129.71%	
	Target Compounds							
1) TM	EDB	5.78	7.23	626511	1481528	0.448	0.446	
2) TM	1,2,3-TCP	9.26	10.46	147739	260407	0.337	0.465	#
4) TM	DBCP	13.36	14.10	1755496	4456386	0.351	0.520	#

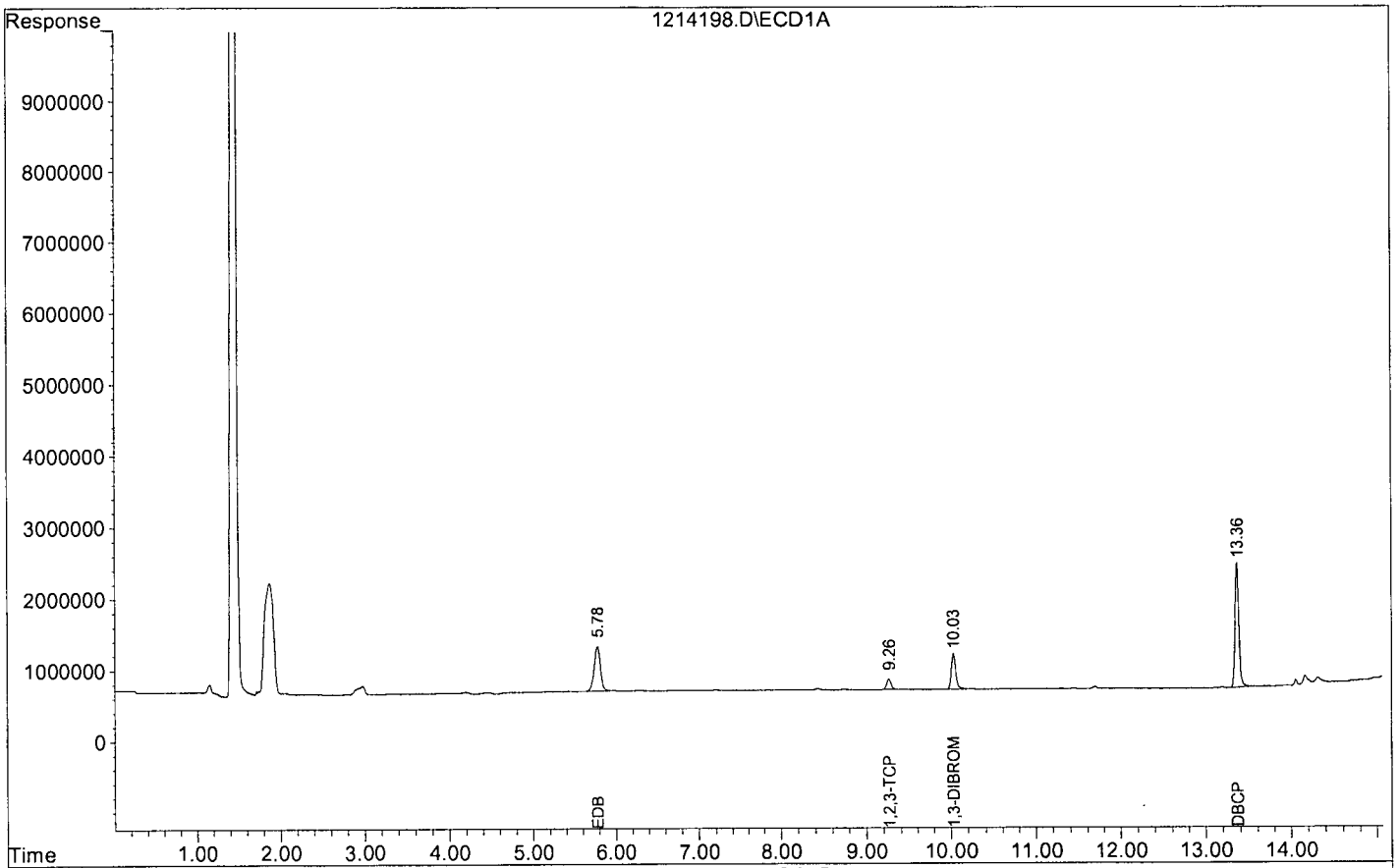
Target Compounds

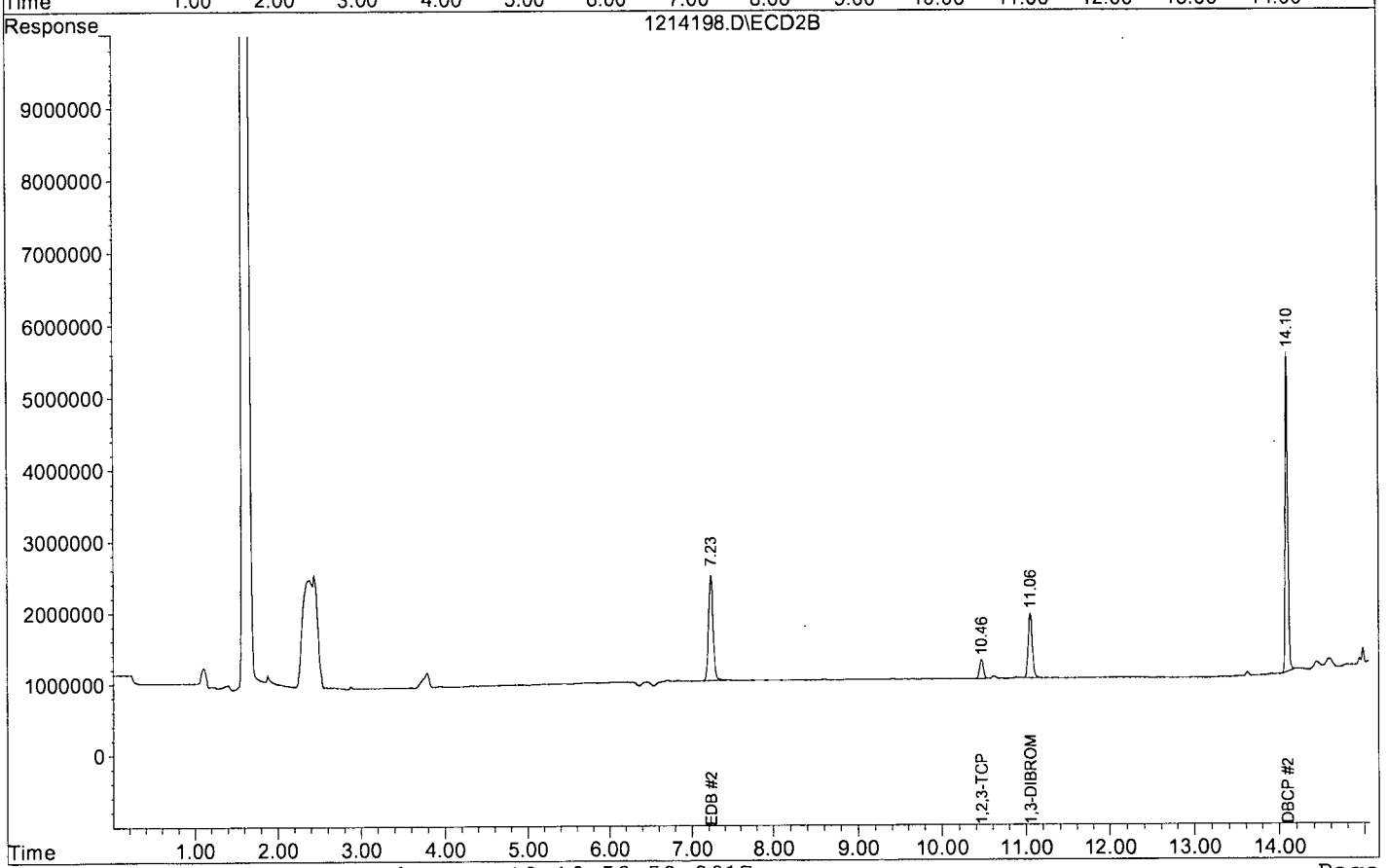
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214198.D
Acq On : 01-18-17 13:26:58
Sample : 8011 4 1/18/17
Misc :
Quant Method : G:\HERBIE\DATA\161011\80111018.M

Vial: 98
Operator: RH
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214199.D\ECD1A.CH Vial: 99
Signal #2 : G:\HERBIE\DATA\161214\1214199.D\ECD2B.CH
Acq On : 01-18-17 13:47:42 Operator: RH
Sample : 8011 5 1/18/17 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Jan 18 15:12 2017 Quant Results File: 80111018.RES

Quant Method : G:\HERBIE\DATA\161011\80111018.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Jan 18 15:12:05 2017
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	System Monitoring Compounds							
3) S	1,3-DIBROMOPROPA	10.03	11.06	685228	1282201	0.443	0.636	#
Spiked Amount	0.350			Recovery	=	126.57%	181.71%	
	Target Compounds							
1) TM	EDB	5.78	7.23	857600	2079418	0.614	0.626	
2) TM	1,2,3-TCP	9.27	10.46	202763	373621	0.463	0.667	#
4) TM	DBCP	13.36	14.10	2472599	6732190	0.494	0.785	#

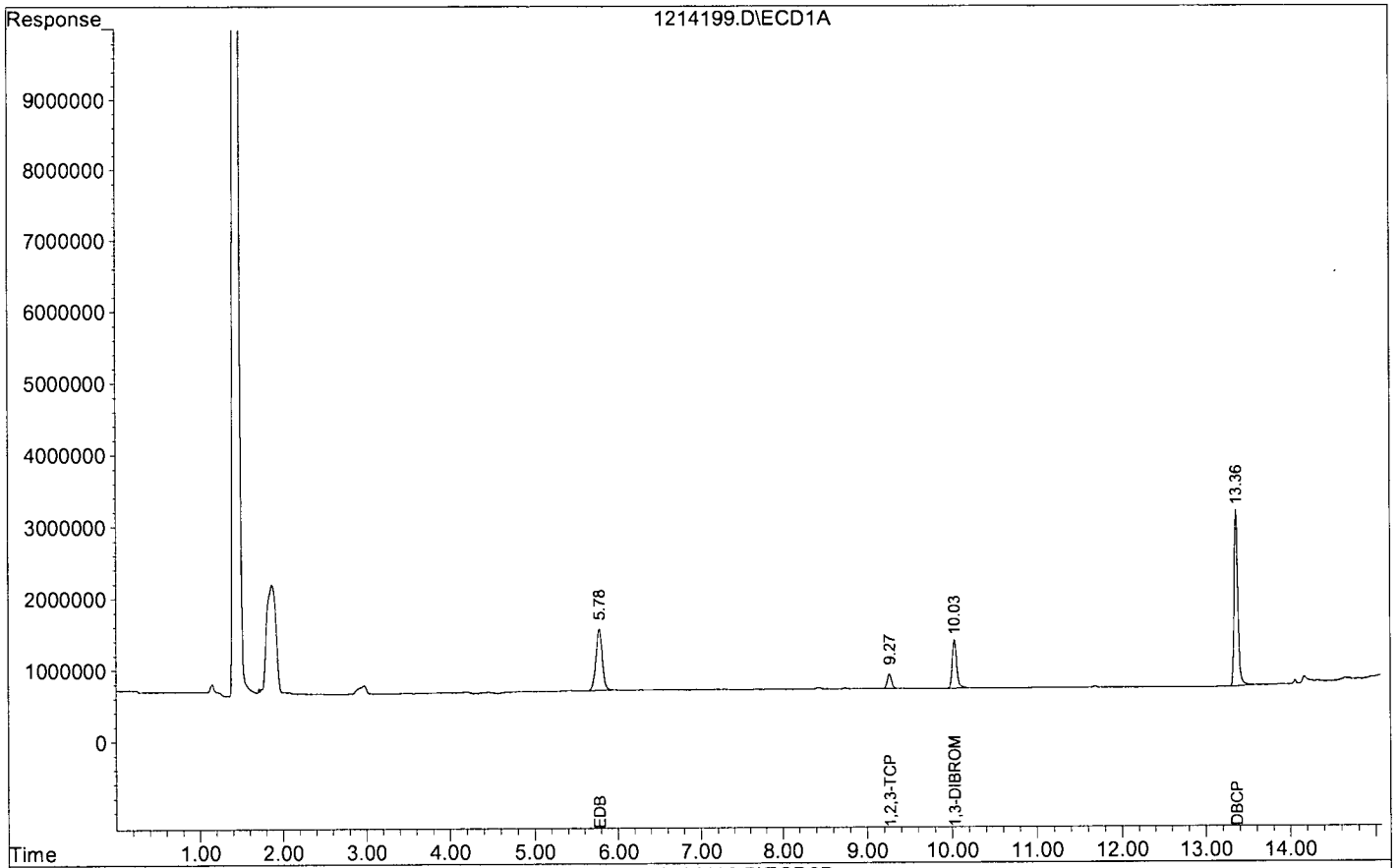
Target Compounds

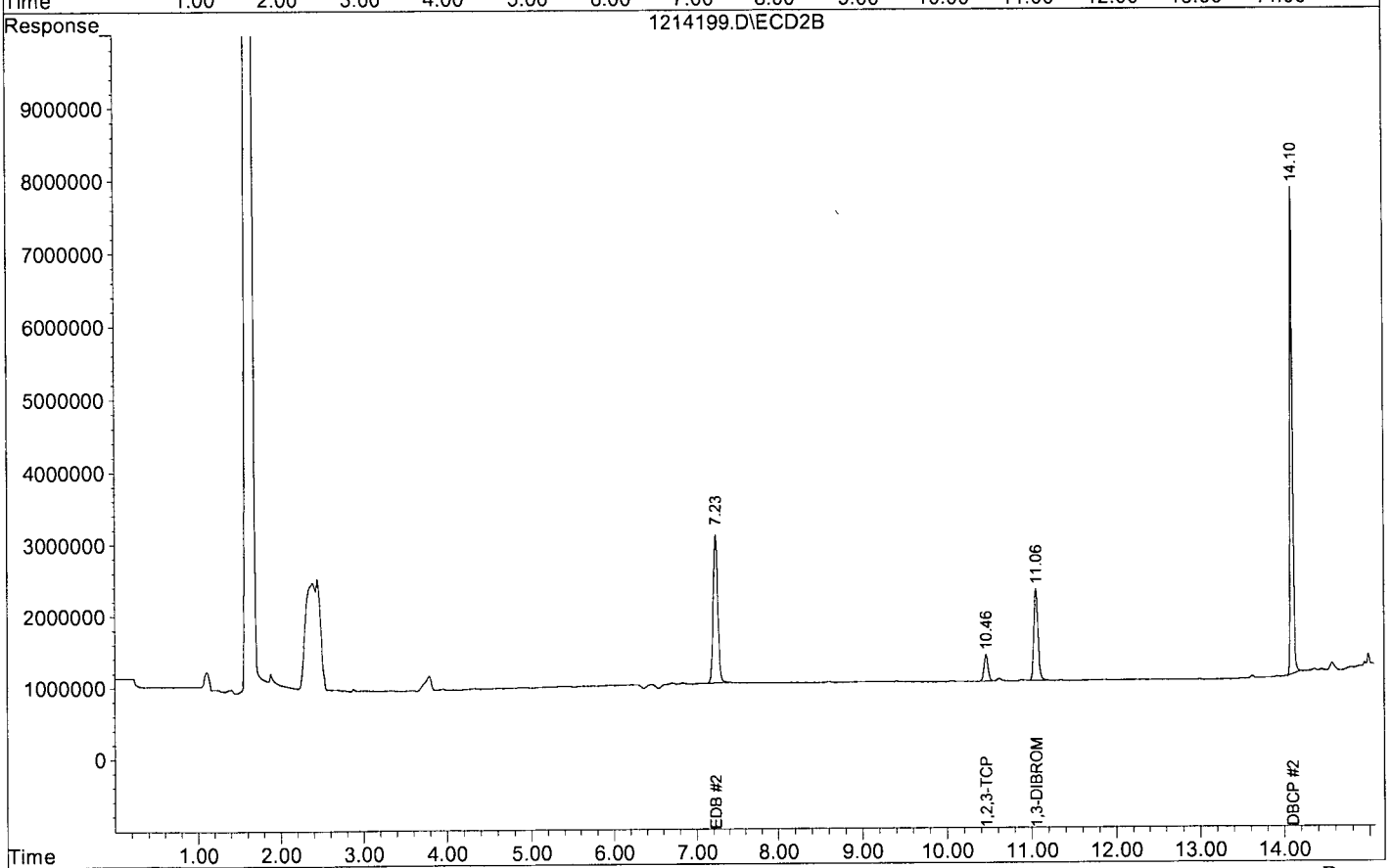
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214199.D
Acq On : 01-18-17 13:47:42
Sample : 8011 5 1/18/17
Misc :
Quant Method : G:\HERBIE\DATA\161011\80111018.M

Vial: 99
Operator: RH
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214200.D\ECD1A.CH Vial: 100
Signal #2 : G:\HERBIE\DATA\161214\1214200.D\ECD2B.CH
Acq On : 01-18-17 14:08:28 Operator: RH
Sample : 8011 6 1/18/17 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Jan 18 15:12 2017 Quant Results File: 80111018.RES

Quant Method : G:\HERBIE\DATA\161011\80111018.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Jan 18 15:12:05 2017
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	System Monitoring Compounds							
3) S	1,3-DIBROMOPROPA	10.03	11.06	929683	1742091	0.601	0.864	#
Spiked Amount	0.350			Recovery	=	171.71%	246.86%	
	Target Compounds							
1) TM	EDB	5.78	7.23	1196026	2897937	0.856	0.872	
2) TM	1,2,3-TCP	9.26	10.46	282759	520726	0.646	0.930	#
4) TM	DBCP	13.36	14.10	3424192	9418326	0.684	1.098	#

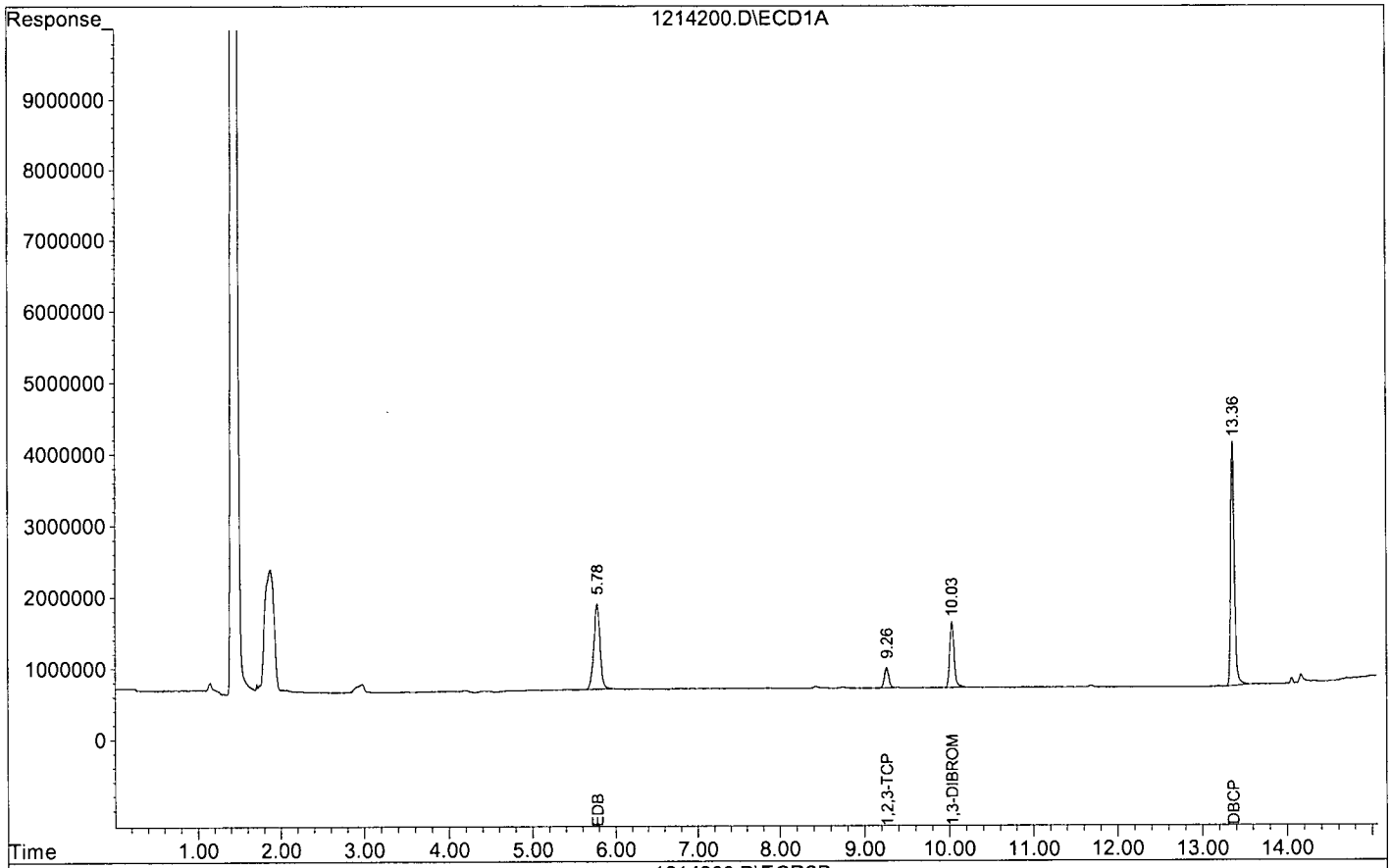
Target Compounds

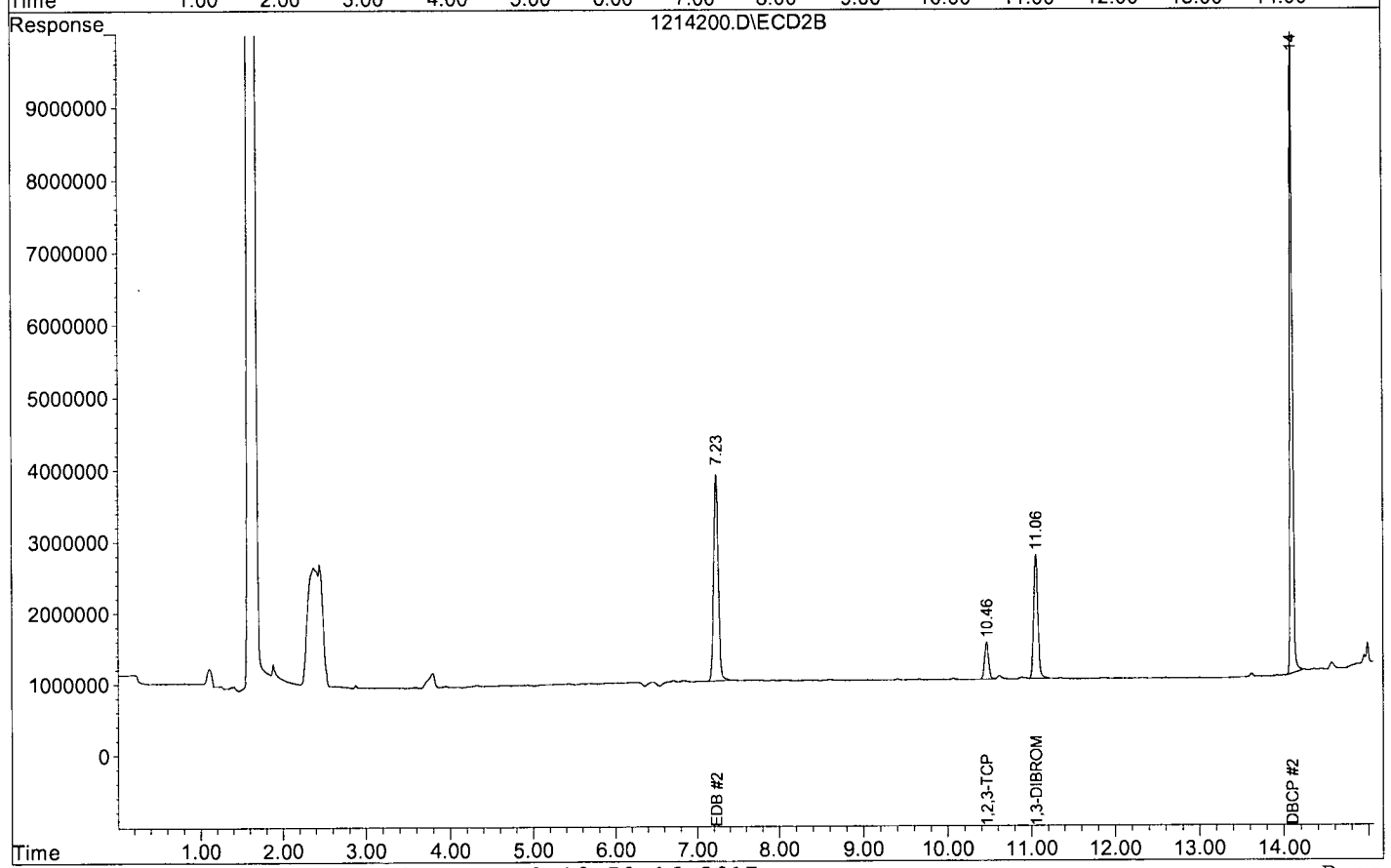
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214200.D
Acq On : 01-18-17 14:08:28
Sample : 8011 6 1/18/17
Misc :
Quant Method : G:\HERBIE\DATA\161011\80111018.M

Vial: 100
Operator: RH
Inst : Herbie
Multiplr: 1.00





DBCP/EDB/1,2,3-TCP Analysis by
504 8011 0301

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/18/17
Instrument: Herbie
Initial Cal. Date: 01/18/17
Data File: 1214203.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TM	EDB	669822	661975	1.2	TM	
2	TM	1,2,3-TCP	159240	154750	2.8	TM	
3	TM	DBCP	1834400	1703110	7.2	TM	
4							
5							
6							
7							
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9							
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38							
39							
40							
		Average			3.7		

DBCP/EDB/1,2,3-TCP Analysis by
504 8011 0301

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/18/17
Instrument: Herbie
Cal. Date: 01/18/17
Data File: 1214203.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	EDB	1529800	1427360	6.7	TM	
42	TM	1,2,3-TCP	267650	247350	7.6	TM	
43	TM	DBCP	4585120	4042250	12	TM	
44							
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80							
		Average			8.8		

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214203.D\ECD1A.CH Vial: 3
Signal #2 : G:\HERBIE\DATA\161214\1214203.D\ECD2B.CH
Acq On : 01-18-17 15:10:44 Operator: RH
Sample : 170118A LCS-1 2/35.15G Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Jan 18 16:39 2017 Quant Results File: 80111018.RES

Quant Method : G:\HERBIE\DATA\161011\80111018.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Jan 18 15:12:05 2017
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	360438	623148	0.343	0.336
Spiked Amount	0.349			Recovery	=	98.42%	96.41%
	Target Compounds						
1) TM	EDB	5.78	7.23	132395	285472	0.098	0.093
2) TM	1,2,3-TCP	9.26	10.46	30950	49470	0.097	0.092
4) TM	DBCP	13.36	14.10	340621	808450	0.092	0.088

Target Compounds

Algorithum check = $\frac{132395 * 1}{669822 * 2}$ = 0.0988

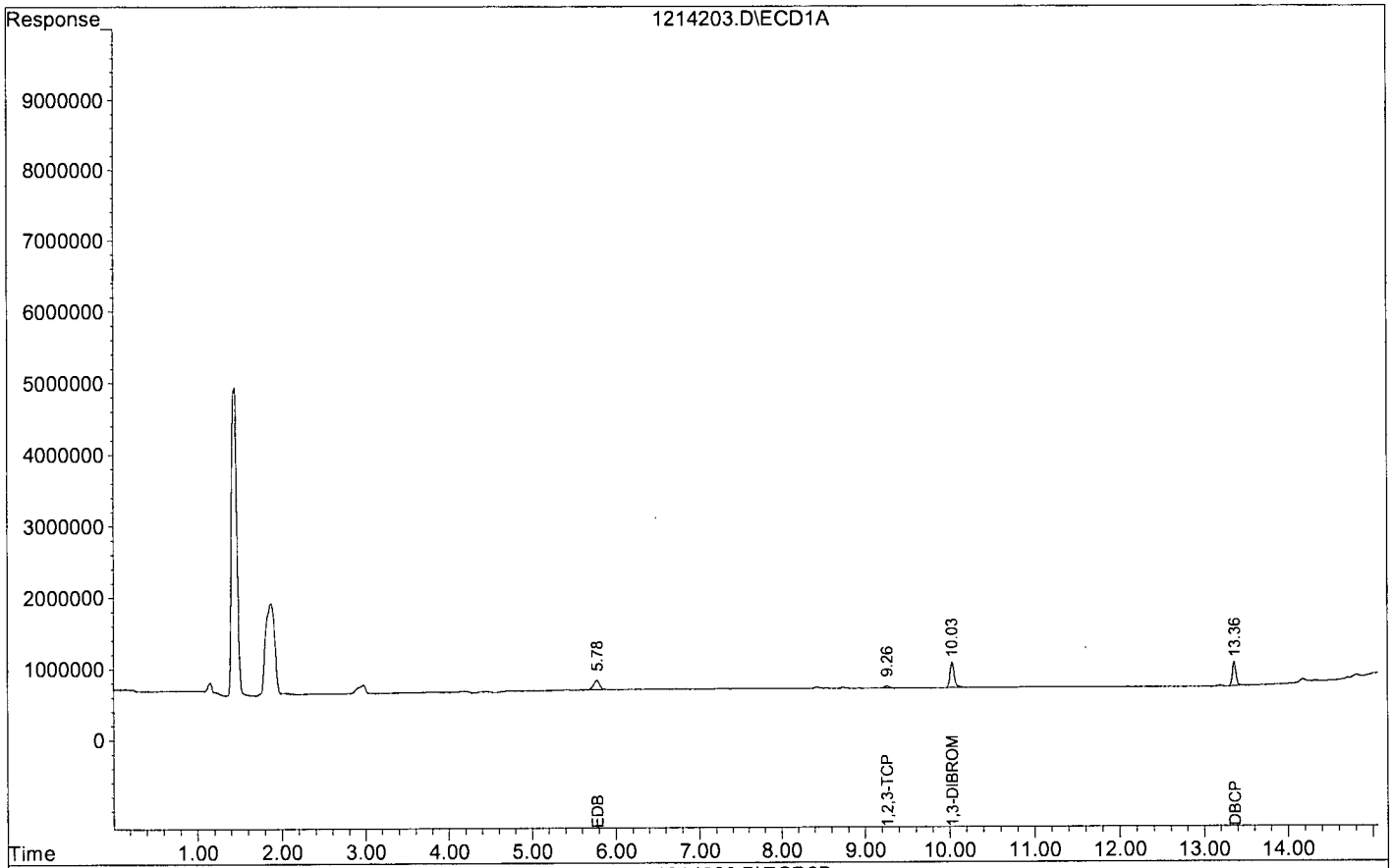
RH 1/19/17

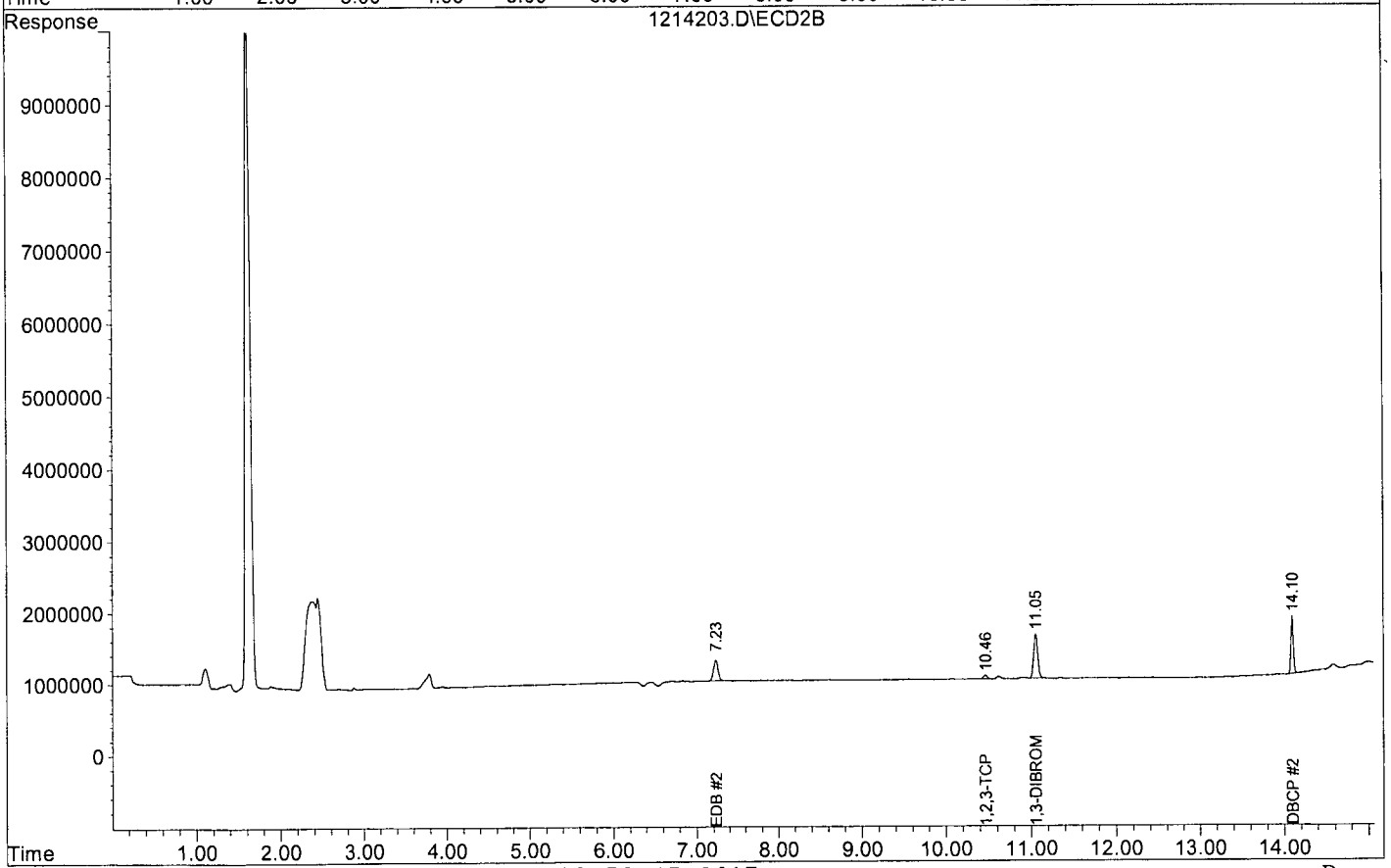
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
1214203.D 80111018.M Thu Jan 19 10:59:44 2017

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214203.D
Acq On : 01-18-17 15:10:44
Sample : 170118A LCS-1 2/35.15G
Misc : water
Quant Method : G:\HERBIE\DATA\161011\80111018.M

Vial: 3
Operator: RH
Inst : Herbie
Multiplr: 1.00





DBCP/EDB/1,2,3-TCP Analysis by
504 8011 0301

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/18/17
Instrument: Herbie
Initial Cal. Date: 01/18/17
Data File: 1214217.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TM	EDB	669822	683194	2.0	TM	
2	TM	1,2,3-TCP	159240	160862	1.0	TM	
3	S	1,3-DIBROMOPROPANE(S)	522597	564228	8.0	S	
4	TM	DBCP	1834400	1883890	2.7	TM	
5							
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36							
37							
38							
39							
40							
		Average			3.4		

DBCP/EDB/1,2,3-TCP Analysis by
504 8011 0301

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/18/17
Instrument: Herbie
Cal. Date: 01/18/17
Data File: 1214217.D

		Compound	MEAN	CCRF	%D	%Drift	
41	TM	EDB	1529800	1564880	2.3	TM	
42	TM	1,2,3-TCP	267650	290052	8.4	TM	
43	S	1,3-DIBROMOPROPANE(S)	922553	962552	4.3	S	
44	TM	DBCP	4585120	4629910	0.98	TM	
45							
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79							
80							
		Average			4.0		

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214217.D\ECD1A.CH Vial: 17
Signal #2 : G:\HERBIE\DATA\161214\1214217.D\ECD2B.CH
Acq On : 01-18-17 20:01:22 Operator: RH
Sample : 8011 3 1/18/17 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Jan 19 10:23 2017 Quant Results File: 80111018.RES

Quant Method : G:\HERBIE\DATA\161011\80111018.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Jan 18 15:12:05 2017
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.05	282114	481276	0.270	0.261
Spiked Amount	0.350			Recovery	=	77.14%	74.57%
	Target Compounds						
1) TM	EDB	5.78	7.23	341597	782442	0.255	0.256
2) TM	1,2,3-TCP	9.26	10.46	80431	145026	0.253	0.271
4) TM	DBCP	13.36	14.10	941946	2314956	0.257	0.252

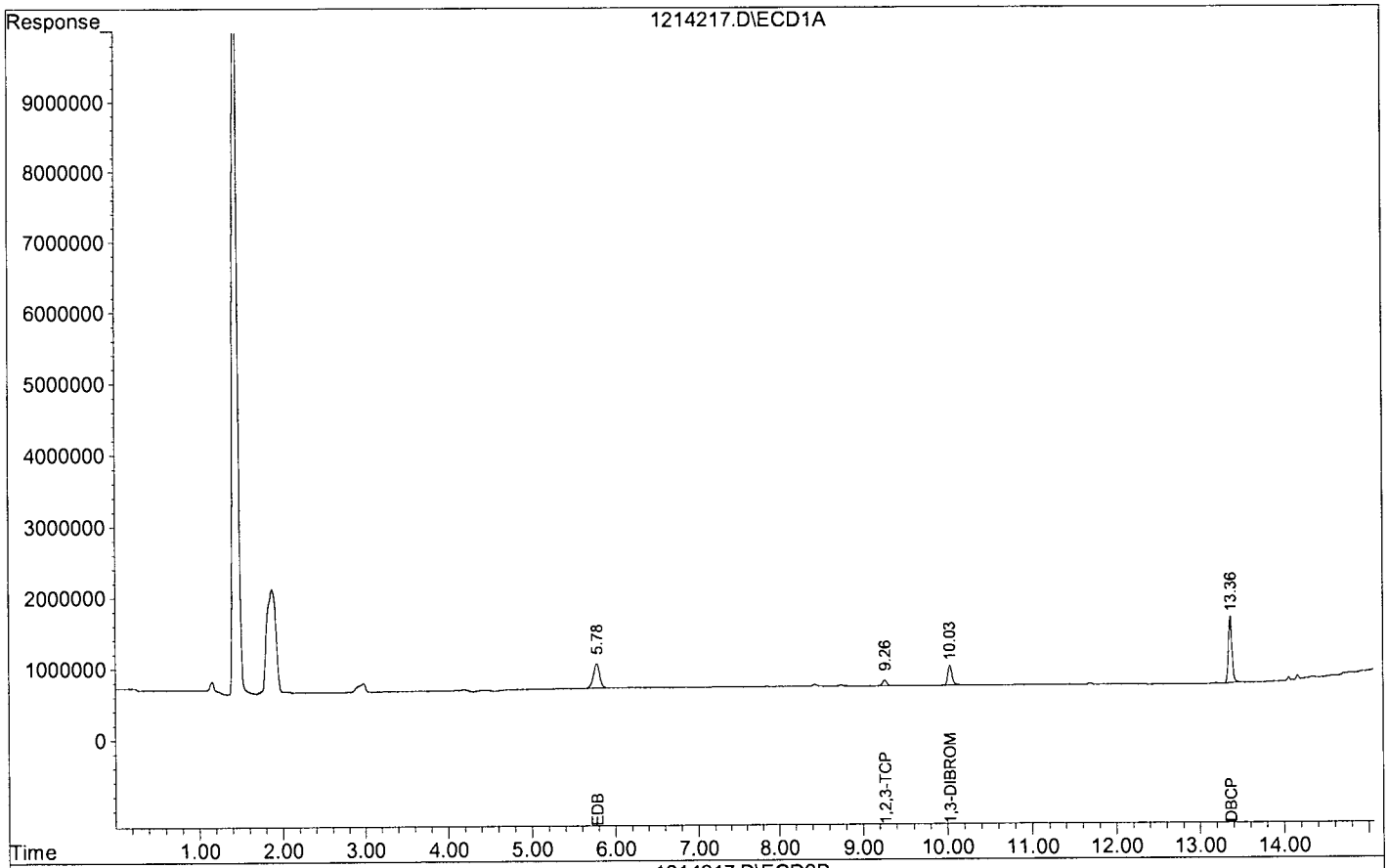
Target Compounds

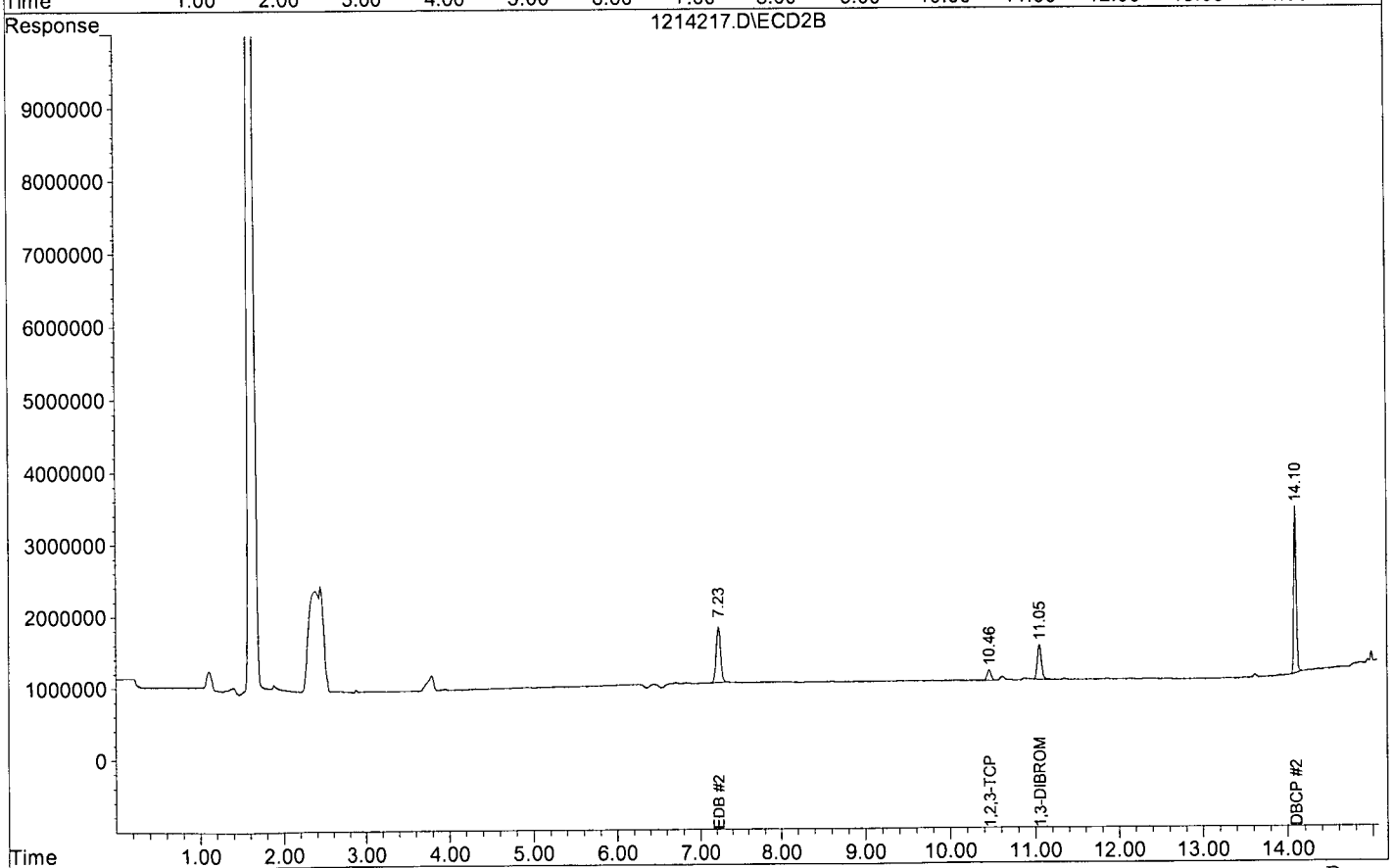
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214217.D
Acq On : 01-18-17 20:01:22
Sample : 8011 3 1/18/17
Misc :
Quant Method : G:\HERBIE\DATA\161011\80111018.M

Vial: 17
Operator: RH
Inst : Herbie
Multiplr: 1.00





ORGANICS

Raw Data

APPL, INC.

Method Blank
EPA 8011

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **170118W-48872 - 215614**
Batch ID: #8011-170118A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	EDB	0.020 U	0.02	0.020	0.010	ug/L	01/18/17	01/18/17
BLANK	SURROGATE: 1,3-DIBROMOPRO	97.5	70-132			%	01/18/17	01/18/17

Quant Method: 80111018.M
Run #: 1214202
Instrument: Herbie
Sequence: 161214
Initials: RHA

GC SC-Blank-REG MDLs-DOD
Printed: 01/19/17 12:18:47 PM

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214202.D\ECD1A.CH Vial: 2
Signal #2 : G:\HERBIE\DATA\161214\1214202.D\ECD2B.CH
Acq On : 01-18-17 14:49:54 Operator: RH
Sample : 170118A BLK 2/33.75G Inst : Herbie
Misc : water Multiplr: 1.04
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Jan 18 15:17 2017 Quant Results File: 80111018.RES

Quant Method : G:\HERBIE\DATA\161011\80111018.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Jan 18 15:12:05 2017
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

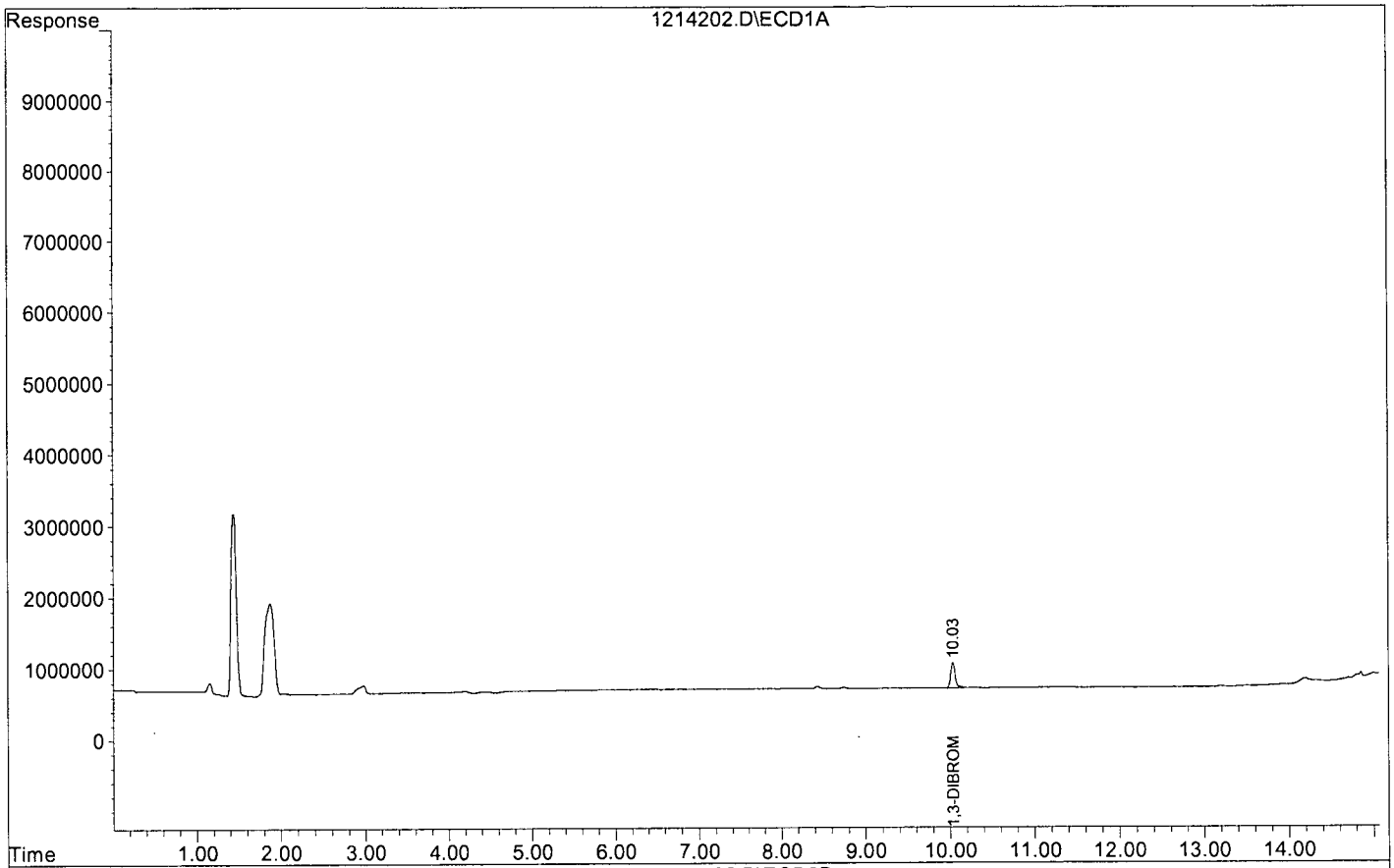
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.03	11.06	356869	628874	0.354	0.353
Spiked Amount	0.363			Recovery	=	97.53%	97.26%
	Target Compounds						
	Target Compounds						
1) TM	EDB	0.00	0.00	0	0	N.D. d	N.D. d
2) TM	1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4) TM	DBCP	0.00	0.00	0	0	N.D. d	N.D. d

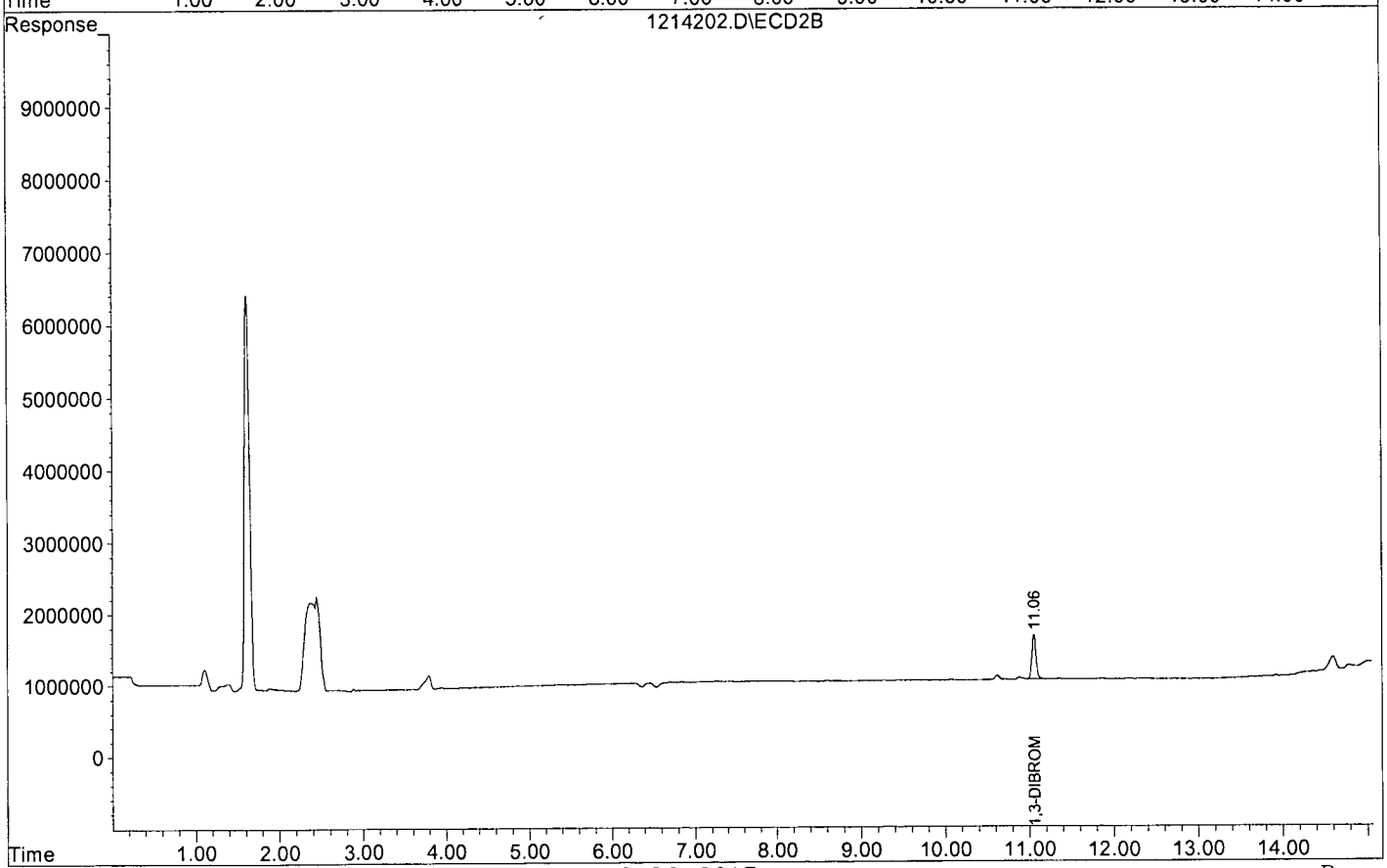
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\161214\1214202.D
Acq On : 01-18-17 14:49:54
Sample : 170118A BLK 2/33.75G
Misc : water
Quant Method : G:\HERBIE\DATA\161011\80111018.M

Vial: 2
Operator: RH
Inst : Herbie
Multiplr: 1.04





Laboratory Control Spike Recovery

EPA 8011

APPL ID: **170118W-48872 LCS - 215614**
Batch ID: #8011-170118A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
EDB	0.250	0.247	98.8	60-140
SURROGATE: 1,3-DIBROMOPROPANE (	0.350	0.259	74.0	70-132

Comments: _____

Primary	SPK
Quant Method :	80111018.M
Extraction Date :	01/18/17
Analysis Date :	01/18/17
Instrument :	Herbie
Run :	1214204
Initials :	RHA

Printed: 01/19/17 12:18:39 PM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\161214\1214204.D\ECD1A.CH Vial: 4
Signal #2 : G:\HERBIE\DATA\161214\1214204.D\ECD2B.CH
Acq On : 01-18-17 15:31:28 Operator: RH
Sample : 170118A LCS-2 2/35.29G Inst : Herbie
Misc : water Multiplr: 0.99
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Jan 18 16:39 2017 Quant Results File: 80111018.RES

Quant Method : G:\HERBIE\DATA\161011\80111018.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Wed Jan 18 15:12:05 2017
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
3) S 1,3-DIBROMOPROPA	10.03	11.05	272612	461341	0.259	0.248
Spiked Amount 0.347			Recovery =		74.61%	71.44%
Target Compounds						
1) TM EDB	5.78	7.23	334009	746998	0.247	0.242
2) TM 1,2,3-TCP	9.26	10.46	78181	137048	0.243	0.254
4) TM DBCP	13.36	14.10	887632	2195482	0.240	0.237

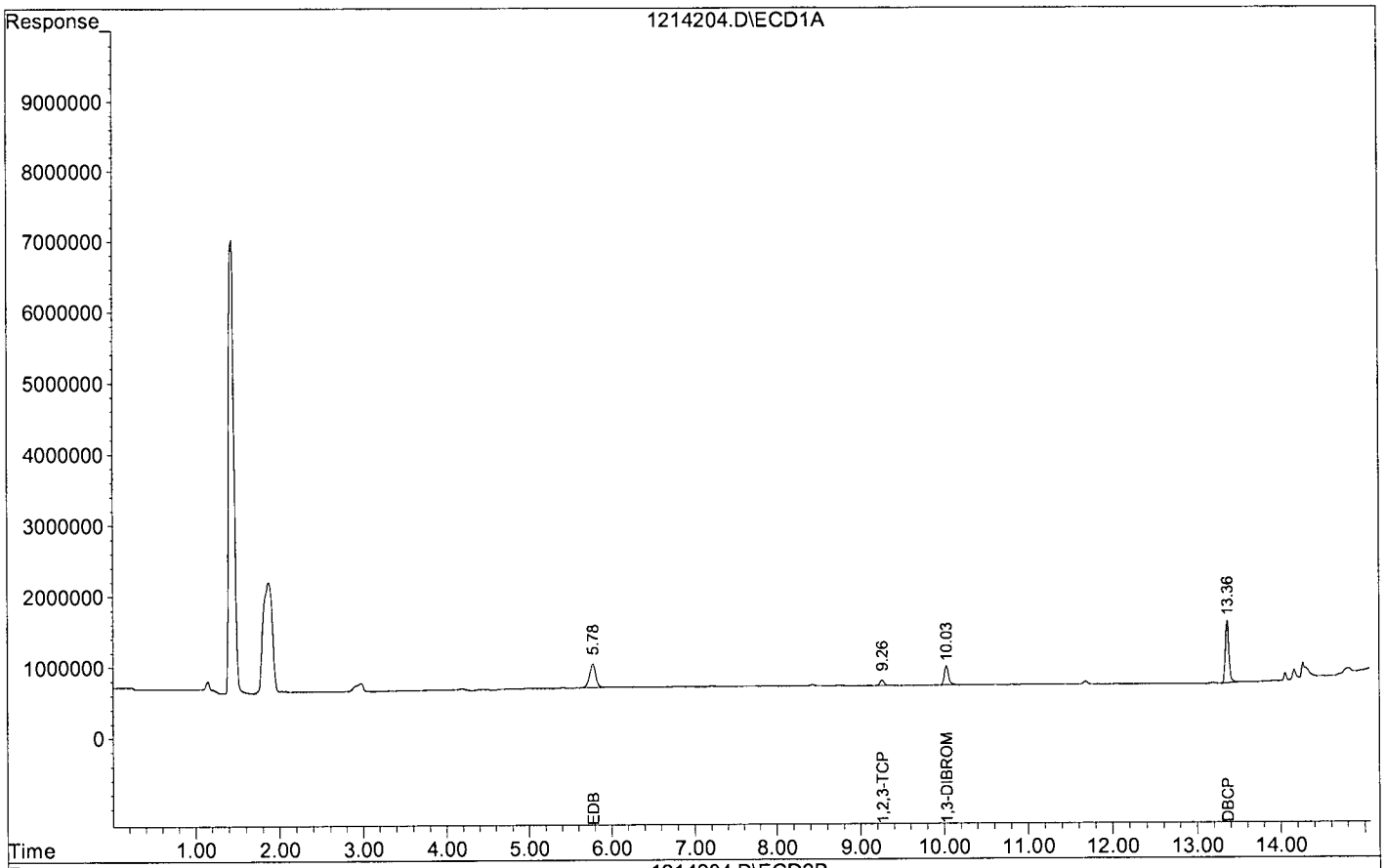
Target Compounds

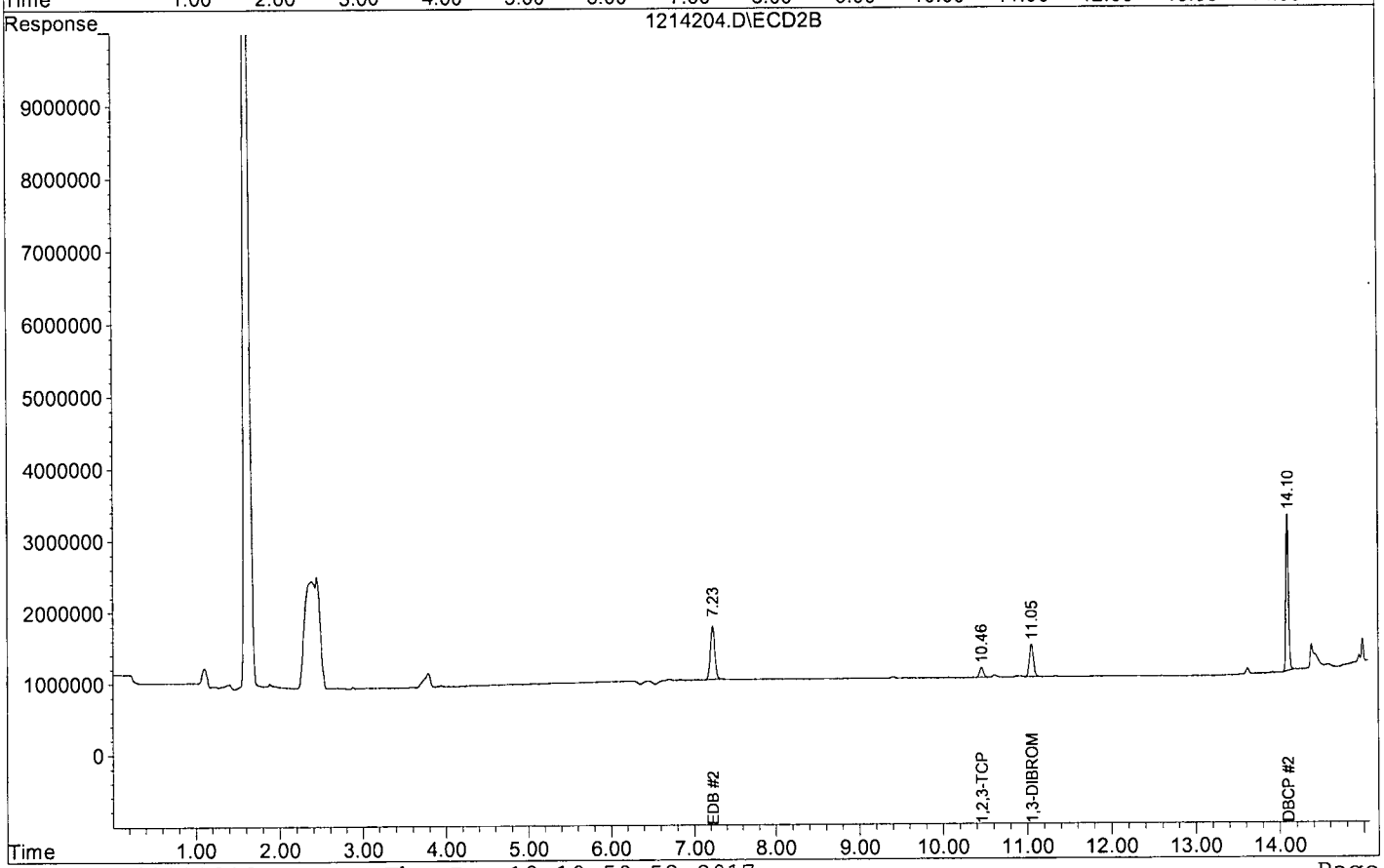
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\161214\1214204.D
Acq On : 01-18-17 15:31:28
Sample : 170118A LCS-2 2/35.29G
Misc : water
Quant Method : G:\HERBIE\DATA\161011\80111018.M

Vial: 4
Operator: RH
Inst : Herbie
Multiplr: 0.99





		504/8011 SS STOCK				
Prep: 1/18/17 RH Ex: 1/18/18						
Compound	**Initial Conc.**	**Source**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
EDB	200ug/mL	Absolute	44uL	25mL	0.35ug/mL	Methanol
TCP		CAT 30096				010616A
DBCP		Lot 010615-37436				
		open 1/18/17				
		exp 1/18/18				

		504/8011 SS				
Prep: 1/18/17 RH Ex: 7/18/17						
Compound	**Initial Conc.**	**Source**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
EDB	0.35ug/mL	504/8011 SS STC	1000uL	10mL	0.035ug/mL	Methanol
TCP		prep. 1/18/17				010616A
DBCP		Exp: 1/18/18				

	504/8011 SURROGATE					
Prep: 1/18/17-R.H. Ex: 6/7/17						
Compound	**Initial Conc.**	**Source**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
1,3 DBP	100	1,3 DBP STOCK	35ul	10mL	0.35ug/mL	Methanol
		prep. 6/7/16				010616A
		exp. 6/7/17				

		504/8011 M STD					
Prep: 12/19/16 Exp: 04/19/17 RH							
Compound	**Initial Conc.**	**Source**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**	
EDB	0.35ug/mL	504/8011 M STD STK	1000uL	10mL	0.035ug/mL	Methanol	
TCP		prep.12/08/16				021915C	
DBCP		exp: 04/08/17					
1,3 DBP							

504/8011 M STD STOCK						
Prep: 12/08/16-R.H.		Exp: 04/08/17				
Compound	**Initial Conc.**	**Source**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
EDB	20ug/mL	504/DOHS STOCK	438uL	25mL	0.35ug/mL	Methanol
TCP		prep. 06/07/16				021915C
DBCP		exp: 06/07/17				
1,3 DBP	100ug/mL	1,3 DBP STOCK	88uL			
		prep.06/07/16				
		exp. 06/07/17				

1,3-DBP STOCK						
Compounds	**Init. Conc.**	**Stock SRC**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
1,3 DBP	1000ug/mL	Absolute	1000uL	10mL	100ug/mL	Methanol
	Cat:	71326				Lot # 021915C
	Lot:	031413-33900				
	Op:	06/07/16				
	Exp:	06/07/17		Prep: 6/7/16 Exp: 6/7/17 LH		

504 DOHS STOCK prep: 6/7/16 Exp: 6/7/17 LH						
Compounds	**Init. Conc.**	**Stock SRC**	**Aliquot**	**Final Vol.**	**Final Conc.**	**Solvent**
EDB	1000ug/mL	O2SI	500uL	25mL	20ug/mL	Methanol
TCP	Cat:	130271-08				Lot # 021915C
DBCP	Lot:	270815-36134				
	Op:	06/07/16				
	Exp:	06/07/17				

_MWE012

Organic Extraction Worksheet

Method	EPA Method 8011 DBCP/EDB	Extraction Set	170118A	Extraction Method	MWE012	Units	mL

Spiked ID 1	504.1 SS 1-18-17 exp 7-18-17		Surrogate ID 1	504.1 Surrogate 1-18-17 exp 6-7-17	
Spiked ID 2	504.1 M. STD 12-19-16 exp 4-8-17		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	01/18/17 10:00	
Spiked ID 8			Ext. End Time:	01/18/17 11:20	
			GC Requires Extract By:	01/19/17 0:00	

pH1			Water Bath Temp Criteria	
pH2				
pH3				

Spiked By: KY **Date** 01/18/17 **Witnessed By:** JR **Date** 01/18/17

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	170118A Blk				0.035	1 equip	33.75g	2	7	01/18/17 10:00	
2	170118A LCS-1		0.1	1	0.035	1 equip	35.15g	2	7	01/18/17 10:00	
3	170118A LCS-2		0.250	2	NA	NA equip	35.29g	2	7	01/18/17 10:00	
4	AZ48872 MS-1	AZ48872W18	0.1	1	0.035	1 equip	34.50g	2	7	01/18/17 10:00	81965 RUSH 1 WEEK
5	AZ48872 MSD-1	AZ48872W15	0.1	1	0.035	1 equip	34.61g	2	7	01/18/17 10:00	81965 RUSH 1 WEEK
6	AZ48872 MS-2	AZ48872W14	0.250	2	NA	NA equip	34.61g	2	7	01/18/17 10:00	81965 RUSH 1 WEEK
7	AZ48872 MSD-2	AZ48872W13	0.250	2	NA	NA equip	34.67g	2	7	01/18/17 10:00	81965 RUSH 1 WEEK
8	AZ48872	AZ48872W16			0.035	1 equip	34.75g	2	7	01/18/17 10:00	81965 RUSH 1 WEEK
9	AZ48873	AZ48873W05			0.035	1 equip	34.64g	2	7	01/18/17 10:00	81965 RUSH 1 WEEK
10	AZ48874	AZ48874W05			0.035	1 equip	34.13g	2	7	01/18/17 10:00	81965 RUSH 1 WEEK
11	AZ48916	AZ48916W07			0.035	1 equip	34.69g	2	7	01/18/17 10:00	81971 RUSH 1 WEEK
12	AZ48917	AZ48917W08			0.035	1 equip	34.88g	2	7	01/18/17 10:00	81971 RUSH 1 WEEK
13	AZ48918	AZ48918W08			0.035	1 equip	34.26g	2	7	01/18/17 10:00	81971 RUSH 1 WEEK
14	AZ48920	AZ48920W07			0.035	1 equip	34.59g	2	7	01/18/17 10:00	81971 RUSH 1 WEEK
15	M STD 1		0.020	2	NA	NA equip	35.19g	2	7	01/18/17 10:00	
16	M STD 2		0.1	2	NA	NA equip	35.44g	2	7	01/18/17 10:00	

Solvent and Lot#	
NaCL	16B100011
Sod. Thiosulfate	24050
GC2 Hexane	DN636

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	RH
Date	1/18/17
Time	1:00
Refrigerator	Hobert

	Technician's Initials
Scanned By	JR
Sample Preparation	KY
Extraction	KY
Concentration	-------

Modified	01/18/17 11:30:13 AM

Reviewed By: [illegible] **Date** 1/18/17

Organic Extraction Worksheet

Method	EPA Method 8011 DBCP/EDB	Extraction Set	170118A	Extraction Method	MWE012	Units	mL

Spiked ID 1	504.1 SS 1-18-17 exp 7-18-17		Surrogate ID 1	504.1 Surrogate 1-18-17 exp 6-7-17	
Spiked ID 2	504.1 M. STD 12-19-16 exp 4-8-17		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	01/18/17 10:00	
Spiked ID 8			Ext. End Time:	01/18/17 11:20	
			GC Requires Extract By:	01/19/17 0:00	

pH1			Water Bath Temp Criteria	
pH2				
pH3				

Spiked By: KY **Date** 01/18/17 **Witnessed By:** JR **Date** 01/18/17

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
17	M STD 3		0.250	2	NA	NA equip	35.49g	2	7	01/18/17 10:00	
18	M STD 4		0.5	2	NA	NA equip	35.42g	2	7	01/18/17 10:00	
19	M STD 5		0.750	2	NA	NA equip	35.42g	2	7	01/18/17 10:00	
20	M STD 6		1	2	NA	NA equip	35.08g	2	7	01/18/17 10:00	

KY 1/18/17

Solvent and Lot#	
NaCL	16B100011
Sod. Thiosulfate	24050
GC2 Hexane	DN636

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	RH
Date	
Time	
Refrigerator	

	Technician's Initials
Scanned By	JR
Sample Preparation	KY
Extraction	KY
Concentration	------

Modified	01/18/17 11:30:13 AM

Reviewed By: KY **Date** 1/18/17

Injection Log

Directory: G:\HERBIE\DATA\161214\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	95	1214195.D	1	8011 1 1/18/17		01-18-17 12:24:48
2	96	1214196.D	1	8011 2 1/18/17		01-18-17 12:45:29
3	97	1214197.D	1	8011 3 1/18/17		01-18-17 13:06:11
4	98	1214198.D	1	8011 4 1/18/17		01-18-17 13:26:58
5	99	1214199.D	1	8011 5 1/18/17		01-18-17 13:47:42
6	100	1214200.D	1	8011 6 1/18/17		01-18-17 14:08:28
7	2	1214202.D	1.03704	170118A BLK 2/33.75G	water	01-18-17 14:49:54
8	3	1214203.D	0.99573	170118A LCS-1 2/35.15G	water	01-18-17 15:10:44
9	4	1214204.D	0.991782	170118A LCS-2 2/35.29G	water	01-18-17 15:31:28
10	12	1214212.D	1.00894	AZ48916W07 2/34.69G	water	01-18-17 18:17:21
11	13	1214213.D	1.00344	AZ48917W08 2/34.88G	water	01-18-17 18:38:15
12	14	1214214.D	1.0216	AZ48918W08 2/34.26G	water	01-18-17 18:58:59
13	15	1214215.D	1.01185	AZ48920W07 2/34.59G	water	01-18-17 19:19:44
14	17	1214217.D	1	8011 3 1/18/17		01-18-17 20:01:22

ORGANICS

APPL, INC.

ORGANICS
QC Summary

APPL, INC.

Method Blank

EPA 8015B TPH WATER

Blank Name/QCG: **170116W-48866 - 215613**

Batch ID: #DOC53-170116A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	01/16/17	01/18/17
BLANK	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	01/16/17	01/18/17
BLANK	SURROGATE: OCTACOSANE (S)	104	60-142			%	01/16/17	01/18/17
BLANK	SURROGATE: ORTHO-TERPHEN	82.3	56-125			%	01/16/17	01/18/17

Quant Method: DOC1103.M
Run #: 118004
Instrument: Apollo
Sequence: 170118
Initials: DPO

GC SC-Blank-REG MDLs-DOD
Printed: 01/19/17 11:11:28 AM

Laboratory Control Spike Recovery
EPA 8015B TPH WATER

APPL ID: **170116W-48866 LCS - 215613**
Batch ID: #DOC53-170116A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
DIESEL (C10-C24)	1330	1080	81.0	36-132
OIL (C24-C40)	1330	1090	81.8	41-113
SURROGATE: OCTACOSANE (S)	40.0	40.3	101	60-142
SURROGATE: ORTHO-TERPHENYL (S)	40.0	39.5	98.8	56-125

Comments: _____

Primary	SPK
Quant Method :	DOC1103.M
Extraction Date :	01/16/17
Analysis Date :	01/18/17
Instrument :	Apollo
Run :	118005
Initials :	DPO

Printed: 01/19/17 11:11:22 AM
APPL Standard LCS

EPA 8015B-eLL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81971

Case No: 81971 Date Analyzed: 01/18/17

Matrix: WATER Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: OCTACOSANE (S)			SURROGATE: ORTHO-TERPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
170116A-BLK	Blank	60-142	104		56-125	82.3	
170116A-LCS	Lab Control Spike	60-142	101		56-125	98.8	
AZ48915	ERH172	60-142	95.5		56-125	76.3	
AZ48916	ERH178	60-142	98.0		56-125	77.9	
AZ48921	ERH181	60-142	94.0		56-125	72.1	
AZ48925	ERH184	60-142	96.4		56-125	77.6	

Comments: Batch: #DOC53-170116A

EPA 8015B-eL

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81971

Case No: 81971 Date Analyzed: 01/18/17

Matrix: WATER Instrument: Apollo

Blank ID: 170116A-BLK Time Analyzed: 1743

APPL ID.	Client Sample No.	File ID.	Date Analyzed
170116A-BLK	Blank	118004	01/18/17 1743
170116A-LCS	Lab Control Spike	118005	01/18/17 1804
AZ48915	ERH172	118024	01/19/17 0034
AZ48916	ERH178	118025	01/19/17 0054
AZ48921	ERH181	118026	01/19/17 0115
AZ48925	ERH184	118027	01/19/17 0135

Comments: Batch: #DOC53-170116A

Printed: 01/19/17 11:11:20 AM
Form 4, Blank Summary

ORGANICS
Sample Data

APPL, INC.

EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH172
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48915
QCG: #DOC53-170116A-215613

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	88 ++	40.0	25.00	13.07	ug/L	01/16/17	01/19/17
EPA 8015B-eL	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	01/16/17	01/19/17
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	95.5	60-142			%	01/16/17	01/19/17
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	76.3	56-125			%	01/16/17	01/19/17

++(T6) The analyst has noted that the chromatogram of this sample is mainly a match to hydrocarbons within the range of diesel fuel.

Quant Method: DOC1103.M
Run #: 118024
Instrument: Apollo
Sequence: 170118
Dilution Factor: 1
Initials: DPO

Printed: 01/19/17 11:11:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\170118\118024.D Vial: 24
Acq On : 1-19-17 0:34:01 Operator: DP
Sample : AZ48915W13 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Jan 20 8:49 2017 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\170118\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

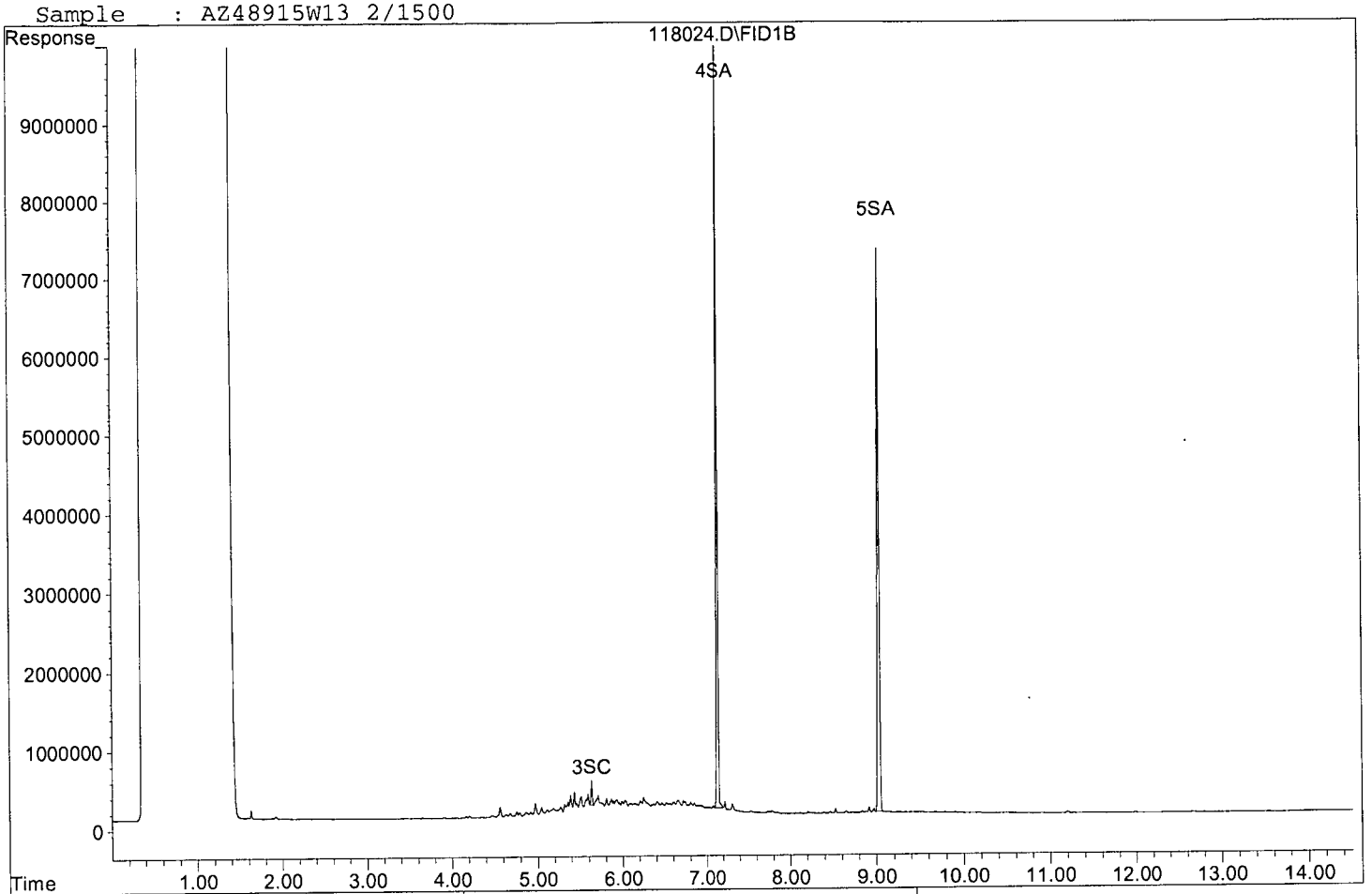
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

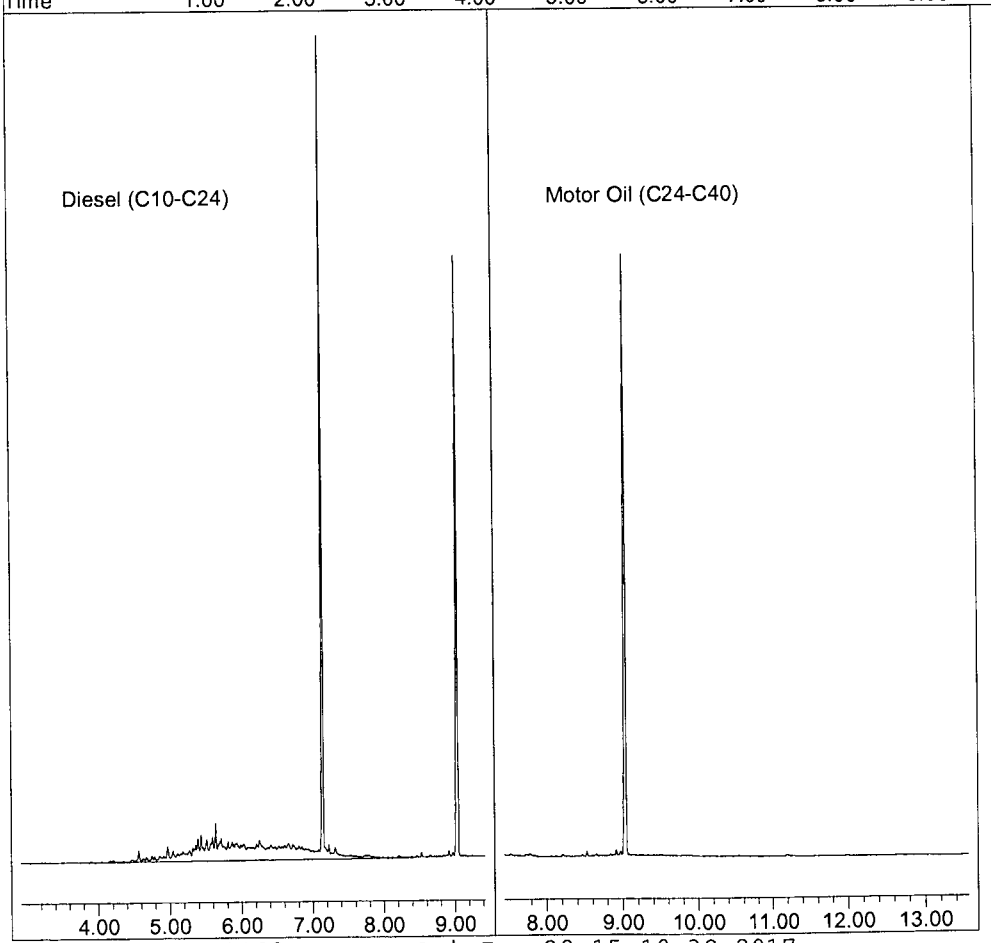
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SC Decanoic Acid(S)	5.63	2929217	3.193 ppb
Surrogate Spike 64.000	Recovery =		4.99%
4) SA Ortho-Terphenyl(S)	7.14	106801245	30.529 ppb
Surrogate Spike 40.000	Recovery =		76.32%
5) SA Octacosane(S)	9.04	100292108	38.210 ppb
Surrogate Spike 40.000	Recovery =		95.53%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	227275411	87.727 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\170118\118024.D
Sample : AZ48915W13 2/1500





118024.D DOC1103.M Fri Jan 20 15:10:38 2017

EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH178
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48916
QCG: #DOC53-170116A-215613

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	01/16/17	01/19/17
EPA 8015B-eL	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	01/16/17	01/19/17
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	98.0	60-142			%	01/16/17	01/19/17
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	77.9	56-125			%	01/16/17	01/19/17

Quant Method: DOC1103.M
Run #: 118025
Instrument: Apollo
Sequence: 170118
Dilution Factor: 1
Initials: DPO

Printed: 01/19/17 11:11:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\170118\118025.D Vial: 25
Acq On : 1-19-17 0:54:32 Operator: DP
Sample : AZ48916W13 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Jan 19 10:16 2017 Quant Results File: DOC1103.RES

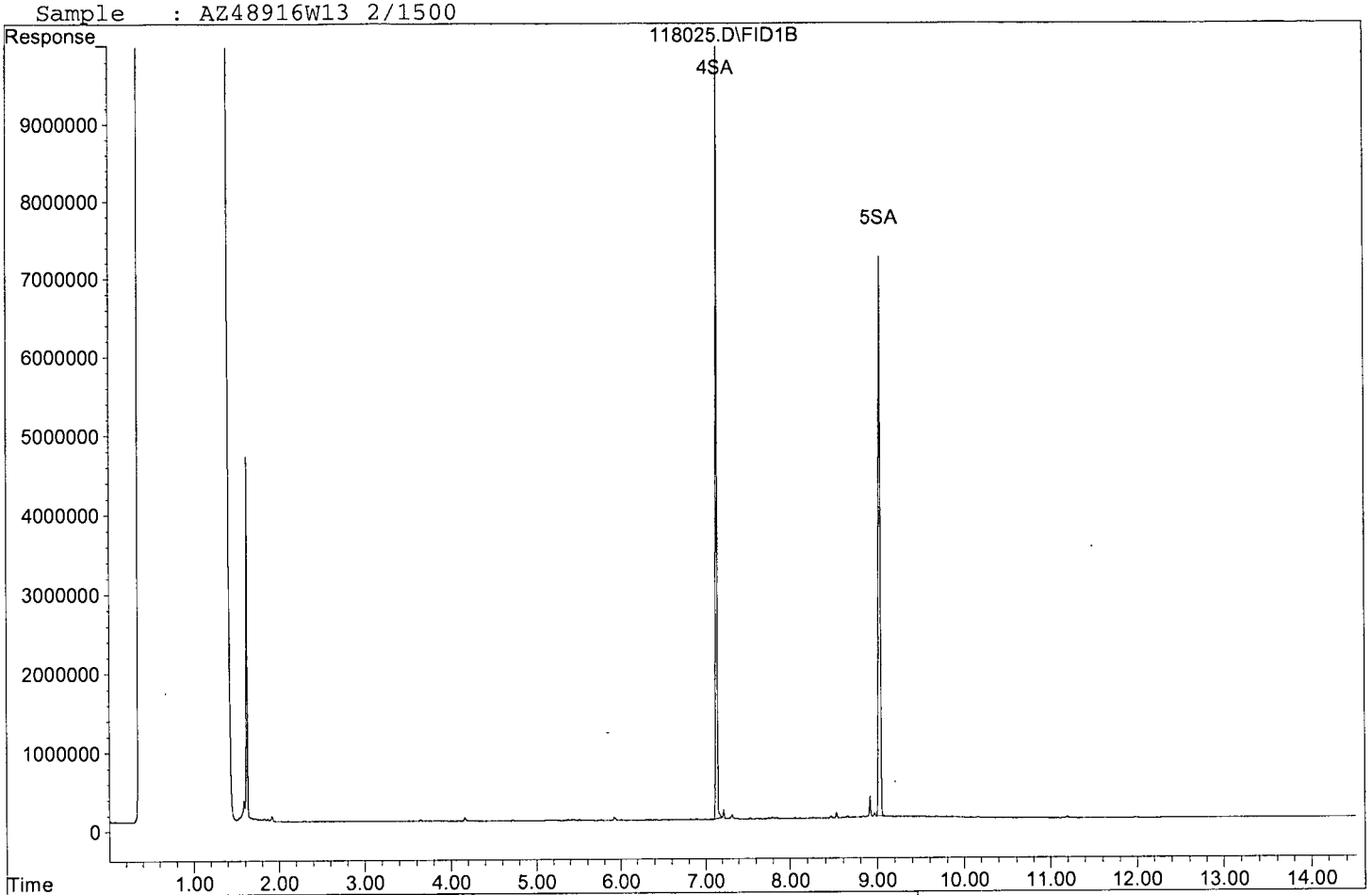
Method : G:\APOLLO\DATA\170118\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

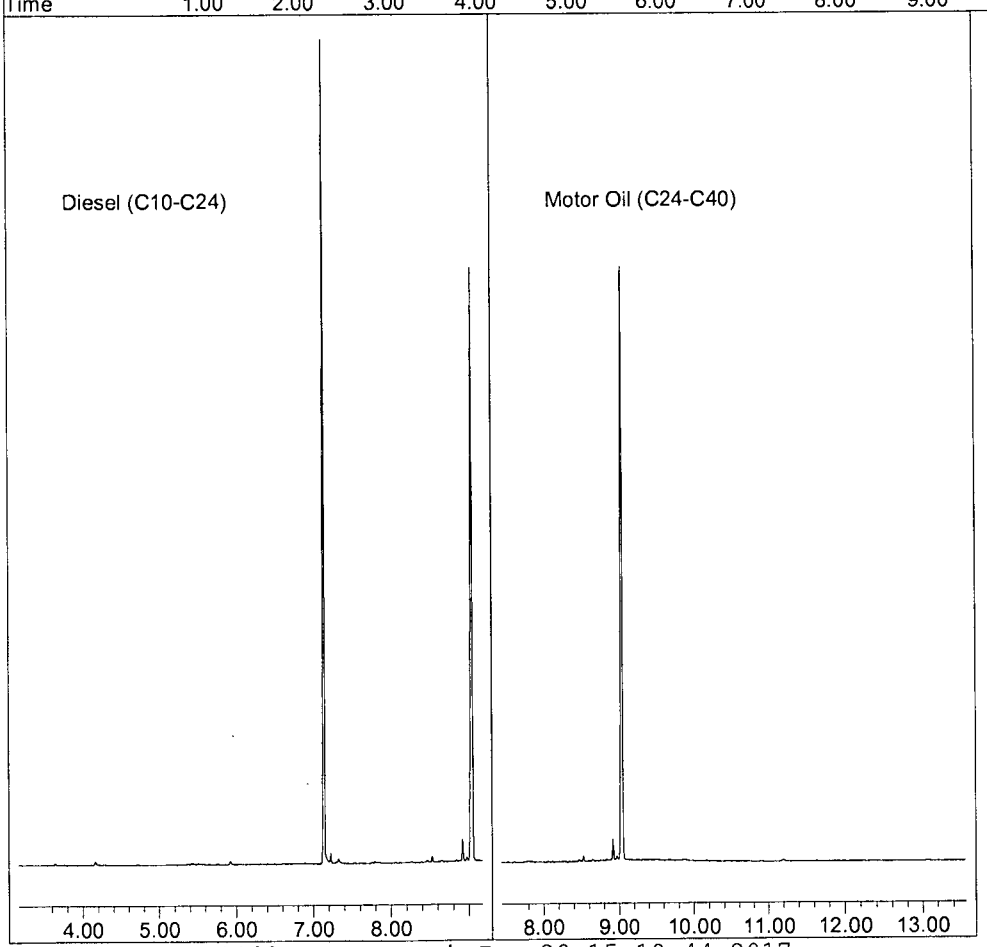
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.14	108937569	31.140	ppb
Surrogate Spike 40.000	Recovery =		77.85%	
5) SA Octacosane(S)	9.04	102915865	39.210	ppb
Surrogate Spike 40.000	Recovery =		98.03%	
Target Compounds				

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\170118\118025.D
Sample : AZ48916W13 2/1500





EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH181
Sample Collection Date: 01/12/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48921
QCG: #DOC53-170116A-215613

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	51 ++	40.0	25.00	13.07	ug/L	01/16/17	01/19/17
EPA 8015B-eL	OIL (C24-C40)	46	40.0	40.00	5.54	ug/L	01/16/17	01/19/17
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	94.0	60-142			%	01/16/17	01/19/17
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	72.1	56-125			%	01/16/17	01/19/17

++(T3I) The analyst has noted that the chromatogram of this sample includes higher boiling hydrocarbons.

Quant Method: DOC1103.M
Run #: 118026
Instrument: Apollo
Sequence: 170118
Dilution Factor: 1
Initials: DPO

Printed: 01/19/17 11:11:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\170118\118026.D Vial: 26
Acq On : 1-19-17 1:15:03 Operator: DP
Sample : AZ48921W12 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Jan 19 10:17 2017 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\170118\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

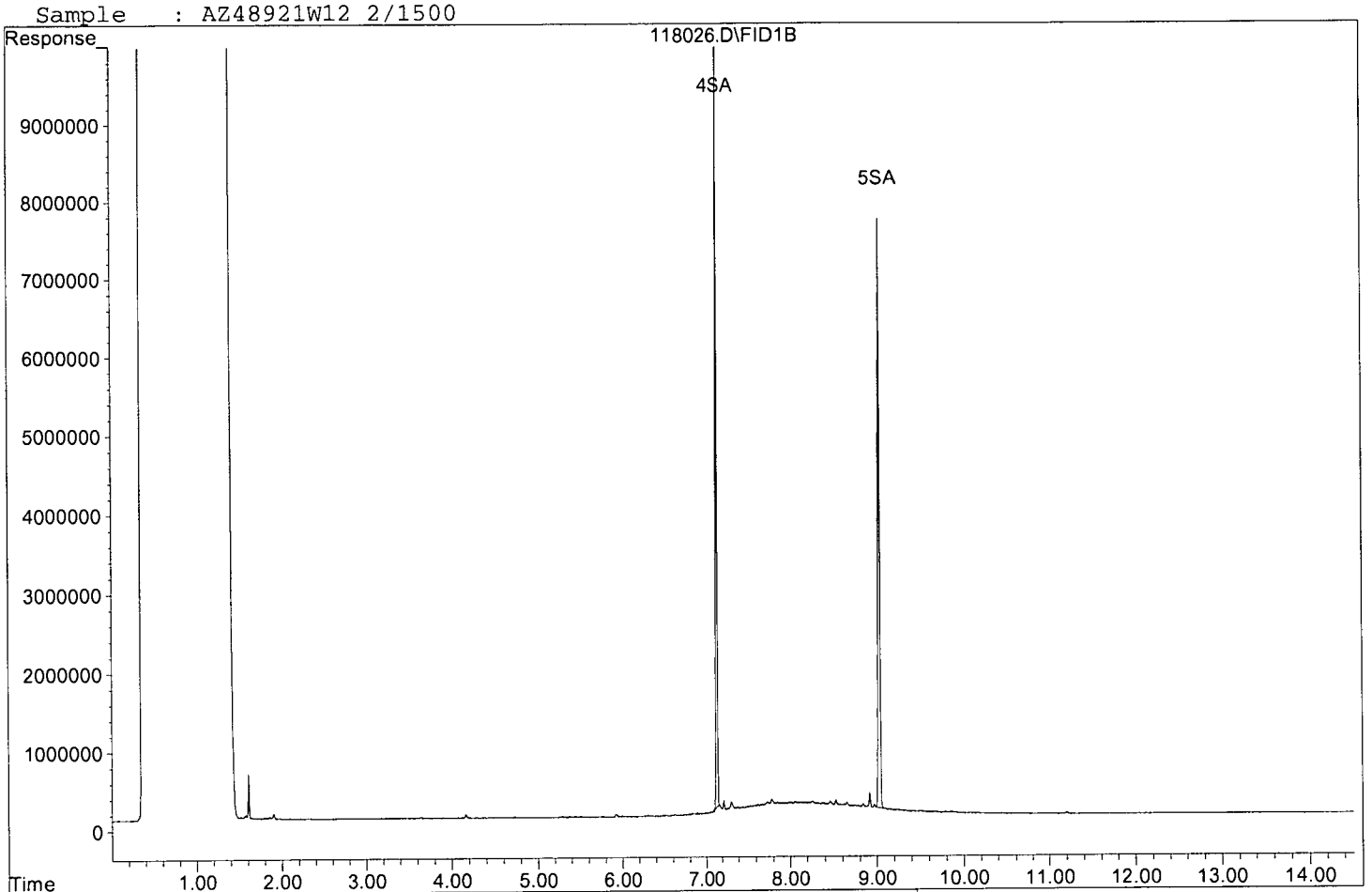
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

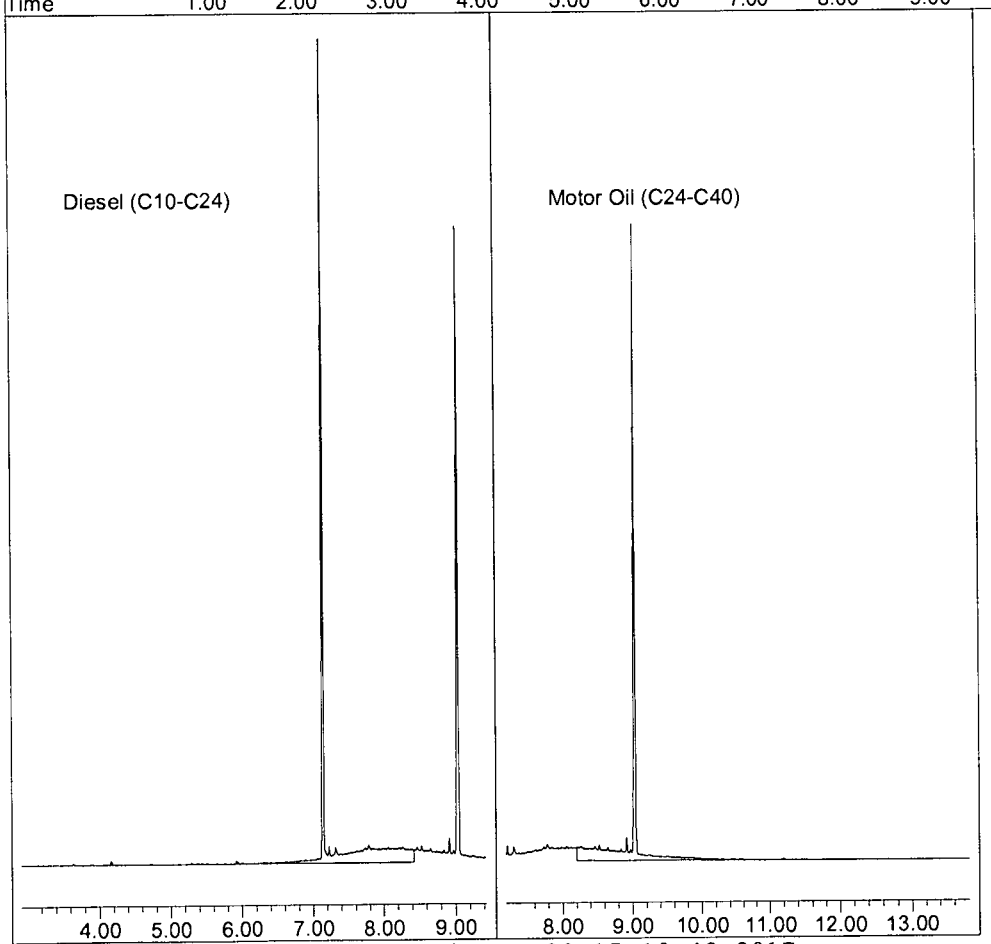
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.14	100946293	28.855 ppb
Surrogate Spike 40.000	Recovery =		72.14%
5) SA Octacosane(S)	9.04	98652374	37.585 ppb
Surrogate Spike 40.000	Recovery =		93.96%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	132017947	50.958 ppb
2) HBTM Motor Oil (C24-C40)	10.50	96759898	46.312 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\170118\118026.D
Sample : AZ48921W12 2/1500





EPA 8015B TPH WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH184
Sample Collection Date: 01/12/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48925
QCG: #DOC53-170116A-215613

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-eL	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	01/16/17	01/19/17
EPA 8015B-eL	OIL (C24-C40)	45 ++	40.0	40.00	5.54	ug/L	01/16/17	01/19/17
EPA 8015B-eL	SURROGATE: OCTACOSANE (S)	96.4	60-142			%	01/16/17	01/19/17
EPA 8015B-eL	SURROGATE: ORTHO-TERPHENYL (S	77.6	56-125			%	01/16/17	01/19/17

++(T3M) The analyst has noted that the chromatogram of this sample is mainly higher boiling hydrocarbons.

Quant Method: DOC1103.M
Run #: 118027
Instrument: Apollo
Sequence: 170118
Dilution Factor: 1
Initials: DPO

Printed: 01/19/17 11:11:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\170118\118027.D Vial: 27
Acq On : 1-19-17 1:35:36 Operator: DP
Sample : AZ48925W09 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Jan 19 12:13 2017 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\170118\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

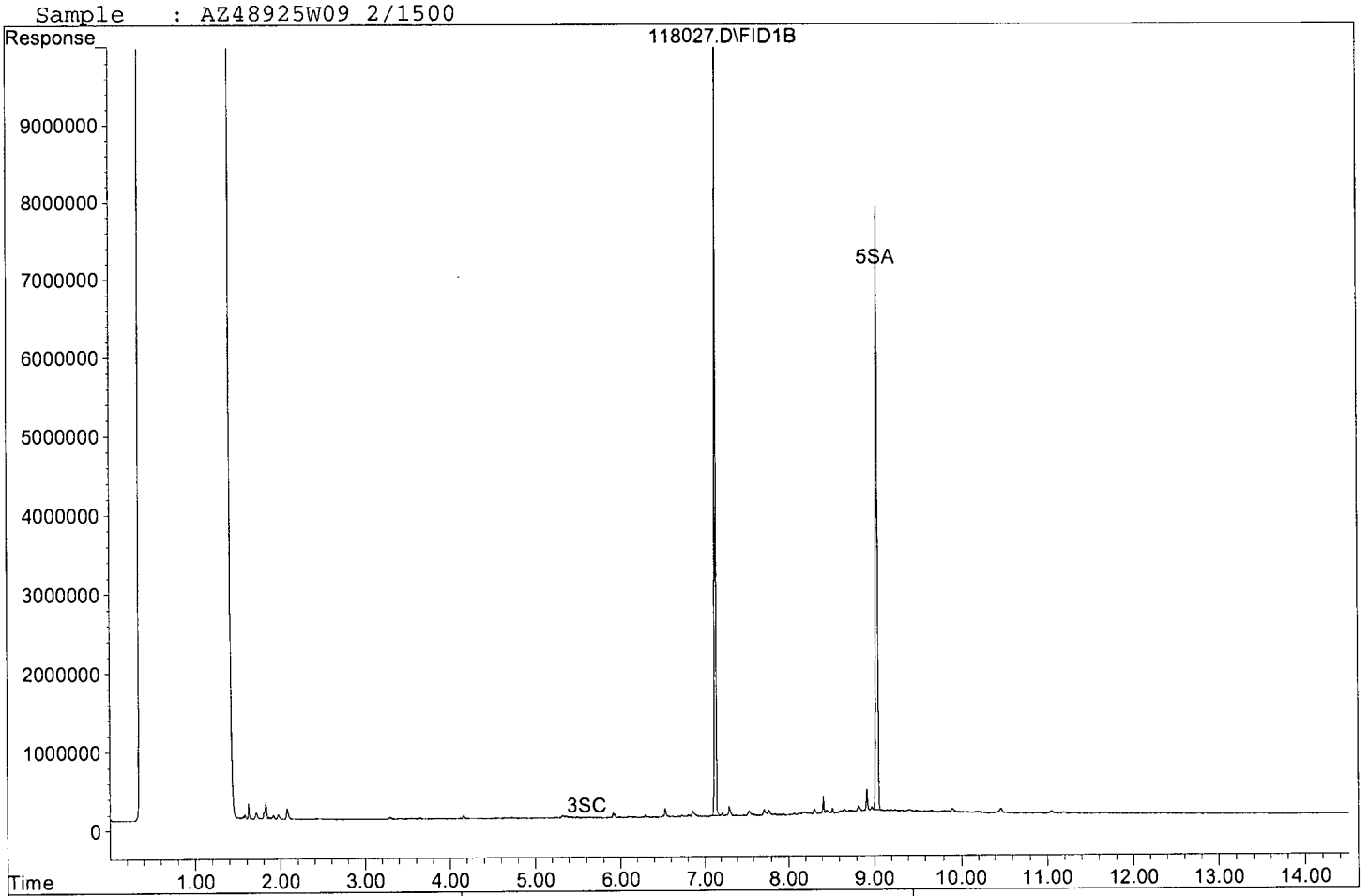
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

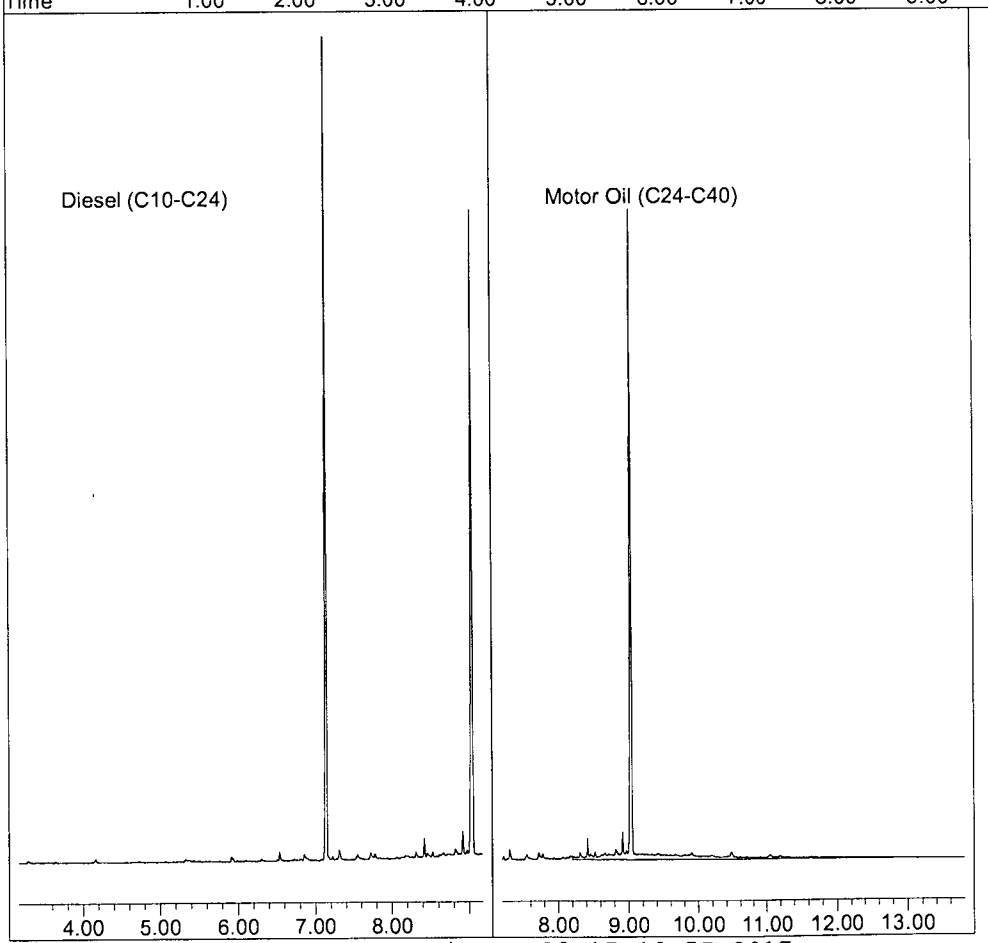
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SC Decanoic Acid(S)	5.61	23349	0.025 ppb
Surrogate Spike 64.000	Recovery =		0.04%
4) SA Ortho-Terphenyl(S)	7.14	108630811	31.052 ppb
Surrogate Spike 40.000	Recovery =		77.63%
5) SA Octacosane(S)	9.04	101219075	38.563 ppb
Surrogate Spike 40.000	Recovery =		96.41%
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	94709001	45.330 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\170118\118027.D
Sample : AZ48925W09 2/1500





118027.D DOC1103.M Fri Jan 20 15:10:55 2017

ORGANICS
Calibration Data

APPL, INC.

TPH Extractables
DOC1103

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:
Diesel: 1103004.D 1103011.D 1103006.D 1103007.D 1103008.D 1103009.D
Motor Oil: 1028002.D 1028003.D 1028004.D 1028005.D 1028006.D 1028007.D

SDG No:
Initial Cal. Date: 11/03/16
Instrument: Apollo

Initials:

		Compound	1	2	3	4	5	6					Avg	%RSD		
1	HATM	Diesel (C10-C24)	1713970	2056602	1625582	1697733	1643335	1625559					1727130	9.6	HATM	
2	HBTM	Motor Oil (C24-C40)	1562690	1603769	1282978	1340015	1321969	1245819					1392873	11	HBTM	
3	SC	Decanoic Acid(S)	436509	643644	711658	659596	590571	627574					611592	15	SC	
4	SA	Ortho-Terphenyl(S)		2687660	2255130	2296757	2215766	2205848					2332232	8.7	SA	
5	SA	Octacosane(S)	1736016	2067699	1697441	1704564	1657038	1636278					1749839	9.1	SA	
6																
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1.5347542

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161103\1103004.D Vial: 4
Acq On : 11-3-16 9:45:14 Operator: DP
Sample : DIESEL 10ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

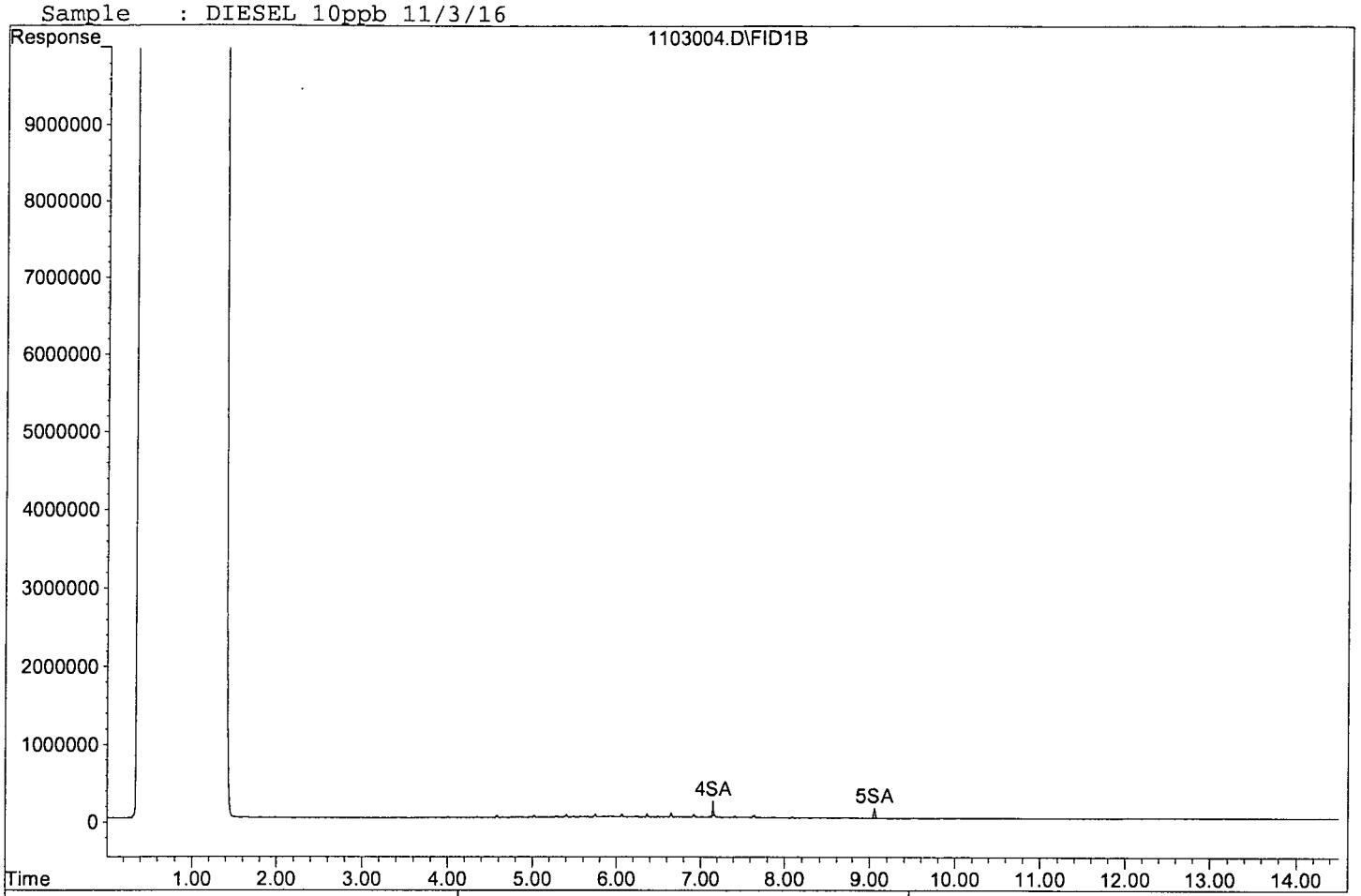
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

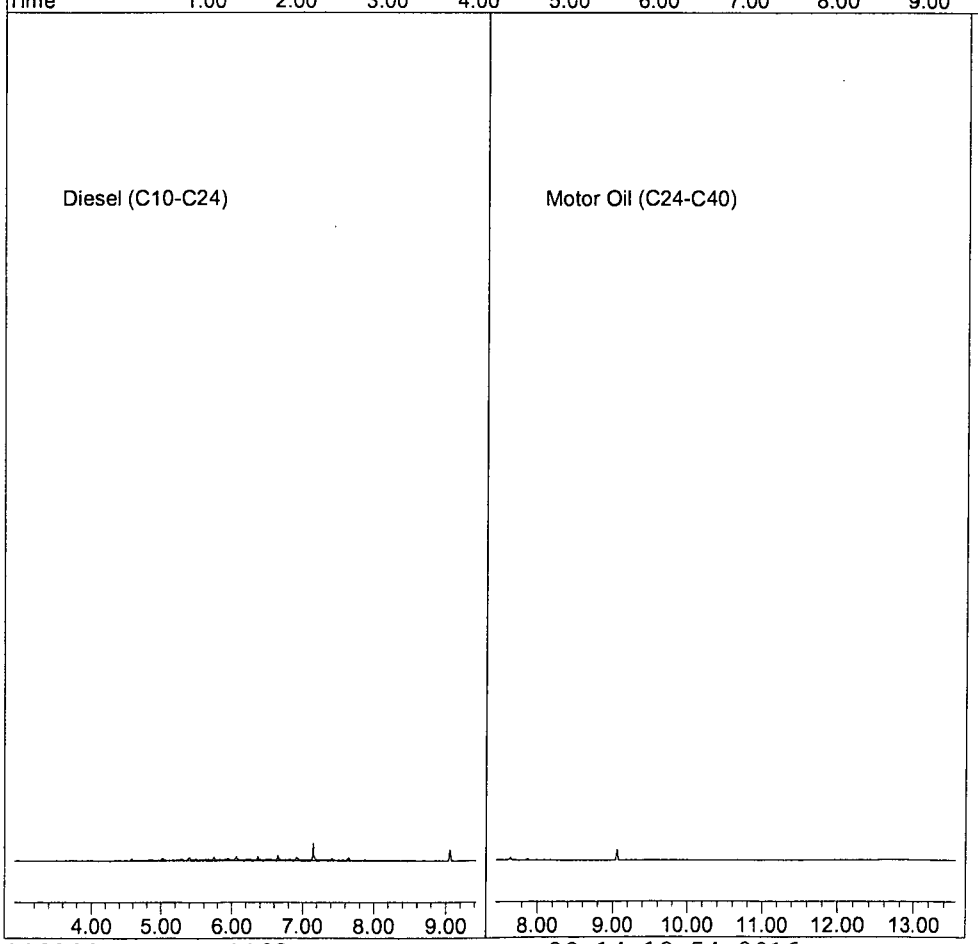
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.15	1320666	0.233 ppb
Surrogate Spike 30.000	Recovery =		0.78%
5) SA Octacosane(S)	9.06	1736016	0.492 ppb
Surrogate Spike 30.000	Recovery =		1.64%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	34279391	10.218 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103004.D
Sample : DIESEL 10ppb 11/3/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161103\1103011.D Vial: 11
Acq On : 11-3-16 12:56:47 Operator: DP
Sample : DIESEL 100ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

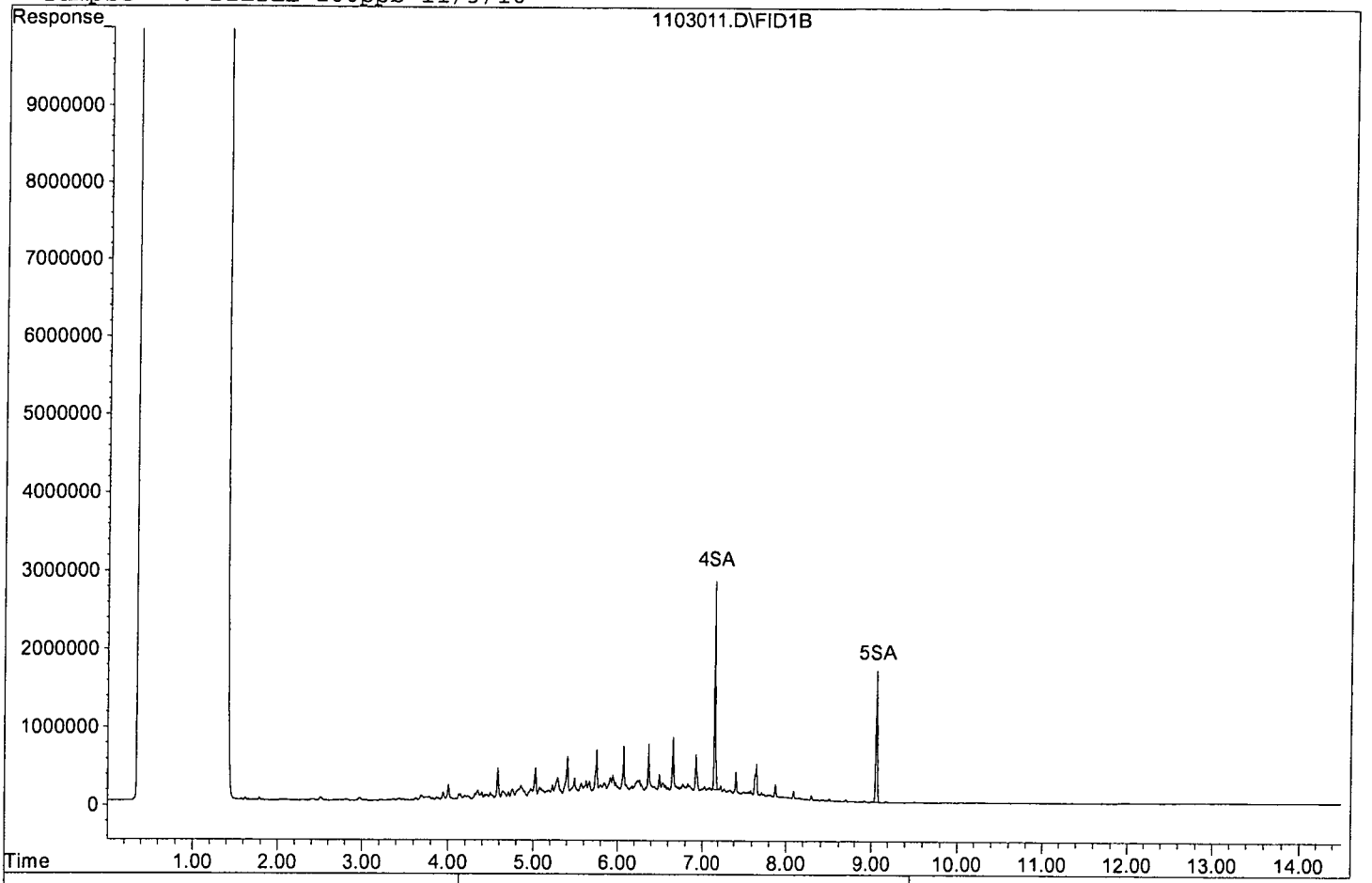
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

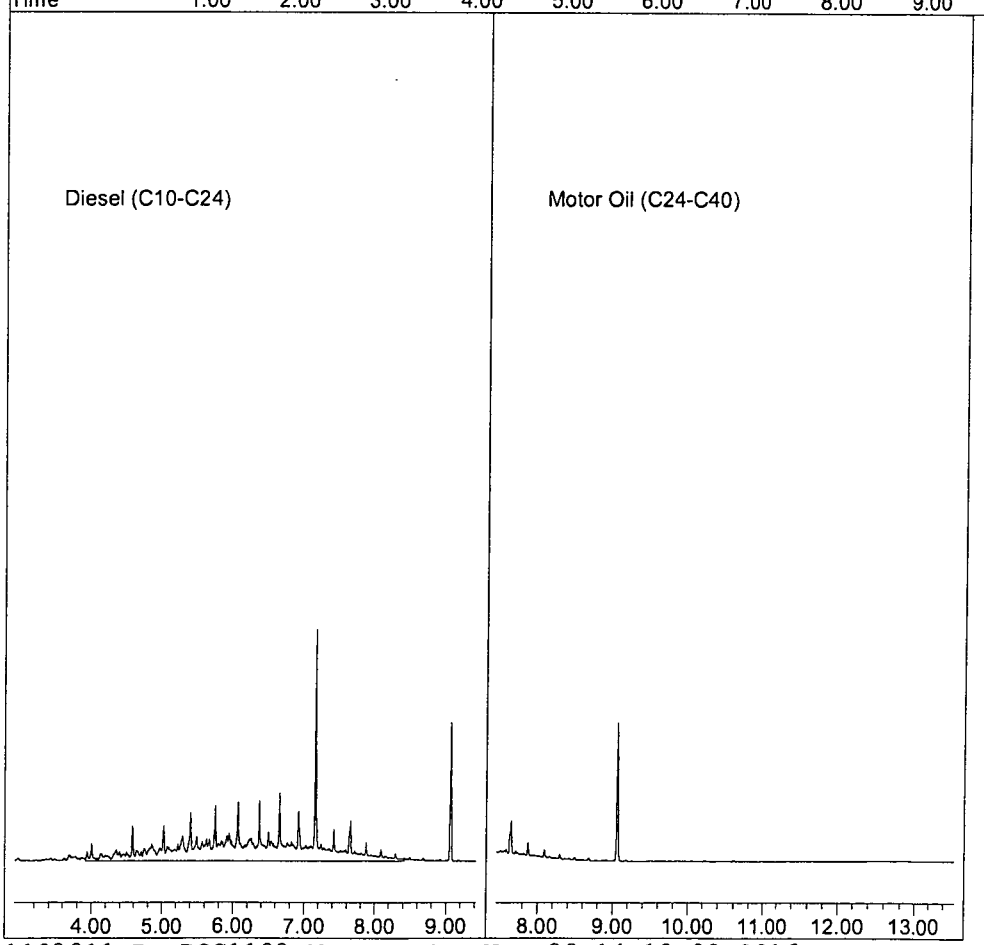
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.16	26876603	4.740 ppb
Surrogate Spike 30.000	Recovery =		15.80%
5) SA Octacosane(S)	9.06	20676993	5.864 ppb
Surrogate Spike 30.000	Recovery =		19.55%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	411320381	122.610 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161103\1103011.D
Sample : DIESEL 100ppb 11/3/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103006.D Vial: 6
Acq On : 11-3-16 10:26:16 Operator: DP
Sample : DIESEL 400ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

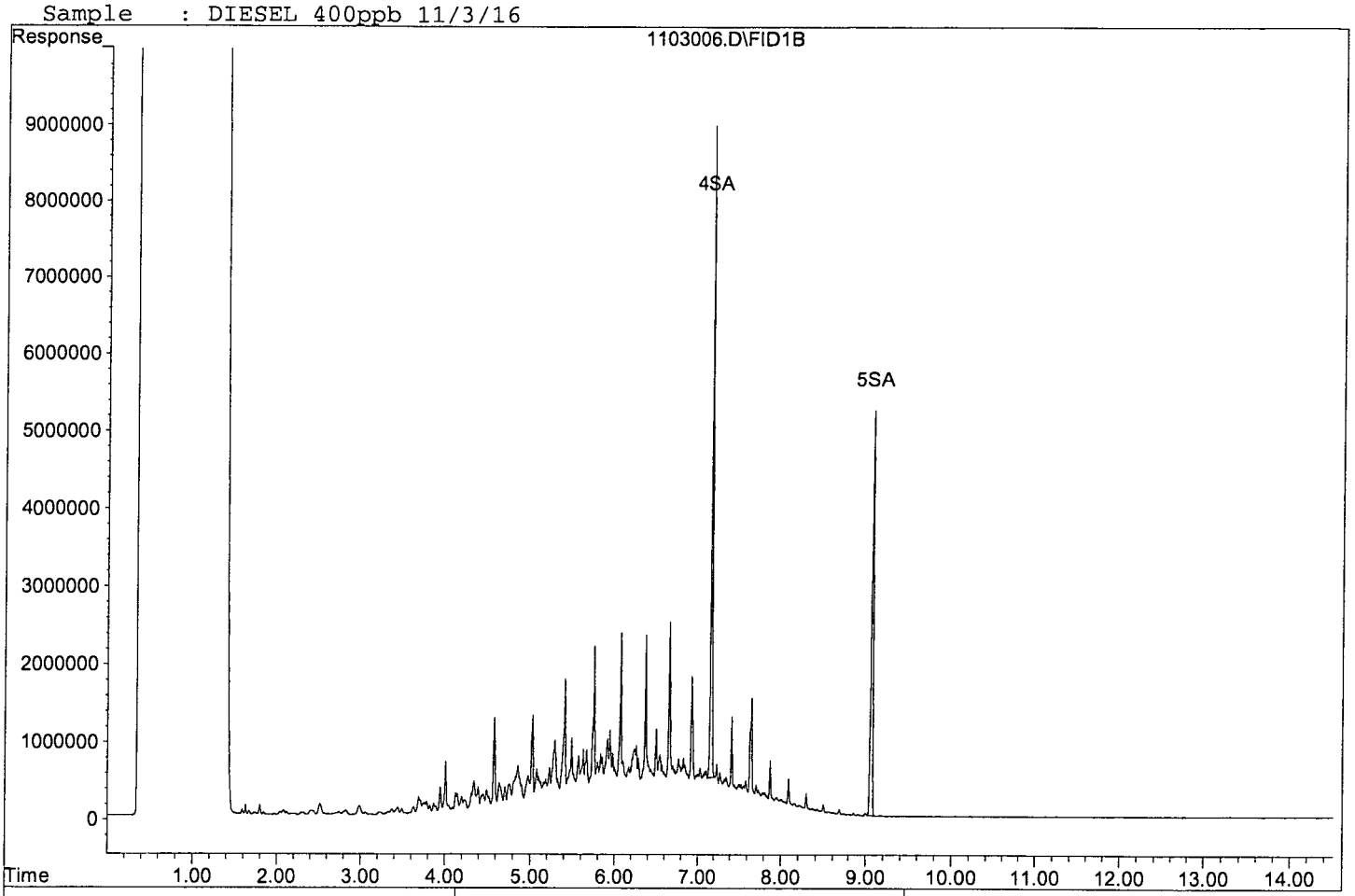
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

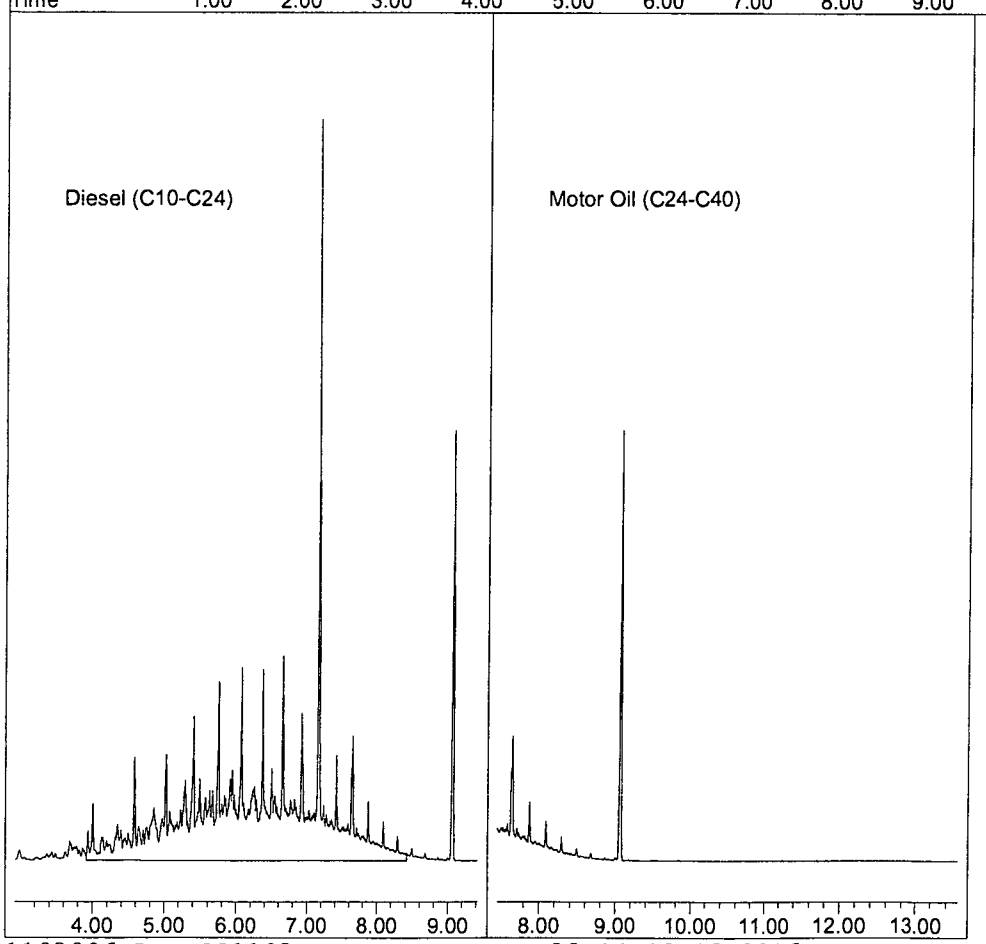
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.16	90205209	15.909 ppb
Surrogate Spike 30.000	Recovery =		53.03%
5) SA Octacosane(S)	9.07	67897660	19.256 ppb
Surrogate Spike 30.000	Recovery =		64.19%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	1300465223	387.653 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103006.D
Sample : DIESEL 400ppb 11/3/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103007.D Vial: 7
Acq On : 11-3-16 10:46:56 Operator: DP
Sample : DIESEL 600ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

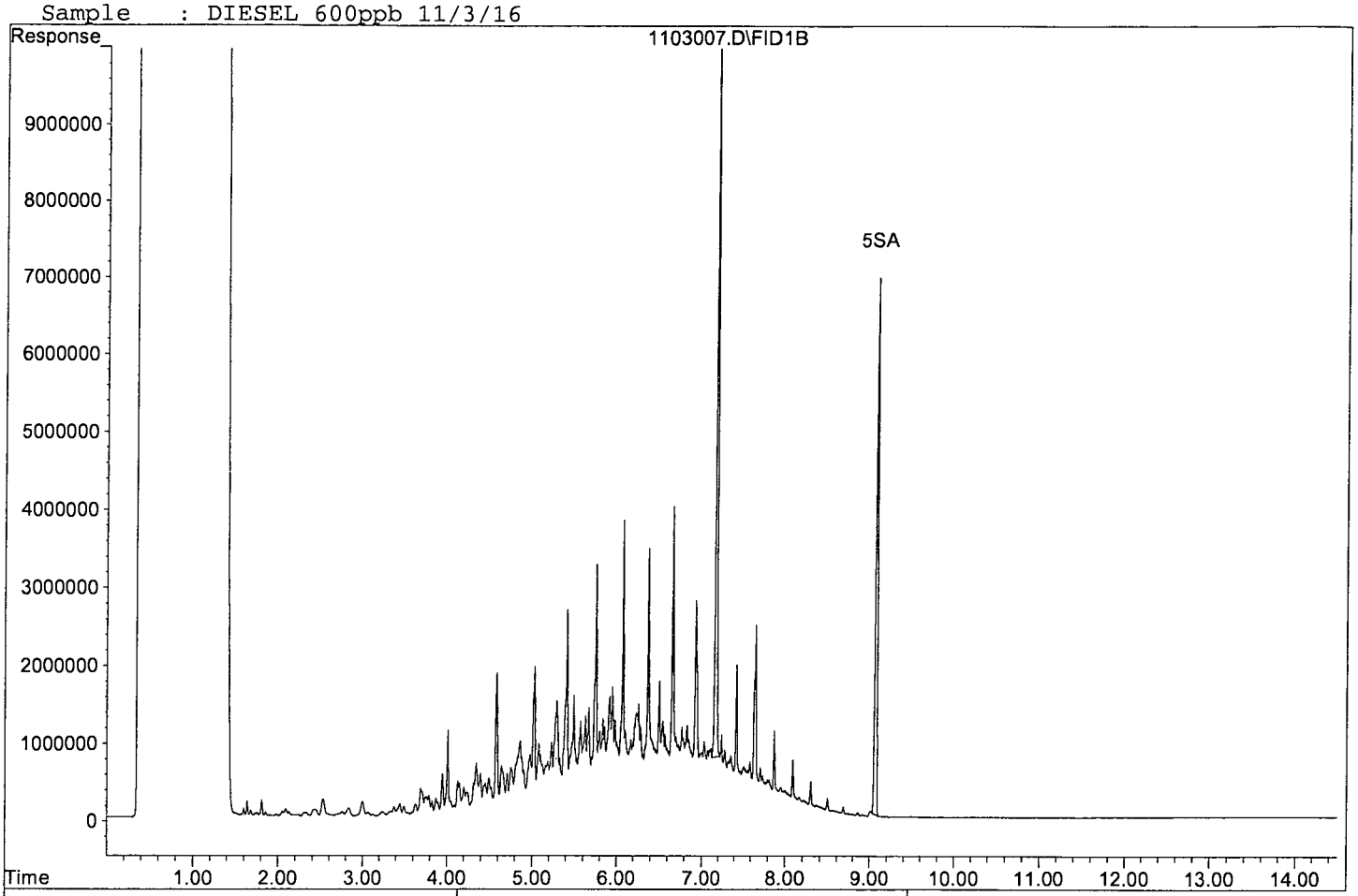
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

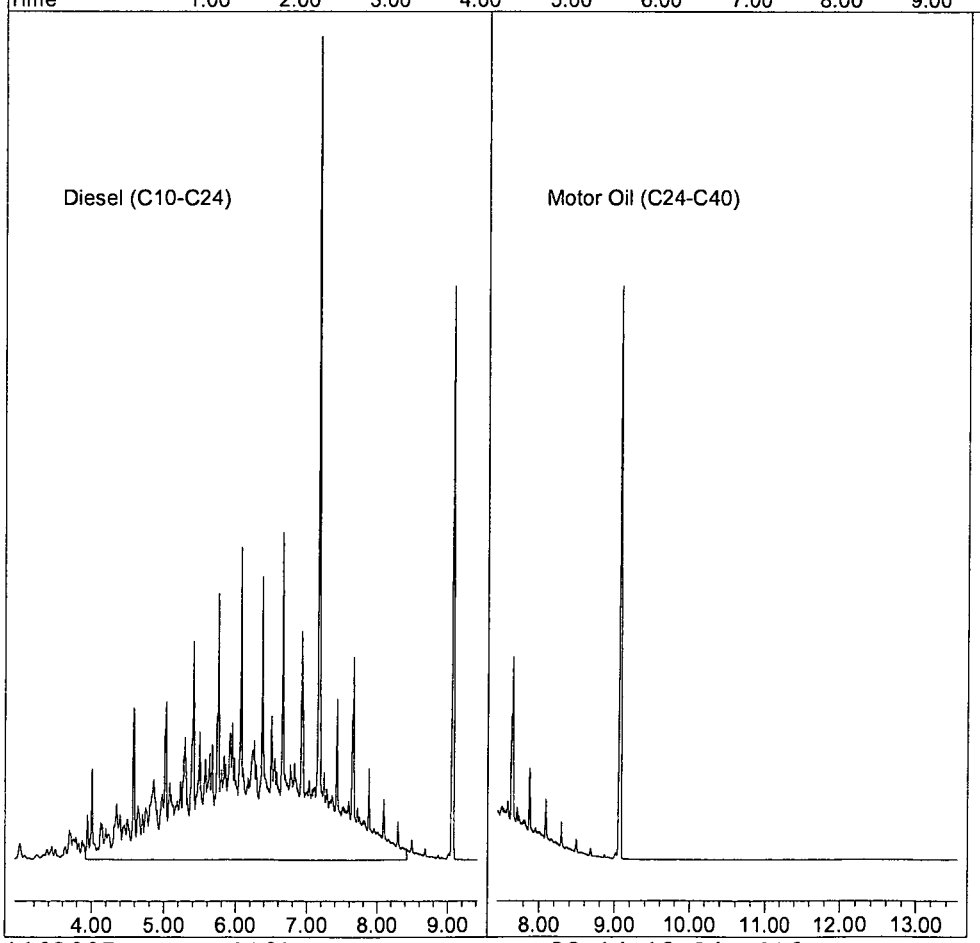
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.17	137805437	24.304 ppb
Surrogate Spike 30.000		Recovery =	81.01%
5) SA Octacosane(S)	9.07	102273844	29.005 ppb
Surrogate Spike 30.000		Recovery =	96.68%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	2037280173	607.288 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103007.D
Sample : DIESEL 600ppb 11/3/16





1103007.D DOC1103.M Mon Nov 28 14:19:24 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103008.D Vial: 8
Acq On : 11-3-16 11:07:39 Operator: DP
Sample : DIESEL 800ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

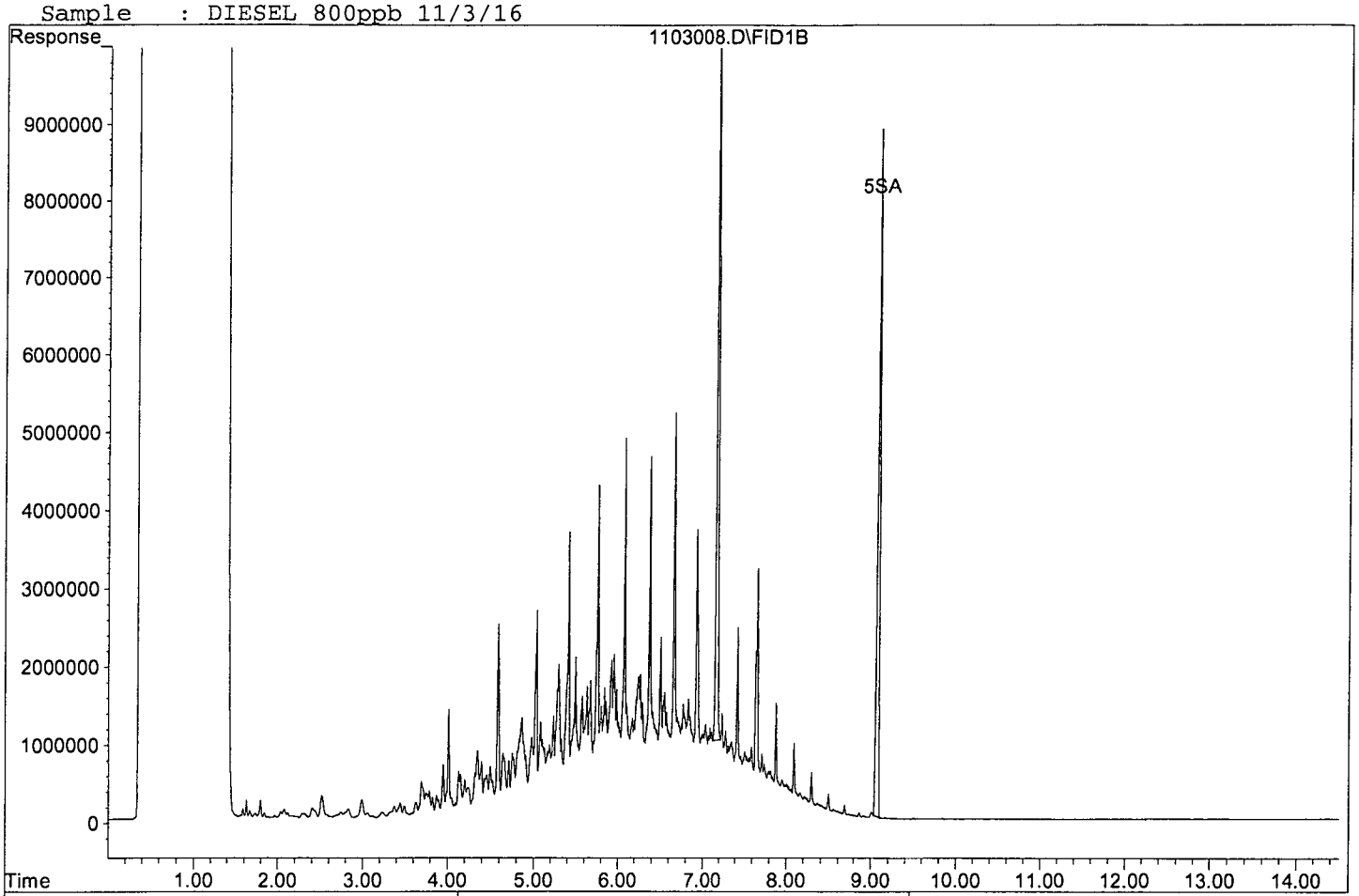
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

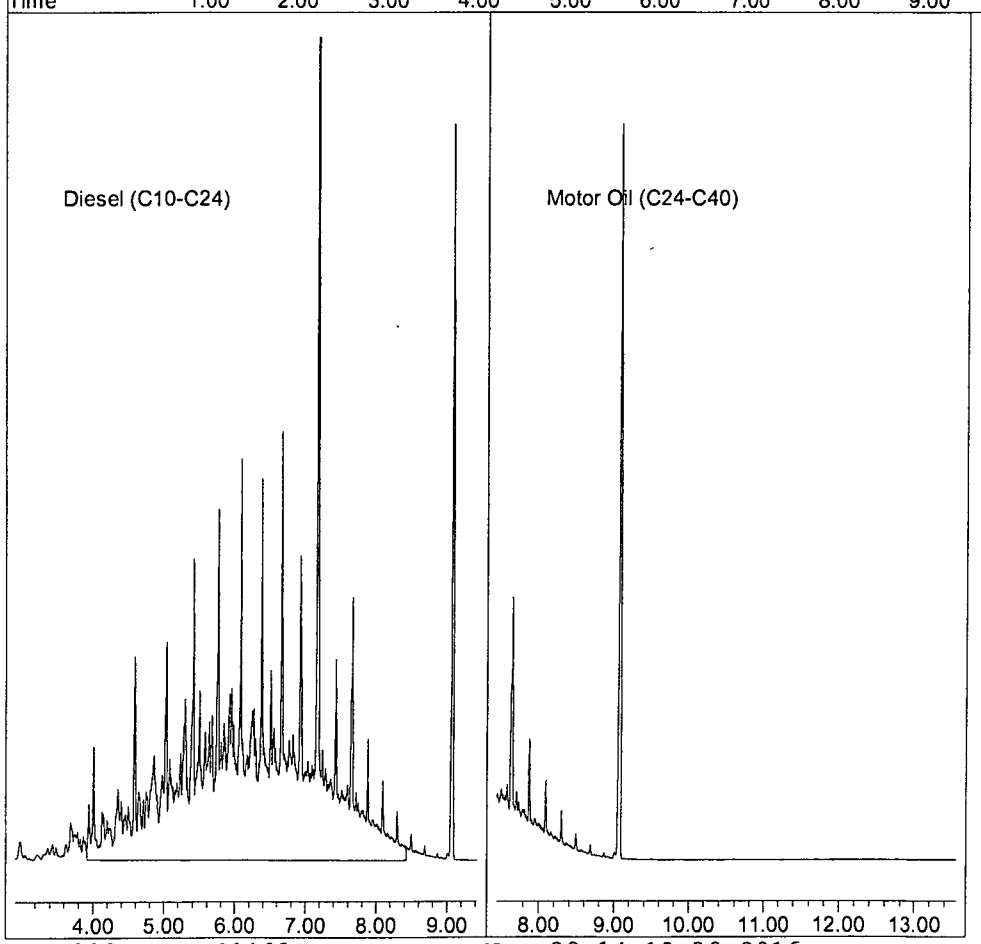
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.17	177261246	31.263	ppb
Surrogate Spike 30.000		Recovery =	104.21%	
5) SA Octacosane(S)	9.08	132563050	37.596	ppb
Surrogate Spike 30.000		Recovery =	125.32%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	2629335633	783.773	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103008.D
Sample : DIESEL 800ppb 11/3/16





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103009.D Vial: 9
Acq On : 11-3-16 11:28:31 Operator: DP
Sample : DIESEL 1000ppb 11/3/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 3 16:09 2016 Quant Results File: DOC1103.RES

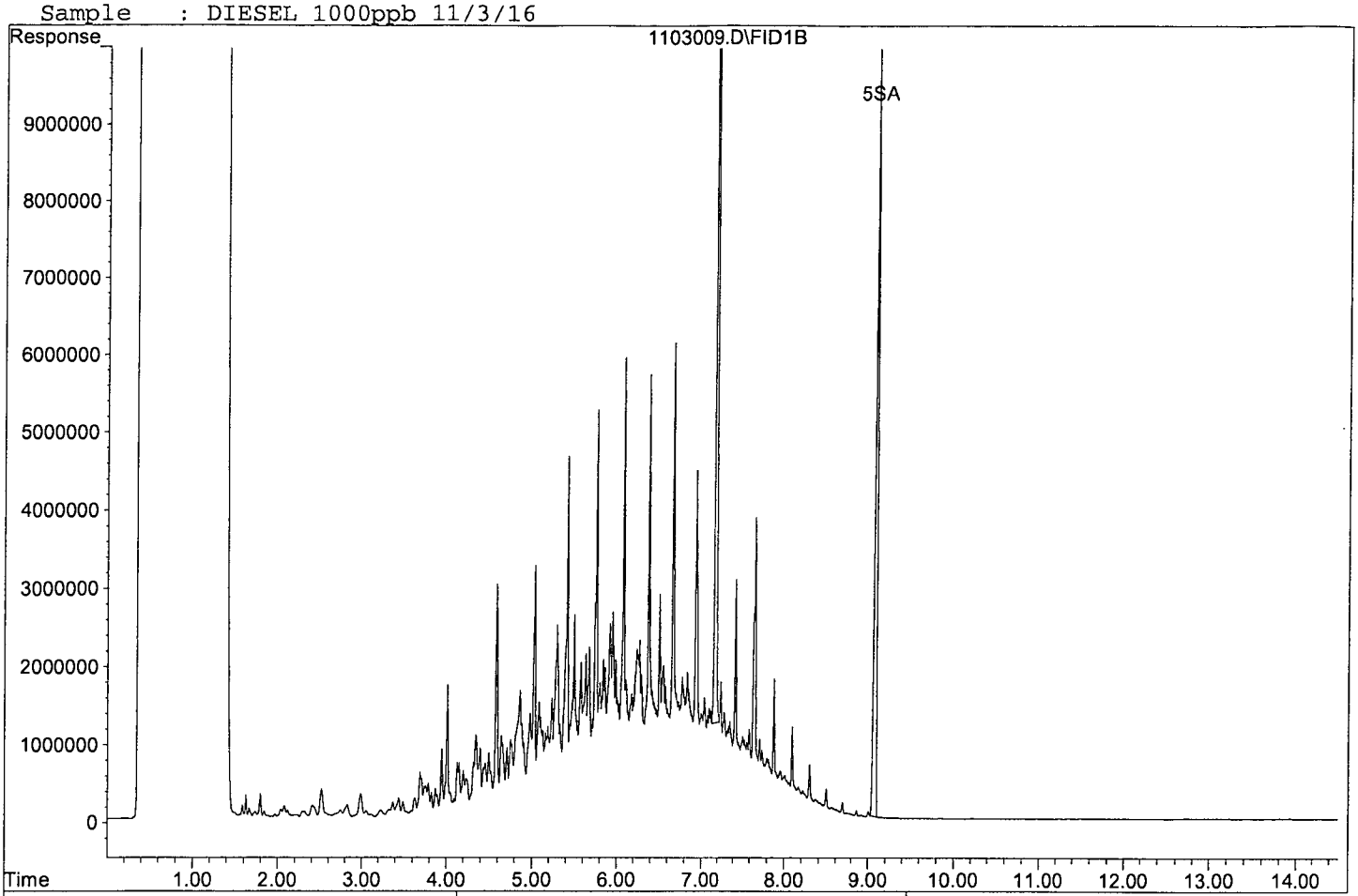
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

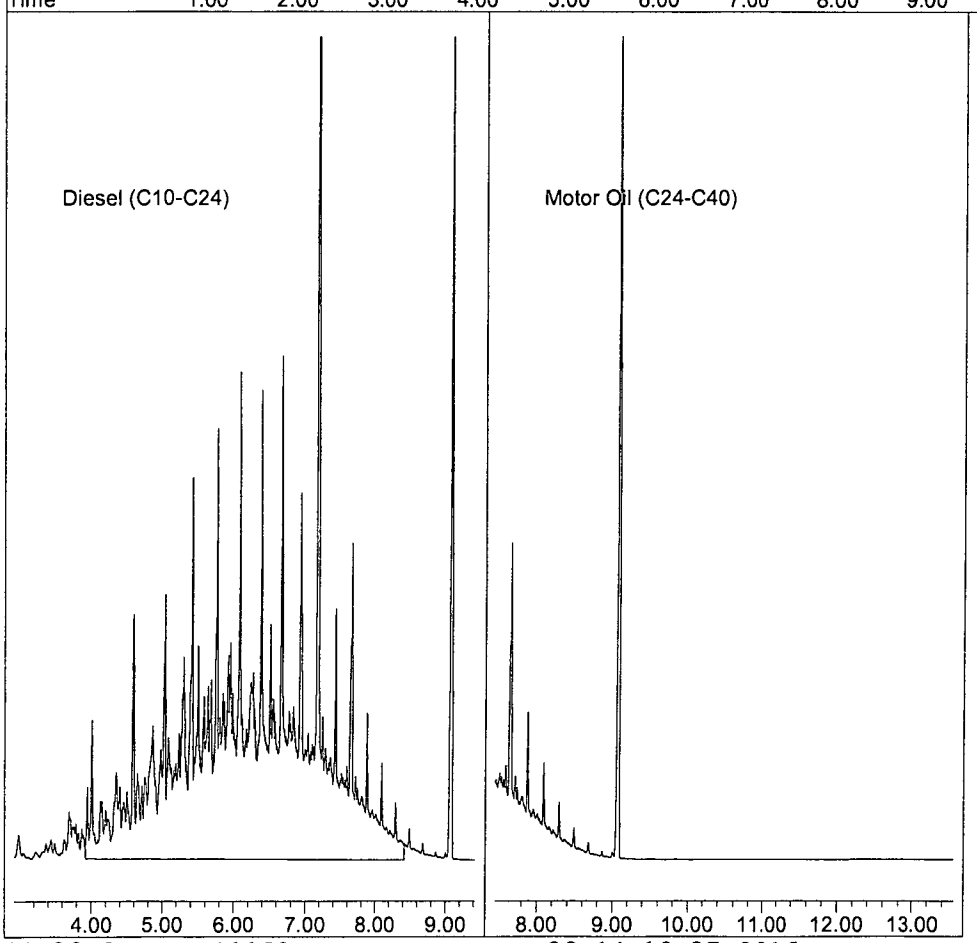
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.18	220584770	38.903	ppb
Surrogate Spike 30.000		Recovery =	129.68%	
5) SA Octacosane(S)	9.08	163627822	46.406	ppb
Surrogate Spike 30.000		Recovery =	154.69%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	3251118324	969.119	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161103\1103009.D
Sample : DIESEL 1000ppb 11/3/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028002.D Vial: 2
Acq On : 10-28-16 9:07:30 Operator: DP
Sample : MO 20ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:24 2016 Quant Results File: DOC1103.RES

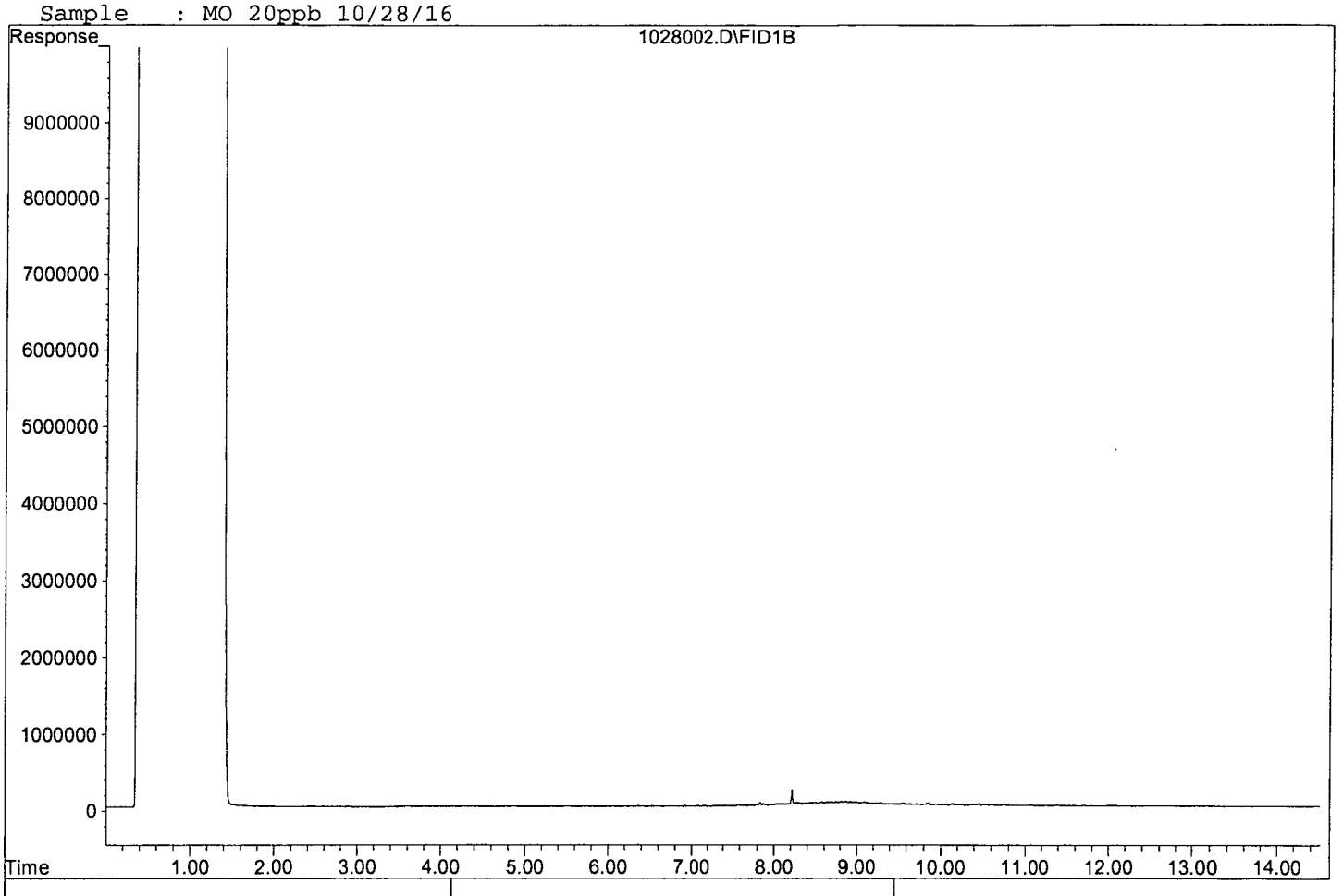
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

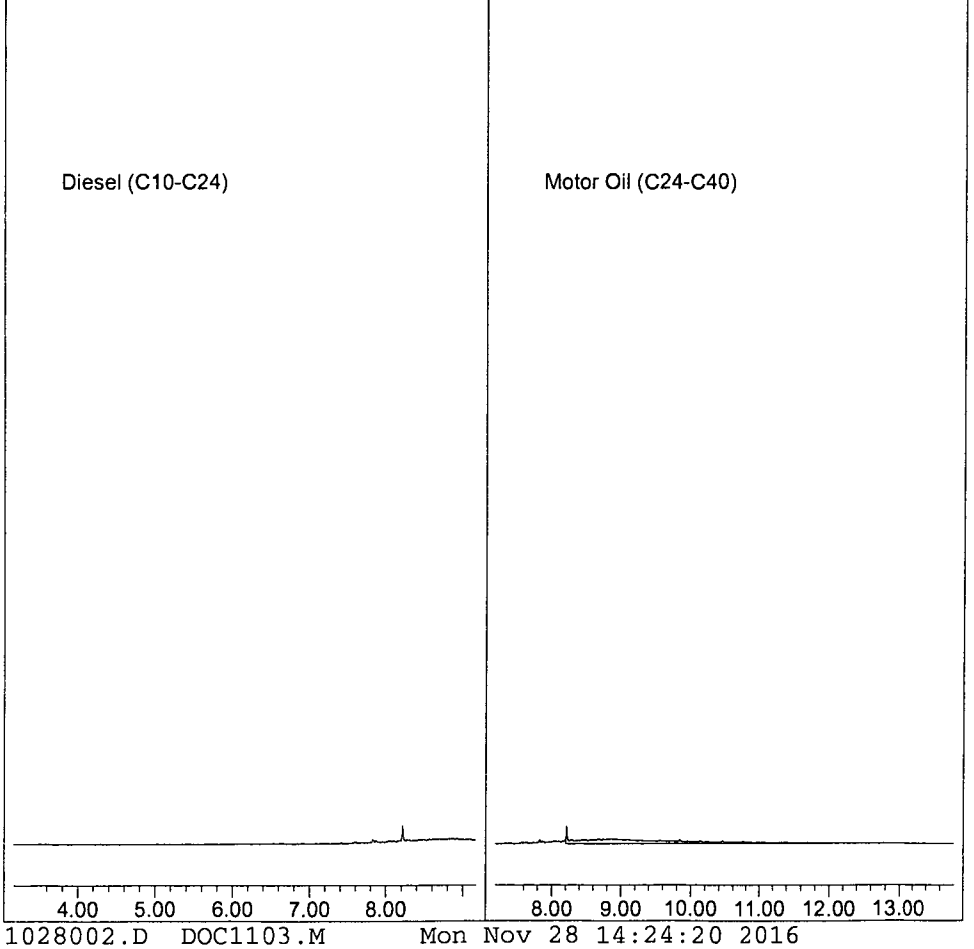
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	62507592	22.438 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028002.D
Sample : MO 20ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028003.D Vial: 3
Acq On : 10-28-16 9:28:13 Operator: DP
Sample : MO 50ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:24 2016 Quant Results File: DOC1103.RES

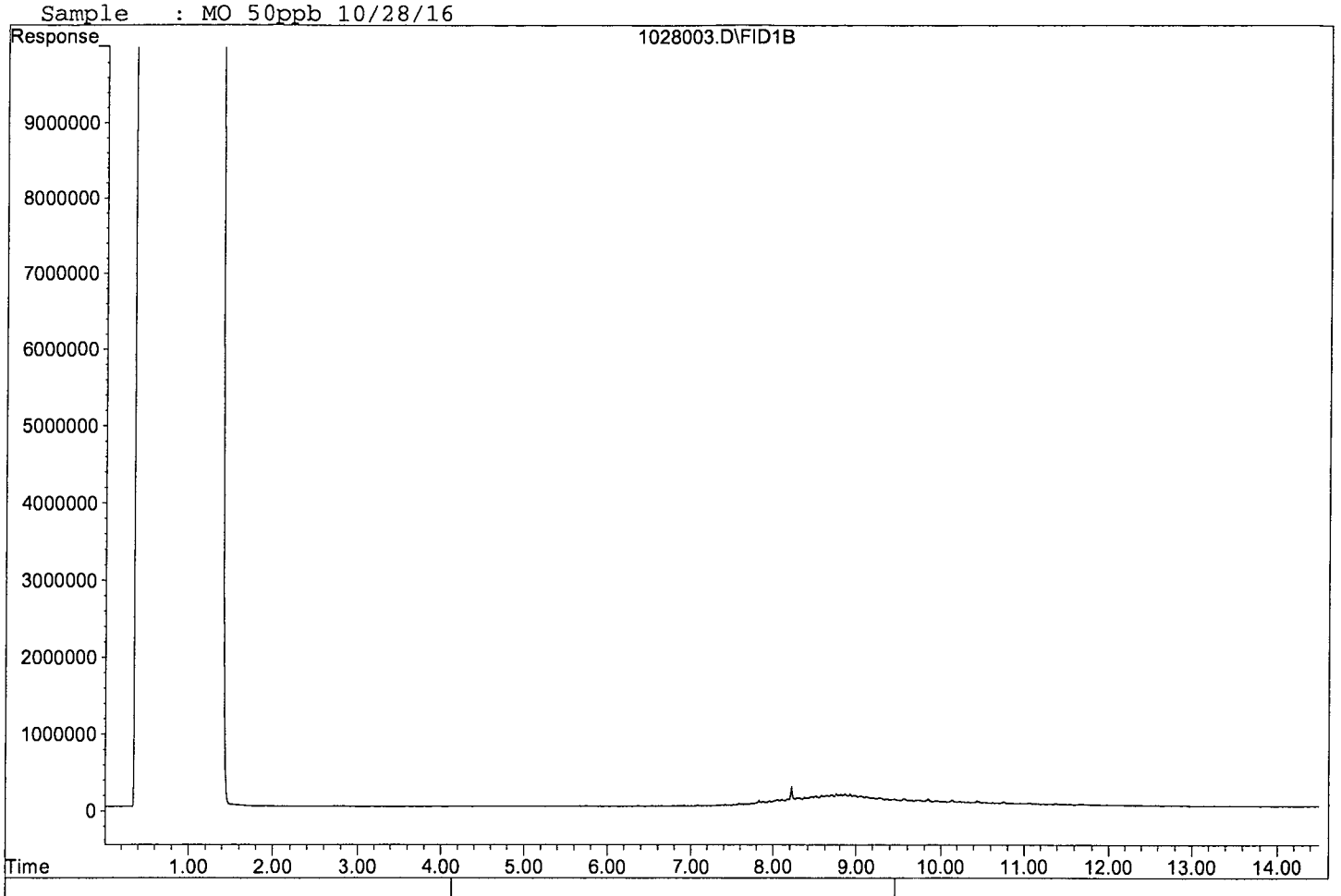
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

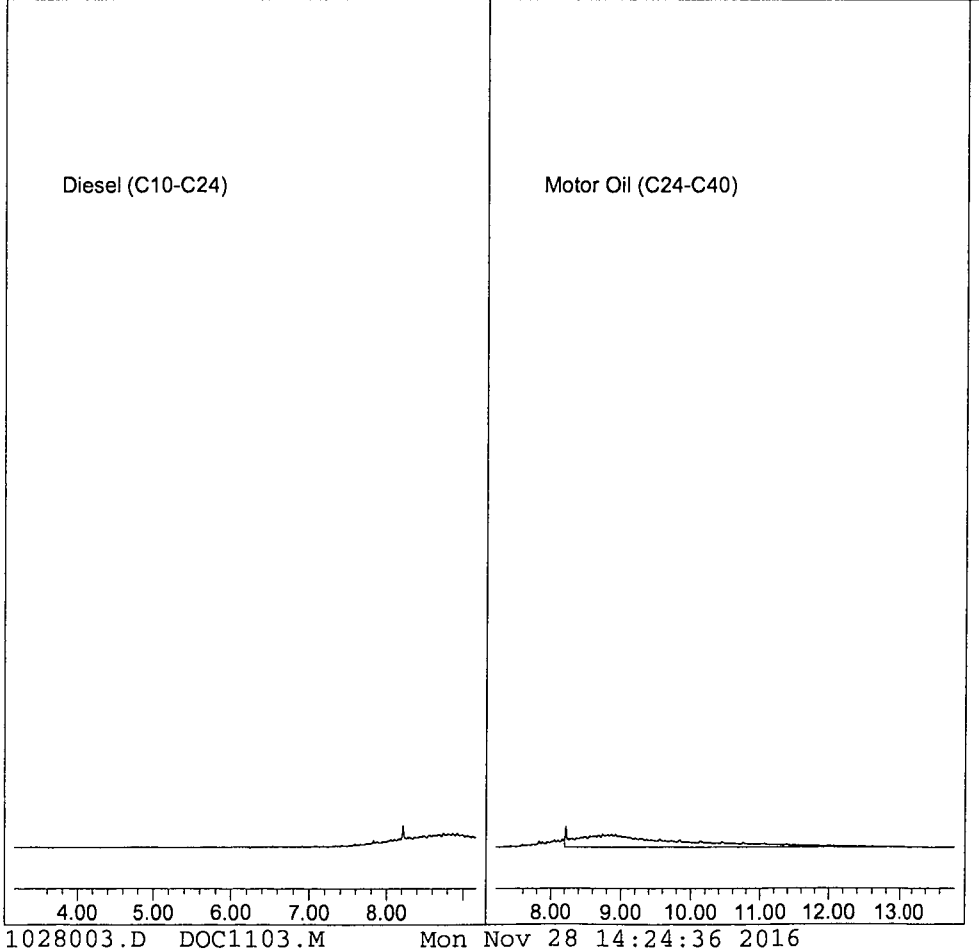
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	160376925	57.571 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028003.D
Sample : MO 50ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028004.D Vial: 4
Acq On : 10-28-16 9:49:06 Operator: DP
Sample : MO 250ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:24 2016 Quant Results File: DOC1103.RES

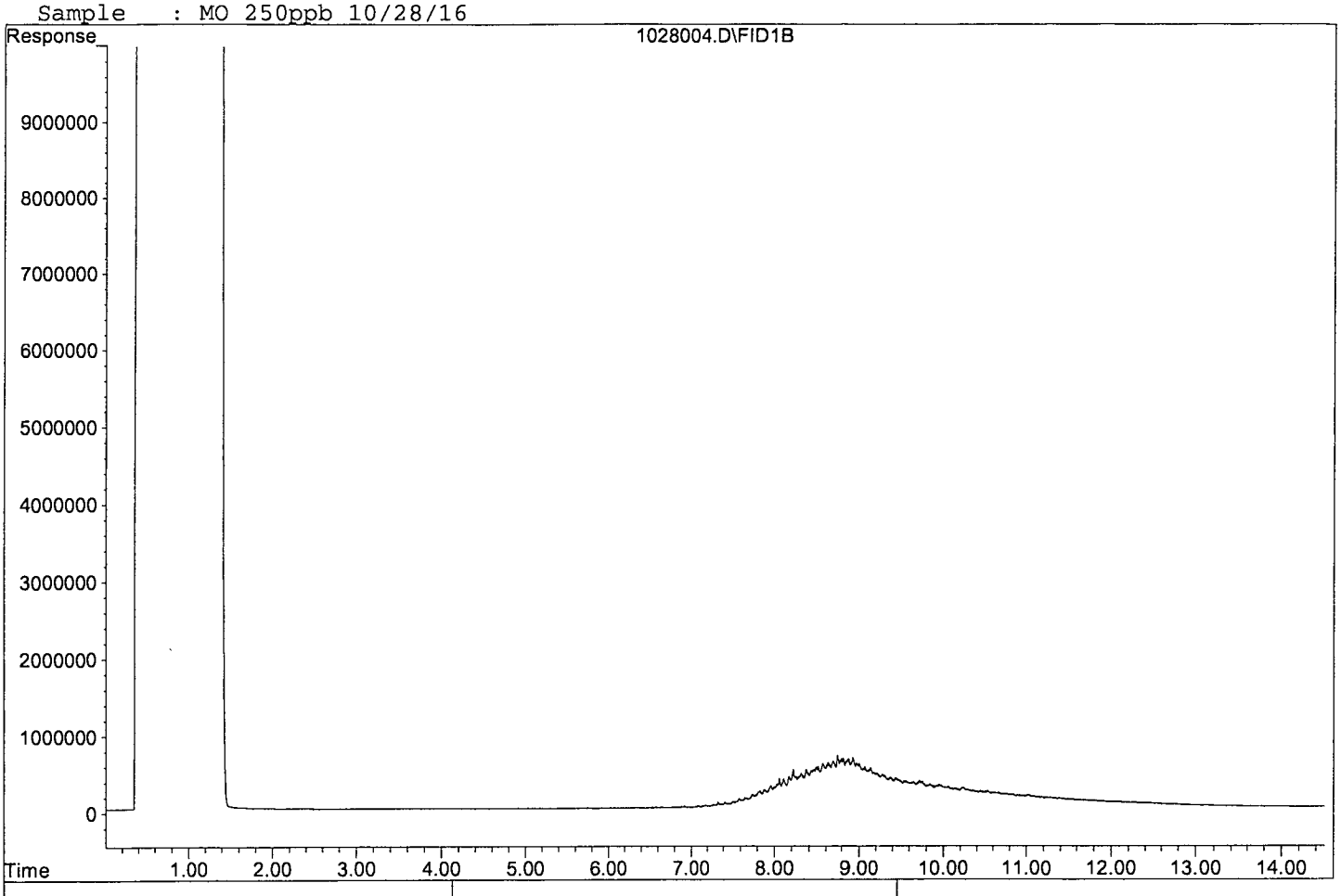
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

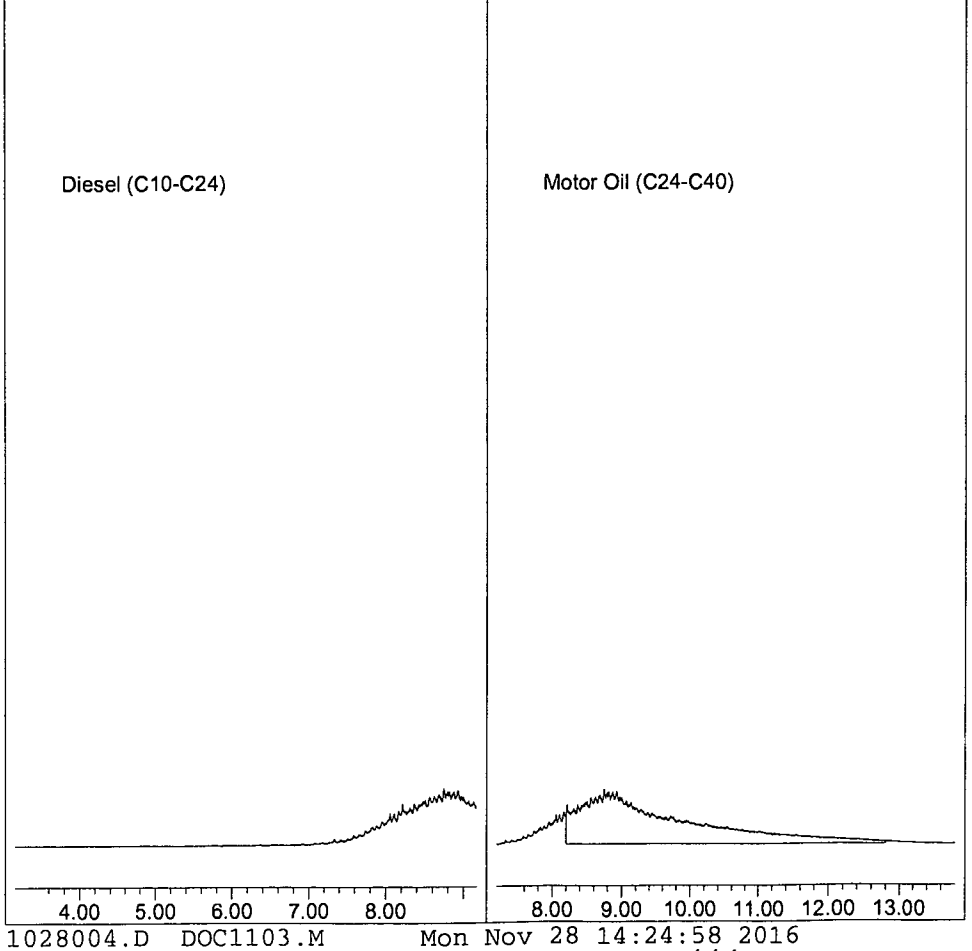
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
Target Compounds				
2) HBTM Motor Oil (C24-C40)	10.50	641488837	230.275	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028004.D
Sample : MO 250ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028005.D Vial: 5
Acq On : 10-28-16 10:09:58 Operator: DP
Sample : MO 1000ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:25 2016 Quant Results File: DOC1103.RES

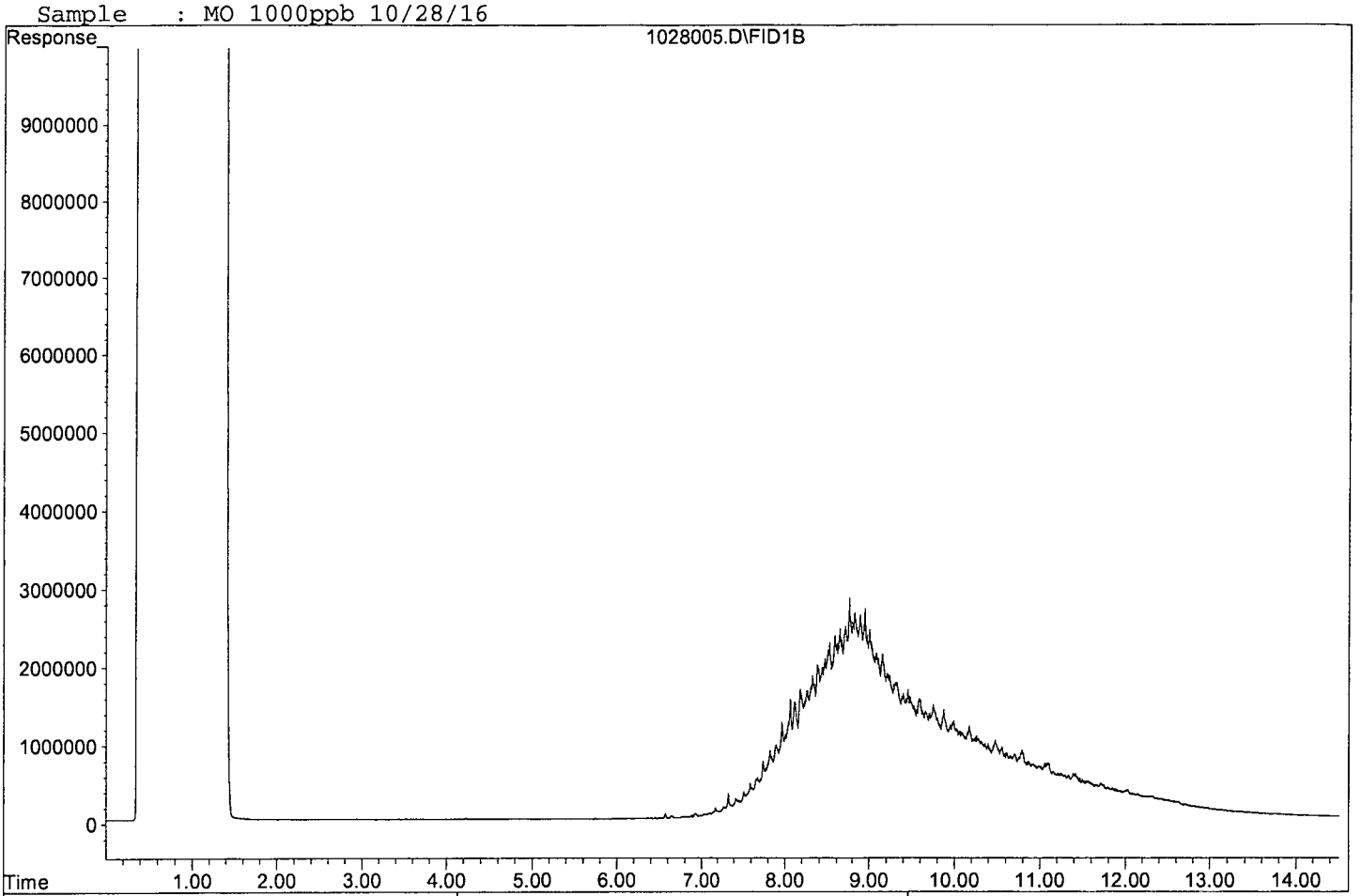
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

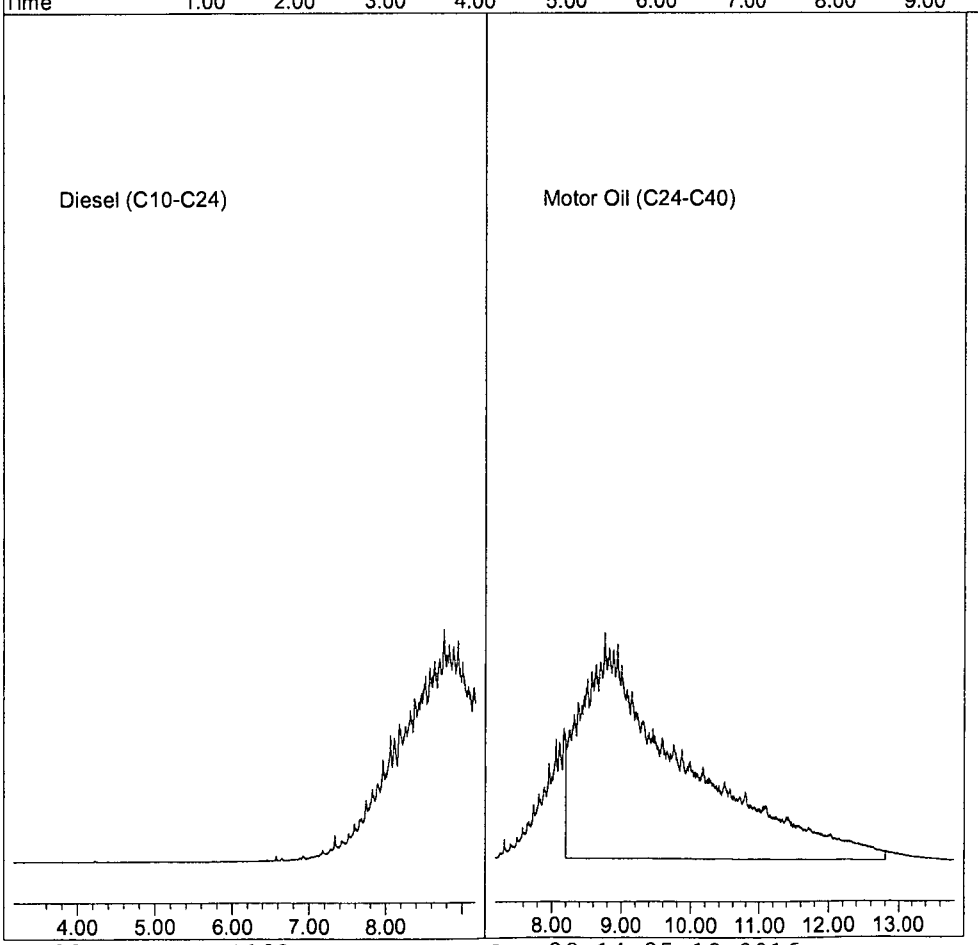
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C40)	10.50	2680029704	962.051 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028005.D
Sample : MO 1000ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028006.D Vial: 6
Acq On : 10-28-16 10:30:51 Operator: DP
Sample : MO 1500ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:25 2016 Quant Results File: DOC1103.RES

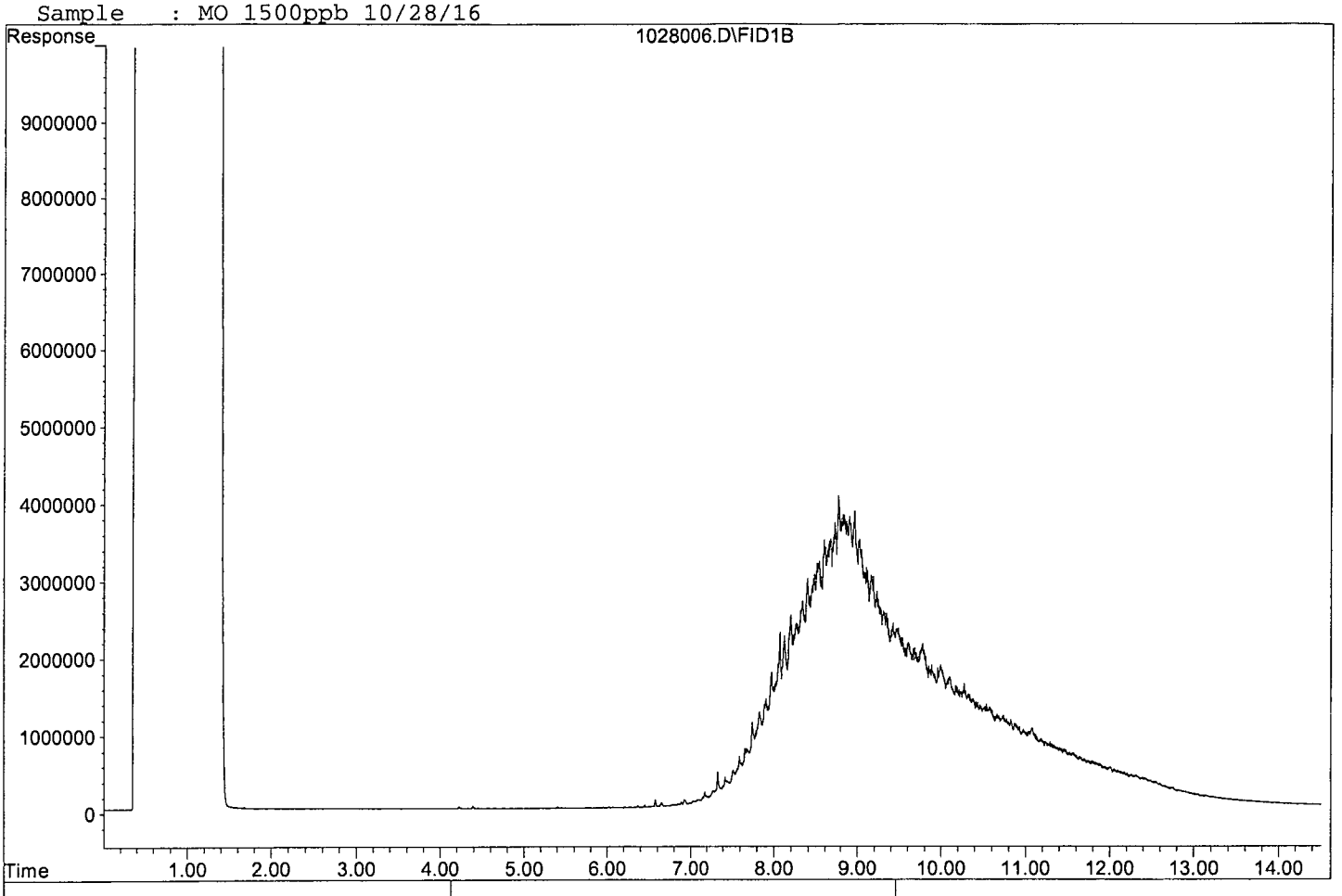
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

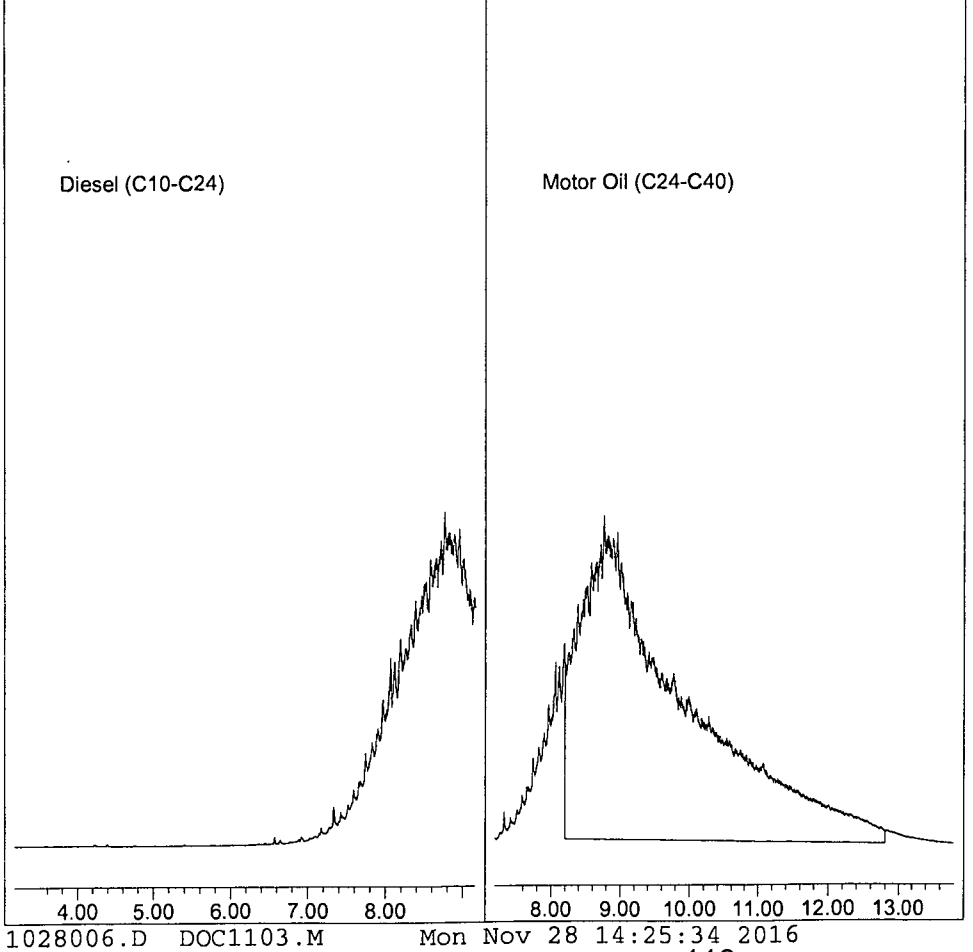
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
Target Compounds				
2) HBTM Motor Oil (C24-C40)	10.50	3965906010	1423.642	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028006.D
Sample : MO 1500ppb 10/28/16





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\161028\1028007.D Vial: 7
Acq On : 10-28-16 10:51:50 Operator: DP
Sample : MO 2000ppb 10/28/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 14:25 2016 Quant Results File: DOC1103.RES

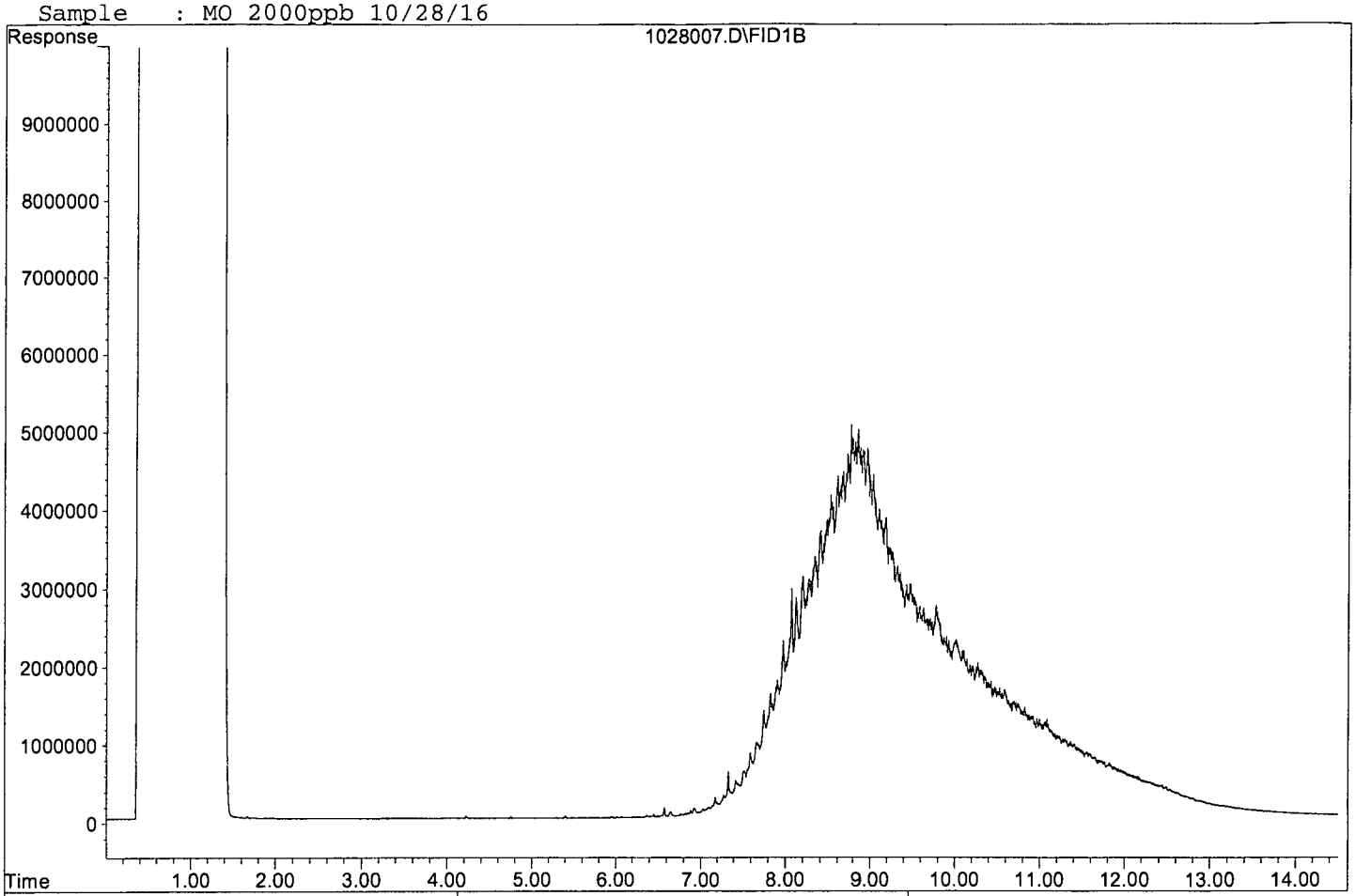
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

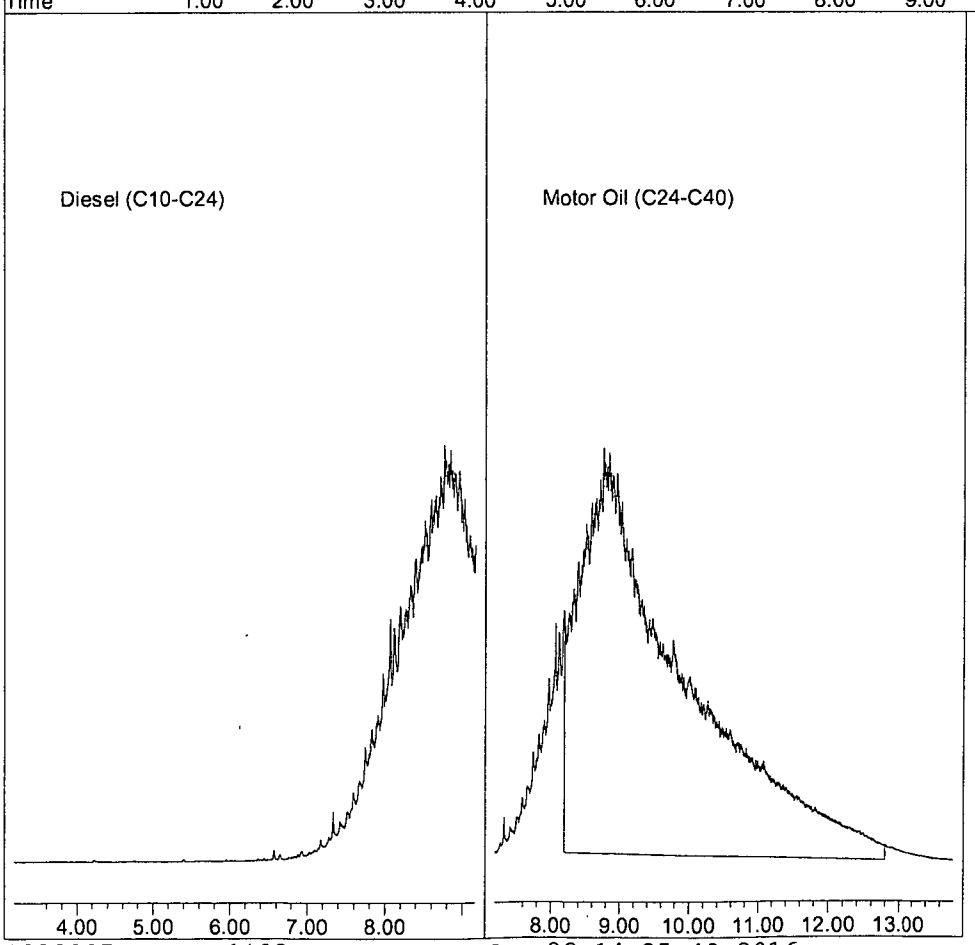
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
Target Compounds				
2) HBTM Motor Oil (C24-C40)	10.50	4983276169	1788.848	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028007.D
Sample : MO 2000ppb 10/28/16





TPH Extractables
DOC1103

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 11/03/16
Instrument: Apollo
Initial Cal. Date: 11/03/16
Data File: 1103012.D (Diesel) 1028008.D (Motor Oil)

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C24)	1727130	1667670	3.4	HATM	
2	HBTM	Motor Oil (C24-C40)	1392870	1239910	11	HBTM	
3							
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		Average			7.2		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161103\1103012.D Vial: 12
Acq On : 11-3-16 13:25:11 Operator: DP
Sample : DIESEL-SS 400ppb 8/1/16 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 15:21 2016 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SC Decanoic Acid(S)	5.67	4681185	3.827 ppb
Surrogate Spike 48.000	Recovery =		7.97%
4) SA Ortho-Terphenyl(S)	7.18	9886456	2.120 ppb
Surrogate Spike 30.000	Recovery =		7.07%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	1345831567	389.615 ppb
2) HBTM Motor Oil (C24-C40)	10.50	43170153	15.497 ppb

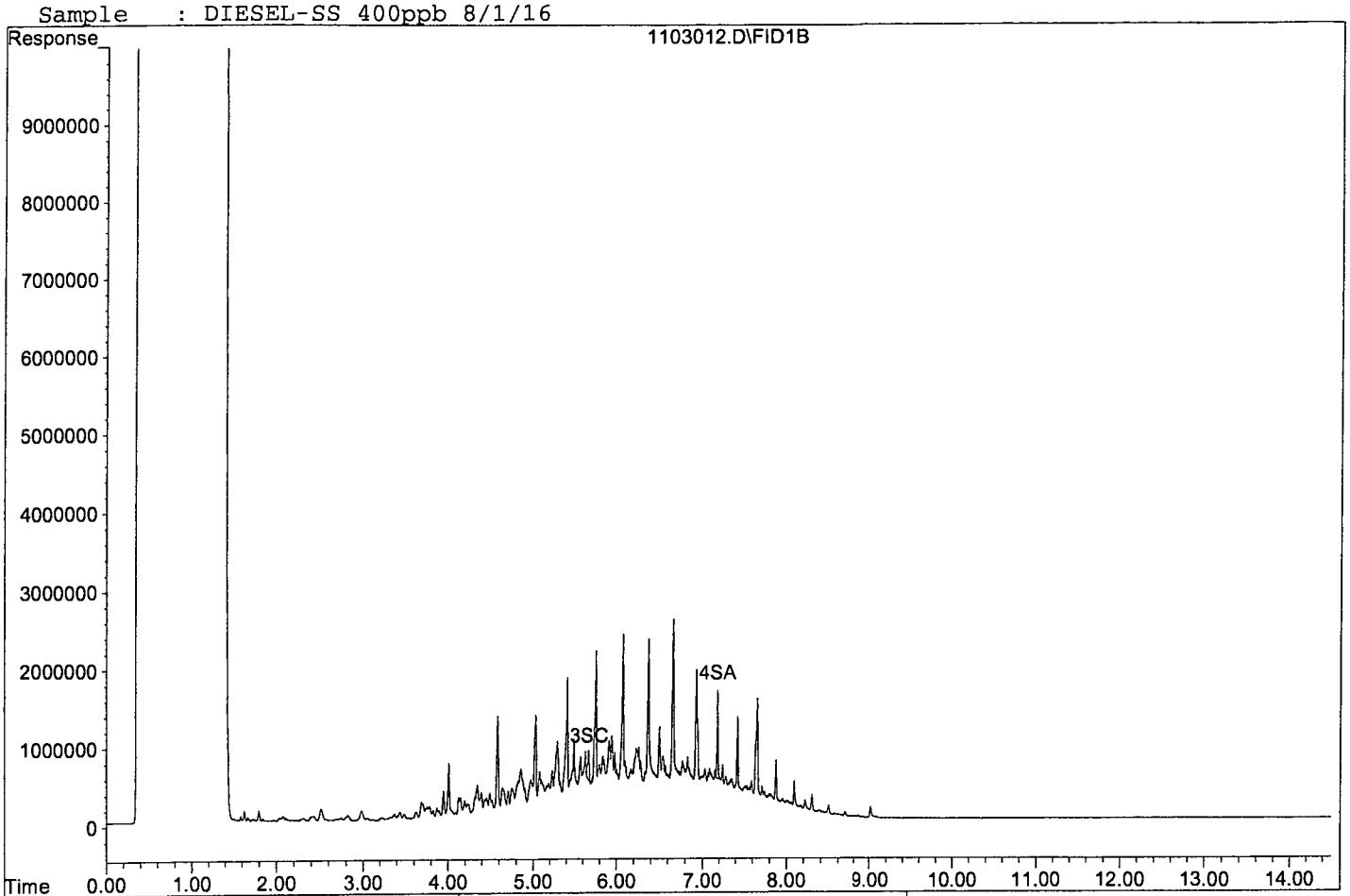
algorithm check: $\frac{1345831567 \times 1}{1727130 \times 2} = 389.6150165$

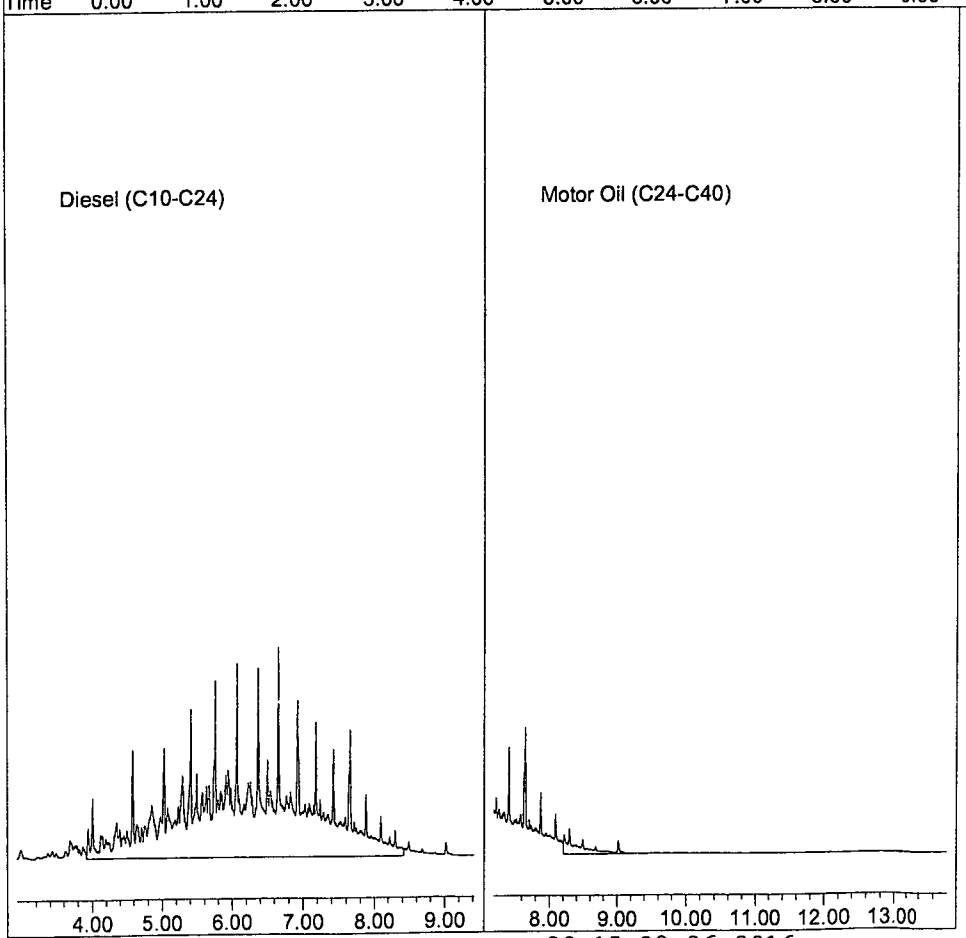
D.P. 11/28/16

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\161103\1103012.D
Sample : DIESEL-SS 400ppb 8/1/16





1103012.D DOC1103.M Mon Nov 28 15:22:26 2016

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\161028\1028008.D Vial: 8
Acq On : 10-28-16 11:12:44 Operator: DP
Sample : MO SS 1000ppb 7/6/16 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 28 15:22 2016 Quant Results File: DOC1103.RES

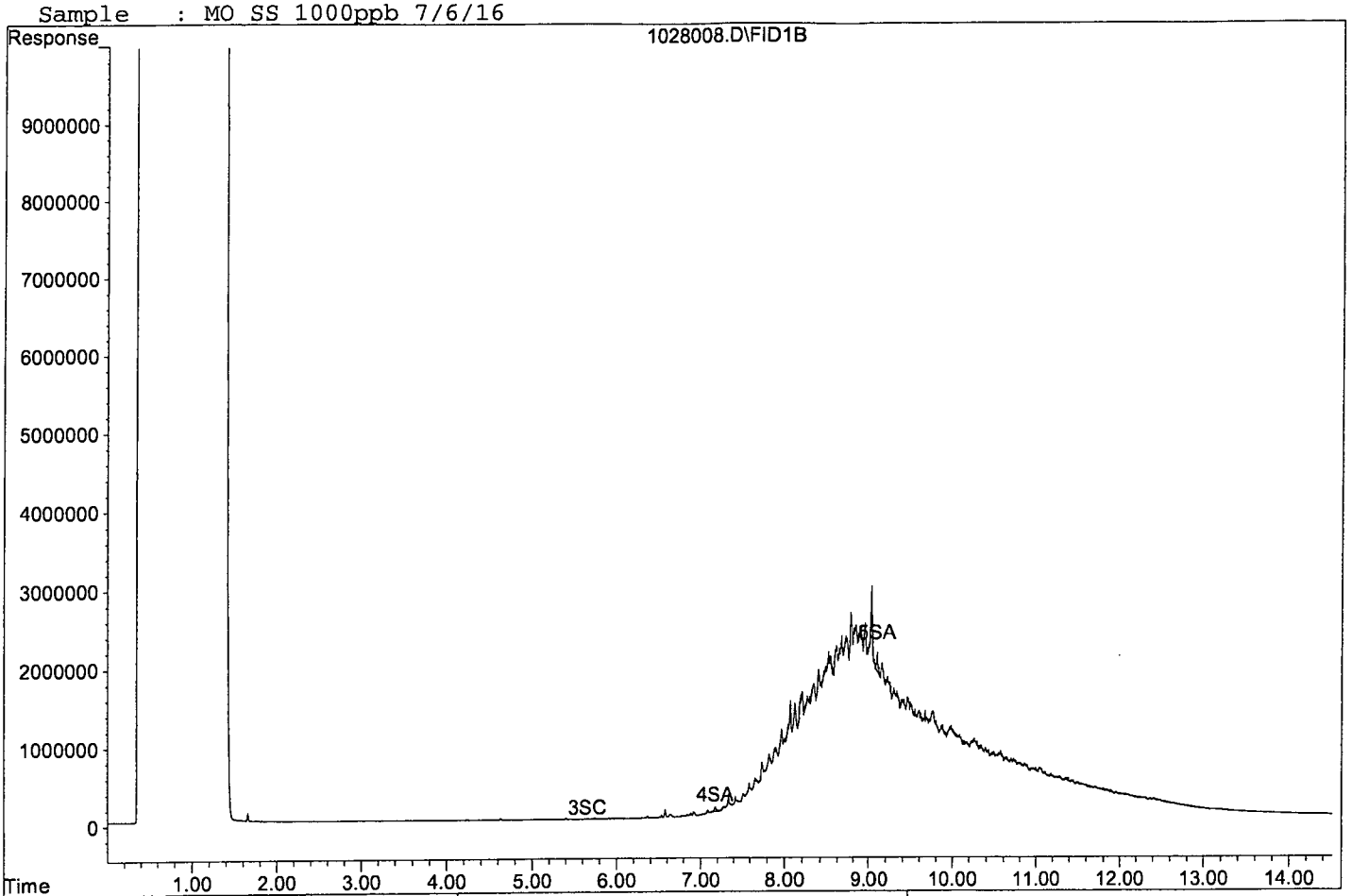
Method : G:\APOLLO\DATA\161121\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Nov 03 17:17:09 2016
Response via : Multiple Level Calibration

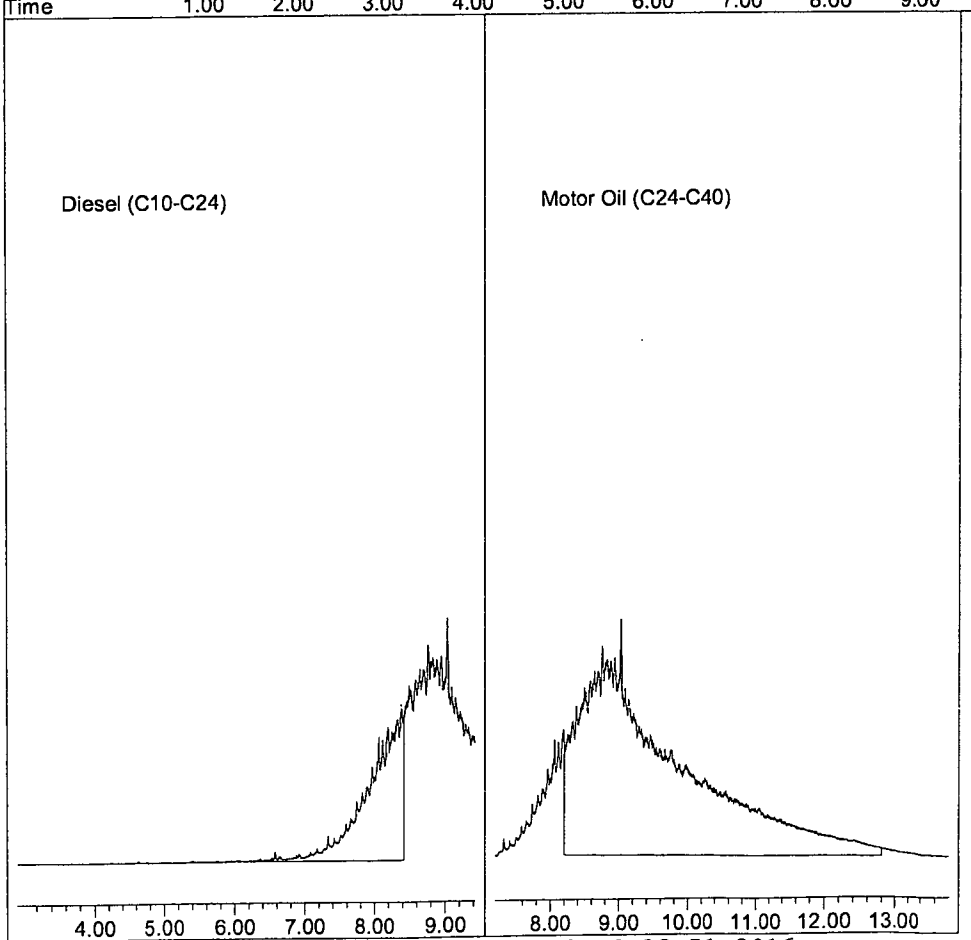
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SC Decanoic Acid(S)	5.65	6816	0.006	ppb
Surrogate Spike 48.000	Recovery =		0.01%	
4) SA Ortho-Terphenyl(S)	7.17	747984	0.160	ppb
Surrogate Spike 30.000	Recovery =		0.53%	
5) SA Octacosane(S)	9.09	2492290	0.712	ppb
Surrogate Spike 30.000	Recovery =		2.37%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	603419098	174.688	ppb
2) HBTM Motor Oil (C24-C40)	10.50	2511616588	901.596	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\161028\1028008.D
Sample : MO SS 1000ppb 7/6/16





TPH Extractables
DOC1103

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/18/17
Instrument: Apollo
Initial Cal. Date: 10/19/16
Data File: 118002-3.D

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C24)	1727130	1690890	2.1	HATM	
2	HBTM	Motor Oil (C24-C40)	1392870	1240180	11	HBTM	
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37							
38							
39							
40							
		Average			6.6		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\170118\118002.D Vial: 2
Acq On : 1-18-17 17:03:03 Operator: DP
Sample : CCV: MO 1000 ppb 1/12/17 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Jan 18 17:25 2017 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\170118\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

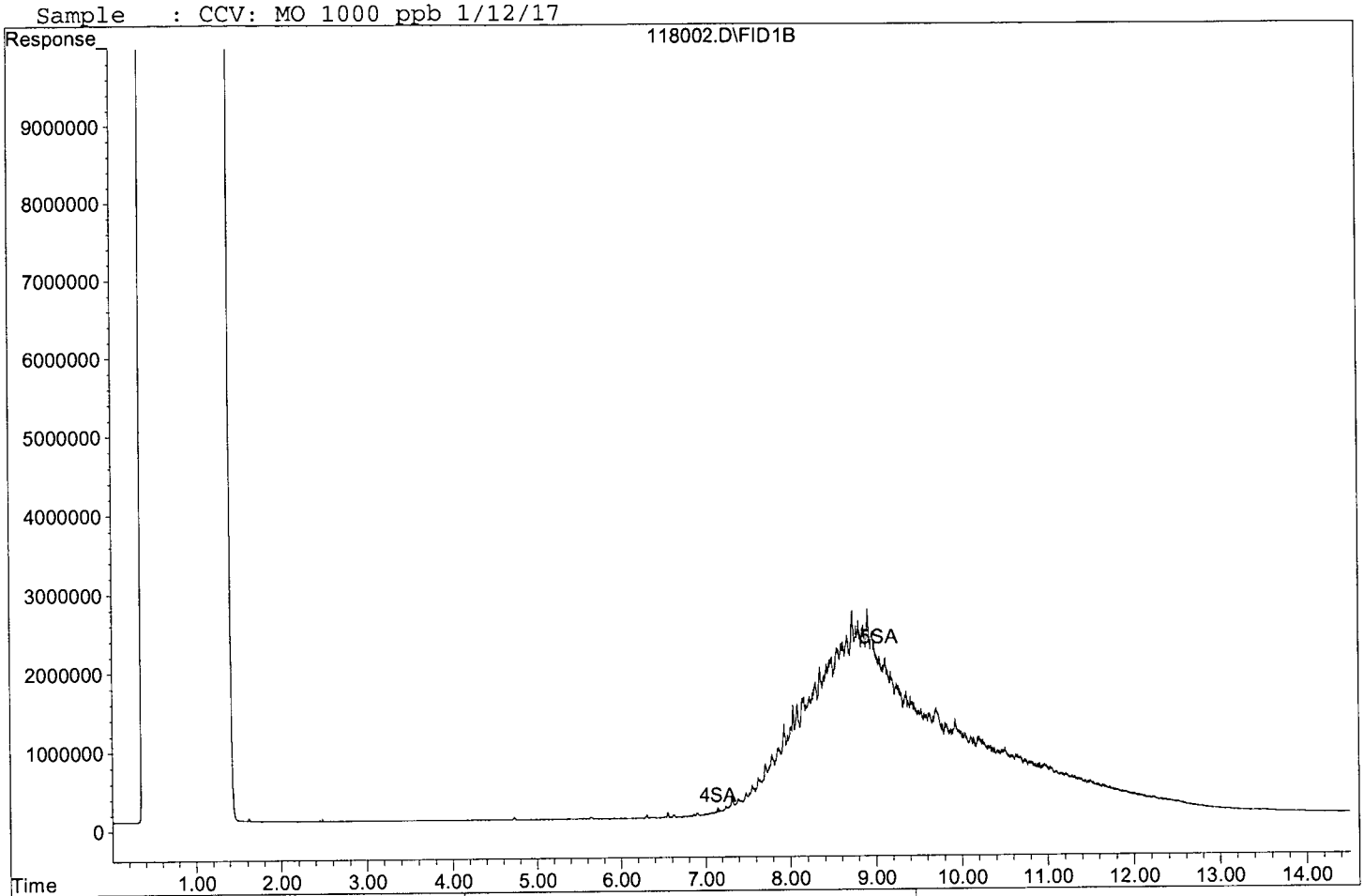
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

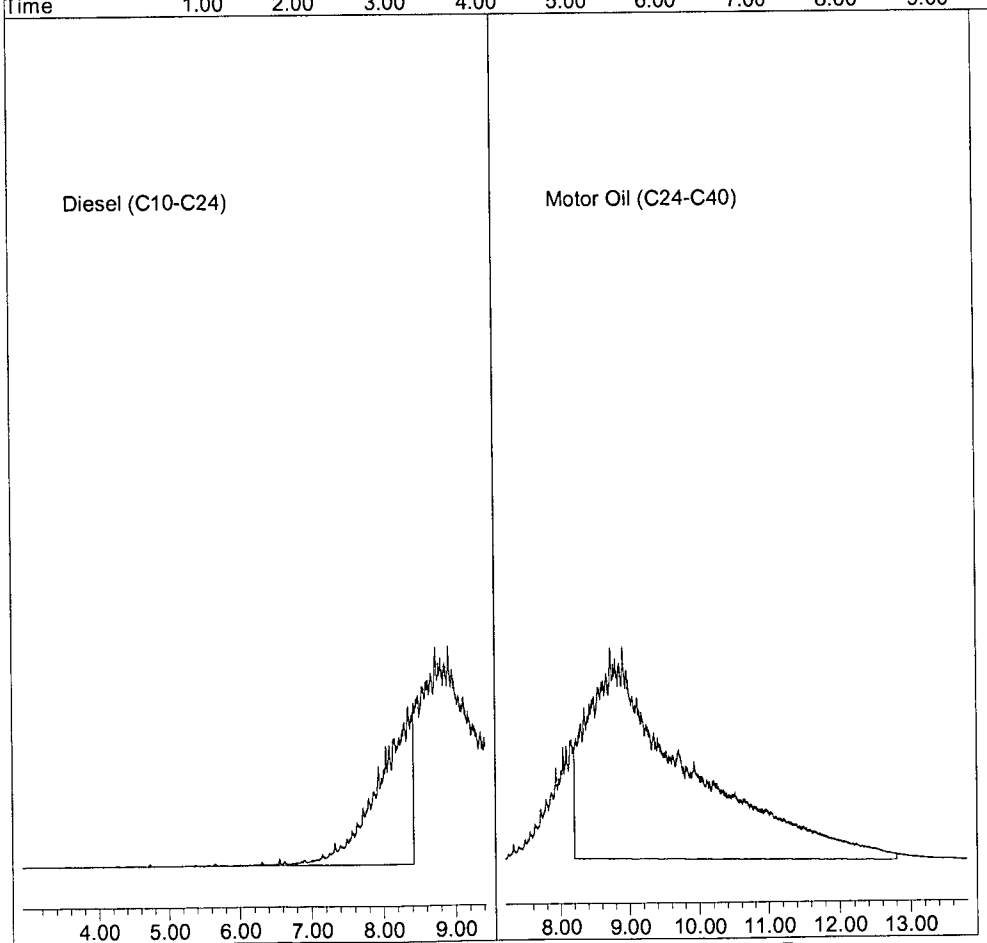
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.15	839715	0.180 ppb
Surrogate Spike 30.000	Recovery	=	0.60%
5) SA Octacosane(S)	9.04	714626	0.204 ppb
Surrogate Spike 30.000	Recovery	=	0.68%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	616061959	178.348 ppb
2) HBTM Motor Oil (C24-C40)	10.50	2480357761	890.375 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\170118\118002.D
Sample : CCV: MO 1000 ppb 1/12/17





118002.D DOC1103.M Fri Jan 20 15:09:44 2017

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\170118\118003.D Vial: 3
Acq On : 1-18-17 17:23:19 Operator: DP
Sample : CCV: Diesel 400 ppb 1/12/17 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jan 19 10:08 2017 Quant Results File: DOC1103.RES

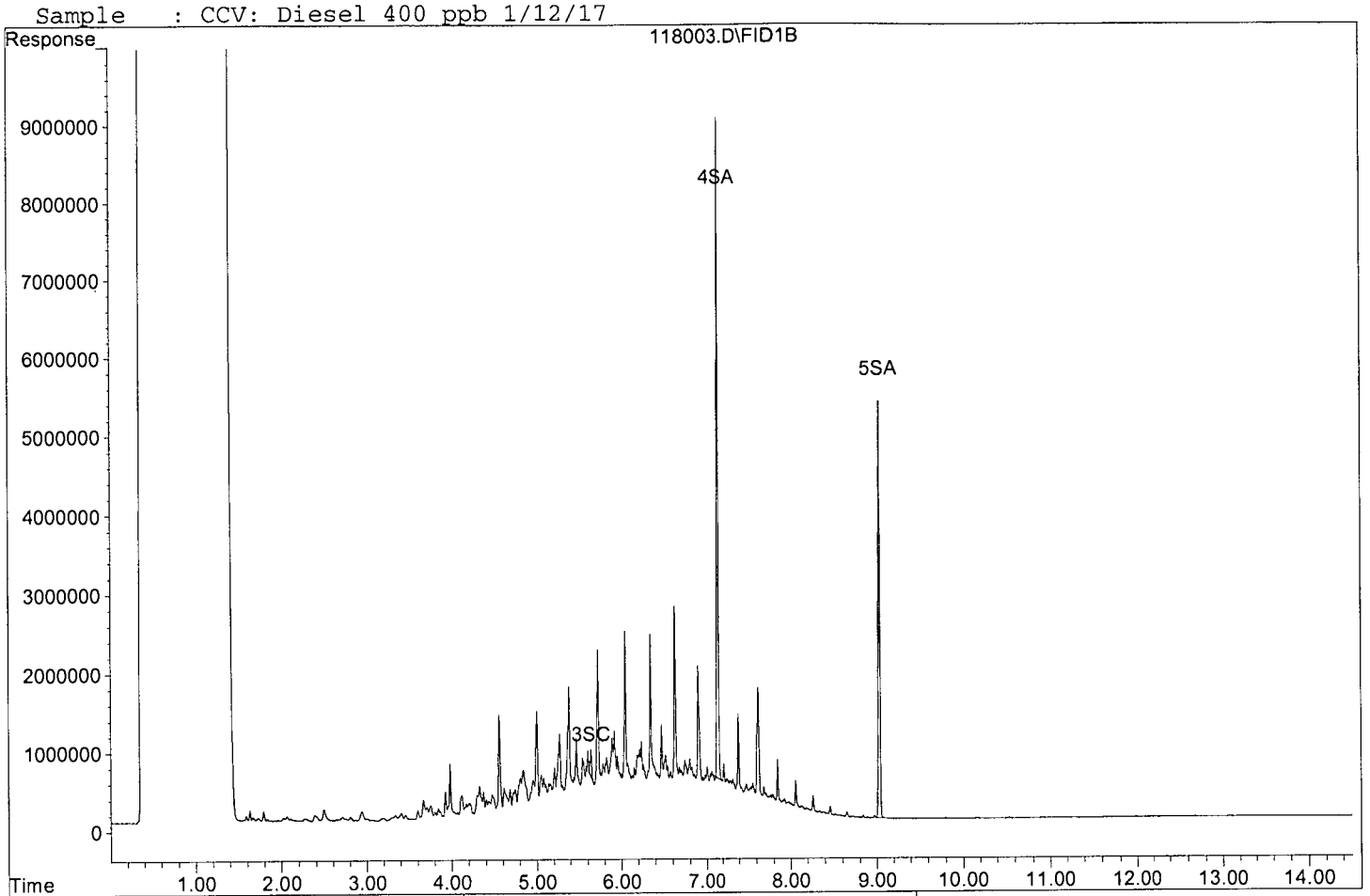
Method : G:\APOLLO\DATA\170118\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

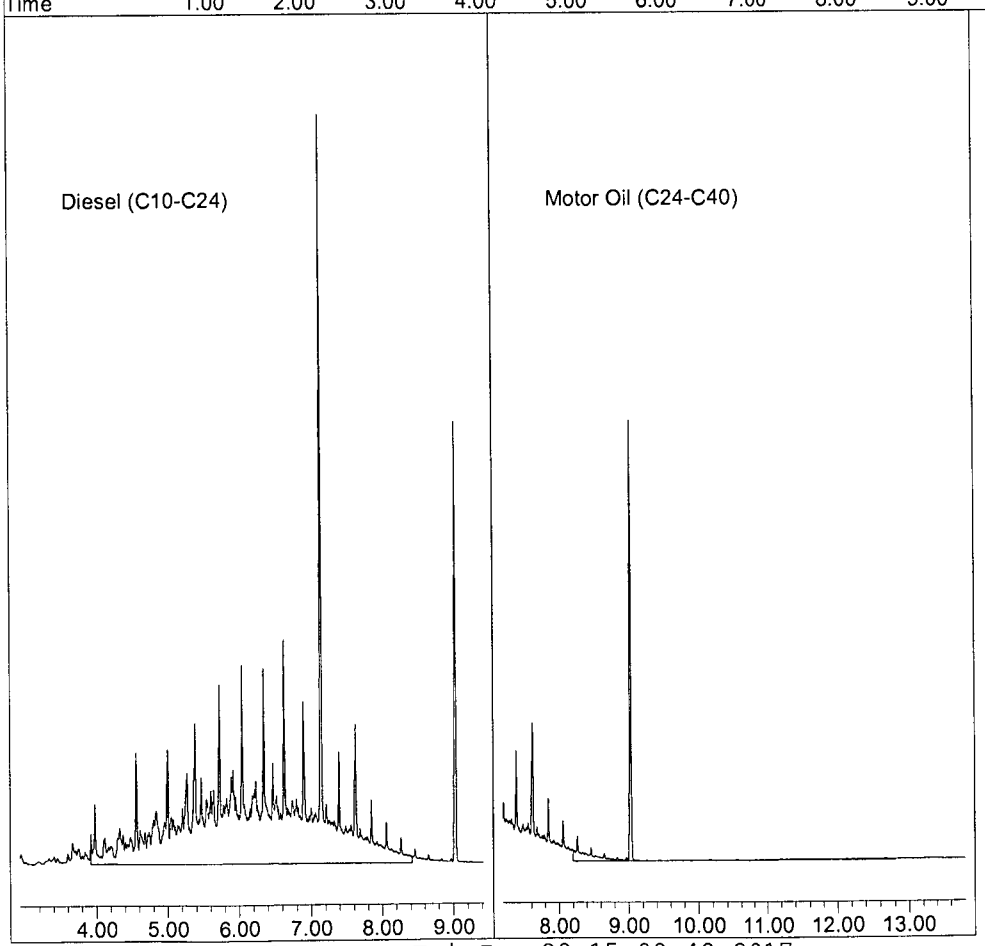
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SC Decanoic Acid(S)	5.64	3680445	3.009 ppb
Surrogate Spike 48.000		Recovery =	6.27%
4) SA Ortho-Terphenyl(S)	7.14	89551036	19.199 ppb
Surrogate Spike 30.000		Recovery =	64.00%
5) SA Octacosane(S)	9.03	67643122	19.328 ppb
Surrogate Spike 30.000		Recovery =	64.43%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	1352708558	391.606 ppb
2) HBTM Motor Oil (C24-C40)	10.50	41098206	14.753 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\170118\118003.D
Sample : CCV: Diesel 400 ppb 1/12/17





118003.D DOC1103.M Fri Jan 20 15:09:49 2017

TPH Extractables
DOC1103

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/18/17
Instrument: Apollo
Initial Cal. Date: 10/19/16
Data File: 118021-22.D

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C24)	1727130	1677120	2.9	HATM	
2	HBTM	Motor Oil (C24-C40)	1392870	1250970	10	HBTM	
3							
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39							
40							
		Average			6.5		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\170118\118021.D Vial: 21
Acq On : 1-18-17 23:32:28 Operator: DP
Sample : CCV: Diesel 400 ppb 1/12/17 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jan 19 10:16 2017 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\170118\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

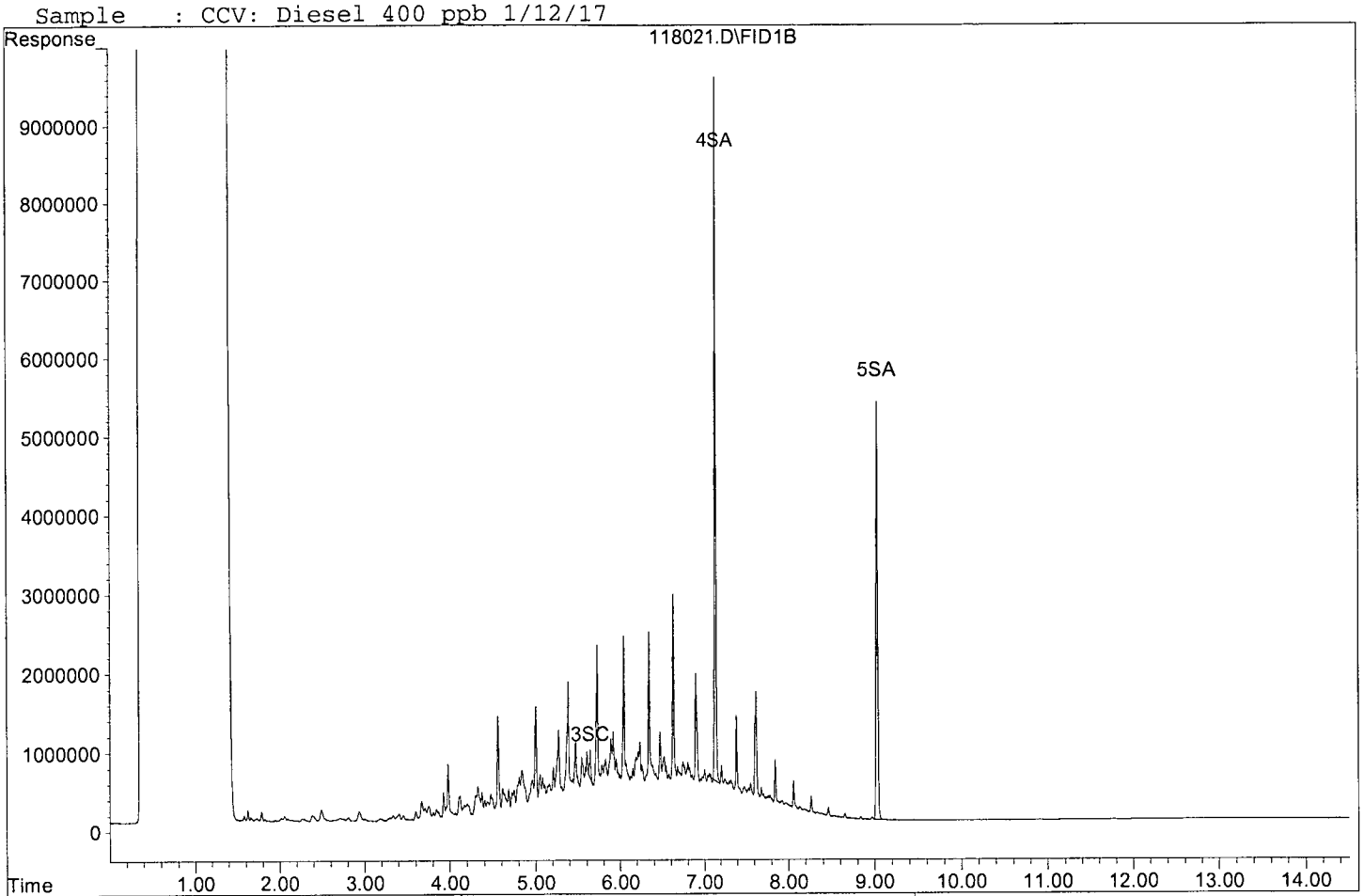
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

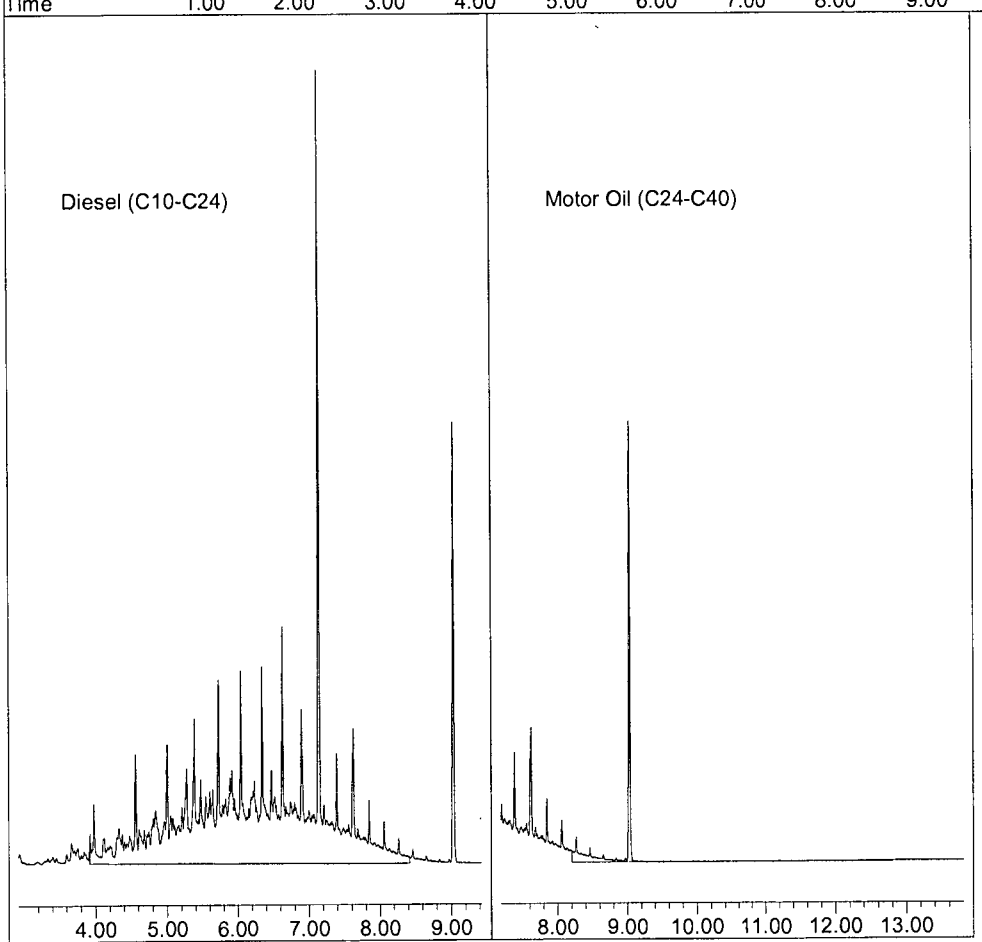
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SC Decanoic Acid(S)	5.64	3915854	3.201	ppb
Surrogate Spike 48.000		Recovery =	6.67%	
4) SA Ortho-Terphenyl(S)	7.14	90327517	19.365	ppb
Surrogate Spike 30.000		Recovery =	64.55%	
5) SA Octacosane(S)	9.03	67916258	19.406	ppb
Surrogate Spike 30.000		Recovery =	64.69%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	1341692349	388.417	ppb
2) HBTM Motor Oil (C24-C40)	10.50	38455612	13.804	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\170118\118021.D
Sample : CCV: Diesel 400 ppb 1/12/17





118021.D DOC1103.M Thu Jan 26 09:42:47 2017

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\170118\118022.D Vial: 22
Acq On : 1-18-17 23:52:58 Operator: DP
Sample : CCV: MO 1000 ppb 1/12/17 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Jan 19 10:09 2017 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\170118\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

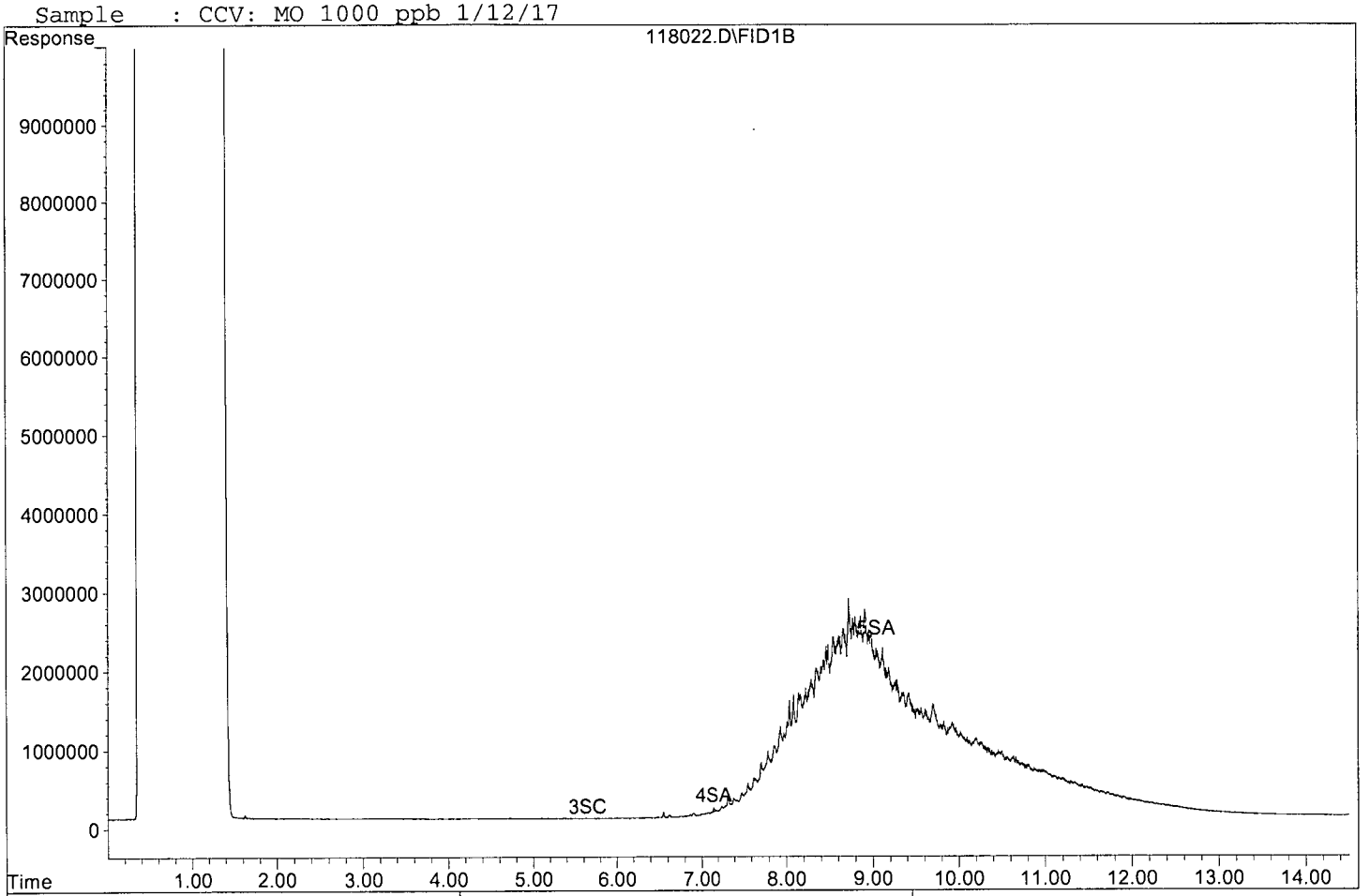
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

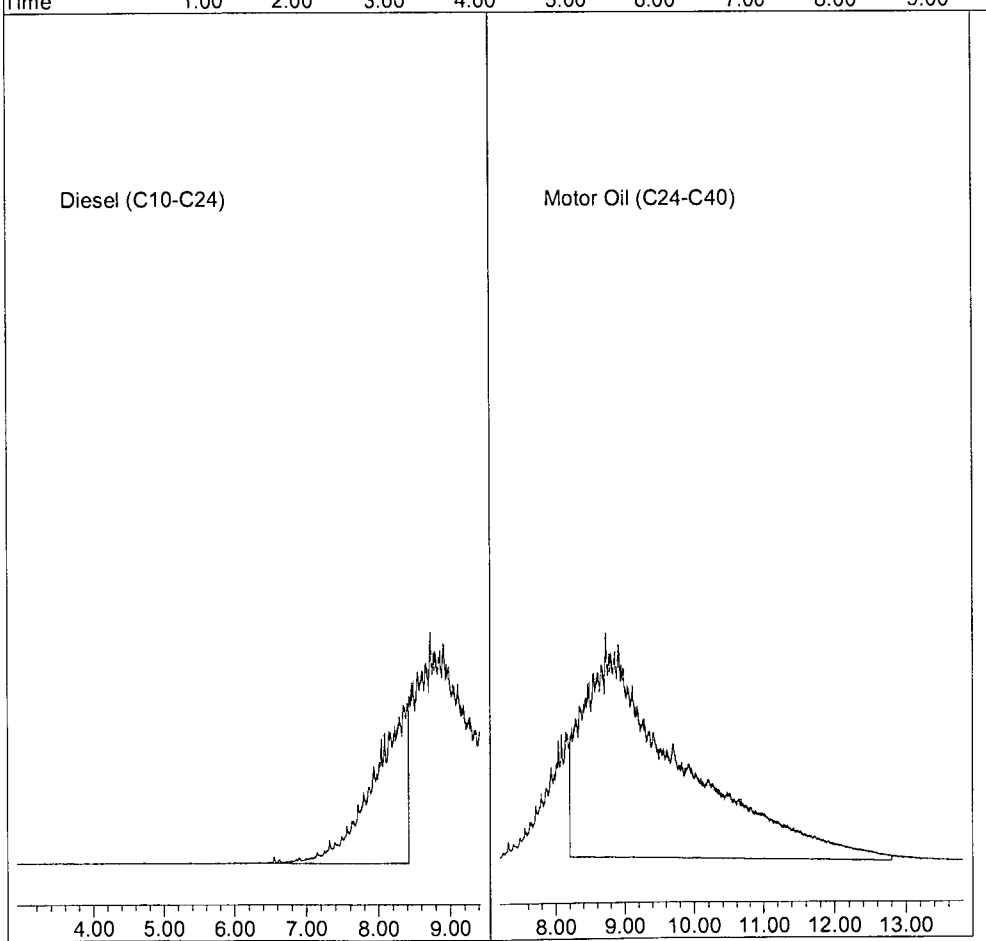
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SC Decanoic Acid(S)	5.64	6826	0.006 ppb
Surrogate Spike 48.000		Recovery =	0.01%
4) SA Ortho-Terphenyl(S)	7.15	573167	0.123 ppb
Surrogate Spike 30.000		Recovery =	0.41%
5) SA Octacosane(S)	9.04	455777	0.130 ppb
Surrogate Spike 30.000		Recovery =	0.43%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	639572445	185.155 ppb
2) HBTM Motor Oil (C24-C40)	10.50	2501930937	898.119 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\170118\118022.D
Sample : CCV: MO 1000 ppb 1/12/17





118022.D DOC1103.M Thu Jan 26 09:42:52 2017

TPH Extractables
DOC1103

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/19/17
Instrument: Apollo
Initial Cal. Date: 10/19/16
Data File: 118028-29.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1727130	1701180	1.5	HATM	
2	HBTM	Motor Oil (C24-C40)	1392870	1231310	12	HBTM	
3							
4							
5							
6							
7							
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35							
36							
37							
38							
39							
40							
		Average			6.8		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\170118\118028.D Vial: 28
Acq On : 1-19-17 1:56:09 Operator: DP
Sample : CCV: Diesel 400 ppb 1/12/17 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jan 19 10:10 2017 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\170118\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

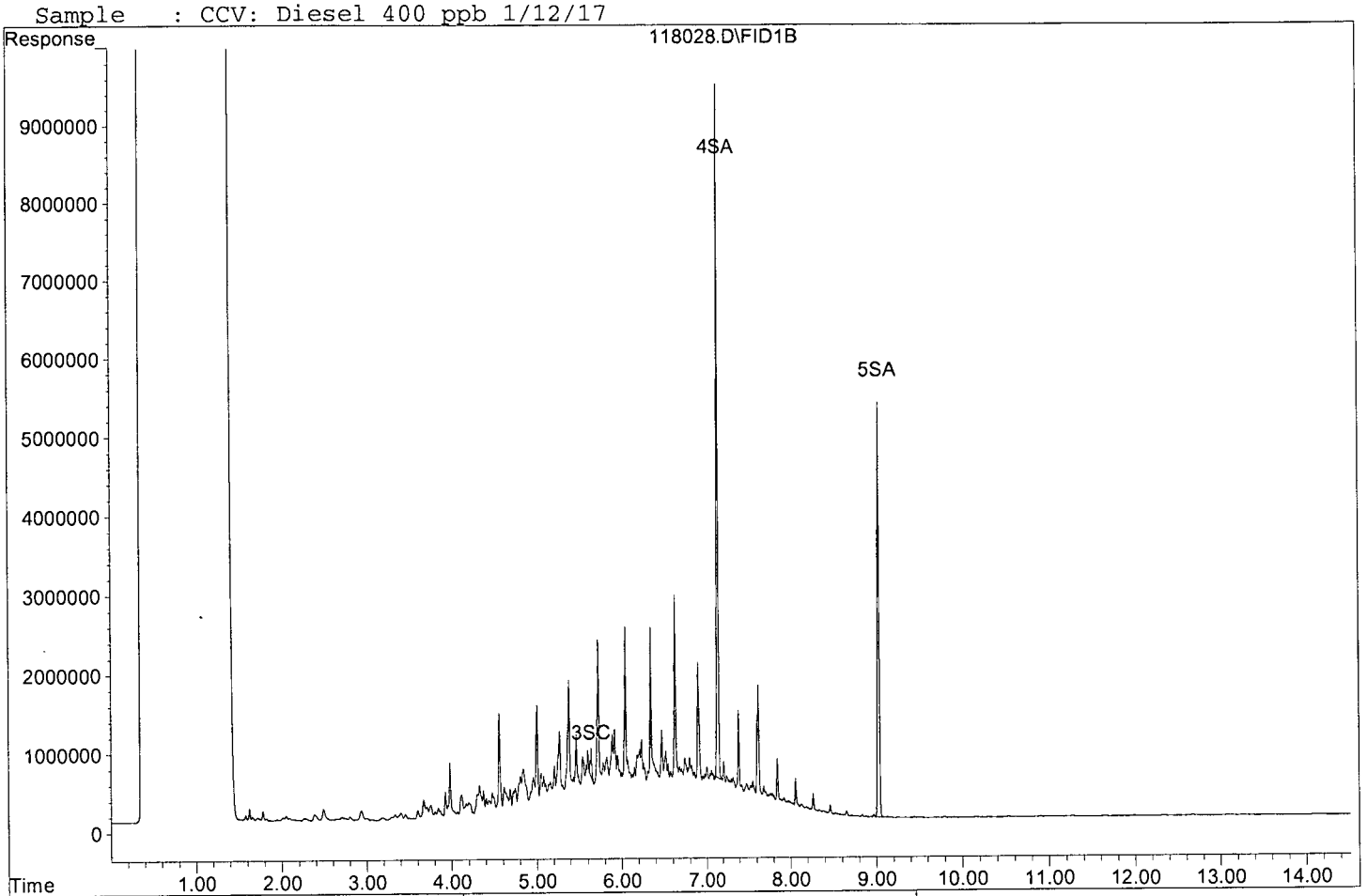
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

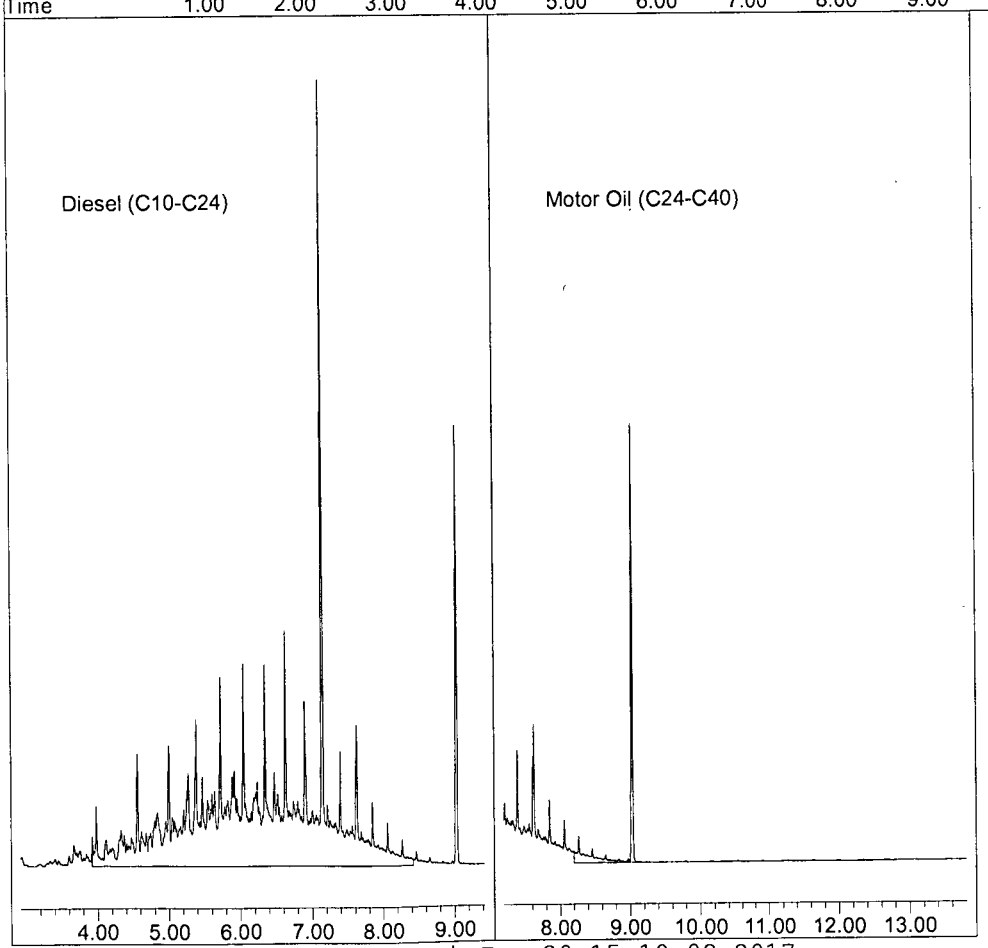
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SC Decanoic Acid(S)	5.64	4096017	3.349 ppb
Surrogate Spike 48.000		Recovery =	6.98%
4) SA Ortho-Terphenyl(S)	7.14	91011372	19.512 ppb
Surrogate Spike 30.000		Recovery =	65.04%
5) SA Octacosane(S)	9.03	68615039	19.606 ppb
Surrogate Spike 30.000		Recovery =	65.35%
Target Compounds			
1) HATM Diesel (C10-C24)	6.17	1360947532	393.991 ppb
2) HBTM Motor Oil (C24-C40)	10.50	39180487	14.065 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\170118\118028.D
Sample : CCV: Diesel 400 ppb 1/12/17





118028.D DOC1103.M Fri Jan 20 15:10:02 2017

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\170118\118029.D Vial: 29
Acq On : 1-19-17 2:16:40 Operator: DP
Sample : CCV: MO 1000 ppb 1/12/17 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Jan 19 10:10 2017 Quant Results File: DOC1103.RES

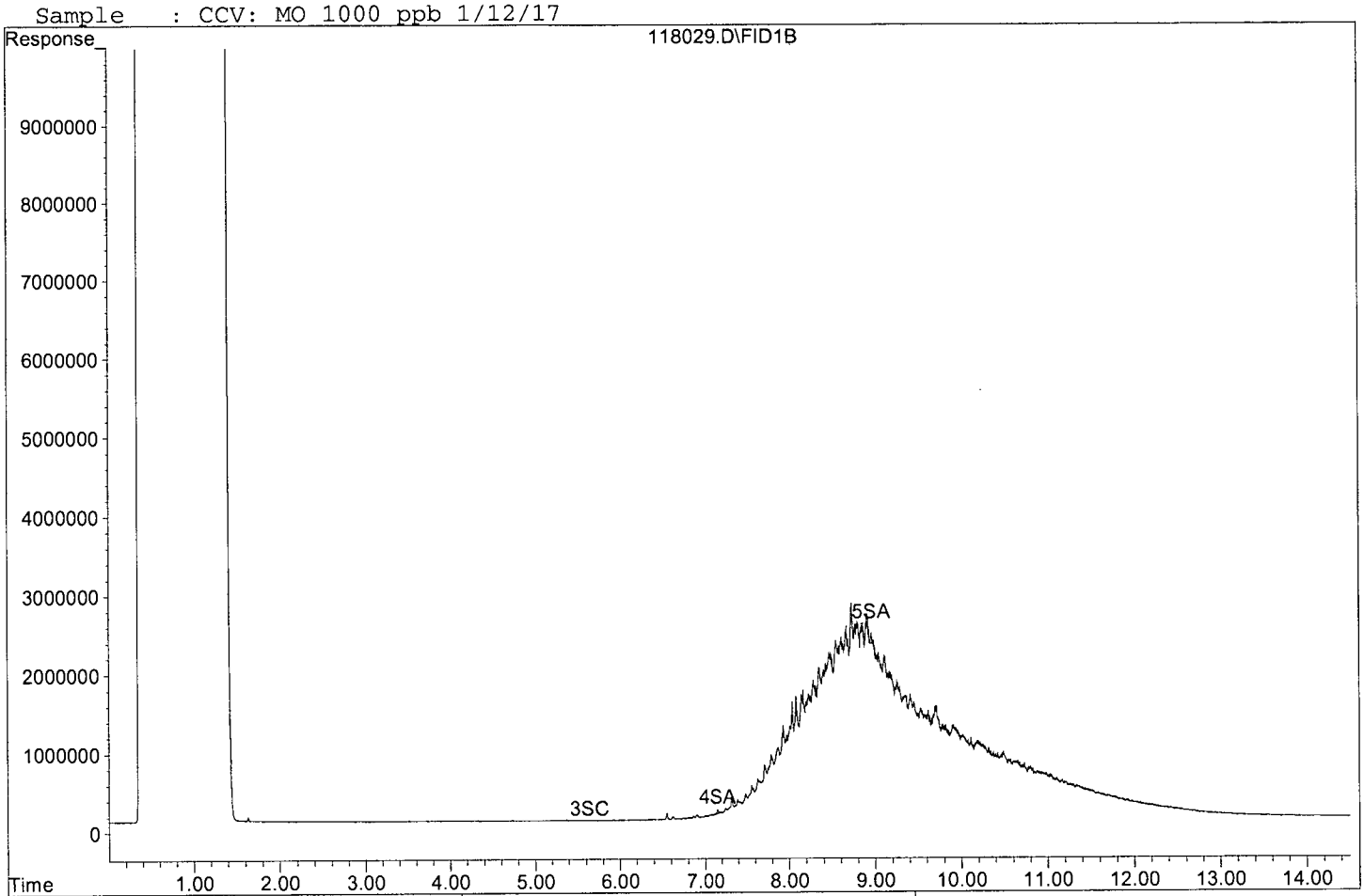
Method : G:\APOLLO\DATA\170118\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

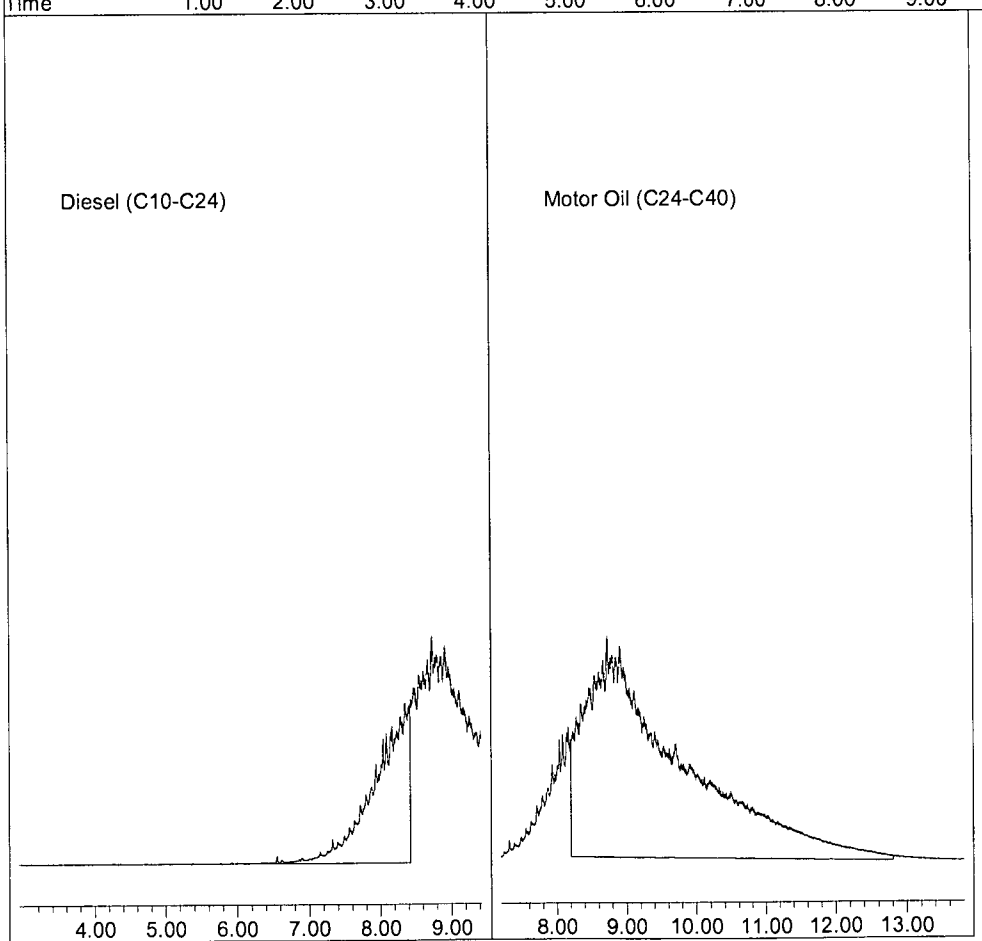
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SC Decanoic Acid(S)	5.64	17584	0.014	ppb
Surrogate Spike 48.000	Recovery =		0.03%	
4) SA Ortho-Terphenyl(S)	7.15	813861	0.174	ppb
Surrogate Spike 30.000	Recovery =		0.58%	
5) SA Octacosane(S)	8.96	1132244	0.324	ppb
Surrogate Spike 30.000	Recovery =		1.08%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	633474527	183.389	ppb
2) HBTM Motor Oil (C24-C40)	10.50	2462616254	884.006	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\170118\118029.D
Sample : CCV: MO 1000 ppb 1/12/17





ORGANICS
Raw Data

APPL, INC.

Method Blank

EPA 8015B TPH WATER

Blank Name/QCG: **170116W-48866 - 215613**
Batch ID: #DOC53-170116A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	25.00 U	40.0	25.00	13.07	ug/L	01/16/17	01/18/17
BLANK	OIL (C24-C40)	40.00 U	40.0	40.00	5.54	ug/L	01/16/17	01/18/17
BLANK	SURROGATE: OCTACOSANE (S)	104	60-142			%	01/16/17	01/18/17
BLANK	SURROGATE: ORTHO-TERPHEN	82.3	56-125			%	01/16/17	01/18/17

Quant Method:DOC1103.M
Run #:118004
Instrument:Apollo
Sequence:170118
Initials:DPO

GC SC-Blank-REG MDLs-DOD
Printed: 01/19/17 11:11:29 AM

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\170118\118004.D Vial: 4
Acq On : 1-18-17 17:43:45 Operator: DP
Sample : 170116A BLK 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Jan 19 10:11 2017 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\170118\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

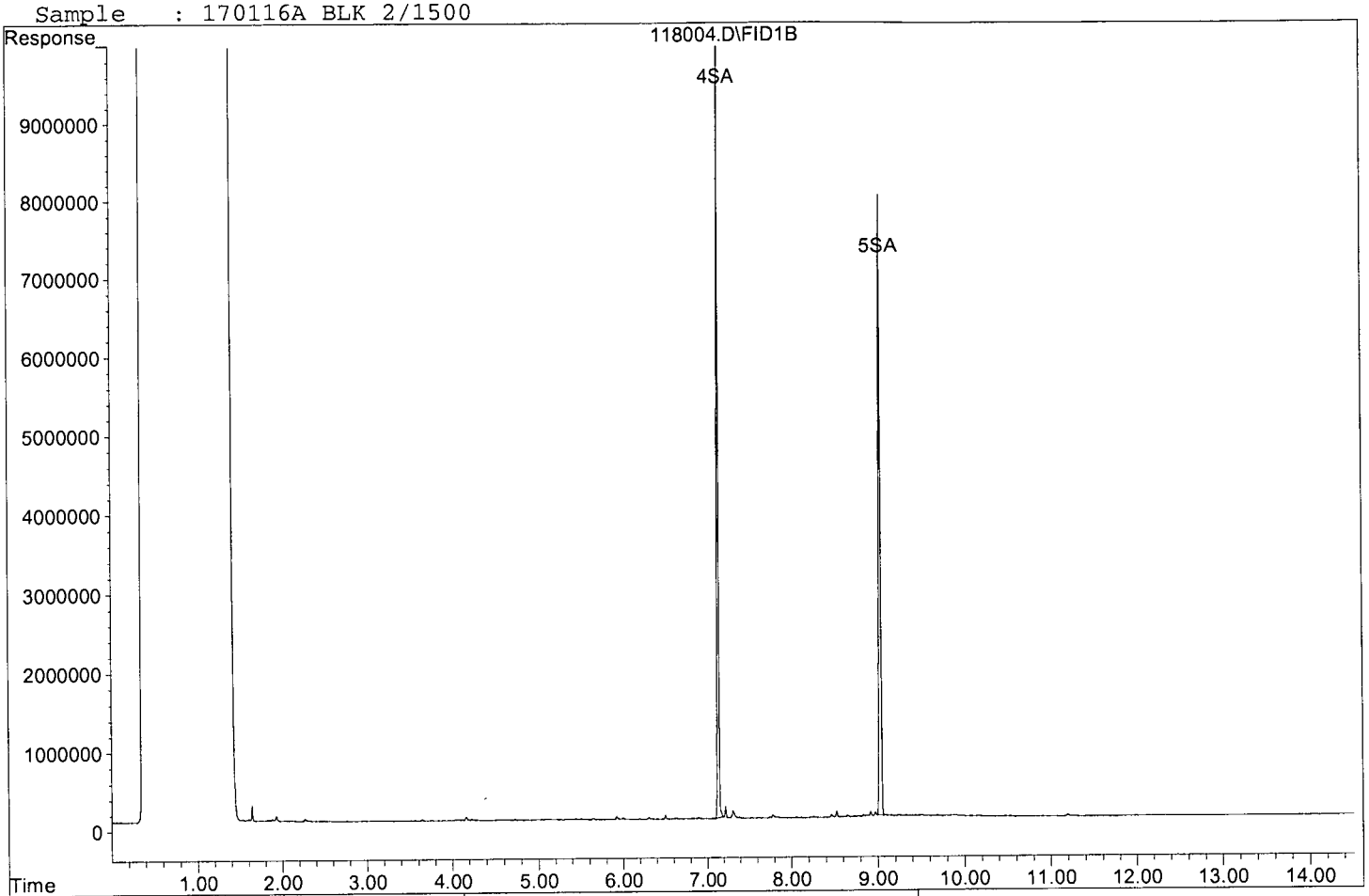
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

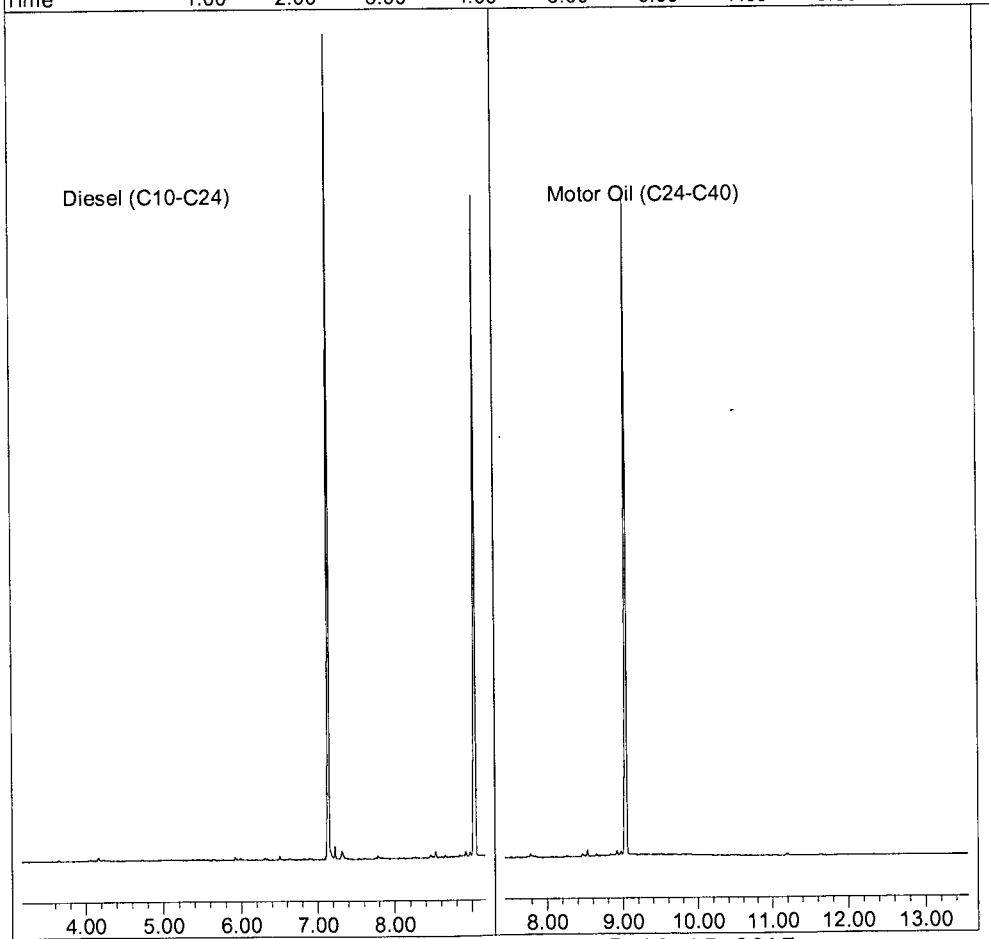
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SA Ortho-Terphenyl(S)	7.14	115202212	32.930 ppb
Surrogate Spike 40.000	Recovery =		82.33%
5) SA Octacosane(S)	9.04	108845816	41.469 ppb
Surrogate Spike 40.000	Recovery =		103.67%
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\170118\118004.D
Sample : 170116A BLK 2/1500





Laboratory Control Spike Recovery
EPA 8015B TPH WATER

APPL ID: **170116W-48866 LCS - 215613**
Batch ID: #DOC53-170116A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
DIESEL (C10-C24)	1330	1080	81.0	36-132
OIL (C24-C40)	1330	1090	81.8	41-113
SURROGATE: OCTACOSANE (S)	40.0	40.3	101	60-142
SURROGATE: ORTHO-TERPHENYL (S)	40.0	39.5	98.8	56-125

Comments: _____

Primary	SPK
Quant Method :	DOC1103.M
Extraction Date :	01/16/17
Analysis Date :	01/18/17
Instrument :	Apollo
Run :	118005
Initials :	DPO

Printed: 01/19/17 11:11:23 AM
APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\170118\118005.D Vial: 5
Acq On : 1-18-17 18:04:15 Operator: DP
Sample : 170116A LCS-1 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Jan 19 10:11 2017 Quant Results File: DOC1103.RES

Method : G:\APOLLO\DATA\170118\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

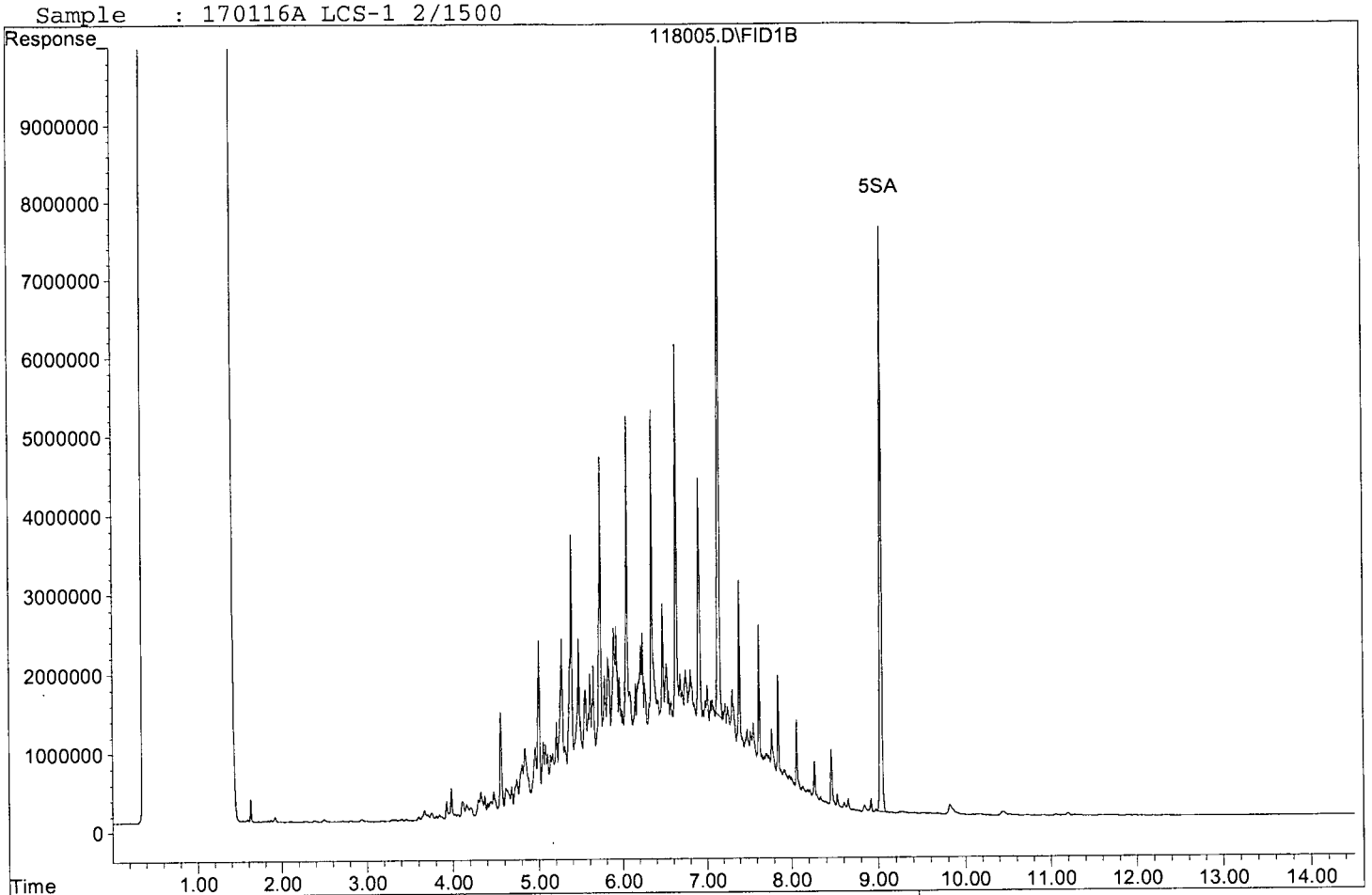
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

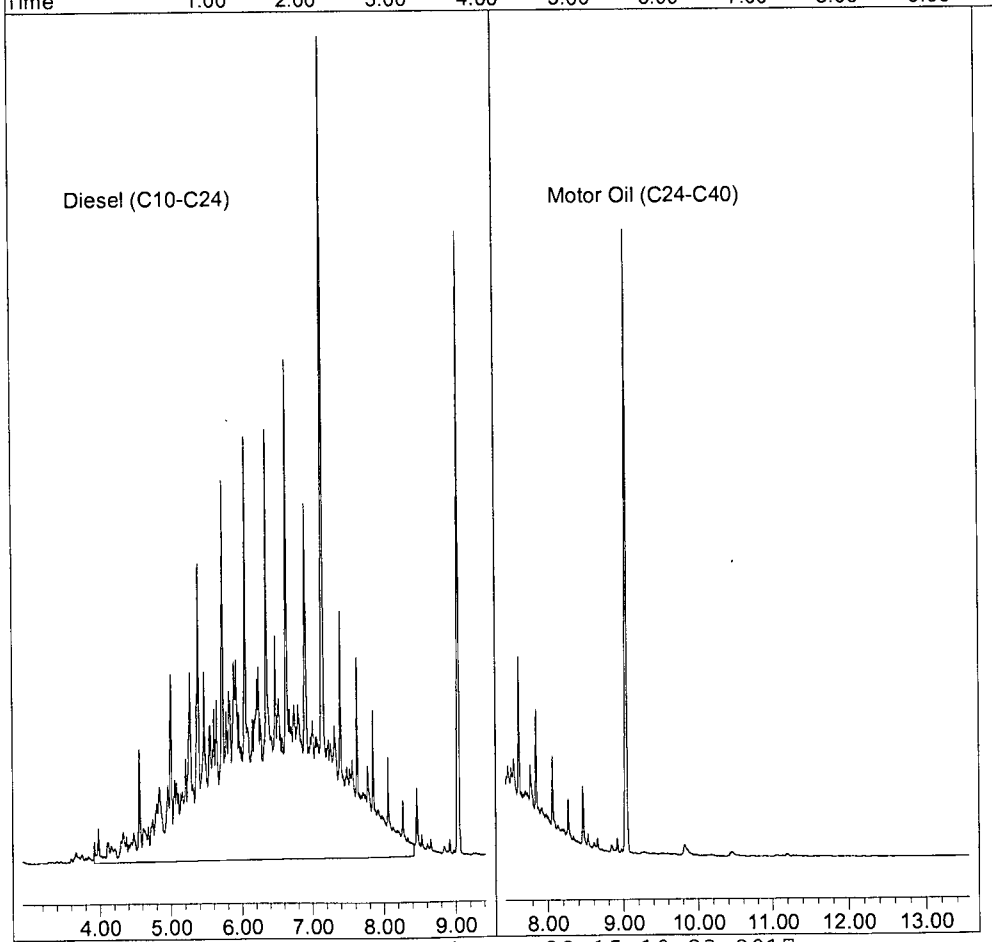
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.15	138035684	39.457	ppb
Surrogate Spike 40.000	Recovery =		98.64%	
5) SA Octacosane(S)	9.04	105889431	40.342	ppb
Surrogate Spike 40.000	Recovery =		100.86%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.17	2804902129	1082.681	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\170118\118005.D
Sample : 170116A LCS-1 2/1500





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\170118\118006.D Vial: 6
Acq On : 1-18-17 18:24:42 Operator: DP
Sample : 170116A LCS-2 2/1500 Inst : Apollo
Misc : Water Multiplr: 1.33
IntFile : events.e
Quant Time: Jan 19 10:11 2017 Quant Results File: DOC1103.RES

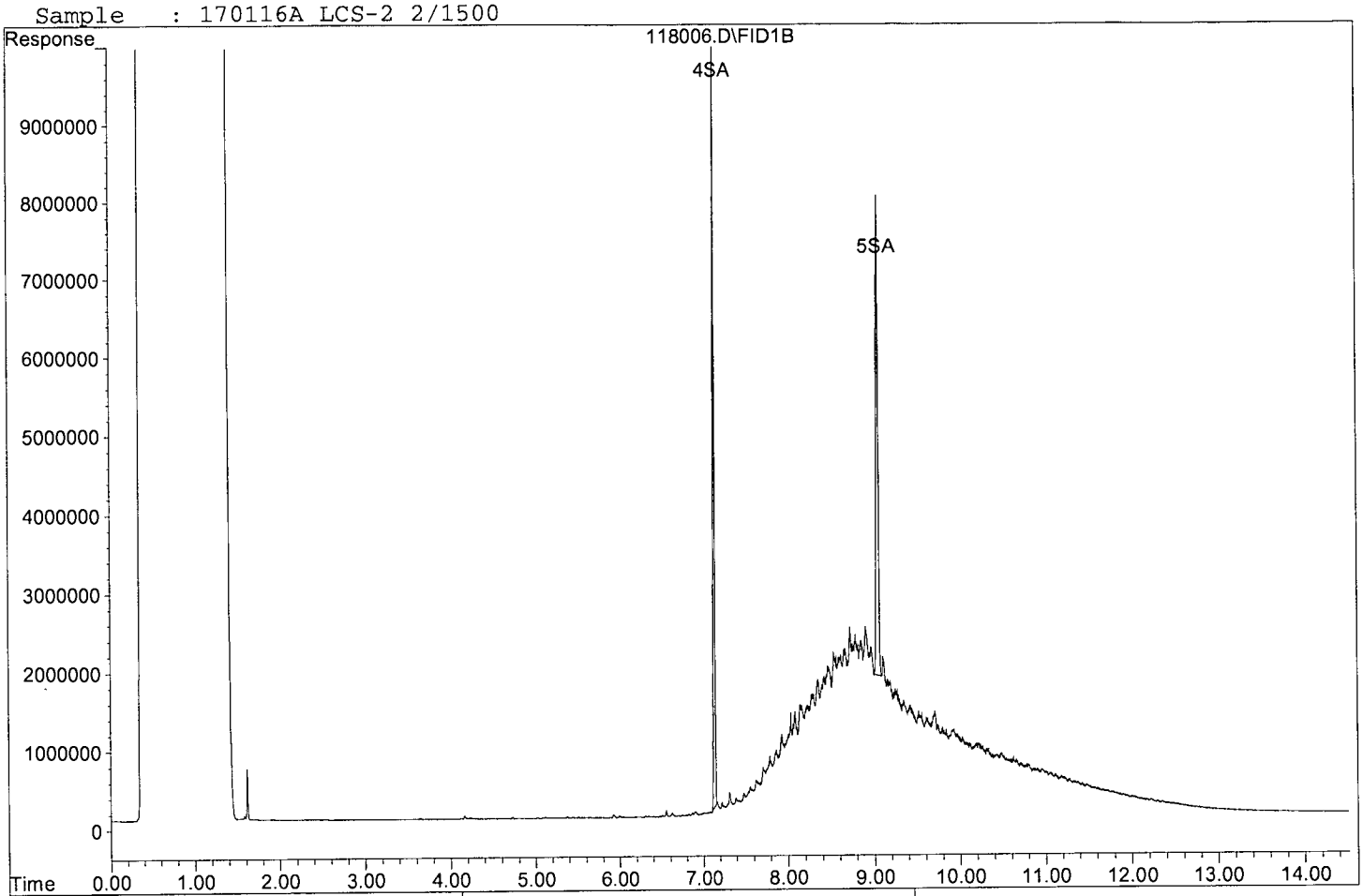
Method : G:\APOLLO\DATA\170118\DOC1103.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Jan 17 16:17:04 2017
Response via : Multiple Level Calibration

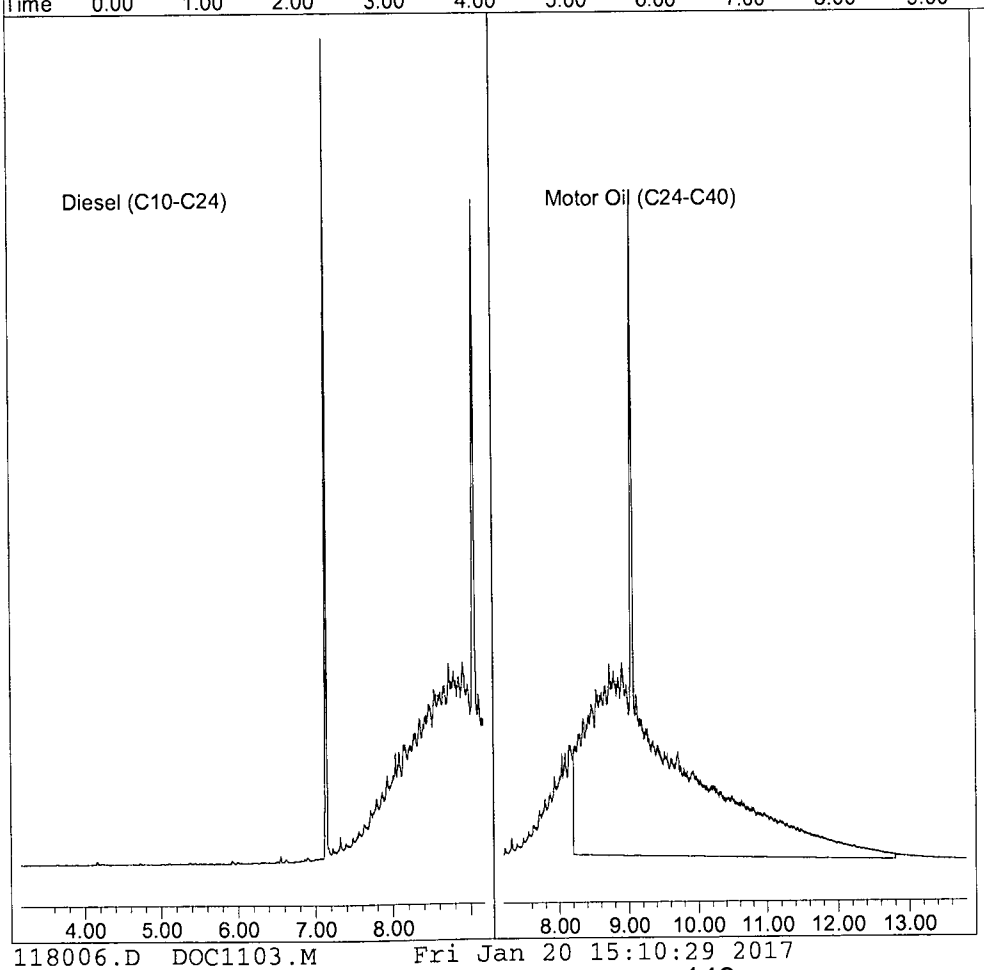
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SA Ortho-Terphenyl(S)	7.14	108377978	30.980	ppb
Surrogate Spike 40.000	Recovery =		77.45%	
5) SA Octacosane(S)	9.05	102192278	38.934	ppb
Surrogate Spike 40.000	Recovery =		97.33%	
Target Compounds				
2) HBTM Motor Oil (C24-C40)	10.50	2272069911	1087.471	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\170118\118006.D
Sample : 170116A LCS-2 2/1500





DIESEL CURVE		prep:11/03/16-D.P.		ex:6/03/17						
STD	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL
DIESEL	1000	237562-37104	11/03/16	06/03/17	10	10	40	60	80	100
MC	N/A	56098			990	90	60	40	20	NA
				Final VOL.	1000	100	100	100	100	100
				ppm	10	100	400	600	800	1000

MOTOR OIL CURVE		prep: 10/28/16-D.P.		ex:4/26/17						
STD	**[µg/mL]**	**LOT #**	**DATE**	**EXP. DATE**	**µL**	**µL**	**µL**	**µL**	**µL**	**µL**
MOTOR OIL	2000		10/26/16	04/26/17	10	25	125	500	750	200
MC	N/A	56098			990	975	875	500	250	NA
				Final VOL.	1000	1000	1000	1000	1000	200
				ppm	20	50	250	1000	1500	2000

Prep: 11/03/16-D.P. Exp: 6/03/17						
DIESEL CAL STD.						
STD.	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT / LOT#
DIESEL FUEL #2	50,000 ug/mL	O2SI CAT#011598-03 LOT#237562-37104 OP: 11/03/06 EXP: 11/03/17	500 µL	25 mL	1000ug/mL	MC LOT# 56098
O-TERPHENYL OCTACOSANE	600 ug/mL	O2SI CAT#110316-05 LOT#266278-37107 OP: 10/27/16 EXP: 10/27/17	2080 µL		50ug/mL	

Prep: 10/26/16 -D.P. Ex: 4/26/17						
MOTOR OIL CAL STD						
STD.	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT / LOT#
MOTOR OIL	50,000 ug/mL	O2SI CAT#116390-02 LOT#239390-36901 OP:10/26/16 EXP:10/26/17	1mL	25mL	2000ug/mL	MC LOT# 56098

DIESEL SECOND SOURCE prep: 08/01/16-D.P. ex: 07/6/17						
standard	**initial conc.**	**SOURCE DATE**	**ALIQUOT**	**FINAL VOL.**	**FINAL CONC.**	**SOLVENT LOT**
DIESEL SECOND SOURCE	50,000 ug/mL	O2SI CAT#011598-03-SS LOT#244813-34634 OP: 08/28/15 Exp 03/14/19	200uL	10mL	1000ug/mL	MC #56061

MOTOR OIL SECOND SOURCE prep: 07/6/16-L.H. ex: 07/6/17						
standard	initial conc.	SOURCE DATE	ALIQUOT	FINAL VOL.	FINAL CONC.	SOLVENT LOT
MOTOR OIL SECOND SOURCE	50,000 ug/mL	O2SI CAT#116390-02-SS LOT#244814-34637 OP: 07/06/16 Exp 07/06/17	200uL	10mL	1000ug/mL	MC #56061

DIESEL CCV 400ug/ml						
Prep: 1/12/17-D.P. Ex: 4/12/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
DIESEL STD.	1000 µg/mL	Diesel Std.	2000µL	5mL	400 µg/ml	MC
	PREP:	11/03/16				56098
	Exp:	06/03/17				

MOTOR OIL CCV 1000ppm						
Prep: 1/12/17-D.P. Ex: 4/12/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
MO STD.	2000 µg/mL	MO Std.	2500µL	5mL	1000 µg/ml	MC
	PREP:	10/26/16				56098
	Exp:	04/26/17				

Diesel Spike
Cat: 011598-03
Lot: 280763-37351
Op: 12/27/2016-D.P.
Exp: 12/27/17

THC Surrogate
Cat: 110316-05
Lot: 266278-37113
Op: 12/27/16-D.P.
Exp: 12/27/17

Motor Oil Spike
Cat: 116390-02
Lot: 239390-34439
Op: 12/27/16-D.P.
Exp: 11/09/17

_SEP011LL

Organic Extraction Worksheet

Method	THC Sep Fun Ext 3510C (LOW LEVEL)	Extraction Set	170116A	Extraction Method	SEP011LL	Units	mL

Spiked ID 1	Diesel Spike 12-27-16 exp 12-27-17		Surrogate ID 1	THC Surrogate 12-27-16 exp 12-27-17	
Spiked ID 2	Motor Oil Spike 12-27-16 exp 12-27-17		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	01/16/17 11:45	
Spiked ID 8			Ext. End Time:	01/18/17 14:00	
			GC Requires Extract By:	**01/19/17 0:00**	

pH1			Water Bath Temp Criteria	35,35,35 °
pH2				
pH3				

Spiked By: KY **Date** 01/16/17 **Witnessed By:** CFM **Date** 01/16/17

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	170116A Blk				0.1	1	1500	2	7	01/16/17 11:45	
						equip	E-WB1				
2	170116A LCS-1		0.040	1	0.1	1	1500	2	7	01/16/17 11:45	
						equip	E-WB2				
3	170116A LCS-2		0.040	2	0.1	1	1500	2	7	01/16/17 11:45	
						equip	E-WB3				
4	170116A LCS-3		0.040		0.1	1	1500	2	7	01/16/17 11:45	
						equip	E-WB2				
5	AZ48866 MS-1	AZ48866W20	0.040	1	0.1	1	1500	2	7	01/16/17 11:45	81965
						equip	E-WB2				
6	AZ48866 MSD-1	AZ48866W34	0.040	1	0.1	1	1500	2	7	01/16/17 11:45	81965
						equip	E-WB3				
7	AZ48866 MS-2	AZ48866W31	0.040	2	0.1	1	1500	2	7	01/16/17 11:45	81965
						equip	E-WB1				
8	AZ48866 MSD-2	AZ48866W26	0.040	2	0.1	1	1500	2	7	01/16/17 11:45	81965
						equip	E-WB3				
9	AZ48866	AZ48866W21			0.1	1	1500	2	7	01/16/17 11:45	81965
						equip	E-WB1				
10	AZ48867	AZ48867W10			0.1	1	1500	2	7	01/16/17 11:45	81965
						equip	E-WB3				
11	AZ48868	AZ48868W12			0.1	1	1500	2	7	01/16/17 11:45	81965
						equip	E-WB1				
12	AZ48871	AZ48871W10			0.1	1	1500	2	7	01/16/17 11:45	81965
						equip	E-WB2				
13	AZ48872	AZ48872W24			0.1	1	1500	2	7	01/16/17 11:45	81965
						equip	E-WB3				
14	AZ48873	AZ48873W12			0.1	1	1500	2	7	01/16/17 11:45	81965
						equip	E-WB1				
15	AZ48875	AZ48875W10			0.1	1	1500	2	7	01/16/17 11:45	81965
						equip	E-WB2				
16	AZ48877	AZ48877W10			0.1	1	1500	2	7	01/16/17 11:45	81965
						equip	E-WB3				

Solvent and Lot#	
MC	56153
Na2SO4	16C255214
ph-indicator strips	HC 574756
Filter Paper	400112

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	RH
Date	1/18/17
Time	4:20
Refrigerator	Hobert

	Technician's Initials
Scanned By	KY
Sample Preparation	KY,JR
Extraction	KY,JR,DL
Concentration	DL

Modified	01/18/17 2:28:28 PM

Reviewed By: [signature] **Date** 1/18/17

Organic Extraction Worksheet

Method	THC Sep Fun Ext 3510C (LOW LEVEL)	Extraction Set	170116A	Extraction Method	SEP011LL	Units	mL

Spiked ID 1	Diesel Spike 12-27-16 exp 12-27-17		Surrogate ID 1	THC Surrogate 12-27-16 exp 12-27-17	
Spiked ID 2	Motor Oil Spike 12-27-16 exp 12-27-17		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	01/16/17 11:45	
Spiked ID 8			Ext. End Time:	01/18/17 14:00	
			GC Requires Extract By:	**01/19/17 0:00**	

pH1			Water Bath Temp Criteria	35,35,35 °
pH2				
pH3				

Spiked By: KY **Date** 01/16/17 **Witnessed By:** CFM **Date** 01/16/17

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
17	AZ48878	AZ48878W11			0.1	1	1500	2	7	01/16/17 11:45	81965
						equip	E-WB1				
18	AZ48880	AZ48880W07			0.1	1	1500	2	7	01/16/17 11:45	81965
						equip	E-WB2				
19	AZ48881	AZ48881W05			0.1	1	1500	2	7	01/16/17 11:45	81965
						equip	E-WB3				
20	AZ48915	AZ48915W13			0.1	1	1500	2	7	01/16/17 11:45	81971
						equip	E-WB1				
21	AZ48916	AZ48916W13			0.1	1	1500	2	7	01/16/17 11:45	81971
						equip	E-WB2				
22	AZ48921	AZ48921W12			0.1	1	1500	2	7	01/16/17 11:45	81971
						equip	E-WB3				
23	AZ48925	AZ48925W09			0.1	1	1500	2	7	01/16/17 11:45	81971
						equip	E-WB1				

KY 1/18/17

Solvent and Lot#	
MC	56153
Na2SO4	16C255214
ph-indicator strips	HC 574756
Filter Paper	400112

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	
Date	
Time	
Refrigerator	

	Technician's Initials
Scanned By	KY
Sample Preparation	KY,JR
Extraction	KY,JR,DL
Concentration	DL

Modified	01/18/17 2:28:28 PM

Reviewed By: KY **Date** 1/18/17

Injection Log

Directory: G:\APOLLO\DATA\161028\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	1028002.D	1	MO 20ppb 10/28/16	Mix(B)	10-28-16 9:07:30
2	3	1028003.D	1	MO 50ppb 10/28/16	Mix(B)	10-28-16 9:28:13
3	4	1028004.D	1	MO 250ppb 10/28/16	Mix(B)	10-28-16 9:49:06
4	5	1028005.D	1	MO 1000ppb 10/28/16	Mix(B)	10-28-16 10:09:58
5	6	1028006.D	1	MO 1500ppb 10/28/16	Mix(B)	10-28-16 10:30:51
6	7	1028007.D	1	MO 2000ppb 10/28/16	Mix(B)	10-28-16 10:51:50
7	8	1028008.D	1	MO SS 1000ppb 7/6/16	Mix(B)	10-28-16 11:12:44
8	4	1103004.D	1	DIESEL 10ppb 11/3/16	Mix(A)	11-3-16 9:45:14
9	6	1103006.D	1	DIESEL 400ppb 11/3/16	Mix(A)	11-3-16 10:26:16
10	7	1103007.D	1	DIESEL 600ppb 11/3/16	Mix(A)	11-3-16 10:46:56
11	8	1103008.D	1	DIESEL 800ppb 11/3/16	Mix(A)	11-3-16 11:07:39
12	9	1103009.D	1	DIESEL 1000ppb 11/3/16	Mix(A)	11-3-16 11:28:31
13	11	1103011.D	1	DIESEL 100ppb 11/3/16	Mix(A)	11-3-16 12:56:47
14	12	1103012.D	1	DIESEL-SS 400ppb 8/1/16	Mix(A)	11-3-16 13:25:11
15	2	118002.D	1	CCV: MO 1000 ppb 1/12/17	Mix(B)	1-18-17 17:03:03
16	3	118003.D	1	CCV: Diesel 400 ppb 1/12/17	Mix(A)	1-18-17 17:23:19
17	4	118004.D	1.33333	170116A BLK 2/1500	Water	1-18-17 17:43:45
18	5	118005.D	1.33333	170116A LCS-1 2/1500	Water	1-18-17 18:04:15
19	6	118006.D	1.33333	170116A LCS-2 2/1500	Water	1-18-17 18:24:42
20	21	118021.D	1	CCV: Diesel 400 ppb 1/12/17	Mix(A)	1-18-17 23:32:28
21	22	118022.D	1	CCV: MO 1000 ppb 1/12/17	Mix(B)	1-18-17 23:52:58
22	24	118024.D	1.33333	AZ48915W13 2/1500	Water	1-19-17 0:34:01
23	25	118025.D	1.33333	AZ48916W13 2/1500	Water	1-19-17 0:54:32
24	26	118026.D	1.33333	AZ48921W12 2/1500	Water	1-19-17 1:15:03
25	27	118027.D	1.33333	AZ48925W09 2/1500	Water	1-19-17 1:35:36
26	28	118028.D	1	CCV: Diesel 400 ppb 1/12/17	Mix(A)	1-19-17 1:56:09
27	29	118029.D	1	CCV: MO 1000 ppb 1/12/17	Mix(B)	1-19-17 2:16:40

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank
EPA 8270D SIM

Blank Name/QCG: **170116W-48866 - 215630**
Batch ID: #SIMDO-170116A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/16/17	01/18/17
BLANK	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/16/17	01/18/17
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	01/16/17	01/18/17
BLANK	SURROGATE: 2-FLUORBIPHENY	56.1	53-106			%	01/16/17	01/18/17
BLANK	SURROGATE: NITROBENZENE-	67.3	55-111			%	01/16/17	01/18/17
BLANK	SURROGATE: TERPHENYL-D14 (	86.3	58-132			%	01/16/17	01/18/17

Quant Method: L0116PR.M
Run #: 0116L023
Instrument: Linus
Sequence: L170116
Initials: RHA

GC SC-Blank-REG MDLs-DOD
Printed: 01/20/17 8:24:23 AM

Laboratory Control Spike Recovery
EPA 8270D SIM

APPL ID: **170116W-48866 LCS - 215630**
Batch ID: #SIMDO-170116A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1-METHYLNAPHTHALENE	5.00	2.77	55.4	41-115
2-METHYLNAPHTHALENE	5.00	2.04	40.8	39-114
NAPHTHALENE	5.00	2.86	57.2	43-114
SURROGATE: 2-FLUORBIPHENYL (S)	5.00	3.85	77.0	53-106
SURROGATE: NITROBENZENE-D5 (S)	5.00	4.35	87.0	55-111
SURROGATE: TERPHENYL-D14 (S)	5.00	5.52	110	58-132

Comments: _____

Primary	SPK
Quant Method :	L0116PR.M
Extraction Date :	01/16/17
Analysis Date :	01/19/17
Instrument :	Linus
Run :	0116L059
Initials :	RHA

Printed: 01/20/17 8:24:03 AM
APPL Standard LCS

8270D-SIM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81971

Case No: 81971 Date Analyzed: 01/18/17

Matrix: WATER Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: 2-FLUORBIPHENYL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
170116A-BLK	Blank	53-106	56.1		55-111	67.3	
AZ48915	ERH172	53-106	69.7		55-111	69.4	
AZ48916	ERH178	53-106	78.6		55-111	75.6	
AZ48921	ERH181	53-106	72.2		55-111	71.4	
AZ48925	ERH184	53-106	72.1		55-111	69.7	
170116A-LCS	Lab Control Spike	53-106	77.0		55-111	87.0	

Comments: Batch: #SIMDO-170116A

8270D-SIM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81971

Case No: 81971 Date Analyzed: 01/18/17

Matrix: WATER Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: TERPHENYL-D14 (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
170116A-BLK	Blank	58-132	86.3				
AZ48915	ERH172	58-132	84.7				
AZ48916	ERH178	58-132	94.2				
AZ48921	ERH181	58-132	87.7				
AZ48925	ERH184	58-132	84.7				
170116A-LCS	Lab Control Spike	58-132	110				

Comments: Batch: #SIMDO-170116A

8270D-SIM

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81971

Case No: 81971 Date Analyzed: 01/18/17

Matrix: WATER Instrument: Linus

Blank ID: 170116A-BLK Time Analyzed: 1254

APPL ID.	Client Sample No.	File ID.	Date Analyzed
170116A-BLK	Blank	0116L023	01/18/17 1254
AZ48915	ERH172	0116L038	01/18/17 1953
AZ48916	ERH178	0116L039	01/18/17 2021
AZ48921	ERH181	0116L040	01/18/17 2049
AZ48925	ERH184	0116L041	01/18/17 2117
170116A-LCS	Lab Control Spike	0116L059	01/19/17 1528

Comments: Batch: #SIMDO-170116A

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81971
Matrix: Water
ID: SV Tune 11/15/16

SDG No: 81971
Date Analyzed: 01/16/17
Instrument: Linus
Time Analyzed: 17:36

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.1 SIM 1/13/17	0116L003.D	01/16/17 17:54
2		0.2 SIM 1/13/17	0116L004.D	01/16/17 18:22
3		0.5 SIM 1/13/17	0116L005.D	01/16/17 18:50
4		1.0 SIM 1/13/17	0116L006.D	01/16/17 19:17
5		5.0 SIM 1/13/17	0116L007.D	01/16/17 19:45
6		10 SIM 1/13/17	0116L008.D	01/16/17 20:13
7		50 SIM 1/13/17	0116L009.D	01/16/17 20:41
8		100 SIM 1/13/17	0116L010.D	01/16/17 21:09
9		SS SIM 1/13/17	0116L011.D	01/16/17 21:37
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	30 - 60% of mass 198	50.8
68	0 - 2% of mass 69	0.0
69	100 - 100% of mass 69	100.0
70	0 - 2% of mass 69	0.3
127	40 - 60% of mass 198	54.5
197	0 - 1% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.7
275	10 - 30% of mass 198	21.5
365	1 - 100% of mass 198	2.7
441	0.01 - 100% of mass 443	91.6
442	40 - 150% of mass 198	58.4
443	17 - 23% of mass 442	18.4

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81971
Matrix: Water
ID: SV Tune 12/15/16

SDG No: 81971
Date Analyzed: 01/18/17
Instrument: Linus
Time Analyzed: 11:58

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		5.0 SIM 1/13/17	0116L022.D	01/18/17 12:15
2	Blank	170116A BLK 1/1000	0116L023.D	01/18/17 12:54
3	ERH172	AZ48915W10 1/1070	0116L038.D	01/18/17 19:53
4	ERH178	AZ48916W12 1/1070	0116L039.D	01/18/17 20:21
5	ERH181	AZ48921W09 1/1070	0116L040.D	01/18/17 20:49
6	ERH184	AZ48925W11 1/1070	0116L041.D	01/18/17 21:17
7		SIM 5 1/13/17	0116L043.D	01/18/17 22:01
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	30 - 60% of mass 198	44.7
68	0 - 2% of mass 69	0.0
69	100 - 100% of mass 69	100.0
70	0 - 2% of mass 69	0.6
127	40 - 60% of mass 198	52.2
197	0 - 1% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.3
275	10 - 30% of mass 198	20.6
365	1 - 100% of mass 198	2.2
441	0.01 - 100% of mass 443	77.7
442	40 - 150% of mass 198	56.6
443	17 - 23% of mass 442	20.9

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81971
Matrix: Water
ID: SV Tune 12/15/16

SDG No: 81971
Date Analyzed: 01/19/17
Instrument: Linus
Time Analyzed: 8:47

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		SIM 5 1/13/17	0116L046.D	01/19/17 9:07
2	Lab Control Spike	170116A LCS-1 1/1000	0116L059.D	01/19/17 15:28
3		SIM 5 1/13/17	0116L061.D	01/19/17 16:44
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	30 - 60% of mass 198	48.3
68	0 - 2% of mass 69	0.0
69	100 - 100% of mass 69	100.0
70	0 - 2% of mass 69	0.5
127	40 - 60% of mass 198	53.2
197	0 - 1% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.2
275	10 - 30% of mass 198	21.4
365	1 - 100% of mass 198	2.4
441	0.01 - 100% of mass 443	83.5
442	40 - 150% of mass 198	57.0
443	17 - 23% of mass 442	20.2

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 81971

Lab File ID (Standard): 0116L007.D Date Analyzed: 01/16/17

Instrument ID: Linus Time Analyzed: 19:45

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Napthalene-D8(IS)		Acenaphthene-D10(IS)		Phenanthrene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	20107	5.87	10094	7.91	19784	9.66
	UPPER LIMIT	40214	6.37	20188	8.41	39568	10.16
	LOWER LIMIT	10054	5.37	5047	7.41	9892	9.16
	SAMPLE NO.						
01	5.0 SIM 1/13/17	22963	5.87	11532	7.91	22755	9.66
02	170116A BLK 1/1000	23020	5.88	11859	7.92	23108	9.67
03	AZ48915W10 1/1070	18421	5.88	9248	7.91	17825	9.67
04	AZ48916W12 1/1070	19555	5.88	9835	7.92	18895	9.68
05	AZ48921W09 1/1070	18115	5.88	9273	7.92	17584	9.68
06	AZ48925W11 1/1070	19002	5.88	9678	7.92	18865	9.67
07	SIM 5 1/13/17	21009	5.87	10596	7.91	20753	9.66
08	SIM 5 1/13/17	22693	5.87	11406	7.91	22167	9.66
09	170116A LCS-1 1/1000	19126	5.87	9610	7.91	18883	9.67
10	SIM 5 1/13/17	22429	5.87	11327	7.91	22178	9.66
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 81971

Lab File ID (Standard): 0116L007.D Date Analyzed: 01/16/17

Instrument ID: Linus Time Analyzed: 19:45

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Chrysene-D12(IS)		Perylene-D12(IS)			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	24551	12.81	20981	15.33		
	UPPER LIMIT	49102	13.31	41962	15.83		
	LOWER LIMIT	12276	12.31	10491	14.83		
	SAMPLE NO.						
01	5.0 SIM 1/13/17	27025	12.81	22532	15.33		
02	170116A BLK 1/1000	26998	12.83	22213	15.36		
03	AZ48915W10 1/1070	21670	12.83	18983	15.36		
04	AZ48916W12 1/1070	23174	12.83	20001	15.36		
05	AZ48921W09 1/1070	21374	12.83	17932	15.35		
06	AZ48925W11 1/1070	23128	12.83	19031	15.35		
07	SIM 5 1/13/17	25060	12.81	21261	15.33		
08	SIM 5 1/13/17	26307	12.81	22173	15.33		
09	170116A LCS-1 1/1000	23088	12.81	19125	15.34		
10	SIM 5 1/13/17	26676	12.81	22431	15.33		
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

ORGANICS

Sample Data

APPL, INC.

EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH172
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48915
QCG: #SIMDO-170116A-215630

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/16/17	01/18/17
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/16/17	01/18/17
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	01/16/17	01/18/17
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	69.7	53-106			%	01/16/17	01/18/17
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	69.4	55-111			%	01/16/17	01/18/17
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	84.7	58-132			%	01/16/17	01/18/17

Quant Method: L0116PR.M
Run #: 0116L038
Instrument: Linus
Sequence: L170116
Dilution Factor: 1
Initials: RHA

Printed: 01/20/17 8:22:13 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L038.D Vial: 38
Acq On : 18 Jan 17 19:53 Operator: MA
Sample : AZ48915W10 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Jan 19 12:40 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	18421	2.50000 ppb	0.01
6) Acenaphthene-D10(IS)	7.91	164	9248	2.50000 ppb	0.00
11) Phenanthrene-D10(IS)	9.67	188	17825	2.50000 ppb	0.01
15) Chrysene-D12(IS)	12.83	240	21670	2.50000 ppb	0.02
21) Perylene-D12(IS)	15.36	264	18983	2.50000 ppb	0.03
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.05	82	10152	3.24447 ppb	0.00
Spiked Amount 4.673			Recovery	= 69.422%	
7) Surrogate Recovery (FBP)	7.13	172	20257	3.25736 ppb	0.00
Spiked Amount 4.673			Recovery	= 69.700%	
17) Surrogate Recovery (TPH)	11.52	244	28474	3.95807 ppb	-0.01
Spiked Amount 4.673			Recovery	= 84.701%	

Target Compounds Qvalue

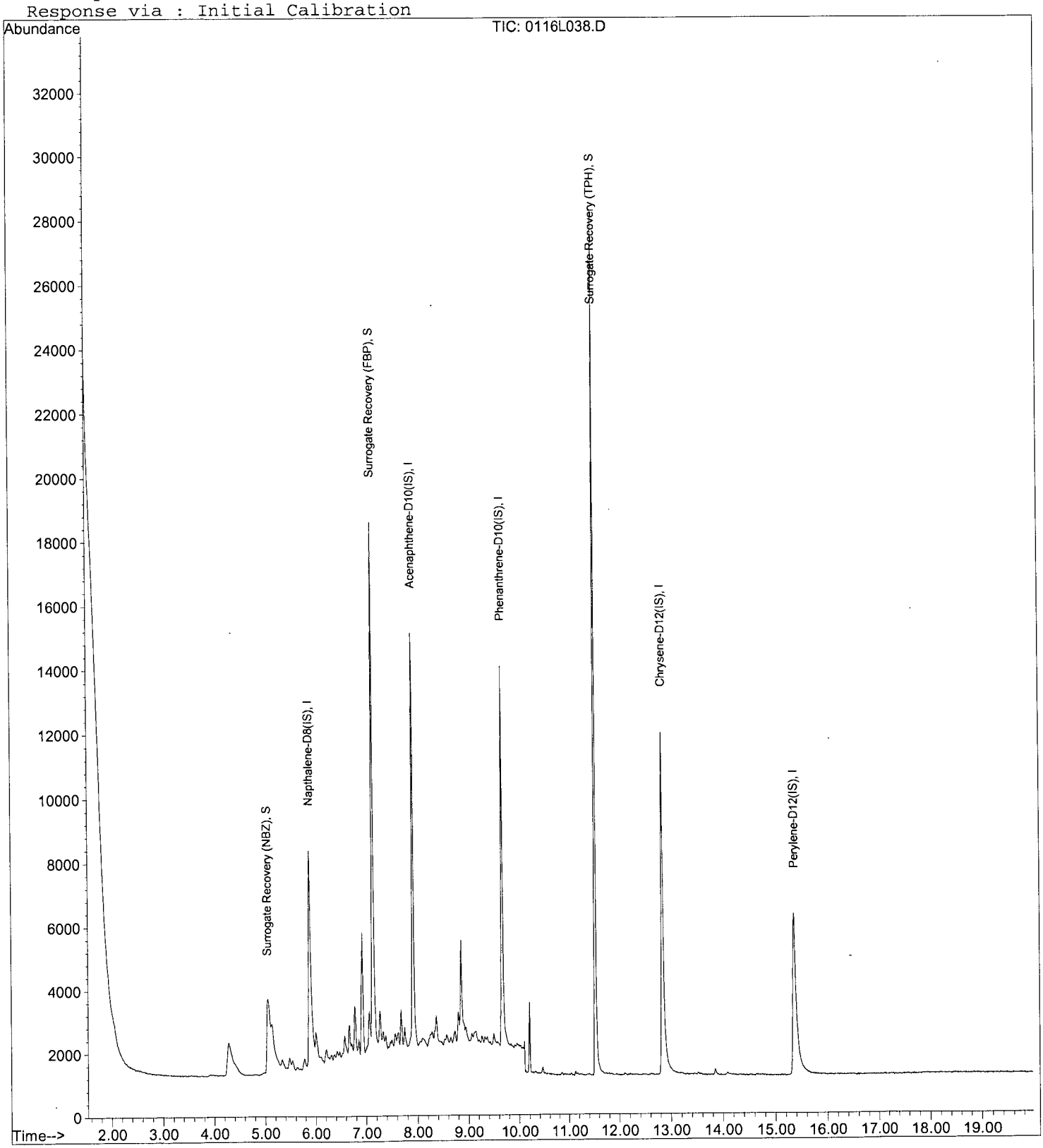
(#) = qualifier out of range (m) = manual integration
0116L038.D L0116PR.M Thu Jan 19 12:40:49 2017 Page 1

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L038.D Vial: 38
Acq On : 18 Jan 17 19:53 Operator: MA
Sample : AZ48915W10 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Jan 19 12:40 2017 Quant Results File: L0116PR.RES

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH178
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48916
QCG: #SIMDO-170116A-215630

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/16/17	01/18/17
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/16/17	01/18/17
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	01/16/17	01/18/17
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	78.6	53-106			%	01/16/17	01/18/17
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	75.6	55-111			%	01/16/17	01/18/17
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	94.2	58-132			%	01/16/17	01/18/17

Quant Method: L0116PR.M
Run #: 0116L039
Instrument: Linus
Sequence: L170116
Dilution Factor: 1
Initials: RHA

Printed: 01/20/17 8:22:13 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L039.D Vial: 39
Acq On : 18 Jan 17 20:21 Operator: MA
Sample : AZ48916W12 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Jan 19 12:41 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	19555	2.50000 ppb	0.01
6) Acenaphthene-D10(IS)	7.92	164	9835	2.50000 ppb	0.01
11) Phenanthrene-D10(IS)	9.68	188	18895	2.50000 ppb	0.02
15) Chrysene-D12(IS)	12.83	240	23174	2.50000 ppb	0.02
21) Perylene-D12(IS)	15.36	264	20001	2.50000 ppb	0.03
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.05	82	11785	3.53122 ppb	0.00
Spiked Amount 4.673			Recovery	= 75.563%	
7) Surrogate Recovery (FBP)	7.13	172	24292	3.67305 ppb	0.00
Spiked Amount 4.673			Recovery	= 78.602%	
17) Surrogate Recovery (TPH)	11.52	244	33878	4.40363 ppb	-0.01
Spiked Amount 4.673			Recovery	= 94.246%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

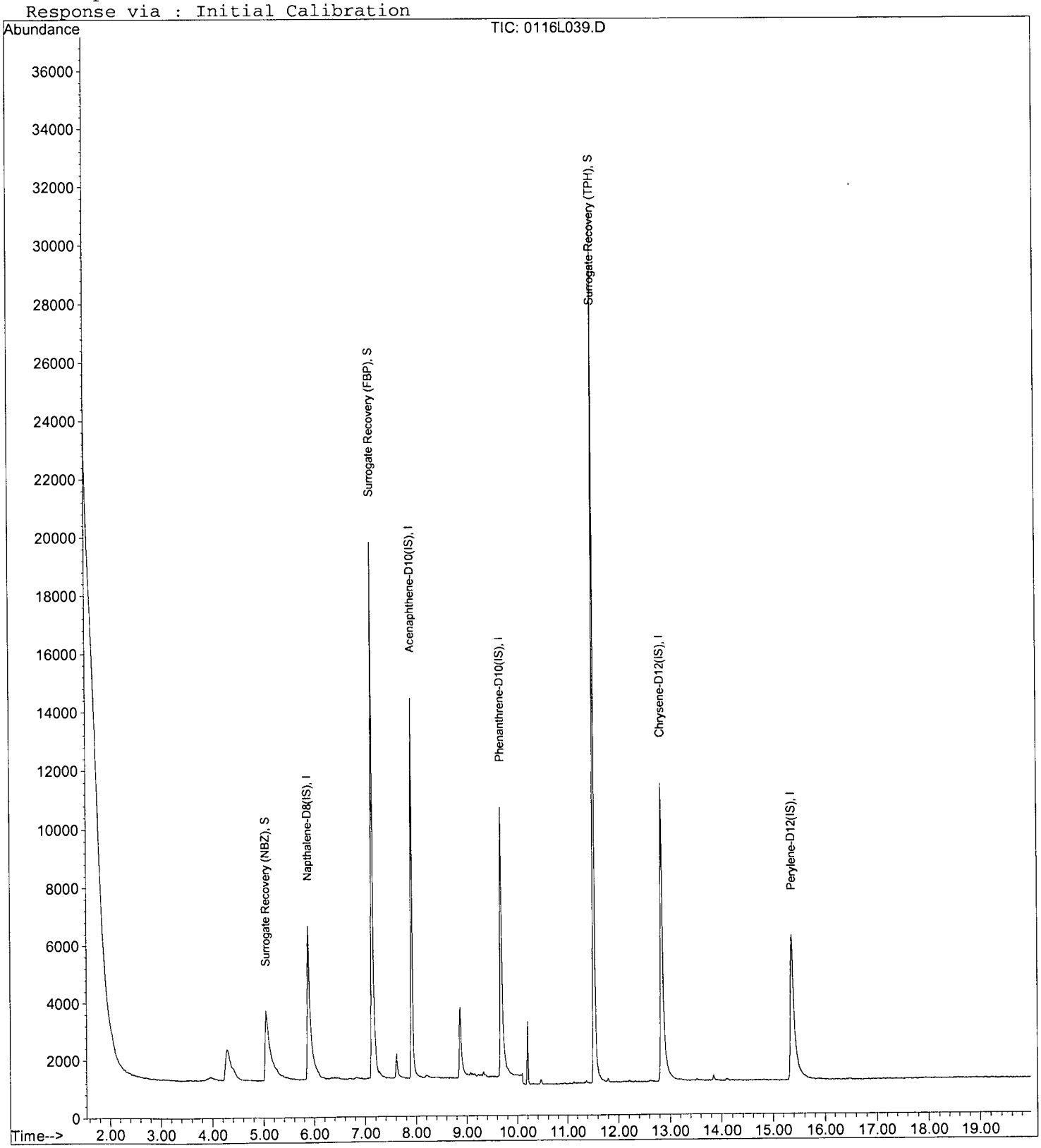
Data File : M:\LINUS\DATA\L170116\0116L039.D
Acq On : 18 Jan 17 20:21
Sample : AZ48916W12 1/1070
Misc : water

Vial: 39
Operator: MA
Inst : Linus
Multiplr: 0.93

Quant Time: Jan 19 12:41 2017

Quant Results File: L0116PR.RES

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH181
Sample Collection Date: 01/12/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48921
QCG: #SIMDO-170116A-215630

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/16/17	01/18/17
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/16/17	01/18/17
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	01/16/17	01/18/17
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	72.2	53-106			%	01/16/17	01/18/17
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	71.4	55-111			%	01/16/17	01/18/17
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	87.7	58-132			%	01/16/17	01/18/17

Quant Method: L0116PR.M
Run #: 0116L040
Instrument: Linus
Sequence: L170116
Dilution Factor: 1
Initials: RHA

Printed: 01/20/17 8:22:13 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L040.D Vial: 40
Acq On : 18 Jan 17 20:49 Operator: MA
Sample : AZ48921W09 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Jan 19 12:41 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	18115	2.50000	ppb	0.01
6) Acenaphthene-D10(IS)	7.92	164	9273	2.50000	ppb	0.01
11) Phenanthrene-D10(IS)	9.68	188	17584	2.50000	ppb	0.02
15) Chrysene-D12(IS)	12.83	240	21374	2.50000	ppb	0.02
21) Perylene-D12(IS)	15.35	264	17932	2.50000	ppb	0.02
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.06	82	10284	3.33679	ppb	0.01
Spiked Amount 4.673			Recovery = 71.412%			
7) Surrogate Recovery (FBP)	7.13	172	21052	3.37607	ppb	0.00
Spiked Amount 4.673			Recovery = 72.246%			
17) Surrogate Recovery (TPH)	11.52	244	29095	4.10040	ppb	-0.01
Spiked Amount 4.673			Recovery = 87.740%			
Target Compounds						Qvalue

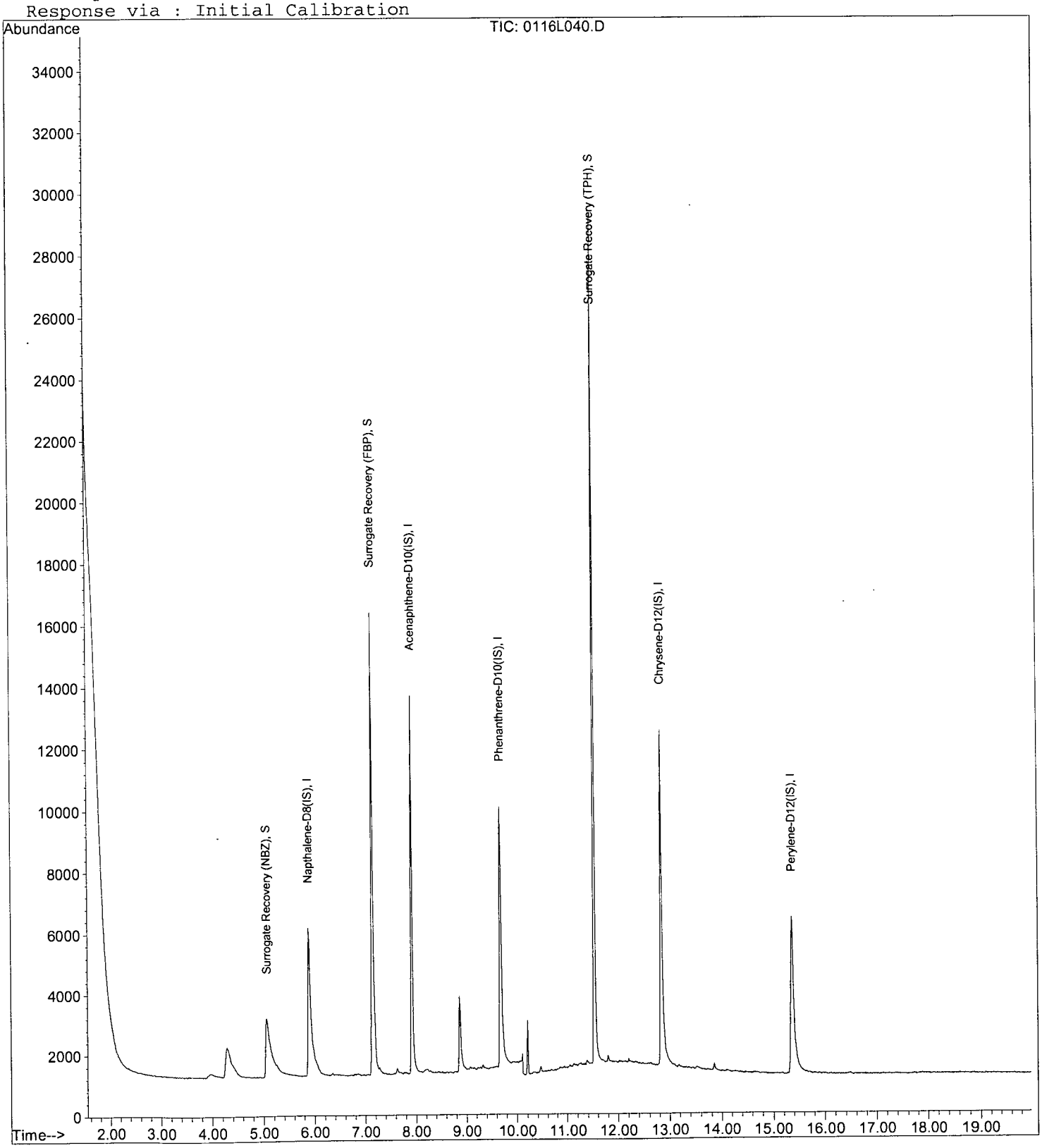
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L040.D Vial: 40
Acq On : 18 Jan 17 20:49 Operator: MA
Sample : AZ48921W09 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Jan 19 12:41 2017 Quant Results File: L0116PR.RES

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



EPA 8270D SIM

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH184
Sample Collection Date: 01/12/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48925
QCG: #SIMDO-170116A-215630

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/16/17	01/18/17
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/16/17	01/18/17
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	01/16/17	01/18/17
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	72.1	53-106			%	01/16/17	01/18/17
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	69.7	55-111			%	01/16/17	01/18/17
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	84.7	58-132			%	01/16/17	01/18/17

Quant Method: L0116PR.M
Run #: 0116L041
Instrument: Linus
Sequence: L170116
Dilution Factor: 1
Initials: RHA

Printed: 01/20/17 8:22:13 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L041.D Vial: 41
Acq On : 18 Jan 17 21:17 Operator: MA
Sample : AZ48925W11 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Jan 19 12:42 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	19002	2.50000	ppb	0.01
6) Acenaphthene-D10(IS)	7.92	164	9678	2.50000	ppb	0.01
11) Phenanthrene-D10(IS)	9.67	188	18865	2.50000	ppb	0.01
15) Chrysene-D12(IS)	12.83	240	23128	2.50000	ppb	0.02
21) Perylene-D12(IS)	15.35	264	19031	2.50000	ppb	0.02
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.05	82	10521	3.25876	ppb	0.00
Spiked Amount 4.673			Recovery = 69.743%			
7) Surrogate Recovery (FBP)	7.13	172	21929	3.36954	ppb	0.00
Spiked Amount 4.673			Recovery = 72.118%			
17) Surrogate Recovery (TPH)	11.52	244	30398	3.95914	ppb	-0.01
Spiked Amount 4.673			Recovery = 84.723%			

Target Compounds Qvalue

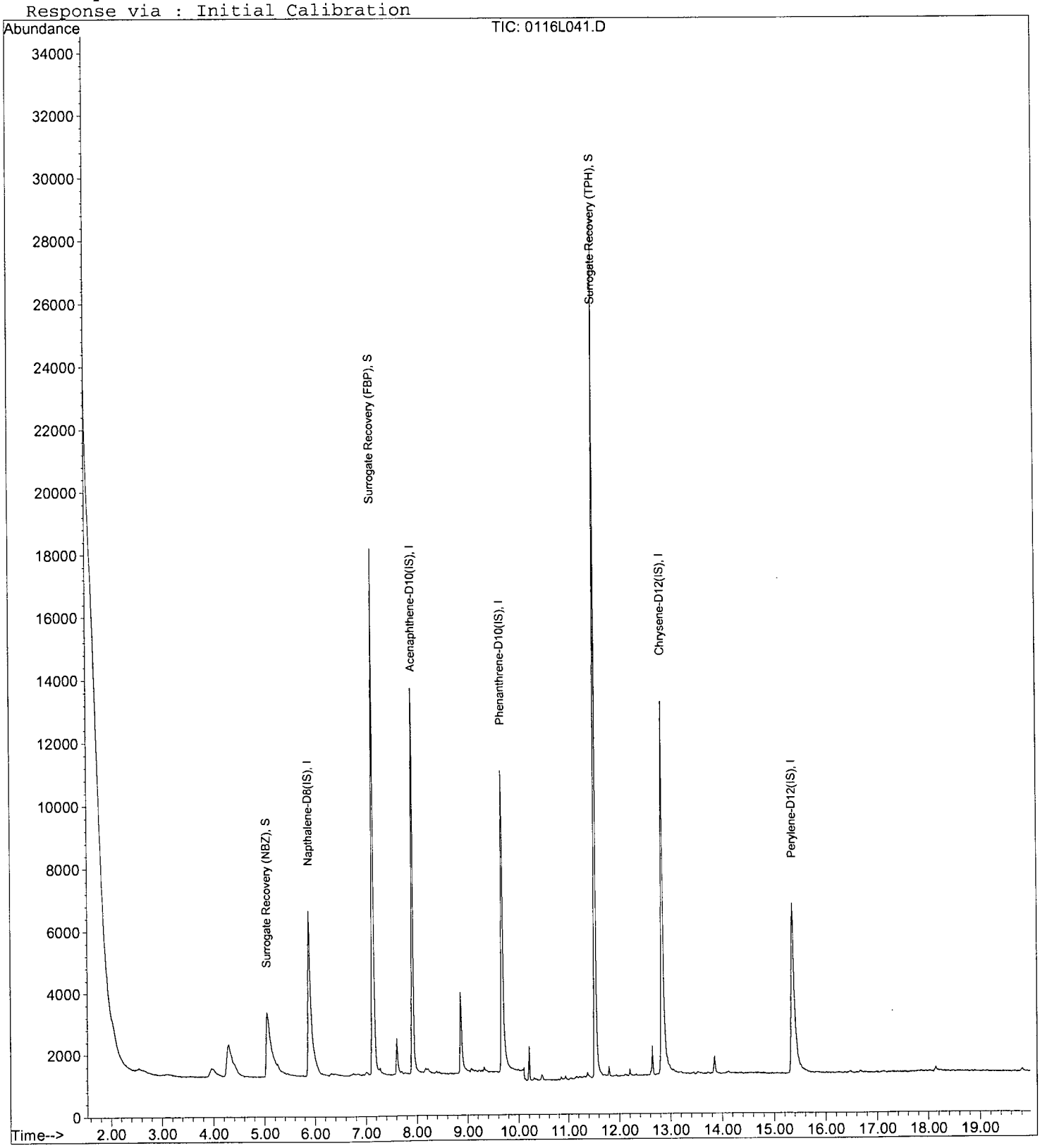
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L041.D Vial: 41
Acq On : 18 Jan 17 21:17 Operator: MA
Sample : AZ48925W11 1/1070 Inst : Linus
Misc : water Multiplr: 0.93

Quant Time: Jan 19 12:42 2017 Quant Results File: L0116PR.RES

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



ORGANICS

Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/16/17
Matrix: Instrument: Linus
Initials:

		Compound	0116L003.D 0.1	0116L004.D 0.2	0116L005.D 0.5	0116L006.D 1	0116L007.D 5	0116L008.D 10	0116L009.D 50	0116L010.D 100			Avg	%RSD		
1	I	Napthalene-D8(IS)														
2	SL	Surrogate Recovery (NBZ)			0.0634	0.1193	0.3785	0.4286	0.4160	0.4184			0.30	55	SL	1.000
3	TM	Naphthalene	0.8641	0.8899	1.014	1.051	1.158	1.210	1.029	0.9625			1.0	12	TM	
4	TML	2-Methylnaphthalene	0.3844	0.3669	0.4696	0.5130	0.6848	0.7310	0.6163	0.5795			0.54	25	TML	0.999
5	TM	1-Methylnaphthalene	0.7503	0.7307	0.7345	0.7190	0.7025	0.7267	0.5843	0.5392			0.69	11	TM	
6	I	Acenaphthene-D10(IS)														
7	S	Surrogate Recovery (FBP)	1.431	1.366	1.559	1.629	1.721	1.833	1.537	1.494			1.6	9.7	S	
8	TM	Acenaphthylene	1.711	1.804	2.071	2.040	2.374	2.524	2.074	1.954			2.1	13	TM	
9	*TM	Acenaphthene	1.304	1.189	1.320	1.273	1.380	1.447	1.178	1.116			1.3	8.7	*TM	
10	TM	Fluorene	1.306	1.197	1.381	1.381	1.572	1.633	1.348	1.260			1.4	11	TM	
11	I	Phenanthrene-D10(IS)														
12	TM	Phenanthrene	1.005	0.9837	1.024	1.013	1.160	1.211	1.017	0.9340			1.0	8.9	TM	
13	TM	Anthracene	0.9050	0.8051	0.9610	0.9801	1.146	1.221	0.9880	0.8505			0.98	14	TM	
14	*TM	Fluoranthene	1.590	1.496	1.677	1.650	1.885	1.985	1.642	1.517			1.7	10	*TM	
15	I	Chrysene-D12(IS)														
16	TM	Pyrene	1.302	1.242	1.401	1.393	1.588	1.653	1.426	1.337			1.4	9.8	TM	
17	S	Surrogate Recovery (TPH)	0.7624	0.6994	0.8025	0.7619	0.8194	0.8577	0.7659	0.7360			0.78	6.4	S	
18	TML	Benz (a) anthracene	0.7445	0.4548	0.7894	0.7434	1.193	1.413	1.267	1.247			0.98	35	TML	1.000
19	TML	Chrysene	1.637	1.740	1.624	1.629	1.469	1.388	1.150	1.066			1.5	17	TML	0.998
20	TML	Indeno (1,2,3-cd) pyrene	0.2668	0.6438	0.8971	0.9645	1.142	1.226	1.097	1.068			0.91	35	TML	1.000
21	I	Perylene-D12(IS)														
22	TML	Benzo (b) fluoranthene	0.9696	0.8802	0.9868	0.9448	1.242	1.523	1.342	1.315			1.2	20	TML	1.000
23	TM	Benzo (k) fluoranthene	1.264	1.256	1.534	1.451	1.496	1.396	1.144	1.072			1.3	13	TM	
24	*TML	Benzo (a) pyrene	0.7195	0.9626	1.096	1.058	1.321	1.393	1.203	1.142			1.1	19	*TML	0.999
25	TML	Dibenz (a,h) anthracene	0.7096	0.8215	0.9390	0.8766	1.104	1.161	1.001	0.9674			0.95	16	TML	0.999
26	TML	Benzo (g,h,i) perylene	0.7140	0.7693	0.9214	0.9032	1.082	1.157	1.000	0.9251			0.93	16	TML	0.998
27																
28																
29																
30																
31																
32																
33																
34																
35																

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L003.D Vial: 3
Acq On : 16 Jan 17 17:54 Operator: MA
Sample : 0.1 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:25 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 16 16:54:35 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	21525	2.50000	ppb		0.01
6) Acenaphthene-D10(IS)	7.92	164	10869	2.50000	ppb		0.01
11) Phenanthrene-D10(IS)	9.68	188	20774	2.50000	ppb		0.02
15) Chrysene-D12(IS)	12.83	240	26428	2.50000	ppb		0.02
21) Perylene-D12(IS)	15.35	264	22690	2.50000	ppb		0.02
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.03	82	4	0.16995	ppb		0.01
Spiked Amount 5.000			Recovery = 3.400%				
7) Surrogate Recovery (FBP)	7.19	172	311	-0.10609	ppb		0.07
Spiked Amount 5.000			Recovery = -2.120%				
17) Surrogate Recovery (TPH)	11.56	244	403	-0.07361	ppb		0.04
Spiked Amount 5.000			Recovery = -1.480%				
Target Compounds							Qvalue
3) Naphthalene	5.89	128	744	0.08568	ppb		99
4) 2-Methylnaphthalene	6.82	142	331	0.06268	ppb		91
5) 1-Methylnaphthalene	6.89	142	646m	0.11019	ppb		90
8) Acenaphthylene	7.79	152	744	0.08811	ppb		92
9) Acenaphthene	7.95	154	567	0.11078	ppb		98
10) Fluorene	8.63	166	568	0.09586	ppb		99
12) Phenanthrene	9.70	178	835	0.09352	ppb		97
13) Anthracene	9.81	178	752	0.09290	ppb	#	94
14) Fluoranthene	11.15	202	1321	0.10645	ppb		97
16) Pyrene	11.41	202	1376	0.10495	ppb		98
18) Benz (a) anthracene	12.83	228	787	0.06978	ppb		89
19) Chrysene	12.87	228	1730	0.13595	ppb		95
20) Indeno (1,2,3-cd) pyrene	17.75	276	282	0.02295	ppb	#	87
22) Benzo (b) fluoranthene	14.61	252	880	0.09035	ppb		99
23) Benzo (k) fluoranthene	14.66	252	1147m	0.11183	ppb		97
24) Benzo (a) pyrene	15.26	252	653	0.06499	ppb	#	90
25) Dibenz (a,h) anthracene	17.76	278	644	0.06824	ppb		94
26) Benzo (g,h,i) perylene	18.29	276	648	0.07004	ppb		96

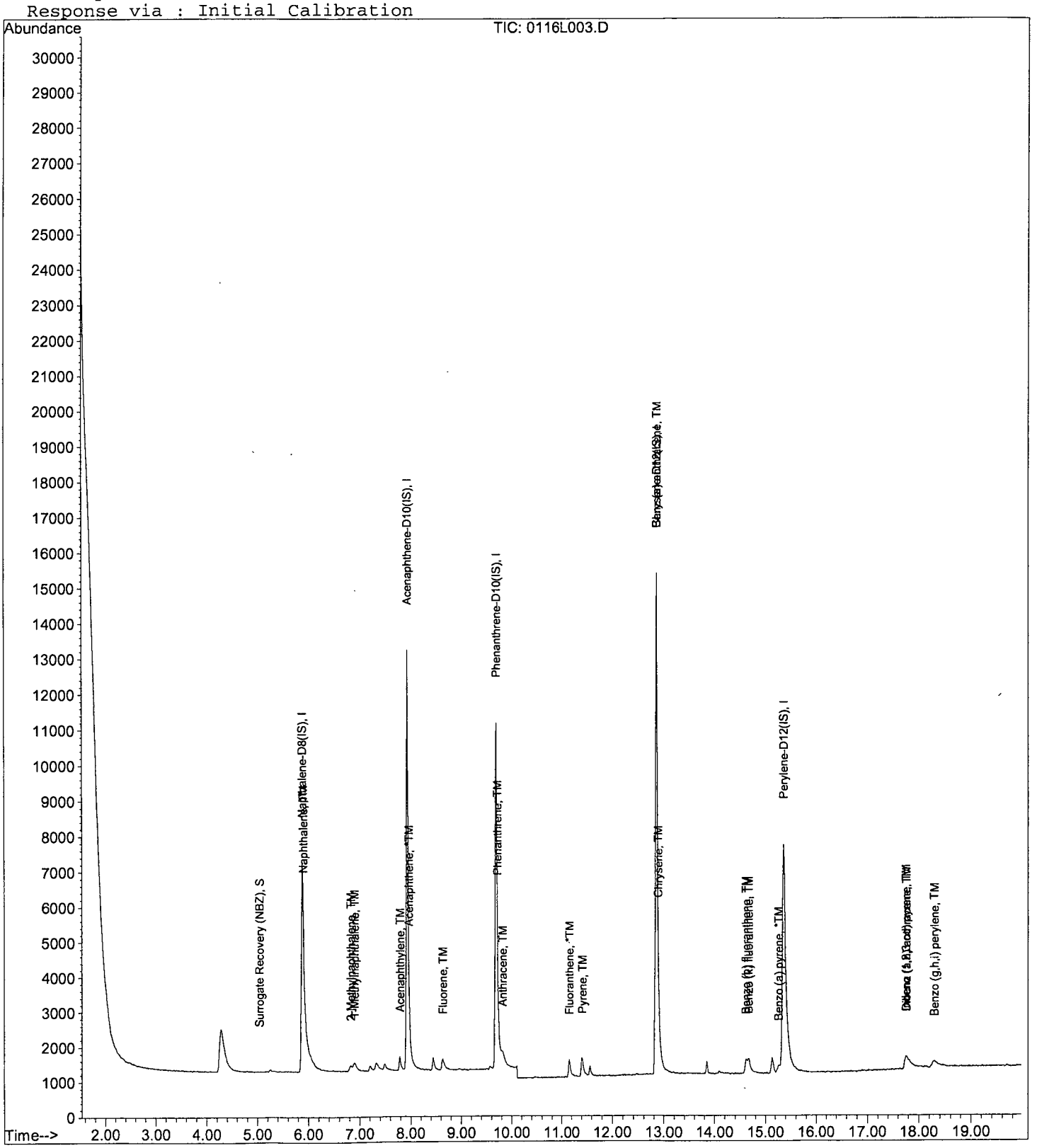
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L003.D Vial: 3
Acq On : 16 Jan 17 17:54 Operator: MA
Sample : 0.1 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:25 2017 Quant Results File: L0116PR.RES

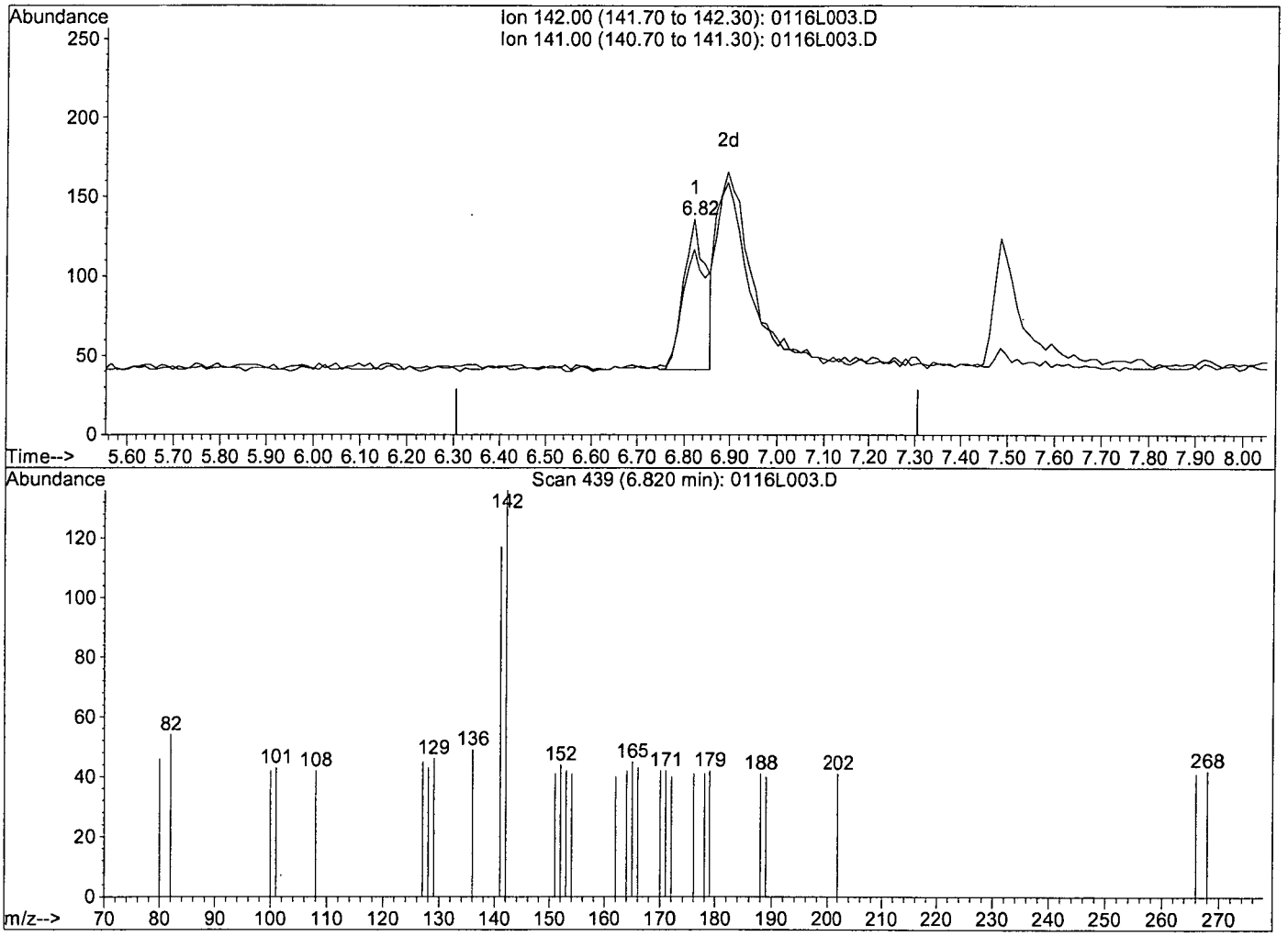
Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L003.D Vial: 3
Acq On : 16 Jan 17 17:54 Operator: MA
Sample : 0.1 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 8:55 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 10:31:40 2017
Response via : Multiple Level Calibration



TIC: 0116L003.D

(5) 1-Methylnaphthalene (TM)

6.82min 0.0565ppb

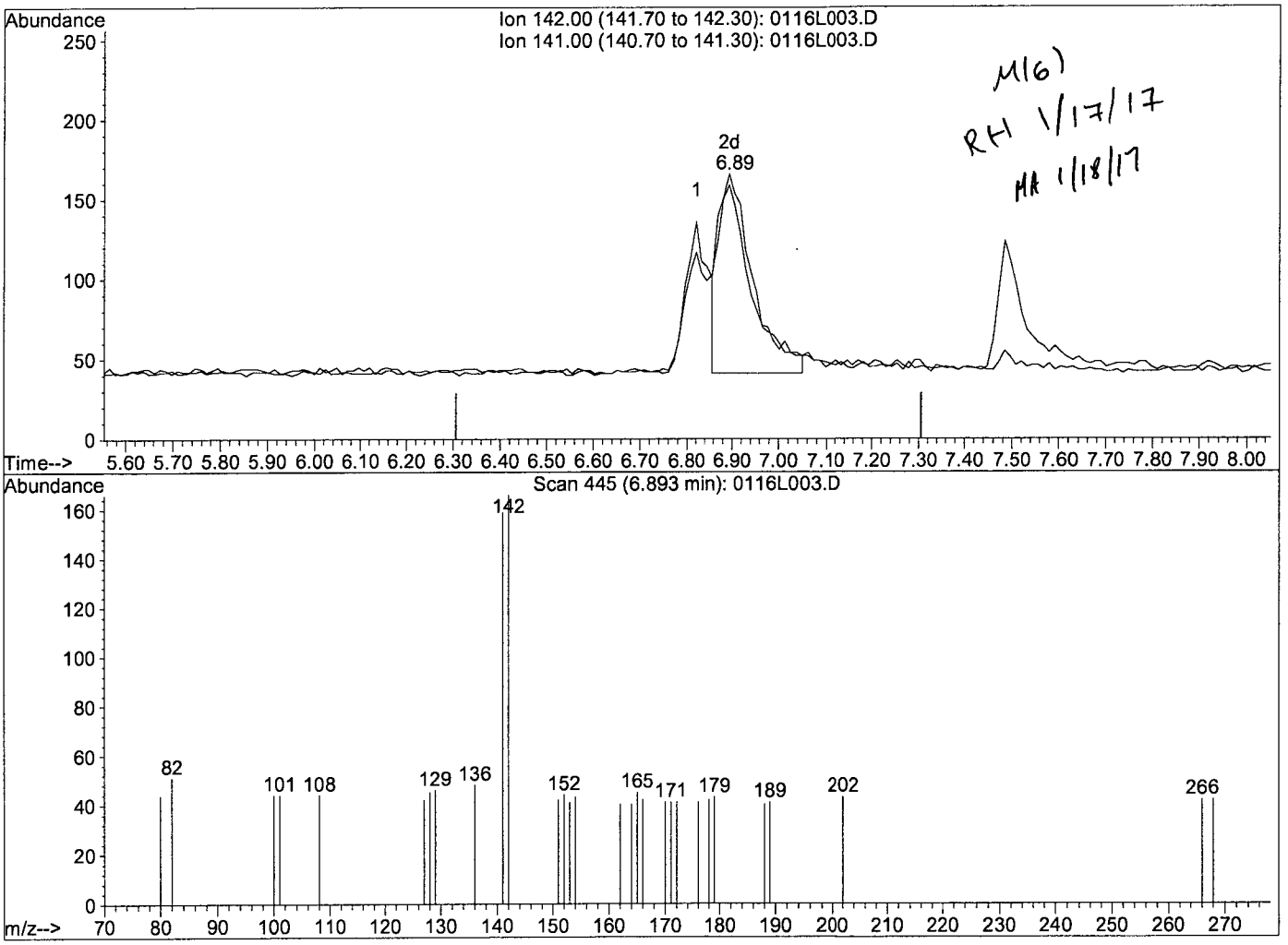
response 331

Ion	Exp%	Act%
142.00	100	100
141.00	86.00	76.84
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L003.D Vial: 3
Acq On : 16 Jan 17 17:54 Operator: MA
Sample : 0.1 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 10:55 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 10:31:40 2017
Response via : Multiple Level Calibration



TIC: 0116L003.D

(5) 1-Methylnaphthalene (TM)

6.89min 0.1102ppb m

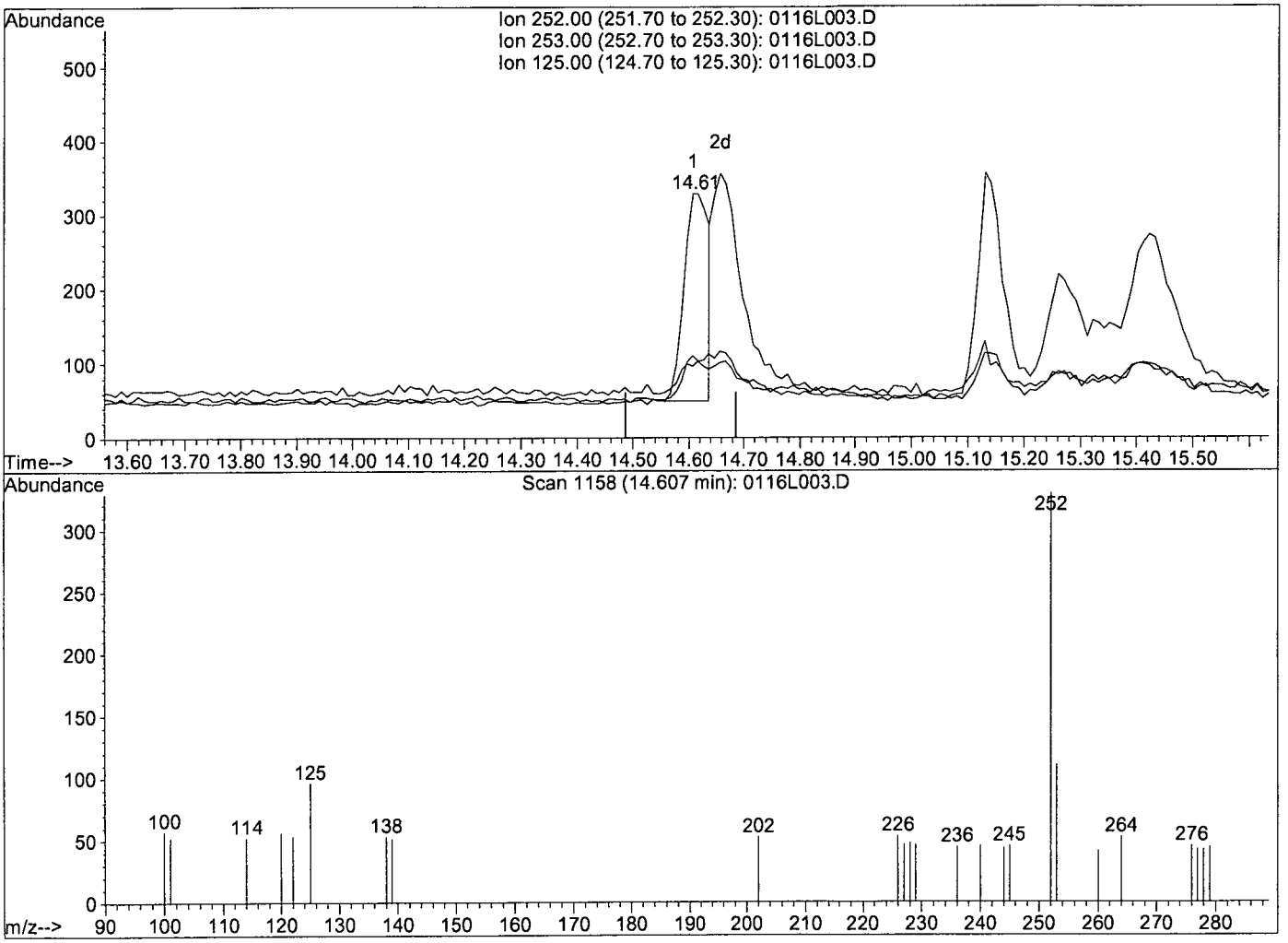
response 646

Ion	Exp%	Act%
142.00	100	100
141.00	86.00	95.78
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L003.D Vial: 3
Acq On : 16 Jan 17 17:54 Operator: MA
Sample : 0.1 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 10:55 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:21:29 2017
Response via : Multiple Level Calibration



TIC: 0116L003.D

(23) Benzo (k) fluoranthene (TM)

14.61min 0.0858ppb

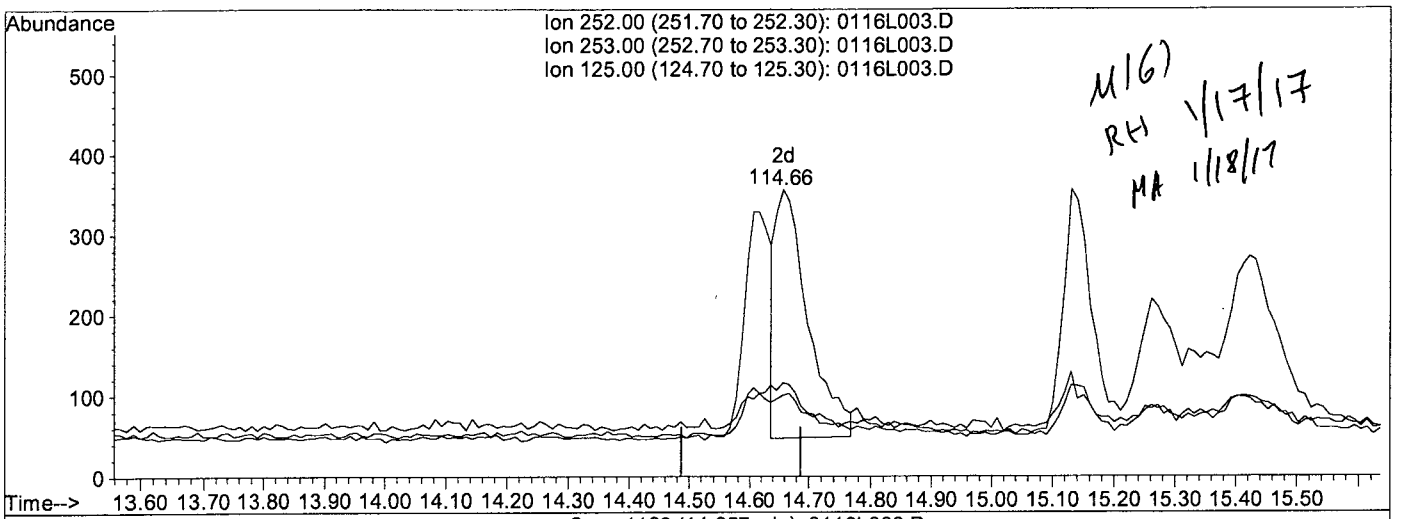
response 880

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	21.07
125.00	10.50	12.50
0.00	0.00	0.00

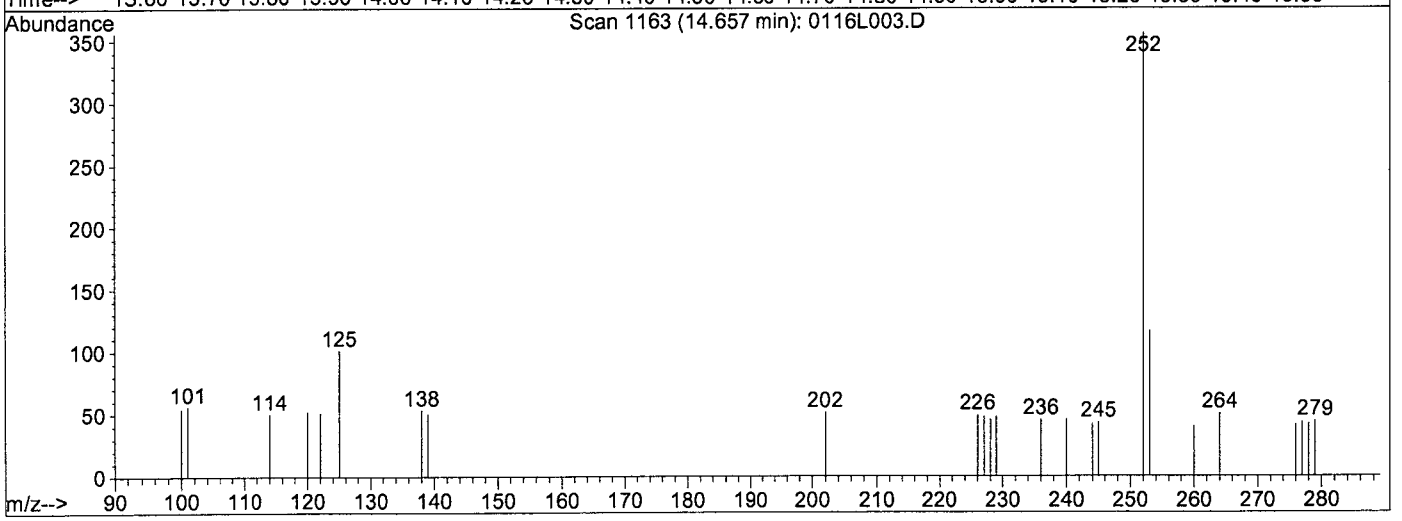
Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L003.D Vial: 3
Acq On : 16 Jan 17 17:54 Operator: MA
Sample : 0.1 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 11:25 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:21:29 2017
Response via : Multiple Level Calibration



M16) RH 1/17/17 MA 1/18/17



TIC: 0116L003.D

(23) Benzo (k) fluoranthene (TM)

14.66min 0.1118ppb m

response 1147

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	32.58#
125.00	10.50	28.37#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L004.D Vial: 4
Acq On : 16 Jan 17 18:22 Operator: MA
Sample : 0.2 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 10:59 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 16 16:54:35 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.88	136	20031	2.50000	ppb		0.02
6) Acenaphthene-D10(IS)	7.92	164	10246	2.50000	ppb		0.01
11) Phenanthrene-D10(IS)	9.68	188	19657	2.50000	ppb		0.02
15) Chrysene-D12(IS)	12.83	240	24737	2.50000	ppb		0.02
21) Perylene-D12(IS)	15.35	264	21530	2.50000	ppb		0.02
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.03	82	7	0.17124	ppb		0.01
Spiked Amount 5.000			Recovery = 3.420%				
7) Surrogate Recovery (FBP)	7.19	172	560	-0.05903	ppb		0.07
Spiked Amount 5.000			Recovery = -1.180%				
17) Surrogate Recovery (TPH)	11.56	244	692	-0.03190	ppb		0.04
Spiked Amount 5.000			Recovery = -0.640%				
Target Compounds							Qvalue
3) Naphthalene	5.90	128	1426	0.17647	ppb		98
4) 2-Methylnaphthalene	6.81	142	588	0.11965	ppb		97
5) 1-Methylnaphthalene	6.88	142	1171m	0.21465	ppb		95
8) Acenaphthylene	7.77	152	1479	0.18581	ppb		99
9) Acenaphthene	7.95	154	975	0.20208	ppb		97
10) Fluorene	8.62	166	981	0.17563	ppb		87
12) Phenanthrene	9.70	178	1547	0.18310	ppb		96
13) Anthracene	9.81	178	1266	0.16528	ppb		97
14) Fluoranthene	11.14	202	2352	0.20030	ppb		97
16) Pyrene	11.40	202	2458	0.20029	ppb		99
18) Benz (a) anthracene	12.83	228	900m	0.08525	ppb		0
19) Chrysene	12.87	228	3443m	0.28906	ppb		96
20) Indeno (1,2,3-cd) pyrene	17.74	276	1274	0.11075	ppb	#	85
22) Benzo (b) fluoranthene	14.60	252	1516	0.16404	ppb		98
23) Benzo (k) fluoranthene	14.66	252	2164m	0.22235	ppb		97
24) Benzo (a) pyrene	15.26	252	1658	0.17390	ppb		92
25) Dibenz (a,h) anthracene	17.75	278	1415	0.15801	ppb		97
26) Benzo (g,h,i) perylene	18.27	276	1325	0.15094	ppb		98

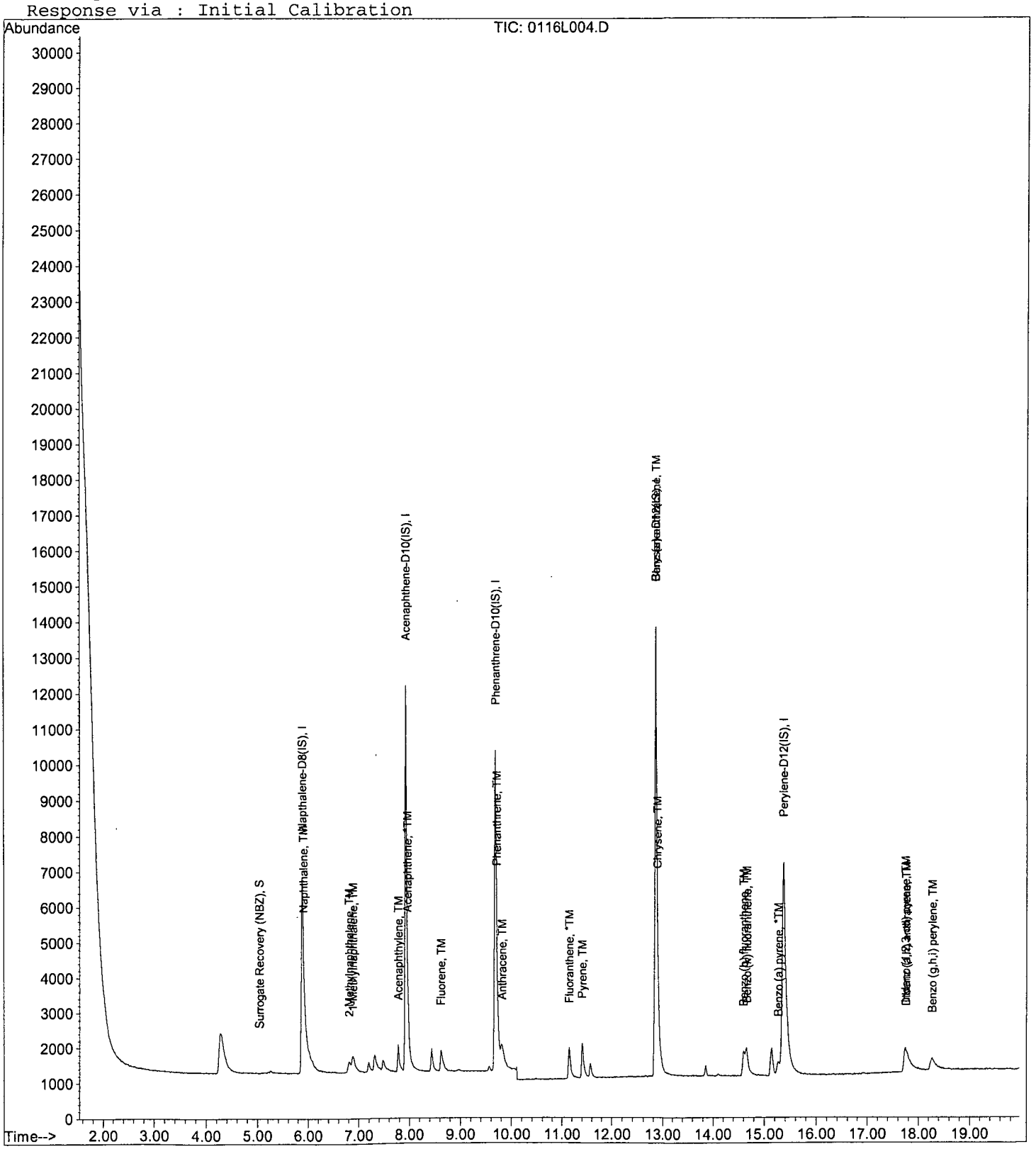
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L004.D Vial: 4
Acq On : 16 Jan 17 18:22 Operator: MA
Sample : 0.2 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 10:59 2017 Quant Results File: L0116PR.RES

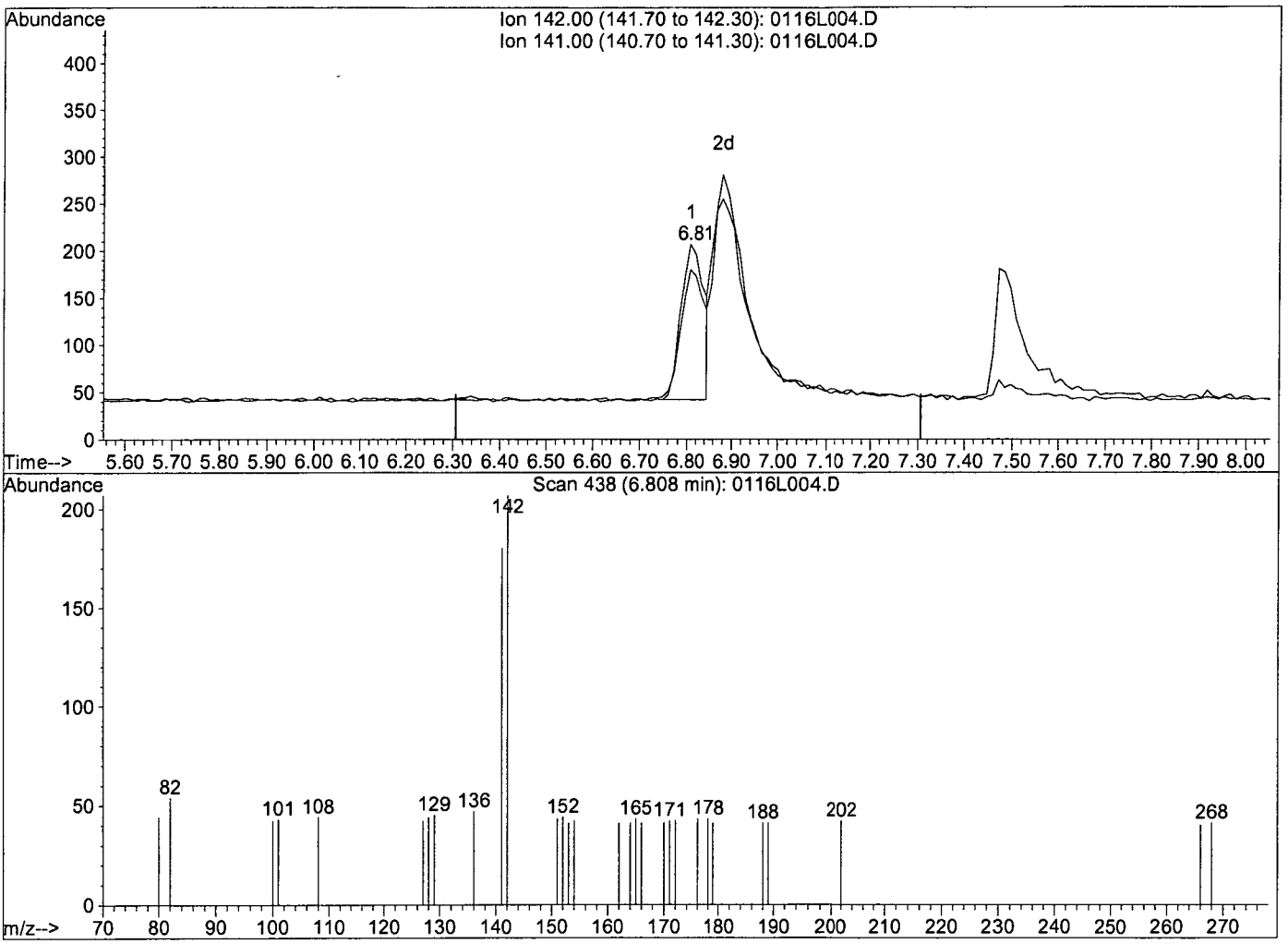
Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L004.D Vial: 4
Acq On : 16 Jan 17 18:22 Operator: MA
Sample : 0.2 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 8:55 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 10:31:40 2017
Response via : Multiple Level Calibration



TIC: 0116L004.D

(5) 1-Methylnaphthalene (TM)

6.81min 0.1078ppb

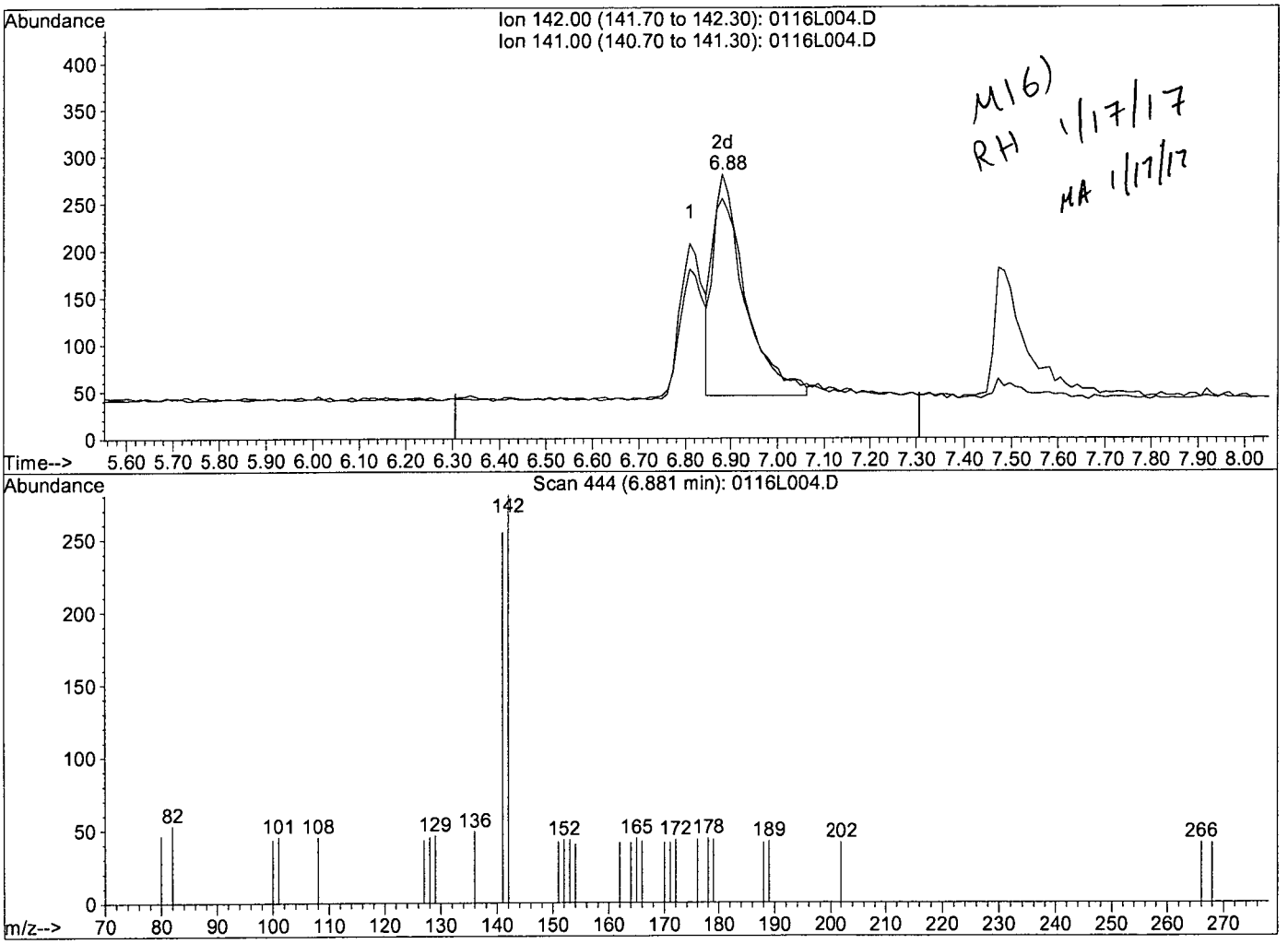
response 588

Ion	Exp%	Act%
142.00	100	100
141.00	86.00	81.82
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L004.D Vial: 4
Acq On : 16 Jan 17 18:22 Operator: MA
Sample : 0.2 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 10:58 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 10:31:40 2017
Response via : Multiple Level Calibration



TIC: 0116L004.D

(5) 1-Methylnaphthalene (TM)

6.88min 0.2146ppb m

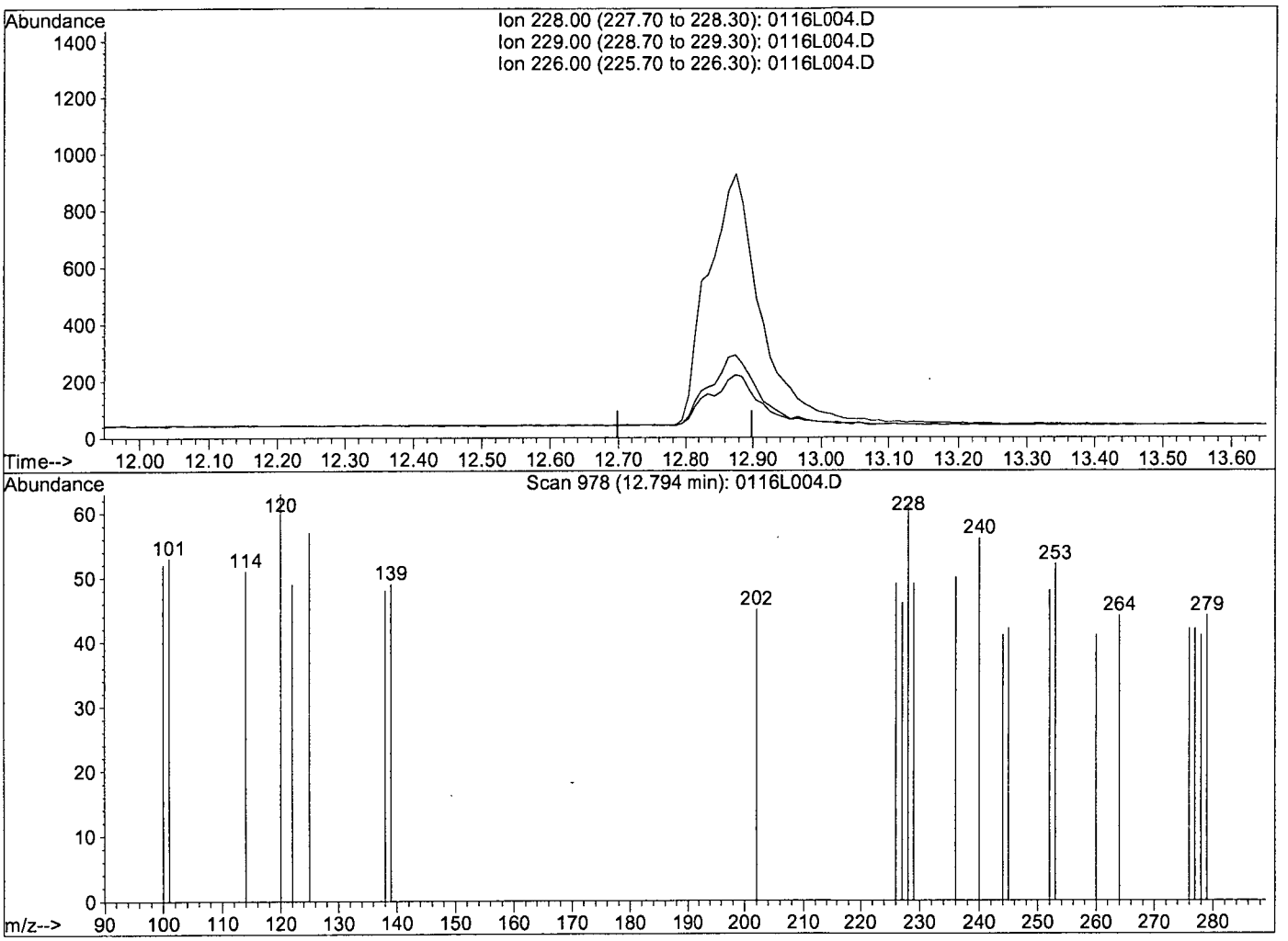
response 1171

Ion	Exp%	Act%
142.00	100	100
141.00	86.00	90.75
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L004.D Vial: 4
Acq On : 16 Jan 17 18:22 Operator: MA
Sample : 0.2 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 8:55 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 10:31:40 2017
Response via : Multiple Level Calibration



TIC: 0116L004.D

(18) Benz (a) anthracene (TM)

12.80min 0.0000ppb

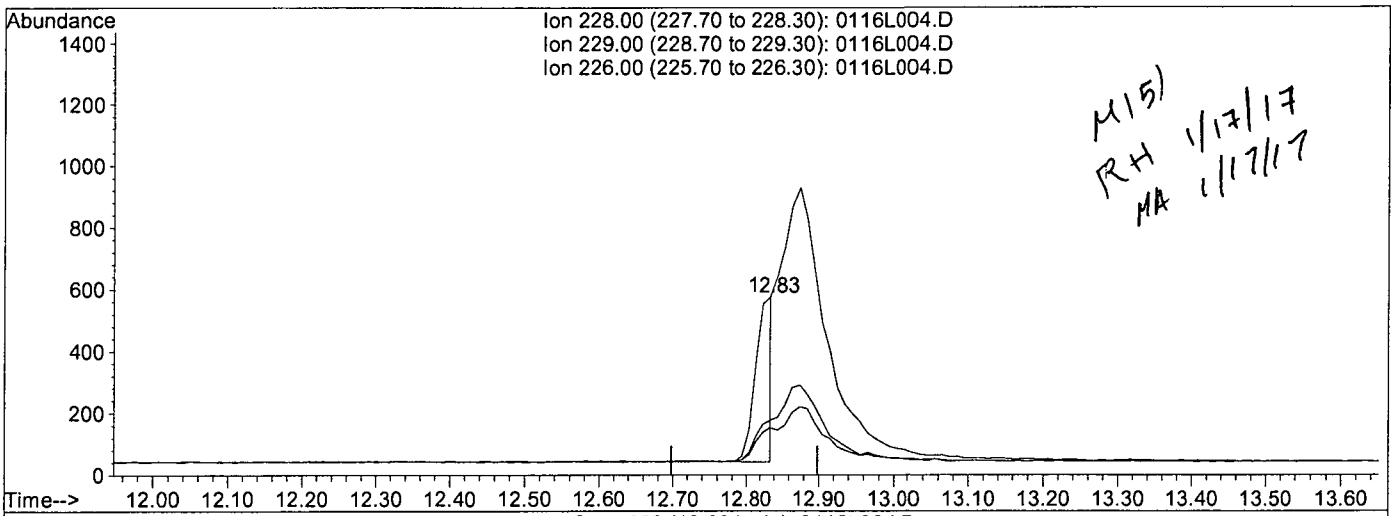
response 0

Ion	Exp%	Act%
228.00	100	0.00
229.00	21.30	0.00#
226.00	27.20	0.00#
0.00	0.00	0.00

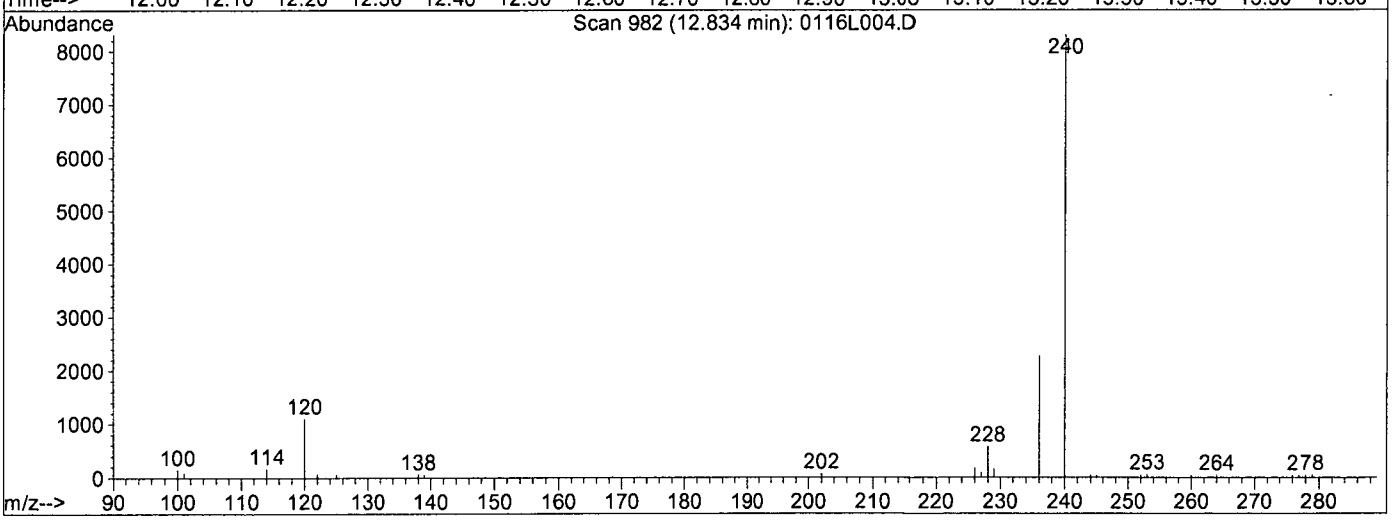
Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L004.D Vial: 4
Acq On : 16 Jan 17 18:22 Operator: MA
Sample : 0.2 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 10:58 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 10:31:40 2017
Response via : Multiple Level Calibration



M15) RH 1/17/17 MA 1/17/17



TIC: 0116L004.D

(18) Benz (a) anthracene (TM)

12.83min 0.0853ppb m

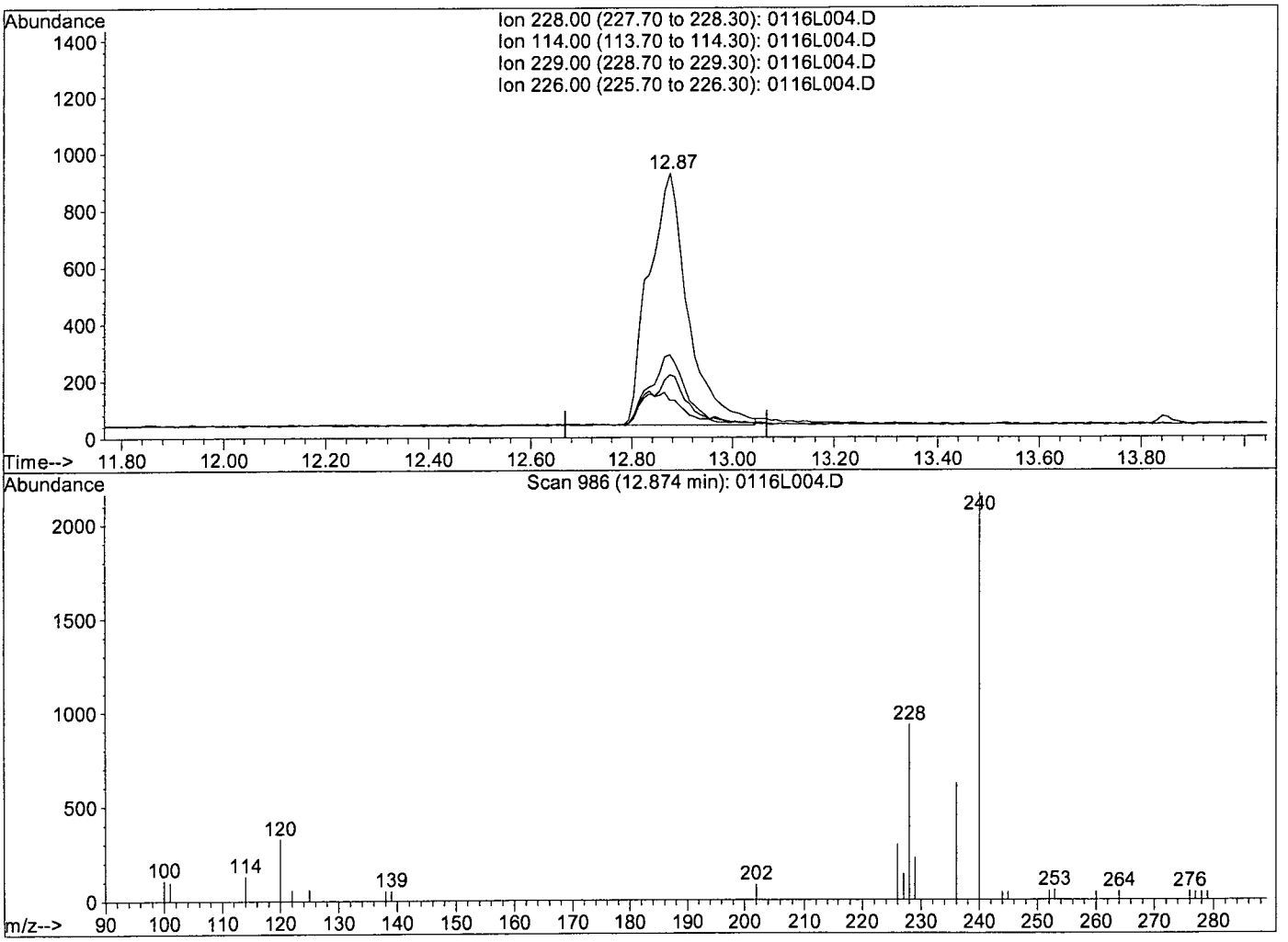
response 900

Ion	Exp%	Act%
228.00	100	100
229.00	21.30	26.66
226.00	27.20	30.84
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L004.D Vial: 4
Acq On : 16 Jan 17 18:22 Operator: MA
Sample : 0.2 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 10:58 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 10:31:40 2017
Response via : Multiple Level Calibration



TIC: 0116L004.D

(19) Chrysene (TM)

12.87min 0.3997ppb

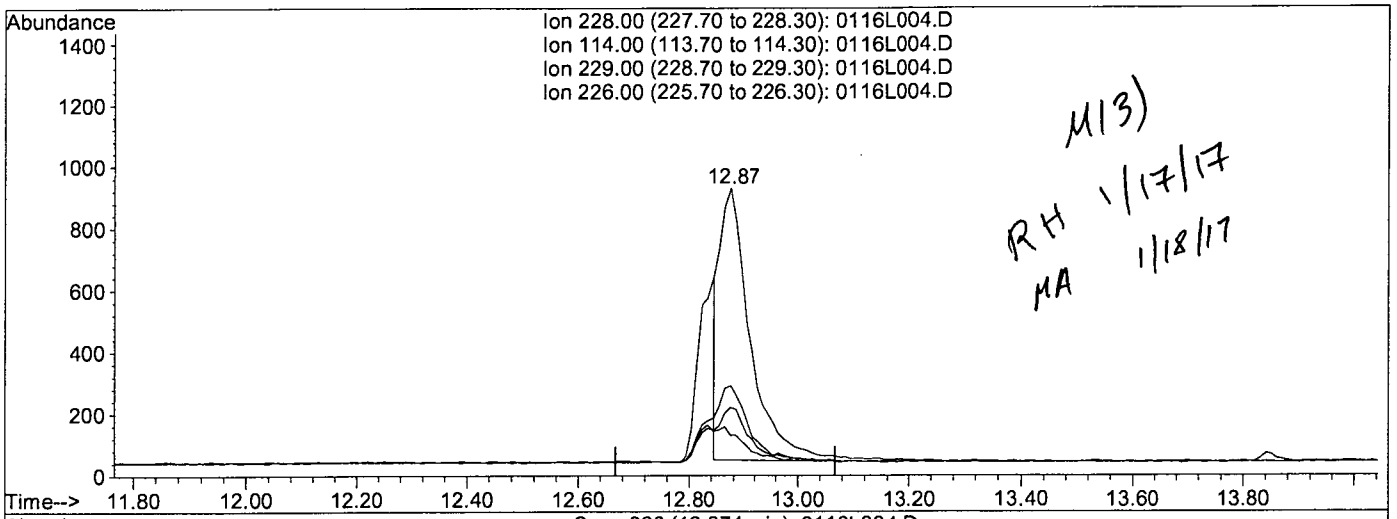
response 4761

Ion	Exp%	Act%
228.00	100	100
114.00	12.90	9.71
229.00	21.00	19.86
226.00	29.70	27.77

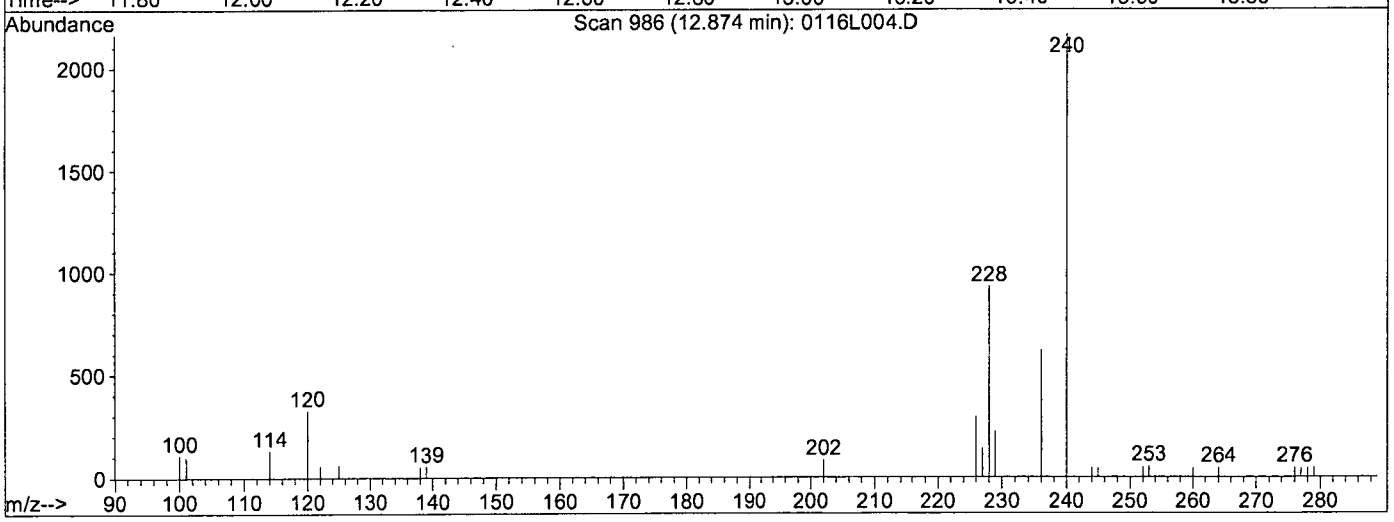
Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L004.D Vial: 4
Acq On : 16 Jan 17 18:22 Operator: MA
Sample : 0.2 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 10:58 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 10:31:40 2017
Response via : Multiple Level Calibration



M13)
RH 1/17/17
MA 1/18/17



TIC: 0116L004.D

(19) Chrysene (TM)

12.87min 0.2891ppb m

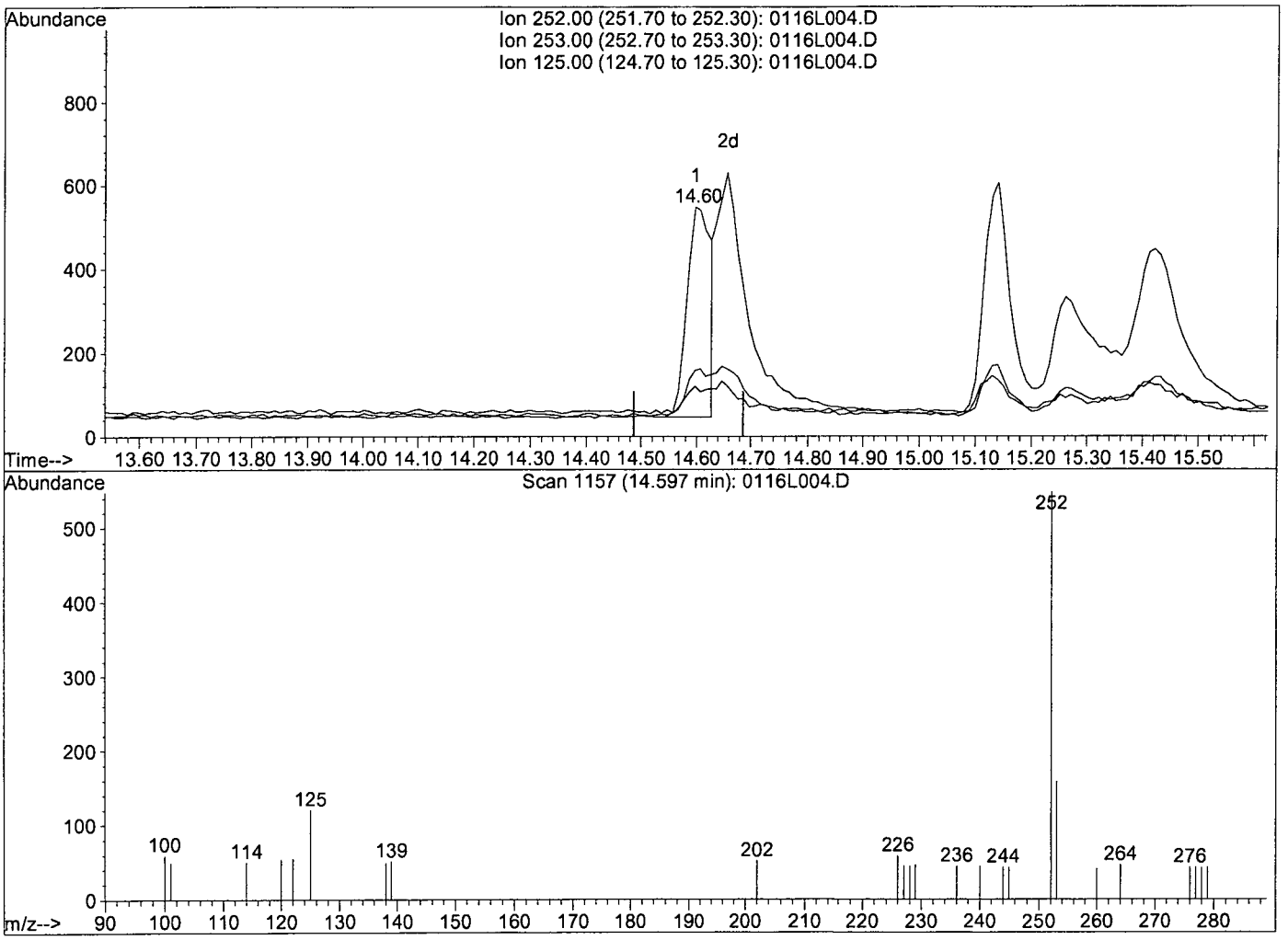
response 3443

Ion	Exp%	Act%
228.00	100	100
114.00	12.90	14.01
229.00	21.00	23.71
226.00	29.70	31.36

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L004.D Vial: 4
Acq On : 16 Jan 17 18:22 Operator: MA
Sample : 0.2 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 10:58 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 10:31:40 2017
Response via : Multiple Level Calibration



TIC: 0116L004.D

(23) Benzo (k) fluoranthene (TM)

14.60min 0.1558ppb

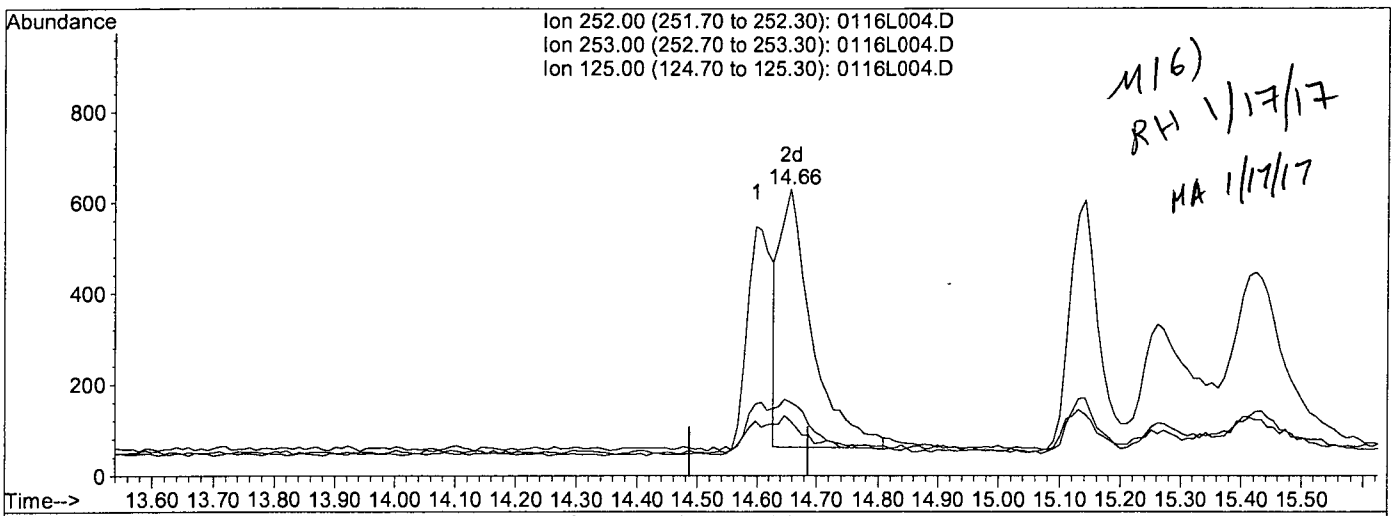
response 1516

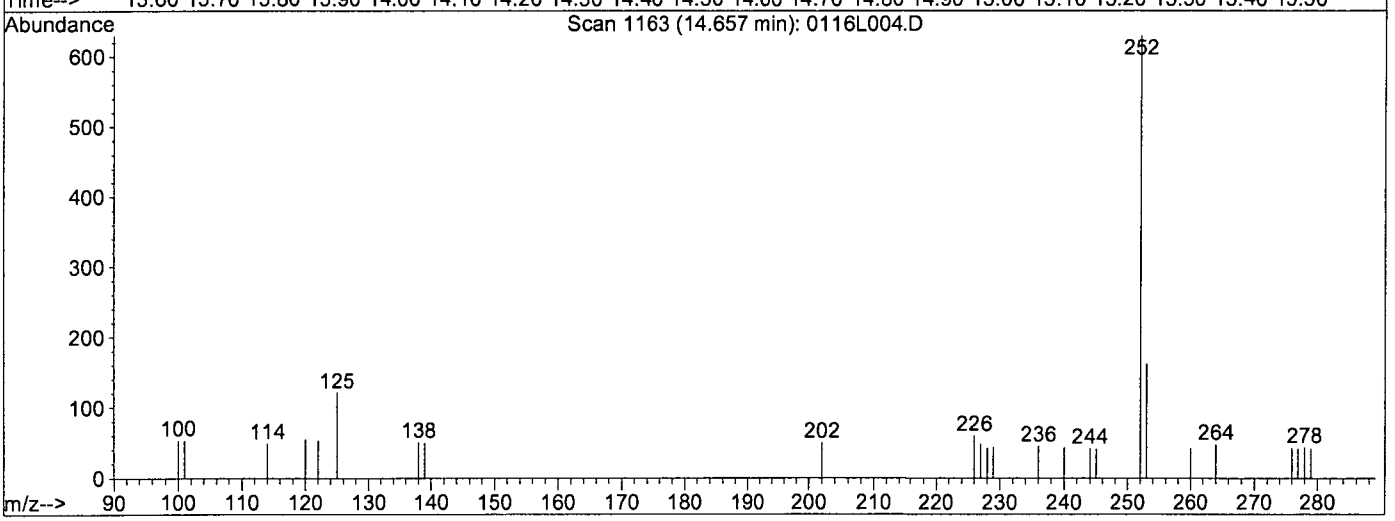
Ion	Exp%	Act%
252.00	100	100
253.00	21.80	20.92
125.00	10.50	12.75
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L004.D Vial: 4
Acq On : 16 Jan 17 18:22 Operator: MA
Sample : 0.2 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 10:59 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 10:31:40 2017
Response via : Multiple Level Calibration





TIC: 0116L004.D

(23) Benzo (k) fluoranthene (TM)

14.66min 0.2224ppb m

response 2164

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	25.71
125.00	10.50	19.21#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L005.D Vial: 5
Acq On : 16 Jan 17 18:50 Operator: MA
Sample : 0.5 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:27 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 16 16:54:35 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.88	136	19570	2.50000	ppb		0.02
6) Acenaphthene-D10(IS)	7.92	164	9925	2.50000	ppb		0.01
11) Phenanthrene-D10(IS)	9.68	188	19203	2.50000	ppb		0.02
15) Chrysene-D12(IS)	12.83	240	24062	2.50000	ppb		0.02
21) Perylene-D12(IS)	15.35	264	20718	2.50000	ppb		0.02
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.14	82	124	0.21870	ppb		0.12
Spiked Amount 5.000			Recovery =	4.380%			
7) Surrogate Recovery (FBP)	7.17	172	1547	0.12388	ppb		0.05
Spiked Amount 5.000			Recovery =	2.480%			
17) Surrogate Recovery (TPH)	11.55	244	1931	0.13946	ppb		0.03
Spiked Amount 5.000			Recovery =	2.780%			
Target Compounds							Qvalue
3) Naphthalene	5.90	128	3969	0.50274	ppb		99
4) 2-Methylnaphthalene	6.78	142	1838	0.38281	ppb		97
5) 1-Methylnaphthalene	6.86	142	2875	0.53941	ppb		92
8) Acenaphthylene	7.77	152	4111	0.53318	ppb		96
9) Acenaphthene	7.95	154	2620	0.56059	ppb		98
10) Fluorene	8.61	166	2742	0.50677	ppb		96
12) Phenanthrene	9.70	178	3933	0.47651	ppb		99
13) Anthracene	9.80	178	3691	0.49327	ppb		99
14) Fluoranthene	11.12	202	6441	0.56149	ppb		99
16) Pyrene	11.39	202	6742	0.56479	ppb		99
18) Benz (a) anthracene	12.83	228	3799	0.36995	ppb		97
19) Chrysene	12.87	228	7816	0.67461	ppb		95
20) Indeno (1,2,3-cd) pyrene	17.70	276	4317	0.38580	ppb	#	93
22) Benzo (b) fluoranthene	14.59	252	4089	0.45980	ppb		99
23) Benzo (k) fluoranthene	14.64	252	6355m	0.67857	ppb		99
24) Benzo (a) pyrene	15.25	252	4540	0.49484	ppb		97
25) Dibenz (a,h) anthracene	17.71	278	3891	0.45154	ppb		96
26) Benzo (g,h,i) perylene	18.23	276	3818	0.45197	ppb		99

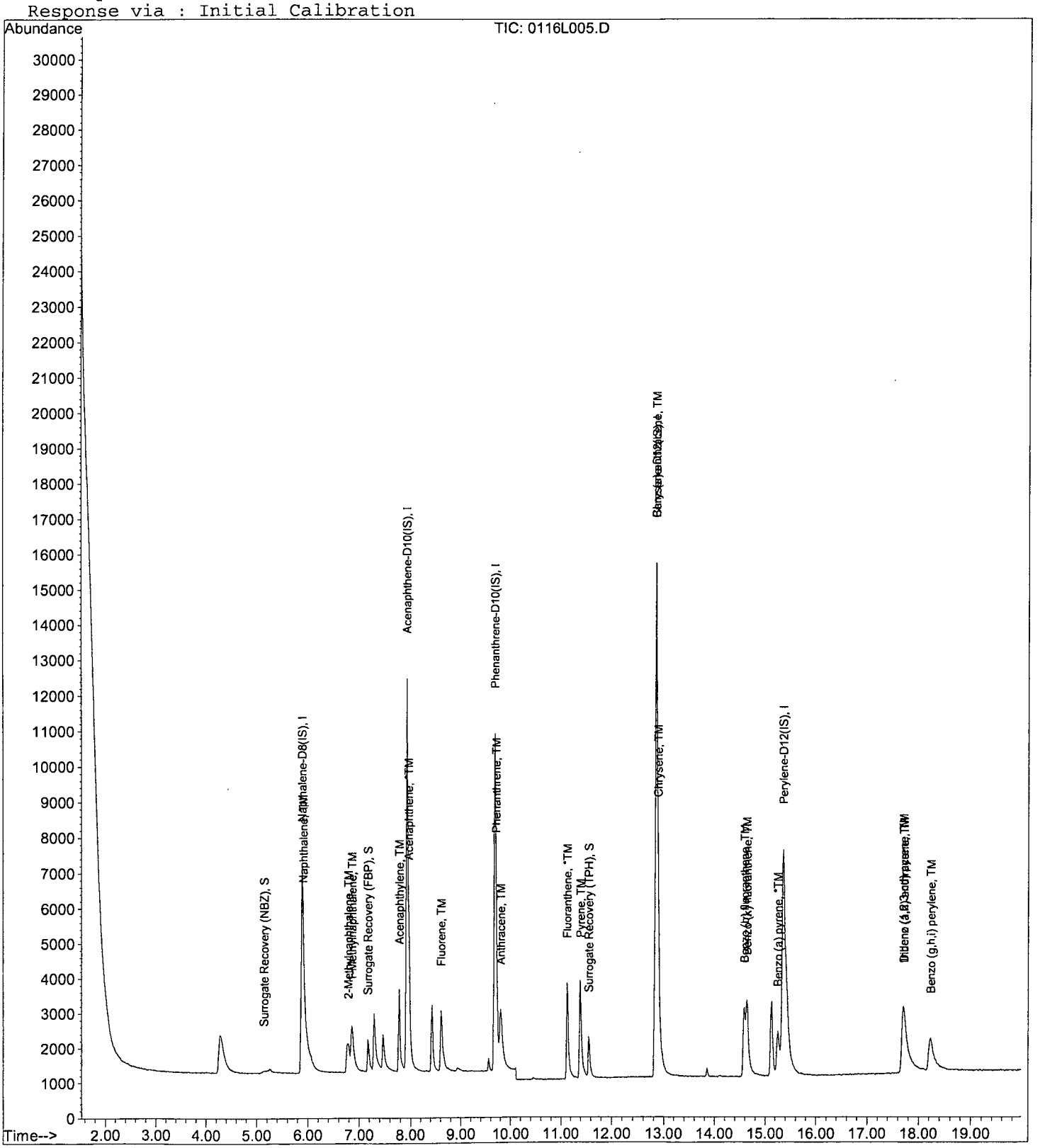
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L005.D Vial: 5
Acq On : 16 Jan 17 18:50 Operator: MA
Sample : 0.5 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:27 2017 Quant Results File: L0116PR.RES

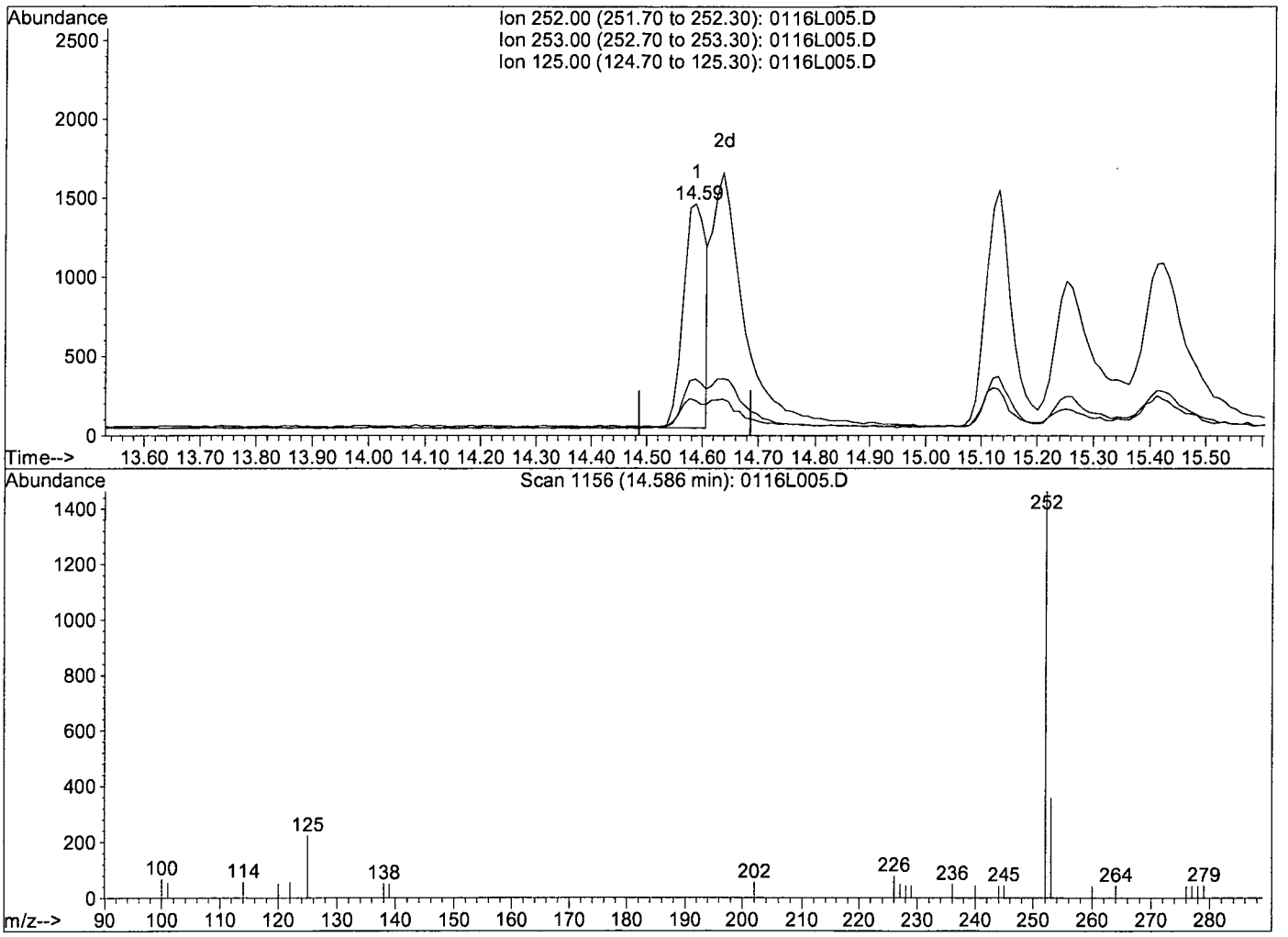
Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L005.D Vial: 5
Acq On : 16 Jan 17 18:50 Operator: MA
Sample : 0.5 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 8:55 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:24:14 2017
Response via : Multiple Level Calibration



TIC: 0116L005.D

(23) Benzo (k) fluoranthene (TM)

14.59min 0.4366ppb

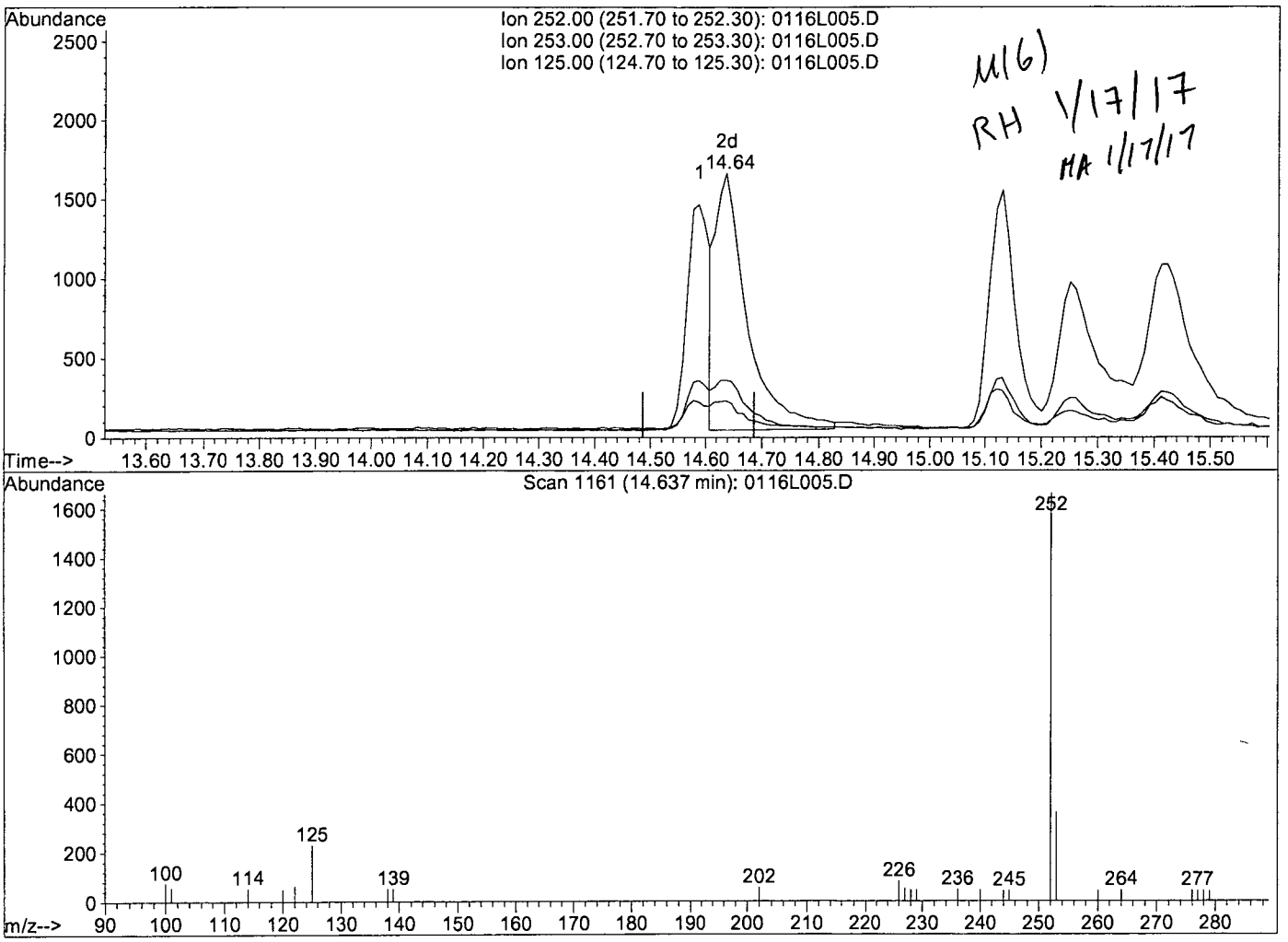
response 4089

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	21.68
125.00	10.50	11.58
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L005.D Vial: 5
Acq On : 16 Jan 17 18:50 Operator: MA
Sample : 0.5 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 11:27 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:24:14 2017
Response via : Multiple Level Calibration



TIC: 0116L005.D

(23) Benzo (k) fluoranthene (TM)

14.64min 0.6786ppb m

response 6355

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	21.59
125.00	10.50	13.77#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L006.D Vial: 6
Acq On : 16 Jan 17 19:17 Operator: MA
Sample : 1.0 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:28 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 16 16:54:35 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.88	136	19747	2.50000	ppb		0.02
6) Acenaphthene-D10(IS)	7.92	164	10027	2.50000	ppb		0.01
11) Phenanthrene-D10(IS)	9.67	188	19409	2.50000	ppb		0.01
15) Chrysene-D12(IS)	12.82	240	24216	2.50000	ppb		0.01
21) Perylene-D12(IS)	15.34	264	20959	2.50000	ppb		0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.16	82	471	0.35756	ppb		0.13
Spiked Amount 5.000			Recovery =	7.160%			
7) Surrogate Recovery (FBP)	7.16	172	3266	0.43084	ppb		0.04
Spiked Amount 5.000			Recovery =	8.620%			
17) Surrogate Recovery (TPH)	11.55	244	3690	0.37588	ppb		0.03
Spiked Amount 5.000			Recovery =	7.520%			
Target Compounds							Qvalue
3) Naphthalene	5.90	128	8302	1.04216	ppb		99
4) 2-Methylnaphthalene	6.75	142	4052	0.83636	ppb		99
5) 1-Methylnaphthalene	6.84	142	5679	1.05594	ppb		95
8) Acenaphthylene	7.76	152	8184	1.05063	ppb		98
9) Acenaphthene	7.95	154	5107	1.08160	ppb		99
10) Fluorene	8.59	166	5539	1.01330	ppb		100
12) Phenanthrene	9.70	178	7863	0.94254	ppb		100
13) Anthracene	9.79	178	7609	1.00608	ppb		99
14) Fluoranthene	11.11	202	12811	1.10494	ppb		97
16) Pyrene	11.37	202	13493	1.12315	ppb		98
18) Benz (a) anthracene	12.82	228	7201	0.69677	ppb		97
19) Chrysene	12.86	228	15776	1.35299	ppb		96
20) Indeno (1,2,3-cd) pyrene	17.66	276	9343	0.82965	ppb	#	90
22) Benzo (b) fluoranthene	14.57	252	7921	0.88046	ppb		98
23) Benzo (k) fluoranthene	14.62	252	12165m	1.28401	ppb		96
24) Benzo (a) pyrene	15.24	252	8874	0.95610	ppb		98
25) Dibenz (a,h) anthracene	17.69	278	7349	0.84302	ppb		98
26) Benzo (g,h,i) perylene	18.19	276	7572	0.88605	ppb		99

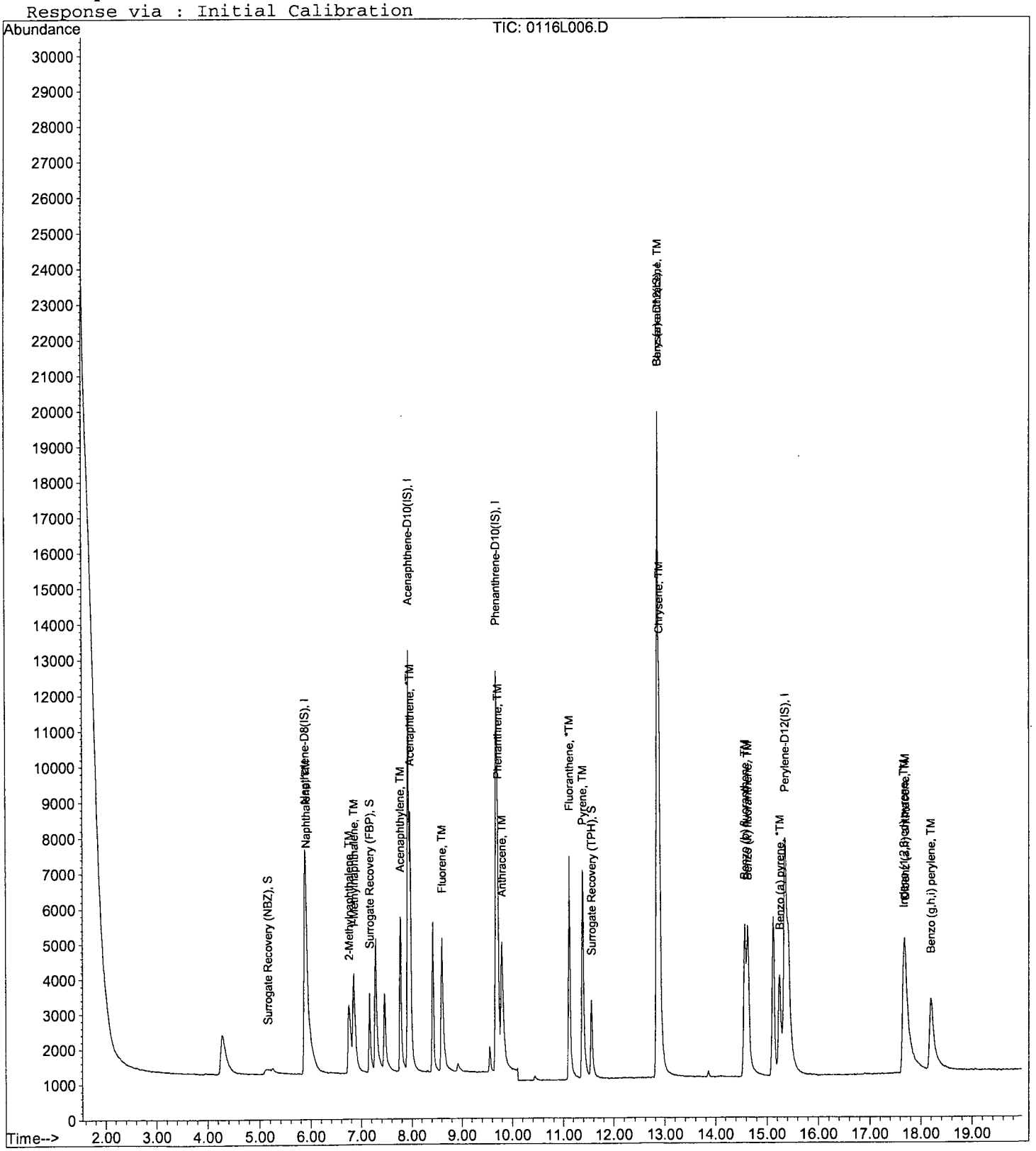
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L006.D Vial: 6
Acq On : 16 Jan 17 19:17 Operator: MA
Sample : 1.0 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:28 2017 Quant Results File: L0116PR.RES

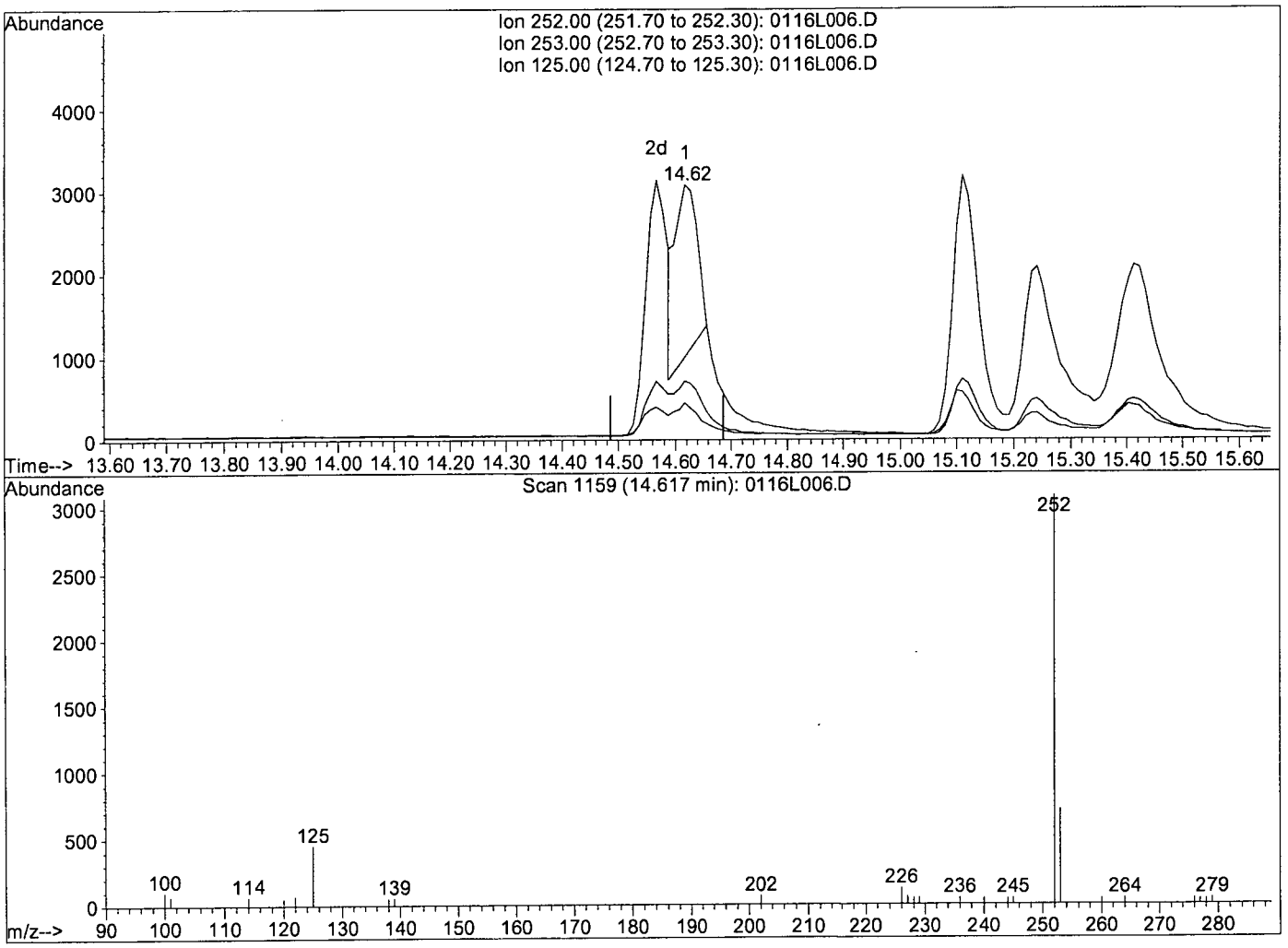
Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L006.D Vial: 6
Acq On : 16 Jan 17 19:17 Operator: MA
Sample : 1.0 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 8:55 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:24:14 2017
Response via : Multiple Level Calibration



TIC: 0116L006.D

(23) Benzo (k) fluoranthene (TM)

14.62min 0.6271ppb

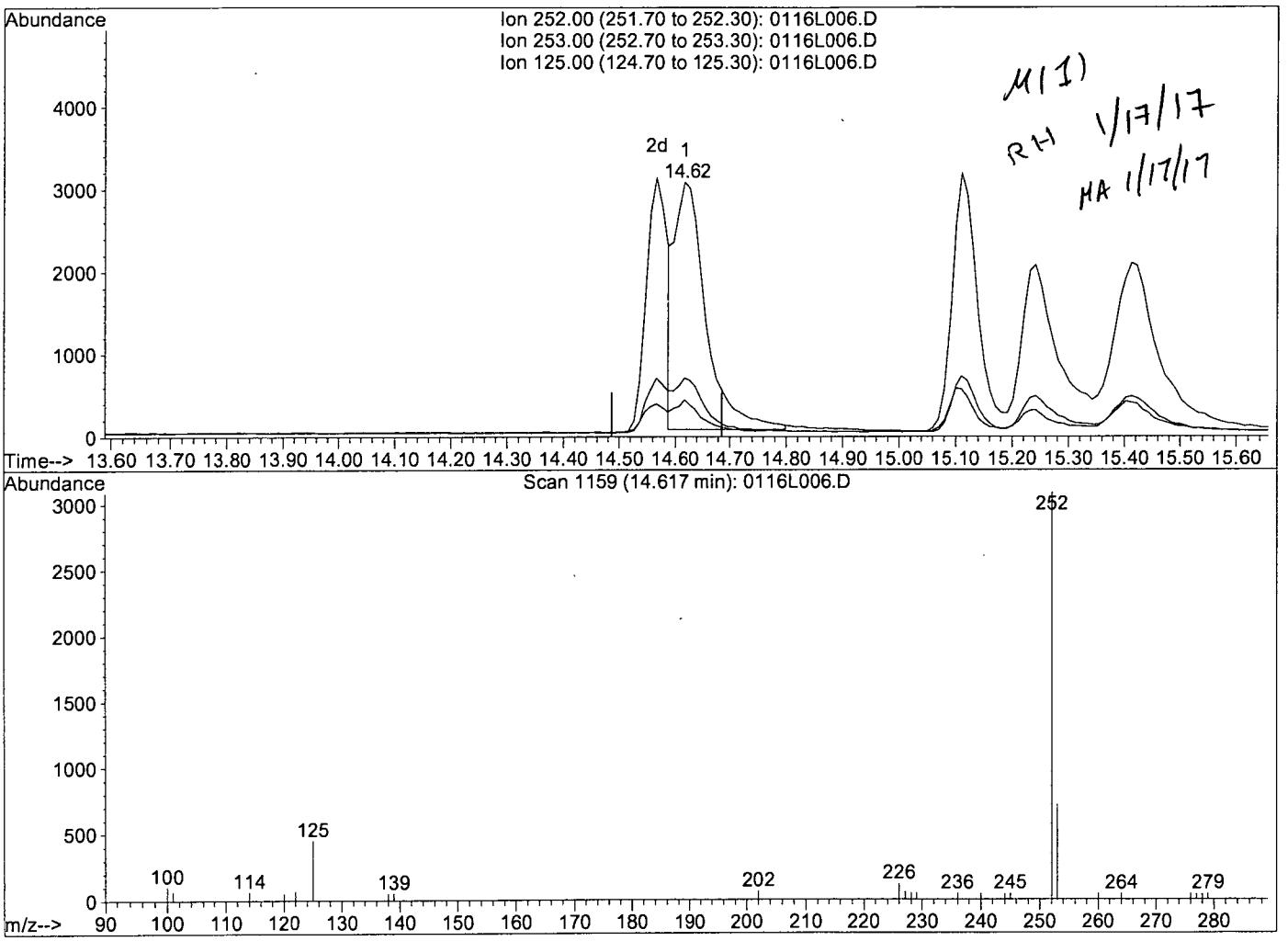
response 5941

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	21.68
125.00	10.50	14.69#
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L006.D Vial: 6
Acq On : 16 Jan 17 19:17 Operator: MA
Sample : 1.0 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 11:28 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:24:14 2017
Response via : Multiple Level Calibration



TIC: 0116L006.D

(23) Benzo (k) fluoranthene (TM)

14.62min 1.2840ppb m

response 12165

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	23.13
125.00	10.50	14.54#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L007.D Vial: 7
Acq On : 16 Jan 17 19:45 Operator: MA
Sample : 5.0 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:28 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 16 16:54:35 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	20107	2.50000 ppb		0.01
6) Acenaphthene-D10(IS)	7.91	164	10094	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.66	188	19784	2.50000 ppb		0.00
15) Chrysene-D12(IS)	12.81	240	24551	2.50000 ppb		0.00
21) Perylene-D12(IS)	15.33	264	20981	2.50000 ppb		0.00
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.05	82	7610	3.16889 ppb		0.02
Spiked Amount 5.000			Recovery	= 63.380%		
7) Surrogate Recovery (FBP)	7.13	172	17369	2.95189 ppb		0.01
Spiked Amount 5.000			Recovery	= 59.040%		
17) Surrogate Recovery (TPH)	11.53	244	20116	2.56211 ppb		0.01
Spiked Amount 5.000			Recovery	= 51.240%		
Target Compounds						Qvalue
3) Naphthalene	5.89	128	46569	5.74121 ppb		100
4) 2-Methylnaphthalene	6.71	142	27540	5.58266 ppb		98
5) 1-Methylnaphthalene	6.82	142	28249	5.15851 ppb		98
8) Acenaphthylene	7.75	152	47918	6.11071 ppb		98
9) Acenaphthene	7.94	154	27862	5.86167 ppb		98
10) Fluorene	8.56	166	31743	5.76847 ppb		96
12) Phenanthrene	9.69	178	45906	5.39847 ppb		99
13) Anthracene	9.75	178	45335	5.88066 ppb		99
14) Fluoranthene	11.08	202	74570	6.30969 ppb		99
16) Pyrene	11.35	202	77989	6.40318 ppb		99
18) Benz (a) anthracene	12.80	228	58564	5.58935 ppb		97
19) Chrysene	12.85	228	72146	6.10300 ppb		96
20) Indeno (1,2,3-cd) pyrene	17.60	276	56056	4.90983 ppb	#	93
22) Benzo (b) fluoranthene	14.54	252	52100	5.78511 ppb		99
23) Benzo (k) fluoranthene	14.59	252	62778m	6.61924 ppb		99
24) Benzo (a) pyrene	15.21	252	55446	5.96758 ppb		98
25) Dibenz (a,h) anthracene	17.63	278	46320	5.30790 ppb		98
26) Benzo (g,h,i) perylene	18.13	276	45396	5.30653 ppb		99

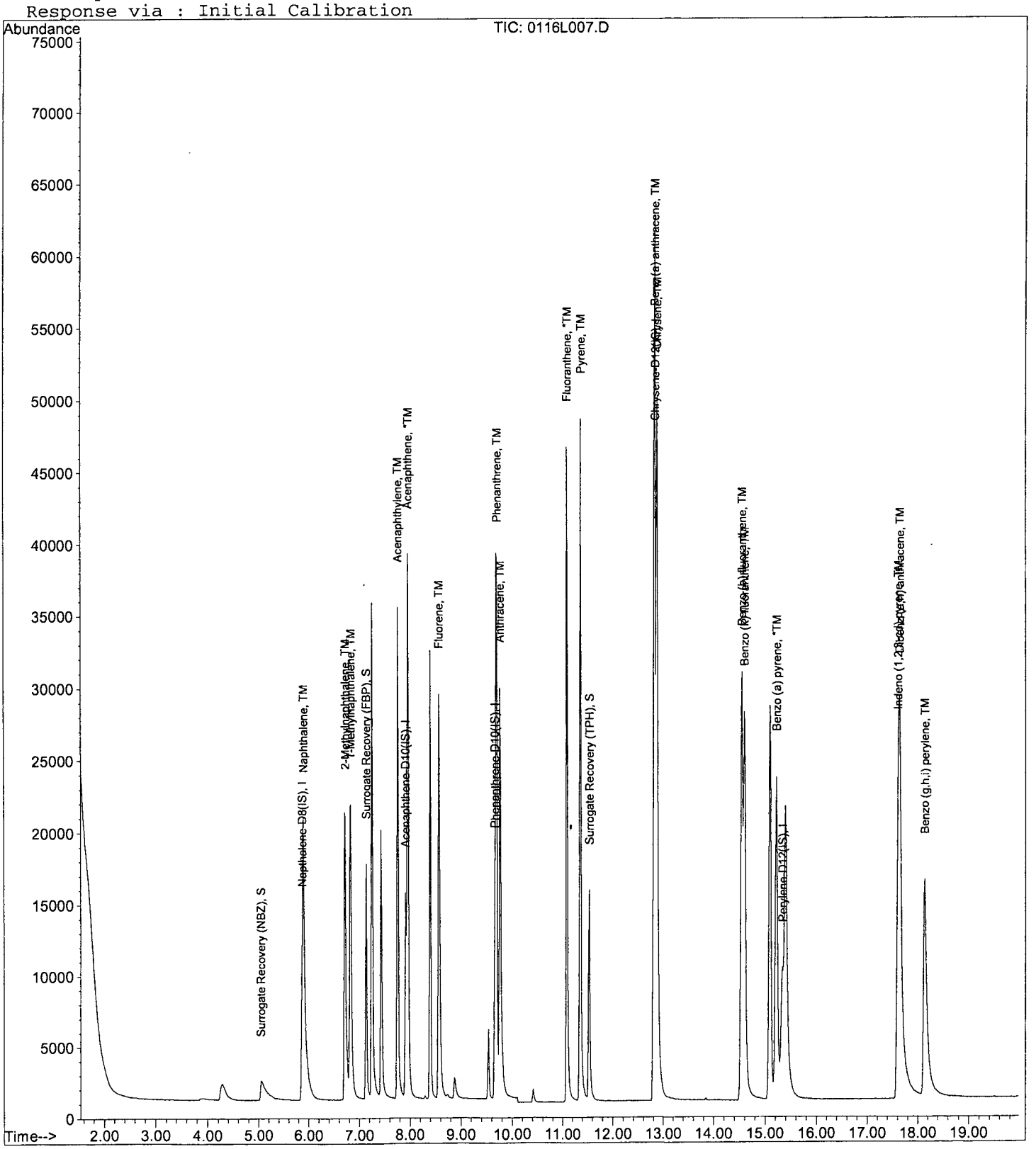
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L007.D Vial: 7
Acq On : 16 Jan 17 19:45 Operator: MA
Sample : 5.0 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:28 2017 Quant Results File: L0116PR.RES

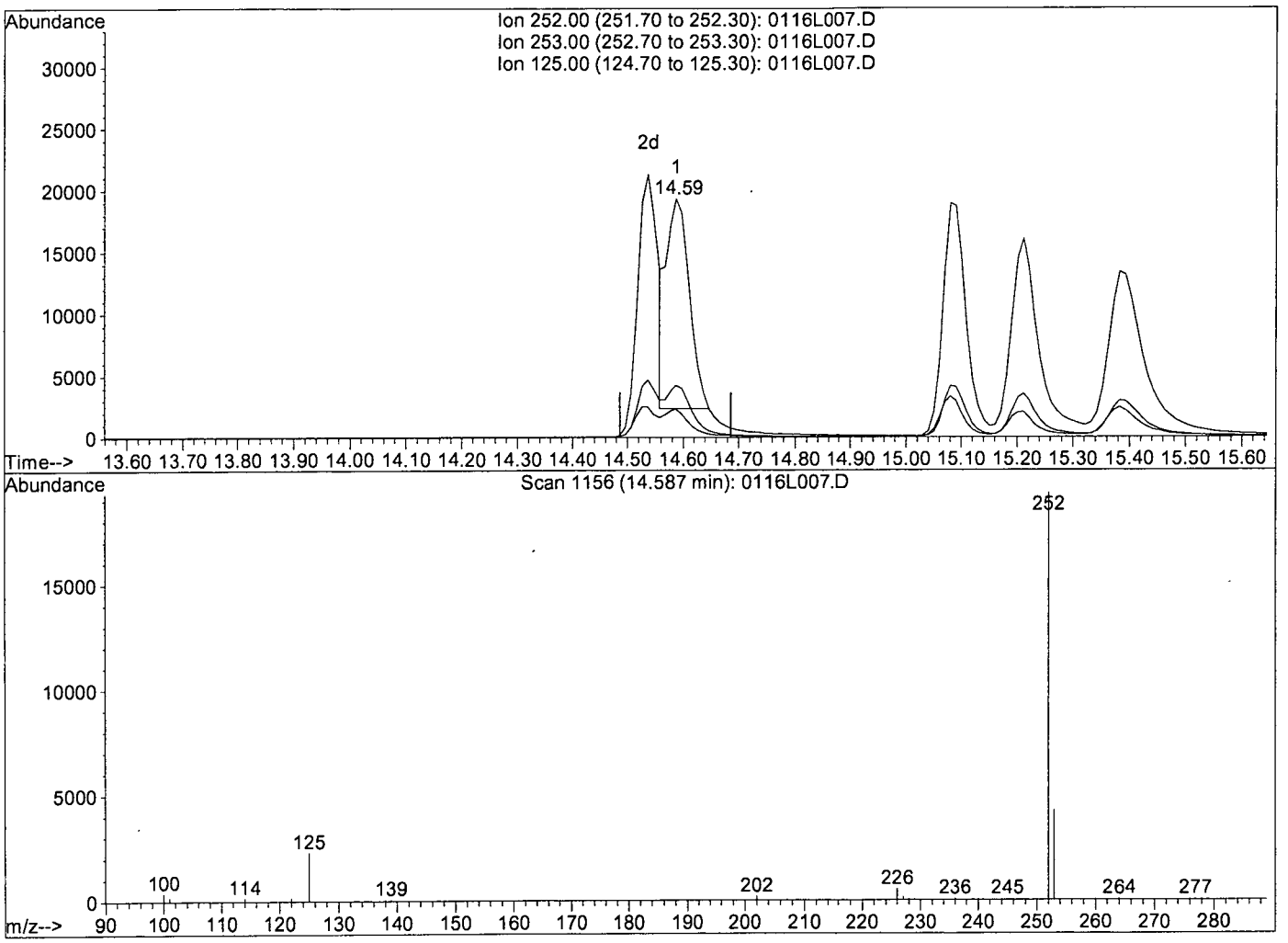
Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L007.D Vial: 7
Acq On : 16 Jan 17 19:45 Operator: MA
Sample : 5.0 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 8:36 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:24:14 2017
Response via : Multiple Level Calibration



TIC: 0116L007.D

(23) Benzo (k) fluoranthene (TM)

14.59min 5.2440ppb

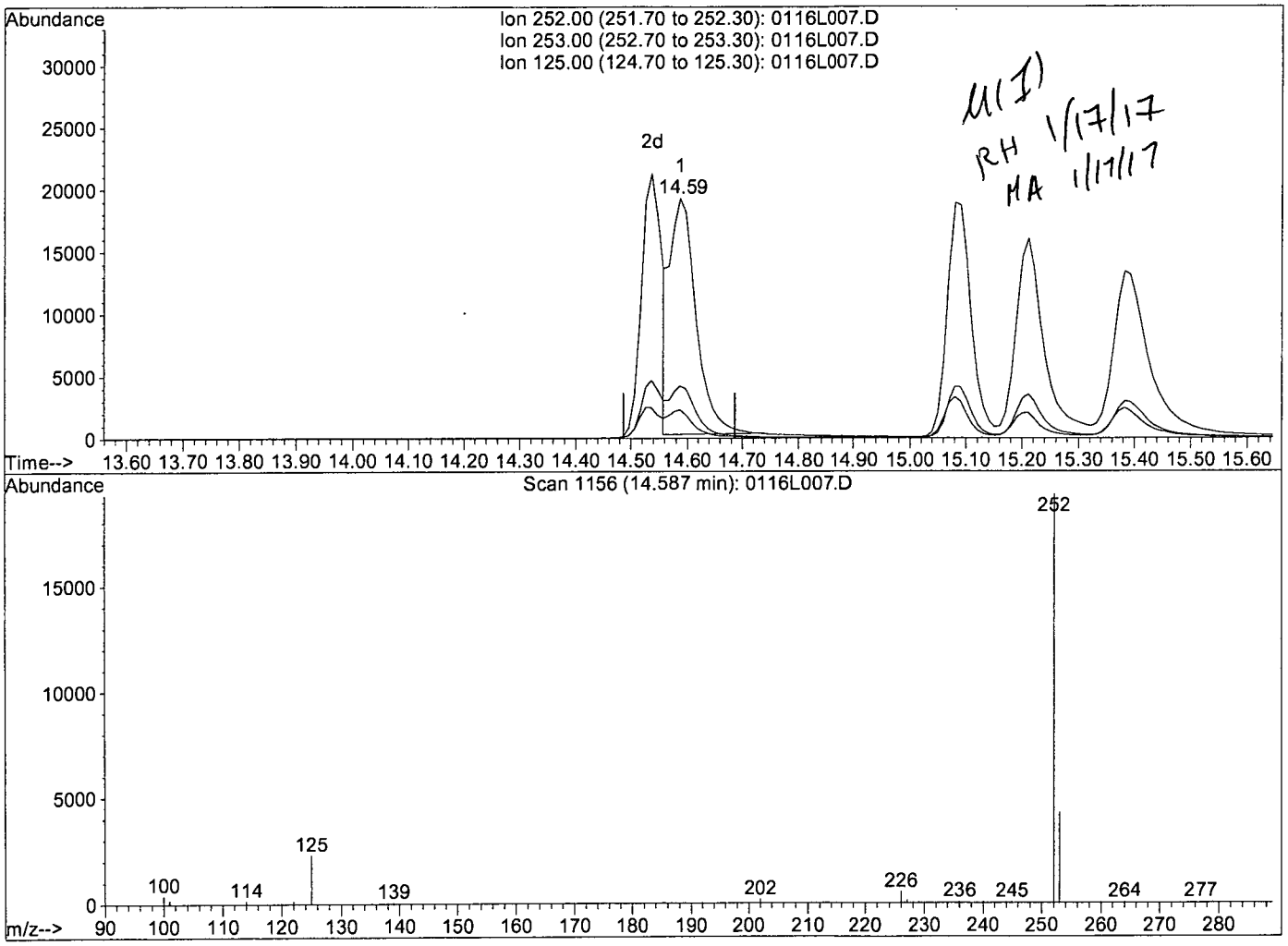
response 49735

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	21.70
125.00	10.50	11.95
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L007.D Vial: 7
Acq On : 16 Jan 17 19:45 Operator: MA
Sample : 5.0 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 11:28 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:24:14 2017
Response via : Multiple Level Calibration



TIC: 0116L007.D

(23) Benzo (k) fluoranthene (TM)

14.59min 6.6192ppb m

response 62778

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	21.93
125.00	10.50	11.88
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L008.D Vial: 8
Acq On : 16 Jan 17 20:13 Operator: MA
Sample : 10 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:29 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 16 16:54:35 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.86	136	19673	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.91	164	9750	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.66	188	19102	2.50000	ppb		0.00
15) Chrysene-D12(IS)	12.81	240	23707	2.50000	ppb		0.00
21) Perylene-D12(IS)	15.32	264	20339	2.50000	ppb		0.00
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.03	82	16864	6.96418	ppb		0.01
Spiked Amount 5.000			Recovery = 139.280%				
7) Surrogate Recovery (FBP)	7.12	172	35736	6.46599	ppb		0.00
Spiked Amount 5.000			Recovery = 129.320%				
17) Surrogate Recovery (TPH)	11.52	244	40668	5.49931	ppb		0.00
Spiked Amount 5.000			Recovery = 109.980%				
Target Compounds							Qvalue
3) Naphthalene	5.88	128	95242	12.00083	ppb		99
4) 2-Methylnaphthalene	6.70	142	57524	11.91799	ppb		99
5) 1-Methylnaphthalene	6.81	142	57182	10.67228	ppb		97
8) Acenaphthylene	7.75	152	98439	12.99626	ppb		97
9) Acenaphthene	7.94	154	56437	12.29227	ppb		99
10) Fluorene	8.56	166	63672	11.97898	ppb		99
12) Phenanthrene	9.68	178	92495	11.26561	ppb		99
13) Anthracene	9.75	178	93269	12.53040	ppb		99
14) Fluoranthene	11.08	202	151671	13.29173	ppb		97
16) Pyrene	11.35	202	156778	13.33030	ppb		97
18) Benz (a) anthracene	12.79	228	133958	13.24012	ppb		97
19) Chrysene	12.84	228	131592	11.52798	ppb		96
20) Indeno (1,2,3-cd) pyrene	17.60	276	116290	10.54822	ppb	#	93
22) Benzo (b) fluoranthene	14.53	252	123922	14.19447	ppb		99
23) Benzo (k) fluoranthene	14.58	252	113592m	12.35506	ppb		98
24) Benzo (a) pyrene	15.20	252	113349	12.58469	ppb		97
25) Dibenz (a,h) anthracene	17.63	278	94486	11.16909	ppb		99
26) Benzo (g,h,i) perylene	18.12	276	94164	11.35467	ppb		99

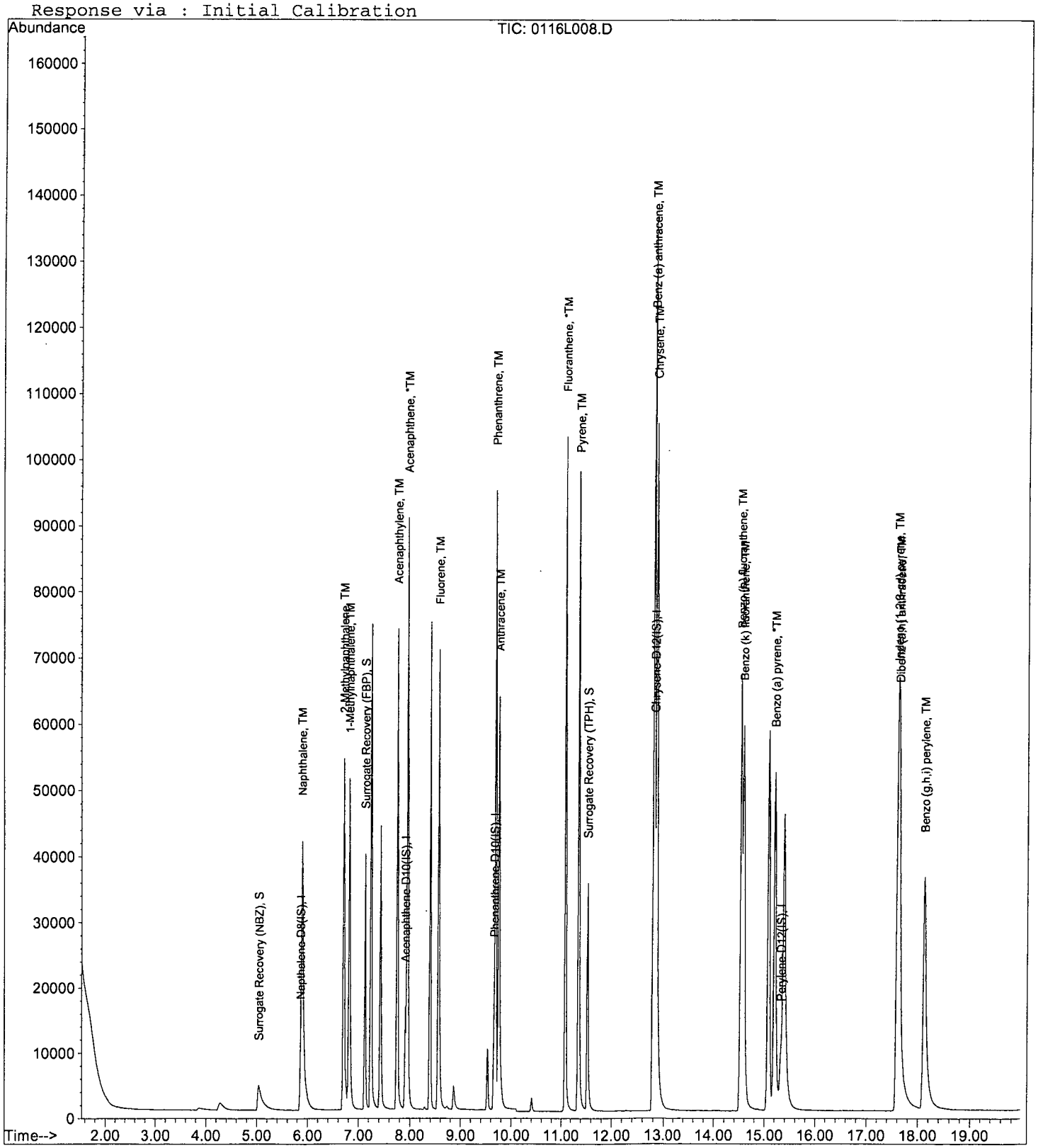
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L008.D Vial: 8
Acq On : 16 Jan 17 20:13 Operator: MA
Sample : 10 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:29 2017 Quant Results File: L0116PR.RES

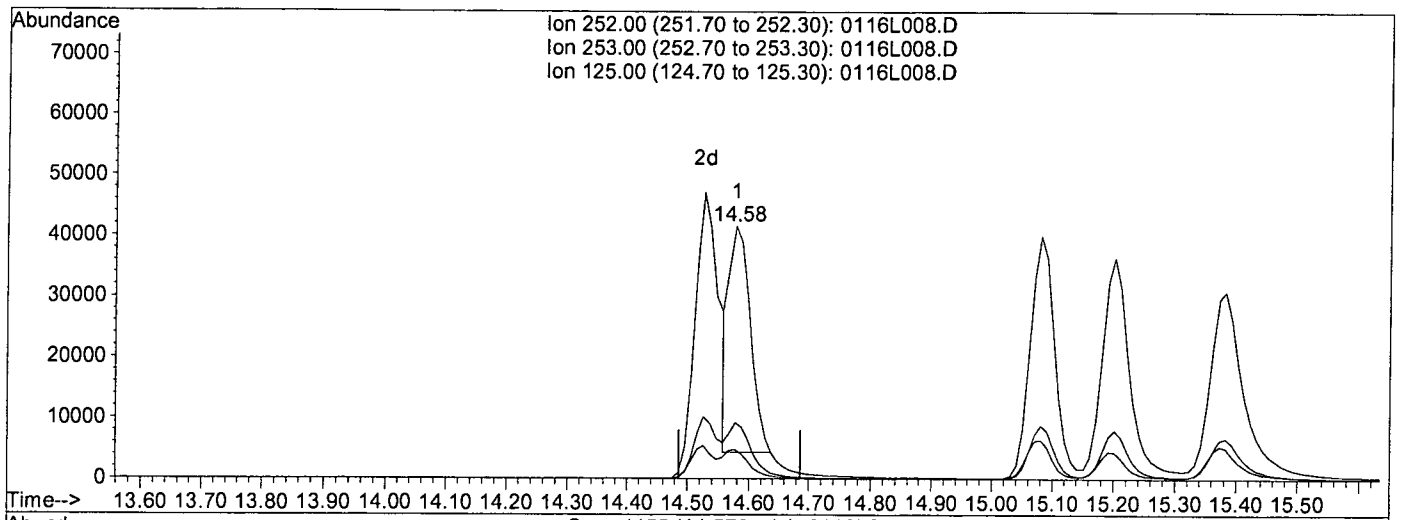
Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration

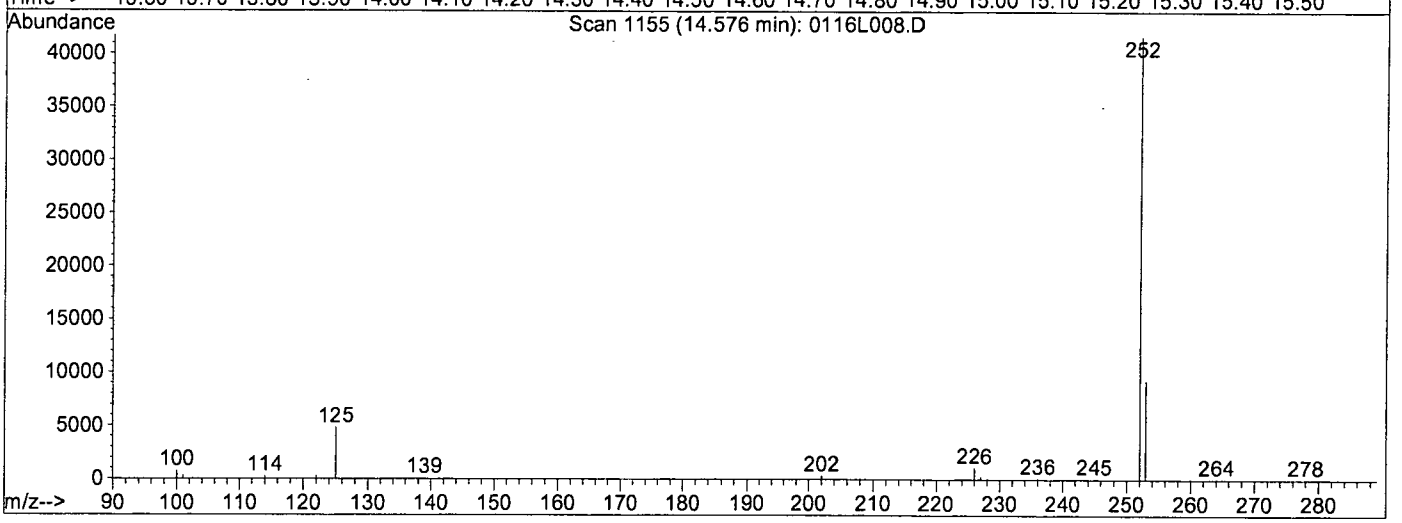


Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L008.D Vial: 8
Acq On : 16 Jan 17 20:13 Operator: MA
Sample : 10 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 8:55 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:24:14 2017
Response via : Multiple Level Calibration





TIC: 0116L008.D

(23) Benzo (k) fluoranthene (TM)

14.58min 10.0109ppb

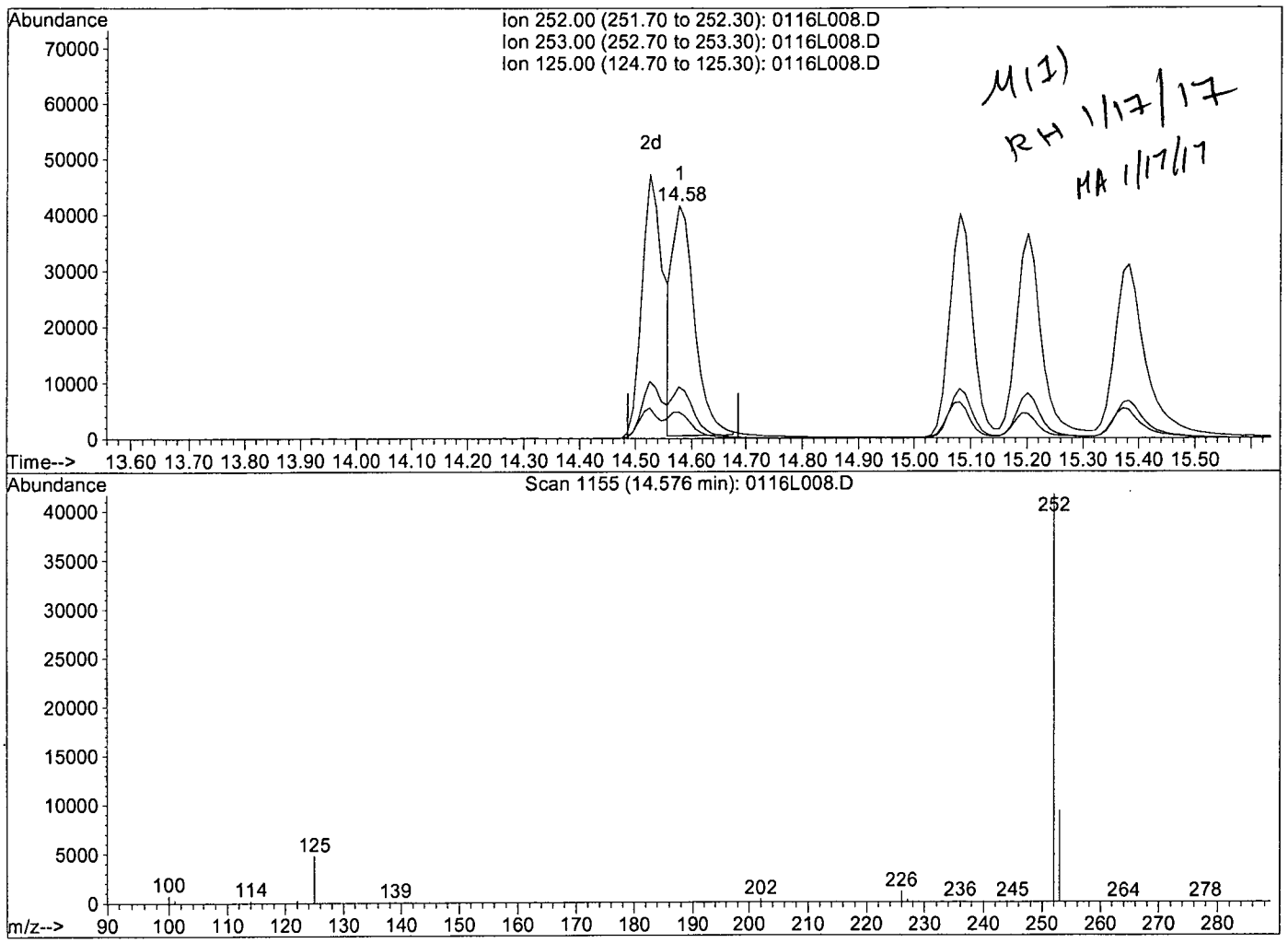
response 92040

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	22.27
125.00	10.50	11.57
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L008.D Vial: 8
Acq On : 16 Jan 17 20:13 Operator: MA
Sample : 10 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 11:29 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:24:14 2017
Response via : Multiple Level Calibration



M(1)
RH 1/17/17
MA 1/17/17

TIC: 0116L008.D

(23) Benzo (k) fluoranthene (TM)

14.58min 12.3551ppb m

response 113592

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	22.24
125.00	10.50	11.48
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L009.D Vial: 9
Acq On : 16 Jan 17 20:41 Operator: MA
Sample : 50 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:30 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 16 16:54:35 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.86	136	19918	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.91	164	9670	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.66	188	18783	2.50000	ppb		0.00
15) Chrysene-D12(IS)	12.81	240	22284	2.50000	ppb		0.00
21) Perylene-D12(IS)	15.32	264	19749	2.50000	ppb		-0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.01	82	82852	33.14475	ppb		-0.01
Spiked Amount 5.000			Recovery = 662.900%				
7) Surrogate Recovery (FBP)	7.12	172	148664	27.62556	ppb		0.00
Spiked Amount 5.000			Recovery = 552.520%				
17) Surrogate Recovery (TPH)	11.52	244	170664	24.97985	ppb		0.00
Spiked Amount 5.000			Recovery = 499.600%				
Target Compounds							Qvalue
3) Naphthalene	5.88	128	409822	51.00385	ppb		100
4) 2-Methylnaphthalene	6.69	142	245527	50.24327	ppb		98
5) 1-Methylnaphthalene	6.81	142	232751	42.90565	ppb		98
8) Acenaphthylene	7.75	152	401113	53.39446	ppb		98
9) Acenaphthene	7.94	154	227796	50.02559	ppb		99
10) Fluorene	8.56	166	260628	49.43910	ppb		99
12) Phenanthrene	9.68	178	382140	47.33397	ppb		99
13) Anthracene	9.74	178	371152	50.70997	ppb		98
14) Fluoranthene	11.08	202	616975	54.98703	ppb		97
16) Pyrene	11.34	202	635650	57.49849	ppb		97
18) Benz (a) anthracene	12.79	228	564611	59.36852	ppb		98
19) Chrysene	12.84	228	512414	47.75604	ppb		98
20) Indeno (1,2,3-cd) pyrene	17.63	276	488779	47.16639	ppb	#	89
22) Benzo (b) fluoranthene	14.54	252	530069	62.52987	ppb		99
23) Benzo (k) fluoranthene	14.60	252	451672m	50.59468	ppb		100
24) Benzo (a) pyrene	15.22	252	475288	54.34582	ppb		97
25) Dibenz (a,h) anthracene	17.66	278	395543	48.15359	ppb		97
26) Benzo (g,h,i) perylene	18.14	276	395011	49.05500	ppb		97

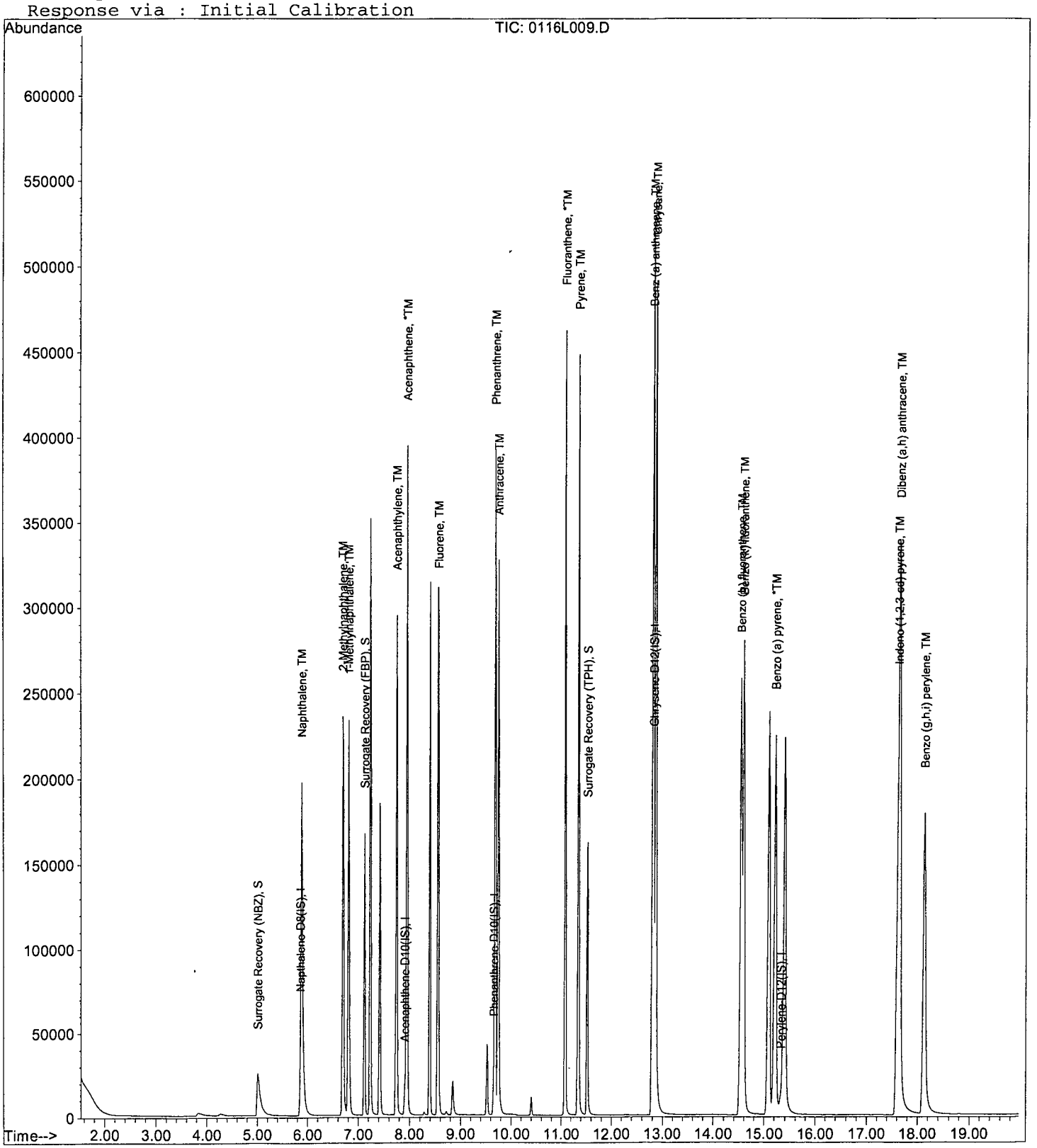
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L009.D Vial: 9
Acq On : 16 Jan 17 20:41 Operator: MA
Sample : 50 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:30 2017 Quant Results File: L0116PR.RES

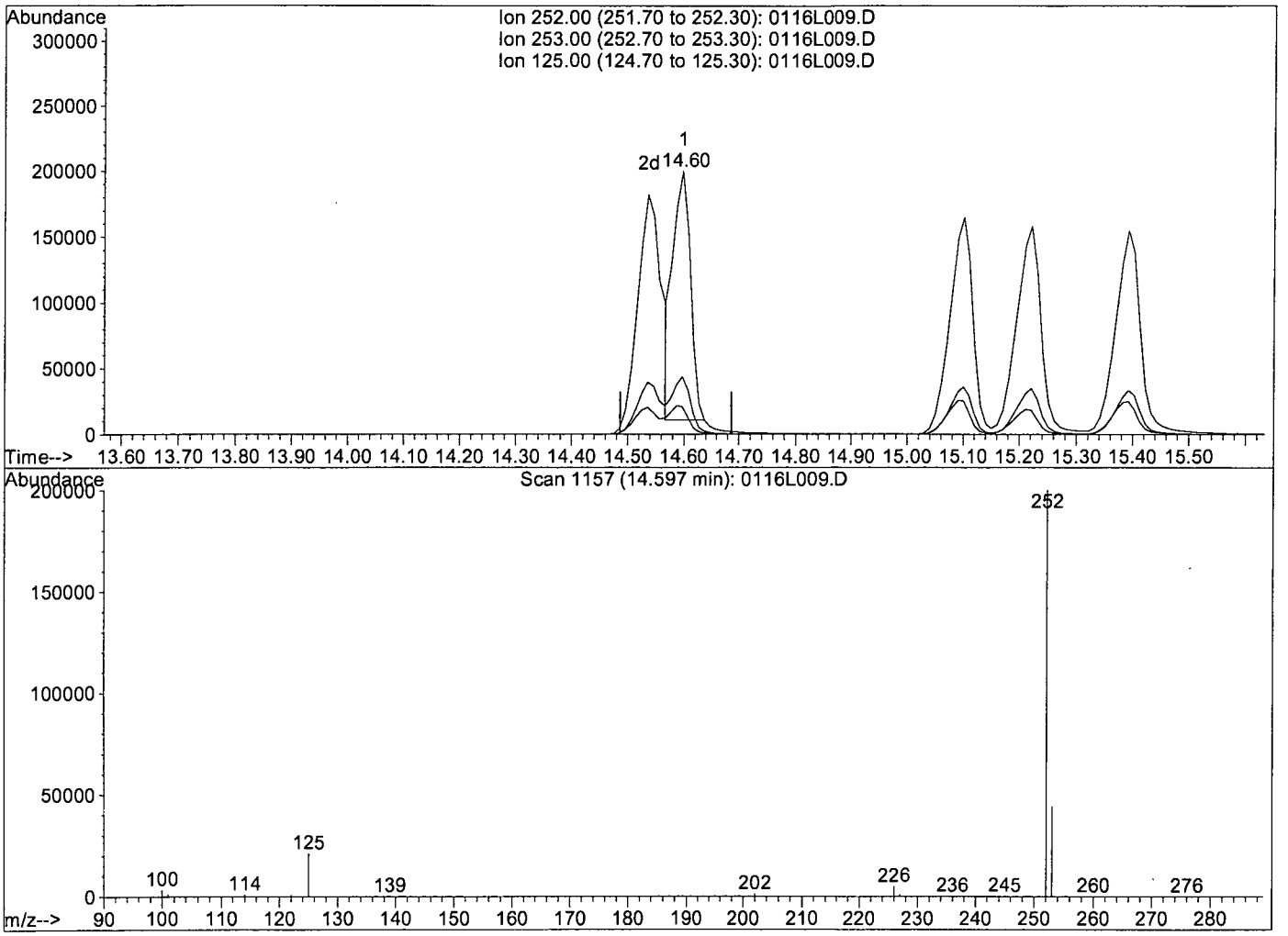
Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L009.D Vial: 9
Acq On : 16 Jan 17 20:41 Operator: MA
Sample : 50 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 8:55 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:24:14 2017
Response via : Multiple Level Calibration



TIC: 0116L009.D

(23) Benzo (k) fluoranthene (TM)

14.60min 46.0973ppb

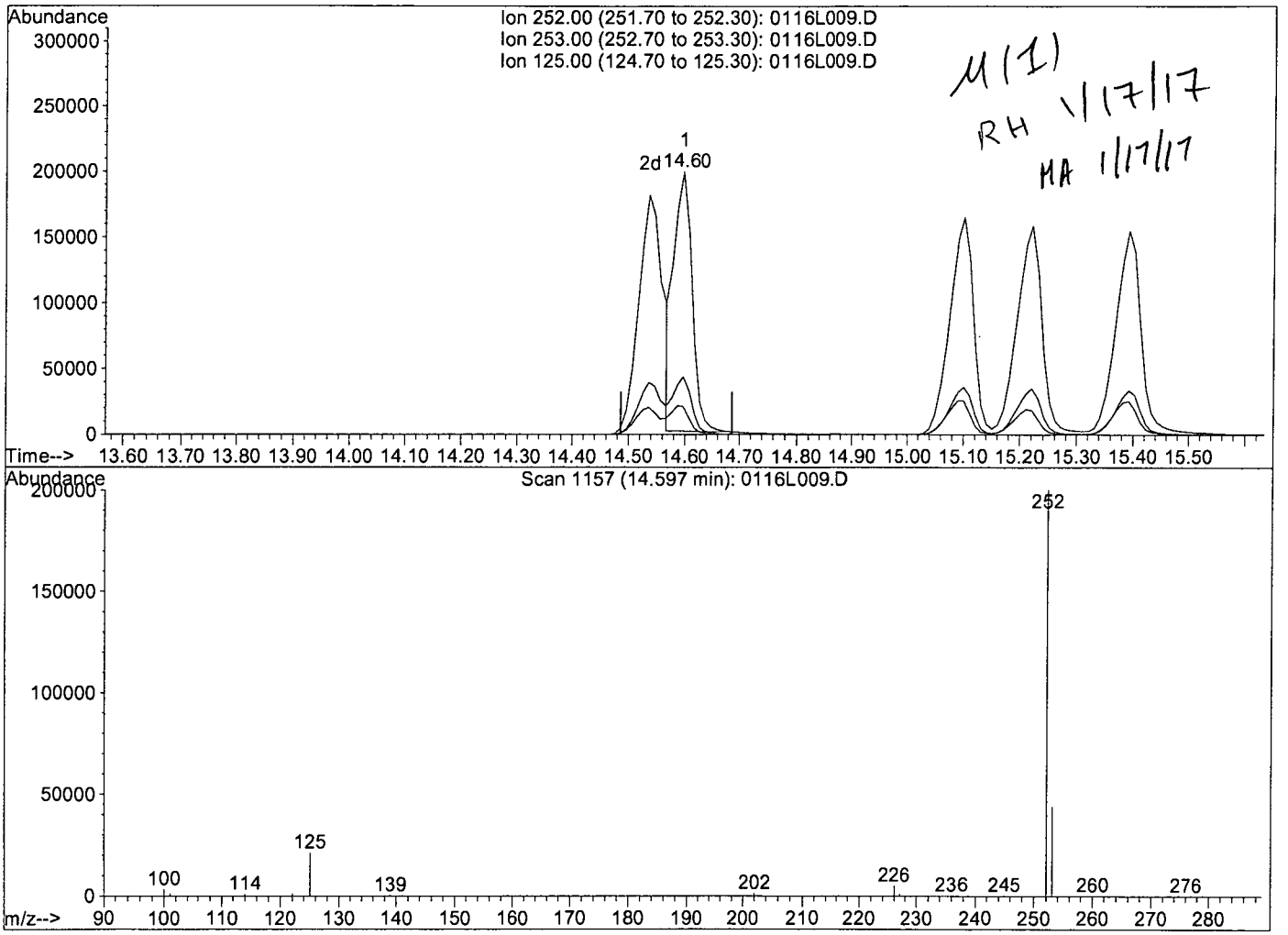
response 411523

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	21.96
125.00	10.50	10.59
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L009.D Vial: 9
Acq On : 16 Jan 17 20:41 Operator: MA
Sample : 50 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 11:30 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:24:14 2017
Response via : Multiple Level Calibration



TIC: 0116L009.D

(23) Benzo (k) fluoranthene (TM)

14.60min 50.5947ppb m

response 451672

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	21.94
125.00	10.50	10.53
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L010.D Vial: 10
Acq On : 16 Jan 17 21:09 Operator: MA
Sample : 100 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:30 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 16 16:54:35 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.86	136	18975	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	7.91	164	9121	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.66	188	18054	2.50000	ppb		0.00
15) Chrysene-D12(IS)	12.82	240	20947	2.50000	ppb		0.01
21) Perylene-D12(IS)	15.34	264	18966	2.50000	ppb		0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.00	82	158793	66.51129	ppb		-0.03
Spiked Amount 5.000			Recovery = 1330.220%				
7) Surrogate Recovery (FBP)	7.12	172	272565	53.84709	ppb		0.00
Spiked Amount 5.000			Recovery = 1076.940%				
17) Surrogate Recovery (TPH)	11.52	244	308342	48.12618	ppb		0.00
Spiked Amount 5.000			Recovery = 962.520%				
Target Compounds							Qvalue
3) Naphthalene	5.88	128	730521	95.43428	ppb		99
4) 2-Methylnaphthalene	6.70	142	439807	94.47235	ppb		98
5) 1-Methylnaphthalene	6.81	142	409217	79.18456	ppb		98
8) Acenaphthylene	7.75	152	713052	100.63167	ppb		98
9) Acenaphthene	7.94	154	407011	94.76246	ppb		99
10) Fluorene	8.56	166	459815	92.47335	ppb		99
12) Phenanthrene	9.69	178	674498	86.92059	ppb		99
13) Anthracene	9.75	178	614227	87.30960	ppb		98
14) Fluoranthene	11.08	202	1095355	101.56384	ppb		100
16) Pyrene	11.35	202	1120001	107.77750	ppb		98
18) Benz (a) anthracene	12.80	228	1044565	116.84595	ppb		98
19) Chrysene	12.86	228	893174	88.55533	ppb	#	96
20) Indeno (1,2,3-cd) pyrene	17.68	276	894908	91.86916	ppb	#	83
22) Benzo (b) fluoranthene	14.56	252	997372	122.51286	ppb		98
23) Benzo (k) fluoranthene	14.62	252	812892m	94.81650	ppb		99
24) Benzo (a) pyrene	15.25	252	866328	103.14804	ppb		97
25) Dibenz (a,h) anthracene	17.70	278	733907	93.03478	ppb		97
26) Benzo (g,h,i) perylene	18.17	276	701789	90.75071	ppb		99

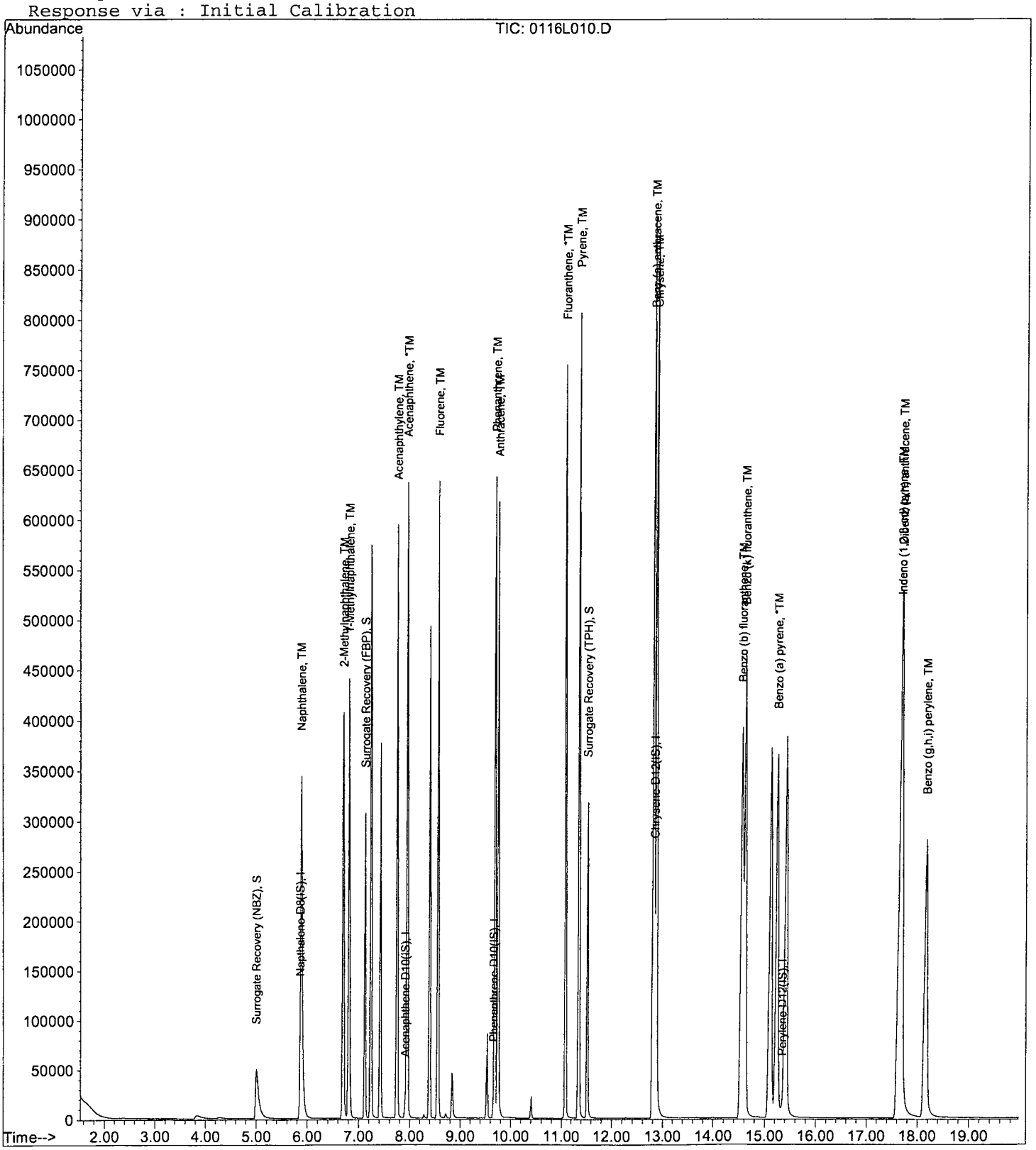
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L010.D Vial: 10
Acq On : 16 Jan 17 21:09 Operator: MA
Sample : 100 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:30 2017 Quant Results File: L0116PR.RES

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration

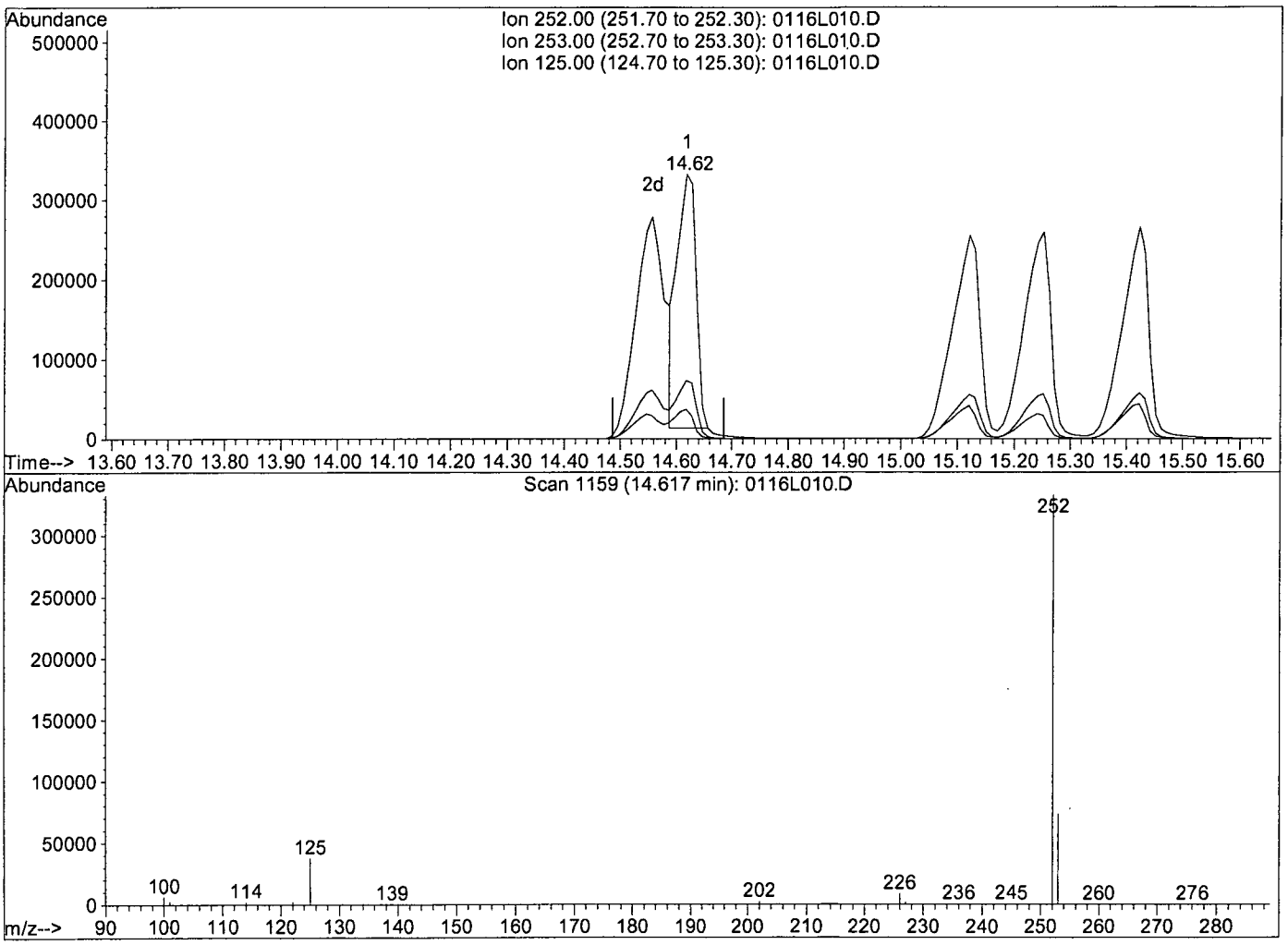


227

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L010.D Vial: 10
Acq On : 16 Jan 17 21:09 Operator: MA
Sample : 100 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 8:55 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:24:14 2017
Response via : Multiple Level Calibration



TIC: 0116L010.D

(23) Benzo (k) fluoranthene (TM)

14.62min 88.5922ppb

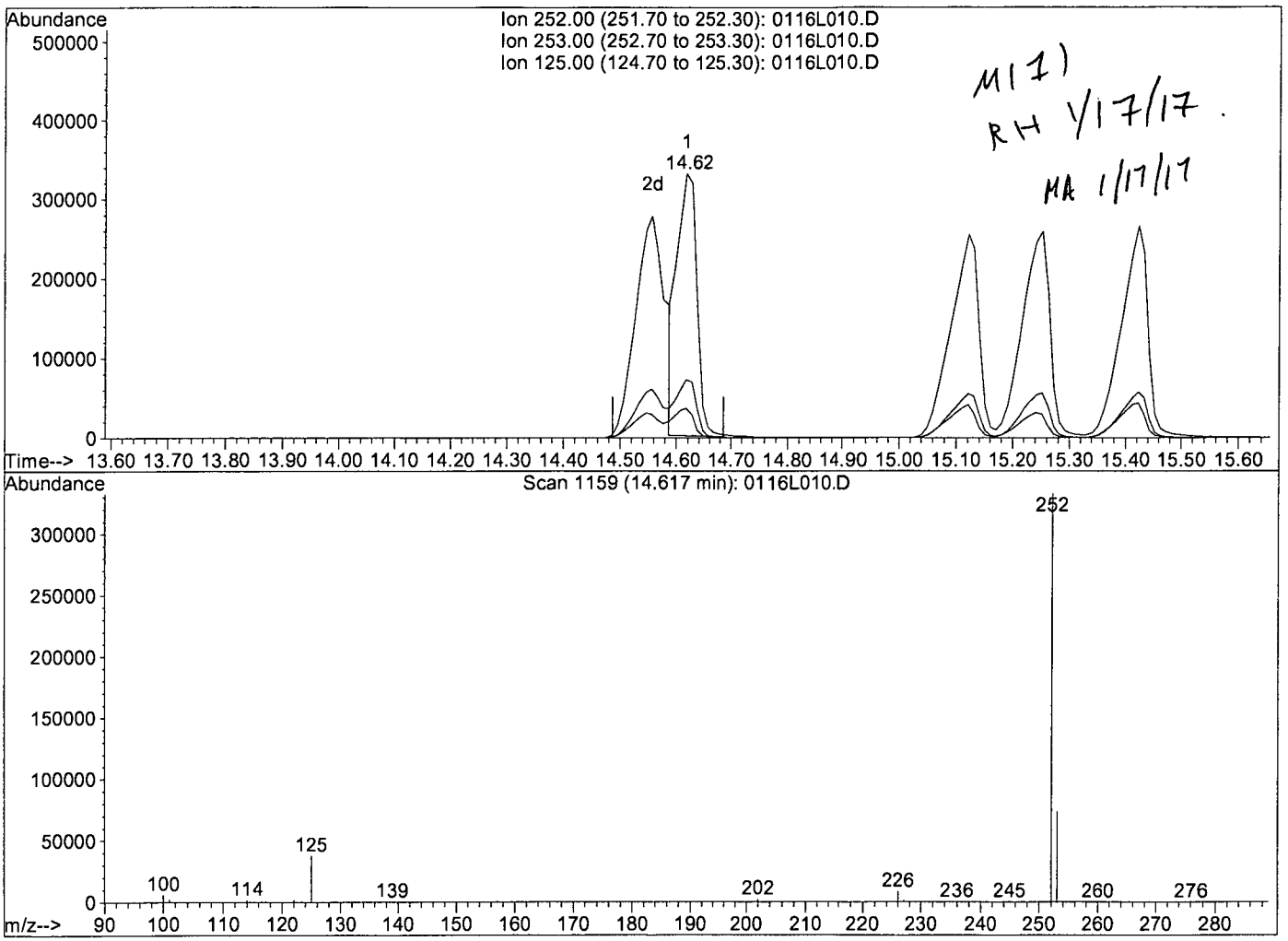
response 759529

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	21.98
125.00	10.50	11.38
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L010.D Vial: 10
Acq On : 16 Jan 17 21:09 Operator: MA
Sample : 100 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 17 11:30 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:24:14 2017
Response via : Multiple Level Calibration



M1)
RH 1/17/17.
MA 1/17/17

TIC: 0116L010.D

(23) Benzo (k) fluoranthene (TM)

14.62min 94.8165ppb m

response 812892

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	21.98
125.00	10.50	11.26
0.00	0.00	0.00

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/16/17
Instrument: Linus
Initial Cal. Date: 01/16/17
Data File: 0116L011.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TM	Naphthalene	1.022	0.9836	3.8	TM	
2	TML	2-Methylnaphthalene	0.5432	0.5784	6.5	TML	2.1
3	TM	1-Methylnaphthalene	0.6859	0.5604	18	TM	
4	TM	Acenaphthylene	2.069	1.926	6.9	TM	
5	*TM	Acenaphthene	1.276	1.098	14	*TM	
6	TM	Fluorene	1.385	1.249	9.8	TM	
7	TM	Phenanthrene	1.043	0.9324	11	TM	
8	TM	Anthracene	0.9820	0.9045	7.9	TM	
9	*TM	Fluoranthene	1.680	1.533	8.8	*TM	
10	TM	Pyrene	1.418	1.291	8.9	TM	
11	TML	Benz (a) anthracene	0.9814	1.180	20	TML	5.8
12	TML	Chrysene	1.463	1.015	31	TML	7.4
13	TML	Indeno (1,2,3-cd) pyrene	0.9131	0.9928	8.7	TML	7.9
14	TML	Benzo (b) fluoranthene	1.150	1.130	1.8	TML	15
15	TM	Benzo (k) fluoranthene	1.327	1.064	20	TM	
16	*TML	Benzo (a) pyrene	1.112	1.089	2.0	*TML	6.2
17	TML	Dibenz (a,h) anthracene	0.9476	0.9060	4.4	TML	7.5
18	TML	Benzo (g,h,i) perylene	0.9340	0.8963	4.0	TML	5.4
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			10.4		

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L011.D Vial: 11
Acq On : 16 Jan 17 21:37 Operator: MA
Sample : SS SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:35 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	5.86	136	19517	2.50000	ppb		-0.01
6) Acenaphthene-D10(IS)	7.91	164	9558	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.66	188	18678	2.50000	ppb		0.00
15) Chrysene-D12(IS)	12.81	240	22555	2.50000	ppb		0.00
21) Perylene-D12(IS)	15.32	264	19722	2.50000	ppb		-0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	0.00	82	0d	0.19140	ppb		
Spiked Amount 5.000			Recovery	=	3.820%		
7) Surrogate Recovery (FBP)	0.00	172	0d	0.00000	ppb		
Spiked Amount 5.000			Recovery	=	0.000%		
17) Surrogate Recovery (TPH)	0.00	244	0d	0.00000	ppb		
Spiked Amount 5.000			Recovery	=	0.000%		
Target Compounds							Qvalue
3) Naphthalene	5.88	128	383936	✓48.10529	ppb		100
4) 2-Methylnaphthalene	6.69	142	225784	48.93929	ppb		99
5) 1-Methylnaphthalene	6.81	142	218736	40.85026	ppb		99
8) Acenaphthylene	7.74	152	368117	46.53342	ppb		98
9) Acenaphthene	7.94	154	209918	43.03203	ppb		99
10) Fluorene	8.55	166	238752	45.09477	ppb		97
12) Phenanthrene	9.68	178	348307	44.67952	ppb		99
13) Anthracene	9.74	178	337869	46.05103	ppb		98
14) Fluoranthene	11.08	202	572698	45.62279	ppb		94
16) Pyrene	11.34	202	582500	45.53918	ppb		98
18) Benz (a) anthracene	12.79	228	532295	47.09967	ppb		98
19) Chrysene	12.84	228	457835	46.28938	ppb		97
20) Indeno (1,2,3-cd) pyrene	17.61	276	447861	46.05623	ppb	#	93
22) Benzo (b) fluoranthene	14.54	252	445574	42.66550	ppb		99
23) Benzo (k) fluoranthene	14.59	252	419522	40.08913	ppb		99
24) Benzo (a) pyrene	15.21	252	429676	46.87839	ppb		99
25) Dibenz (a,h) anthracene	17.65	278	357363	46.22858	ppb		97
26) Benzo (g,h,i) perylene	18.13	276	353532	47.29936	ppb		99

Algorithum check = $\frac{383936 * 1 * 2.5}{1 * 19517 * 1.022} = \frac{959840}{19946.374}$

$= 48.121$ ←

RH 1/18/17

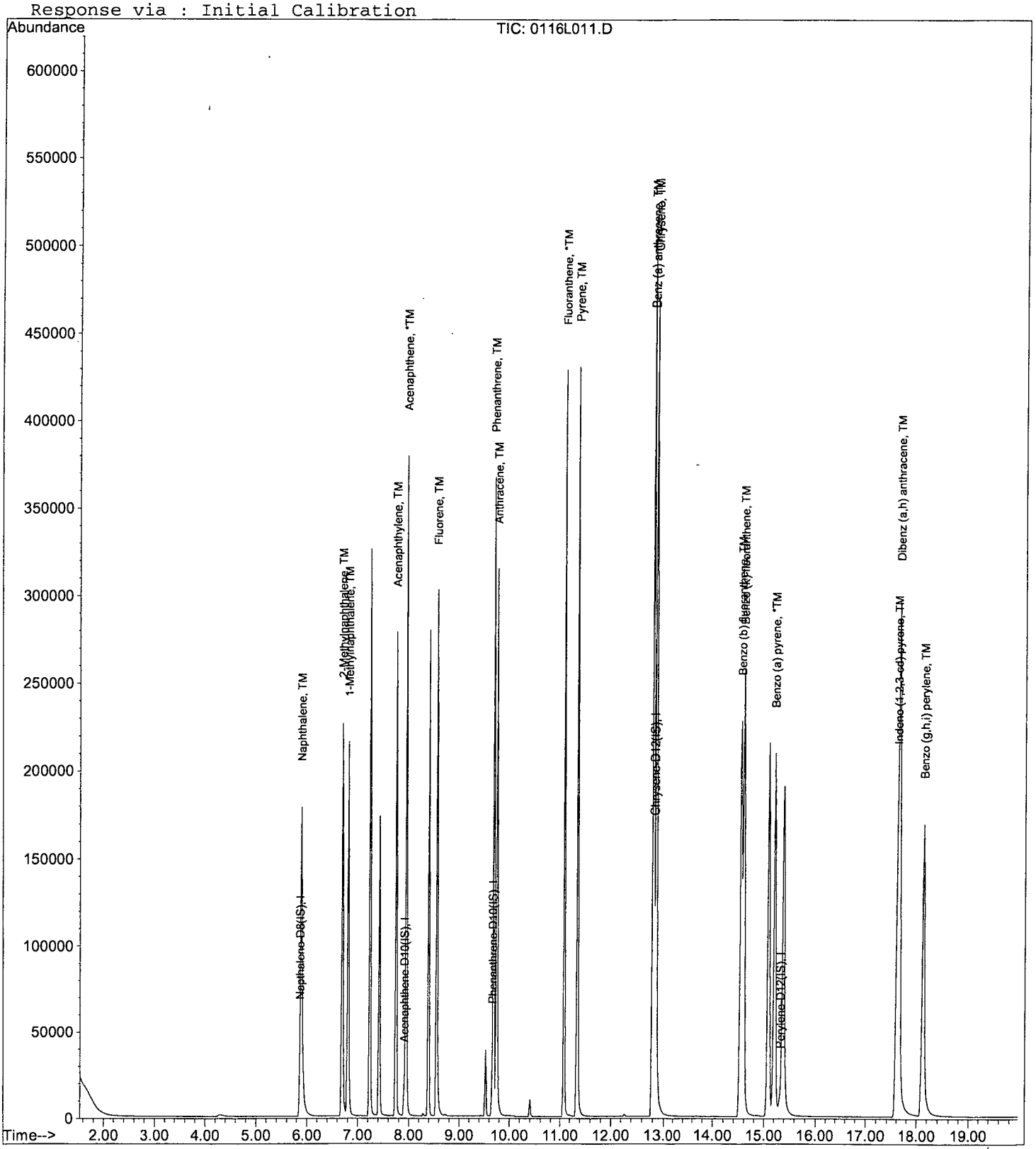
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L011.D Vial: 11
Acq On : 16 Jan 17 21:37 Operator: MA
Sample : SS SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 17 11:35 2017 Quant Results File: L0116PR.RES

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Date Analyzed: 01/18/17

Matrix: Instrument: Linus

Initial Cal. Date: 01/16/17

Data File: 0116L022.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	SL	Surrogate Recovery (NBZ)	0.3040	0.3606	19	SL	6.5
3	TM	Naphthalene	1.022	1.185	16	TM	
4	TML	2-Methylnaphthalene	0.5432	0.6892	27	TML	4.9
5	TM	1-Methylnaphthalene	0.6859	0.7304	6.5	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	S	Surrogate Recovery (FBP)	1.571	1.739	11	S	
8	TM	Acenaphthylene	2.069	2.385	15	TM	
9	*TM	Acenaphthene	1.276	1.399	9.6	*TM	
10	TM	Fluorene	1.385	1.578	14	TM	
11	I	Phenanthrene-D10(IS)	ISTD			I	
12	TM	Phenanthrene	1.043	1.197	15	TM	
13	TM	Anthracene	0.9820	1.125	15	TM	
14	*TM	Fluoranthene	1.680	1.825	8.6	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.418	1.615	14	TM	
17	S	Surrogate Recovery (TPH)	0.7756	0.8112	4.6	S	
18	TML	Benz (a) anthracene	0.9814	1.222	24	TML	4.0
19	TML	Chrysene	1.463	1.460	0.18	TML	14
20	TML	Indeno (1,2,3-cd) pyrene	0.9131	1.128	23	TML	0.67
21	I	Perylene-D12(IS)	ISTD			I	
22	TML	Benzo (b) fluoranthene	1.150	1.247	8.4	TML	8.8
23	TM	Benzo (k) fluoranthene	1.327	1.154	13	TM	
24	*TML	Benzo (a) pyrene	1.112	1.348	21	*TML	5.8
25	TML	Dibenz (a,h) anthracene	0.9476	1.051	11	TML	1.3
26	TML	Benzo (g,h,i) perylene	0.9340	1.071	15	TML	0.21
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			13.9		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L022.D Vial: 10
Acq On : 18 Jan 17 12:15 Operator: MA
Sample : 5.0 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 18 12:43 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	22963	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	7.91	164	11532	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.66	188	22755	2.50000 ppb		0.00
15) Chrysene-D12(IS)	12.81	240	27025	2.50000 ppb		0.00
21) Perylene-D12(IS)	15.33	264	22532	2.50000 ppb		0.00
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.06	82	8281	2.33782 ppb		0.01
Spiked Amount 5.000			Recovery	= 46.760%		
7) Surrogate Recovery (FBP)	7.13	172	20054	2.76705 ppb		0.00
Spiked Amount 5.000			Recovery	= 55.340%		
17) Surrogate Recovery (TPH)	11.52	244	21922	2.61452 ppb		-0.01
Spiked Amount 5.000			Recovery	= 52.300%		
Target Compounds						Qvalue
3) Naphthalene	5.89	128	54426	5.79595 ppb		99
4) 2-Methylnaphthalene	6.70	142	31653	5.24445 ppb		99
5) 1-Methylnaphthalene	6.81	142	33544	5.32444 ppb		96
8) Acenaphthylene	7.75	152	55005	5.76293 ppb		97
9) Acenaphthene	7.94	154	32262	5.48145 ppb		98
10) Fluorene	8.56	166	36397	5.69780 ppb		98
12) Phenanthrene	9.68	178	54469	5.73521 ppb		99
13) Anthracene	9.75	178	51178	5.72569 ppb		98
14) Fluoranthene	11.08	202	83042	5.43010 ppb		100
16) Pyrene	11.35	202	87300	5.69614 ppb		100
18) Benz (a) anthracene	12.80	228	66024	4.80170 ppb		96
19) Chrysene	12.85	228	78921	5.67637 ppb		96
20) Indeno (1,2,3-cd) pyrene	17.60	276	60946	4.96640 ppb	#	89
22) Benzo (b) fluoranthene	14.54	252	56204	4.56122 ppb		99
23) Benzo (k) fluoranthene	14.59	252	51991	4.34862 ppb		99
24) Benzo (a) pyrene	15.21	252	60748	5.29044 ppb		98
25) Dibenz (a,h) anthracene	17.63	278	47369	4.93258 ppb		97
26) Benzo (g,h,i) perylene	18.13	276	48272	5.01043 ppb		99

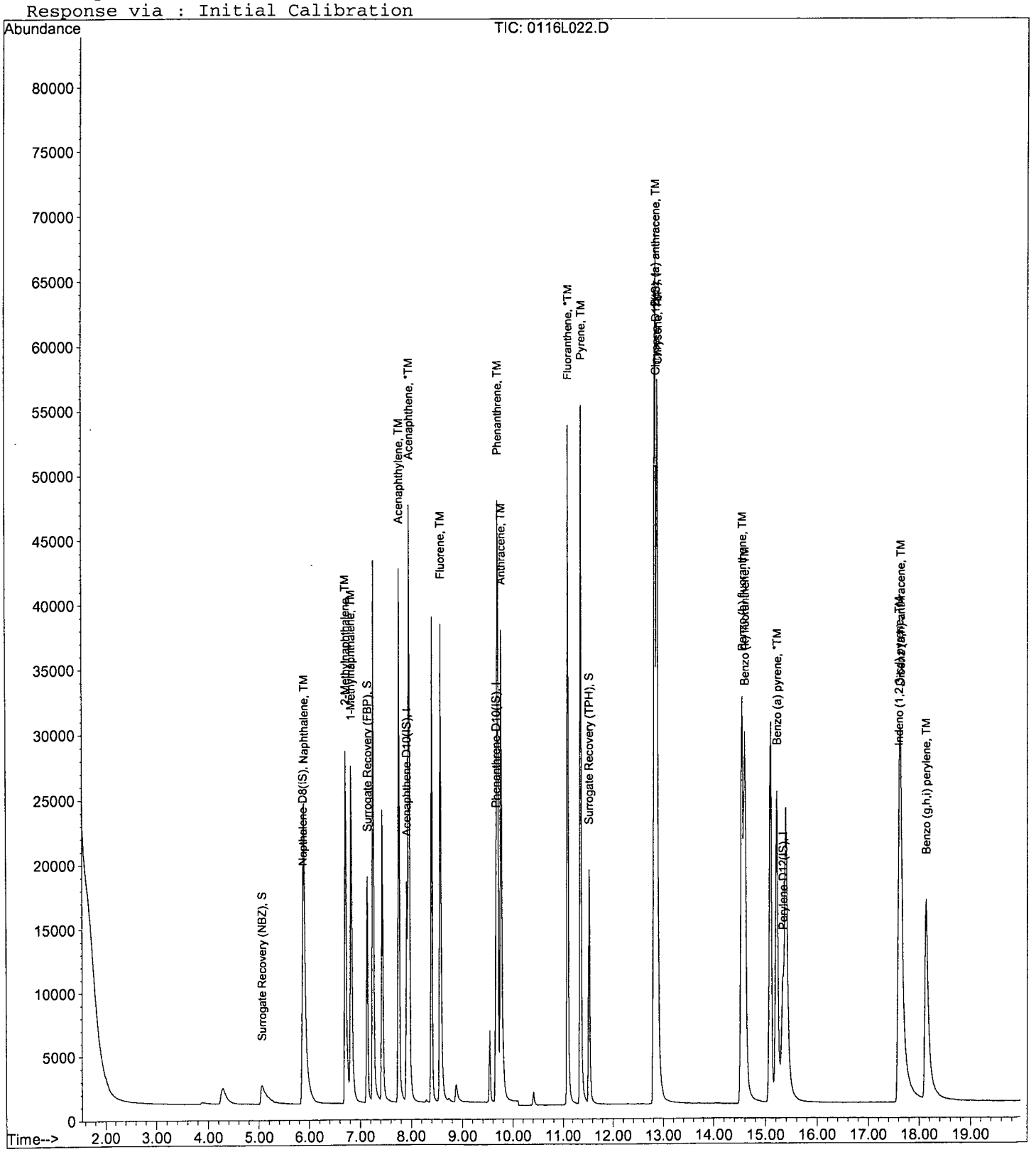
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L022.D Vial: 10
Acq On : 18 Jan 17 12:15 Operator: MA
Sample : 5.0 SIM 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 18 12:43 2017 Quant Results File: L0116PR.RES

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/18/17
Matrix: Instrument: Linus
Initial Cal. Date: 01/16/17
Data File: 0116L043.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	SL	Surrogate Recovery (NBZ)	0.3040	0.3722	22	SL	3.7
3	TM	Naphthalene	1.022	1.172	15	TM	
4	TML	2-Methylnaphthalene	0.5432	0.6852	26	TML	4.2
5	TM	1-Methylnaphthalene	0.6859	0.7243	5.6	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	S	Surrogate Recovery (FBP)	1.571	1.691	7.6	S	
8	TM	Acenaphthylene	2.069	2.372	15	TM	
9	*TM	Acenaphthene	1.276	1.393	9.2	*TM	
10	TM	Fluorene	1.385	1.565	13	TM	
11	I	Phenanthrene-D10(IS)	ISTD			I	
12	TM	Phenanthrene	1.043	1.163	11	TM	
13	TM	Anthracene	0.9820	1.132	15	TM	
14	*TM	Fluoranthene	1.680	1.883	12	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.418	1.625	15	TM	
17	S	Surrogate Recovery (TPH)	0.7756	0.8064	4.0	S	
18	TML	Benz (a) anthracene	0.9814	1.212	24	TML	4.7
19	TML	Chrysene	1.463	1.494	2.1	TML	17
20	TML	Indeno (1,2,3-cd) pyrene	0.9131	1.173	28	TML	3.6
21	I	Perylene-D12(IS)	ISTD			I	
22	TML	Benzo (b) fluoranthene	1.150	1.234	7.3	TML	9.8
23	TM	Benzo (k) fluoranthene	1.327	1.213	8.6	TM	
24	*TML	Benzo (a) pyrene	1.112	1.355	22	*TML	6.4
25	TML	Dibenz (a,h) anthracene	0.9476	1.125	19	TML	6.3
26	TML	Benzo (g,h,i) perylene	0.9340	1.104	18	TML	3.8
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			14.3		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L043.D Vial: 43
Acq On : 18 Jan 17 22:01 Operator: MA
Sample : SIM 5 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 19 9:26 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	21009	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	7.91	164	10596	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.66	188	20753	2.50000 ppb		0.00
15) Chrysene-D12(IS)	12.81	240	25060	2.50000 ppb		0.00
21) Perylene-D12(IS)	15.33	264	21261	2.50000 ppb		0.00
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.06	82	7820	2.40685 ppb		0.01
Spiked Amount 5.000			Recovery	= 48.140%		
7) Surrogate Recovery (FBP)	7.13	172	17914	2.69012 ppb		0.00
Spiked Amount 5.000			Recovery	= 53.800%		
17) Surrogate Recovery (TPH)	11.53	244	20208	2.59908 ppb		0.00
Spiked Amount 5.000			Recovery	= 51.980%		
Target Compounds						Qvalue
3) Naphthalene	5.89	128	49263	5.73406 ppb		99
4) 2-Methylnaphthalene	6.70	142	28791	5.21005 ppb		98
5) 1-Methylnaphthalene	6.82	142	30432	5.27974 ppb		98
8) Acenaphthylene	7.75	152	50275	5.73266 ppb		98
9) Acenaphthene	7.94	154	29527	5.45992 ppb		98
10) Fluorene	8.56	166	33160	5.64961 ppb		97
12) Phenanthrene	9.69	178	48281	5.57406 ppb		100
13) Anthracene	9.75	178	47001	5.76564 ppb		99
14) Fluoranthene	11.09	202	78155	5.60354 ppb		96
16) Pyrene	11.35	202	81427	5.72954 ppb		98
18) Benz (a) anthracene	12.80	228	60769	4.76545 ppb		97
19) Chrysene	12.85	228	74874	5.83410 ppb		96
20) Indeno (1,2,3-cd) pyrene	17.61	276	58790	5.17837 ppb	#	91
22) Benzo (b) fluoranthene	14.54	252	52464	4.51043 ppb		99
23) Benzo (k) fluoranthene	14.59	252	51563	4.57064 ppb		98
24) Benzo (a) pyrene	15.21	252	57611	5.32012 ppb		98
25) Dibenz (a,h) anthracene	17.64	278	47851	5.31504 ppb		100
26) Benzo (g,h,i) perylene	18.13	276	46959	5.18812 ppb		98

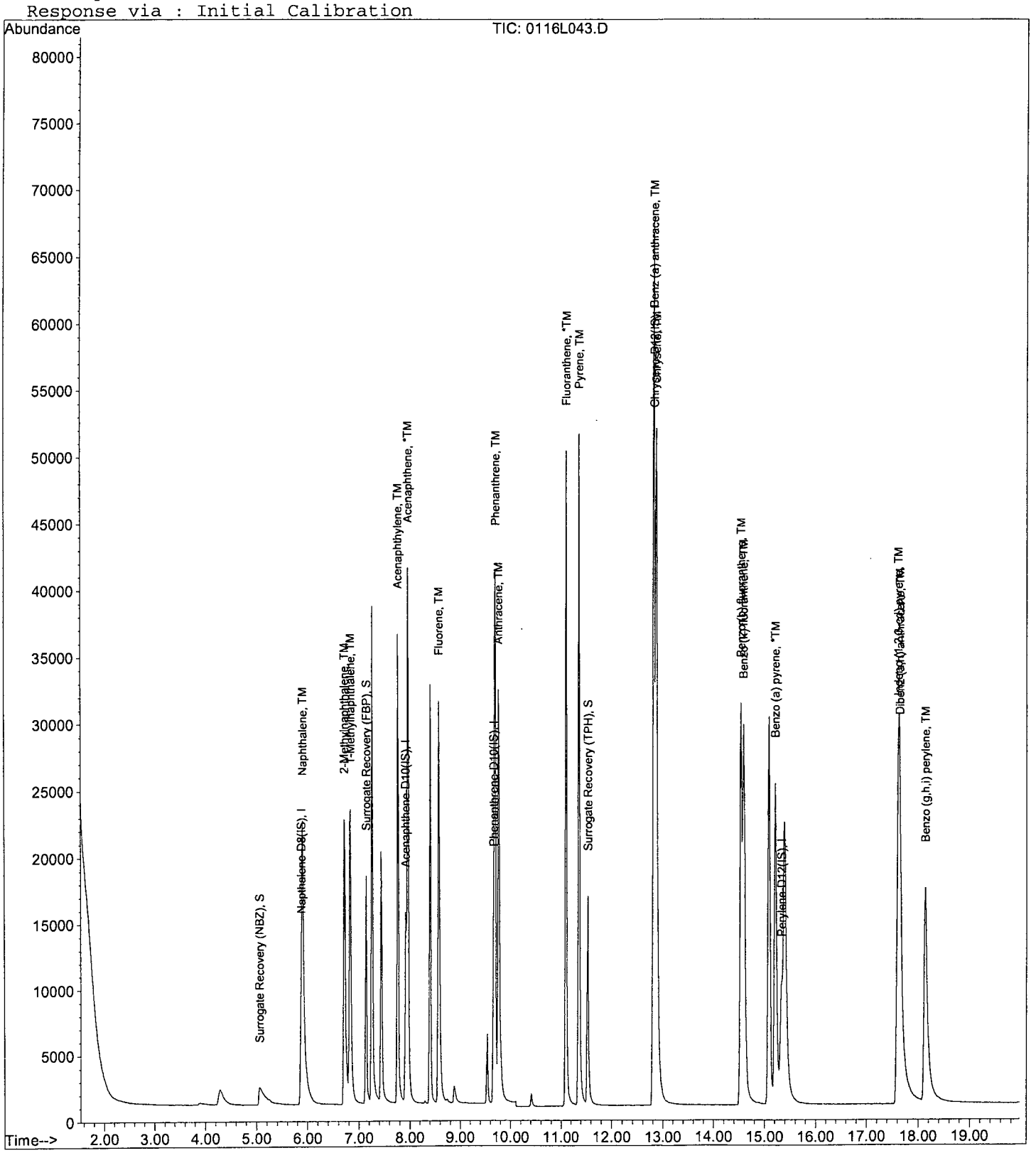
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L043.D Vial: 43
Acq On : 18 Jan 17 22:01 Operator: MA
Sample : SIM 5 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 19 9:26 2017 Quant Results File: L0116PR.RES

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/19/17
Matrix: Instrument: Linus
Initial Cal. Date: 01/16/17
Data File: 0116L046.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	SL	Surrogate Recovery (NBZ)	0.3040	0.3450	13	SL	10
3	TM	Naphthalene	1.022	1.065	4.2	TM	
4	TML	2-Methylnaphthalene	0.5432	0.6152	13	TML	7.8
5	TM	1-Methylnaphthalene	0.6859	0.6762	1.4	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	S	Surrogate Recovery (FBP)	1.571	1.596	1.6	S	
8	TM	Acenaphthylene	2.069	2.132	3.0	TM	
9	*TM	Acenaphthene	1.276	1.273	0.20	*TM	
10	TM	Fluorene	1.385	1.458	5.3	TM	
11	I	Phenanthrene-D10(IS)	ISTD			I	
12	TM	Phenanthrene	1.043	1.079	3.4	TM	
13	TM	Anthracene	0.9820	1.044	6.3	TM	
14	*TM	Fluoranthene	1.680	1.700	1.2	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.418	1.504	6.1	TM	
17	S	Surrogate Recovery (TPH)	0.7756	0.7820	0.82	S	
18	TML	Benz (a) anthracene	0.9814	1.093	11	TML	14
19	TML	Chrysene	1.463	1.382	5.5	TML	6.3
20	TML	Indeno (1,2,3-cd) pyrene	0.9131	1.026	12	TML	10
21	I	Perylene-D12(IS)	ISTD			I	
22	TML	Benzo (b) fluoranthene	1.150	1.279	11	TML	6.4
23	TM	Benzo (k) fluoranthene	1.327	1.271	4.2	TM	
24	*TML	Benzo (a) pyrene	1.112	1.223	10.0	*TML	5.1
25	TML	Dibenz (a,h) anthracene	0.9476	0.9871	4.2	TML	8.0
26	TML	Benzo (g,h,i) perylene	0.9340	0.9834	5.3	TML	9.2
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			5.8		

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L046.D Vial: 46
Acq On : 19 Jan 17 9:07 Operator: MA
Sample : SIM 5 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 19 9:29 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	22693	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	7.91	164	11406	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.66	188	22167	2.50000 ppb		0.00
15) Chrysene-D12(IS)	12.81	240	26307	2.50000 ppb		0.00
21) Perylene-D12(IS)	15.33	264	22173	2.50000 ppb		0.00
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.06	82	7828	2.24454 ppb		0.01
Spiked Amount 5.000			Recovery	= 44.900%		
7) Surrogate Recovery (FBP)	7.13	172	18203	2.53940 ppb		0.00
Spiked Amount 5.000			Recovery	= 50.780%		
17) Surrogate Recovery (TPH)	11.53	244	20572	2.52048 ppb		0.00
Spiked Amount 5.000			Recovery	= 50.400%		
Target Compounds						Qvalue
3) Naphthalene	5.89	128	48326	5.20758 ppb		100
4) 2-Methylnaphthalene	6.70	142	27922	4.60978 ppb		99
5) 1-Methylnaphthalene	6.81	142	30692	4.92970 ppb		96
8) Acenaphthylene	7.75	152	48639	5.15226 ppb		98
9) Acenaphthene	7.94	154	29050	4.99025 ppb		99
10) Fluorene	8.56	166	33270	5.26581 ppb		98
12) Phenanthrene	9.69	178	47830	5.16976 ppb		99
13) Anthracene	9.75	178	46273	5.31425 ppb		99
14) Fluoranthene	11.09	202	75354	5.05808 ppb		97
16) Pyrene	11.35	202	79158	5.30586 ppb		99
18) Benz (a) anthracene	12.80	228	57484	4.28599 ppb		97
19) Chrysene	12.85	228	72731	5.31274 ppb		97
20) Indeno (1,2,3-cd) pyrene	17.61	276	53994	4.49317 ppb	#	89
22) Benzo (b) fluoranthene	14.54	252	56721	4.68200 ppb		100
23) Benzo (k) fluoranthene	14.59	252	56358m	4.79020 ppb		98
24) Benzo (a) pyrene	15.21	252	54229	4.74505 ppb		99
25) Dibenz (a,h) anthracene	17.64	278	43774	4.60233 ppb		98
26) Benzo (g,h,i) perylene	18.13	276	43608	4.53979 ppb		98

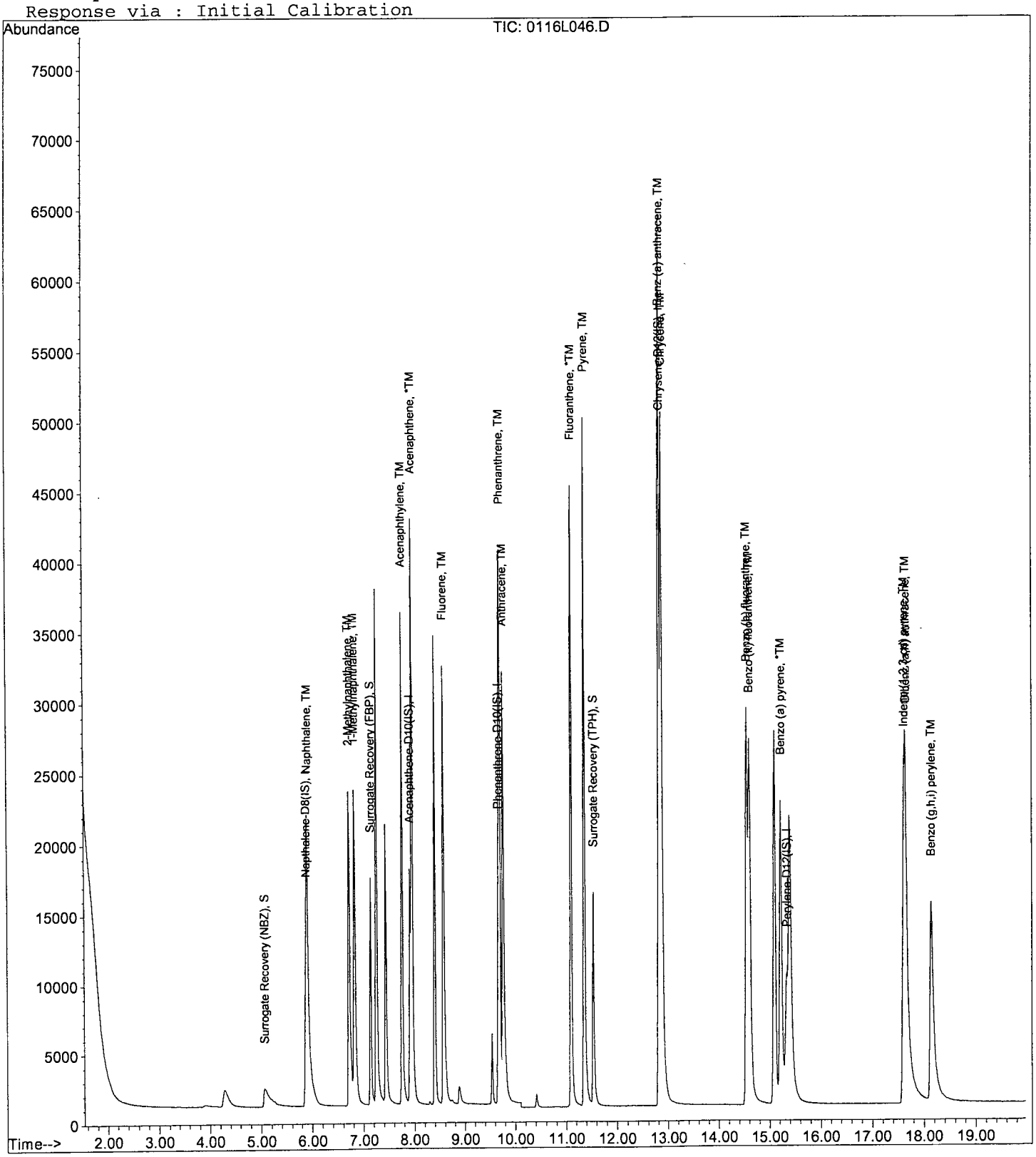
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L046.D Vial: 46
Acq On : 19 Jan 17 9:07 Operator: MA
Sample : SIM 5 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 19 9:29 2017 Quant Results File: L0116PR.RES

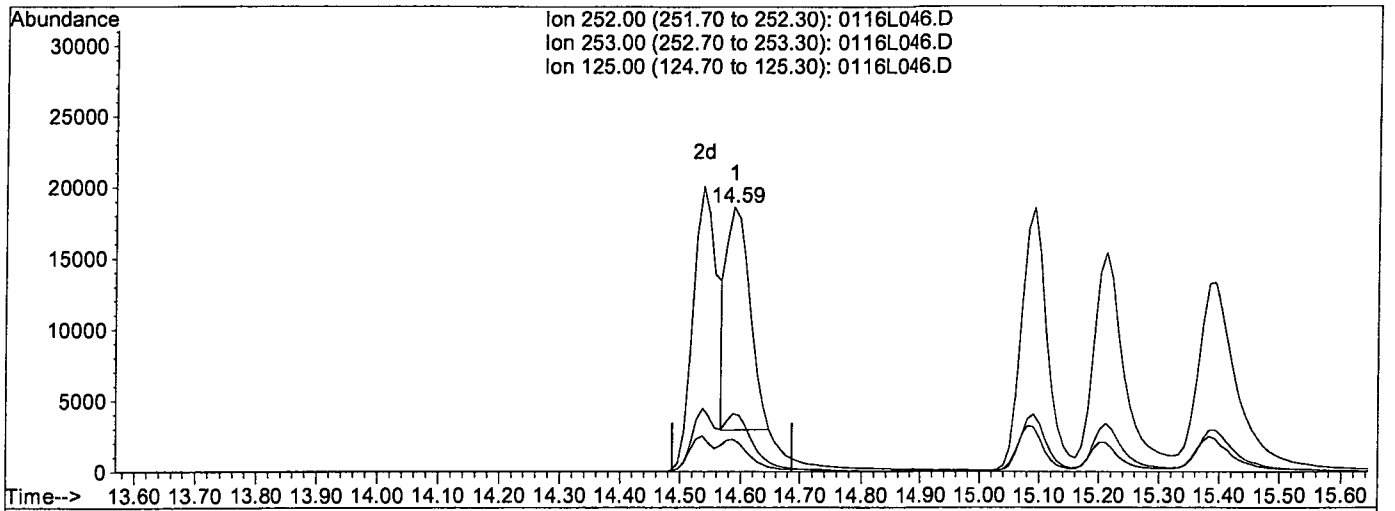
Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration

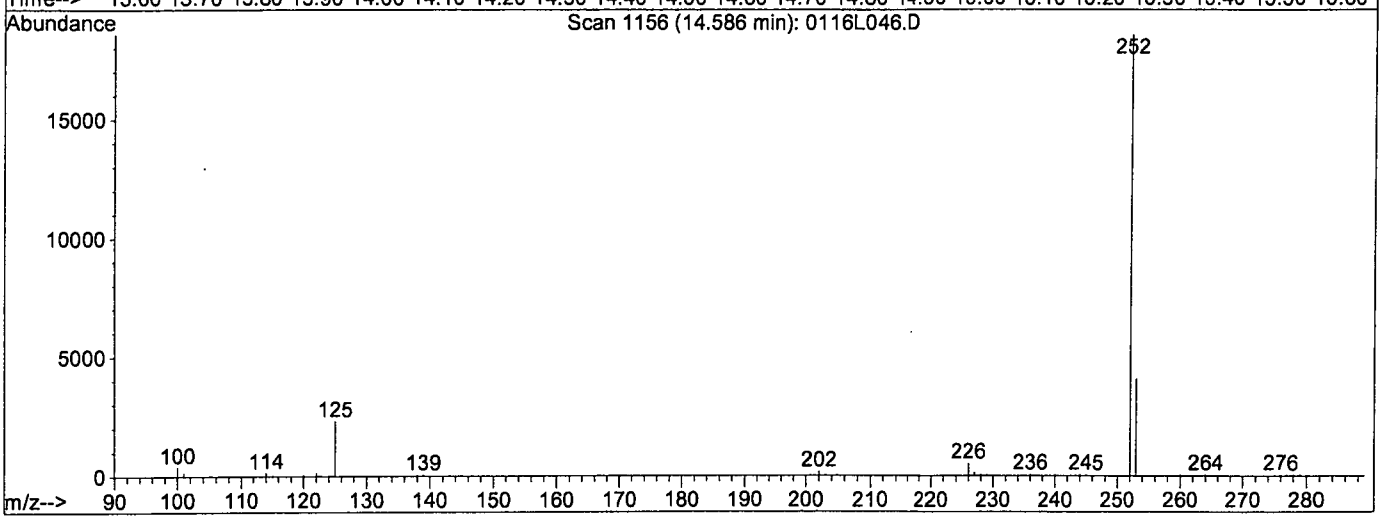


Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L046.D Vial: 46
Acq On : 19 Jan 17 9:07 Operator: MA
Sample : SIM 5 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 19 9:28 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Multiple Level Calibration





TIC: 0116L046.D

(23) Benzo (k) fluoranthene (TM)

14.59min 3.5108ppb

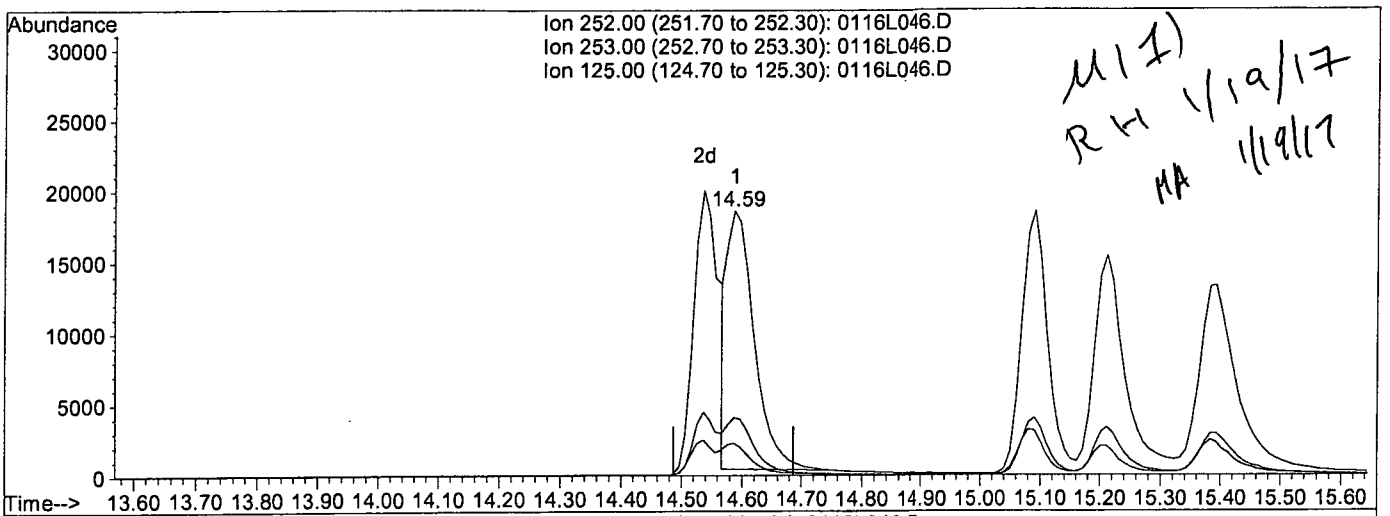
response 41306

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	21.61
125.00	10.50	12.45
0.00	0.00	0.00

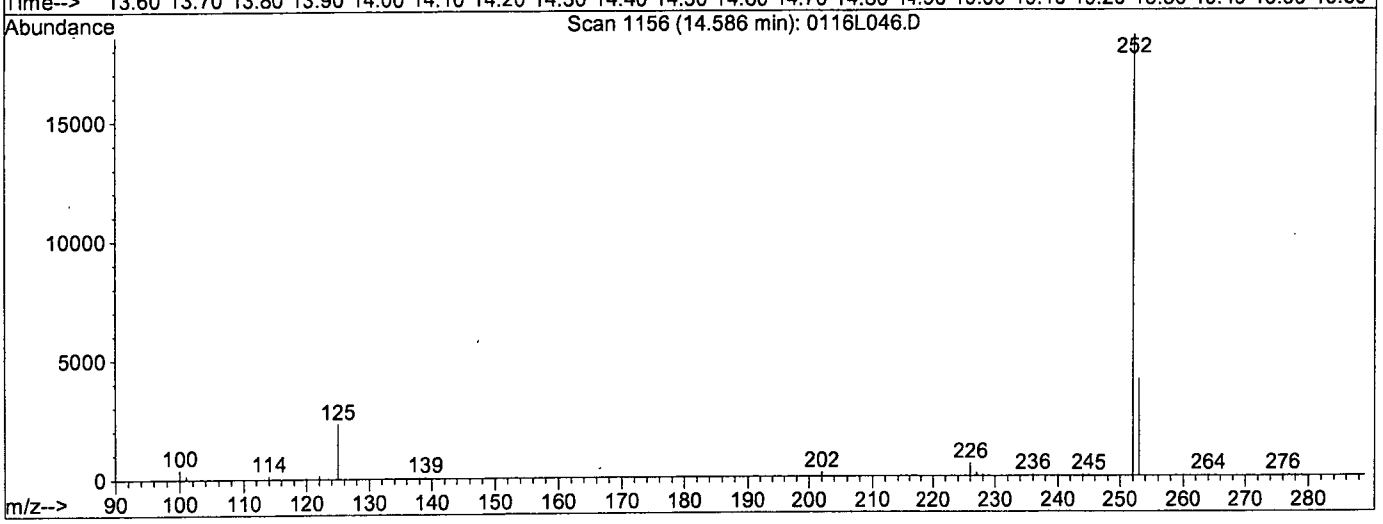
Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L046.D Vial: 46
Acq On : 19 Jan 17 9:07 Operator: MA
Sample : SIM 5 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00
Quant Time: Jan 19 9:29 2017 Quant Results File: temp.res

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Multiple Level Calibration



M17) RH 1/19/17 MA 1/19/17



TIC: 0116L046.D

(23) Benzo (k) fluoranthene (TM)

14.59min 4.7902ppb m

response 56358

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	21.91
125.00	10.50	12.26
0.00	0.00	0.00

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/19/17
Instrument: Linus
Initial Cal. Date: 01/16/17
Data File: 0116L061.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	SL	Surrogate Recovery (NBZ)	0.3040	0.3624	19	SL	6.1
3	TM	Naphthalene	1.022	1.186	16	TM	
4	TML	2-Methylnaphthalene	0.5432	0.6935	28	TML	5.6
5	TM	1-Methylnaphthalene	0.6859	0.7209	5.1	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	S	Surrogate Recovery (FBP)	1.571	1.701	8.2	S	
8	TM	Acenaphthylene	2.069	2.376	15	TM	
9	*TM	Acenaphthene	1.276	1.392	9.1	*TM	
10	TM	Fluorene	1.385	1.599	15	TM	
11	I	Phenanthrene-D10(IS)	ISTD			I	
12	TM	Phenanthrene	1.043	1.166	12	TM	
13	TM	Anthracene	0.9820	1.136	16	TM	
14	*TM	Fluoranthene	1.680	1.894	13	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.418	1.647	16	TM	
17	S	Surrogate Recovery (TPH)	0.7756	0.8221	6.0	S	
18	TML	Benz (a) anthracene	0.9814	1.198	22	TML	5.8
19	TML	Chrysene	1.463	1.517	3.7	TML	19
20	TML	Indeno (1,2,3-cd) pyrene	0.9131	1.161	27	TML	2.5
21	I	Perylene-D12(IS)	ISTD			I	
22	TML	Benzo (b) fluoranthene	1.150	1.248	8.5	TML	8.7
23	TM	Benzo (k) fluoranthene	1.327	1.187	11	TM	
24	*TML	Benzo (a) pyrene	1.112	1.367	23	*TML	7.5
25	TML	Dibenz (a,h) anthracene	0.9476	1.124	19	TML	6.2
26	TML	Benzo (g,h,i) perylene	0.9340	1.107	19	TML	4.1
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			14.8		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L061.D Vial: 61
Acq On : 19 Jan 17 16:44 Operator: MA
Sample : SIM 5 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 20 14:59 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	22429	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	7.91	164	11327	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.66	188	22178	2.50000 ppb		0.00
15) Chrysene-D12(IS)	12.81	240	26676	2.50000 ppb		0.00
21) Perylene-D12(IS)	15.33	264	22431	2.50000 ppb		0.00
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.06	82	8129	2.34858 ppb		0.01
Spiked Amount 5.000			Recovery	= 46.980%		
7) Surrogate Recovery (FBP)	7.13	172	19264	2.70616 ppb		0.00
Spiked Amount 5.000			Recovery	= 54.120%		
17) Surrogate Recovery (TPH)	11.53	244	21931	2.64981 ppb		0.00
Spiked Amount 5.000			Recovery	= 53.000%		
Target Compounds						Qvalue
3) Naphthalene	5.89	128	53196	5.79984 ppb		100
4) 2-Methylnaphthalene	6.71	142	31110	5.28136 ppb		100
5) 1-Methylnaphthalene	6.82	142	32336	5.25489 ppb		98
8) Acenaphthylene	7.75	152	53828	5.74169 ppb		98
9) Acenaphthene	7.94	154	31542	5.45611 ppb		96
10) Fluorene	8.57	166	36215	5.77191 ppb		98
12) Phenanthrene	9.69	178	51702	5.58549 ppb		100
13) Anthracene	9.75	178	50410	5.78650 ppb		98
14) Fluoranthene	11.09	202	83999	5.63558 ppb		97
16) Pyrene	11.35	202	87853	5.80722 ppb		98
18) Benz (a) anthracene	12.80	228	63942	4.70956 ppb		97
19) Chrysene	12.85	228	80961	5.94437 ppb		97
20) Indeno (1,2,3-cd) pyrene	17.60	276	61947	5.12288 ppb	#	89
22) Benzo (b) fluoranthene	14.54	252	56002	4.56544 ppb		99
23) Benzo (k) fluoranthene	14.59	252	53248	4.47381 ppb		98
24) Benzo (a) pyrene	15.21	252	61321	5.37253 ppb		99
25) Dibenz (a,h) anthracene	17.64	278	50447	5.31076 ppb		98
26) Benzo (g,h,i) perylene	18.14	276	49666	5.20279 ppb		100

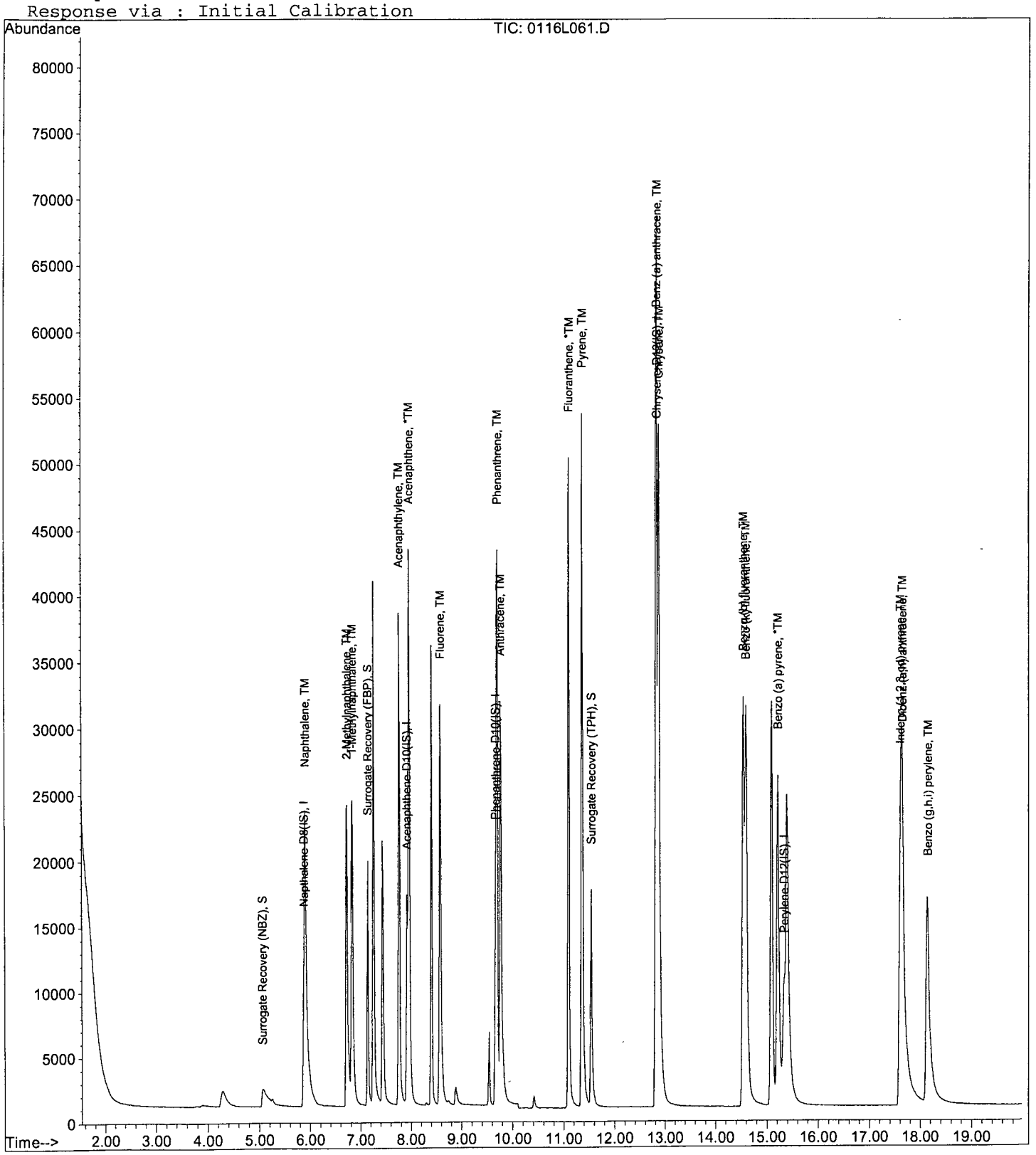
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L061.D Vial: 61
Acq On : 19 Jan 17 16:44 Operator: MA
Sample : SIM 5 1/13/17 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 20 14:59 2017 Quant Results File: L0116PR.RES

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



ORGANICS

Raw Data

APPL, INC.

Method Blank
EPA 8270D SIM

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **170116W-48866 - 215630**
Batch ID: #SIMDO-170116A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/16/17	01/18/17
BLANK	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	01/16/17	01/18/17
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	01/16/17	01/18/17
BLANK	SURROGATE: 2-FLUORBIPHENY	56.1	53-106			%	01/16/17	01/18/17
BLANK	SURROGATE: NITROBENZENE-	67.3	55-111			%	01/16/17	01/18/17
BLANK	SURROGATE: TERPHENYL-D14 (	86.3	58-132			%	01/16/17	01/18/17

Quant Method: L0116PR.M
Run #: 0116L023
Instrument: Linus
Sequence: L170116
Initials: RHA

GC SC-Blank-REG MDLs-DOD
Printed: 01/20/17 8:24:23 AM

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L023.D Vial: 23
Acq On : 18 Jan 17 12:54 Operator: MA
Sample : 170116A BLK 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 19 12:38 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.88	136	23020	2.50000	ppb	0.01
6) Acenaphthene-D10(IS)	7.92	164	11859	2.50000	ppb	0.01
11) Phenanthrene-D10(IS)	9.67	188	23108	2.50000	ppb	0.01
15) Chrysene-D12(IS)	12.83	240	26998	2.50000	ppb	0.02
21) Perylene-D12(IS)	15.36	264	22213	2.50000	ppb	0.03
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.05	82	12268	3.36336	ppb	0.00
Spiked Amount 5.000			Recovery = 67.260%			
7) Surrogate Recovery (FBP)	7.13	172	20902	2.80454	ppb	0.00
Spiked Amount 5.000			Recovery = 56.100%			
17) Surrogate Recovery (TPH)	11.52	244	36152	4.31597	ppb	-0.01
Spiked Amount 5.000			Recovery = 86.320%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

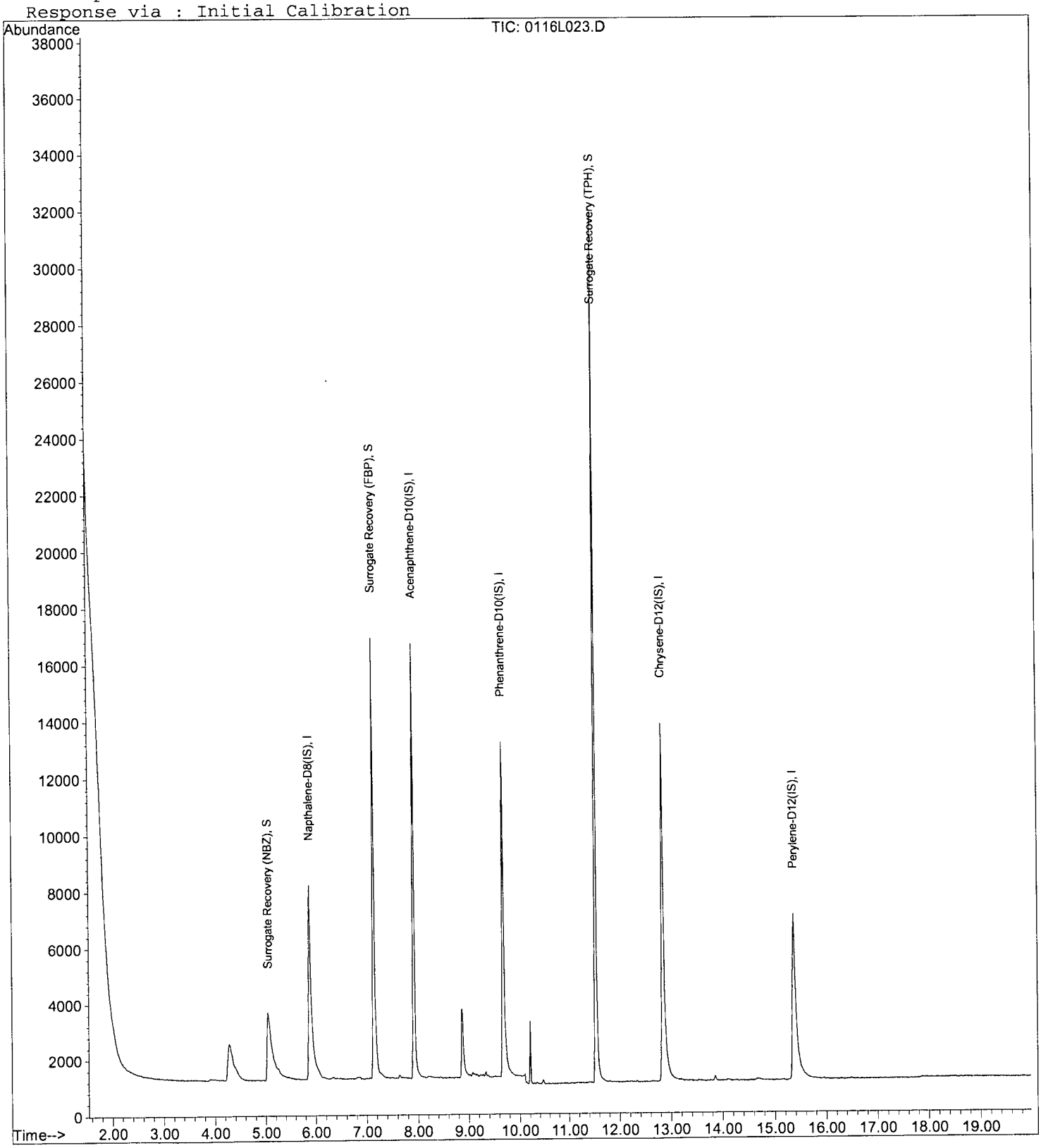
Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L023.D
Acq On : 18 Jan 17 12:54
Sample : 170116A BLK 1/1000
Misc : water

Vial: 23
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Jan 19 12:38 2017 Quant Results File: L0116PR.RES

Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



Laboratory Control Spike Recovery
EPA 8270D SIM

APPL ID: **170116W-48866 LCS - 215630**
Batch ID: #SIMDO-170116A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1-METHYLNAPHTHALENE	5.00	2.77	55.4	41-115
2-METHYLNAPHTHALENE	5.00	2.04	40.8	39-114
NAPHTHALENE	5.00	2.86	57.2	43-114
SURROGATE: 2-FLUORBIPHENYL (S)	5.00	3.85	77.0	53-106
SURROGATE: NITROBENZENE-D5 (S)	5.00	4.35	87.0	55-111
SURROGATE: TERPHENYL-D14 (S)	5.00	5.52	110	58-132

Comments: _____

Primary	SPK
Quant Method :	L0116PR.M
Extraction Date :	01/16/17
Analysis Date :	01/19/17
Instrument :	Linus
Run :	0116L059
Initials :	RHA

Printed: 01/20/17 8:24:06 AM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L170116\0116L059.D Vial: 59
Acq On : 19 Jan 17 15:28 Operator: MA
Sample : 170116A LCS-1 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 19 16:01 2017 Quant Results File: L0116PR.RES

Quant Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration
DataAcq Meth : SIM_ROB

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	5.87	136	19126	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	7.91	164	9610	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.67	188	18883	2.50000 ppb		0.01
15) Chrysene-D12(IS)	12.81	240	23088	2.50000 ppb		0.00
21) Perylene-D12(IS)	15.34	264	19125	2.50000 ppb		0.00
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.05	82	13357	4.34806 ppb		0.00
Spiked Amount 5.000			Recovery	= 86.960%		
7) Surrogate Recovery (FBP)	7.13	172	23254	3.85031 ppb		0.00
Spiked Amount 5.000			Recovery	= 77.000%		
17) Surrogate Recovery (TPH)	11.52	244	39531	5.51860 ppb		-0.01
Spiked Amount 5.000			Recovery	= 110.380%		
Target Compounds						Qvalue
3) Naphthalene	5.89	128	22357	2.85849 ppb		99
4) 2-Methylnaphthalene	6.71	142	12090	2.04431 ppb		99
5) 1-Methylnaphthalene	6.82	142	14541	2.77114 ppb		98
8) Acenaphthylene	7.75	152	29150	3.66489 ppb		98
9) Acenaphthene	7.95	154	16047	3.27175 ppb		98
10) Fluorene	8.57	166	24233	4.55229 ppb		99
12) Phenanthrene	9.69	178	42338	5.37200 ppb		100
13) Anthracene	9.76	178	41865	5.64419 ppb		99
14) Fluoranthene	11.09	202	76470	6.02569 ppb		98
16) Pyrene	11.35	202	78474	5.99338 ppb		96
18) Benz (a) anthracene	12.80	228	64059	5.46443 ppb		97
19) Chrysene	12.85	228	70038	5.94098 ppb		97
20) Indeno (1,2,3-cd) pyrene	17.61	276	54261	5.18820 ppb	#	87
22) Benzo (b) fluoranthene	14.55	252	54736	5.25816 ppb		99
23) Benzo (k) fluoranthene	14.60	252	48804	4.80924 ppb		98
24) Benzo (a) pyrene	15.22	252	52741	5.42468 ppb		99
25) Dibenz (a,h) anthracene	17.64	278	46108	5.72813 ppb		96
26) Benzo (g,h,i) perylene	18.14	276	45499	5.64452 ppb		98

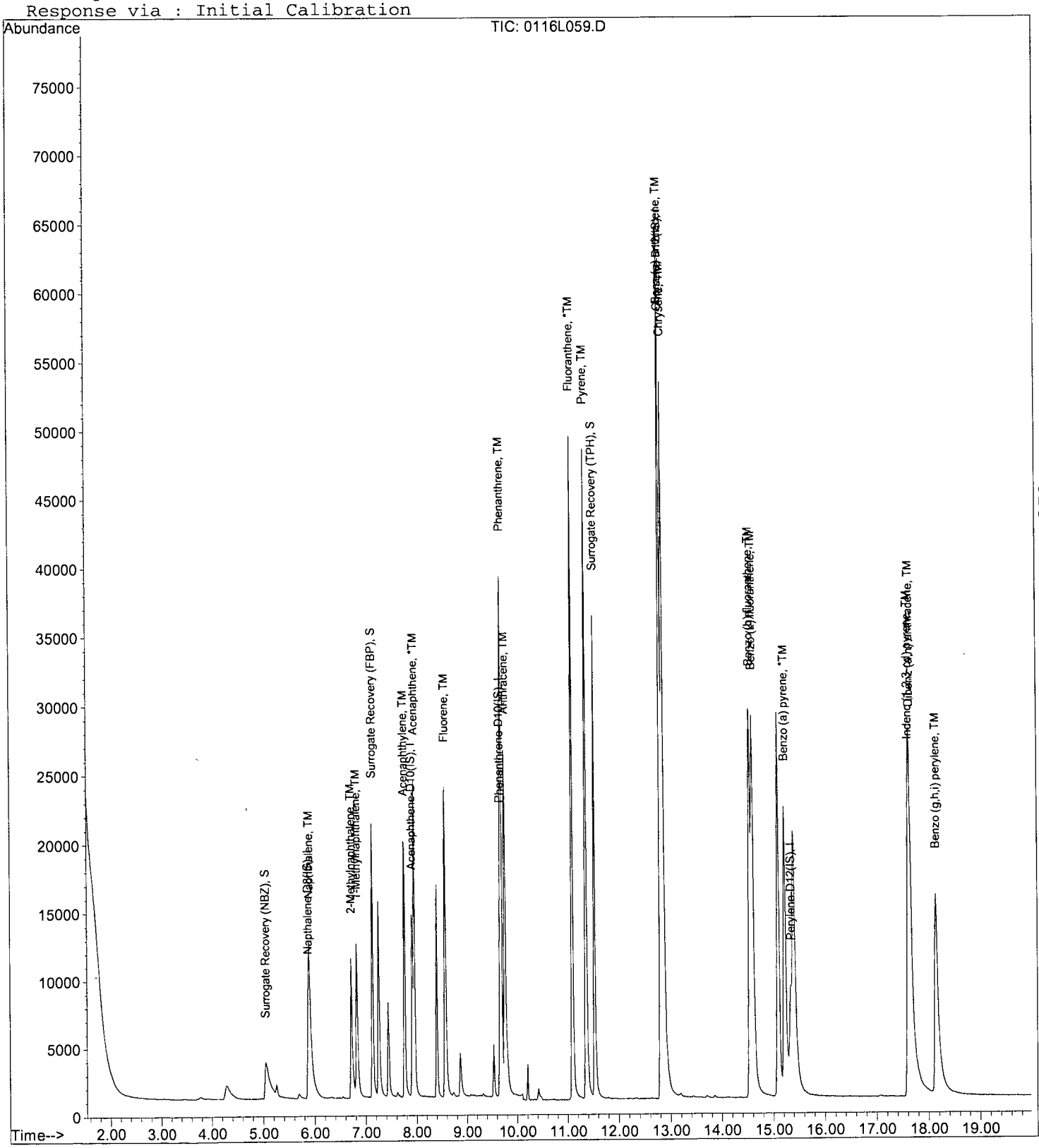
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L170116\0116L059.D Vial: 59
Acq On : 19 Jan 17 15:28 Operator: MA
Sample : 170116A LCS-1 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jan 19 16:01 2017 Quant Results File: L0116PR.RES

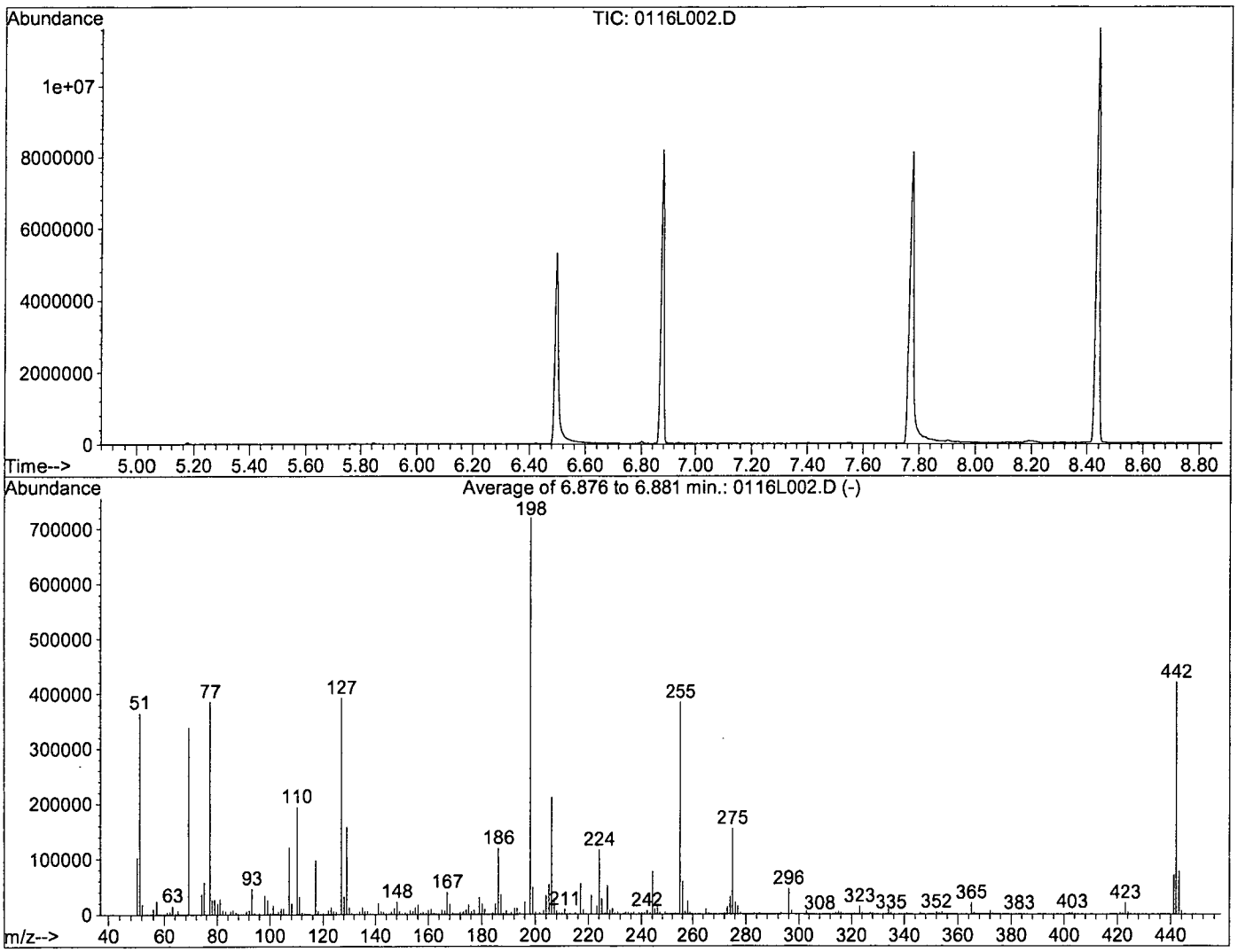
Method : M:\LINUS\DATA\L170116\L0116PR.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Jan 17 11:33:48 2017
Response via : Initial Calibration



253

Data File : M:\LINUS\DATA\L170116\0116L002.D Vial: 2
Acq On : 16 Jan 17 17:36 Operator: MA
Sample : SV Tune 11/15/16 Inst : Linus
Misc : water Multiplr: 1.00

Method : M:\LINUS\DATA\L161026\DFTPP2.M (Chemstation Integrator)
Title :



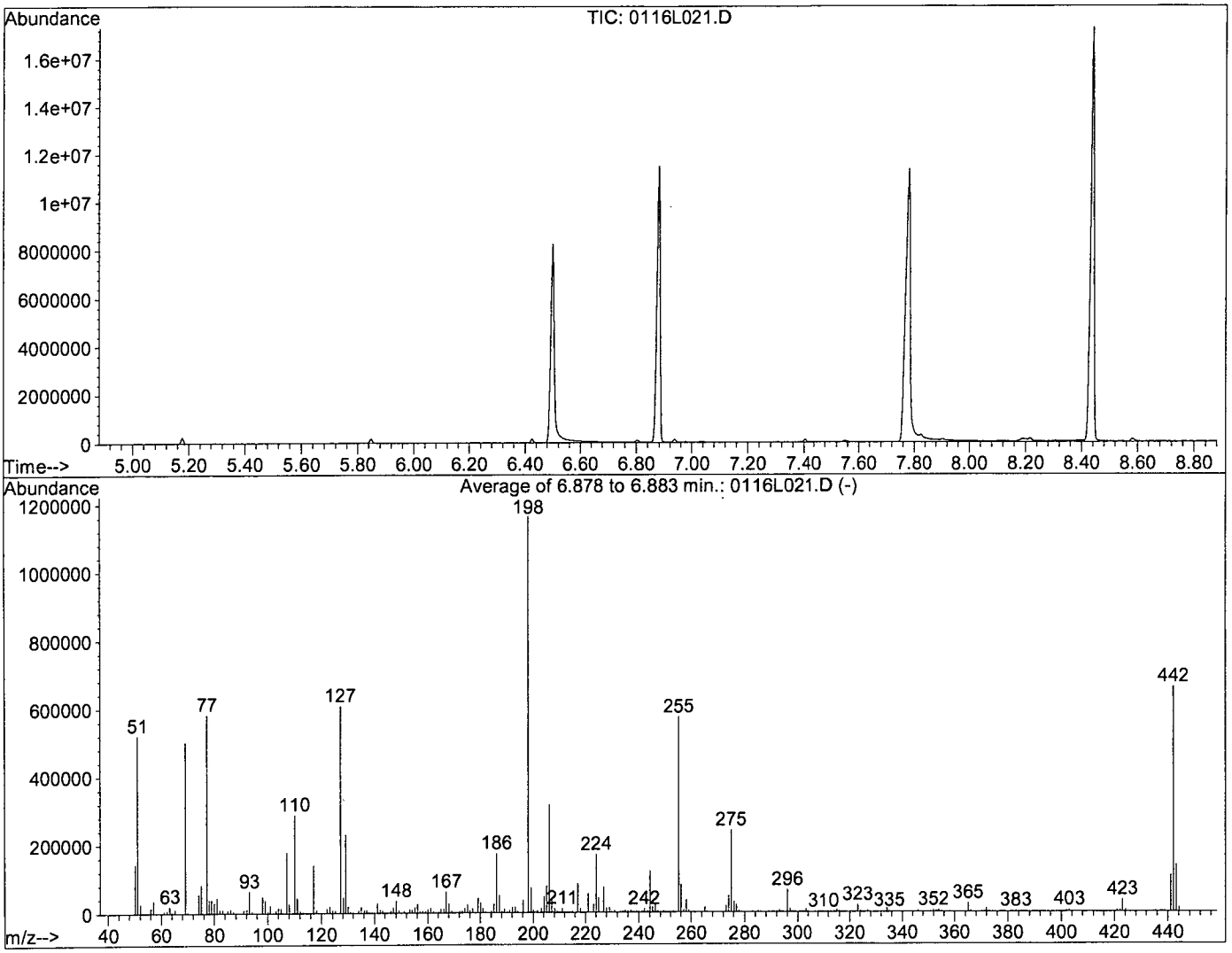
Spectrum Information: Average of 6.876 to 6.881 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	50.8	365889	PASS
68	69	0.00	2	0.0	0	PASS
69	69	100	100	100.0	339490	PASS
70	69	0.00	2	0.3	1019	PASS
127	198	40	60	54.5	392491	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	720555	PASS
199	198	5	9	6.7	48024	PASS
275	198	10	30	21.5	154683	PASS
365	198	1	100	2.7	19688	PASS
441	443	0.01	100	91.6	70885	PASS
442	198	40	150	58.4	420715	PASS
443	442	17	23	18.4	77376	PASS

DFTPP

Data File : M:\LINUS\DATA\L170116\0116L021.D Vial: 9
Acq On : 18 Jan 17 11:58 Operator: MA
Sample : SV Tune 12/15/16 Inst : Linus
Misc : water Multiplr: 1.00

Method : M:\LINUS\DATA\L161026\DFTPP2.M (Chemstation Integrator)
Title :

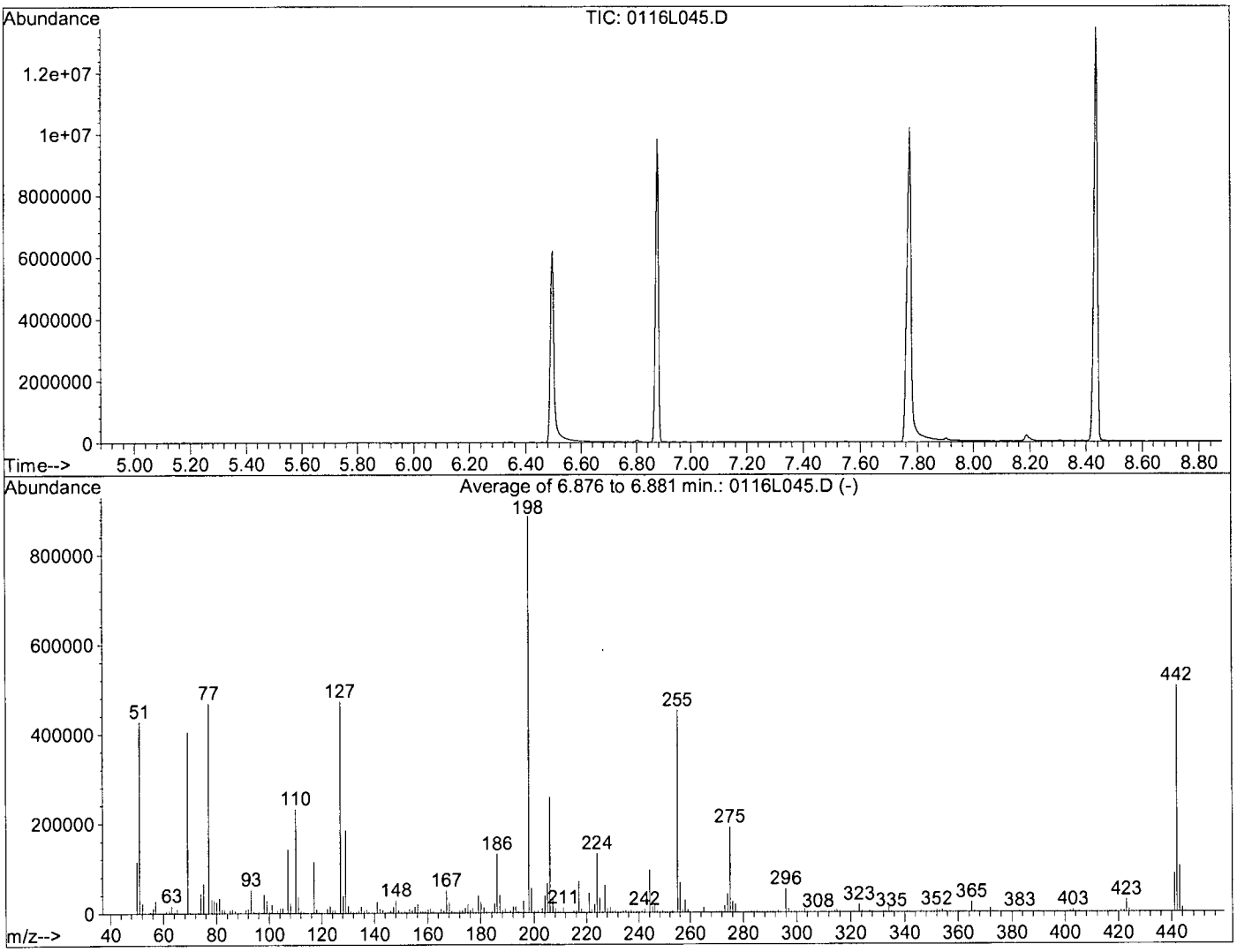


Spectrum Information: Average of 6.878 to 6.883 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	44.7	520804	PASS
68	69	0.00	2	0.0	0	PASS
69	69	100	100	100.0	501355	PASS
70	69	0.00	2	0.6	3186	PASS
127	198	40	60	52.2	608196	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	1165077	PASS
199	198	5	9	6.3	72971	PASS
275	198	10	30	20.6	240192	PASS
365	198	1	100	2.2	25589	PASS
441	443	0.01	100	77.7	106920	PASS
442	198	40	150	56.6	659563	PASS
443	442	17	23	20.9	137589	PASS

Data File : M:\LINUS\DATA\L170116\0116L045.D Vial: 45
Acq On : 19 Jan 17 8:47 Operator: MA
Sample : SV Tune 12/15/16 Inst : Linus
Misc : water Multiplr: 1.00

Method : M:\LINUS\DATA\L161026\DFTPP2.M (Chemstation Integrator)
Title :



Spectrum Information: Average of 6.876 to 6.881 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	48.3	427727	PASS
68	69	0.00	2	0.0	0	PASS
69	69	100	100	100.0	404373	PASS
70	69	0.00	2	0.5	2140	PASS
127	198	40	60	53.2	471829	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	886165	PASS
199	198	5	9	6.2	54979	PASS
275	198	10	30	21.4	189371	PASS
365	198	1	100	2.4	21640	PASS
441	443	0.01	100	83.5	85152	PASS
442	198	40	150	57.0	504704	PASS
443	442	17	23	20.2	101987	PASS

0116L045.D DFTPP2.M Fri Jan 20 15:56:55 2017

8270 PAH SIM Standard Curve

PREP DATE:	01/13/17 RH										
8270 PAH SIM STANDARD CURVE											
Exp.DATE:	**04/13/17**					**0.1**	**0.2**	**0.5**	**1**	**5**	**10**
		Conc.		Date							
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL	µL	µL	µL
O2si	8270 PAH SIM Stock	200	278353-36992	9/12/16	9/12/17	0	0	0	0	5	5
	5.0ug/mL	5		9/12/16	7/29/17	0	0	10	20	0	0
	1.0ug/mL	1		9/12/16	7/29/17	10	20	0	0	0	0
O2SI	BNA SURR.	100/200		1/12/17	3/08/17	0	0	0	0	5	5
EM Science	Methylene Chloride		56061			90	80	90	80	190	90
Supelco	SV Internal Standard	2000	XA14020V-36768	10/10/16	10/10/17	2	2	2	2	4	2
				Final Vol.		102	102	102	102	204	102

50	**100**
µL	µL
25	50
0	0
0	0
25	50
50	0
2	2
102	102

8270 PAH SIM 2ND SRC

8270 PAH SIM 2ND SRC			Prep: 09/06/16 Exp 01/12/17 RH		
Supplier	**Standard**	**Conc.**	**Prep**	**Exp**	**µL**
O2SI	8270 2ND SRC	VARIOUS	06/03/16	01/21/17	25
	Methylene Chloride				75
o2si	8V Internal Standar	2000	10/10/16	10/10/17	2
LOT#	XA10079V-35507			Final Vol.	102

8270 SIM PAH Internal Standard						
PREP DATE:	10/10/16 RH.					
8270 SIM PAH Internal Standard Mix 125ug/ml						
Exp.DATE:	10/10/17					
		Conc.		Date	Exp.	125
Supplier	ID #	µg/mL	Lot #	Code	Date	µL
Supelco	SV Internal	2000	XA14020V-36768	10/10/16	10/10/17	350
EM Science	Methylene Chloride		56061			5250
				Final Vol.		5600

Semivolatile (SV) Tuning Solution -G.A.						
PREP DATE:	11/15/16	RH				
Semivolatile (SV) Tune Solution 50ug/ml						
Exp:	8/26/17					
		Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
Ultra Scient	Semivolatile GC	1000	N081628-37012	08/23/16	8/23/17	200
EM Science	Methylene Chloride		55098			3800
				Final Vol.		4000

SIM SPIKE	
CAT:	110780-01
Lot:	291544-37
OP: 12/22/16 -R.H.	
EX: 12/22/17	

PAH SIM STD prep: 09/12/16-R.H.						
Exp:	9/12/17					
		Conc.				
Supplier	ID #	mg/L	Lot #	Open Date	Exp.Date	µL
o2si	110780-01	200	278353-36992	6/22/16	6/22/17	1000
				Fin Vol.		1000

8270 Surrog Mix 100/200ppm						
Prep: 12/08/16 -RH Ex: 3/08/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
8270 Acid Surrog Mix	10000 ug/ml	Restek Cat# 33029 Lot# A0118884-36875 Op: 11/15/16 EX: 11/15/17	2.0 mL	100 mL	200 ug/mL	MC
8270 B/N surrog Mix	5000 µg/mL	Restek Cat# 31086 Lot# A0119223-36871 Op: 11/15/16 EX: 11/15/17	2.0 mL	100 mL	100 ug/mL	MC

8270 PAH SIM CCV (2)

PREP DATE:	01/13/17 RH					
8270 PAH SIM STANDARD CURVE						
Exp.DATE:	**4/13/17**					**5**
		Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
O2si	8270 PAH SIM Stock	200	278353-36992	9/12/16	9/12/17	5
	5.0ug/mL	5		9/12/16	7/29/17	0
	1.0ug/mL	1		9/12/16	7/29/17	0
O2SI	BNA SURR.	100/200		1/12/17	3/8/17	5
EM Science	Methylene Chloride		56061			190
Supelco	SV Internal Standard	2000	XA14020V-36768	10/10/16	10/10/17	4
				Final Vol.		204

_SEP004S

Organic Extraction Worksheet

Method	SIM Separatory Funnel Extra 3510C	Extraction Set	170116A	Extraction Method	SEP004S	Units	mL

Spiked ID 1	PAH SIM Spike 12-22-16 exp 12-22-17		Surrogate ID 1	8270 Surrogate 1-12-17 exp 7-12-17	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	01/16/17 15:25	
Spiked ID 8			Ext. End Time:	01/17/17 16:45	
			GC Requires Extract By:	01/19/17 0:00	

pH1	2	01/16/17 3:40:00 PM	Water Bath Temp Criteria	75,75,76 °
pH2	14	01/16/17 5:30:00 PM		
pH3				

Spiked By: KY **Date** 01/16/17 **Witnessed By:** CFM **Date** 01/16/17

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	170116A Blk				0.050	1	1000	1	2/1	01/16/17 15:25	
						equip	e-wb6				
2	170116A LCS-1		0.0250	1	0.050	1	1000	1	2/1	01/16/17 15:25	
						equip	E-WB5				
3	AZ48866 MS-1	AZ48866W33	0.0250	1	0.050	1	1070	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
						equip	E-WB5				
4	AZ48866 MSD-1	AZ48866W18	0.0250	1	0.050	1	1070	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
						equip	E-WB5				
5	AZ48866	AZ48866W17			0.050	1	1070	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
						equip	E-WB5				
6	AZ48867	AZ48867W09			0.050	1	1070	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
						equip	E-WB5				
7	AZ48868	AZ48868W14			0.050	1	1070	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
						equip	E-WB5				
8	AZ48871	AZ48871W09			0.050	1	1070	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
						equip	E-WB5				
9	AZ48872	AZ48872W29			0.050	1	1070	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
						equip	E-WB5				
10	AZ48873	AZ48873W10			0.050	1	1070	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
						equip	E-WB7				
11	AZ48875	AZ48875W13			0.050	1	1070	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK Φ
						equip	E-WB7				
12	AZ48877	AZ48877W12			0.050	1	1070	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
						equip	E-WB7				
13	AZ48878	AZ48878W12			0.050	1	1070	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
						equip	E-WB7				
14	AZ48880	AZ48880W08			0.050	1	1070	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
						equip	E-WB7				
15	AZ48881	AZ48881W09			0.050	1	1070	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
						equip	E-WB7				
16	AZ48915	AZ48915W10			0.050	1	1070	1	2/1	01/16/17 15:25	81971 Rush 1 week
						equip	E-WB7				

Solvent and Lot#	
1+1 SULFURIC ACID	12-5-16
PH STRIP	HC 574756
MC	56153
A. Na2SO4	1-3-17
10N NaOH	12-19-16
B. Na2SO4	16C255214
FILTER PAPER	400112

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	HA
Date	1/18/17
Time	10:00
Refrigerator	6C-C

	Technician's Initials
Scanned By	KY
Sample Preparation	KY,DL,JR
Extraction	KY,DL,JR
Concentration	KY

Modified	01/18/17 8:49:09 AM

Reviewed By: [signature] **Date** 1/18/17

Organic Extraction Worksheet

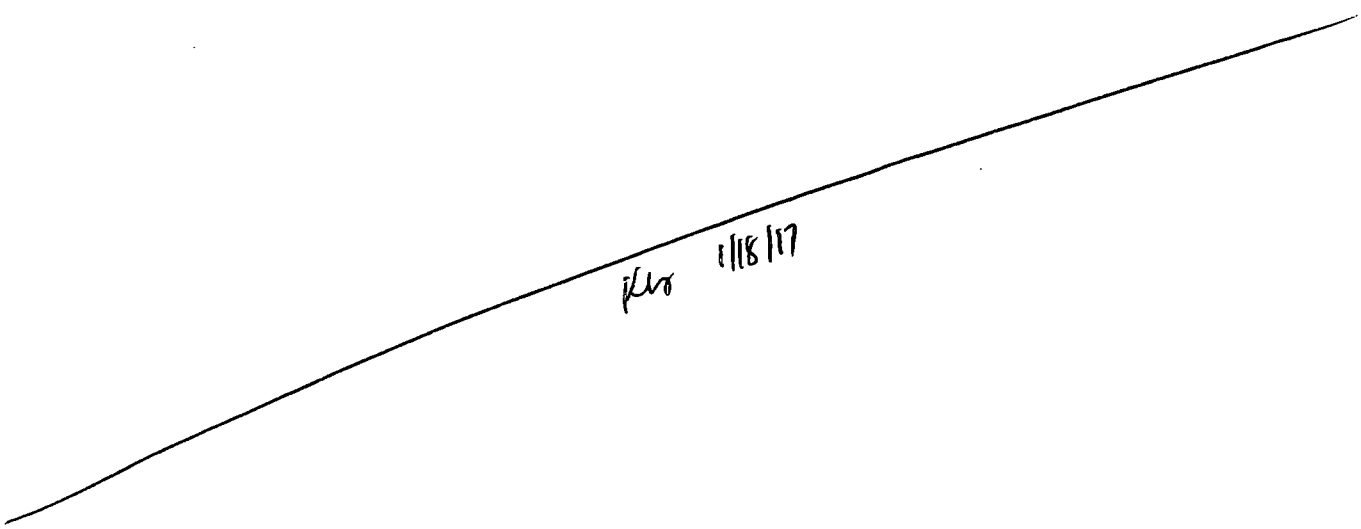
Method	SIM Separatory Funnel Extra 3510C	Extraction Set	170116A	Extraction Method	SEP004S	Units	mL

Spiked ID 1	PAH SIM Spike 12-22-16 exp 12-22-17		Surrogate ID 1	8270 Surrogate 1-12-17 exp 7-12-17	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	01/16/17 15:25	
Spiked ID 8			Ext. End Time:	01/17/17 16:45	
			GC Requires Extract By:	01/19/17 0:00	

pH1	2	01/16/17 3:40:00 PM	Water Bath Temp Criteria	75,75,76 °
pH2	14	01/16/17 5:30:00 PM		
pH3				

Spiked By: KY **Date** 01/16/17 **Witnessed By:** CFM **Date** 01/16/17

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
17	AZ48916	AZ48916W12			0.050	1	1070	1	2/1	01/16/17 15:25	81971 Rush 1 week
						equip	E-WB7				
18	AZ48921	AZ48921W09			0.050	1	1070	1	2/1	01/16/17 15:25	81971 Rush 1 week
						equip	E-WB7				
19	AZ48925	AZ48925W11			0.050	1	1070	1	2/1	01/16/17 15:25	81971 Rush 1 week
						equip	E-WB7				



Solvent and Lot#	
1+1 SULFURIC ACID	12-5-16
PH STRIP	HC 574756
MC	56153
A. Na2SO4	1-3-17
10N NaOH	12-19-16
B. Na2SO4	16C255214
FILTER PAPER	400112

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	
Date	
Time	
Refrigerator	

	Technician's Initials
Scanned By	KY
Sample Preparation	KY,DL,JR
Extraction	KY,DL,JR
Concentration	KY

Modified	01/18/17 8:49:09 AM

Reviewed By: KY **Date** 1/18/17

Injection Log

Directory: M:\LINUS\DATA\L170116\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	0116L002.D	1	SV Tune 11/15/16	water	16 Jan 17 17:36
2	3	0116L003.D	1	0.1 SIM 1/13/17	water	16 Jan 17 17:54
3	4	0116L004.D	1	0.2 SIM 1/13/17	water	16 Jan 17 18:22
4	5	0116L005.D	1	0.5 SIM 1/13/17	water	16 Jan 17 18:50
5	6	0116L006.D	1	1.0 SIM 1/13/17	water	16 Jan 17 19:17
6	7	0116L007.D	1	5.0 SIM 1/13/17	water	16 Jan 17 19:45
7	8	0116L008.D	1	10 SIM 1/13/17	water	16 Jan 17 20:13
8	9	0116L009.D	1	50 SIM 1/13/17	water	16 Jan 17 20:41
9	10	0116L010.D	1	100 SIM 1/13/17	water	16 Jan 17 21:09
10	11	0116L011.D	1	SS SIM 1/13/17	water	16 Jan 17 21:37
11	9	0116L021.D	1	SV Tune 12/15/16	water	18 Jan 17 11:58
12	10	0116L022.D	1	5.0 SIM 1/13/17	water	18 Jan 17 12:15
13	23	0116L023.D	1	170116A BLK 1/1000	water	18 Jan 17 12:54
14	38	0116L038.D	0.93458	AZ48915W10 1/1070	water	18 Jan 17 19:53
15	39	0116L039.D	0.93458	AZ48916W12 1/1070	water	18 Jan 17 20:21
16	40	0116L040.D	0.93458	AZ48921W09 1/1070	water	18 Jan 17 20:49
17	41	0116L041.D	0.93458	AZ48925W11 1/1070	water	18 Jan 17 21:17
18	43	0116L043.D	1	SIM 5 1/13/17	water	18 Jan 17 22:01
19	45	0116L045.D	1	SV Tune 12/15/16	water	19 Jan 17 8:47
20	46	0116L046.D	1	SIM 5 1/13/17	water	19 Jan 17 9:07
21	59	0116L059.D	1	170116A LCS-1 1/1000	water	19 Jan 17 15:28
22	61	0116L061.D	1	SIM 5 1/13/17	water	19 Jan 17 16:44

ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank

EPA 8270D MODIFIED WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **170118W-48915 - 215650**
Batch ID: #87DME-170118A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2-(2-METHOXYETHOXY)-ETHAN	80.0 U	100	80.0	40.0	ug/L	01/18/17	01/19/17

Quant Method: Y0GLYCOL.
Run #: 1220Y075
Instrument: Yoda
Sequence: Y161220G
Initials: MA

GC SC-Blank-REG MDLs-DOD
Printed: 01/20/17 12:32:11 PM

Laboratory Control Spike Recovery
EPA 8270D MODIFIED WATER

APPL ID: **170118W-48915 LCS - 215650**
Batch ID: #87DME-170118A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
2-(2-METHOXYETHOXY)-ETHANOL	80.0	41.2	51.5	30-130

Comments: _____

Primary	SPK
Quant Method :	Y0GLYCOL.M
Extraction Date :	01/18/17
Analysis Date :	01/19/17
Instrument :	Yoda
Run :	1220Y076
Initials :	MA

Printed: 01/20/17 12:32:12 PM
APPL Standard LCS

EPA 8270D

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81971

Case No: 81971 Date Analyzed: 01/19/17

Matrix: WATER Instrument: Yoda

Blank ID: 170118A-BLK Time Analyzed: 0925

APPL ID.	Client Sample No.	File ID.	Date Analyzed
170118A-BLK	Blank	1220Y075	01/19/17 0925
170118A-LCS	Lab Control Spike	1220Y076	01/19/17 0955
AZ48915	ERH172	1220Y081	01/19/17 1227
AZ48916	ERH178	1220Y082	01/19/17 1257
AZ48921	ERH181	1220Y083	01/19/17 1328
AZ48925	ERH184	1220Y084	01/19/17 1358

Comments: Batch: #87DME-170118A

Form 5
Tune Summary

np 1-27-17

Lab Name: APPL Inc.
Case No: ~~1220Y002.D~~ 81971
Matrix: Water np 1-27-17
ID: SV Tune 11/15/16

SDG No: ~~Yoda~~ 81971
Date Analyzed: 12/20/16
Instrument: Yoda
Time Analyzed: 9:12

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		50ug/ml DEG 11/22/16	1220Y003.D	12/20/16 9:32
2		100ug/ml DEG 11/22/1	1220Y004.D	12/20/16 10:02
3		200ug/ml DEG 11/22/1	1220Y005.D	12/20/16 11:27
4		400ug/ml DEG 11/22/1	1220Y006.D	12/20/16 11:57
5		500ug/ml DEG 11/22/1	1220Y007.D	12/20/16 12:27
6		600ug/ml DEG 11/22/1	1220Y008.D	12/20/16 12:57
7		800ug/ml DEG 11/22/1	1220Y009.D	12/20/16 13:28
8		1000ug/ml DEG 11/22/	1220Y010.D	12/20/16 13:58
9		SS2 DEG 11/22/16	1220Y011.D	12/20/16 15:01
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	44.4
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.0
127	40 - 60% of mass 198	53.6
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 197.95	100.0
199	5 - 9% of mass 198	6.3
275	10 - 30% of mass 198	21.8
365	1 - 100% of mass 198	3.0
441	0.01 - 100% of mass 443	85.0
442	50 - 150% of mass 197.95	98.0
443	17 - 23% of mass 442	19.1

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81971
Matrix: Water
ID: SV Tune 11/15/16

SDG No: 81971
Date Analyzed: 01/19/17
Instrument: Yoda
Time Analyzed: 8:31

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		500ug/ml DEG 11/22/1	1220Y074.D	01/19/17 8:48
2	Blank	170118A BLK 2/500	1220Y075.D	01/19/17 9:25
3	Lab Control Spike	170118A LCS-1 2/500	1220Y076.D	01/19/17 9:55
4	ERH172	AZ48915W11 2/500	1220Y081.D	01/19/17 12:27
5	ERH178	AZ48916W17 2/500	1220Y082.D	01/19/17 12:57
6	ERH181	AZ48921W10 2/500	1220Y083.D	01/19/17 13:28
7	ERH184	AZ48925W10 2/500	1220Y084.D	01/19/17 13:58
8		500ug/ml DEG 11/22/1	1220Y090.D	01/19/17 16:43
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	50.4
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.6
127	40 - 60% of mass 198	58.7
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 197.95	100.0
199	5 - 9% of mass 198	6.9
275	10 - 30% of mass 198	23.9
365	1 - 100% of mass 198	4.0
441	0.01 - 100% of mass 443	94.8
442	50 - 150% of mass 197.95	90.6
443	17 - 23% of mass 442	18.8

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81971

Lab File ID (Standard): 1220Y007.D Date Analyzed: 12/20/16

Instrument ID: Yoda Time Analyzed: 12:27

GC Column: ID: Heated Purge: (Y/N)

		1,4-dichlorobenzene-D4(IS)		Napthalene-D8(IS)		Acenaphthene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	220710	4.87	916121	6.29	479952	8.31
	UPPER LIMIT	441420	5.37	1832242	6.79	959904	8.81
	LOWER LIMIT	110355	4.37	458061	5.79	239976	7.81
	SAMPLE NO.						
01	500ug/ml DEG 11/22/16	125616	4.86	658356	6.29	384519	8.30
02	170118A BLK 2/500	168905	4.88	749948	6.29	421436	8.30
03	170118A LCS-1 2/500	178372	4.88	789086	6.29	450383	8.30
04	AZ48915W11 2/500	135810	4.89	623042	6.30	361475	8.30
05	AZ48916W17 2/500	148834	4.88	677967	6.29	382515	8.30
06	AZ48921W10 2/500	127591	4.89	587642	6.30	359164	8.30
07	AZ48925W10 2/500	143652	4.88	639824	6.29	366536	8.30
08	500ug/ml DEG 11/22/16	94325 *	4.88	464214	6.29	269042	8.30
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81971

Lab File ID (Standard): 1220Y007.D Date Analyzed: 12/20/16

Instrument ID: Yoda Time Analyzed: 12:27

GC Column: ID: Heated Purge: (Y/N)

		Phenanthrene-D10(IS)		Chrysene-D12(IS)		Perylene-D12(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	893005	10.02	850646	13.11	931322	14.75
	UPPER LIMIT	1786010	10.52	1701292	13.61	1862644	15.25
	LOWER LIMIT	446503	9.52	425323	12.61	465661	14.25
	SAMPLE NO.						
01	500ug/ml DEG 11/22/16	693160	10.02	616710	13.10	552797	14.74
02	170118A BLK 2/500	818045	10.02	772188	13.10	668914	14.74
03	170118A LCS-1 2/500	814159	10.02	776756	13.10	709284	14.74
04	AZ48915W11 2/500	695851	10.02	656298	13.10	904426	14.75
05	AZ48916W17 2/500	725222	10.03	666380	13.10	623482	14.74
06	AZ48921W10 2/500	661567	10.02	601534	13.10	591228	14.75
07	AZ48925W10 2/500	680286	10.03	621000	13.10	577335	14.74
08	500ug/ml DEG 11/22/16	509149	10.02	467422	13.10	384363 *	14.75
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

ORGANICS

Sample Data

APPL, INC.

EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH172
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48915
QCG: #87DME-170118A-215650

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	01/18/17	01/19/17

Quant Method: Y0GLYCOL.M
Run #: 1220Y081
Instrument: Yoda
Sequence: Y161220G
Dilution Factor: 1
Initials: MA

Printed: 01/20/17 12:32:15 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y081.D Vial: 81
Acq On : 19 Jan 17 12:27 Operator: MA
Sample : AZ48915W11 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 20 8:53 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 20 08:25:34 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.89	152	135810	40.00000	ppb	0.02
3) Napthalene-D8(IS)	6.30	136	623042	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	361475	40.00000	ppb	-0.01
5) Phenanthrene-D10(IS)	10.02	188	695851	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	656298	40.00000	ppb	-0.01
7) Perylene-D12(IS)	14.75	264	904426	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

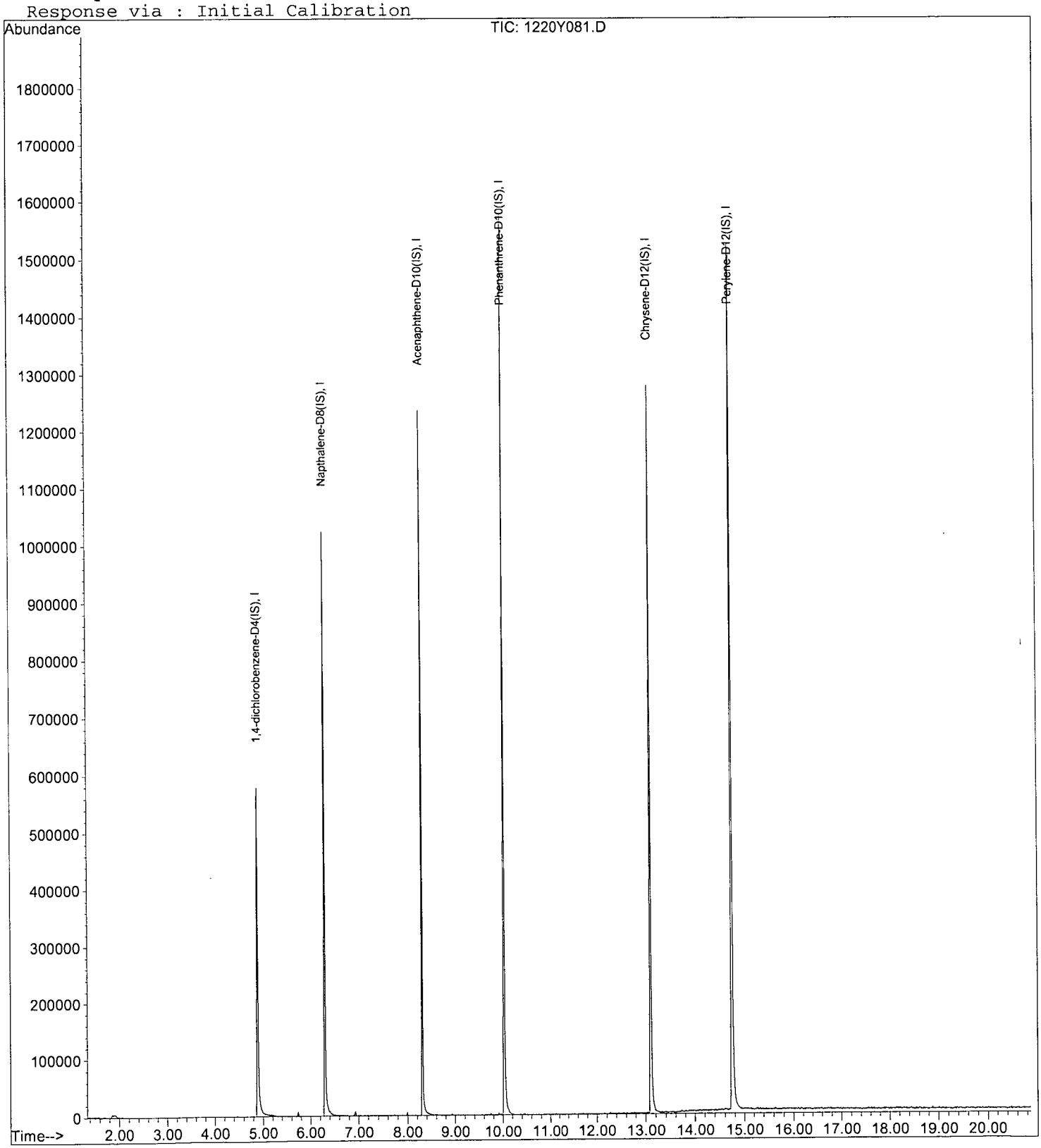
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y081.D Vial: 81
Acq On : 19 Jan 17 12:27 Operator: MA
Sample : AZ48915W11 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 20 8:53 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 20 12:27:23 2017
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH178
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48916
QCG: #87DME-170118A-215650

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	01/18/17	01/19/17

Quant Method: Y0GLYCOL.M
Run #: 1220Y082
Instrument: Yoda
Sequence: Y161220G
Dilution Factor: 1
Initials: MA

Printed: 01/20/17 12:32:15 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y082.D Vial: 82
Acq On : 19 Jan 17 12:57 Operator: MA
Sample : AZ48916W17 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 20 8:53 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 20 08:25:34 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.88	152	148834	40.00000	ppb	0.01
3) Napthalene-D8(IS)	6.29	136	677967	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	382515	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	725222	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	666380	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.74	264	623482	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

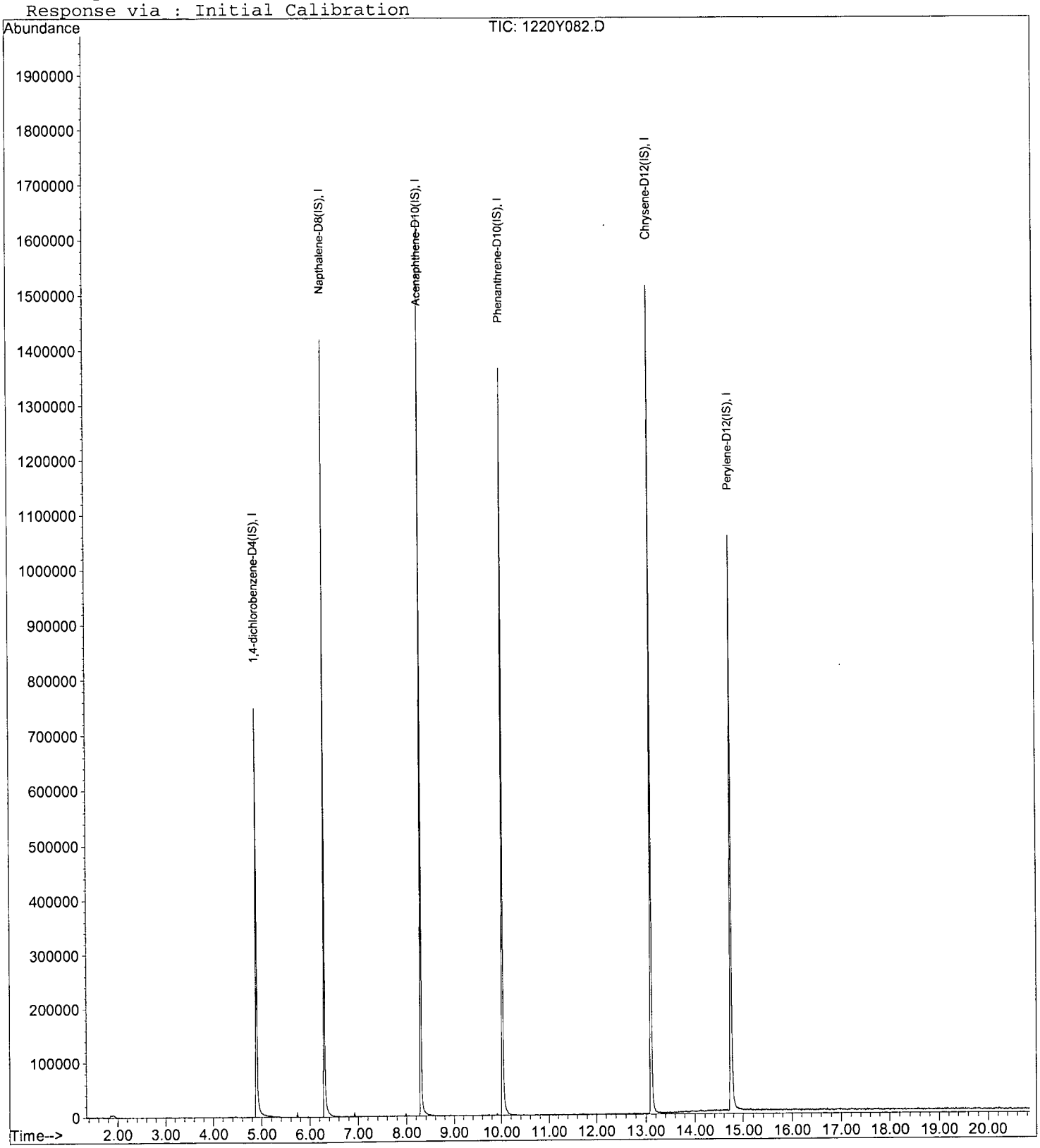
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y082.D
Acq On : 19 Jan 17 12:57
Sample : AZ48916W17 2/500
Misc : water

Vial: 82
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 20 8:53 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 20 12:27:23 2017
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH181
Sample Collection Date: 01/12/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48921
QCG: #87DME-170118A-215650

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	01/18/17	01/19/17

Quant Method: Y0GLYCOL.M
Run #: 1220Y083
Instrument: Yoda
Sequence: Y161220G
Dilution Factor: 1
Initials: MA

Printed: 01/20/17 12:32:15 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y083.D Vial: 83
Acq On : 19 Jan 17 13:28 Operator: MA
Sample : AZ48921W10 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 20 8:53 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 20 08:25:34 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.89	152	127591	40.00000	ppb	0.02
3) Napthalene-D8(IS)	6.30	136	587642	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	359164	40.00000	ppb	-0.01
5) Phenanthrene-D10(IS)	10.02	188	661567	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	601534	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.75	264	591228	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

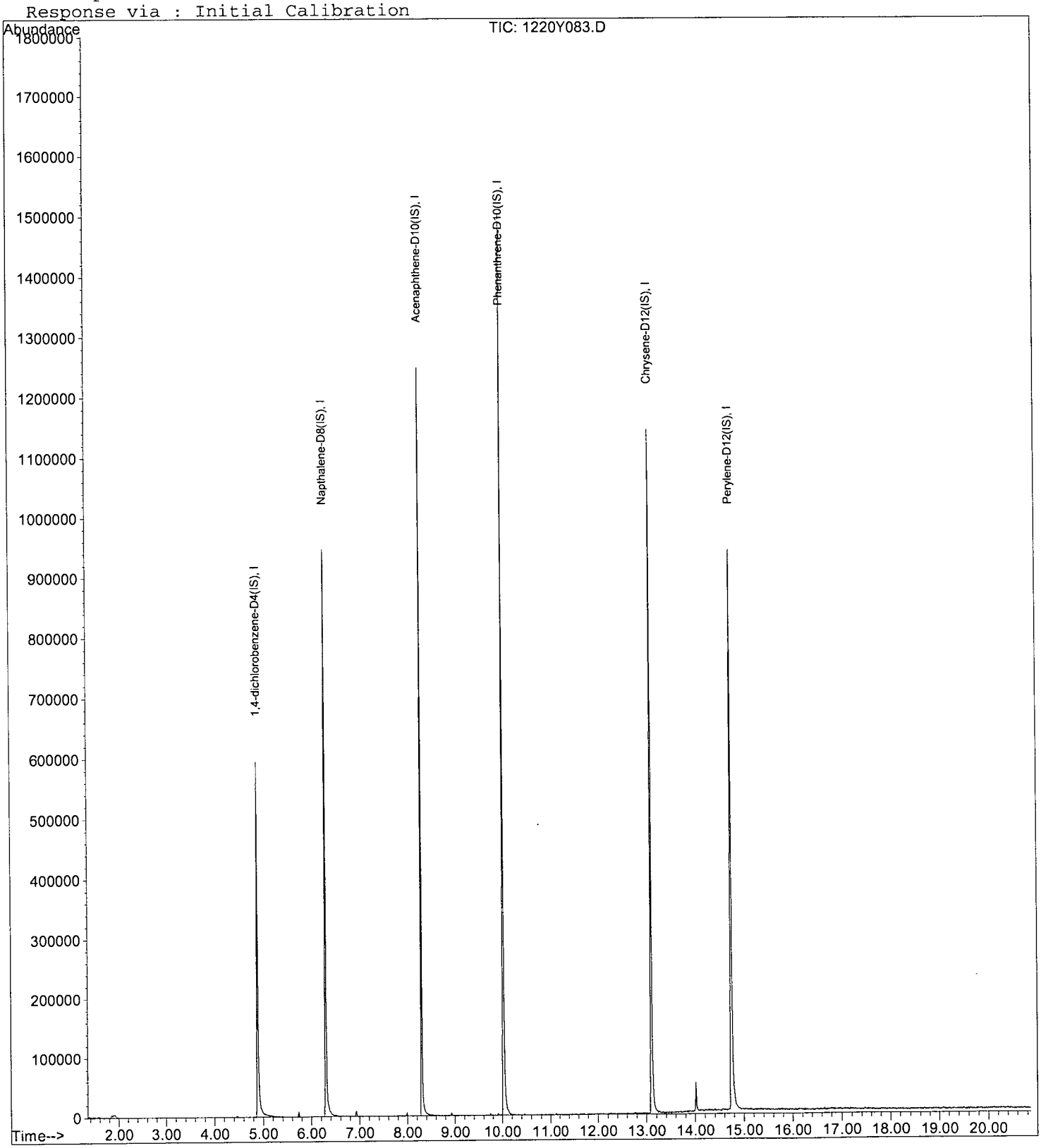
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y083.D Vial: 83
Acq On : 19 Jan 17 13:28 Operator: MA
Sample : AZ48921W10 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 20 8:53 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 20 12:27:23 2017
Response via : Initial Calibration



EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH184
Sample Collection Date: 01/12/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48925
QCG: #87DME-170118A-215650

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	01/18/17	01/19/17

Quant Method: Y0GLYCOL.M
Run #: 1220Y084
Instrument: Yoda
Sequence: Y161220G
Dilution Factor: 1
Initials: MA

Printed: 01/20/17 12:32:15 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y084.D Vial: 84
Acq On : 19 Jan 17 13:58 Operator: MA
Sample : AZ48925W10 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 20 8:53 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 20 08:25:34 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.88	152	143652	40.00000	ppb	0.01
3) Napthalene-D8(IS)	6.29	136	639824	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	366536	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	680286	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	621000	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.74	264	577335	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
1220Y084.D Y0GLYCOL.M Mon Jan 23 13:49:26 2017

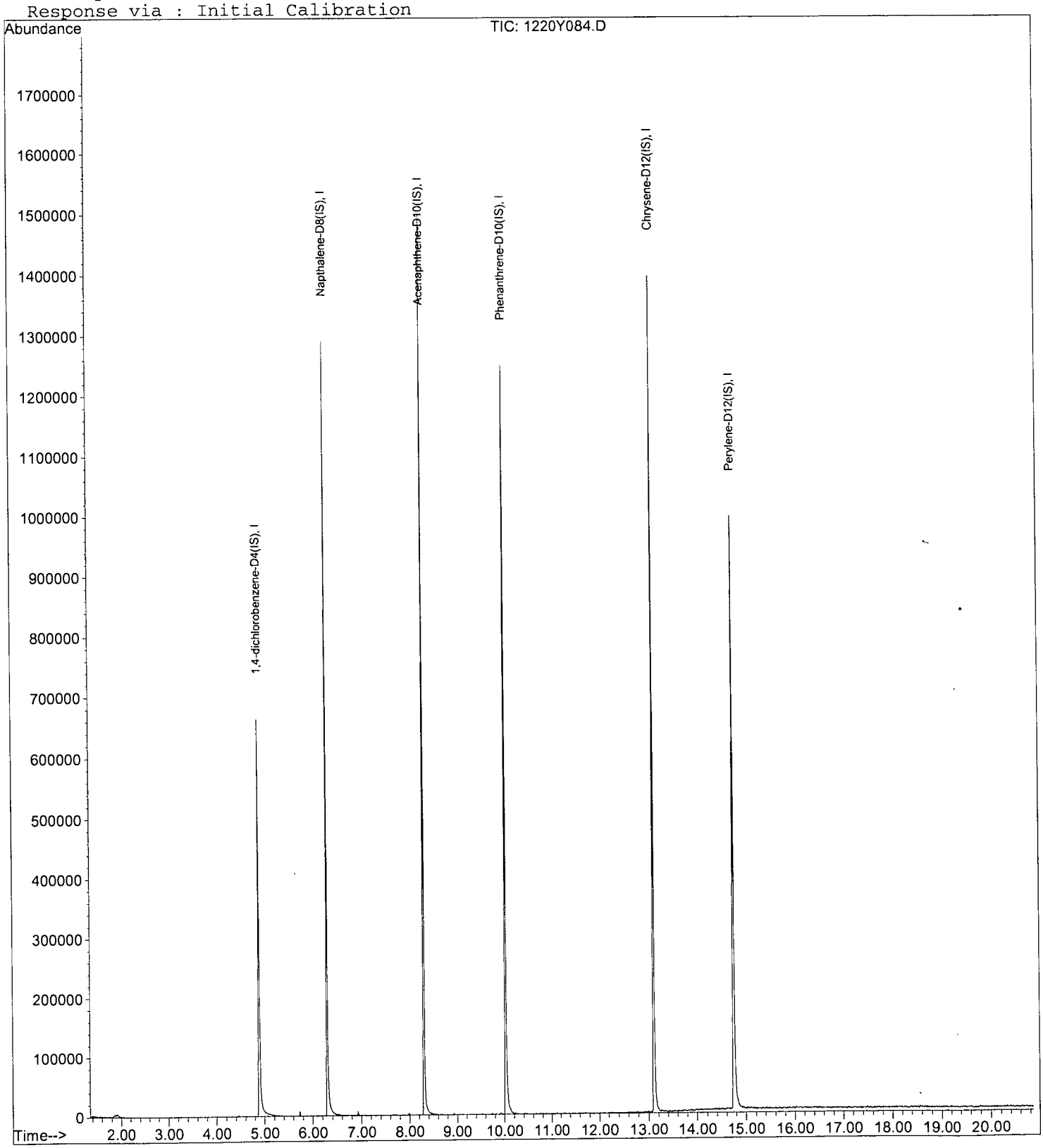
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y084.D
Acq On : 19 Jan 17 13:58
Sample : AZ48925W10 2/500
Misc : water

Vial: 84
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 20 8:53 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 20 12:27:23 2017
Response via : Initial Calibration



ORGANICS

Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/20/16
Matrix: Instrument: Yoda Initials:

			1220Y003.D	1220Y004.D	1220Y005.D	1220Y006.D	1220Y007.D	1220Y008.D	1220Y009.D	1220Y010.D						
		Compound	1	2	3	4	5	6	7	8			Avg	%RSD		
1	I	1,4-dichlorobenzene-D4(IS)														
2	TM	2-(2-Methoxyethoxy)ethanol	0.1800	0.1823	0.2140	0.2253	0.2267	0.2342	0.2268	0.2261			0.21	9.9	TM	
3	I	Napthalene-D8(IS)														
4	I	Acenaphthene-D10(IS)														
5	I	Phenanthrene-D10(IS)														
6	I	Chrysene-D12(IS)														
7	I	Perylene-D12(IS)														
8																
9																
10																
11																
12																
13																
14																
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Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y003.D Vial: 3
Acq On : 20 Dec 16 9:32 Operator: MA
Sample : 50ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:24 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:24:33 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	235296	40.00	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	1020104	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	566383	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	1039128	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	951820	40.00	ppb	0.00
7) Perylene-D12(IS)	14.74	264	863918	40.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.12	45	52929	41.96	ppb	95

(#) = qualifier out of range (m) = manual integration
1220Y003.D Y0GLYCOL.M Thu Jan 19 15:24:57 2017 Page 1

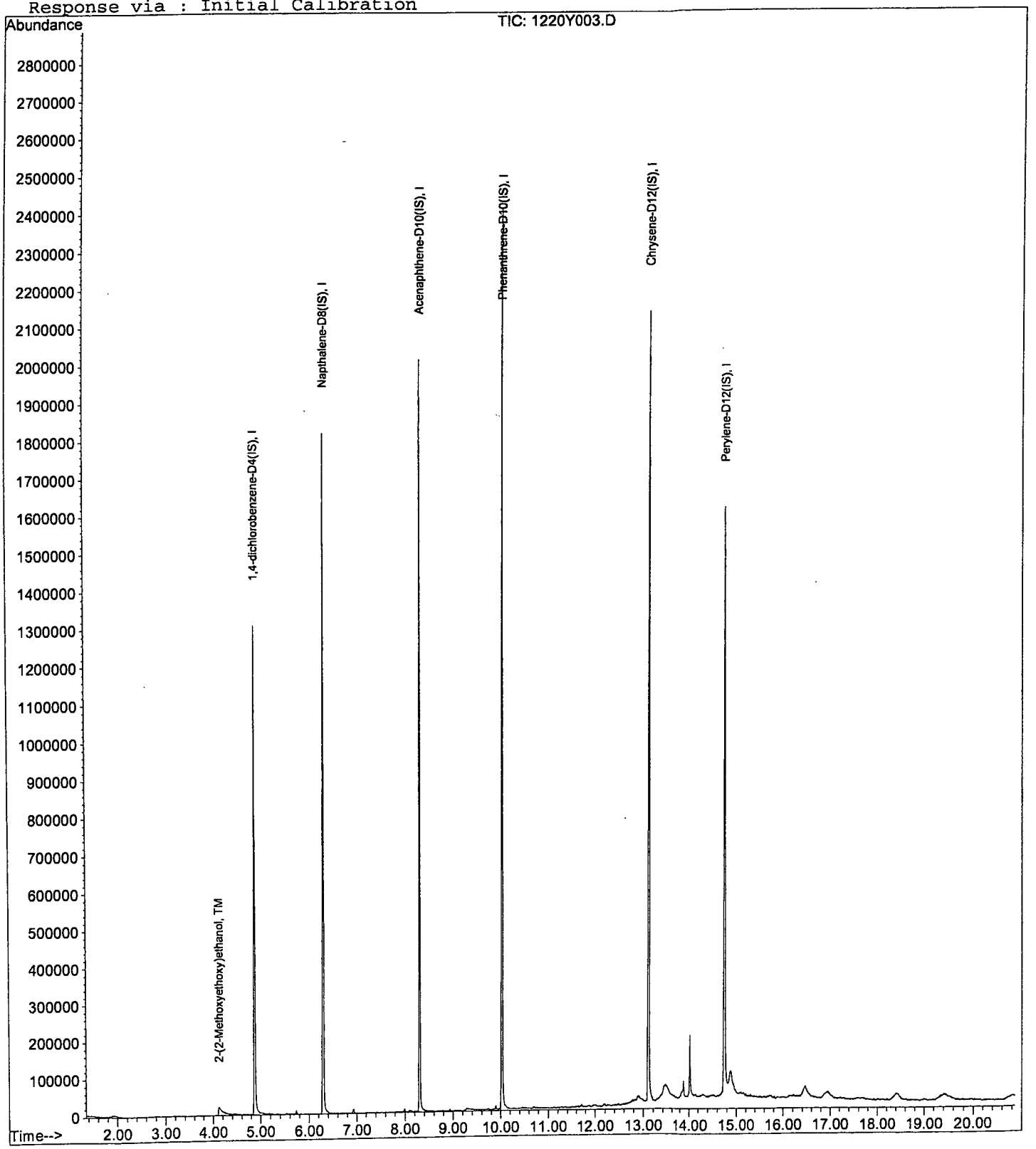
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y003.D
Acq On : 20 Dec 16 9:32
Sample : 50ug/ml DEG 12/20/16
Misc :

Vial: 3
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:24 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:24:33 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y004.D Vial: 4
Acq On : 20 Dec 16 10:02 Operator: MA
Sample : 100ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:28 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:27:52 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	236538	40.00	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	1021117	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	569209	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	1067696	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	1009921	40.00	ppb	0.00
7) Perylene-D12(IS)	14.74	264	992895	40.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.09	45	107826	85.04	ppb	92

(#) = qualifier out of range (m) = manual integration
1220Y004.D Y0GLYCOL.M Thu Jan 19 15:28:11 2017 Page 1

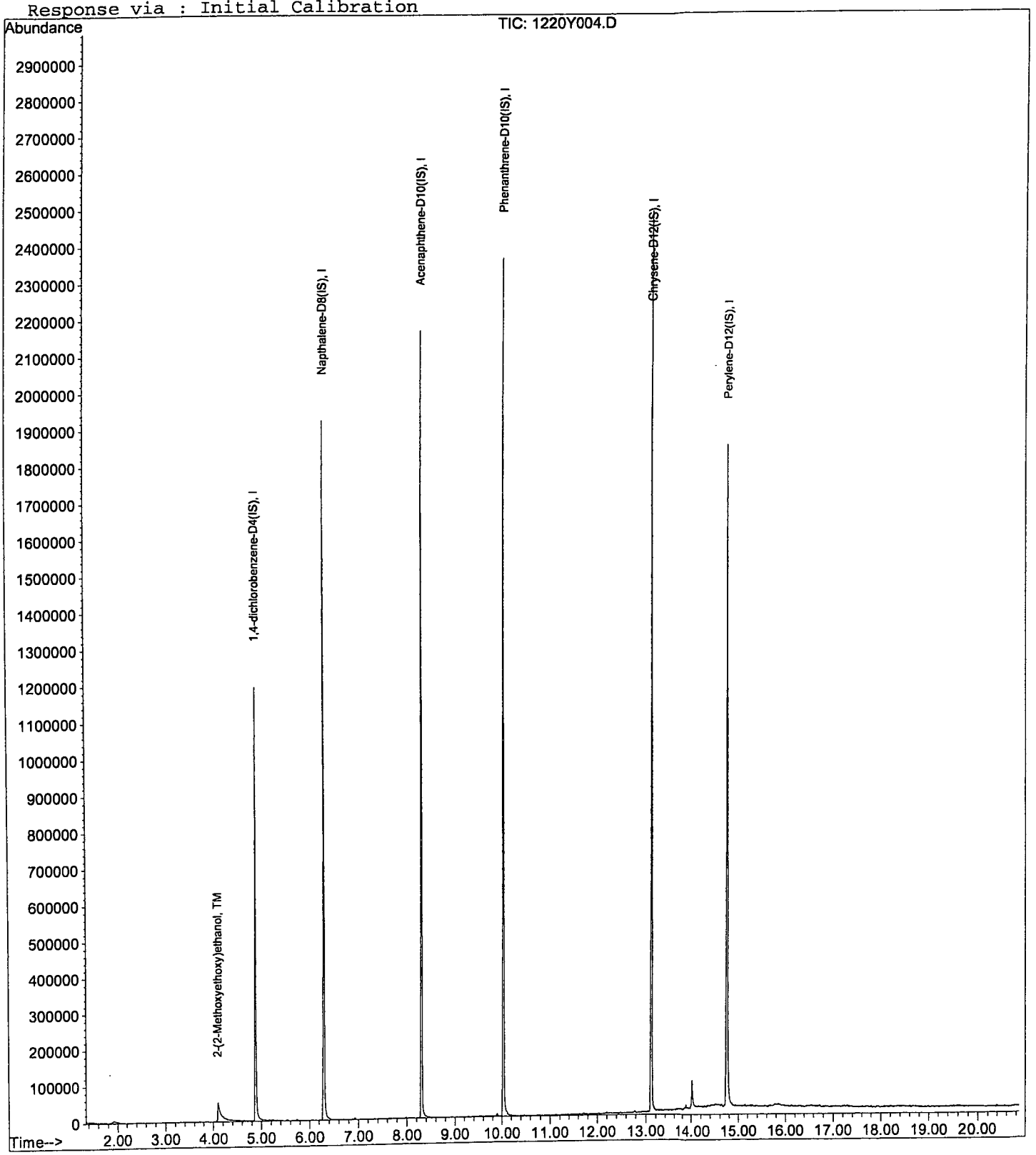
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y004.D
Acq On : 20 Dec 16 10:02
Sample : 100ug/ml DEG 12/20/16
Misc :

Vial: 4
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:28 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:27:52 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y005.D Vial: 5
Acq On : 20 Dec 16 11:27 Operator: MA
Sample : 200ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:31 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:27:52 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	219199	40.00	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	935952	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	541303	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	969145	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.11	240	850962	40.00	ppb	0.00
7) Perylene-D12(IS)	14.75	264	955898	40.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.06	45	234542	199.60	ppb	99

(#) = qualifier out of range (m) = manual integration
1220Y005.D Y0GLYCOL.M Thu Jan 19 15:31:38 2017 Page 1

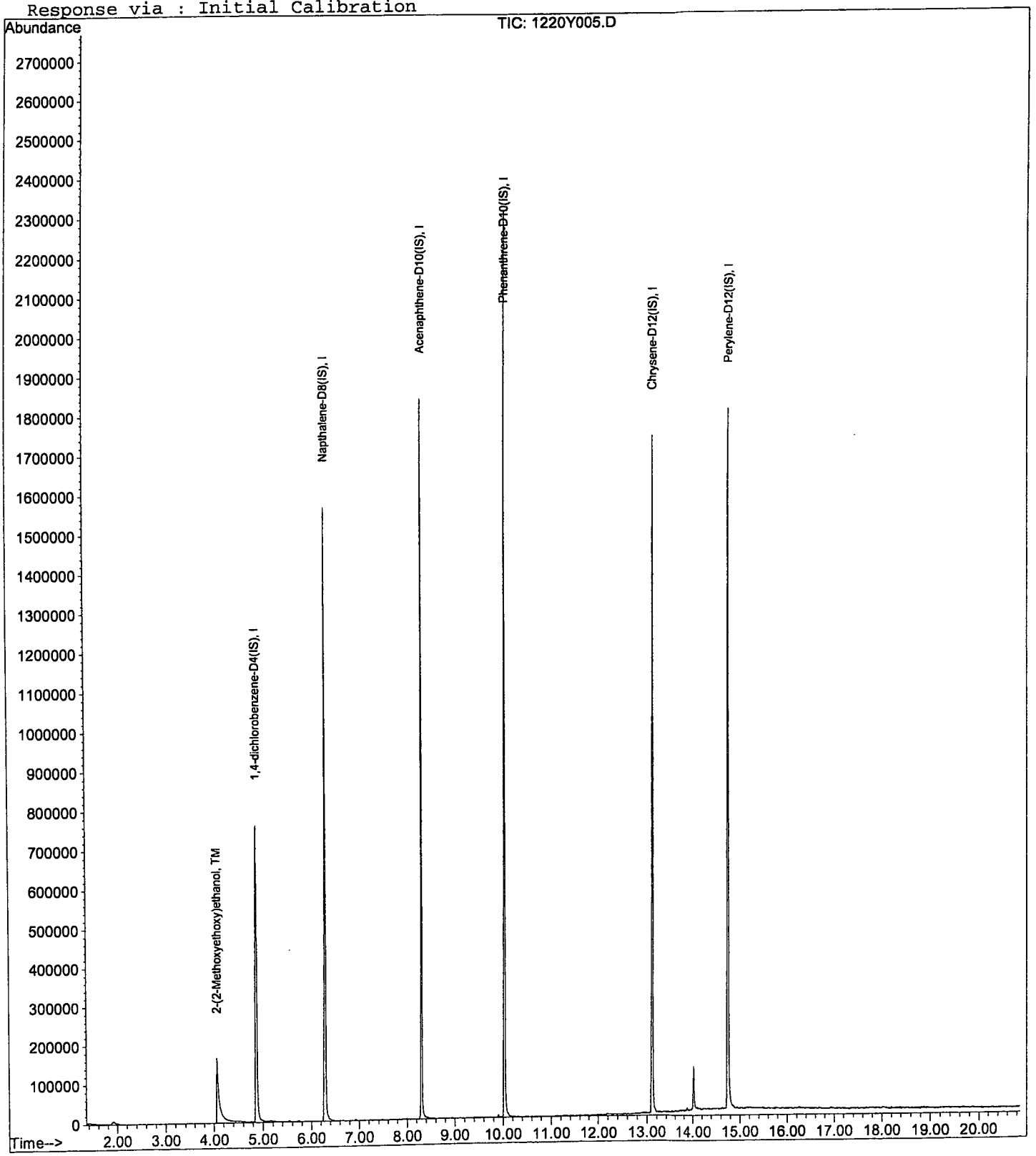
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y005.D
Acq On : 20 Dec 16 11:27
Sample : 200ug/ml DEG 12/20/16
Misc :

Vial: 5
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:31 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:27:52 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y006.D Vial: 6
Acq On : 20 Dec 16 11:57 Operator: MA
Sample : 400ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:31 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:27:52 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	219938	40.00	ppb	-0.02
3) Napthalene-D8(IS)	6.29	136	934708	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	524564	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	930250	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	927639	40.00	ppb	0.00
7) Perylene-D12(IS)	14.74	264	801484	40.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.07	45	495610	420.36	ppb	98

(#) = qualifier out of range (m) = manual integration
1220Y006.D Y0GLYCOL.M Thu Jan 19 15:32:08 2017 Page 1

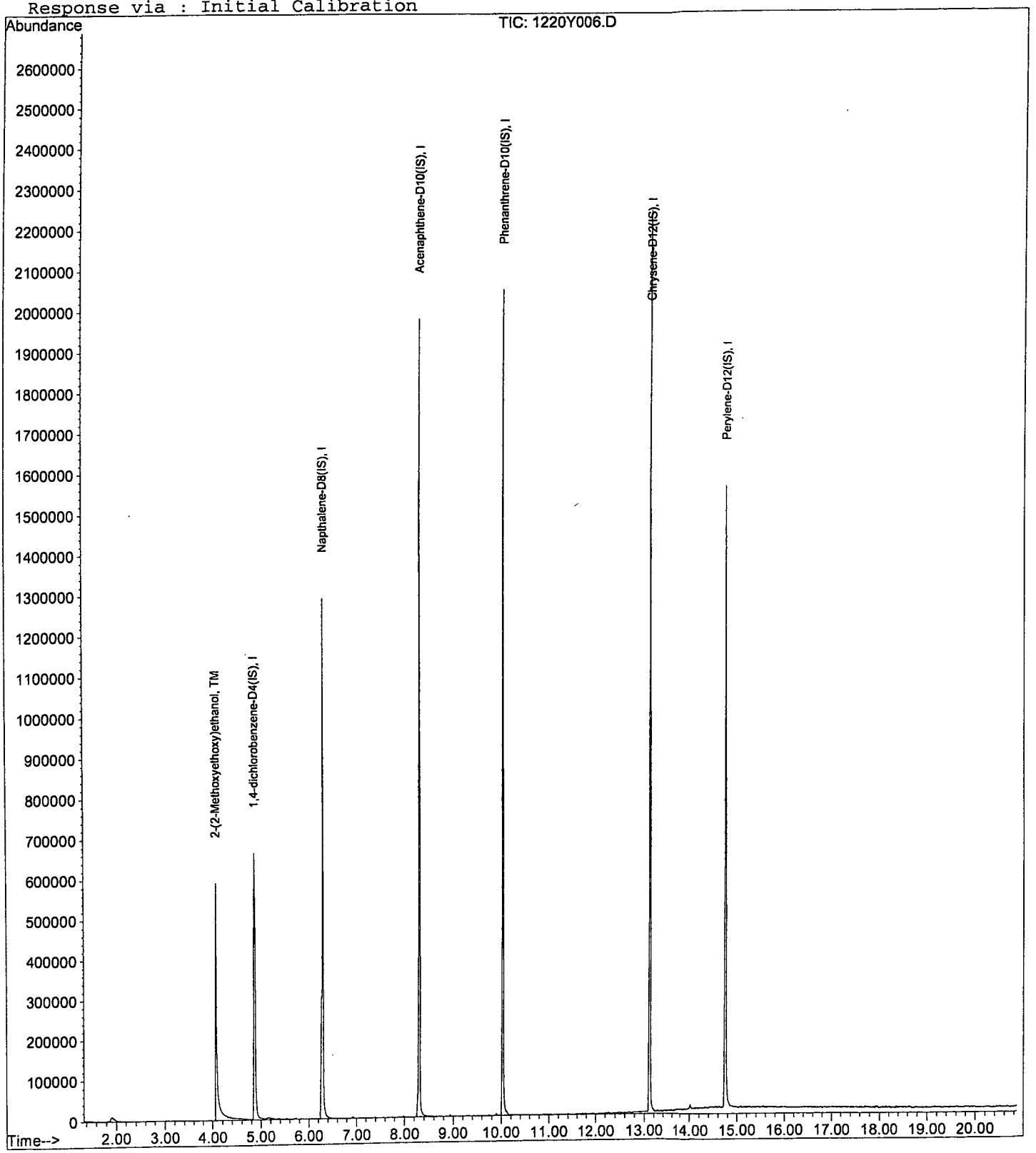
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y006.D
Acq On : 20 Dec 16 11:57
Sample : 400ug/ml DEG 12/20/16
Misc :

Vial: 6
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:31 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:27:52 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y007.D
Acq On : 20 Dec 16 12:27
Sample : 500ug/ml DEG 12/20/16
Misc :

Vial: 7
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:34 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:34:38 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	220710	40.00	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	916121	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	479952	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	893005	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.11	240	850646	40.00	ppb	0.00
7) Perylene-D12(IS)	14.75	264	931322	40.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.07	45	625337	528.53	ppb	100

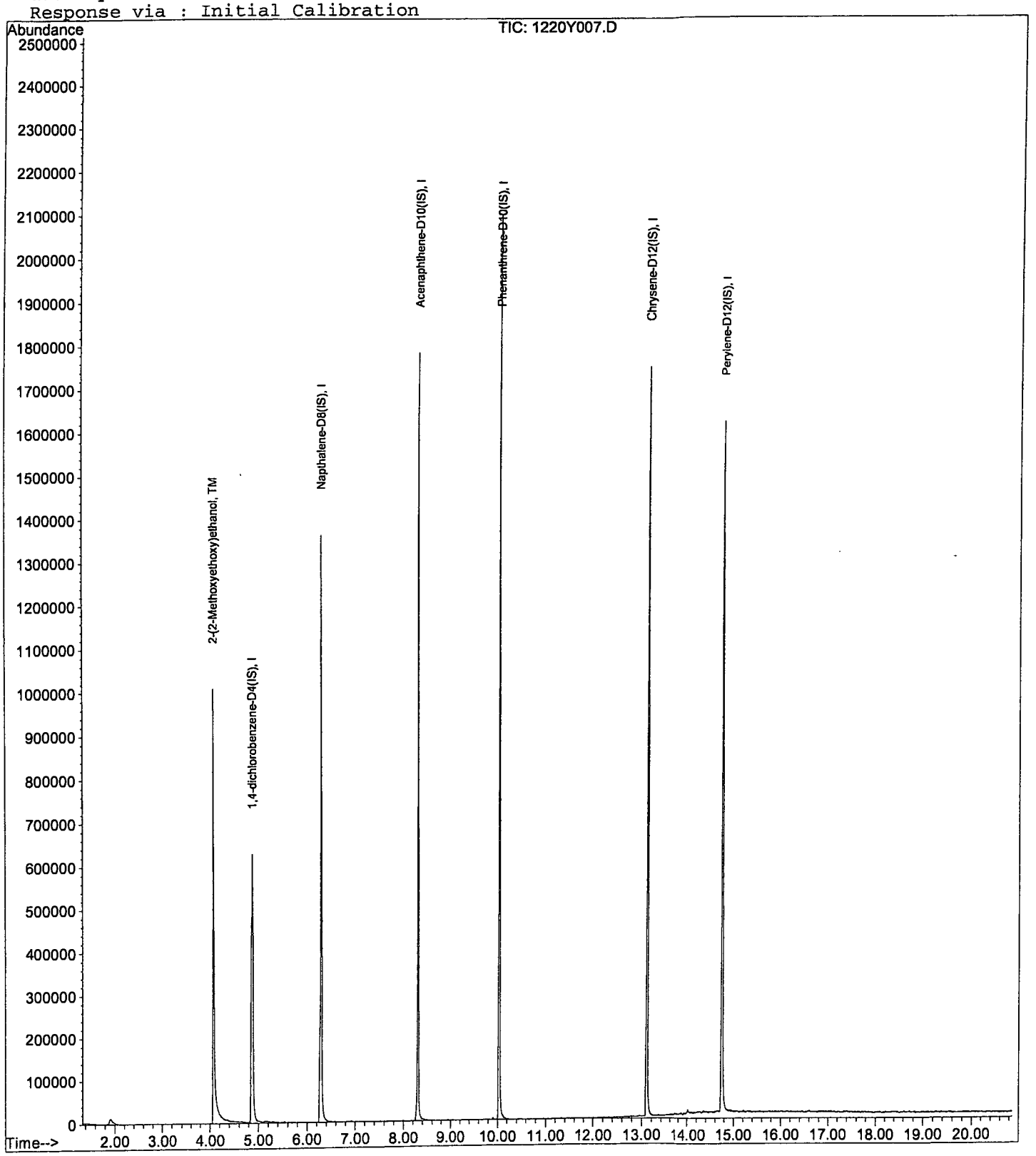
(#) = qualifier out of range (m) = manual integration
1220Y007.D Y0GLYCOL.M Thu Jan 19 15:34:55 2017

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y007.D Vial: 7
Acq On : 20 Dec 16 12:27 Operator: MA
Sample : 500ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:34 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:34:38 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y008.D Vial: 8
Acq On : 20 Dec 16 12:57 Operator: MA
Sample : 600ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:35 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:35:45 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.88	152	218598	40.00 ppb	0.00
3) Napthalene-D8(IS)	6.29	136	918286	40.00 ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	502491	40.00 ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	904865	40.00 ppb	0.00
6) Chrysene-D12(IS)	13.11	240	875224	40.00 ppb	0.00
7) Perylene-D12(IS)	14.75	264	907883	40.00 ppb	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.08	45	767935	655.33 ppb	99

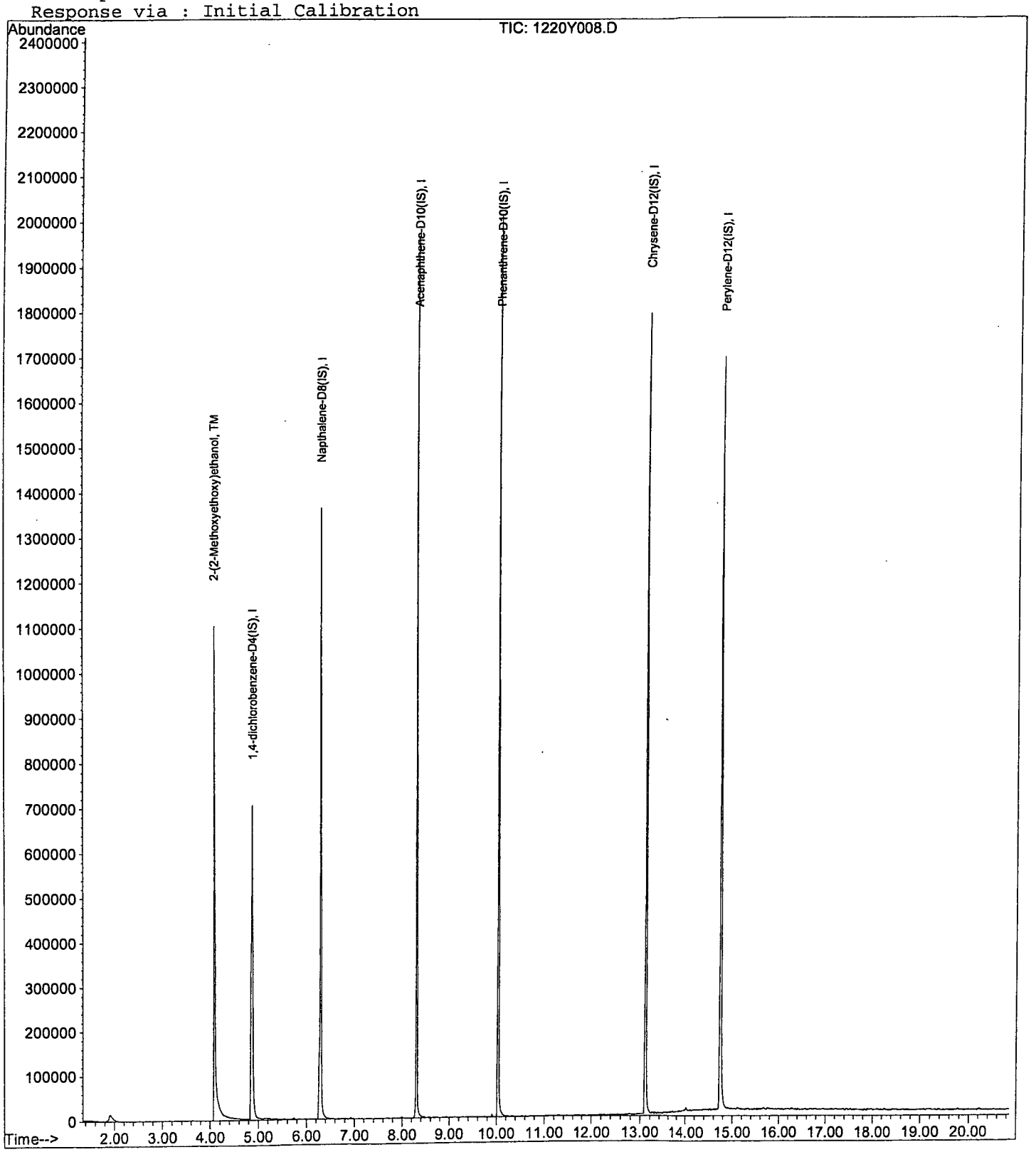
(#) = qualifier out of range (m) = manual integration
1220Y008.D Y0GLYCOL.M Thu Jan 19 15:36:02 2017 Page 1

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y008.D Vial: 8
Acq On : 20 Dec 16 12:57 Operator: MA
Sample : 600ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:35 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:35:45 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y009.D Vial: 9
Acq On : 20 Dec 16 13:28 Operator: MA
Sample : 800ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:36 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:35:45 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.88	152	224351	40.00	ppb	0.01
3) Napthalene-D8(IS)	6.29	136	955028	40.00	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	537186	40.00	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	1003381	40.00	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	910308	40.00	ppb	0.00
7) Perylene-D12(IS)	14.75	264	853883	40.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.09	45	1017711	846.21	ppb	98

(#) = qualifier out of range (m) = manual integration
1220Y009.D Y0GLYCOL.M Thu Jan 19 15:36:33 2017 Page 1

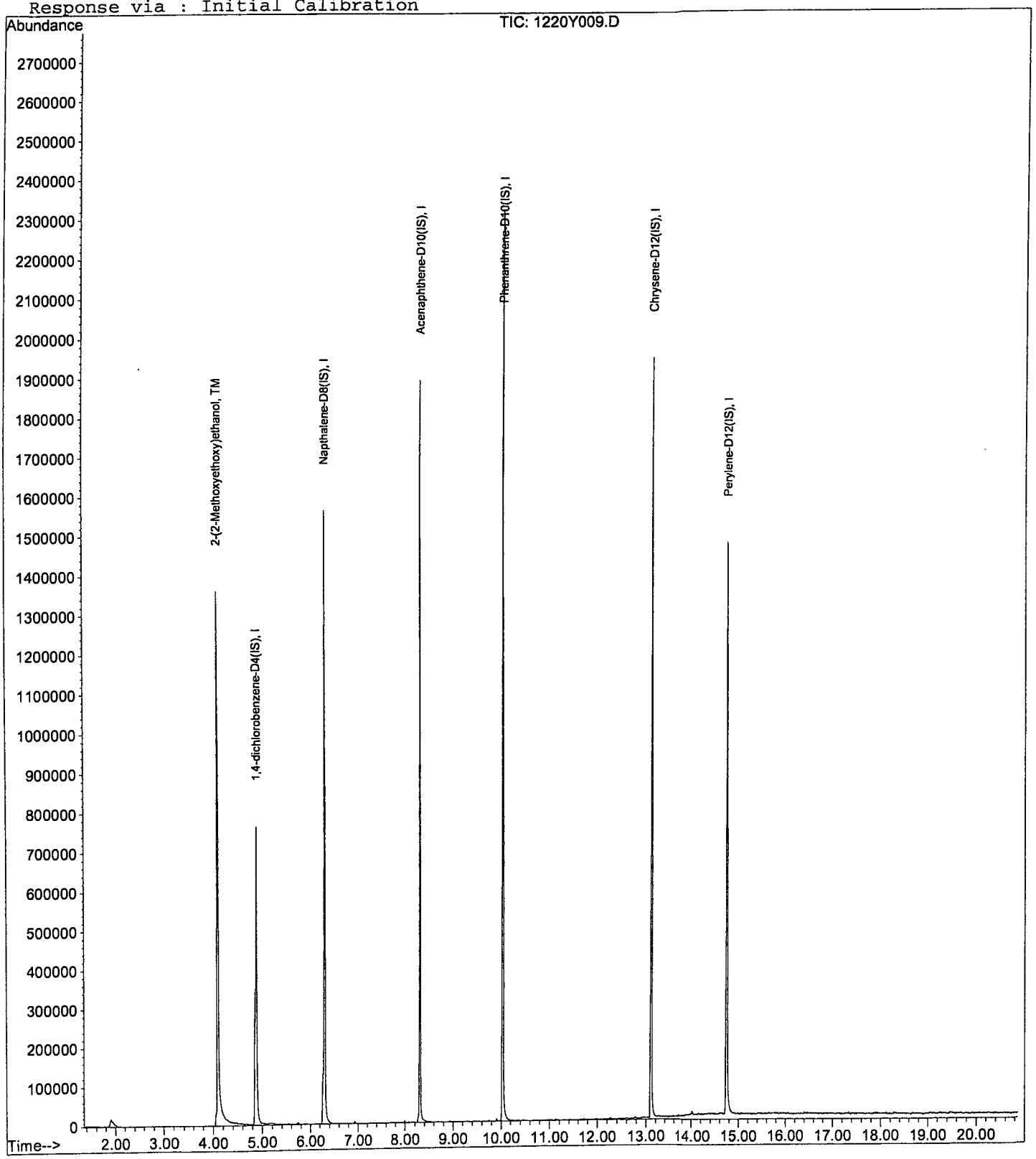
Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y009.D
Acq On : 20 Dec 16 13:28
Sample : 800ug/ml DEG 12/20/16
Misc :

Vial: 9
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:36 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:35:45 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y010.D
Acq On : 20 Dec 16 13:58
Sample : 1000ug/ml DEG 12/20/16
Misc :

Vial: 10
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 15:37 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:35:45 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	283148	40.00 ppb	0.00
3) Napthalene-D8(IS)	6.29	136	1210963	40.00 ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	689185	40.00 ppb	0.00
5) Phenanthrene-D10(IS)	10.03	188	1234610	40.00 ppb	0.00
6) Chrysene-D12(IS)	13.11	240	1201158	40.00 ppb	0.00
7) Perylene-D12(IS)	14.75	264	1162204	40.00 ppb	0.00

System Monitoring Compounds

Target Compounds					Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.12	45	1600487	1054.44 ppb	99

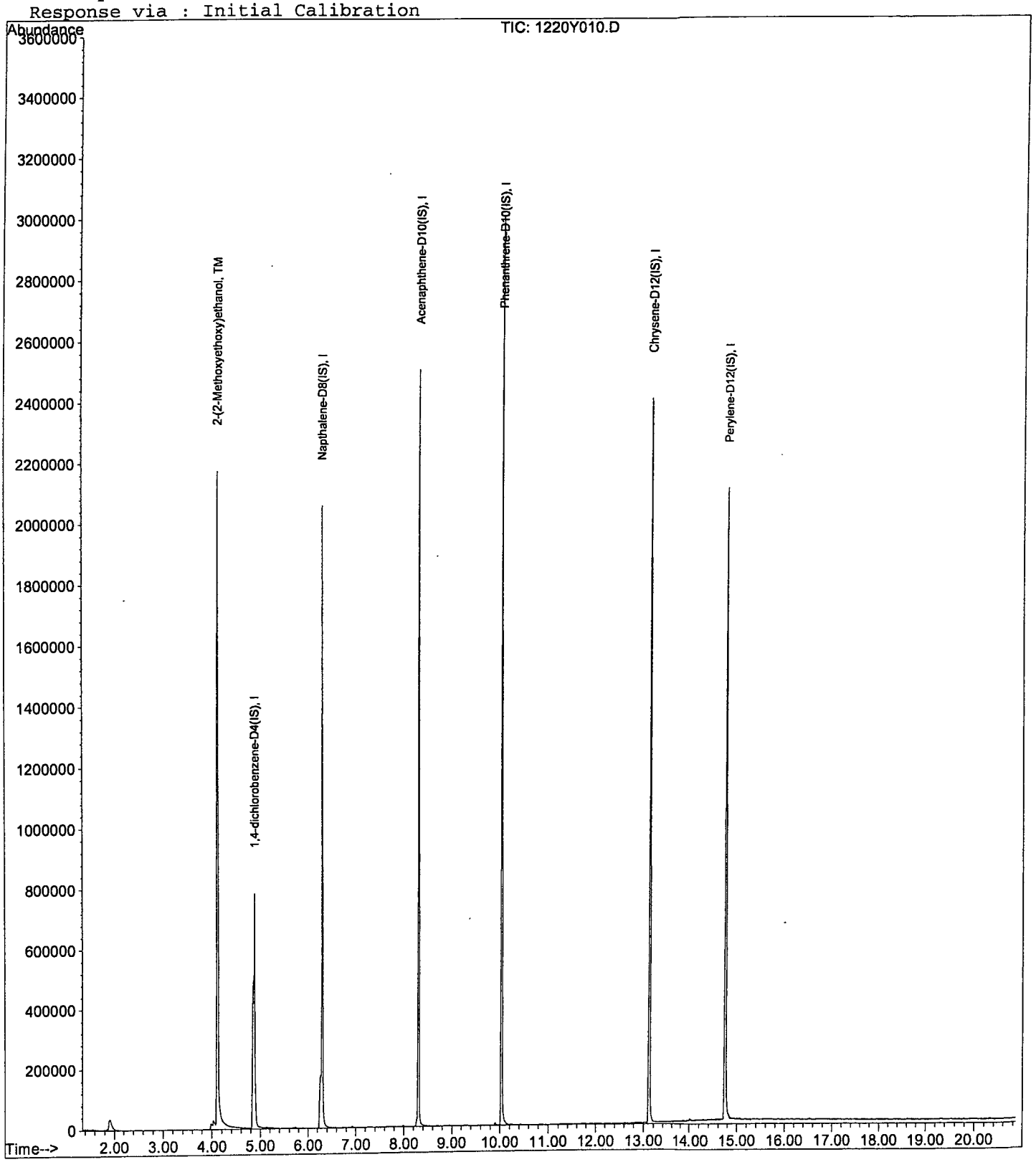
(#) = qualifier out of range (m) = manual integration
1220Y010.D Y0GLYCOL.M Thu Jan 19 15:37:34 2017

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y010.D Vial: 10
Acq On : 20 Dec 16 13:58 Operator: MA
Sample : 1000ug/ml DEG 12/20/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 19 15:37 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 19 15:35:45 2017
Response via : Initial Calibration



Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 12/20/16
Instrument: Yoda
Initial Cal. Date: 12/20/16
Data File: 1220Y011.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TM	2-(2-Methoxyethoxy)ethanol	0.2144	0.2388	11	TM	
2							
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40							
		Average			11.0		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y011.D
Acq On : 20 Dec 16 15:01
Sample : SS2 DEG 12/20/16
Misc :

Vial: 11
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 20 15:16 2016 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Dec 20 14:47:54 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.88	152	226449	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	946039	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.31	164	498527	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	939012	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.11	240	865583	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.75	264	853444	40.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.08	45	676019	556.89065	ppb	99

Algorithm = $\frac{676019 \times 40 \times 1}{226449 \times 0.2144} = 556.9$ MA 12/29/16

(#) = qualifier out of range (m) = manual integration
1220Y011.D Y0GLYCOL.M Wed Dec 21 12:44:47 2016

Quantitation Report

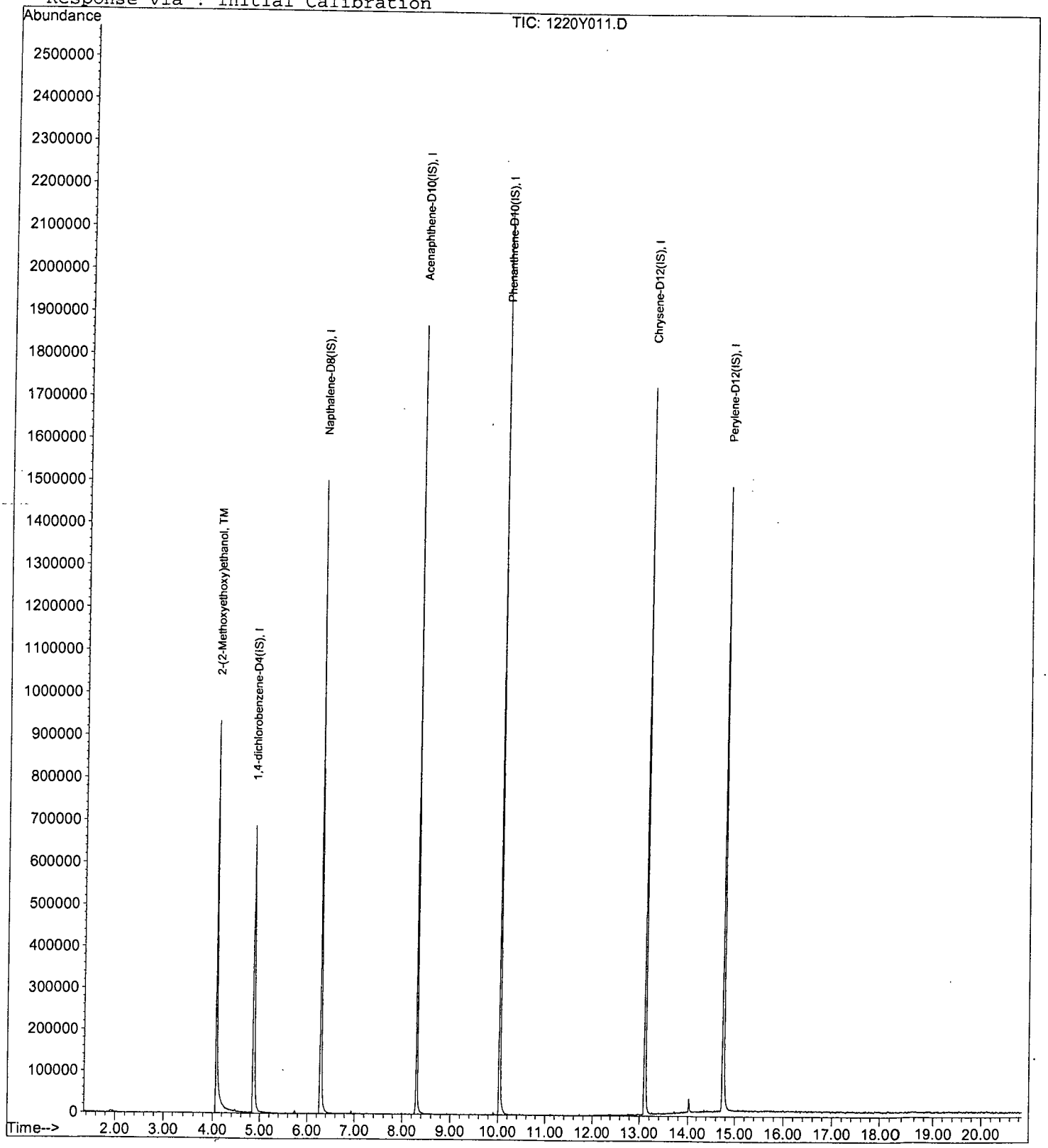
Data File : M:\YODA\DATA\Y161220G\1220Y011.D
Acq On : 20 Dec 16 15:01
Sample : SS2 DEG 12/20/16
Misc :

Vial: 11
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 20 15:16 2016

Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 21 10:52:52 2016
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/19/17
Instrument: Yoda
Initial Cal. Date: 12/20/16
Data File: 1220Y074.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	2-(2-Methoxyethoxy)ethanol	0.2144	0.2423	13	TM	
3	I	Napthalene-D8(IS)	ISTD			I	
4	I	Acenaphthene-D10(IS)	ISTD			I	
5	I	Phenanthrene-D10(IS)	ISTD			I	
6	I	Chrysene-D12(IS)	ISTD			I	
7	I	Perylene-D12(IS)	ISTD			I	
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			13.0		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y074.D Vial: 74
Acq On : 19 Jan 17 8:48 Operator: MA
Sample : 500ug/ml DEG 11/22/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 20 8:51 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 20 08:25:34 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	125616	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	658356	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	384519	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	693160	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	616710	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.74	264	552797	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.06	45	380421	564.93821	ppb	97

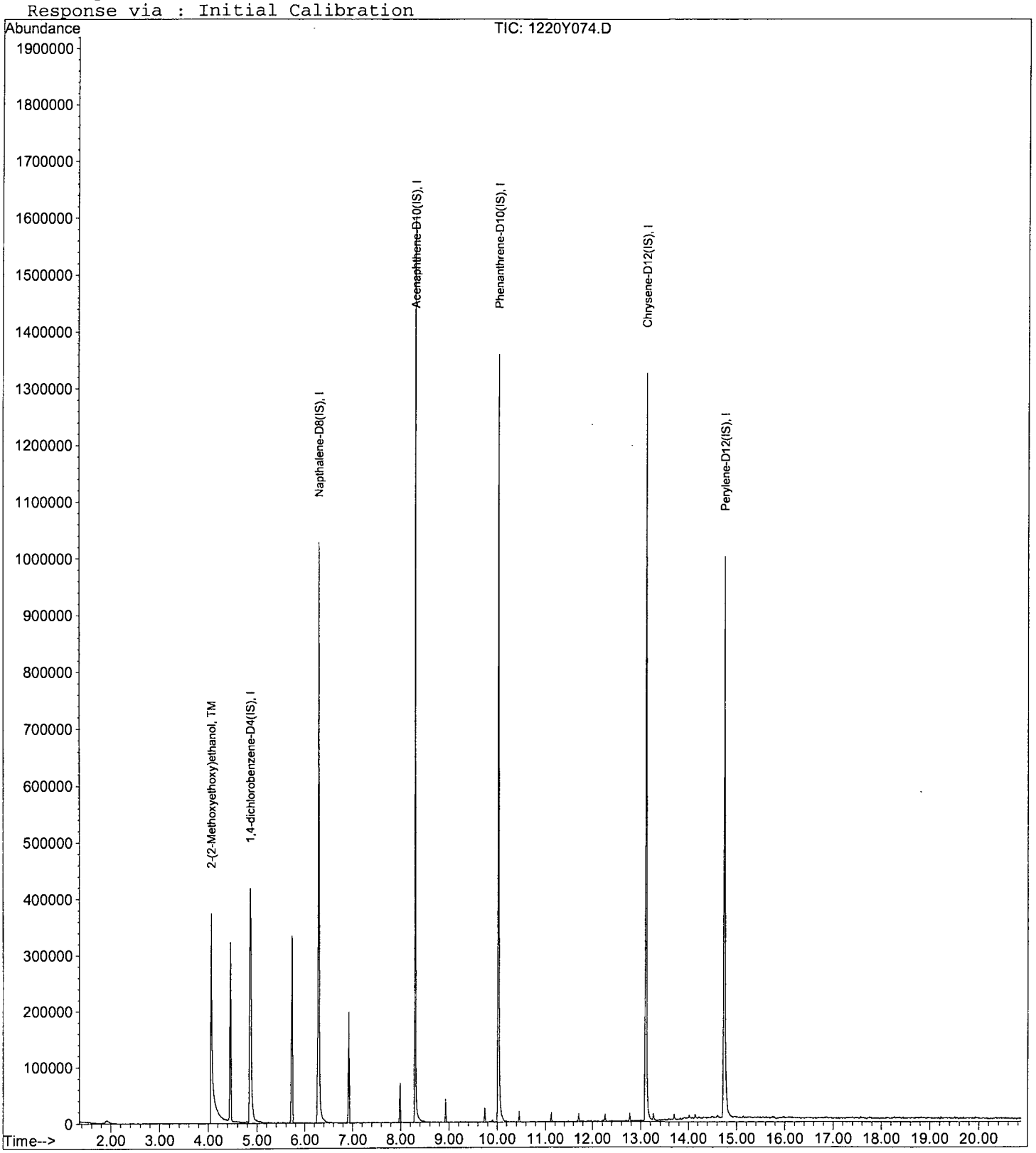
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y074.D Vial: 74
Acq On : 19 Jan 17 8:48 Operator: MA
Sample : 500ug/ml DEG 11/22/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 20 8:51 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 20 08:25:34 2017
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/19/17
Matrix: Instrument: Yoda
Initial Cal. Date: 12/20/16
Data File: 1220Y090.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	2-(2-Methoxyethoxy)ethanol	0.2144	0.1797	16	TM	
3	I	Napthalene-D8(IS)	ISTD			I	
4	I	Acenaphthene-D10(IS)	ISTD			I	
5	I	Phenanthrene-D10(IS)	ISTD			I	
6	I	Chrysene-D12(IS)	ISTD			I	
7	I	Perylene-D12(IS)	ISTD			I	
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			16.0		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y090.D Vial: 90
Acq On : 19 Jan 17 16:43 Operator: MA
Sample : 500ug/ml DEG 11/22/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 23 16:18 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 23 16:17:33 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.88	152	94325	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	464214	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	269042	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	509149	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	467422	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.75	264	384363	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.08	45	211842	418.95433	ppb	100

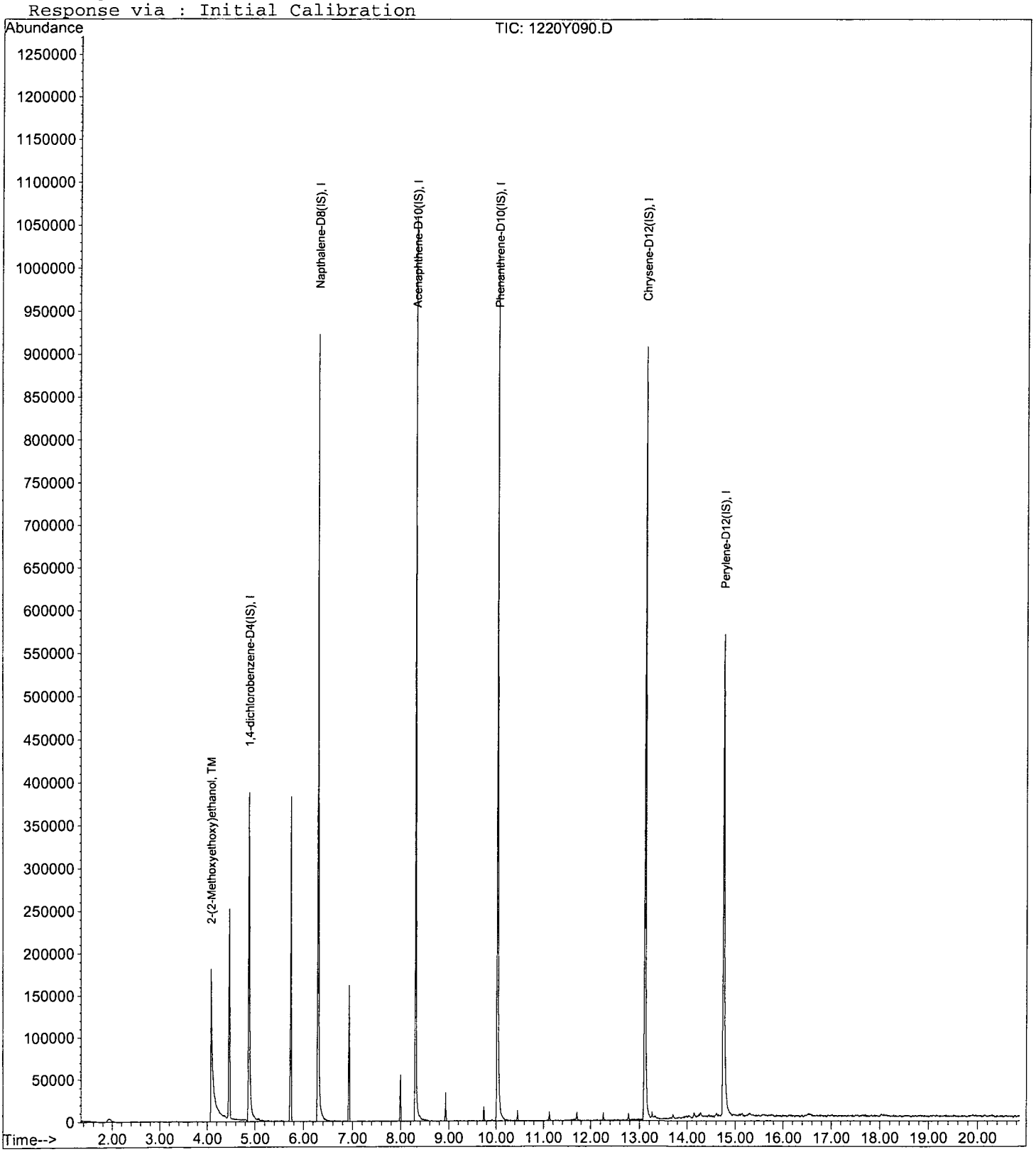
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y090.D Vial: 90
Acq On : 19 Jan 17 16:43 Operator: MA
Sample : 500ug/ml DEG 11/22/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 23 16:18 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 23 16:17:33 2017
Response via : Initial Calibration



ORGANICS

Raw Data

APPL, INC.

Method Blank

EPA 8270D MODIFIED WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **170118W-48915 - 215650**
Batch ID: #87DME-170118A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2-(2-METHOXYETHOXY)-ETHAN	80.0 U	100	80.0	40.0	ug/L	01/18/17	01/19/17

Quant Method:Y0GLYCOL.
Run #:1220Y075
Instrument:Yoda
Sequence:Y161220G
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 01/20/17 12:32:15 PM

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y075.D Vial: 75
Acq On : 19 Jan 17 9:25 Operator: MA
Sample : 170118A BLK 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 20 8:53 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 20 08:25:34 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.88	152	168905	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	749948	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	421436	40.00000	ppb	-0.01
5) Phenanthrene-D10(IS)	10.02	188	818045	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	772188	40.00000	ppb	-0.01
7) Perylene-D12(IS)	14.74	264	668914	40.00000	ppb	-0.01

System Monitoring Compounds

Target Compounds Qvalue

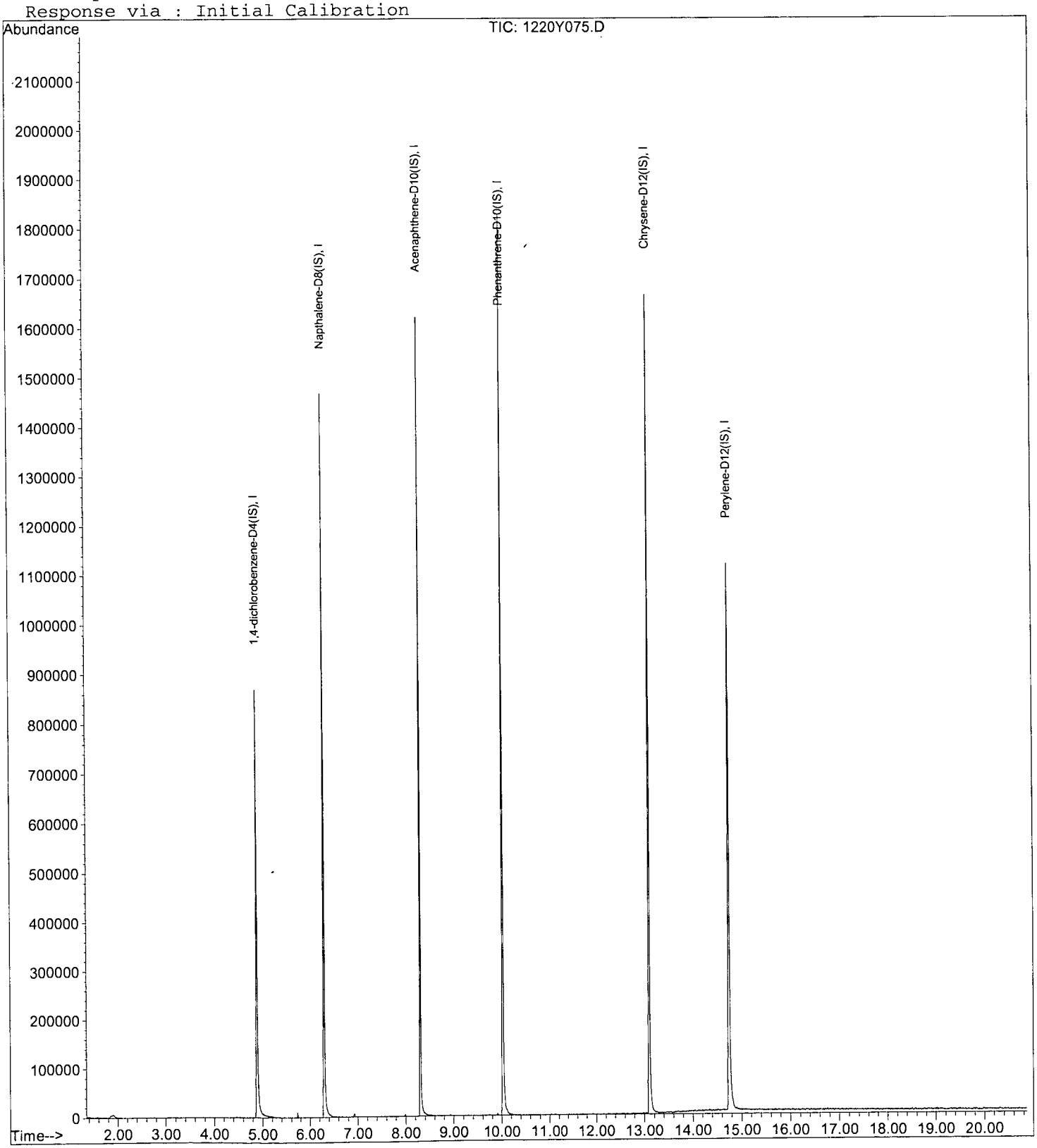
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y075.D Vial: 75
Acq On : 19 Jan 17 9:25 Operator: MA
Sample : 170118A BLK 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 20 8:53 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 20 12:27:23 2017
Response via : Initial Calibration



Laboratory Control Spike Recovery
EPA 8270D MODIFIED WATER

APPL ID: **170118W-48915 LCS - 215650**
Batch ID: #87DME-170118A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
2-(2-METHOXYETHOXY)-ETHANOL	80.0	41.2	51.5	30-130

Comments: _____

Primary	SPK
Quant Method :	Y0GLYCOL.M
Extraction Date :	01/18/17
Analysis Date :	01/19/17
Instrument :	Yoda
Run :	1220Y076
Initials :	MA

Printed: 01/20/17 12:32:16 PM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161220G\1220Y076.D Vial: 76
Acq On : 19 Jan 17 9:55 Operator: MA
Sample : 170118A LCS-1 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 20 8:53 2017 Quant Results File: Y0GLYCOL.RES

Quant Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 20 08:53:44 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.88	152	178372	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.29	136	789086	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.30	164	450383	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.02	188	814159	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.10	240	776756	40.00000	ppb	0.00
7) Perylene-D12(IS)	14.74	264	709284	40.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.22	45	39396	41.20092	ppb	100

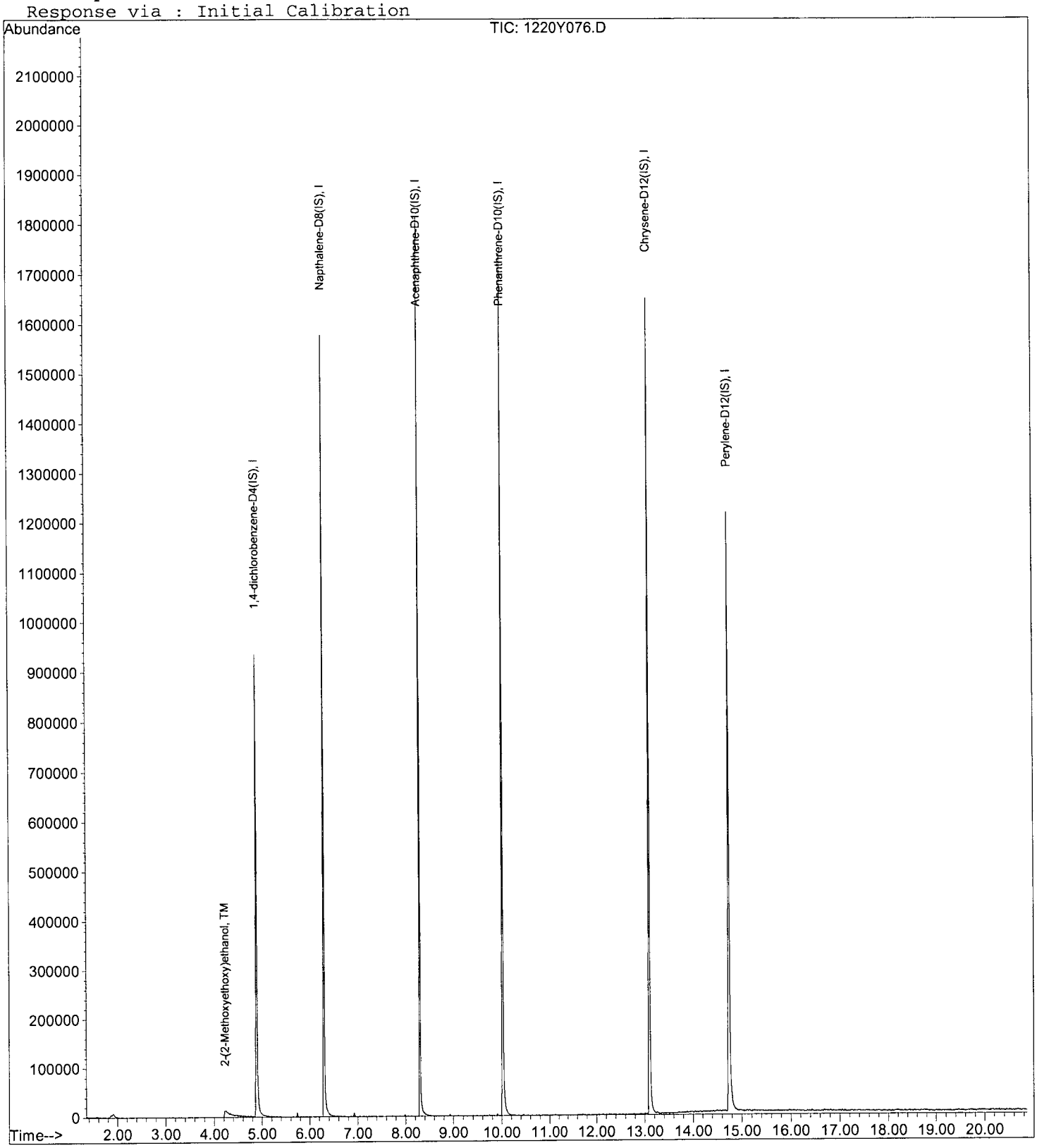
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161220G\1220Y076.D Vial: 76
Acq On : 19 Jan 17 9:55 Operator: MA
Sample : 170118A LCS-1 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 20 8:53 2017 Quant Results File: Y0GLYCOL.RES

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 20 12:27:23 2017
Response via : Initial Calibration

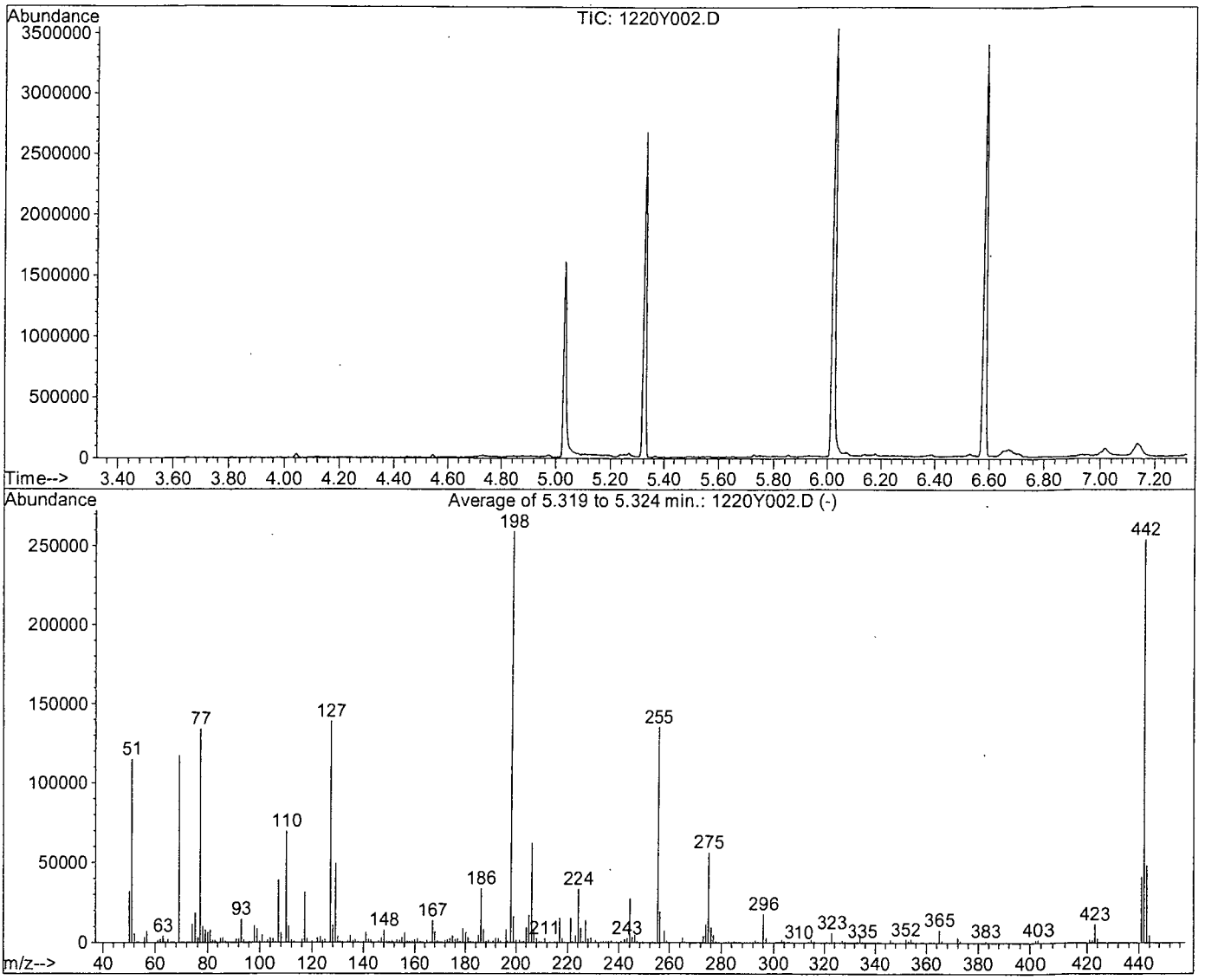


DFTPP

Data File : M:\YODA\DATA\Y161220G\1220Y002.D
Acq On : 20 Dec 16 9:12
Sample : SV Tune 11/15/16
Misc :

Vial: 2
Operator: MA
Inst : Yoda
Multiplr: 1.00

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C



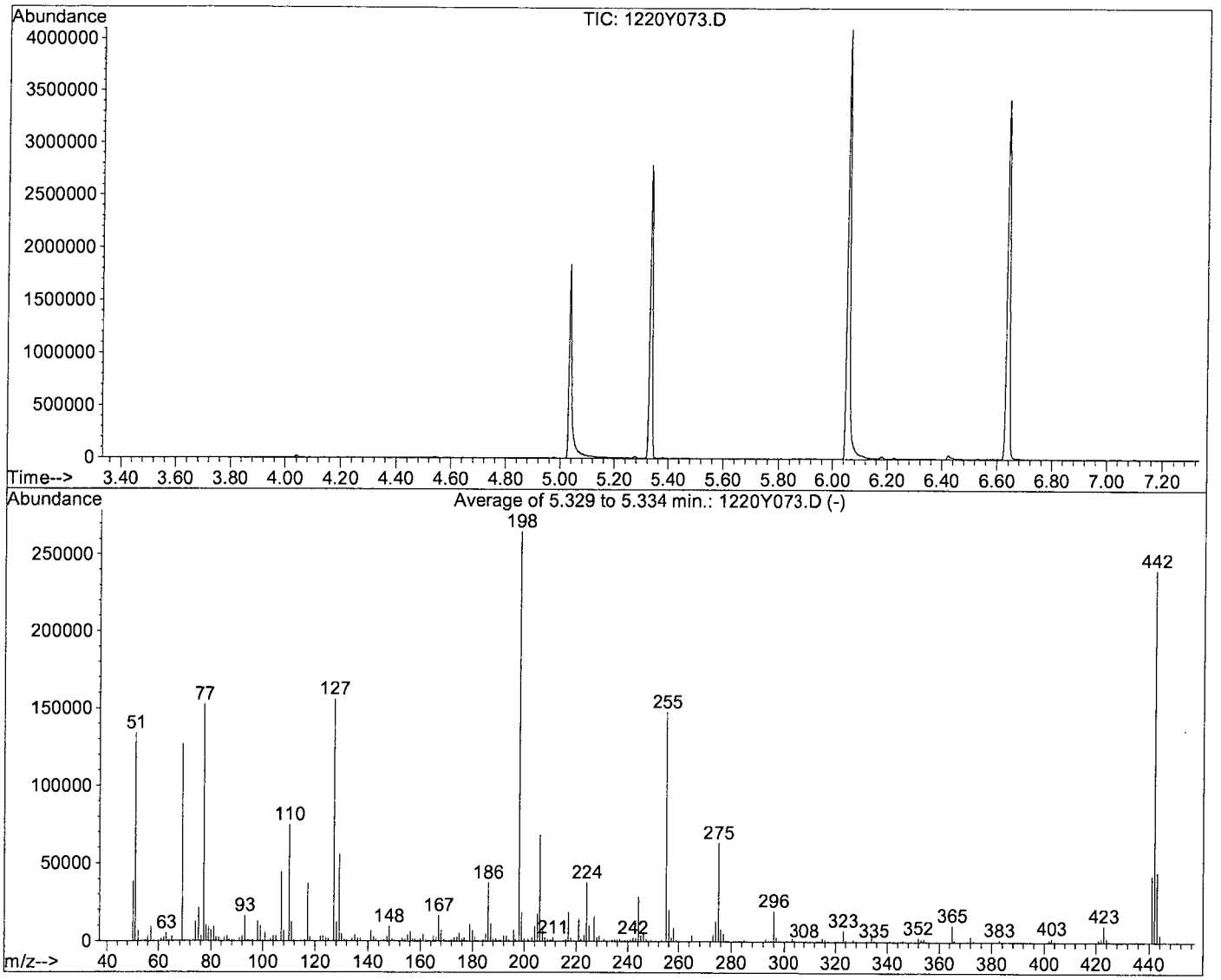
AutoFind: Scans 694, 695, 696; Background Corrected with Scan 686

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	44.4	115264	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.0	0	PASS
127	198	40	60	53.6	139077	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	259413	PASS
199	198	5	9	6.3	16297	PASS
275	198	10	30	21.8	56493	PASS
365	198	1	100	3.0	7796	PASS
441	443	0.01	100	85.0	41237	PASS
442	198	50	150	98.0	254272	PASS
443	442	17	23	19.1	48539	PASS

Data File : M:\YODA\DATA\Y161220G\1220Y073.D
Acq On : 19 Jan 17 8:31
Sample : SV Tune 11/15/16
Misc : water

Vial: 73
Operator: MA
Inst : Yoda
Multiplr: 1.00

Method : M:\YODA\DATA\Y161220G\Y0GLYCOL.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 698, 699, 700; Background Corrected with Scan 689

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	50.4	133885	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.6	747	PASS
127	198	40	60	58.7	155797	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	265387	PASS
199	198	5	9	6.9	18439	PASS
275	198	10	30	23.9	63421	PASS
365	198	1	100	4.0	10541	PASS
441	443	0.01	100	94.8	42952	PASS
442	198	50	150	90.6	240469	PASS
443	442	17	23	18.8	45328	PASS

1220Y073.D Y0GLYCOL.M Thu Jan 19 09:09:09 2017

GED Curve

PREP DATE:	21/20/16 RH											
8270 Standard Curve												
Exp:	2/11/17					**50**	**100**	**200**	**400**	**500**	**600**	**800**
		Conc.		Date								
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL	µL	µL	µL	µL
	GED MSTD Std	2000	VAR	*12/19/16	11/18/17	5	5	10	20	50	30	40
EM Science	Methanol		010616			195	95	90	80	150	70	60
Supelco	SV Internal	2000	A14020V-3660	11/09/16	11/09/17	4	2	2	2	4	2	2
				Final Vol.		204	102	102	102	204	102	102

GED Second Source (SS)

PREP DATE:	12/20/16 RH					**500**
Exp:	1/18/17	Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
	GED MSS Std	2000	VAR	12/19/16	10/27/17	50
EM Science	Methanol		010616			150
Supelco	SV Internal	2000	A14020V-3660	11/09/16	11/09/17	4
				Final Vol.		204

→ MSS extracted on 12/19/16 using HEE Stock 9/27/17
HA 12/29/16

* Method Std. extracted on 12/19/16 using Std 11/18/16
HA 12/29/16

1000
μL
50
50
2
102

Diethylene Glycol						
Prep: 11/18/16 -GA Ex: 11/18/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
Diethylene glycol monomethyl ether	2000 ug/ml	AcuuStandard Cat# S-72273 Lot# 216101007-37091 and 37092 Op: 11/18/16 EX: 11/1817	2.0 mL	4 ml	1000 ug/ml	Methanol Lot# 010616A

Methoxyethoxyethanol-Neat (MEE) Stock: 9/27/16-R.H. ex: 09/27/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
MEE	Neat 99.5%	HEM SERVIC	0.1154g	10 mL	11540 ug/ml	MC
		Cat: N-12404-1G				
		Lot: 5259000-37082				
		OP: 09/27/16				
		EXP: 09/27/17				

0.087ml were spiked in 500ml of water and extracted on 10/27/16. Final concentration is 2000ug/ml

_MWE2MEE

Organic Extraction Worksheet

Method	Solid Phase Extraction of 2MEE in Water	Extraction Set	170118A	Extraction Method	MWE2MEE	Units	mL

Spiked ID 1	Diethylene Glycol 11/18/16 exp 11/18/17		Surrogate ID 1		
Spiked ID 2	MEE 11540ug/mL 9-27-16		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	01/18/17 8:50	
Spiked ID 8			Ext. End Time:	01/18/17 14:20	
			GC Requires Extract By:	01/20/17 0:00	

pH1			Water Bath Temp Criteria	
pH2				
pH3				

Spiked By: DL **Date** 01/18/17 **Witnessed By:** CFM **Date** 01/18/17

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	170118A Blk				NA	NA equip	500	2	7	01/18/17 8:50	
2	170118A LCS-1		0.040	1	NA	NA equip	500	2	7	01/18/17 8:50	
3	170118A LCSD-1		0.040	1	NA	NA equip	500	2	7	01/18/17 8:50	
4	AZ48866 MS-1	AZ48866W25	0.040	1	NA	NA equip	500	2	7	01/18/17 8:50	81965
5	AZ48866 MSD-1	AZ48866W25	0.040	1	NA	NA equip	500	2	7	01/18/17 8:50	81965
6	AZ48915	AZ48915W11			NA	NA equip	500	2	7	01/18/17 8:50	81971 RUSH 1 WEEK
7	AZ48916	AZ48916W17			NA	NA equip	500	2	7	01/18/17 8:50	81971 RUSH 1 WEEK
8	AZ48921	AZ48921W10			NA	NA equip	500	2	7	01/18/17 8:50	81971 RUSH 1 WEEK
9	AZ48925	AZ48925W10			NA	NA equip	500	2	7	01/18/17 8:50	81971 RUSH 1 WEEK
10	SS		0.0870	2	NA	NA equip	500	2	7	01/18/17 8:50	

KY 1/18/17

Solvent and Lot#	
ENVI-Carb Plus 400MG/1ML	.
Reverible Tube Lot:	8088704
PH Strip	HC 574756
Di Water	1-18-17
Dichloromethane	56153
Methanol	060316C

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	RH
Date	1/18/17
Time	4:20
Refrigerator	GC-C

	Technician's Initials
Scanned By	CFM
Sample Preparation	CFM
Extraction	CFM
Concentration	----------

Modified	01/18/17 12:37:27 PM

Reviewed By: KY **Date** 1/18/17

Injection Log

Directory: M:\YODA\DATA\Y161220G\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	1220Y002.D	1	SV Tune 11/15/16		20 Dec 16 9:12
2	3	1220Y003.D	1	50ug/ml DEG 12/20/16		20 Dec 16 9:32
3	4	1220Y004.D	1	100ug/ml DEG 12/20/16		20 Dec 16 10:02
4	5	1220Y005.D	1	200ug/ml DEG 12/20/16		20 Dec 16 11:27
5	6	1220Y006.D	1	400ug/ml DEG 12/20/16		20 Dec 16 11:57
6	7	1220Y007.D	1	500ug/ml DEG 12/20/16		20 Dec 16 12:27
7	8	1220Y008.D	1	600ug/ml DEG 12/20/16		20 Dec 16 12:57
8	9	1220Y009.D	1	800ug/ml DEG 12/20/16		20 Dec 16 13:28
9	10	1220Y010.D	1	1000ug/ml DEG 12/20/16		20 Dec 16 13:58
10	11	1220Y011.D	1	SS2 DEG 12/20/16		20 Dec 16 15:01
11	73	1220Y073.D	1	SV Tune 11/15/16	water	19 Jan 17 8:31
12	74	1220Y074.D	1	500ug/ml DEG 11/22/16	water	19 Jan 17 8:48
13	75	1220Y075.D	1	170118A BLK 2/500	water	19 Jan 17 9:25
14	76	1220Y076.D	1	170118A LCS-1 2/500	water	19 Jan 17 9:55
15	81	1220Y081.D	1	AZ48915W11 2/500	water	19 Jan 17 12:27
16	82	1220Y082.D	1	AZ48916W17 2/500	water	19 Jan 17 12:57
17	83	1220Y083.D	1	AZ48921W10 2/500	water	19 Jan 17 13:28
18	84	1220Y084.D	1	AZ48925W10 2/500	water	19 Jan 17 13:58
19	90	1220Y090.D	1	500ug/ml DEG 11/22/16	water	19 Jan 17 16:43

GC APPL

From: Sharon Dehmlow [sdehmlow@applinc.com]
Sent: Friday, January 20, 2017 1:42 PM
To: Libby Anderson
Cc: Renée Patterson; APPL - GC
Subject: Red Hill 81971

Hi Lib,
Would you please tell Margie that for Red Hill 81971 (F1s due today), the closing CCV for 8270-MEE did not pass for Internal standard last night. The 2-MEE analyte DID pass for the CCV at 16%D, but the IS was below range.

We can either report the CCV with failing IS or we could use an LCS as the closing CCV for this set of samples. The LCS as CCV passes at <10%D, but it is below the ICAL because this project wants the LCS spiked at the LOD.

We can go either route, but we are going to report final F1s today for this data.

Sincerely,

Sharon Dehmlow
Quality Assurance Director

Agriculture & Priority Pollutants Laboratories, Inc.
WOSB. NELAP Accredited.

t. 559.275-2175 f. 559.275-4422
a. 908 N. Temperance Ave., Clovis, CA 93611

Website • Email

DoD accredited for ISM, Dioxins and PCB congeners.

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ORGANICS

APPL, INC.

ORGANICS

QC Summary

APPL, INC.

Method Blank
EPA 8270D WATER

Blank Name/QCG: **170116W-48866 - 215607**
Batch ID: #87DC5-170116A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/16/17	01/18/17
BLANK	SURROGATE: 2,4,6-TRIBROMOP	55.9	43-140			%	01/16/17	01/18/17
BLANK	SURROGATE: 2-FLUORBIPHENY	54.2	44-119			%	01/16/17	01/18/17
BLANK	SURROGATE: 2-FLUOROPHENO	28.0	19-119			%	01/16/17	01/18/17
BLANK	SURROGATE: NITROBENZENE-	60.1	44-120			%	01/16/17	01/18/17
BLANK	SURROGATE: PHENOL-D6 (S)	15.9	10-115			%	01/16/17	01/18/17
BLANK	SURROGATE: TERPHENYL-D14 (	63.0	50-134			%	01/16/17	01/18/17

Quant Method:Y1207.M
Run #:1207Y323
Instrument:Yoda
Sequence:Y161207
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 01/19/17 12:20:29 PM

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81971

Case No: 81971 Date Analyzed: 01/18/17

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2,4,6-TRIBROMOPHENOL (S)			SURROGATE: 2-FLUORBIPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
170116A-BLK	Blank	43-140	55.9		44-119	54.2	
170116A-LCS	Lab Control Spike	43-140	67.0		44-119	65.9	
AZ48915	ERH172	43-140	55.0		44-119	52.3	
AZ48916	ERH178	43-140	59.4		44-119	53.2	
AZ48921	ERH181	43-140	50.1		44-119	49.4	
AZ48925	ERH184	43-140	55.5		44-119	59.4	

Comments: Batch: #87DC5-170116A

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81971

Case No: 81971 Date Analyzed: 01/18/17

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2-FLUOROPHENOL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
170116A-BLK	Blank	19-119	28.0		44-120	60.1	
170116A-LCS	Lab Control Spike	19-119	35.8		44-120	71.3	
AZ48915	ERH172	19-119	24.6		44-120	58.0	
AZ48916	ERH178	19-119	31.1		44-120	66.3	
AZ48921	ERH181	19-119	28.1		44-120	58.5	
AZ48925	ERH184	19-119	24.6		44-120	60.5	

Comments: Batch: #87DC5-170116A

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81971

Case No: 81971 Date Analyzed: 01/18/17

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: PHENOL-D6 (S)			SURROGATE: TERPHENYL-D14 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
170116A-BLK	Blank	10-115	15.9		50-134	63.0	
170116A-LCS	Lab Control Spike	10-115	21.9		50-134	69.5	
AZ48915	ERH172	10-115	14.6		50-134	55.5	
AZ48916	ERH178	10-115	18.1		50-134	57.7	
AZ48921	ERH181	10-115	15.4		50-134	54.6	
AZ48925	ERH184	10-115	15.5		50-134	63.2	

Comments: Batch: #87DC5-170116A

Laboratory Control Spike Recovery
EPA 8270D WATER

APPL ID: **170116W-48866 LCS - 215607**
Batch ID: #87DC5-170116A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
PHENOL	50.0	13.8	27.6	10-115
SURROGATE: 2,4,6-TRIBROMOPHENOL	200	134	67.0	43-140
SURROGATE: 2-FLUORBIPHENYL (S)	100	65.9	65.9	44-119
SURROGATE: 2-FLUOROPHENOL (S)	200	71.5	35.8	19-119
SURROGATE: NITROBENZENE-D5 (S)	100	71.3	71.3	44-120
SURROGATE: PHENOL-D6 (S)	200	43.9	21.9	10-115
SURROGATE: TERPHENYL-D14 (S)	100	69.5	69.5	50-134

Comments: _____

Primary	SPK
Quant Method :	Y1207.M
Extraction Date :	01/16/17
Analysis Date :	01/18/17
Instrument :	Yoda
Run :	1207Y324
Initials :	MA

Printed: 01/19/17 12:20:32 PM
APPL Standard LCS

EPA 8270D

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81971

Case No: 81971 Date Analyzed: 01/18/17

Matrix: WATER Instrument: Yoda

Blank ID: 170116A-BLK Time Analyzed: 1021

APPL ID.	Client Sample No.	File ID.	Date Analyzed
170116A-BLK	Blank	1207Y323	01/18/17 1021
170116A-LCS	Lab Control Spike	1207Y324	01/18/17 1051
AZ48915	ERH172	1207Y338	01/18/17 1752
AZ48916	ERH178	1207Y339	01/18/17 1823
AZ48921	ERH181	1207Y340	01/18/17 1853
AZ48925	ERH184	1207Y341	01/18/17 1923

Comments: Batch: #87DC5-170116A

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81971 RH 1/25/17
Matrix: water
ID: SV Tune 10/19/16

SDG No: 81971 RH 1/25/17
Date Analyzed: 12/07/16
Instrument: Yoda
Time Analyzed: 9:00

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		5ug/ml SVOC 12/06/16	1207Y004.D	12/07/16 10:01
2		10ug/ml SVOC 12/06/1	1207Y005.D	12/07/16 10:32
3		20ug/ml SVOC 12/06/1	1207Y006.D	12/07/16 11:02
4		40ug/ml SVOC 12/06/1	1207Y007.D	12/07/16 11:32
5		50ug/ml SVOC 12/06/1	1207Y008.D	12/07/16 12:02
6		60ug/ml SVOC 12/06/1	1207Y009.D	12/07/16 12:32
7		80ug/ml SVOC 12/06/1	1207Y010.D	12/07/16 13:02
8		100ug/ml SVOC 12/06/	1207Y011.D	12/07/16 13:32
9		2ND SRC SVOC 12/06/1	1207Y012.D	12/07/16 14:01
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	46.7
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.7
127	40 - 60% of mass 198	56.0
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 197.95	100.0
199	5 - 9% of mass 198	6.9
275	10 - 30% of mass 198	24.0
365	1 - 100% of mass 198	3.1
441	0.01 - 100% of mass 443	86.4
442	50 - 150% of mass 197.95	90.6
443	17 - 23% of mass 442	20.1

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81971
Matrix: Water
ID: SV Tune 10/19/16

SDG No: 81971
Date Analyzed: 01/18/17
Instrument: Yoda
Time Analyzed: 9:34

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		50ug/ml SVOC 12/06/1	1207Y322.D	01/18/17 9:51
2	Blank	170116A BLK 1/1000	1207Y323.D	01/18/17 10:21
3	Lab Control Spike	170116A LCS-1 1/1000	1207Y324.D	01/18/17 10:51
4	ERH172	AZ48915W12 1/1070	1207Y338.D	01/18/17 17:52
5	ERH178	AZ48916W14 1/1070	1207Y339.D	01/18/17 18:23
6	ERH181	AZ48921W11 1/1070	1207Y340.D	01/18/17 18:53
7	ERH184	AZ48925W14 1/1070	1207Y341.D	01/18/17 19:23
8		50ug/ml SVOC 12/06/1	1207Y343.D	01/18/17 20:07
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	49.3
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.3
127	40 - 60% of mass 198	57.1
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 197.95	100.0
199	5 - 9% of mass 198	6.7
275	10 - 30% of mass 198	24.0
365	1 - 100% of mass 198	3.8
441	0.01 - 100% of mass 443	90.9
442	50 - 150% of mass 197.95	99.3
443	17 - 23% of mass 442	18.2

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 81971

Lab File ID (Standard): 1207Y008.D Date Analyzed: 7 Dec 16 12:02

Instrument ID: Yoda Time Analyzed: 7 Dec 16 12:02

GC Column: _____ ID: Heated Purge: (Y/N) _____

		1,4-dichlorobenzene-D4(IS)		Napthalene-D8(IS)		Acenaphthene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	195270	4.87	816895	6.30	475200	8.31
	UPPER LIMIT	390540	5.37	1633790	6.80	950400	8.81
	LOWER LIMIT	97635	4.37	408448	5.80	237600	7.81
	SAMPLE NO.						
01	50ug/ml SVOC 12/06/16	172673	4.86	734012	6.29	439505	8.30
02	170116A BLK 1/1000	182902	4.86	778724	6.28	473403	8.30
03	170116A LCS-1 1/1000	186036	4.86	781993	6.29	478032	8.31
04	AZ48915W12 1/1070	175519	4.86	726827	6.29	439866	8.30
05	AZ48916W14 1/1070	169454	4.86	765912	6.29	451432	8.30
06	AZ48921W11 1/1070	170611	4.86	750201	6.29	471082	8.30
07	AZ48925W14 1/1070	177743	4.86	772609	6.29	443241	8.30
08	50ug/ml SVOC 12/06/16	175309	4.87	725071	6.29	446031	8.30
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81971

Lab File ID (Standard): 1207Y008.D Date Analyzed: 7 Dec 16 12:02

Instrument ID: Yoda Time Analyzed: 7 Dec 16 12:02

GC Column: ID: Heated Purge: (Y/N)

		Phenanthrene-D10(IS)		Chrysene-D12(IS)		Perylene-D12(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	975541	10.03	853105	13.10	871056	14.75
	UPPER LIMIT	1951082	10.53	1706210	13.60	1742112	15.25
	LOWER LIMIT	487771	9.53	426553	12.60	435528	14.25
	SAMPLE NO.						
01	50ug/ml SVOC 12/06/16	815236	10.02	801078	13.11	831799	14.75
02	170116A BLK 1/1000	848343	10.03	801392	13.10	823061	14.74
03	170116A LCS-1 1/1000	873294	10.02	868088	13.10	912966	14.75
04	AZ48915W12 1/1070	789688	10.02	830020	13.10	816372	14.74
05	AZ48916W14 1/1070	851757	10.02	878300	13.10	847752	14.75
06	AZ48921W11 1/1070	846859	10.02	902744	13.10	887165	14.74
07	AZ48925W14 1/1070	868719	10.02	879662	13.10	881303	14.74
08	50ug/ml SVOC 12/06/16	873838	10.03	832155	13.11	868174	14.75
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

ORGANICS

Sample Data

APPL, INC.

EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH172
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48915
QCG: #87DC5-170116A-215607

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	55.0	43-140			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	52.3	44-119			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	24.6	19-119			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	58.0	44-120			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: PHENOL-D6 (S)	14.6	10-115			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	55.5	50-134			%	01/16/17	01/18/17

Quant Method: Y1207.M
Run #: 1207Y338
Instrument: Yoda
Sequence: Y161207
Dilution Factor: 1
Initials: MA

Printed: 01/19/17 12:20:51 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y338.D Vial: 38
Acq On : 18 Jan 17 17:52 Operator: MA
Sample : AZ48915W12 1/1070 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 19 8:05 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	175519	40.00000	ppb	0.00
20) Napthalene-D8(IS)	6.29	136	726827	40.00000	ppb	0.00
40) Acenaphthene-D10(IS)	8.30	164	439866	40.00000	ppb	0.00
64) Phenanthrene-D10(IS)	10.02	188	789688	40.00000	ppb	0.00
78) Chrysene-D12(IS)	13.10	240	830020	40.00000	ppb	0.00
88) Perylene-D12(IS)	14.74	264	816372	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.34	112	283760	49.14536	ppb	0.00
Spiked Amount 200.000			Recovery =	24.573%		
5) Phenol-D6 (S)	4.51	99	222387	29.18197	ppb	0.00
Spiked Amount 200.000			Recovery =	14.591%		
21) Nitrobenzene-D5(S)	5.49	82	427192	57.98352	ppb	0.00
Spiked Amount 100.000			Recovery =	57.984%		
45) 2-Fluorobiphenyl(S)	7.53	172	725617	52.32881	ppb	0.00
Spiked Amount 100.000			Recovery =	52.329%		
63) 2,4,6-Tribromophenol(S)	9.23	330	242460	109.93439	ppb	0.00
Spiked Amount 200.000			Recovery =	54.967%		
81) Terphenyl-D14(S)	11.89	244	1041320	55.48198	ppb	0.00
Spiked Amount 100.000			Recovery =	55.482%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

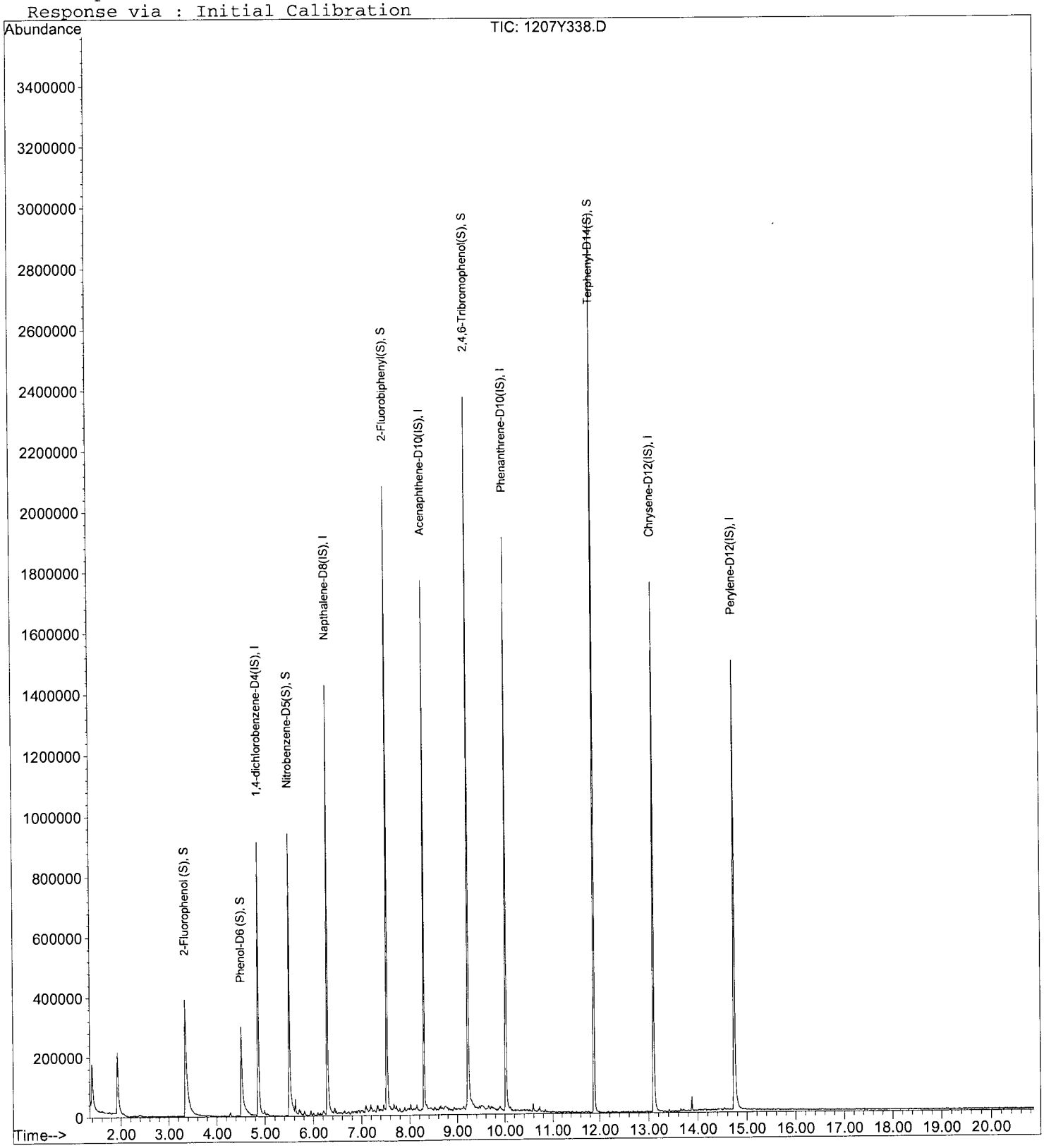
Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y338.D
Acq On : 18 Jan 17 17:52
Sample : AZ48915W12 1/1070
Misc : water

Vial: 38
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 8:05 2017 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration



EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH178
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48916
QCG: #87DC5-170116A-215607

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	59.4	43-140			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	53.2	44-119			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	31.1	19-119			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	66.3	44-120			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: PHENOL-D6 (S)	18.1	10-115			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	57.7	50-134			%	01/16/17	01/18/17

Quant Method: Y1207.M
Run #: 1207Y339
Instrument: Yoda
Sequence: Y161207
Dilution Factor: 1
Initials: MA

Printed: 01/19/17 12:20:52 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y339.D Vial: 39
Acq On : 18 Jan 17 18:23 Operator: MA
Sample : AZ48916W14 1/1070 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 19 8:06 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	169454	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.29	136	765912	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.30	164	451432	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.02	188	851757	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.10	240	878300	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.75	264	847752	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.34	112	346960	62.24193 ppb	0.00
Spiked Amount 200.000			Recovery	= 31.121%	
5) Phenol-D6 (S)	4.51	99	266017	36.15654 ppb	0.00
Spiked Amount 200.000			Recovery	= 18.079%	
21) Nitrobenzene-D5(S)	5.49	82	514549	66.27663 ppb	0.00
Spiked Amount 100.000			Recovery	= 66.277%	
45) 2-Fluorobiphenyl(S)	7.53	172	757639	53.23825 ppb	0.00
Spiked Amount 100.000			Recovery	= 53.238%	
63) 2,4,6-Tribromophenol(S)	9.22	330	268789	118.74984 ppb	0.00
Spiked Amount 200.000			Recovery	= 59.375%	
81) Terphenyl-D14(S)	11.89	244	1146631	57.73472 ppb	0.00
Spiked Amount 100.000			Recovery	= 57.735%	

Target Compounds Qvalue

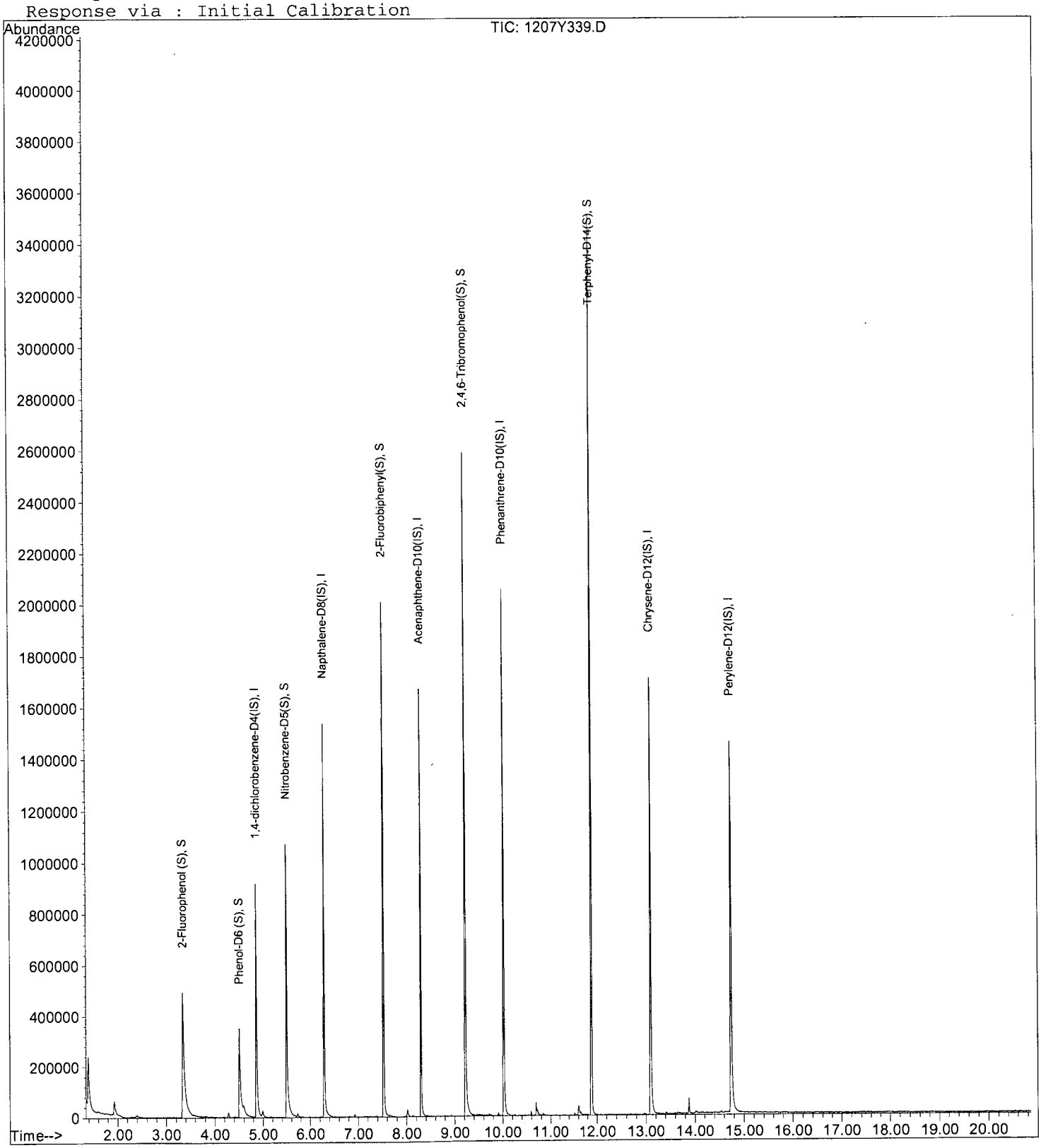
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y339.D Vial: 39
Acq On : 18 Jan 17 18:23 Operator: MA
Sample : AZ48916W14 1/1070 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 19 8:06 2017 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration



EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH181
Sample Collection Date: 01/12/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48921
QCG: #87DC5-170116A-215607

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	50.1	43-140			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	49.4	44-119			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	28.1	19-119			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	58.5	44-120			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: PHENOL-D6 (S)	15.4	10-115			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	54.6	50-134			%	01/16/17	01/18/17

Quant Method: Y1207.M
Run #: 1207Y340
Instrument: Yoda
Sequence: Y161207
Dilution Factor: 1
Initials: MA

Printed: 01/19/17 12:20:52 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y340.D Vial: 40
Acq On : 18 Jan 17 18:53 Operator: MA
Sample : AZ48921W11 1/1070 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 19 8:07 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	170611	40.00000	ppb	0.00
20) Napthalene-D8(IS)	6.29	136	750201	40.00000	ppb	0.00
40) Acenaphthene-D10(IS)	8.30	164	471082	40.00000	ppb	0.00
64) Phenanthrene-D10(IS)	10.02	188	846859	40.00000	ppb	0.00
78) Chrysene-D12(IS)	13.10	240	902744	40.00000	ppb	0.00
88) Perylene-D12(IS)	14.74	264	887165	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.34	112	314864	56.10111	ppb	0.00
Spiked Amount 200.000			Recovery =	28.051%		
5) Phenol-D6 (S)	4.51	99	228790	30.88583	ppb	0.00
Spiked Amount 200.000			Recovery =	15.443%		
21) Nitrobenzene-D5(S)	5.49	82	444799	58.49230	ppb	0.00
Spiked Amount 100.000			Recovery =	58.492%		
45) 2-Fluorobiphenyl(S)	7.54	172	734166	49.43694	ppb	0.00
Spiked Amount 100.000			Recovery =	49.437%		
63) 2,4,6-Tribromophenol(S)	9.22	330	236672	100.19920	ppb	0.00
Spiked Amount 200.000			Recovery =	50.100%		
81) Terphenyl-D14(S)	11.89	244	1113748	54.56053	ppb	0.00
Spiked Amount 100.000			Recovery =	54.561%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

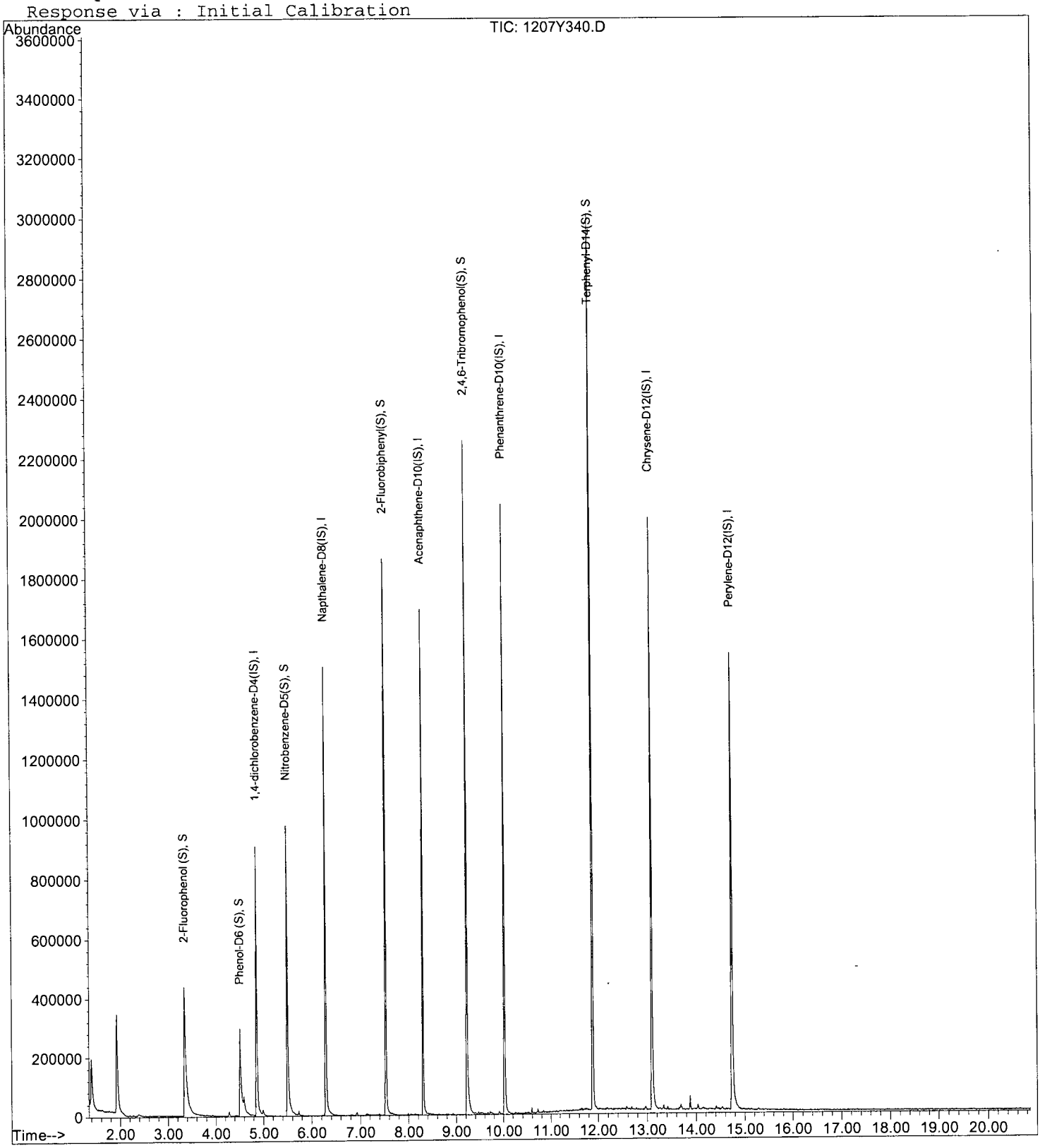
Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y340.D
Acq On : 18 Jan 17 18:53
Sample : AZ48921W11 1/1070
Misc : water

Vial: 40
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 19 8:07 2017 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration



EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH184
Sample Collection Date: 01/12/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48925
QCG: #87DC5-170116A-215607

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	55.5	43-140			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	59.4	44-119			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	24.6	19-119			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	60.5	44-120			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: PHENOL-D6 (S)	15.5	10-115			%	01/16/17	01/18/17
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	63.2	50-134			%	01/16/17	01/18/17

Quant Method: Y1207.M
Run #: 1207Y341
Instrument: Yoda
Sequence: Y161207
Dilution Factor: 1
Initials: MA

Printed: 01/19/17 12:20:52 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y341.D Vial: 41
Acq On : 18 Jan 17 19:23 Operator: MA
Sample : AZ48925W14 1/1070 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 19 8:08 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	177743	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.29	136	772609	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.30	164	443241	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.02	188	868719	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.10	240	879662	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.74	264	881303	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.34	112	287566	49.18135 ppb	0.00
Spiked Amount 200.000			Recovery =	24.591%	
5) Phenol-D6 (S)	4.51	99	238993	30.96863 ppb	0.00
Spiked Amount 200.000			Recovery =	15.485%	
21) Nitrobenzene-D5(S)	5.49	82	473787	60.49729 ppb	0.00
Spiked Amount 100.000			Recovery =	60.497%	
45) 2-Fluorobiphenyl(S)	7.53	172	829292	59.35009 ppb	0.00
Spiked Amount 100.000			Recovery =	59.350%	
63) 2,4,6-Tribromophenol(S)	9.23	330	246502	110.91605 ppb	0.00
Spiked Amount 200.000			Recovery =	55.458%	
81) Terphenyl-D14(S)	11.89	244	1257331	63.21062 ppb	0.00
Spiked Amount 100.000			Recovery =	63.211%	

Target Compounds Qvalue

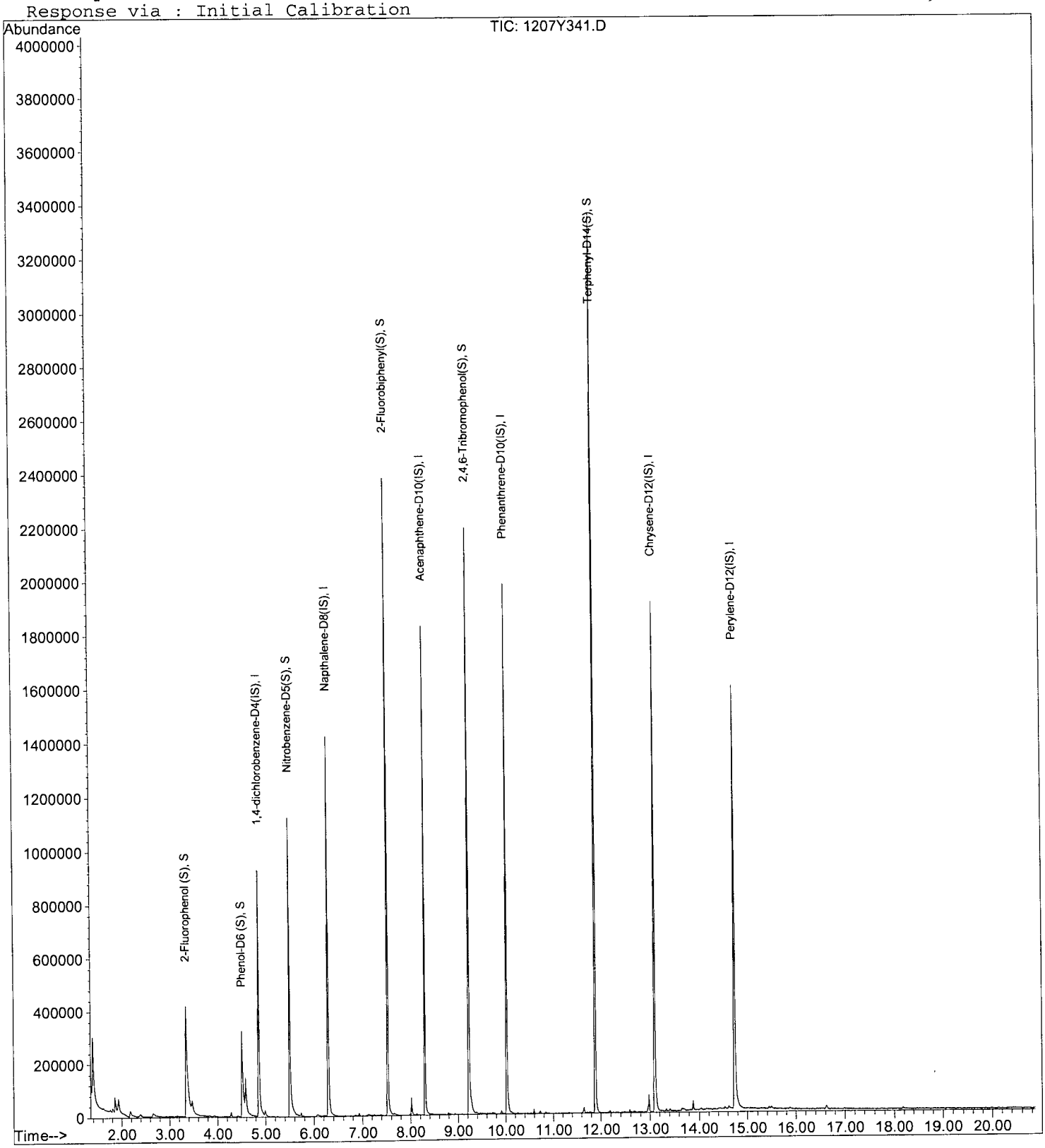
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y341.D Vial: 41
Acq On : 18 Jan 17 19:23 Operator: MA
Sample : AZ48925W14 1/1070 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 19 8:08 2017 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration



ORGANICS

Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/07/16
Matrix: Instrument: Yoda
Initials:

		Compound	1207Y004.D 5	1207Y005.D 10	1207Y006.D 20	1207Y007.D 40	1207Y008.D 50	1207Y009.D 60	1207Y010.D 80	1207Y011.D 100			Avg	%RSD		
1	I	1,4-dichlorobenzene-D4(IS)														
2	TM	n-Nitrosodimethylamine	0.7148	0.8188	0.8173	0.8076	0.8521	0.7243	0.8231	0.7956			0.79	6.2	TM	
3	TM	Pyridine	1.581	1.725	1.660	1.936	2.046	1.751	1.878	1.777			1.8	8.5	TM	
4	S	2-Fluorophenol (S)	1.066	1.299	1.267	1.425	1.424	1.318	1.385	1.343			1.3	8.8	S	
5	S	Phenol-D6 (S)	1.822	1.785	1.823	1.762	1.706	1.655	1.706	1.635			1.7	4.2	S	
6	*TM	Phenol	1.948	1.915	2.075	2.002	1.967	1.942	2.023	1.918			2.0	2.8	*TM	
7	TM	Aniline	1.776	1.833	1.896	1.887	1.869	1.829	1.983	1.872			1.9	3.2	TM	
8	TM	Bis (2-chloroethyl) ether	0.8418	0.7909	0.9135	0.8982	0.8478	0.8563	0.9089	0.8610			0.86	4.7	TM	
9	TM	2-Chlorophenol	1.635	1.632	1.616	1.577	1.518	1.543	1.572	1.517			1.6	3.1	TM	
10	TM	1,3-DCB	1.660	1.666	1.674	1.664	1.624	1.596	1.569	1.586			1.6	2.6	TM	
11	*TM	1,4-DCB	1.785	1.781	1.664	1.660	1.668	1.607	1.666	1.605			1.7	4.1	*TM	
12	TM	Benzyl alcohol	0.7838	0.8402	0.9167	0.8614	0.9167	0.8803	0.8909	0.8835			0.87	5.0	TM	
13	TM	1,2-DCB	1.611	1.557	1.581	1.484	1.593	1.492	1.515	1.463			1.5	3.6	TM	
14	TM	2-Methylphenol	1.082	1.139	1.181	1.118	1.137	1.110	1.083	1.109			1.1	2.9	TM	
15	TM	Bis (2-chloroisopropyl) ether	1.873	1.751	1.831	1.685	1.738	1.688	1.621	1.595			1.7	5.6	TM	
16	TM	Acetophenone	2.043	2.072	2.030	2.015	2.091	2.047	2.025	2.028			2.0	1.3	TM	
17	TM	3&4-Methylphenol	1.558	1.530	1.459	1.440	1.525	1.448	1.459	1.455			1.5	3.1	TM	
18	**TM	n-Nitrosodi-n-propylamine	1.068	1.045	1.056	1.027	1.076	1.038	1.050	1.060			1.1	1.5	**TM	
19	TM	Hexachloroethane	0.6682	0.7054	0.6470	0.6617	0.6824	0.6779	0.6684	0.6594			0.67	2.6	TM	
20	I	Napthalene-D8(IS)														
21	S	Nitrobenzene-D5(S)	0.4047	0.4332	0.3921	0.4003	0.4125	0.3872	0.3742	0.4394			0.41	5.5	S	
22	TM	Nitrobenzene	0.4054	0.4067	0.3889	0.4048	0.4175	0.3984	0.3936	0.4509			0.41	4.7	TM	
23	TM	Isophorone	0.6691	0.6862	0.6315	0.6698	0.6921	0.6667	0.6337	0.7606			0.68	6.0	TM	
24	*TM	2-Nitrophenol	0.1845	0.1935	0.1942	0.2063	0.2096	0.2079	0.2003	0.2337			0.20	7.3	*TM	
25	TM	2,4-Dimethylphenol	0.3139	0.3382	0.3012	0.3156	0.3171	0.3192	0.3290	0.3503			0.32	4.8	TM	
26	TML	Benzoic acid	0.0808	0.1551	0.2077	0.2553	0.2737	0.2314	0.2577	0.2655			0.22	31	TML	0.997
27	TM	Bis (2-chloroethoxy) methane	0.3810	0.3848	0.3681	0.3830	0.3880	0.3802	0.3949	0.4047			0.39	2.8	TM	
28	*TM	2,4-Dichlorophenol	0.2878	0.3066	0.3011	0.3098	0.3185	0.3087	0.3182	0.3126			0.31	3.2	*TM	
29	TM	1,2,4-Trichlorobenzene	0.3408	0.3409	0.3112	0.3403	0.3441	0.3301	0.3350	0.3367			0.33	3.1	TM	
30	TM	3,4-Dimethylphenol	0.5455	0.4964	0.4910	0.4802	0.5023	0.4740	0.4772	0.4907			0.49	4.6	TM	
31	TM	Naphthalene	1.044	1.055	1.078	1.053	1.069	1.024	1.025	1.045			1.0	1.8	TM	
32	TM	4-Chloroaniline	0.3632	0.4265	0.4327	0.4002	0.3874	0.3691	0.3641	0.3626			0.39	7.4	TM	
33	TM	2,6-Dichlorophenol	0.3045	0.3311	0.3196	0.2860	0.2901	0.2795	0.2735	0.2922			0.30	6.7	TM	
34	TM	Hexachloropropene	0.2445	0.2667	0.2704	0.2771	0.2732	0.2621	0.2668	0.2819			0.27	4.2	TM	
35	*TM	Hexachlorobutadiene	0.2289	0.2214	0.2210	0.2112	0.2149	0.2010	0.1986	0.2098			0.21	4.9	*TM	

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/07/16
Matrix: Instrument: Yoda
Initials:

		Compound	5	10	20	40	50	60	80	100			Avg	%RSD		
36	TM	Caprolactum	0.1439	0.1548	0.1512	0.1546	0.1563	0.1592	0.1531	0.1616			0.15	3.5	TM	
37	*TM	4-Chloro-3-methylphenol	0.3364	0.3339	0.3371	0.3445	0.3342	0.3451	0.3311	0.3589			0.34	2.7	*TM	
38	TM	2-Methylnaphthalene	0.7065	0.6994	0.6918	0.6907	0.6745	0.6786	0.6440	0.6992			0.69	2.9	TM	
39	TM	1-Methylnaphthalene	0.7218	0.7325	0.6455	0.6679	0.6461	0.6599	0.6404	0.6966			0.68	5.3	TM	
40	I	Acenaphthene-D10(IS)														
41	**TMQ	Hexachlorocyclopentadiene	0.0352	0.0821	0.1454	0.1986	0.2357	0.2346	0.2693	0.2817			0.19	48	**TMQ	0.999
42	TM	1,2,4,5-Tetrachlorobenzene	0.5396	0.5929	0.5621	0.5192	0.5592	0.5294	0.5151	0.5315			0.54	4.8	TM	
43	*TM	2,4,6-Trichlorophenol	0.3344	0.3592	0.3491	0.3486	0.3682	0.3537	0.3343	0.3590			0.35	3.4	*TM	
44	TM	2,4,5-Trichlorophenol	0.3919	0.4003	0.4163	0.3688	0.3812	0.3816	0.3456	0.3771			0.38	5.5	TM	
45	S	2-Fluorobiphenyl(S)	1.278	1.499	1.336	1.200	1.255	1.168	1.148	1.204			1.3	9.0	S	
46	TM	1,1'-Biphenyl	1.579	1.616	1.598	1.463	1.490	1.434	1.358	1.453			1.5	6.1	TM	
47	TM	2-Chloronaphthalene	1.172	1.197	1.217	1.145	1.225	1.131	1.043	1.138			1.2	5.1	TM	
48	TM	2-Nitroaniline	0.3683	0.3867	0.3740	0.4057	0.4480	0.3960	0.3888	0.4178			0.40	6.5	TM	
49	TM	Dimethyl phthalate	1.403	1.430	1.345	1.384	1.539	1.344	1.277	1.410			1.4	5.5	TM	
50	TM	2,6-DNT	0.2902	0.3118	0.2967	0.3089	0.3396	0.3115	0.2967	0.3576			0.31	7.4	TM	
51	TM	Acenaphthylene	1.893	2.056	1.776	1.750	1.868	1.798	1.649	1.814			1.8	6.5	TM	
52	TM	3-Nitroaniline	0.3015	0.3535	0.3595	0.3549	0.3535	0.3405	0.3322	0.3482			0.34	5.5	TM	
53	*TM	Acenaphthene	1.206	1.354	1.171	1.111	1.135	1.077	1.054	1.138			1.2	8.1	*TM	
54	**TMQ	2,4-Dinitrophenol		0.0853	0.1314	0.1627	0.1649	0.1601	0.2070	0.2035			0.16	26	**TMQ	0.996
55	**TML	4-Nitrophenol	0.0179	0.2323	0.2452	0.2706	0.3006	0.2760	0.2907	0.3183			0.24	39	**TML	0.997
56	TM	Dibenzofuran	1.728	1.704	1.645	1.541	1.704	1.568	1.548	1.676			1.6	4.6	TM	
57	TM	2,4-DNT	0.3927	0.4369	0.4320	0.4428	0.4994	0.4500	0.4285	0.4667			0.44	7.0	TM	
58	TM	2,3,4,6-Tetrachlorophenol	0.2780	0.2939	0.2952	0.3210	0.3494	0.3145	0.2996	0.3397			0.31	7.8	TM	
59	TM	Diethyl phthalate	1.443	1.475	1.388	1.441	1.458	1.389	1.333	1.529			1.4	4.2	TM	
60	TM	4-Chlorophenyl phenyl ether	0.6635	0.6948	0.6104	0.6191	0.6447	0.5999	0.5965	0.6860			0.64	6.1	TM	
61	TM	Fluorene	1.411	1.429	1.285	1.274	1.358	1.224	1.221	1.393			1.3	6.3	TM	
62	TM	4-Nitroaniline	0.3060	0.3370	0.3011	0.3170	0.3477	0.3210	0.3358	0.3338			0.32	5.0	TM	
63	S	2,4,6-Tribromophenol(S)	0.1946	0.2125	0.1908	0.1921	0.2053	0.1876	0.1977	0.2239			0.20	6.2	S	
64	I	Phenanthrene-D10(IS)														
65	TM	4,6-Dinitro-2-methylphenol		0.1149	0.1515	0.1421	0.1500	0.1692	0.1636	0.1489			0.15	12	TM	
66	TM	Diphenyl amine	0.6122	0.5551	0.6348	0.5246	0.5612	0.5921	0.5417	0.5432			0.57	6.7	TM	
67	*TM	n-Nitrosodiphenylamine	0.6122	0.5551	0.6348	0.5246	0.5612	0.5921	0.5417	0.5432			0.57	6.7	*TM	
68	TM	1,2-Diphenylhydrazine	0.7947	0.7385	0.8154	0.7273	0.7623	0.9632	0.8905	0.8768			0.82	10	TM	
69	TM	4-Bromophenyl phenyl ether	0.2256	0.2010	0.2098	0.2179	0.1993	0.2279	0.1871	0.1888			0.21	7.6	TM	
70	TM	Hexachlorobenzene	0.2229	0.2118	0.2232	0.2136	0.2018	0.2342	0.2007	0.1953			0.21	6.3	TM	

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/07/16
Matrix: Instrument: Yoda

Initials:

		Compound	5	10	20	40	50	60	80	100			Avg	%RSD		
71	TM	Atrazine	0.2136	0.1976	0.2108	0.2007	0.2168	0.2165	0.1968	0.1967			0.21	4.4	TM	
72	*TML	Pentachlorophenol		0.0652	0.0888	0.0985	0.0970	0.0990	0.1107	0.1114			0.10	16	*TML	0.998
73	TM	Phenanthrene	1.144	1.128	1.146	1.069	1.069	1.062	1.009	1.014			1.1	5.0	TM	
74	TM	Anthracene	1.227	1.144	1.172	1.109	1.085	1.077	1.032	1.040			1.1	6.0	TM	
75	TM	Carbazol	1.068	1.073	1.153	0.9493	1.043	0.9621	0.9114	0.8832			1.0	9.2	TM	
76	TM	Di-n-butylphthalate	1.394	1.275	1.537	1.286	1.230	1.259	1.180	1.174			1.3	9.3	TM	
77	*TM	Fluoranthene	1.281	1.183	1.301	1.152	1.091	1.169	1.169	1.164			1.2	5.8	*TM	
78	I	Chrysene-D12(IS)														
79	TM	Benzidine	0.3957	0.4105	0.4699	0.4668	0.4739	0.4589	0.4621	0.4870			0.45	7.1	TM	
80	TM	Pyrene	1.421	1.287	1.412	1.333	1.431	1.352	1.245	1.372			1.4	4.9	TM	
81	S	Terphenyl-D14(S)	0.9641	0.9527	1.005	0.8842	0.8995	0.8347	0.8470	0.8492			0.90	6.9	S	
82	TM	Butyl benzylphthalate	0.6615	0.6073	0.6728	0.6922	0.6888	0.6250	0.6287	0.6373			0.65	4.8	TM	
83	TM	3,3'-Dichlorobenzidine	0.3845	0.4505	0.4988	0.4470	0.4416	0.4002	0.3899	0.4057			0.43	9.1	TM	
84	TM	Benz (a) anthracene	1.241	1.281	1.288	1.263	1.262	1.195	1.209	1.251			1.2	2.6	TM	
85	TM	Bis (2-ethylhexyl) phthalate	0.9437	0.8855	0.9320	0.8960	0.9347	0.9382	0.8781	0.9008			0.91	2.9	TM	
86	TM	Chrysene	1.291	1.177	1.223	1.163	1.206	1.256	1.142	1.247			1.2	4.2	TM	
87	*TM	Di-n-octylphthalate	1.601	1.536	1.745	1.580	1.838	1.525	1.513	1.572			1.6	7.2	*TM	
88	I	Perylene-D12(IS)														
89	TM	Benzo (b) fluoranthene	1.137	1.363	1.356	1.287	1.201	1.033	1.428	1.200			1.3	11	TM	
90	TM	Benzo (k) fluoranthene	1.302	1.071	1.186	1.172	1.214	1.184	1.211	1.174			1.2	5.4	TM	
91	*TM	Benzo (a) pyrene	1.164	1.037	1.248	1.228	1.224	1.129	1.192	1.122			1.2	6.0	*TM	
92	TM	Indeno (1,2,3-cd) pyrene	1.367	1.331	1.391	1.324	1.346	1.095	1.395	1.099			1.3	9.6	TM	
93	TM	Dibenz (a,h) anthracene	1.172	1.113	1.158	1.132	1.148	0.9093	1.186	0.9080			1.1	11	TM	
94	TM	Benzo (g,h,i) perylene	1.161	1.064	1.406	1.271	1.253	0.8838	1.091				1.2	15	TM	
95																
96																
97																
98																
99																
100																
101																
102																
103																
104																
105																

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y004.D Vial: 4
Acq On : 7 Dec 16 10:01 Operator: MA
Sample : 5ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	195458	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.29	136	827060	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.30	164	490768	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.03	188	877101	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.10	240	839105	40.00000 ppb		0.00
88) Perylene-D12(IS)	14.74	264	900919	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.38	112	52072	8.41676 ppb		0.03
Spiked Amount 200.000			Recovery =	4.209%		
5) Phenol-D6 (S)	4.51	99	89036	10.40389 ppb		0.00
Spiked Amount 200.000			Recovery =	5.202%		
21) Nitrobenzene-D5(S)	5.51	82	41840	4.84860 ppb		0.00
Spiked Amount 100.000			Recovery =	4.849%		
45) 2-Fluorobiphenyl(S)	7.54	172	78403	5.03098 ppb		0.00
Spiked Amount 100.000			Recovery =	5.031%		
63) 2,4,6-Tribromophenol(S)	9.23	330	23872	9.90525 ppb		0.00
Spiked Amount 200.000			Recovery =	4.953%		
81) Terphenyl-D14(S)	11.88	244	101120	5.31648 ppb		0.00
Spiked Amount 100.000			Recovery =	5.316%		
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.77	42	17464	3.81097 ppb		99
3) Pyridine	1.79	79	38617	3.94469 ppb		99
6) Phenol	4.53	94	47601	4.90399 ppb		95
7) Aniline	4.53	66	43393	4.54015 ppb		90
8) Bis (2-chloroethyl) ether	4.60	63	20566	4.71391 ppb		92
9) 2-Chlorophenol	4.65	128	39939	5.30721 ppb		95
10) 1,3-DCB	4.80	146	40566	4.97403 ppb		98
11) 1,4-DCB	4.88	146	43609	5.21809 ppb		96
12) Benzyl alcohol	5.07	108	19149	4.54883 ppb		90
13) 1,2-DCB	5.06	146	39360	5.05389 ppb		97
14) 2-Methylphenol	5.20	107	26445	4.63400 ppb		97
15) Bis (2-chloroisopropyl) et	5.18	45	45768	5.23802 ppb	#	53
16) Acetophenone	5.34	105	49921	4.69337 ppb		98
17) 3&4-Methylphenol	5.38	107	76111	10.08177 ppb		91
18) n-Nitrosodi-n-propylamine	5.33	70	26103	4.73122 ppb		90
19) Hexachloroethane	5.42	117	16326	4.71012 ppb	#	68
22) Nitrobenzene	5.53	77	41914	4.74777 ppb		98
23) Isophorone	5.78	82	69169	4.75245 ppb		93
24) 2-Nitrophenol	5.90	139	19072	4.53756 ppb		95
25) 2,4-Dimethylphenol	5.95	122	32456	4.95367 ppb		91
26) Benzoic acid	6.13	105	8358	6.59749 ppb		89
27) Bis (2-chloroethoxy) metha	6.04	93	39384	5.06082 ppb		97
28) 2,4-Dichlorophenol	6.19	162	29754	4.71459 ppb		94
29) 1,2,4-Trichlorobenzene	6.24	180	35230	5.05372 ppb		98
30) 3,4-Dimethylphenol	6.29	107	56394	5.39745 ppb		81
31) Naphthalene	6.31	128	107955	4.95797 ppb		100
32) 4-Chloroaniline	6.42	127	37545	4.85948 ppb		96
33) 2,6-Dichlorophenol	6.42	162	31478	5.16618 ppb		97
34) Hexachloropropene	6.42	213	25276	4.55752 ppb		98
35) Hexachlorobutadiene	6.46	225	23664	5.32227 ppb		92
36) Caprolactum	6.79	55	14872	4.52289 ppb		92
37) 4-Chloro-3-methylphenol	6.99	107	34775	4.82802 ppb		87

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y004.D Vial: 4
Acq On : 7 Dec 16 10:01 Operator: MA
Sample : 5ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38) 2-Methylnaphthalene	7.11	142	73035	5.02428 ppb		98
39) 1-Methylnaphthalene	7.22	142	74622	5.35196 ppb		98
41) Hexachlorocyclopentadiene	7.29	237	2162	7.14608 ppb	#	91
42) 1,2,4,5-Tetrachlorobenzene	7.31	216	33104	4.95861 ppb		93
43) 2,4,6-Trichlorophenol	7.46	196	20513	4.63043 ppb		92
44) 2,4,5-Trichlorophenol	7.53	196	24042	5.12505 ppb		88
46) 1,1'-Biphenyl	7.65	154	96876	5.20831 ppb		97
47) 2-Chloronaphthalene	7.67	162	71906	4.90703 ppb		97
48) 2-Nitroaniline	7.82	65	22595	4.34279 ppb		78
49) Dimethyl phthalate	8.01	163	86082	4.79845 ppb		99
50) 2,6-DNT	8.10	165	17800	4.45834 ppb		80
51) Acenaphthylene	8.14	152	116157	5.09910 ppb		99
52) 3-Nitroaniline	8.31	138	18493	4.47392 ppb	#	34
53) Acenaphthene	8.34	154	74001	5.30414 ppb		97
54) 2,4-Dinitrophenol	8.51	184	1898	8.26475 ppb	#	71
55) 4-Nitrophenol	8.54	65	1096	7.02827 ppb	#	38
56) Dibenzofuran	8.54	168	105976	5.20957 ppb		89
57) 2,4-DNT	8.58	165	24091	4.26865 ppb		83
58) 2,3,4,6-Tetrachlorophenol	8.72	232	17055	4.67205 ppb		95
59) Diethyl phthalate	8.83	149	88512	4.85963 ppb		98
60) 4-Chlorophenyl phenyl ethe	8.95	204	40703	4.91663 ppb	#	76
61) Fluorene	8.94	166	86563	5.16554 ppb		96
62) 4-Nitroaniline	9.01	138	18769	4.76703 ppb		93
65) 4,6-Dinitro-2-methylphenol	9.05	198	8901	2.88665 ppb	#	85
66) Diphenyl amine	9.09	169	134244	11.16496 ppb		99
67) n-Nitrosodiphenylamine	9.09	169	134244	11.16496 ppb		99
68) 1,2-Diphenylhydrazine	9.13	77	87129	4.57707 ppb		99
69) 4-Bromophenyl phenyl ether	9.52	248	24730	5.36824 ppb	#	83
70) Hexachlorobenzene	9.59	284	24441	4.98065 ppb	#	74
71) Atrazine	9.72	200	11708	2.43094 ppb		95
72) Pentachlorophenol	9.84	266	6437	7.80595 ppb		92
73) Phenanthrene	10.05	178	125410	5.18209 ppb		98
74) Anthracene	10.12	178	134548	5.34573 ppb		98
75) Carbazol	10.32	167	117070	5.23894 ppb		99
76) Di-n-butylphthalate	10.72	149	152801	5.10773 ppb		100
77) Fluoranthene	11.44	202	140468	5.31106 ppb	#	97
79) Benzidine	11.62	184	41503	4.47439 ppb	#	89
80) Pyrene	11.70	202	149080	5.33068 ppb		99
82) Butyl benzylphthalate	12.46	149	69384	4.95412 ppb		100
83) 3,3'-Dichlorobenzidine	13.07	252	40328	4.68957 ppb	#	98
84) Benz (a) anthracene	13.09	228	130185	4.90624 ppb		99
85) Bis (2-ethylhexyl) phthala	13.13	149	98983	5.00821 ppb		99
86) Chrysene	13.14	228	135366	5.30692 ppb		94
87) Di-n-octylphthalate	13.84	149	167938	4.79507 ppb		99
89) Benzo (b) fluoranthene	14.29	252	127992	4.23678 ppb		95
90) Benzo (k) fluoranthene	14.32	252	146637	5.07643 ppb		97
91) Benzo (a) pyrene	14.68	252	131139	4.60945 ppb		94
92) Indeno (1,2,3-cd) pyrene	16.29	276	153935	4.75506 ppb	#	88
93) Dibenz (a,h) anthracene	16.31	278	131937	4.79035 ppb		96
94) Benzo (g,h,i) perylene	16.76	276	130754	4.77536 ppb		95

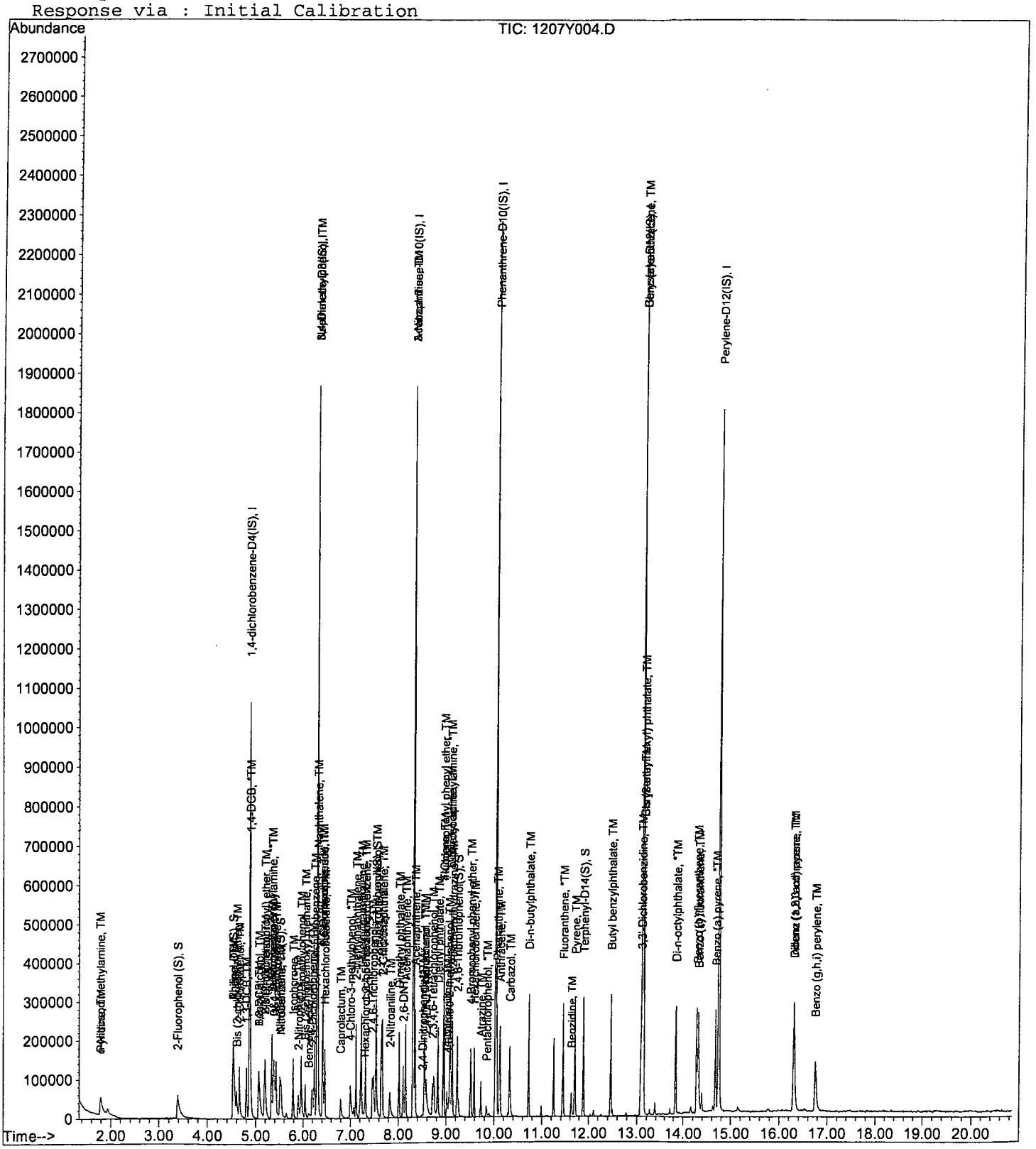
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y004.D Vial: 4
Acq On : 7 Dec 16 10:01 Operator: MA
Sample : 5ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y005.D Vial: 5
Acq On : 7 Dec 16 10:32 Operator: MA
Sample : 10ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	199996	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.29	136	835678	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.31	164	491315	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.02	188	976841	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.11	240	927503	40.00000 ppb		0.00
88) Perylene-D12(IS)	14.75	264	990341	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.37	112	129921	20.52354 ppb		0.02
Spiked Amount 200.000			Recovery = 10.262%			
5) Phenol-D6 (S)	4.51	99	178462	20.38018 ppb		0.00
Spiked Amount 200.000			Recovery = 10.190%			
21) Nitrobenzene-D5(S)	5.50	82	90507	10.38019 ppb		0.00
Spiked Amount 100.000			Recovery = 10.380%			
45) 2-Fluorobiphenyl(S)	7.54	172	184156	11.80380 ppb		0.00
Spiked Amount 100.000			Recovery = 11.804%			
63) 2,4,6-Tribromophenol(S)	9.23	330	52209	21.63904 ppb		0.00
Spiked Amount 200.000			Recovery = 10.820%			
81) Terphenyl-D14(S)	11.89	244	220919	10.50802 ppb		0.00
Spiked Amount 100.000			Recovery = 10.508%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.76	42	40937	8.73052 ppb		87
3) Pyridine	1.78	79	86226	8.60805 ppb		94
6) Phenol	4.53	94	95766	9.64222 ppb		94
7) Aniline	4.52	66	91627	9.36928 ppb	#	79
8) Bis (2-chloroethyl) ether	4.59	63	39545	8.85840 ppb		97
9) 2-Chlorophenol	4.65	128	81615	10.59915 ppb		96
10) 1,3-DCB	4.80	146	83321	9.98465 ppb		99
11) 1,4-DCB	4.89	146	89069	10.41583 ppb		97
12) Benzyl alcohol	5.06	108	42008	9.75255 ppb		93
13) 1,2-DCB	5.06	146	77858	9.77026 ppb		96
14) 2-Methylphenol	5.20	107	56924	9.74855 ppb		92
15) Bis (2-chloroisopropyl) et	5.19	45	87550	9.79249 ppb		84
16) Acetophenone	5.33	105	103596	9.51867 ppb		98
17) 3&4-Methylphenol	5.36	107	152989	19.80531 ppb		96
18) n-Nitrosodi-n-propylamine	5.33	70	52236	9.25304 ppb		95
19) Hexachloroethane	5.42	117	35267	9.94382 ppb		92
22) Nitrobenzene	5.53	77	84968	9.52541 ppb		90
23) Isophorone	5.79	82	143360	9.74837 ppb		96
24) 2-Nitrophenol	5.89	139	40432	9.52028 ppb		93
25) 2,4-Dimethylphenol	5.95	122	70653	10.67236 ppb		94
26) Benzoic acid	6.11	105	32406	10.34814 ppb		90
27) Bis (2-chloroethoxy) metha	6.04	93	80395	10.22417 ppb		98
28) 2,4-Dichlorophenol	6.18	162	64057	10.04530 ppb		97
29) 1,2,4-Trichlorobenzene	6.24	180	71216	10.11054 ppb		95
30) 3,4-Dimethylphenol	6.29	107	103715	9.82416 ppb		98
31) Naphthalene	6.32	128	220486	10.02167 ppb		99
32) 4-Chloroaniline	6.40	127	89109	11.41451 ppb		99
33) 2,6-Dichlorophenol	6.41	162	69177	11.23627 ppb		98
34) Hexachloropropene	6.41	213	55717	9.94274 ppb		97
35) Hexachlorobutadiene	6.46	225	46253	10.29548 ppb		97
36) Caprolactum	6.79	55	32338	9.73326 ppb		96
37) 4-Chloro-3-methylphenol	6.99	107	69749	9.58380 ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y005.D Vial: 5
Acq On : 7 Dec 16 10:32 Operator: MA
Sample : 10ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.11	142	146114	9.94793	ppb		99
39)	1-Methylnaphthalene	7.22	142	153034	10.86256	ppb		99
41)	Hexachlorocyclopentadiene	7.28	237	10085	10.30509	ppb		83
42)	1,2,4,5-Tetrachlorobenzene	7.31	216	72826	10.89639	ppb		96
43)	2,4,6-Trichlorophenol	7.46	196	44123	9.94887	ppb		99
44)	2,4,5-Trichlorophenol	7.53	196	49164	10.46865	ppb		96
46)	1,1'-Biphenyl	7.65	154	198489	10.65941	ppb	#	96
47)	2-Chloronaphthalene	7.66	162	146978	10.01894	ppb		94
48)	2-Nitroaniline	7.81	65	47494	9.11824	ppb		90
49)	Dimethyl phthalate	8.02	163	175672	9.78154	ppb	#	97
50)	2,6-DNT	8.09	165	38304	9.58326	ppb	#	73
51)	Acenaphthylene	8.14	152	252596	11.07621	ppb		99
52)	3-Nitroaniline	8.30	138	43416	10.49172	ppb	#	91
53)	Acenaphthene	8.34	154	166258	11.90354	ppb		96
54)	2,4-Dinitrophenol	8.46	184	10475	11.87415	ppb	#	60
55)	4-Nitrophenol	8.57	65	28528	13.90485	ppb		75
56)	Dibenzofuran	8.55	168	209346	10.27958	ppb		88
57)	2,4-DNT	8.57	165	53666	9.49842	ppb		97
58)	2,3,4,6-Tetrachlorophenol	8.71	232	36099	9.87795	ppb		95
59)	Diethyl phthalate	8.83	149	181223	9.93873	ppb		99
60)	4-Chlorophenyl phenyl ethe	8.95	204	85344	10.29746	ppb		87
61)	Fluorene	8.95	166	175510	10.46168	ppb		97
62)	4-Nitroaniline	9.00	138	41396	10.50223	ppb		90
65)	4,6-Dinitro-2-methylphenol	9.05	198	28069	8.17351	ppb	#	74
66)	Diphenyl amine	9.09	169	271128	20.24708	ppb		99
67)	n-Nitrosodiphenylamine	9.09	169	271128	20.24708	ppb		99
68)	1,2-Diphenylhydrazine	9.13	77	180355	8.50705	ppb	#	91
69)	4-Bromophenyl phenyl ether	9.51	248	49097	9.56948	ppb		92
70)	Hexachlorobenzene	9.59	284	51734	9.46606	ppb		86
71)	Atrazine	9.73	200	24123	4.49726	ppb		94
72)	Pentachlorophenol	9.84	266	15917	12.48338	ppb		97
73)	Phenanthrene	10.05	178	275480	10.22088	ppb		98
74)	Anthracene	10.12	178	279374	9.96647	ppb		100
75)	Carbazol	10.32	167	261994	10.52724	ppb		98
76)	Di-n-butylphthalate	10.72	149	311416	9.34691	ppb		97
77)	Fluoranthene	11.43	202	289008	9.81159	ppb	#	97
79)	Benzidine	11.62	184	95179	9.28318	ppb		97
80)	Pyrene	11.69	202	298339	9.65105	ppb		98
82)	Butyl benzylphthalate	12.46	149	140818	9.09633	ppb		87
83)	3,3'-Dichlorobenzidine	13.07	252	104450	10.98842	ppb	#	93
84)	Benz (a) anthracene	13.09	228	297055	10.12805	ppb		97
85)	Bis (2-ethylhexyl) phthala	13.12	149	205324	9.39859	ppb	#	98
86)	Chrysene	13.13	228	272893	9.67890	ppb		99
87)	Di-n-octylphthalate	13.84	149	356276	9.20309	ppb	#	91
89)	Benzo (b) fluoranthene	14.28	252	337345	10.15848	ppb	#	97
90)	Benzo (k) fluoranthene	14.31	252	265091	8.34854	ppb		98
91)	Benzo (a) pyrene	14.67	252	256785	8.21085	ppb	#	97
92)	Indeno (1,2,3-cd) pyrene	16.30	276	329541	9.26038	ppb		96
93)	Dibenz (a,h) anthracene	16.31	278	275683	9.10566	ppb		98
94)	Benzo (g,h,i) perylene	16.74	276	263509	8.75484	ppb		98

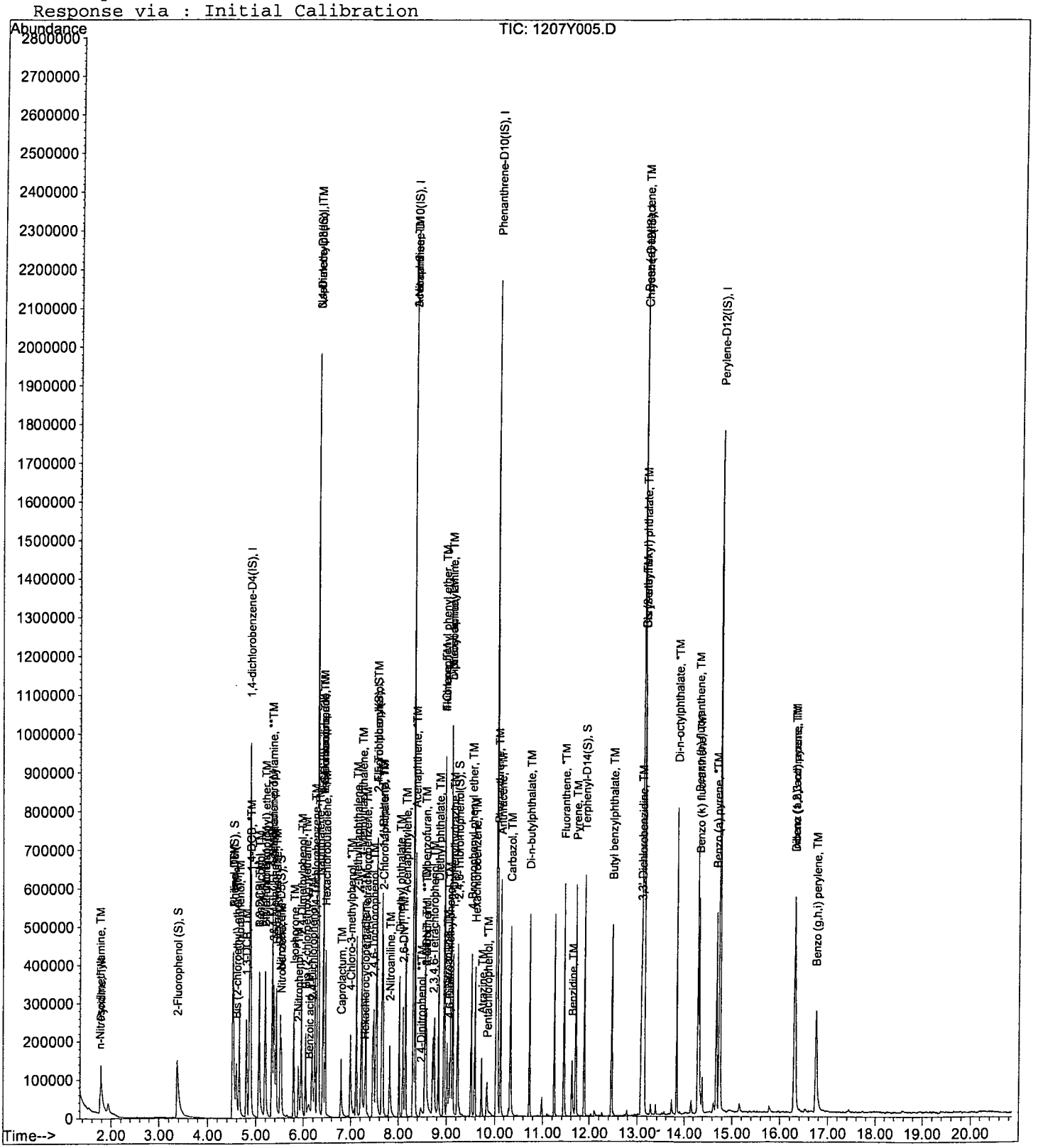
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y005.D Vial: 5
Acq On : 7 Dec 16 10:32 Operator: MA
Sample : 10ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y006.D Vial: 6
Acq On : 7 Dec 16 11:02 Operator: MA
Sample : 20ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	213922	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.30	136	877521	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	527221	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	919632	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.10	240	874733	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.75	264	909225	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.36	112	271002	40.02316 ppb	0.00
Spiked Amount 200.000			Recovery =	20.012%	
5) Phenol-D6 (S)	4.50	99	390048	41.64340 ppb	0.00
Spiked Amount 200.000			Recovery =	20.822%	
21) Nitrobenzene-D5(S)	5.50	82	172033	18.78955 ppb	0.00
Spiked Amount 100.000			Recovery =	18.790%	
45) 2-Fluorobiphenyl(S)	7.53	172	352090	21.03087 ppb	0.00
Spiked Amount 100.000			Recovery =	21.031%	
63) 2,4,6-Tribromophenol(S)	9.23	330	100581	38.84865 ppb	0.00
Spiked Amount 200.000			Recovery =	19.425%	
81) Terphenyl-D14(S)	11.89	244	439341	22.15795 ppb	0.00
Spiked Amount 100.000			Recovery =	22.158%	
Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.76	42	87421	17.43034 ppb	92
3) Pyridine	1.77	79	177528	16.56912 ppb	97
6) Phenol	4.52	94	221931	20.89054 ppb	96
7) Aniline	4.52	66	202813	19.38850 ppb	86
8) Bis (2-chloroethyl) ether	4.58	63	97711	20.46317 ppb	93
9) 2-Chlorophenol	4.65	128	172852	20.98656 ppb	99
10) 1,3-DCB	4.80	146	179050	20.05944 ppb	100
11) 1,4-DCB	4.89	146	178026	19.46331 ppb	97
12) Benzyl alcohol	5.06	108	98047	21.28071 ppb	97
13) 1,2-DCB	5.06	146	169067	19.83480 ppb	97
14) 2-Methylphenol	5.19	107	126350	20.22952 ppb	97
15) Bis (2-chloroisopropyl) et	5.19	45	195850	20.47984 ppb	93
16) Acetophenone	5.33	105	217146	18.65310 ppb	96
17) 3&4-Methylphenol	5.36	107	312061	37.76824 ppb	99
18) n-Nitrosodi-n-propylamine	5.33	70	112913	18.69926 ppb	99
19) Hexachloroethane	5.42	117	69201	18.24159 ppb	91
22) Nitrobenzene	5.52	77	170617	18.21513 ppb	98
23) Isophorone	5.79	82	277084	17.94308 ppb	99
24) 2-Nitrophenol	5.88	139	85225	19.11054 ppb	95
25) 2,4-Dimethylphenol	5.95	122	132147	19.00942 ppb	99
26) Benzoic acid	6.09	105	91123	19.04059 ppb	95
27) Bis (2-chloroethoxy) metha	6.04	93	161526	19.56243 ppb	97
28) 2,4-Dichlorophenol	6.17	162	132126	19.73177 ppb	98
29) 1,2,4-Trichlorobenzene	6.24	180	136552	18.46189 ppb	97
30) 3,4-Dimethylphenol	6.29	107	215414	19.43164 ppb	99
31) Naphthalene	6.32	128	472793	20.46500 ppb	100
32) 4-Chloroaniline	6.40	127	189841	23.15833 ppb	96
33) 2,6-Dichlorophenol	6.40	162	140216	21.68899 ppb	97
34) Hexachloropropene	6.41	213	118650	20.16357 ppb	99
35) Hexachlorobutadiene	6.46	225	96965	20.55433 ppb	96
36) Caprolactum	6.80	55	66358	19.02041 ppb	94
37) 4-Chloro-3-methylphenol	6.99	107	147903	19.35345 ppb	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y006.D Vial: 6
Acq On : 7 Dec 16 11:02 Operator: MA
Sample : 20ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.11	142	303522	19.67943	ppb		99
39)	1-Methylnaphthalene	7.22	142	283238	19.14597	ppb		99
41)	Hexachlorocyclopentadiene	7.29	237	38317	19.84270	ppb		95
42)	1,2,4,5-Tetrachlorobenzene	7.31	216	148167	20.65927	ppb		98
43)	2,4,6-Trichlorophenol	7.46	196	92029	19.33751	ppb		97
44)	2,4,5-Trichlorophenol	7.52	196	109748	21.77747	ppb		97
46)	1,1'-Biphenyl	7.65	154	421333	21.08577	ppb	#	98
47)	2-Chloronaphthalene	7.66	162	320827	20.38017	ppb		97
48)	2-Nitroaniline	7.81	65	98585	17.63805	ppb		95
49)	Dimethyl phthalate	8.02	163	354455	18.39218	ppb		99
50)	2,6-DNT	8.09	165	78220	18.23703	ppb	#	70
51)	Acenaphthylene	8.15	152	468200	19.13214	ppb		100
52)	3-Nitroaniline	8.29	138	94776	21.34336	ppb		82
53)	Acenaphthene	8.34	154	308667	20.59449	ppb		98
54)	2,4-Dinitrophenol	8.44	184	34650	21.05674	ppb		92
55)	4-Nitrophenol	8.55	65	64643	21.85482	ppb		87
56)	Dibenzofuran	8.55	168	433602	19.84127	ppb		95
57)	2,4-DNT	8.57	165	113885	18.78390	ppb	#	69
58)	2,3,4,6-Tetrachlorophenol	8.71	232	77826	19.84558	ppb		96
59)	Diethyl phthalate	8.83	149	365822	18.69626	ppb		94
60)	4-Chlorophenyl phenyl ethe	8.95	204	160915	18.09343	ppb		95
61)	Fluorene	8.95	166	338778	18.81837	ppb		100
62)	4-Nitroaniline	9.00	138	79383	18.76799	ppb		95
65)	4,6-Dinitro-2-methylphenol	9.05	198	69659	21.54609	ppb	#	85
66)	Diphenyl amine	9.09	169	583796	46.30830	ppb		100
67)	n-Nitrosodiphenylamine	9.09	169	583796	46.30830	ppb		100
68)	1,2-Diphenylhydrazine	9.13	77	374925	18.78473	ppb	#	91
69)	4-Bromophenyl phenyl ether	9.51	248	96477	19.97408	ppb		93
70)	Hexachlorobenzene	9.59	284	102637	19.94834	ppb		87
71)	Atrazine	9.73	200	48458	9.59604	ppb		94
72)	Pentachlorophenol	9.84	266	40851	26.44051	ppb		95
73)	Phenanthrene	10.05	178	526900	20.76520	ppb		98
74)	Anthracene	10.12	178	538899	20.42079	ppb		99
75)	Carbazol	10.32	167	530270	22.63237	ppb		97
76)	Di-n-butylphthalate	10.73	149	706599	22.52735	ppb		99
77)	Fluoranthene	11.43	202	598343	21.57691	ppb	#	97
79)	Benzidine	11.61	184	205525	21.25496	ppb		99
80)	Pyrene	11.69	202	617378	21.17657	ppb		99
82)	Butyl benzylphthalate	12.46	149	294257	20.15461	ppb		91
83)	3,3'-Dichlorobenzidine	13.07	252	218137	24.33302	ppb	#	95
84)	Benz (a) anthracene	13.09	228	563481	20.37081	ppb		100
85)	Bis (2-ethylhexyl) phthala	13.12	149	407629	19.78463	ppb	#	96
86)	Chrysene	13.13	228	535016	20.12056	ppb		99
87)	Di-n-octylphthalate	13.84	149	763144	20.90228	ppb	#	92
89)	Benzo (b) fluoranthene	14.28	252	616293	20.21412	ppb	#	98
90)	Benzo (k) fluoranthene	14.31	252	538976	18.48836	ppb		98
91)	Benzo (a) pyrene	14.67	252	567407	19.76179	ppb		98
92)	Indeno (1,2,3-cd) pyrene	16.29	276	632150	19.34875	ppb		97
93)	Dibenz (a,h) anthracene	16.31	278	526382	18.93720	ppb		98
94)	Benzo (g,h,i) perylene	16.74	276	639018	23.12486	ppb		97

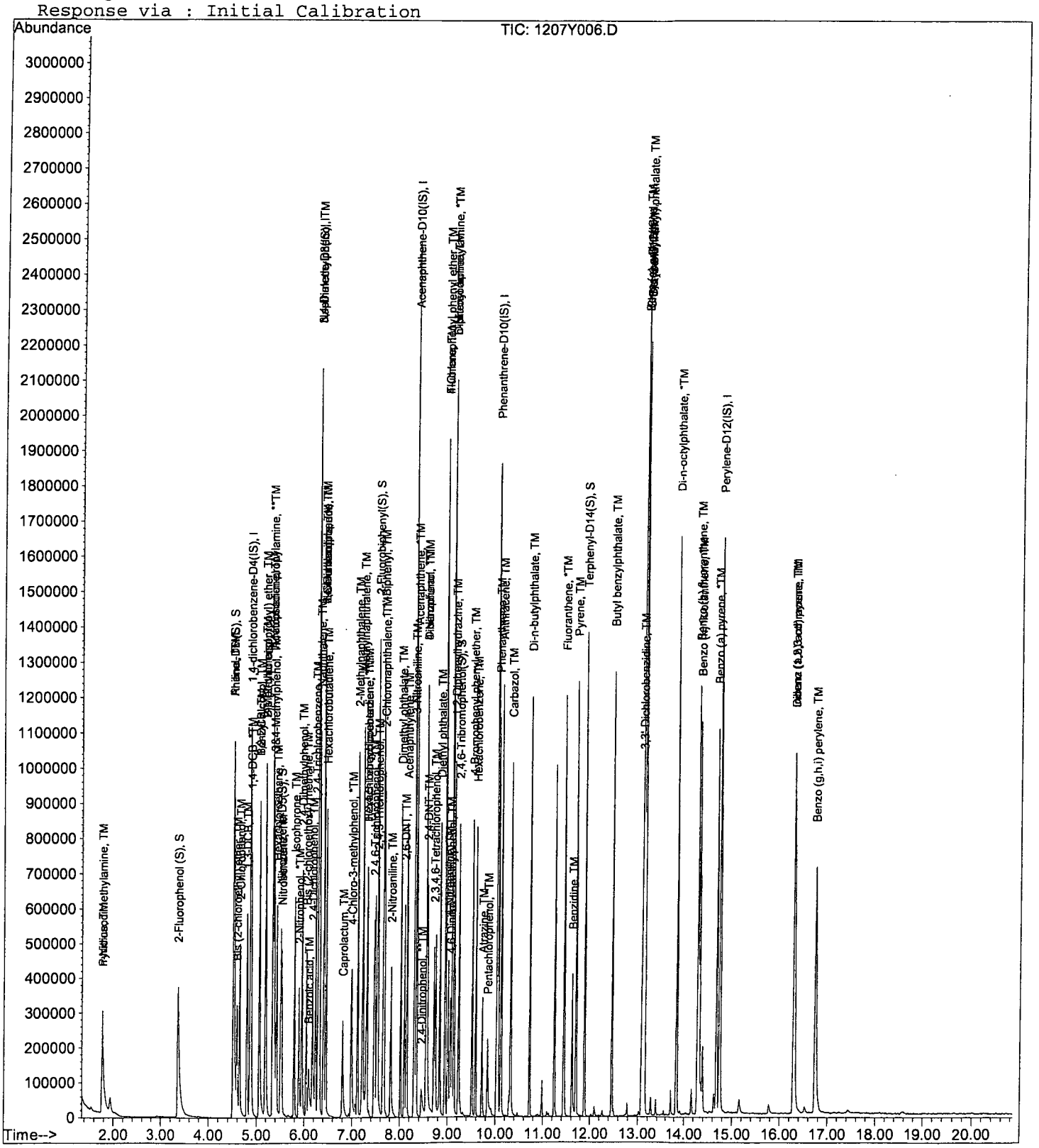
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y006.D Vial: 6
Acq On : 7 Dec 16 11:02 Operator: MA
Sample : 20ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y007.D Vial: 7
Acq On : 7 Dec 16 11:32 Operator: MA
Sample : 40ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	200058	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.30	136	812959	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.31	164	497677	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.03	188	928405	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.11	240	850533	40.00000 ppb		0.00
88) Perylene-D12(IS)	14.75	264	888701	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.35	112	570340	90.06835 ppb		0.00
Spiked Amount 200.000			Recovery = 45.034%			
5) Phenol-D6 (S)	4.50	99	704877	80.47129 ppb		0.00
Spiked Amount 200.000			Recovery = 40.236%			
21) Nitrobenzene-D5(S)	5.50	82	325441	38.36770 ppb		0.00
Spiked Amount 100.000			Recovery = 38.368%			
45) 2-Fluorobiphenyl(S)	7.54	172	597194	37.78888 ppb		0.00
Spiked Amount 100.000			Recovery = 37.789%			
63) 2,4,6-Tribromophenol(S)	9.23	330	191228	78.24500 ppb		0.00
Spiked Amount 200.000			Recovery = 39.123%			
81) Terphenyl-D14(S)	11.89	244	752070	39.00950 ppb		0.00
Spiked Amount 100.000			Recovery = 39.009%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.75	42	161566	34.44606 ppb		97
3) Pyridine	1.76	79	387358	38.65847 ppb		98
6) Phenol	4.52	94	400577	40.31969 ppb		93
7) Aniline	4.51	66	377482	38.58729 ppb	#	75
8) Bis (2-chloroethyl) ether	4.59	63	179689	40.23931 ppb		98
9) 2-Chlorophenol	4.64	128	315428	40.95120 ppb		91
10) 1,3-DCB	4.80	146	332809	39.86933 ppb		99
11) 1,4-DCB	4.89	146	332016	38.81430 ppb		99
12) Benzyl alcohol	5.05	108	172333	39.99630 ppb		92
13) 1,2-DCB	5.06	146	296826	37.23663 ppb		100
14) 2-Methylphenol	5.19	107	223633	38.28652 ppb		95
15) Bis (2-chloroisopropyl) et	5.19	45	337003	37.68221 ppb		98
16) Acetophenone	5.34	105	403185	37.03421 ppb		99
17) 3&4-Methylphenol	5.36	107	576124	74.55945 ppb		97
18) n-Nitrosodi-n-propylamine	5.34	70	205499	36.39064 ppb		92
19) Hexachloroethane	5.42	117	132371	37.31150 ppb		93
22) Nitrobenzene	5.52	77	329118	37.92717 ppb		95
23) Isophorone	5.79	82	544538	38.06296 ppb		95
24) 2-Nitrophenol	5.88	139	167729	40.59784 ppb		97
25) 2,4-Dimethylphenol	5.95	122	256596	39.84284 ppb		99
26) Benzoic acid	6.12	105	207583	40.37949 ppb		96
27) Bis (2-chloroethoxy) metha	6.04	93	311390	40.70745 ppb		99
28) 2,4-Dichlorophenol	6.16	162	251852	40.59868 ppb		93
29) 1,2,4-Trichlorobenzene	6.24	180	276620	40.36924 ppb		98
30) 3,4-Dimethylphenol	6.28	107	390385	38.01171 ppb		99
31) Naphthalene	6.32	128	855871	39.98876 ppb		99
32) 4-Chloroaniline	6.40	127	325340	42.83942 ppb		96
33) 2,6-Dichlorophenol	6.40	162	232500	38.81983 ppb		95
34) Hexachloropropene	6.42	213	225297	41.32796 ppb		97
35) Hexachlorobutadiene	6.46	225	171693	39.28527 ppb		94
36) Caprolactum	6.82	55	125688	38.88743 ppb		97
37) 4-Chloro-3-methylphenol	6.98	107	280036	39.55342 ppb		87

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y007.D Vial: 7
Acq On : 7 Dec 16 11:32 Operator: MA
Sample : 40ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.11	142	561485	39.29610	ppb		100
39)	1-Methylnaphthalene	7.22	142	542998	39.61986	ppb		98
41)	Hexachlorocyclopentadiene	7.29	237	98846	39.78650	ppb		94
42)	1,2,4,5-Tetrachlorobenzene	7.31	216	258378	38.16490	ppb		97
43)	2,4,6-Trichlorophenol	7.45	196	173513	38.62362	ppb		100
44)	2,4,5-Trichlorophenol	7.51	196	183541	38.58238	ppb	#	88
46)	1,1'-Biphenyl	7.65	154	728113	38.60182	ppb	#	97
47)	2-Chloronaphthalene	7.67	162	569966	38.35579	ppb		98
48)	2-Nitroaniline	7.81	65	201923	38.27108	ppb		97
49)	Dimethyl phthalate	8.02	163	688771	37.86099	ppb		99
50)	2,6-DNT	8.10	165	153741	37.97267	ppb		91
51)	Acenaphthylene	8.15	152	870855	37.69841	ppb		100
52)	3-Nitroaniline	8.29	138	176613	42.13394	ppb		87
53)	Acenaphthene	8.34	154	553092	39.09340	ppb		100
54)	2,4-Dinitrophenol	8.45	184	80953	41.10463	ppb		83
55)	4-Nitrophenol	8.54	65	134675	40.08311	ppb		98
56)	Dibenzofuran	8.55	168	766792	37.17071	ppb		98
57)	2,4-DNT	8.58	165	220382	38.50708	ppb		97
58)	2,3,4,6-Tetrachlorophenol	8.71	232	159761	43.15738	ppb		96
59)	Diethyl phthalate	8.84	149	717251	38.83302	ppb		98
60)	4-Chlorophenyl phenyl ethe	8.95	204	308111	36.70089	ppb		96
61)	Fluorene	8.95	166	633972	37.30629	ppb		100
62)	4-Nitroaniline	9.01	138	157741	39.50755	ppb		89
65)	4,6-Dinitro-2-methylphenol	9.05	198	131972	40.43428	ppb	#	84
66)	Diphenyl amine	9.10	169	974102	76.53830	ppb		99
67)	n-Nitrosodiphenylamine	9.10	169	974102	76.53830	ppb		99
68)	1,2-Diphenylhydrazine	9.13	77	675207	33.50998	ppb		95
69)	4-Bromophenyl phenyl ether	9.51	248	202318	41.49103	ppb		94
70)	Hexachlorobenzene	9.59	284	198345	38.18569	ppb		91
71)	Atrazine	9.73	200	93179	18.27769	ppb		100
72)	Pentachlorophenol	9.83	266	91407	50.75984	ppb		95
73)	Phenanthrene	10.06	178	992611	38.74928	ppb		99
74)	Anthracene	10.12	178	1029607	38.64677	ppb		99
75)	Carbazol	10.32	167	881300	37.25919	ppb		99
76)	Di-n-butylphthalate	10.73	149	1193622	37.69472	ppb		99
77)	Fluoranthene	11.43	202	1069844	38.21520	ppb	#	96
79)	Benzidine	11.61	184	397025	42.22773	ppb		99
80)	Pyrene	11.70	202	1133899	40.00029	ppb		99
82)	Butyl benzylphthalate	12.47	149	588724	41.47093	ppb		93
83)	3,3'-Dichlorobenzidine	13.08	252	380229	43.62107	ppb		97
84)	Benz (a) anthracene	13.10	228	1074534	39.95154	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.13	149	762045	38.03889	ppb		98
86)	Chrysene	13.13	228	989386	38.26692	ppb		100
87)	Di-n-octylphthalate	13.84	149	1343797	37.85342	ppb	#	87
89)	Benzo (b) fluoranthene	14.28	252	1144127	38.39349	ppb	#	98
90)	Benzo (k) fluoranthene	14.32	252	1041436	36.54915	ppb		99
91)	Benzo (a) pyrene	14.68	252	1090904	38.87173	ppb		98
92)	Indeno (1,2,3-cd) pyrene	16.30	276	1176312	36.83588	ppb		98
93)	Dibenz (a,h) anthracene	16.32	278	1006185	37.03465	ppb		99
94)	Benzo (g,h,i) perylene	16.75	276	1129852	41.83148	ppb		97

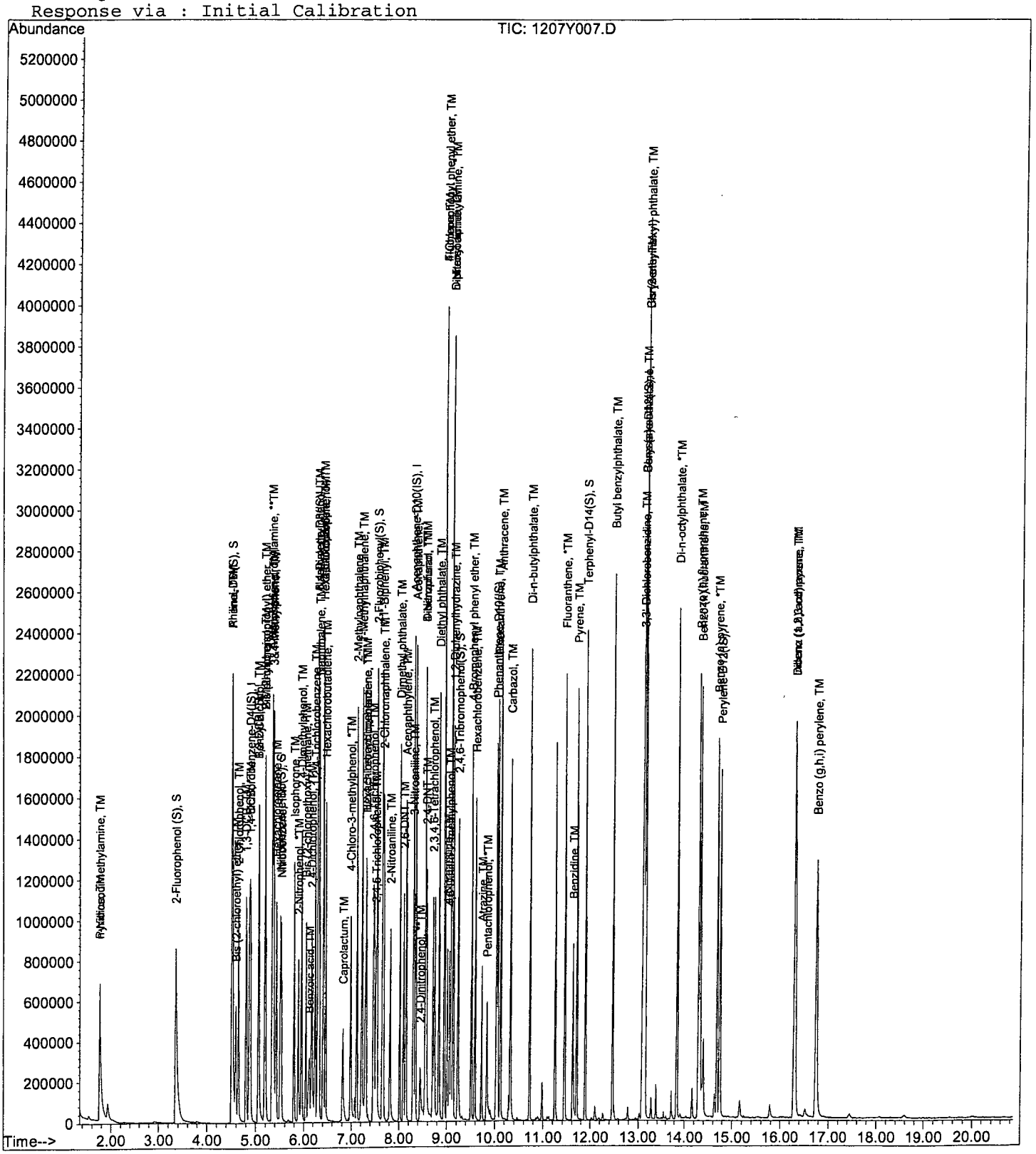
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y007.D Vial: 7
Acq On : 7 Dec 16 11:32 Operator: MA
Sample : 40ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y008.D Vial: 8
Acq On : 7 Dec 16 12:02 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	195270	40.00000	ppb	0.00
20) Napthalene-D8(IS)	6.30	136	816895	40.00000	ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	475200	40.00000	ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	975541	40.00000	ppb	0.00
78) Chrysene-D12(IS)	13.10	240	853105	40.00000	ppb	0.00
88) Perylene-D12(IS)	14.75	264	871056	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.35	112	695029	112.45058	ppb	0.00
Spiked Amount 200.000			Recovery = 56.226%			
5) Phenol-D6 (S)	4.51	99	832830	97.41019	ppb	0.00
Spiked Amount 200.000			Recovery = 48.705%			
21) Nitrobenzene-D5(S)	5.50	82	421258	49.42470	ppb	0.00
Spiked Amount 100.000			Recovery = 49.425%			
45) 2-Fluorobiphenyl(S)	7.53	172	745324	49.39294	ppb	0.00
Spiked Amount 100.000			Recovery = 49.393%			
63) 2,4,6-Tribromophenol(S)	9.23	330	243923	104.52712	ppb	0.00
Spiked Amount 200.000			Recovery = 52.263%			
81) Terphenyl-D14(S)	11.89	244	959232	49.60488	ppb	0.00
Spiked Amount 100.000			Recovery = 49.605%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.75	42	207992	45.43145	ppb	100
3) Pyridine	1.76	79	499289	51.05103	ppb	100
6) Phenol	4.52	94	480106	49.50952	ppb	100
7) Aniline	4.52	66	456200	47.77753	ppb	100
8) Bis (2-chloroethyl) ether	4.59	63	206942	47.47862	ppb	100
9) 2-Chlorophenol	4.65	128	370436	49.27197	ppb	100
10) 1,3-DCB	4.80	146	396306	48.64015	ppb	100
11) 1,4-DCB	4.89	146	407144	48.76421	ppb	100
12) Benzyl alcohol	5.06	108	223746	53.20189	ppb	100
13) 1,2-DCB	5.06	146	388817	49.97284	ppb	100
14) 2-Methylphenol	5.19	107	277560	48.68411	ppb	100
15) Bis (2-chloroisopropyl) et	5.19	45	424279	48.60428	ppb	100
16) Acetophenone	5.33	105	510342	48.02645	ppb	100
17) 3&4-Methylphenol	5.36	107	744509	98.71362	ppb	100
18) n-Nitrosodi-n-propylamine	5.34	70	262564	47.63603	ppb	100
19) Hexachloroethane	5.42	117	166560	48.09955	ppb	100
22) Nitrobenzene	5.52	77	426332	48.89327	ppb	100
23) Isophorone	5.80	82	706760	49.16418	ppb	100
24) 2-Nitrophenol	5.88	139	213979	51.54284	ppb	100
25) 2,4-Dimethylphenol	5.95	122	323836	50.04122	ppb	100
26) Benzoic acid	6.13	105	279445	53.40557	ppb	100
27) Bis (2-chloroethoxy) metha	6.04	93	396181	51.54248	ppb	100
28) 2,4-Dichlorophenol	6.17	162	325223	52.17353	ppb	100
29) 1,2,4-Trichlorobenzene	6.24	180	351337	51.02621	ppb	100
30) 3,4-Dimethylphenol	6.29	107	512874	49.69783	ppb	100
31) Naphthalene	6.32	128	1091949	50.77318	ppb	100
32) 4-Chloroaniline	6.40	127	395557	51.83434	ppb	100
33) 2,6-Dichlorophenol	6.41	162	296250	49.22564	ppb	100
34) Hexachloropropene	6.42	213	279000	50.93252	ppb	100
35) Hexachlorobutadiene	6.46	225	219413	49.96224	ppb	100
36) Caprolactum	6.83	55	159640	49.15407	ppb	100
37) 4-Chloro-3-methylphenol	6.99	107	341306	47.97517	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y008.D Vial: 8
Acq On : 7 Dec 16 12:02 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38)	2-Methylnaphthalene	7.11	142	688780	47.97270	ppb	100
39)	1-Methylnaphthalene	7.22	142	659731	47.90535	ppb	100
41)	Hexachlorocyclopentadiene	7.29	237	140004	52.99808	ppb	100
42)	1,2,4,5-Tetrachlorobenzene	7.31	216	332171	51.38560	ppb	100
43)	2,4,6-Trichlorophenol	7.46	196	218731	50.99205	ppb	100
44)	2,4,5-Trichlorophenol	7.52	196	226443	49.85239	ppb	100
46)	1,1'-Biphenyl	7.66	154	885084	49.14334	ppb	100
47)	2-Chloronaphthalene	7.67	162	727438	51.26833	ppb	100
48)	2-Nitroaniline	7.81	65	266093	52.81891	ppb	100
49)	Dimethyl phthalate	8.02	163	914001	52.61807	ppb	100
50)	2,6-DNT	8.10	165	201713	52.17789	ppb	100
51)	Acenaphthylene	8.15	152	1109739	50.31172	ppb	100
52)	3-Nitroaniline	8.30	138	209961	52.45890	ppb	100
53)	Acenaphthene	8.34	154	674472	49.92765	ppb	100
54)	2,4-Dinitrophenol	8.44	184	97936	50.08681	ppb	100
55)	4-Nitrophenol	8.54	65	178570	53.03676	ppb	100
56)	Dibenzofuran	8.55	168	1012092	51.38241	ppb	100
57)	2,4-DNT	8.57	165	296625	54.28044	ppb	100
58)	2,3,4,6-Tetrachlorophenol	8.71	232	207535	58.71469	ppb	100
59)	Diethyl phthalate	8.83	149	866198	49.11547	ppb	100
60)	4-Chlorophenyl phenyl ethe	8.95	204	382969	47.77538	ppb	100
61)	Fluorene	8.95	166	806446	49.70024	ppb	100
62)	4-Nitroaniline	9.01	138	206542	54.17700	ppb	100
65)	4,6-Dinitro-2-methylphenol	9.06	198	182950	53.34482	ppb	100
66)	Diphenyl amine	9.10	169	1368741	102.34994	ppb	100
67)	n-Nitrosodiphenylamine	9.10	169	1368741	102.34994	ppb	100
68)	1,2-Diphenylhydrazine	9.13	77	929548	43.90369	ppb	100
69)	4-Bromophenyl phenyl ether	9.51	248	243072	47.44020	ppb	100
70)	Hexachlorobenzene	9.59	284	246139	45.09743	ppb	100
71)	Atrazine	9.73	200	132213	24.68138	ppb	100
72)	Pentachlorophenol	9.84	266	118335	60.26116	ppb	100
73)	Phenanthrene	10.06	178	1304097	48.44918	ppb	100
74)	Anthracene	10.12	178	1323292	47.27041	ppb	100
75)	Carbazol	10.32	167	1272051	51.18068	ppb	100
76)	Di-n-butylphthalate	10.73	149	1500155	45.08600	ppb	100
77)	Fluoranthene	11.44	202	1330020	45.21326	ppb	100
79)	Benzidine	11.61	184	505375	53.58983	ppb	100
80)	Pyrene	11.70	202	1525772	53.66203	ppb	100
82)	Butyl benzylphthalate	12.46	149	734576	51.58904	ppb	100
83)	3,3'-Dichlorobenzidine	13.08	252	470879	53.85786	ppb	100
84)	Benz (a) anthracene	13.10	228	1345568	49.87784	ppb	100
85)	Bis (2-ethylhexyl) phthala	13.13	149	996708	49.60253	ppb	100
86)	Chrysene	13.14	228	1285778	49.58067	ppb	100
87)	Di-n-octylphthalate	13.85	149	1959719	55.03689	ppb	100
89)	Benzo (b) fluoranthene	14.29	252	1307332	44.75884	ppb	100
90)	Benzo (k) fluoranthene	14.32	252	1321701	47.32466	ppb	100
91)	Benzo (a) pyrene	14.68	252	1333161	48.46626	ppb	100
92)	Indeno (1,2,3-cd) pyrene	16.30	276	1465032	46.80640	ppb	100
93)	Dibenz (a,h) anthracene	16.32	278	1249734	46.93076	ppb	100
94)	Benzo (g,h,i) perylene	16.76	276	1364184	51.53048	ppb	100

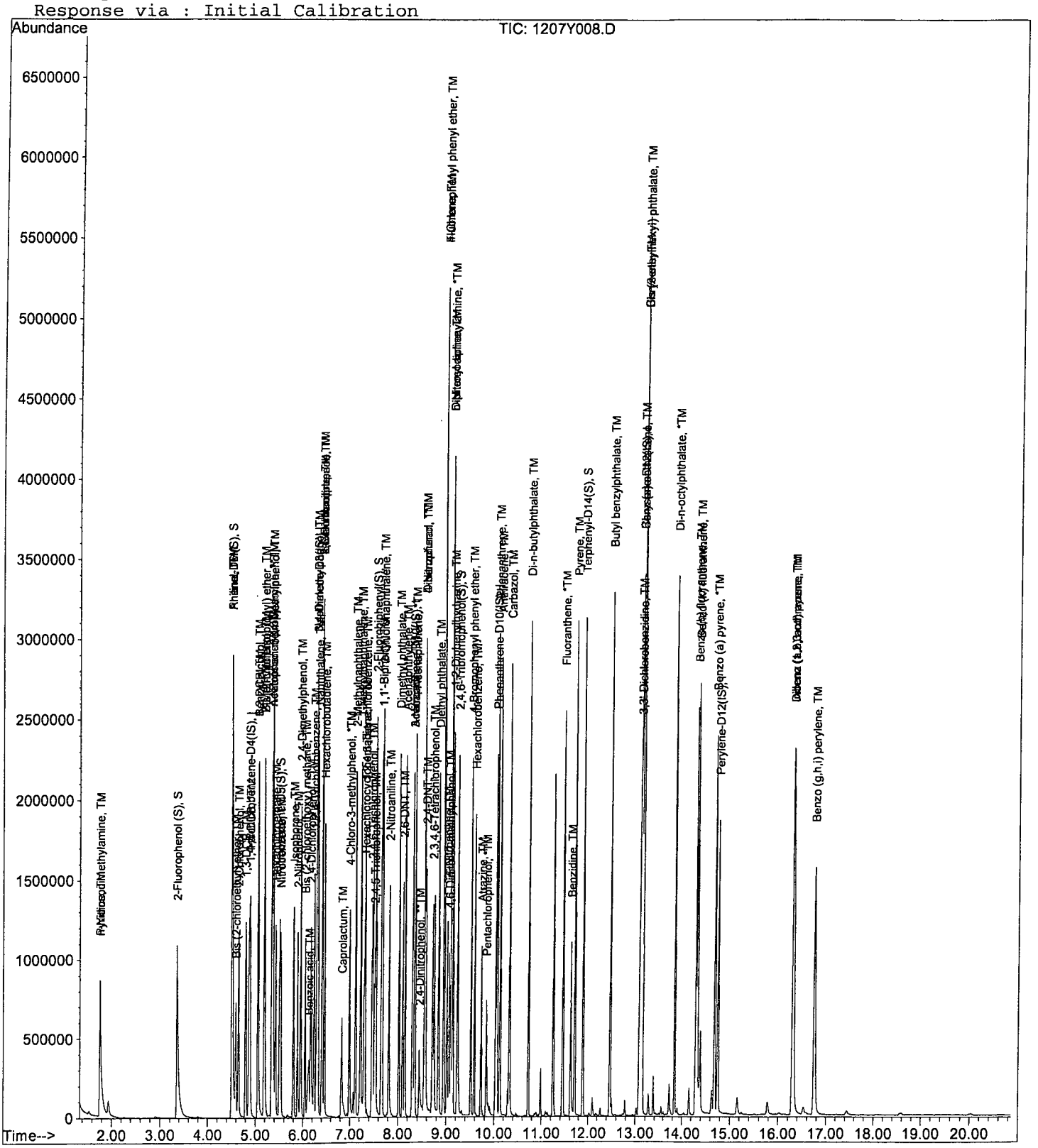
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y008.D Vial: 8
Acq On : 7 Dec 16 12:02 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y009.D Vial: 9
Acq On : 7 Dec 16 12:32 Operator: MA
Sample : 60ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	218783	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.30	136	928479	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	561569	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	933722	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.11	240	884630	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.75	264	1042796	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.35	112	865007	124.91090 ppb	0.00
Spiked Amount 200.000			Recovery = 62.456%		
5) Phenol-D6 (S)	4.51	99	1086222	113.39361 ppb	0.00
Spiked Amount 200.000			Recovery = 56.697%		
21) Nitrobenzene-D5(S)	5.50	82	539284	55.66825 ppb	0.00
Spiked Amount 100.000			Recovery = 55.668%		
45) 2-Fluorobiphenyl(S)	7.54	172	984076	55.18508 ppb	0.00
Spiked Amount 100.000			Recovery = 55.185%		
63) 2,4,6-Tribromophenol(S)	9.23	330	315998	114.58661 ppb	0.00
Spiked Amount 200.000			Recovery = 57.293%		
81) Terphenyl-D14(S)	11.89	244	1107571	55.23485 ppb	0.00
Spiked Amount 100.000			Recovery = 55.235%		
Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.75	42	237687	46.33801 ppb	95
3) Pyridine	1.76	79	574794	52.45498 ppb	95
6) Phenol	4.52	94	637429	58.66854 ppb	94
7) Aniline	4.52	66	600249	56.10761 ppb	94
8) Bis (2-chloroethyl) ether	4.59	63	281001	57.54124 ppb	99
9) 2-Chlorophenol	4.65	128	506460	60.12483 ppb	98
10) 1,3-DCB	4.80	146	523668	57.36438 ppb	99
11) 1,4-DCB	4.89	146	527245	56.36215 ppb	97
12) Benzyl alcohol	5.06	108	288893	61.30992 ppb	96
13) 1,2-DCB	5.06	146	489566	56.15934 ppb	98
14) 2-Methylphenol	5.19	107	364148	57.00727 ppb	99
15) Bis (2-chloroisopropyl) et	5.19	45	554052	56.64941 ppb	96
16) Acetophenone	5.34	105	671773	56.42397 ppb	98
17) 3&4-Methylphenol	5.36	107	950588	112.49194 ppb	98
18) n-Nitrosodi-n-propylamine	5.35	70	340579	55.14933 ppb	98
19) Hexachloroethane	5.42	117	222476	57.34234 ppb	96
22) Nitrobenzene	5.52	77	554825	55.98238 ppb	98
23) Isophorone	5.80	82	928565	56.83073 ppb	99
24) 2-Nitrophenol	5.88	139	289592	61.37308 ppb	94
25) 2,4-Dimethylphenol	5.95	122	444516	60.43441 ppb	98
26) Benzoic acid	6.13	105	322257	54.17674 ppb	95
27) Bis (2-chloroethoxy) metha	6.04	93	529470	60.60482 ppb	99
28) 2,4-Dichlorophenol	6.16	162	429913	60.67973 ppb	96
29) 1,2,4-Trichlorobenzene	6.24	180	459705	58.74120 ppb	95
30) 3,4-Dimethylphenol	6.29	107	660163	56.28233 ppb	98
31) Naphthalene	6.32	128	1425995	58.33701 ppb	99
32) 4-Chloroaniline	6.40	127	513997	59.26021 ppb	98
33) 2,6-Dichlorophenol	6.41	162	389211	56.90000 ppb	98
34) Hexachloropropene	6.42	213	365095	58.63961 ppb	98
35) Hexachlorobutadiene	6.46	225	279947	56.08536 ppb	99
36) Caprolactum	6.84	55	221717	60.06354 ppb	98
37) 4-Chloro-3-methylphenol	6.99	107	480600	59.43613 ppb	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y009.D Vial: 9
Acq On : 7 Dec 16 12:32 Operator: MA
Sample : 60ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38)	2-Methylnaphthalene	7.11	142	945068	57.91231	ppb	98
39)	1-Methylnaphthalene	7.22	142	919036	58.71429	ppb	98
41)	Hexachlorocyclopentadiene	7.29	237	197642	60.29517	ppb	98
42)	1,2,4,5-Tetrachlorobenzene	7.31	216	445973	58.37966	ppb	99
43)	2,4,6-Trichlorophenol	7.46	196	297908	58.76890	ppb	98
44)	2,4,5-Trichlorophenol	7.52	196	321422	59.87920	ppb	94
46)	1,1'-Biphenyl	7.66	154	1207599	56.73829	ppb	98
47)	2-Chloronaphthalene	7.68	162	953118	56.84250	ppb	99
48)	2-Nitroaniline	7.81	65	333570	56.02944	ppb	97
49)	Dimethyl phthalate	8.02	163	1131837	55.13729	ppb	99
50)	2,6-DNT	8.10	165	262428	57.44286	ppb	99
51)	Acenaphthylene	8.15	152	1514599	58.10577	ppb	100
52)	3-Nitroaniline	8.30	138	286828	60.64227	ppb	100
53)	Acenaphthene	8.34	154	907464	56.84338	ppb	99
54)	2,4-Dinitrophenol	8.44	184	134887	57.13945	ppb	90
55)	4-Nitrophenol	8.54	65	232448	57.73526	ppb	99
56)	Dibenzofuran	8.55	168	1321081	56.75410	ppb	99
57)	2,4-DNT	8.58	165	379083	58.70069	ppb	99
58)	2,3,4,6-Tetrachlorophenol	8.71	232	264908	63.41964	ppb	97
59)	Diethyl phthalate	8.84	149	1169813	56.12946	ppb	95
60)	4-Chlorophenyl phenyl ethe	8.95	204	505362	53.34779	ppb	99
61)	Fluorene	8.95	166	1031075	53.77083	ppb	100
62)	4-Nitroaniline	9.01	138	270386	60.01559	ppb	96
65)	4,6-Dinitro-2-methylphenol	9.06	198	237031	72.20927	ppb	96
66)	Diphenyl amine	9.10	169	1658613	129.58040	ppb	99
67)	n-Nitrosodiphenylamine	9.10	169	1658613	129.58040	ppb	99
68)	1,2-Diphenylhydrazine	9.13	77	1349001	66.56860	ppb	99
69)	4-Bromophenyl phenyl ether	9.51	248	319227	65.09373	ppb	95
70)	Hexachlorobenzene	9.59	284	327981	62.78386	ppb	97
71)	Atrazine	9.73	200	151588	29.56569	ppb	96
72)	Pentachlorophenol	9.84	266	138587	71.04943	ppb	96
73)	Phenanthrene	10.06	178	1487228	57.72740	ppb	99
74)	Anthracene	10.12	178	1508389	56.29567	ppb	98
75)	Carbazol	10.32	167	1347464	56.64305	ppb	100
76)	Di-n-butylphthalate	10.73	149	1763308	55.36837	ppb	100
77)	Fluoranthene	11.44	202	1636819	58.13481	ppb	100
79)	Benzidine	11.61	184	608980	62.27482	ppb	98
80)	Pyrene	11.70	202	1793793	60.84019	ppb	99
82)	Butyl benzylphthalate	12.47	149	829390	56.17205	ppb	99
83)	3,3'-Dichlorobenzidine	13.08	252	531065	58.57715	ppb	98
84)	Benz (a) anthracene	13.10	228	1585364	56.67243	ppb	100
85)	Bis (2-ethylhexyl) phthala	13.13	149	1244971	59.74973	ppb	99
86)	Chrysene	13.14	228	1666038	61.95439	ppb	99
87)	Di-n-octylphthalate	13.85	149	2024092	54.81901	ppb	99
89)	Benzo (b) fluoranthene	14.29	252	1616583	46.23147	ppb	100
90)	Benzo (k) fluoranthene	14.32	252	1852486	55.40589	ppb	99
91)	Benzo (a) pyrene	14.68	252	1766595	53.64641	ppb	99
92)	Indeno (1,2,3-cd) pyrene	16.31	276	1712128	45.69210	ppb	98
93)	Dibenz (a,h) anthracene	16.32	278	1422360	44.61658	ppb	99
94)	Benzo (g,h,i) perylene	16.76	276	1382485	43.62128	ppb	99

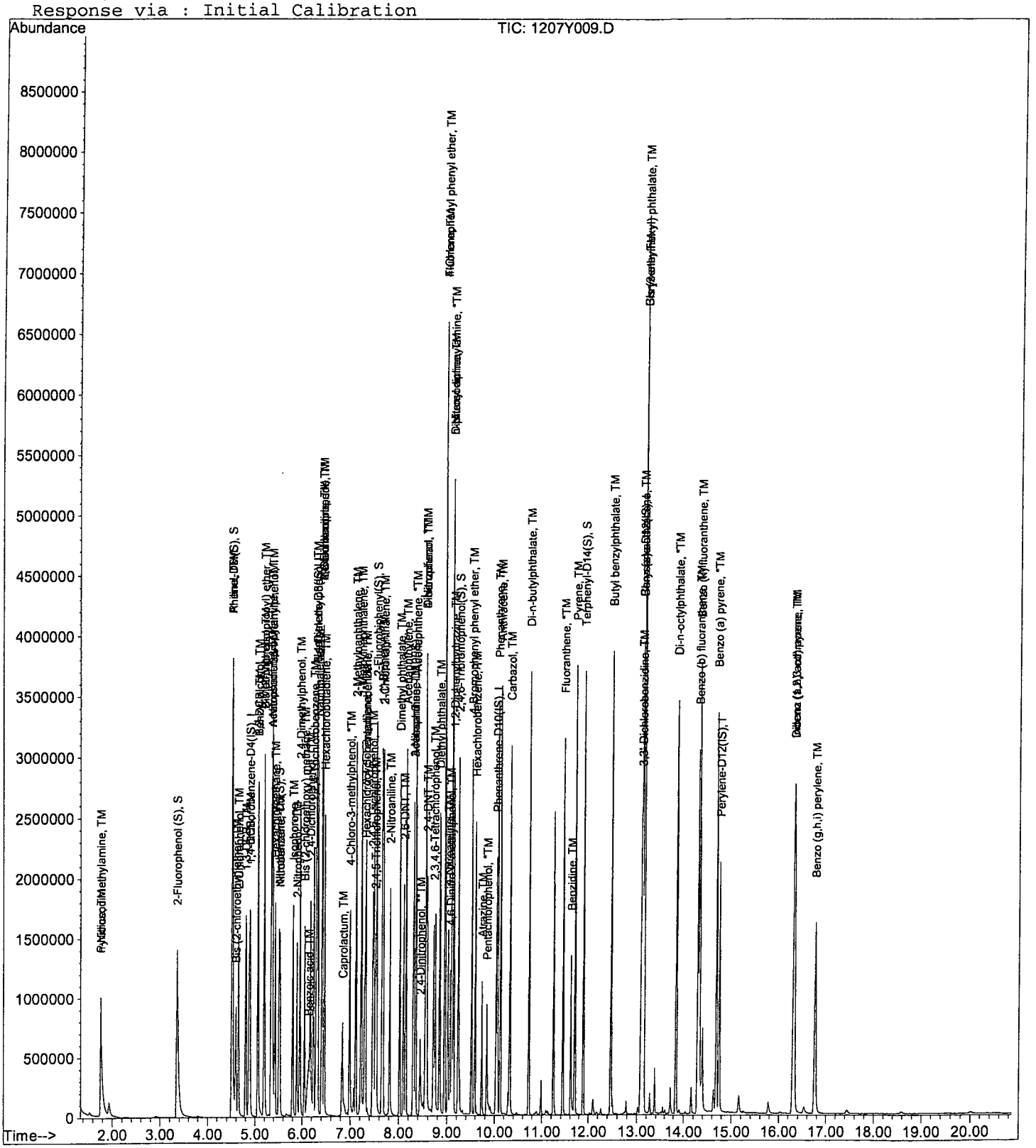
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y009.D Vial: 9
Acq On : 7 Dec 16 12:32 Operator: MA
Sample : 60ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y010.D Vial: 10
Acq On : 7 Dec 16 13:02 Operator: MA
Sample : 80ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	195710	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.30	136	859926	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	527101	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	1005123	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.11	240	912863	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.75	264	909856	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.35	112	1083940	174.97924 ppb	0.00
Spiked Amount 200.000				Recovery = 87.490%	
5) Phenol-D6 (S)	4.51	99	1335540	155.85741 ppb	0.00
Spiked Amount 200.000				Recovery = 77.929%	
21) Nitrobenzene-D5(S)	5.51	82	643499	71.72142 ppb	0.00
Spiked Amount 100.000				Recovery = 71.721%	
45) 2-Fluorobiphenyl(S)	7.54	172	1210171	72.30179 ppb	0.00
Spiked Amount 100.000				Recovery = 72.302%	
63) 2,4,6-Tribromophenol(S)	9.24	330	416825	161.03215 ppb	0.00
Spiked Amount 200.000				Recovery = 80.516%	
81) Terphenyl-D14(S)	11.89	244	1546385	74.73349 ppb	0.00
Spiked Amount 100.000				Recovery = 74.733%	
Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.75	42	322164	70.21171 ppb	97
3) Pyridine	1.76	79	734964	74.97926 ppb	96
6) Phenol	4.53	94	791696	81.45777 ppb	83
7) Aniline	4.52	66	776371	81.12603 ppb	97
8) Bis (2-chloroethyl) ether	4.59	63	355760	81.43836 ppb	95
9) 2-Chlorophenol	4.65	128	615384	81.66867 ppb	98
10) 1,3-DCB	4.81	146	614066	75.19723 ppb	98
11) 1,4-DCB	4.89	146	652039	77.92005 ppb	98
12) Benzyl alcohol	5.06	108	348718	82.73108 ppb	90
13) 1,2-DCB	5.06	146	592989	76.04278 ppb	98
14) 2-Methylphenol	5.20	107	423761	74.16070 ppb	97
15) Bis (2-chloroisopropyl) et	5.19	45	634640	72.53922 ppb	96
16) Acetophenone	5.34	105	792534	74.41484 ppb	97
17) 3&4-Methylphenol	5.37	107	1142368	151.12477 ppb	98
18) n-Nitrosodi-n-propylamine	5.35	70	410995	74.39769 ppb	97
19) Hexachloroethane	5.42	117	261628	75.38363 ppb	97
22) Nitrobenzene	5.53	77	676884	73.74296 ppb	93
23) Isophorone	5.80	82	1089807	72.01642 ppb	95
24) 2-Nitrophenol	5.88	139	344463	78.82155 ppb	97
25) 2,4-Dimethylphenol	5.95	122	565844	83.06243 ppb	98
26) Benzoic acid	6.15	105	443247	81.69217 ppb	95
27) Bis (2-chloroethoxy) metha	6.05	93	679127	83.93205 ppb	98
28) 2,4-Dichlorophenol	6.17	162	547229	83.39561 ppb	100
29) 1,2,4-Trichlorobenzene	6.24	180	576211	79.49798 ppb	99
30) 3,4-Dimethylphenol	6.29	107	820634	75.54077 ppb	99
31) Naphthalene	6.33	128	1762100	77.83370 ppb	99
32) 4-Chloroaniline	6.41	127	626144	77.94493 ppb	93
33) 2,6-Dichlorophenol	6.41	162	470298	74.23545 ppb	98
34) Hexachloropropene	6.42	213	458828	79.56940 ppb	98
35) Hexachlorobutadiene	6.47	225	341554	73.88292 ppb	97
36) Caprolactum	6.85	55	263295	77.01327 ppb	97
37) 4-Chloro-3-methylphenol	6.99	107	569393	76.03086 ppb	86

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y010.D Vial: 10
Acq On : 7 Dec 16 13:02 Operator: MA
Sample : 80ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38) 2-Methylnaphthalene	7.12	142	1107600	73.28275 ppb		99
39) 1-Methylnaphthalene	7.23	142	1101455	75.97821 ppb		100
41) Hexachlorocyclopentadiene	7.29	237	283877	81.78811 ppb		98
42) 1,2,4,5-Tetrachlorobenzene	7.31	216	543057	75.73693 ppb		97
43) 2,4,6-Trichlorophenol	7.46	196	352380	74.06038 ppb		96
44) 2,4,5-Trichlorophenol	7.52	196	364305	72.30607 ppb		98
46) 1,1'-Biphenyl	7.66	154	1431535	71.65801 ppb		99
47) 2-Chloronaphthalene	7.67	162	1099952	69.88911 ppb		96
48) 2-Nitroaniline	7.81	65	409925	73.35725 ppb		87
49) Dimethyl phthalate	8.03	163	1345976	69.85672 ppb		98
50) 2,6-DNT	8.10	165	312732	72.93022 ppb	#	73
51) Acenaphthylene	8.15	152	1738197	71.04441 ppb		100
52) 3-Nitroaniline	8.30	138	350245	78.89239 ppb		86
53) Acenaphthene	8.35	154	1111537	74.17946 ppb		99
54) 2,4-Dinitrophenol	8.44	184	218209	93.07907 ppb		96
55) 4-Nitrophenol	8.54	65	306442	78.35915 ppb		97
56) Dibenzofuran	8.55	168	1632194	74.70485 ppb		94
57) 2,4-DNT	8.57	165	451681	74.51608 ppb	#	80
58) 2,3,4,6-Tetrachlorophenol	8.71	232	315865	80.56372 ppb		96
59) Diethyl phthalate	8.84	149	1405142	71.82968 ppb		99
60) 4-Chlorophenyl phenyl ethe	8.96	204	628797	70.71859 ppb		81
61) Fluorene	8.95	166	1287251	71.52024 ppb		98
62) 4-Nitroaniline	9.02	138	354043	83.72308 ppb		96
65) 4,6-Dinitro-2-methylphenol	9.06	198	328902	93.07921 ppb	#	68
66) Diphenyl amine	9.10	169	2177827	158.05783 ppb		99
67) n-Nitrosodiphenylamine	9.10	169	2177827	158.05783 ppb		99
68) 1,2-Diphenylhydrazine	9.14	77	1790205	82.06506 ppb	#	89
69) 4-Bromophenyl phenyl ether	9.52	248	376085	71.24001 ppb	#	81
70) Hexachlorobenzene	9.60	284	403389	71.73345 ppb	#	79
71) Atrazine	9.73	200	197787	35.83598 ppb		99
72) Pentachlorophenol	9.84	266	222525	97.90203 ppb		97
73) Phenanthrene	10.06	178	2029194	73.16888 ppb		99
74) Anthracene	10.12	178	2073870	71.90210 ppb		99
75) Carbazol	10.32	167	1832065	71.54326 ppb		97
76) Di-n-butylphthalate	10.73	149	2372548	69.20651 ppb		99
77) Fluoranthene	11.44	202	2349024	77.50352 ppb		99
79) Benzidine	11.61	184	843755	83.61455 ppb		99
80) Pyrene	11.70	202	2273483	74.72502 ppb		99
82) Butyl benzylphthalate	12.46	149	1147875	75.33766 ppb		93
83) 3,3'-Dichlorobenzidine	13.08	252	711820	76.08636 ppb		99
84) Benz (a) anthracene	13.10	228	2207148	76.45930 ppb		99
85) Bis (2-ethylhexyl) phthala	13.13	149	1603119	74.55873 ppb		98
86) Chrysene	13.14	228	2085134	75.14105 ppb		99
87) Di-n-octylphthalate	13.85	149	2762190	72.49541 ppb		96
89) Benzo (b) fluoranthene	14.29	252	2598169	85.15963 ppb		98
90) Benzo (k) fluoranthene	14.33	252	2204360	75.56317 ppb		98
91) Benzo (a) pyrene	14.69	252	2169513	75.50794 ppb		99
92) Indeno (1,2,3-cd) pyrene	16.31	276	2538105	77.63207 ppb		98
93) Dibenz (a,h) anthracene	16.34	278	2157371	77.56008 ppb		98
94) Benzo (g,h,i) perylene	16.77	276	1984638	71.77049 ppb		100

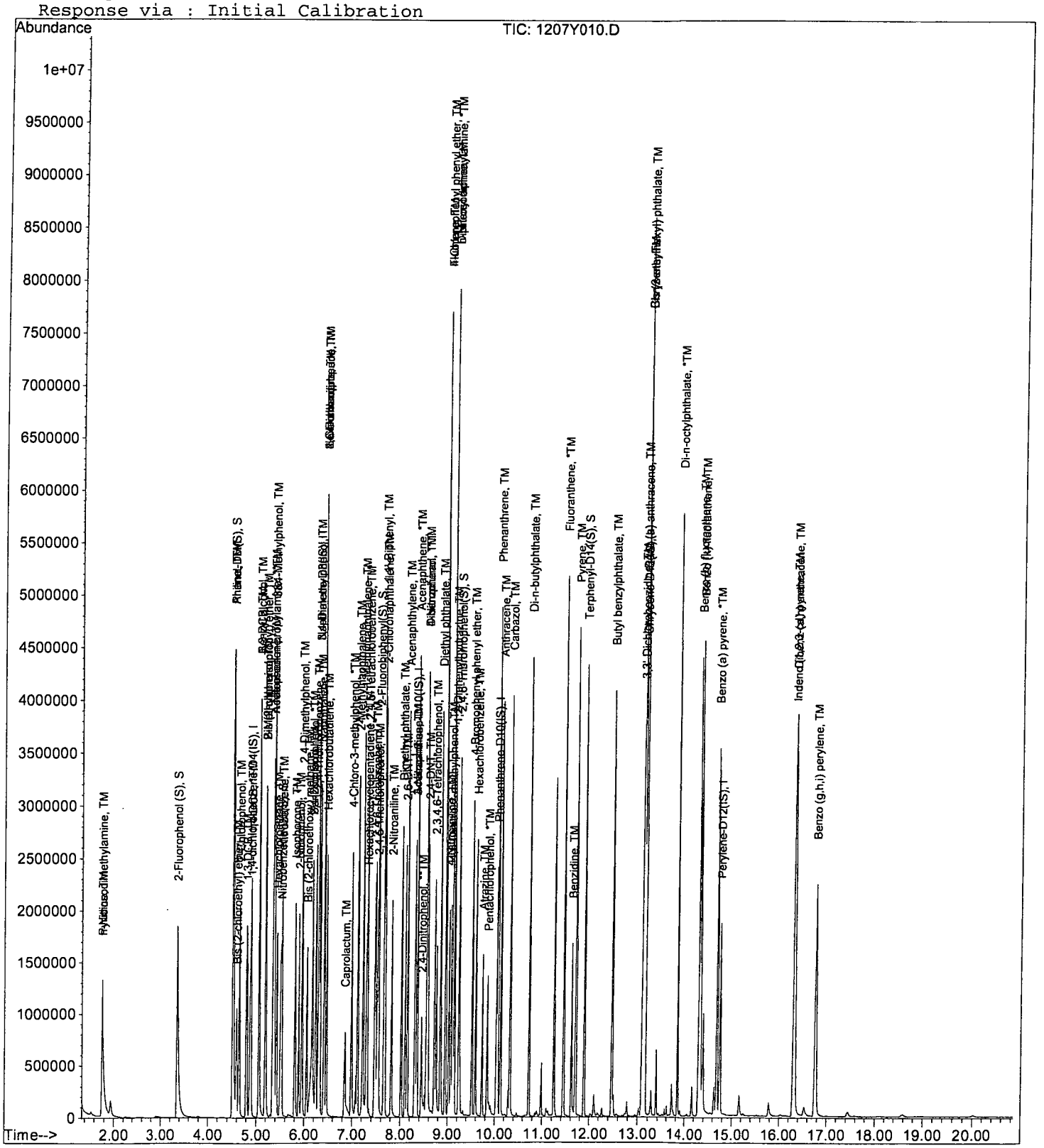
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y010.D Vial: 10
Acq On : 7 Dec 16 13:02 Operator: MA
Sample : 80ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y011.D Vial: 11
Acq On : 7 Dec 16 13:32 Operator: MA
Sample : 100ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	214746	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.30	136	801273	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.31	164	479807	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.03	188	1038349	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.11	240	897961	40.00000 ppb		0.00
88) Perylene-D12(IS)	14.76	264	1012967	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.36	112	1442400	212.20467 ppb		0.00
Spiked Amount 200.000				Recovery = 106.103%		
5) Phenol-D6 (S)	4.52	99	1755614	186.71857 ppb		0.00
Spiked Amount 200.000				Recovery = 93.360%		
21) Nitrobenzene-D5(S)	5.51	82	880245	105.28952 ppb		0.00
Spiked Amount 100.000				Recovery = 105.290%		
45) 2-Fluorobiphenyl(S)	7.54	172	1444098	94.78208 ppb		0.00
Spiked Amount 100.000				Recovery = 94.782%		
63) 2,4,6-Tribromophenol(S)	9.24	330	537159	227.97590 ppb		0.00
Spiked Amount 200.000				Recovery = 113.988%		
81) Terphenyl-D14(S)	11.90	244	1906266	93.65464 ppb		0.00
Spiked Amount 100.000				Recovery = 93.655%		
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.75	42	427152	84.84044 ppb		98
3) Pyridine	1.76	79	954145	88.71098 ppb		96
6) Phenol	4.53	94	1029962	96.57911 ppb		91
7) Aniline	4.53	66	1005037	95.71079 ppb	#	76
8) Bis (2-chloroethyl) ether	4.59	63	462246	96.43463 ppb		99
9) 2-Chlorophenol	4.65	128	814431	98.50346 ppb		96
10) 1,3-DCB	4.81	146	851310	95.00850 ppb		98
11) 1,4-DCB	4.89	146	861705	93.84739 ppb		99
12) Benzyl alcohol	5.06	108	474310	102.55209 ppb		89
13) 1,2-DCB	5.06	146	785684	91.82209 ppb		98
14) 2-Methylphenol	5.20	107	595539	94.98412 ppb		96
15) Bis (2-chloroisopropyl) et	5.19	45	856467	89.21626 ppb		85
16) Acetophenone	5.34	105	1088689	93.16085 ppb		99
17) 3&4-Methylphenol	5.38	107	1562005	188.32154 ppb		92
18) n-Nitrosodi-n-propylamine	5.35	70	569115	93.88817 ppb		99
19) Hexachloroethane	5.43	117	354007	92.95925 ppb	#	76
22) Nitrobenzene	5.53	77	903147	105.59548 ppb		97
23) Isophorone	5.81	82	1523574	108.05033 ppb		96
24) 2-Nitrophenol	5.88	139	468219	114.98256 ppb		95
25) 2,4-Dimethylphenol	5.96	122	701715	110.54758 ppb		99
26) Benzoic acid	6.17	105	531913	109.09798 ppb		91
27) Bis (2-chloroethoxy) metha	6.05	93	810611	107.51520 ppb		99
28) 2,4-Dichlorophenol	6.17	162	626111	102.40142 ppb		99
29) 1,2,4-Trichlorobenzene	6.24	180	674426	99.85951 ppb		99
30) 3,4-Dimethylphenol	6.29	107	982967	97.10719 ppb		97
31) Naphthalene	6.33	128	2092381	99.18785 ppb		100
32) 4-Chloroaniline	6.41	127	726261	97.02573 ppb		97
33) 2,6-Dichlorophenol	6.41	162	585319	99.15426 ppb		97
34) Hexachloropropene	6.42	213	564663	105.09113 ppb		99
35) Hexachlorobutadiene	6.47	225	420352	97.58395 ppb		96
36) Caprolactum	6.87	55	323697	101.61135 ppb		95
37) 4-Chloro-3-methylphenol	6.99	107	718886	103.01925 ppb		84

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y011.D Vial: 11
Acq On : 7 Dec 16 13:32 Operator: MA
Sample : 100ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 13:57:46 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	2-Methylnaphthalene	7.12	142	1400630	99.45413 ppb		98
39)	1-Methylnaphthalene	7.23	142	1395356	103.29704 ppb		99
41)	Hexachlorocyclopentadiene	7.29	237	337941	98.72624 ppb		99
42)	1,2,4,5-Tetrachlorobenzene	7.31	216	637512	97.67376 ppb		98
43)	2,4,6-Trichlorophenol	7.46	196	430600	99.42051 ppb		98
44)	2,4,5-Trichlorophenol	7.52	196	452384	98.63798 ppb		89
46)	1,1'-Biphenyl	7.66	154	1743421	95.87212 ppb		98
47)	2-Chloronaphthalene	7.67	162	1364913	95.27260 ppb		95
48)	2-Nitroaniline	7.82	65	501195	98.53093 ppb		96
49)	Dimethyl phthalate	8.03	163	1691646	96.45119 ppb		99
50)	2,6-DNT	8.11	165	428985	109.90174 ppb		96
51)	Acenaphthylene	8.15	152	2176158	97.71215 ppb		100
52)	3-Nitroaniline	8.31	138	417728	103.36750 ppb	#	99
53)	Acenaphthene	8.35	154	1365612	100.11850 ppb		99
54)	2,4-Dinitrophenol	8.44	184	244053	112.65730 ppb		86
55)	4-Nitrophenol	8.54	65	381862	104.77768 ppb		94
56)	Dibenzofuran	8.56	168	2009957	101.06274 ppb		97
57)	2,4-DNT	8.58	165	559804	101.45686 ppb		98
58)	2,3,4,6-Tetrachlorophenol	8.71	232	407530	114.18916 ppb		93
59)	Diethyl phthalate	8.85	149	1833935	102.98996 ppb		97
60)	4-Chlorophenyl phenyl ethe	8.96	204	822846	101.66441 ppb		81
61)	Fluorene	8.96	166	1670986	101.99193 ppb		98
62)	4-Nitroaniline	9.03	138	400399	104.01822 ppb		94
65)	4,6-Dinitro-2-methylphenol	9.07	198	386581	105.90161 ppb	#	83
66)	Diphenyl amine	9.11	169	2820080	198.12073 ppb		100
67)	n-Nitrosodiphenylamine	9.11	169	2820080	198.12073 ppb		100
68)	1,2-Diphenylhydrazine	9.14	77	2276128	101.00156 ppb		96
69)	4-Bromophenyl phenyl ether	9.52	248	489978	89.84427 ppb		91
70)	Hexachlorobenzene	9.60	284	507014	87.27573 ppb		86
71)	Atrazine	9.73	200	255247	44.76701 ppb		97
72)	Pentachlorophenol	9.84	266	289057	117.11640 ppb		96
73)	Phenanthrene	10.06	178	2631951	91.86635 ppb		99
74)	Anthracene	10.12	178	2699734	90.60598 ppb		100
75)	Carbazol	10.33	167	2292694	86.66621 ppb		99
76)	Di-n-butylphthalate	10.74	149	3048385	86.07511 ppb		99
77)	Fluoranthene	11.44	202	3022326	96.52752 ppb	#	98
79)	Benzidine	11.62	184	1093324	110.14442 ppb		98
80)	Pyrene	11.71	202	3079365	102.89248 ppb		99
82)	Butyl benzylphthalate	12.47	149	1430703	95.45863 ppb		88
83)	3,3'-Dichlorobenzidine	13.08	252	910729	98.96324 ppb	#	97
84)	Benz (a) anthracene	13.10	228	2808833	98.91745 ppb		99
85)	Bis (2-ethylhexyl) phthala	13.13	149	2022285	95.61439 ppb		96
86)	Chrysene	13.14	228	2799507	102.55881 ppb		98
87)	Di-n-octylphthalate	13.85	149	3529346	94.16713 ppb	#	93
89)	Benzo (b) fluoranthene	14.30	252	3038345	89.45009 ppb		99
90)	Benzo (k) fluoranthene	14.33	252	2973702	91.55930 ppb		100
91)	Benzo (a) pyrene	14.69	252	2841755	88.83710 ppb		97
92)	Indeno (1,2,3-cd) pyrene	16.31	276	2782713	76.44997 ppb		95
93)	Dibenz (a,h) anthracene	16.34	278	2299501	74.25478 ppb		97
94)	Benzo (g,h,i) perylene	16.78	276	2235653	72.61835 ppb		99

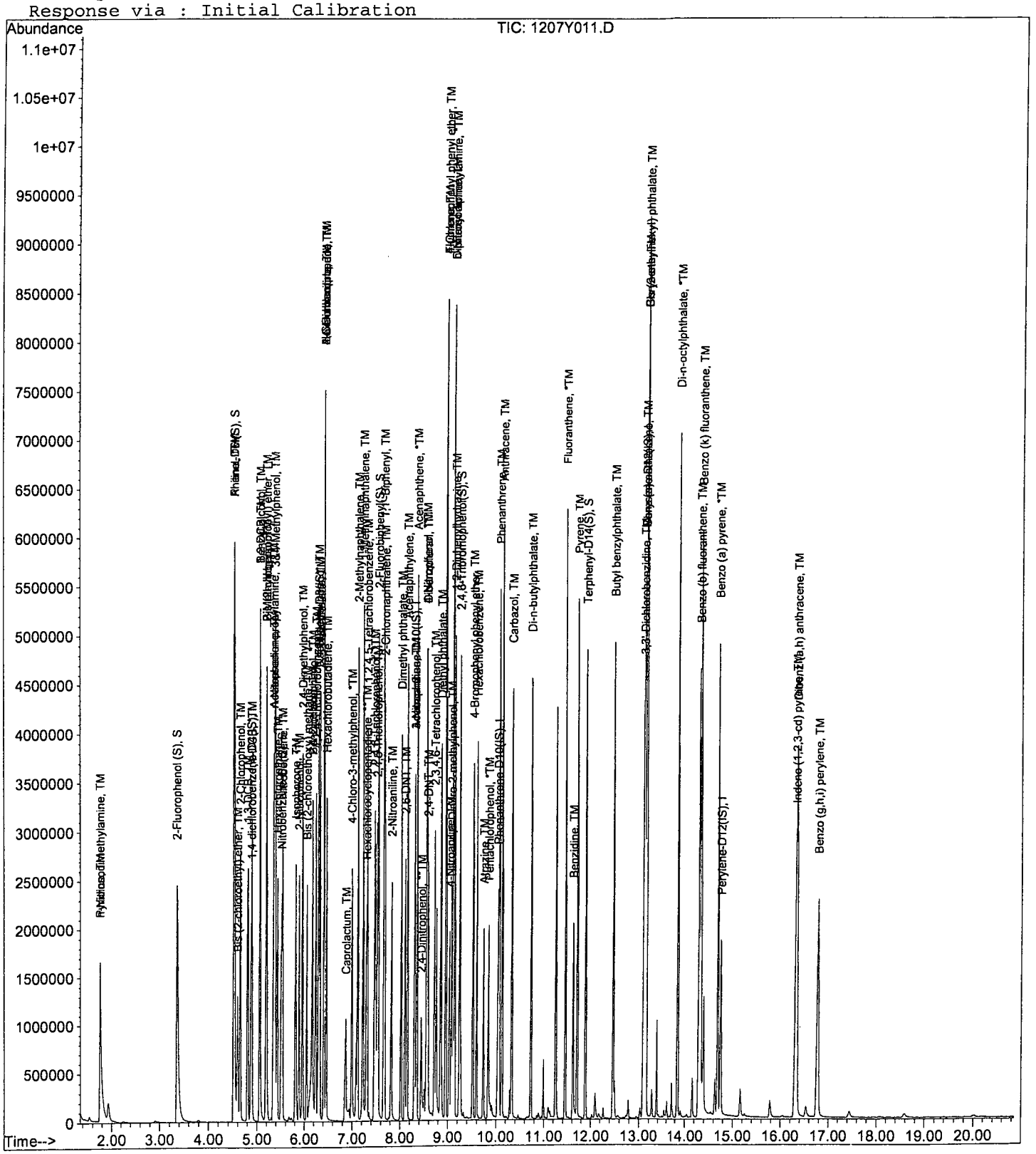
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y011.D Vial: 11
Acq On : 7 Dec 16 13:32 Operator: MA
Sample : 100ug/ml SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 13:58 2016 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Form 7

Second Source Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Date Analyzed: 7 Dec 16 14:01

Matrix: Instrument: Yoda

Initial Cal. Date: 12/07/16

Data File: 1207Y012.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	n-Nitrosodimethylamine	0.7942	0.8605	8.3	TM	
2	TM	Pyridine	1.794	2.065	15	TM	
3	*TM	Phenol	1.974	1.961	0.64	*TM	
4	TM	Aniline	1.868	1.717	8.1	TM	
5	TM	Bis (2-chloroethyl) ether	0.8648	0.9372	8.4	TM	
6	TM	2-Chlorophenol	1.576	1.492	5.4	TM	
7	TM	1,3-DCB	1.630	1.713	5.1	TM	
8	*TM	1,4-DCB	1.679	1.836	9.3	*TM	
9	TM	Benzyl alcohol	0.8717	0.9544	9.5	TM	
10	TM	1,2-DCB	1.537	1.648	7.2	TM	
11	TM	2-Methylphenol	1.120	1.183	5.6	TM	
12	TM	Bis (2-chloroisopropyl) ether	1.723	1.964	14	TM	
13	TM	Acetophenone	2.044	2.282	12	TM	
14	TM	3&4-Methylphenol	1.484	1.588	7.0	TM	
15	**TM	n-Nitrosodi-n-propylamine	1.052	1.111	5.6	**TM	
16	TM	Hexachloroethane	0.6713	0.7583	13	TM	
17	TM	Nitrobenzene	0.4083	0.4146	1.5	TM	
18	TM	Isophorone	0.6762	0.7401	9.5	TM	
19	*TM	2-Nitrophenol	0.2038	0.1897	6.9	*TM	
20	TM	2,4-Dimethylphenol	0.3231	0.2928	9.4	TM	
21	TML	Benzoic acid	0.2159	0.3029	40	TML	19
22	TM	Bis (2-chloroethoxy) methane	0.3856	0.3755	2.6	TM	
23	*TM	2,4-Dichlorophenol	0.3079	0.3092	0.41	*TM	
24	TM	1,2,4-Trichlorobenzene	0.3349	0.3788	13	TM	
25	TM	3,4-Dimethylphenol	0.4947	0.4722	4.5	TM	
26	TM	Naphthalene	1.049	1.030	1.9	TM	
27	TM	4-Chloroaniline	0.3882	0.3699	4.7	TM	
28	TM	2,6-Dichlorophenol	0.2970	0.2844	4.3	TM	
29	TM	Hexachloropropene	0.2678	0.2625	2.0	TM	
30	*TM	Hexachlorobutadiene	0.2134	0.2282	7.0	*TM	
31	TM	Caprolactum	0.1543	0.1430	7.3	TM	
32	*TM	4-Chloro-3-methylphenol	0.3401	0.3273	3.8	*TM	
33	TM	2-Methylnaphthalene	0.6856	0.6921	0.95	TM	
34	TM	1-Methylnaphthalene	0.6763	0.6628	2.0	TM	
35	**TMQ	Hexachlorocyclopentadiene	0.1853	0.2606	41	**TMQ	12
36	TM	1,2,4,5-Tetrachlorobenzene	0.5436	0.5813	6.9	TM	
37	*TM	2,4,6-Trichlorophenol	0.3508	0.3628	3.4	*TM	
38	TM	2,4,5-Trichlorophenol	0.3829	0.4030	5.3	TM	
39	TM	1,1'-Biphenyl	1.499	1.521	1.5	TM	
40	TM	2-Chloronaphthalene	1.159	1.302	12	TM	
		Average			8.2		

0
0

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 7 Dec 16 14:01
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y012.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	2-Nitroaniline	0.3982	0.4094	2.8	TM	
42	TM	Dimethyl phthalate	1.391	1.370	1.6	TM	
43	TM	2,6-DNT	0.3141	0.3323	5.8	TM	
44	TM	Acenaphthylene	1.826	1.754	3.9	TM	
45	TM	3-Nitroaniline	0.3430	0.3329	2.9	TM	
46	*TM	Acenaphthene	1.156	1.094	5.3	*TM	
47	**TMQ	2,4-Dinitrophenol	0.1593	0.1353	15	**TMQ	15
48	**TML	4-Nitrophenol	0.2439	0.2731	12	**TML	5.3
49	TM	Dibenzofuran	1.639	1.588	3.1	TM	
50	TM	2,4-DNT	0.4436	0.4519	1.9	TM	
51	TM	2,3,4,6-Tetrachlorophenol	0.3114	0.3085	0.94	TM	
52	TM	Diethyl phthalate	1.432	1.360	5.0	TM	
53	TM	4-Chlorophenyl phenyl ether	0.6394	0.6265	2.0	TM	
54	TM	Fluorene	1.324	1.241	6.3	TM	
55	TM	4-Nitroaniline	0.3249	0.3379	4.0	TM	
56	TM	4,6-Dinitro-2-methylphenol	0.1486	0.1339	9.9	TM	
57	TM	Diphenyl amine	0.5706	0.5203	8.8	TM	
58	*TM	n-Nitrosodiphenylamine	0.5706	0.5203	8.8	*TM	
59	TM	1,2-Diphenylhydrazine	0.8211	0.7495	8.7	TM	
60	TM	4-Bromophenyl phenyl ether	0.2072	0.2226	7.4	TM	
61	TM	Hexachlorobenzene	0.2130	0.2500	17	TM	
62	TM	Atrazine	0.2062	0.2070	0.41	TM	
63	*TML	Pentachlorophenol	0.0958	0.0912	4.8	*TML	9.9
64	TM	Phenanthrene	1.080	1.064	1.5	TM	
65	TM	Anthracene	1.111	1.042	6.2	TM	
66	TM	Carbazol	1.005	0.8998	11	TM	
67	TM	Di-n-butylphthalate	1.292	1.202	6.9	TM	
68	*TM	Fluoranthene	1.189	1.119	5.8	*TM	
69	TM	Benzidine	0.4531	0.5340	18	TM	
70	TM	Pyrene	1.357	1.408	3.8	TM	
71	TM	Butyl benzylphthalate	0.6517	0.6327	2.9	TM	
72	TM	3,3'-Dichlorobenzidine	0.4273	0.4953	16	TM	
73	TM	Benz (a) anthracene	1.249	1.200	3.9	TM	
74	TM	Bis (2-ethylhexyl) phthalate	0.9136	0.9271	1.5	TM	
75	TM	Chrysene	1.213	1.146	5.5	TM	
76	*TM	Di-n-octylphthalate	1.614	1.629	0.92	*TM	
77	TM	Benzo (b) fluoranthene	1.250	1.211	3.2	TM	
78	TM	Benzo (k) fluoranthene	1.189	1.125	5.4	TM	
79	*TM	Benzo (a) pyrene	1.168	1.100	5.9	*TM	
80	TM	Indeno (1,2,3-cd) pyrene	1.293	1.302	0.66	TM	
		Average			5.9		

0
0

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 7 Dec 16 14:01
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y012.D

		Compound	MEAN	CCRF	%D	%Drift	
81	TM	Dibenz (a,h) anthracene	1.091	1.084	0.59	TM	
82	TM	Benzo (g,h,i) perylene	1.161	1.030	11	TM	
83							
84							
85							
86							
87							
88							
89							
90							
91							
92							
93							
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103							
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109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			5.8		

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y012.D Vial: 12
Acq On : 7 Dec 16 14:01 Operator: MA
Sample : 2ND SRC SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 14:56 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	191057	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.30	136	871568	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.31	164	523606	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	1016944	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.11	240	899173	40.00000 ppb	0.00
88) Perylene-D12(IS)	14.75	264	937926	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	0.00	112	0	0.00000 ppb	
Spiked Amount 200.000			Recovery =	0.000%	
5) Phenol-D6 (S)	0.00	99	0	0.00000 ppb	
Spiked Amount 200.000			Recovery =	0.000%	
21) Nitrobenzene-D5(S)	5.42	82	51167	5.79164 ppb	-0.08
Spiked Amount 100.000			Recovery =	5.792%	
45) 2-Fluorobiphenyl(S)	7.54	172	1678	0.10166 ppb	0.00
Spiked Amount 100.000			Recovery =	0.102%	
63) 2,4,6-Tribromophenol(S)	0.00	330	0	0.00000 ppb	
Spiked Amount 200.000			Recovery =	0.000%	
81) Terphenyl-D14(S)	11.90	244	2267	0.11150 ppb	0.01
Spiked Amount 100.000			Recovery =	0.111%	

Algorithm = $\frac{1121605 \times 1 \times 40}{871568 \times 1.049} = 49.07$ MA 12/8/16

Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.75	42	205505	54.17418 ppb	99
3) Pyridine	1.76	79	493077	57.53832 ppb	100
6) Phenol	4.52	94	468384	49.67907 ppb	97
7) Aniline	4.52	66	410130	45.96281 ppb	94
8) Bis (2-chloroethyl) ether	4.58	63	223817	54.18477 ppb	97
9) 2-Chlorophenol	4.65	128	356278	47.32243 ppb	98
10) 1,3-DCB	4.80	146	409122	52.55606 ppb	98
11) 1,4-DCB	4.89	146	438492	54.66182 ppb	100
12) Benzyl alcohol	5.05	108	227935	54.74642 ppb	89
13) 1,2-DCB	5.06	146	393642	53.62112 ppb	98
14) 2-Methylphenol	5.19	107	282490	52.81375 ppb	99
15) Bis (2-chloroisopropyl) et	5.19	45	468942	56.98498 ppb	99
16) Acetophenone	5.34	105	544879	55.81351 ppb	99
17) 3&4-Methylphenol	5.36	107	758574	107.00501 ppb	99
18) n-Nitrosodi-n-propylamine	5.35	70	265350	52.78586 ppb	98
19) Hexachloroethane	5.42	117	181096	56.48025 ppb	95
22) Nitrobenzene	5.52	77	451653	50.77125 ppb	99
23) Isophorone	5.79	82	806347	54.72642 ppb	92
24) 2-Nitrophenol	5.88	139	206638	46.54256 ppb	97
25) 2,4-Dimethylphenol	5.95	122	319047	45.32287 ppb	99
26) Benzoic acid	6.13	105	329992	59.40511 ppb	98
27) Bis (2-chloroethoxy) metha	6.04	93	409113	48.69541 ppb	99
28) 2,4-Dichlorophenol	6.16	162	336842	50.20680 ppb	95
29) 1,2,4-Trichlorobenzene	6.24	180	412682	56.55773 ppb	97
30) 3,4-Dimethylphenol	6.29	107	514459	47.73195 ppb	99
31) Naphthalene	6.32	128	1121605	49.06908 ppb	99
32) 4-Chloroaniline	6.40	127	402969	47.64010 ppb	98
33) 2,6-Dichlorophenol	6.41	162	309823	47.86782 ppb	99
34) Hexachloropropene	6.42	213	285981	49.00147 ppb	99
35) Hexachlorobutadiene	6.46	225	248647	53.48708 ppb	98
36) Caprolactum	6.83	55	155831	46.33822 ppb	95
37) 4-Chloro-3-methylphenol	6.98	107	356630	48.12038 ppb	86

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y012.D Vial: 12
Acq On : 7 Dec 16 14:01 Operator: MA
Sample : 2ND SRC SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 14:56 2016 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38) 2-Methylnaphthalene	7.11	142	754038	50.47743 ppb		99
39) 1-Methylnaphthalene	7.22	142	722080	48.99775 ppb		100
41) Hexachlorocyclopentadiene	7.29	237	170588	55.81613 ppb		99
42) 1,2,4,5-Tetrachlorobenzene	7.31	216	380472	53.46579 ppb		99
43) 2,4,6-Trichlorophenol	7.45	196	237475	51.71288 ppb		98
44) 2,4,5-Trichlorophenol	7.51	196	263784	52.63506 ppb		91
46) 1,1'-Biphenyl	7.65	154	995419	50.73149 ppb	#	98
47) 2-Chloronaphthalene	7.68	162	852397	56.20556 ppb		98
48) 2-Nitroaniline	7.81	65	267928	51.40520 ppb		97
49) Dimethyl phthalate	8.02	163	896431	49.21645 ppb		100
50) 2,6-DNT	8.10	165	217507	52.89516 ppb		97
51) Acenaphthylene	8.15	152	1148034	48.03874 ppb		99
52) 3-Nitroaniline	8.30	138	217900	48.53466 ppb		96
53) Acenaphthene	8.34	154	716245	47.33371 ppb		98
54) 2,4-Dinitrophenol	8.44	184	88575	42.42116 ppb		93
55) 4-Nitrophenol	8.54	65	178738	47.34341 ppb		99
56) Dibenzofuran	8.55	168	1039530	48.44636 ppb		100
57) 2,4-DNT	8.58	165	295792	50.93595 ppb		96
58) 2,3,4,6-Tetrachlorophenol	8.71	232	201912	49.52960 ppb		97
59) Diethyl phthalate	8.84	149	890442	47.50284 ppb		99
60) 4-Chlorophenyl phenyl ethe	8.95	204	410071	48.99615 ppb		97
61) Fluorene	8.95	166	811998	46.83909 ppb		99
62) 4-Nitroaniline	9.01	138	221182	52.00204 ppb		99
65) 4,6-Dinitro-2-methylphenol	9.05	198	170147	45.02904 ppb	#	63
66) Diphenyl amine	9.10	169	1322713	91.17623 ppb		99
67) n-Nitrosodiphenylamine	9.10	169	1322713	91.17623 ppb		99
68) 1,2-Diphenylhydrazine	9.13	77	952702	45.63842 ppb		98
69) 4-Bromophenyl phenyl ether	9.51	248	282914	53.71191 ppb		98
70) Hexachlorobenzene	9.59	284	317774	58.69445 ppb		95
71) Atrazine	9.73	200	131578	25.10242 ppb		95
72) Pentachlorophenol	9.84	266	115962	45.03845 ppb		95
73) Phenanthrene	10.06	178	1351927	49.22811 ppb		100
74) Anthracene	10.12	178	1325118	46.92467 ppb		99
75) Carbazol	10.32	167	1143768	44.74849 ppb		100
76) Di-n-butylphthalate	10.73	149	1528545	46.53939 ppb		100
77) Fluoranthene	11.44	202	1422850	47.07737 ppb		100
79) Benzidine	11.61	184	600230m	58.92898 ppb		99
80) Pyrene	11.70	202	1583034	51.91299 ppb		98
82) Butyl benzylphthalate	12.47	149	711172	48.54397 ppb		99
83) 3,3'-Dichlorobenzidine	13.08	252	556753	57.96756 ppb		98
84) Benz (a) anthracene	13.10	228	1348312	48.02891 ppb		100
85) Bis (2-ethylhexyl) phthala	13.13	149	1042054	50.73897 ppb		97
86) Chrysene	13.13	228	1288110	47.23790 ppb		98
87) Di-n-octylphthalate	13.85	149	1830661	50.46239 ppb		99
89) Benzo (b) fluoranthene	14.29	252	1419865	48.42384 ppb		99
90) Benzo (k) fluoranthene	14.32	252	1318653	47.28739 ppb		99
91) Benzo (a) pyrene	14.68	252	1289082	47.06095 ppb		99
92) Indeno (1,2,3-cd) pyrene	16.30	276	1526262	50.33221 ppb		99
93) Dibenz (a,h) anthracene	16.32	278	1271230	49.70488 ppb		99
94) Benzo (g,h,i) perylene	16.76	276	1208044	44.36041 ppb		99

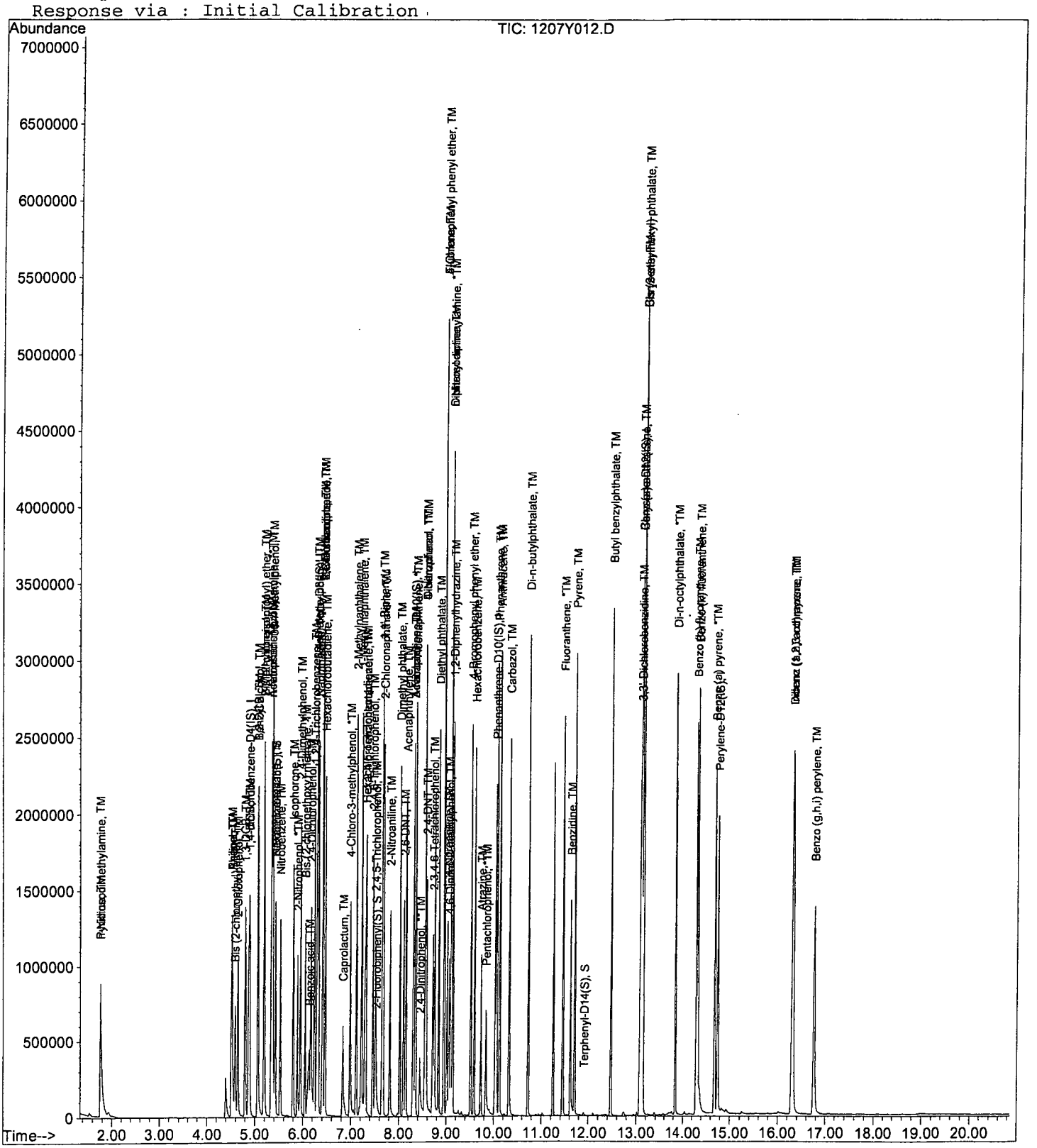
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y012.D Vial: 12
Acq On : 7 Dec 16 14:01 Operator: MA
Sample : 2ND SRC SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 7 14:56 2016 Quant Results File: Y1207.RES

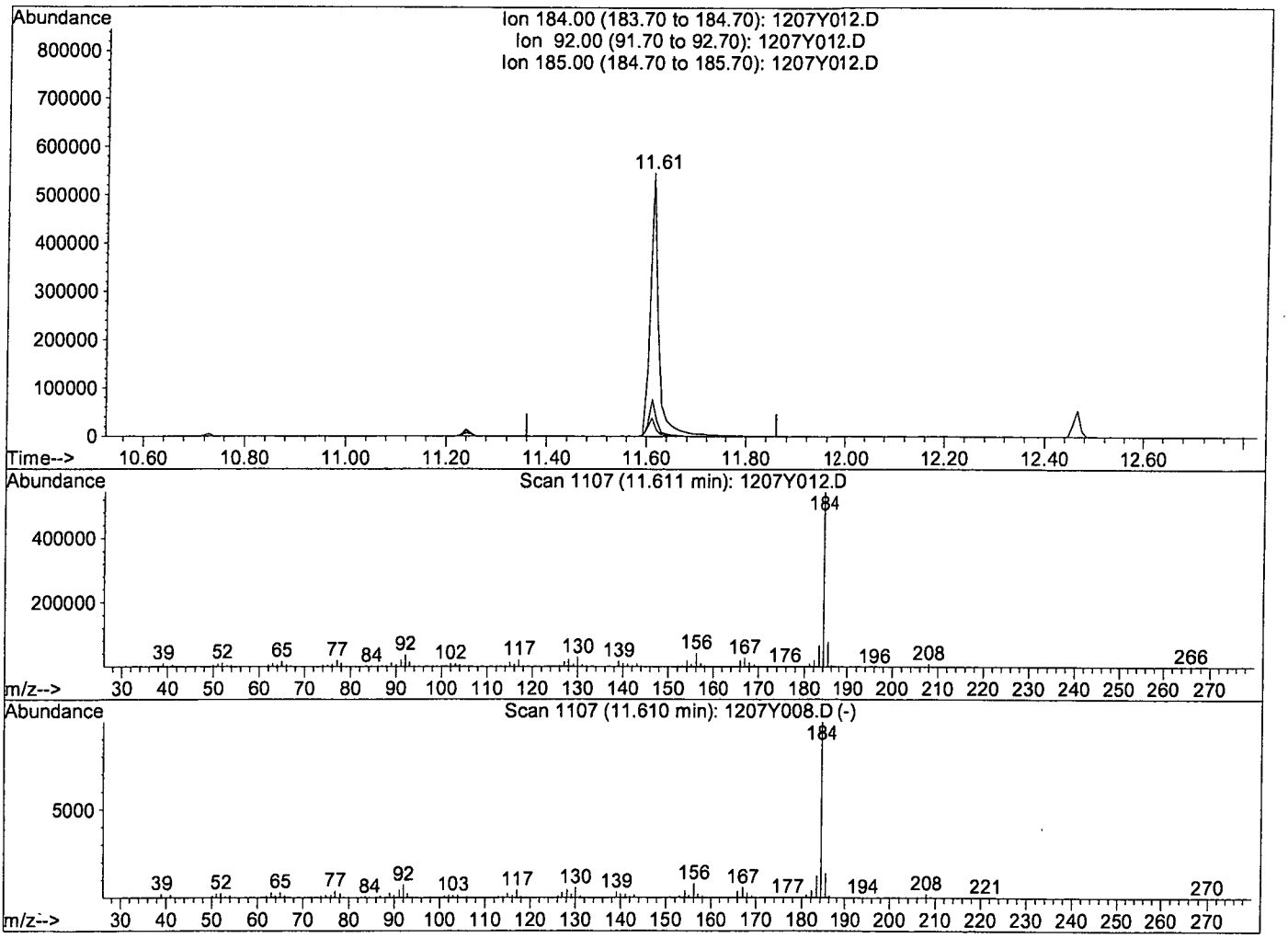
Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Initial Calibration



Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y012.D Vial: 12
Acq On : 7 Dec 16 14:01 Operator: MA
Sample : 2ND SRC SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Dec 7 14:46 2016 Quant Results File: temp.res

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Multiple Level Calibration



TIC: 1207Y012.D

(79) Benzidine (TM)

11.61min 62.5480ppb

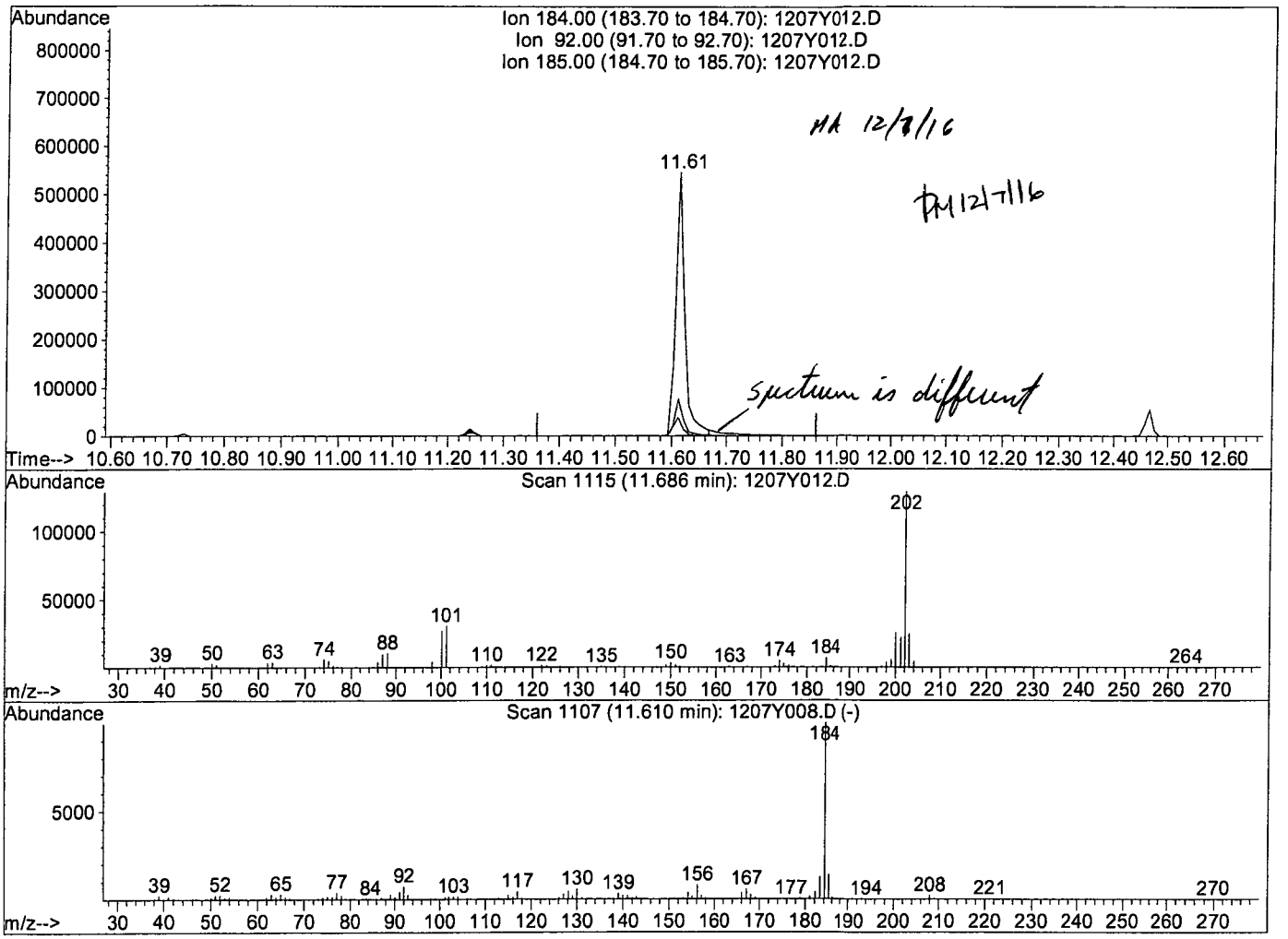
response 637092

Ion	Exp%	Act%
184.00	100	100
92.00	7.20	7.03
185.00	13.80	14.19
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y012.D Vial: 12
Acq On : 7 Dec 16 14:01 Operator: MA
Sample : 2ND SRC SVOC 12/06/16 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Dec 7 14:56 2016 Quant Results File: temp.res

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 07 14:44:33 2016
Response via : Multiple Level Calibration



TIC: 1207Y012.D

(79) Benzidine (TM)

11.61min 58.9290ppb m

response 600230

Ion	Exp%	Act%
184.00	100	100
92.00	7.20	7.03
185.00	13.80	14.19
0.00	0.00	0.00

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/18/17
Instrument: Yoda
Initial Cal. Date: 12/07/16
Data File: 1207Y322.D

		Compound	MEAN	CCRF	%D		%Drift	
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I		
2	TM	n-Nitrosodimethylamine	0.7942	1.059	33	TM		*NT
3	TM	Pyridine	1.794	2.149	20	TM		
4	S	2-Fluorophenol (S)	1.316	1.332	1.3	S		
5	S	Phenol-D6 (S)	1.737	1.744	0.41	S		
6	*TM	Phenol	1.974	2.000	1.3	*TM		
7	TM	Aniline	1.868	1.875	0.34	TM		
8	TM	Bis (2-chloroethyl) ether	0.8648	0.9545	10	TM		
9	TM	2-Chlorophenol	1.576	1.532	2.8	TM		
10	TM	1,3-DCB	1.630	1.585	2.8	TM		
11	*TM	1,4-DCB	1.679	1.630	2.9	*TM		
12	TM	Benzyl alcohol	0.8717	0.8961	2.8	TM		
13	TM	1,2-DCB	1.537	1.510	1.8	TM		
14	TM	2-Methylphenol	1.120	1.132	1.1	TM		
15	TM	Bis (2-chloroisopropyl) ether	1.723	2.092	21	TM		*NT
16	TM	Acetophenone	2.044	2.028	0.78	TM		
17	TM	3&4-Methylphenol	1.484	1.511	1.8	TM		
18	**TM	n-Nitrosodi-n-propylamine	1.052	1.097	4.2	**TM		
19	TM	Hexachloroethane	0.6713	0.6846	2.0	TM		
20	I	Napthalene-D8(IS)	ISTD			I		
21	S	Nitrobenzene-D5(S)	0.4055	0.4029	0.63	S		
22	TM	Nitrobenzene	0.4083	0.4063	0.49	TM		
23	TM	Isophorone	0.6762	0.6765	0.04	TM		
24	*TM	2-Nitrophenol	0.2038	0.1968	3.4	*TM		
25	TM	2,4-Dimethylphenol	0.3231	0.3088	4.4	TM		
26	TML	Benzoic acid	0.2159	0.2381	10	TML	4.9	
27	TM	Bis (2-chloroethoxy) methane	0.3856	0.3774	2.1	TM		
28	*TM	2,4-Dichlorophenol	0.3079	0.2920	5.2	*TM		
29	TM	1,2,4-Trichlorobenzene	0.3349	0.3266	2.5	TM		
30	TM	3,4-Dimethylphenol	0.4947	0.4509	8.8	TM		
31	TM	Naphthalene	1.049	1.025	2.3	TM		
32	TM	4-Chloroaniline	0.3882	0.3667	5.5	TM		
33	TM	2,6-Dichlorophenol	0.2970	0.2671	10	TM		
34	TM	Hexachloropropene	0.2678	0.2407	10	TM		
35	*TM	Hexachlorobutadiene	0.2134	0.1921	10.0	*TM		
36	TM	Caprolactum	0.1543	0.1742	13	TM		
37	*TM	4-Chloro-3-methylphenol	0.3401	0.3296	3.1	*TM		
38	TM	2-Methylnaphthalene	0.6856	0.6974	1.7	TM		
39	TM	1-Methylnaphthalene	0.6763	0.6818	0.80	TM		
40	I	Acenaphthene-D10(IS)	ISTD			I		
		Average			5.5			

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/18/17
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y322.D

		Compound	MEAN	CCRF	%D		%Drift
41	**TMQ	Hexachlorocyclopentadiene	0.1853	0.1887	1.8	**TMQ	13
42	TM	1,2,4,5-Tetrachlorobenzene	0.5436	0.5333	1.9	TM	
43	*TM	2,4,6-Trichlorophenol	0.3508	0.3353	4.4	*TM	
44	TM	2,4,5-Trichlorophenol	0.3829	0.3559	7.1	TM	
45	S	2-Fluorobiphenyl(S)	1.261	1.232	2.3	S	
46	TM	1,1'-Biphenyl	1.499	1.465	2.3	TM	
47	TM	2-Chloronaphthalene	1.159	1.138	1.7	TM	
48	TM	2-Nitroaniline	0.3982	0.4079	2.4	TM	
49	TM	Dimethyl phthalate	1.391	1.344	3.4	TM	
50	TM	2,6-DNT	0.3141	0.3101	1.3	TM	
51	TM	Acenaphthylene	1.826	1.798	1.5	TM	
52	TM	3-Nitroaniline	0.3430	0.3317	3.3	TM	
53	*TM	Acenaphthene	1.156	1.095	5.2	*TM	
54	**TMQ	2,4-Dinitrophenol	0.1593	0.1739	9.2	**TMQ	3.2
55	**TML	4-Nitrophenol	0.2439	0.2474	1.4	**TML	13
56	TM	Dibenzofuran	1.639	1.584	3.4	TM	
57	TM	2,4-DNT	0.4436	0.4315	2.7	TM	
58	TM	2,3,4,6-Tetrachlorophenol	0.3114	0.2918	6.3	TM	
59	TM	Diethyl phthalate	1.432	1.362	4.9	TM	
60	TM	4-Chlorophenyl phenyl ether	0.6394	0.5912	7.5	TM	
61	TM	Fluorene	1.324	1.191	10	TM	
62	TM	4-Nitroaniline	0.3249	0.3218	0.96	TM	
63	S	2,4,6-Tribromophenol(S)	0.2006	0.1752	13	S	
64	I	Phenanthrene-D10(IS)	ISTD			I	
65	TM	4,6-Dinitro-2-methylphenol	0.1486	0.1428	3.9	TM	
66	TM	Diphenyl amine	0.5706	0.5303	7.1	TM	
67	*TM	n-Nitrosodiphenylamine	0.5706	0.5303	7.1	*TM	
68	TM	1,2-Diphenylhydrazine	0.8211	0.7973	2.9	TM	
69	TM	4-Bromophenyl phenyl ether	0.2072	0.1971	4.9	TM	
70	TM	Hexachlorobenzene	0.2130	0.2029	4.7	TM	
71	TM	Atrazine	0.2062	0.1974	4.3	TM	
72	*TML	Pentachlorophenol	0.0958	0.0940	1.8	*TML	7.5
73	TM	Phenanthrene	1.080	1.050	2.8	TM	
74	TM	Anthracene	1.111	1.094	1.5	TM	
75	TM	Carbazol	1.005	0.9935	1.2	TM	
76	TM	Di-n-butylphthalate	1.292	1.258	2.7	TM	
77	*TM	Fluoranthene	1.189	1.163	2.2	*TM	
78	I	Chrysene-D12(IS)	ISTD			I	
79	TM	Benzidine	0.4531	0.4417	2.5	TM	
80	TM	Pyrene	1.357	1.225	9.7	TM	
		Average			4.1		

0
0

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/18/17
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y322.D

		Compound	MEAN	CCRF	%D		%Drift
81	S	Terphenyl-D14(S)	0.9045	0.8268	8.6	S	
82	TM	Butyl benzylphthalate	0.6517	0.5868	10.0	TM	
83	TM	3,3'-Dichlorobenzidine	0.4273	0.4172	2.3	TM	
84	TM	Benz (a) anthracene	1.249	1.167	6.6	TM	
85	TM	Bis (2-ethylhexyl) phthalate	0.9136	0.8254	9.7	TM	
86	TM	Chrysene	1.213	1.104	9.0	TM	
87	*TM	Di-n-octylphthalate	1.614	1.481	8.2	*TM	
88	I	Perylene-D12(IS)	ISTD			I	
89	TM	Benzo (b) fluoranthene	1.250	1.148	8.2	TM	
90	TM	Benzo (k) fluoranthene	1.189	1.080	9.2	TM	
91	*TM	Benzo (a) pyrene	1.168	1.083	7.3	*TM	
92	TM	Indeno (1,2,3-cd) pyrene	1.293	1.178	8.9	TM	
93	TM	Dibenz (a,h) anthracene	1.091	1.020	6.4	TM	
94	TM	Benzo (g,h,i) perylene	1.161	0.9988	14	TM	
95							
96							
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			8.3		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y322.D Vial: 22
Acq On : 18 Jan 17 9:51 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 18 10:08 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	172673	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.29	136	734012	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.30	164	439505	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.02	188	815236	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.11	240	801078	40.00000 ppb		0.00
88) Perylene-D12(IS)	14.75	264	831799	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.34	112	575164	101.25645 ppb		0.00
Spiked Amount 200.000			Recovery = 50.628%			
5) Phenol-D6 (S)	4.50	99	752800	100.41173 ppb		0.00
Spiked Amount 200.000			Recovery = 50.206%			
21) Nitrobenzene-D5(S)	5.49	82	369665	49.68413 ppb		0.00
Spiked Amount 100.000			Recovery = 49.684%			
45) 2-Fluorobiphenyl(S)	7.53	172	676830	48.85056 ppb		0.00
Spiked Amount 100.000			Recovery = 48.851%			
63) 2,4,6-Tribromophenol(S)	9.22	330	192454	87.33272 ppb		0.00
Spiked Amount 200.000			Recovery = 43.667%			
81) Terphenyl-D14(S)	11.88	244	827918	45.70554 ppb		0.00
Spiked Amount 100.000			Recovery = 45.706%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.74	42	228636	66.68883 ppb		97
3) Pyridine	1.75	79	463897	59.89664 ppb		99
6) Phenol	4.51	94	431726	50.66618 ppb		98
7) Aniline	4.51	66	404608	50.17160 ppb		98
8) Bis (2-chloroethyl) ether	4.58	63	206031	55.18934 ppb		91
9) 2-Chlorophenol	4.64	128	330657	48.59530 ppb		98
10) 1,3-DCB	4.79	146	342080	48.62238 ppb		99
11) 1,4-DCB	4.88	146	351926	48.54140 ppb		99
12) Benzyl alcohol	5.05	108	193407	51.39908 ppb		96
13) 1,2-DCB	5.05	146	325909	49.12124 ppb		99
14) 2-Methylphenol	5.19	107	244273	50.53100 ppb		93
15) Bis (2-chloroisopropyl) et	5.18	45	451471	60.70292 ppb	#	78
16) Acetophenone	5.33	105	437721	49.61067 ppb		92
17) 3&4-Methylphenol	5.36	107	652432	101.83099 ppb		100
18) n-Nitrosodi-n-propylamine	5.33	70	236692	52.09794 ppb		90
19) Hexachloroethane	5.41	117	147767	50.99220 ppb		94
22) Nitrobenzene	5.52	77	372764	49.75596 ppb		92
23) Isophorone	5.79	82	620658	50.01791 ppb		97
24) 2-Nitrophenol	5.87	139	180604	48.30205 ppb		95
25) 2,4-Dimethylphenol	5.94	122	283353	47.79569 ppb		95
26) Benzoic acid	6.13	105	218490	47.54450 ppb		89
27) Bis (2-chloroethoxy) metha	6.03	93	346245	48.93577 ppb		99
28) 2,4-Dichlorophenol	6.16	162	267959	47.42450 ppb		98
29) 1,2,4-Trichlorobenzene	6.24	180	299622	48.75827 ppb		99
30) 3,4-Dimethylphenol	6.28	107	413720	45.57882 ppb		96
31) Naphthalene	6.31	128	940637	48.86391 ppb		100
32) 4-Chloroaniline	6.40	127	336481	47.23454 ppb		93
33) 2,6-Dichlorophenol	6.40	162	245101	44.96485 ppb		99
34) Hexachloropropene	6.41	213	220867	44.93667 ppb		99
35) Hexachlorobutadiene	6.45	225	176264	45.02227 ppb		99
36) Caprolactum	6.83	55	159820	56.43061 ppb		96
37) 4-Chloro-3-methylphenol	6.98	107	302377	48.44601 ppb		90

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y322.D Vial: 22
Acq On : 18 Jan 17 9:51 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 18 10:08 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38) 2-Methylnaphthalene	7.11	142	639919	50.86594 ppb		99
39) 1-Methylnaphthalene	7.22	142	625550	50.40238 ppb		98
41) Hexachlorocyclopentadiene	7.28	237	103669	43.67647 ppb		95
42) 1,2,4,5-Tetrachlorobenzene	7.30	216	292959	49.04570 ppb		99
43) 2,4,6-Trichlorophenol	7.45	196	184188	47.78405 ppb		99
44) 2,4,5-Trichlorophenol	7.51	196	195502	46.47492 ppb	#	88
46) 1,1'-Biphenyl	7.65	154	804931	48.87324 ppb		98
47) 2-Chloronaphthalene	7.67	162	625415	49.12996 ppb		99
48) 2-Nitroaniline	7.80	65	224066	51.21600 ppb		87
49) Dimethyl phthalate	8.01	163	738469	48.30215 ppb		100
50) 2,6-DNT	8.09	165	170340	49.35147 ppb		84
51) Acenaphthylene	8.14	152	987889	49.24769 ppb		99
52) 3-Nitroaniline	8.29	138	182210	48.35126 ppb		92
53) Acenaphthene	8.34	154	601790	47.37996 ppb		98
54) 2,4-Dinitrophenol	8.44	184	95541	51.59576 ppb		91
55) 4-Nitrophenol	8.55	65	135891	43.33838 ppb		97
56) Dibenzofuran	8.54	168	870202	48.31534 ppb		92
57) 2,4-DNT	8.57	165	237080	48.63777 ppb	#	76
58) 2,3,4,6-Tetrachlorophenol	8.70	232	160310	46.84941 ppb		94
59) Diethyl phthalate	8.83	149	748273	47.55704 ppb		99
60) 4-Chlorophenyl phenyl ethe	8.94	204	324794	46.23296 ppb		99
61) Fluorene	8.94	166	654532	44.98059 ppb		99
62) 4-Nitroaniline	9.01	138	176786	49.51757 ppb		92
65) 4,6-Dinitro-2-methylphenol	9.05	198	145476	48.02567 ppb	#	73
66) Diphenyl amine	9.09	169	1080886	92.94148 ppb		99
67) n-Nitrosodiphenylamine	9.09	169	1080886	92.94148 ppb		99
68) 1,2-Diphenylhydrazine	9.12	77	812470	48.55059 ppb		95
69) 4-Bromophenyl phenyl ether	9.50	248	200867	47.57058 ppb		99
70) Hexachlorobenzene	9.59	284	206734	47.63260 ppb	#	77
71) Atrazine	9.73	200	100570	23.93395 ppb		99
72) Pentachlorophenol	9.83	266	95809	46.23614 ppb		95
73) Phenanthrene	10.05	178	1070146	48.60900 ppb		99
74) Anthracene	10.12	178	1115260	49.26477 ppb		99
75) Carbazol	10.31	167	1012458	49.41186 ppb		100
76) Di-n-butylphthalate	10.72	149	1281551	48.67344 ppb		99
77) Fluoranthene	11.43	202	1184976	48.90759 ppb	#	97
79) Benzidine	11.61	184	442325	48.74400 ppb		98
80) Pyrene	11.69	202	1226868	45.15980 ppb		99
82) Butyl benzylphthalate	12.46	149	587627	45.02263 ppb		91
83) 3,3'-Dichlorobenzidine	13.07	252	417809	48.82798 ppb	#	96
84) Benz (a) anthracene	13.09	228	1168477	46.71979 ppb		99
85) Bis (2-ethylhexyl) phthala	13.12	149	826477	45.17006 ppb		99
86) Chrysene	13.13	228	1105626	45.51079 ppb		99
87) Di-n-octylphthalate	13.84	149	1483040	45.88611 ppb	#	94
89) Benzo (b) fluoranthene	14.28	252	1193841	45.91016 ppb	#	97
90) Benzo (k) fluoranthene	14.32	252	1122719	45.39793 ppb		99
91) Benzo (a) pyrene	14.67	252	1126366	46.36709 ppb	#	96
92) Indeno (1,2,3-cd) pyrene	16.31	276	1224707	45.54066 ppb	#	94
93) Dibenz (a,h) anthracene	16.32	278	1061032	46.77928 ppb		100
94) Benzo (g,h,i) perylene	16.75	276	1038536	43.00160 ppb		96

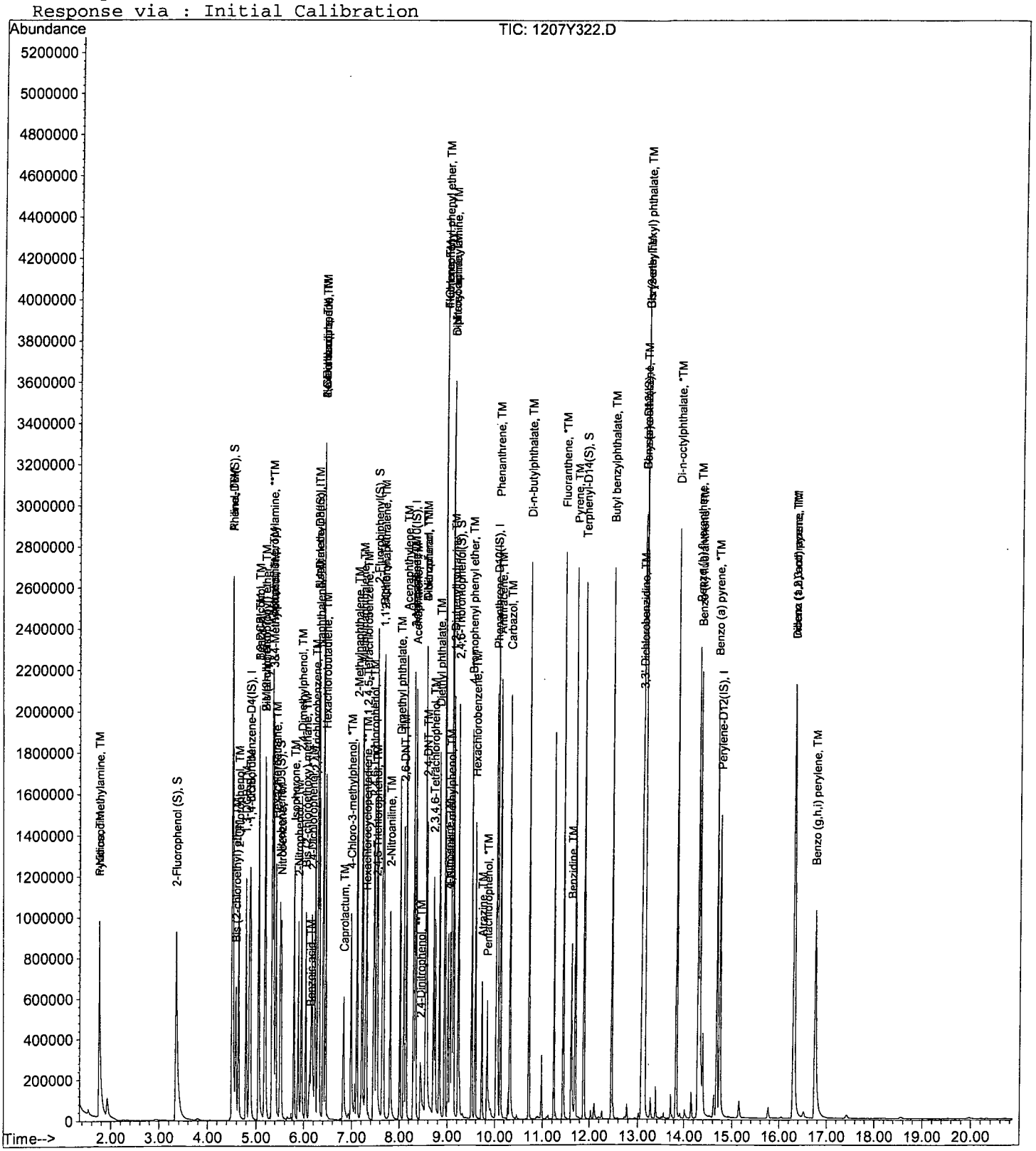
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y322.D Vial: 22
Acq On : 18 Jan 17 9:51 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 18 10:08 2017 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Date Analyzed: 01/18/17

Matrix: Instrument: Yoda

Initial Cal. Date: 12/07/16

Data File: 1207Y343.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	n-Nitrosodimethylamine	0.7942	0.9432	19	TM	
3	TM	Pyridine	1.794	1.815	1.2	TM	
4	S	2-Fluorophenol (S)	1.316	1.317	0.07	S	
5	S	Phenol-D6 (S)	1.737	1.726	0.64	S	
6	*TM	Phenol	1.974	2.007	1.7	*TM	
7	TM	Aniline	1.868	1.928	3.2	TM	
8	TM	Bis (2-chloroethyl) ether	0.8648	0.9331	7.9	TM	
9	TM	2-Chlorophenol	1.576	1.502	4.7	TM	
10	TM	1,3-DCB	1.630	1.578	3.2	TM	
11	*TM	1,4-DCB	1.679	1.617	3.7	*TM	
12	TM	Benzyl alcohol	0.8717	0.8921	2.3	TM	
13	TM	1,2-DCB	1.537	1.486	3.3	TM	
14	TM	2-Methylphenol	1.120	1.112	0.69	TM	
15	TM	Bis (2-chloroisopropyl) ether	1.723	2.109	22	TM	
16	TM	Acetophenone	2.044	2.008	1.7	TM	
17	TM	3&4-Methylphenol	1.484	1.481	0.21	TM	
18	**TM	n-Nitrosodi-n-propylamine	1.052	1.128	7.2	**TM	
19	TM	Hexachloroethane	0.6713	0.6818	1.6	TM	
20	I	Napthalene-D8(IS)	ISTD			I	
21	S	Nitrobenzene-D5(S)	0.4055	0.4177	3.0	S	
22	TM	Nitrobenzene	0.4083	0.4293	5.2	TM	
23	TM	Isophorone	0.6762	0.6925	2.4	TM	
24	*TM	2-Nitrophenol	0.2038	0.2043	0.26	*TM	
25	TM	2,4-Dimethylphenol	0.3231	0.3155	2.4	TM	
26	TML	Benzoic acid	0.2159	0.2451	14	TML	2.4
27	TM	Bis (2-chloroethoxy) methane	0.3856	0.3864	0.22	TM	
28	*TM	2,4-Dichlorophenol	0.3079	0.2949	4.2	*TM	
29	TM	1,2,4-Trichlorobenzene	0.3349	0.3248	3.0	TM	
30	TM	3,4-Dimethylphenol	0.4947	0.4611	6.8	TM	
31	TM	Naphthalene	1.049	1.018	3.0	TM	
32	TM	4-Chloroaniline	0.3882	0.3586	7.6	TM	
33	TM	2,6-Dichlorophenol	0.2970	0.2721	8.4	TM	
34	TM	Hexachloropropene	0.2678	0.2368	12	TM	
35	*TM	Hexachlorobutadiene	0.2134	0.1950	8.6	*TM	
36	TM	Caprolactum	0.1543	0.1745	13	TM	
37	*TM	4-Chloro-3-methylphenol	0.3401	0.3307	2.8	*TM	
38	TM	2-Methylnaphthalene	0.6856	0.6921	0.95	TM	
39	TM	1-Methylnaphthalene	0.6763	0.6704	0.88	TM	
40	I	Acenaphthene-D10(IS)	ISTD			I	
		Average			4.9		

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/18/17
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y343.D

		Compound	MEAN	CCRF	%D		%Drift
41	**TMQ	Hexachlorocyclopentadiene	0.1853	0.1713	7.6	**TMQ	19
42	TM	1,2,4,5-Tetrachlorobenzene	0.5436	0.5056	7.0	TM	
43	*TM	2,4,6-Trichlorophenol	0.3508	0.3310	5.6	*TM	
44	TM	2,4,5-Trichlorophenol	0.3829	0.3521	8.0	TM	
45	S	2-Fluorobiphenyl(S)	1.261	1.191	5.6	S	
46	TM	1,1'-Biphenyl	1.499	1.396	6.8	TM	
47	TM	2-Chloronaphthalene	1.159	1.105	4.6	TM	
48	TM	2-Nitroaniline	0.3982	0.4099	3.0	TM	
49	TM	Dimethyl phthalate	1.391	1.287	7.5	TM	
50	TM	2,6-DNT	0.3141	0.2947	6.2	TM	
51	TM	Acenaphthylene	1.826	1.701	6.8	TM	
52	TM	3-Nitroaniline	0.3430	0.3242	5.5	TM	
53	*TM	Acenaphthene	1.156	1.053	8.9	*TM	
54	**TMQ	2,4-Dinitrophenol	0.1593	0.1524	4.3	**TMQ	6.9
55	**TML	4-Nitrophenol	0.2439	0.2460	0.83	**TML	14
56	TM	Dibenzofuran	1.639	1.524	7.1	TM	
57	TM	2,4-DNT	0.4436	0.4201	5.3	TM	
58	TM	2,3,4,6-Tetrachlorophenol	0.3114	0.2878	7.6	TM	
59	TM	Diethyl phthalate	1.432	1.329	7.2	TM	
60	TM	4-Chlorophenyl phenyl ether	0.6394	0.6015	5.9	TM	
61	TM	Fluorene	1.324	1.240	6.3	TM	
62	TM	4-Nitroaniline	0.3249	0.3276	0.81	TM	
63	S	2,4,6-Tribromophenol(S)	0.2006	0.1796	10	S	
64	I	Phenanthrene-D10(IS)	ISTD			I	
65	TM	4,6-Dinitro-2-methylphenol	0.1486	0.1355	8.8	TM	
66	TM	Diphenyl amine	0.5706	0.5125	10	TM	
67	*TM	n-Nitrosodiphenylamine	0.5706	0.5125	10	*TM	
68	TM	1,2-Diphenylhydrazine	0.8211	0.7778	5.3	TM	
69	TM	4-Bromophenyl phenyl ether	0.2072	0.1962	5.3	TM	
70	TM	Hexachlorobenzene	0.2130	0.2020	5.1	TM	
71	TM	Atrazine	0.2062	0.1936	6.1	TM	
72	*TML	Pentachlorophenol	0.0958	0.0877	8.5	*TML	13
73	TM	Phenanthrene	1.080	1.046	3.2	TM	
74	TM	Anthracene	1.111	1.076	3.2	TM	
75	TM	Carbazol	1.005	0.9641	4.1	TM	
76	TM	Di-n-butylphthalate	1.292	1.248	3.4	TM	
77	*TM	Fluoranthene	1.189	1.130	5.0	*TM	
78	I	Chrysene-D12(IS)	ISTD			I	
79	TM	Benzidine	0.4531	0.4385	3.2	TM	
80	TM	Pyrene	1.357	1.241	8.5	TM	
		Average			6.0		

0
0

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/18/17
Instrument: Yoda
Cal. Date: 12/07/16
Data File: 1207Y343.D

		Compound	MEAN	CCRF	%D		%Drift
81	S	Terphenyl-D14(S)	0.9045	0.8538	5.6	S	
82	TM	Butyl benzylphthalate	0.6517	0.6106	6.3	TM	
83	TM	3,3'-Dichlorobenzidine	0.4273	0.4101	4.0	TM	
84	TM	Benz (a) anthracene	1.249	1.201	3.8	TM	
85	TM	Bis (2-ethylhexyl) phthalate	0.9136	0.8283	9.3	TM	
86	TM	Chrysene	1.213	1.115	8.1	TM	
87	*TM	Di-n-octylphthalate	1.614	1.468	9.0	*TM	
88	I	Perylene-D12(IS)	ISTD			I	
89	TM	Benzo (b) fluoranthene	1.250	1.159	7.3	TM	
90	TM	Benzo (k) fluoranthene	1.189	1.070	10	TM	
91	*TM	Benzo (a) pyrene	1.168	1.088	6.8	*TM	
92	TM	Indeno (1,2,3-cd) pyrene	1.293	1.163	10	TM	
93	TM	Dibenz (a,h) anthracene	1.091	0.9982	8.5	TM	
94	TM	Benzo (g,h,i) perylene	1.161	0.9806	16	TM	
95							
96							
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			8.1		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y343.D Vial: 43
Acq On : 18 Jan 17 20:07 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 19 8:01 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.87	152	175309	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.29	136	725071	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.30	164	446031	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.03	188	873838	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.11	240	832155	40.00000 ppb		0.00
88) Perylene-D12(IS)	14.75	264	868174	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.34	112	577077	100.06564 ppb		0.00
Spiked Amount 200.000			Recovery = 50.033%			
5) Phenol-D6 (S)	4.50	99	756288	99.36016 ppb		0.00
Spiked Amount 200.000			Recovery = 49.680%			
21) Nitrobenzene-D5(S)	5.50	82	378569	51.50828 ppb		0.00
Spiked Amount 100.000			Recovery = 51.508%			
45) 2-Fluorobiphenyl(S)	7.53	172	663962	47.22065 ppb		0.00
Spiked Amount 100.000			Recovery = 47.221%			
63) 2,4,6-Tribromophenol(S)	9.23	330	200217	89.52612 ppb		0.00
Spiked Amount 200.000			Recovery = 44.763%			
81) Terphenyl-D14(S)	11.88	244	888143	47.19923 ppb		0.00
Spiked Amount 100.000			Recovery = 47.199%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.75	42	206690	59.38109 ppb		97
3) Pyridine	1.76	79	397789	50.58875 ppb		97
6) Phenol	4.51	94	439841	50.84238 ppb		97
7) Aniline	4.51	66	422404	51.59074 ppb		97
8) Bis (2-chloroethyl) ether	4.59	63	204475	53.94896 ppb		94
9) 2-Chlorophenol	4.64	128	329040	47.63053 ppb		97
10) 1,3-DCB	4.79	146	345846	48.41852 ppb		99
11) 1,4-DCB	4.88	146	354277	48.13092 ppb		99
12) Benzyl alcohol	5.05	108	195498	51.17357 ppb		98
13) 1,2-DCB	5.05	146	325660	48.34568 ppb		96
14) 2-Methylphenol	5.19	107	243691	49.65262 ppb		92
15) Bis (2-chloroisopropyl) et	5.18	45	462113	61.19954 ppb	#	79
16) Acetophenone	5.33	105	440086	49.12873 ppb		93
17) 3&4-Methylphenol	5.36	107	649088	99.78574 ppb		95
18) n-Nitrosodi-n-propylamine	5.34	70	247246	53.60268 ppb		94
19) Hexachloroethane	5.41	117	149410	50.78392 ppb		95
22) Nitrobenzene	5.52	77	389087	52.57514 ppb		92
23) Isophorone	5.79	82	627601	51.20112 ppb		98
24) 2-Nitrophenol	5.88	139	185150	50.12848 ppb		98
25) 2,4-Dimethylphenol	5.94	122	285924	48.82409 ppb		97
26) Benzoic acid	6.14	105	222164	48.82467 ppb		95
27) Bis (2-chloroethoxy) metha	6.03	93	350249	50.11208 ppb		99
28) 2,4-Dichlorophenol	6.16	162	267252	47.88263 ppb		98
29) 1,2,4-Trichlorobenzene	6.23	180	294342	48.48969 ppb		99
30) 3,4-Dimethylphenol	6.29	107	417921	46.60939 ppb		97
31) Naphthalene	6.31	128	922721	48.52428 ppb		99
32) 4-Chloroaniline	6.40	127	325046	46.19198 ppb		99
33) 2,6-Dichlorophenol	6.41	162	246638	45.80477 ppb		98
34) Hexachloropropene	6.41	213	214615	44.20310 ppb		99
35) Hexachlorobutadiene	6.45	225	176768	45.70777 ppb		96
36) Caprolactum	6.83	55	158179	56.53991 ppb		93
37) 4-Chloro-3-methylphenol	6.98	107	299737	48.61522 ppb		94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y343.D Vial: 43
Acq On : 18 Jan 17 20:07 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 19 8:01 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	2-Methylnaphthalene	7.10	142	627256	50.47421 ppb		97
39)	1-Methylnaphthalene	7.21	142	607611	49.56068 ppb		98
41)	Hexachlorocyclopentadiene	7.28	237	95489	40.58551 ppb		98
42)	1,2,4,5-Tetrachlorobenzene	7.31	216	281919	46.50688 ppb		99
43)	2,4,6-Trichlorophenol	7.46	196	184560	47.18000 ppb		99
44)	2,4,5-Trichlorophenol	7.51	196	196324	45.98748 ppb		92
46)	1,1'-Biphenyl	7.64	154	778599	46.58275 ppb	#	97
47)	2-Chloronaphthalene	7.67	162	616286	47.70448 ppb		98
48)	2-Nitroaniline	7.81	65	228558	51.47839 ppb		86
49)	Dimethyl phthalate	8.01	163	717767	46.26116 ppb		99
50)	2,6-DNT	8.10	165	164289	46.90193 ppb		90
51)	Acenaphthylene	8.14	152	948358	46.58529 ppb		99
52)	3-Nitroaniline	8.29	138	180769	47.26703 ppb		88
53)	Acenaphthene	8.34	154	586907	45.53211 ppb		98
54)	2,4-Dinitrophenol	8.44	184	84980	46.55279 ppb		89
55)	4-Nitrophenol	8.55	65	137135	43.12239 ppb		93
56)	Dibenzofuran	8.54	168	849428	46.47188 ppb		94
57)	2,4-DNT	8.57	165	234197	47.34334 ppb	#	78
58)	2,3,4,6-Tetrachlorophenol	8.71	232	160442	46.20195 ppb		96
59)	Diethyl phthalate	8.83	149	741200	46.41827 ppb		99
60)	4-Chlorophenyl phenyl ethe	8.94	204	335339	47.03558 ppb		96
61)	Fluorene	8.94	166	691590	46.83189 ppb		98
62)	4-Nitroaniline	9.01	138	182624	50.40435 ppb		92
65)	4,6-Dinitro-2-methylphenol	9.05	198	147984	45.57737 ppb	#	76
66)	Diphenyl amine	9.09	169	1119572	89.81195 ppb		98
67)	n-Nitrosodiphenylamine	9.09	169	1119572	89.81195 ppb		98
68)	1,2-Diphenylhydrazine	9.13	77	849586	47.36384 ppb		96
69)	4-Bromophenyl phenyl ether	9.51	248	214260	47.33947 ppb		96
70)	Hexachlorobenzene	9.58	284	220644	47.42823 ppb		99
71)	Atrazine	9.72	200	105712	23.47052 ppb		96
72)	Pentachlorophenol	9.83	266	95773	43.51972 ppb		96
73)	Phenanthrene	10.05	178	1142273	48.40564 ppb		99
74)	Anthracene	10.11	178	1174823	48.41559 ppb		99
75)	Carbazol	10.31	167	1053065	47.94703 ppb		100
76)	Di-n-butylphthalate	10.72	149	1362916	48.29228 ppb		99
77)	Fluoranthene	11.44	202	1233939	47.51304 ppb	#	97
79)	Benzidine	11.61	184	456142	48.38941 ppb		99
80)	Pyrene	11.70	202	1290779	45.73795 ppb		100
82)	Butyl benzylphthalate	12.46	149	635098	46.84254 ppb		95
83)	3,3'-Dichlorobenzidine	13.07	252	426605	47.99406 ppb	#	97
84)	Benz (a) anthracene	13.09	228	1249504	48.09379 ppb		98
85)	Bis (2-ethylhexyl) phthala	13.13	149	861617	45.33198 ppb		99
86)	Chrysene	13.14	228	1159702	45.95398 ppb		99
87)	Di-n-octylphthalate	13.84	149	1527488	45.49637 ppb		96
89)	Benzo (b) fluoranthene	14.29	252	1258066	46.35295 ppb	#	98
90)	Benzo (k) fluoranthene	14.32	252	1161358	44.99277 ppb		98
91)	Benzo (a) pyrene	14.69	252	1181117	46.58380 ppb		99
92)	Indeno (1,2,3-cd) pyrene	16.30	276	1262052	44.96307 ppb		94
93)	Dibenz (a,h) anthracene	16.32	278	1083234	45.75715 ppb		99
94)	Benzo (g,h,i) perylene	16.77	276	1064189	42.21759 ppb		97

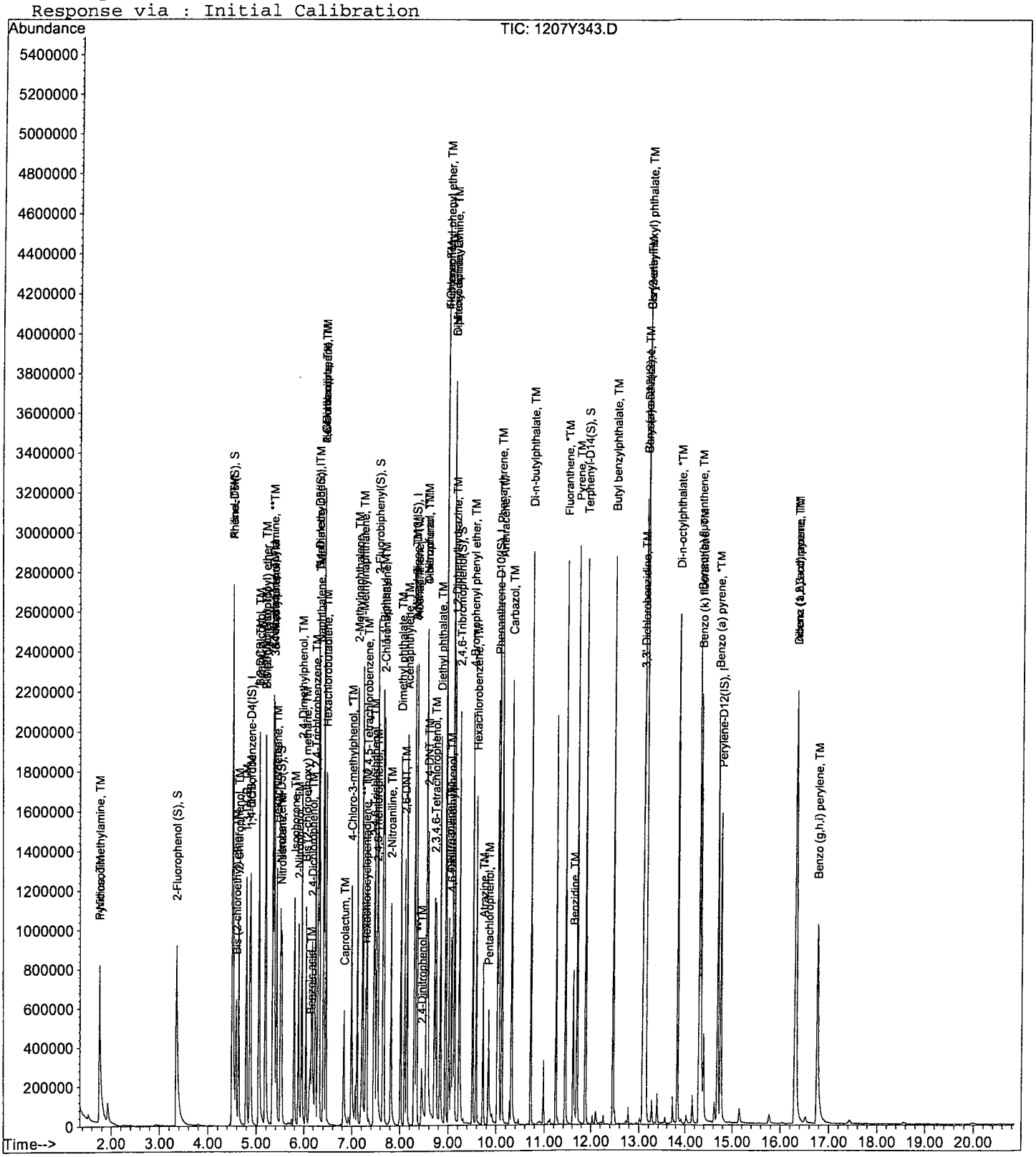
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y343.D Vial: 43
Acq On : 18 Jan 17 20:07 Operator: MA
Sample : 50ug/ml SVOC 12/06/16 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 19 8:01 2017 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration



ORGANICS

Raw Data

APPL, INC.

Method Blank

EPA 8270D WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **170116W-48866 - 215607**
Batch ID: #87DC5-170116A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/16/17	01/18/17
BLANK	SURROGATE: 2,4,6-TRIBROMOP	55.9	43-140			%	01/16/17	01/18/17
BLANK	SURROGATE: 2-FLUORBIPHENY	54.2	44-119			%	01/16/17	01/18/17
BLANK	SURROGATE: 2-FLUOROPHENO	28.0	19-119			%	01/16/17	01/18/17
BLANK	SURROGATE: NITROBENZENE-	60.1	44-120			%	01/16/17	01/18/17
BLANK	SURROGATE: PHENOL-D6 (S)	15.9	10-115			%	01/16/17	01/18/17
BLANK	SURROGATE: TERPHENYL-D14 (	63.0	50-134			%	01/16/17	01/18/17

Quant Method: Y1207.M
Run #: 1207Y323
Instrument: Yoda
Sequence: Y161207
Initials: MA

GC SC-Blank-REG MDLs-DOD
Printed: 01/19/17 12:20:57 PM

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y323.D Vial: 23
Acq On : 18 Jan 17 10:21 Operator: MA
Sample : 170116A BLK 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 18 16:52 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	182902	40.00000	ppb	0.00
20) Napthalene-D8(IS)	6.28	136	778724	40.00000	ppb	-0.02
40) Acenaphthene-D10(IS)	8.30	164	473403	40.00000	ppb	0.00
64) Phenanthrene-D10(IS)	10.03	188	848343	40.00000	ppb	0.00
78) Chrysene-D12(IS)	13.10	240	801392	40.00000	ppb	0.00
88) Perylene-D12(IS)	14.74	264	823061	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.34	112	337409	56.07815	ppb	0.00
Spiked Amount 200.000			Recovery = 28.039%			
5) Phenol-D6 (S)	4.50	99	253106	31.87229	ppb	0.00
Spiked Amount 200.000			Recovery = 15.936%			
21) Nitrobenzene-D5(S)	5.50	82	474620	60.12776	ppb	0.00
Spiked Amount 100.000			Recovery = 60.128%			
45) 2-Fluorobiphenyl(S)	7.53	172	809351	54.23251	ppb	0.00
Spiked Amount 100.000			Recovery = 54.233%			
63) 2,4,6-Tribromophenol(S)	9.23	330	265412	111.81587	ppb	0.00
Spiked Amount 200.000			Recovery = 55.908%			
81) Terphenyl-D14(S)	11.88	244	1141626	62.99921	ppb	0.00
Spiked Amount 100.000			Recovery = 62.999%			

Target Compounds Qvalue

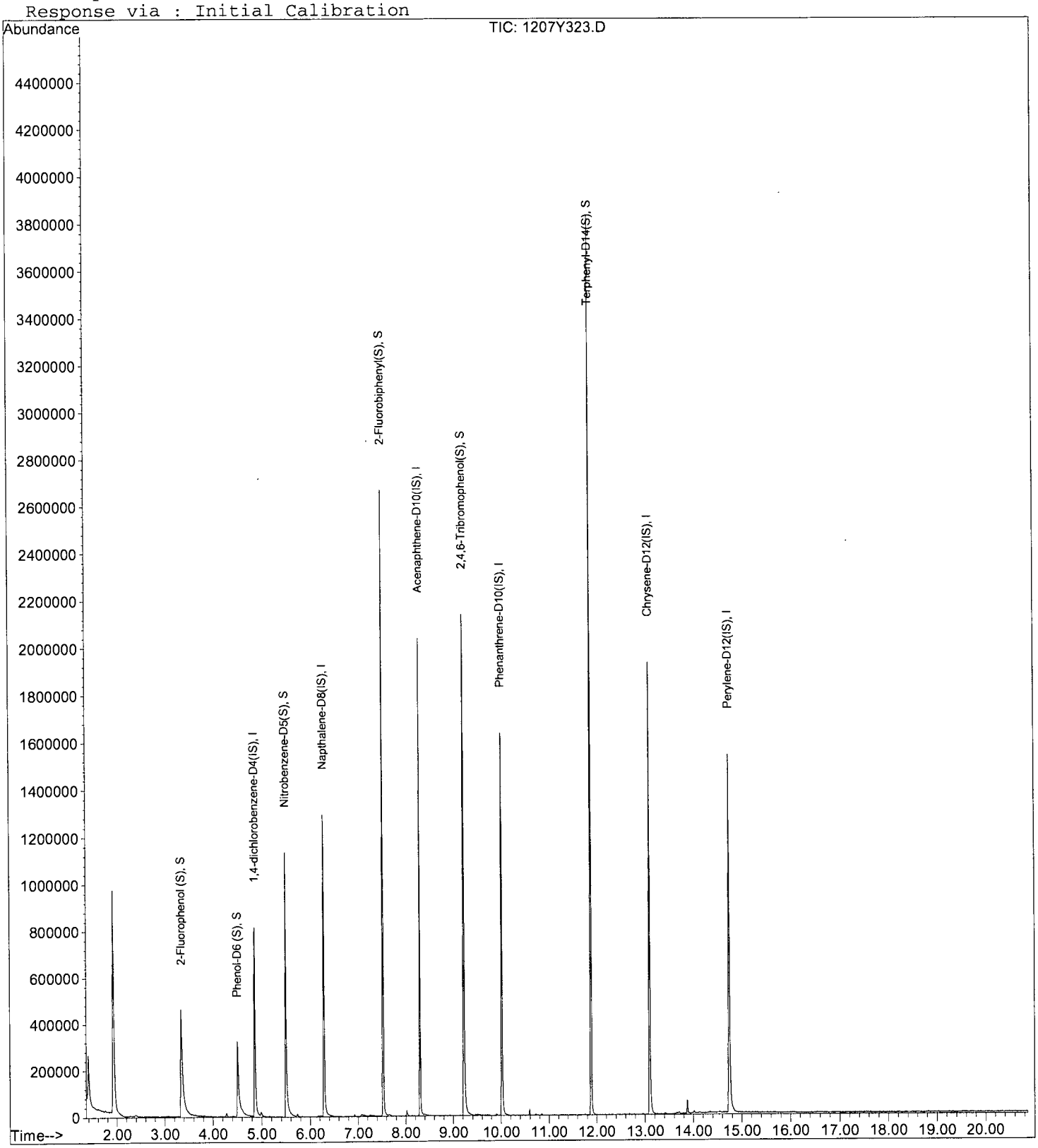
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y323.D Vial: 23
Acq On : 18 Jan 17 10:21 Operator: MA
Sample : 170116A BLK 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 18 16:52 2017 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration



Laboratory Control Spike Recovery
EPA 8270D WATER

APPL ID: **170116W-48866 LCS - 215607**
Batch ID: #87DC5-170116A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
PHENOL	50.0	13.8	27.6	10-115
SURROGATE: 2,4,6-TRIBROMOPHENOL	200	134	67.0	43-140
SURROGATE: 2-FLUORBIPHENYL (S)	100	65.9	65.9	44-119
SURROGATE: 2-FLUOROPHENOL (S)	200	71.5	35.8	19-119
SURROGATE: NITROBENZENE-D5 (S)	100	71.3	71.3	44-120
SURROGATE: PHENOL-D6 (S)	200	43.9	21.9	10-115
SURROGATE: TERPHENYL-D14 (S)	100	69.5	69.5	50-134

Comments: _____

Primary	SPK
Quant Method :	Y1207.M
Extraction Date :	01/16/17
Analysis Date :	01/18/17
Instrument :	Yoda
Run :	1207Y324
Initials :	MA

Printed: 01/19/17 12:20:57 PM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y324.D Vial: 24
Acq On : 18 Jan 17 10:51 Operator: MA
Sample : 170116A LCS-1 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 18 12:05 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	4.86	152	186036	40.00000	ppb		0.00
20) Napthalene-D8(IS)	6.29	136	781993	40.00000	ppb		0.00
40) Acenaphthene-D10(IS)	8.31	164	478032	40.00000	ppb		0.00
64) Phenanthrene-D10(IS)	10.02	188	873294	40.00000	ppb		0.00
78) Chrysene-D12(IS)	13.10	240	868088	40.00000	ppb		0.00
88) Perylene-D12(IS)	14.75	264	912966	40.00000	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol (S)	3.34	112	437518	71.49149	ppb		0.00
Spiked Amount 200.000			Recovery = 35.746%				
5) Phenol-D6 (S)	4.50	99	354740	43.91799	ppb		0.00
Spiked Amount 200.000			Recovery = 21.959%				
21) Nitrobenzene-D5(S)	5.50	82	564908	71.26682	ppb		0.00
Spiked Amount 100.000			Recovery = 71.267%				
45) 2-Fluorobiphenyl(S)	7.53	172	993596	65.93358	ppb		0.00
Spiked Amount 100.000			Recovery = 65.934%				
63) 2,4,6-Tribromophenol(S)	9.23	330	321283	134.04316	ppb		0.00
Spiked Amount 200.000			Recovery = 67.022%				
81) Terphenyl-D14(S)	11.89	244	1364847	69.53068	ppb		0.00
Spiked Amount 100.000			Recovery = 69.531%				
Target Compounds							Qvalue
2) n-Nitrosodimethylamine	1.75	42	106169	28.74310	ppb		95
3) Pyridine	1.76	79	216919	25.99597	ppb		92
6) Phenol	4.52	94	126572	13.78717	ppb	#	72
7) Aniline	4.50	66	219121	25.21941	ppb	#	29
8) Bis (2-chloroethyl) ether	4.58	63	176219	43.81298	ppb		95
9) 2-Chlorophenol	4.64	128	260965	35.59805	ppb		96
10) 1,3-DCB	4.80	146	209477	27.63582	ppb		97
11) 1,4-DCB	4.88	146	226717	29.02502	ppb		98
12) Benzyl alcohol	5.05	108	148264	36.57180	ppb		98
13) 1,2-DCB	5.05	146	219420	30.69564	ppb		98
14) 2-Methylphenol	5.19	107	172203	33.06363	ppb		95
15) Bis (2-chloroisopropyl) et	5.18	45	389442	48.60153	ppb	#	62
16) Acetophenone	5.33	105	382915	40.28168	ppb		90
17) 3&4-Methylphenol	5.36	107	403254	58.41856	ppb		99
18) n-Nitrosodi-n-propylamine	5.33	70	218712	44.68246	ppb		95
19) Hexachloroethane	5.41	117	82922	26.55972	ppb		93
22) Nitrobenzene	5.52	77	326273	40.87827	ppb		96
23) Isophorone	5.79	82	574016	43.42077	ppb		97
24) 2-Nitrophenol	5.87	139	160094	40.18959	ppb		92
25) 2,4-Dimethylphenol	5.94	122	210979	33.40415	ppb		97
26) Benzoic acid	6.11	105	49290	13.16785	ppb		95
27) Bis (2-chloroethoxy) metha	6.04	93	322806	42.82376	ppb		99
28) 2,4-Dichlorophenol	6.16	162	237254	39.41380	ppb		96
29) 1,2,4-Trichlorobenzene	6.24	180	212022	32.38589	ppb		98
30) 3,4-Dimethylphenol	6.28	107	345862	35.76512	ppb		95
31) Naphthalene	6.32	128	777654	37.91865	ppb		99
32) 4-Chloroaniline	6.40	127	342719	45.15830	ppb		92
33) 2,6-Dichlorophenol	6.40	162	226483	38.99994	ppb		97
34) Hexachloropropene	6.41	213	131876	25.18466	ppb		99
35) Hexachlorobutadiene	6.46	225	105971	25.40687	ppb		97
36) Caprolactum	6.81	55	38597	12.79197	ppb	#	84
37) 4-Chloro-3-methylphenol	6.98	107	261795	39.37050	ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y161207\1207Y324.D Vial: 24
Acq On : 18 Jan 17 10:51 Operator: MA
Sample : 170116A LCS-1 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 18 12:05 2017 Quant Results File: Y1207.RES

Quant Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38) 2-Methylnaphthalene	7.11	142	517906	38.64144	ppb		97
39) 1-Methylnaphthalene	7.22	142	521996	39.47812	ppb		98
41) Hexachlorocyclopentadiene	7.28	237	40032	20.55644	ppb		97
42) 1,2,4,5-Tetrachlorobenzene	7.30	216	235814	36.29698	ppb		95
43) 2,4,6-Trichlorophenol	7.45	196	176110	42.00611	ppb		98
44) 2,4,5-Trichlorophenol	7.51	196	185376	40.51612	ppb		93
46) 1,1'-Biphenyl	7.65	154	709495	39.60670	ppb	#	99
47) 2-Chloronaphthalene	7.66	162	534806	38.62613	ppb		99
48) 2-Nitroaniline	7.80	65	220545	46.34830	ppb		85
49) Dimethyl phthalate	8.02	163	788331	47.40779	ppb		98
50) 2,6-DNT	8.09	165	161194	42.93774	ppb	#	73
51) Acenaphthylene	8.14	152	893583	40.95618	ppb		100
52) 3-Nitroaniline	8.29	138	173365	42.29644	ppb		85
53) Acenaphthene	8.34	154	560768	40.59194	ppb		100
54) 2,4-Dinitrophenol	8.44	184	75242	40.09657	ppb	#	53
55) 4-Nitrophenol	8.57	65	41368	15.61794	ppb	#	6
56) Dibenzofuran	8.54	168	815530	41.63051	ppb		90
57) 2,4-DNT	8.57	165	232935	43.93599	ppb	#	70
58) 2,3,4,6-Tetrachlorophenol	8.70	232	153181	41.15809	ppb		94
59) Diethyl phthalate	8.83	149	737625	43.10198	ppb		99
60) 4-Chlorophenyl phenyl ethe	8.95	204	312805	40.93777	ppb	#	77
61) Fluorene	8.94	166	652256	41.21157	ppb		97
62) 4-Nitroaniline	9.01	138	173600	44.70623	ppb		95
65) 4,6-Dinitro-2-methylphenol	9.05	198	139313	42.93353	ppb	#	68
66) Diphenyl amine	9.09	169	976602	78.39172	ppb		100
67) n-Nitrosodiphenylamine	9.09	169	976602	78.39172	ppb		100
68) 1,2-Diphenylhydrazine	9.12	77	918265	51.22454	ppb		92
69) 4-Bromophenyl phenyl ether	9.51	248	197359	43.63246	ppb	#	78
70) Hexachlorobenzene	9.59	284	205549	44.21103	ppb	#	80
71) Atrazine	9.73	200	101557	22.56206	ppb		96
72) Pentachlorophenol	9.83	266	85409	39.47406	ppb		98
73) Phenanthrene	10.05	178	1044252	44.27941	ppb		99
74) Anthracene	10.12	178	1100087	45.36389	ppb		99
75) Carbazol	10.32	167	995349	45.34740	ppb		97
76) Di-n-butylphthalate	10.72	149	1282578	45.47397	ppb		99
77) Fluoranthene	11.43	202	1173547	45.21579	ppb	#	96
79) Benzidine	11.61	184	268023	27.25604	ppb		98
80) Pyrene	11.69	202	1239854	42.11490	ppb		99
82) Butyl benzylphthalate	12.45	149	589714	41.69477	ppb		87
83) 3,3'-Dichlorobenzidine	13.07	252	422449	45.55922	ppb	#	98
84) Benz (a) anthracene	13.09	228	1148146	42.36322	ppb		99
85) Bis (2-ethylhexyl) phthala	13.12	149	806665	40.68405	ppb		97
86) Chrysene	13.13	228	1121072	42.58441	ppb		99
87) Di-n-octylphthalate	13.84	149	1434209	40.94981	ppb	#	93
89) Benzo (b) fluoranthene	14.28	252	1151283	40.33743	ppb	#	97
90) Benzo (k) fluoranthene	14.32	252	1170008	43.10400	ppb		100
91) Benzo (a) pyrene	14.68	252	1106494	41.49953	ppb		99
92) Indeno (1,2,3-cd) pyrene	16.31	276	1204392	40.80363	ppb	#	92
93) Dibenz (a,h) anthracene	16.32	278	1047866	42.09152	ppb		98
94) Benzo (g,h,i) perylene	16.76	276	1029832	38.85019	ppb		98

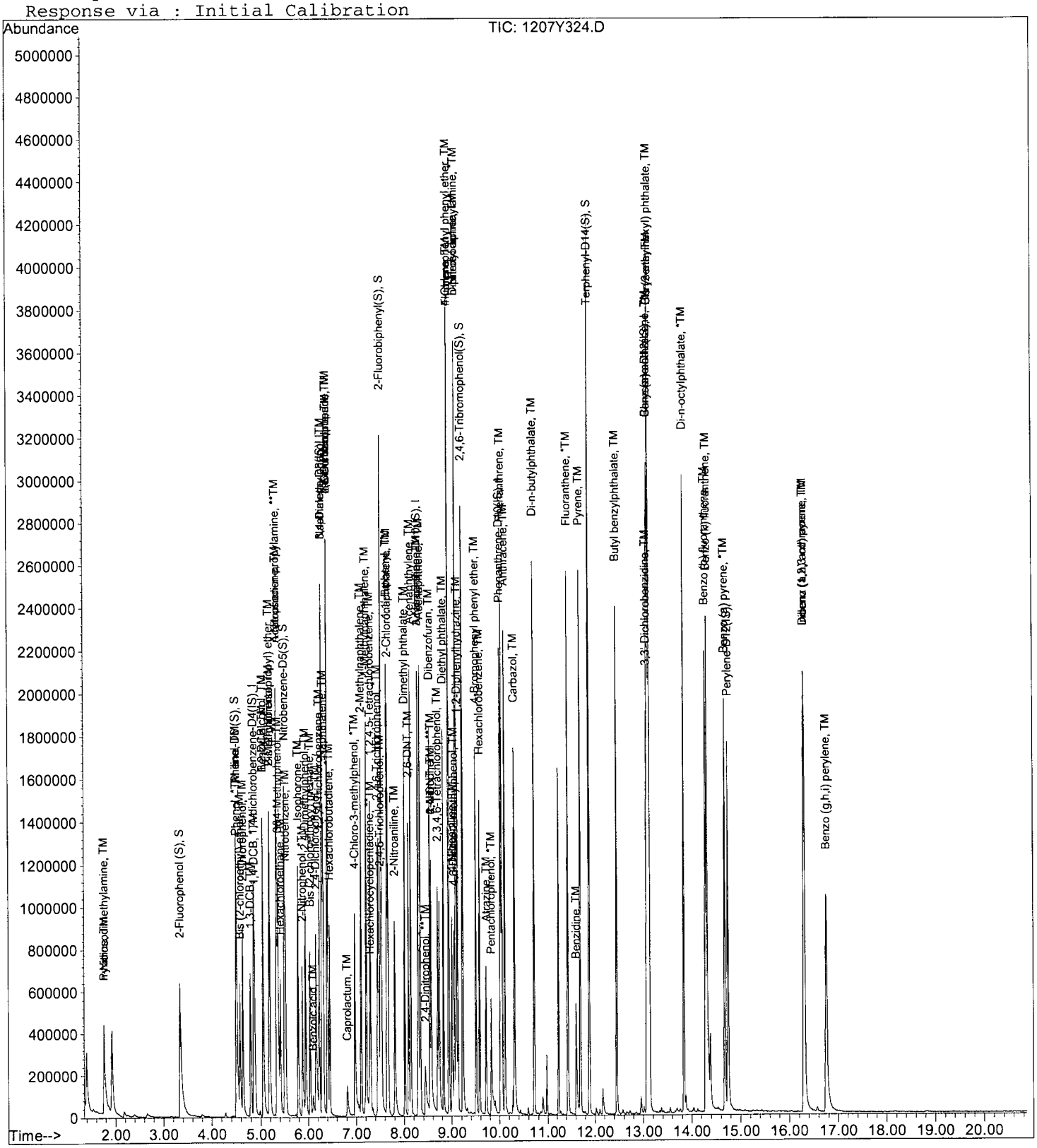
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y161207\1207Y324.D Vial: 24
Acq On : 18 Jan 17 10:51 Operator: MA
Sample : 170116A LCS-1 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jan 18 12:05 2017 Quant Results File: Y1207.RES

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 05 14:52:57 2017
Response via : Initial Calibration

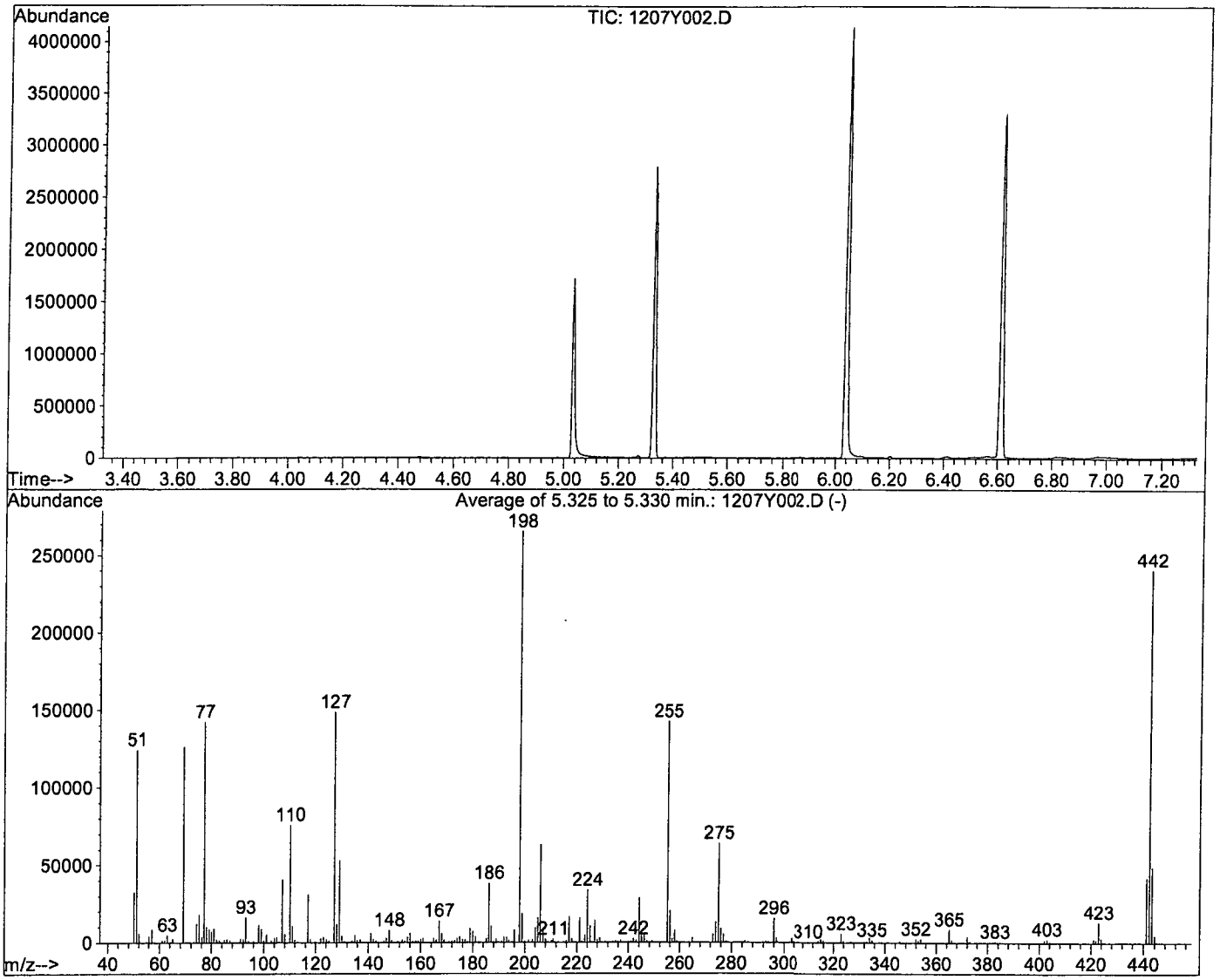


413

DFTPP

Data File : M:\YODA\DATA\Y161207\1207Y002.D Vial: 2
Acq On : 7 Dec 16 9:00 Operator: MA
Sample : SV Tune 10/19/16 Inst : Yoda
Misc : Multiplr: 1.00

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 696, 697, 698; Background Corrected with Scan 689

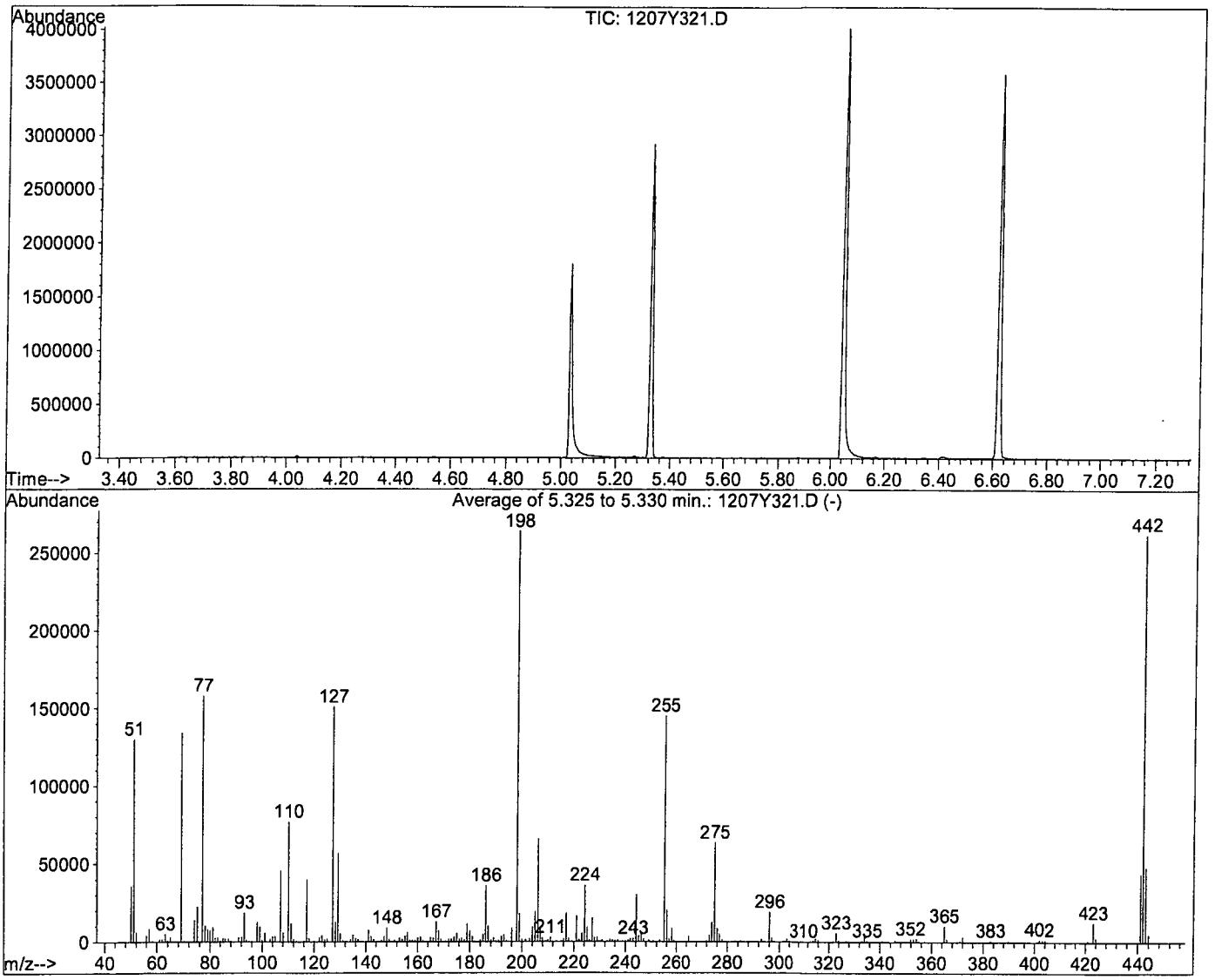
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	46.7	124269	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.7	911	PASS
127	198	40	60	56.0	148757	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	265856	PASS
199	198	5	9	6.9	18432	PASS
275	198	10	30	24.0	63789	PASS
365	198	1	100	3.1	8331	PASS
441	443	0.01	100	86.4	41829	PASS
442	198	50	150	90.6	240747	PASS
443	442	17	23	20.1	48427	PASS

DFTPP

Data File : M:\YODA\DATA\Y161207\1207Y321.D
Acq On : 18 Jan 17 9:34
Sample : SV Tune 10/19/16
Misc : water

Vial: 21
Operator: MA
Inst : Yoda
Multiplr: 1.00

Method : M:\YODA\DATA\Y161207\Y1207.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 696, 697, 698; Background Corrected with Scan 688

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	49.3	130222	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.3	395	PASS
127	198	40	60	57.1	150912	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	264341	PASS
199	198	5	9	6.7	17747	PASS
275	198	10	30	24.0	63437	PASS
365	198	1	100	3.8	10107	PASS
441	443	0.01	100	90.9	43472	PASS
442	198	50	150	99.3	262549	PASS
443	442	17	23	18.2	47832	PASS

1207Y321.D Y1207.M Thu Jan 19 08:24:41 2017

SV Internal Stanard Stock Prep: 10/19/16 RH EXP: 10/19/17						
		Conc.				
Supplier	ID #	µg/mL	Lot #	Open Date	Exp.Date	µL
Supleco	CRM48902	2000	XA14020V-36611	10/19/16	10/19/17	1000
					fin vol.	1000

8270 Full Scan Standard Curve

PREP DATE:	12/06/16 RH							
8270 Standard Curve								
Exp:	2/11/17					5	10	20
		Conc.		Date				
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL
Absolute	8270 Stock	200	VAR	11/15/16	11/15/16	5	5	10
o2si	8270 BN:A	200/400	277272-36400	6/20/16	12/20/16	5	5	10
EM Science	Methylene Chloride		56098			190	90	80
Supelco	SV Internal	2000	A14020V-3661	12/06/16	12/16/16	4	2	2
				Final Vol.		204	102	102

8270 Full Scan Second Source (SS)

PREP DATE:	12/06/16 RH					
Exp:	1/18/17	Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
o2si	8270 Stock S	200	VAR	07/08/16	07/08/17	25
EM Science	Methylene Chloride		56098			75
Supelco	SV Internal	2000	A14020V-3661	12/06/16	12/06/16	2
				Final Vol.		102

40	**50**	**60**	**80**	**100**
µL	µL	µL	µL	µL
20	50	30	40	50
20	50	30	40	50
60	100	40	20	0
2	4	2	2	2
102	204	102	102	102

8270 SVOC Stock 10mL						
8270 Stock/Spike Standard						
prep:	11/15/2016 RH					
Exp:	11/15/17					
		Conc.				
Supplier	ID #	µg/mL	Lot #	Open Date	Exp.Date	µL
Absolute	10001	2000	053014-37136	11/15/16	11/15/17	1000
Absolute	10002	2000	062216-37144	11/15/16	11/15/17	1000
Absolute	10004	2000	012516-37147	11/15/16	11/15/17	1000
Absolute	10005	2000	110314-36848	11/15/16	11/15/17	1000
Absolute	10006	2000	022416-36850	11/15/16	11/15/17	1000
Absolute	10007	2000	020515-36853	11/15/16	11/15/17	1000
Absolute	10018	2000	030216-37081	11/15/16	11/15/17	1000
Absolute	70023	1000	042716-36858	11/15/16	11/15/17	1000
Absolute	82705	2000	012516-36862	11/15/16	11/15/17	1000
Absolute	94552	2000	042016-36488	11/15/16	11/15/17	1000
				Final Vol.		10000

8270 Surrog Mix 100/200ppm						
Prep: 11/15/16 -RH Ex: 2/15/17						
STANDARD	**INITIAL CONC.**	**SOURCE DATE**	**ALIQUOT**	**FINAL VOL**	**FINAL CONC.**	**SOLVENT /LOT#**
8270 Acid Surrog Mix	10000 ug/ml	Restek Cat# 33029 Lot# A0118884-36875 Op: 11/15/16 EX: 11/15/17	2.0 mL	100 mL	200 ug/mL	MC
8270 B/N surrog Mix	5000 µg/mL	Restek Cat# 31086 Lot# A0119223-36871 Op: 11/15/16 EX: 11/15/17	2.0 mL	100 mL	100 ug/mL	MC

8270 Acid Surrog Stock 5000ppm						
Prep: 06/20/16 -LH Ex: 06/20/17						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
8270 Acid Surrog Mix	10,000 µg/mL	Restek Cat# 33029 Lot# A0115509-36718	10mL	20mL	5000 µg/ml	Acetone
	PREP:	06/20/16				
	Exp:	06/20/17				

8270 Surrog Mix 200/400ppm						
Prep: 06/20/16 -LH Ex: 12/20/16						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
8270 Acid Surrog Mix	5000 µg/mL	06/20/16	8.0mL	100 mL	400 µg/mL	MC
8270 B/N surrog Mix	5000 µg/mL	Restek Cat# 31086 Lot# A0119223-36720	4.0 mL	100 mL	200 ug/mL	MC
	PREP:	06/20/16				
	Exp:	12/20/16				

8270 Full Scan Second Source Stock

	7/8/16 GA					
8270 Second Source Stock						
Exp:	07/08/17					
		Conc.		Date	Exp.	
Supplier	ID #	µg/mL	Lot #	Code	Date	µL
o2si	116070-02	2000	234696-35233	07/08/16	07/08/17	1000
o2si	110391-01	2000	252133-35880	07/08/16	07/08/17	1000
o2si	010337-01	1000	259144-35881	07/08/16	07/08/17	1000
o2si	110396-01	2000	252136-35882	07/08/16	07/08/17	1000
o2si	110397-01	2000	263077-35835	07/08/16	01/08/17	1000
o2si	110393-01	2000	252141-35248	07/08/16	07/08/17	1000
o2si	110394-01	2000	252143-35884	07/08/16	07/08/17	1000
o2si	**110395-01**	2000	252146-35885	07/08/16	07/08/17	1000
o2si	110392-01	2000	243259-35886	07/08/16	07/08/17	1000
Absolute	10006	2000	091115-35856	07/08/16	07/08/17	1000
				Final Vol.		10000

Organic Extraction Worksheet

Method	625/8270 Separatory Funnel Extra 3510C	Extraction Set	170116A	Extraction Method	SEP004	Units	mL

Spiked ID 1	8270T Spike 12-8-16 exp 12-8-17		Surrogate ID 1	8270 Surrogate 1-12-17 exp 7-12-17	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	01/16/17 15:25	
Spiked ID 8			Ext. End Time:	01/17/17 16:45	
			GC Requires Extract By:	01/19/17 0:00	

pH1	2	01/16/17 3:40:00 PM	Water Bath Temp Criteria	75,76 °C
pH2	14	01/16/17 5:30:00 PM		
pH3				

Spiked By: KY **Date** 01/16/17 **Witnessed By:** CFM **Date** 01/16/17 5:54:43 PM

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	170116A Blk				1	1 equip	1000 e-wb7	1	2/1	01/16/17 15:25	
2	170116A LCS-1		0.250	1	1	1 equip	1000 E-WB7	1	2/1	01/16/17 15:25	
3	AZ48866 MS-1	AZ48866W22	0.250	1	1	1 equip	1050 E-WB7	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
4	AZ48866 MSD-1	AZ48866W27	0.250	1	1	1 equip	1050 E-WB7	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
5	AZ48866	AZ48866W19			1	1 equip	1050 E-WB7	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
6	AZ48867	AZ48867W05			1	1 equip	1070 E-WB7	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
7	AZ48868	AZ48868W11			1	1 equip	1070 E-WB7	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
8	AZ48871	AZ48871W13			1	1 equip	1070 E-WB7	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
9	AZ48872	AZ48872W28			1	1 equip	1070 E-WB7	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
10	AZ48873	AZ48873W13			1	1 equip	1070 E-WB7	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
11	AZ48875	AZ48875W11			1	1 equip	1070 E-WB6	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
12	AZ48877	AZ48877W14			1	1 equip	1070 E-WB6	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
13	AZ48878	AZ48878W14			1	1 equip	1070 E-WB6	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
14	AZ48880	AZ48880W10			1	1 equip	1070 E-WB6	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
15	AZ48881	AZ48881W07			1	1 equip	1070 E-WB6	1	2/1	01/16/17 15:25	81965 RUSH 1 WEEK
16	AZ48915	AZ48915W12			1	1 equip	1070 E-WB6	1	2/1	01/16/17 15:25	81971 Rush 1 week

Solvent and Lot#	
MC	56153
1+1 Sulfuric Acid	12-5-16
Acidified Na2SO4	1-3-17
B.Na2SO4	16C255214
10N NaOH	12-19-16
ph strips	HC 574756
Filter Paper	400112

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	MA
Date 1/18/17	10:00
Time	10:00
Refrigerator	6C-C

	Technician's Initials
Scanned By	KY
Sample Preparation	KY,DL,JR
Extraction	KY,DL,JR
Concentration	KY

Modified	01/18/17 8:47:32 AM

Reviewed By: [signature] **Date** 1/18/17

_SEP004

Organic Extraction Worksheet

Method	625/8270 Separatory Funnel Extra 3510C	Extraction Set	170116A	Extraction Method	SEP004	Units	mL

Spiked ID 1	8270T Spike 12-8-16 exp 12-8-17		Surrogate ID 1	8270 Surrogate 1-12-17 exp 7-12-17	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	01/16/17 15:25	
Spiked ID 8			Ext. End Time:	01/17/17 16:45	
			GC Requires Extract By:	**01/19/17 0:00**	

pH1	2	01/16/17 3:40:00 PM	Water Bath Temp Criteria	75,76 °C
pH2	14	01/16/17 5:30:00 PM		
pH3				

Spiked By: KY **Date** 01/16/17 **Witnessed By:** CFM **Date** 01/16/17 5:54:43 PM

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
17	AZ48916	AZ48916W14			1	1	1070	1	2/1	01/16/17 15:25	81971 Rush 1 week
						equip	E-WB6				
18	AZ48921	AZ48921W11			1	1	1070	1	2/1	01/16/17 15:25	81971 Rush 1 week
						equip	E-WB6				
19	AZ48925	AZ48925W14			1	1	1070	1	2/1	01/16/17 15:25	81971 Rush 1 week
						equip	E-WB6				

per 1/18/17

Solvent and Lot#	
MC	56153
1+1 Sulfuric Acid	12-5-16
Acidified Na2SO4	1-3-17
B.Na2SO4	16C255214
10N NaOH	12-19-16
ph strips	HC 574756
Filter Paper	400112

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	
Date	
Time	
Refrigerator	

	Technician's Initials
Scanned By	KY
Sample Preparation	KY,DL,JR
Extraction	KY,DL,JR
Concentration	KY

Modified	01/18/17 8:47:32 AM

Reviewed By: per **Date** 1/18/17

Injection Log

Directory: M:\YODA\DATA\Y161207\

Vial	FileName	Multiplier	SampleName	Misc Info	Injected
2	1207Y002.D	1	SV Tune 10/19/16		7 Dec 16 9:00
4	1207Y004.D	1	5ug/ml SVOC 12/06/16		7 Dec 16 10:01
5	1207Y005.D	1	10ug/ml SVOC 12/06/16		7 Dec 16 10:32
6	1207Y006.D	1	20ug/ml SVOC 12/06/16		7 Dec 16 11:02
7	1207Y007.D	1	40ug/ml SVOC 12/06/16		7 Dec 16 11:32
8	1207Y008.D	1	50ug/ml SVOC 12/06/16		7 Dec 16 12:02
9	1207Y009.D	1	60ug/ml SVOC 12/06/16		7 Dec 16 12:32
10	1207Y010.D	1	80ug/ml SVOC 12/06/16		7 Dec 16 13:02
11	1207Y011.D	1	100ug/ml SVOC 12/06/16		7 Dec 16 13:32
12	1207Y012.D	1	2ND SRC SVOC 12/06/16		7 Dec 16 14:01
21	1207Y321.D	1	SV Tune 10/19/16	water	18 Jan 17 9:34
22	1207Y322.D	1	50ug/ml SVOC 12/06/16	water	18 Jan 17 9:51
23	1207Y323.D	1	170116A BLK 1/1000	water	18 Jan 17 10:21
24	1207Y324.D	1	170116A LCS-1 1/1000	water	18 Jan 17 10:51
38	1207Y338.D	1	AZ48915W12 1/1070	water	18 Jan 17 17:52
39	1207Y339.D	1	AZ48916W14 1/1070	water	18 Jan 17 18:23
40	1207Y340.D	1	AZ48921W11 1/1070	water	18 Jan 17 18:53
41	1207Y341.D	1	AZ48925W14 1/1070	water	18 Jan 17 19:23
43	1207Y343.D	1	50ug/ml SVOC 12/06/16	water	18 Jan 17 20:07

EPA METHOD 8260B
Volatile Organic Compounds

APPL, INC.

EPA METHOD 8260B
Volatile Organic Compounds
QC Summary

APPL, INC.

Method Blank

EPA 8260B BTEX & 1,2-DCA WATER

Blank Name/QCG: **170113W-48918 - 215475**

Batch ID: #86BTO-170113AM

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	01/13/17	01/13/17
BLANK	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/13/17	01/13/17
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/13/17	01/13/17
BLANK	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/13/17	01/13/17
BLANK	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/13/17	01/13/17
BLANK	SURROGATE: 1,2-DICHLOROET	93.3	81-118			%	01/13/17	01/13/17
BLANK	SURROGATE: 4-BROMOFLUORO	93.3	85-114			%	01/13/17	01/13/17
BLANK	SURROGATE: DIBROMOFLUOR	97.1	80-119			%	01/13/17	01/13/17
BLANK	SURROGATE: TOLUENE-D8 (S)	99.8	89-112			%	01/13/17	01/13/17

Quant Method: MALLW.M
Run #: 0113M20
Instrument: Max
Sequence: M170111
Initials: SV

GC SC-Blank-REG MDLs-DOD
Printed: 01/16/17 4:08:25 PM

Method Blank

EPA 8260B BTEX & 1,2-DCA WATER

Blank Name/QCG: **170113W-48920 - 215474**
Batch ID: #86BTO-170113BM1

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	01/14/17	01/14/17
BLANK	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/14/17	01/14/17
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/14/17	01/14/17
BLANK	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/14/17	01/14/17
BLANK	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/14/17	01/14/17
BLANK	SURROGATE: 1,2-DICHLOROET	94.1	81-118			%	01/14/17	01/14/17
BLANK	SURROGATE: 4-BROMOFLUORO	95.4	85-114			%	01/14/17	01/14/17
BLANK	SURROGATE: DIBROMOFLUOR	99.4	80-119			%	01/14/17	01/14/17
BLANK	SURROGATE: TOLUENE-D8 (S)	100	89-112			%	01/14/17	01/14/17

Quant Method: MALLW.M
Run #: 0113M47
Instrument: Max
Sequence: M170111
Initials: SV

GC SC-Blank-REG MDLs-DOD
Printed: 01/16/17 4:08:25 PM

Method Blank

EPA 8260B BTEX & 1,2-DCA WATER

Blank Name/QCG: **170113W-48873 - 215498**
Batch ID: #86BTO-170113BL

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	01/14/17	01/14/17
BLANK	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/14/17	01/14/17
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/14/17	01/14/17
BLANK	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/14/17	01/14/17
BLANK	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/14/17	01/14/17
BLANK	SURROGATE: 1,2-DICHLOROET	97.5	81-118			%	01/14/17	01/14/17
BLANK	SURROGATE: 4-BROMOFLUORO	97.7	85-114			%	01/14/17	01/14/17
BLANK	SURROGATE: DIBROMOFLUOR	100	80-119			%	01/14/17	01/14/17
BLANK	SURROGATE: TOLUENE-D8 (S)	98.9	89-112			%	01/14/17	01/14/17

Quant Method: LALLW.M
Run #: 0113L42
Instrument: Loki
Sequence: 170111
Initials: ARO

GC SC-Blank-REG MDLs-DOD
Printed: 01/16/17 4:08:25 PM

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81971

Case No: 81971 Date Analyzed: 01/13/17

Matrix: WATER Instrument: Max

APPL ID.	Client Sample No.	SURROGATE: 1,2-DICHLOROETHANE-D4 (S)			SURROGATE: 4-BROMOFLUOROBENZENE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
170113AM-LCS	Lab Control Spike	81-118	94.4		85-114	98.8	
170113AM-BLK	Blank	81-118	93.3		85-114	93.3	
AZ48918	ERH199	81-118	94.7		85-114	100.0	

Comments: Batch: #86BTO-170113AM

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81971

Case No: 81971 Date Analyzed: 01/13/17

Matrix: WATER Instrument: Max

APPL ID.	Client Sample No.	SURROGATE: DIBROMOFLUOROMETHANE (S)			SURROGATE: TOLUENE-D8 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
170113AM-LCS	Lab Control Spike	80-119	99.2		89-112	102	
170113AM-BLK	Blank	80-119	97.1		89-112	99.8	
AZ48918	ERH199	80-119	98.7		89-112	102	

Comments: Batch: #86BTO-170113AM

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81971

Case No: 81971 Date Analyzed: 01/13/17

Matrix: WATER Instrument: Max

APPL ID.	Client Sample No.	SURROGATE: 1,2-DICHLOROETHANE-D4 (S)			SURROGATE: 4-BROMOFLUOROBENZENE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
170113AM1-LCS	Lab Control Spike	81-118	94.4		85-114	98.8	
170113AM1-BLK	Blank	81-118	93.3		85-114	93.3	
AZ48919	ERH200	81-118	93.5		85-114	97.0	

Comments: Batch: #86BTO-170113AM

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81971

Case No: 81971 Date Analyzed: 01/13/17

Matrix: WATER Instrument: Max

APPL ID.	Client Sample No.	SURROGATE: DIBROMOFLUOROMETHANE (S)			SURROGATE: TOLUENE-D8 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
170113AM1-LCS	Lab Control Spike	80-119	99.2		89-112	102	
170113AM1-BLK	Blank	80-119	97.1		89-112	99.8	
AZ48919	ERH200	80-119	98.6		89-112	98.7	

Comments: Batch: #86BTO-170113AM

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81971

Case No: 81971 Date Analyzed: 01/13/17

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: 1,2-DICHLOROETHANE-D4 (S)			SURROGATE: 4-BROMOFLUOROBENZENE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
170113BL-LCS	Lab Control Spike	81-118	97.2		85-114	105	
170113BL-BLK	Blank	81-118	97.5		85-114	97.7	
AZ48916	ERH178	81-118	98.4		85-114	96.2	
AZ48917	ERH185	81-118	97.2		85-114	93.3	

Comments: Batch: #86BTO-170113BL

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81971

Case No: 81971 Date Analyzed: 01/13/17

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: DIBROMOFLUOROMETHANE (S)			SURROGATE: TOLUENE-D8 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
170113BL-LCS	Lab Control Spike	80-119	96.4		89-112	100	
170113BL-BLK	Blank	80-119	100		89-112	98.9	
AZ48916	ERH178	80-119	101		89-112	97.9	
AZ48917	ERH185	80-119	101		89-112	97.5	

Comments: Batch: #86BTO-170113BL

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81971

Case No: 81971 Date Analyzed: 01/13/17

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: 1,2-DICHLOROETHANE-D4 (S)			SURROGATE: 4-BROMOFLUOROBENZENE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
170113BL1-LCS	Lab Control Spike	81-118	97.2		85-114	105	
170113BL1-BLK	Blank	81-118	97.5		85-114	97.7	
AZ48914	ERH171	81-118	99.5		85-114	97.5	
AZ48915	ERH172	81-118	97.7		85-114	96.7	

Comments: Batch: #86BTO-170113BL

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81971

Case No: 81971 Date Analyzed: 01/13/17

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: DIBROMOFLUOROMETHANE (S)			SURROGATE: TOLUENE-D8 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
170113BL1-LCS	Lab Control Spike	80-119	96.4		89-112	100	
170113BL1-BLK	Blank	80-119	100		89-112	98.9	
AZ48914	ERH171	80-119	101		89-112	98.1	
AZ48915	ERH172	80-119	99.7		89-112	97.7	

Comments: Batch: #86BTO-170113BL

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81971

Case No: 81971 Date Analyzed: 01/14/17

Matrix: WATER Instrument: Max

APPL ID.	Client Sample No.	SURROGATE: 1,2-DICHLOROETHANE-D4 (S)			SURROGATE: 4-BROMOFLUOROBENZENE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
170113BM-LCS	Lab Control Spike	81-118	90.0		85-114	98.0	
170113BM-BLK	Blank	81-118	94.1		85-114	95.4	
AZ48921	ERH181	81-118	97.6		85-114	95.3	
AZ48922	ERH203	81-118	96.9		85-114	95.3	
AZ48923	ERH180	81-118	94.6		85-114	94.7	
AZ48924	ERH183	81-118	94.7		85-114	94.7	
AZ48925	ERH184	81-118	95.2		85-114	96.2	
AZ48926	ERH202	81-118	94.3		85-114	95.0	

Comments: Batch: #86BTO-170113BM

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81971

Case No: 81971 Date Analyzed: 01/14/17

Matrix: WATER Instrument: Max

APPL ID.	Client Sample No.	SURROGATE: DIBROMOFLUOROMETHANE (S)			SURROGATE: TOLUENE-D8 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
170113BM-LCS	Lab Control Spike	80-119	97.2		89-112	98.0	
170113BM-BLK	Blank	80-119	99.4		89-112	100	
AZ48921	ERH181	80-119	96.4		89-112	98.3	
AZ48922	ERH203	80-119	96.3		89-112	99.3	
AZ48923	ERH180	80-119	98.6		89-112	98.9	
AZ48924	ERH183	80-119	98.9		89-112	100	
AZ48925	ERH184	80-119	98.9		89-112	101	
AZ48926	ERH202	80-119	96.2		89-112	98.6	

Comments: Batch: #86BTO-170113BM

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81971

Case No: 81971 Date Analyzed: 01/14/17

Matrix: WATER Instrument: Max

APPL ID.	Client Sample No.	SURROGATE: 1,2-DICHLOROETHANE-D4 (S)			SURROGATE: 4-BROMOFLUOROBENZENE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
170113BM1-LCS	Lab Control Spike	81-118	90.0		85-114	98.0	
170113BM1-BLK	Blank	81-118	94.1		85-114	95.4	
AZ48920	ERH201	81-118	94.6		85-114	96.6	

Comments: Batch: #86BTO-170113BM

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81971

Case No: 81971 Date Analyzed: 01/14/17

Matrix: WATER Instrument: Max

APPL ID.	Client Sample No.	SURROGATE: DIBROMOFLUOROMETHANE (S)			SURROGATE: TOLUENE-D8 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
170113BM1-LCS	Lab Control Spike	80-119	97.2		89-112	98.0	
170113BM1-BLK	Blank	80-119	99.4		89-112	100	
AZ48920	ERH201	80-119	101		89-112	97.6	

Comments: Batch: #86BTO-170113BM

Laboratory Control Spike Recovery
EPA 8260B BTEX & 1,2-DCA WATER

APPL ID: **170113W-48873 LCS - 215498**
Batch ID: #86BTO-170113BL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1,2-DICHLOROETHANE	10.00	9.40	94.0	73-128
BENZENE	10.00	9.67	96.7	79-120
ETHYLBENZENE	10.00	10.1	101	79-121
TOLUENE	10.00	9.94	99.4	80-121
XYLENES (TOTAL)	30.0	31.1	104	79-121
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	24.3	97.2	81-118
SURROGATE: 4-BROMOFLUOROBENZE	25.0	26.2	105	85-114
SURROGATE: DIBROMOFLUOROMETH	25.0	24.1	96.4	80-119
SURROGATE: TOLUENE-D8 (S)	25.0	25.0	100	89-112

Comments: _____

Primary	SPK
Quant Method :	LALLW.M
Extraction Date :	01/13/17
Analysis Date :	01/13/17
Instrument :	Loki
Run :	0113L35
Initials :	ARO

Printed: 01/16/17 4:08:14 PM
APPL Standard LCS

Laboratory Control Spike Recovery
EPA 8260B BTEX & 1,2-DCA WATER

APPL ID: **170113W-48918 LCS - 215475**
Batch ID: #86BTO-170113AM

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1,2-DICHLOROETHANE	10.00	9.73	97.3	73-128
BENZENE	10.00	9.99	99.9	79-120
ETHYLBENZENE	10.00	10.5	105	79-121
TOLUENE	10.00	10.2	102	80-121
XYLENES (TOTAL)	30.0	31.1	104	79-121
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	23.6	94.4	81-118
SURROGATE: 4-BROMOFLUOROBENZE	25.0	24.7	98.8	85-114
SURROGATE: DIBROMOFLUOROMETH	25.0	24.8	99.2	80-119
SURROGATE: TOLUENE-D8 (S)	25.0	25.6	102	89-112

Comments: _____

Primary	SPK
Quant Method :	MTFT113.M
Extraction Date :	01/13/17
Analysis Date :	01/13/17
Instrument :	Max
Run :	0113M12
Initials :	SV

Printed: 01/16/17 4:08:14 PM
APPL Standard LCS

Laboratory Control Spike Recovery
EPA 8260B BTEX & 1,2-DCA WATER

APPL ID: **170114W-48920 LCS - 215474**
Batch ID: #86BTO-170113BM1

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1,2-DICHLOROETHANE	10.00	9.78	97.8	73-128
BENZENE	10.00	10.0	100	79-120
ETHYLBENZENE	10.00	10.7	107	79-121
TOLUENE	10.00	10.1	101	80-121
XYLENES (TOTAL)	30.0	31.8	106	79-121
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	22.5	90.0	81-118
SURROGATE: 4-BROMOFLUOROBENZE	25.0	24.5	98.0	85-114
SURROGATE: DIBROMOFLUOROMETH	25.0	24.3	97.2	80-119
SURROGATE: TOLUENE-D8 (S)	25.0	24.5	98.0	89-112

Comments: _____

Primary	SPK
Quant Method :	MALLW.M
Extraction Date :	01/14/17
Analysis Date :	01/14/17
Instrument :	Max
Run :	0113M40
Initials :	SV

Printed: 01/16/17 4:08:14 PM
APPL Standard LCS

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81971

Case No: 81971 Date Analyzed: 01/13/17

Matrix: WATER Instrument: Max

Blank ID: 170113AM-BLK Time Analyzed: 1815

APPL ID.	Client Sample No.	File ID.	Date Analyzed
170113AM-LCS	Lab Control Spike	0113M12	01/13/17 1429
170113AM-BLK	Blank	0113M20	01/13/17 1815
AZ48918	ERH199	0113M33	01/14/17 0021

Comments: Batch: #86BTO-170113AM

Printed: 01/16/17 4:08:11 PM
Form 4, Blank Summary

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81971

Case No: 81971 Date Analyzed: 01/13/17

Matrix: WATER Instrument: Max

Blank ID: 170113AM1-BLK Time Analyzed: 1814

APPL ID.	Client Sample No.	File ID.	Date Analyzed
170113AM1-LCS	Lab Control Spike	0113M12	01/13/17 1428
170113AM1-BLK	Blank	0113M20	01/13/17 1814
AZ48919	ERH200	0113M34	01/14/17 0049

Comments: Batch: #86BTO-170113AM

Printed: 01/16/17 4:08:11 PM
Form 4, Blank Summary

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81971

Case No: 81971 Date Analyzed: 01/14/17

Matrix: WATER Instrument: Max

Blank ID: 170113BM-BLK Time Analyzed: 0655

APPL ID.	Client Sample No.	File ID.	Date Analyzed
170113BM-LCS	Lab Control Spike	0113M40	01/14/17 0338
170113BM-BLK	Blank	0113M47	01/14/17 0655
AZ48921	ERH181	0113M49	01/14/17 0752
AZ48922	ERH203	0113M50	01/14/17 0820
AZ48923	ERH180	0113M51	01/14/17 0848
AZ48924	ERH183	0113M52	01/14/17 0917
AZ48925	ERH184	0113M53	01/14/17 0945
AZ48926	ERH202	0113M54	01/14/17 1013

Comments: Batch: #86BTO-170113BM

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81971

Case No: 81971 Date Analyzed: 01/14/17

Matrix: WATER Instrument: Max

Blank ID: 170113BM1-BLK Time Analyzed: 0656

APPL ID.	Client Sample No.	File ID.	Date Analyzed
170113BM1-LCS	Lab Control Spike	0113M40	01/14/17 0339
170113BM1-BLK	Blank	0113M47	01/14/17 0656
AZ48920	ERH201	0113M48	01/14/17 0724

Comments: Batch: #86BTO-170113BM

Printed: 01/16/17 4:08:11 PM
Form 4, Blank Summary

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81971

Case No: 81971 Date Analyzed: 01/14/17

Matrix: WATER Instrument: Loki

Blank ID: 170113BL1-BLK Time Analyzed: 0315

APPL ID.	Client Sample No.	File ID.	Date Analyzed
170113BL1-LCS	Lab Control Spike	0113L35	01/13/17 2359
170113BL1-BLK	Blank	0113L42	01/14/17 0315
AZ48914	ERH171	0113L56	01/14/17 0946
AZ48915	ERH172	0113L57	01/14/17 1014

Comments: Batch: #86BTO-170113BL

Printed: 01/16/17 4:08:11 PM
Form 4, Blank Summary

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81971

Case No: 81971 Date Analyzed: 01/14/17

Matrix: WATER Instrument: Loki

Blank ID: 170113BL-BLK Time Analyzed: 0314

APPL ID.	Client Sample No.	File ID.	Date Analyzed
170113BL-LCS	Lab Control Spike	0113L35	01/13/17 2358
170113BL-BLK	Blank	0113L42	01/14/17 0314
AZ48916	ERH178	0113L58	01/14/17 1042
AZ48917	ERH185	0113L59	01/14/17 1110

Comments: Batch: #86BTO-170113BL

Printed: 01/16/17 4:08:11 PM
Form 4, Blank Summary

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: ~~0111L03.D~~ 81971
Matrix: Water np1-27-17
ID: 5ng- BFB STD 12-15-16

SDG No: np1-27-17 ~~Loki~~ 81971
Date Analyzed: 01/11/17
Instrument: Loki
Time Analyzed: 11:00

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.3ug/L VOC STD 1/11	0111L05.D	01/11/17 11:56
2		0.5ug/L VOC STD 1/11	0111L06.D	01/11/17 12:24
3		1.0ug/L VOC STD 1/11	0111L07.D	01/11/17 12:52
4		2.0ug/L VOC STD 1/11	0111L08.D	01/11/17 13:20
5		5.0ug/L VOC STD 1/11	0111L09.D	01/11/17 13:48
6		10ug/L VOC STD 1/11/	0111L10.D	01/11/17 14:16
7		20ug/L VOC STD 1/11/	0111L11.D	01/11/17 14:44
8		40ug/L VOC STD 1/11/	0111L12.D	01/11/17 15:12
9		100ug/L VOC STD 1/11	0111L13.D	01/11/17 15:41
10		(SS)10ug/L VOC STD 1	0111L18.D	01/11/17 18:01
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	20.5
75	30 - 60% of mass 95	52.7
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	6.6
173	0 - 2% of mass 174	0.0
174	50 - 100% of mass 95	86.1
175	5 - 9% of mass 174	7.6
176	95 - 101% of mass 174	96.4
177	5 - 9% of mass 176	6.7

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81971
Matrix: Water
ID: 5ng- BFB STD 12-15-16

SDG No: 81971
Date Analyzed: 01/13/17
Instrument: Loki
Time Analyzed: 23:30

	Client Sample No.	APPL ID.	File ID.	Date Analyzed	
1	Blank	170113B BLK-1WL	0113L42.D	01/14/17 3:14	
2	ERH171	AZ48914W01	0113L56.D	01/14/17 9:46	
3	ERH172	AZ48915W01	0113L57.D	01/14/17 10:14	
4	ERH178	AZ48916W01	0113L58.D	01/14/17 10:42	
5	ERH185	AZ48917W01	0113L59.D	01/14/17 11:10	
6		Ending CCV 8260 10ug	0113L60.D	01/14/17 11:38	*
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

m/e		
50	15 - 40% of mass 95	20.0
75	30 - 60% of mass 95	54.1
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	7.1
173	0 - 2% of mass 174	0.0
174	50 - 100% of mass 95	88.7
175	5 - 9% of mass 174	8.1
176	95 - 101% of mass 174	96.0
177	5 - 9% of mass 176	6.0

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 0111M01.D 81971
Matrix: Water mp 1-27-17
ID: 5ng BFB STD 12/15/16

mp 1-27-17
SDG No: Max 81971
Date Analyzed: 01/11/17
Instrument: Max
Time Analyzed: 9:34

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.3ug/L VOC STD 1/11	0111M06.D	01/11/17 11:24
2		0.5ug/L VOC STD 1/11	0111M07.D	01/11/17 11:52
3		1.0ug/L VOC STD 1/11	0111M08.D	01/11/17 12:21
4		2.0ug/L VOC STD 1/11	0111M09.D	01/11/17 12:49
5		5.0ug/L VOC STD 1/11	0111M10.D	01/11/17 13:17
6		10ug/L VOC STD 1/11/	0111M11.D	01/11/17 13:46
7		20ug/L VOC STD 1/11/	0111M12.D	01/11/17 14:14
8		40ug/L VOC STD 1/11/	0111M13.D	01/11/17 14:42
9		100ug/L VOC STD 1/11	0111M14.D	01/11/17 15:10
10		(SS)10ug/L VOC STD 1	0111M19.D	01/11/17 17:32
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	16.6
75	30 - 60% of mass 95	46.7
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	7.3
173	0 - 2% of mass 174	0.0
174	50 - 100% of mass 95	99.6
175	5 - 9% of mass 174	6.9
176	95 - 101% of mass 174	99.4
177	5 - 9% of mass 176	6.5

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81971
Matrix: Water
ID: 5ng BFB STD 12/15/16

SDG No: 81971
Date Analyzed: 01/13/17
Instrument: Max
Time Analyzed: 13:32

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1	Lab Control Spike	170113A CCV/LCS-1WM	0113M12.D	01/13/17 14:28
2	Blank	170113A BLK-1WM	0113M20.D	01/13/17 18:14
3	ERH199	AZ48918W01	0113M33.D	01/14/17 0:21
4	ERH200	AZ48919W01	0113M34.D	01/14/17 0:49
5		Ending CCV 8260 10ug	0113M35.D	01/14/17 1:17
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	18.7
75	30 - 60% of mass 95	47.5
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	7.5
173	0 - 2% of mass 174	0.0
174	50 - 100% of mass 95	99.8
175	5 - 9% of mass 174	8.2
176	95 - 101% of mass 174	95.9
177	5 - 9% of mass 176	7.5

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 81971
Matrix: Water
ID: 5ng BFB STD 12/15/16

SDG No: 81971
Date Analyzed: 01/14/17
Instrument: Max
Time Analyzed: 3:10

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1	Lab Control Spike	170113B CCV/LCS-1WM	0113M40.D	01/14/17 3:38
2	Blank	170113B BLK-1WM	0113M47.D	01/14/17 6:55
3	ERH201	AZ48920W01	0113M48.D	01/14/17 7:24
4	ERH181	AZ48921W01	0113M49.D	01/14/17 7:52
5	ERH203	AZ48922W01	0113M50.D	01/14/17 8:20
6	ERH180	AZ48923W01	0113M51.D	01/14/17 8:48
7	ERH183	AZ48924W01	0113M52.D	01/14/17 9:17
8	ERH184	AZ48925W01	0113M53.D	01/14/17 9:45
9	ERH202	AZ48926W01	0113M54.D	01/14/17 10:13
10		Ending CCV 8260 10ug	0113M55.D	01/14/17 10:41
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	17.6
75	30 - 60% of mass 95	45.3
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	6.8
173	0 - 2% of mass 174	0.0
174	50 - 100% of mass 95	100.0
175	5 - 9% of mass 174	8.2
176	95 - 101% of mass 174	95.6
177	5 - 9% of mass 176	6.9

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81971

Lab File ID (Standard): 0111L10.D Date Analyzed: 01/11/17

Instrument ID: Loki Time Analyzed: 14:16

GC Column: ID: Heated Purge: (Y/N)

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	363392	5.38	319296	8.70	176960	11.03
	UPPER LIMIT	726784	5.88	638592	9.20	353920	11.53
	LOWER LIMIT	181696	4.88	159648	8.20	88480	10.53
	SAMPLE NO.						
01	(SS)10ug/L VOC STD 1/	358080	5.38	335808	8.70	179776	11.03
02	170113B CCV/LCS-1WL	338752	5.38	312576	8.70	162496	11.03
03	170113B BLK-1WL	326912	5.38	302016	8.70	145664	11.03
04	AZ48914W01	307200	5.38	289728	8.70	144704	11.03
05	AZ48915W01	312704	5.38	290944	8.70	150848	11.03
06	AZ48916W01	310912	5.38	292928	8.70	142336	11.03
07	AZ48917W01	301632	5.38	282752	8.70	142400	11.03
08	Ending CCV 8260 10ug/	320384	5.38	315200	8.70	164672	11.03
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81971

Lab File ID (Standard): 0111M11.D Date Analyzed: 01/11/17

Instrument ID: Max Time Analyzed: 13:46

GC Column: ID: Heated Purge: (Y/N)

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	337093	5.51	240952	9.15	127119	12.35
	UPPER LIMIT	674186	6.01	481904	9.65	254238	12.85
	LOWER LIMIT	168547	5.01	120476	8.65	63560	11.85
	SAMPLE NO.						
01	(SS)10ug/L VOC STD 1/	348322	5.51	244262	9.15	127954	12.35
02	170113A CCV/LCS-1WM	321646	5.51	226106	9.15	117540	12.35
03	170113A BLK-1WM	315554	5.51	219996	9.15	105148	12.35
04	AZ48918W01	335165	5.51	230396	9.15	112749	12.35
05	AZ48919W01	332278	5.51	236295	9.15	116729	12.35
06	Ending CCV 8260 10ug/	349093	5.51	246936	9.15	126575	12.35
07	170113B CCV/LCS-1WM	343762	5.51	240587	9.15	125565	12.35
08	170113B BLK-1WM	319345	5.51	225458	9.15	108226	12.35
09	AZ48920W01	330948	5.51	239142	9.15	115406	12.35
10	AZ48921W01	321393	5.51	225884	9.15	110116	12.35
11	AZ48922W01	314191	5.51	219674	9.15	108304	12.35
12	AZ48923W01	313570	5.51	221030	9.15	107364	12.35
13	AZ48924W01	320609	5.51	224887	9.15	110906	12.35
14	AZ48925W01	311300	5.51	218303	9.16	107245	12.35
15	AZ48926W01	313225	5.51	223248	9.15	108140	12.35
16	Ending CCV 8260 10ug/	330796	5.51	232829	9.15	123559	12.35
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

EPA METHOD 8260B
Volatile Organic Compounds
Sample Data

APPL, INC.

EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH171
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48914
QCG: #86BTO-170113BL1-215499

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/14/17	01/14/17
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/14/17	01/14/17
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/14/17	01/14/17
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	99.5	81-118			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	97.5	85-114			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	101	80-119			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	98.1	89-112			%	01/14/17	01/14/17

Quant Method: LALLW.M
Run #: 0113L56
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/16/17 4:08:09 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L56.D Vial: 53
Acq On : 14 Jan 17 9:46 Operator: PM,DG,SV,CMM
Sample : AZ48914W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 10:01 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	307200	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	289728	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	144704	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	173290	25.28	ppb	0.00
Spiked Amount 25.000			Recovery = 101.116%			
37) 1,2-DCA-D4(S)	4.92	65	184941	24.88	ppb	0.00
Spiked Amount 25.000			Recovery = 99.504%			
57) Toluene-D8(S)	7.22	98	568720	24.52	ppb	0.00
Spiked Amount 25.000			Recovery = 98.092%			
65) 4-Bromofluorobenzene(S)	9.89	95	196109	24.37	ppb	0.00
Spiked Amount 25.000			Recovery = 97.476%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

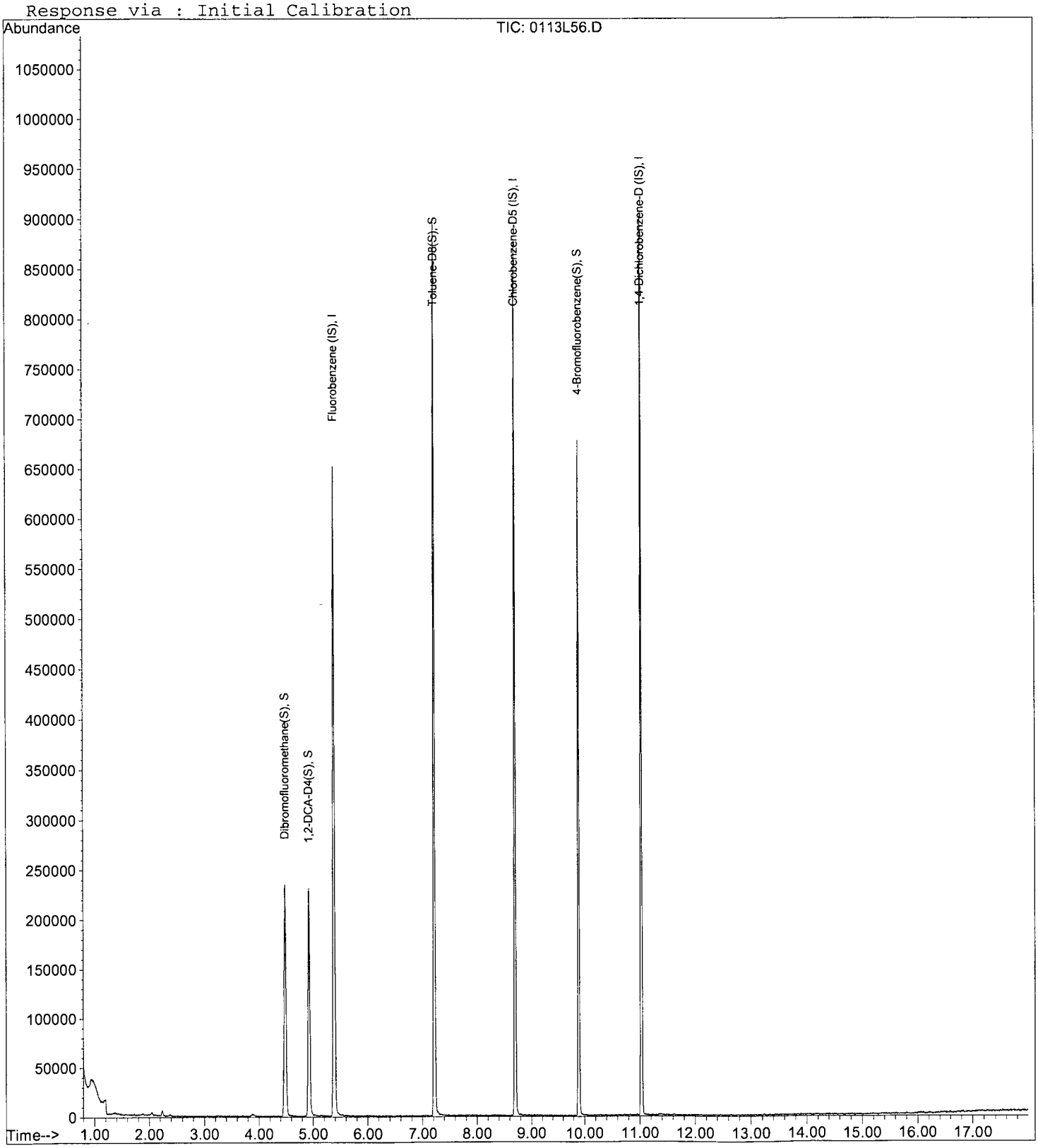
Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L56.D
Acq On : 14 Jan 17 9:46
Sample : AZ48914W01
Misc : W IS&S 1/3/17, 01/11/17

Vial: 53
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 10:01 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH172
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48915
QCG: #86BTO-170113BL1-215499

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/14/17	01/14/17
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/14/17	01/14/17
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/14/17	01/14/17
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	97.7	81-118			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	96.7	85-114			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	99.7	80-119			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	97.7	89-112			%	01/14/17	01/14/17

Quant Method: LALLW.M
Run #: 0113L57
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/16/17 4:08:09 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L57.D Vial: 54
Acq On : 14 Jan 17 10:14 Operator: PM,DG,SV,CMM
Sample : AZ48915W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 10:02 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	312704	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	290944	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	150848	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	173905	24.92	ppb	0.00
Spiked Amount 25.000			Recovery = 99.688%			
37) 1,2-DCA-D4(S)	4.92	65	184837	24.42	ppb	0.00
Spiked Amount 25.000			Recovery = 97.700%			
57) Toluene-D8(S)	7.22	98	568667	24.42	ppb	0.00
Spiked Amount 25.000			Recovery = 97.672%			
65) 4-Bromofluorobenzene(S)	9.89	95	195289	24.17	ppb	0.00
Spiked Amount 25.000			Recovery = 96.664%			

Target Compounds Qvalue

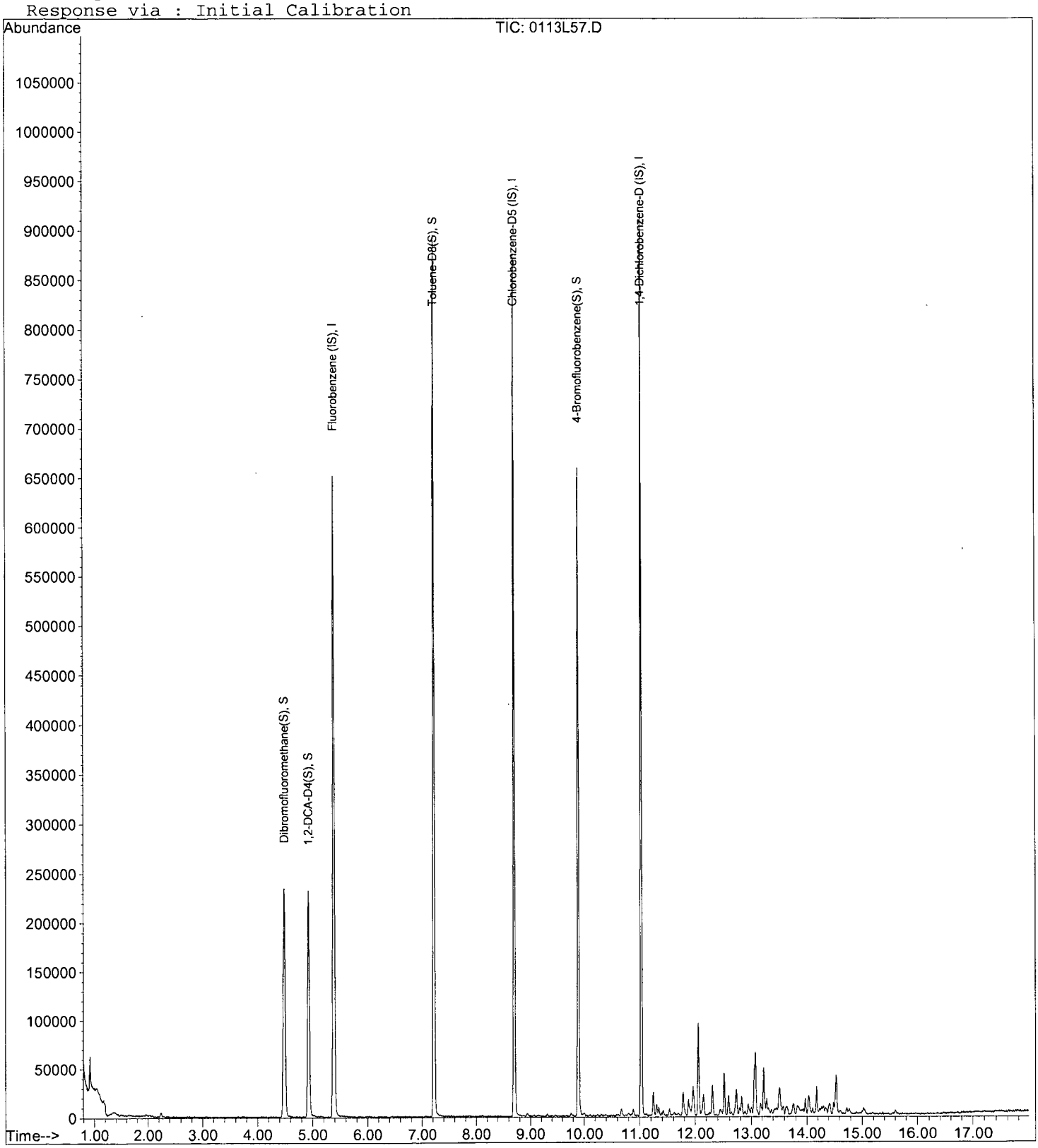
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L57.D Vial: 54
Acq On : 14 Jan 17 10:14 Operator: PM,DG,SV,CMM
Sample : AZ48915W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 10:02 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



EPA 8260B BTEX & 1,2-DCA WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH178
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48916
QCG: #86BTO-170113BL-215498

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	01/14/17	01/14/17
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/14/17	01/14/17
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/14/17	01/14/17
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/14/17	01/14/17
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	98.4	81-118			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	96.2	85-114			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	101	80-119			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	97.9	89-112			%	01/14/17	01/14/17

Quant Method: LALLW.M
Run #: 0113L58
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/16/17 4:08:09 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L58.D Vial: 55
Acq On : 14 Jan 17 10:42 Operator: PM,DG,SV,CMM
Sample : AZ48916W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 10:04 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	310912	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	292928	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	142336	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	174916	25.21	ppb	0.00
Spiked Amount 25.000			Recovery =	100.844%		
37) 1,2-DCA-D4(S)	4.92	65	185176	24.61	ppb	0.00
Spiked Amount 25.000			Recovery =	98.444%		
57) Toluene-D8(S)	7.22	98	573766	24.47	ppb	0.00
Spiked Amount 25.000			Recovery =	97.880%		
65) 4-Bromofluorobenzene(S)	9.89	95	195745	24.06	ppb	0.00
Spiked Amount 25.000			Recovery =	96.232%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

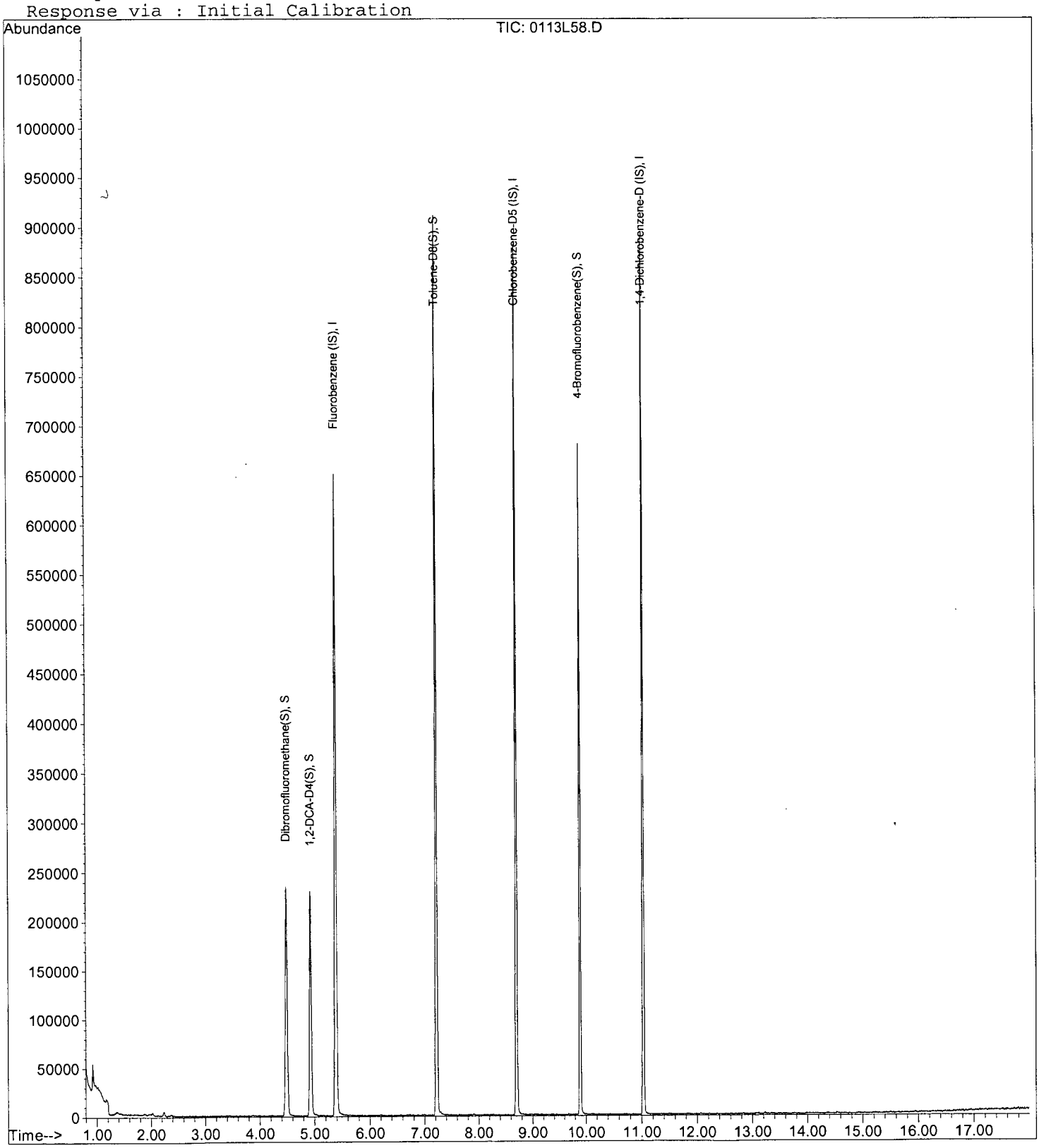
Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L58.D
Acq On : 14 Jan 17 10:42
Sample : AZ48916W01
Misc : W IS&S 1/3/17, 01/11/17

Vial: 55
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 10:04 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



EPA 8260B BTEX & 1,2-DCA WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH185
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48917
QCG: #86BTO-170113BL-215498

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	01/14/17	01/14/17
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/14/17	01/14/17
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/14/17	01/14/17
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/14/17	01/14/17
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	97.2	81-118			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	93.3	85-114			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	101	80-119			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	97.5	89-112			%	01/14/17	01/14/17

Quant Method: LALLW.M
Run #: 0113L59
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/16/17 4:08:09 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L59.D
Acq On : 14 Jan 17 11:10
Sample : AZ48917W01
Misc : W IS&S 1/3/17, 01/11/17

Vial: 56
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 10:05 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	301632	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	282752	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	142400	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	170614	25.35	ppb	0.00
Spiked Amount 25.000			Recovery = 101.392%			
37) 1,2-DCA-D4(S)	4.92	65	177460	24.31	ppb	0.00
Spiked Amount 25.000			Recovery = 97.244%			
57) Toluene-D8(S)	7.22	98	551769	24.38	ppb	0.00
Spiked Amount 25.000			Recovery = 97.516%			
65) 4-Bromofluorobenzene(S)	9.89	95	183139	23.32	ppb	0.00
Spiked Amount 25.000			Recovery = 93.276%			

Target Compounds Qvalue

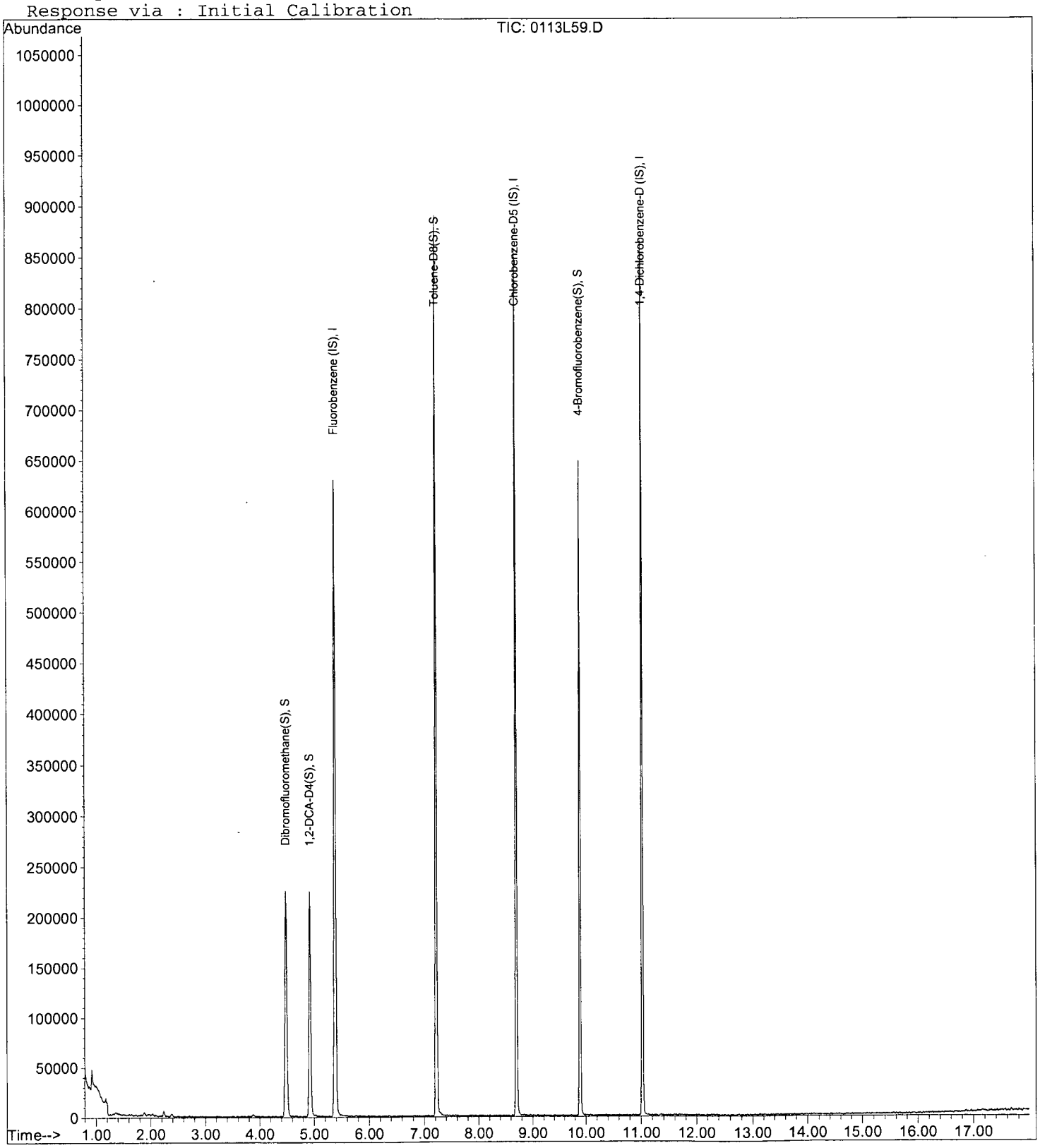
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L59.D Vial: 56
Acq On : 14 Jan 17 11:10 Operator: PM,DG,SV,CMM
Sample : AZ48917W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 10:05 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



EPA 8260B BTEX & 1,2-DCA WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH199
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48918
QCG: #86BTO-170113AM-215475

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	01/14/17	01/14/17
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/14/17	01/14/17
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/14/17	01/14/17
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/14/17	01/14/17
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	94.7	81-118			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	100.0	85-114			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	98.7	80-119			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	102	89-112			%	01/14/17	01/14/17

Quant Method: MALLW.M
Run #: 0113M33
Instrument: Max
Sequence: M170111
Dilution Factor: 1
Initials: SV

Printed: 01/16/17 4:08:09 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0113M33.D
Acq On : 14 Jan 17 00:21
Sample : AZ48918W01
Misc : IS&S 10/20/16

Vial: 24
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 8:39 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	335165	25.00000 ppb	0.00
55) Chlorobenzene-D5 (IS)	9.15	117	230396	25.00000 ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	112749	25.00000 ppb	0.00
System Monitoring Compounds					
31) Dibromofluoromethane(S)	4.78	111	72693	24.68179 ppb	0.00
Spiked Amount 25.000			Recovery =	98.728%	
36) 1,2-DCA-D4(S)	5.13	65	57445	23.68740 ppb	0.00
Spiked Amount 25.000			Recovery =	94.748%	
56) Toluene-D8(S)	7.35	98	296032	25.53004 ppb	0.00
Spiked Amount 25.000			Recovery =	102.120%	
64) 4-Bromofluorobenzene(S)	10.74	95	103916	24.99013 ppb	0.00
Spiked Amount 25.000			Recovery =	99.960%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

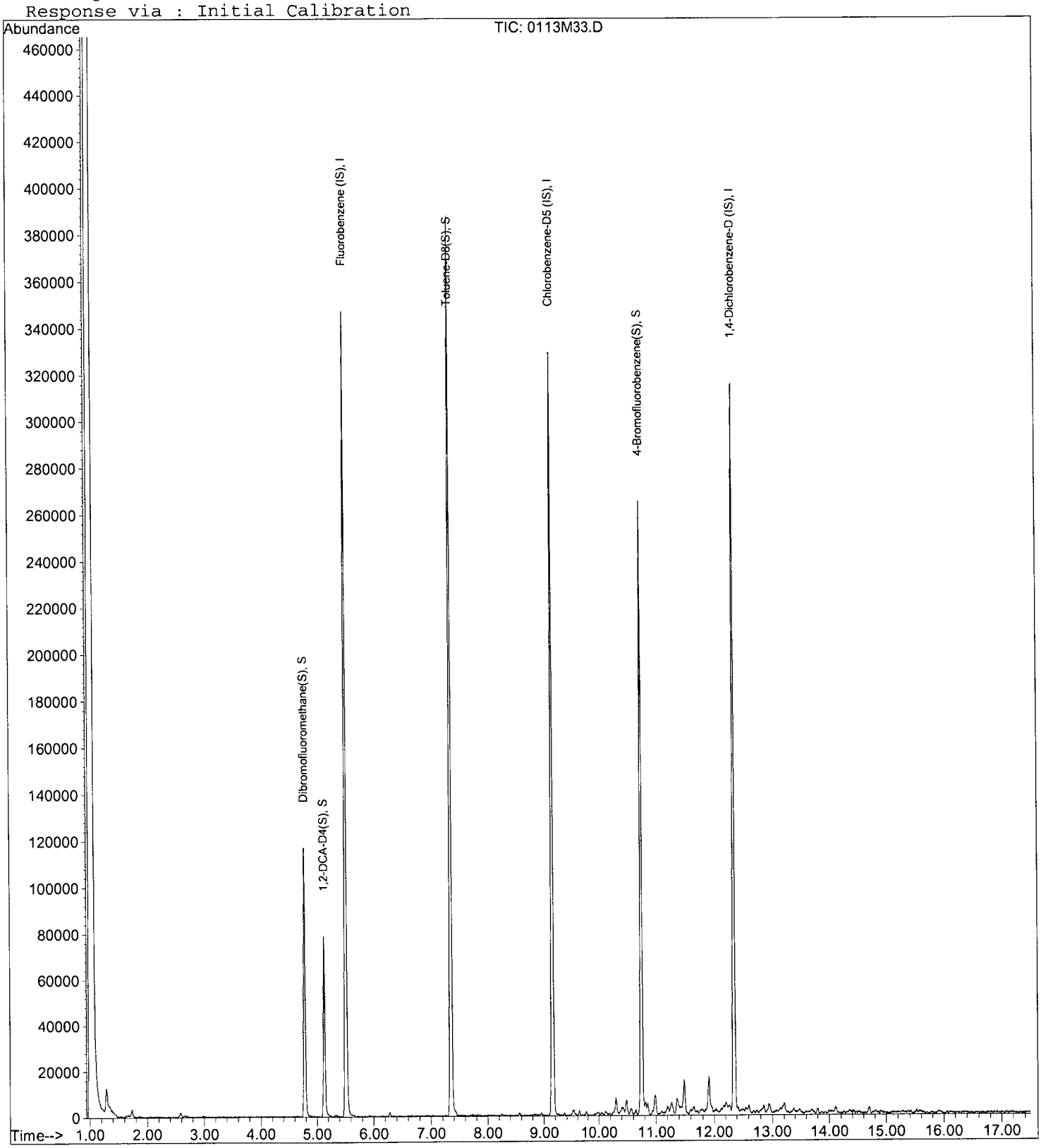
Quantitation Report

Data File : M:\MAX\DATA\M170111\0113M33.D
Acq On : 14 Jan 17 00:21
Sample : AZ48918W01
Misc : IS&S 10/20/16

Vial: 24
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 8:39 2017 Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH200
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48919
QCG: #86BTO-170113AM1-21547

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/14/17	01/14/17
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/14/17	01/14/17
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/14/17	01/14/17
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	93.5	81-118			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	97.0	85-114			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	98.6	80-119			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	98.7	89-112			%	01/14/17	01/14/17

Quant Method: MALLW.M
Run #: 0113M34
Instrument: Max
Sequence: M170111
Dilution Factor: 1
Initials: SV

Printed: 01/16/17 4:08:09 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0113M34.D
Acq On : 14 Jan 17 00:49
Sample : AZ48919W01
Misc : IS&S 10/20/16

Vial: 25
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 8:39 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	332278	25.00000 ppb	0.00
55) Chlorobenzene-D5 (IS)	9.15	117	236295	25.00000 ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	116729	25.00000 ppb	0.00
System Monitoring Compounds					
31) Dibromofluoromethane(S)	4.78	111	72003	24.65992 ppb	0.00
Spiked Amount 25.000			Recovery =	98.640%	
36) 1,2-DCA-D4(S)	5.13	65	56195	23.37329 ppb	0.00
Spiked Amount 25.000			Recovery =	93.492%	
56) Toluene-D8(S)	7.35	98	293540	24.68315 ppb	0.00
Spiked Amount 25.000			Recovery =	98.732%	
64) 4-Bromofluorobenzene(S)	10.74	95	103458	24.25887 ppb	0.00
Spiked Amount 25.000			Recovery =	97.036%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

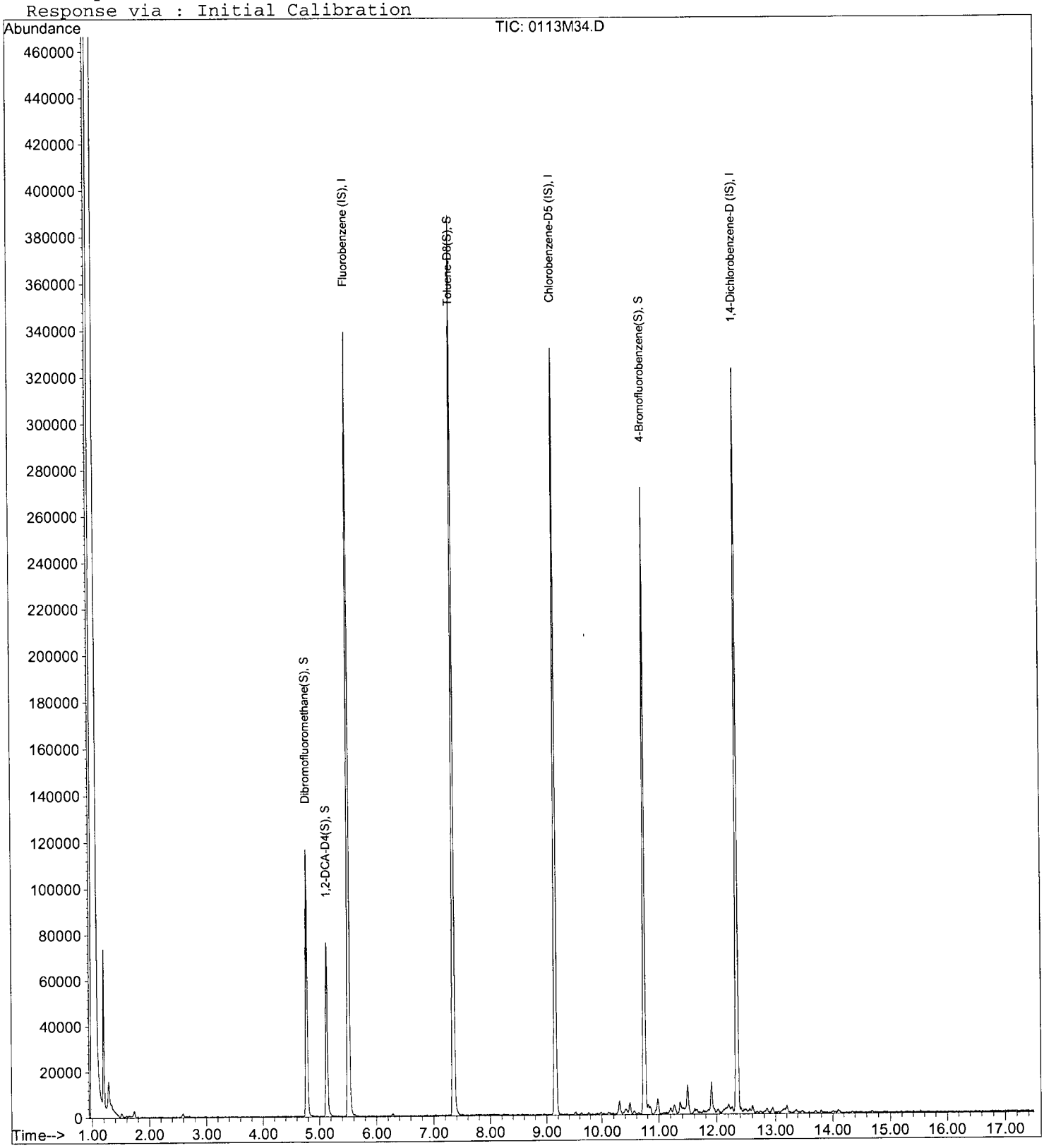
Quantitation Report

Data File : M:\MAX\DATA\M170111\0113M34.D
Acq On : 14 Jan 17 00:49
Sample : AZ48919W01
Misc : IS&S 10/20/16

Vial: 25
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 8:39 2017 Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration



EPA 8260B BTEX & 1,2-DCA WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH201
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48920
QCG: #86BTO-170113BM1-21547

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	01/14/17	01/14/17
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/14/17	01/14/17
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/14/17	01/14/17
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/14/17	01/14/17
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	94.6	81-118			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	96.6	85-114			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	101	80-119			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	97.6	89-112			%	01/14/17	01/14/17

Quant Method: MALLW.M
Run #: 0113M48
Instrument: Max
Sequence: M170111
Dilution Factor: 1
Initials: SV

Printed: 01/16/17 4:08:09 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0113M48.D Vial: 39
Acq On : 14 Jan 17 7:24 Operator: PM,DG,SV,CMM
Sample : AZ48920W01 Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 16 8:43 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	330948	25.00	ppb	0.00
55) Chlorobenzene-D5 (IS)	9.15	117	239142	25.00	ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	115406	25.00	ppb	0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	4.78	111	73377	25.23	ppb	0.00
Spiked Amount 25.000			Recovery =	100.924%		
36) 1,2-DCA-D4(S)	5.13	65	56622	23.65	ppb	0.00
Spiked Amount 25.000			Recovery =	94.584%		
56) Toluene-D8(S)	7.35	98	293651	24.40	ppb	0.00
Spiked Amount 25.000			Recovery =	97.596%		
64) 4-Bromofluorobenzene(S)	10.74	95	104260	24.16	ppb	0.00
Spiked Amount 25.000			Recovery =	96.624%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

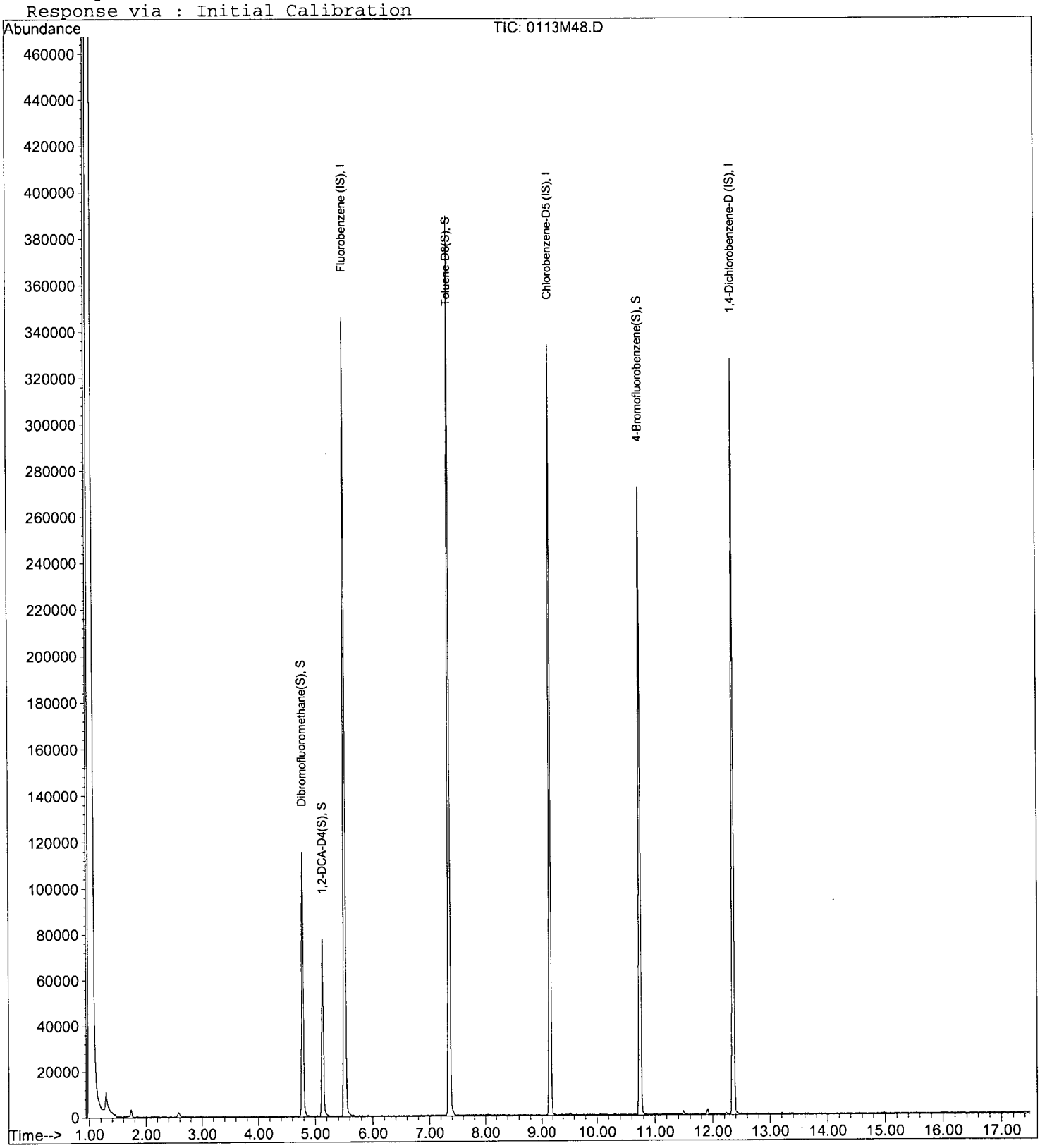
Quantitation Report

Data File : M:\MAX\DATA\M170111\0113M48.D
Acq On : 14 Jan 17 7:24
Sample : AZ48920W01
Misc : IS&S 10/20/16

Vial: 39
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 8:43 2017 Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH181
Sample Collection Date: 01/12/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48921
QCG: #86BTO-170113BM-215473

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/14/17	01/14/17
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/14/17	01/14/17
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/14/17	01/14/17
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	97.6	81-118			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	95.3	85-114			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	96.4	80-119			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	98.3	89-112			%	01/14/17	01/14/17

Quant Method: MALLW.M
Run #: 0113M49
Instrument: Max
Sequence: M170111
Dilution Factor: 1
Initials: SV

Printed: 01/16/17 4:08:09 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0113M49.D
Acq On : 14 Jan 17 7:52
Sample : AZ48921W01
Misc : IS&S 10/20/16

Vial: 40
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 8:43 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	321393	25.00	ppb	0.00
55) Chlorobenzene-D5 (IS)	9.15	117	225884	25.00	ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	110116	25.00	ppb	0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	4.78	111	68098	24.11	ppb	0.00
Spiked Amount 25.000			Recovery = 96.448%			
36) 1,2-DCA-D4(S)	5.13	65	56768	24.41	ppb	0.00
Spiked Amount 25.000			Recovery = 97.644%			
56) Toluene-D8(S)	7.35	98	279492	24.59	ppb	0.00
Spiked Amount 25.000			Recovery = 98.340%			
64) 4-Bromofluorobenzene(S)	10.74	95	97114	23.82	ppb	0.00
Spiked Amount 25.000			Recovery = 95.284%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

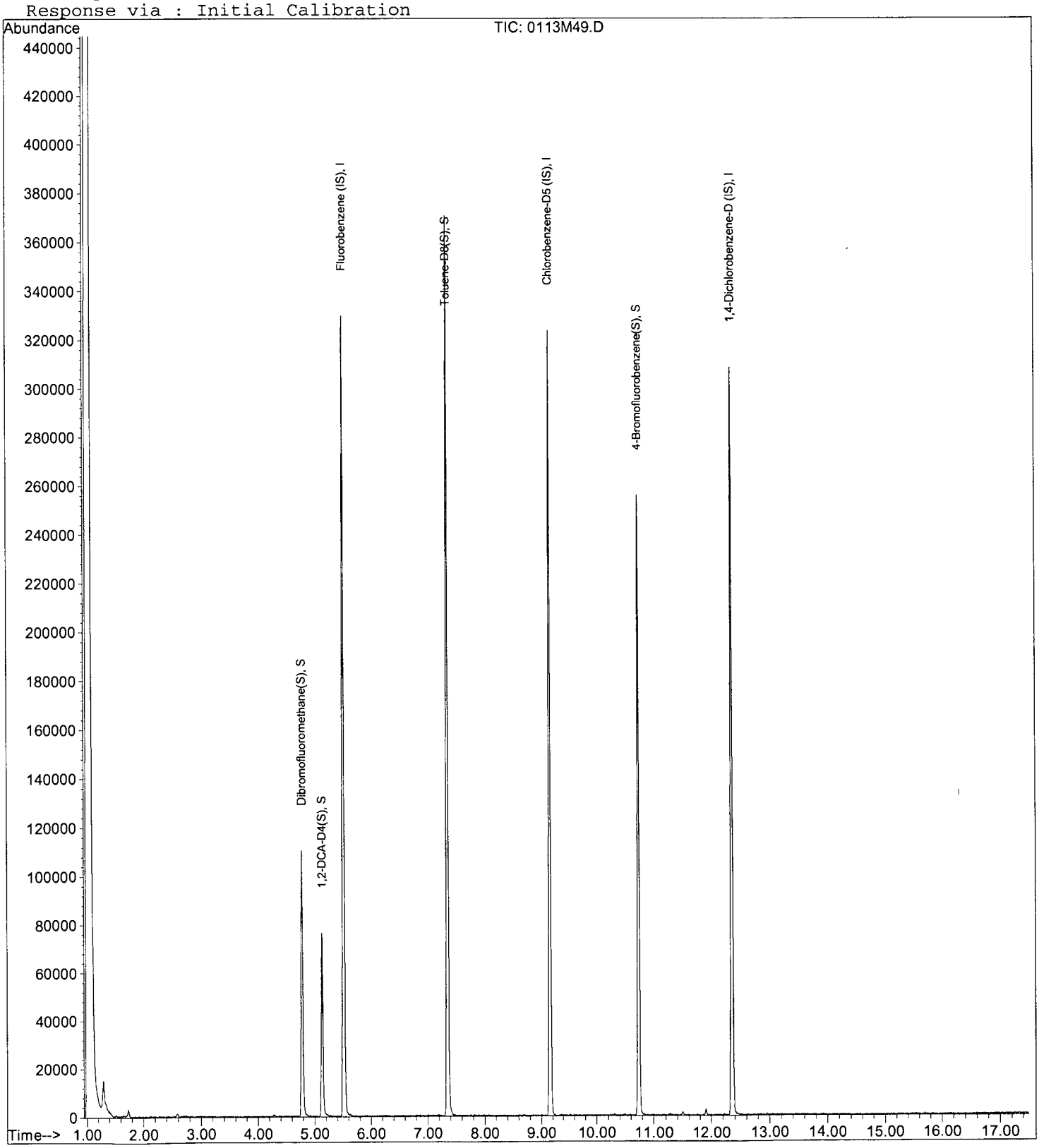
Quantitation Report

Data File : M:\MAX\DATA\M170111\0113M49.D
Acq On : 14 Jan 17 7:52
Sample : AZ48921W01
Misc : IS&S 10/20/16

Vial: 40
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 8:43 2017 Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

ARF: 81971

Sample ID: ERH203

APPL ID: AZ48922

Sample Collection Date: 01/12/17

QCG: #86BTO-170113BM-215473

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/14/17	01/14/17
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/14/17	01/14/17
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/14/17	01/14/17
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	96.9	81-118			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	95.3	85-114			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	96.3	80-119			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	99.3	89-112			%	01/14/17	01/14/17

Quant Method:	MALLW.M
Run #:	0113M50
Instrument:	Max
Sequence:	M170111
Dilution Factor:	1
Initials:	SV

Printed: 01/16/17 4:08:09 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0113M50.D Vial: 41
Acq On : 14 Jan 17 8:20 Operator: PM,DG,SV,CMM
Sample : AZ48922W01 Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 16 8:44 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	314191	25.00	ppb	0.00
55) Chlorobenzene-D5 (IS)	9.15	117	219674	25.00	ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	108304	25.00	ppb	0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	4.78	111	66493	24.08	ppb	0.00
Spiked Amount 25.000			Recovery = 96.336%			
36) 1,2-DCA-D4(S)	5.13	65	55055	24.22	ppb	0.00
Spiked Amount 25.000			Recovery = 96.868%			
56) Toluene-D8(S)	7.35	98	274406	24.82	ppb	0.00
Spiked Amount 25.000			Recovery = 99.280%			
64) 4-Bromofluorobenzene(S)	10.74	95	94432	23.82	ppb	0.00
Spiked Amount 25.000			Recovery = 95.272%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

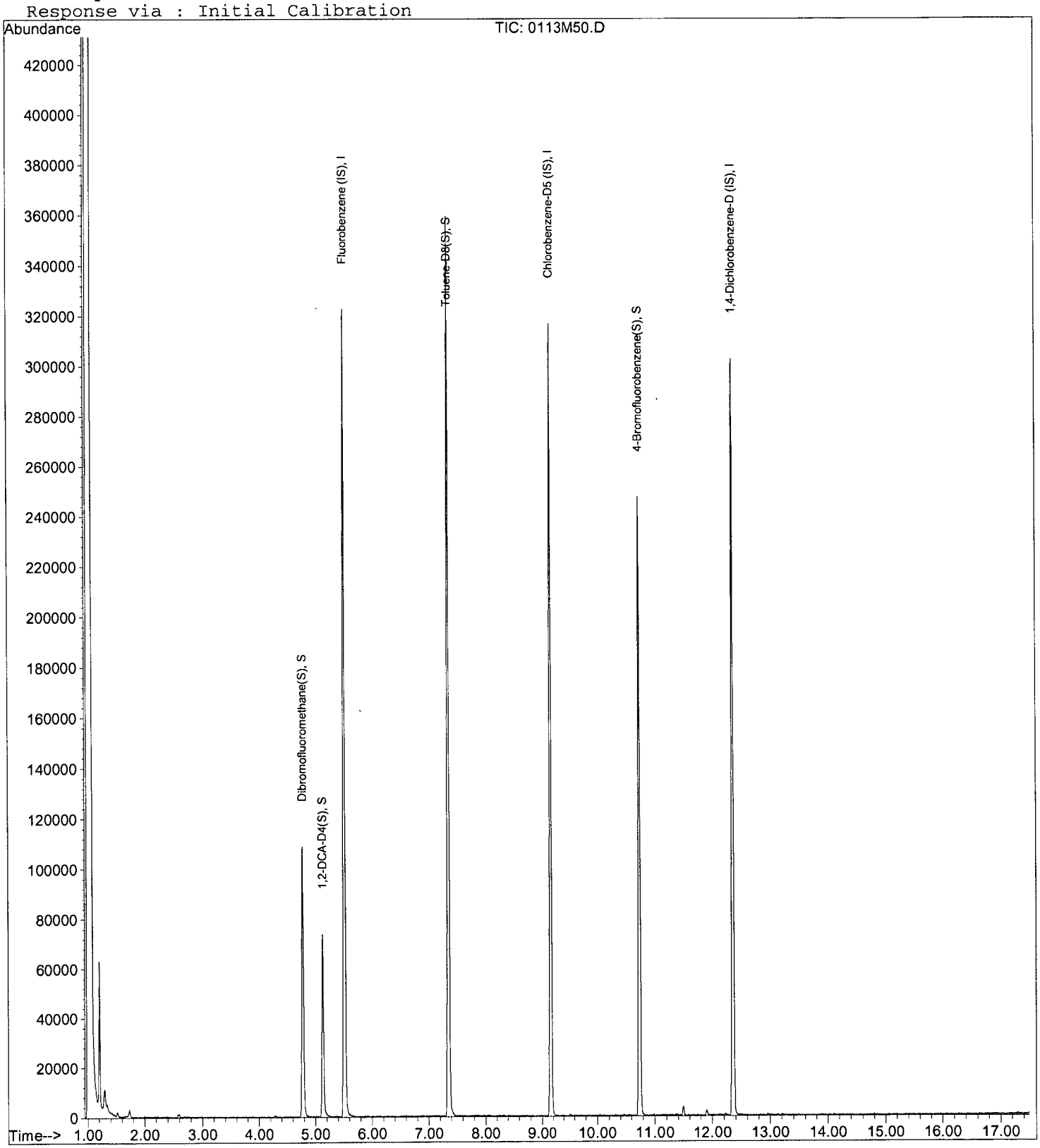
Quantitation Report

Data File : M:\MAX\DATA\M170111\0113M50.D
Acq On : 14 Jan 17 8:20
Sample : AZ48922W01
Misc : IS&S 10/20/16

Vial: 41
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 8:44 2017 Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH180
Sample Collection Date: 01/12/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48923
QCG: #86BTO-170113BM-215473

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/14/17	01/14/17
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/14/17	01/14/17
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/14/17	01/14/17
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	94.6	81-118			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	94.7	85-114			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	98.6	80-119			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	98.9	89-112			%	01/14/17	01/14/17

Quant Method: MALLW.M
Run #: 0113M51
Instrument: Max
Sequence: M170111
Dilution Factor: 1
Initials: SV

Printed: 01/16/17 4:08:09 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0113M51.D
Acq On : 14 Jan 17 8:48
Sample : AZ48923W01
Misc : IS&S 10/20/16

Vial: 42
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 8:44 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	313570	25.00	ppb	0.00
55) Chlorobenzene-D5 (IS)	9.15	117	221030	25.00	ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	107364	25.00	ppb	0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	4.78	111	67938	24.66	ppb	0.00
Spiked Amount 25.000			Recovery =	98.624%		
36) 1,2-DCA-D4(S)	5.13	65	53633	23.64	ppb	0.00
Spiked Amount 25.000			Recovery =	94.556%		
56) Toluene-D8(S)	7.35	98	274913	24.71	ppb	0.00
Spiked Amount 25.000			Recovery =	98.852%		
64) 4-Bromofluorobenzene(S)	10.74	95	94491	23.69	ppb	0.00
Spiked Amount 25.000			Recovery =	94.744%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

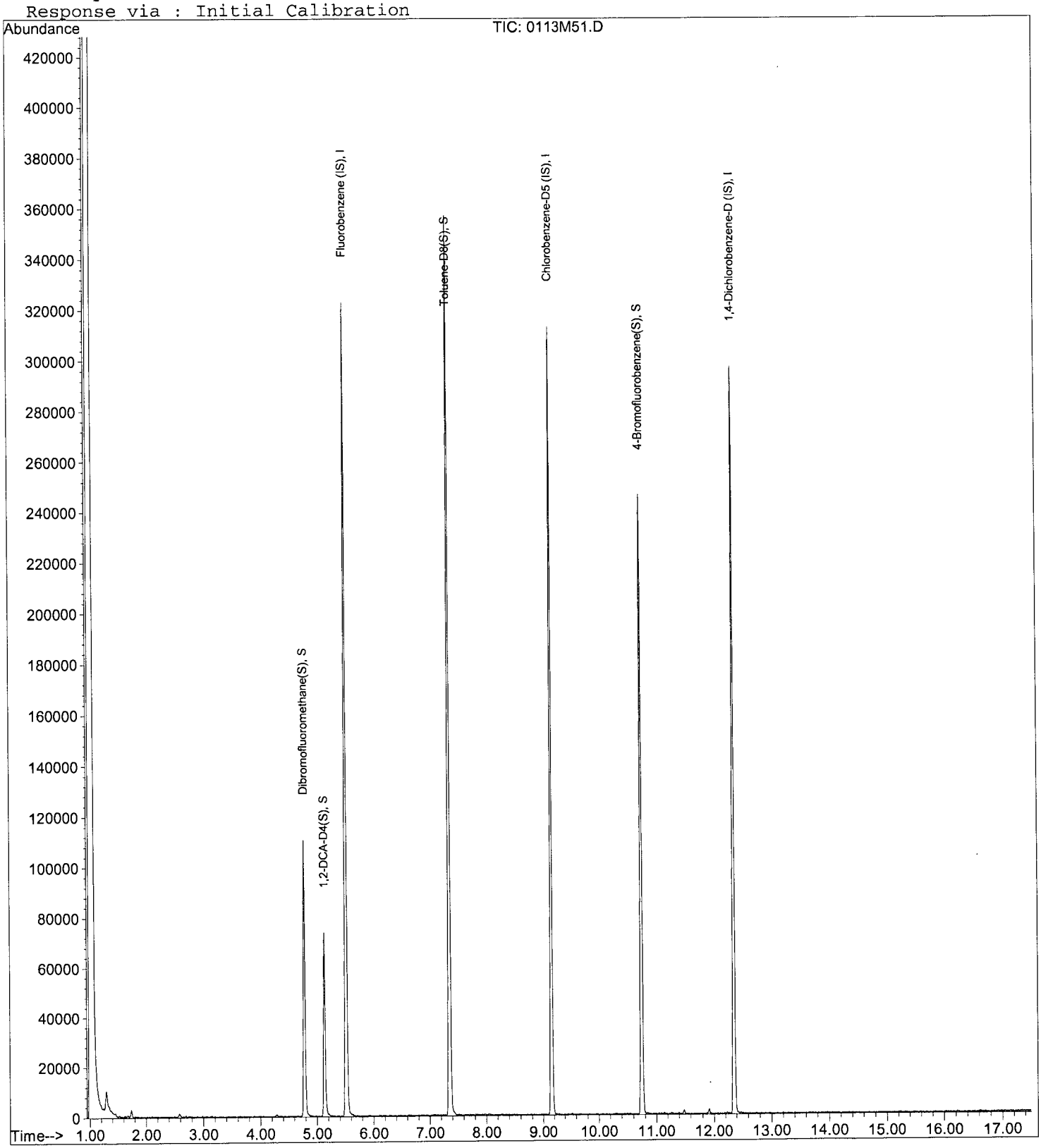
Quantitation Report

Data File : M:\MAX\DATA\M170111\0113M51.D
Acq On : 14 Jan 17 8:48
Sample : AZ48923W01
Misc : IS&S 10/20/16

Vial: 42
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 8:44 2017 Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH183
Sample Collection Date: 01/12/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48924
QCG: #86BTO-170113BM-215473

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/14/17	01/14/17
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/14/17	01/14/17
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/14/17	01/14/17
EPA 8260B	XYLENES (TOTAL)	0.78 J	2.0	0.30	0.19	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	94.7	81-118			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	94.7	85-114			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	98.9	80-119			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	100	89-112			%	01/14/17	01/14/17

J = Estimated value.

Quant Method: MALLW.M
Run #: 0113M52
Instrument: Max
Sequence: M170111
Dilution Factor: 1
Initials: SV

Printed: 01/16/17 4:08:09 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0113M52.D Vial: 43
Acq On : 14 Jan 17 9:17 Operator: PM,DG,SV,CMM
Sample : AZ48924W01 Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 16 8:45 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	320609	25.00	ppb	0.00
55) Chlorobenzene-D5 (IS)	9.15	117	224887	25.00	ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	110906	25.00	ppb	0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	4.78	111	69639	24.72	ppb	0.00
Spiked Amount 25.000			Recovery = 98.872%			
36) 1,2-DCA-D4(S)	5.13	65	54949	23.69	ppb	0.00
Spiked Amount 25.000			Recovery = 94.748%			
56) Toluene-D8(S)	7.35	98	283348	25.03	ppb	0.00
Spiked Amount 25.000			Recovery = 100.140%			
64) 4-Bromofluorobenzene(S)	10.74	95	96086	23.67	ppb	0.00
Spiked Amount 25.000			Recovery = 94.692%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

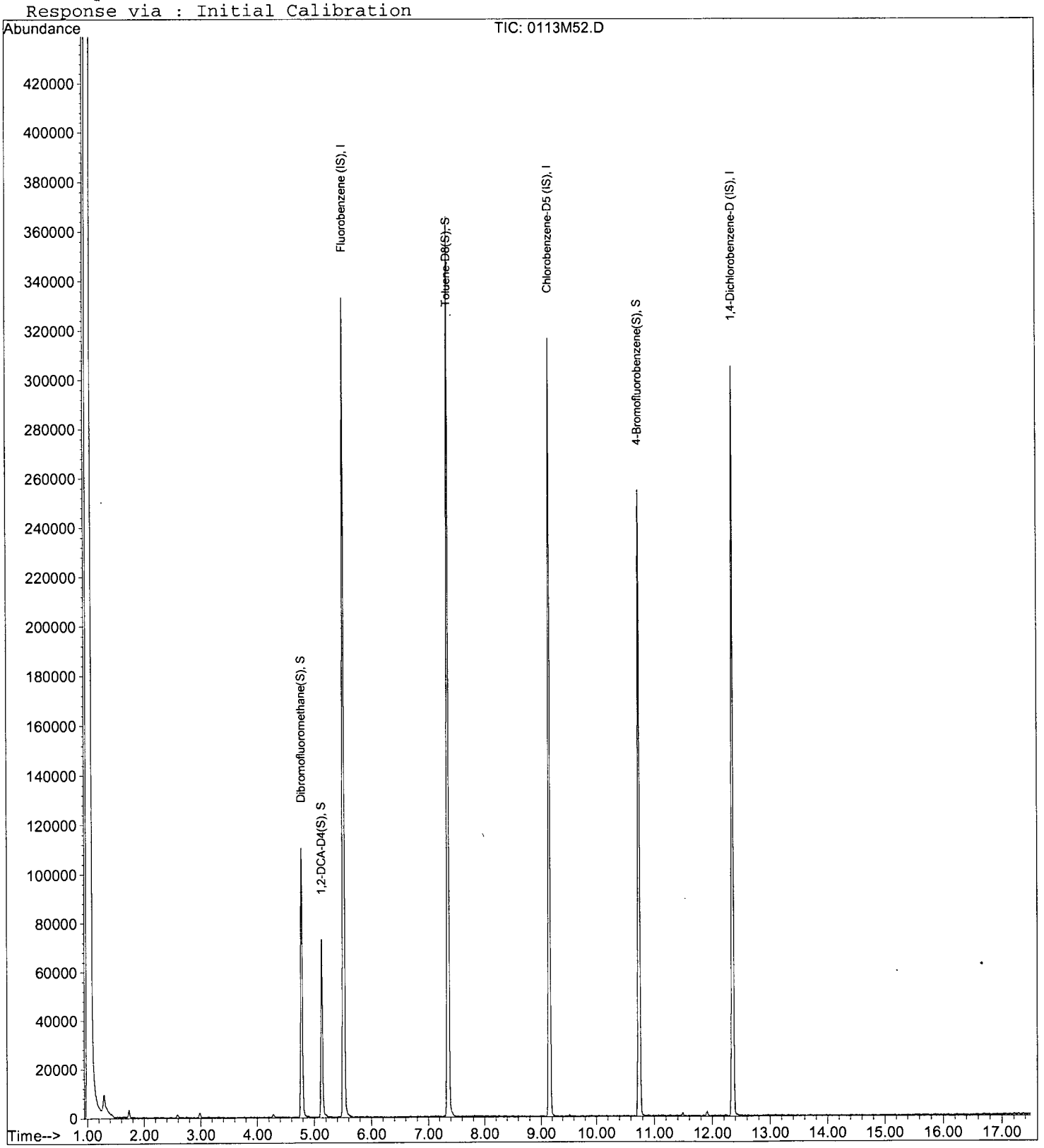
Quantitation Report

Data File : M:\MAX\DATA\M170111\0113M52.D
Acq On : 14 Jan 17 9:17
Sample : AZ48924W01
Misc : IS&S 10/20/16

Vial: 43
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 8:45 2017 Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH184
Sample Collection Date: 01/12/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48925
QCG: #86BTO-170113BM-215473

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/14/17	01/14/17
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/14/17	01/14/17
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/14/17	01/14/17
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	95.2	81-118			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	96.2	85-114			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	98.9	80-119			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	101	89-112			%	01/14/17	01/14/17

Quant Method: MALLW.M
Run #: 0113M53
Instrument: Max
Sequence: M170111
Dilution Factor: 1
Initials: SV

Printed: 01/16/17 4:08:09 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0113M53.D Vial: 44
Acq On : 14 Jan 17 9:45 Operator: PM,DG,SV,CMM
Sample : AZ48925W01 Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 16 8:45 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	311300	25.00	ppb	0.00
55) Chlorobenzene-D5 (IS)	9.16	117	218303	25.00	ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	107245	25.00	ppb	0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	4.78	111	67645	24.73	ppb	0.00
Spiked Amount 25.000			Recovery = 98.916%			
36) 1,2-DCA-D4(S)	5.13	65	53601	23.80	ppb	0.00
Spiked Amount 25.000			Recovery = 95.188%			
56) Toluene-D8(S)	7.35	98	276873	25.20	ppb	0.00
Spiked Amount 25.000			Recovery = 100.800%			
64) 4-Bromofluorobenzene(S)	10.74	95	94719	24.04	ppb	0.00
Spiked Amount 25.000			Recovery = 96.160%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

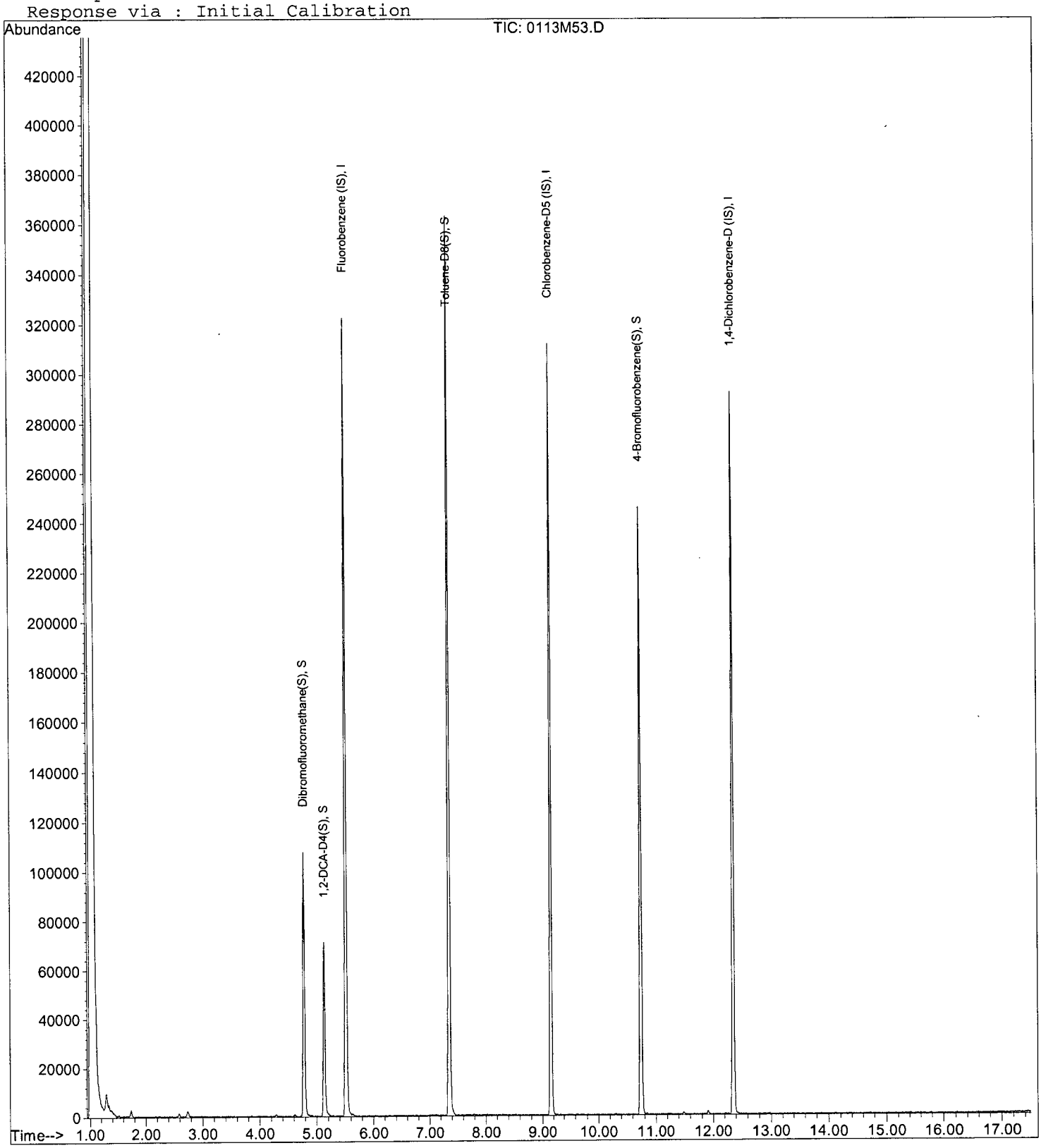
Quantitation Report

Data File : M:\MAX\DATA\M170111\0113M53.D
Acq On : 14 Jan 17 9:45
Sample : AZ48925W01
Misc : IS&S 10/20/16

Vial: 44
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 8:45 2017 Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration



EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH202
Sample Collection Date: 01/12/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48926
QCG: #86BTO-170113BM-215473

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/14/17	01/14/17
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/14/17	01/14/17
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/14/17	01/14/17
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	94.3	81-118			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	95.0	85-114			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	96.2	80-119			%	01/14/17	01/14/17
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	98.6	89-112			%	01/14/17	01/14/17

Quant Method: MALLW.M
Run #: 0113M54
Instrument: Max
Sequence: M170111
Dilution Factor: 1
Initials: SV

Printed: 01/16/17 4:08:09 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0113M54.D
Acq On : 14 Jan 17 10:13
Sample : AZ48926W01
Misc : IS&S 10/20/16

Vial: 45
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 8:46 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	313225	25.00	ppb	0.00
55) Chlorobenzene-D5 (IS)	9.15	117	223248	25.00	ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	108140	25.00	ppb	0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	4.78	111	66187	24.05	ppb	0.00
Spiked Amount 25.000			Recovery = 96.188%			
36) 1,2-DCA-D4(S)	5.13	65	53430	23.58	ppb	0.00
Spiked Amount 25.000			Recovery = 94.300%			
56) Toluene-D8(S)	7.35	98	276893	24.64	ppb	0.00
Spiked Amount 25.000			Recovery = 98.576%			
64) 4-Bromofluorobenzene(S)	10.74	95	95660	23.74	ppb	0.00
Spiked Amount 25.000			Recovery = 94.964%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

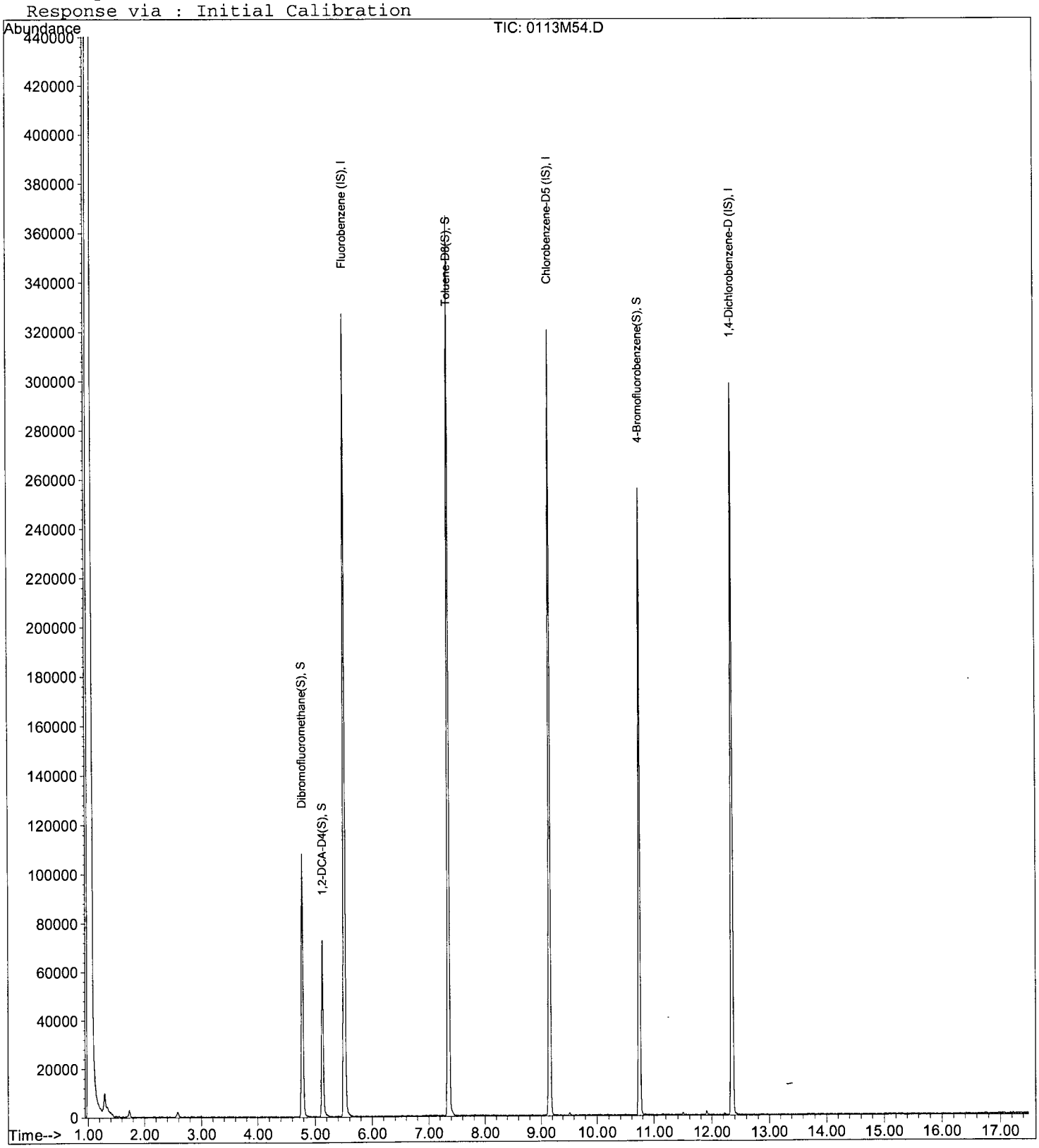
Quantitation Report

Data File : M:\MAX\DATA\M170111\0113M54.D
Acq On : 14 Jan 17 10:13
Sample : AZ48926W01
Misc : IS&S 10/20/16

Vial: 45
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 8:46 2017 Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration



EPA METHOD 8260B
Volatile Organic Compounds
Calibration Data

APPL, INC.

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 1/11/17
Matrix: Instrument: Loki
Initials:

		Compound	0111L05.D 1	0111L06.D 2	0111L07.D 3	0111L08.D 4	0111L09.D 5	0111L10.D 6	0111L11.D 7	0111L12.D 8	0111L13.D 9		Avg	%RSD		
1	I	Fluorobenzene (IS)														
2	TM	Dichlorodifluoromethane		0.5780	0.5427	0.6484	0.5648	0.5867	0.5936	0.5704	0.5370		0.58	6.0	TM	
3	TM	Freon 114		0.4853	0.4274	0.4308	0.3849	0.3723	0.3969	0.3786	0.3789		0.41	9.5	TM	
4	TM**	Chloromethane		1.104	0.9112	0.8387	0.8051	0.8146	0.7592	0.7406	0.7145		0.84	15	TM**	
5	TM*	Vinyl chloride	0.7680	0.7070	0.7126	0.6943	0.6917	0.6780	0.6700	0.6585	0.6623		0.69	4.9	TM*	
6	TM	Bromomethane		0.4903	0.4428	0.4693	0.4297	0.4421	0.5609				0.47	10	TM	
7	TM	Chloroethane		0.4979	0.4276	0.4131	0.3863	0.3764	0.3521	0.3552	0.3480		0.39	13	TM	
8	TM	Dichlorofluoromethane		1.199	1.104	1.119	1.049	1.054	1.036	1.010	1.012		1.1	6.0	TM	
9	TM	Trichlorofluoromethane	0.7436	0.7677	0.7388	0.7754	0.7470	0.7384	0.7256	0.7124	0.7199		0.74	2.8	TM	
10	TM	Acrolein		0.0251	0.0223	0.0235	0.0244	0.0250	0.0240	0.0256	0.0238		0.02	4.3	TM	
11	TML	Acetone			0.2917	0.1748	0.1584	0.1311	0.1228	0.1112	0.1101		0.16	41	TML	1.000
12	TM	Freon-113		0.4451	0.4862	0.4295	0.3982	0.3945	0.4029	0.3850	0.3869		0.42	8.5	TM	
13	TM*	1,1-DCE	0.5181	0.4251	0.4548	0.4849	0.4037	0.4157	0.4139	0.4115	0.4088		0.44	9.2	TM*	
14	TM	t-Butanol	0.0153	0.0135	0.0133	0.0139	0.0134	0.0142	0.0142	0.0118	0.0102		0.01	11	TM	
15	TM	Acetonitrile	0.0589	0.0551	0.0502	0.0491	0.0487	0.0524	0.0480	0.0555			0.05	7.5	TM	
16	TML	Methyl Acetate		0.4952	0.4524	0.3750	0.3311	0.3295	0.3154	0.3144	0.2997		0.36	20	TML	1.000
17	TM	Iodomethane		0.2362	0.2304	0.2426	0.2434	0.2492	0.2860	0.2841			0.25	8.9	TM	
18	TM	Acrylonitrile		0.1448	0.1191	0.1183	0.1163	0.1170	0.1096	0.1084	0.1067		0.12	10	TM	
19	TM	Methylene chloride		0.6219	0.5786	0.5945	0.5505	0.5295	0.4990	0.4935	0.4953		0.55	9.0	TM	
20	TM	Carbon disulfide		1.573	1.539	1.501	1.374	1.392	1.343	1.346	1.354		1.4	6.6	TM	
21	TM	Methyl t-butyl ether (MtBE)	1.108	1.112	1.134	1.045	1.035	1.055	1.062	1.061	1.051		1.1	3.2	TM	
22	TM	Trans-1,2-DCE		0.5727	0.4582	0.4610	0.4427	0.4421	0.4420	0.4348	0.4390		0.46	9.9	TM	
23	TM	Diisopropyl Ether		1.499	1.517	1.444	1.468	1.494	1.505	1.519	1.564		1.5	2.4	TM	
24	TM**	1,1-DCA	0.9757	1.016	0.9642	0.9797	0.9121	0.8905	0.8934	0.8627	0.8726		0.93	5.9	TM**	
25	TM	Vinyl Acetate		0.3985	0.3854	0.3481	0.3236	0.3205	0.3255	0.3157	0.3115		0.34	9.8	TM	
26	TM	Ethyl tert Butyl Ether	1.163	1.170	1.078	1.091	1.102	1.138	1.139	1.179	1.225		1.1	4.1	TM	
27	TML	MEK (2-Butanone)		0.1080	0.1438	0.1998	0.1648	0.1695	0.1583	0.1517	0.1507		0.16	17	TML	1.000
28	TM	Cis-1,2-DCE		0.5835	0.5593	0.5275	0.5169	0.5050	0.5187	0.4984	0.5054		0.53	5.6	TM	
29	TM	2,2-Dichloropropane		0.2924	0.2370	0.2183	0.2100	0.2124	0.2178	0.2096	0.2196		0.23	12	TM	
30	TM*	Chloroform	0.9917	0.9626	0.9621	0.9529	0.8686	0.8811	0.8892	0.8535	0.8587		0.91	5.8	TM*	
31	TML	Bromochloromethane		0.1219	0.2513	0.2476	0.2304	0.2258	0.2296	0.2209	0.2181		0.22	19	TML	1.000
32	S	Dibromofluoromethane(S)	0.6530	0.6270	0.5081	0.5434	0.5556	0.5547	0.5421	0.5409	0.4961		0.56	9.2	S	
33	TM	1,1,1-TCA	0.8896	0.8006	0.7284	0.7024	0.6791	0.6809	0.6721	0.6681	0.6731		0.72	11	TM	
34	TM	Cyclohexane		0.3792	0.4074	0.4038	0.3392	0.3421	0.3533	0.3510	0.3603		0.37	7.3	TM	
35	TM	1,1-Dichloropropene	0.7539	0.6780	0.6294	0.6320	0.5714	0.5738	0.6104	0.6045	0.6127		0.63	9.0	TM	

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Initial Cal. Date: 1/11/17
Instrument: Loki

Initials:

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD		
36	TM	2,2,4-Trimethylpentane	1.243	1.187	1.238	1.210	1.143	1.170	1.262	1.256	1.293		1.2	4.0	TM	
37	S	1,2-DCA-D4(S)	0.7467	0.6553	0.5616	0.5765	0.6001	0.6054	0.6028	0.5703	0.5265		0.61	11	S	
38	TM	Carbon Tetrachloride		0.5594	0.5508	0.5406	0.5282	0.5480	0.5339	0.5294	0.5325		0.54	2.1	TM	
39	TM	Tert Amyl Methyl Ether	1.095	0.9615	0.9888	0.9108	0.9465	1.015	1.020	1.028	1.051		1.0	5.6	TM	
40	TM	1,2-DCA		0.7097	0.6694	0.6715	0.6273	0.6526	0.6387	0.6140	0.5964		0.65	5.6	TM	
41	TM	Benzene	1.950	1.902	1.961	1.901	1.878	1.871	1.876	1.832	1.848		1.9	2.3	TM	
42	TM	TCE		0.2532	0.2809	0.2701	0.2359	0.2441	0.2483	0.2459	0.2561		0.25	5.8	TM	
43	TM	2-Pentanone		0.2321	0.2408	0.2497	0.2477	0.2641	0.2607	0.2611	0.2540		0.25	4.4	TM	
44	TM*	1,2-Dichloropropane	0.5660	0.5987	0.5869	0.6029	0.5201	0.5385	0.5342	0.5266	0.5337		0.56	5.9	TM*	
45	TM	Bromodichloromethane	0.7519	0.6802	0.6472	0.7177	0.6610	0.6506	0.6460	0.6392	0.6464		0.67	5.8	TM	
46	TM	Methyl Cyclohexane		0.6006	0.5907	0.6018	0.5691	0.5736	0.6045	0.6111	0.6377		0.60	3.6	TM	
47	TM	Dibromomethane		0.3047	0.2555	0.2954	0.2736	0.2864	0.2903	0.2748	0.2713		0.28	5.6	TM	
48	TM	2-Chloroethyl vinyl ether													TM	
49	TML	MIBK (methyl isobutyl ketone)		0.7000	0.5427	0.4486	0.4490	0.3817	0.3749	0.3345	0.3286		0.44	28	TML	0.999
50	TM	1-Bromo-2-chloroethane		0.3614	0.3442	0.3810	0.3856	0.3828	0.3621	0.3646	0.3641		0.37	3.8	TM	
51	TM	Cis-1,3-Dichloropropene	0.7810	0.7318	0.6693	0.6964	0.6956	0.7011	0.7189	0.7289	0.7646		0.72	4.9	TM	
52	TM*	Toluene		2.031	1.884	1.953	1.889	1.966	1.993	1.962	2.002		2.0	2.6	TM*	
53	TM	Trans-1,3-Dichloropropene		0.6427	0.6415	0.6061	0.6038	0.6008	0.6222	0.6182	0.6541		0.62	3.2	TM	
54	TM	1,1,2-TCA	0.3741	0.3437	0.3852	0.3496	0.3535	0.3480	0.3437	0.3306	0.3312		0.35	5.2	TM	
55	TM	2-Hexanone		0.0951	0.0967	0.0869	0.1076	0.1143	0.1104	0.1181			0.10	11	TM	
56	I	Chlorobenzene-D5 (IS)														
57	S	Toluene-D8(S)	2.174	2.024	1.807	1.915	2.040	2.108	2.066	1.980	1.895		2.0	5.7	S	
58	TM	1,2-EDB		0.3485	0.3963	0.4180	0.3995	0.4168	0.4008	0.3796	0.3859		0.39	5.7	TM	
59	TM	Tetrachloroethene		0.6135	0.5243	0.5537	0.5068	0.5245	0.4988	0.4722	0.4823		0.52	8.6	TM	
60	TM	1-Chlorohexane		0.5469	0.5431	0.5451	0.5354	0.5977	0.5845	0.5849	0.6217		0.57	5.5	TM	
61	TM	1,1,1,2-Tetrachloroethane	0.5361	0.5182	0.5021	0.4818	0.5065	0.5178	0.4967	0.4652	0.4853		0.50	4.3	TM	
62	TM	m&p-Xylene		0.8718	0.9649	1.022	1.107	1.202	1.229	1.139	1.261		1.1	12	TM	
63	TM	o-Xylene		0.7247	0.6768	0.8282	0.7740	0.8407	0.8388	0.8286	0.8787		0.80	8.5	TM	
64	TML	Styrene		0.6722	0.7313	0.7555	0.8585	0.9556	1.006	0.9893			0.85	16	TML	1.000
65	S	4-Bromofluorobenzene(S)	0.7539	0.6191	0.6040	0.6530	0.7308	0.7539	0.7422	0.7049	0.6878		0.69	8.3	S	
66	TM	1,3-Dichloropropane	0.7726	0.7777	0.7813	0.7605	0.7633	0.7774	0.7459	0.7042	0.7098		0.75	3.9	TM	
67	TM	Dibromochloromethane	0.4817	0.4858	0.4626	0.4830	0.4909	0.4827	0.4855	0.4599	0.4768		0.48	2.2	TM	
68	TM**	Chlorobenzene	1.460	1.382	1.426	1.416	1.404	1.413	1.349	1.302	1.355		1.4	3.4	TM**	
69	TM*	Ethylbenzene	2.187	1.994	2.118	2.263	2.266	2.427	2.413	2.312	2.389		2.3	6.4	TM*	
70	TM**	Bromoform	0.2946	0.3304	0.2695	0.2787	0.2826	0.2975	0.2864	0.2719	0.2818		0.29	6.4	TM**	

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 1/11/17
Matrix: Instrument: Loki

Initials:

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD		
71	I	1,4-Dichlorobenzene-D (IS)														
72	TM	Isopropylbenzene	3.986	3.421	3.583	3.774	3.621	3.793	3.845	4.090	4.100		3.8	6.1	TM	
73	TM**	1,1,2,2-Tetrachloroethane	1.089	1.069	1.048	1.045	0.9964	0.9806	0.9631	0.9152	0.9112		1.0	6.5	TM**	
74	TM	1,2,3-Trichloropropane		0.2119	0.1957	0.2031	0.1737	0.1836	0.1634	0.1736	0.1573		0.18	11	TM	
75	TM	t-1,4-Dichloro-2-Butene		0.2701	0.2688	0.2662	0.2239	0.2206	0.2385	0.2382	0.2347		0.25	8.3	TM	
76	TM	Bromobenzene	1.094	1.188	1.097	1.060	1.037	1.005	1.034	1.046	1.027		1.1	5.2	TM	
77	TM	n-Propylbenzene	4.345	4.299	4.575	4.549	4.533	4.771	4.838	5.157	5.044		4.7	6.3	TM	
78	TM	4-Ethyltoluene	3.555	3.223	3.231	3.443	3.665	3.885	3.923	4.144	4.092		3.7	9.4	TM	
79	TM	2-Chlorotoluene	2.675	2.907	2.690	2.837	2.901	3.031	2.977	3.040	2.999		2.9	4.7	TM	
80	TM	1,3,5-Trimethylbenzene	3.134	2.772	2.878	3.058	3.244	3.424	3.379	3.537	3.468		3.2	8.4	TM	
81	TM	4-Chlorotoluene	3.334	3.104	3.064	3.269	3.325	3.522	3.485	3.531	3.510		3.3	5.3	TM	
82	TM	Tert-Butylbenzene	2.672	2.350	2.506	2.625	2.512	2.639	2.650	2.814	2.829		2.6	5.8	TM	
83	TM	1,2,4-Trimethylbenzene		2.719	2.812	3.017	3.101	3.321	3.414	3.533	3.542		3.2	10	TM	
84	TM	Sec-Butylbenzene	3.564	3.773	3.554	3.765	3.723	4.024	4.111	4.282	4.277		3.9	7.3	TM	
85	TM	p-Isopropyltoluene	3.230	2.949	3.086	3.079	3.079	3.324	3.354	3.520	3.593		3.2	6.7	TM	
86	TM	Benzyl Chloride	1.029	1.077	0.9916	0.9383	0.9848	0.9995	1.055	1.122	1.273		1.1	9.4	TM	
87	TM	1,3-DCB	2.080	1.855	1.943	2.019	1.998	1.978	1.931	1.967	1.967		2.0	3.2	TM	
88	TM	1,4-DCB	2.146	2.296	2.134	2.079	2.071	1.999	1.998	1.985	2.015		2.1	4.8	TM	
89	TM	n-Butylbenzene	2.867	2.703	2.943	2.935	2.812	3.001	3.145	3.373	3.461		3.0	8.4	TM	
90	TM	1,2-DCB		2.037	1.875	1.884	1.801	1.873	1.800	1.823	1.874		1.9	4.0	TM	
91	TM	Hexachloroethane		0.6467	0.6552	0.7291	0.6534	0.6736	0.6705	0.6796	0.7059		0.68	4.2	TM	
92	TM	1,2-Dibromo-3-chloropropane		0.1389	0.1403	0.1470	0.1567	0.1496	0.1456	0.1513	0.1571		0.15	4.5	TM	
93	TM	1,2,4-Trichlorobenzene	1.270	1.127	1.101	1.179	1.155	1.124	1.157	1.243	1.317		1.2	6.2	TM	
94	TM	Hexachlorobutadiene		0.6964	0.6565	0.6273	0.5893	0.5692	0.5576	0.5651	0.6004		0.61	8.1	TM	
95	TM	Naphthalene		1.288	1.107	1.156	1.194	1.275	1.383	1.563	1.577		1.3	13	TM	
96	TM	1,2,3-Trichlorobenzene		0.8254	0.6579	0.6272	0.7056	0.7141	0.7342	0.7974	0.8066		0.73	9.8	TM	
97																
98																
99																
100																
101																
102																
103																
104																
105																

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L05.D Vial: 4
Acq On : 11 Jan 17 11:56 Operator: PM,DG,SV,CMM
Sample : 0.3ug/L VOC STD 1/11/17J Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 12 7:32 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:31:44 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	332160	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	315712	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	150016	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	43382	5.86941 ppb		0.00
Spiked Amount 25.000			Recovery = 23.476%			
37) 1,2-DCA-D4(S)	4.93	65	49605	6.20257 ppb		0.00
Spiked Amount 25.000			Recovery = 24.812%			
57) Toluene-D8(S)	7.22	98	137262	5.52922 ppb		0.00
Spiked Amount 25.000			Recovery = 22.116%			
65) 4-Bromofluorobenzene(S)	9.89	95	47603	5.49833 ppb		0.00
Spiked Amount 25.000			Recovery = 21.992%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.86	85	2874	0.37725 ppb		99
3) Freon 114	0.93	85	1678	0.28852 ppb		90
4) Chloromethane	0.96	50	4186	-0.44043 ppb		98
5) Vinyl chloride	1.03	62	3061	0.31916 ppb		98
6) Bromomethane	1.23	94	1977	-0.27235 ppb		93
7) Chloroethane	1.29	64	1946	0.37450 ppb		93
8) Dichlorofluoromethane	1.43	67	5233	0.34477 ppb		97
9) Trichlorofluoromethane	1.46	101	2964	0.29543 ppb		82
10) Acrolein	1.76	56	2790	5.15509 ppb	#	85
11) Acetone	1.88	43	3161	-0.18037 ppb		97
12) Freon-113	1.85	101	1847	0.31435 ppb	#	82
13) 1,1-DCE	1.83	96	2065	0.36532 ppb		89
14) t-Butanol	2.40	59	2028	10.88266 ppb		95
15) Acetonitrile	2.11	41	7829	11.21753 ppb	#	95
16) Methyl Acetate	2.17	43	1830	0.39731 ppb		91
17) Iodomethane	1.93	142	1253	0.35618 ppb	#	84
18) Acrylonitrile	2.47	52	701	-0.14527 ppb	#	59
19) Methylene chloride	2.23	84	2567	0.35913 ppb		84
20) Carbon disulfide	1.98	76	7038	0.36162 ppb		97
21) Methyl t-butyl ether (MtBE	2.52	73	4416	0.31245 ppb	#	91
22) Trans-1,2-DCE	2.50	96	2390	0.40785 ppb		92
23) Diisopropyl Ether	3.10	45	6877	0.34845 ppb		94
24) 1,1-DCA	2.95	63	3889	0.32915 ppb	#	89
25) Vinyl Acetate	3.08	43	1652	0.36591 ppb	#	95
26) Ethyl tert Butyl Ether	3.58	59	4635	0.30699 ppb		97
27) MEK (2-Butanone)	3.84	43	1820	0.12525 ppb	#	59
28) Cis-1,2-DCE	3.72	96	2851	0.41938 ppb		72
29) 2,2-Dichloropropane	3.69	77	1267	0.43237 ppb	#	73
30) Chloroform	4.26	83	3953	0.32721 ppb		92
31) Bromochloromethane	4.09	128	1230	-0.21668 ppb	#	57
33) 1,1,1-TCA	4.47	97	3546	0.38627 ppb		88
34) Cyclohexane	4.53	41	1883	0.37290 ppb	#	70
35) 1,1-Dichloropropene	4.74	75	3005	0.38972 ppb	#	81
36) 2,2,4-Trimethylpentane	5.15	57	4954	0.29575 ppb		91
38) Carbon Tetrachloride	4.72	119	2703	0.37910 ppb	#	67
39) Tert Amyl Methyl Ether	5.22	73	4364	0.33009 ppb		96
40) 1,2-DCA	5.04	62	2983	0.33856 ppb		93
41) Benzene	4.99	78	7774	0.31434 ppb		93
42) TCE	5.84	95	1466	0.43741 ppb	#	74

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L05.D Vial: 4
Acq On : 11 Jan 17 11:56 Operator: PM,DG,SV,CMM
Sample : 0.3ug/L VOC STD 1/11/17J Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 12 7:32 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:31:44 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43)	2-Pentanone	6.13	43	32712	9.51315 ppb		99
44)	1,2-Dichloropropane	6.09	63	2256	0.30058 ppb	#	90
45)	Bromodichloromethane	6.45	83	2997	0.35020 ppb	#	85
46)	Methyl Cyclohexane	6.04	83	2833	0.35186 ppb		97
47)	Dibromomethane	6.23	93	1505	0.39844 ppb	#	73
48)	2-Chloroethyl vinyl ether	6.50	43	369	0.71717 ppb	#	100
49)	MIBK (methyl isobutyl ket	7.16	43	2834	-0.15917 ppb	#	85
50)	1-Bromo-2-chloroethane	6.75	63	1995	0.39010 ppb		87
51)	Cis-1,3-Dichloropropene	6.96	75	3113	0.33198 ppb		88
52)	Toluene	7.29	91	8231	0.32546 ppb		84
53)	Trans-1,3-Dichloropropene	7.57	75	3210	0.40687 ppb		84
54)	1,1,2-TCA	7.74	83	1491	0.32805 ppb		84
55)	2-Hexanone	8.06	43	377	0.24624 ppb	#	90
58)	1,2-EDB	8.21	107	1961	0.39163 ppb	#	75
59)	Tetrachloroethene	7.86	166	2356	0.38081 ppb		90
60)	1-Chlorohexane	8.76	91	2008	0.27682 ppb		90
61)	1,1,1,2-Tetrachloroethane	8.83	131	2031	0.32799 ppb	#	67
62)	m&p-Xylene	8.99	91	7457	0.55879 ppb		94
63)	o-Xylene	9.38	106	2963	0.30338 ppb		78
64)	Styrene	9.40	104	2534	0.72228 ppb		94
66)	1,3-Dichloropropane	7.91	76	2927	0.30787 ppb		93
67)	Dibromochloromethane	8.12	129	1825	0.31087 ppb		98
68)	Chlorobenzene	8.73	112	5531	0.32457 ppb		93
69)	Ethylbenzene	8.87	91	8285	0.29343 ppb		95
70)	Bromoform	9.55	173	1116	0.31972 ppb	#	72
72)	Isopropylbenzene	9.76	105	7175	0.32559 ppb	#	86
73)	1,1,2,2-Tetrachloroethane	10.07	83	1960	0.30483 ppb	#	81
74)	1,2,3-Trichloropropane	10.09	110	444	0.41089 ppb		90
75)	t-1,4-Dichloro-2-Butene	10.13	53	414	0.27575 ppb	#	33
76)	Bromobenzene	10.02	156	1970	0.31540 ppb		76
77)	n-Propylbenzene	10.17	91	7822	0.28595 ppb		97
78)	4-Ethyltoluene	10.29	105	6400	0.28125 ppb		100
79)	2-Chlorotoluene	10.23	91	4816	0.27988 ppb		92
80)	1,3,5-Trimethylbenzene	10.36	105	5642	0.29265 ppb		86
81)	4-Chlorotoluene	10.34	91	6002	0.30393 ppb		97
82)	Tert-Butylbenzene	10.67	119	4811	0.32009 ppb		95
83)	1,2,4-Trimethylbenzene	10.72	105	5091	0.26988 ppb		87
84)	Sec-Butylbenzene	10.88	105	6415	0.28034 ppb	#	84
85)	p-Isopropyltoluene	11.04	119	5815	0.30198 ppb	#	76
86)	Benzyl Chloride	11.20	91	1853	0.29212 ppb	#	72
87)	1,3-DCB	10.96	146	3745	0.32151 ppb		94
88)	1,4-DCB	11.05	146	3863	0.32114 ppb	#	54
89)	n-Butylbenzene	11.45	91	5162	0.28533 ppb		96
90)	1,2-DCB	11.41	146	4420	0.39927 ppb		79
91)	Hexachloroethane	11.66	117	1582	0.35449 ppb		77
92)	1,2-Dibromo-3-chloropropan	12.18	157	226	0.25524 ppb	#	82
93)	1,2,4-Trichlorobenzene	13.00	180	2287	0.34455 ppb		91
94)	Hexachlorobutadiene	13.19	225	1477	0.43647 ppb	#	67
95)	Naphthalene	13.22	128	1953	0.63002 ppb		99
96)	1,2,3-Trichlorobenzene	13.47	180	1590	0.39076 ppb		80

(#) = qualifier out of range (m) = manual integration

Quantitation Report

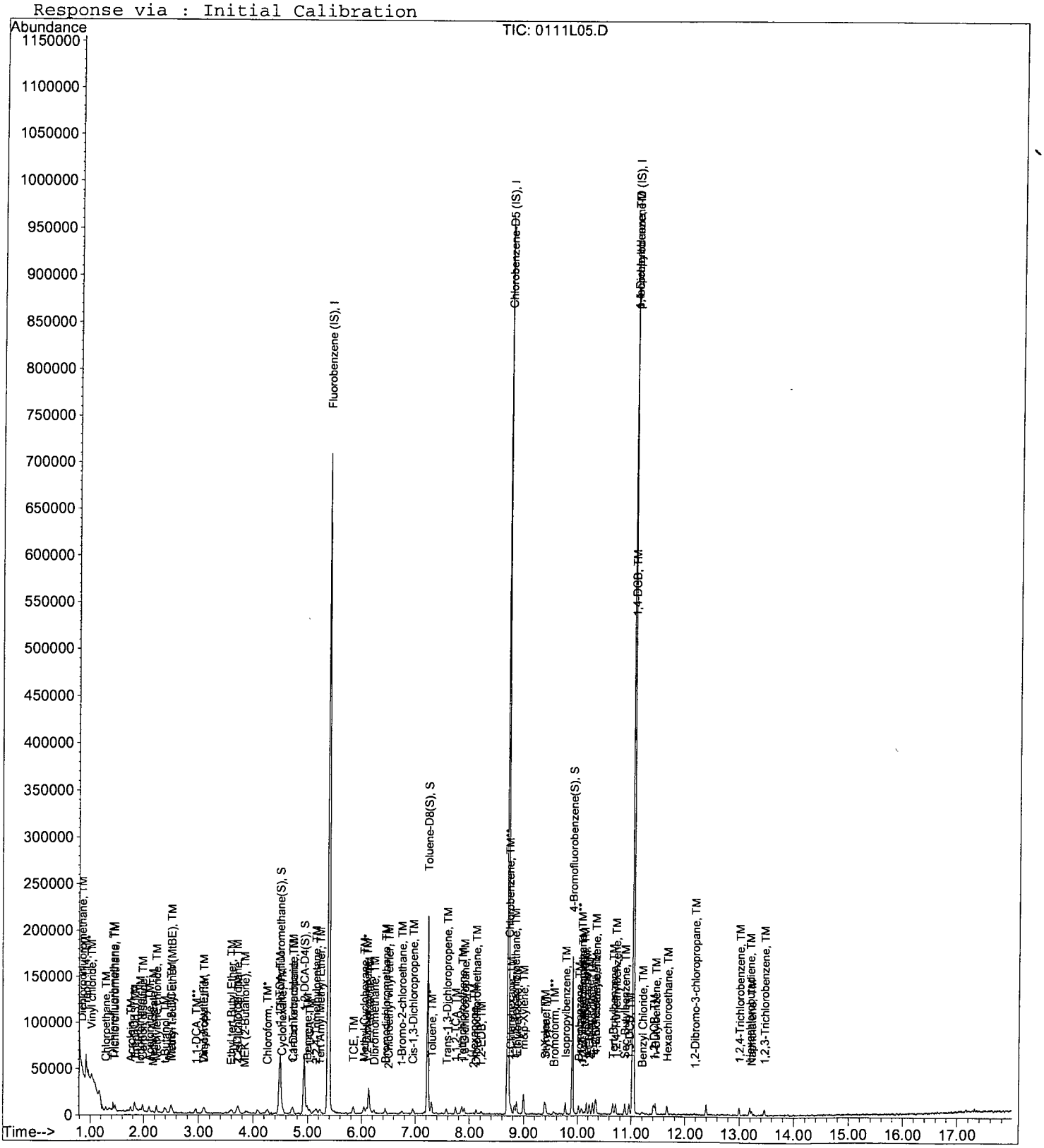
Data File : M:\LOKI\DATA\170111\0111L05.D
Acq On : 11 Jan 17 11:56
Sample : 0.3ug/L VOC STD 1/11/17J
Misc : W IS&S 1/3/17, 01/11/17

Vial: 4
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 12 7:32 2017

Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



504

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L06.D Vial: 5
Acq On : 11 Jan 17 12:24 Operator: PM,DG,SV,CMM
Sample : 0.5ug/L VOC STD 1/11/17K Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 12 7:32 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:31:44 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	353664	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	327936	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	160896	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	44351	5.63566 ppb		0.00
Spiked Amount 25.000			Recovery = 22.544%			
37) 1,2-DCA-D4(S)	4.93	65	46349	5.44306 ppb		0.00
Spiked Amount 25.000			Recovery = 21.772%			
57) Toluene-D8(S)	7.22	98	132753	5.14825 ppb		0.00
Spiked Amount 25.000			Recovery = 20.592%			
65) 4-Bromofluorobenzene(S)	9.89	95	44663	4.96646 ppb		0.00
Spiked Amount 25.000			Recovery = 19.864%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	4088	0.50398 ppb		96
3) Freon 114	0.93	85	3433	0.55440 ppb		83
4) Chloromethane	0.96	50	7806	-0.10811 ppb		93
5) Vinyl chloride	1.02	62	5001	0.48973 ppb		94
6) Bromomethane	1.22	94	3468	0.13058 ppb		95
7) Chloroethane	1.29	64	3522	0.63659 ppb		91
8) Dichlorofluoromethane	1.43	67	8483	0.52490 ppb		98
9) Trichlorofluoromethane	1.46	101	5430	0.50832 ppb		89
10) Acrolein	1.76	56	8874	15.39955 ppb	#	91
11) Acetone	1.88	43	3851	0.12524 ppb		96
12) Freon-113	1.84	101	3148	0.50320 ppb		89
13) 1,1-DCE	1.83	96	3007	0.49963 ppb	#	56
14) t-Butanol	2.40	59	4763	24.00513 ppb		100
15) Acetonitrile	2.11	41	19489	26.22630 ppb		90
16) Methyl Acetate	2.17	43	3503	0.71430 ppb	#	79
17) Iodomethane	1.93	142	1671	0.44612 ppb	#	89
19) Methylene chloride	2.23	84	4399	0.57802 ppb		99
20) Carbon disulfide	1.98	76	11125	0.53686 ppb		100
21) Methyl t-butyl ether (MtBE	2.52	73	7864	0.52258 ppb		92
22) Trans-1,2-DCE	2.50	96	4051	0.64926 ppb		87
23) Diisopropyl Ether	3.10	45	10604	0.50462 ppb		96
24) 1,1-DCA	2.95	63	7185	0.57114 ppb		97
25) Vinyl Acetate	3.10	43	2819	0.58643 ppb	#	95
26) Ethyl tert Butyl Ether	3.59	59	8278	0.51493 ppb		95
27) MEK (2-Butanone)	3.81	43	764	-0.42490 ppb	#	59
28) Cis-1,2-DCE	3.74	96	4127	0.57017 ppb	#	85
29) 2,2-Dichloropropane	3.70	77	2068	0.66280 ppb		95
30) Chloroform	4.26	83	6809	0.52934 ppb		89
31) Bromochloromethane	4.08	128	862	-0.37251 ppb		98
33) 1,1,1-TCA	4.47	97	5663	0.57938 ppb		88
34) Cyclohexane	4.54	41	2682	0.49884 ppb		81
35) 1,1-Dichloropropene	4.73	75	4796	0.58418 ppb	#	85
36) 2,2,4-Trimethylpentane	5.15	57	8394	0.47065 ppb	#	68
38) Carbon Tetrachloride	4.70	119	3957	0.52123 ppb		85
39) Tert Amyl Methyl Ether	5.23	73	6801	0.48315 ppb		92
40) 1,2-DCA	5.03	62	5020	0.53511 ppb	#	77
41) Benzene	4.99	78	13456	0.51101 ppb	#	88
42) TCE	5.83	95	1791	0.50189 ppb		86
43) 2-Pentanone	6.12	43	82083	22.41956 ppb		94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L06.D
Acq On : 11 Jan 17 12:24
Sample : 0.5ug/L VOC STD 1/11/17K
Misc : W IS&S 1/3/17, 01/11/17

Vial: 5
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 12 7:32 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:31:44 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
44) 1,2-Dichloropropane	6.09	63	4235	0.52995 ppb	#	91
45) Bromodichloromethane	6.44	83	4811	0.52799 ppb	#	75
46) Methyl Cyclohexane	6.04	83	4248	0.49553 ppb		96
47) Dibromomethane	6.22	93	2155	0.53583 ppb		77
48) 2-Chloroethyl vinyl ether	6.46	43	1196	2.18315 ppb		100
49) MIBK (methyl isobutyl ket	7.16	43	4951	0.24317 ppb		95
50) 1-Bromo-2-chloroethane	6.75	63	2556	0.46941 ppb		98
51) Cis-1,3-Dichloropropene	6.95	75	5176	0.51842 ppb		87
52) Toluene	7.29	91	14363	0.53339 ppb		91
53) Trans-1,3-Dichloropropene	7.57	75	4546	0.54118 ppb		99
54) 1,1,2-TCA	7.74	83	2431	0.50235 ppb		96
55) 2-Hexanone	8.06	43	673	0.41285 ppb	#	30
58) 1,2-EDB	8.21	107	2286	0.43952 ppb	#	77
59) Tetrachloroethene	7.86	166	4024	0.62618 ppb		96
60) 1-Chlorohexane	8.76	91	3587	0.47607 ppb		88
61) 1,1,1,2-Tetrachloroethane	8.83	131	3399	0.52845 ppb		86
62) m&p-Xylene	9.00	91	11436	0.82502 ppb		92
63) o-Xylene	9.38	106	4753	0.46851 ppb		97
64) Styrene	9.40	104	4409	0.85842 ppb		99
66) 1,3-Dichloropropane	7.91	76	5101	0.51654 ppb		100
67) Dibromochloromethane	8.12	129	3186	0.52247 ppb		89
68) Chlorobenzene	8.73	112	9065	0.51212 ppb		87
69) Ethylbenzene	8.87	91	13075	0.44581 ppb		97
70) Bromoform	9.55	173	2167	0.59768 ppb		100
72) Isopropylbenzene	9.76	105	11007	0.46570 ppb		100
73) 1,1,2,2-Tetrachloroethane	10.07	83	3441	0.49897 ppb	#	78
74) 1,2,3-Trichloropropane	10.09	110	682	0.58847 ppb		90
75) t-1,4-Dichloro-2-Butene	10.13	53	869	0.53967 ppb		99
76) Bromobenzene	10.02	156	3822	0.57053 ppb		90
77) n-Propylbenzene	10.17	91	13834	0.47154 ppb		98
78) 4-Ethyltoluene	10.28	105	10370	0.42490 ppb		97
79) 2-Chlorotoluene	10.22	91	9354	0.50685 ppb		95
80) 1,3,5-Trimethylbenzene	10.36	105	8921	0.43144 ppb		99
81) 4-Chlorotoluene	10.34	91	9990	0.47167 ppb		97
82) Tert-Butylbenzene	10.66	119	7562	0.46910 ppb		93
83) 1,2,4-Trimethylbenzene	10.72	105	8750	0.43248 ppb		99
84) Sec-Butylbenzene	10.88	105	12141	0.49469 ppb		98
85) p-Isopropyltoluene	11.04	119	9491	0.45954 ppb	#	90
86) Benzyl Chloride	11.20	91	3467	0.50960 ppb	#	89
87) 1,3-DCB	10.96	146	5968	0.47771 ppb		94
88) 1,4-DCB	11.05	146	7387	0.57256 ppb		89
89) n-Butylbenzene	11.44	91	8699	0.44832 ppb	#	84
90) 1,2-DCB	11.41	146	6556	0.55217 ppb		94
91) Hexachloroethane	11.65	117	2081	0.43478 ppb		85
92) 1,2-Dibromo-3-chloropropan	12.17	157	447	0.47069 ppb		92
93) 1,2,4-Trichlorobenzene	13.00	180	3628	0.50962 ppb		86
94) Hexachlorobutadiene	13.19	225	2241	0.61746 ppb	#	77
95) Naphthalene	13.23	128	4146	0.87167 ppb	#	88
96) 1,2,3-Trichlorobenzene	13.47	180	2656	0.60860 ppb		83

(#) = qualifier out of range (m) = manual integration

Quantitation Report

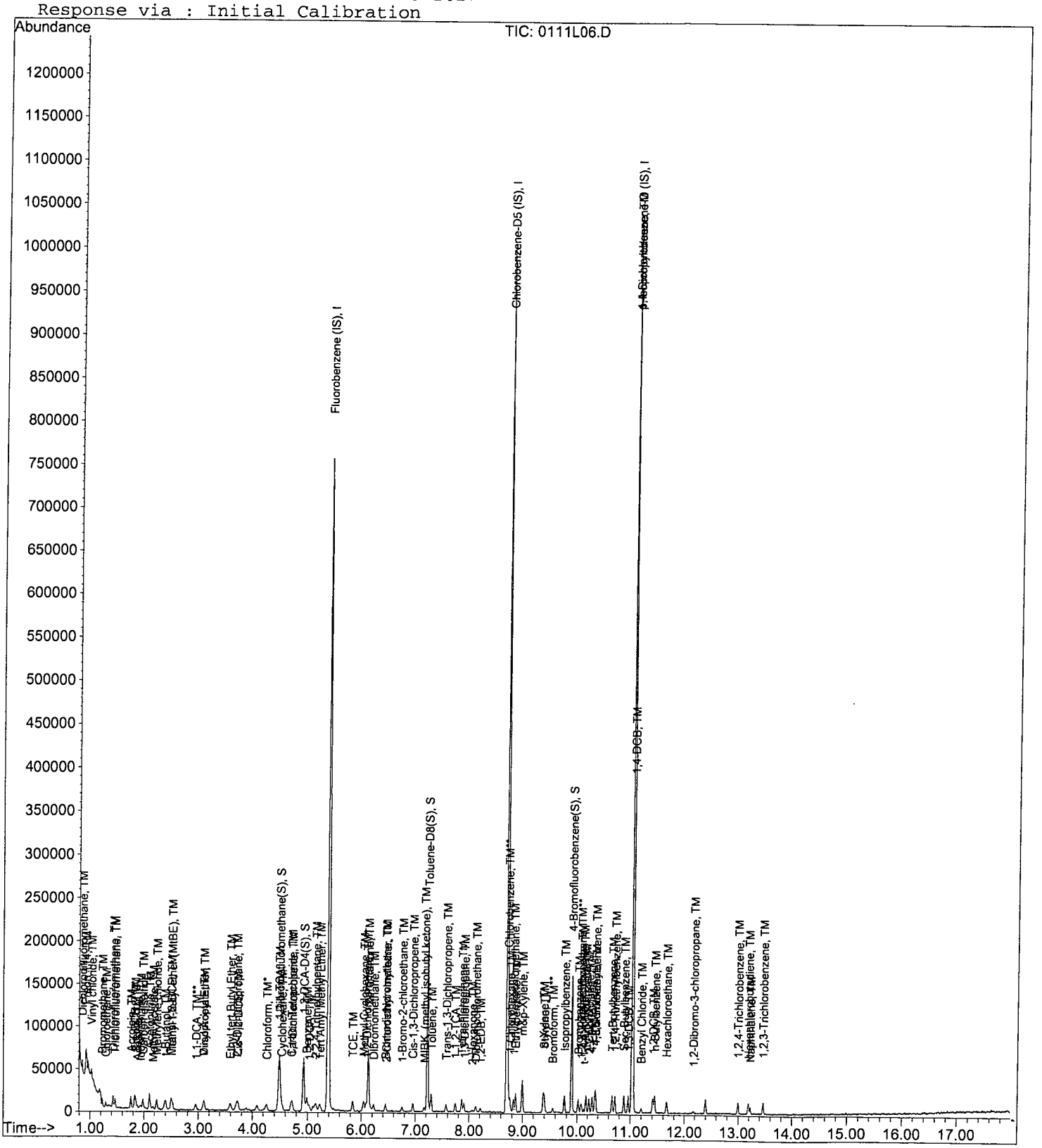
Data File : M:\LOKI\DATA\170111\0111L06.D
Acq On : 11 Jan 17 12:24
Sample : 0.5ug/L VOC STD 1/11/17K
Misc : W IS&S 1/3/17, 01/11/17

Vial: 5
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 12 7:32 2017

Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L07.D Vial: 6
Acq On : 11 Jan 17 12:52 Operator: PM,DG,SV,CMM
Sample : 1.0ug/L VOC STD 1/11/17L Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 12 7:32 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:31:44 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	346432	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	315072	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	160704	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	70403	9.13284 ppb		0.00
Spiked Amount 25.000			Recovery = 36.532%			
37) 1,2-DCA-D4(S)	4.93	65	77817	9.32933 ppb		0.00
Spiked Amount 25.000			Recovery = 37.316%			
57) Toluene-D8(S)	7.22	98	227758	9.19324 ppb		0.00
Spiked Amount 25.000			Recovery = 36.772%			
65) 4-Bromofluorobenzene(S)	9.89	95	76119	8.80990 ppb		0.00
Spiked Amount 25.000			Recovery = 35.240%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	7520	0.94643 ppb		95
3) Freon 114	0.93	85	5923	0.97648 ppb		98
4) Chloromethane	0.96	50	12627	0.39642 ppb		97
5) Vinyl chloride	1.03	62	9874	0.98711 ppb		90
6) Bromomethane	1.22	94	6136	0.88603 ppb		87
7) Chloroethane	1.29	64	5926	1.09346 ppb		91
8) Dichlorofluoromethane	1.43	67	15302	0.96661 ppb		99
9) Trichlorofluoromethane	1.46	101	10238	0.97842 ppb		99
10) Acrolein	1.76	56	15460	27.38868 ppb	#	97
11) Acetone	1.88	43	4042	0.29864 ppb		90
12) Freon-113	1.85	101	6737	1.09938 ppb		92
13) 1,1-DCE	1.83	96	6302	1.06897 ppb		100
14) t-Butanol	2.39	59	9183	47.24773 ppb	#	89
15) Acetonitrile	2.10	41	34804	47.81339 ppb		94
16) Methyl Acetate	2.17	43	6269	1.30500 ppb		98
17) Iodomethane	1.93	142	3193	0.87025 ppb		98
18) Acrylonitrile	2.47	52	1651	0.46648 ppb		83
19) Methylene chloride	2.24	84	8018	1.07554 ppb		93
20) Carbon disulfide	1.98	76	21327	1.05066 ppb		93
21) Methyl t-butyl ether (MtBE	2.53	73	15709	1.06569 ppb		96
22) Trans-1,2-DCE	2.49	96	6349	1.03881 ppb		88
23) Diisopropyl Ether	3.10	45	21020	1.02117 ppb		95
24) 1,1-DCA	2.95	63	13361	1.08424 ppb		97
25) Vinyl Acetate	3.10	43	5341	1.13428 ppb	#	95
26) Ethyl tert Butyl Ether	3.59	59	14932	0.94823 ppb		90
27) MEK (2-Butanone)	3.82	43	1993	0.17061 ppb	#	72
28) Cis-1,2-DCE	3.73	96	7750	1.09307 ppb		92
29) 2,2-Dichloropropane	3.71	77	3284	1.07450 ppb		98
30) Chloroform	4.26	83	13332	1.05809 ppb		99
31) Bromochloromethane	4.08	128	3483	0.56522 ppb		74
33) 1,1,1-TCA	4.47	97	10094	1.05427 ppb		96
34) Cyclohexane	4.53	41	5645	1.07186 ppb		86
35) 1,1-Dichloropropene	4.72	75	8722	1.08457 ppb		94
36) 2,2,4-Trimethylpentane	5.15	57	17149	0.98161 ppb	#	57
38) Carbon Tetrachloride	4.70	119	7632	1.02631 ppb	#	90
39) Tert Amyl Methyl Ether	5.22	73	13702	0.99372 ppb	#	97
40) 1,2-DCA	5.03	62	9276	1.00943 ppb		95
41) Benzene	4.99	78	27174	1.05350 ppb		99
42) TCE	5.84	95	3893	1.11371 ppb		91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L07.D
Acq On : 11 Jan 17 12:52
Sample : 1.0ug/L VOC STD 1/11/17L
Misc : W IS&S 1/3/17, 01/11/17

Vial: 6
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 12 7:32 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:31:44 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43) 2-Pentanone	6.12	43	166814	46.51353 ppb		99
44) 1,2-Dichloropropane	6.09	63	8133	1.03897 ppb		99
45) Bromodichloromethane	6.44	83	8968	1.00475 ppb		92
46) Methyl Cyclohexane	6.04	83	8186	0.97483 ppb		96
47) Dibromomethane	6.22	93	3540	0.89859 ppb	#	71
48) 2-Chloroethyl vinyl ether	6.52	43	1896	3.53317 ppb		100
49) MIBK (methyl isobutyl ket	7.16	43	7521	0.81062 ppb	#	93
50) 1-Bromo-2-chloroethane	6.75	63	4770	0.89431 ppb		90
51) Cis-1,3-Dichloropropene	6.95	75	9275	0.94836 ppb		91
52) Toluene	7.29	91	26108	0.98981 ppb		94
53) Trans-1,3-Dichloropropene	7.56	75	8890	1.08040 ppb		97
54) 1,1,2-TCA	7.74	83	5338	1.12609 ppb		85
55) 2-Hexanone	8.06	43	1340	0.83918 ppb		94
58) 1,2-EDB	8.21	107	4995	0.99958 ppb		86
59) Tetrachloroethene	7.86	166	6608	1.07026 ppb		97
60) 1-Chlorohexane	8.76	91	6845	0.94556 ppb		84
61) 1,1,1,2-Tetrachloroethane	8.83	131	6328	1.02400 ppb		96
62) m&p-Xylene	9.00	91	24320	1.82613 ppb		99
63) o-Xylene	9.38	106	8530	0.87515 ppb		99
64) Styrene	9.40	104	9217	1.25565 ppb		97
66) 1,3-Dichloropropane	7.90	76	9847	1.03784 ppb		100
67) Dibromochloromethane	8.12	129	5830	0.99509 ppb		94
68) Chlorobenzene	8.73	112	17975	1.05695 ppb		98
69) Ethylbenzene	8.87	91	26692	0.94726 ppb		95
70) Bromoform	9.55	173	3396	0.97489 ppb		80
72) Isopropylbenzene	9.76	105	23032	0.97564 ppb		91
73) 1,1,2,2-Tetrachloroethane	10.07	83	6734	0.97765 ppb	#	90
74) 1,2,3-Trichloropropane	10.09	110	1258	1.08677 ppb	#	62
75) t-1,4-Dichloro-2-Butene	10.13	53	1728	1.07442 ppb		99
76) Bromobenzene	10.02	156	7051	1.05379 ppb		85
77) n-Propylbenzene	10.17	91	29411	1.00369 ppb		92
78) 4-Ethyltoluene	10.29	105	20769	0.85200 ppb		90
79) 2-Chlorotoluene	10.23	91	17291	0.93804 ppb		96
80) 1,3,5-Trimethylbenzene	10.36	105	18500	0.89577 ppb		93
81) 4-Chlorotoluene	10.34	91	19699	0.93119 ppb		93
82) Tert-Butylbenzene	10.66	119	16109	1.00050 ppb		97
83) 1,2,4-Trimethylbenzene	10.72	105	18076	0.89449 ppb		99
84) Sec-Butylbenzene	10.88	105	22846	0.93198 ppb		99
85) p-Isopropyltoluene	11.04	119	19839	0.96173 ppb		90
86) Benzyl Chloride	11.20	91	6374	0.93800 ppb		97
87) 1,3-DCB	10.96	146	12488	1.00081 ppb		95
88) 1,4-DCB	11.05	146	13719	1.06463 ppb		90
89) n-Butylbenzene	11.44	91	18916	0.97605 ppb		97
90) 1,2-DCB	11.41	146	12054	1.01645 ppb		95
91) Hexachloroethane	11.66	117	4212	0.88105 ppb	#	65
92) 1,2-Dibromo-3-chloropropan	12.18	157	902	0.95093 ppb	#	86
93) 1,2,4-Trichlorobenzene	13.00	180	7079	0.99556 ppb		97
94) Hexachlorobutadiene	13.19	225	4220	1.16412 ppb		91
95) Naphthalene	13.22	128	7119	1.22244 ppb		99
96) 1,2,3-Trichlorobenzene	13.46	180	4229	0.97020 ppb		92

(#) = qualifier out of range (m) = manual integration

Quantitation Report

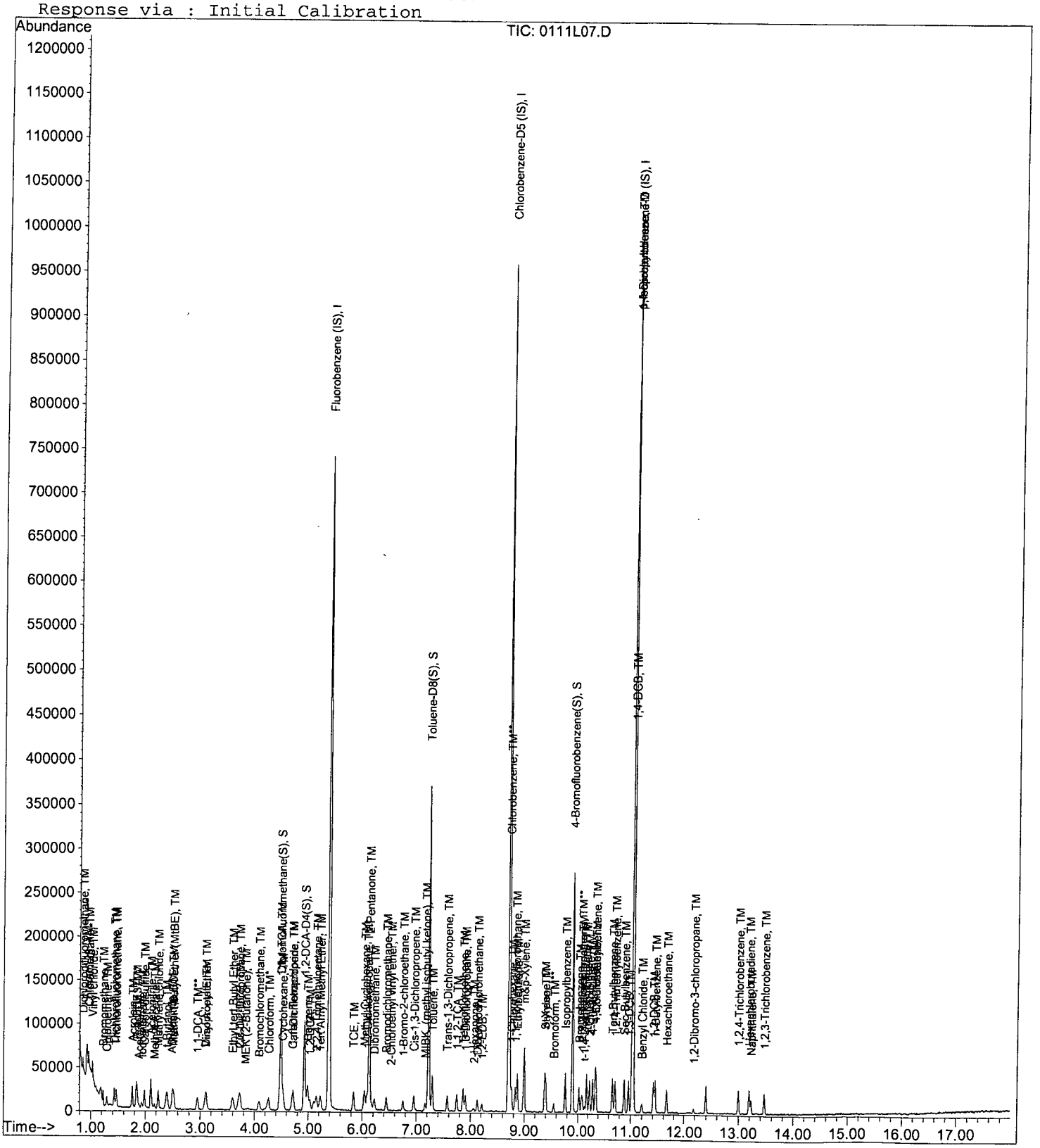
Data File : M:\LOKI\DATA\170111\0111L07.D
Acq On : 11 Jan 17 12:52
Sample : 1.0ug/L VOC STD 1/11/17L
Misc : W IS&S 1/3/17, 01/11/17

Vial: 6
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 12 7:32 2017

Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L08.D
Acq On : 11 Jan 17 13:20
Sample : 2.0ug/L VOC STD 1/11/17M
Misc : W IS&S 1/3/17, 01/11/17

Vial: 7
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 12 7:32 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:31:44 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	345600	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	314496	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	161216	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	75123	9.76859 ppb		0.00
Spiked Amount 25.000			Recovery = 39.076%			
37) 1,2-DCA-D4(S)	4.93	65	79701	9.57820 ppb		0.00
Spiked Amount 25.000			Recovery = 38.312%			
57) Toluene-D8(S)	7.22	98	240936	9.74297 ppb		0.00
Spiked Amount 25.000			Recovery = 38.972%			
65) 4-Bromofluorobenzene(S)	9.89	95	82145	9.52476 ppb		0.00
Spiked Amount 25.000			Recovery = 38.100%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	17928	2.26177 ppb		99
3) Freon 114	0.93	85	11910	1.96823 ppb		100
4) Chloromethane	0.96	50	23189	1.47201 ppb		99
5) Vinyl chloride	1.03	62	19197	1.92376 ppb		99
6) Bromomethane	1.22	94	12975	2.49761 ppb		96
7) Chloroethane	1.29	64	11420	2.11228 ppb		93
8) Dichlorofluoromethane	1.43	67	30951	1.95984 ppb		93
9) Trichlorofluoromethane	1.46	101	21439	2.05381 ppb		100
10) Acrolein	1.76	56	24398	43.32714 ppb	#	97
11) Acetone	1.88	43	4832	0.81394 ppb		83
12) Freon-113	1.84	101	11874	1.94233 ppb		90
13) 1,1-DCE	1.83	96	13406	2.27946 ppb		99
14) t-Butanol	2.40	59	14372	74.12383 ppb		97
15) Acetonitrile	2.10	41	50909	70.10665 ppb		97
16) Methyl Acetate	2.17	43	10369	2.16368 ppb		97
17) Iodomethane	1.93	142	6708	1.83265 ppb		94
18) Acrylonitrile	2.48	52	3272	1.54975 ppb		96
19) Methylene chloride	2.24	84	16438	2.21032 ppb		88
20) Carbon disulfide	1.98	76	41498	2.04930 ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	28905	1.96562 ppb		95
22) Trans-1,2-DCE	2.50	96	12745	2.09032 ppb		98
23) Diisopropyl Ether	3.10	45	39919	1.94397 ppb		97
24) 1,1-DCA	2.95	63	27086	2.20332 ppb		98
25) Vinyl Acetate	3.10	43	9624	2.04879 ppb	#	94
26) Ethyl tert Butyl Ether	3.59	59	30172	1.92064 ppb		99
27) MEK (2-Butanone)	3.82	43	5523	1.86596 ppb	#	64
28) Cis-1,2-DCE	3.72	96	14583	2.06175 ppb		99
29) 2,2-Dichloropropane	3.70	77	6036	1.97970 ppb		98
30) Chloroform	4.26	83	26345	2.09590 ppb		97
31) Bromochloromethane	4.08	128	6846	1.76623 ppb		88
33) 1,1,1-TCA	4.47	97	19421	2.03331 ppb		92
34) Cyclohexane	4.53	41	11164	2.12490 ppb		70
35) 1,1-Dichloropropene	4.73	75	17474	2.17810 ppb		88
36) 2,2,4-Trimethylpentane	5.15	57	33448	1.91918 ppb		94
38) Carbon Tetrachloride	4.71	119	14947	2.01483 ppb		93
39) Tert Amyl Methyl Ether	5.22	73	25183	1.83075 ppb		97
40) 1,2-DCA	5.03	62	18567	2.02535 ppb		97
41) Benzene	4.99	78	52558	2.04251 ppb		97
42) TCE	5.84	95	7467	2.14131 ppb		91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L08.D
Acq On : 11 Jan 17 13:20
Sample : 2.0ug/L VOC STD 1/11/17M
Misc : W IS&S 1/3/17, 01/11/17

Vial: 7
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 12 7:32 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:31:44 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43) 2-Pentanone	6.12	43	258879	72.35822 ppb		99
44) 1,2-Dichloropropane	6.09	63	16669	2.13455 ppb		99
45) Bromodichloromethane	6.44	83	19844	2.22862 ppb		96
46) Methyl Cyclohexane	6.04	83	16639	1.98623 ppb		93
47) Dibromomethane	6.22	93	8167	2.07809 ppb		98
48) 2-Chloroethyl vinyl ether	6.54	43	1481	2.76647 ppb		100
49) MIBK (methyl isobutyl ket	7.16	43	12403	1.85404 ppb		96
50) 1-Bromo-2-chloroethane	6.75	63	10533	1.97954 ppb		95
51) Cis-1,3-Dichloropropene	6.95	75	19254	1.97344 ppb		93
52) Toluene	7.29	91	54000	2.05218 ppb		98
53) Trans-1,3-Dichloropropene	7.56	75	16757	2.04138 ppb		87
54) 1,1,2-TCA	7.74	83	9666	2.04402 ppb		88
55) 2-Hexanone	8.05	43	2402	1.50789 ppb		94
58) 1,2-EDB	8.21	107	10517	2.10848 ppb	#	78
59) Tetrachloroethene	7.86	166	13931	2.26045 ppb		95
60) 1-Chlorohexane	8.76	91	13714	1.89791 ppb		97
61) 1,1,1,2-Tetrachloroethane	8.83	131	12121	1.96502 ppb		100
62) m&p-Xylene	8.99	91	51448	3.87018 ppb		98
63) o-Xylene	9.38	106	20836	2.14162 ppb		88
64) Styrene	9.40	104	19008	2.03925 ppb		97
66) 1,3-Dichloropropane	7.90	76	19135	2.02046 ppb		99
67) Dibromochloromethane	8.12	129	12152	2.07795 ppb		90
68) Chlorobenzene	8.73	112	35630	2.09891 ppb		99
69) Ethylbenzene	8.87	91	56929	2.02403 ppb		97
70) Bromoform	9.55	173	7013	2.01690 ppb		96
72) Isopropylbenzene	9.76	105	48668	2.05503 ppb		97
73) 1,1,2,2-Tetrachloroethane	10.07	83	13474	1.94995 ppb	#	96
74) 1,2,3-Trichloropropane	10.09	110	2619	2.25534 ppb		91
75) t-1,4-Dichloro-2-Butene	10.13	53	3433	2.12776 ppb	#	77
76) Bromobenzene	10.01	156	13667	2.03609 ppb		97
77) n-Propylbenzene	10.17	91	58665	1.99566 ppb		97
78) 4-Ethyltoluene	10.29	105	44403	1.81574 ppb		99
79) 2-Chlorotoluene	10.23	91	36584	1.97838 ppb		96
80) 1,3,5-Trimethylbenzene	10.36	105	39446	1.90391 ppb		98
81) 4-Chlorotoluene	10.34	91	42166	1.98689 ppb		95
82) Tert-Butylbenzene	10.67	119	33860	2.09630 ppb		98
83) 1,2,4-Trimethylbenzene	10.72	105	38914	1.91954 ppb		99
84) Sec-Butylbenzene	10.88	105	48553	1.97439 ppb		100
85) p-Isopropyltoluene	11.04	119	39707	1.91875 ppb		93
86) Benzyl Chloride	11.19	91	12101	1.77514 ppb	#	92
87) 1,3-DCB	10.96	146	26038	2.08010 ppb		94
88) 1,4-DCB	11.05	146	26816	2.07438 ppb		89
89) n-Butylbenzene	11.44	91	37859	1.94728 ppb		100
90) 1,2-DCB	11.41	146	24298	2.04242 ppb		95
91) Hexachloroethane	11.66	117	9403	1.96064 ppb		88
92) 1,2-Dibromo-3-chloropropan	12.18	157	1896	1.99251 ppb	#	75
93) 1,2,4-Trichlorobenzene	13.00	180	15206	2.13171 ppb		91
94) Hexachlorobutadiene	13.19	225	8090	2.22460 ppb		93
95) Naphthalene	13.22	128	14909	2.13198 ppb		97
96) 1,2,3-Trichlorobenzene	13.46	180	8089	1.84985 ppb		85

(#) = qualifier out of range (m) = manual integration

Quantitation Report

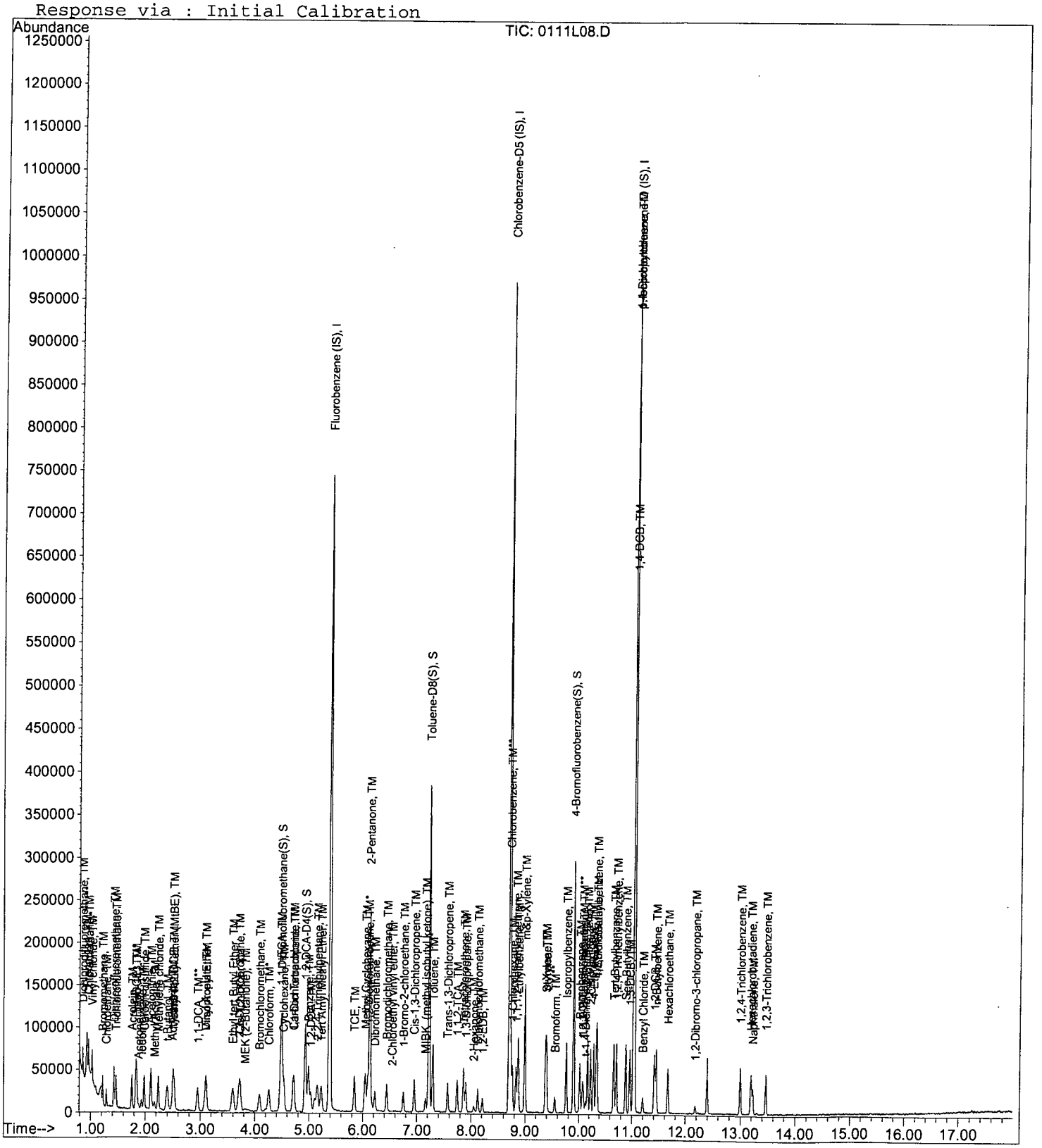
Data File : M:\LOKI\DATA\170111\0111L08.D
Acq On : 11 Jan 17 13:20
Sample : 2.0ug/L VOC STD 1/11/17M
Misc : W IS&S 1/3/17, 01/11/17

Vial: 7
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 12 7:32 2017

Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L09.D Vial: 8
Acq On : 11 Jan 17 13:48 Operator: PM,DG,SV,CMM
Sample : 5.0ug/L VOC STD 1/11/17N Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 12 7:32 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:31:44 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	355200	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	319360	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	174144	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.49	111	197346	24.96824 ppb		0.00
Spiked Amount 25.000			Recovery = 99.872%			
37) 1,2-DCA-D4(S)	4.93	65	213172	24.92591 ppb		0.00
Spiked Amount 25.000			Recovery = 99.704%			
57) Toluene-D8(S)	7.22	98	651549	25.94605 ppb		0.00
Spiked Amount 25.000			Recovery = 103.784%			
65) 4-Bromofluorobenzene(S)	9.89	95	233382	26.64862 ppb		0.00
Spiked Amount 25.000			Recovery = 106.596%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.86	85	40120	4.92468 ppb		95
3) Freon 114	0.93	85	27346	4.39703 ppb		99
4) Chloromethane	0.96	50	57196	4.76823 ppb		95
5) Vinyl chloride	1.03	62	49141	4.79139 ppb		97
6) Bromomethane	1.22	94	30528	5.53763 ppb		97
7) Chloroethane	1.29	64	27441	4.93840 ppb		98
8) Dichlorofluoromethane	1.43	67	74521	4.59120 ppb		97
9) Trichlorofluoromethane	1.46	101	53069	4.94649 ppb		98
10) Acrolein	1.76	56	34649	59.86835 ppb	#	96
11) Acetone	1.88	43	11251	4.75415 ppb		86
12) Freon-113	1.84	101	28288	4.50224 ppb		90
13) 1,1-DCE	1.83	96	28678	4.74440 ppb		96
14) t-Butanol	2.40	59	18976	95.22393 ppb		98
15) Acetonitrile	2.10	41	69135	92.63250 ppb		95
16) Methyl Acetate	2.17	43	23523	4.77583 ppb		99
17) Iodomethane	1.93	142	17288	4.59550 ppb		95
18) Acrylonitrile	2.47	52	8260	4.72614 ppb		98
19) Methylene chloride	2.24	84	39105	5.11609 ppb		99
20) Carbon disulfide	1.98	76	97575	4.68832 ppb		100
21) Methyl t-butyl ether (MtBE	2.52	73	73555	4.86676 ppb		99
22) Trans-1,2-DCE	2.50	96	31448	5.01842 ppb		98
23) Diisopropyl Ether	3.10	45	104308	4.94229 ppb		95
24) 1,1-DCA	2.95	63	64798	5.12855 ppb		98
25) Vinyl Acetate	3.10	43	22992	4.76232 ppb	#	97
26) Ethyl tert Butyl Ether	3.59	59	78290	4.84896 ppb		94
27) MEK (2-Butanone)	3.81	43	11710	4.68156 ppb		93
28) Cis-1,2-DCE	3.73	96	36719	5.05104 ppb		92
29) 2,2-Dichloropropane	3.70	77	14918	4.76059 ppb		100
30) Chloroform	4.26	83	61706	4.77639 ppb		96
31) Bromochloromethane	4.08	128	16368	5.00075 ppb		93
33) 1,1,1-TCA	4.47	97	48242	4.91425 ppb		100
34) Cyclohexane	4.53	41	24094	4.46199 ppb		93
35) 1,1-Dichloropropene	4.72	75	40591	4.92284 ppb		97
36) 2,2,4-Trimethylpentane	5.15	57	81207	4.53357 ppb		93
38) Carbon Tetrachloride	4.70	119	37521	4.92107 ppb		97
39) Tert Amyl Methyl Ether	5.22	73	67242	4.75624 ppb		96
40) 1,2-DCA	5.03	62	44565	4.72990 ppb		100
41) Benzene	4.99	78	133407	5.04436 ppb		98
42) TCE	5.84	95	16760	4.67635 ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L09.D Vial: 8
Acq On : 11 Jan 17 13:48 Operator: PM,DG,SV,CMM
Sample : 5.0ug/L VOC STD 1/11/17N Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 12 7:32 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:31:44 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43)	2-Pentanone	6.12	43	351885	95.69573 ppb		100
44)	1,2-Dichloropropane	6.09	63	36950	4.60376 ppb	#	94
45)	Bromodichloromethane	6.44	83	46956	5.13097 ppb		95
46)	Methyl Cyclohexane	6.04	83	40430	4.69576 ppb		90
47)	Dibromomethane	6.22	93	19435	4.81156 ppb		98
48)	2-Chloroethyl vinyl ether	6.55	43	2610	4.74364 ppb		100
49)	MIBK (methyl isobutyl ket	7.16	43	31899	5.82194 ppb		93
50)	1-Bromo-2-chloroethane	6.75	63	27392	5.00883 ppb		96
51)	Cis-1,3-Dichloropropene	6.95	75	49416	4.92802 ppb		96
52)	Toluene	7.29	91	134172	4.96116 ppb		99
53)	Trans-1,3-Dichloropropene	7.56	75	42891	5.08388 ppb		96
54)	1,1,2-TCA	7.74	83	25111	5.16658 ppb		99
55)	2-Hexanone	8.05	43	7641	4.66710 ppb		94
58)	1,2-EDB	8.21	107	25520	5.03840 ppb		98
59)	Tetrachloroethene	7.86	166	32368	5.17205 ppb		96
60)	1-Chlorohexane	8.76	91	34196	4.66037 ppb		88
61)	1,1,1,2-Tetrachloroethane	8.83	131	32348	5.16428 ppb		97
62)	m&p-Xylene	8.99	91	141440	10.47779 ppb		99
63)	o-Xylene	9.38	106	49439	5.00418 ppb		96
64)	Styrene	9.40	104	54832	4.83468 ppb		96
66)	1,3-Dichloropropane	7.90	76	48751	5.06920 ppb		98
67)	Dibromochloromethane	8.12	129	31355	5.27993 ppb		100
68)	Chlorobenzene	8.73	112	89670	5.20188 ppb		98
69)	Ethylbenzene	8.87	91	144757	5.06824 ppb		100
70)	Bromoform	9.55	173	18051	5.11231 ppb		93
72)	Isopropylbenzene	9.76	105	126111	4.92978 ppb		96
73)	1,1,2,2-Tetrachloroethane	10.07	83	34704	4.64950 ppb		96
74)	1,2,3-Trichloropropane	10.09	110	6051	4.82395 ppb		96
75)	t-1,4-Dichloro-2-Butene	10.13	53	7797	4.47380 ppb		99
76)	Bromobenzene	10.02	156	36132	4.98328 ppb		98
77)	n-Propylbenzene	10.17	91	157870	4.97171 ppb		98
78)	4-Ethyltoluene	10.29	105	127631	4.83166 ppb		97
79)	2-Chlorotoluene	10.23	91	101045	5.05863 ppb		98
80)	1,3,5-Trimethylbenzene	10.36	105	112976	5.04811 ppb		100
81)	4-Chlorotoluene	10.34	91	115818	5.05228 ppb		96
82)	Tert-Butylbenzene	10.67	119	87489	5.01442 ppb		99
83)	1,2,4-Trimethylbenzene	10.72	105	108010	4.93235 ppb		97
84)	Sec-Butylbenzene	10.89	105	129662	4.88122 ppb		98
85)	p-Isopropyltoluene	11.04	119	107222	4.79661 ppb		99
86)	Benzyl Chloride	11.19	91	34300	4.65806 ppb		95
87)	1,3-DCB	10.96	146	69585	5.14626 ppb		97
88)	1,4-DCB	11.05	146	72146	5.16661 ppb		98
89)	n-Butylbenzene	11.44	91	97946	4.66386 ppb		100
90)	1,2-DCB	11.41	146	62731	4.88152 ppb		98
91)	Hexachloroethane	11.66	117	22758	4.39303 ppb		92
92)	1,2-Dibromo-3-chloropropan	12.18	157	5456	5.30807 ppb	#	66
93)	1,2,4-Trichlorobenzene	13.00	180	40234	5.22163 ppb		86
94)	Hexachlorobutadiene	13.19	225	20523	5.22449 ppb		92
95)	Naphthalene	13.22	128	41576	4.87195 ppb		99
96)	1,2,3-Trichlorobenzene	13.46	180	24576	5.20298 ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

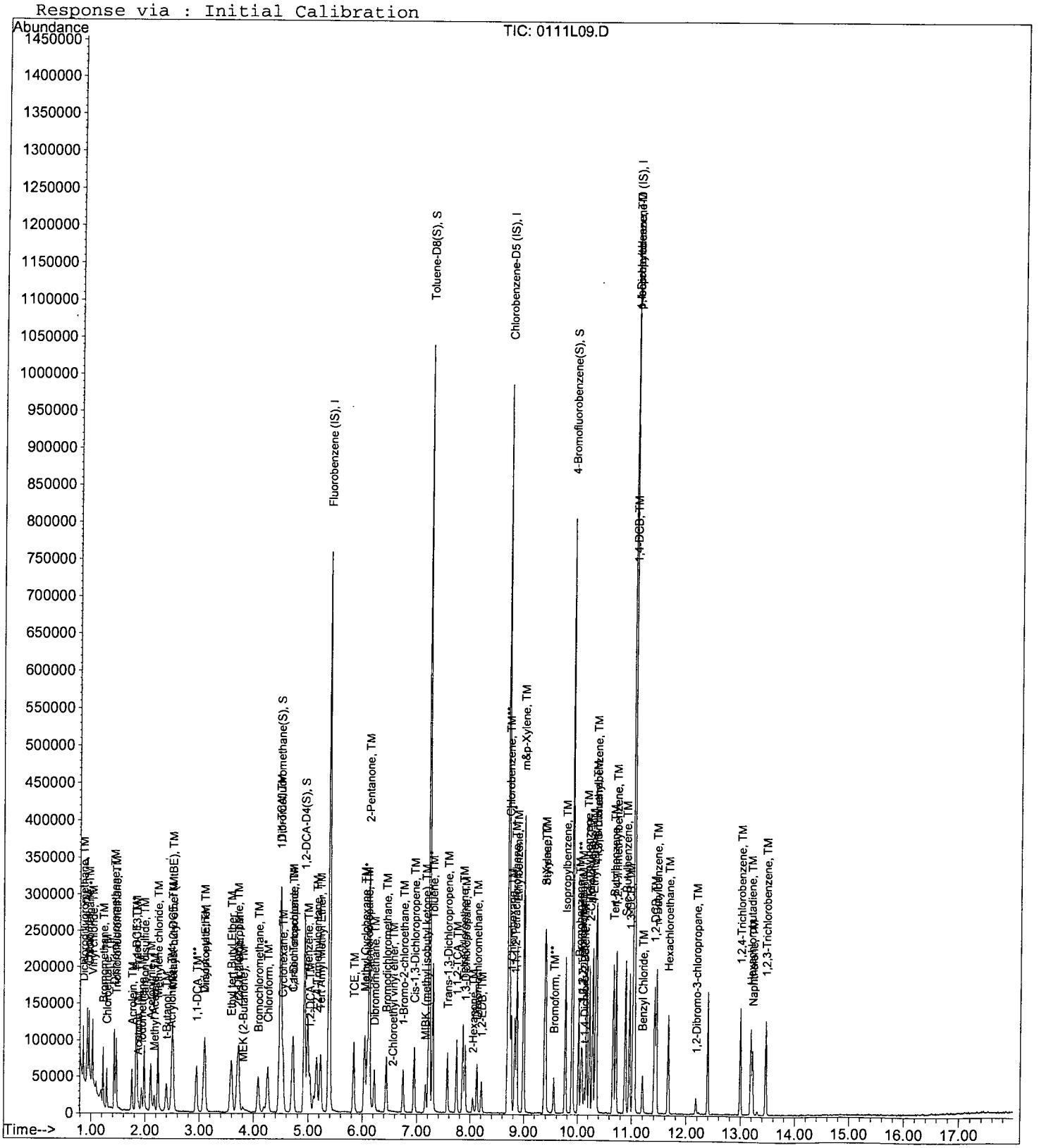
Data File : M:\LOKI\DATA\170111\0111L09.D
Acq On : 11 Jan 17 13:48
Sample : 5.0ug/L VOC STD 1/11/17N
Misc : W IS&S 1/3/17, 01/11/17

Vial: 8
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 12 7:32 2017

Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L10.D
Acq On : 11 Jan 17 14:16
Sample : 10ug/L VOC STD 1/11/17O
Misc : W IS&S 1/3/17, 01/11/17

Vial: 9
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 12 7:32 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:31:44 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	363392	25.00000 ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	319296	25.00000 ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	176960	25.00000 ppb	0.00
System Monitoring Compounds					
32) Dibromofluoromethane(S)	4.48	111	201567	24.92738 ppb	0.00
Spiked Amount 25.000			Recovery = 99.708%		
37) 1,2-DCA-D4(S)	4.92	65	219993	25.14359 ppb	0.00
Spiked Amount 25.000			Recovery = 100.576%		
57) Toluene-D8(S)	7.22	98	673119	26.81039 ppb	0.00
Spiked Amount 25.000			Recovery = 107.240%		
65) 4-Bromofluorobenzene(S)	9.89	95	240729	27.49304 ppb	0.00
Spiked Amount 25.000			Recovery = 109.972%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.85	85	85280	10.23202 ppb	100
3) Freon 114	0.93	85	54109	8.50418 ppb	100
4) Chloromethane	0.96	50	118413	10.55268 ppb	100
5) Vinyl chloride	1.03	62	98545	9.39182 ppb	100
6) Bromomethane	1.22	94	64264	9.75324 ppb	100
7) Chloroethane	1.29	64	54716	9.62495 ppb	100
8) Dichlorofluoromethane	1.43	67	153233	9.22778 ppb	100
9) Trichlorofluoromethane	1.46	101	107330	9.77857 ppb	100
10) Acrolein	1.76	56	45388	76.65584 ppb	100
11) Acetone	1.88	43	19053	9.37629 ppb	100
12) Freon-113	1.84	101	57336	8.91973 ppb	100
13) 1,1-DCE	1.83	96	60428	9.77166 ppb	100
14) t-Butanol	2.40	59	25744	126.27432 ppb	100
15) Acetonitrile	2.10	41	95241	124.73460 ppb	100
16) Methyl Acetate	2.17	43	47900	9.50581 ppb	100
17) Iodomethane	1.93	142	36216	9.40993 ppb	100
18) Acrylonitrile	2.47	52	17006	10.15036 ppb	100
19) Methylene chloride	2.24	84	76970	9.84295 ppb	100
20) Carbon disulfide	1.98	76	202349	9.50336 ppb	100
21) Methyl t-butyl ether (MtBE	2.52	73	153363	9.91850 ppb	100
22) Trans-1,2-DCE	2.50	96	64262	10.02365 ppb	100
23) Diisopropyl Ether	3.10	45	217144	10.05671 ppb	100
24) 1,1-DCA	2.95	63	129445	10.01418 ppb	100
25) Vinyl Acetate	3.10	43	46592	9.43301 ppb	100
26) Ethyl tert Butyl Ether	3.59	59	165377	10.01186 ppb	100
27) MEK (2-Butanone)	3.80	43	24643	10.45758 ppb	100
28) Cis-1,2-DCE	3.73	96	73412	9.87085 ppb	100
29) 2,2-Dichloropropane	3.70	77	30872	9.62970 ppb	100
30) Chloroform	4.25	83	128078	9.69046 ppb	100
31) Bromochloromethane	4.08	128	32825	10.44844 ppb	100
33) 1,1,1-TCA	4.47	97	98978	9.85527 ppb	100
34) Cyclohexane	4.53	41	49724	9.00085 ppb	100
35) 1,1-Dichloropropene	4.72	75	83401	9.88678 ppb	100
36) 2,2,4-Trimethylpentane	5.16	57	170020	9.27778 ppb	100
38) Carbon Tetrachloride	4.71	119	79649	10.21088 ppb	100
39) Tert Amyl Methyl Ether	5.22	73	147512	10.19877 ppb	100
40) 1,2-DCA	5.03	62	94856	9.84058 ppb	100
41) Benzene	4.99	78	271936	10.05059 ppb	100
42) TCE	5.84	95	35488	9.67860 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L10.D Vial: 9
Acq On : 11 Jan 17 14:16 Operator: PM,DG,SV,CMM
Sample : 10ug/L VOC STD 1/11/17O Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 12 7:32 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:31:44 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
43)	2-Pentanone	6.12	43	479809	127.54334 ppb	100
44)	1,2-Dichloropropane	6.09	63	78269	9.53203 ppb	100
45)	Bromodichloromethane	6.44	83	94567	10.10056 ppb	100
46)	Methyl Cyclohexane	6.04	83	83375	9.46533 ppb	100
47)	Dibromomethane	6.22	93	41631	10.07433 ppb	100
48)	2-Chloroethyl vinyl ether	6.48	43	5536	9.83478 ppb	100
49)	MIBK (methyl isobutyl ket	7.16	43	55479	10.44824 ppb	100
50)	1-Bromo-2-chloroethane	6.75	63	55648	9.94626 ppb	100
51)	Cis-1,3-Dichloropropene	6.95	75	101913	9.93418 ppb	100
52)	Toluene	7.29	91	285827	10.33052 ppb	100
53)	Trans-1,3-Dichloropropene	7.56	75	87325	10.11732 ppb	100
54)	1,1,2-TCA	7.74	83	50583	10.17282 ppb	100
55)	2-Hexanone	8.04	43	16616	9.92022 ppb	100
58)	1,2-EDB	8.21	107	53229	10.51107 ppb	100
59)	Tetrachloroethene	7.86	166	66988	10.70608 ppb	100
60)	1-Chlorohexane	8.76	91	76337	10.40561 ppb	100
61)	1,1,1,2-Tetrachloroethane	8.83	131	66129	10.55945 ppb	100
62)	m&p-Xylene	8.99	91	307040	22.74989 ppb	100
63)	o-Xylene	9.38	106	107370	10.87009 ppb	100
64)	Styrene	9.40	104	122048	10.12503 ppb	100
66)	1,3-Dichloropropane	7.90	76	99285	10.32587 ppb	100
67)	Dibromochloromethane	8.12	129	61649	10.38328 ppb	100
68)	Chlorobenzene	8.73	112	180498	10.47305 ppb	100
69)	Ethylbenzene	8.87	91	310012	10.85633 ppb	100
70)	Bromoform	9.55	173	37990	10.76148 ppb	100
72)	Isopropylbenzene	9.76	105	268466	10.32755 ppb	100
73)	1,1,2,2-Tetrachloroethane	10.07	83	69411	9.15141 ppb	100
74)	1,2,3-Trichloropropane	10.09	110	12996	10.19573 ppb	100
75)	t-1,4-Dichloro-2-Butene	10.13	53	15613	8.81594 ppb	100
76)	Bromobenzene	10.02	156	71134	9.65459 ppb	100
77)	n-Propylbenzene	10.17	91	337698	10.46569 ppb	100
78)	4-Ethyltoluene	10.29	105	274972	10.24381 ppb	100
79)	2-Chlorotoluene	10.23	91	214568	10.57100 ppb	100
80)	1,3,5-Trimethylbenzene	10.36	105	242367	10.65735 ppb	100
81)	4-Chlorotoluene	10.34	91	249321	10.70295 ppb	100
82)	Tert-Butylbenzene	10.67	119	186764	10.53400 ppb	100
83)	1,2,4-Trimethylbenzene	10.72	105	235082	10.56435 ppb	100
84)	Sec-Butylbenzene	10.88	105	284811	10.55130 ppb	100
85)	p-Isopropyltoluene	11.04	119	235291	10.35832 ppb	100
86)	Benzyl Chloride	11.20	91	70750	9.45521 ppb	100
87)	1,3-DCB	10.96	146	140028	10.19117 ppb	100
88)	1,4-DCB	11.05	146	141497	9.97181 ppb	100
89)	n-Butylbenzene	11.44	91	212409	9.95325 ppb	100
90)	1,2-DCB	11.41	146	132574	10.15231 ppb	100
91)	Hexachloroethane	11.66	117	47682	9.05771 ppb	100
92)	1,2-Dibromo-3-chloropropan	12.18	157	10590	10.13892 ppb	100
93)	1,2,4-Trichlorobenzene	13.00	180	79580	10.16367 ppb	100
94)	Hexachlorobutadiene	13.19	225	40293	10.09406 ppb	100
95)	Naphthalene	13.22	128	90224	9.86889 ppb	100
96)	1,2,3-Trichlorobenzene	13.46	180	50544	10.53037 ppb	100

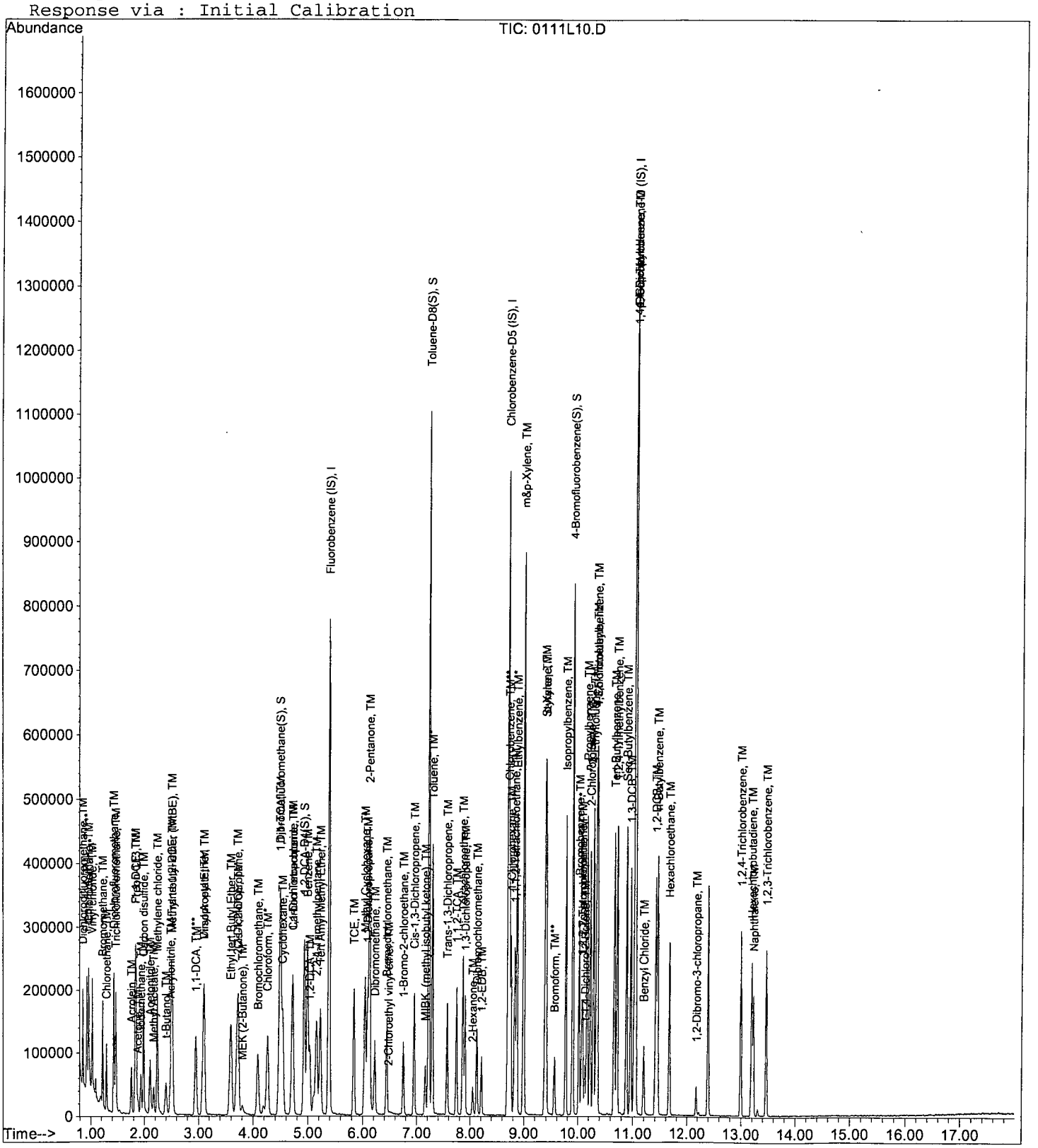
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\170111\0111L10.D Vial: 9
Acq On : 11 Jan 17 14:16 Operator: PM,DG,SV,CMM
Sample : 10ug/L VOC STD 1/11/17O Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 12 7:32 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



519

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L11.D Vial: 10
Acq On : 11 Jan 17 14:44 Operator: PM,DG,SV,CMM
Sample : 20ug/L VOC STD 1/11/17P Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 12 7:32 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:31:44 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	374528	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	339392	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	187776	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	406045	48.72170 ppb		0.00
Spiked Amount 25.000			Recovery = 194.888%			
37) 1,2-DCA-D4(S)	4.92	65	451511	50.07003 ppb		0.00
Spiked Amount 25.000			Recovery = 200.280%			
57) Toluene-D8(S)	7.22	98	1402444	52.55193 ppb		0.00
Spiked Amount 25.000			Recovery = 210.208%			
65) 4-Bromofluorobenzene(S)	9.89	95	503786	54.12929 ppb		0.00
Spiked Amount 25.000			Recovery = 216.516%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	177856	20.70493 ppb		98
3) Freon 114	0.93	85	118921	18.13480 ppb		97
4) Chloromethane	0.96	50	227486	20.43287 ppb		99
5) Vinyl chloride	1.02	62	200733	18.56201 ppb		100
6) Bromomethane	1.21	94	168064	18.37340 ppb		98
7) Chloroethane	1.29	64	105499	18.00627 ppb		99
8) Dichlorofluoromethane	1.42	67	310428	18.13831 ppb		99
9) Trichlorofluoromethane	1.46	101	217420	19.21962 ppb		96
10) Acrolein	1.76	56	53927	88.36932 ppb	#	98
11) Acetone	1.88	43	36787	19.57360 ppb		96
12) Freon-113	1.84	101	120732	18.22376 ppb		96
13) 1,1-DCE	1.83	96	124020	19.45867 ppb		98
14) t-Butanol	2.40	59	31968	152.14075 ppb		96
15) Acetonitrile	2.11	41	107955	137.18190 ppb		94
16) Methyl Acetate	2.17	43	94499	18.19583 ppb		92
17) Iodomethane	1.93	142	85696	21.60417 ppb		97
18) Acrylonitrile	2.48	52	32831	19.56455 ppb		95
19) Methylene chloride	2.23	84	149513	18.55127 ppb		100
20) Carbon disulfide	1.98	76	402250	18.33004 ppb		100
21) Methyl t-butyl ether (MtBE	2.52	73	318206	19.96756 ppb		99
22) Trans-1,2-DCE	2.50	96	132428	20.04207 ppb		98
23) Diisopropyl Ether	3.10	45	450801	20.25741 ppb		99
24) 1,1-DCA	2.95	63	267684	20.09295 ppb		99
25) Vinyl Acetate	3.10	43	97517	19.15625 ppb		99
26) Ethyl tert Butyl Ether	3.59	59	341138	20.03830 ppb		96
27) MEK (2-Butanone)	3.80	43	47425	20.20607 ppb	#	87
28) Cis-1,2-DCE	3.73	96	155407	20.27444 ppb		97
29) 2,2-Dichloropropane	3.70	77	65256	19.74965 ppb		99
30) Chloroform	4.25	83	266417	19.55793 ppb		99
31) Bromochloromethane	4.08	128	68792	21.94098 ppb		97
33) 1,1,1-TCA	4.47	97	201386	19.45585 ppb		99
34) Cyclohexane	4.53	41	105863	18.59314 ppb		93
35) 1,1-Dichloropropene	4.72	75	182889	21.03596 ppb		98
36) 2,2,4-Trimethylpentane	5.15	57	378066	20.01718 ppb		92
38) Carbon Tetrachloride	4.70	119	159980	19.89938 ppb		96
39) Tert Amyl Methyl Ether	5.22	73	305555	20.49751 ppb		96
40) 1,2-DCA	5.03	62	191378	19.26367 ppb		97
41) Benzene	4.99	78	562029	20.15461 ppb		99
42) TCE	5.84	95	74408	19.68982 ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L11.D Vial: 10
Acq On : 11 Jan 17 14:44 Operator: PM,DG,SV,CMM
Sample : 20ug/L VOC STD 1/11/17P Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 12 7:32 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:31:44 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
43) 2-Pentanone	6.12	43	585738	151.07197 ppb	98
44) 1,2-Dichloropropane	6.09	63	160064	18.91387 ppb	100
45) Bromodichloromethane	6.44	83	193555	20.05863 ppb	99
46) Methyl Cyclohexane	6.04	83	181108	19.94935 ppb	96
47) Dibromomethane	6.22	93	86994	20.42582 ppb	93
48) 2-Chloroethyl vinyl ether	6.52	43	10172	17.53340 ppb	100
49) MIBK (methyl isobutyl ket	7.16	43	112328	21.28461 ppb	97
50) 1-Bromo-2-chloroethane	6.75	63	108504	18.81686 ppb	99
51) Cis-1,3-Dichloropropene	6.95	75	215397	20.37197 ppb	95
52) Toluene	7.29	91	597076	20.93822 ppb	100
53) Trans-1,3-Dichloropropene	7.56	75	186429	20.95711 ppb	99
54) 1,1,2-TCA	7.74	83	102975	20.09369 ppb	97
55) 2-Hexanone	8.04	43	33080	19.16247 ppb	98
58) 1,2-EDB	8.20	107	108820	20.21619 ppb	96
59) Tetrachloroethene	7.86	166	135438	20.36414 ppb	97
60) 1-Chlorohexane	8.76	91	158699	20.35159 ppb	98
61) 1,1,1,2-Tetrachloroethane	8.83	131	134873	20.26125 ppb	96
62) m&p-Xylene	8.99	91	667260	46.51267 ppb	99
63) o-Xylene	9.38	106	227742	21.69128 ppb	90
64) Styrene	9.40	104	273088	20.73846 ppb	99
66) 1,3-Dichloropropane	7.90	76	202529	19.81628 ppb	97
67) Dibromochloromethane	8.12	129	131822	20.88758 ppb	98
68) Chlorobenzene	8.73	112	366315	19.99619 ppb	96
69) Ethylbenzene	8.87	91	655240	21.58723 ppb	99
70) Bromoform	9.55	173	77762	20.72345 ppb	98
72) Isopropylbenzene	9.76	105	577636	20.94099 ppb	100
73) 1,1,2,2-Tetrachloroethane	10.07	83	144672	17.97543 ppb	100
74) 1,2,3-Trichloropropane	10.09	110	24552	18.15225 ppb	92
75) t-1,4-Dichloro-2-Butene	10.12	53	35828	19.06512 ppb	97
76) Bromobenzene	10.01	156	155334	19.86818 ppb	92
77) n-Propylbenzene	10.17	91	726811	21.22736 ppb	98
78) 4-Ethyltoluene	10.28	105	589311	20.68963 ppb	98
79) 2-Chlorotoluene	10.23	91	447186	20.76225 ppb	99
80) 1,3,5-Trimethylbenzene	10.36	105	507522	21.03127 ppb	98
81) 4-Chlorotoluene	10.34	91	523594	21.18235 ppb	96
82) Tert-Butylbenzene	10.66	119	398124	21.16185 ppb	99
83) 1,2,4-Trimethylbenzene	10.72	105	512899	21.72153 ppb	100
84) Sec-Butylbenzene	10.88	105	617538	21.55997 ppb	98
85) p-Isopropyltoluene	11.04	119	503838	20.90306 ppb	99
86) Benzyl Chloride	11.19	91	158455	19.95655 ppb	99
87) 1,3-DCB	10.96	146	290015	19.89137 ppb	99
88) 1,4-DCB	11.05	146	300158	19.93479 ppb	98
89) n-Butylbenzene	11.44	91	472478	20.86454 ppb	99
90) 1,2-DCB	11.41	146	270362	19.51135 ppb	99
91) Hexachloroethane	11.66	117	100720	18.03078 ppb	93
92) 1,2-Dibromo-3-chloropropan	12.18	157	21877	19.73870 ppb	94
93) 1,2,4-Trichlorobenzene	13.00	180	173781	20.91626 ppb	93
94) Hexachlorobutadiene	13.19	225	83757	19.77390 ppb	86
95) Naphthalene	13.22	128	207808	20.52253 ppb	99
96) 1,2,3-Trichlorobenzene	13.46	180	110296	21.65554 ppb	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

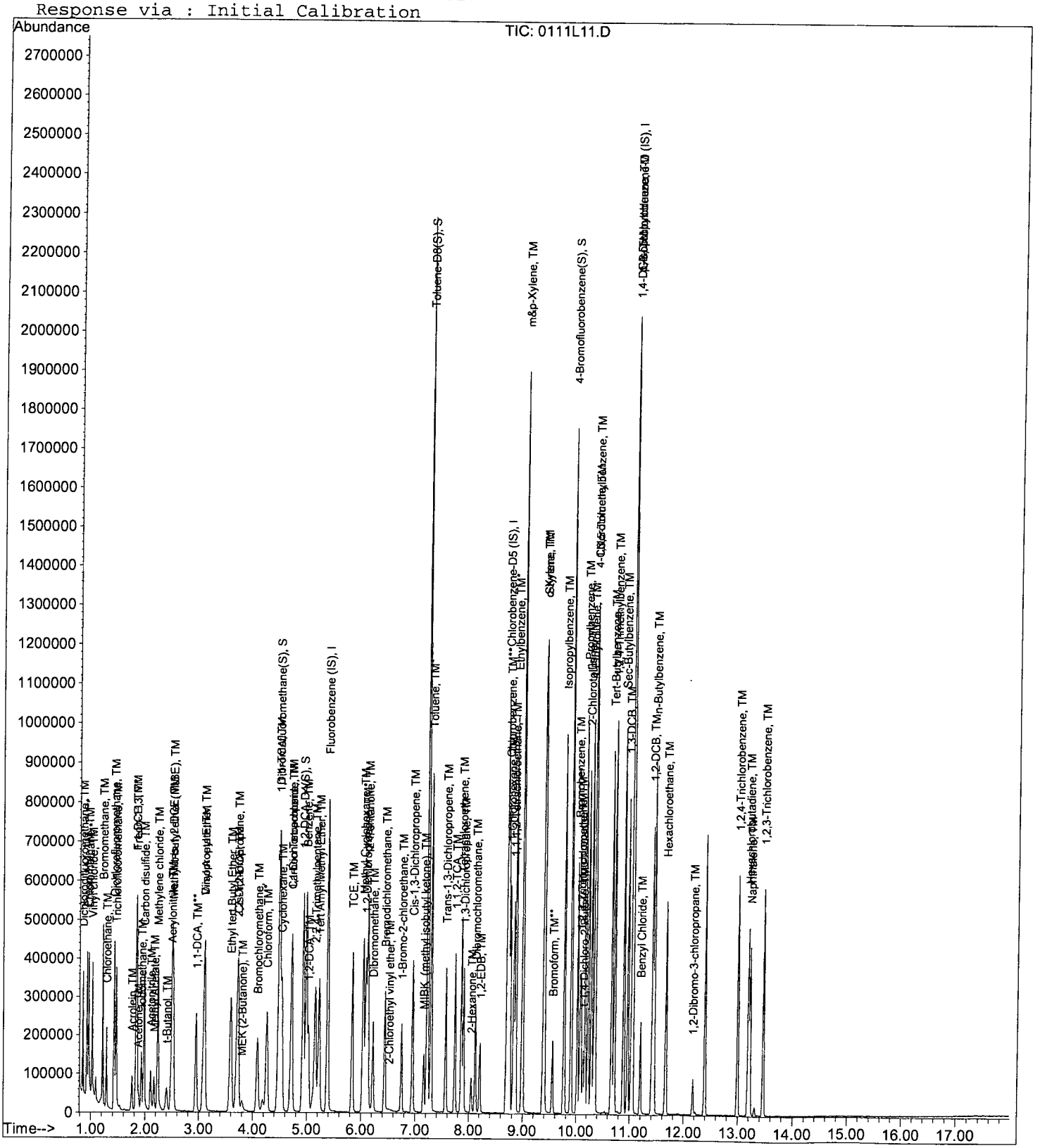
Data File : M:\LOKI\DATA\170111\0111L11.D
Acq On : 11 Jan 17 14:44
Sample : 20ug/L VOC STD 1/11/17P
Misc : W IS&S 1/3/17, 01/11/17

Vial: 10
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 12 7:32 2017

Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L12.D
Acq On : 11 Jan 17 15:12
Sample : 40ug/L VOC STD 1/11/17Q
Misc : W IS&S 1/3/17, 01/11/17

Vial: 11
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 12 7:32 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:31:44 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	394368	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	367744	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	189824	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	426658	48.61953 ppb		0.00
Spiked Amount 25.000			Recovery = 194.480%			
37) 1,2-DCA-D4(S)	4.92	65	449789	47.36973 ppb		0.00
Spiked Amount 25.000			Recovery = 189.480%			
57) Toluene-D8(S)	7.22	98	1456385	50.36575 ppb		0.00
Spiked Amount 25.000			Recovery = 201.464%			
65) 4-Bromofluorobenzene(S)	9.89	95	518450	51.41018 ppb		0.00
Spiked Amount 25.000			Recovery = 205.640%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	359936	39.79360 ppb		94
3) Freon 114	0.93	85	238907	34.59917 ppb		92
4) Chloromethane	0.96	50	467331	40.70351 ppb		99
5) Vinyl chloride	1.02	62	415498	36.48865 ppb		99
6) Bromomethane	1.21	94	414208	30.90921 ppb		98
7) Chloroethane	1.28	64	224121	36.32792 ppb		100
8) Dichlorofluoromethane	1.42	67	637549	35.37791 ppb		100
9) Trichlorofluoromethane	1.46	101	449513	37.73724 ppb		97
10) Acrolein	1.76	56	70592	109.85842 ppb	#	97
11) Acetone	1.88	43	70156	37.31593 ppb		95
12) Freon-113	1.84	101	242944	34.82605 ppb		93
13) 1,1-DCE	1.83	96	259656	38.69032 ppb		96
14) t-Butanol	2.41	59	32456	146.69243 ppb		99
15) Acetonitrile	2.52	41	153270	184.96683 ppb	#	43
16) Methyl Acetate	2.17	43	198380	36.27649 ppb		92
17) Iodomethane	1.93	142	179264	42.91932 ppb		98
18) Acrylonitrile	2.47	52	68429	39.34504 ppb		98
19) Methylene chloride	2.23	84	311408	36.69502 ppb		98
20) Carbon disulfide	1.98	76	849382	36.75810 ppb		100
21) Methyl t-butyl ether (MtBE	2.52	73	669620	39.90502 ppb		99
22) Trans-1,2-DCE	2.49	96	274326	39.42869 ppb		98
23) Diisopropyl Ether	3.10	45	958184	40.89127 ppb		99
24) 1,1-DCA	2.95	63	544381	38.80672 ppb		98
25) Vinyl Acetate	3.10	43	199232	37.16824 ppb		99
26) Ethyl tert Butyl Ether	3.59	59	743662	41.48479 ppb		99
27) MEK (2-Butanone)	3.79	43	95702	39.44137 ppb	#	82
28) Cis-1,2-DCE	3.72	96	314514	38.96736 ppb		97
29) 2,2-Dichloropropane	3.70	77	132224	38.00423 ppb		98
30) Chloroform	4.25	83	538567	37.54769 ppb		97
31) Bromochloromethane	4.08	128	139411	42.84961 ppb		100
33) 1,1,1-TCA	4.47	97	421547	38.67671 ppb		99
34) Cyclohexane	4.53	41	221500	36.94578 ppb		98
35) 1,1-Dichloropropene	4.72	75	381440	41.66617 ppb		99
36) 2,2,4-Trimethylpentane	5.15	57	792517	39.84983 ppb		89
38) Carbon Tetrachloride	4.70	119	334052	39.46122 ppb		96
39) Tert Amyl Methyl Ether	5.22	73	648771	41.33193 ppb		96
40) 1,2-DCA	5.03	62	387403	37.03332 ppb		98
41) Benzene	4.99	78	1156284	39.37884 ppb		99
42) TCE	5.84	95	155136	38.98677 ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L12.D Vial: 11
Acq On : 11 Jan 17 15:12 Operator: PM,DG,SV,CMM
Sample : 40ug/L VOC STD 1/11/17Q Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 12 7:32 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:31:44 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
43)	2-Pentanone	6.12	43	720700	176.52964 ppb	100
44)	1,2-Dichloropropane	6.09	63	332282	37.28860 ppb	99
45)	Bromodichloromethane	6.44	83	403309	39.69331 ppb	98
46)	Methyl Cyclohexane	6.04	83	385593	40.33694 ppb	94
47)	Dibromomethane	6.22	93	173377	38.66023 ppb	98
48)	2-Chloroethyl vinyl ether	6.49	43	18124	29.66856 ppb	100
49)	MIBK (methyl isobutyl ket	7.16	43	211044	38.59540 ppb	96
50)	1-Bromo-2-chloroethane	6.75	63	230080	37.89333 ppb	99
51)	Cis-1,3-Dichloropropene	6.95	75	459934	41.31156 ppb	97
52)	Toluene	7.29	91	1237947	41.22824 ppb	100
53)	Trans-1,3-Dichloropropene	7.56	75	390064	41.64247 ppb	99
54)	1,1,2-TCA	7.74	83	208610	38.65855 ppb	98
55)	2-Hexanone	8.04	43	74521	40.99655 ppb	99
58)	1,2-EDB	8.20	107	223349	38.29400 ppb	100
59)	Tetrachloroethene	7.86	166	277827	38.55280 ppb	96
60)	1-Chlorohexane	8.76	91	344162	40.73269 ppb	98
61)	1,1,1,2-Tetrachloroethane	8.83	131	273733	37.95109 ppb	94
62)	m&p-Xylene	8.99	91	1340736	86.25325 ppb	100
63)	o-Xylene	9.38	106	487547	42.85628 ppb	96
64)	Styrene	9.40	104	582080	40.29204 ppb	97
66)	1,3-Dichloropropane	7.90	76	414365	37.41743 ppb	99
67)	Dibromochloromethane	8.12	129	270585	39.56944 ppb	98
68)	Chlorobenzene	8.73	112	766168	38.59868 ppb	98
69)	Ethylbenzene	8.87	91	1360108	41.35479 ppb	98
70)	Bromoform	9.55	173	159988	39.34940 ppb	99
72)	Isopropylbenzene	9.76	105	1242205	44.54768 ppb	99
73)	1,1,2,2-Tetrachloroethane	10.07	83	277954	34.16305 ppb	99
74)	1,2,3-Trichloropropane	10.09	110	52728	38.56328 ppb	95
75)	t-1,4-Dichloro-2-Butene	10.13	53	72333	38.07523 ppb	91
76)	Bromobenzene	10.01	156	317746	40.20319 ppb	92
77)	n-Propylbenzene	10.17	91	1566203	45.24926 ppb	99
78)	4-Ethyltoluene	10.29	105	1258509	43.70725 ppb	99
79)	2-Chlorotoluene	10.23	91	923390	42.40922 ppb	99
80)	1,3,5-Trimethylbenzene	10.36	105	1074266	44.03637 ppb	100
81)	4-Chlorotoluene	10.34	91	1072538	42.92212 ppb	98
82)	Tert-Butylbenzene	10.67	119	854794	44.94545 ppb	98
83)	1,2,4-Trimethylbenzene	10.72	105	1072992	44.95148 ppb	99
84)	Sec-Butylbenzene	10.88	105	1300429	44.91175 ppb	100
85)	p-Isopropyltoluene	11.04	119	1069120	43.87675 ppb	100
86)	Benzyl Chloride	11.19	91	340853	42.46544 ppb	97
87)	1,3-DCB	10.96	146	597554	40.54248 ppb	99
88)	1,4-DCB	11.05	146	602782	39.60144 ppb	98
89)	n-Butylbenzene	11.44	91	1024455	44.75164 ppb	99
90)	1,2-DCB	11.41	146	553735	39.53053 ppb	97
91)	Hexachloroethane	11.66	117	206415	36.55350 ppb	93
92)	1,2-Dibromo-3-chloropropan	12.18	157	45954	41.01503 ppb	87
93)	1,2,4-Trichlorobenzene	13.00	180	377494	44.94493 ppb	95
94)	Hexachlorobutadiene	13.19	225	171637	40.08401 ppb	90
95)	Naphthalene	13.22	128	474688	43.81402 ppb	98
96)	1,2,3-Trichlorobenzene	13.46	180	242176	47.03588 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

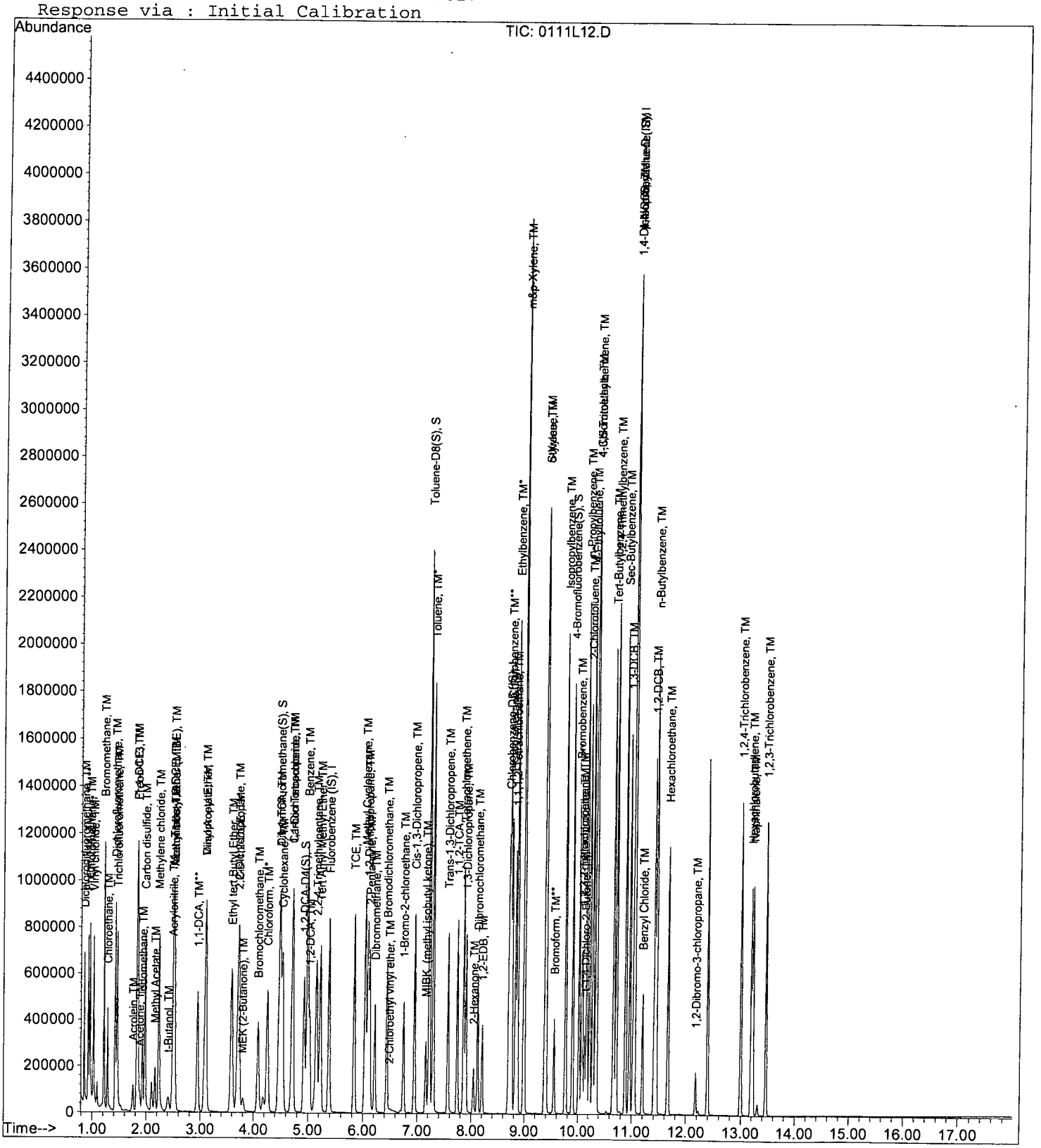
Data File : M:\LOKI\DATA\170111\0111L12.D
Acq On : 11 Jan 17 15:12
Sample : 40ug/L VOC STD 1/11/17Q
Misc : W IS&S 1/3/17, 01/11/17

Vial: 11
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 12 7:32 2017

Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



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Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L13.D Vial: 12
Acq On : 11 Jan 17 15:41 Operator: PM,DG,SV,CMM
Sample : 100ug/L VOC STD 1/11/17R Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 12 7:32 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:31:44 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	402176	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	375168	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	202240	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	798040	89.17458 ppb		0.00
Spiked Amount 25.000			Recovery = 356.700%			
37) 1,2-DCA-D4(S)	4.92	65	846915	87.46161 ppb		0.00
Spiked Amount 25.000			Recovery = 349.848%			
57) Toluene-D8(S)	7.22	98	2844404	96.42069 ppb		0.00
Spiked Amount 25.000			Recovery = 385.684%			
65) 4-Bromofluorobenzene(S)	9.89	95	1032194	100.32828 ppb		0.00
Spiked Amount 25.000			Recovery = 401.312%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	863936	93.66020 ppb		95
3) Freon 114	0.93	85	609558	86.56401 ppb		96
4) Chloromethane	0.96	50	1149344	99.40789 ppb		100
5) Vinyl chloride	1.02	62	1065421	91.74779 ppb		100
6) Bromomethane	1.21	94	1038930	51.66207 ppb		99
7) Chloroethane	1.28	64	559820	88.97990 ppb		98
8) Dichlorofluoromethane	1.42	67	1627372	88.55049 ppb		100
9) Trichlorofluoromethane	1.46	101	1158133	95.33927 ppb		97
10) Acrolein	1.76	56	76424	116.62540 ppb	#	98
11) Acetone	1.88	43	177125	95.77716 ppb		96
12) Freon-113	1.84	101	622470	87.49879 ppb		94
13) 1,1-DCE	1.83	96	657599	96.08390 ppb		97
14) t-Butanol	2.43	59	32728	145.04998 ppb	#	91
15) Acetonitrile	2.52	41	375231	444.03880 ppb	#	40
16) Methyl Acetate	2.17	43	482202	86.46531 ppb		92
17) Iodomethane	1.93	142	485952	114.08765 ppb		100
18) Acrylonitrile	2.48	52	171683	97.71929 ppb		100
19) Methylene chloride	2.23	84	796801	92.06885 ppb		100
20) Carbon disulfide	1.98	76	2177596	92.40868 ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	1691247	98.83066 ppb		99
22) Trans-1,2-DCE	2.49	96	706177	99.52781 ppb		97
23) Diisopropyl Ether	3.10	45	2516019	105.28854 ppb		98
24) 1,1-DCA	2.94	63	1403736	98.12393 ppb		100
25) Vinyl Acetate	3.10	43	501185	91.68461 ppb		99
26) Ethyl tert Butyl Ether	3.59	59	1971358	107.83614 ppb		99
27) MEK (2-Butanone)	3.79	43	242422	99.13082 ppb	#	87
28) Cis-1,2-DCE	3.72	96	812973	98.76945 ppb		99
29) 2,2-Dichloropropane	3.70	77	353216	99.55143 ppb		99
30) Chloroform	4.25	83	1381366	94.43605 ppb		100
31) Bromochloromethane	4.08	128	350818	106.72169 ppb		94
33) 1,1,1-TCA	4.47	97	1082771	97.41495 ppb		98
34) Cyclohexane	4.53	41	579568	94.79405 ppb		98
35) 1,1-Dichloropropene	4.72	75	985656	105.57673 ppb		99
36) 2,2,4-Trimethylpentane	5.15	57	2080377	102.57593 ppb		86
38) Carbon Tetrachloride	4.70	119	856664	99.23217 ppb		97
39) Tert Amyl Methyl Ether	5.22	73	1689984	105.57531 ppb		94
40) 1,2-DCA	5.03	62	959457	89.93749 ppb		98
41) Benzene	4.98	78	2972111	99.25421 ppb		100
42) TCE	5.84	95	412032	101.53626 ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L13.D Vial: 12
Acq On : 11 Jan 17 15:41 Operator: PM,DG,SV,CMM
Sample : 100ug/L VOC STD 1/11/17R Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 12 7:32 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:31:44 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43)	2-Pentanone	6.12	43	817185	196.27682 ppb		99
44)	1,2-Dichloropropane	6.09	63	858534	94.47399 ppb		99
45)	Bromodichloromethane	6.44	83	1039919	100.36089 ppb		99
46)	Methyl Cyclohexane	6.04	83	1025944	105.24052 ppb		95
47)	Dibromomethane	6.22	93	436391	95.41886 ppb		100
48)	2-Chloroethyl vinyl ether	6.47	43	665	1.06746 ppb		100
49)	MIBK (methyl isobutyl ket	7.16	43	528539	95.92762 ppb		97
50)	1-Bromo-2-chloroethane	6.75	63	585664	94.58407 ppb		99
51)	Cis-1,3-Dichloropropene	6.95	75	1230049	108.33879 ppb		96
52)	Toluene	7.29	91	3221219	105.19584 ppb		99
53)	Trans-1,3-Dichloropropene	7.56	75	1052228	110.15290 ppb		99
54)	1,1,2-TCA	7.74	83	532875	96.83253 ppb		95
55)	2-Hexanone	8.04	43	204011	110.05448 ppb		98
58)	1,2-EDB	8.20	107	579063	97.31781 ppb		99
59)	Tetrachloroethene	7.86	166	723719	98.43992 ppb		97
60)	1-Chlorohexane	8.76	91	932970	108.23499 ppb		96
61)	1,1,1,2-Tetrachloroethane	8.83	131	728267	98.97092 ppb		97
62)	m&p-Xylene	8.99	91	3784706	238.66249 ppb		100
63)	o-Xylene	9.38	106	1318662	113.61908 ppb		97
64)	Styrene	9.40	104	1593856	107.26804 ppb		98
66)	1,3-Dichloropropane	7.90	76	1065178	94.28290 ppb		99
67)	Dibromochloromethane	8.12	129	715563	102.57084 ppb		99
68)	Chlorobenzene	8.73	112	2034039	100.44482 ppb		99
69)	Ethylbenzene	8.87	91	3585363	106.85759 ppb		99
70)	Bromoform	9.55	173	422892	101.95300 ppb		98
72)	Isopropylbenzene	9.76	105	3316350	111.62880 ppb		100
73)	1,1,2,2-Tetrachloroethane	10.07	83	737154	85.04055 ppb		98
74)	1,2,3-Trichloropropane	10.09	110	127280	87.37292 ppb		95
75)	t-1,4-Dichloro-2-Butene	10.13	53	189887	93.81781 ppb		88
76)	Bromobenzene	10.01	156	830618	98.64291 ppb		95
77)	n-Propylbenzene	10.17	91	4080065	110.64062 ppb		99
78)	4-Ethyltoluene	10.29	105	3310152	107.90193 ppb		99
79)	2-Chlorotoluene	10.23	91	2425825	104.57277 ppb		99
80)	1,3,5-Trimethylbenzene	10.36	105	2805803	107.95454 ppb		99
81)	4-Chlorotoluene	10.34	91	2839143	106.64482 ppb		97
82)	Tert-Butylbenzene	10.66	119	2288850	112.96026 ppb		99
83)	1,2,4-Trimethylbenzene	10.72	105	2865001	112.65653 ppb		100
84)	Sec-Butylbenzene	10.89	105	3459913	112.15603 ppb		100
85)	p-Isopropyltoluene	11.04	119	2906917	111.97593 ppb		99
86)	Benzyl Chloride	11.19	91	1029758	120.41698 ppb		97
87)	1,3-DCB	10.96	146	1590999	101.31811 ppb		99
88)	1,4-DCB	11.05	146	1629672	100.49281 ppb		99
89)	n-Butylbenzene	11.44	91	2800206	114.81276 ppb		98
90)	1,2-DCB	11.41	146	1516030	101.58335 ppb		98
91)	Hexachloroethane	11.66	117	571028	94.91376 ppb		92
92)	1,2-Dibromo-3-chloropropan	12.18	157	127078	106.45698 ppb	#	84
93)	1,2,4-Trichlorobenzene	13.00	180	1065313	119.05070 ppb		97
94)	Hexachlorobutadiene	13.19	225	485716	106.46987 ppb		90
95)	Naphthalene	13.22	128	1275904	99.22375 ppb		99
96)	1,2,3-Trichlorobenzene	13.46	180	652544	118.95756 ppb		97

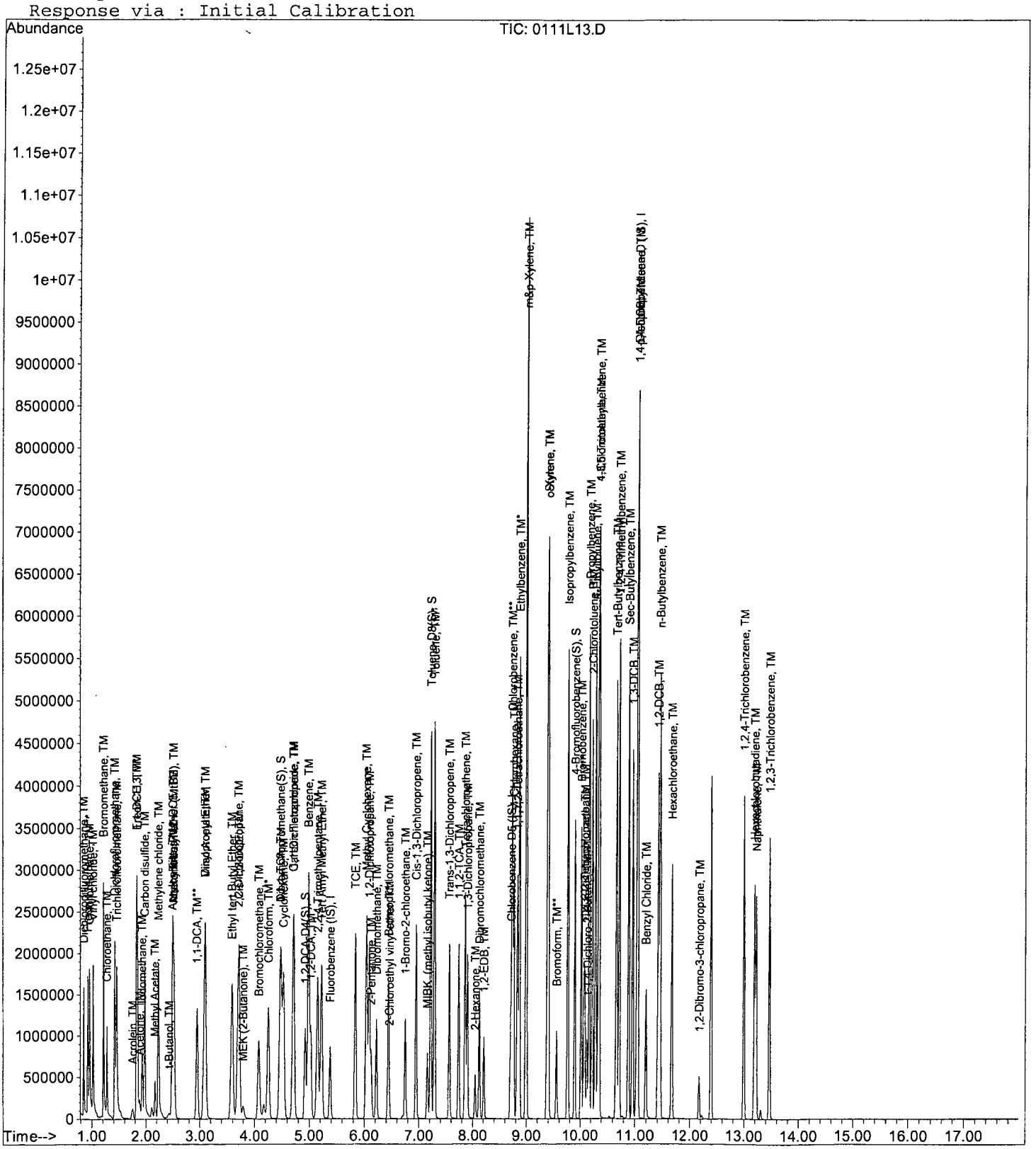
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\170111\0111L13.D Vial: 12
Acq On : 11 Jan 17 15:41 Operator: PM,DG,SV,CMM
Sample : 100ug/L VOC STD 1/11/17R Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 12 7:32 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



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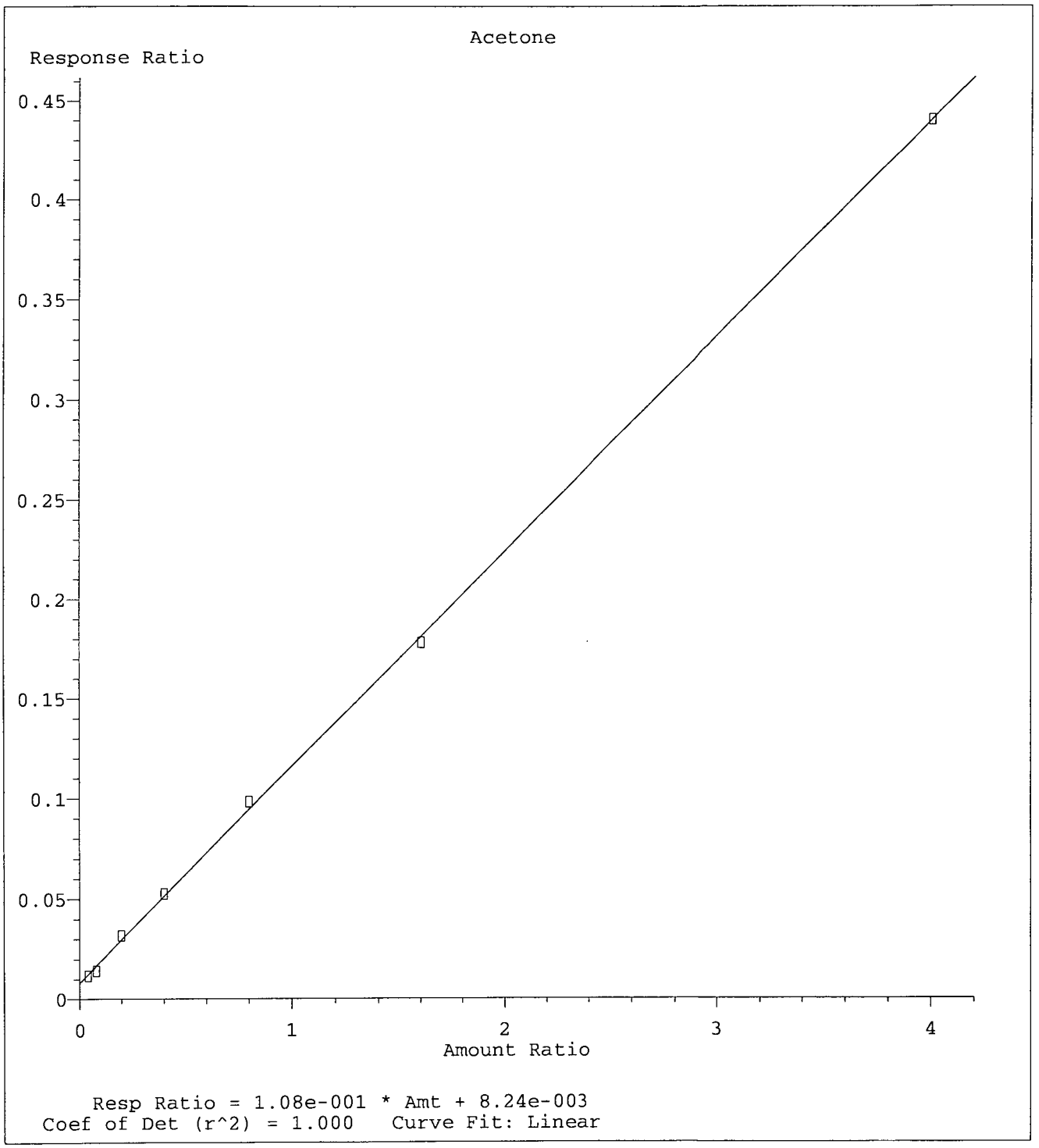
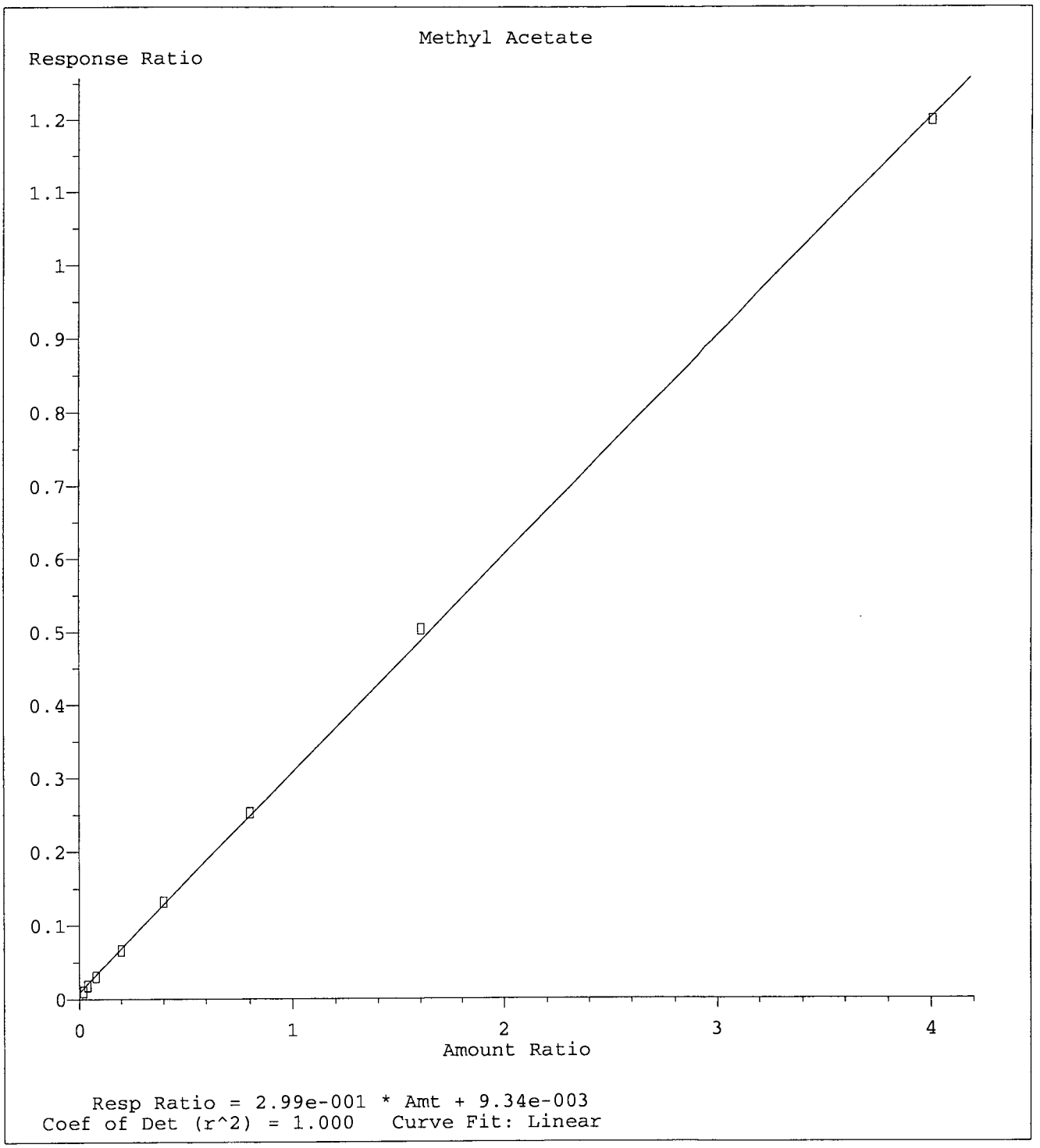
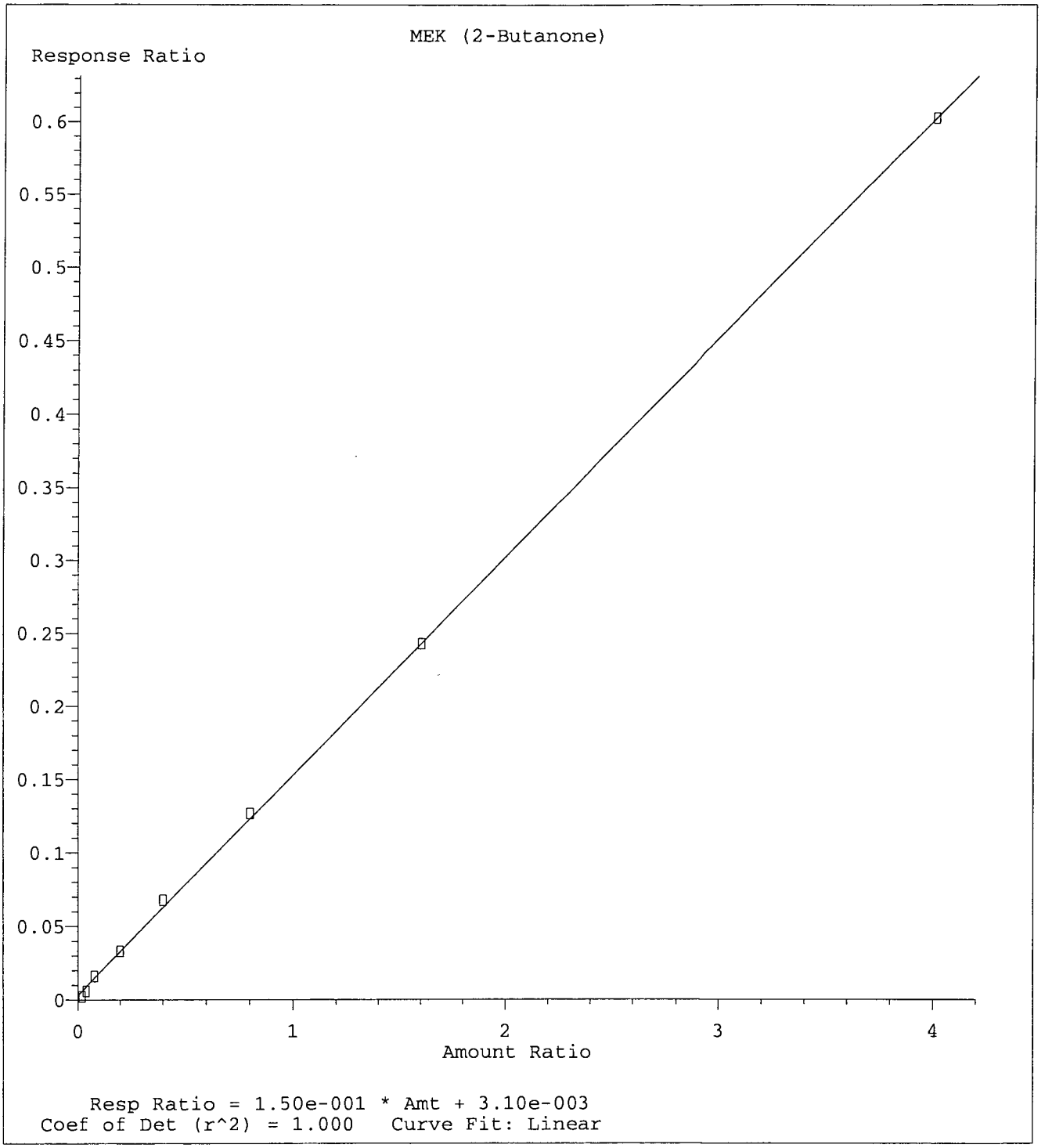


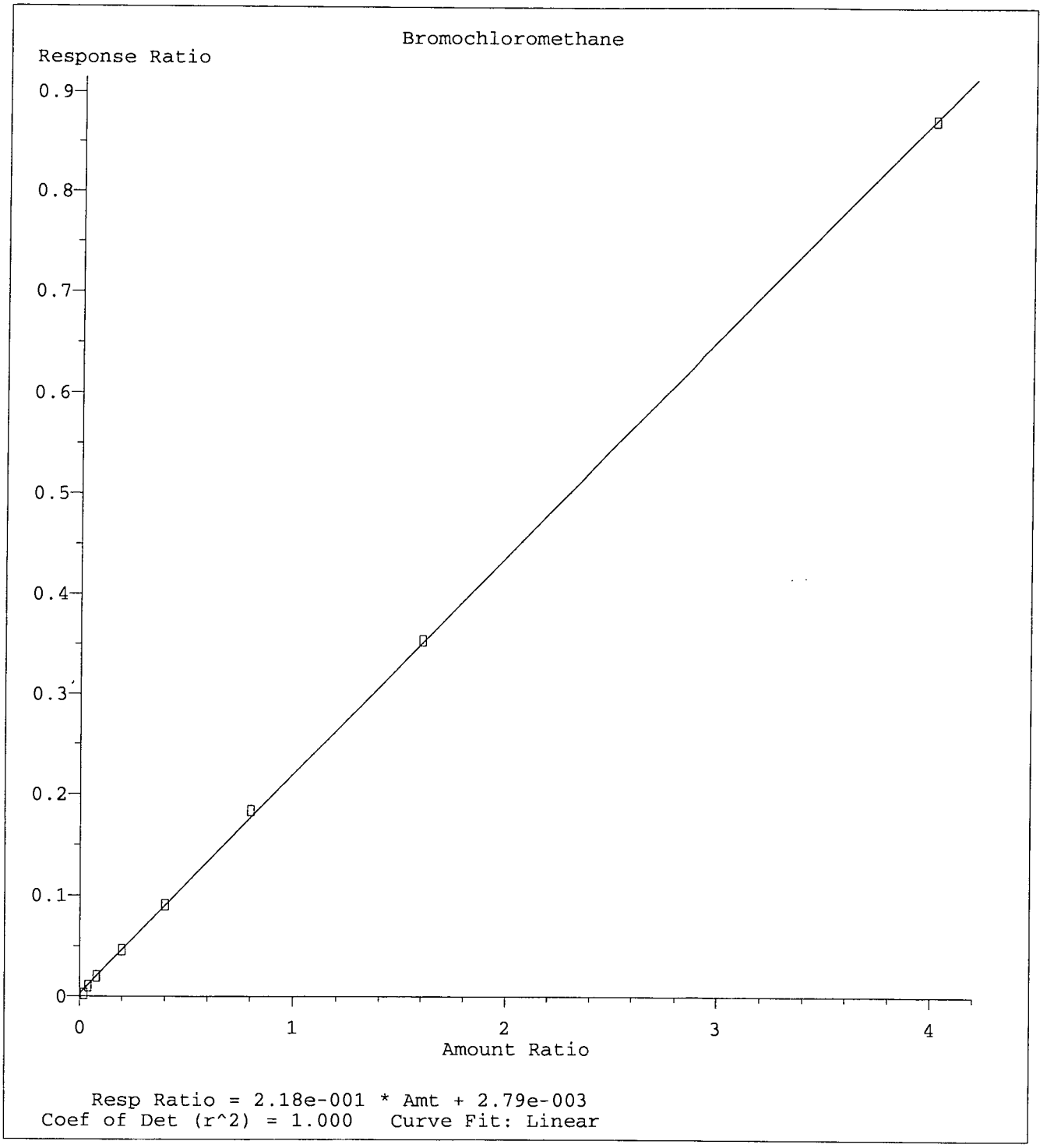
Method Name: M:\LOKI\DATA\170111\LALLW.M
Calibration Table Last Updated: Thu Jan 12 07:59:03 2017



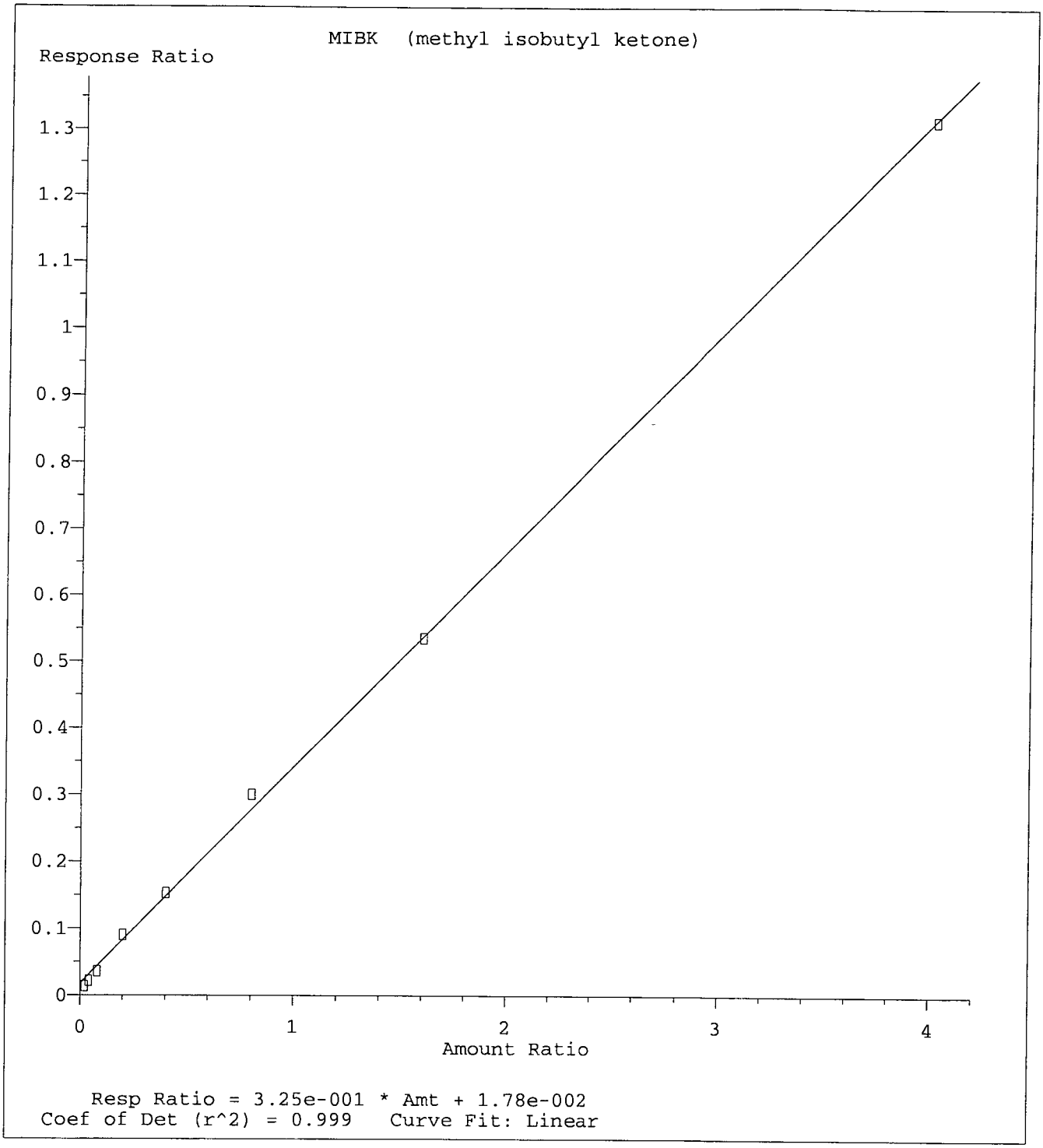
Method Name: M:\LOKI\DATA\170111\LALLW.M
Calibration Table Last Updated: Thu Jan 12 07:59:03 2017



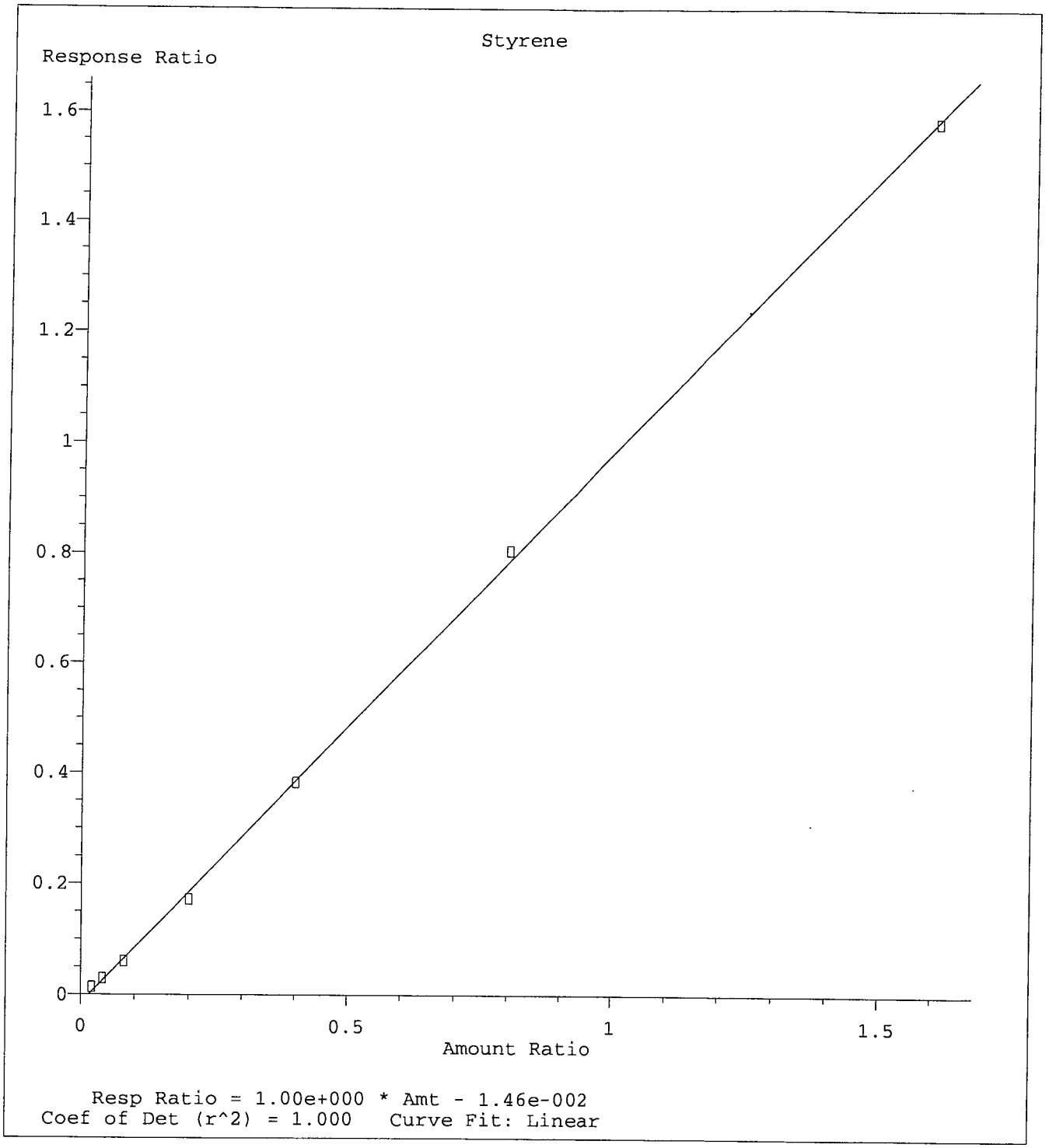
Method Name: M:\LOKI\DATA\170111\LALLW.M
Calibration Table Last Updated: Thu Jan 12 07:59:03 2017



Method Name: M:\LOKI\DATA\170111\LALLW.M
Calibration Table Last Updated: Thu Jan 12 07:59:03 2017



Method Name: M:\LOKI\DATA\170111\LALLW.M
Calibration Table Last Updated: Thu Jan 12 07:59:03 2017



Method Name: M:\LOKI\DATA\170111\LALLW.M
Calibration Table Last Updated: Thu Jan 12 07:59:03 2017

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 1/11/17
Instrument: Loki
Initial Cal. Date: 1/11/17
Data File: 0111L18.D

		Compound	MEAN	CCRF	%D	%Drift		
1	TM	Dichlorodifluoromethane	0.5777	0.6051	4.7	TM		
2	TM	Freon 114	0.4069	0.4064	0.11	TM		
3	TM**	Chloromethane	0.8360	0.7753	7.3	TM**		
4	TM*	Vinyl chloride	0.6936	0.6880	0.81	TM*		
5	TM	Bromomethane	0.4725	0.4239	10	TM		
6	TM	Chloroethane	0.3946	0.3801	3.7	TM		
7	TM	Dichlorofluoromethane	1.073	1.117	4.1	TM		
8	TM	Trichlorofluoromethane	0.7410	0.8312	12	TM		
9	TM	Acrolein	0.0242	0.0426	76	TM		nt
10	TML	Acetone	0.1571	0.1138	28	TML	14	
11	TM	Freon-113	0.4160	0.4317	3.8	TM		
12	TM*	1,1-DCE	0.4374	0.4628	5.8	TM*		
13	TM	t-Butanol	0.0133	0.0130	2.4	TM		
14	TM	Acetonitrile	0.0523	0.0483	7.6	TM		
15	TML	Methyl Acetate	0.3641	0.3340	8.3	TML	3.9	
16	TM	Iodomethane	0.2531	0.1918	24	TM		nt
17	TM	Acrylonitrile	0.1175	0.1087	7.5	TM		
18	TM	Methylene chloride	0.5454	0.5604	2.7	TM		
19	TM	Carbon disulfide	1.428	1.304	8.7	TM		
20	TM	Methyl t-butyl ether (MtBE)	1.074	1.158	7.8	TM		
21	TM	Trans-1,2-DCE	0.4615	0.5060	9.6	TM		
22	TM	Diisopropyl Ether	1.501	1.577	5.0	TM		
23	TM**	1,1-DCA	0.9296	0.9603	3.3	TM**		
24	TM	Vinyl Acetate	0.3411	0.3558	4.3	TM		
25	TM	Ethyl tert Butyl Ether	1.143	1.257	10	TM		
26	TML	MEK (2-Butanone)	0.1558	0.1401	10	TML	12	
27	TM	Cis-1,2-DCE	0.5268	0.5626	6.8	TM		
28	TM	2,2-Dichloropropane	0.2271	0.2229	1.9	TM		
29	TM*	Chloroform	0.9134	0.9141	0.08	TM*		
30	TML	Bromochloromethane	0.2182	0.2467	13	TML	10	
31	TM	1,1,1-TCA	0.7216	0.7571	4.9	TM		
32	TM	Cyclohexane	0.3670	0.3770	2.7	TM		
33	TM	1,1-Dichloropropene	0.6296	0.6499	3.2	TM		
34	TM	2,2,4-Trimethylpentane	1.222	1.284	5.1	TM		
35	TM	Carbon Tetrachloride	0.5403	0.5934	9.8	TM		
36	TM	Tert Amyl Methyl Ether	1.002	1.038	3.7	TM		
37	TM	1,2-DCA	0.6475	0.6635	2.5	TM		
38	TM	Benzene	1.891	2.043	8.0	TM		
39	TM	TCE	0.2543	0.2722	7.0	TM		
40	TM	2-Pentanone	0.2512	0.2558	1.8	TM		
		Average			8.5			

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 1/11/17
Instrument: Loki
Cal. Date: 1/11/17
Data File: 0111L18.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM*	1,2-Dichloropropane	0.5564	0.5757	3.5	TM*	
42	TM	Bromodichloromethane	0.6711	0.6957	3.7	TM	
43	TM	Methyl Cyclohexane	0.5986	0.6354	6.1	TM	
44	TM	Dibromomethane	0.2815	0.3007	6.8	TM	
45	TM	2-Chloroethyl vinyl ether	0.0000	0.0004	0.00	TM	
46	TML	MIBK (methyl isobutyl ketone)	0.4450	0.3562	20	TML	4.1
47	TM	1-Bromo-2-chloroethane	0.3682	0.3703	0.55	TM	
48	TM	Cis-1,3-Dichloropropene	0.7208	0.7584	5.2	TM	
49	TM*	Toluene	1.960	2.147	9.5	TM*	
50	TM	Trans-1,3-Dichloropropene	0.6237	0.6293	0.90	TM	
51	TM	1,1,2-TCA	0.3511	0.3532	0.62	TM	
52	TM	2-Hexanone	0.1042	0.0860	17	TM	
53	TM	1,2-EDB	0.3932	0.4123	4.9	TM	
54	TM	Tetrachloroethene	0.5220	0.5021	3.8	TM	
55	TM	1-Chlorohexane	0.5699	0.5857	2.8	TM	
56	TM	1,1,1,2-Tetrachloroethane	0.5011	0.5031	0.41	TM	
57	TM	m&p-Xylene	1.100	1.206	9.7	TM	
58	TM	o-Xylene	0.7988	0.8619	7.9	TM	
59	TML	Styrene	0.8526	0.9699	14	TML	0.42
60	TM	1,3-Dichloropropane	0.7548	0.7680	1.8	TM	
61	TM	Dibromochloromethane	0.4788	0.4804	0.35	TM	
62	TM**	Chlorobenzene	1.390	1.392	0.17	TM**	
63	TM*	Ethylbenzene	2.263	2.465	8.9	TM*	
64	TM**	Bromoform	0.2882	0.2701	6.2	TM**	
65	TM	Isopropylbenzene	3.801	4.018	5.7	TM	
66	TM**	1,1,2,2-Tetrachloroethane	1.002	0.9809	2.1	TM**	
67	TM	1,2,3-Trichloropropane	0.1828	0.1661	9.1	TM	
68	TM	t-1,4-Dichloro-2-Butene	0.2451	0.2224	9.3	TM	
69	TM	Bromobenzene	1.065	1.099	3.1	TM	
70	TM	n-Propylbenzene	4.679	5.110	9.2	TM	
71	TM	4-Ethyltoluene	3.684	4.087	11	TM	
72	TM	2-Chlorotoluene	2.895	3.131	8.1	TM	
73	TM	1,3,5-Trimethylbenzene	3.211	3.623	13	TM	
74	TM	4-Chlorotoluene	3.350	3.659	9.2	TM	
75	TM	Tert-Butylbenzene	2.622	2.806	7.0	TM	
76	TM	1,2,4-Trimethylbenzene	3.182	3.614	14	TM	
77	TM	Sec-Butylbenzene	3.897	4.320	11	TM	
78	TM	p-Isopropyltoluene	3.246	3.505	8.0	TM	
79	TM	Benzyl Chloride	1.052	0.7628	28	TM	nt
80	TM	1,3-DCB	1.971	2.107	6.9	TM	
		Average			7.2		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 1/11/17
Instrument: Loki
Cal. Date: 1/11/17
Data File: 0111L18.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	1,4-DCB	2.080	2.167	4.2	TM	
82	TM	n-Butylbenzene	3.027	3.132	3.5	TM	
83	TM	1,2-DCB	1.871	1.904	1.8	TM	
84	TM	Hexachloroethane	0.6768	0.8062	19	TM	
85	TM	1,2-Dibromo-3-chloropropane	0.1483	0.1553	4.7	TM	
86	TM	1,2,4-Trichlorobenzene	1.186	1.187	0.08	TM	
87	TM	Hexachlorobutadiene	0.6077	0.6041	0.60	TM	
88	TM	Naphthalene	1.318	1.257	4.6	TM	
89	TM	1,2,3-Trichlorobenzene	0.7335	0.7556	3.0	TM	
90							
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118							
119							
120							
		Average			4.6		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L18.D
Acq On : 11 Jan 17 18:01
Sample : (SS)10ug/L VOC STD 1/11/17
Misc : W IS&S 1/3/17, 01/11/17

Vial: 17
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 12 8:08 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	358080	25.00000 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	335808	25.00000 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	179776	25.00000 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	189029	23.65645 ppb		0.00
Spiked Amount 25.000			Recovery = 94.624%			
37) 1,2-DCA-D4(S)	4.93	65	206169	23.79138 ppb		0.00
Spiked Amount 25.000			Recovery = 95.164%			
57) Toluene-D8(S)	7.22	98	653397	24.30783 ppb		0.00
Spiked Amount 25.000			Recovery = 97.232%			
65) 4-Bromofluorobenzene(S)	9.89	95	233651	25.05008 ppb		0.00
Spiked Amount 25.000			Recovery = 100.200%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	86664	10.47365 ppb		94
3) Freon 114	0.93	85	58215	9.98873 ppb		99
4) Chloromethane	0.96	50	111048	9.27447 ppb		99
5) Vinyl chloride	1.03	62	98537	9.91879 ppb		99
6) Bromomethane	1.22	94	60712	8.97036 ppb		99
7) Chloroethane	1.29	64	54441	9.63283 ppb		99
8) Dichlorofluoromethane	1.43	67	159997	10.41018 ppb		98
9) Trichlorofluoromethane	1.46	101	119052	11.21718 ppb		98
10) Acrolein	1.75	56	76258	219.97361 ppb	#	95
11) Acetone	1.88	43	16305	8.63685 ppb		97
12) Freon-113	1.84	101	61835	10.37691 ppb		93
13) 1,1-DCE	1.83	96	66281	10.57998 ppb		94
14) t-Butanol	2.40	59	23208	122.00454 ppb		99
15) Acetonitrile	2.10	41	86429	115.48605 ppb		100
16) Methyl Acetate	2.17	43	47843	10.38652 ppb		92
17) Iodomethane	1.93	142	27472	7.57718 ppb		100
18) Acrylonitrile	2.47	52	15572	9.25001 ppb		94
19) Methylene chloride	2.24	84	80261	10.27494 ppb		97
20) Carbon disulfide	1.98	76	186743	9.13276 ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	165811	10.78120 ppb		99
22) Trans-1,2-DCE	2.50	96	72474	10.96299 ppb		96
23) Diisopropyl Ether	3.10	45	225849	10.50401 ppb		99
24) 1,1-DCA	2.95	63	137550	10.33015 ppb		98
25) Vinyl Acetate	3.10	43	50968	10.43142 ppb		100
26) Ethyl tert Butyl Ether	3.59	59	180078	11.00237 ppb		99
27) MEK (2-Butanone)	3.80	43	20066	8.81499 ppb	#	78
28) Cis-1,2-DCE	3.73	96	80586	10.67957 ppb		96
29) 2,2-Dichloropropane	3.70	77	31928	9.81466 ppb		97
30) Chloroform	4.25	83	130934	10.00825 ppb		99
31) Bromochloromethane	4.08	128	35341	11.00272 ppb		99
33) 1,1,1-TCA	4.47	97	108439	10.49177 ppb		100
34) Cyclohexane	4.53	41	53994	10.27092 ppb		94
35) 1,1-Dichloropropene	4.72	75	93083	10.32251 ppb		97
36) 2,2,4-Trimethylpentane	5.15	57	183917	10.50518 ppb		94
38) Carbon Tetrachloride	4.71	119	84994	10.98180 ppb		99
39) Tert Amyl Methyl Ether	5.22	73	148742	10.36641 ppb		99
40) 1,2-DCA	5.03	62	95029	10.24719 ppb		97
41) Benzene	4.99	78	292616	10.80340 ppb		99
42) TCE	5.84	95	38984	10.70175 ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L18.D
Acq On : 11 Jan 17 18:01
Sample : (SS)10ug/L VOC STD 1/11/17
Misc : W IS&S 1/3/17, 01/11/17

Vial: 17
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 12 8:08 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43) 2-Pentanone	6.12	43	457946	127.25327 ppb		99
44) 1,2-Dichloropropane	6.09	63	82464	10.34748 ppb		99
45) Bromodichloromethane	6.44	83	99643	10.36580 ppb		100
46) Methyl Cyclohexane	6.04	83	91007	10.61375 ppb		97
47) Dibromomethane	6.22	93	43068	10.68212 ppb		97
49) MIBK (methyl isobutyl ket	7.16	43	51013	9.58765 ppb		93
50) 1-Bromo-2-chloroethane	6.75	63	53032	10.05505 ppb		98
51) Cis-1,3-Dichloropropene	6.95	75	108623	10.52052 ppb		97
52) Toluene	7.29	91	307469	10.95237 ppb		97
53) Trans-1,3-Dichloropropene	7.56	75	90131	10.08980 ppb		98
54) 1,1,2-TCA	7.74	83	50596	10.06211 ppb		98
55) 2-Hexanone	8.05	43	12317	8.25608 ppb	#	92
58) 1,2-EDB	8.20	107	55382	10.48632 ppb		93
59) Tetrachloroethene	7.86	166	67450	9.61946 ppb		93
60) 1-Chlorohexane	8.76	91	78667	10.27619 ppb		96
61) 1,1,1,2-Tetrachloroethane	8.83	131	67584	10.04128 ppb		98
62) m&p-Xylene	8.99	91	324032	21.93665 ppb		100
63) o-Xylene	9.38	106	115779	10.79033 ppb		100
64) Styrene	9.40	104	130280	10.04233 ppb		99
66) 1,3-Dichloropropane	7.90	76	103161	10.17555 ppb		96
67) Dibromochloromethane	8.12	129	64534	10.03497 ppb		99
68) Chlorobenzene	8.73	112	186999	10.01684 ppb		97
69) Ethylbenzene	8.87	91	331073	10.89059 ppb		97
70) Bromoform	9.55	173	36287	9.37522 ppb		97
72) Isopropylbenzene	9.76	105	288960	10.57113 ppb		98
73) 1,1,2,2-Tetrachloroethane	10.07	83	70534	9.79023 ppb		98
74) 1,2,3-Trichloropropane	10.09	110	11943	9.08526 ppb		81
75) t-1,4-Dichloro-2-Butene	10.13	53	15994	9.07413 ppb		97
76) Bromobenzene	10.02	156	79005	10.31284 ppb		92
77) n-Propylbenzene	10.17	91	367440	10.92066 ppb		99
78) 4-Ethyltoluene	10.29	105	293928	11.09399 ppb		99
79) 2-Chlorotoluene	10.23	91	225148	10.81424 ppb		99
80) 1,3,5-Trimethylbenzene	10.36	105	260515	11.28410 ppb		99
81) 4-Chlorotoluene	10.34	91	263133	10.92418 ppb		96
82) Tert-Butylbenzene	10.67	119	201773	10.70119 ppb		99
83) 1,2,4-Trimethylbenzene	10.72	105	259916	11.35751 ppb		99
84) Sec-Butylbenzene	10.88	105	310626	11.08508 ppb		100
85) p-Isopropyltoluene	11.04	119	252038	10.79730 ppb		99
86) Benzyl Chloride	11.20	91	54852	7.24854 ppb		94
87) 1,3-DCB	10.96	146	151487	10.68894 ppb		98
88) 1,4-DCB	11.05	146	155844	10.41776 ppb		99
89) n-Butylbenzene	11.44	91	225189	10.34581 ppb		98
90) 1,2-DCB	11.41	146	136949	10.17903 ppb		99
91) Hexachloroethane	11.66	117	57971	11.91208 ppb		92
92) 1,2-Dibromo-3-chloropropan	12.18	157	11170	10.47309 ppb		92
93) 1,2,4-Trichlorobenzene	13.00	180	85358	10.00828 ppb		94
94) Hexachlorobutadiene	13.19	225	43441	9.94043 ppb		96
95) Naphthalene	13.22	128	90424	9.54088 ppb		99
96) 1,2,3-Trichlorobenzene	13.46	180	54336	10.30073 ppb		100

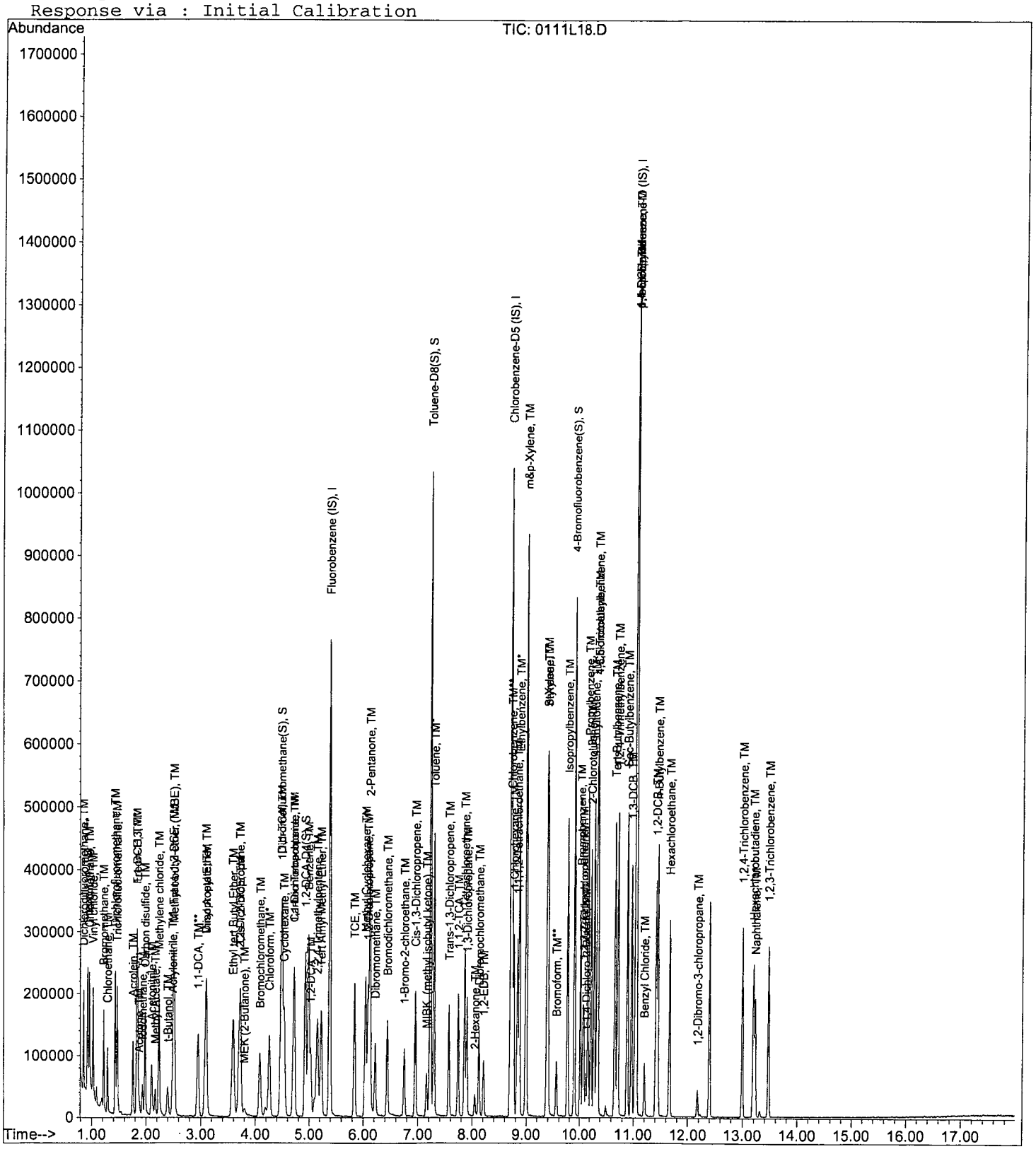
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\170111\0111L18.D Vial: 17
Acq On : 11 Jan 17 18:01 Operator: PM,DG,SV,CMM
Sample : (SS)10ug/L VOC STD 1/11/17 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 12 8:08 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/13/17
Instrument: Loki
Initial Cal. Date: 01/11/17
Data File: 0113L35.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TM	Dichlorodifluoromethane	0.5777	0.5727	0.87	TM	
3	TM	Freon 114	0.4069	0.3622	11	TM	
4	TM**	Chloromethane	0.8360	0.7503	10	TM**	
5	TM*	Vinyl chloride	0.6936	0.6454	6.9	TM*	
6	TM	Bromomethane	0.4725	0.3995	15	TM	
7	TM	Chloroethane	0.3946	0.3669	7.0	TM	
8	TM	Dichlorofluoromethane	1.073	1.010	5.9	TM	
9	TM	Trichlorofluoromethane	0.7410	0.7451	0.55	TM	
10	TM	Acrolein	0.0242	0.0209	14	TM	
11	TML	Acetone	0.1571	0.1240	21	TML	4.2
12	TM	Freon-113	0.4160	0.4044	2.8	TM	
13	TM*	1,1-DCE	0.4374	0.4120	5.8	TM*	
14	TM	t-Butanol	0.0133	0.0113	15	TM	
15	TM	Acetonitrile	0.0523	0.0435	17	TM	
16	TML	Methyl Acetate	0.3641	0.2920	20	TML	10
17	TM	Iodomethane	0.2531	0.2884	14	TM	
18	TM	Acrylonitrile	0.1175	0.0985	16	TM	
19	TM	Methylene chloride	0.5454	0.5267	3.4	TM	
20	TM	Carbon disulfide	1.428	1.270	11	TM	
21	TM	Methyl t-butyl ether (MtBE)	1.074	0.9763	9.1	TM	
22	TM	Trans-1,2-DCE	0.4615	0.4455	3.5	TM	
23	TM	Diisopropyl Ether	1.501	1.352	9.9	TM	
24	TM**	1,1-DCA	0.9296	0.8815	5.2	TM**	
25	TM	Vinyl Acetate	0.3411	0.2929	14	TM	
26	TM	Ethyl tert Butyl Ether	1.143	1.064	6.9	TM	
27	TML	MEK (2-Butanone)	0.1558	0.1341	14	TML	16
28	TM	Cis-1,2-DCE	0.5268	0.5225	0.82	TM	
29	TM	2,2-Dichloropropane	0.2271	0.2091	7.9	TM	
30	TM*	Chloroform	0.9134	0.8798	3.7	TM*	
31	TML	Bromochloromethane	0.2182	0.2333	6.9	TML	3.8
32	S	Dibromofluoromethane(S)	0.5579	0.5378	3.6	S	
33	TM	1,1,1-TCA	0.7216	0.6926	4.0	TM	
34	TM	Cyclohexane	0.3670	0.3377	8.0	TM	
35	TM	1,1-Dichloropropene	0.6296	0.5760	8.5	TM	
36	TM	2,2,4-Trimethylpentane	1.222	1.146	6.3	TM	
37	S	1,2-DCA-D4(S)	0.6050	0.5886	2.7	S	
38	TM	Carbon Tetrachloride	0.5403	0.5484	1.5	TM	
39	TM	Tert Amyl Methyl Ether	1.002	0.9392	6.2	TM	
40	TM	1,2-DCA	0.6475	0.6088	6.0	TM	
		Average			8.4		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/13/17
Instrument: Loki
Cal. Date: 01/11/17
Data File: 0113L35.D

		Compound	MEAN	CCRF	%D		%Drift	
41	TM	Benzene	1.891	1.828	3.3	TM		
42	TM	TCE	0.2543	0.2591	1.9	TM		
43	TM	2-Pentanone	0.2512	0.2194	13	TM		
44	TM*	1,2-Dichloropropane	0.5564	0.5149	7.5	TM*		
45	TM	Bromodichloromethane	0.6711	0.6331	5.7	TM		
46	TM	Methyl Cyclohexane	0.5986	0.5828	2.6	TM		
47	TM	Dibromomethane	0.2815	0.2741	2.6	TM		
48	TM	2-Chloroethyl vinyl ether	0.0000	0.0127	0.00	TM		
49	TML	MIBK (methyl isobutyl ketone)	0.4450	0.3255	27	TML	14	
50	TM	1-Bromo-2-chloroethane	0.3682	0.3299	10	TM		
51	TM	Cis-1,3-Dichloropropene	0.7208	0.6640	7.9	TM		
52	TM*	Toluene	1.960	1.948	0.59	TM*		
53	TM	Trans-1,3-Dichloropropene	0.6237	0.5618	9.9	TM		
54	TM	1,1,2-TCA	0.3511	0.3197	8.9	TM		
55	TM	2-Hexanone	0.1042	0.0867	17	TM		
56	I	Chlorobenzene-D5 (IS)	ISTD			I		
57	S	Toluene-D8(S)	2.001	2.003	0.08	S		
58	TM	1,2-EDB	0.3932	0.3539	10.0	TM		
59	TM	Tetrachloroethene	0.5220	0.4987	4.5	TM		
60	TM	1-Chlorohexane	0.5699	0.5696	0.06	TM		
61	TM	1,1,1,2-Tetrachloroethane	0.5011	0.4686	6.5	TM		
62	TM	m&p-Xylene	1.100	1.154	5.0	TM		
63	TM	o-Xylene	0.7988	0.8103	1.4	TM		
64	TML	Styrene	0.8526	0.9005	5.6	TML	6.5	
65	S	4-Bromofluorobenzene(S)	0.6944	0.7265	4.6	S		
66	TM	1,3-Dichloropropane	0.7548	0.6783	10	TM		
67	TM	Dibromochloromethane	0.4788	0.4545	5.1	TM		
68	TM**	Chlorobenzene	1.390	1.317	5.2	TM**		
69	TM*	Ethylbenzene	2.263	2.287	1.0	TM*		
70	TM**	Bromoform	0.2882	0.2745	4.7	TM**		
71	I	1,4-Dichlorobenzene-D (IS)	ISTD			I		
72	TM	Isopropylbenzene	3.801	3.979	4.7	TM		
73	TM**	1,1,2,2-Tetrachloroethane	1.002	0.9066	9.5	TM**		
74	TM	1,2,3-Trichloropropane	0.1828	0.1767	3.3	TM		
75	TM	t-1,4-Dichloro-2-Butene	0.2451	0.1863	24	TM		*NT
76	TM	Bromobenzene	1.065	1.072	0.59	TM		
77	TM	n-Propylbenzene	4.679	4.883	4.4	TM		
78	TM	4-Ethyltoluene	3.684	4.003	8.7	TM		
79	TM	2-Chlorotoluene	2.895	3.089	6.7	TM		
80	TM	1,3,5-Trimethylbenzene	3.211	3.548	11	TM		
		Average			6.7			

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/13/17
Instrument: Loki
Cal. Date: 01/11/17
Data File: 0113L35.D

		Compound	MEAN	CCRF	%D	%Drift		
81	TM	4-Chlorotoluene	3.350	3.591	7.2	TM		
82	TM	Tert-Butylbenzene	2.622	2.782	6.1	TM		
83	TM	1,2,4-Trimethylbenzene	3.182	3.498	9.9	TM		
84	TM	Sec-Butylbenzene	3.897	4.186	7.4	TM		
85	TM	p-Isopropyltoluene	3.246	3.464	6.7	TM		
86	TM	Benzyl Chloride	1.052	0.8216	22	TM		* NT
87	TM	1,3-DCB	1.971	2.053	4.2	TM		
88	TM	1,4-DCB	2.080	2.048	1.5	TM		
89	TM	n-Butylbenzene	3.027	3.140	3.7	TM		
90	TM	1,2-DCB	1.871	1.870	0.07	TM		
91	TM	Hexachloroethane	0.6768	0.7102	4.9	TM		
92	TM	1,2-Dibromo-3-chloropropane	0.1483	0.1377	7.1	TM		
93	TM	1,2,4-Trichlorobenzene	1.186	1.111	6.3	TM		
94	TM	Hexachlorobutadiene	0.6077	0.5822	4.2	TM		
95	TM	Naphthalene	1.318	1.153	12	TM		
96	TM	1,2,3-Trichlorobenzene	0.7335	0.7034	4.1	TM		
97								
98								
99								
100								
101								
102								
103								
104								
105								
106								
107								
108								
109								
110								
111								
112								
113								
114								
115								
116								
117								
118								
119								
120								
		Average			6.7			

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L35.D
Acq On : 13 Jan 17 23:58
Sample : 170113B CCV/LCS-1WL 10ug/L
Misc : W IS&S 1/3/17, 01/11/17

Vial: 32
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 9:24 2017

Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	338752	25.00 ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	312576	25.00 ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	162496	25.00 ppb		0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	182178	24.10 ppb		0.00
Spiked Amount 25.000			Recovery =	96.400%		
37) 1,2-DCA-D4(S)	4.92	65	199393	24.32 ppb		0.00
Spiked Amount 25.000			Recovery =	97.288%		
57) Toluene-D8(S)	7.22	98	626008	25.02 ppb		0.00
Spiked Amount 25.000			Recovery =	100.080%		
65) 4-Bromofluorobenzene(S)	9.89	95	227083	26.16 ppb		0.00
Spiked Amount 25.000			Recovery =	104.620%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.85	85	77600	9.91 ppb		95
3) Freon 114	0.93	85	49081	8.90 ppb		95
4) Chloromethane	0.96	50	101663	8.98 ppb		99
5) Vinyl chloride	1.03	62	87450	9.31 ppb		98
6) Bromomethane	1.22	94	54136	8.46 ppb		97
7) Chloroethane	1.29	64	49719	9.30 ppb		98
8) Dichlorofluoromethane	1.43	67	136878	9.41 ppb		100
9) Trichlorofluoromethane	1.46	101	100960	10.06 ppb		94
10) Acrolein	1.75	56	35325	107.71 ppb	#	99
11) Acetone	1.88	43	16802	9.58 ppb		97
12) Freon-113	1.84	101	54797	9.72 ppb		96
13) 1,1-DCE	1.83	96	55824	9.42 ppb		98
14) t-Butanol	2.40	59	19056	105.89 ppb		97
15) Acetonitrile	2.10	41	73745	104.16 ppb		96
16) Methyl Acetate	2.17	43	39561	8.98 ppb		91
17) Iodomethane	1.93	142	39080	11.39 ppb		99
18) Acrylonitrile	2.48	52	13347	8.38 ppb		96
19) Methylene chloride	2.23	84	71363	9.66 ppb		100
20) Carbon disulfide	1.98	76	172153	8.90 ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	132289	9.09 ppb		99
22) Trans-1,2-DCE	2.50	96	60371	9.65 ppb		95
23) Diisopropyl Ether	3.10	45	183196	9.01 ppb		96
24) 1,1-DCA	2.94	63	119446	9.48 ppb		98
25) Vinyl Acetate	3.10	43	39688	8.59 ppb		99
26) Ethyl tert Butyl Ether	3.59	59	144144	9.31 ppb		98
27) MEK (2-Butanone)	3.81	43	18175	8.42 ppb	#	87
28) Cis-1,2-DCE	3.73	96	70803	9.92 ppb		91
29) 2,2-Dichloropropane	3.70	77	28336	9.21 ppb		98
30) Chloroform	4.25	83	119213	9.63 ppb		98
31) Bromochloromethane	4.08	128	31609	10.38 ppb		98
33) 1,1,1-TCA	4.47	97	93853	9.60 ppb		95
34) Cyclohexane	4.53	41	45757	9.20 ppb		96
35) 1,1-Dichloropropene	4.72	75	78043	9.15 ppb		98
36) 2,2,4-Trimethylpentane	5.15	57	155269	9.37 ppb		95
38) Carbon Tetrachloride	4.70	119	74310	10.15 ppb		97
39) Tert Amyl Methyl Ether	5.22	73	127259	9.38 ppb		99
40) 1,2-DCA	5.03	62	82490	9.40 ppb		100
41) Benzene	4.99	78	247735	9.67 ppb		98
42) TCE	5.84	95	35104	10.19 ppb		96

(#) = qualifier out of range (m) = manual integration
0113L35.D LALLW.M Tue Jan 17 14:30:17 2017

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L35.D
Acq On : 13 Jan 17 23:58
Sample : 170113B CCV/LCS-1WL 10ug/L
Misc : W IS&S 1/3/17, 01/11/17

Vial: 32
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 9:24 2017

Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43) 2-Pentanone	6.12	43	371545	109.14	ppb		96
44) 1,2-Dichloropropane	6.09	63	69767	9.25	ppb		99
45) Bromodichloromethane	6.44	83	85787	9.43	ppb		96
46) Methyl Cyclohexane	6.04	83	78976	9.74	ppb		93
47) Dibromomethane	6.22	93	37138	9.74	ppb		95
49) MIBK (methyl isobutyl ket	7.16	43	44105	8.64	ppb		98
50) 1-Bromo-2-chloroethane	6.75	63	44696	8.96	ppb		97
51) Cis-1,3-Dichloropropene	6.95	75	89974	9.21	ppb		95
52) Toluene	7.29	91	264018	9.94	ppb		98
53) Trans-1,3-Dichloropropene	7.56	75	76123	9.01	ppb		99
54) 1,1,2-TCA	7.74	83	43313	9.11	ppb		98
55) 2-Hexanone	8.04	43	11743	8.32	ppb	#	94
58) 1,2-EDB	8.20	107	44251	9.00	ppb		92
59) Tetrachloroethene	7.86	166	62350	9.55	ppb		97
60) 1-Chlorohexane	8.76	91	71214	9.99	ppb		96
61) 1,1,1,2-Tetrachloroethane	8.83	131	58587	9.35	ppb		87
62) m&p-Xylene	8.99	91	288630	20.99	ppb		98
63) o-Xylene	9.38	106	101308	10.14	ppb		99
64) Styrene	9.40	104	112592	9.35	ppb		99
66) 1,3-Dichloropropane	7.90	76	84808	8.99	ppb		98
67) Dibromochloromethane	8.12	129	56826	9.49	ppb		97
68) Chlorobenzene	8.73	112	164713	9.48	ppb		97
69) Ethylbenzene	8.87	91	285887	10.10	ppb		100
70) Bromoform	9.55	173	34319	9.53	ppb		99
72) Isopropylbenzene	9.76	105	258636	10.47	ppb		97
73) 1,1,2,2-Tetrachloroethane	10.07	83	58925	9.05	ppb		98
74) 1,2,3-Trichloropropane	10.09	110	11484	9.67	ppb		96
75) t-1,4-Dichloro-2-Butene	10.12	53	12110	7.60	ppb		83
76) Bromobenzene	10.01	156	69651	10.06	ppb		94
77) n-Propylbenzene	10.17	91	317373	10.44	ppb		99
78) 4-Ethyltoluene	10.29	105	260198	10.87	ppb		99
79) 2-Chlorotoluene	10.23	91	200769	10.67	ppb		100
80) 1,3,5-Trimethylbenzene	10.36	105	230595	11.05	ppb		99
81) 4-Chlorotoluene	10.34	91	233438	10.72	ppb		97
82) Tert-Butylbenzene	10.66	119	180849	10.61	ppb		98
83) 1,2,4-Trimethylbenzene	10.72	105	227372	10.99	ppb		98
84) Sec-Butylbenzene	10.88	105	272101	10.74	ppb		98
85) p-Isopropyltoluene	11.04	119	225183	10.67	ppb		97
86) Benzyl Chloride	11.19	91	53405	7.81	ppb		97
87) 1,3-DCB	10.96	146	133458	10.42	ppb		98
88) 1,4-DCB	11.05	146	133123	9.85	ppb		95
89) n-Butylbenzene	11.44	91	204069	10.37	ppb		99
90) 1,2-DCB	11.41	146	121528	9.99	ppb		99
91) Hexachloroethane	11.66	117	46161	10.49	ppb		90
92) 1,2-Dibromo-3-chloropropan	12.18	157	8951	9.29	ppb	#	78
93) 1,2,4-Trichlorobenzene	13.00	180	72245	9.37	ppb		98
94) Hexachlorobutadiene	13.19	225	37845	9.58	ppb		94
95) Naphthalene	13.22	128	74968	8.75	ppb		99
96) 1,2,3-Trichlorobenzene	13.46	180	45720	9.59	ppb		91

(#) = qualifier out of range (m) = manual integration
0113L35.D LALLW.M Tue Jan 17 14:30:17 2017

Quantitation Report

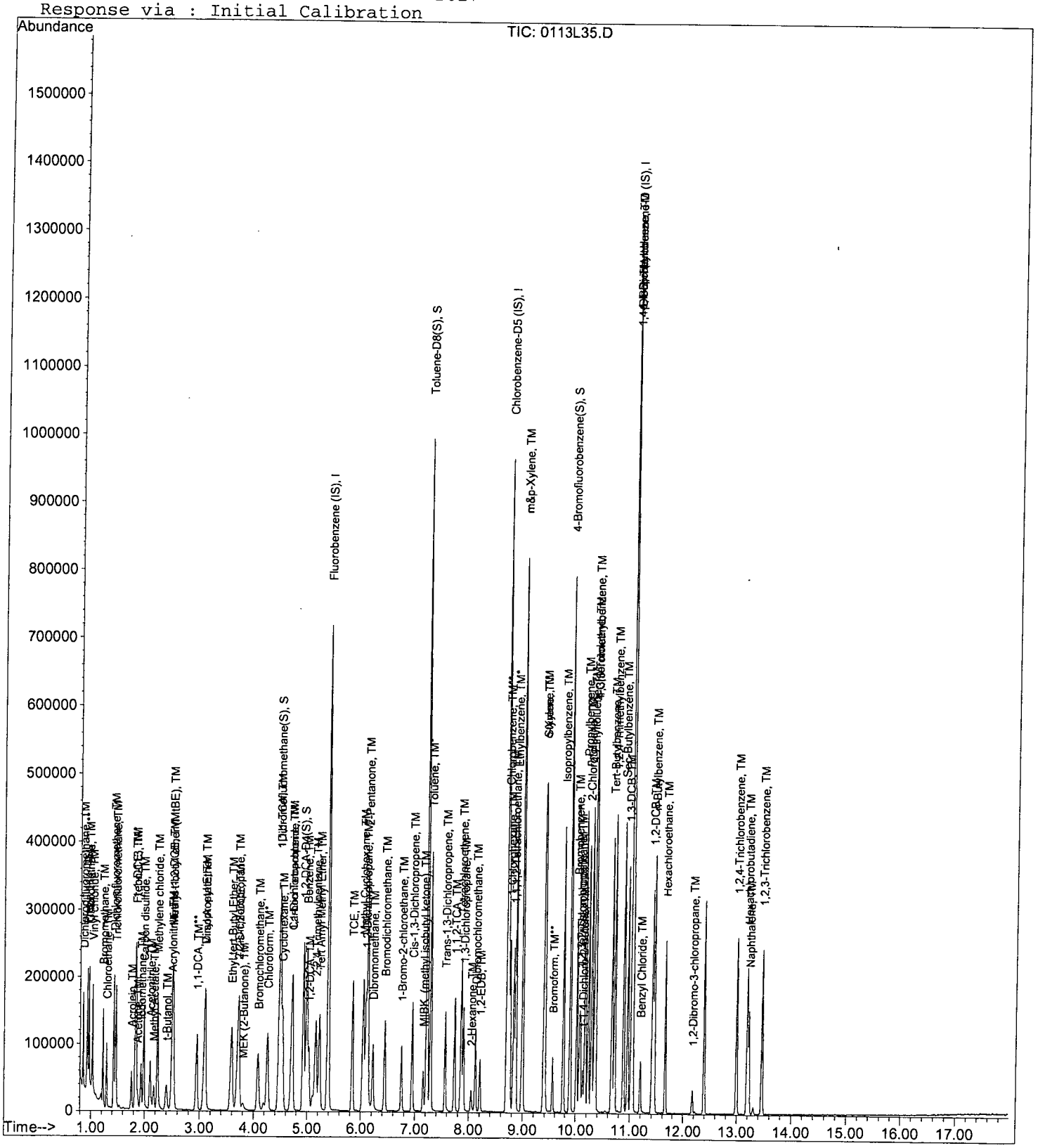
Data File : M:\LOKI\DATA\170111\0113L35.D
Acq On : 13 Jan 17 23:58
Sample : 170113B CCV/LCS-1WL 10ug/L
Misc : W IS&S 1/3/17, 01/11/17

Vial: 32
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 9:24 2017

Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



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VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/14/17
Instrument: Loki
Initial Cal. Date: 01/11/17
Data File: 0113L60.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TM	Dichlorodifluoromethane	0.5777	0.6065	5.0	TM	
3	TM	Freon 114	0.4069	0.3687	9.4	TM	
4	TM**	Chloromethane	0.8360	0.7138	15	TM**	
5	TM*	Vinyl chloride	0.6936	0.6796	2.0	TM*	
6	TM	Bromomethane	0.4725	0.4237	10	TM	
7	TM	Chloroethane	0.3946	0.3624	8.2	TM	
8	TM	Dichlorofluoromethane	1.073	1.031	3.9	TM	
9	TM	Trichlorofluoromethane	0.7410	0.8274	12	TM	
10	TM	Acrolein	0.0242	0.0221	8.9	TM	
11	TML	Acetone	0.1571	0.1272	19	TML	1.3
12	TM	Freon-113	0.4160	0.4120	0.96	TM	
13	TM*	1,1-DCE	0.4374	0.4205	3.9	TM*	
14	TM	t-Butanol	0.0133	0.0123	7.5	TM	
15	TM	Acetonitrile	0.0523	0.0456	13	TM	
16	TML	Methyl Acetate	0.3641	0.2798	23	TML	14
17	TM	Iodomethane	0.2531	0.2964	17	TM	
18	TM	Acrylonitrile	0.1175	0.1078	8.3	TM	
19	TM	Methylene chloride	0.5454	0.5441	0.23	TM	
20	TM	Carbon disulfide	1.428	1.341	6.1	TM	
21	TM	Methyl t-butyl ether (MtBE)	1.074	1.049	2.3	TM	
22	TM	Trans-1,2-DCE	0.4615	0.4569	1.00	TM	
23	TM	Diisopropyl Ether	1.501	1.425	5.1	TM	
24	TM**	1,1-DCA	0.9296	0.8945	3.8	TM**	
25	TM	Vinyl Acetate	0.3411	0.2920	14	TM	
26	TM	Ethyl tert Butyl Ether	1.143	1.084	5.1	TM	
27	TML	MEK (2-Butanone)	0.1558	0.1452	6.8	TML	8.4
28	TM	Cis-1,2-DCE	0.5268	0.5330	1.2	TM	
29	TM	2,2-Dichloropropane	0.2271	0.1770	22	TM	
30	TM*	Chloroform	0.9134	0.8989	1.6	TM*	
31	TML	Bromochloromethane	0.2182	0.2423	11	TML	8.0
32	S	Dibromofluoromethane(S)	0.5579	0.5702	2.2	S	
33	TM	1,1,1-TCA	0.7216	0.7223	0.09	TM	
34	TM	Cyclohexane	0.3670	0.3370	8.2	TM	
35	TM	1,1-Dichloropropene	0.6296	0.5994	4.8	TM	
36	TM	2,2,4-Trimethylpentane	1.222	1.103	9.8	TM	
37	S	1,2-DCA-D4(S)	0.6050	0.5963	1.4	S	
38	TM	Carbon Tetrachloride	0.5403	0.5695	5.4	TM	
39	TM	Tert Amyl Methyl Ether	1.002	0.9800	2.2	TM	
40	TM	1,2-DCA	0.6475	0.6460	0.22	TM	
		Average			7.2		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/14/17
Instrument: Loki
Cal. Date: 01/11/17
Data File: 0113L60.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	Benzene	1.891	1.878	0.69	TM	
42	TM	TCE	0.2543	0.2832	11	TM	
43	TM	2-Pentanone	0.2512	0.2215	12	TM	
44	TM*	1,2-Dichloropropane	0.5564	0.5243	5.8	TM*	
45	TM	Bromodichloromethane	0.6711	0.6712	0.02	TM	
46	TM	Methyl Cyclohexane	0.5986	0.6113	2.1	TM	
47	TM	Dibromomethane	0.2815	0.2888	2.6	TM	
48	TM	2-Chloroethyl vinyl ether	0.0000	0.0048	0.00	TM	
49	TML	MIBK (methyl isobutyl ketone)	0.4450	0.3322	25	TML	11
50	TM	1-Bromo-2-chloroethane	0.3682	0.3446	6.4	TM	
51	TM	Cis-1,3-Dichloropropene	0.7208	0.6725	6.7	TM	
52	TM*	Toluene	1.960	2.025	3.3	TM*	
53	TM	Trans-1,3-Dichloropropene	0.6237	0.5793	7.1	TM	
54	TM	1,1,2-TCA	0.3511	0.3342	4.8	TM	
55	TM	2-Hexanone	0.1042	0.0899	14	TM	
56	I	Chlorobenzene-D5 (IS)	ISTD			I	
57	S	Toluene-D8(S)	2.001	1.938	3.2	S	
58	TM	1,2-EDB	0.3932	0.3660	6.9	TM	
59	TM	Tetrachloroethene	0.5220	0.4905	6.0	TM	
60	TM	1-Chlorohexane	0.5699	0.5500	3.5	TM	
61	TM	1,1,1,2-Tetrachloroethane	0.5011	0.4687	6.5	TM	
62	TM	m&p-Xylene	1.100	1.105	0.45	TM	
63	TM	o-Xylene	0.7988	0.7808	2.3	TM	
64	TML	Styrene	0.8526	0.8971	5.2	TML	6.8
65	S	4-Bromofluorobenzene(S)	0.6944	0.7039	1.4	S	
66	TM	1,3-Dichloropropane	0.7548	0.6736	11	TM	
67	TM	Dibromochloromethane	0.4788	0.4626	3.4	TM	
68	TM**	Chlorobenzene	1.390	1.319	5.1	TM**	
69	TM*	Ethylbenzene	2.263	2.260	0.13	TM*	
70	TM**	Bromoform	0.2882	0.2782	3.4	TM**	
71	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
72	TM	Isopropylbenzene	3.801	3.846	1.2	TM	
73	TM**	1,1,2,2-Tetrachloroethane	1.002	0.8181	18	TM**	
74	TM	1,2,3-Trichloropropane	0.1828	0.1701	7.0	TM	
75	TM	t-1,4-Dichloro-2-Butene	0.2451	0.1900	22	TM	
76	TM	Bromobenzene	1.065	1.060	0.54	TM	
77	TM	n-Propylbenzene	4.679	4.740	1.3	TM	
78	TM	4-Ethyltoluene	3.684	3.854	4.6	TM	
79	TM	2-Chlorotoluene	2.895	3.024	4.4	TM	
80	TM	1,3,5-Trimethylbenzene	3.211	3.384	5.4	TM	
		Average			5.9		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/14/17
Instrument: Loki
Cal. Date: 01/11/17
Data File: 0113L60.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	4-Chlorotoluene	3.350	3.440	2.7	TM	
82	TM	Tert-Butylbenzene	2.622	2.720	3.7	TM	
83	TM	1,2,4-Trimethylbenzene	3.182	3.361	5.6	TM	
84	TM	Sec-Butylbenzene	3.897	4.085	4.8	TM	
85	TM	p-Isopropyltoluene	3.246	3.260	0.43	TM	
86	TM	Benzyl Chloride	1.052	0.6174	41	TM	
87	TM	1,3-DCB	1.971	2.038	3.4	TM	
88	TM	1,4-DCB	2.080	2.015	3.1	TM	
89	TM	n-Butylbenzene	3.027	2.910	3.9	TM	
90	TM	1,2-DCB	1.871	1.875	0.22	TM	
91	TM	Hexachloroethane	0.6768	0.6859	1.4	TM	
92	TM	1,2-Dibromo-3-chloropropane	0.1483	0.1327	11	TM	
93	TM	1,2,4-Trichlorobenzene	1.186	1.165	1.8	TM	
94	TM	Hexachlorobutadiene	0.6077	0.5877	3.3	TM	
95	TM	Naphthalene	1.318	1.209	8.3	TM	
96	TM	1,2,3-Trichlorobenzene	0.7335	0.7186	2.0	TM	
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			6.0		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L60.D
Acq On : 14 Jan 17 11:38
Sample : Ending CCV 8260 10ug/L 1/13/17
Misc : W IS&S 1/3/17, 01/11/17

Vial: 57
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 9:34 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	320384	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	315200	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	164672	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.48	111	182698	25.55	ppb		0.00
Spiked Amount 25.000			Recovery = 102.216%				
37) 1,2-DCA-D4(S)	4.93	65	191033	24.64	ppb		0.00
Spiked Amount 25.000			Recovery = 98.552%				
57) Toluene-D8(S)	7.22	98	610715	24.21	ppb		0.00
Spiked Amount 25.000			Recovery = 96.820%				
65) 4-Bromofluorobenzene(S)	9.89	95	221868	25.34	ppb		0.00
Spiked Amount 25.000			Recovery = 101.368%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.85	85	77728	10.50	ppb		94
3) Freon 114	0.93	85	47255	9.06	ppb		93
4) Chloromethane	0.96	50	91477	8.54	ppb		98
5) Vinyl chloride	1.02	62	87094	9.80	ppb		98
6) Bromomethane	1.22	94	54296	8.97	ppb		100
7) Chloroethane	1.29	64	46445	9.18	ppb		96
8) Dichlorofluoromethane	1.42	67	132101	9.61	ppb		98
9) Trichlorofluoromethane	1.46	101	106038	11.17	ppb		98
10) Acrolein	1.75	56	35335	113.92	ppb	#	100
11) Acetone	1.88	43	16299	9.87	ppb		100
12) Freon-113	1.84	101	52805	9.90	ppb		95
13) 1,1-DCE	1.83	96	53888	9.61	ppb		97
14) t-Butanol	2.39	59	19680	115.63	ppb		93
15) Acetonitrile	2.10	41	73025	109.06	ppb		95
16) Methyl Acetate	2.17	43	35854	8.57	ppb	#	86
17) Iodomethane	1.93	142	37984	11.71	ppb		98
18) Acrylonitrile	2.47	52	13813	9.17	ppb		95
19) Methylene chloride	2.23	84	69726	9.98	ppb		100
20) Carbon disulfide	1.98	76	171796	9.39	ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	134398	9.77	ppb		98
22) Trans-1,2-DCE	2.50	96	58558	9.90	ppb		96
23) Diisopropyl Ether	3.10	45	182606	9.49	ppb		99
24) 1,1-DCA	2.95	63	114629	9.62	ppb		98
25) Vinyl Acetate	3.10	43	37424	8.56	ppb	#	98
26) Ethyl tert Butyl Ether	3.59	59	138956	9.49	ppb		97
27) MEK (2-Butanone)	3.80	43	18610	9.16	ppb	#	74
28) Cis-1,2-DCE	3.73	96	68310	10.12	ppb		92
29) 2,2-Dichloropropane	3.70	77	22680	7.79	ppb		99
30) Chloroform	4.25	83	115198	9.84	ppb		100
31) Bromochloromethane	4.09	128	31051	10.80	ppb		99
33) 1,1,1-TCA	4.47	97	92561	10.01	ppb		100
34) Cyclohexane	4.53	41	43185	9.18	ppb		89
35) 1,1-Dichloropropene	4.72	75	76821	9.52	ppb		100
36) 2,2,4-Trimethylpentane	5.15	57	141368	9.02	ppb		97
38) Carbon Tetrachloride	4.70	119	72985	10.54	ppb		94
39) Tert Amyl Methyl Ether	5.22	73	125588	9.78	ppb		97
40) 1,2-DCA	5.02	62	82791	9.98	ppb		100
41) Benzene	4.98	78	240673	9.93	ppb		99
42) TCE	5.84	95	36288	11.13	ppb		95

(#) = qualifier out of range (m) = manual integration
0113L60.D LALLW.M Tue Jan 17 14:30:23 2017

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L60.D
Acq On : 14 Jan 17 11:38
Sample : Ending CCV 8260 10ug/L 1/13/17
Misc : W IS&S 1/3/17, 01/11/17

Vial: 57
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 9:34 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43) 2-Pentanone	6.12	43	354765	110.18 ppb		95
44) 1,2-Dichloropropane	6.08	63	67191	9.42 ppb		99
45) Bromodichloromethane	6.44	83	86023	10.00 ppb		95
46) Methyl Cyclohexane	6.04	83	78336	10.21 ppb		90
47) Dibromomethane	6.22	93	37011	10.26 ppb		98
49) MIBK (methyl isobutyl ket	7.15	43	42574	8.85 ppb		96
50) 1-Bromo-2-chloroethane	6.75	63	44168	9.36 ppb		99
51) Cis-1,3-Dichloropropene	6.95	75	86181	9.33 ppb		94
52) Toluene	7.29	91	259520	10.33 ppb		98
53) Trans-1,3-Dichloropropene	7.56	75	74235	9.29 ppb		99
54) 1,1,2-TCA	7.74	83	42830	9.52 ppb		95
55) 2-Hexanone	8.04	43	11518	8.63 ppb		95
58) 1,2-EDB	8.20	107	46141	9.31 ppb		99
59) Tetrachloroethene	7.85	166	61848	9.40 ppb		98
60) 1-Chlorohexane	8.76	91	69347	9.65 ppb		95
61) 1,1,1,2-Tetrachloroethane	8.83	131	59093	9.35 ppb		91
62) m&p-Xylene	8.99	91	278540	20.09 ppb		98
63) o-Xylene	9.38	106	98447	9.77 ppb		97
64) Styrene	9.40	104	113104	9.32 ppb		97
66) 1,3-Dichloropropane	7.90	76	84923	8.92 ppb		97
67) Dibromochloromethane	8.12	129	58330	9.66 ppb		97
68) Chlorobenzene	8.73	112	166245	9.49 ppb		100
69) Ethylbenzene	8.87	91	284985	9.99 ppb		98
70) Bromoform	9.55	173	35077	9.66 ppb		99
72) Isopropylbenzene	9.76	105	253334	10.12 ppb		98
73) 1,1,2,2-Tetrachloroethane	10.07	83	53887	8.17 ppb		94
74) 1,2,3-Trichloropropane	10.09	110	11203	9.30 ppb		95
75) t-1,4-Dichloro-2-Butene	10.12	53	12514	7.75 ppb		94
76) Bromobenzene	10.02	156	69793	9.95 ppb		92
77) n-Propylbenzene	10.17	91	312203	10.13 ppb		97
78) 4-Ethyltoluene	10.28	105	253886	10.46 ppb		99
79) 2-Chlorotoluene	10.22	91	199168	10.44 ppb		99
80) 1,3,5-Trimethylbenzene	10.36	105	222932	10.54 ppb		97
81) 4-Chlorotoluene	10.34	91	226621	10.27 ppb		98
82) Tert-Butylbenzene	10.66	119	179180	10.37 ppb		98
83) 1,2,4-Trimethylbenzene	10.72	105	221381	10.56 ppb		99
84) Sec-Butylbenzene	10.88	105	269053	10.48 ppb		99
85) p-Isopropyltoluene	11.04	119	214725	10.04 ppb		98
86) Benzyl Chloride	11.19	91	40670	5.87 ppb		96
87) 1,3-DCB	10.96	146	134219	10.34 ppb		98
88) 1,4-DCB	11.05	146	132741	9.69 ppb		98
89) n-Butylbenzene	11.44	91	191648	9.61 ppb		99
90) 1,2-DCB	11.41	146	123503	10.02 ppb		97
91) Hexachloroethane	11.66	117	45180	10.14 ppb		95
92) 1,2-Dibromo-3-chloropropan	12.17	157	8739	8.95 ppb	#	86
93) 1,2,4-Trichlorobenzene	13.00	180	76710	9.82 ppb		92
94) Hexachlorobutadiene	13.19	225	38711	9.67 ppb		86
95) Naphthalene	13.22	128	79648	9.17 ppb		99
96) 1,2,3-Trichlorobenzene	13.46	180	47336	9.80 ppb		97

(#) = qualifier out of range (m) = manual integration
0113L60.D LALLW.M Tue Jan 17 14:30:24 2017

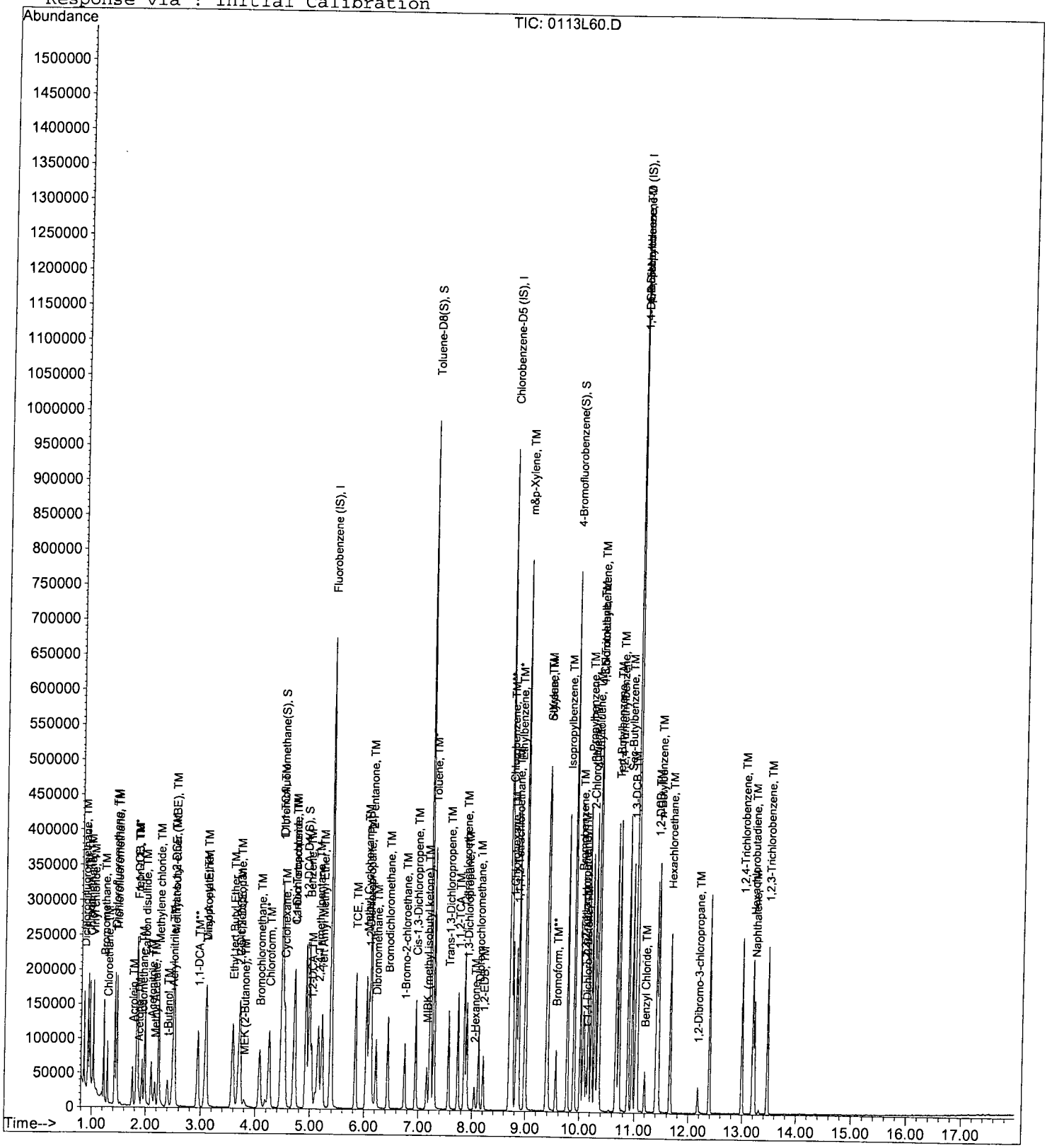
Data File : M:\LOKI\DATA\170111\0113L60.D
Acq On : 14 Jan 17 11:38
Sample : Ending CCV 8260 10ug/L 1/13/17
Misc : W IS&S 1/3/17, 01/11/17

Vial: 57
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 9:34 2017

Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 1/11/17
Matrix: Instrument: Max
Initials:

		Compound	0111M06.D 1	0111M07.D 2	0111M08.D 3	0111M09.D 4	0111M10.D 5	0111M11.D 6	0111M12.D 7	0111M13.D 8	0111M14.D 9		Avg	%RSD		
1	I	Fluorobenzene (IS)														
2	TM	Dichlorodifluoromethane		0.2811	0.2811	0.2717	0.3169	0.3125	0.3021	0.3269	0.2977		0.30	6.6	TM	
3	TM	Freon 114		0.3755	0.3629	0.3713	0.3812	0.3848	0.3881	0.4080	0.3765		0.38	3.5	TM	
4	TM**	Chloromethane		0.4918	0.4049	0.4079	0.4536	0.4410	0.4320	0.4553	0.4429		0.44	6.3	TM**	
5	TM*	Vinyl chloride		0.5605	0.5421	0.5261	0.6000	0.5967	0.5997	0.6188	0.6105		0.58	5.9	TM*	
6	TM	Bromomethane		0.3746	0.3445	0.2901	0.3035	0.2900	0.2544				0.31	14	TM	
7	TM	Chloroethane		0.3444	0.3230	0.2999	0.3485	0.3435	0.3467	0.3555	0.2409		0.33	12	TM	
8	TM	Dichlorofluoromethane		0.8251	0.7751	0.7604	0.8135	0.8063	0.8335	0.8623	0.7993		0.81	4.0	TM	
9	TM	Trichlorofluoromethane	0.7091	0.5923	0.6749	0.6292	0.6982	0.7327	0.7260	0.7372	0.6885		0.69	7.1	TM	
10	TM	Acrolein	0.0112	0.0114	0.0107	0.0110	0.0124	0.0122	0.0127	0.0129	0.0129		0.01	7.1	TM	
11	TML	Acetone	0.1916	0.1077	0.0831	0.0703	0.0651	0.0632	0.0618	0.0632	0.0559		0.08	51	TML	0.998
12	TM	Freon-113		0.3994	0.3917	0.3691	0.3653	0.3893	0.3874	0.4035	0.3697		0.38	3.8	TM	
13	TM*	1,1-DCE	0.6755	0.6530	0.6216	0.6264	0.6484	0.6594	0.6710	0.6743	0.6186		0.65	3.5	TM*	
14	TM	t-Butanol	0.0129	0.0093	0.0103	0.0106	0.0101	0.0107	0.0109	0.0114	0.0120		0.01	9.9	TM	
15	TM	Methyl Acetate	0.1856	0.1495	0.1590	0.1407	0.1415	0.1500	0.1593	0.1657	0.1632		0.16	8.9	TM	
16	TMQ	Iodomethane		0.1619	0.1599	0.2101	0.3738	0.4662	0.5158				0.31	50	TMQ	0.999
17	TM	Acrylonitrile			0.0501	0.0612	0.0724	0.0666	0.0729	0.0714	0.0720		0.07	13	TM	
18	TM	Methylene chloride		0.4372	0.3762	0.3773	0.4001	0.4005	0.4107	0.4124	0.3863		0.40	5.1	TM	
19	TM	Carbon disulfide	1.440	1.289	1.309	1.250	1.256	1.301	1.318	1.360	1.257		1.3	4.6	TM	
20	TM	Methyl t-butyl ether (MtBE)	0.7520	0.6463	0.6919	0.6681	0.6718	0.6848	0.7098	0.7123	0.6926		0.69	4.4	TM	
21	TM	Trans-1,2-DCE	0.4909	0.4944	0.4550	0.4627	0.4632	0.4789	0.4725	0.4809	0.4483		0.47	3.4	TM	
22	TM	Diisopropyl Ether	1.232	1.261	1.204	1.211	1.253	1.267	1.325	1.276	1.251		1.3	2.9	TM	
23	TM**	1,1-DCA	0.8137	0.8187	0.7999	0.7644	0.8004	0.8107	0.8303	0.7982	0.7841		0.80	2.4	TM**	
24	TM	Vinyl Acetate		0.2855	0.2685	0.2479	0.2338	0.2444	0.2702	0.2820	0.2671		0.26	7.0	TM	
25	TM	Ethyl tert Butyl Ether	0.8645	0.8049	0.8000	0.8080	0.8427	0.8481	0.8937	0.8706	0.8987		0.85	4.4	TM	
26	TM	MEK (2-Butanone)		0.0950	0.0705	0.0783	0.1005	0.0802	0.0964	0.0932	0.0839		0.09	12	TM	
27	TM	Cis-1,2-DCE	0.5917	0.5626	0.4752	0.5024	0.5011	0.5091	0.5117	0.4875	0.4742		0.51	7.7	TM	
28	TM	2,2-Dichloropropane	0.6648	0.5583	0.5579	0.5204	0.5563	0.5727	0.6088	0.6059	0.6189		0.58	7.4	TM	
29	TM*	Chloroform	0.8499	0.7857	0.7422	0.7085	0.7750	0.7850	0.7986	0.7624	0.7574		0.77	5.1	TM*	
30	TM	Bromochloromethane	0.2124	0.1996	0.1905	0.1782	0.1958	0.1992	0.1962	0.1884	0.1898		0.19	4.9	TM	
31	S	Dibromofluoromethane(S)	0.2337	0.2291	0.2010	0.2005	0.2193	0.2229	0.2284	0.2221	0.2202		0.22	5.3	S	
32	TM	1,1,1-TCA	0.7237	0.7696	0.7192	0.6841	0.7131	0.7376	0.7564	0.7334	0.7337		0.73	3.4	TM	
33	TM	Cyclohexane	0.4290	0.4403	0.3734	0.3710	0.3863	0.3988	0.4039	0.3900	0.3822		0.40	6.0	TM	
34	TM	1,1-Dichloropropene	0.7159	0.6731	0.6398	0.6090	0.6568	0.6667	0.6700	0.6497	0.6215		0.66	4.8	TM	
35	TM	2,2,4-Trimethylpentane	1.397	1.176	1.124	1.085	1.134	1.155	1.157	1.152	1.093		1.2	7.9	TM	

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 1/11/17
Matrix: Instrument: Max
Initials:

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD		
36	S	1,2-DCA-D4(S)	0.2017	0.1939	0.1631	0.1713	0.1801	0.1717	0.1889	0.1796	0.1777		0.18	6.7	S	
37	TM	Carbon Tetrachloride	0.6034	0.6106	0.5976	0.5810	0.6019	0.6312	0.6507	0.6337	0.6375		0.62	3.7	TM	
38	TM	Tert Amyl Methyl Ether	0.6323	0.6924	0.7174	0.6726	0.7073	0.7182	0.7630	0.7451	0.7731		0.71	6.2	TM	
39	TM	1,2-DCA	0.4423	0.4432	0.4169	0.4096	0.4369	0.4270	0.4392	0.4281	0.4294		0.43	2.7	TM	
40	TM	Benzene	2.036	1.890	1.849	1.856	1.896	1.933	1.977	1.882	1.826		1.9	3.5	TM	
41	TM	TCE	0.6076	0.5806	0.5277	0.4734	0.5129	0.5190	0.5231	0.4994	0.4902		0.53	8.1	TM	
42	TM	2-Pentanone	0.1307	0.1268	0.1276	0.1344	0.1393	0.1419	0.1505	0.1481	0.1618		0.14	8.4	TM	
43	TM*	1,2-Dichloropropane		0.4471	0.4168	0.3981	0.4278	0.4394	0.4359	0.4149	0.4074		0.42	4.0	TM*	
44	TM	Bromodichloromethane		0.4623	0.4979	0.4604	0.5233	0.5078	0.5273	0.5061	0.5081		0.50	5.0	TM	
45	TM	Methyl Cyclohexane		0.6488	0.5983	0.5893	0.6083	0.6410	0.6397	0.6314	0.6015		0.62	3.7	TM	
46	TM	Dibromomethane		0.1669	0.1645	0.1457	0.1587	0.1669	0.1680	0.1593	0.1626		0.16	4.5	TM	
47	TM	MIBK (methyl isobutyl ketone)				0.2345	0.2289	0.2108	0.2071	0.1986	0.1971		0.21	7.3	TM	
48	TM	1-Bromo-2-chloroethane		0.3438	0.4061	0.3950	0.4172	0.4202	0.4433	0.4262	0.4400		0.41	7.7	TM	
49	TMQ	2-Chloroethyl vinyl ether				0.0101	0.0085	0.0114	0.0138	0.0149	0.0192		0.01	30	TMQ	1.000
50	TM	Cis-1,3-Dichloropropene		0.5403	0.5175	0.5039	0.5354	0.5626	0.6048	0.6015	0.6045		0.56	7.3	TM	
51	TM*	Toluene		2.138	2.104	2.082	2.177	2.199	2.260	2.192	2.116		2.2	2.7	TM*	
52	TM	Trans-1,3-Dichloropropene		0.3836	0.3396	0.3266	0.3687	0.3904	0.4218	0.4336	0.4522		0.39	11	TM	
53	TM	1,1,2-TCA		0.2257	0.1861	0.1911	0.2012	0.2055	0.2095	0.2007	0.1997		0.20	5.9	TM	
54	TM	2-Hexanone				0.0458	0.0610	0.0582	0.0635	0.0638	0.0683		0.06	13	TM	
55	I	Chlorobenzene-D5 (IS)														
56	S	Toluene-D8(S)	1.374	1.317	1.158	1.150	1.261	1.269	1.291	1.272	1.230		1.3	5.7	S	
57	TM	1,2-EDB		0.3231	0.2700	0.2919	0.3141	0.3186	0.3326	0.3121	0.3133		0.31	6.4	TM	
58	TM	Tetrachloroethene		0.7781	0.8093	0.7273	0.7229	0.7222	0.7071	0.6730	0.6419		0.72	7.4	TM	
59	TM	1-Chlorohexane		0.7695	0.7622	0.7565	0.8092	0.8106	0.8251	0.8130	0.7788		0.79	3.4	TM	
60	TM	1,1,1,2-Tetrachloroethane		0.6327	0.6131	0.5740	0.6217	0.6193	0.6433	0.6337	0.6212		0.62	3.4	TM	
61	TM	m&p-Xylene		1.308	1.332	1.294	1.361	1.359	1.353	1.314	1.265		1.3	2.6	TM	
62	TM	o-Xylene		1.255	1.220	1.181	1.258	1.237	1.274	1.232	1.168		1.2	3.0	TM	
63	TM	Styrene		1.777	1.830	1.756	1.987	1.975	2.016	1.973	1.912		1.9	5.4	TM	
64	S	4-Bromofluorobenzene(S)	0.4898	0.4586	0.4031	0.4034	0.4549	0.4598	0.4689	0.4698	0.4525		0.45	6.5	S	
65	TM	1,3-Dichloropropane		0.5773	0.5996	0.6072	0.6294	0.5855	0.6170	0.5916	0.5858		0.60	3.0	TM	
66	TM	Dibromochloromethane		0.3944	0.4592	0.4410	0.4727	0.4636	0.4812	0.4743	0.4690		0.46	6.1	TM	
67	TM**	Chlorobenzene		1.928	1.849	1.836	1.889	1.877	1.900	1.846	1.775		1.9	2.5	TM**	
68	TM*	Ethylbenzene		3.206	3.299	3.149	3.413	3.406	3.511	3.339	3.221		3.3	3.7	TM*	
69	TM**	Bromoform		0.2835	0.2722	0.2602	0.2862	0.2792	0.2874	0.2857	0.2918		0.28	3.6	TM**	
70	I	1,4-Dichlorobenzene-D (IS)														

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 1/11/17
Matrix: Instrument: Max
Initials:

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD		
71	TM	Isopropylbenzene		5.799	6.150	5.486	6.085	6.138	5.977	5.816	5.519		5.9	4.5	TM	
72	TM**	1,1,2,2-Tetrachloroethane		0.6334	0.6036	0.6021	0.6067	0.6142	0.6044	0.5822	0.5750		0.60	3.0	TM**	
73	TM	1,2,3-Trichloropropane		0.2218	0.2138	0.2224	0.2060	0.2001	0.2011	0.1924	0.1941		0.21	5.7	TM	
74	TM	t-1,4-Dichloro-2-Butene			0.1098	0.1120	0.1271	0.1232	0.1331	0.1377			0.12	9.0	TM	
75	TM	Bromobenzene		1.521	1.522	1.371	1.459	1.481	1.460	1.399	1.358		1.4	4.4	TM	
76	TM	n-Propylbenzene		6.260	6.750	6.041	6.827	6.789	6.654	6.481	6.185		6.5	4.7	TM	
77	TM	4-Ethyltoluene		5.504	5.874	5.406	6.024	5.906	5.831	5.652	5.416		5.7	4.2	TM	
78	TM	2-Chlorotoluene		4.180	4.067	3.769	4.011	4.017	3.977	3.852	3.671		3.9	4.2	TM	
79	TM	1,3,5-Trimethylbenzene		4.796	4.917	4.502	4.927	4.992	4.868	4.686	4.457		4.8	4.2	TM	
80	TM	4-Chlorotoluene		4.476	4.606	4.273	4.673	4.671	4.543	4.388	4.198		4.5	4.0	TM	
81	TM	Tert-Butylbenzene		4.286	4.327	4.001	4.375	4.376	4.225	4.088	3.869		4.2	4.5	TM	
82	TM	1,2,4-Trimethylbenzene		4.371	4.719	4.517	4.923	4.952	4.906	4.725	4.499		4.7	4.7	TM	
83	TM	Sec-Butylbenzene		5.712	5.799	5.404	5.863	5.883	5.672	5.546	5.247		5.6	4.0	TM	
84	TM	p-Isopropyltoluene		5.148	5.289	4.923	5.333	5.293	5.097	4.968	4.690		5.1	4.4	TM	
85	TM	Benzyl Chloride		0.5015	0.4550	0.4603	0.5531	0.5931	0.6188				0.53	13	TM	
86	TM	1,3-DCB		2.579	2.833	2.676	2.893	2.882	2.823	2.723	2.602		2.8	4.5	TM	
87	TM	1,4-DCB		2.669	2.802	2.564	2.737	2.757	2.728	2.601	2.486		2.7	4.1	TM	
88	TM	n-Butylbenzene		3.856	4.028	3.838	4.246	4.269	4.239	4.091	3.839		4.1	4.7	TM	
89	TM	1,2-DCB		2.216	2.293	2.124	2.465	2.350	2.361	2.270	2.189		2.3	4.8	TM	
90	TM	Hexachloroethane		0.5711	0.5990	0.5996	0.6863	0.7223	0.7519	0.7588	0.7541		0.68	12	TM	
91	TM	1,2-Dibromo-3-chloropropane			0.0762	0.0630	0.0755	0.0911	0.0917	0.0883	0.0923		0.08	14	TM	
92	TML	1,2,4-Trichlorobenzene		0.7844	0.8436	1.031	1.165	1.286	1.428	1.433	1.453		1.2	23	TML	1.000
93	TM	Hexachlorobutadiene		1.262	1.032	1.023	1.104	1.057	1.025	1.014	0.9306		1.1	9.1	TM	
94	TMQ	Naphthalene		0.3424	0.3912	0.6274	0.8698	1.104	1.429	1.578			0.91	54	TMQ	0.999
95	TML	1,2,3-Trichlorobenzene		0.3768	0.4306	0.6263	0.7550	0.8808	1.016	1.056	1.061		0.78	35	TML	1.000
96																
97																
98																
99																
100																
101																
102																
103																
104																
105																

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M06.D
Acq On : 11 Jan 17 11:24
Sample : 0.3ug/L VOC STD 1/11/17A
Misc : IS&S 10/20/16

Vial: 4
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 10:51 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 10:43:31 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.51	96	320130	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.15	117	222100	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	114005	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	4.78	111	14961	5.24182 ppb		0.00
Spiked Amount 25.000			Recovery = 20.968%			
36) 1,2-DCA-D4(S)	5.13	65	12915	5.87485 ppb		0.00
Spiked Amount 25.000			Recovery = 23.500%			
56) Toluene-D8(S)	7.35	98	61030	5.41344 ppb		0.00
Spiked Amount 25.000			Recovery = 21.652%			
64) 4-Bromofluorobenzene(S)	10.74	95	21757	5.32633 ppb		0.00
Spiked Amount 25.000			Recovery = 21.304%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.18	85	1133	0.28314 ppb		94
3) Freon 114	1.29	85	1602	0.32514 ppb		98
4) Chloromethane	1.34	50	2094	0.37081 ppb		90
5) Vinyl chloride	1.42	62	2281	0.29854 ppb	#	78
6) Bromomethane	1.69	94	1624	0.43733 ppb		88
7) Chloroethane	1.79	64	1532	0.34828 ppb		90
8) Dichlorofluoromethane	1.98	67	3240	0.31379 ppb		100
9) Trichlorofluoromethane	2.03	101	2724	0.29032 ppb		87
10) Acrolein	2.41	56	1438	9.17828 ppb	#	83
11) Acetone	2.57	43	736	0.91005 ppb		93
12) Freon-113	2.53	101	1540	0.30892 ppb		89
13) 1,1-DCE	2.51	61	2595	0.30731 ppb		93
14) t-Butanol	3.14	59	1656	12.13701 ppb	#	85
15) Methyl Acetate	2.90	43	713	0.37112 ppb	#	52
17) Acrylonitrile	3.23	53	254	0.29800 ppb	#	79
18) Methylene chloride	2.98	84	1784	0.34790 ppb		91
19) Carbon disulfide	2.70	76	5531	0.33191 ppb		97
20) Methyl t-butyl ether (MtBE	3.28	73	2889	0.32945 ppb		95
21) Trans-1,2-DCE	3.26	96	1886	0.30753 ppb		91
22) Diisopropyl Ether	3.80	45	4734	0.29189 ppb	#	92
23) 1,1-DCA	3.67	63	3126	0.30111 ppb		91
25) Ethyl tert Butyl Ether	4.17	59	3321	0.30579 ppb		100
26) MEK (2-Butanone)	4.31	43	152	0.14809 ppb	#	52
27) Cis-1,2-DCE	4.27	96	2273	0.34864 ppb		98
28) 2,2-Dichloropropane	4.27	77	2554	0.34826 ppb		90
29) Chloroform	4.61	83	3265	0.32482 ppb		78
30) Bromochloromethane	4.52	128	816	0.31985 ppb		86
32) 1,1,1-TCA	4.80	97	2780	0.29434 ppb	#	90
33) Cyclohexane	4.86	41	1648	0.32274 ppb		76
34) 1,1-Dichloropropene	4.99	75	2750	0.32210 ppb		90
35) 2,2,4-Trimethylpentane	5.33	57	5365	0.36289 ppb		96
37) Carbon Tetrachloride	4.97	117	2318	0.28679 ppb		90
38) Tert Amyl Methyl Ether	5.36	73	2429	0.26411 ppb		97
39) 1,2-DCA	5.21	62	1699	0.31076 ppb		99
40) Benzene	5.20	78	7820	0.31598 ppb		95
41) TCE	5.93	95	2334	0.35121 ppb		85
42) 2-Pentanone	6.15	43	16737	9.20910 ppb		100
43) 1,2-Dichloropropane	6.16	63	1960	0.34838 ppb	#	85
44) Bromodichloromethane	6.49	83	1885	0.28989 ppb		97

(#) = qualifier out of range (m) = manual integration
0111M06.D MALLW.M Thu Jan 12 11:36:19 2017

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M06.D
Acq On : 11 Jan 17 11:24
Sample : 0.3ug/L VOC STD 1/11/17A
Misc : IS&S 10/20/16

Vial: 4
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 10:51 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 10:43:31 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
45) Methyl Cyclohexane	6.15	83	2481	0.30228 ppb		100
46) Dibromomethane	6.28	93	598	0.27977 ppb		90
47) MIBK (methyl isobutyl ket	7.24	43	856	0.31707 ppb	#	81
48) 1-Bromo-2-chloroethane	6.84	63	1272	0.23640 ppb		100
50) Cis-1,3-Dichloropropene	7.03	75	2230	0.30953 ppb	#	80
51) Toluene	7.43	91	8812	0.31298 ppb		98
52) Trans-1,3-Dichloropropene	7.71	75	1273	0.25466 ppb	#	76
53) 1,1,2-TCA	7.93	83	695	0.26409 ppb	#	70
57) 1,2-EDB	8.53	107	709	0.25049 ppb		90
58) Tetrachloroethene	8.10	164	2151	0.33526 ppb		92
59) 1-Chlorohexane	9.22	91	2229	0.30951 ppb		95
60) 1,1,1,2-Tetrachloroethane	9.31	131	1895	0.34443 ppb		78
61) m&p-Xylene	9.52	106	7491	0.62066 ppb		96
62) o-Xylene	10.04	106	3353	0.30501 ppb		77
63) Styrene	10.06	104	5458	0.31113 ppb		83
65) 1,3-Dichloropropane	8.13	76	1743	0.33511 ppb	#	76
66) Dibromochloromethane	8.40	129	1395	0.33868 ppb		98
67) Chlorobenzene	9.19	112	5761	0.34541 ppb		94
68) Ethylbenzene	9.36	91	9580	0.31659 ppb		88
69) Bromoform	10.27	173	632	0.25480 ppb		84
71) Isopropylbenzene	10.56	105	8633	0.30842 ppb	#	88
72) 1,1,2,2-Tetrachloroethane	10.97	83	1062	0.37916 ppb	#	74
73) 1,2,3-Trichloropropane	11.01	110	311	0.34084 ppb	#	16
74) t-1,4-Dichloro-2-Butene	11.05	53	91	0.16201 ppb	#	29
75) Bromobenzene	10.93	156	2366	0.35040 ppb		95
76) n-Propylbenzene	11.13	91	9842	0.31791 ppb		98
77) 4-Ethyltoluene	11.30	105	8210	0.30486 ppb		92
78) 2-Chlorotoluene	11.21	91	5896	0.32183 ppb		91
79) 1,3,5-Trimethylbenzene	11.39	105	6904	0.30328 ppb		95
80) 4-Chlorotoluene	11.37	91	6867	0.32240 ppb		94
81) Tert-Butylbenzene	11.84	119	6232	0.31231 ppb	#	94
82) 1,2,4-Trimethylbenzene	11.91	105	6643	0.29416 ppb		94
83) Sec-Butylbenzene	12.15	105	8575	0.31962 ppb		90
84) p-Isopropyltoluene	12.37	119	7262	0.30084 ppb		92
85) Benzyl Chloride	12.59	91	534	0.19744 ppb	#	61
86) 1,3-DCB	12.26	146	3905	0.29717 ppb		84
87) 1,4-DCB	12.39	146	4209	0.33479 ppb		92
88) n-Butylbenzene	12.96	91	5811	0.29852 ppb		94
89) 1,2-DCB	12.90	146	3601	0.33608 ppb	#	89
90) Hexachloroethane	13.26	117	1015	0.30817 ppb	#	66
92) 1,2,4-Trichlorobenzene	15.23	180	977	0.16663 ppb		78
93) Hexachlorobutadiene	15.52	225	1642	0.34072 ppb		83
95) 1,2,3-Trichlorobenzene	15.92	180	363	0.09038 ppb	#	63

(#) = qualifier out of range (m) = manual integration
0111M06.D MALLW.M Thu Jan 12 11:36:20 2017

Quantitation Report

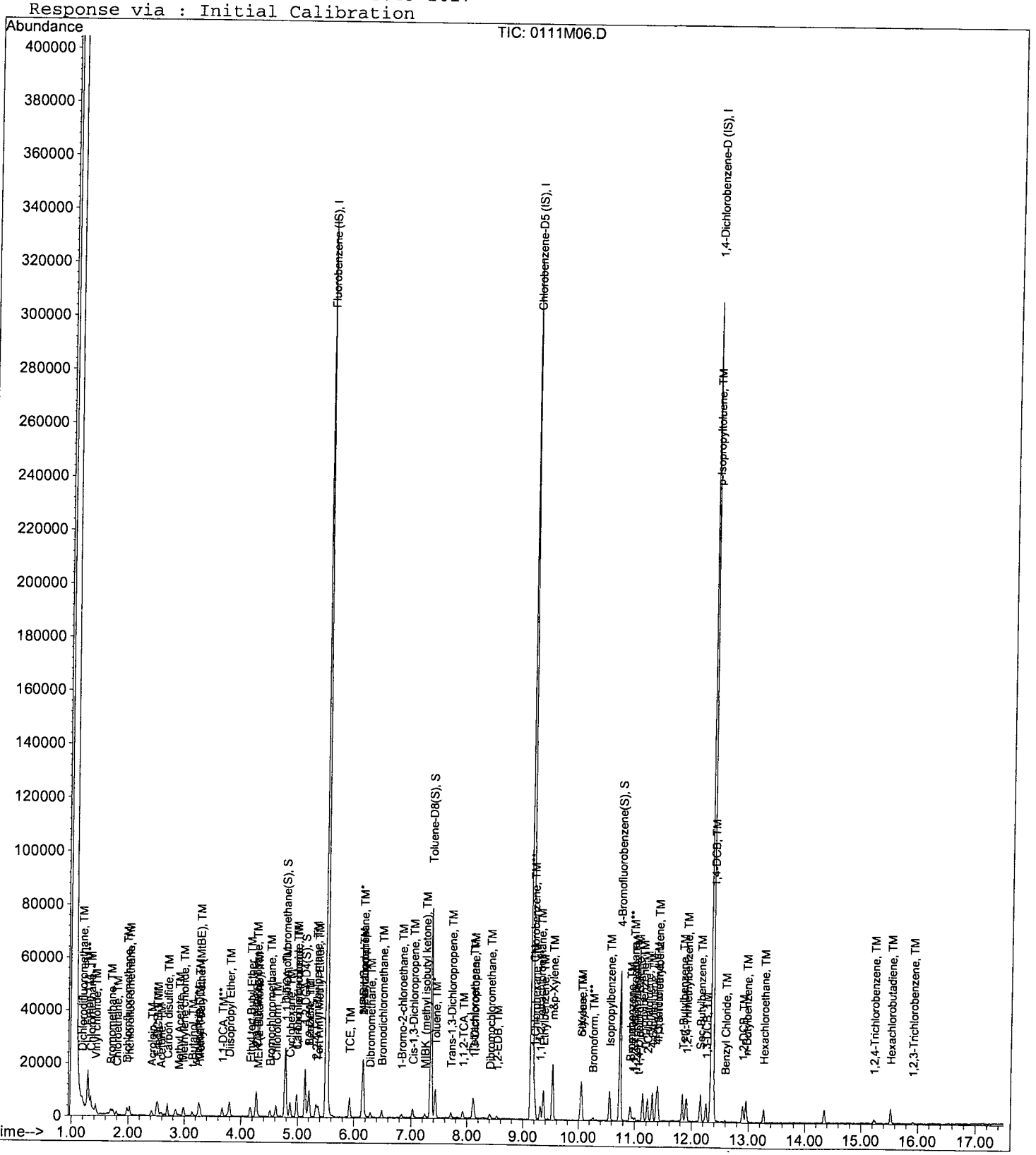
Data File : M:\MAX\DATA\M170111\0111M06.D
Acq On : 11 Jan 17 11:24
Sample : 0.3ug/L VOC STD 1/11/17A
Misc : IS&S 10/20/16

Vial: 4
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 10:51 2017

Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M07.D
Acq On : 11 Jan 17 11:52
Sample : 0.5ug/L VOC STD 1/11/17B
Misc : IS&S 10/20/16

Vial: 5
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 10:51 2017

Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 10:43:31 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.51	96	338873	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.15	117	239828	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	123537	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	4.78	111	15524	5.13824 ppb		0.00
Spiked Amount 25.000			Recovery = 20.552%			
36) 1,2-DCA-D4(S)	5.13	65	13144	5.64832 ppb		0.00
Spiked Amount 25.000			Recovery = 22.592%			
56) Toluene-D8(S)	7.35	98	63193	5.19096 ppb		0.00
Spiked Amount 25.000			Recovery = 20.764%			
64) 4-Bromofluorobenzene(S)	10.74	95	21998	4.98725 ppb		0.00
Spiked Amount 25.000			Recovery = 19.948%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.18	85	1905	0.44973 ppb		100
3) Freon 114	1.29	85	2545	0.48796 ppb		93
4) Chloromethane	1.34	50	3333	0.55756 ppb		96
5) Vinyl chloride	1.42	62	3799	0.46971 ppb	#	86
6) Bromomethane	1.69	94	2539	0.64592 ppb		80
7) Chloroethane	1.79	64	2334	0.50125 ppb		91
8) Dichlorofluoromethane	1.98	67	5592	0.51162 ppb		95
9) Trichlorofluoromethane	2.02	101	4014	0.40414 ppb		86
10) Acrolein	2.41	56	3872	23.34680 ppb		89
11) Acetone	2.58	43	730	0.85271 ppb	#	45
12) Freon-113	2.53	101	2707	0.51299 ppb		90
13) 1,1-DCE	2.50	61	4426	0.49515 ppb	#	89
14) t-Butanol	3.14	59	3158	21.86516 ppb		90
15) Methyl Acetate	2.90	43	1013	0.49811 ppb	#	68
17) Acrylonitrile	3.23	53	263	0.29150 ppb	#	70
18) Methylene chloride	2.98	84	2963	0.54585 ppb		86
19) Carbon disulfide	2.69	76	8734	0.49513 ppb		98
20) Methyl t-butyl ether (MtBE	3.28	73	4380	0.47185 ppb		95
21) Trans-1,2-DCE	3.25	96	3351	0.51619 ppb		89
22) Diisopropyl Ether	3.79	45	8548	0.49791 ppb	#	88
23) 1,1-DCA	3.67	63	5549	0.50494 ppb		94
24) Vinyl Acetate	3.76	43	1935	0.53130 ppb	#	71
25) Ethyl tert Butyl Ether	4.17	59	5455	0.47451 ppb		98
26) MEK (2-Butanone)	4.31	43	644	0.59273 ppb	#	52
27) Cis-1,2-DCE	4.27	96	3813	0.55251 ppb		83
28) 2,2-Dichloropropane	4.27	77	3784	0.48745 ppb		90
29) Chloroform	4.61	83	5325	0.50047 ppb		99
30) Bromochloromethane	4.52	128	1353	0.50100 ppb		76
32) 1,1,1-TCA	4.80	97	5216	0.52172 ppb		95
33) Cyclohexane	4.86	41	2984	0.55205 ppb		85
34) 1,1-Dichloropropene	4.98	75	4562	0.50478 ppb		87
35) 2,2,4-Trimethylpentane	5.33	57	7968	0.50915 ppb		96
37) Carbon Tetrachloride	4.98	117	4138	0.48365 ppb		91
38) Tert Amyl Methyl Ether	5.37	73	4693	0.48205 ppb	#	80
39) 1,2-DCA	5.21	62	3004	0.51906 ppb		93
40) Benzene	5.20	78	12809	0.48894 ppb		95
41) TCE	5.92	95	3935	0.55937 ppb		97
42) 2-Pentanone	6.15	43	42966	22.33335 ppb		99
43) 1,2-Dichloropropane	6.16	63	3030	0.50877 ppb	#	85

(#) = qualifier out of range (m) = manual integration
0111M07.D MALLW.M Thu Jan 12 11:36:26 2017

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M07.D
Acq On : 11 Jan 17 11:52
Sample : 0.5ug/L VOC STD 1/11/17B
Misc : IS&S 10/20/16

Vial: 5
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 10:51 2017

Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 10:43:31 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
44) Bromodichloromethane	6.49	83	3133	0.45516 ppb		96
45) Methyl Cyclohexane	6.15	83	4397	0.50609 ppb		89
46) Dibromomethane	6.29	93	1131	0.49987 ppb		89
47) MIBK (methyl isobutyl ket	7.23	43	1987	0.69529 ppb	#	78
48) 1-Bromo-2-chloroethane	6.84	63	2330	0.40908 ppb		98
50) Cis-1,3-Dichloropropene	7.02	75	3662	0.48018 ppb		89
51) Toluene	7.43	91	14489	0.48615 ppb		94
52) Trans-1,3-Dichloropropene	7.71	75	2600	0.49136 ppb		87
53) 1,1,2-TCA	7.92	83	1530	0.54923 ppb		94
54) 2-Hexanone	8.29	58	206	0.26131 ppb	#	67
57) 1,2-EDB	8.53	107	1550	0.50714 ppb		84
58) Tetrachloroethene	8.11	164	3732	0.53867 ppb		93
59) 1-Chlorohexane	9.21	91	3691	0.47463 ppb		96
60) 1,1,1,2-Tetrachloroethane	9.31	131	3035	0.51085 ppb		91
61) m&p-Xylene	9.52	106	12549	0.96288 ppb		84
62) o-Xylene	10.04	106	6018	0.50697 ppb		86
63) Styrene	10.06	104	8522	0.44988 ppb		90
65) 1,3-Dichloropropane	8.13	76	2769	0.49302 ppb		95
66) Dibromochloromethane	8.40	129	1892	0.42539 ppb	#	71
67) Chlorobenzene	9.19	112	9248	0.51349 ppb		97
68) Ethylbenzene	9.36	91	15380	0.47070 ppb		97
69) Bromoform	10.27	173	1360	0.50778 ppb	#	77
71) Isopropylbenzene	10.56	105	14328	0.47238 ppb	#	89
72) 1,1,2,2-Tetrachloroethane	10.97	83	1565	0.51563 ppb		85
73) 1,2,3-Trichloropropane	11.00	110	548	0.55425 ppb		88
74) t-1,4-Dichloro-2-Butene	11.06	53	146	0.23987 ppb	#	56
75) Bromobenzene	10.93	156	3757	0.51347 ppb		93
76) n-Propylbenzene	11.13	91	15468	0.46108 ppb		99
77) 4-Ethyltoluene	11.30	105	13600	0.46603 ppb		97
78) 2-Chlorotoluene	11.22	91	10328	0.52026 ppb		85
79) 1,3,5-Trimethylbenzene	11.39	105	11850	0.48039 ppb		98
80) 4-Chlorotoluene	11.37	91	11060	0.47920 ppb		92
81) Tert-Butylbenzene	11.84	119	10589	0.48971 ppb		95
82) 1,2,4-Trimethylbenzene	11.91	105	10800	0.44134 ppb		97
83) Sec-Butylbenzene	12.15	105	14112	0.48541 ppb		98
84) p-Isopropyltoluene	12.38	119	12719	0.48625 ppb		97
85) Benzyl Chloride	12.60	91	1239	0.42276 ppb	#	88
86) 1,3-DCB	12.26	146	6372	0.44749 ppb		98
87) 1,4-DCB	12.39	146	6594	0.48403 ppb		93
88) n-Butylbenzene	12.96	91	9528	0.45170 ppb		95
89) 1,2-DCB	12.90	146	5474	0.47146 ppb	#	85
90) Hexachloroethane	13.26	117	1411	0.39535 ppb		92
91) 1,2-Dibromo-3-chloropropan	14.01	75	44	0.09779 ppb	#	6
92) 1,2,4-Trichlorobenzene	15.23	180	1938	0.30503 ppb		92
93) Hexachlorobutadiene	15.53	225	3119	0.59726 ppb	#	81
94) Naphthalene	15.57	128	846	0.15512 ppb	#	79
95) 1,2,3-Trichlorobenzene	15.92	180	931	0.21391 ppb	#	71

(#) = qualifier out of range (m) = manual integration
0111M07.D MALLW.M Thu Jan 12 11:36:27 2017

Quantitation Report

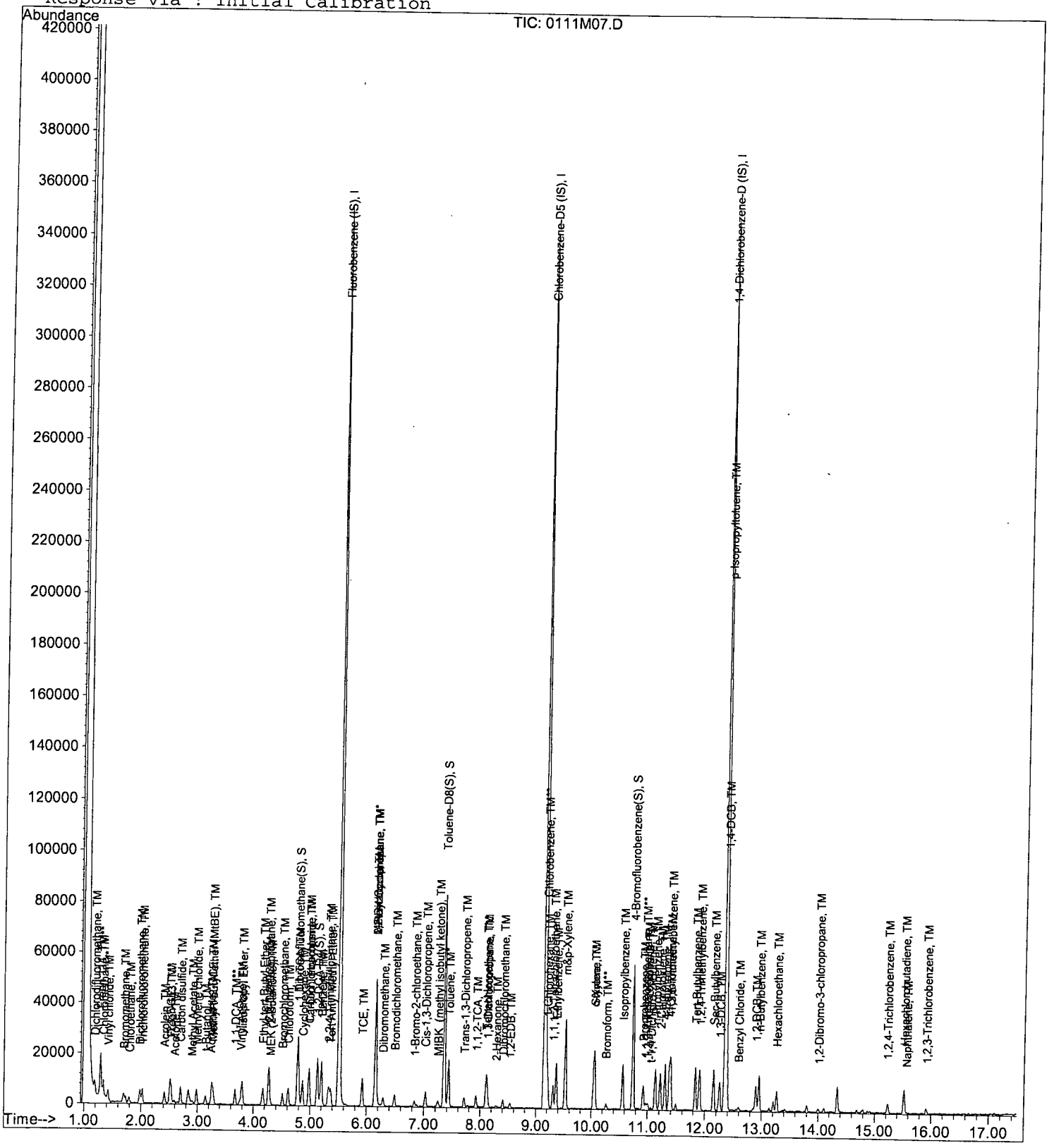
Data File : M:\MAX\DATA\M170111\0111M07.D
Acq On : 11 Jan 17 11:52
Sample : 0.5ug/L VOC STD 1/11/17B
Misc : IS&S 10/20/16

Vial: 5
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 10:51 2017

Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M08.D
Acq On : 11 Jan 17 12:21
Sample : 1.0ug/L VOC STD 1/11/17C
Misc : IS&S 10/20/16

Vial: 6
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 10:51 2017

Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 10:43:31 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.51	96	341843	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.15	117	237526	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	119495	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	4.78	111	27487	9.01879 ppb		0.00
Spiked Amount 25.000			Recovery = 36.076%			
36) 1,2-DCA-D4(S)	5.13	65	22300	9.49964 ppb		0.00
Spiked Amount 25.000			Recovery = 38.000%			
56) Toluene-D8(S)	7.35	98	110065	9.12886 ppb		0.00
Spiked Amount 25.000			Recovery = 36.516%			
64) 4-Bromofluorobenzene(S)	10.74	95	38301	8.76752 ppb		0.00
Spiked Amount 25.000			Recovery = 35.072%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.19	85	3843	0.89937 ppb		93
3) Freon 114	1.29	85	4962	0.94311 ppb		99
4) Chloromethane	1.34	50	5536	0.91805 ppb		97
5) Vinyl chloride	1.43	62	7412	0.90846 ppb		91
6) Bromomethane	1.69	94	4710	1.18780 ppb		94
7) Chloroethane	1.79	64	4416	0.94014 ppb	#	83
8) Dichlorofluoromethane	1.98	67	10598	0.96121 ppb		93
9) Trichlorofluoromethane	2.02	101	9229	0.92113 ppb		91
10) Acrolein	2.41	56	7336	43.84919 ppb		94
11) Acetone	2.56	43	1136	1.31542 ppb		97
12) Freon-113	2.53	101	5356	1.00617 ppb		90
13) 1,1-DCE	2.51	61	8500	0.94265 ppb		93
14) t-Butanol	3.14	59	7018	48.16863 ppb	#	80
15) Methyl Acetate	2.90	43	2174	1.05971 ppb		98
17) Acrylonitrile	3.22	53	685	0.75263 ppb	#	67
18) Methylene chloride	2.98	84	5144	0.93941 ppb		100
19) Carbon disulfide	2.70	76	17903	1.00611 ppb		98
20) Methyl t-butyl ether (MtBE	3.28	73	9461	1.01036 ppb		92
21) Trans-1,2-DCE	3.25	96	6222	0.95011 ppb		92
22) Diisopropyl Ether	3.80	45	16461	0.95050 ppb		98
23) 1,1-DCA	3.67	63	10938	0.98668 ppb		96
24) Vinyl Acetate	3.75	43	3672	0.99947 ppb		95
25) Ethyl tert Butyl Ether	4.17	59	10939	0.94327 ppb		96
26) MEK (2-Butanone)	4.30	43	964	0.87954 ppb	#	52
27) Cis-1,2-DCE	4.27	96	6498	0.93339 ppb		88
28) 2,2-Dichloropropane	4.27	77	7628	0.97409 ppb		91
29) Chloroform	4.61	83	10149	0.94556 ppb		89
30) Bromochloromethane	4.51	128	2605	0.95622 ppb		98
32) 1,1,1-TCA	4.80	97	9834	0.97508 ppb		96
33) Cyclohexane	4.87	41	5106	0.93642 ppb		95
34) 1,1-Dichloropropene	4.98	75	8748	0.95954 ppb		94
35) 2,2,4-Trimethylpentane	5.33	57	15369	0.97354 ppb		98
37) Carbon Tetrachloride	4.98	117	8171	0.94672 ppb		93
38) Tert Amyl Methyl Ether	5.37	73	9810	0.99890 ppb	#	97
39) 1,2-DCA	5.21	62	5700	0.97634 ppb	#	90
40) Benzene	5.20	78	25286	0.95682 ppb		97
41) TCE	5.92	95	7216	1.01687 ppb		94
42) 2-Pentanone	6.15	43	87224	44.94436 ppb		98
43) 1,2-Dichloropropane	6.16	63	5699	0.94862 ppb	#	87

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M08.D
Acq On : 11 Jan 17 12:21
Sample : 1.0ug/L VOC STD 1/11/17C
Misc : IS&S 10/20/16

Vial: 6
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 10:51 2017

Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 10:43:31 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
44) Bromodichloromethane	6.49	83	6808	0.98047 ppb		96
45) Methyl Cyclohexane	6.15	83	8181	0.93345 ppb		96
46) Dibromomethane	6.29	93	2249	0.98536 ppb		88
47) MIBK (methyl isobutyl ket	7.24	43	3706	1.28553 ppb		95
48) 1-Bromo-2-chloroethane	6.83	63	5553	0.96647 ppb		98
50) Cis-1,3-Dichloropropene	7.02	75	7076	0.91979 ppb		97
51) Toluene	7.43	91	28763	0.95671 ppb		92
52) Trans-1,3-Dichloropropene	7.71	75	4643	0.86984 ppb	#	82
53) 1,1,2-TCA	7.92	83	2545	0.90565 ppb		94
54) 2-Hexanone	8.29	58	608	0.76454 ppb	#	46
57) 1,2-EDB	8.53	107	2565	0.84736 ppb		92
58) Tetrachloroethene	8.10	164	7689	1.12058 ppb		87
59) 1-Chlorohexane	9.21	91	7242	0.94029 ppb		99
60) 1,1,1,2-Tetrachloroethane	9.30	131	5825	0.98997 ppb		92
61) m&p-Xylene	9.52	106	25320	1.96162 ppb		95
62) o-Xylene	10.04	106	11587	0.98557 ppb		94
63) Styrene	10.06	104	17391	0.92697 ppb		99
65) 1,3-Dichloropropane	8.13	76	5697	1.02419 ppb		99
66) Dibromochloromethane	8.40	129	4363	0.99047 ppb		89
67) Chlorobenzene	9.18	112	17569	0.98497 ppb		96
68) Ethylbenzene	9.36	91	31347	0.96865 ppb		97
69) Bromoform	10.27	173	2586	0.97488 ppb		81
71) Isopropylbenzene	10.56	105	29398	1.00200 ppb		98
72) 1,1,2,2-Tetrachloroethane	10.97	83	2885	0.98270 ppb		88
73) 1,2,3-Trichloropropane	11.00	110	1022	1.06861 ppb	#	69
74) t-1,4-Dichloro-2-Butene	11.06	53	525	0.89174 ppb		93
75) Bromobenzene	10.92	156	7273	1.02763 ppb		95
76) n-Propylbenzene	11.13	91	32266	0.99434 ppb		96
77) 4-Ethyltoluene	11.30	105	28078	0.99470 ppb		96
78) 2-Chlorotoluene	11.22	91	19439	1.01233 ppb		90
79) 1,3,5-Trimethylbenzene	11.40	105	23503	0.98502 ppb		97
80) 4-Chlorotoluene	11.37	91	22015	0.98611 ppb		98
81) Tert-Butylbenzene	11.84	119	20684	0.98892 ppb		99
82) 1,2,4-Trimethylbenzene	11.91	105	22554	0.95284 ppb		97
83) Sec-Butylbenzene	12.15	105	27717	0.98563 ppb		98
84) p-Isopropyltoluene	12.37	119	25282	0.99923 ppb		98
85) Benzyl Chloride	12.59	91	2175	0.76724 ppb	#	82
86) 1,3-DCB	12.26	146	13543	0.98326 ppb		97
87) 1,4-DCB	12.38	146	13391	1.01621 ppb		98
88) n-Butylbenzene	12.95	91	19254	0.94365 ppb		96
89) 1,2-DCB	12.90	146	10961	0.97597 ppb		95
90) Hexachloroethane	13.27	117	2863	0.82932 ppb		89
91) 1,2-Dibromo-3-chloropropan	14.02	75	364	0.83634 ppb		87
92) 1,2,4-Trichlorobenzene	15.22	180	4032	0.65609 ppb		88
93) Hexachlorobutadiene	15.52	225	4931	0.97618 ppb		82
94) Naphthalene	15.56	128	1870	0.35449 ppb	#	79
95) 1,2,3-Trichlorobenzene	15.92	180	2058	0.48885 ppb		84

(#) = qualifier out of range (m) = manual integration

Quantitation Report

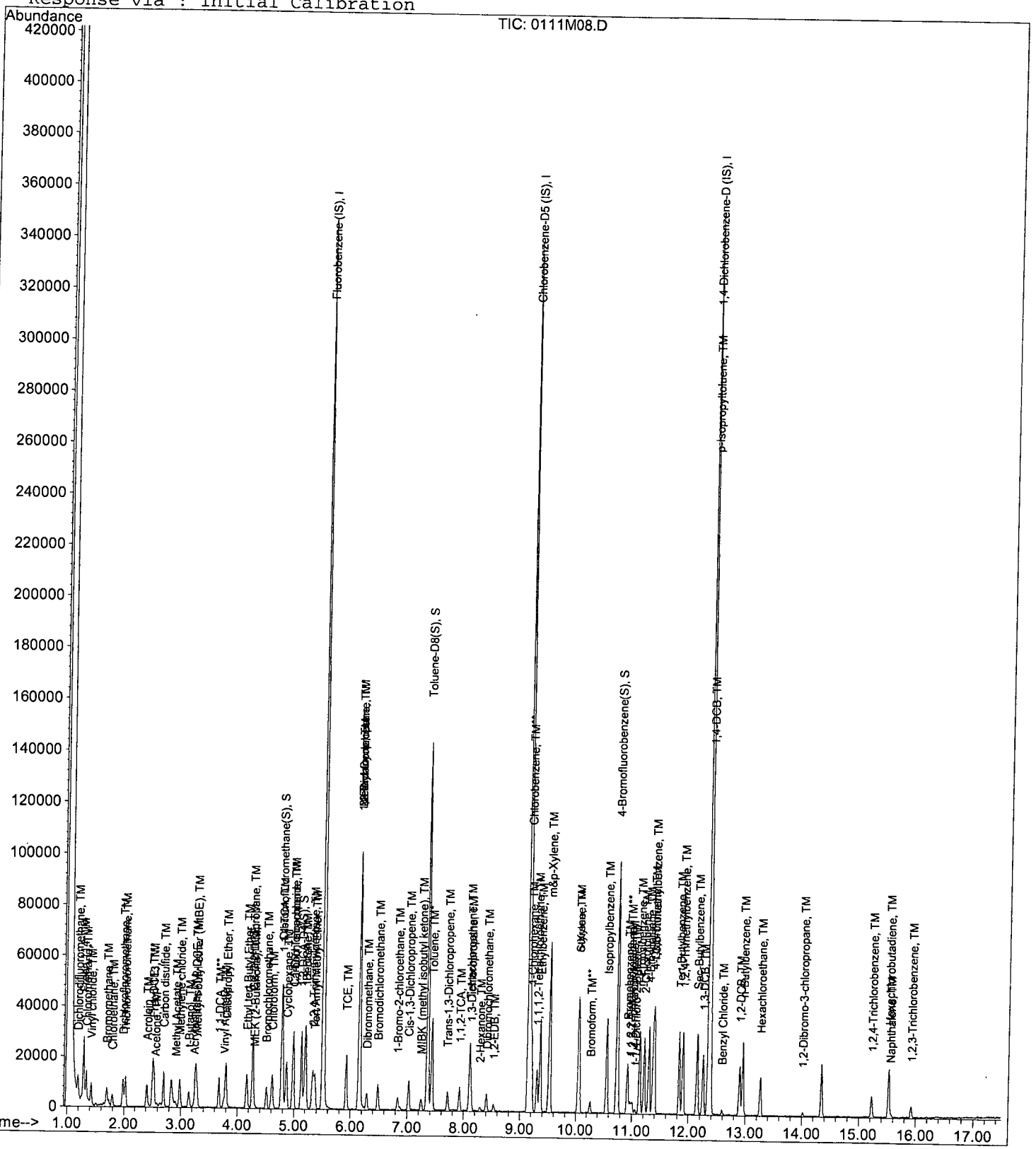
Data File : M:\MAX\DATA\M170111\0111M08.D
Acq On : 11 Jan 17 12:21
Sample : 1.0ug/L VOC STD 1/11/17C
Misc : IS&S 10/20/16

Vial: 6
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 10:51 2017

Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration



564

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M09.D
Acq On : 11 Jan 17 12:49
Sample : 2.0ug/L VOC STD 1/11/17D
Misc : IS&S 10/20/16

Vial: 7
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 10:51 2017

Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 10:43:31 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.51	96	351047	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.15	117	249761	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	131021	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	4.78	111	28151	8.99448 ppb		0.00
Spiked Amount 25.000			Recovery = 35.976%			
36) 1,2-DCA-D4(S)	5.13	65	24057	9.97941 ppb		0.00
Spiked Amount 25.000			Recovery = 39.916%			
56) Toluene-D8(S)	7.35	98	114893	9.06249 ppb		0.00
Spiked Amount 25.000			Recovery = 36.248%			
64) 4-Bromofluorobenzene(S)	10.74	95	40300	8.77320 ppb		0.00
Spiked Amount 25.000			Recovery = 35.092%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.19	85	7630	1.73882 ppb		90
3) Freon 114	1.29	85	10427	1.92987 ppb		97
4) Chloromethane	1.34	50	11455	1.84980 ppb		97
5) Vinyl chloride	1.43	62	14776	1.76355 ppb		100
6) Bromomethane	1.69	94	8147	2.00071 ppb		96
7) Chloroethane	1.79	64	8423	1.74619 ppb		97
8) Dichlorofluoromethane	1.98	67	21354	1.88597 ppb		97
9) Trichlorofluoromethane	2.02	101	17669	1.71727 ppb		90
10) Acrolein	2.41	56	11617	67.61728 ppb		98
11) Acetone	2.57	43	1973	2.22472 ppb		99
12) Freon-113	2.53	101	10367	1.89646 ppb		98
13) 1,1-DCE	2.50	61	17591	1.89970 ppb		95
14) t-Butanol	3.14	59	11112	74.26848 ppb	#	85
15) Methyl Acetate	2.89	43	3950	1.87493 ppb		99
17) Acrylonitrile	3.22	53	1718	1.83812 ppb	#	84
18) Methylene chloride	2.98	84	10597	1.88451 ppb		99
19) Carbon disulfide	2.70	76	35091	1.92033 ppb		99
20) Methyl t-butyl ether (MtBE	3.28	73	18762	1.95110 ppb	#	90
21) Trans-1,2-DCE	3.25	96	12994	1.93219 ppb		96
22) Diisopropyl Ether	3.79	45	34009	1.91228 ppb		99
23) 1,1-DCA	3.67	63	21468	1.88579 ppb		96
24) Vinyl Acetate	3.75	43	6962	1.84528 ppb		99
25) Ethyl tert Butyl Ether	4.17	59	22692	1.90542 ppb		94
26) MEK (2-Butanone)	4.30	43	2200	1.95462 ppb		99
27) Cis-1,2-DCE	4.27	96	14108	1.97337 ppb		97
28) 2,2-Dichloropropane	4.27	77	14615	1.81739 ppb		99
29) Chloroform	4.61	83	19896	1.80506 ppb		98
30) Bromochloromethane	4.51	128	5005	1.78903 ppb		82
32) 1,1,1-TCA	4.80	97	19213	1.85509 ppb		91
33) Cyclohexane	4.87	41	10418	1.86053 ppb		93
34) 1,1-Dichloropropene	4.98	75	17103	1.82678 ppb		97
35) 2,2,4-Trimethylpentane	5.33	57	30458	1.87875 ppb		97
37) Carbon Tetrachloride	4.98	117	16316	1.84087 ppb		99
38) Tert Amyl Methyl Ether	5.37	73	18889	1.87295 ppb	#	96
39) 1,2-DCA	5.21	62	11504	1.91883 ppb		100
40) Benzene	5.20	78	52125	1.92070 ppb		96
41) TCE	5.92	95	13295	1.82439 ppb		91
42) 2-Pentanone	6.15	43	141499	70.99929 ppb		97
43) 1,2-Dichloropropane	6.16	63	11180	1.81216 ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M09.D
Acq On : 11 Jan 17 12:49
Sample : 2.0ug/L VOC STD 1/11/17D
Misc : IS&S 10/20/16

Vial: 7
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 10:51 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 10:43:31 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
44) Bromodichloromethane	6.49	83	12930	1.81333 ppb		98
45) Methyl Cyclohexane	6.15	83	16551	1.83895 ppb		96
46) Dibromomethane	6.29	93	4091	1.74541 ppb		86
47) MIBK (methyl isobutyl ket	7.24	43	6586	2.22464 ppb		96
48) 1-Bromo-2-chloroethane	6.84	63	11093	1.88006 ppb		93
50) Cis-1,3-Dichloropropene	7.02	75	14150	1.79109 ppb		97
51) Toluene	7.43	91	58480	1.89415 ppb		96
52) Trans-1,3-Dichloropropene	7.71	75	9171	1.67309 ppb		99
53) 1,1,2-TCA	7.92	83	5368	1.86014 ppb		94
54) 2-Hexanone	8.28	58	1286	1.57470 ppb	#	95
57) 1,2-EDB	8.53	107	5832	1.83226 ppb		90
58) Tetrachloroethene	8.11	164	14533	2.01426 ppb		88
59) 1-Chlorohexane	9.21	91	15115	1.86636 ppb		96
60) 1,1,1,2-Tetrachloroethane	9.30	131	11469	1.85369 ppb		100
61) m&p-Xylene	9.52	106	51730	3.81135 ppb		98
62) o-Xylene	10.04	106	23605	1.90945 ppb		98
63) Styrene	10.06	104	35087	1.77858 ppb		98
65) 1,3-Dichloropropane	8.13	76	12132	2.07420 ppb		86
66) Dibromochloromethane	8.40	129	8812	1.90247 ppb		98
67) Chlorobenzene	9.19	112	36690	1.95618 ppb		95
68) Ethylbenzene	9.36	91	62912	1.84881 ppb		100
69) Bromoform	10.26	173	5199	1.86392 ppb		93
71) Isopropylbenzene	10.56	105	57504	1.78755 ppb		98
72) 1,1,2,2-Tetrachloroethane	10.97	83	6311	1.96057 ppb		93
73) 1,2,3-Trichloropropane	11.01	110	2331	2.22290 ppb		89
74) t-1,4-Dichloro-2-Butene	11.05	53	1174	1.81868 ppb		82
75) Bromobenzene	10.92	156	14367	1.85139 ppb		97
76) n-Propylbenzene	11.13	91	63325	1.77981 ppb		95
77) 4-Ethyltoluene	11.30	105	56662	1.83074 ppb		98
78) 2-Chlorotoluene	11.21	91	39505	1.87633 ppb		100
79) 1,3,5-Trimethylbenzene	11.39	105	47186	1.80361 ppb		98
80) 4-Chlorotoluene	11.37	91	44785	1.82956 ppb		95
81) Tert-Butylbenzene	11.84	119	41934	1.82854 ppb		95
82) 1,2,4-Trimethylbenzene	11.91	105	47347	1.82430 ppb		97
83) Sec-Butylbenzene	12.15	105	56638	1.83689 ppb		97
84) p-Isopropyltoluene	12.38	119	51602	1.86007 ppb		97
85) Benzyl Chloride	12.60	91	4825	1.55231 ppb		91
86) 1,3-DCB	12.26	146	28048	1.85722 ppb		98
87) 1,4-DCB	12.38	146	26875	1.86005 ppb		96
88) n-Butylbenzene	12.96	91	40225	1.79803 ppb		91
89) 1,2-DCB	12.90	146	22266	1.80817 ppb	#	89
90) Hexachloroethane	13.27	117	6285	1.66040 ppb		92
91) 1,2-Dibromo-3-chloropropan	14.01	75	660	1.38303 ppb		84
92) 1,2,4-Trichlorobenzene	15.23	180	10810	1.60427 ppb		90
93) Hexachlorobutadiene	15.53	225	10726	1.93661 ppb		92
94) Naphthalene	15.56	128	6576	1.13692 ppb		99
95) 1,2,3-Trichlorobenzene	15.92	180	6565	1.42224 ppb		84

(#) = qualifier out of range (m) = manual integration

Quantitation Report

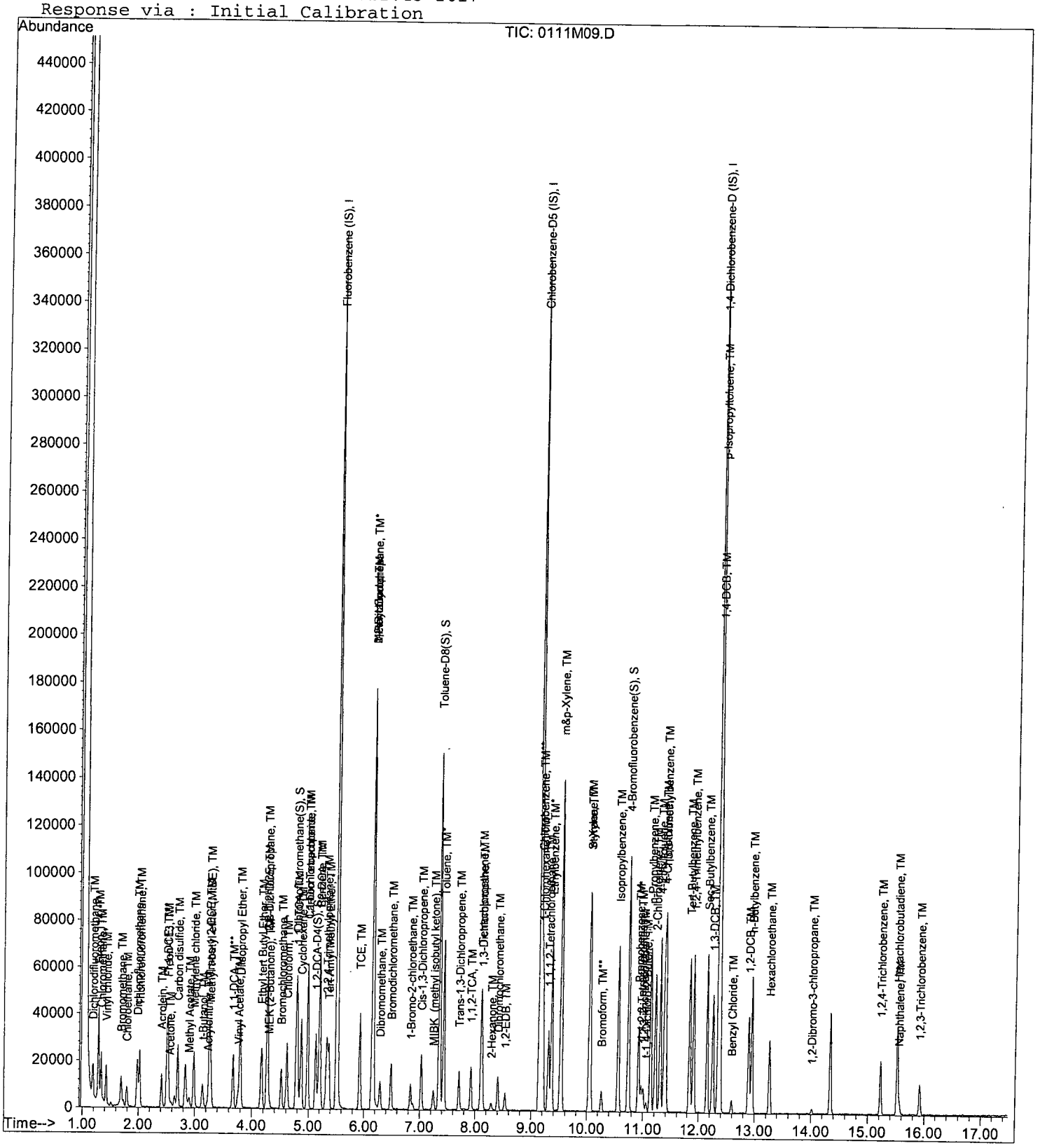
Data File : M:\MAX\DATA\M170111\0111M09.D
Acq On : 11 Jan 17 12:49
Sample : 2.0ug/L VOC STD 1/11/17D
Misc : IS&S 10/20/16

Vial: 7
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 10:51 2017

Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration



567

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M10.D
Acq On : 11 Jan 17 13:17
Sample : 5.0ug/L VOC STD 1/11/17E
Misc : IS&S 10/20/16

Vial: 8
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 10:51 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 10:43:31 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.51	96	341259	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.15	117	240539	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	127100	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	4.78	111	74853	24.60212 ppb		0.00
Spiked Amount 25.000			Recovery = 98.408%			
36) 1,2-DCA-D4(S)	5.13	65	61474	26.23228 ppb		0.00
Spiked Amount 25.000			Recovery = 104.928%			
56) Toluene-D8(S)	7.35	98	303378	24.84718 ppb		0.00
Spiked Amount 25.000			Recovery = 99.388%			
64) 4-Bromofluorobenzene(S)	10.74	95	109432	24.73641 ppb		0.00
Spiked Amount 25.000			Recovery = 98.944%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.19	85	21632	5.07118 ppb		94
3) Freon 114	1.29	85	26020	4.95400 ppb		96
4) Chloromethane	1.34	50	30960	5.14295 ppb		99
5) Vinyl chloride	1.43	62	40952	5.02791 ppb		99
6) Bromomethane	1.69	94	20714	5.23276 ppb		99
7) Chloroethane	1.79	64	23786	5.07257 ppb		100
8) Dichlorofluoromethane	1.98	67	55525	5.04458 ppb		100
9) Trichlorofluoromethane	2.03	101	47653	4.76430 ppb		96
10) Acrolein	2.41	56	16874	101.03292 ppb		100
11) Acetone	2.57	43	4441	5.15123 ppb		98
12) Freon-113	2.53	101	24933	4.69188 ppb		96
13) 1,1-DCE	2.51	61	44256	4.91641 ppb		99
14) t-Butanol	3.14	59	13813	94.96892 ppb		99
15) Methyl Acetate	2.90	43	9655	4.71435 ppb		100
17) Acrylonitrile	3.22	53	4938	5.43478 ppb	#	78
18) Methylene chloride	2.98	84	27309	4.99576 ppb		96
19) Carbon disulfide	2.70	76	85695	4.82409 ppb		99
20) Methyl t-butyl ether (MtBE	3.28	73	45854	4.90521 ppb		99
21) Trans-1,2-DCE	3.25	96	31612	4.83548 ppb		96
22) Diisopropyl Ether	3.79	45	85527	4.94700 ppb		96
23) 1,1-DCA	3.67	63	54632	4.93661 ppb		100
24) Vinyl Acetate	3.76	43	15954	4.34990 ppb		100
25) Ethyl tert Butyl Ether	4.17	59	57517	4.96816 ppb		100
26) MEK (2-Butanone)	4.31	43	6859	6.26875 ppb	#	84
27) Cis-1,2-DCE	4.27	96	34198	4.92069 ppb		99
28) 2,2-Dichloropropane	4.27	77	37967	4.85665 ppb		97
29) Chloroform	4.61	83	52893	4.93635 ppb		95
30) Bromochloromethane	4.51	128	13367	4.91506 ppb		94
32) 1,1,1-TCA	4.80	97	48668	4.83388 ppb		99
33) Cyclohexane	4.87	41	26367	4.84389 ppb		99
34) 1,1-Dichloropropene	4.98	75	44831	4.92578 ppb		96
35) 2,2,4-Trimethylpentane	5.33	57	77369	4.90927 ppb		99
37) Carbon Tetrachloride	4.98	117	41078	4.76760 ppb		96
38) Tert Amyl Methyl Ether	5.37	73	48275	4.92402 ppb		98
39) 1,2-DCA	5.21	62	29819	5.11638 ppb		99
40) Benzene	5.20	78	129428	4.90595 ppb		99
41) TCE	5.92	95	35005	4.94129 ppb		98
42) 2-Pentanone	6.15	43	190146	98.14518 ppb		100
43) 1,2-Dichloropropane	6.16	63	29200	4.86876 ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M10.D
Acq On : 11 Jan 17 13:17
Sample : 5.0ug/L VOC STD 1/11/17E
Misc : IS&S 10/20/16

Vial: 8
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 10:51 2017

Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 10:43:31 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
44) Bromodichloromethane	6.49	83	35716	5.15254 ppb		99
45) Methyl Cyclohexane	6.15	83	41520	4.74552 ppb		97
46) Dibromomethane	6.29	93	10829	4.75266 ppb		92
47) MIBK (methyl isobutyl ket	7.24	43	15621	5.42785 ppb		96
48) 1-Bromo-2-chloroethane	6.84	63	28473	4.96407 ppb		94
50) Cis-1,3-Dichloropropene	7.02	75	36539	4.75771 ppb		96
51) Toluene	7.43	91	148584	4.95062 ppb		98
52) Trans-1,3-Dichloropropene	7.71	75	25162	4.72202 ppb		96
53) 1,1,2-TCA	7.92	83	13729	4.89387 ppb		98
54) 2-Hexanone	8.29	58	4161	5.24127 ppb	#	65
57) 1,2-EDB	8.53	107	15113	4.93013 ppb		98
58) Tetrachloroethene	8.10	164	34778	5.00499 ppb		98
59) 1-Chlorohexane	9.21	91	38929	4.99115 ppb		98
60) 1,1,1,2-Tetrachloroethane	9.31	131	29911	5.01975 ppb		98
61) m&p-Xylene	9.52	106	130976	10.02000 ppb		96
62) o-Xylene	10.04	106	60529	5.08401 ppb		97
63) Styrene	10.06	104	95570	5.03024 ppb		100
65) 1,3-Dichloropropane	8.13	76	30277	5.37491 ppb		94
66) Dibromochloromethane	8.40	129	22740	5.09769 ppb		100
67) Chlorobenzene	9.19	112	90882	5.03128 ppb		95
68) Ethylbenzene	9.36	91	164207	5.01060 ppb		98
69) Bromoform	10.27	173	13767	5.12492 ppb		91
71) Isopropylbenzene	10.56	105	154681	4.95669 ppb		96
72) 1,1,2,2-Tetrachloroethane	10.97	83	15423	4.93910 ppb		97
73) 1,2,3-Trichloropropane	11.00	110	5236	5.14722 ppb		92
74) t-1,4-Dichloro-2-Butene	11.05	53	3230	5.15804 ppb		93
75) Bromobenzene	10.92	156	37092	4.92729 ppb		96
76) n-Propylbenzene	11.13	91	173538	5.02791 ppb		98
77) 4-Ethyltoluene	11.30	105	153120	5.09990 ppb		98
78) 2-Chlorotoluene	11.21	91	101953	4.99174 ppb		98
79) 1,3,5-Trimethylbenzene	11.39	105	125239	4.93475 ppb		98
80) 4-Chlorotoluene	11.37	91	118791	5.00258 ppb		99
81) Tert-Butylbenzene	11.84	119	111218	4.99929 ppb		97
82) 1,2,4-Trimethylbenzene	11.91	105	125143	4.97056 ppb		100
83) Sec-Butylbenzene	12.15	105	149034	4.98261 ppb		99
84) p-Isopropyltoluene	12.37	119	135563	5.03733 ppb		99
85) Benzyl Chloride	12.59	91	14060	4.66296 ppb		95
86) 1,3-DCB	12.26	146	73533	5.01925 ppb		95
87) 1,4-DCB	12.38	146	69572	4.96372 ppb		99
88) n-Butylbenzene	12.95	91	107927	4.97308 ppb		99
89) 1,2-DCB	12.90	146	62667	5.24603 ppb		99
90) Hexachloroethane	13.27	117	17446	4.75115 ppb		93
91) 1,2-Dibromo-3-chloropropan	14.01	75	1918	4.14317 ppb	#	74
92) 1,2,4-Trichlorobenzene	15.23	180	29608	4.52956 ppb		93
93) Hexachlorobutadiene	15.53	225	28075	5.22540 ppb		94
94) Naphthalene	15.56	128	22110	3.94050 ppb		99
95) 1,2,3-Trichlorobenzene	15.92	180	19191	4.28578 ppb		93

(#) = qualifier out of range (m) = manual integration

Quantitation Report

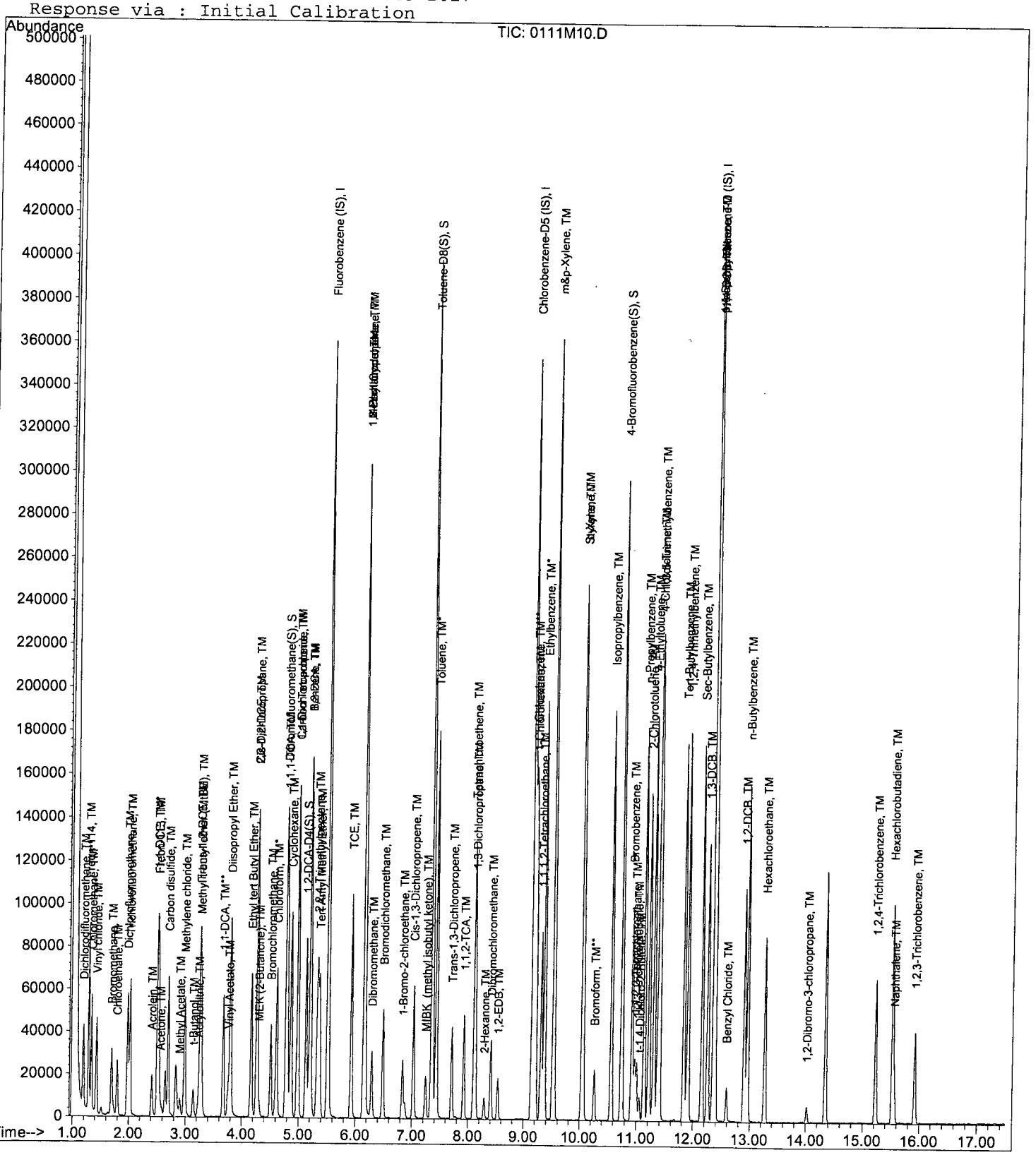
Data File : M:\MAX\DATA\M170111\0111M10.D
Acq On : 11 Jan 17 13:17
Sample : 5.0ug/L VOC STD 1/11/17E
Misc : IS&S 10/20/16

Vial: 8
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 10:51 2017

Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration



570

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M11.D
Acq On : 11 Jan 17 13:46
Sample : 10ug/L VOC STD 1/11/17F
Misc : IS&S 10/20/16

Vial: 9
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 10:51 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 10:43:31 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	337093	25.00000 ppb	0.00
55) Chlorobenzene-D5 (IS)	9.15	117	240952	25.00000 ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	127119	25.00000 ppb	0.00
System Monitoring Compounds					
31) Dibromofluoromethane(S)	4.78	111	75135	25.00000 ppb	0.00
Spiked Amount 25.000			Recovery = 100.000%		
36) 1,2-DCA-D4(S)	5.13	65	57871	25.00000 ppb	0.00
Spiked Amount 25.000			Recovery = 100.000%		
56) Toluene-D8(S)	7.35	98	305768	25.00000 ppb	0.00
Spiked Amount 25.000			Recovery = 100.000%		
64) 4-Bromofluorobenzene(S)	10.74	95	110788	25.00000 ppb	0.00
Spiked Amount 25.000			Recovery = 100.000%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.19	85	42136	10.00000 ppb	100
3) Freon 114	1.29	85	51882	10.00000 ppb	100
4) Chloromethane	1.34	50	59464	10.00000 ppb	100
5) Vinyl chloride	1.43	62	80455	10.00000 ppb	100
6) Bromomethane	1.69	94	39102	10.00000 ppb	100
7) Chloroethane	1.79	64	46319	10.00000 ppb	100
8) Dichlorofluoromethane	1.98	67	108725	10.00000 ppb	100
9) Trichlorofluoromethane	2.02	101	98800	10.00000 ppb	100
10) Acrolein	2.41	56	20622	125.00000 ppb	100
11) Acetone	2.56	43	8516	10.00000 ppb	100
12) Freon-113	2.53	101	52492	10.00000 ppb	100
13) 1,1-DCE	2.51	61	88918	10.00000 ppb	100
14) t-Butanol	3.14	59	17959	125.00000 ppb	100
15) Methyl Acetate	2.90	43	20230	10.00000 ppb	100
17) Acrylonitrile	3.22	53	8975	10.00000 ppb	100
18) Methylene chloride	2.98	84	53997	10.00000 ppb	100
19) Carbon disulfide	2.70	76	175471	10.00000 ppb	100
20) Methyl t-butyl ether (MtBE	3.28	73	92339	10.00000 ppb	100
21) Trans-1,2-DCE	3.25	96	64577	10.00000 ppb	100
22) Diisopropyl Ether	3.80	45	170776	10.00000 ppb	100
23) 1,1-DCA	3.67	63	109316	10.00000 ppb	100
24) Vinyl Acetate	3.75	43	32960	9.09768 ppb	100
25) Ethyl tert Butyl Ether	4.17	59	114358	10.00000 ppb	100
26) MEK (2-Butanone)	4.30	43	10808	10.00000 ppb	100
27) Cis-1,2-DCE	4.27	96	68650	10.00000 ppb	100
28) 2,2-Dichloropropane	4.27	77	77221	10.00000 ppb	100
29) Chloroform	4.61	83	105842	10.00000 ppb	100
30) Bromochloromethane	4.51	128	26864	10.00000 ppb	100
32) 1,1,1-TCA	4.80	97	99452	10.00000 ppb	100
33) Cyclohexane	4.86	41	53769	10.00000 ppb	100
34) 1,1-Dichloropropene	4.98	75	89902	10.00000 ppb	100
35) 2,2,4-Trimethylpentane	5.33	57	155674	10.00000 ppb	100
37) Carbon Tetrachloride	4.98	117	85109	10.00000 ppb	100
38) Tert Amyl Methyl Ether	5.37	73	96843	10.00000 ppb	100
39) 1,2-DCA	5.21	62	57570	10.00000 ppb	100
40) Benzene	5.20	78	260598	10.00000 ppb	100
41) TCE	5.92	95	69977	10.00000 ppb	100
42) 2-Pentanone	6.15	43	239218	125.00000 ppb	100
43) 1,2-Dichloropropane	6.16	63	59242	10.00000 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M11.D
Acq On : 11 Jan 17 13:46
Sample : 10ug/L VOC STD 1/11/17F
Misc : IS&S 10/20/16

Vial: 9
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 10:51 2017

Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 10:43:31 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
44) Bromodichloromethane	6.49	83	68471	10.00000	ppb	100
45) Methyl Cyclohexane	6.15	83	86425	10.00000	ppb	100
46) Dibromomethane	6.29	93	22507	10.00000	ppb	100
47) MIBK (methyl isobutyl ket	7.24	43	28428	10.00000	ppb	100
48) 1-Bromo-2-chloroethane	6.84	63	56658	10.00000	ppb	100
50) Cis-1,3-Dichloropropene	7.02	75	75862	10.00000	ppb	100
51) Toluene	7.43	91	296468	10.00000	ppb	100
52) Trans-1,3-Dichloropropene	7.71	75	52636	10.00000	ppb	100
53) 1,1,2-TCA	7.92	83	27711	10.00000	ppb	100
54) 2-Hexanone	8.28	58	7842	10.00000	ppb	100
57) 1,2-EDB	8.53	107	30707	10.00000	ppb	100
58) Tetrachloroethene	8.10	164	69606	10.00000	ppb	100
59) 1-Chlorohexane	9.21	91	78130	10.00000	ppb	100
60) 1,1,1,2-Tetrachloroethane	9.31	131	59689	10.00000	ppb	100
61) m&p-Xylene	9.52	106	261878	20.00000	ppb	100
62) o-Xylene	10.04	106	119262	10.00000	ppb	100
63) Styrene	10.06	104	190317	10.00000	ppb	100
65) 1,3-Dichloropropane	8.13	76	56427	10.00000	ppb	100
66) Dibromochloromethane	8.40	129	44685	10.00000	ppb	100
67) Chlorobenzene	9.19	112	180944	10.00000	ppb	100
68) Ethylbenzene	9.36	91	328282	10.00000	ppb	100
69) Bromoform	10.27	173	26909	10.00000	ppb	100
71) Isopropylbenzene	10.56	105	312112	10.00000	ppb	100
72) 1,1,2,2-Tetrachloroethane	10.97	83	31231	10.00000	ppb	100
73) 1,2,3-Trichloropropane	11.00	110	10174	10.00000	ppb	100
74) t-1,4-Dichloro-2-Butene	11.05	53	6263	10.00000	ppb	100
75) Bromobenzene	10.92	156	75290	10.00000	ppb	100
76) n-Propylbenzene	11.13	91	345201	10.00000	ppb	100
77) 4-Ethyltoluene	11.30	105	300286	10.00000	ppb	100
78) 2-Chlorotoluene	11.21	91	204274	10.00000	ppb	100
79) 1,3,5-Trimethylbenzene	11.40	105	253828	10.00000	ppb	100
80) 4-Chlorotoluene	11.37	91	237495	10.00000	ppb	100
81) Tert-Butylbenzene	11.84	119	222501	10.00000	ppb	100
82) 1,2,4-Trimethylbenzene	11.91	105	251806	10.00000	ppb	100
83) Sec-Butylbenzene	12.15	105	299153	10.00000	ppb	100
84) p-Isopropyltoluene	12.37	119	269157	10.00000	ppb	100
85) Benzyl Chloride	12.59	91	30157	10.00000	ppb	100
86) 1,3-DCB	12.26	146	146524	10.00000	ppb	100
87) 1,4-DCB	12.38	146	140182	10.00000	ppb	100
88) n-Butylbenzene	12.95	91	217055	10.00000	ppb	100
89) 1,2-DCB	12.90	146	119474	10.00000	ppb	100
90) Hexachloroethane	13.27	117	36725	10.00000	ppb	100
91) 1,2-Dibromo-3-chloropropan	14.01	75	4630	10.00000	ppb	100
92) 1,2,4-Trichlorobenzene	15.23	180	65376	10.00000	ppb	100
93) Hexachlorobutadiene	15.53	225	53736	10.00000	ppb	100
94) Naphthalene	15.56	128	56118	10.00000	ppb	100
95) 1,2,3-Trichlorobenzene	15.92	180	44785	10.00000	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

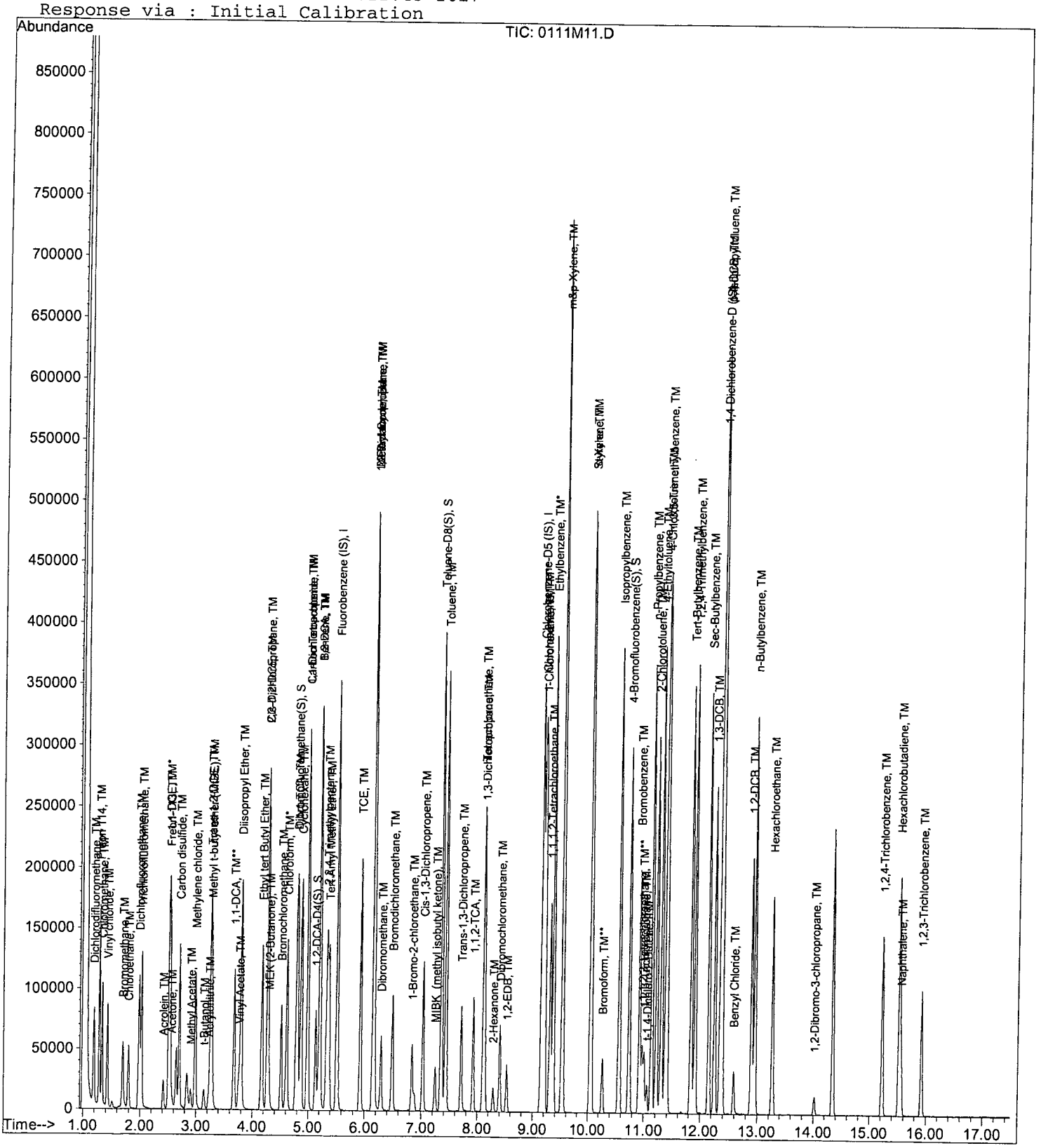
Data File : M:\MAX\DATA\M170111\0111M11.D
Acq On : 11 Jan 17 13:46
Sample : 10ug/L VOC STD 1/11/17F
Misc : IS&S 10/20/16

Vial: 9
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 10:51 2017

Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration



573

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M12.D Vial: 10
Acq On : 11 Jan 17 14:14 Operator: PM,DG,SV,CMM
Sample : 20ug/L VOC STD 1/11/17G Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 10:51 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 10:43:31 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	335531	25.00000 ppb	0.00
55) Chlorobenzene-D5 (IS)	9.15	117	245289	25.00000 ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	132793	25.00000 ppb	0.00
System Monitoring Compounds					
31) Dibromofluoromethane(S)	4.78	111	153257	51.23127 ppb	0.00
Spiked Amount 25.000			Recovery = 204.924%		
36) 1,2-DCA-D4(S)	5.13	65	126755	55.01248 ppb	0.00
Spiked Amount 25.000			Recovery = 220.048%		
56) Toluene-D8(S)	7.35	98	633500	50.87999 ppb	0.00
Spiked Amount 25.000			Recovery = 203.520%		
64) 4-Bromofluorobenzene(S)	10.74	95	230047	50.99368 ppb	0.00
Spiked Amount 25.000			Recovery = 203.976%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.19	85	81096	19.33585 ppb	98
3) Freon 114	1.29	85	104181	20.17386 ppb	100
4) Chloromethane	1.34	50	115965	19.59250 ppb	99
5) Vinyl chloride	1.42	62	160971	20.10072 ppb	99
6) Bromomethane	1.69	94	68280	17.54331 ppb	100
7) Chloroethane	1.79	64	93053	20.18312 ppb	99
8) Dichlorofluoromethane	1.98	67	223735	20.67386 ppb	99
9) Trichlorofluoromethane	2.02	101	194884	19.81693 ppb	97
10) Acrolein	2.41	56	25467	155.08654 ppb	94
11) Acetone	2.56	43	16592	19.57403 ppb	98
12) Freon-113	2.53	101	103999	19.90458 ppb	94
13) 1,1-DCE	2.51	61	180107	20.34970 ppb	99
14) t-Butanol	3.14	59	22008	153.89536 ppb	91
15) Methyl Acetate	2.90	43	42768	21.23930 ppb	100
17) Acrylonitrile	3.22	53	19572	21.90876 ppb	87
18) Methylene chloride	2.98	84	110229	20.50894 ppb	99
19) Carbon disulfide	2.70	76	353711	20.25164 ppb	99
20) Methyl t-butyl ether (MtBE	3.28	73	190531	20.72992 ppb	97
21) Trans-1,2-DCE	3.25	96	126832	19.73186 ppb	94
22) Diisopropyl Ether	3.79	45	355537	20.91583 ppb	98
23) 1,1-DCA	3.67	63	222873	20.48287 ppb	99
24) Vinyl Acetate	3.75	43	72529	20.11279 ppb	97
25) Ethyl tert Butyl Ether	4.17	59	239885	21.07432 ppb	98
26) MEK (2-Butanone)	4.30	43	25884	24.06042 ppb	98
27) Cis-1,2-DCE	4.27	96	137355	20.10116 ppb	93
28) 2,2-Dichloropropane	4.27	77	163418	21.26090 ppb	97
29) Chloroform	4.61	83	214361	20.34721 ppb	99
30) Bromochloromethane	4.51	128	52664	19.69519 ppb	94
32) 1,1,1-TCA	4.80	97	203031	20.51001 ppb	96
33) Cyclohexane	4.86	41	108404	20.25492 ppb	98
34) 1,1-Dichloropropene	4.98	75	179856	20.09892 ppb	97
35) 2,2,4-Trimethylpentane	5.33	57	310463	20.03599 ppb	100
37) Carbon Tetrachloride	4.98	117	174669	20.61852 ppb	98
38) Tert Amyl Methyl Ether	5.37	73	204805	21.24660 ppb	95
39) 1,2-DCA	5.21	62	117901	20.57493 ppb	100
40) Benzene	5.20	78	530631	20.45684 ppb	99
41) TCE	5.92	95	140408	20.15829 ppb	98
42) 2-Pentanone	6.15	43	303043	159.08803 ppb	99
43) 1,2-Dichloropropane	6.16	63	116997	19.84093 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M12.D
Acq On : 11 Jan 17 14:14
Sample : 20ug/L VOC STD 1/11/17G
Misc : IS&S 10/20/16

Vial: 10
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 10:51 2017

Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 10:43:31 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
44) Bromodichloromethane	6.49	83	141528	20.76600 ppb		100
45) Methyl Cyclohexane	6.15	83	171701	19.95954 ppb		100
46) Dibromomethane	6.29	93	45088	20.12614 ppb		95
47) MIBK (methyl isobutyl ket	7.24	43	55602	19.64994 ppb		98
48) 1-Bromo-2-chloroethane	6.84	63	119004	21.10170 ppb		98
50) Cis-1,3-Dichloropropene	7.02	75	162342	21.49927 ppb		98
51) Toluene	7.43	91	606673	20.55862 ppb		99
52) Trans-1,3-Dichloropropene	7.71	75	113215	21.60917 ppb		99
53) 1,1,2-TCA	7.92	83	56241	20.39003 ppb		97
54) 2-Hexanone	8.28	58	17043	21.83415 ppb		93
57) 1,2-EDB	8.53	107	65276	20.88183 ppb		91
58) Tetrachloroethene	8.10	164	138747	19.58075 ppb		99
59) 1-Chlorohexane	9.21	91	161910	20.35674 ppb		99
60) 1,1,1,2-Tetrachloroethane	9.31	131	126234	20.77469 ppb		97
61) m&p-Xylene	9.52	106	530996	39.83591 ppb		99
62) o-Xylene	10.04	106	249932	20.58601 ppb		98
63) Styrene	10.06	104	395659	20.42189 ppb		98
65) 1,3-Dichloropropane	8.13	76	121065	21.07580 ppb		95
66) Dibromochloromethane	8.40	129	94429	20.75851 ppb		99
67) Chlorobenzene	9.19	112	372828	20.24029 ppb		99
68) Ethylbenzene	9.36	91	688961	20.61579 ppb		97
69) Bromoform	10.27	173	56397	20.58785 ppb		95
71) Isopropylbenzene	10.56	105	634924	19.47361 ppb		100
72) 1,1,2,2-Tetrachloroethane	10.97	83	64210	19.68122 ppb		99
73) 1,2,3-Trichloropropane	11.00	110	21365	20.10233 ppb		99
74) t-1,4-Dichloro-2-Butene	11.05	53	14140	21.61236 ppb		95
75) Bromobenzene	10.92	156	155102	19.72038 ppb		99
76) n-Propylbenzene	11.13	91	706836	19.60117 ppb		98
77) 4-Ethyltoluene	11.30	105	619458	19.74750 ppb		99
78) 2-Chlorotoluene	11.21	91	422520	19.80019 ppb		99
79) 1,3,5-Trimethylbenzene	11.39	105	517176	19.50447 ppb		98
80) 4-Chlorotoluene	11.37	91	482647	19.45407 ppb		99
81) Tert-Butylbenzene	11.84	119	448819	19.30966 ppb		100
82) 1,2,4-Trimethylbenzene	11.91	105	521159	19.81251 ppb		99
83) Sec-Butylbenzene	12.15	105	602555	19.28140 ppb		99
84) p-Isopropyltoluene	12.37	119	541451	19.25701 ppb		99
85) Benzyl Chloride	12.59	91	65734	20.86590 ppb		98
86) 1,3-DCB	12.26	146	299849	19.58976 ppb		97
87) 1,4-DCB	12.39	146	289797	19.78960 ppb		99
88) n-Butylbenzene	12.95	91	450287	19.85889 ppb		98
89) 1,2-DCB	12.90	146	250860	20.09987 ppb		98
90) Hexachloroethane	13.27	117	79873	20.81965 ppb		96
91) 1,2-Dibromo-3-chloropropan	14.01	75	9742	20.14199 ppb	#	81
92) 1,2,4-Trichlorobenzene	15.23	180	151723	22.21613 ppb		92
93) Hexachlorobutadiene	15.52	225	108899	19.39965 ppb		95
94) Naphthalene	15.56	128	151823	25.89826 ppb		98
95) 1,2,3-Trichlorobenzene	15.92	180	107965	23.07734 ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

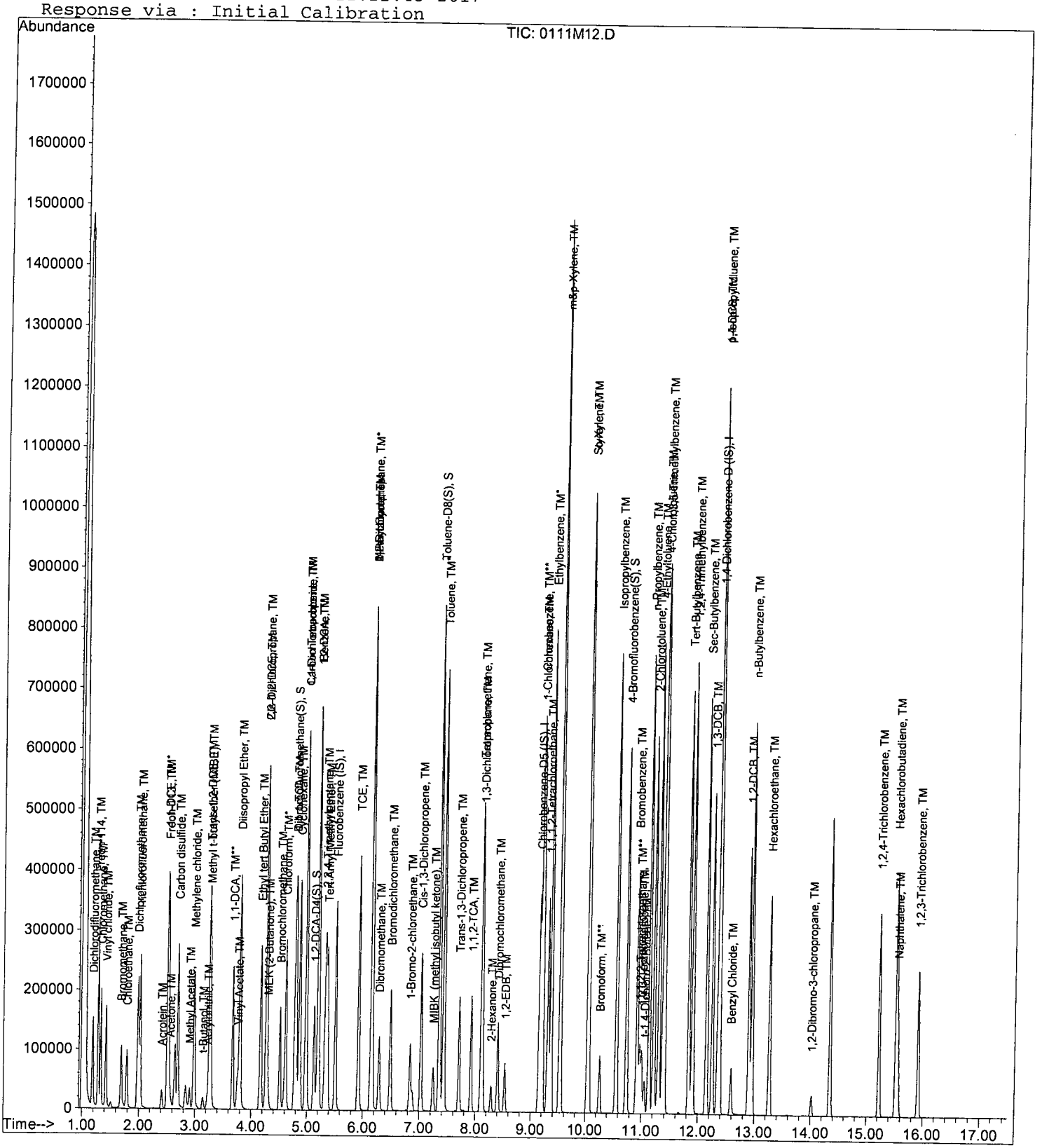
Data File : M:\MAX\DATA\M170111\0111M12.D
Acq On : 11 Jan 17 14:14
Sample : 20ug/L VOC STD 1/11/17G
Misc : IS&S 10/20/16

Vial: 10
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 10:51 2017

Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M13.D
Acq On : 11 Jan 17 14:42
Sample : 40ug/L VOC STD 1/11/17H
Misc : IS&S 10/20/16

Vial: 11
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 10:51 2017

Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 10:43:31 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.51	96	347126	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.15	117	254484	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	138555	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	4.78	111	154211	49.82825 ppb		0.00
Spiked Amount 25.000			Recovery = 199.312%			
36) 1,2-DCA-D4(S)	5.13	65	124686	52.30694 ppb		0.00
Spiked Amount 25.000			Recovery = 209.228%			
56) Toluene-D8(S)	7.35	98	647545	50.12888 ppb		0.00
Spiked Amount 25.000			Recovery = 200.516%			
64) 4-Bromofluorobenzene(S)	10.74	95	239091	51.08349 ppb		0.00
Spiked Amount 25.000			Recovery = 204.332%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.19	85	181568	41.84548 ppb		97
3) Freon 114	1.29	85	226589	42.41160 ppb		100
4) Chloromethane	1.34	50	252885	41.29824 ppb		97
5) Vinyl chloride	1.43	62	343673	41.48155 ppb		99
6) Bromomethane	1.69	94	116733	28.99060 ppb		98
7) Chloroethane	1.78	64	197468	41.39998 ppb		99
8) Dichlorofluoromethane	1.98	67	478917	42.77534 ppb		100
9) Trichlorofluoromethane	2.02	101	409460	40.24548 ppb		98
10) Acrolein	2.41	56	31460	185.18275 ppb		94
11) Acetone	2.57	43	35094	40.01841 ppb		99
12) Freon-113	2.53	101	224130	41.46383 ppb		94
13) 1,1-DCE	2.50	61	374495	40.89959 ppb		99
14) t-Butanol	3.14	59	27752	187.57923 ppb		98
15) Methyl Acetate	2.90	43	92030	44.17699 ppb		98
17) Acrylonitrile	3.22	53	39649	42.90030 ppb	#	86
18) Methylene chloride	2.98	84	229044	41.19191 ppb		97
19) Carbon disulfide	2.70	76	755318	41.80104 ppb		99
20) Methyl t-butyl ether (MtBE	3.28	73	395627	41.60671 ppb		99
21) Trans-1,2-DCE	3.25	96	267111	40.16766 ppb		99
22) Diisopropyl Ether	3.80	45	708724	40.30073 ppb		99
23) 1,1-DCA	3.67	63	443306	39.38061 ppb		100
24) Vinyl Acetate	3.75	43	156627	41.98294 ppb		99
25) Ethyl tert Butyl Ether	4.17	59	483532	41.06022 ppb		99
26) MEK (2-Butanone)	4.30	43	51746	46.49369 ppb		98
27) Cis-1,2-DCE	4.27	96	270783	38.30394 ppb		96
28) 2,2-Dichloropropane	4.27	77	336521	42.31938 ppb		94
29) Chloroform	4.61	83	423425	38.84911 ppb		98
30) Bromochloromethane	4.51	128	104653	37.83063 ppb		98
32) 1,1,1-TCA	4.80	97	407356	39.77619 ppb		97
33) Cyclohexane	4.87	41	216589	39.11713 ppb		97
34) 1,1-Dichloropropene	4.98	75	360823	38.97512 ppb		97
35) 2,2,4-Trimethylpentane	5.33	57	640020	39.92455 ppb		99
37) Carbon Tetrachloride	4.98	117	351940	40.15649 ppb		100
38) Tert Amyl Methyl Ether	5.37	73	413856	41.49957 ppb		92
39) 1,2-DCA	5.21	62	237752	40.10426 ppb		98
40) Benzene	5.20	78	1045219	38.94922 ppb		99
41) TCE	5.92	95	277375	38.49236 ppb		97
42) 2-Pentanone	6.15	43	359851	182.60029 ppb		97
43) 1,2-Dichloropropane	6.16	63	230427	37.77167 ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M13.D
Acq On : 11 Jan 17 14:42
Sample : 40ug/L VOC STD 1/11/17H
Misc : IS&S 10/20/16

Vial: 11
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 10:51 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 10:43:31 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
44)	Bromodichloromethane	6.49	83	281076	39.86389 ppb		100
45)	Methyl Cyclohexane	6.15	83	350667	39.40198 ppb		95
46)	Dibromomethane	6.29	93	88469	38.17122 ppb		92
47)	MIBK (methyl isobutyl ket	7.24	43	110292	37.67561 ppb		98
48)	1-Bromo-2-chloroethane	6.84	63	236735	40.57549 ppb		98
50)	Cis-1,3-Dichloropropene	7.02	75	334089	42.76618 ppb		97
51)	Toluene	7.43	91	1217538	39.88111 ppb		99
52)	Trans-1,3-Dichloropropene	7.71	75	240801	44.42608 ppb		98
53)	1,1,2-TCA	7.92	83	111478	39.06606 ppb		96
54)	2-Hexanone	8.28	58	35448	43.89626 ppb		87
57)	1,2-EDB	8.53	107	127078	39.18348 ppb		99
58)	Tetrachloroethene	8.10	164	274025	37.27465 ppb		99
59)	1-Chlorohexane	9.21	91	331042	40.11764 ppb		99
60)	1,1,1,2-Tetrachloroethane	9.31	131	258013	40.92770 ppb		98
61)	m&p-Xylene	9.52	106	1069889	77.36415 ppb		100
62)	o-Xylene	10.04	106	501819	39.83961 ppb		100
63)	Styrene	10.06	104	803217	39.95999 ppb		100
65)	1,3-Dichloropropane	8.13	76	240894	40.42119 ppb		97
66)	Dibromochloromethane	8.40	129	193142	40.92465 ppb		97
67)	Chlorobenzene	9.19	112	751815	39.34023 ppb		99
68)	Ethylbenzene	9.36	91	1359383	39.20711 ppb		98
69)	Bromoform	10.27	173	116337	40.93458 ppb		96
71)	Isopropylbenzene	10.56	105	1289235	37.89744 ppb		99
72)	1,1,2,2-Tetrachloroethane	10.97	83	129077	37.91851 ppb		99
73)	1,2,3-Trichloropropane	11.00	110	42657	38.46687 ppb		99
74)	t-1,4-Dichloro-2-Butene	11.05	53	30524	44.71439 ppb		100
75)	Bromobenzene	10.92	156	310073	37.78461 ppb		100
76)	n-Propylbenzene	11.13	91	1436818	38.18721 ppb		99
77)	4-Ethyltoluene	11.30	105	1252937	38.28092 ppb		100
78)	2-Chlorotoluene	11.22	91	853958	38.35409 ppb		99
79)	1,3,5-Trimethylbenzene	11.40	105	1038866	37.54986 ppb		99
80)	4-Chlorotoluene	11.37	91	972727	37.57723 ppb		100
81)	Tert-Butylbenzene	11.84	119	906361	37.37296 ppb		99
82)	1,2,4-Trimethylbenzene	11.91	105	1047512	38.16640 ppb		99
83)	Sec-Butylbenzene	12.15	105	1229493	37.70691 ppb		99
84)	p-Isopropyltoluene	12.38	119	1101388	37.54248 ppb		100
85)	Benzyl Chloride	12.59	91	155810	47.40187 ppb		97
86)	1,3-DCB	12.26	146	603623	37.79595 ppb		98
87)	1,4-DCB	12.39	146	576603	37.73748 ppb		99
88)	n-Butylbenzene	12.95	91	907002	38.33776 ppb		99
89)	1,2-DCB	12.90	146	503335	38.65200 ppb		97
90)	Hexachloroethane	13.27	117	168214	42.02315 ppb		99
91)	1,2-Dibromo-3-chloropropan	14.01	75	19576	38.79102 ppb	#	66
92)	1,2,4-Trichlorobenzene	15.23	180	317702	44.58511 ppb		95
93)	Hexachlorobutadiene	15.53	225	224793	38.38007 ppb		98
94)	Naphthalene	15.56	128	349849	57.19614 ppb		99
95)	1,2,3-Trichlorobenzene	15.92	180	234186	47.97518 ppb		99

(#) = qualifier out of range (m) = manual integration
0111M13.D MALLW.M Thu Jan 12 11:37:09 2017

Quantitation Report

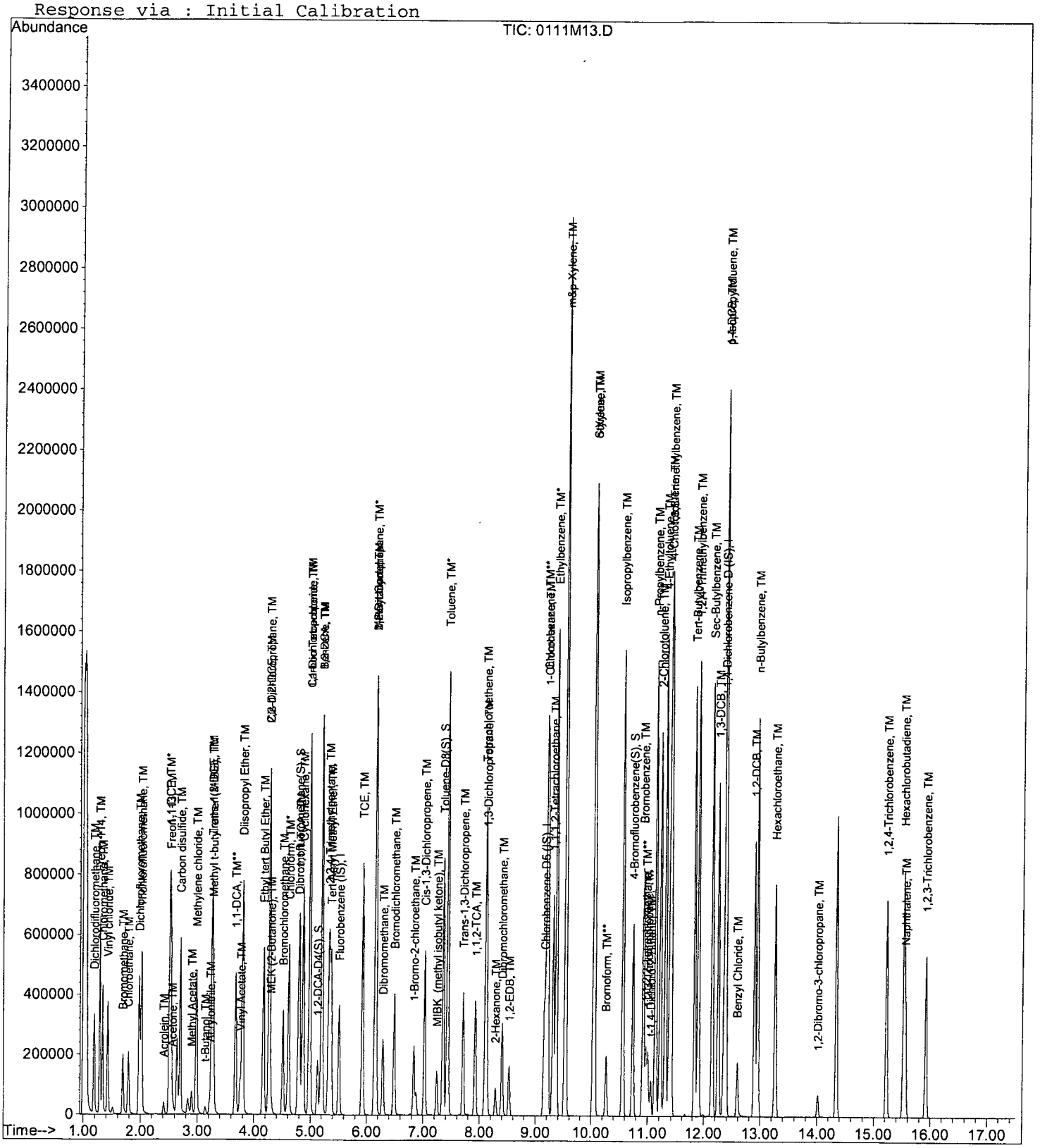
Data File : M:\MAX\DATA\M170111\0111M13.D
Acq On : 11 Jan 17 14:42
Sample : 40ug/L VOC STD 1/11/17H
Misc : IS&S 10/20/16

Vial: 11
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 10:51 2017

Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M14.D
Acq On : 11 Jan 17 15:10
Sample : 100ug/L VOC STD 1/11/17I
Misc : IS&S 10/20/16

Vial: 12
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 10:51 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 10:43:31 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.51	96	347236	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.15	117	258306	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	143084	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	4.78	111	305828	98.78704 ppb		0.00
Spiked Amount 25.000			Recovery = 395.148%			
36) 1,2-DCA-D4(S)	5.13	65	246752	103.48197 ppb		0.00
Spiked Amount 25.000			Recovery = 413.928%			
56) Toluene-D8(S)	7.35	98	1271011	96.93784 ppb		0.00
Spiked Amount 25.000			Recovery = 387.752%			
64) 4-Bromofluorobenzene(S)	10.74	95	467571	98.42171 ppb		0.00
Spiked Amount 25.000			Recovery = 393.688%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.19	85	413504	95.26895 ppb		96
3) Freon 114	1.29	85	522997	97.86051 ppb		100
4) Chloromethane	1.33	50	615127	100.42357 ppb		98
5) Vinyl chloride	1.43	62	848015	102.32352 ppb		99
6) Bromomethane	1.68	94	252551	62.70109 ppb		99
7) Chloroethane	1.77	64	334545	70.11652 ppb		99
8) Dichlorofluoromethane	1.97	67	1110203	99.12837 ppb		99
9) Trichlorofluoromethane	2.01	101	956267	93.96091 ppb		98
10) Acrolein	2.41	56	35851	210.96261 ppb		97
11) Acetone	2.57	43	77649	88.51670 ppb		100
12) Freon-113	2.52	101	513455	94.95859 ppb		94
13) 1,1-DCE	2.50	61	859246	93.81080 ppb		99
14) t-Butanol	3.15	59	33263	224.75754 ppb		92
15) Methyl Acetate	2.90	43	226700	108.78791 ppb		99
17) Acrylonitrile	3.22	53	100052	108.22219 ppb		88
18) Methylene chloride	2.98	84	536599	96.47287 ppb		97
19) Carbon disulfide	2.69	76	1746339	96.61581 ppb		99
20) Methyl t-butyl ether (MtBE	3.28	73	962010	101.13918 ppb		99
21) Trans-1,2-DCE	3.25	96	622667	93.60585 ppb		98
22) Diisopropyl Ether	3.80	45	1737225	98.75389 ppb		99
23) 1,1-DCA	3.67	63	1089062	96.71501 ppb		100
24) Vinyl Acetate	3.75	43	370999	99.41259 ppb		99
25) Ethyl tert Butyl Ether	4.17	59	1248232	105.96288 ppb		100
26) MEK (2-Butanone)	4.30	43	116512	104.65267 ppb		97
27) Cis-1,2-DCE	4.27	96	658591	93.13228 ppb		95
28) 2,2-Dichloropropane	4.27	77	859555	108.05957 ppb		95
29) Chloroform	4.61	83	1051950	96.48550 ppb		99
30) Bromochloromethane	4.51	128	263607	95.26015 ppb		97
32) 1,1,1-TCA	4.80	97	1019044	99.47281 ppb		96
33) Cyclohexane	4.87	41	530797	95.83441 ppb		96
34) 1,1-Dichloropropene	4.98	75	863230	93.21422 ppb		99
35) 2,2,4-Trimethylpentane	5.33	57	1518150	94.67244 ppb		100
37) Carbon Tetrachloride	4.98	117	885410	100.99362 ppb		99
38) Tert Amyl Methyl Ether	5.37	73	1073831	107.64471 ppb	#	89
39) 1,2-DCA	5.21	62	596446	100.57728 ppb		99
40) Benzene	5.20	78	2536368	94.48572 ppb		100
41) TCE	5.92	95	680911	94.46263 ppb		97
42) 2-Pentanone	6.15	43	449494	228.01585 ppb		95
43) 1,2-Dichloropropane	6.16	63	565796	92.71610 ppb		100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M14.D Vial: 12
Acq On : 11 Jan 17 15:10 Operator: PM,DG,SV,CMM
Sample : 100ug/L VOC STD 1/11/17I Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 10:51 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 10:43:31 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
44)	Bromodichloromethane	6.49	83	705757	100.06300 ppb		100
45)	Methyl Cyclohexane	6.15	83	835409	93.83930 ppb		96
46)	Dibromomethane	6.29	93	225821	97.40286 ppb		90
47)	MIBK (methyl isobutyl ket	7.24	43	273827	93.50933 ppb		96
48)	1-Bromo-2-chloroethane	6.84	63	611146	104.71496 ppb		99
50)	Cis-1,3-Dichloropropene	7.03	75	839568	107.43767 ppb		98
51)	Toluene	7.43	91	2938764	96.23031 ppb		99
52)	Trans-1,3-Dichloropropene	7.71	75	628075	115.83868 ppb		97
53)	1,1,2-TCA	7.92	83	277344	97.16091 ppb		97
54)	2-Hexanone	8.28	58	94899	117.47888 ppb		87
57)	1,2-EDB	8.53	107	323699	98.33316 ppb		97
58)	Tetrachloroethene	8.11	164	663220	88.88060 ppb		98
59)	1-Chlorohexane	9.22	91	804655	96.07003 ppb		99
60)	1,1,1,2-Tetrachloroethane	9.31	131	641834	100.30543 ppb		98
61)	m&p-Xylene	9.53	106	2613075	186.15680 ppb		98
62)	o-Xylene	10.05	106	1206722	94.38461 ppb		99
63)	Styrene	10.06	104	1975903	96.84653 ppb		97
65)	1,3-Dichloropropane	8.13	76	605271	100.05964 ppb		96
66)	Dibromochloromethane	8.40	129	484543	101.15017 ppb		99
67)	Chlorobenzene	9.19	112	1834012	94.54837 ppb		98
68)	Ethylbenzene	9.36	91	3328116	94.56870 ppb		98
69)	Bromoform	10.27	173	301462	104.50355 ppb		95
71)	Isopropylbenzene	10.56	105	3158515	89.90666 ppb		99
72)	1,1,2,2-Tetrachloroethane	10.97	83	329111	93.62157 ppb		100
73)	1,2,3-Trichloropropane	11.00	110	111093	97.00952 ppb		97
74)	t-1,4-Dichloro-2-Butene	11.05	53	84948	120.50086 ppb		92
75)	Bromobenzene	10.92	156	777111	91.69912 ppb		99
76)	n-Propylbenzene	11.14	91	3539931	91.10499 ppb		99
77)	4-Ethyltoluene	11.30	105	3099516	91.70187 ppb		97
78)	2-Chlorotoluene	11.22	91	2101086	91.37978 ppb		99
79)	1,3,5-Trimethylbenzene	11.40	105	2550716	89.27749 ppb		99
80)	4-Chlorotoluene	11.37	91	2402557	89.87494 ppb		100
81)	Tert-Butylbenzene	11.84	119	2214404	88.41873 ppb		99
82)	1,2,4-Trimethylbenzene	11.91	105	2574756	90.84257 ppb		99
83)	Sec-Butylbenzene	12.15	105	3003124	89.18654 ppb		99
84)	p-Isopropyltoluene	12.38	119	2684319	88.60288 ppb		100
85)	Benzyl Chloride	12.59	91	487507	143.61907 ppb		96
86)	1,3-DCB	12.26	146	1489115	90.28984 ppb		98
87)	1,4-DCB	12.39	146	1422647	90.16216 ppb		98
88)	n-Butylbenzene	12.96	91	2197218	89.93376 ppb		99
89)	1,2-DCB	12.90	146	1252939	93.16996 ppb		98
90)	Hexachloroethane	13.27	117	431608	104.41120 ppb		98
91)	1,2-Dibromo-3-chloropropan	14.01	75	52813	101.33961 ppb	#	73
92)	1,2,4-Trichlorobenzene	15.23	180	831383	112.98016 ppb		94
93)	Hexachlorobutadiene	15.53	225	532593	88.05409 ppb		97
94)	Naphthalene	15.56	128	941540	149.05824 ppb		98
95)	1,2,3-Trichlorobenzene	15.92	180	607122	120.43779 ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

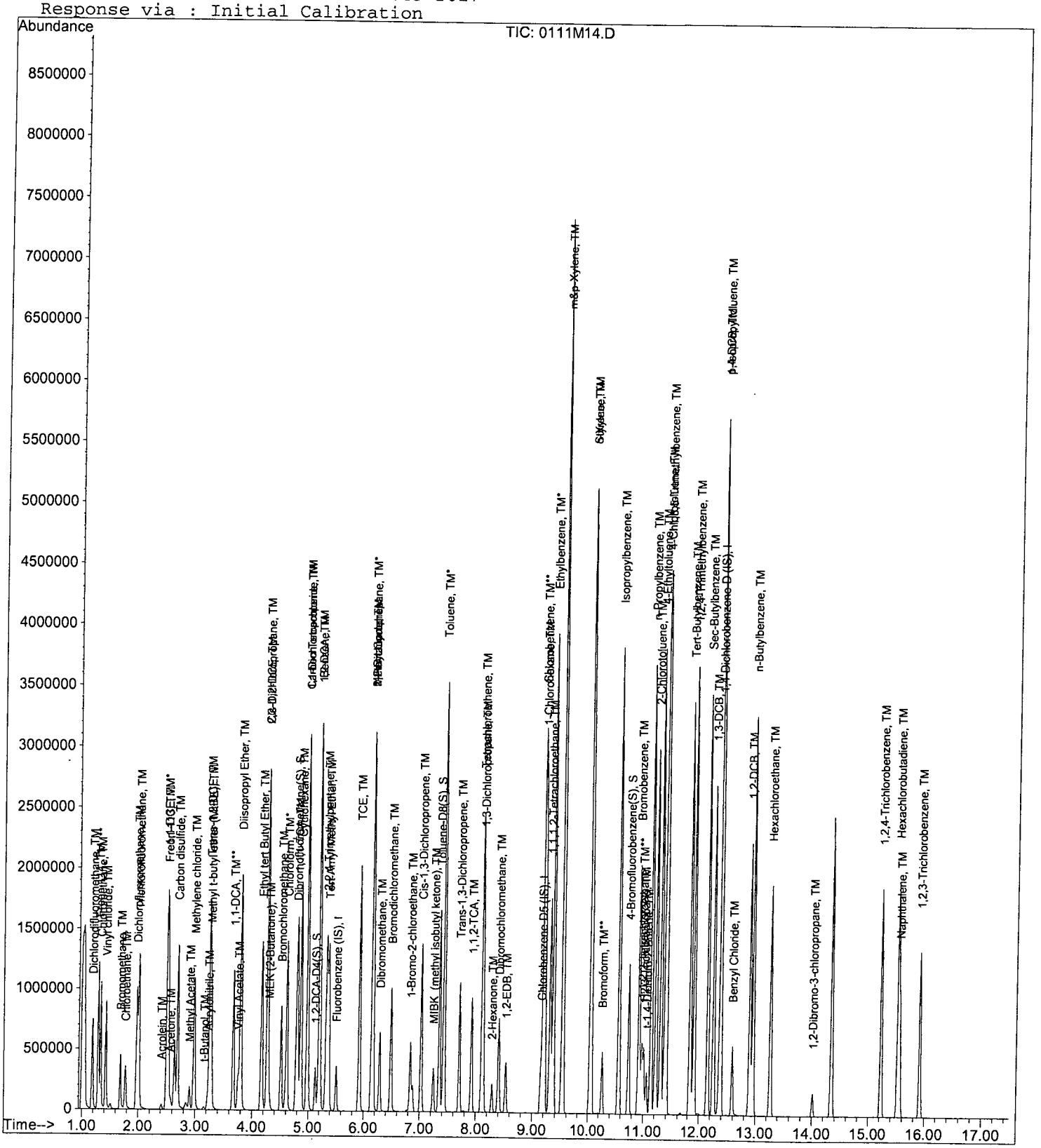
Data File : M:\MAX\DATA\M170111\0111M14.D
Acq On : 11 Jan 17 15:10
Sample : 100ug/L VOC STD 1/11/17I
Misc : IS&S 10/20/16

Vial: 12
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

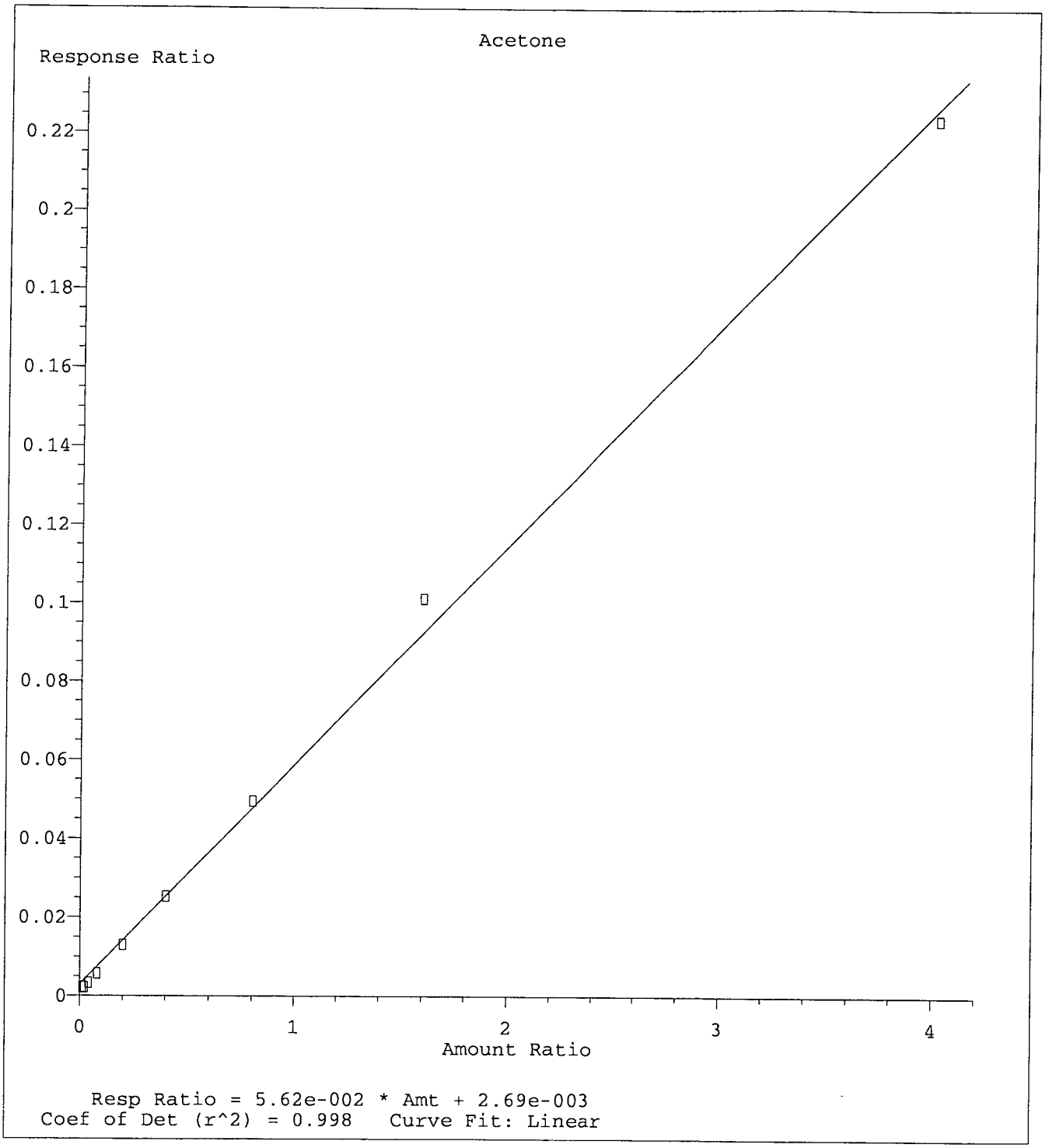
Quant Time: Jan 12 10:51 2017

Quant Results File: MALLW.RES

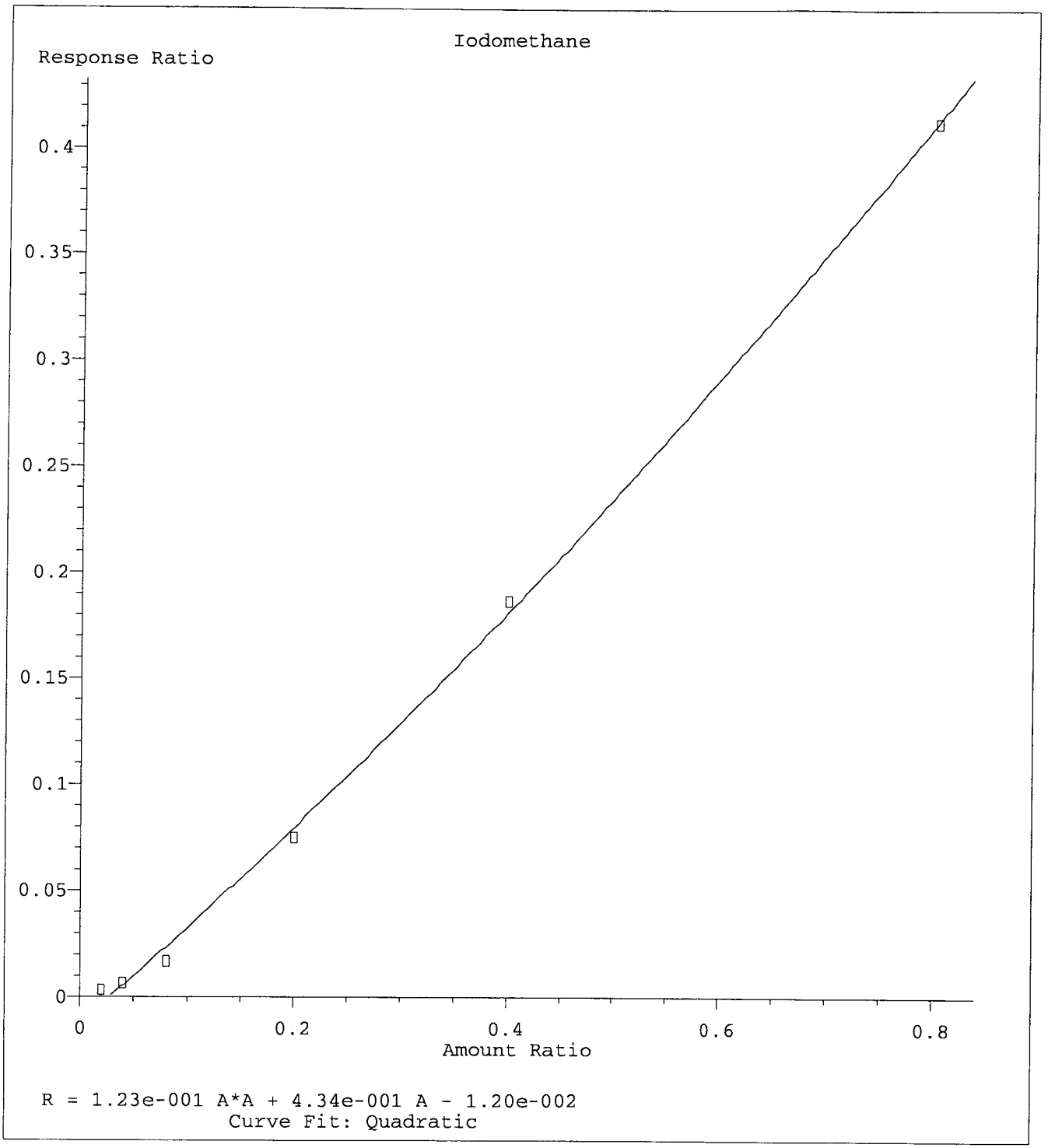
Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration



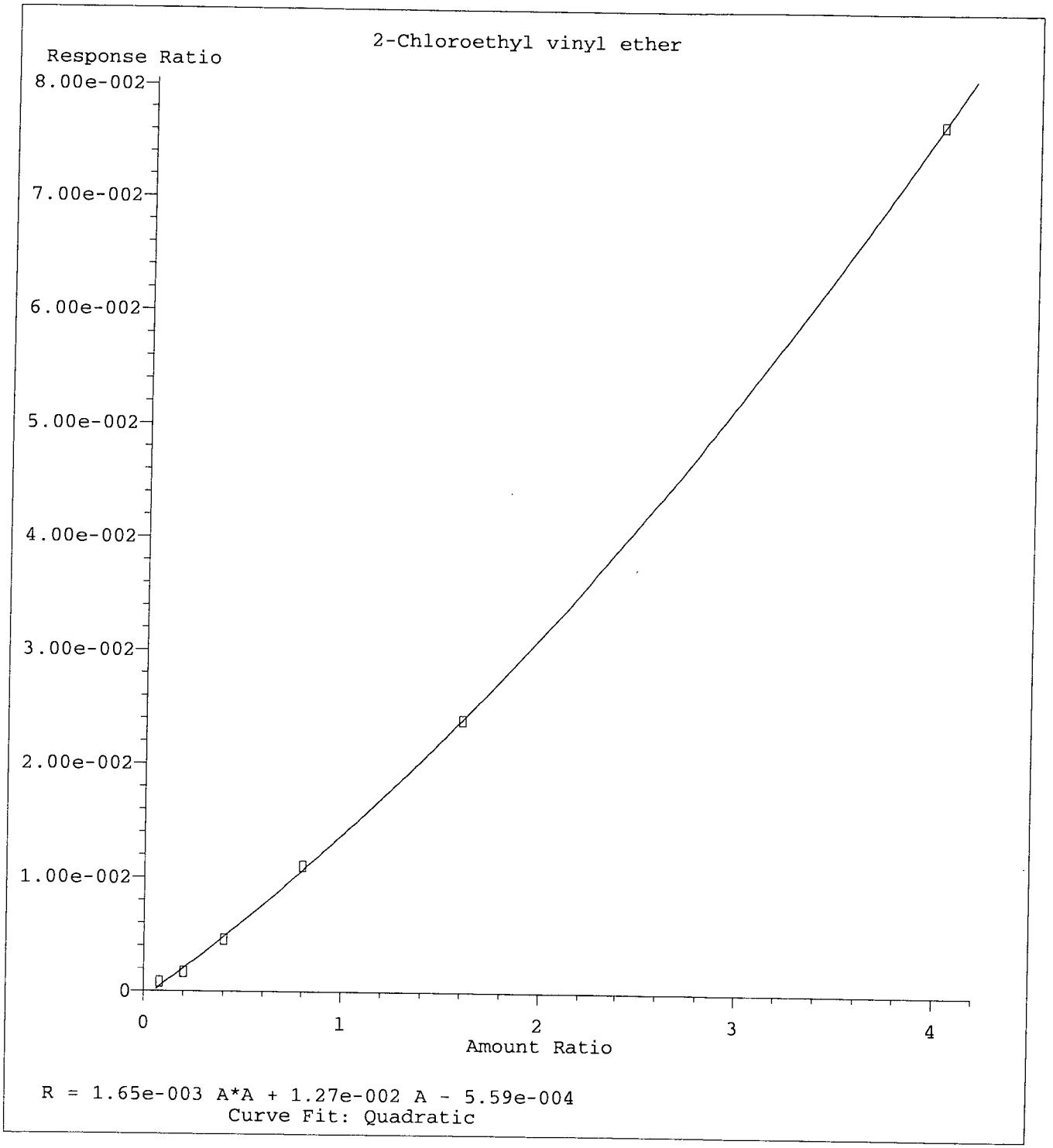
582



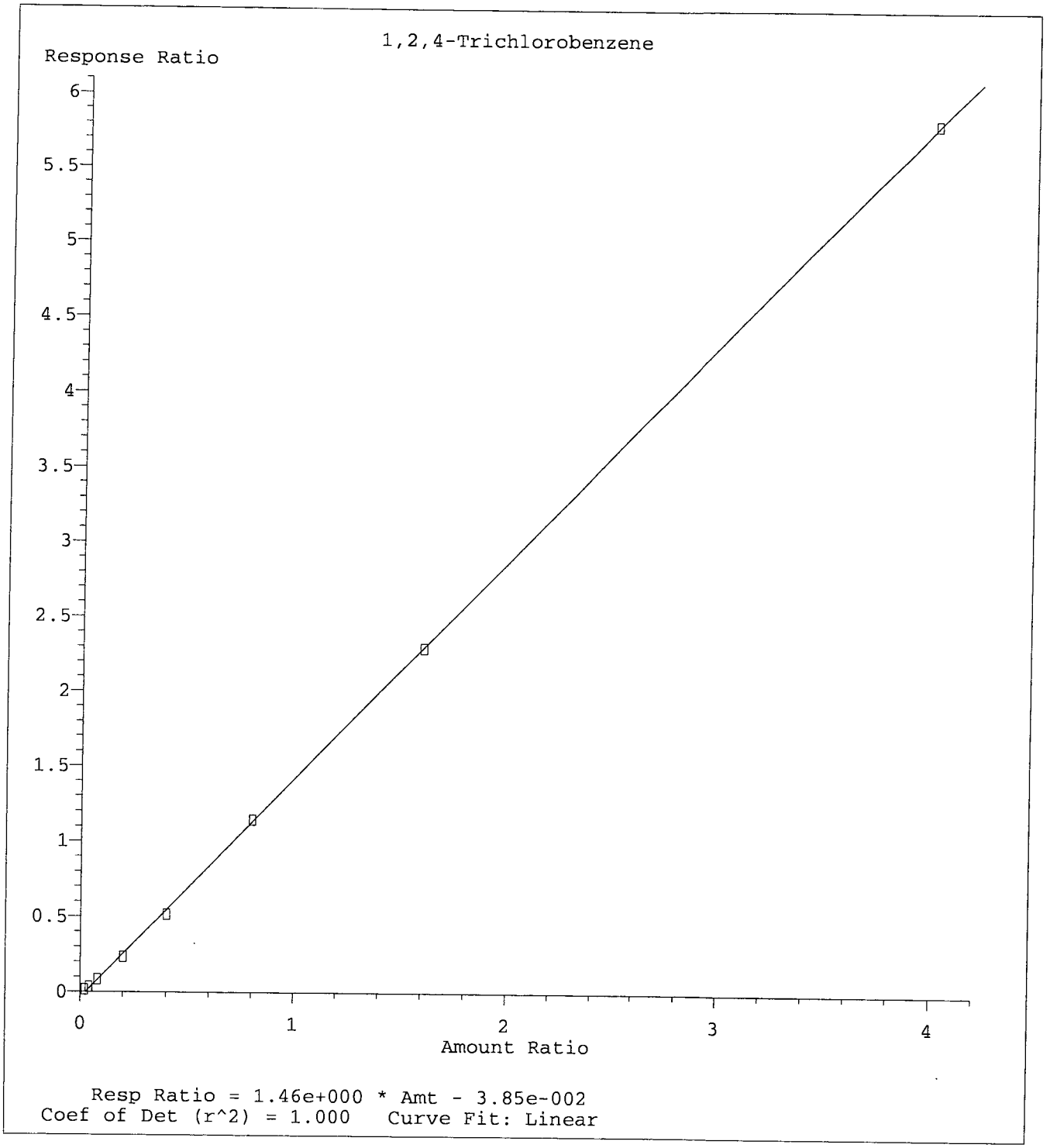
Method Name: M:\MAX\DATA\M170111\MALLW.M
Calibration Table Last Updated: Thu Jan 12 14:30:04 2017



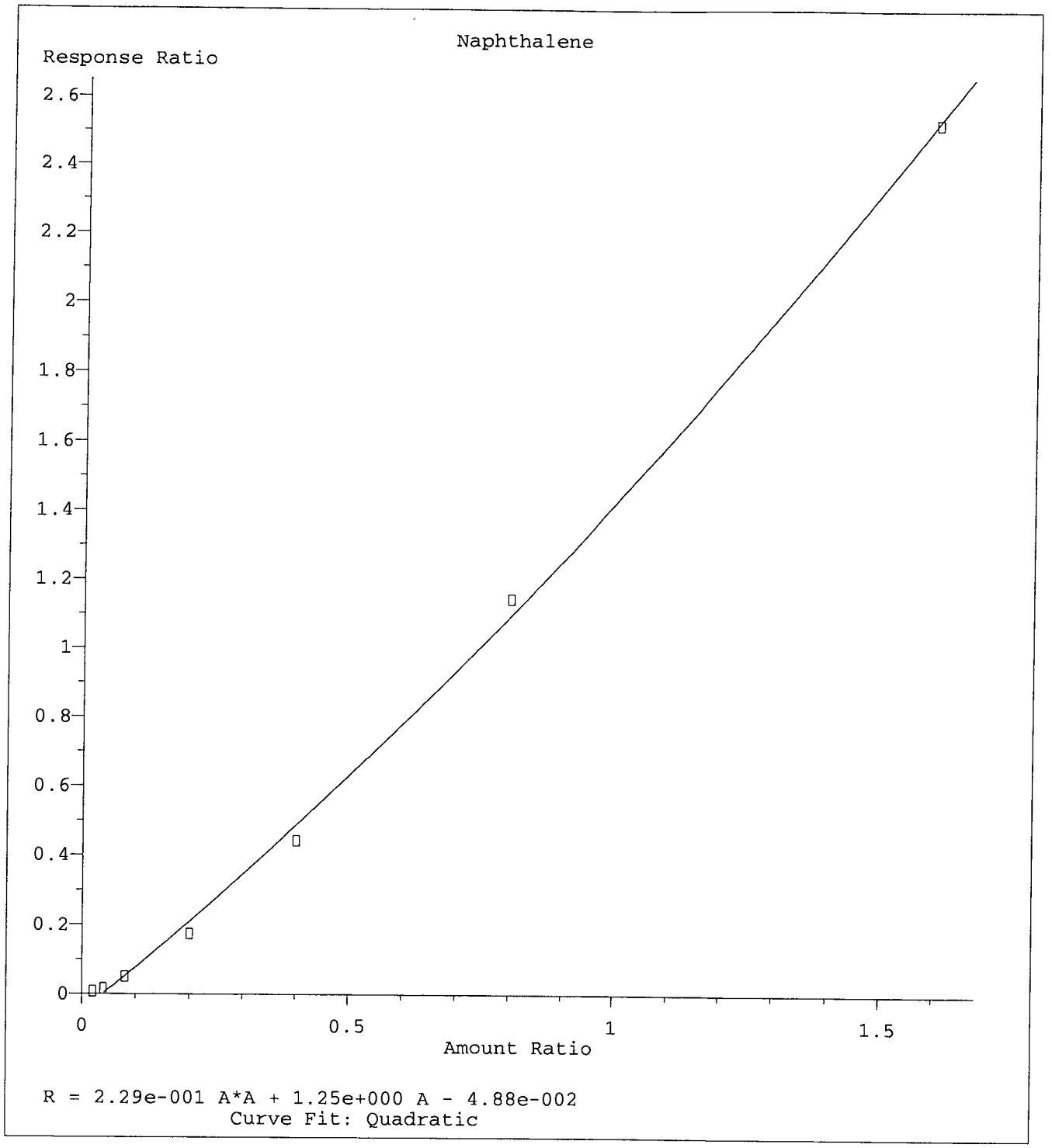
Method Name: M:\MAX\DATA\M170111\MALLW.M
Calibration Table Last Updated: Thu Jan 12 11:22:43 2017



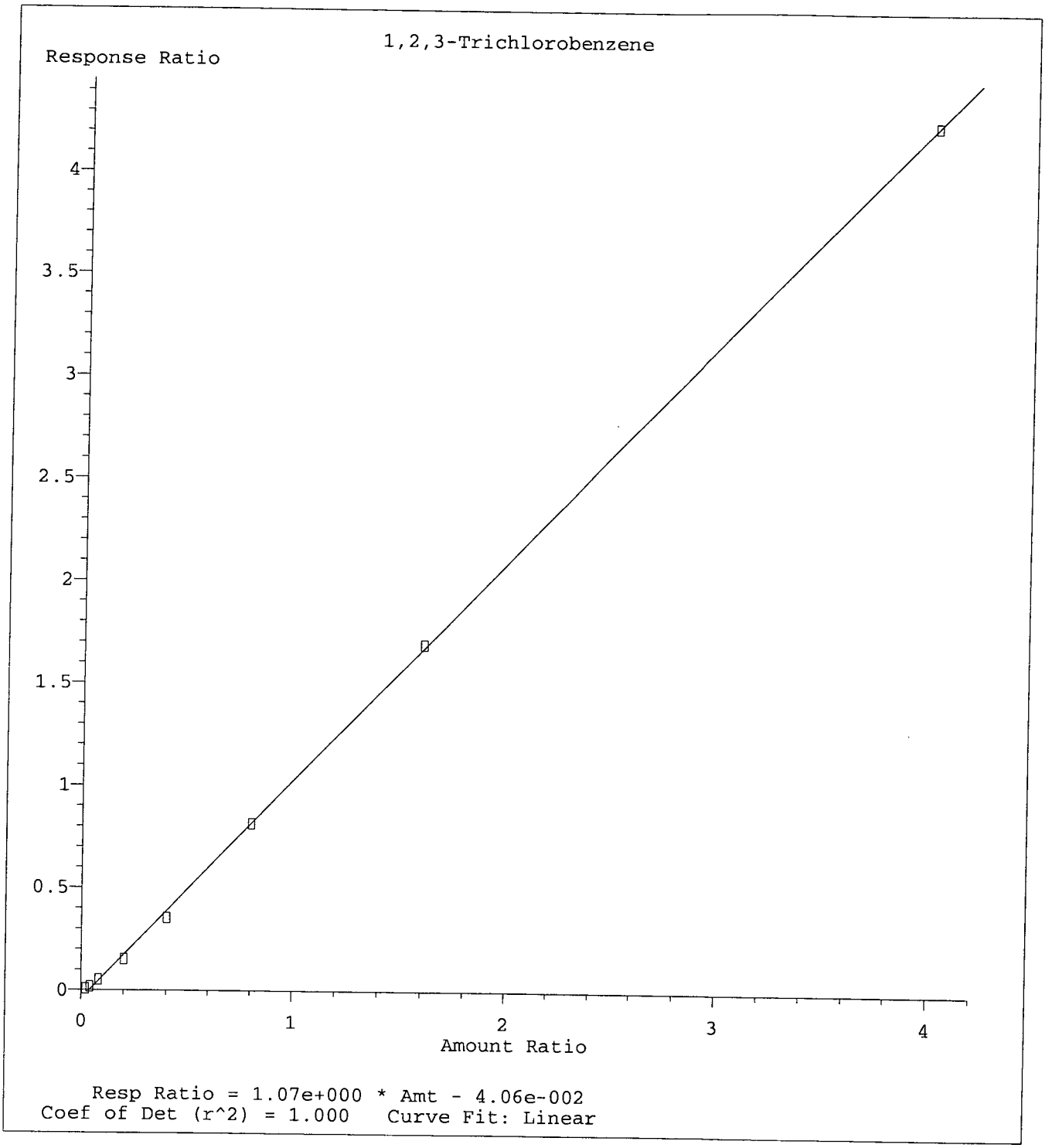
Method Name: M:\MAX\DATA\M170111\MALLW.M
Calibration Table Last Updated: Thu Jan 12 11:22:43 2017



Method Name: M:\MAX\DATA\M170111\MALLW.M
Calibration Table Last Updated: Thu Jan 12 11:22:43 2017



Method Name: M:\MAX\DATA\M170111\MALLW.M
Calibration Table Last Updated: Thu Jan 12 11:22:43 2017



Method Name: M:\MAX\DATA\M170111\MALLW.M
Calibration Table Last Updated: Thu Jan 12 11:22:43 2017

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 1/11/17
Instrument: Max
Initial Cal. Date: 1/11/17
Data File: 0111M19.D

		Compound	MEAN	CCRF	%D		%Drift	
1	TM	Dichlorodifluoromethane	0.2988	0.3153	5.6	TM		
2	TM	Freon 114	0.3810	0.4085	7.2	TM		
3	TM**	Chloromethane	0.4412	0.4133	6.3	TM**		
4	TM*	Vinyl chloride	0.5818	0.5781	0.63	TM*		
5	TM	Bromomethane	0.3095	0.2954	4.6	TM		
6	TM	Chloroethane	0.3253	0.3488	7.2	TM		
7	TM	Dichlorofluoromethane	0.8094	0.8437	4.2	TM		
8	TM	Trichlorofluoromethane	0.6876	0.7617	11	TM		
9	TM	Acrolein	0.0119	0.0199	67	TM		nt
10	TML	Acetone	0.0846	0.0521	38	TML	19	
11	TM	Freon-113	0.3844	0.4137	7.6	TM		
12	TM*	1,1-DCE	0.6498	0.7163	10	TM*		
13	TM	t-Butanol	0.0109	0.0087	20	TM		
14	TM	Methyl Acetate	0.1572	0.1398	11	TM		
15	TMQ	Iodomethane	0.3146	0.2686	15	TMQ	36	nt
16	TM	Acrylonitrile	0.0666	0.0618	7.2	TM		
17	TM	Methylene chloride	0.4001	0.4126	3.1	TM		
18	TM	Carbon disulfide	1.309	1.178	10	TM		
19	TM	Methyl t-butyl ether (MtBE)	0.6922	0.7117	2.8	TM		
20	TM	Trans-1,2-DCE	0.4719	0.5181	9.8	TM		
21	TM	Diisopropyl Ether	1.253	1.276	1.8	TM		
22	TM**	1,1-DCA	0.8023	0.8305	3.5	TM**		
23	TM	Vinyl Acetate	0.2624	0.2152	18	TM		
24	TM	Ethyl tert Butyl Ether	0.8479	0.8873	4.6	TM		
25	TM	MEK (2-Butanone)	0.0872	0.0830	4.9	TM		
26	TM	Cis-1,2-DCE	0.5128	0.5256	2.5	TM		
27	TM	2,2-Dichloropropane	0.5849	0.5651	3.4	TM		
28	TM*	Chloroform	0.7738	0.7870	1.7	TM*		
29	TM	Bromochloromethane	0.1945	0.1983	2.0	TM		
30	TM	1,1,1-TCA	0.7301	0.7767	6.4	TM		
31	TM	Cyclohexane	0.3972	0.4232	6.5	TM		
32	TM	1,1-Dichloropropene	0.6558	0.7045	7.4	TM		
33	TM	2,2,4-Trimethylpentane	1.163	1.162	0.15	TM		
34	TM	Carbon Tetrachloride	0.6164	0.6862	11	TM		
35	TM	Tert Amyl Methyl Ether	0.7135	0.7189	0.76	TM		
36	TM	1,2-DCA	0.4303	0.4265	0.87	TM		
37	TM	Benzene	1.905	2.020	6.0	TM		
38	TM	TCE	0.5260	0.5455	3.7	TM		
39	TM	2-Pentanone	0.1401	0.1349	3.7	TM		
40	TM*	1,2-Dichloropropane	0.4234	0.4305	1.7	TM*		
		Average			8.5			

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 1/11/17
Instrument: Max
Cal. Date: 1/11/17
Data File: 0111M19.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	Bromodichloromethane	0.4991	0.5183	3.8	TM	
42	TM	Methyl Cyclohexane	0.6198	0.6508	5.0	TM	
43	TM	Dibromomethane	0.1616	0.1652	2.3	TM	
44	TM	MIBK (methyl isobutyl ketone)	0.2128	0.1870	12	TM	
45	TM	1-Bromo-2-chloroethane	0.4115	0.3848	6.5	TM	
46	TMQ	2-Chloroethyl vinyl ether	0.0130	0.0131	0.77	TMQ	7.8
47	TM	Cis-1,3-Dichloropropene	0.5588	0.5696	1.9	TM	
48	TM*	Toluene	2.158	2.277	5.5	TM*	
49	TM	Trans-1,3-Dichloropropene	0.3895	0.3900	0.13	TM	
50	TM	1,1,2-TCA	0.2024	0.1979	2.3	TM	
51	TM	2-Hexanone	0.0601	0.0526	12	TM	
52	TM	1,2-EDB	0.3095	0.3246	4.9	TM	
53	TM	Tetrachloroethene	0.7227	0.7676	6.2	TM	
54	TM	1-Chlorohexane	0.7906	0.8575	8.5	TM	
55	TM	1,1,1,2-Tetrachloroethane	0.6199	0.6488	4.7	TM	
56	TM	m&p-Xylene	1.323	1.386	4.7	TM	
57	TM	o-Xylene	1.228	1.307	6.4	TM	
58	TM	Styrene	1.903	2.018	6.0	TM	
59	TM	1,3-Dichloropropane	0.5992	0.6063	1.2	TM	
60	TM	Dibromochloromethane	0.4569	0.4646	1.7	TM	
61	TM**	Chlorobenzene	1.863	1.976	6.1	TM**	
62	TM*	Ethylbenzene	3.318	3.552	7.0	TM*	
63	TM**	Bromoform	0.2808	0.2643	5.9	TM**	
64	TM	Isopropylbenzene	5.871	6.532	11	TM	
65	TM**	1,1,2,2-Tetrachloroethane	0.6027	0.5988	0.65	TM**	
66	TM	1,2,3-Trichloropropane	0.2065	0.2018	2.3	TM	
67	TM	t-1,4-Dichloro-2-Butene	0.1238	0.1170	5.5	TM	
68	TM	Bromobenzene	1.446	1.511	4.5	TM	
69	TM	n-Propylbenzene	6.499	7.053	8.5	TM	
70	TM	4-Ethyltoluene	5.702	6.133	7.6	TM	
71	TM	2-Chlorotoluene	3.943	4.170	5.8	TM	
72	TM	1,3,5-Trimethylbenzene	4.768	5.237	9.8	TM	
73	TM	4-Chlorotoluene	4.478	4.776	6.6	TM	
74	TM	Tert-Butylbenzene	4.193	4.546	8.4	TM	
75	TM	1,2,4-Trimethylbenzene	4.701	5.164	9.8	TM	
76	TM	Sec-Butylbenzene	5.641	6.165	9.3	TM	
77	TM	p-Isopropyltoluene	5.093	5.529	8.6	TM	
78	TM	Benzyl Chloride	0.5303	0.4219	20	TM	
79	TM	1,3-DCB	2.751	2.892	5.1	TM	
80	TM	1,4-DCB	2.668	2.802	5.0	TM	
		Average			6.1		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 1/11/17
Instrument: Max
Cal. Date: 1/11/17
Data File: 0111M19.D

		Compound	MEAN	CCRF	%D	%Drift	
81	TM	n-Butylbenzene	4.051	4.312	6.5	TM	
82	TM	1,2-DCB	2.284	2.370	3.8	TM	
83	TM	Hexachloroethane	0.6804	0.8760	29	TM	nt
84	TM	1,2-Dibromo-3-chloropropane	0.0826	0.0795	3.7	TM	
85	TML	1,2,4-Trichlorobenzene	1.178	1.249	6.0	TML	8.0
86	TM	Hexachlorobutadiene	1.056	1.136	7.6	TM	
87	TMQ	Naphthalene	0.9060	1.006	11	TMQ	15
88	TML	1,2,3-Trichlorobenzene	0.7754	0.8053	3.9	TML	15
89							
90							
91							
92							
93							
94							
95							
96							
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			8.9		

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M19.D
Acq On : 11 Jan 17 17:32
Sample : (SS)10ug/L VOC STD 1/11/17
Misc : IS&S 10/20/16

Vial: 17
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 14:32 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.51	96	348322	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.15	117	244262	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	127954	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	4.78	111	73675	24.07032 ppb		0.00
Spiked Amount 25.000			Recovery = 96.280%			
36) 1,2-DCA-D4(S)	5.13	65	60430	23.97703 ppb		0.00
Spiked Amount 25.000			Recovery = 95.908%			
56) Toluene-D8(S)	7.35	98	306264	24.91311 ppb		0.00
Spiked Amount 25.000			Recovery = 99.652%			
64) 4-Bromofluorobenzene(S)	10.74	95	105257	23.87570 ppb		0.00
Spiked Amount 25.000			Recovery = 95.504%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.19	85	43936	10.55534 ppb		98
3) Freon 114	1.29	85	56922	10.72181 ppb		98
4) Chloromethane	1.34	50	57584	9.36817 ppb		96
5) Vinyl chloride	1.43	62	80551	9.93692 ppb		99
6) Bromomethane	1.70	94	41155	9.54360 ppb		95
7) Chloroethane	1.79	64	48599	10.72288 ppb		100
8) Dichlorofluoromethane	1.98	67	117553	10.42339 ppb		100
9) Trichlorofluoromethane	2.02	101	106131	11.07861 ppb		95
10) Acrolein	2.41	56	34707	208.51770 ppb		99
11) Acetone	2.56	43	7265	8.08774 ppb		88
12) Freon-113	2.53	101	57646	10.76214 ppb		95
13) 1,1-DCE	2.51	61	99796	11.02259 ppb		98
14) t-Butanol	3.14	59	15188	99.93711 ppb		94
15) Methyl Acetate	2.90	43	19483	8.89753 ppb		99
16) Iodomethane	2.64	142	37418	6.41582 ppb		96
17) Acrylonitrile	3.22	53	8617	9.27992 ppb		88
18) Methylene chloride	2.98	84	57486	10.31262 ppb		97
19) Carbon disulfide	2.70	76	164104	8.99923 ppb		99
20) Methyl t-butyl ether (MtBE	3.28	73	99157	10.28154 ppb		99
21) Trans-1,2-DCE	3.25	96	72186	10.97941 ppb		99
22) Diisopropyl Ether	3.80	45	177782	10.18134 ppb		99
23) 1,1-DCA	3.67	63	115714	10.35180 ppb		99
24) Vinyl Acetate	3.76	43	29987	8.20113 ppb		96
25) Ethyl tert Butyl Ether	4.17	59	123630	10.46486 ppb		97
26) MEK (2-Butanone)	4.30	43	11564	9.51275 ppb	#	85
27) Cis-1,2-DCE	4.27	96	73238	10.24997 ppb		96
28) 2,2-Dichloropropane	4.27	77	78741	9.66251 ppb		99
29) Chloroform	4.61	83	109651	10.17000 ppb		99
30) Bromochloromethane	4.51	128	27635	10.19897 ppb		98
32) 1,1,1-TCA	4.80	97	108220	10.63886 ppb		94
33) Cyclohexane	4.87	41	58959	10.65392 ppb		93
34) 1,1-Dichloropropene	4.98	75	98152	10.74144 ppb		98
35) 2,2,4-Trimethylpentane	5.33	57	161862	9.98537 ppb		99
37) Carbon Tetrachloride	4.98	117	95607	11.13271 ppb		99
38) Tert Amyl Methyl Ether	5.37	73	100167	10.07594 ppb		96
39) 1,2-DCA	5.21	62	59427	9.91255 ppb		94
40) Benzene	5.20	78	281412	10.60262 ppb		99
41) TCE	5.92	95	76009	10.37168 ppb		98
42) 2-Pentanone	6.15	43	234938	120.33914 ppb		99

(#) = qualifier out of range (m) = manual integration
0111M19.D MALLW.M Thu Jan 12 14:34:07 2017

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M19.D
Acq On : 11 Jan 17 17:32
Sample : (SS)10ug/L VOC STD 1/11/17
Misc : IS&S 10/20/16

Vial: 17
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 14:32 2017

Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43) 1,2-Dichloropropane	6.16	63	59985	10.16823 ppb		100
44) Bromodichloromethane	6.49	83	72215	10.38398 ppb		99
45) Methyl Cyclohexane	6.15	83	90679	10.50100 ppb		97
46) Dibromomethane	6.29	93	23022	10.22769 ppb		93
47) MIBK (methyl isobutyl ket	7.24	43	26055	8.78579 ppb		98
48) 1-Bromo-2-chloroethane	6.84	63	53613	9.35145 ppb		99
49) 2-Chloroethyl vinyl ether	6.88	106	1821	10.78075 ppb	#	100
50) Cis-1,3-Dichloropropene	7.03	75	79357	10.19262 ppb		99
51) Toluene	7.43	91	317246	10.54910 ppb		99
52) Trans-1,3-Dichloropropene	7.71	75	54344	10.01292 ppb		98
53) 1,1,2-TCA	7.92	83	27567	9.77307 ppb		97
54) 2-Hexanone	8.29	58	7329	8.75348 ppb		93
57) 1,2-EDB	8.53	107	31714	10.48848 ppb		91
58) Tetrachloroethene	8.11	164	74995	10.62056 ppb		94
59) 1-Chlorohexane	9.21	91	83785	10.84633 ppb		100
60) 1,1,1,2-Tetrachloroethane	9.31	131	63394	10.46705 ppb		98
61) m&p-Xylene	9.52	106	270746	20.94085 ppb		99
62) o-Xylene	10.04	106	127670	10.63951 ppb		97
63) Styrene	10.06	104	197185	10.60404 ppb		99
65) 1,3-Dichloropropane	8.13	76	59242	10.11976 ppb		98
66) Dibromochloromethane	8.40	129	45393	10.16748 ppb		97
67) Chlorobenzene	9.19	112	193057	10.60798 ppb		99
68) Ethylbenzene	9.36	91	347028	10.70446 ppb		99
69) Bromoform	10.27	173	25827	9.41469 ppb		100
71) Isopropylbenzene	10.56	105	334318	11.12547 ppb		99
72) 1,1,2,2-Tetrachloroethane	10.97	83	30647	9.93486 ppb		95
73) 1,2,3-Trichloropropane	11.00	110	10328	9.77373 ppb		92
74) t-1,4-Dichloro-2-Butene	11.05	53	5987	9.44786 ppb		99
75) Bromobenzene	10.92	156	77354	10.45092 ppb		99
76) n-Propylbenzene	11.13	91	360975	10.85299 ppb		99
77) 4-Ethyltoluene	11.30	105	313912	10.75730 ppb		98
78) 2-Chlorotoluene	11.22	91	213426	10.57548 ppb		99
79) 1,3,5-Trimethylbenzene	11.40	105	268054	10.98405 ppb		98
80) 4-Chlorotoluene	11.37	91	244450	10.66469 ppb		99
81) Tert-Butylbenzene	11.84	119	232655	10.84007 ppb		98
82) 1,2,4-Trimethylbenzene	11.91	105	264301	10.98380 ppb		98
83) Sec-Butylbenzene	12.15	105	315524	10.92921 ppb		100
84) p-Isopropyltoluene	12.37	119	283003	10.85747 ppb		99
85) Benzyl Chloride	12.59	91	21595	7.95644 ppb		97
86) 1,3-DCB	12.26	146	148033	10.51280 ppb		98
87) 1,4-DCB	12.39	146	143388	10.50118 ppb		98
88) n-Butylbenzene	12.95	91	220695	10.64505 ppb		99
89) 1,2-DCB	12.90	146	121304	10.37859 ppb		96
90) Hexachloroethane	13.27	117	44837	12.87579 ppb		97
91) 1,2-Dibromo-3-chloropropan	14.01	75	4068	9.62726 ppb	#	78
92) 1,2,4-Trichlorobenzene	15.23	180	63915	9.20488 ppb		95
93) Hexachlorobutadiene	15.53	225	58147	10.75817 ppb		97
94) Naphthalene	15.56	128	51472	8.50624 ppb		94
95) 1,2,3-Trichlorobenzene	15.92	180	41219	8.46489 ppb		99

(#) = qualifier out of range (m) = manual integration
0111M19.D MALLW.M Thu Jan 12 14:34:08 2017

Quantitation Report

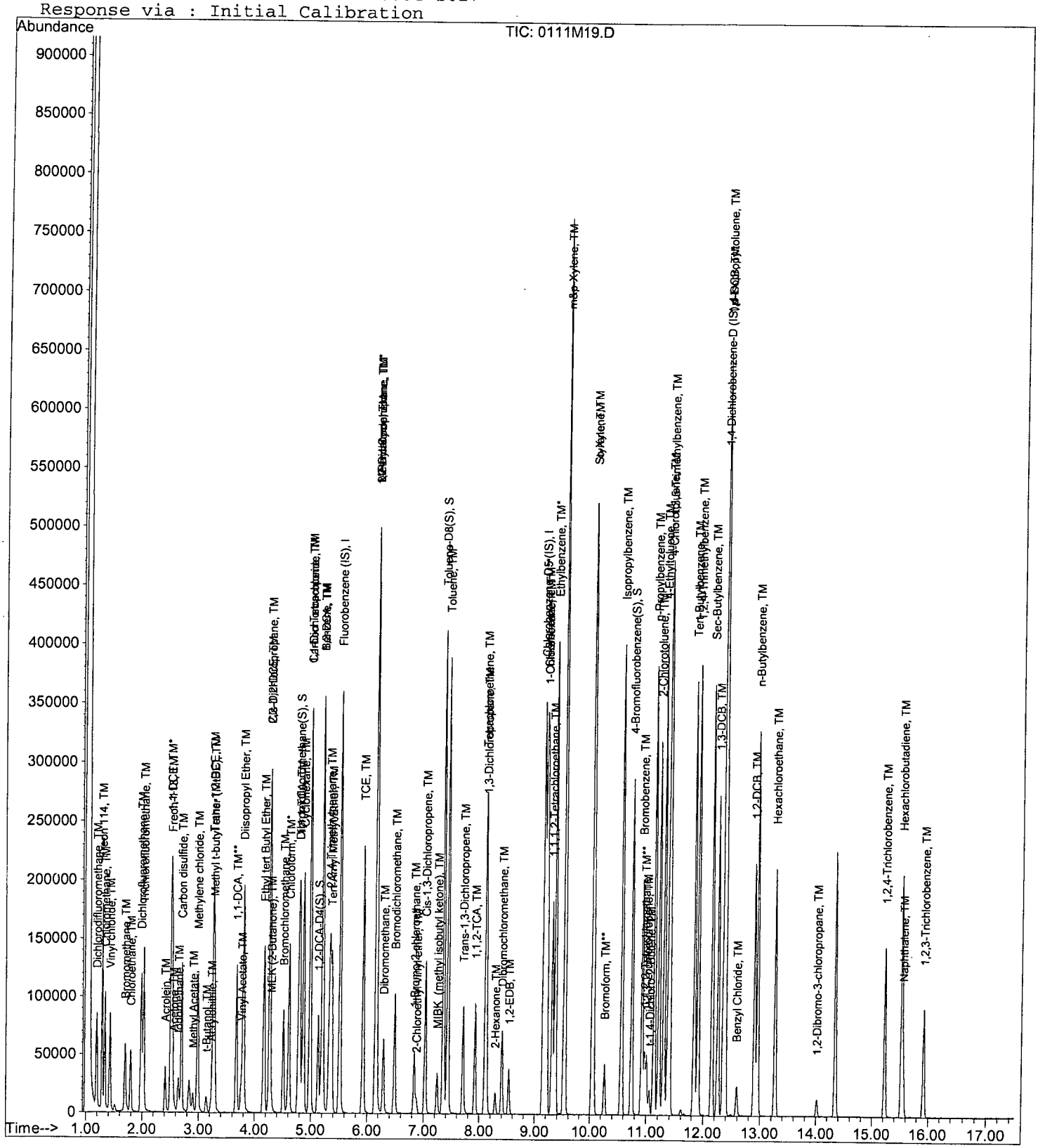
Data File : M:\MAX\DATA\M170111\0111M19.D
Acq On : 11 Jan 17 17:32
Sample : (SS)10ug/L VOC STD 1/11/17
Misc : IS&S 10/20/16

Vial: 17
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 14:32 2017

Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 1/13/17
Instrument: Max
Initial Cal. Date: 1/13/17
Data File: 0113M12.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TM	Dichlorodifluoromethane	0.2988	0.3021	1.1	TM	
3	TM	Freon 114	0.3810	0.3698	2.9	TM	
4	TM**	Chloromethane	0.4412	0.4583	3.9	TM**	
5	TM*	Vinyl chloride	0.5818	0.5943	2.2	TM*	
6	TM	Bromomethane	0.3095	0.3076	0.63	TM	
7	TM	Chloroethane	0.3253	0.3501	7.6	TM	
8	TM	Dichlorofluoromethane	0.8094	0.8101	0.08	TM	
9	TM	Trichlorofluoromethane	0.6876	0.7475	8.7	TM	
10	TM	Acrolein	0.0119	0.0111	7.4	TM	
11	TML	Acetone	0.0846	0.0623	26	TML	1.0
12	TM	Freon-113	0.3844	0.3821	0.60	TM	
13	TM*	1,1-DCE	0.6498	0.6223	4.2	TM*	
14	TM	t-Butanol	0.0109	0.0096	12	TM	
15	TM	Methyl Acetate	0.1572	0.1434	8.8	TM	
16	TMQ	Iodomethane	0.3146	0.4806	53	TMQ	5.2
17	TM	Acrylonitrile	0.0666	0.0668	0.25	TM	
18	TM	Methylene chloride	0.4001	0.4030	0.72	TM	
19	TM	Carbon disulfide	1.309	1.256	4.0	TM	
20	TM	Methyl t-butyl ether (MtBE)	0.6922	0.6391	7.7	TM	
21	TM	Trans-1,2-DCE	0.4719	0.4582	2.9	TM	
22	TM	Diisopropyl Ether	1.253	1.237	1.3	TM	
23	TM**	1,1-DCA	0.8023	0.7871	1.9	TM**	
24	TM	Vinyl Acetate	0.2624	0.2633	0.32	TM	
25	TM	Ethyl tert Butyl Ether	0.8479	0.8115	4.3	TM	
26	TM	MEK (2-Butanone)	0.0872	0.0914	4.7	TM	
27	TM	Cis-1,2-DCE	0.5128	0.4990	2.7	TM	
28	TM	2,2-Dichloropropane	0.5849	0.5680	2.9	TM	
29	TM*	Chloroform	0.7738	0.7784	0.59	TM*	
30	TM	Bromochloromethane	0.1945	0.1875	3.6	TM	
31	S	Dibromofluoromethane(S)	0.2197	0.2180	0.77	S	
32	TM	1,1,1-TCA	0.7301	0.7255	0.63	TM	
33	TM	Cyclohexane	0.3972	0.4014	1.1	TM	
34	TM	1,1-Dichloropropene	0.6558	0.6482	1.2	TM	
35	TM	2,2,4-Trimethylpentane	1.163	1.164	0.07	TM	
36	S	1,2-DCA-D4(S)	0.1809	0.1705	5.7	S	
37	TM	Carbon Tetrachloride	0.6164	0.6131	0.54	TM	
38	TM	Tert Amyl Methyl Ether	0.7135	0.6790	4.8	TM	
39	TM	1,2-DCA	0.4303	0.4189	2.7	TM	
40	TM	Benzene	1.905	1.903	0.08	TM	
		Average			5.0		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 1/13/17
Instrument: Max
Cal. Date: 1/13/17
Data File: 0113M12.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	TCE	0.5260	0.5076	3.5	TM	
42	TM	2-Pentanone	0.1401	0.1352	3.5	TM	
43	TM*	1,2-Dichloropropane	0.4234	0.4214	0.47	TM*	
44	TM	Bromodichloromethane	0.4991	0.5049	1.1	TM	
45	TM	Methyl Cyclohexane	0.6198	0.6238	0.65	TM	
46	TM	Dibromomethane	0.1616	0.1656	2.5	TM	
47	TM	MIBK (methyl isobutyl ketone)	0.2128	0.2091	1.8	TM	
48	TM	1-Bromo-2-chloroethane	0.4115	0.3667	11	TM	
49	TM	Cis-1,3-Dichloropropene	0.5588	0.5461	2.3	TM	
50	TM*	Toluene	2.158	2.200	1.9	TM*	
51	TM	Trans-1,3-Dichloropropene	0.3895	0.3730	4.3	TM	
52	TM	1,1,2-TCA	0.2024	0.1950	3.7	TM	
53	TM	2-Hexanone	0.0601	0.0571	4.9	TM	
54	I	Chlorobenzene-D5 (IS)	ISTD			I	
55	S	Toluene-D8(S)	1.258	1.287	2.3	S	
56	TM	1,2-EDB	0.3095	0.2974	3.9	TM	
57	TM	Tetrachloroethene	0.7227	0.7164	0.87	TM	
58	TM	1-Chlorohexane	0.7906	0.8436	6.7	TM	
59	TM	1,1,1,2-Tetrachloroethane	0.6199	0.6308	1.8	TM	
60	TM	m&p-Xylene	1.323	1.364	3.1	TM	
61	TM	o-Xylene	1.228	1.288	4.9	TM	
62	TM	Styrene	1.903	1.972	3.6	TM	
63	S	4-Bromofluorobenzene(S)	0.4512	0.4465	1.0	S	
64	TM	1,3-Dichloropropane	0.5992	0.5993	0.02	TM	
65	TM	Dibromochloromethane	0.4569	0.4539	0.67	TM	
66	TM**	Chlorobenzene	1.863	1.876	0.72	TM**	
67	TM*	Ethylbenzene	3.318	3.476	4.8	TM*	
68	TM**	Bromoform	0.2808	0.2710	3.5	TM**	
69	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
70	TM	Isopropylbenzene	5.871	6.375	8.6	TM	
71	TM**	1,1,2,2-Tetrachloroethane	0.6027	0.6094	1.1	TM**	
72	TM	1,2,3-Trichloropropane	0.2065	0.1952	5.5	TM	
73	TM	t-1,4-Dichloro-2-Butene	0.1238	0.1215	1.9	TM	
74	TM	Bromobenzene	1.446	1.489	2.9	TM	
75	TM	n-Propylbenzene	6.499	7.052	8.5	TM	
76	TM	4-Ethyltoluene	5.702	6.175	8.3	TM	
77	TM	2-Chlorotoluene	3.943	4.176	5.9	TM	
78	TM	1,3,5-Trimethylbenzene	4.768	5.113	7.2	TM	
79	TM	4-Chlorotoluene	4.478	4.770	6.5	TM	
80	TM	Tert-Butylbenzene	4.193	4.454	6.2	TM	
		Average			3.7		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 1/13/17
Instrument: Max
Cal. Date: 1/13/17
Data File: 0113M12.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	1,2,4-Trimethylbenzene	4.701	5.121	8.9	TM	
82	TM	Sec-Butylbenzene	5.641	6.051	7.3	TM	
83	TM	p-Isopropyltoluene	5.093	5.415	6.3	TM	
84	TM	Benzyl Chloride	0.5303	0.5908	11	TM	
85	TM	1,3-DCB	2.751	2.940	6.9	TM	
86	TM	1,4-DCB	2.668	2.773	4.0	TM	
87	TM	n-Butylbenzene	4.051	4.375	8.0	TM	
88	TM	1,2-DCB	2.284	2.389	4.6	TM	
89	TM	Hexachloroethane	0.6804	0.7781	14	TM	
90	TM	1,2-Dibromo-3-chloropropane	0.0826	0.0829	0.42	TM	
91	TML	1,2,4-Trichlorobenzene	1.178	1.231	4.5	TML	9.2
92	TM	Hexachlorobutadiene	1.056	1.113	5.4	TM	
93	TMQ	Naphthalene	0.9060	1.014	12	TMQ	14
94	TML	1,2,3-Trichlorobenzene	0.7754	0.8049	3.8	TML	15
95							
96							
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
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110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			6.9		

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0113M12.D
Acq On : 13 Jan 17 14:28
Sample : 170113A CCV/LCS-1WM 10ug/L
Misc : IS&S 10/20/16

Vial: 3
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 13 14:59 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	321646	25.00000 ppb	0.00
55) Chlorobenzene-D5 (IS)	9.15	117	226106	25.00000 ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	117540	25.00000 ppb	0.00
System Monitoring Compounds					
31) Dibromofluoromethane(S)	4.78	111	70115	24.80707 ppb	0.00
Spiked Amount 25.000			Recovery = 99.228%		
36) 1,2-DCA-D4(S)	5.13	65	54856	23.57055 ppb	0.00
Spiked Amount 25.000			Recovery = 94.284%		
56) Toluene-D8(S)	7.35	98	291109	25.58182 ppb	0.00
Spiked Amount 25.000			Recovery = 102.328%		
64) 4-Bromofluorobenzene(S)	10.74	95	100955	24.73869 ppb	0.00
Spiked Amount 25.000			Recovery = 98.956%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.19	85	38872	10.11326 ppb	95
3) Freon 114	1.29	85	47579	9.70523 ppb	97
4) Chloromethane	1.34	50	58960	10.38755 ppb	99
5) Vinyl chloride	1.43	62	76464	10.21505 ppb	94
6) Bromomethane	1.69	94	39571	9.93732 ppb	96
7) Chloroethane	1.79	64	45042	10.76229 ppb	97
8) Dichlorofluoromethane	1.98	67	104223	10.00787 ppb	96
9) Trichlorofluoromethane	2.02	101	96177	10.87219 ppb	98
10) Acrolein	2.41	56	17797	115.79116 ppb	91
11) Acetone	2.57	43	8015	9.89588 ppb	97
12) Freon-113	2.53	101	49164	9.93984 ppb	96
13) 1,1-DCE	2.51	61	80064	9.57659 ppb	97
14) t-Butanol	3.14	59	15359	109.44398 ppb	98
15) Methyl Acetate	2.90	43	18447	9.12310 ppb	97
16) Iodomethane	2.64	142	61836	10.51873 ppb	97
17) Acrylonitrile	3.22	53	8596	10.02507 ppb	95
18) Methylene chloride	2.98	84	51845	10.07202 ppb	95
19) Carbon disulfide	2.70	76	161658	9.60033 ppb	98
20) Methyl t-butyl ether (MtBE	3.28	73	82220	9.23241 ppb	97
21) Trans-1,2-DCE	3.25	96	58957	9.71101 ppb	97
22) Diisopropyl Ether	3.79	45	159112	9.86785 ppb	98
23) 1,1-DCA	3.67	63	101273	9.81130 ppb	99
24) Vinyl Acetate	3.75	43	33871	10.03163 ppb	98
25) Ethyl tert Butyl Ether	4.17	59	104403	9.57030 ppb	100
26) MEK (2-Butanone)	4.30	43	11758	10.47453 ppb	98
27) Cis-1,2-DCE	4.27	96	64202	9.73055 ppb	93
28) 2,2-Dichloropropane	4.27	77	73083	9.71198 ppb	93
29) Chloroform	4.61	83	100149	10.05906 ppb	98
30) Bromochloromethane	4.51	128	24122	9.64080 ppb	96
32) 1,1,1-TCA	4.80	97	93336	9.93664 ppb	96
33) Cyclohexane	4.87	41	51639	10.10508 ppb	98
34) 1,1-Dichloropropene	4.98	75	83390	9.88280 ppb	97
35) 2,2,4-Trimethylpentane	5.33	57	149785	10.00669 ppb	99
37) Carbon Tetrachloride	4.98	117	78877	9.94636 ppb	99
38) Tert Amyl Methyl Ether	5.37	73	87364	9.51692 ppb	97
39) 1,2-DCA	5.21	62	53891	9.73465 ppb	99
40) Benzene	5.20	78	244900	9.99222 ppb	98
41) TCE	5.92	95	65309	9.65072 ppb	96
42) 2-Pentanone	6.15	43	217457	120.62290 ppb	100

(#) = qualifier out of range (m) = manual integration
0113M12.D MALLW.M Mon Jan 16 07:46:09 2017

Data File : M:\MAX\DATA\M170111\0113M12.D
Acq On : 13 Jan 17 14:28
Sample : 170113A CCV/LCS-1WM 10ug/L
Misc : IS&S 10/20/16

Vial: 3
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 13 14:59 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	1,2-Dichloropropane	6.16	63	54219	9.95307	ppb		99
44)	Bromodichloromethane	6.49	83	64955	10.11467	ppb		99
45)	Methyl Cyclohexane	6.15	83	80259	10.06515	ppb		96
46)	Dibromomethane	6.29	93	21300	10.24748	ppb	#	81
47)	MIBK (methyl isobutyl ket	7.24	43	26904	9.82447	ppb		97
48)	1-Bromo-2-chloroethane	6.84	63	47184	8.91264	ppb		97
50)	Cis-1,3-Dichloropropene	7.03	75	70254	9.77180	ppb		98
51)	Toluene	7.43	91	283052	10.19267	ppb		98
52)	Trans-1,3-Dichloropropene	7.71	75	47985	9.57453	ppb		99
53)	1,1,2-TCA	7.92	83	25090	9.63263	ppb		98
54)	2-Hexanone	8.28	58	7351	9.50791	ppb	#	85
57)	1,2-EDB	8.53	107	26897	9.60969	ppb		97
58)	Tetrachloroethene	8.11	164	64793	9.91259	ppb		98
59)	1-Chlorohexane	9.21	91	76294	10.66966	ppb		99
60)	1,1,1,2-Tetrachloroethane	9.31	131	57049	10.17579	ppb		96
61)	m&p-Xylene	9.52	106	246677	20.61127	ppb		100
62)	o-Xylene	10.04	106	116482	10.48661	ppb		97
63)	Styrene	10.06	104	178319	10.35950	ppb		97
65)	1,3-Dichloropropane	8.13	76	54203	10.00248	ppb		90
66)	Dibromochloromethane	8.40	129	41051	9.93326	ppb		96
67)	Chlorobenzene	9.19	112	169683	10.07232	ppb		98
68)	Ethylbenzene	9.36	91	314415	10.47725	ppb		100
69)	Bromoform	10.27	173	24513	9.65322	ppb		93
71)	Isopropylbenzene	10.56	105	299733	10.85828	ppb		100
72)	1,1,2,2-Tetrachloroethane	10.97	83	28653	10.11142	ppb		99
73)	1,2,3-Trichloropropane	11.00	110	9177	9.45394	ppb		98
74)	t-1,4-Dichloro-2-Butene	11.05	53	5712	9.81252	ppb		93
75)	Bromobenzene	10.92	156	69986	10.29322	ppb		95
76)	n-Propylbenzene	11.13	91	331550	10.85149	ppb		99
77)	4-Ethyltoluene	11.30	105	290314	10.83008	ppb		99
78)	2-Chlorotoluene	11.21	91	196320	10.58974	ppb		99
79)	1,3,5-Trimethylbenzene	11.40	105	240374	10.72249	ppb		100
80)	4-Chlorotoluene	11.37	91	224255	10.65046	ppb		96
81)	Tert-Butylbenzene	11.84	119	209397	10.62083	ppb		99
82)	1,2,4-Trimethylbenzene	11.91	105	240751	10.89156	ppb		99
83)	Sec-Butylbenzene	12.15	105	284510	10.72808	ppb		98
84)	p-Isopropyltoluene	12.37	119	254604	10.63337	ppb		99
85)	Benzyl Chloride	12.59	91	27776	11.14046	ppb		99
86)	1,3-DCB	12.26	146	138218	10.68544	ppb		97
87)	1,4-DCB	12.38	146	130391	10.39540	ppb		98
88)	n-Butylbenzene	12.95	91	205691	10.80037	ppb		99
89)	1,2-DCB	12.90	146	112311	10.46053	ppb		93
90)	Hexachloroethane	13.27	117	36583	11.43628	ppb		97
91)	1,2-Dibromo-3-chloropropan	14.01	75	3898	10.04227	ppb	#	78
92)	1,2,4-Trichlorobenzene	15.23	180	57888	9.08479	ppb		98
93)	Hexachlorobutadiene	15.53	225	52335	10.54075	ppb		96
94)	Naphthalene	15.56	128	47652	8.56217	ppb		98
95)	1,2,3-Trichlorobenzene	15.92	180	37843	8.46067	ppb		99

(#) = qualifier out of range (m) = manual integration

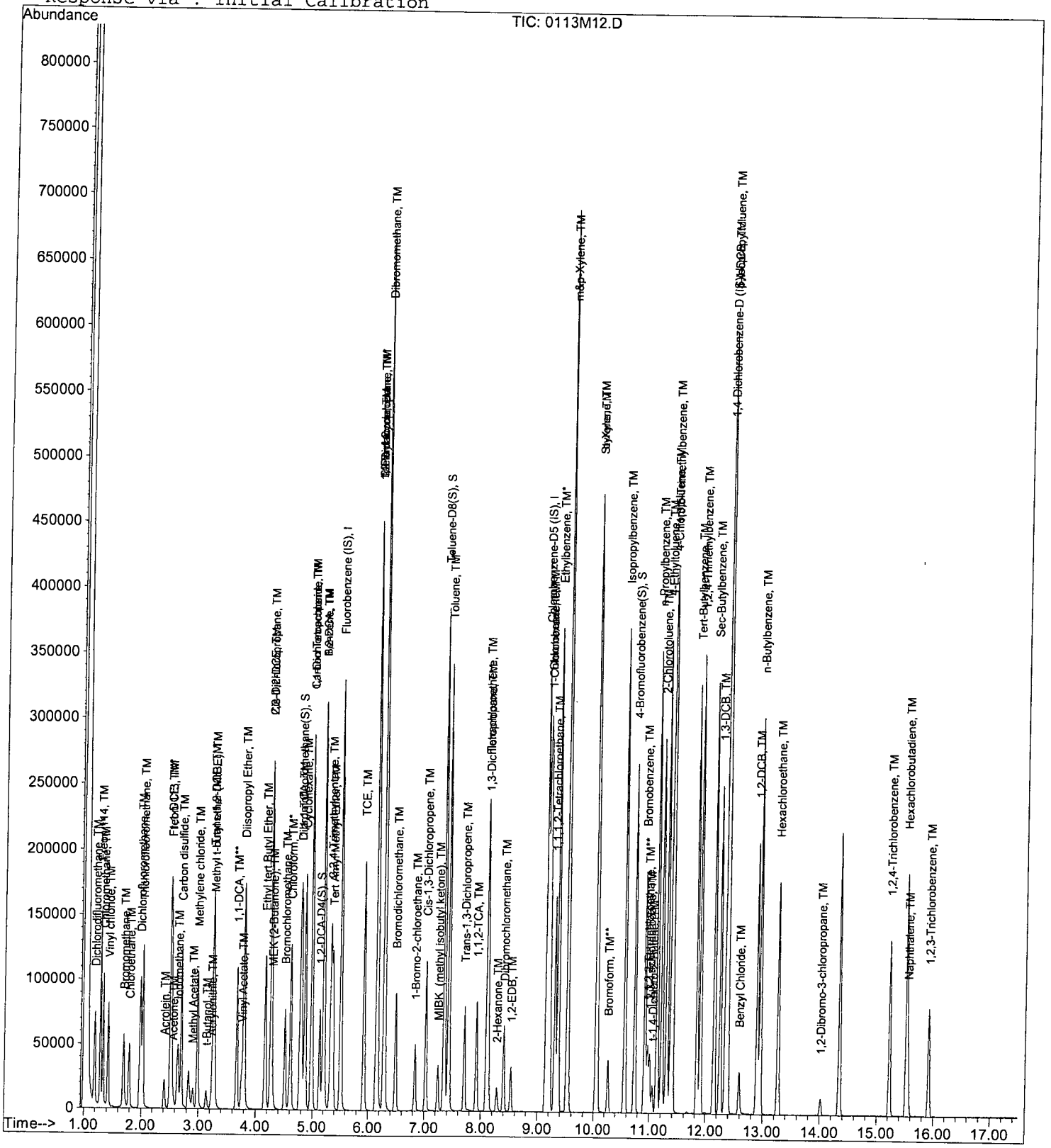
Data File : M:\MAX\DATA\M170111\0113M12.D
Acq On : 13 Jan 17 14:28
Sample : 170113A CCV/LCS-1WM 10ug/L
Misc : IS&S 10/20/16

Vial: 3
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 13 14:59 2017

Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration



600

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 1/14/17
Matrix: Instrument: Max
Initial Cal. Date: 1/11/17
Data File: 0113M35.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TM	Dichlorodifluoromethane	0.2988	0.2802	6.2	TM	
3	TM	Freon 114	0.3810	0.3583	6.0	TM	
4	TM**	Chloromethane	0.4412	0.4457	1.0	TM**	
5	TM*	Vinyl chloride	0.5818	0.5887	1.2	TM*	
6	TM	Bromomethane	0.3095	0.3029	2.1	TM	
7	TM	Chloroethane	0.3253	0.3452	6.1	TM	
8	TM	Dichlorofluoromethane	0.8094	0.8179	1.0	TM	
9	TM	Trichlorofluoromethane	0.6876	0.6929	0.78	TM	
10	TM	Acrolein	0.0119	0.0111	7.4	TM	
11	TML	Acetone	0.0846	0.0488	42	TML	25
12	TM	Freon-113	0.3844	0.3783	1.6	TM	
13	TM*	1,1-DCE	0.6498	0.6241	4.0	TM*	
14	TM	t-Butanol	0.0109	0.0087	20	TM	
15	TM	Methyl Acetate	0.1572	0.1432	8.9	TM	
16	TMQ	Iodomethane	0.3146	0.5071	61	TMQ	10
17	TM	Acrylonitrile	0.0666	0.0602	9.7	TM	
18	TM	Methylene chloride	0.4001	0.4060	1.5	TM	
19	TM	Carbon disulfide	1.309	1.208	7.7	TM	
20	TM	Methyl t-butyl ether (MtBE)	0.6922	0.6406	7.5	TM	
21	TM	Trans-1,2-DCE	0.4719	0.4565	3.3	TM	
22	TM	Diisopropyl Ether	1.253	1.220	2.6	TM	
23	TM**	1,1-DCA	0.8023	0.8040	0.21	TM**	
24	TM	Vinyl Acetate	0.2624	0.1852	29	TM	
25	TM	Ethyl tert Butyl Ether	0.8479	0.8070	4.8	TM	
26	TM	MEK (2-Butanone)	0.0872	0.0707	19	TM	
27	TM	Cis-1,2-DCE	0.5128	0.4897	4.5	TM	
28	TM	2,2-Dichloropropane	0.5849	0.4935	16	TM	
29	TM*	Chloroform	0.7738	0.7653	1.1	TM*	
30	TM	Bromochloromethane	0.1945	0.1920	1.3	TM	
31	S	Dibromofluoromethane(S)	0.2197	0.2146	2.3	S	
32	TM	1,1,1-TCA	0.7301	0.6989	4.3	TM	
33	TM	Cyclohexane	0.3972	0.3991	0.49	TM	
34	TM	1,1-Dichloropropene	0.6558	0.6382	2.7	TM	
35	TM	2,2,4-Trimethylpentane	1.163	1.040	11	TM	
36	S	1,2-DCA-D4(S)	0.1809	0.1770	2.1	S	
37	TM	Carbon Tetrachloride	0.6164	0.5815	5.7	TM	
38	TM	Tert Amyl Methyl Ether	0.7135	0.6986	2.1	TM	
39	TM	1,2-DCA	0.4303	0.4201	2.4	TM	
40	TM	Benzene	1.905	1.874	1.6	TM	
		Average			8.0		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 1/14/17
Instrument: Max
Cal. Date: 1/11/17
Data File: 0113M35.D

		Compound	MEAN	CCRF	%D	%Drift	
41	TM	TCE	0.5260	0.5244	0.30	TM	
42	TM	2-Pentanone	0.1401	0.1231	12	TM	
43	TM*	1,2-Dichloropropane	0.4234	0.4263	0.67	TM*	
44	TM	Bromodichloromethane	0.4991	0.4870	2.4	TM	
45	TM	Methyl Cyclohexane	0.6198	0.6142	0.90	TM	
46	TM	Dibromomethane	0.1616	0.1620	0.30	TM	
47	TM	MIBK (methyl isobutyl ketone)	0.2128	0.2008	5.7	TM	
48	TM	1-Bromo-2-chloroethane	0.4115	0.3622	12	TM	
49	TM	Cis-1,3-Dichloropropene	0.5588	0.5181	7.3	TM	
50	TM*	Toluene	2.158	2.186	1.3	TM*	
51	TM	Trans-1,3-Dichloropropene	0.3895	0.3451	11	TM	
52	TM	1,1,2-TCA	0.2024	0.1988	1.8	TM	
53	TM	2-Hexanone	0.0601	0.0557	7.2	TM	
54	I	Chlorobenzene-D5 (IS)	ISTD			I	
55	S	Toluene-D8(S)	1.258	1.237	1.7	S	
56	TM	1,2-EDB	0.3095	0.3042	1.7	TM	
57	TM	Tetrachloroethene	0.7227	0.7203	0.33	TM	
58	TM	1-Chlorohexane	0.7906	0.8216	3.9	TM	
59	TM	1,1,1,2-Tetrachloroethane	0.6199	0.5957	3.9	TM	
60	TM	m&p-Xylene	1.323	1.352	2.2	TM	
61	TM	o-Xylene	1.228	1.296	5.5	TM	
62	TM	Styrene	1.903	1.974	3.7	TM	
63	S	4-Bromofluorobenzene(S)	0.4512	0.4505	0.15	S	
64	TM	1,3-Dichloropropane	0.5992	0.5721	4.5	TM	
65	TM	Dibromochloromethane	0.4569	0.4252	7.0	TM	
66	TM**	Chlorobenzene	1.863	1.893	1.6	TM**	
67	TM*	Ethylbenzene	3.318	3.434	3.5	TM*	
68	TM**	Bromoform	0.2808	0.2510	11	TM**	
69	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
70	TM	Isopropylbenzene	5.871	6.561	12	TM	
71	TM**	1,1,2,2-Tetrachloroethane	0.6027	0.5841	3.1	TM**	
72	TM	1,2,3-Trichloropropane	0.2065	0.2099	1.6	TM	
73	TM	t-1,4-Dichloro-2-Butene	0.1238	0.1083	13	TM	
74	TM	Bromobenzene	1.446	1.500	3.7	TM	
75	TM	n-Propylbenzene	6.499	7.077	8.9	TM	
76	TM	4-Ethyltoluene	5.702	6.157	8.0	TM	
77	TM	2-Chlorotoluene	3.943	4.256	7.9	TM	
78	TM	1,3,5-Trimethylbenzene	4.768	5.268	10	TM	
79	TM	4-Chlorotoluene	4.478	4.794	7.0	TM	
80	TM	Tert-Butylbenzene	4.193	4.589	9.4	TM	
		Average			5.2		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 1/14/17
Instrument: Max
Cal. Date: 1/11/17
Data File: 0113M35.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	1,2,4-Trimethylbenzene	4.701	5.218	11	TM	
82	TM	Sec-Butylbenzene	5.641	6.085	7.9	TM	
83	TM	p-Isopropyltoluene	5.093	5.423	6.5	TM	
84	TM	Benzyl Chloride	0.5303	0.4051	24	TM	
85	TM	1,3-DCB	2.751	2.970	8.0	TM	
86	TM	1,4-DCB	2.668	2.826	5.9	TM	
87	TM	n-Butylbenzene	4.051	4.190	3.5	TM	
88	TM	1,2-DCB	2.284	2.460	7.7	TM	
89	TM	Hexachloroethane	0.6804	0.6928	1.8	TM	
90	TM	1,2-Dibromo-3-chloropropane	0.0826	0.0697	16	TM	
91	TML	1,2,4-Trichlorobenzene	1.178	1.259	6.9	TML	7.2
92	TM	Hexachlorobutadiene	1.056	1.053	0.26	TM	
93	TMQ	Naphthalene	0.9060	1.061	17	TMQ	11
94	TML	1,2,3-Trichlorobenzene	0.7754	0.7981	2.9	TML	16
95							
96							
97							
98							
99							
100							
101							
102							
103							
104							
105							
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110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			8.5		

Data File : M:\MAX\DATA\M170111\0113M35.D
Acq On : 14 Jan 17 1:17
Sample : Ending CCV 8260 10ug/L 1/13/17
Misc : IS&S 10/20/16

Vial: 26
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 7:42 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	349093	25.00000 ppb	0.00
55) Chlorobenzene-D5 (IS)	9.15	117	246936	25.00000 ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	126575	25.00000 ppb	0.00
System Monitoring Compounds					
31) Dibromofluoromethane(S)	4.78	111	74922	24.42367 ppb	0.00
Spiked Amount 25.000			Recovery = 97.696%		
36) 1,2-DCA-D4(S)	5.13	65	61793	24.46369 ppb	0.00
Spiked Amount 25.000			Recovery = 97.856%		
56) Toluene-D8(S)	7.35	98	305567	24.58725 ppb	0.00
Spiked Amount 25.000			Recovery = 98.348%		
64) 4-Bromofluorobenzene(S)	10.74	95	111252	24.96229 ppb	0.00
Spiked Amount 25.000			Recovery = 99.848%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.19	85	39128	9.37949 ppb	98
3) Freon 114	1.29	85	50025	9.40188 ppb	99
4) Chloromethane	1.34	50	62240	10.10328 ppb	99
5) Vinyl chloride	1.43	62	82210	10.11918 ppb	99
6) Bromomethane	1.69	94	42292	9.78560 ppb	97
7) Chloroethane	1.79	64	48197	10.61070 ppb	96
8) Dichlorofluoromethane	1.98	67	114204	10.10407 ppb	98
9) Trichlorofluoromethane	2.03	101	96757	10.07779 ppb	96
10) Acrolein	2.41	56	19302	115.70921 ppb	99
11) Acetone	2.56	43	6819	7.49847 ppb	97
12) Freon-113	2.53	101	52825	9.84031 ppb	92
13) 1,1-DCE	2.51	61	87146	9.60413 ppb	96
14) t-Butanol	3.14	59	15258	100.17597 ppb	95
15) Methyl Acetate	2.90	43	19993	9.11028 ppb	94
16) Iodomethane	2.64	142	70813	11.00998 ppb	95
17) Acrylonitrile	3.22	53	8403	9.02947 ppb #	96
18) Methylene chloride	2.98	84	56697	10.14862 ppb	93
19) Carbon disulfide	2.70	76	168685	9.23001 ppb	97
20) Methyl t-butyl ether (MtBE	3.28	73	89454	9.25496 ppb	100
21) Trans-1,2-DCE	3.25	96	63744	9.67398 ppb	94
22) Diisopropyl Ether	3.79	45	170418	9.73806 ppb	99
23) 1,1-DCA	3.67	63	112269	10.02143 ppb	98
24) Vinyl Acetate	3.75	43	25864	7.05791 ppb	98
25) Ethyl tert Butyl Ether	4.17	59	112682	9.51709 ppb	99
26) MEK (2-Butanone)	4.30	43	9867	8.09884 ppb	97
27) Cis-1,2-DCE	4.27	96	68387	9.54991 ppb	95
28) 2,2-Dichloropropane	4.27	77	68913	8.43781 ppb	100
29) Chloroform	4.61	83	106867	9.88989 ppb	97
30) Bromochloromethane	4.51	128	26810	9.87264 ppb	95
32) 1,1,1-TCA	4.80	97	97586	9.57226 ppb	95
33) Cyclohexane	4.86	41	55732	10.04856 ppb	93
34) 1,1-Dichloropropene	4.98	75	89115	9.73092 ppb	96
35) 2,2,4-Trimethylpentane	5.33	57	145171	8.93591 ppb	99
37) Carbon Tetrachloride	4.98	117	81200	9.43424 ppb	100
38) Tert Amyl Methyl Ether	5.37	73	97553	9.79133 ppb	93
39) 1,2-DCA	5.21	62	58661	9.76317 ppb	100
40) Benzene	5.20	78	261622	9.83523 ppb	99
41) TCE	5.92	95	73227	9.96999 ppb	97
42) 2-Pentanone	6.15	43	214917	109.84092 ppb	99

(#) = qualifier out of range (m) = manual integration

Data File : M:\MAX\DATA\M170111\0113M35.D Vial: 26
Acq On : 14 Jan 17 1:17 Operator: PM,DG,SV,CMM
Sample : Ending CCV 8260 10ug/L 1/13/17 Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 16 7:42 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	1,2-Dichloropropane	6.16	63	59521	10.06729	ppb		99
44)	Bromodichloromethane	6.49	83	68009	9.75759	ppb		100
45)	Methyl Cyclohexane	6.15	83	85769	9.91046	ppb		97
46)	Dibromomethane	6.29	93	22628	10.03045	ppb	#	77
47)	MIBK (methyl isobutyl ket	7.24	43	28035	9.43257	ppb		97
48)	1-Bromo-2-chloroethane	6.84	63	50579	8.80276	ppb		97
50)	Cis-1,3-Dichloropropene	7.03	75	72352	9.27237	ppb		96
51)	Toluene	7.43	91	305234	10.12726	ppb		99
52)	Trans-1,3-Dichloropropene	7.71	75	48187	8.85888	ppb		98
53)	1,1,2-TCA	7.92	83	27754	9.81764	ppb		93
54)	2-Hexanone	8.29	58	7784	9.27638	ppb		82
57)	1,2-EDB	8.53	107	30043	9.82825	ppb		92
58)	Tetrachloroethene	8.11	164	71151	9.96708	ppb		97
59)	1-Chlorohexane	9.21	91	81153	10.39184	ppb		97
60)	1,1,1,2-Tetrachloroethane	9.31	131	58842	9.61026	ppb		100
61)	m&p-Xylene	9.52	106	267139	20.43813	ppb		100
62)	o-Xylene	10.04	106	128011	10.55240	ppb		95
63)	Styrene	10.06	104	194968	10.37127	ppb		96
65)	1,3-Dichloropropane	8.13	76	56509	9.54838	ppb		99
66)	Dibromochloromethane	8.40	129	41995	9.30451	ppb		96
67)	Chlorobenzene	9.19	112	186937	10.16048	ppb		97
68)	Ethylbenzene	9.36	91	339224	10.35043	ppb		98
69)	Bromoform	10.27	173	24790	8.93882	ppb		97
71)	Isopropylbenzene	10.56	105	332168	11.17435	ppb		99
72)	1,1,2,2-Tetrachloroethane	10.97	83	29572	9.69082	ppb		98
73)	1,2,3-Trichloropropane	11.00	110	10625	10.16433	ppb		90
74)	t-1,4-Dichloro-2-Butene	11.05	53	5481	8.74360	ppb		94
75)	Bromobenzene	10.92	156	75948	10.37275	ppb		99
76)	n-Propylbenzene	11.13	91	358301	10.88996	ppb		99
77)	4-Ethyltoluene	11.30	105	311714	10.79836	ppb		100
78)	2-Chlorotoluene	11.21	91	215479	10.79353	ppb		100
79)	1,3,5-Trimethylbenzene	11.39	105	266726	11.04870	ppb		98
80)	4-Chlorotoluene	11.37	91	242721	10.70462	ppb		98
81)	Tert-Butylbenzene	11.84	119	232364	10.94447	ppb		99
82)	1,2,4-Trimethylbenzene	11.91	105	264187	11.09867	ppb		100
83)	Sec-Butylbenzene	12.15	105	308083	10.78773	ppb		98
84)	p-Isopropyltoluene	12.37	119	274559	10.64827	ppb		99
85)	Benzyl Chloride	12.59	91	20508	7.63826	ppb		97
86)	1,3-DCB	12.26	146	150377	10.79561	ppb		98
87)	1,4-DCB	12.38	146	143076	10.59249	ppb		97
88)	n-Butylbenzene	12.96	91	212163	10.34500	ppb		99
89)	1,2-DCB	12.90	146	124568	10.77396	ppb		98
90)	Hexachloroethane	13.27	117	35079	10.18334	ppb		97
91)	1,2-Dibromo-3-chloropropan	14.01	75	3527	8.43788	ppb	#	72
92)	1,2,4-Trichlorobenzene	15.23	180	63750	9.27569	ppb		96
93)	Hexachlorobutadiene	15.53	225	53325	9.97351	ppb		97
94)	Naphthalene	15.56	128	53733	8.90145	ppb		100
95)	1,2,3-Trichlorobenzene	15.92	180	40410	8.39764	ppb		100

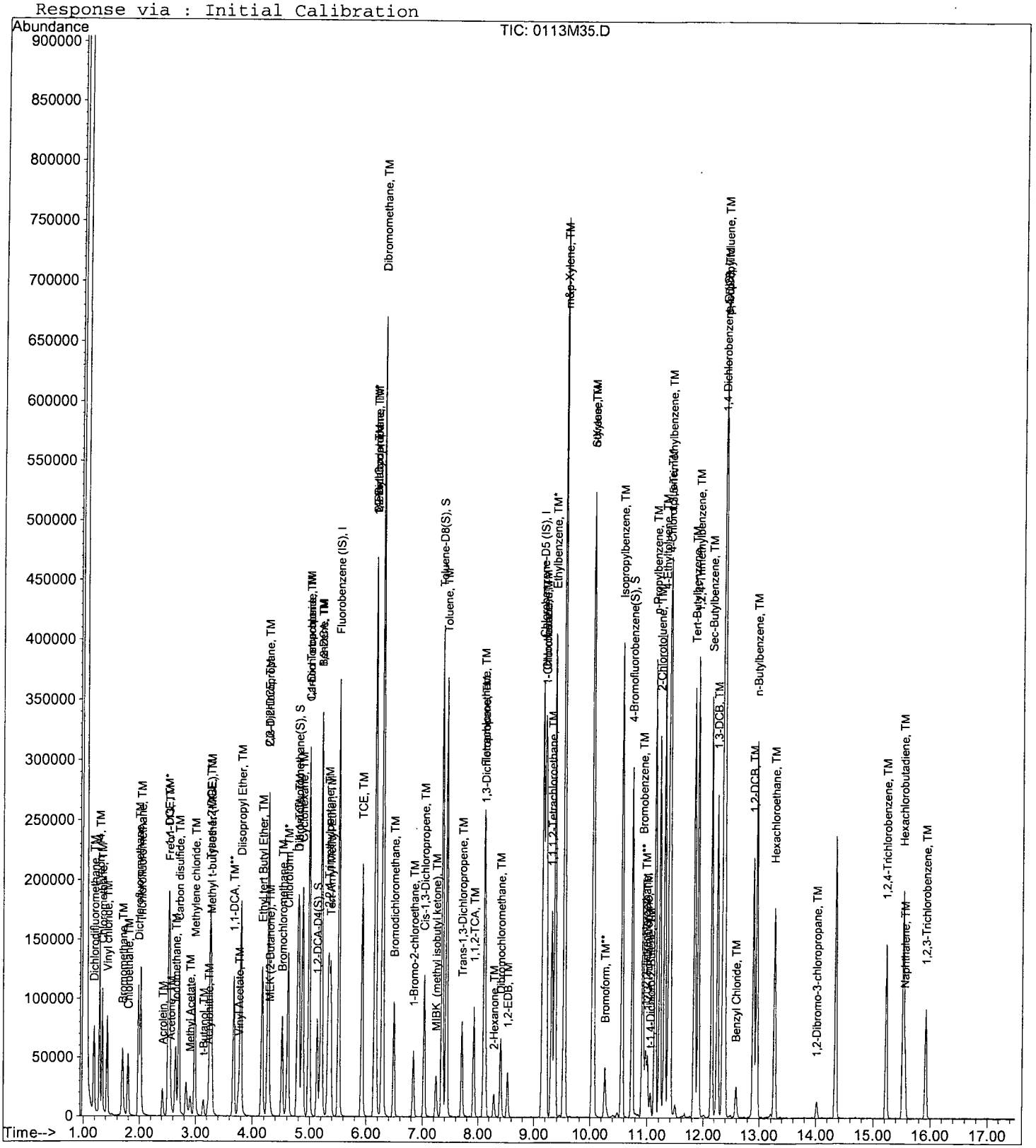
(#) = qualifier out of range (m) = manual integration

Data File : M:\MAX\DATA\M170111\0113M35.D
Acq On : 14 Jan 17 1:17
Sample : Ending CCV 8260 10ug/L 1/13/17
Misc : IS&S 10/20/16

Vial: 26
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 7:42 2017 Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 1/14/17
Instrument: Max
Initial Cal. Date: 1/11/17
Data File: 0113M40.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TM	Dichlorodifluoromethane	0.2988	0.2882	3.5	TM	
3	TM	Freon 114	0.3810	0.3776	0.90	TM	
4	TM**	Chloromethane	0.4412	0.4281	3.0	TM**	
5	TM*	Vinyl chloride	0.5818	0.5935	2.0	TM*	
6	TM	Bromomethane	0.3095	0.3016	2.6	TM	
7	TM	Chloroethane	0.3253	0.3349	3.0	TM	
8	TM	Dichlorofluoromethane	0.8094	0.8306	2.6	TM	
9	TM	Trichlorofluoromethane	0.6876	0.7197	4.7	TM	
10	TM	Acrolein	0.0119	0.0105	12	TM	
11	TML	Acetone	0.0846	0.0557	34	TML	13
12	TM	Freon-113	0.3844	0.3957	2.9	TM	
13	TM*	1,1-DCE	0.6498	0.6530	0.49	TM*	
14	TM	t-Butanol	0.0109	0.0086	21	TM	nt
15	TM	Methyl Acetate	0.1572	0.1412	10	TM	
16	TMQ	Iodomethane	0.3146	0.5104	62	TMQ	11
17	TM	Acrylonitrile	0.0666	0.0614	7.9	TM	
18	TM	Methylene chloride	0.4001	0.3852	3.7	TM	
19	TM	Carbon disulfide	1.309	1.247	4.7	TM	
20	TM	Methyl t-butyl ether (MtBE)	0.6922	0.6361	8.1	TM	
21	TM	Trans-1,2-DCE	0.4719	0.4670	1.0	TM	
22	TM	Diisopropyl Ether	1.253	1.226	2.1	TM	
23	TM**	1,1-DCA	0.8023	0.8107	1.0	TM**	
24	TM	Vinyl Acetate	0.2624	0.1644	37	TM	nt
25	TM	Ethyl tert Butyl Ether	0.8479	0.8181	3.5	TM	
26	TM	MEK (2-Butanone)	0.0872	0.0719	18	TM	
27	TM	Cis-1,2-DCE	0.5128	0.4948	3.5	TM	
28	TM	2,2-Dichloropropane	0.5849	0.5187	11	TM	
29	TM*	Chloroform	0.7738	0.7839	1.3	TM*	
30	TM	Bromochloromethane	0.1945	0.1835	5.6	TM	
31	S	Dibromofluoromethane(S)	0.2197	0.2133	2.9	S	
32	TM	1,1,1-TCA	0.7301	0.7343	0.57	TM	
33	TM	Cyclohexane	0.3972	0.4126	3.9	TM	
34	TM	1,1-Dichloropropene	0.6558	0.6584	0.40	TM	
35	TM	2,2,4-Trimethylpentane	1.163	1.024	12	TM	
36	S	1,2-DCA-D4(S)	0.1809	0.1630	9.9	S	
37	TM	Carbon Tetrachloride	0.6164	0.6121	0.69	TM	
38	TM	Tert Amyl Methyl Ether	0.7135	0.6770	5.1	TM	
39	TM	1,2-DCA	0.4303	0.4210	2.2	TM	
40	TM	Benzene	1.905	1.913	0.42	TM	
		Average			8.0		

VOLATILE ORGANIC ANALYSIS BY EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 1/14/17
Instrument: Max
Cal. Date: 1/11/17
Data File: 0113M40.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	TCE	0.5260	0.5370	2.1	TM	
42	TM	2-Pentanone	0.1401	0.1259	10	TM	
43	TM*	1,2-Dichloropropane	0.4234	0.4217	0.41	TM*	
44	TM	Bromodichloromethane	0.4991	0.4890	2.0	TM	
45	TM	Methyl Cyclohexane	0.6198	0.6372	2.8	TM	
46	TM	Dibromomethane	0.1616	0.1582	2.1	TM	
47	TM	MIBK (methyl isobutyl ketone)	0.2128	0.1956	8.1	TM	
48	TM	1-Bromo-2-chloroethane	0.4115	0.3451	16	TM	
49	TM	Cis-1,3-Dichloropropene	0.5588	0.5206	6.8	TM	
50	TM*	Toluene	2.158	2.185	1.2	TM*	
51	TM	Trans-1,3-Dichloropropene	0.3895	0.3447	12	TM	
52	TM	1,1,2-TCA	0.2024	0.1967	2.9	TM	
53	TM	2-Hexanone	0.0601	0.0571	5.0	TM	
54	I	Chlorobenzene-D5 (IS)	ISTD			I	
55	S	Toluene-D8(S)	1.258	1.235	1.8	S	
56	TM	1,2-EDB	0.3095	0.3057	1.2	TM	
57	TM	Tetrachloroethene	0.7227	0.7417	2.6	TM	
58	TM	1-Chlorohexane	0.7906	0.8608	8.9	TM	
59	TM	1,1,1,2-Tetrachloroethane	0.6199	0.6080	1.9	TM	
60	TM	m&p-Xylene	1.323	1.389	5.0	TM	
61	TM	o-Xylene	1.228	1.325	7.9	TM	
62	TM	Styrene	1.903	2.017	6.0	TM	
63	S	4-Bromofluorobenzene(S)	0.4512	0.4415	2.2	S	
64	TM	1,3-Dichloropropane	0.5992	0.5886	1.8	TM	
65	TM	Dibromochloromethane	0.4569	0.4386	4.0	TM	
66	TM**	Chlorobenzene	1.863	1.904	2.2	TM**	
67	TM*	Ethylbenzene	3.318	3.549	7.0	TM*	
68	TM**	Bromoform	0.2808	0.2530	9.9	TM**	
69	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
70	TM	Isopropylbenzene	5.871	6.562	12	TM	
71	TM**	1,1,2,2-Tetrachloroethane	0.6027	0.5638	6.5	TM**	
72	TM	1,2,3-Trichloropropane	0.2065	0.1905	7.8	TM	
73	TM	t-1,4-Dichloro-2-Butene	0.1238	0.1023	17	TM	
74	TM	Bromobenzene	1.446	1.544	6.8	TM	
75	TM	n-Propylbenzene	6.499	7.322	13	TM	
76	TM	4-Ethyltoluene	5.702	6.344	11	TM	
77	TM	2-Chlorotoluene	3.943	4.346	10	TM	
78	TM	1,3,5-Trimethylbenzene	4.768	5.261	10	TM	
79	TM	4-Chlorotoluene	4.478	4.838	8.0	TM	
80	TM	Tert-Butylbenzene	4.193	4.688	12	TM	
		Average			6.5		

VOLATILE ORGANIC ANALYSIS BY EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 1/14/17
Instrument: Max
Cal. Date: 1/11/17
Data File: 0113M40.D

		Compound	MEAN	CCRF	%D		%Drift	
81	TM	1,2,4-Trimethylbenzene	4.701	5.268	12	TM		
82	TM	Sec-Butylbenzene	5.641	6.123	8.5	TM		
83	TM	p-Isopropyltoluene	5.093	5.564	9.3	TM		
84	TM	Benzyl Chloride	0.5303	0.3950	26	TM		nt
85	TM	1,3-DCB	2.751	2.969	7.9	TM		
86	TM	1,4-DCB	2.668	2.801	5.0	TM		
87	TM	n-Butylbenzene	4.051	4.274	5.5	TM		
88	TM	1,2-DCB	2.284	2.396	4.9	TM		
89	TM	Hexachloroethane	0.6804	0.6845	0.61	TM		
90	TM	1,2-Dibromo-3-chloropropane	0.0826	0.0659	20	TM		
91	TML	1,2,4-Trichlorobenzene	1.178	1.229	4.3	TML	9.3	
92	TM	Hexachlorobutadiene	1.056	1.069	1.2	TM		
93	TMQ	Naphthalene	0.9060	0.9415	3.9	TMQ	20	
94	TML	1,2,3-Trichlorobenzene	0.7754	0.7729	0.32	TML	18	
95								
96								
97								
98								
99								
100								
101								
102								
103								
104								
105								
106								
107								
108								
109								
110								
111								
112								
113								
114								
115								
116								
117								
118								
119								
120								
		Average			7.8			

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0113M40.D
Acq On : 14 Jan 17 3:38
Sample : 170113B CCV/LCS-1WM 10ug/L
Misc : IS&S 10/20/16

Vial: 31
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 7:42 2017

Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	343762	25.00000 ppb	0.00
55) Chlorobenzene-D5 (IS)	9.15	117	240587	25.00000 ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	125565	25.00000 ppb	0.00
System Monitoring Compounds					
31) Dibromofluoromethane(S)	4.78	111	73337	24.27772 ppb	0.00
Spiked Amount 25.000				Recovery = 97.112%	
36) 1,2-DCA-D4(S)	5.13	65	56050	22.53417 ppb	0.00
Spiked Amount 25.000				Recovery = 90.136%	
56) Toluene-D8(S)	7.35	98	297112	24.53781 ppb	0.00
Spiked Amount 25.000				Recovery = 98.152%	
64) 4-Bromofluorobenzene(S)	10.74	95	106208	24.45941 ppb	0.00
Spiked Amount 25.000				Recovery = 97.836%	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.19	85	39632	9.64763 ppb	95
3) Freon 114	1.29	85	51923	9.90993 ppb	99
4) Chloromethane	1.34	50	58872	9.70476 ppb	100
5) Vinyl chloride	1.43	62	81611	10.20123 ppb	99
6) Bromomethane	1.70	94	41465	9.74304 ppb	97
7) Chloroethane	1.79	64	46054	10.29614 ppb	99
8) Dichlorofluoromethane	1.98	67	114213	10.26157 ppb	95
9) Trichlorofluoromethane	2.03	101	98968	10.46793 ppb	98
10) Acrolein	2.41	56	18104	110.21061 ppb	91
11) Acetone	2.57	43	7662	8.72504 ppb	95
12) Freon-113	2.53	101	54416	10.29388 ppb	94
13) 1,1-DCE	2.51	61	89793	10.04931 ppb	98
14) t-Butanol	3.13	59	14722	98.15582 ppb	91
15) Methyl Acetate	2.90	43	19422	8.98733 ppb	98
16) Iodomethane	2.64	142	70188	11.07120 ppb	98
17) Acrylonitrile	3.23	53	8440	9.20987 ppb	94
18) Methylene chloride	2.98	84	52972	9.62889 ppb	99
19) Carbon disulfide	2.70	76	171521	9.53074 ppb	99
20) Methyl t-butyl ether (MtBE	3.28	73	87462	9.18919 ppb	98
21) Trans-1,2-DCE	3.25	96	64221	9.89752 ppb	98
22) Diisopropyl Ether	3.80	45	168629	9.78526 ppb	99
23) 1,1-DCA	3.67	63	111473	10.10469 ppb	100
24) Vinyl Acetate	3.76	43	22604	6.26396 ppb	98
25) Ethyl tert Butyl Ether	4.17	59	112489	9.64812 ppb	100
26) MEK (2-Butanone)	4.30	43	9888	8.24194 ppb	100
27) Cis-1,2-DCE	4.27	96	68033	9.64781 ppb	94
28) 2,2-Dichloropropane	4.27	77	71326	8.86870 ppb	97
29) Chloroform	4.61	83	107784	10.12944 ppb	99
30) Bromochloromethane	4.51	128	25234	9.43639 ppb	98
32) 1,1,1-TCA	4.80	97	100963	10.05710 ppb	97
33) Cyclohexane	4.87	41	56737	10.38840 ppb	98
34) 1,1-Dichloropropene	4.98	75	90540	10.03984 ppb	98
35) 2,2,4-Trimethylpentane	5.33	57	140831	8.80320 ppb	97
37) Carbon Tetrachloride	4.98	117	84171	9.93108 ppb	96
38) Tert Amyl Methyl Ether	5.37	73	93094	9.48868 ppb	98
39) 1,2-DCA	5.21	62	57892	9.78460 ppb	97
40) Benzene	5.20	78	263039	10.04185 ppb	98
41) TCE	5.92	95	73843	10.20978 ppb	98
42) 2-Pentanone	6.15	43	216464	112.34722 ppb	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0113M40.D
Acq On : 14 Jan 17 3:38
Sample : 170113B CCV/LCS-1WM 10ug/L
Misc : IS&S 10/20/16

Vial: 31
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 7:42 2017

Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43) 1,2-Dichloropropane	6.16	63	57984	9.95942 ppb		98
44) Bromodichloromethane	6.49	83	67235	9.79614 ppb		99
45) Methyl Cyclohexane	6.15	83	87612	10.28041 ppb		97
46) Dibromomethane	6.29	93	21748	9.78987 ppb		96
47) MIBK (methyl isobutyl ket	7.24	43	26895	9.18934 ppb	#	91
48) 1-Bromo-2-chloroethane	6.84	63	47447	8.38572 ppb		99
50) Cis-1,3-Dichloropropene	7.02	75	71582	9.31596 ppb		97
51) Toluene	7.43	91	300460	10.12346 ppb		98
52) Trans-1,3-Dichloropropene	7.71	75	47403	8.84989 ppb		99
53) 1,1,2-TCA	7.92	83	27042	9.71412 ppb		97
54) 2-Hexanone	8.28	58	7850	9.50011 ppb		95
57) 1,2-EDB	8.53	107	29421	9.87877 ppb		91
58) Tetrachloroethene	8.11	164	71373	10.26202 ppb		98
59) 1-Chlorohexane	9.21	91	82838	10.88754 ppb		96
60) 1,1,1,2-Tetrachloroethane	9.31	131	58511	9.80839 ppb		94
61) m&p-Xylene	9.52	106	267375	20.99601 ppb		95
62) o-Xylene	10.04	106	127502	10.78781 ppb		95
63) Styrene	10.06	104	194114	10.59834 ppb		99
65) 1,3-Dichloropropane	8.13	76	56644	9.82377 ppb		95
66) Dibromochloromethane	8.40	129	42207	9.59826 ppb		100
67) Chlorobenzene	9.19	112	183248	10.22281 ppb		98
68) Ethylbenzene	9.36	91	341510	10.69517 ppb		99
69) Bromoform	10.27	173	24352	9.01261 ppb		96
71) Isopropylbenzene	10.56	105	329570	11.17613 ppb		99
72) 1,1,2,2-Tetrachloroethane	10.97	83	28317	9.35419 ppb		91
73) 1,2,3-Trichloropropane	11.00	110	9566	9.22486 ppb		95
74) t-1,4-Dichloro-2-Butene	11.06	53	5138	8.26235 ppb		97
75) Bromobenzene	10.92	156	77569	10.67936 ppb		91
76) n-Propylbenzene	11.13	91	367778	11.26791 ppb		99
77) 4-Ethyltoluene	11.30	105	318637	11.12697 ppb		98
78) 2-Chlorotoluene	11.22	91	218269	11.02123 ppb		99
79) 1,3,5-Trimethylbenzene	11.40	105	264242	11.03385 ppb		99
80) 4-Chlorotoluene	11.37	91	242976	10.80206 ppb		97
81) Tert-Butylbenzene	11.84	119	235465	11.17973 ppb		100
82) 1,2,4-Trimethylbenzene	11.91	105	264589	11.20497 ppb		99
83) Sec-Butylbenzene	12.15	105	307527	10.85488 ppb		99
84) p-Isopropyltoluene	12.37	119	279449	10.92510 ppb		99
85) Benzyl Chloride	12.59	91	19839	7.44853 ppb		95
86) 1,3-DCB	12.26	146	149108	10.79061 ppb		97
87) 1,4-DCB	12.38	146	140671	10.49821 ppb		98
88) n-Butylbenzene	12.95	91	214678	10.55183 ppb		97
89) 1,2-DCB	12.90	146	120335	10.49157 ppb		97
90) Hexachloroethane	13.27	117	34381	10.06100 ppb		95
91) 1,2-Dibromo-3-chloropropan	14.01	75	3312	7.98725 ppb	#	56
92) 1,2,4-Trichlorobenzene	15.23	180	61711	9.06717 ppb		91
93) Hexachlorobutadiene	15.53	225	53692	10.12292 ppb		98
94) Naphthalene	15.56	128	47290	8.04797 ppb		98
95) 1,2,3-Trichlorobenzene	15.92	180	38820	8.16208 ppb		99

(#) = qualifier out of range (m) = manual integration
0113M40.D MALLW.M Mon Jan 16 07:46:35 2017

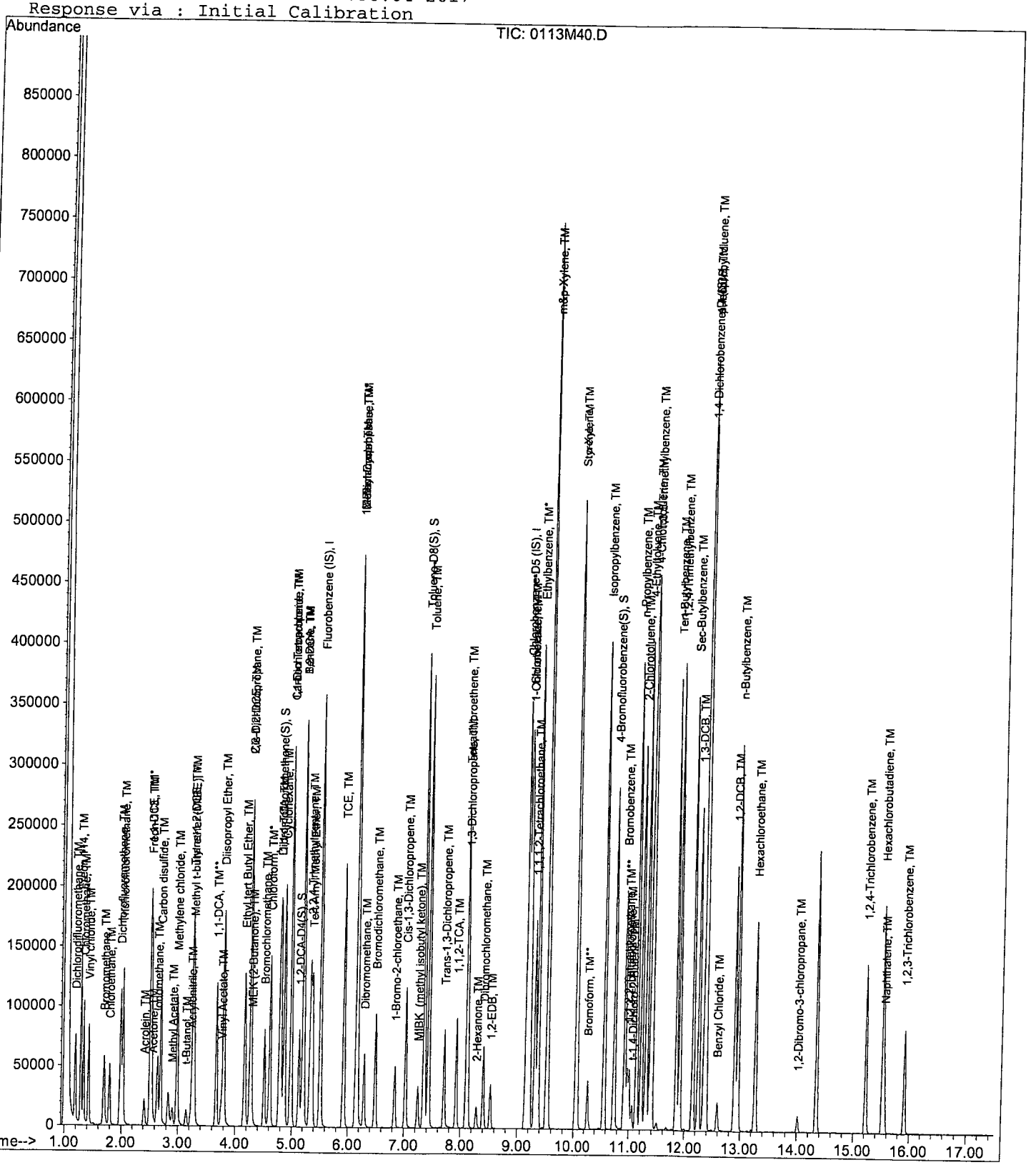
Data File : M:\MAX\DATA\M170111\0113M40.D
Acq On : 14 Jan 17 3:38
Sample : 170113B CCV/LCS-1WM 10ug/L
Misc : IS&S 10/20/16

Vial: 31
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 7:42 2017

Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 1/14/17
Instrument: Max
Initial Cal. Date: 1/11/17
Data File: 0113M55.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TM	Dichlorodifluoromethane	0.2988	0.2831	5.2	TM	
3	TM	Freon 114	0.3810	0.3640	4.5	TM	
4	TM**	Chloromethane	0.4412	0.4198	4.8	TM**	
5	TM*	Vinyl chloride	0.5818	0.5724	1.6	TM*	
6	TM	Bromomethane	0.3095	0.3001	3.1	TM	
7	TM	Chloroethane	0.3253	0.3258	0.16	TM	
8	TM	Dichlorofluoromethane	0.8094	0.8136	0.51	TM	
9	TM	Trichlorofluoromethane	0.6876	0.6991	1.7	TM	
10	TM	Acrolein	0.0119	0.0110	8.0	TM	
11	TML	Acetone	0.0846	0.0561	34	TML	12
12	TM	Freon-113	0.3844	0.3854	0.25	TM	
13	TM*	1,1-DCE	0.6498	0.6353	2.2	TM*	
14	TM	t-Butanol	0.0109	0.0085	22	TM	
15	TM	Methyl Acetate	0.1572	0.1403	11	TM	
16	TMQ	Iodomethane	0.3146	0.4282	36	TMQ	4.7
17	TM	Acrylonitrile	0.0666	0.0664	0.44	TM	
18	TM	Methylene chloride	0.4001	0.3985	0.39	TM	
19	TM	Carbon disulfide	1.309	1.232	5.9	TM	
20	TM	Methyl t-butyl ether (MtBE)	0.6922	0.6501	6.1	TM	
21	TM	Trans-1,2-DCE	0.4719	0.4499	4.7	TM	
22	TM	Diisopropyl Ether	1.253	1.240	1.1	TM	
23	TM**	1,1-DCA	0.8023	0.8050	0.34	TM**	
24	TM	Ethyl tert Butyl Ether	0.8479	0.8063	4.9	TM	
25	TM	MEK (2-Butanone)	0.0872	0.0876	0.43	TM	
26	TM	Cis-1,2-DCE	0.5128	0.4816	6.1	TM	
27	TM	2,2-Dichloropropane	0.5849	0.4320	26	TM	
28	TM*	Chloroform	0.7738	0.7704	0.45	TM*	
29	TM	Bromochloromethane	0.1945	0.1831	5.8	TM	
30	S	Dibromofluoromethane(S)	0.2197	0.2117	3.6	S	
31	TM	1,1,1-TCA	0.7301	0.7141	2.2	TM	
32	TM	Cyclohexane	0.3972	0.4162	4.8	TM	
33	TM	1,1-Dichloropropene	0.6558	0.6616	0.87	TM	
34	TM	2,2,4-Trimethylpentane	1.163	0.9861	15	TM	
35	S	1,2-DCA-D4(S)	0.1809	0.1697	6.2	S	
36	TM	Carbon Tetrachloride	0.6164	0.6170	0.10	TM	
37	TM	Tert Amyl Methyl Ether	0.7135	0.6825	4.3	TM	
38	TM	1,2-DCA	0.4303	0.4205	2.3	TM	
39	TM	Benzene	1.905	1.905	0.01	TM	
40	TM	TCE	0.5260	0.5431	3.3	TM	
		Average			6.2		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 1/14/17
Instrument: Max
Cal. Date: 1/11/17
Data File: 0113M55.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	2-Pentanone	0.1401	0.1268	9.5	TM	
42	TM*	1,2-Dichloropropane	0.4234	0.4312	1.8	TM*	
43	TM	Bromodichloromethane	0.4991	0.4917	1.5	TM	
44	TM	Methyl Cyclohexane	0.6198	0.6392	3.1	TM	
45	TM	Dibromomethane	0.1616	0.1555	3.7	TM	
46	TM	MIBK (methyl isobutyl ketone)	0.2128	0.1981	6.9	TM	
47	TM	1-Bromo-2-chloroethane	0.4115	0.3579	13	TM	
48	TM	Cis-1,3-Dichloropropene	0.5588	0.5235	6.3	TM	
49	TM*	Toluene	2.158	2.175	0.76	TM*	
50	TM	Trans-1,3-Dichloropropene	0.3895	0.3495	10	TM	
51	TM	1,1,2-TCA	0.2024	0.1918	5.3	TM	
52	TM	2-Hexanone	0.0601	0.0558	7.2	TM	
53	I	Chlorobenzene-D5 (IS)	ISTD			I	
54	S	Toluene-D8(S)	1.258	1.230	2.2	S	
55	TM	1,2-EDB	0.3095	0.3151	1.8	TM	
56	TM	Tetrachloroethene	0.7227	0.7408	2.5	TM	
57	TM	1-Chlorohexane	0.7906	0.8512	7.7	TM	
58	TM	1,1,1,2-Tetrachloroethane	0.6199	0.6276	1.2	TM	
59	TM	m&p-Xylene	1.323	1.378	4.1	TM	
60	TM	o-Xylene	1.228	1.314	7.0	TM	
61	TM	Styrene	1.903	2.006	5.4	TM	
62	S	4-Bromofluorobenzene(S)	0.4512	0.4481	0.69	S	
63	TM	1,3-Dichloropropane	0.5992	0.6016	0.41	TM	
64	TM	Dibromochloromethane	0.4569	0.4654	1.8	TM	
65	TM**	Chlorobenzene	1.863	1.910	2.5	TM**	
66	TM*	Ethylbenzene	3.318	3.552	7.1	TM*	
67	TM**	Bromoform	0.2808	0.2705	3.7	TM**	
68	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
69	TM	Isopropylbenzene	5.871	6.399	9.0	TM	
70	TM**	1,1,2,2-Tetrachloroethane	0.6027	0.5278	12	TM**	
71	TM	1,2,3-Trichloropropane	0.2065	0.1968	4.7	TM	
72	TM	t-1,4-Dichloro-2-Butene	0.1238	0.1078	13	TM	
73	TM	Bromobenzene	1.446	1.485	2.7	TM	
74	TM	n-Propylbenzene	6.499	7.134	9.8	TM	
75	TM	4-Ethyltoluene	5.702	6.254	9.7	TM	
76	TM	2-Chlorotoluene	3.943	4.176	5.9	TM	
77	TM	1,3,5-Trimethylbenzene	4.768	5.248	10	TM	
78	TM	4-Chlorotoluene	4.478	4.721	5.4	TM	
79	TM	Tert-Butylbenzene	4.193	4.586	9.4	TM	
80	TM	1,2,4-Trimethylbenzene	4.701	5.135	9.2	TM	
		Average			5.7		

VOLATILE ORGANIC ANALYSIS BY EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 1/14/17
Instrument: Max
Cal. Date: 1/11/17
Data File: 0113M55.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	Sec-Butylbenzene	5.641	6.102	8.2	TM	
82	TM	p-Isopropyltoluene	5.093	5.272	3.5	TM	
83	TM	Benzyl Chloride	0.5303	0.3283	38	TM	
84	TM	1,3-DCB	2.751	2.882	4.7	TM	
85	TM	1,4-DCB	2.668	2.779	4.2	TM	
86	TM	n-Butylbenzene	4.051	4.131	2.0	TM	
87	TM	1,2-DCB	2.284	2.385	4.4	TM	
88	TM	Hexachloroethane	0.6804	0.7147	5.1	TM	
89	TM	1,2-Dibromo-3-chloropropane	0.0826	0.0715	13	TM	
90	TML	1,2,4-Trichlorobenzene	1.178	1.180	0.20	TML	13
91	TM	Hexachlorobutadiene	1.056	1.032	2.3	TM	
92	TMQ	Naphthalene	0.9060	0.9465	4.5	TMQ	19
93	TML	1,2,3-Trichlorobenzene	0.7754	0.7630	1.6	TML	19
94							
95							
96							
97							
98							
99							
100							
101							
102							
103							
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106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			7.1		

Data File : M:\MAX\DATA\M170111\0113M55.D
Acq On : 14 Jan 17 10:41
Sample : Ending CCV 8260 10ug/L 1/13/17
Misc : IS&S 10/20/16

Vial: 46
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 7:42 2017

Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	330796	25.00000 ppb	0.00
55) Chlorobenzene-D5 (IS)	9.15	117	232829	25.00000 ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	123559	25.00000 ppb	0.00
System Monitoring Compounds					
31) Dibromofluoromethane(S)	4.78	111	70031	24.09200 ppb	0.00
Spiked Amount 25.000			Recovery =	96.368%	
36) 1,2-DCA-D4(S)	5.13	65	56145	23.45712 ppb	0.00
Spiked Amount 25.000			Recovery =	93.828%	
56) Toluene-D8(S)	7.35	98	286489	24.44887 ppb	0.00
Spiked Amount 25.000			Recovery =	97.796%	
64) 4-Bromofluorobenzene(S)	10.74	95	104334	24.82846 ppb	0.00
Spiked Amount 25.000			Recovery =	99.312%	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.19	85	37456	9.47532 ppb	98
3) Freon 114	1.29	85	48162	9.55241 ppb	96
4) Chloromethane	1.34	50	55552	9.51641 ppb	99
5) Vinyl chloride	1.43	62	75735	9.83780 ppb	99
6) Bromomethane	1.70	94	39703	9.69468 ppb	97
7) Chloroethane	1.79	64	43109	10.01550 ppb	97
8) Dichlorofluoromethane	1.98	67	107655	10.05148 ppb	99
9) Trichlorofluoromethane	2.03	101	92510	10.16840 ppb	98
10) Acrolein	2.41	56	18178	114.99861 ppb	98
11) Acetone	2.57	43	7426	8.79636 ppb	91
12) Freon-113	2.53	101	50996	10.02504 ppb	89
13) 1,1-DCE	2.51	61	84056	9.77597 ppb	99
14) t-Butanol	3.13	59	14115	97.79749 ppb	94
15) Methyl Acetate	2.90	43	18563	8.92653 ppb	96
16) Iodomethane	2.64	142	56662	9.53416 ppb	97
17) Acrylonitrile	3.22	53	8780	9.95642 ppb	87
18) Methylene chloride	2.98	84	52732	9.96098 ppb	98
19) Carbon disulfide	2.70	76	162984	9.41135 ppb	99
20) Methyl t-butyl ether (MtBE	3.28	73	86016	9.39150 ppb	95
21) Trans-1,2-DCE	3.25	96	59529	9.53401 ppb	97
22) Diisopropyl Ether	3.79	45	164080	9.89449 ppb	100
23) 1,1-DCA	3.67	63	106516	10.03380 ppb	98
25) Ethyl tert Butyl Ether	4.17	59	106688	9.50924 ppb	100
26) MEK (2-Butanone)	4.31	43	11594	10.04274 ppb	90
27) Cis-1,2-DCE	4.27	96	63731	9.39198 ppb	96
28) 2,2-Dichloropropane	4.27	77	57156	7.38535 ppb	99
29) Chloroform	4.61	83	101937	9.95545 ppb	98
30) Bromochloromethane	4.52	128	24229	9.41571 ppb	96
32) 1,1,1-TCA	4.80	97	94493	9.78155 ppb	99
33) Cyclohexane	4.87	41	55068	10.47802 ppb	93
34) 1,1-Dichloropropene	4.98	75	87538	10.08743 ppb	98
35) 2,2,4-Trimethylpentane	5.33	57	130480	8.47586 ppb	97
37) Carbon Tetrachloride	4.98	117	81639	10.00989 ppb	98
38) Tert Amyl Methyl Ether	5.37	73	90308	9.56551 ppb	98
39) 1,2-DCA	5.21	62	55637	9.77205 ppb	95
40) Benzene	5.20	78	252088	10.00100 ppb	99
41) TCE	5.92	95	71868	10.32619 ppb	100
42) 2-Pentanone	6.15	43	209804	113.15872 ppb	98
43) 1,2-Dichloropropane	6.16	63	57055	10.18397 ppb	98

(#) = qualifier out of range (m) = manual integration
0113M55.D MALLW.M Mon Jan 16 07:46:46 2017

Data File : M:\MAX\DATA\M170111\0113M55.D
Acq On : 14 Jan 17 10:41
Sample : Ending CCV 8260 10ug/L 1/13/17
Misc : IS&S 10/20/16

Vial: 46
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 7:42 2017

Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
44) Bromodichloromethane	6.49	83	65058	9.85049 ppb		96
45) Methyl Cyclohexane	6.15	83	84579	10.31352 ppb		97
46) Dibromomethane	6.29	93	20576	9.62534 ppb		94
47) MIBK (methyl isobutyl ket	7.24	43	26214	9.30772 ppb		99
48) 1-Bromo-2-chloroethane	6.84	63	47355	8.69751 ppb		95
50) Cis-1,3-Dichloropropene	7.03	75	69270	9.36842 ppb		99
51) Toluene	7.43	91	287765	10.07576 ppb		98
52) Trans-1,3-Dichloropropene	7.71	75	46244	8.97192 ppb		99
53) 1,1,2-TCA	7.92	83	25380	9.47445 ppb		96
54) 2-Hexanone	8.28	58	7379	9.28013 ppb		83
57) 1,2-EDB	8.53	107	29346	10.18191 ppb		92
58) Tetrachloroethene	8.10	164	68992	10.25021 ppb		99
59) 1-Chlorohexane	9.21	91	79278	10.76683 ppb		99
60) 1,1,1,2-Tetrachloroethane	9.31	131	58449	10.12447 ppb		99
61) m&p-Xylene	9.52	106	256640	20.82454 ppb		100
62) o-Xylene	10.04	106	122352	10.69701 ppb		98
63) Styrene	10.06	104	186822	10.54009 ppb		97
65) 1,3-Dichloropropane	8.13	76	56028	10.04072 ppb		94
66) Dibromochloromethane	8.40	129	43341	10.18456 ppb		93
67) Chlorobenzene	9.19	112	177853	10.25244 ppb		99
68) Ethylbenzene	9.36	91	330820	10.70560 ppb		100
69) Bromoform	10.27	173	25192	9.63415 ppb		90
71) Isopropylbenzene	10.56	105	316283	10.89968 ppb		98
72) 1,1,2,2-Tetrachloroethane	10.97	83	26086	8.75711 ppb	#	98
73) 1,2,3-Trichloropropane	11.00	110	9729	9.53436 ppb		99
74) t-1,4-Dichloro-2-Butene	11.05	53	5329	8.70862 ppb		98
75) Bromobenzene	10.92	156	73377	10.26623 ppb		97
76) n-Propylbenzene	11.13	91	352587	10.97787 ppb		100
77) 4-Ethyltoluene	11.30	105	309113	10.96964 ppb		99
78) 2-Chlorotoluene	11.21	91	206378	10.58999 ppb		97
79) 1,3,5-Trimethylbenzene	11.39	105	259357	11.00570 ppb		98
80) 4-Chlorotoluene	11.37	91	233350	10.54254 ppb		99
81) Tert-Butylbenzene	11.84	119	226648	10.93582 ppb		97
82) 1,2,4-Trimethylbenzene	11.91	105	253789	10.92209 ppb		98
83) Sec-Butylbenzene	12.15	105	301563	10.81718 ppb		100
84) p-Isopropyltoluene	12.37	119	260548	10.35153 ppb		98
85) Benzyl Chloride	12.59	91	16226	6.19094 ppb		95
86) 1,3-DCB	12.26	146	142432	10.47482 ppb		94
87) 1,4-DCB	12.38	146	137356	10.41723 ppb		99
88) n-Butylbenzene	12.96	91	204163	10.19792 ppb		99
89) 1,2-DCB	12.90	146	117872	10.44367 ppb		94
90) Hexachloroethane	13.27	117	35325	10.50507 ppb		99
91) 1,2-Dibromo-3-chloropropan	14.01	75	3534	8.66099 ppb	#	75
92) 1,2,4-Trichlorobenzene	15.23	180	58334	8.73608 ppb		93
93) Hexachlorobutadiene	15.52	225	51004	9.77226 ppb		99
94) Naphthalene	15.56	128	46781	8.08371 ppb	#	92
95) 1,2,3-Trichlorobenzene	15.92	180	37711	8.06976 ppb		98

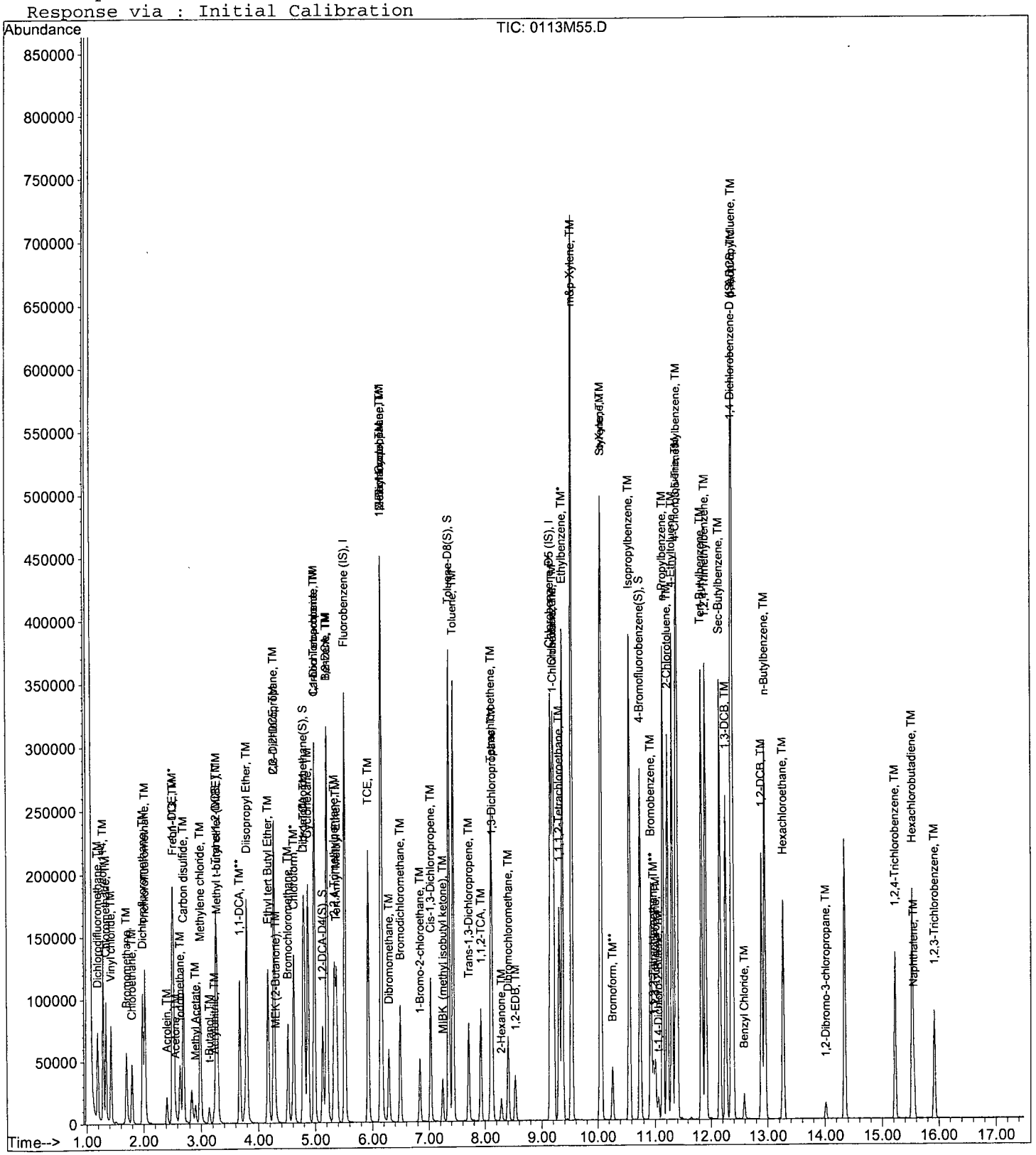
(#) = qualifier out of range (m) = manual integration
0113M55.D MALLW.M Mon Jan 16 07:46:47 2017

Data File : M:\MAX\DATA\M170111\0113M55.D
Acq On : 14 Jan 17 10:41
Sample : Ending CCV 8260 10ug/L 1/13/17
Misc : IS&S 10/20/16

Vial: 46
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 7:42 2017 Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration



618

EPA METHOD 8260B
Volatile Organic Compounds
Raw Data

APPL, INC.

Method Blank

EPA 8260B BTEX & 1,2-DCA WATER

Blank Name/QCG: **170113W-48873 - 215498**

Batch ID: #86BTO-170113BL

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	01/14/17	01/14/17
BLANK	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/14/17	01/14/17
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/14/17	01/14/17
BLANK	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/14/17	01/14/17
BLANK	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/14/17	01/14/17
BLANK	SURROGATE: 1,2-DICHLOROET	97.5	81-118			%	01/14/17	01/14/17
BLANK	SURROGATE: 4-BROMOFLUORO	97.7	85-114			%	01/14/17	01/14/17
BLANK	SURROGATE: DIBROMOFLUOR	100	80-119			%	01/14/17	01/14/17
BLANK	SURROGATE: TOLUENE-D8 (S)	98.9	89-112			%	01/14/17	01/14/17

Quant Method: LALLW.M
Run #: 0113L42
Instrument: Loki
Sequence: 170111
Initials: ARO

GC SC-Blank-REG MDLs-DOD
Printed: 01/16/17 4:08:25 PM

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L42.D
Acq On : 14 Jan 17 3:14
Sample : 170113B BLK-1WL
Misc : W IS&S 1/3/17, 01/11/17

Vial: 39
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 9:30 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	326912	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	8.70	117	302016	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	145664	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	4.48	111	182433	25.01	ppb	0.00
Spiked Amount 25.000			Recovery = 100.032%			
37) 1,2-DCA-D4(S)	4.93	65	192811	24.37	ppb	0.00
Spiked Amount 25.000			Recovery = 97.484%			
57) Toluene-D8(S)	7.22	98	597855	24.73	ppb	0.00
Spiked Amount 25.000			Recovery = 98.920%			
65) 4-Bromofluorobenzene(S)	9.89	95	204904	24.43	ppb	0.00
Spiked Amount 25.000			Recovery = 97.704%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

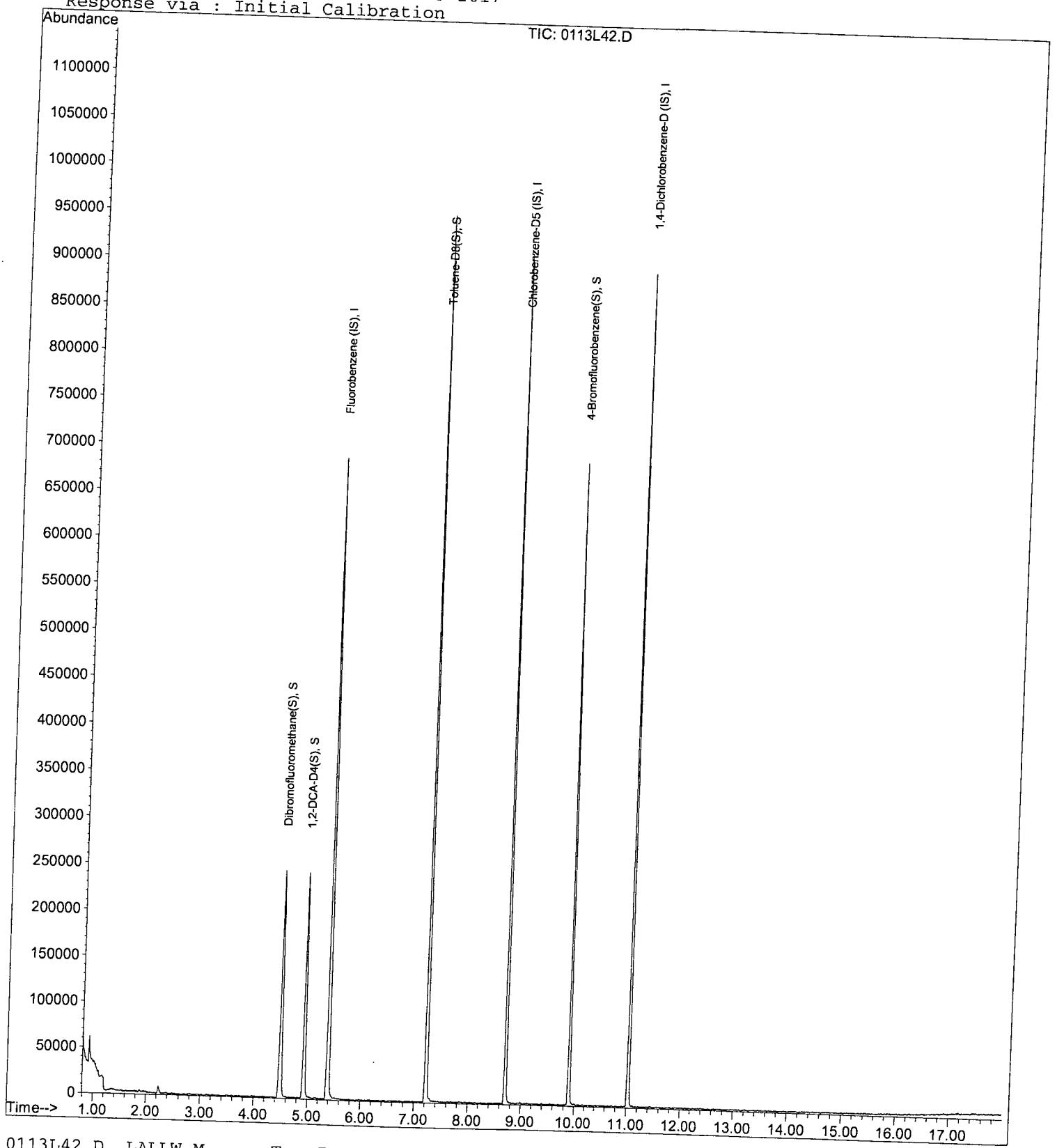
Data File : M:\LOKI\DATA\170111\0113L42.D
Acq On : 14 Jan 17 3:14
Sample : 170113B BLK-1WL
Misc : W IS&S 1/3/17, 01/11/17

Vial: 39
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 9:30 2017

Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



Method Blank

EPA 8260B BTEX & 1,2-DCA WATER

Blank Name/QCG: **170113W-48918 - 215475**

Batch ID: #86BTO-170113AM

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	01/13/17	01/13/17
BLANK	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/13/17	01/13/17
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/13/17	01/13/17
BLANK	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/13/17	01/13/17
BLANK	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/13/17	01/13/17
BLANK	SURROGATE: 1,2-DICHLOROET	93.3	81-118			%	01/13/17	01/13/17
BLANK	SURROGATE: 4-BROMOFLUORO	93.3	85-114			%	01/13/17	01/13/17
BLANK	SURROGATE: DIBROMOFLUOR	97.1	80-119			%	01/13/17	01/13/17
BLANK	SURROGATE: TOLUENE-D8 (S)	99.8	89-112			%	01/13/17	01/13/17

Quant Method: MALLW.M
Run #: 0113M20
Instrument: Max
Sequence: M170111
Initials: SV

GC SC-Blank-REG MDLs-DOD
Printed: 01/16/17 4:08:25 PM

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0113M20.D Vial: 11
Acq On : 13 Jan 17 18:14 Operator: PM,DG,SV,CMM
Sample : 170113A BLK-1WM Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 16 7:40 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	315554	25.00000 ppb	0.00
55) Chlorobenzene-D5 (IS)	9.15	117	219996	25.00000 ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	105148	25.00000 ppb	0.00
System Monitoring Compounds					
31) Dibromofluoromethane(S)	4.78	111	67279	24.26323 ppb	0.00
Spiked Amount 25.000			Recovery = 97.052%		
36) 1,2-DCA-D4(S)	5.13	65	53266	23.32922 ppb	0.00
Spiked Amount 25.000			Recovery = 93.316%		
56) Toluene-D8(S)	7.35	98	276288	24.95371 ppb	0.00
Spiked Amount 25.000			Recovery = 99.816%		
64) 4-Bromofluorobenzene(S)	10.74	95	92597	23.32078 ppb	0.00
Spiked Amount 25.000			Recovery = 93.284%		

Target Compounds Qvalue

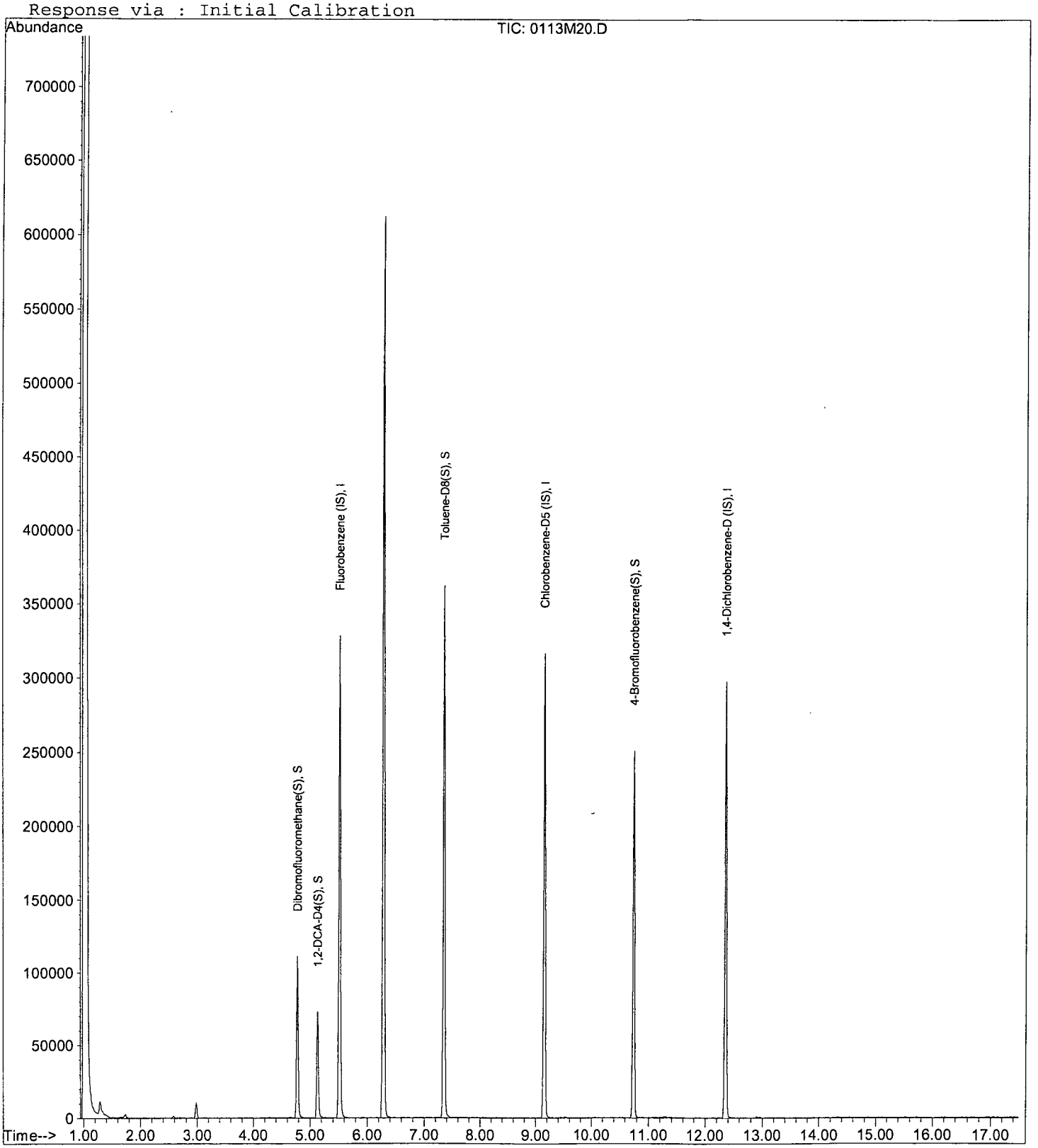
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\M170111\0113M20.D Vial: 11
Acq On : 13 Jan 17 18:14 Operator: PM,DG,SV,CMM
Sample : 170113A BLK-1WM Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 16 7:40 2017 Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration



Method Blank

EPA 8260B BTEX & 1,2-DCA WATER

Blank Name/QCG: **170113W-48920 - 215474**

Batch ID: #86BTO-170113BM1

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	01/14/17	01/14/17
BLANK	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	01/14/17	01/14/17
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/14/17	01/14/17
BLANK	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	01/14/17	01/14/17
BLANK	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.19	ug/L	01/14/17	01/14/17
BLANK	SURROGATE: 1,2-DICHLOROET	94.1	81-118			%	01/14/17	01/14/17
BLANK	SURROGATE: 4-BROMOFLUORO	95.4	85-114			%	01/14/17	01/14/17
BLANK	SURROGATE: DIBROMOFLUOR	99.4	80-119			%	01/14/17	01/14/17
BLANK	SURROGATE: TOLUENE-D8 (S)	100	89-112			%	01/14/17	01/14/17

Quant Method: MALLW.M
Run #: 0113M47
Instrument: Max
Sequence: M170111
Initials: SV

GC SC-Blank-REG MDLs-DOD
Printed: 01/16/17 4:08:25 PM

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0113M47.D
Acq On : 14 Jan 17 6:55
Sample : 170113B BLK-1WM
Misc : IS&S 10/20/16

Vial: 38
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 7:45 2017

Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	319345	25.00000 ppb	0.00
55) Chlorobenzene-D5 (IS)	9.15	117	225458	25.00000 ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	108226	25.00000 ppb	0.00
System Monitoring Compounds					
31) Dibromofluoromethane(S)	4.78	111	69733	24.84969 ppb	0.00
Spiked Amount 25.000			Recovery = 99.400%		
36) 1,2-DCA-D4(S)	5.13	65	54384	23.53612 ppb	0.00
Spiked Amount 25.000			Recovery = 94.144%		
56) Toluene-D8(S)	7.35	98	284804	25.09969 ppb	0.00
Spiked Amount 25.000			Recovery = 100.400%		
64) 4-Bromofluorobenzene(S)	10.74	95	97060	23.85259 ppb	0.00
Spiked Amount 25.000			Recovery = 95.412%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

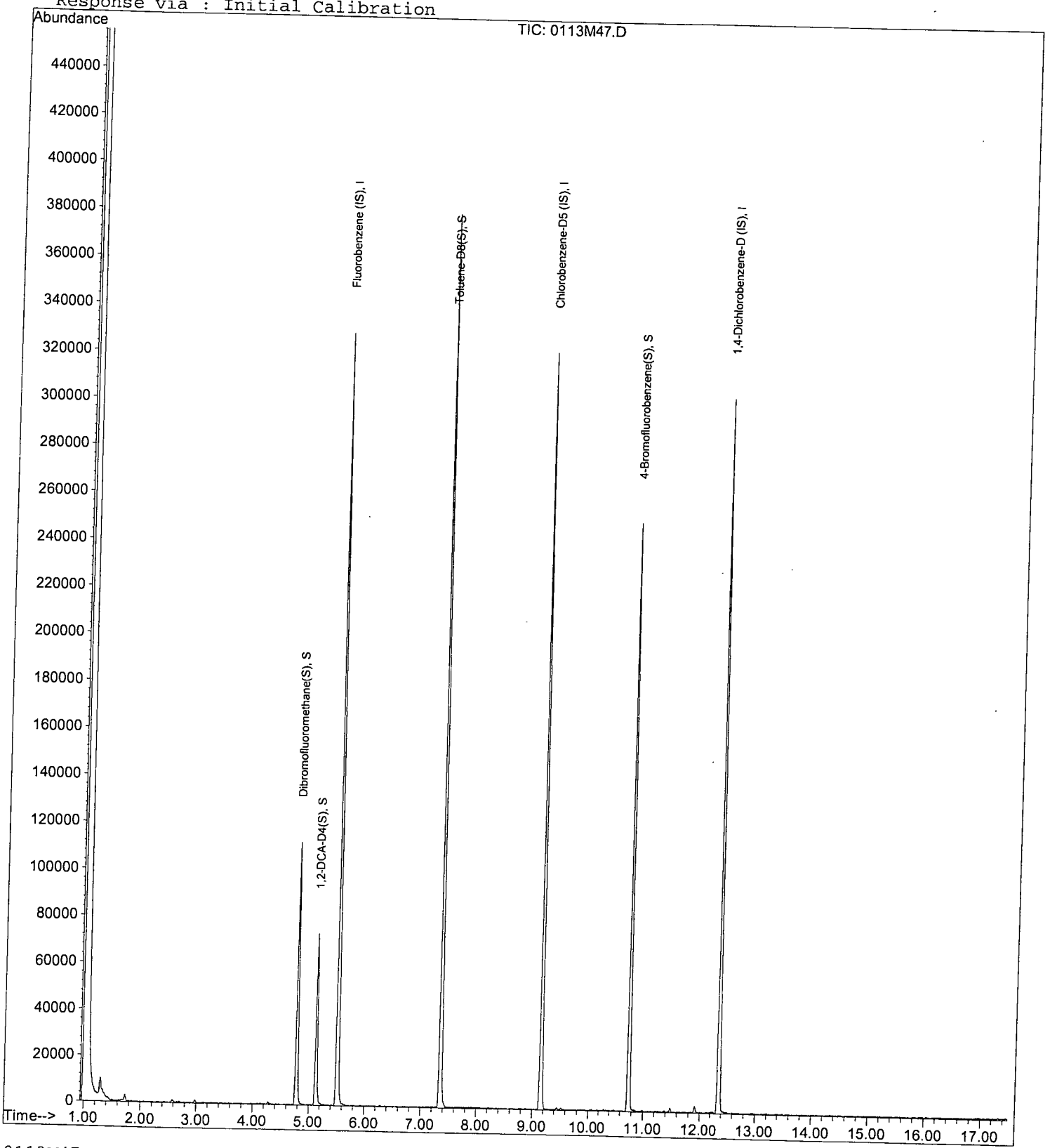
Data File : M:\MAX\DATA\M170111\0113M47.D
Acq On : 14 Jan 17 6:55
Sample : 170113B BLK-1WM
Misc : IS&S 10/20/16

Vial: 38
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 7:45 2017

Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration



0113M47.D MALLW.M Mon Jan 16 07:46:42 2017

Laboratory Control Spike Recovery
EPA 8260B BTEX & 1,2-DCA WATER

APPL ID: **170113W-48873 LCS - 215498**
Batch ID: #86BTO-170113BL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1,2-DICHLOROETHANE	10.00	9.40	94.0	73-128
BENZENE	10.00	9.67	96.7	79-120
ETHYLBENZENE	10.00	10.1	101	79-121
TOLUENE	10.00	9.94	99.4	80-121
XYLENES (TOTAL)	30.0	31.1	104	79-121
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	24.3	97.2	81-118
SURROGATE: 4-BROMOFLUOROBENZE	25.0	26.2	105	85-114
SURROGATE: DIBROMOFLUOROMETH	25.0	24.1	96.4	80-119
SURROGATE: TOLUENE-D8 (S)	25.0	25.0	100	89-112

Comments: _____

Primary	SPK
Quant Method :	LALLW.M
Extraction Date :	01/13/17
Analysis Date :	01/13/17
Instrument :	Loki
Run :	0113L35
Initials :	ARO

Printed: 01/16/17 4:08:14 PM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L35.D Vial: 32
Acq On : 13 Jan 17 23:58 Operator: PM,DG,SV,CMM
Sample : 170113B CCV/LCS-1WL 10ug/L Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 9:24 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.38	96	338752	25.00	ppb		0.00
56) Chlorobenzene-D5 (IS)	8.70	117	312576	25.00	ppb		0.00
71) 1,4-Dichlorobenzene-D (IS)	11.03	152	162496	25.00	ppb		0.00
System Monitoring Compounds							
32) Dibromofluoromethane(S)	4.48	111	182178	24.10	ppb		0.00
Spiked Amount 25.000			Recovery = 96.400%				
37) 1,2-DCA-D4(S)	4.92	65	199393	24.32	ppb		0.00
Spiked Amount 25.000			Recovery = 97.288%				
57) Toluene-D8(S)	7.22	98	626008	25.02	ppb		0.00
Spiked Amount 25.000			Recovery = 100.080%				
65) 4-Bromofluorobenzene(S)	9.89	95	227083	26.16	ppb		0.00
Spiked Amount 25.000			Recovery = 104.620%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.85	85	77600	9.91	ppb		95
3) Freon 114	0.93	85	49081	8.90	ppb		95
4) Chloromethane	0.96	50	101663	8.98	ppb		99
5) Vinyl chloride	1.03	62	87450	9.31	ppb		98
6) Bromomethane	1.22	94	54136	8.46	ppb		97
7) Chloroethane	1.29	64	49719	9.30	ppb		98
8) Dichlorofluoromethane	1.43	67	136878	9.41	ppb		100
9) Trichlorofluoromethane	1.46	101	100960	10.06	ppb		94
10) Acrolein	1.75	56	35325	107.71	ppb	#	99
11) Acetone	1.88	43	16802	9.58	ppb		97
12) Freon-113	1.84	101	54797	9.72	ppb		96
13) 1,1-DCE	1.83	96	55824	9.42	ppb		98
14) t-Butanol	2.40	59	19056	105.89	ppb		97
15) Acetonitrile	2.10	41	73745	104.16	ppb		96
16) Methyl Acetate	2.17	43	39561	8.98	ppb		91
17) Iodomethane	1.93	142	39080	11.39	ppb		99
18) Acrylonitrile	2.48	52	13347	8.38	ppb		96
19) Methylene chloride	2.23	84	71363	9.66	ppb		100
20) Carbon disulfide	1.98	76	172153	8.90	ppb		99
21) Methyl t-butyl ether (MtBE	2.52	73	132289	9.09	ppb		99
22) Trans-1,2-DCE	2.50	96	60371	9.65	ppb		95
23) Diisopropyl Ether	3.10	45	183196	9.01	ppb		96
24) 1,1-DCA	2.94	63	119446	9.48	ppb		98
25) Vinyl Acetate	3.10	43	39688	8.59	ppb		99
26) Ethyl tert Butyl Ether	3.59	59	144144	9.31	ppb		98
27) MEK (2-Butanone)	3.81	43	18175	8.42	ppb	#	87
28) Cis-1,2-DCE	3.73	96	70803	9.92	ppb		91
29) 2,2-Dichloropropane	3.70	77	28336	9.21	ppb		98
30) Chloroform	4.25	83	119213	9.63	ppb		98
31) Bromochloromethane	4.08	128	31609	10.38	ppb		98
33) 1,1,1-TCA	4.47	97	93853	9.60	ppb		95
34) Cyclohexane	4.53	41	45757	9.20	ppb		96
35) 1,1-Dichloropropene	4.72	75	78043	9.15	ppb		98
36) 2,2,4-Trimethylpentane	5.15	57	155269	9.37	ppb		95
38) Carbon Tetrachloride	4.70	119	74310	10.15	ppb		97
39) Tert Amyl Methyl Ether	5.22	73	127259	9.38	ppb		99
40) 1,2-DCA	5.03	62	82490	9.40	ppb		100
41) Benzene	4.99	78	247735	9.67	ppb		98
42) TCE	5.84	95	35104	10.19	ppb		96

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\170111\0113L35.D Vial: 32
Acq On : 13 Jan 17 23:58 Operator: PM,DG,SV,CMM
Sample : 170113B CCV/LCS-1WL 10ug/L Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 9:24 2017 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

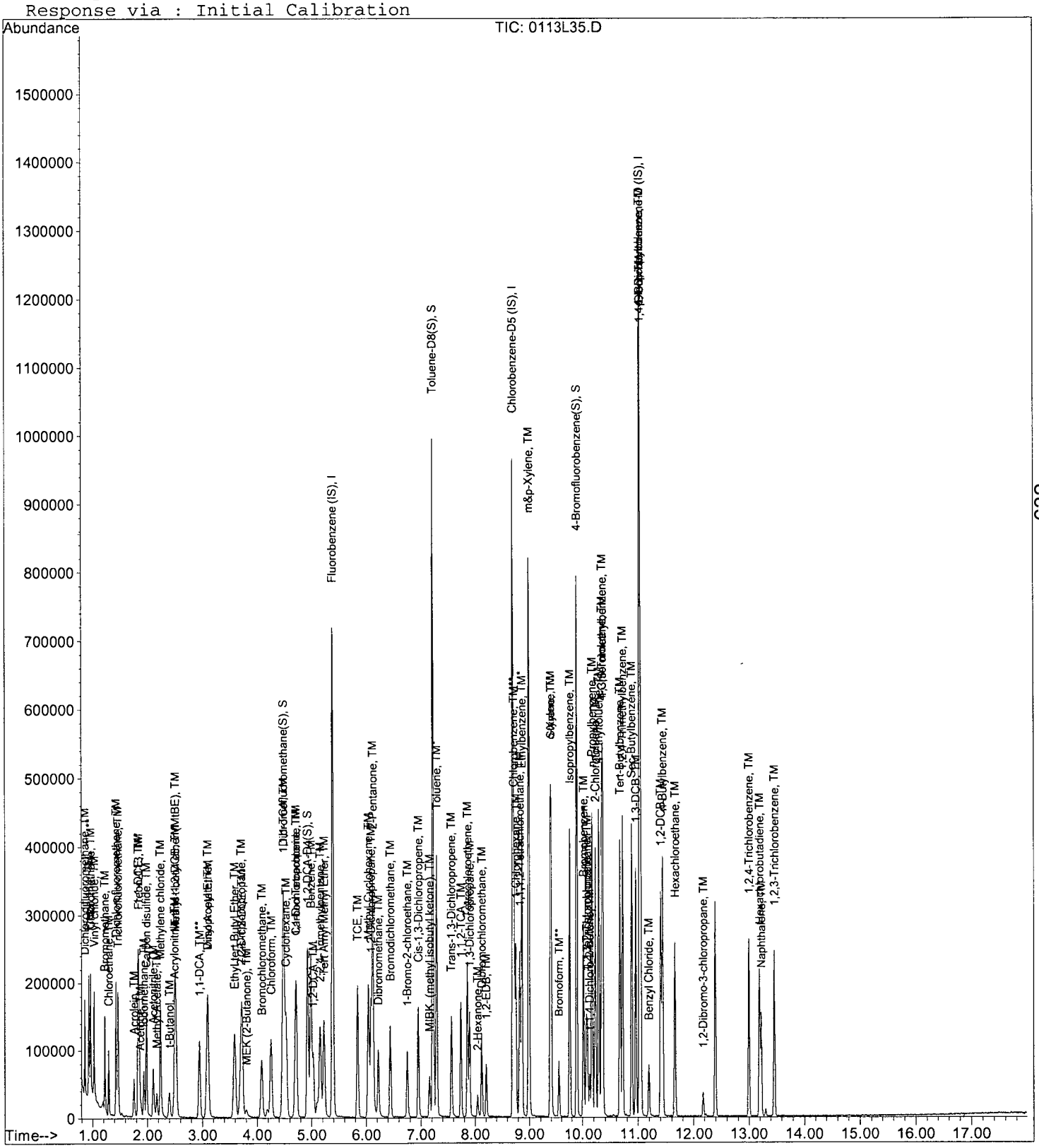
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	2-Pentanone	6.12	43	371545	109.14	ppb		96
44)	1,2-Dichloropropane	6.09	63	69767	9.25	ppb		99
45)	Bromodichloromethane	6.44	83	85787	9.43	ppb		96
46)	Methyl Cyclohexane	6.04	83	78976	9.74	ppb		93
47)	Dibromomethane	6.22	93	37138	9.74	ppb		95
49)	MIBK (methyl isobutyl ket	7.16	43	44105	8.64	ppb		98
50)	1-Bromo-2-chloroethane	6.75	63	44696	8.96	ppb		97
51)	Cis-1,3-Dichloropropene	6.95	75	89974	9.21	ppb		95
52)	Toluene	7.29	91	264018	9.94	ppb		98
53)	Trans-1,3-Dichloropropene	7.56	75	76123	9.01	ppb		99
54)	1,1,2-TCA	7.74	83	43313	9.11	ppb		98
55)	2-Hexanone	8.04	43	11743	8.32	ppb	#	94
58)	1,2-EDB	8.20	107	44251	9.00	ppb		92
59)	Tetrachloroethene	7.86	166	62350	9.55	ppb		97
60)	1-Chlorohexane	8.76	91	71214	9.99	ppb		96
61)	1,1,1,2-Tetrachloroethane	8.83	131	58587	9.35	ppb		87
62)	m&p-Xylene	8.99	91	288630	20.99	ppb		98
63)	o-Xylene	9.38	106	101308	10.14	ppb		99
64)	Styrene	9.40	104	112592	9.35	ppb		99
66)	1,3-Dichloropropane	7.90	76	84808	8.99	ppb		98
67)	Dibromochloromethane	8.12	129	56826	9.49	ppb		97
68)	Chlorobenzene	8.73	112	164713	9.48	ppb		97
69)	Ethylbenzene	8.87	91	285887	10.10	ppb		100
70)	Bromoform	9.55	173	34319	9.53	ppb		99
72)	Isopropylbenzene	9.76	105	258636	10.47	ppb		97
73)	1,1,2,2-Tetrachloroethane	10.07	83	58925	9.05	ppb		98
74)	1,2,3-Trichloropropane	10.09	110	11484	9.67	ppb		96
75)	t-1,4-Dichloro-2-Butene	10.12	53	12110	7.60	ppb		83
76)	Bromobenzene	10.01	156	69651	10.06	ppb		94
77)	n-Propylbenzene	10.17	91	317373	10.44	ppb		99
78)	4-Ethyltoluene	10.29	105	260198	10.87	ppb		99
79)	2-Chlorotoluene	10.23	91	200769	10.67	ppb		100
80)	1,3,5-Trimethylbenzene	10.36	105	230595	11.05	ppb		99
81)	4-Chlorotoluene	10.34	91	233438	10.72	ppb		97
82)	Tert-Butylbenzene	10.66	119	180849	10.61	ppb		98
83)	1,2,4-Trimethylbenzene	10.72	105	227372	10.99	ppb		98
84)	Sec-Butylbenzene	10.88	105	272101	10.74	ppb		98
85)	p-Isopropyltoluene	11.04	119	225183	10.67	ppb		97
86)	Benzyl Chloride	11.19	91	53405	7.81	ppb		97
87)	1,3-DCB	10.96	146	133458	10.42	ppb		98
88)	1,4-DCB	11.05	146	133123	9.85	ppb		95
89)	n-Butylbenzene	11.44	91	204069	10.37	ppb		99
90)	1,2-DCB	11.41	146	121528	9.99	ppb		99
91)	Hexachloroethane	11.66	117	46161	10.49	ppb		90
92)	1,2-Dibromo-3-chloropropan	12.18	157	8951	9.29	ppb	#	78
93)	1,2,4-Trichlorobenzene	13.00	180	72245	9.37	ppb		98
94)	Hexachlorobutadiene	13.19	225	37845	9.58	ppb		94
95)	Naphthalene	13.22	128	74968	8.75	ppb		99
96)	1,2,3-Trichlorobenzene	13.46	180	45720	9.59	ppb		91

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\170111\0113L35.D Vial: 32
Acq On : 13 Jan 17 23:58 Operator: PM,DG,SV,CMM
Sample : 170113B CCV/LCS-1WL 10ug/L Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 9:24 2017 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



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Laboratory Control Spike Recovery
EPA 8260B BTEX & 1,2-DCA WATER

APPL ID: **170113W-48918 LCS - 215475**
Batch ID: #86BTO-170113AM

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1,2-DICHLOROETHANE	10.00	9.73	97.3	73-128
BENZENE	10.00	9.99	99.9	79-120
ETHYLBENZENE	10.00	10.5	105	79-121
TOLUENE	10.00	10.2	102	80-121
XYLENES (TOTAL)	30.0	31.1	104	79-121
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	23.6	94.4	81-118
SURROGATE: 4-BROMOFLUOROBENZE	25.0	24.7	98.8	85-114
SURROGATE: DIBROMOFLUOROMETH	25.0	24.8	99.2	80-119
SURROGATE: TOLUENE-D8 (S)	25.0	25.6	102	89-112

Comments: _____

Primary	SPK
Quant Method :	MTFT113.M
Extraction Date :	01/13/17
Analysis Date :	01/13/17
Instrument :	Max
Run :	0113M12
Initials :	SV

Printed: 01/16/17 4:08:14 PM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0113M12.D
Acq On : 13 Jan 17 14:28
Sample : 170113A CCV/LCS-1WM 10ug/L
Misc : IS&S 10/20/16

Vial: 3
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 13 14:59 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	321646	25.00000 ppb	0.00
55) Chlorobenzene-D5 (IS)	9.15	117	226106	25.00000 ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	117540	25.00000 ppb	0.00
System Monitoring Compounds					
31) Dibromofluoromethane(S)	4.78	111	70115	24.80707 ppb	0.00
Spiked Amount 25.000			Recovery = 99.228%		
36) 1,2-DCA-D4(S)	5.13	65	54856	23.57055 ppb	0.00
Spiked Amount 25.000			Recovery = 94.284%		
56) Toluene-D8(S)	7.35	98	291109	25.58182 ppb	0.00
Spiked Amount 25.000			Recovery = 102.328%		
64) 4-Bromofluorobenzene(S)	10.74	95	100955	24.73869 ppb	0.00
Spiked Amount 25.000			Recovery = 98.956%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.19	85	38872	10.11326 ppb	95
3) Freon 114	1.29	85	47579	9.70523 ppb	97
4) Chloromethane	1.34	50	58960	10.38755 ppb	99
5) Vinyl chloride	1.43	62	76464	10.21505 ppb	94
6) Bromomethane	1.69	94	39571	9.93732 ppb	96
7) Chloroethane	1.79	64	45042	10.76229 ppb	97
8) Dichlorofluoromethane	1.98	67	104223	10.00787 ppb	96
9) Trichlorofluoromethane	2.02	101	96177	10.87219 ppb	98
10) Acrolein	2.41	56	17797	115.79116 ppb	91
11) Acetone	2.57	43	8015	9.89588 ppb	97
12) Freon-113	2.53	101	49164	9.93984 ppb	96
13) 1,1-DCE	2.51	61	80064	9.57659 ppb	97
14) t-Butanol	3.14	59	15359	109.44398 ppb	98
15) Methyl Acetate	2.90	43	18447	9.12310 ppb	97
16) Iodomethane	2.64	142	61836	10.51873 ppb	97
17) Acrylonitrile	3.22	53	8596	10.02507 ppb	95
18) Methylene chloride	2.98	84	51845	10.07202 ppb	95
19) Carbon disulfide	2.70	76	161658	9.60033 ppb	98
20) Methyl t-butyl ether (MtBE	3.28	73	82220	9.23241 ppb	97
21) Trans-1,2-DCE	3.25	96	58957	9.71101 ppb	97
22) Diisopropyl Ether	3.79	45	159112	9.86785 ppb	98
23) 1,1-DCA	3.67	63	101273	9.81130 ppb	99
24) Vinyl Acetate	3.75	43	33871	10.03163 ppb	98
25) Ethyl tert Butyl Ether	4.17	59	104403	9.57030 ppb	100
26) MEK (2-Butanone)	4.30	43	11758	10.47453 ppb	98
27) Cis-1,2-DCE	4.27	96	64202	9.73055 ppb	93
28) 2,2-Dichloropropane	4.27	77	73083	9.71198 ppb	93
29) Chloroform	4.61	83	100149	10.05906 ppb	98
30) Bromochloromethane	4.51	128	24122	9.64080 ppb	96
32) 1,1,1-TCA	4.80	97	93336	9.93664 ppb	96
33) Cyclohexane	4.87	41	51639	10.10508 ppb	98
34) 1,1-Dichloropropene	4.98	75	83390	9.88280 ppb	97
35) 2,2,4-Trimethylpentane	5.33	57	149785	10.00669 ppb	99
37) Carbon Tetrachloride	4.98	117	78877	9.94636 ppb	99
38) Tert Amyl Methyl Ether	5.37	73	87364	9.51692 ppb	97
39) 1,2-DCA	5.21	62	53891	9.73465 ppb	99
40) Benzene	5.20	78	244900	9.99222 ppb	98
41) TCE	5.92	95	65309	9.65072 ppb	96
42) 2-Pentanone	6.15	43	217457	120.62290 ppb	100

(#) = qualifier out of range (m) = manual integration
0113M12.D MALLW.M Mon Jan 16 07:46:09 2017

Data File : M:\MAX\DATA\M170111\0113M12.D
Acq On : 13 Jan 17 14:28
Sample : 170113A CCV/LCS-1WM 10ug/L
Misc : IS&S 10/20/16

Vial: 3
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 13 14:59 2017 Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43)	1,2-Dichloropropane	6.16	63	54219	9.95307 ppb		99
44)	Bromodichloromethane	6.49	83	64955	10.11467 ppb		99
45)	Methyl Cyclohexane	6.15	83	80259	10.06515 ppb		96
46)	Dibromomethane	6.29	93	21300	10.24748 ppb	#	81
47)	MIBK (methyl isobutyl ket	7.24	43	26904	9.82447 ppb		97
48)	1-Bromo-2-chloroethane	6.84	63	47184	8.91264 ppb		97
50)	Cis-1,3-Dichloropropene	7.03	75	70254	9.77180 ppb		98
51)	Toluene	7.43	91	283052	10.19267 ppb		98
52)	Trans-1,3-Dichloropropene	7.71	75	47985	9.57453 ppb		99
53)	1,1,2-TCA	7.92	83	25090	9.63263 ppb		98
54)	2-Hexanone	8.28	58	7351	9.50791 ppb	#	85
57)	1,2-EDB	8.53	107	26897	9.60969 ppb		97
58)	Tetrachloroethene	8.11	164	64793	9.91259 ppb		98
59)	1-Chlorohexane	9.21	91	76294	10.66966 ppb		99
60)	1,1,1,2-Tetrachloroethane	9.31	131	57049	10.17579 ppb		96
61)	m&p-Xylene	9.52	106	246677	20.61127 ppb		100
62)	o-Xylene	10.04	106	116482	10.48661 ppb		97
63)	Styrene	10.06	104	178319	10.35950 ppb		97
65)	1,3-Dichloropropane	8.13	76	54203	10.00248 ppb		90
66)	Dibromochloromethane	8.40	129	41051	9.93326 ppb		96
67)	Chlorobenzene	9.19	112	169683	10.07232 ppb		98
68)	Ethylbenzene	9.36	91	314415	10.47725 ppb		100
69)	Bromoform	10.27	173	24513	9.65322 ppb		93
71)	Isopropylbenzene	10.56	105	299733	10.85828 ppb		100
72)	1,1,2,2-Tetrachloroethane	10.97	83	28653	10.11142 ppb		99
73)	1,2,3-Trichloropropane	11.00	110	9177	9.45394 ppb		98
74)	t-1,4-Dichloro-2-Butene	11.05	53	5712	9.81252 ppb		93
75)	Bromobenzene	10.92	156	69986	10.29322 ppb		95
76)	n-Propylbenzene	11.13	91	331550	10.85149 ppb		99
77)	4-Ethyltoluene	11.30	105	290314	10.83008 ppb		99
78)	2-Chlorotoluene	11.21	91	196320	10.58974 ppb		99
79)	1,3,5-Trimethylbenzene	11.40	105	240374	10.72249 ppb		100
80)	4-Chlorotoluene	11.37	91	224255	10.65046 ppb		96
81)	Tert-Butylbenzene	11.84	119	209397	10.62083 ppb		99
82)	1,2,4-Trimethylbenzene	11.91	105	240751	10.89156 ppb		99
83)	Sec-Butylbenzene	12.15	105	284510	10.72808 ppb		98
84)	p-Isopropyltoluene	12.37	119	254604	10.63337 ppb		99
85)	Benzyl Chloride	12.59	91	27776	11.14046 ppb		99
86)	1,3-DCB	12.26	146	138218	10.68544 ppb		97
87)	1,4-DCB	12.38	146	130391	10.39540 ppb		98
88)	n-Butylbenzene	12.95	91	205691	10.80037 ppb		99
89)	1,2-DCB	12.90	146	112311	10.46053 ppb		93
90)	Hexachloroethane	13.27	117	36583	11.43628 ppb		97
91)	1,2-Dibromo-3-chloropropan	14.01	75	3898	10.04227 ppb	#	78
92)	1,2,4-Trichlorobenzene	15.23	180	57888	9.08479 ppb		98
93)	Hexachlorobutadiene	15.53	225	52335	10.54075 ppb		96
94)	Naphthalene	15.56	128	47652	8.56217 ppb		98
95)	1,2,3-Trichlorobenzene	15.92	180	37843	8.46067 ppb		99

(#) = qualifier out of range (m) = manual integration

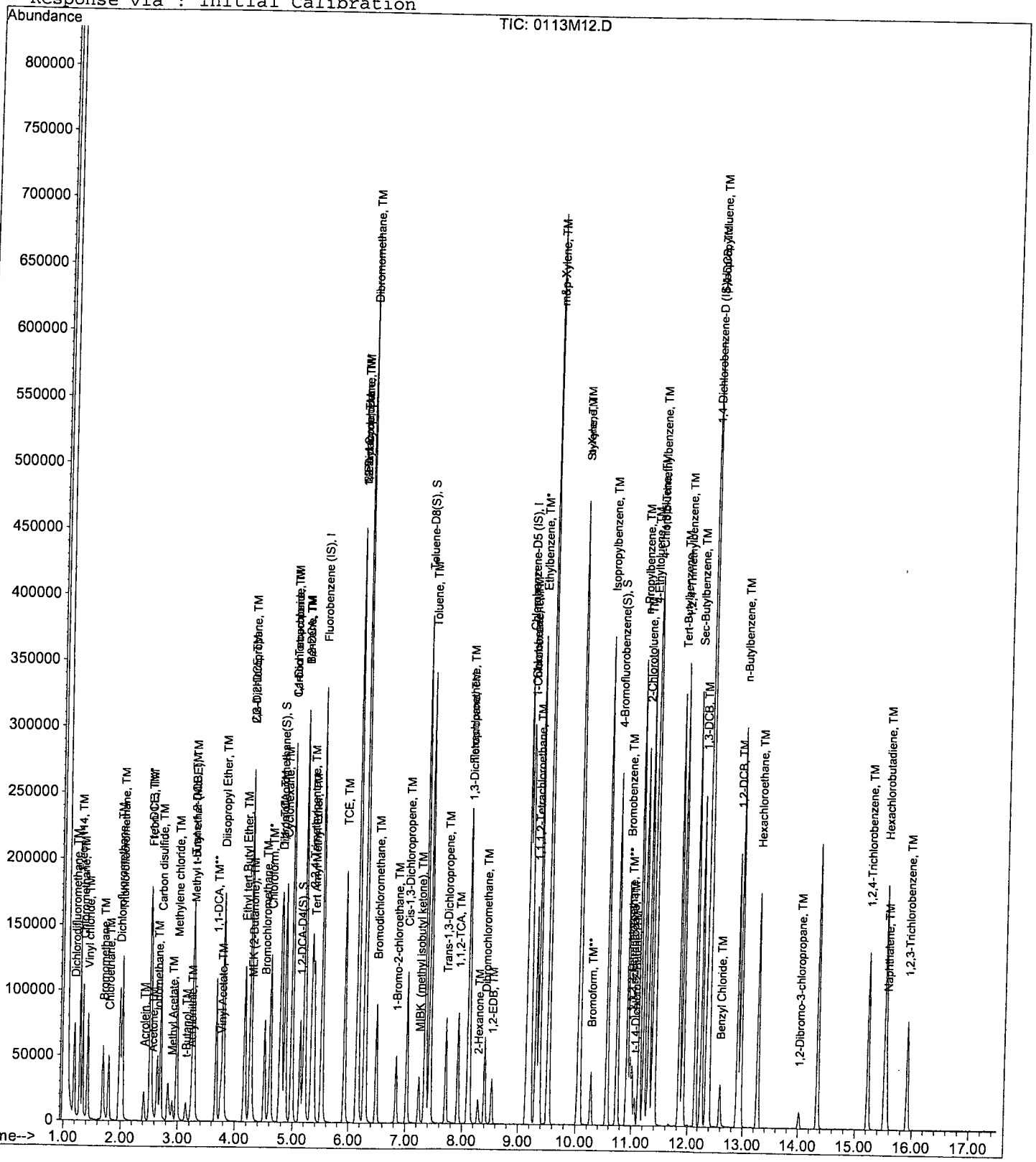
Data File : M:\MAX\DATA\M170111\0113M12.D
Acq On : 13 Jan 17 14:28
Sample : 170113A CCV/LCS-1WM 10ug/L
Misc : IS&S 10/20/16

Vial: 3
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 13 14:59 2017

Quant Results File: MALLW.RES

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration



Laboratory Control Spike Recovery
EPA 8260B BTEX & 1,2-DCA WATER

APPL ID: **170114W-48920 LCS - 215474**
Batch ID: #86BTO-170113BM1

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1,2-DICHLOROETHANE	10.00	9.78	97.8	73-128
BENZENE	10.00	10.0	100	79-120
ETHYLBENZENE	10.00	10.7	107	79-121
TOLUENE	10.00	10.1	101	80-121
XYLENES (TOTAL)	30.0	31.8	106	79-121
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	22.5	90.0	81-118
SURROGATE: 4-BROMOFLUOROBENZE	25.0	24.5	98.0	85-114
SURROGATE: DIBROMOFLUOROMETH	25.0	24.3	97.2	80-119
SURROGATE: TOLUENE-D8 (S)	25.0	24.5	98.0	89-112

Comments: _____

Primary	SPK
Quant Method :	MALLW.M
Extraction Date :	01/14/17
Analysis Date :	01/14/17
Instrument :	Max
Run :	0113M40
Initials :	SV

Printed: 01/16/17 4:08:14 PM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0113M40.D
Acq On : 14 Jan 17 3:38
Sample : 170113B CCV/LCS-1WM 10ug/L
Misc : IS&S 10/20/16

Vial: 31
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 7:42 2017

Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	343762	25.00000 ppb	0.00
55) Chlorobenzene-D5 (IS)	9.15	117	240587	25.00000 ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.35	152	125565	25.00000 ppb	0.00
System Monitoring Compounds					
31) Dibromofluoromethane(S)	4.78	111	73337	24.27772 ppb	0.00
Spiked Amount 25.000			Recovery = 97.112%		
36) 1,2-DCA-D4(S)	5.13	65	56050	22.53417 ppb	0.00
Spiked Amount 25.000			Recovery = 90.136%		
56) Toluene-D8(S)	7.35	98	297112	24.53781 ppb	0.00
Spiked Amount 25.000			Recovery = 98.152%		
64) 4-Bromofluorobenzene(S)	10.74	95	106208	24.45941 ppb	0.00
Spiked Amount 25.000			Recovery = 97.836%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.19	85	39632	9.64763 ppb	95
3) Freon 114	1.29	85	51923	9.90993 ppb	99
4) Chloromethane	1.34	50	58872	9.70476 ppb	100
5) Vinyl chloride	1.43	62	81611	10.20123 ppb	99
6) Bromomethane	1.70	94	41465	9.74304 ppb	97
7) Chloroethane	1.79	64	46054	10.29614 ppb	99
8) Dichlorofluoromethane	1.98	67	114213	10.26157 ppb	95
9) Trichlorofluoromethane	2.03	101	98968	10.46793 ppb	98
10) Acrolein	2.41	56	18104	110.21061 ppb	91
11) Acetone	2.57	43	7662	8.72504 ppb	95
12) Freon-113	2.53	101	54416	10.29388 ppb	94
13) 1,1-DCE	2.51	61	89793	10.04931 ppb	98
14) t-Butanol	3.13	59	14722	98.15582 ppb	91
15) Methyl Acetate	2.90	43	19422	8.98733 ppb	98
16) Iodomethane	2.64	142	70188	11.07120 ppb	98
17) Acrylonitrile	3.23	53	8440	9.20987 ppb	94
18) Methylene chloride	2.98	84	52972	9.62889 ppb	99
19) Carbon disulfide	2.70	76	171521	9.53074 ppb	99
20) Methyl t-butyl ether (MtBE	3.28	73	87462	9.18919 ppb	98
21) Trans-1,2-DCE	3.25	96	64221	9.89752 ppb	98
22) Diisopropyl Ether	3.80	45	168629	9.78526 ppb	99
23) 1,1-DCA	3.67	63	111473	10.10469 ppb	100
24) Vinyl Acetate	3.76	43	22604	6.26396 ppb	98
25) Ethyl tert Butyl Ether	4.17	59	112489	9.64812 ppb	100
26) MEK (2-Butanone)	4.30	43	9888	8.24194 ppb	100
27) Cis-1,2-DCE	4.27	96	68033	9.64781 ppb	94
28) 2,2-Dichloropropane	4.27	77	71326	8.86870 ppb	97
29) Chloroform	4.61	83	107784	10.12944 ppb	99
30) Bromochloromethane	4.51	128	25234	9.43639 ppb	98
32) 1,1,1-TCA	4.80	97	100963	10.05710 ppb	97
33) Cyclohexane	4.87	41	56737	10.38840 ppb	98
34) 1,1-Dichloropropene	4.98	75	90540	10.03984 ppb	98
35) 2,2,4-Trimethylpentane	5.33	57	140831	8.80320 ppb	97
37) Carbon Tetrachloride	4.98	117	84171	9.93108 ppb	96
38) Tert Amyl Methyl Ether	5.37	73	93094	9.48868 ppb	98
39) 1,2-DCA	5.21	62	57892	9.78460 ppb	97
40) Benzene	5.20	78	263039	10.04185 ppb	98
41) TCE	5.92	95	73843	10.20978 ppb	98
42) 2-Pentanone	6.15	43	216464	112.34722 ppb	99

(#) = qualifier out of range (m) = manual integration
0113M40.D MALLW.M Mon Jan 16 07:46:34 2017

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0113M40.D
Acq On : 14 Jan 17 3:38
Sample : 170113B CCV/LCS-1WM 10ug/L
Misc : IS&S 10/20/16

Vial: 31
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 7:42 2017

Quant Results File: MALLW.RES

Quant Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43) 1,2-Dichloropropane	6.16	63	57984	9.95942 ppb		98
44) Bromodichloromethane	6.49	83	67235	9.79614 ppb		99
45) Methyl Cyclohexane	6.15	83	87612	10.28041 ppb		97
46) Dibromomethane	6.29	93	21748	9.78987 ppb		96
47) MIBK (methyl isobutyl ket	7.24	43	26895	9.18934 ppb	#	91
48) 1-Bromo-2-chloroethane	6.84	63	47447	8.38572 ppb		99
50) Cis-1,3-Dichloropropene	7.02	75	71582	9.31596 ppb		97
51) Toluene	7.43	91	300460	10.12346 ppb		98
52) Trans-1,3-Dichloropropene	7.71	75	47403	8.84989 ppb		99
53) 1,1,2-TCA	7.92	83	27042	9.71412 ppb		97
54) 2-Hexanone	8.28	58	7850	9.50011 ppb		95
57) 1,2-EDB	8.53	107	29421	9.87877 ppb		91
58) Tetrachloroethene	8.11	164	71373	10.26202 ppb		98
59) 1-Chlorohexane	9.21	91	82838	10.88754 ppb		96
60) 1,1,1,2-Tetrachloroethane	9.31	131	58511	9.80839 ppb		94
61) m&p-Xylene	9.52	106	267375	20.99601 ppb		95
62) o-Xylene	10.04	106	127502	10.78781 ppb		95
63) Styrene	10.06	104	194114	10.59834 ppb		99
65) 1,3-Dichloropropane	8.13	76	56644	9.82377 ppb		95
66) Dibromochloromethane	8.40	129	42207	9.59826 ppb		100
67) Chlorobenzene	9.19	112	183248	10.22281 ppb		98
68) Ethylbenzene	9.36	91	341510	10.69517 ppb		99
69) Bromoform	10.27	173	24352	9.01261 ppb		96
71) Isopropylbenzene	10.56	105	329570	11.17613 ppb		99
72) 1,1,2,2-Tetrachloroethane	10.97	83	28317	9.35419 ppb		91
73) 1,2,3-Trichloropropane	11.00	110	9566	9.22486 ppb		95
74) t-1,4-Dichloro-2-Butene	11.06	53	5138	8.26235 ppb		97
75) Bromobenzene	10.92	156	77569	10.67936 ppb		91
76) n-Propylbenzene	11.13	91	367778	11.26791 ppb		99
77) 4-Ethyltoluene	11.30	105	318637	11.12697 ppb		98
78) 2-Chlorotoluene	11.22	91	218269	11.02123 ppb		99
79) 1,3,5-Trimethylbenzene	11.40	105	264242	11.03385 ppb		99
80) 4-Chlorotoluene	11.37	91	242976	10.80206 ppb		97
81) Tert-Butylbenzene	11.84	119	235465	11.17973 ppb		100
82) 1,2,4-Trimethylbenzene	11.91	105	264589	11.20497 ppb		99
83) Sec-Butylbenzene	12.15	105	307527	10.85488 ppb		99
84) p-Isopropyltoluene	12.37	119	279449	10.92510 ppb		99
85) Benzyl Chloride	12.59	91	19839	7.44853 ppb		95
86) 1,3-DCB	12.26	146	149108	10.79061 ppb		97
87) 1,4-DCB	12.38	146	140671	10.49821 ppb		98
88) n-Butylbenzene	12.95	91	214678	10.55183 ppb		97
89) 1,2-DCB	12.90	146	120335	10.49157 ppb		97
90) Hexachloroethane	13.27	117	34381	10.06100 ppb		95
91) 1,2-Dibromo-3-chloropropan	14.01	75	3312	7.98725 ppb	#	56
92) 1,2,4-Trichlorobenzene	15.23	180	61711	9.06717 ppb		91
93) Hexachlorobutadiene	15.53	225	53692	10.12292 ppb		98
94) Naphthalene	15.56	128	47290	8.04797 ppb		98
95) 1,2,3-Trichlorobenzene	15.92	180	38820	8.16208 ppb		99

(#) = qualifier out of range (m) = manual integration
0113M40.D MALLW.M Mon Jan 16 07:46:35 2017

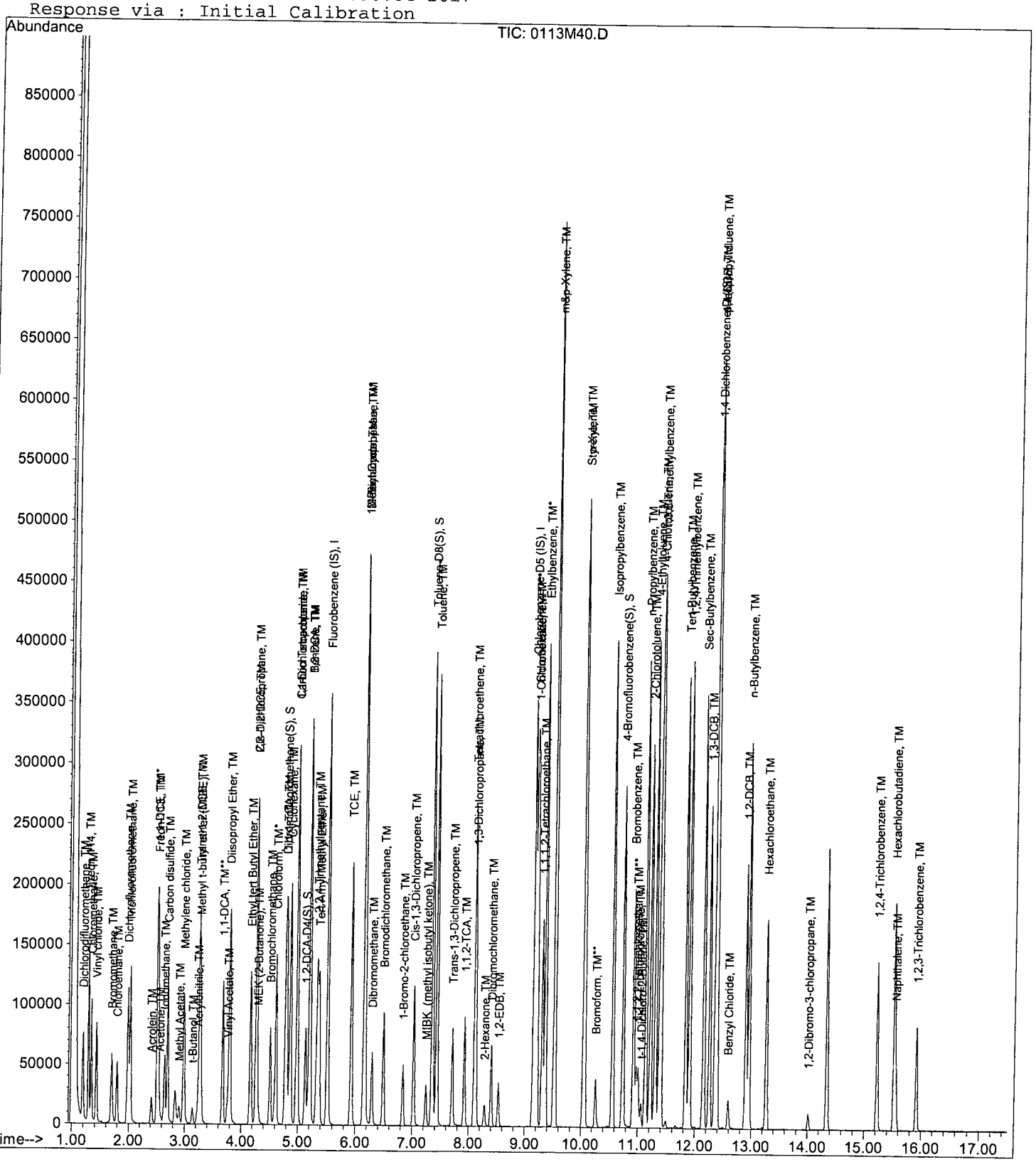
Data File : M:\MAX\DATA\M170111\0113M40.D
Acq On : 14 Jan 17 3:38
Sample : 170113B CCV/LCS-1WM 10ug/L
Misc : IS&S 10/20/16

Vial: 31
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 7:42 2017

Quant Results File: MALLW.RES

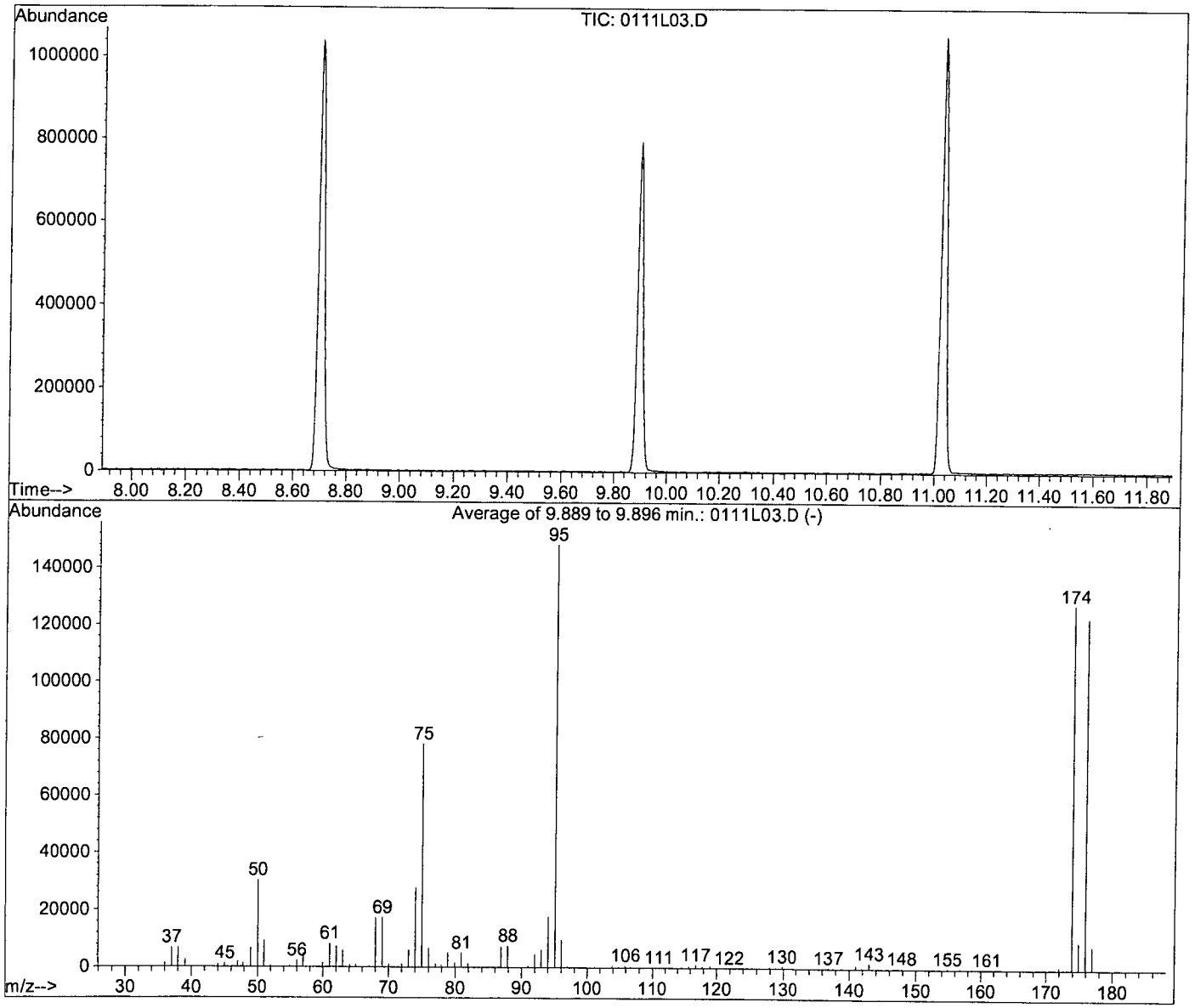
Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 14:30:04 2017
Response via : Initial Calibration



Data File : M:\LOKI\DATA\170111\0111L03.D
Acq On : 11 Jan 17 11:00
Sample : 5ng- BFB STD 12-15-16
Misc : W IS&S 1/3/17, 01/11/17

Vial: 2
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B



AutoFind: Scans 2830, 2831, 2832; Background Corrected with Scan 2817

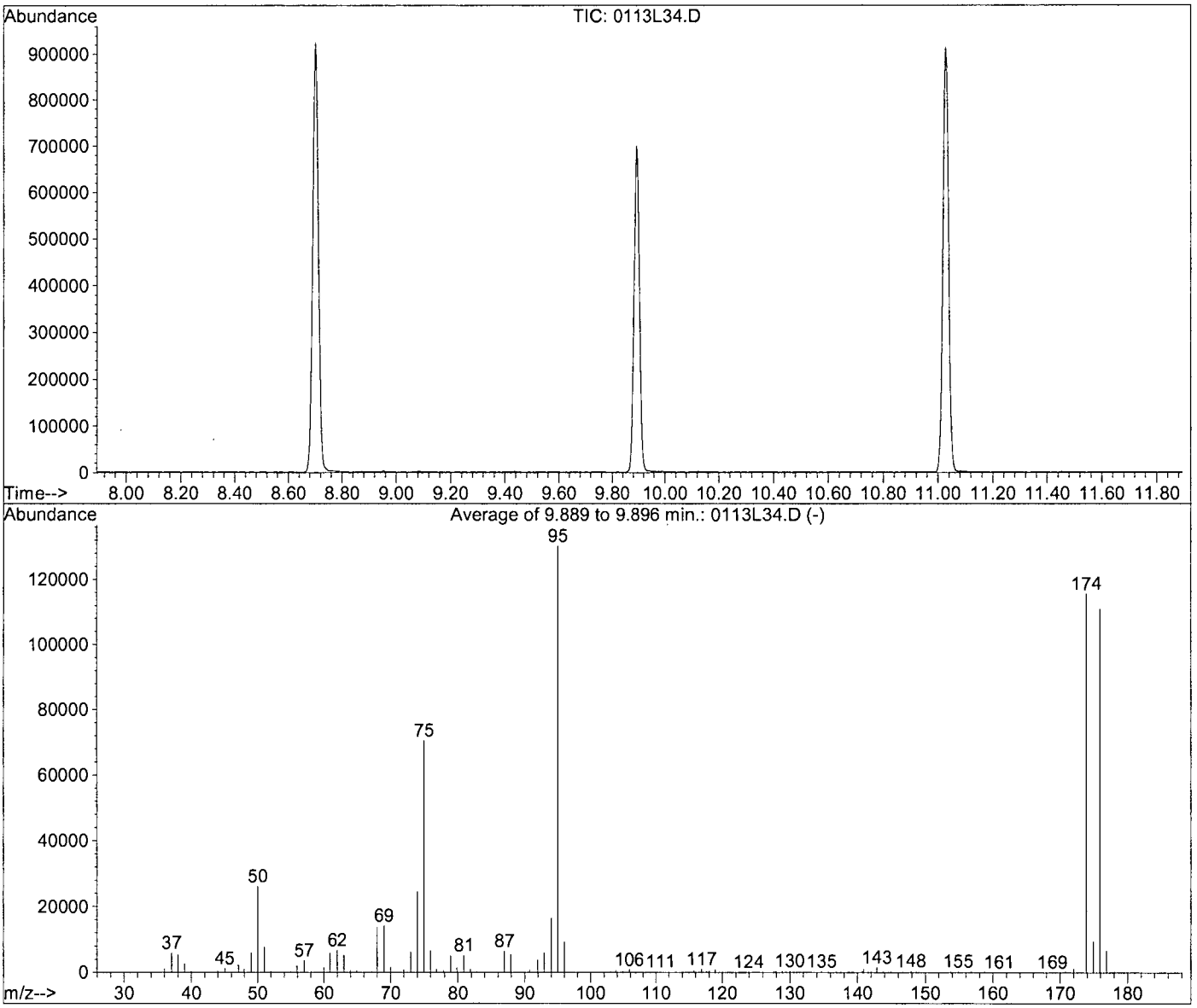
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.5	30349	PASS
75	95	30	60	52.7	78197	PASS
95	95	100	100	100.0	148352	PASS
96	95	5	9	6.6	9747	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	86.1	127757	PASS
175	174	5	9	7.6	9742	PASS
176	174	95	101	96.4	123096	PASS
177	176	5	9	6.7	8227	PASS

0111L03.D LALLW.M Thu Jan 12 08:02:27 2017

Data File : M:\LOKI\DATA\170111\0113L34.D
Acq On : 13 Jan 17 23:30
Sample : 5ng- BFB STD 12-15-16
Misc : W IS&S 1/3/17, 01/11/17

Vial: 31
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Method : M:\LOKI\DATA\170111\LALLW.M (RTE Integrator)
Title : METHOD 8260B



Spectrum Information: Average of 9.889 to 9.896 min.

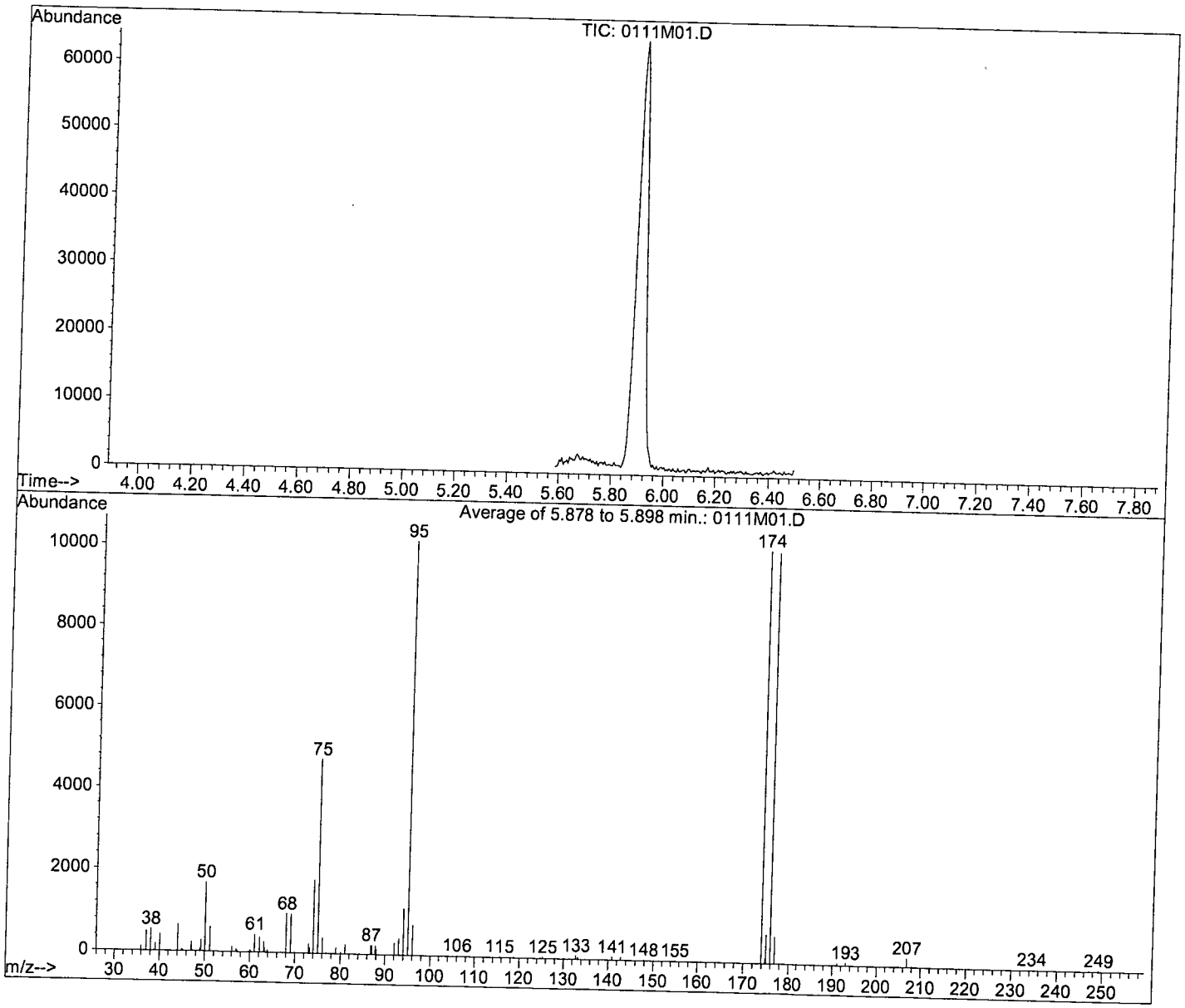
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.0	26000	PASS
75	95	30	60	54.1	70485	PASS
95	95	100	100	100.0	130232	PASS
96	95	5	9	7.1	9225	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	88.7	115528	PASS
175	174	5	9	8.1	9406	PASS
176	174	95	101	96.0	110875	PASS
177	176	5	9	6.0	6676	PASS

0113L34.D LALLW.M Tue Jan 17 16:03:43 2017

Data File : M:\MAX\DATA\M170111\0111M01.D
Acq On : 11 Jan 17 9:34
Sample : 5ng BFB STD 12/15/16
Misc : 2ul

Vial: 1
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B



Spectrum Information: Average of 5.878 to 5.898 min.

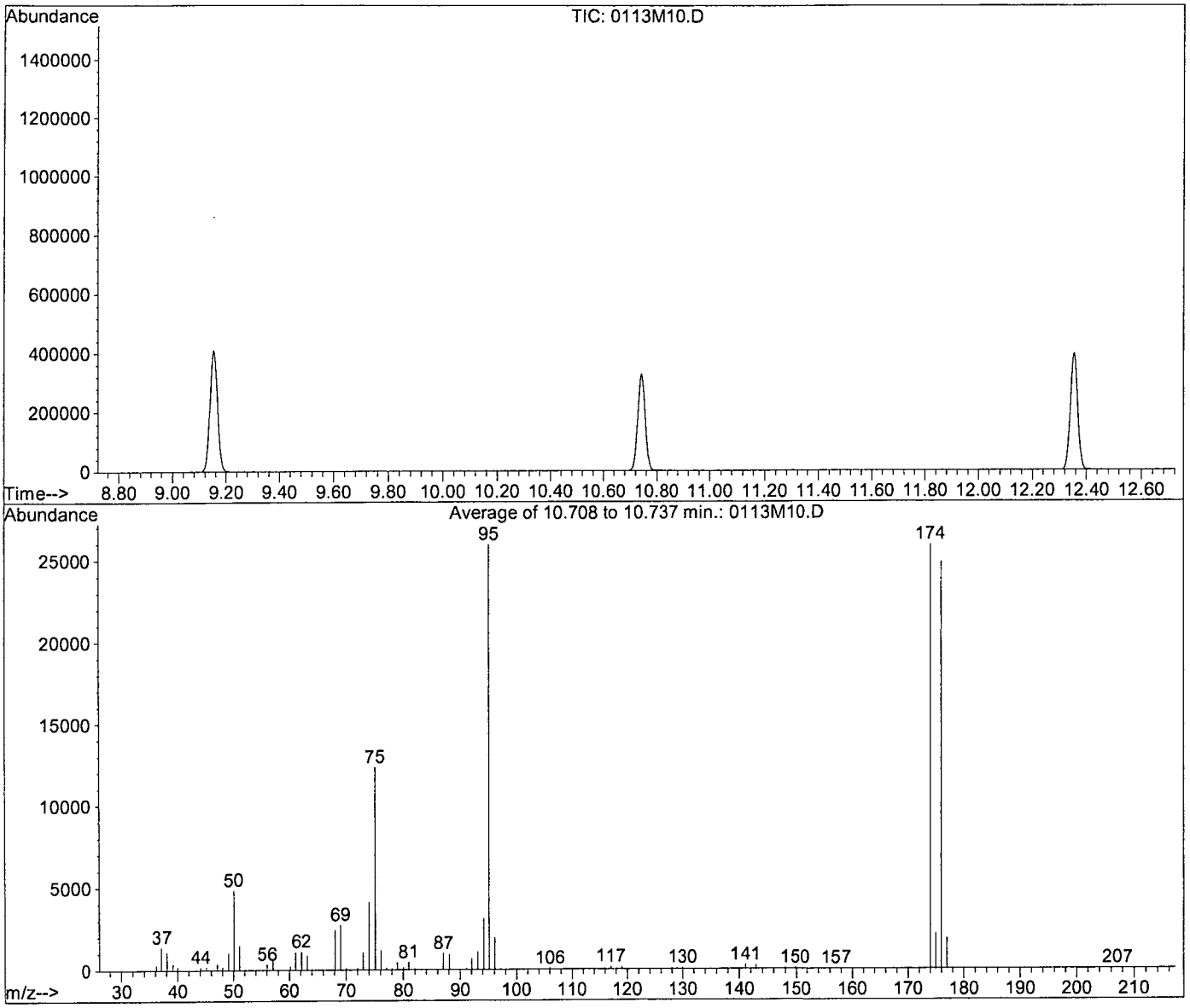
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.6	1689	PASS
75	95	30	60	46.7	4751	PASS
95	95	100	100	100.0	10181	PASS
96	95	5	9	7.3	739	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	99.6	10142	PASS
175	174	5	9	6.9	703	PASS
176	174	95	101	99.4	10084	PASS
177	176	5	9	6.5	654	PASS

0111M01.D MALLW.M Thu Jan 12 11:34:28 2017

Data File : M:\MAX\DATA\M170111\0113M10.D
Acq On : 13 Jan 17 13:32
Sample : 5ng BFB STD 12/15/16
Misc : IS&S 10/20/16

Vial: 1
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B



Spectrum Information: Average of 10.708 to 10.737 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.7	4852	PASS
75	95	30	60	47.5	12327	PASS
95	95	100	100	100.0	25941	PASS
96	95	5	9	7.5	1936	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	99.8	25890	PASS
175	174	5	9	8.2	2117	PASS
176	174	95	101	95.9	24831	PASS
177	176	5	9	7.5	1870	PASS

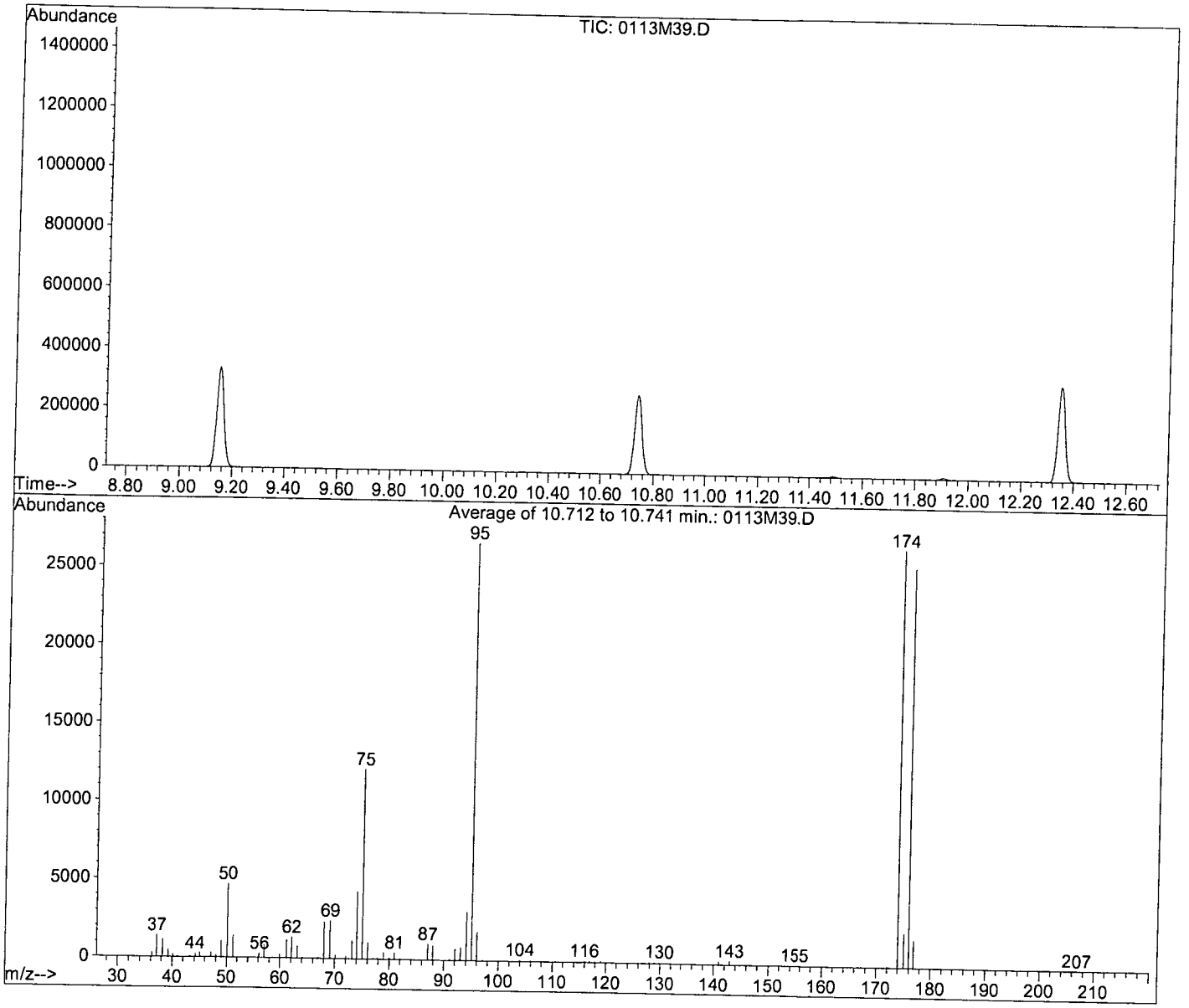
0113M10.D MALLW.M Mon Jan 16 08:15:51 2017

BFB

Data File : M:\MAX\DATA\M170111\0113M39.D
Acq On : 14 Jan 17 3:10
Sample : 5ng BFB STD 12/15/16
Misc : IS&S 10/20/16

Vial: 30
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Method : M:\MAX\DATA\M170111\MALLW.M (RTE Integrator)
Title : METHOD 8260B



Spectrum Information: Average of 10.712 to 10.741 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.6	4690	PASS
75	95	30	60	45.3	12094	PASS
95	95	100	100	100.0	26706	PASS
96	95	5	9	6.8	1813	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	100.0	26695	PASS
175	174	5	9	8.2	2199	PASS
176	174	95	101	95.6	25517	PASS
177	176	5	9	6.9	1771	PASS

0113M39.D MALLW.M Mon Jan 16 07:30:49 2017

Volatile Standard Curve Preparation for 10mL Purge (8260 water)-MAX										
Exp Date:	01/12/17	5µg/mL	5µg/mL	5µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	250µg/mL	
		Vol Std #9	Vol Std #10	Vol Std #12	Vol Std #7	Vol Std #8	Vol Std #1	Vol Std #2	TBA	
		1/10/17L	01/10/17M	01/10/17N	01/10/17H	01/10/17J	01/10/17I	01/10/17K	01/10/17O	Final Vol
	Conc.	02/10/17	02/10/17	02/10/17	02/10/17	02/10/17	02/10/17	02/10/17	02/10/17	w/P&T H2O
Date/code	µg/L	ul	ul	ul	ul	ul	ul	ul	ul	mL
01/11/17A-DG	0.3	3	3	3	n/a	n/a	n/a	n/a	2	50
01/11/17B-DG	0.5	5	5	5	n/a	n/a	n/a	n/a	5	50
01/11/17C-DG	1	10	10	10	n/a	n/a	n/a	n/a	10	50
01/11/17D-DG	2	20	20	20	n/a	n/a	n/a	n/a	15	50
01/11/17E-DG	5	n/a	n/a	n/a	5	5	5	5	20	50
01/11/17F-DG	10	n/a	n/a	n/a	10	10	10	10	25	50
01/11/17G-DG	20	n/a	n/a	n/a	20	20	20	20	30	50
01/11/17H-DG	40	n/a	n/a	n/a	40	40	40	40	35	50
01/11/17I-DG	100	n/a	n/a	n/a	100	100	100	100	40	50

Volatile Standard Curve Preparation for 10mL Purge (8260 water)-LOKI										
Exp Date:	01/12/17	5µg/mL	5µg/mL	5µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	250µg/mL	
		Vol Std #9	Vol Std #10	Vol Std #12	Vol Std #7	Vol Std #8	Vol Std #1	Vol Std #2	TBA	
		1/10/17L	01/10/17M	01/10/17N	01/10/17H	01/10/17J	01/10/17I	01/10/17K	01/10/17O	Final Vol
	Conc.	02/10/17	02/10/17	02/10/17	02/10/17	02/10/17	02/10/17	02/10/17	02/10/17	w/P&T H2O
Date/code	µg/L	ul	ul	ul	ul	ul	ul	ul	ul	mL
01/11/17J-DG	0.3	3	3	3	n/a	n/a	n/a	n/a	2	50
01/11/17K-DG	0.5	5	5	5	n/a	n/a	n/a	n/a	5	50
01/11/17L-DG	1	10	10	10	n/a	n/a	n/a	n/a	10	50
01/11/17M-DG	2	20	20	20	n/a	n/a	n/a	n/a	15	50
01/11/17N-DG	5	n/a	n/a	n/a	5	5	5	5	20	50
01/11/17O-DG	10	n/a	n/a	n/a	10	10	10	10	25	50
01/11/17P-DG	20	n/a	n/a	n/a	20	20	20	20	30	50
01/11/17Q-DG	40	n/a	n/a	n/a	40	40	40	40	35	50
01/11/17R-DG	100	n/a	n/a	n/a	100	100	100	100	40	50

PRIMARY STANDARD

01/10/17H							
50ug/ml Vol Work Std #7							
Exp:02/10/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120016-03	Gas Mix	2000	279822-36644	01/10/17DG	02/19/19	100
02SI	020049-02	HEXACHLOROETHANE	1000	254167-36564	12/27/16C-CMM	12/28/17	200
02SI	020228-02	Benzyl Chloride	1000	279824-36569	12/27/16E-CMM	05/24/18	200
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	3500
01/10/17I							
50ug/ml Vol Work Std #1							
Exp:02/10/17					Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	020145-02-02	2-CEVE	2000	288264-37217	11/22/16C-CMM	09/19/19	50
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	1950
01/10/17J							
50ug/ml Vol Work Std #8							
Exp:02/10/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	122039-02	Volatile Mix, 20-29	2000	258033-37169	12/16/16C-CMM	08/17/17	100
02SI	120023-03	VOC'S-54 COMP	2000	271929-36581	12/16/16D-CMM	02/15/18	100
02SI	020232-02	Vinyl Acetate	2000	292241-37194	12/16/16E-CMM	02/01/17	100
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	3700
01/10/17K							
50ug/ml Vol Work Std #2							
Exp:02/10/17							
Supplier	ID #	ID	ug/ml				
02SI	121020-05	HSL'S-Ketone Solution	2000	258036-36073	01/10/17BDG	08/17/17	100
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	3900
		01/10/17L					
		5ug/ml Vol Work Std #9					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #7		**01/10/17H**	Exp:02/10/17	200	
		50ug/ml Vol Work Std #8		**01/10/17J**	Exp:02/10/17	200	
		J&T Brand		12/16/16	12/16/17	1600	
		01/10/17M					
		5ug/ml Vol Work Std #10					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #1		**01/10/17I**	Exp:02/10/17	200	
		J&T Brand		12/16/16	12/16/17	1800	
		01/10/17N					
		5ug/ml Vol Work Std #12					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #2		**01/10/17K**	Exp:02/10/17	200	
		J&T Brand		12/16/16	12/16/17	1800	
01/10/17O							
250ug/ml TBA/IBA/Acetonitrile/Cyclohexanone/Acrolein/2-P							
Exp:02/10/17			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
02SI	120166-01	Volatile Mix 4-3	2000	275544-36413	12/16/16F-CMM	03/28/18	500
02SI	020229-09-02	Acrolein	10000	294146-37313	01/10/17FDG	01/14/17	100
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	3400

SECONDARY SOURCE

01/10/17P							
50ug/ml VOC Std#4							
Exp:02/10/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120296-01-SS	Custom 8260 Solution	2000	279826-37381	01/10/17DG	06/01/19	50
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	1950
01/10/17Q							
50ug/ml VOC Std#5							
Exp:02/10/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120016-03-SS	8260 Gases(SS)	2000	279826-36675	12/16/16I-CMM	06/01/19	50
02SI	020145-02-02-SS	2-CEVE (SS)	2000	254171-35380	12/16/16J-CMM	06/21/17	50
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	1900
01/10/17R							

50ug/ml VOC Std#6							
Exp:02/10/17							
	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120023-03-SS	VOC'S 54 COMP.	2000	265897-35927	12/16/16K-CMM	11/29/17	50
02SI	020232-02-SS	Vinyl Acetate(SS)	2000	292243-37196	12/16/16L-CMM	02/01/17	50
02SI	020049-02-SS	HEXACHLOROETHANE (SS)	1000	295337-37383	01/10/17D-DG	12/19/18	100
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	1800
01/10/17S							
250ug/ml TBA/IBA/Acetonitrile/Acrolein/2-P							
Exp:02/10/17			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
02SI	120166-01-SS	VOC Mix 4-3 (SS)	2000	258040-37230	01/10/17EDG	08/22/18	250
02SI	020229-09-SS	Acrolein SOLUTION (SS)	10000	294146-37314	01/10/17GDG	01/14/17	50
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	1700
8260 water		spiked with		Total Vol			
CCV/LCS	10ug/L Vol Std	10uL of 50ug/ml Std #7		50mL P&T H2O			
Ending CCV		10uL of 50ug/ml Std #8					
		10uL of 50ug/ml Std #1					
		10uL of 50ug/ml Std #2					
		25uL of 250ug/ml Std TBA					
X4 ketones							
LCS	10ug/L Vol Std	10uL of 50ug/ml Std #7		50mL P&T H2O			
		10uL of 50ug/ml Std #8					
		10uL of 50ug/ml Std #1					
		40uL of 50ug/ml Std #2					
		25uL of 250ug/ml Std TBA					
8260 soil		spiked with		Total Vol			
CCV/LCS	50ug/Kg Vol Std	5uL of 50ug/ml Std #7		5mL P&T H2O			
Ending CCV		5uL of 50ug/ml Std #8					
		5uL of 50ug/ml Std #1					
		5uL of 50ug/ml Std #2					
		5uL of 250ug/ml Std TBA					
Matrix spikes are prepared with same standards as ccv (see above) into the sample.							
8260water		spiked with		Total Vol			
SS	10ug/L STD	10uL of 50ug/ml Std #4		50mL P&T H2O			
		10uL of 50ug/ml Std #5					
		10uL of 50ug/ml Std #6					
		25uL of 250ug/ml Std TBA					
8260 SOIL	50ug/Kg STD	5uL of 50ug/ml Std #4		Total Vol			
SS		5uL of 50ug/ml Std #5		5mL P&T H2O			
		5uL of 50ug/ml Std #6					
		5uL of 250ug/ml Std TBA					

Injection Log

Directory: M:\LOKI\DATA\170111\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	0111L03.D	1	5ng- BFB STD 12-15-16	W IS&S 1/3/17, 01/11/17	11 Jan 17 11:00
2	4	0111L05.D	1	0.3ug/L VOC STD 1/11/17J	W IS&S 1/3/17, 01/11/17	11 Jan 17 11:56
3	5	0111L06.D	1	0.5ug/L VOC STD 1/11/17K	W IS&S 1/3/17, 01/11/17	11 Jan 17 12:24
4	6	0111L07.D	1	1.0ug/L VOC STD 1/11/17L	W IS&S 1/3/17, 01/11/17	11 Jan 17 12:52
5	7	0111L08.D	1	2.0ug/L VOC STD 1/11/17M	W IS&S 1/3/17, 01/11/17	11 Jan 17 13:20
6	8	0111L09.D	1	5.0ug/L VOC STD 1/11/17N	W IS&S 1/3/17, 01/11/17	11 Jan 17 13:48
7	9	0111L10.D	1	10ug/L VOC STD 1/11/17O	W IS&S 1/3/17, 01/11/17	11 Jan 17 14:16
8	10	0111L11.D	1	20ug/L VOC STD 1/11/17P	W IS&S 1/3/17, 01/11/17	11 Jan 17 14:44
9	11	0111L12.D	1	40ug/L VOC STD 1/11/17Q	W IS&S 1/3/17, 01/11/17	11 Jan 17 15:12
10	12	0111L13.D	1	100ug/L VOC STD 1/11/17R	W IS&S 1/3/17, 01/11/17	11 Jan 17 15:41
11	17	0111L18.D	1	(SS)10ug/L VOC STD 1/11/17	W IS&S 1/3/17, 01/11/17	11 Jan 17 18:01
12	31	0113L34.D	1	5ng- BFB STD 12-15-16	W IS&S 1/3/17, 01/11/17	13 Jan 17 23:30
13	32	0113L35.D	1	170113B CCV/LCS-1WL 10ug/L	W IS&S 1/3/17, 01/11/17	13 Jan 17 23:58
14	39	0113L42.D	1	170113B BLK-1WL	W IS&S 1/3/17, 01/11/17	14 Jan 17 3:14
15	53	0113L56.D	1	AZ48914W01	W IS&S 1/3/17, 01/11/17	14 Jan 17 9:46
16	54	0113L57.D	1	AZ48915W01	W IS&S 1/3/17, 01/11/17	14 Jan 17 10:14
17	55	0113L58.D	1	AZ48916W01	W IS&S 1/3/17, 01/11/17	14 Jan 17 10:42
18	56	0113L59.D	1	AZ48917W01	W IS&S 1/3/17, 01/11/17	14 Jan 17 11:10
19	57	0113L60.D	1	Ending CCV 8260 10ug/L 1/13/17	W IS&S 1/3/17, 01/11/17	14 Jan 17 11:38

Injection Log

Directory: M:\MAX\DATA\M170111\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0111M01.D	1	5ng BFB STD 12/15/16	2ul	11 Jan 17 9:34
2	4	0111M06.D	1	0.3ug/L VOC STD 1/11/17A	IS&S 10/20/16	11 Jan 17 11:24
3	5	0111M07.D	1	0.5ug/L VOC STD 1/11/17B	IS&S 10/20/16	11 Jan 17 11:52
4	6	0111M08.D	1	1.0ug/L VOC STD 1/11/17C	IS&S 10/20/16	11 Jan 17 12:21
5	7	0111M09.D	1	2.0ug/L VOC STD 1/11/17D	IS&S 10/20/16	11 Jan 17 12:49
6	8	0111M10.D	1	5.0ug/L VOC STD 1/11/17E	IS&S 10/20/16	11 Jan 17 13:17
7	9	0111M11.D	1	10ug/L VOC STD 1/11/17F	IS&S 10/20/16	11 Jan 17 13:46
8	10	0111M12.D	1	20ug/L VOC STD 1/11/17G	IS&S 10/20/16	11 Jan 17 14:14
9	11	0111M13.D	1	40ug/L VOC STD 1/11/17H	IS&S 10/20/16	11 Jan 17 14:42
10	12	0111M14.D	1	100ug/L VOC STD 1/11/17I	IS&S 10/20/16	11 Jan 17 15:10
11	17	0111M19.D	1	(SS)10ug/L VOC STD 1/11/17	IS&S 10/20/16	11 Jan 17 17:32
12	1	0113M10.D	1	5ng BFB STD 12/15/16	IS&S 10/20/16	13 Jan 17 13:32
13	3	0113M12.D	1	170113A CCV/LCS-1WM 10ug/L	IS&S 10/20/16	13 Jan 17 14:28
14	11	0113M20.D	1	170113A BLK-1WM	IS&S 10/20/16	13 Jan 17 18:14
15	24	0113M33.D	1	AZ48918W01	IS&S 10/20/16	14 Jan 17 00:21
16	25	0113M34.D	1	AZ48919W01	IS&S 10/20/16	14 Jan 17 00:49
17	26	0113M35.D	1	Ending CCV 8260 10ug/L 1/13/17	IS&S 10/20/16	14 Jan 17 1:17
18	30	0113M39.D	1	5ng BFB STD 12/15/16	IS&S 10/20/16	14 Jan 17 3:10
19	31	0113M40.D	1	170113B CCV/LCS-1WM 10ug/L	IS&S 10/20/16	14 Jan 17 3:38
20	38	0113M47.D	1	170113B BLK-1WM	IS&S 10/20/16	14 Jan 17 6:55
21	39	0113M48.D	1	AZ48920W01	IS&S 10/20/16	14 Jan 17 7:24
22	40	0113M49.D	1	AZ48921W01	IS&S 10/20/16	14 Jan 17 7:52
23	41	0113M50.D	1	AZ48922W01	IS&S 10/20/16	14 Jan 17 8:20
24	42	0113M51.D	1	AZ48923W01	IS&S 10/20/16	14 Jan 17 8:48
25	43	0113M52.D	1	AZ48924W01	IS&S 10/20/16	14 Jan 17 9:17
26	44	0113M53.D	1	AZ48925W01	IS&S 10/20/16	14 Jan 17 9:45
27	45	0113M54.D	1	AZ48926W01	IS&S 10/20/16	14 Jan 17 10:13
28	46	0113M55.D	1	Ending CCV 8260 10ug/L 1/13/17	IS&S 10/20/16	14 Jan 17 10:41

ORGANICS

APPL, INC.

ORGANICS
QC Summary

APPL, INC.

Method Blank
EPA 8260B GRO WATER

Blank Name/QCG: **170113W-48918 - 215486**
Batch ID: #GRO86-170113AM

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/13/17	01/13/17
BLANK	SURROGATE: 4-BROMOFLUORO	93.3	85-114			%	01/13/17	01/13/17

Quant Method: MGAS6111.
Run #: 0113M20
Instrument: Max
Sequence: M170111
Initials: SV

GC SC-Blank-REG MDLs-DOD
Printed: 01/16/17 4:09:29 PM

Method Blank
EPA 8260B GRO WATER

Blank Name/QCG: **170113W-48920 - 215485**
Batch ID: #GRO86-170113BM

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/14/17	01/14/17
BLANK	SURROGATE: 4-BROMOFLUORO	95.4	85-114			%	01/14/17	01/14/17

Quant Method: MGAS6111.
Run #: 0113M47
Instrument: Max
Sequence: M170111
Initials: SV

GC SC-Blank-REG MDLs-DOD
Printed: 01/16/17 4:09:29 PM

Method Blank
EPA 8260B GRO WATER

Blank Name/QCG: **170113W-48873 - 215505**
Batch ID: #GRO86-170113BL

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/14/17	01/14/17
BLANK	SURROGATE: 4-BROMOFLUORO	97.7	85-114			%	01/14/17	01/14/17

Quant Method: LGAS6112.M
Run #: 0113L42
Instrument: Loki
Sequence: 170111
Initials: ARO

GC SC-Blank-REG MDLs-DOD
Printed: 01/16/17 4:09:29 PM

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81971

Case No: 81971 Date Analyzed: 01/13/17

Matrix: WATER Instrument: Max

APPL ID.	Client Sample No.	SURROGATE: 4-BROMOFLUOROBENZENE (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
170113AM-LCS	Lab Control Spike	85-114	96.8				
170113AM-BLK	Blank	85-114	93.3				
AZ48918	ERH199	85-114	100.0				
AZ48919	ERH200	85-114	97.0				

Comments: Batch: #GRO86-170113AM

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81971

Case No: 81971 Date Analyzed: 01/14/17

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: 4-BROMOFLUOROBENZENE (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
170113BL-LCS	Lab Control Spike	85-114	98.8				
170113BL-BLK	Blank	85-114	97.7				
AZ48914	ERH171	85-114	97.5				
AZ48915	ERH172	85-114	96.7				
AZ48916	ERH178	85-114	96.2				
AZ48917	ERH185	85-114	93.3				

Comments: Batch: #GRO86-170113BL

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 81971

Case No: 81971 Date Analyzed: 01/14/17

Matrix: WATER Instrument: Max

APPL ID.	Client Sample No.	SURROGATE: 4-BROMOFLUOROBENZENE (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
170113BM-LCS	Lab Control Spike	85-114	98.0				
170113BM-BLK	Blank	85-114	95.4				
AZ48920	ERH201	85-114	96.6				
AZ48921	ERH181	85-114	95.3				
AZ48922	ERH203	85-114	95.3				
AZ48923	ERH180	85-114	94.7				
AZ48924	ERH183	85-114	94.7				
AZ48925	ERH184	85-114	96.2				
AZ48926	ERH202	85-114	95.0				

Comments: Batch: #GRO86-170113BM

Laboratory Control Spike Recovery
EPA 8260B GRO WATER

APPL ID: **170113W-48918 LCS - 215486**
Batch ID: #GRO86-170113AM

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
GASOLINE RANGE ORGANICS	300	359	120	78-122
SURROGATE: 4-BROMOFLUOROBENZE	25.0	24.2	96.8	85-114

Comments: _____

Primary	SPK
Quant Method :	MGAS6111.M
Extraction Date :	01/13/17
Analysis Date :	01/13/17
Instrument :	Max
Run :	0113M14
Initials :	SV

Printed: 01/16/17 4:09:22 PM
APPL Standard LCS

Laboratory Control Spike Recovery

EPA 8260B GRO WATER

APPL ID: **170114W-48920 LCS - 215485**
Batch ID: #GRO86-170113BM

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
GASOLINE RANGE ORGANICS	300	309	103	78-122
SURROGATE: 4-BROMOFLUOROBENZE	25.0	24.5	98.0	85-114

Comments: _____

Primary	SPK
Quant Method :	MGAS6111.M
Extraction Date :	01/14/17
Analysis Date :	01/14/17
Instrument :	Max
Run :	0113M43
Initials :	SV

Printed: 01/16/17 4:09:22 PM
APPL Standard LCS

Laboratory Control Spike Recovery
EPA 8260B GRO WATER

APPL ID: **170114W-48873 LCS - 215505**
Batch ID: #GRO86-170113BL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
GASOLINE RANGE ORGANICS	300	293	97.7	78-122
SURROGATE: 4-BROMOFLUOROBENZE	25.0	24.7	98.8	85-114

Comments: _____

Primary	SPK
Quant Method :	LGAS6112.M
Extraction Date :	01/14/17
Analysis Date :	01/14/17
Instrument :	Loki
Run :	0113L38
Initials :	ARO

Printed: 01/16/17 4:09:22 PM
APPL Standard LCS

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81971

Case No: 81971 Date Analyzed: 01/13/17

Matrix: WATER Instrument: Max

Blank ID: 170113AM-BLK Time Analyzed: 1814

APPL ID.	Client Sample No.	File ID.	Date Analyzed
170113AM-LCS	Lab Control Spike	0113M14	01/13/17 1525
170113AM-BLK	Blank	0113M20	01/13/17 1814
AZ48918	ERH199	0113M33	01/14/17 0021
AZ48919	ERH200	0113M34	01/14/17 0049

Comments: Batch: #GRO86-170113AM

Printed: 01/16/17 4:09:19 PM
Form 4, Blank Summary

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81971

Case No: 81971 Date Analyzed: 01/14/17

Matrix: WATER Instrument: Max

Blank ID: 170113BM-BLK Time Analyzed: 0655

APPL ID.	Client Sample No.	File ID.	Date Analyzed
170113BM-LCS	Lab Control Spike	0113M43	01/14/17 0503
170113BM-BLK	Blank	0113M47	01/14/17 0655
AZ48920	ERH201	0113M48	01/14/17 0724
AZ48921	ERH181	0113M49	01/14/17 0752
AZ48922	ERH203	0113M50	01/14/17 0820
AZ48923	ERH180	0113M51	01/14/17 0848
AZ48924	ERH183	0113M52	01/14/17 0917
AZ48925	ERH184	0113M53	01/14/17 0945
AZ48926	ERH202	0113M54	01/14/17 1013

Comments: Batch: #GRO86-170113BM

Printed: 01/16/17 4:09:19 PM
Form 4, Blank Summary

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81971

Case No: 81971 Date Analyzed: 01/14/17

Matrix: WATER Instrument: Loki

Blank ID: 170113BL-BLK Time Analyzed: 0314

APPL ID.	Client Sample No.	File ID.	Date Analyzed
170113BL-LCS	Lab Control Spike	0113L38	01/14/17 0122
170113BL-BLK	Blank	0113L42	01/14/17 0314
AZ48914	ERH171	0113L56	01/14/17 0946
AZ48915	ERH172	0113L57	01/14/17 1014
AZ48916	ERH178	0113L58	01/14/17 1042
AZ48917	ERH185	0113L59	01/14/17 1110

Comments: Batch: #GRO86-170113BL

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81971

Lab File ID (Standard): 0111M11.D Date Analyzed: 01/11/17

Instrument ID: Max Time Analyzed: 13:46

GC Column: ID: Heated Purge: (Y/N)

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	337093	5.51	240952	9.15	127119	12.35
	UPPER LIMIT	674186	6.01	481904	9.65	254238	12.85
	LOWER LIMIT	168547	5.01	120476	8.65	63560	11.85
	SAMPLE NO.						
01	170113A CCV/LCS-1WM	334937	5.51	233465	9.15	117025	12.35
02	170113A BLK-1WM	315554	5.51	219996	9.15	105148	12.35
03	AZ48918W01	335165	5.51	230396	9.15	112749	12.35
04	AZ48919W01	332278	5.51	236295	9.15	116729	12.35
05	Ending CCV GAS 300ug	328763	5.51	230063	9.15	116272	12.35
06	170113B CCV/LCS-1WM	330100	5.51	235010	9.15	118038	12.35
07	170113B BLK-1WM	319345	5.51	225458	9.15	108226	12.35
08	AZ48920W01	330948	5.51	239142	9.15	115406	12.35
09	AZ48921W01	321393	5.51	225884	9.15	110116	12.35
10	AZ48922W01	314191	5.51	219674	9.15	108304	12.35
11	AZ48923W01	313570	5.51	221030	9.15	107364	12.35
12	AZ48924W01	320609	5.51	224887	9.15	110906	12.35
13	AZ48925W01	311300	5.51	218303	9.16	107245	12.35
14	AZ48926W01	313225	5.51	223248	9.15	108140	12.35
15	Ending CCV GAS 300ug	326182	5.51	232384	9.15	116635	12.35
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 81971

Lab File ID (Standard): 0111L10.D Date Analyzed: 01/11/17

Instrument ID: Loki Time Analyzed: 14:16

GC Column: ID: Heated Purge: (Y/N)

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	363392	5.38	319296	8.70	176960	11.03
	UPPER LIMIT	726784	5.88	638592	9.20	353920	11.53
	LOWER LIMIT	181696	4.88	159648	8.20	88480	10.53
	SAMPLE NO.						
01	170113B CCV/LCS-1WL	338560	5.38	319680	8.70	166464	11.03
02	170113B BLK-1WL	326912	5.38	302016	8.70	145664	11.03
03	AZ48914W01	307200	5.38	289728	8.70	144704	11.03
04	AZ48915W01	312704	5.38	290944	8.70	150848	11.03
05	AZ48916W01	310912	5.38	292928	8.70	142336	11.03
06	AZ48917W01	301632	5.38	282752	8.70	142400	11.03
07	Ending CCV GAS 300ug	319936	5.38	296064	8.70	154560	11.03
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

ORGANICS
Sample Data

APPL, INC.

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH171
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48914
QCG: #GRO86-170113BL-215505

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	97.5	85-114			%	01/14/17	01/14/17

Quant Method: LGAS6112.M
Run #: 0113L56
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/16/17 4:09:16 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L56.D
Acq On : 14 Jan 17 9:46
Sample : AZ48914W01
Misc : W IS&S 1/3/17, 01/11/17

Vial: 53
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 11:18 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	651300	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	875361	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	901993	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

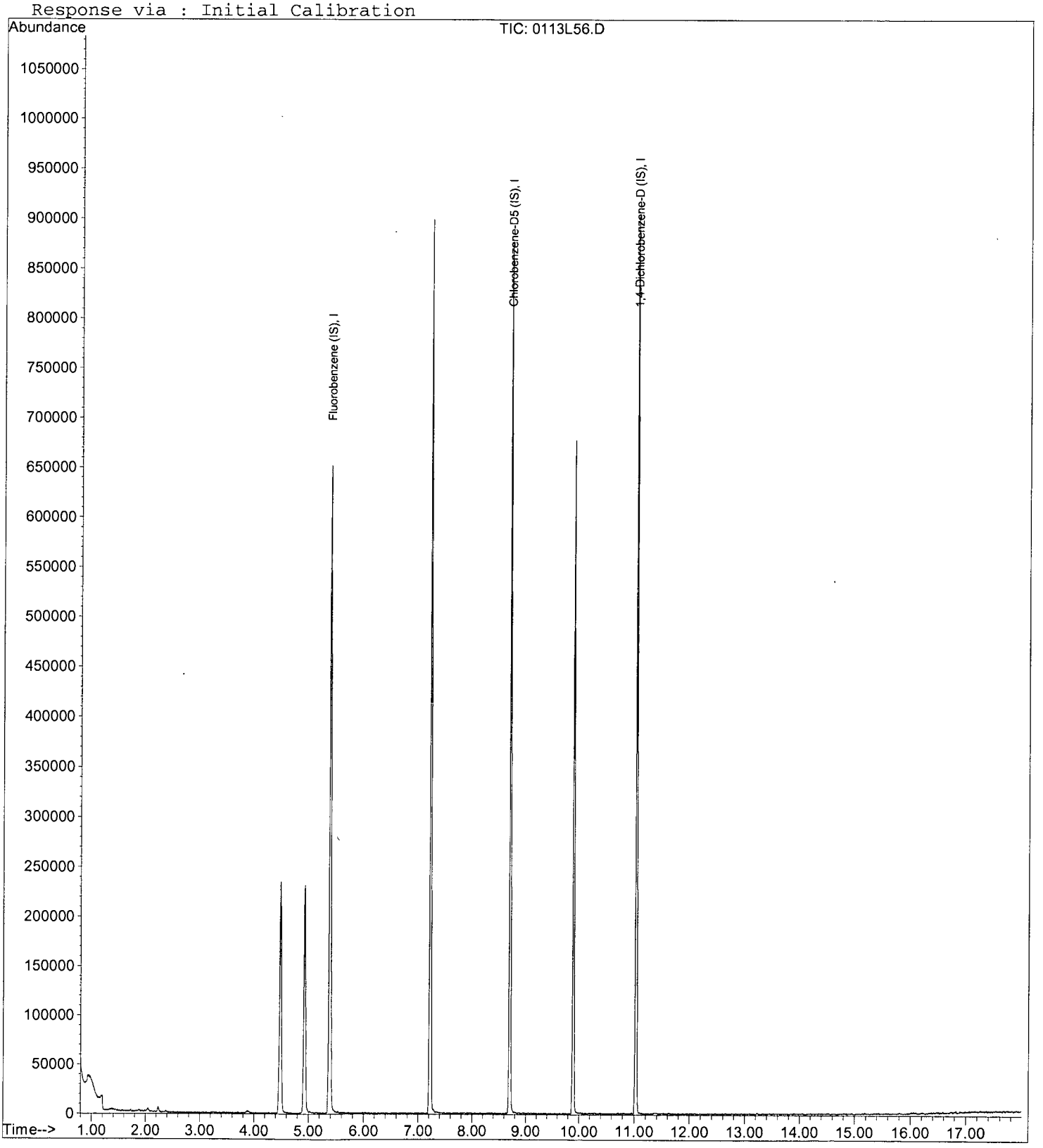
Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L56.D
Acq On : 14 Jan 17 9:46
Sample : AZ48914W01
Misc : W IS&S 1/3/17, 01/11/17

Vial: 53
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 11:18 2017 Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L56.D Vial: 53
Acq On : 14 Jan 17 9:46 Operator: PM,DG,SV,CMM
Sample : AZ48914W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 13:56 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	307200	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	289728	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	144704	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	173290	25.28	ppb	0.00
Spiked Amount 25.000			Recovery =	101.116%		
3) 1,2-DCA-D4(S)	4.92	65	184941	24.88	ppb	0.00
Spiked Amount 25.000			Recovery =	99.504%		
5) Toluene-D8(S)	7.22	98	568720	24.52	ppb	0.00
Spiked Amount 25.000			Recovery =	98.092%		
6) 4-Bromofluorobenzene(S)	9.89	95	196109	24.37	ppb	0.00
Spiked Amount 25.000			Recovery =	97.476%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH172
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48915
QCG: #GRO86-170113BL-215505

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	96.7	85-114			%	01/14/17	01/14/17

Quant Method: LGAS6112.M
Run #: 0113L57
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/16/17 4:09:16 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L57.D Vial: 54
Acq On : 14 Jan 17 10:14 Operator: PM,DG,SV,CMM
Sample : AZ48915W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 11:18 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	650815	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	875591	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	913881	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

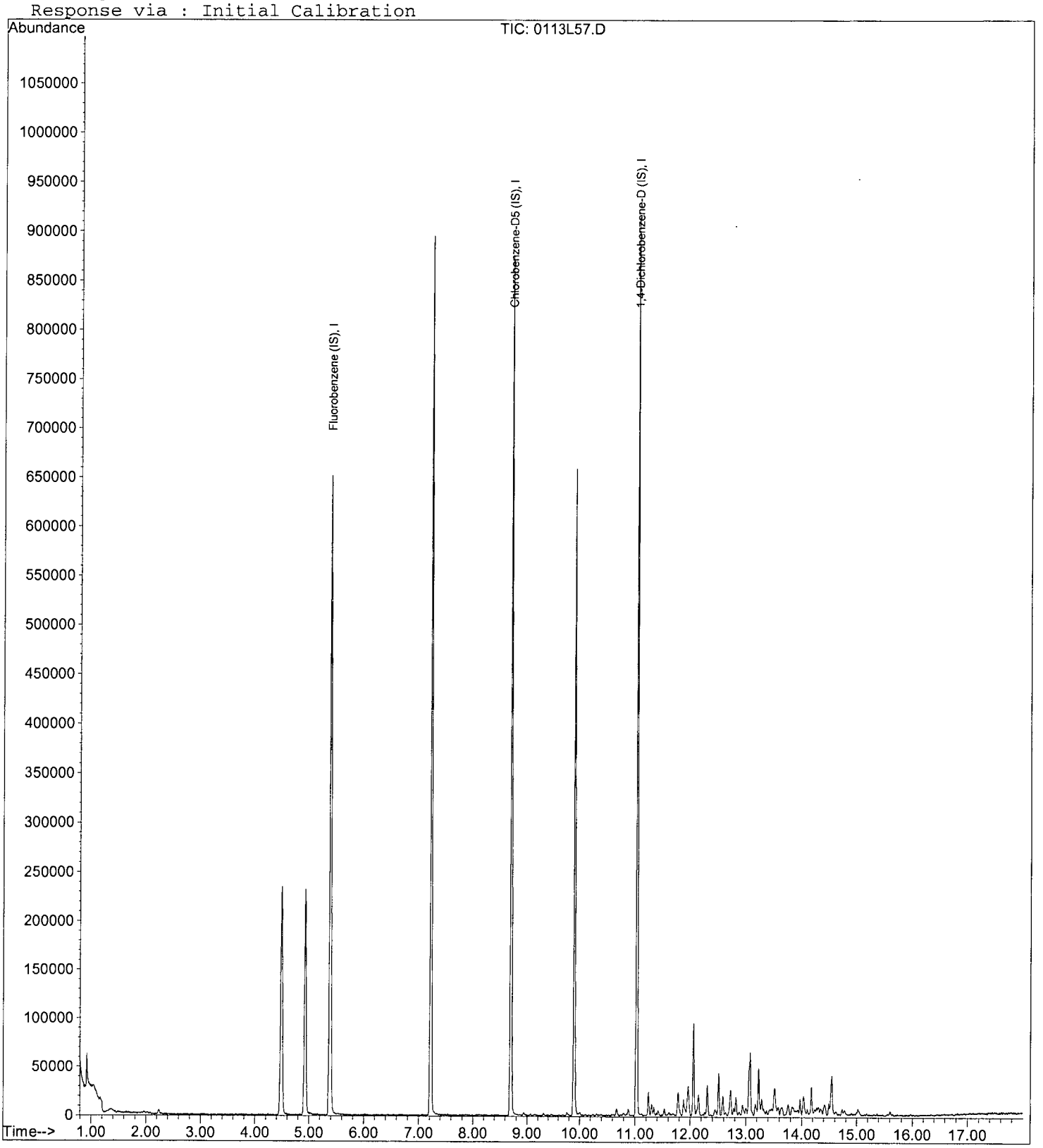
Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L57.D
Acq On : 14 Jan 17 10:14
Sample : AZ48915W01
Misc : W IS&S 1/3/17, 01/11/17

Vial: 54
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 11:18 2017 Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L57.D Vial: 54
Acq On : 14 Jan 17 10:14 Operator: PM,DG,SV,CMM
Sample : AZ48915W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 13:56 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	312704	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	290944	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	150848	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	173905	24.92	ppb	0.00
Spiked Amount 25.000			Recovery =	99.688%		
3) 1,2-DCA-D4(S)	4.92	65	184837	24.42	ppb	0.00
Spiked Amount 25.000			Recovery =	97.700%		
5) Toluene-D8(S)	7.22	98	568667	24.42	ppb	0.00
Spiked Amount 25.000			Recovery =	97.672%		
6) 4-Bromofluorobenzene(S)	9.89	95	195289	24.17	ppb	0.00
Spiked Amount 25.000			Recovery =	96.664%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH178
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48916
QCG: #GRO86-170113BL-215505

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	96.2	85-114			%	01/14/17	01/14/17

Quant Method: LGAS6112.M
Run #: 0113L58
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/16/17 4:09:16 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L58.D
Acq On : 14 Jan 17 10:42
Sample : AZ48916W01
Misc : W IS&S 1/3/17, 01/11/17

Vial: 55
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 11:21 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	650474	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	882280	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	890017	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

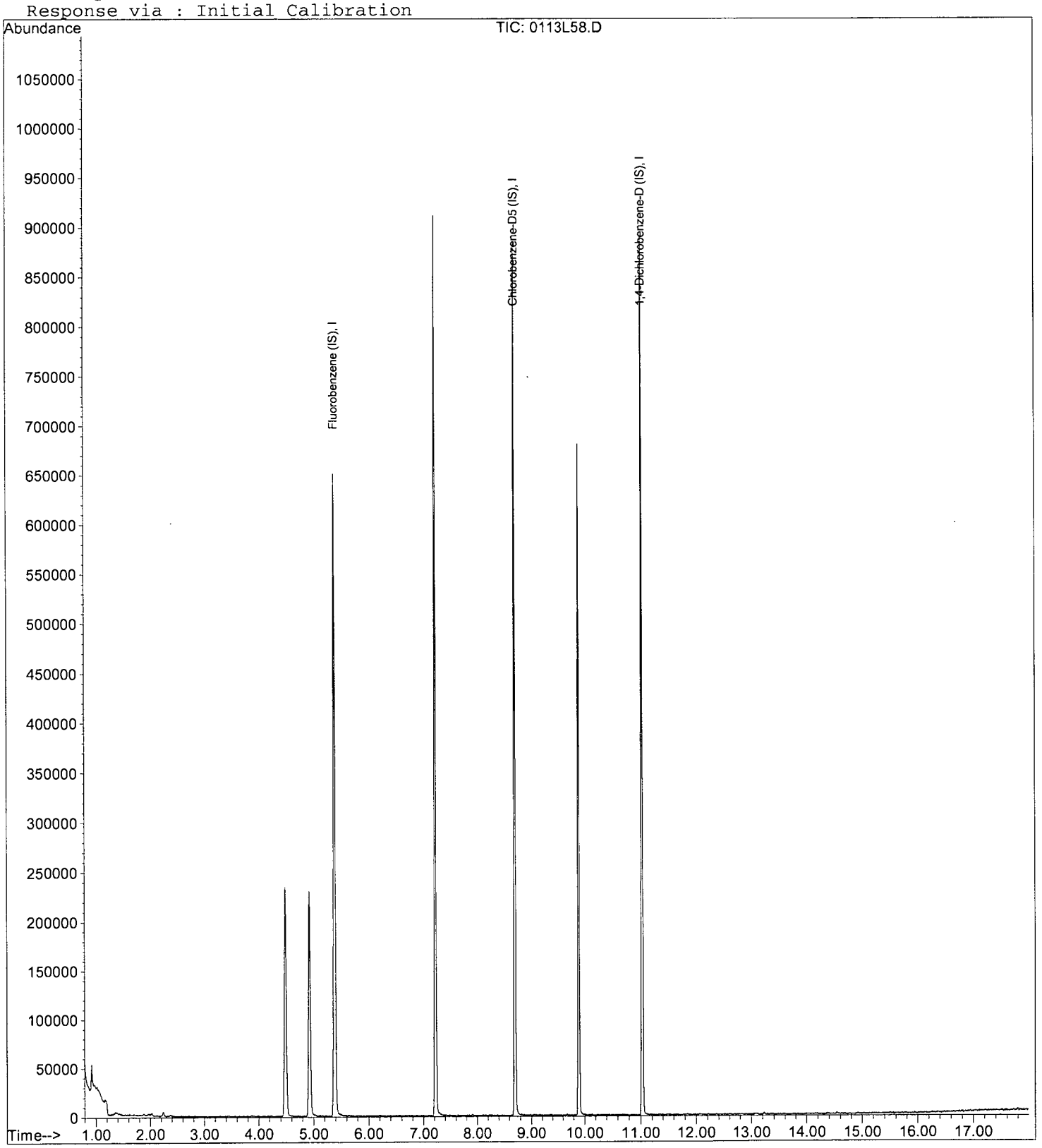
Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L58.D
Acq On : 14 Jan 17 10:42
Sample : AZ48916W01
Misc : W IS&S 1/3/17, 01/11/17

Vial: 55
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 11:21 2017 Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L58.D Vial: 55
Acq On : 14 Jan 17 10:42 Operator: PM,DG,SV,CMM
Sample : AZ48916W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 13:56 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	310912	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	292928	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	142336	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	174916	25.21	ppb	0.00
Spiked Amount 25.000			Recovery =	100.844%		
3) 1,2-DCA-D4(S)	4.92	65	185176	24.61	ppb	0.00
Spiked Amount 25.000			Recovery =	98.444%		
5) Toluene-D8(S)	7.22	98	573766	24.47	ppb	0.00
Spiked Amount 25.000			Recovery =	97.880%		
6) 4-Bromofluorobenzene(S)	9.89	95	195745	24.06	ppb	0.00
Spiked Amount 25.000			Recovery =	96.232%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH185
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48917
QCG: #GRO86-170113BL-215505

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	93.3	85-114			%	01/14/17	01/14/17

Quant Method: LGAS6112.M
Run #: 0113L59
Instrument: Loki
Sequence: 170111
Dilution Factor: 1
Initials: ARO

Printed: 01/16/17 4:09:16 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L59.D Vial: 56
Acq On : 14 Jan 17 11:10 Operator: PM,DG,SV,CMM
Sample : AZ48917W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 11:21 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	629850	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	855806	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	864642	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

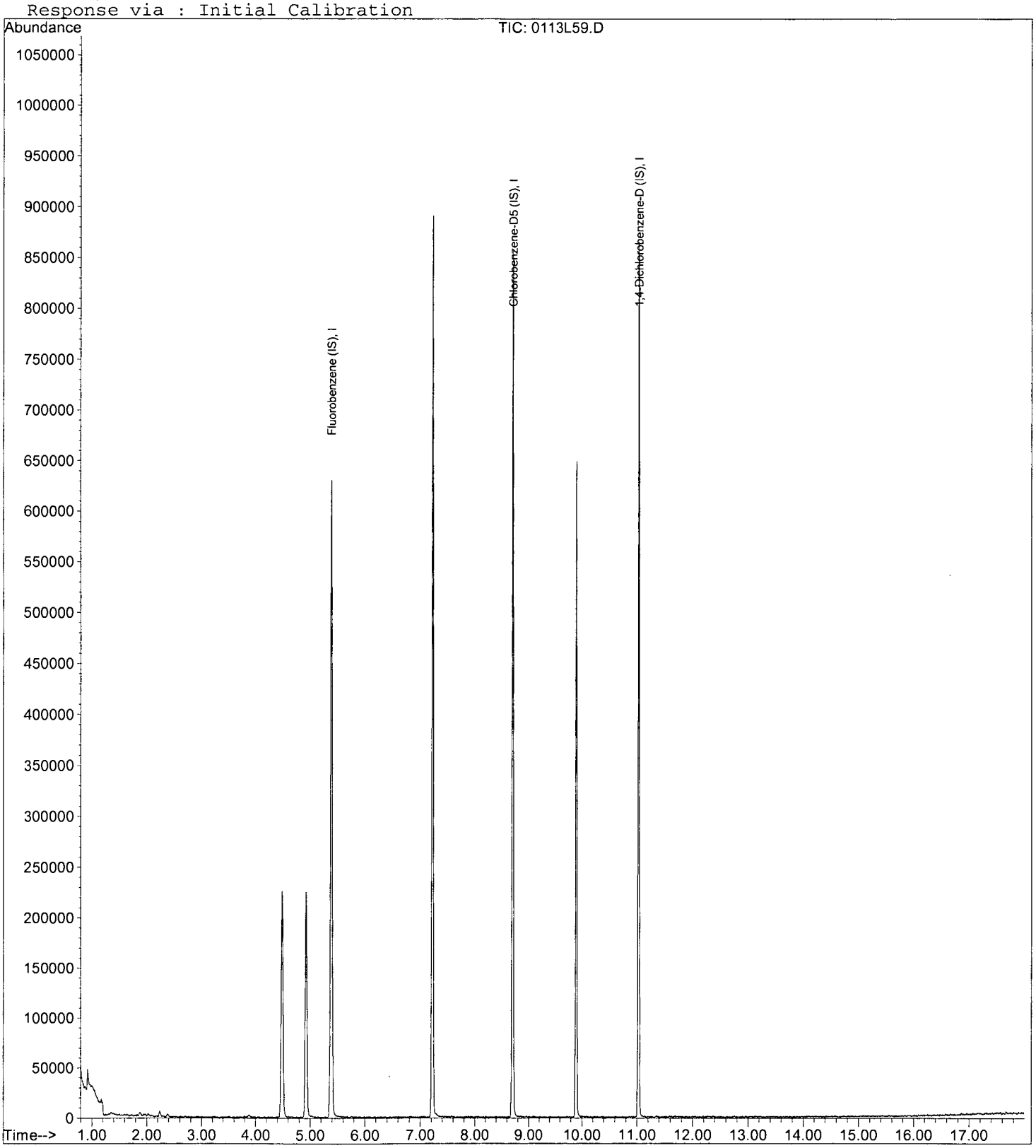
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L59.D Vial: 56
Acq On : 14 Jan 17 11:10 Operator: PM,DG,SV,CMM
Sample : AZ48917W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 11:21 2017 Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L59.D Vial: 56
Acq On : 14 Jan 17 11:10 Operator: PM,DG,SV,CMM
Sample : AZ48917W01 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 13:56 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	301632	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	282752	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	142400	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	170614	25.35	ppb	0.00
Spiked Amount 25.000			Recovery = 101.392%			
3) 1,2-DCA-D4(S)	4.92	65	177460	24.31	ppb	0.00
Spiked Amount 25.000			Recovery = 97.244%			
5) Toluene-D8(S)	7.22	98	551769	24.38	ppb	0.00
Spiked Amount 25.000			Recovery = 97.516%			
6) 4-Bromofluorobenzene(S)	9.89	95	183139	23.32	ppb	0.00
Spiked Amount 25.000			Recovery = 93.276%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH199

Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971

APPL ID: AZ48918

QCG: #GRO86-170113AM-215486

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	100.0	85-114			%	01/14/17	01/14/17

Quant Method:	MGAS6111.M
Run #:	0113M33
Instrument:	Max
Sequence:	M170111
Dilution Factor:	1
Initials:	SV

Printed: 01/16/17 4:09:16 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0113M33.D Vial: 24
Acq On : 14 Jan 17 00:21 Operator: PM,DG,SV,CMM
Sample : AZ48918W01 Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 16 9:48 2017 Quant Results File: MGAS6111.RES

Quant Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	TIC	346971	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0113M33.D MGAS6111.M Mon Jan 16 10:13:59 2017 Page 1

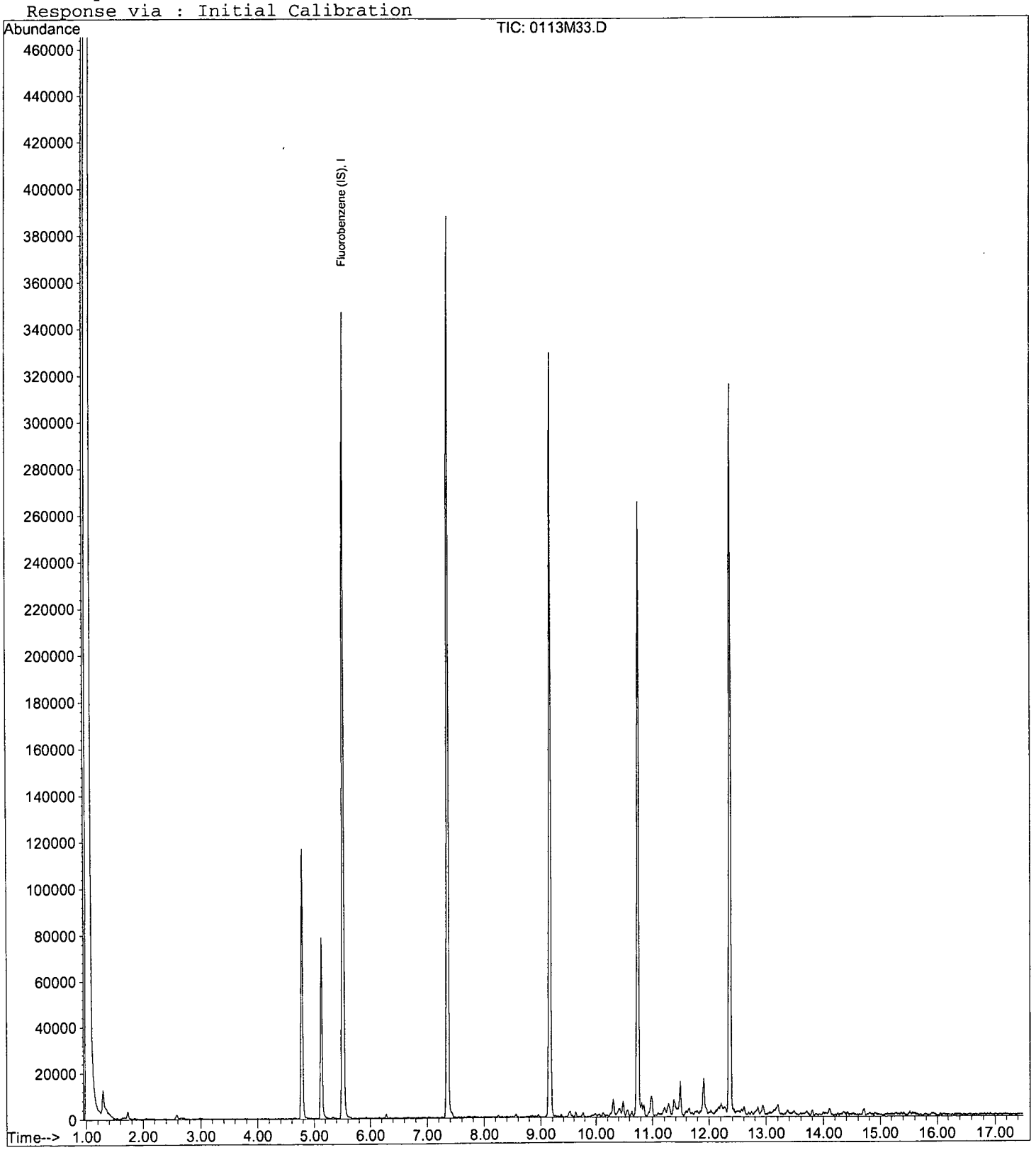
Quantitation Report

Data File : M:\MAX\DATA\M170111\0113M33.D
Acq On : 14 Jan 17 00:21
Sample : AZ48918W01
Misc : IS&S 10/20/16

Vial: 24
Operator: PM,DG,SV,CMM
Inst : Max
Multip1r: 1.00

Quant Time: Jan 16 9:48 2017 Quant Results File: MGAS6111.RES

Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0113M33.D Vial: 24
Acq On : 14 Jan 17 00:21 Operator: PM,DG,SV,CMM
Sample : AZ48918W01 Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 16 10:17 2017 Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	335165	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.15	117	230396	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	112749	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.78	111	72693	24.68179 ppb	0.00
Spiked Amount 25.000			Recovery =	98.728%	
3) 1,2-DCA-D4(S)	5.13	65	57445	23.68740 ppb	0.00
Spiked Amount 25.000			Recovery =	94.748%	
5) Toluene-D8(S)	7.35	98	296032	25.53004 ppb	0.00
Spiked Amount 25.000			Recovery =	102.120%	
6) 4-Bromofluorobenzene(S)	10.74	95	103916	24.99013 ppb	0.00
Spiked Amount 25.000			Recovery =	99.960%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH200
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48919
QCG: #GRO86-170113AM-215486

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	97.0	85-114			%	01/14/17	01/14/17

Quant Method:	MGAS6111.M
Run #:	0113M34
Instrument:	Max
Sequence:	M170111
Dilution Factor:	1
Initials:	SV

Printed: 01/16/17 4:09:16 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0113M34.D
Acq On : 14 Jan 17 00:49
Sample : AZ48919W01
Misc : IS&S 10/20/16

Vial: 25
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 9:48 2017 Quant Results File: MGAS6111.RES

Quant Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	TIC	338953	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

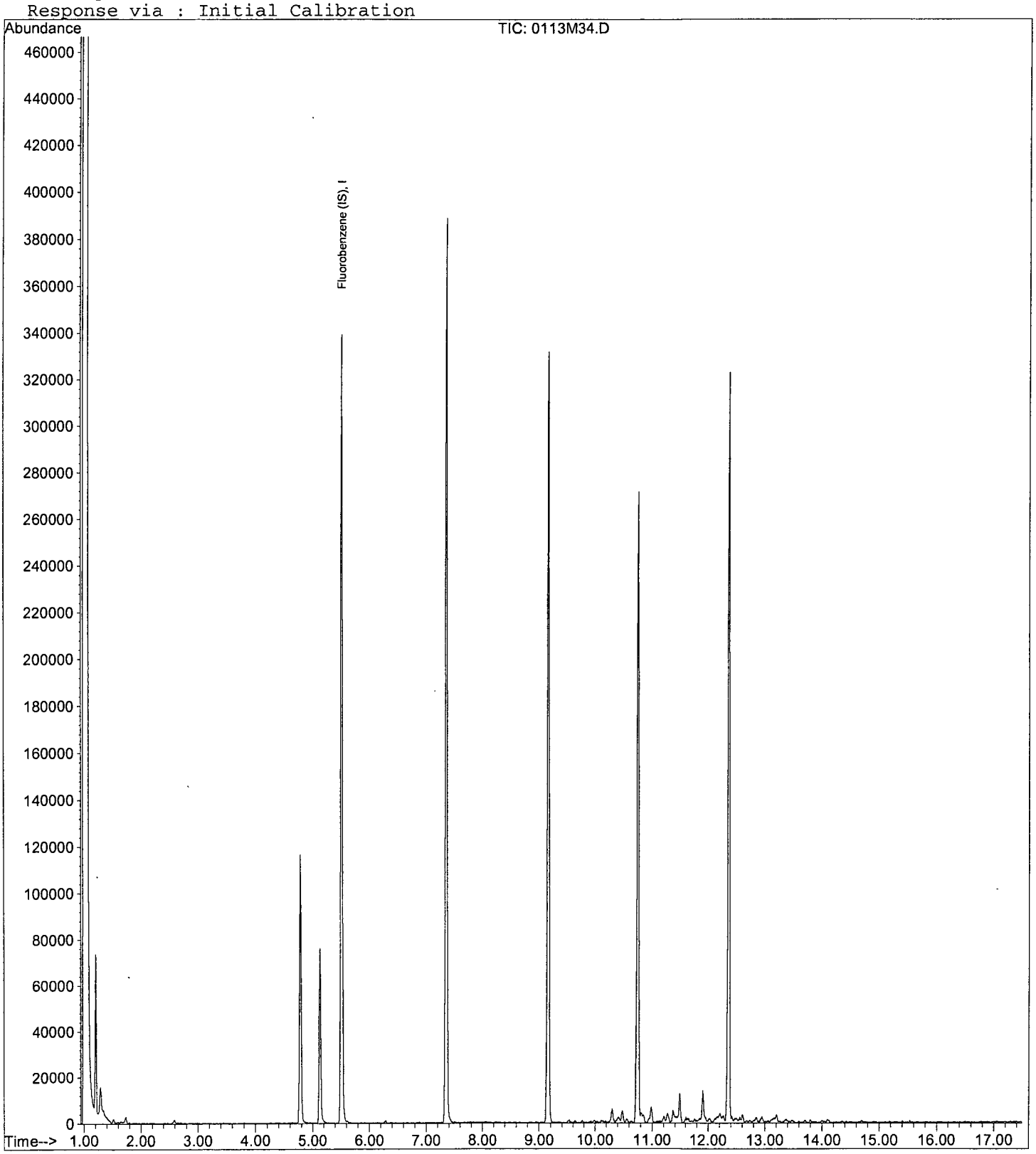
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\M170111\0113M34.D Vial: 25
Acq On : 14 Jan 17 00:49 Operator: PM,DG,SV,CMM
Sample : AZ48919W01 Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 16 9:48 2017 Quant Results File: MGAS6111.RES

Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0113M34.D Vial: 25
Acq On : 14 Jan 17 00:49 Operator: PM,DG,SV,CMM
Sample : AZ48919W01 Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 16 10:17 2017 Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	332278	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.15	117	236295	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	116729	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.78	111	72003	24.65992 ppb	0.00
Spiked Amount 25.000			Recovery =	98.640%	
3) 1,2-DCA-D4(S)	5.13	65	56195	23.37329 ppb	0.00
Spiked Amount 25.000			Recovery =	93.492%	
5) Toluene-D8(S)	7.35	98	293540	24.68315 ppb	0.00
Spiked Amount 25.000			Recovery =	98.732%	
6) 4-Bromofluorobenzene(S)	10.74	95	103458	24.25887 ppb	0.00
Spiked Amount 25.000			Recovery =	97.036%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH201
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48920
QCG: #GRO86-170113BM-215485

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	96.6	85-114			%	01/14/17	01/14/17

Quant Method:	MGAS6111.M
Run #:	0113M48
Instrument:	Max
Sequence:	M170111
Dilution Factor:	1
Initials:	SV

Printed: 01/16/17 4:09:16 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0113M48.D Vial: 39
Acq On : 14 Jan 17 7:24 Operator: PM,DG,SV,CMM
Sample : AZ48920W01 Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 16 9:51 2017 Quant Results File: MGAS6111.RES

Quant Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	TIC	345862	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

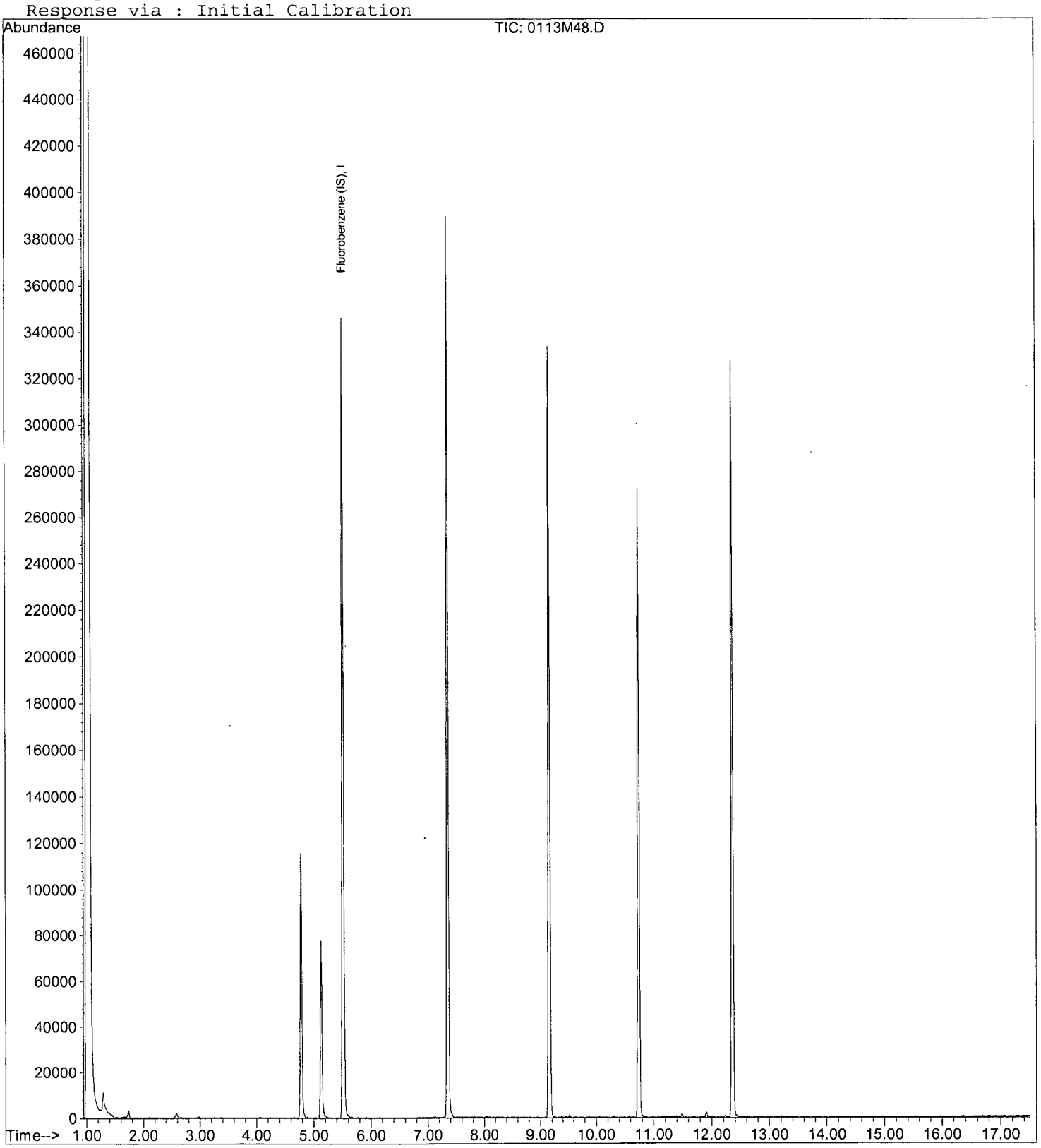
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\M170111\0113M48.D Vial: 39
Acq On : 14 Jan 17 7:24 Operator: PM,DG,SV,CMM
Sample : AZ48920W01 Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 16 9:51 2017 Quant Results File: MGAS6111.RES

Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0113M48.D Vial: 39
Acq On : 14 Jan 17 7:24 Operator: PM,DG,SV,CMM
Sample : AZ48920W01 Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 16 10:17 2017 Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	330948	25.00000	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.15	117	239142	25.00000	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	115406	25.00000	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.78	111	73377	25.23149	ppb	0.00
Spiked Amount 25.000			Recovery = 100.924%			
3) 1,2-DCA-D4(S)	5.13	65	56622	23.64554	ppb	0.00
Spiked Amount 25.000			Recovery = 94.584%			
5) Toluene-D8(S)	7.35	98	293651	24.39852	ppb	0.00
Spiked Amount 25.000			Recovery = 97.596%			
6) 4-Bromofluorobenzene(S)	10.74	95	104260	24.15588	ppb	0.00
Spiked Amount 25.000			Recovery = 96.624%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH181
Sample Collection Date: 01/12/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48921
QCG: #GRO86-170113BM-215485

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	95.3	85-114			%	01/14/17	01/14/17

Quant Method:	MGAS6111.M
Run #:	0113M49
Instrument:	Max
Sequence:	M170111
Dilution Factor:	1
Initials:	SV

Printed: 01/16/17 4:09:16 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0113M49.D Vial: 40
Acq On : 14 Jan 17 7:52 Operator: PM,DG,SV,CMM
Sample : AZ48921W01 Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 16 9:51 2017 Quant Results File: MGAS6111.RES

Quant Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	TIC	329571	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

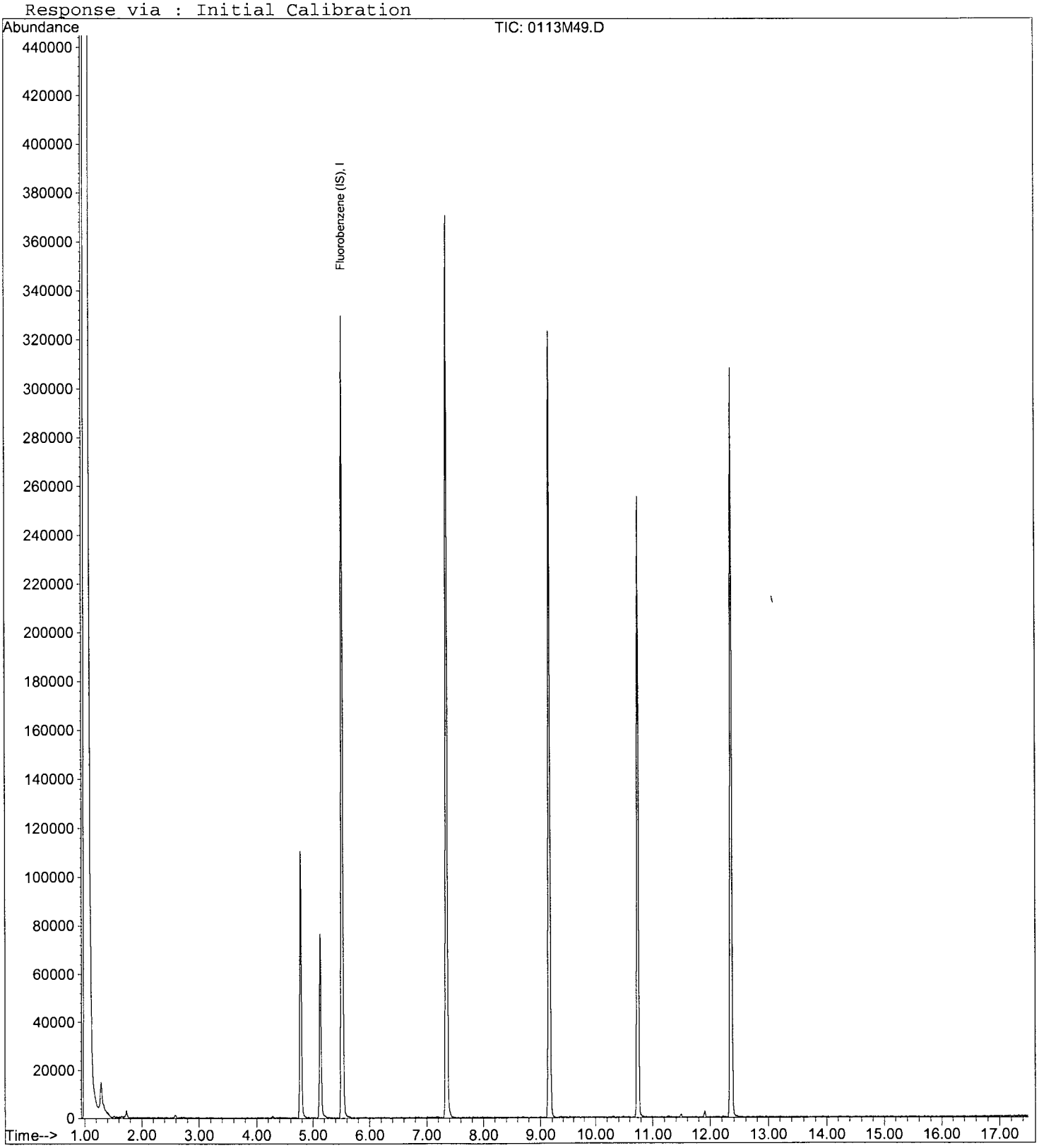
Quantitation Report

Data File : M:\MAX\DATA\M170111\0113M49.D
Acq On : 14 Jan 17 7:52
Sample : AZ48921W01
Misc : IS&S 10/20/16

Vial: 40
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 9:51 2017 Quant Results File: MGAS6111.RES

Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0113M49.D Vial: 40
Acq On : 14 Jan 17 7:52 Operator: PM,DG,SV,CMM
Sample : AZ48921W01 Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 16 10:17 2017 Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	321393	25.00000	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.15	117	225884	25.00000	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	110116	25.00000	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.78	111	68098	24.11241	ppb	0.00
Spiked Amount 25.000			Recovery =	96.448%		
3) 1,2-DCA-D4(S)	5.13	65	56768	24.41130	ppb	0.00
Spiked Amount 25.000			Recovery =	97.644%		
5) Toluene-D8(S)	7.35	98	279492	24.58509	ppb	0.00
Spiked Amount 25.000			Recovery =	98.340%		
6) 4-Bromofluorobenzene(S)	10.74	95	97114	23.82086	ppb	0.00
Spiked Amount 25.000			Recovery =	95.284%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH203
Sample Collection Date: 01/12/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48922
QCG: #GRO86-170113BM-215485

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	95.3	85-114			%	01/14/17	01/14/17

Quant Method: MGAS6111.M
Run #: 0113M50
Instrument: Max
Sequence: M170111
Dilution Factor: 1
Initials: SV

Printed: 01/16/17 4:09:16 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0113M50.D Vial: 41
Acq On : 14 Jan 17 8:20 Operator: PM,DG,SV,CMM
Sample : AZ48922W01 Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 16 9:51 2017 Quant Results File: MGAS6111.RES

Quant Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	TIC	322756	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

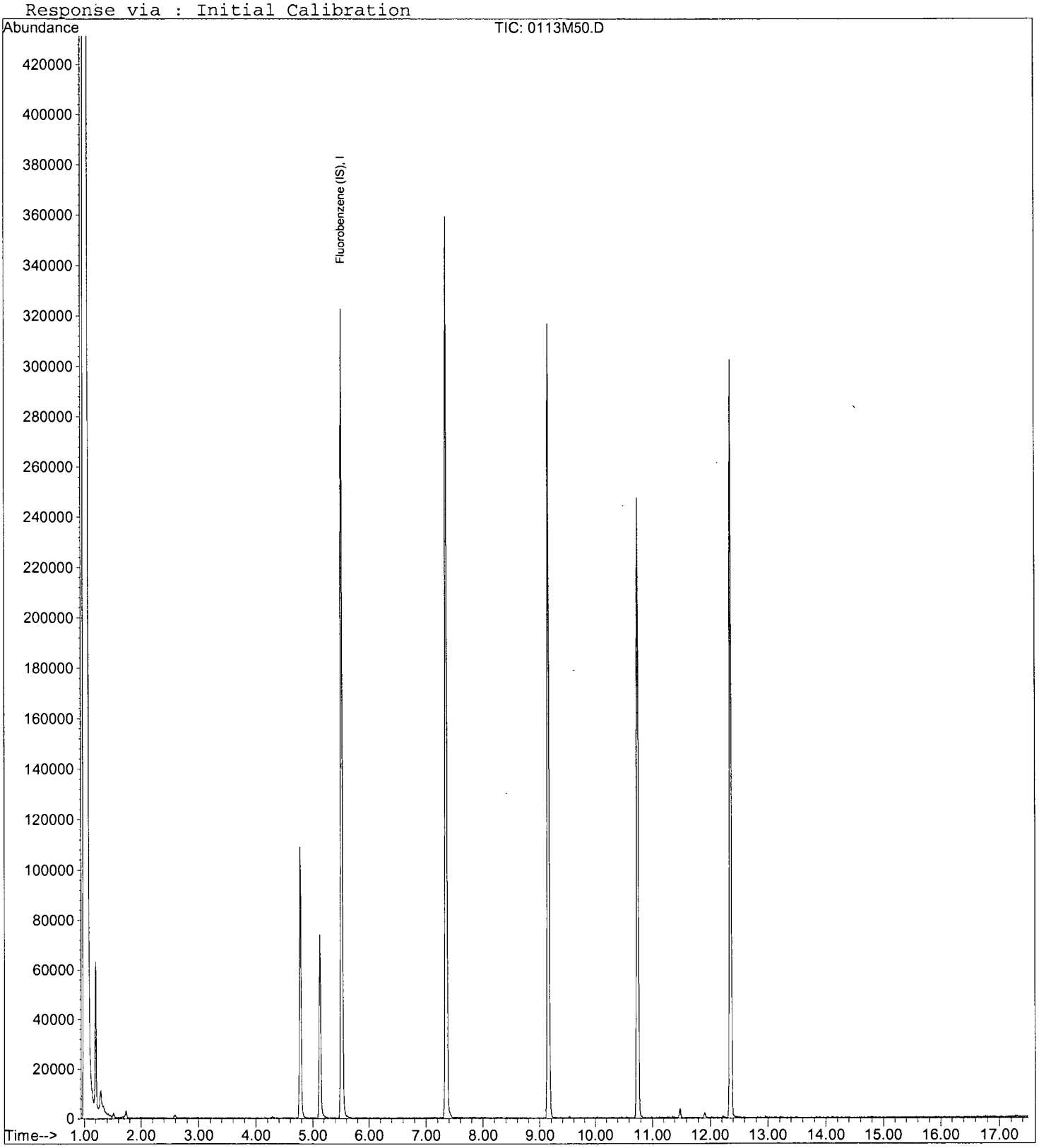
Quantitation Report

Data File : M:\MAX\DATA\M170111\0113M50.D
Acq On : 14 Jan 17 8:20
Sample : AZ48922W01
Misc : IS&S 10/20/16

Vial: 41
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 9:51 2017 Quant Results File: MGAS6111.RES

Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0113M50.D Vial: 41
Acq On : 14 Jan 17 8:20 Operator: PM,DG,SV,CMM
Sample : AZ48922W01 Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 16 10:17 2017 Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	314191	25.00000	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.15	117	219674	25.00000	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	108304	25.00000	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.78	111	66493	24.08379	ppb	0.00
Spiked Amount 25.000			Recovery = 96.336%			
3) 1,2-DCA-D4(S)	5.13	65	55055	24.21736	ppb	0.00
Spiked Amount 25.000			Recovery = 96.868%			
5) Toluene-D8(S)	7.35	98	274406	24.82006	ppb	0.00
Spiked Amount 25.000			Recovery = 99.280%			
6) 4-Bromofluorobenzene(S)	10.74	95	94432	23.81779	ppb	0.00
Spiked Amount 25.000			Recovery = 95.272%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH180

Sample Collection Date: 01/12/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971

APPL ID: AZ48923

QCG: #GRO86-170113BM-215485

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	94.7	85-114			%	01/14/17	01/14/17

Quant Method:	MGAS6111.M
Run #:	0113M51
Instrument:	Max
Sequence:	M170111
Dilution Factor:	1
Initials:	SV

Printed: 01/16/17 4:09:16 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0113M51.D Vial: 42
Acq On : 14 Jan 17 8:48 Operator: PM,DG,SV,CMM
Sample : AZ48923W01 Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 16 9:51 2017 Quant Results File: MGAS6111.RES

Quant Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	TIC	322809	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

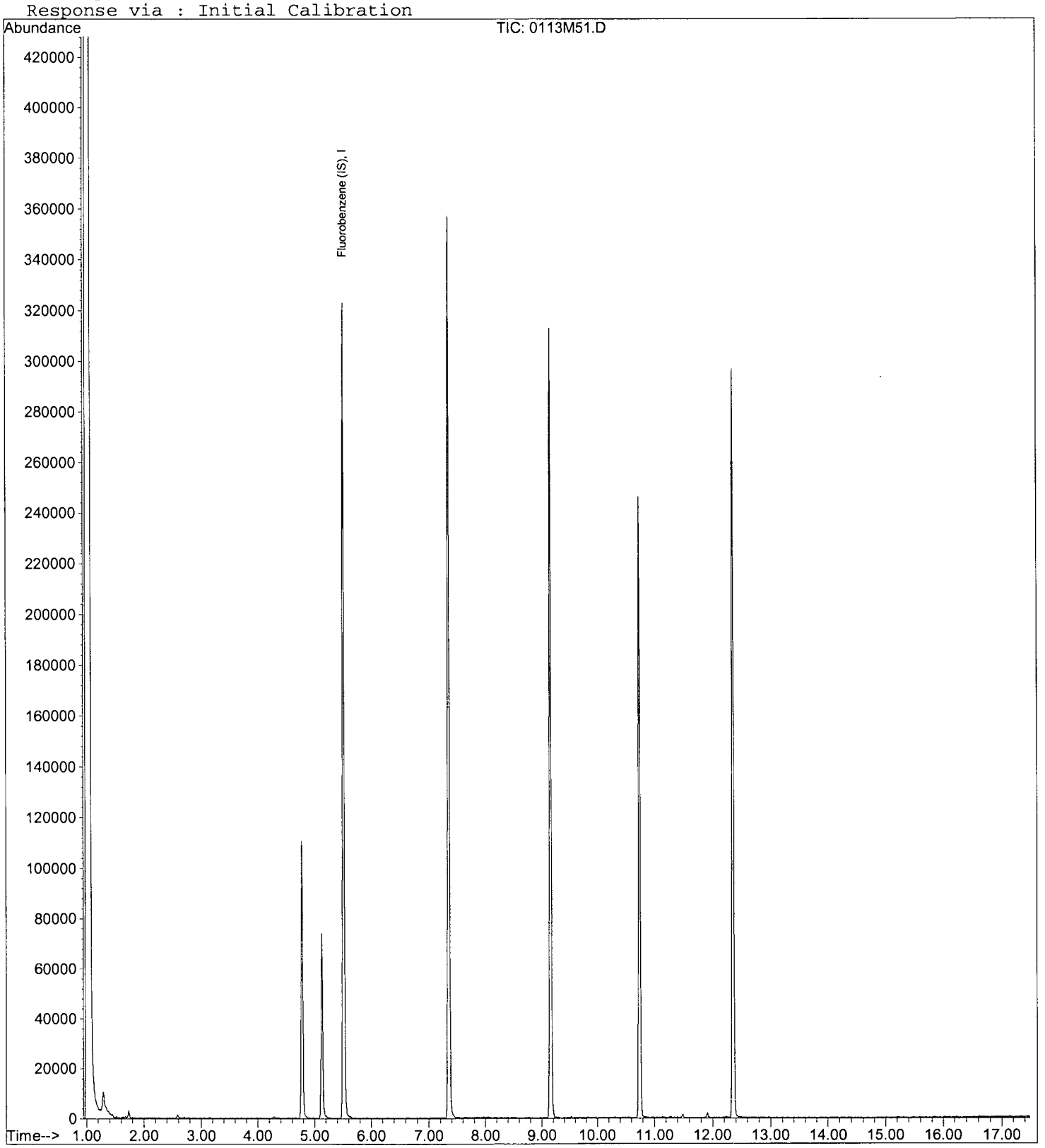
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\M170111\0113M51.D Vial: 42
Acq On : 14 Jan 17 8:48 Operator: PM,DG,SV,CMM
Sample : AZ48923W01 Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 16 9:51 2017 Quant Results File: MGAS6111.RES

Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0113M51.D Vial: 42
Acq On : 14 Jan 17 8:48 Operator: PM,DG,SV,CMM
Sample : AZ48923W01 Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 16 10:17 2017 Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	313570	25.00000	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.15	117	221030	25.00000	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	107364	25.00000	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.78	111	67938	24.65591	ppb	0.00
Spiked Amount 25.000			Recovery = 98.624%			
3) 1,2-DCA-D4(S)	5.13	65	53633	23.63858	ppb	0.00
Spiked Amount 25.000			Recovery = 94.556%			
5) Toluene-D8(S)	7.35	98	274913	24.71337	ppb	0.00
Spiked Amount 25.000			Recovery = 98.852%			
6) 4-Bromofluorobenzene(S)	10.74	95	94491	23.68646	ppb	0.00
Spiked Amount 25.000			Recovery = 94.744%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH183
Sample Collection Date: 01/12/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48924
QCG: #GRO86-170113BM-215485

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	94.7	85-114			%	01/14/17	01/14/17

Quant Method:	MGAS6111.M
Run #:	0113M52
Instrument:	Max
Sequence:	M170111
Dilution Factor:	1
Initials:	SV

Printed: 01/16/17 4:09:16 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0113M52.D Vial: 43
Acq On : 14 Jan 17 9:17 Operator: PM,DG,SV,CMM
Sample : AZ48924W01 Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 16 9:51 2017 Quant Results File: MGAS6111.RES

Quant Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	TIC	332964	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

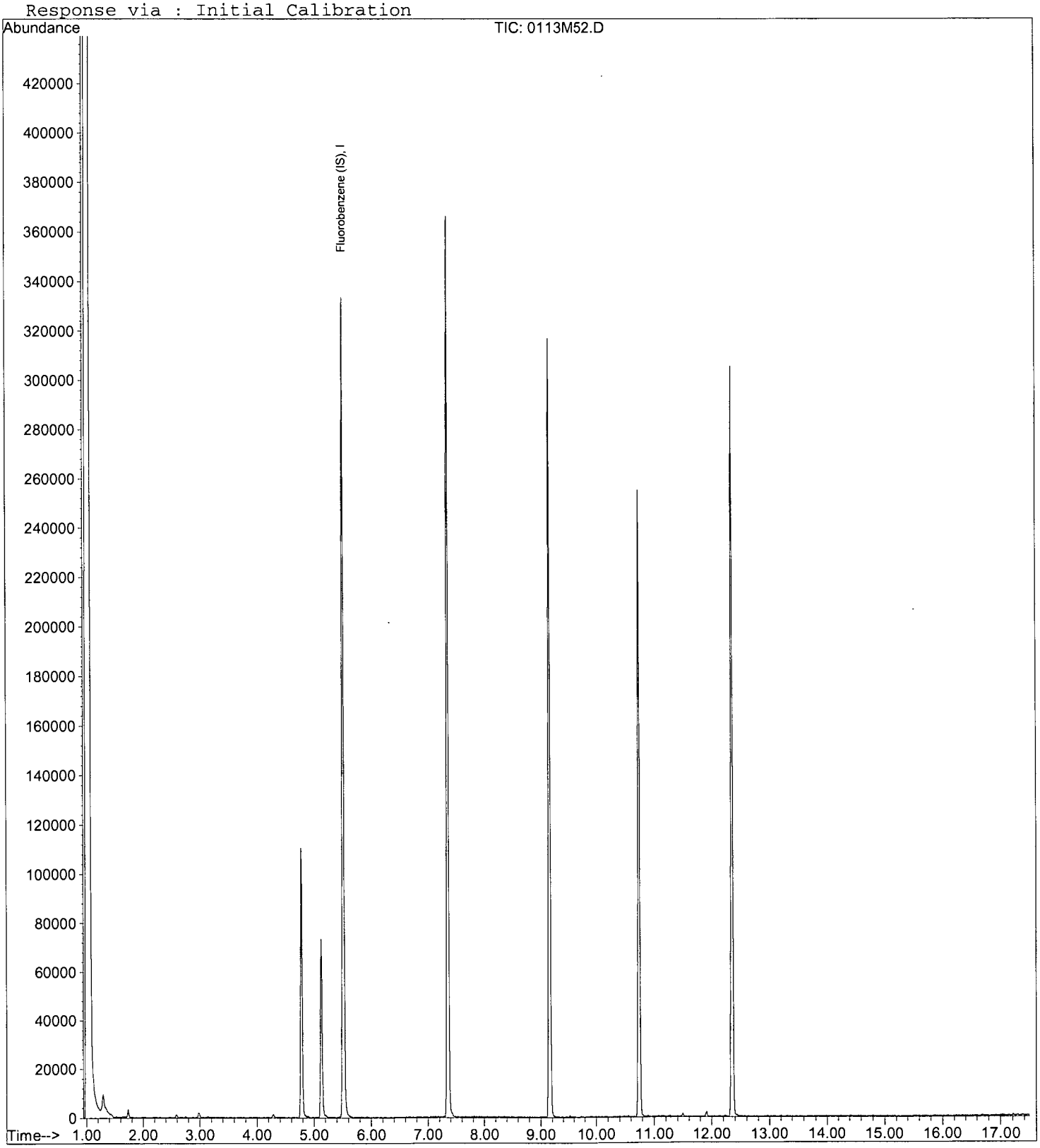
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\M170111\0113M52.D Vial: 43
Acq On : 14 Jan 17 9:17 Operator: PM,DG,SV,CMM
Sample : AZ48924W01 Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 16 9:51 2017 Quant Results File: MGAS6111.RES

Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0113M52.D Vial: 43
Acq On : 14 Jan 17 9:17 Operator: PM,DG,SV,CMM
Sample : AZ48924W01 Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 16 10:17 2017 Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	320609	25.00000	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.15	117	224887	25.00000	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	110906	25.00000	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.78	111	69639	24.71835	ppb	0.00
Spiked Amount 25.000			Recovery = 98.872%			
3) 1,2-DCA-D4(S)	5.13	65	54949	23.68688	ppb	0.00
Spiked Amount 25.000			Recovery = 94.748%			
5) Toluene-D8(S)	7.35	98	283348	25.03477	ppb	0.00
Spiked Amount 25.000			Recovery = 100.140%			
6) 4-Bromofluorobenzene(S)	10.74	95	96086	23.67319	ppb	0.00
Spiked Amount 25.000			Recovery = 94.692%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH184
Sample Collection Date: 01/12/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48925
QCG: #GRO86-170113BM-215485

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	96.2	85-114			%	01/14/17	01/14/17

Quant Method: MGAS6111.M
Run #: 0113M53
Instrument: Max
Sequence: M170111
Dilution Factor: 1
Initials: SV

Printed: 01/16/17 4:09:16 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0113M53.D Vial: 44
Acq On : 14 Jan 17 9:45 Operator: PM,DG,SV,CMM
Sample : AZ48925W01 Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 16 9:52 2017 Quant Results File: MGAS6111.RES

Quant Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	TIC	322423	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

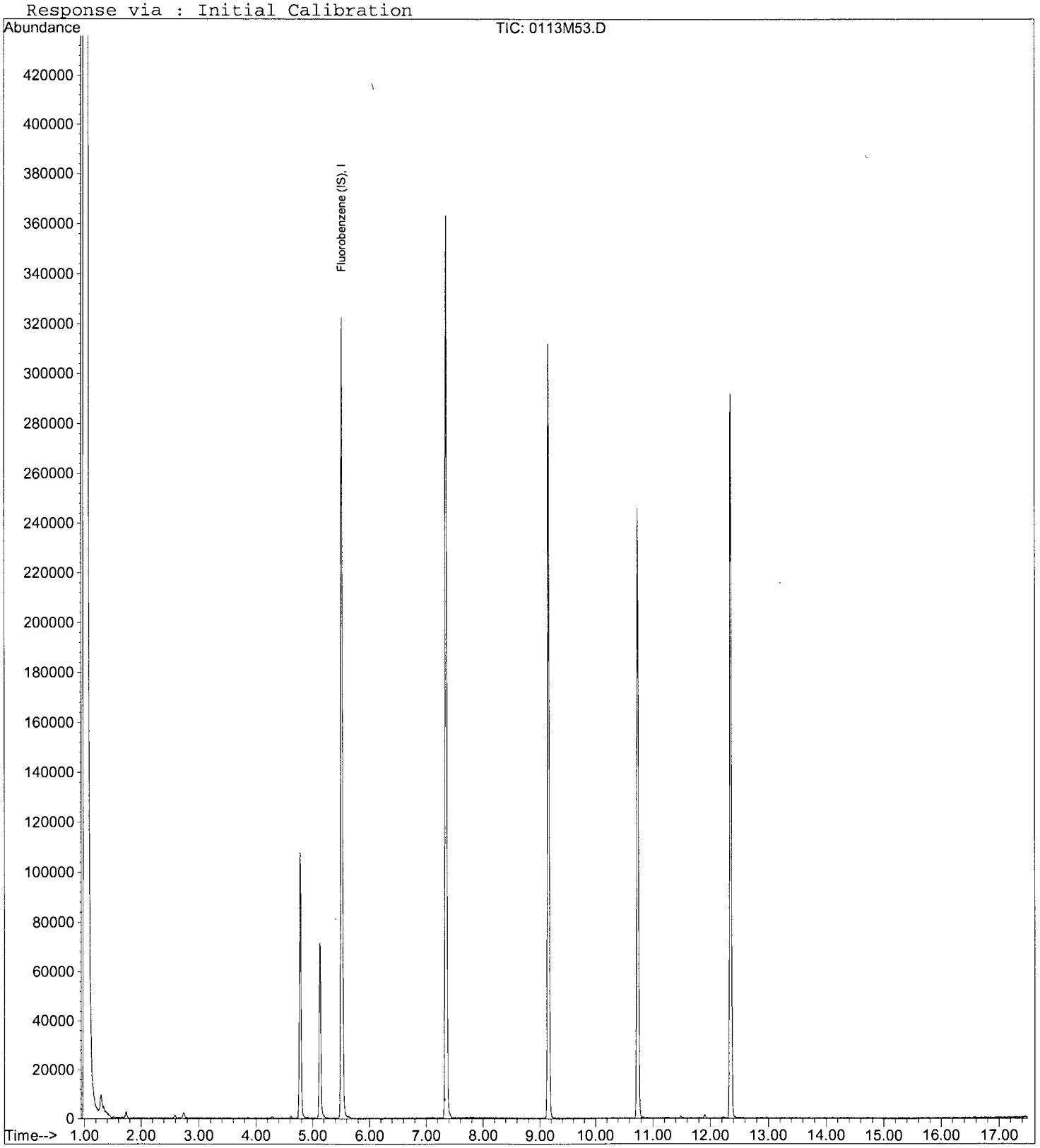
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\M170111\0113M53.D Vial: 44
Acq On : 14 Jan 17 9:45 Operator: PM,DG,SV,CMM
Sample : AZ48925W01 Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 16 9:52 2017 Quant Results File: MGAS6111.RES

Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0113M53.D Vial: 44
Acq On : 14 Jan 17 9:45 Operator: PM,DG,SV,CMM
Sample : AZ48925W01 Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 16 10:17 2017 Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	311300	25.00000	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.16	117	218303	25.00000	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	107245	25.00000	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.78	111	67645	24.72859	ppb	0.00
Spiked Amount 25.000			Recovery = 98.916%			
3) 1,2-DCA-D4(S)	5.13	65	53601	23.79674	ppb	0.00
Spiked Amount 25.000			Recovery = 95.188%			
5) Toluene-D8(S)	7.35	98	276873	25.20048	ppb	0.00
Spiked Amount 25.000			Recovery = 100.800%			
6) 4-Bromofluorobenzene(S)	10.74	95	94719	24.04022	ppb	0.00
Spiked Amount 25.000			Recovery = 96.160%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH202
Sample Collection Date: 01/12/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48926
QCG: #GRO86-170113BM-215485

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/14/17	01/14/17
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	95.0	85-114			%	01/14/17	01/14/17

Quant Method:	MGAS6111.M
Run #:	0113M54
Instrument:	Max
Sequence:	M170111
Dilution Factor:	1
Initials:	SV

Printed: 01/16/17 4:09:16 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0113M54.D Vial: 45
Acq On : 14 Jan 17 10:13 Operator: PM,DG,SV,CMM
Sample : AZ48926W01 Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 16 9:52 2017 Quant Results File: MGAS6111.RES

Quant Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	TIC	327089	25.00000	ppb	0.00

System Monitoring Compounds

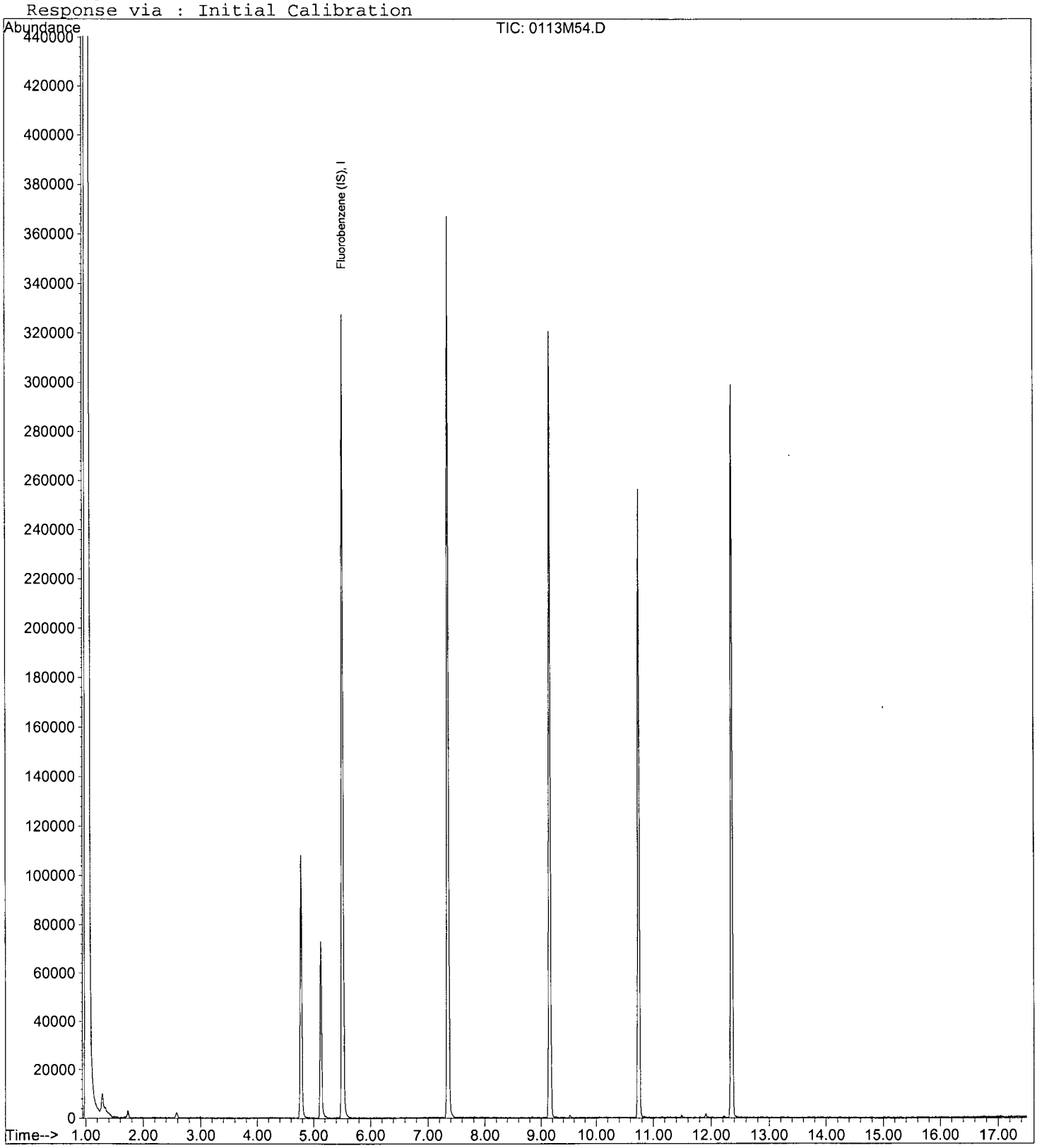
Target Compounds Qvalue

Quantitation Report

Data File : M:\MAX\DATA\M170111\0113M54.D Vial: 45
Acq On : 14 Jan 17 10:13 Operator: PM,DG,SV,CMM
Sample : AZ48926W01 Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 16 9:52 2017 Quant Results File: MGAS6111.RES

Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0113M54.D Vial: 45
Acq On : 14 Jan 17 10:13 Operator: PM,DG,SV,CMM
Sample : AZ48926W01 Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 16 10:17 2017 Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	313225	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.15	117	223248	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	108140	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.78	111	66187	24.04689 ppb	0.00
Spiked Amount 25.000			Recovery =	96.188%	
3) 1,2-DCA-D4(S)	5.13	65	53430	23.57504 ppb	0.00
Spiked Amount 25.000			Recovery =	94.300%	
5) Toluene-D8(S)	7.35	98	276893	24.64406 ppb	0.00
Spiked Amount 25.000			Recovery =	98.576%	
6) 4-Bromofluorobenzene(S)	10.74	95	95660	23.74126 ppb	0.00
Spiked Amount 25.000			Recovery =	94.964%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

ORGANICS
Calibration Data

APPL, INC.

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 1/11/17
Matrix: Instrument: Loki
Initials:

		Compound	0111L05.D 1	0111L06.D 2	0111L07.D 3	0111L08.D 4	0111L09.D 5	0111L10.D 6	0111L11.D 7	0111L12.D 8	0111L13.D 9		Avg	%RSD		
1	I	Fluorobenzene (IS)														
2	S	Dibromofluoromethane(S)	0.6530	0.6270	0.5081	0.5434	0.5556	0.5547	0.5421	0.5409	0.4961		0.56	9.2	S	
3	S	1,2-DCA-D4(S)	0.7467	0.6553	0.5616	0.5765	0.6001	0.6054	0.6028	0.5703	0.5265		0.61	11	S	
4	I	Chlorobenzene-D5 (IS)														
5	S	Toluene-D8(S)	2.174	2.024	1.807	1.915	2.040	2.108	2.066	1.980	1.895		2.0	5.7	S	
6	S	4-Bromofluorobenzene(S)	0.7539	0.6191	0.6040	0.6530	0.7308	0.7539	0.7422	0.7049	0.6878		0.69	8.3	S	
7	I	1,4-Dichlorobenzene-D (IS)														
8																
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Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L05.D Vial: 4
Acq On : 11 Jan 17 11:56 Operator: PM,DG,SV,CMM
Sample : 0.3ug/L VOC STD 1/11/17J Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 13 10:26 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	332160	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	315712	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	150016	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.49	111	43382	5.85280 ppb	0.00
Spiked Amount 25.000			Recovery	= 23.412%	
3) 1,2-DCA-D4(S)	4.93	65	49605	6.17098 ppb	0.00
Spiked Amount 25.000			Recovery	= 24.684%	
5) Toluene-D8(S)	7.22	98	137262	5.43149 ppb	0.00
Spiked Amount 25.000			Recovery	= 21.724%	
6) 4-Bromofluorobenzene(S)	9.89	95	47603	5.42845 ppb	0.00
Spiked Amount 25.000			Recovery	= 21.712%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0111L05.D LSUR111.M Fri Jan 13 10:27:20 2017 Page 1

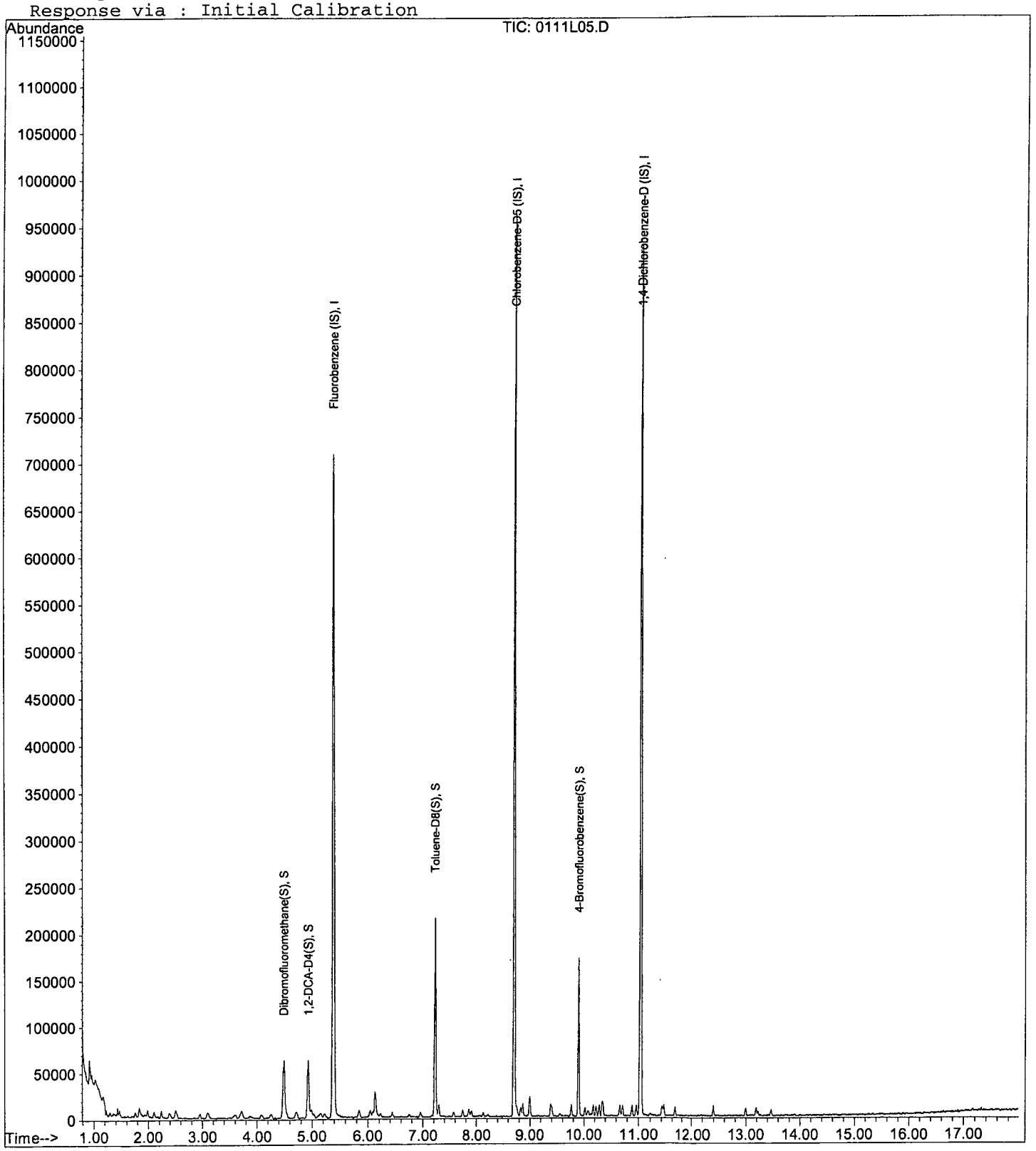
Quantitation Report

Data File : M:\LOKI\DATA\170111\0111L05.D
Acq On : 11 Jan 17 11:56
Sample : 0.3ug/L VOC STD 1/11/17J
Misc : W IS&S 1/3/17, 01/11/17

Vial: 4
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 10:26 2017 Quant Results File: LSUR111.RES

Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L06.D Vial: 5
Acq On : 11 Jan 17 12:24 Operator: PM,DG,SV,CMM
Sample : 0.5ug/L VOC STD 1/11/17K Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 13 10:26 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	353664	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	327936	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	160896	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.48	111	44351	5.61971 ppb	0.00
Spiked Amount 25.000			Recovery	= 22.480%	
3) 1,2-DCA-D4(S)	4.93	65	46349	5.41534 ppb	0.00
Spiked Amount 25.000			Recovery	= 21.660%	
5) Toluene-D8(S)	7.22	98	132753	5.05726 ppb	0.00
Spiked Amount 25.000			Recovery	= 20.228%	
6) 4-Bromofluorobenzene(S)	9.89	95	44663	4.90333 ppb	0.00
Spiked Amount 25.000			Recovery	= 19.612%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0111L06.D LSUR111.M Fri Jan 13 10:27:24 2017 Page 1

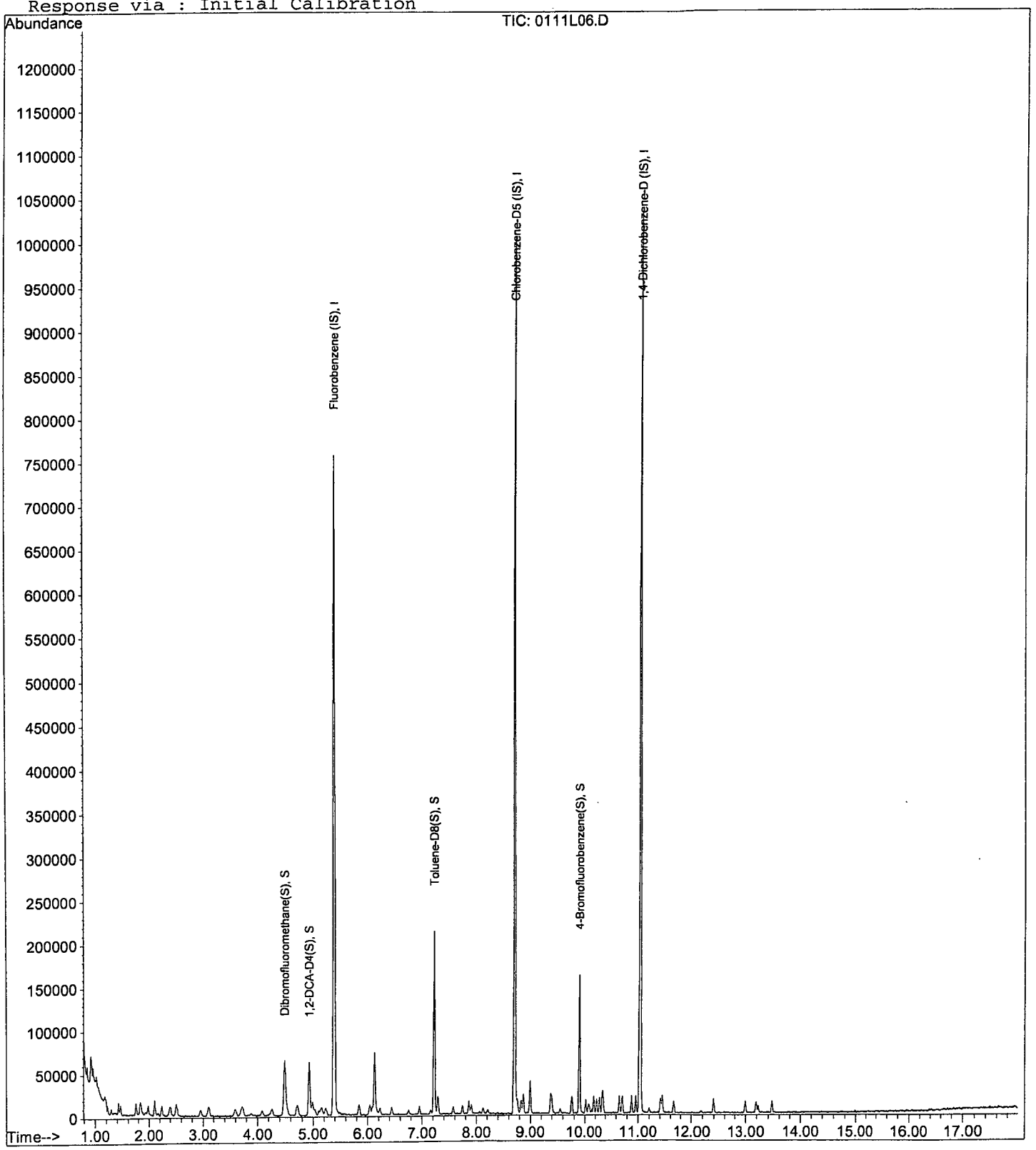
Quantitation Report

Data File : M:\LOKI\DATA\170111\0111L06.D
Acq On : 11 Jan 17 12:24
Sample : 0.5ug/L VOC STD 1/11/17K
Misc : W IS&S 1/3/17, 01/11/17

Vial: 5
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 10:26 2017 Quant Results File: LSUR111.RES

Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L07.D Vial: 6
Acq On : 11 Jan 17 12:52 Operator: PM,DG,SV,CMM
Sample : 1.0ug/L VOC STD 1/11/17L Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 13 10:26 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	346432	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	315072	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	160704	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.49	111	70403	9.10698 ppb	0.00
Spiked Amount 25.000			Recovery	= 36.428%	
3) 1,2-DCA-D4(S)	4.93	65	77817	9.28181 ppb	0.00
Spiked Amount 25.000			Recovery	= 37.128%	
5) Toluene-D8(S)	7.22	98	227758	9.03075 ppb	0.00
Spiked Amount 25.000			Recovery	= 36.124%	
6) 4-Bromofluorobenzene(S)	9.89	95	76119	8.69793 ppb	0.00
Spiked Amount 25.000			Recovery	= 34.792%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0111L07.D LSUR111.M Fri Jan 13 10:27:28 2017 Page 1

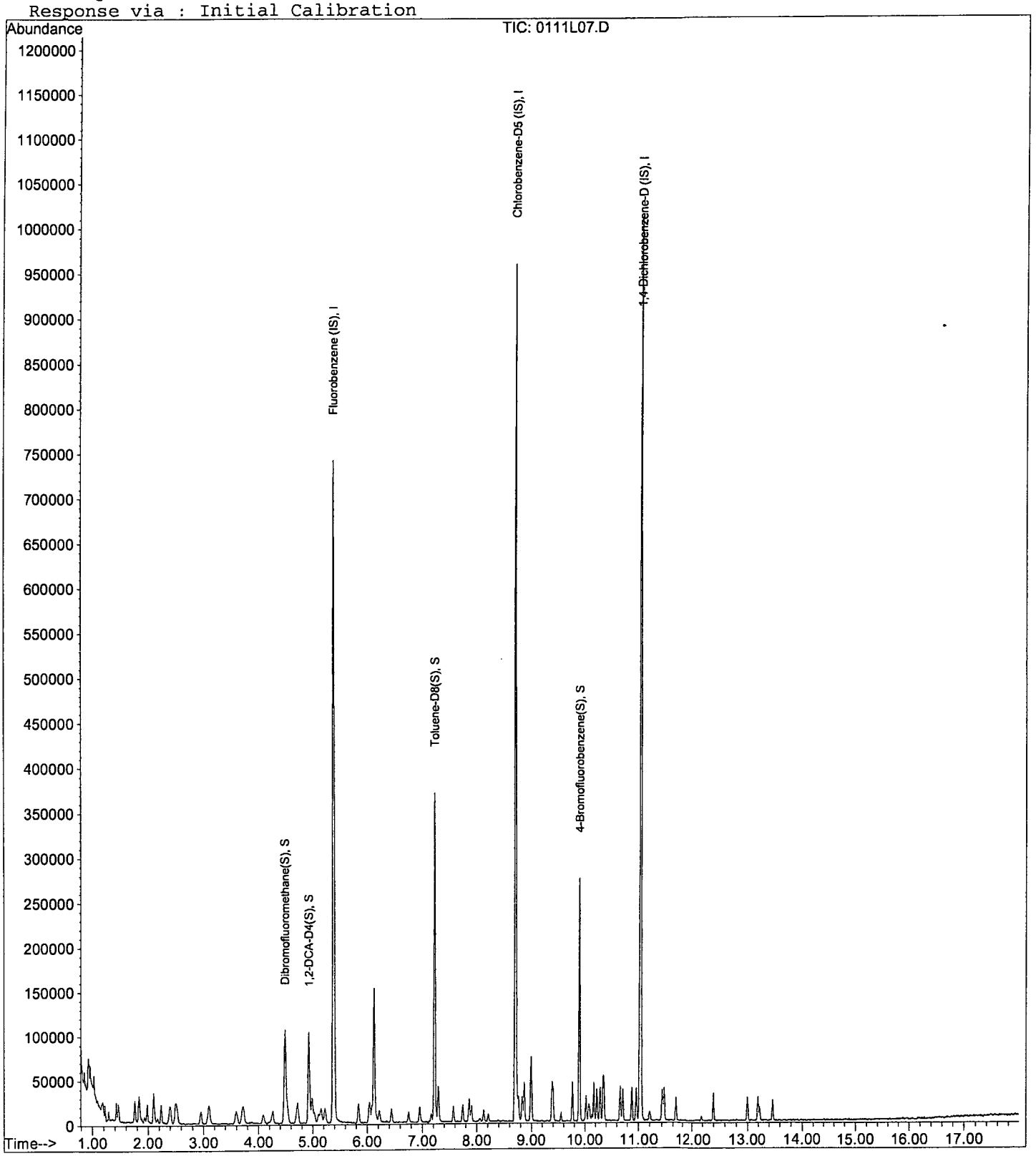
Quantitation Report

Data File : M:\LOKI\DATA\170111\0111L07.D
Acq On : 11 Jan 17 12:52
Sample : 1.0ug/L VOC STD 1/11/17L
Misc : W IS&S 1/3/17, 01/11/17

Vial: 6
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 10:26 2017 Quant Results File: LSUR111.RES

Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L08.D Vial: 7
Acq On : 11 Jan 17 13:20 Operator: PM,DG,SV,CMM
Sample : 2.0ug/L VOC STD 1/11/17M Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 13 10:26 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	345600	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	314496	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	161216	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.48	111	75123	9.74093 ppb	0.00
Spiked Amount 25.000			Recovery	= 38.964%	
3) 1,2-DCA-D4(S)	4.93	65	79701	9.52942 ppb	0.00
Spiked Amount 25.000			Recovery	= 38.116%	
5) Toluene-D8(S)	7.22	98	240936	9.57076 ppb	0.00
Spiked Amount 25.000			Recovery	= 38.284%	
6) 4-Bromofluorobenzene(S)	9.89	95	82145	9.40370 ppb	0.00
Spiked Amount 25.000			Recovery	= 37.616%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

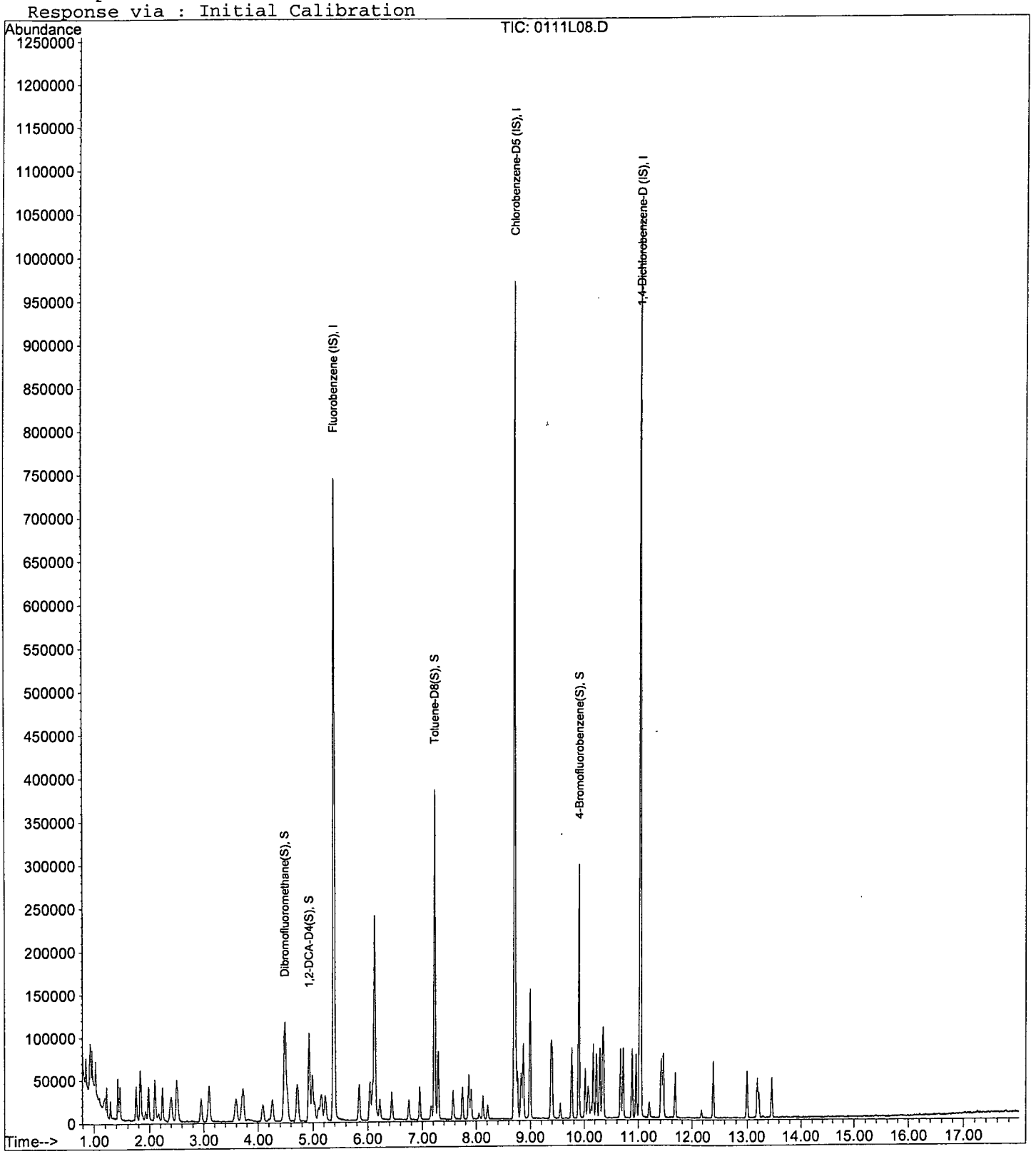
Quantitation Report

Data File : M:\LOKI\DATA\170111\0111L08.D
Acq On : 11 Jan 17 13:20
Sample : 2.0ug/L VOC STD 1/11/17M
Misc : W IS&S 1/3/17, 01/11/17

Vial: 7
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 10:26 2017 Quant Results File: LSUR111.RES

Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L09.D Vial: 8
Acq On : 11 Jan 17 13:48 Operator: PM,DG,SV,CMM
Sample : 5.0ug/L VOC STD 1/11/17N Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 13 10:26 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	355200	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	319360	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	174144	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.49	111	197346	24.89755 ppb	0.00
Spiked Amount 25.000			Recovery =	99.592%	
3) 1,2-DCA-D4(S)	4.93	65	213172	24.79896 ppb	0.00
Spiked Amount 25.000			Recovery =	99.196%	
5) Toluene-D8(S)	7.22	98	651549	25.48747 ppb	0.00
Spiked Amount 25.000			Recovery =	101.948%	
6) 4-Bromofluorobenzene(S)	9.89	95	233382	26.30991 ppb	0.00
Spiked Amount 25.000			Recovery =	105.240%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

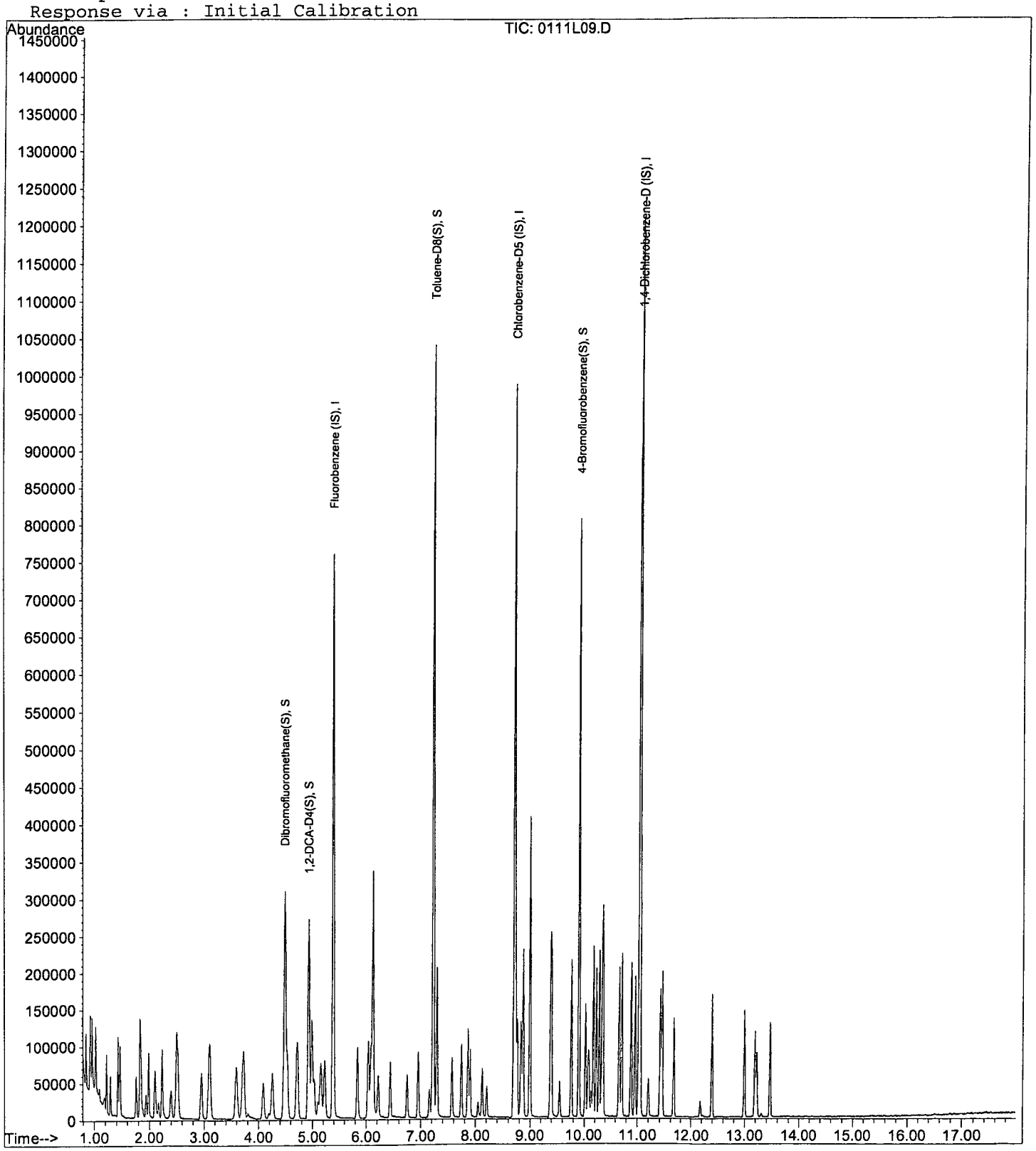
Quantitation Report

Data File : M:\LOKI\DATA\170111\0111L09.D
Acq On : 11 Jan 17 13:48
Sample : 5.0ug/L VOC STD 1/11/17N
Misc : W IS&S 1/3/17, 01/11/17

Vial: 8
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 10:26 2017 Quant Results File: LSUR111.RES

Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L10.D
Acq On : 11 Jan 17 14:16
Sample : 10ug/L VOC STD 1/11/17O
Misc : W IS&S 1/3/17, 01/11/17

Vial: 9
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 10:26 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	363392	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	319296	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	176960	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.48	111	201567	24.85680 ppb	0.00
Spiked Amount 25.000			Recovery = 99.428%		
3) 1,2-DCA-D4(S)	4.92	65	219993	25.01554 ppb	0.00
Spiked Amount 25.000			Recovery = 100.064%		
5) Toluene-D8(S)	7.22	98	673119	26.33652 ppb	0.00
Spiked Amount 25.000			Recovery = 105.348%		
6) 4-Bromofluorobenzene(S)	9.89	95	240729	27.14360 ppb	0.00
Spiked Amount 25.000			Recovery = 108.576%		

Target Compounds Qvalue

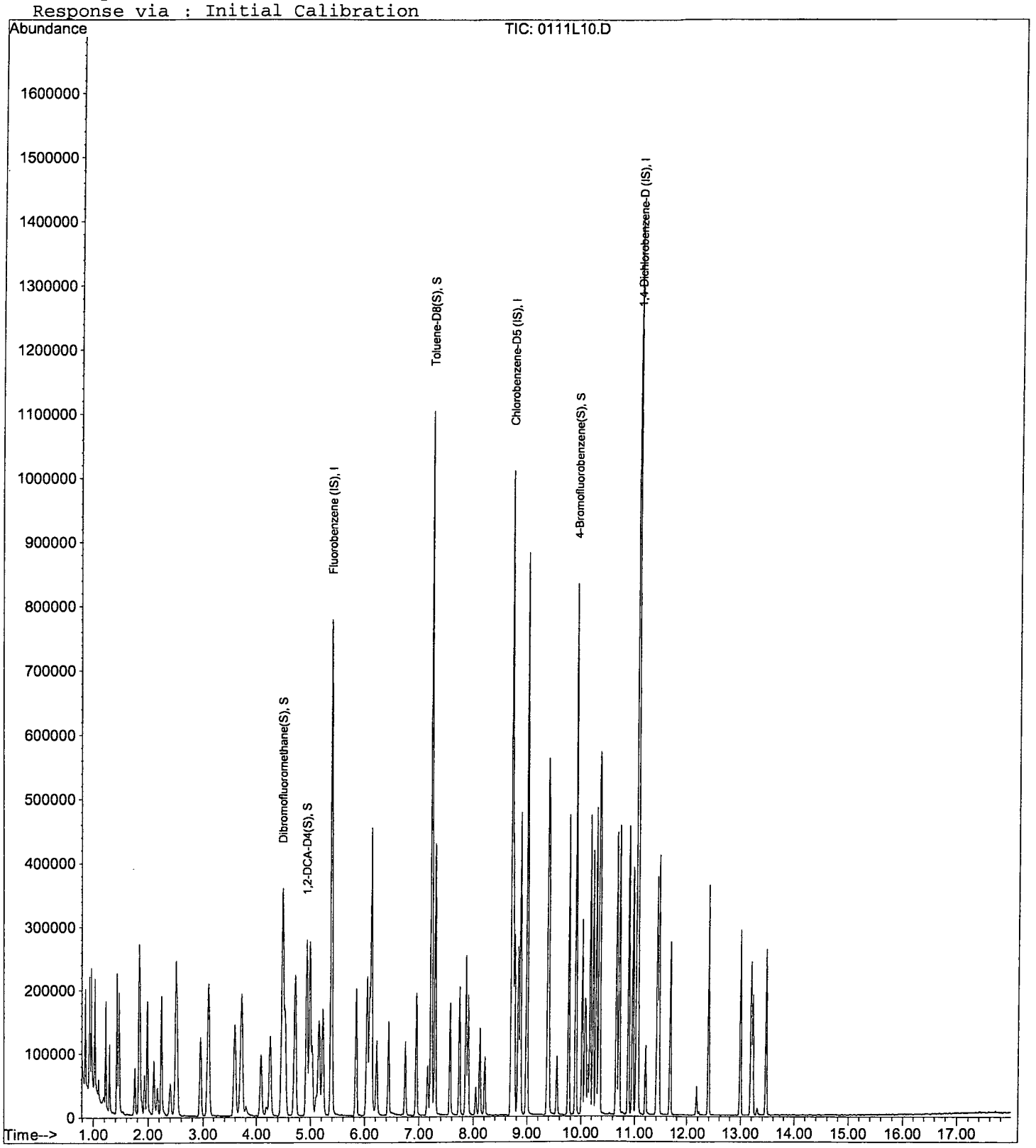
(#) = qualifier out of range (m) = manual integration
0111L10.D LSUR111.M Fri Jan 13 10:27:40 2017 Page 1

Quantitation Report

Data File : M:\LOKI\DATA\170111\0111L10.D Vial: 9
Acq On : 11 Jan 17 14:16 Operator: PM,DG,SV,CMM
Sample : 10ug/L VOC STD 1/11/17O Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 13 10:26 2017 Quant Results File: LSUR111.RES

Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L11.D Vial: 10
Acq On : 11 Jan 17 14:44 Operator: PM,DG,SV,CMM
Sample : 20ug/L VOC STD 1/11/17P Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 13 10:26 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	374528	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	339392	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	187776	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.48	111	406045	48.58376 ppb	0.00
Spiked Amount 25.000			Recovery = 194.336%		
3) 1,2-DCA-D4(S)	4.92	65	451511	49.81503 ppb	0.00
Spiked Amount 25.000			Recovery = 199.260%		
5) Toluene-D8(S)	7.22	98	1402444	51.62309 ppb	0.00
Spiked Amount 25.000			Recovery = 206.492%		
6) 4-Bromofluorobenzene(S)	9.89	95	503786	53.44130 ppb	0.00
Spiked Amount 25.000			Recovery = 213.764%		

Target Compounds Qvalue

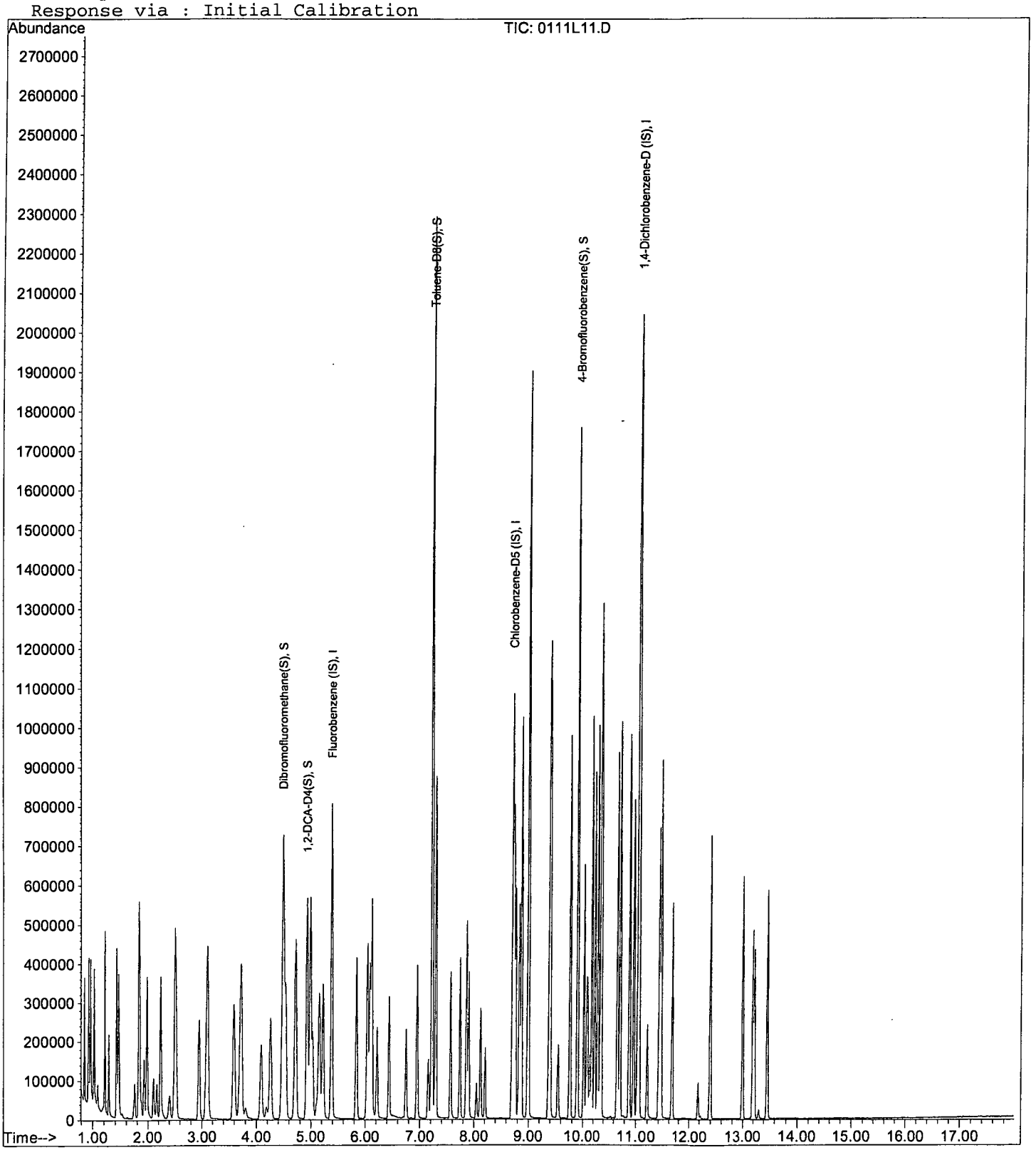
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\170111\0111L11.D Vial: 10
Acq On : 11 Jan 17 14:44 Operator: PM,DG,SV,CMM
Sample : 20ug/L VOC STD 1/11/17P Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 13 10:26 2017 Quant Results File: LSUR111.RES

Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L12.D Vial: 11
Acq On : 11 Jan 17 15:12 Operator: PM,DG,SV,CMM
Sample : 40ug/L VOC STD 1/11/17Q Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 13 10:26 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	394368	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	367744	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	189824	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.48	111	426658	48.48188 ppb	0.00
Spiked Amount 25.000			Recovery	= 193.928%	
3) 1,2-DCA-D4(S)	4.92	65	449789	47.12848 ppb	0.00
Spiked Amount 25.000			Recovery	= 188.512%	
5) Toluene-D8(S)	7.22	98	1456385	49.47556 ppb	0.00
Spiked Amount 25.000			Recovery	= 197.904%	
6) 4-Bromofluorobenzene(S)	9.89	95	518450	50.75675 ppb	0.00
Spiked Amount 25.000			Recovery	= 203.028%	

Target Compounds Qvalue

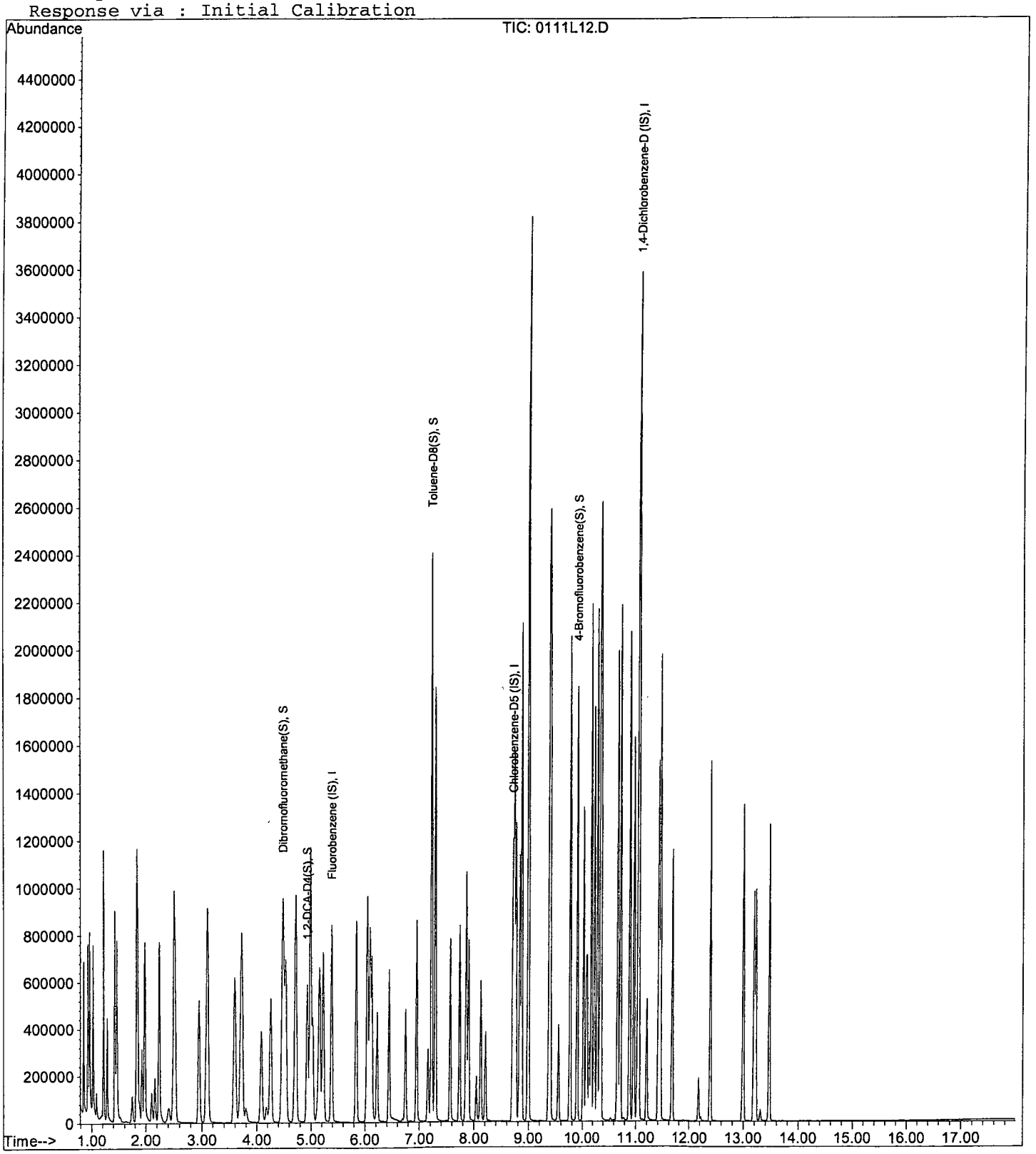
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\170111\0111L12.D Vial: 11
Acq On : 11 Jan 17 15:12 Operator: PM,DG,SV,CMM
Sample : 40ug/L VOC STD 1/11/17Q Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 13 10:26 2017 Quant Results File: LSUR111.RES

Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0111L13.D Vial: 12
Acq On : 11 Jan 17 15:41 Operator: PM,DG,SV,CMM
Sample : 100ug/L VOC STD 1/11/17R Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 13 10:26 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	402176	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	375168	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	202240	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.48	111	798040	88.92210 ppb	0.00
Spiked Amount 25.000			Recovery	= 355.688%	
3) 1,2-DCA-D4(S)	4.92	65	846915	87.01617 ppb	0.00
Spiked Amount 25.000			Recovery	= 348.064%	
5) Toluene-D8(S)	7.22	98	2844404	94.71649 ppb	0.00
Spiked Amount 25.000			Recovery	= 378.864%	
6) 4-Bromofluorobenzene(S)	9.89	95	1032194	99.05311 ppb	0.00
Spiked Amount 25.000			Recovery	= 396.212%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

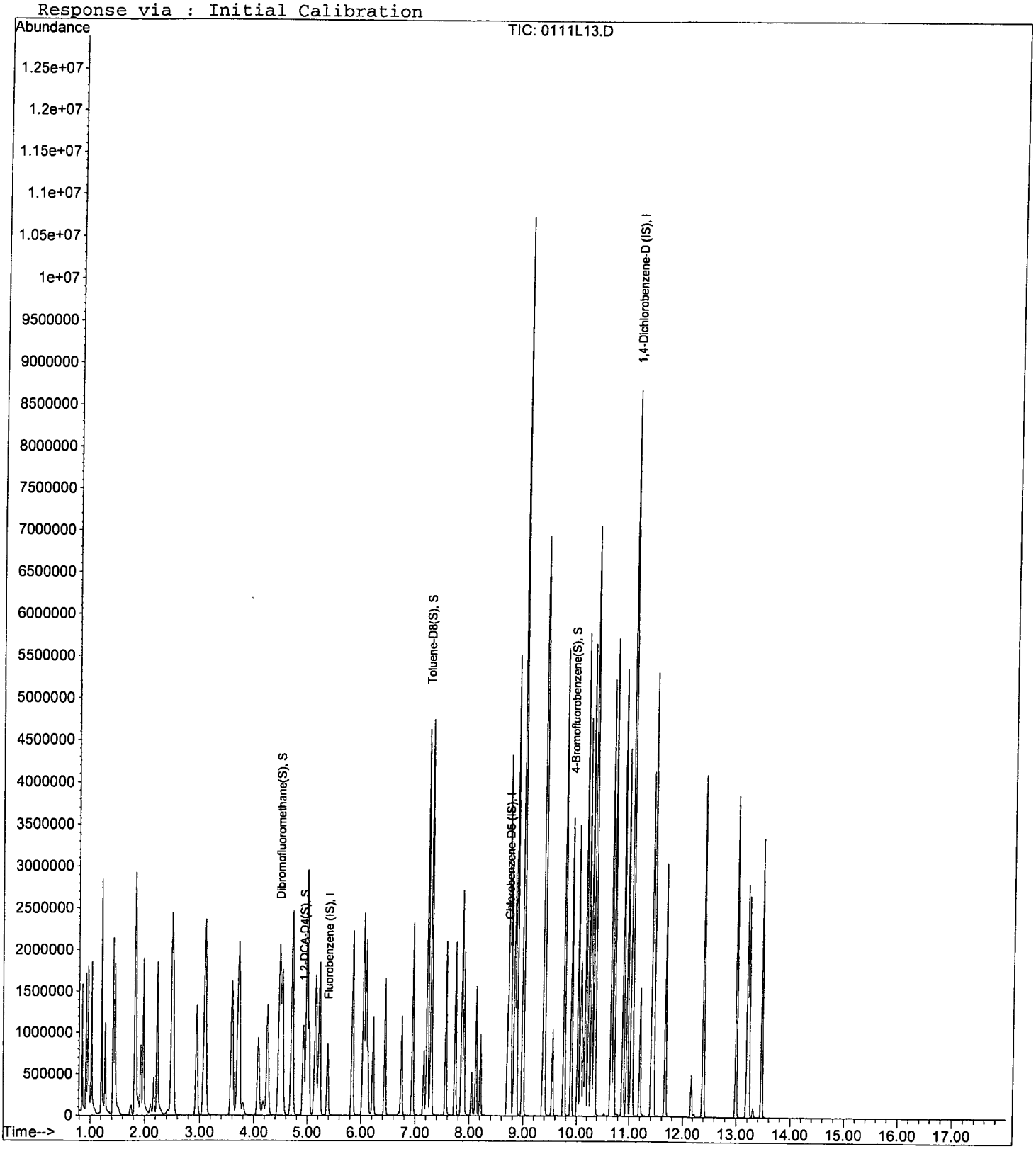
Data File : M:\LOKI\DATA\170111\0111L13.D
Acq On : 11 Jan 17 15:41
Sample : 100ug/L VOC STD 1/11/17R
Misc : W IS&S 1/3/17, 01/11/17

Vial: 12
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 10:26 2017

Quant Results File: LSUR111.RES

Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Initial Cal. Date: 1/12/17
Instrument: Loki

Initials:

		Compound	0112L12.D	0112L13.D	0112L14.D	0112L15.D	0112L16.D	0112L17.D	0112L18.D				Avg	%RSD		
1	I	Fluorobenzene (IS)														
2	TMHBL	Gasoline C6-C10	12.8	5.668	3.302	1.642	1.211	1.107	1.065				3.8	112	TMHBL	1.000
3	I	Chlorobenzene-D5 (IS)														
4	I	1,4-Dichlorobenzene-D (IS)														
5																
6																
7																
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9																
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Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0112L12.D
Acq On : 12 Jan 17 15:56
Sample : 20ug/L GAS STD 1/12/17G
Misc : W IS&S 1/3/17, 01/11/17

Vial: 11
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 7:37 2017

Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:20:05 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	737604	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	996211	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	984189	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	7544140m	23.01848	ppb	100

(#) = qualifier out of range (m) = manual integration
0112L12.D LGAS6112.M Fri Jan 13 09:21:15 2017

Quantitation Report

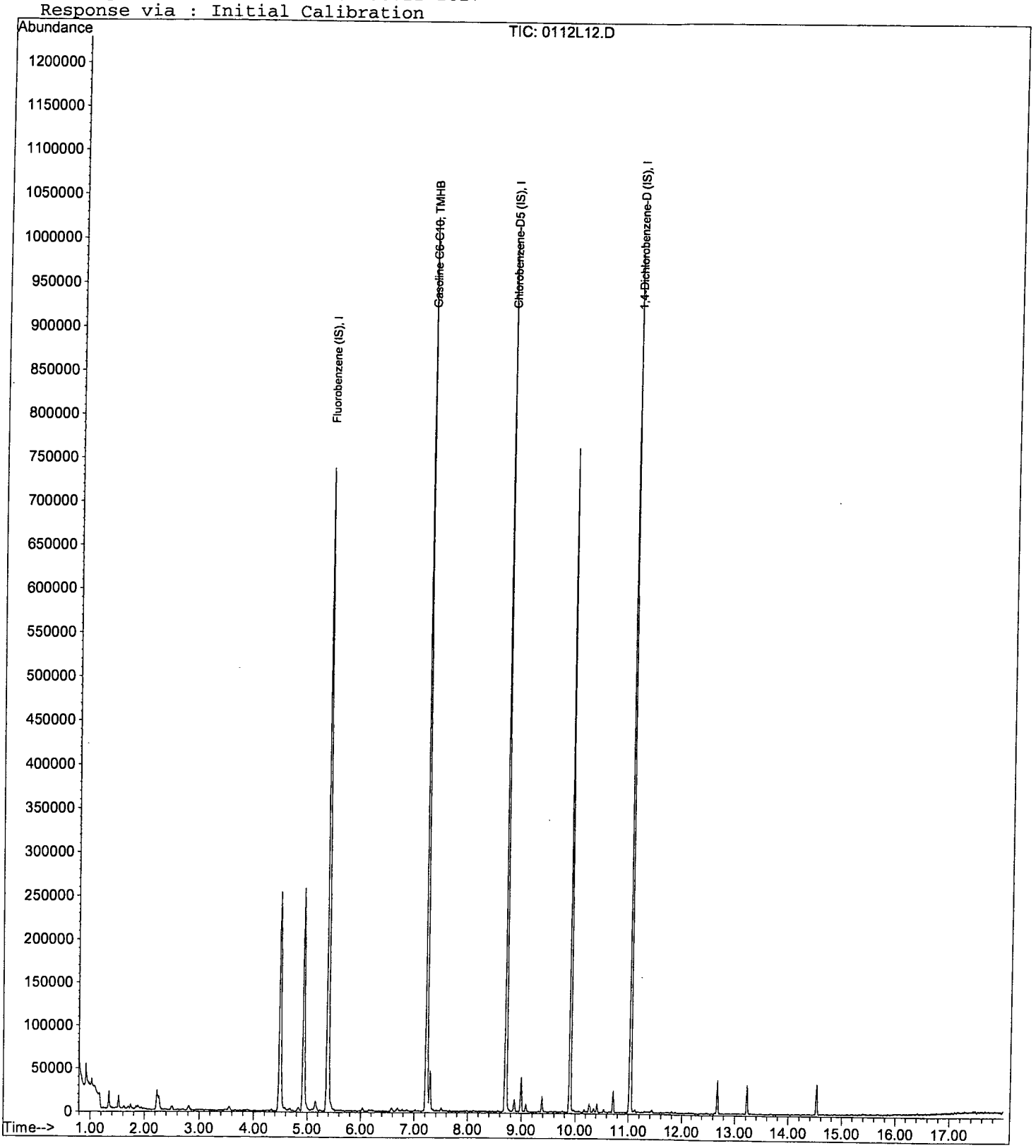
Data File : M:\LOKI\DATA\170111\0112L12.D
Acq On : 12 Jan 17 15:56
Sample : 20ug/L GAS STD 1/12/17G
Misc : W IS&S 1/3/17, 01/11/17

Vial: 11
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 7:37 2017

Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0112L13.D
Acq On : 12 Jan 17 16:24
Sample : 50ug/L GAS STD 1/12/17G
Misc : W IS&S 1/3/17, 01/11/17

Vial: 12
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 7:38 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:20:05 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	724516	25.00000 ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	977270	25.00000 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	976892	25.00000 ppb	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
2) Gasoline C6-C10	7.22	TIC	8212424m	54.72880 ppb	100

(#) = qualifier out of range (m) = manual integration
0112L13.D LGAS6112.M Fri Jan 13 09:21:19 2017

Quantitation Report

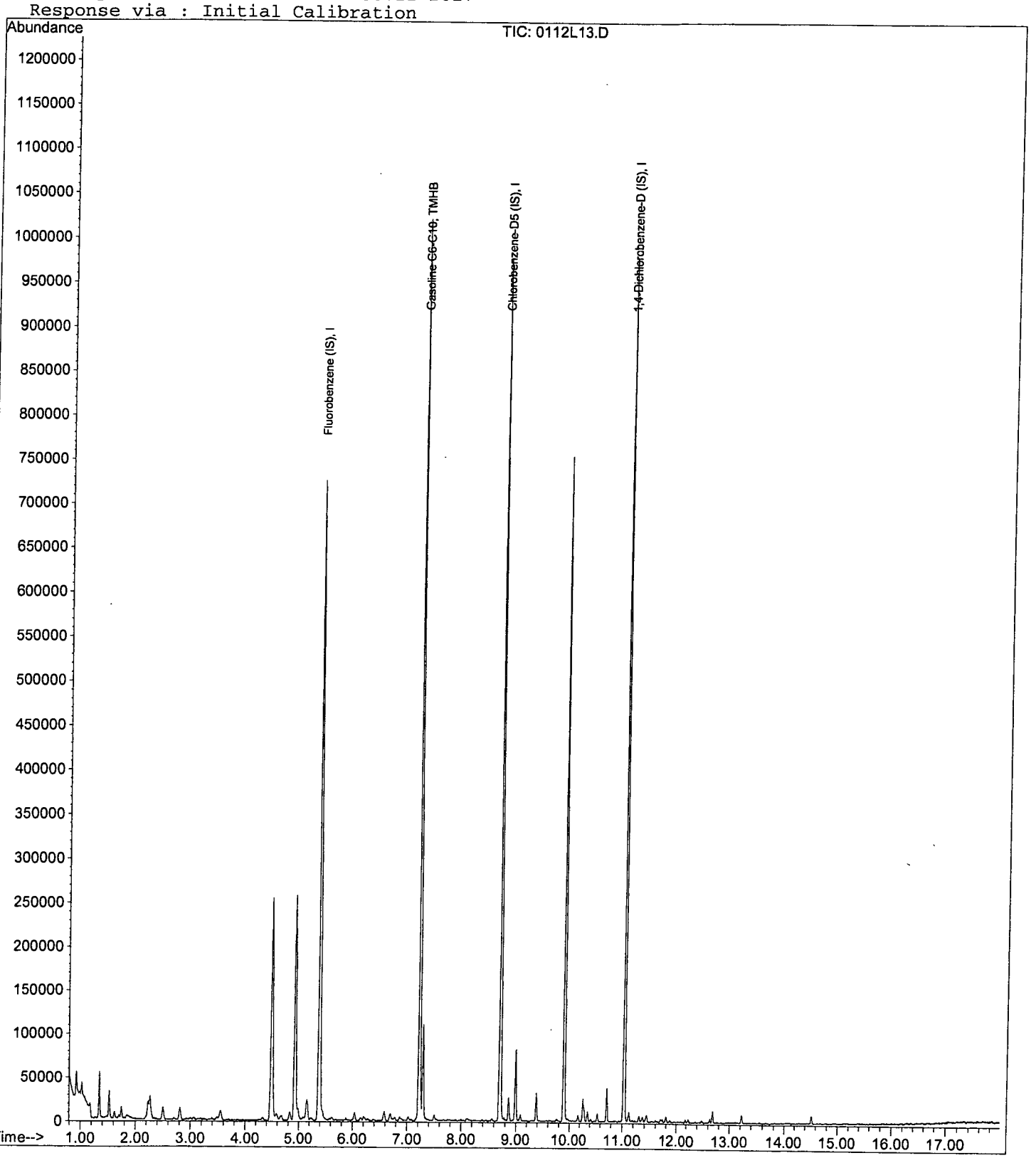
Data File : M:\LOKI\DATA\170111\0112L13.D
Acq On : 12 Jan 17 16:24
Sample : 50ug/L GAS STD 1/12/17G
Misc : W IS&S 1/3/17, 01/11/17

Vial: 12
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 7:38 2017

Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0112L14.D
Acq On : 12 Jan 17 16:52
Sample : 100ug/L GAS STD 1/12/17G
Misc : W IS&S 1/3/17, 01/11/17

Vial: 13
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 7:40 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:20:05 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	716612	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	995083	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	982076	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	9466306m	108.42457	ppb	100

(#) = qualifier out of range (m) = manual integration
0112L14.D LGAS6112.M Fri Jan 13 09:21:23 2017 Page 1

Quantitation Report

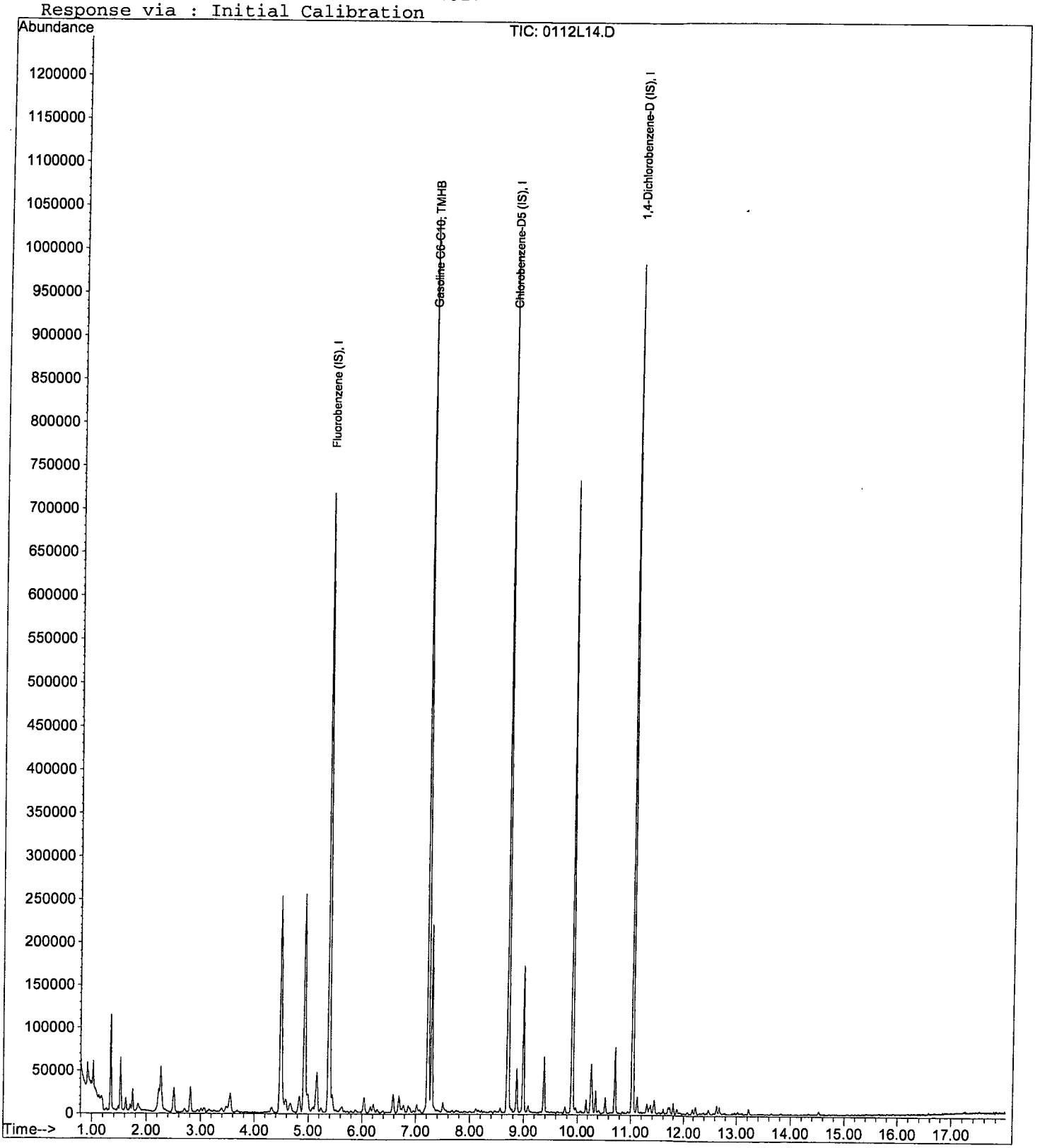
Data File : M:\LOKI\DATA\170111\0112L14.D
Acq On : 12 Jan 17 16:52
Sample : 100ug/L GAS STD 1/12/17G
Misc : W IS&S 1/3/17, 01/11/17

Vial: 13
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 7:40 2017

Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0112L15.D Vial: 14
Acq On : 12 Jan 17 17:20 Operator: PM,DG,SV,CMM
Sample : 300ug/L GAS STD 1/12/17G Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 13 7:48 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:20:05 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	768104	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1009992	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1031553	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	15137027m	294.51356	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

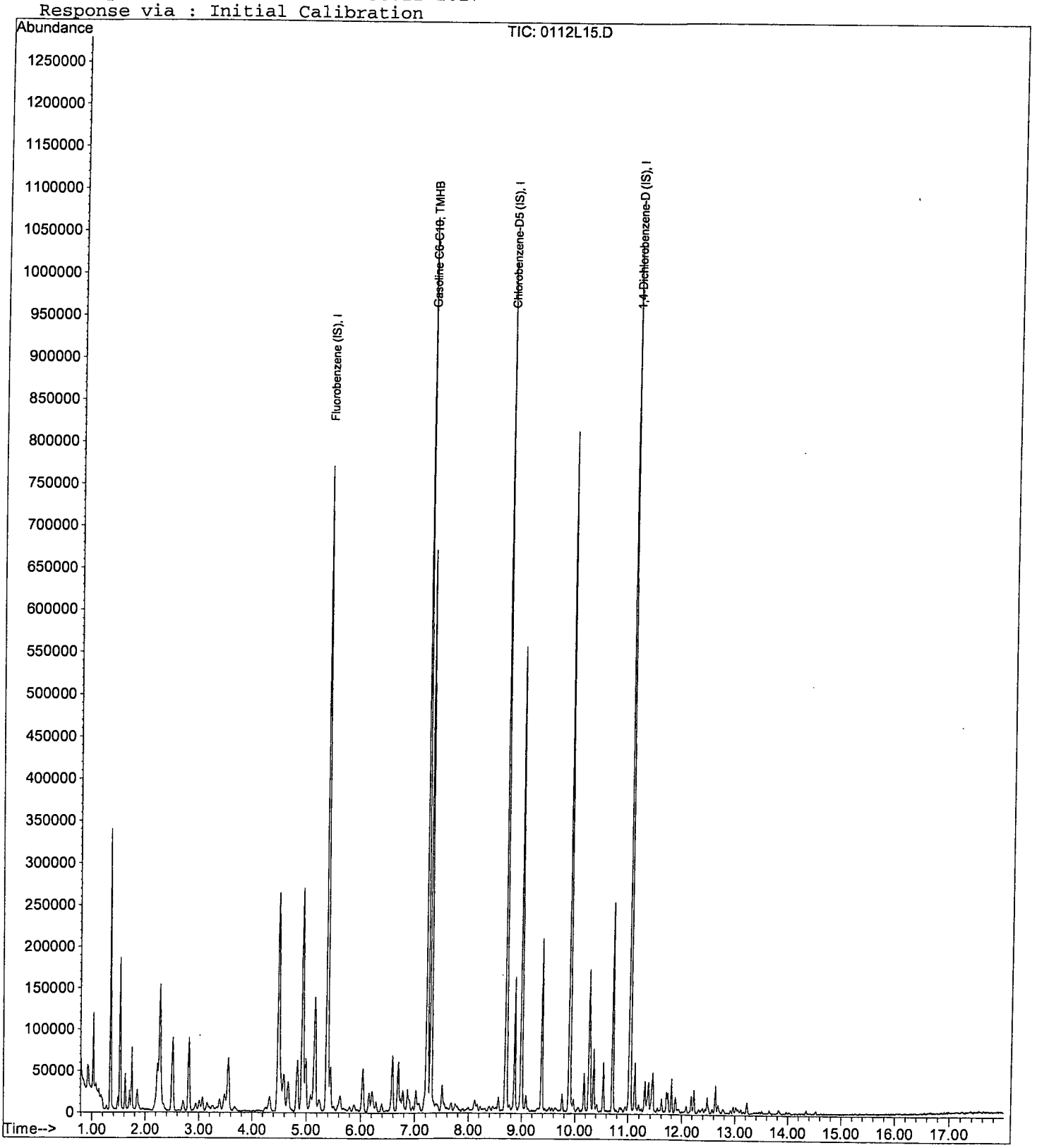
Data File : M:\LOKI\DATA\170111\0112L15.D
Acq On : 12 Jan 17 17:20
Sample : 300ug/L GAS STD 1/12/17G
Misc : W IS&S 1/3/17, 01/11/17

Vial: 14
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 7:48 2017

Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0112L16.D
Acq On : 12 Jan 17 17:48
Sample : 600ug/L GAS STD 1/12/17G
Misc : W IS&S 1/3/17, 01/11/17

Vial: 15
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 7:49 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:20:05 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	759958	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	993191	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1059117	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.29	TIC	22083566m	562.36618	ppb	100

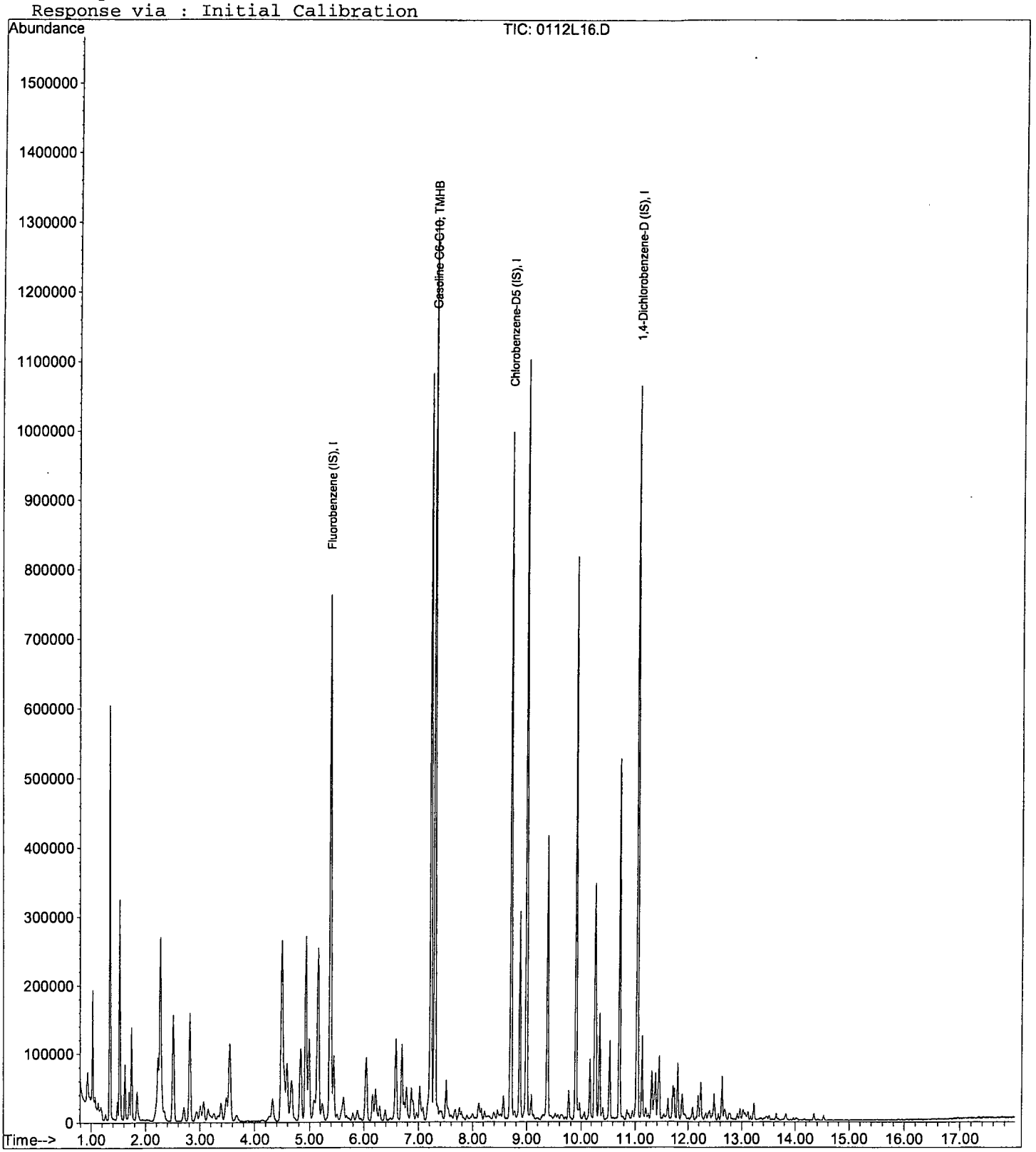
(#) = qualifier out of range (m) = manual integration
0112L16.D LGAS6112.M Fri Jan 13 09:21:30 2017

Quantitation Report

Data File : M:\LOKI\DATA\170111\0112L16.D Vial: 15
Acq On : 12 Jan 17 17:48 Operator: PM,DG,SV,CMM
Sample : 600ug/L GAS STD 1/12/17G Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 13 7:49 2017 Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0112L17.D
Acq On : 12 Jan 17 18:16
Sample : 800ug/L GAS STD 1/12/17G
Misc : W IS&S 1/3/17, 01/11/17

Vial: 16
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 7:44 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:20:05 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	771040	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1044616	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1086612	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.29	TIC	27320479m	744.93682	ppb	100

(#) = qualifier out of range (m) = manual integration
0112L17.D LGAS6112.M Fri Jan 13 09:21:34 2017

Quantitation Report

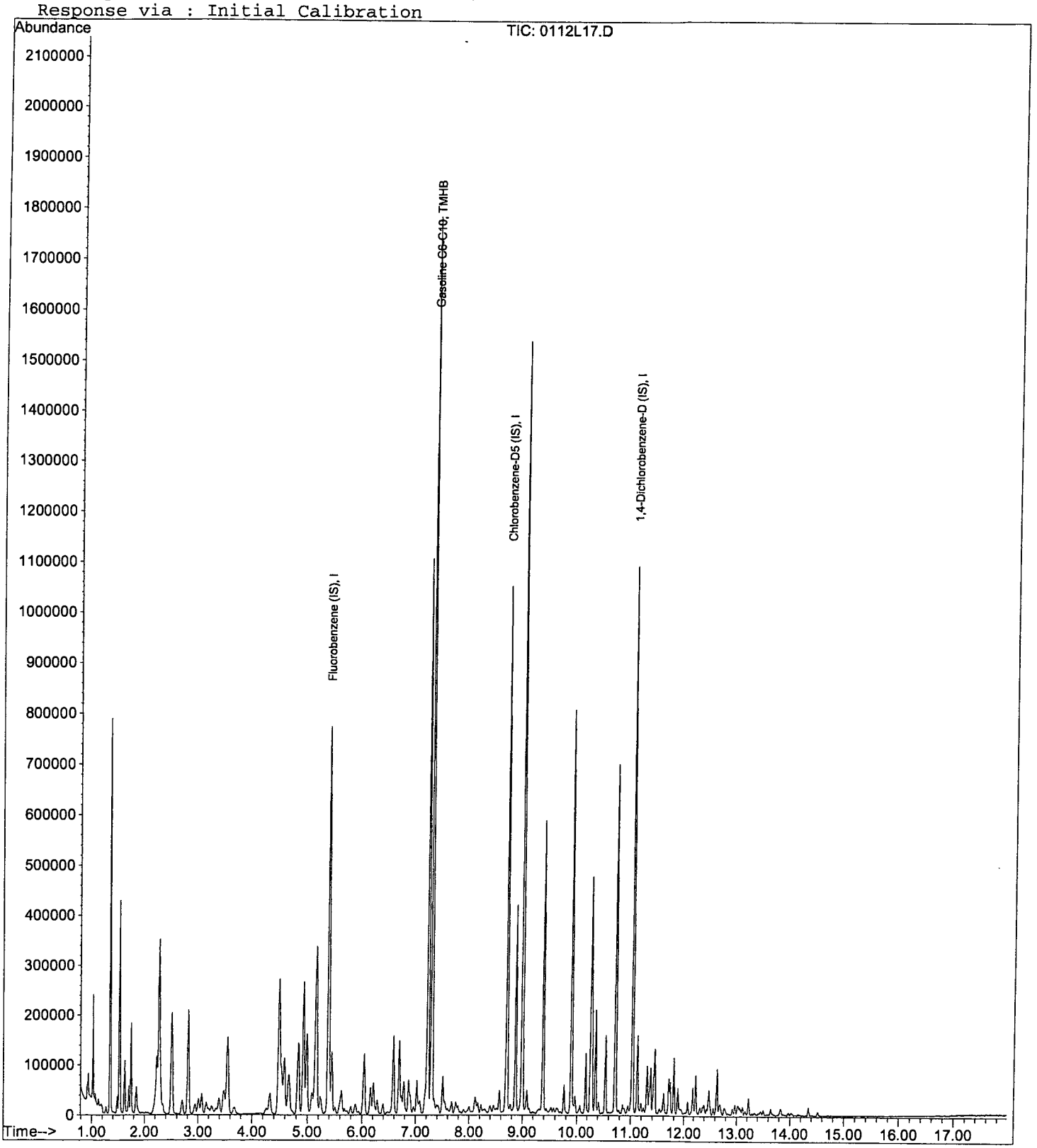
Data File : M:\LOKI\DATA\170111\0112L17.D
Acq On : 12 Jan 17 18:16
Sample : 800ug/L GAS STD 1/12/17G
Misc : W IS&S 1/3/17, 01/11/17

Vial: 16
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 7:44 2017

Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0112L18.D
Acq On : 12 Jan 17 18:44
Sample : 1000ug/L GAS STD 1/12/17G
Misc : W IS&S 1/3/17, 01/11/17

Vial: 17
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 7:45 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:20:05 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	776642	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1036191	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1108873	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.29	TIC	33075714m	949.86127	ppb	100

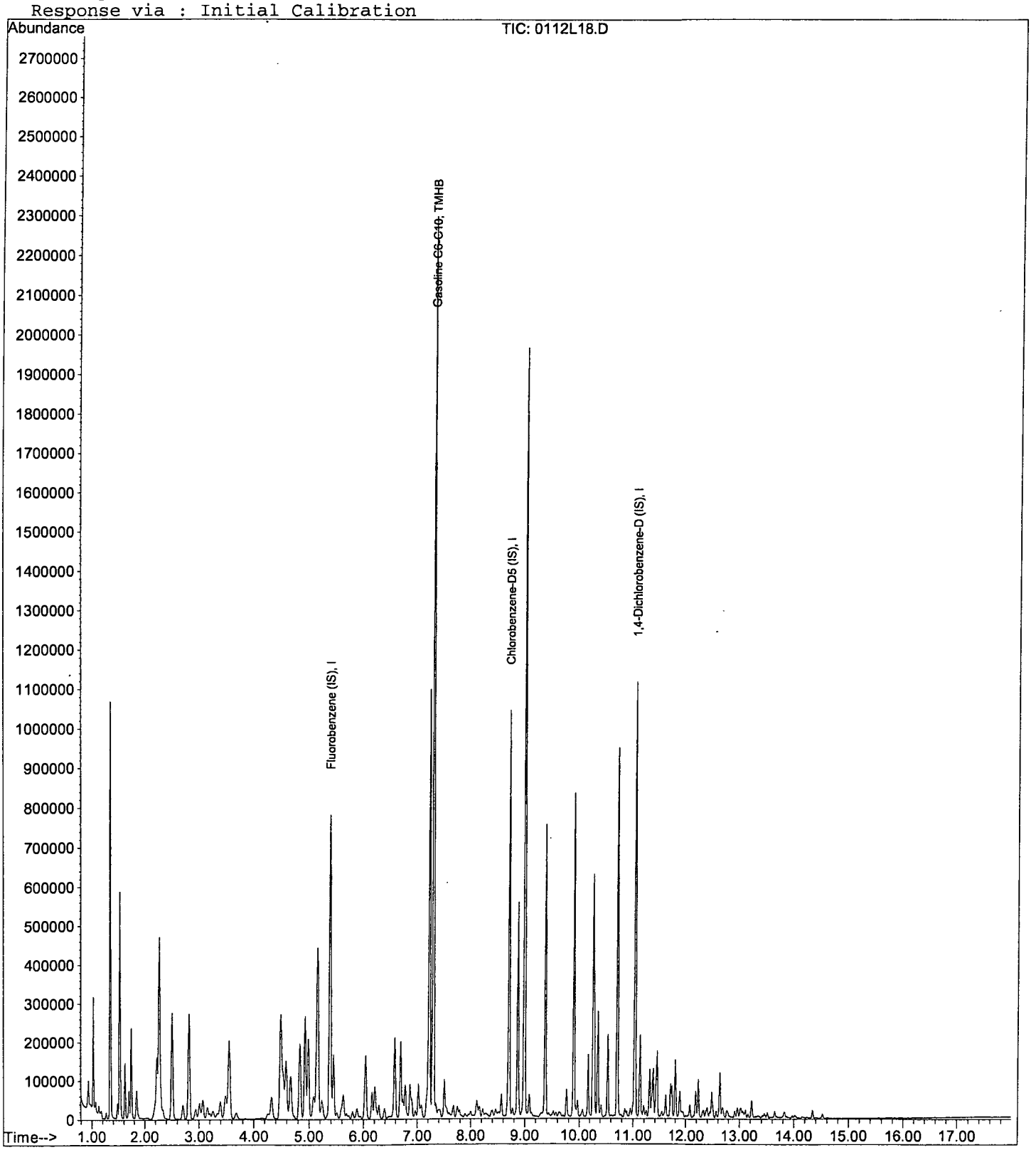
(#) = qualifier out of range (m) = manual integration

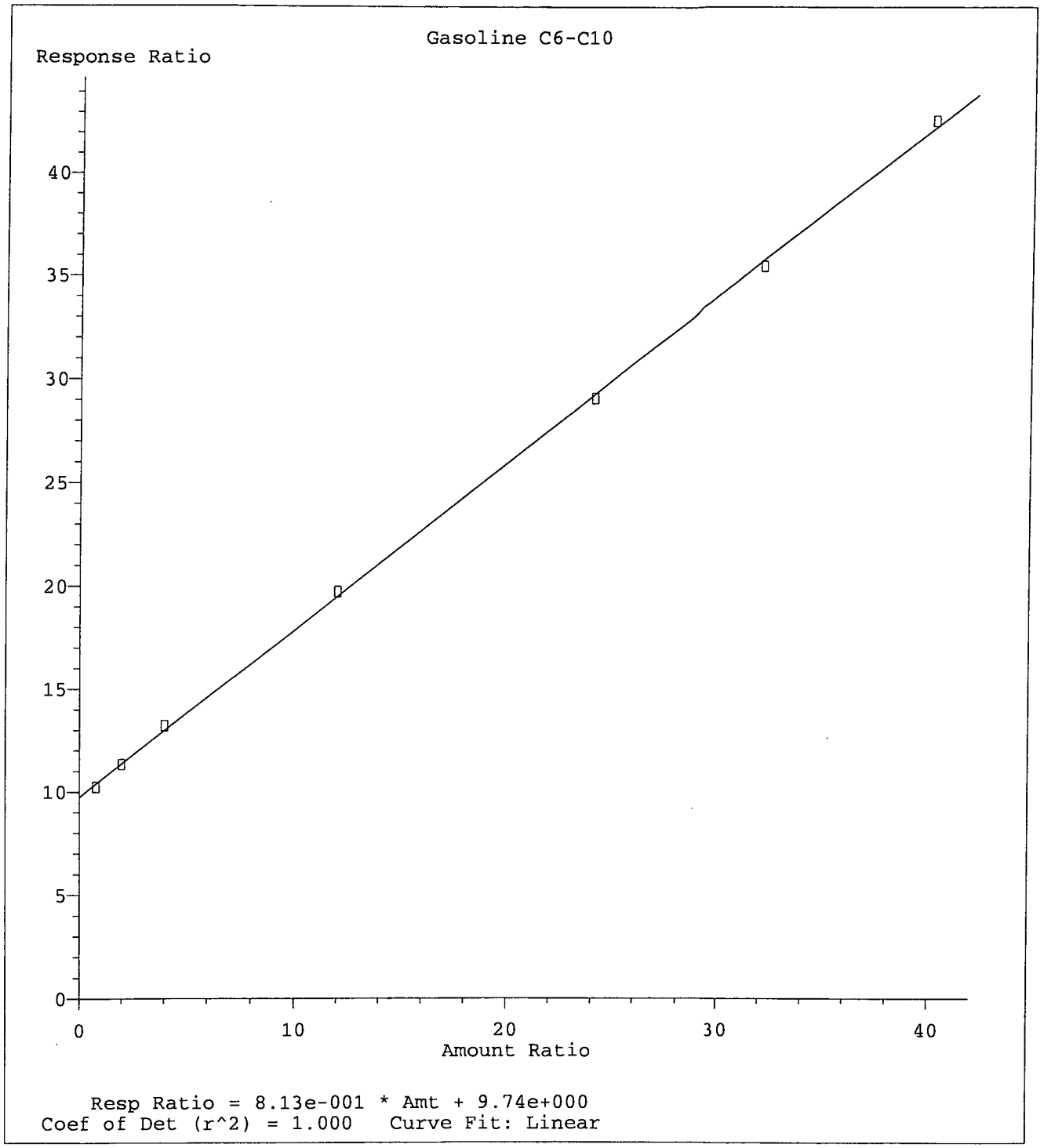
Quantitation Report

Data File : M:\LOKI\DATA\170111\0112L18.D Vial: 17
Acq On : 12 Jan 17 18:44 Operator: PM,DG,SV,CMM
Sample : 1000ug/L GAS STD 1/12/17G Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 13 7:45 2017 Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration





Method Name: M:\LOKI\DATA\170111\LGAS6112.M
Calibration Table Last Updated: Fri Jan 13 07:50:11 2017

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 1/12/17
Instrument: Loki
Initial Cal. Date: 1/12/17
Data File: 0112L21.D

		Compound	MEAN	CCRF	%D		%Drift
1	TMHB	Gasoline C6-C10	3.826	1.648	57	TMHBL	2.8
2							
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40							
		Average			57.0		

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0112L21.D
Acq On : 12 Jan 17 20:08
Sample : (SS)300ug/L GAS STD 1/12/17G
Misc : W IS&S 1/3/17, 01/11/17

Vial: 20
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 7:51 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	783598	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	1042383	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1090665	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	15492164m	308.28315	ppb	100

(#) = qualifier out of range (m) = manual integration
0112L21.D LGAS6112.M Fri Jan 13 09:22:41 2017 Page 1

Quantitation Report

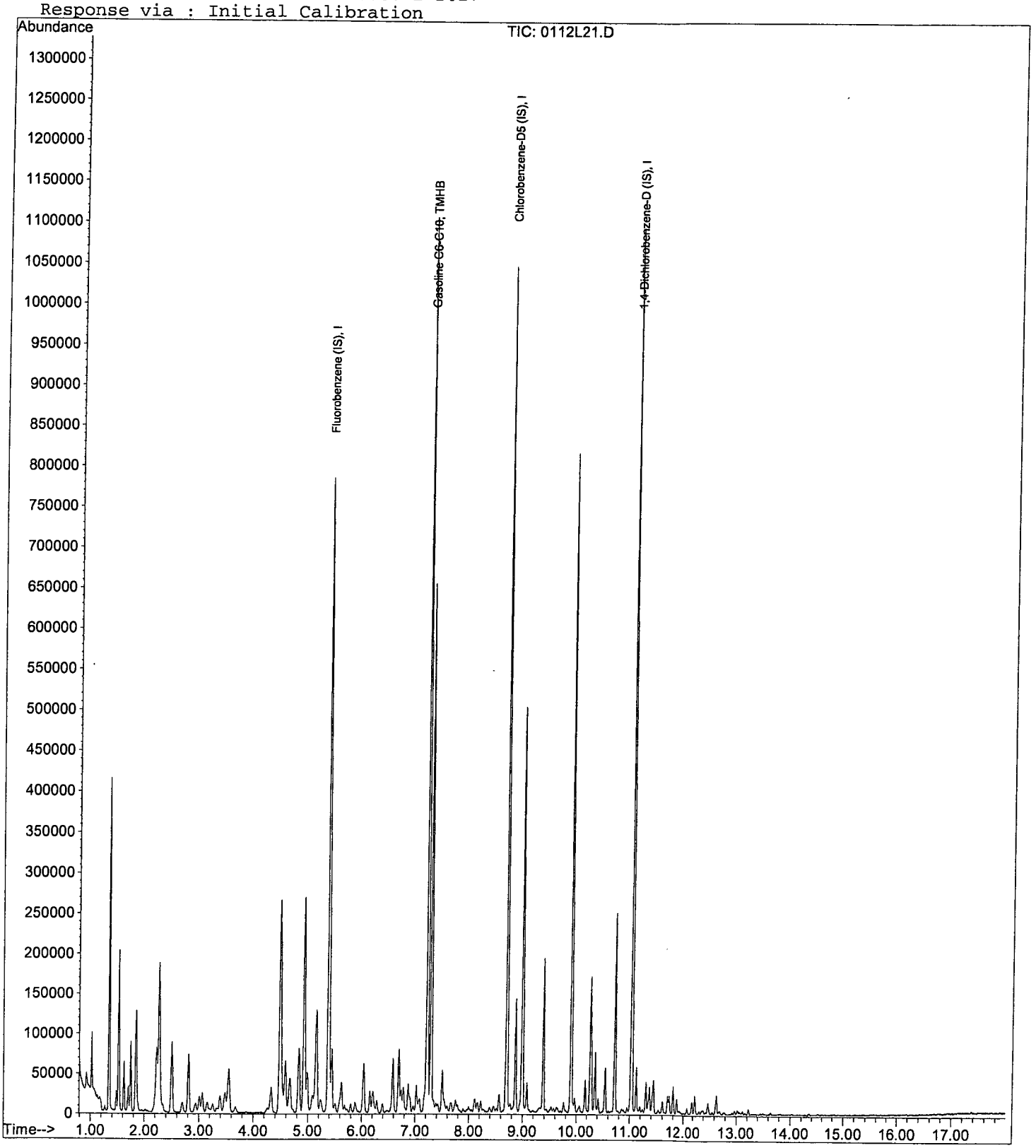
Data File : M:\LOKI\DATA\170111\0112L21.D
Acq On : 12 Jan 17 20:08
Sample : (SS)300ug/L GAS STD 1/12/17G
Misc : W IS&S 1/3/17, 01/11/17

Vial: 20
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 13 7:51 2017

Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/14/17
Instrument: Loki
Initial Cal. Date: 01/11/17
Data File: 0113L38.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	3.826	1.606	58	TMHBL	2.3
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
5							
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39							
40							
		Average			58.0		

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L38.D Vial: 35
Acq On : 14 Jan 17 1:22 Operator: PM,DG,SV,CMM
Sample : 170113B CCV/LCS-1WL 300ug/L Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 13:59 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	720131	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	970828	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1030606	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	13880852m	293.07	ppb	100

(#) = qualifier out of range (m) = manual integration
0113L38.D LGAS6112.M Tue Jan 17 13:42:55 2017 Page 1

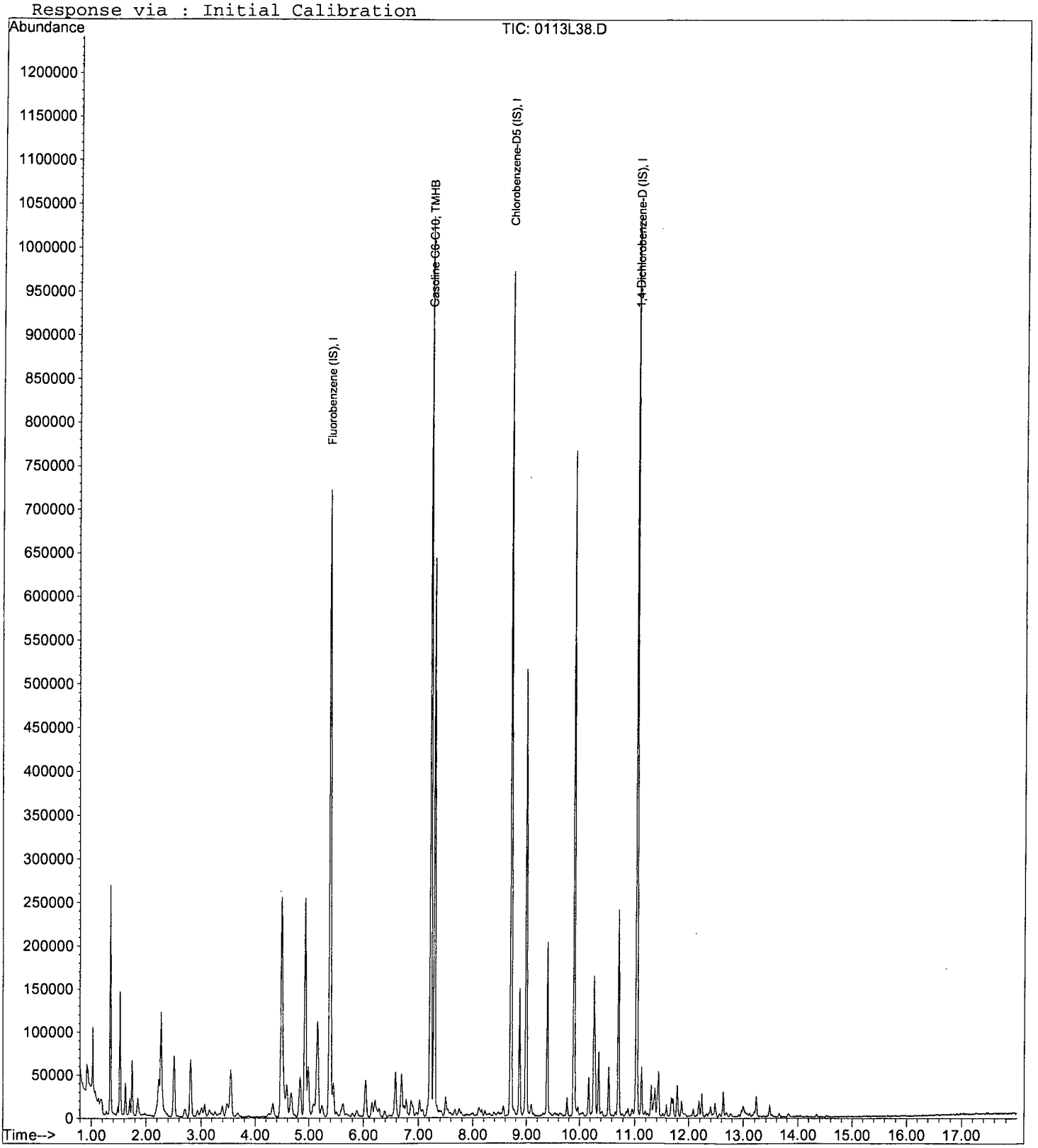
Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L38.D
Acq On : 14 Jan 17 1:22
Sample : 170113B CCV/LCS-1WL 300ug/L
Misc : W IS&S 1/3/17, 01/11/17

Vial: 35
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 13:59 2017 Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/14/17
Instrument: Loki
Initial Cal. Date: 01/11/17
Data File: 0113L38.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	S	Dibromofluoromethane(S)	0.5579	0.5545	0.61	S	
3	S	1,2-DCA-D4(S)	0.6050	0.5969	1.3	S	
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	S	Toluene-D8(S)	2.001	2.004	0.16	S	
6	S	4-Bromofluorobenzene(S)	0.6944	0.6849	1.4	S	
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
8							
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		Average			0.9		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L38.D Vial: 35
Acq On : 14 Jan 17 1:22 Operator: PM,DG,SV,CMM
Sample : 170113B CCV/LCS-1WL 300ug/L Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 13:55 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	338560	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	319680	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	166464	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	187730	24.85	ppb	0.00
Spiked Amount 25.000			Recovery =	99.392%		
3) 1,2-DCA-D4(S)	4.92	65	202073	24.66	ppb	0.00
Spiked Amount 25.000			Recovery =	98.652%		
5) Toluene-D8(S)	7.22	98	640750	25.04	ppb	0.00
Spiked Amount 25.000			Recovery =	100.160%		
6) 4-Bromofluorobenzene(S)	9.89	95	218943	24.66	ppb	0.00
Spiked Amount 25.000			Recovery =	98.628%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/14/17
Matrix: Instrument: Loki
Initial Cal. Date: 01/11/17
Data File: 0113L61.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	3.826	1.570	59	TMHBL	6.8
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
5							
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		Average			59.0		

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L61.D Vial: 58
Acq On : 14 Jan 17 12:06 Operator: PM,DG,SV,CMM
Sample : Ending CCV GAS 300ug/L 1/13/17 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 14:00 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	674036	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	897305	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	951508	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	12698616m	279.67	ppb	100

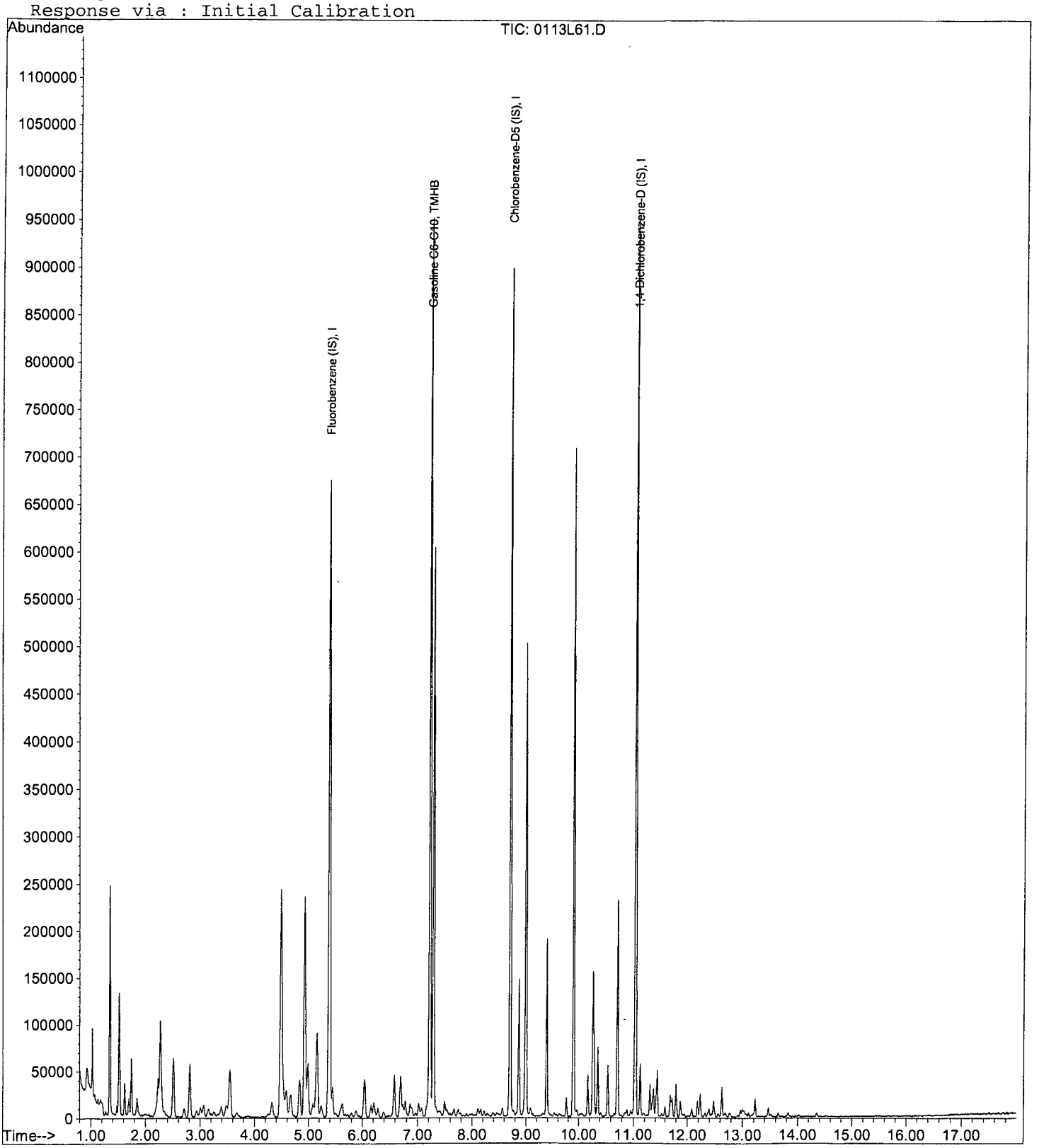
(#) = qualifier out of range (m) = manual integration
0113L61.D LGAS6112.M Tue Jan 17 13:42:59 2017 Page 1

Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L61.D Vial: 58
Acq On : 14 Jan 17 12:06 Operator: PM,DG,SV,CMM
Sample : Ending CCV GAS 300ug/L 1/13/17 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 14:00 2017 Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/14/17
Instrument: Loki
Initial Cal. Date: 01/11/17
Data File: 0113L61.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	S	Dibromofluoromethane(S)	0.5579	0.5552	0.47	S	
3	S	1,2-DCA-D4(S)	0.6050	0.5819	3.8	S	
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	S	Toluene-D8(S)	2.001	2.006	0.26	S	
6	S	4-Bromofluorobenzene(S)	0.6944	0.6839	1.5	S	
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
8							
9							
10							
11							
12							
13							
14							
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40							
		Average			1.5		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L61.D Vial: 58
Acq On : 14 Jan 17 12:06 Operator: PM,DG,SV,CMM
Sample : Ending CCV GAS 300ug/L 1/13/17 Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 13:56 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	319936	25.00 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	296064	25.00 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	154560	25.00 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.48	111	177638	24.88 ppb	0.00
Spiked Amount 25.000			Recovery =	99.524%	
3) 1,2-DCA-D4(S)	4.92	65	186173	24.05 ppb	0.00
Spiked Amount 25.000			Recovery =	96.180%	
5) Toluene-D8(S)	7.22	98	594025	25.07 ppb	0.00
Spiked Amount 25.000			Recovery =	100.264%	
6) 4-Bromofluorobenzene(S)	9.89	95	202476	24.62 ppb	0.00
Spiked Amount 25.000			Recovery =	98.488%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 1/11/17
Matrix: Instrument: Max
Initials:

		Compound	0111M06.D	0111M07.D	0111M08.D	0111M09.D	0111M10.D	0111M11.D	0111M12.D	0111M13.D	0111M14.D		Avg	%RSD		
			1	2	3	4	5	6	7	8	9					
1	I	Fluorobenzene (IS)														
2	S	Dibromofluoromethane(S)	0.2337	0.2291	0.2010	0.2005	0.2193	0.2229	0.2284	0.2221	0.2202		0.22	5.3	S	
3	S	1,2-DCA-D4(S)	0.2017	0.1939	0.1631	0.1713	0.1801	0.1717	0.1889	0.1796	0.1777		0.18	6.7	S	
4	I	Chlorobenzene-D5 (IS)														
5	S	Toluene-D8(S)	1.374	1.317	1.158	1.150	1.261	1.269	1.291	1.272	1.230		1.3	5.7	S	
6	S	4-Bromofluorobenzene(S)	0.4898	0.4586	0.4031	0.4034	0.4549	0.4598	0.4689	0.4698	0.4525		0.45	6.5	S	
7	I	1,4-Dichlorobenzene-D (IS)														
8																
9																
10																
11																
12																
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Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M06.D
Acq On : 11 Jan 17 11:24
Sample : 0.3ug/L VOC STD 1/11/17A
Misc : IS&S 10/20/16

Vial: 4
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:35 2017 Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	320130	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.15	117	222100	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	114005	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.78	111	14961	5.31835 ppb	0.00
Spiked Amount 25.000			Recovery =	21.272%	
3) 1,2-DCA-D4(S)	5.13	65	12915	5.57560 ppb	0.00
Spiked Amount 25.000			Recovery =	22.304%	
5) Toluene-D8(S)	7.35	98	61030	5.45987 ppb	0.00
Spiked Amount 25.000			Recovery =	21.840%	
6) 4-Bromofluorobenzene(S)	10.74	95	21757	5.42765 ppb	0.00
Spiked Amount 25.000			Recovery =	21.712%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0111M06.D MSUR111.M Thu Jan 12 13:36:39 2017 Page 1

Quantitation Report

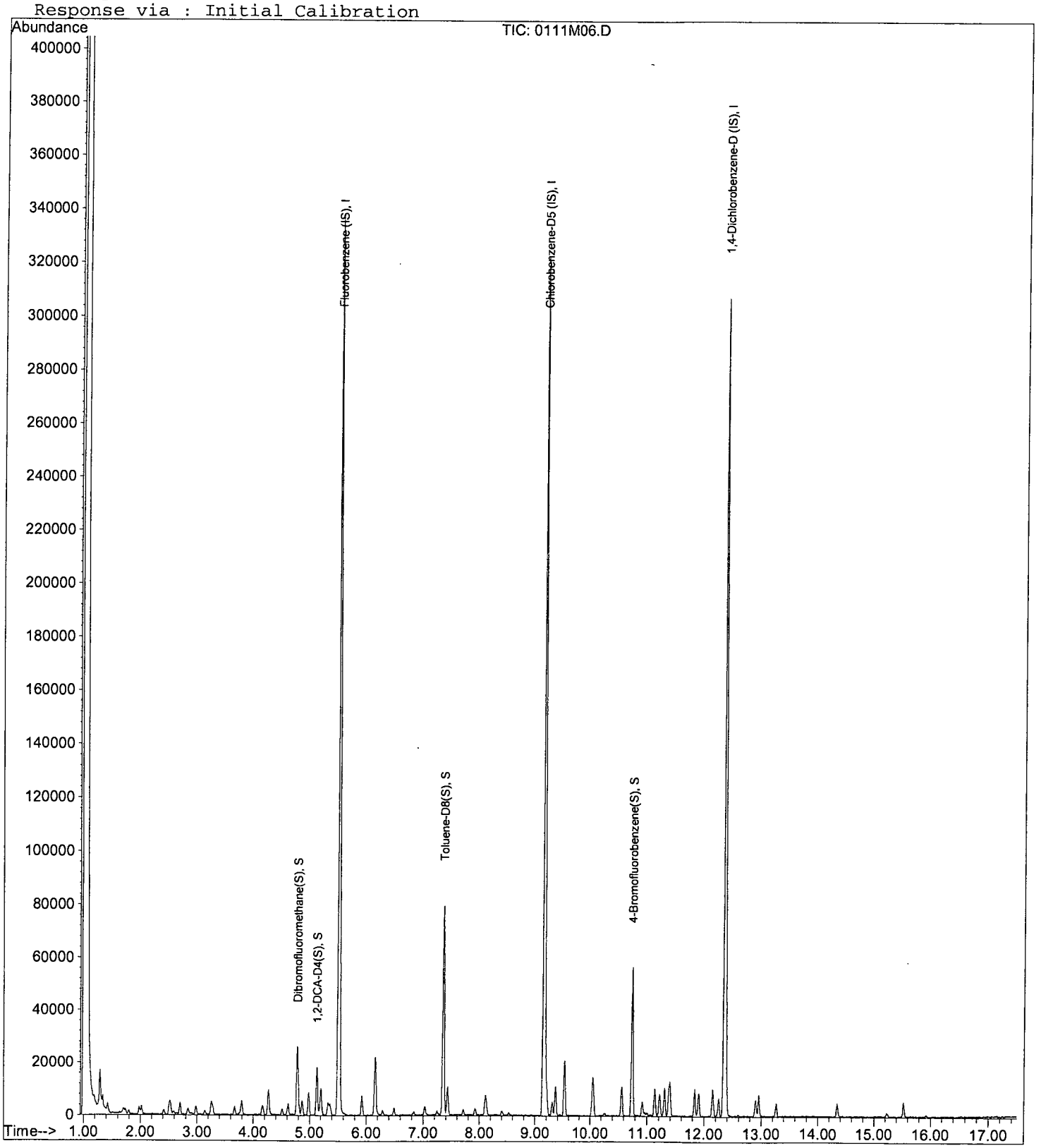
Data File : M:\MAX\DATA\M170111\0111M06.D
Acq On : 11 Jan 17 11:24
Sample : 0.3ug/L VOC STD 1/11/17A
Misc : IS&S 10/20/16

Vial: 4
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:35 2017

Quant Results File: MSUR111.RES

Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M07.D Vial: 5
Acq On : 11 Jan 17 11:52 Operator: PM,DG,SV,CMM
Sample : 0.5ug/L VOC STD 1/11/17B Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 13:35 2017 Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	338873	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.15	117	239828	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	123537	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.78	111	15524	5.21326 ppb	0.00
Spiked Amount 25.000			Recovery =	20.852%	
3) 1,2-DCA-D4(S)	5.13	65	13144	5.36061 ppb	0.00
Spiked Amount 25.000			Recovery =	21.444%	
5) Toluene-D8(S)	7.35	98	63193	5.23549 ppb	0.00
Spiked Amount 25.000			Recovery =	20.940%	
6) 4-Bromofluorobenzene(S)	10.74	95	21998	5.08211 ppb	0.00
Spiked Amount 25.000			Recovery =	20.328%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

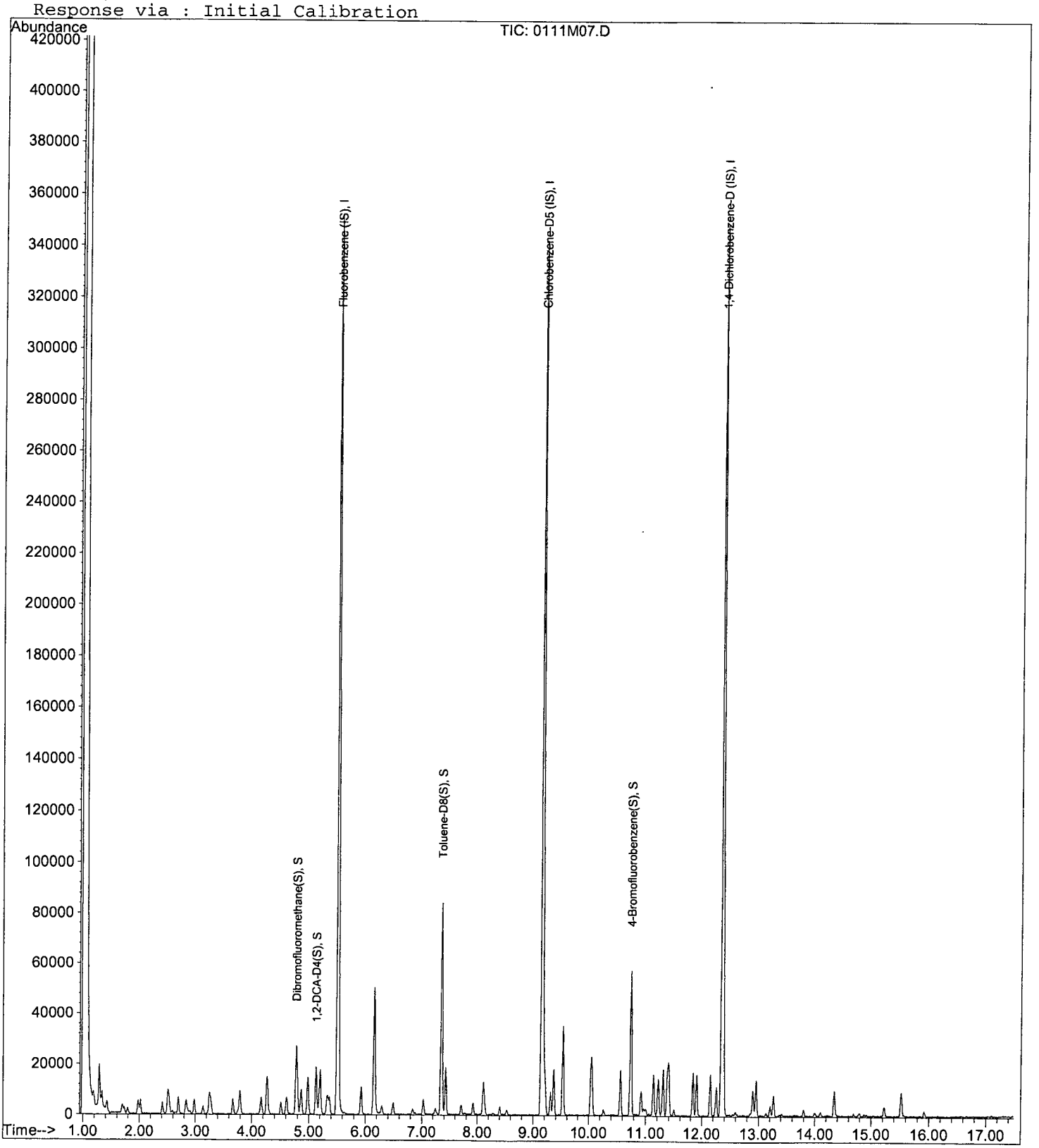
Quantitation Report

Data File : M:\MAX\DATA\M170111\0111M07.D
Acq On : 11 Jan 17 11:52
Sample : 0.5ug/L VOC STD 1/11/17B
Misc : IS&S 10/20/16

Vial: 5
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:35 2017 Quant Results File: MSUR111.RES

Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M08.D Vial: 6
Acq On : 11 Jan 17 12:21 Operator: PM,DG,SV,CMM
Sample : 1.0ug/L VOC STD 1/11/17C Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 13:35 2017 Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	341843	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.15	117	237526	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	119495	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.78	111	27487	9.15047 ppb	0.00
Spiked Amount 25.000			Recovery	= 36.600%	
3) 1,2-DCA-D4(S)	5.13	65	22300	9.01575 ppb	0.00
Spiked Amount 25.000			Recovery	= 36.064%	
5) Toluene-D8(S)	7.35	98	110065	9.20717 ppb	0.00
Spiked Amount 25.000			Recovery	= 36.828%	
6) 4-Bromofluorobenzene(S)	10.74	95	38301	8.93429 ppb	0.00
Spiked Amount 25.000			Recovery	= 35.736%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

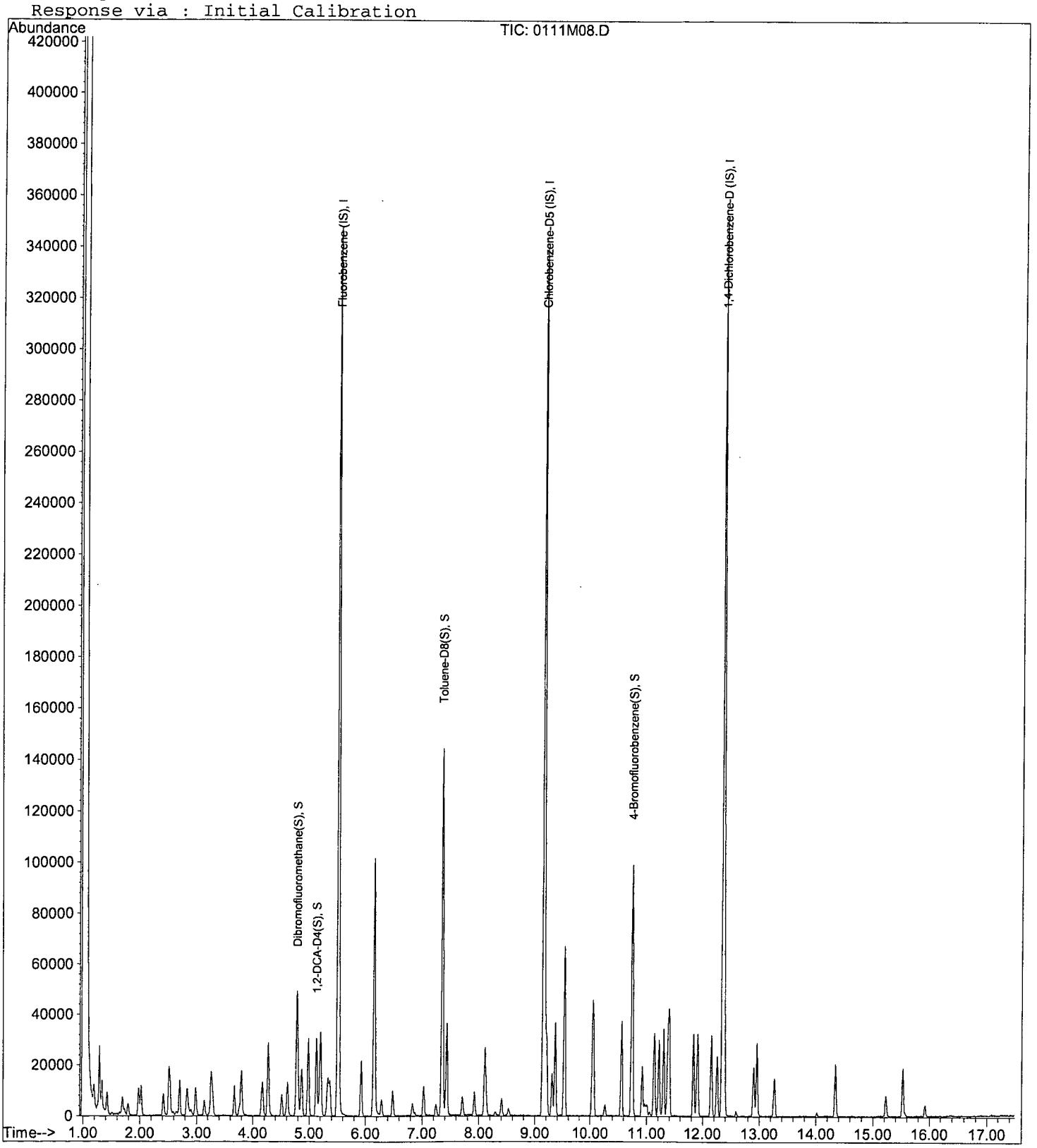
Quantitation Report

Data File : M:\MAX\DATA\M170111\0111M08.D
Acq On : 11 Jan 17 12:21
Sample : 1.0ug/L VOC STD 1/11/17C
Misc : IS&S 10/20/16

Vial: 6
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:35 2017 Quant Results File: MSUR111.RES

Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M09.D
Acq On : 11 Jan 17 12:49
Sample : 2.0ug/L VOC STD 1/11/17D
Misc : IS&S 10/20/16

Vial: 7
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:35 2017

Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	351047	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.15	117	249761	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	131021	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.78	111	28151	9.12581 ppb	0.00
Spiked Amount 25.000			Recovery =	36.504%	
3) 1,2-DCA-D4(S)	5.13	65	24057	9.47109 ppb	0.00
Spiked Amount 25.000			Recovery =	37.884%	
5) Toluene-D8(S)	7.35	98	114893	9.14022 ppb	0.00
Spiked Amount 25.000			Recovery =	36.560%	
6) 4-Bromofluorobenzene(S)	10.74	95	40300	8.94008 ppb	0.00
Spiked Amount 25.000			Recovery =	35.760%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

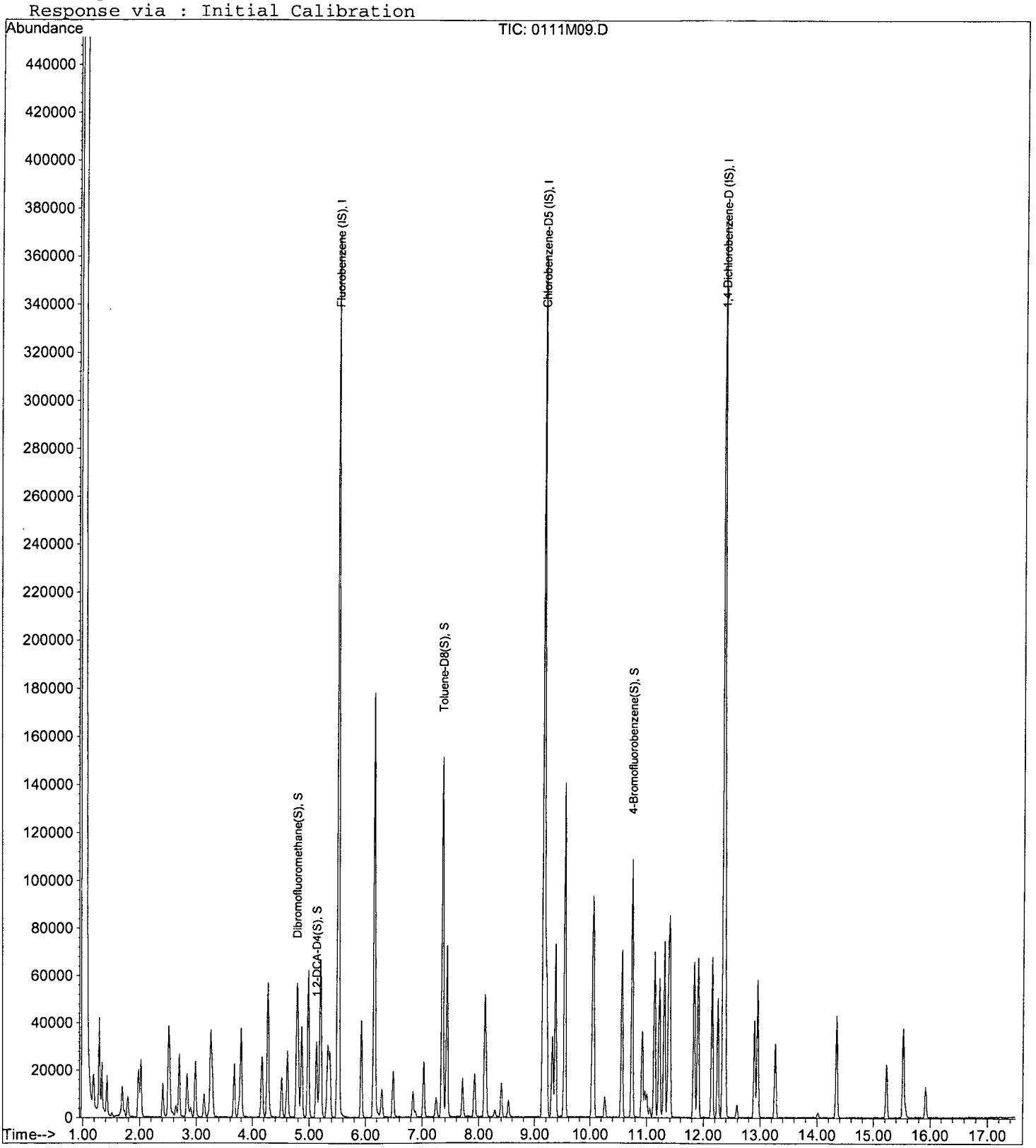
Quantitation Report

Data File : M:\MAX\DATA\M170111\0111M09.D
Acq On : 11 Jan 17 12:49
Sample : 2.0ug/L VOC STD 1/11/17D
Misc : IS&S 10/20/16

Vial: 7
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:35 2017 Quant Results File: MSUR111.RES

Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M10.D
Acq On : 11 Jan 17 13:17
Sample : 5.0ug/L VOC STD 1/11/17E
Misc : IS&S 10/20/16

Vial: 8
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:35 2017 Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	341259	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.15	117	240539	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	127100	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.78	111	74853	24.96134 ppb	0.00
Spiked Amount 25.000			Recovery = 99.844%		
3) 1,2-DCA-D4(S)	5.13	65	61474	24.89609 ppb	0.00
Spiked Amount 25.000			Recovery = 99.584%		
5) Toluene-D8(S)	7.35	98	303378	25.06031 ppb	0.00
Spiked Amount 25.000			Recovery = 100.240%		
6) 4-Bromofluorobenzene(S)	10.74	95	109432	25.20692 ppb	0.00
Spiked Amount 25.000			Recovery = 100.828%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

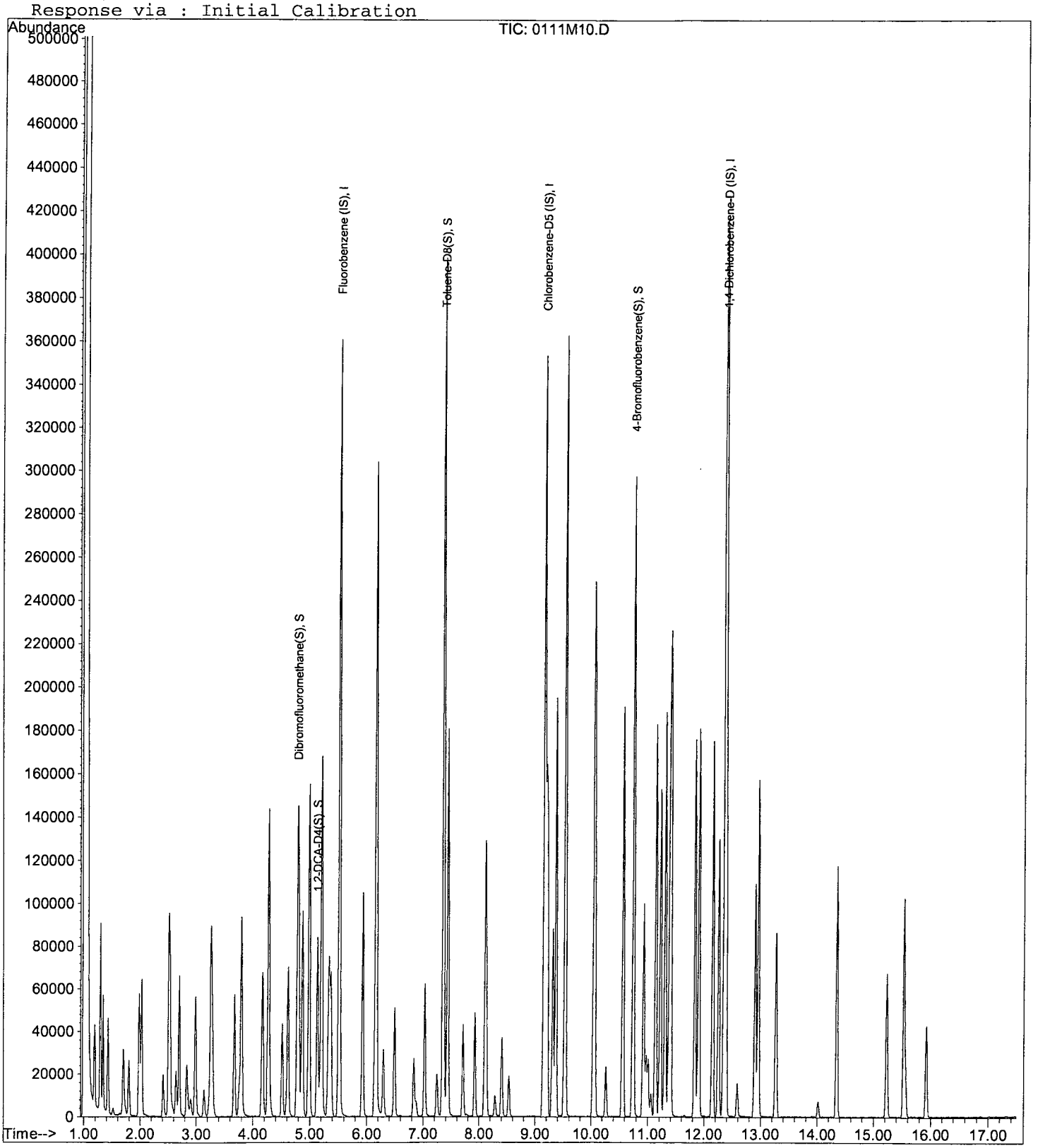
Quantitation Report

Data File : M:\MAX\DATA\M170111\0111M10.D
Acq On : 11 Jan 17 13:17
Sample : 5.0ug/L VOC STD 1/11/17E
Misc : IS&S 10/20/16

Vial: 8
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:35 2017 Quant Results File: MSUR111.RES

Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M11.D Vial: 9
Acq On : 11 Jan 17 13:46 Operator: PM,DG,SV,CMM
Sample : 10ug/L VOC STD 1/11/17F Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 13:35 2017 Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	337093	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.15	117	240952	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	127119	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.78	111	75135	25.36502 ppb	0.00
Spiked Amount 25.000			Recovery = 101.460%		
3) 1,2-DCA-D4(S)	5.13	65	57871	23.72657 ppb	0.00
Spiked Amount 25.000			Recovery = 94.908%		
5) Toluene-D8(S)	7.35	98	305768	25.21444 ppb	0.00
Spiked Amount 25.000			Recovery = 100.856%		
6) 4-Bromofluorobenzene(S)	10.74	95	110788	25.47553 ppb	0.00
Spiked Amount 25.000			Recovery = 101.904%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

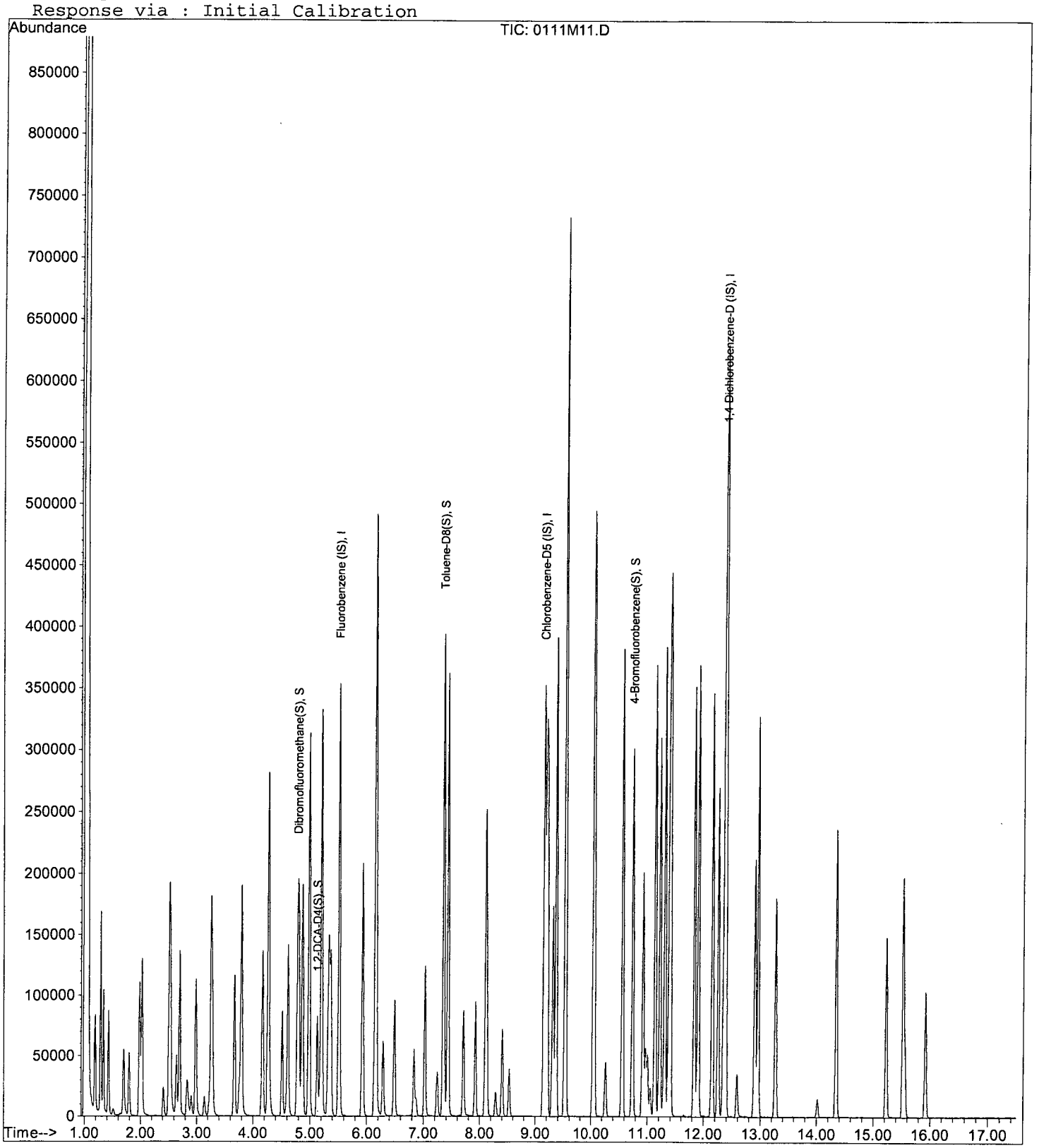
Quantitation Report

Data File : M:\MAX\DATA\M170111\0111M11.D
Acq On : 11 Jan 17 13:46
Sample : 10ug/L VOC STD 1/11/17F
Misc : IS&S 10/20/16

Vial: 9
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:35 2017 Quant Results File: MSUR111.RES

Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M12.D
Acq On : 11 Jan 17 14:14
Sample : 20ug/L VOC STD 1/11/17G
Misc : IS&S 10/20/16

Vial: 10
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:35 2017 Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	335531	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.15	117	245289	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	132793	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.78	111	153257	51.97929 ppb	0.00
Spiked Amount 25.000			Recovery = 207.916%		
3) 1,2-DCA-D4(S)	5.13	65	126755	52.21030 ppb	0.00
Spiked Amount 25.000			Recovery = 208.840%		
5) Toluene-D8(S)	7.35	98	633500	51.31643 ppb	0.00
Spiked Amount 25.000			Recovery = 205.264%		
6) 4-Bromofluorobenzene(S)	10.74	95	230047	51.96363 ppb	0.00
Spiked Amount 25.000			Recovery = 207.856%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

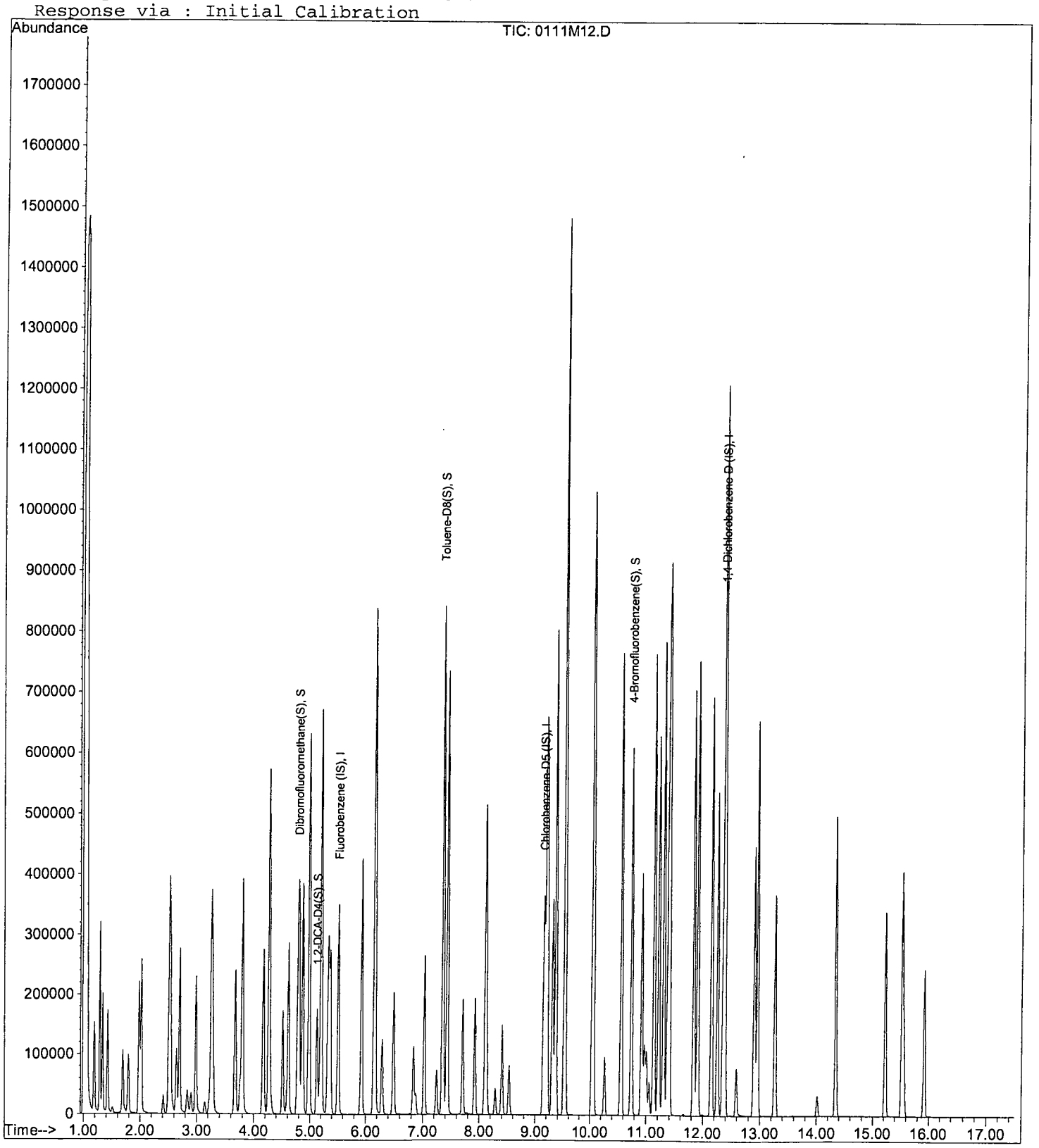
Data File : M:\MAX\DATA\M170111\0111M12.D
Acq On : 11 Jan 17 14:14
Sample : 20ug/L VOC STD 1/11/17G
Misc : IS&S 10/20/16

Vial: 10
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:35 2017

Quant Results File: MSUR111.RES

Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M13.D
Acq On : 11 Jan 17 14:42
Sample : 40ug/L VOC STD 1/11/17H
Misc : IS&S 10/20/16

Vial: 11
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:35 2017 Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	347126	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.15	117	254484	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	138555	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.78	111	154211	50.55579 ppb	0.00
Spiked Amount 25.000			Recovery = 202.224%		
3) 1,2-DCA-D4(S)	5.13	65	124686	49.64258 ppb	0.00
Spiked Amount 25.000			Recovery = 198.572%		
5) Toluene-D8(S)	7.35	98	647545	50.55887 ppb	0.00
Spiked Amount 25.000			Recovery = 202.236%		
6) 4-Bromofluorobenzene(S)	10.74	95	239091	52.05515 ppb	0.00
Spiked Amount 25.000			Recovery = 208.220%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

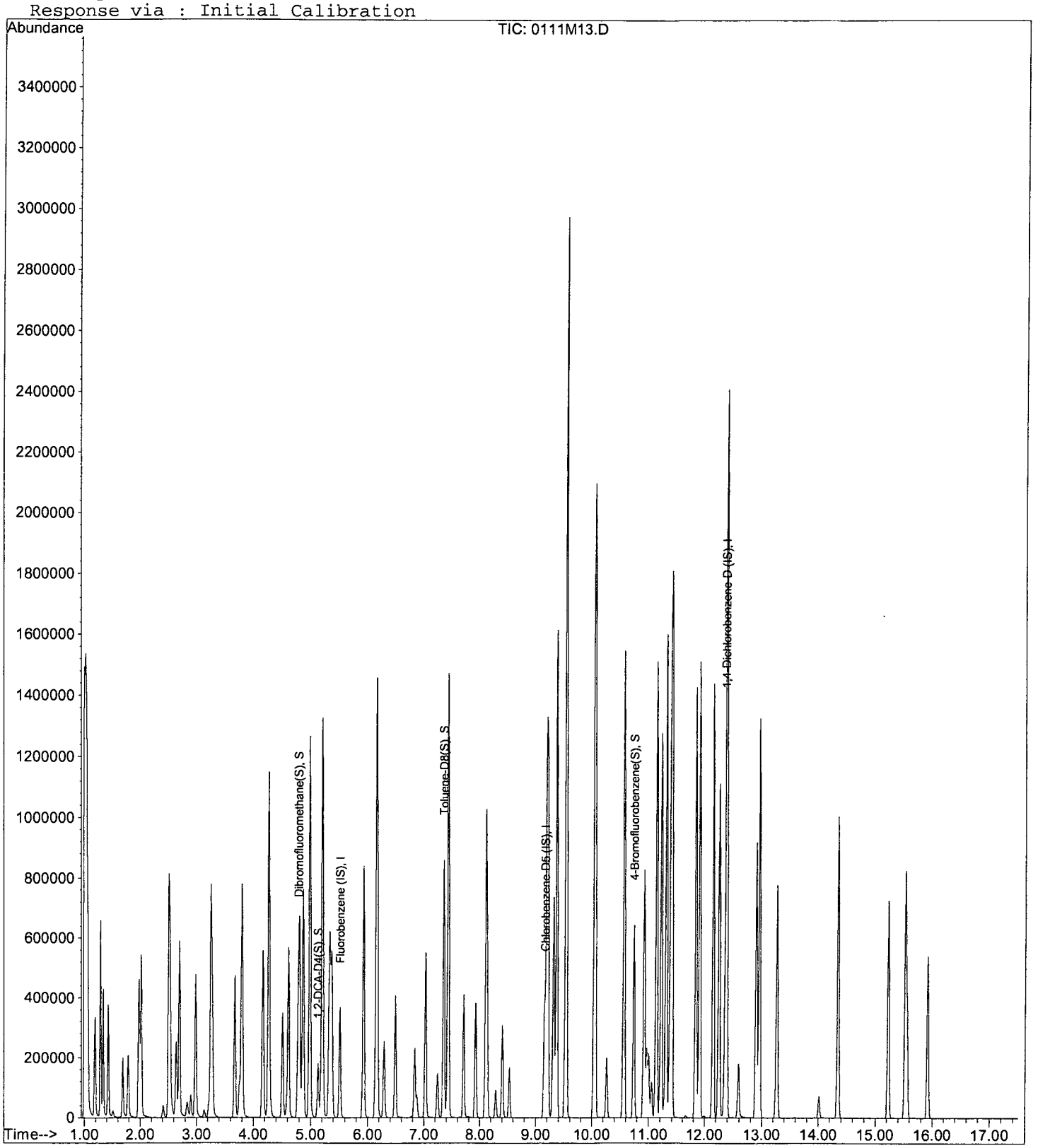
Quantitation Report

Data File : M:\MAX\DATA\M170111\0111M13.D
Acq On : 11 Jan 17 14:42
Sample : 40ug/L VOC STD 1/11/17H
Misc : IS&S 10/20/16

Vial: 11
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:35 2017 Quant Results File: MSUR111.RES

Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0111M14.D Vial: 12
Acq On : 11 Jan 17 15:10 Operator: PM,DG,SV,CMM
Sample : 100ug/L VOC STD 1/11/17I Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 13:36 2017 Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	347236	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.15	117	258306	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	143084	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.78	111	305828	100.22942 ppb	0.00
Spiked Amount 25.000			Recovery = 400.916%		
3) 1,2-DCA-D4(S)	5.13	65	246752	98.21090 ppb	0.00
Spiked Amount 25.000			Recovery = 392.844%		
5) Toluene-D8(S)	7.35	98	1271011	97.76934 ppb	0.00
Spiked Amount 25.000			Recovery = 391.076%		
6) 4-Bromofluorobenzene(S)	10.74	95	467571	100.29379 ppb	0.00
Spiked Amount 25.000			Recovery = 401.176%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

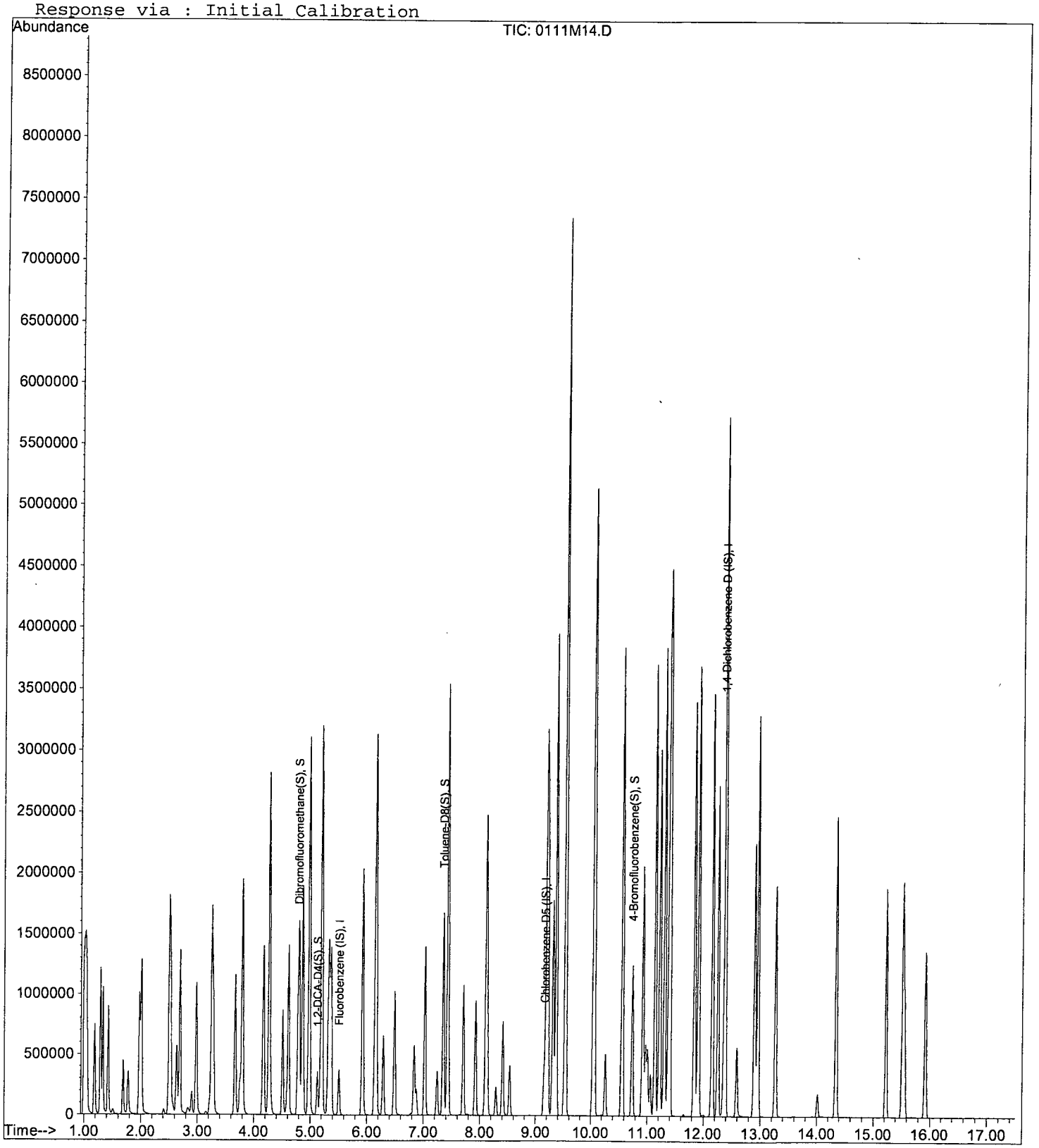
Data File : M:\MAX\DATA\M170111\0111M14.D
Acq On : 11 Jan 17 15:10
Sample : 100ug/L VOC STD 1/11/17I
Misc : IS&S 10/20/16

Vial: 12
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:36 2017

Quant Results File: MSUR111.RES

Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 1/11/17
Matrix: Instrument: Max

Initials:

		Compound	1	2	3	4	5	6	7				Avg	%RSD		
			0111M22.D	0111M23.D	0111M24.D	0111M25.D	0111M26.D	0111M27.D	0111M28.D							
1	I	Fluorobenzene (IS)														
2	TMHBL	Gasoline C6-C10	13.1	6.078	3.845	2.432	1.824	1.760	1.753				4.4	94	TMHBL	0.998
3																
4																
5																
6																
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35																

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0111M22.D
Acq On : 11 Jan 17 18:56
Sample : 20ug/L GAS STD 1/11/17
Misc : IS&S 10/20/16

Vial: 20
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 12:35 2017 Quant Results File: MGAS6111.RES

Quant Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 12:28:10 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	TIC	347960	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.35	TIC	3655169m	21.64320	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

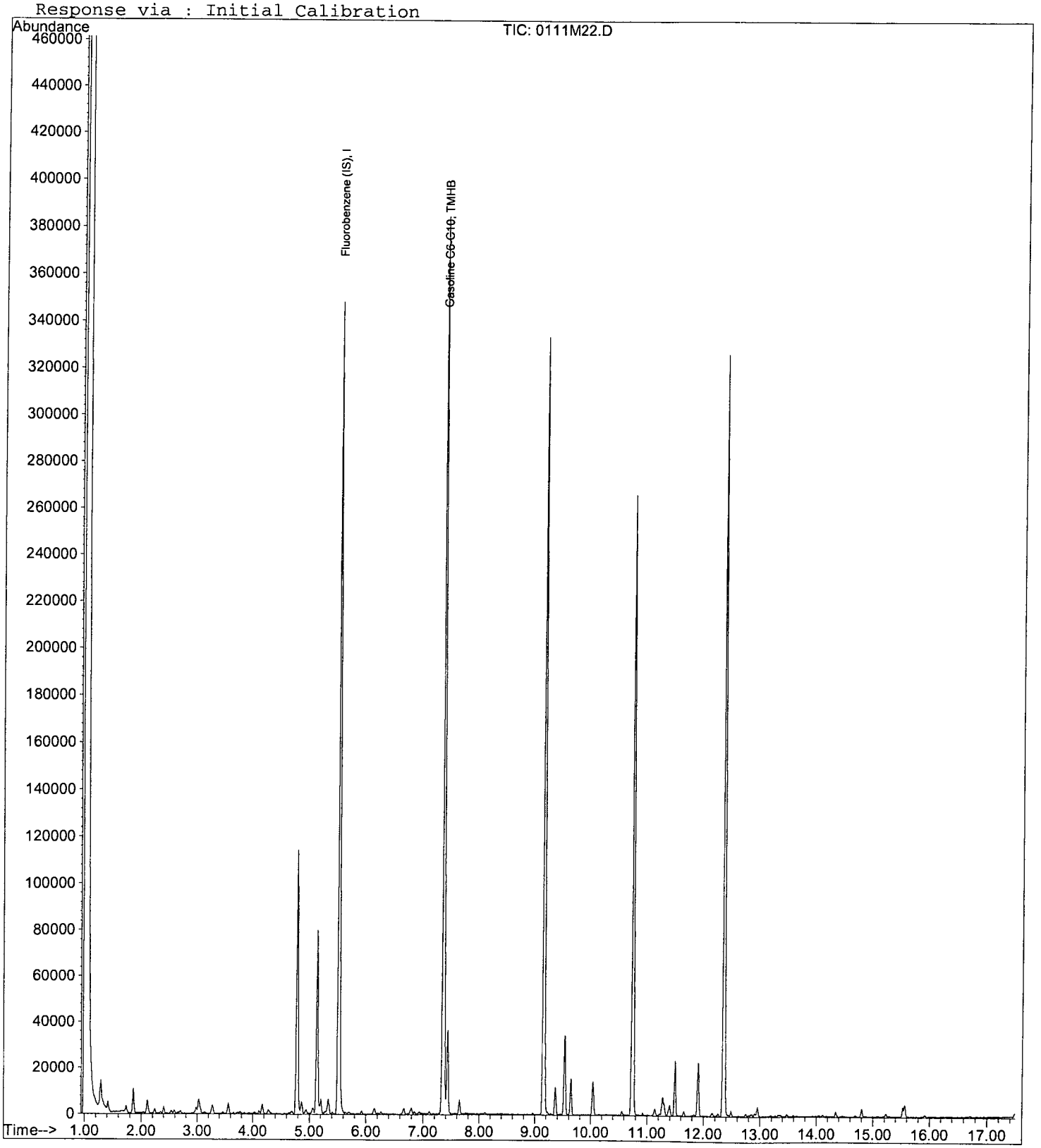
Data File : M:\MAX\DATA\M170111\0111M22.D
Acq On : 11 Jan 17 18:56
Sample : 20ug/L GAS STD 1/11/17
Misc : IS&S 10/20/16

Vial: 20
Operator: PM,DG;SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 12:35 2017

Quant Results File: MGAS6111.RES

Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0111M23.D
Acq On : 11 Jan 17 19:24
Sample : 50ug/L GAS STD 1/11/17
Misc : IS&S 10/20/16

Vial: 21
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 12:37 2017 Quant Results File: MGAS6111.RES

Quant Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 12:28:10 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	TIC	356222	25.00000 ppb	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
2) Gasoline C6-C10	7.35	TIC	4329888m	50.44105 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

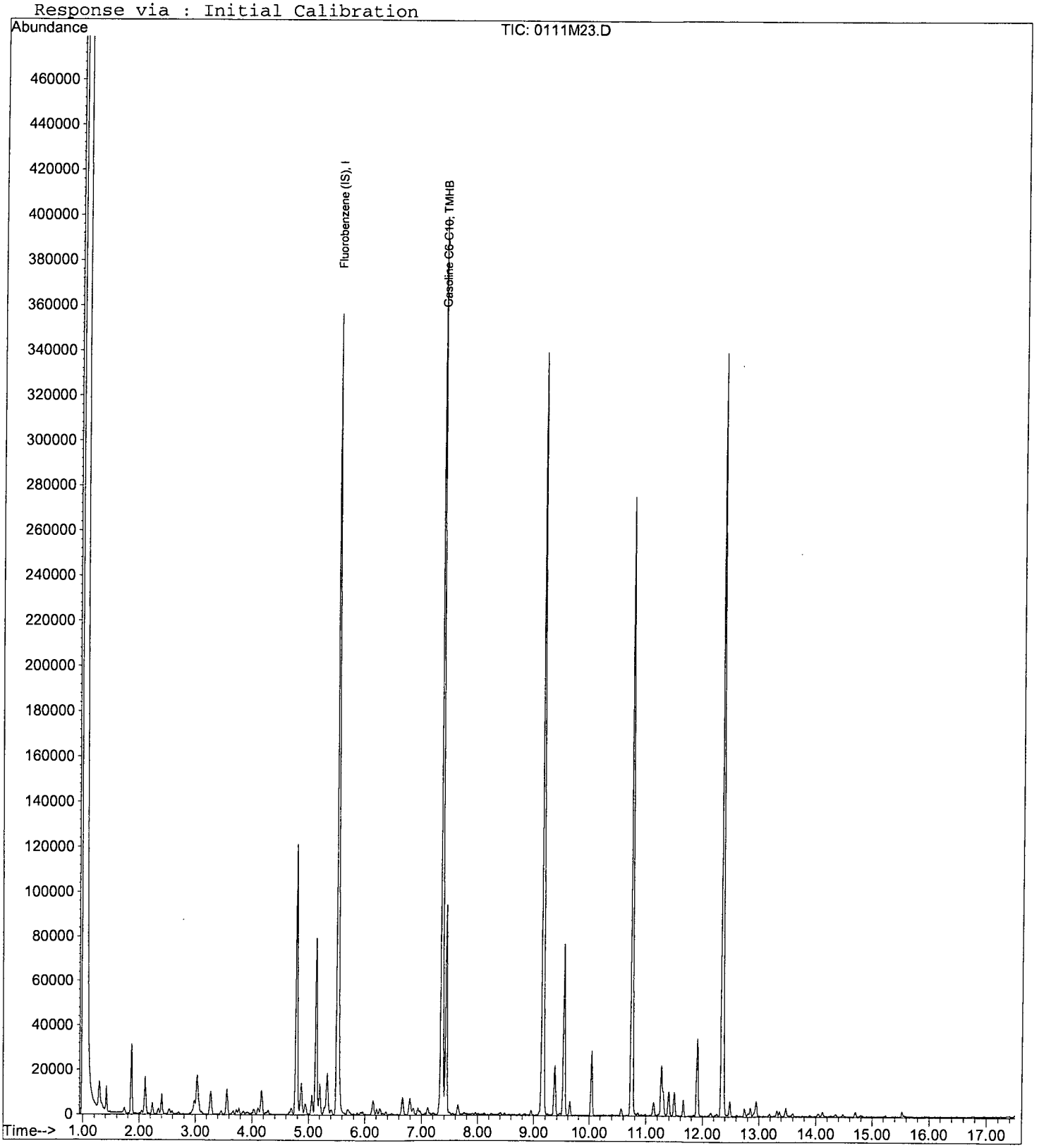
Data File : M:\MAX\DATA\M170111\0111M23.D
Acq On : 11 Jan 17 19:24
Sample : 50ug/L GAS STD 1/11/17
Misc : IS&S 10/20/16

Vial: 21
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 12:37 2017

Quant Results File: MGAS6111.RES

Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0111M24.D
Acq On : 11 Jan 17 19:53
Sample : 100ug/L GAS STD 1/11/17
Misc : IS&S 10/20/16

Vial: 22
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 12:37 2017 Quant Results File: MGAS6111.RES

Quant Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 12:28:10 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	TIC	348169	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.35	TIC	5338460m	105.89075	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

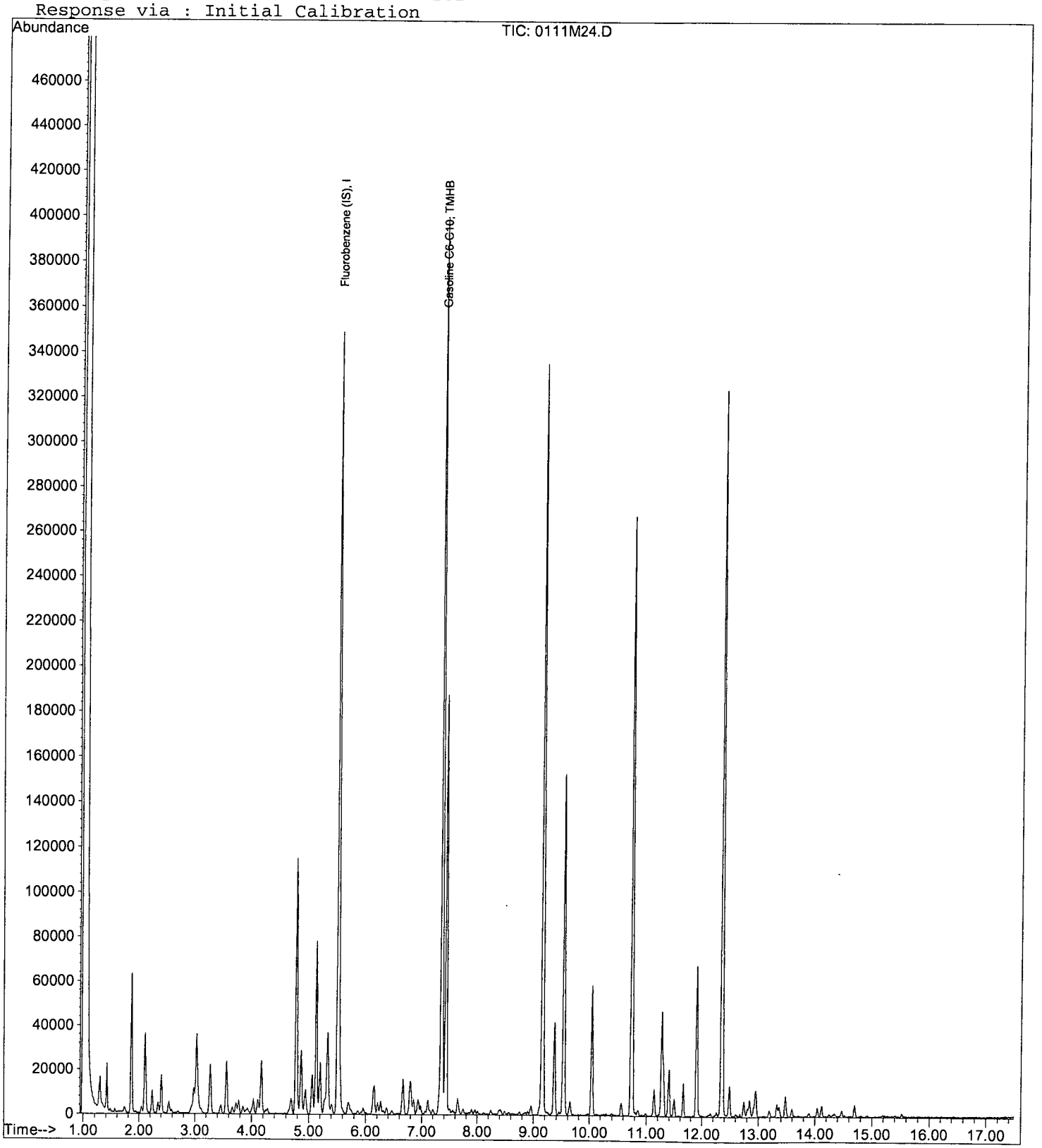
Data File : M:\MAX\DATA\M170111\0111M24.D
Acq On : 11 Jan 17 19:53
Sample : 100ug/L GAS STD 1/11/17
Misc : IS&S 10/20/16

Vial: 22
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 12:37 2017

Quant Results File: MGAS6111.RES

Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0111M25.D Vial: 23
Acq On : 11 Jan 17 20:21 Operator: PM,DG,SV,CMM
Sample : 300ug/L GAS STD 1/11/17 Inst : Max
Misc : IS&S 10/20/16 Multip1r: 1.00

Quant Time: Jan 12 12:38 2017 Quant Results File: MGAS6111.RES

Quant Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 12:28:10 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	TIC	335759	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.43	TIC	8964309m	304.20348	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

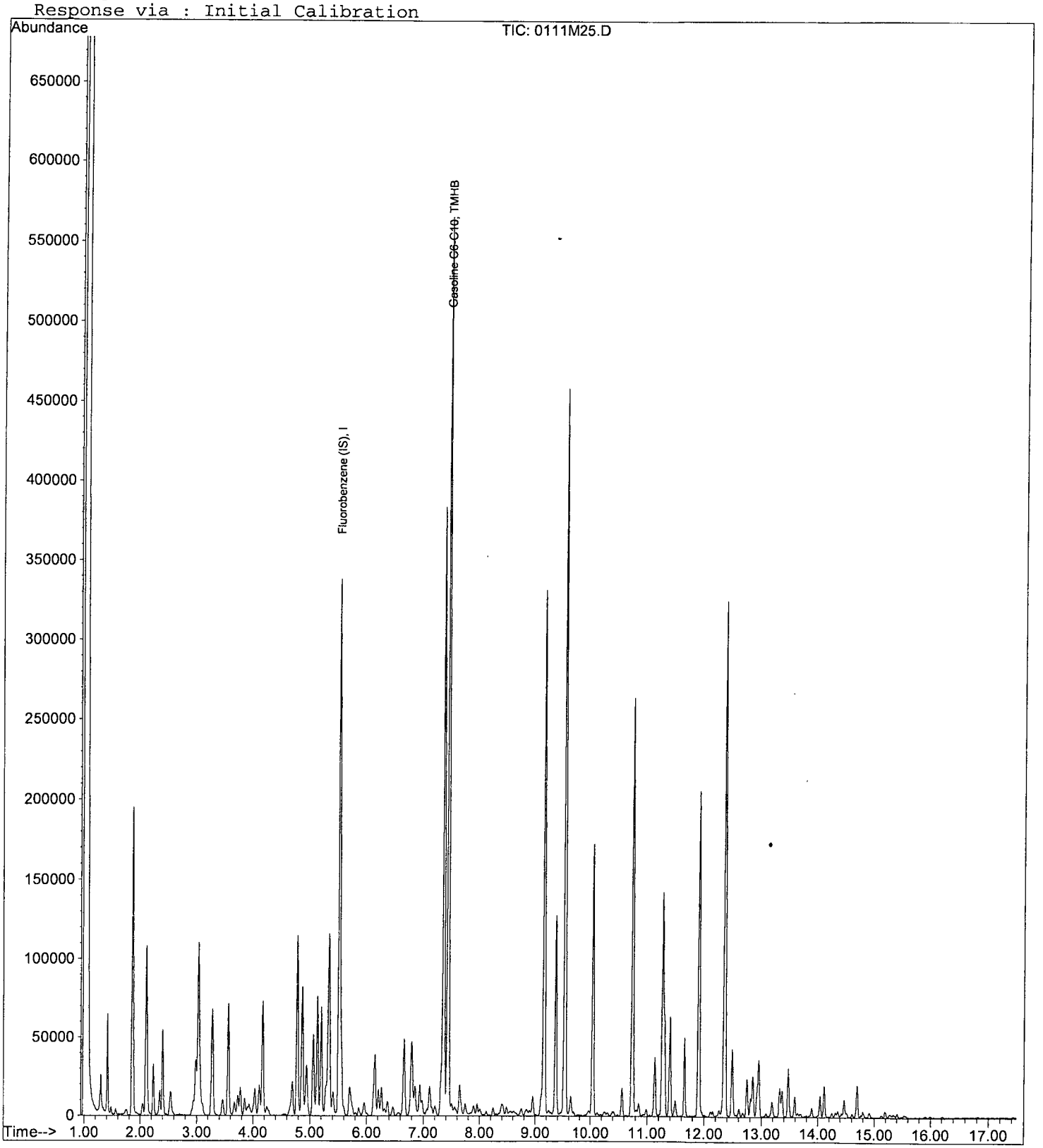
Data File : M:\MAX\DATA\M170111\0111M25.D
Acq On : 11 Jan 17 20:21
Sample : 300ug/L GAS STD 1/11/17
Misc : IS&S 10/20/16

Vial: 23
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 12:38 2017

Quant Results File: MGAS6111.RES

Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0111M26.D
Acq On : 11 Jan 17 20:49
Sample : 600ug/L GAS STD 1/11/17
Misc : IS&S 10/20/16

Vial: 24
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 12:39 2017 Quant Results File: MGAS6111.RES

Quant Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 12:28:10 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	TIC	344780	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.43	TIC	15091213m	602.08069	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

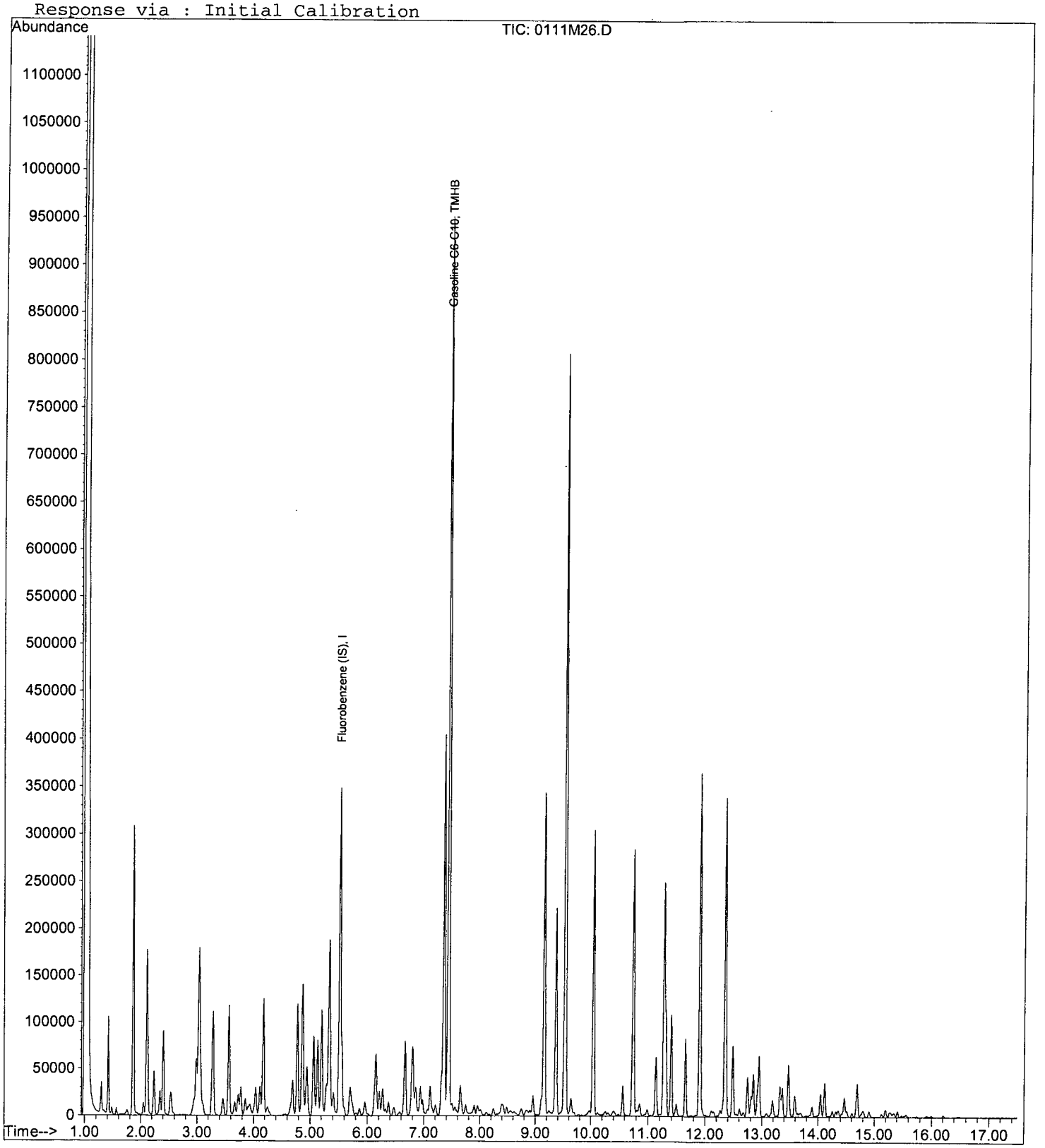
Data File : M:\MAX\DATA\M170111\0111M26.D
Acq On : 11 Jan 17 20:49
Sample : 600ug/L GAS STD 1/11/17
Misc : IS&S 10/20/16

Vial: 24
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 12:39 2017

Quant Results File: MGAS6111.RES

Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0111M27.D
Acq On : 11 Jan 17 21:17
Sample : 800ug/L GAS STD 1/11/17
Misc : IS&S 10/20/16

Vial: 25
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:08 2017 Quant Results File: MGAS6111.RES

Quant Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 12:28:10 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	TIC	348982	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.43	TIC	19651549m	820.89221	ppb	100

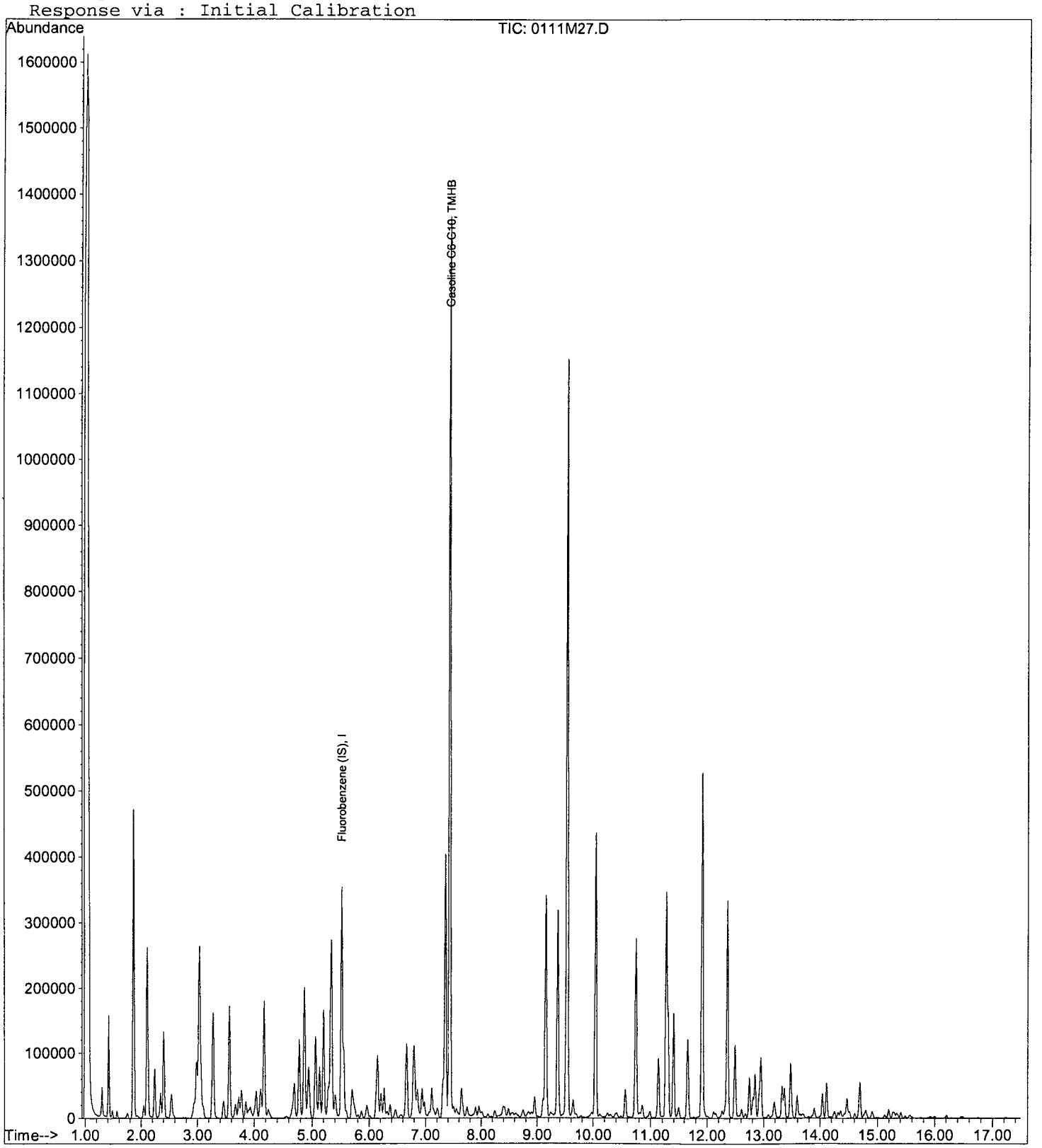
(#) = qualifier out of range (m) = manual integration
0111M27.D MGAS6111.M Thu Jan 12 13:25:50 2017 Page 1

Quantitation Report

Data File : M:\MAX\DATA\M170111\0111M27.D Vial: 25
Acq On : 11 Jan 17 21:17 Operator: PM,DG,SV,CMM
Sample : 800ug/L GAS STD 1/11/17 Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 13:08 2017 Quant Results File: MGAS6111.RES

Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0111M28.D
Acq On : 11 Jan 17 21:46
Sample : 1000ug/L GAS STD 1/11/17
Misc : IS&S 10/20/16

Vial: 26
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:09 2017 Quant Results File: MGAS6111.RES

Quant Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 12:28:10 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	TIC	369516	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.43	TIC	25906480m	1061.64762	ppb	100

(#) = qualifier out of range (m) = manual integration
0111M28.D MGAS6111.M Thu Jan 12 13:25:54 2017 Page 1

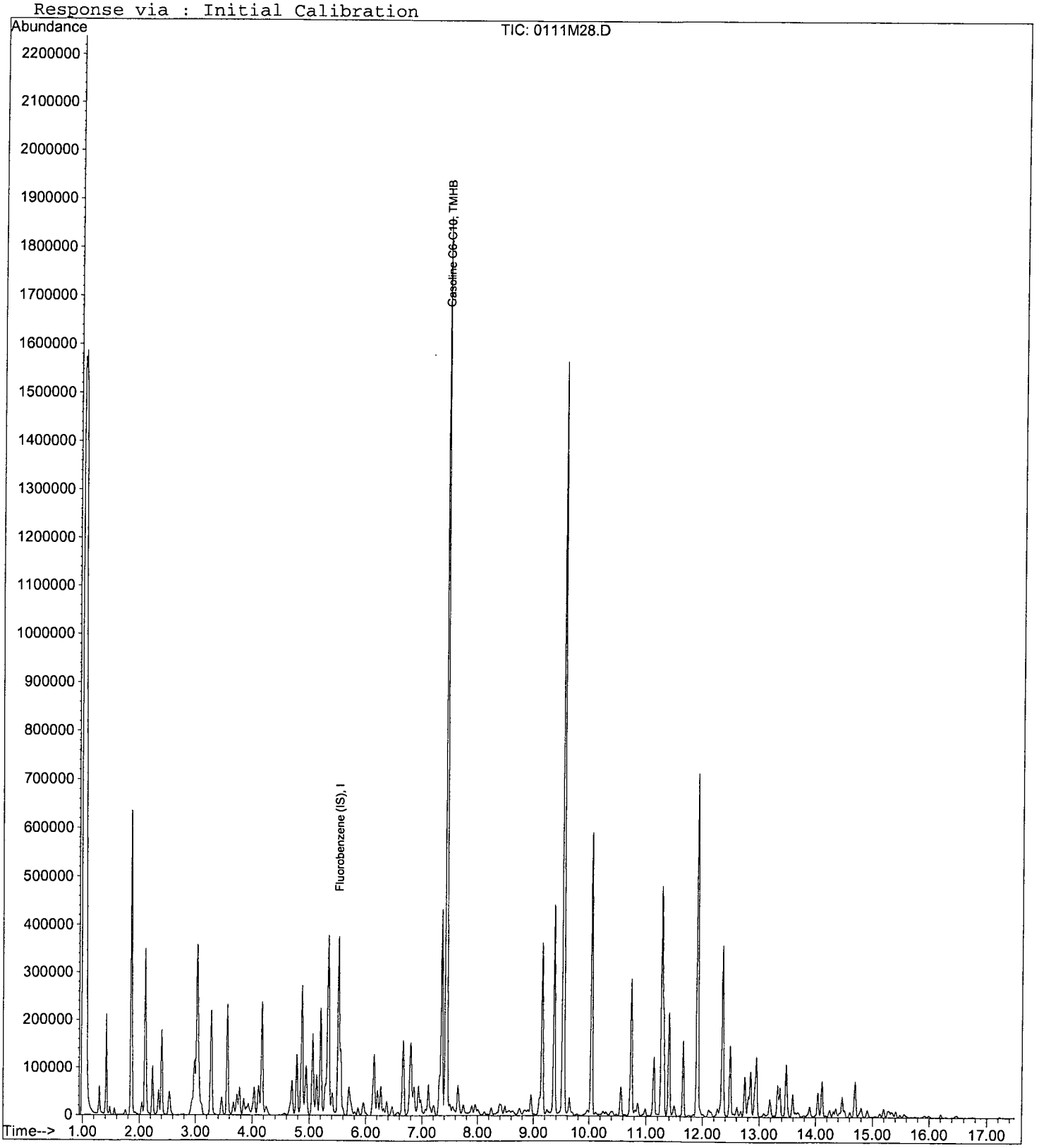
Quantitation Report

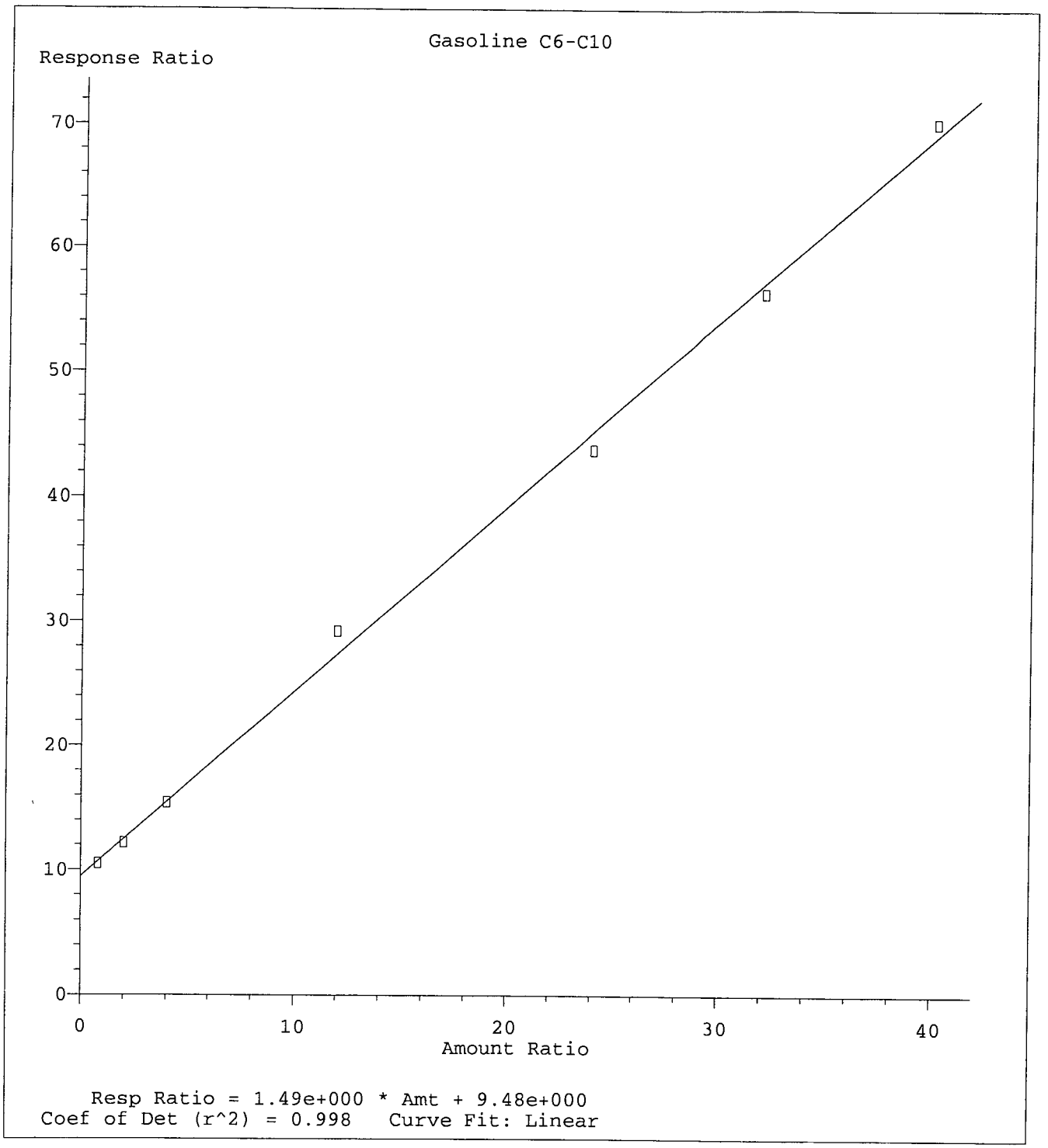
Data File : M:\MAX\DATA\M170111\0111M28.D
Acq On : 11 Jan 17 21:46
Sample : 1000ug/L GAS STD 1/11/17
Misc : IS&S 10/20/16

Vial: 26
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:09 2017 Quant Results File: MGAS6111.RES

Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration





Method Name: M:\MAX\DATA\M170111\MGAS6111.M
Calibration Table Last Updated: Thu Jan 12 13:09:40 2017

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 1/11/17
Instrument: Max
Initial Cal. Date: 1/11/17
Data File: 0111M31.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TMHB	Gasoline C6-C10	4.403	2.526	43	TMHBL	16
2							
3							
4							
5							
6							
7							
8							
9							
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32							
33							
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35							
36							
37							
38							
39							
40							
		Average			43.0		

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0111M31.D Vial: 29
Acq On : 11 Jan 17 23:11 Operator: PM,DG,SV,CMM
Sample : (SS)300ug/L GAS STD 1/11/17 Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 12 13:21 2017 Quant Results File: MGAS6111.RES

Quant Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	TIC	337548	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.43	TIC	10230204m	349.43485	ppb	100

(#) = qualifier out of range (m) = manual integration
0111M31.D MGAS6111.M Thu Jan 12 13:26:42 2017 Page 1

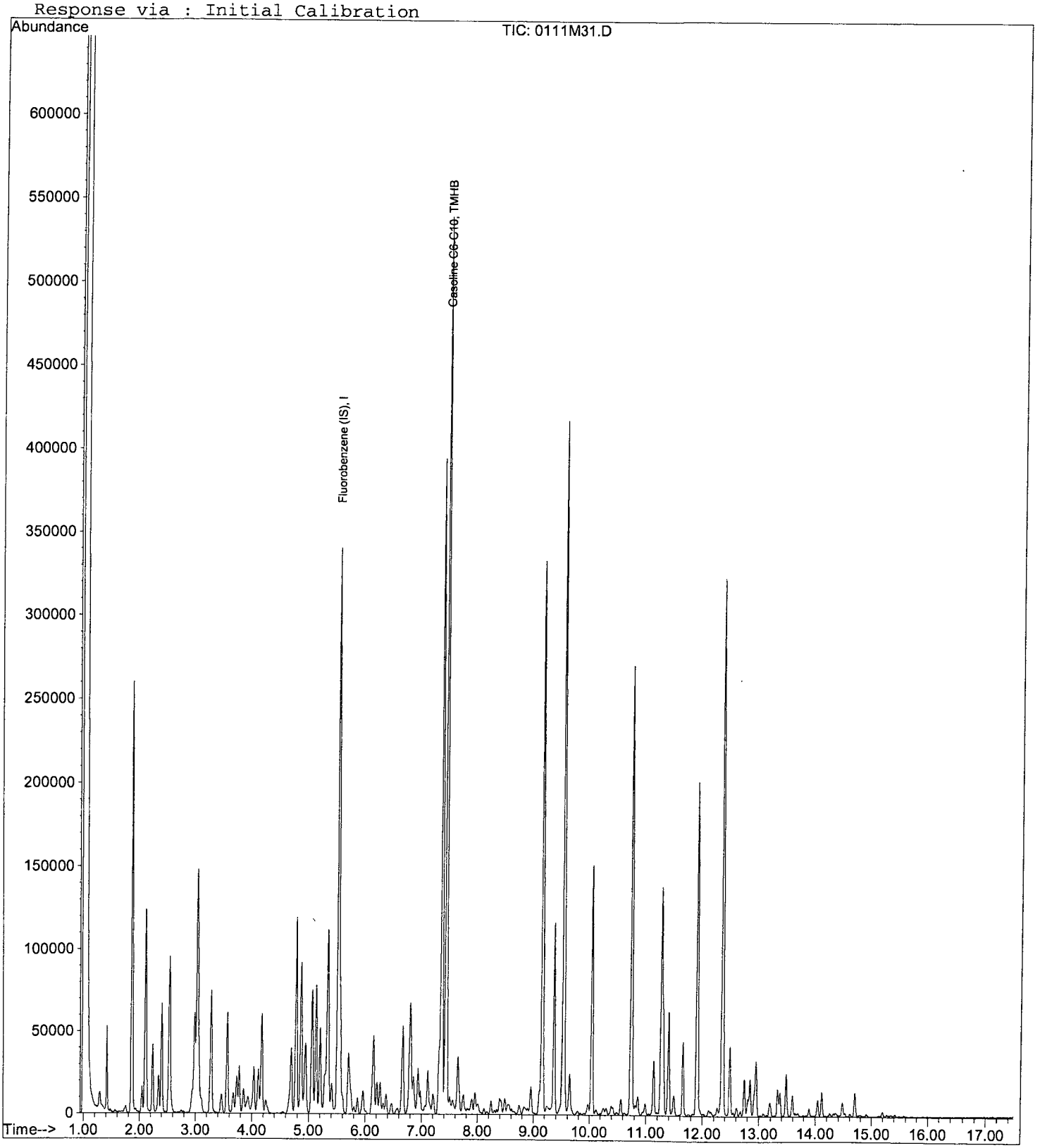
Data File : M:\MAX\DATA\M170111\0111M31.D
Acq On : 11 Jan 17 23:11
Sample : (SS)300ug/L GAS STD 1/11/17
Misc : IS&S 10/20/16

Vial: 29
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 12 13:21 2017

Quant Results File: MGAS6111.RES

Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 1/13/17
Instrument: Max
Initial Cal. Date: 1/11/17
Data File: 0113M14.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	4.403	2.571	42	TMHBL	20
3							
4							
5							
6							
7							
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38							
39							
40							
		Average			42.0		

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0113M14.D
Acq On : 13 Jan 17 15:25
Sample : 170113A CCV/LCS-1WM 300ug/L
Misc : IS&S 10/20/16

Vial: 5
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 9:26 2017 Quant Results File: MGAS6111.RES

Quant Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	TIC	345828	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	6.28	TIC	10668651m	358.53349	ppb	100

(#) = qualifier out of range (m) = manual integration
0113M14.D MGAS6111.M Mon Jan 16 10:13:33 2017 Page 1

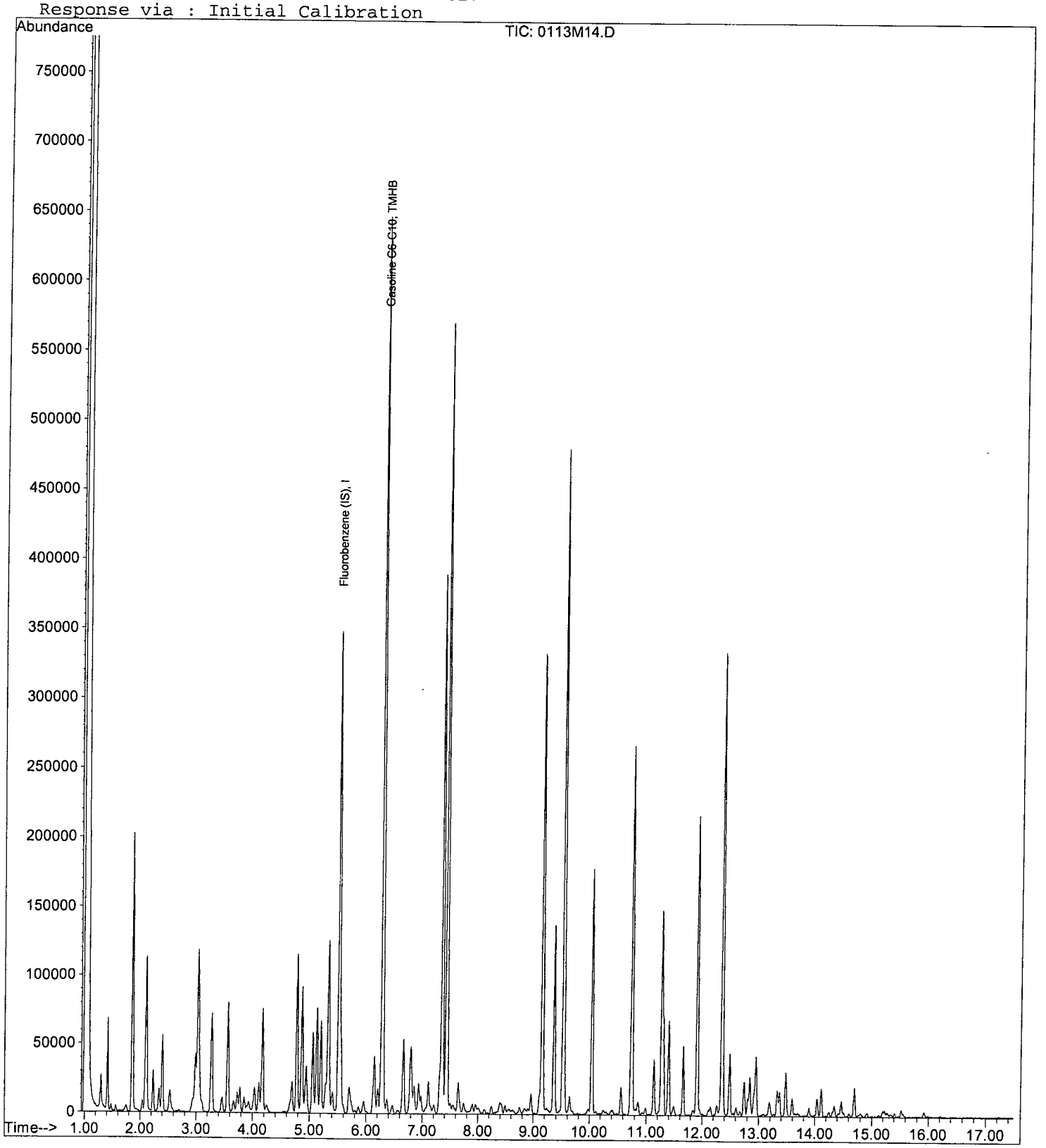
Quantitation Report

Data File : M:\MAX\DATA\M170111\0113M14.D
Acq On : 13 Jan 17 15:25
Sample : 170113A CCV/LCS-1WM 300ug/L
Misc : IS&S 10/20/16

Vial: 5
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 9:26 2017 Quant Results File: MGAS6111.RES

Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 1/13/17
Instrument: Max
Initial Cal. Date: 1/11/17
Data File: 0113M14.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	S	Dibromofluoromethane(S)	0.2197	0.2046	6.9	S	
3	S	1,2-DCA-D4(S)	0.1809	0.1638	9.5	S	
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	S	Toluene-D8(S)	1.258	1.246	0.99	S	
6	S	4-Bromofluorobenzene(S)	0.4512	0.4365	3.3	S	
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
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29							
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31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			5.2		

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0113M14.D
Acq On : 13 Jan 17 15:25
Sample : 170113A CCV/LCS-1WM 300ug/L
Misc : IS&S 10/20/16

Vial: 5
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 10:17 2017 Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	334937	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.15	117	233465	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	117025	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.78	111	68513	23.27837 ppb	0.00
Spiked Amount 25.000			Recovery =	93.112%	
3) 1,2-DCA-D4(S)	5.13	65	54851	22.63316 ppb	0.00
Spiked Amount 25.000			Recovery =	90.532%	
5) Toluene-D8(S)	7.35	98	290836	24.75222 ppb	0.00
Spiked Amount 25.000			Recovery =	99.008%	
6) 4-Bromofluorobenzene(S)	10.74	95	101898	24.18270 ppb	0.00
Spiked Amount 25.000			Recovery =	96.732%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0113M14.D MSUR111.M Mon Jan 16 10:18:26 2017 Page 1

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 1/14/17
Matrix: Instrument: Max
Initial Cal. Date: 1/11/17
Data File: 0113M36.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	4.403	2.467	44	TMHBL	13
3							
4							
5							
6							
7							
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36							
37							
38							
39							
40							
		Average			44.0		

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0113M36.D
Acq On : 14 Jan 17 1:45
Sample : Ending CCV GAS 300ug/L 1/13/17
Misc : IS&S 10/20/16

Vial: 27
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 9:22 2017 Quant Results File: MGAS6111.RES

Quant Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	TIC	341250	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.43	TIC	10102587m	337.64155	ppb	100

(#) = qualifier out of range (m) = manual integration
0113M36.D MGAS6111.M Mon Jan 16 10:14:07 2017 Page 1

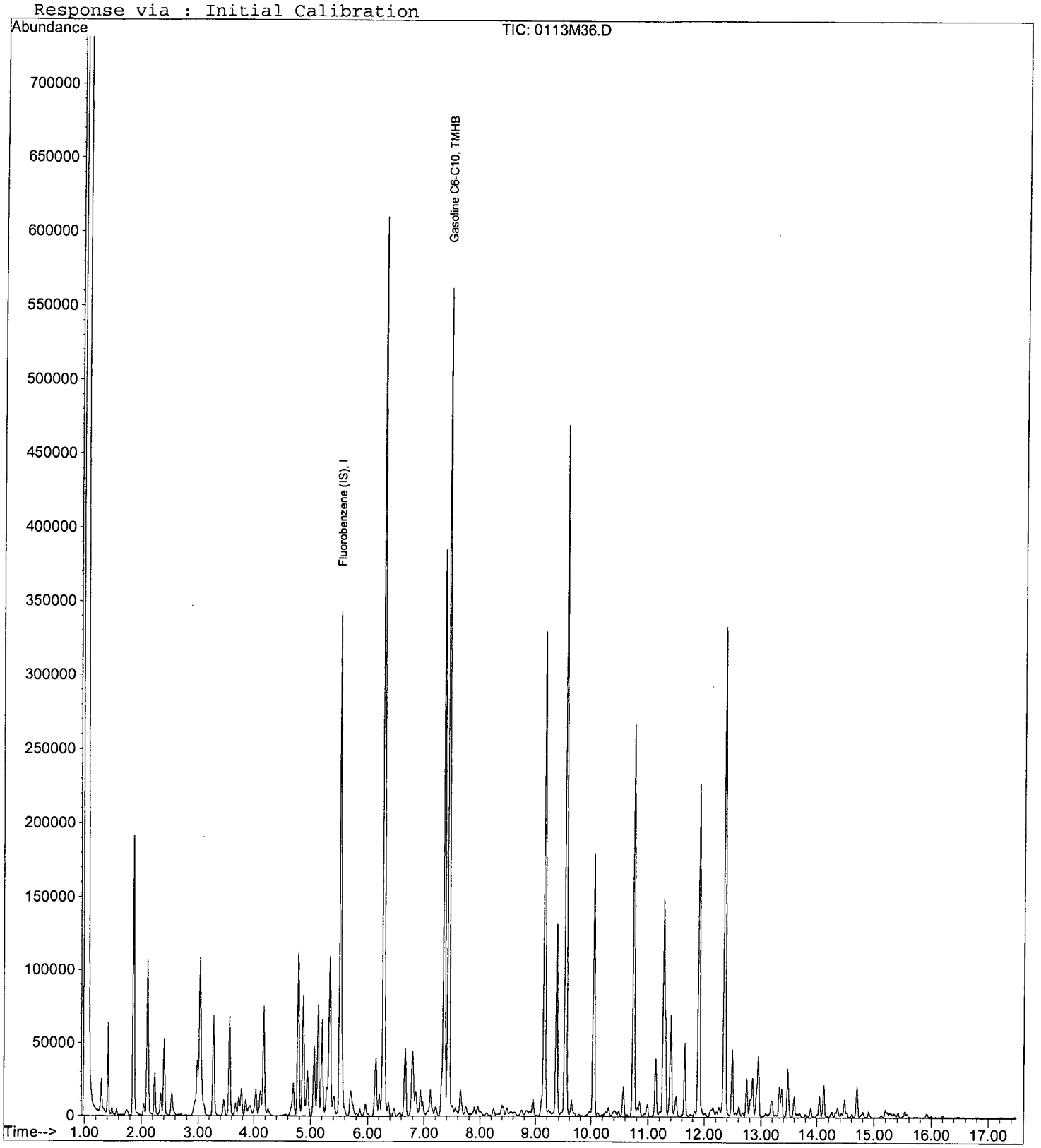
Quantitation Report

Data File : M:\MAX\DATA\M170111\0113M36.D
Acq On : 14 Jan 17 1:45
Sample : Ending CCV GAS 300ug/L 1/13/17
Misc : IS&S 10/20/16

Vial: 27
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 9:22 2017 Quant Results File: MGAS6111.RES

Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 1/14/17
Matrix: Instrument: Max
Initial Cal. Date: 1/11/17
Data File: 0113M36.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	S	Dibromofluoromethane(S)	0.2197	0.2056	6.4	S	
3	S	1,2-DCA-D4(S)	0.1809	0.1681	7.1	S	
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	S	Toluene-D8(S)	1.258	1.255	0.26	S	
6	S	4-Bromofluorobenzene(S)	0.4512	0.4336	3.9	S	
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
8							
9							
10							
11							
12							
13							
14							
15							
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29							
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32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			4.4		

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0113M36.D
Acq On : 14 Jan 17 1:45
Sample : Ending CCV GAS 300ug/L 1/13/17
Misc : IS&S 10/20/16

Vial: 27
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 10:17 2017 Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	328763	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.15	117	230063	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	116272	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.78	111	67593	23.39707 ppb	0.00
Spiked Amount 25.000			Recovery =	93.588%	
3) 1,2-DCA-D4(S)	5.13	65	55270	23.23434 ppb	0.00
Spiked Amount 25.000			Recovery =	92.936%	
5) Toluene-D8(S)	7.35	98	288700	24.93376 ppb	0.00
Spiked Amount 25.000			Recovery =	99.736%	
6) 4-Bromofluorobenzene(S)	10.74	95	99759	24.02516 ppb	0.00
Spiked Amount 25.000			Recovery =	96.100%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 1/14/17
Instrument: Max
Initial Cal. Date: 1/11/17
Data File: 0113M43.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	4.403	2.326	47	TMHBL	3.1
3							
4							
5							
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38							
39							
40							
		Average			47.0		

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0113M43.D
Acq On : 14 Jan 17 5:03
Sample : 170113B CCV/LCS-1WM 300ug/L
Misc : IS&S 10/20/16

Vial: 34
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 9:49 2017 Quant Results File: MGAS6111.RES

Quant Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	TIC	343485	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.43	TIC	9588534m	309.29397	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

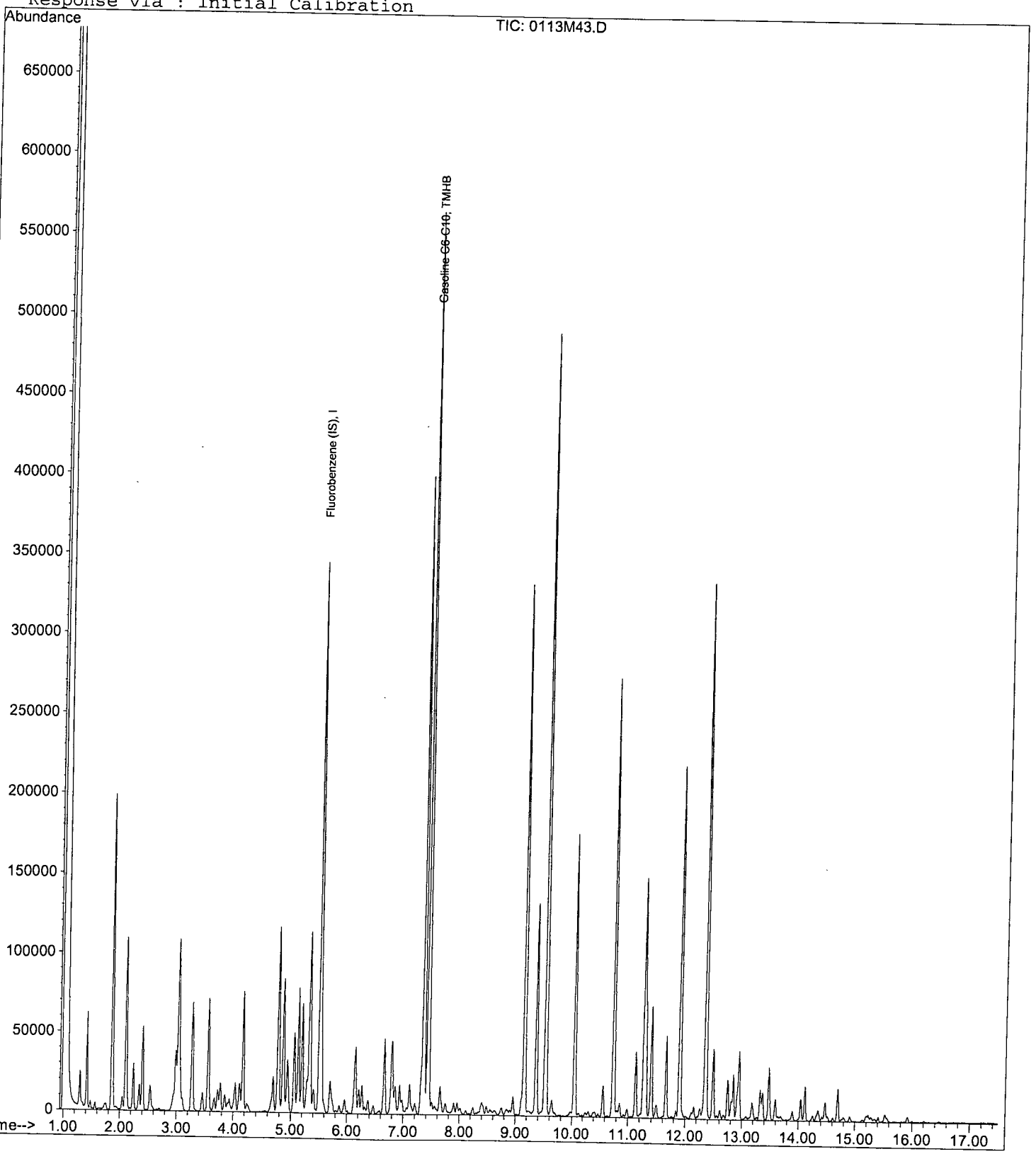
Data File : M:\MAX\DATA\M170111\0113M43.D
Acq On : 14 Jan 17 5:03
Sample : 170113B CCV/LCS-1WM 300ug/L
Misc : IS&S 10/20/16

Vial: 34
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 9:49 2017

Quant Results File: MGAS6111.RES

Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 1/14/17
Instrument: Max
Initial Cal. Date: 1/11/17
Data File: 0113M43.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	S	Dibromofluoromethane(S)	0.2197	0.2142	2.5	S	
3	S	1,2-DCA-D4(S)	0.1809	0.1707	5.6	S	
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	S	Toluene-D8(S)	1.258	1.264	0.50	S	
6	S	4-Bromofluorobenzene(S)	0.4512	0.4417	2.1	S	
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
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29							
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31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			2.7		

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0113M43.D
Acq On : 14 Jan 17 5:03
Sample : 170113B CCV/LCS-1WM 300ug/L
Misc : IS&S 10/20/16

Vial: 34
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 10:17 2017

Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	330100	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.15	117	235010	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	118038	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.78	111	70713	24.37791 ppb	0.00
Spiked Amount 25.000			Recovery = 97.512%		
3) 1,2-DCA-D4(S)	5.13	65	56343	23.58947 ppb	0.00
Spiked Amount 25.000			Recovery = 94.356%		
5) Toluene-D8(S)	7.35	98	297158	25.12401 ppb	0.00
Spiked Amount 25.000			Recovery = 100.496%		
6) 4-Bromofluorobenzene(S)	10.74	95	103793	24.47049 ppb	0.00
Spiked Amount 25.000			Recovery = 97.880%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0113M43.D MSUR111.M Mon Jan 16 10:18:46 2017

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 1/14/17
Instrument: Max
Initial Cal. Date: 1/11/17
Data File: 0113M56.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	4.403	2.167	51	TMHBL	7.6
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
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28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			51.0		

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0113M56.D
Acq On : 14 Jan 17 11:09
Sample : Ending CCV GAS 300ug/L 1/13/17
Misc : IS&S 10/20/16

Vial: 47
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 9:22 2017 Quant Results File: MGAS6111.RES

Quant Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	TIC	336974	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.43	TIC	8763170m	277.24194	ppb	100

(#) = qualifier out of range (m) = manual integration
0113M56.D MGAS6111.M Mon Jan 16 10:14:44 2017 Page 1

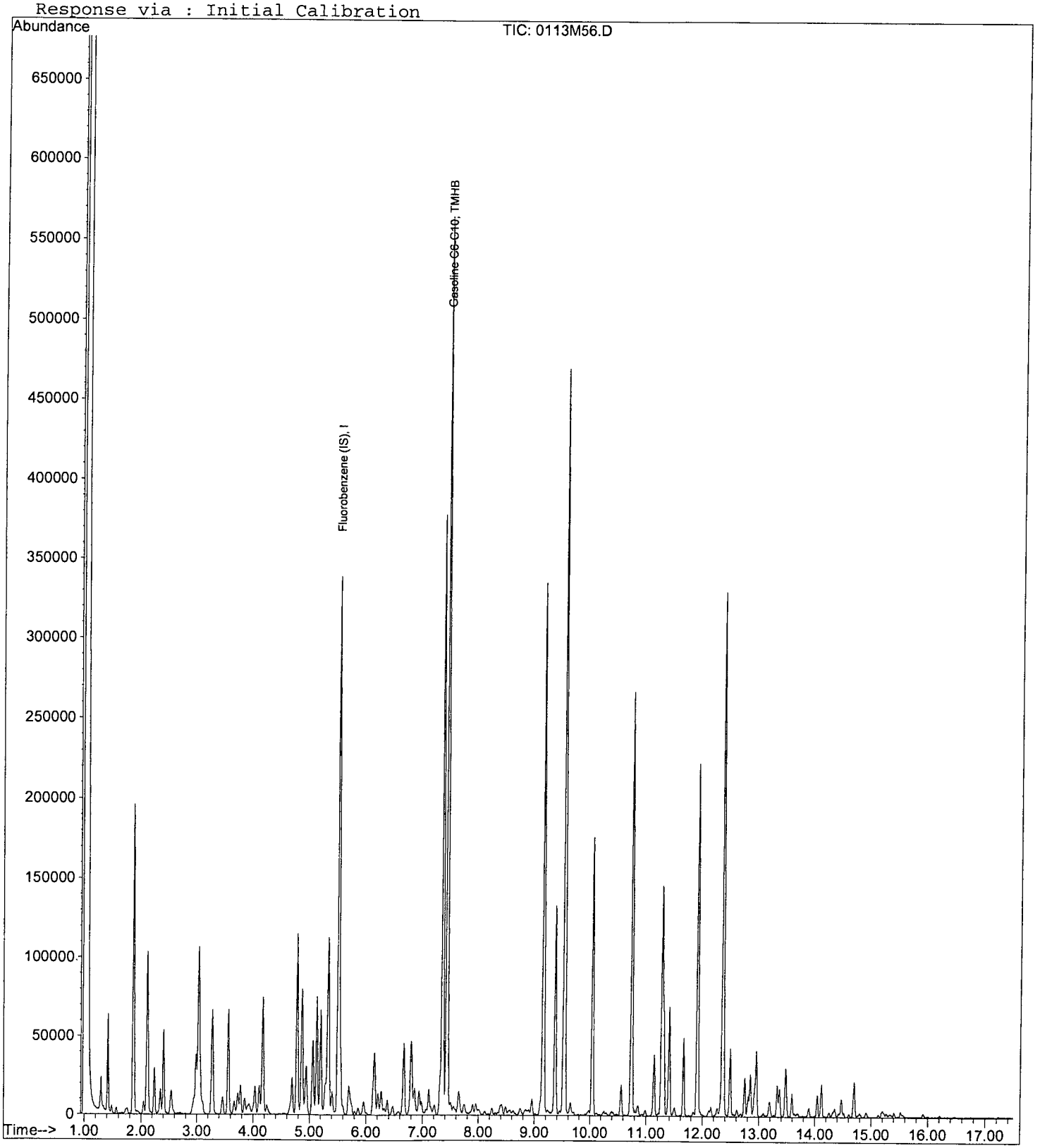
Quantitation Report

Data File : M:\MAX\DATA\M170111\0113M56.D
Acq On : 14 Jan 17 11:09
Sample : Ending CCV GAS 300ug/L 1/13/17
Misc : IS&S 10/20/16

Vial: 47
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 9:22 2017 Quant Results File: MGAS6111.RES

Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 1/14/17
Instrument: Max
Initial Cal. Date: 1/11/17
Data File: 0113M56.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	S	Dibromofluoromethane(S)	0.2197	0.2112	3.9	S	
3	S	1,2-DCA-D4(S)	0.1809	0.1675	7.4	S	
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	S	Toluene-D8(S)	1.258	1.210	3.8	S	
6	S	4-Bromofluorobenzene(S)	0.4512	0.4230	6.2	S	
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
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27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			5.3		

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0113M56.D Vial: 47
Acq On : 14 Jan 17 11:09 Operator: PM,DG,SV,CMM
Sample : Ending CCV GAS 300ug/L 1/13/17 Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 16 10:17 2017 Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	326182	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.15	117	232384	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	116635	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.78	111	68879	24.03087 ppb	0.00
Spiked Amount 25.000			Recovery = 96.124%		
3) 1,2-DCA-D4(S)	5.13	65	54645	23.15337 ppb	0.00
Spiked Amount 25.000			Recovery = 92.612%		
5) Toluene-D8(S)	7.35	98	281137	24.03807 ppb	0.00
Spiked Amount 25.000			Recovery = 96.152%		
6) 4-Bromofluorobenzene(S)	10.74	95	98306	23.43877 ppb	0.00
Spiked Amount 25.000			Recovery = 93.756%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0113M56.D MSUR111.M Mon Jan 16 10:19:20 2017 Page 1

ORGANICS
Raw Data

APPL, INC.

Method Blank

EPA 8260B GRO WATER

Blank Name/QCG: **170113W-48918 - 215486**

Batch ID: #GRO86-170113AM

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/13/17	01/13/17
BLANK	SURROGATE: 4-BROMOFLUORO	93.3	85-114			%	01/13/17	01/13/17

Quant Method: MGAS6111.
Run #: 0113M20
Instrument: Max
Sequence: M170111
Initials: SV

GC SC-Blank-REG MDLs-DOD
Printed: 01/16/17 4:09:29 PM

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0113M20.D
Acq On : 13 Jan 17 18:14
Sample : 170113A BLK-1WM
Misc : IS&S 10/20/16

Vial: 11
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 9:28 2017 Quant Results File: MGAS6111.RES

Quant Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	TIC	327773	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0113M20.D MGAS6111.M Mon Jan 16 10:13:48 2017 Page 1

Quantitation Report

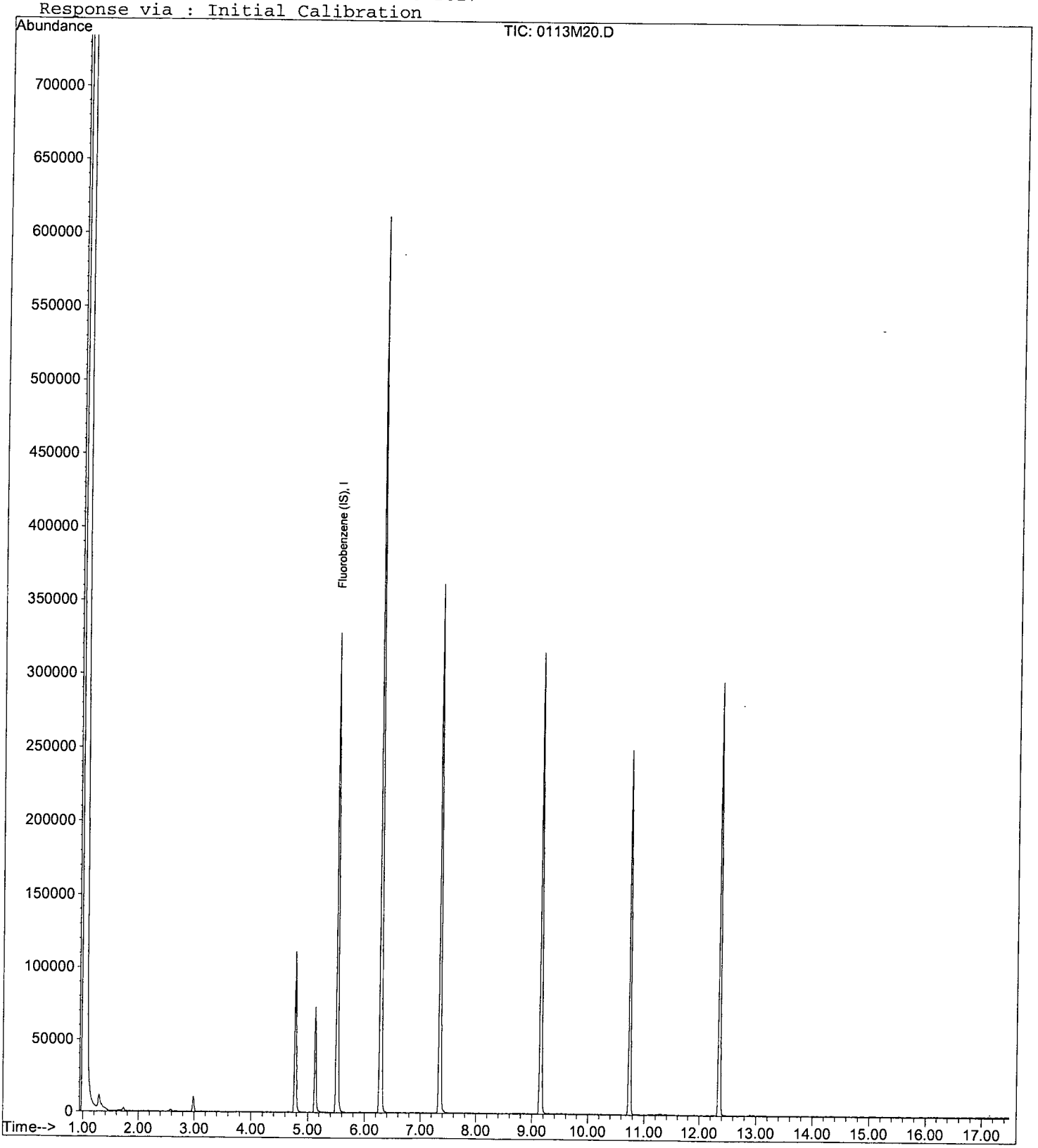
Data File : M:\MAX\DATA\M170111\0113M20.D
Acq On : 13 Jan 17 18:14
Sample : 170113A BLK-1WM
Misc : IS&S 10/20/16

Vial: 11
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 9:28 2017

Quant Results File: MGAS6111.RES

Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0113M20.D Vial: 11
Acq On : 13 Jan 17 18:14 Operator: PM,DG,SV,CMM
Sample : 170113A BLK-1WM Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 16 10:17 2017 Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	315554	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.15	117	219996	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	105148	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.78	111	67279	24.26323 ppb	0.00
Spiked Amount 25.000			Recovery =	97.052%	
3) 1,2-DCA-D4(S)	5.13	65	53266	23.32922 ppb	0.00
Spiked Amount 25.000			Recovery =	93.316%	
5) Toluene-D8(S)	7.35	98	276288	24.95371 ppb	0.00
Spiked Amount 25.000			Recovery =	99.816%	
6) 4-Bromofluorobenzene(S)	10.74	95	92597	23.32078 ppb	0.00
Spiked Amount 25.000			Recovery =	93.284%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Method Blank
EPA 8260B GRO WATER

Blank Name/QCG: **170113W-48920 - 215485**
Batch ID: #GRO86-170113BM

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/14/17	01/14/17
BLANK	SURROGATE: 4-BROMOFLUORO	95.4	85-114			%	01/14/17	01/14/17

Quant Method: MGAS6111.
Run #: 0113M47
Instrument: Max
Sequence: M170111
Initials: SV

GC SC-Blank-REG MDLs-DOD
Printed: 01/16/17 4:09:29 PM

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0113M47.D Vial: 38
Acq On : 14 Jan 17 6:55 Operator: PM,DG,SV,CMM
Sample : 170113B BLK-1WM Inst : Max
Misc : IS&S 10/20/16 Multiplr: 1.00

Quant Time: Jan 16 9:50 2017 Quant Results File: MGAS6111.RES

Quant Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	TIC	328755	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0113M47.D MGAS6111.M Mon Jan 16 10:14:14 2017 Page 1

Quantitation Report

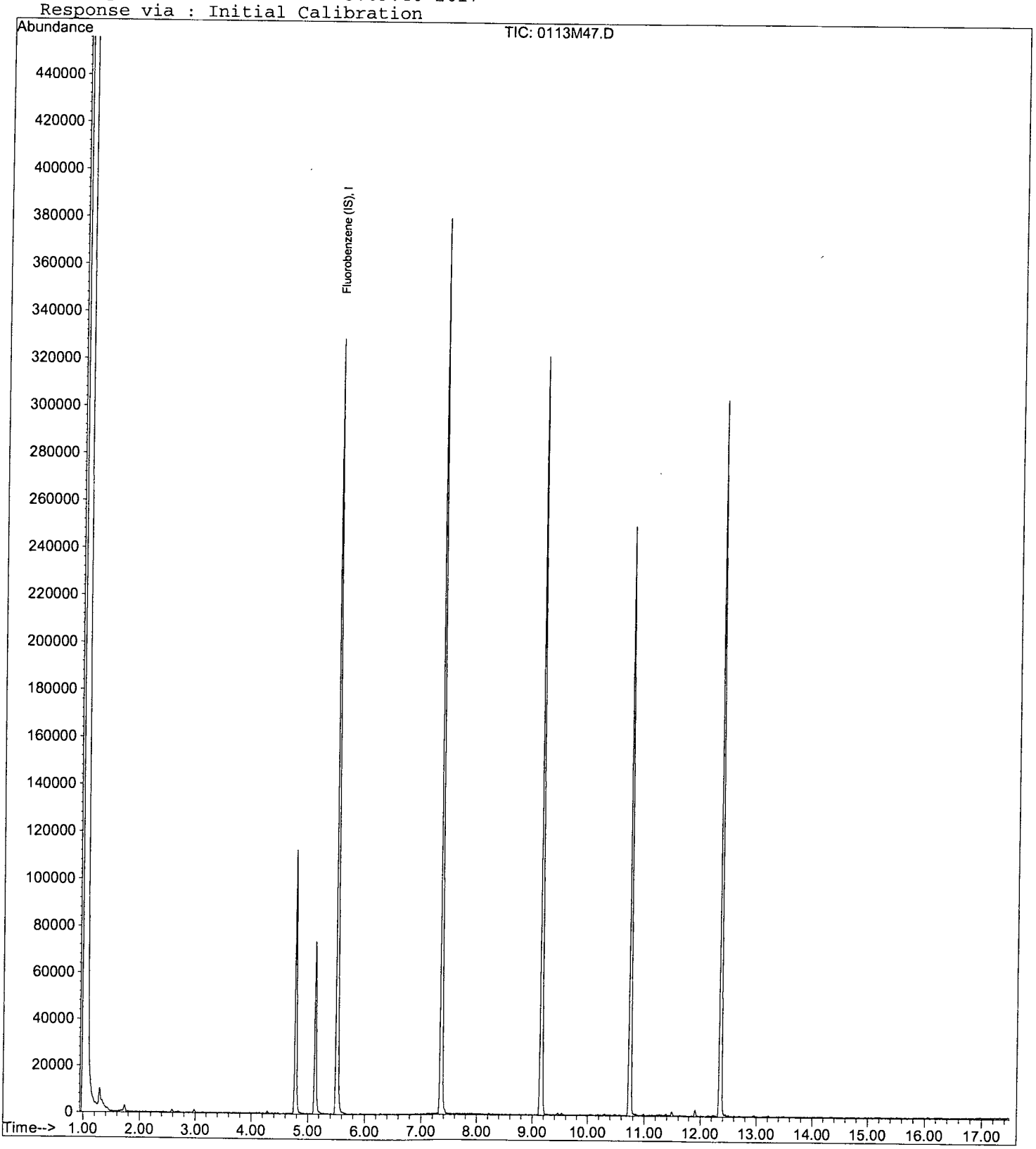
Data File : M:\MAX\DATA\M170111\0113M47.D
Acq On : 14 Jan 17 6:55
Sample : 170113B BLK-1WM
Misc : IS&S 10/20/16

Vial: 38
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 9:50 2017

Quant Results File: MGAS6111.RES

Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0113M47.D
Acq On : 14 Jan 17 6:55
Sample : 170113B BLK-1WM
Misc : IS&S 10/20/16

Vial: 38
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 10:17 2017 Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	319345	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.15	117	225458	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	108226	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.78	111	69733	24.84969 ppb	0.00
Spiked Amount 25.000			Recovery =	99.400%	
3) 1,2-DCA-D4(S)	5.13	65	54384	23.53612 ppb	0.00
Spiked Amount 25.000			Recovery =	94.144%	
5) Toluene-D8(S)	7.35	98	284804	25.09969 ppb	0.00
Spiked Amount 25.000			Recovery =	100.400%	
6) 4-Bromofluorobenzene(S)	10.74	95	97060	23.85259 ppb	0.00
Spiked Amount 25.000			Recovery =	95.412%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0113M47.D MSUR111.M Mon Jan 16 10:18:50 2017

Method Blank

EPA 8260B GRO WATER

Blank Name/QCG: **170113W-48873 - 215505**

Batch ID: #GRO86-170113BL

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/14/17	01/14/17
BLANK	SURROGATE: 4-BROMOFLUORO	97.7	85-114			%	01/14/17	01/14/17

Quant Method: LGAS6112.M
Run #: 0113L42
Instrument: Loki
Sequence: 170111
Initials: ARO

GC SC-Blank-REG MDLs-DOD
Printed: 01/16/17 4:09:29 PM

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L42.D Vial: 39
Acq On : 14 Jan 17 3:14 Operator: PM,DG,SV,CMM
Sample : 170113B BLK-1WL Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 11:22 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	688699	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	913982	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	896204	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

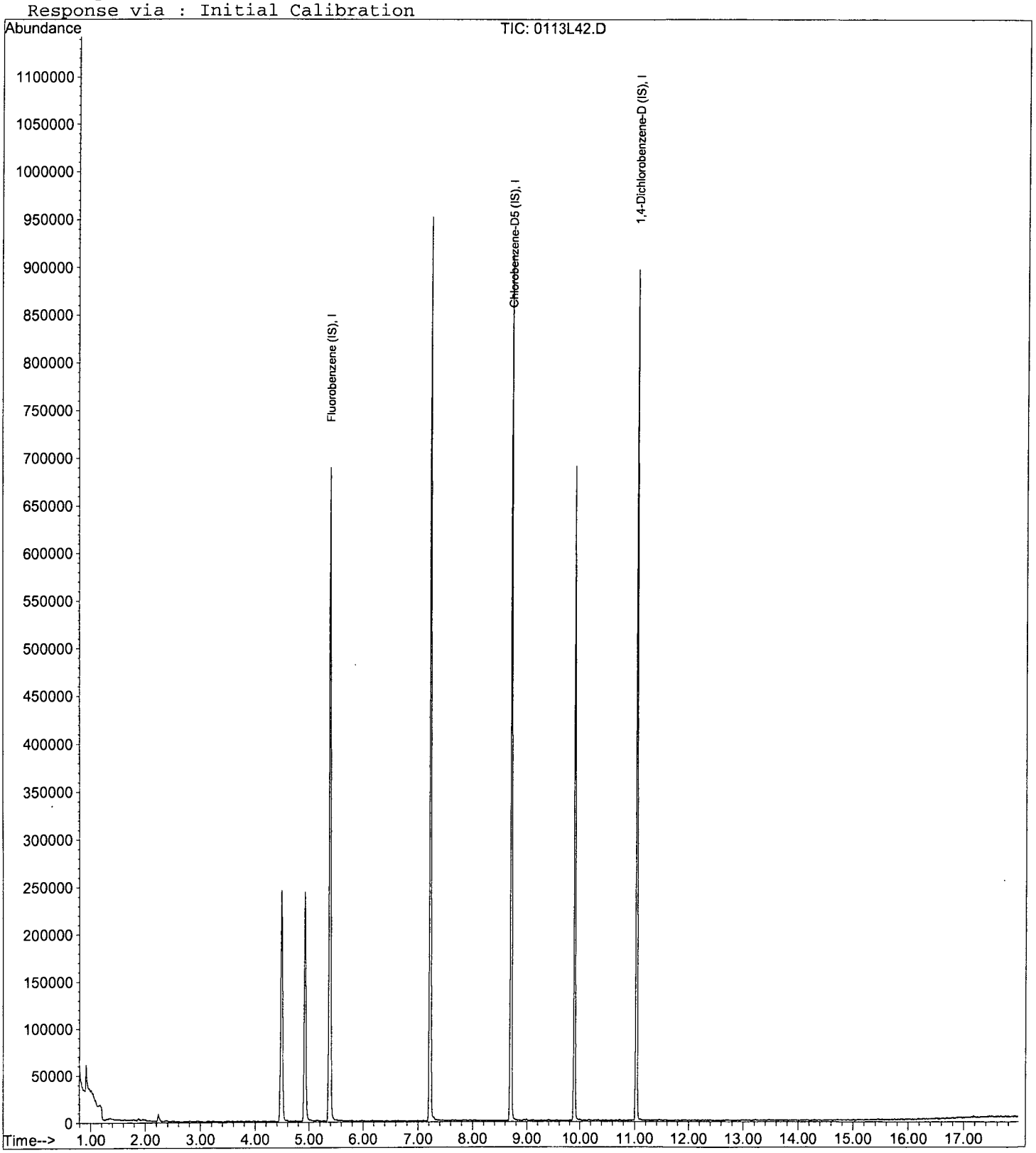
(#) = qualifier out of range (m) = manual integration
0113L42.D LGAS6112.M Tue Jan 17 13:42:57 2017 Page 1

Quantitation Report

Data File : M:\LOKI\DATA\170111\0113L42.D Vial: 39
Acq On : 14 Jan 17 3:14 Operator: PM,DG,SV,CMM
Sample : 170113B BLK-1WL Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 11:22 2017 Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L42.D Vial: 39
Acq On : 14 Jan 17 3:14 Operator: PM,DG,SV,CMM
Sample : 170113B BLK-1WL Inst : Loki
Misc : W IS&S 1/3/17, 01/11/17 Multiplr: 1.00

Quant Time: Jan 16 13:55 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	326912	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	302016	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	145664	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.48	111	182433	25.01	ppb	0.00
Spiked Amount 25.000			Recovery = 100.032%			
3) 1,2-DCA-D4(S)	4.93	65	192811	24.37	ppb	0.00
Spiked Amount 25.000			Recovery = 97.484%			
5) Toluene-D8(S)	7.22	98	597855	24.73	ppb	0.00
Spiked Amount 25.000			Recovery = 98.920%			
6) 4-Bromofluorobenzene(S)	9.89	95	204904	24.43	ppb	0.00
Spiked Amount 25.000			Recovery = 97.704%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Laboratory Control Spike Recovery
EPA 8260B GRO WATER

APPL ID: **170113W-48918 LCS - 215486**
Batch ID: #GRO86-170113AM

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
GASOLINE RANGE ORGANICS	300	359	120	78-122
SURROGATE: 4-BROMOFLUOROBENZE	25.0	24.2	96.8	85-114

Comments: _____

Primary	SPK
Quant Method :	MGAS6111.M
Extraction Date :	01/13/17
Analysis Date :	01/13/17
Instrument :	Max
Run :	0113M14
Initials :	SV

Printed: 01/16/17 4:09:22 PM
APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0113M14.D
Acq On : 13 Jan 17 15:25
Sample : 170113A CCV/LCS-1WM 300ug/L
Misc : IS&S 10/20/16

Vial: 5
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 9:26 2017 Quant Results File: MGAS6111.RES

Quant Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	TIC	345828	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	6.28	TIC	10668651m	358.53349	ppb	100

(#) = qualifier out of range (m) = manual integration
0113M14.D MGAS6111.M Mon Jan 16 10:13:33 2017

Quantitation Report

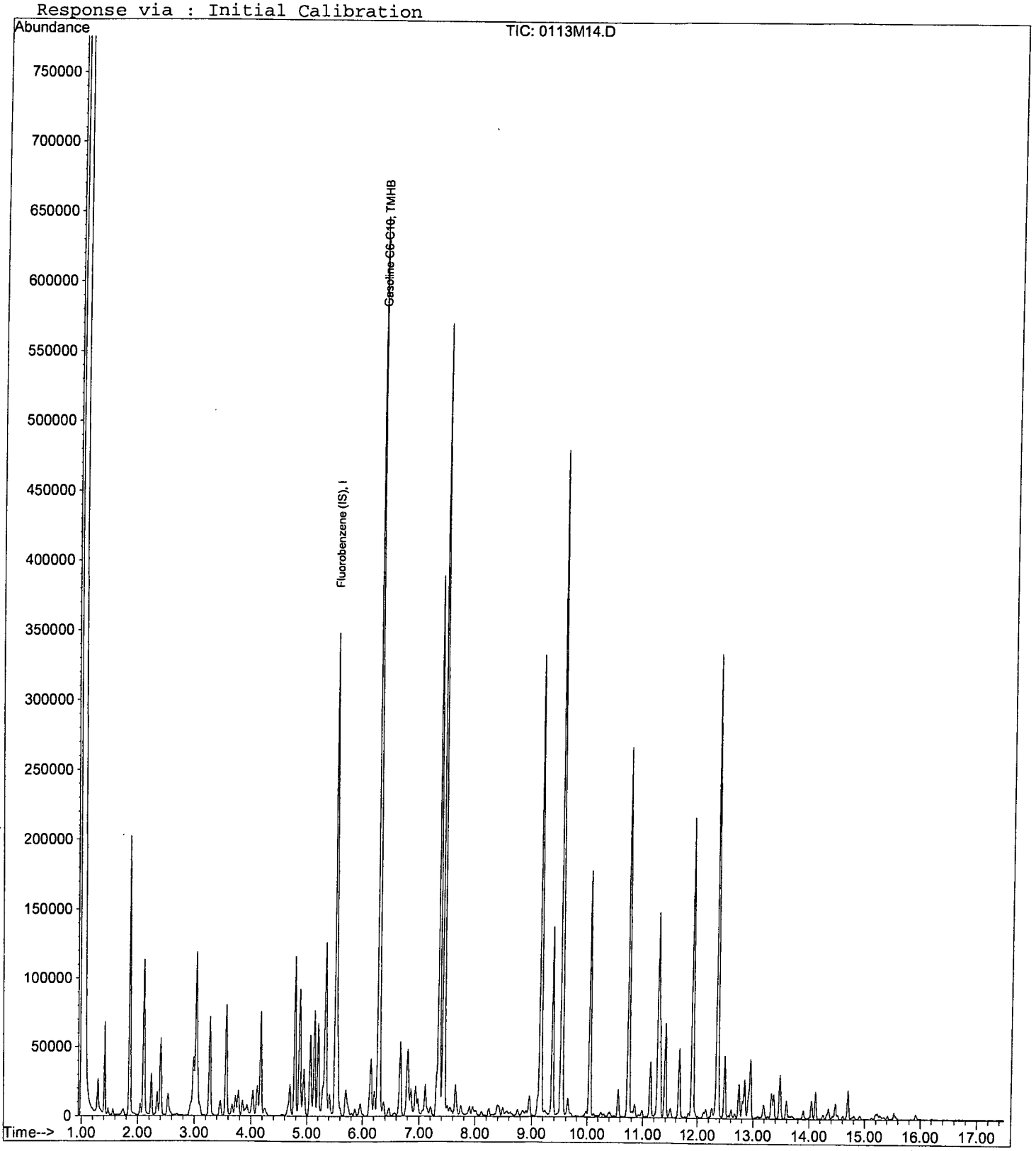
Data File : M:\MAX\DATA\M170111\0113M14.D
Acq On : 13 Jan 17 15:25
Sample : 170113A CCV/LCS-1WM 300ug/L
Misc : IS&S 10/20/16

Vial: 5
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 9:26 2017

Quant Results File: MGAS6111.RES

Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0113M14.D
Acq On : 13 Jan 17 15:25
Sample : 170113A CCV/LCS-1WM 300ug/L
Misc : IS&S 10/20/16

Vial: 5
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 10:17 2017

Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	334937	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.15	117	233465	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	117025	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.78	111	68513	23.27837 ppb	0.00
Spiked Amount 25.000			Recovery = 93.112%		
3) 1,2-DCA-D4(S)	5.13	65	54851	22.63316 ppb	0.00
Spiked Amount 25.000			Recovery = 90.532%		
5) Toluene-D8(S)	7.35	98	290836	24.75222 ppb	0.00
Spiked Amount 25.000			Recovery = 99.008%		
6) 4-Bromofluorobenzene(S)	10.74	95	101898	24.18270 ppb	0.00
Spiked Amount 25.000			Recovery = 96.732%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0113M14.D MSUR111.M Mon Jan 16 10:18:26 2017

Laboratory Control Spike Recovery

EPA 8260B GRO WATER

APPL ID: **170114W-48920 LCS - 215485**
Batch ID: #GRO86-170113BM

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
GASOLINE RANGE ORGANICS	300	309	103	78-122
SURROGATE: 4-BROMOFLUOROBENZE	25.0	24.5	98.0	85-114

Comments: _____

Primary	SPK
Quant Method :	MGAS6111.M
Extraction Date :	01/14/17
Analysis Date :	01/14/17
Instrument :	Max
Run :	0113M43
Initials :	SV

Printed: 01/16/17 4:09:22 PM
APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\M170111\0113M43.D
Acq On : 14 Jan 17 5:03
Sample : 170113B CCV/LCS-1WM 300ug/L
Misc : IS&S 10/20/16

Vial: 34
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 9:49 2017 Quant Results File: MGAS6111.RES

Quant Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	TIC	343485	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.43	TIC	9588534m	309.29397	ppb	100

(#) = qualifier out of range (m) = manual integration
0113M43.D MGAS6111.M Mon Jan 16 10:14:10 2017 Page 1

Quantitation Report

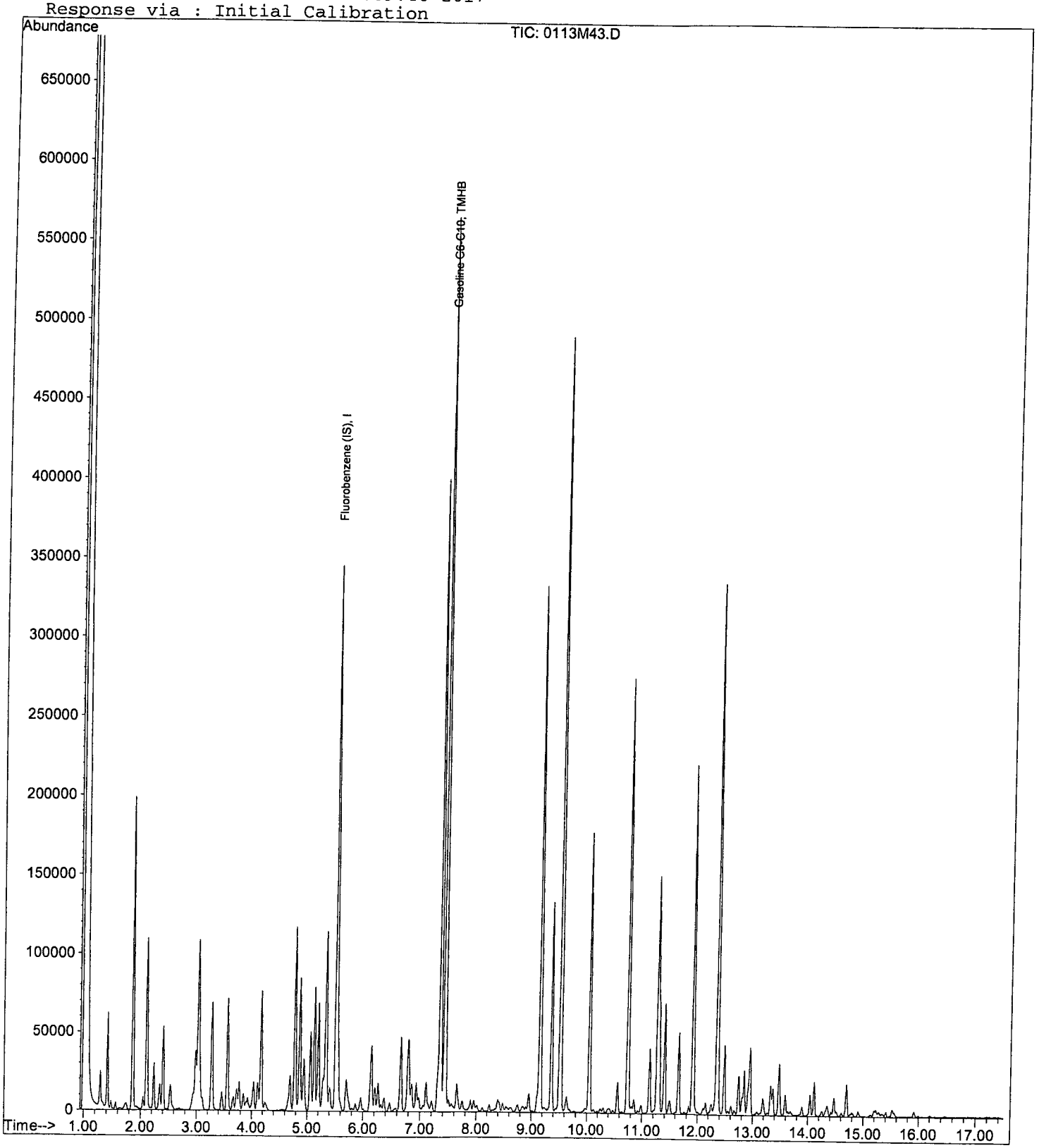
Data File : M:\MAX\DATA\M170111\0113M43.D
Acq On : 14 Jan 17 5:03
Sample : 170113B CCV/LCS-1WM 300ug/L
Misc : IS&S 10/20/16

Vial: 34
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 9:49 2017

Quant Results File: MGAS6111.RES

Method : M:\MAX\DATA\M170111\MGAS6111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 13:09:40 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\M170111\0113M43.D
Acq On : 14 Jan 17 5:03
Sample : 170113B CCV/LCS-1WM 300ug/L
Misc : IS&S 10/20/16

Vial: 34
Operator: PM,DG,SV,CMM
Inst : Max
Multiplr: 1.00

Quant Time: Jan 16 10:17 2017 Quant Results File: MSUR111.RES

Quant Method : M:\MAX\DATA\M170111\MSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 11:22:43 2017
Response via : Initial Calibration
DataAcq Meth : V8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.51	96	330100	25.00000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.15	117	235010	25.00000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.35	152	118038	25.00000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.78	111	70713	24.37791 ppb	0.00
Spiked Amount 25.000			Recovery =	97.512%	
3) 1,2-DCA-D4(S)	5.13	65	56343	23.58947 ppb	0.00
Spiked Amount 25.000			Recovery =	94.356%	
5) Toluene-D8(S)	7.35	98	297158	25.12401 ppb	0.00
Spiked Amount 25.000			Recovery =	100.496%	
6) 4-Bromofluorobenzene(S)	10.74	95	103793	24.47049 ppb	0.00
Spiked Amount 25.000			Recovery =	97.880%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0113M43.D MSUR111.M Mon Jan 16 10:18:46 2017 Page 1

Laboratory Control Spike Recovery
EPA 8260B GRO WATER

APPL ID: **170114W-48873 LCS - 215505**
Batch ID: #GRO86-170113BL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
GASOLINE RANGE ORGANICS	300	293	97.7	78-122
SURROGATE: 4-BROMOFLUOROBENZE	25.0	24.7	98.8	85-114

Comments: _____

Primary	SPK
Quant Method :	LGAS6112.M
Extraction Date :	01/14/17
Analysis Date :	01/14/17
Instrument :	Loki
Run :	0113L38
Initials :	ARO

Printed: 01/16/17 4:09:22 PM
APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\170111\0113L38.D
Acq On : 14 Jan 17 1:22
Sample : 170113B CCV/LCS-1WL 300ug/L
Misc : W IS&S 1/3/17, 01/11/17

Vial: 35
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 13:59 2017 Quant Results File: LGAS6112.RES

Quant Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	TIC	720131	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.70	TIC	970828	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	11.03	TIC	1030606	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.22	TIC	13880852m	293.07	ppb	100

(#) = qualifier out of range (m) = manual integration
0113L38.D LGAS6112.M Tue Jan 17 13:42:55 2017

Quantitation Report

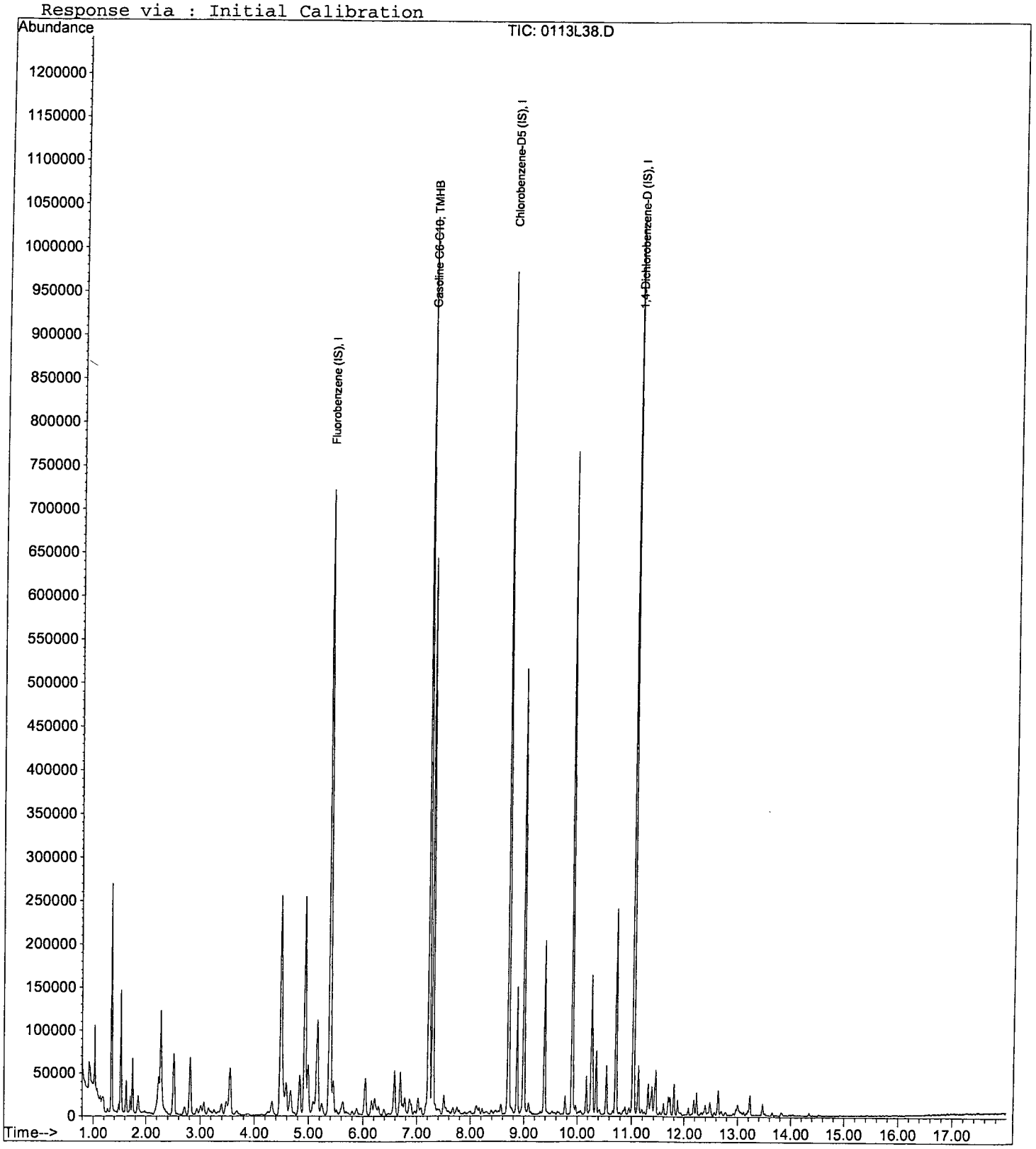
Data File : M:\LOKI\DATA\170111\0113L38.D
Acq On : 14 Jan 17 1:22
Sample : 170113B CCV/LCS-1WL 300ug/L
Misc : W IS&S 1/3/17, 01/11/17

Vial: 35
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 13:59 2017

Quant Results File: LGAS6112.RES

Method : M:\LOKI\DATA\170111\LGAS6112.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 13 07:50:11 2017
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\170111\0113L38.D
Acq On : 14 Jan 17 1:22
Sample : 170113B CCV/LCS-1WL 300ug/L
Misc : W IS&S 1/3/17, 01/11/17

Vial: 35
Operator: PM,DG,SV,CMM
Inst : Loki
Multiplr: 1.00

Quant Time: Jan 16 13:55 2017 Quant Results File: LSUR111.RES

Quant Method : M:\LOKI\DATA\170111\LSUR111.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 12 07:59:03 2017
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.38	96	338560	25.00 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.70	117	319680	25.00 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.03	152	166464	25.00 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.48	111	187730	24.85 ppb	0.00
Spiked Amount 25.000			Recovery =	99.392%	
3) 1,2-DCA-D4(S)	4.92	65	202073	24.66 ppb	0.00
Spiked Amount 25.000			Recovery =	98.652%	
5) Toluene-D8(S)	7.22	98	640750	25.04 ppb	0.00
Spiked Amount 25.000			Recovery =	100.160%	
6) 4-Bromofluorobenzene(S)	9.89	95	218943	24.66 ppb	0.00
Spiked Amount 25.000			Recovery =	98.628%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Gasoline Curve Preparation for 100mL Purge (water)-MAX			
Exp Date:	01/12/17	2000ug/ml	
		12/4/16A	Final Volume
	Conc.	Exp.03/31/21	w/ P&T H2O
Date/code	µg/L	uL	mL
01/11/17V-DG	20	1	100
01/11/17W-DG	50	2.5	100
01/11/17X-DG	100	5	100
01/11/17Y-DG	300	15	100
01/11/17Z-DG	600	30	100
01/11/17AA-DG	800	40	100
01/11/17AB-DG	1000	50	100

Gasoline SECOND SOURCE preparation @300ppb-MAX			
Exp Date:	01/12/17	2000ug/ml	
		12/05/16B	Final Volume
	Conc.	Exp.05-04-18	w/ P&T H2O
Date/code	µg/L	uL	mL
01/11/17	300	15	100

Gasoline Curve Preparation for 100mL Purge (water)-LOKI			
Exp Date:	01/13/17	2000ug/ml	
		12/4/16A	Final Volume
	Conc.	Exp.03/31/21	w/ P&T H2O
Date/code	µg/L	uL	mL
01/12/17G-DG	20	1	100
01/12/17H-DG	50	2.5	100
01/12/17I-DG	100	5	100
01/12/17J-DG	300	15	100
01/12/17K-DG	600	30	100
01/12/17L-DG	800	40	100
01/12/17M-DG	1000	50	100

Gasoline SECOND SOURCE preparation @300ppb-MAX			
Exp Date:	01/13/17	2000ug/ml	
		12/05/16B	Final Volume
	Conc.	Exp.05-04-18	w/ P&T H2O
Date/code	µg/L	uL	mL
12/11/16	300	15	100

PRIMARY STANDARD

01/10/17H							
50ug/ml Vol Work Std #7							
Exp:02/10/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120016-03	Gas Mix	2000	279822-36644	01/10/17DG	02/19/19	100
02SI	020049-02	HEXACHLOROETHANE	1000	254167-36564	12/27/16C-CMM	12/28/17	200
02SI	020228-02	Benzyl Chloride	1000	279824-36569	12/27/16E-CMM	05/24/18	200
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	3500
01/10/17I							
50ug/ml Vol Work Std #1							
Exp:02/10/17					Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	020145-02-02	2-CEVE	2000	288264-37217	11/22/16C-CMM	09/19/19	50
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	1950
01/10/17J							
50ug/ml Vol Work Std #8							
Exp:02/10/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	122039-02	Volatile Mix, 20-29	2000	258033-37169	12/16/16C-CMM	08/17/17	100
02SI	120023-03	VOC'S-54 COMP	2000	271929-36581	12/16/16D-CMM	02/15/18	100
02SI	020232-02	Vinyl Acetate	2000	292241-37194	12/16/16E-CMM	02/01/17	100
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	3700
01/10/17K							
50ug/ml Vol Work Std #2							
Exp:02/10/17							
Supplier	ID #	ID	ug/ml				
02SI	121020-05	HSL'S-Ketone Solution	2000	258036-36073	01/10/17BDG	08/17/17	100
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	3900
		01/10/17L					
		5ug/ml Vol Work Std #9					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #7		**01/10/17H**	Exp:02/10/17	200	
		50ug/ml Vol Work Std #8		**01/10/17J**	Exp:02/10/17	200	
		J&T Brand		12/16/16	12/16/17	1600	
		01/10/17M					
		5ug/ml Vol Work Std #10					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #1		**01/10/17I**	Exp:02/10/17	200	
		J&T Brand		12/16/16	12/16/17	1800	
		01/10/17N					
		5ug/ml Vol Work Std #12					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #2		**01/10/17K**	Exp:02/10/17	200	
		J&T Brand		12/16/16	12/16/17	1800	
01/10/17O							
250ug/ml TBA/IBA/Acetonitrile/Cyclohexanone/Acrolein/2-P							
Exp:02/10/17			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
02SI	120166-01	Volatile Mix 4-3	2000	275544-36413	12/16/16F-CMM	03/28/18	500
02SI	020229-09-02	Acrolein	10000	294146-37313	01/10/17FDG	01/14/17	100
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	3400

SECONDARY SOURCE

01/10/17P							
50ug/ml VOC Std#4							
Exp:02/10/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120296-01-SS	Custom 8260 Solution	2000	279826-37381	01/10/17DG	06/01/19	50
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	1950
01/10/17Q							
50ug/ml VOC Std#5							
Exp:02/10/17							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120016-03-SS	8260 Gases(SS)	2000	279826-36675	12/16/16I-CMM	06/01/19	50
02SI	020145-02-02-SS	2-CEVE (SS)	2000	254171-35380	12/16/16J-CMM	06/21/17	50
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	1900
01/10/17R							

50ug/ml VOC Std#6							
Exp:02/10/17							
	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120023-03-SS	VOC'S 54 COMP.	2000	265897-35927	12/16/16K-CMM	11/29/17	50
02SI	020232-02-SS	Vinyl Acetate(SS)	2000	292243-37196	12/16/16L-CMM	02/01/17	50
02SI	020049-02-SS	HEXACHLOROETHANE (SS)	1000	295337-37383	01/10/17D-DG	12/19/18	100
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	1800
01/10/17S							
250ug/ml TBA/IBA/Acetonitrile/Acrolein/2-P							
Exp:02/10/17			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
02SI	120166-01-SS	VOC Mix 4-3 (SS)	2000	258040-37230	01/10/17EDG	08/22/18	250
02SI	020229-09-SS	Acrolein SOLUTION (SS)	10000	294146-37314	01/10/17GDG	01/14/17	50
J&T Brand		Purge & Trap MeOH		55344-00864	12/16/16	12/16/17	1700
8260 water		spiked with		Total Vol			
CCV/LCS	10ug/L Vol Std	10uL of 50ug/ml Std #7		50mL P&T H2O			
Ending CCV		10uL of 50ug/ml Std #8					
		10uL of 50ug/ml Std #1					
		10uL of 50ug/ml Std #2					
		25uL of 250ug/ml Std TBA					
X4 ketones							
LCS	10ug/L Vol Std	10uL of 50ug/ml Std #7		50mL P&T H2O			
		10uL of 50ug/ml Std #8					
		10uL of 50ug/ml Std #1					
		40uL of 50ug/ml Std #2					
		25uL of 250ug/ml Std TBA					
8260 soil		spiked with		Total Vol			
CCV/LCS	50ug/Kg Vol Std	5uL of 50ug/ml Std #7		5mL P&T H2O			
Ending CCV		5uL of 50ug/ml Std #8					
		5uL of 50ug/ml Std #1					
		5uL of 50ug/ml Std #2					
		5uL of 250ug/ml Std TBA					
Matrix spikes are prepared with same standards as ccv (see above) into the sample.							
8260water		spiked with		Total Vol			
SS	10ug/L STD	10uL of 50ug/ml Std #4		50mL P&T H2O			
		10uL of 50ug/ml Std #5					
		10uL of 50ug/ml Std #6					
		25uL of 250ug/ml Std TBA					
8260 SOIL	50ug/Kg STD	5uL of 50ug/ml Std #4		Total Vol			
SS		5uL of 50ug/ml Std #5		5mL P&T H2O			
		5uL of 50ug/ml Std #6					
		5uL of 250ug/ml Std TBA					

Injection Log

Directory: M:\MAX\DATA\M170111\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	4	0111M06.D	1	0.3ug/L VOC STD 1/11/17A	IS&S 10/20/16	11 Jan 17 11:24
2	5	0111M07.D	1	0.5ug/L VOC STD 1/11/17B	IS&S 10/20/16	11 Jan 17 11:52
3	6	0111M08.D	1	1.0ug/L VOC STD 1/11/17C	IS&S 10/20/16	11 Jan 17 12:21
4	7	0111M09.D	1	2.0ug/L VOC STD 1/11/17D	IS&S 10/20/16	11 Jan 17 12:49
5	8	0111M10.D	1	5.0ug/L VOC STD 1/11/17E	IS&S 10/20/16	11 Jan 17 13:17
6	9	0111M11.D	1	10ug/L VOC STD 1/11/17F	IS&S 10/20/16	11 Jan 17 13:46
7	10	0111M12.D	1	20ug/L VOC STD 1/11/17G	IS&S 10/20/16	11 Jan 17 14:14
8	11	0111M13.D	1	40ug/L VOC STD 1/11/17H	IS&S 10/20/16	11 Jan 17 14:42
9	12	0111M14.D	1	100ug/L VOC STD 1/11/17I	IS&S 10/20/16	11 Jan 17 15:10
10	20	0111M22.D	1	20ug/L GAS STD 1/11/17V	IS&S 10/20/16	11 Jan 17 18:56
11	21	0111M23.D	1	50ug/L GAS STD 1/11/17W	IS&S 10/20/16	11 Jan 17 19:24
12	22	0111M24.D	1	100ug/L GAS STD 1/11/17X	IS&S 10/20/16	11 Jan 17 19:53
13	23	0111M25.D	1	300ug/L GAS STD 1/11/17Y	IS&S 10/20/16	11 Jan 17 20:21
14	24	0111M26.D	1	600ug/L GAS STD 1/11/17Z	IS&S 10/20/16	11 Jan 17 20:49
15	25	0111M27.D	1	800ug/L GAS STD 1/11/17AA	IS&S 10/20/16	11 Jan 17 21:17
16	26	0111M28.D	1	1000ug/L GAS STD 1/11/17AB	IS&S 10/20/16	11 Jan 17 21:46
17	29	0111M31.D	1	(SS)300ug/L GAS STD 1/11/17	IS&S 10/20/16	11 Jan 17 23:11
18	5	0113M14.D	1	170113A CCV/LCS-1WM 300ug/L	IS&S 10/20/16	13 Jan 17 15:25
19	11	0113M20.D	1	170113A BLK-1WM	IS&S 10/20/16	13 Jan 17 18:14
20	24	0113M33.D	1	AZ48918W01	IS&S 10/20/16	14 Jan 17 00:21
21	25	0113M34.D	1	AZ48919W01	IS&S 10/20/16	14 Jan 17 00:49
22	27	0113M36.D	1	Ending CCV GAS 300ug/L 1/13/17	IS&S 10/20/16	14 Jan 17 1:45
23	34	0113M43.D	1	170113B CCV/LCS-1WM 300ug/L	IS&S 10/20/16	14 Jan 17 5:03
24	38	0113M47.D	1	170113B BLK-1WM	IS&S 10/20/16	14 Jan 17 6:55
25	39	0113M48.D	1	AZ48920W01	IS&S 10/20/16	14 Jan 17 7:24
26	40	0113M49.D	1	AZ48921W01	IS&S 10/20/16	14 Jan 17 7:52
27	41	0113M50.D	1	AZ48922W01	IS&S 10/20/16	14 Jan 17 8:20
28	42	0113M51.D	1	AZ48923W01	IS&S 10/20/16	14 Jan 17 8:48
29	43	0113M52.D	1	AZ48924W01	IS&S 10/20/16	14 Jan 17 9:17
30	44	0113M53.D	1	AZ48925W01	IS&S 10/20/16	14 Jan 17 9:45
31	45	0113M54.D	1	AZ48926W01	IS&S 10/20/16	14 Jan 17 10:13
32	47	0113M56.D	1	Ending CCV GAS 300ug/L 1/13/17	IS&S 10/20/16	14 Jan 17 11:09

Injection Log

Directory: M:\LOKI\DATA\170111\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	4	0111L05.D	1	0.3ug/L VOC STD 1/11/17J	W IS&S 1/3/17, 01/11/17	11 Jan 17 11:56
2	5	0111L06.D	1	0.5ug/L VOC STD 1/11/17K	W IS&S 1/3/17, 01/11/17	11 Jan 17 12:24
3	6	0111L07.D	1	1.0ug/L VOC STD 1/11/17L	W IS&S 1/3/17, 01/11/17	11 Jan 17 12:52
4	7	0111L08.D	1	2.0ug/L VOC STD 1/11/17M	W IS&S 1/3/17, 01/11/17	11 Jan 17 13:20
5	8	0111L09.D	1	5.0ug/L VOC STD 1/11/17N	W IS&S 1/3/17, 01/11/17	11 Jan 17 13:48
6	9	0111L10.D	1	10ug/L VOC STD 1/11/17O	W IS&S 1/3/17, 01/11/17	11 Jan 17 14:16
7	10	0111L11.D	1	20ug/L VOC STD 1/11/17P	W IS&S 1/3/17, 01/11/17	11 Jan 17 14:44
8	11	0111L12.D	1	40ug/L VOC STD 1/11/17Q	W IS&S 1/3/17, 01/11/17	11 Jan 17 15:12
9	12	0111L13.D	1	100ug/L VOC STD 1/11/17R	W IS&S 1/3/17, 01/11/17	11 Jan 17 15:41
10	11	0112L12.D	1	20ug/L GAS STD 1/12/17G	W IS&S 1/3/17, 01/11/17	12 Jan 17 15:56
11	12	0112L13.D	1	50ug/L GAS STD 1/12/17H	W IS&S 1/3/17, 01/11/17	12 Jan 17 16:24
12	13	0112L14.D	1	100ug/L GAS STD 1/12/17I	W IS&S 1/3/17, 01/11/17	12 Jan 17 16:52
13	14	0112L15.D	1	300ug/L GAS STD 1/12/17J	W IS&S 1/3/17, 01/11/17	12 Jan 17 17:20
14	15	0112L16.D	1	600ug/L GAS STD 1/12/17K	W IS&S 1/3/17, 01/11/17	12 Jan 17 17:48
15	16	0112L17.D	1	800ug/L GAS STD 1/12/17L	W IS&S 1/3/17, 01/11/17	12 Jan 17 18:16
16	17	0112L18.D	1	1000ug/L GAS STD 1/12/17M	W IS&S 1/3/17, 01/11/17	12 Jan 17 18:44
17	20	0112L21.D	1	(SS)300ug/L GAS STD 1/12/17G	W IS&S 1/3/17, 01/11/17	12 Jan 17 20:08
18	35	0113L38.D	1	170113B CCV/LCS-1WL 300ug/L	W IS&S 1/3/17, 01/11/17	14 Jan 17 1:22
19	39	0113L42.D	1	170113B BLK-1WL	W IS&S 1/3/17, 01/11/17	14 Jan 17 3:14
20	53	0113L56.D	1	AZ48914W01	W IS&S 1/3/17, 01/11/17	14 Jan 17 9:46
21	54	0113L57.D	1	AZ48915W01	W IS&S 1/3/17, 01/11/17	14 Jan 17 10:14
22	55	0113L58.D	1	AZ48916W01	W IS&S 1/3/17, 01/11/17	14 Jan 17 10:42
23	56	0113L59.D	1	AZ48917W01	W IS&S 1/3/17, 01/11/17	14 Jan 17 11:10
24	58	0113L61.D	1	Ending CCV GAS 300ug/L 1/13/17	W IS&S 1/3/17, 01/11/17	14 Jan 17 12:06

ORGANICS

APPL, INC.

ORGANICS
QC Summary

APPL, INC.

Method Blank
METHANE

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **170116W-48914 - 215509**
Batch ID: #RSKME-170116B

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/16/17	01/16/17

Quant Method: RSK0901.M
Run #: 17011632
Instrument: Rocky
Sequence: 160901
Initials: CMO

GC SC-Blank-REG MDLs-DOD
Printed: 01/21/17 1:27:08 PM

Laboratory Control Spike Recovery
METHANE

APPL ID: **170116W-48914 LCS - 215509**
Batch ID: #RSKME-170116B

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
METHANE	1340	1060	79.4	72-125

Comments: _____

Primary	SPK
Quant Method :	RSK0901.M
Extraction Date :	01/16/17
Analysis Date :	01/16/17
Instrument :	Rocky
Run :	17011631
Initials :	CMO

Printed: 01/21/17 1:26:57 PM
APPL Standard LCS

RSK 175

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 81971

Case No: 81971 Date Analyzed: 01/16/17

Matrix: WATER Instrument: Rocky

Blank ID: 170116B-BLK Time Analyzed: 1319

APPL ID.	Client Sample No.	File ID.	Date Analyzed
170116B-LCS	Lab Control Spike	17011631	01/16/17 1314
170116B-BLK	Blank	17011632	01/16/17 1319
AZ48914	ERH171	17011633	01/16/17 1323
AZ48915	ERH172	17011636	01/16/17 1332
AZ48916	ERH178	17011637	01/16/17 1336
AZ48917	ERH185	17011638	01/16/17 1339
AZ48921	ERH181	17011639	01/16/17 1342
AZ48923	ERH180	17011640	01/16/17 1345
AZ48924	ERH183	17011641	01/16/17 1347
AZ48925	ERH184	17011642	01/16/17 1350

Comments: Batch: #RSKME-170116B

ORGANICS
Sample Data

APPL, INC.

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH171
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48914
QCG: #RSKME-170116B-215509

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/16/17	01/16/17

Quant Method:	RSK0901.M
Run #:	17011633
Instrument:	Rocky
Sequence:	160901
Dilution Factor:	1
Initials:	CMO

Printed: 01/21/17 1:27:03 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\17011633.D Vial: 34
Acq On : 16 Jan 17 13:23 Operator: lac
Sample : AZ48914W05 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 16 13:25 2017 Quant Results File: RSK0901.RES

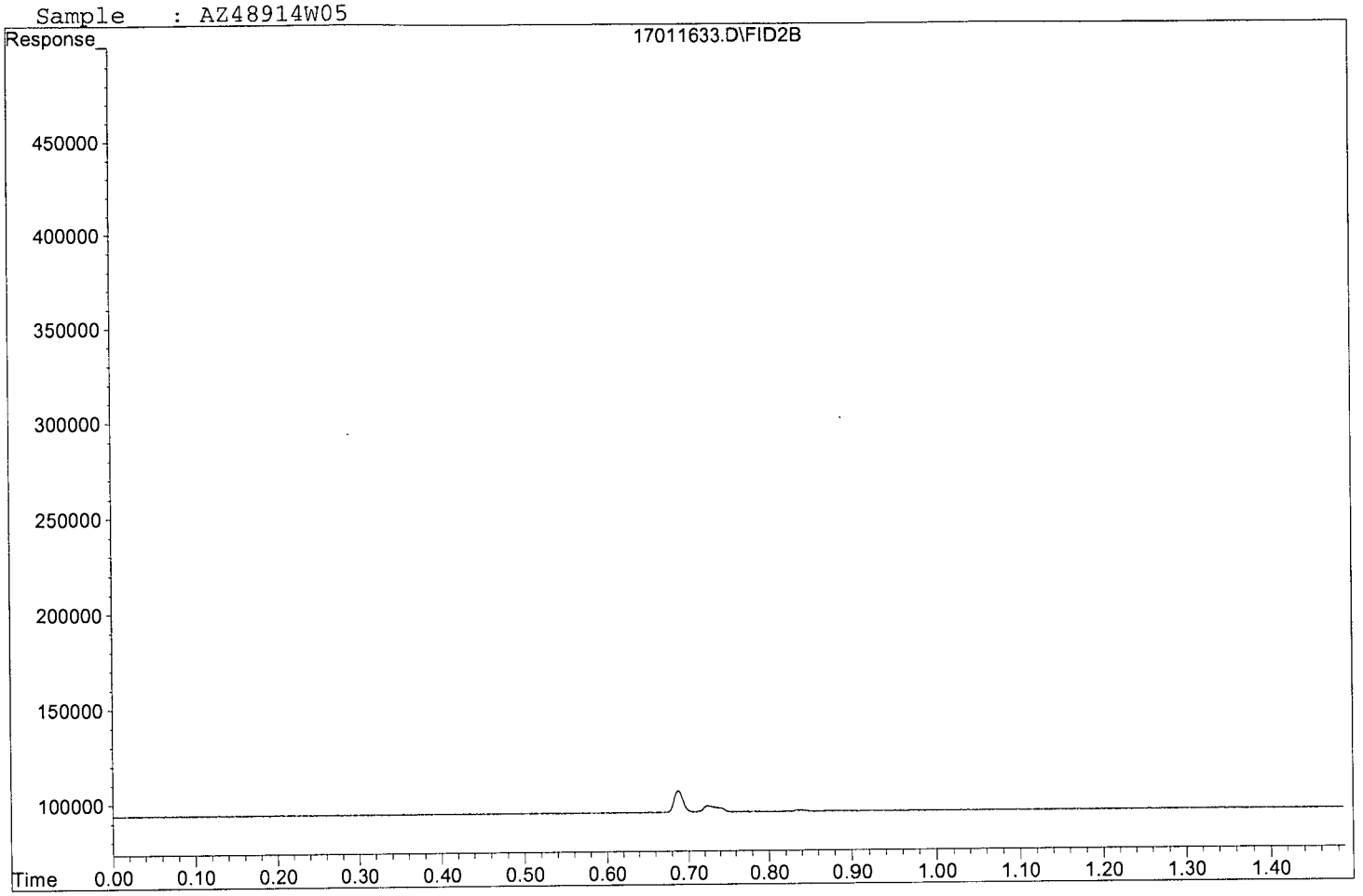
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 17 12:10:52 2017
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.75	316	N.D.	ppb
2) ATM Ethane	0.89	274	N.D.	ppb
3) ATM Ethene	0.97	352	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\17011633.D
Sample : AZ48914W05



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH172
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48915
QCG: #RSKME-170116B-215509

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	4600	50.0	10.00	2.50	ug/L	01/16/17	01/16/17

Quant Method: RSK0901.M
Run #: 17011636
Instrument: Rocky
Sequence: 160901
Dilution Factor: 10
Initials: CMO

Printed: 01/21/17 1:27:03 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\17011636.D Vial: 37
Acq On : 16 Jan 17 13:32 Operator: lac
Sample : AZ48915W05 DF10 Inst : 7890
Misc : Multiplr: 10.00
IntFile : autoint1.e
Quant Time: Jan 16 13:34 2017 Quant Results File: RSK0901.RES

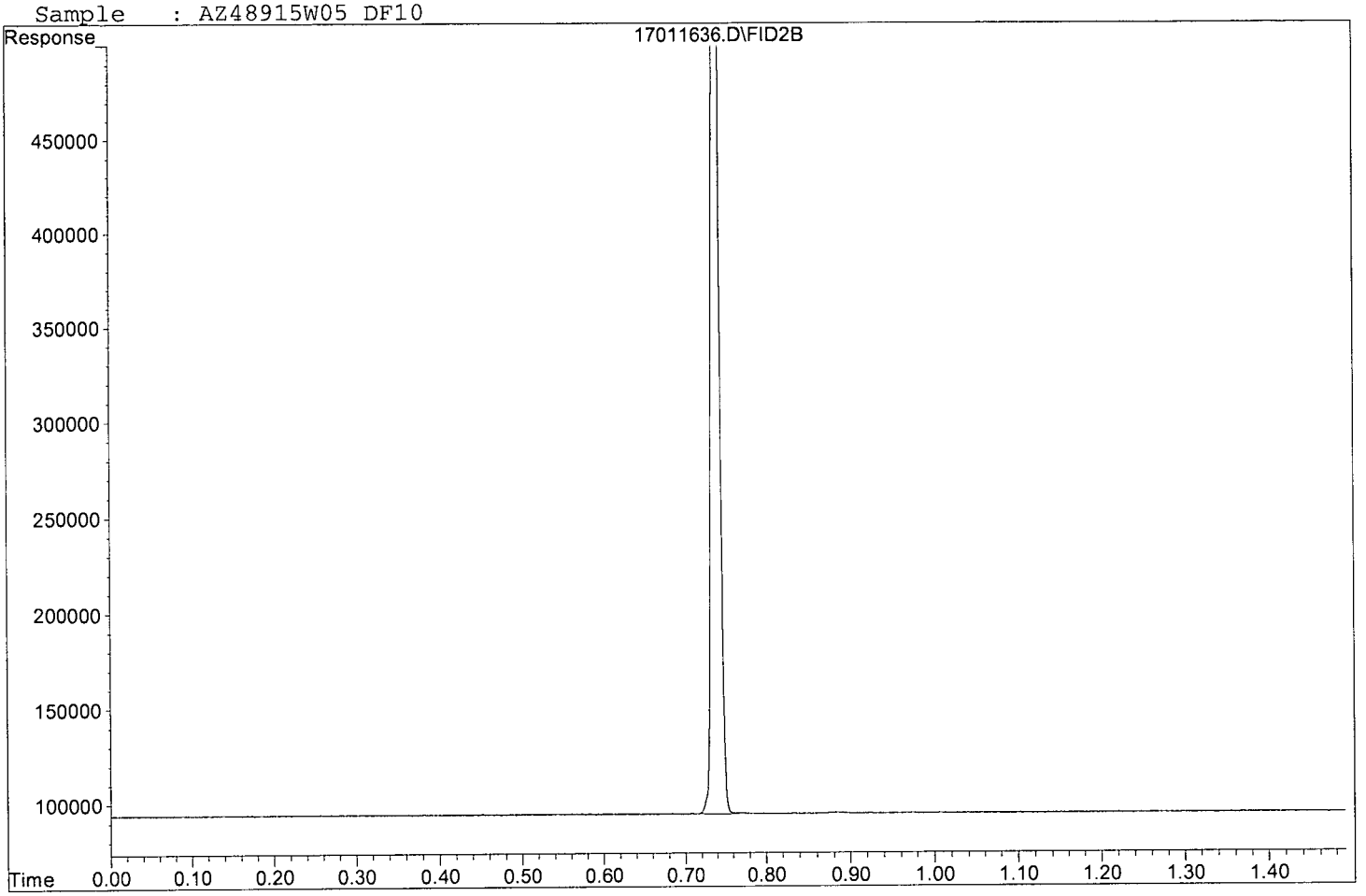
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 17 12:10:52 2017
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.74	517617	4646.064	ppb
Target Compounds				
2) ATM Ethane	0.89	398	N.D.	ppb
3) ATM Ethene	0.98	363	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\17011636.D
Sample : AZ48915W05 DF10



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH178
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48916
QCG: #RSKME-170116B-215509

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/16/17	01/16/17

Quant Method: RSK0901.M
Run #: 17011637
Instrument: Rocky
Sequence: 160901
Dilution Factor: 1
Initials: CMO

Printed: 01/21/17 1:27:03 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\17011637.D Vial: 38
Acq On : 16 Jan 17 13:36 Operator: lac
Sample : AZ48916W05 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 16 13:38 2017 Quant Results File: RSK0901.RES

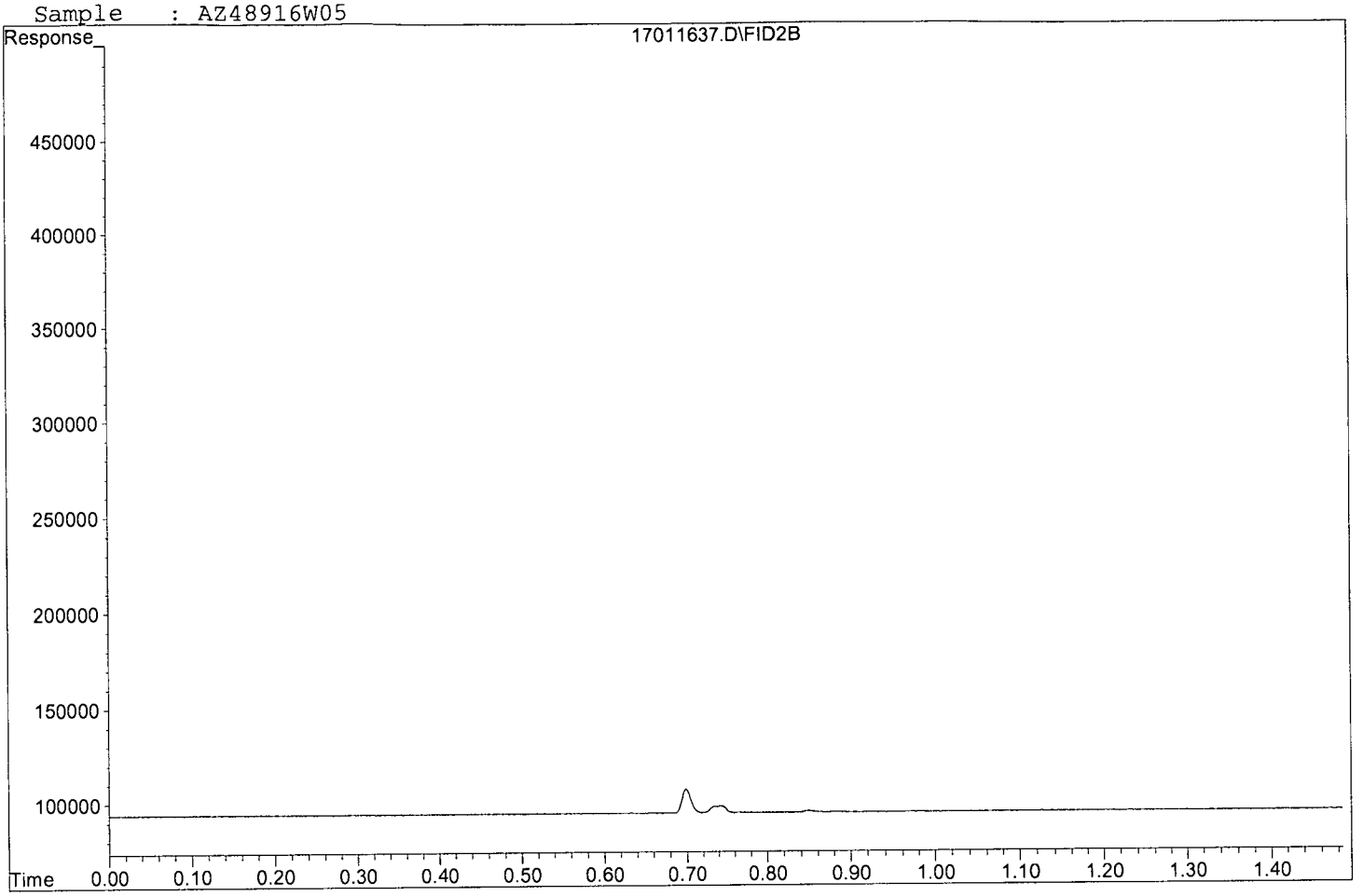
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 17 12:10:52 2017
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.74	3593	N.D.	ppb
2) ATM Ethane	0.89	459	N.D.	ppb
3) ATM Ethene	0.97	353	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\17011637.D
Sample : AZ48916W05



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH185
Sample Collection Date: 01/11/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48917
QCG: #RSKME-170116B-215509

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/16/17	01/16/17

Quant Method:	RSK0901.M
Run #:	17011638
Instrument:	Rocky
Sequence:	160901
Dilution Factor:	1
Initials:	CMO

Printed: 01/21/17 1:27:03 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\17011638.D Vial: 39
Acq On : 16 Jan 17 13:39 Operator: lac
Sample : AZ48917W05 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 16 13:41 2017 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 17 12:10:52 2017
Response via : Multiple Level Calibration

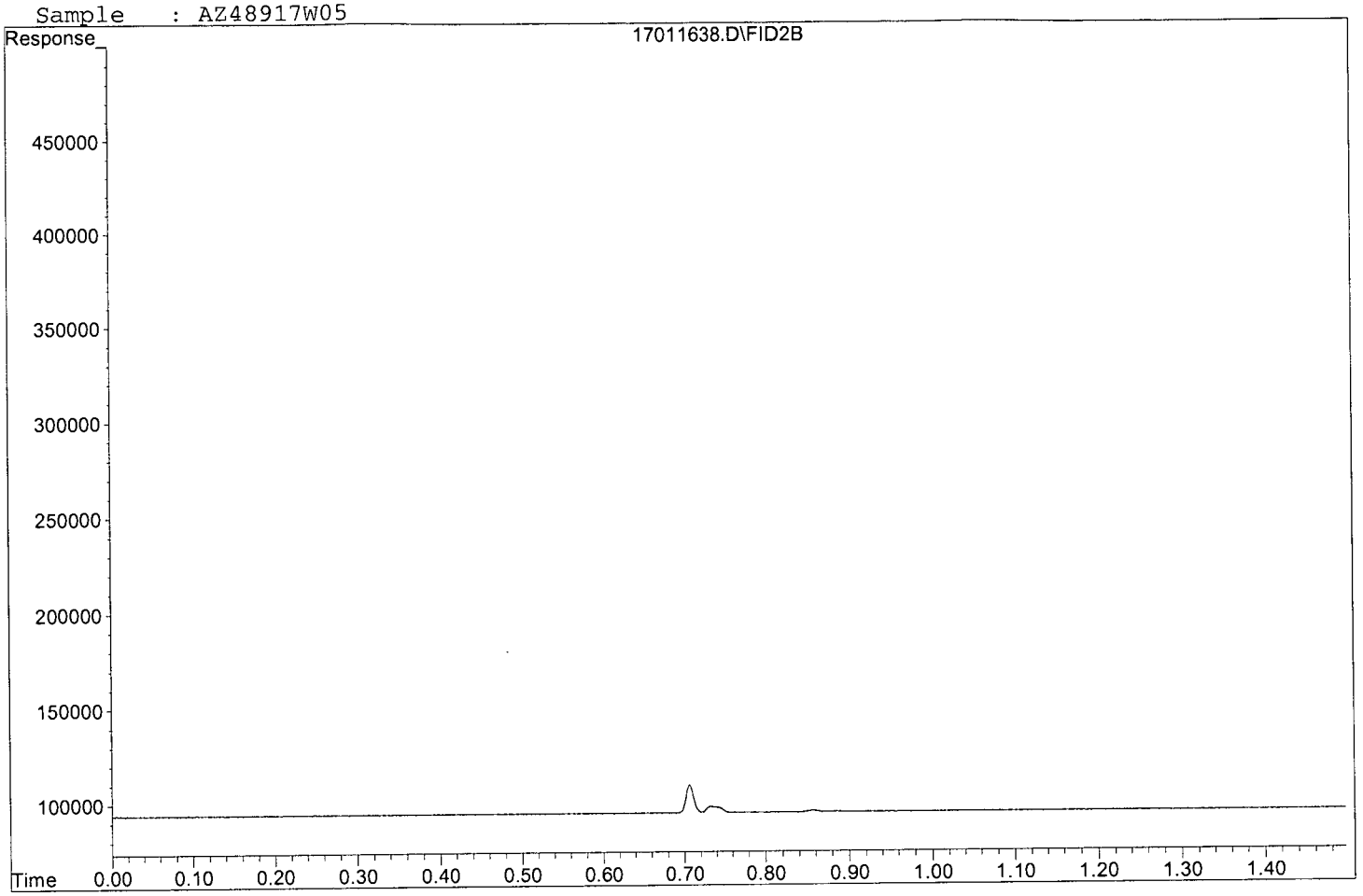
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.74	3135	N.D.	ppb
2) ATM Ethane	0.90	277	N.D.	ppb
3) ATM Ethene	0.97	265	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\ROCKY\DATA\160901R\17011638.D
Sample : AZ48917W05



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH181
Sample Collection Date: 01/12/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48921
QCG: #RSKME-170116B-215509

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/16/17	01/16/17

Quant Method: RSK0901.M
Run #: 17011639
Instrument: Rocky
Sequence: 160901
Dilution Factor: 1
Initials: CMO

Printed: 01/21/17 1:27:03 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\17011639.D Vial: 40
Acq On : 16 Jan 17 13:42 Operator: lac
Sample : AZ48921W05 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 16 13:44 2017 Quant Results File: RSK0901.RES

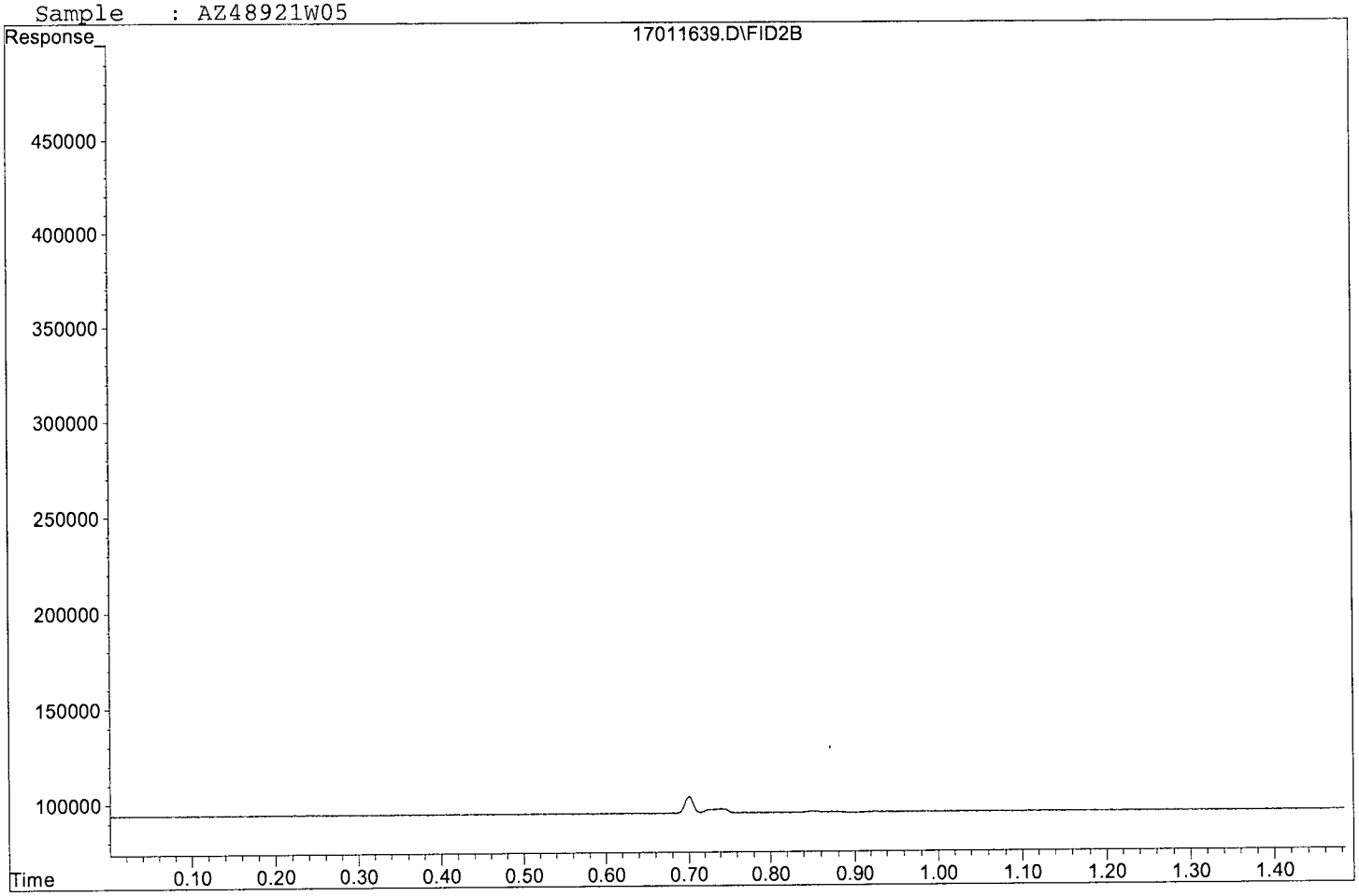
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 17 12:10:52 2017
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.75	2319	N.D.	ppb
2) ATM Ethane	0.89	223	N.D.	ppb
3) ATM Ethene	0.97	505	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\17011639.D
Sample : AZ48921W05



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH180
Sample Collection Date: 01/12/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48923
QCG: #RSKME-170116B-215509

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/16/17	01/16/17

Quant Method: RSK0901.M
Run #: 17011640
Instrument: Rocky
Sequence: 160901
Dilution Factor: 1
Initials: CMO

Printed: 01/21/17 1:27:03 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\17011640.D Vial: 41
Acq On : 16 Jan 17 13:45 Operator: lac
Sample : AZ48923W05 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 16 13:46 2017 Quant Results File: RSK0901.RES

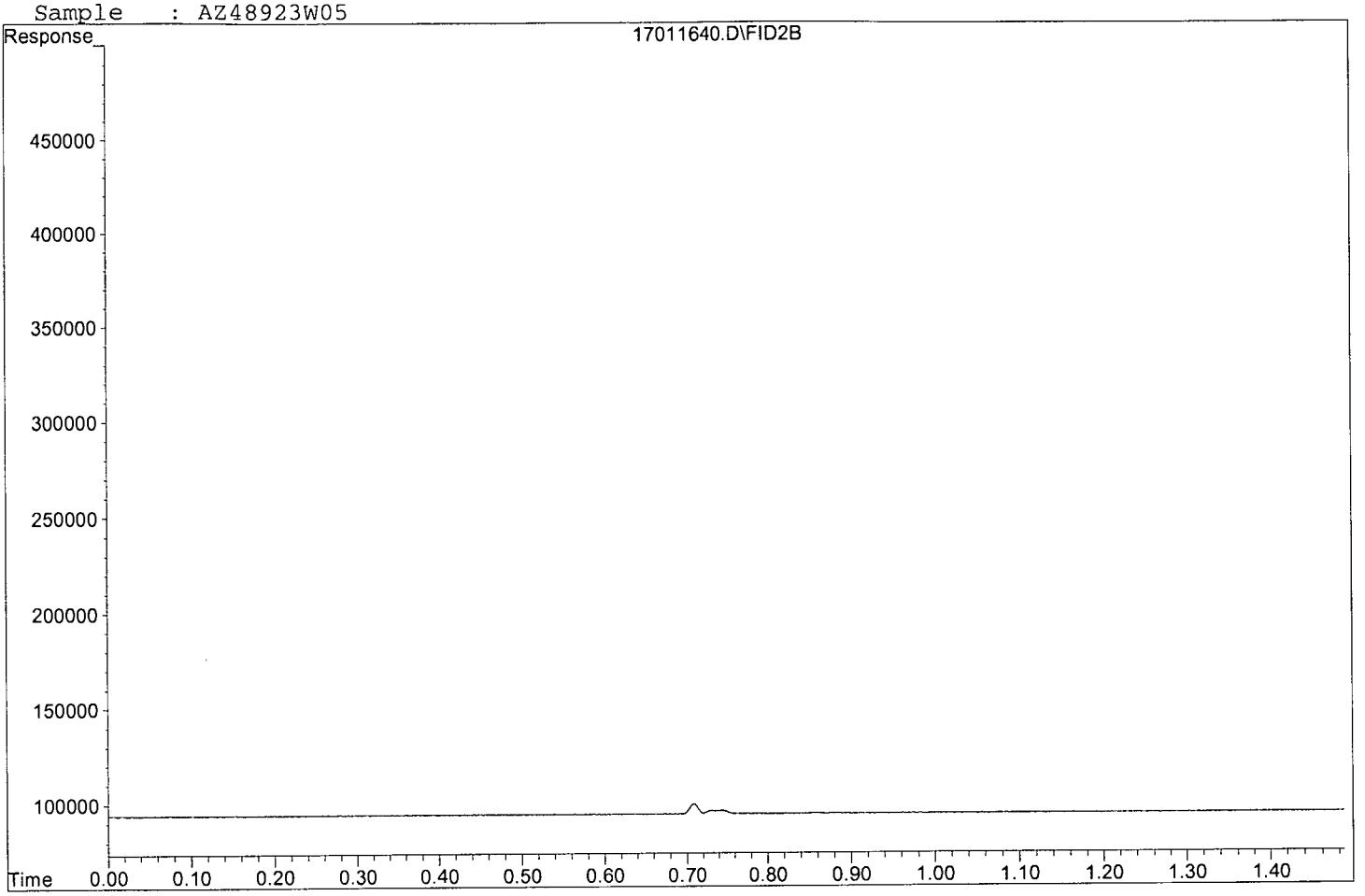
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 17 12:10:52 2017
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.74	1962	N.D.	ppb
2) ATM Ethane	0.89	299	N.D.	ppb
3) ATM Ethene	0.97	325	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\17011640.D
Sample : AZ48923W05



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH183
Sample Collection Date: 01/12/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48924
QCG: #RSKME-170116B-215509

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/16/17	01/16/17

Quant Method: RSK0901.M
Run #: 17011641
Instrument: Rocky
Sequence: 160901
Dilution Factor: 1
Initials: CMO

Printed: 01/21/17 1:27:03 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\17011641.D Vial: 42
Acq On : 16 Jan 17 13:47 Operator: lac
Sample : AZ48924W05 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 16 13:49 2017 Quant Results File: RSK0901.RES

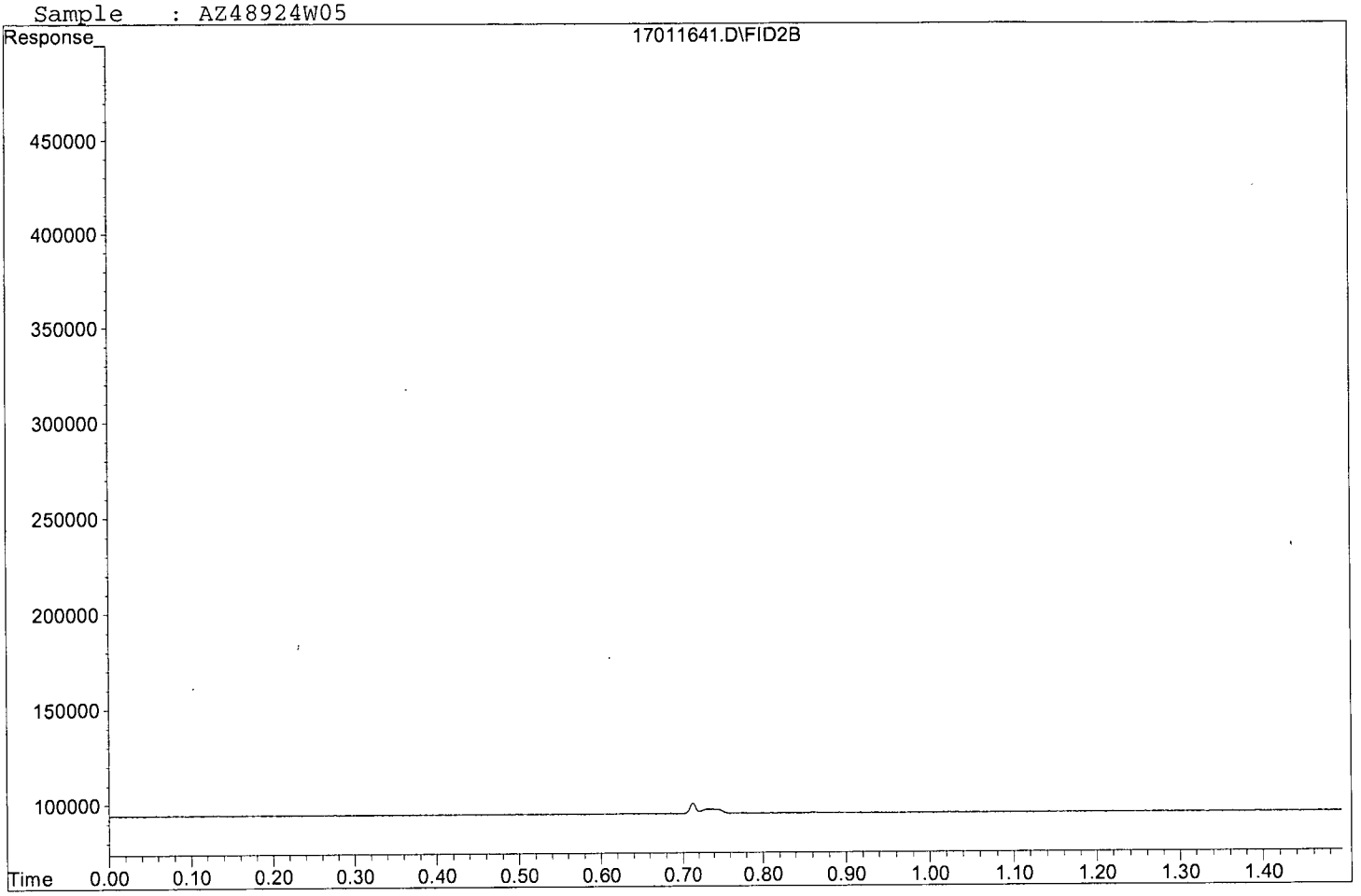
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 17 12:10:52 2017
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.75	2191	N.D.	ppb
2) ATM Ethane	0.89	344	N.D.	ppb
3) ATM Ethene	0.98	287	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\17011641.D
Sample : AZ48924W05



METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Thach
Project: 60481245 CIV0053 Red Hill Fuel Storage
Sample ID: ERH184
Sample Collection Date: 01/12/17

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 81971
APPL ID: AZ48925
QCG: #RSKME-170116B-215509

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/16/17	01/16/17

Quant Method:	RSK0901.M
Run #:	17011642
Instrument:	Rocky
Sequence:	160901
Dilution Factor:	1
Initials:	CMO

Printed: 01/21/17 1:27:03 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\17011642.D Vial: 43
Acq On : 16 Jan 17 13:50 Operator: lac
Sample : AZ48925W05 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 16 13:52 2017 Quant Results File: RSK0901.RES

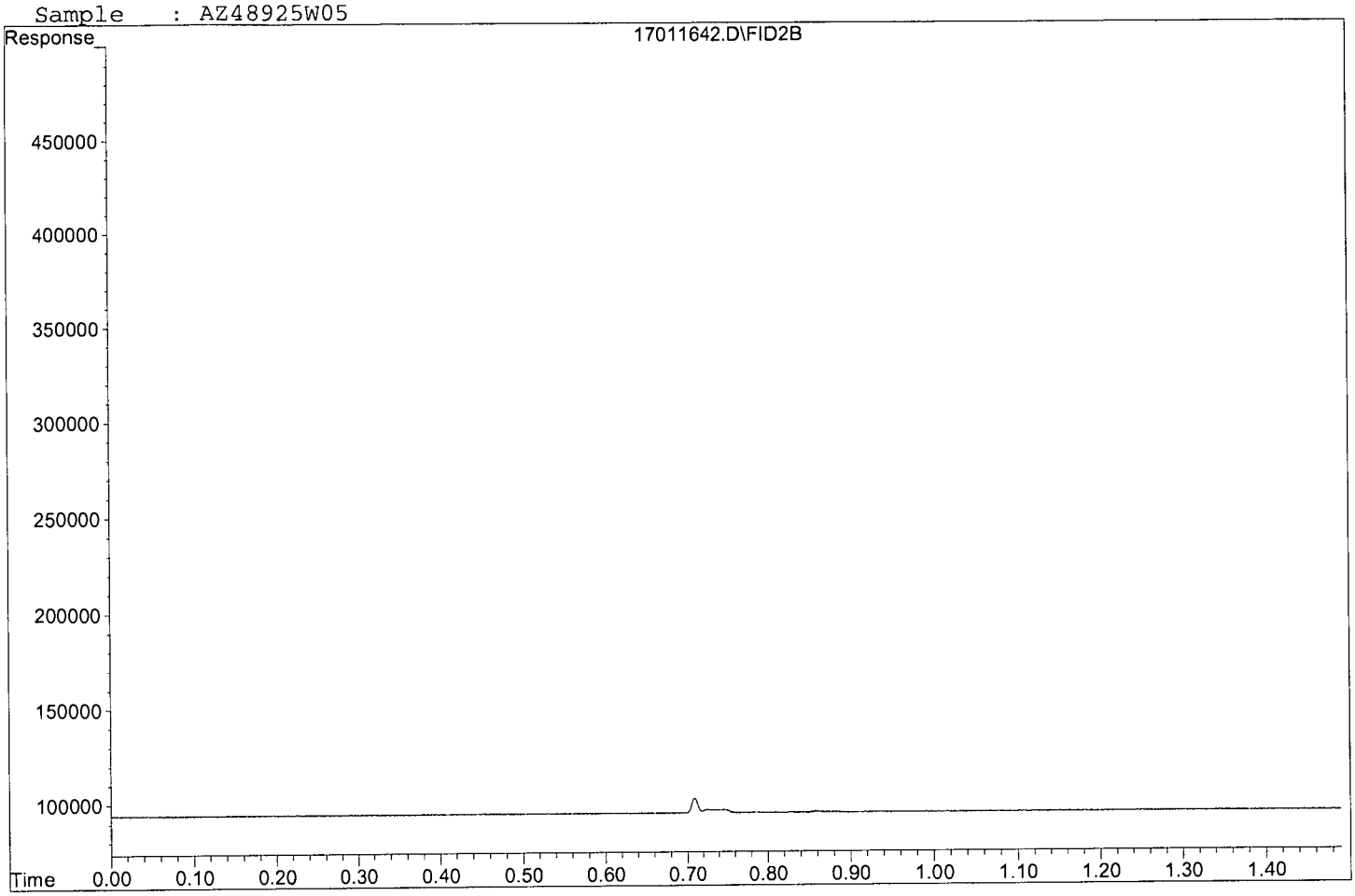
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 17 12:10:52 2017
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.74	1733	N.D.	ppb
2) ATM Ethane	0.89	339	N.D.	ppb
3) ATM Ethene	0.98	293	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\17011642.D
Sample : AZ48925W05



ORGANICS
Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:
SDG No:
Initial Cal. Date: 09/01/16
Instrument: 7890
Initials:

		Compound	1	2	3	4	5	6	7	8	9	10	Avg	%RSD		
			0901000.D	0901001.D	0901002.D	0901003.D	0901004.D	0901005.D	0901006.D	0901007.D	0901008.D	0901009.D				
1	ATM	Methane	7448	5672	3042	3435	1074	1006	1184	1314	1084	1089	2635	87	ATM	
2	ATM	Ethane	1509	1521	1416	2554	478	657	816	933	791	798	1147	54	ATM	
3	ATM	Ethene	1826	1525	1280	2301	444	570	693	733	628	626	1063	60	ATM	
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5.7170224

FORM61

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901000.D Vial: 1
Acq On : 1 Sep 16 11:38 Operator: lac
Sample : RSK Level 1 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

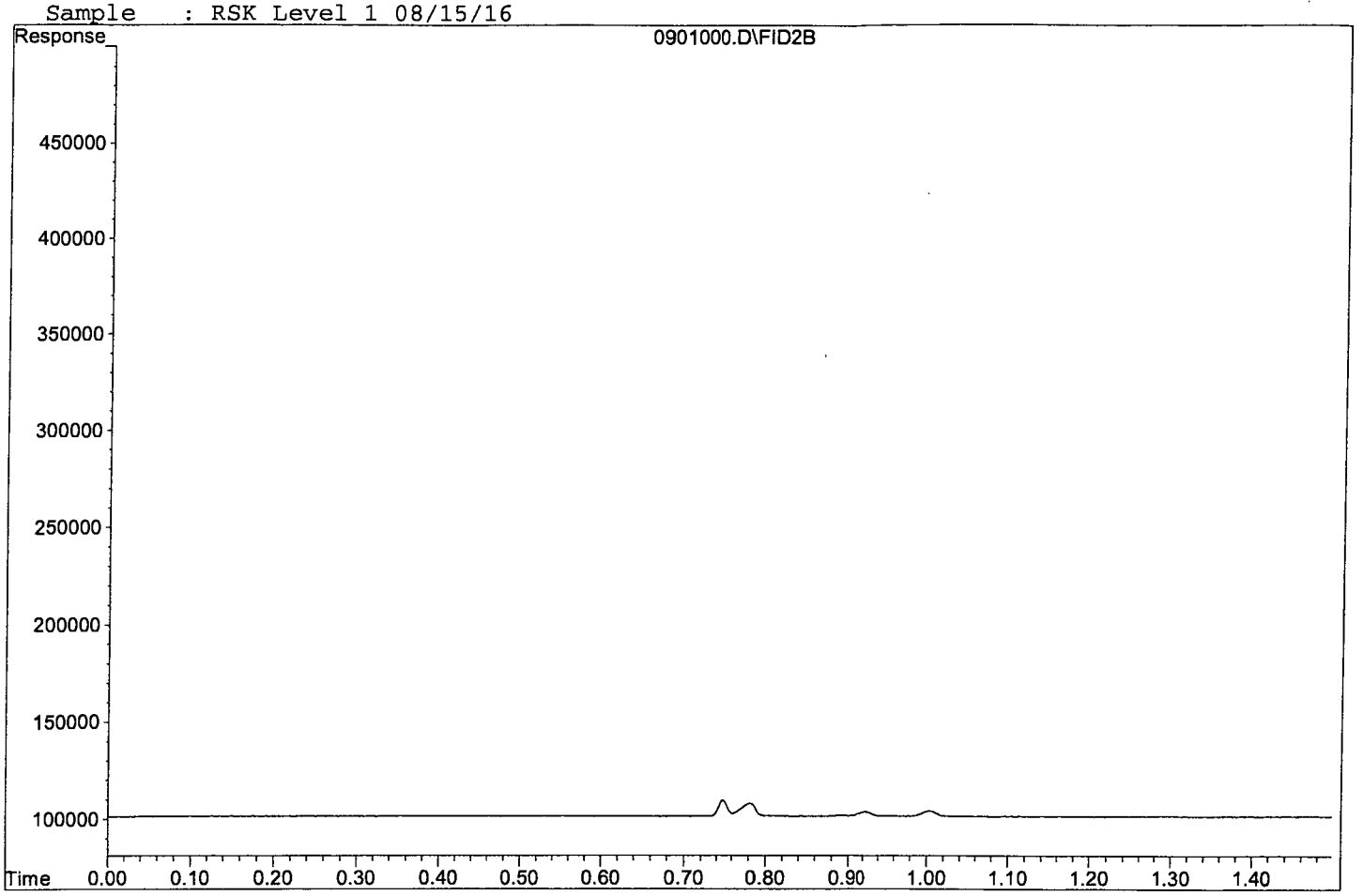
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.78	6703	N.D.	ppb
2) ATM Ethane	0.92	2566	N.D.	ppb
3) ATM Ethene	1.00	2922	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901000.D
Sample : RSK Level 1 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901001.D Vial: 2
Acq On : 1 Sep 16 11:41 Operator: lac
Sample : RSK Level 2 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 26 12:10 2017 Quant Results File: RSK0901.RES

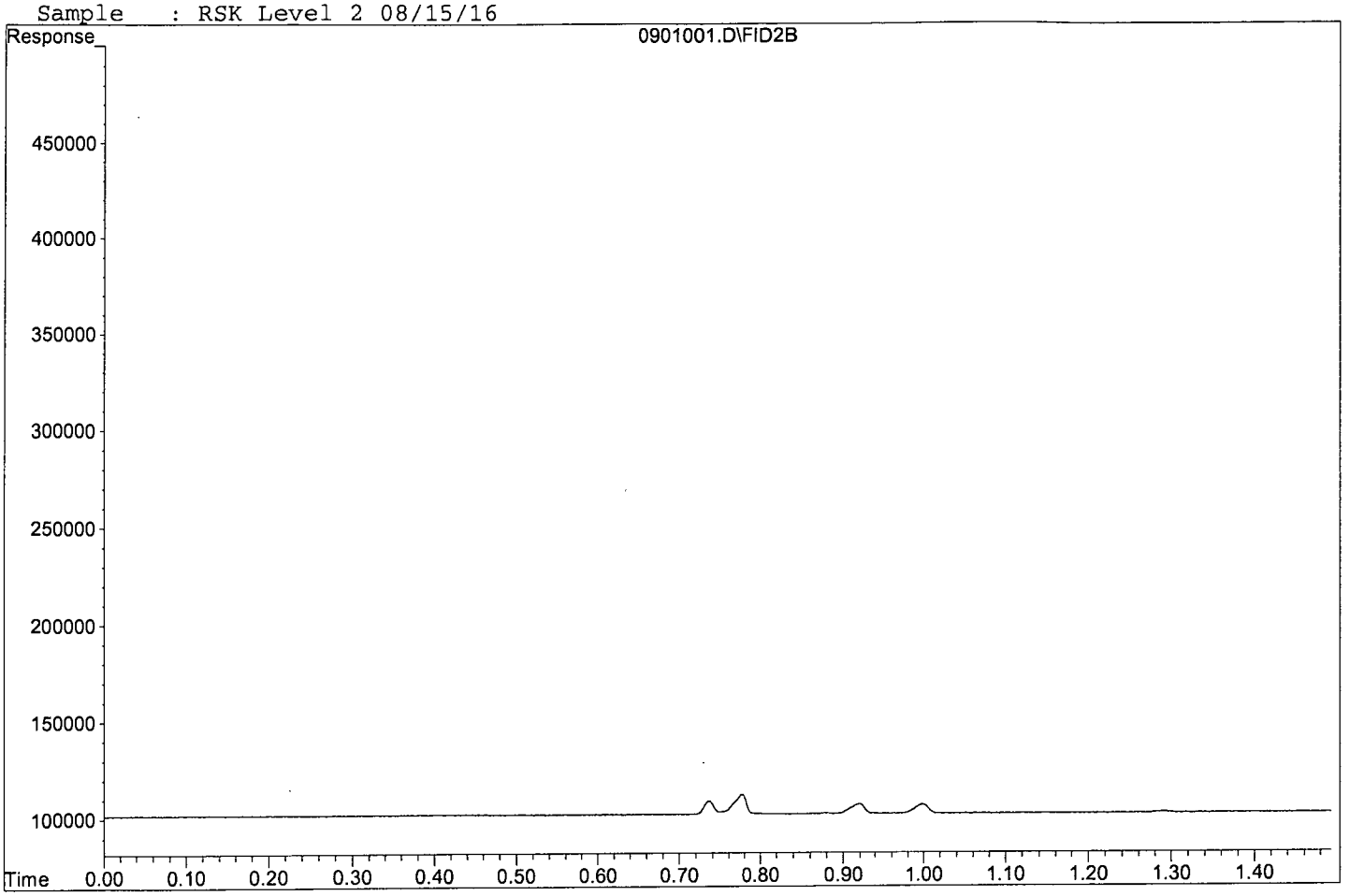
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Thu Jan 26 12:11:56 2017
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.78	10209	N.D.	ppb
2) ATM Ethane	0.92	5171	N.D.	ppb
3) ATM Ethene	1.00	4881	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901001.D
Sample : RSK Level 2 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901002.D Vial: 3
Acq On : 1 Sep 16 11:44 Operator: lac
Sample : RSK Level 3 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 14 13:31 2016 Quant Results File: RSK0901.RES

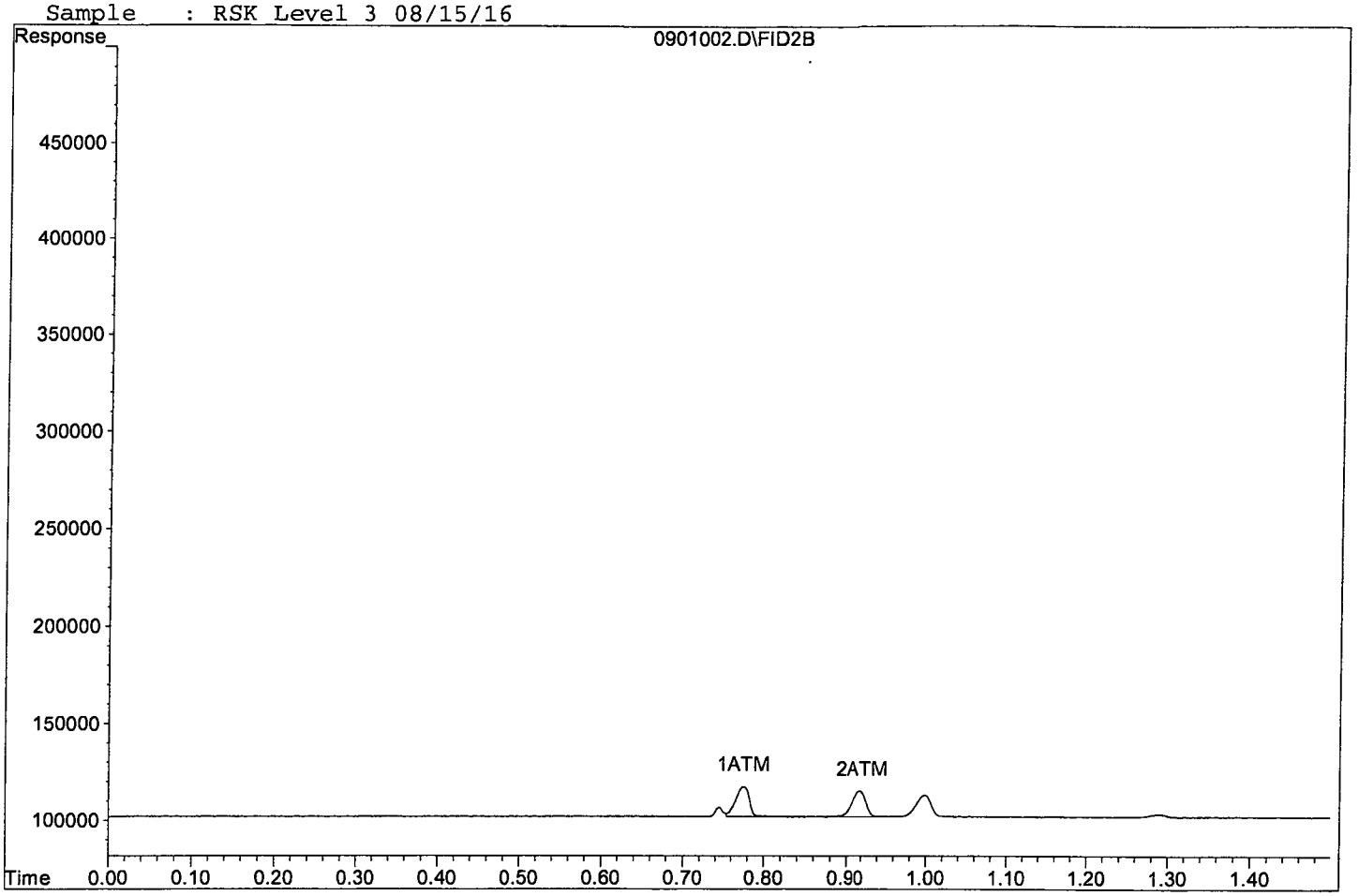
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.77	15515	1.054	ppb
2) ATM Ethane	0.92	13452	3.912	ppb
Target Compounds				
3) ATM Ethene	1.00	11390	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901002.D
Sample : RSK Level 3 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901003.D Vial: 4
Acq On : 1 Sep 16 11:46 Operator: lac
Sample : RSK Level 4 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

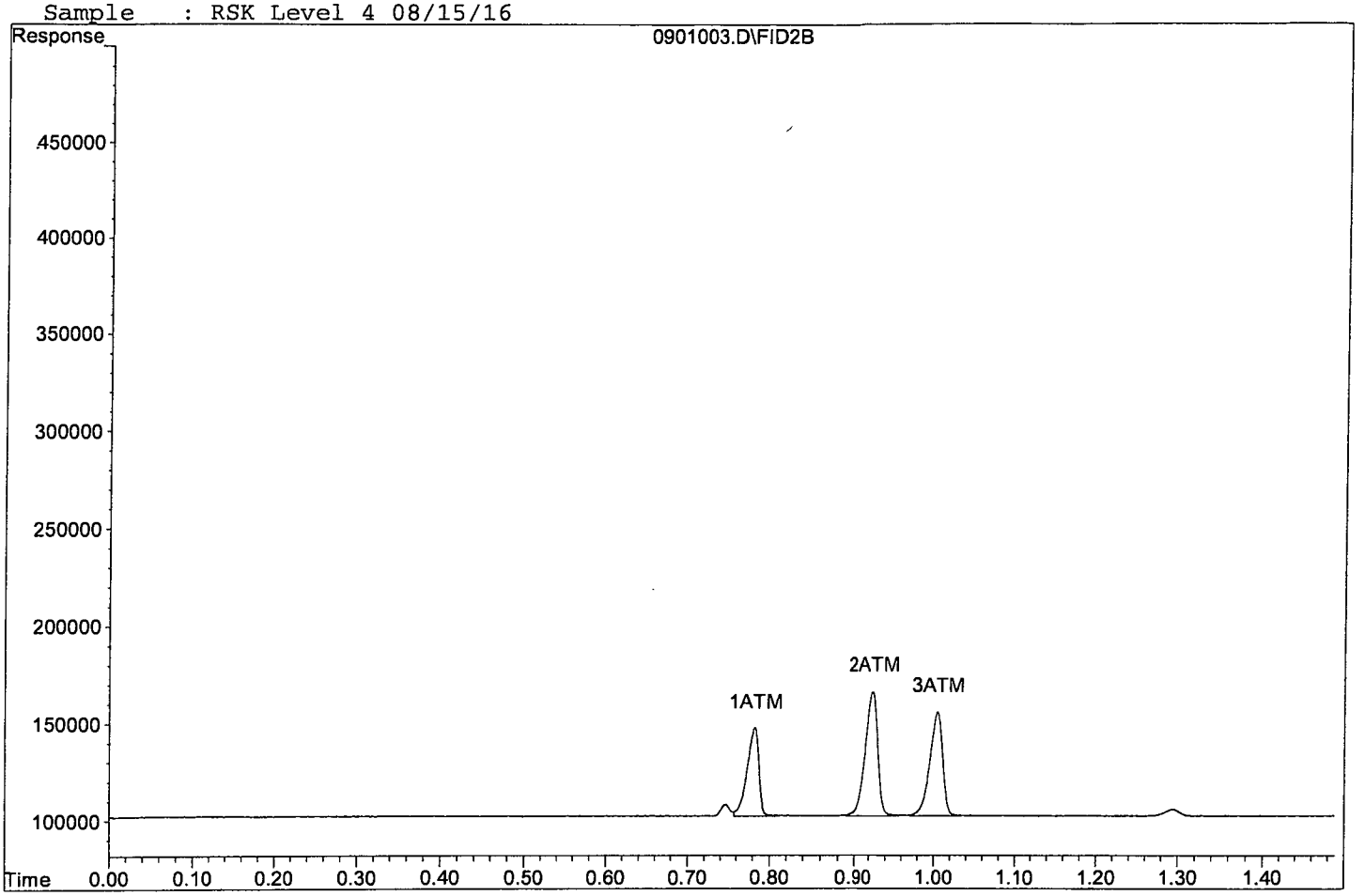
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.78	45792	29.006 ppb
2) ATM Ethane	0.92	63853	67.197 ppb
3) ATM Ethene	1.00	53608	66.354 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901003.D
Sample : RSK Level 4 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901004.D Vial: 5
Acq On : 1 Sep 16 11:48 Operator: lac
Sample : RSK Level 5 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

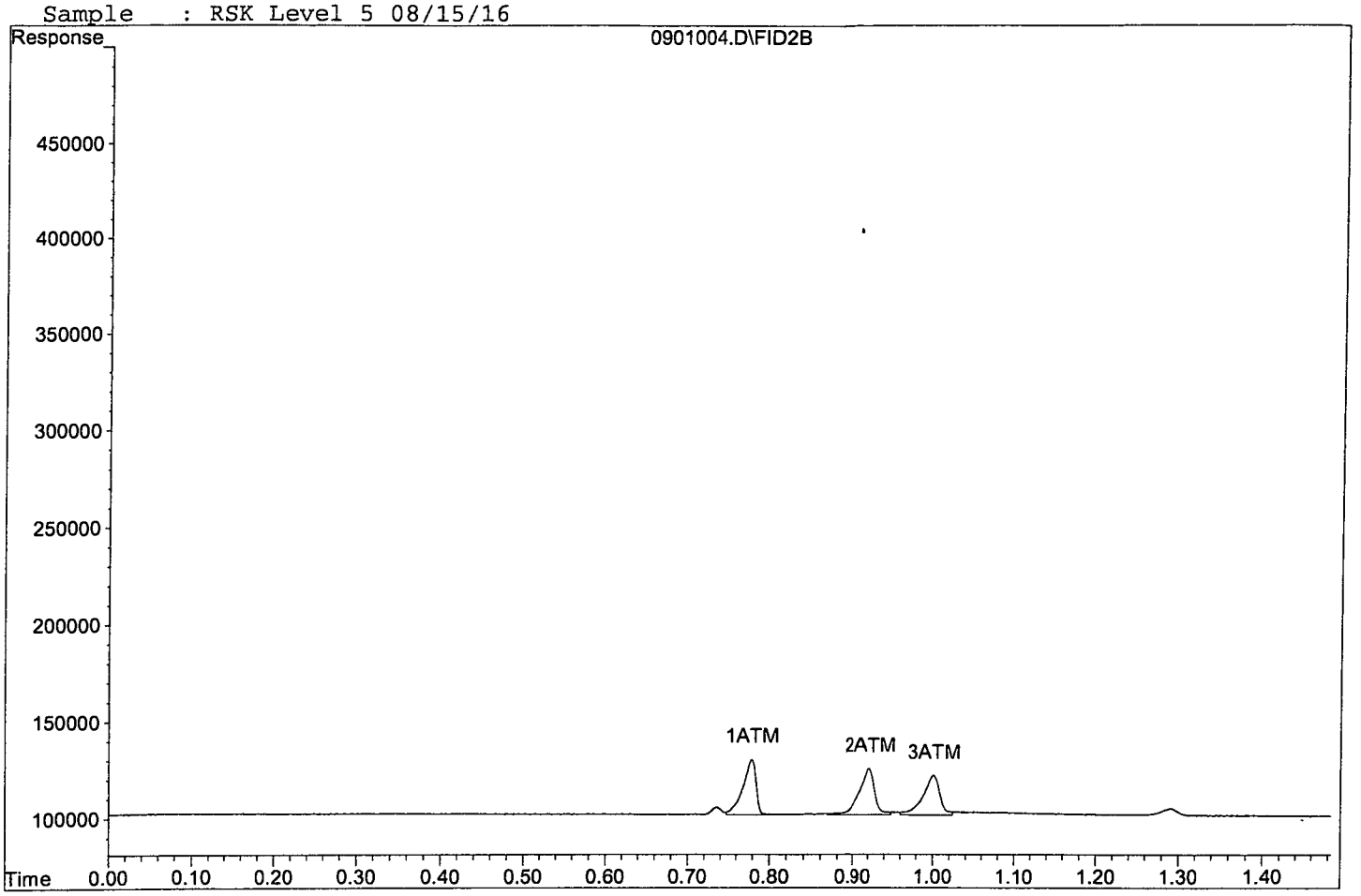
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.78	28664	13.193 ppb
2) ATM Ethane	0.92	23891	17.020 ppb
3) ATM Ethene	1.00	20700	13.631 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901004.D
Sample : RSK Level 5 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901005.D Vial: 6
Acq On : 1 Sep 16 11:50 Operator: lac
Sample : RSK Level 6 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

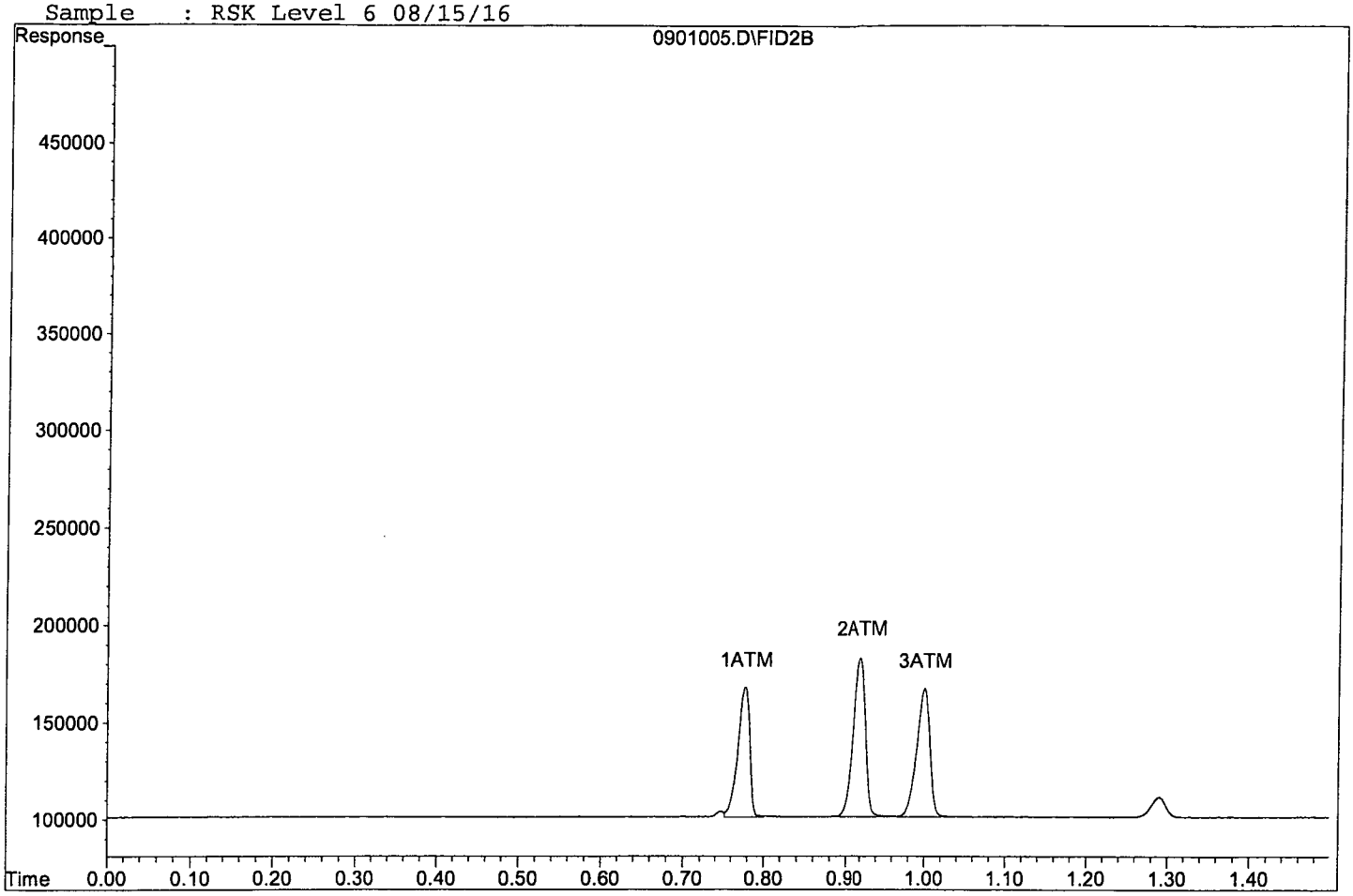
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.78	67137	48.712 ppb
2) ATM Ethane	0.92	82167	90.193 ppb
3) ATM Ethene	1.00	66348	86.764 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901005.D
Sample : RSK Level 6 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901006.D Vial: 7
Acq On : 1 Sep 16 11:52 Operator: lac
Sample : RSK Level 7 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

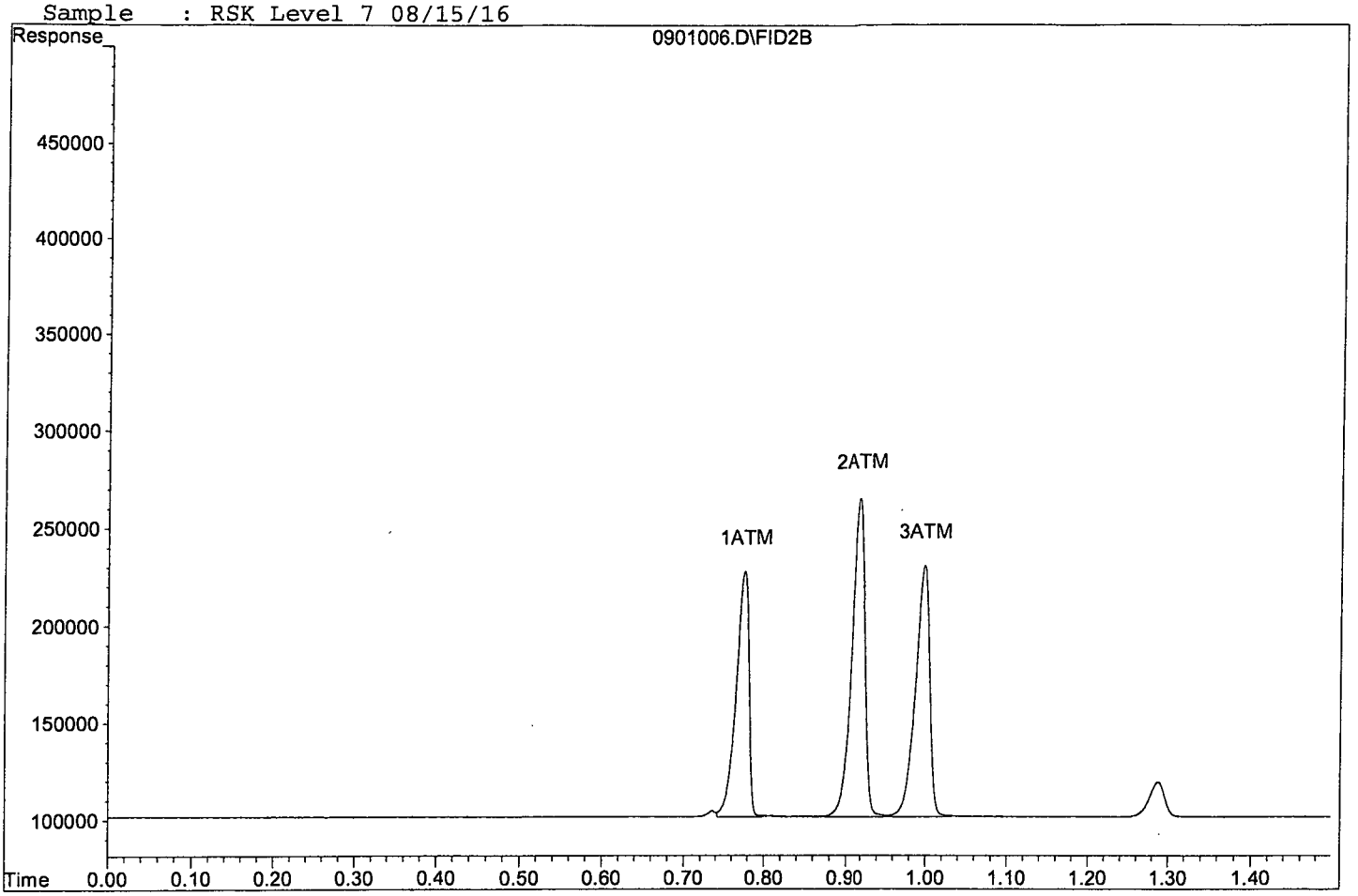
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.78	126422	103.446 ppb
2) ATM Ethane	0.92	163281	192.041 ppb
3) ATM Ethene	1.00	129200	187.460 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901006.D
Sample : RSK Level 7 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901007.D Vial: 8
Acq On : 1 Sep 16 11:55 Operator: lac
Sample : RSK Level 8 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

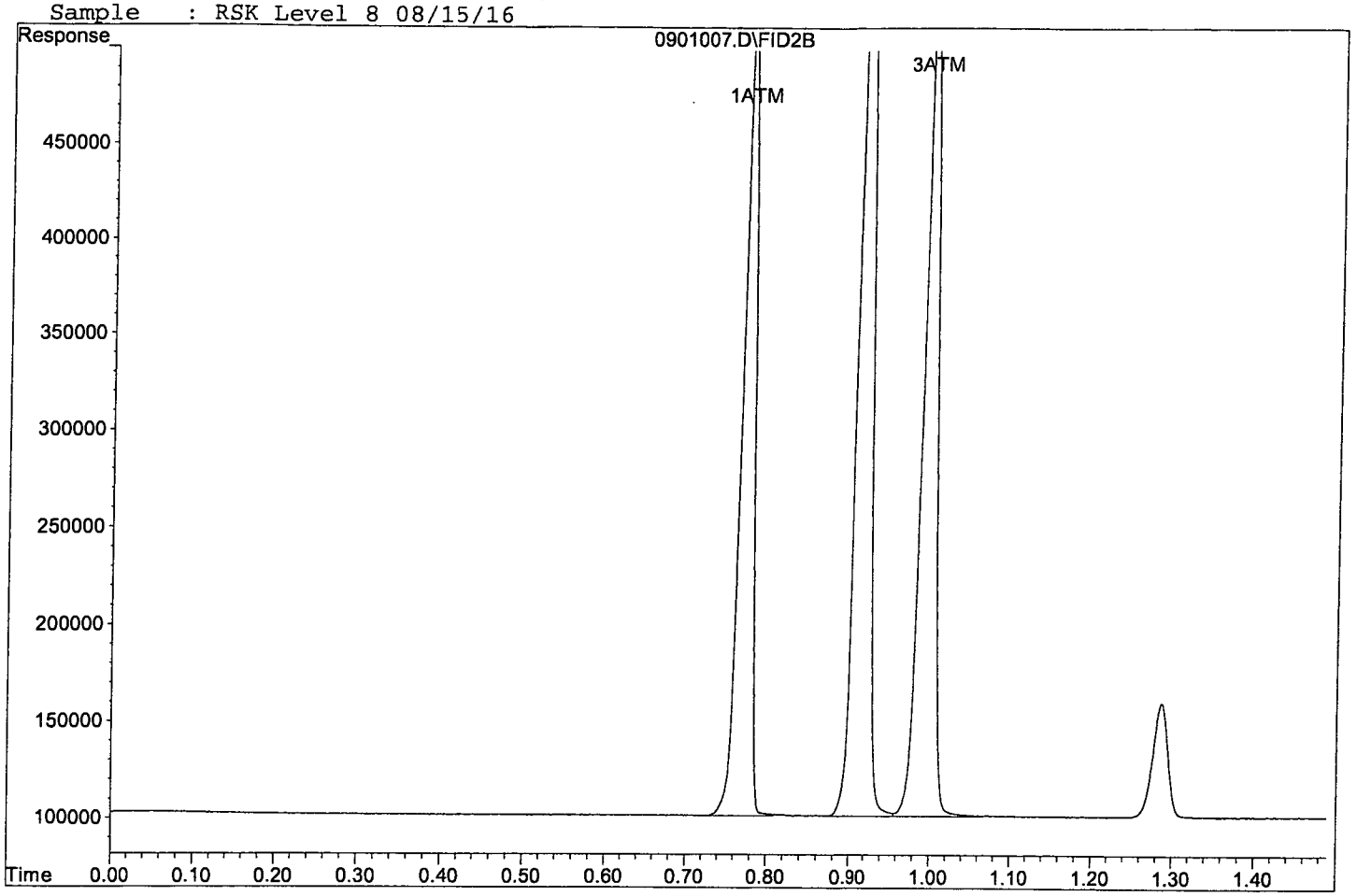
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.77	421052	375.455 ppb
2) ATM Ethane	0.92	559640	689.720 ppb
3) ATM Ethene	1.00	439383	684.403 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901007.D
Sample : RSK Level 8 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901008.D Vial: 9
Acq On : 1 Sep 16 11:57 Operator: lac
Sample : RSK Level 9 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

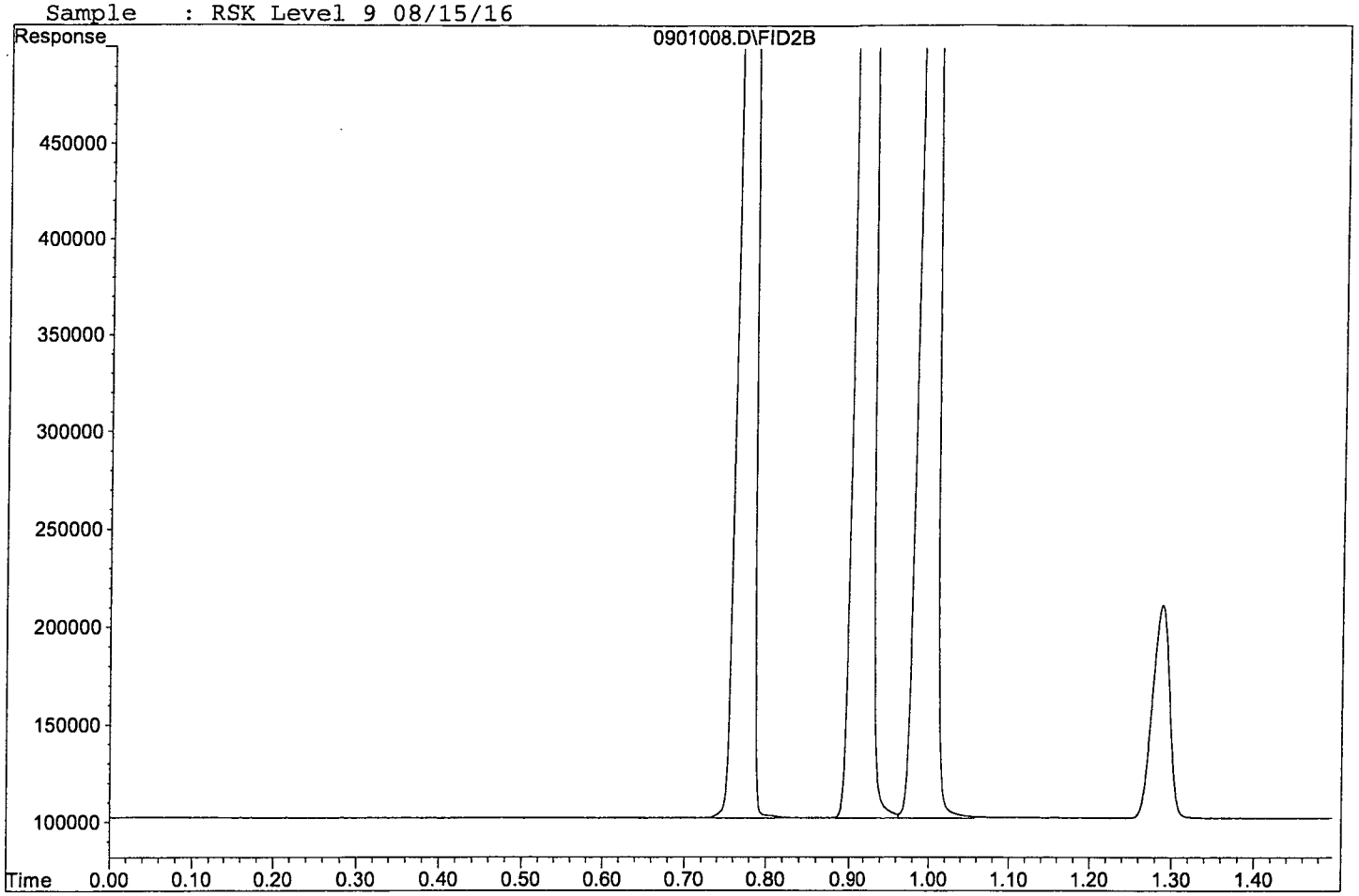
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.78	723824	654.982	ppb
2) ATM Ethane	0.92	989344	1229.268	ppb
3) ATM Ethene	1.00	783615	1235.897	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901008.D
Sample : RSK Level 9 08/15/16



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901009.D Vial: 10
Acq On : 1 Sep 16 11:59 Operator: lac
Sample : RSK Level 10 08/15/16 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 9 13:08 2016 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Oct 25 11:36:05 2016
Response via : Multiple Level Calibration

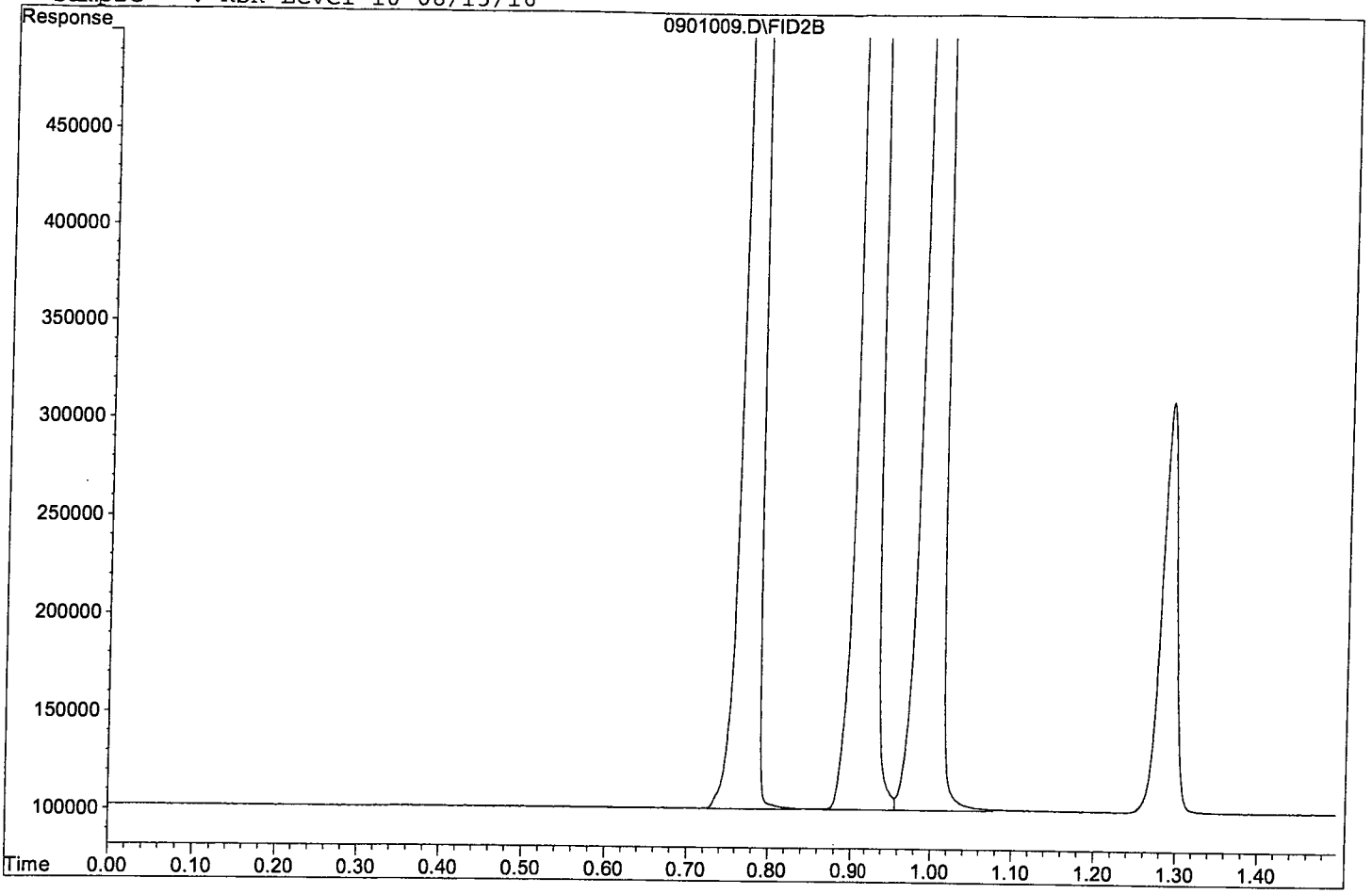
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

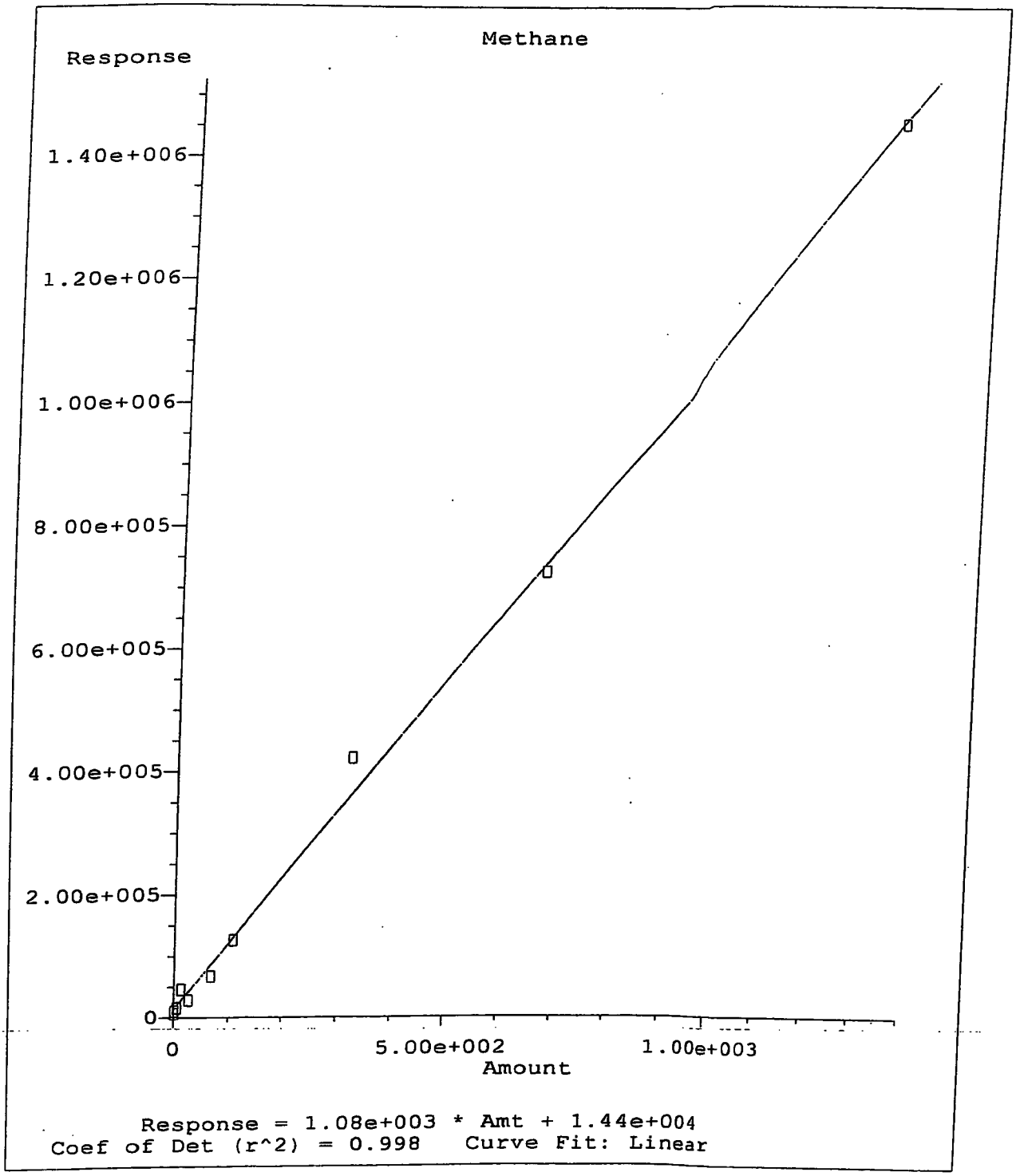
Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.78	1454283	1329.358	ppb
2) ATM Ethane	0.92	1994598	2491.490	ppb
3) ATM Ethene	1.00	1562244	2483.337	ppb

Target Compounds

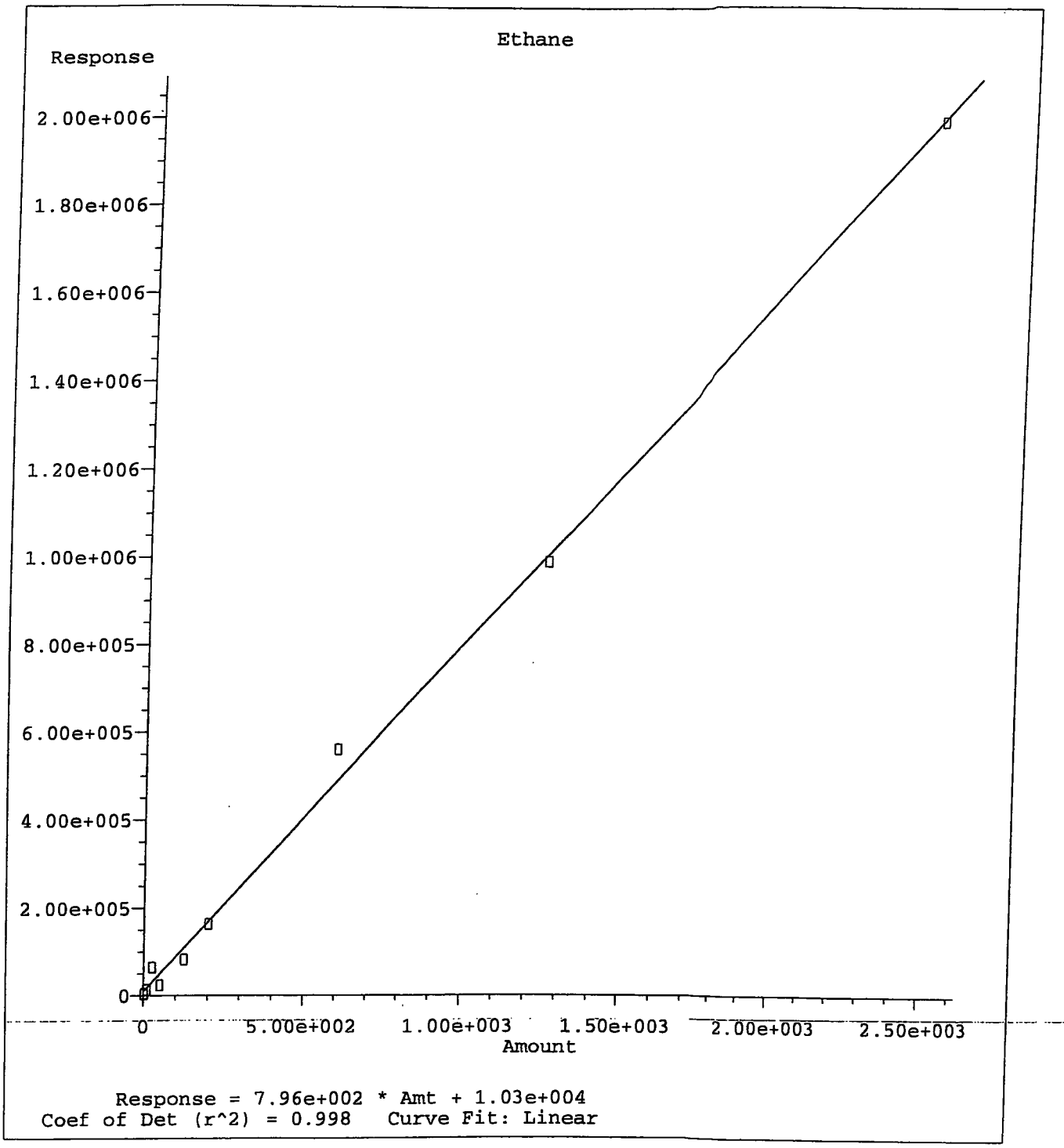
(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\0901009.D
Sample : RSK Level 10 08/15/16

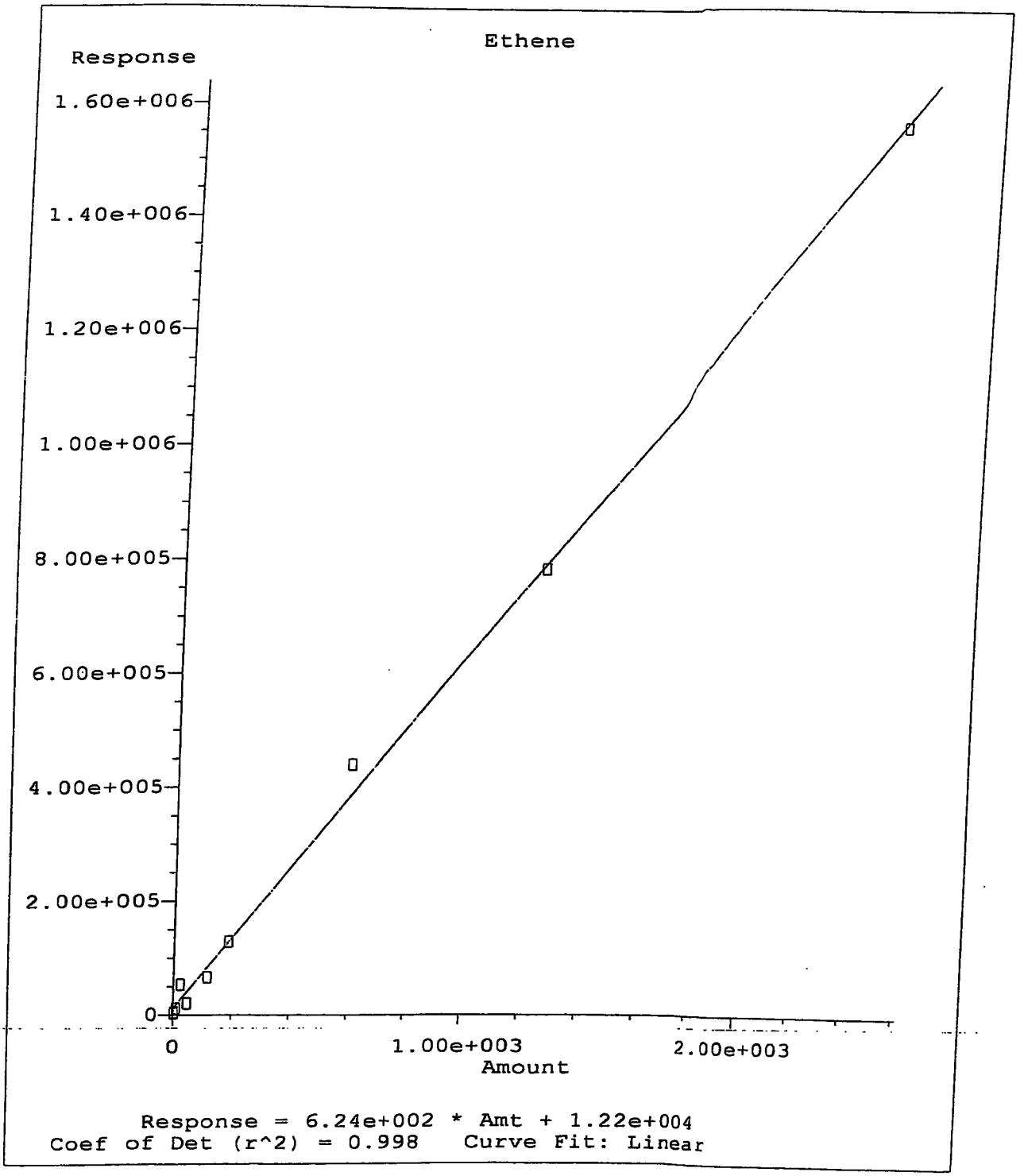




Method Name: G:\ROCKY\DATA\160901R\RSK0901.M
Calibration Table Last Updated: Fri Sep 02 15:25:38 2016



Method Name: G:\ROCKY\DATA\160901R\RSK0901.M
Calibration Table Last Updated: Thu Nov 10 08:49:51 2016



Method Name: G:\ROCKY\DATA\160901R\RSK0901.M
Calibration Table Last Updated: Fri Sep 02 15:25:38 2016

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 1 Sep 16 13:11
Instrument: 7890
Initial Cal. Date: 09/01/16
Data File: 0901018.D

		Compound	MEAN	CCRF	%D	%Drift	
1	ATML	Methane	2635	1090	59	ATML	19
2	ATML	Ethane	1147	964	16	ATML	11
3	ATML	Ethene	1063	853	20	ATML	20
4							
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37							
38							
39							
40							
		Average			31.7		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\0901018.D
Acq On : 1 Sep 16 13:11
Sample : (SS/LCS) RSK Level 6 09/01/16
Misc :
IntFile : autoint1.e
Quant Time: Sep 1 13:16 2016 Quant Results File: RSK0901.RES

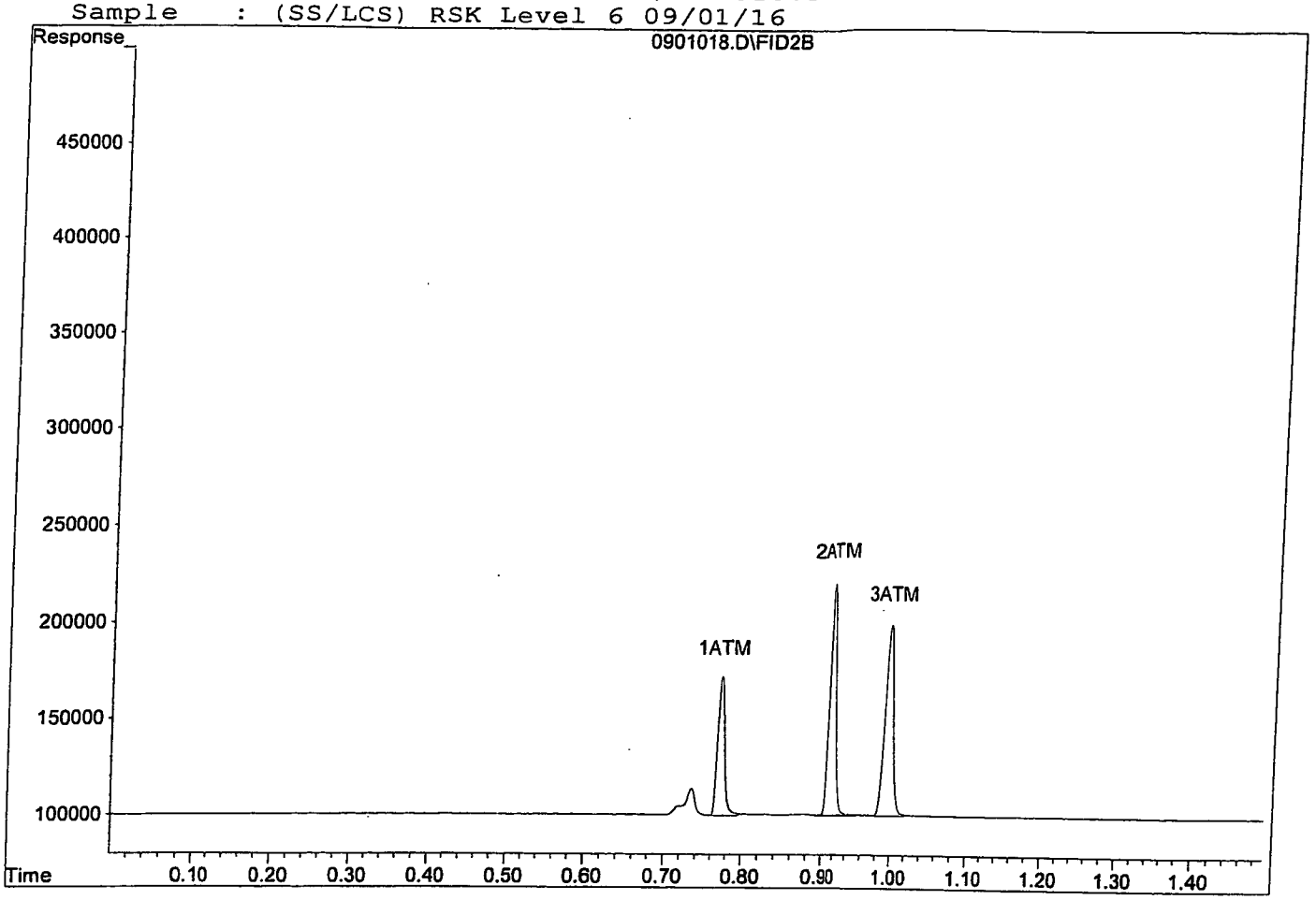
Vial: 19
Operator: lac
Inst : 7890
Multiplr: 1.00

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Thu Sep 01 14:40:19 2016
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.77	72750	53.894 ppb
2) ATM Ethane	0.91	120545	138.382 ppb
3) ATM Ethene	0.99	99349	139.636 ppb

Data File: G:\ROCKY\DATA\160901R\0901018.D
Sample : (SS/LCS) RSK Level 6 09/01/16



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/16/17
Instrument: 7890
Initial Cal. Date: 09/01/17
Data File: 17011631.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	2635	875	67	ATML	20
2	ATML	Ethane	1147	685	40	ATML	14
3	ATML	Ethene	1063	510	52	ATML	19
4							
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37							
38							
39							
40							
		Average			53.0		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\17011631.D Vial: 32
Acq On : 16 Jan 17 13:14 Operator: lac
Sample : 170116B LCS/CCV RSK Level 10 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 16 13:16 2017 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 17 12:10:52 2017
Response via : Multiple Level Calibration

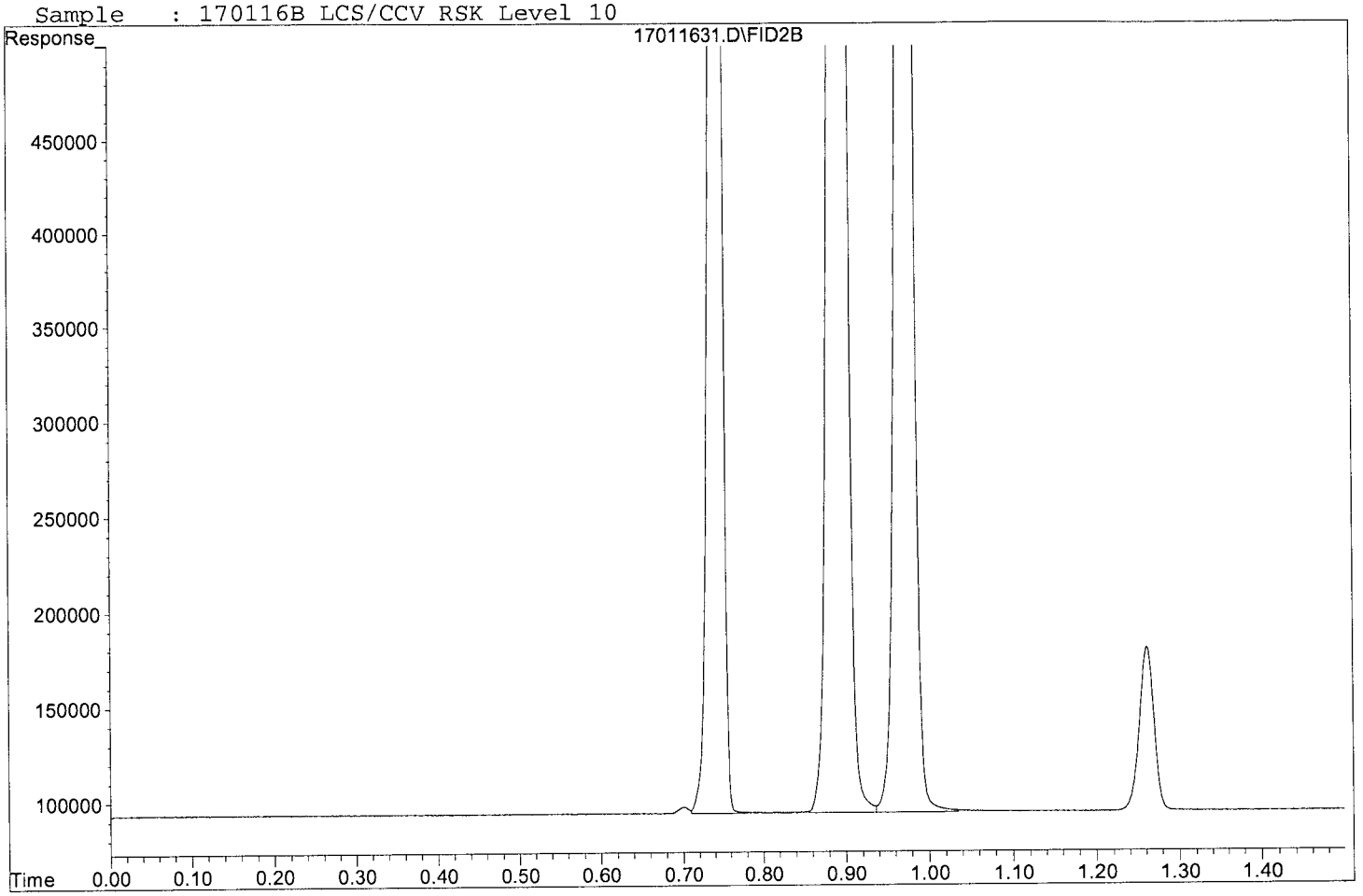
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.74	1167851	1064.918	ppb
2) ATM Ethane	0.89	1712949	2137.845	ppb
3) ATM Ethene	0.98	1273621	2020.935	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\17011631.D
Sample : 170116B LCS/CCV RSK Level 10



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/16/17
Instrument: 7890
Initial Cal. Date: 09/01/17
Data File: 17011643.D

		Compound	MEAN	CCRF	%D	%Drift	
1	ATML	Methane	2635	922	65	ATML	16
2	ATML	Ethane	1147	711	38	ATML	11
3	ATML	Ethene	1063	525	51	ATML	17
4							
5							
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37							
38							
39							
40							
		Average			51.3		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\17011643.D Vial: 44
Acq On : 16 Jan 17 13:52 Operator: lac
Sample : Ending CCV RSK Level 10 01/16/17 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 16 13:55 2017 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 17 12:10:52 2017
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

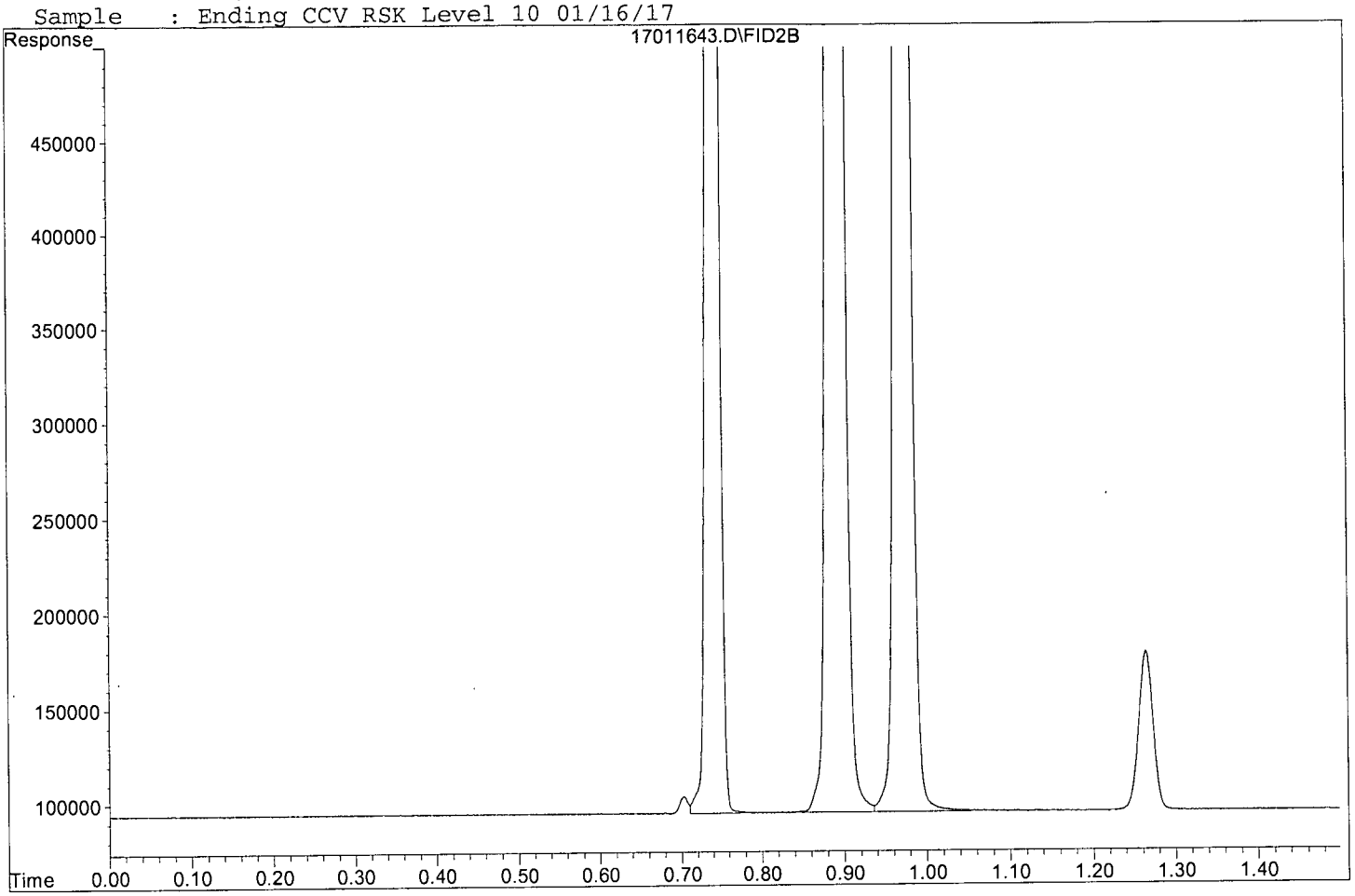
Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.74	1230350	1122.618	ppb
2) ATM Ethane	0.89	1777519	2218.920	ppb
3) ATM Ethene	0.98	1311035	2080.876	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\ROCKY\DATA\160901R\17011643.D
Sample : Ending CCV RSK Level 10 01/16/17



ORGANICS
Raw Data

APPL, INC.

Method Blank
METHANE

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **170116W-48914 - 215509**
Batch ID: #RSKME-170116B

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/16/17	01/16/17

Quant Method: RSK0901.M
Run #: 17011632
Instrument: Rocky
Sequence: 160901
Initials: CMO

GC SC-Blank-REG MDLs-DOD
Printed: 01/21/17 1:27:08 PM

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\17011632.D Vial: 33
Acq On : 16 Jan 17 13:19 Operator: lac
Sample : 170116B BLK-RSK Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 16 13:22 2017 Quant Results File: RSK0901.RES

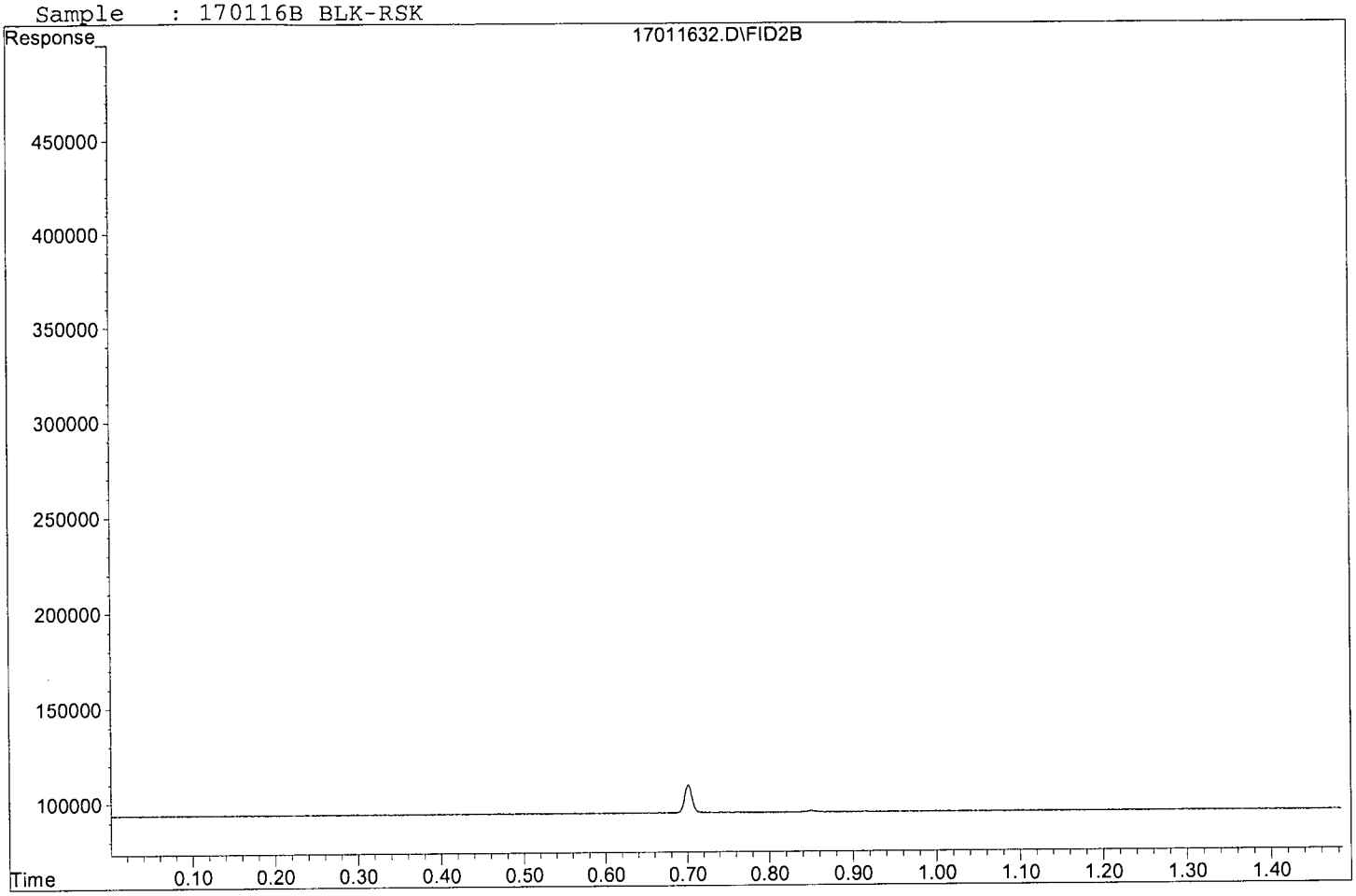
Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 17 12:10:52 2017
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.74	336	N.D.	ppb
2) ATM Ethane	0.89	311	N.D.	ppb
3) ATM Ethene	0.98	208	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\160901R\17011632.D
Sample : 170116B BLK-RSK



Laboratory Control Spike Recovery
METHANE

APPL ID: **170116W-48914 LCS - 215509**
Batch ID: #RSKME-170116B

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
METHANE	1340	1060	79.4	72-125

Comments: _____

Primary	SPK
Quant Method :	RSK0901.M
Extraction Date :	01/16/17
Analysis Date :	01/16/17
Instrument :	Rocky
Run :	17011631
Initials :	CMO

Printed: 01/21/17 1:26:57 PM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\160901R\17011631.D Vial: 32
Acq On : 16 Jan 17 13:14 Operator: lac
Sample : 170116B LCS/CCV RSK Level 10 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 16 13:16 2017 Quant Results File: RSK0901.RES

Method : G:\ROCKY\DATA\160901R\RSK0901.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 17 12:10:52 2017
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

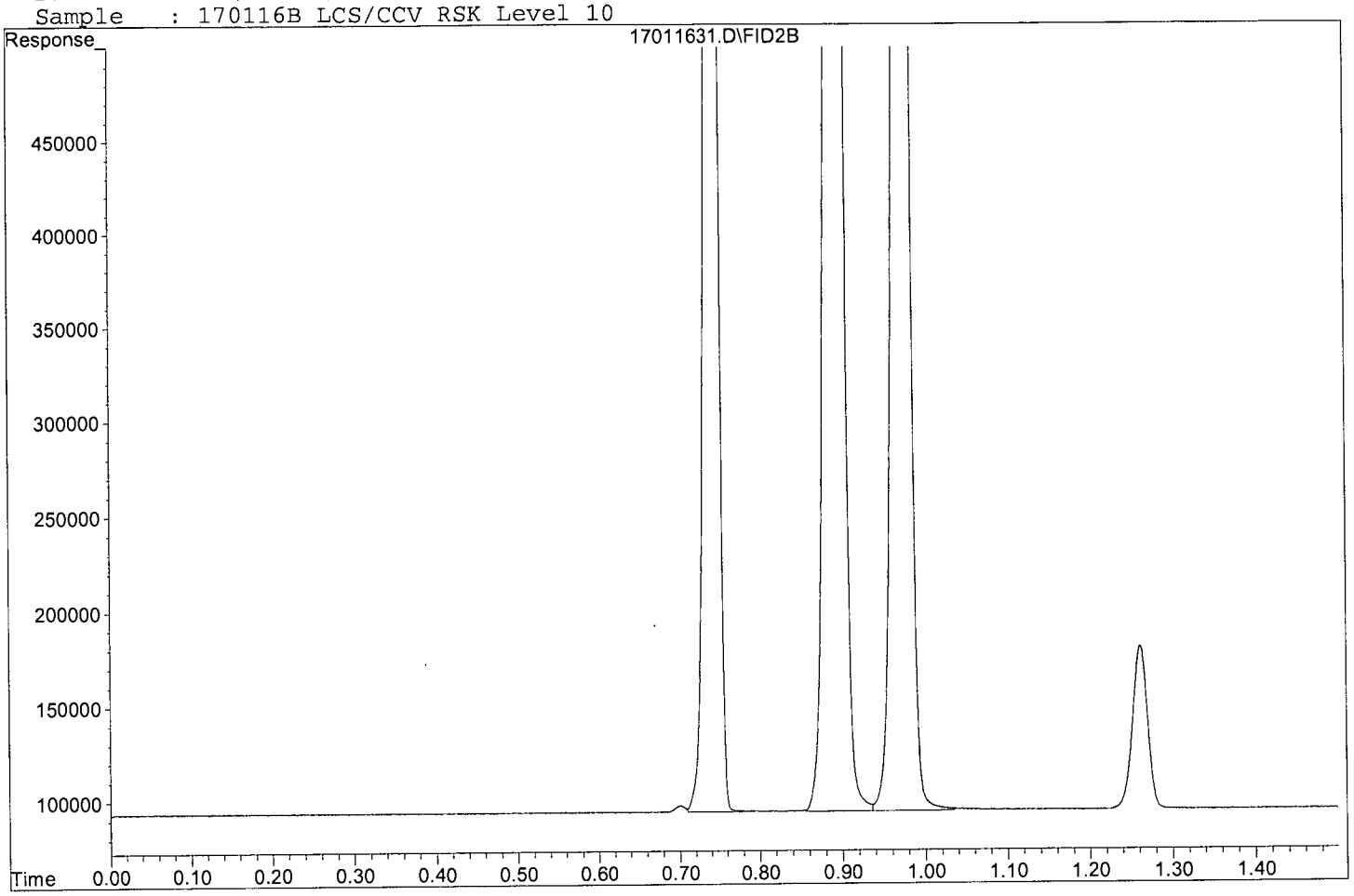
Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.74	1167851	1064.918	ppb
2) ATM Ethane	0.89	1712949	2137.845	ppb
3) ATM Ethene	0.98	1273621	2020.935	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\ROCKY\DATA\160901R\17011631.D
Sample : 170116B LCS/CCV RSK Level 10



imary Source Stock Standard 10,000ppmV **Manufacturer Exp date 7-8-2017** CM 8/15/16

;K Gas Mix (Scott Specialty Gas) Cat.# 23452, Lot # 164PLU4SPC05L-34436

% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

ermediate Calibration Stock Standard 100ppmV **Expires 8/15/17** CM 8/15/16

epared in a 1 L Tedlar bag. Add 990mL Nitrogen and 10mL of 164PLU4SPC05L-34436 standard.

SK Calibration Curve **Vial expiration date 9/28/16** CM 9/1/16

alye	Conc Std 1 (ug/L)	Conc Std 2 (ug/L)	Conc Std 3 (ug/L)	Conc Std 4 (ug/L)	Conc Std 5 (ug/L)	Conc Std 6 (ug/L)	Conc Std 7 (ug/L)	Conc Std 8 (ug/L)	Conc Std 9 (ug/L)	Conc Std 10 (ug/L)
thane (MW 16.	0.90	1.80	5.10	13.33	26.70	66.75	106.80	320.4	667.5	1335.0
ane (MW 30.0	1.70	3.40	9.50	25.00	50.00	125.00	200.00	600.0	1250.0	2500.0
ene (MW 28.0	1.60	3.20	8.90	23.30	46.60	116.50	186.40	599.2	1248.0	2496.0
ck Source	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Intermediate Calib Std 8/15/16	Primary Source Std #164PLU4S PC05L-34436	Primary Source Std #164PLU4S PC05L-34436	Primary Source Std #164PLU4SP C05L-34436	Primary Source Std #164PLU4S PC05L-34436
ck Conc (ppr	100 ppmV	100 ppmV	100 ppmV	100 ppmV	100 ppmV	100 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV
ck Aliquot (m	0.135 mL	0.270 mL	0.760 mL	2.0 mL	4.0 mL	10.0 mL	0.160 mL	0.480 mL	1.00 mL	2.00 mL
al Volume P&T W	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL

cond Source Stock Standard 10,000ppmV **Manufacturer Exp Date 6-19-18** CM 8/15/16

;K Gas Mix (Scott Specialty Gas) Cat.# 0104E40028`4, Lot # 170PLU5SPC06L-35410

% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

ermediate Second Source Standard 100ppmV **Expires 8/15/17** CM 8/15/16

epared in a 1 L Tedlar bag. Add 990mL Nitrogen and 10mL of lot# 170PLU5SPC06L-35410 standard.

cond Source / LCS - Level 6 **Expires 10/1/16** CM 9/1/16

.0mL of Intermediate SS stock 8/15/16 into 10mL P&T water

al conc:66.7ppb Methane, 125.0ppb Ethane, and 116.5 ppb Ethene

CV/LCS - Level 10 **Expires 02/16/17** CM 01/16/17

)mL of Primary Source Std #164PLU4SPC05L-34436 into 10mL P&T water

al conc:1335.0ppb Methane,2500.0 ppb Ethane, and 2496.0 ppb Ethene

Injection Log

Directory: G:\ROCKY\DATA\160901R\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0901000.D	1	RSK Level 1 08/15/16	Methane 0.9, Ethane, 1.7 Etl	1 Sep 16 11:38
2	2	0901001.D	1	RSK Level 2 08/15/16		1 Sep 16 11:41
3	3	0901002.D	1	RSK Level 3 08/15/16	Methane 5.1, Ethane, 9.5 Etl	1 Sep 16 11:44
4	4	0901003.D	1	RSK Level 4 08/15/16		1 Sep 16 11:46
5	5	0901004.D	1	RSK Level 5 08/15/16		1 Sep 16 11:48
6	6	0901005.D	1	RSK Level 6 08/15/16		1 Sep 16 11:50
7	7	0901006.D	1	RSK Level 7 08/15/16		1 Sep 16 11:52
8	8	0901007.D	1	RSK Level 8 08/15/16		1 Sep 16 11:55
9	9	0901008.D	1	RSK Level 9 08/15/16		1 Sep 16 11:57
10	10	0901009.D	1	RSK Level 10 08/15/16		1 Sep 16 11:59
11	19	0901018.D	1	(SS/LCS) RSK Level 6 09/01/16		1 Sep 16 13:11
12	32	17011631.D	1	170116B LCS/CCV RSK Level 10		16 Jan 17 13:14
13	33	17011632.D	1	170116B BLK-RSK		16 Jan 17 13:19
14	34	17011633.D	1	AZ48914W05		16 Jan 17 13:23
15	37	17011636.D	10	AZ48915W05 DF10		16 Jan 17 13:32
16	38	17011637.D	1	AZ48916W05		16 Jan 17 13:36
17	39	17011638.D	1	AZ48917W05		16 Jan 17 13:39
18	40	17011639.D	1	AZ48921W05		16 Jan 17 13:42
19	41	17011640.D	1	AZ48923W05		16 Jan 17 13:45
20	42	17011641.D	1	AZ48924W05		16 Jan 17 13:47
21	43	17011642.D	1	AZ48925W05		16 Jan 17 13:50
22	44	17011643.D	1	Ending CCV RSK Level 10 01/16/17		16 Jan 17 13:52

INORGANIC ANALYSIS

APPL, INC.

INORGANIC ANALYSIS
QC Summary

APPL, INC.

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
SM 2320B	BICARBONATE AS	1.6 J	2.0	1.70	0.85	mg/L	01/16/17	01/16/17	#232W-170116A-AZ48866
SM 2320B	CARBONATE AS CA	1.70 U	2.0	1.70	0.85	mg/L	01/16/17	01/16/17	#232W-170116A-AZ48866
SM 2320B	TOTAL ALKALINITY	1.6 J	2.0	1.70	0.85	mg/L	01/16/17	01/16/17	#232W-170116A-AZ48866
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	01/13/17	01/13/17	#300W-170113A2-AZ48915
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	01/13/17	01/13/17	#300W-170113A2-AZ48915
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	01/13/17	01/13/17	#300W-170113A2-AZ48915
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	01/13/17	01/13/17	#300W-170113B-AZ48921
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	01/13/17	01/13/17	#300W-170113B-AZ48921
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	01/13/17	01/13/17	#300W-170113B-AZ48921
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	01/16/17	01/16/17	#300WD-170116A-AZ48925
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	01/16/17	01/16/17	#300WD-170116A-AZ48925
SM3500Fe	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	01/13/17	01/13/17	#35FE-170113A-AZ48925

Wetlab SC-Blank-REG MDLs
Printed: 01/19/17 9:42:58 AM

Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	20.0	18.6	93.0	90-110	01/13/17	01/13/17	#300W-170113A2-AZ48915
EPA 300.0	NITRATE	22.1	21.1	95.5	90-110	01/13/17	01/13/17	#300W-170113A2-AZ48915
EPA 300.0	SULFATE	20.0	18.5	92.5	90-110	01/13/17	01/13/17	#300W-170113A2-AZ48915
SM 2320B	BICARBONATE AS CACO3	250	248	99.2	90-110	01/16/17	01/16/17	#232W-170116A-AZ48866
SM 2320B	TOTAL ALKALINITY AS CACO3	250	248	99.2	90-110	01/16/17	01/16/17	#232W-170116A-AZ48866

Comments: _____

Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	20.0	18.6	93.0	90-110	01/13/17	01/13/17	#300W-170113B-AZ48921
EPA 300.0	NITRATE	22.1	21.2	95.9	90-110	01/13/17	01/13/17	#300W-170113B-AZ48921
EPA 300.0	SULFATE	20.0	18.6	93.0	90-110	01/13/17	01/13/17	#300W-170113B-AZ48921

Comments: _____

Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	20.0	18.8	94.0	90-110	01/16/17	01/16/17	#300WD-170116A-AZ48925
EPA 300.0	SULFATE	20.0	18.7	93.5	90-110	01/16/17	01/16/17	#300WD-170116A-AZ48925
SM3500Fe	FERROUS IRON	3.00	2.96	98.7	80-120	01/13/17	01/13/17	#35FE-170113A-AZ48925

Comments: _____

INORGANIC ANALYSIS
Sample Data

APPL, INC.

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH172

Sample Collection Date: 01/11/17

APPL ID: AZ48915

ARF: 81971

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date Analysis Date
EPA 300.0	CHLORIDE	39.9	1.0	0.20	0.08	mg/L	1	01/13/17 01/13/17
EPA 300.0	NITRATE	0.42 J	0.5	0.18	0.04	mg/L	1	01/13/17 01/13/17
EPA 300.0	SULFATE	4.5	1.0	0.20	0.09	mg/L	1	01/13/17 01/13/17
SM 2320B	BICARBONATE AS CACO3	92.9	2.0	1.70	0.85	mg/L	1	01/16/17 01/16/17
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	01/16/17 01/16/17
SM 2320B	TOTAL ALKALINITY AS CACO3	92.9	2.0	1.70	0.85	mg/L	1	01/16/17 01/16/17
SM3500FeB	FERROUS IRON	0.56 J	1.0	0.32	0.16	mg/L	1	01/13/17 01/13/17

J = Estimated value.

Printed: 01/19/17 9:42:49 AM

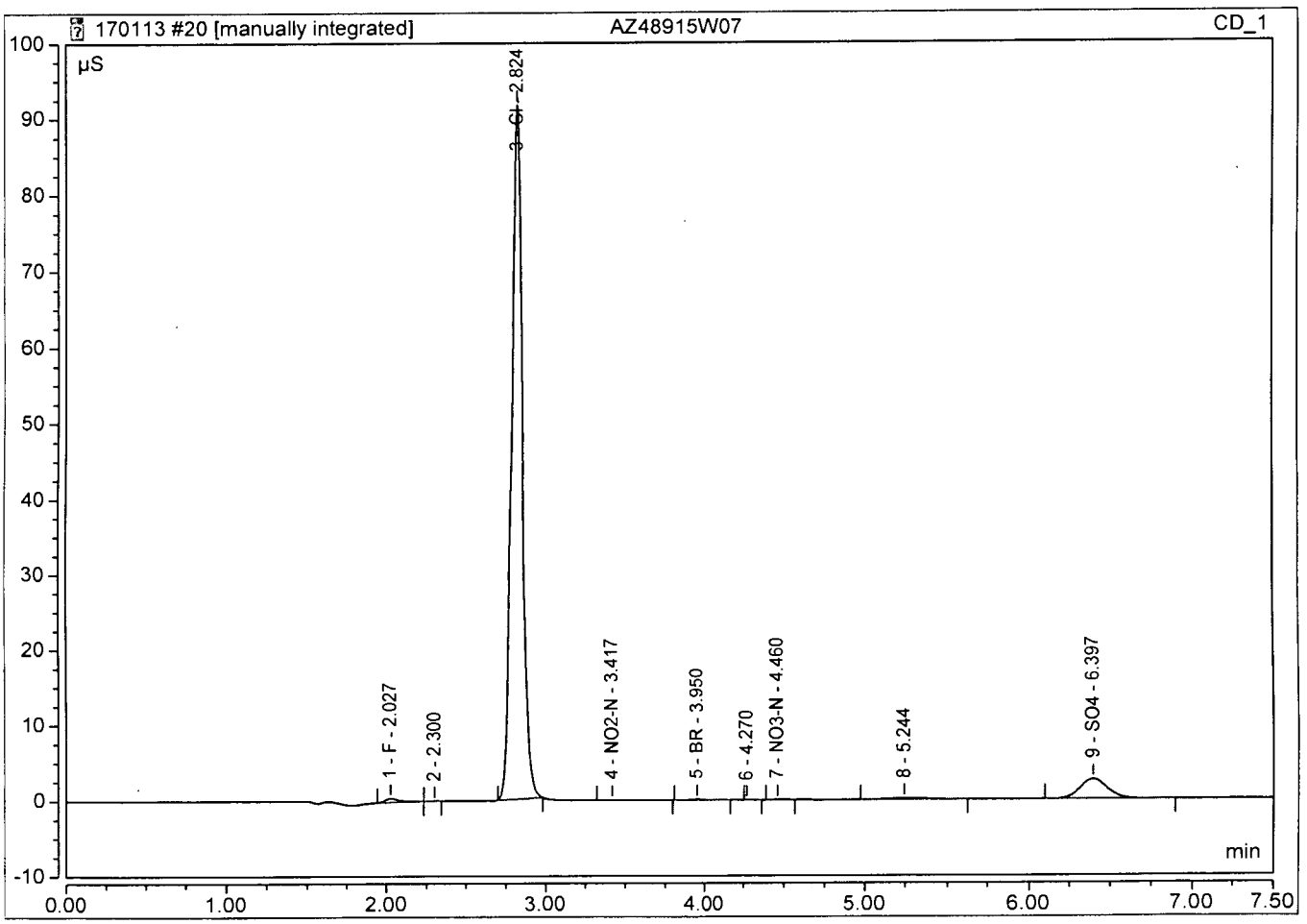
APPL-F1-SC-NoMC-REG MDLs

MI MM 1/27/17

Peak Integration Report PW

Sample Name:	**AZ48915W07**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**13-Jan-2017 / 12:12**	*Run Time:*	**7.50**

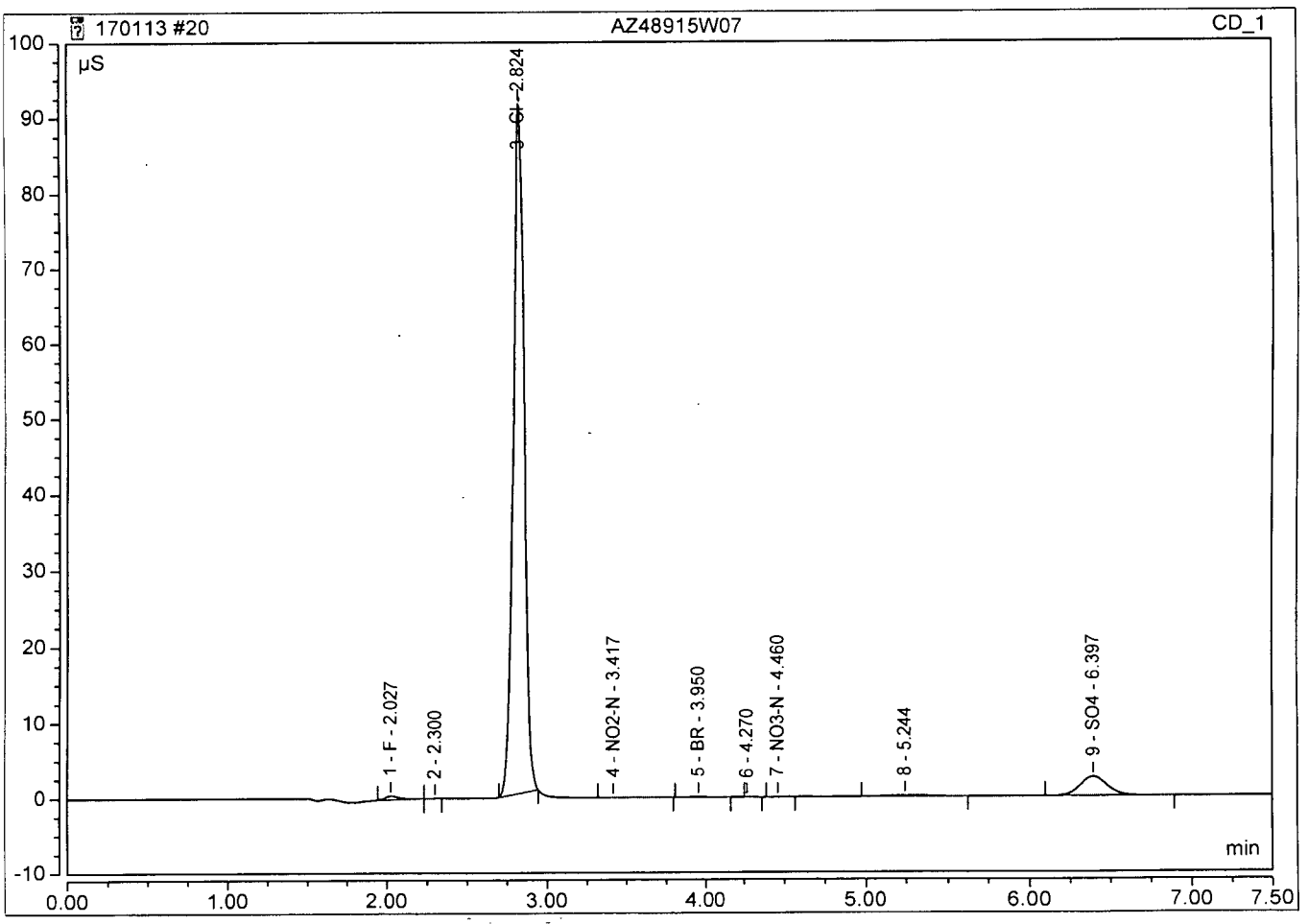
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.03	F	BMB	0.048	0.514	0.2526
3	2.82	Cl	BMB*	7.153	91.561	39.9085
4	3.42	NO2-N	BMB	0.001	0.002	0.0245
5	3.95	BR	BMB	0.009	0.080	0.2654
7	4.46	NO3-N	BMB	0.000	0.001	0.0959
9	6.40	SO4	BMB	0.494	2.568	4.5362
TOTAL:				7.70	94.73	45.08



Peak Integration Report

Sample Name:	**AZ48915W07**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**13-Jan-2017 / 12:12**	*Run Time:*	**7.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.03	F	BMB	0.048	0.514	0.2526
3	2.82	Cl	BMB	7.054	91.192	39.3614
4	3.42	NO2-N	BMB	0.001	0.002	0.0245
5	3.95	BR	BMB	0.009	0.080	0.2654
7	4.46	NO3-N	BMB	0.000	0.001	0.0959
9	6.40	SO4	BMB	0.494	2.568	4.5362
TOTAL:				7.61	94.36	44.54



Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH178

Sample Collection Date: 01/11/17

APPL ID: AZ48916

ARF: 81971

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date Analysis Date
EPA 300.0	NITRATE	2.2	0.5	0.18	0.04	mg/L	1	01/13/17 01/13/17
EPA 300.0	SULFATE	9.3	1.0	0.20	0.09	mg/L	1	01/13/17 01/13/17
EPA 300.0	CHLORIDE	51.9	2.0	0.40	0.16	mg/L	2	01/13/17 01/13/17
SM 2320B	BICARBONATE AS CACO3	70.6	2.0	1.70	0.85	mg/L	1	01/16/17 01/16/17
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	01/16/17 01/16/17
SM 2320B	TOTAL ALKALINITY AS CACO3	70.6	2.0	1.70	0.85	mg/L	1	01/16/17 01/16/17
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	01/13/17 01/13/17

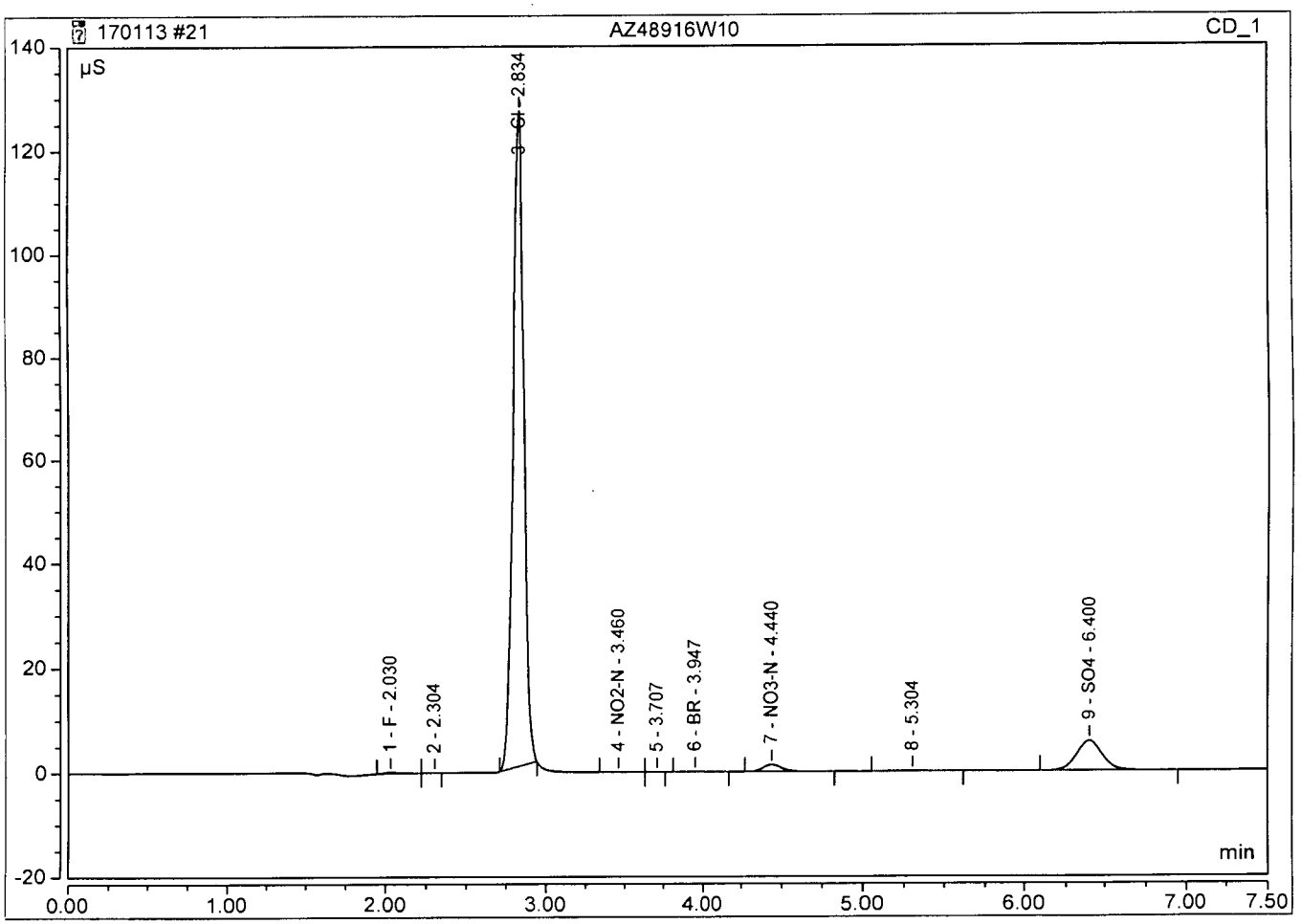
Printed: 01/19/17 9:42:49 AM

APPL-F1-SC-NoMC-REG MDLs

Peak Integration Report

Sample Name:	**AZ48916W10**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**13-Jan-2017 / 12:26**	*Run Time:*	**7.50**

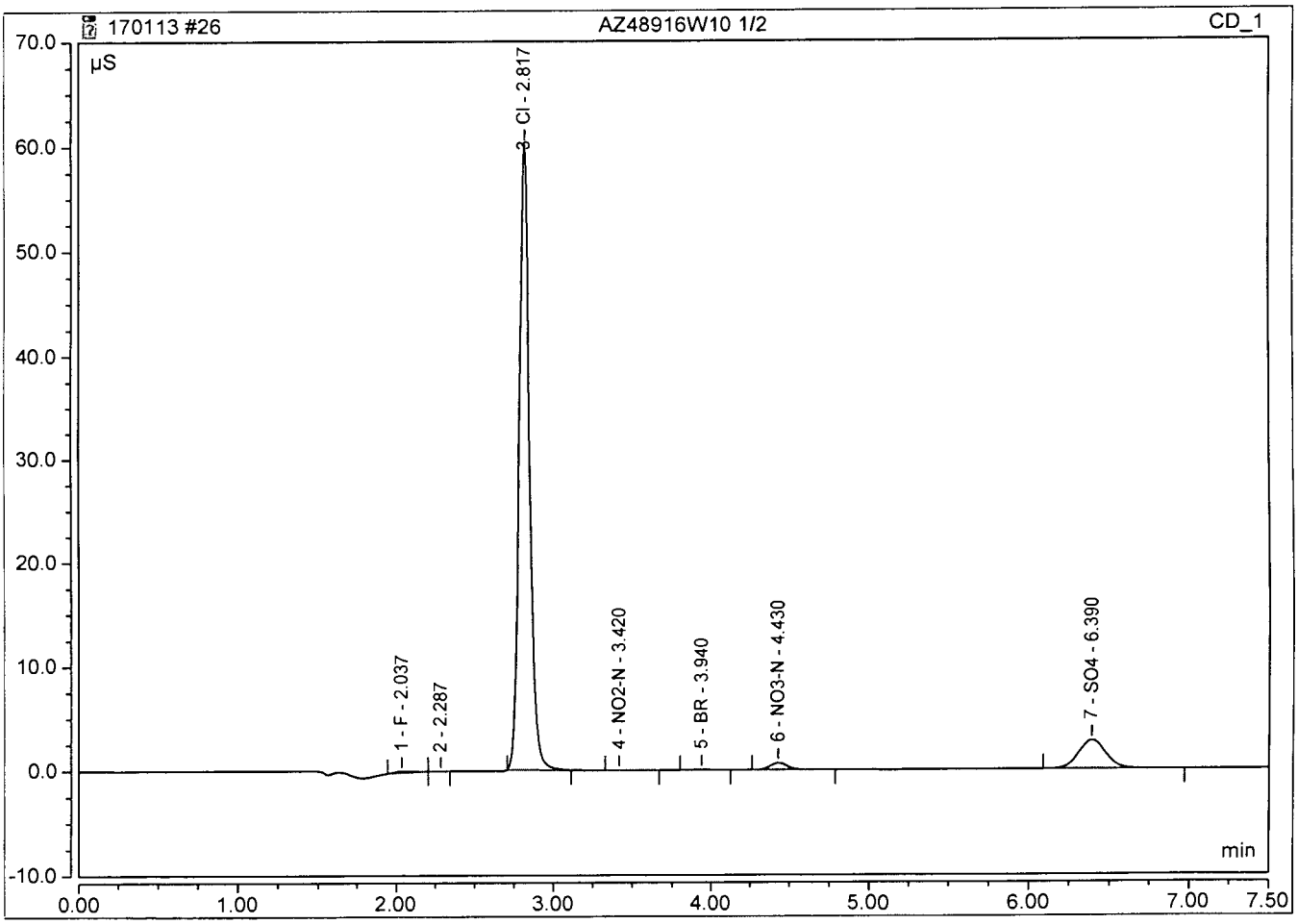
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.03	**F**	BMB	0.025	0.237	0.1497
3	2.83	**Cl**	BMB	9.769	126.373	54.3136
4	3.46	**NO2-N**	BMB	0.000	0.003	0.0230
6	3.95	**BR**	BMB	0.011	0.100	0.2993
7	4.44	**NO3-N**	BMB	0.169	1.324	0.5061
9	6.40	**SO4**	BMB	1.081	5.641	9.3429
TOTAL:				11.06	133.68	64.63



Peak Integration Report

Sample Name:	**AZ48916W10 1/2**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**2.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**13-Jan-2017 / 13:59**	*Run Time:*	**7.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.04	F	BMB	0.018	0.150	0.2398
3	2.82	Cl	BMB	4.620	60.154	51.9230
4	3.42	NO2-N	BMB	0.000	0.002	0.0457
5	3.94	BR	BMB	0.006	0.051	0.4276
6	4.43	NO3-N	BMB	0.084	0.655	0.5977
7	6.39	SO4	BMB	0.528	2.717	9.6376
TOTAL:				5.26	63.73	62.87



Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH181

APPL ID: AZ48921

Sample Collection Date: 01/12/17

ARF: 81971

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date Analysis Date
EPA 300.0	CHLORIDE	47.1	1.0	0.20	0.08	mg/L	1	01/13/17 01/13/17
EPA 300.0	NITRATE	6.2	0.5	0.18	0.04	mg/L	1	01/13/17 01/13/17
EPA 300.0	SULFATE	44.2	1.0	0.20	0.09	mg/L	1	01/13/17 01/13/17
SM 2320B	BICARBONATE AS CACO3	294	2.0	1.70	0.85	mg/L	1	01/16/17 01/16/17
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	01/16/17 01/16/17
SM 2320B	TOTAL ALKALINITY AS CACO3	294	2.0	1.70	0.85	mg/L	1	01/16/17 01/16/17
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	01/13/17 01/13/17

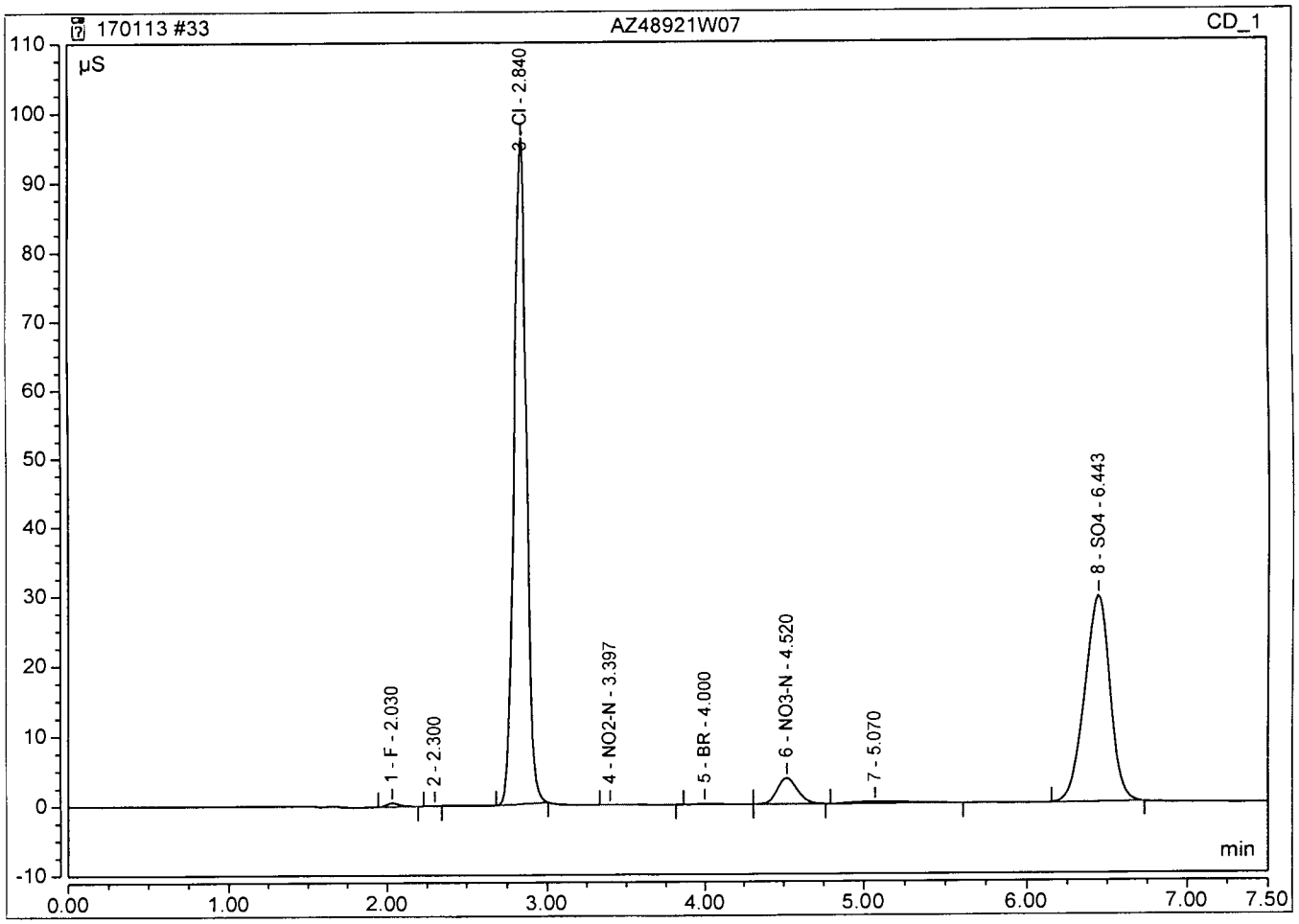
Printed: 01/19/17 9:42:49 AM

APPL-F1-SC-NoMC-REG MDLs

Peak Integration Report

Sample Name:	**AZ48921W07**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**13-Jan-2017 / 15:34**	*Run Time:*	**7.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.03	F	BMB	0.046	0.528	0.2427
3	2.84	Cl	BMB	8.454	96.073	47.0691
4	3.40	NO2-N	BMB	0.001	0.003	0.0245
5	4.00	BR	BMB	0.013	0.113	0.3273
6	4.52	NO3-N	BMB	0.534	3.698	1.3919
8	6.44	SO4	BMB	5.343	29.340	44.2468
TOTAL:				14.39	129.76	93.30



Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Thach

Project: 60481245 CIV0053 Red Hill Fuel Storage

Sample ID: ERH184

APPL ID: AZ48925

Sample Collection Date: 01/12/17

ARF: 81971

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date Analysis Date
EPA 300.0	CHLORIDE	1040	50.0	10.00	4.00	mg/L	50	01/16/17 01/16/17
EPA 300.0	SULFATE	328	50.0	10.00	4.50	mg/L	50	01/16/17 01/16/17
EPA 300.0	NITRATE	7.9	2.5	0.90	0.20	mg/L	5	01/13/17 01/13/17
SM 2320B	BICARBONATE AS CACO3	178	2.0	1.70	0.85	mg/L	1	01/16/17 01/16/17
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	01/16/17 01/16/17
SM 2320B	TOTAL ALKALINITY AS CACO3	178	2.0	1.70	0.85	mg/L	1	01/16/17 01/16/17
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	01/13/17 01/13/17

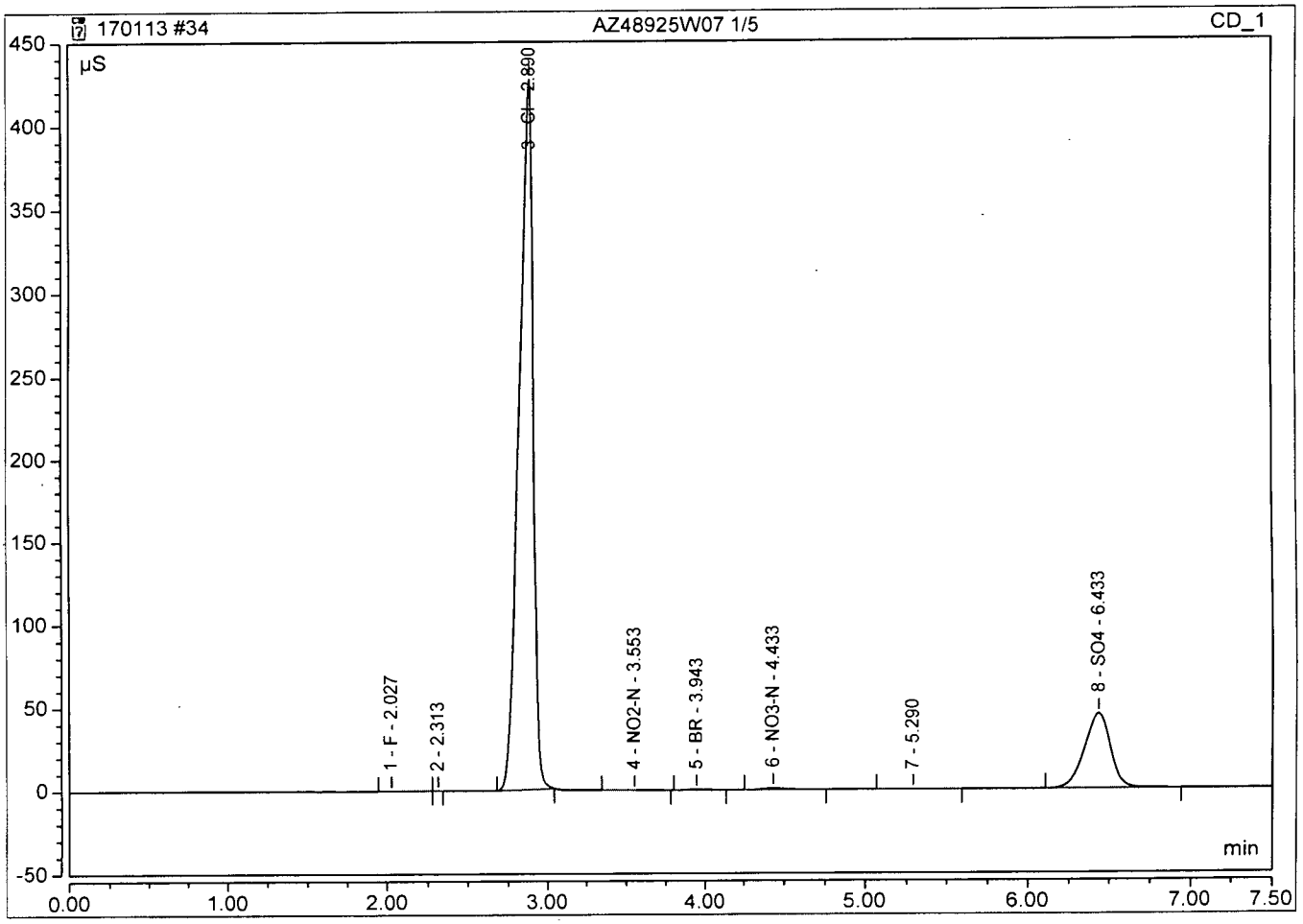
Printed: 01/19/17 9:42:49 AM

APPL-F1-SC-NoMC-REG MDLs

Peak Integration Report

Sample Name:	**AZ48925W07 1/5**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**5.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**13-Jan-2017 / 15:47**	*Run Time:*	**7.50**

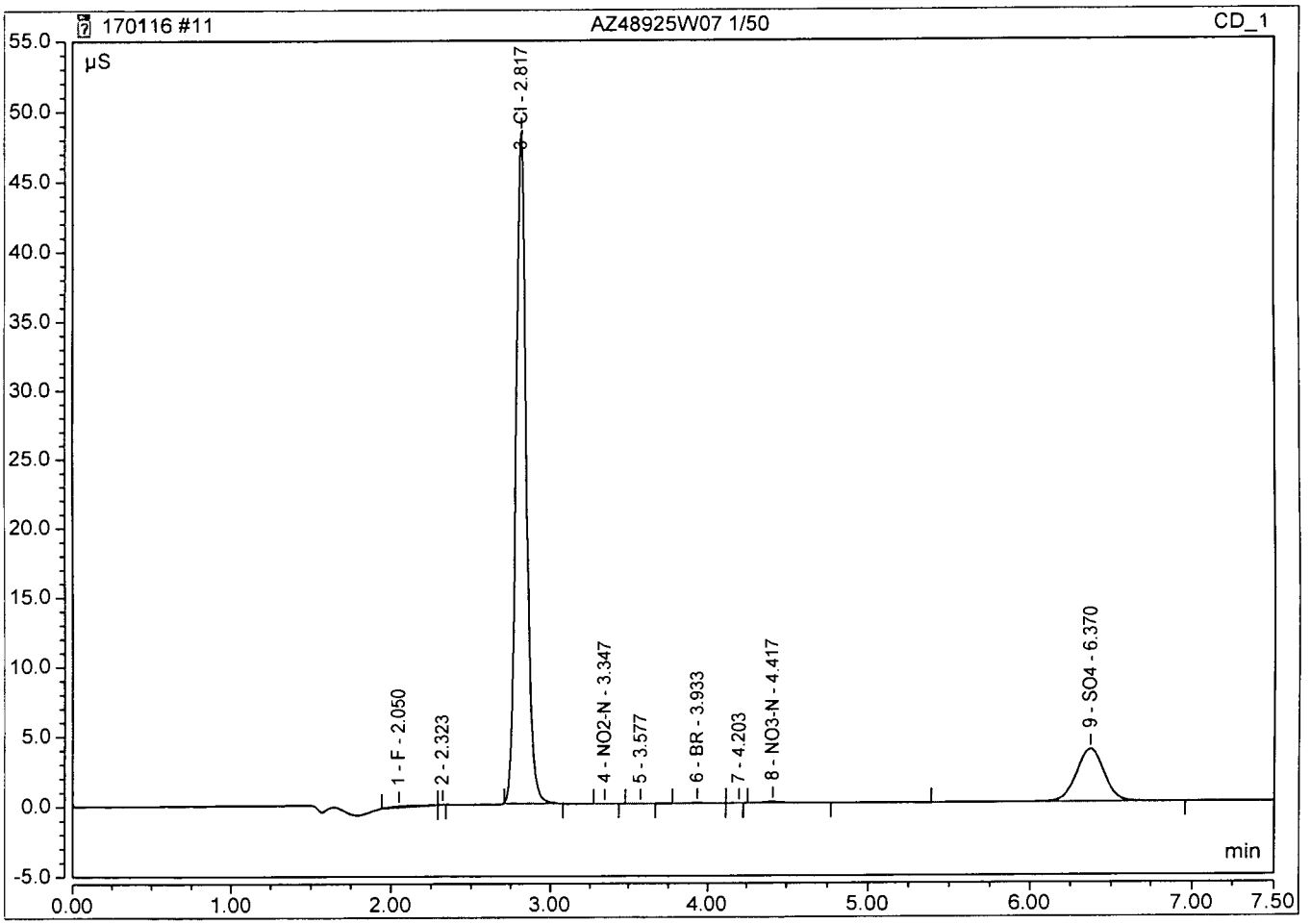
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.03	F	BMB	0.010	0.073	0.4140
3	2.89	Cl	BMB	43.499	426.726	1200.2388
4	3.55	NO2-N	BMB	0.003	0.014	0.1607
5	3.94	BR	BMB	0.034	0.314	3.3595
6	4.43	NO3-N	BMB	0.108	0.847	1.7905
8	6.43	SO4	BMB	8.260	44.321	340.6471
TOTAL:				51.91	472.30	1546.61



Peak Integration Report

Sample Name:	**AZ48925W07 1/50**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**50.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**16-Jan-2017 / 11:51**	*Run Time:*	**7.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.05	F	BMB	0.019	0.093	6.1900
3	2.82	Cl	BMB	3.675	48.302	1037.7726
4	3.35	NO2-N	BMB	0.000	0.002	1.1061
6	3.93	BR	BMB	0.004	0.034	9.2093
8	4.42	NO3-N	BMB	0.012	0.093	6.2305
9	6.37	SO4	BMB	0.741	3.723	328.0899
TOTAL:				4.45	52.25	1388.60



INORGANIC ANALYSIS
Calibration Data

APPL, INC.

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No: 81971 SDG: 81971

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 05/20/16

Analyte	Calibration Verification									M
	True ICV	Found 12:41	%R(1)	True CCV1	Found 17:58	%R(1)	True CCV1	Found 18:08	%R(1)	
Ferrous Iron	3	3.01396	100	4	3.96304	99.1	4	3.95305	98.8	

(1) Control Limits: 90-110

ILM02.0

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 81971 SDG: 81971

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	ICB 05/20/16 12:42	C	CCB 01/13/17 17:59	C	CCB 01/13/17 18:09	C		C		C	
Ferrous Iron	1.000	U	1.000	U	1.000	U					

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract:

ARF No: SDG:

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 10/20/16

Analyte	Calibration Verification									M
	True ICV	Found 12:37	%R(1)	True	Found	%R(1)	True	Found	%R(1)	
bromide	12.5	11.8422	94.7							
chloride	20	18.2183	91.1							
fluoride	2.5	2.55939	102							
Nitrate(NO3)	22.1	20.0573	90.8							
Nitrate(NO3)-N	5	4.52905	90.6							
Nitrite(NO2)	9.98	9.81221	98.3							
Nitrite(NO2)-N	3.04	2.98733	98.3							
phosphate	15.3225	14.7130	96.0							
phosphate-p	5	4.80111	96.0							
sulfate	20	18.4058	92.0							

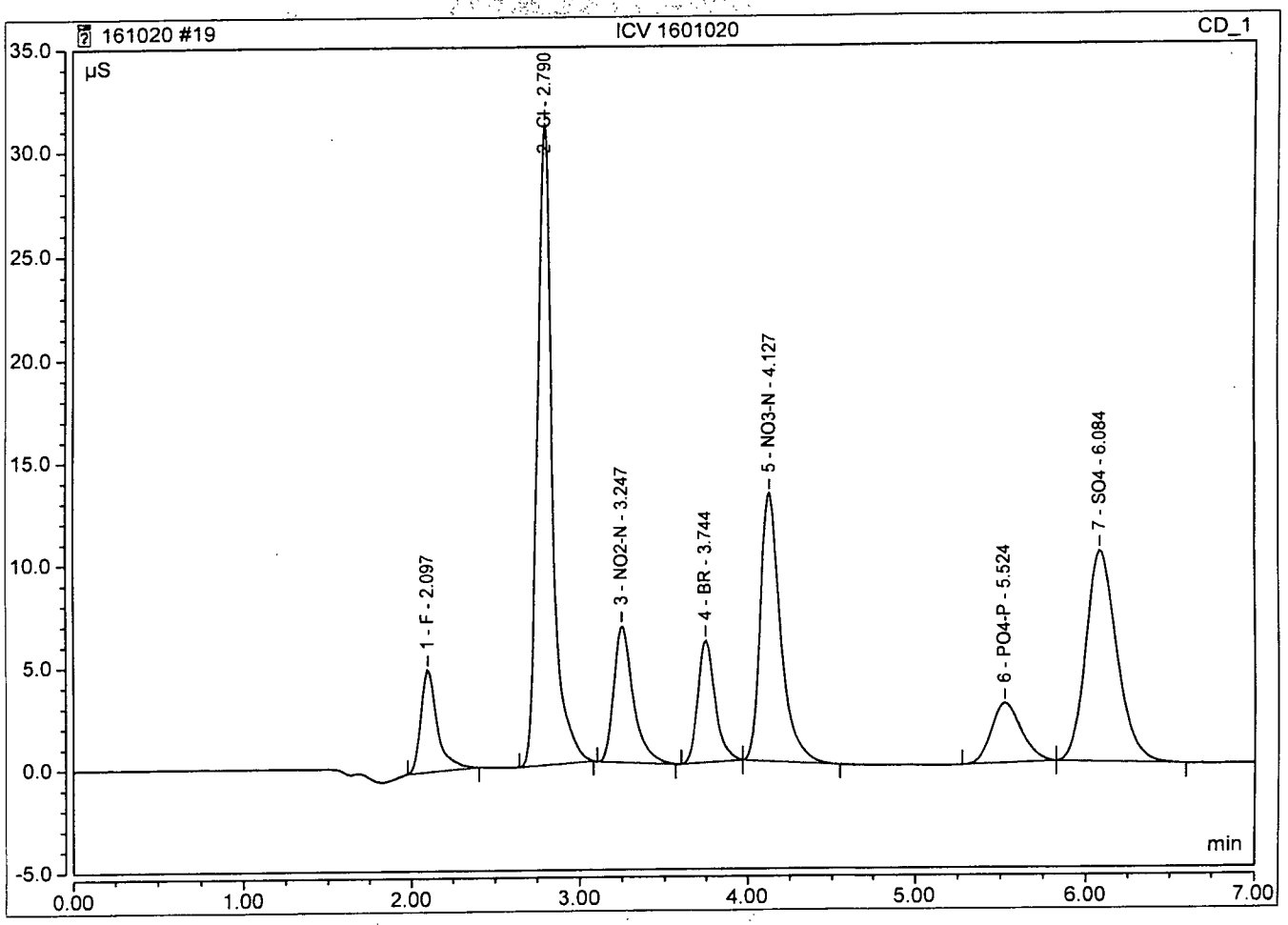
(1) Control Limits: 90-110

ILM02.0

Peak Integration Report

Sample Name:	ICV 1601020	*Inj. Vol.:*	25.00
Injection Type:	Unknown	*Dilution Factor:*	1.0000
Program:	Analytical Processing Method 161020 ND	*Operator:*	chemist_wetlab
Inj. Date / Time:	20-Oct-2016 / 12:37	*Run Time:*	7.00

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB	0.568	5.018	2.5594
2	2.79	Cl	BMB	3.214	31.139	18.2184
3	3.25	NO2-N	BMB	0.894	6.653	2.9873
4	3.74	BR	BMB	0.739	5.970	11.8423
5	4.13	NO3-N	BMB	1.827	13.075	4.5291
6	5.52	PO4-P	BMB	0.590	2.913	4.8011
7	6.08	SO4	BMB	2.187	10.255	18.4058
		TOTAL:		10.02	75.02	63.34



Algorithm Check (Charlie)

SEQUENCE: 161020				CALIBRATION: 161020			
RUN #: 19		AMPLE ID: 161020 ICV					
ANALYTE	SLOPE	INTERCEP	AREA	RESULT (r	SPIKE (mg/L)	% R	Pass?
Flouride	0.225	-0.009	0.568	2.56	2.50	102.4%	Pass
Chloride	0.182	-0.094	3.214	18.22	20.00	91.1%	Pass
NO2-N	0.301	-0.007	0.894	2.99	3.04	98.3%	Pass
Bromide	0.063	-0.008	0.739	11.84	12.50	94.7%	Pass
NO3-N	0.412	-0.039	1.827	4.53	5.00	90.6%	Pass
PO4-P	0.125	-0.008	0.59	4.80	5.00	96.0%	Pass
Sulfate	0.122	-0.060	2.187	18.40	20.00	92.0%	Pass

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: _____

ARF No.: _____ SDG: _____

Preparation Blank Matrix (soil/water): water

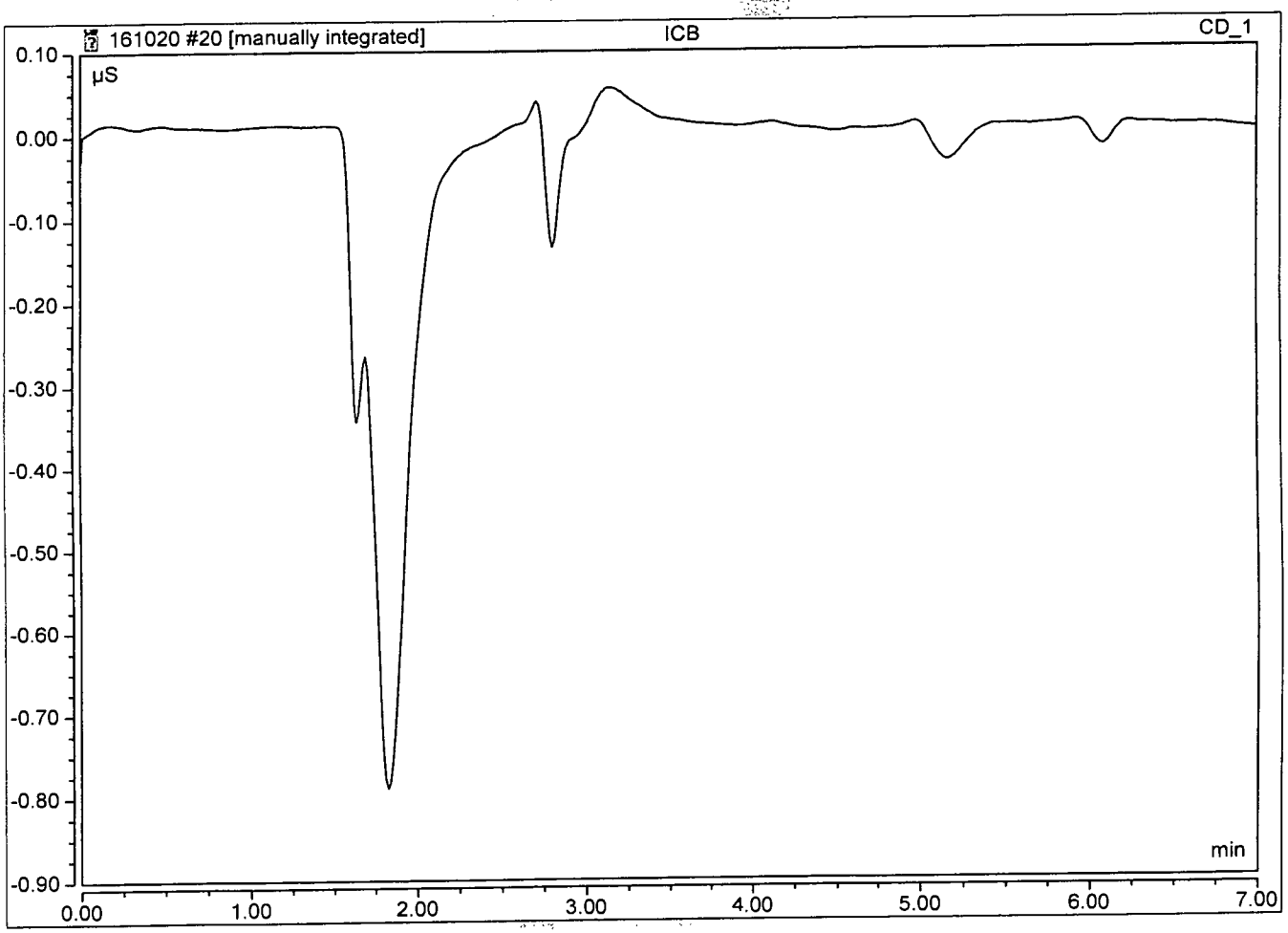
Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	ICB 10/20/16 12:50	C		C		C		C		C	
bromide	.500	U									
chloride	1.000	U									
fluoride	.100	U									
Nitrate(NO3)	.500	U									
Nitrate(NO3)-N	.200	U									
Nitrite(NO2)	.300	U									
Nitrite(NO2)-N	.100	U									
phosphate	.600	U									
phosphate-p	.200	U									
sulfate	1.000	U									

Peak Integration Report

Sample Name:	ICB	*Inj. Vol.:*	25.00
Injection Type:	Unknown	*Dilution Factor:*	1.0000
Program:	Analytical Processing Method 161020 ND	*Operator:*	chemist_wetlab
Inj. Date / Time:	20-Oct-2016 / 12:50	*Run Time:*	7.00

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
		TOTAL:		0.00	0.00	0.00



A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM
ARF No: 81971 SDG: 81971
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 01/13/17

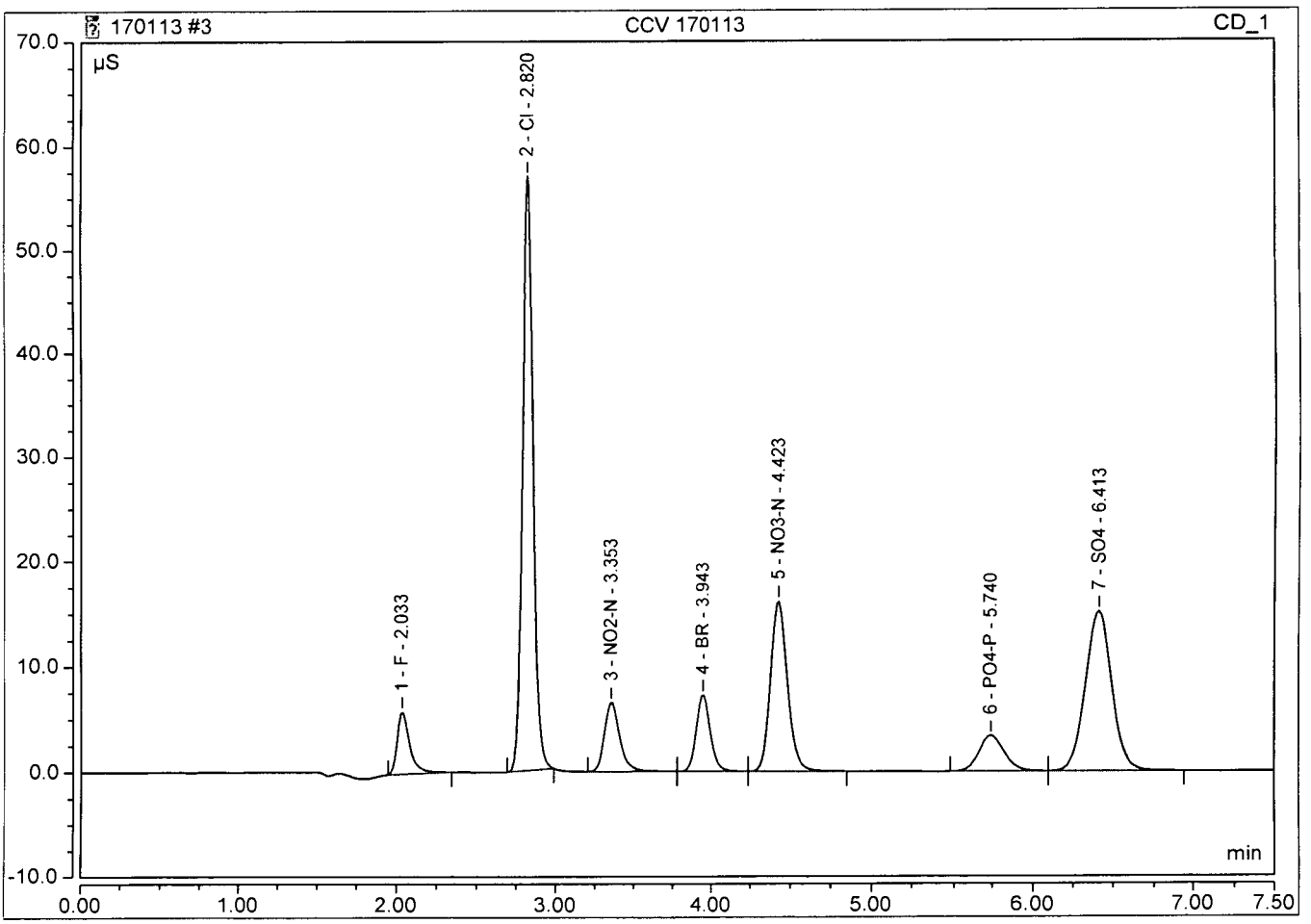
Analyte	Calibration Verification									M
	True CCV1	Found 9:10	%R(1)	True CCV1	Found 14:40	%R(1)	True CCV1	Found 17:49	%R(1)	
chloride	25	24.3821	97.5	25	24.6297	98.5	25	24.6654	98.7	
Nitrate(NO3)	22.1	21.6341	97.9	22.1	21.7417	98.4	22.1	21.7408	98.4	
sulfate	25	23.8131	95.3	25	23.9183	95.7	25	23.9263	95.7	

(1) Control Limits: 90-110

Peak Integration Report

Sample Name:	**CCV 170113**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**13-Jan-2017 / 09:10**	*Run Time:*	**7.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.03	F	BMB	0.534	5.901	2.4111
2	2.82	Cl	BMB	4.334	57.021	24.3821
3	3.35	NO2-N	BMB	0.750	6.556	2.5100
4	3.94	BR	BMB	0.787	7.227	12.6044
5	4.42	NO3-N	BMB	1.973	16.120	4.8851
6	5.74	PO4-P	BMB	0.626	3.351	5.0877
7	6.41	SO4	BMB	2.848	15.074	23.8131
TOTAL:				11.85	111.25	75.69



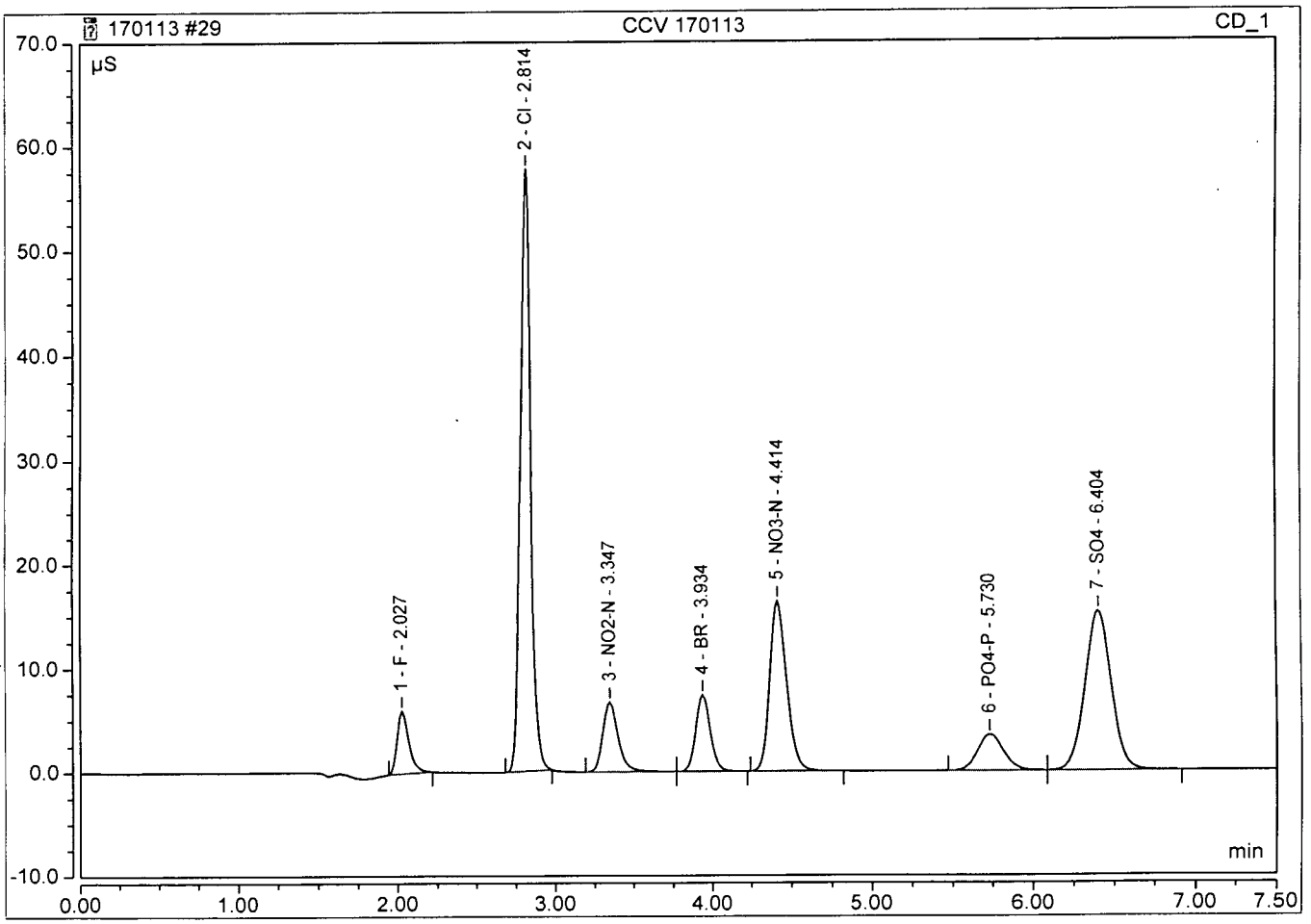
Algorithm Check
y = .1221x - .06
x = 23.81 ✓ mm 1/27/17

y = Peak Area
x = Amount

Peak Integration Report

Sample Name:	**CCV 170113**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**13-Jan-2017 / 14:40**	*Run Time:*	**7.50**

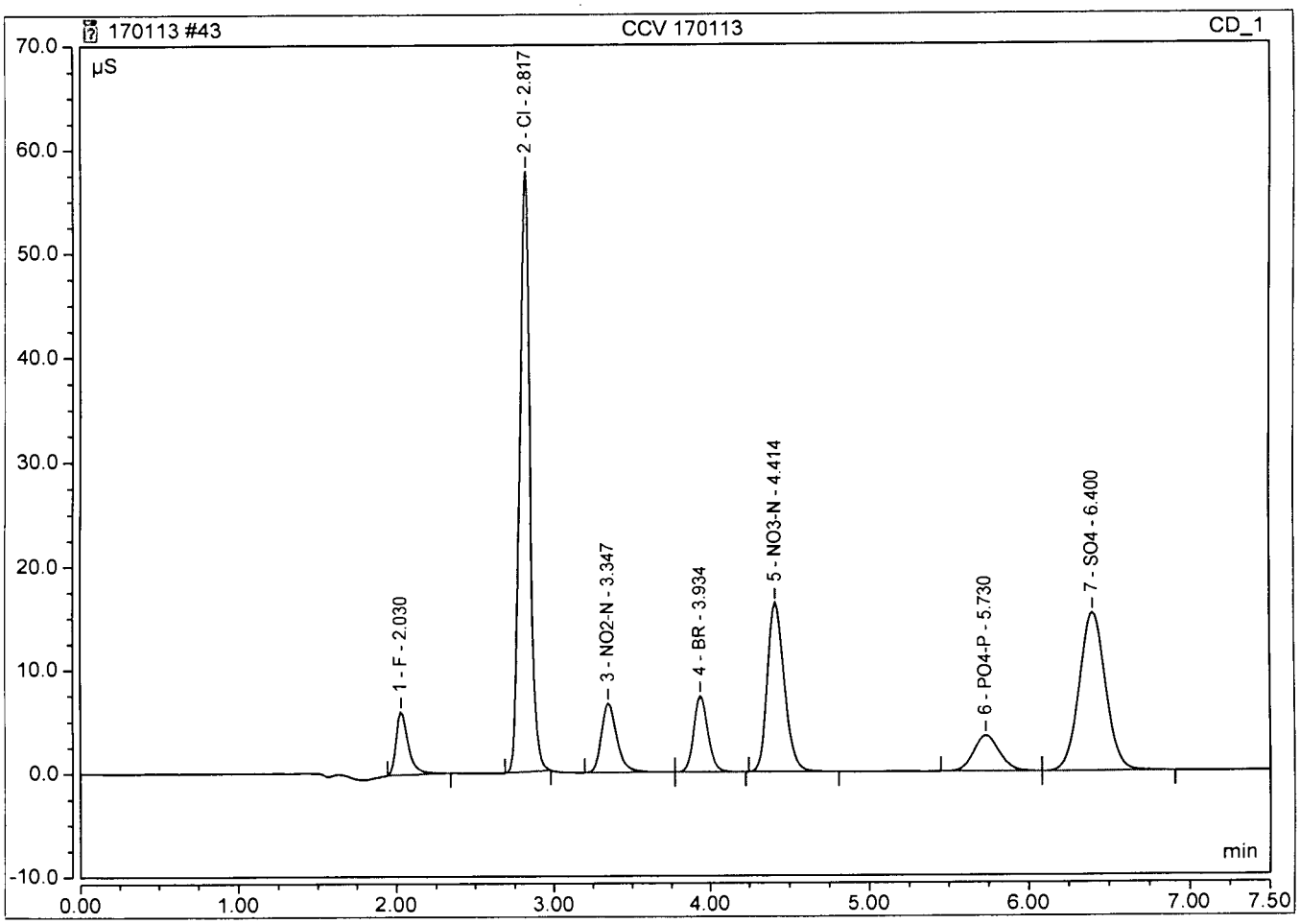
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.03	F	BMB	0.514	6.022	2.3186
2	2.81	Cl	BMB	4.379	57.669	24.6297
3	3.35	NO2-N	BMB	0.758	6.650	2.5362
4	3.93	BR	BMB	0.792	7.314	12.6717
5	4.41	NO3-N	BMB	1.983	16.309	4.9094
6	5.73	PO4-P	BMB	0.641	3.450	5.2141
7	6.40	SO4	BMB	2.861	15.203	23.9183
TOTAL:				11.93	112.62	76.20



Peak Integration Report

Sample Name:	**CCV 170113**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**13-Jan-2017 / 17:49**	*Run Time:*	**7.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.03	F	BMB	0.538	6.103	2.4265
2	2.82	Cl	BMB	4.385	57.721	24.6654
3	3.35	NO2-N	BMB	0.761	6.670	2.5458
4	3.93	BR	BMB	0.792	7.316	12.6832
5	4.41	NO3-N	BMB	1.983	16.320	4.9092
6	5.73	PO4-P	BMB	0.636	3.423	5.1736
7	6.40	SO4	BMB	2.862	15.220	23.9263
TOTAL:				11.96	112.77	76.33



A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 81971 SDG: 81971

Preparation Blank Matrix (soil/water): water

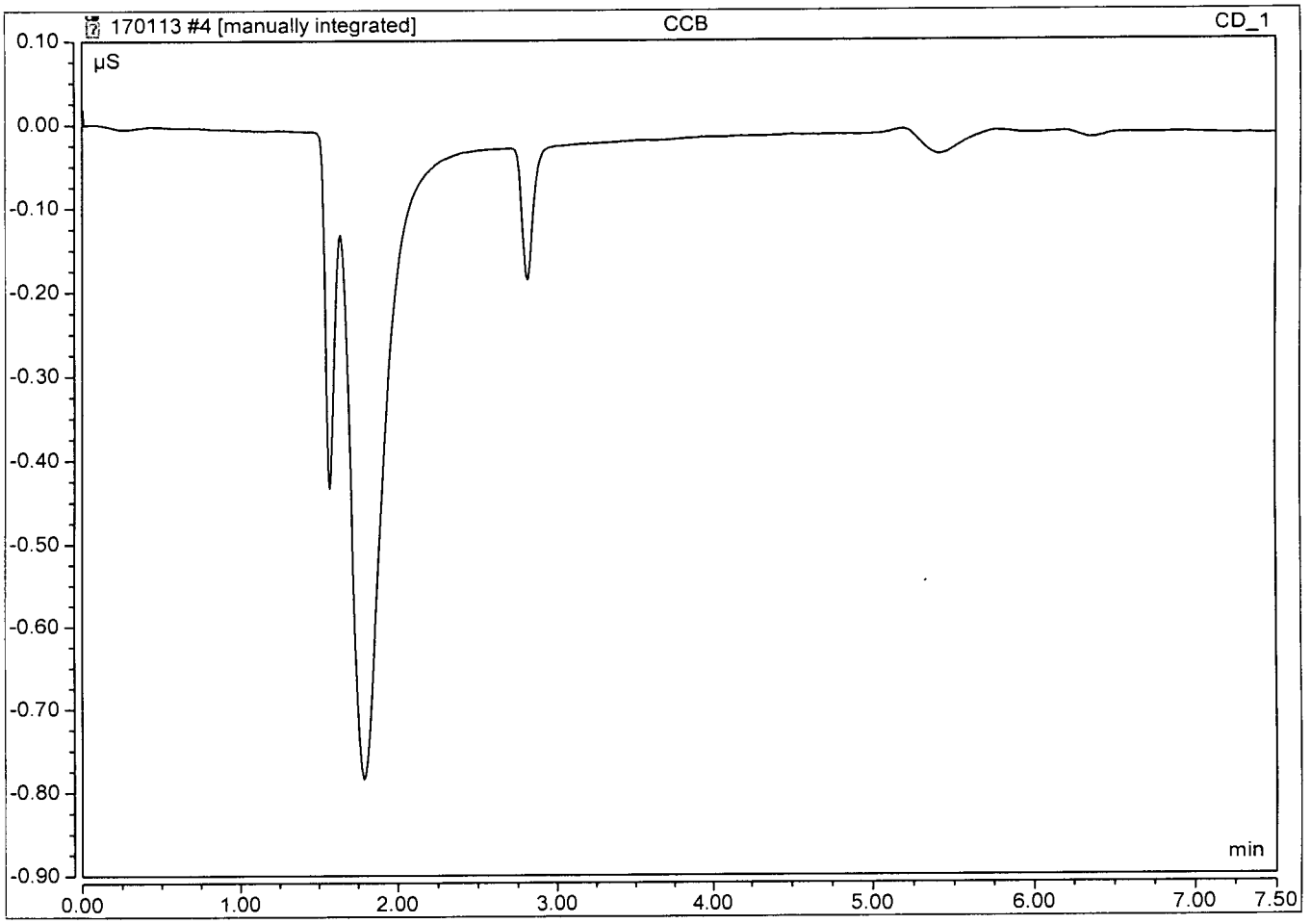
Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	CCB 01/13/17 09:23	C	CCB 01/13/17 14:53	C	CCB 01/13/17 18:03	C		C		C	
chloride	1.000	U	1.000	U	1.000	U					
Nitrate(NO3)	.500	U	.500	U	.500	U					
sulfate	1.000	U	1.000	U	1.000	U					

Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**13-Jan-2017 / 09:23**	*Run Time:*	**7.50**

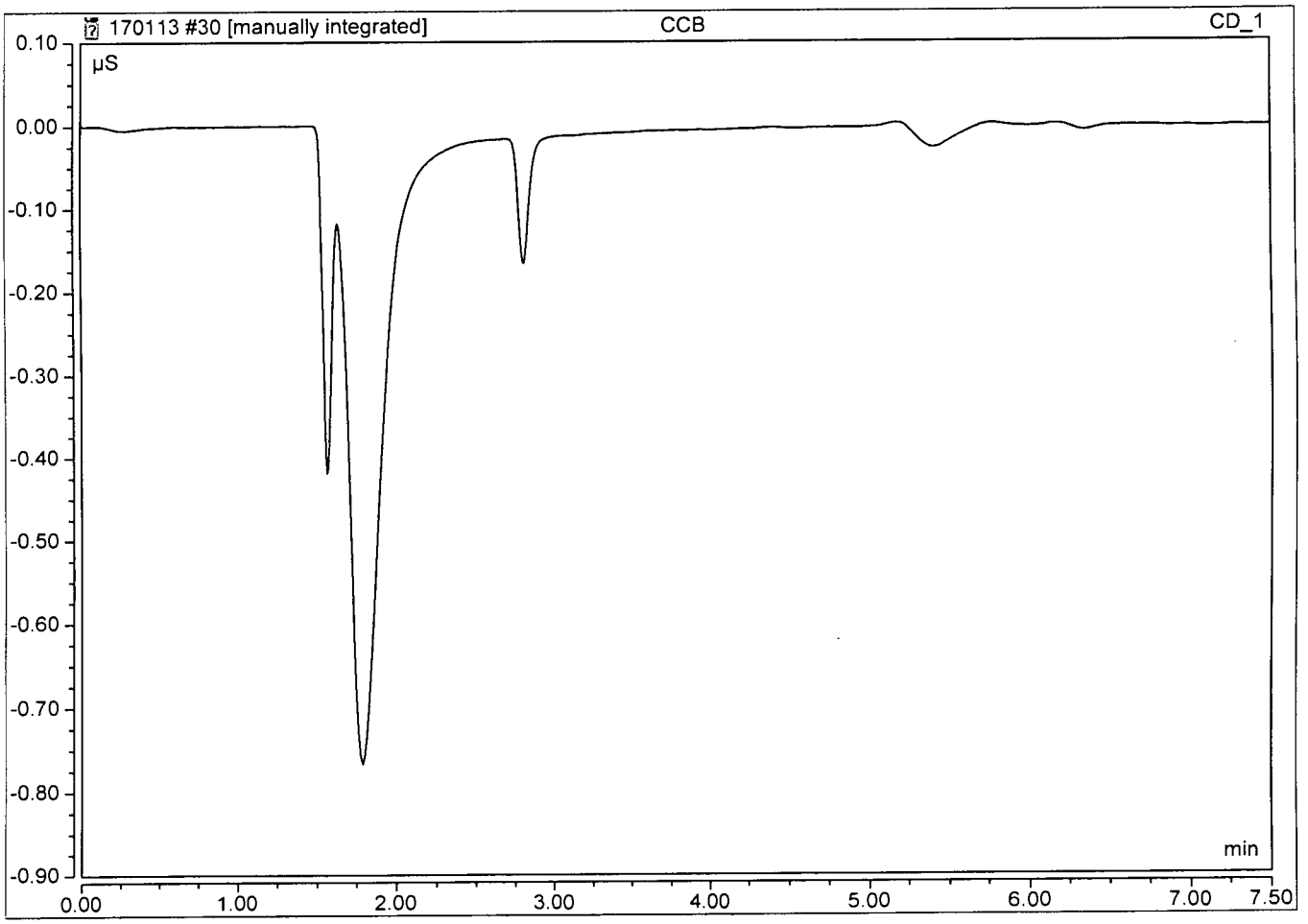
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
		TOTAL:		0.00	0.00	0.00



Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**13-Jan-2017 / 14:53**	*Run Time:*	**7.50**

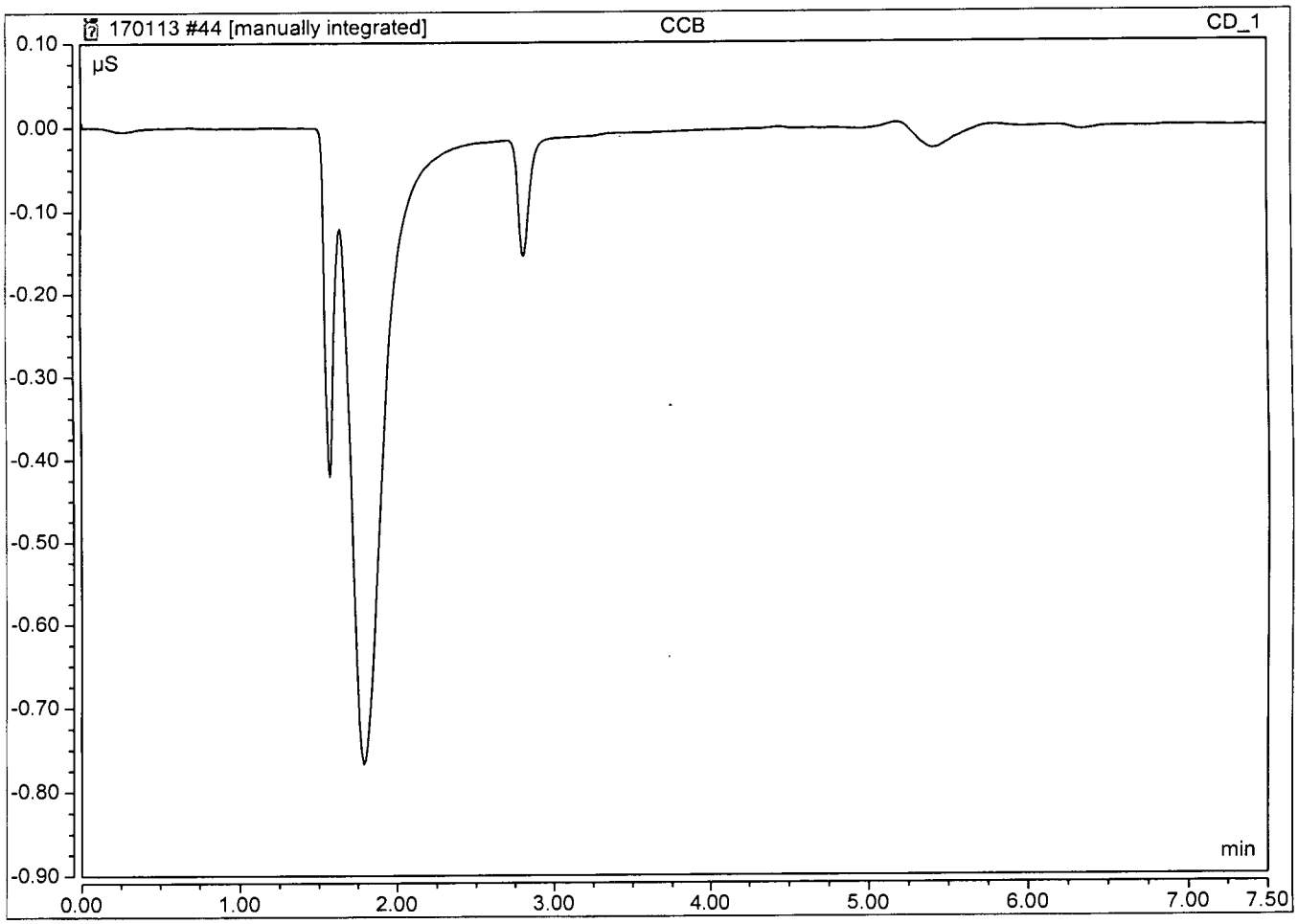
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
		TOTAL:		0.00	0.00	0.00



Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**13-Jan-2017 / 18:03**	*Run Time:*	**7.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
		TOTAL:		0.00	0.00	0.00



A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM
ARF No: 81971 SDG: 81971
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 01/16/17

Analyte	Calibration Verification									M
	True CCV1	Found 10:03	%R(1)	True CCV1	Found 12:45	%R(1)	True	Found	%R(1)	
chloride	25	24.8975	99.6	25	25.0076	100				
sulfate	25	24.144	96.6	25	24.3025	97.2				

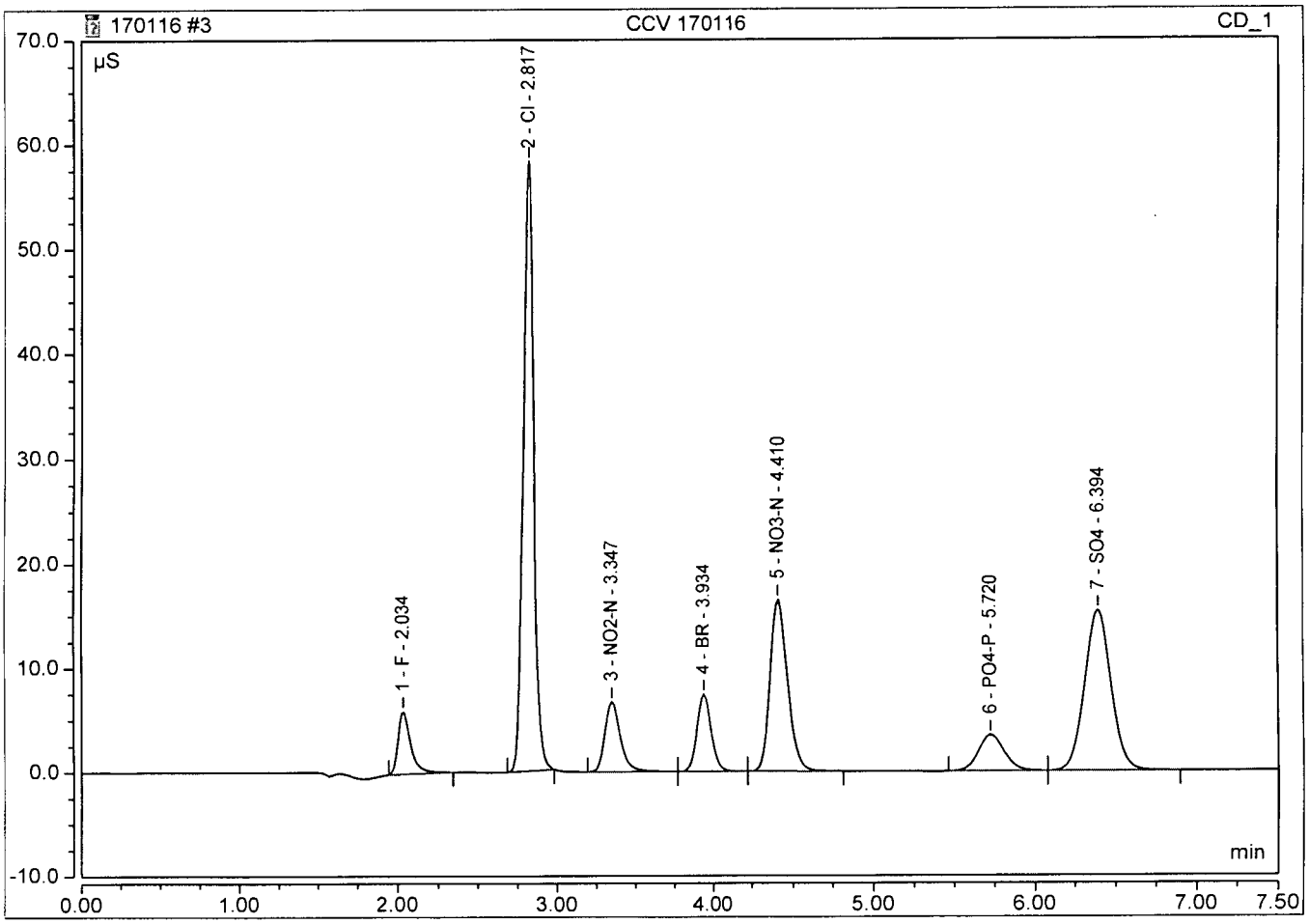
(1) Control Limits: 90-110

ILM02.0

Peak Integration Report

Sample Name:	**CCV 170116**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**16-Jan-2017 / 10:03**	*Run Time:*	**7.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.03	F	BMB	0.542	5.998	2.4442
2	2.82	Cl	BMB	4.427	58.256	24.8975
3	3.35	NO2-N	BMB	0.763	6.694	2.5515
4	3.93	BR	BMB	0.799	7.388	12.7913
5	4.41	NO3-N	BMB	2.005	16.485	4.9613
6	5.72	PO4-P	BMB	0.642	3.453	5.2160
7	6.39	SO4	BMB	2.888	15.374	24.1440
		TOTAL:		12.07	113.65	77.01



Algorithm Check

y = .1221X - .06

X = 24.14 ✓

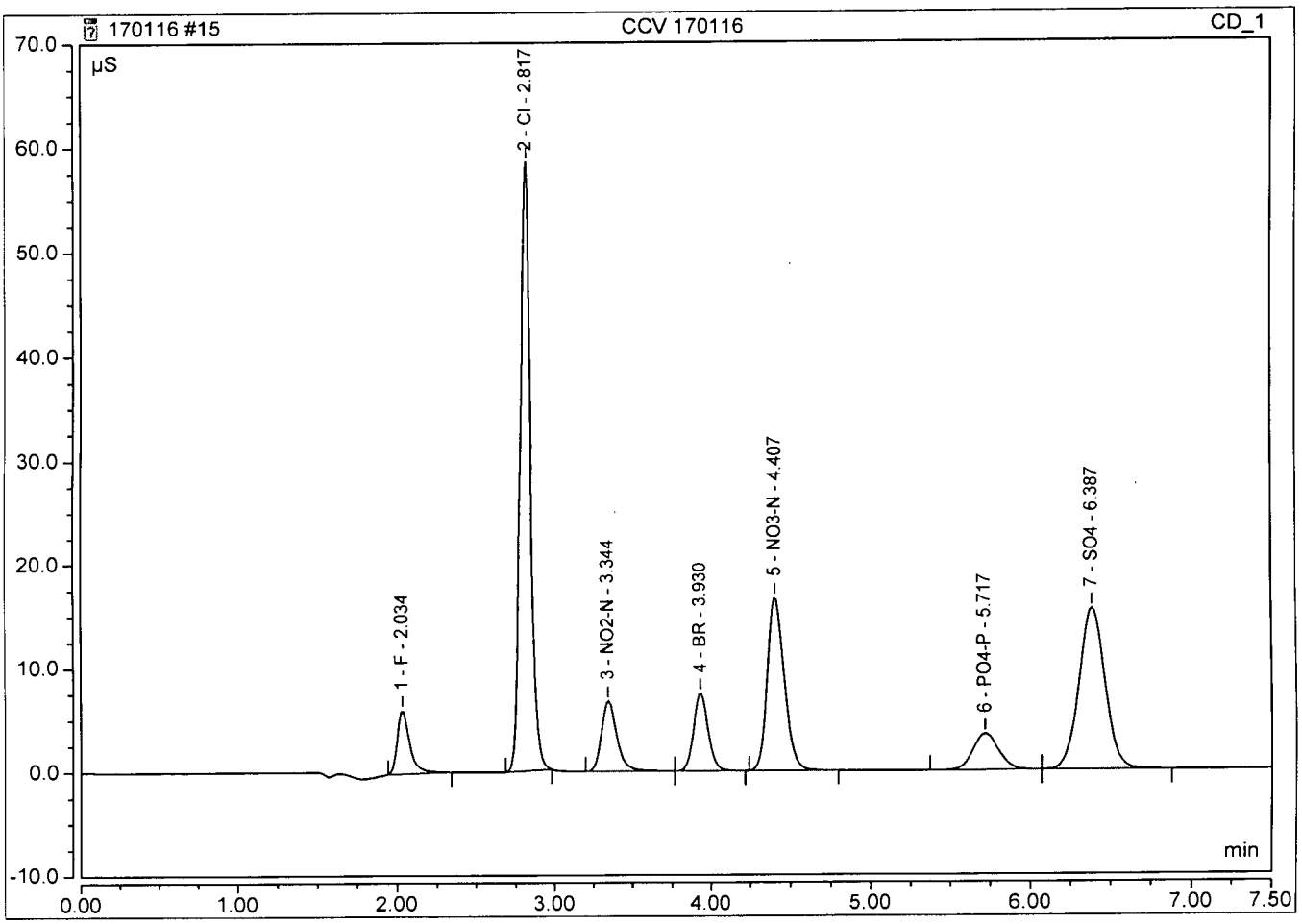
y: Peak Area
X = Amnt

MM 1/27/17

Peak Integration Report

Sample Name:	**CCV 170116**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**16-Jan-2017 / 12:45**	*Run Time:*	**7.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.03	F	BMB	0.548	6.113	2.4711
2	2.82	Cl	BMB	4.447	58.462	25.0076
3	3.34	NO2-N	BMB	0.770	6.742	2.5745
4	3.93	BR	BMB	0.806	7.457	12.9056
5	4.41	NO3-N	BMB	2.018	16.633	4.9934
6	5.72	PO4-P	BMB	0.644	3.455	5.2337
7	6.39	SO4	BMB	2.907	15.474	24.3025
TOTAL:				12.14	114.34	77.49



A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 81971 SDG: 81971

Preparation Blank Matrix (soil/water): water

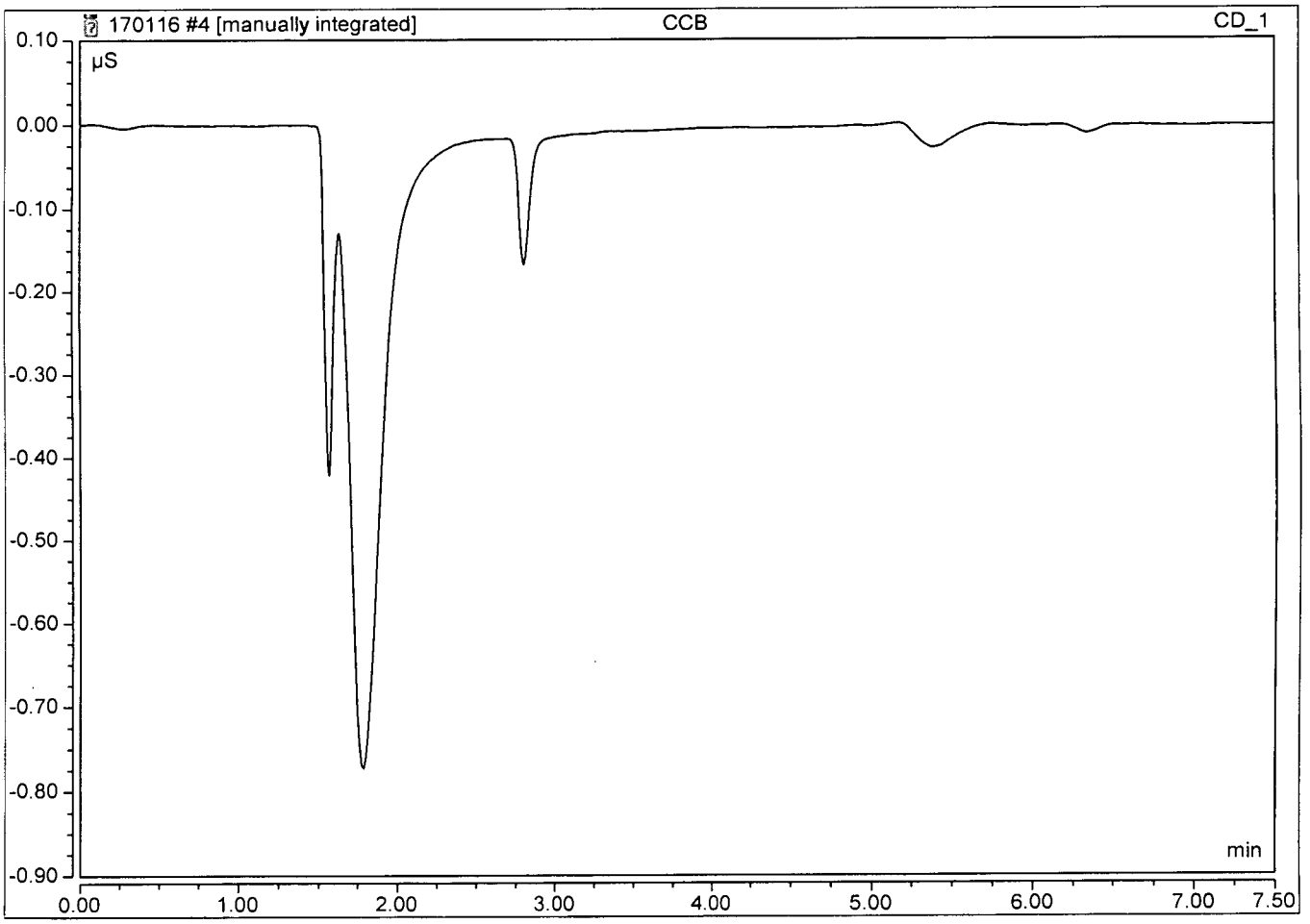
Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	CCB 01/16/17 10:16	C	CCB 01/16/17 12:59	C		C		C		C	
chloride	1.000	U	1.000	U							
sulfate	1.000	U	1.000	U							

Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**16-Jan-2017 / 10:16**	*Run Time:*	**7.50**

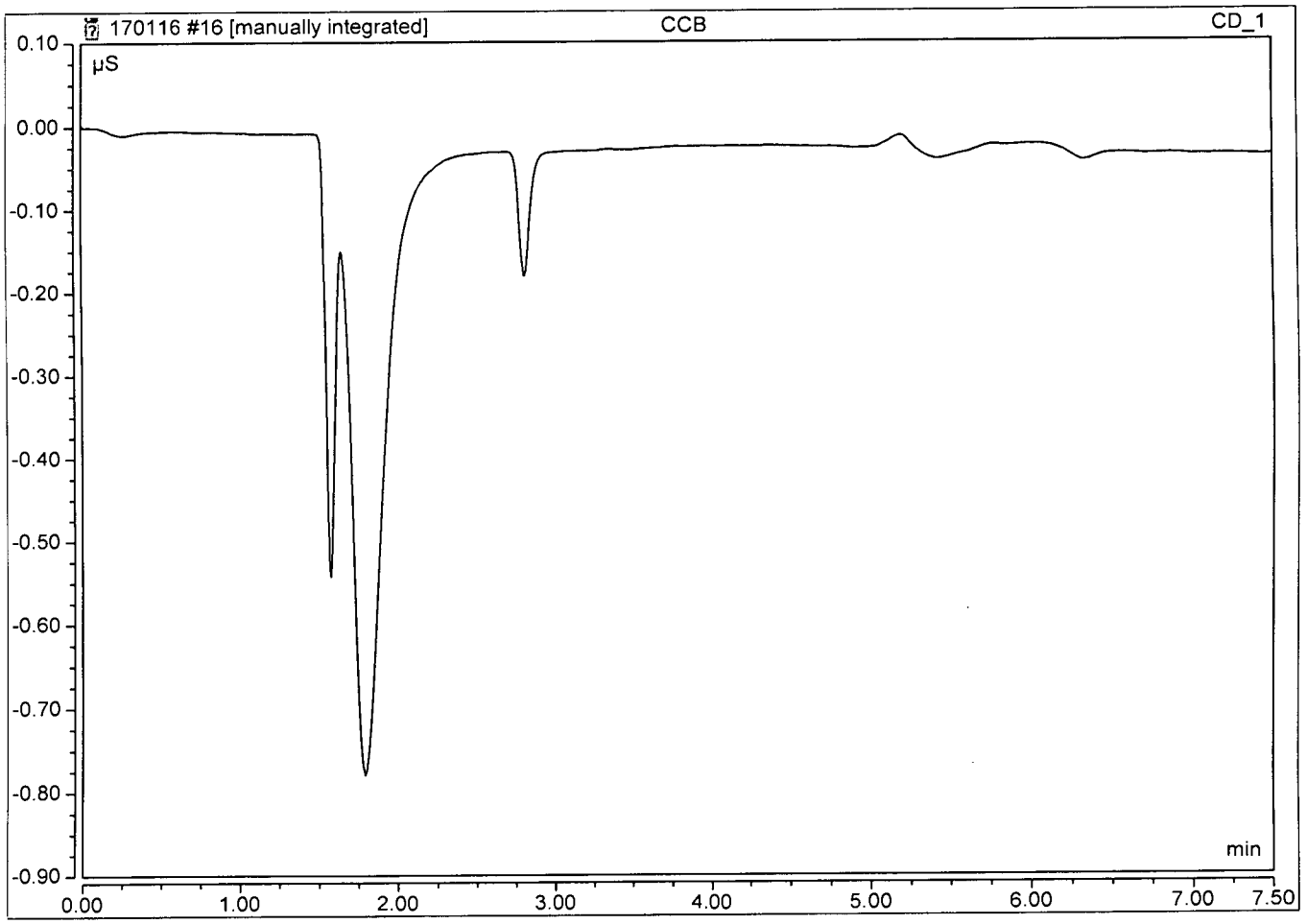
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
TOTAL:				0.00	0.00	0.00



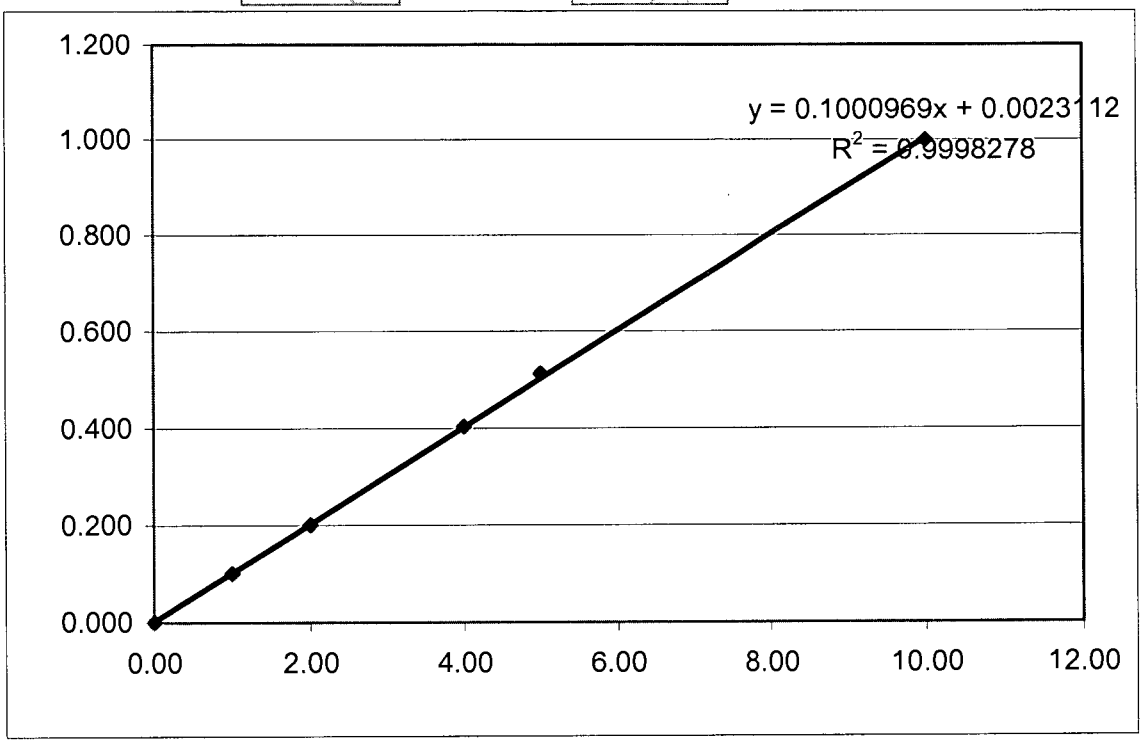
Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**16-Jan-2017 / 12:59**	*Run Time:*	**7.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount n.a.
TOTAL:				0.00	0.00	0.00



Ferrous Iron **170113A**



X	Y
0.00	0.000
1.00	0.101
2.00	0.201
4.00	0.403
5.00	0.512
10.00	0.999

Algorithm Check

reading (y)= 0.299 01/13/17 18:01

dilution= 1

result (x)= 2.96 ✓

MM 1/27/17

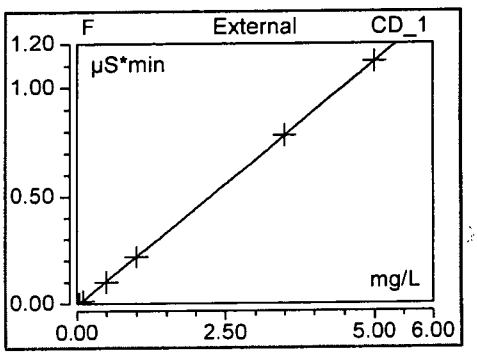
Calibration Batch Report

Sequence:	**161020**	*Injection Volume:*	**25.00**
Instrument Method:	**Program 1**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:24**	*Run Time:*	**7**

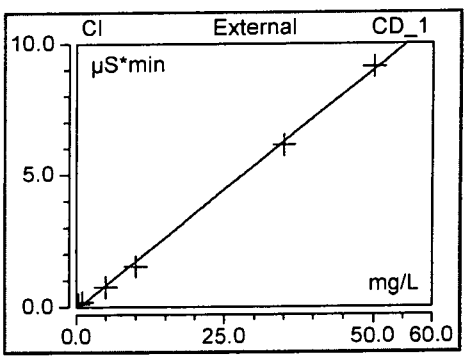
Calibration Summary

Peak Name	Eval.Type	Cal.Type	Points	Offset (C0)	Slope (C1)	Curve (C2)	Coeff.Det. %
F	Area	WithOffset,	6.000	-0.009	0.225	0.000	99.9840
Cl	Area	in, WithOffse	6.000	-0.094	0.182	0.000	99.8613
NO2-N	Area	in, WithOffse	6.000	-0.007	0.301	0.000	99.9917
BR	Area	in, WithOffse	6.000	-0.008	0.063	0.000	99.9802
NO3-N	Area	in, WithOffse	6.000	-0.039	0.412	0.000	99.9329
PO4-P	Area	in, WithOffse	6.000	-0.008	0.125	0.000	99.9563
SO4	Area	in, WithOffse	6.000	-0.060	0.122	0.000	99.9400
		AVERAGE:		-0.0322	0.2043	0.0000	99.9495

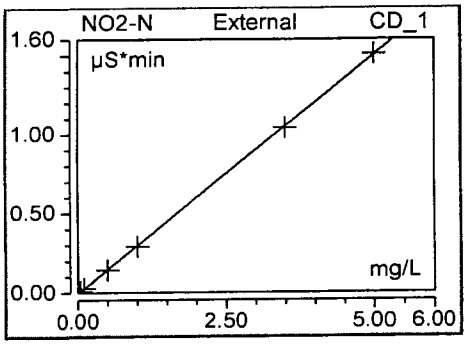
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	F	F	F	F
ICAL 1 10/20/16	2.123	0.0012	0.022	0.044
ICAL 2 10/20/16	2.107	0.0123	0.139	0.093
ICAL 3 10/20/16	2.100	0.1000	0.922	0.483
ICAL 4 10/20/16	2.104	0.2174	1.958	1.004
ICAL 5 10/20/16	2.097	0.7826	6.953	3.513
ICAL 6 10/20/16	2.103	1.1183	9.996	5.004
Average	2.106			
Rel. Std. Dev.	0.443 %			



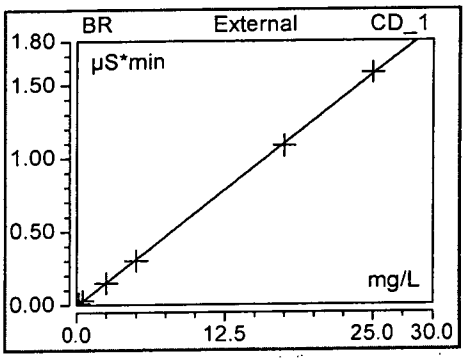
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	Cl	Cl	Cl	Cl
ICAL 1 10/20/16	2.793	0.1132	1.052	1.143
ICAL 2 10/20/16	2.790	0.1861	1.743	1.544
ICAL 3 10/20/16	2.790	0.7617	7.117	4.714
ICAL 4 10/20/16	2.797	1.5419	14.708	9.010
ICAL 5 10/20/16	2.793	6.1288	59.398	34.268
ICAL 6 10/20/16	2.803	9.1171	87.978	50.723
Average	2.795			
Rel. Std. Dev.	0.179 %			



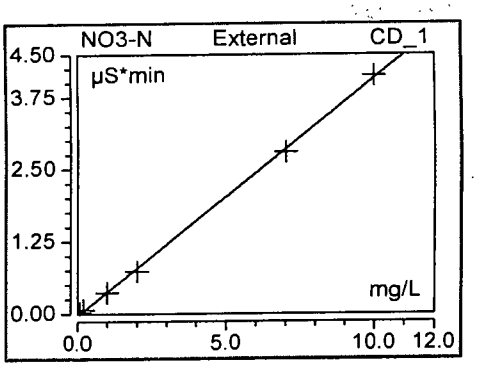
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	NO2-N	NO2-N	NO2-N	NO2-N
ICAL 1 10/20/16	3.250	0.0095	0.073	0.053
ICAL 2 10/20/16	3.247	0.0276	0.209	0.113
ICAL 3 10/20/16	3.250	0.1420	1.072	0.493
ICAL 4 10/20/16	3.254	0.2907	2.188	0.986
ICAL 5 10/20/16	3.250	1.0405	7.775	3.473
ICAL 6 10/20/16	3.257	1.5072	11.205	5.022
Average	3.251			
Rel. Std. Dev.	0.106 %			



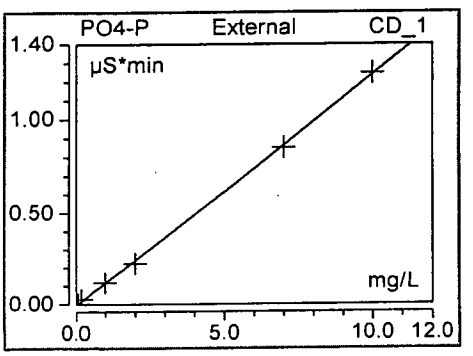
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	BR	BR	BR	BR
ICAL 1 10/20/16	3.757	0.0109	0.087	0.299
ICAL 2 10/20/16	3.753	0.0293	0.232	0.589
ICAL 3 10/20/16	3.750	0.1485	1.179	2.478
ICAL 4 10/20/16	3.754	0.2993	2.389	4.870
ICAL 5 10/20/16	3.743	1.0832	8.801	17.295
ICAL 6 10/20/16	3.747	1.5800	13.023	25.169
Average	3.751			
Rel. Std. Dev.	0.131 %			



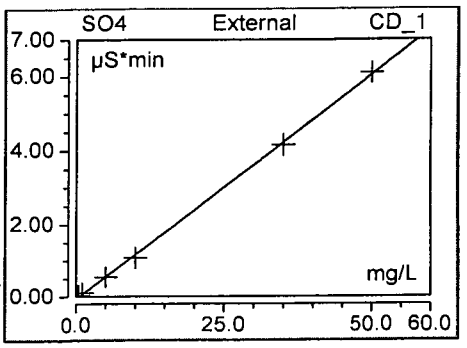
Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	NO3-N	NO3-N	NO3-N	NO3-N
ICAL 1 10/20/16	4.143	0.0290	0.196	0.166
ICAL 2 10/20/16	4.140	0.0717	0.496	0.270
ICAL 3 10/20/16	4.137	0.3656	2.533	0.983
ICAL 4 10/20/16	4.140	0.7330	5.168	1.875
ICAL 5 10/20/16	4.123	2.7923	20.144	6.873
ICAL 6 10/20/16	4.123	4.1278	30.098	10.114
Average	4.135			
Rel. Std. Dev.	0.215 %			



Injection Name	Ret.Time min CD_1	Area µS*min CD_1	Height µS CD_1	Amount mg/L CD_1
	PO4-P	PO4-P	PO4-P	PO4-P
ICAL 1 10/20/16	5.540	0.0032	0.021	0.092
ICAL 2 10/20/16	5.540	0.0284	0.107	0.295
ICAL 3 10/20/16	5.537	0.1191	0.557	1.022
ICAL 4 10/20/16	5.537	0.2251	1.103	1.873
ICAL 5 10/20/16	5.520	0.8544	4.243	6.922
ICAL 6 10/20/16	5.523	1.2473	6.244	10.075
Average	5.533			
Rel. Std. Dev.	0.160 %			



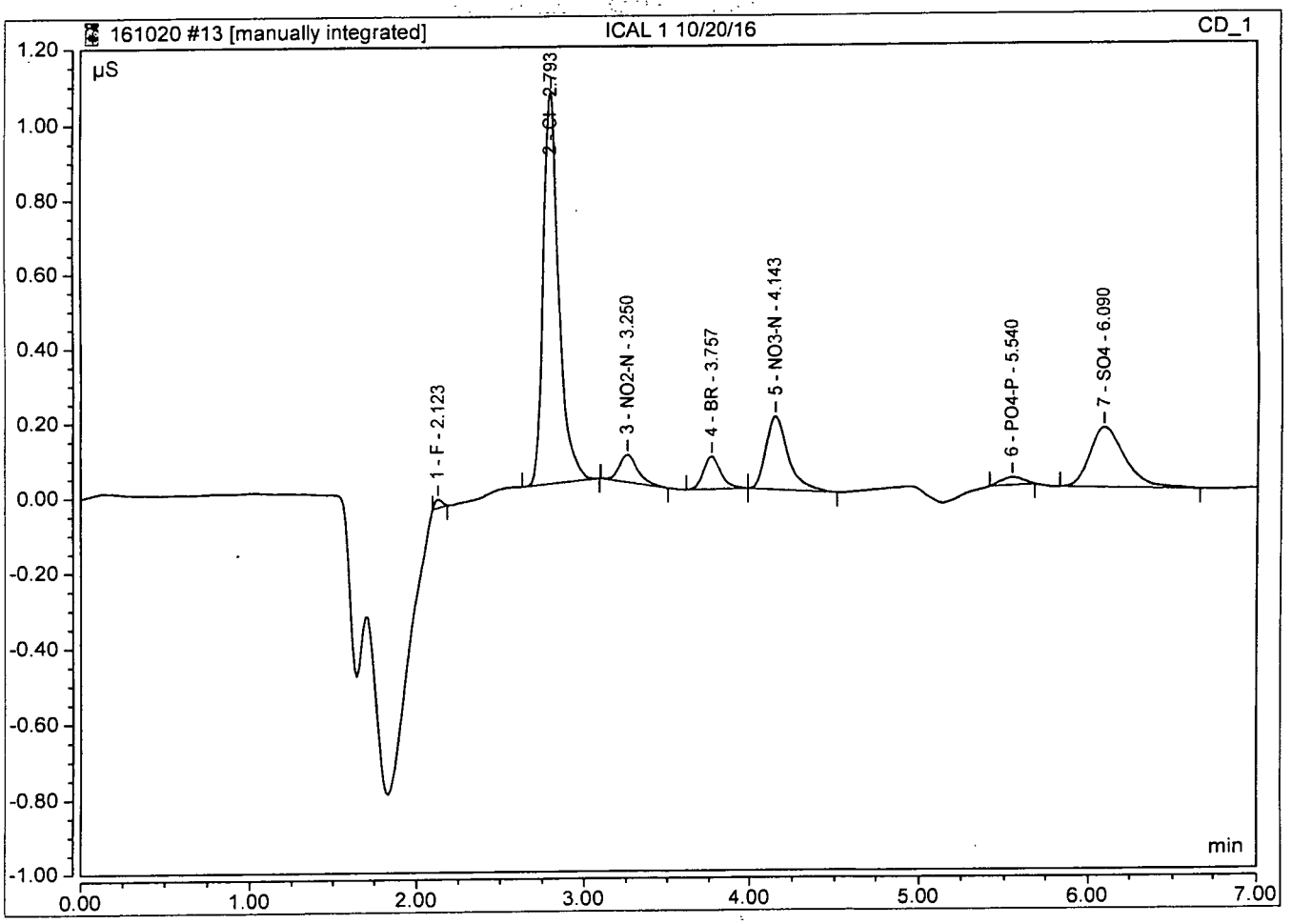
Injection Name	Ret.Time	Area	Height	Amount
	min	µS*min	µS	mg/L
	CD_1	CD_1	CD_1	CD_1
	SO4	SO4	SO4	SO4
ICAL 1 10/20/16	6.090	0.0385	0.159	0.808
ICAL 2 10/20/16	6.093	0.1046	0.455	1.350
ICAL 3 10/20/16	6.097	0.5456	2.464	4.961
ICAL 4 10/20/16	6.100	1.0756	4.975	9.302
ICAL 5 10/20/16	6.097	4.1512	19.714	34.487
ICAL 6 10/20/16	6.110	6.1057	29.270	50.492
Average	6.098			
Rel. Std. Dev.	0.113 %			



Peak Integration Report

Sample Name:	ICAL 1 10/20/16	*Inj. Vol.:*	25.00
Injection Type:	Calibration Standard	*Dilution Factor:*	1.0000
Program:	Analytical Processing Method 161020 ND	*Operator:*	chemist_wetlab
Inj. Date / Time:	20-Oct-2016 / 11:19	*Run Time:*	7.00

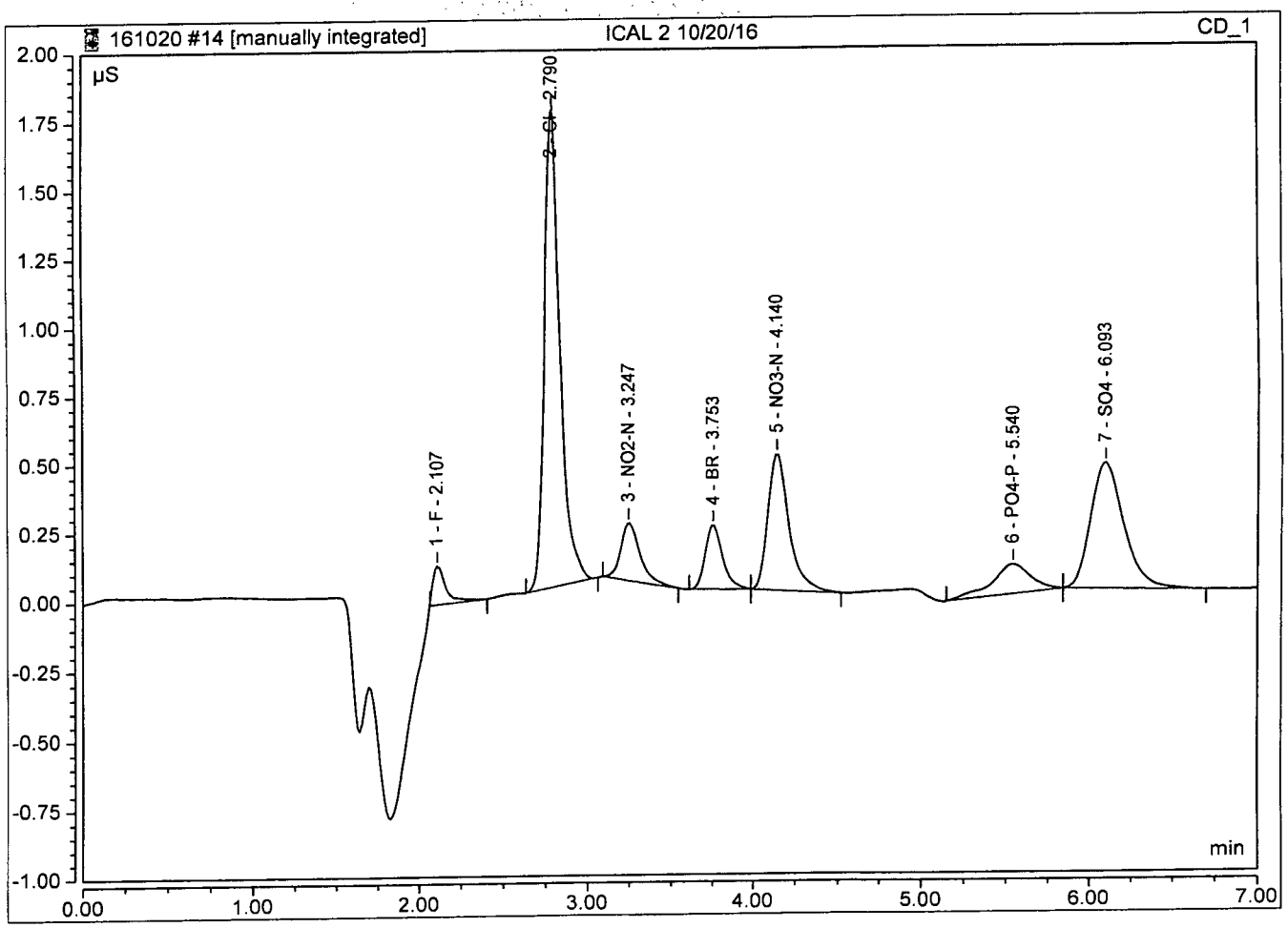
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.12	F	BMB*	0.001	0.022	0.0438
2	2.79	Cl	BMB	0.113	1.052	1.1427
3	3.25	NO2-N	BMB	0.009	0.073	0.0531
4	3.76	BR	BMB	0.011	0.087	0.2985
5	4.14	NO3-N	BMB	0.029	0.196	0.1660
6	5.54	PO4-P	BMB*	0.003	0.021	0.0923
7	6.09	SO4	BMB	0.038	0.159	0.8084
TOTAL:				0.21	1.61	2.60



Peak Integration Report

Sample Name:	**ICAL 2 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:32**	*Run Time:*	**7.00**

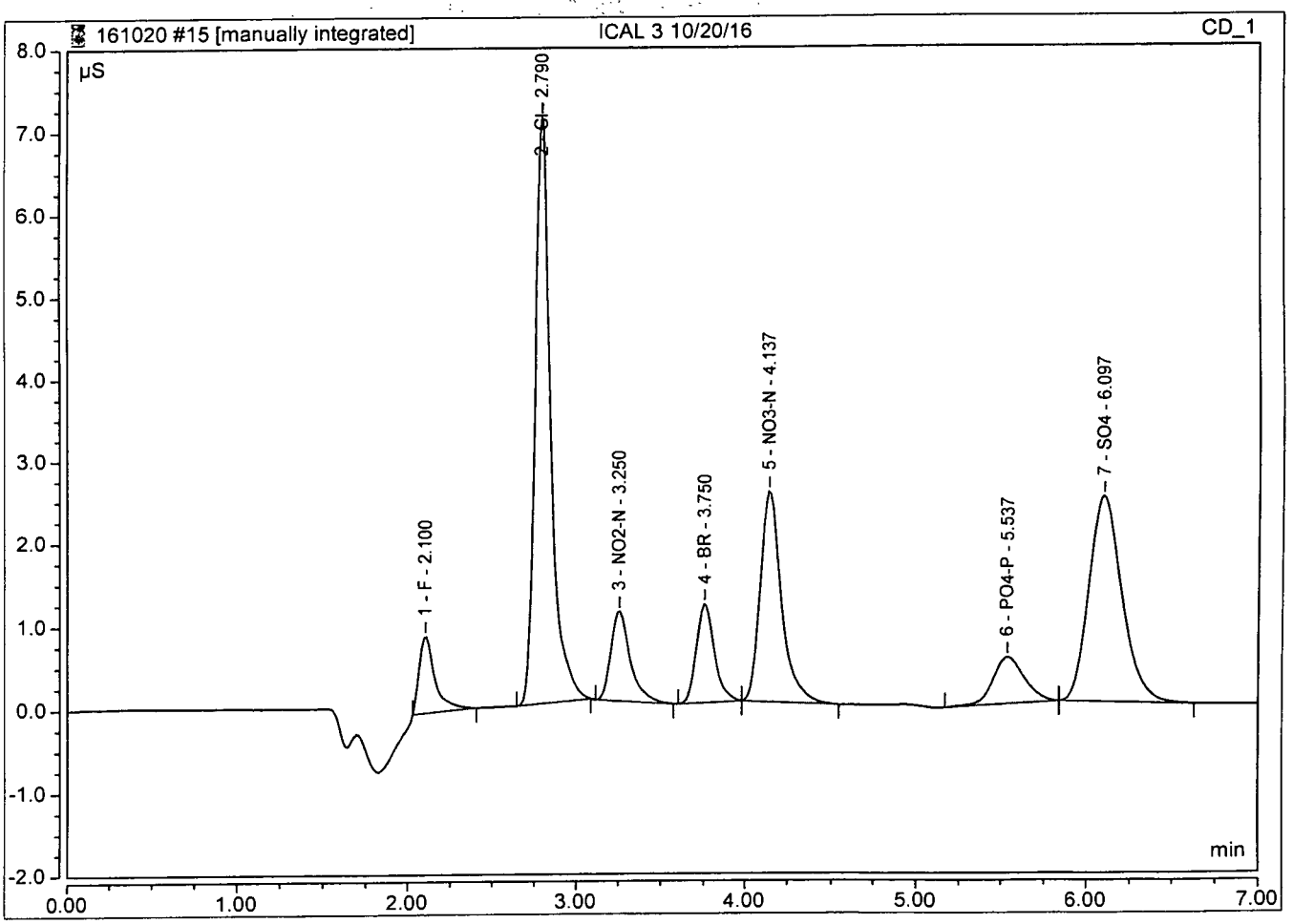
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.11	F	BMB*	0.012	0.139	0.0933
2	2.79	Cl	BMB	0.186	1.743	1.5439
3	3.25	NO2-N	BMB	0.028	0.209	0.1132
4	3.75	BR	BMB	0.029	0.232	0.5894
5	4.14	NO3-N	BMB	0.072	0.496	0.2699
6	5.54	PO4-P	BMB	0.028	0.107	0.2946
7	6.09	SO4	BMB	0.105	0.455	1.3496
TOTAL:				0.46	3.38	4.25



Peak Integration Report

Sample Name:	**ICAL 3 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 11:45**	*Run Time:*	**7.00**

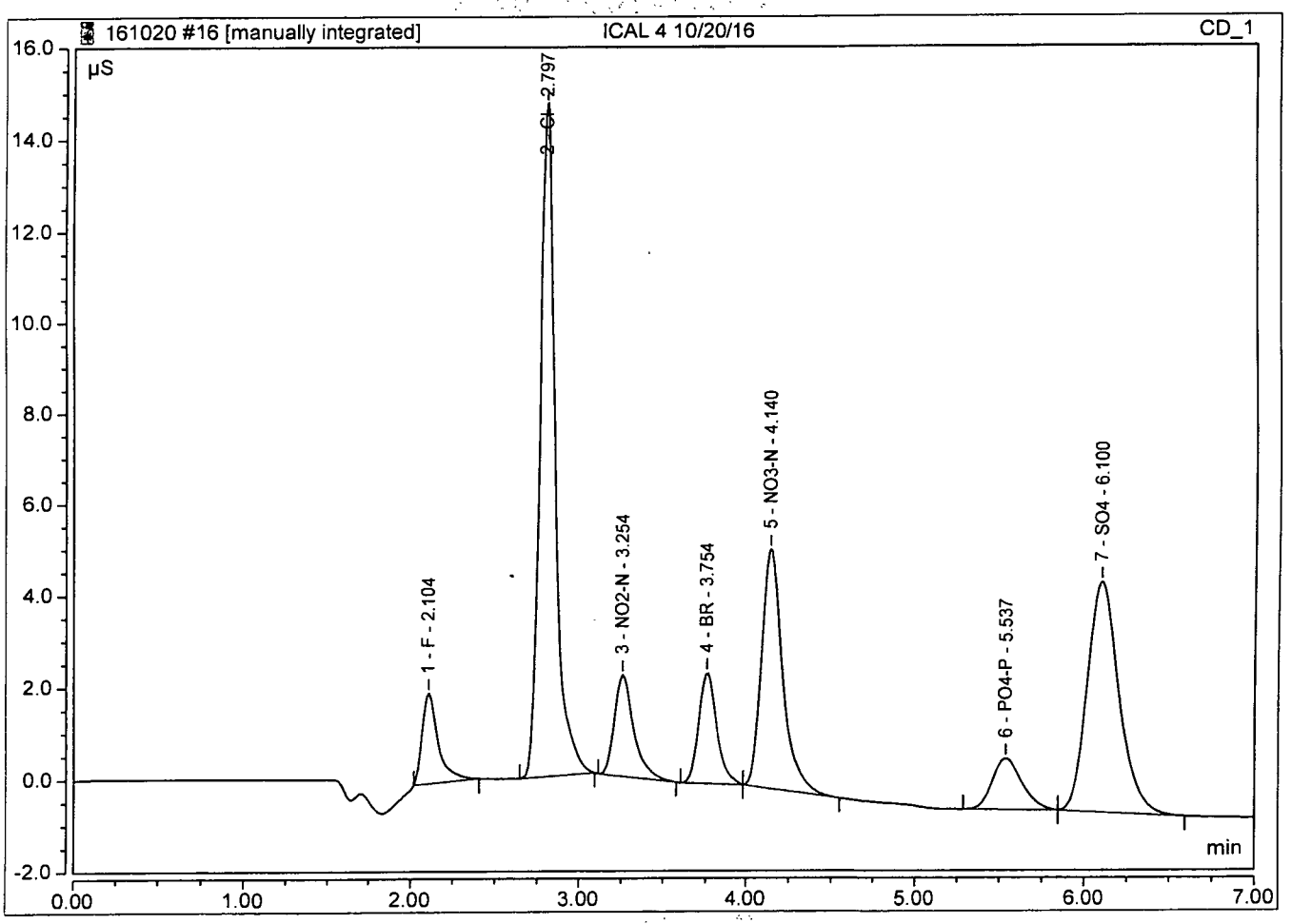
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB*	0.100	0.922	0.4827
2	2.79	Cl	BMB	0.762	7.117	4.7137
3	3.25	NO2-N	BMB	0.142	1.072	0.4926
4	3.75	BR	BMB	0.148	1.179	2.4784
5	4.14	NO3-N	BMB	0.366	2.533	0.9830
6	5.54	PO4-P	BMB	0.119	0.557	1.0221
7	6.10	SO4	BMB	0.546	2.464	4.9609
TOTAL:				2.18	15.84	15.13



Peak Integration Report

Sample Name:	ICAL 4 10/20/16	*Inj. Vol.:*	25.00
Injection Type:	Calibration Standard	*Dilution Factor:*	1.0000
Program:	Analytical Processing Method 161020 ND	*Operator:*	chemist_wetlab
Inj. Date / Time:	20-Oct-2016 / 11:58	*Run Time:*	7.00

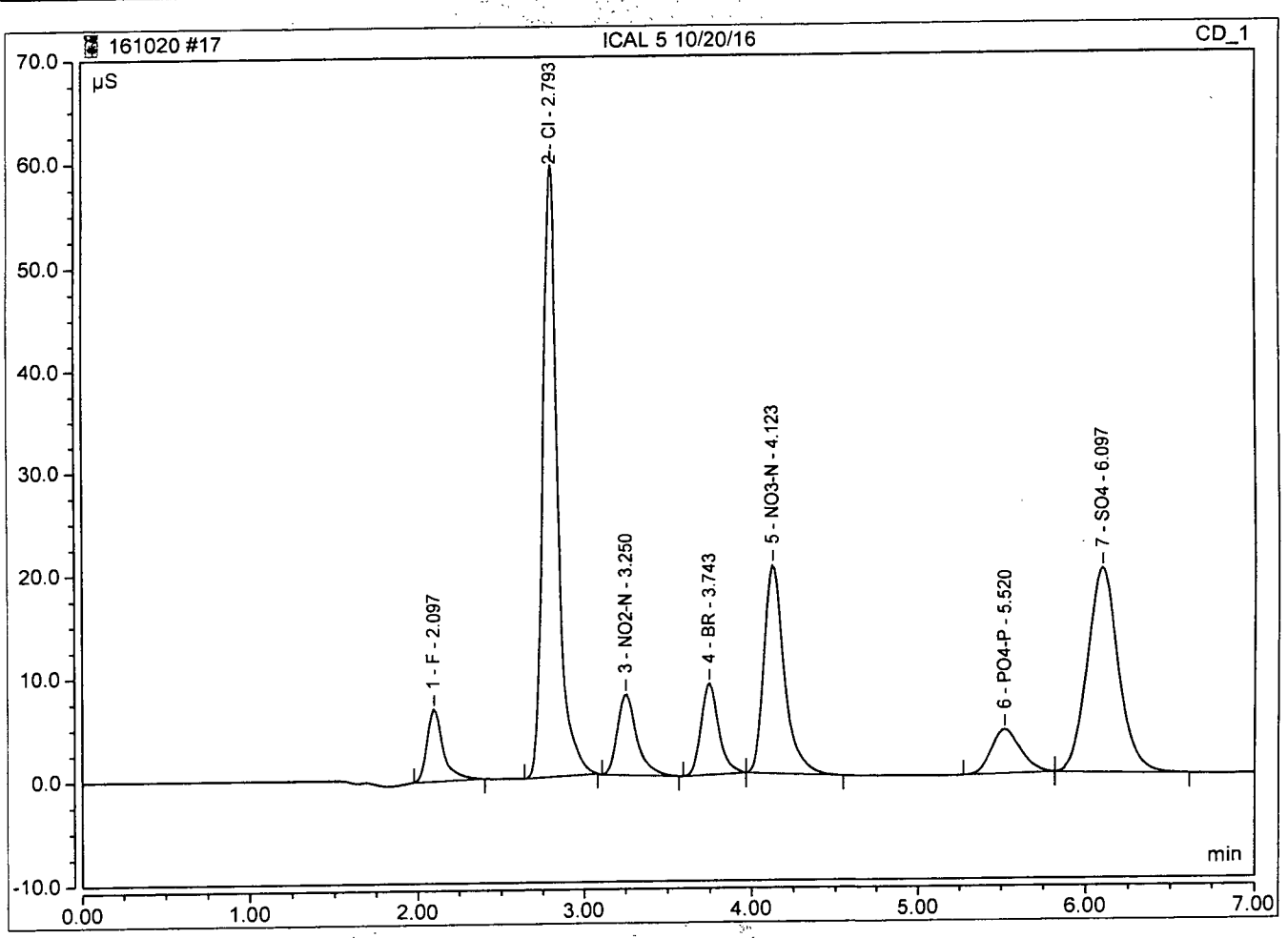
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB*	0.217	1.958	1.0036
2	2.80	Cl	BMB	1.542	14.708	9.0096
3	3.25	NO2-N	BMB	0.291	2.188	0.9859
4	3.75	BR	BMB	0.299	2.389	4.8695
5	4.14	NO3-N	BMB	0.733	5.168	1.8746
6	5.54	PO4-P	BMB	0.225	1.103	1.8731
7	6.10	SO4	BMB	1.076	4.975	9.3015
TOTAL:				4.38	32.49	28.92



Peak Integration Report

Sample Name:	**ICAL 5 10/20/16**	*Inj. Vol.:*	**25.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Oct-2016 / 12:11**	*Run Time:*	**7.00**

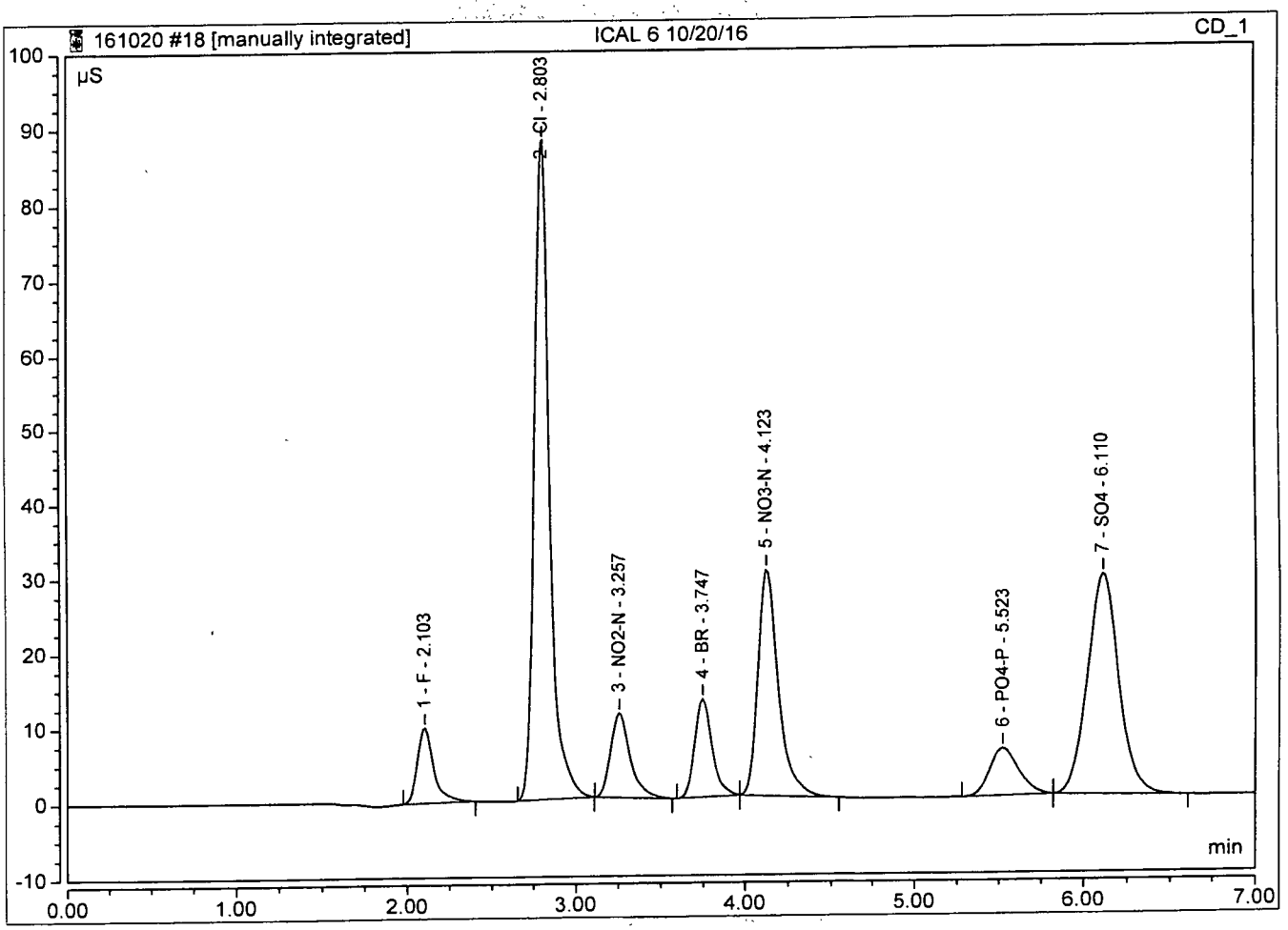
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB	0.783	6.953	3.5131
2	2.79	Cl	BMB	6.129	59.398	34.2675
3	3.25	NO2-N	BMB	1.040	7.775	3.4734
4	3.74	BR	BMB	1.083	8.801	17.2948
5	4.12	NO3-N	BMB	2.792	20.144	6.8727
6	5.52	PO4-P	BMB	0.854	4.243	6.9225
7	6.10	SO4	BMB	4.151	19.714	34.4871
TOTAL:				16.83	127.03	106.83



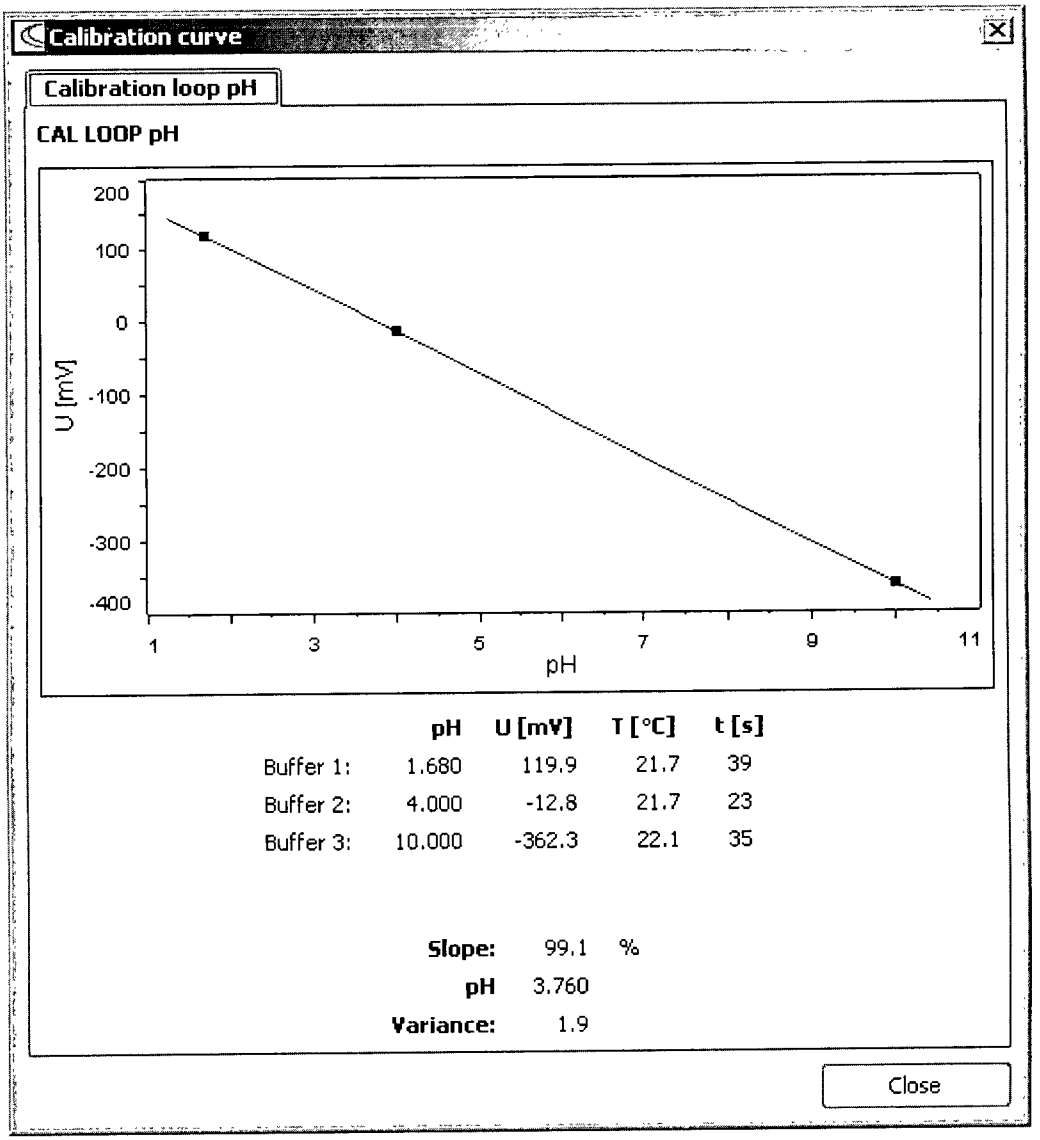
Peak Integration Report

Sample Name:	ICAL 6 10/20/16	*Inj. Vol.:*	25.00
Injection Type:	Calibration Standard	*Dilution Factor:*	1.0000
Program:	Analytical Processing Method 161020 ND	*Operator:*	chemist_wetlab
Inj. Date / Time:	20-Oct-2016 / 12:24	*Run Time:*	7.00

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.10	F	BMB	1.118	9.996	5.0036
2	2.80	Cl	BMB*	9.117	87.978	50.7226
3	3.26	NO2-N	BMB	1.507	11.205	5.0218
4	3.75	BR	BMB	1.580	13.023	25.1693
5	4.12	NO3-N	BMB	4.128	30.098	10.1138
6	5.52	PO4-P	BMB	1.247	6.244	10.0755
7	6.11	SO4	BMB	6.106	29.270	50.4924
TOTAL:				24.80	187.81	156.60



Tiamo Calibration Curve
01/16/17



INORGANIC ANALYSIS
Raw Data

APPL, INC.

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
SM 2320B	BICARBONATE AS	1.6 J	2.0	1.70	0.85	mg/L	01/16/17	01/16/17	#232W-170116A-AZ48866
SM 2320B	CARBONATE AS CA	1.70 U	2.0	1.70	0.85	mg/L	01/16/17	01/16/17	#232W-170116A-AZ48866
SM 2320B	TOTAL ALKALINITY	1.6 J	2.0	1.70	0.85	mg/L	01/16/17	01/16/17	#232W-170116A-AZ48866
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	01/13/17	01/13/17	#300W-170113A2-AZ48915
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	01/13/17	01/13/17	#300W-170113A2-AZ48915
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	01/13/17	01/13/17	#300W-170113A2-AZ48915
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	01/13/17	01/13/17	#300W-170113B-AZ48921
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	01/13/17	01/13/17	#300W-170113B-AZ48921
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	01/13/17	01/13/17	#300W-170113B-AZ48921
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	01/16/17	01/16/17	#300WD-170116A-AZ48925
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	01/16/17	01/16/17	#300WD-170116A-AZ48925
SM3500Fe	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	01/13/17	01/13/17	#35FE-170113A-AZ48925

Wetlab SC-Blank-REG MDLs
Printed: 01/19/17 9:42:58 AM

Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

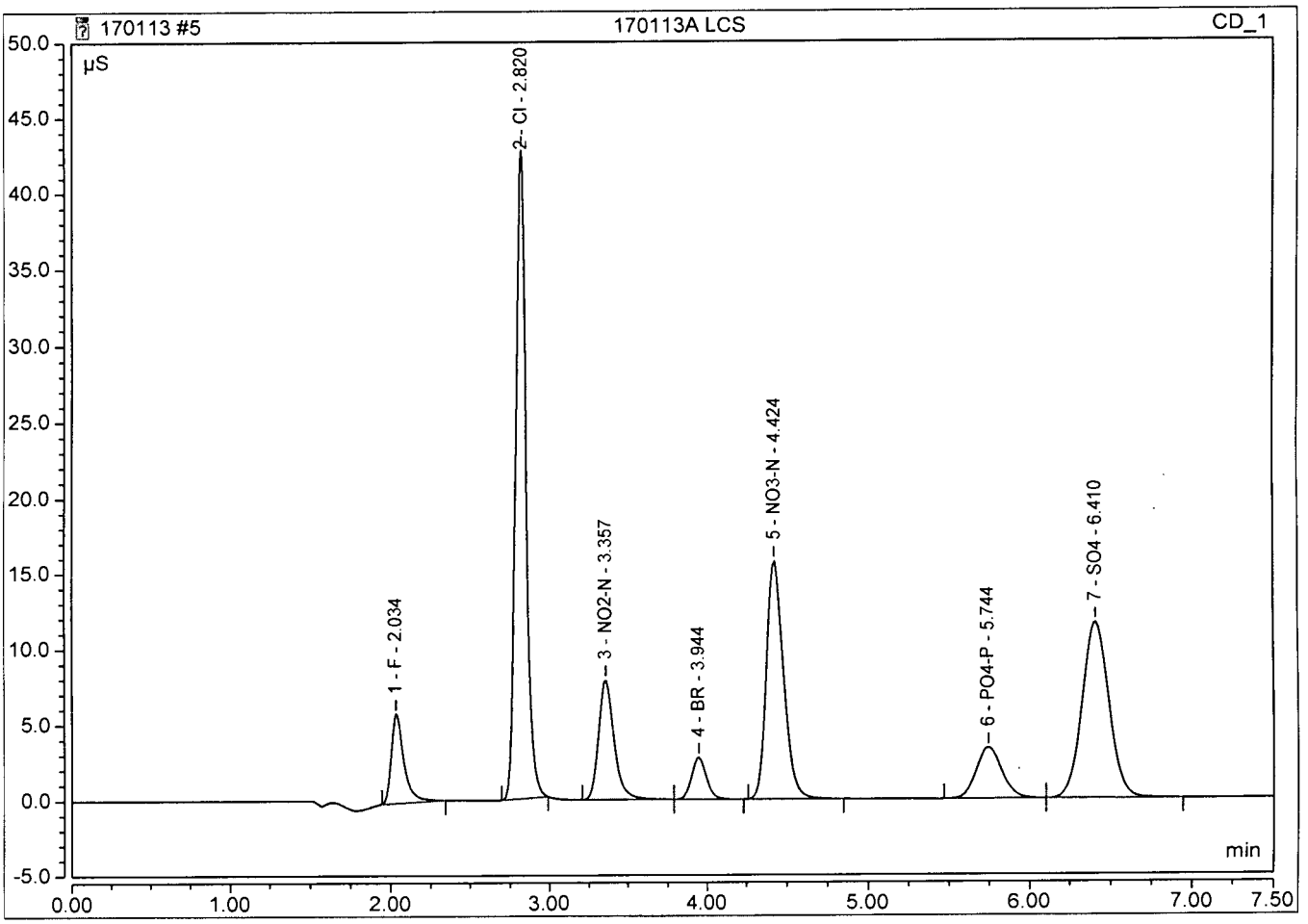
Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	20.0	18.6	93.0	90-110	01/13/17	01/13/17	#300W-170113A2-AZ48915
EPA 300.0	NITRATE	22.1	21.1	95.5	90-110	01/13/17	01/13/17	#300W-170113A2-AZ48915
EPA 300.0	SULFATE	20.0	18.5	92.5	90-110	01/13/17	01/13/17	#300W-170113A2-AZ48915
SM 2320B	BICARBONATE AS CACO3	250	248	99.2	90-110	01/16/17	01/16/17	#232W-170116A-AZ48866
SM 2320B	TOTAL ALKALINITY AS CACO3	250	248	99.2	90-110	01/16/17	01/16/17	#232W-170116A-AZ48866

Comments: _____

Peak Integration Report

Sample Name:	**170113A LCS**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**13-Jan-2017 / 09:37**	*Run Time:*	**7.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.03	F	BMB	0.538	5.900	2.4281
2	2.82	Cl	BMB	3.262	42.731	18.4813
3	3.36	NO2-N	BMB	0.909	7.887	3.0381
4	3.94	BR	BMB	0.306	2.772	4.9715
5	4.42	NO3-N	BMB	1.926	15.738	4.7701
6	5.74	PO4-P	BMB	0.630	3.372	5.1209
7	6.41	SO4	BMB	2.199	11.573	18.4981
TOTAL:				9.77	89.97	57.31



Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

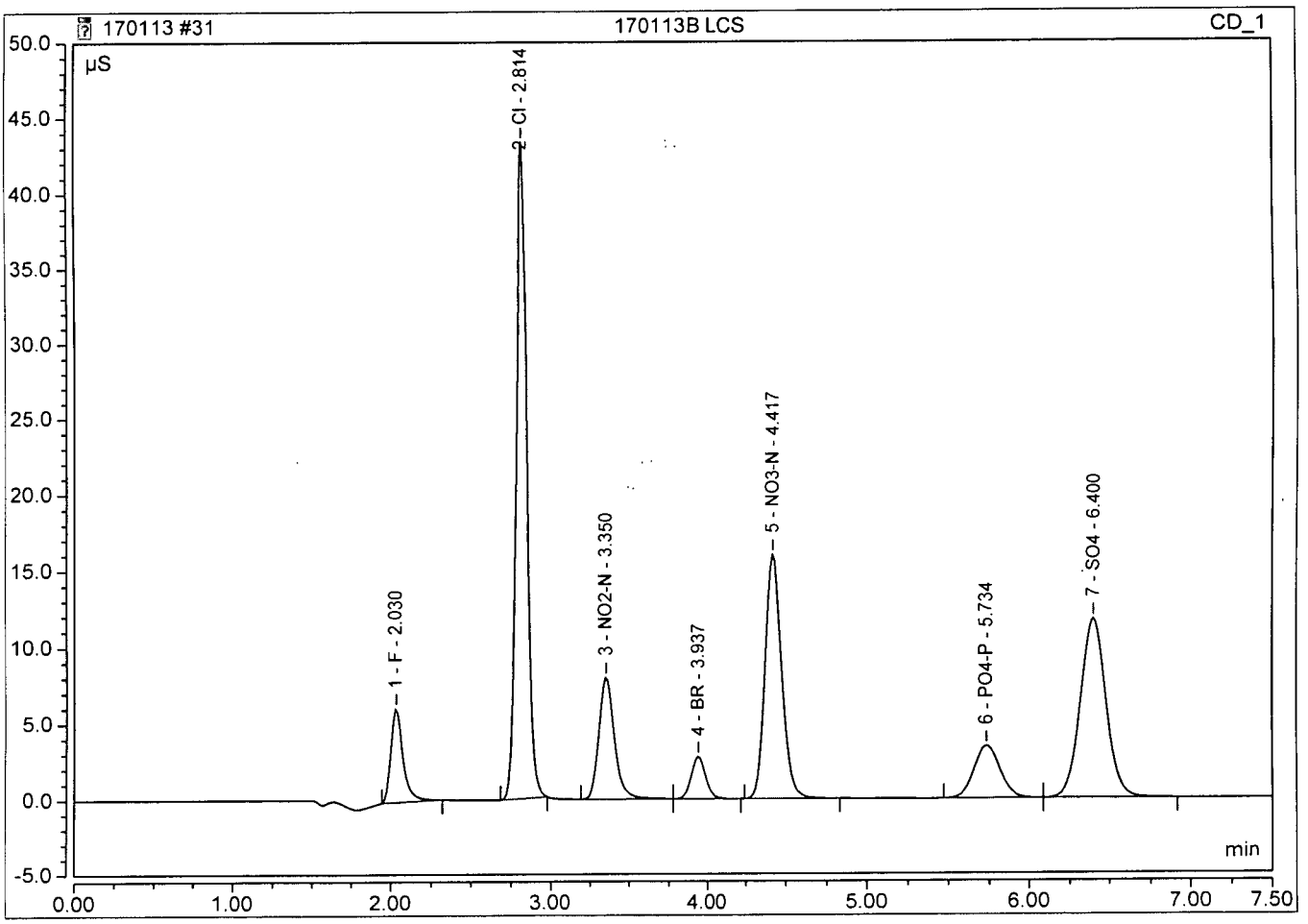
Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	20.0	18.6	93.0	90-110	01/13/17	01/13/17	#300W-170113B-AZ48921
EPA 300.0	NITRATE	22.1	21.2	95.9	90-110	01/13/17	01/13/17	#300W-170113B-AZ48921
EPA 300.0	SULFATE	20.0	18.6	93.0	90-110	01/13/17	01/13/17	#300W-170113B-AZ48921

Comments: _____

Peak Integration Report

Sample Name:	**170113B LCS**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**13-Jan-2017 / 15:07**	*Run Time:*	**7.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.03	F	BMB	0.543	6.193	2.4492
2	2.81	Cl	BMB	3.285	43.301	18.6105
3	3.35	NO2-N	BMB	0.917	8.003	3.0654
4	3.94	BR	BMB	0.307	2.804	4.9939
5	4.42	NO3-N	BMB	1.937	15.918	4.7957
6	5.73	PO4-P	BMB	0.643	3.461	5.2232
7	6.40	SO4	BMB	2.207	11.665	18.5685
TOTAL:				9.84	91.34	57.71



Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

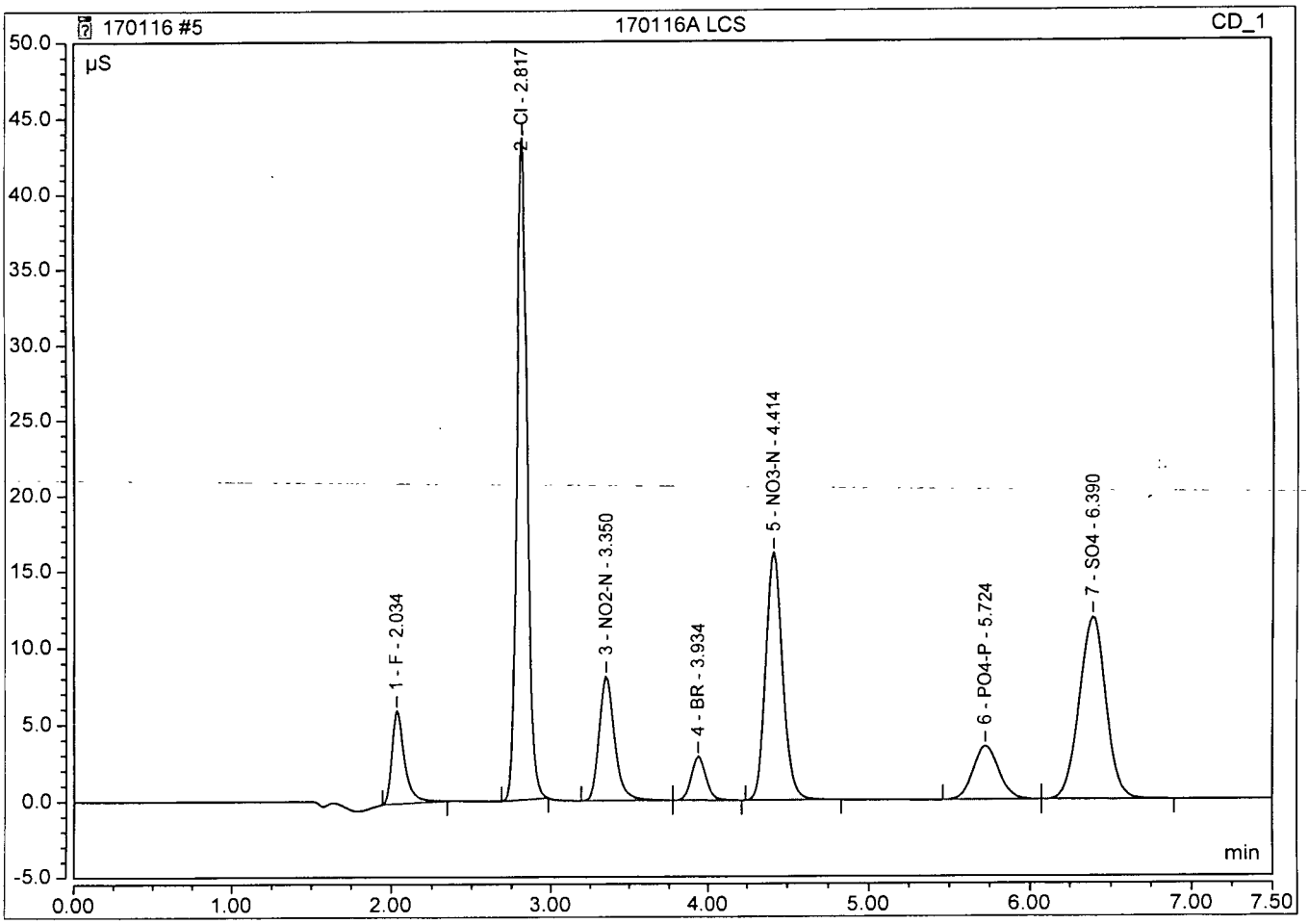
Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	20.0	18.8	94.0	90-110	01/16/17	01/16/17	#300WD-170116A-AZ48925
EPA 300.0	SULFATE	20.0	18.7	93.5	90-110	01/16/17	01/16/17	#300WD-170116A-AZ48925
SM3500Fe	FERROUS IRON	3.00	2.96	98.7	80-120	01/13/17	01/13/17	#35FE-170113A-AZ48925

Comments: _____

Peak Integration Report

Sample Name:	**170116A LCS**	*Inj. Vol.:*	**25.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Analytical Processing Method 161020 ND**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**16-Jan-2017 / 10:30**	*Run Time:*	**7.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount mg/L
1	2.03	F	BMB	0.547	6.039	2.4657
2	2.82	Cl	BMB	3.323	43.603	18.8196
3	3.35	NO2-N	BMB	0.924	8.056	3.0868
4	3.93	BR	BMB	0.310	2.827	5.0391
5	4.41	NO3-N	BMB	1.957	16.082	4.8451
6	5.72	PO4-P	BMB	0.645	3.474	5.2461
7	6.39	SO4	BMB	2.227	11.785	18.7280
TOTAL:				9.93	91.87	58.23



SPECTROPHOTOMETRIC ANALYSIS (Ferrous Iron)

Method: SM3500Fe
Analyte: Ferrous Iron
Analyst: MM
Units: mg/L
QCG: 170113A
Notes:
Final Volume: 50mL

Instrument: GENESYS 10UV
Raw Spec: abs. @ 510nm
R-Squared: 0.99983
Reagent (lot#): COLORIZING REAGENT (12/09/16)
BUFFER (12/09/16)

Date	Time	APPL ID	25mL	Raw Result	SubSample Amt	Raw BLK	Calc Conc	Result	QC True	QC%
05/20/16	12:37	0 BB 5/20/16	1	0.000						
05/20/16	12:38	1	1	0.101						
05/20/16	12:39	2	1	0.201						
05/20/16	12:39	4	1	0.403						
05/20/16	12:40	5	1	0.512						
05/20/16	12:40	10	1	0.999						
05/20/16	12:41	160520A ICV 3.0	1	0.304	25mL		3.01	3.01	3.000	100.5%
05/20/16	12:42	160520A ICB	1	0.000	25mL		-0.02	-0.02		
01/13/17	17:58	CCV 4.0 170113	1	0.399	25mL		3.96	3.963	4.000	*99.08*
01/13/17	17:59	CCB 170113	1	0.001	25mL		-0.01	-0.013		
01/13/17	18:01	170113A LCS 3.0	1	0.299	25mL		2.96	2.964	3.000	*98.80*
01/13/17	18:02	170113A LCSD 3.0	1	0.300	25mL		2.97	2.974	3.000	*99.13*
01/13/17	18:03	AZ48915W08	1	0.058	25mL		0.56	0.556		
01/13/17	18:04	AZ48916W11	1	0.009	25mL		0.07	0.067		
01/13/17	18:05	AZ48921W08	1	0.006	25mL		0.04	0.037		
01/13/17	18:06	AZ48925W08	1	0.009	25mL		0.07	0.067		
01/13/17	18:07	AZ48925W08 MS	1	0.306	25mL		3.03	3.034	3.00	*101.13*
01/13/17	18:08	CCV 4.0 170113	1	0.398	25mL		3.95	3.953	4.00	*98.83*
01/13/17	18:09	CCB 170113	1	0.001	25mL		-0.01	-0.013		

Metrohm 814/809 Titrando Data

Sample ID	Analysis Date/Time	Method	Titration Volume (to 8.3)	Titration Volume (total)	OH	CO3	HCO3	Total Alk	Unit	Sample Vol	N	Batch	Initials
AZ48925W07	2017-01-16 14:32:20 UTC-8	Alkalinity	0.000	4.134	0.00	0.00	177.76	177.76	mg/L	25 mL	0.0215	170116A	AH
AZ48921W07	2017-01-16 14:17:33 UTC-8	Alkalinity	0.000	6.848	0.00	0.00	294.46	294.46	mg/L	25 mL	0.0215	170116A	AH
AZ48916W10	2017-01-16 14:12:51 UTC-8	Alkalinity	0.000	1.642	0.00	0.00	70.61	70.61	mg/L	25 mL	0.0215	170116A	AH
AZ48915W07	2017-01-16 14:06:52 UTC-8	Alkalinity	0.000	2.160	0.00	0.00	92.88	92.88	mg/L	25 mL	0.0215	170116A	AH
170116A LCS	2017-01-16 12:03:40 UTC-8	Alkalinity	0.000	5.762	0.00	0.00	247.77	247.77	mg/L	25 mL	0.0215	170116A	AH
170116A Blk	2017-01-16 11:35:50 UTC-8	Alkalinity	0.000	0.036	0.00	0.00	1.55	1.55	mg/L	25 mL	0.0215	170116A	AH

Ferrous Iron Standard Prep

Stock Standard Prep:

Prep Date: 5/20/16
Exp Date: 5/20/17
Prep'd By: BB

CCV Stock (200 mg/L): 0.3502 g $Fe(NH_4)2(SO_4)_2*6H_2O$ EMD Lot #2013050298 up to 250 mL with DI

ICV Stock (200 mg/L): 0.3500 g $Fe(NH_4)2(SO_4)_2*6H_2O$ JT Baker Lot #0000068681 up to 250 mL with DI

QC Prep

Prep Date: 01/13/17
Exp Date: 01/14/17
Prep'd By: MM

CCV (4.0 mg/L): 0.500 mL of CCV Stock (prep: 5/20/16) into 25 mL DI then carried through sample prep procedure

LCS (3.0 mg/L): 0.375 mL of ICV Stock (prep: 5/20/16) into 25 mL DI then carried through sample prep procedure

MS/MSD (3.0 mg/L): 0.375 mL of ICV Stock (prep: 5/20/16) into 25 mL sample then carried through sample prep procedure

METHOD 300 / 9056		ANION STOCK				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
O2SI	F-	1,000	1085520-36282	07/24/17	0.25	5
O2SI*	Cl-	5,000	1069557-34558	01/08/17	0.5	50
O2SI	NO2-N	1,000	1088548-36281	09/26/17	0.25	5
Ultra Scientific	Br-	1,000	CL-3274-36926	08/31/20	1.25	25
O2SI	NO3-N	1,000	1078397-35587	01/30/17	0.5	10
O2SI	PO4-P	1,000	1072004-34911	09/03/16	0.5	10
Ultra Scientific	SO4	5,000	CP-1469-36296	04/30/18	0.5	50
Brought up with milipore water to Final Volume of:						50

PW 10/20/16

METHOD 300 / 9056		ANION ICV / LCS/MS/MSD				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
CPI	F-	1,000	16B115-36204	09/03/17	0.125	2.50
CPI	Cl-	1,000	16E065-36694	12/06/17	1.00	20.00
CPI	NO2-N	304	15J001-36257	09/24/17	0.50	3.04
CPI	Br-	1,000	15L093-36101	07/21/17	0.625	12.50
CPI	NO3-N	1,000	16E022-36783	12/30/17	0.25	5.00
CPI	PO4-P	1,000	15B116-36258	09/24/17	0.25	5.00
CPI	SO4	1,000	16E104-36693	12/06/17	1.00	20.00
Brought up with milipore water to Final Volume of:					50	

METHOD 300 / 9056		ANION CAL CURVE							
				ICAL #1	ICAL#2	ICAL #3	ICAL #4	ICAL #5	ICAL #6
ID#	mg/L	Prep Date	EXP. DATE	mL	mL	mL	mL	mL	mL
ANION STOCK	100	08/19/16	08/21/16	0.4	2	10	2	7	10
Brought up w/ Milipore Water to final volume of (mL):				50	100	100	10	10	na
Final Conc F (mg/L):				0.04	0.1	0.5	1	3.5	5
Final Conc Cl (mg/L):				0.4	1	5	10	35	50
Final Conc NO2-N (mg/L):				0.04	0.1	0.5	1	3.5	5
Final Conc Br (mg/L):				0.2	0.5	2.5	5	17.5	25
Final Conc NO3-N (mg/L):				0.08	0.2	1	2	7	10
Final Conc PO4-P (mg/L):				0.08	0.2	1	2	7	10
Final Conc SO4 (mg/L):				0.4	1	5	10	35	50

170113 PW

		CCV				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
O2SI	F-	1,000	1085520-36282	07/24/17	0.125	2.50
O2SI	Cl-	5,000	1069557-34558	01/08/17	0.25	25.0
O2SI	NO2-N	1,000	1088548-36281	09/26/17	0.125	2.5
Ultra Scientific	Br-	1,000	CL-3274-36926	08/31/20	0.625	12.50
O2SI	NO3-N	1,000	1078397-35587	01/30/17	0.25	5.0
O2SI	PO4-P	1,000	1072004-34911	09/03/16	0.25	5.0
Ultra Scientific	SO4	5,000	CP-1469-36296	04/30/18	0.25	25.0
Brought up with milipore water to Final Volume of:					50	

METHOD 300 / 9056		ICV LCS MS				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
CPI	F-	1,000	16B115-36204	09/03/17	0.125	2.50
CPI	Cl-	1,000	16E065-37395	06/27/18	1.00	20.00
CPI	NO2-N	304	15C058-35411	09/24/17	0.50	3.04
CPI	Br-	1,000	15L093-36101	07/21/17	0.63	12.50
CPI	NO3-N	1,000	16E022-36783	12/30/17	0.250	5.00
CPI	PO4-P	1,000	15B116-36258	09/24/17	0.25	5.00
CPI	SO4	1,000	16E104-36693	12/06/17	1.00	20.00
Final Volume of Sample: (mL)					50	

170116 PW

		CCV				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
O2SI	F-	1,000	1085520-36282	07/24/17	0.125	2.50
O2SI	Cl-	5,000	1069557-34558	01/08/17	0.25	25.0
O2SI	NO2-N	1,000	1088548-36281	09/26/17	0.125	2.5
Ultra Scientific	Br-	1,000	CL-3274-36926	08/31/20	0.625	12.50
O2SI	NO3-N	1,000	1078397-35587	01/30/17	0.25	5.0
O2SI	PO4-P	1,000	1072004-34911	09/03/16	0.25	5.0
Ultra Scientific	SO4	5,000	CP-1469-36296	04/30/18	0.25	25.0
Brought up with milipore water to Final Volume of:					50	

METHOD 300 / 9056		ICV LCS MS				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
CPI	F-	1,000	16B115-36204	09/03/17	0.125	2.50
CPI	Cl-	1,000	16E065-37395	06/27/18	1.00	20.00
CPI	NO2-N	304	15C058-35411	09/24/17	0.50	3.04
CPI	Br-	1,000	15L093-36101	07/21/17	0.63	12.50
CPI	NO3-N	1,000	16E022-36783	12/30/17	0.250	5.00
CPI	PO4-P	1,000	15B116-36258	09/24/17	0.25	5.00
CPI	SO4	1,000	16E104-36693	12/06/17	1.00	20.00
Final Volume of Sample: (mL)					50	

0.02N H2SO4 Titrant for Alkalinity

Dilute 600 mL 0.1N H2SO4 (prep 1/6/17)
To final volume 3L w/ DI water
Prep 1/6/17
Exp 1/6/18
AH 1/6/17

Inorganic Spiking Solution

7.0001g NaHCO3 BDH lot#1575C510
Final vol 1L w/DI water
Prep: 12/28/16
Exp: 05/28/17
AH

SM3500 Injection Log

Directory: I:\Spec Sheets\Ferrous Iron (Fe2)\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	13 Jan 2017	17:58	CCV 4.0 170113		170113A	1.
2	13 Jan 2017	17:59	CCB 170113		170113A	1.
3	13 Jan 2017	18:01	170113A LCS 3.0		170113A	1.
5	13 Jan 2017	18:03	AZ48915W08		170113A	1.
6	13 Jan 2017	18:04	AZ48916W11		170113A	1.
7	13 Jan 2017	18:05	AZ48921W08		170113A	1.
8	13 Jan 2017	18:06	AZ48925W08		170113A	1.
10	13 Jan 2017	18:08	CCV 4.0 170113		170113A	1.
11	13 Jan 2017	18:09	CCB 170113		170113A	1.
12	20 May 2016	12:37	0 BB 5/20/16		170113A	1.
13	20 May 2016	12:38	1		170113A	1.
14	20 May 2016	12:39	2		170113A	1.
15	20 May 2016	12:39	4		170113A	1.
16	20 May 2016	12:40	10		170113A	1.
17	20 May 2016	12:40	5		170113A	1.
18	20 May 2016	12:41	160520A ICV 3.0		170113A	1.
19	20 May 2016	12:42	160520A ICB		170113A	1.

300/9056A Injection Log

Directory: I:\Dionex\Charlie\Anions\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
14	20 Oct 2016	11:19	ICAL 1 10/20/16		161020	1.
15	20 Oct 2016	11:32	ICAL 2 10/20/16		161020	1.
16	20 Oct 2016	11:45	ICAL 3 10/20/16		161020	1.
17	20 Oct 2016	11:58	ICAL 4 10/20/16		161020	1.
18	20 Oct 2016	12:11	ICAL 5 10/20/16		161020	1.
19	20 Oct 2016	12:24	ICAL 6 10/20/16		161020	1.
20	20 Oct 2016	12:37	ICV 1601020		161020	1.
21	20 Oct 2016	12:50	ICB		161020	1.

300/9056A Injection Log

Directory: I:\Dionex\Charlie\Anions\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
3	13 Jan 2017	09:10	CCV 170113		170113	1.
4	13 Jan 2017	09:23	CCB		170113	1.
5	13 Jan 2017	09:37	170113A LCS		170113	1.
20	13 Jan 2017	12:12	AZ48915W07		170113	1.
21	13 Jan 2017	12:26	AZ48916W10		170113	1.
26	13 Jan 2017	13:59	AZ48916W10 1/2		170113	2.
29	13 Jan 2017	14:40	CCV 170113		170113	1.
30	13 Jan 2017	14:53	CCB		170113	1.
31	13 Jan 2017	15:07	170113B LCS		170113	1.
33	13 Jan 2017	15:34	AZ48921W07		170113	1.
34	13 Jan 2017	15:47	AZ48925W07 1/5		170113	5.
43	13 Jan 2017	17:49	CCV 170113		170113	1.
44	13 Jan 2017	18:03	CCB		170113	1.

300/9056A Injection Log

Directory: I:\Dionex\Charlie\Anions\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
3	16 Jan 2017	10:03	CCV 170116		170116	1.
4	16 Jan 2017	10:16	CCB		170116	1.
5	16 Jan 2017	10:30	170116A LCS		170116	1.
11	16 Jan 2017	11:51	AZ48925W07 1/50		170116	50.
15	16 Jan 2017	12:45	CCV 170116		170116	1.
16	16 Jan 2017	12:59	CCB		170116	1.

310/SM2320B Injection Log

Directory: I:\Tiamo\EXPORT\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	16 Jan 2017	11:35	170116A Blk		170116A_AL	1.
2	16 Jan 2017	12:03	170116A LCS		170116A_AL	1.
15	16 Jan 2017	14:06	AZ48915W07		170116A_AL	1.
16	16 Jan 2017	14:12	AZ48916W10		170116A_AL	1.
17	16 Jan 2017	14:17	AZ48921W07		170116A_AL	1.
18	16 Jan 2017	14:32	AZ48925W07		170116A_AL	1.